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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,2170S×17955W,h600km,mb4.6/6,Error ellipse: s-maj=75.5km s-min=25.7km az=151.0*
*IDC **01** 18:45:46.3±2.6,2176S×17970W,h627km±37km,mb3.5/4, mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km s-min=20.6km az=159.0*
ISC 01 18:45:43.1±2.7,223S±02×1796W±03,h613km±42km,n22, σ1§15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

*CSEM **01** 00:04:25.7±0.1, 3806N×3878E, h10km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.6km az=69.0*
*ISCJB **01** 00:04:26.3±0.6, 3805N±003×3880E±004, h2km±7km, Error ellipse: s-maj=5.5km s-min=4.5km az=21.4*
*ISK **01** 00:04:26.1, 3805N×3877E, h8km, MD2.8*
*DDA **01** 00:04:27.4, 3804N×3881E, h8km±2km, Md2.8*
ISC 01 00:04:27.0±0.5, **3806N**±003×**3878E**±004, **h9**km±6km, **n12**, σ**0s77**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.37**	**312**	PG	**Pg**	**00 04 33.8**	**-0.5**
MALT				SG	**Sg**	**00 04 39.4**	**+0.1**
MYA	**Malataya**	**0.38**	**313**	PG	**Pg**	**00 04 34.2**	**-0.3**
MYA				SG	**Sg**	**00 04 40.2**	**+0.6**
ELZG	**Elazig**	**0.46**	**20**	*i* P	**Pg**	**00 04 35.8**	**-0.2**
ELZG				*i* S	**Sg**	**00 04 43.1**	**+1.0**
URFA	**Urfa**	**0.62**	**177**	PG	**Pg**	**00 04 38.4**	**-0.6**
URFA				SG	**Sg**	**00 04 47.3**	**+0.2**
ATAB	**Bozova**	**0.71**	**213**	*i* P	**Pg**	**00 04 40.3**	**-0.3**
ATAB				*i* S	**Sg**	**00 04 49.7**	**-0.1**
PTK	**Pertek**	**0.96**	**30**	*e*PG	**Pg**	**00 04 45.3**	**-0.1**
DIYA	**Diyarbakir**	**1.07**	**97**	*i* P	**Pg**	**00 04 45.6**	**-1.9**
DIYA				*i* S	**Sg**	**00 05 02.3**	**+0.9**
DIY	**Diyarbakir**	**1.16**	**98**	*e*PN	**Pn**	**00 04 48.3**	**-0.9**
GZT	**Gaziantep**	**1.20**	**234**	*i* P	**Pb**	**00 04 49.7**	**0.0**
GZT				*i* S	**Sg**	**00 05 06.6**	**+1.2**
GAZ	**Gaziantep**	**1.53**	**235**	*e*PN	**Pn**	**00 04 53.9**	**-0.5**
MARD	**Mardin**	**1.75**	**115**	*i* P	**Pn**	**00 04 57.9**	**+0.4**
MARD				*i* S	**Sn**	**00 05 21.4**	**+1.5**
EZC	**Erzincan**	**1.87**	**25**	*e*PN	**Pn**	**00 04 58.3**	**-0.7**

IDC 01 00:11:53.8±12.0, **224S**×**14813E**, **h0**km, **mb4.2**/4, **mb1 4.4**/4, **mb1mx3.8**/14, **mbtmp4.2**/4, **Error ellipse: s-maj=205.3km s-min=81.9km az=30.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.16**	**216**	P	P	00 16 50.7	-0.8
	11nm,0.8s,baz=39,slow=12,SNR=45						
ASAR	**Alice Springs**	**25.36**	**212**	P	P	00 17 24.8	+2.0
	3.2nm,0.9s,baz=41,slow=8.6,SNR=19						
FITZ	**Fitzroy Crossi**	**27.11**	**233**	*e*P	P	00 17 37.2	-1.5
	13nm,1.4s						
FITZ	**Fitzroy Crossi**	**27.11**	**233**	P	P	00 17 38.1	-0.6
	3.2nm,0.6s,baz=62,slow=15,SNR=13						
STKA	**Stephens Creek**	**30.11**	**191**	P	P	00 18 04.1	-1.2
	2.3nm,0.9s,baz=27,slow=14,SNR=3.2						

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*ISCJB **01** 00:15:47.5±0.6, 4492N±007×1436E±0.1, h267km±5km, mb3.3/4, Error ellipse: s-maj=12.9km s-min=10.5km az=41.3*
*JMA **01** 00:15:47.9±0.3, 4504N×14364E, h261km±3km, M2.9*
*IDC **01** 00:15:48.1±5.1, 4588N×14338E, h206km±138km, mb3.2/4, mb1 3.2/4, mb1mx3.0/21, mbtmp3.2/4, Error ellipse: s-maj=227.7km s-min=25.6km az=169.0*
ISC 01 00:15:48.5±0.6, **4490N**±007×**1436E**±01, **h262**km±5km, **n21**, σ**0s97**/32, **mb3.3**/4, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.73**	**275**	P	**Pn**	**00 16 22.9**	**-0.5**
JMP	**Maruseppu**	**0.91**	**192**	P	**Pn**	**00 16 24.8**	**+0.5**
JMP				*e*S	**S**	**00 16 53.0**	**+0.4**
JTKR	**Abashiri--Toko**	**0.95**	**167**	P	**Pn**	**00 16 25.2**	**+0.7**
JTKR				*e*S	**S**	**00 16 53.8**	**+0.9**
ASAJ	**Asahikawa**	**1.07**	**223**	P	**Pn**	**00 16 25.6**	**+0.5**
ASAJ				*e*S	**S**	**00 16 54.3**	**+0.3**
ASAJ	**Asahikawa**	**1.07**	**223**	P	**Pn**	**00 16 25.7**	**+0.6**
	10nm,0.3s,baz=24,slow=2.6,SNR=46						
ASAJ				S	**S**	**00 16 55.0**	**+1.0**
	1.1nm,0.3s,baz=18,slow=20,SNR=6.7						
JWK2	**Keihoku**	**1.28**	**289**	P	**Pn**	**00 16 25.9**	**-0.4**
JWK2				*e*S	**S**	**00 16 54.3**	**-1.9**
JAR	**Ashorobuto**	**1.61**	**176**	P	**Pn**	**00 16 29.9**	**+1.2**
JAR				*e*S	**S**	**00 17 02.2**	**+1.7**
JYG	**Yagishiri**	**1.63**	**254**	P	**Pn**	**00 16 28.3**	**-0.5**
JHR	**Hokuryu**	**1.78**	**230**	P	**Pn**	**00 16 30.5**	**+0.4**
JFR	**Furan**	**1.89**	**203**	P	**Pn**	**00 16 32.4**	**+1.4**
JAK	**Akkeshi**	**2.06**	**157**	P	**Pn**	**00 16 32.5**	**0.0**
JAK				*e*S	**S**	**00 17 07.1**	**-0.1**
NEM2	**Nemuro 2**	**2.17**	**134**	P	**Pn**	**00 16 32.6**	**-0.8**
NEM2				*e*S	**S**	**00 17 07.2**	**-1.8**
JCH	**Churui**	**2.29**	**185**	P	**Pn**	**00 16 34.5**	**-0.1**
JCH				*e*S	**S**	**00 17 08.5**	**-2.6**
JEW	**Eniwo**	**2.59**	**218**	P	**Pn**	**00 16 38.9**	**+1.5**
JNBK	**Urakawa-nobuka**	**2.69**	**194**	P	**Pn**	**00 16 38.7**	**+0.2**
JNBK				*e*S	**S**	**00 17 17.3**	**-0.9**
JSK	**Shakotan**	**2.74**	**237**	P	**Pn**	**00 16 39.4**	**+0.5**
JKB	**Kayabe**	**3.55**	**213**	P	**Pn**	**00 16 47.7**	**0.0**
JKB				*e*S	**S**	**00 17 33.1**	**-1.6**
SONM	**Songino Array**	**25.69**	**290**	P	**P**	**00 20 55.1**	**+0.5**
	2.3nm,0.5s,mb3.9,baz=84,slow=8.8,SNR=16						
MKAR	**Makanchi Array**	**41.80**	**295**	P	**P**	**00 23 12.6**	**+0.2**
	0.5nm,0.4s,mb3.1,baz=78,slow=9.3,SNR=7.8						
YKA	**Yellowknife Ar**	**56.24**	**33**	P	**P**	**00 25 01.3**	**+0.1**
	0.2nm,0.6s,mb2.8,baz=306,slow=6.9,SNR=4.6						
FINES	**FINESS Array B**	**62.67**	**331**	P	**P**	**00 25 43.8**	**-1.2**
	0.4nm,0.4s,mb3.4,baz=55,slow=7.9,SNR=5.5						

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*ISCJB **01** 00:19:31.7±0.3, 1736N±003×9497W±002, h131km±3km, mb4.4/22, Error ellipse: s-maj=5.6km s-min=3.0km az=8.2*
*IDC **01** 00:19:33.0±0.4, 1731N×9484W, h125km±3km, mb3.9/13, mb1 4.1/15, mb1mx4.0/21, mbtmp3.9/15, Error ellipse: s-maj=13.9km s-min=10.3km az=66.0*
*MEX **01** 00:19:34.4±0.9, 1728N×9503W, h132km±6km, MD4.8*
*NEIC **01** 00:19:34.3, 1733N×9505W, h128km, mb4.6/15, MD4.7(MEX), After MEX.*
ISC 01 00:19:32.7±0.3, **1735N**±003×**9497W**±002, **h125**km±3km, **h133**km±2.2km**:pP-P, n134,** σ**1s37**/155, **mb4.3**/22, **1D, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.27**	**163**	P	**Pn**	**00 19 50.9**	**+0.6**
CMIG				*e*P		00 19 51.2	
CMIG				*i* S	**Sn**	**00 20 03.9**	**+0.6**
CMIG				S	**Sn**	**00 20 04.3**	**+1.0**
CMIG	**Matias Romero**	**0.27**	**163**	P	**Pn**	**00 19 50.9**	**+0.6**
	938nm,0.3s,baz=236,slow=3.5,SNR=8429						
CMIG				S	**Sn**	**00 20 04.3**	**+1.0**
	2µm,0.3s,baz=68,slow=19,SNR=147						
CMIG	**Matias Romero**	**0.27**	**163**	*e*P	**Pn**	**00 19 51.2**	**+1.0**
CMIG				*i* S	**Sn**	**00 20 04.4**	**+1.1**
TUIG	**Tuzandepetl**	**0.85**	**37**	*i* P	**Pn**	**00 19 55.4**	**+1.5**
TUIG				*i* S	**Sn**	**00 20 10.3**	**+0.4**
TUIG	**Tuzandepetl**	**0.85**	**37**	*i* P	**Pn**	**00 19 55.4**	**+1.5**
TUIG				*i* S	**Sn**	**00 20 12.0**	**+2.1**
OXX	**Oaxaca**	**1.70**	**261**	*i* P	**Pn**	**00 20 03.5**	**+0.7**
VHO	**Vista Hermosa**	**1.71**	**261**	*i* P	**Pn**	**00 20 03.8**	**+0.8**
VHO				*i* S	**Sn**	**00 20 25.6**	**-0.4**
HUIG	**Huatulco**	**1.92**	**215**	*i* P	**Pn**	**00 20 04.1**	**-1.4**
HUIG				*i* S	**Sn**	**00 20 29.1**	**-1.4**
SCX	**San Cristobal**	**2.31**	**105**	*i* P	**Pn**	**00 20 12.1**	**+1.8**
SCX				*i* S	**Sn**	**00 20 42.5**	**+3.3**
TPIG	**Tehuac#an**	**2.52**	**295**	*e*P	**Pn**	**00 20 13.8**	**+0.8**
TPIG				*i* S	**Sn**	**00 20 43.8**	**-0.1**
LVIG	**Laguna Verde**	**2.73**	**330**	*i* P	**Pn**	**00 20 14.5**	**-1.3**
LVIG				*i* S	**Sn**	**00 20 45.9**	**-2.9**
UTMO	**Huajuapan**	**2.75**	**280**	*i* P	**Pn**	**00 20 16.4**	**+0.5**
UTMO				*i* S	**Sn**	**00 20 48.1**	**-1.1**
CCIG	**Comitan**	**2.91**	**111**	*i* P	**Pn**	**00 20 20.1**	**+2.0**
CCIG				*i* S	**Sn**	**00 20 54.6**	**+1.7**
CCIG	**Comitan**	**2.91**	**111**	*i* P	**Pn**	**00 20 19.9**	**+1.9**
CCIG				*i* S	**Sn**	**00 20 54.6**	**+1.7**
PNIG	**Pinotepa**	**3.17**	**253**	*i* P	**Pn**	**00 20 19.2**	**-2.2**
PNIG				*i* S	**Sn**	**00 20 56.6**	**-2.5**
PNIG	**Pinotepa**	**3.17**	**253**	*i* P	**Pn**	**00 20 19.3**	**-2.2**
PNIG				*i* S	**Sn**	**00 20 56.6**	**-2.5**
PPM	**Popocatepetl**	**3.88**	**297**	*i* P	**Pn**	**00 20 33.3**	**+2.5**
PPM				*i* S	**Sn**	**00 21 16.6**	**+0.9**
PPM	**Popocatepetl**	**3.88**	**297**	*i* P	**Pn**	**00 20 33.0**	**+2.2**
PPM				*i* P		00 20 33.3	
PPM				*i* S	**Sn**	**00 21 16.6**	**+0.9**
SCIG	**Sabancuy**	**3.94**	**65**	*i* P	**Pn**	**00 20 31.8**	**+0.2**
SCIG				*i* S	**Sn**	**00 21 15.7**	**-1.4**
YAIG	**Yautepec**	**4.18**	**292**	*i* P	**Pn**	**00 20 36.2**	**+1.3**
YAIG				*i* S	**Sn**	**00 21 21.6**	**-1.4**
PLIG	**Platanillo**	**4.44**	**284**	*i* P	**Pn**	**00 20 39.2**	**+0.9**
PLIG				*i* S	**Sn**	**00 21 27.8**	**-1.5**
UNM	**Universidad Na**	**4.46**	**297**	*e*P	**Pn**	**00 20 39.2**	**+0.7**
UNM				*i* P		00 20 41.0	
UNM				*i* S	**Sn**	**00 21 27.6**	**-2.0**
MEIG	**Mezcala**	**4.47**	**278**	*i* P	**Pn**	**00 20 39.0**	**+0.2**
MEIG				*i* S	**Sn**	**00 21 27.8**	**-2.2**
PTVM	**Pico Tres Padr**	**4.53**	**300**	*i* P	**Pn**	**00 20 38.6**	**-0.8**
PTVM				*i* S	**Sn**	**00 21 32.7**	**+1.5**
SZVM	**Salazar**	**4.63**	**296**	*i* P	**Pn**	**00 20 40.7**	**-0.1**
SZVM				*i* S	**Sn**	**00 21 31.1**	**-2.6**
ACX	**Acapulco**	**4.76**	**265**	*i* P	**Pn**	**00 20 40.0**	**-2.6**
CAIG	**El Cayaco**	**5.08**	**267**	*i* P	**Pn**	**00 20 45.2**	**-1.6**
CAIG				*i* S	**Sn**	**00 21 39.4**	**-5.1**
CAIG	**El Cayaco**	**5.08**	**267**	*i* P	**Pn**	**00 20 45.2**	**-1.6**
CAIG				*i* S	**Sn**	**00 21 40.4**	**-4.1**
RBDL	**Robledal**	**6.02**	**122**	*e*P	x	00 21 02.7	
RTR	**El Retiro**	**6.17**	**123**	*e*P	x	00 21 05.1	
ZIIG	**Zihuatanejo**	**6.21**	**273**	*i* P	**Pn**	**00 21 01.6**	**-0.4**
ZIIG				*i* S	**Sn**	**00 22 06.7**	**-5.1**
ZIIG	**Zihuatanejo**	**6.21**	**273**	*i* P	**Pn**	**00 21 01.6**	**-0.4**
ZIIG				*i* S	**Sn**	**00 22 08.8**	**-3.0**
SNJE	**San Jose**	**6.22**	**123**	*e*P	x	00 21 07.2	
MOIG	**Morelia**	**6.34**	**292**	*i* P	**Pn**	**00 21 04.8**	**+1.0**
MOIG				*i* S	**Sn**	**00 22 15.6**	**+0.6**
BOQS	**Boqueron**	**6.55**	**122**	*e*P	x	00 21 11.5	
LFRS	**El Faro**	**6.79**	**122**	*e*P	x	00 21 14.1	
LCBS	**La Ceiba**	**6.84**	**122**⇓	*e*P	x	00 21 14.5	
TEIG	**Tepich**	**6.95**	**65**	P	**Pn**	**00 21 11.3**	**-0.8**
	73nm,0.3s,baz=266,slow=4.3,SNR=323						
TEIG				S	**Sn**	**00 22 28.6**	**-1.1**
	74nm,0.3s,baz=23,slow=22,SNR=14						
CAHU	**Cacacuatique**	**7.42**	**118**	*e*P	x	00 21 23.0	
CNCH	**Conchagua**	**7.98**	**120**	*e*P	x	00 21 28.6	
MMIG	**Aquila**	**8.04**	**278**	*i* P	**Pn**	**00 21 27.3**	**+0.5**
MMIG				*i* S	**Sn**	**00 22 55.7**	**-0.3**
SFJM	**Santa Fe**	**8.25**	**293**	*i* P	**Pn**	**00 21 32.0**	**+2.3**
LNIG	**Linares**	**8.60**	**332**	*i* P	**Pn**	**00 21 34.3**	**-0.1**
ZAIG	**Zacatecas**	**8.95**	**308**	*i* P	**Pn**	**00 21 41.3**	**+2.3**
ANIG	**Ahuacatlan**	**9.75**	**294**	*i* P	**Pn**	**00 21 53.2**	**+3.3**
JTS	**JuntasAbangare**	**11.99**	**125**	*e*Pn	**Pn**	**00 22 18.7**	**-0.9**
JTS	**JuntasAbangare**	**11.99**	**125**	P	**Pn**	**00 22 20.0**	**+0.3**
	7.4nm,0.3s,baz=318,slow=12,SNR=17						
JTS				S	**Sn**	**00 24 29.5**	**-2.3**
	1.2nm,0.3s,baz=315,slow=19,SNR=3.2						
SOR	**Soroa**	**12.47**	**62**	*e*P	**Pn**	**00 22 23.4**	**-2.5**
	baz=214						
SOR				*e*S	**Sn**	**00 24 36.6**	**-6.7**
	comp=N,2.4nm,0.6s						
SOR				*e*			
	comp=E,1.9nm,0.6s						
LTX	**Lajitas**	**14.35**	**328**	*e*Pn	**Pn**	**00 22 51.4**	**+1.4**
TXAR	**Lajitas Array**	**14.35**	**328**	P	**Pn**	**00 22 52.8**	**+2.7**
	comp=E,0.1nm,0.3s,baz=149,slow=14,SNR=12						
NATX	**Nacogdoches**	**14.35**	**1**	*e*Pn	**Pn**	**00 22 50.8**	**+0.7**
MGV	**Manicaragua**	**14.88**	**69**	*e*P	**Pn**	**00 22 58.7**	**+1.9**
DWPF	**Disney**	**16.43**	**47**	*e*P	**Pn**	**00 23 14.5**	**-1.6**
CCCC	**Cccc**	**16.68**	**74**	*e*P	**Pn**	**00 23 29.2**	**+10**
GDL2	**Guadalupe Moun**	**17.06**	**332**	*e*Pn	**Pn**	**00 23 28.1**	**+4.4**
MNTX	**Cornudas Mount**	**17.13**	**328**	*e*Pn	**Pn**	**00 23 28.8**	**+4.3**
LRAL	**Lakeview Retre**	**17.19**	**23**	*e*Pn	**Pn**	**00 23 24.9**	**-0.3**
	comp=E,30nm,1.2s						
UALR	**University of**	**17.51**	**7**	*e*Pn	**Pn**	**00 23 29.9**	**+0.8**
WMOK	**Wichita Mounta**	**17.65**	**350**	*e*P	**Pn**	**00 23 30.9**	**+0.1**
	comp=E,20nm,0.7s						
OXF	**Oxford**	**17.80**	**15**	*e*P	**Pn**	**00 23 31.3**	**-1.2**
AMTX	**Amarillo**	**18.46**	**342**	*e*P	**P**	**00 23 41.9**	**+3.1**
HBAR	**Harrisburg**	**18.53**	**11**	*e*P	**P**	**00 23 40.3**	**+0.8**
PLAL	**Pickwick Lake**	**18.61**	**18**	*e*P	**P**	**00 23 39.5**	**-0.9**
GOGA	**Godfrey**	**19.05**	**31**	*e*Pn	**Pn**	**00 23 44.6**	**-2.7**
SWET	**Sewanee**	**19.53**	**23**	*e*P	**P**	**00 23 49.7**	**-0.7**
PARMO	**Parma**	**19.78**	**12**	*e*P	**P**	**00 23 53.9**	**+0.8**
LENM	**Lemitar**	**19.90**	**330**	*e*P	**P**	**00 23 58.6**	**+4.1**
LAZ	**Ladron**	**20.18**	**330**	*e*P	**P**	**00 24 01.4**	**+4.0**
LAZ				*e*S	**S**	**00 27 39.9**	**+2.9**
CPCT	**Cooper Cave**	**20.28**	**25**	*e*P	**P**	**00 23 57.6**	**-0.9**
ANMO	**Albuquerque**	**20.31**	**332**	P	**P**	**00 24 01.5**	**+2.7**
ANMO				*e*		00 24 26.3	
ANMO	**Albuquerque**	**20.31**	**332**	P	**P**	**00 24 01.5**	**+2.7**
	comp=E,5.0nm,0.5s,baz=148,slow=12,SNR=16						
NHSC	**New Hope**	**20.58**	**38**	*e*P	**P**	**00 24 00.5**	**-1.2**
	comp=E,14nm,0.6s						
TKL	**Tuckaleechee C**	**20.77**	**26**	P	**P**	**00 24 03.3**	**-0.5**
	comp=E,15nm,0.4s,baz=205,slow=12,SNR=38						
JSC	**Jenkinsville**	**20.85**	**33**	*e*P	**P**	**00 24 03.6**	**-1.1**
SIUC	**Southern Illin**	**20.91**	**13**	*e*P	**P**	**00 24 05.1**	**-0.1**
FVM	**French Village**	**20.94**	**10**	*e*P	**P**	**00 24 04.7**	**-0.9**
TZTN	**Tazewell**	**21.62**	**26**	*e*P	**P**	**00 24 12.0**	**-0.9**
	comp=E,20nm,0.8s,mb4.5						
KSU1	**Kansas State U**	**21.72**	**357**	*e*P	**P**	**00 24 11.7**	**-2.1**
	comp=E,28nm,0.6s,mb4.8						
KSU1				*e*		00 24 36.0	
CBKS	**Cedar Bluff**	**21.79**	**350**	P	**P**	**00 24 16.2**	**+1.7**
	comp=E,59nm,1.3s,mb4.8						
WCI	**Wyandotte Cave**	**22.15**	**18**	*e*P	**P**	**00 24 17.1**	**-1.3**
SDCO	**Great Sand Dun**	**22.33**	**338**	*e*P	**P**	**00 24 22.8**	**+2.5**
	comp=E,1.7nm,0.5s,mb3.6						
BLO	**Bloomington**	**22.95**	**17**	*e*P	**P**	**00 24 25.7**	**-0.6**
MVCO	**Mesa Verde**	**23.10**	**332**	*e*P	**P**	**00 24 36.4**	**+8.8**
WUAZ	**Wupatki**	**23.25**	**324**	*e*P	**P**	**00 24 38.0**	**+9.0**
	comp=E,28nm,0.9s,mb4.6						
ELN	**Prospectdale**	**23.43**	**30**	*e*P	**P**	**00 24 29.7**	**-1.0**
ELN				*e*		00 24 58.0	
BLA	**Blacksburg**	**23.57**	**30**	*e*P	**P**	**00 24 30.6**	**-1.4**
	comp=E,84nm,1.1s,mb5.0						
BLA				*e*		00 24 56.5	
HDIL	**Hopedale**	**23.64**	**11**	*e*P	**P**	**00 24 32.1**	**-0.4**
	comp=E,34nm,0.4s,mb5.0						
HDIL				S	**S**	**00 28 36.3**	**-1.5**
PV01	**Paradox Valley**	**23.90**	**333**	*e*P	**P**	**00 24 36.9**	**+2.0**
PV01				*e*		00 25 04.3	
SMCO	**Snowmass**	**24.14**	**337**	*e*P	**P**	**00 24 41.6**	**+4.6**
	comp=E,22nm,1.3s,mb4.3						
ISCO	**Idaho Springs**	**24.20**	**340**	*e*P	**P**	**00 24 41.1**	**+3.5**
	comp=E,62nm,2.5s,mb4.5						
ISCO				*e*pP		00 25 07.9	
PV10	**Paradox Valley**	**24.30**	**332**	*e*P	**P**	**00 24 41.6**	**+3.0**
PV10				*e*		00 25 09.9	
ACSO	**Alum Creek Sta**	**25.05**	**22**	*e*P	**P**	**00 24 44.0**	**-1.4**
SDV	**Santo Domingo**	**25.12**	**106**	*e*P	**P**	**00 24 46.0**	**-0.2**
	comp=E,22nm,0.9s,mb4.6						
SDV	**Santo Domingo**	**25.12**	**106**	P	**P**	**00 24 45.8**	**-0.4**
	comp=E,18nm,0.7s,mb4.6,baz=324,slow=4.8,SNR=23						
PHWY	**Pilot Hill**	**25.52**	**341**	*e*P	**P**	**00 24 56.2**	**+6.7**
PHWY				*e*pP	pP	00 25 21.9	+5.6
JFWS	**Jewell Farm**	**25.80**	**8**	*e*P	**P**	**00 24 52.0**	**0.0**
MSU	**Marysvale**	**25.91**	**328**	*e*P	**P**	**00 24 55.8**	**+2.7**
MSU				*e*	pP	00 25 24.8	+4.9
ARUT	**Antelope Range**	**26.04**	**325**	*e*P	**P**	**00 24 57.4**	**+3.2**
ARUT				*e*	pP	00 25 25.5	+4.5
ECSD	**EROS,Sioux Fal**	**26.34**	**357**	*e*P	**P**	**00 24 56.8**	**-0.1**
DAU	**Daniels Canyon**	**26.96**	**332**	*e*P	**P**	**00 25 08.1**	**+5.6**
DAU				*e*	pP	00 25 33.6	+4.3
ALLY	**Alegheny Colle**	**27.35**	**25**	*e*P	**P**	**00 25 05.0**	**-1.1**
ERPA	**Erie**	**27.81**	**24**	*e*P	**P**	**00 25 09.1**	**-1.0**
PDAR	**Pinedale Array**	**28.22**	**337**	P	**P**	**00 25 15.3**	**+1.6**
	comp=E,0.4nm,0.8s,baz=163,slow=9.4,SNR=3.0						
PDAR				pP	pP	00 25 43.5	+2.8
	comp=E,1.4nm,0.9s,baz=142,slow=7.5,SNR=8.0						
PDAR				PcP	PcP	00 28 23.5	-0.7
	comp=E,0.5nm,0.6s,baz=134,slow=5.1,SNR=3.0						
ATAH	**Atahualpa**	**29.22**	**145**	P	**P**	**00 25 27.8**	**+4.9**
	comp=E,5.8nm,0.7s,mb4.3,baz=18,slow=2.3,SNR=4.9						
NVAR	**Mina Array Bea**	**29.29**	**320**	P	**P**	**00 25 26.2**	**+3.0**
	comp=E,1.3nm,0.6s,mb3.7,baz=134,slow=10.0,SNR=6.9						
NVAR				pP	pP	00 25 54.9	+4.6
	comp=E,11nm,0.9s,baz=131,slow=10,SNR=18						
TPAW	**Teton Pass**	**29.37**	**336**	*e*P	**P**	**00 25 29.8**	**+5.9**
	comp=E,11nm,0.9s,mb4.5						
EYMN	**Ely**	**30.65**	**5**	*e*P	**P**	**00 25 34.0**	**-1.1**
AGMN	**Agassiz Refuge**	**30.87**	**359**	*e*P	**P**	**00 25 37.1**	**0.0**
LONY	**Lake Ozonia**	**32.13**	**28**	*e*P	**P**	**00 25 47.1**	**-1.1**
	comp=E,9.9nm,1.0s,mb4.5						
ULM	**Lac du Bonnet**	**32.83**	**359**	P	**P**	**00 25 53.2**	**-0.9**
	comp=E,2.5nm,0.4s,mb4.4,baz=167,slow=10,SNR=13						
EDM	**Edmonton**	**38.57**	**342**	*e*P	**P**	**00 26 44.4**	**+1.2**
EDM				*e*	pP	00 27 13.4	+2.4
FCC	**Fort Churchill**	**41.35**	**1**	*e*P	**P**	**00 27 05.9**	**-0.2**
FCC				*e*	pP	00 27 36.3	+2.0
LPAZ	**La Paz**	**42.62**	**140**	*e*P	**P**	**00 27 18.2**	**+1.3**
LPAZ				*e*		00 27 56.4	
LPAZ	**La Paz**	**42.62**	**140**	P	**P**	**00 27 18.4**	**+1.5**
	comp=E,6.1nm,0.7s,mb4.5,baz=334,slow=6.5,SNR=26						
SCHQ	**Schefferville**	**43.19**	**23**	*e*P	**P**	**00 27 19.5**	**-1.5**
SCHQ				*e*	pP	00 27 49.8	+0.4
SCHQ	**Schefferville**	**43.19**	**23**	P	**P**	**00 27 19.3**	**-1.8**
	comp=E,3.0nm,0.5s,mb4.3,baz=221,slow=10,SNR=14						
SCHQ				pP	pP	00 27 50.7	+1.3
	comp=E,2.8nm,0.7s,baz=229,slow=8.0,SNR=2.8						
YKA	**Yellowknife Ar**	**47.15**	**348**	P	**P**	**00 27 52.1**	**0.0**
YKA				pP	pP	00 28 23.1	+2.2
YKA	**Yellowknife Ar**	**47.15**	**348**	P	**P**	**00 27 52.1**	**0.0**
	comp=E,1.3nm,0.6s,mb3.8,baz=154,slow=7.2,SNR=13						
YKA				pP	pP	00 28 23.1	+2.2
	comp=E,2.8nm,0.6s,baz=153,slow=7.4,SNR=11						
INK	**Inuvik**	**56.44**	**344**	*e*P	**P**	**00 29 01.3**	**+0.3**
	comp=E,161nm,0.9s						
INK				*e*	pP	00 29 33.3	+2.6
RES	**Resolute Bay**	**57.35**	**0**	*e*P	**P**	**00 29 07.3**	**0.0**
TRQA	**Tornquist**	**63.23**	**151**	P	**P**	**00 29 48.6**	**+0.8**
ESDC	**Sonseca Array**	**79.89**	**52**	P	**P**	**00 31 27.7**	**-0.1**
	comp=E,2.1nm,0.8s,mb4.0,baz=282,slow=5.6,SNR=8.5						
ESLA	**Sonseca Array**	**79.89**	**52**	P	**P**	**00 31 28.7**	**+0.8**
NOA	**NORSAR Array B**	**82.57**	**28**	P	**P**	**00 31 41.7**	**+0.2**
NOA	**NORSAR Array B**	**82.57**	**28**	P	**P**	**00 31 41.7**	**+0.2**
	comp=E,1.1nm,0.8s,mb3.8,baz=300,slow=5.4,SNR=4.8						
ARCES	**ARCESS Array B**	**83.85**	**18**	P	**P**	**00 31 49.3**	**+1.3**
	comp=E,3.3nm,1.0s,mb4.1,baz=313,slow=4.5,SNR=4.6						
ARCES				pP	pP	00 32 20.2	+0.4
	comp=E,7.0nm,0.8s,baz=298,slow=4.0,SNR=5.5						
TORD	**Torodi Ar. Bea**	**92.34**	**76**	P	**P**	**00 32 29.4**	**-0.2**
	comp=E,0.4nm,0.5s,mb3.9,baz=285,slow=4.4,SNR=8.4						
MKAR	**Makanchi Array**	**116.11**	**2**	PKP	PKPdf	00 37 59.9	-1.3
	comp=E,0.2nm,0.6s,baz=349,slow=1.5,SNR=4.5						
BOSA	**Boshof**	**124.32**	**113**	PKP	PKPdf	00 38 17.4	-0.1
	comp=E,2.3nm,0.8s,baz=23,slow=3.6,SNR=5.0						
STKA	**Stephens Creek**	**127.12**	**243**	*e*P	PKPdf	00 38 22.5	-0.2
	comp=E,2.8nm,0.8s						
STKA	**Stephens Creek**	**127.12**	**243**	PKP	PKPdf	00 38 22.8	+0.1
	comp=E,3.1nm,0.9s,baz=142,slow=1.1,SNR=7.8						
WRA	**Warramunga Arr**	**133.34**	**259**	PKP	PKPdf	00 38 34.6	-0.2
	comp=E,1.2nm,0.6s,baz=322,slow=1.2,SNR=16						
ASAR	**Alice Springs**	**133.97**	**254**	PKP	PKPdf	00 38 35.6	-0.3
	comp=E,1.0nm,0.7s,baz=84,slow=1.9,SNR=7.1						
FITZ	**Fitzroy Crossi**	**141.37**	**263**	PKhKP		00 38 44.1	
	comp=E,1.4nm,0.6s,baz=45,slow=0.4,SNR=6.3						

IDC 01 00:35:10.3±2.3, **300N**×**12825E**, **h0**km, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.4**/16, **mbtmp3.5**/3, **Error ellipse: s-maj=169.1km s-min=23.4km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.57**	**166**	P	P	00 40 21.9	-1.0
	0.5nm,0.4s,baz=343,slow=10.0,SNR=22						
ASAR	**Alice Springs**	**27.07**	**169**	P	P	00 40 53.8	-0.9
	0.3nm,0.3s,baz=352,slow=7.2,SNR=4.2						
MKAR	**Makanchi Array**	**59.02**	**325**	P	P	00 45 13.2	+1.2
	0.2nm,0.5s,baz=118,slow=8.7,SNR=3.2						

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*ISCJB **01** 00:54:23.1±0.4, 1380N±004×12051E±007, h128km±4km, mb3.8/8, Error ellipse: s-maj=10.6km s-min=5.8km az=5.1*
*MAN **01** 00:54:24, 1382N×12053E, h107km, mb4.7, ML3.6, MS3.5*
*IDC **01** 00:54:28.2±10.0, 1377N×12074E, h171km±110km, mb3.6/8, mb1 3.7/8, mb1mx3.4/21, mbtmp3.6/8, Error ellipse: s-maj=36.5km s-min=13.9km az=64.0*
ISC 01 00:54:24.2±0.4, **1380N**±004×**12052E**±007, **h123**km±4km, **n19,** σ**0s89**/26, **mb4.0**/8, **1C, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.28**	**256**	*e*P	**Pn**	**00 54 41.5**	**+0.2**
LUBP				*e*S	**Sn**	**00 54 53.8**	**-0.5**
TGY	**Tagaytay City**	**0.50**	**53**⇑	*i* P	**Pn**	**00 54 43.2**	**+0.8**
TGY				*i* S	**Sn**	**00 54 56.6**	**+0.4**
POLP	**Polilio Island**	**1.65**	**56**	*e*P	**Pn**	**00 54 54.2**	**+0.6**
BUSP	**Coron**	**1.82**	**190**	*e*P	**Pn**	**00 54 55.6**	**0.0**
BUSP				*e*S	**Sn**	**00 55 19.1**	**-0.4**
PCPH	**Palayan**	**1.84**	**18**	*e*P	**Pn**	**00 54 54.7**	**-1.1**
PCPH				*e*S	**Sn**	**00 55 18.1**	**-1.8**
OTRP	**Odiongan**	**2.04**	**134**	*e*P	**Pn**	**00 54 58.4**	**+0.1**
OTRP				*e*S	**Sn**	**00 55 24.2**	**-0.2**
BALP	**Baler**	**2.18**	**28**	*e*P	**Pn**	**00 55 00.2**	**+0.2**
BOLP	**Bolinao**	**2.63**	**347**	*e*P	**Pn**	**00 55 06.5**	**+0.7**
ENPP	**El Nido**	**2.79**	**203**	*e*P	**Pn**	**00 55 09.0**	**+1.1**
ENPP				*e*S	**Sn**	**00 55 39.9**	**-1.6**
CUYO	**Cuyo Island**	**2.97**	**171**	*e*P	**Pn**	**00 55 10.7**	**+0.4**
CUYO				*e*S	**Sn**	**00 55 46.5**	**+0.7**
PVCP	**Virac**	**3.54**	**93**	*e*P	**Pn**	**00 55 18.6**	**+1.0**
PSI	**Prapat**	**23.98**	**245**	P	**P**	**00 59 29.3**	**+1.9**
	6.1nm,0.6s,mb4.1,baz=42,slow=6.0,SNR=6.9						
SONM	**Songino Array**	**35.91**	**344**	P	**P**	**01 01 12.8**	**+0.4**
	1.5nm,0.6s,mb4.1,baz=160,slow=10.0,SNR=12						
WRA	**Warramunga Arr**	**36.18**	**158**	P	**P**	**01 01 13.3**	**-1.7**
	0.9nm,0.5s,mb4.0,baz=332,slow=9.9,SNR=86						
ASAR	**Alice Springs**	**39.47**	**160**	P	**P**	**01 01 41.5**	**-1.1**
	0.8nm,0.4s,mb3.9,baz=338,slow=7.1,SNR=15						
MKAR	**Makanchi Array**	**45.85**	**324**	P	**P**	**01 02 34.9**	**+0.9**
	0.2nm,0.4s,mb3.2,baz=113,slow=8.3,SNR=8.2						
ZALV	**Zalesovo Beam**	**48.89**	**333**	P	**P**	**01 02 57.0**	**-0.3**
	1.4nm,0.3s,mb4.3,baz=126,slow=7.2,SNR=12						
AKTO	**Aktyubinsk**	**62.03**	**320**	P	**P**	**01 04 31.4**	**0.0**
	0.8nm,0.4s,mb4.1,baz=97,slow=10,SNR=3.3						
ARCES	**ARCESS Array B**	**78.93**	**339**	P	**P**	**01 06 12.9**	**-0.8**
	4.8nm,1.1s,mb4.2,baz=80,slow=7.9,SNR=7.3						

MAN 01 01:11:13, 1833N×12089E, h15km, mb4.1, ML2.9, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.26**	**268**⇓	*i*P	Pg	01 11 18.3	-0.2
PIP				*e*S	Sg	01 11 23.3	+1.0
APYP	**Conner**	**0.58**	**144**	*e*P	Pg	01 11 25.1	+0.7
APYP				*e*S	Sg	01 11 35.2	+3.1
ABRA	**Dolores**	**0.70**	**194**	*e*P	Pg	01 11 25.6	-1.1
CVP	**Callao Caves**	**1.09**	**125**	*e*P	Pb	01 11 32.4	-1.1
CVP				*e*S	Sb	01 11 48.4	+0.9
SGCP	**Mt. Cagua**	**1.10**	**94**	*e*P	Pb	01 11 33.1	-0.7
SGCP				*e*S	Sb	01 11 49.2	+1.2
BOLP	**Bolinao**	**2.15**	**206**	*e*P	Pn	01 11 49.0	+0.6

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*IDC **01** 01:27:07.9±0.9, 4690N×15556E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/23, mbtmp3.7/9, Error ellipse: s-maj=27.4km s-min=19.6km az=136.0*
*ISCJB **01** 01:27:11.5±2.0, 469N±0.1×1554E±02, h36km±18km, mb3.6/10, Error ellipse: s-maj=25.8km s-min=11.6km az=135.2*
*MOS **01** 01:27:11.4±1.1, 4683N×15540E, h36km, mb3.9/5, Error ellipse: s-maj=23.0km s-min=13.2km az=67.8*
ISC 01 01:27:14.3±1.7, **469N**±01×**1554E**±02, **h44**km±15km, **n20,** σ**0s90**/20, **mb3.6**/10, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**5.49**	**255**	PN	**Pn**	**01 28 32.0**	**-1.5**
KUR				pmax	pmax		
	comp=E,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
PET	**Petropavlovsk**	**6.50**	**18**	*i* PN	**Pn**	**01 28 49.0**	**+1.8**
ERM	**Erimo**	**10.01**	**245**	*i* PN	**Pn**	**01 29 35.1**	**-0.3**
BILL	**Bilibino**	**21.94**	**11**	*e*P	**P**	**01 32 03.2**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
KSRS	**Korea Array**	**22.34**	**255**	P	**P**	**01 32 09.8**	**+1.7**
	comp=Z,1.8nm,0.7s,mb3.6,baz=49,slow=11,SNR=6.4						
COLA	**College**	**35.06**	**38**	*i* P	**P**	**01 34 02.3**	**-0.2**
INK	**Inuvik**	**40.70**	**33**	P	**P**	**01 34 49.2**	**-0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**40.70**	**33**	P	**P**	**01 34 49.2**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.6,baz=278,slow=7.4,SNR=6.4						
ZALV	**Zalesovo Beam**	**43.80**	**306**	P	**P**	**01 35 15.0**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.5,baz=68,slow=8.5,SNR=3.4						
ZAL	**Zalesovo**	**43.82**	**306**	P	**P**	**01 35 15.0**	**-0.5**
MKAR	**Makanchi Array**	**48.27**	**298**	P	**P**	**01 35 50.9**	**+0.2**
	comp=Z,0.3nm,0.7s,mb3.4,baz=71,slow=7.1,SNR=3.7						
YKA	**Yellowknife Ar**	**49.88**	**37**	P	**P**	**01 36 01.6**	**-1.1**
	comp=Z,0.2nm,0.4s,mb3.5,baz=295,slow=7.0,SNR=3.4						
FINES	**FINESS Array B**	**64.58**	**336**	*i* P	**P**	**01 37 47.7**	**+1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**64.58**	**336**	P	**P**	**01 37 46.6**	**+0.2**
	comp=Z,1.0nm,0.9s,mb3.9,baz=41,slow=7.6,SNR=5.8						
WRA	**Warramunga Arr**	**69.17**	**201**	P	**P**	**01 38 16.5**	**+0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**69.17**	**201**	P	**P**	**01 38 15.8**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=20,slow=6.7,SNR=5.7						
ASAR	**Alice Springs**	**72.86**	**201**	P	**P**	**01 38 39.2**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**72.86**	**201**	P	**P**	**01 38 39.2**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.8,baz=19,slow=5.7,SNR=6.6						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**01 38 56.8**	**-0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**76.06**	**62**	P	**P**	**01 38 56.8**	**-0.3**
	comp=Z,0.7nm,0.8s,mb3.7,baz=294,slow=4.1,SNR=9.0						

ISCJB ***01*** *01:30:21.7±0.6, 50.35N±0.04×18.77E±0.03, h0km, Error ellipse: s-maj=6.2km s-min=2.7km az=17.8*
NEIC ***01*** *01:30:22.3±1.5, 50.37N×18.77E, h5km, MG2.5(WAR), Error ellipse: s-maj=21.0km s-min=8.1km az=177.0*
WAR ***01*** *01:30:23.2, 50.25N×18.88E, ML2.5, Mining Induced*
ISC 01 01:30:23.2±0.6**, 50.30N**±0.04×**18.78E**±0.03**, h0**km**, n16, σ1.36**/29**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.61**	**222**	*e*PG	**Pg**	**01 30 35.1**	**+0.2**
OKC				*e*SG	**Sg**	**01 30 44.9**	**+2.1**
	19nm,0.4s						
OJC	**Ojcow**	**0.66**	**96**	*e*Pg	**Pg**	**01 30 34.8**	**-0.9**
OJC				*e*Sg	**Sg**	**01 30 43.1**	**-1.2**
MORC	**Moravsky Berou**	**0.95**	**237**	*e*P	**Pg**	**01 30 41.4**	**0.0**
MORC				*e*S	**Sg**	**01 30 54.4**	**+0.7**
NIE	**Niedzica**	**1.32**	**131**	*e*Pg	**Pg**	**01 30 47.2**	**-1.3**
NIE				*e*Sg	**Sg**	**01 31 05.2**	**-0.5**
DPC	**Dobruska-Polom**	**1.58**	**273**	*e*PG	**Pg**	**01 30 52.2**	**-1.1**
DPC				*e*SG	**Sg**	**01 31 13.6**	**-0.2**
	11nm,0.3s						
KSP	**Ksiaz**	**1.68**	**290**	*e*Pg	**Pg**	**01 30 55.8**	**+0.5**
KSP				*e*Sg	**Sg**	**01 31 18.5**	**+1.5**
KOLL	**Kolacno**	**1.74**	**188**	*e*PN	**Pn**	**01 30 55.7**	**+1.2**
KOLL				*e*SN	**Sn**	**01 31 18.1**	**+0.8**
UPC	**Upice**	**1.78**	**278**	*e*SG	**Sg**	**01 31 20.1**	**-0.3**
VYHS	**Vyhne**	**1.80**	**179**	*e*PN	**Pn**	**01 30 53.6**	**-1.8**
VYHS				*e*SN	**Sn**	**01 31 17.5**	**-1.5**
STHS	**Stebnicka Huta**	**1.82**	**118**	*e*PN	**Pn**	**01 30 56.4**	**+0.7**
STHS				*e*SN	**Sn**	**01 31 20.5**	**+1.1**
KECS	**Kecovo**	**2.13**	**148**	*e*PN	**Pn**	**01 31 01.7**	**+1.8**
KECS				*e*SN	**Sn**	**01 31 26.0**	**-1.0**
CRVS	**Cervenica-Dubn**	**2.23**	**128**	*e*PN	**Pn**	**01 31 04.2**	**+2.9**
CRVS				*e*SN	**Sn**	**01 31 32.0**	**+2.4**
PRU	**Pruhonice**	**2.74**	**265**	*e*PG	**Pg**	**01 31 12.3**	**-3.4**
PRU				*e*SG	**Sg**	**01 31 48.6**	**-2.6**
BRG	**Berggiesshubel**	**3.14**	**282**	SG	**Sg**	**01 32 03.8**	**-0.1**
	3.0nm,0.6s						
KHC	**Kasperske Hory**	**3.57**	**253**	*e*PG	**Pg**	**01 31 29.0**	**-2.6**
KHC				*e*SG	**Sg**	**01 32 16.7**	**-1.1**
CLL	**Collm**	**3.80**	**288**	*e*Sg	**Sg**	**01 32 27.0**	**+1.8**

IDC 01 01:34:27.1±2.4**, 9.28S**×**113.46E, h0**km**, mb3.9**/6**, mb1 3.9**/6**, mb1mx3.8**/16**, mbtmp3.9**/6**, Error ellipse: s-maj=135.2km s-min=18.8km az=52.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.79**	**120**	P	P	01 39 31.3	-0.2
	0.6nm,0.5s,baz=289,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**24.22**	**129**	P	P	01 39 45.7	0.0
	0.7nm,0.7s,baz=301,slow=8.5,SNR=8.0						
STKA	**Stephens Creek**	**34.44**	**135**	P	P	01 41 16.9	+0.4
	1.1nm,0.5s,baz=300,slow=12,SNR=3.4						
SONM	**Songino Array**	**57.20**	**354**	P	P	01 44 16.4	+0.5
	1.5nm,0.5s,baz=172,slow=8.7,SNR=16						
SONM				PcP	PcP	01 45 10.8	+0.4
	0.2nm,0.5s,baz=174,slow=2.9,SNR=2.8						
MKAR	**Makanchi Array**	**62.36**	**336**	P	P	01 44 51.7	+0.2
	1.1nm,0.4s,baz=147,slow=7.5,SNR=28						
ZALV	**Zalesovo Beam**	**67.48**	**342**	P	P	01 45 23.9	-0.9
	0.7nm,0.3s,baz=137,slow=3.5,SNR=5.4						

CSEM ***01*** *01:35:13.0±0.1, 38.48N×39.13E, h30km, MD3.0, Error ellipse: s-maj=2.4km s-min=1.6km az=140.0*
ISK ***01*** *01:35:13.3, 38.46N×39.13E, h5km, MD2.8*
ISCJB ***01*** *01:35:14.5±0.6, 38.43N±0.04×39.24E±0.04, h15km±10km, Error ellipse: s-maj=7.1km s-min=5.4km az=168.0*
DDA ***01*** *01:35:15.0, 38.33N×39.22E, h5km±2km, Md3.0*
ISC 01 01:35:14.4±0.6**, 38.39N**±0.04×**39.25E**±0.04**, h9**km±6km**, n10, σ0.82**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.23**	**297**	*i* P	**Pg**	**01 35 19.0**	**-0.1**
ELZG				*i* S	**Sg**	**01 35 23.5**	**+1.2**
PTK	**Pertek**	**0.51**	**13**	PG	**Pg**	**01 35 23.7**	**-0.6**
PTK				SG	**Sg**	**01 35 31.7**	**+0.7**
MALT	**Malatya**	**0.65**	**263**	PG	**Pg**	**01 35 25.3**	**-1.7**
MALT				SG	**Sg**	**01 35 34.6**	**-0.9**
MYA	**Malataya**	**0.65**	**264**	PG	**Pg**	**01 35 25.8**	**-1.2**
DIYA	**Diyarbakir**	**0.83**	**124**	*i* P	**Pg**	**01 35 30.5**	**+0.1**
DIYA				*i* S	**Sg**	**01 35 41.5**	**+0.3**
URFA	**Urfa**	**1.01**	**200**	*e*PG	**Pg**	**01 35 34.6**	**+0.8**
ATAB	**Bozova**	**1.19**	**220**	*i* P	**Pb**	**01 35 37.6**	**+0.5**
ATAB				*i* S	**Sg**	**01 35 53.1**	**+0.4**
MARD	**Mardin**	**1.62**	**131**	*i* P	**Pn**	**01 35 43.2**	**0.0**
MARD				*i* S	**Sn**	**01 36 02.7**	**-1.5**
GZT	**Gaziantep**	**1.69**	**233**	*i* P	**Pn**	**01 35 44.2**	**+0.1**
GZT				*i* S	**Sn**	**01 36 06.9**	**+1.0**
BTMT	**Batman**	**1.77**	**96**	*e*PN	**Pn**	**01 35 45.7**	**+0.4**

ISCJB ***01*** *01:49:47.5±0.8, 8.6S±0.2×124.7E±0.3, h33km, mb4.7/8, Error ellipse: s-maj=48.5km s-min=9.0km az=153.2*
NEIC ***01*** *01:49:51.5±0.7, 8.67S×124.09E, h35km, Error ellipse: s-maj=49.2km s-min=11.4km az=63.0*
IDC ***01*** *01:49:54.0±5.4, 8.82S×124.03E, h65km±58km, mb3.6/3, mb1 4.1/6, mb1mx3.8/15, mbtmp3.9/6, ML4.3/3, Error ellipse: s-maj=93.8km s-min=35.4km az=70.0*
ISC 01 01:49:51.9±0.7**, 8.7S**±0.2×**124.2E**±0.3**, h35**km**, n13, σ0.69**/15**, mb4.7**/8**, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.51**	**172**	P	**Pn**	**01 52 06.0**	**-0.4**
	3.5nm,0.3s,baz=1.5,slow=10,SNR=144						
FITZ				S	**Sn**	**01 53 43.1**	**-9.0**
	9.5nm,0.3s,baz=286,slow=18,SNR=12						
WRA	**Warramunga Arr**	**14.93**	**140**	P	**Pn**	**01 53 20.2**	**-0.2**
	0.9nm,0.3s,baz=316,slow=15,SNR=50						
WRA				S	**Sn**	**01 55 51.4**	**-13**
	0.5nm,0.3s,baz=298,slow=23,SNR=8.2						
ASAR	**Alice Springs**	**17.60**	**149**	P	**Pn**	**01 53 55.3**	**+0.8**
	1.1nm,0.3s,baz=322,slow=11,SNR=74						
ASAR				S	**S**	**01 56 58.7**	**-18**
	0.5nm,0.3s,baz=319,slow=22,SNR=8.2						
LSA	**Lhasa**	**49.63**	**322**	*e*P	**P**	**01 58 41.4**	**+1.2**
	5.8nm,0.5s,mb4.9						
TAPN	**Taplejung**	**50.28**	**317**	*e*P	**P**	**01 58 45.5**	**+0.4**
	17nm,0.4s,mb5.4						
JIRN	**Jiri**	**51.52**	**316**	*e*P	**P**	**01 58 54.5**	**+0.1**
	25nm,0.7s,mb5.3						
KKN	**Kakani**	**52.23**	**315**	*e*P	**P**	**01 58 59.5**	**-0.2**
	16nm,0.8s,mb5.0						
GKN	**Gorkha**	**52.80**	**315**	*e*P	**P**	**01 59 03.7**	**-0.3**
	12nm,0.5s,mb5.1						
SONM	**Songino Array**	**58.40**	**346**	P	**P**	**01 59 44.1**	**+0.3**
	0.5nm,0.9s,mb3.5,baz=156,slow=7.3,SNR=2.7						
MKAR	**Makanchi Array**	**66.59**	**330**	P	**P**	**02 00 38.7**	**+0.1**
MKAR	**Makanchi Array**	**66.59**	**330**	P	**P**	**02 00 38.7**	**+0.1**
	1.2nm,0.5s,mb4.2,baz=133,slow=7.6,SNR=38						
ZALV	**Zalesovo Beam**	**70.64**	**337**	P	**P**	**02 01 02.0**	**-1.7**
	1.2nm,0.6s,mb4.0,baz=120,slow=5.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**123.44**	**280**	PKP	PKPdf	02 08 44.3	-2.1
	0.3nm,0.6s,baz=48,slow=1.7,SNR=11						

MOS ***01*** *02:01:01.2±0.8, 3.93N×96.35E, h33km, mb5.8/126, MS4.4/19, Error ellipse: s-maj=9.9km s-min=3.9km az=128.5*
ISCJB ***01*** *02:01:03.7±0.1, 3.77N±0.03×96.28E±0.02, h57km, mb5.6/287, MS4.5/53, Error ellipse: s-maj=3.7km s-min=2.4km az=15.7*
CRAAG ***01*** *02:01:03.8, 3.84N×96.36E, Mb5.6*
BJI ***01*** *02:01:05.0, 3.61N×96.11E, h92km, mB5.2, mb5.5*
IDC ***01*** *02:01:05.0±0.6, 3.85N×96.35E, h56km±4km, mb5.0/27, mb1 5.1/28, mb1mx5.1/28, mbtmp5.0/28, MS4.4/24, Ms1 4.4/24, ms1mx4.3/35, Error ellipse: s-maj=12.5km s-min=7.8km az=49.0*
SZGRF ***01*** *02:01:06.4, 3.71N×95.85E, h55km, mb5.7, Off west coast of northern Sumatera, Indonesia*
GCMT ***01*** *02:01:07.0±0.3, 3.60N×96.23E, h43km±1km, MW5.2/70, Moment Tensor Solution. s57,c79; s70,c122; Duration: 1.0 Moment tensor: Scale 10^17 Nm; Mrr0.53±.03; Mθθ-0.29±.02; Mφφ-0.23±.03; Mrθ0.34±.02; Mθφ-0.42±.02; Mφr-0.67±.03; Best double couple: M0 0.92900×10^17 NP1: φs71.00000°, δ41.00000°, λ146.00000°. NP2: φs188.00000°, δ69.00000°, λ54.00000°. Principal axes: T 1.1090, Plg52.0000°, Azm55.0000°; N -0.3590, Plg33.0000°, Azm203.0000°; P -0.7490, Plg16.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *02:01:07.0±0.6, 3.78N×96.34E, h74km±5km, mb5.6/179 Error ellipse: s-maj=4.3km s-min=2.5km az=220.0*
NEIC Felt [IV] at Meulaboh and [III] at Banda Aceh.
ISC 01 02:01:05.5±0.1**, 3.76N**±0.02×**96.27E**±0.02**, h59**km**, h59**km±1.6km**: pP-P, n1176, σ0.85**/875**, mb5.6**/286**, MS4.5**/53**, 333C-106D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**1.98**	**331**	P	**Pn**	**02 01 36.3**	**-0.4**
	21μm,0.6s						
PSI	**Prapat**	**2.82**	**110**	P	**Pn**	**02 01 49.7**	**+1.6**
PSI				pmax	pmax		
	comp=Z,108nm,0.3s						
PSI	**Prapat**	**2.82**	**110**	P	**Pn**	**02 01 49.6**	**+1.5**
	comp=Z,108nm,0.3s,baz=292,slow=9.1,SNR=124						
KULM	**Kulim**	**4.62**	**71**	⇑*i*Pn	**Pn**	**02 02 14.6**	**+1.7**
KULM				*e*Sn	**Sn**	**02 03 04.2**	**-1.0**
KULM	**Kulim**	**4.62**	**71**	⇓P	**Pn**	**02 02 14.7**	**+1.8**
IPM	**Ipoh**	**4.80**	**81**	⇑P	**Pn**	**02 02 16.8**	**+1.5**
FRIM	**Kepong**	**5.37**	**95**	⇑P	**Pn**	**02 02 25.5**	**+2.3**
PPI	**Padang Panjang**	**5.88**	**135**	P	**Pn**	**02 02 29.0**	**-1.1**
	comp=Z,592nm,1.5s						
KTGM	**Kuala Trenggan**	**7.02**	**77**	⇑P	**Pn**	**02 02 47.9**	**+2.2**
KGM	**Kluang**	**7.25**	**104**	⇓P	**Pn**	**02 02 51.1**	**+2.2**
MYKOM	**Kota Tinggi**	**7.82**	**104**	⇑P	**Pn**	**02 02 58.6**	**+1.9**
NNT	**Nongplab**	**9.41**	**21**	P	**Pn**	**02 03 22.0**	**+3.5**
NST	**Nakhon Sawan**	**12.43**	**18**	P	**Pn**	**02 04 02.0**	**+2.3**
	comp=Z,117nm,1.0s						
TPI	**Tanjungpandan**	**13.09**	**119**	P	**Pn**	**02 04 08.7**	**-0.1**
	comp=Z,72nm,1.1s						
BDT	**Bhumibol Dam**	**13.66**	**11**	P	**Pn**	**02 04 18.0**	**+1.5**
	comp=Z,20nm,1.0s						
SBJI	**Serang**	**13.90**	**135**	P	**Pn**	**02 04 19.3**	**-0.4**
	comp=Z,231nm,1.3s						
KSM	**Kuching**	**14.21**	**99**	*e*Pn	**Pn**	**02 04 24.5**	**+0.8**
KSM				*e*P		02 04 30.3	
KSM	**Kuching**	**14.21**	**99**	⇑P	**Pn**	**02 04 25.4**	**+1.7**
CHG	**Chiang Mai**	**15.19**	**10**	⇑P	**Pn**	**02 04 38.4**	**+1.9**
	comp=Z,150nm,1.0s						
CHTO	**Chiang Mai**	**15.19**	**10**	*e*P	**Pn**	**02 04 37.9**	**+1.4**
	comp=Z,95nm,0.9s						
CHTO	**Chiang Mai**	**15.19**	**10**	*e*P	**Pn**	**02 04 38.3**	**+1.8**
CHTO				pmax	pmax		
	comp=Z,95nm,0.9s						
PALK	**Pallekele**	**15.88**	**283**	Pn	**Pn**	**02 04 45.0**	**-0.4**
	comp=Z,1μm,1.2s,SNR=16						
PALK	**Pallekele**	**15.88**	**283**	*e*Pn	**Pn**	**02 04 44.6**	**-0.8**
PALK	**Pallekele**	**15.88**	**283**	P	**Pn**	**02 04 45.9**	**+0.5**
	SNR=23						
SBUM	**Sibu**	**15.98**	**94**	⇑P	**Pn**	**02 04 48.0**	**+1.3**
CHRT	**Chiangrai**	**16.37**	**12**	⇑P	**Pn**	**02 04 54.0**	**+2.4**
	comp=Z,500nm,0.8s						
BTM	**Bintulu**	**16.79**	**91**	⇑P	**Pn**	**02 04 58.2**	**+1.3**
MDRS	**Chennai**	**18.34**	**301**	⇓*i*P	**Pn**	**02 05 15.5**	**-0.3**
MDRS				*e*S	**S**	**02 08 44.5**	**+3.4**
MDRS				*e*x	x	02 08 57.5	
MDRS				*e*x	x	02 10 10.5	
MDRS				*e*x	x	02 16 01.5	
VIS	**Vishakhapatnam**	**18.80**	**319**	*i* P	**Pn**	**02 05 21.2**	**-0.1**
VIS				*i* x	x	02 08 36.5	
KOD	**Kodaikanal**	**19.73**	**290**	*e*P	**Pn**	**02 05 31.9**	**-0.6**
TRD	**Trivandrum**	**19.77**	**285**	⇓*i*P	**Pn**	**02 05 32.0**	**-0.9**
TRD				*i* x	x	02 09 26.0	
KKM	**Kota Kinabalu**	**20.00**	**83**	*e*P	**Pn**	**02 05 34.1**	**-1.6**
KKM				*e*PcP	PcP	02 09 47.4	-0.5
KKM	**Kota Kinabalu**	**20.00**	**83**	⇓P	**Pn**	**02 05 34.0**	**-1.6**
QIZ	**Qiongzhong**	**20.15**	**40**	⇑*i*P	**P**	**02 05 36.1**	**+1.1**
QIZ				S	**S**	**02 09 17.9**	**-0.3**
QIZ				AMB	AMB		
	comp=Z,264nm,0.8s						
QIZ				LR	LR		
	comp=N,1μm,17.9s,MS4.5						
QIZ				LR	LR		
	comp=E,2μm,17.7s,MS4.5						
QIZ				LR	LR		
	comp=Z,2μm,19.3s,MS4.5						
QIZ	**Qiongzhong**	**20.15**	**40**	*e*P	**P**	**02 05 36.5**	**+1.5**
	comp=Z,203nm,0.8s						
KMMI	**Kalianget**	**20.67**	**121**	P	**P**	**02 05 36.7**	**-4.0**
	comp=Z,450nm,1.1s						
KDM	**Kudat**	**20.71**	**80**	⇓P	**P**	**02 05 41.3**	**+0.2**
SDKM	**Sandakan**	**20.94**	**84**	⇑P	**P**	**02 05 44.6**	**+1.0**
TARAI	**Tarakan**	**21.26**	**90**	P	**P**	**02 05 48.4**	**+1.3**
	comp=Z,1μm,0.8s,mb6.3						
TSM	**Tawau**	**21.55**	**88**	⇑P	**P**	**02 05 50.7**	**+0.4**
NBBI	**Negara**	**21.91**	**123**	P	**P**	**02 05 53.5**	**-0.5**
	comp=Z,236nm,1.2s,mb5.5						
BATP	**Bataraza**	**21.97**	**76**	*e*P	**P**	**02 05 54.0**	**-0.7**
HYB	**Hyderabad**	**22.04**	**309**	*e*P	**P**	**02 05 56.5**	**+1.1**
	comp=Z,200nm,1.0s,mb5.5						
HYB				*e*S	**S**	**02 09 56.0**	**+0.7**
HYB	**Hyderabad**	**22.04**	**309**	*e*P	**P**	**02 05 56.5**	**+1.1**
HYB				*e*S	**S**	**02 09 56.0**	**+0.7**
HYB				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.5						
HYB	**Hyderabad**	**22.04**	**309**	*i* P	**P**	**02 05 56.5**	**+1.1**
	comp=Z,200nm,1.0s,mb5.5						
HYB				*e*S	**S**	**02 09 56.0**	**+0.7**
SHL	**Shillong**	**22.08**	**349**	*e*P	**P**	**02 05 51.6**	**-4.1**
SHL				AMb	AMB	02 05 56.0	
	comp=Z,1μm,1.3s,mb6.2						
SHL				*i* S	**S**	**02 09 50.5**	**-5.5**
KMI	**Kunming**	**22.13**	**16**	⇑P	**P**	**02 05 58.1**	**+1.9**
KMI				AP		02 06 12.6	
KMI				AP		02 06 18.5	
KMI				PP		02 06 27.6	
KMI				S	**S**	**02 09 55.0**	**-1.9**
KMI				SS		02 10 38.6	
KMI				AMB	AMB		
	comp=Z,182nm,0.9s,mb5.5						
KMI				AMB	AMB		
	comp=Z,393nm,3.1s						
KMI				LR	LR		
	comp=N,1μm,14.6s,MS4.5						
KMI				LR	LR		
	comp=E,1μm,18.6s,MS4.5						
KMI				LR	LR		
	comp=Z,1μm,25.6s						
KMI	**Kunming**	**22.13**	**16**	⇑P	**P**	**02 05 58.1**	**+1.9**
	comp=Z,182nm,0.9s,mb5.5						
KMI				pP		02 06 12.6	
KMI				sP	sP	02 06 18.5	+1.7
KMI				PP		02 06 27.6	
KMI				PPP		02 06 37.5	
KMI				S	**S**	**02 09 55.0**	**-1.9**
KMI				sS	sS	02 10 17.7	-0.8
KMI				SS		02 10 38.6	
KMI				SSS		02 10 53.7	
KMI				LR	LR		
	comp=Z,1μm,25.6s,MS4.3						
KMI	**Kunming**	**22.13**	**16**	⇑P	**P**	**02 05 58.1**	**+1.9**
KMI				*PP		02 06 12.6	
KMI						02 06 27.6	
KMI				PPP		02 06 37.5	
KMI				S	**S**	**02 09 55.0**	**-1.9**
KMI				SS		02 10 38.6	
KMI				SSS		02 10 53.7	
KMI				pmax	pmax		
	comp=Z,182nm,0.9s,mb5.5						
KMI				MLR	MLR		
	comp=Z,1μm,25.6s,MS4.3						
MYLDM	**Lahad Datu**	**22.21**	**86**	⇑P	**P**	**02 05 57.8**	**+0.6**
MNGI	**Mangalore**	**23.07**	**295**	*i* P	**P**	**02 06 07.0**	**+0.6**
MNGI				*i* S	**S**	**02 10 13.7**	**+0.7**
PPR	**Puerto Princes**	**23.08**	**74**	⇓*e*P	**P**	**02 06 07.0**	**+0.6**
PCI	**Palu**	**24.00**	**101**	P	**P**	**02 06 14.9**	**-0.1**
	comp=Z,586nm,1.2s,mb5.9						
NGP	**Nagpur**	**24.06**	**317**	*e*P	**P**	**02 06 15.0**	**-0.4**
NGP				*e*x	x	02 06 29.8	
	comp=Z,277nm,1.5s						
NGP				*e*S	**S**	**02 10 28.0**	**-0.9**
ENPP	**El Nido**	**24.10**	**71**	*e*P	**P**	**02 06 15.3**	**-0.5**
LATR	**Latur**	**24.17**	**309**	*e*P	**P**	**02 06 15.0**	**-1.4**
LATR				*e*S	**S**	**02 10 42.2**	**+12**
ODAN	**Odare**	**24.49**	**341**	*e*P	**P**	**02 06 18.8**	**-0.4**
	comp=Z,148nm,0.7s,mb5.5						
GYA	**Guiyang**	**24.67**	**23**	⇑*i*P	**P**	**02 06 20.7**	**-0.2**
GYA				AP		02 06 43.5	
GYA				PP		02 07 01.4	
GYA				PCP	PcP	02 09 59.4	+2.3
GYA				S	**S**	**02 10 38.6**	**+0.2**
GYA				SS		02 11 38.8	
GYA				PCS	PcS	02 13 38.0	+0.7
GYA				AMB	AMB		
	comp=Z,190nm,0.9s,mb5.6						
GYA				AMB	AMB		
	comp=Z,1μm,7.8s						
GYA				LR	LR		
	comp=N,2μm,17.8s,MS5.1						
GYA				LR	LR		
	comp=E,5μm,16.4s,MS5.1						
GYA				LR	LR		
	comp=Z,7μm,16.2s,MS5.2						
TAPN	**Taplejung**	**24.84**	**342**	*e*P	**P**	**02 06 22.4**	**0.0**
	comp=Z,213nm,0.7s,mb5.8						
JBP	**Jabalpur**	**24.91**	**322**	⇑*e*P	**P**	**02 06 23.6**	**+0.5**
JBP				*e*S	**S**	**02 10 42.8**	**+0.4**
GOA	**Goa**	**24.97**	**299**	*e*x	x	02 06 19.3	
KAD	**Karad**	**25.50**	**303**	*i* P	**P**	**02 06 30.1**	**+1.5**
JIRN	**Jiri**	**25.64**	**339**	*e*P	**P**	**02 06 29.6**	**-0.1**
	comp=Z,290nm,0.7s,mb5.9						
LUBP	**Lubang**	**25.66**	**66**	*e*P	**P**	**02 06 29.1**	**-0.9**
KKN	**Kakani**	**26.09**	**337**	*e*P	**P**	**02 06 33.3**	**-0.5**
	comp=Z,225nm,0.9s,mb5.7						
KKN	**Kakani**	**26.09**	**337**	*e*P	**P**	**02 06 33.3**	**-0.5**
KKN				pmax	pmax		
	comp=Z,225nm,0.9s,mb5.7						
LSA	**Lhasa**	**26.25**	**350**	P	**P**	**02 06 35.2**	**0.0**
LSA				AP	pP	02 06 54.8	+5.1
LSA				AMB	AMB		
	comp=Z,180nm,0.9s,mb5.6						
LSA				LR	LR		
	comp=N,370nm,26.0s						
LSA				LR	LR		
	comp=E,830nm,35.9s						
LSA				LR	LR		
	comp=Z,850nm,24.7s,MS4.2						
LSA	**Lhasa**	**26.25**	**350**	⇑*i*P	**P**	**02 06 35.3**	**+0.1**
	comp=Z,130nm,0.8s,mb5.5						
LSA				*e*PcP	PcP	02 10 02.3	+1.7
LSA				*e*S	**S**	**02 11 05.1**	**+1.7**
LSA	**Lhasa**	**26.25**	**350**	⇑*i*P	**P**	**02 06 35.3**	**+0.1**
LSA				*e*		02 10 02.3	
LSA				*e*S	**S**	**02 11 05.1**	**+1.7**
LSA				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.5						
POO	**Poona**	**26.39**	**305**	*e*P	**P**	**02 06 37.0**	**+0.4**
GKN	**Gorkha**	**26.53**	**336**	*e*P	**P**	**02 06 37.5**	**-0.3**
	comp=Z,409nm,0.8s,mb6.0						
GUIM	**Jordan**	**26.97**	**74**	*e*P	**P**	**02 06 41.7**	**-0.2**
BOAC	**Boac**	**27.03**	**68**	*e*P	**P**	**02 06 37.2**	**-5.2**
PAGZ	**Pagadian**	**27.27**	**80**	*e*P	**P**	**02 06 44.5**	**-0.1**
POLP	**Polilio Island**	**27.54**	**65**	*e*P	**P**	**02 06 46.1**	**-0.9**
BALP	**Baler**	**27.59**	**63**	*e*P	**P**	**02 06 46.9**	**-0.5**
ABRA	**Dolores**	**27.64**	**58**	*e*P	**P**	**02 06 47.7**	**-0.2**
CD2	**Chengdu**	**27.91**	**14**	⇑*i*P	**P**	**02 06 49.6**	**-0.5**
CD2				AP	pP	02 07 11.4	+6.7
CD2				PP	PP	02 07 40.2	-14
CD2				PCP	PcP	02 10 03.5	-1.1
CD2				S	**S**	**02 11 26.4**	**-3.2**
CD2				SS		02 12 52.1	
CD2				PCS	PcS	02 13 44.4	-2.3
CD2				AMB	AMB		
	comp=Z,130nm,0.7s,mb5.7						
CD2				AMB	AMB		
	comp=Z,120nm,7.2s						
CD2				LR	LR		
	comp=N,740nm,15.4s,MS4.5						
CD2				LR	LR		
	comp=E,700nm,15.6s,MS4.5						
CD2				LR	LR		
	comp=Z,580nm,22.2s						
APYP	**Conner**	**28.19**	**58**	*e*P	**P**	**02 06 53.1**	**+0.4**
BUKP	**Musuan**	**28.93**	**81**	*e*P	**P**	**02 07 00.3**	**+1.0**
OCLP	**Ormoc**	**29.00**	**74**	*e*P	**P**	**02 06 59.0**	**-1.0**
MSLP	**Maasin**	**29.06**	**76**	*e*P	**P**	**02 06 59.9**	**-0.7**
PVCP	**Virac**	**29.21**	**69**	*e*P	**P**	**02 06 59.5**	**-2.3**
CNP	**Catarman**	**29.39**	**71**	*e*P	**P**	**02 06 57.2**	**-6.2**
BUTP	**Butuan**	**29.61**	**79**	*e*P	**P**	**02 07 04.7**	**-0.8**
QZH	**Quanzhou**	**30.08**	**43**	⇑*i*P	**P**	**02 07 12.2**	**+2.8**
QZH				*e*S	**S**	**02 12 05.8**	**+1.9**
QZH				AMB	AMB		
	comp=Z,160nm,0.9s,mb5.8						
QZH				LR	LR		
	comp=Z,3μm,31.5s,MS4.7						
NDI	**New Delhi**	**30.70**	**326**	*e*P	**P**	**02 07 14.6**	**-0.3**
NDI				AMb	AMB	02 07 15.7	
	comp=Z,195nm,1.2s,mb5.8						
WHN	**Wuhan**	**31.64**	**31**	⇑P	**P**	**02 07 23.5**	**+0.4**
WHN				PCP	PcP	02 10 14.2	0.0
WHN				AMB	AMB		
	comp=Z,188nm,1.2s,mb5.8						
WHN				LR	LR		
	comp=Z,2μm,24.6s,MS4.7						
XAN	**Xi'an**	**32.34**	**20**	P	**P**	**02 07 28.6**	**-0.6**
XAN				AMB	AMB		
	comp=Z,131nm,0.9s,mb5.8						
XAN				AMB	AMB		
	comp=Z,184nm,8.7s						
XAN				LR	LR		
	comp=N,321nm,28.4s						
XAN				LR	LR		
	comp=E,586nm,19.7s						
XAN				LR	LR		
	comp=Z,761nm,16.5s						
AAI	**Ambon**	**32.75**	**103**	P	**P**	**02 07 32.2**	**-0.9**
	comp=Z,176nm,1.3s,mb5.8						
LZH	**Lanzhou**	**32.92**	**11**	⇑*i*P	**P**	**02 07 34.0**	**-0.2**
LZH				AP	pP	02 07 52.2	+3.2
LZH				PP	PP	02 08 47.3	-2.3
LZH				PCP	PcP	02 10 17.5	0.0
LZH				S	**S**	**02 12 46.2**	**-1.7**
LZH				SCP	ScP	02 13 53.7	-3.1
LZH				PCS	PcS	02 14 01.2	-1.7
LZH				SS	SS	02 14 50.4	-21
LZH				AMB	AMB		
	comp=Z,132nm,1.2s,mb5.7						
LZH				AMB	AMB		
	comp=Z,486nm,7.8s						
LZH				LR	LR		
	comp=E,3μm,13.1s						
LZH				LR	LR		
	comp=Z,4μm,16.7s,MS5.2						
LZH	**Lanzhou**	**32.92**	**11**	⇑*i*P	**P**	**02 07 34.0**	**-0.2**
	comp=Z,132nm,1.2s,mb5.7						
LZH				pP	pP	02 07 52.2	+3.2
LZH				sP	sP	02 08 01.5	+5.5
LZH				PP	PP	02 08 47.3	-2.3
LZH				PcP	PcP	02 10 17.5	0.0
LZH				S	**S**	**02 12 46.2**	**-1.7**
LZH				sS	sS	02 13 16.9	+3.9
LZH				ScP	ScP	02 13 53.7	-3.1
LZH				PcS	PcS	02 14 01.2	-1.7
LZH				SS	SS	02 14 50.4	-21
LZH				ScS	ScS	02 17 55.0	-1.9
LZH				LR	LR		
	comp=Z,4μm,16.7s,MS5.2						
LZH	**Lanzhou**	**32.92**	**11**	⇑*i*P	**P**	**02 07 34.0**	**-0.2**
LZH				*PP	pP	02 07 52.2	+3.2

LZH 02 08 47.3
LZH 02 10 17.5
LZH S **S** **02 12 46.2 -1.7**
LZH 02 17 55.0
LZH pmax pmax
comp=Z,132nm,1.2s,mb5.7
LZH MLR MLR
comp=Z,4μm,16.7s,MS5.2
MBWA Marble Bar 33.80 138 *e*P **P** **02 07 40.4 -1.6**
comp=Z,15nm,0.6s,mb5.1
MBWA *e*PcP PcP 02 10 19.4 -0.9
THN Thein Dam 34.42 328 *e*P **P** **02 07 46.2 -1.1**
THN *e*S **S** **02 13 08.9 -2.4**
NJ2 Nanjing 35.23 34 *e*P **P** **02 07 55.4 +1.0**
NJ2 AP pP 02 08 16.5 +7.3
NJ2 PP PP 02 09 14.6 -0.7
NJ2 S **S** **02 13 24.0 +0.2**
NJ2 AMB AMB
comp=Z,90nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,590nm,4.9s
NJ2 LR LR
comp=N,1μm,21.0s
NJ2 LR LR
comp=E,890nm,15.3s
NJ2 LR LR
comp=Z,890nm,15.3s
GTA Gaotai 35.63 5⇑*i*P **P** **02 07 57.3 -0.3**
GTA AP pP 02 08 20.2 +7.7
GTA PP PP 02 09 17.9 -1.7
GTA PCP PcP 02 10 25.8 +0.5
GTA S **S** **02 13 30.0 +0.3**
GTA PCS PcS 02 14 12.2 -0.2
GTA SS SS 02 15 52.5 -14
GTA AMB AMB
comp=Z,114nm,1.0s,mb5.8
GTA AMB AMB
comp=Z,344nm,7.6s
GTA LR LR
comp=N,250nm,22.0s,MS4.3
GTA LR LR
comp=E,442nm,17.1s,MS4.3
GTA LR LR
comp=Z,528nm,17.9s,MS4.3
SSE Sheshan 35.92 38 *e*P **P** **02 08 01.0 +0.7**
SSE AP pP 02 08 19.6 +4.4
SSE PP PP 02 09 24.8 +1.9
SSE PCP PcP 02 10 23.1 -3.2
SSE S **S** **02 13 37.0 +2.6**
SSE SCS ScS 02 18 00.9 -12
SSE AMB AMB
comp=Z,28nm,1.1s,mb5.1
SSE AMB AMB
comp=Z,218nm,3.5s
SSE LR LR
comp=N,730nm,21.7s,MS4.5
SSE LR LR
comp=E,418nm,21.7s,MS4.5
SSE LR LR
comp=Z,1μm,18.2s,MS4.7
SSE Sheshan 35.92 38 *e*P **P** **02 08 01.0 +0.7**
comp=Z,28nm,1.1s,mb5.1
SSE pP pP 02 08 19.6 +4.4
SSE sP sP 02 08 27.0 +4.9
SSE PP PP 02 09 24.8 +1.9
SSE PcP PcP 02 10 23.1 -3.2
SSE S **S** **02 13 37.0 +2.6**
SSE sS sS 02 14 03.9 +4.2
SSE ScS ScS 02 18 00.9 -12
SSE LR LR
comp=Z,1μm,18.2s,MS4.7
FITZ Fitzroy Crossi 36.20 128⇑*i*P **P** **02 08 00.8 -2.0**
comp=Z,69nm,0.6s,mb5.8
FITZ *e*pP pP 02 08 16.6 -1.1
TIA Tai'an 37.58 28 P **P** **02 08 14.0 -0.3**
QUE Quetta 38.19 317 *e*P **P** **02 08 16.0 -3.6**
QUE *e*S **S** **02 14 01.0 -8.0**
BTO Baotou 38.72 17 *e*P **P** **02 08 23.9 +0.1**
BTO AMB AMB
comp=Z,19nm,1.3s,mb4.7
HHC Hu-ho-hao-te 39.41 18 ⇑P **P** **02 08 30.7 +1.1**
HHC AP pP 02 08 48.5 +3.9
HHC XP sP 02 08 58.0 +6.5
HHC PP PP 02 10 07.0 +6.0
HHC PCP PcP 02 10 34.3 -2.5
HHC SCP ScP 02 14 17.0 -3.6
HHC PCS PcS 02 14 26.1 -0.5
HHC S **S** **02 14 28.1 +1.1**
HHC XS sS 02 14 58.8 +6.3
HHC SS SS 02 17 18.7 -4.4
HHC AMB AMB
comp=Z,108nm,1.1s,mb5.5
HHC AMB AMB
comp=Z,255nm,3.8s
HHC LR LR
comp=N,684nm,14.0s,MS4.7
HHC LR LR
comp=E,339nm,12.3s,MS4.7
HHC LR LR
comp=Z,786nm,15.5s,MS4.7
KAKA Kakadu 39.48 115 *e*P **P** **02 08 28.3 -2.3**
comp=Z,71nm,0.6s,mb5.6
KBL Kabul 39.71 324 *e*P **P** **02 08 31.8 -0.4**
MUN Mundaring 40.28 153 *e*P **P** **02 08 37.2 +0.2**
BJT Baijiatuan 40.33 24⇑*i*P **P** **02 08 38.1 +0.9**
comp=Z,66nm,0.8s,mb5.4
BJT *e*PcP PcP 02 10 39.2 -0.5
BJT Baijiatuan 40.33 24⇑*i*P **P** **02 08 38.1 +0.9**
BJT *e* 02 10 39.3
BJT pmax pmax
comp=Z,66nm,0.8s
BJI Beijing 40.35 24 P **P** **02 08 38.5 +1.1**
BJI AP pP 02 08 57.8 +5.3
BJI PP PP 02 10 11.8 +0.5
BJI PCP PcP 02 10 40.3 +0.5
BJI S **S** **02 14 44.3 +3.2**
BJI AMB AMB
comp=Z,109nm,1.2s,mb5.5
BJI LR LR
comp=N,345nm,15.1s,MS4.5
BJI LR LR
comp=E,384nm,13.8s,MS4.5
BJI LR LR
comp=Z,639nm,31.7s
BJI Beijing 40.35 24 P **P** **02 08 38.5 +1.1**
comp=Z,0.1nm,1.2s
BJI pP pP 02 08 51.7 -0.8
BJI sP sP 02 08 57.8 -1.6
BJI PP PP 02 10 11.8 +0.5
BJI PcP PcP 02 10 40.3 +0.5
BJI S **S** **02 14 44.3 +3.2**
BJI SS SS 02 17 44.0 +2.0
BJI LR LR
comp=Z,640nm,31.7s,MS4.3
BJI Beijing 40.35 24 P **P** **02 08 38.5 +1.1**
BJI *PP pP 02 08 51.7 -0.8
BJI 02 10 11.8
BJI 02 10 40.3
BJI S **S** **02 14 44.3 +3.2**
BJI SS SS 02 17 44.0 +2.0
BJI MLR MLR
comp=Z,640nm,31.7s,MS4.3
WMQ Urumqi 40.61 350⇑*i*P **P** **02 08 39.3 -0.2**
WMQ AP pP 02 09 01.5 +6.9
WMQ PP PP 02 10 17.5 +3.5
WMQ PCP PcP 02 10 41.5 +0.9
WMQ S **S** **02 14 44.0 -0.8**
WMQ AMB AMB
comp=Z,63nm,1.2s,mb5.1
WMQ AMB AMB
comp=Z,64nm,3.5s
WMQ LR LR
comp=N,269nm,26.5s,MS4.2
WMQ LR LR
comp=E,365nm,25.5s,MS4.2
WMQ LR LR
comp=Z,191nm,20.9s,MS3.9
KLBR Kellerberrin 40.68 151 *e*P **P** **02 08 40.0 -0.2**
comp=Z,23nm,0.7s,mb4.9
NWAO Narrogin (SRO) 41.55 153 P **P** **02 08 46.5 -0.9**
NWAO PcP PcP 02 10 42.4 -1.4
NWAO Narrogin (SRO) 41.55 153 P **P** **02 08 46.5 -0.8**
NWAO 02 10 42.4
NWAO pmax pmax
comp=Z,22nm,0.7s
NWAO Narrogin (SRO) 41.55 153 P **P** **02 08 46.5 -0.9**
comp=Z,22nm,0.7s,mb4.9,baz=340,slow=10,SNR=9.9
NWAO PcP PcP 02 10 42.4 -1.4
comp=Z,15nm,0.8s,baz=48,slow=5.8,SNR=2.9
DL2 Dalian 41.90 30⇑*i*P **P** **02 08 50.9 +0.8**
DL2 AP pP 02 09 13.5 +8.2
DL2 *e*S **S** **02 15 06.1 +2.0**
DL2 AMB AMB
comp=Z,80nm,0.7s,mb5.5
DL2 AMB AMB
comp=Z,150nm,7.1s
DL2 LR LR
comp=N,330nm,16.8s,MS4.4
DL2 LR LR
comp=E,280nm,14.2s,MS4.4
DL2 LR LR
comp=Z,410nm,17.4s,MS4.4
ULHL Ulahol 42.29 338 P **P** **02 08 53.8 +0.6**
SNR=8.3
KZA Kyzart 42.52 337 P **P** **02 08 55.9 +0.7**
SNR=30
UCH Uchtor 42.95 336⇑*i*P **P** **02 08 59.2 +0.6**
UCH *e*ScP ScP 02 14 36.3 +1.7
UCH Uchtor 42.95 336 P **P** **02 08 59.5 +0.9**
SNR=91
ARQ Araqi 43.04 301 ⇓P **P** **02 09 02.1 +2.4**
SNR=6.8
TKM2 Tokmak 2 43.11 338⇑*i*P **P** **02 08 59.9 0.0**
comp=Z,58nm,1.1s,mb5.2
TKM2 Tokmak 2 43.11 338⇑*i*P **P** **02 08 59.9 0.0**
TKM2 pmax pmax
comp=Z,58nm,1.1s,mb5.2
TKM2 Tokmak 2 43.11 338 P **P** **02 09 00.3 +0.3**
SNR=33
KBK Karagaybulak 43.13 337 P **P** **02 09 01.1 +1.0**
SNR=56
AML Almayashu 43.20 335 P **P** **02 09 01.6 +0.9**
SNR=53
AAK Ala-Archa 43.29 336 P **P** **02 09 01.5 +0.1**
comp=Z,260nm,1.0s,mb5.9,SNR=27
AAK Ala-Archa 43.29 336 *e*P **P** **02 09 01.0 -0.4**
comp=Z,23nm,0.6s,mb5.1
AAK *e*PcP PcP 02 10 49.8 +0.3
AAK *e*ScP ScP 02 14 36.3 +0.3
AAK Ala-Archa 43.29 336 *c*⇑*i*P **P** **02 09 01.1 -0.3**
AAK pmax pmax
comp=Z,47nm,1.0s,mb5.2
AAK Ala-Archa 43.29 336 P **P** **02 09 01.3 -0.1**
SNR=24
AAK Ala-Archa 43.29 336 P **P** **02 09 02.0 +0.6**
SNR=35
FRU Bishkek 43.41 337 *e*P **P** **02 09 02.0 -0.4**
FRU *e* 02 15 28.0
FRU *e* 02 15 48.0
FRU pmax pmax
comp=Z,140nm,2.0s,mb5.3
CHMS Chumysh 43.50 337 P **P** **02 09 03.0 0.0**
SNR=21
EKS2 Erkin-Say 43.61 336⇑*i*P **P** **02 09 04.3 +0.3**
comp=Z,30nm,0.7s,mb5.1
EKS2 Erkin-Say 43.61 336 P **P** **02 09 04.4 +0.5**
SNR=36
USP Ospenovka 43.83 337 P **P** **02 09 05.9 +0.2**
SNR=17
WHFO Wadi Hawf 43.91 292 P **P** **02 09 08.2 +1.4**
SNR=16
WRA Warramunga Arr 44.20 124 P **P** **02 09 08.0 -1.0**
WRA *PP pP 02 09 23.3 -1.0
WRA 02 10 52.5
WRA pmax pmax
comp=Z,67nm,0.6s
WRA pmax pmax
comp=N,85nm,0.6s
WRA MLR MLR
comp=Z,325nm,21.9s
WRA Warramunga Arr 44.20 124 P **P** **02 09 08.0 -1.0**
comp=Z,67nm,0.6s,mb5.5,baz=301,slow=9.2,SNR=415
WRA pP pP 02 09 23.3 -0.9
comp=Z,85nm,0.6s,baz=302,slow=9.2,SNR=11
WRA PcP PcP 02 10 52.5 -0.5
comp=Z,14nm,0.7s,baz=295,slow=2.9,SNR=5.1
WRA ScP ScP 02 14 38.9 -1.2
comp=Z,3.1nm,0.8s,baz=308,slow=3.7,SNR=4.7
WRA LR LR 02 27 58.9
comp=Z,325nm,21.9s,MS4.2,baz=290,slow=36
WB2 Warramunga Arr 44.21 124⇑*i*P **P** **02 09 08.0 -1.1**
WB2 *e*pP pP 02 09 23.8 -0.5
ABTO Aybut 44.22 291 ⇑P **P** **02 09 10.8 +1.6**
SNR=9.9
KSRS Korea Array 44.32 37 P **P** **02 09 08.8 -0.9**
comp=Z,20nm,0.8s,mb4.9,baz=227,slow=9.1,SNR=68
KSRS PcP PcP 02 10 52.9 -0.3
comp=Z,8.0nm,0.6s,baz=220,slow=2.7,SNR=10
KSRS LR LR 02 30 10.2
comp=Z,899nm,18.8s,MS4.7,baz=225,slow=40
MK31 Makanchi Array 44.55 346 *e*P **P** **02 09 10.8 -0.6**
MKAR Makanchi Array 44.55 346 P **P** **02 09 10.7 -0.7**
MKAR S **S** **02 15 39.6 -3.1**
MKAR pmax pmax
comp=Z,215nm,0.8s,mb6.0,baz=161,slow=7.8,SNR=950
MKAR S **S** **02 15 39.6 -3.1**
comp=Z,1.0nm,1.0s,baz=161,slow=18,SNR=2.4
MKAR LR LR 02 30 11.7
comp=Z,258nm,19.9s,MS4.2,baz=161,slow=39
SONM Songino Array 44.76 10 P **P** **02 09 13.1 0.0**
SONM PcP PcP 02 10 54.7 +0.3
SONM ScP ScP 02 14 41.9 +0.1
SONM LR LR 02 30 13.2
SONM Songino Array 44.76 10 P **P** **02 09 13.1 0.0**
comp=Z,50nm,0.7s,mb5.4,baz=189,slow=8.9,SNR=319
SONM PcP PcP 02 10 54.7 +0.3
comp=Z,34nm,0.7s,baz=193,slow=4.0,SNR=12
SONM ScP ScP 02 14 41.9 +0.1
comp=Z,3.4nm,1.0s,baz=190,slow=1.9,SNR=5.1
SONM LR LR 02 30 13.2
comp=Z,726nm,18.7s,MS4.6,baz=192,slow=39
ULN Ulaanbaatar 44.91 10⇑*i*P **P** **02 09 13.9 -0.3**
comp=Z,47nm,0.9s,mb5.3
ULN *e*PcP PcP 02 10 55.0 +0.1
ULN *e*ScP ScP 02 14 42.9 +0.5
ULN Ulaanbaatar 44.91 10⇑*i*P **P** **02 09 14.0 -0.2**
ULN *e* 02 10 55.0
ULN pmax pmax
comp=Z,47nm,0.9s,mb5.3
ULN Ulaanbaatar 44.91 10 P **P** **02 09 14.4 +0.2**
SNR=23
SNY Shenyang 45.09 29 ⇑P **P** **02 09 15.4 -0.4**
SNY S **S** **02 15 50.6 -0.1**
SNY AMB AMB
comp=Z,78nm,0.8s,mb5.6
SNY AMB AMB
comp=Z,294nm,8.0s
SNY LR LR
comp=N,685nm,18.0s
SNY LR LR
comp=Z,660nm,19.8s,MS4.6
ASAR Alice Springs 45.69 129 P **P** **02 09 19.9 -0.9**
ASAR 02 10 57.9
ASAR S **S** **02 16 00.8 +0.9**
ASAR pmax pmax
comp=Z,32nm,0.6s
ASAR smax
comp=N,3.0nm,1.1s
ASAR Alice Springs 45.69 129 P **P** **02 09 19.9 -0.9**
comp=N,32nm,0.6s,mb5.5,baz=300,slow=7.7,SNR=374
ASAR PcP PcP 02 10 57.9 -0.3
comp=N,17nm,0.7s,baz=304,slow=3.5,SNR=11
ASAR ScP ScP 02 14 45.5 -0.7
comp=N,4.1nm,1.1s,baz=306,slow=3.5,SNR=5.1
ASAR S **S** **02 16 00.8 +0.9**
comp=N,3.1nm,1.1s,baz=305,slow=14,SNR=5.8
FORT Forrest 45.83 141⇑*i*P **P** **02 09 21.6 -0.2**
comp=N,112nm,0.6s,mb6.0
FORT *e*pP pP 02 09 38.2 +1.1
ZAK Zakamensk 46.83 6⇓*i*P **P** **02 09 28.8 -0.5**
ZAK *e* 02 11 02.0
ZAK pmax pmax
comp=Z,12nm,1.1s,mb4.7
CN2 Changchun 47.48 29 ⇑P **P** **02 09 34.1 -0.4**
CN2 PCP PcP 02 11 03.5 -0.5
CN2 *e*S **S** **02 16 24.0 -0.9**
CN2 AMB AMB
comp=Z,90nm,0.6s,mb5.9
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,17.0s,MS4.6
CN2 LR LR
comp=E,500nm,17.0s,MS4.6
CN2 LR LR
comp=Z,500nm,18.0s,MS4.5
MOY Mondy 47.90 4 *e*P **P** **02 09 37.1 -0.6**
MOY pmax pmax
comp=Z,53nm,2.4s,mb5.1
TLY Talaya 48.15 6 P **P** **02 09 39.6 0.0**
comp=Z,196nm,0.8s,mb6.2,SNR=6.5
TLY Talaya 48.15 6⇑*i*P **P** **02 09 39.8 +0.2**
comp=Z,25nm,0.8s,mb5.3
TLY *e*PcP PcP 02 11 06.5 +0.3
TLY Talaya 48.15 6 *e*P **P** **02 09 39.8 +0.2**
TLY *e* 02 11 08.5
TLY *e*S **S** **02 16 51.2 +17**
TLY pmax pmax
comp=Z,25nm,0.9s,mb5.2
TLY MLR MLR
comp=Z,812nm,24.0s,MS4.6
TLY Talaya 48.15 6 P **P** **02 09 39.9 +0.4**
SNR=20
ABKT Ailbek 48.67 319 P **P** **02 09 44.5 +0.7**
comp=Z,702nm,0.8s,mb6.7,SNR=23
KURK Kurchatov 49.09 345 P **P** **02 09 46.5 -0.3**
comp=Z,720nm,0.8s,mb6.8,SNR=83
KURK Kurchatov 49.09 345⇑*i*P **P** **02 09 46.4 -0.4**
comp=Z,91nm,0.8s,mb5.9
KURK *e*S **S** **02 16 47.8 +0.4**
KURK Kurchatov 49.09 345⇑*e*P **P** **02 09 46.4 -0.4**
KURK Kurchatov 49.09 345 P **P** **02 09 45.9 -0.9**
SNR=44
HIA Hailar 49.55 20⇑*i*P **P** **02 09 50.2 -0.1**
comp=Z,39nm,1.0s,mb5.4
HIA *e*PcP PcP 02 11 10.7 -0.7
HIA Hailar 49.55 20⇑*i*P **P** **02 09 50.2 -0.1**
HIA *e* 02 11 10.7
HIA pmax pmax
comp=Z,39nm,1.0s
COEN Coen 49.74 112 *e*P **P** **02 09 50.8 -1.6**
comp=Z,17nm,0.8s,mb5.1
COEN *e*PcP PcP 02 11 12.6 -0.1
MDJ Mudanjiang 50.12 31 P **P** **02 09 54.8 0.0**
MDJ AP pP 02 10 14.3 +4.0
MDJ PCS PcS 02 15 10.7 +0.2
MDJ S **S** **02 17 03.6 +1.6**
MDJ AMB AMB
comp=Z,29nm,1.3s,mb5.2
MDJ LR LR
comp=N,342nm,24.9s,MS4.4
MDJ LR LR
comp=E,359nm,23.3s,MS4.4
MDJ LR LR
comp=Z,517nm,22.7s,MS4.5
CIT Chita 50.20 14 *e*P **P** **02 09 55.5 +0.3**
CIT *e* 02 10 04.2
CIT pmax pmax
comp=Z,163nm,1.7s,mb5.8
VLA Vladivostok 50.33 34*de*P **P** **02 09 55.9 -0.5**
VLA *e*PP pP 02 10 10.3 -1.6
VLA *e* 02 11 12.7
VLA pmax pmax
comp=Z,240nm,2.1s,mb5.9
VLA MLR MLR
comp=Z,500nm,16.3s,MS4.6
MAJO Matsushiro 50.47 44 *e*P **P** **02 09 57.0 -0.6**
comp=Z,13nm,0.7s,mb5.1
MAJO *e*PcP PcP 02 11 15.8 +0.7
MAT Matsushiro 50.47 44 P **P** **02 09 56.1 -1.5**
MAT *e*S **S** **02 17 11.0 +3.8**
MJAR Matsushiro Arr 50.47 44 P **P** **02 09 56.3 -1.3**
MJAR 02 11 14.9
MJAR pmax pmax
comp=Z,16nm,1.0s
MJAR Matsushiro Arr 50.47 44 P **P** **02 09 56.3 -1.3**
comp=Z,16nm,1.0s,mb5.0,baz=242,slow=7.6,SNR=23
MJAR PcP PcP 02 11 14.9 -0.2
comp=Z,33nm,0.9s,baz=240,slow=3.4,SNR=21
MJAR ScP ScP 02 15 06.1 -0.1
comp=Z,2.6nm,1.0s,baz=242,slow=2.8,SNR=4.8
MJAR LR LR 02 31 00.2
comp=Z,369nm,20.8s,MS4.4,baz=250,slow=36
ZAL Zalesovo 50.89 351 P **P** **02 09 59.8 -0.6**
ZAL S **S** **02 17 11.0 -1.4**
ZAL 02 19 41.2
ZALV Zalesovo Beam 50.90 351 P **P** **02 09 59.8 -0.7**
ZALV ScP ScP 02 15 09.6 +2.0
ZALV S **S** **02 17 11.0 -1.5**
ZALV ScS ScS 02 19 41.2 -4.4
ZALV Zalesovo Beam 50.90 351 P **P** **02 09 59.8 -0.7**
comp=Z,113nm,1.0s,mb5.7,baz=181,slow=6.6,SNR=197
ZALV ScP ScP 02 15 09.6 +2.0
comp=Z,2.2nm,0.8s,baz=132,slow=2.1,SNR=4.6
ZALV S **S** **02 17 11.0 -1.5**
comp=Z,1.9nm,0.7s,baz=179,slow=9.9,SNR=4.4
ZALV ScS ScS 02 19 41.2 -4.4
comp=Z,5.0nm,1.1s,baz=217,slow=4.7,SNR=5.3
NVS Novosibirsk 52.01 350 *i*P **P** **02 10 07.3 -1.4**
NVS *i*S **S** **02 17 25.3 -2.4**
NVS pmax pmax
comp=N,56nm,1.1s
NVS pmax pmax
comp=Z,63nm,1.1s,mb5.5
NVS pmax pmax
comp=E,37nm,1.2s
NVS smax
comp=N,37nm,2.1s
NVS smax
comp=E,68nm,2.1s
QRN Al-Qurain 52.16 304 *e*P **P** **02 10 10.9 +0.6**
QRN AMb AMB 02 10 11.8
comp=Z,311nm,0.7s,mb6.3
PMG Port Moresby 52.37 105⇑*i*P **P** **02 10 11.4 -0.7**
comp=Z,132nm,0.8s,mb5.9
PMG Port Moresby 52.37 105⇑*i*P **P** **02 10 11.4 -0.7**
PMG pmax pmax
comp=Z,132nm,0.8s
PMG Port Moresby 52.37 105 P **P** **02 10 11.6 -0.6**
comp=Z,123nm,0.7s,mb5.9,baz=300,slow=4.4,SNR=30
KBD Kabd 52.48 304 *e*P **P** **02 10 13.4 +0.7**
KBD AMb AMB 02 10 14.3
comp=Z,902nm,0.7s,mb6.8
RDF Al-Radifah 52.52 304 *e*P **P** **02 10 13.8 +0.8**
RDF AMb AMB 02 10 14.6
comp=Z,414nm,0.8s,mb6.4
UMR Umm Al-Rimmam 52.59 305 *e*P **P** **02 10 13.9 +0.3**
UMR AMb AMB 02 10 15.3
comp=Z,222nm,0.8s,mb6.2
NAY Al-Naaiem 52.88 304 *e*P **P** **02 10 16.2 +0.5**
NAY AMb AMB 02 10 17.8
comp=Z,317nm,0.7s,mb6.4
MIB Mutribah 52.98 305 *e*P **P** **02 10 17.2 +0.8**
MIB AMb AMB 02 10 18.7
comp=Z,776nm,0.7s,mb6.7
RST Umm Al-Ruwaisa 53.16 304 *e*P **P** **02 10 18.1 +0.3**
RST AMb AMB 02 10 18.9
comp=Z,360nm,0.7s,mb6.4
OPO Ambohidratompo 53.18 244 P **P** **02 10 18.7 +0.7**
comp=Z,2.3nm,0.7s,mb4.2,baz=83,slow=13,SNR=5.1
OPO pP pP 02 10 33.5 -0.2
comp=Z,2.2nm,0.7s,baz=44,slow=12,SNR=3.1
BRVK Borovoye 53.60 341 P **P** **02 10 20.9 +0.4**
comp=Z,1μm,0.9s,mb6.8,SNR=96
BRVK Borovoye 53.60 341⇑*i*P **P** **02 10 19.9 -0.6**
comp=Z,167nm,0.9s,mb6.0
BRVK Borovoye 53.60 341⇑*i*P **P** **02 10 19.9 -0.6**
BRVK pmax pmax
comp=Z,167nm,0.9s,mb6.0
BRVK Borovoye 53.60 341 P **P** **02 10 20.2 -0.3**
SNR=64
KLR Kul'dur 54.41 28⇓*i*P **P** **02 10 24.2 -2.3**
KLR pmax pmax
comp=N,43nm,1.2s
KLR pmax pmax
comp=E,160nm,1.2s
KLR pmax pmax
comp=Z,360nm,1.2s,mb6.2
KLR MLR MLR
comp=E,500nm,17.0s

KLR MLR MLR
comp=Z,600nm,17.0s,MS4.7
CTA Charters Tower 54.49 118⇑ *i*P **P 02 10 27.0 -0.6**
comp=Z,50nm,0.8s,mb5.5
CTA *e*pP pP 02 10 49.8 +6.5
CTA Charters Tower 54.49 118 P **P 02 10 27.5 -0.1**
CTA pmax pmax
comp=Z,63nm,0.8s
CTA Charters Tower 54.49 118 P **P 02 10 27.5 -0.1**
comp=Z,63nm,0.8s,mb5.6,baz=294,slow=9.2,SNR=34
CTAO Charters Tower 54.49 118⇑ *i*P **P 02 10 26.9 -0.7**
comp=Z,82nm,0.9s,mb5.7
CTAO Charters Tower 54.49 118 *e*P **P 02 10 27.2 -0.4**
CTAO pmax pmax
comp=Z,82nm,0.9s,mb5.7
HABR Khabarovsk 55.51 30 *e*P **P 02 10 34.8 +0.4**
HABR *e* 02 11 32.9
HABR *e* 02 12 38.4
HABR *e*S **S 02 18 16.6 +1.3**
HABR *e* 02 20 18.8
HABR *e* 02 22 05.3
HABR pmax pmax
comp=Z,223nm,1.1s,mb6.1
HABR pmax pmax
comp=Z,268nm,1.1s,mb6.2
BOD Bodaibo 55.69 11⇓ *i*P **P 02 10 35.0 -0.5**
BOD pmax pmax
comp=Z,124nm,1.1s,mb5.8
STKA Stephens Creek 55.76 133⇑ *i*P **P 02 10 35.7 -0.8**
comp=Z,42nm,0.7s,mb5.6
STKA Stephens Creek 55.76 133 P **P 02 10 35.9 -0.6**
comp=Z,49nm,0.7s,mb5.6,baz=307,slow=7.2,SNR=106
STKA LR LR 02 38 21.7
comp=Z,499nm,18.4s,MS4.6,baz=23,slow=40
AKTO Aktyubinsk 56.55 332 LR LR 02 39 54.1
comp=Z,216nm,19.8s,MS4.2,baz=1.0,slow=41
NRGR Nerungri 57.39 18 *e*P **P 02 10 48.3 +0.6**
NRGR S **S 02 18 44.7 +4.7**
NRGR smax
comp=N,32nm,0.5s
CLNS Chul'man 57.60 18 *e*P **P 02 10 49.4 +0.3**
CLNS pmax pmax
comp=Z,56nm,0.7s,mb5.7
CLNS pmax pmax
comp=N,25nm,1.0s
CLNS pmax pmax
comp=E,26nm,0.9s
YSS Yuzh-Sakhalins 58.79 36⇑ *i*P **P 02 10 57.7 +0.1**
comp=E,261nm,1.2s,mb6.1
YSS *e*PcP PcP 02 11 45.5 -1.2
YSS Yuzh-Sakhalins 58.79 36⇑ *i*P **P 02 10 57.3 -0.3**
YSS *e* 02 11 45.5
YSS *e* 02 20 40.0
YSS pmax pmax
comp=Z,210μm,1.1s
YSS MLR MLR
comp=Z,500nm,20.0s,MS4.6
YSS MLR MLR
comp=N,200nm,18.0s,MS4.5
YSS MLR MLR
comp=E,300nm,19.0s,MS4.5
DGRG David-gareji 58.93 317 P **P 02 10 59.5 +0.8**
KMBO Kiima Mbogo 59.18 266 P **P 02 11 02.3 +1.3**
comp=E,8.2nm,0.8s,mb4.8,baz=63,slow=10,SNR=27
KMBO LR LR 02 33 30.4
comp=E,447nm,19.1s,MS4.6,baz=87,slow=33
DYDN Diyadin 59.32 314⇑ *i*P **P 02 11 02.0 +0.5**
MTA Mtatsminda 59.42 317 P **P 02 11 02.0 -0.2**
TBLG Delisi 59.48 317 P **P 02 11 02.5 0.0**
TUTA Tutak 59.90 314⇑ *i*P **P 02 11 05.6 +0.2**
SVE Sverdlovsk 59.98 338 *d i*P **P 02 11 05.1 -0.5**
SVE pmax pmax
comp=Z,306nm,1.1s,mb6.2
ARU Arti 60.48 337 P **P 02 11 08.2 -0.8**
comp=Z,686nm,1.0s,mb6.6,SNR=34
ARU Arti 60.48 337⇑ *i*P **P 02 11 08.1 -1.0**
comp=Z,111nm,1.0s,mb5.8
ARU Arti 60.48 337 *c i*P **P 02 11 08.1 -0.9**
ARU *e**PP pP 02 11 23.4 -1.6
ARU *e* 02 11 51.9
ARU *e* 02 13 22.1
ARU *e*S **S 02 19 18.6 -1.3**
ARU *e*SS SS 02 23 15.2 -3.6
ARU pmax pmax
comp=Z,220nm,1.7s,mb5.9
ZEI Tsey 60.48 318 *e*P **P 02 11 09.6 +0.2**
ZEI *i* pP 02 11 22.9 -2.4
ZEI *e* 02 13 22.3
ZEI *e*S **S 02 19 19.7 -0.8**
ZEI pmax pmax
comp=Z,27nm,0.7s,mb5.4
ZEI smax
comp=N,12nm,1.5s
EIDS Eidsvold 60.50 122 *e*P **P 02 11 09.1 -0.7**
comp=N,32nm,1.3s,mb5.2
MARD Mardin 60.65 311⇑ *i*P **P 02 11 10.8 +0.1**
ONI Oni 60.70 318 P **P 02 11 11.3 +0.4**
ERZM Erzurum 61.12 314 *i*P **P 02 11 14.4 +0.7**
TOO Toolangi 61.43 137 *e*P **P 02 11 16.7 +0.8**
comp=N,22nm,1.1s,mb5.2
TOO Toolangi 61.43 137 *e*P **P 02 11 16.7 +0.8**
TOO pmax pmax
comp=Z,22nm,1.1s,mb5.2
KIV Kislovodsk 61.78 319 P **P 02 11 18.4 +0.3**
comp=Z,470nm,0.9s,mb6.6,SNR=9.6
KIV Kislovodsk 61.78 319⇑ *i*P **P 02 11 17.8 -0.3**
comp=Z,87nm,1.0s,mb5.8
KIV Kislovodsk 61.78 319 *c i*P **P 02 11 17.8 -0.3**
KIV *e* 02 11 57.1
KIV *e*S **S 02 19 35.1 -1.8**
KIV *e*SS SS 02 23 41.3 +1.7
KIV pmax pmax
comp=Z,94nm,1.1s,mb5.8
KIV pmax pmax
comp=Z,202nm,8.7s
KIV Kislovodsk 61.78 319 P **P 02 11 18.4 +0.3**
SNR=12
ASF Jabal al Asfar 62.25 304 P **P 02 11 23.1 +1.6**
ASF pmax pmax
comp=Z,21nm,1.0s
ASF MLR MLR
comp=Z,116nm,19.9s
ASF Jabal al Asfar 62.25 304 P **P 02 11 23.1 +1.6**
comp=Z,20nm,1.0s,mb5.2,baz=338,slow=5.0,SNR=19
ASF LR LR 02 39 52.8
comp=Z,116nm,19.9s,MS4.0,baz=55,slow=37
ELZG Elazig 62.38 312 *i*P **P 02 11 22.9 +0.6**
ATAB Bozova 62.58 311⇑ *i*P **P 02 11 24.5 +0.8**
MALT Malatya 62.74 311⇑ *i*P **P 02 11 25.1 +0.5**
comp=Z,59nm,1.0s,mb5.7
MALT Malatya 62.74 311 *e*P **P 02 11 25.1 +0.4**
MALT pmax pmax
comp=Z,59nm,1.0s,mb5.7
ARMA Armidale 62.80 127⇑ *i*P **P 02 11 26.0 +0.8**
CNB Canberra Magne 63.09 133 *e*P **P 02 11 27.0 0.0**
comp=Z,32nm,0.9s,mb5.5
GZT Gaziantep 63.10 310⇑ *i*P **P 02 11 27.8 +0.7**
YAK Yakutsk 63.24 17 *e*P **P 02 11 27.0 -0.5**
comp=Z,485nm,0.8s,mb6.7
YAK Yakutsk 63.24 17 *c i*P **P 02 11 27.2 -0.3**
YAK *e**PP pP 02 11 41.4 -2.2
YAK *e* 02 12 04.4
YAK *e*S **S 02 19 53.5 -1.2**
YAK *e**SS sS 02 20 17.1 -4.6
YAK *e* 02 21 11.1
YAK pmax pmax
comp=Z,484nm,0.9s,mb6.6
YAK pmax pmax
comp=N,176nm,1.3s
YAK pmax pmax
comp=E,161nm,1.4s
YAK smax
comp=N,128nm,1.9s
YAK smax
comp=E,150nm,2.7s
YAK MLR MLR
comp=N,491nm,16.0s,MS4.9
YAK MLR MLR
comp=E,352nm,16.0s,MS4.9
YAK MLR MLR
comp=Z,727nm,16.0s,MS5.0
EIL Elat 63.33 301 LR LR 02 39 07.2
comp=Z,382nm,19.8s,MS4.6,baz=105,slow=36
SOKR Solikamsk 63.37 339 *c i*P **P 02 11 28.2 -0.2**
SOKR pmax pmax
comp=Z,220nm,1.1s,mb6.2
SOC Sochi 63.61 317 *i*P **P 02 11 29.8 -0.5**
SOC Sochi 63.61 317 *e*P **P 02 11 28.3 -2.0**
SOC *e**PP pP 02 11 44.2 -2.2
SOC *e* 02 12 05.9
SOC *e* 02 13 47.3
SOC *e*S **S 02 19 56.4 -3.5**
SOC *e**SS sS 02 20 26.9 -0.1
SOC *e* 02 21 21.4
SOC *e*SS SS 02 24 12.9 +4.5
SOC pmax pmax
comp=Z,118nm,1.1s,mb5.8
MMAI Mount Meron Ar 63.67 305 LR LR 02 41 59.2
comp=Z,191nm,18.5s,MS4.3,baz=140,slow=38
BHL Bhannes 63.68 306 *e*P **P 02 11 32.4 +1.4**
COBT Iskenderun 63.87 309⇑ *i*P **P 02 11 33.4 +1.2**
ANDN Andirin 64.09 310⇑ *i*P **P 02 11 34.4 +0.8**
HNR Honiara 64.79 102 *e*P **P 02 11 36.9 -1.7**
comp=Z,364nm,1.0s,mb6.4
HNR Honiara 64.79 102 P **P 02 11 37.7 -0.9**
HNR pmax pmax
comp=Z,360nm,1.0s,mb6.4
HNR Honiara 64.79 102 LR LR 02 42 37.4
comp=Z,155nm,18.7s,MS4.2,baz=180,slow=38
VRHR Novokhopersk 65.50 326 *e*P **P 02 11 41.0 -1.5**
VRHR pmax pmax
comp=Z,140nm,0.7s,mb6.1
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
AVNT Avonos 65.55 311⇑ *i*P **P 02 11 43.2 +0.1**
ANN Anapa 65.58 318 *e*P **P 02 11 39.8 -3.4**
ANN pmax pmax
comp=Z,121nm,1.8s,mb5.6
CSS Prodhromos 65.79 307⇑ *i*P **P 02 11 45.0 +0.2**
comp=Z,99nm,1.1s,mb5.8
CTKT Corum 66.11 313⇑ *i*P **P 02 11 46.9 +0.2**
CDAG Cicekdag 66.14 312⇑ *i*P **P 02 11 46.3 -0.6**
BOYT Boyabat 66.26 314⇓ *i*P **P 02 11 47.7 +0.1**
BR131 Keskin Array S 66.72 312 *e*P **P 02 11 50.3 -0.3**
comp=Z,50nm,0.8s,mb5.6
BRTR Keskin Array B 66.72 312 P **P 02 11 50.1 -0.4**
BRTR pmax pmax
comp=Z,52nm,0.9s
BRTR Keskin Array B 66.72 312 P **P 02 11 50.1 -0.4**
comp=Z,52nm,0.9s,mb5.6,baz=116,slow=7.0,SNR=226
VORD Divnogorie 66.77 325 *e*P **P 02 11 49.7 -1.0**
VORD pmax pmax
comp=Z,70nm,0.9s,mb5.7
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,40nm,0.4s
VRSR Storozhevoye 66.94 325 *c i*P **P 02 11 49.9 -1.8**
VRSR *e*S S 02 20 35.1 -5.2
VRSR pmax pmax
comp=E,10.0nm,1.0s
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
VRSR pmax pmax
comp=N,6.0nm,0.9s
ELDT Eldivan 67.08 313 *i*P **P 02 11 52.9 0.0**
ANTO Ankara 67.38 312⇑ *i*P **P 02 11 54.3 -0.5**
comp=N,71nm,0.8s,mb5.8
ANTO LR LR
comp=Z,313nm,21.0s,MS4.5
ANTO Ankara 67.38 312⇑ *i*P **P 02 11 54.3 -0.5**
ANTO pmax pmax
comp=Z,71nm,0.8s,mb5.8
ANTO MLR MLR
comp=Z,313nm,21.0s,MS4.5
ANTO Ankara 67.38 312 P **P 02 11 54.9 +0.1**
SNR=12
ANTO Ankara 67.38 312⇑ *i*P **P 02 11 54.6 -0.2**
BALT Daday 67.39 314⇑ *i*P **P 02 11 54.8 0.0**
SIM Simferopol' 67.86 317 *c i*P **P 02 11 57.2 -0.5**
SIM pmax pmax
comp=Z,58nm,0.8s,mb5.7
SKR Severo-Kuril's 68.33 36 *e*P **P 02 12 01.2 +0.7**
SKR *e* 02 12 07.1
SKR *e* pP 02 12 14.1 -2.6
SKR pmax pmax
comp=N,220nm,1.0s
SKR pmax pmax
comp=E,220nm,1.0s
SKR pmax pmax
comp=Z,670nm,1.0s,mb6.6
ISP Isparta 68.64 309 *e*P **P 02 12 02.2 -0.6**
comp=Z,324nm,2.1s,mb5.9
ISP Isparta 68.64 309 *e*P **P 02 12 02.9 +0.2**
ISP pmax pmax
comp=Z,320nm,2.1s,mb5.9
ISP Isparta 68.64 309⇑ *i*P **P 02 12 02.6 -0.1**
ESKT Eskisehir 68.75 311⇑ *i*P **P 02 12 02.6 -0.8**
HENT Hendek 69.02 312 *i*P **P 02 12 03.8 -1.2**
GOLH Golhisar 69.26 308⇑ *i*P **P 02 12 06.3 -0.3**
MA2 Magadan 69.45 26⇑ *i*P **P 02 12 07.0 -0.2**
comp=Z,135nm,0.8s,mb5.9
MA2 Magadan 69.45 26⇑ *i*P **P 02 12 07.2 -0.1**
MA2 pmax pmax
comp=Z,300nm,0.9s,mb6.2
MOS Moscow 69.67 329 *e*P **P 02 12 06.7 -2.0**
MOS *e* pP 02 12 22.8 -2.2
MOS *e* 02 12 29.8
MOS *e* 02 14 40.9
MOS *e*S S 02 21 06.6 -6.1
MOS pmax pmax
comp=Z,188nm,1.2s,mb5.9
MOS smax
comp=N,1μm,4.5s
GDZ Gediz 69.70 310 *i*P **P 02 12 08.9 -0.3**
OBN Obninsk 69.96 328 P **P 02 12 09.8 -0.7**
comp=N,622nm,1.3s,mb6.4,SNR=15
OBN Obninsk 69.96 328⇑ *i*P **P 02 12 09.7 -0.8**
comp=N,162nm,1.2s,mb5.8
OBN Obninsk 69.96 328 *c i*P **P 02 12 09.3 -1.2**
OBN *e* 02 12 33.4
OBN *i* 02 14 44.6
OBN pmax pmax
comp=Z,170nm,1.2s,mb5.8
LSZ Lusaka 69.98 252 *e*P **P 02 12 11.6 +0.3**
comp=Z,16nm,1.0s,mb4.9
LSZ LR LR
comp=Z,476nm,21.0s,MS4.7
LSZ Lusaka 69.98 252 *e*P **P 02 12 11.6 +0.3**
LSZ pmax pmax
comp=Z,16nm,1.0s,mb4.9
LSZ MLR MLR
comp=Z,476nm,21.0s,MS4.7
ULDT Uludag 70.18 311 *i*P **P 02 12 09.3 -2.9**
ARG Arkhangelos 70.20 307 *e*P **P 02 12 12.7 +0.3**
PET Petropavlovsk 70.65 35⇑ *i*P **P 02 12 13.7 -1.0**
comp=Z,141nm,0.8s,mb6.0
PET Petropavlovsk 70.65 35 *e*P **P 02 12 14.2 -0.5**
PET pmax pmax
comp=Z,208nm,0.8s,mb6.1
PET MLR MLR
comp=Z,400nm,21.0s,MS4.7
TIXI Tiksi 70.84 10⇑ *i*P **P 02 12 14.4 -1.2**
comp=Z,175nm,0.8s,mb6.0
TIXI Tiksi 70.84 10 *i*P **P 02 12 14.4 -1.2**
TIXI pmax pmax
comp=Z,294nm,1.2s,mb6.1
TIXI pmax pmax
comp=N,37nm,1.1s
TIXI pmax pmax
comp=E,22nm,1.0s
KARP Karpathos 70.86 306 *e*P **P 02 12 16.9 +0.5**
BDRM Kayabasi 70.89 308 *i*P **P 02 12 16.1 -0.5**
BTOK Tokmak 70.93 311⇑ *i*P **P 02 12 16.3 -0.4**
KDAG Bornova 71.26 309 *i*P **P 02 12 19.1 +0.4**
SMG Samos 71.47 308 *e*P **P 02 12 20.4 +0.3**
PSN Preselentsi 71.64 315 *e*P **P 02 12 20.7 -0.2**
TIRR Tirgusor 71.65 316 P **P 02 12 20.9 -0.1**
TIRR Tirgusor 71.65 316⇑ *i*P **P 02 12 20.7 -0.3**
AYVA Ayvalik 71.87 310⇑ *i*P **P 02 12 22.1 -0.4**
KIS Kishinev 71.97 318 *i*P **P 02 12 21.0 -1.9**
KIS *i* 02 12 29.0
KIS *i* pP 02 12 36.0 -3.2
KIS pmax pmax
comp=Z,140nm,1.3s,mb5.7
KIS Kishinev 71.97 318⇑ *i*UNK **P 02 12 21.0 -1.9**
KIS XM 02 12 21.5
comp=Z,100nm,1.3s
NPS Neapolis 72.06 306 *e*P **P 02 12 24.5 +0.8**
PRD Provadia 72.09 314 *e*P **P 02 12 23.8 +0.1**
PRK Paraskevi 72.17 310 *e*P **P 02 12 24.3 0.0**
CHOS Chios island 72.20 309 *e*P **P 02 12 24.9 +0.5**
SANT Santorini 72.35 307⇑ *i*P **P 02 12 24.2 -1.1**
comp=Z,13μm,1.1s
APE Apeiranthos 72.40 308 P **P 02 12 24.8 -0.8**
APE Apeiranthos 72.40 308 *e*P **P 02 12 24.8 -0.9**
APE Apeiranthos 72.40 308⇑ *i*P **P 02 12 24.9 -0.7**
BOZC Bozcaada 72.44 311⇑ *i*P **P 02 12 25.5 -0.3**
JMB Yambol 72.53 313 *e*P **P 02 12 26.5 +0.2**
JMB Yambol 72.53 313 *e*P **P 02 12 26.3 0.0**
ALN Alexandroupoli 72.64 312 *e*P **P 02 12 26.7 -0.3**
IDI Anoyia 72.65 306 LR LR 02 47 39.8
comp=Z,129nm,20.8s,MS4.2,baz=288,slow=38
AKASG Malin Array Be 72.67 322 P **P 02 12 25.8 -1.2**
AKASG pmax pmax
comp=Z,21nm,0.7s
AKASG MLR MLR
comp=Z,91nm,20.5s
AKASG Malin Array Be 72.67 322 P **P 02 12 25.8 -1.2**
comp=Z,21nm,0.7s,mb5.2,baz=90,slow=4.8,SNR=37
AKASG LR LR 02 46 16.9
comp=Z,91nm,20.5s,MS4.0,baz=115,slow=37
AKBB Malin Array Si 72.67 322⇑ *i*P **P 02 12 25.7 -1.3**
KIEV Kiev 72.68 322⇑ *i*P **P 02 12 25.7 -1.3**
comp=Z,24nm,0.6s,mb5.3
KIEV Kiev 72.68 322⇑ *i*P **P 02 12 25.7 -1.3**
KIEV pmax pmax
comp=Z,24nm,0.6s,mb5.3
IAS Iasi 72.86 318 P **P 02 12 28.0 -0.2**
IAS Iasi 72.86 318⇑ *i*P **P 02 12 28.1 0.0**
LIA Limnos Island 73.11 310 *e*P **P 02 12 32.1 +2.3**
VRI Vrincioaia 73.12 317 P **P 02 12 30.3 +0.6**
VRI Vrincioaia 73.12 317⇑ *i*P **P 02 12 30.2 +0.5**
SZH Strazhica 73.15 314 *e*P **P 02 12 29.5 -0.5**
DZM Mont Dzumac 73.17 114 LR LR 02 44 38.9
comp=Z,359nm,19.5s,MS4.7,baz=227,slow=36
PLOR Plostina 73.17 317 P **P 02 12 30.7 +0.7**
PLOR Plostina 73.17 317⇓ *i*P **P 02 12 30.5 +0.5**
TMCR Tamitsa 73.22 337 *i*P **P 02 12 29.7 -0.2**
DIM Dimitrovgrad 73.22 313 *e*P **P 02 12 30.3 -0.1**
VAM Vamos 73.23 306 *e*P **P 02 12 31.2 +0.6**
KDZ Kurdzhali 73.23 312 *e*P **P 02 12 30.0 -0.5**
GVD Gavdhos 73.25 305 *e*P **P 02 12 30.6 -0.2**
BUC1 Bucharest 73.30 315 P **P 02 12 31.4 +0.6**
PVL Pavlikeni 73.58 314 *e*P **P 02 12 33.2 +0.7**
MLR Muntele Rosu 73.58 316 P **P 02 12 33.0 +0.6**
MLR Muntele Rosu 73.58 316 P **P 02 12 32.9 +0.5**
comp=Z,62nm,0.9s,mb5.5,baz=133,slow=2.1,SNR=85
MLR LR LR 02 47 03.8
comp=Z,216nm,21.4s,MS4.4,baz=111,slow=38
MLR Muntele Rosu 73.58 316⇓ *i*P **P 02 12 33.0 +0.6**
ZIMR 73.63 314 P **P 02 12 33.1 +0.3**
ZIMR 73.63 314⇓ *i*P **P 02 12 32.9 +0.1**
PLD Plovdiv 73.84 313 *e*P **P 02 12 33.6 -0.4**
PLD Plovdiv 73.84 313 *e*P **P 02 12 33.3 -0.7**
VOIR 74.19 316 P **P 02 12 35.5 -0.5**
VOIR 74.19 316⇑ *i*P **P 02 12 35.4 -0.6**
LBTB Lobatse 74.20 243 *e*P **P 02 12 36.5 0.0**
comp=Z,17nm,0.8s,mb5.0
LBTB Lobatse 74.20 243 P **P 02 12 37.1 +0.6**
LBTB pmax pmax
comp=Z,17nm,0.8s,mb5.0
PAIG Paliouri 74.26 310 *e*P **P 02 12 36.0 -0.6**
DID Didima 74.27 308 *e*P **P 02 12 34.8 -1.9**
PGB Panagyurishte 74.31 313 *e*P **P 02 12 35.9 -0.8**
NVR Nevrokopi 74.34 312 *e*P **P 02 12 36.5 -0.5**
VLI Veliai 74.41 307 *e*P **P 02 12 37.5 0.0**
MMB Musomiste 74.47 312 *e*P **P 02 12 36.8 -1.0**
BURAR Bucovina Array 74.50 318⇓ P **P 02 12 38.5 +0.7**
BURAR Bucovina Array 74.50 318⇓ *i*P **P 02 12 38.5 +0.7**
PLG Polygyros 74.50 311 *e*P **P 02 12 37.5 -0.5**
PLG Polygyros 74.50 311 *e*P **P 02 12 36.5 -1.4**
MNK Minsk 74.52 326⇓ *e*P **P 02 12 35.0 -2.7**
MNK pmax pmax
comp=Z,400nm,1.0s,mb6.3
LTK Loutraki 74.55 308 *e*P **P 02 12 36.5 -1.8**
HORT Hortiatis 74.80 311 *e*P **P 02 12 38.8 -0.9**
PUL Pulkovo 74.81 331 *e*P **P 02 12 39.4 +0.1**
MAW Mawson 74.99 193 *e*P **P 02 12 40.4 +0.3**
comp=Z,7.5nm,0.7s,mb4.7
MAW Mawson 74.99 193 *e*P **P 02 12 40.4 +0.3**
MAW pmax pmax
comp=Z,8.0nm,0.7s
MAW Mawson 74.99 193 P **P 02 12 40.8 +0.7**
comp=Z,8.7nm,0.8s,mb4.7,baz=0.0,slow=7.1,SNR=3.9
MAW LR LR 02 39 47.3
comp=Z,397nm,20.7s,MS4.7,baz=66,slow=31
KKB Krupnik 74.99 312 *e*P **P 02 12 39.8 -0.9**
VTS Vitosha 75.01 313 P **P 02 12 40.8 -0.1**
VTS Vitosha 75.01 313 *e*P **P 02 12 40.4 -0.4**
VTS Vitosha 75.01 313⇑ *i*P **P 02 12 40.6 -0.2**
KNT Kendrikon 75.03 312 *e*P **P 02 12 40.2 -0.7**
AGG Agios Georgios 75.17 309 *e*P **P 02 12 40.1 -1.8**
LIT Litokhoron 75.19 310 *e*P **P 02 12 40.9 -1.0**
BOSA Boshof 75.26 239 *e*P **P 02 12 42.3 -0.3**
comp=Z,24nm,1.4s,mb4.9
BOSA Boshof 75.26 239 *e*P **P 02 12 42.3 -0.3**
BOSA pmax pmax
comp=Z,25nm,1.4s,mb5.0
BOSA Boshof 75.26 239 P **P 02 12 42.6 0.0**
comp=Z,3.7nm,0.5s,mb4.6,baz=98,slow=3.4,SNR=22
BOSA LR LR 02 41 37.2
comp=Z,334nm,18.9s,MS4.7,baz=102,slow=32
ITM Ithomi 75.27 307 *e*P **P 02 12 41.6 -0.8**
VAY Valandovo 75.30 312⇑ *i*PKP **P 02 12 41.0 -1.5**
IDID Didziasalis 75.35 326 *e*P **P 02 12 42.0 -0.5**
IDID AMb AMB 02 12 44.0
comp=Z,34nm,1.2s,mb5.2
GRG Griva 75.37 311 *e*P **P 02 12 42.1 -0.8**
SELA Sela 75.42 308 *e*P **P 02 12 42.8 -0.4**
JOF Joensuu 75.45 335 *e*p **P 02 12 40.6 -2.3**
comp=Z,60nm,0.9s,mb5.5
JOF Joensuu 75.45 335 *e*P **P 02 12 40.6 -2.3**
JOF pmax pmax
comp=Z,60nm,0.9s,mb5.5
THL Klokotos Trika 75.48 310 *e*P **P 02 12 41.8 -1.8**
EVR Evrytania 75.56 309 *e*P **P 02 12 43.2 -0.9**
STIP Stip 75.63 312 *i*PKP **P 02 12 42.7 -1.7**
IIGN Ignalina 75.64 326 *e*P **P 02 12 43.9 -0.3**
IIGN AMb AMB 02 12 45.9
comp=Z,34nm,1.4s,mb5.1
LVV L'vov 75.71 320 *e*P **P 02 12 43.5 -1.2**
LVV *e* pP 02 12 56.7 -4.4
IZAR Zarasai 75.73 327 *e*P **P 02 12 44.2 -0.4**
IZAR AMb AMB 02 12 46.2
comp=Z,24nm,1.3s,mb5.0
RLS Riolos of Patr 75.73 308 *e*P **P 02 12 45.0 -0.1**
GZR Gura Zlata 75.76 316 P **P 02 12 45.6 +0.5**
GZR Gura Zlata 75.76 316⇑ *i*P **P 02 12 44.8 -0.2**
DRGR 76.03 317 P **P 02 12 47.2 +0.6**
DRGR 76.03 317⇓ *i*P **P 02 12 47.1 +0.5**
FNA Florina 76.12 311 *e*P **P 02 12 45.7 -1.5**
LVZ Lovozero 76.12 340 P **P 02 12 45.9 -0.8**
comp=Z,597nm,0.9s,mb6.5,SNR=12
LVZ Lovozero 76.12 340⇑ *i*P **P 02 12 45.9 -0.8**
LVZ Lovozero 76.12 340 *c i*P **P 02 12 45.8 -0.9**
LVZ pmax pmax
comp=Z,77nm,0.8s,mb5.7
VSU Vasula 76.18 330 *c i*P **P 02 12 46.5 -0.7**
BIA Bitola 76.19 311 *i*PKP **P 02 12 45.7 -1.9**
SKO Skopje 76.22 312 *i*PKP **P 02 12 46.8 -1.0**
KFL Anninata 76.27 308 *e*P **P 02 12 47.8 -0.3**
KRUS Krusevo 76.29 312⇑ *i*PKP **P 02 12 47.4 -0.8**
APA Apatity 76.42 339⇑ *i*P **P 02 12 47.8 -0.5**
APA pmax pmax
comp=Z,99nm,0.9s,mb5.7
VLS Valsamata 76.43 308 *e*P **P 02 12 48.5 -0.5**
LKD Levkas 76.44 309 *e*P **P 02 12 48.9 -0.2**
KWP Kalwaria 76.52 320 *e*P **P 02 12 49.7 +0.4**
KWP Kalwaria 76.52 320⇑ *i*P **P 02 12 49.5 +0.2**
OHR Ohrid 76.59 311⇑ *i*PKP **P 02 12 47.9 -2.0**
BZS Buzias 76.60 316 P **P 02 12 50.1 +0.3**
BZS Buzias 76.60 316⇑ *i*P **P 02 12 49.8 0.0**
UZH Uzhgorod 76.61 319 *e*P **P 02 12 50.0 +0.2**
UZH *i* 02 12 57.4
UZH *e* pP 02 13 07.4 +1.1
UZH *i* 02 15 42.0
KOLS Kolonicke sedl 76.68 319 *e*P **P 02 12 50.9 +0.7**
IGT Igoumenitsa 76.77 310 *e*P **P 02 12 50.1 -0.9**
SUW Suwalki 77.06 325 *e*P **P 02 12 51.6 -0.7**

KEK Kerkira 77.20 310 *e*P P 02 12 52.7 -0.6
CRVS Cervenica-Dubn 77.20 319 *e*P P 02 12 53.7 +0.6
FIA1 FINESS Array S 77.31 332 *e*P P 02 12 52.8 -0.7
FINES FINESS Array B 77.31 332 P P 02 12 52.9 -0.6
FINES pmax pmax
comp=Z,23nm,0.7s
FINES MLR MLR
comp=Z,200nm,20.7s
FINES FINESS Array B 77.31 332 P P 02 12 52.9 -0.6
comp=Z,23nm,0.7s,mb5.2,baz=104,slow=8.0,SNR=90
FINES LR LR 02 48 05.0
comp=Z,200nm,20.7s,MS4.4,baz=12,slow=36
PVY Plav 77.38 313⇑*i*P P 02 12 53.0 -1.3
KAF Kangasniemi 77.39 333 *e*p P 02 12 52.0 -1.9
comp=Z,65nm,0.9s,mb5.6,baz=102,slow=5.2
KAF Kangasniemi 77.39 333 *e*P P 02 12 52.0 -1.9
KAF pmax pmax
comp=Z,65nm,0.9s,mb5.6
STHS Stebnicka Huta 77.42 320 *e*P P 02 12 54.9 +0.5
comp=Z,46nm,0.9s,mb5.4
STHS Stebnicka Huta 77.42 320 *e*P P 02 12 54.9 +0.5
STHS pmax pmax
comp=Z,46nm,0.9s,mb5.4
IVA Berane 77.47 313⇑*i*P P 02 12 54.0 -0.8
KECS Kecovo 77.78 319 *e*P P 02 12 56.3 -0.1
comp=Z,24nm,0.9s,mb5.1
KECS Kecovo 77.78 319 *e*P P 02 12 56.3 -0.1
KECS pmax pmax
comp=Z,24nm,0.9s,mb5.1
ULC Ulcinj 77.84 312⇑*i*P P 02 12 56.1 -0.8
PLE Pljevlja 77.88 313⇑*i*P P 02 12 56.6 -0.5
TTG Podgorica 77.88 312⇑*i*P P 02 12 56.1 -1.0
NIE Niedzica 78.02 320 *e*P P 02 12 58.3 +0.6
PSZ Piszkesteto 78.09 318⇑*i*P P 02 12 58.2 +0.1
comp=Z,87nm,1.0s,mb5.6
PSZ Piszkesteto 78.09 318 P P 02 12 58.7 +0.6
PSZ Piszkesteto 78.09 318⇑*i*P P 02 12 58.3 +0.2
PSZ Piszkesteto 78.09 318⇑*i*P P 02 12 58.4 +0.3
NKY Niksic 78.12 313⇑*i*P P 02 12 57.3 -1.1
BUM Brajici-Budva 78.14 312⇑*i*P P 02 12 57.3 -1.2
UPM Unac-Piva 78.22 313⇑*i*P P 02 12 58.2 -0.7
HCY Herceg Novi 78.45 312⇑*i*P P 02 12 59.2 -1.0
BRY Bratogost 78.46 313⇑*i*P P 02 12 59.8 -0.5
OJC Ojcow 78.47 320 *e*P P 02 13 00.3 +0.1
LCI Lecce 78.55 310 *i*Pu P 02 13 00.5 -0.3
comp=Z,39nm,0.8s,mb5.4
LCI Lecce 78.55 310 *i*P P 02 13 00.5 -0.3
LCI pmax pmax
comp=Z,39nm,0.8s,mb5.4
BUD Budapest 78.62 318⇑*i*P P 02 13 01.3 +0.3
VYHS Vyhne 78.87 319 *i*P P 02 13 02.5 +0.1
comp=Z,41nm,1.5s,mb5.1
VYHS Vyhne 78.87 319 *i*P P 02 13 02.5 +0.1
VYHS pmax pmax
comp=Z,41nm,1.5s,mb5.1
VYHS Vyhne 78.87 319 *i*P P 02 13 02.4 0.0
BILL Bilibino 79.12 211⇑*i*P P 02 13 02.1 -1.3
comp=Z,73nm,1.3s,mb5.5
BILL Bilibino 79.12 21*c i*P P 02 13 02.5 -0.9
BILL *e* 02 13 12.1
BILL pmax pmax
comp=Z,94nm,1.6s,mb5.5
KOLL Kolacno 79.16 319 *e*P P 02 13 04.3 +0.3
KEV Kevo 79.39 341 *e*p P 02 13 03.6 -1.2
comp=Z,47nm,0.8s,mb5.5
KEV Kevo 79.39 341 *e*P P 02 13 03.6 -1.2
KEV pmax pmax
comp=Z,47nm,0.8s,mb5.5
OKC Ostrava-Krasne 79.47 320⇑*i*P P 02 13 05.9 +0.2
OKC *ex* x 02 13 21.1
TIP Timpagrande 79.50 309⇑*i*P P 02 13 06.2 +0.1
SUR Sutherland 79.79 236 P P 02 13 09.7 +1.9
comp=Z,84nm,0.8s,mb5.7,SNR=7.1
SUR Sutherland 79.79 236 *e*P P 02 13 09.2 +1.4
ARCES ARCESS Array B 79.83 340 P P 02 13 07.1 0.0
ARCES pP pP 02 13 22.8 -1.0
ARCES ARCESS Array B 79.83 340 P P 02 13 07.1 -0.1
ARCES *PP pP 02 13 22.8 -0.9
ARCES pmax pmax
comp=Z,48nm,0.7s
ARCES pmax pmax
comp=N,8.0nm,0.5s
ARCES ARCESS Array B 79.83 340 P P 02 13 07.1 0.0
comp=N,48nm,0.7s,mb5.5,baz=94,slow=6.1,SNR=100
ARCES pP pP 02 13 22.8 -1.0
comp=N,8.2nm,0.5s,baz=122,slow=1.6,SNR=3.9
ARE0 ARCESS Array S 79.83 340 *e*P P 02 13 07.3 +0.1
TDS Terranova Siba 79.86 309 P P 02 13 09.7 +1.7
comp=N,371nm,1.0s,mb6.3
TDS Terranova Siba 79.86 309 P P 02 13 09.7 +1.7
TDS pmax pmax
comp=Z,371nm,1.0s,mb6.3
MORC Moravsky Berou 79.86 320 *e*P P 02 13 07.8 +0.1
comp=Z,43nm,0.9s,mb5.4
MORC Moravsky Berou 79.86 320 P P 02 13 08.4 +0.7
MORC Moravsky Berou 79.86 320⇑*i*P P 02 13 08.2 +0.5
ZST Bratislava 79.98 318 *e*P P 02 13 08.4 -0.1
comp=Z,79nm,0.9s,mb5.6
ZST Bratislava 79.98 318 *e*P P 02 13 08.4 -0.1
ZST pmax pmax
comp=Z,79nm,0.9s,mb5.6
SOI Samo 79.99 308 P P 02 13 09.3 +0.6
MTTG Motta San Giov 80.27 308 P P 02 13 11.1 +0.9
SOP Sopron 80.30 318 *i*P P 02 13 10.4 +0.2
KOGS Kog 80.41 316 *i*P P 02 13 11.1 +0.3
VRAC Vranov 80.42 319 P P 02 13 11.1 +0.3
VRAC Vranov 80.42 319 LR LR 02 50 53.7
comp=Z,150nm,19.2s,MS4.3,baz=94,slow=37
VRAC Vranov 80.42 319⇑*i*P P 02 13 11.0 +0.2
GKP Gorka Klasztor 80.44 323 *e*P P 02 13 10.5 -0.3
KTK1 Kautokeino 80.46 340⇑*i*P P 02 13 11.2 +0.6
comp=Z,120nm,0.8s,mb5.9
KTK1 Kautokeino 80.46 340⇑*i*P P 02 13 11.2 +0.6
KTK1 AMb AMB 02 13 12.0
comp=Z,120nm,0.8s,mb5.9
KTK1 *ep*P pP 02 13 27.2 0.0
FG4 Candela 80.57 311 P P 02 13 12.6 +0.8
comp=Z,241nm,0.9s,mb6.1
FG4 Candela 80.57 311 P P 02 13 12.6 +0.8
FG4 pmax pmax
comp=Z,241nm,0.9s,mb6.1
TSUM Tsumeb 80.58 250 *e*P P 02 13 12.5 +0.3
comp=Z,8.2nm,1.0s,mb4.6
TSUM LR LR
comp=Z,431nm,19.0s,MS4.8
DPC Dobruska-Polom 80.70 320⇑*i*P P 02 13 13.1 +0.8
SGO Sicignano 80.70 310 P P 02 13 12.9 +0.4
comp=Z,90nm,0.9s,mb5.7
SGO Sicignano 80.70 310 P P 02 13 12.9 +0.4
SGO pmax pmax
comp=Z,90nm,0.9s,mb5.7
KSP Ksiaz 80.76 321 *e*P P 02 13 13.1 +0.5
KSP Ksiaz 80.76 321 *e*P P 02 13 12.4 -0.2
KSP *e* 02 13 15.4
FG5 Orsara di Pugl 80.77 311 P P 02 13 13.5 +0.7
comp=Z,57nm,0.8s,mb5.5
FG5 Orsara di Pugl 80.77 311 P P 02 13 13.5 +0.7
FG5 pmax pmax
comp=Z,57nm,0.8s,mb5.5
CONA Conrad Observa 80.79 318 *i*P P 02 13 13.0 +0.2
comp=Z,22nm,0.9s,mb5.1,SNR=7.1
UPC Upice 80.91 320⇑*i*P P 02 13 13.8 +0.4
CSSN Cassano Irpino 80.93 311 P P 02 13 14.0 +0.3
comp=Z,67nm,0.7s,mb5.7
ARSA Arzberg 80.97 317⇑*i*P P 02 13 14.2 +0.5
comp=Z,49nm,1.1s,mb5.4,SNR=15
BOJS Bojanci 81.03 315 *i*P P 02 13 14.4 +0.3
BOJS *e* pP 02 13 30.3 -0.5
TREC Trest 81.15 319⇑*i*P P 02 13 14.9 +0.2
TREC *ep*CP PcP 02 13 21.2 +0.4
PERS Pernice 81.20 316 *e*P P 02 13 14.6 -0.4
CSLB Castelbuono 81.56 308 P P 02 13 17.8 +0.7
comp=Z,82nm,1.0s,mb5.6
LJU Ljubljana 81.57 316 *i*P P 02 13 17.3 +0.3
OBKA Obir 81.58 316⇑*i*P P 02 13 17.7 +0.7
comp=Z,42nm,0.9s,mb5.4,SNR=19
RFI Roccamonfina 81.73 311 P P 02 13 18.1 +0.1
comp=Z,13nm,1.1s,mb4.8
PRU Pruhonice 81.81 320⇑*i*P P 02 13 18.4 +0.2
PVCC Panska Ves 81.83 320⇑*i*P P 02 13 18.7 +0.4
MOA Molln 81.86 318⇑*i*P P 02 13 18.5 0.0
comp=Z,24nm,0.8s,mb5.2,SNR=19
SDI San Donato 81.88 311 *i*Pu P 02 13 18.3 -0.4
comp=Z,49nm,1.0s,mb5.4
SDI San Donato 81.88 311 *i*P P 02 13 18.3 -0.4
SDI pmax pmax
comp=Z,49nm,1.0s,mb5.4
JAVS Javornik 81.88 316 *i*P P 02 13 18.4 -0.2
BSD Bornholm Skovb 81.98 325 *i*P P 02 13 18.4 -0.5
BSD *i* pP 02 13 34.1 -1.5
BSD pmax pmax
comp=Z,56nm,1.0s,mb5.5
BSD Bornholm Skovb 81.98 325 *i*P P 02 13 18.4 -0.5
comp=Z,56nm,1.0s,mb5.5
BSD *i* pP 02 13 34.1 -1.5
VOY Vojsko 82.01 316 *e*P P 02 13 19.2 -0.1
VOY *e* pP 02 13 36.0 +0.1
VOY *e* 02 14 03.8
VVLD Villa Vallelon 82.03 312 *i*Pu P 02 13 19.1 -0.4
TRO Tromso 82.09 340 *e*P P 02 13 17.7 -1.5
comp=Z,109nm,0.9s,mb5.8
TRO Tromso 82.09 340 *e*P P 02 13 17.7 -1.5
TRO AMb AMB 02 13 19.6
comp=Z,109nm,0.9s,mb5.8
SYO Syowa Base 82.14 198⇑*e*P P 02 13 18.8 -0.7
SYO Syowa Base 82.14 198⇓*ep*P pP 02 13 35.6 -0.5
PTQR Pietraquaria 82.20 312 *i*Pu P 02 13 20.7 +0.3
comp=Z,135nm,0.8s,mb5.9
AQU L'Aquila 82.21 312⇑*i*P P 02 13 20.6 +0.2
comp=Z,124nm,0.9s,mb5.8
AQU L'Aquila 82.21 312 P P 02 13 21.3 +0.9
AQU L'Aquila 82.21 312⇑*i*P P 02 13 20.6 +0.2
MYKA Terra Mystica 82.21 316⇑*i*P P 02 13 20.5 +0.2
comp=Z,36nm,0.8s,mb5.3
BRG Berggiesshubel 82.25 321⇑*i*P P 02 13 20.7 +0.3
BRG pmax pmax
comp=Z,21nm,1.9s,mb4.7
BRG Berggiesshubel 82.25 321 *e*P P 02 13 20.5 +0.1
comp=Z,34nm,0.9s,mb5.3
BRG *ep*P pP 02 13 35.8 -1.3
BRG Berggiesshubel 82.25 321⇑*i*P P 02 13 20.7 +0.3
comp=Z,34nm,1.9s,mb5.0
GEC2 GERESS Array S 82.29 319 *e*P P 02 13 21.0 +0.3
GEC2 pmax pmax
comp=Z,85nm,1.2s,mb5.5
GEC2 GERESS Array S 82.29 319 *e*P P 02 13 21.0 +0.3
comp=Z,85nm,1.2s,mb5.5
GERES GERESS Array B 82.29 319 P P 02 13 21.0 +0.3
GERES pmax pmax
comp=Z,28nm,0.9s
GERES MLR MLR
comp=Z,127nm,19.8s
GERES GERESS Array B 82.29 319 P P 02 13 21.0 +0.3
comp=Z,28nm,0.8s,mb5.2,baz=96,slow=6.7,SNR=87
GERES LR LR 02 51 32.8
comp=Z,127nm,19.8s,MS4.3,baz=76,slow=37
KHC Kasperske Hory 82.38 319⇑*i*P P 02 13 21.2 0.0
KHC *e*PCP PcP 02 13 26.0 -0.3
PTCC Patocco-Chiusa 82.40 316 *i*Pu P 02 13 21.3 -0.1
comp=Z,77nm,0.8s,mb5.7
FIAM Fiamignano 82.42 312 *i*Pu P 02 13 21.6 +0.1
NRCA Norcia 82.44 313 P P 02 13 21.8 +0.2
comp=Z,82nm,1.2s,mb5.5
KBA Koelnbreinsper 82.44 317⇑*i*P P 02 13 21.4 -0.2
comp=Z,26nm,0.9s,mb5.1,SNR=7.7
KBA Koelnbreinsper 82.44 317⇑*i*P P 02 13 21.4 -0.1
KBA pmax pmax
comp=Z,26nm,0.9s,mb5.2
RUE Ruedersdorf 82.45 322 *e*P P 02 13 21.1 -0.4
comp=Z,129nm,1.1s,mb5.8
RUE Ruedersdorf 82.45 322 *e*P P 02 13 21.5 0.0
comp=Z,176nm,1.2s,mb5.9
GMNA Gemona 82.48 316 *i*Pu P 02 13 21.9 +0.2
comp=Z,367nm,0.9s,mb6.3
SNTG Esanatoglia 82.58 313 *i*P P 02 13 23.0 +0.7
comp=Z,106nm,1.2s,mb5.8
FBE Freiberg 82.62 321 *e*P P 02 13 22.7 +0.3
comp=Z,46nm,1.0s,mb5.5
FBE *ep*P pP 02 13 38.2 -0.8
FSSB Fossombrone 82.71 313 *i*Pu P 02 13 23.8 +0.8
comp=Z,57nm,0.8s,mb5.7
MA9 Marino 82.74 311 P P 02 13 23.4 +0.2
comp=Z,81nm,1.0s,mb5.7
ASS Assisi 82.78 313 P P 02 13 23.9 +0.5
comp=Z,2.7nm,0.8s,mb4.3
ASS Assisi 82.78 313 P P 02 13 23.9 +0.5
ASS pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
FVI Forni Avoltri 82.81 316 *i*Pu P 02 13 23.2 -0.2
comp=Z,36nm,0.8s,mb5.5
FVI Forni Avoltri 82.81 316 *i*P P 02 13 23.2 -0.2
FVI pmax pmax
comp=Z,36nm,0.8s,mb5.5
WET Wettzell 82.84 319 *e*P P 02 13 23.7 +0.1
WET pmax pmax
comp=Z,40nm,0.9s,mb5.5
WET Wettzell 82.84 319 *e*P P 02 13 23.7 +0.1
comp=Z,40nm,0.9s,mb5.5
RGN Rugen 82.86 324 *e*P P 02 13 23.7 +0.2
comp=Z,108nm,1.0s,mb5.8
CLL Collm 82.87 321⇑*i*P P 02 13 23.4 -0.2
comp=Z,32nm,1.0s,mb5.3
CLL *i* 02 13 26.2
CLL LR LR
comp=Z,200nm,20.5s,MS4.5
CLL Collm 82.87 321⇑*i*P P 02 13 23.4 -0.2
comp=Z,32nm,1.0s,mb5.3
CLL *i* PcP PcP 02 13 26.2 -2.1
comp=Z,26nm,1.0s
CLL L 02 49 00.0
comp=Z,200nm,20.5s
CLL Collm 82.87 321 *e*P P 02 13 23.3 -0.3
comp=Z,32nm,1.0s,mb5.3
RSM Repubblica di 82.95 314 *i*Pu P 02 13 25.4 +1.1
comp=Z,167nm,1.0s,mb6.0
RSM Repubblica di 82.95 314 *i*P P 02 13 25.4 +1.1
RSM pmax pmax
comp=Z,167nm,1.0s,mb6.0
ABTA Abfaltersbach 83.00 316⇑*i*P P 02 13 24.1 -0.4
comp=Z,34nm,1.0s,mb5.3,SNR=17
HFS Hagfors 83.05 330 LR LR 02 50 31.5
comp=Z,265nm,20.9s,MS4.6,baz=342,slow=36
BADI Badiali 83.09 313 P P 02 13 25.8 +0.8
TANN Tannenbergstha 83.17 320 *e*P P 02 13 25.3 +0.1
comp=Z,434nm,4.1s
NKC Novy Kostel 83.17 320⇑*i*P P 02 13 25.4 +0.2
SEST Monte Rota 83.20 316 P P 02 13 25.1 -0.4
WERN Wernitzgruen 83.22 320 *e*P P 02 13 25.8 +0.3
comp=Z,22nm,1.1s,mb5.1
GUNZ Gunzen 83.25 320 *e*P P 02 13 25.8 +0.2
comp=Z,23nm,0.9s,mb5.2
WERD Werda 83.27 320 *e*P P 02 13 25.7 0.0
comp=Z,23nm,0.9s,mb5.2
WERD *ep*P pP 02 13 41.7 -0.7
MOR8 Moi Rana 83.27 336⇑*i*P P 02 13 24.4 -1.0
MOR8 *e* 02 13 24.7
MOR8 Moi Rana 83.27 336⇑*i*P P 02 13 24.4 -1.0
MOR8 *e* 02 13 24.7
baz=104,slow=4.1
MOR8 AMb AMB 02 13 25.4
comp=Z,86nm,0.8s,mb5.8
CRE Caprese Michel 83.31 313 *i*Pu P 02 13 26.3 +0.2
comp=Z,30nm,0.7s,mb5.4
CRE Caprese Michel 83.31 313 *i*P P 02 13 26.3 +0.2
CRE pmax pmax
comp=Z,30nm,0.7s,mb5.4
ROTZ Rotzenmuhle 83.31 320 *e*P P 02 13 26.3 +0.3
comp=Z,40nm,0.9s,mb5.5
ROTZ *ep*P pP 02 13 42.0 -0.6
MANZ Manzenberg 83.38 320 *e*P P 02 13 26.9 +0.6
comp=Z,65nm,1.1s,mb5.6
SFI Santa Sofia 83.39 314 *i*Pu P 02 13 27.7 +1.2
comp=Z,162nm,1.0s,mb6.0
SFI Santa Sofia 83.39 314 *i*P P 02 13 27.7 +1.2
SFI pmax pmax
comp=Z,162nm,1.0s,mb6.0
COP Copenhagen 83.43 325 *e*P P 02 13 26.9 +0.4
COP pmax pmax
comp=Z,39nm,1.0s,mb5.4
COP Copenhagen 83.43 325 *i*P P 02 13 26.9 +0.4
comp=Z,39nm,1.0s,mb5.4
CTI Castel Tesino 83.57 316 *i*Pu P 02 13 27.9 +0.5
comp=Z,102nm,0.8s,mb6.0
CTI Castel Tesino 83.57 316 *i*P P 02 13 27.9 +0.5
CTI pmax pmax
comp=Z,102nm,0.8s,mb6.0
VMG Vicchio 83.61 314 P P 02 13 28.4 +0.8
comp=Z,100nm,0.8s,mb6.0
WTTA Wattenberg 83.61 317⇑*i*P P 02 13 27.3 -0.3
comp=Z,50nm,0.8s,mb5.7,SNR=24
WTTA Wattenberg 83.61 317⇑*i*P P 02 13 27.3 -0.3
WTTA pmax pmax
comp=Z,50nm,0.8s,mb5.7
WATA Walderalm 83.65 317⇑*i*P P 02 13 27.2 -0.6
comp=Z,27nm,0.9s,mb5.4,SNR=8.0
WATA Walderalm 83.65 317⇑*i*P P 02 13 27.2 -0.6
WATA pmax pmax
comp=Z,27nm,0.9s,mb5.4
MOX Moxa 83.72 320 *e*P P 02 13 27.8 -0.2
comp=Z,77nm,2.0s,mb5.5
MOX Moxa 83.72 320 *e*P P 02 13 27.8 -0.2
MOX pmax pmax
comp=Z,77nm,2.0s,mb5.5
MOX Moxa 83.72 320 *e*P P 02 13 28.1 +0.1
comp=Z,51nm,1.5s,mb5.4
SEI Scarperia 83.75 314 P P 02 13 29.2 +0.9
comp=Z,285nm,0.7s,mb6.5
FUR Furstenfeldbru 83.87 318 *e*P P 02 13 28.4 -0.5
FUR pmax pmax
comp=Z,36nm,0.9s,mb5.5
FUR Furstenfeldbru 83.87 318 *e*P P 02 13 28.4 -0.5
comp=Z,36nm,0.9s,mb5.5
SQTA Sankt Quirin 83.90 317⇑*i*P P 02 13 28.8 -0.3
comp=Z,36nm,0.6s,mb5.7,SNR=28
SQTA Sankt Quirin 83.90 317⇑*i*P P 02 13 28.8 -0.3
SQTA pmax pmax
comp=Z,36nm,0.6s,mb5.7
GRA1 Grafenberg Arr 83.94 319 *e*P P 02 13 29.6 +0.4
comp=Z,58nm,1.0s,mb5.7
GRF Grafenberg Arr 83.94 319 *e*P P 02 13 29.6 +0.4
GRF pmax pmax
comp=Z,58nm,1.0s,mb5.7
GRF Grafenberg Arr 83.94 319 *e*P P 02 13 29.6 +0.4
GRF pmax pmax
comp=Z,58nm,1.0s,mb5.7
GRF Grafenberg Arr 83.94 319 *e*P P 02 13 29.6 +0.4
comp=Z,58nm,1.0s,mb5.7
MOTA Moosalm 83.97 317⇑*i*P P 02 13 29.0 -0.5
SNR=24
NSS Namsos 84.17 334 *e*P P 02 13 28.7 -1.3
RETA Reutte 84.21 317 *i*P P 02 13 30.3 -0.3
comp=Z,52nm,0.8s,mb5.7,SNR=39
FETA Feichten 84.22 317 *i*P P 02 13 30.7 0.0
comp=Z,33nm,0.9s,mb5.5,SNR=25
SPB4 Spitsbergen Ar 84.27 348 *e*P P 02 13 29.5 -0.8
GSCL Gusciola 84.30 314 *i*Pu P 02 13 32.2 +1.0
comp=Z,51nm,0.8s,mb5.7
NB2 NORSAR Subarra 84.33 331 P P 02 13 30.0 -0.9
comp=Z,24nm,0.8s,mb5.4,baz=95,slow=5.1
NB2 NORSAR Subarra 84.33 331 P P 02 13 30.0 -0.9
NB2 pmax pmax
comp=Z,24nm,0.8s,mb5.4
NOA NORSAR Array B 84.33 331 P P 02 13 30.2 -0.7
comp=Z,17nm,0.8s,mb5.2,baz=94,slow=5.2,SNR=38
NOA pP pP 02 13 46.1 -1.5
comp=Z,7.2nm,0.8s,baz=96,slow=5.4,SNR=4.6
NOA PP PP 02 16 40.5 -5.7
comp=Z,5.2nm,0.8s,baz=96,slow=7.8,SNR=8.0
NOA LR LR 02 55 09.1
comp=Z,134nm,19.7s,MS4.3,baz=80,slow=38
NAO01 NORSAR Array S 84.48 331 *e*P P 02 13 31.1 -0.6
comp=Z,13nm,0.8s,mb5.1
CLZ Clausthal 84.53 322 *e*P P 02 13 32.2 +0.1
CLZ pmax pmax
comp=Z,46nm,0.9s,mb5.6
CLZ Clausthal 84.53 322 *e*P P 02 13 32.2 +0.1
comp=Z,46nm,0.9s,mb5.6
BSEG Bad Segeberg 84.59 324 *e*P P 02 13 32.6 +0.2
BSEG *e**PP pP 02 13 48.4 -0.7
BSEG pmax pmax
comp=Z,83nm,0.9s,mb5.9
BSEG Bad Segeberg 84.59 324 *e*P P 02 13 32.6 +0.2
comp=Z,83nm,0.9s,mb5.9
BSEG *ep*P pP 02 13 48.4 -0.7
NRDL Niedersach Rie 84.70 322 *e*P P 02 13 33.3 +0.3
comp=Z,111nm,1.5s,mb5.8
DAVA Damuels 84.81 317 *i*P P 02 13 33.7 0.0
comp=Z,77nm,0.9s,mb5.8,SNR=29
KONO Kongsberg 85.09 329 *e*P P 02 13 34.8 0.0
VSL Villasalto 85.23 309 *e*P P 02 13 35.9 -0.1
comp=Z,79nm,1.0s,mb5.8
KBS Kingsbay 85.24 349 *e*P P 02 13 34.4 -0.8
comp=Z,49nm,1.0s,mb5.6
KBS Kingsbay 85.24 349 *e*P P 02 13 34.4 -0.8
KBS pmax pmax
comp=Z,49nm,1.0s,mb5.6
STU Stuttgart 85.26 318 *e*P P 02 13 35.8 -0.1
comp=Z,38nm,0.8s,mb5.6
STU *ep*P pP 02 13 51.7 -0.9
MUD Monsted U'grnd 85.28 326 *i*P P 02 13 36.1 +0.3
MUD pmax pmax
comp=Z,51nm,1.1s,mb5.6
MUD Monsted U'grnd 85.28 326 *i*P P 02 13 36.1 +0.3
comp=Z,51nm,1.1s,mb5.6
KEST Kesra 85.33 305 P P 02 13 37.7 +1.2
comp=Z,20nm,0.8s,mb5.3,baz=47,slow=2.0,SNR=47
DOMB Dombas 85.39 332 *e*P P 02 13 36.4 +0.2
comp=Z,57nm,1.4s,mb5.5
DOMB Dombas 85.39 332 *e*P P 02 13 36.4 +0.2
DOMB AMb AMB 02 13 38.2
comp=Z,57nm,1.4s,mb5.5
PGF Pioggiola 85.47 312⇑*i*P P 02 13 37.2 +0.1
comp=Z,58nm,0.8s,mb5.5
PGF Pioggiola 85.47 312⇑*i*P P 02 13 37.2 +0.1
comp=Z,29nm,0.8s,mb5.5
PGF Pioggiola 85.47 312⇑*i*P P 02 13 37.2 +0.1
PGF pmax pmax
comp=Z,29nm,0.8s,mb5.5
TOD Tromm 85.51 319 *e*P P 02 13 36.9 -0.2
SPAK Spaichingen-Ko 85.54 318 *e*P P 02 13 37.5 +0.2
TNS Taunus Mts 85.74 320 *e*P P 02 13 38.4 +0.2
TNS pmax pmax
comp=Z,31nm,0.9s,mb5.5
TNS Taunus Mts 85.74 320 *e*P P 02 13 38.4 +0.2
comp=Z,31nm,0.9s,mb5.5
BFO Black Forest 85.84 318 P P 02 13 38.7 -0.1
comp=Z,240nm,0.7s,mb6.5,SNR=6.0
BFO Black Forest 85.84 318 *e*P P 02 13 38.1 -0.7
BFO pmax pmax
comp=Z,44nm,1.0s,mb5.6
BFO Black Forest 85.84 318 *e*P P 02 13 38.1 -0.7
comp=Z,44nm,1.0s,mb5.6
FIN Finale Ligure 86.01 314 P P 02 13 39.7 0.0
HLG Helgoland 86.03 324 *e*P P 02 13 38.3 -1.3
FELD Feldberg im Sc 86.07 318 *e*P P 02 13 41.0 +1.1
IBBN Ibbenburen 86.14 322 *e*P P 02 13 40.5 +0.3
comp=Z,66nm,0.9s,mb5.9
LANF Langenberg 86.18 319 *e*P P 02 13 40.5 +0.1
IMI Imperia 86.25 314 *i*P P 02 13 41.2 +0.3
ABH Alteburg 86.32 320 *e*P P 02 13 41.2 +0.1
BUG Bochum--Univer 86.46 321 *e*P P 02 13 41.7 -0.1
comp=Z,58nm,0.9s,mb5.8
SAOF Saorge 86.49 314 *e*P P 02 13 41.9 -0.2
CDF Champ du Feu 86.54 318⇑*i*P P 02 13 41.8 -0.4
comp=Z,50nm,1.0s,mb5.4
CDF Champ du Feu 86.54 318⇑*i*P P 02 13 41.8 -0.4
comp=Z,25nm,1.0s,mb5.4
CDF Champ du Feu 86.54 318⇑*i*P P 02 13 41.8 -0.4
CDF pmax pmax
comp=Z,25nm,1.0s,mb5.4
SBF Sospel 86.58 314⇑*i*P P 02 13 42.6 +0.1
comp=Z,158nm,0.8s,mb6.0
SBF Sospel 86.58 314⇑*i*P P 02 13 42.6 +0.1
comp=Z,79nm,0.8s,mb6.0
SBF Sospel 86.58 314⇑*i*P P 02 13 42.6 +0.1
SBF pmax pmax
comp=Z,79nm,0.8s,mb6.0
ODD1 Odda 86.59 330 *e*P P 02 13 41.8 -0.5
comp=Z,79nm,1.7s,mb5.7
ODD1 Odda 86.59 330 *e*P P 02 13 41.8 -0.5
ODD1 AMb AMB 02 13 45.8
comp=Z,79nm,1.7s,mb5.7
ECH Echery 86.63 318 *e*P P 02 13 43.1 +0.4
LUCF Luceram 86.64 314 *e*P P 02 13 43.1 +0.3
RUP Ruppelstein 86.65 319 *e*P P 02 13 42.7 0.0
BLS5 Blasjo 86.69 329⇑*i*P P 02 13 43.9 +1.2
TOUF Mont Tournerai 86.71 314 *e*P P 02 13 43.6 +0.5
MVIF Mont Vial 86.78 314 *e*P P 02 13 44.1 +0.6
HINF Hinteralfeld 86.85 318⇑*i*P P 02 13 43.0 -0.7
comp=Z,36nm,1.1s,mb5.2
HINF Hinteralfeld 86.85 318⇑*i*P P 02 13 43.0 -0.7
comp=Z,18nm,1.1s,mb5.2
HINF Hinteralfeld 86.85 318⇑*i*P P 02 13 43.0 -0.7
HINF pmax pmax
comp=Z,18nm,1.1s,mb5.2
CMAH Djebel Manchou 86.86 306 P P 02 13 46.0 +1.9

LOMF Lomont 86.88 317 *e*P P 02 13 43.8 -0.1
CALN Calern 86.98 313 *e*P P 02 13 44.8 +0.3
LPG La Plagne 87.01 315⇑*i*P P 02 13 45.0 +0.4
comp=Z,124nm,0.8s,mb5.9
LPG La Plagne 87.01 315⇑*i*P P 02 13 45.0 +0.4
comp=Z,62nm,0.8s,mb5.9
LPG La Plagne 87.01 315⇑*i*P P 02 13 45.0 +0.4
LPG pmax pmax
comp=Z,62nm,0.8s,mb5.9
LPL La Plagne 87.02 315⇑*i*P P 02 13 45.0 +0.4
comp=Z,164nm,0.8s,mb6.0
LPL La Plagne 87.02 315⇑*i*P P 02 13 45.0 +0.4
comp=Z,82nm,0.8s,mb6.0
LPL La Plagne 87.02 315⇑*i*P P 02 13 45.0 +0.4
LPL pmax pmax
comp=Z,82nm,0.8s,mb6.0
OG01 Vacheresse 87.02 316 *e*P P 02 13 44.6 0.0
MBDF Montbardon 87.02 314⇑*i*P P 02 13 44.2 -0.5
comp=Z,51nm,0.9s,mb5.4
MBDF Montbardon 87.02 314⇑*i*P P 02 13 44.2 -0.5
comp=Z,26nm,0.9s,mb5.5
MBDF Montbardon 87.02 314⇑*i*P P 02 13 44.2 -0.5
MBDF pmax pmax
comp=Z,26nm,0.9s,mb5.5
BNI Bardonecchia 87.08 315 *e*P P 02 13 44.7 -0.3
comp=Z,344nm,0.8s,mb5.6
RSL Roselend 87.09 315 *e*P P 02 13 44.9 -0.1
FRF La Foret Royal 87.16 313⇑*i*P P 02 13 45.6 +0.2
comp=Z,98nm,0.9s,mb5.7
FRF La Foret Royal 87.16 313⇑*i*P P 02 13 45.6 +0.2
comp=Z,49nm,0.9s,mb5.7
FRF La Foret Royal 87.16 313⇑*i*P P 02 13 45.6 +0.2
FRF pmax pmax
comp=Z,49nm,0.9s,mb5.7
HAU Haudompre 87.18 318⇑*i*P P 02 13 45.0 -0.3
comp=Z,114nm,0.8s,mb5.8
HAU Haudompre 87.18 318⇑*i*P P 02 13 45.0 -0.3
comp=Z,57nm,0.8s,mb5.8
HAU Haudompre 87.18 318⇑*i*P P 02 13 45.0 -0.3
HAU pmax pmax
comp=Z,57nm,0.8s,mb5.8
WLF Walferdange 87.24 319 *e*P P 02 13 46.1 +0.5
comp=Z,38nm,1.2s,mb5.5
WLF Walferdange 87.24 319 *e*P P 02 13 46.1 +0.5
WLF pmax pmax
comp=Z,38nm,1.2s,mb5.5
WLF Walferdange 87.24 319 P P 02 13 46.6 +1.0
comp=Z,25nm,1.6s,mb5.2
WLF Walferdange 87.24 319 *e*P P 02 13 46.2 +0.6
comp=Z,146nm,1.9s,mb5.9
LMR La Mourre 87.27 313⇑*i*P P 02 13 46.0 +0.1
comp=Z,70nm,1.0s,mb5.5
LMR La Mourre 87.27 313⇑*i*P P 02 13 46.0 +0.1
comp=Z,35nm,1.0s,mb5.5
LMR La Mourre 87.27 313⇑*i*P P 02 13 46.0 +0.1
LMR pmax pmax
comp=Z,35nm,1.0s,mb5.5
MEM Membach 87.29 320 P P 02 13 45.8 0.0
comp=Z,22nm,1.3s,mb5.2
THEF They Montfort 87.41 318 *e*P P 02 13 45.9 -0.6
CABF La Chapelle 87.42 316⇑*i*P P 02 13 46.8 +0.3
comp=Z,122nm,0.9s,mb5.8
CABF La Chapelle 87.42 316⇑*i*P P 02 13 46.8 +0.3
comp=Z,61nm,0.9s,mb5.8
CABF La Chapelle 87.42 316⇑*i*P P 02 13 46.8 +0.3
CABF pmax pmax
comp=Z,61nm,0.9s,mb5.8
CKFL Kef-Lekhel 87.43 306 P P 02 13 48.0 +1.2
BEBN Eben Emael 87.49 321 P P 02 13 47.1 +0.4
CASM Ain Smara 87.62 306 P P 02 13 49.0 +1.2
ORIF Oris-en-Rattie 87.65 315⇑*i*P P 02 13 47.6 -0.1
comp=Z,44nm,0.7s,mb5.5
ORIF *e*MLR MLR
comp=Z,252nm,22.2s,MS4.3
ORIF Oris-en-Rattie 87.65 315⇑*i*P P 02 13 47.6 -0.1
comp=Z,22nm,0.7s,mb5.5
ORIF Oris-en-Rattie 87.65 315⇑*i*P P 02 13 47.6 -0.1
ORIF pmax pmax
comp=Z,22nm,0.7s,mb5.5
CTEI Djebel Teioual 87.70 306 P P 02 13 50.0 +1.9
BCLA Clavier 87.75 320 P P 02 13 48.7 +0.7
comp=Z,23nm,1.8s,mb5.1
BCLA AP pP 02 14 04.4 -0.4
SMRF Simiane la Rot 87.92 314⇑*i*P P 02 13 49.7 +0.7
comp=Z,72nm,1.0s,mb5.6
SMRF Simiane la Rot 87.92 314⇑*i*P P 02 13 49.7 +0.7
comp=Z,72nm,1.0s,mb5.9
MEZF Maizieres J'vi 88.02 318⇑*i*P P 02 13 49.4 +0.1
comp=Z,34nm,0.8s,mb5.3
MEZF Maizieres J'vi 88.02 318⇑*i*P P 02 13 49.4 +0.1
comp=Z,34nm,0.8s,mb5.6
GIVF Givet 88.07 320⇑*i*P P 02 13 49.8 +0.2
DFRA Djebel Bou Aff 88.10 306 P P 02 13 52.0 +2.0
DOU Dourbes 88.22 320 P P 02 13 50.9 +0.6
SNF Seneffe 88.39 320 P P 02 13 51.3 +0.3
comp=Z,32nm,1.6s,mb5.3
SNF AP pP 02 14 08.7 +0.9
SNF XP sP 02 14 12.2 -2.1
BAIF Baives 88.47 320⇑*i*P P 02 13 51.9 +0.5
comp=Z,97nm,0.9s,mb5.7
BAIF Baives 88.47 320⇑*i*P P 02 13 51.9 +0.5
comp=Z,48nm,0.9s,mb5.7
BAIF Baives 88.47 320⇑*i*P P 02 13 51.9 +0.5
BAIF pmax pmax
comp=Z,49nm,0.9s,mb5.7
VNDA Vanda 88.50 169 *e*P P 02 13 50.4 -0.6
VNDA Vanda 88.50 169 P P 02 13 50.8 -0.3
comp=Z,3.4nm,0.8s,mb4.7,baz=300,slow=8.1,SNR=5.6
VNDA LR LR 02 49 36.7
comp=Z,328nm,20.6s,MS4.7,baz=262,slow=33
SET Setif 88.51 306 P P 02 13 55.0 +3.1
VIVF Saint-Julien-l 88.51 315⇑*i*P P 02 13 51.9 +0.1
comp=Z,66nm,1.0s,mb5.6
VIVF Saint-Julien-l 88.51 315⇑*i*P P 02 13 51.9 +0.1
comp=Z,33nm,1.0s,mb5.6
VIVF Saint-Julien-l 88.51 315⇑*i*P P 02 13 51.9 +0.1
VIVF pmax pmax
comp=Z,33nm,1.0s,mb5.6
LOR Lormes 88.90 317⇑*i*P P 02 13 53.6 0.0
comp=Z,69nm,0.8s,mb5.7
LOR Lormes 88.90 317⇑*i*P P 02 13 53.6 0.0
comp=Z,34nm,0.8s,mb5.7
LOR Lormes 88.90 317⇑*i*P P 02 13 53.6 0.0
LOR pmax pmax
comp=Z,35nm,0.8s,mb5.7
SMF Signal de Mont 88.96 316⇑*i*P P 02 13 53.8 0.0
comp=Z,88nm,0.8s,mb5.8
SMF Signal de Mont 88.96 316⇑*i*P P 02 13 53.8 0.0
comp=Z,44nm,0.8s,mb5.8
SMF Signal de Mont 88.96 316⇑*i*P P 02 13 53.8 0.0
SMF pmax pmax
comp=Z,44nm,0.8s,mb5.8
TNA Tin City 89.01 24⇑*i*P P 02 13 52.8 -0.9
comp=Z,12nm,0.9s,mb5.2
TNA LR LR
comp=Z,184nm,19.0s,MS4.5
LASF Ste Croix 89.15 314⇑*i*P P 02 13 55.4 +0.6
comp=Z,158nm,1.5s,mb5.8
SSF Saint Saulge 89.16 317⇑*i*P P 02 13 54.9 +0.1
comp=Z,44nm,0.9s,mb5.5
SSF Saint Saulge 89.16 317⇑*i*P P 02 13 54.9 +0.1
comp=Z,22nm,0.9s,mb5.5
SSF Saint Saulge 89.16 317⇑*i*P P 02 13 54.9 +0.1
SSF pmax pmax
comp=Z,22nm,0.9s,mb5.5
PLDF La Plantade 89.17 316 *e*P P 02 13 55.4 +0.6
AVF Avril sur Loir 89.29 317⇑*i*P P 02 13 55.3 -0.1
comp=Z,83nm,1.1s,mb5.7
AVF Avril sur Loir 89.29 317⇑*i*P P 02 13 55.3 -0.1
comp=Z,41nm,1.1s,mb5.7
AVF Avril sur Loir 89.29 317⇑*i*P P 02 13 55.3 -0.1
AVF pmax pmax
comp=Z,41nm,1.1s,mb5.7
LBL Lubilhac 89.49 315 *e*P P 02 13 56.9 +0.6
AGO Saint Agoulin 89.50 316 *e*P P 02 13 56.9 +0.5
PYM Petit Puy Mans 89.61 316 *e*P P 02 13 57.4 +0.5
BGF Bois d'Agland 89.65 316⇑*i*P P 02 13 57.6 +0.5
comp=Z,116nm,1.0s,mb5.8
BGF Bois d'Agland 89.65 316⇑*i*P P 02 13 57.6 +0.5
comp=Z,58nm,1.0s,mb5.9
BGF Bois d'Agland 89.65 316⇑*i*P P 02 13 57.6 +0.5
BGF pmax pmax
comp=Z,58nm,1.0s,mb5.9
EJON La Jonquera 89.98 312 P P 02 13 59.1 +0.4
comp=Z,9.4nm,0.8s,mb5.2
TCF Toulx Ste Croi 90.12 316⇑*i*P P 02 13 59.7 +0.4
comp=Z,106nm,1.5s,mb5.6
TCF Toulx Ste Croi 90.12 316⇑*i*P P 02 13 59.7 +0.4
comp=Z,53nm,1.5s,mb5.7
TCF Toulx Ste Croi 90.12 316⇑*i*P P 02 13 59.7 +0.4
TCF pmax pmax
comp=Z,53nm,1.5s,mb5.7
ETOS Mallorca 90.28 310 P P 02 13 59.9 -0.3
comp=Z,44nm,1.0s,mb5.7
CAF Calviac 90.35 315⇑*i*P P 02 14 01.1 +0.7
comp=Z,67nm,1.1s,mb5.6
CAF Calviac 90.35 315⇑*i*P P 02 14 01.1 +0.7
comp=Z,33nm,1.1s,mb5.6
CAF Calviac 90.35 315⇑*i*P P 02 14 01.1 +0.7
CAF pmax pmax
comp=Z,33nm,1.1s,mb5.6
MTLF Montolieu 90.39 313⇑*i*P P 02 14 01.2 +0.6
comp=Z,99nm,1.2s,mb5.7
MTLF Montolieu 90.39 313⇑*i*P P 02 14 01.2 +0.6
comp=Z,50nm,1.2s,mb5.7
MTLF Montolieu 90.39 313⇑*i*P P 02 14 01.2 +0.6
MTLF pmax pmax
comp=Z,50nm,1.2s,mb5.7
RJF Les Rejaudoux 90.70 315⇑*i*P P 02 14 02.9 +0.9
comp=Z,81nm,1.0s,mb5.7
RJF Les Rejaudoux 90.70 315⇑*i*P P 02 14 02.9 +0.9
comp=Z,40nm,1.0s,mb5.7
RJF Les Rejaudoux 90.70 315⇑*i*P P 02 14 02.9 +0.9
RJF pmax pmax
comp=Z,40nm,1.0s,mb5.7
EMIR Miracle 91.04 312 P P 02 14 05.1 +1.4
comp=Z,45nm,0.8s,mb5.8
LFF La Frestale 91.28 315⇑*i*P P 02 14 05.7 +1.0
comp=Z,56nm,0.9s,mb5.6
LFF La Frestale 91.28 315⇑*i*P P 02 14 05.7 +1.0
comp=Z,28nm,0.9s,mb5.6
LFF La Frestale 91.28 315⇑*i*P P 02 14 05.7 +1.0
LFF pmax pmax
comp=Z,28nm,0.9s,mb5.6
LDF La Druitiere 91.43 319⇑*i*P P 02 14 05.7 +0.4
comp=Z,147nm,1.0s,mb6.0
LDF La Druitiere 91.43 319⇑*i*P P 02 14 05.7 +0.4
comp=Z,73nm,1.0s,mb6.0
LDF La Druitiere 91.43 319⇑*i*P P 02 14 05.7 +0.4
LDF pmax pmax
comp=Z,73nm,1.0s,mb6.0
EPOB Poblet 91.44 311 P P 02 14 06.5 +1.0
comp=Z,36nm,0.8s,mb5.8
EIBI Ibiza 91.48 309 P P 02 14 07.5 +1.7
comp=Z,63nm,0.9s,mb5.9
CWF Charnwood Fore 91.62 323 *e*P P 02 14 05.5 -0.6
CWF AMb AMB 02 14 06.0
comp=Z,115nm,1.9s,mb5.9
HPK Haverah Park 91.63 324 *e*P P 02 14 05.5 -0.6
HPK AMb AMB 02 14 18.2
comp=Z,183nm,1.7s,mb6.1
FLN La Foliniere 91.65 319⇑*i*P P 02 14 06.6 +0.3
comp=Z,197nm,1.0s,mb5.9
FLN La Foliniere 91.65 319⇑*i*P P 02 14 06.6 +0.3
comp=Z,68nm,1.0s,mb5.9
FLN La Foliniere 91.65 319⇑*i*P P 02 14 06.6 +0.3
FLN pmax pmax
comp=Z,68nm,1.0s,mb5.9
KBI1 Birley Grange 91.67 323 *e*P P 02 14 05.4 -0.9
EPF Esparros 91.79 313⇑*i*P P 02 14 07.0 -0.1
comp=Z,22nm,1.2s,mb5.1
EPF Esparros 91.79 313⇑*i*P P 02 14 07.0 -0.1
comp=Z,11nm,1.2s,mb5.1
EPF Esparros 91.79 313⇑*i*P P 02 14 07.0 -0.1
EPF pmax pmax
comp=Z,11nm,1.2s,mb5.1
MLA1 Latheron 91.88 329 *e*P P 02 14 05.7 -1.5
KWE Weaver Farm 91.90 323 *e*P P 02 14 07.5 +0.2
DAG Danmarks Havn 91.91 348⇓*i*P P 02 14 06.0 -1.0
DAG pmax pmax
comp=Z,14nm,0.7s,mb5.4
DAG Danmarks Havn 91.91 348⇓*i*P P 02 14 06.0 -1.0
comp=Z,14nm,0.7s,mb5.4
GRR Gorron 91.94 319 *e*P P 02 14 08.2 +0.5
comp=Z,222nm,1.4s,mb6.0
GRR Gorron 91.94 319 *e*P P 02 14 08.2 +0.5
comp=Z,111nm,1.4s,mb6.0
GRR Gorron 91.94 319 *e*P P 02 14 08.2 +0.5
GRR pmax pmax
comp=Z,111nm,1.4s,mb6.0
EBIE Bielsa 91.98 313 P P 02 14 08.8 +0.8
comp=Z,19nm,0.9s,mb5.4
ERTA Horta de San J 92.04 311 P P 02 14 09.5 +1.2
comp=Z,33nm,0.9s,mb5.7
ESK Eskdalemuir 92.32 326 *e*P P 02 14 08.2 -1.0
ESK AMb AMB 02 14 10.8
comp=Z,91nm,1.7s,mb5.8
MVH1 Achvaich 92.38 328 *e*P P 02 14 08.9 -0.5
ETSF Etsaut 92.46 313 *e*P P 02 14 11.2 +1.0
comp=Z,69nm,1.0s,mb5.7
ETSF Etsaut 92.46 313 *e*P P 02 14 11.2 +1.0
comp=Z,35nm,1.0s,mb5.6
ETSF Etsaut 92.46 313 *e*P P 02 14 11.2 +1.0
ETSF pmax pmax
comp=Z,35nm,1.0s,mb5.6
ESAC San Caprasio 92.55 312 P P 02 14 11.6 +1.0
comp=Z,41nm,0.8s,mb5.9
MDO Dochfour 92.56 328 *e*P P 02 14 10.5 +0.2
HGH Gray Hill 92.70 322 *e*P P 02 14 10.4 -0.7
EMOS Mosqueruela 92.72 311 P P 02 14 13.6 +2.2
comp=Z,58nm,0.9s,mb6.0
EBEN Beniarda 92.73 309 P P 02 14 12.7 +1.2
comp=Z,14nm,2.1s,mb5.0
SJPF Ste Jean 92.92 313 *e*P P 02 14 13.4 +1.1
comp=Z,66nm,1.1s,mb5.8
SJPF Ste Jean 92.92 313 *e*P P 02 14 13.4 +1.1
comp=Z,48nm,1.1s,mb5.8
SJPF Ste Jean 92.92 313 *e*P P 02 14 13.4 +1.1
SJPF pmax pmax
comp=Z,48nm,1.1s,mb5.8
SGMF Saint Gilles 93.09 319 *e*P P 02 14 13.1 +0.1
ECHE Chera 93.20 310 P P 02 14 14.4 +0.7
comp=Z,97nm,3.2s
ECHE Chera 93.20 310 P P 02 14 14.4 +0.7
ECHE pmax pmax
comp=Z,97nm,3.2s
ALE Alert 93.29 357 P P 02 14 13.0 -0.3
comp=Z,300nm,0.7s,mb6.8,SNR=37
CART Cartagena 93.48 308 *e*P P 02 14 15.2 +0.1
comp=Z,70nm,1.2s,mb6.0
QUIF Quistinic 93.54 318 *e*P P 02 14 15.3 +0.2
comp=Z,247nm,1.4s,mb6.1
QUIF Quistinic 93.54 318 *e*P P 02 14 15.3 +0.2
comp=Z,124nm,1.4s,mb6.2
QUIF Quistinic 93.54 318 *e*P P 02 14 15.3 +0.2
QUIF pmax pmax
comp=Z,124nm,1.4s,mb6.2
ROSF Rostrenen 93.55 319 *e*P P 02 14 14.4 -0.7
TOA0 Torodi Ar. Sit 93.60 283 *e*P P 02 14 15.7 -0.3
TORD Torodi Ar. Bea 93.60 283 P P 02 14 16.1 +0.1
comp=Z,7.6nm,1.0s,mb5.1,baz=94,slow=5.5,SNR=30
TORD PP PP 02 18 04.9 +3.3
comp=Z,0.7nm,0.9s,baz=80,slow=6.7,SNR=5.4
TORD PKKP PKKPbc 02 31 21.4 +0.3
comp=Z,1.8nm,0.8s,baz=295,slow=2.1,SNR=15
ETOB Tobarra 93.77 309 P P 02 14 18.0 +1.6
comp=Z,17nm,0.8s,mb5.5
ETOR Torete 93.85 311 P P 02 14 17.9 +1.2
comp=Z,33nm,0.7s,mb5.9
ETOR Torete 93.85 311 P P 02 14 17.9 +1.2
ETOR pmax pmax
comp=Z,33nm,0.7s,mb5.9
SDPT Sand Point 94.42 34 *e*P P 02 14 17.7 -1.2
comp=Z,33nm,0.6s,mb6.0
EVIA Vianos 94.51 309 P P 02 14 21.0 +1.2
comp=Z,20nm,1.0s,mb5.5
EVIA Vianos 94.51 309 P P 02 14 21.0 +1.2
EVIA pmax pmax
comp=Z,20nm,1.0s,mb5.5
IMA2 Indian Mountai 94.59 23 *e*P P 02 14 19.5 0.0
TTA Tatalina 94.64 26 *e*P P 02 14 19.7 -0.1
TTA Tatalina 94.64 26 *e*P P 02 14 19.9 +0.1
EBER Berja 95.07 307 P P 02 14 22.6 +0.3
comp=Z,30nm,2.4s,mb5.3
EQES Quesada 95.08 308 P P 02 14 22.5 +0.2
comp=Z,11nm,0.9s,mb5.3
SVW2 Sparrevohn 95.39 28 *e*P P 02 14 23.7 +0.4
GUD Guadarrama 95.46 311 P P 02 14 24.1 +0.1
comp=Z,43nm,1.7s,mb5.6
GUD Guadarrama 95.46 311 P P 02 14 24.1 +0.1
GUD pmax pmax
comp=Z,43nm,1.7s,mb5.6
ESDC Sonseca Array 95.47 310 P P 02 14 24.6 +0.5
comp=Z,7.2nm,0.8s,mb5.2
ESDC Sonseca Array 95.47 310 P P 02 14 24.6 +0.4
comp=Z,6.8nm,0.8s,mb5.1,baz=57,slow=4.3,SNR=21
ESLA Sonseca Array 95.47 310 *e*P P 02 14 24.9 +0.8
ECOG Cogollos-Vega 95.55 308 P P 02 14 25.0 +0.5
comp=Z,5.0nm,2.2s,mb4.6
ECOG Cogollos-Vega 95.55 308 P P 02 14 25.0 +0.5
ECOG pmax pmax
comp=Z,5.0nm,2.2s,mb4.6
EBAN Banos Encina 95.58 309 P P 02 14 25.3 +0.6
comp=Z,15nm,1.0s,mb5.4
EBAN Banos Encina 95.58 309 P P 02 14 25.3 +0.6
EBAN pmax pmax
comp=Z,15nm,1.0s,mb5.4
EGUA Guajares 95.61 307 P P 02 14 25.3 +0.5
comp=Z,80nm,2.6s,mb5.7
EGUA Guajares 95.61 307 P P 02 14 25.3 +0.5
EGUA pmax pmax
comp=Z,80nm,2.6s,mb5.7
EADA Adamuz 96.19 309 P P 02 14 28.8 +1.4
comp=Z,12nm,1.0s,mb5.3
MCK McKinley 97.34 24 *e*P P 02 14 30.7 -1.4
comp=Z,37nm,2.1s,mb5.4
MCK McKinley 97.34 24 *e*P P 02 14 31.3 -0.8
MCK pmax pmax
comp=Z,37nm,2.1s,mb5.5
EMIN Mina Concepcio 97.89 309 P P 02 14 35.2 0.0
comp=Z,32nm,5.9s
EBAD Badajoz 97.97 310 P P 02 14 35.6 +0.1
comp=Z,7.2nm,0.9s,mb5.2
PBAR Barrancos 98.10 309 *e*P P 02 14 36.8 +0.7
comp=Z,17nm,1.3s,mb5.4
PMR Palmer 98.13 26 *e*P P 02 14 34.5 -1.1
comp=Z,25nm,1.4s,mb5.5
PMR Palmer 98.13 26 *e*P P 02 14 34.5 -1.1
PMR pmax pmax
comp=Z,25nm,1.4s,mb5.5
PBEJ Beja 98.77 309 *e*P P 02 14 40.2 +1.1
comp=Z,14nm,1.7s,mb5.2
PVAQ Vaqueiros 98.78 309 *e*P P 02 14 38.9 -0.2
comp=Z,23nm,1.6s,mb5.5
PFVI Vila Bisbo 99.70 308 *e*P Pdif 02 14 42.2 -0.6
comp=Z,60nm,1.9s
INK Inuvik 100.31 17 *e*Pdif Pdif 02 14 44.8 -0.7
RES Resolute Bay 101.38 3 *e*Pdif Pdif 02 14 50.0 -0.3
YKA Yellowknife Ar 109.87 15 Pdif Pdif 02 15 28.3 +0.3
YKA PKPdf PKiKP 02 19 27.6 -2.2
YKA PP PP 02 19 53.1 -9.0
YKA PKKPbc PKKPbc 02 30 31.1 -4.3
YKA PKKPab PKKPab 02 30 47.3 +1.5
YKA Yellowknife Ar 109.87 15 Pdiff Pdif 02 15 28.3 +0.3
comp=Z,0.5nm,0.6s,baz=325,slow=4.2,SNR=13
YKA PKiKP PKiKP 02 19 27.6 -2.2
comp=Z,0.6nm,0.7s,baz=311,slow=2.6,SNR=7.3
YKA PP PP 02 19 53.1 -9.0
comp=Z,3.3nm,0.8s,baz=329,slow=7.7,SNR=12
YKA PKKPbc PKKPbc 02 30 31.0 -4.3
comp=Z,1.0nm,0.9s,baz=143,slow=3.2,SNR=12
YKA PKKPab PKKPab 02 30 47.3 +1.5
comp=Z,1.8nm,1.0s,baz=146,slow=3.0,SNR=9.9
FCC Fort Churchill 117.12 6 *e*PKPdf PKPdf 02 19 42.2 -1.5
FCC *e*PP PP 02 20 49.9 -3.5
A05A Maple Falls 117.79 28 ⇓P PKPdf 02 19 44.7 -0.6
baz=118
A06A Chilliwack 118.00 27 ⇓P PKPdf 02 19 45.1 -0.6
baz=118
EDM Edmonton 118.00 20 *e*PKPdf PKPdf 02 19 45.1 -0.5
C04A Brinnon 118.28 29⇑P PKPdf 02 19 46.0 -0.2
baz=118
B05A Bryant 118.31 28 P PKPdf 02 19 46.5 +0.2
baz=118,SNR=7.4
B06A Marblemount 118.42 28⇑P PKPdf 02 19 45.6 -0.9
baz=118
A07A Ashnola River, 118.53 27 P PKPdf 02 19 46.7 -0.1
baz=118,SNR=6.0
C05A Tolt Reservoir 118.91 28 ⇓P PKPdf 02 19 46.9 -0.6
baz=119
B07A Winthrop 119.08 27⇑P PKPdf 02 19 47.5 -0.3
baz=119
A08A Turner Farm, O 119.09 26⇑P PKPdf 02 19 47.8 0.0
baz=119
D05A Enumclaw 119.13 29⇑P PKPdf 02 19 47.9 0.0
baz=119
A09A Danville 119.37 26⇑P PKPdf 02 19 47.8 -0.6
baz=119
FMW Mount Fremont 119.46 29 P PKPdf 02 19 48.5 -0.1
B08A Colville Reser 119.51 26 ⇓P PKPdf 02 19 48.0 -0.6
baz=119
C07A Waterville 119.67 27 P PKPdf 02 19 48.2 -0.7
baz=120,SNR=5.4
E05A Randle 119.68 29 ⇓P PKPdf 02 19 49.0 -0.1
baz=120
WTV Waterville 119.72 27 P PKPdf 02 19 48.5 -0.6
FFC Flin Flon 119.78 12 *e*PKPdf PKPdf 02 19 47.6 -1.4
F04A Amboy 119.80 30⇑P PKPdf 02 19 48.9 -0.4
baz=120
A10A Northport 119.81 25⇑P PKPdf 02 19 48.9 -0.3
baz=120
SCHQ Schefferville 119.95 349 PKP PKPdf 02 19 48.7 -0.6
SCHQ PP PP 02 21 04.4 -8.7
SCHQ PKKPbc PKKPbc 02 29 56.3 -4.2
SCHQ Schefferville 119.95 349 PKP PKPdf 02 19 48.7 -0.6
comp=Z,7.1nm,0.7s,baz=36,slow=3.6,SNR=15
SCHQ PP PP 02 21 04.4 -8.7
comp=Z,2.3nm,0.8s,baz=7.4,slow=7.8,SNR=2.1
SCHQ PKKPbc PKKPbc 02 29 56.3 -4.2
comp=Z,2.5nm,0.6s,baz=183,slow=1.5,SNR=8.4
B09A Rice 119.98 26 ⇓P PKPdf 02 19 49.2 -0.3
baz=120,SNR=12
C08A Higginbotham F 120.06 27 ⇓P PKPdf 02 19 49.2 -0.5
baz=120
E06A Yakima 120.07 29 ⇓P PKPdf 02 19 49.1 -0.7
baz=120
D07A Quincy 120.08 28 ⇓P PKPdf 02 19 49.3 -0.4
baz=120
EPH Ephrata 120.14 27 P PKPdf 02 19 49.3 -0.6
A11A Hall Mountain, 120.32 24⇑P PKPdf 02 19 50.1 -0.1
baz=120,SNR=5.4
NEW Newport 120.54 25 *e*PKPdf PKPdf 02 19 50.0 -0.6
E07A Sunnyside 120.60 28 ⇓P PKPdf 02 19 50.4 -0.4
baz=120
A12A Yaak River Ran 120.63 24⇑P PKPdf 02 19 50.1 -0.6
baz=120
D08A Wollman Farm, 120.66 27 ⇓P PKPdf 02 19 51.1 +0.2
baz=120
F06A Goldendale 120.72 29 ⇓P PKPdf 02 19 51.2 +0.2
baz=121
B11A Sandpoint 120.73 25 ⇓P PKPdf 02 19 50.9 -0.1
baz=121
H04A Detroit Lake 120.78 31 ⇓P PKPdf 02 19 50.8 -0.4
baz=121
HAWA Hanford 120.87 28 *e*PKPdf PKPdf 02 19 51.1 -0.2
HAWA *e* 02 20 07.8
D09A Jones Farm, Ri 120.94 27 P PKPdf 02 19 51.4 0.0
baz=121,SNR=6.0
E08A Dider Farm, El 121.02 28 ⇓P PKPdf 02 19 51.2 -0.4
baz=121
B12A Libby 121.02 24⇑P PKPdf 02 19 51.5 -0.1
baz=121
F07A Phinny Hill Vi 121.05 29⇑P PKPdf 02 19 51.6 -0.1
baz=121
G06A Carlson Farm, 121.18 30⇑P PKPdf 02 19 51.8 -0.1
baz=121
J03A Ideyld Park 121.27 33 ⇓P PKPdf 02 19 52.3 +0.1
baz=121
I04A Tendick Farm, 121.27 32 ⇓P PKPdf 02 19 51.7 -0.5
baz=121
H05A Madras 121.30 31⇑P PKPdf 02 19 52.4 +0.2
baz=121,SNR=5.3
D10A Wagner Farm, O 121.41 26⇑P PKPdf 02 19 52.2 -0.1
baz=121
E09A Wood Farm, Sta 121.42 27⇑P PKPdf 02 19 52.0 -0.4
baz=121
B13A Whitefish 121.55 24 P PKPdf 02 19 52.4 -0.2
baz=121,SNR=11
I05A Bend 121.62 31 ⇓P PKPdf 02 19 53.0 +0.1
baz=122
G07A Ruggs Ranch, H 121.63 29⇑P PKPdf 02 19 52.6 -0.2
baz=122
H06A Lindquist Farm 121.68 30 ⇓P PKPdf 02 19 52.9 0.0
baz=122,SNR=5.5
L02A Cave Junction 121.73 34 ⇓P PKPdf 02 19 53.2 +0.1
baz=122
J04A Umpqua Nationa 121.81 32 ⇓P PKPdf 02 19 53.0 -0.2
baz=122
E10A Myers Farm, Un 121.91 27 P PKPdf 02 19 52.9 -0.5
baz=122,SNR=6.3

G08A	Pilot Rock	121.95	29	⇓P	PKPdf	02 19 52.7	-0.8
	baz=122						
C13A	Hot Springs	122.07	24	P	PKPdf	02 19 53.0	-0.6
	baz=122,SNR=7.2						
F09A	S2 Ranch, Elgi	122.14	28	P	PKPdf	02 19 53.6	-0.2
	baz=122,SNR=7.4						
J05A	Fort Rock	122.25	32	⇑P	PKPdf	02 19 54.6	+0.5
	baz=122,SNR=5.9						
F10A	Beach Ranch, E	122.25	27	P	PKPdf	02 19 54.1	+0.2
	baz=122,SNR=26						
I06A	Prineville	122.31	31	⇑P	PKPdf	02 19 54.8	+0.6
	baz=122						
E11A	Bogner Ranch,	122.41	26	P	PKPdf	02 19 53.7	-0.6
	baz=122,SNR=11						
D13A	Huson	122.58	24	P	PKPdf	02 19 54.0	-0.6
	baz=122,SNR=9.7						
H08A	Prairie City	122.66	29	⇓P	PKPdf	02 19 54.9	+0.1
	baz=122						
L04A	Klamath Falls	122.66	33	⇓P	PKPdf	02 19 54.4	-0.5
	baz=122						
F11A	Grangeville	122.80	26	P	PKPdf	02 19 54.3	-0.7
	baz=123,SNR=16						
K05A	Summer Lake	122.81	32	⇑P	PKPdf	02 19 55.6	+0.4
	baz=123,SNR=5.5						
J06A	Christmas Vall	122.83	31	P	PKPdf	02 19 55.4	+0.2
	baz=123,SNR=7.3						
M04C	Macdoel	122.95	33	⇑P	PKPdf	02 19 55.2	-0.3
	baz=123						
D14A	Greenough	122.98	24	P	PKPdf	02 19 54.8	-0.6
	baz=123,SNR=11						
MSO	Missoula	123.00	24	*e*PKPdf	PKPdf	02 19 53.9	-1.5
MSO				*e*PP	PP	02 21 34.8	+0.7
H09A	Durkee	123.03	28	⇑P	PKPdf	02 19 55.6	+0.1
	baz=123						
K06A	Valley Falls	123.10	32	⇑P	PKPdf	02 19 56.3	+0.6
	baz=123,SNR=7.8						
M03C	McCloud	123.14	34	P	PKPdf	02 19 56.1	+0.2
	baz=123,SNR=6.4						
I08A	Drewsey	123.15	30	⇓P	PKPdf	02 19 56.2	+0.4
	baz=123						
J07A	Hines	123.17	30	P	PKPdf	02 19 56.8	+1.0
	baz=123,SNR=5.8						
E13A	Victor	123.21	25	⇑P	PKPdf	02 19 55.3	-0.5
	baz=123,SNR=30						
CHMT	Chamberlain Mo	123.22	24	*e*PKPdf	PKPdf	02 19 54.5	-1.3
CHMT				*e*PP	PP	02 21 35.8	+0.2
F12A	Elk City	123.30	26	⇓P	PKPdf	02 19 55.3	-0.7
	baz=123						
WDC	Whiskeytown Da	123.37	35	⇑P	PKPdf	02 19 56.0	-0.3
	baz=123						
D15A	Lincoln	123.40	23	P	PKPdf	02 19 55.7	-0.5
	baz=123,SNR=9.5						
E14A	Clinton	123.52	24	P	PKPdf	02 19 56.4	0.0
	baz=123,SNR=10						
H10A	Noah's Angus R	123.52	28	P	PKPdf	02 19 55.8	-0.7
	baz=123,SNR=8.3						
LTIM	Timbered Crate	123.56	34	P	PKPdf	02 19 57.0	+0.4
J08A	Circle Bar Ran	123.61	30	⇓P	PKPdf	02 19 56.7	0.0
	baz=124,SNR=8.4						
EGMT	Eagleton	123.62	21	*e*PKPdf	PKPdf	02 19 56.0	-0.5
EGMT				*e*PP	PP	02 21 38.9	+0.8
EGMT	Eagleton	123.62	21	⇑P	PKPdf	02 19 55.8	-0.7
	baz=124						
M05C	Lookout	123.62	33	⇓P	PKPdf	02 19 56.8	0.0
	baz=124						
F13A	Darby	123.67	25	⇑P	PKPdf	02 19 56.4	-0.3
	baz=124,SNR=15						
K07A	Rock Creek Ran	123.70	31	⇑P	PKPdf	02 19 57.5	+0.7
	baz=124,SNR=15						
MOD	Modoc	123.70	32	*e*PKPdf	PKPdf	02 19 57.0	0.0
MOD				*e*pPKPdf	pPKPdf	02 20 13.1	-1.3
MOD				*e*PP	PP	02 21 40.5	+1.3
MOD	Modoc	123.70	32	⇓P	PKPdf	02 19 57.2	+0.3
	baz=124,SNR=9.2						
H11A	Donnelly	123.77	27	P	PKPdf	02 19 56.7	-0.2
	baz=124,SNR=16						
HATC	Hat Creek Radi	123.82	34	⇑P	PKPdf	02 19 56.9	-0.3
	baz=124						
E15A	Deer Lodge	123.86	24	P	PKPdf	02 19 56.7	-0.3
	baz=124,SNR=5.2						
LBCM	Butte Creek Ri	123.86	34	P	PKPdf	02 19 57.6	+0.3
GASB	Alder Springs	123.88	36	⇑P	PKPdf	02 19 57.5	+0.2
	baz=124						
I10A	Payette	123.88	28	⇓P	PKPdf	02 19 56.9	-0.2
	baz=124						
J09A	Fry Pan Ranch,	123.97	29	⇓P	PKPdf	02 19 57.7	+0.3
	baz=124,SNR=9.9						
K08A	Mann Creek Ran	124.06	30	⇑P	PKPdf	02 19 57.9	+0.4
	baz=124,SNR=12						
F14A	Wisdom	124.06	25	⇓P	PKPdf	02 19 57.8	+0.3
	baz=124,SNR=14						
HOPS	Hopland	124.09	37	⇓P	PKPdf	02 19 57.7	0.0
	baz=124						
M06C	Likely Place G	124.09	33	⇓P	PKPdf	02 19 58.3	+0.6
	baz=124						
L07A	Adell	124.13	32	⇑P	PKPdf	02 19 58.4	+0.7
	baz=124,SNR=5.5						
WVOR	Wild Horse Val	124.19	31	*e*PKPdf	PKPdf	02 19 57.8	0.0
WVOR				*e*PP	PP	02 21 42.9	+0.6
WVOR	Wild Horse Val	124.19	31	PKIKP	PKPdf	02 19 58.5	+0.7
G13A	Cobalt	124.26	26	⇓P	PKPdf	02 19 57.9	0.0
	baz=124						
O04C	Chester	124.36	34	⇑P	PKPdf	02 19 58.1	-0.1
	baz=124,SNR=6.6						
J10A	Berg Farm, Mel	124.39	29	⇓P	PKPdf	02 19 57.9	-0.3
	baz=124						
F15A	Butte	124.39	24	P	PKPdf	02 19 58.1	0.0
	baz=124,SNR=5.8						
I11A	Placerville	124.40	28	⇓P	PKPdf	02 19 57.9	-0.3
	baz=124						
H12A	Diamond D Ranc	124.42	27	P	PKPdf	02 19 58.1	-0.1
	baz=124,SNR=12						
K09A	Rome	124.46	30	⇑P	PKPdf	02 19 58.4	+0.1
	baz=124,SNR=17						
G14A	Jackson	124.47	25	P	PKPdf	02 19 58.7	+0.4
	baz=124,SNR=44						
L08A	Fields	124.52	31	⇓P	PKPdf	02 19 58.8	+0.4
	baz=124,SNR=12						
MNRC	McLaughlin Nat	124.54	36	⇑P	PKPdf	02 19 58.9	+0.3
	baz=124						
ORV	Oroville	124.64	35	P	PKPdf	02 19 58.6	-0.2
	baz=124,SNR=5.8						
M07A	Soldier Meadow	124.67	32	⇓P	PKPdf	02 19 59.1	+0.3
	baz=124,SNR=12						
H13A	Challis	124.67	26	P	PKPdf	02 19 58.5	-0.2
	baz=124,SNR=29						
O05C	Quincy	124.70	34	P	PKPdf	02 19 59.3	+0.4
	baz=125,SNR=5.0						
N06A	Buffalo Meadow	124.76	33	⇓P	PKPdf	02 19 59.4	+0.4
	baz=125,SNR=16						
OHCM	Honcut	124.80	35	*e*PKPdf	PKPdf	02 19 58.1	-1.0
OHCM				*e*pPKPdf	pPKPdf	02 20 14.7	-1.9
K10A	MacKenzie Ranc	124.83	29	⇑P	PKPdf	02 19 59.7	+0.6
	baz=125						
MFID	Camas Ranch	124.84	28	P	PKPdf	02 19 59.6	+0.6
	baz=125,SNR=15						
CVS	Carmenet Viney	124.88	37	⇑P	PKPdf	02 19 59.2	-0.1
	baz=125						
BOZ	Bozeman (W)	124.90	24	*e*PKPdf	PKPdf	02 19 58.7	-0.4
BOZ				*e*pPKPdf	pPKPdf	02 20 15.4	-1.1
BOZ				*e*PP	PP	02 21 45.0	-1.9
BOZ	Bozeman (W)	124.90	24	⇓P	PKPdf	02 19 59.2	+0.1
	baz=125						
G15A	Dillon	124.94	25	P	PKPdf	02 19 59.4	+0.2
	baz=125,SNR=28						
L09A	Wilkinson Ranc	124.99	31	⇑P	PKPdf	02 19 59.7	+0.3
	baz=125						
DGMT	Dagmar	125.00	17	*e*PKPdf	PKPdf	02 19 59.1	-0.1
DGMT				*e*pPKPdf	pPKPdf	02 20 15.2	-1.4
DGMT				*e*PP	PP	02 21 44.2	-3.1
M08A	Happy Creek Ra	125.04	31	⇓P	PKPdf	02 19 60.0	+0.5
	baz=125,SNR=8.2						
MCMT	McKenzie Canyo	125.07	25	*e*PKPdf	PKPdf	02 19 59.3	-0.1
MCMT				*e*PP	PP	02 21 47.7	-0.3
BEKR	Beckwourth	125.08	34	⇑P	PKPdf	02 19 59.9	+0.3
	baz=125,SNR=9.1						
O06A	Flanigan	125.17	34	⇓P	PKPdf	02 19 60.0	+0.2
	baz=125,SNR=6.4						
ULM	Lac du Bonnet	125.19	10	PKP	PKPdf	02 19 53.2	-6.2
ULM				*e*PKPdf	PKPdf	02 19 58.1	-1.3
ULM				*e*pPKPdf	pPKPdf	02 20 14.7	-2.2
ULM				*e*PP	PP	02 21 45.4	-3.1
ULM	Lac du Bonnet	125.19	10	PKhKP		02 19 53.2	
	comp=Z,7.7nm,1.1s,baz=346,slow=3.2,SNR=4.1						
ULM				PKP	PKPdf	02 19 58.8	-0.7
	comp=Z,23nm,0.8s,baz=352,slow=2.4,SNR=59						
ULM				pPKP	pPKPdf	02 20 15.2	-1.7
	comp=Z,11nm,0.6s,baz=337,slow=2.8,SNR=6.8						
ULM				PP	PP	02 21 39.9	-8.5
	comp=Z,2.6nm,1.0s,baz=322,slow=12,SNR=1.9						
N07B	Gerlach	125.20	32	⇓P	PKPdf	02 20 00.3	+0.5
	baz=125,SNR=14						
K11A	Parker Ranch,	125.24	29	⇑P	PKPdf	02 20 00.1	+0.3
	baz=125						
I13A	Wildhorse Cree	125.24	27	P	PKPdf	02 20 00.6	+0.8
	baz=125,SNR=13						
J12A	Stokes Ranch,	125.31	28	P	PKPdf	02 20 00.8	+0.8
	baz=125,SNR=12						
P05C	Yuba Gap, Truc	125.32	35	⇑P	PKPdf	02 20 00.6	+0.5
	baz=125						
HLID	Hailey	125.39	27	*e*PKPdf	PKPdf	02 20 00.2	+0.1
HLID				*e*pPKPdf	pPKPdf	02 20 16.3	-1.2
HLID				*e*PP	PP	02 21 51.7	+1.5
HLID	Hailey	125.39	27	⇓P	PKPdf	02 20 00.4	+0.3
	baz=125						
P06A	Stead Airport,	125.47	34	⇑P	PKPdf	02 20 00.6	+0.2
	baz=125						
M09A	Marrel Ranch,	125.54	31	⇓P	PKPdf	02 20 01.0	+0.6
	baz=125						
GCMT	Greycliff	125.54	22	*e*PKPdf	PKPdf	02 20 00.4	+0.1
GCMT				*e*PP	PP	02 21 52.2	+1.1
L10A	Juniper Basin	125.55	30	⇑P	PKPdf	02 20 01.2	+0.8
	baz=125,SNR=16						
LAVA	Lava Cap Winer	125.62	35	P	PKPdf	02 20 00.9	+0.3
	baz=126,SNR=8.2						
J13A	Cove Ranch, Pi	125.62	27	P	PKPdf	02 20 01.1	+0.6
	baz=126,SNR=30						
N08A	GE Springer Mi	125.65	32	P	PKPdf	02 20 01.8	+1.1
	baz=126,SNR=12						
QLMT	Earthquake Lak	125.65	24	*e*PKPdf	PKPdf	02 20 00.8	+0.3
QLMT				*e*		02 20 18.1	
O07A	Toulon	125.69	33	P	PKPdf	02 20 01.7	+0.9
	baz=126,SNR=11						
PAHR	Pah Rah Range	125.73	34	*e*PKPdf	PKPdf	02 20 01.0	+0.2
PAHR				*e*pPKPdf	pPKPdf	02 20 17.1	-1.2
WENL	Wente Brothers	125.77	37	⇓P	PKPdf	02 20 01.8	+0.8
	baz=126						
L11A	Cat Creek Ranc	125.83	29	⇓P	PKPdf	02 20 01.6	+0.7
	baz=126,SNR=10						
K12A	Draper Farm, C	125.88	28	⇑P	PKPdf	02 20 01.6	+0.5
	baz=126						
N09A	Rock Creek Ran	125.92	31	⇓P	PKPdf	02 20 01.9	+0.7
	baz=126,SNR=8.6						
M10A	I.L. Ranch, Tu	125.92	30	⇓P	PKPdf	02 20 02.1	+1.0
	baz=126,SNR=5.3						
LAO	LASA Array	125.97	19	*e*PKPdf	PKPdf	02 20 01.8	+0.7
YMR	Madison River	125.97	24	*e*PKPdf	PKPdf	02 20 02.2	+1.0
R05C	Kirkwood Meado	126.04	35	P	PKPdf	02 20 02.3	+0.8
	baz=126,SNR=5.1						
YFT	Old Faithful	126.20	24	*e*PKPdf	PKPdf	02 20 03.4	+1.8
K13A	Stover Farm, H	126.25	28	⇑P	PKPdf	02 20 02.8	+1.1
	baz=126,SNR=6.8						
PACP	Pacheco Peak	126.45	37	⇓P	PKPdf	02 20 03.0	+0.7
	baz=126						
P08A	Dixie Valley	126.45	33	⇓P	PKPdf	02 20 03.4	+1.1
	baz=126						
R06C	Coleville	126.52	35	P	PKPdf	02 20 03.6	+1.2
	baz=126,SNR=9.4						
N10A	Dunphy	126.54	31	⇓P	PKPdf	02 20 03.5	+1.1
	baz=126						
O09A	Fish Creek Ran	126.59	32	⇓P	PKPdf	02 20 03.0	+0.5
	baz=126						
HAST	UC Hastings Re	126.69	38	⇑P	PKPdf	02 20 03.6	+0.8
	baz=127						
K14A	Jones Ranch, D	126.75	27	P	PKPdf	02 20 03.5	+0.8
	baz=127,SNR=11						
L13A	Double Diamond	126.75	28	P	PKPdf	02 20 04.0	+1.3
	baz=127,SNR=6.6						
S05C	Merced	126.80	36	⇑P	PKPdf	02 20 03.8	+0.8
	baz=127						
M12A	Wells	126.81	29	⇓P	PKPdf	02 20 03.8	+0.9
	baz=127,SNR=22						
MOOW	Moose Ponds	126.82	24	*e*PKPdf	PKPdf	02 20 02.9	+0.1
MOOW				*e*PP	PP	02 21 58.6	-1.0
N11A	Elko Archery C	126.86	30	⇑P	PKPdf	02 20 03.5	+0.5
	baz=127						
O10A	Cortez Mining,	126.86	31	⇑P	PKPdf	02 20 04.1	+1.1
	baz=127						
TPAW	Teton Pass	126.95	25	*e*PKPdf	PKPdf	02 20 03.6	+0.6
TPAW				*e*		02 20 20.0	
TPAW				*e*PP	PP	02 22 00.9	+0.5
LOHW	Long Hollow	126.99	24	*e*PKPdf	PKPdf	02 20 03.3	+0.2
LOHW				*e*pPKPdf	pPKPdf	02 20 20.3	-0.3
LOHW				*e*PP	PP	02 21 59.6	-1.2
AGMN	Agassiz Refuge	127.08	10	*e*PKPdf	PKPdf	02 20 02.1	-1.0
AGMN				*e*PP	PP	02 21 56.2	-4.8
REDW	Red Top Meadow	127.10	25	*e*PKPdf	PKPdf	02 20 03.0	-0.3
REDW				*e*		02 20 20.2	
REDW				*e*PP	PP	02 22 02.6	+1.2
Q08A	Gabbs	127.13	33	P	PKPdf	02 20 04.4	+0.9
	baz=127,SNR=6.7						
ELK	Elko	127.16	30	*e*PKPdf	PKPdf	02 20 04.5	+1.0
N12A	Clover Valley,	127.17	30	P	PKPdf	02 20 04.7	+1.1
	baz=127,SNR=17						
M13A	Montello	127.21	29	P	PKPdf	02 20 04.8	+1.1
	baz=127,SNR=6.0						
P10A	Eureka	127.37	32	⇓P	PKPdf	02 20 05.0	+1.0
	baz=127,SNR=6.1						
T06C	Millerton Lake	127.40	36	P	PKPdf	02 20 04.2	+0.1
	baz=127,SNR=11						
O11A	Cowboy Ranch,	127.41	31	⇓P	PKPdf	02 20 05.0	+1.0
	baz=127,SNR=12						
KCC	Kaiser Creek	127.41	36	⇓P	PKPdf	02 20 04.2	+0.1
	baz=127						
M14A	Sheep Mountain	127.49	28	P	PKPdf	02 20 04.9	+0.7
	baz=127,SNR=16						
Q09A	Carvers	127.56	33	⇓P	PKPdf	02 20 05.2	+0.8
	baz=127						
N13A	Wendover, West	127.58	29	⇓P	PKPdf	02 20 05.2	+0.8
	baz=127						
U05C	Westside ANR,	127.60	37	⇑P	PKPdf	02 20 05.5	+1.0
	baz=128						
V04C	Ramage Ranch,	127.60	38	⇑P	PKPdf	02 20 04.0	-0.6
	baz=128						
PKD	Parkfield	127.60	38	⇓P	PKPdf	02 20 05.0	+0.4
	baz=128						
O12A	Currie	127.76	30	P	PKPdf	02 20 04.7	-0.1
	baz=128,SNR=12						
P11A	Circle Ranch,	127.79	31	⇓P	PKPdf	02 20 05.6	+0.8
	baz=128						
MTUM	Tungsten Hills	127.83	35	*e*PKPdf	PKPdf	02 20 05.8	+0.9
MTUM				*e*		02 20 21.8	
S08C	White Mtn Res	127.95	35	⇓P	PKPdf	02 20 06.0	+0.8
	baz=128,SNR=9.1						
Q10A	Clear Creek Ra	127.98	32	P	PKPdf	02 20 06.1	+0.9
	baz=128,SNR=7.5						
HELL	Mitchell Peak,	128.02	36	P	PKPdf	02 20 05.7	+0.4
	baz=128,SNR=8.5						
R09A	Tonopah	128.04	33	P	PKPdf	02 20 06.2	+0.9
	baz=128,SNR=8.8						
EYMN	Ely	128.06	7	*e*PKPdf	PKPdf	02 20 05.1	0.0
EYMN				*e*pPKPdf	pPKPdf	02 20 21.3	-1.2
N14A	Grayback Hills	128.07	28	⇓P	PKPdf	02 20 06.0	+0.7
	baz=128,SNR=19						
BGU	Big Grassy Mou	128.09	28	*e*PKPdf	PKPdf	02 20 05.2	-0.1
BGU				*e*PP	PP	02 22 06.1	-2.0
BW06	Boulder Array	128.12	24	*e*PKPdf	PKPdf	02 20 04.8	-0.5
PDAR	Pinedale Array	128.12	24	PKhKP		02 19 55.4	
	comp=Z,0.5nm,0.8s,baz=116,slow=3.4,SNR=5.1						
PDAR				PKP	PKPdf	02 20 05.0	-0.3
	comp=Z,7.1nm,1.0s,baz=251,slow=1.2,SNR=28						
HWUT	Hardware Ranch	128.22	26	*e*PKPdf	PKPdf	02 20 05.1	-0.4
HWUT				*e*		02 20 21.8	
HWUT				*e*PP	PP	02 22 09.6	+0.7
O13A	Hicks Ranch, I	128.25	29	⇓P	PKPdf	02 20 06.9	+1.2
	baz=128,SNR=5.5						
P12A	McGill	128.28	31	P	PKPdf	02 20 06.8	+1.1
	baz=128,SNR=19						
S09A	Goldfield	128.33	34	P	PKPdf	02 20 07.2	+1.3
	baz=128,SNR=7.0						
N15A	Stansbury Isla	128.35	28	⇑P	PKPdf	02 20 06.9	+1.1
	baz=128						
S10A	Tonopah Range,	128.53	33	P	PKPdf	02 20 07.4	+1.1
	baz=128,SNR=19						
Q12A	Willow Creek R	128.65	31	⇑P	PKPdf	02 20 07.7	+1.2
	baz=128,SNR=6.3						
PKM	Peak Mountain	128.74	38	⇑P	PKPdf	02 20 07.7	+1.0
	baz=129						
CWC	Cottonwood Cre	128.74	36	⇓P	PKPdf	02 20 06.8	+0.1
	baz=129						
DUG	Dugway	128.76	29	*e*PKPdf	PKPdf	02 20 07.1	+0.5
DUG				*e*pPKPdf	pPKPdf	02 20 23.6	-0.5
DUG				*e*PP	PP	02 22 11.4	-1.1
DUG	Dugway	128.76	29	⇑P	PKPdf	02 20 07.4	+0.8
	baz=129						
R11A	Troy Canyon, C	128.77	32	P	PKPdf	02 20 07.4	+0.7
	baz=129,SNR=32						
TRCR	Troy Canyon	128.77	32	*e*PKPdf	PKPdf	02 20 07.9	+1.2
TRCR				*e*		02 20 22.9	
RSSD	Black Hills	128.96	19	*e*PKPdf	PKPdf	02 20 06.5	-0.3
ISA	Isabella	129.04	37	⇓P	PKPdf	02 20 07.3	0.0
	baz=129						
JLU	Jordanelle	129.07	27	*e*PKPdf	PKPdf	02 20 07.5	+0.2
JLU				*e*PP	PP	02 22 13.8	-0.7
NLU	North Lily Min	129.30	28	*e*PKPdf	PKPdf	02 20 07.7	0.0
NLU				*e*PP	PP	02 22 12.9	-3.1
DAU	Daniels Canyon	129.31	27	*e*PKPdf	PKPdf	02 20 08.3	+0.6
DAU	Daniels Canyon	129.31	27	PKIKP	PKPdf	02 20 08.6	+0.9
MPMC	Manual Prospec	129.35	36	⇑P	PKPdf	02 20 08.8	+1.0
	baz=129,SNR=14						
FURC	Furnace Creek,	129.42	35	⇓P	PKPdf	02 20 09.0	+1.0
	baz=129						
TPNV	Topopah Spring	129.42	34	⇓P	PKPdf	02 20 08.7	+0.7
	baz=129						
S12A	Delamar Landin	129.71	32	⇓P	PKPdf	02 20 09.5	+1.0
	baz=130						
U10A	Ash Meadows, A	129.76	34	⇓P	PKPdf	02 20 09.6	+1.0
	baz=130						
T11A	Corn Creek, Al	129.78	33	⇑P	PKPdf	02 20 10.3	+1.6
	baz=130,SNR=12						
EDW2	Edwards Air Fo	129.86	37	⇓P	PKPdf	02 20 10.0	+1.1
	baz=130						
RWWY	Rawlins	129.96	23	*e*PKPdf	PKPdf	02 20 09.0	+0.2
SNCC	San Nicolas Is	129.99	40	⇑P	PKPdf	02 20 10.7	+1.5
	baz=130						
COWI	Conover	130.12	5	*e*PKPdf	PKPdf	02 20 09.0	0.0
SHOC	Shoshone	130.16	35	⇓P	PKPdf	02 20 10.4	+1.0
	baz=130						
TMUT	Trail Mountain	130.23	28	*e*PKPdf	PKPdf	02 20 10.3	+0.9
S13A	Holt Ranch, En	130.25	32	⇓P	PKPdf	02 20 11.1	+1.6
	baz=130,SNR=14						
GSC	Goldstone	130.27	36	⇓P	PKPdf	02 20 10.7	+1.0
	baz=130						
ARUT	Antelope Range	130.31	31	*e*PKPdf	PKPdf	02 20 10.2	+0.5
ARUT				*e*PP	PP	02 22 22.1	-0.6
ARUT				*e*SKP		02 23 28.8	
ARUT	Antelope Range	130.31	31	PKIKP	PKPdf	02 20 11.3	+1.6
MSU	Marysvale	130.38	29	*e*PKPdf	PKPdf	02 20 10.7	+0.9
MSU				*e*PP	PP	02 22 23.8	+0.6
MSU				*e*SKPbc	SKPbc	02 23 29.5	+1.4
S14A	Cedar City	130.47	31	⇓P	PKPdf	02 20 11.5	+1.5
	baz=130,SNR=10						
BFSC	Mount Baldy St	130.50	37	⇑P	PKPdf	02 20 11.2	+1.1
	baz=130						
T13A	Saint George	130.64	32	⇑P	PKPdf	02 20 12.0	+1.7
	baz=130,SNR=7.2						
V11A	Goodsprings	130.68	34	⇑P	PKPdf	02 20 11.7	+1.3
	baz=131						
TUQ	Turquoise Mtn.	130.69	35	⇑P	PKPdf	02 20 11.7	+1.2
	baz=131						
SRU	San Rafael	130.69	28	*e*PKPdf	PKPdf	02 20 10.8	+0.5
SRU				*e*PP	PP	02 22 26.3	+1.2
SRU				*e*SKP		02 23 29.8	
SRU	San Rafael	130.69	28	*e*PKIKP	PKPdf	02 20 10.8	+0.5
SRU				*e*		02 22 26.3	
U12A	Valley of Fire	130.74	33	⇓P	PKPdf	02 20 12.0	+1.5
	baz=131,SNR=5.8						
PHWY	Pilot Hill	130.96	22	*e*PKPdf	PKPdf	02 20 10.8	0.0
PHWY				*e*SKP		02 23 30.5	
T14A	Hurricane	131.04	31	⇓P	PKPdf	02 20 12.7	+1.7
	baz=131,SNR=7.3						
U13A	Pakoon Wash	131.06	33	⇑P	PKPdf	02 20 12.4	+1.3
	baz=131						
V12A	Nelson	131.09	34	P	PKPdf	02 20 12.6	+1.4
	baz=131,SNR=8.5						
LONY	Lake Ozonia	131.14	351	*e*PKPdf	PKPdf	02 20 10.3	-0.7
LONY				*e*SKP		02 23 31.3	
MURC	Murrieta	131.21	38	⇓P	PKPdf	02 20 13.0	+1.5
	baz=131						
GMRC	Granite Mounta	131.31	35	P	PKPdf	02 20 13.1	+1.5
	baz=131,SNR=9.2						
ECSD	EROS,Sioux Fal	131.32	12	*e*PKPdf	PKPdf	02 20 10.6	-0.8
ECSD				*e*pPKPdf	pPKPdf	02 20 26.4	-2.4
ECSD				*e*PP	PP	02 22 25.3	-3.4
ECSD				*e*SKP		02 23 31.0	
T15A	Red Dirt Ranch	131.44	31	⇑P	PKPdf	02 20 12.8	+1.0
	baz=131						
U14A	Mt Trumbull	131.48	32	⇑P	PKPdf	02 20 13.4	+1.5
	baz=131,SNR=7.1						
GLMI	Grayling	131.62	1	*e*PKPdf	PKPdf	02 20 11.6	-0.3
GLMI				*e*SKP		02 23 33.1	
PFO	Pinyon Flat Ob	131.66	37	SKPbc	SKPbc	02 23 33.0	-0.1
	comp=Z,12nm,0.9s,baz=313,slow=4.9,SNR=8.6						
NCB	Newcomb	131.72	351	*e*PKPdf	PKPdf	02 20 11.6	-0.5
NCB				*e*SKP		02 23 34.3	
PV10	Paradox Valley	131.97	27	*e*PKPdf	PKPdf	02 20 13.6	+0.8
PV10				*e*PP	PP	02 22 31.4	-1.9
PV10				*e*SKP		02 23 35.5	
IRM	Iron Mountain	132.04	36	P	PKPdf	02 20 14.5	+1.5
	baz=132,SNR=5.8						
W13A	Hualapai Mount	132.08	34	⇑P	PKPdf	02 20 14.0	+0.9
	baz=132,SNR=15						
MONP	Monument Peak	132.17	38	⇑P	PKPdf	02 20 14.3	+1.0
	baz=132						
SMCO	Snowmass	132.19	24	*e*PKPdf	PKPdf	02 20 11.6	-1.6
SMCO				*e*PP	PP	02 22 34.4	-0.3
ISCO	Idaho Springs	132.21	23	*e*PKPpre		02 20 08.8	
ISCO				*e*PP	PP	02 22 34.4	-0.3
BC3	Big Chuckw Mtn	132.22	36	⇑P	PKPdf	02 20 14.0	+0.6
	baz=132						
PV01	Paradox Valley	132.38	27	*e*PKPdf	PKPdf	02 20 13.5	0.0
PV01				*e*PP	PP	02 22 34.5	-1.4
PV01				*e*SKP		02 23 35.5	
W14A	Seligman	132.44	33	P	PKPdf	02 20 15.1	+1.3
	baz=132,SNR=9.1						
X13A	Yucca	132.48	34	P	PKPdf	02 20 15.1	+1.2
	baz=132,SNR=12						
PDMCI	Parker Dam,Lak	132.52	35	⇓P	PKPdf	02 20 14.8	+0.9
	baz=132						
Y12C	Blythe	132.70	35	⇑P	PKPdf	02 20 15.2	+0.9
	baz=133						
W15A	Williams	132.90	32	⇑P	PKPdf	02 20 15.8	+1.2
	baz=133						
GLA	Glamis	133.02	36	⇓P	PKPdf	02 20 16.1	+1.2
	baz=133,SNR=6.2						
Y13A	Salome	133.05	35	P	PKPdf	02 20 16.4	+1.4
	baz=133,SNR=5.6						
X14A	Yava	133.10	33	P	PKPdf	02 20 16.3	+1.3
	baz=133,SNR=9.9						
WUAZ	Wupatki	133.11	31	*e*PKPdf	PKPdf	02 20 16.0	+0.9
WUAZ				*e*SKPbc	SKPbc	02 23 40.3	+2.2
WUAZ	Wupatki	133.11	31	⇓P	PKPdf	02 20 15.9	+0.9
	baz=133						
JFWS	Jewell Farm	133.17	7	*e*PKPdf	PKPdf	02 20 14.0	-0.9
JFWS				*e*PP	PP	02 22 37.0	-3.4
JFWS				*e*SKPbc	SKPbc	02 23 39.1	+1.1
JFWS	Jewell Farm	133.17	7	PKIKP	PKPdf	02 20 14.8	-0.1
MVCO	Mesa Verde	133.17	27	*e*PKPdf	PKPdf	02 20 15.7	+0.6
MVCO	Mesa Verde	133.17	27	⇑P	PKPdf	02 20 16.0	+0.9
	baz=133						
Y14A	Wickenburg	133.43	34	P	PKPdf	02 20 16.4	+0.7
	baz=133,SNR=7.3						
X15A	Humboldt	133.44	33	⇑P	PKPdf	02 20 16.9	+1.2
	baz=133,SNR=11						
Z14A	Wintersburg	133.88	35	P	PKPdf	02 20 17.7	+1.1
	baz=134,SNR=5.0						
ERPA	Erie	134.21	356	*e*PKPdf	PKPdf	02 20 16.6	-0.2
ERPA				*e*PP	PP	02 22 48.3	+1.2
ERPA				*e*SKPbc	SKPbc	02 23 41.4	-0.1
115A	Sonoran Desert	134.78	35	⇑P	PKPdf	02 20 19.3	+1.1
	baz=135						
116A	Eloy	135.18	34	⇑P	PKPdf	02 20 20.1	+1.1
	baz=135						
SSPA	Standing Stone	135.49	354	*e*PKPdf	PKPdf	02 20 19.1	-0.2
SSPA				*e*PP	PP	02 22 56.4	+1.1
SSPA				*e*SKPbc	SKPbc	02 23 45.6	-0.1
KSU1	Kansas State U	135.72	14	*e*PKPdf	PKPdf	02 20 19.4	-0.4
KSU1				*e*PP	PP	02 22 51.4	-5.4
TUC	Tucson	135.88	34	*e*PKPdf	PKPdf	02 20 21.0	+0.7
MVL	Millersville	135.93	352	*e*PKPdf	PKPdf	02 20 19.8	-0.3
MVL				*e*PP	PP	02 22 56.2	-1.8
MVL				*e*SKPbc	SKPbc	02 23 47.0	0.0
ANMO	Albuquerque	135.96	27	*e*PKPdf	PKPdf	02 20 21.0	+0.6
ANMO				*e*SKPbc	SKPbc	02 23 48.6	+1.3
ANMO	Albuquerque	135.96	27	PKIKP	PKPdf	02 20 18.9	-1.5
LAZ	Ladron	136.10	28	*e*PKPdf	PKPdf	02 20 20.4	-0.3
ACSO	Alum Creek Sta	136.22	359	*e*PKPdf	PKPdf	02 20 20.0	-0.7

LENM	Lemitar	136.37	28	ePKPdf	PKPdf	02 20 21.3	+0.1
LPM	Los Pinos Moun	136.41	28	ePKPdf	PKPdf	02 20 17.0	-4.3
BNM	Barren Site	136.54	28	ePKPdf	PKPdf	02 20 21.9	+0.4
WCI	Wyandotte Cave	138.15	3	ePKPpre		02 20 16.5	
WCI				ePKPdf	PKPdf	02 20 24.1	-0.2
WCI				ePP	PP	02 23 10.9	-1.0
BLA	Blacksburg	139.12	356	ePKPdf	PKPdf	02 20 25.9	-0.2
BLA				ePP	PP	02 23 16.5	-1.3
ELN	Prospectdale	139.12	356	ePKPdf	PKPdf	02 20 25.2	-1.0
MNTX	Cornudas Mount	139.16	29	ePKPpre		02 20 18.8	
MNTX				ePKPdf	PKPdf	02 20 26.7	+0.4
MNTX				ePP	PP	02 23 17.0	-1.6
WMOK	Wichita Mounta	139.17	19	ePKPpre		02 20 16.9	
WMOK				ePP	PP	02 23 14.4	-4.0
TZTN	Tazewell	139.90	360	ePKPpre		02 20 20.8	
TZTN				ePKPdf	PKPdf	02 20 27.0	-0.6
TZTN				ePP	PP	02 23 19.8	-2.8
TZTN				eSKP		02 23 58.3	
UALR	University of	140.82	11	ePKPpre		02 20 21.4	
UALR				ePKPdf	PKPdf	02 20 29.0	-0.3
PLAL	Pickwick Lake	141.25	6	ePKPpre		02 20 21.4	
LTX	Lajitas	141.94	29	ePKPpre		02 20 24.9	
LTX				ePKPdf	PKPdf	02 20 31.7	+0.2
LTX				ePP	PP	02 23 33.4	-2.3
LTX	Lajitas	141.94	29	PKHKP		02 20 25.9	
TXAR	Lajitas Array	141.94	29	PKP	PKPdf	02 20 25.3	-6.1
TXAR				PP	PP	02 23 37.0	+1.3
TXAR	Lajitas Array	141.94	29	PKHKP		02 20 25.3	
TXAR						02 23 37.0	
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TXAR	Lajitas Array	141.94	29	PKhKP		02 20 25.3	
	comp=Z,2.9nm,0.5s,baz=203,slow=0.5,SNR=28						
TXAR				PP	PP	02 23 37.0	+1.3
	comp=Z,6.6nm,1.1s,baz=341,slow=3.0,SNR=7.2						
JSC	Jenkinsville	142.09	357	ePKPdf	PKPdf	02 20 31.4	-0.2
JSC	Jenkinsville	142.09	357	PKIKP	PKPdf	02 20 31.9	+0.3
JCT	Junction City	142.65	23	ePKPpre		02 20 26.8	
JCT				ePKPdf	PKPdf	02 20 32.9	+0.2
JCT				ePP	PP	02 23 37.1	-2.7
JCT				eSKP		02 24 05.8	
JCT	Junction City	142.65	23	PKHKP		02 20 27.0	
GOGA	Godfrey	143.03	360	ePKPpre		02 20 27.7	
GOGA				ePP	PP	02 23 39.0	-2.7
GOGA	Godfrey	143.03	360	PKHKP		02 20 28.3	
NATX	Nacogdoches	143.17	16	ePKPdf	PKPdf	02 20 30.2	-3.4
LRAL	Lakeview Retre	143.27	5	ePKPdf	PKPdf	02 20 29.0	-4.7
LRAL				ePP	PP	02 23 40.6	-2.5
KVTX	Kingsville	146.01	23	ePKPbc	PKPbc	02 20 40.6	+1.2
RPN	Rapa Nui	146.26	136	PKPbc	PKPbc	02 20 41.0	+0.8
	comp=Z,80nm,0.7s,baz=242,slow=2.4,SNR=5.4						
DWPF	Disney	148.24	356	ePKPbc	PKPbc	02 20 45.5	-0.2
MGG	Marie-Galante	150.44	312	eP	PKPbc	02 20 51.5	+0.1
TBG	Guadaloupe-3	150.72	312	eP	PKPbc	02 20 51.7	-0.4
MTP	Monte Pirata	151.84	321	ePKPbc	PKPbc	02 20 53.7	-0.9
LCO	Las Campanas	152.01	205	ePKPbc	PKPbc	02 20 54.4	-0.4
CPD	Cerro la Pandu	152.11	322	ePKPbc	PKPbc	02 20 54.7	-0.6
CPD				ePKPab	PKPab	02 21 04.8	-0.1
SJG	San Juan	152.20	322	ePKPbc	PKPbc	02 20 54.7	-0.8
SOR	Soroa	153.60	359	eP	PKPbc	02 20 57.9	-0.6
MGV	Manicaragua	154.03	352	eP	PKPdf	02 20 53.6	+2.3
SDDR	Presa de Saban	154.29	332	ePKPbc	PKPbc	02 20 59.7	-0.3
SDDR				ePKPab	PKPab	02 21 14.3	+0.3
CMIG	Matias Romero	156.53	28	PP	PP	02 24 57.6	-2.7
	comp=Z,4.2nm,1.0s,baz=15,slow=12,SNR=4.0						
LPAZ	La Paz	160.25	230	ePKPdf	PKPdf	02 20 59.6	+0.3
LPAZ				ePKPab	PKPab	02 21 40.9	+1.1
LPAZ	La Paz	160.25	230	PKP2	PKPab	02 21 41.2	+1.4
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPAZ	La Paz	160.25	230	PKP	PKPdf	02 20 59.8	+0.5
	comp=Z,4.0nm,0.7s,baz=86,slow=1.8,SNR=17						
LPAZ				PKPab	PKPab	02 21 41.2	+1.3
	comp=Z,5.1nm,0.8s,baz=154,slow=1.4,SNR=8.4						
SDV	Santo Domingo	161.88	314	ePKPdf	PKPdf	02 21 00.2	-1.0
SDV				ePKPab	PKPab	02 21 47.4	+0.4
SDV				ePP	PP	02 25 27.6	-2.6
ROSC	El Rosal	167.29	312	ePKPdf	PKPdf	02 21 06.0	+0.1
ROSC				ePKPab	PKPab	02 22 11.6	+0.8
ROSC	El Rosal	167.29	312	PKP	PKPdf	02 21 05.3	-0.6
	comp=Z,14nm,0.9s,baz=114,slow=5.7,SNR=11						
ROSC				PKPab	PKPab	02 22 11.6	+0.8
	comp=Z,9.7nm,0.9s,baz=289,slow=20,SNR=3.8						

IDC 01 02:02:03.5±2.7, 5570S×2871W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.9/11, mbtmp3.9/2, Error ellipse: s-maj=94.2km s-min=47.2km az=9.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	49.48	307	P	P	02 10 56.1	+0.7
	0.8nm,0.7s,baz=166,slow=8.3,SNR=5.1						
TORD	Torodi Ar. Bea	73.18	31	P	P	02 13 36.0	+0.1
	1.0nm,0.7s,baz=204,slow=6.2,SNR=8.8						
SONM	Songino Array	151.56	87	PKPbc	PKPbc	02 21 58.5	0.0
	0.3nm,0.4s,baz=259,slow=1.5,SNR=3.6						

IDC 01 02:29:10.2±1.6, 145N×12478E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=113.6km s-min=23.0km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.44	178	P	Pn	02 33 38.9	-0.6
	0.1nm,0.3s,baz=356,slow=13,SNR=5.1						
WRA	Warramunga Arr	23.23	157	P	P	02 34 19.6	+0.4
	4.9nm,0.5s,baz=336,slow=10,SNR=60						
ASAR	Alice Springs	26.49	161	P	P	02 34 48.8	-0.7
	0.2nm,0.3s,baz=344,slow=15,SNR=4.9						
STKA	Stephens Creek	36.78	156	P	P	02 36 19.6	-0.2
	1.2nm,0.8s,baz=338,slow=11,SNR=2.7						
MKAR	Makanchi Array	58.35	327	P	P	02 39 07.4	+0.2
	0.2nm,0.4s,baz=124,slow=8.1,SNR=6.6						

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*IDC **01** 02:33:06.8±1.3, 3689N×330E, h0km, mb3.4/3, mb1 3.4/6, mb1mx3.3/24, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=30.4km s-min=23.6km az=163.0*
*ISCJB **01** 02:33:07.8±0.3, 3697N±002×325E±002, h10km, mb3.4/3, Error ellipse: s-maj=3.0km s-min=2.6km az=31.3*
*CRAAG **01** 02:33:08.6, 3681N×332E, Ml3.8*
*CSEM **01** 02:33:08.3±0.1, 3676N×319E, h8km, ML3.2/3, Error ellipse: s-maj=3.3km s-min=1.8km az=75.0*
*MDD **01** 02:33:09.4±0.3, 3686N×330E, h0km, mb4.2/17, Error ellipse: s-maj=5.0km s-min=3.3km az=40.0, PRXIMO*
*LDG **01** 02:33:11.4±0.2, 3683N×333E, h10km, Ml3.3/10, Error ellipse: s-maj=4.4km s-min=3.0km az=148.0*
*NEIC **01** 02:33:13.0, 3708N×308E, h0km, ML3.0(CSEM), After MDD.*
ISC 01 02:33:10.1±0.3, 3695N±002×321E±002, h10km, n131, σ1^{s}36/196, mb3.4/3, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.20	223	P	Pg	02 33 14.2	-0.1
ABMS	Boumerdes	0.29	133	P	Pg	02 33 12.2	-3.8
EMHD	Djebel Mahouad	0.78	196	P	Pg	02 33 21.0	-4.0
ADJB	Djebel Djouab	0.81	167	P	Pg	02 33 21.8	-3.9
AKET	Djebel Ketaf	1.05	149	P	Pg	02 33 26.5	-3.8
AKF	Akfadou	1.13	106	P	Pb	02 33 28.9	-2.8
EBNR	Beni Rached	1.50	245	P	Pn	02 33 37.0	-0.1
ECHA	Ech Chlef	1.69	242	P	Pn	02 33 41.0	+1.4
ECHF	Ech Chlef	1.70	243	P	Pn	02 33 41.0	+1.2
EANR	'Ain N'Sour	1.97	240	P	Pn	02 33 46.0	+2.5
CKHR	Kef el Ahmar	2.08	116	P	Pn	02 33 45.0	+0.1
DFRA	Djebel Bou Aff	2.18	100	P	Pn	02 33 46.0	-0.4
ETRT	Tiaret	2.19	225	P	Pn	02 33 45.0	-1.6
OKGL	Djebel Kef Gue	2.26	247	P	Pn	02 33 52.0	+4.5
OJGS	Djebel Guires	2.46	235	P	Pn	02 33 53.0	+2.8
EIBI	Ibiza	2.54	325	P	Pn	02 33 52.0	+0.6
	SNR=98						
EIBI				S	Sn	02 34 21.8	-0.6
	19nm,0.3s,SNR=5.6						
EIBI	Ibiza	2.54	325	P	Pn	02 33 52.0	+0.6
	SNR=98						
EIBI				S	Sn	02 34 21.8	-0.6
	19nm,0.3s,SNR=5.6						
CTEI	Djebel Teioual	2.72	108	P	Pn	02 34 00.0	+6.2
CASM	Ain Smara	2.73	104	P	Pg	02 34 02.0	-0.3
ETOS	Mallorca	2.83	354	P	Pn	02 33 55.5	+0.2
	37nm,0.3s,SNR=178						
ETOS				S	Sn	02 34 29.2	-0.3
	20nm,0.5s						
ETOS	Mallorca	2.83	354	P	Pn	02 33 55.5	+0.2
	37nm,0.3s,SNR=178						
ETOS				S	Sn	02 34 29.2	-0.2
	20nm,0.5s						
CKFL	Kef-Lekhel	2.88	100	P	Pg	02 34 03.0	-2.1
CAEH	'Ain El Ouahch	2.92	92	P	Pg	02 34 04.0	-2.1
ODJA	Bouhanifia	3.16	240	P	Pg	02 34 10.0	-0.7
EBEN	Beniarda	3.23	304	P	Pn	02 34 01.1	+0.2
EBEN				S	Sn	02 34 38.1	-1.3
EBEN	Beniarda	3.23	304	P	Pn	02 34 01.1	+0.2
	6.4nm,0.5s,SNR=22						
EBEN				S	Sn	02 34 39.8	+0.4
	47nm,1.0s						
EBEN	Beniarda	3.23	304	P	Pn	02 34 01.1	+0.2
	6.4nm,0.5s,SNR=22						
EBEN				S	Sn	02 34 38.1	-1.3
	47nm,1.0s						
CMAH	Djebel Manchou	3.40	94	P	Pn	02 34 04.0	+0.9
EMUR	La Murta	3.65	285	P	Pn	02 34 07.0	+0.4
	3.4nm,0.3s,SNR=7.9						
EMUR				S	Sn	02 34 48.4	-1.4
	15nm,0.6s						
EMUR	La Murta	3.65	285	P	Pn	02 34 07.0	+0.4
	3.4nm,0.3s,SNR=7.9						
EMUR				S	Sn	02 34 48.4	-1.4
	15nm,0.6s						
ETOB	Tobarra	4.13	296	P	Pn	02 34 14.0	+0.8
ETOB				S	Sn	02 34 59.0	-2.5
ETOB	Tobarra	4.13	296	P	Pn	02 34 14.0	+0.8
	6.2nm,0.3s,SNR=46						
ETOB				S	Sn	02 35 02.5	+1.0
	10nm,0.3s,SNR=4.1						
ETOB	Tobarra	4.13	296	P	Pn	02 34 14.0	+0.8
	6.2nm,0.3s,SNR=46						
ETOB				S	Sn	02 34 59.0	-2.5
	10nm,0.3s,SNR=4.1						
ECHE	Chera	4.21	310	P	Pn	02 34 15.5	+1.1
ECHE				S	Sn	02 35 00.8	-2.7
ECHE	Chera	4.21	310	P	Pn	02 34 15.5	+1.2
	11nm,0.2s,SNR=7.9						
ECHE				S	Sn	02 35 03.9	+0.4
	1.4nm,0.2s,SNR=7.9						
ECHE	Chera	4.21	310	P	Pn	02 34 15.5	+1.2
	11nm,0.2s,SNR=7.9						
ECHE				S	Sn	02 35 00.8	-2.8
	1.4nm,0.2s,SNR=7.9						
ENIJ	Nijar	4.34	272	P	Pn	02 34 17.4	+1.4
	0.5nm,0.4s,SNR=7.9						
ENIJ				S	Sn	02 35 05.0	-1.7
	29nm,1.3s,SNR=7.9						
EMOS	Mosqueruela	4.46	321	P	Pn	02 34 18.9	+1.1
EMOS				S	Sn	02 35 07.5	-2.2
EMOS	Mosqueruela	4.46	321	P	Pn	02 34 18.9	+1.1
	7.8nm,0.4s,SNR=29						
EMOS				S	Sn	02 35 09.9	+0.2
	11nm,0.6s						
EMOS	Mosqueruela	4.46	321	P	Pn	02 34 18.9	+1.2
	7.8nm,0.4s,SNR=29						
EMOS				S	Sn	02 35 07.5	-2.2
	11nm,0.6s						
ERTA	Horta de San J	4.58	332	P	Pn	02 34 19.8	+0.4
ERTA				S	Sn	02 35 10.2	-2.6
ERTA	Horta de San J	4.58	332	P	Pn	02 34 19.8	+0.4
	2.0nm,0.4s,SNR=5.9						
ERTA				S	Sn	02 35 11.5	-1.2
	6.0nm,0.5s						
ERTA	Horta de San J	4.58	332	P	Pn	02 34 19.8	+0.4
	2.0nm,0.4s,SNR=5.9						
ERTA				S	Sn	02 35 10.1	-2.6
	6.0nm,0.5s						
EPOB	Poblet	4.70	340	P	Pn	02 34 21.8	+0.8
	5.8nm,0.4s,SNR=14						
EPOB				S	Sn	02 35 13.5	-2.0
	4.2nm,0.6s						
EPOB	Poblet	4.70	340	P	Pn	02 34 21.8	+0.8
	5.8nm,0.4s,SNR=14						
EPOB				S	Sn	02 35 13.5	-2.0
	4.2nm,0.6s						
EVIA	Vianos	4.83	292	P	Pn	02 34 23.3	+0.6
EVIA				S	Sn	02 35 16.0	-2.7
EVIA	Vianos	4.83	292	P	Pn	02 34 23.3	+0.6
	1.5nm,0.2s,SNR=6.5						
EVIA				S	Sn	02 35 17.4	-1.3
	8.6nm,1.0s,SNR=7.9						
EVIA	Vianos	4.83	292	P	Pn	02 34 23.3	+0.5
	1.5nm,0.2s,SNR=6.5						
EVIA				S	Sn	02 35 16.0	-2.7
	8.6nm,1.0s,SNR=7.9						
EBER	Berja	4.89	271	P	Pn	02 34 24.1	+0.5
	1.0nm,0.5s,SNR=7.9						
EBER				S	Sn	02 35 18.4	-1.8
	8.9nm,0.8s,SNR=7.9						
EBER	Berja	4.89	271	P	Pn	02 34 24.1	+0.5
	1.0nm,0.5s,SNR=7.9						
EBER				S	Sn	02 35 18.4	-1.8
	8.9nm,0.8s,SNR=7.9						
EQES	Quesada	5.07	282	P	Pn	02 34 27.6	+1.5
	8.0nm,0.5s,SNR=23						
EQES				S	Sn	02 35 22.6	-2.2
	24nm,0.7s,SNR=133						
EQES	Quesada	5.07	282	P	Pn	02 34 27.6	+1.5
	8.0nm,0.5s,SNR=23						
EQES				S	Sn	02 35 22.6	-2.2
	24nm,0.7s,SNR=133						
KEST	Kesra	5.10	102	Pn	Pn	02 34 24.9	-1.6
	0.3nm,0.3s,baz=253,slow=5.6,SNR=51						
KEST				Sn	Sn	02 35 22.8	-2.7
	0.4nm,0.3s,baz=24,slow=20,SNR=3.3						
EMIR	Miracle	5.12	346	P	Pn	02 34 28.8	+1.9
	54nm,0.3s,SNR=116						
EMIR				S	Sn	02 35 23.4	-2.6
	12nm,0.4s						
EMIR	Miracle	5.12	346	P	Pn	02 34 28.8	+2.0
	54nm,0.3s,SNR=116						
EMIR				S	Sn	02 35 23.4	-2.6
	12nm,0.4s						
EQUE	Quentar	5.32	275	P	Pn	02 34 30.5	+0.9
	1.4nm,0.4s,SNR=5.9						
EQUE				S	Sn	02 35 28.9	-2.1
	2.1nm,0.3s,SNR=5.0						
ECOG	Cogollos-Vega	5.43	275	P	Pn	02 34 34.4	+3.4
ECOG				S	Sn	02 35 31.1	-2.4
ECOG	Cogollos-Vega	5.43	275	P	Pn	02 34 32.8	+1.9
	0.2nm,0.6s,SNR=7.9						
ECOG				S	Sn	02 35 31.1	-2.4
	7.1nm,0.5s,SNR=4.0						
ECOG	Cogollos-Vega	5.43	275	P	Pn	02 34 34.3	+3.3
	0.2nm,0.6s,SNR=7.9						
ECOG				S	Sn	02 35 31.1	-2.4
	7.1nm,0.5s,SNR=4.0						
EJON	La Jonquera	5.50	358	P	Pn	02 34 33.2	+1.3
	16nm,0.3s,SNR=48						
EJON				S	Sn	02 35 32.8	-2.4
	66nm,1.7s						
EJON	La Jonquera	5.50	358	P	Pn	02 34 33.2	+1.3
	16nm,0.3s,SNR=48						
EJON				S	Sn	02 35 32.8	-2.4
	66nm,1.7s						
ESAC	San Caprasio	5.55	330	P	Pn	02 34 33.5	+0.8
ESAC				S	Sn	02 35 33.0	-3.6
ESAC	San Caprasio	5.55	330	P	Pn	02 34 33.5	+0.8
	15nm,0.3s,SNR=5.2						
ESAC				S	Sn	02 35 36.4	-0.2
	26nm,0.4s,SNR=7.9						
ESAC	San Caprasio	5.55	330	P	Pn	02 34 33.5	+0.8
	15nm,0.3s,SNR=5.2						
ESAC				S	Sn	02 35 33.0	-3.5
	26nm,0.4s,SNR=7.9						
ETOR	Torete	5.64	315	P	Pn	02 34 36.7	+2.8
ETOR				S	Sn	02 35 35.4	-3.3
ETOR	Torete	5.64	315	P	Pn	02 34 36.7	+2.8
	8.4nm,0.3s,SNR=8.6						
ETOR				S	Sn	02 35 38.5	-0.1
	5.8nm,0.6s,SNR=7.9						
ETOR	Torete	5.64	315	P	Pn	02 34 36.7	+2.8
	8.4nm,0.3s,SNR=8.6						
ETOR				S	Sn	02 35 35.4	-3.3
	5.8nm,0.6s,SNR=7.9						
EBIE	Bielsa	6.20	339	P	Pn	02 34 43.4	+1.9
	3.5nm,0.4s,SNR=14						
EBIE				S	Sn	02 35 49.3	-3.1
	2.1nm,0.3s						
EBIE	Bielsa	6.20	339	P	Pn	02 34 43.4	+1.9
	3.5nm,0.4s,SNR=14						
EBIE				S	Sn	02 35 49.3	-3.1
	2.1nm,0.3s						
ESDC	Sonseca Array	6.26	298	Pn	Pn	02 34 42.0	-0.4
	0.9nm,0.3s,baz=111,slow=13,SNR=8.8						
ESDC				Sn	Sn	02 35 52.2	-1.9
	1.2nm,0.3s,baz=115,slow=23,SNR=6.3						
ESDC	Sonseca Array	6.26	298	P	Pn	02 34 42.8	+0.4
	0.5nm,0.3s,baz=110,slow=13,SNR=19						
ESDC				S	Sn	02 35 50.9	-3.1
	0.6nm,0.3s,baz=114,slow=24,SNR=3.9						
ESDC	Sonseca Array	6.26	298	P	Pn	02 34 42.8	+0.4
	0.5nm,0.3s,SNR=19						
ESDC				S	Sn	02 35 50.9	-3.1
	0.6nm,0.3s,SNR=3.9						
EMIJ	Mijas	6.42	269	P	Pn	02 34 46.0	+1.4
	0.5nm,0.1s,SNR=7.9						
MTLF	Montolieu	6.43	354	ePn	Pn	02 34 45.8	+1.1
MTLF				eSn	Sn	02 35 55.3	-2.8
	0.7nm,0.3s						
EPF	Esparros	6.46	341	ePn	Pn	02 34 46.8	+1.6
EPF				eSn	Sn	02 35 56.8	-2.1
	2.2nm,0.3s						
ETSF	Etsaut	6.61	335	ePn	Pn	02 34 48.2	+1.0
ETSF				eSn	Sn	02 36 00.3	-2.2
	2.4nm,0.3s						
GUD	Guadarrama	6.83	305	P	Pn	02 34 51.2	+1.0
	0.7nm,0.3s,SNR=7.9						
LMR	La Mourre	6.86	21	ePn	Pn	02 34 49.2	-1.4
LMR				eSn	Sn	02 36 03.6	-5.1
	3.4nm,0.2s						
SJPF	Ste Jean	7.03	332	ePn	Pn	02 34 54.7	+1.7
SJPF				eSn	Sn	02 36 10.0	-3.0
	1.5nm,0.2s						
FRF	La Foret Royal	7.11	21	ePn	Pn	02 34 53.1	-0.9
FRF				eSn	Sn	02 36 09.9	-4.9
	6.6nm,0.2s						
LASF	Ste Croix	7.13	4	ePn	Pn	02 34 54.7	+0.3
LASF				eSn	Sn	02 36 10.1	-5.4
	5.1nm,0.4s						
LASF	Ste Croix	7.13	4	ePn	Pn	02 34 54.7	+0.3
LASF				eSn	Sn	02 36 10.1	-5.4
	2.5nm,0.4s						
PGF	Pioggiola	7.15	37	ePn	Pn	02 34 53.2	-1.4
PGF				eSn	Sn	02 36 10.5	-5.4
	4.7nm,0.3s						
ELIZ	Elizondo	7.19	331	P	Pn	02 34 56.6	+1.4
	1.2nm,0.2s,SNR=6.2						
SMRF	Simiane la Rot	7.25	14	ePn	Pn	02 34 56.3	+0.4
SMRF				eSn	Sn	02 36 13.4	-4.8
	1.3nm,0.4s						
SMRF	Simiane la Rot	7.25	14	ePn	Pn	02 34 56.3	+0.4
SMRF				eSn	Sn	02 36 13.4	-4.8
	0.6nm,0.4s						
SBF	Sospel	7.62	24	ePn	Pn	02 35 01.0	-0.1
MDT	Midelt	7.64	240	ePn	Pn	02 35 00.7	-0.7
MDT	Midelt	7.64	240	Pn	Pn	02 35 00.7	-0.6
	0.1nm,0.3s,baz=68,slow=14,SNR=4.7						
EMIN	Mina Concepcio	7.91	279	P	Pn	02 35 05.1	0.0
	0.9nm,0.3s,SNR=7.9						
EMIN				S	Sn	02 36 29.6	-5.1
	1.5nm,0.8s,SNR=7.9						
EMIN	Mina Concepcio	7.91	279	P	Pn	02 35 05.1	0.0
	0.9nm,0.3s,SNR=7.9						
EMIN				S	Sn	02 36 29.6	-5.1
	1.5nm,0.8s,SNR=7.9						
VIVF	Saint-Julien-l	7.97	8	ePn	Pn	02 35 06.1	+0.2
VIVF				eSn	Sn	02 36 31.6	-4.6
	3.3nm,0.4s						
VIVF	Saint-Julien-l	7.97	8	ePn	Pn	02 35 06.1	+0.2
VIVF				eSn	Sn	02 36 31.6	-4.6
	1.6nm,0.4s						
CAF	Calviac	8.01	354	ePn	Pn	02 35 07.9	+1.4
ELAN	Lanestosa	8.08	323	P	Pn	02 35 08.7	+1.3
	0.3nm,0.5s,SNR=7.9						
ELAN	Lanestosa	8.08	323	P	Pn	02 35 08.6	+1.2
	0.3nm,0.5s,SNR=7.9						
LFF	La Frestale	8.20	348	ePn	Pn	02 35 09.8	+0.8
ORIF	Oris-en-Rattie	8.21	13	ePn	Pn	02 35 09.9	+0.7
MBDF	Montbardon	8.22	18	ePn	Pn	02 35 09.6	+0.3
LPG	La Plagne	8.95	16	ePn	Pn	02 35 20.3	+1.1
LPL	La Plagne	8.96	16	ePn	Pn	02 35 20.3	+0.9
EARI	Arriondas	9.04	317	P	Pn	02 35 22.1	+1.6
	0.4nm,0.2s,SNR=11						
EARI	Arriondas	9.04	317	P	Pn	02 35 22.1	+1.5
	0.4nm,0.2s,SNR=11						
ECAL	Calabor	9.16	306	P	Pn	02 35 23.2	+1.0
	6.8nm,0.3s,SNR=7.9						
ECAL	Calabor	9.16	306	P	Pn	02 35 23.2	+0.9
	6.8nm,0.3s,SNR=7.9						
TCF	Toulx Ste Croi	9.36	356	ePn	Pn	02 35 26.3	+1.4
BGF	Bois d'Agland	9.60	358	ePn	Pn	02 35 29.1	+0.8
SMF	Signal de Mont	9.70	3	ePn	Pn	02 35 30.6	+1.0
SMF				eP		02 35 36.4	
AVF	Avril sur Loir	9.83	1	ePn	Pn	02 35 32.2	+0.8
CABF	La Chapelle	9.89	12	ePn	Pn	02 35 32.9	+0.7
SSF	Saint Saulge	10.11	1	ePn	Pn	02 35 36.3	+1.2
EPON	Pontenova	10.17	312	P	Pn	02 35 36.5	+0.5
	0.4nm,0.2s						
EPON	Pontenova	10.17	312	P	Pn	02 35 36.5	+0.5
	0.4nm,0.2s						
LOR	Lormes	10.32	2	ePn	Pn	02 35 38.8	+0.7
	baz=177						
LOR	Lormes	10.32	2	eP	Pn	02 35 45.1	+7.0
	baz=185						
LOR	Lormes	10.32	2	ePn	Pn	02 35 38.8	+0.7
LOR				eP		02 35 45.1	
HINF	Hinteralfeld	11.19	13	ePn	Pn	02 35 49.8	-0.1
HAU	Haudompre	11.29	11	ePn	Pn	02 35 51.5	+0.2
SFTF	Sexfontaines	11.33	6	ePn	Pn	02 35 52.8	+0.9
	baz=184						
MEZF	Maizieres J'vi	11.62	6	ePn	Pn	02 35 56.4	+0.5
	baz=184						
CDF	Champ du Feu	11.84	13	ePn	Pn	02 35 58.7	-0.1
LDF	La Druitiere	11.89	349	ePn	Pn	02 35 59.7	+0.2
QUIF	Quistinic	11.92	339	ePn	Pn	02 36 00.5	+0.5
SGMF	Saint Gilles	12.06	341	ePn	Pn	02 36 02.3	+0.4
FLN	La Foliniere	12.11	348	ePn	Pn	02 36 02.5	0.0
ROSF	Rostrenen	12.33	339	ePn	Pn	02 36 06.5	+0.9
BAIF	Baives	13.12	3	ePn	Pn	02 36 16.8	+0.4
TORD	Torodi Ar. Bea	23.74	184	P	P	02 38 19.6	-3.0
	0.7nm,0.6s,mb3.2,baz=6.3,slow=8.5,SNR=8.0						
MKAR	Makanchi Array	57.37	53	P	P	02 42 57.0	-1.4
	0.3nm,0.7s,mb3.4,baz=286,slow=6.0,SNR=3.3						
SONM	Songino Array	71.39	44	P	P	02 44 28.1	-2.1
	0.2nm,0.3s,mb3.5,baz=299,slow=6.5,SNR=2.6						
PPT	Papeete	149.22	302	eLR	LR	02 53 12.5	
	391nm,32.2s						

IDC 01 02:39:19.4±16.0, 2121S×17963W, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.9/15, mbtmp4.0/5, ML4.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/19, Error ellipse: s-maj=298.9km s-min=54.8km az=65.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.43	47	LR	LR	02 45 03.6	
	comp=Z,110nm,18.8s,baz=253,slow=33						
URZ	Urewera	17.22	189	P	Pn	02 43 21.6	+0.2
	1.8nm,0.3s,baz=311,slow=4.8,SNR=11						
STKA	Stephens Creek	36.11	245	P	P	02 46 22.0	-1.2
	0.5nm,0.3s,baz=84,slow=12,SNR=4.8						
ASAR	Alice Springs	42.88	258	P	P	02 47 19.4	-0.3
	1.2nm,0.7s,baz=86,slow=8.3,SNR=13						
WRA	Warramunga Arr	43.00	263	P	P	02 47 21.9	+1.1
	1.7nm,0.3s,baz=95,slow=8.2,SNR=166						
FITZ	Fitzroy Crossi	51.43	263	P	P	02 48 26.4	-0.2
	1.1nm,0.8s,baz=108,slow=3.2,SNR=5.1						

CASC 01 02:51:17.0±2.0, 1126N×8671W, h31km±11km, MD3.5, ML2.7, 4C-7D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSN	San Juan del S	0.84	87	⇑eP	Pn	02 51 32.3	-0.4
SSN				eP		02 51 32.4	
SSN				eS	Sn	02 51 46.3	+2.3
SSNN	San Juan del S	0.84	88	i	Pn	02 51 47.8	+15
	comp=Z,623nm,0.4s						
TICN	Ticuantepe	0.90	31	⇓eP	Pn	02 51 33.7	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APON	**Apoyo**	**0.90**	**44**	eP	Pn	02 51 33.2	-0.4
COPN	**Copaltepe**	**0.92**	**7**	⇑eP	Pn	02 51 32.9	-0.9
COPN				eP		02 51 33.2	
COPN				⇑eP		02 51 33.3	
XAVN	**Gruta Xavier**	**0.96**	**23**	⇑eP	Pn	02 51 34.4	+0.1
XAVN				eS	Sn	02 51 48.1	+1.2
TISN	**Laguna Tiscapa**	**0.97**	**26**	⇓eP	Pn	02 51 34.6	0.0
TISN				eS	Sn	02 51 48.5	+1.1
MGAN	**Managua**	**0.99**	**27**	⇓eP	Pn	02 51 34.6	-0.2
MGAN				eS	Sn	02 51 48.9	+1.2
MGAN				i		02 51 52.8	
	comp=E,323nm,0.4s						
CONN	**Concepcion**	**1.10**	**74**	eP	Pn	02 51 36.4	+0.1
MOMJ	**Momotombo**	**1.15**	**8**	eP	Pn	02 51 36.6	-0.4
MADN	**Villa Maderas**	**1.16**	**83**	eP	Pn	02 51 37.2	+0.1
MADN				⇓eP		02 51 37.3	
MADN				⇓iP		02 51 37.5	
LEON	**Leon**	**1.16**	**351**	eP	Pn	02 51 36.8	-0.4
HUEN		**1.19**	**26**	eP	Pn	02 51 35.6	-1.9
HUEN				eP		02 51 37.3	
HUEN				⇓eP		02 51 37.4	
TEL3	**Telica 3**	**1.31**	**354**	eP	Pn	02 51 39.1	-0.1
BOAB	**BOACO BROADBAN**	**1.56**	**41**	⇓eP	Pn	02 51 42.2	-0.4
BOAB				eS	Sn	02 52 02.2	+0.4
BOAB				i		02 52 04.2	
	comp=N,17nm,0.6s						
CNCH	**Conchagua**	**2.29**	**331**	eP	x	02 51 52.8	
SNVI	**San Vicente**	**3.13**	**318**	eP	x	02 52 05.5	
SNVI				eS	x	02 52 43.3	
LCBS	**La Ceiba**	**3.25**	**317**	eP	x	02 52 07.0	
LFRS	**El Faro**	**3.29**	**316**	eP	x	02 52 06.6	
CHI2		**14.42**	**116**	eP		02 51 40.6	

IDC 01 03:37:03.6±1.9**, 5534S**×**2910W, h0^{km}, mb4.2**/2**, mb1 4.4**/2**, mb1mx4.0**/11**, mbtmp4.2**/2**, Error ellipse: s-maj=76.1km s-min=41.2km az=9.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**49.09**	**307**	P	P	03 45 53.4	+0.8
	3.0nm,0.7s,baz=150,slow=7.0,SNR=15						
TORD	**Torodi Ar. Bea**	**72.99**	**31**	P	P	03 48 35.0	+0.1
	1.7nm,0.9s,baz=199,slow=6.6,SNR=13						
YKA	**Yellowknife Ar**	**134.93**	**319**	PKP	PKPdf	03 56 22.4	-0.6
	0.4nm,0.7s,baz=120,slow=2.5,SNR=7.6						
INK	**Inuvik**	**144.57**	**322**	PKP	PKPdf	03 56 38.9	-1.4
	2.0nm,0.8s,baz=86,slow=3.3,SNR=5.6						
SONM	**Songino Array**	**151.76**	**87**	PKPbc	PKPbc	03 56 59.4	+0.3
	1.0nm,0.5s,baz=237,slow=3.1,SNR=7.2						

KRSC 01 03:39:54.5±0.9**, 4982N**×**15718E, h46^{km}**±46^{km}**, ML3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.48**	**316**	eP	Pn	03 40 18.9	+0.3
ALID				iS	Sn	03 40 36.5	-0.3
MIPR	**Malaya Ipel'ka**	**2.47**	**354**	eP	Pn	03 40 34.4	+2.2
MIPR				iS	Sn	03 41 04.1	+2.9
RUS	**Russkaya**	**2.75**	**17**	eP	Pn	03 40 38.5	+2.5
RUS				iS	Sn	03 41 10.4	+2.5
GRL	**Gorelyy**	**2.79**	**11**	eP	Pn	03 40 40.4	+3.8
GRL				iS	Sn	03 41 13.1	+4.1
PET	**Petropavlovsk**	**3.34**	**15**	eP	Pn	03 40 47.4	+3.3
PET				iS	Sn	03 41 26.5	+4.1
AVH	**Avacha**	**3.58**	**15**	eP	Pn	03 40 51.8	+4.3
AVH				iS	Sn	03 41 33.5	+5.0
NLC	**Nalytchevo**	**3.62**	**21**	P	Pn	03 40 51.3	+3.4
NLC				iS	Sn	03 41 32.6	+3.3
SPN	**Mys Shipunski**	**3.73**	**27**	eP	Pn	03 40 52.7	+3.2
SPN				iS	Sn	03 41 35.1	+3.0
GNL	**Ganaly**	**3.91**	**7**	eP	Pn	03 40 55.9	+4.0
MKZ	**Mys Kozlova**	**5.51**	**29**	eP	Pn	03 41 16.3	+2.5
MKZ				iS	Sn	03 42 15.9	+0.1
KBTR	**Krutoberegovo**	**7.25**	**26**	eP	Pn	03 41 41.5	+3.9

*IDC **01** 03:40:45.0±0.9, 2509N×95.15E, h0^{km}, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, Error ellipse: s-maj=37.9km s-min=18.1km az=55.0*
*NEIC **01** 03:40:51.0±1.8, 25.12N×95.17E, h42^{km}±15^{km}, mb3.7/3, Error ellipse: s-maj=19.5km s-min=10.4km az=53.0*
*BJI **01** 03:40:51.3, 25.14N×94.98E, h50^{km}, mb4.2, ML3.5*
*ISCJB **01** 03:40:56.1±1.4, 252N±0.1×95.17E±0.09, h107^{km}±13^{km}, mb3.6/14, Error ellipse: s-maj=19.9km s-min=11.9km az=18.3*
ISC 01 03:40:57.5±1.3**, 252N**±01×**9517E**±008**, h101^{km}**±11^{km}**, n20,** σ**0^{s}52**/21**, mb3.6**/14**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.00**	**277**	ePN	**Pn**	**03 41 33.5**	**-10**
SHL				eSN	**Sn**	**03 42 18.5**	**+0.1**
LSA	**Lhasa**	**5.72**	**322**	P	**Pn**	**03 42 19.1**	**-0.9**
LSA	**Lhasa**	**5.72**	**322**	ePn	**Pn**	**03 42 14.7**	**-5.3**
	11nm,0.6s						
GYA	**Guiyang**	**10.43**	**81**	P	**Pn**	**03 43 24.6**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
MK31	**Makanchi Array**	**23.86**	**338**	eP	**P**	**03 46 01.2**	**-0.2**
MKAR	**Makanchi Array**	**23.86**	**338**	P	**P**	**03 46 01.7**	**+0.3**
	comp=Z,1.3nm,0.4s,mb3.7,baz=152,slow=8.4,SNR=22						
SONM	**Songino Array**	**24.26**	**19**	P	**P**	**03 46 05.1**	**0.0**
	comp=Z,1.3nm,0.7s,mb3.4,baz=196,slow=9.1,SNR=8.2						
AAK	**Ala-Archa**	**24.32**	**321**	eP	**P**	**03 46 05.4**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.3						
EKS2	**Erkin-Say**	**24.75**	**320**	eP	**P**	**03 46 09.8**	**+0.2**
	comp=Z,1.8nm,0.8s,mb3.5						
KURK	**Kurchatov**	**28.48**	**338**	eP	**P**	**03 46 42.3**	**-0.7**
	comp=Z,1.2nm,0.5s,mb3.7						
ZALV	**Zalesovo Beam**	**29.73**	**348**	P	**P**	**03 46 54.3**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.4,baz=150,slow=6.8,SNR=4.2						
AKTK	**Aktyubinsk**	**38.06**	**321**	P	**P**	**03 48 05.8**	**-0.3**
AKTO	**Aktyubinsk**	**38.06**	**321**	P	**P**	**03 48 05.8**	**-0.3**
	comp=Z,0.5nm,0.3s,mb3.8,baz=161,slow=2.8,SNR=4.0						
BRTR	**Keskin Array B**	**52.94**	**302**	P	**P**	**03 50 03.5**	**0.0**
	comp=Z,0.5nm,0.7s,mb3.6,baz=106,slow=8.4,SNR=3.3						
WRA	**Warramunga Arr**	**58.86**	**136**	P	**P**	**03 50 45.1**	**-0.8**
	comp=Z,1.0nm,0.8s,mb3.9,baz=323,slow=7.4,SNR=6.4						
ARCES	**ARCESS Array B**	**59.52**	**338**	P	**P**	**03 50 49.9**	**+0.1**
	comp=Z,2.9nm,0.9s,mb4.3,baz=107,slow=5.8,SNR=2.8						
ASAR	**Alice Springs**	**61.39**	**139**	P	**P**	**03 51 02.8**	**-0.3**
	comp=Z,0.9nm,0.9s,mb3.8,baz=329,slow=6.4,SNR=6.4						
NOA	**NORSAR Array B**	**65.39**	**328**	P	**P**	**03 51 28.6**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=103,slow=4.1,SNR=2.8						
GERES	**GERESS Array B**	**66.00**	**314**	P	**P**	**03 51 33.8**	**+0.7**
	comp=Z,0.4nm,0.5s,mb3.5,baz=54,slow=4.6,SNR=6.7						
TORD	**Torodi Ar. Bea**	**87.58**	**283**	P	**P**	**03 53 36.3**	**+1.4**
	comp=Z,0.2nm,0.6s,mb3.3,baz=57,slow=3.7,SNR=3.3						

*NSSC **01** 03:44:46.2, 3630N×4103E, h5^{km}±4^{km}*
*CSEM **01** 03:44:47.2±0.3, 3631N×4087E, h0^{km}±1^{km}, Mc2.9, Error ellipse: s-maj=5.8km s-min=2.3km az=169.0*
*ISK **01** 03:44:47.9, 3634N×4089E, h5^{km}, MD3.9*
*ISCJB **01** 03:44:49.6±0.6, 3640N±003×4087E±003, h10^{km}, Error ellipse: s-maj=5.2km s-min=3.5km az=155.8*
*DDA **01** 03:44:51.7, 3653N×4100E, h7^{km}, Md3.7*
ISC 01 03:44:50.3±0.6**, 3640N**±003×**4089E**±003**, h10^{km}, n28,** σ**1^{s}49**/43**, 8D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFNV	**Sufian**	**0.63**	**272**	⇓P	**Pg**	**03 45 00.3**	**-2.2**
SFNV				⇓S	**Sg**	**03 45 11.8**	**+1.2**
SFNV	**Sufian**	**0.63**	**272**	⇓iP	**Pg**	**03 45 00.3**	**-2.2**
SFNV				⇓iS	**Sg**	**03 45 11.8**	**+1.1**
KBSD	**Kabsdagh**	**0.66**	**335**	⇑P	**Pg**	**03 45 02.2**	**-0.9**
KBSD				⇑S	**Sg**	**03 45 12.6**	**+0.9**
KBSD	**Kabsdagh**	**0.66**	**335**	⇑iP	**Pg**	**03 45 02.2**	**-0.9**
MARD	**Mardin**	**0.92**	**355**	iP	**Pg**	**03 45 06.6**	**-1.3**
MARD				iS	**Sg**	**03 45 21.8**	**+1.9**
BSHR	**Al Beshri**	**1.14**	**230**	⇑P	**Pg**	**03 45 13.8**	**+1.7**
BSHR				⇑S	**Sg**	**03 45 34.1**	**+7.3**
DIY	**Diyarbakir**	**1.58**	**341**	PN	**Pg**	**03 45 18.7**	**-2.0**
DIY				SN	**Sg**	**03 45 41.3**	**+0.1**
KSRV	**Kasrt alli**	**1.62**	**251**	⇓P	**Pn**	**03 45 16.4**	**-2.5**
KSRV				⇓S	**Sn**	**03 45 38.2**	**-1.6**
KSRV	**Kasrt alli**	**1.62**	**251**	⇓iP	**Pn**	**03 45 16.4**	**-2.5**
KSRV				⇓iS	**Sn**	**03 45 38.2**	**-1.6**
SIRT	**Sirnak**	**1.66**	**48**	PN	**Pn**	**03 45 19.7**	**+0.3**
SIRT				SN	**Sg**	**03 45 42.6**	**-1.0**
MSL	**Mosul**	**1.78**	**93**	ex	x	03 45 21.0	
MSL				ex	x	03 45 46.0	
BTMT	**Batman**	**1.85**	**15**	PN	**Pn**	**03 45 21.5**	**-0.6**
URFA	**Urfa**	**1.95**	**303**	PN	**Pn**	**03 45 23.2**	**-0.3**
URFA				SN	**Sn**	**03 45 50.5**	**+2.4**
ATAB	**Bozova**	**2.33**	**298**	iP	**Pb**	**03 45 30.9**	**-1.5**
ATAB				iS	**Sb**	**03 46 02.0**	**+0.7**
HAKT	**HAKKARI**	**2.54**	**62**	iP	**Pn**	**03 45 31.4**	**0.0**
HAKT				iS	**Sb**	**03 46 07.0**	**-0.1**
BNGL	**BINGOL**	**2.55**	**5**	iP	**Pg**	**03 45 37.2**	**-2.1**
BNGL				iS	**Sg**	**03 46 15.1**	**+2.7**
HKR	**Hakkari**	**2.57**	**62**	ePN	**Pn**	**03 45 33.1**	**+1.1**
ELZG	**Elazig**	**2.58**	**325**	iP	**Pg**	**03 45 36.6**	**-3.3**
ELZG				iS	**Sg**	**03 46 11.7**	**-1.7**
MALT	**Malatya**	**2.74**	**315**	ePN	**Pn**	**03 45 34.9**	**+0.6**
MYA	**Malataya**	**2.75**	**315**	ePN	**Pn**	**03 45 35.5**	**+1.1**
PTK	**Pertek**	**2.75**	**335**	ePN	**Pn**	**03 45 36.2**	**+1.7**
GZT	**Gaziantep**	**2.83**	**291**	iP	**Pn**	**03 45 33.7**	**-1.9**
GZT				iS	**Sg**	**03 46 21.7**	**+0.5**
EZC	**Erzincan**	**3.45**	**346**	ePN	**Pn**	**03 45 47.3**	**+3.3**
ERZM	**Erzurum**	**3.52**	**6**	iP	**Pn**	**03 45 48.0**	**+3.0**
ERZM				iS	**Sg**	**03 46 41.0**	**-2.3**
ERZM	**Erzurum**	**3.52**	**6**	iP	**Pn**	**03 45 48.0**	**+3.0**
EZM	**Erzurum**	**3.52**	**6**	ePN	**Pn**	**03 45 46.5**	**+1.5**
AGRB	**Hanur-Agry**	**3.58**	**27**	ePN	**Pn**	**03 45 47.2**	**+1.4**
KOZT	**Kozan**	**4.20**	**286**	ePN	**Pn**	**03 45 55.0**	**+0.7**

*ISCJB **01** 04:40:14.4±0.3, 1505N±004×9169W±003, h184^{km}±3^{km}, mb3.8/13, Error ellipse: s-maj=8.1km s-min=3.9km az=32.1*
*CASC **01** 04:40:14.9±3.7, 1453N×9176W, h192^{km}±13^{km}, MD4.4, mb4.2(NEIC)*
*IDC **01** 04:40:16.8±1.3, 15.13N×91.32W, h188^{km}±10^{km}, mb3.5/9, mb1 3.7/12, mb1mx3.6/20, mbtmp3.5/12, Error ellipse: s-maj=20.8km s-min=12.5km az=58.0*
*MEX **01** 04:40:16.1±0.8, 15.19N×9171W, h206^{km}±9^{km}, MD4.5*
*NEIC **01** 04:40:17.8, 1527N×9175W, h198^{km}, mb4.2/16, MD4.6(MEX), After MEX.*
ISC 01 04:40:15.3±0.3**, 1500N**±005×**9171W**±004**, h180^{km}**±3^{km}**, n68,** σ**1^{s}37**/73**, mb3.8**/13**, 2C-8D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.68**	**174**	⇓iP	**Pn**	**04 40 42.1**	**+1.1**
JAT				eS	**Sn**	**04 41 00.2**	**-0.6**
FUG	**Fuego 3**	**1.01**	**123**	⇓iP	**Pn**	**04 40 43.5**	**+0.4**
FUG				eS	**Sn**	**04 41 05.1**	**+0.8**
PCG	**Pacaya**	**1.23**	**119**	⇑iP	**Pn**	**04 40 45.6**	**+0.8**
CCIG	**Comitan**	**1.34**	**342**	eP	**Pn**	**04 40 46.5**	**+0.8**
CCIG				iS	**Sn**	**04 41 09.7**	**+0.3**
SCX	**San Cristobal**	**1.94**	**333**	iP	**Pn**	**04 40 51.2**	**-0.5**
SCX				iS	**Sn**	**04 41 20.5**	**+0.6**
RBDL	**Robledal**	**2.15**	**114**	⇓iP	x	04 40 57.0	
RBDL				eS	x	04 41 28.1	
SNJE	**San Jose**	**2.33**	**119**	⇓iP	x	04 40 59.1	
SNJE				eS	x	04 41 30.8	
MTO2	**Montecristo 2**	**2.35**	**104**	⇓iP	x	04 40 59.2	
MTO2				eS	x	04 41 31.5	
BOQS	**Boqueron**	**2.67**	**118**	⇑eP	x	04 41 02.9	
BOQS				eS	x	04 41 39.7	
LFRS	**El Faro**	**2.91**	**118**	⇓eP	x	04 41 05.5	
LFRS				eS	x	04 41 43.4	
LCBS	**La Ceiba**	**2.97**	**116**	⇓eP	x	04 41 06.4	
LCBS				eS	x	04 41 44.4	
SNVI	**San Vicente**	**3.11**	**116**	eP	x	04 41 08.3	
SNVI				eS	x	04 41 49.2	
VSM	**San Miguel**	**3.68**	**115**	⇓eP	x	04 41 14.8	
CMIG	**Matias Romero**	**3.69**	**305**	P	**Pn**	**04 41 13.0**	**+0.6**
	11nm,0.3s,baz=124,slow=8.1,SNR=294						
CMIG				S	**Sn**	**04 41 53.3**	**-3.8**
	36nm,0.3s,baz=118,slow=13,SNR=32						
CMIG	**Matias Romero**	**3.69**	**305**	eP	**Pn**	**04 41 12.8**	**+0.4**
CMIG				iS	**Sn**	**04 41 55.2**	**-1.8**
SCIG	**Sabancuy**	**3.98**	**7**	iP	**Pn**	**04 41 15.1**	**-1.0**
SCIG				iS	**Sn**	**04 41 59.5**	**-4.2**
CNCH	**Conchagua**	**4.14**	**114**	eP	x	04 41 20.3	
HUIG	**Huatulco**	**4.31**	**281**	iP	**Pn**	**04 41 20.3**	**0.0**
HUIG				iS	**Sn**	**04 42 10.8**	**-0.4**
TGUH	**Tegucigalpa,Un**	**4.40**	**102**	ePn	**Pn**	**04 41 20.5**	**-1.0**
OXX	**Oaxaca**	**5.24**	**294**	eP	**Pn**	**04 41 35.5**	**+3.1**
VHO	**Vista Hermosa**	**5.25**	**294**	iP	**Pn**	**04 41 35.0**	**+2.6**
VHO				iS	**Sn**	**04 42 31.5**	**-1.6**
TEIG	**Tepich**	**6.14**	**32**	P	**Pn**	**04 41 42.1**	**-2.0**
	10nm,0.3s,baz=241,slow=2.1,SNR=74						
TEIG				S	**Sn**	**04 42 49.5**	**-4.6**
	4.4nm,0.3s,baz=314,slow=23,SNR=3.9						
TPIG	**Tehuac#an**	**6.39**	**303**	iS	**Sn**	**04 42 57.1**	**-2.9**
UTMO	**Huajuapan**	**6.49**	**297**	iP	**Pn**	**04 41 50.9**	**+2.2**
UTMO				iS	**Sn**	**04 43 01.2**	**-1.0**
PPM	**Popocatepetl**	**7.75**	**302**	iP	**Pn**	**04 42 04.3**	**-0.9**
PPM				eP		04 42 09.5	
PPM				iS	**Sn**	**04 43 29.5**	**-2.8**
JTS	**JuntasAbangare**	**8.09**	**125**	P	**Pn**	**04 42 08.3**	**-1.5**
JTS				S	**Sn**	**04 43 29.8**	**-11**
JTS	**JuntasAbangare**	**8.09**	**125**	P	**Pn**	**04 42 08.3**	**-1.5**
	5.9nm,0.3s,baz=321,slow=16,SNR=16						
JTS				S	**Sn**	**04 43 29.8**	**-11**
	1.3nm,0.3s,baz=270,slow=19,SNR=2.7						
IIO	**Organos**	**8.10**	**305**	iP	**Pn**	**04 42 12.1**	**+2.2**
MEIG	**Mezcala**	**8.12**	**292**	iP	**Pn**	**04 42 13.7**	**+3.5**
MEIG				iS	**Sn**	**04 43 38.1**	**-3.1**
PRS1	**Puriscal**	**8.78**	**124**	eP	**Pn**	**04 42 19.2**	**+0.3**
LCR2	**La Lucha 2**	**9.17**	**124**	eP	**Pn**	**04 42 24.0**	**+0.1**
URSC	**Urasca**	**9.30**	**123**	eP	**Pn**	**04 42 26.1**	**+0.5**
URSC				eS	**Sn**	**04 44 06.4**	**-3.0**
BAR1		**10.01**	**124**	eP	**Pn**	**04 42 34.8**	**-0.2**
HKT	**Hockley**	**15.35**	**346**	eP	**Pn**	**04 43 45.8**	**+3.2**
	2.9nm,0.6s						
NATX	**Nacogdoches**	**16.90**	**351**	eP	**Pn**	**04 44 00.7**	**-0.6**
	15nm,0.6s						
TXAR	**Lajitas Array**	**18.03**	**324**	P	**P**	**04 44 16.4**	**+3.6**
TXAR	**Lajitas Array**	**18.03**	**324**	P	**P**	**04 44 16.4**	**+3.6**
	0.4nm,0.3s,baz=147,slow=10,SNR=20						
LTX	**Lajitas**	**18.03**	**324**	eP	**P**	**04 44 16.1**	**+3.3**
	1.4nm,0.6s						
LRAL	**Lakeview Retre**	**18.46**	**13**	eP	**P**	**04 44 18.2**	**+0.8**
	14nm,0.9s						
MIAR	**Mount Ida**	**19.53**	**355**	eP	**P**	**04 44 28.9**	**-0.1**
	5.9nm,0.8s						
GOGA	**Godfrey**	**19.79**	**21**	eP	**P**	**04 44 32.6**	**+0.8**
	24nm,0.8s						
SDDR	**Presa de Saban**	**19.93**	**76**	eP	**P**	**04 44 33.8**	**+0.4**
	17nm,0.9s						
PLAL	**Pickwick Lake**	**20.16**	**9**	eP	**P**	**04 44 35.2**	**-0.5**
	5.2nm,0.4s						
WMOK	**Wichita Mounta**	**20.66**	**343**	eP	**P**	**04 44 42.4**	**+1.4**
	2.4nm,0.7s						
NHSC	**New Hope**	**20.84**	**28**	eP	**P**	**04 44 45.2**	**+2.2**
	34nm,1.0s						
WVT	**Waverly**	**21.32**	**9**	eP	**P**	**04 44 50.5**	**+2.4**
	0.1nm,0.7s						
JSC	**Jenkinsville**	**21.39**	**24**	eP	**P**	**04 44 48.9**	**+0.1**
SDV	**Santo Domingo**	**21.49**	**104**	P	**P**	**04 44 47.5**	**-2.6**
SDV				pP		04 45 20.8	
SDV	**Santo Domingo**	**21.49**	**104**	P	**P**	**04 44 47.5**	**-2.6**
	3.6nm,0.5s,mb4.0,baz=343,slow=13,SNR=6.0						
SDV				pP		04 45 20.8	
	3.3nm,0.6s,baz=317,slow=8.4,SNR=2.9						
TKL	**Tuckaleechee C**	**21.77**	**18**	P	**P**	**04 44 52.8**	**+0.1**
	8.3nm,0.8s,mb4.2,baz=184,slow=8.8,SNR=9.1						
FVM	**French Village**	**22.92**	**3**	eP	**P**	**04 45 03.2**	**-0.3**
	5.1nm,0.6s,mb4.1						
WCI	**Wyandotte Cave**	**23.63**	**11**	eP	**P**	**04 45 09.8**	**-0.2**
	27nm,0.7s						
HWUT	**Hardware Ranch**	**31.59**	**331**	eP	**P**	**04 46 23.7**	**+2.8**
	2.3nm,1.1s,mb3.8						
LOHW	**Long Hollow**	**32.77**	**334**	eP	**P**	**04 46 32.4**	**+1.3**
	1.2nm,0.6s,mb3.8						
NVAR	**Mina Array Bea**	**33.08**	**320**	P	**P**	**04 46 36.5**	**+2.6**
	1.6nm,0.6s,mb3.9,baz=125,slow=9.0,SNR=9.9						
ULM	**Lac du Bonnet**	**35.32**	**355**	P	**P**	**04 46 52.3**	**-0.7**
	1.9nm,0.8s,mb3.8,baz=163,slow=12,SNR=3.2						
LPAZ	**La Paz**	**38.84**	**142**	eP	**P**	**04 47 24.0**	**+0.9**
	1.0nm,0.6s,mb3.6						
LPAZ	**La Paz**	**38.84**	**142**	P	**P**	**04 47 23.9**	**+0.7**
	1.0nm,0.6s,mb3.6,baz=312,slow=7.1,SNR=4.9						
FCC	**Fort Churchill**	**43.72**	**358**	eP	**P**	**04 48 01.5**	**-0.8**
	8.8nm,1.2s,mb4.3						
SCHQ	**Schefferville**	**44.19**	**20**	P	**P**	**04 48 04.7**	**-1.5**
	1.6nm,0.7s,mb3.8,baz=223,slow=15,SNR=6.2						
SCHQ				pP	pP	04 48 45.6	+0.2
	1.7nm,0.8s,baz=225,slow=14,SNR=1.8						
YKA	**Yellowknife Ar**	**50.12**	**346**	P	**P**	**04 48 51.9**	**+0.1**
YKA				pP	pP	04 49 32.5	+0.5
YKA	**Yellowknife Ar**	**50.12**	**346**	P	**P**	**04 48 51.9**	**+0.1**
	1.2nm,0.7s,mb3.6,baz=147,slow=7.7,SNR=24						
YKA				pP	pP	04 49 32.5	+0.5
	0.3nm,0.7s,baz=148,slow=7.7,SNR=2.4						
RES	**Resolute Bay**	**59.71**	**359**	eP	**P**	**04 49 59.1**	**-1.3**
ESDC	**Sonseca Array**	**78.88**	**52**	P	**P**	**04 51 56.6**	**-2.1**
	0.3nm,0.5s,mb3.2,baz=267,slow=4.6,SNR=3.0						
ARCES	**ARCESS Array B**	**85.10**	**18**	P	**P**	**04 52 29.3**	**-1.3**
ARCES	**ARCESS Array B**	**85.10**	**18**	P	**P**	**04 52 29.3**	**-1.3**
	1.6nm,0.9s,mb3.8,baz=309,slow=5.8,SNR=3.6						
WRA	**Warramunga Arr**	**135.90**	**257**	PKP	PKPdf	04 59 16.6	+1.1
	0.3nm,0.5s,baz=84,slow=2.8,SNR=6.9						
ASAR	**Alice Springs**	**136.25**	**251**	PKP	PKPdf	04 59 18.0	+2.0
	0.2nm,0.4s,baz=72,slow=3.0,SNR=3.4						

CASC 01 04:48:46.9±3.3**, 1119N**×**8636W, h7^{km}**±13^{km}**, MD3.5, 1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.51**	**79**	eP	Pg	04 48 59.2	+2.4
SSNN				eS	Sg	04 49 07.1	+3.6
CONN	**Concepcion**	**0.81**	**63**	eP	Pg	04 49 01.6	-0.9
MADN	**Villa Maderas**	**0.84**	**75**	eP	Pg	04 49 02.1	-1.0
TICN	**Ticuantepe**	**0.85**	**9**	eP	Pg	04 49 04.0	+0.7
COPN	**Copaltepe**	**1.01**	**347**	eP	Pg	04 49 06.0	-0.4
COPN				eS	Sg	04 49 19.1	-0.4
HUEN		**1.16**	**9**	eP	Pg	04 49 07.7	-1.4
LIM1	**Limonal**	**1.19**	**114**	eP	Pg	04 49 07.2	-2.5
LIM1				eS	Sg	04 49 23.7	-1.6
MOMJ	**Momotombo**	**1.23**	**352**	eP	Pb	04 49 08.8	-1.6
CUI		**1.27**	**114**	⇓iP	Pn	04 49 09.5	-1.6
CUI				eS	Sb	04 49 25.9	-1.9
2RIO	**Dos Rios de Up**	**1.29**	**120**	eP	Pn	04 49 05.0	-6.3
2RIO				eS	Sb	04 49 18.1	-10
TEL3	**Telica 3**	**1.46**	**341**	eP	Pn	04 49 13.1	-0.5
CGA2	**Cerro Gallo 2**	**2.20**	**122**	eP	Pn	04 49 24.0	+0.2
PRS1	**Puriscal**	**2.34**	**120**	eP	Pn	04 49 25.1	-0.7
PRS1				eS	Sn	04 49 59.0	+4.1
LAJ	**Bijagual**	**2.57**	**121**	eP	Pn	04 49 26.4	-2.5
LCR2	**La Lucha 2**	**2.73**	**122**	eP	Pn	04 49 30.5	-0.7
LCR2				eS	Sn	04 50 08.0	+3.6
URSC	**Urasca**	**2.88**	**118**	eP	Pn	04 49 32.5	-0.6
URSC				eS	Sn	04 50 12.0	+4.0

*ISCJB **01** 05:02:17.2±0.8, 3867N±003×2470E±003, h0^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=4.4km az=12.2*
*CSEM **01** 05:02:19.9±0.1, 3863N×2474E, h20^{km}, ML3.2, Error ellipse: s-maj=2.3km s-min=1.9km az=6.0*
*ATH **01** 05:02:19.5, 3864N×2474E, h34^{km}±11^{km}, MD3.5/10, ML3.2*
*NEIC **01** 05:02:19.5, 3864N×2474E, h34^{km}, ML3.2(ATH), After ATH.*
*THE **01** 05:02:21.8, 3867N×2475E, h20^{km}, ML3.4*
ISC 01 05:02:17.9±0.8**, 3866N**±003×**2469E**±003**, h2^{km}**±6^{km}**, n25,** σ**0^{s}99**/31**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATH	**Athens Observa**	**1.03**	**229**	ePN	**Pn**	**05 02 39.6**	**+0.4**
ATH				eSN	**Sn**	**05 02 54.3**	**+0.1**
CHOS	**Chios island**	**1.10**	**104**	ePg	**Pg**	**05 02 39.5**	**+0.5**
CHOS				eSg	**Sg**	**05 02 54.8**	**+1.5**
LIA	**Limnos Island**	**1.30**	**17**	ePN	**Pn**	**05 02 44.3**	**+1.3**
NEO	**Neokhori**	**1.32**	**300**	ePB	**Pb**	**05 02 43.1**	**-0.2**
LKR	**Lokris**	**1.33**	**270**	ePB	**Pb**	**05 02 43.6**	**+0.2**
PRK	**Paraskevi**	**1.36**	**64**	ePN	**Pn**	**05 02 43.5**	**-0.4**
PRK				eSN	**Sn**	**05 03 02.1**	**-0.4**
XOR	**Xorichti**	**1.37**	**302**	ePg	**Pg**	**05 02 44.0**	**0.0**
XOR	**Xorichti**	**1.37**	**302**	ePg	**Pg**	**05 02 44.0**	**-0.1**
PAIG	**Paliouri**	**1.49**	**329**	ePg	**Pg**	**05 02 45.8**	**-0.7**
LTK	**Loutraki**	**1.50**	**246**	ePg	**Pg**	**05 02 46.3**	**-0.2**
DID	**Didima**	**1.62**	**225**	ePb	**Pb**	**05 02 48.0**	**-0.5**
APE	**Apeiranthos**	**1.72**	**157**	ePb	**Pb**	**05 02 48.4**	**-1.7**
APE				eSb	**Sb**	**05 03 09.7**	**-2.4**
AGG	**Agios Georgios**	**1.88**	**282**	ePb	**Pb**	**05 02 51.8**	**-1.1**
AGG				eSb	**Sb**	**05 03 15.8**	**-1.0**
SMG	**Samos**	**1.94**	**119**	ePN	**Pn**	**05 02 51.2**	**-0.5**
PLG	**Polygyros**	**1.97**	**331**	ePN	**Pn**	**05 02 52.1**	**-0.1**
SELA	**Sela**	**2.23**	**261**	ePn	**Pn**	**05 02 57.3**	**+1.6**
VLX	**Vlachokerasia**	**2.23**	**236**	ePn	**Pn**	**05 02 57.1**	**+1.3**
EVR	**Evrytania**	**2.27**	**277**	ePB	**Pb**	**05 02 58.3**	**-1.2**
THL	**Klokotos Trika**	**2.27**	**294**	ePN	**Pn**	**05 02 57.4**	**+1.0**
VLI	**Veliai**	**2.38**	**216**	ePN	**Pn**	**05 02 57.7**	**-0.2**
SOH	**Sokhos**	**2.40**	**335**	ePn	**Pn**	**05 02 58.5**	**+0.4**
SOH				eSn	**Sn**	**05 03 27.7**	**-0.3**
RDO	**Rodhopi**	**2.57**	**14**	ePN	**Pn**	**05 02 59.4**	**-1.1**
SRS	**Serrai**	**2.60**	**341**	ePn	**Pn**	**05 03 00.7**	**-0.2**
ITM	**Ithomi**	**2.64**	**237**	ePN	**Pn**	**05 03 03.3**	**+1.9**
PYL	**PYLOS**	**2.92**	**234**	ePn	**Pn**	**05 03 07.2**	**+1.9**

*MOS **01** 05:08:14.2±0.9, 1035N×9300E, h33^{km}, mb5.2/55, Error ellipse: s-maj=8.7km s-min=4.1km az=117.7*
*SZGRF **01** 05:08:15.7, 1030N×9305E, h33^{km}, mb5.1, Andaman Islands, India, region*
*ISCJB **01** 05:08:18.4±0.1, 1029N±003×9303E±002, h72^{km}, mb5.0/131, Error ellipse: s-maj=3.9km s-min=2.7km az=34.9*
*BJI **01** 05:08:18.4, 1034N×9303E, h75^{km}, mB5.1, mb5.1, Ms4.5, Msz4.2*
*IDC **01** 05:08:20.2±1.1, 1030N×9305E, h73^{km}±9^{km}, mb4.7/29, mb1 4.7/30, mb1mx4.7/30, mbtmp4.7/30, MS4.0/18, Ms1 4.0/18, ms1mx3.9/28, Error ellipse: s-maj=11.9km s-min=8.6km az=52.0*
*NEIC **01** 05:08:20.7±0.1, 1029N×9306E, mb5.0/74, Error ellipse: s-maj=4.4km s-min=2.8km az=224.0*
*GCMT **01** 05:08:20.7±0.4, 1042N×9323E, h89^{km}±3^{km}, MW5.0/72, Moment Tensor Solution. s34,c46; s72,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.59±.15; $M_{\theta\theta}$-4.03±.14; $M_{\phi\phi}$2.44±.16; $M_{r\theta}$-2.02±.10; $M_{\theta\phi}$1.37±.16; $M_{\phi r}$-1.78±.10; Best double couple: $M_0$4.62900×10^{16} NP1:ϕ_s141.00000°, δ50.00000°, λ161.00000°. NP2: ϕ_s243.00000°, δ75.00000°, λ41.00000°. Principal axes: T 4.4900, Plg39.0000°, Azm110.0000°; N 0.2780, Plg47.0000°, Azm260.0000°; P -4.7680, Plg16.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 01 05:08:20.5±0.1**, 1033N**±003×**9305E**±002**, h74^{km}, h74^{km}**±4.0^{km}**:pP-P, n627,** σ**0^{s}95**/412**, mb5.0**/131**, 121C-138D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.35**	**347**	eP	**Pn**	**05 08 49.2**	**+5.5**
PBA				eS	**Sn**	**05 09 04.3**	**+3.2**
NNT	**Nongplab**	**6.93**	**70**	P	**Pn**	**05 10 01.4**	**+2.0**
BDT	**Bhumibol Dam**	**8.98**	**39**	⇑P	**Pn**	**05 10 29.0**	**+1.6**
	33nm,0.8s						
KULM	**Kulim**	**9.04**	**123**	ePn	**Pn**	**05 10 28.5**	**+0.3**
KULM				eSn	**Sn**	**05 12 07.6**	**-0.9**
KULM	**Kulim**	**9.04**	**123**	⇑P	**Pn**	**05 10 29.1**	**+0.8**
PSI	**Prapat**	**9.48**	**142**	P	**Pn**	**05 10 35.2**	**+0.9**
PSI				S	**Sn**	**05 12 19.2**	**-0.2**
PSI	**Prapat**	**9.48**	**142**	P	**Pn**	**05 10 35.2**	**+0.9**
	14nm,0.3s,baz=334,slow=13,SNR=68						
PSI				S	**Sn**	**05 12 19.2**	**-0.2**
	2.1nm,0.3s,baz=259,slow=21,SNR=2.5						
IPM	**Ipoh**	**9.81**	**126**	⇑P	**Pn**	**05 10 39.8**	**+0.9**
CHG	**Chiang Mai**	**10.18**	**33**	⇓P	**Pn**	**05 10 44.9**	**+1.1**
	150nm,0.7s						
CHTO	**Chiang Mai**	**10.18**	**33**	⇓ePn	**Pn**	**05 10 44.5**	**+0.6**
	89nm,0.6s						
CHTO	**Chiang Mai**	**10.18**	**33**	⇓eP	**Pn**	**05 10 44.5**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,89nm,0.6s						
FRIM	**Kepong**	**11.05**	**129**	⇑P	**Pn**	**05 10 57.6**	**+1.9**
KTGM	**Kuala Trenggan**	**11.15**	**116**	⇑P	**Pn**	**05 10 59.6**	**+2.4**
CHRT	**Chiangrai**	**11.50**	**34**	⇑P	**Pn**	**05 11 02.0**	**+0.2**
	comp=Z,816nm,0.8s						

VIS Vishakhapatnam 11.95 309 *i* P **Pn 05 11 07.3 -0.7**
VIS AMb AMB 05 11 10.7
comp=Z,262nm,1.6s
VIS *i* S **Sn 05 13 07.2 -12**
PALK Pallekele 12.57 257 *e*Pn **Pn 05 11 17.3 +0.8**
PALK *e*Sn **Sn 05 13 24.2 -11**
MDRS Chennai 12.83 283 *e*P **Pn 05 11 20.0 0.0**
MDRS Chennai 12.83 283 *e*P **Pn 05 11 19.5 -0.5**
MDRS *ex* x 05 11 30.5
MDRS *e*S **Sn 05 13 25.5 -16**
MDRS *ex* x 05 14 22.5
MDRS *ex* x 05 15 59.5
MDRS *ex* x 05 16 22.5
KGM Kluang 13.12 128 ⇓P **Pn 05 11 26.1 +2.1**
AGT Agartala 13.59 353 *ex* x 05 11 24.0
MYKOM Kota Tinggi 13.68 128 ⇑P **Pn 05 11 32.2 +1.0**
SHL Shillong 15.20 356 *i* x x 05 11 46.5
comp=Z,80nm,0.8s
SHL *ex* x 05 14 27.5
KOD Kodaikanal 15.34 271 *e*P **Pn 05 11 55.9 +3.2**
KOD AMb AMB 05 12 01.1
comp=Z,70nm,0.9s
BLSP Bilaspur 15.72 320 *ex* x 05 14 39.3
BLSP AMb AMB 05 14 47.3
comp=Z,573nm,0.9s
HYB Hyderabad 15.73 298 *e*P **Pn 05 11 58.0 +0.2**
comp=Z,90nm,1.0s
HYB *e* 05 12 19.0
HYB *e*S S 05 14 35.0 -27
HYB Hyderabad 15.73 298 *e*P **Pn 05 11 58.0 +0.2**
HYB pmax pmax
comp=Z,90nm,1.0s
HYB Hyderabad 15.73 298 *i* P **Pn 05 11 58.0 +0.2**
comp=Z,90nm,1.0s
HYB *e* 05 12 19.0
HYB *e* 05 14 35.0
HYB *e*S **S 05 14 51.0 -11**
TRD Trivandrum 15.98 265⇑ *ex* x 05 12 25.0
TRD *ex* x 05 15 49.0
NGP Nagpur 17.23 310 *ex* **Pn 05 12 19.0 +2.7**
comp=Z,172nm,1.9s
NGP *e*S **S 05 15 16.2 -16**
ODAN Odare 17.29 343 *e*P **Pn 05 12 18.1 +1.0**
comp=Z,336nm,0.4s
KMI Kunming 17.36 31 ⇓P **Pn 05 12 20.1 +2.2**
KMI AP pP 05 12 30.2 -2.9
KMI PP 05 12 33.2
KMI S **S 05 15 29.6 -5.4**
KMI SS 05 15 51.0
KMI AMB AMB
comp=Z,297nm,0.8s
KMI AMB AMB
comp=Z,345nm,3.1s
KMI LR LR
comp=N,505nm,13.2s
KMI LR LR
comp=E,513nm,14.1s
KMI LR LR
comp=Z,475nm,20.5s
KMI Kunming 17.36 31 ⇓P **Pn 05 12 20.1 +2.2**
comp=Z,297nm,0.8s
KMI pP pP 05 12 25.8 -7.3
KMI sP sP 05 12 30.2 -12
KMI PP 05 12 33.2
KMI PPP 05 12 41.9
KMI S **S 05 15 29.6 -5.4**
KMI sS sS 05 15 39.8 -19
KMI SS 05 15 51.0
KMI SSS 05 16 02.6
GTK Gangtok 17.43 347 *e*P **Pn 05 12 18.0 -0.7**
TAPN Taplejung 17.66 344 *e*P **Pn 05 12 22.7 +1.1**
comp=Z,337nm,0.5s
JBP Jabalpur 17.86 317 ⇓*i*P **Pn 05 12 25.3 +1.3**
JBP *ex* x 05 15 30.9
MNGI Mangalore 18.04 280 *i* P **Pn 05 12 29.4 +3.1**
MNGI *ex* x 05 12 43.9
comp=Z,93nm,0.9s
MNGI *i* x x 05 15 30.6
QIZ Qiongzhong 18.39 60 P **Pn 05 12 30.4 -0.1**
QIZ S **S 05 15 52.3 -3.7**
QIZ XS sS 05 16 12.2 -8.2
QIZ AMB AMB
comp=Z,27nm,1.7s
QIZ AMB AMB
comp=Z,137nm,5.9s
QIZ LR LR
comp=N,783nm,18.3s
QIZ LR LR
comp=Z,343nm,22.5s
JIRN Jiri 18.41 340 *e*P **Pn 05 12 31.7 +1.0**
comp=Z,741nm,0.8s
KKN Kakani 18.85 338 *e*P **Pn 05 12 35.9 0.0**
comp=Z,319nm,0.6s
KKN Kakani 18.85 338 *e*P **Pn 05 12 35.9 0.0**
KKN pmax pmax
comp=Z,319nm,0.6s
KSM Kuching 19.27 116 *e*P **Pn 05 12 38.6 -2.5**
KSM Kuching 19.27 116 ⇓P **Pn 05 12 40.6 -0.5**
GKN Gorkha 19.28 337 *e*P **Pn 05 12 40.9 -0.1**
comp=Z,747nm,0.5s
LSA Lhasa 19.36 355 P **Pn 05 12 37.8 -4.1**
LSA AP pP 05 12 50.1 -5.1
LSA S **S 05 16 11.3 -3.9**
LSA XS sS 05 16 36.5 -3.3
LSA LR LR
comp=N,300nm,30.7s
LSA LR LR
comp=E,500nm,33.3s
LSA LR LR
comp=Z,480nm,29.2s
LSA Lhasa 19.36 355 ⇓*i*P **Pn 05 12 40.7 -1.2**
comp=Z,201nm,0.6s
LSA *e*S **S 05 16 14.3 -0.9**
LSA *e*ScP ScP 05 20 29.8 +0.6
LSA Lhasa 19.36 355 ⇓*i*P **Pn 05 12 40.7 -1.2**
LSA *e*S **S 05 16 14.3 -0.9**
LSA pmax pmax
comp=Z,201nm,0.6s
GOA Goa 19.43 287 *ex* x 05 12 27.5
GOA AMb AMB 05 12 43.1
comp=Z,48nm,1.6s
KAD Karad 19.58 293 *e*P **Pn 05 12 44.1 -0.6**
KAD AMb AMB 05 12 48.0
comp=Z,83nm,0.5s
BHPL Bhopal 19.69 313 *e*P **Pn 05 12 45.2 -0.7**
BHPL AMb AMB 05 12 49.0
comp=Z,175nm,1.3s
POO Poona 20.29 296 *e*P **P 05 12 52.0 +1.6**
POO AMb AMB 05 12 55.4
comp=Z,77nm,1.0s
GYA Guiyang 20.57 37 ⇓*i*P **P 05 12 53.6 +0.3**
GYA AP 05 13 08.4
GYA PP 05 13 17.6
GYA S **S 05 16 39.7 +0.4**
GYA PCP PcP 05 17 05.2 +3.3
GYA SS 05 17 11.0
GYA PCS PcS 05 20 42.6 +2.8
GYA AMB AMB
comp=Z,50nm,1.0s
GYA AMB AMB
comp=Z,270nm,7.4s
GYA LR LR
comp=N,780nm,16.8s
GYA LR LR
comp=E,670nm,17.4s
GYA LR LR
comp=Z,840nm,17.2s
SBUM Sibu 20.58 111 ⇓P **P 05 12 54.3 +0.7**
BTM Bintulu 21.10 108 ⇓P **P 05 13 00.5 +1.3**
LGTI Lohaghat 22.48 330 *e*P **P 05 13 13.0 -0.7**
LGTI *ex* x 05 17 23.5
CD2 Chengdu 22.77 24 P **P 05 13 15.7 -1.0**
CD2 AP 05 13 32.4
CD2 XP sP 05 13 41.6 +0.1
CD2 PP 05 13 47.6
CD2 PCP PcP 05 17 06.3 +0.2
CD2 S **S 05 17 14.8 -5.4**
CD2 XS sS 05 17 43.3 -4.5
CD2 SS 05 18 03.3
CD2 PCS PcS 05 20 43.9 -1.2
CD2 AMB AMB
comp=Z,40nm,0.7s,mb4.9
CD2 AMB AMB
comp=Z,150nm,6.2s
CD2 LR LR
comp=N,240nm,15.6s
CD2 LR LR
comp=E,530nm,14.4s
CD2 LR LR
comp=Z,190nm,12.0s
KKM Kota Kinabalu 23.31 99 *e*P **P 05 13 21.8 -0.4**
KKM Kota Kinabalu 23.31 99 ⇑P **P 05 13 23.3 +1.0**
NDI New Delhi 23.53 323 *e*P **P 05 13 25.0 +0.9**
NDI AMb AMB 05 13 26.6
comp=Z,150nm,0.8s,mb5.4
NDI *ex* x 05 17 40.0
AJM Ajmer 23.68 315 *e*P **P 05 13 27.0 +1.6**
AJM *e*P 05 13 27.1
AJM AMb AMB 05 13 27.6
comp=Z,106nm,0.8s,mb5.2
KDM Kudat 23.75 96 ⇑P **P 05 13 26.7 +0.4**
SDKM Sandakan 24.35 99 ⇑P **P 05 13 32.0 +0.2**
TSM Tawau 25.33 102 ⇑P **P 05 13 40.2 -0.4**
MYLDM Lahad Datu 25.72 100 ⇓P **P 05 13 45.0 +0.8**
SDNR Sundarnagar 25.81 327 *e*P **P 05 13 45.6 +0.8**
SDNR *ex* x 05 18 41.6
DLH Dalhousie 27.15 327 *ex* x 05 13 54.0
THN Thein Dam 27.20 327 *e*P **P 05 13 57.0 -0.3**
THN *ex* x 05 19 07.2
LZH Lanzhou 27.45 19 ⇓P **P 05 13 59.8 +0.3**
LZH AP pP 05 14 17.5 +0.6
LZH XP sP 05 14 27.4 +1.8
LZH PP PP 05 14 50.8 -12
LZH *e*S **S 05 18 33.2 -1.5**
LZH XS sS 05 19 04.1 -0.6
LZH SS 05 19 56.9
LZH AMB AMB
comp=Z,89nm,1.4s,mb5.1
LZH AMB AMB
comp=Z,256nm,5.1s
LZH LR LR
comp=N,1μm,11.5s
LZH LR LR
comp=Z,2μm,15.4s
LZH Lanzhou 27.45 19 ⇓P **P 05 13 59.8 +0.3**
comp=Z,89nm,1.4s,mb5.1
LZH pP pP 05 14 17.5 +0.6
LZH sP sP 05 14 27.4 +1.8
LZH PP PP 05 14 50.8 -12
LZH *e*S **S 05 18 33.2 -1.5**
LZH sS sS 05 19 04.1 -0.6
LZH SS 05 19 56.9
LZH LR LR
comp=Z,2μm,15.4s
LZH Lanzhou 27.45 19 ⇓P **P 05 13 59.8 +0.3**
LZH *PP pP 05 14 17.5 +0.6
LZH 05 14 50.8
LZH *e*S **S 05 18 33.2 -1.5**
LZH SS 05 19 56.9
LZH pmax pmax
comp=Z,89nm,1.4s,mb5.1
LZH MLR MLR
comp=Z,2μm,15.4s
XAN Xi'an 27.72 29 P **P 05 14 00.2 -1.7**
XAN AMB AMB
comp=Z,25nm,0.9s,mb4.7
GTA Gaotai 29.58 11 ⇓P **P 05 14 19.3 +0.9**
GTA AP pP 05 14 33.0 -2.9
GTA PP PP 05 15 13.7 -13
GTA PCP PcP 05 17 22.9 +1.2
GTA S **S 05 19 07.1 -1.1**
GTA SS SS 05 20 40.3 -36
GTA SCP ScP 05 20 56.9 -0.4
GTA PCS PcS 05 21 05.7 +0.9
GTA SCS ScS 05 24 50.5 -1.5
GTA AMB AMB
comp=Z,69nm,1.0s,mb5.2
GTA AMB AMB
comp=Z,232nm,7.2s
GTA LR LR
comp=N,150nm,8.7s
GTA LR LR
comp=E,187nm,8.4s
GTA LR LR
comp=Z,224nm,15.6s
NJ2 Nanjing 32.18 44 *e*P **P 05 14 43.2 +1.8**
NJ2 AP pP 05 14 55.2 -3.8
NJ2 PP PP 05 15 48.6 -6.8
NJ2 S **S 05 19 53.0 +3.9**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
NJ2 AMB AMB
comp=Z,380nm,5.8s
NJ2 LR LR
comp=N,680nm,15.7s
NJ2 LR LR
comp=E,430nm,11.8s
NJ2 LR LR
comp=Z,430nm,11.8s
KBL Kabul 32.59 321 *e*P **P 05 14 46.0 +1.1**
SSE Sheshan 33.29 47 *e*P **P 05 14 49.9 -1.2**
SSE AP pP 05 15 06.0 -2.7
SSE XP sP 05 15 14.5 -2.9
SSE PP PP 05 16 06.2 -1.5
SSE S **S 05 20 06.2 -0.1**
SSE XS sS 05 20 35.8 -0.7
SSE SCS ScS 05 25 08.4 -2.4
SSE AMB AMB
comp=Z,34nm,0.7s,mb5.3
SSE AMB AMB
comp=Z,207nm,3.5s
SSE LR LR
comp=N,150nm,21.8s
SSE LR LR
comp=E,33nm,22.1s
SSE LR LR
comp=Z,143nm,21.3s
SSE Sheshan 33.29 47 *e*P **P 05 14 49.9 -1.2**
comp=Z,34nm,0.7s,mb5.3
SSE pP pP 05 15 06.0 -2.7
SSE sP sP 05 15 14.5 -2.9
SSE PP PP 05 16 06.2 -1.5
SSE S **S 05 20 06.2 -0.1**
SSE sS sS 05 20 35.8 -0.7
SSE ScS ScS 05 25 08.4 -2.4
SSE LR LR
comp=Z,140nm,21.3s
BTO Baotou 33.69 24 *e*P **P 05 14 52.8 -1.6**
WMQ Urumqi 33.69 353 ⇓P **P 05 14 55.2 +0.8**
WMQ AP pP 05 15 11.0 -1.0
WMQ XP sP 05 15 22.9 +2.2
WMQ PP PP 05 16 10.4 -1.6
WMQ S **S 05 20 12.2 0.0**
WMQ XS sS 05 20 43.0 +0.6
WMQ SCP ScP 05 21 10.2 -0.8
WMQ AMB AMB
comp=Z,19nm,0.6s,mb5.1
WMQ AMB AMB
comp=Z,291nm,3.1s
WMQ LR LR
comp=N,199nm,26.0s
WMQ LR LR
comp=E,446nm,27.0s
WMQ LR LR
comp=Z,208nm,25.5s
HHC Hu-ho-hao-te 34.52 25 *e*P **P 05 15 01.4 -0.3**
HHC AP pP 05 15 19.5 +0.2
HHC XP sP 05 15 28.7 +0.7
HHC PP PP 05 16 19.6 -1.6
HHC PCP PcP 05 17 34.7 -0.5
HHC S **S 05 20 19.7 -5.4**
HHC SCP ScP 05 21 11.7 -2.3
HHC SS SS 05 22 40.8 -17
HHC AMB AMB
comp=Z,38nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,198nm,5.4s
HHC LR LR
comp=N,162nm,10.8s
HHC LR LR
comp=E,252nm,12.0s
HHC LR LR
comp=Z,182nm,12.5s
ULHL Ulahol 35.04 338 P **P 05 15 07.2 +1.1**
SNR=36
KZA Kyzart 35.27 337 P **P 05 15 09.7 +1.6**
SNR=80
UCH Uchtor 35.69 336 ⇓*i*P **P 05 15 13.1 +1.4**
comp=Z,53nm,0.7s,mb5.6
UCH *e*ScP ScP 05 21 18.7 +0.5
UCH Uchtor 35.69 336 P **P 05 15 13.3 +1.7**
SNR=78
TKM2 Tokmak 2 35.86 338 ⇓*i*P **P 05 15 14.0 +0.9**
comp=Z,58nm,0.8s,mb5.6
TKM2 *e*ScP ScP 05 21 18.1 -0.7
TKM2 Tokmak 2 35.86 338 ⇓*i*P **P 05 15 14.0 +0.9**
TKM2 pmax pmax
comp=Z,58nm,0.8s,mb5.6
TKM2 Tokmak 2 35.86 338 P **P 05 15 14.3 +1.1**
SNR=69
KBK Karagaybulak 35.88 337 P **P 05 15 15.1 +1.8**
SNR=29
AML Almayashu 35.94 335 ⇓*i*P **P 05 15 15.6 +1.8**
comp=Z,182nm,0.7s,mb6.1
AML *e*ScP ScP 05 21 19.2 +0.1
AML Almayashu 35.94 335 P **P 05 15 15.7 +1.9**
SNR=19
BJT Baijiatuau 35.99 31 *e*P **P 05 15 14.8 +0.5**
comp=Z,12nm,0.6s,mb5.0
BJT Baijiatuau 35.99 31 *e*P **P 05 15 14.8 +0.5**
BJT pmax pmax
comp=Z,12nm,0.6s
BJI Beijing 36.01 31 P **P 05 15 14.6 +0.1**
BJI AP pP 05 15 27.3 -4.9
BJI PCP PcP 05 17 39.8 +0.2
BJI S **S 05 20 45.8 -2.2**
BJI AMB AMB
comp=Z,16nm,1.0s,mb4.9
BJI AMB AMB
comp=Z,94nm,3.8s
BJI LR LR
comp=N,232nm,15.0s
BJI LR LR
comp=E,386nm,18.6s
BJI LR LR
comp=Z,250nm,21.3s
BJI Beijing 36.01 31 P **P 05 15 14.6 +0.1**
BJI pP pP 05 15 23.4 -8.8
BJI sP sP 05 15 27.3 -14
BJI PcP PcP 05 17 39.8 +0.2
BJI S **S 05 20 45.8 -2.2**
BJI sS sS 05 21 07.5 -11
BJI SS SS 05 23 24.4 -3.4
BJI LR LR
comp=Z,250nm,21.3s
AAK Ala-Archa 36.04 336 P **P 05 15 15.8 +1.2**
comp=Z,642nm,0.6s,SNR=80
AAK Ala-Archa 36.04 336 ⇓*i*P **P 05 15 15.3 +0.6**
comp=Z,102nm,0.9s,mb5.8
AAK *e*ScP ScP 05 21 18.9 -0.6
AAK Ala-Archa 36.04 336 ⇓*i*P **P 05 15 15.3 +0.7**
AAK pmax pmax
comp=Z,102nm,0.9s,mb5.8
AAK Ala-Archa 36.04 336 P **P 05 15 16.3 +1.6**
SNR=85
FRU Bishkek 36.16 337 *e*P **P 05 15 16.6 +0.9**
FRU *e* 05 16 39.0
FRU *e* 05 20 50.4
FRU pmax pmax
comp=Z,100nm,1.6s,mb5.5
CHMS Chumysh 36.25 337 P **P 05 15 17.7 +1.3**
SNR=86
EKS2 Erkin-Say 36.35 336 ⇓*i*P **P 05 15 18.9 +1.6**
comp=Z,149nm,0.7s,mb6.0
EKS2 *e*ScP ScP 05 21 20.2 -0.4
EKS2 Erkin-Say 36.35 336 P **P 05 15 19.2 +1.9**
SNR=19
USP Ospenovka 36.57 337 P **P 05 15 20.3 +1.1**
SNR=35
JOW Kunigami 37.04 59 P **P 05 15 23.2 -0.2**
comp=Z,15nm,0.4s,mb5.3,baz=146,slow=28,SNR=5.3
JOW LR LR 05 33 10.6
comp=Z,129nm,19.8s,baz=181,slow=40
MK31 Makanchi Array 37.48 348 ⇓*i*P **P 05 15 26.7 -0.1**
MK31 *e*pP pP 05 15 47.3 +2.7
MK31 *e*sP sP 05 15 54.6 +1.4
MK31 *e*ScP ScP 05 21 23.6 -1.1
MKAR Makanchi Array 37.48 348 P **P 05 15 26.6 -0.1**
comp=Z,32nm,0.8s,mb5.3,baz=168,slow=7.8,SNR=316
MKAR ScP ScP 05 21 23.9 -0.8
comp=Z,4.6nm,0.9s,baz=134,slow=5.2,SNR=7.0
MKAR LR LR 05 34 09.1
comp=Z,76nm,21.0s,baz=159,slow=41
DL2 Dalian 38.22 37 P **P 05 15 34.1 +0.9**
DL2 AMB AMB
comp=Z,20nm,0.7s,mb5.1
SONM Songino Array 39.04 14 P **P 05 15 40.0 +0.1**
SONM PcP PcP 05 17 49.6 +1.0
SONM ScP ScP 05 21 29.5 -1.2
SONM LR LR 05 35 25.4
SONM Songino Array 39.04 14 P **P 05 15 40.0 +0.1**
SONM 05 17 49.6
SONM 05 21 29.5
SONM Songino Array 39.04 14 P **P 05 15 40.0 +0.1**
comp=Z,26nm,0.9s,mb5.1,baz=203,slow=6.8,SNR=160
SONM PcP PcP 05 17 49.6 +1.0
comp=Z,13nm,0.7s,baz=205,slow=3.8,SNR=10
SONM ScP ScP 05 21 29.5 -1.2
comp=Z,1.9nm,0.9s,baz=213,slow=3.3,SNR=6.1
SONM LR LR 05 35 25.4
comp=Z,102nm,18.7s,baz=329,slow=42
ULN Ulaanbaatar 39.23 15 ⇓*i*P **P 05 15 41.2 -0.3**
comp=Z,27nm,1.0s,mb5.0
ULN *e*PcP PcP 05 17 50.0 +0.7
ULN Ulaanbaatar 39.23 15 ⇓*i*P **P 05 15 41.3 -0.2**
ULN *e* 05 17 50.0
ULN pmax pmax
comp=Z,27nm,1.0s,mb5.0
ZAK Zakamensk 40.82 10⇑ *e*P **P 05 15 54.7 +0.1**
ZAK *e* 05 17 30.7
ZAK *e* 05 17 55.0
ZAK pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
MBWA Marble Bar 40.82 140 *e*P **P 05 15 52.5 -2.5**
comp=Z,18nm,0.8s,mb5.0
MBWA *e*PcP PcP 05 17 54.4 -0.5
SNY Shenyang 41.25 35 ⇑P **P 05 15 57.3 -1.0**
SNY S **S 05 22 04.0 -2.9**
SNY SS SS 05 25 12.2 -0.6
SNY AMB AMB
comp=Z,12nm,0.8s,mb4.8
SNY AMB AMB
comp=Z,201nm,5.9s
SNY LR LR
comp=E,395nm,13.5s
SNY LR LR
comp=Z,463nm,16.5s
KSRS Korea Array 41.38 43 P **P 05 15 58.6 -0.9**
comp=Z,2.3nm,0.6s,mb4.2,baz=248,slow=9.1,SNR=7.0
KSRS ScP ScP 05 21 38.4 -1.7
comp=Z,2.3nm,0.7s,baz=239,slow=3.8,SNR=7.0
KSRS S **S 05 22 12.3 +3.4**
comp=Z,2.5nm,1.0s,baz=242,slow=18,SNR=5.7
KSRS LR LR 05 34 44.6
comp=Z,249nm,18.9s,baz=236,slow=38
JNU Nakatsue 41.49 51 P **P 05 16 00.1 -0.3**
comp=Z,8.1nm,0.8s,mb4.6,baz=267,slow=14,SNR=3.6
ABKT Ailbek 41.67 317 P **P 05 16 04.6 +2.8**
comp=Z,805nm,0.6s,SNR=11
MOY Mondy 41.73 7 *e*P **P 05 16 03.0 +1.0**
MOY pmax pmax
comp=Z,19nm,1.7s,mb4.5
KURK Kurchatov 41.98 346 P **P 05 16 04.6 +0.4**
comp=Z,214nm,0.9s,mb5.9,SNR=28
KURK Kurchatov 41.98 346 ⇓*i*P **P 05 16 04.0 -0.1**
comp=Z,43nm,1.0s,mb5.1
KURK *e*ScP ScP 05 21 41.4 -0.8
KURK Kurchatov 41.98 346*d* *i*P **P 05 16 04.1 -0.1**
TLY Talaya 42.13 10 P **P 05 16 06.5 +1.2**
comp=Z,104nm,0.5s,mb5.8,SNR=7.2
TLY Talaya 42.13 10 ⇓*i*P **P 05 16 06.3 +1.0**
comp=Z,11nm,0.7s,mb4.7
TLY pP pP 05 16 28.2 +4.8
TLY Talaya 42.13 10 *e*P **P 05 16 06.4 +1.1**
TLY *e*S **S 05 22 30.5 +11**
TLY *e*SS SS 05 25 58.9 +29
TLY pmax pmax
comp=Z,27nm,1.6s,mb4.7
TLY MLR MLR
comp=Z,125nm,18.0s
FITZ Fitzroy Crossi 42.81 131⇑ *i*P **P 05 16 09.3 -2.0**
comp=Z,100nm,0.6s,mb5.7
FITZ Fitzroy Crossi 42.81 131 P **P 05 16 09.4 -1.9**
comp=Z,135nm,1.0s,mb5.6,baz=326,slow=7.1,SNR=231

FITZ PcP PcP 05 18 01.7 +0.2
comp=Z,10nm,0.4s,baz=323,slow=5.1,SNR=36
FITZ LR LR 05 34 04.6
comp=Z,182nm,21.0s,baz=311,slow=36
CN2 Changchun 43.58 34 ⇑P P 05 16 17.4 +0.2
CN2 PCP PcP 05 18 03.5 -0.1
CN2 *e*S S **05 22 44.2 +3.2**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,18.0s
CN2 LR LR
comp=E,300nm,18.0s
CN2 LR LR
comp=Z,200nm,19.0s
ZAL Zalesovo 43.99 353 P P 05 16 20.1 -0.2
ZALV Zalesovo Beam 44.00 353 P P 05 16 20.1 -0.3
comp=Z,9.0nm,0.4s,mb4.9,baz=173,slow=8.3,SNR=51
ZALV ScP ScP 05 21 48.4 -1.9
comp=Z,3.6nm,0.7s,baz=172,slow=3.0,SNR=6.5
ZALV LR LR 05 39 20.0
comp=Z,74nm,18.9s,baz=175,slow=42
HIA Hailar 44.73 25 *e*P P 05 16 26.0 -0.2
comp=Z,5.7nm,0.6s,mb4.5
HIA Hailar 44.73 25 *e*P P 05 16 26.0 -0.3
HIA pmax pmax
comp=Z,6.0nm,0.6s
CIT Chita 44.80 18 *e*P P 05 16 26.5 -0.3
CIT *e* 05 18 05.1
CIT pmax pmax
comp=Z,50nm,1.5s,mb5.0
NVS Novosibirsk 45.08 352 *i* P P 05 16 28.1 -0.8
NVS pmax pmax
comp=Z,19nm,1.2s,mb4.7
NVS pmax pmax
comp=N,7.0nm,0.5s
NVS pmax pmax
comp=E,4.0nm,0.6s
QRN Al-Qurain 45.99 300 *e*P P 05 16 35.8 -0.8
QRN AMb AMB 05 16 39.5
comp=Z,21nm,0.6s,mb5.0
BRVK Borovoye 46.40 341 P P 05 16 39.0 -0.4
comp=Z,306nm,0.6s,mb6.2,SNR=18
BRVK Borovoye 46.40 341 ⇓*i*P P 05 16 39.1 -0.2
comp=Z,36nm,0.7s,mb5.2
BRVK *e*pP pP 05 16 58.6 +0.9
BRVK Borovoye 46.40 341 ⇓*i*P P 05 16 39.1 -0.3
BRVK pmax pmax
comp=Z,36nm,0.7s,mb5.2
MDJ Mudanjiang 46.43 36 P P 05 16 40.3 +0.5
MDJ AP pP 05 16 53.2 -4.9
MDJ PP PP 05 18 29.3 -0.7
MDJ PCS PcS 05 22 09.0 +1.0
MDJ S S **05 23 27.1 +5.0**
MDJ AMB AMB
comp=Z,59nm,5.0s
MDJ LR LR
comp=N,80nm,32.5s
MDJ LR LR
comp=E,123nm,37.0s
NAY Al-Naaiem 46.69 301 *e*P P 05 16 41.6 -0.4
NAY AMb AMB 05 16 43.4
comp=Z,24nm,0.8s,mb5.0
MIB Mutribah 46.74 301 *e*P P 05 16 41.7 -0.8
MIB AMb AMB 05 16 45.5
comp=Z,44nm,0.8s,mb5.2
RST Umm Al-Ruwaisa 46.95 301 *e*P P 05 16 44.1 0.0
RST AMb AMB 05 16 45.2
comp=Z,34nm,0.7s,mb5.2
MUN Mundaring 47.55 153 *e*P P 05 16 47.2 -1.4
KLBR Kellerberrin 47.93 151 *e*P P 05 16 50.0 -1.6
comp=Z,103nm,1.5s,mb5.4
MAT Matsushiro 48.36 50 P P 05 16 56.2 +1.3
MJAR Matsushiro Arr 48.37 50 P P 05 16 54.8 -0.2
MJAR 05 18 20.9
MJAR Matsushiro Arr 48.37 50 P P 05 16 54.8 -0.1
comp=Z,2.5nm,0.6s,mb4.2,baz=222,slow=6.4,SNR=7.2
MJAR PcP PcP 05 18 20.9 +0.3
comp=Z,5.2nm,0.4s,baz=245,slow=3.6,SNR=15
MJAR ScP ScP 05 22 06.2 -2.7
comp=Z,9.7nm,0.8s,baz=238,slow=3.2,SNR=16
MJAR LR LR 05 39 24.9
comp=Z,157nm,19.2s,baz=165,slow=38
NWAO Narrogin (SRO) 48.81 153 P P 05 16 56.8 -1.5
comp=Z,20nm,0.6s,mb5.3,baz=313,slow=7.2,SNR=19
NWAO LR LR 05 34 19.4
comp=Z,208nm,21.8s,baz=12,slow=32
AKTO Aktyubinsk 49.29 331 ScP ScP 05 22 11.8 -0.7
comp=Z,6.6nm,0.9s,baz=110,slow=4.5,SNR=8.2
BOD Bodaibo 50.04 14 *e*P P 05 17 06.8 -0.6
BOD *e* 05 24 06.0
BOD *e* 05 26 45.7
BOD pmax pmax
comp=Z,19nm,1.3s,mb4.9
KLR Kul'dur 50.36 32 *e*P P 05 17 08.2 -1.7
WRA Warramunga Arr 50.56 127 P P 05 17 10.4 -1.5
WRA 05 18 28.5
WRA Warramunga Arr 50.56 127 P P 05 17 10.4 -1.5
comp=Z,62nm,0.5s,mb5.9,baz=304,slow=8.6,SNR=549
WRA PcP PcP 05 18 28.5 -0.4
comp=Z,4.9nm,0.4s,baz=314,slow=3.2,SNR=6.8
WRA LR LR 05 38 26.0
comp=Z,129nm,21.1s,baz=265,slow=36
WB2 Warramunga Arr 50.58 127 *e*P P 05 17 09.9 -2.1
GUMO Guam 50.73 81 LR LR 05 36 33.2
comp=Z,160nm,18.6s,baz=318,slow=33
ASAR Alice Springs 52.31 131 P P 05 17 24.1 -0.9
comp=Z,187nm,0.8s,mb6.2,baz=304,slow=6.9,SNR=1221
SVE Sverdlovsk 52.74 338*c**e*P P **05 17 28.0 +0.5**
SVE *e*S S **05 24 59.8 +10**
SVE pmax pmax
comp=Z,86nm,0.7s,mb5.9
SVE pmax pmax
comp=N,54nm,0.7s
FORT Forrest 52.92 142 *e*P P 05 17 27.9 -1.3
comp=N,101nm,1.2s,mb5.7
ARU Arti 53.23 337 *e*P P 05 17 31.1 0.0
ARU *e*pP pP 05 17 49.8 -0.1
ARU Arti 53.23 337*d**i*P P **05 17 31.0 -0.1**
ARU *e* 05 19 28.9
ARU *e*PPP 05 20 33.4
ARU *e*S S **05 25 00.6 +4.1**
ARU *e*SS SS 05 28 35.8 -1.2
ARU pmax pmax
comp=Z,46nm,1.0s,mb5.5
ZEI Tsey 53.53 316 *e*P P 05 17 33.9 +0.3
ZEI *i* 05 17 42.7
ZEI *e* pP 05 17 50.2 -2.2
ZEI pmax pmax
comp=Z,26nm,0.9s,mb5.3
ASAJ Asahikawa 54.31 42 P P 05 17 39.7 +0.4
comp=Z,5.4nm,0.5s,mb4.8,baz=290,slow=13,SNR=5.8
KIV Kislovodsk 54.79 317 P P 05 17 43.9 +1.1
comp=Z,374nm,0.8s,mb6.5,SNR=7.1
KIV Kislovodsk 54.79 317 *e*P P 05 17 43.6 +0.8
KIV Kislovodsk 54.79 317 *e*P P 05 17 43.5 +0.7
KIV *e* 05 18 45.9
KIV *e*S S **05 25 17.2 -0.9**
KIV pmax pmax
comp=Z,43nm,0.7s,mb5.6
KIV pmax pmax
comp=Z,90nm,5.5s
YSS Yuzh-Sakhalins 55.55 39 *e*P P 05 17 48.4 +0.2
YSS Yuzh-Sakhalins 55.55 39 *e*P P 05 17 48.3 +0.1
YSS pmax pmax
comp=Z,12nm,1.2s,mb4.8
MALT Malatya 56.07 309 *e*P P 05 17 52.1 0.0
SOKR Solikamsk 56.14 339*d**i*P P **05 17 52.2 +0.1**
SOKR pmax pmax
comp=Z,60nm,0.9s,mb5.6
PMG Port Moresby 57.30 108 *e*P P 05 18 01.0 -0.1
comp=Z,31nm,0.8s,mb5.4
PMG Port Moresby 57.30 108 *e*P P 05 18 01.4 +0.3
PMG Port Moresby 57.30 108 P P 05 18 00.2 -0.9
comp=Z,32nm,0.8s,mb5.4,baz=267,slow=3.8,SNR=7.9
YAK Yakutsk 58.04 19 *e*P P 05 18 04.4 -1.1
YAK *e* 05 18 52.5
YAK *e*S S **05 25 58.5 -1.9**
YAK *e* 05 27 42.4
YAK pmax pmax
comp=Z,24nm,0.8s,mb5.3
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,11nm,1.2s
YAK smax
comp=N,154nm,2.2s
YAK smax
comp=E,118nm,1.3s
VRHR Novokhopersk 58.32 325 *e*P P 05 18 07.6 -0.1
VRHR pmax pmax
comp=E,30nm,0.6s
VRHR pmax pmax
comp=Z,50nm,0.6s,mb5.7
VRHR pmax pmax
comp=N,20nm,0.9s
ANN Anapa 58.62 317 *e*P P 05 18 10.6 +0.7
ANN pmax pmax
comp=Z,77nm,1.5s,mb5.5
VORD Divnogorie 59.61 324 *e*P P 05 18 15.7 -0.9
VORD pmax pmax
comp=Z,70nm,1.0s,mb5.7
VORD pmax pmax
comp=N,90nm,0.9s
VORD pmax pmax
comp=E,80nm,0.6s
VRSR Storozhevoye 59.77 324*d**i*P P **05 18 16.9 -0.8**
VRSR *e*S S **05 26 20.3 -2.9**
VRSR pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
VRSR pmax pmax
comp=N,4.0nm,0.9s
VRSR pmax pmax
comp=E,9.0nm,0.9s
VRSR smax
comp=N,8.0nm,0.9s
VRSR smax
comp=Z,1.0nm,1.0s
VRSR smax
comp=E,3.0nm,0.8s
BR131 Keskin Array S 60.03 310 *e*P P 05 18 19.2 -0.5
BRTR Keskin Array B 60.03 310 P P 05 18 18.8 -0.9
comp=E,7.4nm,0.7s,mb4.8,baz=115,slow=7.6,SNR=48
BRTR ScP ScP 05 22 58.4 -1.4
comp=E,1.4nm,0.9s,baz=97,slow=6.3,SNR=4.3
BRTR LR LR 05 49 11.3
comp=E,55nm,18.8s,baz=140,slow=41
CTA Charters Tower 60.45 120 *e*P P 05 18 23.1 +0.2
comp=E,18nm,0.8s,mb5.2
CTA Charters Tower 60.45 120 *e*P PcP 05 19 07.2 +0.1
comp=E,14nm,0.6s
CTA Charters Tower 60.45 120 *e*P P 05 18 23.1 +0.2
CTA pmax pmax
comp=Z,18nm,0.8s
CTA Charters Tower 60.45 120 P P 05 18 23.0 +0.2
comp=Z,20nm,0.8s,mb5.2,baz=298,slow=9.4,SNR=9.8
CTA PcP PcP 05 19 07.4 +0.3
comp=Z,19nm,0.6s,baz=301,slow=5.0,SNR=10
CTAO Charters Tower 60.45 120 *e*P P 05 18 22.9 0.0
comp=Z,38nm,1.0s,mb5.4
CTAO Charters Tower 60.45 120 *e*P P 05 18 22.9 0.0
CTAO pmax pmax
comp=Z,38nm,1.0s,mb5.4
SIM Simferopol' 60.92 316⇑*e*P P 05 18 25.7 0.0
SIM *e* 05 18 36.0
SIM pmax pmax
comp=Z,20nm,0.7s,mb5.3
MOS Moscow 62.44 328 *e*P P 05 18 34.2 -1.5
MOS *e* 05 19 18.0
MOS *e* 05 20 49.8
MOS *e*S S **05 26 53.3 -3.6**
MOS pmax pmax
comp=Z,61nm,0.9s,mb5.6
STKA Stephens Creek 62.57 134⇑*i*P P 05 18 36.7 -0.2
comp=Z,48nm,0.4s,mb5.8
STKA Stephens Creek 62.57 134 P P 05 18 36.8 -0.2
comp=Z,82nm,0.6s,mb5.9,baz=312,slow=6.2,SNR=88
STKA LR LR 05 46 29.9
comp=Z,169nm,20.3s,baz=111,slow=37
OBN Obninsk 62.74 327 *i*P P 05 18 37.7 0.0
OBN Obninsk 62.74 327 *i*P P 05 18 37.6 -0.1
OBN *i* 05 19 11.9
OBN *e* 05 21 00.2
OBN *e*S S 05 27 25.9 +25
OBN pmax pmax
comp=Z,128nm,1.9s,mb5.5
OBN MLR MLR
comp=Z,100nm,17.0s
TIRR Tirgusor 64.78 314 ⇓P P 05 18 50.7 -0.6
TIRR Tirgusor 64.78 314 ⇓*i*P P 05 18 50.7 -0.6
TIXI Tiksi 65.06 12 *e*P P 05 18 51.9 -0.8
comp=Z,34nm,0.6s,mb5.3
TIXI Tiksi 65.06 12*d**i*P P **05 18 51.8 -0.8**
TIXI *e*S S 05 27 24.7 -4.3
TIXI pmax pmax
comp=Z,41nm,0.9s,mb5.3
CFR Carcaliu 65.10 315 P P 05 18 50.6 -2.8
MA2 Magadan 65.11 28 *e*P P 05 18 53.4 +0.2
MA2 Magadan 65.11 28 *e*P P 05 18 53.2 0.0
MA2 *e*S S 05 27 28.3 -1.7
MA2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
MA2 MLR MLR
comp=Z,100nm,15.9s
HARR Harsova 65.16 315 P P 05 18 58.7 +4.9
AKASG Malin Array Be 65.58 321 P P 05 18 55.1 -1.2
comp=Z,97nm,0.6s,mb4.8,baz=89,slow=5.9,SNR=20
AKBB Malin Array Si 65.58 321 *e*P P 05 18 55.0 -1.4
KIEV Kiev 65.58 321 *e*P P 05 18 55.0 -1.4
comp=Z,10nm,0.7s,mb4.8
KIEV Kiev 65.58 321 *e*P P 05 18 55.0 -1.4
KIEV pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
TMCR Tamitsa 65.96 337 *e*P P 05 18 55.8 -2.8
VRI Vrincioaia 66.20 316 P P 05 19 00.7 +0.2
VRI Vrincioaia 66.20 316 ⇓*i*P P 05 19 01.1 +0.6
PLOR Plostina 66.25 316⇑*i*P P 05 19 01.5 +0.7
MLR Muntele Rosu 66.68 315 P P 05 19 04.3 +0.8
MLR Muntele Rosu 66.68 315 ⇓P P 05 19 04.4 +0.9
MLR Muntele Rosu 66.68 315 ⇓*i*P P 05 19 04.3 +0.8
EIDS Eidsvold 66.71 123 *e*P P 05 19 03.8 -0.2
comp=Z,20nm,1.2s,mb4.8
VOIR 67.29 315 P P 05 19 07.1 -0.4
VOIR 67.29 315 ⇓*i*P P 05 19 07.1 -0.3
BURAR Bucovina Array 67.52 317 ⇓P P 05 19 09.2 +0.4
BURAR Bucovina Array 67.52 317 ⇓*i*P P 05 19 09.2 +0.4
JOF Joensuu 68.19 334 *e*p P 05 19 11.6 -1.1
comp=Z,9.5nm,0.6s,mb4.8
VTS Vitosha 68.25 312 ⇓P P 05 19 13.2 -0.3
VTS Vitosha 68.25 312 ⇓*i*P P 05 19 13.2 -0.3
TOO Toolangi 68.38 137⇑*i*P P 05 19 15.1 +0.8
comp=Z,47nm,0.6s,mb5.5
TOO Toolangi 68.38 137⇑*i*P P 05 19 15.1 +0.8
TOO pmax pmax
comp=Z,47nm,0.6s,mb5.5
VAY Valandovo 68.60 310 *i*P P 05 19 13.9 -1.8
GZR Gura Zlata 68.87 315 ⇓P P 05 19 17.3 0.0
GZR Gura Zlata 68.87 315 ⇓*i*P P 05 19 17.3 0.0
STIP Stip 68.92 311 *i*P P 05 19 16.3 -1.4
DRGR 69.09 316 P P 05 19 19.2 +0.6
DRGR 69.09 316⇑*i*P P 05 19 19.2 +0.6
LSZ Lusaka 69.10 249 *e*P P 05 19 20.5 +1.3
comp=Z,7.0nm,0.7s,mb4.6
LSZ Lusaka 69.10 249 *e*P P 05 19 20.5 +1.3
LSZ pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
ARMA Armidale 69.30 128 *e*P P 05 19 21.2 +1.0
HNR Honiara 69.39 104 P P 05 19 20.9 -0.2
HNR Honiara 69.39 104 P P 05 19 20.9 -0.2
comp=Z,134nm,0.8s,mb5.8,baz=263,slow=2.0,SNR=5.7
KWP Kalwaria 69.48 319 *e*P P 05 19 21.4 +0.4
KRUS Krusevo 69.60 310 *i*P P 05 19 20.9 -1.0
KOLS Kolonicke sedl 69.66 318 *e*P P 05 19 22.3 +0.2
BZS Buzias 69.71 315 P P 05 19 22.5 0.0
BZS Buzias 69.71 315⇑*i*P P 05 19 22.3 -0.2
CNB Canberra Magne 69.89 134 *e*P P 05 19 23.3 -0.4
comp=Z,49nm,0.9s,mb5.3
SUW Suwalki 69.90 324 *e*P P 05 19 23.1 -0.4
FINES FINESS Array B 70.05 332 P P 05 19 23.7 -0.6
FINES LR LR 05 52 50.1
FINES FINESS Array B 70.05 332 P P 05 19 23.7 -0.6
comp=Z,3.0nm,0.5s,mb4.4,baz=94,slow=5.9,SNR=31
FINES LR LR 05 52 50.1
comp=Z,112nm,20.5s,baz=144,slow=38
KAF Kangasniemi 70.13 333 *ep* P 05 19 24.0 -0.7
comp=Z,3.5nm,0.4s,mb4.5,baz=104,slow=5.8
KAF Kangasniemi 70.13 333 *e*P P 05 19 24.0 -0.7
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.6
CRVS Cervenica-Dubn 70.19 318 *e*P P 05 19 25.2 -0.2
STHS Stebnicka Huta 70.39 319 *i*P P 05 19 26.9 +0.3
comp=Z,7.1nm,0.8s,mb4.5
STHS Stebnicka Huta 70.39 319 *i*P P 05 19 26.9 +0.3
STHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
KECS Kecovo 70.78 318 *e*P P 05 19 29.1 +0.1
comp=Z,8.5nm,0.7s,mb4.7
KECS Kecovo 70.78 318 *e*P P 05 19 29.1 +0.1
KECS pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
NIE Niedzica 71.00 319 *e*P P 05 19 31.0 +0.7
PSZ Piszkesteto 71.12 317 *e*P P 05 19 31.0 0.0
comp=Z,9.4nm,0.6s,mb4.8
PSZ Piszkesteto 71.12 317 *e*P P 05 19 31.0 0.0
PSZ pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
PSZ Piszkesteto 71.12 317⇓*i*P P 05 19 31.0 0.0
OJC Ojcow 71.42 320 *e*P P 05 19 32.7 -0.1
PKSM Moragy 71.83 315 ⇓P P 05 19 34.9 -0.5
PKSM Moragy 71.83 315 ⇓*i*P P 05 19 34.9 -0.5
VYHS Vyhne 71.88 318 *e*P P 05 19 35.3 -0.3
comp=Z,5.1nm,0.7s,mb4.5
VYHS Vyhne 71.88 318 *e*P P 05 19 35.3 -0.3
VYHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
VYHS Vyhne 71.88 318 *e*P P 05 19 35.2 -0.4
KOLL Kolacno 72.17 318 *e*P P 05 19 37.0 -0.3
KEV Kevo 72.18 340 *ep* P 05 19 35.8 -1.2
comp=Z,11nm,0.9s,mb4.7
KEV Kevo 72.18 340 *e*P P 05 19 35.8 -1.2
KEV pmax pmax
comp=Z,11nm,0.9s,mb4.7
OKC Ostrava-Krasne 72.44 319 *e*P P 05 19 39.1 +0.2
OKC *ex* x 05 19 46.9
ARCES ARCESS Array B 72.61 340 P P 05 19 39.5 0.0
comp=Z,3.0nm,0.6s,mb4.3,baz=94,slow=5.4,SNR=23
ARCES LR LR 05 53 45.8
comp=Z,351nm,21.3s,baz=12,slow=38
MORC Moravsky Berou 72.83 319 *e*P P 05 19 41.3 +0.1
comp=Z,2.2nm,1.1s,mb4.9
MORC Moravsky Berou 72.83 319 ⇓*i*P P 05 19 41.6 +0.4
TIP Timpagrande 72.94 308 *e*P P 05 19 41.9 -0.3
ZST Bratislava 73.01 317 *e*P P 05 19 42.3 0.0
comp=Z,21nm,0.8s,mb5.0
ZST Bratislava 73.01 317 *e*P P 05 19 42.3 0.0
ZST pmax pmax
comp=Z,21nm,0.8s,mb5.0
DPC Dobruska-Polom 73.65 319 *e*P P 05 19 46.5 +0.4
DPC *ex* x 05 19 55.2
KSP Ksiaz 73.70 320 *e*P P 05 19 46.8 +0.5
CONA Conrad Observa 73.83 317 ⇓*i*P P 05 19 47.2 0.0
comp=Z,7.9nm,0.9s,mb4.5
UPC Upice 73.86 320 *e*P P 05 19 47.9 +0.6
UPC *ex* x 05 19 54.9
ARSA Arzberg 74.03 316 ⇓*i*P P 05 19 48.3 0.0
comp=Z,10nm,0.7s,mb4.7
BOJS Bojanci 74.16 314 *i*P P 05 19 48.9 -0.3
BILL Bilíbino 74.22 22 *e*P pP 05 20 03.8 -5.0
BILL *i* 05 20 12.3
BILL pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
BILL MLR MLR
comp=Z,100nm,17.0s
VISS Visnje 74.46 315 *i*P P 05 19 50.6 -0.3
LBTB Lobatse 74.49 240 *e*P P 05 19 53.0 +1.6
comp=Z,19nm,0.6s,mb5.0
LBTB Lobatse 74.49 240 *e*P P 05 19 53.0 +1.6
LBTB pmax pmax
comp=Z,19nm,0.6s,mb5.0
OBKA Obir 74.68 315⇓*e*P P 05 19 52.3 +0.2
comp=Z,8.3nm,0.6s,mb4.6
LJU Ljubljana 74.68 315 *e*P P 05 19 52.4 +0.2
PRU Pruhonice 74.78 319 *e*P P 05 19 53.0 +0.4
PRU *e*PCP PcP 05 20 03.4 -3.0
MOA Molln 74.90 317⇑*i*P P 05 19 53.3 0.0
comp=Z,12nm,1.1s,mb4.5
JAVS Javornik 75.00 315 *e*P P 05 19 53.8 -0.2
VOY Vojsko 75.12 315 *e*P P 05 19 54.4 -0.3
VOY *e* 05 20 29.3
BRG Berggiesshubel 75.19 320 *e*P P 05 19 55.1 +0.1
comp=Z,10nm,0.9s,mb4.5
BRG *e* pP 05 20 16.6 +1.9
comp=Z,18nm,1.6s
GEC2 GERESS Array S 75.29 318 *e*P P 05 19 55.8 +0.2
GEC2 pmax pmax
comp=Z,20nm,1.0s,mb4.8
GEC2 GERESS Array S 75.29 318 *e*P P 05 19 55.8 +0.2
comp=Z,20nm,1.0s,mb4.8
GERES GERESS Array B 75.29 318 P P 05 19 55.8 +0.2
comp=Z,14nm,0.8s,mb4.7,baz=93,slow=5.3,SNR=46
KHC Kasperske Hory 75.38 318 *i*P P 05 19 56.4 +0.3
KHC Kasperske Hory 75.38 318 *e*P P 05 19 56.0 -0.1
KHC *ex* x 05 20 04.0
KBA Koelnbreinsper 75.51 316 ⇓*i*P P 05 19 56.5 -0.4
comp=Z,14nm,1.4s,mb4.5
KBA Koelnbreinsper 75.51 316 ⇓*i*P P 05 19 56.5 -0.4
KBA pmax pmax
comp=Z,14nm,1.4s,mb4.5
CLL Collm 75.79 320 *e*P P 05 19 58.0 -0.4
CLL *e*pP pP 05 20 08.0 -10
CLL Collm 75.79 320 *e*P P 05 19 58.0 -0.4
CLL *e*PcP PcP 05 20 11.0 +0.3
CLL *i* pP pP 05 20 20.2 +2.0
WET Wettzell 75.84 318 *e*P P 05 19 58.7 0.0
WET pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
WET Wettzell 75.84 318 *e*P P 05 19 58.7 0.0
comp=Z,8.0nm,0.6s,mb4.6
BOSA Boshof 75.99 237 *e*P P 05 20 00.9 +1.0
comp=Z,15nm,0.8s,mb4.8
BOSA Boshof 75.99 237 *e*P P 05 20 01.0 +1.1
BOSA pmax pmax
comp=Z,15nm,0.8s,mb4.8
BOSA Boshof 75.99 237 P P 05 20 01.3 +1.4
comp=Z,15nm,0.6s,mb4.9,baz=79,slow=5.0,SNR=47
BOSA LR LR 05 54 21.0
comp=Z,104nm,18.4s,baz=116,slow=36
WTTA Wattenberg 76.67 316 ⇓*i*P P 05 20 03.0 -0.5
comp=Z,16nm,0.6s,mb4.9,SNR=8.8
WTTA Wattenberg 76.67 316 ⇓*i*P P 05 20 03.0 -0.5
WTTA pmax pmax
comp=Z,16nm,0.6s,mb4.9
WATA Walderalm 76.72 316⇑*i*P P 05 20 03.1 -0.6
comp=Z,7.6nm,0.5s,mb4.7
WATA Walderalm 76.72 316⇑*i*P P 05 20 03.1 -0.6
WATA pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
GRA1 Grafenberg Arr 76.92 319 *e*P P 05 20 05.1 +0.3
comp=Z,23nm,1.2s,mb4.8
GRF Grafenberg Arr 76.92 319 *e*P P 05 20 05.1 +0.3
GRF pmax pmax
comp=Z,23nm,1.2s,mb4.8
GRF Grafenberg Arr 76.92 319 *e*P P 05 20 05.1 +0.3
GRF pmax pmax
comp=Z,23nm,1.2s,mb4.8
GRF Grafenberg Arr 76.92 319 *e*P P 05 20 05.1 +0.3
comp=Z,23nm,1.2s,mb4.8
SQTA Sankt Quirin 76.97 316 ⇓*i*P P 05 20 04.2 -1.0
comp=Z,13nm,0.6s,mb4.9
SQTA Sankt Quirin 76.97 316 ⇓*i*P P 05 20 04.2 -1.0
SQTA pmax pmax
comp=Z,13nm,0.6s,mb4.8
MOTA Moosalm 77.04 316⇑*i*P P 05 20 05.0 -0.5
comp=Z,11nm,0.7s,mb4.7
MOTA Moosalm 77.04 316⇑*i*P P 05 20 05.0 -0.5
MOTA pmax pmax
comp=Z,11nm,0.7s,mb4.7
NB2 NORSAR Subarra 77.08 330 P P 05 20 04.2 -1.3
comp=Z,5.4nm,0.7s,mb4.4,baz=91,slow=5.9
NB2 NORSAR Subarra 77.08 330 P P 05 20 04.2 -1.3
NB2 pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
NOA NORSAR Array B 77.08 330 P P 05 20 04.4 -1.1
NOA 05 22 59.1
NOA NORSAR Array B 77.08 330 P P 05 20 04.4 -1.1
comp=Z,2.4nm,0.7s,mb4.0,baz=92,slow=5.8,SNR=8.6
NOA PP PP 05 22 59.1 -0.5
comp=Z,1.3nm,0.8s,baz=88,slow=8.8,SNR=3.6
NOA LR LR 06 00 29.9
comp=Z,93nm,19.1s,baz=115,slow=41
NAO01 NORSAR Array S 77.23 330 *e*P P 05 20 05.5 -0.9
comp=Z,10nm,0.9s,mb4.6
SPB4 Spitsbergen Ar 77.23 348 *e*P P 05 20 06.3 +0.2

RETA Reutte 77.27 316 ⇓ *i* P P 05 20 06.4 -0.4
comp=Z,14nm,0.6s,mb4.9
FETA Feichten 77.30 316 *i* P P 05 20 06.7 -0.3
comp=Z,15nm,1.1s,mb4.6,SNR=10
DAVA Damuels 77.87 316 *i* P P 05 20 10.3 +0.2
comp=Z,20nm,0.7s,mb5.0,SNR=7.2
KEST Kesra 78.97 305 P P 05 20 16.8 +0.3
comp=Z,3.6nm,0.6s,mb4.4,baz=292,slow=1.1,SNR=23
CDF Champ du Feu 79.56 317 *e*P P 05 20 18.6 -0.9
SBF Sospel 79.78 313 *e*P P 05 20 20.1 -0.6
HINF Hinteralfeld 79.89 317 *e*P P 05 20 20.9 -0.3
TSUM Tsumeb 79.91 248 *e*P P 05 20 23.1 +1.2
comp=Z,3.7nm,0.8s,mb4.3
LPG La Plagne 80.14 315 *e*P P 05 20 22.6 0.0
comp=Z,71nm,0.9s,mb5.2
LPG La Plagne 80.14 315 *e*P P 05 20 22.6 0.0
comp=Z,36nm,0.9s,mb5.2
LPG La Plagne 80.14 315 *e*P P 05 20 22.6 0.0
LPG pmax pmax
comp=Z,36nm,0.9s,mb5.2
LPL La Plagne 80.15 315 *e*P P 05 20 22.5 -0.2
comp=Z,53nm,0.7s,mb5.2
LPL La Plagne 80.15 315 *e*P P 05 20 22.5 -0.2
comp=Z,26nm,0.7s,mb5.2
LPL La Plagne 80.15 315 *e*P P 05 20 22.5 -0.2
LPL pmax pmax
comp=Z,26nm,0.7s,mb5.2
MBDF Montbardon 80.19 314 *e*P P 05 20 21.9 -1.0
HAU Haudompre 80.21 317 *e*P P 05 20 22.0 -1.0
BNI Bardonecchia 80.22 314 *e*P P 05 20 26.0 +2.9
FRF La Foret Royal 80.38 313 *e*P P 05 20 23.4 -0.6
comp=Z,21nm,0.8s,mb4.7
FRF La Foret Royal 80.38 313 *e*P P 05 20 23.4 -0.6
comp=Z,11nm,0.8s,mb4.7
FRF La Foret Royal 80.38 313 *e*P P 05 20 23.4 -0.6
FRF pmax pmax
comp=Z,11nm,0.8s,mb4.7
LMR La Mourre 80.50 312 *e*P P 05 20 24.0 -0.6
comp=Z,12nm,0.7s,mb4.5
LMR La Mourre 80.50 312 *e*P P 05 20 24.0 -0.6
comp=Z,5.8nm,0.7s,mb4.5
LMR La Mourre 80.50 312 *e*P P 05 20 24.0 -0.6
LMR pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
CABF La Chapelle 80.50 316 *e*P P 05 20 23.4 -1.2
comp=Z,73nm,1.2s,mb5.1
CABF La Chapelle 80.50 316 *e*P P 05 20 23.4 -1.2
comp=Z,36nm,1.3s,mb5.0
CABF La Chapelle 80.50 316 *e*P P 05 20 23.4 -1.2
CABF pmax pmax
comp=Z,36nm,1.3s,mb5.0
MAW Mawson 80.71 191 P P 05 20 26.4 +1.3
comp=Z,23nm,0.9s,mb5.0,baz=16,slow=5.3,SNR=11
MAW LR LR 05 51 00.7
comp=Z,290nm,18.0s,baz=251,slow=32
ORIF Oris-en-Rattie 80.80 314 *e*P P 05 20 25.3 -0.9
comp=Z,36nm,1.0s,mb4.8
ORIF Oris-en-Rattie 80.80 314 *e*P P 05 20 25.3 -0.9
comp=Z,18nm,1.0s,mb4.8
ORIF Oris-en-Rattie 80.80 314 *e*P P 05 20 25.3 -0.9
ORIF pmax pmax
comp=Z,18nm,1.0s,mb4.9
SUR Sutherland 80.85 235 P P 05 20 29.6 +3.0
comp=Z,214nm,0.7s,mb6.1,SNR=12
SUR Sutherland 80.85 235 *e*P P 05 20 28.5 +1.8
comp=Z,27nm,0.8s,mb5.1
SMRF Simiane la Rot 81.11 313 *e*P P 05 20 27.8 -0.1
BAIF Baives 81.43 319 *e*P P 05 20 28.9 -0.5
VIVF Saint-Julien-l 81.66 314 *e*P P 05 20 30.2 -0.6
comp=Z,33nm,1.0s,mb4.8
VIVF Saint-Julien-l 81.66 314 *e*P P 05 20 30.2 -0.6
comp=Z,17nm,1.0s,mb4.8
VIVF Saint-Julien-l 81.66 314 *e*P P 05 20 30.2 -0.6
VIVF pmax pmax
comp=Z,17nm,1.0s,mb4.8
LOR Lormes 81.96 317 *e*P P 05 20 31.5 -0.8
comp=Z,34nm,1.0s,mb4.8
LOR Lormes 81.96 317 *e*P P 05 20 31.5 -0.8
comp=Z,17nm,1.0s,mb4.8
LOR Lormes 81.96 317 *e*P P 05 20 31.5 -0.8
LOR pmax pmax
comp=Z,17nm,1.0s,mb4.8
SMF Signal de Mont 82.04 316 *e*P P 05 20 31.8 -0.9
SSF Saint Saulge 82.22 316 *e*P P 05 20 33.3 -0.4
comp=Z,52nm,1.4s,mb4.9
SSF Saint Saulge 82.22 316 *e*P P 05 20 33.3 -0.4
comp=Z,26nm,1.4s,mb4.9
SSF Saint Saulge 82.22 316 *e*P P 05 20 33.3 -0.4
SSF pmax pmax
comp=Z,26nm,1.4s,mb4.9
LASF Ste Croix 82.33 313 *e*P P 05 20 33.9 -0.4
BGF Bois d'Agland 82.73 316 *e*P P 05 20 35.9 -0.4
GAMB Gambell 83.13 26 *e*P P 05 20 38.0 0.0
MTLF Montolieu 83.61 313 *e*P P 05 20 40.5 -0.4
TNA Tin City 84.39 24 *e*P P 05 20 44.8 +0.3
comp=Z,3.6nm,0.9s,mb4.2
LDF La Druitiere 84.43 318 *e*P P 05 20 44.1 -0.9
ETSF Etsaut 85.68 313 *e*P P 05 20 52.2 +0.8
comp=Z,21nm,0.9s,mb4.8
ETSF Etsaut 85.68 313 *e*P P 05 20 52.2 +0.8
comp=Z,11nm,0.9s,mb4.8
ETSF Etsaut 85.68 313 *e*P P 05 20 52.2 +0.8
ETSF pmax pmax
comp=Z,11nm,0.9s,mb4.8
SYO Syowa Base 87.42 197 ⇑ *e*P P 05 21 00.8 +1.6
ESDC Sonseca Array 88.82 310 P P 05 21 06.9 +0.3
comp=Z,1.0nm,0.6s,mb4.1,baz=63,slow=4.2,SNR=7.5
TOA0 Torodi Ar. Sit 88.99 283 *e*P P 05 21 08.1 +0.2
TORD Torodi Ar. Bea 88.99 283 P P 05 21 08.4 +0.5
comp=Z,2.5nm,0.7s,mb4.4,baz=86,slow=4.8,SNR=36
TORD PKKPbc PKKPbc 05 38 46.2 +0.5
comp=Z,1.0nm,0.6s,baz=302,slow=3.0,SNR=17
TORD LR LR 05 57 23.6
comp=Z,74nm,20.4s,baz=280,slow=33
IMA2 Indian Mountai 89.77 22 *e*P P 05 21 10.4 0.0
MVO Moncorvo 90.76 312 *e*pP pP 05 21 39.5 +3.6
PBAR Barrancos 91.50 309 *e*pP pP 05 21 43.7 +4.3
PBEJ Beja 92.17 309 *e*pP pP 05 21 46.6 +4.1
PVAQ Vaqueiros 92.22 308 *e*pP pP 05 21 47.4 +4.7
MCK McKinley 92.64 23 *e*P P 05 21 23.5 -0.3
comp=Z,2.8nm,0.8s,mb4.6
MCK McKinley 92.64 23 *e*P P 05 21 23.5 -0.3
MCK pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
PMR Palmer 93.62 25 *e*P P 05 21 27.7 -0.7
comp=Z,4.4nm,0.8s,mb4.8
PMR Palmer 93.62 25 *e*P P 05 21 27.7 -0.7
PMR pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
SLKM Skilak Lake 93.68 26 *e*P P 05 21 28.4 -0.3
KDAK Kodiak Island 93.85 29 P P 05 21 29.9 +0.4
comp=Z,38nm,1.4s,mb5.5,baz=168,slow=11,SNR=5.2
INK Inuvik 94.94 16 *e*P P 05 21 34.1 -0.2
comp=Z,288nm,0.7s
INK Inuvik 94.94 16 P P 05 21 34.2 -0.1
comp=Z,6.6nm,0.5s,mb5.3,baz=340,slow=4.7,SNR=83
INK PKKPbc PKKPbc 05 38 28.4 -3.8
comp=Z,1.3nm,0.7s,baz=169,slow=3.1,SNR=8.5
RES Resolute Bay 95.01 2 *e*P P 05 21 34.5 0.0
comp=Z,435nm,0.9s
VNDA Vanda 95.53 168 *e*P P 05 21 36.9 +0.2
VNDA Vanda 95.53 168 P P 05 21 36.9 +0.1
comp=Z,3.3nm,0.9s,mb4.8,baz=294,slow=4.1,SNR=9.5
YKA Yellowknife Ar 104.30 13 Pdif Pdif 05 22 16.1 -0.4
YKA PP PP 05 26 31.1 -3.5
YKA PKKPbc PKKPbc 05 38 02.2 -3.5
YKA Yellowknife Ar 104.30 13 P Pdif 05 22 16.1 -0.3
YKA 05 26 31.1
YKA Yellowknife Ar 104.30 13 Pdiff Pdif 05 22 16.1 -0.3
comp=Z,0.6nm,0.9s,baz=328,slow=4.4,SNR=11
YKA PP PP 05 26 31.0 -3.5
comp=Z,1.8nm,0.8s,baz=334,slow=7.7,SNR=14
YKA PKKPbc PKKPbc 05 38 02.2 -3.5
comp=Z,0.8nm,0.7s,baz=151,slow=2.6,SNR=16
SCHQ Schefferville 112.91 348 PKKPbc PKKPbc 05 37 34.9 -3.3
comp=Z,2.2nm,0.7s,baz=211,slow=5.0,SNR=5.6
A04A Legoe Bay, Lum 113.29 25 ⇓ P PKiKP 05 26 49.1 -0.6
baz=113
B05A Bryant 113.90 25 ⇓ P PKiKP 05 26 50.9 -0.1
baz=114
C05A Tolt Reservoir 114.52 25 ⇓ P PKiKP 05 26 51.8 -0.4
baz=114
C07A Waterville 115.19 24 ⇓ P PKiKP 05 26 53.2 -0.2
baz=115
D06A Cle Elum 115.26 25 ⇑ P PKiKP 05 26 53.4 -0.3
baz=115
B09A Rice 115.33 22 ⇓ P PKiKP 05 26 53.9 +0.2
baz=115
A11A Hall Mountain, 115.53 21 ⇑ P PKiKP 05 26 54.6 +0.6
baz=115
A12A Yaak River Ran 115.80 21 ⇑ P PKiKP 05 26 55.0 +0.4
baz=116
E07A Sunnyside 116.18 25 ⇓ P PKiKP 05 26 55.0 -0.4
baz=116
A13A Flathead Natio 116.22 20 ⇑ P PKiKP 05 26 55.8 +0.4
baz=116
H04A Detroit Lake 116.65 27 ⇓ P PKPdf 05 26 56.2 -0.2
baz=116
B13A Whitefish 116.69 20 ⇓ P PKPdf 05 26 56.2 -0.2
baz=116
I04A Tendick Farm, 117.23 28 ⇓ P PKPdf 05 26 57.4 -0.1
baz=117
F08A Pendleton 117.24 25 ⇑ P PKPdf 05 26 56.7 -0.8
baz=117
C13A Hot Springs 117.25 21 ⇓ P PKPdf 05 26 57.6 +0.2
baz=117
H06A Lindquist Farm 117.43 26 ⇓ P PKPdf 05 26 57.8 -0.1
baz=117
C14A Swan Lake 117.45 20 ⇑ P PKPdf 05 26 57.4 -0.5
baz=117
I05A Bend 117.47 27 ⇓ P PKPdf 05 26 57.7 -0.2
baz=117
D12A Red Ives Fores 117.51 22 ⇓ P PKPdf 05 26 58.1 +0.2
baz=117
G08A Pilot Rock 117.57 25 ⇑ P PKPdf 05 26 58.4 +0.3
baz=117
F09A S2 Ranch, Elgi 117.66 24 ⇓ P PKPdf 05 26 58.1 -0.2
baz=117
F10A Beach Ranch, E 117.71 23 P PKPdf 05 26 59.0 +0.6
baz=118,SNR=5.5
E11A Bogner Ranch, 117.78 22 P PKPdf 05 26 58.1 -0.4
baz=118,SNR=5.1
D13A Huson 117.79 21 ⇑ P PKPdf 05 26 57.6 -0.9
baz=118
I06A Prineville 118.11 27 ⇓ P PKPdf 05 26 58.5 -0.7
baz=118
D14A Greenough 118.13 20 ⇑ P PKPdf 05 26 58.8 -0.4
baz=118
J05A Fort Rock 118.17 28 ⇑ P PKPdf 05 27 00.2 +0.9
baz=118
F11A Grangeville 118.19 23 P PKPdf 05 26 58.8 -0.5
baz=118,SNR=5.3
MSO Missoula 118.20 21 *e*PKPdf PKPdf 05 26 58.8 -0.5
I07A Izee 118.31 26 ⇓ P PKPdf 05 26 59.7 +0.1
baz=118
CHMT Chamberlain Mo 118.36 20 *e*PKPdf PKPdf 05 26 59.4 -0.2
E13A Victor 118.45 21 ⇓ P PKPdf 05 26 59.0 -0.8
baz=118
EGMT Eagleton 118.48 17 *e*PKPdf PKPdf 05 26 59.4 -0.4
EGMT Eagleton 118.48 17 ⇓ P PKPdf 05 26 59.7 -0.1
baz=118
D15A Lincoln 118.50 20 ⇑ P PKPdf 05 26 60.0 +0.1
baz=118
J06A Christmas Vall 118.68 27 ⇑ P PKPdf 05 27 00.5 +0.2
baz=118
E14A Clinton 118.71 21 ⇑ P PKPdf 05 27 00.4 +0.1
baz=118
L04A Klamath Falls 118.72 29 ⇓ P PKPdf 05 26 59.8 -0.6
baz=118
K05A Summer Lake 118.76 28 ⇑ P PKPdf 05 27 00.2 -0.3
baz=118
I08A Drewsey 118.85 26 ⇓ P PKPdf 05 27 00.2 -0.4
baz=119
F13A Darby 118.96 22 ⇓ P PKPdf 05 27 00.6 -0.2
baz=119
J07A Hines 118.96 26 ⇑ P PKPdf 05 27 02.3 +1.5
baz=119
K06A Valley Falls 119.00 28 ⇑ P PKPdf 05 27 01.8 +0.8
baz=119
E15A Deer Lodge 119.00 20 ⇑ P PKPdf 05 27 00.6 -0.2
baz=119
M04C Macdoel 119.04 29 ⇑ P PKPdf 05 27 00.5 -0.6
baz=119
H10A Noah's Angus R 119.05 24 ⇑ P PKPdf 05 27 00.5 -0.5
baz=119
I09A Lost Marbles R 119.15 25 ⇓ P PKPdf 05 27 00.8 -0.4
baz=119
ULM Lac du Bonnet 119.18 7 *e*PKPdf PKPdf 05 27 00.3 -0.8
ULM Lac du Bonnet 119.18 7 PKP PKPdf 05 27 00.3 -0.7
comp=Z,1.8nm,0.7s,baz=7.6,slow=2.4,SNR=5.8
ULM PKKPbc PKKPbc 05 37 12.9 -3.4
comp=Z,3.6nm,0.8s,baz=179,slow=1.9,SNR=7.1
H11A Donnelly 119.24 23 P PKPdf 05 27 01.8 +0.4
baz=119,SNR=8.0
F14A Wisdom 119.28 21 ⇓ P PKPdf 05 27 01.7 +0.3
baz=119
M03C McCloud 119.29 30 ⇓ P PKPdf 05 27 01.4 -0.2
baz=119
J08A Circle Bar Ran 119.34 26 ⇑ P PKPdf 05 27 01.8 +0.2
baz=119
I10A Payette 119.44 24 ⇑ P PKPdf 05 27 01.5 -0.3
baz=119
K07A Rock Creek Ran 119.53 27 ⇓ P PKPdf 05 27 02.5 +0.5
baz=119
F15A Butte 119.56 20 ⇑ P PKPdf 05 27 01.8 -0.2
baz=119
G13A Cobalt 119.59 22 ⇑ P PKPdf 05 27 01.6 -0.4
baz=119
WDC Whiskeytown Da 119.61 31 ⇑ P PKPdf 05 27 01.4 -0.8
baz=119
J09A Fry Pan Ranch, 119.65 25 ⇑ P PKPdf 05 27 02.1 -0.1
baz=119
MOD Modoc 119.67 28 ⇑ P PKPdf 05 27 02.4 +0.1
baz=119
M05C Lookout 119.70 29 ⇓ P PKPdf 05 27 01.7 -0.6
baz=120
G14A Jackson 119.74 21 ⇑ P PKPdf 05 27 03.1 +0.8
baz=120
O02C Red Bluff 119.78 31 ⇑ P PKPdf 05 27 03.1 +0.6
baz=120
H12A Diamond D Ranc 119.82 23 P PKPdf 05 27 02.8 +0.3
baz=120,SNR=5.2
K08A Mann Creek Ran 119.84 26 ⇑ P PKPdf 05 27 02.9 +0.3
baz=120
I11A Placerville 119.92 24 ⇑ P PKPdf 05 27 02.8 +0.1
baz=120
HATC Hat Creek Radi 119.96 30 ⇑ P PKPdf 05 27 03.0 +0.1
baz=120
WVOR Wild Horse Val 120.01 27 *e*PKPdf PKPdf 05 27 03.6 +0.7
BOZ Bozeman (W) 120.02 20 *e*PKPdf PKPdf 05 27 03.0 +0.1
BOZ Bozeman (W) 120.02 20 ⇑ P PKPdf 05 27 03.3 +0.5
baz=120
L07A Adell 120.03 27 ⇓ P PKPdf 05 27 03.6 +0.6
baz=120
H13A Challis 120.03 22 ⇑ P PKPdf 05 27 03.0 +0.1
baz=120
G15A Dillon 120.15 21 ⇓ P PKPdf 05 27 04.3 +1.3
baz=120
K09A Rome 120.19 26 ⇓ P PKPdf 05 27 03.4 +0.2
baz=120
L08A Fields 120.33 27 ⇑ P PKPdf 05 27 04.8 +1.3
baz=120
MFID Camas Ranch 120.39 24 ⇑ P PKPdf 05 27 03.5 -0.2
baz=120,SNR=7.0
O04C Chester 120.53 30 ⇑ P PKPdf 05 27 04.2 +0.2
baz=120
M07A Soldier Meadow 120.60 28 ⇑ P PKPdf 05 27 05.1 +1.0
baz=120
I13A Wildhorse Cree 120.64 23 ⇑ P PKPdf 05 27 04.5 +0.4
baz=120
LAO LASA Array 120.68 15 *e*PKPdf PKPdf 05 27 04.6 +0.5
L09A Wilkinson Ranc 120.77 26 ⇓ P PKPdf 05 27 05.1 +0.7
baz=120
N06A Buffalo Meadow 120.80 29 ⇑ P PKPdf 05 27 05.0 +0.6
baz=120
J12A Stokes Ranch, 120.82 24 ⇓ P PKPdf 05 27 04.4 -0.1
baz=121
HLID Hailey 120.82 23 *e*PKPdf PKPdf 05 27 04.9 +0.4
HLID Hailey 120.82 23 P PKPdf 05 27 05.5 +1.1
baz=121,SNR=8.9
K11A Parker Ranch, 120.84 25 ⇑ P PKPdf 05 27 04.3 -0.2
baz=121
O05C Quincy 120.88 30 ⇑ P PKPdf 05 27 04.6 -0.1
baz=121
ORV Oroville 120.91 31 ⇑ P PKPdf 05 27 04.9 +0.2
baz=121
M08A Happy Creek Ra 120.92 27 ⇑ P PKPdf 05 27 05.2 +0.6
baz=121
J13A Cove Ranch, Pi 121.06 23 ⇑ P PKPdf 05 27 05.7 +0.8
baz=121
YMR Madison River 121.10 20 *e*PKPdf PKPdf 05 27 06.3 +1.3
N07B Gerlach 121.18 28 ⇓ P PKPdf 05 27 05.4 +0.2
baz=121
BEKR Beckwourth 121.23 30 ⇑ P PKPdf 05 27 05.0 -0.3
baz=121
L10A Juniper Basin 121.24 25 ⇑ P PKPdf 05 27 06.4 +1.1
baz=121
RLMT Red Lodge 121.25 18 *e*PKPdf PKPdf 05 27 06.2 +1.0
O06A Flanigan 121.26 29 ⇑ P PKPdf 05 27 05.8 +0.4
baz=121
M09A Marrel Ranch, 121.35 27 ⇓ P PKPdf 05 27 05.5 -0.1
baz=121
LKWY Lake 121.38 19 *e*PKPdf PKPdf 05 27 07.6 +2.1
K12A Draper Farm, C 121.42 24 ⇓ P PKPdf 05 27 05.9 +0.3
baz=121
L11A Cat Creek Ranc 121.46 25 ⇓ P PKPdf 05 27 06.4 +0.7
baz=121
P05C Yuba Gap, Truc 121.54 30 ⇑ P PKPdf 05 27 06.5 +0.5
baz=121
N08A GE Springer Mi 121.56 27 ⇑ P PKPdf 05 27 06.7 +0.7
baz=121
P06A Stead Airport, 121.60 30 ⇓ P PKPdf 05 27 06.6 +0.5
baz=121
M10A I.L. Ranch, Tu 121.66 26 ⇑ P PKPdf 05 27 06.5 +0.4
baz=121
O07A Toulon 121.71 28 ⇑ P PKPdf 05 27 07.1 +0.9
baz=122
K13A Stover Farm, H 121.73 23 ⇓ P PKPdf 05 27 07.0 +0.8
baz=122
N09A Rock Creek Ran 121.78 27 ⇑ P PKPdf 05 27 06.7 +0.4
baz=122
L12A House Creek Ra 121.78 24 ⇑ P PKPdf 05 27 06.6 +0.3
baz=122
LAVA Lava Cap Winer 121.90 31 ⇓ P PKPdf 05 27 06.7 0.0
baz=122
WCN Washoe City 121.96 30 ⇓ P PKPdf 05 27 07.8 +1.1
baz=122
MOOW Moose Ponds 121.99 20 *e*PKPdf PKPdf 05 27 07.0 +0.3
M11A Holland Ranch, 122.06 25 ⇓ P PKPdf 05 27 07.6 +0.7
baz=122
TPAW Teton Pass 122.15 20 *e*PKPdf PKPdf 05 27 07.7 +0.7
LOHW Long Hollow 122.16 20 *e*PKPdf PKPdf 05 27 07.2 +0.2
K14A Jones Ranch, D 122.16 23 ⇓ P PKPdf 05 27 07.9 +0.9
baz=122
L13A Double Diamond 122.26 24 ⇑ P PKPdf 05 27 07.8 +0.6
baz=122
R05C Kirkwood Meado 122.27 30 ⇑ P PKPdf 05 27 07.4 0.0
baz=122
REDW Red Top Meadow 122.29 20 *e*PKPdf PKPdf 05 27 07.8 +0.6
M12A Wells 122.43 25 ⇓ P PKPdf 05 27 07.9 +0.3
baz=122,SNR=5.1
O09A Fish Creek Ran 122.48 27 ⇑ P PKPdf 05 27 08.5 +0.7
baz=122
N11A Elko Archery C 122.59 26 ⇑ P PKPdf 05 27 09.0 +1.1
baz=122
CMB Columbia Colle 122.62 31 ⇓ P PKPdf 05 27 08.1 0.0
baz=122
R06C Coleville 122.72 30 ⇓ P PKPdf 05 27 08.8 +0.5
baz=122
M13A Montello 122.78 24 ⇑ P PKPdf 05 27 09.3 +1.0
baz=122
N12A Clover Valley, 122.85 25 P PKPdf 05 27 09.4 +1.0
baz=123,SNR=5.7
ELK Elko 122.86 25 *e*PKPdf PKPdf 05 27 09.6 +1.1
PACP Pacheco Peak 122.93 33 ⇑ P PKPdf 05 27 09.3 +0.6
baz=123
M14A Sheep Mountain 122.99 23 ⇓ P PKPdf 05 27 09.3 +0.7
baz=123
S05C Merced 123.18 32 ⇑ P PKPdf 05 27 09.4 +0.3
baz=123
Q08A Gabbs 123.19 29 ⇑ P PKPdf 05 27 09.4 +0.3
baz=123
O11A Cowboy Ranch, 123.19 26 ⇓ P PKPdf 05 27 10.0 +0.9
baz=123
N13A Wendover, West 123.19 25 ⇑ P PKPdf 05 27 09.6 +0.5
baz=123
P10A Eureka 123.25 27 ⇓ P PKPdf 05 27 10.2 +1.0
baz=123
R07C Lee Vining 123.25 30 ⇑ P PKPdf 05 27 10.0 +0.7
baz=123
BW06 Boulder Array 123.26 20 *e*PKPdf PKPdf 05 27 08.8 -0.3
PDAR Pinedale Array 123.26 20 PKP PKPdf 05 27 09.1 0.0
comp=Z,5.4nm,0.8s,baz=66,slow=0.5,SNR=48
PDAR PKKPbc PKKPbc 05 36 58.3 -2.4
comp=Z,0.7nm,0.6s,baz=151,slow=4.7,SNR=7.7
NVAR Mina Array Bea 123.35 29 PKP PKPdf 05 27 10.7 +1.2
comp=Z,7.6nm,0.7s,baz=345,slow=1.8,SNR=46
O12A Currie 123.46 25 P PKPdf 05 27 10.8 +1.2
baz=123,SNR=12
HWUT Hardware Ranch 123.58 22 *e*PKPdf PKPdf 05 27 09.9 +0.1
N14A Grayback Hills 123.61 24 ⇑ P PKPdf 05 27 10.5 +0.7
baz=123
RSSD Black Hills 123.63 15 *e*PKPdf PKPdf 05 27 09.2 -0.6
KCC Kaiser Creek 123.71 31 ⇓ P PKPdf 05 27 10.3 +0.1
baz=124
T06C Millerton Lake 123.76 31 ⇑ P PKPdf 05 27 10.4 +0.1
baz=124
Q10A Clear Creek Ra 123.92 28 ⇑ P PKPdf 05 27 10.5 0.0
baz=124
P12A McGill 124.06 26 ⇓ P PKPdf 05 27 11.5 +0.8
baz=124,SNR=5.7
U05C Westside ANR, 124.06 32 ⇓ P PKPdf 05 27 11.3 +0.4
baz=124
MTUM Tungsten Hills 124.07 30 *e*PKPdf PKPdf 05 27 11.5 +0.7
R09A Tonopah 124.09 28 ⇑ P PKPdf 05 27 11.1 +0.2
baz=124
S08C White Mtn Res 124.15 30 ⇑ P PKPdf 05 27 11.7 +0.7
baz=124
Q11A Duckwater 124.25 27 ⇑ P PKPdf 05 27 11.8 +0.7
baz=124
DUG Dugway 124.32 24 *e*PKPdf PKPdf 05 27 11.8 +0.5
DUG Dugway 124.32 24 ⇑ P PKPdf 05 27 12.0 +0.7
baz=124
HELL Mitchell Peak, 124.36 31 ⇑ P PKPdf 05 27 11.8 +0.3
baz=124
R10A Warm Springs 124.41 28 ⇓ P PKPdf 05 27 12.9 +1.4
baz=124
S09A Goldfield 124.43 29 ⇑ P PKPdf 05 27 12.1 +0.5
baz=124
Q12A Willow Creek R 124.45 26 ⇓ P PKPdf 05 27 12.1 +0.5
baz=124
JLU Jordanelle 124.49 23 *e*PKPdf PKPdf 05 27 11.3 -0.3
S10A Tonopah Range, 124.56 28 ⇓ P PKPdf 05 27 12.1 +0.3
baz=124
TRCR Troy Canyon 124.68 27 *e*PKPdf PKPdf 05 27 12.9 +0.9
R11A Troy Canyon, C 124.68 27 ⇓ P PKPdf 05 27 13.2 +1.2
baz=124
SADO Sadowa 124.71 353 PKP PKPdf 05 27 11.2 -0.6
S11A Rachel 125.18 28 ⇓ P PKPdf 05 27 14.2 +1.2
baz=125
DAC Darwin (Calif) 125.39 30 *e*PKPdf PKPdf 05 27 14.0 +0.5
ECSD EROS,Sioux Fal 125.48 9 *e*PKPdf PKPdf 05 27 13.0 -0.4
TPNV Topopah Spring 125.51 29 ⇑ P PKPdf 05 27 14.4 +0.8
baz=125
FURC Furnace Creek, 125.60 30 ⇑ P PKPdf 05 27 14.0 +0.2
baz=125
MPMC Manual Prospec 125.61 30 ⇓ P PKPdf 05 27 14.7 +0.8
baz=125
S12A Delamar Landin 125.62 27 ⇓ P PKPdf 05 27 15.6 +1.7
baz=125
TMUT Trail Mountain 125.72 23 *e*PKPdf PKPdf 05 27 15.0 +1.0
T11A Corn Creek, Al 125.75 28 ⇑ P PKPdf 05 27 15.1 +1.0
baz=126
PHWY Pilot Hill 125.87 17 *e*PKPdf PKPdf 05 27 13.7 -0.5
U10A Ash Meadows, A 125.90 29 ⇑ P PKPdf 05 27 16.1 +1.7
baz=126
LRMC Laurel Mountai 125.97 31 ⇓ P PKPdf 05 27 15.5 +0.9
baz=126
MSU Marysvale 126.01 24 *e*PKPdf PKPdf 05 27 16.0 +1.5
S13A Holt Ranch, En 126.08 26 P PKPdf 05 27 16.3 +1.6
baz=126,SNR=7.3
S14A Cedar City 126.23 26 ⇑ P PKPdf 05 27 15.7 +0.7
baz=126
EDW2 Edwards Air Fo 126.28 32 ⇓ P PKPdf 05 27 15.5 +0.3
baz=126
T13A Saint George 126.53 27 P PKPdf 05 27 17.1 +1.6
baz=126,SNR=7.6
GSC Goldstone 126.55 30 ⇓ P PKPdf 05 27 16.2 +0.5
baz=126
U12A Valley of Fire 126.73 28 ⇑ P PKPdf 05 27 17.4 +1.4
baz=126
V11A Goodsprings 126.80 29 ⇓ P PKPdf 05 27 17.1 +0.9
baz=127
T14A Hurricane 126.86 26 P PKPdf 05 27 17.6 +1.4
baz=127,SNR=6.8
TUQ Turquoise Mtn. 126.88 30 ⇑ P PKPdf 05 27 17.2 +0.9
baz=127
BFSC Mount Baldy St 126.95 32 ⇑ P PKPdf 05 27 17.4 +0.9
baz=127
U13A Pakoon Wash 127.00 27 ⇑ P PKPdf 05 27 17.6 +1.1
baz=127

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
V12A	**Nelson**	**127.16**	**29**	⇑P	PKPdf	05 27 17.7	+0.8
	baz=127						
HEC	**Hector,Ludlow**	**127.17**	**30**	⇓P	PKPdf	05 27 18.1	+1.2
	baz=127						
T15A	**Red Dirt Ranch**	**127.19**	**26**	⇑P	PKPdf	05 27 17.4	+0.5
	baz=127						
SMCO	**Snowmass**	**127.34**	**20**	*e*PKPdf	PKPdf	05 27 17.9	+0.9
U14A	**Mt Trumbull**	**127.35**	**27**	⇓P	PKPdf	05 27 18.1	+0.9
	baz=127,SNR=7.1						
GMRC	**Granite Mounta**	**127.54**	**30**	⇓P	PKPdf	05 27 19.1	+1.5
	baz=127						
MURC	**Murrieta**	**127.69**	**32**	⇑P	PKPdf	05 27 18.6	+0.7
	baz=128						
BELC	**Belle Mtn.**	**127.99**	**31**	⇑P	PKPdf	05 27 19.2	+0.7
	baz=128						
W13A	**Hualapai Mount**	**128.13**	**28**	⇓P	PKPdf	05 27 19.7	+1.0
	baz=128						
W14A	**Seligman**	**128.40**	**27**	P	PKPdf	05 27 21.1	+1.9
	baz=128,SNR=7.8						
BC3	**Big Chuckw Mtn**	**128.54**	**31**	⇑P	PKPdf	05 27 21.8	+2.3
	baz=128						
X13A	**Yucca**	**128.57**	**28**	⇓P	PKPdf	05 27 20.9	+1.4
	baz=128						
MVCO	**Mesa Verde**	**128.57**	**22**	⇓P	PKPdf	05 27 19.9	+0.5
	baz=128						
PDMCI	**Parker Dam,Lak**	**128.66**	**29**	⇑P	PKPdf	05 27 20.7	+1.0
	baz=128						
W15A	**Williams**	**128.79**	**27**	⇓P	PKPdf	05 27 21.6	+1.6
	baz=129						
WUAZ	**Wupatki**	**128.90**	**26**	⇑P	PKPdf	05 27 21.3	+1.2
	baz=129						
Y12C	**Blythe**	**128.92**	**30**	⇓P	PKPdf	05 27 21.6	+1.3
	baz=129						
X14A	**Yava**	**129.10**	**28**	⇓P	PKPdf	05 27 22.0	+1.4
	baz=129,SNR=6.0						
SDCO	**Great Sand Dun**	**129.12**	**19**	*e*PKPdf	PKPdf	05 27 21.2	+0.7
Y13A	**Salome**	**129.21**	**29**	⇓P	PKPdf	05 27 21.9	+1.1
	baz=129						
GLA	**Glamis**	**129.33**	**31**	⇑P	PKPdf	05 27 22.7	+1.7
	baz=129						
X15A	**Humboldt**	**129.39**	**27**	⇓P	PKPdf	05 27 22.8	+1.7
	baz=129,SNR=6.1						
Y14A	**Wickenburg**	**129.49**	**28**	⇓P	PKPdf	05 27 22.6	+1.3
	baz=129						
Z14A	**Wintersburg**	**129.99**	**29**	⇑P	PKPdf	05 27 23.3	+1.0
	baz=130						
115A	**Sonoran Desert**	**130.88**	**28**	⇑P	PKPdf	05 27 24.9	+0.9
	baz=131						
116A	**Eloy**	**131.24**	**28**	⇓P	PKPdf	05 27 26.0	+1.3
	baz=131						
ANMO	**Albuquerque**	**131.33**	**21**	*e*PKPdf	PKPdf	05 27 26.0	+1.2
ANMO	**Albuquerque**	**131.33**	**21**	*i* PKIKP	PKPdf	05 27 26.1	+1.3
ANMO	**Albuquerque**	**131.33**	**21**	PKP	PKPdf	05 27 25.8	+1.0
	comp=Z,2.9nm,0.6s,baz=319,slow=2.1,SNR=14						
ANMO				SKPbc	SKPbc	05 30 42.8	-0.6
	comp=Z,20nm,0.9s,baz=332,slow=3.4,SNR=48						
LAZ	**Ladron**	**131.57**	**22**	*e*PKPdf	PKPdf	05 27 26.4	+1.2
LAZ				*e*SKP		05 30 44.0	
TUC	**Tucson**	**131.87**	**27**	*e*PKPdf	PKPdf	05 27 27.2	+1.3
BNM	**Barren Site**	**131.98**	**22**	*e*PKPdf	PKPdf	05 27 26.2	+0.1
BNM				*e*SKP		05 30 44.6	
WMOK	**Wichita Mounta**	**133.80**	**14**	*e*PKPdf	PKPdf	05 27 30.4	+1.0
TKL	**Tuckaleechee C**	**134.17**	**356**	PKP	PKPdf	05 27 30.5	+0.4
	comp=Z,2.2nm,0.6s,baz=79,slow=4.9,SNR=3.5						
TKL				SKPbc	SKPbc	05 30 51.1	-2.1
	comp=Z,5.4nm,0.8s,baz=101,slow=4.2,SNR=5.2						
MNTX	**Cornudas Mount**	**134.64**	**22**	*e*PKPdf	PKPdf	05 27 31.9	+0.8
LTX	**Lajitas**	**137.40**	**22**	*e*PKPdf	PKPdf	05 27 36.4	+0.1
TXAR	**Lajitas Array**	**137.40**	**22**	PKHKP		05 27 24.7	
TXAR						05 27 36.9	
TXAR						05 30 19.7	
TXAR	**Lajitas Array**	**137.40**	**22**	PKhKP		05 27 24.6	
	comp=Z,0.9nm,0.4s,baz=251,slow=0.6,SNR=10						
TXAR				PKP	PKPdf	05 27 36.9	+0.5
	comp=Z,1.5nm,0.5s,baz=160,slow=2.5,SNR=4.6						
TXAR				PP	PP	05 30 19.7	-1.1
	comp=Z,0.9nm,0.8s,baz=1.9,slow=3.8,SNR=3.6						
TXAR				SKPbc	SKPbc	05 31 02.5	-1.0
	comp=Z,9.4nm,0.9s,baz=281,slow=2.0,SNR=20						
JCT	**Junction City**	**137.59**	**17**	*e*PKPdf	PKPdf	05 27 36.8	+0.1
TRQA	**Tornquist**	**144.44**	**215**	*e*PKPdf	PKPdf	05 27 46.9	-1.7
MTP	**Monte Pirata**	**144.73**	**323**	*e*PKPdf	PKPdf	05 27 48.4	-1.3
CPD	**Cerro la Pandu**	**144.99**	**323**	*e*PKPbc	PKPdf	05 27 49.4	-0.8
SJG	**San Juan**	**145.07**	**324**	*e*PKPbc	PKPbc	05 27 49.5	-0.3
SOR	**Soroa**	**146.86**	**353**	*e*P	PKPdf	05 27 55.2	+1.9
SDDR	**Presa de Saban**	**147.03**	**332**	*e*PKPbc	PKPbc	05 27 56.2	+0.5
TEIG	**Tepich**	**149.61**	**2**	PKPbc	PKPbc	05 28 02.3	-0.1
	comp=Z,19nm,0.8s,baz=19,slow=4.6,SNR=5.0						
TEIG				PKPab	PKPab	05 28 07.3	-0.3
	comp=Z,7.3nm,0.5s,baz=286,slow=13,SNR=8.1						
CMIG	**Matias Romero**	**151.65**	**16**	PKP	PKPdf	05 27 59.8	-1.2
	comp=Z,3.1nm,1.0s,baz=333,slow=3.1,SNR=5.3						
CMIG				PKPbc	PKPbc	05 28 07.3	-0.1
	comp=Z,21nm,0.8s,baz=344,slow=2.5,SNR=47						
SDV	**Santo Domingo**	**154.94**	**319**	*e*PKPbc	PKPbc	05 28 13.8	-0.9
LPAZ	**La Paz**	**160.76**	**250**	*e*PKPdf	PKPdf	05 28 13.4	+0.5
LPAZ				*e*PKPab	PKPab	05 28 55.9	+0.6
LPAZ	**La Paz**	**160.76**	**250**	PKP	PKPdf	05 28 13.8	+0.9
	comp=Z,4.4nm,0.9s,baz=89,slow=2.2,SNR=15						
LPAZ				PKPab	PKPab	05 28 56.2	+0.8
	comp=Z,3.2nm,0.7s,baz=167,slow=3.0,SNR=5.8						
NNA	**Nana**	**169.95**	**260**	*e*PKPdf	PKPdf	05 28 20.7	+0.1

*ISCJB **01** 05:08:30.0±1.2, 10.83N±0.07×62.37W±0.04, h87km±9km, Error ellipse: s-maj=11.6km s-min=6.4km az=10.6*
*TRN **01** 05:08:30.8, 11.40N×62.20W, h35km, MD2.8*
*FUNV **01** 05:08:31.2, 10.91N×62.33W, h79km, MW2.5*
ISC 01 05:08:30.8±1.2**, 10.85N**±0.07×**62.37W**±0.04**, h83**km±10km**, n10,** σ**0^{s}95**/17**, 1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.25**	**144**	⇑*i*P	**Pn**	**05 08 43.9**	**+0.8**
GUIV				*e*S	**Sn**	**05 08 51.4**	**-0.8**
TCE	**Chacachacare**	**0.63**	**104**	*e*P	**Pn**	**05 08 46.3**	**+0.4**
TCE				*e*S	**Sn**	**05 08 57.5**	**+0.3**
CRUV	**Carupano**	**0.87**	**258**	⇓*i*P	**Pn**	**05 08 49.1**	**+0.7**
CRUV				*e*S	**Sn**	**05 09 01.5**	**-0.2**
GUNV	**Guanoco**	**0.89**	**219**	*e*P	**Pn**	**05 08 50.2**	**+1.5**
GUNV				*e*S	**Sn**	**05 09 03.2**	**+1.1**
ITEV	**Isla Los Testi**	**0.90**	**304**	⇓*i*P	**Pn**	**05 08 49.0**	**+0.2**
ITEV				*e*S	**Sn**	**05 09 01.0**	**-1.3**
TRN	**Trinidad (W)**	**0.97**	**102**	*e*P	**Pn**	**05 08 49.1**	**-0.6**
TRN				*e*S	**Sn**	**05 09 02.3**	**-1.5**
TBH	**Brigand Hill**	**1.33**	**106**	*e*P	**Pn**	**05 08 54.9**	**+0.8**
TBH				*e*S	**Sn**	**05 09 13.1**	**+1.4**
PCRV	**Puerto La Cruz**	**2.33**	**253**	*e*P	**Pn**	**05 09 06.5**	**-0.6**
RIOV	**Rio Grande**	**2.82**	**169**	*e*S	**Sn**	**05 09 45.3**	**-1.6**
LUEV	**Luepa**	**5.06**	**170**	*e*P	**Pn**	**05 09 43.5**	**-0.7**

*IDC **01** 05:14:53.3±2.2, 6.10S×129.85E, h0km, mb3.9/1, mb1 4.7/4, mb1mx4.1/15, mbtmp4.4/4, ML4.5/3, Error ellipse: s-maj=93.7km s-min=27.5km az=76.0*
*NEIC **01** 05:15:06.4±3.6, 6.42S×129.74E, h114km±37km, mb3.9/1, Error ellipse: s-maj=31.9km s-min=20.8km az=159.0*
*ISCJB **01** 05:15:08.8±4.3, 6.7S±0.2×129.8E±0.2, h160km±46km, mb3.6/1, Error ellipse: s-maj=38.4km s-min=24.1km az=165.7*
ISC 01 05:15:09.7±4.3**, 6.7S**±0.2×**129.8E**±0.2**, h151**km±47km**, n10,** σ**1^{s}33**/12**, mb3.6**/1**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.49**	**157**	*e*P	**Pn**	**05 16 43.5**	**+0.5**
	70nm,0.2s						
KAKA				*e*S	**Sn**	**05 17 49.4**	**-6.7**
KAKA	**Kakadu**	**6.49**	**157**	*e*Pn	**Pn**	**05 16 43.5**	**+0.5**
KAKA				*e*Sn	**Sn**	**05 17 53.5**	**-2.6**
FITZ	**Fitzroy Crossi**	**12.04**	**199**	*e*P	**Pn**	**05 17 56.6**	**+0.1**
	41nm,1.1s						
FITZ				*e*S	Sx	05 20 03.6	
FITZ	**Fitzroy Crossi**	**12.04**	**199**	Pn	**Pn**	**05 17 55.6**	**-0.9**
	1.6nm,0.3s,baz=26,slow=14,SNR=26						
FITZ				Sn	Sx	05 20 03.1	
	2.4nm,0.3s,baz=346,slow=18,SNR=4.0						
WRA	**Warramunga Arr**	**13.86**	**162**	Pn	**Pn**	**05 18 18.4**	**-1.5**
	2.7nm,0.3s,baz=343,slow=13,SNR=11						
WRA				Sn	Sx	05 20 45.0	
	5.1nm,0.3s,baz=335,slow=25,SNR=7.9						
WB2	**Warramunga Arr**	**13.87**	**162**	*e*P	**Pn**	**05 18 19.0**	**-0.9**
WB2				*e*S	Sx	05 20 43.6	
COEN	**Coen**	**14.96**	**120**	*e*P	**Pn**	**05 18 35.4**	**+1.7**
ASAR	**Alice Springs**	**17.31**	**167**	P	**Pn**	**05 19 03.4**	**+1.1**
	1.8nm,0.3s,baz=346,slow=10,SNR=6.7						
ASAR				S	Sx	05 22 10.9	
	0.8nm,0.3s,baz=359,slow=28,SNR=5.8						
MBWA	**Marble Bar**	**17.37**	**213**	*e*P	**Pn**	**05 19 04.9**	**+1.8**
	6.6nm,0.8s						
MKAR	**Makanchi Array**	**67.89**	**327**	P	**P**	**05 25 50.6**	**-1.3**
	0.6nm,0.4s,mb3.6,baz=117,slow=7.9,SNR=8.8						

*NEIC **01** 06:00:10.9, 19.13N×69.12W, h3km, MD3.8(RSPR), After RSPR.*
RSPR 01 06:00:10.9, 19.13N×69.12W, h3km±31km**, MD3.8**/12**, MD3.8**/12**, 13C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STDO	**Santo Domingo**	**1.02**	**228**	*e*S	Sg	06 00 44.4	+0.6
AGPR	**Aguadilla, PR**	**2.02**	**109**	⇑*e*P	Pn	06 00 42.7	-3.1
AGPR				*e*S	Sn	06 01 08.8	-2.8
SDDR	**Presa de Saban**	**2.05**	**266**	⇑*e*P	Pn	06 00 44.4	-2.0
SDDR				*e*S	Sn	06 01 11.2	-1.4
LSP	**Las Mesas**	**2.15**	**116**	⇑*e*P	Pn	06 00 45.1	-2.6
LSP				*e*S	Sn	06 01 11.7	-3.2
CRPR	**Cabo Rojo, PR**	**2.21**	**120**	⇑*e*P	Pn	06 00 45.3	-3.3
CRPR				*e*S	Sn	06 01 13.3	-3.1
AOPR	**Arecibo Observ**	**2.38**	**109**	⇑*e*P	Pn	06 00 47.3	-3.5
AOPR				*e*S	Sn	06 01 17.3	-3.2
GBPR	**Guanica, Bosqu**	**2.42**	**118**	⇑*e*P	Pn	06 00 50.7	-0.7
GBPR	**Guanica, Bosqu**	**2.42**	**118**	*e*S	Sn	06 01 19.0	-2.6
OBIP	**Obispado Ponce**	**2.62**	**114**	⇑*e*P	Pn	06 00 51.2	-3.0
OBIP				*e*S	Sn	06 01 24.0	-2.6
CELP	**Cerrillos**	**2.63**	**113**	⇑*e*P	Pn	06 00 51.1	-3.2
CELP				*e*S	Sn	06 01 24.4	-2.4
ICM	**Isla Caja Muer**	**2.76**	**116**	*e*S	Sn	06 01 27.1	-2.8
SJG	**San Juan**	**3.00**	**109**	*e*S	Sn	06 01 34.0	-1.8
SJG	**San Juan**	**3.00**	**109**	⇑*e*P	Pn	06 00 53.5	-5.9
SJG				*e*S	Sn	06 01 32.0	-3.8
CBYP	**Canovanas**	**3.21**	**105**	⇑*e*P	Pn	06 00 58.1	-4.2
CBYP				*e*S	Sn	06 01 37.2	-3.9
CPD	**Cerro la Pandu**	**3.23**	**109**	⇑*e*P	Pn	06 00 59.8	-2.8
CPD				*e*S	Sn	06 01 37.9	-3.8
HUMP	**Col San Antoni**	**3.26**	**107**	⇑*e*P	Pn	06 00 59.7	-3.2
HUMP				*e*S	Sn	06 01 38.0	-4.2
MTP	**Monte Pirata**	**3.54**	**106**	⇑*e*P	Pn	06 01 03.1	-3.7
MTP				*e*S	Sn	06 01 47.1	-2.1

*ISCJB **01** 06:31:46.9±0.6, 38.25N±0.03×39.83E±0.04, h1km±7km, Error ellipse: s-maj=5.2km s-min=4.6km az=27.7*
*CSEM **01** 06:31:46.6±0.1, 38.30N×39.80E, h2km, MD3.5, Error ellipse: s-maj=2.1km s-min=1.5km az=14.0*
*ISK **01** 06:31:46.6, 38.29N×39.79E, h5km, MD3.1*
*DDA **01** 06:31:48.1, 38.20N×39.84E, h2km±3km, Md3.5*
ISC 01 06:31:47.4±0.5**, 38.22N**±0.03×**39.82E**±0.03**, h6**km±5km**, n19,** σ**1^{s}09**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DIYA	**Diyarbakir**	**0.38**	**141**	*i* P	**Pg**	**06 31 54.9**	**0.0**
DIYA				*i* S	**Sg**	**06 32 00.6**	**+0.8**
DIY	**Diyarbakir**	**0.46**	**135**	PG	**Pg**	**06 31 57.9**	**+1.6**
ELZG	**Elazig**	**0.71**	**293**	*i* P	**Pg**	**06 32 01.3**	**+0.2**
ELZG				*i* S	**Sg**	**06 32 10.9**	**+0.7**
PTK	**Pertek**	**0.75**	**334**	PG	**Pg**	**06 32 00.7**	**-1.1**
PTK				SG	**Sg**	**06 32 11.9**	**+0.3**
BINT	**Bingol**	**0.84**	**39**	PG	**Pg**	**06 32 02.9**	**-0.7**
MALT	**Malatya**	**1.10**	**275**	PG	**Pg**	**06 32 08.2**	**-0.3**
MYA	**Malataya**	**1.10**	**276**	PG	**Pg**	**06 32 08.2**	**-0.3**
URFA	**Urfa**	**1.11**	**226**	PN	**Pn**	**06 32 09.6**	**+0.1**
MARD	**Mardin**	**1.18**	**140**	*i* P	**Pn**	**06 32 09.1**	**-1.5**
MARD				*i* S	**Sn**	**06 32 24.6**	**-2.3**
BNGL	**BINGOL**	**1.28**	**55**	*i* P	**Pn**	**06 32 10.8**	**-1.0**
BNGL				*i* S	**Sg**	**06 32 28.4**	**-0.1**
BTMT	**Batman**	**1.32**	**91**	PN	**Pn**	**06 32 10.9**	**-1.5**
EZC	**Erzincan**	**1.52**	**0**	*e*PN	**Pg**	**06 32 15.4**	**-1.3**
GZT	**Gaziantep**	**1.98**	**245**	*i* P	**Pn**	**06 32 22.2**	**+0.7**
GZT				*i* S	**Sg**	**06 32 48.5**	**-2.6**
EZM	**Erzurum**	**2.07**	**35**	*e*PN	**Pn**	**06 32 22.9**	**+0.2**
ERZM	**Erzurum**	**2.07**	**35**	*i* P	**Pn**	**06 32 23.4**	**+0.7**
ERZM				*i* S	**Sg**	**06 32 54.3**	**+0.3**
SIRT	**Sirnak**	**2.20**	**108**	*e*PN	**Pn**	**06 32 26.3**	**+1.8**
GAZ	**Gaziantep**	**2.31**	**244**	*e*PN	**Pn**	**06 32 27.5**	**+1.4**
SVSK	**Karacayir**	**2.77**	**309**	*e*PN	**Pn**	**06 32 33.7**	**+1.3**
AGRB	**Hanur-Agry**	**2.82**	**60**	*e*PN	**Pn**	**06 32 34.1**	**+1.0**

*IDC **01** 06:34:29.6±1.7, 17.50S×174.71W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.1/15, mbtmp4.0/7, MS3.8/10, Ms1 3.8/10, ms1mx3.5/33, Error ellipse: s-maj=143.1km s-min=20.0km az=151.0*
*ISCJB **01** 06:34:33.3±0.6, 17.5S±0.2×174.8W±0.2, h33km, mb4.2/9, MS3.9/8, Error ellipse: s-maj=37.2km s-min=14.9km az=143.6*
*NEIC **01** 06:34:33.1±0.5, 17.49S×174.76W, h20km, mb4.8/2, Error ellipse: s-maj=28.7km s-min=11.8km az=144.0*
ISC 01 06:34:35.2±0.6**, 17.4S**±0.2×**174.8W**±0.2**, h35**km**, n38,** σ**0^{s}42**/14**, mb4.2**/9**, MS3.9**/8**, 2C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.58**	**40**	Pn	**Pn**	**06 35 30.9**	**-11**
	7.2nm,0.3s,baz=240,slow=20,SNR=8.6						
AFI				LR	LR	06 37 01.2	
	comp=Z,357nm,20.4s,baz=183,slow=33						
DZM	**Mont Dzumac**	**18.22**	**252**	LR	LR	06 44 05.5	
	comp=Z,337nm,21.1s,baz=26,slow=32						
PAE	**Paea**	**24.07**	**94**	*e*T		07 04 20.1	
	24nm,0.3s						
PPT	**Papeete**	**24.08**	**94**	*e*LR	LR	06 45 26.9	
	434nm,26.2s						
TVO	**Taravao**	**24.37**	**95**	*e*T		07 04 29.4	
	7.2nm,0.3s						
HNR	**Honiara**	**25.77**	**285**	LR	LR	06 48 30.5	
	comp=Z,406nm,19.8s,MS4.0,baz=180,slow=32						
PMOR	**Pomariorio Ree**	**25.96**	**89**	*e*T		07 06 45.5	
	6.9nm,0.2s						
VAH	**Vaihoa**	**26.18**	**89**	*e*T		07 06 59.2	
	20nm,0.2s						
TAOE	**Nuku Hiva Isla**	**34.78**	**80**	*e*LR	LR	06 50 43.9	
	632nm,25.2s						
TAOE	**Nuku Hiva Isla**	**34.78**	**80**	*e*T		07 17 41.2	
	178nm,0.2s						
CTA	**Charters Tower**	**36.89**	**260**	LR	LR	06 54 38.3	
	comp=Z,148nm,18.4s,MS3.8,baz=310,slow=33						
RKT	**Rikitea**	**37.72**	**105**	*e*LR	LR	06 51 38.6	
	539nm,31.2s						
RKT	**Rikitea**	**37.72**	**105**	*e*T		07 21 22.0	
	5.0nm,0.3s						
PMG	**Port Moresby**	**37.77**	**277**	LR	LR	06 55 04.6	
	comp=Z,172nm,18.8s,MS3.9,baz=142,slow=33						
STKA	**Stephens Creek**	**41.85**	**242**	P	**P**	**06 42 21.7**	**-0.3**
STKA				LR	LR	06 58 52.2	
STKA	**Stephens Creek**	**41.85**	**242**	P	**P**	**06 42 21.7**	**-0.3**
	3.6nm,0.8s,mb4.1,baz=104,slow=8.3,SNR=6.8						
STKA				LR	LR	06 58 52.2	
	comp=Z,129nm,18.1s,MS3.9,baz=25,slow=35						
WRA	**Warramunga Arr**	**48.08**	**259**	P	**P**	**06 43 11.6**	**-0.1**
	1.1nm,0.6s,mb4.1,baz=97,slow=7.3,SNR=6.2						
WRA				LR	LR	07 01 24.9	
	comp=Z,120nm,20.4s,MS3.9,baz=120,slow=34						
ASAR	**Alice Springs**	**48.20**	**254**	P	**P**	**06 43 13.2**	**+0.5**
	8.0nm,0.9s,mb4.8,baz=86,slow=8.4,SNR=39						
FITZ	**Fitzroy Crossi**	**56.48**	**260**	LR	LR	07 08 16.4	
	comp=Z,157nm,18.3s,MS4.1,baz=154,slow=36						
QSPA	**South Pole Qui**	**72.61**	**180**	*e*P	**P**	**06 45 58.5**	**0.0**
	8.1nm,0.9s,mb4.7						
KSRS	**Korea Array**	**76.67**	**317**	LR	LR	07 13 39.9	
	comp=Z,41nm,21.1s,MS3.7,baz=115,slow=31						
NVAR	**Mina Array Bea**	**76.75**	**42**	P	**P**	**06 46 22.7**	**-0.3**
	1.5nm,1.0s,mb3.9,baz=218,slow=6.7,SNR=6.3						
TXAR	**Lajitas Array**	**82.88**	**56**	P	**P**	**06 46 57.5**	**+1.0**
	0.4nm,0.9s,mb3.5,baz=204,slow=2.0,SNR=2.9						
TXAR				LR	LR	07 15 05.8	
	comp=Z,56nm,21.4s,MS3.9,baz=0.0,slow=29						
ANMO	**Albuquerque**	**83.15**	**50**	P	**P**	**06 46 57.2**	**-0.6**
ANMO	**Albuquerque**	**83.15**	**50**	P	**P**	**06 46 57.2**	**-0.6**
	0.8nm,0.8s,mb3.8,baz=249,slow=5.2,SNR=4.1						
MCMT	**McKenzie Canyo**	**83.69**	**39**	*e*P	**P**	**06 47 00.3**	**0.0**
COLA	**College**	**84.61**	**11**	*e*P	**P**	**06 47 04.4**	**-0.1**
	7.0nm,1.1s,mb4.7						
PDAR	**Pinedale Array**	**84.69**	**42**	P	**P**	**06 47 05.3**	**-0.1**
	1.0nm,0.8s,mb4.0,baz=218,slow=3.3,SNR=8.0						
DAWY	**Dawson**	**85.73**	**15**	*e*P	**P**	**06 47 10.3**	**+0.2**
CLL	**Collm**	**145.64**	**351**	⇑*i*P	PKPdf	06 54 10.4	+0.7
CLL	**Collm**	**145.64**	**351**	⇑*i*PKPbc	PKPbc	06 54 10.4	+0.4
	comp=Z,33nm,1.6s						
UPC	**Upice**	**145.88**	**348**	*e*P	PKPdf	06 54 05.0	-5.2
BRG	**Berggiesshubel**	**145.92**	**350**	*e*P	PKPdf	06 54 11.7	+1.5
	comp=Z,19nm,1.4s						
DPC	**Dobruska-Polom**	**145.97**	**347**	*e*PKP	PKPdf	06 54 11.9	+1.6
PVCC	**Panska Ves**	**146.14**	**349**	*e*PKP	PKPdf	06 54 12.1	+1.5
PRU	**Pruhonice**	**146.66**	**349**	*e*PKP	PKPdf	06 54 12.6	+1.1
BRTR	**Keskin Array B**	**146.81**	**318**	PKPbc	PKPbc	06 54 14.3	+0.4
	comp=Z,1.5nm,0.8s,baz=63,slow=0.3,SNR=6.9						
KHC	**Kasperske Hory**	**147.66**	**350**	*e*PKP	PKPbc	06 54 17.8	+1.9

*NEIC **01** 06:45:20.1, 16.33N×99.15W, h3km, mb4.7/51, MD4.7(MEX), After MEX.*
*BJI **01** 06:45:20.1, 16.30N×99.20W, h3km, mB5.3, Ms5.1, Msz4.8*
*MEX **01** 06:45:20.6±0.9, 16.31N×99.14W, h9km±11km, MD4.8*
*ISCJB **01** 06:45:21.4±0.3, 16.51N±0.03×98.92W±0.02, h26km, mb4.5/54, MS3.9/18, Error ellipse: s-maj=4.7km s-min=3.0km az=24.3*
*MOS **01** 06:45:23.6±1.2, 16.73N×98.82W, h33km, mb4.8/15, Error ellipse: s-maj=13.3km s-min=5.2km az=98.0*
*IDC **01** 06:45:26.3±3.5, 16.71N×98.79W, h51km±29km, mb4.1/9, mb1 4.3/14, mb1mx4.1/24, mbtmp4.2/14, ML4.0/5, MS3.7/18, Ms1 3.7/18, ms1mx3.6/29, Error ellipse: s-maj=28.9km s-min=13.9km az=52.0*
ISC 01 06:45:24.4±0.3**, 16.67N**±0.04×**98.79W**±0.03**, h27**km**, h27**km±.8km**: pP-P, n329,** σ**0^{s}75**/335**, mb4.5**/54**, MS3.9**/18**, 54C-68D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.69**	**113**	*i* P	**Pb**	**06 45 37.0**	**-0.9**
PNIG				*i* S	**Sb**	**06 45 49.9**	**+2.9**
PNIG	**Pinotepa**	**0.69**	**113**	*i* P	**Pb**	**06 45 37.0**	**-0.8**
PNIG				*e*S	**Sb**	**06 45 48.4**	**+1.3**
ACX	**Acapulco**	**1.10**	**281**	*e*P	**Pn**	**06 45 35.4**	**-8.6**
ACX				*i* S	**Sn**	**06 45 47.4**	**-11**
ACX	**Acapulco**	**1.10**	**281**	*i* P	**Pn**	**06 45 35.4**	**-8.6**
ACX				*i* S	**Sn**	**06 45 47.4**	**-11**
CAIG	**El Cayaco**	**1.47**	**285**	*i* P	**Pn**	**06 45 42.3**	**-6.7**
CAIG	**El Cayaco**	**1.47**	**285**	*i* P	**Pn**	**06 45 42.4**	**-6.6**
CAIG				*i* S	**Sn**	**06 45 56.9**	**-10**
MEIG	**Mezcala**	**1.48**	**328**	*i* P	**Pn**	**06 45 46.5**	**-2.8**
MEIG				*i* S	**Sn**	**06 46 07.0**	**-0.7**
UTMO	**Huajuapan**	**1.49**	**39**	*e*P	**Pn**	**06 45 50.2**	**+0.9**
UTMO				*i* S	**Sn**	**06 46 15.4**	**+7.4**
PLIG	**Platanillo**	**1.85**	**338**	*e*P	**Pn**	**06 45 52.9**	**-1.3**
VHO	**Vista Hermosa**	**2.01**	**78**	*e*P	**Pn**	**06 45 57.2**	**+0.7**
VHO				*i* S	**Sn**	**06 46 27.3**	**+6.6**
OXX	**Oaxaca**	**2.02**	**78**	*i* P	**Pn**	**06 45 58.0**	**+1.4**
YAIG	**Yautepec**	**2.20**	**353**	*e*P	**Pn**	**06 45 59.3**	**+0.2**
YAIG				*i* S	**Sn**	**06 46 29.8**	**+4.3**
TPIG	**Tehuac#an**	**2.21**	**38**	*e*P	**Pn**	**06 45 59.7**	**+0.4**
TPIG				*i* S	**Sn**	**06 46 34.2**	**+8.5**
PPM	**Popocatepetl**	**2.39**	**4**	*e*P	**Pn**	**06 46 01.6**	**-0.2**
PPM				*i* P		06 46 02.0	
PPM				*i* S	**Sn**	**06 46 35.5**	**+5.3**
UNM	**Universidad Na**	**2.67**	**352**	*e*P	**Pn**	**06 46 07.4**	**+1.7**
UNM				*i* S	**Sn**	**06 46 38.2**	**+1.1**
UNM	**Universidad Na**	**2.67**	**352**	*e*P	**Pn**	**06 46 07.4**	**+1.7**
UNM				*e*P		06 46 09.5	
UNM				*i* S	**Sn**	**06 46 41.0**	**+3.9**
SZVM	**Salazar**	**2.70**	**348**	*i* P	**Pn**	**06 46 06.0**	**0.0**
SZVM				*i* S	**Sn**	**06 46 38.6**	**+0.8**
SZVM				*i* S	**Sn**	**06 46 42.7**	**+4.9**
ZIIG	**Zihuatanejo**	**2.72**	**290**	*e*P	**Pn**	**06 46 01.2**	**-5.1**
ZIIG				*i* S	**Sn**	**06 46 29.1**	**-9.2**
ZIIG	**Zihuatanejo**	**2.72**	**290**	*e*P	**Pn**	**06 45 59.8**	**-6.5**
ZIIG				*i* S	**Sn**	**06 46 29.1**	**-9.2**
HUIG	**Huatulco**	**2.73**	**109**	*e*P	**Pn**	**06 46 06.0**	**-0.4**
HUIG				*i* S	**Sn**	**06 46 36.0**	**-2.4**
HUIG	**Huatulco**	**2.73**	**109**	*e*P	**Pn**	**06 46 06.0**	**-0.4**
HUIG				*i* S	**Sn**	**06 46 37.3**	**-1.1**
IIO	**Organos**	**2.91**	**1**	*e*P	**Pn**	**06 46 09.2**	**+0.4**
IIO				*i* S	**Sn**	**06 46 49.2**	**+6.3**
PTVM	**Pico Tres Padr**	**2.93**	**354**	*e*P	**Pn**	**06 46 08.5**	**-0.6**
PTVM				*i* S	**Sn**	**06 46 46.4**	**+3.1**
CMIG	**Matias Romero**	**3.76**	**83**	P	**Pn**	**06 46 20.9**	**+0.3**
CMIG				*i* S	**Sn**	**06 47 12.7**	**+8.6**
CMIG				S	Sn	06 47 26.2	+22
CMIG	**Matias Romero**	**3.76**	**83**	P	**Pn**	**06 46 20.9**	**+0.3**
	9.3nm,0.3s,baz=260,slow=10,SNR=117						
CMIG				S	Sn	06 47 26.2	+22
	66nm,0.3s,baz=26,slow=9.8,SNR=7.5						
CMIG	**Matias Romero**	**3.76**	**83**	*e*P	**Pn**	**06 46 21.2**	**+0.6**
CMIG				*i* S	**Sn**	**06 47 12.7**	**+8.6**
MOIG	**Morelia**	**3.77**	**323**	*e*P	**Pn**	**06 46 22.5**	**+1.9**
MOIG				*e*S	**Sn**	**06 47 09.5**	**+5.4**
LVIG	**Laguna Verde**	**3.79**	**36**	*e*P	**Pn**	**06 46 19.1**	**-1.8**
TUIG	**Tuzandepetl**	**4.39**	**71**	*i* P	**Pn**	**06 46 29.4**	**+0.2**
TUIG				*i* S	**Sn**	**06 47 30.8**	**+11**
MMIG	**Aquila**	**4.64**	**291**	*i* P	**Pn**	**06 46 27.8**	**-4.8**
MMIG				*i* S	**Sn**	**06 47 19.0**	**-6.6**
SFJM	**Santa Fe**	**5.54**	**314**	*e*P	**Pn**	**06 46 41.5**	**-3.5**
SCX	**San Cristobal**	**5.90**	**88**	*e*P	**Pn**	**06 46 52.0**	**+2.0**
CCIG	**Comitan**	**6.39**	**92**	*e*P	**Pn**	**06 46 59.4**	**+2.6**
CJM	**Chamela**	**6.58**	**296**	*i* S	**Sn**	**06 48 05.3**	**-8.3**
ANIG	**Ahuacatlan**	**6.96**	**310**	*i* P	**Pn**	**06 47 03.4**	**-1.2**
ANIG				*i* S	**Sn**	**06 48 16.6**	**-6.3**
ZAIG	**Zacatecas**	**7.04**	**330**	*e*P	**Pn**	**06 47 07.0**	**+1.4**
LNIG	**Linares**	**8.21**	**356**	*i* P	**Pn**	**06 47 24.0**	**+2.3**
LNIG				*i* S	**Sn**	**06 48 57.0**	**+3.3**
RBDL	**Robledal**	**9.14**	**105**	*e*P	x	06 47 35.3	
RTR	**El Retiro**	**9.24**	**106**	*e*P	x	06 47 37.1	
LFRS	**El Faro**	**9.87**	**107**	*e*P	x	06 47 47.4	
TEIG	**Tepich**	**10.59**	**69**	*e*Pn	**Pn**	**06 47 54.4**	**+0.1**
	37nm,0.8s						
TEIG	**Tepich**	**10.59**	**69**	P	**Pn**	**06 47 53.9**	**-0.4**
	1.9nm,0.3s,baz=32,slow=3.3,SNR=30						
TEIG				S	**Sn**	**06 49 53.4**	**+1.4**
	3.7nm,0.3s,baz=302,slow=21,SNR=3.4						
TEIG				LR	LR	06 52 59.9	
	comp=Z,556nm,20.4s,baz=232,slow=43						
TGUH	**Tegucigalpa,Un**	**11.41**	**102**	*e*Pn	**Pn**	**06 48 06.9**	**+1.3**
	25nm,1.1s						
LTX	**Lajitas**	**13.38**	**341**	*e*Pn	**Pn**	**06 48 31.3**	**-1.2**
TXAR	**Lajitas Array**	**13.38**	**341**	P	**Pn**	**06 48 33.1**	**+0.6**
	0.1nm,0.3s,baz=157,slow=14,SNR=14						
TXAR				LR	LR	06 53 44.3	
	comp=Z,209nm,18.2s,baz=170,slow=37						
JCT	**Junction City**	**13.78**	**356**	*e*Pn	**Pn**	**06 48 36.5**	**-1.4**
JTS	**JuntasAbangare**	**14.87**	**113**	*e*Pn	**Pn**	**06 48 55.2**	**+2.3**
JTS	**JuntasAbangare**	**14.87**	**113**	P	**Pn**	**06 48 55.6**	**+2.7**
	1.4nm,0.3s,baz=302,slow=8.6,SNR=7.8						
JTS				LR	LR	06 54 56.0	
	comp=Z,113nm,21.8s,baz=98,slow=38						
NATX	**Nacogdoches**	**15.49**	**13**	*e*P	**Pn**	**06 49 04.4**	**+3.5**
	29nm,0.8s						
MNTX	**Cornudas Mount**	**16.12**	**339**	*e*Pn	**Pn**	**06 49 08.1**	**-1.0**
	4.4nm,0.9s						
GDL2	**Guadalupe Moun**	**16.27**	**343**	*e*Pn	**Pn**	**06 49 10.8**	**-0.2**
WMOK	**Wichita Mounta**	**18.00**	**0**	*e*Pn	**Pn**	**06 49 31.4**	**-1.2**
	7.8nm,0.8s						
WMOK	**Wichita Mounta**	**18.00**	**0**	*e*P	**Pn**	**06 49 31.4**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MIAR	**Mount Ida**	**18.41**	**14**	*e*P	**Pn**	**06 49 35.7**	**-1.9**
	comp=Z,24nm,1.0s						
MIAR	**Mount Ida**	**18.41**	**14**	*e*P	**Pn**	**06 49 35.7**	**-1.9**
MIAR				pmax	pmax		
	comp=Z,24nm,1.0s						
BNM	**Barren Site**	**18.78**	**339**	*e*P	**Pn**	**06 49 42.0**	**-0.2**
LPM	**Los Pinos Moun**	**18.93**	**340**	*e*P	**Pn**	**06 49 43.0**	**-0.9**
UALR	**University of**	**18.93**	**17**	*e*P	**Pn**	**06 49 39.1**	**-4.8**
	comp=Z,17nm,1.0s						
TUC	**Tucson**	**18.99**	**327**	*e*Pn	**Pn**	**06 49 45.0**	**+0.3**
	comp=Z,5.4nm,0.9s						
TUC				*e*pP	pP	06 49 52.7	+1.5
TUC	**Tucson**	**18.99**	**327**	*e*P	**Pn**	**06 49 45.0**	**+0.3**
TUC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LAZ	**Ladron**	**19.18**	**339**	*e*P	**Pn**	**06 49 46.6**	**-0.4**
LAZ				*e*pP	pP	06 49 55.7	+2.4
ANMO	**Albuquerque**	**19.46**	**341**	*e*P	**Pn**	**06 49 49.1**	**-1.2**
ANMO				*e*pP	pP	06 49 56.2	-0.2
ANMO	**Albuquerque**	**19.46**	**341**	P	**Pn**	**06 49 49.0**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=153,slow=11,SNR=27						
ANMO				LR	LR	06 58 21.7	

comp=Z,356nm,20.9s,baz=280,slow=40
LRAL **Lakeview Retre** 19.47 31 *e*Pn Pn 06 49 49.0 -1.4
116A **Eloy** 19.68 326 ⇑P Pn 06 49 51.2 -1.7
baz=20,SNR=5.3
115A **Sonoran Desert** 20.07 325 ⇑P P 06 49 55.7 +0.1
baz=20
CCCC **Cccc** 20.39 74 *e*P P 06 50 05.0 +5.8
PLAL **Pickwick Lake** 20.61 26 *e*P P 06 50 00.3 -1.1
comp=Z,19nm,0.7s
Z14A **Wintersburg** 20.96 325 ⇓P P 06 50 05.5 +0.2
baz=21
Y14A **Wickenburg** 21.43 326 P P 06 50 10.8 +0.5
baz=21,SNR=9.6
X15A **Humboldt** 21.45 328 ⇓P P 06 50 10.9 +0.3
baz=21,SNR=9.8
GOGA **Godfrey** 21.65 37 *e*P P 06 50 12.2 -0.5
GOGA *ep*P 06 50 20.8
SWET **Sewanee** 21.75 29 *e*P P 06 50 12.8 -1.0
SWET *ep*P 06 50 20.8
X14A **Yava** 21.77 327 ⇓P P 06 50 14.3 +0.3
baz=22
Y13A **Salome** 21.79 324 P P 06 50 14.6 +0.5
baz=22,SNR=7.9
GLA **Glamis** 21.81 321 P P 06 50 14.8 +0.3
baz=22,SNR=6.4
SDCO **Great Sand Dun** 21.82 346 *e*P P 06 50 14.2 -0.2
comp=Z,11nm,1.0s,mb4.2
SDCO *ep*P 06 50 23.3
SDCO *es*P sP 06 50 27.4 +2.0
WUAZ **Wupatki** 21.87 332 *e*P P 06 50 16.0 +1.0
comp=Z,33nm,0.9s,mb4.8
WUAZ *ep*P 06 50 25.1
WUAZ **Wupatki** 21.87 332 ⇓P P 06 50 15.4 +0.4
baz=22,SNR=14
W15A **Williams** 22.02 329 ⇑P P 06 50 17.1 +0.5
baz=22
Y12C **Blythe** 22.13 323 ⇑P P 06 50 18.1 +0.2
baz=22
MVCO **Mesa Verde** 22.19 339 *e*P P 06 50 18.2 -0.2
comp=Z,15nm,0.7s,mb4.5
MVCO **Mesa Verde** 22.19 339 P P 06 50 18.6 +0.1
baz=22,SNR=18
PDMCI **Parker Dam,Lak** 22.32 325 ⇓P P 06 50 19.9 0.0
baz=22
SWSC **Sam W. Stewart** 22.33 320 ⇑P P 06 50 20.1 +0.1
baz=22
DVTC **Desert V Tower** 22.33 319 ⇓P P 06 50 20.0 0.0
baz=22
X13A **Yucca** 22.37 326 ⇓P P 06 50 20.4 0.0
baz=22
KSU1 **Kansas State U** 22.43 4 *e*P P 06 50 19.9 -1.1
comp=Z,44nm,0.6s,mb5.1
W14A **Seligman** 22.45 328 ⇓P P 06 50 21.3 0.0
baz=22,SNR=8.0
FVM **French Village** 22.48 17 *e*P P 06 50 20.7 -0.8
comp=Z,13nm,0.7s,mb4.5
FVM *ep*P 06 50 29.7
FVM **French Village** 22.48 17 *e*P P 06 50 20.7 -0.8
FVM *e**PP 06 50 29.7
FVM pmax pmax
comp=Z,13nm,0.7s,mb4.5
SIUC **Southern Illin** 22.60 20 *e*P P 06 50 22.9 +0.1
comp=Z,21nm,0.8s,mb4.6
SIUC *ep*P 06 50 30.7
BC3 **Big Chuckw Mtn** 22.61 322 ⇓P P 06 50 22.8 -0.2
baz=22
CPCT **Cooper Cave** 22.63 32 *e*P P 06 50 22.4 -0.7
MONP **Monument Peak** 22.68 319 ⇑P P 06 50 23.7 0.0
baz=23
W13A **Hualapai Mount** 22.78 327 ⇓P P 06 50 24.6 -0.1
baz=23
IRM **Iron Mountain** 22.79 323 P P 06 50 25.0 +0.2
baz=23,SNR=10
PV01 **Paradox Valley** 23.05 340 *e*P P 06 50 27.2 -0.3
PV01 *ep*P 06 50 36.4
109C **Camp Elliot, M** 23.12 318 ⇑P P 06 50 28.4 +0.1
baz=23
TKL **Tuckaleechee C** 23.17 32 P P 06 50 27.2 -1.6
comp=Z,16nm,1.1s,mb4.4,baz=212,slow=9.3,SNR=8.6
TKL LR LR 07 03 17.9
comp=Z,91nm,19.2s,MS3.2,baz=273,slow=46
BELC **Belle Mtn.** 23.17 321 ⇓P P 06 50 28.9 0.0
baz=23
PFO **Pinyon Flat Ob** 23.18 320 ⇑P P 06 50 29.0 0.0
baz=23
COW **Cow Castle Cre** 23.30 41 *e*P P 06 50 29.3 -0.9
USIN **University of** 23.37 23 *e*P P 06 50 29.5 -1.3
comp=Z,28nm,0.8s,mb4.7
NHSC **New Hope** 23.45 42 *e*P P 06 50 31.2 -0.6
comp=Z,60nm,0.9s,mb5.0
U14A **Mt Trumbull** 23.46 330 P P 06 50 32.2 +0.4
baz=23,SNR=5.3
GMRC **Granite Mounta** 23.52 323 ⇓P P 06 50 32.8 +0.3
baz=24
SMCO **Snowmass** 23.54 344 *e*P P 06 50 32.9 +0.3
comp=Z,21nm,1.1s,mb4.5
SMCO *ep*P 06 50 41.0
JSC **Jenkinsville** 23.56 39 *e*P P 06 50 33.2 +0.4
T15A **Red Dirt Ranch** 23.57 332 ⇑P P 06 50 32.8 0.0
baz=24,SNR=7.6
MURC **Murrieta** 23.64 319 ⇓P P 06 50 33.5 0.0
baz=24
V12A **Nelson** 23.77 326 P P 06 50 34.6 0.0
baz=24,SNR=5.1
ISCO **Idaho Springs** 23.80 347 *e*P P 06 50 35.5 +0.5
comp=Z,32nm,1.6s,mb4.5
ISCO *ep*P 06 50 43.1
ISCO **Idaho Springs** 23.80 347 *e*P P 06 50 35.5 +0.6
ISCO *e**PP 06 50 43.1
ISCO pmax pmax
comp=Z,32nm,1.6s,mb4.5
U13A **Pakoon Wash** 23.84 329 ⇑P P 06 50 35.3 0.0
baz=24
T14A **Hurricane** 23.93 331 ⇓P P 06 50 36.3 +0.2
baz=24
HEC **Hector,Ludlow** 23.95 322 ⇑P P 06 50 36.2 -0.1
baz=24
TZTN **Tazewell** 23.97 31 *e*P P 06 50 36.2 -0.3
comp=Z,40nm,1.4s,mb4.7
WCI **Wyandotte Cave** 24.12 25 *e*P P 06 50 37.4 -0.5
comp=Z,26nm,0.8s,mb4.7
WCI **Wyandotte Cave** 24.12 25 *e*P P 06 50 37.4 -0.5
WCI pmax pmax
comp=Z,26nm,0.8s,mb4.7
TUQ **Turquoise Mtn.** 24.15 324 ⇑P P 06 50 38.4 +0.3
baz=24
V11A **Goodsprings** 24.17 325 ⇓P P 06 50 38.3 0.0
baz=24
T13A **Saint George** 24.29 330 ⇑P P 06 50 39.3 -0.1
baz=24,SNR=8.9
SHPR **Sheep Range** 24.52 327 *e*P P 06 50 41.4 -0.2
S14A **Cedar City** 24.54 332 ⇑P P 06 50 42.0 +0.4
baz=24
GSC **Goldstone** 24.56 323 ⇓P P 06 50 41.7 -0.2
baz=24
SRU **San Rafael** 24.60 338 *e*P P 06 50 42.1 -0.2
comp=Z,26nm,0.8s,mb4.8
SRU **San Rafael** 24.60 338 *e*P P 06 50 42.1 -0.1
SRU pmax pmax
comp=Z,26nm,0.8s,mb4.8
SHOC **Shoshone** 24.68 324 ⇓P P 06 50 43.0 0.0
baz=25
ARUT **Antelope Range** 24.68 331 *e*P P 06 50 43.6 +0.6
S13A **Holt Ranch, En** 24.71 330 ⇑P P 06 50 43.1 -0.1
baz=25
MSU **Marysvale** 24.73 334 *e*P P 06 50 44.6 +1.2
MSU *ep*P 06 50 52.6
BLO **Bloomington** 24.85 23 *e*P P 06 50 44.1 -0.5
comp=Z,15nm,0.8s,mb4.6
BLO **Bloomington** 24.85 23 *e*P P 06 50 44.1 -0.4
BLO pmax pmax
comp=Z,15nm,0.8s,mb4.6
TMUT **Trail Mountain** 25.02 337 *e*P P 06 50 46.0 0.0
U10A **Ash Meadows, A** 25.09 325 ⇓P P 06 50 47.1 +0.4
baz=25
T11A **Corn Creek, Al** 25.11 328 ⇑P P 06 50 46.9 0.0
baz=25,SNR=5.2
HDIL **Hopedale** 25.19 17 *e*P P 06 50 47.0 -0.5
LRMC **Laurel Mountai** 25.20 322 ⇓P P 06 50 47.8 +0.1
baz=25,SNR=7.4
PHWY **Pilot Hill** 25.21 348 *e*P P 06 50 47.6 -0.1
FURC **Furnace Creek,** 25.42 324 ⇓P P 06 50 49.9 +0.2
baz=25
TPNV **Topopah Spring** 25.43 326 *e*P P 06 50 50.6 +0.8
comp=Z,15nm,1.0s,mb4.5
TPNV *ep*P pP 06 50 59.5 +1.7
TPNV *es*P sP 06 51 03.8 +2.6
TPNV **Topopah Spring** 25.43 326 *e*P P 06 50 50.6 +0.8
TPNV *e**PP pP 06 50 59.5 +1.7
TPNV *e**SP sP 06 51 03.8 +2.6
TPNV pmax pmax
comp=Z,15nm,1.0s,mb4.5
TPNV **Topopah Spring** 25.43 326 ⇑P P 06 50 49.8 0.0
baz=25
MPMC **Manual Prospec** 25.48 323 ⇑P P 06 50 50.5 +0.2
baz=25,SNR=5.7
ARVC **Arvin** 25.66 320 ⇓P P 06 50 52.7 +0.8
baz=26
R12A **Pony Springs,** 25.66 330 ⇓P P 06 50 52.3 +0.4
baz=26,SNR=5.9
S11A **Rachel** 25.69 328 ⇑P P 06 50 52.7 +0.6
baz=26
DAC **Darwin (Calif)** 25.70 323 *e*P P 06 50 52.3 +0.1
SBC **Santa Barbara** 25.79 317 ⇓P P 06 50 53.5 +0.4
baz=26
ISA **Isabella** 25.80 321 ⇑P P 06 50 53.5 +0.4
baz=26,SNR=5.7
MPU **Maple Canyon** 25.81 337 *e*P P 06 50 53.0 -0.2
comp=Z,10nm,0.8s,mb4.4
MPU *ep*P pP 06 51 00.1 -1.1
NLU **North Lily Min** 25.92 336 *e*P P 06 50 54.9 +0.7
NLU *ep*P pP 06 51 01.8 -0.5
NLU *es*P sP 06 51 06.6 +1.0
ELN **Prospectdale** 25.95 34 *e*P P 06 50 54.6 +0.1
ELN *ep*P pP 06 51 02.5 0.0
RWWY **Rawlins** 25.97 345 *e*P P 06 50 52.3 -2.3
comp=Z,40nm,1.4s,mb4.8
DAU **Daniels Canyon** 26.02 338 *e*P P 06 50 55.5 +0.4
BLA **Blacksburg** 26.12 35 *e*P P 06 50 56.0 -0.1
comp=Z,33nm,1.1s,mb4.8
BLA **Blacksburg** 26.12 35 *e*P P 06 50 56.0 0.0
BLA pmax pmax
comp=Z,33nm,1.1s,mb4.8
R11A **Troy Canyon, C** 26.15 329 ⇓P P 06 50 56.7 +0.4
baz=26,SNR=7.7
JLU **Jordanelle** 26.25 338 *e*P P 06 50 57.3 +0.1
JLU *ep*P pP 06 51 04.5 -0.7
Q12A **Willow Creek R** 26.34 331 ⇓P P 06 50 58.3 +0.3
baz=26
S10A **Tonopah Range,** 26.34 327 ⇑P P 06 50 58.4 +0.4
baz=26,SNR=6.8
DUG **Dugway** 26.42 335 *e*P P 06 50 59.0 +0.2
comp=Z,7.7nm,1.0s,mb4.2
DUG *ep*P pP 06 51 06.7 0.0
DUG *es*P sP 06 51 09.9 -0.1
DUG **Dugway** 26.42 335 *e*P P 06 50 59.0 +0.3
DUG *e**PP pP 06 51 06.7 0.0
DUG *e**SP sP 06 51 10.0 -0.1
DUG pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
DUG **Dugway** 26.42 335 ⇑P P 06 50 59.0 +0.3
baz=26
CTU **Camp Tracy** 26.44 337 *e*P P 06 50 59.1 +0.2
comp=Z,7.9nm,0.8s,mb4.3
R10A **Warm Springs** 26.47 328 ⇓P P 06 50 59.6 +0.5
baz=26
SMMC **Simmler** 26.51 318 ⇓P P 06 50 59.7 +0.1
baz=26
S09A **Goldfield** 26.53 326 ⇓P P 06 50 59.7 0.0
baz=26
Q11A **Duckwater** 26.57 330 ⇓P P 06 51 00.3 +0.2
baz=26
P12A **McGill** 26.72 331 ⇑P P 06 51 01.4 0.0
baz=27
HELL **Mitchell Peak,** 26.81 322 ⇑P P 06 51 02.5 +0.2
baz=27
S08C **White Mtn Res** 26.89 324 ⇓P P 06 51 03.6 +0.7
baz=27
Q10A **Clear Creek Ra** 26.93 329 ⇓P P 06 51 03.8 +0.5
baz=27
ECSD **EROS,Sioux Fal** 27.04 3 *e*P P 06 51 03.3 -1.0
comp=Z,9.5nm,0.9s,mb4.3
N14A **Grayback Hills** 27.13 336 ⇓P P 06 51 05.7 +0.6
baz=27
BGU **Big Grassy Mou** 27.13 336 *e*P P 06 51 05.3 +0.2
BGU *ep*P pP 06 51 12.6 -0.5
HWUT **Hardware Ranch** 27.18 339 *e*P P 06 51 05.9 +0.3
comp=Z,11nm,1.0s,mb4.3
HWUT *ep*P pP 06 51 12.9 -0.7
HWUT *es*P sP 06 51 17.4 +0.4
ACSO **Alum Creek Sta** 27.20 27 *e*P P 06 51 05.0 -0.8
comp=Z,15nm,0.7s,mb4.6
O12A **Currie** 27.29 333 ⇓P P 06 51 07.0 +0.4
baz=27
KCC **Kaiser Creek** 27.42 323 ⇑P P 06 51 07.9 +0.2
baz=27
T06C **Millerton Lake** 27.43 322 ⇑P P 06 51 07.9 0.0
baz=27
R08A **Mina** 27.46 326 ⇓P P 06 51 08.0 -0.1
baz=27
P10A **Eureka** 27.57 330 ⇓P P 06 51 09.5 +0.4
baz=28
O11A **Cowboy Ranch,** 27.59 331 ⇓P P 06 51 09.7 +0.4
baz=28
BW06 **Boulder Array** 27.59 343 *e*P P 06 51 09.0 -0.2
comp=Z,22nm,1.2s,mb4.7
PDAR **Pinedale Array** 27.59 343 P P 06 51 08.9 -0.3
comp=Z,9.3nm,1.1s,mb4.3,baz=144,slow=9.0,SNR=39
PDAR PcP PcP 06 54 25.1 -1.3
comp=Z,0.5nm,0.6s,baz=134,slow=5.3,SNR=3.6
PDAR LR LR 07 03 29.0
comp=Z,233nm,20.6s,MS3.7,baz=171,slow=39
NVAR **Mina Array Bea** 27.62 326 P P 06 51 10.1 +0.5
comp=Z,4.4nm,0.7s,mb4.2,baz=142,slow=11,SNR=16
NVAR PcP PcP 06 54 26.1 -0.5
comp=Z,0.7nm,0.8s,baz=148,slow=2.8,SNR=3.1
U04C **Hernandez Rese** 27.67 319 ⇓P P 06 51 10.2 +0.2
baz=28
RSSD **Black Hills** 27.73 352 *e*P P 06 51 09.6 -0.8
Q08A **Gabbs** 27.74 327 ⇑P P 06 51 11.3 +0.7
baz=28
M14A **Sheep Mountain** 27.75 336 P P 06 51 11.3 +0.7
baz=28,SNR=12
HVU **Hansel Valley** 27.77 337 *e*P P 06 51 08.2 -2.6
comp=Z,8.0nm,0.8s,mb4.4
HVU *ep*P pP 06 51 18.5 -0.4
HVU **Hansel Valley** 27.77 337 *e*P P 06 51 08.2 -2.6
HVU *e**PP pP 06 51 18.5 -0.4
HVU pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
N12A **Clover Valley,** 27.90 333 ⇓P P 06 51 12.5 +0.5
baz=28
M13A **Montello** 27.95 335 ⇑P P 06 51 12.8 +0.3
baz=28
AHID **Auburn Hatcher** 28.06 340 *e*P P 06 51 12.4 -1.0
comp=Z,4.3nm,0.9s,mb4.1
AHID *ep*P pP 06 51 20.6 -0.8
MCWV **Mont Chateau** 28.23 32 *e*P P 06 51 15.2 +0.2
comp=Z,16nm,0.9s,mb4.7
M12A **Wells** 28.31 334 ⇓P P 06 51 15.4 -0.3
baz=28
R06C **Coleville** 28.32 324 ⇑P P 06 51 15.4 -0.4
baz=28
O09A **Fish Creek Ran** 28.35 329 ⇑P P 06 51 15.8 -0.2
baz=28
L13A **Double Diamond** 28.48 336 ⇑P P 06 51 17.6 +0.5
baz=28,SNR=7.2
SDV **Santo Domingo** 28.50 102 *e*P P 06 51 18.9 +1.3
comp=Z,3.9nm,0.8s,mb4.1
SDV **Santo Domingo** 28.50 102 P P 06 51 19.1 +1.4
comp=Z,3.9nm,0.8s,mb4.1,baz=246,slow=5.7,SNR=5.8
SDV LR LR 07 02 38.7
comp=Z,98nm,20.7s,MS3.4,baz=10,slow=36
REDW **Red Top Meadow** 28.52 341 *e*P P 06 51 17.6 +0.1
comp=Z,21nm,1.3s,mb4.7
CBN **Corbin** 28.53 37 *e*P P 06 51 14.8 -2.9
comp=Z,34nm,0.3s,mb5.5
K14A **Jones Ranch, D** 28.58 337 P P 06 51 18.6 +0.5
baz=28,SNR=10
TPAW **Teton Pass** 28.67 341 *e*P P 06 51 19.4 +0.6
comp=Z,23nm,1.4s,mb4.7
LOHW **Long Hollow** 28.67 342 *e*P P 06 51 19.2 +0.3
comp=Z,16nm,0.8s,mb4.8
LOHW *ep*P pP 06 51 26.4 -0.5
M11A **Holland Ranch,** 28.70 333 ⇓P P 06 51 19.2 +0.1
baz=29
MOOW **Moose Ponds** 28.84 342 *e*P P 06 51 20.4 +0.1
comp=Z,6.1nm,0.9s,mb4.3
MOOW *ep*P pP 06 51 28.3 -0.1
MOOW *es*P sP 06 51 32.4 +0.6
K13A **Stover Farm, H** 29.01 336 ⇓P P 06 51 22.0 +0.1
baz=29,SNR=7.7
O07A **Toulon** 29.19 327 ⇓P P 06 51 23.4 -0.1
baz=29
L11A **Cat Creek Ranc** 29.28 334 ⇑P P 06 51 24.6 +0.3
baz=29
K12A **Draper Farm, C** 29.32 335 ⇑P P 06 51 24.6 0.0
baz=29,SNR=5.6
M09A **Marrel Ranch,** 29.45 331 ⇓P P 06 51 25.9 +0.1
baz=29
LKWY **Lake** 29.49 343 P P 06 51 25.0 -1.0
comp=Z,6.2nm,1.0s,mb4.3
LKWY **Lake** 29.49 343 P P 06 51 25.0 -1.1
LKWY pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
P05C **Yuba Gap, Truc** 29.51 324 ⇑P P 06 51 26.3 -0.1
baz=29
L10A **Juniper Basin** 29.52 333 ⇑P P 06 51 26.6 +0.2
baz=29
J13A **Cove Ranch, Pi** 29.68 337 P P 06 51 28.3 +0.5
baz=30,SNR=7.6
RLMT **Red Lodge** 29.70 345 *e*P P 06 51 28.3 +0.3
comp=Z,9.7nm,0.7s,mb4.6
RLMT *ep*P pP 06 51 35.8 -0.3
YNR **Norris Junctio** 29.70 343 *ep*P pP 06 51 36.3 +0.3
BEKR **Beckwourth** 29.77 325 ⇓P P 06 51 28.8 +0.2
baz=30
J12A **Stokes Ranch,** 29.91 336 ⇓P P 06 51 30.6 +0.7
baz=30
HLID **Hailey** 29.91 337 *e*P P 06 51 30.3 +0.4
comp=Z,7.1nm,1.0s,mb4.3
HLID *ep*P pP 06 51 37.5 -0.4
HLID **Hailey** 29.91 337 ⇓P P 06 51 30.0 +0.1
baz=30,SNR=7.5
N06A **Buffalo Meadow** 30.12 327 ⇓P P 06 51 31.8 +0.1
baz=30
O05C **Quincy** 30.14 325 ⇓P P 06 51 32.2 +0.3
baz=30
ORV **Oroville** 30.19 324 ⇓P P 06 51 32.4 0.0
baz=30
K10A **MacKenzie Ranc** 30.26 333 ⇑P P 06 51 33.1 +0.2
baz=30
MFID **Camas Ranch** 30.34 335 ⇑P P 06 51 34.0 +0.3
baz=30
L08A **Fields** 30.46 331 ⇑P P 06 51 34.9 +0.2
baz=30
MCMT **McKenzie Canyo** 30.47 340 *e*P P 06 51 36.0 +1.2
MCMT *ep*P pP 06 51 43.2 +0.4
O04C **Chester** 30.48 325 ⇓P P 06 51 35.2 +0.3
baz=30
GLMI **Grayling** 30.50 20 *e*P P 06 51 34.7 -0.4
K09A **Rome** 30.57 332 ⇑P P 06 51 35.6 -0.1
baz=30
G15A **Dillon** 30.66 341 ⇓P P 06 51 36.5 +0.1
baz=31
H13A **Challis** 30.72 338 ⇓P P 06 51 37.3 +0.3
baz=31,SNR=7.8
M06C **Likely Place G** 30.78 327 ⇑P P 06 51 37.9 +0.3
baz=31
L07A **Adell** 30.81 329 ⇓P P 06 51 37.6 -0.2
baz=31
BOZ **Bozeman (W)** 30.83 342 *e*P P 06 51 37.8 -0.1
comp=Z,6.3nm,0.8s,mb4.5
BOZ *ep*P pP 06 51 45.5 -0.5
BOZ **Bozeman (W)** 30.83 342 *e*P P 06 51 37.8 -0.1
BOZ *e**PP pP 06 51 45.5 -0.5
BOZ pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BOZ **Bozeman (W)** 30.83 342 ⇑P P 06 51 37.9 0.0
baz=31
DLMT **Dillon** 30.86 341 *e*P P 06 51 39.2 +1.0
comp=Z,16nm,0.9s,mb4.8
DLMT *ep*P pP 06 51 46.5 +0.1
H12A **Diamond D Ranc** 30.92 337 P P 06 51 39.5 +0.7
baz=31,SNR=12
K08A **Mann Creek Ran** 30.95 331 ⇑P P 06 51 39.4 +0.4
baz=31
ATAH **Atahualpa** 30.98 138 LR LR 07 01 41.9
comp=Z,97nm,19.1s,MS3.5,baz=140,slow=31
G14A **Jackson** 31.04 340 P P 06 51 40.3 +0.5
baz=31,SNR=11
J09A **Fry Pan Ranch,** 31.10 333 ⇑P P 06 51 40.7 +0.3
baz=31
G13A **Cobalt** 31.17 339 P P 06 51 41.5 +0.6
baz=31,SNR=7.0
MOD **Modoc** 31.20 328 ⇓P P 06 51 41.3 0.0
baz=31
LRM **Limekiln Ridge** 31.23 341 *e*P P 06 51 42.1 +0.7
F15A **Butte** 31.26 341 P P 06 51 42.5 +0.8
baz=31,SNR=5.6
K07A **Rock Creek Ran** 31.27 330 ⇓P P 06 51 42.1 +0.2
baz=31
J08A **Circle Bar Ran** 31.43 332 ⇓P P 06 51 43.5 +0.2
baz=31
H11A **Donnelly** 31.49 336 P P 06 51 44.1 +0.3
baz=31,SNR=7.3
I09A **Lost Marbles R** 31.60 333 ⇑P P 06 51 45.1 +0.4
baz=32
AGMN **Agassiz Refuge** 31.64 4 *e*P P 06 51 44.1 -0.9
comp=Z,9.7nm,0.7s,mb4.7
AGMN *ep*P pP 06 51 51.2 -1.9
H10A **Noah's Angus R** 31.69 335 ⇓P P 06 51 45.5 0.0
baz=32
F13A **Darby** 31.81 339 P P 06 51 46.5 -0.1
baz=32,SNR=8.4
E15A **Deer Lodge** 31.83 342 ⇑P P 06 51 46.8 0.0
baz=32,SNR=7.0
HRY **Holter Researc** 31.86 343 *e*P P 06 51 46.8 -0.1
DGMT **Dagmar** 32.03 353 *e*P P 06 51 48.2 -0.2
E14A **Clinton** 32.09 341 ⇓P P 06 51 49.3 +0.3
baz=32,SNR=5.7
E13A **Victor** 32.34 340 P P 06 51 51.0 -0.2
baz=32,SNR=5.4
D15A **Lincoln** 32.35 342 ⇓P P 06 51 51.3 0.0
baz=32
H08A **Prairie City** 32.44 333 ⇓P P 06 51 51.8 -0.3
baz=32
CHMT **Chamberlain Mo** 32.46 341 *e*P P 06 51 52.3 0.0
EGMT **Eagleton** 32.55 346 *e*P P 06 51 53.4 +0.4
comp=Z,19nm,1.5s,mb4.8
EGMT *ep*P pP 06 52 00.3 -0.8
EGMT **Eagleton** 32.55 346 ⇑P P 06 51 53.1 +0.1
baz=32
F11A **Grangeville** 32.55 337 ⇑P P 06 51 53.1 +0.1
baz=32
MSO **Missoula** 32.60 341 *e*P P 06 51 53.3 -0.2
comp=Z,4.8nm,0.8s,mb4.5
MSO *ep*P pP 06 52 00.9 -0.6
D14A **Greenough** 32.69 341 ⇓P P 06 51 54.2 0.0
baz=33,SNR=6.4
H07A **Lands Inn, Kim** 32.89 332 ⇑P P 06 51 55.9 -0.1
baz=33
E11A **Bogner Ranch,** 32.96 338 P P 06 51 55.9 -0.7
baz=33,SNR=8.5
D13A **Huson** 33.00 340 P P 06 51 56.8 -0.2
baz=33,SNR=12
F10A **Beach Ranch, E** 33.02 336 P P 06 51 57.1 -0.1
baz=33,SNR=6.3
F09A **S2 Ranch, Elgi** 33.08 335 ⇓P P 06 51 57.3 -0.4
baz=33
G08A **Pilot Rock** 33.17 334 ⇑P P 06 51 57.9 -0.6
baz=33
D12A **Red Ives Fores** 33.26 339 ⇓P P 06 51 59.1 -0.1
baz=33
ULM **Lac du Bonnet** 33.58 3 P P 06 52 00.2 -1.8
ULM LR LR 07 06 43.1
ULM **Lac du Bonnet** 33.58 3 P P 06 52 00.2 -1.8
comp=Z,3.5nm,0.9s,mb4.3,baz=192,slow=12,SNR=6.5
ULM LR LR 07 06 43.1
comp=Z,99nm,21.4s,MS3.5,baz=167,slow=38
NEW **Newport** 34.91 338 LR LR 07 08 15.1
comp=Z,166nm,19.7s,MS3.8,baz=331,slow=39
C09A **Chrisman Ranch** 34.94 337 ⇓P P 06 52 13.9 0.0
baz=35
A12A **Yaak River Ran** 35.00 341 ⇑P P 06 52 14.2 -0.1
baz=35
B09A **Rice** 35.41 338 ⇑P P 06 52 17.7 -0.2
baz=35
D06A **Cle Elum** 35.48 334 ⇑P P 06 52 18.8 +0.3
baz=35
C07A **Waterville** 35.55 335 ⇓P P 06 52 19.0 -0.1
baz=36
B08A **Colville Reser** 35.80 336 ⇓P P 06 52 21.0 -0.3
baz=36
C05A **Tolt Reservoir** 36.23 334 ⇓P P 06 52 24.3 -0.6
baz=36
A08A **Turner Farm, O** 36.27 337 ⇑P P 06 52 24.8 -0.5
baz=36
FFC **Flin Flon** 38.06 357 *e*P P 06 52 39.5 -0.8
comp=Z,11nm,0.9s,mb4.6
FFC *ep*P pP 06 52 46.9 -1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FFC	**Flin Flon**	**38.06**	**357**	*e*P	**P**	**06 52 39.6**	**-0.7**
FFC				*e**PP	pP	06 52 46.9	-1.6
FFC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
EDM	**Edmonton**	**38.22**	**346**	*e*P	**P**	**06 52 41.0**	**-0.7**
EDM				*e*pP	pP	06 52 47.9	-2.0
FCC	**Fort Churchill**	**42.17**	**4**	*e*P	**P**	**06 53 13.6**	**-0.8**
	comp=Z,46nm,2.0s,mb4.8						
FCC	**Fort Churchill**	**42.17**	**4**	*e*P	**P**	**06 53 13.6**	**-0.8**
FCC				pmax	pmax		
	comp=Z,46nm,2.0s,mb4.8						
BBB	**Bella Bella**	**42.34**	**333**	LR	LR	07 13 17.3	
	comp=Z,95nm,18.7s,MS3.7,baz=133,slow=40						
SCHQ	**Schefferville**	**45.33**	**26**	*e*P	**P**	**06 53 39.1**	**-0.7**
	comp=Z,19nm,1.0s,mb4.9						
SCHQ	**Schefferville**	**45.33**	**26**	P	**P**	**06 53 39.5**	**-0.3**
	comp=Z,14nm,0.9s,mb4.8,baz=224,slow=7.1,SNR=24						
SCHQ				LR	LR	07 17 08.1	
	comp=Z,108nm,19.2s,MS3.8,baz=62,slow=42						
YKA	**Yellowknife Ar**	**47.11**	**350**	P	**P**	**06 53 52.3**	**-1.3**
	comp=Z,5.9nm,0.9s,mb4.5,baz=159,slow=7.3,SNR=49						
YKA				LR	LR	07 15 32.0	
	comp=Z,94nm,18.4s,MS3.8,baz=270,slow=38						
YKW3	**Yellowknife Ar**	**47.17**	**350**	*e*P	**P**	**06 53 53.2**	**-1.0**
SIV	**San Ignacio**	**49.37**	**129**	P	**P**	**06 54 10.4**	**-1.4**
	comp=Z,1.8nm,0.8s,mb4.1,baz=313,slow=11,SNR=9.6						
EGAK	**Eagle**	**55.88**	**340**	*e*P	**P**	**06 54 57.7**	**-1.6**
INK	**Inuvik**	**56.12**	**345**	*e*P	**P**	**06 55 00.3**	**-0.7**
	comp=Z,234nm,0.9s						
INK				*e*sP	sP	06 55 11.6	-1.1
CFAA	**Coronel Fontan**	**56.24**	**149**	P	**P**	**06 55 02.6**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=320,slow=4.4,SNR=4.6						
RES	**Resolute Bay**	**58.07**	**1**	*e*P	**P**	**06 55 13.2**	**-1.4**
	comp=Z,56nm,0.7s						
COLA	**College**	**58.27**	**338⇑**	*e*P	**P**	**06 55 15.7**	**-0.5**
SFJD	**Kangerlussuaq**	**59.11**	**20**	LR	LR	07 21 11.0	
	comp=Z,167nm,19.3s,MS4.2,baz=180,slow=36						
PPT	**Papeete**	**60.49**	**238**	LR	LR	07 14 20.4	
	comp=Z,115nm,18.3s,MS4.0,baz=57,slow=29						
TNA	**Tin City**	**66.34**	**335**	*e*P	**P**	**06 56 10.1**	**-0.2**
	comp=Z,4.6nm,1.0s,mb4.5						
BILL	**Bilibino**	**76.52**	**337**	*i* P	**P**	**06 57 10.8**	**-0.8**
BILL				*e*	pP	06 57 19.7	-0.7
BILL				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
NOA	**NORSAR Array B**	**84.87**	**27**	P	**P**	**06 57 55.6**	**-0.8**
	comp=Z,1.0nm,0.8s,mb4.0,baz=303,slow=5.0,SNR=3.2						
NOA				LR	LR	07 39 39.0	
	comp=Z,38nm,19.6s,MS3.8,baz=125,slow=38						
TIXI	**Tiksi**	**86.22**	**346**	*e*P	**P**	**06 58 01.9**	**-1.1**
TIXI	**Tiksi**	**86.22**	**346⇓**	*e*P	**P**	**06 58 01.7**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
FINES	**FINESS Array B**	**90.76**	**23**	LR	LR	07 41 20.0	
	comp=Z,77nm,18.4s,MS4.2,baz=19,slow=37						
TORD	**Torodi Ar. Bea**	**96.06**	**74**	LR	LR	07 39 09.6	
	comp=Z,57nm,20.8s,MS4.0,baz=320,slow=34						
BJI	**Beijing**	**114.86**	**331**	PKP	PKiKP	07 04 01.0	-1.9
BJI				SKS	SKSdf	07 11 11.5	-1.8
BJI				LR	LR		
	comp=Z,65nm,27.1s,MS4.1						
BJI	**Beijing**	**114.86**	**331**	PKIKP	PKiKP	07 04 01.3	-1.6
BJI						07 11 11.5	
BJI				SS	SS	07 20 51.4	-1.9
BJI				MLR	MLR		
	comp=Z,70nm,27.1s,MS4.1						
HHC	**Hu-ho-hao-te**	**116.22**	**335**	*e*PKP	PKPdf	07 04 04.9	-0.6
HHC				PP	PP	07 05 14.3	+4.4
HHC				PKS		07 07 40.0	
HHC				SKS	SKSdf	07 11 12.4	-3.5
HHC				PP	PP		
	comp=Z,174nm,7.5s						
HHC				LR	LR		
	comp=N,197nm,13.1s,MS5.0						
HHC				LR	LR		
	comp=E,152nm,15.8s,MS5.0						
HHC				LR	LR		
	comp=Z,154nm,14.4s,MS4.8						
MKAR	**Makanchi Array**	**116.83**	**359**	PKP	PKPdf	07 04 04.3	-2.1
	comp=Z,0.2nm,0.6s,baz=342,slow=3.3,SNR=3.0						
WMQ	**Urumqi**	**119.52**	**355**	*e*PKP	PKPdf	07 04 12.0	+0.3
WMQ				PP	PP	07 05 38.0	+5.6
NJ2	**Nanjing**	**119.60**	**323**	*e*PKP	PKPdf	07 04 12.2	0.0
LZH	**Lanzhou**	**123.33**	**338**	*e*PKP	PKPdf	07 04 19.2	-0.1
LZH				LR	LR		
	comp=E,154nm,18.2s						
LZH				LR	LR		
	comp=Z,213nm,20.2s,MS4.8						
CD2	**Chengdu**	**127.97**	**335**	*e*PKP	PKPdf	07 04 27.9	-0.4
CD2				PP	PP		
	comp=Z,60nm,8.4s						
WRA	**Warramunga Arr**	**129.62**	**258**	PKP	PKPdf	07 04 28.9	-2.7
	comp=Z,1.6nm,0.9s,baz=86,slow=1.6,SNR=5.6						
ASAR	**Alice Springs**	**130.27**	**253**	PKP	PKPdf	07 04 30.7	-2.1
	comp=Z,0.6nm,0.9s,baz=107,slow=2.4,SNR=4.0						
GYA	**Guiyang**	**130.51**	**330**	*e*PDIF	Pdif	07 01 22.8	+0.2
GYA				PKP	PKPdf	07 04 32.9	-0.4
GYA				PP	PP	07 06 49.8	+3.3
GYA				PP	PP		
	comp=Z,90nm,8.4s						
KMI	**Kunming**	**133.47**	**333**	PKP	PKPdf	07 04 38.9	0.0

IDC 01 06:46:07.3±1.2**,043S**×**12263E,h0**^{km}**,mb3.4**/4**,mb1 3.6**/4**, mb1mx3.5**/16**,mbtmp3.5**/4**,Error ellipse: s-maj=147.9km s-min=21.5km az=64.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.53**	**150**	P	P	06 51 09.0	+0.1
	0.8nm,0.8s,baz=330,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**25.56**	**155**	P	P	06 51 37.9	-0.1
	0.3nm,0.4s,baz=344,slow=14,SNR=5.0						
SONM	**Songino Array**	**50.11**	**346**	P	P	06 55 05.5	+1.4
	0.6nm,0.7s,baz=148,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**58.78**	**329**	P	P	06 56 06.7	-0.6
	0.3nm,0.3s,baz=125,slow=8.4,SNR=14						

*ISCJB **01** 06:46:50.9±0.6, 3835N±003×3924E±003, h3^{km}±6^{km}, Error ellipse: s-maj=5.1km s-min=3.7km az=175.1*
*CSEM **01** 06:46:50.4±0.1, 3839N×3922E, h5^{km}, MD3.2, Error ellipse: s-maj=1.8km s-min=1.4km az=159.0*
*ISK **01** 06:46:50.1, 3839N×3921E, h2^{km}, MD3.2*
*DDA **01** 06:46:51.9, 3836N×3926E, h5^{km}±3^{km}, Md3.2*
ISC 01 06:46:51.6±0.5**,3836N**±003×**3923E**±003**,h7**^{km}±4^{km}**,n20,** σ**0§85**/29**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**305**	*i* P	**Pg**	**06 46 56.1**	**-0.2**
ELZG				*i* S	**Sg**	**06 46 59.5**	**0.0**
PTK	**Pertek**	**0.54**	**13**	PG	**Pg**	**06 47 01.2**	**-0.9**
PTK				SG	**Sg**	**06 47 09.4**	**+0.2**
MALT	**Malatya**	**0.63**	**266**	PG	**Pg**	**06 47 02.7**	**-1.1**
MALT				SG	**Sg**	**06 47 12.3**	**+0.2**
MYA	**Malataya**	**0.63**	**267**	PG	**Pg**	**06 47 03.1**	**-0.7**
MYA				SG	**Sg**	**06 47 12.5**	**+0.4**
DIYA	**Diyarbakir**	**0.83**	**122**	*i* P	**Pg**	**06 47 07.3**	**-0.3**
DIYA				*i* S	**Sg**	**06 47 18.5**	**+0.2**
DIY	**Diyarbakir**	**0.91**	**120**	PG	**Pg**	**06 47 08.8**	**-0.4**
URFA	**Urfa**	**0.97**	**199**	PG	**Pg**	**06 47 10.5**	**+0.2**
ATAB	**Bozova**	**1.16**	**220**	*i* P	**Pg**	**06 47 14.6**	**+0.7**
ATAB				*i* S	**Sg**	**06 47 30.3**	**+1.4**
EZC	**Erzincan**	**1.46**	**18**	PN	**Pn**	**06 47 17.1**	**-1.3**
MARD	**Mardin**	**1.61**	**130**	*i* P	**Pn**	**06 47 20.0**	**-0.5**
MARD				*i* S	**Sn**	**06 47 40.0**	**-1.5**
BNGL	**BINGOL**	**1.61**	**68**	*i* P	**Pn**	**06 47 21.7**	**+1.2**
BNGL				*i* S	**Sn**	**06 47 44.0**	**+2.4**
GZT	**Gaziantep**	**1.66**	**233**	*i* P	**Pn**	**06 47 20.9**	**-0.2**
GZT				*i* S	**Sn**	**06 47 41.2**	**-1.4**
BTMT	**Batman**	**1.79**	**95**	PN	**Pn**	**06 47 21.8**	**-1.1**
GAZ	**Gaziantep**	**1.99**	**234**	PN	**Pn**	**06 47 25.9**	**+0.2**
EZM	**Erzurum**	**2.26**	**46**	*e*PN	**Pn**	**06 47 29.8**	**+0.3**
SVSK	**Karacayir**	**2.33**	**313**	*e*PN	**Pn**	**06 47 30.6**	**+0.2**
SIRT	**Sirnak**	**2.68**	**108**	*e*PN	**Pn**	**06 47 35.9**	**+0.7**
BNN	**Bunyan**	**2.70**	**281**	*e*PN	**Pn**	**06 47 35.8**	**+0.4**
KOZT	**Kozan**	**2.83**	**253**	*e*PN	**Pn**	**06 47 38.3**	**+1.0**
AGRB	**Hanur-Agry**	**3.17**	**66**	*e*PN	**Pn**	**06 47 42.5**	**+0.5**

IDC 01 06:47:29.4±2.2**,127N**×**12639E,h0**^{km}**,mb3.6**/3**,mb1 3.8**/3**, mb1mx3.5**/15**,mbtmp3.6**/3**,Error ellipse: s-maj=178.4km s-min=27.8km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.48**	**160**	P	P	06 52 29.2	-1.1
	1.4nm,0.5s,baz=338,slow=11,SNR=7.7						
ASAR	**Alice Springs**	**25.84**	**164**	P	P	06 53 04.0	+1.3
	0.5nm,0.6s,baz=344,slow=9.9,SNR=4.3						
MKAR	**Makanchi Array**	**59.38**	**326**	P	P	06 57 33.5	-0.1
	0.4nm,0.5s,baz=123,slow=8.8,SNR=3.6						

*NEIC **01** 06:50:12.3, 3890S×175.13E, h223^{km}, MG3.9(WEL), After WEL.*
WEL 01 06:50:11.8±0.3**,3889S**×**17513E,h226**^{km}±2^{km}**,ML3.9**/15**, 1C,Error ellipse: s-maj=3.2km s-min=2.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.30**	**128**	P	Pn	06 50 41.0	-0.3
TWVZ				S	S	06 51 03.3	-1.1
TWVZ	**Taurewa**	**0.30**	**128**	PN	Pn	06 50 41.0	-0.3
TWVZ				SN	S	06 51 03.3	-1.1
VRZ	**Vera Road**	**0.38**	**230**	*e*P	Pn	06 50 40.9	-0.6
VRZ	**Vera Road**	**0.38**	**230**	*e*PN	Pn	06 50 40.9	-0.6
VRZ				SN	S	06 51 04.4	-0.4
WTVZ	**West Tongariro**	**0.43**	**123**	P	Pn	06 50 41.5	-0.1
WTVZ				S	S	06 51 03.7	-1.2
WTVZ	**West Tongariro**	**0.43**	**123**	PN	Pn	06 50 41.5	-0.1
WTVZ				SN	S	06 51 03.7	-1.2
PKVZ	**Pokaka**	**0.44**	**158**	PN	Pn	06 50 41.5	-0.1
KATZ	**Kakaramea**	**0.45**	**102**	P	Pn	06 50 41.4	-0.3
KATZ	**Kakaramea**	**0.45**	**102**	PN	Pn	06 50 41.4	-0.3
KRVZ	**Karewarewa**	**0.45**	**118**	PN	Pn	06 50 41.7	0.0
KRVZ				SN	S	06 51 04.1	-0.9
WPVZ	**Whakapapa**	**0.46**	**135**	P	Pn	06 50 41.8	+0.1
WPVZ	**Whakapapa**	**0.46**	**135**	PN	Pn	06 50 41.8	+0.1
WPVZ				SN	S	06 51 04.4	-0.7
NGZ	**Ngauruhoe**	**0.47**	**129**	PN	Pn	06 50 41.8	+0.1
FWVZ	**Far West T-bar**	**0.49**	**139**	P	Pn	06 50 42.0	+0.2
FWVZ	**Far West T-bar**	**0.49**	**139**	PN	Pn	06 50 42.0	+0.2
OTVZ	**Oturere**	**0.50**	**124**	PN	Pn	06 50 42.0	+0.1
TRVZ	**Turoa**	**0.53**	**142**	PN	Pn	06 50 42.1	+0.2
TUVZ	**Tukino**	**0.56**	**134**	PN	Pn	06 50 42.2	+0.2
MTVZ	**Mangateitei**	**0.57**	**152**	⇑PN	Pn	06 50 42.0	0.0
WNVZ	**Wahianoa**	**0.57**	**141**	P	Pn	06 50 42.1	0.0
WNVZ	**Wahianoa**	**0.57**	**141**	PN	Pn	06 50 42.1	+0.1
RAEZ	**Rainy Point**	**0.70**	**235**	P	Pn	06 50 42.2	-0.4
RAEZ	**Rainy Point**	**0.70**	**235**	PN	Pn	06 50 42.2	-0.4
MOVZ	**Moawhango**	**0.71**	**137**	P	Pn	06 50 42.3	-0.3
MOVZ	**Moawhango**	**0.71**	**137**	PN	Pn	06 50 42.3	-0.3
WAZ	**Wanganui**	**0.88**	**187**	PN	Pn	06 50 43.7	+0.2
NEZ	**North Egmont**	**0.89**	**244**	P	Pn	06 50 43.6	0.0
NEZ	**North Egmont**	**0.89**	**244**	PN	Pn	06 50 43.6	+0.1
PKE	**Pukeiti**	**0.94**	**250**	P	Pn	06 50 43.6	-0.3
PKE	**Pukeiti**	**0.94**	**250**	PN	Pn	06 50 43.6	-0.2
NRZ	**Ngariki Road**	**1.04**	**244**	P	Pn	06 50 44.3	-0.1
NRZ	**Ngariki Road**	**1.04**	**244**	PN	Pn	06 50 44.3	-0.1
BKZ	**Black Stump Fm**	**1.10**	**105**	P	Pn	06 50 44.4	-0.4
BKZ	**Black Stump Fm**	**1.10**	**105**	PN	Pn	06 50 44.4	-0.4
TSZ	**Takapari Road**	**1.34**	**152**	P	Pn	06 50 46.6	+0.1
TSZ	**Takapari Road**	**1.34**	**152**	PN	Pn	06 50 46.6	+0.1
URZ	**Urewera**	**1.67**	**69**	P	Pn	06 50 47.6	-1.7
URZ	**Urewera**	**1.67**	**69**	PN	Pn	06 50 47.6	-1.7
PXZ	**Pawanui**	**1.76**	**131**	PN	Pn	06 50 50.0	0.0
MRZ	**Mangatainoka R**	**1.81**	**169**	P	Pn	06 50 50.0	-0.4
MRZ	**Mangatainoka R**	**1.81**	**169**	PN	Pn	06 50 50.0	-0.4
MWZ	**Matawai**	**1.96**	**74**	P	Pn	06 50 50.5	-1.3
MWZ	**Matawai**	**1.96**	**74**	PN	Pn	06 50 50.5	-1.3
TIWZ	**Tintock**	**1.98**	**163**	PN	Pn	06 50 51.6	-0.4
KIW	**Kapiti Island**	**1.98**	**185**	P	Pn	06 50 51.4	-0.6
KIW	**Kapiti Island**	**1.98**	**185**	PN	Pn	06 50 51.4	-0.6
KNZ	**Kokohu**	**1.99**	**95**	P	Pn	06 50 51.5	-0.6
KNZ	**Kokohu**	**1.99**	**95**	PN	Pn	06 50 51.5	-0.6
BFZ	**Birch Farm**	**1.99**	**155**	P	Pn	06 50 51.6	-0.5
BFZ	**Birch Farm**	**1.99**	**155**	PN	Pn	06 50 51.6	-0.5
DUWZ	**D'Urville Isla**	**2.13**	**206**	PN	Pn	06 50 52.7	-0.8
CAW	**Cannon Point**	**2.22**	**181**	P	Pn	06 50 53.7	-0.7
CAW	**Cannon Point**	**2.22**	**181**	PN	Pn	06 50 53.7	-0.7
MTW	**Mount Morrison**	**2.29**	**173**	P	Pn	06 50 54.1	-1.0
MTW	**Mount Morrison**	**2.29**	**173**	PN	Pn	06 50 54.1	-0.9
MRW	**Makara Radio**	**2.37**	**188**	P	Pn	06 50 55.0	-0.8
MRW	**Makara Radio**	**2.37**	**188**	PN	Pn	06 50 55.0	-0.9
TCW	**Tory Channel**	**2.42**	**195**	P	Pn	06 50 55.7	-0.7
TCW	**Tory Channel**	**2.42**	**195**	PN	Pn	06 50 55.7	-0.7
SNZO	**South Karori**	**2.44**	**188**	P	Pn	06 50 55.6	-1.1
SNZO	**South Karori**	**2.44**	**188**	PN	Pn	06 50 55.6	-1.1
PAWZ	**Paruwai Farm**	**2.50**	**175**	PN	Pn	06 50 56.4	-0.9
BHW	**Baring Head**	**2.53**	**184**	P	Pn	06 50 56.3	-1.3
BHW	**Baring Head**	**2.53**	**184**	PN	Pn	06 50 56.3	-1.3
MSWZ	**Moikau Station**	**2.53**	**178**	P	Pn	06 50 56.6	-1.0
MSWZ	**Moikau Station**	**2.53**	**178**	PN	Pn	06 50 56.6	-1.0
TRWZ	**Traveller**	**2.55**	**171**	PN	Pn	06 50 56.9	-0.9
NNZ	**Nelson**	**2.69**	**209**	P	Pn	06 50 57.9	-1.4
NNZ	**Nelson**	**2.69**	**209**	PN	Pn	06 50 57.9	-1.4
TUWZ	**Tuamarina**	**2.70**	**199**	PN	Pn	06 50 58.4	-1.0
QRZ	**Quartz Range**	**2.79**	**225**	P	Pn	06 50 58.2	-2.2
QRZ	**Quartz Range**	**2.79**	**225**	PN	Pn	06 50 58.2	-2.2
MXZ	**Matakaoa Point**	**2.83**	**63**	P	Pn	06 50 59.2	-1.7
MXZ	**Matakaoa Point**	**2.83**	**63**	PN	Pn	06 50 59.2	-1.7
BSWZ	**Blackbirch Sta**	**2.99**	**198**	P	Pn	06 51 01.7	-0.9
BSWZ	**Blackbirch Sta**	**2.99**	**198**	PN	Pn	06 51 01.7	-0.9
THZ	**Tophouse**	**3.34**	**210**	P	Pn	06 51 04.8	-1.8
THZ	**Tophouse**	**3.34**	**210**	PN	Pn	06 51 04.8	-1.8
KHZ	**Kahutara**	**3.73**	**198**	P	Pn	06 51 09.8	-1.4
KHZ	**Kahutara**	**3.73**	**198**	PN	Pn	06 51 09.8	-1.4
DSZ	**Denniston Nort**	**3.83**	**221**	*e*P	Pn	06 51 09.7	-2.7
DSZ	**Denniston Nort**	**3.83**	**221**	PN	Pn	06 51 09.7	-2.7
LTZ	**Lake Taylor**	**4.46**	**208**	P	Pn	06 51 17.2	-2.8
LTZ	**Lake Taylor**	**4.46**	**208**	PN	Pn	06 51 17.2	-2.8
MQZ	**McQueen's Vall**	**5.17**	**200**	*e*P	Pn	06 51 25.7	-3.1
MQZ	**McQueen's Vall**	**5.17**	**200**	PN	Pn	06 51 25.7	-3.2
RPZ	**Rata Peaks**	**5.72**	**211**	PN	Pn	06 51 33.0	-2.8
FOZ	**Fox Glacier**	**6.22**	**220**	PN	Pn	06 51 37.4	-4.7
LBZ	**Lake Benmore**	**6.63**	**212**	*e*P	Pn	06 51 44.4	-2.9
LBZ	**Lake Benmore**	**6.63**	**212**	PN	Pn	06 51 44.4	-2.9
ODZ	**Otahua Downs**	**7.00**	**207**	*e*P	Pn	06 51 50.0	-2.1
ODZ	**Otahua Downs**	**7.00**	**207**	PN	Pn	06 51 50.0	-2.2

MEX 01 07:00:16.9±0.7**,1638N**×**9914W,h16**^{km}±36^{km}**,MD4.2, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.89**	**303**	*e*P	Pb	07 00 30.1	-3.8
ACX				*i* S	Sb	07 00 41.8	-3.9
PNIG	**Pinotepa**	**0.97**	**89**	*i* P	Pb	07 00 32.4	-2.9
PNIG				*i* S	Sb	07 00 43.1	-4.8
CAIG	**El Cayaco**	**1.27**	**302**	*e*P	Pn	07 00 37.1	-2.9
CAIG				*i* S	Sb	07 00 51.8	-4.8
MEIG	**Mezcala**	**1.60**	**343**	*i* P	Pn	07 00 41.0	-3.5
MEIG				*i* S	Sn	07 01 00.1	-4.9
UTMO	**Huajuapan**	**1.92**	**41**	*e*P	Pn	07 00 45.1	-3.8
UTMO				*i* S	Sn	07 01 08.3	-4.6
PLIG	**Platanillo**	**2.03**	**350**	*e*P	Pn	07 00 47.5	-2.9
PLIG				*i* S	Sn	07 01 11.1	-4.4
VHO	**Vista Hermosa**	**2.40**	**73**	*i* P	Pn	07 00 52.7	-2.9
VHO				*i* S	Sn	07 01 21.2	-3.5
OXX	**Oaxaca**	**2.41**	**73**	*e*P	Pn	07 00 50.0	-5.7
ZIIG	**Zihuatanejo**	**2.54**	**299**	*i* S	Sn	07 01 23.5	-4.5
TPIG	**Tehuac#an**	**2.64**	**40**	*i* P	Pn	07 00 57.1	-1.7
TPIG				*i* S	Sn	07 01 25.4	-5.2
SZVM	**Salazar**	**2.93**	**355**	*i* P	Pn	07 01 01.7	-1.2
SZVM				*i* S	Sn	07 01 32.7	-5.1
HUIG	**Huatulco**	**2.97**	**101**	*i* P	Pn	07 01 04.2	+0.7
HUIG				*i* S	Sn	07 01 34.2	-4.5
PTVM	**Pico Tres Padr**	**3.19**	**0**	*i* P	Pn	07 01 01.8	-4.7
PTVM				*i* S	Sn	07 01 39.4	-4.8
CMIG	**Matias Romero**	**4.13**	**80**	*i* P	Pn	07 01 17.8	-1.6
CMIG				*i* S	Sn	07 02 04.2	-3.3

*NEIC **01** 07:10:39.5, 1628N×99.19W, h17^{km}, MD3.8(MEX), After MEX.*
MEX 01 07:10:39.5±0.5**,1628N**×**9919W,h17**^{km}±556^{km}**,MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.91**	**310**	*i* P	Pb	07 10 53.5	-3.3
ACX				*i* S	Sb	07 11 04.9	-3.8
PNIG	**Pinotepa**	**1.03**	**84**	*i* P	Pb	07 10 55.8	-3.1
PNIG				*i* S	Sb	07 11 07.9	-4.2
CAIG	**El Cayaco**	**1.28**	**307**	*e*P	Pn	07 11 00.1	-2.6
CAIG				*i* S	Sb	07 11 15.3	-4.1
MEIG	**Mezcala**	**1.69**	**346**	*i* P	Pn	07 11 04.5	-3.7
MEIG				*i* S	Sn	07 11 24.4	-5.1
PLIG	**Platanillo**	**2.12**	**352**	*i* P	Pn	07 11 13.2	-1.1
PLIG				*i* S	Sn	07 11 36.2	-4.0
TPIG	**Tehuac#an**	**2.75**	**39**	*i* P	Pn	07 11 20.8	-2.1
TPIG				*i* S	Sn	07 11 52.5	-3.3
PPM	**Popocatepetl**	**2.82**	**11**	*i* P	Pn	07 11 21.4	-2.5
PPM				*i* S	Sn	07 11 54.9	-2.6

JMA 01 07:13:36.3±0.2**,3624N**×**14378E,h5**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**2.55**	**291**	P	Pn	07 14 19.1	+0.9
JFK	**Kawauchi**	**2.59**	**297**	P	Pn	07 14 19.7	+0.9
JFK				*e*S	Sn	07 14 52.0	+1.3
JHO	**Hitachi**	**2.62**	**279**	P	Pn	07 14 20.4	+1.2
JHO				*e*S	Sn	07 14 53.1	+1.8
JYT	**Yasato**	**2.90**	**271**	P	Pn	07 14 24.1	+1.0
JMK	**Ichinoseki**	**3.38**	**324**	P	Pn	07 14 31.4	+1.6
JAG	**Ashikaga**	**3.50**	**274**	P	Pn	07 14 33.0	+1.7
JAG				*e*S	Sn	07 15 14.7	+1.6
JRY	**Ryogami san**	**3.96**	**268**	P	Pn	07 14 39.6	+2.0

IDC 01 07:17:02.1±12.0**,322S**×**12717E,h296**^{km}±147^{km}**,mb2.9**/2**, mb1 3.2**/4**,mb1mx3.0**/17**,mbtmp3.0**/4**,Error ellipse: s-maj=101.7km s-min=43.7km az=61.0,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.87**	**186**	P	Pn	07 20 19.3	+0.2
	0.1nm,0.3s,baz=5.3,slow=14,SNR=2.1						
WRA	**Warramunga Arr**	**18.04**	**158**	P	P	07 20 51.8	-0.6
	0.7nm,0.3s,baz=335,slow=11,SNR=30						
ASAR	**Alice Springs**	**21.35**	**163**	P	P	07 21 26.8	+0.3
	0.6nm,0.3s,baz=347,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**63.54**	**327**	P	P	07 27 01.5	+0.1
	0.6nm,0.6s,baz=119,slow=8.3,SNR=4.3						

IDC 01 07:40:49.4±2.5**,284S**×**13680E,h0**^{km}**,mb3.5**/3**,mb1 3.8**/4**, mb1mx3.7**/12**,mbtmp3.6**/4**,ML3.9**/1**,Error ellipse: s-maj=110.8km s-min=25.1km az=83.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.17**	**188**	P	Pn	07 44 51.9	+1.0
	0.5nm,0.3s,baz=9.5,slow=12,SNR=30						
ASAR	**Alice Springs**	**20.90**	**187**	P	P	07 45 33.0	-0.5
	0.8nm,0.6s,baz=20,slow=11,SNR=20						
SONM	**Songino Array**	**57.04**	**336**	P	P	07 50 37.5	+0.4
	0.4nm,0.7s,baz=148,slow=3.8,SNR=3.0						
MKAR	**Makanchi Array**	**68.74**	**323**	P	P	07 51 55.0	0.0
	0.8nm,0.5s,baz=107,slow=7.6,SNR=12						

SKHL 01 07:50:34.5±0.6**,4842N**×**13316E,h10**^{km}**,mb3.6**/1**,Felt (II-III) at Golovino,Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**1.23**	**312**	*e*Pg	Pg	07 50 56.9	-1.3
KLR				*e*rx	rx	07 50 59.2	
KLR				*e*Sg	Sg	07 51 12.8	-1.4
HABR	**Khabarovsk**	**1.26**	**87**	*e*Pg	Pg	07 50 56.5	-2.2
HABR				*e*Sg	Sg	07 51 12.6	-2.4
HABR				A		07 51 16.7	
	158nm,0.3s						
GRNR	**Gornyy**	**3.17**	**41**	*e*Pg	Pg	07 51 31.7	-3.4
GRNR				*e*Sg	Sg	07 52 13.8	-2.4
GRNR				A		07 52 16.9	
	27nm,0.4s						
EKMR	**Ekimchan**	**4.66**	**358**	*e*Pg	Pg	07 51 58.4	-5.3
EKMR				AMB	AMB	07 52 02.4	
	2.0nm,0.2s						
EKMR				*e*Sg	Sg	07 53 00.5	-3.4
EKMR				A		07 53 11.3	
	6.0nm,0.5s						
EKMR				A		07 53 11.3	
	5.0nm,0.5s						
NKL	**Nikolayevsk**	**6.72**	**42**	*e*rx	rx	07 53 56.5	
NKL				*e*Sg	Sg	07 54 05.0	-5.0
BMKR	**Bomnak**	**6.85**	**339**	*e*Pn	Pn	07 52 15.5	+0.6
BMKR				*e*Sg	Sg	07 54 08.2	-6.0
BMKR				A		07 54 16.3	
	2.0nm,0.6s						
KROS	**Kirovskiy**	**7.16**	**330**	*e*Sg	Sg	07 54 17.6	-6.3
KROS				A		07 54 24.3	
	3.0nm,0.6s						

*ISCJB **01** 07:53:23.7±0.3, 5330N±002×10837E±003, h10^{km}, Error ellipse: s-maj=3.6km s-min=2.0km az=43.8*
*MOS **01** 07:53:26.4±1.4, 5328N×108.14E, h11^{km}, mb4.6/1, Error ellipse: s-maj=10.7km s-min=7.3km az=60.5*
MOS Felt (II) at Onguryeny.
*IDC **01** 07:53:26.9±6.6, 5333N×10752E, h0^{km}, mb1 3.7/3, mb1mx3.3/23, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=72.9km s-min=27.9km az=60.0*
*BYKL **01** 07:53:27.7±0.2, 5329N×108.12E, h9^{km}±21^{km}, FELT I=II MSK at Onguren*
ISC 01 07:53:26.1±0.3**,5327N**±002×**10827E**±003**,h10**^{km}**,n60,** σ**1§53**/110**,9C-3D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGRR	**Ongureny**	**0.55**	**313⇑**	*i*PG	**Pg**	**07 53 37.2**	**+0.5**
OGRR				*e*		07 53 44.0	
OGRR				pmax	pmax		
	comp=Z,552nm,0.3s						
OGRR				smax			
	comp=E,3µm,0.3s						
OGRR	**Ongureny**	**0.55**	**313⇑**	*i*Pg	**Pg**	**07 53 37.2**	**+0.5**
	comp=E,680nm,0.3s						
OGRR				⇓*i*Pg	**Pg**	**07 53 37.2**	**+0.5**
	comp=E,234nm,0.3s						
OGRR				⇑*i*Pg	**Pg**	**07 53 37.2**	**+0.5**
	comp=E,680nm,0.3s						
OGRR				*e*Sg	**Sg**	**07 53 43.7**	**-0.3**
OGRR				Pmax			
	comp=E,559nm,0.3s						
OGRR				Smax			
	comp=E,3µm,0.2s						
ZRHB	**Zarechye**	**0.99**	**224**	*e*Pg	**Pg**	**07 53 45.1**	**0.0**
ZRHB				*e*Sg	**Sg**	**07 53 58.2**	**+0.3**
ZRHB				Pmax			
	comp=E,228nm,0.3s						
ZRHB				Smax			
	comp=E,2µm,0.5s						
SYVR	**Suvo**	**1.10**	**69**	*e*PG	**Pg**	**07 53 48.7**	**+1.4**
SYVR				*e*		07 54 05.1	
SYVR				pmax	pmax		
	comp=Z,860nm,0.4s						
SYVR				smax			
	comp=E,1µm,0.6s						
SYVR	**Suvo**	**1.10**	**69⇑**	*i*Pg	**Pg**	**07 53 48.7**	**+1.4**
SYVR				*i* Sg	**Sg**	**07 54 05.1**	**+3.5**
SYVR				Pmax			
	comp=E,860nm,0.4s						
SYVR				Smax			
	comp=E,2µm,0.9s						
TRTB	**Turuntaevo**	**1.11**	**201⇑**	*i*Pg	**Pg**	**07 53 47.4**	**-0.1**
TRTB				*e*		07 53 48.8	
TRTB				*e*		07 53 51.5	
TRTB				*e*Sg	**Sg**	**07 54 02.1**	**+0.1**
TRTB				max			
	comp=E,219nm,0.3s						
TRTB				Smax			
	comp=E,1µm,0.5s						
TRG	**Tyrgan**	**1.27**	**247⇑**	*i*PG	**Pg**	**07 53 48.8**	**-1.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TRG				e		07 54 05.0	
TRG				pmax	pmax		
	comp=Z,271nm,0.2s						
TRG				smax			
	comp=N,3μm,0.3s						
TRG	Tyrgan	1.27	247	⇑iPg	Pg	07 53 48.8	-1.7
TRG				eSg	Sg	07 54 05.2	-1.7
TRG				Pmax			
	comp=N,263nm,0.2s						
TRG				Smax			
	comp=N,3μm,0.3s						
UUDB	Ulan-Yde	1.46	195	ePg	Pg	07 53 53.7	-0.3
UUDB				eSg	Sg	07 54 13.0	+0.1
UUDB				Pmax			
	comp=N,161nm,0.4s						
UUDB				Smax			
	comp=N,603nm,0.4s						
FFNB	Fofonovo	1.53	217	ePg	Pg	07 53 54.5	-1.0
FFNB				eSg	Sg	07 54 14.6	-0.7
FFNB				Pmax			
	comp=N,485nm,0.1s						
FFNB				Smax			
	comp=N,5μm,0.5s						
KAB	Kabansk	1.57	219	ePN	Pn	07 53 55.7	+1.7
KAB	Kabansk	1.57	219	ePg	Pg	07 53 55.9	-0.3
KAB				i Sg	Sg	07 54 16.0	-0.6
KAB				Pmax			
	comp=N,324nm,0.5s						
KAB				Smax			
	comp=N,2μm,0.2s						
YLYR	Ulyunkhan	2.34	46	ePN	Pn	07 54 07.1	+2.5
YLYR				e		07 54 09.9	
YLYR				e		07 54 41.8	
YLYR				pmax	pmax		
	comp=Z,133nm,0.6s						
YLYR				smax			
	comp=N,589nm,0.8s						
YLYR	Ulyunkhan	2.34	46	ePn	Pn	07 54 07.1	+2.5
YLYR				ePg	Pg	07 54 09.9	-1.0
YLYR				eSg	Sg	07 54 41.9	+0.6
YLYR				Pmax			
	comp=N,133nm,0.8s						
YLYR				Smax			
	comp=N,583nm,1.0s						
LSTR	Listvyanka	2.53	238	ePN	Pn	07 54 07.7	+0.6
LSTR				e		07 54 11.2	
LSTR				eS	Sn	07 54 38.4	+0.5
LSTR				e		07 54 43.2	
LSTR				pmax	pmax		
	comp=Z,32nm,0.3s						
LSTR				smax			
	comp=N,359nm,0.8s						
LSTR	Listvyanka	2.53	238	⇓iPn	Pn	07 54 07.8	+0.7
LSTR				ePg	Pg	07 54 10.7	-3.8
LSTR				eSn	Sn	07 54 38.5	+0.6
LSTR				eSg	Sg	07 54 43.2	-4.0
LSTR				Pmax			
	comp=N,31nm,0.3s						
LSTR				Smax			
	comp=N,359nm,0.4s						
NIZ	Nizh Angarsk	2.62	16	ePN	Pn	07 54 11.3	+3.0
NIZ				e		07 54 15.9	
NIZ				e		07 54 49.1	
NIZ				pmax	pmax		
	comp=Z,59nm,0.4s						
NIZ				smax			
	comp=N,284nm,0.6s						
NIZ	Nizh Angarsk	2.62	16	ePn	Pn	07 54 10.8	+2.5
NIZ				ePg	Pg	07 54 14.4	-1.8
NIZ				eSg	Sg	07 54 48.4	-1.6
NIZ				Pmax			
	comp=N,59nm,0.3s						
NIZ				Smax			
	comp=N,285nm,0.5s						
IRK	Irkutsk	2.64	249	ePN	Pn	07 54 12.1	+3.4
IRK				eS	Sn	07 54 39.7	-1.0
IRK				e		07 54 44.6	
IRK				pmax	pmax		
	comp=Z,168nm,0.2s						
IRK				smax			
	comp=N,2μm,0.3s						
IRK	Irkutsk	2.64	249	e	Sn	07 54 42.8	+2.1
IRK				i Sg	Sg	07 54 46.0	-4.8
IRK				Smax			
	comp=N,2μm,0.3s						
KMO	Kumora	3.12	32	ePN	Pn	07 54 17.5	+2.2
KMO				e		07 54 24.0	
KMO				eS	Sn	07 54 54.6	+1.9
KMO				e		07 55 04.3	
KMO				pmax	pmax		
	comp=Z,79nm,0.4s						
KMO				smax			
	comp=N,188nm,0.6s						
KMO	Kumora	3.12	32	ePn	Pn	07 54 18.4	+3.1
KMO				ePg	Pg	07 54 24.7	-1.2
KMO				eSg	Sg	07 55 05.5	-0.9
KMO				Pmax			
	comp=N,87nm,0.5s						
KMO				Smax			
	comp=N,240nm,0.8s						
TLY	Talaya	3.25	242	ePN	Pn	07 54 17.6	+0.6
TLY				e		07 54 24.3	
TLY				e		07 55 04.2	
TLY				pmax	pmax		
	comp=Z,19nm,0.3s						
TLY				smax			
	comp=E,249nm,0.4s						
TLY	Talaya	3.25	242	ePn	Pn	07 54 17.6	+0.6
TLY				⇓iPg	Pg	07 54 24.4	-3.9
TLY				eSg	Sg	07 55 04.6	-5.7
TLY				Pmax			
	comp=E,20nm,0.4s						
TLY				Smax			
	comp=E,245nm,0.4s						
CIT	Chita	3.45	109	ePN	Pn	07 54 21.9	+2.1
CIT				e		07 54 31.7	
CIT				e		07 55 16.5	
CIT				pmax	pmax		
	comp=Z,210nm,0.3s						
CIT				smax			
	comp=N,371nm,0.8s						
CIT	Chita	3.45	109	ePn	Pn	07 54 21.7	+1.9
CIT				e		07 54 25.3	
CIT				e		07 54 29.3	
CIT				ePg	Pg	07 54 31.2	-1.0
CIT				eSg	Sg	07 55 16.9	0.0
CIT				Pmax			
	comp=N,210nm,0.3s						
CIT				Smax			
	comp=N,370nm,0.8s						
YOA	Uoyan	3.50	34	ePN	Pg	07 54 32.3	-0.7
YOA				i		07 55 18.5	
YOA				pmax	pmax		
	comp=Z,176nm,0.2s						
YOA				smax			
	comp=N,544nm,1.0s						
YOA	Uoyan	3.50	34	eSg	Sg	07 55 18.0	-0.3
YOA				Smax			
	comp=N,540nm,1.0s						
ARS	Arshan	3.81	252	ePN	Pb	07 54 34.8	+1.4
ARS				e		07 55 19.9	
ARS				pmax	pmax		
	comp=Z,46nm,0.2s						
ARS				smax			
	comp=E,839nm,0.5s						
ARS	Arshan	3.81	252	ePn	Pn	07 54 26.6	+1.8
ARS				ePg	Pg	07 54 34.4	-4.7
ARS				e		07 55 19.6	
ARS				eSg	Sg	07 55 24.5	-4.0
ARS				Pmax			
	comp=E,64nm,0.6s						
ARS				Smax			
	comp=E,827nm,0.5s						
UKT	Uakit	3.84	53	ePn	Pn	07 54 28.1	+3.0
UKT				ePg	Pg	07 54 36.9	-2.7
UKT				e		07 54 44.5	
UKT				eSg	Sg	07 55 29.0	-0.3
UKT				max			
	comp=E,55nm,1.0s						
UKT				Smax			
	comp=E,84nm,0.1s						
SVKR	Severomuysk	4.19	45	ePN	Pg	07 54 44.1	-2.1
SVKR				e		07 55 40.1	
SVKR				pmax	pmax		
	comp=Z,44nm,0.5s						
SVKR				smax			
	comp=E,436nm,1.1s						
SVKR	Severomuysk	4.19	45	ePg	Pg	07 54 44.7	-1.5
SVKR				eSg	Sg	07 55 40.2	-0.2
SVKR				Pmax			
	comp=E,39nm,0.4s						
SVKR				Smax			
	comp=E,432nm,1.3s						
ZAK	Zakamensk	4.24	229	ePN	Pn	07 54 31.4	+0.8
ZAK				e		07 54 42.7	
ZAK				e		07 55 38.4	
ZAK				pmax	pmax		
	comp=Z,11nm,0.4s						
ZAK				smax			
	comp=N,105nm,0.5s						
ZAK	Zakamensk	4.24	229	ePn	Pn	07 54 32.7	+2.1
ZAK				ePg	Pg	07 54 43.6	-3.6
ZAK				eSg	Sg	07 55 38.4	-3.7
ZAK				Pmax			
	comp=N,14nm,0.8s						
ZAK				Smax			
	comp=N,105nm,0.7s						
KPC	Khapcheranga	4.40	143	ePN	Pn	07 54 34.0	+1.1
KPC				e		07 54 46.6	
KPC				eS	Sn	07 55 24.3	+0.2
KPC				e		07 55 44.2	
KPC				pmax	pmax		
	comp=Z,28nm,0.2s						
KPC				smax			
	comp=E,156nm,1.3s						
KPC	Khapcheranga	4.40	143	ePn	Pn	07 54 33.8	+0.9
KPC				ePg	Pg	07 54 46.5	-3.8
KPC				eSn	Sn	07 55 24.1	0.0
KPC				i Sg	Sg	07 55 43.9	-3.4
KPC				Pmax			
	comp=E,28nm,0.5s						
KPC				Smax			
	comp=E,155nm,1.2s						
MOY	Mondy	4.73	253	ePN	Pn	07 54 40.2	+2.8
MOY				e		07 54 51.4	
MOY	Mondy	4.73	253	ePn	Pn	07 54 40.3	+2.9
MOY				ePg	Pg	07 54 50.7	-6.0
MOY				e		07 55 35.5	
MOY				e		07 55 47.8	
MOY				eSg	Sg	07 55 50.3	-7.6
MOY				e		07 56 02.5	
MOY				Pmax			
	comp=E,26nm,0.5s						
MOY				max			
	comp=E,345nm,1.4s						
ORL	Orlik	5.17	265	ePN	Pn	07 54 46.3	+2.8
ORL				eS	Sg	07 56 02.9	-9.2
ORL				smax			
	comp=N,262nm,1.0s						
ORL	Orlik	5.17	265	⇑iPn	Pn	07 54 46.3	+2.8
ORL				eSn	Sn	07 55 44.2	+1.0
ORL				e		07 55 58.8	
ORL				eSg	Sg	07 56 03.9	-8.2
ORL				max			
	comp=N,35nm,0.9s						
ORL				Smax			
	comp=N,278nm,1.1s						
NLYR	Nelyaty	5.37	50	ePn	Pn	07 54 51.3	+5.2
NLYR				ePg	Pg	07 55 04.7	-4.1
ULN	Ulaanbaatar	5.47	189	i PN	Pn	07 54 50.4	+2.8
ULN	Ulaanbaatar	5.47	189	ePn	Pn	07 54 50.3	+2.7
ULN				ePg	Pg	07 55 07.5	-3.3
ULN				eSg	Sg	07 56 18.9	-2.7
SONM	Songino Array	5.57	193	Pn	Pn	07 54 51.0	+2.0
	comp=N,0.8nm,0.3s,baz=8.8,slow=13,SNR=15						
SONM				Lg		07 56 22.8	
	comp=N,9.2nm,0.3s,baz=5.8,slow=31,SNR=11						
BOD	Bodaibo	5.60	33	ePg	Pg	07 55 08.9	-4.3
BOD				eSg	Sg	07 56 21.6	-4.0
BOD				Pmax			
	comp=N,12nm,0.7s						
BOD				Smax			
	comp=N,41nm,1.3s						
CRS	Chara	6.79	54	ePG	Pg	07 55 33.8	-2.2
CRS				e		07 57 02.9	
CRS				pmax	pmax		
	comp=Z,39nm,0.8s						
CRS				smax			
	comp=E,97nm,1.3s						
CRS	Chara	6.79	54	ePg	Pg	07 55 31.3	-4.7
CRS				eSg	Sg	07 57 00.4	-3.5
CRS				Pmax			
	comp=E,19nm,0.8s						
CRS				Smax			
	comp=E,97nm,1.6s						
TUP	Tupik	7.01	76	ePN	Pn	07 55 11.4	+2.7
TUP				e		07 55 34.5	
TUP				e		07 57 08.0	
TUP				pmax	pmax		
	comp=Z,9.0nm,0.4s						
TUP				smax			
	comp=N,205nm,1.0s						
TUP	Tupik	7.01	76	ePn	Pn	07 55 11.4	+2.7
TUP				ePg	Pg	07 55 34.2	-6.0
TUP				eSg	Sg	07 57 07.4	-3.5
TUP				Pmax			
	comp=N,8.0nm,0.6s						
TUP				Smax			
	comp=N,131nm,1.0s						
TDJR	Todzha	7.43	268	eSg	Sg	07 57 13.4	-11
KRAR	Krasnoyarsk	9.34	293	i P	Pn	07 55 42.0	+1.4
NRGR	Nerungri	10.05	64	eP	Pn	07 55 57.0	+6.8
NRGR				S	Sn	07 57 42.1	-0.8
NRGR				smax			
	comp=N,42nm,0.6s						
CLNS	Chul'man	10.18	63	eSg	Sx	07 58 45.0	
ZALV	Zalesovo Beam	13.93	282	Pn	Pn	07 56 37.4	-5.9
	comp=N,3.4nm,0.3s,baz=81,slow=16,SNR=32						
ZALV				Lg		08 00 36.0	
	comp=N,0.1nm,0.3s,baz=89,slow=26,SNR=3.5						
ZAL	Zalesovo	13.94	282	P	Pn	07 56 37.4	-6.1
NVS	Novosibirsk	14.77	286	⇑iP	Pn	07 56 55.8	+1.1
MKAR	Makanchi Array	17.84	259	i P	Pn	07 57 36.2	+2.0
MKAR	Makanchi Array	17.84	259	P	Pn	07 57 32.3	-1.9
	comp=N,0.1nm,0.3s,baz=61,slow=9.7,SNR=3.8						
KURK	Kurchatov	18.38	274	i P	Pn	07 57 39.1	-1.6

MEX 01 07:54:56.9±0.7, 1361N×9236W, h23km±943km, MD4.4
NEIC 01 07:54:56.4, 1360N×9240W, h20km, MD4.4(MEX), After MEX.
CASC 01 07:54:59.9±3.4, 1477N×9231W, h63km±38km, MD3.9
ISC 01 07:54:54.2±3.1, 135N±02×9239W±005, h26km±39km, n14, σ1§01/14, 1C-1D, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	1.07	43	⇓eP	Pn	07 55 13.3	-0.2
JAT				eS	Sn	07 55 28.3	+0.7
FUG	Fuego 3	1.75	58	⇑eP	Pn	07 55 22.3	-0.6
FUG				eS	Sn	07 55 43.1	-1.3
PCG	Pacaya	1.93	63	eP	Pn	07 55 26.8	+1.5
PCG				eS	Sn	07 55 49.1	+0.4
RBDL	Robledal	2.69	77	eP	x	07 55 41.4	
RBDL				eS	x	07 56 11.5	
RTR	El Retiro	2.69	82	eP	x	07 55 42.1	
SBLS	San Blas	2.70	83	eP	x	07 55 42.5	
SBLS				eS	x	07 56 15.0	
SNJE	San Jose	2.72	83	eP	x	07 55 43.4	
SNJE				eS	x	07 56 17.6	
CCIG	Comitan	2.75	5	eP	Pn	07 55 36.7	+0.1
CCIG				i S	Sn	07 56 06.8	-2.1
SCX	San Cristobal	3.20	356	i P	Pn	07 55 44.1	+1.3
SCX				i S	Sn	07 56 21.2	+1.1
LFRS	El Faro	3.23	88	eP	x	07 55 50.5	
LFRS				eS	x	07 56 32.3	
LBRS	Las Brisas	3.26	86	eP	x	07 55 51.1	
SNVI	San Vicente	3.45	88	eS	x	07 56 32.5	
CMIG	Matias Romero	4.28	326	i P	Pn	07 55 56.2	-1.5
CMIG				i S	Sn	07 56 47.2	+0.3
VHO	Vista Hermosa	5.48	311	i P	Pn	07 56 13.7	-0.5
VHO				i S	Sn	07 57 16.7	+0.4

CSEM 01 08:01:47.6, 2906N×3482E, h0km, ML3.0, After SNSN
SGS 01 08:01:47.6, 2906N×3482E, h0km, Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		0.32	42	S	Sg	08 02 00.6	+2.7
HQLS		0.32	42	P	Pg	08 01 54.8	+1.0
HQLS		0.32	42	P	Pg	08 01 54.8	+1.0
HQLS				S	Sg	08 02 00.6	+2.6
JLOS		0.67	119	P	Pg	08 02 01.7	+1.2
JLOS		0.67	119	P	Pg	08 02 01.7	+1.2
JLOS				S	Sg	08 02 12.2	+2.9
RSHS		0.76	181	P	Pg	08 02 03.5	+1.3
RSHS		0.76	181	P	Pg	08 02 03.5	+1.3
RSHS				S	Sg	08 02 14.8	+2.8

IDC 01 08:09:59.5±1.9, 666S×12966E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/15, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=50.4km s-min=27.0km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	6.90	239	Pn	Pn	08 11 43.7	+1.7
	17nm,0.3s,baz=71,slow=5.0,SNR=11						
BATI				Sn	Sn	08 12 49.4	-12
	14nm,0.3s,baz=87,slow=3.7,SNR=9.8						
FITZ	Fitzroy Crossi	12.03	199	Pn	Pn	08 12 50.2	-2.2
	0.1nm,0.3s,baz=24,slow=15,SNR=10						
FITZ				Sn	Sn	08 14 47.3	-20
	1.1nm,0.3s,baz=134,slow=24,SNR=8.1						
WRA	Warramunga Arr	13.96	161	Pn	Pn	08 13 19.9	+1.2
	0.2nm,0.3s,baz=340,slow=13,SNR=11						
WRA				Sn	Sn	08 15 43.1	-12
	0.6nm,0.3s,baz=330,slow=24,SNR=8.2						
ASAR	Alice Springs	17.40	167	P	Pn	08 14 04.0	+0.2
	0.1nm,0.3s,baz=333,slow=9.8,SNR=7.7						
ASAR				S	Sn	08 17 05.8	-12
	0.1nm,0.3s,baz=19,slow=21,SNR=4.5						
MKAR	Makanchi Array	67.76	327	P	P	08 20 59.0	0.0
	0.2nm,0.3s,baz=118,slow=7.7,SNR=8.7						

JSN 01 08:39:09.8±0.9, 1804N×8018W, h18km±41km, MD4.6
IDC 01 08:39:15.0±2.2, 1800N×7956W, h0km, mb3.6/5, mb1 4.0/6, mb1mx3.7/18, mbtmp3.6/6, ML4.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/22, Error ellipse: s-maj=53.7km s-min=33.2km az=178.0
ISCJB 01 08:39:16.7±1.6, 1821N±008×7952W±005, h15km±11km, mb3.6/5, Error ellipse: s-maj=13.0km s-min=6.9km az=10.8
NEIC 01 08:39:17.0±1.0, 1816N×7960W, h10km, mb4.1/1, Error ellipse: s-maj=25.8km s-min=12.2km az=181.0
SSNC 01 08:39:22.3, 1835N×7936W, h35km, MD3.8, ML3.1
ISC 01 08:39:17.4±1.4, 1812N±007×7954W±004, h16km±10km, n27, σ1§18/33, mb3.5/5, 7C-1D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBJ	Montego Bay	1.61	80	⇑eP	Pn	08 39 44.7	-0.6
MBJ				⇓eS	Sg	08 40 11.4	+1.9
MCJ	Malvern	1.77	96	⇑eP	Pn	08 39 47.0	-0.5
MCJ				eS	Sg	08 40 14.5	0.0
CVJ	Coleyville	1.91	87	⇑eP	Pn	08 39 49.0	-0.3
BBJ	Bamboo Saint A	2.17	83	⇑eP	Pn	08 39 53.1	+0.2
PCJ	Portland Cotta	2.30	99	⇑eP	Pn	08 39 54.0	-0.6
PCJ				eS	Sg	08 40 28.6	-2.8
STH	Stony Hill	2.59	91	⇑eP	Pn	08 39 58.8	0.0
STH				eS	Sn	08 40 34.5	+4.5
CMJ	Castle Mountai	3.01	89	⇑eP	Pn	08 40 04.9	+0.5
LMGC	Las Mercedes	3.08	51	eP	Pn	08 40 01.5	-3.9
LMGC				eS	Sn	08 40 35.8	-6.1
	comp=N,101nm,0.3s						
LMGC				e			
	comp=E,115nm,0.6s						
CCCC	Cccc	3.49	28	eP	Pn	08 40 14.6	+3.6
MGV	Manicaragua	3.99	354	eP	Pn	08 40 19.2	+1.3
MGV				eS	Sn	08 41 03.4	-1.0
	comp=N,31nm,0.3s						
MGV				e			
	comp=E,23nm,0.1s						
RCC	Rio Carpintero	4.08	62	eP	Pn	08 40 18.1	-1.1
RCC				eS	Sn	08 41 01.7	-5.0
	comp=N,25nm,0.3s						
RCC				e			
	comp=E,35nm,0.6s						
MASC	Masc	5.41	67	eP	Pn	08 40 40.6	+3.1
MASC				eS	Sn	08 41 38.8	-0.8
	comp=N,1.4nm,0.4s						
MASC				e			
	comp=E,1.3nm,0.3s						
SOR	Soroa	5.67	326	eP	Pn	08 40 40.7	-0.4
SDDR	Presa de Saban	7.87	82	ePn	Pn	08 41 12.2	+0.8
	comp=E,9.5nm,0.5s						
TEIG	Tepich	8.52	286	Pn	Pn	08 41 18.2	-2.0
	comp=E,19nm,0.3s,baz=70,slow=1.6,SNR=70						
JTS	JuntasAbangare	9.39	215	LR	LR	08 45 06.1	
	comp=E,82nm,20.5s,baz=45,slow=38						
CMIG	Matias Romero	14.67	268	Pn	Pn	08 42 44.2	-0.2
	comp=E,0.1nm,0.3s,baz=8.7,slow=13,SNR=2.8						
LRAL	Lakeview Retre	16.29	337	ePn	Pn	08 43 03.8	-1.8
	comp=E,4.5nm,0.3s						
TXAR	Lajitas Array	24.70	301	P	P	08 44 38.9	+1.0
	comp=E,0.6nm,0.8s,mb3.2,baz=122,slow=9.3,SNR=6.9						
PDAR	Pinedale Array	35.36	320	P	P	08 46 12.9	+0.7
	comp=E,0.5nm,0.8s,mb3.5,baz=121,slow=10,SNR=6.6						
NVAR	Mina Array Bea	39.31	309	P	P	08 46 47.7	+1.9
NVAR	Mina Array Bea	39.31	309	P	P	08 46 47.7	+1.9
	comp=E,1.1nm,0.8s,mb3.7,baz=113,slow=9.4,SNR=8.2						
YKA	Yellowknife Ar	50.56	340	P	P	08 48 14.9	0.0
YKA	Yellowknife Ar	50.56	340	P	P	08 48 14.9	0.0
	comp=E,0.4nm,0.7s,mb3.5,baz=132,slow=8.4,SNR=10						
FINES	FINESS Array B	81.48	28	P	P	08 51 35.0	+1.2
FINES	FINESS Array B	81.48	28	P	P	08 51 35.0	+1.2
	comp=E,1.0nm,0.7s,mb3.9,baz=257,slow=3.3,SNR=5.3						
ASAR	Alice Springs	148.32	254	PKPbc	PKPbc	08 59 02.9	-0.9
	comp=E,0.5nm,0.7s,baz=80,slow=2.2,SNR=5.0						

IDC 01 08:48:34.2±2.4, 276N×6662E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.7/5, MS3.6/4, Ms1 3.6/4, ms1mx3.2/27, Error ellipse: s-maj=79.2km s-min=28.3km az=69.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	45.93	15	P	P	08 56 59.5	+0.8
	0.3nm,0.9s,baz=194,slow=5.2,SNR=2.9						
MKAR				LR	LR	09 15 46.1	
	comp=Z,48nm,18.1s,baz=178,slow=36						
ZALV	Zalesovo Beam	53.17	13	P	P	08 57 52.4	-1.4
	0.3nm,0.3s,baz=210,slow=7.7,SNR=3.5						
ZALV				LR	LR	09 20 07.4	
	comp=Z,33nm,20.2s,baz=103,slow=36						
SONM	Songino Array	56.45	31	P	P	08 58 18.4	+0.6
	0.5nm,0.8s,baz=238,slow=8.3,SNR=3.3						
SONM				LR	LR	09 22 43.4	
	comp=Z,55nm,19.3s,baz=16,slow=36						
KSRS	Korea Array	65.75	50	LR	LR	09 30 40.0	
	comp=Z,66nm,19.3s,baz=208,slow=38						
WRA	Warramunga Arr	70.12	112	P	P	08 59 49.3	+0.3
	1.0nm,0.8s,baz=292,slow=5.0,SNR=6.7						
ASAR	Alice Springs	70.45	116	P	P	08 59 50.8	-0.2
	1.2nm,0.9s,baz=277,slow=5.6,SNR=6.5						
TXAR	Lajitas Array	146.76	344	PKPbc	PKPbc	09 08 18.6	-0.4
	1.4nm,0.8s,baz=49,slow=3.1,SNR=12						

NEIC 01 09:08:10.5, 1882N×6723W, h37km, MD2.8(RSPR), After RSPR.
RSPR 01 09:08:10.5, 1882N×6723W, h37km±2km, MD2.8/8, MD2.8/8, 19C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.37	162	⇑eP	Pn	09 08 18.1	-1.3
AGPR	Aguadilla, PR	0.37	162	eS	Sn	09 08 24.9	-0.7
AGPR	Aguadilla, PR	0.37	162	⇑eP	Pn	09 08 18.6	-0.8
AGPR				eS	Sn	09 08 24.8	-0.8
AOPR	Arecibo Observ	0.66	136	⇑eP	Pn	09 08 21.8	-1.4
AOPR	Arecibo Observ	0.66	136	eS	Sn	09 08 31.3	-1.1
AOPR	Arecibo Observ	0.66	136	⇑eP	Pn	09 08 21.8	-1.5
AOPR	Arecibo Observ	0.66	136	eS	Sn	09 08 30.9	-1.4
AOPR	Arecibo Observ	0.66	136	⇑eP	Pn	09 08 21.8	-1.5
AOPR				eS	Sn	09 08 30.9	-1.4
AOPR				eS	Sn	09 08 31.3	-1.1
LSP	Las Mesas	0.66	168	⇑eP	Pn	09 08 22.3	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LSP	**Las Mesas**	**0.66**	**168**	*e*S	Sn	09 08 31.3	-1.1
LSP	**Las Mesas**	**0.66**	**168**⇑	*e*P	Pn	09 08 22.3	-1.0
LSP	**Las Mesas**	**0.66**	**168**	*e*S	Sn	09 08 31.5	-1.0
LSP	**Las Mesas**	**0.66**	**168**⇑	*e*P	Pn	09 08 22.3	-1.0
LSP				*e*S	Sn	09 08 31.3	-1.1
LSP				*e*S	Sn	09 08 31.5	-1.0
CRPR	**Cabo Rojo, PR**	**0.82**	**172**⇑	*e*P	Pn	09 08 24.0	-1.6
CRPR	**Cabo Rojo, PR**	**0.82**	**172**⇑	*e*P	Pn	09 08 24.1	-1.4
CRPR				*e*S	Sn	09 08 35.0	-1.5
CRPR				*e*S	Sn	09 08 35.4	-1.0
CELP	**Cerrillos**	**0.97**	**140**	*e*S	Sn	09 08 39.0	-1.1
CELP	**Cerrillos**	**0.97**	**140**⇑	*e*P	Pn	09 08 26.7	-0.9
CELP				*e*S	Sn	09 08 38.9	-1.2
OBIP	**Obispado Ponce**	**0.98**	**142**⇑	*e*P	Pn	09 08 26.6	-1.1
OBIP	**Obispado Ponce**	**0.98**	**142**⇑	*e*P	Pn	09 08 26.8	-0.9
OBIP				*e*S	Sn	09 08 39.1	-1.2
CBYP	**Canovanas**	**1.41**	**113**⇑	*e*P	Pn	09 08 32.6	-1.1
CBYP	**Canovanas**	**1.41**	**113**⇑	*e*P	Pn	09 08 32.9	-0.8
CBYP				*e*S	Sn	09 08 49.9	-1.2
CBYP				*e*S	Sn	09 08 50.2	-0.9
HUMP	**Col San Antoni**	**1.48**	**117**⇑	*e*P	Pn	09 08 33.1	-1.4
HUMP	**Col San Antoni**	**1.48**	**117**⇑	*e*P	Pn	09 08 33.1	-1.4
HUMP				*e*S	Sn	09 08 51.1	-1.5
HUMP				*e*S	Sn	09 08 51.3	-1.3
MTP	**Monte Pirata**	**1.75**	**114**⇑	*e*P	Pn	09 08 37.1	-1.2
MTP	**Monte Pirata**	**1.75**	**114**⇑	*e*P	Pn	09 08 37.4	-0.9
MTP				*e*S	Sn	09 08 58.1	-1.2
MTP				*e*S	Sn	09 08 58.3	-1.1

IDC 01 09:08:11.2±8.8**, 750S**×**12910E, h160**km±94km**, mb2.9**/1**, mb1 3.2**/5**, mb1mx3.1**/15**, mbtmp3.1**/5**, Error ellipse: s-maj=85.7km s-min=24.6km az=37.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.01**	**243**	P	Pn	09 09 39.2	+1.2
	8.9nm,0.3s,baz=54,slow=8.7,SNR=5.7						
BATI				S	Sn	09 10 46.2	+0.1
	9.0nm,0.3s,baz=43,slow=21,SNR=7.2						
FITZ	**Fitzroy Crossi**	**11.07**	**197**	P	Pn	09 10 44.5	-0.5
	0.4nm,0.3s,baz=33,slow=14,SNR=28						
FITZ				S	Sn	09 12 42.0	-5.6
	0.7nm,0.3s,baz=64,slow=22,SNR=8.5						
WRA	**Warramunga Arr**	**13.38**	**158**	P	Pn	09 11 13.2	-1.6
	0.3nm,0.3s,baz=335,slow=14,SNR=52						
WRA				S	Sn	09 13 34.0	-9.2
	1.1nm,0.3s,baz=331,slow=23,SNR=12						
ASAR	**Alice Springs**	**16.73**	**165**	P	Pn	09 11 57.8	+1.5
	0.1nm,0.3s,baz=343,slow=10.0,SNR=13						
ASAR				S	S	09 14 59.1	-3.0
	0.3nm,0.3s,baz=348,slow=25,SNR=6.9						
MKAR	**Makanchi Array**	**68.15**	**327**	P	P	09 18 53.9	0.0
	0.2nm,0.5s,baz=118,slow=7.8,SNR=5.0						

*ISCJB **01** 09:08:46.3±1.2, 1550N±005×9479W±003, h16km±10km, mb3.8/11, MS3.6/9, Error ellipse: s-maj=8.3km s-min=4.6km az=14.7*
*IDC **01** 09:08:50.0±5.3, 1556N×9462W, h32km±38km, mb3.6/9, mb1 3.9/12, mb1mx3.8/21, mbtmp3.7/12, ML3.8/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/23, Error ellipse: s-maj=32.0km s-min=15.2km az=50.0*
*MEX **01** 09:08:50.1±1.2, 1545N×9481W, h21km±31km, MD4.6*
*NEIC **01** 09:08:50.1, 1544N×9479W, h20km, mb4.2/3, MD4.6(MEX), After MEX.*
ISC 01 09:08:47.8±1.6**, 1552N**±005×**9477W**±003**, h15**km±11km**, n45,** σ1^s**42**/55**, mb3.8**/11**, MS3.6**/9**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.31**	**281**	*e*P	**Pn**	**09 09 10.0**	**-1.6**
HUIG				*i* S	**Sn**	**09 09 24.5**	**-4.3**
CMIG	**Matias Romero**	**1.57**	**356**	*i* P	**Pn**	**09 09 14.2**	**-0.9**
CMIG				Sn	**Sn**	**09 09 33.0**	**-2.1**
CMIG				*i* S	**Sn**	**09 09 33.8**	**-1.4**
CMIG				LR	LR	09 10 04.1	
CMIG	**Matias Romero**	**1.57**	**356**	Pn	**Pn**	**09 09 14.1**	**-1.0**
	152nm,0.3s,baz=163,slow=11,SNR=1522						
CMIG				Sn	**Sn**	**09 09 33.0**	**-2.1**
	164nm,0.3s,baz=91,slow=17,SNR=20						
CMIG				LR	LR	09 10 04.1	
	comp=Z,2μm,19.5s,baz=104,slow=48						
CMIG	**Matias Romero**	**1.57**	**356**	*i* P	**Pn**	**09 09 14.2**	**-0.9**
CMIG				*i* S	**Sn**	**09 09 33.8**	**-1.4**
SCX	**San Cristobal**	**2.38**	**59**	*i* P	**Pn**	**09 09 26.7**	**+0.3**
SCX				*i* S	**Sn**	**09 09 55.3**	**0.0**
OXX	**Oaxaca**	**2.43**	**310**	*e*P	**Pn**	**09 09 27.0**	**0.0**
VHO	**Vista Hermosa**	**2.44**	**310**	*i* P	**Pn**	**09 09 28.5**	**+1.5**
VHO				*i* S	**Sn**	**09 09 57.5**	**+0.9**
TUIG	**Tuzandepetl**	**2.52**	**8**	*e*P	**Pn**	**09 09 28.3**	**0.0**
TUIG				*i* S	**Sn**	**09 09 58.8**	**+0.1**
CCIG	**Comitan**	**2.65**	**73**	*e*P	**Pn**	**09 09 30.0**	**+0.1**
CCIG				*i* S	**Sn**	**09 10 02.1**	**+0.3**
TPIG	**Tehuac#an**	**3.80**	**320**	*i* P	**Pn**	**09 09 45.2**	**-0.7**
TPIG				*i* P		09 09 49.6	
TPIG				*i* S	**Sn**	**09 10 28.9**	**-1.5**
SCIG	**Sabancuy**	**4.85**	**44**	*i* P	**Pn**	**09 09 59.5**	**-0.8**
SCIG				*i* S	**Sn**	**09 10 56.9**	**+0.7**
PPM	**Popocatepetl**	**5.10**	**314**	*e*P	**Pn**	**09 10 06.2**	**+2.5**
PPM				*i* S	**Sn**	**09 11 02.4**	**+0.1**
ACX	**Acapulco**	**5.12**	**286**	*e*P	**Pn**	**09 10 02.0**	**-2.0**
MEIG	**Mezcala**	**5.22**	**298**	*i* S	**Sn**	**09 11 02.3**	**-3.1**
IIO	**Organos**	**5.53**	**318**	*i* P	**Pn**	**09 10 09.9**	**+0.3**
IIO				*i* S	**Sn**	**09 11 11.9**	**-1.1**
PTVM	**Pico Tres Padr**	**5.79**	**315**	*e*P	**Pn**	**09 10 15.7**	**+2.5**
SZVM	**Salazar**	**5.80**	**311**	*i* P	**Pn**	**09 10 10.8**	**-2.6**
SZVM				*i* S	**Sn**	**09 11 22.0**	**+2.3**
TEIG	**Tepich**	**7.76**	**52**	Pn	**Pn**	**09 10 38.1**	**-2.1**
	8.9nm,0.3s,baz=266,slow=8.7,SNR=26						
TEIG				Sn	**Sn**	**09 12 03.0**	**-4.9**
	1.9nm,0.3s,baz=330,slow=20,SNR=3.6						
TEIG				LR	LR	09 14 02.2	
	comp=Z,360nm,19.5s,baz=23,slow=41						
JTS	**JuntasAbangare**	**10.89**	**117**	Pn	**Pn**	**09 11 22.5**	**-0.7**
	0.3nm,0.3s,baz=306,slow=19,SNR=2.1						
MGV	**Manicaragua**	**15.46**	**63**	*e*P	**Pn**	**09 12 17.1**	**-8.3**
JCT	**Junction City**	**15.59**	**344**	*e*Pn	**Pn**	**09 12 29.2**	**+2.1**
	18nm,1.1s						
TXAR	**Lajitas Array**	**16.01**	**331**	Pn	**Pn**	**09 12 34.7**	**+2.2**
	0.1nm,0.3s,baz=157,slow=11,SNR=7.5						
WMOK	**Wichita Mounta**	**19.47**	**350**	P	**Pn**	**09 13 14.2**	**-1.2**
	9.0nm,1.2s						
BNM	**Barren Site**	**21.41**	**332**	*e*P	**P**	**09 13 37.4**	**+2.2**
LAZ	**Ladron**	**21.85**	**332**	*e*P	**P**	**09 13 42.8**	**+2.9**
ANMO	**Albuquerque**	**22.01**	**334**	P	**P**	**09 13 43.5**	**+1.9**
	0.6nm,0.7s,mb3.1,baz=175,slow=5.1,SNR=3.7						
TKL	**Tuckaleechee C**	**22.34**	**24**	P	**P**	**09 13 45.9**	**+0.8**
TKL				LR	LR	09 25 14.8	
TKL	**Tuckaleechee C**	**22.34**	**24**	P	**P**	**09 13 45.9**	**+0.8**
	3.6nm,0.9s,mb3.8,baz=206,slow=9.9,SNR=3.1						
TKL				LR	LR	09 25 14.8	
	comp=Z,125nm,19.1s,MS3.4,baz=253,slow=44						
ROSC	**El Rosal**	**22.71**	**116**	P	**P**	**09 13 52.0**	**+2.8**
	6.5nm,0.4s,mb4.4,baz=90,slow=21,SNR=8.5						
SDV	**Santo Domingo**	**24.48**	**103**	P	**P**	**09 14 06.8**	**+0.3**
	4.1nm,1.0s,mb3.8,baz=44,slow=9.6,SNR=4.5						
SDV				LR	LR	09 24 09.4	
	comp=Z,171nm,20.5s,MS3.5,baz=0.8,slow=38						
PFO	**Pinyon Flat Ob**	**26.61**	**316**	LR	LR	09 25 56.1	
	comp=Z,228nm,20.6s,MS3.7,baz=279,slow=38						
SJG	**San Juan**	**27.51**	**81**	LR	LR	09 26 11.8	
	comp=Z,69nm,18.2s,MS3.3,baz=276,slow=38						
PDAR	**Pinedale Array**	**29.97**	**338**	P	**P**	**09 14 55.4**	**-0.2**
	0.4nm,0.9s,mb3.1,baz=134,slow=4.3,SNR=3.4						
NVAR	**Mina Array Bea**	**30.82**	**322**	P	**P**	**09 15 05.6**	**+2.5**
	0.7nm,0.8s,mb3.5,baz=132,slow=10.0,SNR=5.3						
DLMT	**Dillon**	**33.32**	**337**	*e*P	**P**	**09 15 23.7**	**-1.3**
	5.9nm,1.0s,mb4.5						
LPAZ	**La Paz**	**41.11**	**139**	P	**P**	**09 16 30.6**	**-0.8**
	0.9nm,0.9s,mb3.4,baz=331,slow=13,SNR=2.9						
LPAZ				LR	LR	09 31 52.8	
	comp=Z,97nm,18.4s,MS3.7,baz=21,slow=34						
SCHQ	**Schefferville**	**44.80**	**23**	LR	LR	09 39 06.7	
	comp=Z,84nm,18.2s,MS3.7,baz=107,slow=41						
YKA	**Yellowknife Ar**	**48.96**	**348**	P	**P**	**09 17 32.4**	**-1.0**
YKA				PcP	PcP	09 18 55.0	-2.2
YKA				LR	LR	09 39 36.6	
YKA	**Yellowknife Ar**	**48.96**	**348**	P	**P**	**09 17 32.3**	**-1.0**
	1.1nm,0.9s,mb3.9,baz=154,slow=7.4,SNR=16						
YKA				PcP	PcP	09 18 55.0	-2.2
	0.6nm,1.1s,baz=146,slow=4.8,SNR=4.8						
YKA				LR	LR	09 39 36.6	
	comp=Z,31nm,19.5s,MS3.3,baz=205,slow=38						
RKT	**Rikitea**	**54.97**	**227**	*e*T		10 17 23.1	
	2.4nm,0.2s						
PPT	**Papeete**	**63.24**	**241**	*e*S	**S**	**09 27 49.6**	**+1.9**
	38nm,23.0s						
PPT				*e*SS	SS	09 31 50.8	-3.6
	56nm,24.0s						
PPT				*e*LR	LR	09 38 15.0	
	74nm,23.0s						
ESDC	**Sonseca Array**	**80.88**	**51**	P	**P**	**09 21 00.2**	**-1.3**
	1.2nm,0.6s,mb4.0,baz=292,slow=5.0,SNR=6.8						
NOA	**NORSAR Array B**	**84.08**	**28**	P	**P**	**09 21 17.3**	**-0.5**
NOA				LR	LR	09 58 18.2	
NOA	**NORSAR Array B**	**84.08**	**28**	P	**P**	**09 21 17.3**	**-0.5**
	1.0nm,0.8s,mb4.0,baz=298,slow=5.2,SNR=3.8						
NOA				LR	LR	09 58 18.2	
	comp=Z,58nm,18.2s,MS4.0,baz=270,slow=35						
TORD	**Torodi Ar. Bea**	**92.62**	**76**	LR	LR	09 59 07.1	
	comp=Z,67nm,20.1s,MS4.1,baz=125,slow=33						

*ISCJB **01** 09:27:31.9±0.6, 3694N±004×2786E±005, h15km±5km, Error ellipse: s-maj=7.1km s-min=5.8km az=159.4*
*CSEM **01** 09:27:31.9±0.3, 3698N×2783E, h10km, MD2.7, Error ellipse: s-maj=7.9km s-min=6.7km az=59.0*
*ATH **01** 09:27:31.8, 3702N×2790E, h22km±3km, MD3.1/3*
*ISK **01** 09:27:31.3, 3693N×2782E, h21km, MD2.7*
ISC 01 09:27:32.2±0.6**, 3694N**±004×**2785E**±005**, h17**km±4km**, n11,** σ0^s**75**/15**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.30**	**226**	PG	**Pg**	**09 27 38.2**	**-0.4**
DAT				SG	**Sg**	**09 27 42.9**	**-0.1**
MLSB	**Milas**	**0.36**	**351**	PG	**Pg**	**09 27 39.8**	**+0.2**
MLSB				SG	**Sg**	**09 27 45.3**	**+0.6**
YER	**Yerkesik**	**0.40**	**61**	PG	**Pg**	**09 27 41.4**	**+1.1**
BODT	**Bodrum**	**0.45**	**286**	PG	**Pg**	**09 27 40.7**	**-0.5**
DALT	**Dalyan (Mudla)**	**0.66**	**105**	*e*PG	**Pg**	**09 27 44.4**	**-0.6**
ARG	**Arkhangelos**	**0.76**	**163**	*e*PN	**Pn**	**09 27 48.1**	**0.0**
ARG				*e*SN	**Sn**	**09 27 59.4**	**+0.3**
FETY	**Fethiye**	**1.04**	**107**	*e*PG	**Pg**	**09 27 51.5**	**-0.7**
SMG	**Samos**	**1.11**	**314**	*e*PN	**Pn**	**09 27 53.2**	**+0.2**
SMG				*e*SN	**Sn**	**09 28 07.3**	**-0.6**
KARP	**Karpathos**	**1.50**	**202**	*e*PN	**Pn**	**09 28 00.7**	**+2.4**
BLCB	**Balcova**	**1.58**	**336**	*e*PN	**Pn**	**09 27 59.0**	**-0.4**
ELL	**Elmali**	**1.66**	**96**	*e*PN	**Pn**	**09 27 59.9**	**-0.7**

*NEIC **01** 09:29:52.8, 1549N×9481W, h17km, MD4.2(MEX), After MEX.*
MEX 01 09:29:52.6±1.5**, 1548N**×**9481W, h16**km±24km**, MD4.2, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.29**	**283**	*i* P	Pn	09 30 12.0	-3.9
HUIG				*i* S	Sb	09 30 27.0	-5.8
CMIG	**Matias Romero**	**1.60**	**357**	*i* P	Pn	09 30 16.2	-4.1
CMIG				*i* S	Sn	09 30 35.5	-5.2
SCX	**San Cristobal**	**2.43**	**59**	*i* P	Pn	09 30 30.3	-1.4
SCX				*i* S	Sn	09 30 56.5	-4.6
VHO	**Vista Hermosa**	**2.44**	**311**	*i* P	Pn	09 30 30.7	-1.0
VHO				*i* S	Sn	09 30 58.4	-2.8
CCIG	**Comitan**	**2.69**	**72**	*e*P	Pn	09 30 32.2	-3.0
CCIG				*i* S	Sn	09 31 04.1	-3.4

*NEIC **01** 09:31:07.5±4.3, 491S×15097E, h110km±26km, mb4.6/1, Error ellipse: s-maj=41.3km s-min=33.4km az=52.0*
*IDC **01** 09:31:09.6±3.1, 503S×15072E, h109km±23km, mb3.7/3, mb1 3.8/5, mb1mx3.4/16, mbtmp3.7/5, Error ellipse: s-maj=73.1km s-min=22.3km az=127.0*
ISC 01 09:31:11.1±3.2**, 51S**±02×**1507E**±03**, h112**km±21km**, n8,** σ0^s**53**/9**, mb3.9**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.53**	**220**	P	**Pn**	**09 32 31.7**	**+0.5**
	1.8nm,0.3s,baz=14,slow=7.7,SNR=5.5						
PMG				S	**Sn**	**09 33 33.2**	**-0.5**
	8.5nm,0.3s,baz=54,slow=12,SNR=12						
CTA	**Charters Tower**	**15.49**	**196**	P	**Pn**	**09 34 44.0**	**+0.5**
	0.1nm,0.3s,baz=22,slow=16,SNR=2.7						
KAKA	**Kakadu**	**19.57**	**246**	*e*P	**P**	**09 35 31.0**	**+0.6**
	12nm,0.4s						
WB2	**Warramunga Arr**	**21.70**	**226**	*e*P	**P**	**09 35 53.0**	**-0.2**
WRA	**Warramunga Arr**	**21.71**	**226**	P	**P**	**09 35 52.6**	**-0.8**
	1.4nm,0.3s,mb3.8,baz=51,slow=10.0,SNR=40						
WRA				S	**S**	**09 39 48.2**	**+0.9**
	1.2nm,0.9s,baz=51,slow=16,SNR=5.2						
ASAR	**Alice Springs**	**24.55**	**220**	P	**P**	**09 36 20.1**	**-0.5**
	0.7nm,0.4s,mb3.5,baz=56,slow=8.7,SNR=14						
FITZ	**Fitzroy Crossi**	**27.71**	**240**	P	**P**	**09 36 48.9**	**-0.1**
	7.0nm,0.6s,mb4.3,baz=75,slow=7.5,SNR=30						
TORD	**Torodi Ar. Bea**	**148.45**	**287**	PKPbc	PKPbc	09 50 43.0	-2.7
	0.9nm,0.8s,baz=72,slow=1.9,SNR=5.4						

IDC 01 09:39:38.9±1.4**, 113N**×**12728E, h0**km**, mb3.7**/5**, mb1 3.9**/5**, mb1mx3.7**/16**, mbtmp3.7**/5**, Error ellipse: s-maj=190.9km s-min=18.8km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.05**	**162**	P	P	09 44 35.9	+0.4
	1.8nm,0.7s,baz=331,slow=12,SNR=13						
ASAR	**Alice Springs**	**25.47**	**166**	P	P	09 45 09.1	+0.2
	1.1nm,0.8s,baz=344,slow=11,SNR=8.9						
STKA	**Stephens Creek**	**35.52**	**159**	P	P	09 46 37.1	-0.6
	2.5nm,1.0s,baz=343,slow=12,SNR=3.8						
SONM	**Songino Array**	**49.92**	**342**	P	P	09 48 34.1	-0.3
	0.6nm,0.8s,baz=142,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**60.00**	**326**	P	P	09 49 47.8	+0.4
	0.9nm,0.6s,baz=118,slow=8.0,SNR=14						

*ISCJB **01** 09:47:53.6±0.7, 3840N±007×9773E±007, h10km, mb3.6/5, Error ellipse: s-maj=10.8km s-min=7.7km az=179.7*
*IDC **01** 09:47:53.7±1.0, 3834N×9780E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/35, Error ellipse: s-maj=33.7km s-min=20.8km az=52.0*
*BJI **01** 09:47:55.8, 3846N×9793E, h6km, ML3.9, Ms3.7, Msz3.7*
ISC 01 09:47:54.9±0.7**, 3823N**±007×**9788E**±007**, h10**km**, n11,** σ1^s**01**/15**, mb3.6**/5**, Qinghai**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.92**	**51**	PG	**Pg**	**09 48 27.8**	**-3.9**
GTA				SG	**Sg**	**09 48 57.3**	**+0.7**
GTA				LR	LR		
	comp=N,1μm,6.5s						
GTA				LR	LR		
	comp=E,1μm,6.5s						
GTA				LR	LR		
	comp=Z,1μm,7.2s						
LZH	**Lanzhou**	**5.22**	**112**	P	**Pn**	**09 49 20.0**	**+7.0**
LZH				PG	**Pg**	**09 49 33.7**	**-1.2**
LZH				S	**Sn**	**09 50 20.1**	**+6.9**
LZH				SG	**Sg**	**09 50 41.3**	**-1.2**
LZH				Smax			
	comp=N,103nm,1.1s						
LZH				Smax			
	comp=E,120nm,1.0s						
LZH				LR	LR		
	comp=N,459nm,6.5s						
LZH				LR	LR		
	comp=Z,575nm,8.2s						
WMQ	**Urumqi**	**9.51**	**309**	*e*P	**Pn**	**09 50 11.0**	**-0.8**
SONM	**Songino Array**	**11.44**	**30**	Pn	**Pn**	**09 50 38.0**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=214,slow=15,SNR=7.7						
SONM				Lg		09 53 45.7	
	comp=Z,0.6nm,0.3s,baz=214,slow=28,SNR=7.4						
SONM				LR	LR	09 55 14.8	
	comp=Z,115nm,19.9s,baz=224,slow=39						
MKAR	**Makanchi Array**	**14.31**	**312**	Pn	**Pn**	**09 51 12.9**	**-4.6**
	comp=Z,0.1nm,0.3s,baz=118,slow=12,SNR=3.1						
ZALV	**Zalesovo Beam**	**18.10**	**335**	P	**Pn**	**09 52 06.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=6.7						
KSRS	**Korea Array**	**23.70**	**83**	P	**P**	**09 53 07.8**	**+1.0**
	comp=Z,2.8nm,0.7s,mb3.8,baz=281,slow=8.7,SNR=11						
WRA	**Warramunga Arr**	**67.23**	**143**	P	**P**	**09 58 50.9**	**+1.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=349,slow=6.6,SNR=6.2						
ASAR	**Alice Springs**	**70.24**	**145**	P	**P**	**09 59 09.6**	**+1.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=339,slow=6.7,SNR=13						
ESDC	**Sonseca Array**	**74.51**	**308**	P	**P**	**09 59 33.2**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=24,slow=4.8,SNR=3.6						
YKA	**Yellowknife Ar**	**76.27**	**15**	P	**P**	**09 59 42.4**	**-1.0**
	comp=Z,0.1nm,0.4s,mb3.1,baz=333,slow=5.6,SNR=3.4						

*ISCJB **01** 09:58:59.2±3.9, 57S±02×1448E±02, h69km±38km, mb3.6/3, Error ellipse: s-maj=31.4km s-min=25.3km az=7.8*
*IDC **01** 09:59:01.6±5.6, 575S×14479E, h75km±60km, mb3.6/4, mb1 3.9/6, mb1mx3.7/15, mbtmp3.7/6, ML3.6/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/18, Error ellipse: s-maj=38.9km s-min=33.3km az=141.0*
*NEIC **01** 09:59:01.3±3.3, 578S×14488E, h74km±35km, mb4.6/1, Error ellipse: s-maj=33.4km s-min=22.5km az=144.0*
ISC 01 09:59:00.3±3.7**, 57S**±02×**1448E**±02**, h61**km±38km**, n10,** σ0^s**88**/10**, mb3.8**/3**, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.39**	**148**	P	**Pn**	**10 00 03.5**	**-1.0**
	6.7nm,0.3s,baz=23,slow=5.1,SNR=22						
PMG				S	**Sn**	**10 00 55.3**	**+0.9**
	8.3nm,0.3s,baz=135,slow=20,SNR=6.7						
WB2	**Warramunga Arr**	**17.43**	**215**	*e*P	**Pn**	**10 02 59.7**	**+0.4**
WRA	**Warramunga Arr**	**17.44**	**215**	P	**Pn**	**10 02 59.9**	**+0.5**
	0.5nm,0.3s,baz=40,slow=12,SNR=51						
ASAR	**Alice Springs**	**20.72**	**209**	P	**P**	**10 03 36.5**	**+0.8**
	3.5nm,0.8s,baz=34,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**22.40**	**235**	*e*P	**P**	**10 03 52.8**	**-1.0**
	10nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**22.40**	**235**	P	**P**	**10 03 52.9**	**-0.9**
	4.8nm,0.4s,mb4.3,baz=49,slow=9.3,SNR=32						
STKA	**Stephens Creek**	**26.23**	**186**	P	**P**	**10 04 28.2**	**-1.4**
STKA				LR	LR	10 16 15.8	
STKA	**Stephens Creek**	**26.23**	**186**	P	**P**	**10 04 28.2**	**-1.4**
	0.7nm,0.4s,mb3.5,baz=355,slow=11,SNR=3.0						
STKA				LR	LR	10 16 15.8	
	comp=Z,106nm,18.4s,baz=25,slow=40						
KSRS	**Korea Array**	**45.70**	**341**	LR	LR	10 24 48.3	
	comp=Z,45nm,18.1s,baz=142,slow=34						
MKAR	**Makanchi Array**	**75.85**	**321**	P	**P**	**10 10 40.9**	**+0.8**
	0.3nm,0.6s,mb3.4,baz=103,slow=5.4,SNR=4.5						

*NEIC **01** 10:02:39.8, 3837N×3926E, h5km, MD3.3(ISK), After ISK.*
*ISCJB **01** 10:02:40.7±0.6, 3838N±003×3925E±003, h0km±6km, Error ellipse: s-maj=4.7km s-min=3.6km az=178.0*
*CSEM **01** 10:02:40.3±0.1, 3838N×3924E, h5km, MD3.2, Error ellipse: s-maj=1.5km s-min=1.2km az=167.0*
*ISK **01** 10:02:40.1, 3837N×3923E, h3km, MD3.2*
*DDA **01** 10:02:41.6, 3836N×3925E, h5km±4km, Md3.2*
ISC 01 10:02:41.4±0.5**, 3838N**±003×**3925E**±003**, h2**km±5km**, n36,** σ0^s**91**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**299**	*i* P	**Pg**	**10 02 46.2**	**+0.3**
ELZG				*i* S	**Sg**	**10 02 48.9**	**-0.2**
PTK	**Pertek**	**0.52**	**12**	PG	**Pg**	**10 02 51.3**	**-0.1**
PTK				SG	**Sg**	**10 02 59.5**	**+1.4**
PTK	**Pertek**	**0.52**	**12**	Pg	**Pg**	**10 02 51.3**	**-0.1**
PTK				Sg	**Sg**	**10 02 59.3**	**+1.2**
PTK	**Pertek**	**0.52**	**12**	*e*Pg	**Pg**	**10 02 51.3**	**-0.1**
PTK				Sg	**Sg**	**10 02 59.3**	**+1.2**
MALT	**Malatya**	**0.65**	**264**	PG	**Pg**	**10 02 52.6**	**-1.2**
MALT				SG	**Sg**	**10 03 02.4**	**+0.1**
MALT	**Malatya**	**0.65**	**264**	Pg	**Pg**	**10 02 53.0**	**-0.8**
MALT				*e*Sg	**Sg**	**10 03 02.4**	**+0.1**
MYA	**Malataya**	**0.65**	**265**	PG	**Pg**	**10 02 53.2**	**-0.6**
MYA	**Malataya**	**0.65**	**265**	Pg	**Pg**	**10 02 53.2**	**-0.6**
DIYA	**Diyarbakir**	**0.83**	**124**	*i* P	**Pg**	**10 02 56.9**	**-0.3**
DIYA				*i* S	**Sg**	**10 03 08.6**	**+0.7**
DIY	**Diyarbakir**	**0.91**	**122**	PG	**Pg**	**10 02 58.2**	**-0.7**
DIY				SG	**Sg**	**10 03 11.9**	**+1.2**
DIY	**Diyarbakir**	**0.91**	**122**	Pg	**Pg**	**10 02 58.1**	**-0.8**
URFA	**Urfa**	**1.00**	**200**	PG	**Pg**	**10 03 00.3**	**-0.3**
URFA	**Urfa**	**1.00**	**200**	Pg	**Pg**	**10 03 00.4**	**-0.2**
BINT	**Bingol**	**1.09**	**63**	PN	**Pn**	**10 03 01.8**	**-1.8**
BINT	**Bingol**	**1.09**	**63**	Pn	**Pn**	**10 03 01.9**	**-1.7**
BINT	**Bingol**	**1.09**	**63**	Pn	**Pn**	**10 03 01.9**	**-1.7**
ATAB	**Bozova**	**1.18**	**220**	*i* P	**Pg**	**10 03 04.2**	**+0.1**
ATAB				*i* S	**Sg**	**10 03 20.3**	**+0.9**
EZC	**Erzincan**	**1.43**	**18**	PN	**Pn**	**10 03 07.1**	**-1.2**
BNGL	**BINGOL**	**1.59**	**69**	*i* P	**Pn**	**10 03 10.8**	**+0.3**
BNGL				*i* S	**Sn**	**10 03 33.6**	**+1.9**
MARD	**Mardin**	**1.61**	**131**	*i* P	**Pn**	**10 03 09.5**	**-1.3**
MARD				*i* S	**Sn**	**10 03 28.1**	**-4.2**
GZT	**Gaziantep**	**1.68**	**233**	*i* P	**Pn**	**10 03 11.2**	**-0.6**
GZT				*i* S	**Sn**	**10 03 34.7**	**+0.9**
BTMT	**Batman**	**1.77**	**96**	PN	**Pn**	**10 03 10.8**	**-2.2**
GAZ	**Gaziantep**	**2.02**	**234**	*e*PN	**Pn**	**10 03 16.3**	**-0.1**
GAZ	**Gaziantep**	**2.02**	**234**	Pn	**Pn**	**10 03 16.5**	**+0.2**
GUMT	**Gumushane**	**2.08**	**5**	*e*PN	**Pn**	**10 03 17.1**	**-0.2**
GUMT	**Gumushane**	**2.08**	**5**	Pn	**Pn**	**10 03 17.5**	**+0.3**
EZM	**Erzurum**	**2.24**	**47**	*e*PN	**Pn**	**10 03 19.8**	**+0.4**
EZM	**Erzurum**	**2.24**	**47**	Pn	**Pn**	**10 03 19.5**	**+0.1**
SVSK	**Karacayir**	**2.33**	**312**	*e*PN	**Pn**	**10 03 20.9**	**+0.3**
SVSK	**Karacayir**	**2.33**	**312**	Pn	**Pn**	**10 03 20.9**	**+0.3**
ANDN	**Andirin**	**2.43**	**252**	*i* P	**Pn**	**10 03 25.2**	**+3.2**
ANDN				*i* S	**Sn**	**10 03 59.0**	**+6.7**
SIRT	**Sirnak**	**2.67**	**108**	*e*PN	**Pn**	**10 03 25.4**	**0.0**
BNN	**Bunyan**	**2.71**	**281**	*e*PN	**Pn**	**10 03 25.7**	**-0.1**
BNN	**Bunyan**	**2.71**	**281**	Pn	**Pn**	**10 03 26.6**	**+0.7**
KOZT	**Kozan**	**2.85**	**253**	*e*PN	**Pn**	**10 03 28.0**	**+0.2**
AGRB	**Hanur-Agry**	**3.15**	**67**	*e*PN	**Pn**	**10 03 32.2**	**+0.2**

DHMR 01 10:03:52.3±0.6**, 989N**×**4268E, h15**km±397km**, ML3.9, Ethiopia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DESE	**Dese**	**3.23**	**292**	*e*Pn	Pn	10 04 51.2	+8.7
TRBA	**At Turbah**	**3.61**	**23**	*i* P	Pn	10 04 50.3	+2.6
TRBA				*i* S	Sn	10 05 36.2	+6.0
TRBA				AML	AML	10 05 50.0	
	comp=E,428nm,0.5s						
UDYN	**Al ‘Udayn**	**4.25**	**17**	*i* P	Pn	10 04 59.2	+2.7
UDYN				*i* S	Sn	10 05 51.1	+5.3
UDYN				AML	AML	10 06 11.1	
	comp=Z,406nm,0.7s						
UDYN	**Al ‘Udayn**	**4.25**	**17**	*i* P	Pn	10 04 59.2	+2.7
UDYN				*i* S	Sn	10 05 51.1	+5.2
LBOS		**4.69**	**32**	*i* P	Pn	10 05 05.1	+2.5
LBOS				*i* S	Sn	10 06 02.1	+5.2
DHBB	**Dhamar BB**	**4.95**	**20**	*i* P	Pn	10 05 09.0	+2.8
DHBB				*i* S	Sn	10 06 08.1	+5.0

*IDC **01** 10:07:29.4±2.2, 4539N×12102W, h0km, mb3.2/1, mb1 3.8/5, mb1mx3.5/22, mbtmp3.3/5, ML3.2/4, MS2.7/1, Ms1 2.7/1, ms1mx2.0/15, Error ellipse: s-maj=34.1km s-min=8.6km az=104.0*
*NEIC **01** 10:07:32.0, 45.13N×12093W, h22km, MD3.6(SEA), After SEA.*
NEIC Felt at Maupin.
*PNSN **01** 10:07:31.9, 45.12N×12093W, h24km, MD3.6, Fault plane solution: NP1:φs173.00000°, δ51.00000°, NP2: φs75.00000°, δ80.00000°, Principal axes: T Plg19.0000°, Azm130.0000°; P Plg35.0000°, Azm26.0000°;*
*ISCJB **01** 10:07:32.0±0.1, 45.152N±0008×12087W±001, h22km Error ellipse: s-maj=1.3km s-min=1.2km az=23.1*
ISC 01 10:07:33.1±0.2**, 45147N**±0008×**12092W**±001**, h25**km±2km**, n187,** σ0^s**96**/287**, 116C-111D, Washington-Oregon border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
G06A	**Carlson Farm,**	**0.22**	**66**	⇑P	**Pb**	**10 07 37.8**	**-1.1**
	baz=0.2,SNR=1000						
G06A				⇑S	**Sb**	**10 07 41.9**	**-1.1**
	baz=0.2						
VTHM	**Trough**	**0.26**	**82**	⇑P	**Pb**	**10 07 38.3**	**-1.1**
G05A	**Wamic**	**0.29**	**289**	P	**Pb**	**10 07 38.6**	**-1.3**
	baz=0.3,SNR=1000						
G05A				⇓S	**Sb**	**10 07 43.5**	**-1.1**
	baz=0.3						

VGB	Gordon Butte	0.38	15	⇓P	Pb	10 07 40.6	-0.7
VFP	Flag Point	0.42	294	⇑P	Pb	10 07 40.8	-1.1
VBEM	Beaver Butte	0.48	260	⇑P	Pb	10 07 41.5	-1.4
H05A	Madras	0.54	204	⇑P	Pb	10 07 42.2	-1.8
	baz=0.5,SNR=1000						
H05A				⇑S	Sb	10 07 50.1	-1.3
	baz=0.5						
HOOD	Mount Hood Mea	0.55	289	⇑P	Pb	10 07 42.4	-1.6
H06A	Lindquist Farm	0.59	134	⇓P	Pb	10 07 43.2	-1.5
	baz=0.6,SNR=1000						
H06A				⇓S	Sb	10 07 51.5	-1.1
	baz=0.6						
F06A	Goldendale	0.63	9	⇓P	Pb	10 07 44.4	-1.0
	baz=0.7,SNR=758						
F06A				⇓S	Sb	10 07 53.6	-0.2
	baz=0.7						
TDH	Tom, Dick, Har	0.63	283	⇑P	Pb	10 07 43.9	-1.6
VIPM	Ingram Point	0.67	161	⇑P	Pb	10 07 44.9	-1.3
GMO	Grizzlie Mount	0.71	182	⇓P	Pb	10 07 45.1	-1.6
APM	Augspurger Mou	0.80	318	⇑P	Pb	10 07 47.4	-0.8
F05A	White Salmon	0.83	333	⇓P	Pb	10 07 47.8	-1.0
	baz=0.8,SNR=209						
F05A				⇑S	Sb	10 07 59.6	0.0
	baz=0.8						
VLMM	Larch Mountain	0.88	297	⇓P	Pb	10 07 48.7	-1.0
G07A	Ruggs Ranch, H	0.89	82	P	Pb	10 07 48.9	-1.0
	baz=0.9,SNR=1000						
G07A				⇑S	Sb	10 08 01.2	-0.2
	baz=0.9						
GULW	Guler Mountain	0.91	329	P	Pb	10 07 49.6	-0.6
GT2	Goat Mountain	0.95	271	⇑P	Pn	10 07 49.5	-1.4
H04A	Detroit Lake	1.01	243	⇓P	Pn	10 07 49.8	-1.8
	baz=1.0,SNR=1000						
H04A				⇑S	Sb	10 08 03.2	-1.5
	baz=1.0						
BKCOR	Black Crater	1.01	213	⇓P	Pn	10 07 50.5	-1.2
I05A	Bend	1.01	194	P	Pn	10 07 50.2	-1.5
	baz=1.0,SNR=446						
I05A				⇑S	Sb	10 08 03.7	-1.1
	baz=1.0						
F07A	Phinny Hill Vi	1.02	43	⇓P	Pn	10 07 51.3	-0.5
	baz=1.0,SNR=455						
F07A				⇓S	Sb	10 08 05.4	+0.3
	baz=1.0						
COLT	Colton High Sc	1.07	272	P	Pn	10 07 51.6	-0.9
G04A	Mulino	1.10	274	P	Pn	10 07 51.9	-1.0
	baz=1.1,SNR=351						
G04A				⇑S	Sn	10 08 07.1	-0.3
	baz=1.1						
ASR	Mount Adams--S	1.11	335	P	Pn	10 07 52.9	-0.1
H07A	Lands Inn, Kim	1.11	119	⇑P	Pn	10 07 52.3	-0.8
	baz=1.1						
H07A				⇓S	Sn	10 08 07.9	+0.3
	baz=1.1						
BEND	Bend	1.12	195	P	Pn	10 07 52.2	-1.0
PGO	Gresham	1.13	287	P	Pn	10 07 52.9	-0.3
HUOR	Husband	1.22	213	⇓P	Pn	10 07 53.7	-0.9
CDFW	Cedar Flats	1.25	321	P	Pn	10 07 54.5	-0.4
FRIS	Frissel Point	1.26	222	⇓P	Pn	10 07 54.5	-0.6
WIFE	Three Sisters-	1.26	211	⇓P	Pn	10 07 54.3	-0.8
I06A	Prineville	1.31	157	⇑P	Pn	10 07 55.1	-0.6
	baz=1.3,SNR=847						
I06A				⇓S	Sn	10 08 12.5	+0.2
	baz=1.3						
F04A	Amboy	1.31	307	⇓P	Pn	10 07 55.3	-0.5
	baz=1.3,SNR=932						
F04A				⇓S	Sn	10 08 13.2	+0.6
	baz=1.3						
PINOR	Pine Mountain	1.34	178	P	Pn	10 07 55.8	-0.4
G08A	Pilot Rock	1.40	83	⇑P	Pn	10 07 56.6	-0.3
	baz=1.4,SNR=1000						
G08A				⇑S	Sn	10 08 15.4	+0.9
	baz=1.4						
E06A	Yakima	1.40	358	⇓P	Pn	10 07 57.0	0.0
	baz=1.4,SNR=1000						
E06A				⇑Sb	Sb	10 08 16.6	+0.8
	baz=1.4						
I07A	Izee	1.47	136	⇓P	Pn	10 07 57.9	0.0
	baz=1.5						
I07A				⇓Sb	Sb	10 08 17.9	0.0
	baz=1.5						
E05A	Randle	1.53	338	⇑P	Pn	10 07 59.0	+0.2
	baz=1.5,SNR=394						
E05A				⇑Sb	Sb	10 08 20.0	+0.3
	baz=1.5						
HAWA	Hanford	1.58	37	*e*Pn	Pn	10 07 59.1	-0.4
HAWA				*e*Sn	Sn	10 08 18.9	-0.3
E07A	Sunnyside	1.60	27	⇓P	Pn	10 07 59.6	-0.2
	baz=1.6,SNR=425						
E07A				⇑Sb	Sb	10 08 22.3	+0.7
	baz=1.6						
F08A	Pendleton	1.64	66	⇑P	Pn	10 07 60.0	-0.4
	baz=1.7						
F08A				⇓S	Sn	10 08 21.1	+0.4
	baz=1.7						
G03A	Yamhill	1.68	277	⇑P	Pn	10 08 00.6	-0.2
	baz=1.7,SNR=248						
G03A				⇑Sb	Sb	10 08 24.2	+0.4
	baz=1.7						
LON	Longmire	1.72	339	*e*Pg	Pn	10 08 01.0	-0.4
H08A	Prairie City	1.72	111	P	Pn	10 08 01.2	-0.2
	baz=1.7,SNR=610						
H08A				⇑Sb	Sb	10 08 25.4	+0.3
	baz=1.7						
I04A	Tendick Farm,	1.72	219	⇓P	Pn	10 08 01.2	-0.3
	baz=1.7,SNR=109						
I04A				⇓S	Sn	10 08 23.2	+0.6
	baz=1.7						
H03A	Soap Creek Ran	1.75	255	⇑P	Pn	10 08 01.7	-0.1
	baz=1.7,SNR=193						
H03A				⇓S	Sn	10 08 23.9	+0.6
	baz=1.7						
COR	Corvallis	1.78	253	*e*Pb	Pb	10 08 02.5	-2.5
COR				*e*Sn	Sn	10 08 25.1	+0.9
E08A	Dider Farm, El	1.87	43	⇓P	Pn	10 08 03.7	+0.2
	baz=1.9,SNR=12						
E08A				⇑S	Sn	10 08 27.0	+0.7
	baz=1.9						
J05A	Fort Rock	1.88	187	⇑P	Pn	10 08 03.9	+0.4
	baz=1.9,SNR=153						
J05A				⇓Sb	Sb	10 08 30.0	+0.4
	baz=1.9						
E04A	Onalaska	1.92	320	⇓Pb	Pb	10 08 06.4	-0.9
	baz=1.9,SNR=26						
E04A				⇑Sb	Sb	10 08 31.6	+0.8
	baz=1.9						
J06A	Christmas Vall	1.97	163	⇑P	Pn	10 08 04.1	-0.8
	baz=2.0,SNR=175						
J06A				⇓Sb	Sb	10 08 32.8	+0.4
	baz=2.0						
F03A	Seaside	2.01	294	P	Pn	10 08 05.6	+0.2
	baz=2.0,SNR=178						
F03A				⇑Sb	Sb	10 08 34.3	+0.8
	baz=2.0						
D06A	Cle Elum	2.05	1	⇓P	Pn	10 08 06.3	+0.4
	baz=2.1,SNR=169						
D06A				⇑Sb	Sb	10 08 35.6	+1.0
	baz=2.1						
I03A	Eugene	2.05	236	P	Pn	10 08 06.0	0.0
	baz=2.0,SNR=247						
I03A				⇑S	Sn	10 08 31.1	+0.3
	baz=2.0						
I08A	Drewsey	2.09	125	⇓P	Pn	10 08 06.2	-0.3
	baz=2.1,SNR=46						
I08A				⇑Sb	Sb	10 08 36.8	+1.1
	baz=2.1						
J04A	Umpqua Nationa	2.09	205	⇑P	Pn	10 08 07.4	+0.9
	baz=2.1						
J07A	Hines	2.12	146	⇑P	Pn	10 08 06.6	-0.2
	baz=2.1,SNR=22						
D07A	Quincy	2.15	18	⇑P	Pn	10 08 07.7	+0.4
	baz=2.2,SNR=23						
D07A				⇑Sb	Sb	10 08 38.5	+1.0
	baz=2.2						
D05A	Enumclaw	2.17	340	⇓P	Pn	10 08 08.4	+0.8
	baz=2.2						
D05A				⇓Sb	Sb	10 08 39.5	+1.3
	baz=2.2						
F09A	S2 Ranch, Elgi	2.19	74	⇑P	Pn	10 08 07.8	-0.2
	baz=2.2,SNR=18						
F09A				⇓Sb	Sb	10 08 39.6	+0.8
	baz=2.2						
H02A	Toledo	2.24	259	⇓Sb	Sb	10 08 40.5	+0.5
	baz=2.2						
J03A	Ideyld Park	2.30	220	⇑P	Pn	10 08 09.6	+0.2
	baz=2.3,SNR=52						
J03A				⇑S	Sn	10 08 37.1	+0.1
	baz=2.3						
E03A	Lebam	2.32	308	⇑P	Pn	10 08 10.3	+0.6
	baz=2.3,SNR=38						
E03A				⇓S	Sn	10 08 37.7	+0.4
	baz=2.3						
D04A	Dobbs Creek Ra	2.36	327	⇑Pb	Pb	10 08 14.3	-0.6
	baz=2.4						
D04A				⇓Sb	Sb	10 08 44.8	+1.3
	baz=2.4						
D08A	Wollman Farm,	2.36	35	P	Pn	10 08 10.0	-0.3
	baz=2.4,SNR=620						
D08A				⇓Sb	Sb	10 08 44.3	+0.6
	baz=2.4						
H09A	Durkee	2.37	101	P	Pn	10 08 10.5	+0.2
	baz=2.4,SNR=272						
H09A				⇓Sb	Sb	10 08 43.9	+0.3
	baz=2.4						
I02A	Mapleton	2.37	242	⇑P	Pn	10 08 11.1	+0.7
	baz=2.3,SNR=66						
I02A				⇓Sb	Sb	10 08 44.5	+0.6
	baz=2.3						
E09A	Wood Farm, Sta	2.38	54	⇑P	Pn	10 08 09.6	-0.8
	baz=2.4,SNR=80						
E09A				⇑S	Sn	10 08 38.8	+0.1
	baz=2.4						
K06A	Valley Falls	2.40	168	⇓P	Pn	10 08 11.0	+0.3
	baz=2.4,SNR=29						
K06A				⇑Sb	Sb	10 08 45.2	+0.6
	baz=2.4						
K05A	Summer Lake	2.42	179	⇑P	Pn	10 08 11.8	+0.8
	baz=2.4						
K05A				⇑Sb	Sb	10 08 46.6	+1.4
	baz=2.4						
J08A	Circle Bar Ran	2.51	135	⇓P	Pn	10 08 11.9	-0.4
	baz=2.5						
I09A	Lost Marbles R	2.56	116	⇑P	Pn	10 08 12.1	-0.8
	baz=2.5,SNR=6.4						
I09A				⇑Sb	Sb	10 08 50.8	+1.6
	baz=2.5						
BMO	Blue Mountains	2.58	95	*e*Pn	Pn	10 08 13.1	-0.2
BMO				*e*Sn	Sn	10 08 50.5	+6.6
K04A	Chilquin	2.60	193	⇓Pb	Pb	10 08 17.3	-1.6
	baz=2.6						
K04A				⇑Sb	Sb	10 08 52.1	+1.7
	baz=2.6						
C05A	Tolt Reservoir	2.60	349	⇓P	Pn	10 08 14.3	+0.7
	baz=2.6						
C05A				⇑Sb	Sb	10 08 52.0	+1.4
	baz=2.6						
J02A	Umpqua	2.61	228	⇑P	Pn	10 08 14.7	+1.0
	baz=2.6,SNR=32						
J02A				⇑S	Sn	10 08 44.5	0.0
	baz=2.6						
C07A	Waterville	2.61	13	P	Pn	10 08 13.8	+0.1
	baz=2.6,SNR=124						
C07A				⇓Sb	Sb	10 08 52.0	+1.2
	baz=2.6						
D09A	Jones Farm, Ri	2.64	43	P	Pn	10 08 13.3	-0.7
	baz=2.7,SNR=305						
D09A				⇑S	Sn	10 08 44.6	-0.7
	baz=2.7						
F10A	Beach Ranch, E	2.72	71	⇓P	Pn	10 08 15.2	0.0
	baz=2.7						
F10A				⇑S	Sn	10 08 47.5	+0.2
	baz=2.7						
K07A	Rock Creek Ran	2.74	153	⇓P	Pn	10 08 15.8	+0.4
	baz=2.7,SNR=20						
K07A				⇓Sb	Sb	10 08 55.5	+1.1
	baz=2.7						
GNW	Green Mountain	2.75	332	*e*Pn	Pn	10 08 15.4	-0.2
C06A	Tall Timber Ra	2.78	0	⇑P	Pn	10 08 16.3	+0.3
	baz=2.8						
C06A				⇓Sb	Sb	10 08 57.0	+1.5
	baz=2.8						
J09A	Fry Pan Ranch,	2.90	127	⇑P	Pn	10 08 17.2	-0.5
	baz=2.9						
C04A	Brinnon	2.94	332	⇓P	Pn	10 08 19.3	+1.1
	baz=2.9,SNR=25						
C04A				⇑Sb	Sb	10 09 00.7	+0.6
	baz=2.9						
C08A	Higginbotham F	2.94	26	P	Pn	10 08 17.6	-0.5
	baz=3.0,SNR=132						
C08A				⇑Sb	Sb	10 09 02.5	+2.3
	baz=3.0						
E10A	Myers Farm, Un	2.98	62	⇓P	Pn	10 08 18.3	-0.5
	baz=3.0						
K08A	Mann Creek Ran	2.99	143	⇓P	Pn	10 08 18.8	-0.1
	baz=3.0						
H10A	Noah's Angus R	3.02	99	⇓P	Pn	10 08 19.3	0.0
	baz=3.0,SNR=202						
H10A				⇓S	Sn	10 08 55.1	+0.4
	baz=3.0						
NLWA	Neilton Lookou	3.04	319	*e*Pn	Pn	10 08 24.1	+4.6
L04A	Klamath Falls	3.05	194	⇑P	Pn	10 08 21.0	+1.3
	baz=3.0,SNR=6.1						
L04A				⇓Sb	Sb	10 09 05.5	+2.1
	baz=3.0						
I10A	Payette	3.13	108	⇑P	Pn	10 08 20.8	0.0
	baz=3.1,SNR=54						
I10A				⇓Sb	Sb	10 09 06.2	+0.6
	baz=3.1						
D10A	Wagner Farm, O	3.17	52	⇓P	Pn	10 08 20.4	-1.0
	baz=3.2						
D10A				⇑S	Sn	10 08 58.1	-0.3
	baz=3.2						
WVOR	Wild Horse Val	3.18	148	Pn	Pn	10 08 20.3	-1.1
B05A	Bryant	3.22	346	⇓P	Pn	10 08 22.8	+0.8
	baz=3.2						
B05A				⇑Sb	Sb	10 09 10.4	+2.1
	baz=3.2						
C09A	Chrisman Ranch	3.22	34	⇑P	Pn	10 08 21.2	-0.9
	baz=3.2,SNR=40						
C09A				⇓S	Sn	10 08 60.0	+0.3
	baz=3.2						
MOD	Modoc	3.27	172	Pn	Pn	10 08 23.6	+0.8
MOD	Modoc	3.27	172	⇓Pb	Pb	10 08 29.2	-1.3
	baz=3.3						
MOD				⇓Sb	Sb	10 09 11.7	+1.9
	baz=3.3						
L07A	Adell	3.33	159	⇑Sb	Sb	10 09 13.6	+2.1
	baz=3.3						
B07A	Winthrop	3.36	9	⇓P	Pn	10 08 24.4	+0.4
	baz=3.4,SNR=338						
B07A				⇓S	Sn	10 09 03.5	+0.5
	baz=3.4						
K09A	Rome	3.36	136	⇓P	Pn	10 08 23.8	-0.3
	baz=3.3						
K09A				⇓S	Sn	10 09 04.0	+0.9
	baz=3.3						
B08A	Colville Reser	3.39	18	P	Pn	10 08 24.1	-0.3
	baz=3.4,SNR=27						
B08A				⇓Sb	Sb	10 09 15.6	+2.3
	baz=3.4						
B06A	Marblemount	3.40	354	⇓Sb	Sb	10 09 15.3	+2.0
	baz=3.4						
B04A	Port Angeles	3.41	329	⇓Sb	Sb	10 09 15.8	+2.1
	baz=3.4						
M04C	Macdoel	3.43	192	⇓P	Pn	10 08 26.3	+1.4
	baz=3.4						
M04C				⇑S	Sn	10 09 04.4	-0.3
	baz=3.4						
F11A	Grangeville	3.43	76	⇑P	Pn	10 08 25.4	+0.5
	baz=3.4,SNR=11						
F11A				⇓S	Sn	10 09 05.1	+0.3
	baz=3.4						
J10A	Berg Farm, Mel	3.44	118	⇑P	Pn	10 08 24.4	-0.7
	baz=3.4						
J10A				⇑Sb	Sb	10 09 17.6	+2.9
	baz=3.4						
L08A	Fields	3.50	147	⇓S	Sn	10 09 06.1	-0.3
	baz=3.5						
E11A	Bogner Ranch,	3.51	68	⇓P	Pn	10 08 26.0	-0.1
	baz=3.5,SNR=33						
E11A				⇓S	Sn	10 09 06.9	+0.1
	baz=3.5						
H11A	Donnelly	3.52	96	⇑P	Pn	10 08 26.4	+0.3
	baz=3.5,SNR=56						
H11A				⇓S	Sn	10 09 07.2	+0.3
	baz=3.5						
L02A	Cave Junction	3.57	214	⇓P	Pn	10 08 28.5	+1.7
	baz=3.5						
YBH	Yreka Blue Hor	3.65	202	*e*Pn	Pn	10 08 30.1	+2.1
YBH	Yreka Blue Hor	3.65	202	P	Pn	10 08 29.4	+1.4
	baz=3.6,SNR=21						
I11A	Placerville	3.76	107	⇑P	Pn	10 08 29.1	-0.3
	baz=3.7,SNR=39						
K10A	MacKenzie Ranc	3.76	128	⇓P	Pn	10 08 29.3	-0.2
	baz=3.7						
M05C	Lookout	3.79	183	⇑P	Pn	10 08 31.6	+1.7
	baz=3.8						
B09A	Rice	3.79	29	⇑P	Pn	10 08 29.2	-0.7
	baz=3.8						
B09A				⇑S	Sn	10 09 13.3	-0.4
	baz=3.8						
PGC	Sidney	3.91	335	*e*Pn	Pn	10 08 29.2	-2.3
A07A	Ashnola River,	3.92	5	⇓P	Pn	10 08 32.2	+0.5
	baz=3.9						
A07A				⇓S	Sn	10 09 17.4	+0.6
	baz=3.9						
L09A	Wilkinson Ranc	3.92	142	⇓P	Pn	10 08 32.2	+0.6
	baz=3.9						
A05A	Maple Falls	3.93	349	⇓P	Pn	10 08 32.5	+0.7
	baz=4.0						
A05A				⇑Sb	Sb	10 09 31.7	+2.9
	baz=4.0						
M06C	Likely Place G	3.95	175	⇑Pb	Pb	10 08 41.2	-0.9
	baz=3.9						
A06A	Chilliwack	3.97	355	⇑Sb	Sb	10 09 33.4	+3.6
	baz=4.0						
A08A	Turner Farm, O	3.97	16	P	Pn	10 08 32.8	+0.4
	baz=4.0,SNR=94						
A08A				⇑S	Sn	10 09 18.2	+0.1
	baz=4.0						
MFID	Camas Ranch	4.05	114	⇑P	Pn	10 08 32.9	-0.5
	baz=4.0,SNR=17						
MFID				⇓S	Sn	10 09 20.0	0.0
	baz=4.0						
B10A	Chitwood Farm,	4.05	38	⇓S	Sn	10 09 18.7	-1.4
	baz=4.1						
NEW	Newport	4.07	39	*e*Pn	Pn	10 08 32.2	-1.4
NEW				*e*Sn	Sn	10 09 36.6	+16
NEW	Newport	4.07	39	Pn	Pn	10 08 32.5	-1.1
	1.6nm,0.3s,baz=207,slow=13,SNR=30						
NEW				Pg	Pn	10 08 38.8	+5.1
	1.3nm,0.3s,baz=199,slow=15,SNR=12						
NEW				Sn	Sn	10 09 18.4	-2.0
	4.7nm,0.3s,baz=37,slow=21,SNR=3.7						
NEW				Lg		10 09 31.7	
	4.5nm,0.3s,baz=313,slow=22,SNR=4.5						
A09A	Danville	4.15	22	⇓P	Pn	10 08 35.2	+0.4
	baz=4.2						
D12A	Red Ives Fores	4.32	62	⇓P	Pn	10 08 37.2	+0.1
	baz=4.3						
D12A				⇑S	Sn	10 09 26.4	-0.2
	baz=4.3						
H12A	Diamond D Ranc	4.36	96	⇓P	Pn	10 08 38.2	+0.5
	baz=4.3,SNR=36						
H12A				⇓S	Sn	10 09 27.4	-0.1
	baz=4.3						
L10A	Juniper Basin	4.46	132	⇑P	Pn	10 08 39.6	+0.6
	baz=4.4,SNR=17						
A10A	Northport	4.47	30	⇑P	Pn	10 08 38.7	-0.5
	baz=4.5						
A10A				⇑S	Sn	10 09 29.5	-0.9
	baz=4.5						
M09A	Marrel Ranch,	4.50	145	⇓Pb	Pb	10 08 50.7	-0.7
	baz=4.5						
B11A	Sandpoint	4.54	42	⇓P	Pn	10 08 39.7	-0.5
	baz=4.6,SNR=22						
B11A				⇑S	Sn	10 09 29.9	-2.2
	baz=4.6						
J12A	Stokes Ranch,	4.60	112	⇓P	Pn	10 08 41.0	0.0
	baz=4.6						
J12A				⇓Sb	Sb	10 09 51.8	+3.9
	baz=4.6						
F13A	Darby	4.68	80	⇑P	Pn	10 08 42.5	+0.4
	baz=4.7,SNR=20						
F13A				⇑S	Sn	10 09 35.3	-0.3
	baz=4.7						
WDC	Whiskeytown Da	4.72	195	*e*Pn	Pn	10 08 44.4	+1.8
WDC	Whiskeytown Da	4.72	195	⇓P	Pn	10 08 45.1	+2.5
	baz=4.7						
G13A	Cobalt	4.74	88	⇑P	Pn	10 08 43.5	+0.6
	baz=4.7,SNR=10						
G13A				⇑Sb	Sb	10 09 55.3	+3.5
	baz=4.7						
H13A	Challis	4.78	95	P	Pn	10 08 44.0	+0.6
	baz=4.8,SNR=12						
H13A				⇑Sb	Sb	10 09 55.4	+2.4
	baz=4.8						
L11A	Cat Creek Ranc	4.79	127	⇓P	Pn	10 08 44.4	+0.8
	baz=4.8						
O04C	Chester	4.83	181	⇓Sb	Sb	10 09 57.3	+2.8
	baz=4.8						
E13A	Victor	4.88	72	⇑P	Pn	10 08 44.9	0.0
	baz=4.9,SNR=26						
E13A				⇑S	Sn	10 09 40.5	-0.1
	baz=4.9						
D13A	Huson	4.90	64	⇑P	Pn	10 08 44.5	-0.6
	baz=4.9,SNR=17						
D13A				⇓S	Sn	10 09 39.7	-1.2
	baz=4.9						
A11A	Hall Mountain,	4.92	38	⇑P	Pn	10 08 46.0	+0.6
	baz=4.9,SNR=40						
A11A				⇑S	Sn	10 09 40.5	-1.1
	baz=4.9						
HLID	Hailey	4.93	106	*e*Pn	Pn	10 08 45.0	-0.5
HLID	Hailey	4.93	106	⇑P	Pn	10 08 45.4	-0.1
	baz=4.9,SNR=23						
B12A	Libby	4.95	46	⇓P	Pn	10 08 46.2	+0.5
	baz=5.0,SNR=19						
B12A				⇓S	Sn	10 09 40.8	-1.2
	baz=5.0						
I13A	Wildhorse Cree	5.02	102	⇓P	Pn	10 08 46.9	+0.2
	baz=5.0,SNR=19						
K12A	Draper Farm, C	5.02	118	⇑P	Pn	10 08 47.0	+0.2
	baz=5.0						
BSMT	Bassoo Peak	5.03	55	*e*Pn	Pn	10 08 46.8	0.0
C13A	Hot Springs	5.07	58	⇑P	Pn	10 08 47.2	-0.2
	baz=5.1,SNR=15						
C13A				⇑S	Sn	10 09 44.1	-1.0
	baz=5.1						
MSO	Missoula	5.15	68	*e*Pn	Pn	10 08 48.0	-0.6
J13A	Cove Ranch, Pi	5.15	107	⇑P	Pn	10 08 48.5	0.0
	baz=5.1						
A12A	Yaak River Ran	5.23	42	⇓P	Pn	10 08 50.2	+0.6
	baz=5.2,SNR=28						
A12A				⇓S	Sn	10 09 48.0	-1.0
	baz=5.2						
M11A	Holland Ranch,	5.27	133	⇓Pb	Pb	10 09 02.2	-2.3
	baz=5.3						
G14A	Jackson	5.28	86	⇑P	Pn	10 08 50.5	+0.3
	baz=5.3						
E14A	Clinton	5.35	74	⇓P	Pn	10 08 51.9	+0.6
	baz=5.3						
F14A	Wisdom	5.35	80	⇑P	Pn	10 08 52.2	+0.9
	baz=5.3						
B13A	Whitefish	5.49	52	⇑P	Pn	10 08 53.1	0.0
	baz=5.5						
B13A				⇑S	Sn	10 09 53.7	-1.7
	baz=5.5						
D14A	Greenough	5.51	67	⇑P	Pn	10 08 53.2	-0.2
	baz=5.5,SNR=10						
C14A	Swan Lake	5.61	60	⇑P	Pn	10 08 54.2	-0.6
	baz=5.6						
C14A				⇓S	Sn	10 09 56.9	-1.5
	baz=5.6						
CHMT	Chamberlain Mo	5.63	69	*e*Pn	Pn	10 08 54.9	-0.1
MCMT	McKenzie Canyo	5.74	90	*e*Pn	Pn	10 08 57.5	+0.9
A13A	Flathead Natio	5.84	47	⇓P	Pn	10 08 57.8	-0.2
	baz=5.8						
A13A				⇑S	Sn	10 10 01.9	-2.3
	baz=5.8						
P05C	Yuba Gap, Truc	5.84	178	⇓P	Pn	10 08 59.4	+1.2
	baz=5.8						
DLMT	Dillon	5.88	85	*e*Pn	Pn	10 08 57.1	-1.5
E15A	Deer Lodge	5.93	75	⇓P	Pn	10 08 59.6	+0.4
	baz=5.9						
E15A				⇑S	Sn	10 10 05.8	-0.6
	baz=5.9						
G15A	Dillon	5.96	87	⇓P	Pn	10 09 00.1	+0.4
	baz=6.0,SNR=6.7						
F15A	Butte	5.97	80	⇑P	Pn	10 08 59.9	+0.2
	baz=6.0						
F15A				⇓S	Sn	10 10 07.3	0.0
	baz=6.0						
LRM	Limekiln Ridge	6.00	81	*e*Pn	Pn	10 09 01.3	+1.1
D15A	Lincoln	6.14	69	⇑P	Pn	10 09 02.3	+0.1
	baz=6.1,SNR=14						
D15A				⇑S	Sn	10 10 10.9	-0.7
	baz=6.1						
BOZ	Bozeman (W)	6.56	82	*e*Pn	Pn	10 09 08.3	+0.4
BOZ	Bozeman (W)	6.56	82	⇓S	Sn	10 10 20.6	-1.3
	baz=6.6						
QLMT	Earthquake Lak	6.74	89	*e*Pn	Pn	10 09 11.9	+1.5
QLMT				*e*S	Sn	10 11 05.1	+39

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**6.99**	**163**	Pn	**Pn**	**10 09 18.1**	**+4.2**
	0.6nm,0.3s,baz=345,slow=13,SNR=23						
NVAR				Lg		10 11 17.6	
	0.2nm,0.3s,baz=346,slow=31,SNR=3.1						
DCID1	**Drake Creek**	**7.15**	**99**	*e*Pn	**Pn**	**10 09 17.9**	**+1.8**
MOOW	**Moose Ponds**	**7.42**	**97**	*e*Pn	**Pn**	**10 09 21.8**	**+2.1**
BBB	**Bella Bella**	**8.50**	**329**	LR	LR	10 12 49.9	
	comp=Z,55nm,21.3s,baz=214,slow=39						
DAU	**Daniels Canyon**	**8.54**	**120**	*e*Pn	**Pn**	**10 09 38.9**	**+3.9**
PDAR	**Pinedale Array**	**8.54**	**102**	Pn	**Pn**	**10 09 40.1**	**+5.1**
	0.0nm,0.3s,baz=279,slow=19,SNR=3.8						
ANMO	**Albuquerque**	**15.02**	**128**	Pn	**Pn**	**10 11 10.0**	**+6.4**
ANMO	**Albuquerque**	**15.02**	**128**	Pn	**Pn**	**10 11 10.0**	**+6.4**
	0.0nm,0.3s,baz=345,slow=12,SNR=2.9						
YKA	**Yellowknife Ar**	**17.76**	**10**	P	**Pn**	**10 11 36.4**	**-1.9**
	0.1nm,0.3s,baz=195,slow=12,SNR=9.7						
TXAR	**Lajitas Array**	**20.86**	**133**	P	**P**	**10 12 17.1**	**+4.0**
	0.9nm,0.7s,baz=328,slow=10,SNR=10.0						

CSEM ***01*** *10:15:23.7±0.1, 3841N×3927E, h2km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.7km az=119.0*
ISK ***01*** *10:15:23.6, 3840N×3921E, h5km, MD3.2*
NEIC ***01*** *10:15:23.7, 3840N×3922E, h5km, MD3.2(ISK), After ISK.*
ISCJB ***01*** *10:15:24.4±0.5, 3836N±003×3923E±003, h3km±5km, Error ellipse: s-maj=4.5km s-min=3.4km az=175.7*
DDA ***01*** *10:15:25.1, 3834N×3921E, h1km±2km, Md3.2*
ISC 01 10:15:25.2±0.4**, 3837N**±003×**3923E**±003**, h7**km±4km**, n40, σ0s89**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.23**	**303**	*i* P	**Pg**	**10 15 29.8**	**0.0**
ELZG				*i* S	**Sg**	**10 15 32.5**	**-0.4**
PTK	**Pertek**	**0.54**	**13**	PG	**Pg**	**10 15 34.4**	**-1.1**
PTK				SG	**Sg**	**10 15 42.8**	**+0.3**
PTK	**Pertek**	**0.54**	**13**	Pg	**Pg**	**10 15 34.4**	**-1.1**
PTK				Sg	**Sg**	**10 15 42.4**	**-0.1**
PTK	**Pertek**	**0.54**	**13**	*e*Pg	**Pg**	**10 15 34.4**	**-1.1**
PTK				Sg	**Sg**	**10 15 42.4**	**-0.1**
MALT	**Malatya**	**0.64**	**265**	PG	**Pg**	**10 15 36.6**	**-0.8**
MALT				SG	**Sg**	**10 15 46.0**	**+0.3**
MALT	**Malatya**	**0.64**	**265**	Pg	**Pg**	**10 15 36.8**	**-0.6**
MALT				Sg	**Sg**	**10 15 47.8**	**+2.2**
MALT	**Malatya**	**0.64**	**265**	Pg	**Pg**	**10 15 36.8**	**-0.6**
MALT				Sg	**Sg**	**10 15 47.8**	**+2.1**
MYA	**Malataya**	**0.64**	**266**	PG	**Pg**	**10 15 36.4**	**-1.0**
MYA	**Malataya**	**0.64**	**266**	Pg	**Pg**	**10 15 36.9**	**-0.5**
MYA	**Malataya**	**0.64**	**266**	Pg	**Pg**	**10 15 36.9**	**-0.5**
DIYA	**Diyarbakir**	**0.83**	**122**	*i* P	**Pg**	**10 15 40.7**	**-0.4**
DIYA				*i* S	**Sg**	**10 15 51.6**	**-0.3**
DIY	**Diyarbakir**	**0.92**	**121**	PG	**Pg**	**10 15 42.2**	**-0.5**
DIY				SG	**Sg**	**10 15 56.7**	**+2.1**
DIY	**Diyarbakir**	**0.92**	**121**	Pg	**Pg**	**10 15 42.1**	**-0.7**
DIY	**Diyarbakir**	**0.92**	**121**	Pg	**Pg**	**10 15 42.1**	**-0.6**
DIY				*e*Sg	**Sg**	**10 15 56.7**	**+2.1**
URFA	**Urfa**	**0.98**	**199**	PG	**Pg**	**10 15 44.2**	**+0.2**
URFA	**Urfa**	**0.98**	**199**	Pg	**Pg**	**10 15 44.3**	**+0.2**
BINT	**Bingol**	**1.11**	**62**	PN	**Pn**	**10 15 46.1**	**-0.9**
BINT	**Bingol**	**1.11**	**62**	Pn	**Pn**	**10 15 46.4**	**-0.7**
BINT	**Bingol**	**1.11**	**62**	Pn	**Pn**	**10 15 46.3**	**-0.7**
ATAB	**Bozova**	**1.17**	**220**	*i* P	**Pg**	**10 15 48.1**	**+0.6**
ATAB				*i* S	**Sg**	**10 16 02.7**	**+0.1**
EZC	**Erzincan**	**1.45**	**18**	PN	**Pn**	**10 15 50.4**	**-1.4**
EZC	**Erzincan**	**1.45**	**18**	Pn	**Pn**	**10 15 50.6**	**-1.1**
BNGL	**BINGOL**	**1.61**	**68**	*i* P	**Pn**	**10 15 54.8**	**+0.8**
BNGL				*i* S	**Sn**	**10 16 15.2**	**+0.3**
MARD	**Mardin**	**1.62**	**130**	*i* P	**Pn**	**10 15 53.1**	**-0.9**
MARD				*i* S	**Sn**	**10 16 13.8**	**-1.3**
GZT	**Gaziantep**	**1.66**	**233**	*i* P	**Pn**	**10 15 54.2**	**-0.5**
GZT				*i* S	**Sn**	**10 16 15.1**	**-1.2**
GAZ	**Gaziantep**	**2.00**	**234**	*e*PN	**Pn**	**10 15 59.9**	**+0.6**
GAZ	**Gaziantep**	**2.00**	**234**	Pn	**Pn**	**10 16 00.3**	**+1.0**
GAZ	**Gaziantep**	**2.00**	**234**	Pn	**Pn**	**10 16 00.3**	**+1.0**
GUMT	**Gumushane**	**2.10**	**5**	*e*PN	**Pn**	**10 16 01.1**	**+0.5**
EZM	**Erzurum**	**2.26**	**47**	*e*PN	**Pn**	**10 16 03.5**	**+0.6**
EZM	**Erzurum**	**2.26**	**47**	Pn	**Pn**	**10 16 03.5**	**+0.7**
SVSK	**Karacayir**	**2.33**	**312**	*e*PN	**Pn**	**10 16 04.1**	**+0.3**
SVSK	**Karacayir**	**2.33**	**312**	Pn	**Pn**	**10 16 04.2**	**+0.4**
SVSK	**Karacayir**	**2.33**	**312**	Pn	**Pn**	**10 16 04.2**	**+0.4**
ANDN	**Andirin**	**2.41**	**252**	*i* P	**Pn**	**10 16 05.7**	**+0.7**
ANDN				*i* S	**Sg**	**10 16 43.7**	**+1.0**
SIRT	**Sirnak**	**2.68**	**108**	*e*PN	**Pn**	**10 16 10.4**	**+1.7**
BNN	**Bunyan**	**2.70**	**281**	*e*PN	**Pn**	**10 16 09.8**	**+0.9**
BNN	**Bunyan**	**2.70**	**281**	Pn	**Pn**	**10 16 09.9**	**+1.0**
BNN	**Bunyan**	**2.70**	**281**	Pn	**Pn**	**10 16 09.9**	**+1.0**
COBT	**Iskenderun**	**3.00**	**233**	*i* P	**Pg**	**10 16 22.4**	**-0.3**
COBT				*i* S	**Sg**	**10 17 00.2**	**-1.4**

ISCJB ***01*** *10:23:43.9±0.5, 4848N±001×12066W±002, h11km±3km, Error ellipse: s-maj=2.5km s-min=1.9km az=4.6*
PNSN ***01*** *10:23:44.5, 4847N×12071W, h2km, MD3.1, Fault plane solution: NP1:φs260.00000°, δ60.00000°, NP2: φs80.00000°, δ30.00000°, Principal axes: T Plg75.0000°, Azm170.0000°; P Plg15.0000°, Azm350.0000°;*
PGC ***01*** *10:23:45.3±0.4, 4849N×12074W, h5km, ML2.5/7, 110km Ssw of Princeton, Bc Washington*
ISC 01 10:23:44.0±0.3**, 4848N**±001×**12070W**±002**, h5**km±2km**, n76, σ0s89**/114**, 41C-50D, Washington**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
B07A	**Winthrop**	**0.39**	**93**	⇓P	**Pg**	**10 23 52.2**	**+0.7**
	baz=0.4						
B07A				⇓S	**Sg**	**10 23 57.7**	**+1.1**
	baz=0.4						
B06A	**Marblemount**	**0.52**	**275**	P	**Pg**	**10 23 54.0**	**-0.1**
	baz=0.5,SNR=67						
B06A				⇑S	**Sg**	**10 24 00.7**	**-0.2**
	baz=0.5						
C06A	**Tall Timber Ra**	**0.57**	**193**	⇓P	**Pg**	**10 23 54.5**	**-0.5**
	baz=0.6,SNR=73						
C06A				⇓S	**Sg**	**10 24 01.7**	**-0.7**
	baz=0.6						
A07A	**Ashnola River,**	**0.61**	**20**	⇑P	**Pg**	**10 23 56.1**	**+0.4**
	baz=0.6,SNR=747						
A07A				⇓S	**Sg**	**10 24 04.4**	**+0.8**
	baz=0.6						
A06A	**Chilliwack**	**0.81**	**321**	⇓P	**Pg**	**10 23 59.2**	**-0.3**
	baz=0.8						
A06A				⇓S	**Sg**	**10 24 09.8**	**-0.2**
	baz=0.8						
C07A	**Waterville**	**0.90**	**151**	P	**Pg**	**10 24 00.6**	**-0.7**
	baz=0.9,SNR=653						
C07A				⇑S	**Sg**	**10 24 12.3**	**-0.6**
	baz=0.9						
B08A	**Colville Reser**	**0.92**	**97**	⇑P	**Pg**	**10 24 01.1**	**-0.6**
	baz=0.9,SNR=144						
B08A				⇑S	**Sg**	**10 24 14.2**	**+0.5**
	baz=0.9						
B05A	**Bryant**	**0.95**	**257**	P	**Pg**	**10 24 01.9**	**-0.3**
	baz=0.9,SNR=40						
B05A				⇑S	**Sg**	**10 24 14.4**	**-0.2**
	baz=0.9						
HOPB	**Hope**	**1.02**	**333**	Trac			
HOPB	**Hope**	**1.02**	**333**	P	**Pg**	**10 24 03.2**	**-0.4**
HOPB				S	**Sg**	**10 24 16.6**	**-0.3**
C05A	**Tolt Reservoir**	**1.03**	**220**	⇓P	**Pg**	**10 24 02.7**	**-0.9**
	baz=1.0,SNR=12						
C05A				⇓S	**Sg**	**10 24 15.7**	**-1.3**
	baz=1.0						
A05A	**Maple Falls**	**1.05**	**300**	⇑P	**Pg**	**10 24 03.7**	**-0.5**
	baz=1.1						
A05A				⇓S	**Sg**	**10 24 18.0**	**+0.1**
	baz=1.1						
A08A	**Turner Farm, O**	**1.06**	**63**	P	**Pg**	**10 24 04.2**	**-0.2**
	baz=1.1,SNR=301						
A08A				⇑S	**Sg**	**10 24 18.9**	**+0.8**
	baz=1.1						
VDB	**Vedder Mountai**	**1.08**	**301**	Trac			
VDB	**Vedder Mountai**	**1.08**	**301**	P	**Pg**	**10 24 04.2**	**-0.4**
VDB				S	**Sg**	**10 24 18.6**	**0.0**
PNT	**Penticton**	**1.10**	**40**	Trac			
PNT	**Penticton**	**1.10**	**40**	P	**Pg**	**10 24 05.2**	**0.0**
PNT				S	**Sg**	**10 24 19.6**	**+0.1**
D06A	**Cle Elum**	**1.29**	**184**	⇓P	**Pn**	**10 24 07.5**	**-1.2**
	baz=1.3,SNR=112						
D06A				⇓S	**Sg**	**10 24 24.1**	**-1.4**
	baz=1.3						
C08A	**Higginbotham F**	**1.31**	**121**	⇑P	**Pn**	**10 24 08.2**	**-0.7**
	baz=1.3,SNR=132						
C08A				⇓S	**Sg**	**10 24 25.8**	**-0.3**
	baz=1.3						
D07A	**Quincy**	**1.38**	**159**	⇑P	**Pn**	**10 24 09.3**	**-0.5**
	baz=1.4,SNR=135						
D07A				⇓S	**Sb**	**10 24 27.6**	**-0.5**
	baz=1.4						
HNB	**Haney**	**1.47**	**303**	Trac			
HNB	**Haney**	**1.47**	**303**	P	**Pn**	**10 24 10.8**	**-0.3**
HNB				S	**Sn**	**10 24 29.6**	**-1.2**
A09A	**Danville**	**1.49**	**70**	⇑P	**Pn**	**10 24 11.2**	**-0.1**
	baz=1.5,SNR=50						
A09A				⇓S	**Sn**	**10 24 31.4**	**+0.3**
	baz=1.5						
D05A	**Enumclaw**	**1.56**	**214**	⇓P	**Pn**	**10 24 12.7**	**+0.4**
	baz=1.5,SNR=58						
D05A				⇑S	**Sn**	**10 24 33.3**	**+0.5**
	baz=1.5						
SNB	**Saturna Island**	**1.66**	**281**	Trac			
SNB	**Saturna Island**	**1.66**	**281**	P	**Pn**	**10 24 14.9**	**+1.1**
SNB				S	**Sn**	**10 24 36.7**	**+1.2**
C04A	**Brinnon**	**1.70**	**244**	⇑P	**Pn**	**10 24 14.0**	**-0.3**
	baz=1.7,SNR=17						
C04A				⇑S	**Sn**	**10 24 36.5**	**+0.1**
	baz=1.7						
B09A	**Rice**	**1.70**	**91**	⇓P	**Pn**	**10 24 14.0**	**-0.3**
	baz=1.7,SNR=20						
B09A				⇑S	**Sn**	**10 24 36.4**	**0.0**
	baz=1.7						
VGZ	**Gonzales**	**1.75**	**269**	Trac			
VGZ	**Gonzales**	**1.75**	**269**	P	**Pn**	**10 24 15.0**	**+0.1**
VGZ				S	**Sn**	**10 24 36.8**	**-0.7**
C09A	**Chrisman Ranch**	**1.76**	**112**	⇓P	**Pn**	**10 24 14.6**	**-0.6**
	baz=1.8,SNR=9.8						
PGC	**Sidney**	**1.83**	**276**	Trac			
PGC	**Sidney**	**1.83**	**276**	P	**Pn**	**10 24 17.0**	**+0.9**
PGC				S	**Sn**	**10 24 40.1**	**+0.4**
D08A	**Wollman Farm,**	**1.86**	**139**	⇓P	**Pn**	**10 24 15.7**	**-0.9**
	baz=1.9,SNR=102						
B04A	**Port Angeles**	**1.92**	**258**	⇓P	**Pn**	**10 24 17.1**	**-0.2**
	baz=1.9,SNR=11						
B04A				⇓S	**Sn**	**10 24 42.4**	**+0.7**
	baz=1.9						
E06A	**Yakima**	**1.95**	**186**	⇑P	**Pn**	**10 24 17.5**	**-0.1**
	baz=1.9,SNR=74						
E06A				⇓S	**Sn**	**10 24 43.5**	**+1.1**
	baz=1.9						
D04A	**Dobbs Creek Ra**	**1.97**	**227**	⇑Sb	**Sb**	**10 24 46.1**	**+1.0**
	baz=1.9						
E07A	**Sunnyside**	**2.01**	**163**	⇓P	**Pn**	**10 24 18.5**	**0.0**
	baz=2.0,SNR=16						
E07A				⇓Sb	**Sb**	**10 24 47.2**	**+1.0**
	baz=2.0						
E05A	**Randle**	**2.05**	**201**	⇑P	**Pn**	**10 24 19.6**	**+0.5**
	baz=2.0,SNR=37						
E05A				⇑Sb	**Sb**	**10 24 47.6**	**+0.2**
	baz=2.0						
A10A	**Northport**	**2.14**	**75**	⇑P	**Pn**	**10 24 20.0**	**-0.3**
	baz=2.1,SNR=13						
A10A				⇑Sb	**Sb**	**10 24 51.7**	**+1.6**
	baz=2.1						
D09A	**Jones Farm, Ri**	**2.15**	**130**	P	**Pn**	**10 24 19.4**	**-1.1**
	baz=2.1,SNR=8.3						
D09A				⇓Sb	**Sb**	**10 24 51.6**	**+1.3**
	baz=2.1						
E08A	**Dider Farm, El**	**2.28**	**150**	⇓Sb	**Sb**	**10 24 55.6**	**+1.6**
	baz=2.3						
B10A	**Chitwood Farm,**	**2.33**	**93**	⇓S	**Sn**	**10 24 52.5**	**+0.7**
	baz=2.3						
E04A	**Onalaska**	**2.33**	**217**	⇓Sb	**Sb**	**10 24 56.3**	**+0.8**
	baz=2.3						
F07A	**Phinny Hill Vi**	**2.64**	**168**	⇑Sb	**Sb**	**10 25 06.1**	**+1.7**
	baz=2.6						
F06A	**Goldendale**	**2.71**	**181**	⇓Sb	**Sb**	**10 25 08.1**	**+1.5**
	baz=2.7						
D10A	**Wagner Farm, O**	**2.72**	**120**	⇑Sb	**Sb**	**10 25 08.4**	**+1.8**
	baz=2.7						
F04A	**Amboy**	**2.80**	**205**	⇓Sb	**Sb**	**10 25 10.3**	**+1.1**
	baz=2.8						
B11A	**Sandpoint**	**2.89**	**89**	P	**Pn**	**10 24 30.1**	**-0.5**
	baz=2.9,SNR=14						
B11A				⇑Sb	**Sb**	**10 25 14.2**	**+2.7**
	baz=2.9						
A11A	**Hall Mountain,**	**2.91**	**79**	⇑P	**Pn**	**10 24 31.0**	**+0.1**
	baz=2.9,SNR=11						
A11A				⇓Sb	**Sb**	**10 25 14.7**	**+2.4**
	baz=2.9						
E10A	**Myers Farm, Un**	**3.15**	**128**	⇑P	**Pn**	**10 24 34.2**	**0.0**
	baz=3.1,SNR=27						
E10A				⇓Sb	**Sb**	**10 25 22.1**	**+3.0**
	baz=3.1						
G06A	**Carlson Farm,**	**3.25**	**179**	⇓Sb	**Sb**	**10 25 23.9**	**+2.1**
	baz=3.2						
A12A	**Yaak River Ran**	**3.38**	**80**	⇑S	**Sn**	**10 25 19.1**	**+1.4**
	baz=3.4						
B12A	**Libby**	**3.40**	**88**	⇓Sb	**Sb**	**10 25 29.4**	**+3.1**
	baz=3.4						
E11A	**Bogner Ranch,**	**3.72**	**123**	P	**Pn**	**10 24 41.7**	**-0.3**
	baz=3.7,SNR=93						
E11A				⇓S	**Sn**	**10 25 25.0**	**-1.2**
	baz=3.7						
D12A	**Red Ives Fores**	**3.88**	**110**	⇑S	**Sn**	**10 25 30.0**	**-0.2**
	baz=3.9						
F11A	**Grangeville**	**4.04**	**128**	P	**Pn**	**10 24 46.4**	**-0.1**
	baz=4.0,SNR=14						
F11A				⇓S	**Sn**	**10 25 32.8**	**-1.3**
	baz=4.0						
B13A	**Whitefish**	**4.15**	**89**	⇓S	**Sn**	**10 25 35.7**	**-1.2**
	baz=4.1						
C13A	**Hot Springs**	**4.19**	**99**	⇑P	**Pn**	**10 24 47.9**	**-0.5**
	baz=4.2						
C13A				⇑S	**Sn**	**10 25 38.0**	**+0.3**
	baz=4.2						
A13A	**Flathead Natio**	**4.19**	**81**	⇓P	**Pn**	**10 24 49.2**	**+0.7**
	baz=4.2						
A13A				⇓S	**Sn**	**10 25 37.4**	**-0.4**
	baz=4.2						
H08A	**Prairie City**	**4.20**	**160**	P	**Pn**	**10 24 49.5**	**+0.9**
	baz=4.2,SNR=53						
H09A	**Durkee**	**4.35**	**150**	⇑P	**Pn**	**10 24 51.3**	**+0.5**
	baz=4.3						
D13A	**Huson**	**4.43**	**106**	⇑S	**Sn**	**10 25 42.6**	**-1.1**
	baz=4.4						
E13A	**Victor**	**4.87**	**112**	⇑P	**Pn**	**10 24 57.6**	**-0.2**
	baz=4.9,SNR=14						
E13A				⇑S	**Sn**	**10 25 52.6**	**-1.9**
	baz=4.9						
H11A	**Donnelly**	**4.97**	**138**	⇑P	**Pn**	**10 24 59.4**	**+0.2**
	baz=5.0,SNR=11						
H11A				⇓S	**Sn**	**10 25 55.7**	**-1.4**
	baz=5.0						
D14A	**Greenough**	**5.05**	**103**	⇑S	**Sn**	**10 25 57.4**	**-1.6**
	baz=5.0						
F13A	**Darby**	**5.11**	**119**	⇓P	**Pn**	**10 25 01.3**	**+0.1**
	baz=5.1,SNR=40						
F13A				⇑S	**Sn**	**10 25 58.9**	**-1.6**
	baz=5.1						
E14A	**Clinton**	**5.31**	**110**	⇓S	**Sn**	**10 26 05.3**	**-0.1**
	baz=5.3						
G13A	**Cobalt**	**5.59**	**125**	⇓P	**Pn**	**10 25 08.1**	**+0.4**
	baz=5.6,SNR=8.0						
G13A				⇓S	**Sn**	**10 26 11.4**	**-0.8**
	baz=5.6						
H12A	**Diamond D Ranc**	**5.63**	**132**	⇓P	**Pn**	**10 25 08.9**	**+0.6**
	baz=5.6,SNR=11						
F14A	**Wisdom**	**5.67**	**115**	⇑P	**Pn**	**10 25 08.7**	**-0.1**
	baz=5.7						
F14A				⇑S	**Sn**	**10 26 13.2**	**-1.1**
	baz=5.7						
D15A	**Lincoln**	**5.70**	**102**	⇑P	**Pn**	**10 25 09.1**	**-0.2**
	baz=5.7,SNR=8.8						
D15A				⇓S	**Sn**	**10 26 13.9**	**-1.2**
	baz=5.7						
E15A	**Deer Lodge**	**5.84**	**108**	⇓S	**Sn**	**10 26 17.4**	**-1.0**
	baz=5.8						
H13A	**Challis**	**5.93**	**129**	⇓P	**Pn**	**10 25 12.7**	**+0.3**
	baz=5.9,SNR=20						
H13A				⇑S	**Sn**	**10 26 19.4**	**-1.1**
	baz=5.9						
I13A	**Wildhorse Cree**	**6.46**	**133**	⇓P	**Pn**	**10 25 20.0**	**+0.3**
	baz=6.4,SNR=14						
BOZ	**Bozeman (W)**	**6.81**	**111**	⇓S	**Sn**	**10 26 41.2**	**-1.2**
	baz=6.8						

ISCJB ***01*** *10:27:10.3±0.5, 3503N±003×13551E±004, h10km, Error ellipse: s-maj=5.4km s-min=3.7km az=163.2*
JMA ***01*** *10:27:10.3, 3504N×13555E, h13km, M2.8*
JMA Felt I J1.
ISC 01 10:27:10.8±0.6**, 3503N**±003×**13549E**±004**, h10**km**, n8, σ0s58**/16**, Western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.27**	**344**	P	**Pg**	**10 27 16.0**	**-0.2**
JWT				S	**Sg**	**10 27 19.6**	**-0.2**
JHE	**Heguri**	**0.40**	**157**	P	**Pg**	**10 27 18.2**	**-0.5**
JHE				S	**Sg**	**10 27 23.8**	**-0.2**
JKS	**Kasai**	**0.54**	**266**	P	**Pg**	**10 27 21.4**	**+0.2**
JKS				S	**Sg**	**10 27 29.1**	**+0.9**
JKY	**Yasaka**	**0.68**	**332**	P	**Pg**	**10 27 23.4**	**-0.5**
JKY				S	**Sg**	**10 27 32.3**	**-0.6**
JAJ2	**Tsuna**	**0.79**	**220**	P	**Pg**	**10 27 25.8**	**-0.1**
JAJ2				S	**Sg**	**10 27 37.0**	**+0.8**
JWY	**Kouya**	**0.81**	**174**	P	**Pg**	**10 27 25.8**	**-0.6**
JWY				S	**Sg**	**10 27 36.4**	**-0.5**
JKSM	**Kasumi**	**0.88**	**310**	P	**Pg**	**10 27 27.3**	**-0.4**
JKSM				S	**Sg**	**10 27 39.1**	**-0.1**
MAT	**Matsushiro**	**2.67**	**55**	P	**Pn**	**10 27 54.7**	**+0.8**
MAT				*e*S	**Sn**	**10 28 27.5**	**+1.2**

IDC 01 10:33:01.6±1.6**, 786S**×**12259E, h0**km**, mb3.6**/1**, mb1 3.7**/5**, mb1mx3.5**/19**, mbtmp3.5**/5**, ML3.3**/4**, Error ellipse: s-maj=127.6km s-min=16.5km az=64.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**2.56**	**156**	Pn	Pn	10 33 46.1	+1.7
	12nm,0.3s,baz=354,slow=3.9,SNR=9.5						
BATI				Lg		10 34 22.7	
	8.6nm,0.3s,baz=260,slow=23,SNR=4.1						
FITZ	**Fitzroy Crossi**	**10.61**	**164**	Pn	Pn	10 35 34.4	-0.5
	0.1nm,0.3s,baz=3.0,slow=12,SNR=4.0						
FITZ				Sn	Sn	10 37 35.3	+0.8
	0.2nm,0.3s,baz=159,slow=9.0,SNR=3.6						
WRA	**Warramunga Arr**	**16.55**	**138**	Pn	Pn	10 36 55.3	+0.1
	0.1nm,0.3s,baz=312,slow=12,SNR=5.9						
WRA				Sn	Sn	10 39 50.5	-9.3
	0.1nm,0.3s,baz=305,slow=20,SNR=3.4						
ASAR	**Alice Springs**	**19.10**	**147**	P	Pn	10 37 25.4	-1.4
	0.1nm,0.3s,baz=326,slow=12,SNR=13						
MKAR	**Makanchi Array**	**65.14**	**331**	P	P	10 43 44.4	+0.1
	0.4nm,0.7s,baz=134,slow=7.6,SNR=5.4						

NEIC ***01*** *10:37:37.1, 1650N×9905W, h17km, MD4.0(MEX), After MEX.*
MEX 01 10:37:36.1±1.5**, 1643N**×**9912W, h16**km±274km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.88**	**300**	*i* P	Pb	10 37 49.9	-3.0
ACX				*i* S	Sb	10 37 59.2	-5.2
ACX	**Acapulco**	**0.88**	**300**	*i* P	Pb	10 37 49.6	-3.3
ACX				*i* S	Sb	10 37 59.2	-5.2
PNIG	**Pinotepa**	**0.95**	**92**	*i* P	Pb	10 37 51.4	-2.8
PNIG				*i* S	Sb	10 38 01.8	-4.8
CAIG	**El Cayaco**	**1.26**	**299**	*e*P	Pn	10 37 56.7	-2.3
CAIG				*i* S	Sb	10 38 12.2	-3.1
MEIG	**Mezcala**	**1.56**	**342**	*i* P	Pn	10 38 00.3	-2.8
MEIG				*i* S	Sn	10 38 18.5	-4.6
PLIG	**Platanillo**	**1.98**	**349**	*i* P	Pn	10 38 05.5	-3.5
PLIG				*i* S	Sn	10 38 28.6	-4.9
VHO	**Vista Hermosa**	**2.38**	**74**	*i* P	Pn	10 38 11.5	-2.9
VHO				*i* S	Sn	10 38 39.8	-3.3
OXX	**Oaxaca**	**2.39**	**74**	*e*P	Pn	10 38 11.5	-3.0
TPIG	**Tehuac#an**	**2.59**	**40**	*e*P	Pn	10 38 14.1	-3.2
TPIG				*i* S	Sn	10 38 47.8	-0.8
PPM	**Popocatepetl**	**2.66**	**10**	*e*P	Pn	10 38 15.0	-3.4
PPM				*i* S	Sn	10 38 50.0	-0.2
PTVM	**Pico Tres Padr**	**3.15**	**0**	*i* P	Pn	10 38 22.0	-3.0
PTVM				*i* S	Sn	10 39 02.5	+0.3
IIO	**Organos**	**3.17**	**7**	*i* P	Pn	10 38 25.1	-0.2
IIO				*i* S	Sn	10 39 02.8	+0.1

MEX 01 11:02:50.8±0.4**, 1547N**×**9533W, h14**km±8km**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.80**	**292**	*i* P	Pg	11 03 03.6	-2.8
HUIG				*i* S	Sg	11 03 14.0	-3.0
CMIG	**Matias Romero**	**1.67**	**15**	*i* P	Pn	11 03 16.3	-3.3
CMIG				*i* S	Sn	11 03 35.8	-5.0
VHO	**Vista Hermosa**	**2.08**	**320**	*i* P	Pn	11 03 22.0	-3.3
VHO				*i* S	Sn	11 03 47.5	-3.6
OXX	**Oaxaca**	**2.08**	**320**	*e*P	Pn	11 03 22.5	-2.8
CCIG	**Comitan**	**3.18**	**75**	*i* P	Pn	11 03 38.7	-1.7
CCIG				*i* S	Sn	11 04 14.5	-3.7

CSEM ***01*** *11:18:02.4±0.2, 3838N×3923E, h3km±1km, MD2.9, Error ellipse: s-maj=3.2km s-min=2.5km az=120.0*
ISK ***01*** *11:18:02.6, 3839N×39.19E, h2km, MD3.0*
ISCJB ***01*** *11:18:03.3±0.6, 3836N±004×3922E±004, h3km±8km, Error ellipse: s-maj=6.6km s-min=4.7km az=13.1*
DDA ***01*** *11:18:03.8, 3831N×39.18E, h5km±3km, Md2.9*
ISC 01 11:18:03.9±0.6**, 3837N**±004×**3921E**±004**, h8**km±6km**, n10, σ0s61**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**306**	*i* P	**Pg**	**11 18 07.8**	**-0.5**
ELZG				*i* S	**Sg**	**11 18 12.0**	**+0.6**
PTK	**Pertek**	**0.55**	**15**	PG	**Pg**	**11 18 13.7**	**-0.7**
PTK				SG	**Sg**	**11 18 22.0**	**+0.5**
MALT	**Malatya**	**0.62**	**266**	PG	**Pg**	**11 18 15.4**	**-0.4**
MYA	**Malataya**	**0.62**	**267**	PG	**Pg**	**11 18 14.9**	**-0.9**
MYA				SG	**Sg**	**11 18 24.3**	**+0.3**
DIYA	**Diyarbakir**	**0.84**	**121**	*i* P	**Pg**	**11 18 19.7**	**-0.3**
DIYA				*i* S	**Sg**	**11 18 31.4**	**+0.5**
URFA	**Urfa**	**0.97**	**199**	PG	**Pg**	**11 18 22.5**	**-0.1**
ATAB	**Bozova**	**1.15**	**219**	*i* P	**Pb**	**11 18 26.5**	**+0.5**
ATAB				*i* S	**Sb**	**11 18 42.3**	**+1.2**
MARD	**Mardin**	**1.62**	**130**	*i* P	**Pn**	**11 18 32.6**	**-0.2**
MARD				*i* S	**Sn**	**11 18 53.9**	**0.0**
GZT	**Gaziantep**	**1.65**	**233**	*i* P	**Pn**	**11 18 32.9**	**-0.3**
GZT				*i* S	**Sn**	**11 18 53.6**	**-1.0**
SVSK	**Karacayir**	**2.32**	**313**	*e*PN	**Pn**	**11 18 43.2**	**+0.8**

CSEM ***01*** *11:42:50.6±0.1, 3839N×3922E, h10km, MD2.8, Error ellipse: s-maj=2.6km s-min=1.4km az=116.0*
ISK ***01*** *11:42:50.9, 3839N×3920E, h5km, MD2.6*
ISCJB ***01*** *11:42:51.2±0.7, 3837N±004×3925E±005, h6km±8km, Error ellipse: s-maj=7.3km s-min=5.8km az=138.4*
DDA ***01*** *11:42:51.7, 3835N×3925E, h5km±3km, Md2.8*
ISC 01 11:42:51.8±0.7**, 3839N**±004×**3923E**±006**, h11**km±7km**, n9, σ0s56**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**299**	*i* P	**Pg**	**11 42 56.4**	**-0.1**
ELZG				*i* S	**Sg**	**11 43 00.5**	**+0.9**
ELZG	**Elazig**	**0.22**	**299**	*i* P	**Pg**	**11 42 56.3**	**-0.2**
ELZG				*i* S	**Sg**	**11 43 00.5**	**+0.9**
PTK	**Pertek**	**0.52**	**14**	PG	**Pg**	**11 43 01.6**	**-0.3**
PTK				SG	**Sg**	**11 43 09.3**	**+0.5**
MALT	**Malatya**	**0.64**	**263**	PG	**Pg**	**11 43 03.4**	**-0.8**
MYA	**Malataya**	**0.64**	**264**	PG	**Pg**	**11 43 03.5**	**-0.7**
MYA				SG	**Sg**	**11 43 12.3**	**-0.2**
URFA	**Urfa**	**1.00**	**199**	PG	**Pg**	**11 43 10.2**	**-0.9**
URFA				SG	**Sg**	**11 43 24.9**	**+0.8**
ATAB	**Bozova**	**1.18**	**219**	*i* P	**Pb**	**11 43 14.9**	**+0.7**
ATAB				*i* S	**Sb**	**11 43 30.1**	**+0.6**
MARD	**Mardin**	**1.63**	**131**	*i* P	**Pn**	**11 43 20.3**	**-0.2**
MARD				*i* S	**Sn**	**11 43 41.5**	**0.0**
GZT	**Gaziantep**	**1.68**	**232**	*i* P	**Pn**	**11 43 21.1**	**0.0**
GZT				*i* S	**Sn**	**11 43 42.4**	**-0.2**

IDC ***01*** *11:46:56.9±1.0, 5473N×16179W, h0km, mb4.1/16, mb1 4.2/18, mb1mx4.1/28, mbtmp4.1/18, ML4.0/2, MS3.2/3, Ms1 3.1/3, ms1mx2.8/32, Error ellipse: s-maj=28.0km s-min=14.2km az=2.0*
BJI ***01*** *11:47:00.9, 5440N×16150W, h41km, mB4.9, mb4.7*

*ISCJB **01** 11:47:01.9±1.0, 5452N±0.10×16158W±0.09, h60km±6km, mb4.2/20, Error ellipse: s-maj=17.1km s-min=7.0km az=159.1*
*NEIC **01** 11:47:01.9±1.4, 5437N×16149W, h41km±14km, ML4.0(AEIC), Error ellipse: s-maj=20.3km s-min=8.5km az=156.0*
ISC 01 11:47:02.6±1.1**, 544N**±01×**16155W**±009**, h53**km±7km**, n41, σ1s08**/45**, mb4.2**/20**, MS3.0**/2**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	**1.11**	**33**	P	**Pn**	**11 47 20.6**	**-1.3**
SDPT				S	**Sn**	**11 47 37.2**	**+1.1**
FALS	**False Pass**	**1.17**	**293**	P	**Pn**	**11 47 21.0**	**-1.5**
FALS				S	**Sn**	**11 47 37.7**	**+0.2**
AKUT	**Akutan**	**2.49**	**265**	*e*P	**Pn**	**11 47 40.2**	**-0.4**
CHGN	**Chignik**	**2.60**	**42**	*e*P	**Pn**	**11 47 41.6**	**-0.4**
UNV	**Unalaska Valle**	**2.97**	**261**	*e*Pn	**Pn**	**11 47 47.6**	**+0.5**
UNV				*e*Sn	**Sn**	**11 48 27.6**	**+6.1**
KDAK	**Kodiak Island**	**6.04**	**53**	P	**Pn**	**11 48 26.9**	**-2.3**
KDAK	**Kodiak Island**	**6.04**	**53**	Pn	**Pn**	**11 48 26.9**	**-2.3**
	3.0nm,0.3s,baz=227,slow=8.3,SNR=15						
KDAK				Pg	**Pn**	**11 48 39.8**	**+11**
	6.8nm,0.3s,baz=280,slow=8.8,SNR=11						
KDAK				Sn	**Sn**	**11 49 32.7**	**-4.1**
	2.5nm,0.3s,baz=335,slow=22,SNR=6.7						
KDAK				Lg		11 50 01.3	
	6.5nm,0.3s,baz=72,slow=20,SNR=9.4						
SVW2	**Sparrevohn**	**7.41**	**23**	*e*Pn	**Pn**	**11 48 48.4**	**+0.5**
TTA	**Tatalina**	**9.00**	**16**	*e*Pn	**Pn**	**11 49 09.3**	**-0.3**
RC01	**Rabbit Creek A**	**9.18**	**39**	P	**Pn**	**11 49 11.3**	**-0.8**
GAMB	**Gambell**	**10.72**	**335**	*e*Pn	**Pn**	**11 49 34.6**	**+1.5**
TNA	**Tin City**	**11.61**	**347**	*e*Pn	**Pn**	**11 49 46.0**	**+0.7**
IMA2	**Indian Mountai**	**12.30**	**15**	*e*Pn	**Pn**	**11 49 55.7**	**+1.0**
COLA	**College**	**12.52**	**28**	*e*Pn	**Pn**	**11 50 00.6**	**+2.9**
INK	**Inuvik**	**19.07**	**32**	P	**Pn**	**11 51 18.7**	**-2.8**
INK				LR	LR	11 59 32.8	
INK	**Inuvik**	**19.07**	**32**	P	**Pn**	**11 51 18.7**	**-2.8**
	0.5nm,0.3s,baz=221,slow=12,SNR=5.2						
INK				LR	LR	11 59 32.8	
	comp=Z,109nm,20.5s,baz=250,slow=40						
YKA	**Yellowknife Ar**	**25.32**	**52**	P	**P**	**11 52 24.2**	**+0.3**
YKA				PcP	PcP	11 55 55.1	0.0
YKA				LR	LR	12 02 27.0	
YKA	**Yellowknife Ar**	**25.32**	**52**	P	**P**	**11 52 24.2**	**+0.3**
	0.7nm,0.5s,mb3.4,baz=268,slow=9.1,SNR=20						
YKA				PcP	PcP	11 55 55.1	0.0
	0.4nm,0.5s,baz=282,slow=1.8,SNR=8.2						
YKA				LR	LR	12 02 27.0	
	comp=Z,19nm,18.4s,MS2.6,baz=35,slow=37						
NVAR	**Mina Array Bea**	**33.22**	**101**	P	**P**	**11 53 39.0**	**+4.8**
	0.6nm,0.9s,mb3.5,baz=289,slow=8.3,SNR=3.0						
ULM	**Lac du Bonnet**	**39.04**	**68**	P	**P**	**11 54 24.4**	**+0.6**
ULM	**Lac du Bonnet**	**39.04**	**68**	P	**P**	**11 54 24.4**	**+0.7**
	0.6nm,0.4s,mb3.7,baz=295,slow=10,SNR=4.5						
MDJ	**Mudanjiang**	**44.07**	**287**	P	**P**	**11 55 07.5**	**+2.5**
MDJ				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,23nm,5.1s						
TXAR	**Lajitas Array**	**48.18**	**97**	P	**P**	**11 55 39.3**	**+1.9**
	comp=Z,0.2nm,0.5s,mb3.4,baz=327,slow=9.8,SNR=4.0						
KSRS	**Korea Array**	**49.73**	**280**	P	**P**	**11 55 49.4**	**+0.2**
	comp=Z,2.9nm,0.7s,mb4.4,baz=46,slow=7.1,SNR=11						
SCHQ	**Schefferville**	**50.65**	**48**	P	**P**	**11 55 56.8**	**+0.8**
	comp=Z,2.6nm,0.9s,mb4.2,baz=292,slow=5.4,SNR=3.6						
SONM	**Songino Array**	**54.16**	**304**	P	**P**	**11 56 22.3**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.3,baz=40,slow=7.0,SNR=17						
SONM				PcP	PcP	11 57 27.3	+1.3
	comp=Z,0.8nm,0.9s,baz=55,slow=2.9,SNR=4.2						
HHC	**Hu-ho-hao-te**	**56.44**	**295**	*e*P	**P**	**11 56 44.5**	**+6.0**
HHC				AMB	AMB		
	comp=Z,15nm,0.6s,mb5.2						
HHC				AMB	AMB		
	comp=Z,125nm,6.5s						
ZALV	**Zalesovo Beam**	**58.93**	**321**	P	**P**	**11 56 55.6**	**-0.3**
	comp=Z,0.3nm,0.3s,mb3.8,baz=62,slow=6.7,SNR=3.2						
ZALV				LR	LR	12 22 40.5	
	comp=Z,30nm,19.8s,MS3.4,baz=101,slow=37						
JOF	**Joensuu**	**62.56**	**353**	*e*p	**P**	**11 57 19.0**	**-1.4**
	comp=Z,1.1nm,0.4s,mb4.3						
KAF	**Kangasniemi**	**63.64**	**356**	*e*p	**P**	**11 57 25.9**	**-1.6**
	baz=2.2,slow=6.3						
FINES	**FINESS Array B**	**64.32**	**356**	P	**P**	**11 57 31.2**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.4,baz=23,slow=6.8,SNR=13						
NB2	**NORSAR Subarra**	**64.74**	**4**	P	**P**	**11 57 34.7**	**0.0**
	comp=Z,6.8nm,1.0s,mb4.6,baz=354,slow=6.5						
NOA	**NORSAR Array B**	**64.74**	**4**	P	**P**	**11 57 34.7**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.3,baz=356,slow=6.6,SNR=5.0						
MKAR	**Makanchi Array**	**65.63**	**317**	P	**P**	**11 57 40.0**	**-0.7**
	comp=Z,0.6nm,0.3s,mb4.1,baz=45,slow=5.8,SNR=7.2						
HFS	**Hagfors**	**65.73**	**3**	P	**P**	**11 57 40.7**	**-0.4**
	comp=Z,2.7nm,0.5s,mb4.6,baz=40,slow=4.8,SNR=21						
GYA	**Guiyang**	**69.92**	**287**	P	**P**	**11 58 13.0**	**+5.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
AKTO	**Aktyubinsk**	**70.38**	**334**	P	**P**	**11 58 10.2**	**-0.2**
	comp=Z,3.7nm,0.6s,mb4.5,baz=21,slow=5.3,SNR=17						
AKASG	**Malin Array Be**	**74.86**	**353**	P	**P**	**11 58 36.2**	**-0.8**
	comp=Z,3.3nm,0.6s,mb4.5,baz=7.0,slow=5.5,SNR=16						
GERES	**GERESS Array B**	**77.03**	**3**	P	**P**	**11 58 50.0**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.8,baz=10,slow=6.0,SNR=2.9						
BRTR	**Keskin Array B**	**85.32**	**348**	P	**P**	**11 59 33.9**	**+0.3**
	comp=Z,3.1nm,0.9s,mb4.4,baz=42,slow=5.7,SNR=12						
MATP	**Matopo**	**145.21**	**343**	PKP	PKPdf	12 06 34.1	+0.1
	comp=Z,6.0nm,0.5s,baz=352,slow=3.0,SNR=4.6						

*IDC **01** 11:49:42.7±6.5, 3179S×17986W, h326km±68km, mb3.4/4, mb1 3.5/5, mb1mx3.4/15, mbtmp3.4/5, Error ellipse: s-maj=72.2km s-min=26.9km az=8.0*
*NEIC **01** 11:49:46.4±2.2, 3199S×17989E, h359km±20km, mb3.8/1, Error ellipse: s-maj=29.8km s-min=25.9km az=46.0*
ISC 01 11:49:51.3±1.0**, 3227S**±008×**1794E**±01**, h372**km±9km**, n51, σ0s98**/62**, mb3.5**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.36**	**189**	*e*P	**Pn**	**11 51 16.4**	**+0.8**
MXZ	**Matakaoa Point**	**5.36**	**189**	*e*PN	**Pn**	**11 51 16.4**	**+0.7**
MXZ				SN	**S**	**11 52 23.9**	**-0.2**
PUZ	**Puketiti**	**5.87**	**189**	*e*PN	**Pn**	**11 51 21.8**	**+0.6**
PUZ				SN	**S**	**11 52 33.7**	**-0.7**
MWZ	**Matawai**	**6.24**	**194**	*e*P	**Pn**	**11 51 22.6**	**-2.8**
MWZ				S	**S**	**11 52 43.7**	**+1.7**
MWZ	**Matawai**	**6.24**	**194**	*e*PN	**Pn**	**11 51 27.1**	**+1.7**
MWZ				SN	**S**	**11 52 42.2**	**+0.2**
URZ	**Urewera**	**6.26**	**197**	*e*P	**Pn**	**11 51 24.2**	**-1.5**
URZ	**Urewera**	**6.26**	**197**	P	**Pn**	**11 51 24.1**	**-1.5**
	3.1nm,0.3s,baz=295,slow=3.3,SNR=37						
URZ				S	**S**	**11 52 44.4**	**+2.0**
	9.4nm,0.3s,baz=248,slow=22,SNR=20						
URZ	**Urewera**	**6.26**	**197**	*e*PN	**Pn**	**11 51 27.2**	**+1.5**
URZ				SN	**S**	**11 52 43.6**	**+1.2**
KNZ	**Kokohu**	**6.88**	**191**	*e*P	**Pn**	**11 51 33.6**	**+0.9**
KNZ	**Kokohu**	**6.88**	**191**	*e*PN	**Pn**	**11 51 33.6**	**+0.9**
BKZ	**Black Stump Fm**	**7.28**	**198**	*e*P	**Pn**	**11 51 34.7**	**-2.5**
BKZ				S	**S**	**11 53 05.1**	**+1.5**
BKZ	**Black Stump Fm**	**7.28**	**198**	*e*PN	**Pn**	**11 51 38.2**	**+1.0**
BKZ				SN	**S**	**11 53 05.1**	**+1.5**
WNVZ	**Wahianoa**	**7.69**	**202**	*e*P	**Pn**	**11 51 43.3**	**+1.3**
WNVZ	**Wahianoa**	**7.69**	**202**	*e*PN	**Pn**	**11 51 43.3**	**+1.3**
PXZ	**Pawanui**	**8.01**	**194**	*e*PN	**Pn**	**11 51 44.2**	**-1.5**
TSZ	**Takapari Road**	**8.25**	**199**	*e*P	**Pn**	**11 51 48.1**	**-0.5**
TSZ	**Takapari Road**	**8.25**	**199**	*e*PN	**Pn**	**11 51 48.1**	**-0.4**
BFZ	**Birch Farm**	**8.77**	**196**	*e*P	**Pn**	**11 51 54.2**	**-0.4**
BFZ				S	**S**	**11 53 35.6**	**0.0**
BFZ	**Birch Farm**	**8.77**	**196**	*e*PN	**Pn**	**11 51 54.2**	**-0.4**
MRZ	**Mangatainoka R**	**8.92**	**199**	*e*P	**Pn**	**11 51 55.4**	**-1.0**
MRZ				S	**S**	**11 53 38.2**	**-0.6**
MRZ	**Mangatainoka R**	**8.92**	**199**	*e*PN	**Pn**	**11 51 55.4**	**-1.0**
KIW	**Kapiti Island**	**9.30**	**201**	*e*P	**Pn**	**11 52 00.4**	**-0.4**
KIW	**Kapiti Island**	**9.30**	**201**	*e*PN	**Pn**	**11 52 00.4**	**-0.4**
CAW	**Cannon Point**	**9.48**	**200**	*e*P	**Pn**	**11 52 01.8**	**-1.1**
CAW	**Cannon Point**	**9.48**	**200**	*e*PN	**Pn**	**11 52 01.8**	**-1.1**
TCW	**Tory Channel**	**9.82**	**203**	*e*P	**Pn**	**11 52 06.1**	**-0.9**
TCW				S	**S**	**11 53 57.5**	**-0.9**
TUWZ	**Tuamarina**	**10.13**	**204**	*e*PN	**Pn**	**11 52 09.9**	**-0.7**
NNZ	**Nelson**	**10.15**	**207**	*e*P	**Pn**	**11 52 12.1**	**+1.3**
NNZ				S	**S**	**11 54 04.9**	**-0.6**
NNZ	**Nelson**	**10.15**	**207**	*e*PN	**Pn**	**11 52 12.1**	**+1.3**
QRZ	**Quartz Range**	**10.16**	**211**	*e*P	**Pn**	**11 52 11.8**	**+0.8**
QRZ	**Quartz Range**	**10.16**	**211**	*e*PN	**Pn**	**11 52 11.8**	**+0.8**
THZ	**Tophouse**	**10.80**	**207**	*e*P	**Pn**	**11 52 17.1**	**-1.4**
THZ				S	**S**	**11 54 20.2**	**+0.6**
THZ	**Tophouse**	**10.80**	**207**	*e*PN	**Pn**	**11 52 17.1**	**-1.3**
KHZ	**Kahutara**	**11.14**	**203**	*e*P	**Pn**	**11 52 21.7**	**-0.8**
KHZ				S	**S**	**11 54 27.6**	**+0.4**
KHZ	**Kahutara**	**11.14**	**203**	*e*PN	**Pn**	**11 52 21.7**	**-0.8**
DSZ	**Denniston Nort**	**11.23**	**210**	*e*P	**Pn**	**11 52 24.0**	**+0.4**
DSZ	**Denniston Nort**	**11.23**	**210**	*e*PN	**Pn**	**11 52 24.0**	**+0.4**
LTZ	**Lake Taylor**	**11.91**	**206**	*e*P	**Pn**	**11 52 31.2**	**-0.4**
LTZ				S	**S**	**11 54 42.6**	**-0.3**
LTZ	**Lake Taylor**	**11.91**	**206**	*e*PN	**Pn**	**11 52 31.2**	**-0.3**
STKA	**Stephens Creek**	**31.91**	**260**	*e*P	**P**	**11 55 46.0**	**+2.3**
STKA	**Stephens Creek**	**31.91**	**260**	P	**P**	**11 55 46.2**	**+2.5**
	1.3nm,0.5s,mb3.4,baz=88,slow=11,SNR=7.8						
CTA	**Charters Tower**	**31.98**	**284**	P	**P**	**11 55 44.4**	**-0.1**
	2.7nm,0.4s,mb3.8,baz=104,slow=8.3,SNR=3.8						
ASAR	**Alice Springs**	**40.82**	**270**	P	**P**	**11 56 58.2**	**-0.1**
	0.6nm,0.4s,mb3.2,baz=108,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**41.98**	**276**	P	**P**	**11 57 07.0**	**-0.7**
	0.9nm,0.3s,mb3.4,baz=111,slow=8.0,SNR=39						
QSPA	**South Pole Qui**	**57.85**	**180**	*e*P	**P**	**11 59 06.0**	**+1.3**
	2.0nm,0.5s,mb3.7						
VNA3	**Neumayer Olymp**	**76.58**	**177**	*e*	**P**	**12 01 01.2**	**0.0**
VNA3				*e*		12 01 06.4	
VNA3				*e*		12 01 12.7	
VNA2	**Neumayer--Watz**	**76.99**	**178**	*e*	**P**	**12 01 03.6**	**+0.1**
	baz=195,slow=5.1						
VNA2				*e*		12 01 08.9	
VNA2				*e*		12 01 14.6	
FINES	**FINESS Array B**	**146.06**	**337**	PKPbc	PKPdf	12 08 42.7	-3.1
	0.9nm,0.4s,baz=67,slow=4.7,SNR=11						
NB2	**NORSAR Subarra**	**150.19**	**348**	PKP	PKPdf	12 08 53.6	+1.1
	comp=Z,0.1nm,0.6s,baz=31,slow=2.9						
NOA	**NORSAR Array B**	**150.19**	**348**	PKPbc	PKPdf	12 08 53.1	+0.6
	comp=Z,1.3nm,0.8s,baz=16,slow=4.1,SNR=4.0						
HFS	**Hagfors**	**150.55**	**345**	PKPbc	PKPdf	12 08 54.4	+1.3
	comp=Z,1.6nm,0.6s,baz=93,slow=3.2,SNR=5.3						

*ISCJB **01** 12:36:07.2±4.3, 46S±02×1535E±03, h156km±35km, mb3.8/8, Error ellipse: s-maj=45.7km s-min=24.6km az=22.2*
*IDC **01** 12:36:07.1±6.2, 455S×15354E, h138km±49km, mb3.5/6, mb1 3.8/7, mb1mx3.6/15, mbtmp3.6/7, Error ellipse: s-maj=55.9km s-min=25.0km az=97.0*
ISC 01 12:36:07.5±4.2**, 46S**±02×**1536E**±03**, h143**km±33km**, n11, σ0s49**/11**, mb3.8**/8**, 1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.95**	**233**	P	**Pn**	**12 38 00.0**	**-0.2**
	6.1nm,0.3s,baz=44,slow=6.3,SNR=27						
PMG				S	**Sn**	**12 39 29.0**	**+0.2**
	1.6nm,0.3s,baz=134,slow=22,SNR=12						
WB2	**Warramunga Arr**	**24.14**	**229**	⇓*i*P	**P**	**12 41 10.7**	**+0.3**
WRA	**Warramunga Arr**	**24.15**	**229**	P	**P**	**12 41 11.2**	**+0.7**
	5.7nm,0.6s,mb4.3,baz=54,slow=9.9,SNR=50						
WRA				pP		12 41 41.5	
	2.7nm,0.8s,baz=52,slow=10,SNR=4.2						
ASAR	**Alice Springs**	**26.81**	**223**	P	**P**	**12 41 34.4**	**-0.2**
	1.1nm,0.8s,mb3.5,baz=54,slow=7.4,SNR=4.3						
STKA	**Stephens Creek**	**29.37**	**201**	P	**P**	**12 41 57.7**	**+0.6**
	2.8nm,0.6s,mb4.2,baz=11,slow=14,SNR=6.6						
FITZ	**Fitzroy Crossi**	**30.42**	**242**	*e*P	**P**	**12 42 06.0**	**-0.6**
	3.9nm,0.8s,mb4.2						
FORT	**Forrest**	**35.43**	**220**	*e*P	**P**	**12 42 48.9**	**-1.1**
	8.3nm,0.7s,mb4.5						
SONM	**Songino Array**	**66.56**	**327**	P	**P**	**12 46 42.2**	**+0.1**
	0.2nm,0.5s,mb3.2,baz=132,slow=4.1,SNR=2.6						
MKAR	**Makanchi Array**	**80.67**	**319**	P	**P**	**12 48 04.8**	**+0.2**
	0.2nm,0.3s,mb3.2,baz=104,slow=6.9,SNR=4.8						
YKA	**Yellowknife Ar**	**94.89**	**28**	P	**P**	**12 49 13.0**	**-0.1**
	0.1nm,0.6s,mb3.2,baz=258,slow=4.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.96**	**289**	PKPbc	PKPbc	12 55 43.9	-0.6
	1.7nm,0.7s,baz=64,slow=2.0,SNR=11						

IDC 01 13:00:46.6±5.9**, 008S**×**12207E, h282**km±62km**, mb3.3**/6**, mb1 3.4**/7**, mb1mx3.2**/19**, mbtmp3.3**/7**, Error ellipse: s-maj=84.3km s-min=16.6km az=63.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**10.19**	**171**	P	Pn	13 03 12.9	+5.6
	4.6nm,0.3s,baz=355,slow=3.0,SNR=9.0						
FITZ	**Fitzroy Crossi**	**18.25**	**169**	*e*P	P	13 04 39.4	-0.8
FITZ	**Fitzroy Crossi**	**18.25**	**169**	P	P	13 04 39.3	-0.8
	0.2nm,0.3s,baz=351,slow=9.8,SNR=18						
WRA	**Warramunga Arr**	**23.12**	**149**	P	P	13 05 28.1	-0.3
	2.3nm,0.7s,baz=330,slow=10.0,SNR=16						
WB2	**Warramunga Arr**	**23.12**	**149**	*e*P	P	13 05 27.8	-0.6
ASAR	**Alice Springs**	**26.12**	**155**	P	P	13 05 55.8	+0.4
	1.3nm,0.6s,baz=344,slow=13,SNR=30						
ASAR				PcP	PcP	13 09 13.8	-1.1
	0.5nm,0.5s,baz=343,slow=1.8,SNR=7.8						
STKA	**Stephens Creek**	**36.63**	**152**	*e*P	P	13 07 27.0	+0.4
	3.6nm,0.7s						
STKA	**Stephens Creek**	**36.63**	**152**	P	P	13 07 27.1	+0.5
	4.8nm,0.7s,baz=317,slow=9.6,SNR=11						
SONM	**Songino Array**	**49.63**	**346**	P	P	13 09 10.5	+0.6
	0.3nm,0.6s,baz=171,slow=7.0,SNR=3.5						
MKAR	**Makanchi Array**	**58.19**	**329**	P	P	13 10 11.3	-0.2
	0.3nm,0.4s,baz=124,slow=7.9,SNR=5.0						
RPZ	**Rata Peaks**	**61.53**	**142**	P	P	13 10 34.6	+0.4
	7.8nm,0.8s,baz=203,slow=9.4,SNR=3.6						

*IDC **01** 13:18:04.8±2.1, 1568N×12244E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=231.0km s-min=21.3km az=65.0*
*MAN **01** 13:18:07, 1537N×12127E, h1km, mb4.5, ML3.4, MS3.3 MAN INTENSITY II - PALAYAN CITY.*
*ISCJB **01** 13:18:08.3±0.8, 1538N±003×12131E±003, h0km±6km, mb3.5/4, Error ellipse: s-maj=5.8km s-min=3.8km az=150.5*
ISC 01 13:18:08.9±0.6**, 1539N**±003×**12130E**±003**, h0**km±5km**, n20, σ1s17**/32**, mb3.5**/4**, 2C-3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**0.26**	**311**	⇑*i*P	**Pg**	**13 18 15.2**	**+1.3**
PCPH				*i* S	**Sg**	**13 18 19.9**	**+2.6**
BALP	**Baler**	**0.44**	**37**	*e*P	**Pg**	**13 18 17.0**	**-0.4**
BALP				*e*S	**Sg**	**13 18 23.1**	**0.0**
POLP	**Polilio Island**	**0.90**	**137**	*e*P	**Pg**	**13 18 25.4**	**-0.8**
POLP				*e*S	**Sg**	**13 18 37.6**	**-0.3**
BCPH	**Baguio City Da**	**1.21**	**325**	⇓*e*P	**Pg**	**13 18 31.0**	**-1.0**
BCPH				*i* S	**Sg**	**13 18 47.3**	**-0.3**
TGY	**Tagaytay City**	**1.32**	**195**	⇓*i*P	**Pg**	**13 18 36.4**	**+2.1**
TGY				*i* S	**Sg**	**13 18 55.3**	**+3.8**
SCZP	**Santa Cruz**	**1.39**	**286**	*e*P	**Pn**	**13 18 34.1**	**-1.4**
SCZP				*e*S	**Sg**	**13 18 53.0**	**-0.7**
CAUP	**Cauayan**	**1.63**	**18**	*e*P	**Pn**	**13 18 37.1**	**-1.6**
CAUP				*e*S	**Sn**	**13 19 01.4**	**+1.0**
BOLP	**Bolinao**	**1.66**	**307**	*e*P	**Pn**	**13 18 38.4**	**-0.8**
GQP	**Guinayangan**	**1.84**	**143**	⇓*i*P	**Pn**	**13 18 41.3**	**-0.4**
GQP				*i* S	**Sn**	**13 19 06.5**	**+0.7**
LUBP	**Lubang**	**1.94**	**212**	*e*P	**Pn**	**13 18 42.9**	**-0.1**
ABRA	**Dolores**	**2.32**	**346**	*e*P	**Pn**	**13 18 48.6**	**+0.4**
ABRA				*e*S	**Sn**	**13 19 19.6**	**+2.2**
CVP	**Callao Caves**	**2.36**	**12**	*e*P	**Pn**	**13 18 47.9**	**-0.9**
CVP				*e*S	**Sn**	**13 19 17.6**	**-0.8**
APYP	**Conner**	**2.46**	**359**	*e*P	**Pn**	**13 18 50.7**	**+0.5**
APYP				*e*S	**Sn**	**13 19 22.3**	**+1.3**
OTRP	**Odiongan**	**3.09**	**167**	*e*P	**Pn**	**13 18 58.8**	**-0.1**
PVCP	**Virac**	**3.29**	**122**	⇑*i*P	**Pn**	**13 19 02.7**	**+1.1**
PVCP	**Virac**	**3.29**	**122**	*e*P	**Pn**	**13 19 01.1**	**-0.5**
PVCP				*e*S	**Sn**	**13 19 44.4**	**+3.0**
WRA	**Warramunga Arr**	**37.38**	**160**	P	**P**	**13 25 17.8**	**-5.6**
	0.4nm,0.4s,mb3.5,baz=342,slow=9.2,SNR=8.6						
ASAR	**Alice Springs**	**40.72**	**162**	P	**P**	**13 25 47.9**	**-3.5**
	0.4nm,0.4s,mb3.5,baz=342,slow=6.9,SNR=10						
MKAR	**Makanchi Array**	**45.04**	**322**	P	**P**	**13 26 25.4**	**-0.8**
	0.1nm,0.3s,mb3.2,baz=128,slow=7.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**47.84**	**332**	P	**P**	**13 26 46.6**	**-1.6**
	0.3nm,0.4s,mb3.8,baz=131,slow=8.1,SNR=2.5						

*CSEM **01** 13:20:04.8±0.1, 3803N×3826E, h2km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.6km az=108.0*
*ISK **01** 13:20:05.7, 3803N×3826E, h7km, MD3.0*
*ISCJB **01** 13:20:06.2±0.6, 3804N±003×3826E±006, h5km±8km, Error ellipse: s-maj=7.7km s-min=3.9km az=20.6*
*DDA **01** 13:20:06.7, 3806N×3824E, h5km±2km, Md3.4*
ISC 01 13:20:06.7±0.6**, 3805N**±003×**3826E**±006**, h5**km±7km**, n17, σ1s06**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.29**	**27**	*i* PG	**Pg**	**13 20 11.9**	**-0.5**
MALT				*i* SG	**Sg**	**13 20 17.2**	**+0.9**
MYA	**Malataya**	**0.30**	**26**	*i* PG	**Pg**	**13 20 12.8**	**+0.2**
MYA				*i* SG	**Sg**	**13 20 17.7**	**+1.1**
ATAB	**Bozova**	**0.58**	**177**	*i* P	**Pg**	**13 20 16.9**	**-0.9**
ATAB				*i* S	**Sg**	**13 20 25.6**	**+0.3**
ATAB	**Bozova**	**0.58**	**177**	*i* P	**Pg**	**13 20 16.9**	**-0.9**
ATAB				*i* S	**Sg**	**13 20 25.6**	**+0.2**
ELZG	**Elazig**	**0.73**	**52**	*i* P	**Pg**	**13 20 20.6**	**-0.1**
ELZG				*i* S	**Sg**	**13 20 29.7**	**-0.4**
ELZG	**Elazig**	**0.73**	**52**	*i* P	**Pg**	**13 20 20.5**	**-0.1**
ELZG				*i* S	**Sg**	**13 20 29.7**	**-0.4**
URFA	**Urfa**	**0.76**	**143**	PG	**Pg**	**13 20 20.2**	**-1.0**
URFA				SG	**Sg**	**13 20 31.3**	**+0.3**
GZT	**Gaziantep**	**0.89**	**219**	*i* P	**Pg**	**13 20 23.4**	**-0.3**
GZT				*i* S	**Sg**	**13 20 35.8**	**+0.7**
GAZ	**Gaziantep**	**1.21**	**224**	PN	**Pn**	**13 20 28.9**	**-1.3**
PTK	**Pertek**	**1.23**	**46**	PN	**Pn**	**13 20 29.3**	**-1.1**
ANDN	**Andirin**	**1.58**	**253**	*i* P	**Pn**	**13 20 32.5**	**-2.9**
ANDN				*i* S	**Sn**	**13 20 56.3**	**+0.1**
KOZT	**Kozan**	**2.01**	**254**	*e*PN	**Pn**	**13 20 41.1**	**-0.1**
BNN	**Bunyan**	**2.06**	**294**	*e*PN	**Pn**	**13 20 41.8**	**0.0**
EZC	**Erzincan**	**2.09**	**35**	*e*PN	**Pn**	**13 20 39.4**	**-2.9**
SVSK	**Karacayir**	**2.11**	**333**	*e*PN	**Pn**	**13 20 42.6**	**+0.1**
MARD	**Mardin**	**2.13**	**109**	*i* P	**Pn**	**13 20 45.7**	**+2.8**
MARD				*i* S	**Sn**	**13 21 15.3**	**+5.6**
COBT	**Iskenderun**	**2.21**	**227**	*i* P	**Pn**	**13 20 45.9**	**+2.0**
COBT				*i* S	**Sn**	**13 21 12.5**	**+0.9**

*IDC **01** 13:51:53.7±0.7, 100N×12606E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/19, mbtmp4.1/10, ML4.1/1, Error ellipse: s-maj=33.9km s-min=14.4km az=74.0*
*ISCJB **01** 13:51:56.5±0.6, 101N±008×1260E±02, h33km, mb4.2/10, Error ellipse: s-maj=25.8km s-min=10.1km az=165.7*
ISC 01 13:51:58.8±0.6**, 100N**±008×**1261E**±02**, h35**km**, n15, σ0s52**/14**, mb4.2**/10**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.98**	**181**	*e*P	**Pn**	**13 56 18.0**	**-0.3**
	12nm,1.5s						
FITZ	**Fitzroy Crossi**	**18.98**	**181**	P	**Pn**	**13 56 18.2**	**-0.1**
	0.5nm,0.3s,baz=28,slow=12,SNR=15						
WRA	**Warramunga Arr**	**22.34**	**159**	P	**P**	**13 56 53.1**	**-0.5**
	8.6nm,0.8s,mb4.2,baz=337,slow=11,SNR=114						
WB2	**Warramunga Arr**	**22.34**	**159**	*e*P	**P**	**13 56 54.2**	**+0.5**
ASAR	**Alice Springs**	**25.67**	**163**	P	**P**	**13 57 24.9**	**-0.7**
	3.9nm,0.3s,mb4.4,baz=346,slow=12,SNR=125						
PSI	**Prapat**	**27.18**	**274**	P	**P**	**13 57 39.4**	**0.0**
	4.6nm,0.7s,mb4.1,baz=111,slow=8.0,SNR=6.9						
FORT	**Forrest**	**31.66**	**177**	*e*P	**P**	**13 58 19.7**	**+0.9**
	20nm,1.6s,mb4.7						
STKA	**Stephens Creek**	**35.86**	**157**	*e*P	**P**	**13 58 55.6**	**+0.3**
	2.7nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**35.86**	**157**	P	**P**	**13 58 55.5**	**+0.2**
	2.9nm,0.6s,mb4.4,baz=316,slow=7.1,SNR=7.1						
KSRS	**Korea Array**	**36.32**	**3**	P	**P**	**13 59 00.2**	**+1.0**
	1.1nm,0.7s,mb3.9,baz=183,slow=9.7,SNR=5.6						
MJAR	**Matsushiro Arr**	**37.12**	**16**	P	**P**	**13 59 05.5**	**-0.5**
	1.6nm,0.5s,mb4.1,baz=181,slow=9.1,SNR=6.0						
SONM	**Songino Array**	**49.67**	**343**	P	**P**	**14 00 46.9**	**-0.2**
	0.6nm,0.6s,mb3.8,baz=159,slow=7.1,SNR=6.6						
MKAR	**Makanchi Array**	**59.43**	**326**	P	**P**	**14 01 57.9**	**-0.1**
	1.0nm,0.4s,mb4.2,baz=121,slow=7.3,SNR=38						
MKAR				PcP	PcP	14 02 46.1	+0.7
	0.7nm,0.7s,baz=116,slow=5.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**62.72**	**334**	P	**P**	**14 02 19.8**	**-0.3**
	0.6nm,0.6s,mb3.9,baz=110,slow=13,SNR=3.7						
TORD	**Torodi Ar. Bea**	**123.08**	**286**	PKP	PKPdf	14 10 53.4	+0.7
	0.6nm,0.7s,baz=55,slow=1.8,SNR=4.1						

*ISCJB **01** 14:11:17.6±0.7, 701N±008×7308W±009, h163km±7km, mb3.4/3, Error ellipse: s-maj=18.1km s-min=7.3km az=37.9*
*IDC **01** 14:11:17.4±0.7, 664N×7285W, h170km±7km, mb3.1/3, mb1 3.6/5, mb1mx3.2/19, mbtmp3.3/5, Error ellipse: s-maj=32.3km s-min=7.5km az=132.0*
*FUNV **01** 14:11:20.7, 694N×7304W, h154km, MW3.6*
ISC 01 14:11:18.5±0.7**, 699N**±007×**7307W**±009**, h156**km±7km**, n16, σ1s48**/25**, mb3.4**/3**, 3C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.15**	**41**	⇑*i*P	**Pn**	**14 11 47.1**	**+2.0**
CAPV				*e*S	**Sn**	**14 12 06.0**	**+0.4**
ROSC	**El Rosal**	**2.46**	**211**	P	**Pn**	**14 11 58.7**	**-0.8**
	31nm,0.3s,baz=266,slow=24,SNR=38						
ROSC				S	**Sn**	**14 12 29.0**	**-2.1**
	51nm,0.3s,baz=251,slow=23,SNR=14						
VIGV	**El Vigia**	**2.50**	**42**	⇑*i*P	**Pn**	**14 12 01.5**	**+1.6**
VIGV				*e*S	**Sn**	**14 12 31.8**	**-0.1**
SOCV	**Socops**	**2.54**	**59**	⇑*i*P	**Pn**	**14 12 01.8**	**+1.3**
SOCV				*e*S	**Sn**	**14 12 31.6**	**-1.2**
SDV	**Santo Domingo**	**3.06**	**52**	P	**Pn**	**14 12 08.5**	**+1.6**
	19nm,0.3s,baz=249,slow=4.6,SNR=90						
SDV				S	**Sn**	**14 12 46.6**	**+2.2**
	24nm,0.3s,baz=66,slow=23,SNR=23						
VIRV	**Villa del Rosa**	**3.55**	**11**	*e*P	**Pn**	**14 12 13.7**	**+0.5**
VIRV				*e*S	**Sn**	**14 12 54.2**	**-1.4**
QARV	**Quebrada Arrib**	**4.07**	**38**	*e*P	**Pn**	**14 12 21.0**	**+1.2**
QARV				*e*S	**Sn**	**14 13 05.7**	**-1.9**
SANV	**Sanarito**	**4.29**	**54**	*e*P	**Pn**	**14 12 23.3**	**+0.5**
SANV				*e*S	**Sn**	**14 13 09.9**	**-3.0**
CURV	**Curarigua**	**4.30**	**45**	*e*P	**Pn**	**14 12 23.4**	**+0.6**
CURV				*e*S	**Sn**	**14 13 10.8**	**-2.2**
DABV	**Dabajuro**	**4.59**	**31**	*e*P	**Pn**	**14 12 28.2**	**+1.6**
DABV				*e*S	**Sn**	**14 13 17.1**	**-2.6**
SIQV	**Siquisique**	**4.86**	**41**	*e*P	**Pn**	**14 12 30.9**	**+0.7**
SIQV				*e*S	**Sn**	**14 13 22.1**	**-4.0**
PDAR	**Pinedale Array**	**47.97**	**324**	P	**P**	**14 19 42.2**	**+0.7**
	0.3nm,0.8s,mb3.0,baz=134,slow=7.7,SNR=3.3						
YKA	**Yellowknife Ar**	**63.12**	**340**	P	**P**	**14 21 29.3**	**0.0**
	0.3nm,0.5s,mb3.4,baz=131,slow=6.8,SNR=9.3						
ESDC	**Sonseca Array**	**69.51**	**50**	P	**P**	**14 22 07.5**	**-2.9**
	0.7nm,0.4s,mb3.8,baz=258,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**149.25**	**234**	PKPbc	PKPbc	14 30 46.3	-3.3
	0.4nm,0.6s,baz=112,slow=1.9,SNR=10						
WRA	**Warramunga Arr**	**150.46**	**241**	PKPbc	PKPbc	14 30 50.2	-2.4
	0.5nm,0.5s,baz=111,slow=2.4,SNR=11						

IDC 01 14:13:18.0±1.8**, 1888S**×**6698W, h233**km±13km**, mb3.1**/3**, mb1 3.5**/6**, mb1mx3.3**/18**, mbtmp3.3**/6**, Error ellipse: s-maj=29.2km s-min=19.5km az=31.0, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.80**	**337**	P	Pn	14 14 09.2	+1.9
	7.8nm,0.3s,baz=156,slow=8.1,SNR=154						
LPAZ				S	S	14 14 47.4	+1.2
	2.9nm,0.3s,baz=349,slow=16,SNR=14						
SIV	**San Ignacio**	**6.33**	**64**	P	Pn	14 14 51.1	+1.2
	3.7nm,0.3s,baz=261,slow=9.3,SNR=57						
NNA	**Nana**	**11.72**	**304**	P	Pn	14 15 57.7	-0.8
	3.1nm,0.3s,baz=144,slow=12,SNR=5.2						
CFAA	**Coronel Fontan**	**12.72**	**185**	P	Pn	14 16 09.8	-1.1
	0.1nm,0.3s,baz=359,slow=15,SNR=4.2						
CFAA				S	S	14 18 21.9	-11
	0.1nm,0.3s,baz=242,slow=14,SNR=3.4						
PDAR	**Pinedale Array**	**72.79**	**329**	P	P	14 24 21.3	+0.4
	0.1nm,0.4s,baz=130,slow=9.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**74.77**	**70**	P	P	14 24 32.1	-0.8
	0.6nm,0.4s,baz=256,slow=5.0,SNR=8.3						
YKA	**Yellowknife Ar**	**89.35**	**340**	P	P	14 25 47.8	+0.4
	0.2nm,0.4s,baz=133,slow=4.6,SNR=7.8						
ASAR	**Alice Springs**	**133.06**	**207**	PKP	PKPdf	14 32 06.7	+0.3
	0.3nm,0.6s,baz=134,slow=1.4,SNR=4.6						
WRA	**Warramunga Arr**	**136.12**	**210**	PKP	PKPdf	14 32 13.8	+1.6
	0.1nm,0.3s,baz=156,slow=1.9,SNR=4.0						
SONM	**Songino Array**	**150.62**	**9**	PKPbc	PKPbc	14 32 42.3	+0.2
	0.3nm,0.5s,baz=335,slow=1.4,SNR=4.8						

ISCJB ***01*** *14:18:08.7±0.5, 3835N±003×3922E±003, h5km±5km, Error ellipse: s-maj=4.7km s-min=3.7km az=173.0*
CSEM ***01*** *14:18:08.4±0.1, 3837N×3921E, h5km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.5km az=7.0*
ISK ***01*** *14:18:08.1, 3837N×3921E, h4km, MD3.0*
DDA ***01*** *14:18:09.2, 3835N×3922E, h5km±2km, Md3.4*
ISC 01 14:18:09.3±0.4, **3835N**±003×**3921E**±003, **h8**km±4km, **n21**, σ**0^{s}93**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.23	309	iP	Pg	14 18 13.9	0.0
ELZG				iS	Sg	14 18 16.4	-0.7
ELZG	Elazig	0.23	309	iP	Pg	14 18 13.9	-0.1
PTK	Pertek	0.56	15	PG	Pg	14 18 19.0	-1.1
PTK				SG	Sg	14 18 27.7	+0.3
MALT	Malatya	0.62	267	PG	Pg	14 18 20.5	-0.7
MYA	Malataya	0.62	268	PG	Pg	14 18 20.8	-0.5
MYA				SG	Sg	14 18 30.0	+0.7
DIYA	Diyarbakir	0.84	121	iP	Pg	14 18 25.0	-0.4
DIYA				iS	Sg	14 18 36.2	-0.1
DIY	Diyarbakir	0.92	119	PG	Pg	14 18 26.5	-0.5
DIY				SG	Sg	14 18 39.8	+0.8
URFA	Urfa	0.96	199	PG	Pg	14 18 27.9	+0.1
BINT	Bingol	1.13	62	ePN	Pn	14 18 30.4	-1.0
ATAB	Bozova	1.14	220	iP	Pg	14 18 30.6	-0.6
ATAB				iS	Sg	14 18 47.2	+1.2
EZC	Erzincan	1.47	19	ePN	Pn	14 18 35.1	-1.0
MARD	Mardin	1.62	129	iP	Pn	14 18 37.7	-0.4
MARD				iS	Sn	14 18 56.0	-3.1
BNGL	BINGOL	1.63	68	iP	Pn	14 18 38.1	-0.2
BNGL				iS	Sn	14 19 04.1	+4.6
GZT	Gaziantep	1.64	233	iP	Pn	14 18 38.5	+0.1
GZT				iS	Sn	14 18 59.6	-0.1
BTMT	Batman	1.80	94	ePN	Pn	14 18 39.4	-1.2
GAZ	Gaziantep	1.98	234	ePN	Pn	14 18 43.9	+0.9
GUMT	Gumushane	2.12	6	ePN	Pn	14 18 45.4	+0.5
EZM	Erzurum	2.28	47	ePN	Pn	14 18 47.7	+0.5
ERZM	Erzurum	2.28	47	eP	Pn	14 18 49.8	+2.5
ERZM				iS	Sg	14 19 25.6	+2.9
SVSK	Karacayir	2.32	313	ePN	Pn	14 18 48.1	+0.3
SIRT	Sirnak	2.69	107	ePN	Pn	14 18 54.0	+1.1

CSEM ***01*** *14:21:56.8±0.3, 38.15N×4246E, h15km, MD3.0, Error ellipse: s-maj=7.1km s-min=5.4km az=122.0*
ISK ***01*** *14:21:56.8, 38.18N×4243E, h18km, MD3.0*
ISCJB ***01*** *14:21:58.1±0.8, 38.13N±003×4260E±005, h4km±8km, Error ellipse: s-maj=6.4km s-min=5.1km az=36.9*
DDA ***01*** *14:21:59.1, 38.12N×4260E, h7km±4km, Md3.2*
ISC 01 14:21:58.7±0.7, **3813N**±004×**4263E**±005, **h10**km±8km, **n11**, σ**1^{s}18**/18, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.64	193	PG	Pg	14 22 10.5	-0.7
SIRT				SG	Sg	14 22 20.5	+0.9
VANT	Van	0.68	62	PG	Pg	14 22 11.0	-0.9
VANB	Van	0.76	52	ePG	Pg	14 22 14.2	+0.8
VANB				eSG	Sg	14 22 26.1	+2.8
BTMT	Batman	0.90	274	ePG	Pg	14 22 14.5	-1.5
HAKT	HAKKARI	1.03	123	iP	Pg	14 22 17.5	-1.0
HAKT				iS	Sg	14 22 32.8	+0.9
HKR	Hakkari	1.04	122	ePN	Pn	14 22 19.1	-0.3
TUTA	Tutak	1.28	7	iP	Pn	14 22 21.5	-1.2
TUTA				iS	Sb	14 22 39.5	+0.1
TUTA	Tutak	1.28	7	iP	Pn	14 22 21.5	-1.2
TUTA				iS	Sb	14 22 39.5	+0.1
BNGL	BINGOL	1.42	306	iP	Pn	14 22 25.2	+0.6
BNGL				iS	Sb	14 22 45.6	+2.2
AGRB	Hanur-Agry	1.47	11	ePN	Pn	14 22 23.0	-2.3
MARD	Mardin	1.67	241	iP	Pn	14 22 28.0	-0.1
MARD				iS	Sn	14 22 50.3	+0.7

IDC ***01*** *14:31:56.1±0.9, 104S×12723E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.8/17, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=63.2km s-min=16.1km az=78.0*
NEIC ***01*** *14:31:57.4±0.6, 106S×12720E, h10km, mb4.3/1, Error ellipse: s-maj=22.2km s-min=9.3km az=77.0*
ISCJB ***01*** *14:31:58.7±0.7, 109S±008×1272E±02, h33km, mb3.8/7, Error ellipse: s-maj=29.0km s-min=10.9km az=168.1*
ISC 01 14:32:00.8±0.7, **113S**±008×**1272E**±02, **h35**km, **n12**, σ**1^{s}00**/12, **mb3.8**/7, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.94	185	P	Pn	14 35 55.5	+0.3
	0.1nm,0.3s,baz=20,slow=14,SNR=3.5						
WRA	Warramunga Arr	19.96	160	P	Pn	14 36 30.9	-1.0
	0.8nm,0.5s,baz=340,slow=11,SNR=14						
WB2	Warramunga Arr	19.96	160	P	Pn	14 36 29.6	-2.4
PMG	Port Moresby	21.48	113	P	P	14 36 47.3	+0.8
	11nm,0.9s,mb4.2						
ASAR	Alice Springs	23.32	164	P	P	14 37 06.9	+0.8
	0.8nm,0.4s,mb3.5,baz=345,slow=12,SNR=32						
STKA	Stephens Creek	33.46	157	P	P	14 38 37.9	+1.3
STKA				P		14 38 38.6	
STKA	Stephens Creek	33.46	157	P	P	14 38 37.9	+1.3
	2.5nm,0.8s,mb4.2,baz=339,slow=9.6,SNR=4.6						
KSRS	Korea Array	38.39	1	P	P	14 39 18.9	+0.2
	1.0nm,0.8s,mb3.6,baz=193,slow=8.7,SNR=3.9						
MJAR	Matsushiro Arr	38.85	14	P	P	14 39 21.5	-1.1
	0.5nm,0.5s,mb3.5,baz=157,slow=6.6,SNR=3.1						
SONM	Songino Array	52.03	342	P	P	14 41 07.3	+0.5
	0.4nm,0.7s,mb3.5,baz=146,slow=8.4,SNR=4.8						
SONM				PcP	PcP	14 42 19.1	+0.3
	0.3nm,0.7s,baz=170,slow=1.8,SNR=2.7						
MKAR	Makanchi Array	61.83	327	P	P	14 42 16.2	-0.1
	0.3nm,0.4s,mb3.8,baz=119,slow=8.4,SNR=4.9						
KBL	Kabul	64.90	309	P	P	14 42 32.4	-4.5

NEIC ***01*** *14:37:04.4±0.5, 5081N×625E, h10km, ML2.9(LDG), ML2.3(SZGRF), Error ellipse: s-maj=8.1km s-min=5.1km az=152.0*
ISCJB ***01*** *14:37:04.6±0.3, 5075N±002×625E±003, h10km, Error ellipse: s-maj=2.7km s-min=1.9km az=41.7*
BGR ***01*** *14:37:05.3±0.3, 5082N×635E, h5km, ML2.4/4, Error ellipse: s-maj=4.4km s-min=3.3km az=134.0*
CSEM ***01*** *14:37:05.9±0.1, 5086N×624E, h12km, ML2.9/16, Error ellipse: s-maj=1.3km s-min=0.8km az=125.0*
LDG ***01*** *14:37:06.2±0.1, 5084N×622E, h10km, Md2.7/2, Ml2.9/16, Error ellipse: s-maj=1.3km s-min=0.9km az=133.0*
BNS ***01*** *14:37:06.1±0.8, 5086N×625E, h14km±6km, ML2.2*
UCC ***01*** *14:37:06.0±0.2, 5084N×622E, h17km, ML2.1*
ISC 01 14:37:05.1±0.2, **5081N**±001×**621E**±002, **h10**km, **n72**, σ**1^{s}22**/140, **9C-9D**, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DREG	Dreilaegerbach	0.15	174	⇓iPg	Pg	14 37 10.3	+1.9
DREG				iSg	Sg	14 37 13.5	+2.7
	680nm,0.1s						
JUE	Julich	0.16	53	⇑iPg	Sg	14 37 18.1	+7.1
KLL	Kalltalsperre	0.18	158	⇓ePg	Pg	14 37 10.7	+1.7
KLL				eSg	Sg	14 37 14.1	+2.6
	360nm,0.1s						
HGN	Heimansgroeve	0.18	254	ePg	Pg	14 37 10.5	+1.5
	SNR=52						
HGN				eSg	Sg	14 37 13.8	+2.2
	SNR=14						
BD05	Hambach	0.21	55	⇑ePg	Pg	14 37 10.5	+0.9
MEM	Membach	0.24	212	⇓P	Pg	14 37 11.7	+1.7
MEM				S	Sg	14 37 15.8	+2.5
	comp=N,277nm,0.2s						
BD04	Gut Margarthen	0.27	68	⇑ePg	Pg	14 37 11.7	+1.2
BD03	Millendorf	0.28	51	eSg	Sg	14 37 15.9	+1.2
BD11	Borschemich	0.30	28	⇑iPg	Pg	14 37 11.6	+0.4
BA05	Sindorf	0.31	70	⇑iPg	Pg	14 37 12.4	+1.1
BD01	Bergheim Laure	0.31	62	⇑iPg	Pg	14 37 12.2	+0.9
BD01				eSg	Sg	14 37 17.0	+1.5
BD07	Roetschberg	0.32	66	⇓iPg	Pg	14 37 12.7	+1.2
BD09	Hochneukirch	0.33	30	⇑ePg	Pg	14 37 11.9	+0.3
RODG	Roetgen-Dahlhe	0.33	357	⇑ePg	Pg	14 37 11.9	+0.2
RODG				iSg	Sg	14 37 16.8	+0.6
	comp=N,641nm,0.4s						
BEBN	Eben Emael	0.34	267	⇓P	Pg	14 37 13.0	+1.2
BEBN				S	Sg	14 37 17.9	+1.7
	comp=N,62nm,0.4s						
STB	Steinbach	0.46	118	⇑ePg	Pg	14 37 15.3	+1.2
STB				eSg	Sg	14 37 21.1	+1.0
	comp=N,59nm,0.3s						
BNS	Bensberg	0.63	76	eSg	Sg	14 37 25.4	-0.2
	comp=N,185nm,0.2s						
BCLA	Clavier	0.70	236	⇓P	Pg	14 37 19.8	+1.2
BCLA				S	Sg	14 37 29.4	+1.7
	comp=N,26nm,0.1s						
BCLA	Clavier	0.70	236	P	Pg	14 37 19.7	+1.1
BCLA				S	Sg	14 37 29.3	+1.6
	comp=N,26nm,0.1s						
HOBG	Hohbusch	0.73	76	⇓ePg	Pg	14 37 19.5	+0.2
HOBG				eSg	Sg	14 37 28.0	-0.9
	comp=N,103nm,0.2s						
BUG	Bochum--Univer	0.92	46	ePg	Pg	14 37 22.3	-0.5
	SNR=3.2						
BUG				eSg	Sg	14 37 33.4	-1.4
	SNR=6.8						
BUG	Bochum--Univer	0.92	46	ePg	Pg	14 37 22.2	-0.6
BUG				eSg	Sg	14 37 33.4	-1.4
BGG	Burgeitz	0.94	130	ePg	Pg	14 37 23.8	+0.5
BGG				eSg	Sg	14 37 36.4	+0.9
	comp=N,55nm,0.1s						
GIVF	Givet	1.14	232	ePg	Pg	14 37 28.3	+1.4
GIVF				eSn	Sn	14 37 41.5	-1.1
	comp=N,82nm,0.2s						
GIVF	Givet	1.14	232	ePn	Pn	14 37 26.7	-0.3
GIVF				ePg	Pg	14 37 28.3	+1.4
GIVF				eSn	Sn	14 37 41.5	-1.1
GIVF	Givet	1.14	232	ePg	Pg	14 37 28.3	+1.4
GIVF				eSn	Sn	14 37 41.5	-1.1
	comp=N,41nm,0.2s						
WLF	Walferdange	1.15	182	ePg	Pg	14 37 27.0	-0.2
	SNR=1.3						
WLF				eSg	Sg	14 37 42.9	+0.7
	SNR=5.4						
WLF	Walferdange	1.15	182	P	Pb	14 37 27.1	0.0
WLF				S	Sb	14 37 42.6	+0.6
	comp=E,21nm,0.4s						
WLF	Walferdange	1.15	182	P	Pb	14 37 27.1	0.0
WLF				S	Sb	14 37 42.6	+0.6
	comp=E,21nm,0.4s						
WTSB	Winterswijk	1.21	18	ePg	Pg	14 37 27.1	-1.4
	comp=E,11nm,0.5s						
WTSB				iSg	Sg	14 37 42.5	-1.7
WTSB				eP		23 20 15.4	
	comp=E,89nm,1.5s						
WTSB	Winterswijk	1.21	18	ePg	Pg	14 37 27.1	-1.3
	comp=E,11nm,0.5s						
WTSB				iSg	Sg	14 37 42.5	-1.7
DOU	Dourbes	1.26	236	⇓P	Pn	14 37 28.8	+0.1
DOU				S	Sb	14 37 45.6	+0.6
	comp=E,44nm,0.3s						
DOU	Dourbes	1.26	236	P	Pn	14 37 28.7	0.0
DOU				S	Sb	14 37 45.6	+0.5
	comp=E,44nm,0.3s						
SNF	Seneffe	1.26	257	⇓P	Pn	14 37 28.7	-0.1
SNF	Seneffe	1.26	257	P	Pn	14 37 28.6	-0.2
BAIF	Baives	1.48	240	ePg	Pg	14 37 34.7	+1.1
BAIF				eSn	Sn	14 37 49.8	-1.5
	comp=E,29nm,0.2s						
BAIF	Baives	1.48	240	ePn	Pn	14 37 31.1	-0.7
BAIF				ePg	Pg	14 37 34.7	+1.1
BAIF				eSn	Sn	14 37 49.8	-1.5
BAIF	Baives	1.48	240	ePg	Pg	14 37 34.7	+1.1
BAIF				eSn	Sn	14 37 49.8	-1.5
	comp=E,15nm,0.2s						
TNS	Taunus Mts	1.55	112	ePg	Pg	14 37 32.8	-2.0
	SNR=1.9						
TNS				eSg	Sg	14 37 51.4	-3.5
	SNR=3.4						
TNS	Taunus Mts	1.55	112	ePg	Pg	14 37 32.6	-2.2
TNS				eSg	Sg	14 37 53.1	-1.8
IBBN	Ibbenburen	1.78	32	eSg	Sg	14 38 00.4	-2.0
	SNR=1.7						
RFYF	Reffroy	2.24	193	eSg	Sg	14 38 17.8	+0.8
	comp=E,32nm,0.3s						
RFYF	Reffroy	2.24	193	eSg	Sg	14 38 17.8	+0.8
	comp=E,16nm,0.3s						
UBBA	Unterbreizbach	2.41	88	eSg	Sg	14 38 19.2	-3.2
	SNR=1.4						
MEZF	Maizieres J'vi	2.43	198	ePg	Pg	14 37 52.0	+0.3
	baz=21						
MEZF				eSg	Sg	14 38 23.7	+0.5
	comp=E,14nm,0.3s						
MEZF	Maizieres J'vi	2.43	198	ePg	Pg	14 37 52.0	+0.3
MEZF				eSg	Sg	14 38 23.7	+0.5
	comp=E,6.9nm,0.3s						
CDF	Champ du Feu	2.50	163	ePg	Pg	14 37 53.3	+0.2
CDF				eSg	Sg	14 38 25.4	-0.1
	comp=E,4.3nm,0.3s						
CDF	Champ du Feu	2.50	163	ePg	Pg	14 37 53.3	+0.2
CDF				eSg	Sg	14 38 25.4	-0.1
	comp=E,2.2nm,0.3s						
SFTF	Sexfontaines	2.72	197	ePn	Pn	14 37 48.4	-0.4
	baz=21						
SFTF				eSn	Sn	14 38 19.0	-2.7
SFTF				eSg	Sg	14 38 32.8	+0.4
	comp=E,10nm,0.3s,baz=24						
SFTF	Sexfontaines	2.72	197	ePn	Pn	14 37 48.4	-0.4
SFTF				eSn	Sn	14 38 19.0	-2.7
SFTF				eSg	Sg	14 38 32.8	+0.4
	comp=E,5.2nm,0.3s						
CLZ	Clausthal	2.81	67	ePg	Pg	14 37 56.1	-2.9
CLZ				eSg	Sg	14 38 30.3	-5.0
	SNR=2.8						
HAU	Haudompre	2.81	178	ePn	Pn	14 37 49.3	-0.8
HAU				eSg	Sg	14 38 35.2	-0.2
	comp=E,6.5nm,0.2s						
HAU	Haudompre	2.81	178	ePn	Pn	14 37 49.3	-0.8
HAU				eSg	Sg	14 38 35.2	-0.2
	comp=E,3.2nm,0.2s						
HINF	Hinteralfeld	3.03	172	ePn	Pn	14 37 52.8	-0.3
HINF				eSg	Sg	14 38 40.8	-1.6
	comp=E,4.7nm,0.3s						
HINF	Hinteralfeld	3.03	172	ePn	Pn	14 37 52.8	-0.3
HINF				eSg	Sg	14 38 40.8	-1.6
	comp=E,2.3nm,0.3s						
LOR	Lormes	3.87	204	ePg	Pg	14 38 18.3	-0.9
	baz=24						
LOR				eSn	Sn	14 38 46.7	-3.4
	baz=19						
LOR				eSg	Sg	14 39 08.8	-0.5
	comp=E,3.8nm,0.2s,baz=25						
LOR	Lormes	3.87	204	ePn	Pn	14 38 04.2	-0.4
LOR				ePg	Pg	14 38 18.3	-0.9
LOR				eSn	Sn	14 38 46.7	-3.4
LOR				eSg	Sg	14 39 08.8	-0.5
LOR	Lormes	3.87	204	ePg	Pg	14 38 18.3	-0.9
LOR				eSn	Sn	14 38 46.7	-3.4
LOR				eSg	Sg	14 39 08.8	-0.5
	comp=E,1.9nm,0.2s						
SSF	Saint Saulge	4.16	206	ePg	Pg	14 38 23.7	-1.0
SSF				eSn	Sn	14 38 53.7	-3.4
SSF				eSg	Sg	14 39 16.9	-1.6
	comp=E,5.3nm,0.4s						
SSF	Saint Saulge	4.16	206	ePn	Pn	14 38 08.0	-0.6
SSF				ePg	Pg	14 38 23.7	-1.0
SSF				eSn	Sn	14 38 53.7	-3.4
SSF				eSg	Sg	14 39 16.9	-1.6
SSF	Saint Saulge	4.16	206	ePg	Pg	14 38 23.7	-1.0
SSF				eSn	Sn	14 38 53.7	-3.4
SSF				eSg	Sg	14 39 16.9	-1.6
	comp=E,2.7nm,0.4s						
CABF	La Chapelle	4.21	181	ePn	Pn	14 38 08.9	-0.4
AVF	Avril sur Loir	4.45	206	ePn	Pn	14 38 11.7	-0.8
AVF				eSg	Sg	14 39 26.9	-0.9
	comp=E,2.3nm,0.4s						
AVF	Avril sur Loir	4.45	206	ePn	Pn	14 38 11.7	-0.8
AVF				eSg	Sg	14 39 26.9	-0.9
	comp=E,1.1nm,0.4s						
SMF	Signal de Mont	4.46	201	ePn	Pn	14 38 12.3	-0.4
SMF				eSg	Sg	14 39 26.6	-1.5
	comp=E,4.6nm,0.4s						
SMF	Signal de Mont	4.46	201	ePn	Pn	14 38 12.3	-0.4
SMF				eSg	Sg	14 39 26.6	-1.5
	comp=E,2.3nm,0.4s						
LDF	La Druitiere	4.67	244	ePn	Pn	14 38 14.5	-1.1
LDF				eSg	Sg	14 39 32.6	-2.4
	comp=E,3.0nm,0.3s						
LDF	La Druitiere	4.67	244	ePn	Pn	14 38 14.5	-1.1
LDF				eSg	Sg	14 39 32.6	-2.4
	comp=E,1.5nm,0.3s						
BGF	Bois d'Agland	4.80	209	ePn	Pn	14 38 16.8	-0.7
BGF				eSg	Sg	14 39 37.4	-1.9
	comp=E,14nm,0.5s						
BGF	Bois d'Agland	4.80	209	ePn	Pn	14 38 16.8	-0.7
BGF				eSg	Sg	14 39 37.4	-1.9
	comp=E,7.1nm,0.5s						
GRR	Gorron	5.20	245	ePn	Pn	14 38 22.5	-0.3
GRR				eSn	Sn	14 39 18.3	-4.5
	comp=E,2.5nm,0.2s						
GRR	Gorron	5.20	245	ePn	Pn	14 38 22.5	-0.3
GRR				eSn	Sn	14 39 18.3	-4.5
	comp=E,1.2nm,0.2s						

ISCJB ***01*** *14:37:43.6±0.4, 3323N±001×11600W±002, h3km±3km, Error ellipse: s-maj=2.6km s-min=2.2km az=34.4*
ECX ***01*** *14:37:45.2±0.6, 3322N×11602W, h1km, MD3.2, ML3.3*
ISC 01 14:37:44.2±0.3, **3323N**±001×**11601W**±002, **h6**km±3km, **n50**, σ**0^{s}70**/78, **28C-32D**, **Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWSC	Sam W. Stewart	0.34	149	P	Pg	14 37 51.0	+0.3
	baz=0.4,SNR=1000						
SWSC				⇓S	Sg	14 37 56.0	+0.8
	baz=0.4						
CRR	Carrizo Plain	0.34	175	⇓eP	Pg	14 37 51.5	+0.6
COK	Cook Ranch	0.45	148	⇑eP	Pg	14 37 53.7	+0.9
MONP	Monument Peak	0.49	226	⇑P	Pg	14 37 53.9	+0.3
	baz=0.5,SNR=542						
MONP				⇑S	Sg	14 38 00.5	+0.6
	baz=0.5						
PFO	Pinyon Flat Ob	0.53	315	P	Pg	14 37 54.8	+0.3
	baz=0.5,SNR=427						
PFO				⇑S	Sg	14 38 02.0	+0.5
	baz=0.5						
DVTC	Desert V Tower	0.57	188	⇑P	Pg	14 37 55.4	+0.1
	baz=0.6,SNR=44						
DVTC				⇓S	Sg	14 38 03.3	+0.6
	baz=0.6						
YUH	Yuha Desert	0.58	173	⇓eP	Pg	14 37 55.7	+0.2
SGL	Mount Signal	0.62	158	⇓eP	Pg	14 37 56.5	+0.3
BC3	Big Chuckw Mtn	0.63	47	P	Pg	14 37 56.7	+0.4
	baz=0.6,SNR=347						
BC3				⇓S	Sg	14 38 05.4	+1.0
	baz=0.6						
BELC	Belle Mtn.	0.77	0	P	Pg	14 37 59.2	+0.2
	baz=0.8,SNR=102						
BELC				⇓S	Sg	14 38 09.6	+0.6
	baz=0.8						
BAR	Barrett	0.78	226	⇑eP	Pg	14 37 59.1	-0.2
BAR				eS	Sg	14 38 09.4	0.0
109C	Camp Elliot, M	0.98	250	⇓P	Pg	14 38 02.6	-0.5
	baz=1.0,SNR=55						
109C				⇑S	Sg	14 38 15.6	-0.3
	baz=1.0						
CPBX	Cerro Prieto	1.00	144	eP	Pg	14 38 02.3	-1.1
CPBX				eS	Sg	14 38 16.4	0.0
GLA	Glamis	1.00	100	P	Pg	14 38 02.5	-1.0
	baz=1.0,SNR=50						
GLA				⇑S	Sg	14 38 16.5	0.0
	baz=1.0						
SND	San Diego	1.00	243	⇓eP	Pg	14 37 56.5	-7.0
MURC	Murrieta	1.06	291	⇓P	Pg	14 38 04.3	-0.4
	baz=1.0,SNR=66						
MURC				⇓S	Sg	14 38 18.3	-0.2
	baz=1.0						
CBX	Cerro Bola	1.07	211	eP	Pg	14 38 04.4	-0.3
CBX				eS	Sg	14 38 19.0	+0.4
IRM	Iron Mountain	1.17	37	⇓P	Pg	14 38 05.5	-1.2
	baz=1.2,SNR=176						
IRM				⇓S	Sg	14 38 22.3	+0.4
	baz=1.2						
BBRC	Big Bear Sol-O	1.28	324	⇑P	Pn	14 38 08.3	-0.3
	baz=1.3,SNR=16						
BBRC				⇑S	Sb	14 38 25.3	-0.1
	baz=1.3						
Y12C	Blythe	1.34	67	⇑P	Pn	14 38 07.6	-1.8
	baz=1.4						
Y12C				⇓S	Sb	14 38 26.9	-0.3
	baz=1.4						
ENX	Ensenada	1.45	203	eP	Pn	14 38 10.5	-0.5
ENX				eS	Sn	14 38 30.0	-0.3
ENX				⇑e		14 38 35.5	
	comp=N,552nm,0.5s						
GMRC	Granite Mounta	1.57	10	⇓P	Pn	14 38 11.3	-1.3
	baz=1.6,SNR=55						
GMRC				⇓Sb	Sb	14 38 34.4	+0.6
	baz=1.6						
PBX	Punta Banda	1.60	202	eP	Pn	14 38 12.9	-0.1
PBX				eS	Sn	14 38 34.6	+0.6
PBX				⇑e		14 38 40.9	
	comp=E,484nm,1.4s						
HEC	Hector,Ludlow	1.62	351	⇓Pb	Pb	14 38 14.2	-0.3
	baz=1.6,SNR=17						
HEC				⇓Sb	Sb	14 38 35.9	+0.8
	baz=1.6						
ECNX	Esteban Cantu	1.65	198	eP	Pn	14 38 13.6	0.0
ECNX				eS	Sn	14 38 36.3	+1.2
BFSC	Mount Baldy St	1.71	307	⇓Pb	Pb	14 38 15.5	-0.5
	baz=1.7,SNR=20						
BFSC				⇑Sb	Sb	14 38 38.2	+0.5
	baz=1.7						
RRX	Edison Barstow	1.84	334	⇑Pg	Pg	14 38 18.9	-0.6
	baz=1.8,SNR=18						
PDMCI	Parker Dam,Lak	1.89	55	⇓Sb	Sb	14 38 43.5	+0.7
	baz=1.9						
Y13A	Salome	1.91	72	⇑Pb	Pb	14 38 19.1	-0.3
	baz=1.9,SNR=19						
Y13A				⇑Sb	Sb	14 38 44.7	+1.2
	baz=1.9						
NEE2	Needles Airpor	1.92	37	⇑Pb	Pb	14 38 19.5	-0.1
	baz=1.9						
NEE2				⇑Sb	Sb	14 38 44.4	+0.6
	baz=1.9						
FMP	Fort Macarthur	1.97	285	⇓Pb	Pb	14 38 20.1	-0.3
	baz=1.9						
FMP				⇓Sb	Sb	14 38 45.6	+0.4
	baz=1.9						
CIS	Catalina Islan	2.02	276	⇑Pb	Pb	14 38 20.7	-0.5
	baz=2.0,SNR=15						
CIS				⇓Sb	Sb	14 38 47.2	+0.7
	baz=2.0						
GSC	Goldstone	2.17	342	⇓Pg	Pg	14 38 25.0	-0.8
	baz=2.2,SNR=10						
DECC	Green Verdugo	2.19	298	⇓Sb	Sb	14 38 52.3	+0.7
	baz=2.2						
TUQ	Turquoise Mtn.	2.20	2	⇑P	Pn	14 38 20.2	-1.0
	baz=2.2,SNR=17						
X13A	Yucca	2.26	52	⇓P	Pn	14 38 21.5	-0.6
	baz=2.3,SNR=12						
X13A				⇑Sb	Sb	14 38 54.8	+1.2
	baz=2.3						
EDW2	Edwards Air Fo	2.33	316	Pg	Pg	14 38 27.7	-1.2
	baz=2.3,SNR=35						
EDW2				⇓Sb	Sb	14 38 56.9	+1.3
	baz=2.3						
W13A	Hualapai Mount	2.56	43	⇑P	Pn	14 38 25.5	-0.7
	baz=2.6,SNR=7.5						
W13A				⇓Sb	Sb	14 39 04.4	+2.1
	baz=2.6						
Z14A	Wintersburg	2.57	86	⇑P	Pn	14 38 25.3	-1.0
	baz=2.6						
V12A	Nelson	2.67	21	⇑P	Pn	14 38 27.1	-0.6
	baz=2.7,SNR=14						
X14A	Yava	2.87	64	P	Pn	14 38 30.1	-0.3
	baz=2.9,SNR=10.0						
MPMC	Manual Prospec	3.08	337	⇑P	Pn	14 38 32.7	-0.6
	baz=3.1						
W14A	Seligman	3.13	50	⇑P	Pn	14 38 34.2	+0.2
	baz=3.1,SNR=6.9						
ISA	Isabella	3.17	321	⇓P	Pn	14 38 34.0	-0.5
	baz=3.2						
115A	Sonoran Desert	3.22	98	⇓P	Pn	14 38 34.0	-1.3
	baz=3.2,SNR=8.7						
X15A	Humboldt	3.38	67	⇓P	Pn	14 38 36.9	-0.5
	baz=3.4						
U12A	Valley of Fire	3.42	20	⇓P	Pn	14 38 37.4	-0.6
	baz=3.4						
U13A	Pakoon Wash	3.59	27	P	Pn	14 38 40.6	+0.2
	baz=3.6,SNR=7.3						
TPNV	Topopah Spring	3.72	357	⇑P	Pn	14 38 42.4	+0.3
	baz=3.7						
U14A	Mt Trumbull	3.94	35	P	Pn	14 38 45.6	+0.5
	baz=4.0,SNR=6.5						

CASC 01 14:40:03.1±3.9, **1443N**×**8926W**, **h26**km±18km, **MD3.9**,

3C-8D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBDL	**Robledal**	**0.52**	**233**⇓	*i*P	x	14 40 27.6	
RBDL				*e*S	x	14 40 40.2	
RTR	**El Retiro**	**0.65**	**215**⇓	*i*P	x	14 40 24.5	
RTR				*e*S	x	14 40 37.1	
SNJE	**San Jose**	**0.65**	**211**⇓	*i*P	x	14 40 24.1	
SNJE				*e*S	x	14 40 33.2	
BOQS	**Boqueron**	**0.69**	**182**⇑	*e*P	x	14 40 24.7	
BOQS				*e*S	x	14 40 34.8	
LBRS	**Las Brisas**	**0.72**	**163**⇓	*i*P	x	14 40 27.3	
LBRS				*e*S	x	14 40 39.4	
SNET	**Serv Nac Est T**	**0.74**	**178**	*e*P	x	14 40 16.1	
LCBS	**La Ceiba**	**0.82**	**160**⇓	*e*P	x	14 40 27.1	
LCBS				*e*S	x	14 40 38.5	
SNVI	**San Vicente**	**0.91**	**153**	*e*P	x	14 40 28.6	
SNVI				*e*S	x	14 40 41.7	
CAHU	**Cacacuatique**	**1.21**	**123**⇓	*e*P	x	14 40 37.4	
CAHU				*e*S	x	14 40 53.8	
PCG	**Pacaya**	**1.30**	**269**	*e*P	Pn	14 40 28.0	+2.4
PCG				*e*S	Sn	14 40 45.2	+3.0
BLLM	**Bellamira**	**1.40**	**135**⇑	*e*P	x	14 40 36.5	
BLLM				*e*S	x	14 40 54.7	
FUG	**Fuego 3**	**1.53**	**271**⇑	*e*P	Pn	14 40 30.2	+1.4
FUG				*e*S	Sn	14 40 48.8	+0.9
CNCH	**Conchagua**	**1.80**	**129**⇓	*e*P	x	14 40 41.9	
CNCH				*e*S	x	14 41 04.7	
JAT	**Jato**	**2.31**	**268**⇓	*e*P	Pn	14 40 37.9	-1.5
JAT				*e*S	Sn	14 41 06.9	-0.1

MAN 01 14:42:43, 1788N×12129E, h34km, mb4.5, ML3.4, MS3.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	**Conner**	**0.05**	**253**	*e*P	Pb	14 42 49.4	+0.7
APYP				*e*S	Sb	14 42 53.0	+0.4
CVP	**Callao Caves**	**0.53**	**109**	*i* P	Pb	14 42 55.7	+1.5
CVP				*i* S	Sb	14 43 03.1	+1.3
ABRA	**Dolores**	**0.60**	**248**	*e*P	Pn	14 42 57.1	+2.0
ABRA				*e*S	Sb	14 43 05.5	+1.9
SGCP	**Mt. Cagua**	**0.80**	**63**	*e*P	Pn	14 42 59.0	+1.1
SGCP				*e*S	Sn	14 43 10.4	+1.8
CAUP	**Cauayan**	**1.06**	**151**	*e*P	Pn	14 43 06.6	+5.2
CAUP				*e*S	Sn	14 43 24.8	+10

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*CSEM **01** 14:54:49.7±0.1, 4093N×3956E, h10km, MD3.0, Error ellipse: s-maj=4.4km s-min=2.3km az=141.0*
*ISCJB **01** 14:54:51.0±0.6, 4089N±004×3960E±006, h12km±4km, Error ellipse: s-maj=8.8km s-min=5.3km az=136.8*
*ISK **01** 14:54:50.5, 4090N×3961E, h13km, MD3.0*
*DDA **01** 14:54:51.3, 4085N×3959E, h6km±1km, Md2.8*
ISC 01 14:54:51.0±0.6, **4090N**±004×**3958E**±005, **h11**km±4km, **n10**, σ0s**47**/16, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.15**	**73**	*i* P	**Pg**	**14 54 54.2**	**-0.2**
MACK				*i* S	**Sg**	**14 54 57.2**	**+0.4**
KTUT	**Trabzon**	**0.16**	**58**	*i* PG	**Pg**	**14 54 54.4**	**-0.3**
KTUT				*i* SG	**Sg**	**14 54 57.5**	**+0.3**
GUMT	**Gumushane**	**0.45**	**190**	PG	**Pg**	**14 54 59.7**	**-0.1**
GUMT				SG	**Sg**	**14 55 06.0**	**+0.3**
KELT	**Kelkit**	**0.79**	**198**	*i* P	**Pg**	**14 55 06.4**	**+0.1**
KELT				*i* S	**Sg**	**14 55 15.6**	**-1.0**
GRSN	**GIRESUNGRSN**	**1.00**	**272**	*i* P	**Pg**	**14 55 09.5**	**-0.7**
GRSN				*i* S	**Sg**	**14 55 23.5**	**+0.3**
EZC	**Erzincan**	**1.17**	**171**	PN	**Pn**	**14 55 13.3**	**+0.1**
BCA	**Borcka**	**1.63**	**70**	PN	**Pn**	**14 55 19.1**	**-0.6**
BCA				SN	**Sn**	**14 55 40.2**	**-0.5**
EZM	**Erzurum**	**1.68**	**126**	PN	**Pn**	**14 55 20.9**	**+0.5**
PTK	**Pertek**	**2.01**	**184**	*e*PN	**Pn**	**14 55 25.4**	**+0.5**
SVSK	**Karacayir**	**2.20**	**244**	*e*PN	**Pn**	**14 55 28.1**	**+0.6**

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*ISCJB **01** 14:56:43.4±0.9, 1807S±009×17846W±009, h576km±11km, mb3.9/18, Error ellipse: s-maj=17.0km s-min=10.0km az=136.2*
*IDC **01** 14:56:43.9±1.3, 18.17S×17841W, h568km±17km, mb3.3/12, mb1 3.5/14, mb1mx3.5/18, mbtmp3.3/14, Error ellipse: s-maj=20.2km s-min=10.4km az=141.0*
*NEIC **01** 14:56:43.7±0.9, 18.10S×17840W, h569km±11km, mb4.1/8, Error ellipse: s-maj=16.5km s-min=9.8km az=137.0*
ISC 01 14:56:43.7±0.8, **1806S**±009×**17842W**±009, **h567**km±10km, **n39**, σ0s**94**/33, **mb3.8**/18, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.61**	**58**	P	**P**	**14 58 38.8**	**+0.5**
AFI				S	**S**	**15 00 11.2**	**-0.8**
AFI				*e*S	**S**	**15 00 12.1**	**0.0**
AFI	**Afiamalu**	**7.61**	**58**	P	**P**	**14 58 38.8**	**+0.5**
	1.5nm,0.3s,baz=68,slow=23,SNR=3.5						
AFI				S	**S**	**15 00 11.2**	**-0.8**
	1.3nm,0.3s,baz=110,slow=15,SNR=2.9						
DZM	**Mont Dzumac**	**14.77**	**252**	P	**P**	**14 59 51.3**	**+0.7**
	0.3nm,0.3s,baz=93,slow=18,SNR=3.3						
URZ	**Urewera**	**20.50**	**190**	P	**P**	**15 00 41.9**	**-1.4**
	2.8nm,0.4s,baz=165,slow=20,SNR=7.7						
RPZ	**Rata Peaks**	**27.07**	**197**	P	**P**	**15 01 40.3**	**-1.3**
	5.1nm,0.9s,mb4.1,baz=17,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**38.54**	**241**	*e*P	**P**	**15 03 19.5**	**+1.0**
	1.7nm,0.5s,mb3.8						
STKA	**Stephens Creek**	**38.54**	**241**	P	**P**	**15 03 19.9**	**+1.4**
	2.2nm,1.0s,mb3.6,baz=76,slow=7.4,SNR=8.0						
WRA	**Warramunga Arr**	**44.59**	**260**	P	**P**	**15 04 06.1**	**-0.3**
	0.7nm,0.3s,mb3.6,baz=95,slow=7.9,SNR=43						
WRA				PcP	PcP	15 05 36.7	-0.3
	0.4nm,0.3s,baz=90,slow=3.8,SNR=5.3						
ASAR	**Alice Springs**	**44.74**	**254**	P	**P**	**15 04 08.1**	**+0.6**
	4.7nm,0.6s,mb4.2,baz=88,slow=8.5,SNR=101						
ASAR				PcP	PcP	15 05 36.8	-0.6
	0.6nm,0.5s,baz=103,slow=3.9,SNR=9.0						
ASAR				S	**S**	**15 10 02.0**	**-1.7**
	0.4nm,0.7s,baz=85,slow=15,SNR=4.7						
MBWA	**Marble Bar**	**58.02**	**256**	*e*P	**P**	**15 05 42.7**	**-0.6**
	3.9nm,0.8s,mb3.7						
MJAR	**Matsushiro Arr**	**68.02**	**323**	P	**P**	**15 06 47.1**	**0.0**
	2.9nm,0.6s,mb4.0,baz=159,slow=6.0,SNR=9.1						
MAJO	**Matsushiro**	**68.02**	**323**	*e*P	**P**	**15 06 46.7**	**-0.4**
	4.7nm,0.5s,mb4.3						
QSPA	**South Pole Qui**	**71.99**	**180**	*e*P	**P**	**15 07 10.7**	**+0.7**
	6.1nm,1.2s,mb3.9						
YSS	**Yuzh-Sakhalins**	**73.55**	**333**	P	**P**	**15 07 19.9**	**+0.6**
	14nm,1.3s,mb4.2						
KSRS	**Korea Array**	**74.81**	**318**	P	**P**	**15 07 27.7**	**+1.1**
	0.8nm,0.6s,mb3.3,baz=124,slow=6.2,SNR=5.5						
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**15 07 53.4**	**+1.1**
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**	**15 07 53.4**	**+1.1**
	1.3nm,0.7s,mb3.4,baz=217,slow=8.1,SNR=10.0						
MA2	**Magadan**	**81.34**	**345**	P	**P**	**15 08 00.2**	**-0.9**
	4.1nm,0.9s,mb3.9						
MCK	**McKinley**	**84.69**	**13**	*e*P	**P**	**15 08 16.8**	**-1.0**
	3.7nm,1.0s,mb3.9						
PV10	**Paradox Valley**	**85.83**	**48**	*e*P	**P**	**15 08 22.7**	**-1.2**
COLA	**College**	**85.92**	**13**	*e*P	**P**	**15 08 22.4**	**-1.3**
	8.6nm,1.1s,mb4.3						
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**15 08 27.3**	**+2.0**
	1.1nm,0.7s,mb3.6,baz=224,slow=6.4,SNR=9.5						
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**	**15 08 32.1**	**+0.6**
	1.2nm,0.6s,mb3.7,baz=213,slow=3.0,SNR=11						
VNA3	**Neumayer Olymp**	**90.59**	**176**	*e*	**P**	**15 08 45.6**	**+0.1**
VNA3				*e*		15 08 48.9	
VNA3				*e*		15 08 55.2	
VNA2	**Neumayer--Watz**	**91.03**	**177**	*e*	**P**	**15 08 48.0**	**+0.4**
	baz=195,slow=4.6						
VNA2				*e*		15 08 51.3	
VNA2				*e*		15 08 57.4	
VNA1	**Neumayer--Stat**	**91.26**	**177**	*e*	**P**	**15 08 49.7**	**+1.1**
VNA1				*e*		15 08 52.8	
VNA1				*e*		15 08 59.5	
INK	**Inuvik**	**92.04**	**15**	*e*P	**P**	**15 08 50.9**	**-1.1**
	45nm,0.7s						
SONM	**Songino Array**	**93.66**	**319**	P	**P**	**15 09 00.8**	**+0.8**
	0.3nm,0.6s,mb3.6,baz=117,slow=5.2,SNR=4.1						
YKA	**Yellowknife Ar**	**94.47**	**25**	P	**P**	**15 09 02.9**	**-0.4**
	0.3nm,0.5s,mb3.7,baz=243,slow=4.3,SNR=7.2						
MKAR	**Makanchi Array**	**109.23**	**314**	PKPdf	PKiKP	15 14 08.4	-1.3
MKAR	**Makanchi Array**	**109.23**	**314**	PKiKP	PKiKP	15 14 08.4	-1.2
	0.2nm,0.3s,baz=135,slow=1.8,SNR=2.3						
ARCES	**ARCESS Array B**	**126.46**	**350**	PKP	PKPdf	15 14 41.4	-0.6
	2.9nm,0.8s,baz=88,slow=2.8,SNR=6.1						
BRTR	**Keskin Array B**	**144.88**	**315**	PKP	PKPdf	15 15 17.8	+0.9
	1.8nm,0.6s,baz=113,slow=3.3,SNR=5.0						
STHS	**Stebnicka Huta**	**144.93**	**338**	*e*PKP	PKPdf	15 15 17.7	+1.1
KOLS	**Kolonicke sedl**	**144.94**	**336**	*e*PKP	PKPdf	15 15 17.3	+0.7
CLL	**Collm**	**145.61**	**347**	*i* PKPbc	PKPbc	15 15 19.1	-0.1
	comp=Z,11nm,0.7s						
KECS	**Kecovo**	**145.98**	**337**	*e*PKP	PKPdf	15 15 20.2	+1.8
VYHS	**Vyhne**	**146.56**	**339**	*e*PKP	PKPdf	15 15 18.6	-0.8
GERES	**GERESS Array B**	**147.75**	**345**	PKPbc	PKPbc	15 15 25.3	+0.2
	comp=Z,2.3nm,0.6s,baz=20,slow=2.8,SNR=11						

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*IDC **01** 15:09:58.0±2.1, 1264S×16706E, h226km±19km, mb4.0/21, mb1 4.1/23, mb1mx4.1/25, mbtmp4.0/23, Error ellipse: s-maj=11.3km s-min=10.1km az=17.0*
*MOS **01** 15:09:58.6±1.1, 1261S×16696E, h244km, mb4.5/14, Error ellipse: s-maj=11.7km s-min=9.7km az=29.4*
*BJI **01** 15:09:58.0, 1240S×16734E, h241km, mB4.8, mb4.6*
*ISCJB **01** 15:09:59.0±1.5, 1263S±006×16701E±007, h250km±14km, mb4.4/44, Error ellipse: s-maj=10.8km s-min=9.5km az=164.9*
*NEIC **01** 15:09:59.2±1.5, 1266S×16706E, h244km±13km, mb4.5/24, Error ellipse: s-maj=9.9km s-min=8.6km az=113.0*
ISC 01 15:09:58.9±1.6, **1264S**±006×**16706E**±007, **h236**km±15km, **n129**, σ0s**94**/89, **mb4.4**/44, **4C-4D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.67**	**294**	*e*Pn	**Pn**	**15 11 47.9**	**-0.2**
HNR				P		15 11 48.2	
HNR	**Honiara**	**7.67**	**294**	P	**Pn**	**15 11 48.2**	**+0.1**
	3.4nm,0.3s,baz=268,slow=7.0,SNR=3.9						
DZM	**Mont Dzumac**	**9.40**	**183**	P	**Pn**	**15 12 13.4**	**+3.4**
	0.9nm,0.3s,baz=338,slow=20,SNR=7.7						
PMG	**Port Moresby**	**19.79**	**277**	*e*P	**P**	**15 14 09.4**	**-2.4**
	24nm,1.1s						
PMG	**Port Moresby**	**19.79**	**277**	*e*P	**P**	**15 14 09.4**	**-2.4**
PMG				pmax	pmax		
	comp=Z,24nm,1.1s						
PMG	**Port Moresby**	**19.79**	**277**	P	**P**	**15 14 11.9**	**0.0**
	comp=Z,0.5nm,0.3s,baz=300,slow=19,SNR=3.2						
AFI	**Afiamalu**	**20.64**	**96**	P	**P**	**15 14 20.8**	**+0.1**
	comp=Z,27nm,0.9s,baz=296,slow=20,SNR=3.2						
CTA	**Charters Tower**	**21.28**	**247**	*e*P	**P**	**15 14 27.3**	**-0.2**
	comp=Z,5.9nm,0.6s,mb4.3						
CTA	**Charters Tower**	**21.28**	**247**	*e*P	**P**	**15 14 27.3**	**-0.2**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CTA	**Charters Tower**	**21.28**	**247**	P	**P**	**15 14 27.6**	**+0.1**
	comp=Z,5.5nm,0.6s,mb4.2,baz=58,slow=8.0,SNR=7.7						
CTAO	**Charters Tower**	**21.28**	**247**	*e*P	**P**	**15 14 27.2**	**-0.2**
	comp=Z,12nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**21.28**	**247**	*e*P	**P**	**15 14 27.2**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
ARMA	**Armidale**	**22.74**	**216**	*e*P	**P**	**15 14 42.0**	**+1.2**
URZ	**Urewera**	**27.05**	**162**	P	**P**	**15 15 18.8**	**-0.7**
	comp=Z,3.1nm,0.3s,mb4.4,baz=244,slow=1.1,SNR=14						
STKA	**Stephens Creek**	**30.23**	**227**	*e*P	**P**	**15 15 48.6**	**+0.8**
	comp=Z,3.6nm,0.3s,mb4.5						
STKA	**Stephens Creek**	**30.23**	**227**	P	**P**	**15 15 49.0**	**+1.2**
	comp=Z,4.6nm,0.3s,mb4.5,baz=49,slow=7.8,SNR=41						
STKA				PcP	PcP	15 18 42.8	+0.2
	comp=Z,4.3nm,0.6s,baz=27,slow=2.3,SNR=7.3						
RPZ	**Rata Peaks**	**31.16**	**174**	P	**P**	**15 15 55.9**	**+0.1**
	comp=Z,20nm,0.7s,mb4.8,baz=93,slow=4.6,SNR=16						
RPZ				PcP	PcP	15 18 46.5	+1.7
	comp=Z,2.7nm,0.6s,baz=354,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**32.19**	**253**	*i* P	**P**	**15 16 04.1**	**-1.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**32.19**	**253**	P	**P**	**15 16 04.2**	**-0.9**
	comp=Z,1.5nm,0.5s,mb3.7,baz=83,slow=8.8,SNR=22						
WRA				PcP	PcP	15 18 48.2	+0.1
	comp=Z,0.5nm,0.4s,baz=82,slow=3.4,SNR=3.9						
ASAR	**Alice Springs**	**33.28**	**246**	P	**P**	**15 16 13.8**	**-0.8**
	comp=Z,2.0nm,0.5s,mb3.9,baz=69,slow=9.7,SNR=73						
ASAR				pP	pP	15 16 60.0	-2.0
	comp=Z,0.8nm,0.5s,baz=72,slow=9.4,SNR=1.9						
ASAR				PcP	PcP	15 18 50.1	-0.9
	comp=Z,1.2nm,0.6s,baz=73,slow=2.1,SNR=8.4						
FORT	**Forrest**	**40.22**	**237**⇑	*i*P	**P**	**15 17 13.3**	**+0.4**
	comp=Z,40nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**40.24**	**257**	*e*P	**P**	**15 17 12.9**	**-0.3**
	comp=Z,4.9nm,0.8s,mb4.0						
FITZ	**Fitzroy Crossi**	**40.24**	**257**	P	**P**	**15 17 13.5**	**+0.2**
	comp=Z,2.2nm,0.5s,mb3.9,baz=59,slow=8.2,SNR=15						
FITZ				PcP	PcP	15 19 12.6	+0.3
	comp=Z,3.0nm,1.0s,baz=146,slow=3.6,SNR=2.8						
BATI	**Kupang**	**42.57**	**269**	P	**P**	**15 17 33.3**	**+1.1**
	comp=Z,14nm,0.5s,mb4.6,baz=104,slow=3.8,SNR=3.7						
GSPH	**General Santos**	**45.80**	**292**	*e*P	**P**	**15 17 57.4**	**-0.3**
	comp=Z,314μm,12.0s						
NWAO	**Narrogin (SRO)**	**49.67**	**237**	P	**P**	**15 18 26.9**	**-0.2**
	comp=Z,4.6nm,0.5s,mb4.1,baz=102,slow=5.1,SNR=8.3						
LUBP	**Lubang**	**53.28**	**298**	*e*P	**P**	**15 18 52.9**	**-1.2**
MJAR	**Matsushiro Arr**	**55.97**	**332**	P	**P**	**15 19 12.3**	**-0.6**
	comp=Z,8.0nm,0.8s,mb4.3,baz=166,slow=8.9,SNR=17						
MAJO	**Matsushiro**	**55.97**	**332**	*e*P	**P**	**15 19 11.6**	**-1.4**
	comp=Z,9.3nm,0.5s,mb4.6						
MAJO	**Matsushiro**	**55.97**	**332**	*e*P	**P**	**15 19 11.6**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6						
MAT	**Matsushiro**	**55.97**	**332**	P	**P**	**15 19 12.4**	**-0.5**
KSRS	**Korea Array**	**61.91**	**325**	P	**P**	**15 19 52.5**	**-1.2**
	comp=Z,1.8nm,0.6s,mb3.9,baz=134,slow=7.1,SNR=6.6						
KSRS				PcP	PcP	15 20 32.8	+0.7
	comp=Z,0.9nm,0.5s,baz=137,slow=4.8,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**63.19**	**342**	*e*P	**P**	**15 20 02.6**	**+0.7**
	comp=Z,14nm,0.8s,mb4.6						
YSS	**Yuzh-Sakhalins**	**63.19**	**342**⇓	*e*P	**P**	**15 20 03.2**	**+1.3**
YSS				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.7						
NJ2	**Nanjing**	**64.05**	**315**	*e*P	**P**	**15 20 09.2**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
VNDA	**Vanda**	**64.94**	**181**	P	**P**	**15 20 11.5**	**-1.4**
	comp=Z,4.9nm,0.8s,mb4.2,baz=98,slow=3.5,SNR=5.5						
CASY	**Casey**	**65.38**	**202**	P	**P**	**15 20 13.5**	**-2.4**
	comp=Z,75nm,1.1s,mb5.2						
HABR	**Khabarovsk**	**67.13**	**337**	*e*P	**P**	**15 20 28.3**	**+1.1**
CN2	**Changchun**	**67.76**	**329**	*e*P	**P**	**15 20 32.1**	**+0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
KLR	**Kul'dur**	**69.02**	**336**	*e*P	**P**	**15 20 36.6**	**-2.3**
PSI	**Prapat**	**69.36**	**278**	P	**P**	**15 20 41.4**	**-0.4**
	comp=Z,8.9nm,0.9s,mb4.4,baz=118,slow=6.6,SNR=11						
XAN	**Xi'an**	**72.14**	**312**	P	**P**	**15 20 58.6**	**+0.6**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.7s,mb4.5						
MA2	**Magadan**	**73.16**	**351**	*e*P	**P**	**15 21 02.8**	**-0.7**
	comp=Z,5.2nm,0.9s,mb4.2						
MA2	**Magadan**	**73.16**	**351**	*e*P	**P**	**15 21 02.8**	**-0.6**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.1						
HHC	**Hu-ho-hao-te**	**73.87**	**319**	*e*P	**P**	**15 21 09.2**	**+1.2**
HHC				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.7						
CM31	**Chiang Mai Arr**	**73.92**	**294**	*e*P	**P**	**15 21 09.8**	**+1.0**
	comp=Z,5.0nm,0.8s,mb4.2						
CHG	**Chiang Mai**	**74.04**	**294**	⇓P	**P**	**15 21 10.6**	**+1.1**
	comp=Z,130nm,1.0s						
CHTO	**Chiang Mai**	**74.04**	**294**	*e*P	**P**	**15 21 09.0**	**-0.5**
	comp=Z,12nm,1.4s,mb4.3						
CHTO	**Chiang Mai**	**74.04**	**294**	*e*P	**P**	**15 21 09.0**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.3						
HIA	**Hailar**	**74.38**	**330**	*e*P	**P**	**15 21 11.1**	**+0.3**
	comp=Z,3.3nm,0.8s,mb4.0						
HIA	**Hailar**	**74.38**	**330**⇓	*e*P	**P**	**15 21 11.7**	**+0.9**
QSPA	**South Pole Qui**	**77.38**	**180**	*e*P	**P**	**15 21 27.9**	**+0.6**
	comp=Z,8.4nm,0.8s,mb4.4						
GAMB	**Gambell**	**77.91**	**9**	*e*P	**P**	**15 21 30.4**	**+0.1**
YAK	**Yakutsk**	**79.98**	**343**	*e*P	**P**	**15 21 41.5**	**-0.1**
	comp=Z,16nm,0.8s,mb4.7						
YAK	**Yakutsk**	**79.98**	**343**	*e*P	**P**	**15 21 42.4**	**+0.8**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**80.34**	**324**	*e*P	**P**	**15 21 44.4**	**+0.6**
	comp=Z,2.1nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**80.34**	**324***c*	*i*P	**P**	**15 21 44.9**	**+1.1**
SLKM	**Skilak Lake**	**80.45**	**20**	P	**P**	**15 21 41.4**	**-2.7**
BILL	**Bilibino**	**80.46**	**360**	*e*P	**P**	**15 21 44.3**	**+0.3**
	comp=Z,20nm,1.2s,mb4.6						
BILL	**Bilibino**	**80.46**	**360***c*	*i*P	**P**	**15 21 44.4**	**+0.4**
BILL				pmax	pmax		
	comp=Z,27nm,1.7s,mb4.6						
SONM	**Songino Array**	**80.70**	**323**	P	**P**	**15 21 46.4**	**+0.7**
	comp=Z,0.9nm,0.3s,mb3.8,baz=137,slow=5.9,SNR=23						
MCK	**McKinley**	**83.24**	**18**	*e*P	**P**	**15 21 58.4**	**-0.2**
	comp=Z,2.7nm,0.6s,mb4.2						
MCK	**McKinley**	**83.24**	**18**	*e*P	**P**	**15 21 58.4**	**-0.1**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
IMA2	**Indian Mountai**	**83.69**	**15**	*e*P	**P**	**15 22 01.1**	**+0.3**
ZAK	**Zakamensk**	**83.73**	**325**	*e*P	**P**	**15 22 01.4**	**0.0**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.0						
TLY	**Talaya**	**84.15**	**326**	*e*P	**P**	**15 22 03.7**	**+0.3**
	comp=Z,4.9nm,0.8s,mb4.3						
TLY	**Talaya**	**84.15**	**326**	*e*P	**P**	**15 22 03.5**	**+0.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
LSA	**Lhasa**	**84.28**	**302**	*e*P	**P**	**15 22 06.1**	**+1.5**
	comp=Z,4.8nm,0.6s,mb4.4						
LSA	**Lhasa**	**84.28**	**302**	*e*P	**P**	**15 22 06.1**	**+1.5**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
COLA	**College**	**84.39**	**18**	*e*P	**P**	**15 22 03.7**	**-0.6**
	comp=Z,13nm,0.8s,mb4.7						
COLA	**College**	**84.39**	**18***c*	*e*P	**P**	**15 22 03.9**	**-0.5**
NVAR	**Mina Array Bea**	**86.07**	**49**	P	**P**	**15 22 14.3**	**+1.0**
	comp=Z,2.5nm,0.8s,mb4.0,baz=221,slow=5.7,SNR=14						
EGAK	**Eagle**	**86.42**	**20**	*e*P	**P**	**15 22 13.8**	**-0.6**
	comp=Z,7.1nm,0.7s,mb4.5						
TIXI	**Tiksi**	**87.89**	**349**	*e*P	**P**	**15 22 20.5**	**-0.8**
	comp=Z,5.5nm,1.0s,mb4.3						
TIXI	**Tiksi**	**87.89**	**349**⇓	*e*P	**P**	**15 22 21.3**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.2						
BMO	**Blue Mountains**	**88.88**	**44**	*e*P	**P**	**15 22 24.6**	**-1.9**
	comp=Z,6.0nm,1.3s,mb4.3						
BMO	**Blue Mountains**	**88.88**	**44**	*e*P	**P**	**15 22 24.6**	**-1.9**
BMO				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.3						
ARUT	**Antelope Range**	**89.53**	**51**	*e*P	**P**	**15 22 30.5**	**+0.8**
MSU	**Marysvale**	**90.68**	**51**	*e*P	**P**	**15 22 36.2**	**+1.1**
PDAR	**Pinedale Array**	**93.68**	**47**	P	**P**	**15 22 49.1**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.6,baz=160,slow=4.7,SNR=3.7						
TXAR	**Lajitas Array**	**95.46**	**61**	P	**P**	**15 22 57.8**	**+0.5**
	comp=Z,1.1nm,0.7s,mb4.1,baz=238,slow=5.3,SNR=9.7						
MKAR	**Makanchi Array**	**95.55**	**317**	*i* P	**P**	**15 22 57.5**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	**95.55**	**317**	P	**P**	**15 22 57.9**	**+0.6**
	comp=Z,3.9nm,0.5s,mb4.9,baz=87,slow=6.4,SNR=35						
MKAR				PKKPbc	PKKPbc	15 39 46.9	-2.5
	comp=Z,0.5nm,0.6s,baz=282,slow=3.2,SNR=4.2						
ZALV	**Zalesovo Beam**	**95.59**	**324**	P	**P**	**15 22 57.1**	**-0.1**
	comp=Z,2.9nm,0.7s,mb4.6,baz=106,slow=4.4,SNR=14						
ZAL	**Zalesovo**	**95.60**	**324**	P	**P**	**15 22 57.1**	**-0.2**
YKA	**Yellowknife Ar**	**95.79**	**27**	P	**P**	**15 22 57.0**	**-0.9**
YKA				PKKPbc	PKKPbc	15 39 46.1	-3.3
YKA	**Yellowknife Ar**	**95.79**	**27**	P	**P**	**15 22 57.0**	**-0.9**
	comp=Z,1.2nm,0.5s,mb4.4,baz=258,slow=4.6,SNR=27						
YKA				PKKPbc	PKKPbc	15 39 46.1	-3.3
	comp=Z,0.2nm,0.6s,baz=82,slow=2.8,SNR=4.6						
VNA3	**Neumayer Olymp**	**96.29**	**181**	*e*P	**P**	**15 22 59.7**	**-0.5**
VNA3				*e*		15 23 01.8	
VNA2	**Neumayer--Watz**	**96.55**	**182**	*e*P	**P**	**15 23 01.6**	**+0.2**
	baz=184,slow=5.2						
VNA2				*e*		15 23 03.7	
ARCES	**ARCESS Array B**	**118.19**	**346**	PKP	PKPdf	15 28 17.4	0.0
ARCES				PKKPbc	PKKPbc	15 38 36.2	-3.5
ARCES	**ARCESS Array B**	**118.19**	**346**	PKP	PKPdf	15 28 17.4	0.0
	comp=Z,3.4nm,0.5s,baz=79,slow=2.2,SNR=40						
ARCES				PKKPbc	PKKPbc	15 38 36.2	-3.5
	comp=Z,4.4nm,0.9s,baz=231,slow=2.4,SNR=7.0						
LPAZ	**La Paz**	**118.33**	**116**	PKP	PKPdf	15 28 19.5	+0.3
	comp=Z,0.7nm,0.6s,baz=296,slow=0.5,SNR=4.7						
KAF	**Kangasniemi**	**123.18**	**339**	*e*pkp	PKPdf	15 28 24.6	-2.5
FINES	**FINESS Array B**	**123.71**	**339**	PKP	PKPdf	15 28 27.9	-0.3
	comp=Z,1.7nm,0.7s,baz=44,slow=2.7,SNR=9.7						
BOSA	**Boshof**	**124.81**	**221**	PKP	PKPdf	15 28 31.8	+0.5
	comp=Z,2.4nm,0.6s,baz=50,slow=3.4,SNR=8.6						
LBTB	**Lobatse**	**126.96**	**225**	PKPdf	PKPdf	15 28 35.4	-0.1
NB2	**NORSAR Subarra**	**128.56**	**345**	PKPdf	PKPdf	15 28 37.9	+0.5
	comp=Z,1.2nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**128.56**	**345**	PKP	PKPdf	15 28 38.0	+0.5
	comp=Z,1.3nm,0.6s,baz=36,slow=2.0,SNR=5.5						
CABF	**La Chapelle**	**142.52**	**338**	*e*PKP1	PKPdf	15 29 01.9	-1.9
LDF	**La Druitiere**	**142.60**	**346**	*e*PKP1	PKPdf	15 29 01.3	-2.5
	comp=Z,14nm,0.7s						
LOR	**Lormes**	**142.71**	**341**	*e*PKP1	PKPdf	15 29 01.7	-2.4
	comp=Z,4.6nm,0.5s						
GRR	**Gorron**	**142.96**	**347**	*e*PKP1	PKPdf	15 29 01.4	-3.1
SSF	**Saint Saulge**	**143.00**	**341**	*e*PKP1	PKPdf	15 29 02.4	-2.2
	comp=Z,4.8nm,0.5s						
LPL	**La Plagne**	**143.21**	**337**	*e*PKP1	PKPdf	15 29 03.4	-1.6
	comp=Z,12nm,0.6s						
LPG	**La Plagne**	**143.22**	**337**	*e*PKP1	PKPdf	15 29 03.5	-1.5
	comp=Z,11nm,0.5s						
SMF	**Signal de Mont**	**143.26**	**341**	*e*PKP1	PKPdf	15 29 03.0	-2.1
AVF	**Avril sur Loir**	**143.29**	**341**	*e*PKP1	PKPdf	15 29 02.5	-2.6
SGMF	**Saint Gilles**	**143.45**	**348**	*e*PKP1	PKPdf	15 29 03.6	-1.7
BNI	**Bardonecchia**	**143.62**	**336**	*e*PKPdf	PKPdf	15 29 04.5	-1.3
BGF	**Bois d'Agland**	**143.66**	**342**	*e*PKP1	PKPdf	15 29 04.3	-1.5
	comp=Z,31nm,0.7s						
MBDF	**Montbardon**	**143.85**	**336**	*e*PKP1	PKPdf	15 29 04.9	-1.3
	comp=Z,16nm,0.7s						
QUIF	**Quistinic**	**143.89**	**349**	*e*PKP1	PKPdf	15 29 04.5	-1.6
ORIF	**Oris-en-Rattie**	**144.04**	**337**	*e*PKP1	PKPdf	15 29 06.0	-0.5
	comp=Z,64nm,0.7s						
TCF	**Toulx Ste Croi**	**144.09**	**342**	*e*PKP1	PKPdf	15 29 05.8	-0.7
	comp=Z,31nm,0.7s						
SBF	**Sospel**	**144.29**	**334**	*e*PKP1	PKPdf	15 29 06.2	-0.8
	comp=Z,88nm,0.7s						
VIVF	**Saint-Julien-l**	**144.54**	**338**	*e*PKP1	PKPdf	15 29 07.7	+0.3
	comp=Z,38nm,0.7s						
PGF	**Pioggiola**	**144.64**	**332**	*e*PKP1	PKPdf	15 29 07.6	0.0
	comp=Z,21nm,0.7s						
FRF	**La Foret Royal**	**144.86**	**335**	*e*PKP1	PKPdf	15 29 08.1	+0.1
	comp=Z,53nm,0.7s						
SMRF	**Simiane la Rot**	**144.95**	**336**	*e*PKP1	PKPdf	15 29 09.0	+0.9
	comp=Z,22nm,0.7s						
LMR	**La Mourre**	**145.11**	**335**	*e*PKP1	PKPbc	15 29 09.0	+0.6
	comp=Z,44nm,0.7s						
RJF	**Les Rejaudoux**	**145.19**	**342**	*e*PKP1	PKPbc	15 29 08.8	+0.2
CAF	**Calviac**	**145.36**	**341**	*e*PKP1	PKPbc	15 29 09.5	+0.4
LASF	**Ste Croix**	**145.50**	**338**	*e*PKP1	PKPbc	15 29 10.6	+1.0
	comp=Z,35nm,0.8s						
LFF	**La Frestale**	**145.75**	**343**	*e*PKP1	PKPbc	15 29 10.5	+0.2
	comp=Z,33nm,0.6s						
MTLF	**Montolieu**	**146.72**	**340**	*e*PKP1	PKPbc	15 29 14.2	+1.0
	comp=Z,28nm,0.8s						
KEST	**Kesra**	**149.45**	**323**	PKPbc	PKPbc	15 29 21.5	+0.9
	comp=Z,4.0nm,0.8s,baz=291,slow=4.2,SNR=5.8						
ESDC	**Sonseca Array**	**151.92**	**345**	PKPab	PKPab	15 29 37.4	+1.2
	comp=Z,1.0nm,0.4s,baz=8.8,slow=4.4,SNR=7.8						
TOA0	**Torodi Ar. Sit**	**165.72**	**274**	*e*PKPdf	PKPdf	15 29 35.5	-0.8
TORD	**Torodi Ar. Bea**	**165.72**	**274**	PKP	PKPdf	15 29 35.9	-0.5
	comp=Z,1.2nm,0.8s,baz=13,slow=1.1,SNR=6.5						
TORD				PKPab	PKPab	15 30 36.9	-0.1
	comp=Z,1.7nm,0.7s,baz=84,slow=5.3,SNR=9.8						

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*MOS **01** 15:15:21.2±1.3, 0.15S×12425E, h33km, mb5.7/42, MS4.5/22, Error ellipse: s-maj=9.7km s-min=5.2km az=110.1*
*ISCJB **01** 15:15:22.2±0.2, 035S±002×12439E±003, h46km, mb5.3/116, MS4.6/76, Error ellipse: s-maj=4.6km s-min=2.9km az=165.6*
*GCMT **01** 15:15:23.9±0.1, 033S×12460E, h43km, MW5.4/82, Moment Tensor Solution. s75,c140; s82,c144; Duration: 1s3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.47±.03; $M_{\theta\theta}$-0.73±.02; $M_{\phi\phi}$-0.74±.03; $M_{r\theta}$0.16±.02; $M_{\theta\phi}$-0.93±.02; $M_{\phi r}$0.81±.03; Best double couple: $M_0$1.77900×10^{17} NP1:ϕ_s241.00000°, δ35.00000°, λ117.00000°. NP2:ϕ_s29.00000°, δ59.00000°, λ72.00000°. Principal axes: T 1.7470, Plg70.0000°, Azm259.0000°; N 0.0640, Plg15.0000°, Azm39.0000°; P -1.8110, Plg12.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 15:15:23.9±0.2, 024S×12436E, mb5.4/53, MS4.6/44 Error ellipse: s-maj=7.1km s-min=4.6km az=62.0*

NEIC Felt [III] at Bolaang Mongondow, Gorontalo and Manado, Indonesia.

BJI ***01*** *15:15:23.8, 020S×12440E, h42km, mB5.3, mb5.4, Ms4.7, Msz4.5*

IDC ***01*** *15:15:25.7±1.3, 029S×12431E, h59km±10km, mb4.8/25, mb1 4.8/26, mb1mx4.8/27, mbtmp4.8/26, MS4.5/15, Ms1 4.4/15, ms1mx4.3/26, Error ellipse: s-maj=13.8km s-min=7.2km az=66.0*

ISC 01 15:15:24.2±0.2**, 034S**±002×**12445E**±003**, h48km, h48km**±1.8km**: pP-P, n397,** σ1s.42/361**, mb5.3**/116**, MS4.6**/76**, 71C-24D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	4.65	263	P	Pn	15 16 34.7	+2.8
	2µm,1.0s						
AAI	Ambon	5.01	132	P	Pn	15 16 38.2	+1.4
	1µm,1.1s						
GSPH	General Santos	6.40	4	⇑eP	Pn	15 16 57.6	+1.7
KAPI	Kappang	6.61	225	Pn	Pn	15 17 01.6	+2.9
	2µm,0.5s,SNR=34						
KCP	Kidapawan	7.32	5	⇑iP	Pn	15 17 14.2	+5.6
DAV	Davao City (W)	7.44	9	⇑ePn	Pn	15 17 15.2	+4.9
	454nm,0.6s						
MATI	Mati	7.45	14	eP	Pn	15 17 12.8	+2.4
ZMPH	Zamboanga City	7.62	342	⇓eP	Pn	15 17 14.3	+1.5
TARAI	Tarakan	7.78	298	P	Pn	15 17 15.0	+0.1
	985nm,0.9s						
TSM	Tawau	8.02	305	⇑P	Pn	15 17 19.1	+0.9
MYLDM	Lahad Datu	8.08	313	⇑P	Pn	15 17 22.7	+3.7
BUKP	Musuan	8.18	4	eP	Pn	15 17 23.5	+3.1
PAGZ	Pagadian	8.20	353	eP	Pn	15 17 22.1	+1.5
BIPH	Bislig	8.68	13	⇑iP	Pn	15 17 31.5	+4.3
BIPH				iS	Sn	15 19 11.9	+8.3
CGP	Cagayan de Oro	8.74	2	eP	Pn	15 17 30.1	+2.1
BUTP	Butuan	9.32	7	eP	Pn	15 17 39.8	+3.8
SDKM	Sandakan	9.37	309	⇑P	Pn	15 17 38.4	+1.8
BATI	Kupang	9.84	185	P	Pn	15 17 50.1	+7.0
	1.9nm,0.3s,baz=135,slow=14,SNR=2.7						
BATI				S	Sn	15 19 31.4	-0.8
	1.9nm,0.3s,baz=165,slow=7.2,SNR=1.4						
BATI				LR	LR	15 21 51.6	
	comp=Z,7µm,21.8s,baz=11,slow=39						
TBP	Tagbilaran	9.98	357	eP	Pn	15 17 47.8	+2.8
SCPH	Surigao	10.10	6	⇑eP	Pn	15 17 52.4	+5.7
KKM	Kota Kinabalu	10.38	308	ePn	Pn	15 17 52.7	+2.1
KKM				eSn	Sn	15 19 34.1	-11
KKM	Kota Kinabalu	10.38	308	⇑P	Pn	15 17 53.5	+3.0
MSLP	Maasin	10.41	2	eP	Pn	15 17 54.0	+3.1
KDM	Kudat	10.47	314	⇑P	Pn	15 17 54.6	+2.8
GUIM	Jordan	11.05	350	eP	Pn	15 18 02.3	+2.7
BATP	Bataraza	11.23	324	eP	Pn	15 18 08.1	+6.0
OCLP	Ormoc	11.31	1	eP	Pn	15 18 06.9	+3.7
CUYO	Cuyo Island	11.62	343	eP	Pn	15 18 11.8	+4.3
BTM	Bintulu	11.89	287	⇓P	Pn	15 18 17.7	+6.5
RCP	Roxas	11.94	352	⇓eP	Pn	15 18 15.3	+3.5
	838µm,25.0s						
KMMI	Kalianget	12.40	237	P	Pn	15 18 22.3	+4.1
	165nm,2.2s						
ENPP	El Nido	12.51	337	eP	Pn	15 18 22.5	+2.9
SBUM	Sibu	12.54	283	⇓P	Pn	15 18 23.0	+3.0
SBUM	Sibu	12.54	283	⇑P	Pn	15 18 23.9	+3.9
CNP	Catarman	12.76	1	eP	Pn	15 18 29.0	+6.0
OTRP	Odiongan	12.84	349	eP	Pn	15 18 25.8	+1.6
BUSP	Coron	12.96	341	eP	Pn	15 18 28.5	+2.7
PVCP	Virac	13.85	359	iP	Pn	15 18 40.8	+3.0
PVCP	Virac	13.85	359	eP	Pn	15 18 40.6	+2.8
KSM	Kuching	14.26	277	ePn	Pn	15 18 45.4	+2.0
KSM	Kuching	14.26	277	⇑P	Pn	15 18 47.8	+4.4
KRKI	Karangkates	14.26	237	P	Pn	15 18 51.6	+8.1
	785nm,1.3s						
KAKA	Kakadu	14.63	148	⇓iP	Pn	15 18 48.4	+0.1
	293nm,0.8s						
POLP	Polilio Island	15.17	351	eP	Pn	15 18 55.7	+0.3
BALP	Baler	16.22	350	eP	Pn	15 19 13.9	+5.0
BJII	Banjamegara	16.26	244	P	Pn	15 19 13.3	+3.9
	456nm,1.9s						
SCZP	Santa Cruz	16.62	345	eP	Pn	15 19 15.7	+1.7
TPI	Tanjungpandan	16.96	262	P	Pn	15 19 21.0	+2.8
	170nm,1.4s						
BCPH	Baguio City Da	17.04	347	⇑iP	Pn	15 19 24.8	+5.6
	270µm,16.7s						
BOLP	Bolinao	17.20	345	eP	Pn	15 19 26.4	+5.2
CAUP	Cauayan	17.36	352	eP	Pn	15 19 26.4	+3.3
FITZ	Fitzroy Crossi	17.69	176	⇑iP	Pn	15 19 27.5	+0.3
	77nm,1.1s						
FITZ				eS	S	15 22 37.9	-11
FITZ	Fitzroy Crossi	17.69	176	P	Pn	15 19 27.4	+0.2
	0.8nm,0.3s,baz=9.1,slow=14,SNR=14						
FITZ				S	S	15 22 38.3	-11
	baz=89,slow=23,SNR=1.7						
LEM	Lembang	17.99	249	P	Pn	15 19 33.5	+2.6
	403nm,1.0s						
ABRA	Dolores	18.25	349	eP	Pn	15 19 34.8	+0.8
APYP	Conner	18.36	350	eP	Pn	15 19 36.5	+1.2
SBJI	Serang	19.17	252	P	Pn	15 19 47.6	+2.5
	313nm,1.3s						
MYKOM	Kota Tinggi	20.71	276	⇑P	P	15 20 02.7	+2.1
MBWA	Marble Bar	21.20	192	⇑iP	P	15 20 07.2	+1.4
	141nm,1.2s,mb5.2						
MBWA				epP		15 20 21.1	
MBWA				LR	LR		
	comp=Z,2µm,22.0s,MS4.5						
XMIS	Christmas Isla	21.23	241	⇑iP	P	15 20 06.3	0.0
XMIS				epP		15 20 20.2	
KGM	Kluang	21.26	276	⇓P	P	15 20 09.2	+2.7
WRA	Warramunga Arr	21.76	154	P	P	15 20 11.9	+0.1
	comp=Z,80nm,1.0s,mb5.1,baz=334,slow=11,SNR=91						
WRA				S	S	15 24 06.9	-3.0
	comp=Z,15nm,1.3s,baz=342,slow=19,SNR=4.1						
WB2	Warramunga Arr	21.76	154	eP	P	15 20 11.1	-0.8
WB2				i		15 20 16.9	
WB2				i		15 20 28.5	
WB2				iS	S	15 24 08.4	-1.6
KTGM	Kuala Trenggan	22.02	285	⇑P	P	15 20 17.3	+2.6
KSI	Kapahiang	22.09	261	P	P	15 20 21.6	+6.1
	comp=Z,175nm,1.6s,mb5.2						
FRIM	Kepong	23.09	279	⇓P	P	15 20 27.8	+1.7
IPM	Ipoh	23.89	282	⇓P	P	15 20 34.7	+1.1
QIZ	Qiongzhong	24.00	324	⇑P	P	15 20 35.3	+0.8
QIZ				AP		15 20 48.1	
QIZ				S	S	15 24 49.5	+1.1
QIZ				AMB	AMB		
	comp=Z,74nm,1.1s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,526nm,3.7s						
QIZ				LR	LR		
	comp=N,830nm,16.7s						
QIZ				LR	LR		
	comp=Z,1µm,24.6s						
QIZ	Qiongzhong	24.00	324	⇑iP	P	15 20 34.9	+0.4
	comp=Z,166nm,1.4s,mb5.3						
QIZ				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
PPI	Padang Panjang	24.05	270	P	P	15 20 34.5	-0.6
	comp=Z,109nm,1.2s,mb5.2						
PMG	Port Moresby	24.33	112	eP	P	15 20 38.1	+0.4
	comp=Z,201nm,1.3s,mb5.4						
PMG				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						
PMG	Port Moresby	24.33	112	⇓eP	P	15 20 38.7	+1.1
PMG	Port Moresby	24.33	112	P	P	15 20 39.2	+1.6
	comp=Z,25nm,0.5s,mb4.9,baz=10.0,slow=2.8,SNR=23						
PMG				S	S	15 24 51.8	-2.0
	comp=Z,11nm,1.1s,baz=292,slow=23,SNR=2.4						
KULM	Kulim	24.42	284	eP	P	15 20 35.5	-2.9
KULM	Kulim	24.42	284	⇑P	P	15 20 39.4	+1.0
GUMO	Guam	24.51	55	P	P	15 20 40.8	+1.6
GUMO				S	S	15 24 52.3	-4.3
GUMO	Guam	24.51	55	P	P	15 20 40.8	+1.6
	comp=Z,72nm,0.7s,mb5.3,baz=18,slow=23,SNR=2.8						
GUMO				S	S	15 24 52.3	-4.3
	comp=Z,96nm,0.8s,baz=359,slow=21,SNR=1.8						
SNG	Songkhla	24.92	288	P	P	15 20 46.0	+3.0
	comp=Z,406nm,1.0s,mb5.9						
ASAR	Alice Springs	24.94	159	P	P	15 20 44.6	+1.5
ASAR				PcP	PcP	15 24 19.2	+1.4
ASAR				S	S	15 24 58.4	-5.0
ASAR				ScP	ScP	15 27 54.0	+1.0
ASAR	Alice Springs	24.94	159	P	P	15 20 44.6	+1.5
ASAR						15 24 19.2	
ASAR				S	S	15 24 58.4	-5.0
ASAR	Alice Springs	24.94	159	P	P	15 20 44.6	+1.5
	comp=Z,21nm,1.0s,mb4.6,baz=327,slow=6.9,SNR=87						
ASAR				PcP	PcP	15 24 19.2	+1.4
	comp=Z,16nm,0.6s,baz=349,slow=2.1,SNR=14						
ASAR				S	S	15 24 58.3	-5.0
	comp=Z,4.9nm,1.1s,baz=333,slow=18,SNR=2.1						
ASAR				ScP	ScP	15 27 54.0	+1.0
	comp=Z,3.3nm,0.8s,baz=346,slow=3.2,SNR=4.9						
ASAR				PKiKP	PKiKP	15 31 57.7	-1.7
	comp=Z,0.9nm,0.8s,baz=355,slow=1.1,SNR=5.9						
YHNB	Yeheng	25.04	353	eP	P	15 20 43.9	0.0
GZH	Guangzhou	25.67	336	P	P	15 20 53.2	+3.5
GZH				S	S	15 25 21.4	+6.5
GZH				LR	LR		
	comp=Z,1µm,26.4s,MS4.4						
PSI	Prapat	25.71	277	P	P	15 20 49.5	-0.7
PSI				LR	LR	15 31 27.1	
PSI	Prapat	25.71	277	P	P	15 20 49.5	-0.7
PSI	Prapat	25.71	277	P	P	15 20 49.5	-0.7
	comp=Z,27nm,1.0s,mb4.7,baz=107,slow=7.6,SNR=19						
PSI				LR	LR	15 31 27.2	
	comp=Z,1µm,21.8s,MS4.4,baz=110,slow=38						
QZH	Quanzhou	25.76	348	⇑iP	P	15 20 53.6	+3.1
QZH				XP	sP	15 21 09.0	+0.2
QZH				S	S	15 25 14.9	-1.5
QZH				LR	LR		
	comp=Z,3µm,13.6s,MS4.9						
KKTK	Khon Kaen	27.01	309	P	P	15 21 02.0	+0.1
	comp=Z,1µm,0.5s						
JOW	Kunigami	27.26	7	P	P	15 21 04.3	+0.4
JOW				LR	LR	15 31 30.4	
JOW	Kunigami	27.26	7	P	P	15 21 04.3	+0.4
	comp=Z,71nm,0.8s,mb5.2,baz=199,slow=9.4,SNR=9.9						
JOW				LR	LR	15 31 30.4	
	comp=Z,882nm,21.1s,MS4.3,baz=208,slow=35						
NNT	Nongplab	27.68	299	P	P	15 21 09.0	+1.1
NST	Nakhon Sawan	28.81	305	P	P	15 21 18.0	+0.1
CTA	Charters Tower	29.00	134	eP	P	15 21 20.6	+1.0
	comp=Z,15nm,0.9s,mb4.7						
CTA				eS	S	15 26 10.3	+2.8
CTA	Charters Tower	29.00	134	eP	P	15 21 20.6	+1.0
CTA				eS	S	15 26 10.3	+2.8
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTA	Charters Tower	29.00	134	P	P	15 21 21.4	+1.8
	comp=Z,13nm,1.1s,mb4.6,baz=310,slow=14,SNR=3.8						
CTA				S	S	15 26 08.1	+0.5
	comp=Z,6.3nm,1.0s,baz=298,slow=6.1,SNR=1.6						
CTAO	Charters Tower	29.00	134	eP	P	15 21 21.3	+1.8
	comp=Z,87nm,1.3s,mb5.3						
CTAO				LR	LR		
	comp=Z,1µm,21.0s,MS4.5						
CTAO	Charters Tower	29.00	134	eP	P	15 21 21.3	+1.7
CTAO				pmax	pmax		
	comp=Z,87nm,1.3s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.5						
FORT	Forrest	30.47	174	eP	P	15 21 33.4	+0.9
	comp=Z,50nm,0.6s,mb5.4						
CM31	Chiang Mai Arr	31.26	308	PFAKE		15 21 50.0	+10
CM31				LR	LR		
	comp=Z,1µm,21.0s,MS4.6						
SSE	Sheshan	31.41	355	⇑P	P	15 21 44.0	+3.2
SSE				XP	sP	15 21 59.9	+0.7
SSE				S	S	15 26 45.4	+0.3
SSE				SCS	ScS	15 32 13.0	+2.5
SSE				AMB	AMB		
	comp=Z,25nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,257nm,3.5s						
SSE				LR	LR		
	comp=N,128nm,24.9s,MS4.1						
SSE				LR	LR		
	comp=E,472nm,24.9s,MS4.1						
SSE				LR	LR		
	comp=Z,485nm,32.3s						
SSE	Sheshan	31.41	355	⇑P	P	15 21 44.0	+3.2
	comp=Z,25nm,0.7s,mb5.2						
SSE				pP	pP	15 21 59.9	+6.5
SSE				sP	sP	15 22 06.2	+7.0
SSE				PP	PP	15 22 56.2	+3.7
SSE				S	S	15 26 45.4	+0.3
SSE				sS	sS	15 27 14.2	+7.8
SSE				ScS	ScS	15 32 13.0	+2.5
SSE				LR	LR		
	comp=Z,490nm,32.3s,MS4.0						
CHRT	Chiangrai	31.43	311	⇑P	P	15 21 42.0	+0.9
	comp=Z,237nm,1.0s,mb6.0						
CHTO	Chiang Mai	31.46	309	⇑iP	P	15 21 41.5	+0.1
	comp=Z,50nm,0.9s,mb5.3						
CHTO				epP	pP	15 21 55.8	+1.8
CHTO				ePcP	PcP	15 24 34.9	+1.0
CHTO	Chiang Mai	31.46	309	⇑iP	P	15 21 41.5	+0.1
CHTO				e*PP	pP	15 21 55.8	+1.8
CHTO				e		15 24 34.9	
CHTO				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.3						
GYA	Guiyang	31.68	329	P	P	15 21 44.3	+1.1
GYA				AP	pP	15 22 01.2	+5.4
GYA				PP	PP	15 22 52.9	-2.6
GYA				PCP	PcP	15 24 36.7	+2.4
GYA				S	S	15 26 50.5	+1.1
GYA				SCP	ScP	15 28 13.6	-0.2
GYA				PCS	PcS	15 28 20.0	+1.0
GYA				SS	SS	15 28 43.7	-23
GYA				SCS	ScS	15 32 10.2	-1.8
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,250nm,6.0s						
GYA				LR	LR		
	comp=N,680nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,790nm,18.4s,MS4.5						
GYA				LR	LR		
	comp=Z,810nm,17.2s,MS4.5						
KLBR	Kellerberrin	31.73	191	eP	P	15 21 43.9	+0.4
	comp=Z,37nm,0.8s,mb5.3						
WHN	Wuhan	32.18	343	P	P	15 21 47.0	-0.5
WHN				S	S	15 26 57.0	-0.1
WHN				AMB	AMB		
	comp=Z,76nm,1.1s,mb5.4						
WHN				LR	LR		
	comp=Z,2µm,19.4s,MS4.9						
NJ2	Nanjing	32.64	351	eP	P	15 21 51.5	-0.1
NJ2				AP	pP	15 22 06.2	+1.9
NJ2				XP	sP	15 22 13.9	+3.9
NJ2				PP	PP	15 23 04.4	-1.7
NJ2				S	S	15 27 03.0	-1.3
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,370nm,4.6s						
NJ2				LR	LR		
	comp=N,3µm,26.1s,MS4.9						
NJ2				LR	LR		
	comp=E,2µm,30.2s,MS4.9						
NJ2				LR	LR		
	comp=Z,2µm,30.5s,MS4.6						
KMI	Kunming	32.89	322	P	P	15 21 55.2	+1.4
KMI				AP	pP	15 22 11.2	+4.7
KMI				PP	PP	15 23 07.5	-1.5
KMI				PCP	PcP	15 24 39.9	+2.2
KMI				S	S	15 27 09.2	+0.8
KMI				PCS	PcS	15 28 24.3	+1.1
KMI				SS	SS	15 29 10.7	-21
KMI				AMB	AMB		
	comp=Z,26nm,1.4s,mb5.0						
KMI				AMB	AMB		
	comp=Z,162nm,3.1s						
KMI				LR	LR		
	comp=N,495nm,14.9s,MS4.4						
KMI				LR	LR		
	comp=E,410nm,18.7s,MS4.4						
KMI				LR	LR		
	comp=Z,831nm,21.1s,MS4.4						
KMI	Kunming	32.89	322	P	P	15 21 55.2	+1.4
	comp=Z,26nm,1.4s,mb5.0						
KMI				pP	pP	15 22 11.2	+4.7
KMI				sP	sP	15 22 18.3	+6.0
KMI				PP	PP	15 23 07.5	-1.5
KMI				PPP		15 23 25.3	
KMI				PcP	PcP	15 24 39.9	+2.2
KMI				S	S	15 27 09.2	+0.8
KMI				sS	sS	15 27 34.9	+5.2
KMI				PcS	PcS	15 28 24.3	+1.1
KMI				SS	SS	15 29 10.7	-21
KMI				SSS		15 29 37.0	
KMI				LR	LR		
	comp=Z,830nm,21.1s,MS4.4						
KMI	Kunming	32.89	322	P	P	15 21 55.2	+1.4
KMI				*PP	pP	15 22 11.2	+4.7
KMI						15 23 07.5	
KMI						15 24 39.9	
KMI				S	S	15 27 09.2	+0.8
KMI				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
KMI				MLR	MLR		
	comp=Z,830nm,21.1s,MS4.4						
NWAO	Narrogin (SRO)	33.12	191	P	P	15 21 55.7	-0.1
NWAO				S	S	15 27 10.3	-1.5
NWAO				LR	LR		
	comp=Z,755nm,21.0s,MS4.4						
NWAO	Narrogin (SRO)	33.12	191	P	P	15 21 55.7	-0.1
	comp=Z,12nm,0.9s,mb4.8,baz=356,slow=7.2,SNR=6.2						
NWAO				S	S	15 27 10.3	-1.5
	comp=Z,6.2nm,0.9s,baz=269,slow=22,SNR=1.9						
STKA	Stephens Creek	35.31	154	eP	P	15 22 16.5	+1.7
	comp=Z,19nm,0.6s,mb5.2						
STKA				eS	S	15 27 46.1	+0.5
STKA	Stephens Creek	35.31	154	P	P	15 22 15.9	+1.2
	comp=Z,7.0nm,0.5s,mb4.8,baz=326,slow=9.6,SNR=23						
STKA				PcP	PcP	15 24 45.8	+1.3
	comp=Z,8.5nm,0.6s,baz=358,slow=4.6,SNR=2.3						
STKA				S	S	15 27 45.6	0.0
	comp=Z,3.4nm,0.9s,baz=40,slow=21,SNR=1.8						
STKA				ScP	ScP	15 28 26.9	+0.5
	comp=Z,8.9nm,1.0s,baz=352,slow=2.7,SNR=3.9						
STKA				LR	LR	15 37 06.8	
	comp=Z,696nm,21.9s,MS4.4,baz=338,slow=37						
EIDS	Eidsvold	35.79	136	eP	P	15 22 20.8	+1.8
	comp=Z,31nm,1.5s,mb5.0						
JHJ	Hachijo jima 2	36.28	22	LR	LR	15 38 11.5	
	comp=Z,470nm,18.3s,MS4.3,baz=127,slow=38						
HNR	Honiara	36.46	105	eP	P	15 22 25.5	+0.6
	comp=Z,271nm,1.3s,mb6.0						
HNR	Honiara	36.46	105	eP	P	15 22 25.5	+0.6
HNR				pmax	pmax		
	comp=Z,271nm,1.3s,mb6.0						
HNR	Honiara	36.46	105	P	P	15 22 25.8	+0.9
	comp=Z,63nm,0.8s,mb5.6,baz=254,slow=2.8,SNR=4.4						
CD2	Chengdu	36.77	330	P	P	15 22 27.6	+0.4
CD2				AP	pP	15 22 41.7	+1.7
CD2				PP	PP	15 23 53.4	+1.6
CD2				PCP	PcP	15 24 49.0	+0.2
CD2				S	S	15 28 04.1	-3.8
CD2				XS	sS	15 28 29.2	-0.2
CD2				SCS	ScS	15 32 34.8	-4.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,4.4s						
CD2				LR	LR		
	comp=N,440nm,20.4s						
CD2				LR	LR		
	comp=E,610nm,15.0s						
CD2				LR	LR		
	comp=Z,510nm,18.0s,MS4.3						
TIA	Tai'an	36.99	350	eP	P	15 22 28.3	-0.8
XAN	Xi'an	37.17	338	P	P	15 22 29.5	-1.1
XAN				AMB	AMB		
	comp=Z,88nm,0.9s,mb5.6						
KSRS	Korea Array	37.74	5	P	P	15 22 35.6	+0.3
	comp=Z,16nm,0.7s,mb4.9,baz=180,slow=10,SNR=47						
KSRS				PcP	PcP	15 24 52.7	+1.1
	comp=Z,7.9nm,0.8s,baz=199,slow=2.9,SNR=9.5						
KSRS				S	S	15 28 18.7	-3.8
	comp=Z,1.4nm,1.0s,baz=152,slow=39,SNR=2.8						
KSRS				ScP	ScP	15 28 34.7	-0.6
	comp=Z,2.4nm,1.0s,baz=196,slow=2.5,SNR=4.5						
KSRS				LR	LR	15 38 11.1	
	comp=Z,455nm,22.0s,MS4.2,baz=197,slow=36						
MAJO	Matsushiro	38.85	18	⇑iP	P	15 22 43.7	-1.0
	comp=Z,73nm,0.8s,mb5.5						
MAJO				LR	LR		
	comp=Z,784nm,20.0s,MS4.5						
MAJO	Matsushiro	38.85	18	⇑iP	P	15 22 43.7	-1.0
MAJO				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.5						
MAJO				MLR	MLR		
	comp=Z,784nm,20.0s,MS4.5						
MAT	Matsushiro	38.85	18	P	P	15 22 43.9	-0.8
MAT				S	S	15 28 35.1	-4.2
MJAR	Matsushiro Arr	38.85	18	P	P	15 22 43.9	-0.8
MJAR				ScP	ScP	15 28 37.2	-2.4
MJAR	Matsushiro Arr	38.85	18	P	P	15 22 43.9	-0.8
	comp=Z,69nm,0.8s,mb5.4,baz=194,slow=8.9,SNR=156						
MJAR				ScP	ScP	15 28 37.2	-2.4
	comp=Z,4.6nm,1.0s,baz=186,slow=4.1,SNR=5.8						
DL2	Dalian	39.14	357	P	P	15 22 46.6	-0.5
DL2				eS	S	15 28 43.6	+0.1
DL2				XS	sS	15 29 04.5	-0.7
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
DL2				AMB	AMB		
	comp=Z,140nm,7.6s						
DL2				LR	LR		
	comp=N,240nm,16.5s,MS4.3						
DL2				LR	LR		
	comp=E,280nm,18.8s,MS4.3						
DL2				LR	LR		
	comp=Z,410nm,17.9s,MS4.3						
ARMA	Armidale	39.52	142	⇓iP	P	15 22 53.2	+2.8
ARMA				e	pP	15 23 05.1	+1.8
SHL	Shillong	40.65	312	eP	P	15 23 00.3	+0.4
SHL				ex	x	15 28 51.3	
BJT	Baijiatuau	40.87	350	eP	P	15 22 59.7	-1.7
	comp=Z,68nm,0.9s,mb5.3						
BJT				LR	LR		
	comp=Z,550nm,22.0s,MS4.4						
BJT	Baijiatuau	40.87	350	eP	P	15 22 59.7	-1.7
BJT				pmax	pmax		
	comp=Z,68nm,0.9s						
BJT				MLR	MLR		
	comp=Z,550nm,22.0s						
BJI	Beijing	40.89	350	P	P	15 23 00.3	-1.3
BJI				AP	pP	15 23 13.4	-1.1
BJI				XP	sP	15 23 19.8	-0.4
BJI				S	S	15 29 06.5	-3.2
BJI				SS	SS	15 32 10.9	-1.9
BJI				SCS	ScS	15 33 01.2	-1.2
BJI				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.2						
BJI				AMB	AMB		
	comp=Z,203nm,2.9s,mb5.2						
BJI				LR	LR		
	comp=N,409nm,26.9s						
BJI				LR	LR		
	comp=E,331nm,19.6s						
BJI				LR	LR		
	comp=Z,1µm,34.7s						
BJI	Beijing	40.89	350	P	P	15 23 00.3	-1.3
	comp=Z,0.1nm,1.0s						
BJI				pP	pP	15 23 13.4	-1.1
BJI				sP	sP	15 23 19.8	-0.4
BJI				PP	PP	15 24 34.1	-2.6
BJI				S	S	15 29 06.5	-3.2
BJI				SS	SS	15 32 10.9	-1.9
BJI				ScS	ScS	15 33 01.2	-1.2
BJI				LR	LR		
	comp=Z,1µm,34.7s,MS4.5						
BJI	Beijing	40.89	350	P	P	15 23 00.3	-1.3
BJI				*PP	pP	15 23 13.4	-1.1
BJI						15 24 34.1	
BJI				S	S	15 29 06.5	-3.2
BJI				SS	SS	15 32 10.9	-1.9
BJI						15 33 01.2	
BJI				MLR	MLR		
	comp=Z,1µm,34.7s,MS4.5						
LZH	Lanzhou	41.00	334	⇓P	P	15 23 04.4	+1.9
LZH				AP	pP	15 23 14.5	-1.0
LZH				XP	sP	15 23 18.3	-2.9
LZH				PP	PP	15 24 43.5	+5.6
LZH				PCP	PcP	15 25 03.5	+1.5
LZH				SCP	ScP	15 28 49.0	+1.1
LZH				PCS	PcS	15 28 54.5	+1.5
LZH				S	S	15 29 15.2	+3.8
LZH				XS	sS	15 29 31.4	-1.7
LZH				SS	SS	15 32 11.2	-3.9
LZH				SCS	ScS	15 33 04.1	+0.9
LZH				AMB	AMB		

comp=Z,119nm,1.2s,mb5.4
LZH AMB AMB
comp=Z,423nm,5.3s
LZH LR LR
comp=E,1µm,14.3s
LZH LR LR
comp=Z,2µm,16.9s,MS5.0
LZH Lanzhou 41.00 334 ⇓P **P 15 23 04.4 +1.9**
comp=Z,119nm,1.2s,mb5.4
LZH pP pP 15 23 14.5 -1.0
LZH sP sP 15 23 18.3 -2.9
LZH PP PP 15 24 43.5 +5.6
LZH PcP PcP 15 25 03.5 +1.5
LZH PPP 15 25 12.3
LZH ScP ScP 15 28 49.0 +1.1
LZH PcS PcS 15 28 54.5 +1.5
LZH S **S 15 29 15.2 +3.8**
LZH sS sS 15 29 31.4 -1.7
LZH SS SS 15 32 11.2 -3.9
LZH ScS ScS 15 33 04.1 +0.9
LZH LR LR
comp=Z,2µm,16.9s,MS5.0
LZH Lanzhou 41.00 334 ⇓P **P 15 23 04.4 +1.9**
LZH *PP pP 15 23 14.5 -1.0
LZH *SP sP 15 23 18.3 -2.9
LZH 15 24 43.5
LZH 15 25 03.5
LZH PPP 15 25 12.3
LZH S **S 15 29 15.2 +3.8**
LZH *SS sS 15 29 31.4 -1.7
LZH SS SS 15 32 11.2 -3.9
LZH 15 33 04.1
LZH pmax pmax
comp=Z,119nm,1.2s,mb5.4
LZH MLR MLR
comp=Z,2µm,16.9s,MS5.0
TOO Toolangi 41.83 155 *e*P **P 15 23 13.0 +3.6**
comp=Z,14nm,0.8s,mb4.7
TOO Toolangi 41.83 155 *e*P **P 15 23 13.0 +3.6**
TOO pmax pmax
comp=Z,15nm,0.8s,mb4.7
CNB Canberra Magne 41.84 149 *e*P **P 15 23 13.6 +4.2**
comp=Z,31nm,1.1s,mb4.8
CNB *i* pP 15 23 26.6 +4.2
SNY Shenyang 41.98 359 ⇑P **P 15 23 09.5 -1.0**
SNY AP pP 15 23 22.5 -0.9
SNY XP sP 15 23 31.5 +2.4
SNY S **S 15 29 22.0 -3.8**
SNY AMB AMB
comp=Z,14nm,0.6s,mb4.8
SNY AMB AMB
comp=Z,351nm,5.4s
SNY LR LR
comp=N,637nm,25.9s
SNY LR LR
comp=Z,895nm,27.4s,MS4.5
HHC Hu-ho-hao-te 42.63 346 *e*P **P 15 23 17.0 +1.2**
HHC AP pP 15 23 32.2 +3.4
HHC PP PP 15 24 59.3 +3.8
HHC PCP PcP 15 25 08.0 +0.7
HHC SCP ScP 15 28 53.5 -0.9
HHC PCS PcS 15 28 59.3 0.0
HHC S **S 15 29 35.0 -0.5**
HHC SS SS 15 32 40.8 -6.5
HHC SCS ScS 15 33 10.6 -2.4
HHC AMB AMB
comp=Z,34nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,237nm,4.3s
HHC LR LR
comp=N,500nm,13.4s,MS4.6
HHC LR LR
comp=E,272nm,14.5s,MS4.6
HHC LR LR
comp=Z,561nm,20.2s
BTO Baotou 42.81 344 *e*P **P 15 23 16.5 -0.8**
LSA Lhasa 43.59 316 P **P 15 23 25.1 +1.3**
LSA PP PP 15 25 10.6 +4.7
LSA LR LR
comp=N,400nm,32.3s,MS4.4
LSA LR LR
comp=E,730nm,32.3s,MS4.4
LSA LR LR
comp=Z,880nm,32.9s,MS4.5
LSA Lhasa 43.59 316 ⇑*i*P **P 15 23 24.5 +0.8**
comp=Z,30nm,0.8s,mb5.1
LSA *e*PcP PcP 15 25 12.2 +1.5
LSA LR LR
comp=Z,394nm,20.0s,MS4.3
LSA Lhasa 43.59 316 ⇑*i*P **P 15 23 24.5 +0.7**
LSA *e* 15 25 12.3
LSA pmax pmax
comp=Z,30nm,0.8s,mb5.1
LSA MLR MLR
comp=Z,394nm,20.0s,MS4.3
VLA Vladivostok 43.77 8 *e*P **P 15 23 22.7 -2.3**
VLA *e**PP pP 15 23 32.3 -5.7
VLA *e**SP sP 15 23 37.0 -6.7
VLA *e* 15 25 09.8
VLA *e*S **S 15 29 49.1 -3.0**
VLA pmax pmax
comp=Z,48nm,0.9s,mb5.2
CN2 Changchun 43.95 1 *e*P **P 15 23 30.0 +3.6**
CN2 *e*XP sP 15 23 48.0 +2.9
CN2 *e*S **S 15 29 58.1 +3.4**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,16.0s,MS4.6
CN2 LR LR
comp=E,400nm,16.0s,MS4.6
CN2 LR LR
comp=Z,600nm,19.0s,MS4.5
PALK Pallekele 44.28 281 PFAKE 15 23 40.0 +10
PALK LR LR
comp=Z,838nm,22.0s,MS4.6
ODAN Odare 44.74 310 *e*P **P 15 23 32.9 -0.2**
comp=Z,90nm,0.8s,mb5.7
TAPN Taplejung 44.76 311 *e*P **P 15 23 33.1 -0.1**
comp=Z,58nm,0.7s,mb5.5
MDJ Mudanjiang 44.99 5 P **P 15 23 35.1 +0.4**
MDJ AP pP 15 23 48.4 +0.6
MDJ XP sP 15 23 54.6 +1.2
MDJ PP PP 15 25 20.4 -0.2
MDJ SCP ScP 15 29 03.9 0.0
MDJ PCS PcS 15 29 09.5 +0.7
MDJ S **S 15 30 09.5 -0.3**
MDJ SCS ScS 15 33 27.7 0.0
MDJ AMB AMB
comp=Z,83nm,1.0s,mb5.5
MDJ AMB AMB
comp=Z,196nm,5.6s
MDJ LR LR
comp=N,360nm,33.4s
MDJ LR LR
comp=E,403nm,22.2s
MDJ LR LR
comp=Z,437nm,29.1s,MS4.2
ERM Erimo 45.42 20 *e*P **P 15 23 40.1 +2.0**
comp=Z,183nm,1.4s,mb5.7
ERM Erimo 45.42 20 *e*P **P 15 23 40.1 +2.0**
ERM pmax pmax
comp=Z,183nm,1.4s,mb5.7
GTA Gaotai 45.53 333 P **P 15 23 39.0 -0.1**
GTA AP pP 15 23 54.7 +2.5
GTA XP sP 15 24 01.5 +3.7
GTA PCP PcP 15 25 18.3 +1.1
GTA SCP ScP 15 29 06.6 +0.3
GTA PCS PcS 15 29 10.0 -1.2
GTA S **S 15 30 15.5 -2.3**
GTA XS sS 15 30 41.1 +1.4
GTA SCS ScS 15 33 27.3 -4.1
GTA SS SS 15 33 30.7 -12
GTA AMB AMB
comp=Z,18nm,1.3s,mb4.8
GTA AMB AMB
comp=Z,263nm,7.6s
GTA LR LR
comp=N,452nm,24.9s
GTA LR LR
comp=E,514nm,16.4s
GTA LR LR

comp=Z,509nm,23.7s,MS4.4
JIRN Jiri 46.07 310 *e*P **P 15 23 43.5 -0.1**
comp=Z,86nm,0.7s,mb5.8
KKN Kakani 46.83 310 *e*P **P 15 23 49.0 -0.5**
comp=Z,87nm,1.0s,mb5.6
KKN Kakani 46.83 310 *e*P **P 15 23 49.0 -0.5**
KKN pmax pmax
comp=Z,87nm,1.0s,mb5.6
GKN Gorkha 47.43 310 *e*P **P 15 23 53.6 -0.6**
comp=Z,57nm,0.6s,mb5.7
TRD Trivandrum 48.13 282 ⇓ex x 15 24 05.0
HYB Hyderabad 48.49 294 *e*P **P 15 24 01.0 -1.6**
comp=Z,75nm,1.0s,mb5.7
HYB Hyderabad 48.49 294 *e*P **P 15 24 01.0 -1.6**
HYB pmax pmax
comp=Z,75nm,1.0s,mb5.7
HYB Hyderabad 48.49 294 *i* P **P 15 24 01.0 -1.6**
comp=Z,75nm,1.0s,mb5.7
HYB *e* 15 24 06.0
HYB *e*PP PP 15 25 56.0 +0.2
HABR Khabarovsk 49.48 9 ⇑*i*P **P 15 24 10.3 +0.7**
HABR *e* pP 15 24 19.9 -2.9
HABR *e* pP 15 24 23.5 +0.7
HABR *e* 15 25 31.7
HABR S **S 15 31 15.9 +2.4**
HABR *e* 15 33 56.0
HABR *e* 15 34 44.3
HABR pmax pmax
comp=Z,121nm,1.0s,mb5.9
HIA Hailar 49.58 356 ⇑*e*P **P 15 24 09.6 -0.7**
comp=Z,78nm,0.8s,mb5.8
HIA LR LR
comp=Z,491nm,22.0s,MS4.5
HIA Hailar 49.58 356 ⇑*e*P **P 15 24 09.6 -0.7**
HIA pmax pmax
comp=Z,78nm,0.8s
HIA MLR MLR
comp=Z,491nm,22.0s
YSS Yuzh-Sakhalins 49.75 16 ⇑*e*P **P 15 24 11.6 -0.1**
comp=Z,39nm,0.8s,mb5.5
YSS LR LR
comp=Z,296nm,20.0s,MS4.3
YSS Yuzh-Sakhalins 49.75 16 *e*P **P 15 24 10.8 -0.9**
YSS *e* pP 15 24 24.2 -0.7
YSS *e*S **S 15 31 13.0 -4.4**
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.5
KLR Kul'dur 49.77 6 ⇓*i*P **P 15 24 08.8 -3.0**
KLR *e* pP 15 24 21.1 -3.9
KLR pmax pmax
comp=Z,64nm,1.8s,mb5.3
ULN Ulaanbaatar 50.34 345 ⇑*i*P **P 15 24 15.3 -0.8**
comp=Z,46nm,0.8s,mb5.6
ULN *e*ScP ScP 15 29 26.4 +0.1
ULN LR LR
comp=Z,258nm,19.0s,MS4.3
ULN Ulaanbaatar 50.34 345 *c i*P **P 15 24 15.4 -0.7**
SONM Songino Array 50.49 344 P **P 15 24 16.5 -0.7**
comp=Z,47nm,0.8s,mb5.5,baz=158,slow=7.5,SNR=104
SONM ScP ScP 15 29 26.4 -0.6
comp=Z,2.0nm,1.1s,baz=151,slow=3.4,SNR=4.0
SONM LR LR 15 46 37.8
comp=Z,577nm,21.6s,MS4.5,baz=163,slow=37
KAD Karad 52.49 292 *e*P **P 15 24 32.0 -0.8**
CIT Chita 52.97 352 *e*P **P 15 24 34.8 -0.9**
CIT *e* pP 15 24 44.1 -4.9
CIT *e* 15 25 45.1
CIT pmax pmax
comp=Z,74nm,0.9s,mb5.6
POO Poona 53.10 294 *e*P **P 15 24 35.0 -2.3**
ZAK Zakamensk 53.66 343 ⇑*e*P **P 15 24 39.9 -0.9**
ZAK *e* 15 25 41.2
ZAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
TLY Talaya 54.73 344 P **P 15 24 48.6 +0.1**
comp=Z,287nm,0.8s,mb6.3,SNR=32
TLY Talaya 54.73 344 ⇑*i*P **P 15 24 48.0 -0.5**
TLY LR LR
comp=Z,300nm,21.0s,MS4.3
TLY Talaya 54.73 344 *e*P **P 15 24 48.1 -0.4**
TLY *e*S **S 15 32 28.1 +2.7**
TLY pmax pmax
comp=Z,45nm,0.9s,mb5.5
TLY MLR MLR
comp=Z,442nm,24.0s,MS4.5
WMQ Urumqi 54.84 328 ⇑*i*P **P 15 24 48.6 -0.9**
WMQ AP pP 15 25 03.4 +0.5
WMQ XP sP 15 25 10.6 +2.1
WMQ PP PP 15 26 53.2 +0.4
WMQ S **S 15 32 22.6 -4.6**
WMQ XS sS 15 32 49.6 0.0
WMQ SCS ScS 15 34 28.6 -6.1
WMQ AMB AMB
comp=Z,75nm,1.1s,mb5.6
WMQ AMB AMB
comp=Z,189nm,3.0s
WMQ LR LR
comp=N,494nm,20.8s,MS4.6
WMQ LR LR
comp=E,287nm,20.0s,MS4.6
WMQ LR LR
comp=Z,323nm,22.1s,MS4.3
AJM Ajmer 54.84 303 *e*P **P 15 24 48.0 -1.9**
SDNR Sundarnagar 54.95 310 *e*P **P 15 24 50.6 0.0**
IRK Irkutsk 55.07 345 *e*P **P 15 24 49.7 -1.3**
IRK pmax pmax
comp=Z,42nm,1.3s,mb5.3
MOY Mondy 55.48 342 *e*P **P 15 24 53.5 -0.4**
MOY pmax pmax
comp=Z,48nm,2.2s,mb5.1
NRGR Nerungri 56.81 0 *i* P **P 15 25 04.0 +0.6**
NRGR S S 15 33 16.1 +23
NRGR smax
comp=N,24nm,0.6s
CLNS Chul'man 56.99 0 *e*P **P 15 25 05.2 +0.5**
CLNS pmax pmax
comp=Z,50nm,0.7s,mb5.7
CLNS pmax pmax
comp=N,46nm,0.8s
CLNS pmax pmax
comp=E,28nm,0.9s
BOD Bodaibo 58.58 353 *e*P **P 15 25 15.1 -0.6**
BOD pmax pmax
comp=Z,71nm,0.8s,mb5.8
MK31 Makanchi Array 59.66 328 ⇑*i*P **P 15 25 22.4 -1.1**
MK31 *e*PcP PcP 15 26 09.1 -1.1
MKAR Makanchi Array 59.66 328 P **P 15 25 22.6 -0.9**
MKAR 15 26 10.2
MKAR S **S 15 33 28.0 -2.5**
MKAR Makanchi Array 59.66 328 P **P 15 25 22.6 -0.9**
comp=Z,34nm,0.7s,mb5.5,baz=121,slow=8.8,SNR=130
MKAR PcP PcP 15 26 10.2 0.0
comp=Z,26nm,0.7s,baz=118,slow=6.1,SNR=7.9
MKAR ScP ScP 15 30 06.8 -0.4
comp=Z,2.2nm,0.7s,baz=99,slow=6.0,SNR=4.7
MKAR S **S 15 33 27.9 -2.6**
comp=Z,0.2nm,0.2s,baz=78,slow=41,SNR=1.8
MKAR LR LR 15 52 16.5
comp=Z,412nm,20.4s,MS4.5,baz=120,slow=37
MKAR PKPPKP 15 54 42.1
comp=Z,0.2nm,0.6s,baz=45,slow=3.9,SNR=1.9
RPZ Rata Peaks 59.86 142 P **P 15 25 27.0 +2.1**
comp=Z,26nm,0.8s,mb5.3,baz=307,slow=2.2,SNR=14
PET Petropavlovsk 60.33 23 ⇑*e*P **P 15 25 28.9 +1.0**
comp=Z,58nm,1.1s,mb5.5
PET *e*pP pP 15 25 40.9 -0.7
PET Petropavlovsk 60.33 23 *e*P **P 15 25 29.0 +1.0**
PET *e*S **S 15 33 45.7 +6.8**
PET *e*SS SS 15 37 41.4 +4.1
PET pmax pmax
comp=Z,56nm,1.0s,mb5.5
PET pmax pmax
comp=Z,100nm,19.5s
KZA Kyzart 61.15 320 P **P 15 25 34.1 +0.4**
SNR=38
URZ Urewera 61.24 134 P **P 15 25 35.7 +1.3**
comp=Z,6.0nm,0.5s,mb5.0,baz=88,slow=1.2,SNR=13
TKM2 Tokmak 2 61.35 321 P **P 15 25 34.6 -0.5**
SNR=49
KBK Karagaybulak 61.63 320 P **P 15 25 36.9 -0.1**
SNR=47
UCH Uchtor 61.70 320 PFAKE 15 25 50.0 +13
UCH LR LR
comp=Z,306nm,20.0s,MS4.5
UCH Uchtor 61.70 320 P **P 15 25 37.7 +0.3**
SNR=37
AAK Ala-Archa 61.91 320 P **P 15 25 37.7 -1.2**
comp=Z,215nm,0.9s,mb6.3,SNR=41
AAK Ala-Archa 61.91 320 ⇑*e*P **P 15 25 37.2 -1.6**
comp=Z,51nm,1.1s,mb5.6
AAK LR LR
comp=Z,471nm,21.0s,MS4.6
AAK Ala-Archa 61.91 320 *c i*P **P 15 25 37.6 -1.3**
AAK pmax pmax
comp=Z,44nm,1.0s,mb5.5
AAK MLR MLR
comp=Z,600nm,30.0s,MS4.6
AAK Ala-Archa 61.91 320 P **P 15 25 38.5 -0.4**
SNR=42
CHMS Chumysh 61.93 321 P **P 15 25 40.2 +1.2**
SNR=11
FRU Bishkek 61.93 320 *e*P **P 15 25 37.2 -1.8**
AML Almayashu 62.18 319 P **P 15 25 40.7 0.0**
SNR=44
USP Ospenovka 62.22 321 P **P 15 25 40.1 -0.8**
SNR=65
KBL Kabul 62.27 310 ⇑*i*P **P 15 25 40.0 -1.4**
YAK Yakutsk 62.33 3 *e*P **P 15 25 41.0 -0.3**
comp=Z,175nm,0.8s,mb6.2
YAK LR LR
comp=Z,271nm,22.0s,MS4.4
YAK Yakutsk 62.33 3 *c i*P **P 15 25 41.4 +0.1**
YAK *e**PP pP 15 25 54.5 -0.4
YAK *e* 15 26 19.1
YAK *e* 15 27 59.5
YAK *i* S **S 15 34 01.1 -2.9**
YAK *e**SS sS 15 34 23.2 -3.6
YAK *e* 15 35 28.2
YAK pmax pmax
comp=Z,181nm,1.0s,mb6.2
YAK pmax pmax
comp=N,69nm,1.1s
YAK pmax pmax
comp=E,34nm,1.4s
YAK smax
comp=N,138nm,1.9s
YAK smax
comp=E,109nm,1.7s
YAK MLR MLR
comp=Z,298nm,24.0s,MS4.4
YAK MLR MLR
comp=N,278nm,23.0s
EKS2 Erkin-Say 62.38 320 P **P 15 25 41.5 -0.6**
SNR=60
MA2 Magadan 63.18 15 ⇑*i*P **P 15 25 47.9 +0.9**
comp=N,75nm,0.8s,mb5.9
MA2 *e*pP pP 15 25 58.8 -1.8
MA2 LR LR
comp=Z,303nm,21.0s,MS4.5
MA2 Magadan 63.18 15 *c i*P **P 15 25 48.0 +1.0**
MA2 *e*S **S 15 34 14.0 -0.7**
MA2 *e*PS 15 34 37.8
MA2 *e* 15 35 35.4
MA2 *e*SS SS 15 38 18.3 -3.3
MA2 *e*SSS 15 41 13.0
MA2 pmax pmax
comp=Z,100nm,1.0s,mb5.9
MA2 MLR MLR
comp=E,300nm,23.8s
ZALV Zalesovo Beam 63.22 335 P **P 15 25 45.2 -2.1**
ZALV LR LR 15 54 15.9
ZALV P'P' 15 54 44.1
ZALV ⇑*e* 15 54 49.1
ZALV Zalesovo Beam 63.22 335 P **P 15 25 45.2 -2.1**
comp=E,8.3nm,0.5s,mb5.1,baz=115,slow=7.0,SNR=37
ZALV LR LR 15 54 15.9
comp=E,172nm,18.3s,MS4.3,baz=134,slow=37
ZALV PKPPKP 15 54 44.1
comp=E,0.4nm,0.3s,baz=18,slow=28,SNR=2.7
ZALV PKP2bc 15 54 49.1
comp=E,0.5nm,0.3s,baz=316,slow=4.1,SNR=5.5
ZAL Zalesovo 63.22 335 P **P 15 25 45.3 -2.1**
KURK Kurchatov 63.99 330 P **P 15 25 51.8 -0.7**
comp=E,910nm,0.5s,SNR=85
KURK Kurchatov 63.99 330 ⇑*i*P **P 15 25 51.0 -1.5**
comp=E,96nm,0.7s,mb5.9
KURK LR LR
comp=Z,307nm,21.0s,MS4.5
KURK Kurchatov 63.99 330 *c i*P **P 15 25 51.1 -1.4**
NVS Novosibirsk 64.51 335 ⇑*i*P **P 15 25 53.4 -2.4**
NVS *e* 15 26 27.1
NVS *e*S **S 15 34 19.4 -12**
NVS *e* 15 35 37.7
NVS pmax pmax
comp=Z,30nm,0.7s,mb5.4
NVS pmax pmax
comp=N,27nm,1.2s
NVS pmax pmax
comp=E,30nm,1.0s
NVS smax
comp=E,40nm,1.8s
NVS smax
comp=N,26nm,1.9s
KK31 Karatay Array 64.71 319 *i* P **P 15 25 56.4 -1.0**
KKAR Karatay Array 64.71 319 *i* P **P 15 25 56.3 -1.1**
KKAR pmax pmax
comp=Z,15nm,0.9s,mb5.0
DRV Dumont d'Urvil 67.10 173 PP PP 15 28 37.0 -3.6
DRV S S 15 35 04.0 +1.5
DRV SS SS 15 39 25.0 +2.7
DRV R 15 49 00.0
BVA0 Borovoye Array 69.52 329 P **P 15 26 25.7 -2.0**
BVA0 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BRVK Borovoye 69.59 329 P **P 15 26 26.1 -2.0**
comp=Z,284nm,1.0s,mb6.2,SNR=29
BRVK Borovoye 69.59 329 ⇑*i*P **P 15 26 26.4 -1.7**
comp=Z,60nm,1.1s,mb5.4
BRVK LR LR
comp=Z,300nm,21.0s,MS4.5
BRVK Borovoye 69.59 329 ⇑*i*P **P 15 26 26.4 -1.7**
BRVK pmax pmax
comp=Z,60nm,1.1s,mb5.4
BRVK MLR MLR
comp=Z,300nm,21.0s,MS4.5
ABKT Ailbek 71.71 310 P **P 15 26 40.8 -0.6**
comp=Z,129nm,1.3s,mb5.7,SNR=7.6
TIXI Tiksi 71.92 1 ⇑*i*P **P 15 26 40.7 -1.2**
comp=Z,27nm,0.4s,mb5.5
TIXI Tiksi 71.92 1 *c i*P **P 15 26 40.8 -1.2**
TIXI *e*S S 15 35 52.8 -6.3
TIXI pmax pmax
comp=Z,79nm,1.4s,mb5.5
AB31 Akbulak array 73.88 322 *i* P **P 15 26 52.3 -1.7**
BILL Bilibino 74.04 15 ⇑*e*P **P 15 26 53.9 -0.6**
comp=Z,17nm,1.1s,mb4.9
BILL *e*pP pP 15 27 04.8 -3.7
BILL LR LR
comp=Z,258nm,20.0s,MS4.5
BILL Bilibino 74.04 15 *c i*P **P 15 26 54.8 +0.2**
BILL *e* pP 15 27 08.9 +0.4
BILL *e*S S 15 36 27.9 +4.6
BILL pmax pmax
comp=Z,21nm,1.8s,mb4.8
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.2
SVE Sverdlovsk 76.25 329 *de*P **P 15 27 06.2 -1.3**
SVE *e* pP 15 27 21.5 +0.1
SVE *e*PPP 15 31 50.9
SVE pmax pmax
comp=Z,75nm,0.9s,mb5.6
ARU Arti 77.17 329 P **P 15 27 10.5 -2.2**
comp=Z,326nm,0.9s,mb6.3,SNR=23
ARU Arti 77.17 329 ⇑*i*P **P 15 27 10.6 -2.0**
comp=Z,78nm,1.1s,mb5.5
ARU LR LR
comp=Z,329nm,19.0s,MS4.7
ARU Arti 77.17 329 *c i*P **P 15 27 10.8 -1.9**
ARU *e* pP 15 27 21.0 -5.7
ARU *e* 15 30 03.6
ARU *e*S S 15 36 55.8 -2.4
ARU pmax pmax
comp=Z,66nm,1.0s,mb5.5
QRN Al-Qurain 78.36 299 *e*P **P 15 27 17.5 -2.4**
QRN AMb AMB 15 27 18.5
comp=Z,21nm,0.3s,mb5.6
KBD Kabd 78.61 300 *e*P **P 15 27 18.9 -2.4**
KBD AMb AMB 15 27 26.3
comp=Z,87nm,0.5s,mb6.0
UMR Umm Al-Rimmam 78.64 300 *e*P **P 15 27 19.5 -2.0**

UMR AMb AMB 15 27 27.2
comp=Z,48nm,0.8s,mb5.5
RDF Al-Radifah 78.70 299 *e*P **P** **15 27 19.4 -2.4**
RDF AMb AMB 15 27 24.9
comp=Z,30nm,0.7s,mb5.3
NAY Al-Naaiem 79.01 300 *e*P **P** **15 27 20.5 -3.0**
NAY AMb AMB 15 27 28.7
comp=Z,22nm,0.8s,mb5.1
GAMB Gambell 79.01 24⇑ *i*P **P** **15 27 23.8 +1.0**
SOKR Solikamsk 79.14 331 *e*P **P** **15 27 22.2 -1.3**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
SOKR MLR MLR
comp=Z,280nm,15.0s,MS4.7
MAW Mawson 79.18 200 P **P** **15 27 25.5 +2.0**
MAW LR LR 15 55 31.2
MAW Mawson 79.18 200 P **P** **15 27 25.5 +2.0**
comp=Z,9.0nm,0.9s,mb4.7,baz=44,slow=22,SNR=2.4
MAW LR LR 15 55 31.2
comp=Z,294nm,21.7s,MS4.6,baz=64,slow=30
RST Umm Al-Ruwaisa 79.25 300 *e*P **P** **15 27 22.1 -2.7**
RST AMb AMB 15 27 29.4
comp=Z,49nm,0.7s,mb5.5
VNDA Vanda 79.72 172 *e*P **P** **15 27 27.4 +1.1**
comp=Z,25nm,1.2s,mb5.0
VNDA LR LR
comp=Z,508nm,22.0s,MS4.8
VNDA Vanda 79.72 172 *e*P **P** **15 27 27.5 +1.1**
VNDA pmax pmax
comp=Z,25nm,1.2s
VNDA MLR MLR
comp=Z,508nm,22.0s
VNDA Vanda 79.72 172 P **P** **15 27 28.1 +1.7**
comp=Z,11nm,0.9s,mb4.8,baz=306,slow=7.1,SNR=9.5
VNDA LR LR 16 04 51.0
comp=Z,305nm,18.6s,MS4.7,baz=328,slow=37
FALS False Pass 80.06 34 *e*P **P** **15 27 29.3 +0.7**
TNA Tin City 81.19 23⇑ *i*P **P** **15 27 35.4 +0.9**
comp=Z,17nm,0.9s,mb5.0
SDPT Sand Point 81.82 34 *e*P **P** **15 27 38.9 +0.9**
comp=Z,235nm,0.6s,mb6.3
BHD Baghdad 81.88 304 *ex* x 15 27 37.0
DGRG David-gareji 82.03 312 P **P** **15 27 38.0 -1.4**
MTA Mtatsminda 82.50 312 P **P** **15 27 41.2 -0.7**
MSL Mosul 83.23 306 *ex* x 15 27 44.5
ZEI Tsey 83.28 313 *e*P **P** **15 27 44.5 -1.4**
ZEI *i* pP 15 27 55.1 -5.0
ZEI *e* 15 30 56.3
ZEI pmax pmax
comp=Z,46nm,1.3s,mb5.3
ONI Oni 83.59 313 P **P** **15 27 47.0 -0.5**
KIV Kislovodsk 84.29 314 *e*P **P** **15 27 51.3 +0.2**
comp=Z,11nm,0.8s,mb5.0
KIV LR LR
comp=Z,236nm,21.0s,MS4.5
KIV Kislovodsk 84.29 314 *e*P **P** **15 27 51.7 +0.7**
KIV *e* 15 38 10.7
KIV pmax pmax
comp=Z,11nm,0.7s,mb5.1
SVW2 Sparrevohn 85.44 29 *e*P **P** **15 27 57.6 +1.2**
SVW2 *e*pP pP 15 28 11.0 +0.4
TTA Tatalina 85.53 27 *e*P **P** **15 27 57.4 +0.6**
comp=Z,23nm,0.8s,mb5.5
TTA Tatalina 85.53 27 *e*P **P** **15 27 57.4 +0.6**
TTA pmax pmax
comp=Z,23nm,0.8s,mb5.5
VRHR Novokhopersk 85.74 321 *e*P **P** **15 27 56.7 -1.4**
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.8
VRHR pmax pmax
comp=N,5.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.6s
PPT Papeete 86.06 107 *e*S S 15 38 33.8 +2.2
comp=E,950nm,26.2s
PPT *e*SS SS 15 44 11.0 +0.2
comp=E,240nm,27.8s
PPT *e*LR LR 15 55 23.5
comp=E,356nm,25.5s
SOC Sochi 86.41 314 *i* P **P** **15 28 01.1 -0.5**
SOC Sochi 86.41 314 *e*P **P** **15 27 57.6 -4.0**
SOC *e* 15 31 18.8
SOC *e*S S 15 38 18.8 -15
SOC pmax pmax
comp=Z,45nm,1.1s,mb5.6
SOC MLR MLR
comp=Z,104nm,12.0s,MS4.5
IMA2 Indian Mountai 87.00 24 *e*P **P** **15 28 04.9 +0.9**
IMA2 *e*pP pP 15 28 18.3 +0.1
MALT Malatya 87.08 308⇑ *i*P **P** **15 28 04.5 -0.5**
comp=Z,17nm,0.8s,mb5.3
MALT Malatya 87.08 308 *i*P **P** **15 28 04.8 -0.2**
KMBO Kilima Mbogo 87.19 269 P **P** **15 28 07.5 +1.4**
KMBO LR LR 16 04 47.8
KMBO Kilima Mbogo 87.19 269 P **P** **15 28 07.5 +1.4**
comp=Z,15nm,0.9s,mb5.2,baz=71,slow=5.0,SNR=36
KMBO LR LR 16 04 47.8
comp=Z,441nm,20.6s,MS4.8,baz=277,slow=34
VORD Divnogorie 87.20 321 *e*P **P** **15 28 03.8 -1.5**
VORD pmax pmax
comp=Z,20nm,0.7s,mb5.5
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,60nm,0.9s
SYO Syowa Base 87.84 201⇓ *e*P **P** **15 28 07.8 -0.2**
SYO Syowa Base 87.84 201⇑ *e*PcP PcP 15 28 09.0 -0.8
SLKM Skilak Lake 87.98 30 *e*P **P** **15 28 08.3 -0.5**
SLKM *e*pP pP 15 28 21.8 -1.2
ANN Anapa 88.11 315 *e*P **P** **15 28 07.4 -2.4**
ANN *e**PP pP 15 28 18.6 -5.5
ANN pmax pmax
comp=Z,53nm,0.9s,mb5.8
MOS Moscow 88.48 326 *e*P **P** **15 28 09.3 -2.0**
PMR Palmer 88.58 29 PFAKE 15 28 20.0 +8.4
PMR LR LR
comp=Z,218nm,20.0s,MS4.6
TMCR Tamitsa 88.73 334 *e*P **P** **15 28 09.7 -2.6**
TMCR pmax pmax
comp=Z,47nm,1.2s,mb5.7
MCK McKinley 88.79 26 *e*P **P** **15 28 11.7 -0.9**
comp=Z,15nm,1.0s,mb5.3
MCK *e*pP pP 15 28 25.0 -1.8
MCK McKinley 88.79 26 *e*P **P** **15 28 11.7 -0.9**
MCK *e**PP pP 15 28 25.0 -1.8
MCK pmax pmax
comp=Z,15nm,1.0s,mb5.3
OBN Obninsk 89.06 325 *e*P **P** **15 28 12.7 -1.3**
comp=Z,42nm,0.9s,mb5.8
OBN LR LR
comp=Z,300nm,23.0s,MS4.7
COLA College 89.32 25 *e*P **P** **15 28 13.6 -1.4**
comp=Z,13nm,1.1s,mb5.2
COLA College 89.32 25⇑ *e*P **P** **15 28 14.4 -0.6**
QSPA South Pole Qui 89.60 180⇑ *e*P **P** **15 28 17.8 +1.7**
comp=Z,42nm,1.1s,mb5.7
QSPA *e*pP pP 15 28 31.8 +1.4
LVZ Lovozero 90.23 338 *i* P **P** **15 28 17.4 -1.8**
APA Apatity 90.71 337⇓ *i*P **P** **15 28 20.2 -1.3**
APA *i* pP 15 28 32.2 -3.5
APA pmax pmax
comp=Z,24nm,1.1s,mb5.4
BRTR Keskin Array B 90.84 310 P **P** **15 28 20.9 -1.8**
BRTR LR LR 16 17 31.7
BRTR Keskin Array B 90.84 310 P **P** **15 28 20.9 -1.8**
comp=Z,4.3nm,0.8s,mb4.8,baz=104,slow=4.8,SNR=20
BRTR LR LR 16 17 31.7
comp=Z,75nm,20.6s,MS4.1,baz=140,slow=41
JOF Joensuu 91.73 333 *e*P **P** **15 28 22.5 -3.8**
EGAK Eagle 92.18 25 *e*P **P** **15 28 28.4 +0.1**
comp=Z,33nm,1.6s,mb5.4
EGAK *e*pP pP 15 28 44.7 +2.1
KEV Kevo 92.90 340 *e*P **P** **15 28 28.7 -2.9**
DAWY Dawson 93.00 26⇑ *e*P **P** **15 28 32.6 +0.4**
DAWY *e*pP pP 15 28 46.1 -0.4
ARCES ARCESS Array B 93.45 340 P **P** **15 28 32.6 -1.5**
comp=Z,7.7nm,0.6s,mb5.3,baz=88,slow=5.9,SNR=20
AKASG Malin Array Be 93.58 321 P **P** **15 28 33.1 -2.0**
comp=Z,2.3nm,0.6s,mb4.8,baz=77,slow=3.9,SNR=16
AKASG LR LR 16 17 43.7
comp=Z,145nm,20.6s,MS4.4,baz=80,slow=40
SPB4 Spitsbergen Ar 94.00 349 *e*P **P** **15 28 33.8 -2.8**
KAF Kangasniemi 94.11 332 *ep* **P** **15 28 33.9 -3.4**
comp=Z,3.2nm,0.4s,mb5.1
KAF Kangasniemi 94.11 332 *e*P **P** **15 28 33.9 -3.4**
comp=Z,3.2nm,0.4s,mb5.1
KAF Kangasniemi 94.11 332 *e*P **P** **15 28 33.9 -3.4**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb5.1
FINES FINESS Array B 94.31 332 P **P** **15 28 36.4 -1.9**
FINES FINESS Array B 94.31 332 P **P** **15 28 36.4 -1.8**
FINES FINESS Array B 94.31 332 P **P** **15 28 36.4 -1.9**
comp=Z,2.7nm,0.5s,mb4.9,baz=74,slow=5.5,SNR=20
TIRR Tirgusor 94.55 314⇓ *i*P **P** **15 28 39.2 -0.5**
INK Inuvik 94.75 21⇑ *e*P **P** **15 28 39.8 -0.3**
comp=Z,1μm,1.3s
INK *e*pP pP 15 28 52.0 -2.4
VRI Vrincioaia 95.63 316⇓ *i*P **P** **15 28 44.0 -0.6**
LSZ Lusaka 95.96 255⇑ *i*P **P** **15 28 46.9 +0.1**
comp=Z,18nm,0.9s,mb5.5
LSZ *e*pP pP 15 29 00.5 -0.5
LSZ LR LR
comp=Z,1μm,21.0s,MS5.4
MLR Muntele Rosu 96.21 316⇓ *i*P **P** **15 28 46.4 -0.9**
BURAR Bucovina Array 96.48 318⇓ *i*P **P** **15 28 48.1 -0.3**
BOSA Boshof 97.92 241 P **P** **15 28 55.7 +0.3**
comp=Z,2.2nm,0.8s,mb4.8,baz=104,slow=7.4,SNR=2.9
BOSA LR LR 16 09 17.7
comp=Z,258nm,18.3s,MS4.8,baz=171,slow=33
UZH Uzhgorod 98.28 319 *e*P **P** **15 28 56.0 -0.6**
UZH *e* pP 15 29 12.6 +1.7
RKT Rikitea 99.60 113 *e*PS PS 15 42 09.2 +2.9
comp=Z,349nm,28.8s
RKT Rikitea 99.60 113 *e*SKSac SKSac 15 39 42.5 +4.3
comp=Z,257nm,28.2s
RKT *e*SS SS 15 47 28.5 +3.8
comp=Z,162nm,32.5s
RKT *e*LR LR 16 01 39.2
comp=Z,207nm,28.8s
SNAA Sanae 100.73 195 *i* P Pdif 15 29 09.3 +2.0
DAG Danmarks Havn 100.94 352⇓ *i*P Pdif 15 29 06.6 -1.7
DAG pmax pmax
comp=Z,9.0nm,0.3s
DAG Danmarks Havn 100.94 352⇓ *i*P Pdif 15 29 06.6 -1.7
comp=Z,9.1nm,0.3s
SUR Sutherland 101.33 237 PFAKE 15 29 20.0 +10
SUR LR LR
comp=Z,687nm,19.0s,MS5.2
NB2 NORSAR Subarra101.37 333 P Pdif 15 29 08.0 -2.1
comp=Z,24nm,1.7s,baz=72,slow=4.4
NB2 NORSAR Subarra101.37 333 P Pdif 15 29 08.0 -2.1
NB2 pmax pmax
comp=Z,24nm,1.7s
NOA NORSAR Array B101.37 333 P Pdif 15 29 08.2 -1.9
comp=Z,1.8nm,0.7s,baz=73,slow=4.5,SNR=4.9
NOA PP PP 15 33 19.9 +0.4
comp=Z,2.1nm,0.9s,baz=70,slow=7.1,SNR=3.9
RES Resolute Bay 102.19 10 *e*P Pdif 15 29 09.2 -4.6
comp=Z,136nm,0.6s
CLL Collm 103.54 323 *ep*PP 15 33 47.0
CLL LmV 15 21 00.0
comp=Z,200nm,21.6s
CLL *e*Sdif Sdif 15 41 18.0 +14
CLL *es*PS 15 43 04.0
CLL *e*PPS 15 43 42.0
CLL *e*SS SS 15 48 30.0 +13
CLL *e*SSS 15 52 54.0
YKA Yellowknife Ar 104.12 24 Pdiff Pdif 15 29 23.1 +0.8
comp=Z,0.8nm,0.8s,baz=298,slow=4.7,SNR=12
YKA PKiKP PKiKP 15 33 39.3 +0.3
comp=Z,0.8nm,0.5s,baz=307,slow=1.8,SNR=12
YKA PKKPbc PKKPbc 15 45 11.3 -1.9
comp=Z,0.6nm,0.7s,baz=112,slow=2.4,SNR=10
GRF Grafenberg Arr 105.10 322 *e*PP PP 15 33 51.1 +3.3
TSUM Tsumeb 105.80 250 PFAKE 15 34 00.0 +17
TSUM LR LR
comp=Z,498nm,21.0s,MS5.0
LPG La Plagne 109.33 319 *e*PP PP 15 34 16.6 -2.3
comp=Z,93nm,1.8s
LPL La Plagne 109.34 319 *e*PP PP 15 34 16.3 -2.7
comp=Z,81nm,1.8s
CMB Columbia Colle 109.83 49 PFAKE 15 34 00.0 +10
CMB LR LR
comp=Z,235nm,20.0s,MS4.8
NVAR Mina Array Bea 111.29 49 PKiKP PKiKP 15 33 54.9 +1.7
comp=Z,1.0nm,0.7s,baz=278,slow=1.0,SNR=5.8
NVAR PKKPab PKKPab 15 44 59.9 +0.8
comp=Z,0.4nm,0.5s,baz=140,slow=5.4,SNR=3.6
TPH Tonopah 112.21 49 PFAKE 15 34 10.0 +15
TPH LR LR
comp=Z,209nm,19.0s,MS4.7
HLID Hailey 112.33 42 *e*PKPdf PKiKP 15 33 56.9 +2.0
ELK Elko 112.78 45 PFAKE 15 34 10.0 +14
ELK LR LR
comp=Z,239nm,20.0s,MS4.8
TPNV Topopah Spring 113.30 50 PFAKE 15 34 10.0 +13
TPNV LR LR
comp=Z,200nm,22.0s,MS4.7
EGMT Eagleton 113.39 36 *e*PKPdf PKiKP 15 33 57.8 +1.0
FFC Flin Flon 113.86 27 *e*PKPdf PKiKP 15 33 57.5 -0.1
HVU Hansel Valley 114.12 44 *e*PKPdf PKiKP 15 33 58.2 -0.2
LKWY Lake 114.56 40 *e*PKPdf PKiKP 15 34 00.8 +1.6
DUG Dugway 114.71 45 PFAKE 15 34 10.0 +10
DUG LR LR
comp=Z,248nm,20.0s,MS4.8
REDW Red Top Meadow 114.78 41 *e*PKPdf PKiKP 15 34 01.2 +1.6
HWUT Hardware Ranch 115.03 43 PFAKE 15 34 10.0 +10
HWUT LR LR
comp=Z,356nm,22.0s,MS4.9
MSU Marysvale 115.79 47 *e*PKPdf PKPdf 15 34 03.4 +1.6
BW06 Albuquerque 115.89 41 PFAKE 15 34 10.0 +8.1
BW06 LR LR
comp=Z,314nm,21.0s,MS4.9
PDAR Pinedale Array 115.89 41 PKP PKPdf 15 34 02.9 +1.0
comp=Z,1.4nm,0.6s,baz=143,slow=1.8,SNR=10
PDAR PKKPbc PKKPbc 15 44 33.9 -0.6
comp=Z,1.1nm,0.9s,baz=131,slow=8.1,SNR=3.6
PDAR PKKPab PKKPab 15 44 38.8 +0.1
comp=Z,2.4nm,0.8s,baz=114,slow=5.3,SNR=16
PDAR PKKP PKKPbc 15 44 59.4 +25
comp=Z,1.2nm,0.8s,baz=125,slow=5.8,SNR=4.7
LAO LASA Array 116.14 36 PKPdf PKPdf 15 34 03.5 +1.3
SRU San Rafael 116.75 46 *e*PKPdf PKPdf 15 34 04.9 +1.2
WUAZ Wupatki 117.49 50 *e*PKPdf PKPdf 15 34 06.9 +1.7
PV10 Paradox Valley 118.11 46 *e*P PKPdf 15 33 57.8 -8.4
PV01 Paradox Valley 118.55 46 *e*PKPdf PKPdf 15 34 08.6 +1.5
ESDC Sonseca Array 118.90 316 PKP PKPdf 15 34 08.7 +1.0
ESDC Sonseca Array 118.90 316 PKP PKPdf 15 34 08.7 +1.0
comp=Z,0.3nm,0.3s,baz=106,slow=1.9,SNR=3.7
ULM Lac du Bonnet 119.60 29 *e*PKPdf PKPdf 15 34 08.3 -0.4
ULM Lac du Bonnet 119.60 29 PKP PKPdf 15 34 08.7 0.0
comp=Z,5.9nm,0.7s,baz=288,slow=2.8,SNR=13
ISCO Idaho Springs 119.88 43 *e*PKPdf PKPdf 15 34 10.7 +1.0
ISCO LR LR
comp=Z,175nm,21.0s,MS4.7
SDCO Great Sand Dun 120.90 45 PFAKE 15 34 20.0 +8.3
SDCO LR LR
comp=Z,188nm,20.0s,MS4.7
ANMO Albuquerque 121.42 48 *e*PKPdf PKPdf 15 34 14.4 +1.7
ANMO LR LR
comp=Z,270nm,20.0s,MS4.9
BNM Barren Site 121.62 49 *e*PKPdf PKPdf 15 34 14.8 +1.7
TOA0 Torodi Ar. Sit 121.90 285 *e*PKPdf PKPdf 15 34 14.1 -0.1
TORD Torodi Ar. Bea 121.90 285 PKP PKPdf 15 34 14.2 0.0
comp=Z,4.9nm,0.6s,baz=68,slow=1.6,SNR=33
TORD PKKPab PKKPab 15 44 15.0 +2.2
comp=Z,3.9nm,0.8s,baz=283,slow=4.4,SNR=20
ECSD EROS,Sioux Fal 123.40 35 *e*PKPdf PKPdf 15 34 16.3 0.0
MNTX Cornudas Mount 123.56 51 *e*PKPdf PKPdf 15 34 18.3 +1.4
SCHQ Schefferville 124.90 8 PKP PKPdf 15 34 19.5 +0.7
SCHQ PP PP 15 36 07.0 +0.6
SCHQ LR LR
comp=Z,532nm,20.0s,MS5.2
SCHQ Schefferville 124.90 8 PKP PKPdf 15 34 19.5 +0.7
comp=Z,10nm,0.6s,baz=22,slow=2.9,SNR=29
SCHQ PP PP 15 36 07.0 +0.6
comp=Z,4.0nm,0.9s,baz=319,slow=9.3,SNR=2.4
LTX Lajitas 125.86 53 PFAKE 15 34 30.0 +8.6
LTX LR LR
comp=Z,249nm,19.0s,MS4.9
TXAR Lajitas Array 125.86 53 PKP PKPdf 15 34 23.2 +1.8
TXAR Lajitas Array 125.86 53 PKP PKPdf 15 34 23.2 +1.8
comp=Z,3.4nm,0.8s,baz=247,slow=0.9,SNR=17
KSU1 Kansas State U 126.18 39 *e*PKPdf PKPdf 15 34 22.2 +0.5
KSU1 *ep*PKPdf pPKPdf 15 34 36.6 +0.1
WMOK Wichita Mounta 127.11 45 *e*PKPdf PKPdf 15 34 24.7 +1.1
JCT Junction City 128.41 50 *e*PKPdf PKPdf 15 34 27.3 +1.1
JCT *ep*PKPdf pPKPdf 15 34 41.4 +0.4
KIC Kosan Boka 128.96 278 *e*PKIKP PKPdf 15 34 28.6 +0.9
comp=Z,108nm,1.6s
TIC Toumodi 129.21 278 *e*PKIKP PKPdf 15 34 28.6 +0.4
comp=Z,19nm,0.2s
LIC Lamto 129.25 278 *e*PKIKP PKPdf 15 34 28.0 -0.3
comp=Z,7.9nm,0.5s
LIC Lamto 129.25 278 *e*PKIKP PKPdf 15 34 29.0 +0.7
comp=Z,35nm,1.2s
MIAR Mount Ida 130.81 42 *e*PKPdf PKPdf 15 34 32.6 +1.9
MIAR *ep*PKPdf pPKPdf 15 34 46.6 +1.2
ACSO Alum Creek Sta 133.10 29 *e*PKPdf PKPdf 15 34 35.0 +0.2
OXF Oxford 133.55 39 *e*PKPdf PKPdf 15 34 36.7 +0.8
OXF *e*SKP 15 38 00.8
PLAL Pickwick Lake 134.08 38 *e*PKPdf PKPdf 15 34 37.0 +0.1
PLAL *ep*PKPdf pPKPdf 15 34 51.4 -0.2
SSPA Standing Stone 135.05 24 *e*PKPdf PKPdf 15 34 38.3 -0.2
SSPA *e*SKP 15 38 04.7
LRAL Lakeview Retre 136.03 39 *e*PKPdf PKPdf 15 34 40.7 +0.1
LRAL *e*SKP 15 38 08.2
LUPA Lehigh Univers 136.06 22 *e*Pdif Pdif 15 31 40.6 -3.7
ELN Prospectdale 136.53 30 *e*PKPdf PKPdf 15 34 40.6 -0.7
ELN *e*SKP 15 38 09.9
CMIG Matias Romero 137.85 65 PKhKP 15 34 41.3
comp=Z,3.7nm,0.8s,baz=350,slow=5.1,SNR=5.3
CMIG PKP PKPdf 15 34 45.8 +1.4
comp=Z,5.5nm,0.6s,baz=282,slow=3.7,SNR=9.9
MDZ Mendoza 144.66 160 *e*P PKPdf 15 34 57.3 +1.1
SOR Soroa 145.20 48 *e*P PKPbc 15 34 58.3 +1.3
PAYG Puerto Ayora 145.25 92 *e*PKPdf PKPdf 15 35 00.4 +2.6
TGUH Tegucigalpa,Un 145.78 65 *e*PKPdf PKPdf 15 35 00.6 +2.1
LCO Las Campanas 147.42 155 *e*PKPbc PKPbc 15 35 05.0 +1.6
JTS JuntasAbangare 149.13 70 *e*PKPdf PKPdf 15 35 03.7 -0.5
JTS *e*PKPbc PKPbc 15 35 08.5 +0.1
JTS LR LR
comp=Z,251nm,21.0s,MS5.0
LMGC Las Mercedes 151.27 46 *e*P PKPbc 15 35 11.9 -1.4
NNA Nana 155.57 121 PFAKE 15 35 30.0 +16
NNA LR LR
comp=Z,189nm,22.0s,MS4.9
LPAZ La Paz 159.34 144 *e*PKPdf PKPdf 15 35 20.9 +2.6
LPAZ *e*PKPab PKPab 15 35 59.3 +3.6
LPAZ LR LR
comp=Z,183nm,21.0s,MS4.9
LPAZ La Paz 159.34 144 PKP PKPdf 15 35 21.1 +2.7
comp=Z,4.2nm,0.9s,baz=87,slow=1.2,SNR=15
LPAZ PKPab PKPab 15 35 59.0 +3.3
comp=Z,9.5nm,0.7s,baz=198,slow=4.1,SNR=12
ROSC El Rosal 160.71 76 PKP PKPdf 15 35 22.2 +2.3
comp=Z,9.2nm,0.7s,baz=105,slow=16,SNR=4.6
SDV Santo Domingo 162.74 60 *e*PKPdf PKPdf 15 35 22.6 +0.5

ISCJB ***01*** *15:26:50.5±5.1, 45S±02×153.4E±0.3, h141km±39km, mb3.8/6, Error ellipse: s-maj=42.2km s-min=30.1km az=0.4*
IDC ***01*** *15:26:50.1±8.4, 4.43S×153.45E, h128km±58km, mb3.6/4, mb1 3.8/5, mb1mx3.4/16, mbtmp3.7/5, Error ellipse: s-maj=66.7km s-min=52.0km az=96.0*
NEIC ***01*** *15:26:51.3±5.2, 4.45S×153.39E, h136km±36km, mb3.9/3, Error ellipse: s-maj=48.3km s-min=23.9km az=77.0*
ISC 01 15:26:51.0±5.2, 44S±02×153.4E±0.3, h134km±37km, n12, σ0.9 96/12, mb3.8/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.94**	**231**	P		**Pn**	**15 28 43.3**	**-0.3**
	6.9nm,0.3s,baz=44,slow=5.5,SNR=32			S		**Sn**	**15 30 12.3**	**+0.4**
PMG	1.5nm,0.3s,baz=128,slow=18,SNR=5.5							
WB2	**Warramunga Arr**	**24.14**	**229**	*e*P		**P**	**15 31 55.2**	**+0.5**
WRA	**Warramunga Arr**	**24.15**	**229**	P		**P**	**15 31 55.5**	**+0.7**
	3.8nm,0.5s,mb4.2,baz=53,slow=9.9,SNR=29							
ASAR	**Alice Springs**	**26.84**	**223**	P		**P**	**15 32 18.8**	**-0.2**
	0.4nm,0.4s,mb3.4,baz=56,slow=9.1,SNR=12							
STKA	**Stephens Creek**	**29.48**	**201**	*e*P		**P**	**15 32 41.6**	**-0.8**
	3.0nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**29.48**	**201**	P		**P**	**15 32 42.0**	**-0.5**
	2.0nm,0.8s,mb3.9,baz=42,slow=16,SNR=4.9							
FITZ	**Fitzroy Crossi**	**30.37**	**241**	P		**P**	**15 32 50.0**	**-0.5**
	2.1nm,0.9s,mb3.9,baz=45,slow=11,SNR=6.9							
KULM	**Kulim**	**53.56**	**280**	*e*P		**P**	**15 35 56.6**	**-2.0**
LSA	**Lhasa**	**68.52**	**304**	P		**P**	**15 37 41.9**	**+2.6**
	1.5nm,0.6s,mb3.9							
AAK	**Ala-Archa**	**84.84**	**313**	P		**P**	**15 39 10.9**	**+0.2**
	0.7nm,0.8s,mb3.4							
QSPA	**South Pole Qui**	**85.55**	**180**	P		**P**	**15 39 13.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**150.75**	**289**	PKPbc	PKPbc		15 46 28.3	-0.2
	0.4nm,0.4s,baz=87,slow=2.4,SNR=5.5							

KRSC 01 15:56:52.1±0.5, 5499N×16417E, h17km±17km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.44**	**328**	*e*P		Pn	15 57 16.0	-1.4
KBTR				*i* S		Sn	15 57 32.7	-3.2
SMKR	**Semkarok**	**2.21**	**317**	*e*P		Pn	15 57 29.1	+1.2
SMKR				*i* S		Sn	15 57 56.8	+2.0
BZMR	**Bezymyannaya**	**2.30**	**296**	P		Pn	15 57 30.1	+0.9
BDR	**Baidarnaya**	**2.30**	**315**	*e*P		Pn	15 57 31.3	+2.1
BDR				*i* S		Sn	15 57 59.2	+2.1
TUMR	**Tumrok**	**2.33**	**279**	*e*P		Pn	15 57 31.5	+1.9
TUMR				*i* S		Sn	15 58 00.4	+2.7
KMNR	**Kamenistaya**	**2.37**	**290**	*e*P		Pn	15 57 32.3	+2.1
KMNR				*i* S		Sn	15 58 01.5	+2.7
SRKR	**Sorokina**	**2.38**	**316**	*e*P		Pn	15 57 32.2	+2.0
SRKR				*i* S		Sn	15 58 02.0	+3.1
KIRR	**Kirishev**	**2.38**	**295**	*e*P		Pn	15 57 31.4	+1.1
KRSR	**Krestovskiy**	**2.39**	**302**	P		Pn	15 57 33.5	+3.1
KLY	**Klyuchi**	**2.39**	**305**	*e*P		Pn	15 57 29.7	-0.8
KLY				*i* S		Sn	15 57 57.4	-2.0
KPT	**Kopyto**	**2.45**	**295**	*e*P		Pn	15 57 33.6	+2.4
KOZ	**Kozyrevsk**	**2.67**	**295**	*e*P		Pn	15 57 37.1	+2.9
KOZ				*i* S		Sn	15 58 10.9	+4.8
SRDR	**Sredinnyy**	**2.85**	**300**	*e*P		Pn	15 57 39.3	+2.6
SPN	**Mys Shipunski**	**3.09**	**234**	*e*P		Pn	15 57 40.1	0.0
SPN				*i* S		Sn	15 58 14.8	-1.8
AVH	**Avacha**	**3.63**	**244**	*e*P		Pn	15 57 49.7	+2.2
AVH				*i* S		Sn	15 58 31.7	+1.8
GNL	**Ganaly**	**3.87**	**253**	*e*P		Pn	15 57 53.3	+2.6
GNL				*i* S		Sn	15 58 38.1	+2.4

ISCJB ***01*** *16:07:19.6±1.2, 31.0N±0.2×138.9E±0.3, h400km±19km, mb3.1/5, Error ellipse: s-maj=40.5km s-min=20.8km az=155.0*
IDC ***01*** *16:07:20.2±2.4, 30.87N×138.59E, h378km±33km, mb3.0/5, mb1 3.1/6, mb1mx2.9/21, mbtmp2.9/6, Error ellipse: s-maj=72.0km s-min=14.7km az=72.0*
JMA ***01*** *16:07:22.0±0.5, 30.91N×139.00E, h364km, M3.3*
ISC 01 16:07:21.1±1.1, 311N±02×139.0E±0.3, h398km±19km, n13, σ0.8 85/15, mb3.1/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**3.95**	**18**	P		**Pn**	**16 08 33.7**	**+1.3**
BSO3				*e*S		**S**	**16 09 29.6**	**-0.7**
BSO1	**Boso 1**	**3.95**	**24**	P		**Pn**	**16 08 32.9**	**+0.4**
BSO1				*e*S		**S**	**16 09 30.0**	**-0.4**
BSO4	**Boso 4**	**4.08**	**15**	*e*S		**S**	**16 09 32.4**	**-0.3**
JOD2	**Odawara 2**	**4.21**	**1**	*e*S		**S**	**16 09 33.3**	**-1.5**
JAO	**Obara**	**4.46**	**341**	P		**Pn**	**16 08 38.4**	**+1.0**
JRY	**Ryogami san**	**4.96**	**359**	P		**Pn**	**16 08 43.3**	**+0.9**
JAG	**Ashikaga**	**5.38**	**4**	P		**Pn**	**16 08 47.8**	**+1.0**
MJAR	**Matsushiro Arr**	**5.52**	**353**	P		**Pn**	**16 08 48.0**	**-0.3**
	0.5nm,0.3s,baz=165,slow=10,SNR=4.2							
SONM	**Songino Array**	**29.98**	**313**	P		**P**	**16 12 54.4**	**-0.1**
	0.2nm,0.4s,mb2.8,baz=79,slow=7.5,SNR=3.6							
MKAR	**Makanchi Array**	**45.87**	**307**	P		**P**	**16 15 04.3**	**-1.1**
	0.1nm,0.3s,mb2.6,baz=87,slow=8.6,SNR=4.2							
WRA	**Warramunga Arr**	**50.90**	**186**	P		**P**	**16 15 42.8**	**-0.7**
	0.9nm,0.4s,mb3.4,baz=0.8,slow=8.0,SNR=56							
ASAR	**Alice Springs**	**54.62**	**186**	P		**P**	**16 16 09.8**	**-0.6**
	0.4nm,0.3s,mb3.1,baz=358,slow=4.7,SNR=26							
FINES	**FINESS Array B**	**73.19**	**332**	P		**P**	**16 18 10.4**	**+1.1**
	2.4nm,1.1s,mb3.7,baz=99,slow=4.4,SNR=3.2							

ISCJB ***01*** *16:17:13.3±0.6, 37.42N±0.09×134.9E±0.1, h395km±9km, mb2.9/3, Error ellipse: s-maj=17.4km s-min=10.7km az=42.8*
JMA ***01*** *16:17:13.9±0.2, 37.29N×134.82E, h390km, M2.8*

IDC ***01*** *16:17:14.1±1.1, 37.42N×134.98E, h384km±14km, mb2.8/3, mb1 2.8/7, mb1mx2.7/26, mbtmp2.7/7, Error ellipse: s-maj=20.5km s-min=18.2km az=92.0*

ISC 01 16:17:14.5±0.6**, 37.4N**±0.1**×134.8E**±0.1**, h385**km±9km**, n17, σ0.33**/18**, mb2.9**/3**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSZ	Suzu	2.01	87	P	Pn	16 18 09.5	+0.4
JWT	Wachi	2.12	168	P	Pn	16 18 09.6	-0.4
JNG	Nsakai	2.78	109	P	Pn	16 18 15.4	+0.6
JSD	Sado	2.79	75	P	Pn	16 18 14.8	0.0
MAT	Matsushiro	2.81	106	P	Pn	16 18 14.9	-0.1
MAT	Matsushiro	2.81	106	P	Pn	16 18 15.2	+0.2
MJAR	Matsushiro Arr	2.82	106	P	Pn	16 18 15.4	+0.4
	1.3nm,0.3s,baz=285,slow=10,SNR=24						
JIE	Ise	3.33	152	P	Pn	16 18 19.4	-0.1
JHK	Hiroka	3.33	91	P	Pn	16 18 19.2	-0.2
JFT	Otama	4.38	86	P	Pn	16 18 29.4	+0.1
JMM	Marumori	4.75	82	P	Pn	16 18 32.8	-0.3
JNU	Nakatsue	5.33	219	P	Pn	16 18 38.9	-0.5
	0.2nm,0.3s,baz=22,slow=42,SNR=2.5						
KSRS	Korea Array	5.51	273	P	Pn	16 18 41.4	+0.2
	0.1nm,0.3s,baz=94,slow=10,SNR=4.1						
ASAJ	Asahikawa	8.95	39	P	Pn	16 19 19.5	-0.6
	2.7nm,0.3s,baz=246,slow=10,SNR=33						
ASAJ				S	S	16 20 57.5	-5.6
	0.4nm,0.3s,baz=315,slow=32,SNR=8.8						
MKAR	Makanchi Array	39.48	301	P	P	16 24 09.5	+0.3
	0.2nm,0.3s,mb2.9,baz=71,slow=11,SNR=2.8						
WRA	Warramunga Arr	56.99	181	P	P	16 26 21.5	0.0
	0.3nm,0.4s,mb2.9,baz=16,slow=7.2,SNR=7.9						
ASAR	Alice Springs	60.70	181	P	P	16 26 46.7	+0.1
	0.6nm,1.1s,mb2.9,baz=359,slow=6.4,SNR=3.0						

ISK ***01*** *16:27:31.8, 38.40N×39.20E, h5km, MD3.0*
CSEM ***01*** *16:27:32.4±0.1, 38.40N×39.21E, h5km, MD3.1, Error ellipse: s-maj=2.6km s-min=2.3km az=139.0*
ISCJB ***01*** *16:27:33.1±0.4, 38.37N±0.03×39.24E±0.03, h5km, Error ellipse: s-maj=4.4km s-min=3.4km az=10.4*
DDA ***01*** *16:27:33.8, 38.34N×39.24E, h5km±1km, Md3.1*

ISC 01 16:27:33.5±0.5**, 38.38N**±0.03**×39.24E**±0.03**, h3**km±6km**, n15, σ0.94**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.24	301	*i* P	Pg	16 27 38.2	+0.2
ELZG				*i* S	Sg	16 27 42.1	+1.0
PTK	Pertek	0.53	13	PG	Pg	16 27 42.9	-0.7
PTK				SG	Sg	16 27 51.4	+0.9
MALT	Malatya	0.64	265	PG	Pg	16 27 44.9	-0.9
MYA	Malataya	0.64	266	PG	Pg	16 27 44.8	-1.0
MYA				SG	Sg	16 27 54.2	+0.1
DIYA	Diyarbakir	0.83	123	*i* P	Pg	16 27 49.2	-0.1
DIYA				*i* S	Sg	16 28 00.6	+0.5
DIY	Diyarbakir	0.91	121	PG	Pg	16 27 50.9	0.0
URFA	Urfa	0.99	200	PG	Pg	16 27 52.6	+0.2
ATAB	Bozova	1.17	220	*i* P	Pg	16 27 55.2	-0.8
ATAB				*i* S	Sg	16 28 12.6	+1.4
EZC	Erzincan	1.44	18	*e*PN	Pn	16 27 59.0	-1.4
BNGL	BINGOL	1.60	68	*i* P	Pn	16 28 02.9	+0.3
BNGL				*i* S	Sn	16 28 25.6	+1.8
MARD	Mardin	1.61	131	*i* P	Pn	16 28 02.0	-0.7
MARD				*i* S	Sn	16 28 23.5	-0.5
GZT	Gaziantep	1.67	233	*i* P	Pn	16 28 02.8	-0.7
GZT				*i* S	Sn	16 28 28.4	+3.0
BTMT	Batman	1.78	95	*e*PN	Pn	16 28 03.8	-1.2
SVSK	Karacayir	2.33	312	*e*PN	Pn	16 28 12.4	-0.2
SIRT	Sirnak	2.67	108	*e*PN	Pn	16 28 18.3	+0.9

MAN 01 16:27:35, 10.65N×124.68E, h26km, mb4.1, ML2.9, MS2.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.40	350	*e*P	Pb	16 27 45.4	+1.7
OCLP				*e*S	Sb	16 27 53.5	+3.9
MSLP	Maasin	0.54	161	*e*P	Pb	16 27 47.1	+1.1
MSLP				*e*S	Sb	16 27 57.7	+4.3
SCPH	Surigao	1.18	137	⇓ *e*P	Pn	16 27 56.0	+0.2
SCPH				*e*S	Sn	16 28 11.5	+0.5

ISCJB ***01*** *16:36:58.5±3.1, 45.5S±0.7×95.3E±0.9, h10km, mb3.7/4, MS4.0/8, Error ellipse: s-maj=133.2km s-min=15.9km az=139.1*
IDC ***01*** *16:36:58.3±3.9, 45.53S×95.23E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/14, mbtmp3.8/4, MS4.0/8, Ms1 4.0/8, ms1mx3.9/21, Error ellipse: s-maj=158.0km s-min=29.3km az=139.0*

ISC 01 16:37:00.4±3.1**, 45.5S**±0.7**×95.3E**±0.9**, h10**km**, n13, σ0.60**/6**, mb3.7**/4**, MS4.0**/8**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	21.04	61	LR	LR	16 47 58.4	
	comp=Z,492nm,20.3s,MS3.9,baz=213,slow=31						
MAW	Mawson	27.85	206	LR	LR	16 50 47.9	
	comp=Z,162nm,18.0s,MS3.6,baz=67,slow=30						
FITZ	Fitzroy Crossi	37.17	53	LR	LR	16 55 51.5	
	comp=Z,149nm,21.5s,MS3.8,baz=66,slow=30						
ASAR	Alice Springs	38.02	68	P	P	16 44 19.1	+0.4
	1.2nm,1.0s,mb3.6,baz=219,slow=7.2,SNR=6.1						
STKA	Stephens Creek	38.08	85	P	P	16 44 19.0	-0.1
	1.4nm,0.9s,mb3.7,baz=337,slow=22,SNR=2.4						
WRA	Warramunga Arr	40.97	65	P	P	16 44 43.0	-0.3
	1.4nm,0.7s,mb3.7,baz=224,slow=8.5,SNR=11						
WRA				LR	LR	16 59 50.3	
	comp=Z,453nm,19.6s,MS4.3,baz=100,slow=33						
VNDA	Vanda	40.98	162	LR	LR	17 00 25.4	
	comp=Z,238nm,19.1s,MS4.1,baz=343,slow=34						
SNAA	Sanae	49.98	204	P	P	16 45 53.3	-0.8
	1.1nm,0.9s,mb3.9,baz=122,slow=12,SNR=3.8						
VNA2	Neumayer--Watz	51.63	204	*e*	P	16 46 06.9	+0.4
	baz=107,slow=6.9						
VNA2				*e*		16 46 13.2	
VNA2				*e*		16 46 17.3	
VNA2				*e*		16 46 21.2	
VNA3	Neumayer Olymp	52.12	203	*e*	P	16 46 10.5	+0.4
VNA3				*e*		16 46 17.1	
VNA3				*e*		16 46 21.3	
VNA3				*e*		16 46 24.9	
BOSA	Boshof	56.67	262	LR	LR	17 04 19.2	
	comp=Z,152nm,21.7s,MS4.1,baz=176,slow=29						
HNR	Honiara	65.60	78	LR	LR	17 13 02.0	
	comp=Z,253nm,19.7s,MS4.4,baz=180,slow=33						
KMBO	Kilima Mbogo	67.32	293	LR	LR	17 10 18.4	
	comp=Z,76nm,18.9s,MS3.9,baz=90,slow=30						

ISCJB ***01*** *16:39:53.8±2.4, 18.66S±0.07×173.28W±0.08, h12km±14km, mb4.8/32, MS4.4/18, Error ellipse: s-maj=15.4km s-min=7.3km az=44.5*
GCMT ***01*** *16:39:57.5±0.5, 18.54S×172.42W, h13km±1km, MW5.0/55, Moment Tensor Solution. s18,c25; s55,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.69±.20; $M_{\theta\theta}$-0.98±.12; $M_{\phi\phi}$-1.71±.14; $M_{r\theta}$-1.00±.33; $M_{\theta\phi}$-1.37±.10; $M_{\phi r}$2.06±.40; Best double couple: $M_0$3.46900×10^{16} NP1:ϕ_s238.00000°, δ39.00000°, λ133.00000°. NP2: ϕ_s8.00000°, δ63.00000°, λ61.00000°. Principal axes: T 3.9320, Plg61.0000°, Azm234.0000°; N -0.9260, Plg25.0000°, Azm22.0000°; P -3.0060, Plg13.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *16:39:57.5±5.7, 18.67S×173.24W, h27km±39km, mb4.9/22 Error ellipse: s-maj=14.0km s-min=9.0km az=152.0*
SZGRF ***01*** *16:39:57.3, 19.37S×169.64W, h33km, Tonga Islands region*
IDC ***01*** *16:39:59.7±2.7, 18.77S×173.24W, h41km±23km, mb4.3/12, mb1 4.5/13, mb1mx4.4/20, mbtmp4.3/13, ML4.1/1, MS4.3/17, Ms1 4.3/17, ms1mx4.0/33, Error ellipse: s-maj=25.7km s-min=12.3km az=147.0*
MOS ***01*** *16:40:04.3±1.2, 17.67S×172.11W, h33km, mb5.0/8, Error ellipse: s-maj=25.9km s-min=12.4km az=73.1*

ISC 01 16:39:59.4±2.0**, 18.70S**±0.08**×173.25W**±0.07**, h41**km±18km**, n175, σ0.97**/86**, mb4.8**/32**, MS4.4**/18**, 5C-9D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.97	17	*e*Pn	Pn	16 41 03.4	-8.1
AFI	Afiamalu	4.97	17	P	Pn	16 41 05.7	-5.9
	8.0nm,0.3s,baz=175,slow=15,SNR=14						
RAR	Rarotonga	12.92	103	P	Pn	16 42 47.7	-13
	4.8nm,0.3s,baz=255,slow=6.7,SNR=12						
RAR				LR	LR	16 47 09.1	
	comp=Z,355nm,18.1s,baz=254,slow=33						
DZM	Mont Dzumac	19.33	257	P	Pn	16 44 22.5	-0.2
	0.5nm,0.3s,baz=80,slow=22,SNR=5.3						
OTAZ	Otara	20.94	207	P	P	16 44 39.9	+1.2
OTAZ	Otara	20.94	207	PN	P	16 44 39.5	+0.8
MKAZ	Moumakai	20.97	207	P	P	16 44 39.6	+0.6
MKAZ	Moumakai	20.97	207	PN	P	16 44 39.6	+0.6
URZ	Urewera	21.22	201	P	P	16 44 41.0	-0.8
	48nm,0.9s,mb4.8,baz=14,slow=6.4,SNR=25						
URZ				S	S	16 48 34.7	-0.7
	3.5nm,0.6s,baz=91,slow=22,SNR=5.1						
PPT	Papeete	22.52	91	*e*LQ		16 49 04.8	
	3μm,25.5s						
PPT				*e*LR	LR	16 50 02.9	
	2μm,26.0s,baz=263						
PPT	Papeete	22.52	91	LR	LR	16 50 28.8	
	comp=Z,777nm,21.1s,MS4.1,baz=258,slow=28						
SNZO	South Karori	24.78	202	P	P	16 45 13.2	-4.1
	63nm,1.2s,mb5.0						
THZ	Tophouse	25.84	204	*e*P	P	16 45 30.3	+3.3
THZ	Tophouse	25.84	204	*e*PN	P	16 45 33.0	+6.0
DSZ	Denniston Nort	26.27	206	*e*P	P	16 45 33.6	+2.7
DSZ	Denniston Nort	26.27	206	*e*PN	P	16 45 33.6	+2.8
LTZ	Lake Taylor	26.96	204	*e*P	P	16 45 43.2	+6.2
LTZ	Lake Taylor	26.96	204	*e*PN	P	16 45 43.2	+6.2
HNR	Honiara	27.55	286	LR	LR	16 55 05.7	
	comp=Z,747nm,20.1s,MS4.3,baz=178,slow=33						
WVZ	Waitaha Valley	27.82	206	*e*P	P	16 45 46.7	+2.0
WVZ	Waitaha Valley	27.82	206	*e*PN	P	16 45 48.0	+3.2
RPZ	Rata Peaks	28.22	205	P	P	16 45 49.3	+0.9
	8.9nm,0.9s,mb4.4,baz=197,slow=3.7,SNR=4.2						
RKT	Rikitea	35.96	104	*e*LR	LR	16 56 00.0	
	2μm,33.5s						
CTA	Charters Tower	38.16	261	*e*P	P	16 47 13.9	-1.2
	9.8nm,0.4s,mb4.9						
CTA	Charters Tower	38.16	261	*e*P	P	16 47 13.9	-1.2
CTA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CTAO	Charters Tower	38.16	261	*e*P	P	16 47 13.8	-1.3
	comp=Z,14nm,0.8s,mb4.8						
CTAO	Charters Tower	38.16	261	*e*P	P	16 47 13.8	-1.3
CTAO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
PMG	Port Moresby	39.42	278	LR	LR	16 59 12.8	
	comp=Z,256nm,20.1s,MS4.0,baz=115,slow=29						
STKA	Stephens Creek	42.59	243	*e*P	P	16 47 50.9	-0.8
	comp=Z,6.4nm,1.0s,mb4.3						
STKA	Stephens Creek	42.59	243	*e*P	P	16 47 50.9	-0.8
	comp=Z,11nm,1.0s,mb4.5						
STKA	Stephens Creek	42.59	243	P	P	16 47 51.0	-0.7
	comp=Z,1.8nm,0.5s,mb4.1,baz=89,slow=12,SNR=8.7						
STKA				LR	LR	17 04 52.6	
	comp=Z,904nm,18.7s,MS4.7,baz=31,slow=35						
WB2	Warramunga Arr	49.30	259	*e*P	P	16 48 43.4	-1.3
ASAR	Alice Springs	49.30	255	P	P	16 48 44.1	-0.5
	comp=Z,7.4nm,0.5s,mb5.0,baz=90,slow=8.0,SNR=195						
ASAR				S	S	16 55 48.6	+0.2
	comp=Z,0.8nm,0.8s,baz=103,slow=16,SNR=5.4						
WRA	Warramunga Arr	49.31	259	P	P	16 48 43.3	-1.5
	comp=Z,1.5nm,0.3s,mb4.5,baz=96,slow=7.6,SNR=69						
WRA				S	S	16 55 49.3	+0.8
	comp=Z,0.8nm,0.8s,baz=97,slow=14,SNR=3.2						
GUMO	Guam	52.28	305	LR	LR	17 08 54.0	
	comp=Z,206nm,20.9s,MS4.2,baz=119,slow=33						
FITZ	Fitzroy Crossi	57.73	260	P	P	16 49 46.3	-0.3
	comp=Z,2.4nm,0.7s,mb4.3,baz=47,slow=5.3,SNR=5.7						
MBWA	Marble Bar	62.63	255	*e*P	P	16 50 19.3	-0.8
	comp=Z,50nm,1.5s,mb5.4						
QSPA	South Pole Qui	71.36	180	*e*P	P	16 51 13.5	-1.1
	comp=Z,8.2nm,0.9s,mb4.7						
MJAR	Matsushiro Arr	71.55	320	P	P	16 51 17.0	+0.7
	comp=Z,4.3nm,1.0s,mb4.3,baz=154,slow=6.5,SNR=7.4						
MJAR				LR	LR	17 16 02.9	
	comp=Z,237nm,21.3s,MS4.4,baz=130,slow=30						
LPIG	La Paz	74.66	58	LR	LR	17 20 45.3	
	comp=Z,160nm,18.1s,MS4.4,baz=7.4,slow=33						
CMB	Columbia Colle	75.15	41	P	P	16 51 37.6	+0.1
MTUM	Tungsten Hills	75.87	42	*e*P	P	16 51 41.4	-0.2
YSS	Yuzh-Sakhalins	76.41	331	*e*P	P	16 51 42.5	-1.9
	comp=Z,20nm,1.3s,mb4.9						
YSS	Yuzh-Sakhalins	76.41	331	*i* P	P	16 51 46.2	+1.7
YSS				pmax	pmax		
	comp=Z,18nm,1.9s,mb4.7						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.2						
NVAR	Mina Array Bea	76.69	41	P	P	16 51 46.5	+0.2
NVAR	Mina Array Bea	76.69	41	P	P	16 51 46.5	+0.3
	comp=Z,7.3nm,1.0s,mb4.5,baz=216,slow=7.7,SNR=22						
TPH	Tonopah	77.16	42	*e*P	P	16 51 48.5	-0.4
TUC	Tucson	78.37	50	*e*P	P	16 51 55.4	-0.4
	comp=Z,14nm,1.4s,mb4.7						
TUC	Tucson	78.37	50	*e*P	P	16 51 55.4	-0.4
TUC				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.7						
KSRS	Korea Array	78.61	316	P	P	16 51 59.6	+2.6
	comp=Z,4.6nm,1.0s,mb4.4,baz=124,slow=5.4,SNR=8.4						
KSRS				LR	LR	17 24 30.1	
	comp=Z,171nm,18.1s,MS4.4,baz=135,slow=34						
ARUT	Antelope Range	79.44	44	*e*P	P	16 51 59.9	-1.7
MSU	Marysvale	80.67	44	*e*P	P	16 52 08.8	+0.6
BBB	Bella Bella	80.76	26	LR	LR	17 23 46.6	
	comp=Z,150nm,18.5s,MS4.4,baz=215,slow=32						
HABR	Khabarovsk	81.19	328	⇑ *e*P	P	16 52 14.1	+3.4
HABR				*e*	pP	16 52 24.5	+1.4
HABR				*e*	pP	16 52 27.7	+4.6
HABR				*e*		16 55 21.3	
HABR				S	S	17 02 18.9	+1.2
HABR				*e*		17 07 34.4	
MNTX	Cornudas Mount	82.08	53	*e*P	P	16 52 15.4	-0.4
	comp=Z,11nm,1.1s,mb4.7						
GAMB	Gambell	82.22	1	P	P	16 52 14.8	-0.9
BNM	Barren Site	82.31	50	*e*P	P	16 52 16.7	-0.2
LTX	Lajitas	82.33	56	*e*P	P	16 52 16.5	-0.7
	comp=Z,18nm,1.3s,mb4.8						
LTX	Lajitas	82.33	56	*e*P	P	16 52 16.5	-0.7
LTX				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
TXAR	Lajitas Array	82.33	56	P	P	16 52 17.6	+0.4
	comp=Z,5.9nm,1.0s,mb4.5,baz=216,slow=6.2,SNR=18						
TXAR				LR	LR	17 21 47.3	
	comp=Z,105nm,19.8s,MS4.2,baz=175,slow=30						
PV10	Paradox Valley	82.70	46	*e*P	P	16 52 18.0	-0.8
ANMO	Albuquerque	82.81	50	*e*P	P	16 52 20.7	+1.1
	comp=Z,11nm,1.3s,mb4.7						
ANMO	Albuquerque	82.81	50	*i* P	P	16 52 17.3	-2.2
PV01	Paradox Valley	82.89	46	*e*P	P	16 52 20.2	+0.3
NEW	Newport	83.34	34	LR	LR	17 26 32.7	
	comp=Z,341nm,18.1s,MS4.8,baz=170,slow=34						
MCMT	McKenzie Canyo	83.73	38	*e*P	P	16 52 24.3	+0.3
TNA	Tin City	84.10	2	*e*P	P	16 52 27.1	+1.7
	comp=Z,9.8nm,1.1s,mb4.8						
REDW	Red Top Meadow	84.13	41	*e*P	P	16 52 26.4	+0.3
	comp=Z,9.2nm,1.1s,mb4.8						
TPAW	Teton Pass	84.14	40	*e*P	P	16 52 26.0	-0.2
	comp=Z,8.1nm,1.0s,mb4.8						
MCK	McKinley	84.32	11	*e*P	P	16 52 26.1	-0.5
	comp=Z,6.0nm,1.0s,mb4.7						
MCK	McKinley	84.32	11	*e*P	P	16 52 26.1	-0.5
MCK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
SMCO	Snowmass	84.50	46	*e*P	P	16 52 28.7	+0.6
	comp=Z,7.3nm,0.9s,mb4.8						
QLMT	Earthquake Lak	84.57	39	*e*P	P	16 52 29.0	+0.7
PDAR	Pinedale Array	84.62	42	P	P	16 52 28.0	-0.6
	comp=Z,3.1nm,0.8s,mb4.5,baz=216,slow=3.2,SNR=25						
MAW	Mawson	84.73	199	LR	LR	17 25 40.2	
	comp=Z,215nm,20.6s,MS4.5,baz=242,slow=32						
SDCO	Great Sand Dun	84.82	47	*e*P	P	16 52 29.2	-0.5
	comp=Z,5.6nm,1.2s,mb4.6						
CMIG	Matias Romero	84.85	70	LR	LR	17 25 07.5	
	comp=Z,127nm,19.2s,MS4.3,baz=188,slow=32						
BOZ	Bozeman (W)	84.90	38	*e*P	P	16 52 29.8	-0.1
	comp=Z,5.0nm,1.2s,mb4.5						
BOZ	Bozeman (W)	84.90	38	*e*P	P	16 52 29.8	-0.1
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
COLA	College	85.56	11	*e*P	P	16 52 32.2	-0.6
	comp=Z,24nm,1.0s,mb5.4						
COLA	College	85.56	11	*i* P	P	16 52 33.0	+0.2
IMA2	Indian Mountai	85.79	8	*e*P	P	16 52 34.8	+0.8
DAWY	Dawson	86.57	14	*e*P	P	16 52 37.8	0.0
EGAK	Eagle	86.78	13	*e*P	P	16 52 39.4	+0.6
	comp=Z,16nm,1.4s,mb5.1						
BILL	Bilibino	87.78	352	*e*P	P	16 52 44.7	+1.1
	comp=Z,7.9nm,1.0s,mb4.9						
BILL	Bilibino	87.78	352	*d i*P	P	16 52 45.0	+1.4
BILL				*e*S	S	17 03 23.3	+0.7
BILL				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.9						
HIA	Hailar	89.90	323	*e*P	P	16 52 53.4	-0.5
EFI	East Falkland	90.10	146	P	P	16 52 51.2	-3.9
	comp=Z,144nm,1.4s,mb6.1						
EFI	East Falkland	90.10	146	P	P	16 52 51.2	-3.9
EFI				pmax	pmax		
	comp=Z,144nm,1.4s						
INK	Inuvik	91.42	14	*e*P	P	16 53 01.4	+0.8
	comp=Z,295nm,1.3s						
JTS	JuntasAbangare	91.65	80	*e*P	P	16 53 02.1	-0.8
	comp=Z,64nm,1.5s						
JTS	JuntasAbangare	91.65	80	*c i*P	P	16 53 02.6	-0.4
TEIG	Tepich	91.81	69	LR	LR	17 26 13.2	
	comp=Z,72nm,20.5s,MS4.1,baz=268,slow=30						
YKA	Yellowknife Ar	93.05	23	P	P	16 53 08.3	0.0
	comp=Z,0.9nm,0.9s,mb4.2,baz=238,slow=3.9,SNR=10						
ULN	Ulaanbaatar	96.98	318	*i* P	P	16 53 32.8	+6.2
SONM	Songino Array	97.38	318	LR	LR	17 35 41.1	
	comp=Z,123nm,18.1s,MS4.4,baz=16,slow=34						
LPAZ	La Paz	98.55	110	LR	LR	17 27 30.3	
	comp=Z,167nm,21.8s,MS4.5,baz=152,slow=29						
ZALV	Zalesovo Beam	111.89	321	PKiKP	PKiKP	16 58 29.7	-0.1
	comp=Z,0.2nm,0.3s,baz=169,slow=0.7,SNR=2.7						
ZAL	Zalesovo	111.91	321	PKIKP	PKiKP	16 58 29.7	-0.1
MKAR	Makanchi Array	113.22	314	PKiKP	PKiKP	16 58 32.4	-0.1
	comp=Z,0.1nm,0.2s,baz=194,slow=0.7,SNR=3.0						
ARU	Arti	126.19	327	*i* PKIKP	PKPdf	16 58 58.5	+1.4
ARU				MLR	MLR		
	comp=Z,100nm,20.0s,MS4.5						
AKASG	Malin Array Be	143.41	336	PKP	PKPdf	16 59 28.2	-1.1
	comp=Z,1.4nm,0.7s,baz=39,slow=3.5,SNR=6.7						
KMBO	Kilima Mbogo	144.12	240	PKP	PKPdf	16 59 30.6	-1.1
	comp=Z,6.5nm,0.9s,baz=61,slow=3.0,SNR=8.7						
KELT	Kelkit	144.82	314	*i* P	PKPdf	16 59 33.6	+1.5
MARD	Mardin	144.95	309	*i* P	PKPdf	16 59 34.5	+2.0
ELZG	Elazig	145.76	312	*i* P	PKPbc	16 59 38.0	+3.7
LVV	L'vov	146.00	340	*e*PKHKP		16 59 36.3	
NRDL	Niedersach Rie	146.17	356	*e*PKPbc	PKPbc	16 59 36.8	+1.8
MALT	Malatya	146.23	312	*e*PKPdf	PKPdf	16 59 36.6	+2.0
MALT	Malatya	146.23	312	⇓ *i*P	PKPbc	16 59 38.8	+3.1
KSP	Ksiaz	147.04	349	*e*PKP	PKPbc	16 59 40.1	+2.5
KSP				*e*PKPdf	PKPab	16 59 43.4	+4.2
KSP	Ksiaz	147.04	349	*i* PKP2	PKPab	16 59 43.4	+4.2
CLL	Collm	147.09	353	⇓ *i*PKiKP	PKiKP	16 59 39.2	-1.0
	comp=Z,27nm,1.2s						
CLL				*i* pPKPbc	pPKPbc	16 59 46.1	-4.5
CLL				*i* sPKiKP		16 59 51.8	
CLL	Collm	147.09	353	*e*PKPbc	PKPbc	16 59 38.9	+1.2
STHS	Stebnicka Huta	147.21	342	*e*PKP	PKPdf	16 59 38.7	+2.8
STHS				*e*		16 59 56.5	
GZT	Gaziantep	147.27	311	*i* P	PKPbc	16 59 41.2	+2.5
KOLS	Kolonicke sedl	147.34	341	*e*PKP	PKPbc	16 59 43.7	+5.2
BRG	Berggiesshubel	147.39	352	*e*PKIKP	PKPbc	16 59 41.0	+2.4
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG	Berggiesshubel	147.39	352	*e*PKPbc	PKPbc	16 59 40.6	+2.0
BRG	Berggiesshubel	147.39	352	*e*PKP	PKPbc	16 59 41.0	+2.4
	comp=Z,13nm,1.1s						
UPC	Upice	147.42	349	*e*PKP	PKPbc	16 59 41.2	+2.5
FBE	Freiberg	147.43	352	*e*PKPbc	PKPbc	16 59 40.7	+2.0
BURAR	Bucovina Array	147.45	337	⇑ *i*P	PKPbc	16 59 42.7	+3.8
DPC	Dobruska-Polom	147.51	349	*e*PKP	PKPbc	16 59 41.1	+2.2
UZH	Uzhgorod	147.60	341	*d i*PKIKP	PKPbc	16 59 41.8	+2.6
UZH				*i*		16 59 44.8	
UZH				*e*		16 59 52.8	
CRVS	Cervenica-Dubn	147.61	342	*e*PKP	PKPbc	16 59 41.5	+2.2
OKC	Ostrava-Krasne	147.62	346	*e*PKP	PKPbc	16 59 41.5	+2.2
PVCC	Panska Ves	147.64	351	*e*PKP	PKPbc	16 59 40.9	+1.6
MORC	Moravsky Berou	147.81	347	*e*PKPbc	PKPbc	16 59 41.5	+1.7
MORC	Moravsky Berou	147.81	347	⇓ *i*P	PKPbc	16 59 41.6	+1.8
MOX	Moxa	147.89	354	*e*P	PKPdf	16 59 42.2	+5.2
	comp=Z,34nm,1.9s						
MOX	Moxa	147.89	354	*e*PKPbc	PKPbc	16 59 41.9	+1.9
TRPA	Tarpa	147.96	340	⇑ *i*P	PKPdf	16 59 40.1	+2.9
WERD	Werda	148.02	353	*e*PKPbc	PKPbc	16 59 41.2	+0.9
TANN	Tannenbergstha	148.03	353	*e*PKPbc	PKPbc	16 59 41.7	+1.4
GUNZ	Gunzen	148.10	353	*e*PKPbc	PKPbc	16 59 41.9	+1.4
PRU	Pruhonice	148.17	350	*e*PKP	PKPbc	16 59 42.2	+1.5
PRU				*e*pPKP	pPKPdf	16 59 50.1	-0.3
WERN	Wernitzgruen	148.17	353	*e*PKPbc	PKPbc	16 59 43.3	+2.6
NKC	Novy Kostel	148.21	353	*e*PKP	PKPbc	16 59 41.6	+0.8
NKC				*e*pPKP	pPKPdf	16 59 45.7	-4.8
KECS	Kecovo	148.27	343	*e*PKP	PKPbc	16 59 42.6	+1.6
ELDT	Eldivan	148.44	319	*i* P	PKPbc	16 59 44.6	+2.8
VRAC	Vranov	148.45	348	⇓ *i*P	PKPbc	16 59 44.8	+3.3
MANZ	Manzenberg	148.49	353	*e*PKPbc	PKPbc	16 59 43.3	+1.7
GIVF	Givet	148.63	2	*e*PKP1	PKPbc	16 59 42.0	+0.1
BAIF	Baives	148.65	3	*e*PKP1	PKPbc	16 59 42.8	+0.8
ROTZ	Rotzenmuhle	148.70	353	*e*PKPbc	PKPbc	16 59 44.3	+2.2
VYHS	Vyhne	148.71	344	*e*PKP	PKPbc	16 59 44.1	+1.9
KOLL	Kolacno	148.73	345	*e*PKP	PKPbc	16 59 44.5	+2.3
BRTR	Keskin Array B	148.74	318	PKPbc	PKPbc	16 59 44.4	+1.9
	comp=Z,3.1nm,0.9s,baz=100,slow=2.8,SNR=11						
GRA1	Grafenberg Arr	148.88	354	*e*PKPbc	PKPbc	16 59 43.5	+0.9
GRF	Grafenberg Arr	148.88	354	*e*PKPbc	PKPbc	16 59 43.5	+0.9
MLR	Muntele Rosu	148.89	333	⇓ *i*P	PKPbc	16 59 43.3	+0.6
KHC	Kasperske Hory	149.15	351	*i* PKIKP	PKPbc	16 59 45.7	+2.4
KHC	Kasperske Hory	149.15	351	*e*PKP	PKPbc	16 59 45.5	+2.2
KHC				*e*pPKP	pPKPdf	16 59 54.0	+2.0
ANTO	Ankara	149.19	319	*e*PKPbc	PKPbc	16 59 44.5	+0.8
SGKT	Sivrigoynuk	149.23	320	*i* P	PKPbc	16 59 45.4	+1.6
WET	Wettzell	149.23	352	*e*PKPbc	PKPbc	16 59 45.7	+2.2
VOIR		149.31	334	⇓ *i*P	PKPbc	16 59 46.2	+2.4
ZST	Bratislava	149.40	346	*e*PKP	PKPbc	16 59 47.6	+3.7
GEC2	GERESS Array S	149.41	351	*e*PKPbc	PKPbc	16 59 45.6	+1.7
GERES	GERESS Array B	149.41	351	PKPbc	PKPbc	16 59 45.4	+1.5
	comp=Z,5.6nm,1.1s,baz=66,slow=3.2,SNR=7.0						
MEZF	Maizieres J'vi	150.24	2	*e*PKP1	PKPbc	16 59 46.9	+0.9
CDF	Champ du Feu	150.36	359	*e*PKP1	PKPbc	16 59 47.1	+0.8
	comp=Z,54nm,1.4s						
BFO	Black Forest	150.42	358	*e*PKPbc	PKPbc	16 59 47.3	+0.9
BZS	Buzias	150.46	339	⇓ *i*P	PKPbc	16 59 49.1	+2.5
PKSM	Moragy	150.86	343	⇑ *i*P	PKPbc	16 59 49.2	+1.7
ULDT	Uludag	151.22	323	*i* P	PKPbc	16 59 50.2	+1.6
PERS	Pernice	151.30	348	*i* PKPdf	PKPbc	16 59 51.7	+3.2
LOR	Lormes	151.41	4	*e*PKP1	PKPbc	16 59 50.6	+1.8
SSF	Saint Saulge	151.59	5	*e*PKP1	PKPbc	16 59 51.2	+2.0
	comp=Z,49nm,1.3s						
SMF	Signal de Mont	152.03	4	*e*PKP1	PKPbc	16 59 50.9	+0.7
VISS	Visnje	152.15	348	*e*PKPdf	PKPbc	16 59 52.8	+2.3
CABF	La Chapelle	152.16	1	*e*PKP1	PKPbc	16 59 52.9	+2.4
BOJS	Bojanci	152.35	347	*e*PKPdf	PKPbc	16 59 53.3	+2.3
TORD	Torodi Ar. Bea	172.64	138	PKP	PKPdf	17 00 03.9	-1.0
	comp=Z,1.3nm,1.1s,baz=283,slow=2.5,SNR=3.3						
TORD				PKPab	PKPab	17 01 31.3	+1.0
	comp=Z,2.3nm,0.8s,baz=252,slow=5.0,SNR=10						

ISCJB ***01*** *16:43:28.5±0.6, 39.86N±0.03×40.40E±0.03, h1km±6km, Error ellipse: s-maj=5.1km s-min=3.9km az=4.4*
CSEM ***01*** *16:43:28.6±0.1, 39.86N×40.36E, h12km, MD3.0, Error ellipse: s-maj=2.7km s-min=2.3km az=11.0*
ISK ***01*** *16:43:28.1, 39.90N×40.39E, h11km, MD3.0*
DDA ***01*** *16:43:29.9, 39.79N×40.38E, h13km±5km, Md3.1*

ISC 01 16:43:29.3±0.5**, 39.86N**±0.03**×40.39E**±0.03**, h6**km±6km**, n12, σ0.99**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.46	256	PG	Sg	16 43 44.3	+0.3
EZM	Erzurum	0.75	86	PG	Pg	16 43 42.4	-1.3
EZM				SG	Sg	16 43 54.0	+0.5
ERZM	Erzurum	0.75	86	*i* P	Pg	16 43 41.5	-2.3
ERZM				*i* S	Sg	16 43 54.6	+1.0
KELT	Kelkit	0.92	289	*i* P	Pg	16 43 46.5	-0.4
KELT				*i* S	Sg	16 43 59.4	+0.6
BINT	Bingol	0.99	175	PG	Pg	16 43 48.5	+0.2
BINT				SG	Sg	16 44 02.9	+1.8
BNGL	BINGOL	1.08	147	*i* P	Pg	16 43 48.8	-1.3
BNGL				*i* S	Sg	16 44 04.4	+0.2
MACK	Trabzon	1.18	337	*i* P	Pg	16 43 51.4	-0.5
MACK				*i* S	Sg	16 44 07.8	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTK	**Pertek**	**1.24**	**219**	PN	**Pn**	**16 43 52.6**	**-0.6**
PTK				SN	**Sn**	**16 44 09.9**	**-0.3**
ARTV	**Artvin**	**1.77**	**41**	*i* P	**Pn**	**16 44 01.1**	**+0.7**
ARTV				*i* S	**Sn**	**16 44 25.2**	**+2.0**
BCA	**Borcka**	**1.84**	**30**	*e*PN	**Pn**	**16 43 59.8**	**-1.6**
TUTA	**Tutak**	**1.93**	**103**	*i* P	**Pn**	**16 44 02.3**	**-0.3**
TUTA				*i* S	**Sg**	**16 44 31.7**	**+0.4**
AGRB	**Hanur-Agry**	**2.03**	**97**	*e*PN	**Pn**	**16 44 03.8**	**-0.2**

*NEIC **01** 16:53:15.1, 3470N×2426E, h28km, MD3.5(ATH), After ATH.*
*CSEM **01** 16:53:15.1, 3470N×2426E, h28km, MD3.5/6, After ATH*
ATH 01 16:53:15.1, 3470N×2426E, h28km±6km, MD3.5/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.20**	**314**	*e*Pg	Pb	16 53 18.6	-2.4
GVD				*e*Sg	Sb	16 53 25.2	+0.1
VAM	**Vamos**	**0.71**	**356**	*e*PN	Pn	16 53 29.0	-0.2
VAM				*e*SN	Sn	16 53 40.0	+0.8
NPS	**Neapolis**	**1.24**	**63**	*e*PN	Pn	16 53 38.3	+1.7
KYTH	**Kithira**	**1.87**	**328**	*e*PB	Pb	16 53 47.5	-1.0
VLI	**Veliai**	**2.28**	**332**	*e*PN	Pn	16 53 53.1	+2.2
KARP	**Karpathos**	**2.52**	**70**	*e*PN	Pn	16 53 56.4	+2.2
APE	**Apeiranthos**	**2.58**	**23**	*e*PN	Pn	16 53 56.4	+1.4

MAN 01 17:10:28, 852N×12614E, h29km, mb4.3, ML3.1, MS2.9, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.40**	**147**	⇓*i*P	Pb	17 10 36.9	+0.1
BIPH				*i* S	Sb	17 10 43.3	+0.5
BUTP	**Butuan**	**0.68**	**311**	*e*P	Pb	17 10 42.1	+0.7
BUTP				*e*S	Sb	17 10 52.5	+2.0
BUKP	**Musuan**	**1.25**	**239**	*e*P	Pn	17 10 49.5	+0.1
BUKP				*e*S	Sn	17 11 07.3	+2.0
SCPH	**Surigao**	**1.41**	**333**	⇑*e*P	Pn	17 10 56.9	+5.2
SCPH				*e*S	Sn	17 11 13.8	+4.5
MATI	**Mati**	**1.57**	**176**	*e*P	Pn	17 10 54.6	+0.6
MATI				*e*S	Sn	17 11 14.1	+0.8
PVCP	**Virac**	**5.41**	**339**	*e*P	Pn	17 11 38.2	-8.5

MEX 01 17:12:21.6±0.6, 1436N×9330W, h20km±345km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.21**	**30**	*e*P	Pn	17 12 53.8	-3.4
CCIG				*i* S	Sn	17 13 20.4	-3.6
SCX	**San Cristobal**	**2.45**	**15**	*e*P	Pn	17 12 59.8	-0.6
CMIG	**Matias Romero**	**3.12**	**331**	*e*P	Pn	17 13 06.8	-2.8
CMIG				*i* S	Sn	17 13 42.9	-3.3

JMA 01 17:25:25.6±0.2, 2556N×12769E, h40km±3km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**0.58**	**5**	P	Pn	17 25 37.3	-0.1
JJT2				*e*S	Sn	17 25 45.8	0.0
NAH1	**Naha**	**0.64**	**0**	P	Pn	17 25 38.1	-0.1
NAH1				*e*S	Sn	17 25 46.9	-0.4
JAGN	**Aguni-jima**	**1.10**	**339**	P	Pn	17 25 45.1	+0.6
JAGN				*e*S	Sn	17 25 59.0	+0.5
JKE	**Kume jima 2**	**1.12**	**313**	P	Pn	17 25 44.9	+0.2
JKE				*e*S	Sn	17 26 00.2	+1.3
JOW	**Kunigami**	**1.37**	**22**	P	Pn	17 25 48.8	+0.5
JIH	**Iheya**	**1.49**	**10**	P	Pn	17 25 50.8	+0.9
JIH				*e*S	Sn	17 26 09.2	+1.1
JTK	**Tokunoshima**	**2.49**	**27**	P	Pn	17 26 05.0	+1.4
JMZ	**Minamidaito 2**	**3.20**	**85**	P	Pn	17 26 12.5	-0.8
JMZ				*e*S	Sn	17 26 47.3	-2.9
JAM	**Amami Oshima**	**3.31**	**31**	P	Pn	17 26 16.1	+1.1
JZK	**Kikaishima**	**3.42**	**36**	P	Pn	17 26 17.9	+1.5

IDC 01 17:58:07.9±8.5, 366N×12452E, h431km±113km, mb2.8/4, mb1 3.0/5, mb1mx2.7/20, mbtmp2.9/5, Error ellipse: s-maj=85.8km s-min=25.3km az=66.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**13.80**	**184**	P	P	18 01 07.0	+0.3
	3.8nm,0.3s,baz=319,slow=9.4,SNR=7.0						
FITZ	**Fitzroy Crossi**	**21.65**	**177**	P	P	18 02 25.6	+0.1
	1.7nm,0.9s,baz=356,slow=14,SNR=4.5						
WRA	**Warramunga Arr**	**25.36**	**158**	P	P	18 02 58.6	-0.1
	0.2nm,0.3s,baz=335,slow=10,SNR=8.2						
SONM	**Songino Array**	**46.70**	**343**	P	P	18 05 56.0	0.0
	0.4nm,0.8s,baz=164,slow=6.7,SNR=3.9						
MKAR	**Makanchi Array**	**56.38**	**326**	P	P	18 07 06.7	+0.1
	0.4nm,0.3s,baz=121,slow=7.6,SNR=15						

*BJI **01** 18:32:45.7, 108S×12462E, h79km, mB5.2, mb4.8, Ms5.0, Msz4.8*
*MOS **01** 18:32:47.0±1.3, 023S×12439E, h33km, mb5.0/21, Error ellipse: s-maj=16.3km s-min=7.2km az=114.7*
*IDC **01** 18:32:48.9±2.8, 023S×12426E, h33km±20km, mb4.3/17, mb1 4.3/18, mb1mx4.3/22, mbtmp4.3/18, ML4.2/1, MS3.7/7, Ms1 3.7/7, ms1mx3.4/22, Error ellipse: s-maj=25.4km s-min=12.6km az=69.0*
*ISCJB **01** 18:32:51.5±0.9, 026S±005×12456E±005, h78km±9km, mb4.7/56, Error ellipse: s-maj=9.5km s-min=6.4km az=145.1*
*NEIC **01** 18:32:53.2±1.4, 027S×12448E, h80km±13km, mb4.9/25, Error ellipse: s-maj=13.4km s-min=6.5km az=58.0*
ISC 01 18:32:53.5±0.8, 032S±005×12453E±005, h81km±7km, n136, σ1.12/129, mb4.7/56, 12C-9D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	**Palu**	**4.73**	**263**	P	**Pn**	**18 34 01.0**	**-1.4**
	869nm,0.8s						
AAI	**Ambon**	**4.96**	**132**	P	**Pn**	**18 34 04.1**	**-1.4**
	280nm,0.8s						
TSM	**Tawau**	**8.08**	**305**	⇑P	**Pn**	**18 34 48.0**	**-0.1**
MYLDM	**Lahad Datu**	**8.13**	**312**	⇑P	**Pn**	**18 34 49.2**	**+0.3**
SDKM	**Sandakan**	**9.42**	**309**	⇑P	**Pn**	**18 35 10.0**	**+3.6**
BATI	**Kupang**	**9.86**	**185**	LR	LR	18 39 17.0	
	comp=Z,561nm,20.9s,baz=13,slow=39						
KKM	**Kota Kinabalu**	**10.43**	**307**	*e*P	**Pn**	**18 35 19.3**	**-1.0**
KKM	**Kota Kinabalu**	**10.43**	**307**	⇓P	**Pn**	**18 35 20.4**	**+0.1**
KDM	**Kudat**	**10.52**	**313**	⇓P	**Pn**	**18 35 21.6**	**+0.2**
BTM	**Bintulu**	**11.96**	**287**	⇑P	**Pn**	**18 35 51.5**	**+10**
SBUM	**Sibu**	**12.61**	**283**	⇓P	**Pn**	**18 35 59.4**	**+10**
KSM	**Kuching**	**14.33**	**277**	*e*P	**Pn**	**18 36 14.0**	**+1.5**
KSM	**Kuching**	**14.33**	**277**	⇑P	**Pn**	**18 36 17.6**	**+5.1**
KAKA	**Kakadu**	**14.60**	**148**	*e*P	**Pn**	**18 36 15.1**	**-0.9**
	54nm,0.7s						
BJII	**Banjamegara**	**16.34**	**244**	P	**Pn**	**18 36 40.3**	**+2.2**
	104nm,1.6s						
FITZ	**Fitzroy Crossi**	**17.71**	**177**	*e*P	**Pn**	**18 36 52.9**	**-1.9**
	10nm,0.7s						
FITZ	**Fitzroy Crossi**	**17.71**	**177**	P	**Pn**	**18 36 53.3**	**-1.5**
	0.7nm,0.3s,baz=54,slow=6.3,SNR=18						
LEM	**Lembang**	**18.07**	**249**	P	**Pn**	**18 37 00.9**	**+1.6**
	113nm,0.9s						
MBWA	**Marble Bar**	**21.24**	**192**	*e*P	**P**	**18 37 33.8**	**+0.8**
KGM	**Kluang**	**21.34**	**276**	⇑P	**P**	**18 37 36.0**	**+1.8**
WRA	**Warramunga Arr**	**21.74**	**154**	P	**P**	**18 37 38.1**	**-0.3**
	14nm,1.0s,mb4.3,baz=334,slow=11,SNR=51						
WRA				PcP	PcP	18 41 38.6	+2.3
	0.5nm,0.5s,baz=331,slow=2.0,SNR=6.3						
WB2	**Warramunga Arr**	**21.75**	**154**	*e*P	**P**	**18 37 37.9**	**-0.5**
KTGM	**Kuala Trenggan**	**22.09**	**285**	⇓P	**P**	**18 37 41.8**	**-0.5**
FRIM	**Kepong**	**23.17**	**279**	⇑P	**P**	**18 37 52.5**	**-0.8**
IPM	**Ipoh**	**23.96**	**282**	⇑P	**P**	**18 38 01.6**	**+1.0**
PPI	**Padang Panjang**	**24.14**	**270**	P	**P**	**18 38 01.6**	**-0.5**
	31nm,1.0s,mb4.6						
KULM	**Kulim**	**24.49**	**283**	⇓P	**P**	**18 38 04.3**	**-1.1**
ASAR	**Alice Springs**	**24.93**	**159**	P	**P**	**18 38 10.6**	**+1.4**
ASAR						18 41 45.5	
ASAR	**Alice Springs**	**24.93**	**159**	P	**P**	**18 38 10.6**	**+1.4**
	9.0nm,0.8s,mb4.3,baz=321,slow=6.6,SNR=73						
ASAR				PcP	PcP	18 41 45.5	+2.5
	3.2nm,0.6s,baz=350,slow=2.0,SNR=17						
ASAR				ScP	ScP	18 45 20.8	+5.8
	1.0nm,0.8s,baz=358,slow=4.1,SNR=5.2						
PSI	**Prapat**	**25.79**	**277**	P	**P**	**18 38 16.0**	**-1.1**
	5.1nm,0.9s,mb4.0,baz=45,slow=2.9,SNR=7.7						
KKTK	**Khon Kaen**	**27.07**	**309**	P	**P**	**18 38 28.0**	**-0.6**
	340nm,0.5s						
FORT	**Forrest**	**30.48**	**174**	*e*P	**P**	**18 39 01.8**	**+3.1**
	13nm,0.6s,mb4.7						
CHG	**Chiang Mai**	**31.51**	**308**	⇓P	**P**	**18 39 08.4**	**+0.4**
	31nm,1.0s,mb5.0						
CHTO	**Chiang Mai**	**31.51**	**308**	*e*P	**P**	**18 39 08.2**	**+0.2**
	12nm,0.8s,mb4.7						
CHTO	**Chiang Mai**	**31.51**	**308**	*e*P	**P**	**18 39 08.2**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
GYA	**Guiyang**	**31.71**	**328**	P	**P**	**18 39 10.6**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2	**Nanjing**	**32.64**	**351**	*e*P	**P**	**18 39 17.4**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**35.29**	**154**	*e*P	**P**	**18 39 42.3**	**+1.6**
	comp=Z,4.6nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**35.29**	**154**	P	**P**	**18 39 42.7**	**+2.0**
	comp=Z,2.6nm,0.8s,mb4.1,baz=308,slow=7.4,SNR=4.6						
STKA				LR	LR	18 55 57.2	
	comp=Z,98nm,21.5s,baz=26,slow=39						
XAN	**Xi'an**	**37.19**	**338**	P	**P**	**18 39 57.6**	**+0.8**
XAN				AMB	AMB		
	comp=Z,18nm,0.9s,mb5.0						
KSRS	**Korea Array**	**37.71**	**4**	P	**P**	**18 40 01.7**	**+0.5**
	comp=Z,1.2nm,0.4s,mb4.1,baz=180,slow=11,SNR=11						
KSRS				LR	LR	18 54 33.7	
	comp=Z,60nm,18.5s,baz=185,slow=35						
MJAR	**Matsushiro Arr**	**38.81**	**18**	P	**P**	**18 40 10.6**	**+0.1**
	comp=Z,12nm,0.8s,mb4.8,baz=194,slow=9.0,SNR=37						
MJAR				LR	LR	18 55 07.3	
	comp=Z,147nm,18.5s,baz=185,slow=34						
MAJO	**Matsushiro**	**38.81**	**18**	*e*P	**P**	**18 40 10.3**	**-0.1**
	comp=Z,12nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**38.81**	**18**	*e*P	**P**	**18 40 10.3**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
MAT	**Matsushiro**	**38.81**	**18**	P	**P**	**18 40 10.5**	**+0.1**
ARMA	**Armidale**	**39.49**	**142**	*e*P	**P**	**18 40 19.7**	**+3.5**
LZH	**Lanzhou**	**41.02**	**334**	⇑P	**P**	**18 40 30.6**	**+1.9**
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,83nm,4.1s						
LZH	**Lanzhou**	**41.02**	**334**	⇑P	**P**	**18 40 30.6**	**+1.9**
	comp=Z,20nm,1.0s,mb4.9						
LZH				pP	pP	18 40 38.2	-10
LZH				sP	sP	18 40 41.7	-16
HHC	**Hu-ho-hao-te**	**42.64**	**345**	*e*P	**P**	**18 40 42.5**	**+0.6**
HHC				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,96nm,4.5s						
LSA	**Lhasa**	**43.63**	**316**	P	**P**	**18 40 51.3**	**+1.2**
LSA	**Lhasa**	**43.63**	**316**	*e*P	**P**	**18 40 51.2**	**+1.1**
	comp=Z,6.3nm,0.6s,mb4.5						
LSA	**Lhasa**	**43.63**	**316**	*e*P	**P**	**18 40 51.2**	**+1.1**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
ODAN	**Odare**	**44.80**	**310**	*e*P	**P**	**18 40 57.9**	**-1.5**
	comp=Z,25nm,0.9s,mb5.0						
TAPN	**Taplejung**	**44.81**	**311**	*e*P	**P**	**18 40 59.3**	**-0.2**
	comp=Z,14nm,0.7s,mb4.8						
GTA	**Gaotai**	**45.55**	**333**	*e*P	**P**	**18 41 06.2**	**+1.0**
GTA				AP	pP	18 41 21.9	-3.1
GTA				PCP	PcP	18 42 44.7	+2.1
GTA				AMB	AMB		
	comp=Z,23nm,1.1s,mb4.8						
JIRN	**Jiri**	**46.12**	**310**	*e*P	**P**	**18 41 09.8**	**-0.1**
	comp=Z,19nm,0.6s,mb5.0						
KKN	**Kakani**	**46.88**	**310**	*e*P	**P**	**18 41 14.9**	**-1.0**
	comp=Z,7.6nm,0.5s,mb4.7						
KKN	**Kakani**	**46.88**	**310**	*e*P	**P**	**18 41 14.9**	**-1.0**
KKN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
GKN	**Gorkha**	**47.48**	**310**	*e*P	**P**	**18 41 19.8**	**-0.7**
	comp=Z,16nm,0.5s,mb5.0						
HYB	**Hyderabad**	**48.56**	**294**	*e*P	**P**	**18 41 29.0**	**0.0**
HYB	**Hyderabad**	**48.56**	**294**	*i* P	**P**	**18 41 29.0**	**0.0**
HABR	**Khabarovsk**	**49.45**	**9**	*e*P	**P**	**18 41 36.5**	**+1.3**
HABR				*e*S	**S**	**18 48 42.5**	**+6.2**
HABR				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	**49.71**	**16**	*i* P	**P**	**18 41 37.4**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.7						
KLR	**Kul'dur**	**49.75**	**6**	*e*P	**P**	**18 41 32.9**	**-4.6**
ULN	**Ulaanbaatar**	**50.34**	**345**	*e*P	**P**	**18 41 41.3**	**-0.8**
	comp=Z,9.6nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**50.34**	**345**	⇓*e*P	**P**	**18 41 42.1**	**+0.1**
SONM	**Songino Array**	**50.49**	**344**	P	**P**	**18 41 43.4**	**+0.3**
	comp=Z,9.4nm,0.9s,mb4.7,baz=160,slow=7.2,SNR=52						
SONM				LR	LR	19 04 15.8	
	comp=Z,58nm,19.1s,baz=195,slow=38						
ZAK	**Zakamensk**	**53.67**	**343**	*e*P	**P**	**18 42 06.1**	**-0.6**
ZAK				*e*		18 43 13.4	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
TLY	**Talaya**	**54.73**	**344**	*e*P	**P**	**18 42 16.9**	**+2.5**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
WMQ	**Urumqi**	**54.87**	**328**	*e*P	**P**	**18 42 16.0**	**+0.5**
MOY	**Mondy**	**55.48**	**342**	*e*P	**P**	**18 42 21.9**	**+2.1**
CLNS	**Chul'man**	**56.98**	**0**	*e*P	**P**	**18 42 30.7**	**+0.4**
CLNS				pmax	pmax		
	comp=E,6.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
BOD	**Bodaibo**	**58.57**	**353**	⇓*i*P	**P**	**18 42 41.3**	**-0.1**
BOD				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
MK31	**Makanchi Array**	**59.69**	**328**	*e*P	**P**	**18 42 48.7**	**-0.8**
MKAR	**Makanchi Array**	**59.69**	**328**	P	**P**	**18 42 48.7**	**-0.8**
MKAR				PcP	PcP	18 43 35.9	+0.2
MKAR				ScP	ScP	18 47 33.2	+3.7
MKAR	**Makanchi Array**	**59.69**	**328**	P	**P**	**18 42 48.7**	**-0.8**
MKAR						18 43 35.9	
MKAR	**Makanchi Array**	**59.69**	**328**	P	**P**	**18 42 48.7**	**-0.8**
	comp=Z,8.1nm,0.6s,mb5.0,baz=122,slow=8.4,SNR=64						
MKAR				PcP	PcP	18 43 35.9	+0.2
	comp=Z,3.2nm,0.7s,baz=120,slow=4.2,SNR=5.5						
MKAR				ScP	ScP	18 47 33.2	+3.7
	comp=Z,0.8nm,0.7s,baz=116,slow=5.5,SNR=4.4						
KZA	**Kyzart**	**61.19**	**320**	P	**P**	**18 43 01.8**	**+2.0**
	SNR=10						
TKM2	**Tokmak 2**	**61.39**	**321**	*e*P	**P**	**18 43 00.7**	**-0.4**
	comp=Z,18nm,0.9s,mb5.1						
TKM2	**Tokmak 2**	**61.39**	**321**	*e*P	**P**	**18 43 00.7**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
TKM2	**Tokmak 2**	**61.39**	**321**	P	**P**	**18 43 03.0**	**+1.9**
	SNR=12						
KBK	**Karagaybulak**	**61.67**	**320**	P	**P**	**18 43 04.1**	**+1.1**
	SNR=9.2						
UCH	**Uchtor**	**61.74**	**320**	*e*P	**P**	**18 43 03.8**	**+0.4**
	comp=Z,8.5nm,1.0s,mb4.7						
UCH	**Uchtor**	**61.74**	**320**	P	**P**	**18 43 04.2**	**+0.7**
	SNR=10						
AAK	**Ala-Archa**	**61.95**	**320**	*e*P	**P**	**18 43 03.9**	**-0.9**
	comp=Z,11nm,1.0s,mb4.8						
AAK	**Ala-Archa**	**61.95**	**320**	*i* P	**P**	**18 43 03.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
AAK				MLR	MLR		
	comp=Z,100nm,18.0s						
AAK	**Ala-Archa**	**61.95**	**320**	P	**P**	**18 43 04.8**	**-0.1**
	SNR=6.7						
AML	**Almayashu**	**62.22**	**319**	*e*P	**P**	**18 43 06.7**	**0.0**
	comp=Z,13nm,1.1s,mb4.9						
AML	**Almayashu**	**62.22**	**319**	P	**P**	**18 43 07.0**	**+0.3**
	SNR=7.5						
USP	**Ospenovka**	**62.26**	**321**	P	**P**	**18 43 06.7**	**-0.2**
	SNR=16						
YAK	**Yakutsk**	**62.31**	**3**	*e*P	**P**	**18 43 07.3**	**+0.5**
	comp=Z,27nm,0.6s,mb5.5						
YAK	**Yakutsk**	**62.31**	**3**	*e*P	**P**	**18 43 08.8**	**+1.9**
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.3						
KBL	**Kabul**	**62.32**	**310**	*e*P	**P**	**18 43 06.0**	**-1.5**
EKS2	**Erkin-Say**	**62.42**	**320**	*e*P	**P**	**18 43 07.7**	**-0.4**
	comp=Z,18nm,1.3s,mb4.9						
EKS2	**Erkin-Say**	**62.42**	**320**	P	**P**	**18 43 05.1**	**-2.9**
	SNR=8.2						
MA2	**Magadan**	**63.14**	**15**	*e*P	**P**	**18 43 14.2**	**+1.7**
	comp=Z,13nm,0.6s,mb5.0						
MA2	**Magadan**	**63.14**	**15**	*e*P	**P**	**18 43 14.5**	**+2.1**
MA2				pmax	pmax		
	comp=N,8.0nm,0.6s						
MA2				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
ZALV	**Zalesovo Beam**	**63.24**	**335**	P	**P**	**18 43 11.4**	**-1.8**
	comp=Z,1.6nm,0.4s,mb4.3,baz=114,slow=7.3,SNR=11						
ZALV				LR	LR	19 12 51.8	
	comp=Z,34nm,18.6s,baz=23,slow=38						
ZAL	**Zalesovo**	**63.24**	**335**	P	**P**	**18 43 11.4**	**-1.8**
KURK	**Kurchatov**	**64.02**	**329**	*e*P	**P**	**18 43 17.4**	**-1.1**
	comp=Z,23nm,0.7s,mb5.1						
KURK	**Kurchatov**	**64.02**	**329***c*	*i*P	**P**	**18 43 17.5**	**-0.9**
NVS	**Novosibirsk**	**64.53**	**335**	*i* P	**P**	**18 43 19.9**	**-1.7**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
NVS				pmax	pmax		
	comp=N,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.0s						
BRVK	**Borovoye**	**69.62**	**328**	*e*P	**P**	**18 43 52.6**	**-1.3**
	comp=E,9.1nm,0.9s,mb4.6						
BRVK	**Borovoye**	**69.62**	**328**	*e*P	**P**	**18 43 52.6**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
TIXI	**Tiksi**	**71.90**	**1**	*e*P	**P**	**18 44 06.9**	**-0.5**
	comp=Z,5.4nm,0.4s,mb4.7						
TIXI	**Tiksi**	**71.90**	**1***c*	*i*P	**P**	**18 44 07.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.6						
AKTK	**Aktyubinsk**	**75.49**	**323**	P	**P**	**18 44 28.1**	**-0.8**
AKTO	**Aktyubinsk**	**75.49**	**323**	P	**P**	**18 44 28.1**	**-0.8**
	comp=Z,6.4nm,0.8s,mb4.4,baz=110,slow=8.2,SNR=23						
SVE	**Sverdlovsk**	**76.27**	**329**	*e*P	**P**	**18 44 32.8**	**-0.4**
SVE				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
ARU	**Arti**	**77.19**	**329**	*e*P	**P**	**18 44 37.0**	**-1.3**
	comp=Z,14nm,1.0s,mb4.7						
ARU	**Arti**	**77.19**	**329***d*	*i*P	**P**	**18 44 37.2**	**-1.2**
ARU				*e*		18 47 29.8	
ARU				*e*PPP		18 49 15.4	
ARU				*e*S	S	18 54 22.5	+1.2
ARU				*e*SSS		19 02 41.5	
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
SOC	**Sochi**	**86.45**	**314**	*e*P	**P**	**18 45 28.3**	**+1.0**
SOC				*e*		18 48 47.6	
SOC				*e*S	S	18 55 51.2	-5.8
IMA2	**Indian Mountai**	**86.95**	**24**	*e*P	**P**	**18 45 30.9**	**+1.7**
MALT	**Malatya**	**87.13**	**308**	*e*P	**P**	**18 45 31.3**	**+0.5**
	comp=Z,3.6nm,0.8s,mb4.3						
MALT	**Malatya**	**87.13**	**308**	*e*P	**P**	**18 45 31.3**	**+0.6**
MALT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
KMBO	**Kilima Mbogo**	**87.27**	**269**	P	**P**	**18 45 32.5**	**+0.5**
KMBO				LR	LR	19 20 55.1	
KMBO	**Kilima Mbogo**	**87.27**	**269**	P	**P**	**18 45 32.5**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.2,baz=55,slow=11,SNR=6.2						
KMBO				LR	LR	19 20 55.1	
	comp=Z,57nm,18.1s,baz=6.4,slow=33						
ASF	**Jabal al Asfar**	**88.16**	**302**	P	**P**	**18 45 35.8**	**0.0**
	comp=Z,2.6nm,0.8s,mb4.3,baz=336,slow=4.6,SNR=3.9						
OBN	**Obninsk**	**89.09**	**325**	*e*P	**P**	**18 45 39.8**	**+0.2**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
MMAI	**Mount Meron Ar**	**89.44**	**303**	P	**P**	**18 45 42.5**	**+0.8**
	comp=Z,1.6nm,0.6s,mb4.2,baz=82,slow=6.0,SNR=5.2						
BRTR	**Keskin Array B**	**90.89**	**310**	*i* P	**P**	**18 45 49.4**	**+1.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**90.89**	**310**	P	**P**	**18 45 47.5**	**-0.8**
	comp=Z,0.8nm,0.4s,mb4.2,baz=117,slow=4.4,SNR=6.2						
JOF	**Joensuu**	**91.75**	**333**	*e*p	**P**	**18 45 49.8**	**-2.0**
	comp=Z,6.3nm,0.5s,mb5.1						
ARCES	**ARCESS Array B**	**93.46**	**340**	P	**P**	**18 45 59.0**	**-0.6**
	comp=Z,2.6nm,0.6s,mb4.8,baz=79,slow=6.5,SNR=10						
AKASG	**Malin Array Be**	**93.62**	**321**	P	**P**	**18 45 59.4**	**-1.3**
	comp=Z,0.8nm,0.6s,mb4.2,baz=72,slow=4.4,SNR=4.7						
KAF	**Kangasniemi**	**94.14**	**332**	*e*p	**P**	**18 46 00.3**	**-2.6**
FINES	**FINESS Array B**	**94.33**	**332**	P	**P**	**18 46 02.4**	**-1.3**
FINES	**FINESS Array B**	**94.33**	**332**	*i* P	**P**	**18 46 02.2**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**94.33**	**332**	P	**P**	**18 46 02.4**	**-1.3**
	comp=Z,1.5nm,0.9s,mb4.3,baz=81,slow=6.0,SNR=8.4						
ULM	**Lac du Bonnet**	**119.54**	**29**	PKP	PKPdf	18 51 34.9	+1.0
ULM	**Lac du Bonnet**	**119.54**	**29**	PKP	PKPdf	18 51 34.9	+1.0
	comp=Z,2.6nm,0.8s,baz=131,slow=3.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**121.97**	**285**	PKP	PKPdf	18 51 40.2	+0.6
TORD	**Torodi Ar. Bea**	**121.97**	**285**	PKP	PKPdf	18 51 40.2	+0.6
	comp=Z,1.2nm,0.6s,baz=90,slow=1.9,SNR=11						
SCHQ	**Schefferville**	**124.87**	**8**	PKP	PKPdf	18 51 44.9	+0.9
	comp=Z,2.6nm,0.7s,baz=6.6,slow=17,SNR=6.7						
TXAR	**Lajitas Array**	**125.78**	**53**	PKP	PKPdf	18 51 48.9	+2.3
	comp=Z,0.4nm,0.7s,baz=153,slow=1.1,SNR=3.9						
LPAZ	**La Paz**	**159.30**	**143**	PKPab	PKPab	18 53 25.8	+4.8
	comp=Z,1.5nm,0.6s,baz=195,slow=3.5,SNR=5.8						

GUC 01 18:34:28.2±0.9, 3317S×7020W, h5km±5km, MD3.6, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.17**	**206**	⇑*i*P	Pg	18 34 32.3	+0.7
FCH				*i* S	Sg	18 34 35.2	+1.3
PCH	**Pirque**	**0.52**	**210**	⇓*i*P	Pg	18 34 38.7	+0.5
PCH				*i* S	Sg	18 34 46.2	+1.3
RCDM	**Rinconada Maip**	**0.60**	**238**	*e*P	Pg	18 34 39.3	-0.3
TACH	**Talagante**	**0.78**	**232**	⇓*i*P	Pg	18 34 42.9	-0.3
TACH				*i* S	Sg	18 34 53.9	+0.6
CHCH	**Chadas Angostu**	**0.85**	**206**	*e*P	Pg	18 34 44.4	0.0
CHCH				*i* S	Sg	18 34 56.7	+1.3
CICH	**Cipreses**	**1.16**	**189**	*e*P	Pg	18 34 50.0	-0.4
CICH				*i* S	Sg	18 35 05.8	+0.4
LNV	**Longovilo**	**1.28**	**232**	*e*P	Pn	18 34 51.1	-1.6
SFDO	**San Fernando**	**1.59**	**205**	*i* P	Pn	18 34 57.1	+0.1
SFDO				*i* S	Sn	18 35 19.1	+1.2

*NIED **01** 19:17:00, 42.10N×142.90E, h50km, Mw3.6 Best double couple: $M_0$2.80000×10^14 NP1:ϕ_s326.00000°, δ37.00000°, λ100.00000°. NP2:ϕ_s133.00000°, δ53.00000°, λ83.00000°.*
*MOS **01** 19:17:09.5±2.2, 4189N×14449E, h33km, mb4.2/2, Error ellipse: s-maj=35.5km s-min=25.3km az=115.7*
*ISCJB **01** 19:17:18.4±0.7, 4203N±006×14290E±008, h53km±5km, mb3.6/5, Error ellipse: s-maj=9.4km s-min=9.4km az=172.0*
*NEIC **01** 19:17:18.2±2.5, 4235N×14291E, h29km±40km, mb3.9/1, Error ellipse: s-maj=62.6km s-min=19.8km az=112.0*
*JMA **01** 19:17:19.7±0.1, 42.10N×14292E, h41km±1km, M3.6*
JMA Felt II J1.
*IDC **01** 19:17:21.5±3.9, 42.12N×14289E, h67km±21km, mb3.4/4, mb1 3.4/6, mb1mx3.2/22, mbtmp3.4/6, Error ellipse: s-maj=72.0km s-min=18.8km az=99.0*
ISC 01 19:17:18.8±0.8, 4200N±007×14290E±007, h45km±6km, n20, σ0.66/27, mb3.6/5, 3C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.19**	**85**	*e*P	**Pn**	**19 17 26.8**	**+0.2**
JEM	**Erimo**	**0.19**	**85**	⇑P	**Pn**	**19 17 27.0**	**+0.4**
JNBK	**Urakawa-nobuka**	**0.30**	**339**	⇑P	**Pn**	**19 17 27.0**	**-0.6**
JNBK				*e*S	**Sn**	**19 17 33.1**	**-0.6**
JCH	**Churui**	**0.70**	**29**	⇓P	**Pn**	**19 17 31.8**	**-0.6**
JCH				*e*S	**Sn**	**19 17 41.0**	**-1.3**
JBT2	**Biratori 2**	**0.87**	**333**	⇓P	**Pn**	**19 17 34.8**	**+0.1**
JBT2				*e*S	**Sn**	**19 17 46.5**	**+0.2**
JOB	**Onbets**	**1.14**	**37**	⇓P	**Pn**	**19 17 38.8**	**+0.5**
JOB				*e*S	**Sn**	**19 17 53.9**	**+1.1**
JFR	**Furan**	**1.19**	**349**	P	**Pn**	**19 17 37.9**	**-1.1**
JEW	**Eniwo**	**1.36**	**309**	⇑P	**Pn**	**19 17 42.2**	**+0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JEW				eS	**Sn**	**19 17 58.5**	**+0.2**
ASAJ	**Asahikawa**	**2.13**	**354**	P	**Pn**	**19 17 52.7**	**+0.8**
ASAJ				S	**Sn**	**19 18 17.7**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,16nm,0.3s						
ASAJ				smax			
	comp=N,10.0nm,0.3s						
ASAJ	**Asahikawa**	**2.13**	**354**	P	**Pn**	**19 17 52.7**	**+0.8**
	comp=N,16nm,0.3s,baz=198,slow=11,SNR=101						
ASAJ				S	**Sn**	**19 18 17.7**	**+0.7**
	comp=N,10nm,0.3s,baz=36,slow=26,SNR=12						
MJAR	**Matsushiro Arr**	**6.55**	**215**	P	**Pn**	**19 18 56.8**	**+4.2**
	comp=N,0.4nm,0.3s,baz=26,slow=14,SNR=4.9						
SONM	**Songino Array**	**26.32**	**295**	P	**P**	**19 22 49.9**	**-0.2**
	comp=N,0.4nm,0.7s,mb3.1,baz=97,slow=8.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**39.59**	**308**	P	**P**	**19 24 45.7**	**+0.3**
ZALV	**Zalesovo Beam**	**39.59**	**308**	P	**P**	**19 24 45.7**	**+0.3**
	comp=N,1.4nm,0.5s,mb3.9,baz=87,slow=7.9,SNR=11						
ZAL	**Zalesovo**	**39.60**	**308**	P	**P**	**19 24 45.7**	**+0.2**
MKAR	**Makanchi Array**	**42.63**	**298**	P	**P**	**19 25 10.5**	**0.0**
	comp=N,0.4nm,0.5s,mb3.4,baz=85,slow=9.5,SNR=5.2						
KURK	**Kurchatov**	**43.93**	**304**	eP	**P**	**19 25 20.1**	**-0.8**
	comp=N,1.0nm,0.5s,mb3.8						
KURK	**Kurchatov**	**43.93**	**304**	eP	**P**	**19 25 20.1**	**-0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
FINES	**FINESS Array B**	**64.97**	**332**	P	**P**	**19 27 52.8**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**64.97**	**332**	P	**P**	**19 27 52.8**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.9,baz=66,slow=6.5,SNR=3.9						

MAN 01 19:31:13, 695N×12516E, h16km, mb4.7, ML3.6, MS3.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.09**	**309**	⇑iP	Pg	19 31 17.9	+1.5
KCP				iS	Sg	19 31 20.5	+1.9
GSPH	**General Santos**	**0.88**	**194**	⇓eP	Pb	19 31 28.9	-1.1
GSPH				eS	Sb	19 31 42.0	+0.5
BUKP	**Musuan**	**0.93**	**354**	eP	Pb	19 31 30.7	-0.1
BUKP				eS	Sb	19 31 45.5	+2.6
MATI	**Mati**	**1.09**	**90**	eP	Pb	19 31 32.8	-0.6
MATI				eS	Sb	19 31 49.3	+1.9
CGP	**Cagayan de Oro**	**1.56**	**343**	eP	Pn	19 31 41.0	+0.8
CGP				iS	Sn	19 32 01.0	+0.9
PAGZ	**Pagadian**	**1.98**	**297**	eP	Pn	19 31 45.5	-0.4
PAGZ				eS	Sn	19 32 12.2	+1.9
BUTP	**Butuan**	**2.06**	**13**	eP	Pn	19 31 50.0	+3.1
BUTP				eS	Sn	19 32 20.8	+8.5

IDC 01 20:25:20.4±9.3**, 791S×15734E, h0km, mb3.7**/4**, mb1 3.8**/4**, mb1mx3.6**/14**, mbtmp3.7**/4**, Error ellipse: s-maj=278.8km s-min=39.2km az=116.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.29**	**239**	P	P	20 30 48.7	-0.1
	0.7nm,0.9s,baz=64,slow=9.9,SNR=3.3						
SONM	**Songino Array**	**71.37**	**326**	P	P	20 36 42.6	+0.5
	0.5nm,0.4s,baz=141,slow=6.4,SNR=13						
MKAR	**Makanchi Array**	**85.63**	**318**	P	P	20 38 01.4	+0.5
	0.2nm,0.3s,baz=105,slow=6.8,SNR=5.4						
ZALV	**Zalesovo Beam**	**86.24**	**326**	P	P	20 38 03.2	-0.5
	0.4nm,0.4s,baz=125,slow=7.2,SNR=3.3						

*CSEM **01** 20:54:52.2±0.2, 4026N×4278E, h20km, MD3.3, Error ellipse: s-maj=6.9km s-min=5.3km az=81.0*
*ISK **01** 20:54:52.2, 4037N×4264E, h4km, MD3.0*
*ISCJB **01** 20:54:53.3±0.6, 4030N±004×4272E±006, h19km±15km, Error ellipse: s-maj=7.9km s-min=6.4km az=177.8*
*DDA **01** 20:54:53.1, 4027N×4271E, h4km±2km, Md3.3*
ISC 01 20:54:53.0±0.7**, 4027N**±003×**4272E**±006**, h13**km±9km**, n9,** σ**0.95**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KARS	**Kars**	**0.45**	**40**	PG	**Pg**	**20 55 01.2**	**-0.6**
KARS				SG	**Sg**	**20 55 07.8**	**0.0**
AGRB	**Hanur-Agry**	**0.73**	**163**	PG	**Pg**	**20 55 08.9**	**+1.8**
AGRB				SG	**Sg**	**20 55 21.2**	**+4.5**
TUTA	**Tutak**	**0.87**	**175**	iP	**Pg**	**20 55 08.8**	**-1.1**
TUTA				iS	**Sg**	**20 55 21.9**	**+0.6**
DYDN	**Diyadin**	**1.04**	**134**	iP	**Pb**	**20 55 11.9**	**-1.0**
DYDN				iS	**Sb**	**20 55 27.1**	**+0.5**
DYDN	**Diyadin**	**1.04**	**134**	iP	**Pb**	**20 55 11.9**	**-1.1**
DYDN				iS	**Sb**	**20 55 27.0**	**+0.4**
ARTV	**Artvin**	**1.09**	**327**	iP	**Pb**	**20 55 13.3**	**-0.5**
ARTV				iS	**Sb**	**20 55 30.5**	**+2.6**
ERZM	**Erzurum**	**1.10**	**251**	iP	**Pb**	**20 55 13.5**	**-0.4**
ERZM				iS	**Sb**	**20 55 27.9**	**-0.2**
EZM	**Erzurum**	**1.10**	**251**	PN	**Pn**	**20 55 13.5**	**-0.7**
BCA	**Borcka**	**1.44**	**325**	ePN	**Pn**	**20 55 19.0**	**+0.2**

*ISCJB **01** 21:09:20.9±0.6, 3836N±004×3924E±005, h8km±8km, Error ellipse: s-maj=7.0km s-min=6.2km az=174.6*
*CSEM **01** 21:09:20.7±0.1, 3838N×3921E, h5km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.4km az=11.0*
*ISK **01** 21:09:20.0, 3840N×3921E, h5km, MD3.1*
*DDA **01** 21:09:21.4, 3832N×3920E, h9km±2km, Md3.0*
ISC 01 21:09:21.4±0.5**, 3836N**±004×**3923E**±004**, h11**km±6km**, n13,** σ**0.87**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**305**	iP	**Pg**	**21 09 26.3**	**0.0**
ELZG				iS	**Sg**	**21 09 29.6**	**-0.1**
PTK	**Pertek**	**0.55**	**13**	PG	**Pg**	**21 09 30.9**	**-1.1**
PTK				SG	**Sg**	**21 09 39.8**	**+0.6**
MALT	**Malatya**	**0.64**	**266**	PG	**Pg**	**21 09 33.1**	**-0.6**
MALT				SG	**Sg**	**21 09 43.1**	**+1.0**
MYA	**Malataya**	**0.64**	**267**	PG	**Pg**	**21 09 33.0**	**-0.7**
DIYA	**Diyarbakir**	**0.82**	**122**	iP	**Pg**	**21 09 37.6**	**+0.3**
DIYA				iS	**Sg**	**21 09 48.1**	**0.0**
DIY	**Diyarbakir**	**0.91**	**120**	PG	**Pg**	**21 09 39.1**	**+0.2**
URFA	**Urfa**	**0.97**	**200**	PG	**Pg**	**21 09 40.5**	**+0.3**
EZC	**Erzincan**	**1.46**	**18**	ePN	**Pn**	**21 09 47.1**	**-0.5**
MARD	**Mardin**	**1.61**	**130**	iP	**Pn**	**21 09 47.8**	**-1.9**
MARD				iS	**Sn**	**21 10 05.8**	**-4.7**
GZT	**Gaziantep**	**1.66**	**233**	iP	**Pn**	**21 09 49.7**	**-0.7**
GZT				iS	**Sn**	**21 10 16.2**	**+4.5**
BTMT	**Batman**	**1.78**	**95**	ePN	**Pn**	**21 09 52.2**	**+0.1**
SVSK	**Karacayir**	**2.33**	**312**	ePN	**Pn**	**21 10 00.8**	**+1.1**
SIRT	**Sirnak**	**2.68**	**108**	ePN	**Pn**	**21 10 06.4**	**+2.0**

IDC 01 21:26:01.0±2.0**, 230N×12563E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/16**, mbtmp3.4**/3**, Error ellipse: s-maj=182.9km s-min=25.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.70**	**159**	P	P	21 31 13.1	-1.7
	0.4nm,0.4s,baz=338,slow=11,SNR=12						
ASAR	**Alice Springs**	**27.04**	**163**	P	P	21 31 47.1	+2.1
	0.2nm,0.4s,baz=338,slow=7.0,SNR=4.4						
MKAR	**Makanchi Array**	**58.11**	**326**	P	P	21 35 56.2	-0.1
	0.4nm,0.3s,baz=115,slow=7.6,SNR=6.8						

*BJI **01** 21:41:03.8, 938S×10639E, h23km, mB5.1, mb4.7, Ms4.9, Msz4.6*
*IDC **01** 21:41:05.8±1.4, 902S×10601E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/18, mbtmp4.0/9, ML4.7/1, Error ellipse: s-maj=60.9km s-min=16.1km az=46.0*
*ISCJB **01** 21:41:06.9±0.4, 899S±005×10606E±006, h19km, mb4.5/26, Error ellipse: s-maj=9.3km s-min=6.6km az=139.0*
*NEIC **01** 21:41:07.1±0.4, 909S×10605E, h10km, mb4.9/10, Error ellipse: s-maj=14.8km s-min=6.3km az=58.0*
*MOS **01** 21:41:10.5±1.1, 866S×10646E, h33km, mb4.8/9, Error ellipse: s-maj=28.1km s-min=11.6km az=109.3*
ISC 01 21:41:09.6±0.6**, 893S**±007×**10610E**±006**, h21**km**, h21**km±4.1km**: pP-P, n60,** σ**1.03**/57**, mb4.5**/26**, 3C-6D, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.60**	**196**	eP	**Pn**	**21 41 33.3**	**-3.5**
LEM	**Lembang**	**2.57**	**36**	P	**Pn**	**21 41 48.9**	**-1.1**
	685nm,0.7s						
SBJI	**Serang**	**2.79**	**1**	P	**Pn**	**21 41 52.4**	**-0.6**
	495nm,1.4s						
BJII	**Banjamegara**	**3.91**	**66**	P	**Pn**	**21 42 09.3**	**+0.9**
	76nm,0.8s						
KSI	**Kapahiang**	**6.30**	**326**	P	**Pn**	**21 42 40.1**	**-1.2**
	202nm,0.7s						
KRKI	**Karangkates**	**6.33**	**84**	P	**Pn**	**21 42 44.2**	**+2.5**
	168nm,0.5s						
FRIM	**Kepong**	**12.88**	**340**	⇑P	**Pn**	**21 44 04.4**	**-7.2**
BTM	**Bintulu**	**13.91**	**30**	⇓P	**Pn**	**21 44 21.1**	**-4.6**
IPM	**Ipoh**	**14.25**	**339**	⇑P	**Pn**	**21 44 29.5**	**-0.8**
KTGM	**Kuala Trenggan**	**14.47**	**348**	⇓P	**Pn**	**21 44 31.7**	**-1.5**
BATI	**Kupang**	**17.36**	**96**	P	**Pn**	**21 45 11.2**	**+0.3**
	2.9nm,0.3s,baz=270,slow=7.1,SNR=3.0						
MBWA	**Marble Bar**	**17.90**	**134**	eP	**Pn**	**21 45 13.9**	**-3.5**
KKM	**Kota Kinabalu**	**17.97**	**34**	⇓P	**Pn**	**21 45 12.1**	**-6.2**
SDKM	**Sandakan**	**18.21**	**38**	⇓P	**Pn**	**21 45 22.5**	**+1.2**
MYLDM	**Lahad Datu**	**18.69**	**42**	⇓P	**Pn**	**21 45 27.6**	**+0.5**
KDM	**Kudat**	**19.03**	**35**	⇑P	**Pn**	**21 45 30.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.05**	**118**	P	**P**	**21 45 52.3**	**-0.1**
	2.1nm,0.7s,mb3.6,baz=263,slow=15,SNR=3.7						
WRA	**Warramunga Arr**	**29.40**	**115**	P	**P**	**21 47 10.7**	**-1.1**
	0.6nm,0.6s,mb3.5,baz=287,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**30.36**	**122**	P	**P**	**21 47 20.1**	**-0.1**
	0.7nm,0.9s,mb3.4,baz=302,slow=8.7,SNR=4.6						
ODAN	**Odare**	**39.94**	**333**	eP	**P**	**21 48 43.5**	**+1.0**
	36nm,0.7s,mb5.2						
STKA	**Stephens Creek**	**40.05**	**130**	P	**P**	**21 48 42.9**	**-0.7**
	1.2nm,0.6s,mb3.8,baz=294,slow=10.0,SNR=2.3						
TAPN	**Taplejung**	**40.23**	**334**	eP	**P**	**21 48 46.2**	**+1.3**
	44nm,0.8s,mb5.2						
LSA	**Lhasa**	**41.01**	**340**	P	**P**	**21 48 53.2**	**+1.8**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**41.01**	**340**	eP	**P**	**21 48 52.6**	**+1.2**
	comp=Z,11nm,0.8s,mb4.5						
LSA				e		21 49 02.3	
LSA	**Lhasa**	**41.01**	**340**	eP	**P**	**21 48 52.6**	**+1.2**
LSA				e		21 49 02.3	
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
JIRN	**Jiri**	**41.17**	**333**	eP	**P**	**21 48 54.0**	**+1.3**
	comp=Z,47nm,0.8s,mb5.2						
KKN	**Kakani**	**41.70**	**332**	eP	**P**	**21 48 57.8**	**+0.8**
	comp=Z,32nm,0.8s,mb5.0						
KKN	**Kakani**	**41.70**	**332**	eP	**P**	**21 48 57.8**	**+0.8**
KKN				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.0						
GKN	**Gorkha**	**42.18**	**331**	eP	**P**	**21 49 01.8**	**+0.8**
	comp=Z,21nm,0.8s,mb4.8						
NJ2	**Nanjing**	**42.53**	**16**	eP	**P**	**21 49 02.4**	**-1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
XAN	**Xi'an**	**42.81**	**3**	P	**P**	**21 49 05.0**	**-1.0**
XAN				AMB	AMB		
	comp=Z,17nm,0.7s,mb4.9						
LZH	**Lanzhou**	**44.82**	**357**	eP	**P**	**21 49 22.3**	**+0.2**
LZH				AP	pP	21 49 30.5	+1.9
LZH				XP	sP	21 49 33.8	+2.7
LZH				AMB	AMB		
	comp=Z,22nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,91nm,4.2s						
LZH	**Lanzhou**	**44.82**	**357**	eP	**P**	**21 49 22.3**	**+0.2**
	comp=Z,22nm,1.3s,mb4.8						
LZH				pP	pP	21 49 30.5	+1.9
LZH				sP	sP	21 49 33.8	+2.7
GTA	**Gaotai**	**48.44**	**353**	eP	**P**	**21 49 51.5**	**+1.0**
GTA				AP	pP	21 50 00.8	+3.8
GTA				XP	sP	21 50 05.2	+5.7
GTA				AMB	AMB		
	comp=Z,7.0nm,1.6s,mb4.4						
HHC	**Hu-ho-hao-te**	**49.78**	**5**	eP	**P**	**21 50 01.1**	**+0.4**
HHC				AP	pP	21 50 04.6	-2.6
HHC				XP	sP	21 50 09.7	0.0
HHC				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,111nm,4.3s						
WMQ	**Urumqi**	**55.10**	**344**	eP	**P**	**21 50 41.0**	**+0.9**
CN2	**Changchun**	**55.34**	**17**	eP	**P**	**21 50 40.8**	**-1.1**
SONM	**Songino Array**	**56.51**	**0**	P	**P**	**21 50 50.7**	**+0.5**
	comp=Z,2.1nm,0.7s,mb4.3,baz=179,slow=9.1,SNR=24						
ULN	**Ulaanbaatar**	**56.55**	**1**	eP	**P**	**21 50 50.8**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**56.55**	**1**	eP	**P**	**21 50 50.8**	**+0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
MK31	**Makanchi Array**	**59.40**	**341**	eP	**P**	**21 51 10.0**	**-0.4**
MKAR	**Makanchi Array**	**59.40**	**341**	P	**P**	**21 51 10.5**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.4,baz=143,slow=7.8,SNR=32						
KURK	**Kurchatov**	**64.01**	**341**	eP	**P**	**21 51 41.4**	**-0.1**
	comp=Z,5.4nm,0.8s,mb4.6						
KURK	**Kurchatov**	**64.01**	**341**	eP	**P**	**21 51 41.4**	**0.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YSS	**Yuzh-Sakhalins**	**64.49**	**27**	iP	**P**	**21 51 43.3**	**-1.4**
YSS				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.7						
YSS				MLR	MLR		
	comp=Z,100nm,20.0s						
ZAL	**Zalesovo**	**65.17**	**346**	P	**P**	**21 51 48.3**	**-0.6**
ZALV	**Zalesovo Beam**	**65.17**	**346**	P	**P**	**21 51 48.2**	**-0.7**
	comp=Z,1.7nm,0.5s,mb4.3,baz=159,slow=4.6,SNR=10						
NVS	**Novosibirsk**	**66.37**	**346**	eP	**P**	**21 51 53.0**	**-3.7**
BOD	**Bodaibo**	**66.83**	**5**	eP	**P**	**21 51 58.1**	**-1.4**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BRVK	**Borovoye**	**68.86**	**338**	eP	**P**	**21 52 11.9**	**-0.6**
	comp=Z,3.4nm,0.8s,mb4.3						
BRVK	**Borovoye**	**68.86**	**338**	eP	**P**	**21 52 11.9**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SVE	**Sverdlovsk**	**75.39**	**336**	P	**P**	**21 52 57.1**	**+5.6**
ARU	**Arti**	**75.97**	**335**	d iP	**P**	**21 52 55.4**	**+0.6**
ARU				e		21 55 44.9	
ARU				eS	S	22 02 34.8	-1.8
ARU				eSS	SS	22 07 28.7	-1.0
ARU				pmax	pmax		
	comp=Z,16nm,2.5s,mb4.5						
BRTR	**Keskin Array B**	**82.45**	**312**	P	**P**	**21 53 31.0**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=124,slow=7.7,SNR=3.1						
OBN	**Obninsk**	**85.85**	**327**	eP	**P**	**21 53 49.6**	**+2.0**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.7						
VNA2	**Neumayer--Watz**	**89.08**	**198**	eP	**P**	**21 54 09.6**	**+6.7**
	baz=57,slow=5.0						
VNA2				e		21 54 11.9	
VNA2				e	pP	21 54 14.5	+4.7
VNA3	**Neumayer Olymp**	**89.60**	**197**	eP	**P**	**21 54 11.4**	**+6.0**
VNA3				e		21 54 13.8	
VNA3				e	pP	21 54 16.5	+4.3
YKA	**Yellowknife Ar**	**118.97**	**20**	PKP	PKPdf	21 59 54.6	-1.7
	comp=Z,0.1nm,0.3s,baz=328,slow=2.2,SNR=3.7						
TXAR	**Lajitas Array**	**145.49**	**50**	PKPbc	PKPbc	22 00 48.0	+1.1
TXAR	**Lajitas Array**	**145.49**	**50**	PKPbc	PKPbc	22 00 48.0	+1.1
	comp=Z,1.2nm,0.8s,baz=332,slow=1.8,SNR=6.6						

*ISCJB **01** 21:56:54.2±3.6, 465N±05×1527E±07, h83km±17km, mb3.8/4, Error ellipse: s-maj=114.0km s-min=14.7km az=137.8*
*MOS **01** 21:56:54.8±0.9, 4652N×15262E, h91km, mb3.8/3, Error ellipse: s-maj=30.3km s-min=19.6km az=47.8*
*IDC **01** 21:56:59.0±10.0, 4677N×15237E, h90km±75km, mb3.6/4, mb1 3.7/5, mb1mx3.2/23, mbtmp3.7/5, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/44, Error ellipse: s-maj=132.5km s-min=73.7km az=124.0*
ISC 01 21:56:56.1±3.7**, 465N**±05×**1527E**±07**, h82**km±16km**, n14,** σ**0.82**/13**, mb3.8**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.60**	**251**	PN	**Pn**	**21 57 48.0**	**-1.6**
SKR	**Severo-Kuril's**	**4.76**	**27**	ePN	**Pn**	**21 58 05.5**	**+0.1**
ASAJ	**Asahikawa**	**7.50**	**255**	PN	**Pn**	**21 58 43.7**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.50**	**255**	P	**Pn**	**21 58 43.7**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=62,slow=13,SNR=4.9						
ERM	**Erimo**	**8.18**	**240**	iPN	**Pn**	**21 58 52.5**	**+0.5**
ZALV	**Zalesovo Beam**	**42.52**	**306**	LR	LR	22 24 14.8	
	comp=Z,17nm,20.8s,baz=224,slow=39						
MKAR	**Makanchi Array**	**46.80**	**297**	P	**P**	**22 05 18.7**	**+1.5**
MKAR	**Makanchi Array**	**46.80**	**297**	P	**P**	**22 05 16.9**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.4,baz=66,slow=7.5,SNR=4.0						
MKAR				PcP	PcP	22 06 49.8	+0.7
	comp=Z,0.2nm,0.2s,baz=72,slow=5.0,SNR=2.4						
FINES	**FINESS Array B**	**64.14**	**335**	P	**P**	**22 07 21.1**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**64.14**	**335**	P	**P**	**22 07 21.1**	**-0.2**
	comp=Z,1.4nm,0.7s,mb3.9,baz=42,slow=8.8,SNR=10						
NB2	**NORSAR Subarra**	**68.37**	**341**	P	**P**	**22 07 48.3**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.6,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.37**	**341**	P	**P**	**22 07 48.7**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**68.37**	**341**	P	**P**	**22 07 48.6**	**+0.3**
	comp=Z,1.1nm,0.7s,mb3.8,baz=28,slow=6.2,SNR=4.0						
AKASG	**Malin Array Be**	**71.59**	**326**	P	**P**	**22 08 07.5**	**-0.8**
	comp=Z,1.4nm,0.5s,mb4.1,baz=34,slow=6.2,SNR=4.2						

*ISCJB **01** 22:07:24.4±4.6, 773S±010×306E±02, h12km±31km, mb3.6/3, Error ellipse: s-maj=29.9km s-min=12.0km az=23.7*
*IDC **01** 22:07:25.0±1.5, 764S×3060E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/18, mbtmp3.8/4, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/29, Error ellipse: s-maj=42.0km s-min=24.5km az=131.0*
*NEIC **01** 22:07:26.3±0.7, 767S×3046E, h10km, mb3.7/1, Error ellipse: s-maj=23.3km s-min=10.5km az=121.0*
ISC 01 22:07:25.1±2.7**, 770S**±008×**305E**±02**, h2**km±17km**, n7,** σ**0.75**/10**, mb3.6**/3**, Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**7.87**	**197**	ePn	**Pn**	**22 09 21.2**	**+0.5**
	5.5nm,0.3s						
LSZ				eSn	**Sn**	**22 10 50.4**	**0.0**
LSZ				eSg	**Sg**	**22 11 37.6**	**-0.5**
KMBO	**Kilima Mbogo**	**9.35**	**46**	Pn	**Pn**	**22 09 41.8**	**+0.8**
	1.0nm,0.3s,baz=224,slow=16,SNR=27						
KMBO				Sn	**Sn**	**22 11 22.8**	**-4.1**
	1.4nm,0.3s,baz=242,slow=23,SNR=3.5						
KMBO				Lg		22 12 17.7	
	3.3nm,0.3s,baz=298,slow=23,SNR=7.8						
TSUM	**Tsumeb**	**17.00**	**226**	ePn	**Pn**	**22 11 22.9**	**-1.2**
	4.8nm,0.8s						
TSUM				eSn	**Sn**	**22 14 18.0**	**-16**
BOSA	**Boshof**	**21.39**	**193**	P	**P**	**22 12 15.2**	**+1.1**
	2.7nm,0.9s,mb3.6,baz=9.4,slow=13,SNR=4.4						
TORD	**Torodi Ar. Bea**	**35.35**	**306**	P	**P**	**22 14 22.6**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=121,slow=8.3,SNR=4.2						
EIL	**Elat**	**37.39**	**6**	LR	LR	22 29 25.5	
	comp=Z,42nm,18.1s,baz=184,slow=35						
MKAR	**Makanchi Array**	**71.04**	**35**	P	**P**	**22 18 44.4**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=234,slow=5.5,SNR=9.7						

*ISCJB **01** 22:07:41.8±0.5, 4527N±003×10687W±004, h0km, Error ellipse: s-maj=4.6km s-min=4.1km az=149.6*
*IDC **01** 22:07:43.9±1.1, 4495N×10684W, h0km, mb1 3.6/3, mb1mx3.4/21, mbtmp3.4/3, ML2.7/2, Error ellipse: s-maj=34.9km s-min=8.2km az=134.0*
*NEIC **01** 22:07:44.3±0.5, 4512N×10691W, h0km, ML3.3, Error ellipse: s-maj=6.7km s-min=6.3km az=158.0, Suspected Mining explosion.*
NEIC 35 km [20 miles] N of Sheridan.
ISC 01 22:07:43.8±0.5**, 4523N**±003×**10689W**±004**, h0**km**, n23,** σ**1.47**/52**, Montana**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLMT	**Red Lodge**	**1.69**	**267**	ePg	**Pg**	**22 08 15.5**	**-0.6**
RLMT				eS	**Sn**	**22 08 39.7**	**+2.9**
GCMT	**Greycliff**	**2.04**	**287**	ePg	**Pg**	**22 08 22.2**	**-0.6**
GCMT				eSg	**Sg**	**22 08 50.0**	**+0.8**
PDAR	**Pinedale Array**	**3.12**	**219**	Pn	**Pn**	**22 08 34.6**	**+0.4**
	9.9nm,0.3s,baz=53,slow=17,SNR=199						
PDAR				Lg		22 09 15.8	
	16nm,0.3s,baz=47,slow=33,SNR=15						
BW06	**Boulder Array**	**3.12**	**219**	ePn	**Pn**	**22 08 34.8**	**+0.5**
BW06				eSn	**Sn**	**22 09 13.9**	**+1.6**
MOOW	**Moose Ponds**	**3.13**	**243**	ePn	**Pn**	**22 08 34.2**	**-0.2**
MOOW				ePg	**Pg**	**22 08 44.4**	**+0.6**
QLMT	**Earthquake Lak**	**3.25**	**265**	Pn	**Pn**	**22 08 35.4**	**-0.6**
QLMT				ePg	**Pg**	**22 08 42.0**	**-4.0**
QLMT				eSg	**Sg**	**22 09 22.9**	**-5.2**
DGMT	**Dagmar**	**3.73**	**29**	ePn	**Pn**	**22 08 45.7**	**+3.1**
DGMT				eSn	**Sn**	**22 09 26.5**	**-0.8**
DLMT	**Dillon**	**4.03**	**274**	ePn	**Pn**	**22 08 48.4**	**+1.6**
DLMT				ePg	**Pg**	**22 08 57.1**	**-4.0**
DLMT				eSn	**Sn**	**22 09 28.3**	**-6.3**
DLMT				eSg	**Sg**	**22 09 47.2**	**-6.0**
MCMT	**McKenzie Canyo**	**4.25**	**267**	ePn	**Pn**	**22 08 49.8**	**+0.1**
MCMT				ePg	**Pg**	**22 09 01.3**	**-3.8**
MCMT				eSn	**Sn**	**22 09 36.9**	**-3.0**
MCMT				eSg	**Sg**	**22 09 54.3**	**-5.9**
CHMT	**Chamberlain Mo**	**4.74**	**293**	ePn	**Pn**	**22 08 58.1**	**+1.6**
CHMT				ePg	**Pg**	**22 09 12.3**	**-2.3**
CHMT				eSn	**Sn**	**22 09 41.1**	**-11**
CHMT				eSg	**Sg**	**22 10 17.1**	**+1.1**
HWUT	**Hardware Ranch**	**4.97**	**225**	ePn	**Pn**	**22 09 00.0**	**+0.4**
HWUT				ePg	**Pg**	**22 09 14.0**	**-5.0**
HWUT				eSn	**Sn**	**22 10 01.8**	**+4.1**
HWUT				eSg	**Sg**	**22 10 15.3**	**-8.0**
MSO	**Missoula**	**5.17**	**291**	ePn	**Pn**	**22 09 03.4**	**+1.1**
	3.2nm,0.5s						
MSO				ePg	**Pg**	**22 09 26.1**	**+3.3**
MSO				eSn	**Sn**	**22 09 55.0**	**-7.6**
MSO				eSg	**Sg**	**22 10 32.7**	**+3.0**
ISCO	**Idaho Springs**	**5.50**	**170**	ePn	**Pn**	**22 09 05.9**	**-1.0**
	5.8nm,0.5s						
ISCO				ePg	**Pg**	**22 09 23.4**	**-5.9**
ISCO				Sn	**Sn**	**22 10 12.2**	**+1.3**
ISCO				eSg	**Sg**	**22 10 30.2**	**-10**
HLID	**Hailey**	**5.64**	**256**	Pg	**Pg**	**22 09 30.3**	**-1.7**
CTU	**Camp Tracy**	**5.77**	**220**	Pn	**Pn**	**22 09 12.6**	**+2.1**
	6.9nm,0.6s						
CTU				Pg	**Pg**	**22 09 36.6**	**+2.4**
CTU				eSn	**Sn**	**22 10 19.7**	**+2.4**
SMCO	**Snowmass**	**6.04**	**181**	Pn	**Pn**	**22 09 13.4**	**-1.0**
	3.8nm,0.4s						
SRU	**San Rafael**	**6.68**	**205**	Pn	**Pn**	**22 09 22.5**	**-0.6**
	5.9nm,0.5s						
SRU				ePg	**Pg**	**22 09 51.2**	**-0.5**
SRU				eSn	**Sn**	**22 10 44.6**	**+4.7**
PV01	**Paradox Valley**	**7.20**	**191**	ePn	**Pn**	**22 09 29.9**	**-0.3**
PV01				eSn	**Sn**	**22 10 49.9**	**-2.7**
NEW	**Newport**	**7.66**	**297**	Lg		22 11 47.9	
	0.8nm,0.3s,baz=204,slow=12,SNR=7.5						
MVCO	**Mesa Verde**	**8.10**	**189**	ePn	**Pn**	**22 09 39.7**	**-2.9**
	3.2nm,0.5s						
MVCO				eSn	Sn	22 11 35.0	+20
MVCO				eSg	Sg	22 12 31.4	+28
AGMN	**Agassiz Refuge**	**8.17**	**64**	Pn	**Pn**	**22 09 44.5**	**+1.0**
	6.4nm,0.3s						
ULM	**Lac du Bonnet**	**8.96**	**52**	Pn	**Pn**	**22 09 55.0**	**+0.6**
	0.8nm,0.3s,baz=242,slow=12,SNR=10						
ULM				Lg		22 12 23.1	
	0.4nm,0.3s,baz=333,slow=22,SNR=4.6						
YKA	**Yellowknife Ar**	**17.87**	**348**	Pn	**Pn**	**22 11 52.2**	**-1.3**
	0.1nm,0.3s,baz=162,slow=11,SNR=3.4						

*NIED **01** 22:11:00, 3880N×14340E, h23km, Mw3.8 Best double couple: M0 5.11000×10^14 NP1: φs 188.00000°, δ28.00000°, λ74.00000°. NP2: φs 25.00000°, δ63.00000°, λ98.00000°.*
*JMA **01** 22:11:41.4±0.2, 3881N×14341E, h19km±4km, M3.7*
*ISCJB **01** 22:11:42.0±1.8, 3885N±005×14345E±007, h26km±15km, mb3.8/5, Error ellipse: s-maj=9.4km s-min=6.8km az=35.7*
*BJI **01** 22:11:43.0, 3889N×14338E, h23km, mB4.9, mb4.2, Ms4.4, Msz3.9*
*NEIC **01** 22:11:44.2±0.8, 3882N×14365E, h35km, mb4.3/1, Error ellipse: s-maj=17.9km s-min=12.8km az=134.0*
*IDC **01** 22:11:44.9±4.6, 3883N×14362E, h39km±37km, mb3.5/4,*

mb1 3.6/6, mb1mx3.4/23, mbtmp3.5/6, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/37, Error ellipse: s-maj=53.6km s-min=24.8km az=78.0

ISC 01 22:11:42.6±1.9**, 3888N**±005×**14336E**±007**, h13**km±13km**,**
n25, σ**1s10**/34**, mb3.8**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	1.33	279	P	Pn	22 12 06.0	-0.9
OFUJ				eS	Sb	22 12 23.9	-0.5
MIYJ	Miyakonagasawa	1.38	301	P	Pn	22 12 06.8	-0.8
MIYJ				eS	Sn	22 12 25.0	-0.7
JIO	Ouri	1.63	255	P	Pn	22 12 09.9	-1.1
JIO				eS	Sn	22 12 31.0	-0.8
JMK	Ichinoseki	1.67	273	P	Pn	22 12 11.0	-0.5
JMK				eS	Sn	22 12 32.6	-0.2
JOM	Ohasama	1.71	291	P	Pn	22 12 11.8	-0.3
JOU	Okura	2.17	257	P	Pn	22 12 18.2	-0.2
JMM	Marumori	2.26	244	P	Pn	22 12 18.9	-0.7
JMM				eS	Sn	22 12 46.4	-0.9
JYK	Kaneyama	2.34	272	P	Pn	22 12 20.8	+0.1
JFK	Kawauchi	2.48	233	P	Pn	22 12 21.4	-1.2
JFK				eS	Sn	22 12 51.7	-1.0
JTM	Tenmabayashi	2.59	318	P	Pn	22 12 24.1	-0.1
JTM				eS	Sn	22 12 56.0	+0.4
JYS	Shirataka	2.67	257	P	Pn	22 12 25.3	+0.1
MAJO	Matsushiro	4.70	242	ePn	Pn	22 12 55.1	+1.8
MAJO				eSn	Sn	22 13 50.4	+2.8
MAT	Matsushiro	4.70	242	P	Pn	22 12 54.1	+0.9
MAT				eS	Sn	22 13 49.7	+2.0
MJAR	Matsushiro Arr	4.70	242	Pn	Pn	22 12 54.9	+1.7
MJAR	Matsushiro Arr	4.70	242	Pn	Pn	22 12 54.9	+1.7
	2.1nm,0.3s,baz=62,slow=12,SNR=24						
ASAJ	Asahikawa	5.26	354	Pn	Pn	22 13 02.1	+1.2
	0.7nm,0.3s,baz=200,slow=12,SNR=3.1						
ASAJ				LR	LR	22 15 54.3	
	comp=Z,103nm,18.3s,baz=163,slow=47						
SONM	Songino Array	28.10	301	P	P	22 17 34.9	+1.0
	0.6nm,0.6s,mb3.4,baz=94,slow=8.8,SNR=7.2						
GTA	Gaotai	33.53	285	eP	P	22 18 24.1	+2.2
GTA				AP	pP	22 18 29.0	+3.1
GTA				XP	sP	22 18 32.1	+4.6
GTA				AMB	AMB		
	comp=Z,4.0nm,1.1s						
GTA				AMB	AMB		
	comp=Z,156nm,7.6s						
GTA				LR	LR		
	comp=N,124nm,5.7s						
GTA				LR	LR		
	comp=E,145nm,6.9s						
GTA				LR	LR		
	comp=Z,111nm,10.3s						
ZALV	Zalesovo Beam	41.84	311	P	P	22 19 31.7	-0.2
ZALV	Zalesovo Beam	41.84	311	P	P	22 19 31.7	-0.2
	comp=Z,0.4nm,0.4s,mb3.4,baz=92,slow=6.0,SNR=3.3						
MK31	Makanchi Array	44.47	301	eP	P	22 19 54.3	+1.1
MKAR	Makanchi Array	44.47	301	P	P	22 19 53.7	+0.4
MKAR	Makanchi Array	44.47	301	P	P	22 19 53.7	+0.4
	comp=Z,1.0nm,0.4s,mb3.9,baz=86,slow=9.6,SNR=11						
WRA	Warramunga Arr	59.12	190	P	P	22 21 41.3	-1.5
	comp=Z,0.7nm,0.6s,mb3.8,baz=8.2,slow=6.9,SNR=8.0						
REDW	Red Top Meadow	74.17	47	P	P	22 23 16.6	-2.2
	comp=Z,2.3nm,0.6s,mb4.3						

IDC 01 22:37:09.0±17.0**, 2139S**×**17488W, h0**km**, mb4.3**/5**,**
mb1 4.5/5**, mb1mx4.1**/17**, mbtmp4.3**/5**, Error ellipse:**
s-maj=319.9km s-min=151.7km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.31	265	P	P	22 44 16.1	+1.4
	11nm,0.4s,baz=94,slow=10,SNR=21						
STKA	Stephens Creek	40.05	246	P	P	22 44 45.0	-1.1
	2.3nm,1.0s,baz=66,slow=10.0,SNR=3.4						
ASAR	Alice Springs	47.16	257	P	P	22 45 42.6	-0.9
	2.2nm,0.6s,baz=93,slow=8.4,SNR=16						
WRA	Warramunga Arr	47.37	262	P	P	22 45 44.5	-0.7
	1.5nm,0.3s,baz=94,slow=8.5,SNR=62						
FITZ	Fitzroy Crossi	55.80	262	P	P	22 46 49.1	+0.8
	1.9nm,0.8s,baz=83,slow=9.9,SNR=7.5						

IDC 01 22:39:21.4±1.4**, 113S**×**12728E, h0**km**, mb3.4**/3**, mb1 3.6**/4**,**
mb1mx3.4/16**, mbtmp3.4**/4**, ML3.5**/1**, MS3.2**/1**, Ms1 3.2**/1**,**
ms1mx2.7/21**, Error ellipse: s-maj=126.6km**
s-min=22.2km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.94	160	P	Pn	22 43 55.0	-1.6
	0.1nm,0.3s,baz=340,slow=11,SNR=14						
ASAR	Alice Springs	23.31	164	P	P	22 44 31.4	+0.2
	0.3nm,0.4s,baz=346,slow=10,SNR=4.8						
KSRS	Korea Array	38.39	1	LR	LR	23 03 28.1	
	comp=Z,30nm,18.3s,baz=160,slow=38						
SONM	Songino Array	52.05	342	P	P	22 48 33.6	+0.8
	0.5nm,0.9s,baz=131,slow=6.5,SNR=3.3						
MKAR	Makanchi Array	61.86	327	P	P	22 49 41.9	-0.5
	0.4nm,0.4s,baz=119,slow=8.0,SNR=8.4						

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*ISCJB **01** 22:45:27.8±0.4, 2655N±007×4461W±006, h10km, mb4.3/32, MS3.8/4, Error ellipse: s-maj=10.5km s-min=8.1km az=166.7*

*IDC **01** 22:45:28.0±0.7, 2649N×4468W, h0km, mb4.0/16, mb1 4.2/16, mb1mx4.1/22, mbtmp4.0/16, MS3.9/4, Ms1 3.8/4, ms1mx3.4/30, Error ellipse: s-maj=21.2km s-min=15.6km az=160.0*

*GCMT **01** 22:45:29.6±0.4, 2658N×4451W, h17km±1km, MW5.1/58, Moment Tensor Solution. s17,c18; s58,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.11±.33; $M_{\theta\theta}$0.67±.20; $M_{\phi\phi}$3.44±.24; $M_{r\theta}$-2.21±.59; $M_{\theta\phi}$1.33±.14; $M_{\phi r}$-1.89±.50; Best double couple: $M_0$4.96800×10^{16} NP1:ϕ_s189.00000°, δ30.00000°, λ-114.00000°. NP2: ϕ_s37.00000°, δ63.00000°, λ-77.00000°. Principal axes: T 4.7590, Plg17.0000°, Azm117.0000°; N 0.4150, Plg12.0000°, Azm211.0000°; P -5.1770, Plg69.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **01** 22:45:29.6±0.4, 2654N×4458W, h10km, mb4.7/15 Error ellipse: s-maj=10.2km s-min=8.0km az=161.0*

*MOS **01** 22:45:31.3±1.1, 2658N×4467W, h10km, mb4.8/9, Error ellipse: s-maj=13.9km s-min=11.5km az=83.4*

ISC 01 22:45:29.8±0.4**, 2654N**±007×**4460W**±006**, h10**km**, n62,**
σ**1s02**/58**, mb4.3**/32**, MS3.8**/4**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSR	BB Station	18.43	293	Pn	Pn	22 49 43.5	-1.8
MTP	Monte Pirata	21.10	251	eP	P	22 50 17.5	+2.9
CPD	Cerro la Pandu	21.43	251	eP	P	22 50 19.6	+1.4
PCRV	Puerto La Cruz	24.96	233	LR	LR	22 59 40.2	
	comp=Z,204nm,19.1s,MS3.6,baz=62,slow=34						
HRV	Harvard--Oak R	27.17	313	eP	P	22 51 19.0	+5.7
SDV	Santo Domingo	30.27	239	eP	P	22 51 40.9	-0.3
	2.2nm,0.7s,mb4.0						
SCHQ	Schefferville	32.62	336	LR	LR	23 03 33.2	
	comp=Z,203nm,20.6s,MS3.8,baz=341,slow=33						
RCBR	Riachuelo	33.26	164	P	P	22 52 07.2	-0.3
TKL	Tuckaleechee C	34.56	295	LR	LR	23 06 16.5	
	comp=Z,155nm,18.0s,MS3.8,baz=93,slow=36						
ROSC	El Rosal	35.65	238	LR	LR	23 06 50.5	
	comp=Z,197nm,19.1s,MS3.9,baz=27,slow=36						
JTS	JuntasAbangare	41.34	255	P	P	22 53 14.8	-1.3
SIV	San Ignacio	45.20	203	P	P	22 53 46.1	-1.1
	0.9nm,0.7s,mb3.7,baz=33,slow=13,SNR=5.5						
TORD	Torodi Ar. Bea	45.30	98	P	P	22 53 47.3	-0.8
	1.8nm,1.1s,mb3.8,baz=294,slow=8.7,SNR=8.1						
TORD				PP	PP	22 55 37.0	+2.9
	0.6nm,0.9s,baz=297,slow=7.6,SNR=3.7						
ULM	Lac du Bonnet	45.53	315	P	P	22 53 48.4	-1.1
	2.7nm,0.6s,mb4.3,baz=90,slow=6.6,SNR=3.9						
KEST	Kesra	46.58	65	P	P	22 53 58.8	+0.8
	1.3nm,0.8s,mb3.9,baz=91,slow=7.4,SNR=5.6						
WMOK	Wichita Mounta	46.85	294	eP	P	22 54 00.5	+0.4
	16nm,1.4s,mb4.8						
WMOK	Wichita Mounta	46.85	294	eP	P	22 54 00.5	+0.4
WMOK				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
FCC	Fort Churchill	46.95	327	eP	P	22 54 00.6	+0.1
	comp=Z,7.9nm,1.0s,mb4.6						
FCC				ePcP	PcP	22 55 32.3	-0.6
FCC	Fort Churchill	46.95	327	eP	P	22 54 00.6	+0.1
FCC				e		22 55 32.3	
FCC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
LPAZ	La Paz	48.32	211	eP	P	22 54 11.4	-0.2
LPAZ	La Paz	48.32	211	P	P	22 54 11.7	+0.1
	comp=Z,2.8nm,0.9s,mb4.3,baz=12,slow=8.3,SNR=8.9						
GERES	GERESS Array B	49.87	47	P	P	22 54 23.6	+0.4
	comp=Z,0.5nm,0.5s,mb3.8,baz=284,slow=8.0,SNR=3.9						
FFC	Flin Flon	50.05	320	eP	P	22 54 24.3	-0.1
	comp=Z,4.9nm,0.9s,mb4.5						
FFC	Flin Flon	50.05	320	eP	P	22 54 24.3	-0.1
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
NOA	NORSAR Array B	50.72	31	P	P	22 54 30.3	+0.9
	comp=Z,0.9nm,0.8s,mb3.7,baz=249,slow=7.9,SNR=2.9						
TXAR	Lajitas Array	51.78	288	P	P	22 54 37.1	-0.7
	comp=Z,0.5nm,0.8s,mb3.5,baz=91,slow=5.6,SNR=3.8						
SDCO	Great Sand Dun	51.95	298	eP	P	22 54 40.0	+0.9
	comp=Z,4.3nm,1.1s,mb4.3						
ANMO	Albuquerque	53.09	295	eP	P	22 54 46.9	-0.6
RLMT	Red Lodge	54.18	308	eP	P	22 54 57.0	+1.7
EGMT	Eagleton	54.40	311	eP	P	22 54 57.0	+0.1
	comp=Z,7.5nm,0.9s,mb4.6						
RES	Resolute Bay	54.52	345	eP	P	22 54 57.7	+0.4
	comp=Z,142nm,0.9s						
BW06	Boulder Array	54.55	305	eP	P	22 54 58.1	0.0
	comp=Z,12nm,1.4s,mb4.8						
PDAR	Pinedale Array	54.55	305	P	P	22 54 57.8	-0.4
	comp=Z,3.0nm,0.9s,mb4.3,baz=113,slow=6.7,SNR=20						
MOOW	Moose Ponds	55.33	306	eP	P	22 55 05.1	+1.4
	comp=Z,48nm,2.6s,mb5.1						
TPAW	Teton Pass	55.51	306	eP	P	22 55 07.1	+2.1
	comp=Z,34nm,1.9s,mb5.0						
HRY	Holter Researc	55.87	310	eP	P	22 55 12.0	+4.5
EDM	Edmonton	56.61	318	eP	P	22 55 14.0	+1.3
YKA	Yellowknife Ar	57.60	329	P	P	22 55 18.5	-1.1
	comp=Z,3.2nm,1.0s,mb4.3,baz=94,slow=7.5,SNR=23						
YKW3	Yellowknife Ar	57.61	329	eP	P	22 55 18.6	-1.0
FINES	FINESS Array B	57.85	32	P	P	22 55 21.6	+0.2
	comp=Z,2.2nm,0.7s,mb4.3,baz=237,slow=6.3,SNR=9.2						
KAF	Kangasniemi	58.00	32	ep	P	22 55 21.7	-0.7
	comp=Z,4.5nm,0.7s,mb4.6,baz=266,slow=6.7						
KAF	Kangasniemi	58.00	32	eP	P	22 55 21.7	-0.7
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ARCES	ARCESS Array B	58.45	23	P	P	22 55 25.4	0.0
ARCES	ARCESS Array B	58.45	23	P	P	22 55 25.4	0.0
	comp=Z,4.4nm,0.6s,mb4.7,baz=252,slow=6.1,SNR=20						
KEV	Kevo	59.01	23	ep	P	22 55 28.3	-1.0
	comp=Z,8.4nm,0.6s,mb5.0						
KEV	Kevo	59.01	23	eP	P	22 55 28.3	-1.0
KEV				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
NEW	Newport	59.31	312	eP	P	22 55 31.7	0.0
	comp=Z,7.4nm,1.1s,mb4.6						
NEW	Newport	59.31	312	eP	P	22 55 31.7	0.0
NEW				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AKASG	Malin Array Be	59.89	45	P	P	22 55 36.3	+0.6
	comp=Z,3.1nm,1.0s,mb4.3,baz=276,slow=6.2,SNR=4.2						
JOF	Joensuu	60.34	31	ep	P	22 55 36.6	-2.0
	comp=Z,1.4nm,0.6s,mb4.2						
NVAR	Mina Array Bea	61.80	301	P	P	22 55 49.9	+1.0
	comp=Z,0.5nm,0.4s,mb4.0,baz=50,slow=6.0,SNR=3.6						
BRTR	Keskin Array B	64.94	56	P	P	22 56 10.6	+0.9
	comp=Z,1.3nm,0.7s,mb4.1,baz=254,slow=5.5,SNR=9.3						
INK	Inuvik	65.24	336	eP	P	22 56 10.5	-0.7
COLA	College	71.69	334	eP	P	22 56 50.5	-1.0
	comp=Z,1.9nm,0.5s,mb4.3						
COLA	College	71.69	334	eP	P	22 56 50.5	-1.0
COLA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
PMR	Palmer	73.57	331	P	P	22 57 00.5	-2.3
	comp=Z,8.6nm,0.9s,mb4.7						
PMR	Palmer	73.57	331	P	P	22 57 00.5	-2.3
PMR				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TIXI	Tiksi	81.98	2	eP	P	22 57 49.6	+0.2
	comp=Z,1.9nm,0.8s,mb4.1						
TIXI	Tiksi	81.98	2	eP	P	22 57 48.4	-1.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
LSZ	Lusaka	81.99	111	eP	P	22 57 50.4	0.0
ZAL	Zalesovo	88.73	27	P	P	22 58 24.6	+1.1
ZALV	Zalesovo Beam	88.73	27	P	P	22 58 24.6	+1.2
	comp=Z,0.8nm,0.7s,mb4.2,baz=306,slow=5.3,SNR=5.5						

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*SZGRF **01** 23:01:57.8, 2605N×4486W, h33km, mb5.4, Northern Mid-Atlantic Ridge*

*IDC **01** 23:01:58.0±0.5, 2653N×4462W, h0km, mb4.4/23, mb1 4.6/23, mb1mx4.5/25, mbtmp4.4/23, MS5.2/1, Ms1 5.2/1, ms1mx3.9/31, Error ellipse: s-maj=17.3km s-min=12.0km az=164.0*

*ISCJB **01** 23:01:58.5±0.2, 2653N±005×4450W±002, h10km, mb5.2/139, MS5.6/166, Error ellipse: s-maj=7.1km s-min=2.9km az=173.8*

*MOS **01** 23:01:58.3±1.1, 2657N×4449W, h10km, mb5.3/72, MS5.6/22, Error ellipse: s-maj=6.7km s-min=3.8km az=135.6*

*NEIC **01** 23:02:00.1±0.3, 2646N×4445W, h10km, mb5.2/97, Error ellipse: s-maj=7.9km s-min=3.3km az=173.0*

*BJI **01** 23:02:00.1, 2650N×4450W, h10km, mB5.5, mb5.0, Ms5.4, Msz5.2*

*GCMT **01** 23:02:00.1±0.3, 2654N×4462W, h12km, MW5.3/81, Moment Tensor Solution. s56,c78; s81,c127; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.22±.03; $M_{\theta\theta}$-0.00±.04; $M_{\phi\phi}$1.22±.04; $M_{r\theta}$-0.39±.08; $M_{\theta\phi}$0.23±.03; $M_{\phi r}$-0.06±.08; Best double couple: $M_0$1.30100×10^{17} NP1:ϕ_s175.00000°, δ44.00000°, λ-113.00000°. NP2: ϕ_s26.00000°, δ50.00000°, λ-69.00000°. Principal axes: T 1.2690, Plg3.0000°, Azm101.0000°; N 0.0620, Plg16.0000°, Azm192.0000°; P -1.3340, Plg74.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 23:02:00.5±0.2**, 2652N**±005×**4448W**±002**, h10**km**,**
(h21km±2.3km**:pP-P), n552,** σ**1s24**/426**, mb5.2**/139**,**
MS5.6/166**, 27C-13D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSR	BB Station	18.53	293	eP	Pn	23 06 18.7	+1.3
	520nm,2.4s						
MTP	Monte Pirata	21.20	251	eP	P	23 06 47.0	+0.7
CPD	Cerro la Pandu	21.53	251	eP	P	23 06 50.8	+0.8
SJG	San Juan	21.70	252	eP	P	23 06 51.6	-0.1
	218nm,2.1s,mb5.2						
SJG				LR	LR		
	comp=Z,5μm,20.0s,MS4.9						
SJG	San Juan	21.70	252	eP	P	23 06 51.6	-0.1
SJG				pmax	pmax		
	comp=Z,218nm,2.1s						
SJG				MLR	MLR		
	comp=Z,5μm,20.0s						
SJG	San Juan	21.70	252	P	P	23 06 50.5	-1.2
	comp=Z,6.1nm,0.3s,mb4.6,baz=278,slow=18,SNR=6.4						
MPR	Mayaguez	22.50	253	eP	P	23 07 04.0	+3.7
PMAR	Madeira	24.71	69	eP	P	23 07 24.3	+2.4
PMPS	Porto Santo	25.24	68	eP	P	23 07 31.4	+4.7
SDDR	Presa de Saban	25.80	259	eP	P	23 07 35.5	+3.6
SDDR				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
WES	Weston	27.05	313	eP	P	23 07 43.6	+0.7
	comp=Z,164nm,1.9s,mb5.2						
WES				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
WES	Weston	27.05	313	eP	P	23 07 43.6	+0.6
WES				pmax	pmax		
	comp=Z,164nm,1.9s,mb5.2						
WES				MLR	MLR		
	comp=Z,3μm,20.0s,MS4.8						
HRV	Harvard--Oak R	27.26	313	eP	P	23 07 46.0	+1.2
HRV				LR	LR		
	comp=Z,3μm,20.0s,MS4.9						
PKME	Peaks-Kenny Pk	27.28	320	PFAKE		23 08 00.0	+15
PKME				LR	LR		
	comp=Z,3μm,20.0s,MS4.9						
LBNH	Lisbon	28.32	316	eP	P	23 07 56.4	+2.1
	comp=Z,103nm,1.8s,mb5.2						
LBNH				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
LBNH	Lisbon	28.32	316	eP	P	23 07 56.4	+2.1
LBNH				pmax	pmax		
	comp=Z,103nm,1.8s,mb5.2						
LBNH				MLR	MLR		
	comp=Z,4μm,21.0s,MS5.0						
BRNJ	Basking Ridge	28.60	307	eP	P	23 07 55.2	-1.6
ACCN	Adirondack Com	29.04	313	eP	P	23 08 02.4	+1.6
FRNY	Flat Rock	29.65	316	eP	P	23 08 06.3	+0.2
NCB	Newcomb	29.66	314	eP	P	23 08 08.2	+2.0
NCB				LR	LR		
	comp=Z,3μm,21.0s,MS5.0						
MVL	Millersville	29.67	305	eP	P	23 08 08.1	+1.7
CNNC	Cliffs of the	29.85	295	PFAKE		23 08 20.0	+12
CNNC				LR	LR		
	comp=Z,4μm,20.0s,MS5.0						
CBN	Corbin	29.97	301	PFAKE		23 08 20.0	+11
CBN				LR	LR		
	comp=Z,3μm,21.0s,MS4.9						
BINY	Binghamton	30.13	309	eP	P	23 08 12.2	+1.7
	comp=Z,67nm,1.6s,mb5.1						
BINY				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
LONY	Lake Ozonia	30.18	315	eP	P	23 08 12.7	+1.9
SDV	Santo Domingo	30.36	240	eP	P	23 08 10.4	-2.3
	comp=Z,4.5nm,0.8s						
SDV				LR	LR		
	comp=Z,983nm,21.0s,MS4.4						
SSPA	Standing Stone	30.98	306	PFAKE		23 08 30.0	+12
SSPA				LR	LR		
	comp=Z,3μm,21.0s,MS4.9						
NHSC	New Hope	31.55	291	PFAKE		23 08 40.0	+17
NHSC				LR	LR		
	comp=Z,4μm,22.0s,MS5.1						
PMAFR	Mafra	31.90	58	eLR	LR	23 26 07.2	
	comp=Z,19μm,20.0s						
PFVI	Vila Bisbo	31.92	62	eLR	LR	23 26 09.3	
BLA	Blacksburg	32.16	298	eP	P	23 08 30.1	+1.7
	comp=Z,51nm,1.2s,mb5.2						
BLA	Blacksburg	32.16	298	eP	P	23 08 30.1	+1.8
BLA				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.2						
MCWV	Mont Chateau	32.18	303	eP	P	23 08 31.7	+3.2
	comp=Z,77nm,1.5s,mb5.3						
MCWV				LR	LR		
	comp=Z,4μm,22.0s,MS5.1						
PBDV	Barranco-do-Ve	32.65	62	eP	P	23 08 34.3	+1.7
	comp=Z,91nm,1.6s,mb5.5						
PBDV				eP		23 15 59.8	
PBDV	Barranco-do-Ve	32.65	62	eLR	LR	23 26 49.0	
SCHQ	Schefferville	32.68	336	P	P	23 08 31.6	-1.1
	comp=Z,5.1nm,1.0s,mb4.4,baz=162,slow=7.6,SNR=5.6						
DWPF	Disney	32.79	281	PFAKE		23 08 50.0	+16
DWPF				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
PVAQ	Vaqueiros	32.84	62	eP	P	23 08 35.7	+1.4
	comp=Z,64nm,1.6s,mb5.3						
PVAQ				eP		23 16 35.6	
PVAQ	Vaqueiros	32.84	62	eLR	LR	23 26 55.7	
ERPA	Erie	32.92	307	eP	P	23 08 37.3	+2.3
	comp=Z,80nm,1.5s,mb5.4						
ERPA				LR	LR		
	comp=Z,3μm,20.0s,MS5.0						
EGRO	El Granado	33.04	61	P	P	23 08 37.8	+1.8
	comp=Z,137nm,2.3s,mb5.5						
RCBR	Riachuelo	33.22	164	P	P	23 08 36.1	-1.7
RCBR				LR	LR		
	comp=Z,1μm,20.0s,MS4.6						
PBAR	Barrancos	33.49	60	eLR	LR	23 27 13.5	
ELOB	Lobios	33.51	53	P	P	23 08 43.4	+3.3
	comp=Z,441nm,2.7s,mb5.9						
MTE	Manteigas	33.53	56	eLR	LR	23 27 07.6	
	comp=Z,16μm,20.0s						
MTE	Manteigas	33.53	56	eP	P	23 08 45.1	+4.9
EBAD	Badajoz	33.60	59	P	P	23 08 41.9	+1.0
	comp=Z,7.5nm,1.4s,mb4.4						
EMIN	Mina Concepcio	33.71	61	P	P	23 08 43.5	+1.6
	comp=Z,55nm,1.4s,mb5.3						
MVO	Moncorvo	34.08	55	eLR	LR	23 27 33.6	
ERUA	La Rua	34.31	53	P	P	23 08 47.7	+0.7
	comp=Z,41nm,1.4s,mb5.2						
ERUA	La Rua	34.31	53	P	P	23 08 47.7	+0.7
ERUA				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.2						
GOGA	Godfrey	34.31	291	eP	P	23 08 49.0	+1.8
GOGA				LR	LR		
	comp=Z,4μm,22.0s,MS5.1						
ECAL	Calabor	34.48	54	P	P	23 08 48.8	+0.2
	comp=Z,78nm,1.2s,mb5.5						
TZTN	Tazewell	34.56	297	eP	P	23 08 51.2	+1.9
	comp=Z,58nm,1.6s,mb5.3						
TZTN				LR	LR		
	comp=Z,4μm,21.0s,MS5.2						
TKL	Tuckaleechee C	34.67	295	P	P	23 08 49.1	-1.1
	comp=Z,9.0nm,0.9s,mb4.7,baz=107,slow=7.0,SNR=5.1						
TKL				LR	LR	23 20 11.9	
	comp=Z,4μm,19.8s,MS5.2,baz=123,slow=32						
MDT	Midelt	35.05	70	P	P	23 08 53.8	+0.2
	comp=Z,2.7nm,0.9s,baz=281,slow=6.2,SNR=4.2						
EMIJ	Mijas	35.08	64	P	P	23 09 00.3	+6.5
	comp=Z,22nm,1.2s,mb5.0						
EADA	Adamuz	35.41	61	P	P	23 09 01.6	+5.0
	comp=Z,26nm,1.1s,mb5.1						
AAM	Ann Arbor	35.60	306	PFAKE		23 09 10.0	+12
AAM				LR	LR		
	comp=Z,3μm,22.0s,MS5.1						
ELOJ	Sierra Loja	35.63	63	P	P	23 09 05.5	+7.0
	comp=Z,15nm,1.1s,mb4.8						
ELOJ	Sierra Loja	35.63	63	P	P	23 09 05.5	+7.0
ELOJ				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
PAB	San Pablo	35.78	58	PFAKE		23 09 10.0	+10
PAB				LR	LR		
	comp=Z,10μm,22.0s,MS5.6						
ERON	Agron	35.89	63	P	P	23 09 03.1	+2.3
ESDC	Sonseca Array	36.09	58	P	P	23 09 03.8	+1.3
	comp=Z,3.7nm,1.3s						
ESDC	Sonseca Array	36.09	58	P	P	23 09 03.2	+0.7
	comp=Z,0.8nm,0.7s,baz=256,slow=8.5,SNR=5.6						
ESLA	Sonseca Array	36.09	58	eP	P	23 09 03.5	+1.0
ESLA				LR	LR		
	comp=Z,66μm,22.0s,MS6.4						
ECOG	Cogollos-Vega	36.11	62	P	P	23 09 05.7	+3.0
	comp=Z,2.6nm,0.6s,mb4.3						
ECOG	Cogollos-Vega	36.11	62	P	P	23 09 05.7	+3.1
ECOG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
SWET	Sewanee	36.40	294	eP	P	23 09 02.5	-2.6
WCI	Wyandotte Cave	36.91	299	eP	P	23 09 09.9	+0.5
WCI				LR	LR		
	comp=Z,2μm,21.0s,MS5.0						
GLMI	Grayling	36.92	310	PFAKE		23 09 20.0	+11
GLMI				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
LRAL	Lakeview Retre	37.27	290	PFAKE		23 09 20.0	+7.4
LRAL				LR	LR		
	comp=Z,5μm,22.0s,MS5.2						
BRAL	Brewton	37.42	287	PFAKE		23 09 30.0	+16
BRAL				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
BCIP	Isla Barro Col	37.64	249	PFAKE		23 09 30.0	+14
BCIP				LR	LR		
	comp=Z,4μm,19.0s,MS5.2						
ETOR	Torete	37.71	57	P	P	23 09 17.0	+0.8
	comp=Z,14nm,1.1s,mb4.6						
ETOR	Torete	37.71	57	P	P	23 09 17.0	+0.8
ETOR				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.6						
WVT	Waverly	37.98	295	eP	P	23 09 14.7	-3.9
WVT				LR	LR		
	comp=Z,3.0nm,19.0s						
PLAL	Pickwick Lake	38.16	294	eP	P	23 09 20.9	+0.8
PLAL				LR	LR		
	comp=Z,4μm,22.0s,MS5.2						
QUIF	Quistinic	38.62	45	eP	P	23 09 22.6	-1.2
	comp=Z,425nm,1.8s,mb5.6						
QUIF	Quistinic	38.62	45	eP	P	23 09 22.6	-1.2
	comp=Z,213nm,1.8s,mb5.6						
QUIF	Quistinic	38.62	45	eP	P	23 09 22.6	-1.2
QUIF				pmax	pmax		
	comp=Z,213nm,1.8s,mb5.6						
ROSF	Rostrenen	38.69	45	eP	P	23 09 24.4	+0.1
	comp=Z,394nm,1.8s,mb5.5						
ROSF	Rostrenen	38.69	45	eP	P	23 09 24.4	+0.1
	comp=Z,197nm,1.8s,mb5.5						

ROSF Rostrenen 38.69 45 *e*P **P 23 09 24.4 +0.1**
ROSF pmax pmax
comp=Z,197nm,1.8s,mb5.5

SJPF Ste Jean 38.71 53 *e*P **P 23 09 24.0 -0.6**
comp=Z,98nm,1.3s,mb5.1

SJPF Ste Jean 38.71 53 *e*P **P 23 09 24.0 -0.6**
comp=Z,49nm,1.3s,mb5.1

SJPF Ste Jean 38.71 53 *e*P **P 23 09 24.0 -0.6**
SJPF pmax pmax
comp=Z,49nm,1.3s,mb5.1

ESAC San Caprasio 39.03 56 P **P 23 09 18.1 -9.2**
comp=Z,492nm,3.0s

SGMF Saint Gilles 39.12 45 *e*P **P 23 09 26.8 -1.1**
comp=Z,381nm,1.6s,mb5.6

SGMF Saint Gilles 39.12 45 *e*P **P 23 09 26.8 -1.1**
comp=Z,190nm,1.6s,mb5.6

SGMF Saint Gilles 39.12 45 *e*P **P 23 09 26.8 -1.1**
SGMF pmax pmax
comp=Z,190nm,1.6s,mb5.6

ETSF Etsaut 39.16 54 *e*P **P 23 09 27.5 -0.8**
comp=Z,120nm,1.7s,mb5.0

ETSF Etsaut 39.16 54 *e*P **P 23 09 27.5 -0.8**
comp=Z,60nm,1.7s,mb5.0

ETSF Etsaut 39.16 54 *e*P **P 23 09 27.5 -0.8**
ETSF pmax pmax
comp=Z,60nm,1.7s,mb5.0

SIUC Southern Illin 39.17 298 P **P 23 09 25.6 -2.9**
OXF Oxford 39.26 293 *e*P **P 23 09 27.1 -2.2**
OXF LR LR
comp=Z,3µm,19.0s,MS5.1

HDIL Hopedale 39.47 302 *e*PcP PcP 23 11 41.0 +2.2
HDIL LR LR
comp=Z,3µm,21.0s,MS5.1

ERTA Horta de San J 39.52 57 P **P 23 09 31.4 0.0**
comp=Z,1µm,5.6s

EBIE Bielsa 39.63 54 P **P 23 09 33.8 +1.5**
EPF Esparros 39.83 54 *e*P **P 23 09 33.4 -0.5**
comp=Z,166nm,1.7s,mb5.2

EPF Esparros 39.83 54 *e*P **P 23 09 33.4 -0.5**
comp=Z,83nm,1.7s,mb5.2

EPF Esparros 39.83 54 *e*P **P 23 09 33.4 -0.5**
EPF pmax pmax
comp=Z,83nm,1.7s,mb5.2

EPOB Poblet 40.13 57 P **P 23 09 37.6 +1.1**
FVM French Village 40.14 298 *e*P **P 23 09 38.1 +1.6**
comp=Z,83nm,1.8s,mb5.2

FVM French Village 40.14 298 *e*P **P 23 09 38.2 +1.6**
FVM pmax pmax
comp=Z,83nm,1.8s,mb5.2

GRR Gorron 40.24 45 *e*P **P 23 09 36.0 -1.2**
comp=Z,109nm,1.5s,mb5.0

GRR Gorron 40.24 45 *e*P **P 23 09 36.0 -1.2**
comp=Z,54nm,1.5s,mb5.1

GRR Gorron 40.24 45 *e*P **P 23 09 36.0 -1.2**
GRR pmax pmax
comp=Z,55nm,1.5s,mb5.1

COWI Conover 40.32 311 PFAKE 23 09 50.0 +12
COWI LR LR
comp=Z,3µm,20.0s,MS5.1

JFWS Jewell Farm 40.49 306 PFAKE 23 09 50.0 +11
JFWS LR LR
comp=Z,3µm,19.0s,MS5.1

EMIR Miracle 40.53 56 P **P 23 09 44.5 +4.7**
comp=Z,165nm,2.2s,mb5.3

TEIG Tepich 40.54 271 PFAKE 23 09 50.0 +10
TEIG LR LR
comp=Z,3µm,20.0s,MS5.1

FLN La Foliniere 40.58 45 *e*P **P 23 09 38.6 -1.5**
comp=Z,240nm,1.7s,mb5.3

FLN La Foliniere 40.58 45 *e*P **P 23 09 38.6 -1.5**
comp=Z,120nm,1.7s,mb5.2

FLN La Foliniere 40.58 45 *e*P **P 23 09 38.6 -1.5**
FLN pmax pmax
comp=Z,120nm,1.7s,mb5.2

SFJD Kangerlussuaq 40.67 356 PFAKE 23 09 50.0 +9.5
SFJD LR LR
comp=Z,5µm,21.0s,MS5.4

LDF La Druitiere 40.76 45 *e*P **P 23 09 39.7 -1.9**
comp=Z,64nm,1.1s,mb4.9

LDF La Druitiere 40.76 45 *e*P **P 23 09 39.7 -1.9**
comp=Z,32nm,1.1s,mb4.9

LDF La Druitiere 40.76 45 *e*P **P 23 09 39.7 -1.9**
LDF pmax pmax
comp=Z,32nm,1.1s,mb4.9

BORG Borgarnes 41.01 15 PFAKE 23 10 00.0 +17
BORG LR LR
comp=Z,6µm,20.0s,MS5.4

RJF Les Rejaudoux 41.07 51 *e*P **P 23 09 42.4 -1.8**
comp=Z,74nm,1.4s,mb4.8

RJF Les Rejaudoux 41.07 51 *e*P **P 23 09 42.4 -1.8**
comp=Z,37nm,1.4s,mb4.8

RJF Les Rejaudoux 41.07 51 *e*P **P 23 09 42.4 -1.8**
RJF pmax pmax
comp=Z,37nm,1.4s,mb4.8

MTLF Montolieu 41.23 54 *e*P **P 23 09 44.1 -1.5**
comp=Z,64nm,1.4s,mb4.8

MTLF Montolieu 41.23 54 *e*P **P 23 09 44.1 -1.5**
comp=Z,32nm,1.4s,mb4.8

MTLF Montolieu 41.23 54 *e*P **P 23 09 44.1 -1.5**
MTLF pmax pmax
comp=Z,32nm,1.4s,mb4.8

JTS JuntasAbangare 41.44 255 *e*P **P 23 09 45.3 -2.3**
JTS LR LR
comp=Z,5µm,21.0s,MS5.3

ESK Eskdalemuir 41.47 35 *e*P **P 23 09 47.2 -0.1**
ESK LR LR
comp=Z,16µm,19.0s,MS5.9

EJON La Jonquera 41.60 55 P **P 23 09 51.1 +2.5**
comp=Z,124nm,2.0s,mb5.2

UALR University of 41.67 293 *e*P **P 23 09 49.8 +0.6**
TCF Toulx Ste Croi 41.74 49 *e*P **P 23 09 48.3 -1.4**
comp=Z,47nm,1.1s,mb4.7

TCF Toulx Ste Croi 41.74 49 *e*P **P 23 09 48.3 -1.4**
comp=Z,24nm,1.1s,mb4.7

TCF Toulx Ste Croi 41.74 49 *e*P **P 23 09 48.3 -1.4**
TCF pmax pmax
comp=Z,24nm,1.1s,mb4.7

TGUH Tegucigalpa,Un 41.82 261 PFAKE 23 10 00.0 +9.3
TGUH LR LR
comp=Z,4µm,20.0s,MS5.3

BGF Bois d'Agland 42.23 49 *e*P **P 23 09 52.1 -1.5**
comp=Z,234nm,1.7s,mb5.2

BGF Bois d'Agland 42.23 49 *e*P **P 23 09 52.1 -1.5**
comp=Z,117nm,1.7s,mb5.2

BGF Bois d'Agland 42.23 49 *e*P **P 23 09 52.1 -1.5**
BGF pmax pmax
comp=Z,117nm,1.7s,mb5.2

LBL Lubilhac 42.26 51 *e*P **P 23 09 56.7 +2.8**
EYMN Ely 42.31 313 PFAKE 23 10 10.0 +16
EYMN LR LR
comp=Z,3µm,22.0s,MS5.2

TIC Toumodi 42.42 111 *e*P **P 23 09 59.0 +3.4**
comp=Z,232nm,1.8s,mb5.5

LASF Ste Croix 42.51 53 *e*P **P 23 09 55.1 -0.9**
AVF Avril sur Loir 42.61 49 *e*P **P 23 09 55.2 -1.6**
comp=Z,42nm,1.3s,mb4.7

AVF Avril sur Loir 42.61 49 *e*P **P 23 09 55.2 -1.6**
comp=Z,21nm,1.3s,mb4.7

AVF Avril sur Loir 42.61 49 *e*P **P 23 09 55.2 -1.6**
AVF pmax pmax
comp=Z,21nm,1.3s,mb4.7

LIC Lamto 42.64 111 *e*P **P 23 09 56.2 -1.2**
comp=Z,170nm,1.7s,mb5.2

LIC Lamto 42.64 111 *e*P **P 23 09 58.5 +1.1**
comp=Z,122nm,1.7s,mb5.3

LIC Lamto 42.64 111 *e*P **P 23 09 56.2 -1.2**
comp=Z,85nm,1.7s,mb5.2

PLDF La Plantade 42.65 50 *e*P **P 23 09 58.3 +1.2**
MIAR Mount Ida 42.69 293 *e*P **P 23 09 59.5 +1.8**
comp=Z,86nm,1.8s,mb5.2

MIAR LR LR
comp=Z,13µm,22.0s,MS5.8

MIAR Mount Ida 42.69 293 *e*P **P 23 09 59.5 +1.9**
MIAR pmax pmax
comp=Z,86nm,1.8s,mb5.2

MIAR MLR MLR
comp=Z,13µm,22.0s,MS5.8

SSF Saint Saulge 42.77 48 *e*P **P 23 09 56.5 -1.6**
comp=Z,46nm,1.2s,mb4.8

SSF Saint Saulge 42.77 48 *e*P **P 23 09 56.5 -1.6**
comp=Z,23nm,1.2s,mb4.8

SSF Saint Saulge 42.77 48 *e*P **P 23 09 56.5 -1.6**
SSF pmax pmax
comp=Z,23nm,1.2s,mb4.8

KIC Kosan Boka 42.81 111 *e*P **P 23 10 00.0 +1.2**
comp=Z,296nm,1.7s,mb5.7

SMF Signal de Mont 42.92 49 *e*P **P 23 09 58.0 -1.3**
comp=Z,132nm,1.3s,mb5.2

SMF Signal de Mont 42.92 49 *e*P **P 23 09 58.0 -1.3**
comp=Z,66nm,1.3s,mb5.2

SMF Signal de Mont 42.92 49 *e*P **P 23 09 58.0 -1.3**
SMF pmax pmax
comp=Z,66nm,1.3s,mb5.2

LOR Lormes 43.05 48 *e*P **P 23 09 58.8 -1.5**
comp=Z,53nm,1.3s,mb4.8

LOR Lormes 43.05 48 *e*P **P 23 09 58.8 -1.5**
comp=Z,26nm,1.3s,mb4.8

LOR Lormes 43.05 48 *e*P **P 23 09 58.8 -1.5**
LOR pmax pmax
comp=Z,26nm,1.3s,mb4.8

VIVF Saint-Julien-l 43.20 52 *e*P **P 23 10 00.9 -0.7**
SMRF Simiane la Rot 43.73 53 *e*P **P 23 10 05.8 -0.1**
comp=Z,186nm,2.0s,mb5.2

SMRF Simiane la Rot 43.73 53 *e*P **P 23 10 05.8 -0.1**
comp=Z,186nm,2.0s,mb5.5

NATX Nacogdoches 43.83 289 PFAKE
NATX LR LR 23 10 20.0 +13
comp=Z,12µm,21.0s,MS5.8

BAIF Baives 43.88 44 *e*P **P 23 10 05.1 -1.9**
comp=Z,53nm,1.3s,mb4.8

BAIF Baives 43.88 44 *e*P **P 23 10 05.1 -1.9**
comp=Z,26nm,1.3s,mb4.8

BAIF Baives 43.88 44 *e*P **P 23 10 05.1 -1.9**
BAIF pmax pmax
comp=Z,26nm,1.3s,mb4.8

ORIF Oris-en-Rattie 44.06 52 *e*P **P 23 10 08.3 -0.2**
MEZF Maizieres J'vi 44.08 47 *e*P **P 23 10 07.2 -1.4**
comp=Z,454nm,1.8s,mb5.6

MEZF Maizieres J'vi 44.08 47 *e*P **P 23 10 07.2 -1.4**
comp=Z,454nm,1.8s,mb5.9

GIVF Givet 44.28 44 *e*P **P 23 10 08.3 -1.9**
LMR La Mourre 44.34 54 *e*P **P 23 10 09.8 -1.0**
comp=Z,158nm,1.6s,mb5.2

LMR La Mourre 44.34 54 *e*P **P 23 10 09.8 -1.0**
comp=Z,79nm,1.6s,mb5.2

LMR La Mourre 44.34 54 *e*P **P 23 10 09.8 -1.0**
LMR pmax pmax
comp=Z,79nm,1.6s,mb5.2

CABF La Chapelle 44.44 50 *e*P **P 23 10 10.5 -1.0**
comp=Z,195nm,1.6s,mb5.3

CABF La Chapelle 44.44 50 *e*P **P 23 10 10.5 -1.0**
comp=Z,97nm,1.6s,mb5.3

CABF La Chapelle 44.44 50 *e*P **P 23 10 10.5 -1.0**
CABF pmax pmax
comp=Z,97nm,1.6s,mb5.3

FRF La Foret Royal 44.46 54 *e*P **P 23 10 10.9 -0.8**
comp=Z,101nm,1.6s,mb5.0

FRF La Foret Royal 44.46 54 *e*P **P 23 10 10.9 -0.8**
comp=Z,50nm,1.6s,mb5.0

FRF La Foret Royal 44.46 54 *e*P **P 23 10 10.9 -0.8**
FRF pmax pmax
comp=Z,50nm,1.6s,mb5.0

THEF They Montfort 44.64 47 *e*P **P 23 10 16.1 +3.0**
MBDF Montbardon 44.67 52 *e*P **P 23 10 13.6 +0.2**
LPL La Plagne 44.73 51 *e*P **P 23 10 13.9 0.0**
LPG La Plagne 44.74 51 *e*P **P 23 10 13.9 -0.1**
HAU Haudompre 44.84 48 *e*P **P 23 10 13.1 -1.6**
comp=Z,176nm,1.7s,mb5.3

HAU Haudompre 44.84 48 *e*P **P 23 10 13.1 -1.6**
comp=Z,88nm,1.7s,mb5.3

HAU Haudompre 44.84 48 *e*P **P 23 10 13.1 -1.6**
HAU pmax pmax
comp=Z,88nm,1.7s,mb5.3

KSU1 Kansas State U 45.01 300 *e*P **P 23 10 14.6 -1.6**
KSU1 LR LR
comp=Z,19µm,21.0s,MS6.0

ASCN Ascension 45.03 135 PFAKE
ASCN LR LR 23 10 30.0 +13
comp=Z,10µm,20.0s,MS5.7

LOMF Lomont 45.05 49 *e*P **P 23 10 17.4 +1.0**
SBF Sospel 45.06 54 *e*P **P 23 10 16.1 -0.4**
HKT Hockley 45.07 287 PFAKE
HKT LR LR 23 10 30.0 +13
comp=Z,5µm,21.0s,MS5.4

HINF Hinteralfeld 45.14 48 *e*P **P 23 10 15.4 -1.7**
comp=Z,66nm,1.6s,mb4.9

HINF Hinteralfeld 45.14 48 *e*P **P 23 10 15.4 -1.7**
comp=Z,33nm,1.6s,mb4.9

HINF Hinteralfeld 45.14 48 *e*P **P 23 10 15.4 -1.7**
HINF pmax pmax
comp=Z,33nm,1.6s,mb4.9

TOA0 Torodi Ar. Sit 45.19 98 *e*P **P 23 10 17.7 -0.2**
TORD Torodi Ar. Bea 45.19 98 P **P 23 10 17.8 -0.2**
comp=Z,1.9nm,0.8s,baz=290,slow=4.2,SNR=12

TORD PP PP 23 12 08.5 +4.9
comp=Z,3.9nm,1.2s,baz=289,slow=8.4,SNR=4.1

ECSD EROS,Sioux Fal 45.20 306 *e*P **P 23 10 19.5 +1.9**
SIV San Ignacio 45.23 203 P **P 23 10 16.4 -1.6**
comp=Z,2.6nm,0.7s,baz=50,slow=8.1,SNR=12

AGMN Agassiz Refuge 45.25 313 *e*P **P 23 10 16.5 -1.5**
CDF Champ du Feu 45.52 47 *e*P **P 23 10 18.6 -1.5**
comp=Z,122nm,1.6s,mb5.3

CDF Champ du Feu 45.52 47 *e*P **P 23 10 18.6 -1.5**
comp=Z,61nm,1.6s,mb5.3

CDF Champ du Feu 45.52 47 *e*P **P 23 10 18.6 -1.5**
CDF pmax pmax
comp=Z,61nm,1.6s,mb5.3

RUP Ruppelstein 45.61 45 *e*P **P 23 10 23.9 +3.1**
ULM Lac du Bonnet 45.62 315 P **P 23 10 19.1 -1.8**
comp=Z,6.5nm,0.6s,mb4.7,baz=81,slow=8.2,SNR=19

STR Strasbourg 45.87 47 *e*P **P 23 10 21.5 -1.3**
ABH Alteburg 45.95 45 *e*P **P 23 10 26.7 +3.2**
BUG Bochum--Univer 46.09 43 *e*P **P 23 10 24.9 +0.4**
comp=Z,382nm,3.0s

BFO Black Forest 46.20 47 P **P 23 10 25.3 -0.2**
comp=Z,116nm,1.2s,mb5.7,SNR=5.4

BFO Black Forest 46.20 47 *e*P **P 23 10 25.7 +0.2**
comp=Z,63nm,1.6s,mb5.3

BFO LR LR
comp=Z,3µm,22.0s,MS5.3

BFO Black Forest 46.20 47 *e*P **P 23 10 25.7 +0.2**
BFO pmax pmax
comp=Z,63nm,1.6s,mb5.3

BFO MLR MLR
comp=Z,3µm,22.0s,MS5.3

BFO Black Forest 46.20 47 *e*P **P 23 10 25.7 +0.2**
comp=Z,63nm,1.6s,mb5.3

VSL Villasalto 46.35 60 *e*P **P 23 10 27.7 +0.8**
SPAK Spaichingen-Ko 46.47 48 *e*P **P 23 10 28.4 +0.8**
KEST Kesra 46.49 65 P **P 23 10 28.5 +0.5**
comp=Z,9.4nm,1.0s,mb4.7,baz=205,slow=3.3,SNR=16

IBBN Ibbenburen 46.57 42 *e*P **P 23 10 28.9 +0.6**
comp=Z,26nm,0.8s,mb5.2

TNS Taunus Mts 46.58 45 *e*P **P 23 10 29.1 +0.7**
TNS pmax pmax
comp=Z,52nm,1.6s,mb5.2

TNS Taunus Mts 46.58 45 *e*P **P 23 10 29.1 +0.7**
comp=Z,52nm,1.6s,mb5.2

TOD Tromm 46.71 46 *e*P **P 23 10 31.7 +2.3**
STU Stuttgart 46.83 47 *e*P **P 23 10 30.4 0.0**
comp=Z,46nm,1.4s,mb5.2

WMOK Wichita Mounta 46.96 294 *e*P **P 23 10 32.4 +0.8**
comp=Z,58nm,1.5s,mb5.3

WMOK LR LR
comp=Z,15µm,20.0s,MS5.9

WMOK Wichita Mounta 46.96 294 *e*P **P 23 10 32.4 +0.8**
WMOK pmax pmax
comp=Z,58nm,1.5s,mb5.3

WMOK MLR MLR
comp=Z,15µm,20.0s,MS5.9

FCC Fort Churchill 47.03 327 *e*P **P 23 10 30.5 -1.3**
comp=Z,63nm,1.4s,mb5.3

FCC Fort Churchill 47.03 327 *e*P **P 23 10 30.5 -1.3**
FCC pmax pmax
comp=Z,63nm,1.4s,mb5.3

DAVA Damuels 47.10 49⇑ *i*P **P 23 10 33.5 +0.9**
comp=Z,56nm,1.4s,mb5.3

DAVA Damuels 47.10 49⇑ *i*pP pP 23 10 33.5 -2.2
comp=Z,56nm,1.4s

KVTX Kingsville 47.27 284 PFAKE
KVTX LR LR 23 10 50.0 +16
comp=Z,6µm,21.0s,MS5.5

CBKS Cedar Bluff 47.45 299 PFAKE
CBKS LR LR 23 10 50.0 +15
comp=Z,17µm,21.0s,MS6.0

FETA Feichten 47.65 49⇑ *i*pP pP 23 10 37.4 -2.5
comp=Z,21nm,1.2s

UBBA Unterbreizbach 47.66 44 *e*P **P 23 10 37.2 +0.3**
comp=Z,215nm,2.9s,mb5.7

RETA Reutte 47.72 49⇑ *i*pP pP 23 10 38.4 -2.1
comp=Z,45nm,1.7s

MOTA Moosalm 47.94 49⇑ *i*P **P 23 10 40.1 +1.1**

MOTA Moosalm 47.94 49⇑ *i*pP pP 23 10 40.1 -2.1
SQTA Sankt Quirin 47.99 49⇑ *i*P **P 23 10 40.0 +0.5**
comp=Z,38nm,1.4s,mb5.2

SQTA Sankt Quirin 47.99 49⇑ *i*P **P 23 10 40.0 +0.5**
SQTA pmax pmax
comp=Z,38nm,1.4s,mb5.2

NRDL Niedersach Rie 48.02 42 *e*P **P 23 10 40.5 +0.9**
comp=Z,68nm,1.4s,mb5.5

CLZ Clausthal 48.06 43 *e*P **P 23 10 40.5 +0.5**
CLZ pmax pmax
comp=Z,62nm,1.6s,mb5.4

CLZ Clausthal 48.06 43 *e*P **P 23 10 40.5 +0.5**
comp=Z,62nm,1.6s,mb5.4

FUR Furstenfeldbru 48.13 48 *e*P **P 23 10 40.6 +0.1**
FUR pmax pmax
comp=Z,88nm,1.8s,mb5.5

FUR Furstenfeldbru 48.13 48 *e*P **P 23 10 40.6 +0.1**
comp=Z,88nm,1.8s,mb5.5

GRFO Grafenberg 48.27 46 PFAKE
GRFO LR LR 23 10 50.0 +8.4
comp=Z,5µm,22.0s,MS5.4

GRA1 Grafenberg Arr 48.27 46 *e*P **P 23 10 41.9 +0.3**
comp=Z,35nm,1.2s,mb5.3

GRF Grafenberg Arr 48.27 46 *e*P **P 23 10 41.9 +0.3**
GRF pmax pmax
comp=Z,35nm,1.2s,mb5.3

GRF Grafenberg Arr 48.27 46 *e*P **P 23 10 41.9 +0.3**
GRF pmax pmax
comp=Z,35nm,1.2s,mb5.3

GRF Grafenberg Arr 48.27 46 *e*P **P 23 10 41.9 +0.3**
comp=Z,35nm,1.2s,mb5.3

WTTA Wattenberg 48.29 49⇓ *i*P **P 23 10 41.5 -0.3**
comp=Z,42nm,1.6s,mb5.2

WTTA Wattenberg 48.29 49⇓ *i*P **P 23 10 41.5 -0.3**
WTTA pmax pmax
comp=Z,42nm,1.6s,mb5.2

LPAZ La Paz 48.36 211 P **P 23 10 41.4 -1.2**
LPAZ LR LR
comp=Z,5µm,20.0s,MS5.5

LPAZ La Paz 48.36 211 P **P 23 10 41.4 -1.2**
comp=Z,4.4nm,0.5s,mb4.7,baz=13,slow=8.1,SNR=16

JCT Junction City 48.37 288 *e*P **P 23 10 43.7 +1.0**
comp=Z,24nm,1.0s,mb5.2

JCT Junction City 48.37 288 *e*P **P 23 10 43.7 +1.0**
JCT pmax pmax
comp=Z,24nm,1.0s,mb5.2

BSEG Bad Segeberg 48.43 40 *e*P **P 23 10 42.9 +0.2**
comp=Z,101nm,1.4s,mb5.7

MOX Moxa 48.65 45 *e*P **P 23 10 47.0 +2.5**
comp=Z,44nm,1.7s,mb5.2

MOX Moxa 48.65 45 *e*P **P 23 10 47.0 +2.5**
MOX pmax pmax
comp=Z,44nm,1.7s,mb5.2

MOX Moxa 48.65 45 *e*P **P 23 10 44.9 +0.4**
comp=Z,20nm,1.1s,mb5.1

ABTA Abfaltersbach 48.85 50⇑ *i*P **P 23 10 45.9 -0.2**
comp=Z,23nm,1.2s,mb5.1

MANZ Manzenberg 48.88 46 *e*P **P 23 10 46.8 +0.5**
ROTZ Rotzenmuhle 48.92 46 *e*P **P 23 10 47.2 +0.6**
comp=Z,50nm,1.7s,mb5.3

WERD Werda 49.06 45 *e*P **P 23 10 48.0 +0.3**
comp=Z,82nm,2.3s,mb5.3

GUNZ Gunzen 49.07 45 *e*P **P 23 10 48.6 +0.9**
comp=Z,124nm,2.4s,mb5.5

WERN Wernitzgruen 49.09 45 *e*P **P 23 10 48.7 +0.9**
comp=Z,44nm,1.4s,mb5.3

NKC Novy Kostel 49.13 45 *e*P **P 23 10 48.2 0.0**
TANN Tannenbergstha 49.16 45 *e*P **P 23 10 49.1 +0.7**
comp=Z,52nm,2.0s,mb5.2

WET Wettzell 49.29 47 *e*P **P 23 10 49.7 +0.3**
WET pmax pmax
comp=Z,64nm,1.9s,mb5.3

WET Wettzell 49.29 47 *e*P **P 23 10 49.7 +0.3**
comp=Z,64nm,1.9s,mb5.3

KBA Koelnbreinsper 49.44 50⇑ *i*P **P 23 10 51.1 +0.5**
comp=Z,13nm,1.1s,mb4.9

KBA Koelnbreinsper 49.44 50⇑ *i*P **P 23 10 51.1 +0.5**
KBA pmax pmax
comp=Z,13nm,1.1s,mb4.9

KONO Kongsberg 49.49 33 PFAKE 23 11 00.0 +9.2
KONO LR LR
comp=Z,5µm,19.0s,MS5.5

NNA Nana 49.54 223 P **P 23 10 50.0 -1.7**
NNA LR LR
comp=Z,1µm,21.0s,MS4.9

CLL Collm 49.61 44 *i* P **P 23 10 52.2 +0.4**
comp=Z,33nm,1.3s,mb5.2

CLL *e*PP PP 23 12 43.0 -3.0
CLL *e*S **S 23 18 07.0 +7.0**
comp=N,300nm,21.6s

CLL *e*S **S 23 18 07.0 +7.0**
comp=E,400nm,22.2s

CLL Collm 49.61 44 *e*P **P 23 10 51.8 0.0**
comp=Z,33nm,1.3s,mb5.2

KHC Kasperske Hory 49.74 47 *e*P **P 23 10 52.7 -0.2**
KHC *e*pP pP 23 10 58.7 +2.6
FBE Freiberg 49.78 45 *e*P **P 23 10 52.9 -0.2**
comp=Z,179nm,2.3s,mb5.7

GEC2 GERESS Array S 49.80 47 *e*P **P 23 10 53.5 +0.2**
GEC2 pmax pmax
comp=Z,56nm,1.7s,mb5.3

GEC2 GERESS Array S 49.80 47 *e*P **P 23 10 53.5 +0.2**
comp=Z,56nm,1.7s,mb5.3

GERES GERESS Array B 49.80 47 P **P 23 10 53.3 -0.1**
comp=Z,2.1nm,0.8s,baz=263,slow=7.8,SNR=4.8

JAVS Javornik 49.88 51 *e*P **P 23 10 54.1 +0.1**
FFC Flin Flon 50.13 320 P **P 23 10 54.8 -0.9**
comp=Z,113nm,1.6s,mb5.7,SNR=7.3

FFC Flin Flon 50.13 320 *e*P **P 23 10 54.1 -1.6**
comp=Z,59nm,1.5s,mb5.4

FFC LR LR
comp=Z,7µm,19.0s,MS5.7

FFC Flin Flon 50.13 320 *e*P **P 23 10 54.2 -1.5**
FFC pmax pmax
comp=Z,59nm,1.5s,mb5.4

FFC MLR MLR
comp=Z,7µm,19.0s,MS5.7

BRG Berggiesshubel 50.15 45 *e*P **P 23 10 56.3 +0.4**
BRG pmax pmax
comp=Z,19nm,1.4s,mb4.9

BRG Berggiesshubel 50.15 45 *e*P **P 23 10 56.0 +0.1**
comp=Z,282nm,3.2s

BRG Berggiesshubel 50.15 45 *e*P **P 23 10 56.2 +0.3**
comp=Z,32nm,1.4s,mb5.2

LJU Ljubljana 50.21 51 *e*P **P 23 10 57.0 +0.5**
RUE Ruedersdorf 50.24 43 *e*P **P 23 10 57.0 +0.4**
comp=Z,91nm,1.6s,mb5.5

OBKA Obir 50.24 50⇑ *i*P **P 23 10 56.2 -0.4**
comp=Z,35nm,0.8s,mb5.5

PRA Prague 50.38 46 P **P 23 11 00.0 +2.3**
PRA *ex* x 23 13 35.0
PRU Pruhonice 50.44 46 *e*P **P 23 10 58.8 +0.6**
PRU *e*pP pP 23 11 04.1 +2.8
NAO01 NORSAR Array S 50.46 31 PFAKE 23 11 10.0 +12
NAO01 LR LR
comp=Z,9µm,19.0s,MS5.8

PVCC Panska Ves 50.51 45 *e*P **P 23 10 59.2 +0.5**
PVCC *e*pP pP 23 11 04.8 +3.0
RSSD Black Hills 50.57 307 PFAKE 23 11 10.0 +11
RSSD LR LR
comp=Z,2µm,22.0s,MS5.2

NB2 NORSAR Subarra 50.67 31 P **P 23 10 59.4 -0.3**
comp=Z,478nm,3.3s,baz=253,slow=7.9

NOA NORSAR Array B 50.67 31 P **P 23 10 59.9 +0.1**
comp=Z,14nm,1.1s,mb4.8,baz=254,slow=7.7,SNR=17

BOJS Bojanci 50.70 52 *i* P **P 23 11 00.9 +0.7**
DGMT Dagmar 50.79 312 *e*P **P 23 11 02.2 +1.4**
DGMT LR LR
comp=Z,21µm,20.0s,MS6.2

UPC Upice 51.42 45 *e*P **P 23 11 05.5 -0.1**
DPC Dobruska-Polom 51.61 46 *e*P **P 23 11 00.5 -6.5**
DPC *e* 23 11 07.4
DPC Dobruska-Polom 51.61 46 *e*P **P 23 11 07.4 +0.4**
KSP Ksiaz 51.63 45 *e*P **P 23 11 08.6 +1.6**
KSP Ksiaz 51.63 45 *e*P **P 23 11 07.4 +0.3**
KSP *e*S **S 23 18 27.0 -1.0**
VRAC Vranov 51.73 47⇑ *i*P **P 23 11 08.0 +0.1**
VRAC Vranov 51.73 47⇑ *i*P **P 23 11 08.0 +0.1**
PAYG Puerto Ayora 51.73 246 PFAKE 23 11 20.0 +12
PAYG LR LR
comp=Z,3µm,21.0s,MS5.2

DAG Danmarks Havn 51.84 7⇑ *e*P **P 23 11 06.7 -1.6**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8

DAG Danmarks Havn 51.84 7⇑ *i*P **P 23 11 06.7 -1.6**
comp=Z,10nm,0.8s,mb4.8

DAG *e* 23 13 42.0
LTX Lajitas 51.88 288 *e*P **P** **23 11 10.2 +0.9**
LTX LR LR
comp=Z,2μm,21.0s,MS5.1
TXAR Lajitas Array 51.88 288 P **P** **23 11 08.2 -1.2**
comp=Z,0.6nm,0.6s,baz=96,slow=7.7,SNR=8.0
GDL2 Guadalupe Moun 51.92 291 *e*P **P** **23 11 09.8 +0.1**
ISCO Idaho Springs 51.94 301 *e*P **P** **23 11 12.0 +2.3**
ISCO LR LR
comp=Z,15μm,20.0s,MS6.0
ZST Bratislava 52.02 48 *e*P **P** **23 11 05.7 -4.4**
SDCO Great Sand Dun 52.06 298 *e*P **P** **23 11 13.8 +3.3**
SDCO LR LR
comp=Z,35μm,21.0s,MS6.4
LAO LASA Array 52.11 310 PFAKE 23 11 20.0 +9.3
LAO LR LR
comp=Z,16μm,20.0s,MS6.1
MORC Moravsky Berou 52.37 46 *e*P **P** **23 11 13.2 +0.7**
MORC Moravsky Berou 52.37 46 ⇓*i*P **P** **23 11 13.1 +0.5**
OKC Ostrava-Krasne 52.76 46 *e*P **P** **23 11 14.7 -0.8**
MNTX Cornudas Mount 52.87 291 *e*P **P** **23 11 16.9 +0.3**
comp=Z,62nm,2.2s,mb5.2
MNTX LR LR
comp=Z,14μm,20.0s,MS6.0
KOLL Kolacno 52.90 48 *e*P **P** **23 11 16.0 -0.6**
SMCO Snowmass 53.05 300 *e*P **P** **23 11 21.2 +3.4**
PKSM Moragy 53.07 51 ⇑P **P** **23 11 17.2 -0.7**
PKSM Moragy 53.07 51 ⇑*i*P **P** **23 11 17.2 -0.7**
VYHS Vyhne 53.19 48 *e*P **P** **23 11 17.2 -1.5**
comp=Z,20nm,1.7s,mb4.8
VYHS Vyhne 53.19 48 *e*P **P** **23 11 17.2 -1.5**
VYHS pmax pmax
comp=Z,20nm,1.7s,mb4.8
ANMO Albuquerque 53.20 295 *e*P **P** **23 11 19.9 +0.9**
comp=Z,66nm,1.9s,mb5.2
ANMO LR LR
comp=Z,19μm,20.0s,MS6.1
ANMO Albuquerque 53.20 295 *e*P **P** **23 11 19.9 +0.9**
ANMO pmax pmax
comp=Z,66nm,1.9s
ANMO MLR MLR
comp=Z,19μm,20.0s
OJC Ojcow 53.83 46 *e*P **P** **23 11 24.1 +0.7**
PSZ Piszkesteto 53.90 49 ⇑P **P** **23 11 23.7 -0.2**
PSZ Piszkesteto 53.90 49 ⇑*i*P **P** **23 11 23.7 -0.2**
NIE Niedzica 54.16 47 *e*P **P** **23 11 27.3 +1.5**
RLMT Red Lodge 54.27 308 PFAKE 23 11 40.0 +13
RLMT LR LR
comp=Z,14μm,21.0s,MS6.0
KECS Kecovo 54.28 48 *e*P **P** **23 11 27.9 +1.2**
comp=Z,7.5nm,1.6s,mb4.4
KECS Kecovo 54.28 48 *e*P **P** **23 11 27.9 +1.2**
KECS pmax pmax
comp=Z,8.0nm,1.6s,mb4.4
PV01 Paradox Valley 54.42 299 *e*P **P** **23 11 30.2 +2.4**
MVCO Mesa Verde 54.49 298 *e*P **P** **23 11 31.1 +2.7**
MVCO LR LR
comp=Z,16μm,20.0s,MS6.1
EGMT Eagleton 54.49 311 *e*P **P** **23 11 26.9 -1.4**
RES Resolute Bay 54.56 345 *e*P **P** **23 11 27.0 -1.3**
PDAR Pinedale Array 54.65 305 P **P** **23 11 27.9 -1.6**
comp=Z,3.4nm,0.6s,mb4.6,baz=101,slow=7.1,SNR=19
BW06 Boulder Array 54.65 305 *e*P **P** **23 11 28.0 -1.5**
BW06 LR LR
comp=Z,13μm,21.0s,MS6.0
PV10 Paradox Valley 54.75 300 P **P** **23 11 29.9 -0.4**
STHS Stebnicka Huta 54.77 47 *e*P **P** **23 11 29.0 -1.2**
comp=Z,15nm,1.6s,mb4.8
STHS Stebnicka Huta 54.77 47 *e*P **P** **23 11 29.0 -1.2**
STHS pmax pmax
comp=Z,15nm,1.6s,mb4.8
CRVS Cervenica-Dubn 54.92 47 *e*P **P** **23 11 31.8 +0.5**
OHR Ohrid 54.97 57 *i*P **P** **23 11 32.9 +1.1**
LKWY Lake 55.12 307 *e*P **P** **23 11 33.8 +0.9**
comp=Z,28nm,1.4s,mb5.1
LKWY LR LR
comp=Z,23μm,21.0s,MS6.2
LKWY Lake 55.12 307 *e*P **P** **23 11 33.8 +1.0**
LKWY pmax pmax
comp=Z,28nm,1.4s,mb5.1
LKWY MLR MLR
comp=Z,23μm,21.0s,MS6.2
BZS Buzias 55.17 51 ⇑P **P** **23 11 34.2 +1.0**
BZS Buzias 55.17 51 ⇑*i*P **P** **23 11 34.2 +1.0**
KRUS Krusevo 55.28 57 *i*P **P** **23 11 36.9 +2.8**
SKO Skopje 55.35 56 *i*P **P** **23 11 35.6 +1.0**
BIA Bitola 55.38 57 *i*P **P** **23 11 37.4 +2.6**
MOOW Moose Ponds 55.43 306 *e*P **P** **23 11 35.1 0.0**
comp=Z,54nm,2.0s,mb5.2
YFT Old Faithful 55.44 307 *e*P **P** **23 11 38.7 +3.5**
KOLS Kolonicko sedl 55.46 47 *e*P **P** **23 11 33.7 -1.5**
UZH Uzhgorod 55.48 48 *d i*P **P** **23 11 36.2 +0.8**
UZH *i* 23 11 42.0
YMR Madison River 55.51 307 *e*P **P** **23 11 35.2 -0.5**
comp=Z,70nm,1.6s,mb5.4
YMR LR LR
comp=Z,13μm,21.0s,MS6.0
REDW Red Top Meadow 55.54 306 *e*P **P** **23 11 35.9 -0.1**
comp=Z,37nm,1.5s,mb5.2
AHID Auburn Hatcher 55.78 305 PFAKE 23 11 50.0 +12
AHID LR LR
comp=Z,11μm,21.0s,MS5.9
SRU San Rafael 55.80 301 *e*P **P** **23 11 37.0 -0.9**
QLMT Earthquake Lak 55.83 308 *e*P **P** **23 11 39.0 +1.1**
BOZ Bozeman (W) 55.90 309 *e*P **P** **23 11 37.1 -1.3**
BOZ LR LR
comp=Z,9μm,20.0s,MS5.9
STIP Stip 55.94 56 *i*P **P** **23 11 39.0 +0.1**
HWUT Hardware Ranch 56.26 304 *e*P **P** **23 11 40.5 -0.6**
comp=Z,83nm,2.5s,mb5.3
HWUT LR LR
comp=Z,13μm,20.0s,MS6.0
VAY Valandovo 56.27 57 *i*P **P** **23 11 40.4 -0.8**
TMUT Trail Mountain 56.30 301 *e*P **P** **23 11 41.5 +0.1**
JLU Jordanelle 56.30 303 *e*P **P** **23 11 43.2 +1.8**
LRM Limekiln Ridge 56.46 309 *e*P **P** **23 11 42.6 +0.2**
ALE Alert 56.48 357 P **P** **23 11 40.0 -2.1**
comp=Z,216nm,1.3s,mb6.0,SNR=18
MPU Maple Canyon 56.52 302 PFAKE 23 12 00.0 +17
MPU LR LR
comp=Z,19μm,20.0s,MS6.2
LVV L'vov 56.57 46 *e*P **P** **23 11 43.1 -0.1**
DLMT Dillon 56.60 308 *e*P **P** **23 11 43.4 -0.1**
EDM Edmonton 56.69 318 *e*P **P** **23 11 43.6 -0.4**
NLU North Lily Min 56.86 302 *e*P **P** **23 11 48.3 +2.9**
WUAZ Wupatki 57.06 297 *e*P **P** **23 11 47.9 +1.0**
comp=Z,50nm,1.6s,mb5.3
MSU Marysvale 57.17 300 *e*P **P** **23 11 46.8 -0.8**
MVU Marysvale 57.20 300 PFAKE 23 12 00.0 +12
MVU LR LR
comp=Z,15μm,22.0s,MS6.0
TUC Tucson 57.23 293 *e*P **P** **23 11 48.6 +0.4**
TUC LR LR
comp=Z,15μm,22.0s,MS6.0
DUG Dugway 57.39 302 *e*P **P** **23 11 48.1 -1.1**
comp=Z,31nm,0.6s,mb5.5
DUG LR LR
comp=Z,16μm,20.0s,MS6.1
DUG Dugway 57.39 302 *e*P **P** **23 11 48.1 -1.0**
DUG pmax pmax
comp=Z,31nm,0.6s,mb5.5
DUG MLR MLR
comp=Z,16μm,20.0s,MS6.1
MSO Missoula 57.40 310 *e*P **P** **23 11 50.7 +1.6**
MSO LR LR
comp=Z,15μm,21.0s,MS6.1
BGU Big Grassy Mou 57.44 303 *e*P **P** **23 11 48.1 -1.4**
BURAR Bucovina Array 57.50 49 ⇓P **P** **23 11 50.5 +0.8**
BURAR Bucovina Array 57.50 49 ⇓*i*P **P** **23 11 50.5 +0.7**
YKA Yellowknife Ar 57.67 329 P **P** **23 11 48.4 -2.3**
comp=Z,12nm,1.2s,mb4.8,baz=93,slow=7.0,SNR=27
YKW3 Yellowknife Ar 57.68 329 *e*P **P** **23 11 49.7 -1.1**
FINES FINESS Array B 57.81 32 P **P** **23 11 50.8 -0.9**
comp=Z,9.0nm,0.8s,mb4.9,baz=262,slow=3.9,SNR=30
FIA1 FINESS Array S 57.81 32 *e*P **P** **23 11 50.9 -0.8**
KBS Kingsbay 57.89 11 PFAKE 23 12 00.0 +7.9
KBS LR LR
comp=Z,1μm,22.0s,MS5.0
KAF Kangasniemi 57.95 32 *ep* **P** **23 11 51.0 -1.7**
comp=Z,5.5nm,0.6s,mb4.8,baz=267,slow=6.8
KAF Kangasniemi 57.95 32 *e*P **P** **23 11 51.0 -1.7**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
VSU Vasula 58.03 36 *i*P **P** **23 11 52.2 -1.1**

HLID Hailey 58.10 306 *e*P **P** **23 11 54.2 +0.1**
comp=Z,39nm,1.8s,mb5.1
HLID LR LR
comp=Z,15μm,22.0s,MS6.1
MLR Muntele Rosu 58.21 51 ⇓P **P** **23 11 54.9 +0.1**
MLR Muntele Rosu 58.21 51 ⇓*i*P **P** **23 11 54.9 +0.1**
CCUT Cedar City 58.26 299 *e*P **P** **23 11 54.5 -0.8**
ARCES ARCESS Array B 58.43 23 P **P** **23 11 55.1 -0.8**
comp=Z,12nm,0.6s,mb5.1,baz=258,slow=6.1,SNR=34
MNK Minsk 58.70 41 *e*P **P** **23 11 56.0 -2.1**
VRI Vrincioaia 58.71 51 ⇓P **P** **23 11 58.8 +0.5**
VRI Vrincioaia 58.71 51 ⇓*i*P **P** **23 11 58.8 +0.5**
KEV Kevo 58.98 23 *e*P **P** **23 11 58.0 -1.8**
comp=Z,12nm,0.7s,mb5.0
KEV LR LR
comp=Z,2μm,22.0s,MS5.2
ELK Elko 59.13 303 PFAKE 23 12 10.0 +8.7
ELK LR LR
comp=Z,13μm,20.0s,MS6.0
NEW Newport 59.40 312 *e*P **P** **23 12 01.7 -1.4**
NEW LR LR
comp=Z,13μm,20.0s,MS6.1
KIEV Kiev 59.82 45 *e*P **P** **23 12 04.4 -1.5**
comp=Z,20nm,1.2s,mb5.0
KIEV LR LR
comp=Z,4μm,22.0s,MS5.5
KIEV Kiev 59.82 45 *e*P **P** **23 12 04.4 -1.5**
KIEV pmax pmax
comp=Z,20nm,1.2s,mb5.0
KIEV MLR MLR
comp=Z,4μm,22.0s,MS5.5
AKASG Malin Array Be 59.83 45 *i*P **P** **23 12 05.4 -0.6**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 59.83 45 P **P** **23 12 04.6 -1.3**
comp=Z,6.0nm,0.7s,mb4.7,baz=276,slow=6.0,SNR=13
AKBB Malin Array Si 59.83 45 *e*P **P** **23 12 04.2 -1.7**
BMO Blue Mountains 59.97 308 PFAKE 23 12 20.0 +13
BMO LR LR
comp=Z,6μm,20.0s,MS5.7
KIS Kishinev 60.00 49 *e*P **P** **23 12 05.0 -2.2**
KIS Kishinev 60.00 49 *e*PP PP 23 14 40.0 +21
JOF Joensuu 60.30 31 *ep* **P** **23 12 06.8 -2.2**
comp=Z,4.1nm,0.6s,mb4.6
TPNV Topopah Spring 60.63 299 *e*P **P** **23 12 12.6 +0.9**
comp=Z,39nm,1.8s,mb5.2
TPNV LR LR
comp=Z,17μm,21.0s,MS6.2
TPNV Topopah Spring 60.63 299 *e*P **P** **23 12 12.6 +0.9**
TPNV pmax pmax
comp=Z,39nm,1.8s,mb5.2
TPNV MLR MLR
comp=Z,17μm,21.0s,MS6.2
BMN Battle Mountai 60.67 303 PFAKE 23 12 20.0 +8.1
BMN LR LR
comp=Z,2μm,20.0s,MS5.3
LCO Las Campanas 60.67 206 PFAKE 23 12 20.0 +8.1
LCO LR LR
comp=Z,2μm,20.0s,MS5.3
APA Apatity 61.17 25 ⇓*i*P **P** **23 12 20.6 +5.8**
APA pmax pmax
comp=Z,24nm,1.1s,mb5.2
APA MLR MLR
comp=Z,2μm,18.0s,MS5.3
HAWA Hanford 61.28 310 *e*P **P** **23 12 14.8 -1.1**
comp=Z,20nm,1.1s,mb5.2
PFO Pinyon Flat Ob 61.57 296 PFAKE 23 12 30.0 +12
PFO LR LR
comp=Z,9μm,19.0s,MS5.9
LVZ Lovozero 61.64 25 PFAKE 23 12 30.0 +12
LVZ LR LR
comp=Z,1μm,21.0s,MS5.1
DAC Darwin (Calif) 61.84 299 *e*P **P** **23 12 19.6 -0.3**
comp=Z,21nm,1.5s,mb5.0
DAC LR LR
comp=Z,3μm,22.0s,MS5.5
DAC Darwin (Calif) 61.84 299 *e*P **P** **23 12 19.6 -0.3**
DAC pmax pmax
comp=Z,21nm,1.5s,mb5.0
DAC MLR MLR
comp=Z,3μm,22.0s,MS5.5
NVAR Mina Array Bea 61.90 301 P **P** **23 12 20.5 +0.2**
comp=Z,0.7nm,0.6s,baz=81,slow=5.6,SNR=3.5
MOD Modoc 62.65 305 *e*P **P** **23 12 25.5 +0.2**
MOD LR LR
comp=Z,8μm,21.0s,MS5.8
WAKR Walker 62.75 302 *e*P **P** **23 12 27.6 +1.7**
CMB Columbia Colle 63.59 301 *e*P **P** **23 12 30.2 -1.4**
CMB LR LR
comp=Z,14μm,20.0s,MS6.2
OBN Obninsk 63.67 39 *e*P **P** **23 12 32.1 +0.4**
OBN LR LR
comp=Z,7μm,19.0s,MS5.8
OBN Obninsk 63.67 39 *e*P **P** **23 12 32.0 +0.3**
OBN pmax pmax
comp=Z,71nm,1.8s,mb5.4
OHCM Honcut 64.11 303 *e*P **P** **23 12 35.3 +0.3**
MOS Moscow 64.16 38 *e*P **P** **23 12 29.6 -5.4**
MOS pmax pmax
comp=Z,59nm,1.4s,mb5.4
ANTO Ankara 64.19 57 *e*P **P** **23 12 35.8 +0.3**
comp=Z,65nm,1.6s,mb5.4
ANTO LR LR
comp=Z,3μm,20.0s,MS5.5
ANTO Ankara 64.19 57 *e*P **P** **23 12 35.8 +0.3**
ANTO pmax pmax
comp=Z,65nm,1.6s,mb5.4
ANTO MLR MLR
comp=Z,3μm,20.0s,MS5.5
COR Corvallis 64.22 309 PFAKE 23 12 50.0 +14
COR LR LR
comp=Z,9μm,21.0s,MS5.9
YBH Yreka Blue Hor 64.45 306 PFAKE 23 12 50.0 +13
YBH LR LR
comp=Z,11μm,20.0s,MS6.0
WDC Whiskeytown Da 64.60 304 PFAKE 23 12 50.0 +12
WDC LR LR
comp=Z,6μm,20.0s,MS5.8
SAO San Andreas Ge 64.72 300 PFAKE 23 12 50.0 +11
SAO LR LR
comp=Z,15μm,22.0s,MS6.2
BR131 Keskin Array S 64.85 56 *e*P **P** **23 12 40.3 +0.5**
comp=Z,15nm,1.1s,mb4.9
BR131 LR LR
comp=Z,2μm,20.0s,MS5.4
BRTR Keskin Array B 64.85 56 *i*P **P** **23 12 39.7 -0.1**
BRTR pmax pmax
comp=Z,9.0nm,1.0s
BRTR Keskin Array B 64.85 56 P **P** **23 12 39.8 0.0**
comp=Z,9.0nm,1.0s,mb4.8,baz=257,slow=5.4,SNR=19
INK Inuvik 65.30 336 *e*P **P** **23 12 40.0 -2.2**
HOPS Hopland 65.39 303 *e*P **P** **23 12 46.3 +3.0**
HOPS LR LR
comp=Z,8μm,20.0s,MS5.9
MCCM Marconi Confer 65.46 302 PFAKE 23 13 00.0 +16
MCCM LR LR
comp=Z,9μm,19.0s,MS6.0
DLBC Dease Lake 65.52 325 *e*P **P** **23 12 43.7 -0.1**
VRSR Storozhevoye 65.96 43 *e*P **P** **23 12 46.2 -0.6**
VRSR pmax pmax
comp=Z,2.0nm,0.8s
VRSR pmax pmax
comp=N,1.0nm,0.7s
VRSR pmax pmax
comp=E,7.0nm,2.4s
VORD Divnogorie 66.08 43 *e*P **P** **23 12 47.2 -0.3**
VORD pmax pmax
comp=N,100nm,0.6s
VORD pmax pmax
comp=E,80nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s,mb5.3
VORD MLR MLR
comp=Z,5μm,25.0s,MS5.6
VORD MLR MLR
comp=N,2μm,22.0s
VORD MLR MLR
comp=E,5μm,32.0s
TRQA Tornquist 66.30 195 PFAKE 23 13 00.0 +11
TRQA LR LR
comp=Z,2μm,19.0s,MS5.4
ANN Anapa 66.32 50 *e*P **P** **23 12 53.2 +4.0**
ANN pmax pmax
comp=Z,61nm,1.6s,mb5.4
WRAK Wrangell Islan 67.18 323 PFAKE 23 13 10.0 +16
WRAK LR LR
comp=Z,5μm,21.0s,MS5.7
SOC Sochi 68.23 51 *e*P **P** **23 12 56.5 -4.8**
SOC *e**PP pP 23 13 05.4 +0.8
SOC *e* 23 13 24.7
SOC *e* 23 15 35.2
SOC *e*PPP 23 17 04.7
SOC *e*S S 23 21 59.6 -2.3
DAWY Dawson 68.58 332 *e*P **P** **23 13 01.9 -1.3**
SIT Sitka 68.61 324 PFAKE 23 13 20.0 +17
SIT LR LR
comp=Z,10μm,22.0s,MS6.0
MALT Malatya 68.83 57 *e*P **P** **23 13 05.2 +0.1**
comp=Z,85nm,1.7s,mb5.4
MALT Malatya 68.83 57 *e*P **P** **23 13 05.2 0.0**
MALT pmax pmax
comp=Z,85nm,1.7s,mb5.4
EGAK Eagle 69.10 333 PFAKE 23 13 20.0 +14
EGAK LR LR
comp=Z,6μm,20.0s,MS5.8
TRIS Tristan da Cun 70.12 153 PFAKE 23 13 20.0 +7.1
TRIS LR LR
comp=Z,2μm,19.0s,MS5.3
KIV Kislovodsk 70.17 50 *e*P **P** **23 13 17.0 +3.6**
comp=Z,50nm,1.5s,mb5.2
KIV LR LR
comp=Z,2μm,19.0s,MS5.4
KIV Kislovodsk 70.17 50 ⇑*e*P **P** **23 13 13.8 +0.4**
KIV pmax pmax
comp=Z,16nm,0.9s,mb5.0
PLCA Paso Flores 71.16 201 PFAKE 23 13 30.0 +11
PLCA LR LR
comp=Z,2μm,20.0s,MS5.3
ZEI Tsey 71.39 51 *e*P **P** **23 13 21.4 +0.6**
ZEI *e* 23 15 58.0
ZEI pmax pmax
comp=Z,18nm,1.3s,mb4.8
COLA College 71.75 334 *e*P **P** **23 13 21.2 -1.3**
comp=Z,38nm,1.5s,mb5.1
COLA LR LR
comp=Z,7μm,20.0s,MS5.9
COLA College 71.75 334 *i*P **P** **23 13 21.6 -1.0**
MCK McKinley 72.65 333 *e*P **P** **23 13 27.2 -0.7**
MCK LR LR
comp=Z,2μm,22.0s,MS5.3
MSL Mosul 73.00 58 *ex* x 23 13 33.0
IMA2 Indian Mountai 73.42 336 *e*P **P** **23 13 30.4 -2.1**
PMR Palmer 73.64 331 P **P** **23 13 30.9 -3.0**
PMR LR LR
comp=Z,13μm,20.0s,MS6.2
MAK Makhachkala 73.81 50 *e*P **P** **23 13 44.9 +10**
MAK *e* 23 16 19.8
BHD Baghdad 75.08 60 *ex* x 23 13 40.0
ARU Arti 75.11 34 *e*P **P** **23 13 41.8 -0.7**
comp=Z,53nm,1.7s,mb5.2
ARU LR LR
comp=Z,3μm,19.0s,MS5.7
ARU Arti 75.11 34 *c i*P **P** **23 13 42.7 +0.2**
ARU *e* 23 16 26.5
ARU *e*PPP 23 18 14.3
ARU *e*S S 23 23 19.0 -1.8
ARU pmax pmax
comp=Z,40nm,2.5s,mb4.9
TSUM Tsumeb 75.44 120 P **P** **23 13 47.9 +2.9**
TSUM LR LR
comp=Z,4μm,20.0s,MS5.7
SVE Sverdlovsk 75.97 33 *e*P **P** **23 13 47.2 -0.2**
SVE pmax pmax
comp=Z,31nm,1.6s,mb5.0
KDAK Kodiak Island 76.94 328 PFAKE 23 14 00.0 +7.1
KDAK LR LR
comp=Z,2μm,20.0s,MS5.5
TNA Tin City 78.55 339 *e*P **P** **23 14 02.9 +1.1**
TNA LR LR
comp=Z,2μm,19.0s,MS5.5
EFI East Falkland 78.77 189 P **P** **23 14 00.9 -2.0**
EFI LR LR
comp=Z,4μm,19.0s,MS5.8
HOPE Hope Point 80.77 175 PFAKE 23 14 20.0 +6.3
HOPE LR LR
comp=Z,4.0nm,20.0s
LSZ Lusaka 81.88 111 *e*P **P** **23 14 20.1 -0.4**
LSZ LR LR
comp=Z,5μm,21.0s,MS5.9
TIXI Tiksi 81.99 2 *e*P **P** **23 14 18.9 -1.3**
TIXI LR LR
comp=Z,964nm,22.0s,MS5.1
TIXI Tiksi 81.99 2 *d i*P **P** **23 14 19.1 -1.1**
TIXI pmax pmax
comp=Z,35nm,2.0s,mb4.9
RPN Rapa Nui 82.07 235 PFAKE 23 14 30.0 +8.7
RPN LR LR
comp=Z,1μm,22.0s,MS5.2
BRVK Borovoye 82.67 34 P **P** **23 14 23.8 -0.3**
comp=Z,57nm,0.9s,mb5.6,SNR=6.0
BRVK Borovoye 82.67 34 *e*P **P** **23 14 24.0 -0.1**
BRVK MLR MLR
comp=Z,3μm,20.0s,MS5.7
BILL Bilibino 83.00 349 PFAKE 23 14 40.0 +14
BILL LR LR
comp=Z,2μm,19.0s,MS5.6
BILL Bilibino 83.00 349 ⇑*i*P **P** **23 14 24.4 -1.1**
BILL *i* 23 14 31.8
BILL pmax pmax
comp=Z,47nm,2.7s,mb5.0
KMBO Kilima Mbogo 83.10 95 P **P** **23 14 28.9 +1.8**
comp=Z,2.1nm,1.0s,baz=291,slow=5.5,SNR=7.9
LBTB Lobatse 84.83 121 *e*P **P** **23 14 36.5 +1.0**
LBTB LR LR
comp=Z,6μm,20.0s,MS6.0
SUR Sutherland 85.40 130 PFAKE 23 14 50.0 +12
SUR LR LR
comp=Z,4μm,22.0s,MS5.7
UNV Unalaska Valle 85.62 330 PFAKE 23 14 50.0 +11
UNV LR LR
comp=Z,38μm,20.0s
BOSA Boshof 86.49 124 PFAKE 23 14 50.0 +6.3
BOSA LR LR
comp=Z,7μm,20.0s,MS6.0
NVS Novosibirsk 87.41 27 *e*P **P** **23 14 46.8 -1.0**
NVS pmax pmax
comp=Z,34nm,2.3s,mb5.2
NVS pmax pmax
comp=N,18nm,2.4s
KURK Kurchatov 88.18 32 PFAKE 23 15 00.0 +8.4
KURK LR LR
comp=Z,3μm,20.0s,MS5.7
KURK Kurchatov 88.18 32 ⇑*e*P **P** **23 14 51.4 -0.2**
ZAA0 Zalesovo Array 88.69 27 *e*P **P** **23 14 53.7 -0.3**
ZAL Zalesovo 88.69 27 P **P** **23 14 53.7 -0.3**
ZALV Zalesovo Beam 88.69 27 P **P** **23 14 53.7 -0.3**
ZALV Zalesovo Beam 88.69 27 P **P** **23 14 53.7 -0.3**
comp=Z,2.3nm,0.8s,mb4.5,baz=305,slow=5.2,SNR=10
AAK Ala-Archa 91.18 40 PFAKE 23 15 20.0 +14
AAK LR LR
comp=Z,5μm,20.0s,MS5.9
YAK Yakutsk 91.64 3 PFAKE 23 15 20.0 +12
YAK LR LR
comp=Z,1μm,21.0s,MS5.3
PMSA Palmer Station 92.26 188 *e*P **P** **23 15 09.3 -0.7**
PMSA LR LR
comp=Z,2μm,21.0s,MS5.5
MK31 Makanchi Array 92.63 33 *e*P **P** **23 15 13.6 +1.2**
MKAR Makanchi Array 92.63 33 P **P** **23 15 11.5 -0.9**
MKAR Makanchi Array 92.63 33 P **P** **23 15 11.5 -0.9**
comp=Z,0.2nm,0.2s,baz=343,slow=4.5,SNR=3.3
MA2 Magadan 93.30 352 PFAKE 23 15 30.0 +15
MA2 LR LR
comp=Z,2μm,19.0s,MS5.5
BOD Bodaibo 94.07 11 *e*P **P** **23 15 13.6 -5.2**
BOD pmax pmax
comp=Z,5.0nm,1.4s,mb4.8
SMY Shemya 94.21 338 PFAKE 23 15 30.0 +10
SMY LR LR
comp=Z,4μm,19.0s,MS5.9
PTCN Pitcairn Islan 97.18 246 PFAKE 23 15 40.0 +6.4
PTCN LR LR
comp=Z,3μm,19.0s,MS5.8
TLY Talaya 97.25 19 PFAKE 23 15 40.0 +6.5
TLY LR LR
comp=Z,1μm,22.0s,MS5.3
WMQ Urumqi 97.41 33 ⇑P **P** **23 15 35.0 +0.6**
WMQ AP pP 23 15 39.8 +2.1
WMQ XP sP 23 15 42.0 +3.1
WMQ AMB AMB
comp=Z,7.0nm,2.0s,mb4.7

PET Petropavlovsk 98.27 346 PFAKE 23 15 50.0 +12
PET LR LR
comp=Z,2μm,22.0s,MS5.5
POHA Pohakuloa 98.85 297 PFAKE 23 15 50.0 +8.7
POHA LR LR
comp=Z,4μm,20.0s,MS5.9
KIP Kipapa 99.91 300 PFAKE 23 16 00.0 +15
KIP LR LR
comp=Z,4μm,20.0s,MS5.9
MSEY Mahe Island 100.98 90 PFAKE 23 16 00.0 +10
MSEY LR LR
comp=Z,6μm,22.0s,MS6.1
ULN Ulaanbaatar 101.66 19 PFAKE 23 16 00.0 +6.8
ULN LR LR
comp=Z,2μm,19.0s,MS5.5
HIA Hailar 103.25 11 PFAKE 23 16 10.0 +10
HIA LR LR
comp=Z,1μm,20.0s,MS5.4
YSS Yuzh-Sakhalins 106.58 355 PFAKE 23 20 40.0 +14
YSS LR LR
comp=Z,2μm,21.0s,MS5.6
HHC Hu-ho-hao-te 109.38 19 ePDIF Pdif 23 16 28.8 +1.3
HHC PP PP
comp=Z,151nm,9.9s
HHC LR LR
comp=N,986nm,19.2s,MS5.5
HHC LR LR
comp=E,598nm,16.3s,MS5.5
HHC LR LR
comp=Z,1μm,22.0s
LSA Lhasa 109.78 40 PFAKE 23 20 40.0 +7.7
LSA LR LR
comp=Z,2μm,21.0s,MS5.7
LZH Lanzhou 110.93 27 ePKP PKiKP 23 20 30.1 -4.2
LZH XPKP 23 20 34.6
LZH PP PP 23 21 11.2 +0.2
LZH PP PP
comp=Z,135nm,7.8s
LZH LR LR
comp=E,345nm,18.0s
LZH LR LR
comp=Z,582nm,20.1s,MS5.2
LZH Lanzhou 110.93 27 ePKP PKiKP 23 20 30.1 -4.2
LZH pPKP 23 20 33.4
LZH sPKP 23 20 34.6
LZH PP PP 23 21 11.2 +0.2
LZH SKS SKSdf 23 27 39.6 -7.0
LZH SKKS SKKSac 23 28 03.2 -12
LZH SS SS 23 36 34.7 -6.6
LZH LR LR
comp=Z,580nm,20.1s,MS5.2
LZH Lanzhou 110.93 27 ePKIKP PKiKP 23 20 30.1 -4.2
LZH 23 20 33.4
LZH 23 20 34.6
LZH 23 21 11.2
LZH 23 27 39.6
LZH SS SS 23 36 34.7 -6.6
LZH MLR MLR
comp=Z,580nm,20.1s,MS5.2
BJI Beijing 111.37 16 PDIF Pdif 23 16 34.3 -2.1
BJI LR LR
comp=N,409nm,20.2s
BJI LR LR
comp=E,217nm,12.5s
BJI LR LR
comp=Z,332nm,26.0s
BJT Baijiatuan 111.39 16 PFAKE 23 20 50.0 +15
BJT LR LR
comp=Z,3μm,22.0s,MS5.8
ERM Erimo 111.44 354 PFAKE 23 20 50.0 +15
ERM LR LR
comp=Z,3μm,19.0s,MS5.9
SYO Syowa Base 112.39 157 ||eX 23 21 18.6
CD2 Chengdu 115.33 30 ePKP PKPdf 23 20 41.9 -0.9
CD2 XPKP 23 20 50.2
CD2 PP PP 23 21 46.0 +3.6
CD2 PP PP
comp=Z,110nm,8.4s
CD2 LR LR
comp=N,150nm,24.6s
CD2 LR LR
comp=Z,100nm,26.4s,MS4.3
INCN Inchon 115.79 8 PFAKE 23 20 50.0 +6.5
INCN LR LR
comp=Z,1μm,21.0s,MS5.5
QSPA South Pole Qui 116.44 180 ePKPdf PKPdf 23 20 43.6 +0.3
QSPA LR LR
comp=Z,1μm,21.0s,MS5.5
PALK Pallekele 117.15 66 PFAKE 23 21 00.0 +13
PALK LR LR
comp=Z,3μm,20.0s,MS6.0
MAJO Matsushiro 117.22 358 PFAKE 23 21 00.0 +14
MAJO LR LR
comp=Z,2μm,22.0s,MS5.7
ENH Enshi 118.28 26 PFAKE 23 21 00.0 +12
ENH LR LR
comp=Z,4.0nm,21.0s
NJ2 Nanjing 119.62 16 ePKP PKPdf 23 20 47.7 -3.3
KMI Kunming 119.69 34 PKP PKPdf 23 20 51.9 +0.6
KMI sPKP 23 20 58.7
KMI SKKS SKKSac 23 29 07.9 -6.7
KMI SS SS 23 38 45.7 +8.9
KMI LR LR
comp=Z,620nm,32.5s,MS5.0
KMI Kunming 119.69 34 PKIKP PKPdf 23 20 51.9 +0.6
KMI 23 20 58.7
KMI MLR MLR
comp=Z,620nm,32.5s,MS5.0
GYA Guiyang 120.44 30 PDIF Pdif 23 17 16.8 +0.1
GYA PKP PKPdf 23 20 52.0 -0.8
GYA PP PP 23 22 21.0 +3.0
GYA PP PP
comp=Z,120nm,9.1s
GYA LR LR
comp=N,280nm,20.8s,MS5.2
GYA LR LR
comp=E,470nm,21.4s,MS5.2
GYA LR LR
comp=Z,340nm,20.2s,MS5.0
RAR Rarotonga 121.12 260 PFAKE 23 21 10.0 +16
RAR LR LR
comp=Z,2.0nm,19.0s
CHTO Chiang Mai 122.63 42 PFAKE 23 21 10.0 +13
CHTO LR LR
comp=Z,1μm,22.0s,MS5.5
TATO Taipei 127.04 16 PFAKE 23 21 20.0 +15
TATO LR LR
comp=Z,2μm,20.0s,MS5.8
VNDA Vanda 127.46 187 PFAKE 23 21 20.0 +15
VNDA LR LR
comp=Z,1μm,19.0s,MS5.7
QIZ Qiongzhong 128.31 31 PFAKE 23 21 20.0 +12
QIZ LR LR
comp=Z,1μm,21.0s,MS5.6
AFI Afiamalu 129.29 274 PFAKE 23 21 20.0 +10
AFI LR LR
comp=Z,2μm,21.0s,MS5.8
FUNA Funafuti 134.94 285 PFAKE 23 21 30.0 +9.4
FUNA LR LR
comp=Z,5μm,19.0s,MS6.3
CASY Casey 137.28 165 PFAKE 23 21 30.0 +6.6
CASY LR LR
comp=Z,4μm,20.0s,MS6.1
GUMO Guam 139.11 346 PFAKE 23 21 40.0 +12
GUMO LR LR
comp=Z,2μm,19.0s,MS5.8
COCO West Island 140.99 76 PFAKE 23 21 40.0 +8.3
COCO LR LR
comp=Z,3μm,21.0s,MS6.0
SNZO South Karori 144.61 235 PFAKE 23 21 50.0 +13
SNZO LR LR
comp=Z,1μm,19.0s,MS5.8
DAV Davao City (W) 145.25 17 PFAKE 23 21 50.0 +11
DAV LR LR
comp=Z,3μm,20.0s,MS6.1
RPZ Rata Peaks 146.56 230 PKPbc PKPbc 23 21 38.7 -3.4
comp=Z,5.3nm,0.8s,baz=63,slow=4.5,SNR=2.5
HNR Honiara 151.30 302 PFAKE 23 22 00.0 +11
HNR LR LR
comp=Z,4μm,20.0s,MS6.2
DZM Mont Dzumac 151.50 272 PKPbc PKPbc 23 21 54.2 -1.2
comp=Z,18nm,1.0s,baz=207,slow=19,SNR=4.2
PMG Port Moresby 159.72 325 PFAKE 23 22 10.0 +10
PMG LR LR
comp=Z,3μm,21.0s,MS6.1

TAU Tasmania Unive 161.02 208 PFAKE 23 22 10.0 +9.0
TAU LR LR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 162.89 116 PFAKE 23 22 10.0 +6.8
NWAO LR LR
comp=Z,3μm,21.0s
MBWA Marble Bar 164.61 73 PFAKE 23 22 20.0 +15
MBWA LR LR
comp=Z,4μm,20.0s
CTAO Charters Tower 168.24 301 PFAKE 23 22 20.0 +12
CTAO LR LR
comp=Z,3μm,22.0s
WRA Warramunga Arr 173.36 10 PKPab PKPab 23 23 37.2 -1.6
comp=Z,1.1nm,0.8s,baz=355,slow=5.2,SNR=8.4
ASAR Alice Springs 176.80 28 PKP PKPdf 23 22 10.6 -1.0
comp=Z,0.9nm,1.0s,baz=11,slow=2.7,SNR=4.9
ASAR PKPab PKPab 23 23 53.1 -0.9
comp=Z,0.7nm,0.8s,baz=0.1,slow=4.6,SNR=4.5

*BJI **01** 23:04:32.5, 2669N×4482W, h3km, mB5.6, mb5.3, Ms5.4, Msz5.1*
*ISCJB **01** 23:04:33.8±0.2, 2649N±005×4448W±002, h10km, mb5.2/104, MS5.7/164, Error ellipse: s-maj=7.5km s-min=3.0km az=170.6*
*MOS **01** 23:04:33.5±1.0, 2646N×4445W, h10km, mb5.4/56, MS5.5/20, Error ellipse: s-maj=8.1km s-min=4.3km az=136.7*
*IDC **01** 23:04:34.1±0.5, 2653N×4461W, h0km, mb4.4/24, mb1 4.5/24, mb1mx4.5/26, mbtmp4.4/24, MS5.1/1, Ms1 5.1/1, ms1mx3.8/29, Error ellipse: s-maj=17.7km s-min=12.0km az=157.0*
*GCMT **01** 23:04:35.5±0.4, 2642N×4453W, h12km, MW5.4/56, Moment Tensor Solution. s37,c50; s56,c83; Duration: 1s2 Moment tensor: Scale 10^17^Nm; Mrr-1.51±.06; Mθθ-0.03±.06; Mφφ 1.54±.06; Mrθ 0.16±.15; Mθφ 0.46±.05; Mφr 0.20±.15; Best double couple: M0 1.60800×10^17^ NP1:ϕs199.00000°, δ49.00000°, λ-85.00000°. Principal axes: T 1.6810, Plg4.0000°, Azm285.0000°; N -0.1440, Plg4.0000°, Azm16.0000°; P -1.5350, Plg84.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 23:04:35.5±0.2, 2647N×4445W, h10km, mb5.3/66 Error ellipse: s-maj=6.8km s-min=3.0km az=170.0*
*SZGRF **01** 23:04:39.3, 2639N×4441W, h33km, mb5.6, Northern Mid-Atlantic Ridge*

ISC 01 23:04:35.8±0.2, 2649N±005×4446W±002, h10km, (h21km±.7km:pP-P), n476, σ1§03/346, mb5.2/104, MS5.7/164, 26C-7D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBSR	BB Station	18.57	293	P		P	Pn	23 08 47.0	-6.1
PDA	Ponta Delgada	19.44	50	*i* LR		LR	LR	23 13 40.0	
MTP	Monte Pirata	21.20	251	*e*P		P		23 09 22.9	+1.1
CBYP	Canovanas	21.39	252	*e*P		P		23 09 28.6	+4.9
CPD	Cerro la Pandu	21.54	251	*e*P		P		23 09 25.3	0.0
SJG	San Juan	21.71	252	*e*P		P		23 09 26.7	-0.4
	81nm,1.5s,mb4.9								
SJG				LR		LR	LR		
	comp=Z,5μm,20.0s,MS4.9								
SJG	San Juan	21.71	252	*e*P		P		23 09 26.7	-0.4
SJG				pmax		pmax			
	comp=Z,81nm,1.5s								
SJG				MLR		MLR			
	comp=Z,5μm,20.0s								
SJG	San Juan	21.71	252	P		P		23 09 26.0	-1.1
	comp=Z,8.0nm,0.2s,mb4.7,baz=53,slow=14,SNR=4.2								
SDDR	Presa de Saban	25.81	259	*e*P		P		23 10 09.0	+1.7
SDDR				LR		LR			
	comp=Z,4μm,19.0s,MS5.0								
WES	Weston	27.09	313	*e*P		P		23 10 19.4	+0.8
WES				LR		LR			
	comp=Z,3μm,20.0s,MS4.8								
WVL	Waterville	27.14	318	*e*P		P		23 10 23.1	+4.1
HRV	Harvard--Oak R	27.30	313	*e*P		P		23 10 24.2	+3.7
HRV				LR		LR			
	comp=Z,3μm,20.0s,MS4.9								
PKME	Peaks-Kenny Pk	27.32	320	PFAKE				23 10 30.0	+9.4
PKME				LR		LR			
	comp=Z,3μm,20.0s,MS4.9								
LBNH	Lisbon	28.36	316	*e*P		P		23 10 31.7	+1.7
	comp=Z,91nm,1.6s,mb5.2								
LBNH				LR		LR			
	comp=Z,4μm,21.0s,MS5.0								
LBNH	Lisbon	28.36	316	*e*P		P		23 10 31.7	+1.7
LBNH				pmax		pmax			
	comp=Z,91nm,1.6s,mb5.2								
LBNH				MLR		MLR			
	comp=Z,4μm,21.0s,MS5.0								
BRNJ	Basking Ridge	28.64	307	P		P		23 10 31.9	-0.6
FRNY	Flat Rock	29.69	316	*e*P		P		23 10 41.4	-0.3
NCB	Newcomb	29.70	314	*e*P		P		23 10 43.8	+1.9
NCB				LR		LR			
	comp=Z,25μm,21.0s,MS5.8								
MVL	Millersville	29.71	305	*e*P		P		23 10 42.1	+0.1
CNNC	Cliffs of the	29.88	295	PFAKE				23 11 00.0	+16
CNNC				LR		LR			
	comp=Z,26μm,20.0s,MS5.9								
CBN	Corbin	30.01	301	PFAKE				23 11 00.0	+15
CBN				LR		LR			
	comp=Z,19μm,21.0s,MS5.7								
BINY	Binghamton	30.17	309	*e*P		P		23 10 47.8	+1.7
BINY				LR		LR			
	comp=Z,23μm,22.0s,MS5.8								
SDV	Santo Domingo	30.36	240	*e*P		P		23 10 47.7	-0.3
	comp=Z,5.3nm,0.9s								
SDV				LR		LR			
	comp=Z,983nm,21.0s,MS4.4								
SSPA	Standing Stone	31.02	306	*e*P		P		23 10 58.3	+4.7
SSPA				LR		LR			
	comp=Z,19μm,20.0s,MS5.8								
NHSC	New Hope	31.58	291	PFAKE				23 11 10.0	+11
NHSC				LR		LR			
	comp=Z,22μm,20.0s,MS5.8								
BLA	Blacksburg	32.19	298	*e*P		P		23 11 04.4	+0.4
	comp=Z,38nm,1.2s,mb5.1								
BLA	Blacksburg	32.19	298	*e*P		P		23 11 04.4	+0.4
BLA				pmax		pmax			
	comp=Z,38nm,1.2s,mb5.1								
MCWV	Mont Chateau	32.22	303	PFAKE				23 11 20.0	+16
MCWV				LR		LR			
	comp=Z,22μm,21.0s,MS5.8								
SCHQ	Schefferville	32.72	336	P		P		23 11 08.3	-0.1
SCHQ	Schefferville	32.72	336	P		P		23 11 08.3	-0.1
	comp=Z,4.9nm,0.9s,mb4.4,baz=130,slow=7.6,SNR=5.5								
DWPF	Disney	32.82	281	P		P		23 11 07.6	-1.9
DWPF				LR		LR			
	comp=Z,25μm,22.0s,MS5.9								
ERPA	Erie	32.96	307	PFAKE				23 11 20.0	+9.4
ERPA				LR		LR			
	comp=Z,22μm,21.0s,MS5.8								
RCBR	Riachuelo	33.17	164	PFAKE				23 11 20.0	+7.3
RCBR				LR		LR			
	comp=Z,11μm,19.0s,MS5.6								
GOGA	Godfrey	34.35	291	PFAKE				23 11 30.0	+7.2
GOGA				LR		LR			
	comp=Z,21μm,21.0s,MS5.8								
TZTN	Tazewell	34.60	297	*e*P		P		23 11 25.7	+0.7
	comp=Z,66nm,1.4s,mb5.4								
TZTN				LR		LR			
	comp=Z,22μm,20.0s,MS5.9								
ACSO	Alum Creek Sta	34.70	303	*e*P		P		23 11 26.3	+0.5
	comp=Z,82nm,1.5s,mb5.4								
ACSO				LR		LR			
	comp=Z,17μm,20.0s,MS5.8								
TKL	Tuckaleechee C	34.70	295	P		P		23 11 26.0	+0.1
	comp=Z,20nm,1.2s,mb4.9,baz=87,slow=3.8,SNR=4.3								
MDT	Midelt	35.05	70	P		P		23 11 29.2	+0.3
	comp=Z,3.1nm,1.0s,baz=284,slow=11,SNR=4.1								
MDT				LR		LR		23 22 32.9	
	comp=Z,3μm,20.1s,MS5.0,baz=205,slow=31								
AAM	Ann Arbor	35.64	306	PFAKE				23 11 50.0	+16
AAM				LR		LR			
	comp=Z,3μm,22.0s,MS5.1								
ROSC	El Rosal	35.73	238	P		P		23 11 34.3	-0.7
	comp=Z,3.3nm,0.4s,mb4.7,baz=108,slow=23,SNR=3.9								
PAB	San Pablo	35.78	58	PFAKE				23 11 50.0	+15
PAB				LR		LR			
	comp=Z,10μm,22.0s,MS5.6								
ESLA	Sonseca Array	36.09	58	*e*P		P		23 11 38.1	+0.3
ESLA				LR		LR			
	comp=Z,66μm,22.0s								
SWET	Sewanee	36.44	294	*e*P		P		23 11 40.7	-0.1
WCI	Wyandotte Cave	36.94	299	PFAKE				23 12 00.0	+15
WCI				LR		LR			
	comp=Z,12μm,21.0s,MS5.7								
GLMI	Grayling	36.96	310	PFAKE				23 12 00.0	+15
GLMI				LR		LR			
	comp=Z,22μm,21.0s,MS5.9								
LRAL	Lakeview Retre	37.31	290	PFAKE				23 12 00.0	+12
LRAL				LR		LR			
	comp=Z,28μm,20.0s,MS6.1								
BRAL	Brewton	37.45	287	PFAKE				23 12 00.0	+11
BRAL				LR		LR			
	comp=Z,16μm,20.0s,MS5.8								
BCIP	Isla Barro Col	37.65	249	PFAKE				23 12 00.0	+8.7
BCIP				LR		LR			
	comp=Z,5μm,19.0s,MS5.3								
WVT	Waverly	38.02	295	P		P		23 11 54.5	+0.3
WVT				LR		LR			
	comp=Z,8.0nm,22.0s								
PLAL	Pickwick Lake	38.19	294	*e*P		P		23 11 57.0	+1.3
	comp=Z,101nm,1.9s,mb5.2								
PLAL				LR		LR			
	comp=Z,24μm,22.0s,MS6.0								
QUIF	Quistinic	38.63	45	*e*P		P		23 11 58.0	-1.2
ROSF	Rostrenen	38.70	45	*e*P		P		23 11 58.5	-1.3
SGMF	Saint Gilles	39.13	45	*e*P		P		23 12 02.3	-1.0
	comp=Z,360nm,1.8s,mb5.5								
SGMF	Saint Gilles	39.13	45	*e*P		P		23 12 02.3	-1.0
	comp=Z,180nm,1.8s,mb5.5								
SGMF	Saint Gilles	39.13	45	*e*P		P		23 12 02.3	-1.0
SGMF				pmax		pmax			
	comp=Z,180nm,1.8s,mb5.5								
ETSF	Etsaut	39.16	54	*e*P		P		23 12 02.9	-0.8
SIUC	Southern Illin	39.20	298	*e*P		P		23 12 04.6	+0.5
OXF	Oxford	39.29	293	PFAKE				23 12 20.0	+15
OXF				LR		LR			
	comp=Z,17μm,22.0s,MS5.8								
HDIL	Hopedale	39.51	302	PFAKE				23 12 20.0	+13
HDIL				LR		LR			
	comp=Z,14μm,20.0s,MS5.8								
EPF	Esparros	39.83	54	*e*P		P		23 12 08.0	-1.3
GRR	Gorron	40.25	45	*e*P		P		23 12 10.8	-1.9
	comp=Z,286nm,1.9s,mb5.4								
GRR	Gorron	40.25	45	*e*P		P		23 12 10.8	-1.9
	comp=Z,143nm,1.9s,mb5.4								
GRR	Gorron	40.25	45	*e*P		P		23 12 10.8	-1.9
GRR				pmax		pmax			
	comp=Z,143nm,1.9s,mb5.4								
COWI	Conover	40.36	311	PFAKE				23 12 30.0	+16
COWI				LR		LR			
	comp=Z,19μm,22.0s,MS5.9								
LFF	La Frestale	40.47	51	*e*P		P		23 12 12.7	-1.8
	comp=Z,194nm,1.5s,mb5.3								
LFF	La Frestale	40.47	51	*e*P		P		23 12 12.7	-1.8
	comp=Z,97nm,1.5s,mb5.3								
LFF	La Frestale	40.47	51	*e*P		P		23 12 12.7	-1.8
LFF				pmax		pmax			
	comp=Z,97nm,1.5s,mb5.3								
JFWS	Jewell Farm	40.53	306	PFAKE				23 12 30.0	+15
JFWS				LR		LR			
	comp=Z,18μm,21.0s,MS5.9								
TEIG	Tepich	40.56	271	PFAKE				23 12 30.0	+14
TEIG				LR		LR			
	comp=Z,14μm,22.0s,MS5.8								
SFJD	Kangerlussuaq	40.70	356	PFAKE				23 12 30.0	+14
SFJD				LR		LR			
	comp=Z,5μm,21.0s,MS5.4								
LDF	La Druitiere	40.77	45	*e*P		P		23 12 15.2	-1.8
	comp=Z,24nm,0.8s,mb4.6								
LDF	La Druitiere	40.77	45	*e*P		P		23 12 15.2	-1.8
	comp=Z,12nm,0.8s,mb4.6								
LDF	La Druitiere	40.77	45	*e*P		P		23 12 15.2	-1.8
LDF				pmax		pmax			
	comp=Z,12nm,0.8s,mb4.6								
BORG	Borgarnes	41.04	15	PFAKE				23 12 30.0	+11
BORG				LR		LR			
	comp=Z,6μm,20.0s,MS5.4								
RJF	Les Rejaudoux	41.08	51	*e*P		P		23 12 17.5	-2.1
MTLF	Montolieu	41.24	54	*e*P		P		23 12 18.9	-2.0
CAF	Calviac	41.39	51	*e*P		P		23 12 20.3	-1.8
JTS	JuntasAbangare	41.45	255	*e*P		P		23 12 21.4	-1.6
JTS				LR		LR			
	comp=Z,5μm,20.0s,MS5.3								
ESK	Eskdalemuir	41.49	35	PFAKE				23 12 30.0	+7.2
ESK				LR		LR			
	comp=Z,16μm,19.0s,MS5.9								
UALR	University of	41.70	293	*e*P		P		23 12 26.0	+1.2
TCF	Toulx Ste Croi	41.75	49	*e*P		P		23 12 23.4	-1.7
	comp=Z,128nm,1.7s,mb5.0								
TCF	Toulx Ste Croi	41.75	49	*e*P		P		23 12 23.4	-1.7
	comp=Z,64nm,1.7s,mb5.0								
TCF	Toulx Ste Croi	41.75	49	*e*P		P		23 12 23.4	-1.7
TCF				pmax		pmax			
	comp=Z,64nm,1.7s,mb5.0								
TGUH	Tegucigalpa,Un	41.83	261	PFAKE				23 12 40.0	+14
TGUH				LR		LR			
	comp=Z,4μm,20.0s,MS5.3								
BGF	Bois d'Agland	42.23	49	*e*P		P		23 12 27.3	-1.7
	comp=Z,137nm,1.6s,mb5.0								
BGF	Bois d'Agland	42.23	49	*e*P		P		23 12 27.3	-1.7
	comp=Z,68nm,1.6s,mb5.0								
BGF	Bois d'Agland	42.23	49	*e*P		P		23 12 27.3	-1.7
BGF				pmax		pmax			
	comp=Z,68nm,1.6s,mb5.0								
HYF	Humbligny	42.24	48	*e*P		P		23 12 27.5	-1.6
EYMN	Ely	42.35	313	PFAKE				23 12 40.0	+10
EYMN				LR		LR			
	comp=Z,18μm,21.0s,MS5.9								
LASF	Ste Croix	42.52	53	*e*P		P		23 12 30.3	-1.1
	comp=Z,151nm,1.7s,mb5.1								
LIC	Lamto	42.61	111	*e*P		P		23 12 32.3	-0.2
	comp=Z,163nm,1.7s,mb5.2								
LIC	Lamto	42.61	111	*e*P		P		23 12 32.3	-0.2
	comp=Z,82nm,1.7s,mb5.2								
AVF	Avril sur Loir	42.62	49	*e*P		P		23 12 30.4	-1.8
	comp=Z,109nm,1.7s,mb5.0								
AVF	Avril sur Loir	42.62	49	*e*P		P		23 12 30.4	-1.8
	comp=Z,54nm,1.7s,mb5.0								
AVF	Avril sur Loir	42.62	49	*e*P		P		23 12 30.4	-1.8
AVF				pmax		pmax			
	comp=Z,54nm,1.7s,mb5.0								
MIAR	Mount Ida	42.72	293	PFAKE				23 12 40.0	+6.8
MIAR				LR		LR			
	comp=Z,13μm,22.0s,MS5.8								
SSF	Saint Saulge	42.78	48	*e*P		P		23 12 31.5	-2.0
	comp=Z,149nm,1.8s,mb5.1								
SSF	Saint Saulge	42.78	48	*e*P		P		23 12 31.5	-2.0
	comp=Z,75nm,1.8s,mb5.1								
SSF	Saint Saulge	42.78	48	*e*P		P		23 12 31.5	-2.0
SSF				pmax		pmax			
	comp=Z,75nm,1.8s,mb5.1								
SMF	Signal de Mont	42.92	49	*e*P		P		23 12 33.0	-1.7
	comp=Z,111nm,1.4s,mb5.1								
SMF	Signal de Mont	42.92	49	*e*P		P		23 12 33.0	-1.7
	comp=Z,56nm,1.4s,mb5.1								
SMF	Signal de Mont	42.92	49	*e*P		P		23 12 33.0	-1.7
SMF				pmax		pmax			
	comp=Z,56nm,1.4s,mb5.1								
LOR	Lormes	43.06	48	*e*P		P		23 12 33.8	-1.9
	comp=Z,180nm,1.7s,mb5.2								
LOR	Lormes	43.06	48	*e*P		P		23 12 33.8	-1.9
	comp=Z,90nm,1.7s,mb5.2								
LOR	Lormes	43.06	48	*e*P		P		23 12 33.8	-1.9
LOR				pmax		pmax			
	comp=Z,90nm,1.7s,mb5.2								
VIVF	Saint-Julien-l	43.21	52	*e*P		P		23 12 35.9	-1.1
	comp=Z,179nm,1.9s,mb5.2								
VIVF	Saint-Julien-l	43.21	52	*e*P		P		23 12 35.9	-1.1
	comp=Z,90nm,1.9s,mb5.2								
VIVF	Saint-Julien-l	43.21	52	*e*P		P		23 12 35.9	-1.1
VIVF				pmax		pmax			
	comp=Z,90nm,1.9s,mb5.2								
NATX	Nacogdoches	43.86	289	PFAKE				23 12 50.0	+7.6
NATX				LR		LR			
	comp=Z,17μm,20.0s,MS6.0								
ORIF	Oris-en-Rattie	44.07	52	*e*P		P		23 12 43.7	-0.2
MEZF	Maizieres J'vi	44.09	47	*e*P		P		23 12 42.3	-1.7
GIVF	Givet	44.29	44	*e*P		P		23 12 43.4	-2.2
CABF	La Chapelle	44.45	49	*e*P		P		23 12 45.5	-1.4
MBDF	Montbardon	44.67	52	*e*P		P		23 12 48.3	-0.4
LPL	La Plagne	44.74	51	*e*P		P		23 12 48.7	-0.6
HAU	Haudompre	44.85	48	*e*P		P		23 12 48.0	-2.1
ASCN	Ascension	44.99	135	PFAKE				23 13 00.0	+8.4
ASCN				LR		LR			

comp=Z,10µm,20.0s,MS5.7
WLF Walferdange 45.03 45 *e*P **P 23 12 52.5 +0.9**
WLF Walferdange 45.03 45 *e*P **P 23 12 52.3 +0.8**
comp=Z,157nm,2.0s,mb5.5
KSU1 Kansas State U 45.05 300 *e*P **P 23 12 50.4 -1.4**
KSU1 LR LR
comp=Z,19µm,21.0s,MS6.0
HKT Hockley 45.10 287 PFAKE 23 13 00.0 +7.7
HKT LR LR
comp=Z,11µm,20.0s,MS5.8
HINF Hinteralfeld 45.15 48 *e*P **P 23 12 50.3 -2.2**
TORD Torodi Ar. Bea 45.17 98 P **P 23 12 53.2 +0.1**
TORD Torodi Ar. Bea 45.17 98 P **P 23 12 53.2 +0.1**
comp=Z,1.2nm,0.8s,baz=308,slow=8.4,SNR=3.5
SIV San Ignacio 45.20 203 P **P 23 12 52.7 -0.5**
comp=Z,3.5nm,0.8s,baz=29,slow=6.4,SNR=9.4
AGMN Agassiz Refuge 45.29 313 *e*P **P 23 12 53.0 -0.6**
CDF Champ du Feu 45.53 47 *e*P **P 23 12 53.5 -2.0**
comp=Z,208nm,1.9s,mb5.4
CDF Champ du Feu 45.53 47 *e*P **P 23 12 53.5 -2.0**
comp=Z,104nm,1.9s,mb5.4
CDF Champ du Feu 45.53 47 *e*P **P 23 12 53.5 -2.0**
CDF pmax pmax
comp=Z,104nm,1.9s,mb5.4
ULM Lac du Bonnet 45.66 315 P **P 23 12 54.9 -1.6**
ULM Lac du Bonnet 45.66 315 P **P 23 12 54.9 -1.6**
comp=Z,10nm,1.1s,mb4.7,baz=88,slow=6.4,SNR=6.7
BUG Bochum--Univer 46.10 43 *e*P **P 23 13 00.2 +0.2**
comp=Z,239nm,2.3s,mb5.7
BFO Black Forest 46.21 47 *e*P **P 23 13 01.1 +0.2**
BFO pmax pmax
comp=Z,282nm,2.4s,mb5.8
BFO Black Forest 46.21 47 *e*P **P 23 13 01.1 +0.2**
comp=Z,282nm,2.4s,mb5.8
KEST Kesra 46.49 65 P **P 23 13 04.6 +1.3**
comp=Z,8.3nm,1.1s,mb4.6,baz=183,slow=3.7,SNR=9.0
IBBN Ibbenburen 46.59 42 *e*P **P 23 13 04.2 +0.4**
comp=Z,1µm,3.9s
TNS Taunus Mts 46.59 45 *e*P **P 23 13 04.7 +0.8**
TNS pmax pmax
comp=Z,114nm,2.1s,mb5.4
TNS Taunus Mts 46.59 45 *e*P **P 23 13 04.7 +0.8**
comp=Z,114nm,2.1s,mb5.4
STU Stuttgart 46.84 47 *e*P **P 23 13 05.7 -0.1**
comp=Z,131nm,2.3s,mb5.5
WMOK Wichita Mounta 46.99 294 *e*P **P 23 13 07.2 0.0**
WMOK LR LR
comp=Z,15µm,20.0s,MS5.9
DAVOS Davos 47.00 50 P **P 23 13 09.2 +2.1**
DAVOX Davos/Dischmat 47.05 50 P **P 23 13 09.2 +1.7**
comp=Z,3.1nm,0.7s,baz=310,slow=16,SNR=4.9
FCC Fort Churchill 47.07 327 *e*P **P 23 13 07.1 -0.4**
comp=Z,61nm,1.4s,mb5.3
FCC Fort Churchill 47.07 327 *e*P **P 23 13 07.1 -0.3**
FCC pmax pmax
comp=Z,61nm,1.4s,mb5.3
DAVA Damuels 47.11 49⇑*i*P **P 23 13 09.6 +1.7**
comp=Z,51nm,1.5s,mb5.2
DAVA Damuels 47.11 49⇑*ip*P pP 23 13 09.6 -1.5
comp=Z,51nm,1.5s
KVTX Kingsville 47.30 284 PFAKE 23 13 20.0 +10
KVTX LR LR
comp=Z,11µm,21.0s,MS5.8
CBKS Cedar Bluff 47.49 299 PFAKE 23 13 20.0 +9.0
CBKS LR LR
comp=Z,17µm,21.0s,MS6.0
FETA Feichten 47.66 49⇑*ip*P pP 23 13 13.8 -1.6
comp=Z,29nm,1.5s
UBBA Unterbreizbach 47.67 44 *e*P **P 23 13 12.7 +0.4**
comp=Z,58nm,1.9s,mb5.3
RETA Reutte 47.73 49⇑*ip*P pP 23 13 13.8 -2.0
comp=Z,48nm,1.8s
MOTA Moosalm 47.94 49⇑*i*P **P 23 13 15.5 +1.1**
comp=Z,127nm,1.9s,mb5.6
MOTA Moosalm 47.94 49⇑*ip*P pP 23 13 15.5 -2.1
comp=Z,127nm,1.9s
MOTA Moosalm 47.94 49⇑*i*P **P 23 13 15.5 +1.1**
MOTA pmax pmax
comp=Z,127nm,1.9s,mb5.6
SQTA Sankt Quirin 48.00 49⇑*i*P **P 23 13 16.1 +1.2**
comp=Z,175nm,2.3s,mb5.7
SQTA Sankt Quirin 48.00 49⇑*ip*P pP 23 13 16.1 -1.9
comp=Z,175nm,2.3s
SQTA Sankt Quirin 48.00 49⇑*i*P **P 23 13 16.1 +1.2**
SQTA pmax pmax
comp=Z,175nm,2.3s,mb5.7
NRDL Niedersach Rie 48.03 42 *e*P **P 23 13 15.9 +0.9**
comp=Z,215nm,2.2s,mb5.8
CLZ Clausthal 48.08 43 *e*P **P 23 13 16.1 +0.7**
CLZ pmax pmax
comp=Z,55nm,1.8s,mb5.3
CLZ Clausthal 48.08 43 *e*P **P 23 13 16.1 +0.7**
comp=Z,55nm,1.8s,mb5.3
FUR Furstenfeldbru 48.14 48 *e*P **P 23 13 16.8 +0.9**
GRFO Grafenberg 48.28 46 PFAKE 23 13 30.0 +13
GRFO LR LR
comp=Z,5µm,22.0s,MS5.4
GRA1 Grafenberg Arr 48.28 46 *e*P **P 23 13 17.3 +0.3**
comp=Z,98nm,1.8s,mb5.5
GRF Grafenberg Arr 48.28 46 *e*P **P 23 13 17.3 +0.3**
GRF pmax pmax
comp=Z,98nm,1.8s,mb5.5
GRF Grafenberg Arr 48.28 46 *e*P **P 23 13 17.3 +0.3**
GRF pmax pmax
comp=Z,98nm,1.8s,mb5.5
GRF Grafenberg Arr 48.28 46 *e*P **P 23 13 17.3 +0.3**
comp=Z,98nm,1.8s,mb5.5
WTTA Wattenberg 48.30 49⇑*i*P **P 23 13 16.1 -1.0**
comp=Z,54nm,2.0s,mb5.2
WTTA Wattenberg 48.30 49⇑*i*P **P 23 13 16.1 -1.1**
WTTA pmax pmax
comp=Z,54nm,2.0s,mb5.2
LPAZ La Paz 48.34 211 *e*P **P 23 13 17.7 -0.1**
LPAZ LR LR
comp=Z,6µm,21.0s,MS5.6
LPAZ La Paz 48.34 211 P **P 23 13 17.7 -0.1**
comp=Z,12nm,0.9s,mb5.0,baz=16,slow=8.5,SNR=14
JCT Junction City 48.40 288 *e*P **P 23 13 17.4 -0.8**
comp=Z,42nm,1.4s,mb5.3
JCT Junction City 48.40 288 *e*P **P 23 13 17.4 -0.8**
JCT pmax pmax
comp=Z,42nm,1.4s,mb5.3
BSEG Bad Segeberg 48.44 40 *e*P **P 23 13 18.6 +0.4**
comp=Z,272nm,2.0s,mb5.9
MOX Moxa 48.66 45 *e*P **P 23 13 20.4 +0.5**
comp=Z,72nm,1.9s,mb5.4
MOX Moxa 48.66 45 *e*P **P 23 13 20.4 +0.5**
MOX pmax pmax
comp=Z,72nm,1.9s,mb5.4
MOX Moxa 48.66 45 *e*P **P 23 13 20.3 +0.4**
comp=Z,42nm,1.6s,mb5.2
ABTA Abfaltersbach 48.86 50⇓*i*P **P 23 13 21.7 +0.3**
comp=Z,38nm,1.7s,mb5.2
MANZ Manzenberg 48.89 46 *e*P **P 23 13 22.2 +0.5**
comp=Z,77nm,1.9s,mb5.4
ROTZ Rotzenmuhle 48.93 46 *e*P **P 23 13 22.2 +0.2**
comp=Z,99nm,2.1s,mb5.5
WERD Werda 49.07 45 *e*P **P 23 13 23.5 +0.4**
comp=Z,294nm,3.4s
GUNZ Gunzen 49.08 45 *e*P **P 23 13 23.9 +0.8**
comp=Z,106nm,2.1s,mb5.5
WERN Wernitzgruen 49.10 45 *e*P **P 23 13 24.0 +0.7**
comp=Z,167nm,2.2s,mb5.7
NKC Novy Kostel 49.14 45 *e*P **P 23 13 24.4 +0.8**
NKC *ep*P pP 23 13 30.1 +3.4
TANN Tannenbergstha 49.17 45 *e*P **P 23 13 24.5 +0.7**
comp=Z,99nm,2.3s,mb5.4
WET Wettzell 49.30 47 *e*P **P 23 13 25.2 +0.4**
WET pmax pmax
comp=Z,80nm,1.9s,mb5.4
WET Wettzell 49.30 47 *e*P **P 23 13 25.2 +0.4**
comp=Z,80nm,1.9s,mb5.4
AMTX Amarillo 49.35 294 PFAKE 23 13 40.0 +15
AMTX LR LR
comp=Z,15µm,19.0s,MS6.0
KBA Koelnbreinsper 49.45 50⇑*i*P **P 23 13 27.4 +1.4**
comp=Z,18nm,1.3s,mb5.0
KBA Koelnbreinsper 49.45 50⇑*ip*P pP 23 13 27.4 -1.8
comp=Z,18nm,1.3s
KBA Koelnbreinsper 49.45 50⇑*i*P **P 23 13 27.4 +1.4**
KBA pmax pmax
comp=Z,18nm,1.3s,mb4.9
KONO Kongsberg 49.51 33 PFAKE 23 13 40.0 +14
KONO LR LR
comp=Z,5µm,19.0s,MS5.5
NNA Nana 49.53 224 *e*P **P 23 13 24.1 -2.9**
NNA LR LR
comp=Z,4µm,21.0s,MS5.4
CLL Collm 49.62 44⇑*i*P **P 23 13 27.8 +0.6**
comp=Z,62nm,1.8s,mb5.3
CLL *e*S **S 23 20 45.0 +10**
CLL LR LR
comp=Z,1µm,22.1s,MS4.9
CLL Collm 49.62 44⇑*i*P **P 23 13 27.8 +0.6**
CLL *e*S **S 23 20 45.0 +10**
CLL pmax pmax
comp=Z,62nm,1.8s,mb5.3
CLL MLR MLR
comp=Z,1µm,22.1s,MS4.9
CLL Collm 49.62 44⇑*i*P **P 23 13 27.8 +0.6**
comp=Z,62nm,1.8s,mb5.3
CLL *e*PP PP 23 15 20.0 -1.5
CLL *e*S **S 23 20 45.0 +10**
comp=N,200nm,21.2s
CLL *e*S **S 23 20 45.0 +10**
comp=E,600nm,27.1s
CLL Collm 49.62 44 *e*P **P 23 13 27.5 +0.3**
comp=Z,62nm,1.8s,mb5.3
KHC Kasperske Hory 49.75 47⇑*e*P **P 23 13 29.0 +0.7**
KHC Kasperske Hory 49.75 47 *e*P **P 23 13 28.9 +0.6**
FBE Freiberg 49.79 45 *e*P **P 23 13 29.3 +0.8**
comp=Z,61nm,1.6s,mb5.4
GEC2 GERESS Array S 49.81 47 *e*P **P 23 13 29.0 +0.3**
GEC2 pmax pmax
comp=Z,81nm,1.8s,mb5.5
GEC2 GERESS Array S 49.81 47 *e*P **P 23 13 29.0 +0.3**
comp=Z,81nm,1.8s,mb5.5
GERES GERESS Array B 49.81 47 P **P 23 13 29.0 +0.3**
comp=Z,2.0nm,0.9s,baz=280,slow=3.9,SNR=7.3
MOA Molln 50.12 49⇑*i*P **P 23 13 31.2 +0.1**
comp=Z,24nm,1.7s,mb5.0
BRG Berggiesshubel 50.16 45 *e*P **P 23 13 31.8 +0.5**
BRG pmax pmax
comp=Z,57nm,2.1s,mb5.2
BRG Berggiesshubel 50.16 45 *e*P **P 23 13 31.9 +0.6**
comp=Z,95nm,2.1s,mb5.5
BRG Berggiesshubel 50.16 45 *e*P **P 23 13 31.8 +0.5**
comp=Z,94nm,2.1s,mb5.5
FFC Flin Flon 50.17 320 *e*P **P 23 13 30.0 -1.4**
FFC LR LR
comp=Z,7µm,19.0s,MS5.7
OBKA Obir 50.25 50⇑*i*P **P 23 13 32.8 +0.7**
comp=Z,22nm,0.8s,mb5.2
OBKA Obir 50.25 50⇑*ip*P pP 23 13 32.8 -2.5
comp=Z,22nm,0.8s
RUE Ruedersdorf 50.25 43 *e*P **P 23 13 32.3 +0.3**
comp=Z,71nm,1.5s,mb5.5
RGN Rugen 50.29 40 *e*P **P 23 13 32.6 +0.3**
comp=Z,106nm,1.3s,mb5.7
PRU Pruhonice 50.45 46 *e*P **P 23 13 34.6 +1.0**
PRU *ep*P pP 23 13 40.6 +3.9
NAO01 NORSAR Array S 50.48 31 PFAKE 23 13 50.0 +16
NAO01 LR LR
comp=Z,9µm,19.0s,MS5.8
PVCC Panska Ves 50.52 45 *e*P **P 23 13 32.1 -2.0**
RSSD Black Hills 50.61 307 PFAKE 23 13 50.0 +15
RSSD LR LR
comp=Z,2µm,22.0s,MS5.2
NOA NORSAR Array B 50.70 31 P **P 23 13 35.4 +0.2**
NOA NORSAR Array B 50.70 31 P **P 23 13 35.4 +0.2**
comp=Z,2.3nm,0.7s,baz=254,slow=7.8,SNR=7.0
DGMT Dagmar 50.83 312 *e*P **P 23 13 36.3 -0.1**
comp=Z,38nm,1.4s,mb5.1
DGMT LR LR
comp=Z,21µm,20.0s,MS6.2
UPC Upice 51.44 45 *e*P **P 23 13 40.8 -0.2**
UPC *e* 23 13 47.3
UPC Upice 51.44 45 *e*P **P 23 13 40.8 -0.2**
UPC *ep*P pP 23 13 47.3 +3.2
DPC Dobruska-Polom 51.62 46 *e*P **P 23 13 42.6 +0.2**
KSP Ksiaz 51.64 45 *e*P **P 23 13 43.7 +1.2**
KSP Ksiaz 51.64 45 *e*P **P 23 13 42.2 -0.3**
SOP Sopron 51.65 49 *e*P **P 23 13 43.1 +0.4**
PAYG Puerto Ayora 51.73 246 *e*P **P 23 13 42.6 -1.1**
PAYG *e*PcP PcP 23 14 57.8 +0.7
PAYG LR LR
comp=Z,3µm,21.0s,MS5.2
LTX Lajitas 51.91 288 *e*P **P 23 13 45.5 +0.6**
comp=Z,50nm,1.8s,mb5.2
LTX LR LR
comp=Z,6µm,19.0s,MS5.6
LTX Lajitas 51.91 288 *e*P **P 23 13 45.5 +0.6**
LTX pmax pmax
comp=Z,50nm,1.8s,mb5.1
LTX MLR MLR
comp=Z,6µm,19.0s,MS5.6
TXAR Lajitas Array 51.91 288 P **P 23 13 43.7 -1.2**
TXAR Lajitas Array 51.91 288 P **P 23 13 43.7 -1.2**
comp=Z,1.6nm,0.8s,baz=108,slow=6.7,SNR=6.4
GDL2 Guadalupe Moun 51.96 291 *e*P **P 23 13 45.8 +0.6**
ISCO Idaho Springs 51.98 301 P **P 23 13 46.9 +1.7**
comp=Z,8.2nm,0.8s,mb4.7
ISCO LR LR
comp=Z,15µm,20.0s,MS6.0
ISCO Idaho Springs 51.98 301 P **P 23 13 46.9 +1.7**
ISCO pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
ISCO MLR MLR
comp=Z,15µm,20.0s,MS6.0
ZST Bratislava 52.03 48 *e*P **P 23 13 45.6 +0.1**
comp=Z,91nm,2.0s,mb5.4
ZST Bratislava 52.03 48 *e*P **P 23 13 45.6 +0.1**
ZST pmax pmax
comp=Z,91nm,2.0s,mb5.4
SDCO Great Sand Dun 52.09 298 *e*P **P 23 13 44.1 -1.9**
SDCO LR LR
comp=Z,35µm,21.0s
LAO LASA Array 52.15 310 PFAKE 23 14 00.0 +14
LAO LR LR
comp=Z,16µm,20.0s,MS6.1
MORC Moravsky Berou 52.38 46 *e*P **P 23 13 48.8 +0.8**
comp=Z,95nm,2.2s,mb5.3
MORC Moravsky Berou 52.38 46 *e*P **P 23 13 48.8 +0.8**
MORC pmax pmax
comp=Z,95nm,2.2s,mb5.3
OKC Ostrava-Krasne 52.77 46 *e*P **P 23 13 51.7 +0.8**
OKC *ep*P pP 23 13 57.1 +3.0
MNTX Cornudas Mount 52.90 291 PFAKE 23 14 00.0 +7.8
MNTX LR LR
comp=Z,14µm,20.0s,MS6.0
KOLL Kolacno 52.91 48 *e*P **P 23 13 52.2 +0.2**
PKSM Moragy 53.08 51 P **P 23 13 54.5 +1.3**
PKSM Moragy 53.08 51 S **P 23 13 53.7 +0.5**
SMCO Snowmass 53.09 300 *e*P **P 23 13 52.0 -1.4**
comp=Z,25nm,0.8s,mb5.2
VYHS Vyhne 53.19 48 *e*P **P 23 13 54.3 +0.2**
comp=Z,24nm,1.8s,mb4.8
VYHS LR LR
comp=Z,2µm,27.4s,MS5.1
VYHS Vyhne 53.19 48 *e*P **P 23 13 54.3 +0.2**
VYHS pmax pmax
comp=Z,25nm,1.8s,mb4.8
VYHS MLR MLR
comp=Z,2µm,27.4s,MS5.1
ANMO Albuquerque 53.23 295 *e*P **P 23 13 55.3 +0.7**
comp=Z,72nm,2.0s,mb5.3
ANMO LR LR
comp=Z,19µm,20.0s,MS6.1
ANMO Albuquerque 53.23 295 *e*P **P 23 13 55.3 +0.7**
ANMO pmax pmax
comp=Z,72nm,2.0s
ANMO MLR MLR
comp=Z,19µm,20.0s
BUD Budapest 53.32 49⇑*e*P **P 23 13 55.5 +0.5**
BNM Barren Site 53.50 294 *e*P **P 23 13 57.0 +0.5**
OJC Ojcow 53.84 46 *e*P **P 23 13 58.7 -0.1**
LAZ Ladron 53.87 295 *e*P **P 23 13 59.5 +0.2**
PSZ Piszkesteto 53.90 49⇑*e*P **P 23 14 00.2 +0.9**
NIE Niedzica 54.17 47 *e*P **P 23 14 02.7 +1.5**
KECS Kecovo 54.29 48 *e*P **P 23 14 03.0 +0.9**
comp=Z,4.2nm,1.2s
KECS Kecovo 54.29 48 *e*P **P 23 14 03.0 +0.9**
KECS pmax pmax
comp=Z,4.0nm,1.2s
RLMT Red Lodge 54.31 308 *e*P **P 23 14 03.1 +0.7**
RLMT LR LR
comp=Z,14µm,21.0s,MS6.0
PV01 Paradox Valley 54.45 299 *e*P **P 23 14 05.1 +1.6**
MVCO Mesa Verde 54.52 298 *e*P **P 23 14 06.4 +2.4**
MVCO LR LR
comp=Z,16µm,20.0s,MS6.1
EGMT Eagleton 54.53 312 *e*P **P 23 14 03.5 -0.4**
GCMT Greycliff 54.56 309 P **P 23 14 04.0 -0.1**
RES Resolute Bay 54.60 345 *e*P **P 23 14 04.0 +0.1**
BW06 Boulder Array 54.69 305 *e*P **P 23 14 04.5 -0.6**
comp=Z,62nm,1.7s,mb5.4
BW06 LR LR
comp=Z,13µm,21.0s,MS6.0
PDAR Pinedale Array 54.69 305 P **P 23 14 04.0 -1.1**
comp=Z,4.0nm,0.8s,mb4.5,baz=93,slow=7.9,SNR=9.5
STHS Stebnicka Huta 54.78 47 *e*P **P 23 14 07.3 +1.7**
comp=Z,12nm,1.4s,mb4.7
STHS Stebnicka Huta 54.78 47 *e*P **P 23 14 07.3 +1.7**
STHS pmax pmax
comp=Z,12nm,1.4s,mb4.7
PV10 Paradox Valley 54.79 300 *e*P **P 23 14 05.1 -0.8**
CRVS Cervenica-Dubn 54.93 47 *e*P **P 23 14 07.2 +0.5**
OHR Ohrid 54.97 57 *i* P **P 23 14 09.7 +2.5**
LKWY Lake 55.15 307 *e*P **P 23 14 09.7 +1.2**
comp=Z,53nm,1.9s,mb5.2
LKWY LR LR
comp=Z,23µm,21.0s,MS6.2
LKWY Lake 55.15 307 *e*P **P 23 14 09.7 +1.3**
LKWY pmax pmax
comp=Z,53nm,1.9s,mb5.2
LKWY MLR MLR
comp=Z,23µm,21.0s,MS6.2
BZS Buzias 55.18 51 P **P 23 14 09.6 +1.0**
BZS Buzias 55.18 51 S **P 23 14 09.3 +0.7**
KRUS Krusevo 55.28 57 *i* P **P 23 14 10.8 +1.4**
SKO Skopje 55.36 56 *i* P **P 23 14 11.3 +1.4**
LOHW Long Hollow 55.38 306 *e*P **P 23 14 11.6 +1.5**
comp=Z,60nm,1.8s,mb5.3
BIA Bitola 55.38 57 *i* P **P 23 14 10.6 +0.5**
KOLS Kolonicke sedl 55.47 47 *e*P **P 23 14 12.1 +1.5**
MOOW Moose Ponds 55.47 306 *e*P **P 23 14 11.9 +1.2**
comp=Z,54nm,2.1s,mb5.2
YFT Old Faithful 55.47 307 *e*P **P 23 14 13.1 +2.3**
UZH Uzhgorod 55.49 48*d* *i*P **P 23 14 11.6 +0.8**
YMR Madison River 55.55 307 PFAKE 23 14 20.0 +8.7
YMR LR LR
comp=Z,13µm,21.0s,MS6.0
REDW Red Top Meadow 55.58 306 *e*P **P 23 14 11.6 0.0**
TPAW Teton Pass 55.64 306 *e*P **P 23 14 12.1 +0.2**
AHID Auburn Hatcher 55.82 305 PFAKE 23 14 30.0 +17
AHID LR LR
comp=Z,11µm,21.0s,MS5.9
SRU San Rafael 55.84 301 P **P 23 14 12.2 -1.2**
comp=Z,20nm,1.1s,mb5.1
SRU San Rafael 55.84 301 P **P 23 14 12.2 -1.2**
SRU pmax pmax
comp=Z,20nm,1.1s,mb5.1
55.86 50 P **P 23 14 14.9 +1.4**
QLMT Earthquake Lak 55.86 308 *e*P **P 23 14 15.1 +1.5**
BOZ Bozeman (W) 55.94 309 *e*P **P 23 14 14.4 +0.3**
BOZ LR LR
comp=Z,9µm,20.0s,MS5.9
STIP Stip 55.94 56 *i* P **P 23 14 14.7 +0.5**
VAY Valandovo 56.28 56 *i* P **P 23 14 16.9 +0.3**
HWUT Hardware Ranch 56.30 304 *e*P **P 23 14 16.0 -0.6**
HWUT LR LR
comp=Z,13µm,20.0s,MS6.0
JLU Jordanelle 56.34 303 *e*P **P 23 14 17.5 +0.5**
LRM Limekiln Ridge 56.50 309 *e*P **P 23 14 19.1 +1.0**
MPU Maple Canyon 56.56 302 PFAKE 23 14 30.0 +11
MPU LR LR
comp=Z,19µm,20.0s,MS6.2
DLMT Dillon 56.64 308 *e*P **P 23 14 19.8 +0.8**
EDM Edmonton 56.73 318 *e*P **P 23 14 18.9 -0.7**
NLU North Lily Min 56.90 302 *e*P **P 23 14 20.9 -0.1**
SPUT South Promonto 56.99 304 *e*P **P 23 14 26.4 +4.8**
WUAZ Wupatki 57.10 297 *e*P **P 23 14 23.8 +1.3**
comp=Z,29nm,1.3s,mb5.2
MSU Marysvale 57.20 300 *e*P **P 23 14 23.2 0.0**
MVU Marysvale 57.23 300 PFAKE 23 14 40.0 +17
MVU LR LR
comp=Z,15µm,22.0s,MS6.0
TUC Tucson 57.27 293 *e*P **P 23 14 24.3 +0.5**
TUC LR LR
comp=Z,15µm,22.0s,MS6.0
DUG Dugway 57.42 302 PFAKE 23 14 40.0 +15
DUG LR LR
comp=Z,16µm,20.0s,MS6.1
MSO Missoula 57.44 310 PFAKE 23 14 40.0 +15
MSO LR LR
comp=Z,15µm,21.0s,MS6.1
BGU Big Grassy Mou 57.48 303 *e*P **P 23 14 24.7 -0.4**
YKA Yellowknife Ar 57.71 329 P **P 23 14 24.6 -1.8**
YKA Yellowknife Ar 57.71 329 P **P 23 14 24.6 -1.8**
comp=Z,3.2nm,0.8s,mb4.4,baz=94,slow=7.3,SNR=10
YKW3 Yellowknife Ar 57.72 329 *e*P **P 23 14 25.0 -1.4**
FINES FINESS Array B 57.83 32 P **P 23 14 27.4 +0.2**
comp=Z,5.5nm,0.8s,mb4.7,baz=267,slow=3.8,SNR=11
FIA1 FINESS Array S 57.83 32 *e*P **P 23 14 27.2 0.0**
KBS Kingsbay 57.92 11 PFAKE 23 14 40.0 +12
KBS LR LR
comp=Z,1µm,22.0s,MS5.0
KAF Kangasniemi 57.98 32 *ep* **P 23 14 23.9 -4.3**
comp=Z,19nm,0.9s,mb5.1,baz=266,slow=6.7
KAF Kangasniemi 57.98 32 *e*P **P 23 14 23.9 -4.3**
KAF pmax pmax
comp=Z,19nm,0.9s,mb5.1
VSU Vasula 58.05 36⇑*e*P **P 23 14 28.7 -0.1**
HLID Hailey 58.13 306 *e*P **P 23 14 29.6 -0.1**
HLID LR LR
comp=Z,15µm,22.0s,MS6.1
MLR Muntele Rosu 58.22 51 P **P 23 14 31.3 +1.1**
MLR Muntele Rosu 58.22 51 S **P 23 14 29.6 -0.6**
CCUT Cedar City 58.29 299 *e*P **P 23 14 30.9 +0.1**
ARUT Antelope Range 58.31 300 P **P 23 14 31.8 +0.8**
ARCES ARCESS Array B 58.45 23 P **P 23 14 31.4 -0.1**
comp=Z,8.7nm,0.8s,mb4.8,baz=252,slow=6.7,SNR=13
MNK Minsk 58.72 41 *e*P **P 23 14 31.0 -2.5**
VRI Vrincioaia 58.72 51 P **P 23 14 34.6 +1.0**
KEV Kevo 59.00 23 *ep* **P 23 14 32.1 -3.2**
comp=Z,6.0nm,0.7s,mb4.7
KEV Kevo 59.00 23 *e*P **P 23 14 35.1 -0.2**
comp=Z,135nm,1.6s,mb5.7
KEV LR LR
comp=Z,2µm,22.0s,MS5.2
KEV Kevo 59.00 23 *e*P **P 23 14 35.1 -0.2**
KEV pmax pmax
comp=Z,135nm,1.6s,mb5.7
KEV MLR MLR
comp=Z,2µm,22.0s,MS5.2
ELK Elko 59.16 303 PFAKE 23 14 50.0 +13
ELK LR LR
comp=Z,13µm,20.0s,MS6.0
NEW Newport 59.44 312 *e*P **P 23 14 38.1 -0.5**
NEW LR LR
comp=Z,13µm,20.0s,MS6.1
KIEV Kiev 59.83 45 *e*P **P 23 14 41.0 -0.3**
comp=Z,15nm,1.3s,mb4.9
KIEV LR LR
comp=Z,4µm,22.0s,MS5.5
KIEV Kiev 59.83 45 *e*P **P 23 14 41.0 -0.3**
KIEV pmax pmax
comp=Z,15nm,1.3s,mb4.9
KIEV MLR MLR
comp=Z,4µm,22.0s,MS5.5
AKASG Malin Array Be 59.84 45 P **P 23 14 41.0 -0.4**
AKASG Malin Array Be 59.84 45 P **P 23 14 41.0 -0.4**
comp=Z,3.3nm,0.7s,mb4.5,baz=272,slow=5.9,SNR=9.5
AKBB Malin Array Si 59.84 45 *e*P **P 23 14 40.8 -0.5**
BMO Blue Mountains 60.01 308 PFAKE 23 14 50.0 +7.3
BMO LR LR
comp=Z,6µm,20.0s,MS5.7
JOF Joensuu 60.32 31 *ep* **P 23 14 42.0 -2.4**
comp=Z,2.6nm,0.6s,mb4.4
LCO Las Campanas 60.65 206 PFAKE 23 15 00.0 +13
LCO LR LR
comp=Z,2µm,19.0s,MS5.4
TPNV Topopah Spring 60.67 299 *e*P **P 23 14 48.0 +0.7**
comp=Z,43nm,1.7s,mb5.3
TPNV LR LR
comp=Z,17µm,21.0s,MS6.2
TPNV Topopah Spring 60.67 299 *e*P **P 23 14 48.0 +0.7**
TPNV pmax pmax
comp=Z,43nm,1.7s,mb5.3
TPNV MLR MLR
comp=Z,17µm,21.0s,MS6.2
BMN Battle Mountai 60.71 303 PFAKE 23 15 00.0 +13
BMN LR LR
comp=Z,2µm,20.0s,MS5.3
TPH Tonopah 61.18 301 P **P 23 14 50.4 -0.4**
APA Apatity 61.19 25⇓*e*P **P 23 14 57.0 +6.7**
HAWA Hanford 61.32 310 *e*P **P 23 14 51.3 -0.2**

PFO Pinyon Flat Ob 61.60 296 PFAKE 23 15 10.0 +16
PFO LR LR
comp=Z,9μm,19.0s,MS5.9
LVZ Lovozero 61.66 25 PFAKE 23 15 10.0 +17
LVZ LR LR
comp=Z,1μm,21.0s,MS5.1
DAC Darwin (Calif) 61.87 299 *e*P **P** **23 14 55.3 -0.1**
comp=Z,37nm,1.8s,mb5.2
DAC LR LR
comp=Z,892nm,20.0s,MS4.9
DAC Darwin (Calif) 61.87 299 *e*P **P** **23 14 55.3 -0.2**
DAC pmax pmax
comp=Z,37nm,1.8s,mb5.2
DAC MLR MLR
comp=Z,892nm,20.0s,MS4.9
NVAR Mina Array Bea 61.94 301 P **P** **23 14 54.8 -1.0**
comp=Z,0.5nm,0.4s,baz=81,slow=5.6,SNR=3.7
MTUM Tungsten Hills 62.38 300 *e*P **P** **23 14 58.0 -0.8**
PAHR Pah Rah Range 62.48 303 *e*P **P** **23 14 58.8 -0.7**
comp=Z,45nm,1.5s,mb5.4
MOD Modoc 62.69 305 *e*P **P** **23 15 00.8 0.0**
MOD LR LR
comp=Z,8μm,21.0s,MS5.8
WAKR Walker 62.79 302 *e*P **P** **23 15 01.8 +0.2**
CMB Columbia Colle 63.62 301 P **P** **23 15 05.7 -1.4**
CMB LR LR
comp=Z,14μm,20.0s,MS6.2
OBN Obninsk 63.68 39 *e*P **P** **23 15 07.0 -0.1**
OBN LR LR
comp=Z,7μm,19.0s,MS5.8
OBN Obninsk 63.68 39‖ *e*P **P** **23 15 07.4 +0.2**
OBN *e* 23 15 46.6
OBN *e* 23 17 25.6
OBN pmax pmax
comp=Z,96nm,1.6s,mb5.6
OHCM Honcut 64.14 303 *e*P **P** **23 15 10.3 -0.2**
MOS Moscow 64.18 38 *e*P **P** **23 15 09.6 -0.8**
MOS pmax pmax
comp=Z,145nm,2.0s,mb5.7
ANTO Ankara 64.19 56 *e*P **P** **23 15 11.3 +0.5**
comp=Z,51nm,1.6s,mb5.3
ANTO LR LR
comp=Z,3μm,20.0s,MS5.5
ANTO Ankara 64.19 56 *e*P **P** **23 15 11.3 +0.5**
ANTO pmax pmax
comp=Z,51nm,1.6s,mb5.3
ANTO MLR MLR
comp=Z,3μm,20.0s,MS5.5
COR Corvallis 64.26 309 PFAKE 23 15 20.0 +8.8
COR LR LR
comp=Z,9μm,21.0s,MS5.9
YBH Yreka Blue Hor 64.48 306 PFAKE 23 15 20.0 +7.3
YBH LR LR
comp=Z,11μm,20.0s,MS6.0
WDC Whiskeytown Da 64.63 304 PFAKE 23 15 30.0 +16
WDC LR LR
comp=Z,6μm,20.0s,MS5.8
SAO San Andreas Ge 64.76 300 PFAKE 23 15 30.0 +15
SAO LR LR
comp=Z,15μm,22.0s,MS6.2
BR131 Keskin Array S 64.86 56 PFAKE 23 15 30.0 +15
BR131 LR LR
comp=Z,2μm,20.0s,MS5.4
BRTR Keskin Array B 64.86 56 *i* P **P** **23 15 15.8 +0.6**
BRTR pmax pmax
comp=Z,7.0nm,1.1s
BRTR Keskin Array B 64.86 56 P **P** **23 15 15.8 +0.7**
comp=Z,7.2nm,1.1s,mb4.6,baz=284,slow=5.0,SNR=11
INK Inuvik 65.34 336 *e*P **P** **23 15 16.8 -1.0**
HOPS Hopland 65.42 303 PFAKE 23 15 30.0 +11
HOPS LR LR
comp=Z,8μm,20.0s,MS5.9
MCCM Marconi Confer 65.50 302 PFAKE 23 15 30.0 +11
MCCM LR LR
comp=Z,9μm,19.0s,MS6.0
DLBC Dease Lake 65.56 325 *e*P **P** **23 15 18.2 -1.2**
VRSR Storozhevoye 65.97 43 *e*P **P** **23 15 21.8 -0.4**
VRSR pmax pmax
comp=Z,1.0nm,0.9s
VRSR pmax pmax
comp=N,1.0nm,1.0s
VRSR pmax pmax
comp=E,3.0nm,1.0s
TRQA Tornquist 66.27 195 P **P** **23 15 24.3 +0.2**
TRQA LR LR
comp=Z,2μm,19.0s,MS5.4
ANN Anapa 66.33 50 *e*P **P** **23 15 22.9 -1.7**
ANN *e*S S 23 24 10.0 -4.3
ANN pmax pmax
comp=Z,54nm,2.2s,mb5.2
ANN MLR MLR
comp=Z,4μm,25.0s,MS5.5
WRAK Wrangell Islan 67.22 323 PFAKE 23 15 40.0 +10
WRAK LR LR
comp=Z,5μm,21.0s,MS5.7
VRHR Novokhopersk 67.49 43 *e*P **P** **23 15 32.6 +0.7**
VRHR pmax pmax
comp=Z,9.0nm,0.4s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,30nm,0.7s
DAWY Dawson 68.62 332 *e*P **P** **23 15 38.0 -0.8**
SIT Sitka 68.65 324 PFAKE 23 15 50.0 +11
SIT LR LR
comp=Z,10μm,22.0s,MS6.0
MALT Malatya 68.83 57 *e*P **P** **23 15 41.4 +0.9**
EGAK Eagle 69.14 333 PFAKE 23 15 50.0 +8.0
EGAK LR LR
comp=Z,6μm,20.0s,MS5.8
TRIS Tristan da Cun 70.08 153 PFAKE 23 16 00.0 +12
TRIS LR LR
comp=Z,2μm,19.0s,MS5.3
KIV Kislovodsk 70.18 50 *e*P **P** **23 15 50.4 +1.6**
KIV LR LR
comp=Z,2μm,19.0s,MS5.4
KIV Kislovodsk 70.18 50 *d i*P **P** **23 15 49.6 +0.8**
KIV pmax pmax
comp=Z,40nm,1.7s,mb5.1
PLCA Paso Flores 71.13 201 *e*P **P** **23 15 53.3 -1.0**
comp=Z,55nm,1.8s,mb5.2
PLCA LR LR
comp=Z,2μm,20.0s,MS5.4
PLCA Paso Flores 71.13 201 *e*P **P** **23 15 53.3 -1.1**
PLCA pmax pmax
comp=Z,55nm,1.8s
PLCA MLR MLR
comp=Z,2μm,20.0s
COLA College 71.79 334 *e*P **P** **23 15 57.2 -0.9**
comp=Z,46nm,1.5s,mb5.2
COLA LR LR
comp=Z,7μm,20.0s,MS5.9
COLA College 71.79 334 *i* P **P** **23 15 57.4 -0.7**
MCK McKinley 72.69 333 *e*P **P** **23 16 02.8 -0.7**
comp=Z,74nm,2.3s,mb5.2
MCK LR LR
comp=Z,2μm,22.0s,MS5.3
MCK McKinley 72.69 333 *e*P **P** **23 16 02.8 -0.7**
MCK pmax pmax
comp=Z,74nm,2.3s,mb5.2
MCK MLR MLR
comp=Z,2μm,22.0s,MS5.3
MSL Mosul 73.00 58 *ex* x 23 16 07.5
IMA2 Indian Mountai 73.47 336 *e*P **P** **23 16 08.2 +0.1**
PMR Palmer 73.68 331 PFAKE 23 16 20.0 +11
PMR LR LR
comp=Z,13μm,20.0s,MS6.2
BHD Baghdad 75.08 60 *ex* x 23 16 19.0
ARU Arti 75.13 34 *e*P **P** **23 16 18.6 +0.6**
comp=Z,85nm,1.9s,mb5.3
ARU LR LR
comp=Z,3μm,19.0s,MS5.7
ARU Arti 75.13 34 *d i*P **P** **23 16 18.4 +0.4**
ARU *e* 23 16 31.7
ARU *e* 23 19 03.0
ARU *e*PPP 23 20 46.7
ARU *e*S S 23 25 55.4 -0.9
ARU *e*SS SS 23 30 40.5 -4.1
ARU pmax pmax
comp=Z,39nm,1.7s,mb5.1
TSUM Tsumeb 75.40 120 *e*P **P** **23 16 19.8 -0.2**
TSUM LR LR
comp=Z,4μm,20.0s,MS5.7
SVE Sverdlovsk 75.98 33 *e*P **P** **23 16 23.6 +0.8**
SVE pmax pmax
comp=Z,40nm,2.0s,mb5.0
KDAK Kodiak Island 76.98 328 PFAKE 23 16 40.0 +12
KDAK LR LR
comp=Z,2μm,20.0s,MS5.5
TNA Tin City 78.59 339 *e*P **P** **23 16 38.1 +0.8**
TNA LR LR
comp=Z,2μm,19.0s,MS5.5
EFI East Falkland 78.73 189 PFAKE 23 16 50.0 +12
EFI LR LR
comp=Z,4μm,19.0s,MS5.8
HOPE Hope Point 80.73 175 PFAKE 23 17 00.0 +11
HOPE LR LR
comp=Z,4.0nm,20.0s
GAMB Gambell 81.00 339 *e*P **P** **23 16 50.2 -0.2**
LSZ Lusaka 81.85 111 P **P** **23 16 56.9 +1.3**
LSZ LR LR
comp=Z,5μm,21.0s,MS5.9
TIXI Tiksi 82.02 2 *e*P **P** **23 16 55.6 -0.1**
TIXI LR LR
comp=Z,964nm,22.0s,MS5.1
TIXI Tiksi 82.02 2 *e*P **P** **23 16 55.2 -0.5**
TIXI *e* 23 17 01.2
TIXI pmax pmax
comp=Z,51nm,2.1s,mb5.1
RPN Rapa Nui 82.07 235 PFAKE 23 17 10.0 +13
RPN LR LR
comp=Z,1μm,22.0s,MS5.2
BRVK Borovoye 82.69 34 *e*P **P** **23 16 59.9 +0.3**
BRVK LR LR
comp=Z,3μm,20.0s,MS5.7
BILL Bilibino 83.04 349 *i* P **P** **23 17 00.4 -0.6**
BILL Bilibino 83.04 349 *d i*P **P** **23 17 00.3 -0.7**
BILL *i* 23 17 06.7
BILL pmax pmax
comp=Z,40nm,2.4s,mb5.0
KMBO Kilima Mbogo 83.08 95 P **P** **23 17 04.2 +2.0**
KMBO Kilima Mbogo 83.08 95 P **P** **23 17 04.2 +2.0**
comp=Z,6.3nm,1.1s,mb4.5,baz=273,slow=5.8,SNR=11
LBTB Lobatse 84.79 121 P **P** **23 17 10.9 +0.2**
LBTB LR LR
comp=Z,6μm,20.0s,MS6.0
SUR Sutherland 85.36 130 PFAKE 23 17 20.0 +6.6
SUR LR LR
comp=Z,4μm,22.0s,MS5.7
UNV Unalaska Valle 85.67 330 PFAKE 23 17 30.0 +15
UNV LR LR
comp=Z,38μm,20.0s
BOSA Boshof 86.45 124 PFAKE 23 17 30.0 +11
BOSA LR LR
comp=Z,7μm,20.0s,MS6.0
KURK Kurchatov 88.20 32‖ *e*P **P** **23 17 27.2 +0.2**
ZAA0 Zalesovo Array 88.72 27 *e*P **P** **23 17 29.4 -0.1**
ZAL Zalesovo 88.72 27 P **P** **23 17 29.5 +0.1**
ZALV Zalesovo Beam 88.72 27 P **P** **23 17 29.5 +0.1**
comp=Z,1.8nm,0.7s,mb4.5,baz=292,slow=4.7,SNR=7.0
AAK Ala-Archa 91.20 40 PFAKE 23 17 50.0 +8.8
AAK LR LR
comp=Z,5μm,20.0s,MS5.9
YAK Yakutsk 91.67 3 PFAKE 23 17 50.0 +7.0
YAK LR LR
comp=Z,1μm,21.0s,MS5.3
PMSA Palmer Station 92.23 188 PFAKE 23 18 00.0 +15
PMSA LR LR
comp=Z,2μm,21.0s,MS5.5
MKAR Makanchi Array 92.65 33 *i* P **P** **23 17 47.7 -0.2**
MKAR Makanchi Array 92.65 33 P **P** **23 17 47.8 0.0**
comp=Z,0.2nm,0.2s,baz=352,slow=2.7,SNR=4.9
MA2 Magadan 93.34 352 PFAKE 23 18 00.0 +9.2
MA2 LR LR
comp=Z,2μm,19.0s,MS5.5
MA2 Magadan 93.34 352 *i* P **P** **23 17 49.9 -0.9**
MA2 pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
BOD Bodaibo 94.10 11 *e*P **P** **23 17 51.6 -2.7**
BOD pmax pmax
comp=Z,7.0nm,1.8s,mb4.8
SMY Shemya 94.25 338 PFAKE 23 18 10.0 +15
SMY LR LR
comp=Z,4μm,19.0s,MS5.9
PTCN Pitcairn Islan 97.18 246 PFAKE 23 18 20.0 +11
PTCN LR LR
comp=Z,3μm,19.0s,MS5.8
TLY Talaya 97.28 19 PFAKE 23 18 20.0 +11
TLY LR LR
comp=Z,1μm,22.0s,MS5.3
PET Petropavlovsk 98.31 346 PFAKE 23 18 20.0 +6.5
PET LR LR
comp=Z,2μm,22.0s,MS5.5
POHA Pohakuloa 98.88 297 PFAKE 23 18 30.0 +13
POHA LR LR
comp=Z,4μm,20.0s,MS5.9
KIP Kipapa 99.94 300 PFAKE 23 18 30.0 +9.1
KIP LR LR
comp=Z,4μm,20.0s,MS5.9
MSEY Mahe Island 100.96 90 PFAKE 23 18 40.0 +15
MSEY LR LR
comp=Z,6μm,22.0s,MS6.1
ULN Ulaanbaatar 101.68 19 PFAKE 23 18 40.0 +11
ULN LR LR
comp=Z,2μm,19.0s,MS5.5
HIA Hailar 103.28 11 PFAKE 23 18 50.0 +14
HIA LR LR
comp=Z,2μm,19.0s,MS5.6
YSS Yuzh-Sakhalins 106.62 355 PFAKE 23 23 10.0 +8.8
YSS LR LR
comp=Z,2μm,21.0s,MS5.6
HHC Hu-ho-hao-te 109.40 19 *e*PDIF Pdif 23 19 07.1 +4.1
HHC PP PP 23 23 43.0 +7.9
HHC S Sdif 23 31 14.3 0.0
HHC SS SS 23 39 00.4 +4.6
HHC PP PP
comp=Z,170nm,6.0s
HHC LR LR
comp=N,898nm,19.0s,MS5.6
HHC LR LR
comp=E,1μm,15.3s,MS5.6
HHC LR LR
comp=Z,2μm,20.6s
LSA Lhasa 109.79 40 PFAKE 23 23 20.0 +12
LSA LR LR
comp=Z,2μm,21.0s,MS5.7
LZH Lanzhou 110.95 27 *e*PKP PKiKP 23 23 06.0 -3.6
LZH XPKP 23 23 10.5
LZH SKS SKSdf 23 30 15.6 -6.4
LZH PP PP
comp=Z,139nm,7.7s
LZH LR LR
comp=E,374nm,18.2s
LZH LR LR
comp=Z,607nm,20.1s,MS5.2
LZH Lanzhou 110.95 27 *e*PKP PKiKP 23 23 06.0 -3.6
LZH pPKP 23 23 09.3
LZH sPKP 23 23 10.5
LZH PP PP 23 23 17.2 -29
LZH SKS SKSdf 23 30 15.6 -6.4
LZH SKKS SKKSac 23 30 39.3 -12
LZH SS SS 23 39 12.2 -4.7
LZH LR LR
comp=Z,610nm,20.1s,MS5.2
LZH Lanzhou 110.95 27 *e*PKIKP PKiKP 23 23 06.0 -3.6
LZH 23 23 09.3
LZH 23 23 10.5
LZH 23 30 15.6
LZH SS SS 23 39 12.2 -4.7
LZH MLR MLR
comp=Z,610nm,20.1s,MS5.2
BJT Baijiatuau 111.42 16 PFAKE 23 23 20.0 +10
BJT LR LR
comp=Z,3μm,22.0s,MS5.8
ERM Erimo 111.48 354 PFAKE 23 23 20.0 +10
ERM LR LR
comp=Z,3μm,19.0s,MS5.9
CD2 Chengdu 115.35 30 *e*PKP PKPdf 23 23 16.9 -1.3
CD2 PP PP 23 24 21.0 +3.1
CD2 PKS 23 26 52.0
CD2 SKS SKSdf 23 30 23.8 -6.8
CD2 PP PP
comp=Z,130nm,10.2s
CD2 LR LR
comp=N,150nm,28.0s
CD2 LR LR
comp=Z,120nm,24.6s,MS4.4
INCN Inchon 115.82 8 PFAKE 23 23 30.0 +11
INCN LR LR
comp=Z,1μm,21.0s,MS5.5
QSPA South Pole Qui 116.40 180 PFAKE 23 23 30.0 +11
QSPA LR LR
comp=Z,1μm,21.0s,MS5.5
PALK Pallekele 117.15 66 PFAKE 23 23 30.0 +8.0
PALK LR LR
comp=Z,3μm,20.0s,MS6.0
MAJO Matsushiro 117.26 358 PFAKE 23 23 30.0 +8.3
MAJO LR LR
comp=Z,2μm,22.0s,MS5.7
ENH Enshi 118.30 26 PFAKE 23 23 40.0 +16
ENH LR LR
comp=Z,4.0nm,21.0s
NJ2 Nanjing 119.65 16 *e*PKP PKPdf 23 23 23.7 -2.7
KMI Kunming 119.71 34 PKP PKPdf 23 23 26.5 -0.2
KMI sPKP 23 23 29.8
KMI SKKS SKKSac 23 31 43.5 -6.5
KMI SS SS 23 41 08.0 -4.4
KMI LR LR
comp=Z,920nm,25.2s,MS5.3
KMI Kunming 119.71 34 PKIKP PKPdf 23 23 26.5 -0.2
KMI 23 23 29.8
KMI SS SS 23 41 08.0 -4.4
KMI MLR MLR
comp=Z,920nm,25.2s,MS5.3
GYA Guiyang 120.46 30 PKP PKPdf 23 23 27.4 -0.7
GYA PP PP 23 24 57.0 +3.5
GYA PKS 23 27 02.9
GYA SKS SKSdf 23 30 37.0 -3.6
GYA SKKS SKKSac 23 31 48.3 -6.6
GYA S Sdif 23 32 41.4 -5.1
GYA SS SS 23 41 20.9 -0.9
GYA PP PP
comp=Z,140nm,9.4s
GYA LR LR
comp=N,380nm,20.2s,MS5.1
GYA LR LR
comp=E,270nm,21.0s,MS5.1
GYA LR LR
comp=Z,440nm,20.6s,MS5.1
RAR Rarotonga 121.14 260 PFAKE 23 23 40.0 +11
RAR LR LR
comp=Z,2.0nm,19.0s
CHTO Chiang Mai 122.64 42 PFAKE 23 23 40.0 +7.5
CHTO LR LR
comp=Z,1μm,22.0s,MS5.5
TATO Taipei 127.07 16 PFAKE 23 23 50.0 +9.2
TATO LR LR
comp=Z,2μm,20.0s,MS5.8
VNDA Vanda 127.42 187 PFAKE 23 23 50.0 +10
VNDA LR LR
comp=Z,1μm,19.0s,MS5.7
QIZ Qiongzhong 128.34 32 PFAKE 23 23 50.0 +6.6
QIZ LR LR
comp=Z,1μm,21.0s,MS5.6
AFI Afiamalu 129.31 273 PFAKE 23 24 00.0 +15
AFI LR LR
comp=Z,2μm,21.0s,MS5.8
FUNA Funafuti 134.97 285 PFAKE 23 24 10.0 +14
FUNA LR LR
comp=Z,5μm,19.0s,MS6.3
CASY Casey 137.24 165 PFAKE 23 24 10.0 +11
CASY LR LR
comp=Z,4μm,20.0s,MS6.1
GUMO Guam 139.15 346 PFAKE 23 24 20.0 +16
GUMO LR LR
comp=Z,2μm,19.0s,MS5.8
COCO West Island 140.98 76 PFAKE 23 24 20.0 +13
COCO LR LR
comp=Z,3μm,21.0s,MS6.0
SNZO South Karori 144.61 235 PFAKE 23 24 20.0 +7.4
SNZO LR LR
comp=Z,1μm,19.0s,MS5.8
DAV Davao City (W) 145.27 18 PFAKE 23 24 30.0 +16
DAV LR LR
comp=Z,3μm,20.0s,MS6.1
RPZ Rata Peaks 146.56 230 PKP PKPdf 23 24 17.2 +1.3
comp=Z,12nm,1.1s,baz=209,slow=3.9,SNR=3.7
HNR Honiara 151.34 302 PFAKE 23 24 40.0 +15
HNR LR LR
comp=Z,4μm,20.0s,MS6.2
DZM Mont Dzumac 151.53 272 PKPbc PKPbc 23 24 31.4 +0.6
comp=Z,21nm,0.8s,baz=50,slow=19,SNR=7.9
PMG Port Moresby 159.76 325 PFAKE 23 24 50.0 +14
PMG LR LR
comp=Z,3μm,21.0s,MS6.1
TAU Tasmania Unive 161.00 207 PFAKE 23 24 50.0 +14
TAU LR LR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 162.86 116 PFAKE 23 24 50.0 +11
NWAO LR LR
comp=Z,3μm,21.0s
MBWA Marble Bar 164.60 73 PFAKE 23 24 50.0 +10
MBWA LR LR
comp=Z,4μm,20.0s
CTAO Charters Tower 168.28 301 PFAKE 23 24 50.0 +6.7
CTAO LR LR
comp=Z,3μm,22.0s
STKA Stephens Creek 172.46 223 PKP PKPdf 23 24 43.4 -2.0
comp=Z,3.2nm,1.0s,baz=20,slow=3.4,SNR=4.2
WRA Warramunga Arr 173.39 10 PKPab PKPab 23 26 13.3 -0.9
comp=Z,4.7nm,1.2s,baz=356,slow=5.1,SNR=6.0
ASAR Alice Springs 176.82 28 PKP PKPdf 23 24 46.6 -0.3
comp=Z,1.4nm,1.0s,baz=110,slow=1.1,SNR=6.7

*ISCJB **01** 23:07:42.3±1.8,287N±03×442W±02,h10km,mb4.1/9, Error ellipse: s-maj=47.7km s-min=23.2km az=15.8*
*IDC **01** 23:07:42.7±2.1,2860N×4429W,h0km,mb4.1/7,mb1 4.3/7, mb1mx3.9/21,mbtmp4.1/7,Error ellipse: s-maj=54.7km s-min=27.0km az=17.0*
ISC 01 23:07:44.2±1.8,286N±03×442W±02,h10km,n10,σ1§44/10, mb4.1/9,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**45.26**	**100**	P	**P**	**23 16 02.8**	**+0.7**
	1.1nm,0.9s,mb3.7,baz=173,slow=38,SNR=3.4						
NB2	**NORSAR Subarra**	**48.79**	**32**	P	**P**	**23 16 31.3**	**+2.2**
	comp=Z,4.9nm,1.1s,mb4.5,baz=254,slow=7.9						
NOA	**NORSAR Array B**	**48.79**	**32**	P	**P**	**23 16 30.6**	**+1.5**
	comp=Z,2.3nm,0.9s,mb4.2,baz=254,slow=7.7,SNR=4.8						
PDAR	**Pinedale Array**	**53.70**	**304**	P	**P**	**23 17 07.3**	**+1.0**
	comp=Z,1.6nm,0.9s,mb4.0,baz=96,slow=8.3,SNR=4.7						
FINES	**FINESS Array B**	**55.93**	**33**	P	**P**	**23 17 22.6**	**+0.5**
	comp=Z,3.4nm,0.9s,mb4.4,baz=290,slow=5.7,SNR=7.0						
YKA	**Yellowknife Ar**	**56.05**	**328**	P	**P**	**23 17 21.1**	**-1.8**
	comp=Z,0.7nm,0.8s,mb3.7,baz=94,slow=7.6,SNR=6.7						
KAF	**Kangasniemi**	**56.07**	**32**	*ep*	**P**	**23 17 18.9**	**-4.2**
	comp=Z,0.6nm,0.4s,mb4.0						
ARCES	**ARCESS Array B**	**56.43**	**23**	P	**P**	**23 17 26.6**	**+1.1**
	comp=Z,7.3nm,0.9s,mb4.7,baz=248,slow=6.4,SNR=5.6						
AKASG	**Malin Array Be**	**58.20**	**46**	P	**P**	**23 17 37.0**	**-1.3**
	comp=Z,2.1nm,0.7s,mb4.2,baz=272,slow=5.3,SNR=3.6						
BRTR	**Keskin Array B**	**63.51**	**57**	P	**P**	**23 18 12.0**	**-2.7**
	comp=Z,1.3nm,0.9s,mb3.9,baz=264,slow=6.2,SNR=4.1						

*BJI **01** 23:11:48.7,2684N×4531W,h8km,mB5.9,mb5.4,Ms5.7, Msz5.5*
*IDC **01** 23:11:49.9±0.4,2660N×4469W,h0km,mb4.8/31, mb1 5.0/31,mb1mx4.9/32,mbtmp4.8/31,MS5.5/24, Ms1 5.5/24,ms1mx5.5/25,Error ellipse: s-maj=14.3km s-min=9.9km az=157.0*
*ISCJB **01** 23:11:50.1±0.1,2661N±003×4465W±001,h10km, mb5.4/214,MS5.7/203,Error ellipse: s-maj=4.5km s-min=1.8km az=170.6*
*CRAAG **01** 23:11:50.6,2667N×4459W,Mb5.8*
*MOS **01** 23:11:50.4±0.8,2668N×4463W,h10km,mb5.7/104, MS5.6/61,Error ellipse: s-maj=5.8km s-min=3.1km az=45.3*
*NEIC **01** 23:11:52.1±0.1,2658N×4459W,h10km,mb5.5/126, MS5.8/151,MW5.8,Error ellipse: s-maj=4.6km s-min=2.0km az=169.0,Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.20; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$4.99; $M_{r\theta}$-2.45; $M_{r\phi}$0.30; $M_{\theta\phi}$-2.71; Best double couple: $M_0$5.90000×10^{17} NP1:ϕ_s161.00000°,δ34.00000°, λ-130.00000°. NP2:ϕ_s26.00000°,δ65.00000°, λ-67.00000°. Principal axes: T 5.8700, Plg17.0000°, Azm99.0000°; N 0.1000, Plg21.0000°, Azm196.0000°; P -5.9700, Plg63.0000°, Azm333.0000°;*
*SZGRF **01** 23:11:52.0,26.18N×4474W,h33km,mb5.6,MS5.7,*

Northern Mid-Atlantic Ridge

GCMT ***01*** *23:11:52.1±0.1,2654N×4457W,h12km,MW6.0/106, Moment Tensor Solution. s81,c156; s106,c368; Duration: 2s4 Moment tensor: Scale 10^{18}Nm; Mrr-1.11±.01; Mθθ-0.04±.01; Mφφ1.15±.01; Mrθ-0.01±.02; Mθφ0.29±.01; Mφr-0.04±.02; Best double couple: Mo1.16400×10^{18} NP1:φs193.00000°,δ44.00000°, λ-90.00000°. NP2:φs13.00000°,δ46.00000°,λ-90.00000°. Principal axes: T 1.2180, Plg1.0000°, Azm103.0000°; N -0.1070, Plg0.0000°, Azm13.0000°; P -1.1110, Plg89.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 01 23:11:52.0±0.1**,2659N**±003×**4462W**±001**,h10**km**, (h17**km±1.2km**:pP-P),n974,**σ**0s96**/903**,mb5.4**/214**, MS5.7**/203**,102C-81D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEG	La Desirade	18.38	239	eP	Pn	23 16 06.3	-0.8
BBSR	BB Station	18.39	293	eP	Pn	23 16 08.5	+1.3
MGG	Marie-Galante	18.82	239	eP	Pn	23 16 10.7	-1.8
STMA	St. Maarten, A	19.09	247	eP	Pn	23 16 17.3	+1.6
STMA	St. Maarten, A	19.09	247	e	Pn	23 16 17.3	+1.6
TBG	Guadaloupe-3	19.11	239	eP	Pn	23 16 06.0	-10
MVM	Montagne Vaucl	19.35	235	eP	Pn	23 16 20.8	+1.8
BBGH	Gun Hill	19.37	229	eP	Pn	23 16 14.8	-4.3
BBGH				eS	Sn	23 19 55.2	-1.3
FDF	Fort de France	19.43	236	eP	Pn	23 16 18.6	-1.2
PDA	Ponta Delgada	19.49	51	i P	Pn	23 16 23.0	+2.6
PDA				i LR	LR	23 20 50.0	
BIM	Bigot	19.50	235	eP	Pn	23 16 23.2	+2.5
SVB	Belmont	20.46	233	eP	P	23 16 29.7	-0.3
SVB	Belmont	20.46	233	e	P	23 16 29.7	-0.3
FCV	Fort Charlotte	20.53	233	eP	P	23 16 36.0	+5.3
FCV	Fort Charlotte	20.53	233	e	P	23 16 36.0	+5.3
MTP	Monte Pirata	21.10	251	eP	P	23 16 37.8	+1.0
CBYP	Canovanas	21.28	251	eP	P	23 16 39.0	+0.2
HUMP	Col San Antoni	21.33	251	eP	P	23 16 40.4	+1.0
CPD	Cerro la Pandu	21.44	251	eP	P	23 16 41.5	+1.0
GRGR	Grenville	21.53	231	eP	P	23 16 44.0	+2.5
GRGR				LR	LR		
	comp=Z,16µm,22.0s,MS5.4						
SJG	San Juan	21.60	251⇑	eP	P	23 16 42.2	0.0
	comp=Z,898nm,2.1s,mb5.8						
SJG				eS	S	23 20 53.4	+12
SJG				LR	LR		
	comp=Z,27µm,22.0s,MS5.6						
SJG	San Juan	21.60	251⇑	eP	P	23 16 42.3	0.0
SJG				pmax	pmax		
	comp=Z,898nm,2.1s						
SJG				MLR	MLR		
	comp=Z,27µm,22.0s						
SJG	San Juan	21.60	251	P	P	23 16 41.6	-0.7
	comp=Z,60nm,1.1s,mb4.9,baz=74,slow=8.3,SNR=17						
TBH	Brigand Hill	22.31	227	eP	P	23 16 50.9	+1.0
MPR	Mayaguez	22.40	253	eP	P	23 16 52.3	+1.5
TRN	Trinidad (W)	22.41	228	eP	P	23 16 53.0	+2.1
PMAR	Madeira	24.80	69	eP	P	23 17 15.2	+0.9
	comp=Z,479nm,1.5s,mb5.8						
PCRV	Puerto La Cruz	24.98	233	P	P	23 17 15.3	-0.7
PCRV				LR	LR	23 26 04.3	
PCRV	Puerto La Cruz	24.98	233	P	P	23 17 15.3	-0.7
	comp=Z,36nm,1.1s,mb4.8,baz=43,slow=8.9,SNR=5.9						
PCRV				LR	LR	23 26 04.3	
	comp=Z,8µm,19.3s,MS5.2,baz=60,slow=34						
PMPS	Porto Santo	25.33	68	eP	P	23 17 21.5	+2.4
	comp=Z,238nm,1.6s,mb5.5						
SDDR	Presa de Saban	25.69	258	eP	P	23 17 23.7	+1.3
SDDR				LR	LR		
	comp=Z,18µm,20.0s,MS5.6						
BRYW	Bryant College	26.85	312	eP	P	23 17 37.7	+5.0
WES	Weston	26.91	313	PFAKE		23 17 50.0	+17
WES				LR	LR		
	comp=Z,16µm,20.0s,MS5.6						
WES	Weston	26.91	313	eP	P	23 17 33.6	+0.3
WVL	Waterville	26.97	318	eP	P	23 17 34.6	+0.9
HRV	Harvard--Oak R	27.12	313	eP	P	23 17 35.3	+0.1
HRV				LR	LR		
	comp=Z,26µm,22.0s,MS5.8						
PKME	Peaks-Kenny Pk	27.14	320	eP	P	23 17 36.3	+0.9
PKME				LR	LR		
	comp=Z,14µm,21.0s,MS5.5						
QUA2	Belchertown	27.55	312	eP	P	23 17 38.3	-0.7
	comp=Z,84nm,1.5s,mb5.2						
QUA2				PcP	PcP	23 21 03.7	+6.9
QUA2				S	S	23 22 15.2	-5.0
FFD	Franklin Falls	27.64	314⇑	eP	P	23 17 40.1	+0.3
	comp=Z,53nm,1.0s,mb5.1						
FFD				ePcP	PcP	23 20 56.4	-0.6
MASC	Masc	27.88	263	eP	P	23 17 43.2	+1.0
	baz=80						
MASC				e			
	comp=E,14nm,17.3s						
CPNY	Central Park	28.07	308⇑	eP	P	23 17 44.0	+0.3
CPNY				ePcP	PcP	23 20 56.4	-1.7
HNH	Hanover	28.15	314	eP	P	23 17 45.7	+1.3
LBNH	Lisbon	28.18	316	eP	P	23 17 45.3	+0.6
	comp=E,418nm,2.0s,mb5.7						
LBNH				LR	LR		
	comp=Z,21µm,21.0s,MS5.7						
LBNH	Lisbon	28.18	316	eP	P	23 17 45.3	+0.6
LBNH				pmax	pmax		
	comp=Z,418nm,2.0s,mb5.7						
LBNH				MLR	MLR		
	comp=Z,21µm,21.0s,MS5.7						
BRNJ	Basking Ridge	28.46	307	eP	P	23 17 46.4	-0.8
BRNJ				ePcP	PcP	23 20 59.4	+0.4
ACCN	Adirondack Com	28.90	313	eP	P	23 17 52.7	+1.7
NCB	Newcomb	29.52	314	eP	P	23 17 57.3	+0.7
	comp=Z,438nm,2.3s,mb5.8						
NCB				LR	LR		
	comp=Z,25µm,21.0s,MS5.8						
CNNC	Cliffs of the	29.71	295	PFAKE		23 18 10.0	+12
CNNC				LR	LR		
	comp=Z,26µm,20.0s,MS5.9						
SDMD	Soldier's Deli	29.73	304	eP	P	23 17 59.4	+1.0
URVA	University of	29.82	300⇑	eP	P	23 17 59.9	+0.6
CBN	Corbin	29.83	301⇑	eP	P	23 18 00.2	+0.8
CBN				LR	LR		
	comp=Z,19µm,21.0s,MS5.7						
BINY	Binghamton	30.00	309	eP	P	23 18 01.4	+0.7
BINY				LR	LR		
	comp=Z,23µm,22.0s,MS5.8						
LONY	Lake Ozonia	30.04	315	eP	P	23 18 01.7	+0.6
	comp=Z,240nm,2.0s,mb5.6						
SDV	Santo Domingo	30.29	239	eP	P	23 18 04.1	+0.5
SDV				LR	LR		
	comp=Z,4µm,22.0s,MS5.0						
MSNY	Massena	30.39	315	eP	P	23 18 04.9	+0.6
MSNY				ePcP	PcP	23 21 04.1	+0.2
CCCC	Cccc	30.72	267	eP	P	23 18 00.6	-6.8
SSPA	Standing Stone	30.84	305	eP	P	23 18 10.9	+2.6
SSPA				LR	LR		
	comp=Z,19µm,20.0s,MS5.8						
NHSC	New Hope	31.41	291	PFAKE		23 18 30.0	+17
NHSC				LR	LR		
	comp=Z,22µm,20.0s,MS5.8						
PFVI	Vila Bisbo	32.00	62	eP	P	23 18 20.2	+1.7
	comp=Z,90nm,1.5s,mb5.4						
BLA	Blacksburg	32.02	298	eP	P	23 18 19.4	+0.8
	comp=Z,118nm,1.3s,mb5.6						
BLA				PP	PP	23 19 35.6	+4.7
BLA				ePcP	PcP	23 21 09.5	+1.1
BLA	Blacksburg	32.02	298	eP	P	23 18 19.4	+0.7
BLA						23 19 35.7	
BLA				e		23 21 09.5	
BLA				pmax	pmax		
	comp=Z,118nm,1.3s,mb5.6						
MCWV	Mont Chateau	32.04	303	eP	P	23 18 21.1	+2.2
MCWV				LR	LR		
	comp=Z,22µm,21.0s,MS5.8						
PTEO	Sao Teotonio	32.15	61	eP	P	23 18 17.2	-2.6
	comp=Z,90nm,1.6s,mb5.3						
MORF	Marmelete	32.16	62	eP	P	23 18 20.3	+0.3
	comp=Z,87nm,1.6s,mb5.3						
JSC	Jenkinsville	32.38	293	P	P	23 18 21.8	-0.1
JSC	Jenkinsville	32.38	293	P	P	23 18 23.5	+1.7
SCHQ	Schefferville	32.57	336	P	P	23 18 22.3	-0.9
SCHQ				PcP	PcP	23 21 08.0	-1.6
SCHQ				LR	LR	23 30 18.0	
SCHQ	Schefferville	32.57	336	P	P	23 18 22.3	-0.9
	comp=Z,8.7nm,0.8s,mb4.7,baz=128,slow=7.7,SNR=12						
SCHQ				PcP	PcP	23 21 08.0	-1.6
	comp=Z,3.3nm,1.0s,baz=175,slow=7.1,SNR=4.3						
SCHQ				LR	LR	23 30 18.0	
	comp=Z,6µm,19.3s,MS5.3,baz=149,slow=34						
DWPF	Disney	32.65	281	PFAKE		23 18 40.0	+16
DWPF				LR	LR		
	comp=Z,25µm,22.0s,MS5.9						
PBDV	Barranco-do-Ve	32.72	62	eP	P	23 18 26.1	+1.2
	comp=Z,111nm,1.3s,mb5.6						
ALLY	Alegheny Colle	32.76	306	eP	P	23 18 26.9	+1.7
ERPA	Erie	32.78	307	eP	P	23 18 28.4	+3.0
ERPA				LR	LR		
	comp=Z,22µm,21.0s,MS5.8						
EVO	Evora	32.87	60	eP	P	23 18 26.8	+0.7
PVAQ	Vaqueiros	32.91	62	eP	P	23 18 27.5	+1.0
	comp=Z,98nm,1.6s,mb5.5						
PTO	Porto	32.99	55	eP	P	23 18 27.6	+0.5
	comp=Z,151nm,1.5s,mb5.7						
PESTR	Estremoz	33.25	59	eP	P	23 18 30.2	+0.7
	comp=Z,49nm,1.5s,mb5.2						
RCBR	Riachuelo	33.31	164	eP	P	23 18 30.6	+0.5
RCBR				ePP	PP	23 19 44.3	-1.3
RCBR				PcP	PcP	23 21 11.3	-1.0
RCBR				LR	LR		
	comp=Z,11µm,19.0s,MS5.6						
PVIS	Viseu	33.40	56	eP	P	23 18 31.5	+0.7
	comp=Z,84nm,1.2s,mb5.5						
PCBR	Castelo Branco	33.52	57	eP	P	23 18 32.7	+0.9
	comp=Z,60nm,1.3s,mb5.4						
PBAR	Barrancos	33.56	60	eP	P	23 18 33.4	+1.2
	comp=Z,52nm,1.6s,mb5.2						
MTE	Manteigas	33.59	56	eP	P	23 18 35.2	+2.8
	comp=Z,155nm,1.4s,mb5.7						
MTE	Manteigas	33.59	56	eP	P	23 18 34.8	+2.4
	comp=Z,135nm,1.4s,mb5.7						
PVRL	Vila Real	33.67	55	eP	P	23 18 32.8	-0.3
	comp=Z,144nm,1.6s,mb5.7						
GOGA	Godfrey	34.17	291	eP	P	23 18 38.5	+1.0
GOGA				LR	LR		
	comp=Z,21µm,21.0s,MS5.8						
TZTN	Tazewell	34.42	296	eP	P	23 18 41.7	+2.1
	comp=Z,312nm,2.3s,mb5.8						
TZTN				LR	LR		
	comp=Z,22µm,20.0s,MS5.9						
ACSO	Alum Creek Sta	34.52	303	eP	P	23 18 41.0	+0.6
	comp=Z,173nm,1.5s,mb5.8						
TKL	Tuckaleechee C	34.53	295	P	P	23 18 39.5	-1.1
	comp=Z,24nm,0.9s,mb5.1,baz=98,slow=10,SNR=12						
SOR	Soroa	34.99	272	eP	P	23 18 40.2	-4.6
CPCT	Cooper Cave	35.12	294	eP	P	23 18 48.0	+2.3
MDT	Midelt	35.15	70	P	P	23 18 45.8	-0.2
	comp=Z,4.7nm,0.9s,mb4.4,baz=291,slow=7.7,SNR=8.2						
MDT				PcP	PcP	23 21 17.9	+0.6
	comp=Z,2.7nm,0.9s,baz=278,slow=2.6,SNR=5.3						
AAM	Ann Arbor	35.46	306	eP	P	23 18 51.7	+3.2
	comp=Z,120nm,1.4s,mb5.6						
AAM	Ann Arbor	35.46	306	eP	P	23 18 51.7	+3.1
AAM				pmax	pmax		
	comp=Z,120nm,1.4s,mb5.6						
ROSC	El Rosal	35.67	238	P	P	23 18 50.9	+0.3
	comp=Z,2.9nm,0.4s,mb4.6,baz=111,slow=23,SNR=4.9						
ROSC				LR	LR	23 32 35.6	
	comp=Z,7µm,19.4s,MS5.4,baz=22,slow=35						
PAB	San Pablo	35.85	59	PFAKE		23 19 00.0	+8.1
PAB				LR	LR		
	comp=Z,10µm,22.0s,MS5.6						
ESDC	Sonseca Array	36.16	58	P	P	23 18 55.1	+0.5
	comp=Z,4.5nm,1.0s,mb4.4,baz=257,slow=8.0,SNR=15						
ESDC				LR	LR	23 30 03.6	
	comp=Z,8µm,20.7s,MS5.5,baz=255,slow=30						
ESLA	Sonseca Array	36.16	58	eP	P	23 18 54.1	-0.5
	comp=Z,12nm,1.5s,mb4.6						
ESLA				ePP	PP	23 20 14.0	-2.8
ESLA				LR	LR		
	comp=Z,66µm,22.0s,MS6.4						
SWET	Sewanee	36.26	294	eP	P	23 18 58.5	+3.0
WCI	Wyandotte Cave	36.76	299	eP	P	23 19 00.7	+1.0
WCI				LR	LR		
	comp=Z,12µm,21.0s,MS5.7						
GLMI	Grayling	36.78	310	PFAKE		23 19 10.0	+10
GLMI				LR	LR		
	comp=Z,22µm,21.0s,MS5.9						
BLO	Bloomington	37.05	300	eP	P	23 19 02.9	+0.7
LRAL	Lakeview Retre	37.14	290	eP	P	23 19 04.5	+1.5
	comp=Z,397nm,2.7s,mb5.8						
LRAL				LR	LR		
	comp=Z,28µm,20.0s,MS6.1						
BRAL	Brewton	37.28	287	PFAKE		23 19 20.0	+16
BRAL				LR	LR		
	comp=Z,16µm,20.0s,MS5.8						
BCIP	Isla Barro Col	37.55	249	PFAKE		23 19 20.0	+13
BCIP				LR	LR		
	comp=Z,5µm,19.0s,MS5.3						
USIN	University of	37.82	298	eP	P	23 19 11.8	+3.1
	comp=Z,136nm,1.5s,mb5.5						
WVT	Waverly	37.84	295	PFAKE		23 19 20.0	+11
WVT				LR	LR		
	comp=Z,8.0nm,22.0s						
PLAL	Pickwick Lake	38.02	294	eP	P	23 19 10.7	+0.3
PLAL				LR	LR		
	comp=Z,24µm,22.0s,MS6.0						
CRQ2	Rosemanowes 2	38.23	41	eP	P	23 19 12.8	+0.8
DCN	Croghan	38.45	36	eP	P	23 19 11.0	-2.8
QUIF	Quistinic	38.66	45	eP	P	23 19 15.7	0.0
ROSF	Rostrenen	38.73	45	eP	P	23 19 17.2	+1.0
	comp=Z,296nm,1.7s,mb5.4						
ROSF	Rostrenen	38.73	45	eP	P	23 19 17.2	+1.0
	comp=Z,148nm,1.7s,mb5.4						
ROSF	Rostrenen	38.73	45	eP	P	23 19 17.2	+1.0
ROSF				pmax	pmax		
	comp=Z,148nm,1.7s,mb5.4						
SJPF	Ste Jean	38.77	53	eP	P	23 19 16.9	+0.2
	comp=Z,322nm,1.7s,mb5.5						
SJPF	Ste Jean	38.77	53	eP	P	23 19 16.9	+0.2
	comp=Z,161nm,1.7s,mb5.5						
SJPF	Ste Jean	38.77	53	eP	P	23 19 16.9	+0.2
SJPF				pmax	pmax		
	comp=Z,161nm,1.7s,mb5.5						
DLF	Lyons Farm	38.82	36	eP	P	23 19 12.7	-4.2
SIUC	Southern Illin	39.03	298	eP	P	23 19 21.6	+2.7
	comp=Z,106nm,1.4s,mb5.4						
HALT	Halls	39.06	295	eP	P	23 19 20.8	+1.6
HALT				ePP	PP	23 20 44.0	-4.7
DYA	Yadsworthy	39.06	41	eP	P	23 19 19.4	+0.3
OXF	Oxford	39.12	293	PFAKE		23 19 30.0	+10
OXF				LR	LR		
	comp=Z,17µm,22.0s,MS5.8						
OXF	Oxford	39.12	293	eP	P	23 19 20.3	+0.6
OXF				pmax	pmax		
	comp=Z,96nm,1.0s,mb5.5						
SGMF	Saint Gilles	39.16	45	eP	P	23 19 19.9	+0.1
	comp=Z,389nm,1.4s,mb5.6						
SGMF	Saint Gilles	39.16	45	eP	P	23 19 19.9	+0.1
	comp=Z,194nm,1.4s,mb5.6						
SGMF	Saint Gilles	39.16	45	eP	P	23 19 19.9	+0.1
SGMF				pmax	pmax		
	comp=Z,194nm,1.4s,mb5.6						
ETSF	Etsaut	39.22	54	eP	P	23 19 20.8	+0.4
	comp=Z,243nm,1.7s,mb5.3						
ETSF	Etsaut	39.22	54	eP	P	23 19 20.8	+0.4
	comp=Z,121nm,1.7s,mb5.3						
ETSF	Etsaut	39.22	54	eP	P	23 19 20.8	+0.4
ETSF				pmax	pmax		
	comp=Z,121nm,1.7s,mb5.3						
HDIL	Hopedale	39.33	302	PFAKE		23 19 30.0	+8.6
HDIL				LR	LR		
	comp=Z,14µm,20.0s,MS5.8						
MET	Memphis--Engin	39.54	294	eP	P	23 19 23.2	0.0
EANR	'Ain N'Sour	39.87	65	P	P	23 19 27.0	+1.0
SLM	Saint Louis	39.88	299	eP	P	23 19 26.9	+0.8
	comp=Z,65nm,0.9s,mb5.4						
SLM	Saint Louis	39.88	299	eP	P	23 19 26.9	+0.9
SLM				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.4						
EPF	Esparros	39.89	54	eP	P	23 19 26.3	+0.3
	comp=Z,174nm,1.7s,mb5.2						
EPF	Esparros	39.89	54	eP	P	23 19 26.3	+0.3
	comp=Z,87nm,1.7s,mb5.2						
EPF	Esparros	39.89	54	eP	P	23 19 26.3	+0.3
EPF				pmax	pmax		
	comp=Z,87nm,1.7s,mb5.2						
FVM	French Village	39.99	298	eP	P	23 19 27.4	+0.4
	comp=Z,333nm,2.5s,mb5.6						
FVM	French Village	39.99	298	eP	P	23 19 27.4	+0.4
FVM				pmax	pmax		
	comp=Z,333nm,2.5s,mb5.6						
ETRT	Tiaret	40.04	66	P	P	23 19 29.5	+2.1
HBAR	Harrisburg	40.13	294	P	P	23 19 23.2	-4.9
COWI	Conover	40.18	311	PFAKE		23 19 40.0	+12
COWI				LR	LR		
	comp=Z,19µm,22.0s,MS5.9						
EBNR	Beni Rached	40.23	64	P	P	23 19 31.0	+2.1
GRR	Gorron	40.28	45	eP	P	23 19 29.1	-0.1
	comp=Z,206nm,1.3s,mb5.4						
GRR	Gorron	40.28	45	eP	P	23 19 29.1	-0.1
	comp=Z,103nm,1.3s,mb5.4						
GRR	Gorron	40.28	45	eP	P	23 19 29.1	-0.1
GRR				pmax	pmax		
	comp=Z,103nm,1.3s,mb5.4						
JFWS	Jewell Farm	40.35	306	PFAKE		23 19 40.0	+10
JFWS				LR	LR		
	comp=Z,18µm,21.0s,MS5.9						
TEIG	Tepich	40.41	270	P	P	23 19 29.2	-1.4
	comp=Z,288nm,2.0s,mb5.7						
TEIG				LR	LR		
	comp=Z,14µm,22.0s,MS5.8						
TEIG	Tepich	40.41	270	P	P	23 19 29.9	-0.7
	comp=Z,22nm,0.9s,mb4.9,baz=49,slow=9.3,SNR=4.4						
SALF	Salau	40.46	54	eP	P	23 19 31.6	+0.8
LFF	La Frestale	40.51	51	eP	P	23 19 30.9	-0.3
	comp=Z,291nm,1.4s,mb5.4						
LFF	La Frestale	40.51	51	eP	P	23 19 30.9	-0.3
	comp=Z,146nm,1.4s,mb5.4						
LFF	La Frestale	40.51	51	eP	P	23 19 30.9	-0.3
LFF				pmax	pmax		
	comp=Z,146nm,1.4s,mb5.4						
SFJD	Kangerlussuaq	40.59	356	P	P	23 19 30.0	-1.5
	comp=Z,4.6nm,0.9s,baz=134,slow=14,SNR=2.7						
SFJD				LR	LR	23 32 55.0	
	comp=Z,6µm,21.5s,MS5.4,baz=159,slow=31						
FLN	La Foliniere	40.62	45	eP	P	23 19 31.9	-0.1
	comp=Z,70nm,1.1s,mb4.9						
FLN				eMLR	MLR		
	comp=Z,14µm,20.5s,MS5.5						
FLN	La Foliniere	40.62	45	eP	P	23 19 31.9	-0.1
	comp=Z,35nm,1.1s,mb4.9						
FLN				LR	LR		
	comp=Z,14µm,20.5s,MS5.8						
FLN	La Foliniere	40.62	45	eP	P	23 19 31.9	-0.1
FLN				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.9						
FLN				MLR	MLR		
	comp=Z,14µm,20.5s,MS5.8						
LDF	La Druitiere	40.80	45	eP	P	23 19 33.2	-0.3
	comp=Z,116nm,1.2s,mb5.1						
LDF	La Druitiere	40.80	45	eP	P	23 19 33.2	-0.3
	comp=Z,58nm,1.2s,mb5.1						
LDF	La Druitiere	40.80	45	eP	P	23 19 33.2	-0.3
LDF				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.1						
KAR1	Arisaig	40.97	32	eP	P	23 19 34.4	-0.3
BORG	Borgarnes	40.98	15	PFAKE		23 19 50.0	+15
BORG				LR	LR		
	comp=Z,6µm,20.0s,MS5.4						
RJF	Les Rejaudoux	41.12	51	eP	P	23 19 35.8	-0.4
	comp=Z,196nm,1.6s,mb5.2						
RJF				eMLR	MLR		
	comp=Z,16µm,22.2s,MS5.5						
RJF	Les Rejaudoux	41.12	51	eP	P	23 19 35.8	-0.4
	comp=Z,98nm,1.6s,mb5.2						
RJF				LR	LR		
	comp=Z,16µm,22.3s,MS5.8						
RJF	Les Rejaudoux	41.12	51	eP	P	23 19 35.8	-0.4
RJF				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.2						
RJF				MLR	MLR		
	comp=Z,16µm,22.3s,MS5.8						
MTLF	Montolieu	41.29	54	eP	P	23 19 37.2	-0.4
	comp=Z,72nm,1.2s,mb4.9						
MTLF	Montolieu	41.29	54	eP	P	23 19 37.2	-0.4
	comp=Z,36nm,1.2s,mb4.9						
MTLF	Montolieu	41.29	54	eP	P	23 19 37.2	-0.4
MTLF				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.9						
JTS	JuntasAbangare	41.34	255	PFAKE		23 19 50.0	+12
JTS				LR	LR		
	comp=Z,5µm,20.0s,MS5.3						
EMHD	Djebel Mahouad	41.38	65	P	P	23 19 31.5	-6.9
CAF	Calviac	41.44	51	eP	P	23 19 38.4	-0.4
	comp=Z,208nm,1.6s,mb5.2						
CAF	Calviac	41.44	51	eP	P	23 19 38.4	-0.4
	comp=Z,104nm,1.6s,mb5.2						
CAF	Calviac	41.44	51	eP	P	23 19 38.4	-0.4
CAF				pmax	pmax		
	comp=Z,104nm,1.6s,mb5.2						
FILF	Fillols	41.44	55	eP	P	23 19 38.3	-0.5
ABA	Alger-Bouzarea	41.44	64	P	P	23 19 37.0	-1.9
CWF	Charnwood Fore	41.45	39	eP	P	23 19 38.1	-0.7
CWF				AMb	AMB	23 19 40.0	
	comp=Z,111nm,1.5s,mb5.3						
ESK	Eskdalemuir	41.48	35	eP	P	23 19 38.9	-0.1
ESK				AMb	AMB	23 19 40.7	
	comp=Z,135nm,1.7s,mb5.3						
ESK	Eskdalemuir	41.48	35	eP	P	23 19 39.2	+0.2
ESK				MLR	MLR		
	comp=Z,16µm,19.0s,MS5.9						
UALR	University of	41.53	293	eP	P	23 19 38.9	-0.8
	comp=Z,135nm,1.3s,mb5.4						
SJAF	Saint Jean de	41.67	55	eP	P	23 19 39.8	-0.9
TGUH	Tegucigalpa,Un	41.71	261	eP	P	23 19 45.5	+4.2
HPK	Haverah Park	41.74	37	eP	P	23 19 41.5	+0.3
ADJB	Djebel Djouab	41.77	65	P	P	23 19 41.5	-0.1
TCF	Toulx Ste Croi	41.79	49	eP	P	23 19 41.6	-0.1
	comp=Z,151nm,1.5s,mb5.1						
TCF	Toulx Ste Croi	41.79	49	eP	P	23 19 41.6	-0.1
	comp=Z,76nm,1.5s,mb5.1						
TCF	Toulx Ste Croi	41.79	49	eP	P	23 19 41.6	-0.1
TCF				pmax	pmax		
	comp=Z,76nm,1.5s,mb5.1						
EYMN	Ely	42.17	313	P	P	23 19 43.6	-1.1
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
PYM	Petit Puy Mans	42.24	50	eP	P	23 19 46.5	+1.2
BGF	Bois d'Agland	42.28	49	eP	P	23 19 45.5	-0.1
HYF	Humbligny	42.28	48	eP	P	23 19 45.7	+0.1
LBL	Lubilhac	42.31	51	eP	P	23 19 46.5	+0.6
AGO	Saint Agoulin	42.38	50	eP	P	23 19 47.2	+0.8
MIAR	Mount Ida	42.55	293	eP	P	23 19 48.3	+0.3
MIAR				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
TIC	Toumodi	42.56	111	eP	P	23 19 46.6	-1.8
	comp=Z,1µm,2.4s,mb6.3						
LASF	Ste Croix	42.57	53	eP	P	23 19 48.3	+0.2
	comp=Z,118nm,1.4s,mb5.1						
AVF	Avril sur Loir	42.66	49	eP	P	23 19 48.5	-0.3
	comp=Z,122nm,1.4s,mb5.2						
AVF	Avril sur Loir	42.66	49	eP	P	23 19 48.5	-0.3
	comp=Z,61nm,1.4s,mb5.1						
AVF	Avril sur Loir	42.66	49	eP	P	23 19 48.5	-0.3
AVF				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.1						
PLDF	La Plantade	42.70	50	eP	P	23 19 49.7	+0.7
MENF	Mencas	42.77	43	eP	P	23 19 49.6	0.0
LIC	Lamto	42.78	111⇑	iP	P	23 19 49.9	-0.2
	comp=Z,489nm,1.7s,mb5.7						
LIC				eMLR	MLR		
	comp=Z,37µm,22.8s,MS5.9						
LIC	Lamto	42.78	111	eP	P	23 19 48.7	-1.4
	comp=Z,347nm,1.7s,mb5.8						
LIC	Lamto	42.78	111⇑	iP	P	23 19 49.9	-0.2
	comp=Z,244nm,1.7s,mb5.7						
LIC				LR	LR		
	comp=Z,18µm,22.8s,MS5.9						
SSF	Saint Saulge	42.82	49	eP	P	23 19 49.7	-0.3
	comp=Z,126nm,1.3s,mb5.2						
SSF	Saint Saulge	42.82	49	eP	P	23 19 49.7	-0.3
	comp=Z,63nm,1.3s,mb5.2						
SSF	Saint Saulge	42.82	49	eP	P	23 19 49.7	-0.3
SSF				pmax	pmax		
	comp=Z,63nm,1.3s,mb5.2						
KIC	Kosan Boka	42.95	111	eP	P	23 19 50.3	-1.2
	comp=Z,807nm,1.7s,mb6.2						
SMF	Signal de Mont	42.97	49	eP	P	23 19 51.2	0.0
	comp=Z,196nm,1.4s,mb5.4						
SMF	Signal de Mont	42.97	49	eP	P	23 19 51.2	0.0
	comp=Z,98nm,1.4s,mb5.3						
SMF	Signal de Mont	42.97	49	eP	P	23 19 51.2	0.0
SMF				pmax	pmax		
	comp=Z,98nm,1.4s,mb5.3						
LOR	Lormes	43.09	48	eP	P	23 19 52.0	-0.3
	comp=Z,175nm,1.6s,mb5.2						
LOR				eMLR	MLR		

comp=Z,4µm,18.2s,MS5.1
LOR Lormes 43.09 48 *e*P **P 23 19 52.0 -0.3**
comp=Z,87nm,1.6s,mb5.2
LOR LR LR
comp=Z,4µm,18.3s,MS5.4
LOR Lormes 43.09 48 *e*P **P 23 19 52.0 -0.3**
LOR pmax pmax
comp=Z,87nm,1.6s,mb5.2
LOR MLR MLR
comp=Z,4µm,18.3s,MS5.4
VIVF Saint-Julien-l 43.26 52 *e*P **P 23 19 54.1 +0.5**
comp=Z,77nm,1.4s,mb4.9
VIVF Saint-Julien-l 43.26 52 *e*P **P 23 19 54.1 +0.5**
comp=Z,39nm,1.4s,mb4.9
VIVF Saint-Julien-l 43.26 52 *e*P **P 23 19 54.1 +0.5**
VIVF pmax pmax
comp=Z,39nm,1.4s,mb4.9
SET Setif 43.35 65 P **P 23 19 56.0 +1.5**
CKHR Kef el Ahmar 43.45 65 P **P 23 19 56.0 +0.7**
NATX Nacogdoches 43.69 289 *e*P **P 23 20 01.0 +3.7**
NATX LR LR
comp=Z,17µm,20.0s,MS6.0
DFRA Djebel Bou Aff 43.73 64 P **P 23 19 58.0 +0.5**
CMER Merouana 43.78 65 P **P 23 20 01.0 +3.0**
SMRF Simiane la Rot 43.79 53 *e*P **P 23 19 58.8 +0.9**
comp=Z,177nm,1.9s,mb5.2
SMRF Simiane la Rot 43.79 53 *e*P **P 23 19 58.8 +0.9**
comp=Z,177nm,1.9s,mb5.5
BAIF Baives 43.92 44 *e*P **P 23 19 58.5 -0.4**
comp=Z,84nm,1.2s,mb5.0
BAIF Baives 43.92 44 *e*P **P 23 19 58.5 -0.4**
comp=Z,42nm,1.2s,mb5.0
BAIF Baives 43.92 44 *e*P **P 23 19 58.5 -0.4**
BAIF pmax pmax
comp=Z,42nm,1.2s,mb5.0
STOF St-Étienne Org 44.03 53 *e*P **P 23 20 01.3 +1.4**
GRN Grenoble 44.06 51 *e*P **P 23 20 02.4 +2.3**
SNF Seneffe 44.07 44 P **P 23 20 00.6 +0.5**
TAVF Tavernes 44.10 54 *e*P **P 23 20 01.8 +1.4**
ORIF Oris-en-Rattie 44.12 52 *e*P **P 23 20 02.0 +1.5**
comp=Z,184nm,1.9s,mb5.2
ORIF *e*MLR MLR
comp=Z,18µm,21.8s,MS5.6
ORIF Oris-en-Rattie 44.12 52 *e*P **P 23 20 02.0 +1.5**
comp=Z,92nm,1.9s,mb5.2
ORIF Oris-en-Rattie 44.12 52 *e*P **P 23 20 02.0 +1.5**
ORIF pmax pmax
comp=Z,92nm,1.9s,mb5.2
MEZF Maizieres J'vi 44.12 47 *e*P **P 23 20 00.3 -0.2**
comp=Z,123nm,1.0s,mb5.3
MEZF Maizieres J'vi 44.12 47 *e*P **P 23 20 00.3 -0.2**
comp=Z,123nm,1.0s,mb5.6
DOU Dourbes 44.17 44 P **P 23 20 01.7 +0.9**
CASM Ain Smara 44.23 64 P **P 23 20 01.0 -0.6**
GIVF Givet 44.31 44 *e*P **P 23 20 01.5 -0.5**
comp=Z,117nm,1.3s,mb5.2
GIVF Givet 44.31 44 *e*P **P 23 20 01.5 -0.5**
comp=Z,59nm,1.3s,mb5.2
GIVF Givet 44.31 44 *e*P **P 23 20 01.5 -0.5**
GIVF pmax pmax
comp=Z,59nm,1.3s,mb5.2
GDM Grand'Maison 44.32 52 *e*P **P 23 20 04.2 +2.1**
LMR La Mourre 44.40 54 *e*P **P 23 20 03.0 +0.2**
comp=Z,143nm,1.6s,mb5.2
LMR La Mourre 44.40 54 *e*P **P 23 20 03.0 +0.2**
comp=Z,72nm,1.6s,mb5.2
LMR La Mourre 44.40 54 *e*P **P 23 20 03.0 +0.2**
LMR pmax pmax
comp=Z,72nm,1.6s,mb5.2
CKFL Kef-Lekhel 44.41 64 P **P 23 20 03.0 0.0**
CABF La Chapelle 44.49 50 *e*P **P 23 20 03.9 +0.4**
comp=Z,66nm,1.5s,mb5.2
CABF La Chapelle 44.49 50 *e*P **P 23 20 03.9 +0.4**
comp=Z,83nm,1.5s,mb5.2
CABF La Chapelle 44.49 50 *e*P **P 23 20 03.9 +0.4**
CABF pmax pmax
comp=Z,83nm,1.5s,mb5.2
CAEH 'Ain El Ouahch 44.50 64 P **P 23 20 05.0 +1.3**
FRF La Foret Royal 44.52 54 *e*P **P 23 20 04.0 +0.2**
comp=Z,102nm,1.4s,mb5.2
FRF La Foret Royal 44.52 54 *e*P **P 23 20 04.0 +0.2**
comp=Z,51nm,1.4s,mb5.2
FRF La Foret Royal 44.52 54 *e*P **P 23 20 04.0 +0.2**
FRF pmax pmax
comp=Z,51nm,1.4s,mb5.2
THEF They Montfort 44.68 47 *e*P **P 23 20 05.5 +0.5**
BCLA Clavier 44.69 44 P **P 23 20 05.3 +0.3**
BNI Bardonecchia 44.69 52 *e*P **P 23 20 05.7 +0.5**
comp=Z,81nm,1.4s,mb5.4
BNI *e*PcP PcP 23 21 47.0 -0.5
BNI Bardonecchia 44.69 52 *e*P **P 23 20 05.7 +0.6**
BNI *e* 23 21 47.0
BNI pmax pmax
comp=Z,81nm,1.4s,mb5.4
MBDF Montbardon 44.72 52 *e*P **P 23 20 06.5 +1.1**
comp=Z,141nm,1.4s,mb5.3
MBDF Montbardon 44.72 52 *e*P **P 23 20 06.5 +1.1**
comp=Z,71nm,1.4s,mb5.3
MBDF Montbardon 44.72 52 *e*P **P 23 20 06.5 +1.1**
MBDF pmax pmax
comp=Z,71nm,1.4s,mb5.3
LPL La Plagne 44.78 51 *e*P **P 23 20 06.9 +1.0**
comp=Z,59nm,1.2s,mb5.0
LPL La Plagne 44.78 51 *e*P **P 23 20 06.9 +1.0**
comp=Z,30nm,1.2s,mb5.0
LPL La Plagne 44.78 51 *e*P **P 23 20 06.9 +1.0**
LPL pmax pmax
comp=Z,30nm,1.2s,mb5.0
LPG La Plagne 44.80 51 *e*P **P 23 20 07.2 +1.2**
comp=Z,216nm,1.9s,mb5.3
LPG La Plagne 44.80 51 *e*P **P 23 20 07.2 +1.2**
comp=Z,108nm,1.9s,mb5.3
LPG La Plagne 44.80 51 *e*P **P 23 20 07.2 +1.2**
LPG pmax pmax
comp=Z,108nm,1.9s,mb5.3
KSU1 Kansas State U 44.87 300 *e*P **P 23 20 06.5 -0.1**
comp=Z,403nm,2.3s,mb5.8
KSU1 LR LR
comp=Z,19µm,21.0s,MS6.0
HAU Haudompre 44.88 48 *e*P **P 23 20 06.2 -0.4**
comp=Z,146nm,1.4s,mb5.3
HAU *e*MLR MLR
comp=Z,5µm,21.8s,MS5.1
HAU Haudompre 44.88 48 *e*P **P 23 20 06.2 -0.4**
comp=Z,73nm,1.4s,mb5.3
HAU LR LR
comp=Z,5µm,21.8s,MS5.4
HAU Haudompre 44.88 48 *e*P **P 23 20 06.2 -0.4**
HAU pmax pmax
comp=Z,73nm,1.4s,mb5.3
HAU MLR MLR
comp=Z,5µm,21.8s,MS5.4
HKT Hockley 44.93 287 PFAKE 23 20 20.0 +13
HKT LR LR
comp=Z,11µm,20.0s,MS5.8
PZZ Prazzo 44.94 53 P **P 23 20 09.5 +2.4**
CMAH Djebel Manchou 44.97 64 P **P 23 20 08.0 +0.6**
BEBN Eben Emael 45.00 44 P **P 23 20 08.6 +1.0**
ABSA Djebel Ababsia 45.03 64 P **P 23 20 08.0 0.0**
DOI San Damiano 45.04 53 P **P 23 20 09.3 +1.4**
comp=Z,210nm,1.5s,mb5.8
DOI San Damiano 45.04 53 P **P 23 20 09.3 +1.4**
DOI pmax pmax
comp=Z,210nm,1.5s,mb5.8
ECSD EROS,Sioux Fal 45.06 306 *e*P **P 23 20 07.9 -0.2**
WLF Walferdange 45.06 45 *e*P **P 23 20 08.2 +0.2**
comp=Z,223nm,2.0s,mb5.7
WLF Walferdange 45.06 45 *e*P **P 23 20 08.3 +0.3**
WLF pmax pmax
comp=Z,223nm,2.0s,mb5.7
WLF Walferdange 45.06 45 P **P 23 20 07.8 -0.2**
comp=Z,65nm,2.3s,mb5.0
WLF Walferdange 45.06 45 *e*P **P 23 20 08.0 0.0**
comp=Z,120nm,1.5s,mb5.5
LOMF Lomont 45.10 49 *e*P **P 23 20 08.7 +0.4**
AGMN Agassiz Refuge 45.11 313 *e*P **P 23 20 08.3 -0.1**
SBF Sospel 45.12 54 *e*P **P 23 20 08.8 +0.3**
comp=Z,134nm,1.2s,mb5.3
SBF Sospel 45.12 54 *e*P **P 23 20 08.8 +0.3**
comp=Z,67nm,1.2s,mb5.3
SBF Sospel 45.12 54 *e*P **P 23 20 08.8 +0.3**
SBF pmax pmax
comp=Z,67nm,1.2s,mb5.3
ASCN Ascension 45.16 135 PFAKE 23 20 20.0 +11
ASCN LR LR
comp=Z,10µm,20.0s,MS5.7

MEM Membach 45.17 44 P **P 23 20 08.8 -0.1**
comp=Z,22nm,1.2s,mb4.9
HINF Hinteralfeld 45.19 48 *e*P **P 23 20 08.5 -0.5**
comp=Z,115nm,1.5s,mb5.2
HINF Hinteralfeld 45.19 48 *e*P **P 23 20 08.5 -0.5**
comp=Z,58nm,1.5s,mb5.2
HINF Hinteralfeld 45.19 48 *e*P **P 23 20 08.5 -0.5**
HINF pmax pmax
comp=Z,57nm,1.5s,mb5.2
SIV San Ignacio 45.24 203 P **P 23 20 08.1 -1.7**
comp=Z,12nm,0.8s,mb4.8,baz=30,slow=7.9,SNR=44
SIV PcP PcP 23 21 48.5 -1.2
comp=Z,2.9nm,0.8s,baz=98,slow=4.3,SNR=5.6
TOA0 Torodi Ar. Sit 45.33 98 *e*P **P 23 20 09.5 -1.1**
TOA0 *e*PcP PcP 23 21 49.4 -0.8
TOA0 *e*PP PP 23 21 56.4 -0.2
TORD Torodi Ar. Bea 45.33 98 P **P 23 20 09.2 -1.4**
TORD PP PP 23 21 59.1 +2.5
TORD LR LR 23 38 37.1
TORD Torodi Ar. Bea 45.33 98 P **P 23 20 09.2 -1.4**
comp=Z,7.4nm,1.0s,mb4.5,baz=298,slow=5.7,SNR=21
TORD PP PP 23 21 59.1 +2.5
comp=Z,9.3nm,1.2s,baz=289,slow=7.0,SNR=3.9
TORD LR LR 23 38 37.2
comp=Z,27µm,18.4s,MS6.2,baz=295,slow=35
MOF Molkenrain 45.38 48 *e*P **P 23 20 10.7 +0.1**
ECH Echery 45.45 48 *e*P **P 23 20 10.7 -0.4**
ULM Lac du Bonnet 45.48 315 P **P 23 20 10.1 -1.3**
comp=Z,19nm,1.1s,mb4.8,baz=93,slow=7.6,SNR=16
ULM LR LR 23 36 48.5
comp=Z,7µm,21.9s,MS5.6,baz=102,slow=33
CDF Champ du Feu 45.56 47 *e*P **P 23 20 11.7 -0.3**
comp=Z,172nm,1.5s,mb5.5
CDF Champ du Feu 45.56 47 *e*P **P 23 20 11.7 -0.3**
comp=Z,86nm,1.5s,mb5.5
CDF Champ du Feu 45.56 47 *e*P **P 23 20 11.7 -0.3**
CDF pmax pmax
comp=Z,86nm,1.5s,mb5.5
BBS Basel-Blauen 45.57 49 *e*P **P 23 20 12.4 +0.3**
RUP Ruppelstein 45.65 45 *e*P **P 23 20 13.5 +0.9**
ORX Oropa 45.67 51 P **P 23 20 13.8 +0.9**
KIZ Kirchzarten 45.92 48 P **P 23 20 15.8 +1.0**
FELD Feldberg im Sc 45.96 48 *e*P **P 23 20 15.2 0.0**
ABH Alteburg 45.99 45 *e*P **P 23 20 15.9 +0.5**
LANF Langenberg 46.00 47 *e*P **P 23 20 15.9 +0.4**
BUG Bochum--Univer 46.12 43 P **P 23 20 15.9 -0.5**
BUG Bochum--Univer 46.12 43 *e*P **P 23 20 16.4 0.0**
comp=Z,88nm,1.6s,mb5.4
PGF Pioggiola 46.18 56 *e*P **P 23 20 17.8 +0.8**
comp=Z,138nm,1.2s,mb5.5
PGF Pioggiola 46.18 56 *e*P **P 23 20 17.8 +0.8**
comp=Z,69nm,1.2s,mb5.5
PGF Pioggiola 46.18 56 *e*P **P 23 20 17.8 +0.8**
PGF pmax pmax
comp=Z,69nm,1.2s,mb5.5
KTD Kalmit 46.24 46 *e*P **P 23 20 17.6 +0.3**
VAI Varese 46.24 51 *i* Pu **P 23 20 17.7 +0.3**
comp=Z,106nm,1.2s,mb5.7
VAI Varese 46.24 51 *i* P **P 23 20 17.7 +0.3**
VAI pmax pmax
comp=Z,106nm,1.2s,mb5.7
BFO Black Forest 46.24 48 *e*P **P 23 20 17.0 -0.4**
BFO pmax pmax
comp=Z,77nm,1.3s,mb5.5
BFO Black Forest 46.24 48 *e*P **P 23 20 17.0 -0.4**
comp=Z,77nm,1.3s,mb5.5
VSL Villasalto 46.43 60 *e*P **P 23 20 20.0 +1.0**
comp=Z,140nm,1.3s,mb5.7
SPAK Spaichingen-Ko 46.51 48 *e*P **P 23 20 20.0 +0.5**
KEST Kesra 46.58 65 P **P 23 20 21.0 +0.8**
comp=Z,14nm,1.0s,mb4.8,baz=199,slow=3.1,SNR=22
KEST LR LR 23 37 41.9
comp=Z,3µm,20.2s,MS5.2,baz=218,slow=33
LBG Lerchenberg 46.60 47 P **P 23 20 19.7 -0.5**
IBBN Ibbenburen 46.60 42 *e*P **P 23 20 20.1 -0.1**
comp=Z,82nm,1.3s,mb5.5
TNS Taunus Mts 46.62 45 *e*P **P 23 20 20.5 +0.2**
TNS pmax pmax
comp=Z,79nm,1.3s,mb5.5
TNS Taunus Mts 46.62 45 *e*P **P 23 20 20.5 +0.2**
comp=Z,79nm,1.3s,mb5.5
SWS Schriesheim-Wi 46.66 46 P **P 23 20 22.0 +1.4**
TUE Stuetta 46.70 50 P **P 23 20 22.2 +1.2**
GUT Gutenstein 46.73 48 P **P 23 20 22.6 +1.4**
TOD Tromm 46.75 46 *e*P **P 23 20 21.3 0.0**
WMOK Wichita Mounta 46.82 294 PFAKE 23 20 30.0 +7.9
WMOK LR LR
comp=Z,15µm,20.0s,MS5.9
WMOK Wichita Mounta 46.82 294 *e*P **P 23 20 22.2 +0.1**
STU Stuttgart 46.88 47 P **P 23 20 21.8 -0.5**
STU Stuttgart 46.88 47 *e*P **P 23 20 21.6 -0.7**
comp=Z,61nm,1.1s,mb5.4
FCC Fort Churchill 46.90 327 *e*P **P 23 20 22.0 -0.4**
comp=Z,233nm,1.8s,mb5.8
FCC Fort Churchill 46.90 327 *e*P **P 23 20 22.0 -0.4**
FCC pmax pmax
comp=Z,233nm,1.8s,mb5.8
BUCH Bad Urach 46.94 47 P **P 23 20 24.0 +1.2**
DAVOS Davos 47.05 50 P **P 23 20 24.4 +0.7**
DAVOX Davos/Dischmat 47.10 50 P **P 23 20 24.4 +0.3**
comp=Z,18nm,1.2s,mb4.9,baz=287,slow=8.8,SNR=8.9
KVTX Kingsville 47.13 284 PFAKE 23 20 40.0 +15
KVTX LR LR
comp=Z,11µm,21.0s,MS5.8
DAVA Damuels 47.15 49⇑ *i*P **P 23 20 25.1 +0.6**
comp=Z,113nm,1.6s,mb5.5,SNR=17
SIND Sindeldorf 47.23 46 P **P 23 20 24.9 -0.1**
CBKS Cedar Bluff 47.31 299 PFAKE 23 20 40.0 +14
CBKS LR LR
comp=Z,17µm,21.0s,MS6.0
BRMO Bormio 47.41 50 P **P 23 20 27.0 +0.5**
comp=Z,836nm,5.2s
HDH Heidenheim-Cha 47.52 47 P **P 23 20 28.6 +1.3**
UBBA Unterbreizbach 47.70 44 *e*P **P 23 20 28.6 -0.1**
comp=Z,49nm,1.5s,mb5.3
FETA Feichten 47.70 50⇑ *i*P **P 23 20 29.4 +0.6**
comp=Z,52nm,1.3s,mb5.4,SNR=12
RETA Reutte 47.77 49⇑ *i*P **P 23 20 29.6 +0.3**
comp=Z,66nm,1.5s,mb5.4,SNR=13
MOTA Moosalm 47.98 49⇓ *i*P **P 23 20 31.8 +0.8**
comp=Z,135nm,1.7s,mb5.7,SNR=8.9
MOTA Moosalm 47.98 49⇓ *i*pP pP 23 20 31.8 -2.4
comp=Z,135nm,1.7s,SNR=8.9
MOTA Moosalm 47.98 49⇓ *i*P **P 23 20 31.8 +0.8**
MOTA pmax pmax
comp=Z,135nm,1.7s,mb5.7
SQTA Sankt Quirin 48.05 49 *i* P **P 23 20 31.6 +0.2**
comp=Z,98nm,1.4s,mb5.6,SNR=9.1
SQTA Sankt Quirin 48.05 49 *i* P **P 23 20 31.6 +0.2**
comp=Z,98nm,1.4s,mb5.6
SQTA Sankt Quirin 48.05 49 *i* P **P 23 20 31.6 +0.2**
SQTA pmax pmax
comp=Z,98nm,1.4s,mb5.7
NRDL Niedersach Rie 48.05 42 *e*P **P 23 20 31.7 +0.3**
comp=Z,100nm,1.2s,mb5.7
CLZ Clausthal 48.10 43 *e*P **P 23 20 31.8 0.0**
CLZ pmax pmax
comp=Z,376nm,2.6s,mb6.0
CLZ Clausthal 48.10 43 *e*P **P 23 20 31.8 0.0**
comp=Z,376nm,2.6s,mb6.0
FUR Furstenfeldbru 48.18 48 *e*P **P 23 20 32.6 +0.1**
FUR pmax pmax
comp=Z,276nm,2.2s,mb5.9
FUR Furstenfeldbru 48.18 48 *e*P **P 23 20 32.6 +0.1**
comp=Z,276nm,2.2s,mb5.9
JCT Junction City 48.23 288 *e*P **P 23 20 33.1 -0.1**
comp=Z,227nm,1.9s,mb5.9
JCT Junction City 48.23 288 *e*P **P 23 20 33.1 -0.1**
JCT pmax pmax
comp=Z,227nm,1.9s,mb5.9
WATA Walderalm 48.30 49⇓ *i*P **P 23 20 33.4 0.0**
comp=Z,101nm,1.6s,mb5.6
WATA Walderalm 48.30 49⇓ *i*P **P 23 20 33.4 -0.1**
WATA pmax pmax
comp=Z,101nm,1.6s,mb5.6
GRFO Grafenberg 48.31 46 PFAKE 23 20 50.0 +17
GRFO LR LR
comp=Z,5µm,22.0s,MS5.4
GRA1 Grafenberg Arr 48.31 46 *e*P **P 23 20 33.3 -0.2**
comp=Z,137nm,1.6s,mb5.7
GRA1 *e*S **S 23 27 39.9 +6.5**
GRA1 LR LR
comp=Z,11µm,26.3s,MS5.7
GRF Grafenberg Arr 48.31 46 *e*P **P 23 20 33.3 -0.2**
GRF *e*S **S 23 27 39.9 +6.5**
GRF pmax pmax

comp=Z,137nm,1.6s,mb5.7
GRF MLR MLR
comp=Z,11µm,26.3s,MS5.7
GRF Grafenberg Arr 48.31 46 *e*P **P 23 20 33.3 -0.2**
GRF *e*S **S 23 27 39.9 +6.5**
GRF pmax pmax
comp=Z,137nm,1.6s,mb5.7
GRF MLR MLR
comp=Z,11µm,26.3s,MS5.7
GRF Grafenberg Arr 48.31 46 *e*P **P 23 20 33.3 -0.2**
comp=Z,137nm,1.6s,mb5.7
GRF *e*S **S 23 27 39.9 +6.5**
GRF *e*L 23 35 59.2
comp=Z,11µm,26.3s
WTTA Wattenberg 48.34 49⇑ *i*P **P 23 20 33.3 -0.4**
comp=Z,48nm,1.1s,mb5.4,SNR=12
WTTA Wattenberg 48.34 49⇑ *i*P **P 23 20 33.3 -0.4**
comp=Z,48nm,1.1s,mb5.4
WTTA Wattenberg 48.34 49⇑ *i*P **P 23 20 33.3 -0.4**
WTTA pmax pmax
comp=Z,48nm,1.1s,mb5.4
LPAZ La Paz 48.36 211 P **P 23 20 33.4 -0.8**
comp=Z,50nm,1.0s,mb5.5,baz=16,slow=8.4,SNR=49
LPAZ LR LR 23 40 46.0
comp=Z,6µm,19.2s,MS5.6,baz=21,slow=36
MUD Monsted U'grnd 48.40 37 *i* P **P 23 20 35.3 +1.3**
MUD *i* S **S 23 27 45.3 +11**
MUD pmax pmax
comp=Z,46nm,1.1s,mb5.4
MUD MLR MLR
comp=Z,6µm,21.0s,MS5.6
MUD Monsted U'grnd 48.40 37 *i* P **P 23 20 35.3 +1.3**
comp=Z,46nm,1.1s,mb5.4
MUD *i* 23 21 50.8
MUD *i* S **S 23 27 45.3 +11**
MUD
comp=Z,6µm,21.0s
BSEG Bad Segeberg 48.46 40 *e*P **P 23 20 34.5 0.0**
comp=Z,217nm,1.3s,mb6.0
MOX Moxa 48.69 45 *e*P **P 23 20 36.1 -0.3**
comp=Z,80nm,1.8s,mb5.5
MOX
comp=Z,7µm,23.0s
MOX Moxa 48.69 45 *e*P **P 23 20 36.1 -0.3**
MOX pmax pmax
comp=Z,80nm,1.8s,mb5.5
MOX MLR MLR
comp=Z,7µm,23.0s,MS5.6
JMIC Jan Mayen 48.88 15 LR LR 23 35 45.5
comp=Z,4µm,21.4s,MS5.3,baz=88,slow=29
ABTA Abfaltersbach 48.90 50⇑ *i*P **P 23 20 37.7 -0.4**
comp=Z,51nm,1.5s,mb5.3,SNR=12
MANZ Manzenberg 48.92 46 *e*P **P 23 20 38.2 +0.1**
comp=Z,92nm,1.8s,mb5.5
ROTZ Rotzenmuhle 48.96 46 *e*P **P 23 20 38.2 -0.2**
comp=Z,50nm,1.5s,mb5.3
WERD Werda 49.10 45 *e*P **P 23 20 39.3 -0.2**
comp=Z,68nm,1.6s,mb5.4
GUNZ Gunzen 49.11 45 *e*P **P 23 20 39.7 +0.1**
comp=Z,96nm,1.8s,mb5.5
WERN Wernitzgruen 49.13 45 *e*P **P 23 20 39.8 +0.1**
comp=Z,119nm,1.5s,mb5.7
NKC Novy Kostel 49.17 45 *e*P **P 23 20 40.0 0.0**
NKC *e*S **S 23 27 51.0 +5.6**
NKC Novy Kostel 49.17 45 *e*P **P 23 20 40.0 0.0**
NKC *e*S **S 23 27 51.0 +5.6**
NKC AMS AMS 23 36 00.0
comp=Z,12µm,26.3s
AMTX Amarillo 49.17 294 PFAKE 23 20 50.0 +10
AMTX LR LR
comp=Z,15µm,19.0s,MS6.0
TANN Tannenbergstha 49.20 45 *e*P **P 23 20 40.4 +0.1**
comp=Z,88nm,1.8s,mb5.5
WET Wettzell 49.33 47 *e*P **P 23 20 41.0 -0.3**
WET pmax pmax
comp=Z,95nm,1.7s,mb5.5
WET Wettzell 49.33 47 *e*P **P 23 20 41.0 -0.3**
comp=Z,95nm,1.7s,mb5.5
AQU L'Aquila 49.43 56 *e*P **P 23 20 42.0 -0.2**
AQU L'Aquila 49.43 56⇓ *i*P **P 23 20 43.3 +1.1**
KBA Koelnbreinsper 49.49 50⇑ *i*P **P 23 20 42.0 -0.5**
comp=Z,25nm,1.1s,mb5.2,SNR=8.0
KBA Koelnbreinsper 49.49 50⇑ *i*P **P 23 20 42.1 -0.4**
KBA pmax pmax
comp=Z,25nm,1.1s,mb5.2
KONO Kongsberg 49.51 33 *e*P **P 23 20 44.1 +1.6**
comp=Z,127nm,1.4s,mb5.8
KONO LR LR
comp=Z,5µm,19.0s,MS5.5
KONO Kongsberg 49.51 33 *e*P **P 23 20 44.1 +1.7**
KONO *e*S **S 23 27 53.8 +3.9**
KONO Kongsberg 49.51 33 *e*P **P 23 20 44.1 +1.6**
KONO pmax pmax
comp=Z,127nm,1.4s,mb5.8
KONO MLR MLR
comp=Z,5µm,19.0s,MS5.5
NNA Nana 49.51 223 *e*P **P 23 20 43.0 0.0**
NNA LR LR
comp=Z,4µm,20.0s,MS5.4
CLTB Caltabellotta 49.53 62 P **P 23 20 43.6 +0.6**
MOL Molde 49.54 29 *e*S **S 23 27 50.9 +0.7**
CLL Collm 49.64 44⇑ *e*P **P 23 20 43.4 -0.3**
comp=Z,94nm,1.6s,mb5.6
CLL *e* 23 20 49.0
CLL *e*S **S 23 28 05.0 +13**
CLL LR LR
comp=Z,8µm,23.1s,MS5.7
CLL Collm 49.64 44⇑ *e*P **P 23 20 43.4 -0.3**
CLL *e* 23 20 49.0
CLL *e*S **S 23 28 05.0 +13**
CLL pmax pmax
comp=Z,94nm,1.6s,mb5.6
CLL MLR MLR
comp=Z,8µm,23.1s,MS5.7
CLL Collm 49.64 44⇑ *e*P **P 23 20 43.4 -0.3**
comp=Z,94nm,1.6s,mb5.6
CLL *e*(pP) pP 23 20 49.0 +2.2
CLL *e*PP PP 23 22 32.0 -5.9
CLL *e*S **S 23 27 59.0 +7.0**
comp=N,1µm,24.0s
CLL *e*S **S 23 27 59.0 +7.0**
comp=E,3µm,22.8s
CLL *e*S **S 23 27 59.0 +7.0**
comp=Z,2µm,17.3s
CLL Collm 49.64 44 *e*P **P 23 20 43.3 -0.4**
comp=Z,96nm,1.6s,mb5.6
CADS Cadrg 49.72 51 *e*P **P 23 20 43.7 -0.6**
KHC Kasperske Hory 49.79 47 *e*P **P 23 20 44.5 -0.3**
KHC *e*x x 23 20 55.5
KHC *e*S **S 23 27 56.4 +2.3**
KHC AMS AMS 23 35 50.0
comp=Z,8µm,28.1s
FBE Freiberg 49.82 45 *e*P **P 23 20 44.8 -0.2**
comp=Z,96nm,1.3s,mb5.7
VOY Vojsko 49.82 51 *e*P **P 23 20 44.3 -0.8**
GEC2 GERESS Array S 49.85 47 *e*P **P 23 20 44.9 -0.3**
GEC2 pmax pmax
comp=Z,145nm,1.8s,mb5.7
GEC2 GERESS Array S 49.85 47 *e*P **P 23 20 44.9 -0.3**
comp=Z,145nm,1.8s,mb5.7
GERES GERESS Array B 49.85 47 P **P 23 20 44.4 -0.8**
comp=Z,18nm,1.2s,mb5.0,baz=264,slow=5.4,SNR=28
GERES LR LR 23 39 02.6
comp=Z,2µm,18.9s,MS5.2,baz=256,slow=33
JAVS Javornik 49.94 51 *i* P **P 23 20 45.4 -0.5**
FFC Flin Flon 50.00 320 P **P 23 20 45.5 -0.8**
comp=Z,204nm,1.0s,mb6.1,SNR=9.9
FFC Flin Flon 50.00 320 *e*P **P 23 20 45.3 -1.0**
comp=Z,294nm,1.9s,mb6.0
FFC LR LR
comp=Z,7µm,19.0s,MS5.7
FFC Flin Flon 50.00 320 *e*P **P 23 20 45.3 -1.0**
FFC pmax pmax
comp=Z,294nm,1.9s,mb6.0
FFC MLR MLR
comp=Z,7µm,19.0s,MS5.7
COP Copenhagen 50.01 38 *e*P **P 23 20 44.2 -2.1**
COP *i* S **S 23 28 02.3 +5.3**
COP pmax pmax
comp=Z,24nm,0.8s,mb5.3
COP MLR MLR
comp=Z,4µm,19.0s,MS5.5
COP Copenhagen 50.01 38 *i* P **P 23 20 44.2 -2.1**
comp=Z,24nm,0.8s,mb5.3
COP *i* S **S 23 28 02.3 +5.3**
COP

comp=Z,4µm,19.0s
MOA Molln 50.16 49 *P* **P 23 20 48.8 +1.2**
BRG Berggiesshubel 50.18 45 *eP* **P 23 20 47.6 -0.2**
comp=Z,109nm,1.7s,mb5.6
BRG Berggiesshubel 50.18 45 *i P* **P 23 20 47.5 -0.2**
comp=Z,110nm,1.7s,mb5.6
BRG *S* **S 23 28 06.0 +6.4**
BRG
comp=N,3µm,29.6s
BRG
comp=E,7µm,23.6s
BRG
comp=Z,10µm,24.9s
LJU Ljubljana 50.26 51 *eP* **P 23 20 48.7 +0.2**
LJU *eS* **S 23 28 01.1 +0.3**
RUE Ruedersdorf 50.27 43 *eP* **P 23 20 47.3 -1.1**
comp=Z,44nm,0.9s,mb5.5
RUE Ruedersdorf 50.27 43 *eP* **P 23 20 48.2 -0.2**
comp=Z,165nm,1.5s,mb5.8
OBKA Obir 50.29 50 *i P* **P 23 20 48.2 -0.4**
comp=Z,48nm,0.8s,mb5.6,SNR=14
RGN Rugen 50.30 40 *eP* **P 23 20 48.6 0.0**
comp=Z,144nm,1.5s,mb5.8
PRA Prague 50.42 46 *P* **P 23 20 50.0 +0.4**
PRA *ex* x 23 21 06.0
RSSD Black Hills 50.43 306 PFAKE 23 21 00.0 +10
RSSD LR LR
comp=Z,2µm,22.0s,MS5.1
NAO01 NORSAR Array S 50.47 32 PFAKE 23 21 00.0 +10
NAO01 LR LR
comp=Z,9µm,19.0s,MS5.8
PRU Pruhonice 50.48 46 *eP* **P 23 20 49.9 -0.2**
PRU *eS* **S 23 28 05.7 +1.9**
PRU AMS AMS 23 36 30.0
comp=Z,9µm,27.5s
NVLJ Novalja 50.49 53 *P* **P 23 20 55.2 +5.0**
PVCC Panska Ves 50.55 45 *eP* **P 23 20 50.4 -0.1**
PVCC *eS* **S 23 28 08.6 +3.9**
PVCC AMS AMS 23 36 40.0
comp=Z,10µm,24.3s
DGMT Dagmar 50.65 312 *eP* **P 23 20 51.3 0.0**
NB2 NORSAR Subarra 50.68 31 *P* **P 23 20 51.2 -0.2**
comp=Z,72nm,1.1s,mb5.5,baz=253,slow=7.9
NB2 NORSAR Subarra 50.68 31 *P* **P 23 20 51.2 -0.2**
NB2 pmax pmax
comp=Z,72nm,1.1s,mb5.5
NOA NORSAR Array B 50.68 31 *P* **P 23 20 51.2 -0.1**
NOA LR LR 23 38 47.3
NOA NORSAR Array B 50.68 31 *P* **P 23 20 51.2 -0.1**
comp=Z,35nm,1.1s,mb5.2,baz=253,slow=7.7,SNR=30
NOA LR LR 23 38 47.3
comp=Z,8µm,20.4s,MS5.7,baz=270,slow=32
PERS Pernice 50.69 50 *i P* **P 23 20 51.0 -0.6**
BOJS Bojanci 50.76 52 *i P* **P 23 20 52.7 +0.5**
BOJS *eS* **S 23 28 12.9 +5.1**
ARSA Arzberg 50.98 50 *i P* **P 23 20 52.9 -0.9**
comp=Z,50nm,1.4s,mb5.2,SNR=16
TREC Trest 51.05 47 *eP* **P 23 20 53.8 -0.5**
TREC *ex* x 23 21 08.8
TREC *eS* **S 23 28 13.9 +2.3**
TREC AMS AMS 23 36 50.0
comp=Z,7µm,31.4s
CONA Conrad Observa 51.23 49 *i P* **P 23 20 55.0 -0.8**
comp=Z,42nm,1.7s,mb5.1,SNR=6.6
BSD Bornholm Skovb 51.30 39⇑ *iP* **P 23 20 56.1 0.0**
BSD *i S* **S 23 28 21.2 +6.2**
comp=Z,53nm,1.2s,mb5.3
BSD pmax pmax
BSD MLR MLR
comp=Z,7µm,19.0s,MS5.7
BSD Bornholm Skovb 51.30 39⇑ *iP* **P 23 20 56.1 0.0**
comp=Z,53nm,1.2s,mb5.3
BSD *i S* **S 23 28 21.2 +6.2**
BSD
comp=Z,7µm,19.0s
UPC Upice 51.46 45 *eP* **P 23 20 56.9 -0.5**
KOGS Kog 51.47 51 *P* **P 23 20 58.4 +0.9**
SISC Sisak 51.55 52 *P* **P 23 20 58.3 +0.2**
KRUC Moravsky 51.63 47 *P* **P 23 20 58.1 -0.6**
PAYG Puerto Ayora 51.64 246 *eP* **P 23 20 59.8 +0.5**
PAYG LR LR
comp=Z,3µm,21.0s,MS5.2
DPC Dobruska-Polom 51.65 46 *eP* **P 23 20 58.7 -0.1**
DPC *ex* x 23 21 13.2
DPC *eS* **S 23 28 24.5 +4.6**
DPC AMS AMS 23 37 30.0
comp=Z,7µm,22.8s
KSP Ksiaz 51.66 45 *eP* **P 23 20 58.8 -0.1**
KSP LMZ 23 37 57.4
comp=Z,18µm,24.7s
KSP Ksiaz 51.66 45 *eP* **P 23 20 58.0 -0.9**
KSP *eS* **S 23 28 18.0 -2.1**
KSP MLR MLR
comp=Z,21µm,24.4s,MS6.1
SOP Sopron 51.69 49 *P* **P 23 20 57.8 -1.4**
SOP Sopron 51.69 49 *eP* **P 23 20 59.1 -0.1**
LTX Lajitas 51.75 288 *eP* **P 23 20 59.5 -0.4**
comp=Z,363nm,3.0s
LTX LR LR
comp=Z,6µm,19.0s,MS5.6
LTX Lajitas 51.75 288 *eP* **P 23 20 59.5 -0.4**
LTX pmax pmax
comp=Z,363nm,3.0s
LTX MLR MLR
comp=Z,6µm,19.0s,MS5.6
TXAR Lajitas Array 51.75 288 *P* **P 23 20 59.3 -0.6**
comp=Z,4.5nm,0.8s,mb4.5,baz=94,slow=7.6,SNR=29
TXAR LR LR 23 43 36.4
comp=Z,5µm,19.1s,MS5.5,baz=5.0,slow=37
VRAC Vranov 51.77 47 *P* **P 23 20 59.8 0.0**
VRAC Vranov 51.77 47⇓ *iP* **P 23 20 58.0 -1.7**
DAG Danmarks Havn 51.78 7⇓ *iP* **P 23 20 59.1 -0.4**
DAG pmax pmax
comp=Z,64nm,1.2s,mb5.4
DAG MLR MLR
comp=Z,4µm,17.0s,MS5.6
DAG MLR MLR
comp=N,3µm,20.0s,MS5.4
DAG MLR MLR
comp=E,3µm,20.0s,MS5.4
DAG Danmarks Havn 51.78 7⇓ *iP* **P 23 20 59.1 -0.4**
comp=E,64nm,1.2s,mb5.4
DAG
comp=Z,4µm,17.0s
GDL2 Guadalupe Moun 51.78 291 *eP* **P 23 21 00.2 0.0**
ISCO Idaho Springs 51.80 301 *eP* **P 23 21 01.2 +1.1**
comp=Z,142nm,2.3s,mb5.5
ISCO LR LR
comp=Z,15µm,20.0s,MS6.0
ISCO Idaho Springs 51.80 301 *eP* **P 23 21 01.2 +1.1**
ISCO pmax pmax
comp=Z,142nm,2.3s,mb5.5
ISCO MLR MLR
comp=Z,15µm,20.0s,MS6.0
SDCO Great Sand Dun 51.92 298 *eP* **P 23 21 01.7 +0.7**
comp=Z,4.4nm,0.9s,mb4.4
SDCO *ePcP* PcP 23 22 13.8 +0.1
SDCO LR LR
comp=Z,35µm,21.0s,MS6.4
LAO LASA Array 51.97 310 *eP* **P 23 21 02.2 +0.9**
comp=Z,217nm,2.5s,mb5.6
LAO LR LR
comp=Z,16µm,20.0s,MS6.1
ZST Bratislava 52.07 48 *eP* **P 23 21 01.5 -0.5**
comp=Z,97nm,1.7s,mb5.5
ZST LR LR
comp=Z,4µm,17.8s,MS5.5
ZST Bratislava 52.07 48 *eP* **P 23 21 01.5 -0.5**
ZST pmax pmax
comp=Z,97nm,1.7s,mb5.5
ZST MLR MLR
comp=Z,4µm,17.8s,MS5.5
NSS Namsos 52.08 27 *eP* **P 23 21 00.5 -1.3**
comp=Z,121nm,2.0s,mb5.5
NSS *e* 23 28 36.5
NSS LR LR
comp=Z,1µm,21.4s,MS5.0
NSS Namsos 52.08 27 *eP* **P 23 21 00.5 -1.3**
NSS AMb AMB 23 21 03.9
comp=Z,121nm,2.0s,mb5.5
NSS *eS* **S 23 28 25.6 +0.3**
NSS AMS AMS 23 38 00.6
comp=Z,1µm,21.4s,MS5.0
TIP Timpagrande 52.16 60 *eP* **P 23 21 06.1 +3.3**
MORC Moravsky Berou 52.41 46 *eP* **P 23 21 04.3 -0.2**
MORC Moravsky Berou 52.41 46⇓ *iP* **P 23 21 04.1 -0.4**
GKP Gorka Klasztor 52.44 42 *eP* **P 23 21 06.1 +1.4**
GKP LMZ 23 39 06.4
comp=Z,7µm,21.6s
JAVC Velka Javorina 52.46 48 *P* **P 23 21 06.8 +1.9**
STON Ston 52.59 55 *P* **P 23 21 01.9 -4.0**
MNTX Cornudas Mount 52.73 291 *eP* **P 23 21 06.9 -0.3**
comp=Z,187nm,2.2s,mb5.6
MNTX LR LR
comp=Z,14µm,20.0s,MS6.0
OKC Ostrava-Krasne 52.80 46 *eP* **P 23 21 06.8 -0.6**
OKC *e* 23 21 22.3
OKC *eS* **S 23 28 39.1 +3.4**
OKC Ostrava-Krasne 52.80 46 *eP* **P 23 21 06.8 -0.6**
OKC *ex* x 23 21 22.3
OKC *eS* **S 23 28 39.1 +3.4**
OKC AMS AMS 23 38 00.0
comp=Z,4µm,26.4s
RAC Raciborz 52.84 46 *eP* **P 23 21 08.1 +0.4**
RAC LR LR
comp=Z,7µm,25.4s,MS5.6
SMCO Snowmass 52.91 300 *eP* **P 23 21 09.6 +1.2**
KOLL Kolacno 52.94 48 *eP* **P 23 21 07.8 -0.7**
ANMO Albuquerque 53.06 295 *eP* **P 23 21 10.8 +1.3**
ANMO LR LR
comp=Z,19µm,20.0s,MS6.1
PKSM Moragy 53.12 51 *P* **P 23 21 09.6 -0.3**
PKSM Moragy 53.12 51⇑ *iP* **P 23 21 09.1 -0.7**
VYHS Vyhne 53.23 48 *i P* **P 23 21 09.8 -0.8**
comp=Z,45nm,1.8s,mb5.1
VYHS LR LR
comp=Z,2µm,27.4s,MS5.1
VYHS Vyhne 53.23 48 *i P* **P 23 21 09.8 -0.8**
VYHS pmax pmax
comp=Z,45nm,1.8s,mb5.1
VYHS MLR MLR
comp=Z,2µm,27.4s,MS5.1
LPM Los Pinos Moun 53.30 294 *eP* **P 23 21 12.6 +1.3**
BNM Barren Site 53.32 294 *eP* **P 23 21 12.3 +0.8**
BNM *ePcP* PcP 23 22 18.4 -0.6
BUD Budapest 53.36 49 *P* **P 23 21 11.7 +0.1**
BUD Budapest 53.36 49⇑ *eP* **P 23 21 11.9 +0.3**
MOR8 Moi Rana 53.57 26⇑ *iP* **P 23 21 14.2 +1.4**
LENM Lemitar 53.60 294 *eP* **P 23 21 15.9 +2.4**
LAZ Ladron 53.70 294 *eP* **P 23 21 15.1 +0.9**
OJC Ojcow 53.88 46 *eP* **P 23 21 15.5 +0.2**
OJC *ePcP* PcP 23 22 21.7 +0.9
OJC *ePP* PP 23 23 18.1 +1.8
OJC *eS* **S 23 28 50.8 +0.5**
OJC L 23 44 03.9
comp=Z,3.4nm,17.9s
PSZ Piszkesteto 53.94 49 *eP* **P 23 21 16.5 +0.7**
comp=Z,178nm,2.2s,mb5.6
PSZ Piszkesteto 53.94 49 *P* **P 23 21 16.7 +0.9**
PSZ Piszkesteto 53.94 49⇑ *eP* **P 23 21 16.3 +0.5**
PSZ Piszkesteto 53.94 49⇓ *iP* **P 23 21 15.3 -0.5**
RLMT Red Lodge 54.13 308 *eP* **P 23 21 14.3 -3.0**
RLMT LR LR
comp=Z,14µm,21.0s,MS6.0
NIE Niedzica 54.20 47 *eP* **P 23 21 18.4 +0.7**
PV01 Paradox Valley 54.28 299 *eP* **P 23 21 17.6 -0.8**
PV01 *ePcP* PcP 23 22 22.1 -0.5
KECS Kecovo 54.33 48 *eP* **P 23 21 19.1 +0.5**
comp=Z,10nm,1.5s,mb4.5
KECS Kecovo 54.33 48 *eP* **P 23 21 19.1 +0.5**
KECS pmax pmax
comp=Z,10.0nm,1.5s,mb4.5
KECS Kecovo 54.33 48 *eP* **P 23 21 19.1 +0.5**
KECS *e* 00 07 38.8
MVCO Mesa Verde 54.35 298 *eP* **P 23 21 20.3 +1.3**
MVCO LR LR
comp=Z,16µm,20.0s,MS6.1
MVCO Mesa Verde 54.35 298⇑ *P* **P 23 21 19.1 +0.2**
baz=54,SNR=7.8
EGMT Eagleton 54.36 311 *eP* **P 23 21 18.8 0.0**
EGMT Eagleton 54.36 311⇑ *P* **P 23 21 17.9 -0.9**
baz=54,SNR=17
KEK Kerkira 54.44 59 *eP* **P 23 21 11.8 -7.8**
RES Resolute Bay 54.46 345 *eP* **P 23 21 17.2 -2.0**
BW06 Boulder Array 54.51 305 *eP* **P 23 21 19.2 -0.9**
comp=Z,241nm,2.0s,mb5.9
BW06 LR LR
comp=Z,13µm,21.0s,MS6.0
PDAR Pinedale Array 54.51 305 *P* **P 23 21 19.4 -0.7**
comp=Z,11nm,0.9s,mb4.9,baz=83,slow=5.5,SNR=55
PDAR LR LR 23 42 14.8
comp=Z,11µm,20.6s,MS5.9,baz=101,slow=34
PV10 Paradox Valley 54.61 300 *eP* **P 23 21 19.6 -1.2**
PV10 *ePcP* PcP 23 22 24.1 +0.2
STHS Stebnicka Huta 54.81 47 *eP* **P 23 21 23.0 +0.9**
comp=Z,17nm,1.0s,mb5.0
STHS Stebnicka Huta 54.81 47 *eP* **P 23 21 23.0 +0.9**
STHS pmax pmax
comp=Z,17nm,1.0s,mb5.0
IGT Igoumenitsa 54.87 59 *eP* **P 23 21 22.9 +0.1**
CRVS Cervenica-Dubn 54.97 47 *eP* **P 23 21 23.2 0.0**
LKWY Lake 54.98 307 *eP* **P 23 21 25.1 +1.8**
LKWY LR LR
comp=Z,23µm,21.0s,MS6.2
OHR Ohrid 55.04 57 *i P* **P 23 21 23.8 -0.1**
LOHW Long Hollow 55.20 306 *eP* **P 23 21 24.7 -0.3**
comp=Z,151nm,1.8s,mb5.7
BZS Buzias 55.23 51 *P* **P 23 21 25.8 +0.6**
BZS Buzias 55.23 51⇑ *iP* **P 23 21 25.3 +0.1**
LKD Levkas 55.23 60 *P* **P 23 21 27.1 +1.8**
JAN Janina 55.25 59 *eP* **P 23 21 25.1 -0.4**
MOOW Moose Ponds 55.29 306 *eP* **P 23 21 25.8 +0.1**
comp=Z,191nm,2.3s,mb5.7
YFT Old Faithful 55.30 307 *eP* **P 23 21 24.8 -0.9**
KRUS Krusevo 55.34 57 *i P* **P 23 21 26.3 +0.2**
YMR Madison River 55.37 307 *eP* **P 23 21 27.0 +0.8**
comp=Z,135nm,1.6s,mb5.7
YMR LR LR
comp=Z,13µm,21.0s,MS6.0
REDW Red Top Meadow 55.40 306 *eP* **P 23 21 26.8 +0.3**
comp=Z,97nm,1.4s,mb5.6
SKO Skopje 55.42 56 *i P* **P 23 21 27.1 +0.5**
BIA Bitola 55.44 57 *i P* **P 23 21 27.4 +0.6**
TPAW Teton Pass 55.46 306 *eP* **P 23 21 27.5 +0.6**
comp=Z,100nm,1.4s,mb5.7
KOLS Kolonicke sedl 55.50 47 *eP* **P 23 21 26.7 -0.4**
FNA Florina 55.51 57 *P* **P 23 21 29.2 +1.9**
UZH Uzhgorod 55.52 48 *eP* **P 23 21 26.6 -0.7**
UZH *e* 23 21 35.0
UZH *e* 23 22 29.0
UZH *i S* **S 23 29 08.3 -4.3**
UZH *i* PS 23 29 23.5
UZH *eSS* SS 23 32 56.0 -1.1
UZH MLR MLR
comp=Z,1µm,16.0s,MS5.1
AHID Auburn Hatcher 55.64 305 PFAKE 23 21 40.0 +12
AHID LR LR
comp=Z,11µm,21.0s,MS5.9
SRU San Rafael 55.66 301 *eP* **P 23 21 28.9 +0.4**
QLMT Earthquake Lak 55.69 308 *eP* **P 23 21 30.0 +1.5**
TRPA Tarpa 55.71 48⇓ *iP* **P 23 21 28.3 -0.3**
KWP Kalwaria 55.76 47 *eP* **P 23 21 29.6 +0.7**
KWP LMZ 23 40 13.9
comp=Z,6µm,26.3s
KWP Kalwaria 55.76 47 *eP* **P 23 21 29.6 +0.6**
BOZ Bozeman (W) 55.76 309 *eP* **P 23 21 29.2 +0.2**
comp=Z,131nm,2.3s,mb5.6
BOZ LR LR
comp=Z,9µm,20.0s,MS5.9
BOZ Bozeman (W) 55.76 309 *eP* **P 23 21 29.3 +0.3**
BOZ pmax pmax
comp=Z,131nm,2.3s,mb5.6
BOZ MLR MLR
comp=Z,9µm,20.0s,MS5.9
BOZ Bozeman (W) 55.76 309⇓ *P* **P 23 21 28.6 -0.4**
baz=56
KZN Kozani 55.87 58 *eP* **P 23 21 29.9 0.0**
DRGR 55.91 50 *P* **P 23 21 30.1 +0.1**
RLS Riolos of Patr 55.96 61 *eP* **P 23 21 30.8 +0.2**
STIP Stip 56.01 56 *eP* **P 23 21 30.1 -0.8**
STIP Stip 56.01 56 *i P* **P 23 21 30.0 -0.9**
SUW Suwalki 56.01 41 *eP* **P 23 21 29.9 -0.7**
SUW LMZ 23 41 39.9
comp=Z,7µm,22.0s
DAU Daniels Canyon 56.04 302 *eP* **P 23 21 32.5 +1.4**
EVR Evrytania 56.09 59 *eP* **P 23 21 32.3 +0.8**
HWUT Hardware Ranch 56.12 304 *eP* **P 23 21 31.1 -0.5**
HWUT LR LR
comp=Z,13µm,20.0s,MS6.0
THL Klokotos Trika 56.16 59 *eP* **P 23 21 26.6 -5.4**
TMUT Trail Mountain 56.16 301 *eP* **P 23 21 33.2 +1.2**
JLU Jordanelle 56.16 303 *eP* **P 23 21 32.4 +0.4**
TRO Tromso 56.17 22 *eP* **P 23 21 30.8 -0.8**
comp=Z,188nm,1.4s,mb5.9
TRO *e* 23 29 26.1
TRO LR LR
comp=Z,1µm,24.0s,MS5.0
TRO Tromso 56.17 22 *eP* **P 23 21 30.8 -0.8**
TRO AMb AMB 23 21 35.3
comp=Z,188nm,1.4s,mb5.9
TRO *eS* **S 23 29 23.9 +3.3**
TRO AMS AMS 23 39 32.1
comp=Z,1µm,24.0s,MS5.0
TRO Tromso 56.17 22 *eP* **P 23 21 30.8 -0.8**
TRO *e* 23 29 26.1
TRO pmax pmax
comp=Z,188nm,1.4s,mb5.9
TRO MLR MLR
comp=Z,1µm,24.0s,MS5.0
GRG Griva 56.26 57 *eP* **P 23 21 32.6 -0.1**
GRG Griva 56.26 57 *P* **P 23 21 32.5 -0.2**
LRM Limekiln Ridge 56.32 309 *eP* **P 23 21 33.3 +0.3**
VAY Valandovo 56.34 57 *i P* **P 23 21 29.4 -3.9**
CTU Camp Tracy 56.37 303 *eP* **P 23 21 35.9 +2.4**
MPU Maple Canyon 56.38 302 *eP* **P 23 21 33.4 -0.1**
comp=Z,84nm,1.6s,mb5.5
MPU LR LR
comp=Z,19µm,20.0s,MS6.2
ALE Alert 56.40 357 *P* **P 23 21 32.0 -1.1**
comp=Z,394nm,0.9s,mb6.4,SNR=31
LIT Litokhoron 56.44 58 *eP* **P 23 21 32.8 -1.2**
LIT Litokhoron 56.44 58 *P* **P 23 21 34.8 +0.8**
ITM Ithomi 56.46 62 *eP* **P 23 21 30.5 -3.7**
DLMT Dillon 56.46 308 *eP* **P 23 21 34.6 +0.5**
AGG Agios Georgios 56.48 59 *eP* **P 23 21 32.6 -1.7**
EDM Edmonton 56.56 318 *eP* **P 23 21 34.0 -0.6**
KNT Kendrikon 56.60 57 *eP* **P 23 21 34.9 -0.2**
KNT Kendrikon 56.60 57 *P* **P 23 21 36.4 +1.3**
LVV L'vov 56.61 46 *eP* **P 23 21 36.1 +1.1**
LVV *e* 23 23 45.5
LVV *eS* **S 23 29 25.5 -1.5**
LVV *eSS* SS 23 33 18.7 +4.5
LVV MLR MLR
comp=N,1µm,16.0s,MS5.2
LVV MLR MLR
comp=E,1µm,16.0s,MS5.2
LVV MLR MLR
comp=Z,2µm,16.0s,MS5.3
KKB Krupnik 56.65 56 *i P* **P 23 21 36.6 +1.1**
VTS Vitosha 56.65 55 *P* **P 23 21 37.1 +1.7**
VTS Vitosha 56.65 55 *i P* **P 23 21 36.8 +1.3**
NLU North Lily Min 56.72 302 *eP* **P 23 21 36.8 +0.8**
THE Thessaloniki 56.73 57 *P* **P 23 21 37.6 +1.6**
CHMT Chamberlain Mo 56.78 310 *eP* **P 23 21 36.3 0.0**
HORT Hortiatis 56.83 57 *P* **P 23 21 37.9 +1.1**
WUAZ Wupatki 56.92 297 *eP* **P 23 21 38.8 +1.3**
WUAZ LR LR
comp=Z,4µm,19.0s,MS5.5
WUAZ Wupatki 56.92 297⇑ *P* **P 23 21 37.6 +0.1**
baz=57
F14A Wisdom 56.96 309⇑ *P* **P 23 21 37.2 -0.4**
baz=57
SOH Sokhos 56.99 57 *P* **P 23 21 39.2 +1.3**
HVU Hansel Valley 56.99 304 *eP* **P 23 21 38.8 +0.9**
MSU Marysvale 57.02 300 *eP* **P 23 21 39.2 +1.1**
C14A Swan Lake 57.05 311⇑ *P* **P 23 21 37.4 -0.8**
baz=57
LKR Lokris 57.05 60 *eP* **P 23 21 32.3 -6.1**
MVU Marysvale 57.05 300 PFAKE 23 21 50.0 +12
MVU LR LR
comp=Z,15µm,22.0s,MS6.0
G14A Jackson 57.08 308⇑ *P* **P 23 21 38.8 +0.3**
baz=57
XOR Xorichti 57.09 59 *P* **P 23 21 39.7 +1.1**
XOR Xorichti 57.09 59 *eP* **P 23 21 38.4 -0.2**
TUC Tucson 57.09 293 *eP* **P 23 21 39.7 +0.9**
TUC LR LR
comp=Z,15µm,22.0s,MS6.0
PLG Polygyros 57.13 58 *eP* **P 23 21 36.7 -2.2**
MMB Musomiste 57.16 56 *i P* **P 23 21 40.0 +0.9**
DUG Dugway 57.25 302 *eP* **P 23 21 39.5 -0.2**
comp=Z,236nm,2.3s,mb5.8
DUG LR LR
comp=Z,16µm,20.0s,MS6.1
DUG Dugway 57.25 302 *eP* **P 23 21 39.5 -0.2**
DUG pmax pmax
comp=Z,236nm,2.3s,mb5.8
DUG MLR MLR
comp=Z,16µm,20.0s,MS6.1
DUG Dugway 57.25 302⇓ *P* **P 23 21 39.5 -0.2**
baz=57,SNR=14
MSO Missoula 57.26 310 *eP* **P 23 21 39.6 -0.1**
comp=Z,136nm,2.5s,mb5.5
MSO LR LR
comp=Z,15µm,21.0s,MS6.1
NVR Nevrokopi 57.30 56 *eP* **P 23 21 37.0 -3.1**
BGU Big Grassy Mou 57.30 303 *eP* **P 23 21 40.2 +0.1**
VLI Veliai 57.34 62 *eP* **P 23 21 40.0 -0.4**
PAIG Paliouri 57.37 58 *P* **P 23 21 41.9 +1.3**
A13A Flathead Natio 57.41 313⇓ *P* **P 23 21 40.0 -0.7**
baz=57
KTK1 Kautokeino 57.53 23⇑ *iP* **P 23 21 41.7 +0.5**
comp=Z,97nm,1.8s,mb5.5
KTK1 Kautokeino 57.53 23⇑ *iP* **P 23 21 41.7 +0.5**
KTK1 AMb AMB 23 21 44.9
comp=Z,97nm,1.8s,mb5.5
BURAR Bucovina Array 57.55 49⇑ *iP* **P 23 21 41.7 0.0**
YKA Yellowknife Ar 57.55 329 *P* **P 23 21 40.3 -1.1**
YKA LR LR 23 45 07.8
YKA Yellowknife Ar 57.55 329 *P* **P 23 21 40.3 -1.1**
comp=Z,16nm,0.8s,mb5.1,baz=93,slow=7.7,SNR=148
YKA LR LR 23 45 07.7
comp=Z,14µm,21.4s,MS6.0,baz=140,slow=35
YKW3 Yellowknife Ar 57.56 329 *eP* **P 23 21 40.0 -1.5**
F13A Darby 57.63 309⇓ *P* **P 23 21 41.7 -0.6**
baz=58
VOIR 57.65 51⇑ *P* **P 23 21 39.8 -2.6**
VOIR 57.65 51⇑ *iP* **P 23 21 39.8 -2.6**
ATH Athens Observa 57.73 60 *eP* **P 23 21 41.9 -1.2**
BSMT Bassoo Peak 57.74 311 *eP* **P 23 21 42.5 -0.6**
FINES FINESS Array B 57.81 32 *P* **P 23 21 43.0 -0.4**
comp=Z,40nm,1.0s,mb5.4,baz=267,slow=3.8,SNR=66
FINES LR LR 23 43 32.3
comp=Z,5µm,19.0s,MS5.6,baz=77,slow=33
L13A Double Diamond 57.81 305⇑ *P* **P 23 21 42.8 -0.9**
baz=58
FIA1 FINESS Array S 57.82 32 *eP* **P 23 21 42.5 -0.9**
KBS Kingsbay 57.85 11 *eP* **P 23 21 46.2 +2.9**
KBS *eS* **S 23 29 44.1 +1.6**
KBS Kingsbay 57.85 11 *eP* **P 23 21 46.2 +2.9**
KBS *e* 23 29 55.4
KBS MLR MLR
comp=Z,1µm,22.0s,MS5.0
RZN Rozhen 57.88 56 *i P* **P 23 21 45.1 +0.9**
HLID Hailey 57.96 306 *eP* **P 23 21 44.9 +0.2**
HLID LR LR
comp=Z,15µm,22.0s,MS6.1
HLID Hailey 57.96 306⇑ *P* **P 23 21 44.5 -0.1**
baz=58,SNR=13
KAF Kangasniemi 57.96 32 *ep* **P 23 21 42.2 -2.2**
comp=Z,21nm,0.7s,mb5.3,baz=267,slow=6.8
KAF Kangasniemi 57.96 32 *eP* **P 23 21 42.2 -2.2**
KAF pmax pmax
comp=Z,21nm,0.7s,mb5.3
VSU Vasula 58.05 36 *i P* **P 23 21 43.9 -1.1**
M13A Montello 58.09 304⇑ *P* **P 23 21 44.7 -0.9**
baz=58
CCUT Cedar City 58.11 299 *eP* **P 23 21 46.3 +0.4**
CCUT *ePP* PP 23 23 53.9 -0.5
PVL Pavlikeni 58.12 54 *i P* **P 23 21 46.0 +0.2**
ARUT Antelope Range 58.13 300 *eP* **P 23 21 46.0 +0.1**
ARUT Antelope Range 58.13 300 *P* **P 23 21 46.6 +0.6**
H12A Diamond D Ranc 58.15 308⇑ *P* **P 23 21 46.0 +0.1**
baz=58
U14A Mt Trumbull 58.19 298⇑ *P* **P 23 21 46.7 +0.3**
baz=58,SNR=21
N13A Wendover, West 58.19 303⇑ *P* **P 23 21 45.8 -0.5**
baz=58
D12A Red Ives Fores 58.20 311⇑ *P* **P 23 21 45.3 -1.0**
baz=58
A12A Yaak River Ran 58.22 313⇓ *P* **P 23 21 45.2 -1.2**
baz=58

MLR Muntele Rosu 58.27 51 P P 23 21 47.2 +0.5
MLR Muntele Rosu 58.27 51⇑iP P 23 21 46.9 +0.1
F12A Elk City 58.28 309 ⇓P P 23 21 46.2 -0.6
baz=58
KDZ Kurdzhali 58.41 56 i P P 23 21 48.0 +0.1
ARCES ARCESS Array B 58.41 23 P P 23 21 46.9 -0.6
comp=Z,36nm,0.7s,mb5.5,baz=256,slow=4.9,SNR=106
ARCES LR LR 23 42 28.9
comp=Z,1µm,20.1s,MS5.0,baz=250,slow=32
ARE0 ARCESS Array S 58.41 23 eP P 23 21 47.0 -0.4
LIA Limnos Island 58.52 58 eP P 23 21 49.8 +1.2
Y14A Wickenburg 58.56 295 ⇓P P 23 21 48.9 -0.1
baz=58,SNR=7.1
RDO Rodhopi 58.58 56 eP P 23 21 46.8 -2.2
L12A House Creek Ra 58.60 305 ⇓P P 23 21 48.7 -0.4
baz=58
M12A Wells 58.63 304 ⇑P P 23 21 48.8 -0.7
baz=59,SNR=11
O12A Currie 58.70 303 ⇑P P 23 21 49.4 -0.5
baz=59,SNR=8.6
PLOR Plostina 58.71 51 P P 23 21 51.1 +1.2
MNK Minsk 58.73 41 eP P 23 21 47.0 -2.9
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.4
B11A Sandpoint 58.74 312 ⇓P P 23 21 49.1 -1.0
baz=59
VRI Vrincioaia 58.76 51 P P 23 21 50.0 -0.3
VRI Vrincioaia 58.76 51⇑iP P 23 21 49.3 -0.9
F11A Grangeville 58.89 309 ⇓P P 23 21 50.3 -0.8
baz=59
KEV Kevo 58.96 23 ep P 23 21 49.2 -2.0
comp=Z,26nm,0.6s,mb5.5
KEV Kevo 58.96 23 eP P 23 21 49.2 -2.0
KEV pmax pmax
comp=Z,27nm,0.6s,mb5.5
ELK Elko 58.99 303 eP P 23 21 52.2 +0.3
ELK LR LR
comp=Z,13µm,20.0s,MS6.0
I11A Placerville 59.02 307 ⇓P P 23 21 51.3 -0.7
baz=59
G11A Walters Elk Ra 59.03 309 ⇑P P 23 21 50.9 -1.3
baz=59
X13A Yucca 59.08 296 ⇓P P 23 21 52.5 -0.1
baz=59
JMB Yambol 59.14 55 P P 23 21 53.7 +0.8
K11A Parker Ranch, 59.24 306 ⇑P P 23 21 53.1 -0.5
baz=59
U12A Valley of Fire 59.26 298 ⇓P P 23 21 54.0 +0.2
baz=59
NEW Newport 59.26 312 eP P 23 21 53.0 -0.6
NEW LR LR
comp=Z,13µm,20.0s,MS6.0
M11A Holland Ranch, 59.28 304 ⇓P P 23 21 53.5 -0.5
baz=59
APE Apeiranthos 59.31 61 eP P 23 21 49.5 -4.7
PDMCI Parker Dam,Lak 59.40 296 ⇓P P 23 21 54.5 -0.4
baz=59
PRK Paraskevi 59.46 58 eP P 23 21 54.9 -0.3
A10A Northport 59.47 313 ⇓P P 23 21 53.7 -1.4
baz=59
P11A Circle Ranch, 59.59 302 ⇑P P 23 21 55.8 -0.3
baz=60
I10A Payette 59.59 307 ⇓P P 23 21 55.0 -1.0
baz=60
L10A Juniper Basin 59.67 305 ⇓P P 23 21 56.4 -0.2
baz=60,SNR=12
NEE2 Needles Airpor 59.68 296 ⇓P P 23 21 56.2 -0.5
baz=60
TRCR Troy Canyon 59.69 301 eP P 23 21 56.9 +0.1
SHPR Sheep Range 59.73 298 eP P 23 21 58.1 +1.0
NPS Neapolis 59.76 63 eP P 23 21 51.9 -5.4
M10A I.L. Ranch, Tu 59.82 304 ⇑P P 23 21 56.9 -0.7
baz=60,SNR=33
BMO Blue Mountains 59.84 308 eP P 23 21 57.0 -0.7
comp=Z,132nm,2.6s,mb5.5
BMO LR LR
comp=Z,6µm,20.0s,MS5.7
BMO Blue Mountains 59.84 308 eP P 23 21 57.0 -0.7
BMO pmax pmax
comp=Z,132nm,2.6s,mb5.5
BMO MLR MLR
comp=Z,6µm,20.0s,MS5.7
KIEV Kiev 59.86 45 eP P 23 21 56.3 -1.5
comp=Z,39nm,1.1s,mb5.3
KIEV LR LR
comp=Z,4µm,22.0s,MS5.5
KIEV Kiev 59.86 45 eP P 23 21 56.3 -1.4
KIEV pmax pmax
comp=Z,39nm,1.1s,mb5.3
KIEV MLR MLR
comp=Z,4µm,22.0s,MS5.5
AKASG Malin Array Be 59.87 45 P P 23 21 56.6 -1.2
comp=Z,9.5nm,0.7s,mb5.0,baz=272,slow=6.2,SNR=26
AKASG LR LR 23 44 25.2
comp=Z,3µm,20.9s,MS5.5,baz=280,slow=33
AKBB Malin Array Si 59.87 45 eP P 23 21 56.4 -1.4
URLA Izmir 59.88 59⇓eP P 23 21 56.5 -1.6
SART Tekirdag 59.88 57⇓iP P 23 21 56.4 -1.7
S11A Rachel 59.95 300 ⇑P P 23 21 58.5 -0.1
baz=60
KIS Kishinev 60.05 49 eP P 23 21 55.0 -4.1
KIS eS S 23 30 10.0 -1.9
KIS e 23 30 40.0
KIS MLR MLR
comp=E,2µm,16.0s,MS5.5
KIS MLR MLR
comp=Z,3µm,16.0s,MS5.5
KIS MLR MLR
comp=N,2µm,15.0s,MS5.5
KIS MLR MLR
comp=Z,3µm,16.0s
KIS Kishinev 60.05 49 ePP PP 23 24 30.0 +19
KIS eS S 23 30 10.0 -1.9
KIS eSS SS 23 34 00.0 -8.3
KIS eSSS 23 37 00.0
KIS LRM 23 47 50.0
comp=Z,3µm,16.0s
C09A Chrisman Ranch 60.08 312 ⇓P P 23 21 58.1 -1.2
baz=60
G09A Cove 60.10 309 ⇑P P 23 21 58.2 -1.3
baz=60
PSN Preselentsi 60.10 53 i P P 23 21 58.9 -0.6
H09A Durkee 60.12 308 ⇑P P 23 21 59.0 -0.6
baz=60
F09A S2 Ranch, Elgi 60.13 309 ⇓P P 23 21 59.0 -0.7
baz=60,SNR=6.6
A09A Danville 60.14 313 ⇓P P 23 21 58.9 -0.8
baz=60
TIRR Tirgusor 60.14 52 ⇑P P 23 21 58.1 -1.7
TIRR Tirgusor 60.14 52⇑iP P 23 21 58.1 -1.7
E09A Wood Farm, Sta 60.17 310 ⇑P P 23 21 59.0 -1.0
baz=60
SMG Samos 60.20 60 eP P 23 21 58.7 -1.6
BLCB Balcova 60.22 59 P P 23 22 02.6 +2.2
GLA Glamis 60.24 294 ⇑P P 23 22 00.8 +0.1
baz=60
IRM Iron Mountain 60.24 296 ⇓P P 23 22 00.6 -0.1
baz=60
R10A Warm Springs 60.25 301 ⇑P P 23 22 00.6 0.0
baz=60
I09A Lost Marbles R 60.28 307 ⇓P P 23 22 00.1 -0.7
baz=60
JOF Joensuu 60.30 31 ep P 23 21 58.1 -2.5
comp=Z,16nm,0.7s,mb5.2
J09A Fry Pan Ranch, 60.39 307 ⇑P P 23 22 01.0 -0.5
baz=60
K09A Rome 60.48 306 ⇓P P 23 22 01.5 -0.6
baz=60
TPNV Topopah Spring 60.49 299 eP P 23 22 03.5 +1.2
comp=Z,107nm,1.8s,mb5.6
TPNV LR LR
comp=Z,17µm,21.0s,MS6.2
TPNV Topopah Spring 60.49 299 eP P 23 22 03.5 +1.2
TPNV pmax pmax
comp=Z,107nm,1.8s,mb5.6
TPNV MLR MLR
comp=Z,17µm,21.0s,MS6.2
TPNV Topopah Spring 60.49 299 ⇓P P 23 22 02.7 +0.3
baz=60
GMRC Granite Mounta 60.51 297 ⇓P P 23 22 02.5 0.0
baz=60,SNR=8.7
BMN Battle Mountai 60.53 303 eP P 23 22 02.5 0.0
O09A Fish Creek Ran 60.55 303 ⇓P P 23 22 02.5 -0.2
baz=60
TUQ Turquoise Mtn. 60.57 297 ⇑P P 23 22 03.1 +0.3
baz=60

C08A Higginbotham F 60.60 312 ⇓P P 23 22 02.2 -0.7
baz=60
BC3 Big Chuckw Mtn 60.61 295 ⇑P P 23 22 02.9 -0.3
baz=61
LCO Las Campanas 60.68 206 PFAKE 23 22 20.0 +16
LCO LR LR
comp=Z,2µm,19.0s,MS5.4
SHOC Shoshone 60.75 298 ⇓P P 23 22 03.5 -0.6
baz=61
E08A Dider Farm, El 60.80 310 ⇑P P 23 22 02.9 -1.3
baz=61
R09A Tonopah 60.85 301 ⇑P P 23 22 03.9 -0.9
baz=61
J08A Circle Bar Ran 60.91 307 ⇑P P 23 22 04.3 -0.8
baz=61
KARP Karpathos 60.93 62 eP P 23 21 56.6 -8.7
BELC Belle Mtn. 60.96 296 ⇑P P 23 22 06.0 +0.4
baz=61
TPH Tonopah 61.01 301 eP P 23 22 05.3 -0.5
L08A Fields 61.03 305 ⇓P P 23 22 05.3 -0.5
baz=61
HEC Hector,Ludlow 61.03 297 ⇑P P 23 22 05.7 -0.3
baz=61
SWSC Sam W. Stewart 61.06 295 ⇓P P 23 22 05.5 -0.7
baz=61
FURC Furnace Creek, 61.08 299 ⇑P P 23 22 06.3 0.0
baz=61
S09A Goldfield 61.08 300 ⇓P P 23 22 05.7 -0.6
baz=61
HAWA Hanford 61.14 310 eP P 23 22 05.6 -1.0
comp=Z,47nm,1.2s,mb5.5
APA Apatity 61.16 25⇓iP P 23 22 06.0 -0.3
APA eS S 23 30 25.0 -0.5
WVOR Wild Horse Val 61.19 306 eP P 23 22 05.5 -1.5
comp=Z,60nm,1.4s,mb5.5
WVOR Wild Horse Val 61.19 306 P P 23 22 07.7 +0.7
WVOR pmax pmax
comp=Z,60nm,1.3s,mb5.6
GSC Goldstone 61.30 297 ⇓P P 23 22 08.1 +0.2
baz=61
P08A Dixie Valley 61.32 303 ⇑P P 23 22 07.6 -0.4
baz=61
GRAC Grapevine Rang 61.35 299 ⇑P P 23 22 07.7 -0.5
baz=61
DVTC Desert V Tower 61.38 294 ⇑P P 23 22 08.7 +0.3
baz=61
PFO Pinyon Flat Ob 61.43 295 eP P 23 22 09.6 +0.9
PFO LR LR
comp=Z,9µm,19.0s,MS5.9
PFO Pinyon Flat Ob 61.43 295 ⇓P P 23 22 09.1 +0.3
baz=61
ULDT Uludag 61.45 57⇓iP P 23 22 07.3 -1.5
H07A Lands Inn, Kim 61.47 308 ⇓P P 23 22 08.6 -0.2
baz=61
J07A Hines 61.51 307 ⇓P P 23 22 08.4 -0.7
baz=61
ARG Arkhangelos 61.53 61 eP P 23 22 07.3 -2.1
RRX Edison Barstow 61.56 297 ⇑P P 23 22 09.4 -0.2
baz=62
MONP Monument Peak 61.58 295 ⇑P P 23 22 09.9 +0.1
baz=62
LVZ Lovozero 61.63 25 PFAKE 23 22 20.0 +10
LVZ LR LR
comp=Z,2µm,20.0s,MS5.2
BBRC Big Bear Sol-O 61.64 296 ⇓P P 23 22 10.4 +0.3
baz=62
MPMC Manual Prospec 61.66 298 ⇑P P 23 22 10.0 -0.3
baz=62,SNR=7.3
DAC Darwin (Calif) 61.70 299 eP P 23 22 11.5 +0.9
comp=Z,181nm,2.3s,mb5.8
DAC Darwin (Calif) 61.70 299 eP P 23 22 11.5 +1.0
DAC pmax pmax
comp=Z,181nm,2.3s,mb5.8
NVAR Mina Array Bea 61.76 301 P P 23 22 09.6 -1.3
comp=Z,2.0nm,0.4s,mb4.6,baz=118,slow=1.5,SNR=5.3
L07A Adell 61.79 305 ⇑P P 23 22 10.2 -0.8
baz=62
M07A Soldier Meadow 61.79 305 ⇓P P 23 22 10.6 -0.4
baz=62
C06A Tall Timber Ra 61.81 312 ⇑P P 23 22 09.9 -1.2
baz=62
GDZ Gediz 61.94 58⇓iP P 23 22 10.0 -2.1
TIN Tinemaha 62.01 300 ⇓P P 23 22 13.0 +0.4
baz=62
MURC Murrieta 62.03 296 ⇑P P 23 22 12.6 -0.2
baz=62
CWC Cottonwood Cre 62.04 299 ⇓P P 23 22 13.1 +0.3
baz=62
MTUM Tungsten Hills 62.20 300 eP P 23 22 11.6 -2.3
BFSC Mount Baldy St 62.24 296 ⇑P P 23 22 13.9 -0.3
baz=62
PAHR Pah Rah Range 62.30 303 eP P 23 22 14.6 +0.1
EDW2 Edwards Air Fo 62.34 297 ⇑P P 23 22 14.8 -0.1
baz=62
MLAC Mammoth Lakes 62.35 300 ⇑P P 23 22 14.8 -0.1
baz=62
N06A Buffalo Meadow 62.41 304 ⇑P P 23 22 14.6 -0.6
baz=62
GOLH Golhisar 62.42 60⇓iP P 23 22 13.8 -1.5
LPA La Plata 62.45 192deP P 23 22 14.0 -1.3
LPA esP sP 23 22 24.0 +4.2
LPA ePP PP 23 24 35.0 +1.9
LPA eS S 23 30 43.0 +0.6
LPA epS 23 30 48.0
MOD Modoc 62.51 305 eP P 23 22 15.7 -0.2
comp=Z,235nm,2.5s,mb5.9
MOD LR LR
comp=Z,8µm,21.0s,MS5.8
MOD Modoc 62.51 305 ⇑P P 23 22 15.2 -0.7
baz=62,SNR=11
O06A Flanigan 62.53 303 ⇑P P 23 22 15.4 -0.6
baz=62
ISA Isabella 62.54 298 ⇓P P 23 22 15.8 -0.4
baz=62
WAKR Walker 62.61 301 eP P 23 22 17.1 +0.5
E05A Randle 62.63 311 ⇓P P 23 22 14.9 -1.6
baz=62
WCN Washoe City 62.67 302 ⇑P P 23 22 16.4 -0.6
baz=63
DECC Green Verdugo 62.77 297 ⇑P P 23 22 17.1 -0.7
baz=63
HOOD Mount Hood Mea 62.79 309 eP P 23 22 18.6 +0.9
KCC Kaiser Creek 62.80 300 ⇑P P 23 22 17.1 -0.8
baz=63
FMP Fort Macarthur 62.88 296 ⇑P P 23 22 18.2 -0.3
baz=63
ARVC Arvin 62.95 298 ⇓P P 23 22 18.7 -0.3
baz=63
OSI Osito Adit 63.00 297 ⇓P P 23 22 19.0 -0.3
baz=63
BEKR Beckwourth 63.00 303 ⇑P P 23 22 18.0 -1.1
baz=63,SNR=6.0
ISP Isparta 63.01 59 eP P 23 22 19.0 -0.3
ISP Isparta 63.01 59 i P P 23 22 20.7 +1.4
CIS Catalina Islan 63.05 296 ⇓P P 23 22 20.1 +0.4
baz=63
S06C San Francisco 63.07 301 ⇓P P 23 22 19.9 +0.2
baz=63
TMCR Tamitsa 63.23 29 eP P 23 22 13.5 -6.8
TMCR pmax pmax
comp=Z,55nm,1.3s,mb5.5
PGC Sidney 63.37 313 eP P 23 22 21.4 -0.1
K04A Chilquin 63.40 306 ⇑P P 23 22 21.2 -0.6
baz=63
O04C Chester 63.44 304 ⇓P P 23 22 21.9 -0.2
baz=63
CMB Columbia Colle 63.45 301 eP P 23 22 22.0 -0.2
comp=Z,40nm,1.6s,mb5.3
CMB LR LR
comp=Z,14µm,20.0s,MS6.2
CMB Columbia Colle 63.45 301 P P 23 22 22.4 +0.2
CMB pmax pmax
comp=Z,40nm,1.6s,mb5.3
CMB Columbia Colle 63.45 301 ⇑P P 23 22 22.2 0.0
baz=63
MDZ Mendoza 63.48 203 eP P 23 22 23.4 +1.2
OBN Obninsk 63.69 39 eP P 23 22 25.0 +1.5
comp=Z,130nm,1.2s,mb5.8
OBN LR LR
comp=Z,7µm,19.0s,MS5.8
OBN Obninsk 63.69 39c iP P 23 22 23.3 -0.2
OBN e 23 22 58.7
OBN i S S 23 30 52.2 -5.5
OBN pmax pmax
comp=Z,171nm,1.6s,mb5.8
PKM Peak Mountain 63.80 298 ⇓P P 23 22 24.5 -0.1
baz=64

ORV Oroville 63.93 303 ⇑P P 23 22 24.4 -0.9
baz=64,SNR=10
OHCM Honcut 63.97 303 eP P 23 22 25.6 +0.1
SIM Simferopol' 64.05 51 P P 23 22 30.9 +4.9
SIM SS SS 23 35 10.0 -0.9
SIM pmax pmax
comp=Z,280nm,10.0s
COR Corvallis 64.09 309 PFAKE 23 22 40.0 +14
COR LR LR
comp=Z,9µm,21.0s,MS5.9
MOS Moscow 64.18 39 eP P 23 22 21.8 -4.9
MOS e 23 22 59.9
MOS eS S 23 31 02.0 -1.8
MOS pmax pmax
comp=Z,163nm,1.6s,mb5.8
ANTO Ankara 64.25 57 eP P 23 22 27.6 +0.1
comp=Z,31nm,1.0s,mb5.3
ANTO ePP PP 23 24 47.8 -0.8
ANTO LR LR
comp=Z,3µm,20.0s,MS5.5
ANTO Ankara 64.25 57 eP P 23 22 27.6 +0.1
ANTO e 23 24 47.8
ANTO pmax pmax
comp=Z,31nm,1.0s,mb5.3
ANTO MLR MLR
comp=Z,3µm,20.0s,MS5.5
YBH Yreka Blue Hor 64.31 306 PFAKE 23 22 40.0 +12
YBH LR LR
comp=Z,11µm,20.0s,MS6.0
YBH Yreka Blue Hor 64.31 306 ⇓P P 23 22 27.7 0.0
baz=64
WDC Whiskeytown Da 64.45 304 PFAKE 23 22 40.0 +11
WDC LR LR
comp=Z,6µm,20.0s,MS5.8
ELDT Eldivan 64.57 56⇓eP P 23 22 29.2 -0.3
SAO San Andreas Ge 64.58 300 PFAKE 23 22 40.0 +10
SAO LR LR
comp=Z,15µm,22.0s,MS6.2
MNRC McLaughlin Nat 64.80 303 ⇓P P 23 22 31.2 +0.2
baz=65
BR131 Keskin Array S 64.92 56 eP P 23 22 31.8 0.0
comp=Z,8.7nm,0.6s,mb5.0
BR131 ePcP PcP 23 23 02.8 -2.2
BR131 LR LR
comp=Z,2µm,20.0s,MS5.4
BRTR Keskin Array B 64.92 56 P P 23 22 31.6 -0.2
comp=Z,20nm,0.9s,mb5.1,baz=284,slow=5.0,SNR=51
BRTR LR LR 23 48 48.9
comp=Z,3µm,20.7s,MS5.5,baz=79,slow=34
INK Inuvik 65.19 336 eP P 23 22 32.1 -0.9
comp=Z,1µm,1.1s
INK PcP PcP 23 23 04.2 -1.4
INK ePP PP 23 24 55.9 -0.2
INK Inuvik 65.19 336 P P 23 22 32.2 -0.9
comp=Z,26nm,0.8s,mb5.3,baz=73,slow=7.7,SNR=80
HOPS Hopland 65.25 303 eP P 23 22 35.5 +1.6
comp=Z,112nm,1.1s,mb5.8
HOPS LR LR
comp=Z,8µm,20.0s,MS5.9
HOPS Hopland 65.25 303 ⇑P P 23 22 33.9 -0.1
baz=65
MCCM Marconi Confer 65.32 302 PFAKE 23 22 50.0 +16
MCCM LR LR
comp=Z,9µm,19.0s,MS6.0
DLBC Dease Lake 65.39 325 eP P 23 22 34.8 +0.2
CDAG Cicekdag 65.49 56⇓iP P 23 22 33.4 -2.1
VRSR Storozhevoye 66.00 43 eP P 23 22 37.8 -0.8
VRSR pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
VRSR pmax pmax
comp=N,2.0nm,0.9s
VRSR pmax pmax
comp=E,2.0nm,0.8s
AVNT Avonos 66.08 57⇑iP P 23 22 38.6 -0.7
TRQA Tornquist 66.33 195 eP P 23 22 39.1 -1.6
TRQA LR LR
comp=Z,2µm,19.0s,MS5.4
ANN Anapa 66.38 50 eP P 23 22 38.6 -2.5
ANN eS S 23 31 28.1 -3.0
ANN pmax pmax
comp=Z,83nm,1.8s,mb5.5
ANN MLR MLR
comp=N,1µm,15.0s,MS5.2
ANN MLR MLR
comp=E,237nm,15.0s,MS5.2
ANN MLR MLR
comp=Z,1µm,15.0s,MS5.2
WRAK Wrangell Islan 67.05 323 PFAKE 23 23 00.0 +15
WRAK LR LR
comp=Z,5µm,21.0s,MS5.7
VRHR Novokhopersk 67.51 43 eP P 23 22 47.1 -1.1
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.3
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,40nm,1.4s
ANDN Andirin 67.54 58⇓iP P 23 22 46.9 -1.8
BHL Bhannes 68.10 62 eP P 23 22 50.6 -1.7
SOC Sochi 68.28 51c iP P 23 22 53.1 -0.1
SOC e 23 23 18.6
SOC eS S 23 31 53.1 -1.0
SOC pmax pmax
comp=Z,46nm,1.3s,mb5.3
SOC MLR MLR
comp=Z,2µm,18.0s,MS5.4
SIT Sitka 68.48 324 PFAKE 23 23 10.0 +16
SIT LR LR
comp=Z,10µm,22.0s,MS6.0
MALT Malatya 68.89 57 eP P 23 22 56.9 -0.3
MALT Malatya 68.89 57⇑iP P 23 22 56.6 -0.6
KELT Kelkit 68.95 55⇓iP P 23 22 56.3 -1.2
EGAK Eagle 68.99 333 eP P 23 22 56.5 -0.7
EGAK LR LR
comp=Z,6µm,20.0s,MS5.8
KIV Kislovodsk 70.23 50 P P 23 23 05.8 +0.5
comp=Z,122nm,1.3s,mb5.7,SNR=9.8
KIV Kislovodsk 70.23 50 eP P 23 23 05.4 +0.1
comp=Z,144nm,1.8s,mb5.6
KIV LR LR
comp=Z,2µm,19.0s,MS5.4
KIV Kislovodsk 70.23 50 eP P 23 23 04.0 -1.3
KIV eS S 23 32 13.4 -3.6
KIV eSS SS 23 36 48.1 +1.5
KIV pmax pmax
comp=Z,27nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,2µm,18.0s,MS5.4
TRIS Tristan da Cun 70.23 153 PFAKE 23 23 20.0 +15
TRIS LR LR
comp=Z,2µm,19.0s,MS5.3
ARTV Artvin 70.57 53⇓iP P 23 23 06.6 -0.8
MARD Mardin 70.98 57⇓iP P 23 23 08.6 -1.4
PLCA Paso Flores 71.18 201 eP P 23 23 10.3 -0.6
comp=Z,118nm,1.7s,mb5.5
PLCA ePP PP 23 25 47.6 -1.6
PLCA LR LR
comp=Z,2µm,20.0s,MS5.4
PLCA Paso Flores 71.18 201 eP P 23 23 10.3 -0.6
PLCA e 23 25 47.6
PLCA pmax pmax
comp=Z,118nm,1.7s
PLCA MLR MLR
comp=Z,2µm,20.0s
ONI Oni 71.19 51 P P 23 23 09.9 -1.3
ONI S S 23 32 32.9 +4.6
ZEI Tsey 71.44 51 eP P 23 23 13.2 +0.5
ZEI pmax pmax
comp=Z,23nm,1.5s,mb4.9
COLA College 71.63 334 i P P 23 23 12.7 -0.7
COLA College 71.63 334 P P 23 23 12.8 -0.6
COLA pmax pmax
comp=Z,150nm,1.6s,mb5.7
DYDN Diyadin 72.38 54⇓iP P 23 23 17.6 -0.8
TBLG Delisi 72.38 52 P P 23 23 18.4 +0.1
MTA Mtatsminda 72.43 52 P P 23 23 16.4 -2.2
MTA S S 23 32 46.1 +3.5
MCK McKinley 72.53 333 eP P 23 23 18.3 -0.5
MCK LR LR
comp=Z,2µm,22.0s,MS5.3
DGRG David-gareji 72.92 52 P P 23 23 19.6 -1.9
SOKR Solikamsk 72.96 31c iP P 23 23 21.2 -0.3
SOKR S S 23 32 52.4 +4.4
SOKR SS SS 23 37 29.9 +2.1
SOKR pmax pmax

comp=Z,40nm,1.0s,mb5.3
SOKR MLR MLR
comp=Z,2μm,17.0s,MS5.5
MSL Mosul 73.07 58 *ex* x 23 23 23.5
MSL *ex* x 23 27 18.5
HAKT HAKKARI 73.08 56 ⇓ *i* P **P 23 23 20.7 -1.9**
IMA2 Indian Mountai 73.31 336 *eP* **P 23 23 23.3 -0.1**
PMR Palmer 73.52 331 *eP* **P 23 23 20.0 -4.7**
comp=Z,4.0nm,0.6s,mb4.5
PMR LR LR
comp=Z,13μm,20.0s,MS6.2
PMR Palmer 73.52 331 *eP* **P 23 23 24.5 -0.2**
MAK Makhachkala 73.86 50 *eP* **P 23 23 28.3 +1.2**
MAK *e*PPP 23 28 04.3
MAK *e*S S 23 32 57.2 -1.7
MAK *e* 23 33 36.5
MAK pmax pmax
comp=Z,406nm,1.3s,mb6.2
MAK MLR MLR
comp=Z,2μm,15.0s,MS5.6
ARU Arti 75.12 34 *eP* **P 23 23 33.0 -1.2**
ARU LR LR
comp=Z,3μm,19.0s,MS5.7
ARU Arti 75.12 34 *d i* P **P 23 23 33.6 -0.6**
ARU *e* 23 23 44.6
ARU *e* 23 26 26.6
ARU *e*PPP 23 28 08.8
ARU *e* 23 33 50.4
ARU *e*SS SS 23 37 56.1 -4.7
ARU pmax pmax
comp=Z,62nm,1.7s,mb5.3
BHD Baghdad 75.16 60 *ex* x 23 23 34.0
TSUM Tsumeb 75.58 120 *eP* **P 23 23 38.0 +0.7**
TSUM LR LR
comp=Z,4μm,20.0s,MS5.8
TTA Tatalina 75.73 334 *eP* **P 23 23 37.0 -0.6**
SVE Sverdlovsk 75.98 33 ⇓ *i* P **P 23 23 39.2 +0.2**
SVE *e*S S 23 33 23.2 +1.3
SVE pmax pmax
comp=Z,59nm,1.5s,mb5.3
SVW2 Sparrevohn 76.50 332 *eP* **P 23 23 41.4 -0.5**
KDAK Kodiak Island 76.82 328 P **P 23 23 43.7 -0.1**
KDAK LR LR
comp=Z,2μm,20.0s,MS5.5
KDAK Kodiak Island 76.82 328 P **P 23 23 43.7 -0.1**
comp=Z,15nm,0.8s,mb5.0,baz=73,slow=8.4,SNR=4.5
AKTK Aktyubinsk 77.47 40 P **P 23 23 47.4 -0.3**
AKTO Aktyubinsk 77.47 40 P **P 23 23 47.4 -0.3**
comp=Z,12nm,0.9s,mb4.8,baz=303,slow=5.7,SNR=33
TNA Tin City 78.45 339 *eP* **P 23 23 53.6 +0.8**
comp=Z,268nm,2.5s,mb5.7
TNA LR LR
comp=Z,2μm,19.0s,MS5.5
EFI East Falkland 78.82 188 *eP* **P 23 23 54.3 -0.4**
EFI LR LR
comp=Z,4μm,19.0s,MS5.8
FURI Furi 80.12 85 *eP* **P 23 24 05.2 +2.4**
HOPE Hope Point 80.84 175 PFAKE 23 24 20.0 +14
HOPE LR LR
comp=Z,4.0nm,20.0s
GAMB Gambell 80.85 339 *eP* **P 23 24 06.1 +0.2**
TIXI Tiksi 81.92 2 *i* P **P 23 24 11.1 -0.3**
TIXI Tiksi 81.92 2 P **P 23 24 10.6 -0.8**
TIXI pmax pmax
comp=Z,41nm,1.1s,mb5.3
RPN Rapa Nui 82.01 234 PFAKE 23 24 20.0 +7.5
RPN LR LR
comp=Z,1μm,22.0s,MS5.2
RPN Rapa Nui 82.01 234 LR LR 23 55 40.1
comp=Z,954nm,21.0s,MS5.1,baz=231,slow=32
LSZ Lusaka 82.02 111 *eP* **P 23 24 12.4 -0.4**
comp=Z,128nm,2.0s,mb5.5
LSZ LR LR
comp=Z,5μm,21.0s,MS5.9
LSZ Lusaka 82.02 111 P **P 23 24 13.6 +0.8**
LSZ pmax pmax
comp=Z,130nm,2.0s,mb5.5
BRVK Borovoye 82.68 34 P **P 23 24 16.4 +0.7**
comp=Z,151nm,0.9s,mb6.0,SNR=16
BRVK Borovoye 82.68 34 *i* P **P 23 24 15.6 -0.1**
BRVK Borovoye 82.68 34 *i* P **P 23 24 15.6 -0.1**
BILL Bilibino 82.91 349 *i* P **P 23 24 16.2 -0.4**
BILL Bilibino 82.91 349 *i* P **P 23 24 16.1 -0.5**
BILL *i* 23 24 21.9
BILL *i* SS SS 23 39 57.0 +0.2
BILL pmax pmax
comp=Z,56nm,1.7s,mb5.3
BILL MLR MLR
comp=Z,4μm,21.0s,MS5.8
KMBO Kilima Mbogo 83.23 95 P **P 23 24 21.0 +1.7**
comp=Z,5.1nm,1.1s,mb4.5,baz=309,slow=6.1,SNR=16
KMBO LR LR 00 01 48.5
comp=Z,15μm,18.0s,MS6.4,baz=288,slow=36
LBTB Lobatse 84.97 121 *eP* **P 23 24 27.0 -0.8**
comp=Z,48nm,1.9s,mb5.3
LBTB LR LR
comp=Z,6μm,20.0s,MS6.0
LBTB Lobatse 84.97 121 *eP* **P 23 24 27.0 -0.8**
LBTB pmax pmax
comp=Z,48nm,1.9s,mb5.3
LBTB MLR MLR
comp=Z,6μm,20.0s,MS6.0
UNV Unalaska Valle 85.50 330 PFAKE 23 24 40.0 +10
UNV LR LR
comp=Z,38μm,20.0s,MS6.8
SUR Sutherland 85.54 129 PFAKE 23 24 40.0 +9.5
SUR LR LR
comp=Z,4μm,22.0s,MS5.7
BOSA Boshof 86.63 124 PFAKE 23 24 50.0 +14
BOSA LR LR
comp=Z,7μm,20.0s,MS6.0
BOSA Boshof 86.63 124 LR LR 23 57 41.8
comp=Z,6μm,19.7s,MS6.0,baz=313,slow=32
NVS Novosibirsk 87.40 27 *i* P **P 23 24 38.3 -1.1**
NVS *e* 23 28 04.0
NVS pmax pmax
comp=Z,171nm,3.0s
NVS pmax pmax
comp=N,26nm,2.2s
HATD Hatta, Dubai 88.05 63 ⇑ P **P 23 24 41.9 -1.2**
SNR=8.1
ASHO Ashiyiah 88.06 63 ⇑ P **P 23 24 41.8 -1.3**
SNR=6.5
KURK Kurchatov 88.19 32 *i* P **P 23 24 42.4 -0.8**
ZAA0 Zalesovo Array 88.69 27 *eP* **P 23 24 44.9 -0.7**
ZAL Zalesovo 88.69 27 P **P 23 24 45.0 -0.5**
ZALV Zalesovo Beam 88.69 27 P **P 23 24 45.0 -0.6**
ZALV Zalesovo Beam 88.69 27 P **P 23 24 45.0 -0.6**
comp=N,6.1nm,0.9s,mb5.0,baz=306,slow=5.3,SNR=21
ZALV LR LR 00 02 51.7
comp=N,2μm,20.1s,MS5.6,baz=303,slow=34
FRU Bishkek 91.16 40 *eP* **P 23 24 57.0 -0.3**
FRU MLR MLR
comp=N,3μm,19.0s,MS5.9
FRU MLR MLR
comp=E,3μm,19.0s,MS5.9
FRU MLR MLR
comp=Z,4μm,19.0s,MS5.9
AAK Ala-Archa 91.21 40 *i* P **P 23 24 56.7 -0.8**
YAK Yakutsk 91.57 3 *eP* **P 23 24 57.5 -1.4**
YAK LR LR
comp=Z,1μm,20.0s,MS5.3
PMSA Palmer Station 92.31 188 PFAKE 23 25 10.0 +8.2
PMSA LR LR
comp=Z,2μm,21.0s,MS5.5
MKAR Makanchi Array 92.64 33 P **P 23 25 03.5 -0.6**
MKAR 23 42 14.4
MKAR Makanchi Array 92.64 33 P **P 23 25 03.5 -0.6**
comp=Z,0.4nm,0.6s,baz=317,slow=2.7,SNR=6.8
MKAR PKKP PKKPbc 23 42 14.4 -2.2
comp=Z,0.7nm,0.6s,baz=111,slow=5.3,SNR=9.5
MKAR LR LR 00 04 48.1
comp=Z,3μm,21.6s,MS5.6,baz=304,slow=34
MA2 Magadan 93.22 352 ⇓ *eP* **P 23 25 05.8 -0.7**
BOD Bodaibo 94.02 11 *eP* **P 23 25 07.9 -2.3**
BOD pmax pmax
comp=Z,16nm,1.4s,mb5.3
KSH Kashi 94.04 42 *eP* **P 23 25 11.3 +0.6**
KSH AP pP 23 25 15.8 +1.8
KSH XP sP 23 25 18.6 +3.4
KSH PP PP 23 28 58.5 +2.3
KSH SKS 23 35 43.9
KSH S S 23 36 19.1 -2.3
KSH XS sS 23 36 31.8 +4.8
KSH AMB AMB
comp=Z,9.0nm,0.1s,mb6.2
SMY Shemya 94.10 338 PFAKE 23 25 20.0 +9.3
SMY LR LR
comp=Z,4μm,19.0s,MS5.9
PTCN Pitcairn Islan 97.09 246 PFAKE 23 25 40.0 +15
PTCN LR LR
comp=Z,3μm,19.0s,MS5.8
TLY Talaya 97.23 19 PFAKE 23 25 40.0 +15
TLY LR LR
comp=Z,1μm,22.0s,MS5.3
TLY Talaya 97.23 19 *eP* **P 23 25 24.3 -0.6**
TLY *e* 23 29 26.3
TLY *e*PPP 23 31 29.9
TLY *e*PS PS 23 38 19.3 +8.8
TLY pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,2μm,22.0s,MS5.5
WMQ Urumqi 97.42 33 ⇑ P **P 23 25 26.0 0.0**
WMQ AP pP 23 25 30.8 +1.5
WMQ XP sP 23 25 33.0 +2.5
WMQ AMB AMB
comp=Z,9.0nm,1.6s,mb5.0
PET Petropavlovsk 98.17 346 PFAKE 23 25 40.0 +11
PET LR LR
comp=Z,2μm,22.0s,MS5.5
PET Petropavlovsk 98.17 346 *eP* **P 23 25 22.8 -6.3**
PET *e* 23 29 27.7
POHA Pohakuloa 98.71 297 PFAKE 23 25 40.0 +7.8
POHA LR LR
comp=Z,4μm,20.0s,MS5.9
KIP Kipapa 99.76 300 PFAKE 23 25 50.0 +14
KIP LR LR
comp=Z,4μm,20.0s,MS5.9
RKT Rikitea 100.30 249 *e*LQ 23 53 58.8
comp=Z,2μm,33.0s
RKT Rikitea 100.30 249 *e*PS PS 23 38 40.8 -4.8
comp=Z,1μm,28.5s
RKT Rikitea 100.30 249 *e*SS SS 23 44 05.7 -5.0
comp=Z,680nm,33.5s
RKT *e*LR LR 23 58 22.9
comp=Z,4μm,37.5s
MSEY Mahe Island 101.10 90 PFAKE 23 25 50.0 +7.7
MSEY LR LR
comp=Z,6μm,22.0s,MS6.1
SONM Songino Array 101.47 19 P Pdif 23 25 46.5 +2.6
comp=Z,0.4nm,0.8s,baz=310,slow=2.0,SNR=3.2
ULN Ulaanbaatar 101.63 19 PFAKE 23 26 00.0 +15
ULN LR LR
comp=Z,2μm,19.0s,MS5.5
HIA Hailar 103.21 10 PFAKE 23 26 00.0 +8.3
HIA LR LR
comp=Z,3μm,20.0s,MS5.8
YSS Yuzh-Sakhalins 106.50 355 PFAKE 23 30 30.0 +13
YSS LR LR
comp=Z,2μm,21.0s,MS5.6
MDJ Mudanjiang 108.94 4 PDIF Pdif 23 26 15.1 -2.1
MDJ PP PP
comp=Z,245nm,5.9s
MDJ LR LR
comp=N,404nm,27.9s,MS5.2
MDJ LR LR
comp=E,826nm,26.7s,MS5.2
MDJ LR LR
comp=Z,922nm,28.5s,MS5.2
LSA Lhasa 109.80 40 PFAKE 23 30 40.0 +16
LSA LR LR
comp=Z,2μm,21.0s,MS5.7
PPT Papeete 110.73 260 *e*PS PS 23 40 29.1 -4.5
comp=Z,2μm,28.5s
PPT Papeete 110.73 260 *e*LR LR 00 03 20.2
comp=Z,7μm,32.8s
LZH Lanzhou 110.92 27 *e*PKP PKiKP 23 30 21.1 -4.7
LZH XPKP 23 30 25.6
LZH PP PP 23 31 02.3 -0.2
LZH PKS 23 33 56.5
LZH SKS SKSdf 23 37 30.6 -7.6
LZH SKKS SKKSac 23 37 54.5 -12
LZH PP PP
comp=Z,185nm,8.1s
LZH LR LR
comp=E,853nm,18.3s
LZH LR LR
comp=Z,1μm,20.5s,MS5.5
LZH Lanzhou 110.92 27 *e*PKP PKiKP 23 30 21.1 -4.7
LZH pPKP 23 30 24.4
LZH sPKP 23 30 25.6
LZH PP PP 23 31 02.3 -0.2
LZH PKS 23 33 56.5
LZH SKS SKSdf 23 37 30.6 -7.6
LZH SKKS SKKSac 23 37 54.5 -12
LZH SS SS 23 46 26.9 -5.9
LZH LR LR
comp=Z,1μm,20.5s,MS5.5
LZH Lanzhou 110.92 27 *e*PKIKP PKiKP 23 30 21.1 -4.7
LZH 23 30 24.4
LZH 23 30 25.6
LZH 23 31 02.3
LZH 23 37 30.6
LZH SS SS 23 46 26.9 -5.9
LZH MLR MLR
comp=Z,1μm,20.5s,MS5.5
BJI Beijing 111.34 16 PDIF Pdif 23 26 25.4 -2.4
BJI PKS 23 34 00.8
BJI SKS SKSdf 23 37 36.8 -2.0
BJI LR LR
comp=N,234nm,18.6s,MS5.0
BJI LR LR
comp=E,253nm,19.0s,MS5.0
BJT Baijiatuau 111.36 16 PFAKE 23 30 40.0 +13
BJT LR LR
comp=Z,3μm,22.0s,MS5.8
ERM Erimo 111.36 354 PFAKE 23 30 40.0 +14
ERM LR LR
comp=Z,3μm,19.0s,MS5.9
SHL Shillong 113.31 43 *ex* x 23 31 19.0
DL2 Dalian 113.59 12 *e*PKP PKiKP 23 30 27.4 -3.4
DL2 PP PP
comp=Z,150nm,4.6s
DL2 LR LR
comp=N,580nm,16.5s,MS5.3
DL2 LR LR
comp=E,450nm,17.5s,MS5.3
DL2 LR LR
comp=Z,810nm,18.6s,MS5.3
CD2 Chengdu 115.33 30 *e*PKP PKPdf 23 30 33.1 -1.3
CD2 PP PP 23 31 37.0 +3.0
CD2 PKS 23 34 08.0
CD2 SKS SKSdf 23 37 39.8 -7.0
CD2 SKKS SKKSac 23 38 26.0 -11
CD2 SS SS 23 47 27.0 -4.3
CD2 PP PP
comp=Z,250nm,10.8s
CD2 LR LR
comp=N,690nm,20.4s,MS5.3
CD2 LR LR
comp=E,490nm,19.2s,MS5.3
CD2 LR LR
comp=Z,830nm,19.2s,MS5.4
INCN Inchon 115.74 8 PFAKE 23 30 50.0 +15
INCN LR LR
comp=Z,1μm,21.0s,MS5.5
QSPA South Pole Qui 116.51 180 PFAKE 23 30 50.0 +15
QSPA LR LR
comp=Z,1μm,21.0s,MS5.5
MAJO Matsushiro 117.15 357 PFAKE 23 30 50.0 +12
MAJO LR LR
comp=Z,2μm,22.0s,MS5.7
MAT Matsushiro 117.15 357 PS PS 23 41 34.8 +4.3
MJAR Matsushiro Arr 117.15 357 PKP PKPdf 23 30 36.2 -1.6
MJAR Matsushiro Arr 117.15 357 PKP PKPdf 23 30 36.2 -1.6
comp=Z,1.1nm,0.6s,baz=312,slow=2.1,SNR=4.2
PALK Pallekele 117.23 66 PFAKE 23 30 50.0 +12
PALK LR LR
comp=Z,3μm,20.0s,MS6.0
ENH Enshi 118.27 25 PFAKE 23 30 50.0 +10
ENH LR LR
comp=Z,4.0nm,21.0s
NJ2 Nanjing 119.59 16 *e*PKP PKPdf 23 30 39.4 -3.2
NJ2 PP PP 23 32 07.0 +3.6
NJ2 PKS 23 34 14.0
NJ2 SKS SKSdf 23 37 46.0 -8.9
NJ2 PP PP
comp=Z,190nm,5.0s
NJ2 LR LR
comp=N,1μm,28.0s,MS5.4
NJ2 LR LR
comp=E,390nm,25.3s,MS5.4
NJ2 LR LR
comp=Z,590nm,25.4s,MS5.1
KMI Kunming 119.71 34 PKP PKPdf 23 30 41.2 -1.7
KMI sPKP 23 30 47.3
KMI SKKS SKKSac 23 38 59.3 -6.9
KMI SS SS 23 48 24.5 -4.1
KMI LR LR
comp=Z,1μm,16.9s,MS5.6
KMI Kunming 119.71 34 PKIKP PKPdf 23 30 41.2 -1.7
KMI 23 30 47.3
KMI SS SS 23 48 24.5 -4.1
KMI MLR MLR
comp=Z,1μm,16.9s,MS5.6
MAW Mawson 120.95 155 PKP PKPdf 23 30 41.1 -2.8
comp=Z,15nm,1.0s,baz=4.6,slow=4.0,SNR=3.6
RAR Rarotonga 121.01 260 PFAKE 23 31 00.0 +15
RAR LR LR
comp=Z,2.0nm,19.0s
SSE Sheshan 121.06 14 *e*PKP PKPdf 23 30 44.0 -1.4
SSE PP PP 23 32 18.2 +4.8
SSE SS SS 23 48 41.6 -3.4
SSE PP PP
comp=Z,343nm,4.2s
SSE LR LR
comp=N,761nm,25.9s,MS5.5
SSE LR LR
comp=E,1μm,25.7s,MS5.5
SSE LR LR
comp=Z,2μm,21.9s,MS5.6
SSE Sheshan 121.06 14 *e*PKP PKPdf 23 30 44.9 -0.5
SSE PP PP 23 32 18.2 +4.8
SSE SS SS 23 48 41.6 -3.4
SSE LR LR
comp=Z,2μm,21.9s,MS5.6
CHTO Chiang Mai 122.66 42 PFAKE 23 31 00.0 +11
CHTO LR LR
comp=Z,1μm,22.0s,MS5.5
TATO Taipei 127.01 16 PFAKE 23 31 10.0 +13
TATO LR LR
comp=Z,2μm,20.0s,MS5.8
VNDA Vanda 127.51 187 PKP PKPdf 23 30 56.1 -0.2
VNDA LR LR
comp=Z,1μm,20.0s,MS5.5
VNDA Vanda 127.51 187 PKP PKPdf 23 30 56.1 -0.2
comp=Z,9.3nm,0.9s,baz=10,slow=2.0,SNR=7.7
QIZ Qiongzhong 128.32 31 PKP PKPdf 23 30 56.2 -3.4
QIZ PP PP 23 33 07.3 +4.8
QIZ PP PP
comp=Z,163nm,8.0s
QIZ LR LR
comp=E,809nm,21.4s
QIZ LR LR
comp=Z,1μm,20.6s,MS5.6
QIZ Qiongzhong 128.32 31 PFAKE 23 31 10.0 +10
QIZ LR LR
comp=Z,1μm,21.0s,MS5.6
AFI Afiamalu 129.16 273 PFAKE 23 31 10.0 +8.8
AFI LR LR
comp=Z,2μm,21.0s,MS5.8
FUNA Funafuti 134.80 285 PFAKE 23 31 20.0 +8.1
FUNA LR LR
comp=Z,5μm,19.0s,MS6.3
CASY Casey 137.38 165 PFAKE 23 31 30.0 +15
CASY LR LR
comp=Z,4μm,20.0s,MS6.1
GUMO Guam 139.01 346 PFAKE 23 31 30.0 +10
GUMO LR LR
comp=Z,2μm,19.0s,MS5.8
COCO West Island 141.09 76 PFAKE 23 31 40.0 +17
COCO LR LR
comp=Z,3μm,21.0s,MS6.0
URZ Urewera 143.19 241 PKP PKPdf 23 31 26.5 0.0
comp=Z,9.6nm,0.7s,baz=19,slow=6.1,SNR=7.1
SNZO South Karori 144.55 235 PFAKE 23 31 40.0 +11
SNZO LR LR
comp=Z,1μm,19.0s,MS5.8
DAV Davao City (W) 145.22 17 PFAKE 23 31 40.0 +10
DAV LR LR
comp=Z,3μm,20.0s,MS6.1
RPZ Rata Peaks 146.51 230 PKP PKPdf 23 31 32.8 +0.7
comp=Z,19nm,0.8s,baz=227,slow=1.8,SNR=10
HNR Honiara 151.16 302 PFAKE 23 31 50.0 +10
HNR LR LR
comp=Z,4μm,20.0s,MS6.2
PMG Port Moresby 159.59 325 PFAKE 23 32 00.0 +8.1
PMG LR LR
comp=Z,3μm,21.0s,MS6.1
TAU Tasmania Unive 161.03 208 PFAKE 23 32 00.0 +7.4
TAU LR LR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 163.04 116 PFAKE 23 32 10.0 +15
NWAO LR LR
comp=Z,3μm,21.0s
MBWA Marble Bar 164.70 73 PFAKE 23 32 10.0 +13
MBWA LR LR
comp=Z,4μm,20.0s
CTAO Charters Tower 168.10 301 PFAKE 23 32 10.0 +11
CTAO LR LR
comp=Z,3μm,22.0s
STKA Stephens Creek 172.44 224 PKP PKPdf 23 32 00.6 -1.0
comp=Z,2.9nm,0.8s,baz=69,slow=0.9,SNR=5.3
WRA Warramunga Arr 173.31 8 PKP PKPdf 23 32 01.7 -0.6
comp=Z,1.1nm,0.8s,baz=316,slow=0.7,SNR=5.0
WRA PKPab PKPab 23 33 29.2 -0.8
comp=Z,2.7nm,0.7s,baz=354,slow=5.2,SNR=13
ASAR Alice Springs 176.80 25 PKP PKPdf 23 32 02.2 -0.9
comp=Z,1.1nm,0.8s,baz=173,slow=0.1,SNR=11
ASAR PKPab PKPab 23 33 46.0 +0.5
comp=Z,1.0nm,0.8s,baz=355,slow=5.5,SNR=5.8

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*ISCJB **01** 23:42:03.3±0.4, 2660N±008×4461W±007, h10km, mb4.3/19, Error ellipse: s-maj=12.3km s-min=8.1km az=155.5*
*IDC **01** 23:42:03.6±0.7, 2656N×4456W, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/22, mbtmp4.1/12, MS4.6/1, Ms1 4.6/1, ms1mx3.9/37, Error ellipse: s-maj=23.5km s-min=17.5km az=141.0*
*MOS **01** 23:42:03.2±0.8, 2666N×4459W, h10km, mb4.7/8, Error ellipse: s-maj=15.5km s-min=13.2km az=78.3*
*NEIC **01** 23:42:04.8±0.4, 2658N×4456W, h10km, mb4.6/6, Error ellipse: s-maj=10.5km s-min=7.8km az=148.0*

ISC 01 23:42:05.3±0.4, 2661W±008×4461W±007, h10km, n52, g092/50, mb4.3/19, 1C-2D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BBSR	**BB Station**	**18.40**	**293**	P	**P**	**Pn**	**23 46 21.1**	**+0.6**
SJG	**San Juan**	**21.62**	**251**	*eP*	**P**		**23 46 56.2**	**+0.6**
	10nm,0.8s,mb4.3							
SJG	**San Juan**	**21.62**	**251**	*eP*	**P**		**23 46 56.2**	**+0.6**
SJG				pmax	pmax			
	comp=Z,10.0nm,0.8s							
SDV	**Santo Domingo**	**30.30**	**239**	P	**P**		**23 48 17.7**	**+0.7**
ROSC	**El Rosal**	**35.69**	**238**	LR	LR		00 01 54.4	
	comp=Z,803nm,18.2s,baz=5.5,slow=33							
SWET	**Sewanee**	**36.27**	**294**	P	**P**		**23 49 09.2**	**+0.4**
WVT	**Waverly**	**37.85**	**295**	P	**P**		**23 49 21.3**	**-0.9**
	comp=Z,0.1nm,0.6s							
SIV	**San Ignacio**	**45.26**	**203**	P	**P**		**23 50 23.0**	**-0.1**
	comp=Z,1.7nm,0.9s,mb3.9,baz=28,slow=6.8,SNR=7.8							
TORD	**Torodi Ar. Bea**	**45.32**	**98**	P	**P**		**23 50 21.9**	**-1.8**
TORD	**Torodi Ar. Bea**	**45.32**	**98**	P	**P**		**23 50 21.9**	**-1.8**
	comp=Z,0.6nm,0.8s,mb3.5,baz=257,slow=5.3,SNR=7.9							
WMOK	**Wichita Mounta**	**46.82**	**294**	*eP*	**P**		**23 50 35.4**	**0.0**
	comp=Z,2.9nm,0.8s,mb4.3							
WMOK	**Wichita Mounta**	**46.82**	**294**	*eP*	**P**		**23 50 35.4**	**0.0**
WMOK				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
FCC	**Fort Churchill**	**46.90**	**327**	*eP*	**P**		**23 50 36.1**	**+0.6**
	comp=Z,6.7nm,1.0s,mb4.5							
FCC	**Fort Churchill**	**46.90**	**327**	*eP*	**P**		**23 50 36.1**	**+0.5**
FCC				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.5							
LPAZ	**La Paz**	**48.38**	**211**	*eP*	**P**		**23 50 48.1**	**+0.6**
	comp=Z,6.6nm,0.9s,mb4.7							
LPAZ	**La Paz**	**48.38**	**211**	*eP*	**P**		**23 50 48.1**	**+0.6**
LPAZ				pmax	pmax			
	comp=Z,7.0nm,0.9s							
LPAZ	**La Paz**	**48.38**	**211**	P	**P**		**23 50 48.1**	**+0.6**
	comp=Z,11nm,1.2s,mb4.8,baz=31,slow=10.0,SNR=13							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NNA	Nana	49.52	223	P	P	23 50 54.2	-2.2
CLL	Collm	49.62	44	eP	P	23 50 57.0	+0.3
CLL				e(pP)	pP	23 51 03.0	+3.1
GERES	GERESS Array B	49.83	47	P	P	23 50 58.2	-0.1
	comp=Z,1.0nm,0.7s,mb3.9,baz=280,slow=7.7,SNR=4.4						
PAYG	Puerto Ayora	51.66	246	P	P	23 51 13.2	+0.6
LTX	Lajitas	51.75	288	P	P	23 51 13.9	+0.7
TXAR	Lajitas Array	51.75	288	P	P	23 51 13.4	+0.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=81,slow=8.1,SNR=3.7						
SDCO	Great Sand Dun	51.92	298	P	P	23 51 12.6	-1.7
RES	Resolute Bay	54.45	345	eP	P	23 51 32.8	+0.5
	comp=Z,167nm,1.1s						
PDAR	Pinedale Array	54.51	305	P	P	23 51 34.1	+0.8
	comp=Z,1.0nm,0.8s,mb3.9,baz=96,slow=7.4,SNR=8.1						
BZS	Buzias	55.21	51⇑	iP	P	23 51 39.3	+1.0
HWUT	Hardware Ranch	56.12	304	P	P	23 51 40.6	-4.3
YKA	Yellowknife Ar	57.54	329	P	P	23 51 54.2	-0.4
YKA	Yellowknife Ar	57.54	329	P	P	23 51 54.2	-0.4
	comp=Z,3.2nm,1.0s,mb4.3,baz=94,slow=7.4,SNR=22						
FINES	FINESS Array B	57.80	32	P	P	23 51 57.0	+0.5
FINES	FINESS Array B	57.80	32	P	P	23 51 57.0	+0.5
	comp=Z,4.5nm,0.9s,mb4.5,baz=318,slow=2.6,SNR=9.0						
KAF	Kangasniemi	57.94	32	ep	P	23 51 55.9	-1.6
MLR	Muntele Rosu	58.25	51⇓	iP	P	23 52 02.4	+2.5
ARCES	ARCESS Array B	58.39	23	P	P	23 52 00.6	+0.1
ARCES	ARCESS Array B	58.39	23	P	P	23 52 00.6	+0.1
	comp=Z,4.1nm,0.9s,mb4.5,baz=3.5,slow=9.8,SNR=4.6						
NEW	Newport	59.26	312	eP	P	23 52 05.4	-1.4
	comp=Z,4.3nm,0.9s,mb4.5						
NEW	Newport	59.26	312	eP	P	23 52 05.4	-1.5
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	Malin Array Be	59.85	45	P	P	23 52 10.8	-0.1
	comp=Z,4.9nm,1.0s,mb4.5,baz=268,slow=7.4,SNR=3.8						
JOF	Joensuu	60.28	31	ep	P	23 52 03.9	-10
OBN	Obninsk	63.67	39	eP	P	23 52 35.2	-1.4
OBN				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.0						
BRTR	Keskin Array B	64.90	56	P	P	23 52 45.8	+0.8
	comp=Z,2.6nm,1.0s,mb4.2,baz=270,slow=4.7,SNR=11						
INK	Inuvik	65.18	336	eP	P	23 52 46.1	-0.1
	comp=Z,271nm,1.2s						
MALT	Malatya	68.88	57⇓	iP	P	23 53 11.6	+1.3
PLCA	Paso Flores	71.20	201	eP	P	23 53 24.3	+0.1
	comp=Z,6.0nm,1.2s,mb4.4						
PLCA	Paso Flores	71.20	201	eP	P	23 53 24.3	+0.1
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
COLA	College	71.63	334	P	P	23 53 25.6	-1.0
TIXI	Tiksi	81.91	2	eP	P	23 54 24.2	-0.4
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
ZAL	Zalesovo	88.67	27	P	P	23 54 58.7	0.0
ZALV	Zalesovo Beam	88.67	27	P	P	23 54 58.7	+0.1
ZALV	Zalesovo Beam	88.67	27	P	P	23 54 58.7	+0.1
	comp=Z,0.9nm,0.8s,mb4.1,baz=305,slow=5.2,SNR=6.1						
QSPA	South Pole Qui	116.52	180	PKPdf	PKPdf	00 00 43.4	-4.9

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*BJI **01** 23:47:29.6, 30.15S×177.36W, h31km, mB5.7, mb5.1, Ms5.4, Msz5.0*
*ISCJB **01** 23:47:30.6±0.4, 30.82S±0.04×178.00W±0.08, h33km, mb4.9/25, MS4.8/4, Error ellipse: s-maj=10.8km s-min=4.0km az=21.7*
*MOS **01** 23:47:32.1±2.1, 30.29S×178.08W, h33km, mb5.4/7, Error ellipse: s-maj=15.8km s-min=10.9km az=84.4*
*NEIC **01** 23:47:32.3±0.3, 30.78S×177.97W, h35km, mb5.0/13, Error ellipse: s-maj=13.1km s-min=7.9km az=122.0*
*IDC **01** 23:47:34.6±2.1, 30.34S×178.02W, h49km±18km, mb4.4/12, mb1 4.6/12, mb1mx4.6/13, mbtmp4.4/12, MS4.5/6, Ms1 4.5/6, ms1mx4.2/19, Error ellipse: s-maj=21.1km s-min=16.1km az=137.0*

ISC 01 23:47:32.7±0.4, 30.85S±0.04×178.02W±0.08, h35km, n196, σ1.45/99, mb4.9/25, MS4.8/4, 5C-6D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.59	3	P	Pn	23 47 52.7	-5.6
	2µm,0.3s,baz=78,slow=20,SNR=34						
MXZ	Matakaoa Point	7.36	203	eP	Pn	23 49 17.7	+0.2
MXZ	Matakaoa Point	7.36	203	ePN	Pn	23 49 17.2	-0.3
MXZ				SN	Sn	23 50 43.9	+4.2
PUZ	Puketiti	7.83	202	eP	Pn	23 49 24.3	+0.2
PUZ	Puketiti	7.83	202	ePN	Pn	23 49 23.8	-0.3
PUZ				SN	Sn	23 50 54.6	+3.1
KUZ	Kuaotunu	7.86	220	PN	Pn	23 49 31.5	+7.1
WCZ	Waipu Caves	8.16	229	eP	Pn	23 49 38.4	+10
WCZ	Waipu Caves	8.16	229	ePN	Pn	23 49 38.4	+10
OUZ	Omahuta	8.28	236	ePN	Pn	23 49 39.8	+10
MWZ	Matawai	8.32	205	eP	Pn	23 49 30.2	-0.6
MWZ				S	Sn	23 51 08.9	+5.4
MWZ	Matawai	8.32	205	ePN	Pn	23 49 30.2	-0.5
MWZ				SN	Sn	23 51 08.9	+5.4
URZ	Urewera	8.41	207	eP	Pn	23 49 32.2	+0.2
URZ	Urewera	8.41	207	P	Pn	23 49 32.4	+0.4
	2.6nm,0.3s,baz=335,slow=0.7,SNR=29						
URZ				S	Sn	23 51 10.7	+5.0
	17nm,0.3s,baz=347,slow=24,SNR=11						
URZ	Urewera	8.41	207	ePN	Pn	23 49 32.2	+0.2
URZ				SN	Sn	23 51 10.6	+4.8
KNZ	Kokohu	8.89	202	eP	Pn	23 49 38.5	0.0
KNZ	Kokohu	8.89	202	ePN	Pn	23 49 38.5	0.0
BKZ	Black Stump Fm	9.44	207	eP	Pn	23 49 45.6	-0.5
BKZ				S	Sn	23 51 33.9	+3.0
BKZ	Black Stump Fm	9.44	207	ePN	Pn	23 49 45.6	-0.4
BKZ				SN	Sn	23 51 33.9	+3.0
PXZ	Pawanui	10.07	203	PN	Pn	23 49 52.8	-1.9
TSZ	Takapari Road	10.42	206	PN	Pn	23 49 57.8	-1.6
MRZ	Mangatainoka R	11.08	206	eP	Pn	23 50 04.7	-3.9
MRZ				S	Sn	23 52 09.0	-2.2
MRZ	Mangatainoka R	11.08	206	ePN	Pn	23 50 04.7	-3.9
MRZ				SN	Sn	23 52 09.0	-2.2
KIW	Kapiti Island	11.52	208	eP	Pn	23 50 11.2	-3.3
KIW				S	Sn	23 52 20.4	-1.4
KIW	Kapiti Island	11.52	208	ePN	Pn	23 50 11.2	-3.3
KIW				SN	Sn	23 52 20.4	-1.5
NNZ	Nelson	12.46	212	SN	Sn	23 52 43.5	-1.5
KHZ	Kahutara	13.38	208	eP	Pn	23 50 37.5	-2.4
MQZ	McQueen's Vall	14.81	207	SN	Sn	23 53 33.4	-8.9
WVZ	Waitaha Valley	15.14	213	ePN	Pn	23 51 02.3	-1.4
RPZ	Rata Peaks	15.49	211	P	Pn	23 51 09.1	+0.7
RPZ				S	Sn	23 53 51.5	-7.3
RPZ				LR	LR	23 57 24.4	
RPZ	Rata Peaks	15.49	211	P	Pn	23 51 09.1	+0.7
	2.8nm,0.3s,baz=92,slow=2.7,SNR=6.6						
RPZ				S	Sn	23 53 51.5	-7.3
	4.2nm,0.3s,baz=203,slow=23,SNR=9.2						
RPZ				LR	LR	23 57 24.5	
	comp=Z,992nm,18.1s,baz=28,slow=37						
DZM	Mont Dzumac	16.42	298	P	Pn	23 51 25.1	+4.7
	0.6nm,0.3s,baz=91,slow=18,SNR=5.4						
DZM				LR	LR	23 56 25.7	
	comp=Z,2µm,19.8s,baz=295,slow=33						
JCZ	Jackson Bay	16.84	215	ePN	Pn	23 51 23.0	-2.5
AFI	Afiamalu	17.81	20	eP	Pn	23 51 29.9	-7.9
RAR	Rarotonga	18.97	64	LR	LR	23 56 24.3	
	comp=Z,743nm,21.7s,baz=60,slow=28						
ARMA	Armidale	26.09	263	eP	P	23 53 04.3	+1.2
	0.6nm,0.9s						
EIDS	Eidsvold	27.75	274	eP	P	23 53 20.1	+2.0
	36nm,1.4s,mb4.8						
HNR	Honiara	29.58	311	P	P	23 53 30.2	-4.3
TAU	Tasmania Unive	30.02	237	eP	P	23 53 42.3	+4.2
	20nm,0.9s,mb4.8						
TAU	Tasmania Unive	30.02	237	eP	P	23 53 42.x	+4.2
TAU				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
CTA	Charters Tower	33.86	280	LR	LR	00 06 50.0	
	comp=Z,971nm,18.6s,MS4.6,baz=150,slow=34						
CTAO	Charters Tower	33.86	280	eP	P	23 54 13.7	+1.8
	comp=Z,77nm,0.6s,mb5.8						
CTAO	Charters Tower	33.86	280	eP	P	23 54 13.7	+1.7
CTAO				pmax	pmax		
	comp=Z,77nm,0.6s,mb5.8						
STKA	Stephens Creek	34.37	258	P	P	23 54 19.5	+3.2
	comp=Z,113nm,0.6s,baz=100,slow=10,SNR=335						
STKA				ScP	ScP	00 00 42.4	+8.3
	comp=Z,1.8nm,0.7s,baz=165,slow=4.7,SNR=3.4						
COEN	Coen	39.38	286	eP	P	23 55 00.4	+1.3
	comp=Z,18nm,1.0s,mb4.8						
ASAR	Alice Springs	43.07	267	eP	P	23 55 29.8	+0.4
ASAR	Alice Springs	43.07	267	P	P	23 55 29.9	+0.5
	comp=Z,30nm,0.5s,mb5.2,baz=104,slow=7.1,SNR=333						
ASAR				ScP	ScP	00 01 15.5	+8.0
	comp=Z,7.5nm,0.8s,baz=121,slow=4.2,SNR=18						
WB2	Warramunga Arr	44.09	273	eP	P	23 55 37.5	-0.1
WRA	Warramunga Arr	44.10	273	P	P	23 55 37.6	-0.1
	comp=Z,40nm,0.4s,mb5.5,baz=111,slow=7.9,SNR=700						
WRA				ScP	ScP	00 01 20.0	+8.2
	comp=Z,3.2nm,0.6s,baz=105,slow=3.8,SNR=7.5						
WRA				LR	LR	00 13 56.9	
	comp=Z,641nm,18.6s,MS4.6,baz=100,slow=36						
FORT	Forrest	45.92	256	eP	P	23 55 52.1	+0.1
	comp=Z,3.5nm,0.5s,mb4.5						
VNDA	Vanda	47.65	186	P	P	23 56 10.1	+5.2
VNDA	Vanda	47.65	186	P	P	23 56 10.1	+5.2
	comp=Z,5.2nm,0.6s,mb4.8,baz=7.3,slow=7.6,SNR=11						
FITZ	Fitzroy Crossi	52.34	270	eP	P	23 56 41.7	+0.4
	comp=Z,65nm,1.0s,mb5.5						
MBWA	Marble Bar	56.16	264	eP	P	23 57 08.8	-0.3
	comp=Z,5.7nm,0.5s,mb4.9						
QSPA	South Pole Qui	59.26	180	eP	P	23 57 34.3	+4.3
	comp=Z,45nm,0.4s,mb5.8						
PMSA	Palmer Station	71.86	156	eP	P	23 59 00.4	+8.8
	comp=Z,28nm,0.7s,mb5.3						
MAW	Mawson	71.88	201	P	P	23 58 54.5	+2.8
	comp=Z,14nm,0.9s,mb4.9,baz=140,slow=9.5,SNR=3.8						
SYO	Syowa Base	76.68	193⇓	eP	P	23 59 20.0	+0.5
SYO	Syowa Base	76.68	193⇓	iP	P	23 59 24.1	+4.6
SNAA	Sanae	77.71	178⇑	eP	P	23 59 27.3	+2.0
MAIT	Maitri	78.42	183	eP	P	23 59 30.0	+0.7
MJAR	Matsushiro Arr	78.60	325	P	P	23 59 28.7	-1.9
	comp=Z,2.1nm,0.5s,mb4.4,baz=146,slow=5.3,SNR=8.1						
MAJO	Matsushiro	78.60	325	P	P	23 59 26.8	-3.8
PLCA	Paso Flores	82.21	133	eP	P	23 59 52.3	+2.1
	comp=Z,9.2nm,0.9s,mb4.7						
PLCA	Paso Flores	82.21	133	eP	P	23 59 52.3	+2.1
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ASAJ	Asahikawa	82.83	333	P	P	23 59 52.2	-0.8
	comp=Z,8.3nm,0.6s,mb4.9,baz=237,slow=12,SNR=5.6						
KSRS	Korea Array	84.68	320	P	P	00 00 02.1	-0.5
	comp=Z,3.9nm,1.0s,mb4.5,baz=129,slow=5.4,SNR=7.7						
YSS	Yuzh-Sakhalins	85.14	334	eP	P	00 00 02.6	-2.1
	comp=Z,23nm,0.8s,mb5.4						
YSS	Yuzh-Sakhalins	85.14	334⇓	eP	P	00 00 07.2	+2.4
YSS				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.4						
PFO	Pinyon Flat Ob	86.52	47	P	P	00 00 11.7	-0.3
	comp=Z,1.3nm,0.5s,mb4.4,baz=149,slow=2.8,SNR=3.6						
CMB	Columbia Colle	87.10	42	eP	P	00 00 12.2	-2.5
	comp=Z,7.9nm,1.1s,mb4.9						
CMB	Columbia Colle	87.10	42	eP	P	00 00 12.2	-2.5
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.9						
PAYG	Puerto Ayora	87.71	89	P	P	00 00 20.6	+2.4
NVAR	Mina Array Bea	88.58	43	P	P	00 00 21.5	-0.2
NVAR	Mina Array Bea	88.58	43	P	P	00 00 21.5	-0.2
	comp=Z,3.6nm,0.7s,mb4.8,baz=211,slow=7.1,SNR=18						
TPH	Tonopah	88.98	44	eP	P	00 00 23.2	-0.4
CN2	Changchun	90.49	323	eP	P	00 00 29.2	-1.3
CCUT	Cedar City	90.98	46	eP	P	00 00 33.8	+0.8
KLR	Kul'dur	91.41	330	eP	P	00 00 30.2	-4.5
TXAR	Lajitas Array	92.64	57	P	P	00 00 40.7	-0.2
TXAR	Lajitas Array	92.64	57	P	P	00 00 40.7	-0.2
	comp=Z,1.5nm,1.0s,mb4.4,baz=210,slow=7.2,SNR=8.3						
CMIG	Matias Romero	92.91	72	P	P	00 00 41.8	-0.5
	comp=Z,0.8nm,0.4s,mb4.5,baz=43,slow=22,SNR=4.1						
ANMO	Albuquerque	93.87	51	eP	P	00 00 46.4	0.0
	comp=Z,0.9nm,0.4s,mb4.5						
ANMO	Albuquerque	93.87	51	iP	P	00 00 46.3	-0.1
ANMO	Albuquerque	93.87	51	P	P	00 00 46.0	-0.4
	comp=Z,1.2nm,0.8s,mb4.4,baz=196,slow=4.0,SNR=3.7						
PDAR	Pinedale Array	96.47	44	PKKPbc	PKKPbc	00 17 42.2	-1.3
	comp=Z,0.9nm,0.7s,baz=81,slow=5.9,SNR=8.3						
PDAR				LR	LR	00 39 16.0	
	comp=Z,470nm,18.1s,MS5.0,baz=351,slow=32						
LPAZ	La Paz	97.97	114	eP	P	00 01 08.8	+3.2
LPAZ	La Paz	97.97	114	P	P	00 01 09.1	+3.5
	comp=Z,0.6nm,0.6s,mb4.3,baz=77,slow=1.1,SNR=3.5						
COLA	College	98.27	13	eP	P	00 01 03.5	-2.2
SONM	Songino Array	103.46	318	Pdiff	Pdif	00 01 32.2	+2.6
	comp=Z,0.3nm,0.6s,baz=141,slow=5.8,SNR=3.3						
INK	Inuvik	104.22	16	Pdif	Pdif	00 01 29.9	-3.0
YKA	Yellowknife Ar	105.85	26	PKKPbc	PKKPbc	00 17 12.0	-4.8
	comp=Z,0.8nm,0.5s,baz=37,slow=3.2,SNR=10						
MDRS	Chennai	106.56	276	ex	x	00 05 55.5	
MDRS				ex	x	00 08 07.5	
MDRS				ex	x	00 10 55.5	
MDRS				ex	x	00 17 05.5	
MDRS				ex	x	00 20 37.5	
MDRS				ex	x	00 32 58.5	
BOSA	Boshof	116.84	203	PKP	PKPdf	00 06 14.2	+0.4
	comp=Z,2.7nm,0.7s,baz=66,slow=20,SNR=6.7						
RES	Resolute Bay	117.68	17	ePKPdf	PKPdf	00 06 12.2	-1.7
MKAR	Makanchi Array	118.05	310	PKP	PKPdf	00 06 13.6	-1.8
MKAR				PKKPbc	PKKPbc	00 16 38.8	+3.2
MKAR	Makanchi Array	118.05	310	PKP	PKPdf	00 06 13.6	-1.8
	comp=Z,2.5nm,0.6s,baz=215,slow=1.5,SNR=17						
MKAR				PKKPbc	PKKPbc	00 16 38.8	+3.2
	comp=Z,0.3nm,0.4s,baz=271,slow=2.5,SNR=4.2						
ZALV	Zalesovo Beam	118.36	318	PKhKP		00 06 13.7	
	comp=Z,2.3nm,0.7s,baz=110,slow=1.2,SNR=11						
ZAL	Zalesovo	118.36	318	PKIKP	PKPdf	00 06 13.7	-2.1
NVS	Novosibirsk	119.46	319	ePKIKP	PKPdf	00 06 15.6	-2.3
NVS				pmax	pmax		
	comp=Z,41nm,2.7s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.7s						
KURK	Kurchatov	121.35	314⇓	iPKIKP	PKPdf	00 06 24.0	+2.4
TKM2	Tokmak 2	121.63	304	P	PKPdf	00 06 21.2	-1.2
	SNR=5.9						
KZA	Kyzart	121.67	303	P	PKPdf	00 06 22.4	-0.2
	SNR=7.6						
KBK	Karagaybulak	122.03	304	P	PKPdf	00 06 22.0	-1.2
	SNR=6.4						
UCH	Uchtor	122.24	303	P	PKPdf	00 06 23.6	0.0
	SNR=12						
CHMS	Chumysh	122.25	304	P	PKPdf	00 06 22.3	-1.3
	SNR=6.7						
AAK	Ala-Archa	122.35	304	i PKIKP	PKPdf	00 06 25.8	+2.0
USP	Ospenovka	122.49	304	P	PKPdf	00 06 22.9	-1.2
	SNR=7.6						
AML	Almayashu	122.80	303	P	PKPdf	00 06 24.5	-0.2
	SNR=10						
KBL	Kabul	124.38	293	ePKPdf	PKPdf	00 06 28.0	0.0
SCHQ	Schefferville	126.58	42	PKP	PKPdf	00 06 28.9	-2.6
	comp=N,3.6nm,0.9s,baz=242,slow=7.3,SNR=4.5						
SVE	Sverdlovsk	132.23	321	ePKIKP	PKPdf	00 06 41.1	-1.1
ARU	Arti	133.43	320	eP	PKPdf	00 06 43.7	-0.8
ARU	Arti	133.43	320	i PKIKP	PKPdf	00 06 43.6	-0.9
SOKR	Solikamsk	133.75	325	ePKIKP	PKPdf	00 06 44.5	-0.5
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARCES	ARCESS Array B	139.02	348	PKP		00 06 45.0	
ARCES	ARCESS Array B	139.02	348	PKhKP		00 06 45.0	
	comp=Z,3.1nm,0.7s,baz=27,slow=4.1,SNR=11						
JOF	Joensuu	142.83	338	epkp	PKPdf	00 07 03.7	+2.2
MOS	Moscow	144.69	325	ePKHKP		00 07 00.2	
ZEI	Tsey	144.73	302	ePKIKP	PKPdf	00 07 03.6	-1.9
KAF	Kangasniemi	144.97	340	epkp	PKPdf	00 07 01.8	-3.5
	baz=40,slow=3.3						
HAKT	HAKKARI	145.07	293	i P	PKPbc	00 07 06.2	+0.4
DYDN	Diyadin	145.09	296	i P	PKPbc	00 07 05.8	0.0
TVAN	Van	145.32	294	i P	PKPbc	00 07 05.9	-0.6
KIV	Kislovodsk	145.47	304	ePKPdf	PKPdf	00 07 05.9	-0.8
KIV	Kislovodsk	145.47	304c	iPKIKP	PKPdf	00 07 09.9	+3.2
KIV				MLR	MLR		
	comp=Z,200nm,15.0s,MS5.0						
MSL	Mosul	145.51	290	i x	x	00 07 07.0	
OBN	Obninsk	145.53	325	ePKPdf	PKPdf	00 07 04.8	-1.7
FIA1	FINESS Array S	145.56	340	eP	PKPdf	00 07 05.2	-1.1
FINES	FINESS Array B	145.56	340	PKP	PKPdf	00 07 04.5	-1.9
	comp=Z,64nm,0.7s,baz=64,slow=4.4,SNR=228						
NSS	Namsos	145.72	352	eP	PKPdf	00 07 03.9	-2.6
NSS				AMb	AMB	00 07 06.0	
	comp=Z,151nm,1.8s						
TUTA	Tutak	145.77	296	i P	PKPdf	00 07 08.1	+0.7
VRSR	Storozhevoye	145.84	317d	iPKP2	PKPdf	00 07 05.9	-1.2
VRSR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VRSR				pmax	pmax		
	comp=N,1.0nm,0.7s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.7s						
ERZM	Erzurum	146.86	297	i P	PKPdf	00 07 10.1	+0.8
MARD	Mardin	147.39	292	i P	PKPdf	00 07 11.5	+1.3
VSU	Vasula	147.63	336	i PKP2	PKPab	00 07 15.6	+0.7
SOC	Sochi	147.65	304	i PKP2	PKPab	00 07 15.6	+0.1
MACK	Trabzon	147.99	299	i P	PKPbc	00 07 13.9	-0.3
DOMB	Dombas	148.46	354	eP	PKPdf	00 07 13.1	+1.9
KELT	Kelkit	148.46	297	i P	PKPbc	00 07 16.0	+0.5
ELZG	Elazig	148.79	294	i P	PKPbc	00 07 17.0	+0.6
GRSN	GIRESUNGRSN	149.12	299	i P	PKPbc	00 07 18.8	+1.6
NB2	NORSAR Subarra	149.19	351	PKP	PKPbc	00 07 14.8	-1.8
	comp=Z,10nm,0.8s,baz=17,slow=2.6						
NB2	NORSAR Subarra	149.19	351	PKP	PKPbc	00 07 14.8	-1.8
	baz=17,slow=2.6						
NOA	NORSAR Array B	149.19	351	PKPbc	PKPbc	00 07 15.0	-1.7
	comp=Z,18nm,0.7s,baz=15,slow=4.3,SNR=58						
MALT	Malatya	149.23	294	ePKPdf	PKPbc	00 07 15.7	-1.8
NAO01	NORSAR Array S	149.42	351	eP	PKPbc	00 07 15.5	-1.7
HYA	Hoyanger	149.55	356	eP	PKPbc	00 07 17.1	-0.4
GZT	Gaziantep	149.96	292	i P	PKPbc	00 07 19.1	-0.2
MNK	Minsk	149.99	329	ePKHKP	PKPbc	00 07 16.0	-2.8
ASK	Askoy	150.28	357	eP	PKPbc	00 07 18.5	-0.9
ASK				AMb	AMB	00 07 29.4	
	comp=Z,171nm,2.0s						
KONO	Kongsberg	150.74	352	ePKPbc	PKPbc	00 07 19.1	-1.4
ODD1	Odda	150.77	355	eP	PKPbc	00 07 18.4	-2.1
ODD1				AMb	AMB	00 07 22.4	
	comp=Z,70nm,1.5s						
ANDN	Andirin	150.91	293	i P	PKPbc	00 07 21.1	-0.5
BLS5	Blasjo	151.27	355	eP	PKPbc	00 07 22.3	+0.6
BOYT	Boyabat	151.55	301	i P	PKPbc	00 07 22.0	-0.9
AKASG	Malin Array Be	151.65	322	PKPbc	PKPbc	00 07 21.3	-1.5
	comp=Z,25nm,0.6s,baz=47,slow=2.7,SNR=90						
AKBB	Malin Array Si	151.65	322	ePKP	PKPbc	00 07 21.2	-1.6
KIEV	Kiev	151.66	322	ePKP	PKPbc	00 07 20.6	-2.2
AVNT	Avonos	151.99	295	i P	PKPbc	00 07 23.4	-0.7
CDAG	Cicekdag	152.25	297	i P	PKPbc	00 07 21.9	-2.7
BR131	Keskin Array S	152.80	298	PKPdf	PKPdf	00 07 20.1	+1.4
BRTR	Keskin Array B	152.80	298	PKP	PKPdf	00 07 17.4	-1.2
	comp=Z,0.9nm,0.9s,baz=197,slow=1.3,SNR=4.1						
BRTR				PKPbc	PKPbc	00 07 25.1	-0.8
	comp=Z,6.5nm,0.8s,baz=149,slow=5.8,SNR=19						
ELDT	Eldivan	152.82	299	i P	PKPbc	00 07 25.2	-0.6
BSD	Bornholm Skovb	154.05	343⇑	iPKIKP	PKPbc	00 07 26.5	-1.5
BSD				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BSD	Bornholm Skovb	154.05	343⇑	iP	PKPbc	00 07 26.5	-1.5
	comp=Z,4.4nm,0.4s						
LIC	Lamto	154.63	164	ePKP2	PKPab	00 07 46.0	+0.9
	comp=Z,30nm,1.0s						
LIC	Lamto	154.63	164	ePKP2	PKPdf	00 07 22.0	-0.1
	comp=Z,68nm,1.8s						
KIC	Kosan Boka	154.84	164	ePKP2	PKPdf	00 07 23.1	+0.8
	comp=Z,125nm,1.6s						
TIC	Toumodi	155.04	163	ePKP2	PKPdf	00 07 22.1	-0.5
	comp=Z,43nm,1.1s						
TIRR	Tirgusor	155.18	311⇑	iP	PKPab	00 07 48.6	+1.8
KOLS	Kolonicke sedl	156.28	325	eP	PKPdf	00 07 31.1	+7.9
KOLS	Kolonicke sedl	156.28	325	e	PKPdf	00 07 31.1	+7.9
STHS	Stebnicka Huta	156.44	327	ePKP	PKPab	00 07 51.5	-0.5
CRVS	Cervenica-Dubn	156.69	326	ePKP	PKPab	00 07 46.6	-6.5
KECS	Kecovo	157.45	327	ePKP	PKPab	00 07 57.5	+1.1
UPC	Upice	157.74	336	ePKPab	PKPab	00 08 00.1	+2.6
DPC	Dobruska-Polom	157.76	335	ePKPab	PKPab	00 07 59.8	+2.2
CLL	Collm	157.99	341	i PKP	PKPab	00 07 56.0	-2.5
CLL				i		00 07 59.8	
BRG	Berggiesshubel	158.10	339	ePKP2	PKPab	00 07 56.8	-2.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRG	Berggiesshubel	158.10	339	eP	PKPab	00 07 56.8	-2.3
	comp=Z,14nm,1.1s						
BRG				i		00 08 00.9	
	comp=Z,12nm,0.9s						
VYHS	Vyhne	158.20	329	ePKP	PKPab	00 07 58.4	-1.2
PVCC	Panska Ves	158.21	338	ePKPab	PKPab	00 07 58.0	-1.5
PRU	Pruhonice	158.68	337	ePKPab	PKPab	00 08 03.6	+2.0
NKC	Novy Kostel	159.11	341	ePKPab	PKPab	00 08 01.9	-1.5
SANT	Santorini	159.71	292	ePKPdf	PKPdf	00 07 28.6	+0.9
KHC	Kasperske Hory	159.74	338	ePKPab	PKPab	00 08 08.5	+2.3
GRF	Grafenberg Arr	159.93	342	ePKP2	PKPab	00 08 05.4	-1.6
PKSM	Moragy	159.94	325⇓	iP	PKPdf	00 07 26.6	-1.1
GERES	GERESS Array B	159.94	337	PKP	PKPdf	00 07 26.3	-1.3
	comp=Z,0.8nm,0.8s,baz=96,slow=4.7,SNR=3.5						
GERES				PKPab	PKPab	00 08 08.7	+1.5
	comp=Z,2.5nm,0.7s,baz=40,slow=4.4,SNR=8.1						
TOA0	Torodi Ar. Sit	162.38	179	ePKPdf	PKPdf	00 07 29.4	-1.9
TORD	Torodi Ar. Bea	162.38	179	PKP	PKPdf	00 07 31.3	0.0
	comp=Z,2.5nm,0.8s,baz=300,slow=0.2,SNR=12						
TORD				PKPab	PKPab	00 08 19.6	+1.1
	comp=Z,8.2nm,0.9s,baz=183,slow=3.0,SNR=17						
LOR	Lormes	163.54	355	ePKP2	PKPab	00 08 18.5	-4.4
SSF	Saint Saulge	163.77	356	ePKP2	PKPab	00 08 20.5	-3.4
	comp=Z,43nm,1.1s						
AVF	Avril sur Loir	164.05	357	ePKP2	PKPab	00 08 21.6	-3.5
	comp=Z,12nm,0.9s						
SMF	Signal de Mont	164.16	355	ePKP2	PKPab	00 08 21.3	-4.3
	comp=Z,23nm,0.8s						
ORIF	Oris-en-Rattie	165.62	349	ePKP2	PKPab	00 08 26.4	-5.7
	comp=Z,16nm,1.0s						

IDC 01 23:50:46.6±3.1, 30.28S×177.99W, h79km±24km, mb4.6/3, mb1 4.8/3, mb1mx4.3/11, mbtmp4.6/3, Error ellipse: s-maj=55.4km s-min=28.1km az=157.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.03	3	P	Pn	23 51 05.9	-0.1
	346nm,0.3s,baz=95,slow=23,SNR=6.2						
STKA	Stephens Creek	34.52	257	P	P	23 57 28.4	+1.1
	26nm,0.7s,baz=96,slow=9.8,SNR=9.6						
ASAR	Alice Springs	43.13	267	P	P	23 58 39.0	-0.4
	4.5nm,0.5s,baz=105,slow=7.3,SNR=7.3						
WRA	Warramunga Arr	44.11	272	P	P	23 58 46.6	-0.7
	7.8nm,0.4s,baz=110,slow=8.1,SNR=18						
VNA3	Neumayer Olymp	78.42	176	e	P	00 02 37.0	-1.2
VNA3				e		00 02 43.4	
VNA3				e		00 02 46.0	
VNA3				e		00 02 57.4	
VNA3				e		00 03 03.5	
VNA2	Neumayer--Watz	78.86	177	e	P	00 02 39.5	-1.1
	baz=199,slow=5.6						
VNA2				e		00 02 46.2	
VNA2				e		00 02 48.8	
VNA2				e		00 02 59.9	
VNA2				e		00 03 05.4	
JOF	Joensuu	142.31	339	epkp	PKPdf	00 10 09.6	+0.4
KAF	Kangasniemi	144.44	341	epkp	PKPdf	00 10 10.4	-2.6
	baz=34,slow=3.4						
NOA	NORSAR Array B	148.64	351	PKPbc	PKPbc	00 10 24.1	+0.2
	2.7nm,0.6s,baz=15,slow=4.2,SNR=6.9						
AKASG	Malin Array Be	151.22	323	PKPbc	PKPbc	00 10 30.1	-0.4
	3.4nm,0.6s,baz=48,slow=2.8,SNR=8.2						
BRTR	Keskin Array B	152.56	299	PKPbc	PKPbc	00 10 33.8	-0.1
	1.4nm,1.0s,baz=123,slow=4.6,SNR=4.2						
TORD	Torodi Ar. Bea	162.94	179	PKPab	PKPab	00 11 29.1	-0.7
	1.4nm,0.7s,baz=178,slow=3.1,SNR=6.0						

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*NEIC **01** 23:52:22.5, 35.95N×10.61W, h0km, ML2.6(LIS), MN3.1(MDD), After MDD.*
*ISCJB **01** 23:52:23.0±0.8, 35.86N±0.04×10.28W±0.05, h10km, Error ellipse: s-maj=6.3km s-min=5.3km az=137.8*
*MDD **01** 23:52:23.3±1.4, 35.91N×10.55W, h0km, mbLg3.1/9, Error ellipse: s-maj=12.2km s-min=8.7km az=53.0, PRXIMO*
*INMG **01** 23:52:24.3±0.8, 35.80N×10.55W, h10km, ML2.5, Error ellipse: s-maj=4.0km s-min=3.3km az=88.0*
*CSEM **01** 23:52:24.1±0.4, 35.51N×9.99W, h10km, ML3.8/6, Error ellipse: s-maj=8.3km s-min=4.7km az=83.0*
*CNRM **01** 23:52:26.3, 35.24N×10.51W, h30km, MD3.5*

ISC 01 23:52:24.8±0.8, 35.91N±0.04×10.32W±0.05, h10km, n78, σ0.93/143, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.71	44	i Pn	Pn	23 52 55.2	+0.6
PFVI				eSn	Sn	23 53 18.4	+1.8
PFVI				A		23 53 20.1	
	18nm,0.2s						
PFVI	Vila Bisbo	1.71	44	ePn	Pn	23 52 55.2	+0.6
PFVI				eSn	Sn	23 53 17.7	+1.1
PFVI	Vila Bisbo	1.71	44	ePn	Pn	23 52 55.2	+0.6
PFVI				eSn	Sn	23 53 18.4	+1.8

18nm,0.2s
MORF Marmelete 1.94 43 *i* Pn **Pn 23 52 58.4 +0.7**
MORF eSn **Sn 23 53 23.8 +1.7**
MORF A 23 53 25.1
28nm,0.1s
MORF Marmelete 1.94 43 *e*Pn **Pn 23 52 58.4 +0.7**
MORF eSn **Sn 23 53 23.3 +1.3**
MORF Marmelete 1.94 43 P **Pn 23 52 58.3 +0.6**
MORF ⇑Pn **Pn 23 52 58.4 +0.7**
MORF S **Sn 23 53 22.9 +0.8**
MORF Sn **Sn 23 53 23.8 +1.7**
28nm,0.1s
MORF Marmelete 1.94 43 *e*Pn **Pn 23 52 58.4 +0.7**
MORF eSn **Sn 23 53 23.8 +1.7**
28nm,0.1s
PTEO Sao Teotonio 2.08 38 *e*Pn **Pn 23 53 00.3 +0.7**
PTEO eSn **Sn 23 53 27.1 +1.6**
PTEO A 23 53 28.8
22nm,0.2s
PTEO Sao Teotonio 2.08 38 *e*Pn **Pn 23 53 00.3 +0.7**
PTEO eSn **Sn 23 53 27.1 +1.6**
22nm,0.2s
PBDV Barranco-do-Ve 2.34 55 *e*Pn **Pn 23 53 04.0 +0.8**
PBDV eSn **Sn 23 53 33.0 +1.0**
PBDV A 23 53 38.8
8.2nm,0.2s
PBDV Barranco-do-Ve 2.34 55 *e*Pn **Pn 23 53 04.0 +0.8**
PBDV eSn **Sn 23 53 33.0 +1.0**
8.2nm,0.2s
PVAQ Vaqueiros 2.57 54 *e*Pn **Pn 23 53 07.0 +0.6**
PVAQ eSn **Sn 23 53 38.6 +0.9**
PVAQ A 23 53 40.9
13nm,0.1s
PVAQ Vaqueiros 2.57 54 *e*Pn **Pn 23 53 07.0 +0.6**
PVAQ eSn **Sn 23 53 38.6 +0.9**
13nm,0.1s
EGRO El Granado 2.80 54 P **Pn 23 53 10.1 +0.6**
4.9nm,0.1s,SNR=33
EGRO S **Sn 23 53 44.5 +1.2**
10nm,0.1s,SNR=11
EGRO El Granado 2.80 54 P **Pn 23 53 10.1 +0.6**
4.9nm,0.1s,SNR=33
EGRO S **Sn 23 53 44.5 +1.2**
10nm,0.1s,SNR=11
ERIP Rio Piedras 2.86 58 P **Pn 23 53 11.1 +0.6**
7.6nm,0.1s,SNR=7.9
ERIP S **Sn 23 53 45.5 +0.5**
28nm,0.1s,SNR=7.9
MOE Montemor 3.04 30 *e*Pn **Pn 23 53 14.1 +1.1**
MOE eSn **Sn 23 53 50.7 +1.2**
MOE Montemor 3.04 30 *e*Pn **Pn 23 53 14.1 +1.1**
MOE eSn **Sn 23 53 50.5 +1.0**
MOE Montemor 3.04 30 *e*Pn **Pn 23 53 14.1 +1.1**
MOE eSn **Sn 23 53 50.5 +1.1**
PMAFR Mafra 3.15 15 *e*Pn **Pn 23 53 13.9 -0.5**
PMAFR eSn **Sn 23 53 51.4 -0.7**
PMAFR A 23 53 54.9
42nm,0.2s
PMAFR Mafra 3.15 15 *e*Pn **Pn 23 53 13.9 -0.5**
PMAFR eSn **Sn 23 53 51.4 -0.7**
42nm,0.2s
EVO Evora 3.20 34 *e*Pn **Pn 23 53 15.3 +0.2**
EVO eSn **Sn 23 53 53.7 +0.4**
EVO A 23 53 54.9
23nm,0.1s
EVO Evora 3.20 34 *e*Pn **Pn 23 53 15.2 +0.2**
EVO eSn **Sn 23 53 53.7 +0.4**
EVO Evora 3.20 34 Pn **Sn 23 53 15.3 +0.2**
EVO Sn **Sn 23 53 53.7 +0.4**
11nm,0.1s
EVO Evora 3.20 34 *e*Pn **Pn 23 53 15.2 +0.1**
EVO eSn **Sn 23 53 53.7 +0.4**
23nm,0.1s
EMIN Mina Concepcio 3.46 57 P **Pn 23 53 19.0 +0.3**
1.0nm,0.1s,SNR=22
EMIN S **Sn 23 54 00.7 +1.0**
4.2nm,0.1s,SNR=7.8
EMIN Mina Concepcio 3.46 57 P **Pn 23 53 19.0 +0.3**
1.0nm,0.1s,SNR=22
EMIN S **Sn 23 54 00.7 +0.9**
4.2nm,0.1s,SNR=7.8
PBAR Barrancos 3.46 48 *e*Pn **Pn 23 53 19.2 +0.5**
PBAR eSn **Sn 23 54 00.7 +0.9**
PBAR A 23 54 03.2
4.8nm,0.1s
PBAR Barrancos 3.46 48 *e*Pn **Pn 23 53 19.2 +0.5**
PBAR eSn **Sn 23 54 00.7 +0.9**
4.8nm,0.1s
PESTR Estremoz 3.67 36 *e*Pn **Pn 23 53 21.4 -0.1**
PESTR eSn **Sn 23 54 04.7 -0.1**
PESTR A 23 54 07.7
5.4nm,0.1s
PESTR Estremoz 3.67 36 *e*Pn **Pn 23 53 21.4 -0.1**
PESTR eSn **Sn 23 54 04.7 -0.1**
5.4nm,0.1s
ESPR Espera 3.73 74 P **Pn 23 53 22.6 +0.3**
6.1nm,0.2s,SNR=17
ESPR S **Sn 23 54 06.0 -0.2**
21nm,0.2s,SNR=7.9
ESPR Espera 3.73 74 P **Pn 23 53 22.6 +0.3**
6.1nm,0.2s,SNR=17
ESPR S **Sn 23 54 06.0 -0.2**
21nm,0.2s,SNR=7.9
EBAD Badajoz 3.87 42 P **Pn 23 53 24.5 +0.1**
1.1nm,0.1s,SNR=11
EBAD S **Sn 23 54 10.7 +0.8**
3.4nm,0.1s,SNR=8.0
EBAD Badajoz 3.87 42 P **Pn 23 53 24.5 +0.2**
1.1nm,0.1s,SNR=11
EBAD S **Sn 23 54 10.7 +0.8**
3.4nm,0.1s,SNR=8.0
EJIF Jimena Fronter 3.96 81 P **Pn 23 53 26.1 +0.6**
0.5nm,0.1s,SNR=7.9
EJIF S **Sn 23 54 12.8 +0.8**
0.9nm,0.2s,SNR=7.9
EJIF Jimena Fronter 3.96 81 P **Pn 23 53 26.1 +0.6**
0.5nm,0.1s,SNR=7.9
EJIF S **Sn 23 54 12.8 +0.8**
0.9nm,0.2s,SNR=7.9
PTOM Tomar 4.00 22 *e*Pn **Pn 23 53 25.9 -0.2**
PTOM eSn **Sn 23 54 12.6 -0.4**
PTOM A 23 54 16.4
10nm,0.2s
PTOM Tomar 4.00 22 *e*Pn **Pn 23 53 25.9 -0.2**
PTOM eSn **Sn 23 54 12.6 -0.4**
10nm,0.2s
CIA Chichaoua 4.52 163 *i* P **Pn 23 53 25.0 -8.3**
PCBR Castelo Branco 4.52 29 *e*Pn **Pn 23 53 33.5 +0.2**
PCBR eSn **Sn 23 54 24.8 -1.1**
PCBR A 23 54 27.1
3.5nm,0.3s
PCBR Castelo Branco 4.52 29 Pn **Sn 23 53 33.5 +0.2**
PCBR Sn **Sn 23 54 24.8 -1.1**
1.8nm,0.3s
EMIJ Mijas 4.53 80 P **Pn 23 53 33.1 -0.3**
SNR=7.9
EMIJ S **Sn 23 54 24.4 -1.7**
0.3nm,0.1s,SNR=7.9
KIB El Ksiba 4.86 132 *i* P **Pn 23 53 32.0 -5.9**
KIB *i* S **Sn 23 54 23.0 -11**
MTE Manteigas 4.99 25 *e*Sn **Sn 23 54 37.6 +0.3**
MTE A 23 54 42.6
4.9nm,0.1s
MTE Manteigas 4.99 25 *e*Sn **Sn 23 54 37.8 +0.4**
MTE Manteigas 4.99 25 Sn **Sn 23 54 37.6 +0.3**
2.5nm,0.1s
EADA Adamuz 5.12 62 P **Pn 23 53 41.4 0.0**
3.8nm,0.2s,SNR=23
EADA S **Sn 23 54 39.8 -0.7**
4.9nm,0.1s,SNR=7.9
EADA Adamuz 5.12 62 P **Pn 23 53 41.4 0.0**
3.8nm,0.2s,SNR=23
EADA S **Sn 23 54 39.8 -0.7**
4.9nm,0.1s,SNR=7.9
ELOJ Sierra Loja 5.12 74 S **Sn 23 54 41.0 +0.5**
1.8nm,0.2s,SNR=7.9
PVIS Viseu 5.16 21 *e*Pn **Pn 23 53 41.7 -0.4**
PVIS eSn **Sn 23 54 40.5 -1.2**
PVIS A 23 54 44.3
5.9nm,0.1s
PVIS Viseu 5.16 21 Pn **Pn 23 53 41.7 -0.4**
PVIS Sn **Sn 23 54 40.5 -1.2**
3.0nm,0.1s
CZD Col de Zad 5.22 122 *i* P **Pn 23 53 39.0 -3.8**
CZD *i* S **Sn 23 54 33.0 -10**

EGUA Guajares 5.53 78 S **Sn 23 54 49.2 -1.4**
SNR=7.9
EQUE Quentar 5.69 75 P **Pn 23 53 50.4 +1.1**
SNR=7.9
EQUE S **Sn 23 54 54.6 0.0**
0.1nm,0.0s,SNR=7.9
EBAN Banos Encina 5.69 65 P **Pn 23 53 49.4 +0.1**
1.8nm,0.2s,SNR=7.9
EBAN S **Sn 23 54 53.8 -0.9**
1.5nm,0.1s,SNR=7.9
PVRL Vila Real 5.73 20 *e*Sn **Sn 23 54 52.7 -3.0**
PVRL A 23 54 56.3
6.0nm,0.1s
PVRL Vila Real 5.73 20 Sn **Sn 23 54 52.7 -3.0**
3.0nm,0.1s
MVO Moncorvo 5.85 25 *e*Pn **Pn 23 53 51.0 -0.4**
MVO *e*Sn **Sn 23 54 55.6 -2.9**
MVO A 23 54 58.8
3.6nm,0.2s
MVO Moncorvo 5.85 25 *e*Pn **Pn 23 53 51.1 -0.3**
MVO eSn **Sn 23 54 56.7 -1.8**
MVO Moncorvo 5.85 25 Pn **Pn 23 53 51.0 -0.4**
MVO Sn **Sn 23 54 55.6 -2.9**
1.8nm,0.2s
MVO Moncorvo 5.85 25 *e*Pn **Pn 23 53 51.1 -0.3**
EALB Alboran 5.91 88 P **Pn 23 53 51.8 -0.5**
EALB Alboran 5.91 88 P **Pn 23 53 51.8 -0.5**
EQES Quesada 6.11 70 P **Pn 23 53 54.4 -0.7**
0.2nm,0.1s,SNR=7.9
EQES S **Sn 23 55 04.9 -0.1**
0.5nm,0.1s,SNR=7.9
EQES Quesada 6.11 70 P **Pn 23 53 54.4 -0.7**
0.2nm,0.1s,SNR=7.9
EQES S **Sn 23 55 04.9 -0.1**
0.5nm,0.1s,SNR=7.9
ELOB Lobios 6.21 16 P **Pn 23 53 56.0 -0.4**
0.3nm,0.1s,SNR=7.9
ELOB S **Sn 23 55 03.9 -3.4**
SNR=7.9
ESDC Sonseca Array 6.28 51 P **Pn 23 53 57.9 +0.5**
ESDC S **Sn 23 55 08.3 -0.9**
ESDC Sonseca Array 6.28 51 P **Pn 23 53 57.9 +0.5**
0.6nm,0.3s,baz=240,slow=13,SNR=16
ESDC S **Sn 23 55 08.3 -0.9**
2.1nm,0.5s,baz=238,slow=23,SNR=13
ESDC Sonseca Array 6.28 51 P **Pn 23 53 57.9 +0.5**
0.6nm,0.3s,SNR=16
ZFT Errachidia 6.28 126 *i* P **Pn 23 53 53.5 -4.0**
PBRG Braganca 6.51 24 *e*Pn **Pn 23 54 00.2 -0.4**
PBRG eSn **Sn 23 55 12.3 -2.6**
ECAL Calabor 6.64 24 S **Sn 23 55 13.9 -4.0**
SNR=7.9
GUD Guadarrama 6.77 44 P **Pn 23 54 04.4 +0.2**
0.5nm,0.2s,SNR=7.9
GUD S **Sn 23 55 19.9 -1.4**
0.8nm,0.2s,SNR=7.9
EVIA Vianos 6.80 64 P **Pn 23 54 04.0 -0.6**
0.4nm,0.1s,SNR=7.9
EVIA S **Sn 23 55 21.0 -1.1**
0.7nm,0.1s,SNR=7.9
EMAZ Mazaricos 7.11 8 S **Sn 23 55 24.0 -5.5**
6.9nm,0.2s,SNR=7.9
ETOB Tobarra 7.51 66 P **Pn 23 54 13.9 -0.4**
SNR=7.9
ETOB S **Sn 23 55 36.9 -2.5**
0.4nm,0.1s,SNR=7.9
ETOR Torete 8.13 50 P **Pn 23 54 22.8 0.0**
3.5nm,0.3s,SNR=7.9
ETOR S **Sn 23 55 54.2 -0.5**
SNR=7.9

IDC ***02*** *00:16:08.5±0.6, 3337N×8122E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.3/23, mbtmp4.2/17, ML4.4/1, Error ellipse: s-maj=19.4km s-min=14.3km az=27.0*
ISCJB ***02*** *00:16:11.0±1.1, 3339N±002×8116E±003, h26km±9km, mb4.3/38, MS4.3/3, Error ellipse: s-maj=4.5km s-min=3.5km az=151.5*
MOS ***02*** *00:16:11.7±1.1, 3335N×8113E, h33km, mb4.4/25, Error ellipse: s-maj=9.4km s-min=5.4km az=105.5*
BJI ***02*** *00:16:13.9, 3356N×8126E, h38km, mB4.9, mb4.3, ML4.1, Ms4.2, Msz4.0*
NEIC ***02*** *00:16:14.3±0.5, 3336N×8116E, h39km±5km, mb4.4/8, Error ellipse: s-maj=7.1km s-min=4.1km az=52.0*
NDI ***02*** *00:16:14.8±3.1, 3333N×8121E, h33km, mb4.5, mb4.4(NEIC)*
ISC 02 00:16:14.8±0.4, 3337N±002×8116E±003, h43km±4km, n144, σ1§13/161, mb4.3/38, MS4.3/3, 6C-4D, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGTI	**Lohaghat**	**3.98**	**192**	*ex*	**Pn**	**00 17 22.3**	**+8.9**
SDNR	**Sundarnagar**	**4.00**	**243**	*eP*	**Pn**	**00 17 15.0**	**+1.4**
SDNR				*ex*	x	00 18 14.0	
DLH	**Dalhousie**	**4.44**	**261**	*eP*	**Pn**	**00 17 20.0**	**+0.3**
DLH				*ex*	**Sn**	**00 18 11.0**	**+0.8**
NDI	**New Delhi**	**5.77**	**217**	*eP*	**Pn**	**00 17 36.3**	**-1.6**
NDI				*ex*	**Sn**	**00 18 44.9**	**+2.2**
GKN	**Gorkha**	**6.12**	**150**	*eP*	**Pn**	**00 17 43.3**	**+0.5**
213nm,0.7s							
KKN	**Kakani**	**6.59**	**146**	*eP*	**Pn**	**00 17 49.6**	**+0.4**
115nm,0.5s							
KKN	**Kakani**	**6.59**	**146**	*eP*	**Pn**	**00 17 49.6**	**+0.4**
KKN				pmax	pmax		
comp=Z,115nm,0.5s							
JIRN	**Jiri**	**7.15**	**141**	*eP*	**Pn**	**00 17 57.1**	**+0.2**
comp=Z,117nm,0.5s							
TAPN	**Taplejung**	**8.24**	**135**	*eP*	**Pn**	**00 18 11.7**	**-0.1**
comp=Z,99nm,0.7s							
ODAN	**Odare**	**8.43**	**139**	*eP*	**Pn**	**00 18 14.0**	**-0.4**
comp=Z,157nm,0.7s							
AJM	**Ajmer**	**8.89**	**221**	*eP*	**Pn**	**00 18 21.3**	**+0.5**
AJM				*eS*	**Sn**	**00 19 50.2**	**-9.4**
LSA	**Lhasa**	**9.27**	**111**	P	**Pn**	**00 18 27.4**	**+1.4**
LSA	**Lhasa**	**9.27**	**111**	*ePn*	**Pn**	**00 18 27.0**	**+1.0**
comp=Z,26nm,0.9s							
LSA				*eSn*	**Sn**	**00 20 11.4**	**+2.5**
LSA	**Lhasa**	**9.27**	**111**	*eP*	**Pn**	**00 18 27.0**	**+1.1**
LSA				*e*		00 20 11.4	
LSA				pmax	pmax		
comp=Z,26nm,0.9s							
ULHL	**Ulahol**	**9.68**	**338**	P	**Pn**	**00 18 33.5**	**+2.0**
SNR=6.2							
KZA	**Kyzart**	**9.87**	**333**	P	**Pn**	**00 18 34.9**	**+0.7**
SNR=9.1							
KBL	**Kabul**	**10.14**	**280**	*ePn*	**Pn**	**00 18 37.2**	**-0.5**
KBL				*eSn*	**Sn**	**00 20 29.3**	**-0.8**
UCH	**Uchtor**	**10.29**	**331**	*ePn*	**Pn**	**00 18 39.7**	**-0.1**
comp=Z,25nm,0.8s							
UCH				*eSn*	**Sn**	**00 20 33.2**	**-0.4**
UCH	**Uchtor**	**10.29**	**331**	P	**Pn**	**00 18 40.1**	**+0.3**
SNR=22							
BOK	**Bokaro**	**10.40**	**155**	*eP*	**Pn**	**00 18 39.2**	**-2.2**
BOK				AMb	AMB	00 18 40.7	
comp=Z,19nm,1.5s							
BOK				*eS*	**Sn**	**00 20 27.7**	**-8.9**
KBK	**Karagaybulak**	**10.49**	**334**	P	**Pn**	**00 18 44.6**	**+2.1**
SNR=7.5							
TKM2	**Tokmak 2**	**10.49**	**337**	*ePn*	**Pn**	**00 18 44.3**	**+1.7**
comp=Z,15nm,0.7s							
TKM2				*eSn*	**Sn**	**00 20 39.2**	**+0.5**
TKM2	**Tokmak 2**	**10.49**	**337**	*eP*	**Pn**	**00 18 44.3**	**+1.7**
TKM2				*e*		00 20 39.2	
TKM2				pmax	pmax		
comp=Z,15nm,0.7s							
TKM2	**Tokmak 2**	**10.49**	**337**	P	**Pn**	**00 18 44.4**	**+1.8**
SNR=13							
AML	**Almayashu**	**10.55**	**328**	*ePn*	**Pn**	**00 18 43.0**	**-0.4**
comp=Z,14nm,0.7s							
AML				*eSn*	**Sn**	**00 20 45.3**	**+5.1**
AML	**Almayashu**	**10.55**	**328**	P	**Pn**	**00 18 43.1**	**-0.3**
SNR=12							
BHPL	**Bhopal**	**10.61**	**199**	*eP*	**Pn**	**00 18 43.6**	**-0.6**
BHPL				*ex*	**Sn**	**00 20 35.2**	**-6.5**
AAK	**Ala-Archa**	**10.64**	**332**	*ePn*	**Pn**	**00 18 44.1**	**-0.5**
comp=Z,30nm,1.1s							
AAK				*eSn*	**Sn**	**00 20 36.8**	**-5.5**
AAK	**Ala-Archa**	**10.64**	**332**	*eP*	**Pn**	**00 18 44.1**	**-0.5**
AAK				*e*		00 20 36.8	
AAK				pmax	pmax		
comp=Z,30nm,1.1s							
FRU	**Bishkek**	**10.76**	**333**	*eP*	**Pn**	**00 18 48.0**	**+1.7**
EKS2	**Erkin-Say**	**10.95**	**330**	*ePn*	**Pn**	**00 18 49.0**	**+0.1**
comp=Z,13nm,0.8s							
EKS2				*eSn*	**Sn**	**00 20 49.5**	**-0.4**
EKS2	**Erkin-Say**	**10.95**	**330**	P	**Pn**	**00 18 49.5**	**+0.6**
SNR=12							
BLSP	**Bilaspur**	**11.23**	**175**	*eP*	**Pn**	**00 18 51.1**	**-1.6**
WMQ	**Urumqi**	**11.62**	**24**	⇓P	**Pn**	**00 18 56.5**	**-1.4**
WMQ				AP		00 19 06.5	
WMQ				XP		00 19 11.0	
WMQ				AMB	AMB		
comp=Z,16nm,1.3s							
WMQ				AMB	AMB		
comp=Z,206nm,3.0s							
WMQ				LR	LR		
comp=N,477nm,19.5s							
WMQ				LR	LR		
comp=E,672nm,20.0s							
WMQ				LR	LR		
comp=Z,470nm,19.6s							
SHL	**Shillong**	**12.14**	**127**	*eP*	**Pn**	**00 19 04.5**	**-0.8**
SHL				*eS*	**Sn**	**00 21 05.6**	**-14**
NGP	**Nagpur**	**12.31**	**189**	*eP*	**Pn**	**00 19 06.0**	**-1.6**
NGP				*eS*	**Sn**	**00 21 11.7**	**-12**
KKAR	**Karatay Array**	**12.82**	**322**	P	**Pn**	**00 19 12.0**	**-2.3**
KKAR				pmax	pmax		
comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**13.44**	**3**	*i* P	**Pn**	**00 19 20.8**	**-2.0**
MKAR				pmax	pmax		
comp=Z,15nm,0.7s							
MKAR	**Makanchi Array**	**13.44**	**3**	Pn	**Pn**	**00 19 20.2**	**-2.6**
comp=Z,1.7nm,0.3s,baz=180,slow=12,SNR=52							
HYB	**Hyderabad**	**16.05**	**189**	*eP*	**Pn**	**00 19 55.0**	**-2.6**
HYB				*e*		00 20 04.5	
HYB	**Hyderabad**	**16.05**	**189**	*i* P	**Pn**	**00 19 55.0**	**-2.6**
HYB				*e*		00 20 04.5	
HYB				*e*		00 22 46.0	
HYB				*eS*	**S**	**00 22 56.0**	**-11**
POO	**Poona**	**16.16**	**206**	*eP*	**Pn**	**00 19 58.1**	**-0.8**
GTA	**Gaotai**	**16.18**	**63**	*eP*	**Pn**	**00 19 59.6**	**+0.6**
GTA				AP	pP	00 20 04.2	-7.8
GTA				XP	sP	00 20 07.1	-10
GTA				AMB	AMB		
comp=Z,6.0nm,1.6s							
GTA				AMB	AMB		
comp=Z,366nm,7.3s							
GTA				LR	LR		
comp=N,768nm,19.1s							
GTA				LR	LR		
comp=E,802nm,19.9s							
GTA				LR	LR		
comp=Z,916nm,19.5s							
KAD	**Karad**	**17.18**	**203**	*eP*	**Pn**	**00 20 13.7**	**+2.0**
KURK	**Kurchatov**	**17.44**	**355**	*ePn*	**Pn**	**00 20 14.7**	**0.0**
comp=Z,24nm,0.8s							
KURK				*eSn*	**Sn**	**00 23 33.5**	**+5.8**
KURK	**Kurchatov**	**17.44**	**355**	*eP*	**Pn**	**00 20 14.7**	**0.0**
KURK				*e*		00 23 33.5	
KURK				pmax	pmax		
comp=Z,24nm,0.8s							
LZH	**Lanzhou**	**18.84**	**75**	*eP*	**Pn**	**00 20 32.8**	**+0.9**
LZH				AP	pP	00 20 41.0	-0.4
LZH				XP	sP	00 20 43.2	-3.7
LZH				AMB	AMB		
comp=Z,22nm,1.3s							
LZH				AMB	AMB		
comp=Z,85nm,4.0s							
LZH	**Lanzhou**	**18.84**	**75**	*eP*	**Pn**	**00 20 32.8**	**+0.9**
comp=Z,22nm,1.3s							
LZH				pP	pP	00 20 41.0	-0.4
LZH				sP	sP	00 20 43.2	-3.7
CD2	**Chengdu**	**19.29**	**91**	*eP*	**Pn**	**00 20 38.7**	**+1.4**
CD2				AMB	AMB		
comp=Z,10.0nm,0.5s							
KMI	**Kunming**	**20.52**	**108**	P	**P**	**00 20 49.4**	**0.0**
KMI				AMB	AMB		
comp=Z,349nm,5.2s							
KMI				LR	LR		
comp=N,800nm,17.4s,MS4.3							
KMI				LR	LR		
comp=E,813nm,17.4s,MS4.3							
KMI				LR	LR		
comp=Z,1μm,17.4s,MS4.3							
KMI	**Kunming**	**20.52**	**108**	P	**P**	**00 20 49.4**	**0.0**
comp=Z,0.3nm,5.2s							
KMI				pP		00 20 52.1	
KMI				LR	LR		
comp=Z,1μm,17.4s,MS4.3							
ZAL	**Zalesovo**	**20.73**	**6**	P	**P**	**00 20 50.0**	**-1.4**
ZAA0	**Zalesovo Array**	**20.74**	**6**	*eP*	**P**	**00 20 51.2**	**-0.4**
ZALV	**Zalesovo Beam**	**20.74**	**6**	P	**P**	**00 20 50.0**	**-1.6**
comp=Z,13nm,0.7s,baz=192,slow=10,SNR=30							
BVA0	**Borovoye Array**	**21.12**	**342**	P	**P**	**00 20 54.3**	**-1.3**
BVA0				pmax	pmax		
comp=Z,11nm,1.2s,mb4.1							
BRVK	**Borovoye**	**21.17**	**342**	*eP*	**P**	**00 20 55.4**	**-0.8**
comp=Z,40nm,0.9s,mb4.8							
BRVK	**Borovoye**	**21.17**	**342**	*eP*	**P**	**00 20 55.4**	**-0.9**
BRVK				pmax	pmax		
comp=Z,40nm,0.9s,mb4.8							
CHTO	**Chiang Mai**	**21.52**	**128**	*eP*	**P**	**00 20 58.6**	**-1.6**
comp=Z,16nm,1.0s,mb4.4							
CHTO	**Chiang Mai**	**21.52**	**128**	*eP*	**P**	**00 20 58.6**	**-1.6**
CHTO				pmax	pmax		
comp=Z,16nm,1.0s,mb4.4							
NVS	**Novosibirsk**	**21.52**	**3**	⇑*i*P	**P**	**00 20 58.1**	**-1.8**
NVS				*eS*	**S**	**00 24 57.8**	**+1.9**
NVS				pmax	pmax		
comp=Z,22nm,1.2s,mb4.5							
NVS				pmax	pmax		
comp=N,23nm,1.1s							
NVS				smax			
comp=N,24nm,2.3s							
NVS				smax			
comp=E,18nm,2.0s							
AB31	**Akbulak array**	**22.38**	**321**	*i* P	**P**	**00 21 07.9**	**-1.3**
AB31				pmax	pmax		
comp=Z,5.0nm,0.6s,mb4.1							
XAN	**Xi'an**	**23.08**	**81**	P	**P**	**00 21 19.4**	**+2.7**
XAN				AMB	AMB		
comp=Z,5.0nm,1.2s,mb3.8							
GYA	**Guiyang**	**23.12**	**101**	P	**P**	**00 21 20.1**	**+2.9**
GYA				AMB	AMB		
comp=Z,10.0nm,0.8s,mb4.3							
KOD	**Kodaikanal**	**23.27**	**189**	*eP*	**P**	**00 21 20.1**	**+1.2**
KOD				AMb	AMB	00 21 25.1	
comp=Z,26nm,2.0s,mb4.3							
MOY	**Mondy**	**23.28**	**32**	*eP*	**P**	**00 21 18.0**	**-0.7**
ZAK	**Zakamensk**	**23.53**	**37**	*eP*	**P**	**00 21 19.6**	**-1.4**
ZAK				pmax	pmax		
comp=Z,5.0nm,1.2s,mb3.8							
SONM	**Songino Array**	**23.86**	**45**	P	**P**	**00 21 24.0**	**0.0**
SONM				pmax	pmax		
comp=Z,4.0nm,0.8s							
SONM	**Songino Array**	**23.86**	**45**	P	**P**	**00 21 24.0**	**0.0**
comp=Z,4.3nm,0.8s,mb3.9,baz=239,slow=9.5,SNR=39							
AKTK	**Aktyubinsk**	**24.09**	**322**	P	**P**	**00 21 25.1**	**-0.9**
AKTO	**Aktyubinsk**	**24.09**	**322**	P	**P**	**00 21 25.2**	**-0.9**
AKTO				pmax	pmax		
comp=Z,6.0nm,0.8s,mb4.1							
AKTO	**Aktyubinsk**	**24.09**	**322**	P	**P**	**00 21 25.1**	**-0.9**
comp=Z,5.9nm,0.8s,mb4.1,baz=116,slow=7.6,SNR=17							
ULN	**Ulaanbaatar**	**24.27**	**46**	*eP*	**P**	**00 21 28.3**	**+0.5**
comp=Z,36nm,1.6s,mb4.5							
ULN	**Ulaanbaatar**	**24.27**	**46**	⇑*eP*	**P**	**00 21 28.5**	**+0.8**
TLY	**Talaya**	**24.52**	**35**	*eP*	**P**	**00 21 31.1**	**+1.1**
TLY	**Talaya**	**24.52**	**35**	*eP*	**P**	**00 21 30.9**	**+0.9**
TLY				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.2							
PALK	**Pallekele**	**25.97**	**181**	P	**P**	**00 21 41.7**	**-1.7**
SVE	**Sverdlovsk**	**27.36**	**335**	⇑*eP*	**P**	**00 21 55.7**	**+0.1**
SVE				pmax	pmax		
comp=Z,8.0nm,0.9s,mb4.2							
SVE				MLR	MLR		
comp=Z,1μm,19.0s,MS4.4							
ARU	**Arti**	**27.83**	**333**	*eP*	**P**	**00 21 59.4**	**-0.4**
ARU	**Arti**	**27.83**	**333**	*c i*P	**P**	**00 22 00.1**	**+0.3**
ARU				*e*PPP		00 22 52.2	
ARU				*eS*	**S**	**00 26 39.1**	**-0.6**
ARU				pmax	pmax		
comp=Z,9.0nm,1.2s,mb4.3							
KIV	**Kislovodsk**	**31.59**	**301**	P	**P**	**00 22 32.8**	**-0.5**
KIV	**Kislovodsk**	**31.59**	**301**	P	**P**	**00 22 32.8**	**-0.5**
NJ2	**Nanjing**	**31.63**	**82**	*eP*	**P**	**00 22 37.6**	**+3.8**
NJ2				AMB	AMB		
comp=Z,10.0nm,0.7s,mb4.8							
HIA	**Hailar**	**32.63**	**49**	P	**P**	**00 22 43.7**	**+1.3**
HIA	**Hailar**	**32.63**	**49**	*i* P	**P**	**00 22 43.9**	**+1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BOD	Bodaibo	33.00	32	eP	P	00 22 44.4	-1.0
BOD				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
MALT	Malatya	34.77	291	P	P	00 23 04.0	+3.0
	comp=Z,3.2nm,0.8s,mb4.3						
MALT	Malatya	34.77	291	P	P	00 23 04.1	+3.1
MALT				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
OBN	Obninsk	37.77	319	⇑eP	P	00 23 26.8	+0.3
OBN				e		00 24 54.0	
OBN				eS	S	00 29 08.6	-5.4
OBN				eSS	SS	00 31 53.4	-7.4
OBN				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.3						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.1						
KSRS	Korea Array	38.03	70	P	P	00 23 28.7	-0.2
	comp=Z,0.4nm,0.3s,mb3.6,baz=281,slow=7.3,SNR=3.3						
BRTR	Keskin Array B	38.34	294	P	P	00 23 32.6	+1.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	38.34	294	P	P	00 23 32.5	+1.0
	comp=Z,2.6nm,0.7s,mb4.1,baz=109,slow=8.6,SNR=12						
AKASG	Malin Array Be	41.36	311	P	P	00 23 56.8	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	41.36	311	P	P	00 23 56.8	+0.4
	comp=Z,1.4nm,0.5s,mb3.8,baz=80,slow=7.6,SNR=4.0						
JOF	Joensuu	42.80	329	ep	P	00 24 07.5	-0.5
VRI	Vrincioaia	42.97	304	⇑iP	P	00 24 15.2	+5.6
MLR	Muntele Rosu	43.54	303	⇓iP	P	00 24 20.5	+6.3
BURAR	Bucovina Array	43.93	306	⇓iP	P	00 24 16.8	-0.5
MTUR	Matau	44.18	303	⇓iP	P	00 24 20.9	+1.6
FIA1	FINESS Array S	44.75	326	eP	P	00 24 23.9	+0.3
FINES	FINESS Array B	44.75	326	i P	P	00 24 24.0	+0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	44.75	326	P	P	00 24 23.5	-0.1
	comp=Z,2.9nm,0.6s,mb4.3,baz=110,slow=9.8,SNR=20						
TIXI	Tiksi	45.77	19	eP	P	00 24 27.8	-3.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MAJO	Matsushiro	46.28	69	P	P	00 24 35.6	-0.5
MJAR	Matsushiro Arr	46.28	69	P	P	00 24 35.2	-0.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	Matsushiro Arr	46.28	69	P	P	00 24 35.2	-0.9
	comp=Z,1.0nm,0.4s,mb4.1,baz=292,slow=9.6,SNR=3.7						
ARCES	ARCESS Array B	47.28	337	P	P	00 24 42.1	-1.3
ARCES				pmax	pmax		
	comp=Z,12nm,1.1s						
ARCES	ARCESS Array B	47.28	337	P	P	00 24 42.1	-1.3
	comp=Z,12nm,1.1s,mb4.7,baz=90,slow=6.1,SNR=5.9						
DPC	Dobruska-Polom	49.59	310	eP	P	00 25 06.4	+4.9
UPC	Upice	49.77	311	eP	P	00 25 04.6	+1.7
PRU	Pruhonice	50.77	310	eP	P	00 25 16.7	+6.3
BRG	Berggiesshubel	51.04	311	eP	P	00 25 13.9	+1.5
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
BRG	Berggiesshubel	51.04	311	eP	P	00 25 13.9	+1.4
	comp=Z,11nm,1.1s,mb4.7						
BRG				e		00 25 18.2	
	comp=Z,8.0nm,1.0s						
GERES	GERESS Array B	51.48	309	P	P	00 25 16.7	+1.0
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	GERESS Array B	51.48	309	P	P	00 25 16.7	+0.9
	comp=Z,0.7nm,0.5s,mb3.8,baz=112,slow=5.9,SNR=4.5						
KHC	Kasperske Hory	51.51	309	eP	P	00 25 22.4	+6.4
CLL	Collm	51.57	312	i P	P	00 25 17.3	+0.9
	comp=Z,18nm,1.8s,mb4.7						
MA2	Magadan	51.71	37	P	P	00 25 17.7	+0.4
MA2				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
NB2	NORSAR Subarra	51.84	324	P	P	00 25 18.0	-0.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=90,slow=7.9						
NB2	NORSAR Subarra	51.84	324	P	P	00 25 18.0	-0.3
NB2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
NOA	NORSAR Array B	51.84	324	P	P	00 25 17.9	-0.4
NOA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	NORSAR Array B	51.84	324	P	P	00 25 17.9	-0.4
	comp=Z,3.7nm,0.8s,mb4.3,baz=88,slow=7.4,SNR=10						
BILL	Bilibino	57.72	26	P	P	00 26 02.1	+1.4
WRA	Warramunga Arr	73.36	128	P	P	00 27 42.3	0.0
WRA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	Warramunga Arr	73.36	128	P	P	00 27 42.3	0.0
	comp=Z,3.5nm,1.0s,mb4.2,baz=326,slow=5.8,SNR=15						
WB2	Warramunga Arr	73.37	128	eP	P	00 27 42.0	-0.4
WB2	Warramunga Arr	73.37	128	eP	P	00 27 41.8	-0.6
TOA0	Torodi Ar. Sit	74.17	275	eP	P	00 27 47.8	+0.5
TORD	Torodi Ar. Bea	74.17	275	P	P	00 27 47.4	+0.1
	comp=Z,2.2nm,0.6s,mb4.3,baz=47,slow=4.5,SNR=36						
COLA	College	74.89	20	eP	P	00 27 50.0	-0.7
INK	Inuvik	75.39	13	eP	P	00 27 53.4	0.0
MCK	McKinley	75.44	21	P	P	00 27 53.7	-0.2
ASAR	Alice Springs	75.76	131	P	P	00 27 56.2	+0.1
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	Alice Springs	75.76	131	P	P	00 27 56.1	0.0
	comp=Z,1.5nm,0.7s,mb4.1,baz=315,slow=5.5,SNR=15						
BOSA	Boshof	81.28	227	P	P	00 28 26.4	-0.1
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
BOSA	Boshof	81.28	227	P	P	00 28 26.4	-0.1
	comp=Z,5.5nm,0.8s,mb4.5,baz=36,slow=6.9,SNR=9.7						
KIC	Kosan Boka	83.13	273	eP	P	00 28 42.8	+6.2
	comp=Z,22nm,0.8s,mb5.3						
TIC	Toumodi	83.21	273	eP	P	00 28 43.1	+6.1
	comp=Z,107nm,1.6s						
LIC	Lamto	83.44	273	eP	P	00 28 45.6	+7.4
	comp=Z,28nm,1.1s,mb5.2						
YKA	Yellowknife Ar	83.64	7	P	P	00 28 37.6	-0.8
YKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YKA	Yellowknife Ar	83.64	7	P	P	00 28 37.6	-0.8
	comp=Z,5.9nm,0.7s,mb4.8,baz=341,slow=5.2,SNR=47						
STKA	Stephens Creek	86.35	132	P	P	00 28 52.9	+0.5
FCC	Fort Churchill	88.14	358	P	P	00 29 00.8	+0.2
LPAZ	La Paz	147.52	294	PKP2	PKPbc	00 35 56.4	+1.6
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	147.52	294	PKPbc	PKPbc	00 35 56.4	+1.6
	comp=Z,0.7nm,0.6s,baz=40,slow=7.9,SNR=3.0						

*NEIC **02** 00:18:48.3, 1878N×6867W, h105^{km}, MD4.0(RSPR), After RSPR.*

RSPR 02 00:18:48.3±, **1878N×6867W, h105**^{km}±3^{km}**, MD4.0**/14, **MD4.0**/14**, 14C, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STDO	Santo Domingo	1.23	255	eS	Sn	00 19 28.1	-1.3
AGPR	Aguadilla, PR	1.51	102	⇑eP	Pn	00 19 15.5	+0.6
AGPR				eS	Sn	00 19 35.7	+0.5
LSP	Las Mesas	1.62	112	⇑eP	Pn	00 19 16.9	+0.6
LSP				eS	Sn	00 19 38.5	+0.9
CRPR	Cabo Rojo, PR	1.67	117	⇑eP	Pn	00 19 16.3	-0.6
CRPR				eS	Sn	00 19 38.7	+0.1
AOPR	Arecibo Observ	1.87	103	⇑eP	Pn	00 19 19.1	-0.3
AOPR				eS	Sn	00 19 42.9	-0.3
GBPR	Guanica, Bosqu	1.88	115	eS	Sn	00 19 43.5	+0.1
OBIP	Obispado Ponce	2.09	110	⇑eP	Pn	00 19 23.0	+0.7
OBIP				eS	Sn	00 19 49.1	+0.9
CELP	Cerrillos	2.11	109	⇑eP	Pn	00 19 22.4	0.0
CELP				eS	Sn	00 19 48.2	-0.3
ICM	Isla Caja Muer	2.22	113	⇑eP	Pn	00 19 23.7	-0.2
ICM				eS	Sn	00 19 51.0	-0.3
SJG	San Juan	2.48	105	⇑eP	Pn	00 19 27.8	+0.5
SJG				eS	Sn	00 19 56.8	-0.6
SJG	San Juan	2.48	105	⇑eP	Pn	00 19 27.3	0.0
SJG				eS	Sn	00 19 57.7	+0.4
SDDR	Presa de Saban	2.49	275	⇑eP	Pn	00 19 28.0	+0.6
SDDR				eS	Sn	00 19 56.8	-0.5
CBYP	Canovanas	2.72	100	⇑eP	Pn	00 19 29.4	-1.1
CBYP				eS	Sn	00 20 02.4	-0.5
CPD	Cerro la Pandu	2.72	105	⇑eP	Pn	00 19 30.9	+0.4
CPD				eS	Sn	00 20 02.1	-0.8
HUMP	Col San Antoni	2.75	103	eS	Sn	00 20 03.2	-0.4
MTP	Monte Pirata	3.04	102	⇑eP	Pn	00 19 34.3	-0.4
MTP				eS	Sn	00 20 10.3	-0.1
STVI	Saint Thomas	3.55	96	⇑eP	Pn	00 19 41.5	-0.1
STVI				eS	Sn	00 20 22.7	0.0

CASC 02 00:40:12.9±2.1**, 823N×8282W, h12**^{km}±17^{km}**, MD3.8, 1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVD	David	0.41	61	eP	Pg	00 40 20.1	-1.0
BRU2	Volcan	0.57	12	eS	Sg	00 40 33.5	+1.8
TBS2		0.58	16	⇑eP	Pg	00 40 26.7	+2.4
BRU	Baru	0.62	24	eP	Pg	00 40 25.4	+0.3
CTCR	Cotoan	0.66	5	eP	Pg	00 40 25.6	-0.2
CTCR				eS	Sg	00 40 34.7	+0.1
BAR1		1.12	334	eP	Pb	00 40 32.4	-1.8
BAR1				eS	Sb	00 40 47.4	-1.3
CNI	Changuinola	1.21	14	eP	Pn	00 40 34.0	-1.7
QCR	Quepos	1.79	312	eP	Pn	00 40 42.8	-0.8
QCR				eS	Sn	00 41 05.6	-0.6
URSC	Urasca	1.86	329	⇓eP	Pn	00 40 44.3	-0.2
URSC				eS	Sn	00 41 09.6	+1.6
LCR2	La Lucha 2	1.91	322	eP	Pn	00 40 44.6	-0.6
LCR2				eS	Sn	00 41 11.1	+1.9
LAJ	Bijagual	2.07	322	eP	Pn	00 40 49.8	+2.3
LAJ				eS	Sn	00 41 18.3	+5.0
PRS1	Puriscal	2.28	320	eP	Pn	00 40 50.2	-0.2
PRS1				eS	Sn	00 41 18.8	+0.3
CGA2	Cerro Gallo 2	2.41	318	eP	Pn	00 40 53.2	+1.1
CGA2				eS	Sn	00 41 23.0	+1.5

*ISK **02** 00:40:28.6, 3836N×3916E, h5^{km}, MD3.6*
*ISCJB **02** 00:40:29.7±0.6, 3833N±002×3920E±003, h3^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.7km az=135.4*
*CSEM **02** 00:40:29.4±0.1, 3836N×3915E, h5^{km}, MD3.4, Error ellipse: s-maj=1.8km s-min=1.3km az=172.0*
*DDA **02** 00:40:30.2, 3827N×3914E, h2^{km}, Md3.4*

ISC 02 00:40:30.5±0.6**, 3834N**±003×**3920E**±003**, h4**^{km}±5^{km}**, n28,** σ**1^{s}21**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.23	313	i P	Pg	00 40 34.5	-0.5
ELZG				i S	Sg	00 40 37.6	-0.4
PTK	Pertek	0.57	15	PG	Pg	00 40 40.6	-0.8
PTK				SG	Sg	00 40 49.5	+0.7
MALT	Malatya	0.61	268	PG	Pg	00 40 40.7	-1.4
MYA	Malataya	0.61	269	PG	Pg	00 40 41.1	-1.1
MYA				SG	Sg	00 40 50.5	+0.4
DIY	Diyarbakir	0.92	118	PG	Pg	00 40 47.4	-0.8
URFA	Urfa	0.95	199	PG	Pg	00 40 48.6	0.0
URFA				SG	Sg	00 41 02.4	+1.5
ATAB	Bozova	1.13	220	i P	Pg	00 40 50.4	-1.7
ATAB				i S	Sg	00 41 08.3	+1.6
BINT	Bingol	1.14	62	PN	Pn	00 40 51.8	-1.4
MARD	Mardin	1.62	129	i P	Pn	00 40 58.0	-1.7
MARD				i S	Sn	00 41 19.2	-1.8
GZT	Gaziantep	1.63	233	i P	Pn	00 40 57.4	-2.5
GZT				i S	Sg	00 41 24.7	+2.0
BNGL	BINGOL	1.64	68	i P	Pn	00 41 01.4	+1.3
BNGL				i S	Sn	00 41 24.9	+3.2
KELT	Kelkit	1.81	1	i P	Pn	00 41 03.4	+1.0
KELT				i S	Sn	00 41 26.8	+1.1
KELT	Kelkit	1.81	1	i P	Pn	00 41 03.3	+1.0
KELT				i S	Sn	00 41 26.8	+1.2
BTMT	Batman	1.81	94	PN	Pn	00 41 00.4	-2.0
GAZ	Gaziantep	1.96	234	PN	Pn	00 41 04.2	-0.3
GUMT	Gumushane	2.13	6	PN	Pn	00 41 06.8	+0.1
EZM	Erzurum	2.29	46	PN	Pn	00 41 09.4	+0.3
SVSK	Karacayir	2.33	313	PN	Pn	00 41 08.9	-0.6
ANDN	Andirin	2.38	252	i P	Pn	00 41 09.5	-0.7
ANDN				i S	Sg	00 41 49.8	+2.8
BNN	Bunyan	2.68	282	ePN	Pn	00 41 13.7	-0.6
SIRT	Sirnak	2.70	107	ePN	Pn	00 41 15.6	+1.0
KOZT	Kozan	2.80	253	ePN	Pn	00 41 15.6	-0.4
AGRB	Hanur-Agry	3.20	66	ePN	Pn	00 41 22.6	+1.1
YOZ	Yozgat	3.29	294	ePN	Pn	00 41 22.6	-0.1
HTY	Hatay	3.30	229	ePN	Pn	00 41 22.6	-0.3
CUKT	Cukurca	3.66	106	ePN	Pn	00 41 29.4	+1.6
HKR	Hakkari	3.67	101	ePN	Pn	00 41 29.5	+1.6
CORM	Corum	3.99	299	ePN	Pn	00 41 32.7	+0.3

*ISCJB **02** 00:41:44.7±0.7, 1038N±003×6228W±002, h8^{km}±5^{km}, Error ellipse: s-maj=5.5km s-min=3.6km az=155.7*
*TRN **02** 00:41:44.8, 1049N×6229W, h2^{km}, MD3.2*
*NEIC **02** 00:41:44.8, 1049N×6229W, h2^{km}, MD3.2(TRN), After TRN.*
*FUNV **02** 00:41:45.5, 1039N×6227W, h3^{km}, MW2.9*

ISC 02 00:41:45.2±0.5**, 1040N**±003×**6229W**±002**, h7**^{km}±4^{km}**, n19,** σ**0^{s}86**/30**, 3C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.25	14	⇑eP	Pg	00 41 50.5	+0.3
GUIV				eS	Sg	00 41 54.5	+0.9
TCE	Chacachacare	0.60	60	⇓iP	Pg	00 41 56.4	-0.4
TCE				eS	Sg	00 42 03.6	-1.0
GUNV	Guanoco	0.69	250	⇑iP	Pg	00 41 58.6	+0.1
GUNV				eS	Sg	00 42 09.0	+1.6
TPP	Pointe-a-Pierr	0.82	96	eP	Pg	00 42 00.6	-0.5
TRN	Trinidad (W)	0.90	74	eP	Pg	00 42 01.4	-1.1
TRN				eS	Sg	00 42 15.3	+1.1
CRUV	Carupano	0.97	286	eP	Pg	00 42 02.9	-1.0
CRUV				eS	Sg	00 42 15.7	-0.9
TBH	Brigand Hill	1.20	86	eP	Pb	00 42 08.5	+0.2
TBH				eS	Sb	00 42 26.2	+2.2
ITEV	Isla Los Testi	1.26	319	⇑iP	Pn	00 42 09.1	-0.1
ITEV				eS	Sb	00 42 26.1	+0.3
TPR	Prospect	1.68	62	eP	Pn	00 42 14.9	0.0
TPR				eS	Sn	00 42 37.3	+0.6
ORIV	Oritupano	1.72	220	eP	Pn	00 42 16.2	+0.6
ORIV				eS	Sn	00 42 38.7	+0.8
GRW	Mount Saint Ca	1.85	19	eP	Pn	00 42 18.1	+0.7
GRW				eS	Sn	00 42 39.6	-1.5
PCRV	Puerto La Cruz	2.32	265	eP	Pn	00 42 24.5	+0.6
RIOV	Rio Grande	2.36	169	eP	Pn	00 42 24.3	-0.1
RIOV				eS	Sn	00 42 53.1	-0.6
PRGV	PARIAGUAN	2.84	235	eP	Pn	00 42 31.1	+0.1
CUPV	Cœpira	3.46	265	eP	Pn	00 42 39.5	-0.1
BIRV	Birongo	3.92	271	eP	Pn	00 42 46.4	+0.6
LUEV	Luepa	4.60	170	eP	Pn	00 42 53.5	-1.7
CAOV	Caicara del Or	5.02	233	eP	Pn	00 42 60.0	-1.0
BAUV	El Baul	5.86	256	eP	Pn	00 43 12.2	-0.3

IDC 02 00:51:01.2±2.9**, 2158S×17986E, h0**^{km}**, mb3.9**/3**, mb1 4.3**/3**, mb1mx3.9**/13**, mbtmp3.9**/3**, Error ellipse: s-maj=287.4km s-min=32.2km az=163.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.33	258	P	P	00 58 56.0	-1.2
	0.5nm,0.5s,baz=93,slow=7.5,SNR=7.7						
WRA	Warramunga Arr	42.48	264	P	P	00 58 59.4	+0.9
	1.4nm,0.3s,baz=98,slow=8.3,SNR=45						
TXAR	Lajitas Array	89.32	58	P	P	01 03 60.0	+0.1
	0.6nm,0.7s,baz=208,slow=6.9,SNR=7.6						

*MOS **02** 00:56:35.1±2.7, 50.14N×154.39E, h37^{km}, mb4.5/1, Error ellipse: s-maj=40.3km s-min=11.8km az=60.6*

KRSC 02 00:56:30.1±1.8**, 4921N×15670E, h5**^{km}±5^{km}**, ML4.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.52	346	ePN	Pn	00 56 54.5	-3.4
SKR				eS	Sn	00 57 09.0	-9.1
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				pmax	pmax		
	comp=N,280nm,0.3s						
SKR				pmax	pmax		
	comp=E,110nm,0.3s						
SKR				smax			
	comp=N,4μm,0.3s						
SKR				smax			
	comp=E,4μm,0.3s						
MIPR	Malaya Ipel'ka	3.07	1	eP	Pn	00 57 18.8	-0.4
MIPR				i S	Sn	00 57 54.1	-2.2
RUS	Russkaya	3.43	19	eP	Pn	00 57 25.4	+1.3
RUS				i S	Sn	00 58 06.1	+1.1
GRL	Gorelyy	3.46	14	eP	Pn	00 57 26.8	+2.3
GRL				i S	Sn	00 58 08.5	+2.7
PET	Petropavlovsk	4.01	17	ePN	Pn	00 57 34.5	+2.4
PET				eS	Sn	00 58 21.7	+2.2
PET				pmax	pmax		
	comp=Z,59nm,0.3s						
PET				smax			
	comp=E,217nm,0.5s						
PET				smax			
	comp=N,210nm,0.4s						
PET				MLR	MLR		
	comp=Z,700nm,19.0s						
PET	Petropavlovsk	4.01	17	eP	Pn	00 57 34.8	+2.7
PET				i S	Sn	00 58 22.1	+2.6
AVH	Avacha	4.26	17	eP	Pn	00 57 38.6	+3.1
NLC	Nalytchevo	4.30	22	eP	Pn	00 57 37.0	+0.9
NLC				i S	Sn	00 58 26.2	-0.4
SPN	Mys Shipunski	4.42	27	eP	Pn	00 57 39.9	+2.2
SPN				i S	Sn	00 58 30.8	+1.3
GNL	Ganaly	4.56	9	eP	Pn	00 57 41.5	+1.9
MKZ	Mys Kozlova	6.19	28	eP	Pn	00 58 03.5	+1.4
MKZ				i S	Sn	00 59 12.2	-1.0
TUMR	Tumrok	6.44	18	P	Pn	00 58 08.4	+3.0
KMNR	Kamenistaya	6.90	17	P	Pn	00 58 14.9	+3.1
SRDR	Sredinnyy	7.35	13	P	Pn	00 58 19.1	+1.2
SMKR	Semkarok	7.92	19	P	Pn	00 58 29.0	+3.2
SRKR	Sorokina	7.93	18	P	Pn	00 58 27.8	+1.9
KBTR	Krutoberegovo	7.93	26	eP	Pn	00 58 27.4	+1.5
BILL	Bilibino	19.48	11	i P	Pn	01 00 56.8	-1.9
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						

*MOS **02** 00:56:52.0±1.0, 36.18N×71.41E, h93^{km}, mb4.2/10, Error ellipse: s-maj=12.9km s-min=7.7km az=97.2*
*ISCJB **02** 00:56:53.9±0.4, 3631N±002×7157E±004, h110^{km}±5^{km}, mb3.9/14, Error ellipse: s-maj=5.6km s-min=3.4km az=2.4*
*NEIC **02** 00:56:54.5±0.7, 3623N×7151E, h104^{km}±7^{km}, mb4.6/13, Error ellipse: s-maj=7.6km s-min=5.5km az=53.0*
*BJI **02** 00:56:54.5, 3620N×7150E, h104^{km}, mb4.0*
*IDC **02** 00:56:55.5±0.7, 36.16N×71.40E, h112^{km}±5^{km}, mb3.6/11, mb1 3.7/13, mb1mx3.5/23, mbtmp3.6/13, Error ellipse: s-maj=16.9km s-min=15.7km az=40.0*
*NNC **02** 00:57:07.0±4.9, 3736N×7144E, h223^{km}±47^{km}, mb3.1, mpv4.2, Error ellipse: s-maj=58.9km s-min=22.1km az=22.0*

ISC 02 00:56:55.2±0.3**, 3630N**±002×**7156E**±004**, h109**^{km}±4^{km}**, h115**^{km}±2.4^{km}**:pP-P, n91,** σ**1^{s}08**/118**, mb3.9**/14**, 3C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.48	173	P	Pn	00 57 36.6	+2.2
KBL	Kabul	2.70	230	ePn	Pn	00 57 37.6	+0.4
KBL				eSn	Sn	00 58 08.9	-0.6
THW	Thamme Wali	3.50	177	P	Pn	00 57 49.7	+1.9
SBDP	Sheikh Budin	4.04	189	P	Pn	00 57 55.6	+0.6
SBDP				S	Sn	00 58 31.0	-10
DRP	Derazinda	4.68	194	P	Pn	00 58 05.7	+2.0
DRP				S	Sn	00 58 55.0	-1.9
KSH	Kashi	4.75	46	⇑iP	Pn	00 58 08.6	+4.1
KSH				S	Sn	00 58 57.8	-0.6
KSH				Smax			
	comp=N,2μm,0.4s						
KSH				Smax			
	comp=E,1μm,0.4s						
DLH	Dalhousie	5.22	135	eP	Pn	00 58 13.0	+1.9
DLH				eS	Sn	00 59 10.0	-0.1
AML	Almayashu	6.06	15	ePn	Pn	00 58 22.7	+0.4
	comp=E,126nm,0.4s						
AML				eSn	Sn	00 59 30.7	+0.5
AML	Almayashu	6.06	15	P	Pn	00 58 22.6	+0.3
	SNR=216						
UCH	Uchtor	6.35	20	ePn	Pn	00 58 27.1	+0.9
UCH				eSn	Sn	00 59 35.5	-1.8
UCH	Uchtor	6.35	20	P	Pn	00 58 27.1	+0.8
	SNR=40						
KZA	Kyzart	6.45	25	P	Pn	00 58 28.6	+1.1
	SNR=15						
SDNR	Sundarnagar	6.57	135	eP	Pn	00 58 30.0	+0.7
SDNR				eS	Sn	00 59 41.0	-1.7
EKS2	Erkin-Say	6.58	14	ePn	Pn	00 58 29.6	+0.2
	comp=E,34nm,0.5s						
EKS2				eSn	Sn	00 59 42.8	-0.2
EKS2	Erkin-Say	6.58	14	P	Pn	00 58 29.6	+0.2
	SNR=66						
AAK	Ala-Archa	6.72	19	ePn	Pn	00 58 30.8	-0.5
	comp=E,35nm,0.5s						
AAK				eSn	Sn	00 59 46.8	+0.5
AAK	Ala-Archa	6.72	19	⇓iPN	Pn	00 58 30.9	-0.4
AAK	Ala-Archa	6.72	19	P	Pn	00 58 32.1	+0.8
	SNR=72						
KK31	Karatay Array	6.85	354	P	Pn	00 58 31.6	-1.4
	comp=E,37nm,0.3s,baz=178,slow=13,SNR=2941						
KK31				⇓S	Sn	00 59 41.0	-8.3
	comp=E,13nm,0.3s,baz=181,slow=23,SNR=7.8						
KBK	Karagaybulak	6.87	21	P	Pn	00 58 34.1	+0.9
	SNR=23						
CHMS	Chumysh	7.13	19	P	Pn	00 58 37.2	+0.4
	SNR=7.9						
TKM2	Tokmak 2	7.31	24	⇓P	Pn	00 58 39.8	+0.5
	comp=E,3.7nm,0.8s						
TKM2	Tokmak 2	7.31	24	ePn	Pn	00 58 40.4	+1.1
	comp=E,28nm,0.6s						
TKM2				eSn	Sn	00 59 59.9	-0.8
TKM2	Tokmak 2	7.31	24	ePN	Pn	00 58 40.4	+1.1
TKM2				pmax	pmax		
	comp=Z,28nm,0.6s						
TKM2	Tokmak 2	7.31	24	P	Pn	00 58 40.2	+0.9
	SNR=40						
USP	Ospenovka	7.32	17	P	Pn	00 58 39.6	+0.2
	SNR=18						
DDI	Dehra Dun	8.06	136	ex	x	01 00 08.0	
JOSI	Joshimath	8.80	128	eP	Pn	00 59 00.0	+0.4
JOSI				AMb	AMB	00 59 05.0	
	comp=Z,68nm,0.8s						
JOSI				eS	Sn	01 00 31.4	-5.6
KHET	Khetri	8.95	155	eP	Pn	00 59 00.3	-1.4
KHET				AMb	AMB	00 59 03.6	
	comp=Z,13nm,0.2s						
KHET				eS	Sn	01 00 34.2	-6.5
NDI	New Delhi	8.97	146	eP	Pn	00 59 02.0	+0.1
NDI				eS	Sn	01 00 35.0	-6.1
KUDL	Kundal	9.14	151	eP	Pn	00 59 03.9	-0.3
KUDL				AMb	AMB	00 59 06.2	
	comp=Z,16nm,0.7s						
KUDL				eS	Sn	01 00 38.4	-6.8
SONA	Sohna	9.28	148	eP	Pn	00 59 06.7	+0.5
SONA				AMb	AMB	00 59 07.6	
	comp=Z,9.9nm,0.5s						
SONA				eS	Sn	01 00 41.8	-7.0
AJM	Ajmer	10.13	164	eP	Pn	00 59 17.0	-0.7
AJM				eS	Sn	01 01 04.0	-5.4
MK31	Makanchi Array	13.20	34	⇑P	Pn	00 59 55.8	-2.4
	comp=Z,1.6nm,0.8s,baz=225,slow=8.2,SNR=6.2						
MKAR	Makanchi Array	13.20	34	P	Pn	00 59 59.3	+1.1
	comp=Z,0.2nm,0.3s,baz=223,slow=16,SNR=7.8						
GKN	Gorkha	13.81	123	eP	Pn	01 00 05.4	-1.0
	comp=Z,12nm,0.2s						
GKN				eS	Sn	01 02 30.5	-8.1
KKN	Kakani	14.39	122	eP	Pn	01 00 12.3	-1.4
	comp=Z,20nm,0.5s						
KKN				eS	Sn	01 02 42.9	-10
KKN	Kakani	14.39	122	eP	Pn	01 00 12.3	-1.4
KKN				eS	Sn	01 02 42.9	-10
KKN				pmax	pmax		
	comp=Z,20nm,0.5s						
JIRN	Jiri	15.10	121	eP	Pn	01 00 21.9	-0.8
	comp=Z,28nm,0.4s						
JIRN				eS	S	01 03 00.8	-18
KURK	Kurchatov	15.28	17	ePn	Pn	01 00 26.5	+1.6
	comp=Z,5.6nm,0.9s						
KURK				eSn	Sn	01 03 12.0	-1.7
KURK	Kurchatov	15.28	17	eP	Pn	01 00 26.5	+1.6
KURK				e		01 03 12.0	
KURK				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.0nm,0.9s						
AB31	Akbulak array	15.48	330	P	Pn	01 00 23.6	-3.8
	comp=Z,5.5nm,0.5s,baz=142,slow=11,SNR=300						
AB31				S	S	01 03 01.5	-25
	comp=Z,3.5nm,0.5s,baz=156,slow=21,SNR=9.7						
TAPN	Taplejung	16.35	119	*e*P	Pn	01 00 37.7	-0.7
	comp=Z,13nm,0.4s						
ODAN	Odare	16.43	120	*e*P	Pn	01 00 39.2	-0.1
	comp=Z,7.6nm,0.4s						
BRVK	Borovoye	16.78	357	*e*Pn	Pn	01 00 40.2	-3.2
	comp=Z,9.2nm,0.9s						
BRVK	Borovoye	16.78	357	*e*P	Pn	01 00 40.2	-3.2
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKTK	Aktyubinsk	17.18	330	P	Pn	01 00 47.5	-0.7
AKTK				S	S	01 03 45.5	-14
AKTO	Aktyubinsk	17.18	330	P	Pn	01 00 47.6	-0.7
AKTO				S	S	01 03 45.5	-14
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	Aktyubinsk	17.18	330	P	Pn	01 00 47.5	-0.7
	comp=Z,2.0nm,0.3s,baz=135,slow=11,SNR=20						
AKTO				S	S	01 03 45.5	-14
	comp=Z,0.2nm,0.3s,baz=45,slow=20,SNR=5.0						
CHKZ	Chkalovo	17.39	358	P	Pn	01 00 50.5	-0.3
LSA	Lhasa	17.69	106	P	Pn	01 00 54.7	+0.1
ZAL	Zalesovo	19.90	23	P	P	01 01 18.0	+0.1
ZAA0	Zalesovo Array	19.92	23	*e*P	P	01 01 18.0	0.0
ZALV	Zalesovo Beam	19.92	23	P	P	01 01 18.0	0.0
	comp=Z,12nm,0.4s,baz=203,slow=10,SNR=132						
NVS	Novosibirsk	20.21	20	*e*P	P	01 01 21.1	-0.1
NVS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NVS				pmax	pmax		
	comp=N,12nm,1.5s						
ARU	Arti	21.97	340*c*	*i*P	P	01 01 40.4	+0.4
ARU				*e*		01 02 01.5	
ARU				*e*S	S	01 05 39.3	+3.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.0						
GTA	Gaotai	22.49	74	*e*P	P	01 01 50.2	+4.6
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
KIV	Kislovodsk	23.28	298	*e*P	P	01 01 51.4	-1.6
	comp=Z,11nm,1.0s,mb4.1						
KIV	Kislovodsk	23.28	298	*e*P	P	01 01 51.4	-1.7
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.1						
SOC	Sochi	25.36	296	*e*P	P	01 02 08.0	-4.0
SOC				*e*S	S	01 06 31.1	+0.8
SOC				*e*SS		01 07 34.1	
SOC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.4						
SOC				MLR	MLR		
	comp=Z,236nm,17.0s						
MALT	Malatya	26.36	284	P	P	01 02 18.7	-2.4
SONM	Songino Array	28.08	55	P	P	01 02 38.6	+2.3
SONM				pP	pP	01 03 03.2	+2.9
SONM	Songino Array	28.08	55	P	P	01 02 38.6	+2.3
	comp=Z,0.1nm,0.4s,baz=248,slow=6.8,SNR=4.6						
SONM				pP	pP	01 03 03.2	+2.9
	comp=Z,0.6nm,0.8s,baz=254,slow=8.8,SNR=4.5						
OBN	Obninsk	30.39	319	P	P	01 02 56.4	-0.2
AKASG	Malin Array Be	33.42	309	P	P	01 03 24.6	+1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	33.42	309	P	P	01 03 24.6	+1.3
	comp=Z,0.8nm,0.5s,mb3.8,baz=110,slow=9.6,SNR=1.7						
JOF	Joensuu	36.27	330	*e*p	P	01 03 47.9	+0.3
	comp=Z,3.6nm,0.4s,mb4.7						
JOF	Joensuu	36.27	330	*e*P	P	01 03 47.9	+0.3
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
FINES	FINESS Array B	37.90	326	P	P	01 04 02.2	+0.8
FINES				pP	pP	01 04 28.8	+2.7
FINES	FINESS Array B	37.90	326	P	P	01 04 02.2	+0.8
FINES				*PP	pP	01 04 28.8	+2.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES				pmax	pmax		
	comp=N,1.0nm,0.6s						
FINES	FINESS Array B	37.90	326	P	P	01 04 02.2	+0.8
	comp=N,1.2nm,0.4s,mb4.1,baz=122,slow=9.7,SNR=27						
FINES				pP	pP	01 04 28.8	+2.7
	comp=N,0.8nm,0.6s,baz=123,slow=15,SNR=2.2						
KAF	Kangasniemi	38.04	327	*e*p	P	01 04 03.6	+1.0
	baz=109,slow=7.9						
PSZ	Piszkesteto	39.36	304	P	P	01 04 13.4	-0.3
ARCES	ARCESS Array B	41.50	338	P	P	01 04 32.1	+1.0
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARCES	ARCESS Array B	41.50	338	P	P	01 04 32.1	+1.0
	comp=Z,5.4nm,0.9s,mb4.2,baz=112,slow=8.4,SNR=10						
TIP	Timpagrande	42.88	291	P	P	01 04 42.4	-0.3
NB2	NORSAR Subarra	44.81	323	P	P	01 04 58.2	+0.4
	comp=Z,1.8nm,0.5s,mb4.1,baz=99,slow=7.9						
NB2	NORSAR Subarra	44.81	323	P	P	01 04 58.2	+0.4
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
NOA	NORSAR Array B	44.81	323	P	P	01 04 57.9	+0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	44.81	323	P	P	01 04 57.9	0.0
	comp=Z,1.9nm,0.6s,mb4.0,baz=96,slow=7.7,SNR=12						
TORD	Torodi Ar. Bea	66.16	269	P	P	01 07 28.8	-2.5
	comp=Z,0.5nm,0.4s,mb3.7,baz=50,slow=5.8,SNR=26						
TORD				pP	pP	01 07 57.6	-0.7
	comp=Z,0.6nm,0.7s,baz=39,slow=5.8,SNR=2.5						
MBWA	Marble Bar	73.06	133	P	P	01 08 14.2	+0.7
BOSA	Boshof	77.88	221	P	P	01 08 41.2	+0.3
BOSA	Boshof	77.88	221	P	P	01 08 41.2	+0.3
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
BOSA	Boshof	77.88	221	P	P	01 08 41.2	+0.3
	comp=Z,1.5nm,0.5s,mb4.0,baz=39,slow=5.7,SNR=7.2						
YKA	Yellowknife Ar	81.43	3	P	P	01 09 00.6	+1.0
YKA				pP	pP	01 09 28.7	+1.1
YKA	Yellowknife Ar	81.43	3	P	P	01 09 00.6	+1.0
YKA				*PP	pP	01 09 28.7	+1.1
YKA				pmax	pmax		
	comp=N,1.0nm,0.8s						
YKA	Yellowknife Ar	81.43	3	P	P	01 09 00.6	+1.0
	comp=N,0.3nm,0.6s,mb3.3,baz=350,slow=5.4,SNR=7.1						
YKA				pP	pP	01 09 28.7	+1.1
	comp=N,0.8nm,0.8s,baz=348,slow=5.5,SNR=4.4						
WRA	Warramunga Arr	81.50	122	P	P	01 09 01.5	+0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	81.50	122	P	P	01 09 01.5	+0.8
	comp=Z,0.5nm,0.7s,mb3.5,baz=326,slow=5.1,SNR=5.4						
ASAR	Alice Springs	83.77	125	P	P	01 09 11.7	-0.6
	comp=Z,0.2nm,0.5s,mb3.2,baz=311,slow=4.7,SNR=3.5						
ASAR				pP	pP	01 09 41.1	+0.6
	comp=Z,0.4nm,0.7s,baz=313,slow=5.0,SNR=2.5						
ASAR				sP	sP	01 09 53.6	+1.5
	comp=Z,0.5nm,0.8s,baz=311,slow=6.0,SNR=3.1						

*ISCJB **02** 00:57:18.5±0.6, 4528N±003×1484E±005, h8^{km}, Error ellipse: s-maj=4.8km s-min=4.1km az=171.7*
*LJU **02** 00:57:18.6, 4529N×1484E, h8^{km}, ML1.8*
*VIE **02** 00:57:18.6±0.5, 4526N×1485E, h8^{km}±2^{km}, ML2.5/1, Error ellipse: s-maj=3.2km s-min=1.6km az=177.0 36 km ESE of Rijeka*
ISC 02 00:57:18.9±1.2, **4528N**±003×**1487E**±006, **h16**^{km}±23^{km}, **n11**, σ**0^{s}71**/19, **3C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOJS	Bojanci	0.35	50	*i* Pg	Pg	00 57 25.9	-0.4
BOJS				*i* Sg	Sg	00 57 31.3	+0.1
BOJS							
	comp=Z,52nm,0.1s						
VISS	Visnje	0.53	358	*i* Pg	Pg	00 57 28.7	-0.7
VISS				*e*Sg	Sg	00 57 35.7	-0.9
VISS							
	comp=Z,21nm,0.1s						
SKDS	Skadanscina	0.66	295	*i* Pg	Pg	00 57 30.4	-1.4
SKDS				*i* Sg	Sg	00 57 40.5	-0.1
CRES	Cresnjev	0.69	37	*i* Pg	Pg	00 57 32.5	+0.1
NVLJ	Novalja	0.71	180	*e*Pg	Pg	00 57 32.2	-0.6
NVLJ				Sg	Sg	00 57 43.5	+1.3
LEGS	Legarje	0.74	25	*e*Pg	Pg	00 57 32.9	-0.5
LEGS				*e*Sg	Sg	00 57 44.0	+0.7
PDKS	Podkum	0.79	7	*i* Pg	Pg	00 57 34.0	-0.4
VOY	Vojsko	1.02	318	*e*Pg	Pg	00 57 39.2	+0.5
VOY				*e*Sg	Sg	00 57 52.3	+0.3
CADS	Cadrg	1.24	321	*e*Pg	Pg	00 57 42.3	-0.5
OBKA	Obir	1.25	350	⇑*i*Pg	Pg	00 57 43.1	-0.1
OBKA				⇓*i*Sg	Sg	00 58 00.9	+1.4
	comp=Z,12nm,0.2s						
MYKA	Terra Mystica	1.60	328	⇑*i*Pg	Pg	00 57 49.9	+0.2
MYKA				⇑*i*Sg	Sg	00 58 11.5	+0.9
	comp=Z,4.8nm,0.3s						

*CSEM **02** 01:24:47.4±0.1, 3840N×3927E, h5^{km}, MD3.1, Error ellipse: s-maj=2.1km s-min=1.5km az=175.0*
*ISK **02** 01:24:47.8, 3839N×3927E, h9^{km}, MD3.4*
*ISCJB **02** 01:24:48.1±0.5, 3838N±003×3930E±003, h7^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.3km az=4.7*
*DDA **02** 01:24:49.5, 3836N×3925E, h5^{km}, Md3.1*
ISC 02 01:24:48.8±0.5, **3839N**±003×**3929E**±003, **h9**^{km}±5^{km}, **n20**, σ**0^{s}99**/28, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	294	*i* P	Pg	01 24 53.7	-0.3
ELZG				*i* S	Sg	01 24 58.7	+1.1
PTK	Pertek	0.51	9	PG	Pg	01 24 58.1	-0.5
PTK				SG	Sg	01 25 06.0	+0.7
MALT	Malatya	0.68	264	PG	Pg	01 25 00.9	-1.1
MALT				SG	Sg	01 25 11.1	+0.2
MYA	Malataya	0.69	265	PG	Pg	01 25 01.1	-0.9
DIY	Diyarbakir	0.89	124	PG	Pg	01 25 05.0	-0.8
DIY				SG	Sg	01 25 18.3	+1.0
URFA	Urfa	1.02	202	PG	Pg	01 25 08.0	-0.3
BINT	Bingol	1.05	62	PG	Pg	01 25 08.7	-0.3
ATAB	Bozova	1.21	221	*i* P	Pn	01 25 12.0	+0.2
ATAB				*i* S	Sb	01 25 29.9	+2.3
EZC	Erzincan	1.42	17	PN	Pn	01 25 13.4	-1.3
BNGL	BINGOL	1.56	68	*i* P	Pn	01 25 18.4	+1.8
BNGL				*i* S	Sn	01 25 41.4	+4.5
MARD	Mardin	1.59	132	*i* P	Pn	01 25 16.7	-0.4
MARD				*i* S	Sn	01 25 36.2	-1.7
GZT	Gaziantep	1.71	233	*i* P	Pn	01 25 18.2	-0.5
GZT				*i* S	Sn	01 25 44.8	+4.0
BTMT	Batman	1.74	96	PN	Pn	01 25 17.5	-1.6
GAZ	Gaziantep	2.05	234	*e*PN	Pn	01 25 23.3	-0.1
SVSK	Karacayir	2.35	311	*e*PN	Pn	01 25 27.2	-0.3
SIRT	Sirnak	2.64	109	*e*PN	Pn	01 25 32.7	+1.2
BNN	Bunyan	2.74	281	*e*PN	Pn	01 25 32.6	-0.3
KOZT	Kozan	2.89	253	*e*PN	Pn	01 25 35.1	+0.2
AGRB	Hanur-Agry	3.12	67	*e*PN	Pn	01 25 39.0	+0.9
CUKT	Cukurca	3.60	107	*e*PN	Pn	01 25 46.1	+1.3

IDC 02 01:33:12.1±2.4, **233N**×**12851E**, **h0**^{km}, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/16, **mbtmp3.5**/3, **MS3.7**/1, **Ms1 3.7**/1, **ms1mx3.0**/19, **Error ellipse: s-maj=176.3km s-min=24.9km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.86	166	P	P	01 38 18.2	+1.1
	2.0nm,0.9s,baz=346,slow=10,SNR=6.2						
ASAR	Alice Springs	26.36	169	P	P	01 38 49.1	-1.0
	0.3nm,0.6s,baz=353,slow=7.0,SNR=2.6						
HNR	Honiara	33.42	111	LR	LR	01 53 12.3	
	comp=Z,145nm,20.6s,baz=7.0,slow=36						
MKAR	Makanchi Array	59.72	325	P	P	01 43 18.9	+0.3
	0.4nm,0.5s,baz=111,slow=8.7,SNR=9.0						

*ISCJB **02** 01:41:33.8±0.7, 5151N±003×185E±004, h4^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=3.8km az=25.3*
*UCC **02** 01:41:35.7±0.3, 5168N×208E, h11^{km}±3^{km}, ML1.6*
*CSEM **02** 01:41:36.2±0.1, 5171N×189E, h5^{km}, ML2.7/6, Error ellipse: s-maj=2.4km s-min=1.8km az=24.0*
*LDG **02** 01:41:37.2±0.1, 5164N×193E, h10^{km}, Ml2.6/14, Error ellipse: s-maj=3.6km s-min=2.6km az=39.0*
*BGS **02** 01:41:37.1±1.1, 5167N×209E, h15^{km}, ML2.0*
*NEIC **02** 01:41:37.2, 5164N×193E, h10^{km}, ML2.6(LDG), After LDG.*
ISC 02 01:41:35.4±0.6, **5156N**±002×**190E**±004, **h10**^{km}±4^{km}, **n49**, σ**1^{s}29**/108, **United Kingdom**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TFO1	Folkestone	0.65	227	*e*P	Pg	01 41 51.2	+3.2
TFO1				*e*S	Sg	01 42 01.8	+5.3
TFO1				AML	AML	01 42 04.2	
	comp=E,72nm,0.3s						
TFO1				AML	AML	01 42 07.0	
	comp=N,93nm,0.1s						
APAE	Packway	0.79	341	*e*P	Pg	01 41 49.6	-1.0
APAE	Packway	0.79	341	*e*P	Pg	01 41 49.6	-1.0
	comp=N,93nm,0.1s						
AEU	East Anglia Un	1.14	339	*e*P	Pb	01 41 55.9	-1.3
AEU				*e*S	Sb	01 42 09.6	-2.4
AEU				AML	AML	01 42 12.8	
	comp=N,29nm,0.3s						
AEU				AML	AML	01 42 13.9	
	comp=E,36nm,0.3s						
AEU	East Anglia Un	1.14	339	*e*P	Pb	01 41 55.9	-1.3
	comp=E,29nm,0.3s						
ABA1	Baconsthorpe	1.41	341	*e*P	Pn	01 42 00.3	-0.9
SKP1	Kophill	1.69	277	*e*P	Pn	01 42 06.6	+1.6
SKP1	Kophill	1.69	277	*e*P	Pn	01 42 06.6	+1.5
	comp=E,2.3nm,0.6s						
BAIF	Baives	2.10	135	*e*P	Pg	01 42 14.4	-1.2
BAIF				*e*Sn	Sn	01 42 37.1	+0.3
BAIF				*e*Sg	Sg	01 42 43.7	+0.9
	comp=E,4.7nm,0.3s						
BAIF	Baives	2.10	135	*e*Pn	Pn	01 42 11.5	+0.9
BAIF				*e*P	Pg	01 42 14.4	-1.2
BAIF				*e*Sn	Sn	01 42 37.1	+0.3
BAIF				*e*Sg	Sg	01 42 43.7	+0.9
BAIF	Baives	2.10	135	*e*P	Pg	01 42 14.4	-1.2
BAIF				*e*Sn	Sn	01 42 37.1	+0.3
BAIF				*e*Sg	Sg	01 42 43.7	+0.9
	comp=E,2.3nm,0.3s						
DOU	Dourbes	2.25	130	P	Pn	01 42 16.5	+3.8
DOU				S	Sn	01 42 42.4	+1.8
	comp=E,2.4nm,0.2s						
DOU	Dourbes	2.25	130	P	Pn	01 42 16.5	+3.8
DOU				S	Sn	01 42 42.3	+1.8
	comp=E,2.4nm,0.2s						
GIVF	Givet	2.36	127	*e*P	Pn	01 42 17.9	+3.7
GIVF	Givet	2.36	127	*e*Pg	Pg	01 42 21.4	+0.8
GIVF				*e*Sn	Sn	01 42 43.0	-0.2
GIVF				*e*Sg	Sg	01 42 52.0	+0.8
	comp=E,8.4nm,0.3s						
GIVF	Givet	2.36	127	*e*Pn	Pn	01 42 15.5	+1.3
GIVF				*e*P		01 42 17.9	
GIVF				*e*Pg	Pg	01 42 21.4	+0.8
GIVF				*e*Sn	Sn	01 42 43.0	-0.2
GIVF				*e*Sg	Sg	01 42 52.0	+0.8
GIVF	Givet	2.36	127	*e*P	Pn	01 42 17.9	+3.7
GIVF	Givet	2.36	127	*e*Pg	Pg	01 42 21.4	+0.8
GIVF				*e*Sn	Sn	01 42 43.0	-0.2
GIVF				*e*Sg	Sg	01 42 52.0	+0.8
	comp=E,4.2nm,0.3s						
BCLA	Clavier	2.44	117	P	Pn	01 42 13.5	-1.8
BCLA				S	Sn	01 42 38.3	-6.7
	comp=E,3.3nm,0.2s						
BCLA	Clavier	2.44	117	P	Pn	01 42 13.4	-1.8
MCH1	Michaelchurch	3.07	280	*e*P	Pn	01 42 25.1	+1.1
MCH1				*e*S	Sn	01 42 59.3	-1.5
MCH1				AML	AML	01 43 19.8	
	comp=N,2.1nm,0.7s						
MCH1				AML	AML	01 43 22.8	
	comp=E,2.3nm,0.6s						
FLN	La Foliniere	3.19	210	*e*P	Pn	01 42 30.1	+4.5
	baz=30						
FLN				*e*Sn	Sn	01 43 02.9	-0.8
FLN				*e*Sg	Sg	01 43 18.6	+0.7
	comp=E,7.5nm,0.4s						
FLN	La Foliniere	3.19	210	*e*Pn	Pn	01 42 26.5	+0.9
FLN				*e*P		01 42 30.1	
FLN				*e*Sn	Sn	01 43 02.9	-0.8
FLN				*e*Sg	Sg	01 43 18.6	+0.7
FLN	La Foliniere	3.19	210	*e*P	Pn	01 42 30.1	+4.5
FLN				*e*Sn	Sn	01 43 02.9	-0.8
FLN				*e*Sg	Sg	01 43 18.6	+0.7
	comp=E,3.8nm,0.4s						
LDF	La Druitiere	3.24	204	*e*Pn	Pn	01 42 27.5	+1.2
LDF				*e*Sn	Sn	01 43 04.3	-0.7
LDF				*e*Sg	Sg	01 43 19.9	+0.4
	comp=E,3.5nm,0.3s						
LDF	La Druitiere	3.24	204	*e*Pn	Pn	01 42 27.5	+1.2
LDF				*e*Sn	Sn	01 43 04.3	-0.7
LDF				*e*Sg	Sg	01 43 19.9	+0.4
	comp=E,1.8nm,0.3s						
GRR	Gorron	3.64	210	*e*Pn	Pn	01 42 33.0	+1.2
GRR				*e*Sn	Sn	01 43 14.2	-0.6
GRR				*e*Sg	Sg	01 43 32.9	+0.7
	comp=E,3.7nm,0.3s						
GRR	Gorron	3.64	210	*e*Pn	Pn	01 42 33.0	+1.2
GRR				*e*Sn	Sn	01 43 14.2	-0.6
GRR				*e*Sg	Sg	01 43 32.9	+0.7
	comp=E,1.9nm,0.3s						
MEZF	Maizieres J'vi	3.67	145	*e*Pg	Pg	01 42 45.7	-0.1
	baz=324						
MEZF				*e*Sg	Sg	01 43 32.5	-0.9
	comp=E,4.3nm,0.4s						
MEZF	Maizieres J'vi	3.67	145	*e*Pg	Pg	01 42 45.7	-0.1
MEZF				*e*Sg	Sg	01 43 32.5	-0.9
	comp=E,2.2nm,0.4s						
SFTF	Sexfontaines	3.92	148	*e*Pn	Pn	01 42 36.8	+1.1
	baz=331						
SFTF				*e*Sg	Sg	01 43 41.6	+0.2
	comp=E,3.4nm,0.3s						
SFTF	Sexfontaines	3.92	148	*e*Pn	Pn	01 42 36.8	+1.1
SFTF				*e*Sg	Sg	01 43 41.6	+0.2
	comp=E,1.7nm,0.3s						
SGMF	Saint Gilles	4.39	223	*e*Pn	Pn	01 42 43.2	+1.2
SGMF				*e*Sn	Sn	01 43 32.2	-1.0
	comp=E,1.3nm,0.4s						
SGMF	Saint Gilles	4.39	223	*e*Pn	Pn	01 42 43.2	+1.2
SGMF				*e*Sn	Sn	01 43 32.2	-1.0
	comp=E,0.6nm,0.4s						
LOR	Lormes	4.48	163	*e*Pn	Pn	01 42 45.7	+2.3
LOR				*e*Sg	Sg	01 43 57.7	-1.6
	comp=E,2.3nm,0.3s						
LOR	Lormes	4.48	163	*e*Pn	Pn	01 42 45.7	+2.3
LOR				*e*Sg	Sg	01 43 57.7	-1.6
	comp=E,1.1nm,0.3s						
HAU	Haudompre	4.58	139	*e*Pg	Pg	01 43 01.9	-1.2
HAU				*e*Sn	Sn	01 43 36.0	-1.9
HAU				*e*Sg	Sg	01 44 00.1	-2.3
	comp=E,3.9nm,0.3s						
HAU	Haudompre	4.58	139	*e*Pn	Pn	01 42 45.9	+1.2
HAU				*e*Pg	Pg	01 43 01.9	-1.2
HAU				*e*Sn	Sn	01 43 36.0	-1.9
HAU				*e*Sg	Sg	01 44 00.1	-2.3
HAU	Haudompre	4.58	139	*e*Pg	Pg	01 43 01.9	-1.2
HAU				*e*Sn	Sn	01 43 36.0	-1.9
HAU				*e*Sg	Sg	01 44 00.1	-2.3
	comp=E,2.0nm,0.3s						
SSF	Saint Saulge	4.62	166	*e*Pn	Pn	01 42 46.0	+0.7
SSF				*e*Sg	Sg	01 44 02.3	-1.5
	comp=E,1.6nm,0.3s						
SSF	Saint Saulge	4.62	166	*e*Pn	Pn	01 42 46.0	+0.7
SSF				*e*Sg	Sg	01 44 02.3	-1.5
	comp=E,0.8nm,0.3s						
ROSF	Rostrenen	4.64	228	*e*Pn	Pn	01 42 46.8	+1.2
ROSF				*e*Sn	Sn	01 43 38.4	-1.1
	comp=E,1.5nm,0.2s						
ROSF	Rostrenen	4.64	228	*e*Pn	Pn	01 42 46.8	+1.2
ROSF				*e*Sn	Sn	01 43 38.4	-1.1
	comp=E,0.8nm,0.2s						
AVF	Avril sur Loir	4.87	168	*e*Pn	Pn	01 42 49.9	+1.2
QUIF	Quistinic	4.91	224	*e*Pn	Pn	01 42 50.2	+1.0
QUIF				*e*Sn	Sn	01 43 44.6	-1.4
	comp=E,1.5nm,0.4s						
QUIF	Quistinic	4.91	224	*e*Pn	Pn	01 42 50.2	+1.0
QUIF				*e*Sn	Sn	01 43 44.6	-1.4
	comp=E,0.8nm,0.4s						
BGF	Bois d'Agland	5.05	173	*e*Pn	Pn	01 42 52.3	+1.2
BGF				*e*Sn	Sn	01 43 47.0	-2.4
BGF				*e*Sg	Sg	01 44 15.4	-1.9
	comp=E,4.3nm,0.3s						
BGF	Bois d'Agland	5.05	173	*e*Pn	Pn	01 42 52.3	+1.2
BGF				*e*Sn	Sn	01 43 47.0	-2.4
BGF				*e*Sg	Sg	01 44 15.4	-1.9
	comp=E,2.2nm,0.3s						
SMF	Signal de Mont	5.08	165	*e*Pn	Pn	01 42 53.2	+1.6

*BJI **02** 01:43:56.6, 41.14N×78.60E, h9^{km}, ML3.2*
*ISCJB **02** 01:43:58.3±1.4, 41.10N±0.08×78.6E±0.1, h10^{km}, Error ellipse: s-maj=15.4km s-min=7.5km az=39.4*
*NNC **02** 01:44:05.7±4.6, 4160N×7857E, h17^{km}±21^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=26.1km s-min=14.0km az=143.0*
ISC 02 01:43:59.9±4.2, **411N**±01×**785E**±02, **h6**^{km}±23^{km}, **n15**, σ**1^{s}23**/16, **6C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	1.99	305	P	Pn	01 44 33.7	-0.3
	SNR=83						
KNDC	Almaty	2.35	333	⇑Pn	Pn	01 44 40.2	+1.2
	167nm,0.6s						
KNDC				⇑Lg		01 45 10.7	
	252nm,0.6s						
KSH	Kashi	2.49	230	*e*P	Pn	01 44 40.4	-0.5
KSH				S	Sn	01 45 11.0	-0.6
KSH				Smax			
	comp=N,1μm,1.3s						
KSH				Smax			
	comp=E,504nm,0.5s						
KZA	Kyzart	2.57	292	P	Pn	01 44 43.9	+1.9
	SNR=28						
TKM2	Tokmak 2	2.77	311	⇑Pn	Pn	01 44 45.7	+1.0
	comp=E,1.2nm,0.5s						
TKM2				⇓Lg		01 45 25.5	
	comp=E,4.6nm,0.4s						
TKM2	Tokmak 2	2.77	311	P	Pn	01 44 45.7	+0.9
	SNR=36						
KBK	Karagaybulak	3.02	301	P	Pn	01 44 49.9	+1.7
	SNR=23						
UCH	Uchtor	3.14	292	P	Pb	01 44 54.7	-1.3
	SNR=21						
AAK	Ala-Archa	3.31	298	P	Pb	01 44 57.5	-1.4
	SNR=15						
USP	Ospenovka	3.62	307	P	Pb	01 45 01.9	-2.4
	SNR=5.9						
AML	Almayashu	3.70	287	P	Pb	01 45 05.4	-0.1
	SNR=18						
EKS2	Erkin-Say	3.80	295	P	Pb	01 45 07.2	-0.1
	SNR=29						
KK31	Karatay Array	6.22	291	Pn	Pb	01 45 49.8	+1.3
	comp=E,2.4nm,0.6s,baz=105,slow=14,SNR=25						
KK31				⇑Lg		01 47 20.0	
	comp=E,4.8nm,0.6s,baz=103,slow=29,SNR=6.3						
MK31	Makanchi Array	6.30	25	⇑Pn	Pn	01 45 34.2	+1.0
	comp=E,0.8nm,0.5s,baz=203,slow=13,SNR=24						
MK31				⇓Sn	Sn	01 46 43.7	-1.7
	comp=E,1.8nm,0.4s						
MK31				⇓Lg		01 47 10.8	
	comp=E,4.2nm,0.6s,baz=205,slow=28,SNR=5.5						
KURK	Kurchatov	9.58	1	⇑Pn	Px	01 46 53.0	
	comp=E,4.4nm,1.9s						
KURK				⇓Lg		01 48 52.4	
	comp=E,6.2nm,1.0s						

*ISCJB **02** 01:58:16.1±0.6, 4865N±003×12579W±005, h38^{km}±11^{km}, Error ellipse: s-maj=6.0km s-min=4.4km az=162.5*
*PGC **02** 01:58:16.9±0.6, 4871N×12579W, h35^{km}, ML3.1/7, 32km southwest of Ucluelet, Bc Vancouver Island Region*
*NEIC **02** 01:58:16.9, 4871N×12479W, h35^{km}, ML3.1(PGC), After PGC.*
ISC 02 01:58:16.1±0.7, **4866N**±003×**12579W**±005, **h22**^{km}±5^{km}, **n61**, σ**0^{s}82**/81, **21C-24D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZB	Mount Ozzard	0.36	32	P	Pb	01 58 24.5	+0.6
OZB				S	Sb	01 58 30.1	+0.9
OZB	Mount Ozzard	0.36	32	Trac			
BMSB	Bamfield Mari	0.47	67	Trac			
BMSB	Bamfield Mari	0.47	67	P	Pb	01 58 26.4	+0.7
BMSB				S	Sb	01 58 33.1	+0.9
MGB	Mount Grey	0.80	64	P	Pb	01 58 30.9	-0.4
MGB				S	Sb	01 58 41.1	-0.7
BTB	Buttle Lake	0.83	12	P	Pb	01 58 31.1	-0.8
BTB				S	Sb	01 58 40.9	-1.8
BTB	Buttle Lake	0.83	12	Trac			

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETB	Estevan Point	0.88	326	P	Pb	01 58 31.8	-0.8
ETB	Estevan Point	0.88	326	Trac			
ALB	Alberni	0.88	45	P	Pb	01 58 32.1	-0.7
ALB				S	Sb	01 58 42.9	-1.2
ALB	Alberni	0.88	45	Trac			
PFB	Port Renfrew	0.90	95	P	Pb	01 58 32.3	-0.7
PFB				S	Sb	01 58 43.8	-0.8
PFB	Port Renfrew	0.90	95	Trac			
PFB	Port Renfrew	0.90	95	P	Pb	01 58 32.3	-0.7
PFB				S	Sb	01 58 43.8	-0.8
C03A	Quillayute Air	1.08	130	⇓P	Pn	01 58 36.0	+0.1
	baz=1.1						
C03A				⇓S	Sb	01 58 49.9	+0.1
	baz=1.1						
OTR	Olympics--Tyee	1.12	120	P	Pn	01 58 36.5	+0.1
GDR	Gold River	1.14	352	P	Pn	01 58 35.7	-1.0
GDR				S	Sb	01 58 49.2	-2.3
GDR	Gold River	1.14	352	Trac			
OBC	Olympics--Boni	1.30	118	P	Pn	01 58 38.9	0.0
STW	Striped Peak	1.50	109	⇑P	Pn	01 58 41.3	-0.4
PGC	Sidney	1.55	89	eP	Pn	01 58 41.7	-0.6
B04A	Port Angeles	1.64	111	⇑P	Pn	01 58 43.1	-0.5
	baz=1.7						
B04A				⇓S	Sn	01 59 03.0	-0.9
	baz=1.7						
SNB	Saturna Island	1.74	85	P	Pn	01 58 44.9	-0.1
NLWA	Neilton Lookou	1.81	134	ePn	Pn	01 58 45.8	0.0
NLWA				eSn	Sn	01 58 58.0	-10
MCW	Mount Constitu	1.96	88	P	Pn	01 58 48.1	+0.1
A04A	Legoe Bay, Lum	2.04	87	P	Pn	01 58 49.4	+0.2
	baz=2.0,SNR=47						
A04A				⇓S	Sn	01 59 14.0	+0.1
	baz=2.0						
D03A	Wishkah Elem.	2.05	138	P	Pn	01 58 49.6	+0.4
	baz=2.1,SNR=6.6						
D03A				⇑S	Sn	01 59 13.1	-1.0
	baz=2.1						
HDW	Hoodsport	2.09	118	P	Pn	01 58 49.9	+0.2
C04A	Brinnon	2.10	115	⇑P	Pn	01 58 50.1	+0.2
	baz=2.1						
C04A				⇓S	Sn	01 59 14.5	-0.9
	baz=2.1						
CMW	Cultus Mountai	2.45	94	P	Pn	01 58 55.6	+0.9
VDB	Vedder Mountai	2.46	80	P	Pn	01 58 55.2	+0.3
A05A	Maple Falls	2.47	81	P	Pn	01 58 55.7	+0.7
	baz=2.5,SNR=43						
A05A				⇑S	Sn	01 59 24.8	+0.3
	baz=2.5						
B05A	Bryant	2.49	98	⇓P	Pn	01 58 55.4	+0.1
	baz=2.5,SNR=25						
B05A				⇓S	Sn	01 59 24.7	-0.1
	baz=2.5						
D04A	Dobbs Creek Ra	2.53	126	⇓S	Sn	01 59 25.7	-0.3
	baz=2.6						
E03A	Lebam	2.59	144	⇓P	Pn	01 58 56.5	-0.2
	baz=2.6,SNR=7.7						
E03A				⇑S	Sn	01 59 25.5	-1.9
	baz=2.6						
JCW	Jim Creek	2.61	99	P	Pn	01 58 57.7	+0.7
B06A	Marblemount	2.86	91	⇑P	Pn	01 59 01.3	+1.0
	baz=2.9,SNR=12						
A06A	Chilliwack	2.88	80	⇑P	Pn	01 59 01.3	+0.7
	baz=2.9,SNR=39						
C05A	Tolt Reservoir	2.91	108	⇓P	Pn	01 59 02.1	+1.1
	baz=2.9						
C05A				⇓S	Sn	01 59 34.3	-0.9
	baz=2.9						
E04A	Onalaska	2.92	134	⇓S	Sn	01 59 34.9	-0.7
	baz=3.0						
D05A	Enumclaw	2.95	118	⇓S	Sn	01 59 36.1	-0.1
	baz=3.0						
F03A	Seaside	3.12	150	⇓P	Pn	01 59 04.4	+0.5
	baz=3.2						
F03A				⇑S	Sn	01 59 38.1	-2.3
	baz=3.2						
C06A	Tall Timber Ra	3.35	101	⇑S	Sn	01 59 45.8	-0.3
	baz=3.3						
E05A	Randle	3.44	126	⇑P	Pn	01 59 09.2	+0.9
	baz=3.5,SNR=8.2						
E05A				⇑S	Sn	01 59 47.8	-0.4
	baz=3.5						
F04A	Amboy	3.56	139	⇑P	Pn	01 59 11.4	+1.4
	baz=3.6,SNR=5.7						
F04A				⇓S	Sn	01 59 50.8	-0.5
	baz=3.6						
A07A	Ashnola River,	3.59	82	P	Pn	01 59 11.3	+1.0
	baz=3.6,SNR=27						
A07A				⇑S	Sn	01 59 52.4	+0.4
	baz=3.6						
D06A	Cle Elum	3.63	112	⇓P	Pn	01 59 12.6	+1.6
	baz=3.6						
D06A				⇓S	Sn	01 59 53.7	+0.7
	baz=3.6						
G03A	Yamhill	3.76	152	⇑S	Sn	01 59 56.0	-0.1
	baz=3.8						
B07A	Winthrop	3.77	91	⇓P	Pn	01 59 13.7	+0.9
	baz=3.8,SNR=28						
E06A	Yakima	3.88	121	⇑S	Sn	01 59 59.1	0.0
	baz=3.9						
C07A	Waterville	3.95	102	⇓P	Pn	01 59 16.0	+0.7
	baz=4.0,SNR=20						
C07A				⇓S	Sn	02 00 00.7	-0.3
	baz=4.0						
A08A	Turner Farm, O	4.32	84	⇑P	Pn	01 59 21.3	+1.0
	baz=4.3,SNR=50						
H03A	Soap Creek Ran	4.33	156	⇑P	Pn	01 59 21.7	+1.1
	baz=4.4						
H03A				⇑S	Sn	02 00 09.6	-0.8
	baz=4.4						
E07A	Sunnyside	4.53	115	⇑S	Sn	02 00 13.7	-1.4
	baz=4.5						
C08A	Higginbotham F	4.59	98	⇓P	Pn	01 59 25.1	+1.0
	baz=4.6,SNR=11						
H04A	Detroit Lake	4.68	147	⇓P	Pn	01 59 26.9	+1.5
	baz=4.7,SNR=24						
H04A				⇓S	Sn	02 00 18.6	-0.4
	baz=4.7						
A09A	Danville	4.77	83	P	Pn	01 59 27.7	+1.1
	baz=4.7,SNR=13						
B09A	Rice	5.08	90	⇓P	Pn	01 59 31.4	+0.6
	baz=5.1,SNR=9.2						
D09A	Jones Farm, Ri	5.28	105	⇑P	Pn	01 59 33.8	+0.2
	baz=5.3						
NEW	Newport	5.78	91	ePn	Pn	01 59 40.8	+0.4
	3.1nm,0.7s						
NEW				eSn	Sn	02 00 53.6	+7.7
MOD	Modoc	7.78	148	Pn	Pn	02 00 07.3	-0.6

CASC 02 02:00:16.4±2.1, 1173N×8842W, h36km±586km, MD3.8, 3C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.64	20	⇑eP	x	02 00 42.8	
CNCH				eS	x	02 01 02.9	
BLLM	Bellamira	1.71	6	eP	x	02 00 44.6	
BLLM				eS	x	02 01 05.0	
SNVI	San Vicente	1.91	348	eP	x	02 00 48.3	
SNVI				eS	x	02 01 11.7	
LFRS	El Faro	1.98	342	⇑eP	x	02 00 47.4	
LFRS				eS	x	02 01 11.9	
LCBS	La Ceiba	1.99	344	eP	x	02 00 47.4	
LFU	La Fuente	2.12	341	eP	x	02 00 49.9	
LFU				eS	x	02 01 15.3	
BOQS	Boqueron	2.16	337	⇑eP	x	02 00 50.9	
SBLS	San Blas	2.40	331	⇓eP	x	02 00 53.9	
SNJE	San Jose	2.42	332	eP	x	02 00 51.6	
SNJE				eS	x	02 01 22.9	
RTR	El Retiro	2.46	331	⇓eP	x	02 00 52.9	
RTR				eS	x	02 01 24.8	
PRS1	Puriscal	4.39	113	eP	Pn	02 01 21.5	+0.8
PRS1				eS	Sn	02 02 11.8	+1.2
LAJ	Bijagual	4.61	113	eP	Pn	02 01 19.7	-4.0
LCR2	La Lucha 2	4.77	114	eP	Pn	02 01 26.4	+0.6
QCR	Quepos	4.77	118	eP	Pn	02 01 25.7	-0.2
URSC	Urasca	4.94	112	eP	Pn	02 01 30.0	+1.9
URSC				eS	Sn	02 02 25.9	+1.9
BAR1		5.60	116	eP	Pn	02 01 37.5	+0.2

IDC 02 02:39:17.8±0.8, 2162S×6981W, h62km±6km, mb3.4/3, mb1 3.9/5, mb1mx3.6/15, mbtmp3.7/5, Error ellipse: s-maj=28.7km s-min=15.5km az=96.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.53	17	P	Pn	02 40 39.0	+1.4
	2.5nm,0.3s,baz=192,slow=8.1,SNR=40						
LPAZ				S	Sn	02 41 42.7	+2.9
	baz=342,slow=20,SNR=1.3						
SIV	San Ignacio	9.98	57	P	Pn	02 41 36.8	-1.7
	4.0nm,0.3s,baz=250,slow=11,SNR=43						
SIV				S	Sn	02 43 24.7	-4.3
	baz=302,slow=19,SNR=2.8						
CFAA	Coronel Fontan	10.05	172	P	Pn	02 41 40.6	+1.2
	0.1nm,0.3s,baz=279,slow=12,SNR=7.4						
CFAA				S	Sn	02 43 31.9	+1.4
	0.1nm,0.3s,baz=342,slow=20,SNR=2.0						
TXAR	Lajitas Array	60.25	326	P	P	02 49 19.8	0.0
	0.1nm,0.5s,baz=132,slow=7.8,SNR=2.6						
NVAR	Mina Array Bea	75.07	322	pP	pP	02 51 10.1	+0.1
	0.7nm,0.8s,baz=134,slow=8.4,SNR=4.5						
TORD	Torodi Ar. Bea	78.18	71	P	P	02 51 10.8	-0.3
	2.2nm,0.7s,baz=256,slow=5.4,SNR=30						
YKA	Yellowknife Ar	91.02	341	P	P	02 52 14.8	0.0
	0.3nm,0.7s,baz=135,slow=4.7,SNR=8.5						
YKA				pP	pP	02 52 31.1	-1.1
	0.6nm,0.8s,baz=133,slow=4.4,SNR=6.0						
ZALV	Zalesovo Beam	142.41	25	PKP	PKPdf	02 58 43.8	+0.6
	1.0nm,0.6s,baz=303,slow=1.7,SNR=5.2						
ZALV				pPKP	pPKPdf	02 59 01.5	+0.2
	1.4nm,0.7s,baz=299,slow=3.3,SNR=4.3						
MKAR	Makanchi Array	146.21	35	PKPbc	PKPbc	02 58 51.3	+0.1
	2.1nm,0.6s,baz=321,slow=4.2,SNR=36						
MKAR				pPKPbc	pPKPbc	02 59 08.5	-0.5
	1.4nm,0.7s,baz=310,slow=1.9,SNR=6.9						
SONM	Songino Array	153.66	6	PKPbc	PKPbc	02 59 10.8	+1.2
	0.4nm,0.6s,baz=344,slow=2.0,SNR=3.7						
SONM				PKPab	PKPab	02 59 20.6	-1.7
	0.4nm,0.7s,baz=348,slow=2.1,SNR=3.5						
SONM				pPKPbc	pPKPbc	02 59 27.7	+0.2
	0.5nm,0.6s,baz=351,slow=1.8,SNR=4.4						

*NEIC **02** 02:48:00.1, 1882N×6424W, h34km, MD3.5(RSPR), After RSPR.*
RSPR 02 02:48:00.1, 1882N×6424W, h34km±11km, MD3.5/11, MD3.5/11, 9C-4D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.54	222	⇑iP	Pb	02 48 10.1	-1.2
TBVI				eS	Sb	02 48 18.2	-0.9
STVI	Saint Thomas	0.82	236	⇓eP	Pn	02 48 13.7	-1.6
STVI				eS	Sn	02 48 24.1	-2.2
MTP	Monte Pirata	1.44	240	⇓eP	Pn	02 48 22.5	-1.3
MTP				eS	Sn	02 48 39.3	-2.2
CBYP	Canovanas	1.63	251	⇑eP	Pn	02 48 24.5	-1.9
CBYP				eS	Sn	02 48 44.3	-1.9
HUMP	Col San Antoni	1.67	246	⇓eP	Pn	02 48 25.4	-1.6
HUMP				eS	Sn	02 48 46.4	-0.8
CPD	Cerro la Pandu	1.77	244	⇑eP	Pn	02 48 27.6	-0.8
CPD				eS	Sn	02 48 48.8	-1.0
SJG	San Juan	1.95	249	⇑eP	Pn	02 48 29.6	-1.2
SJG				eS	Sn	02 48 52.1	-2.0
SJG	San Juan	1.95	249	⇑eP	Pn	02 48 29.1	-1.7
SJG				eS	Sn	02 48 53.3	-0.8
CELP	Cerrillos	2.34	252	⇓eP	Pn	02 48 35.7	-0.5
CELP				eS	Sn	02 49 03.1	-0.7
ICM	Isla Caja Muer	2.36	247	⇑eP	Pn	02 48 36.2	-0.1
ICM				eS	Sn	02 49 03.5	-0.7
AOPR	Arecibo Observ	2.43	259	⇑eP	Pn	02 48 37.1	-0.4
AOPR				eS	Sn	02 49 04.9	-1.1
AGPR	Aguadilla, PR	2.75	263	eS	Sn	02 49 12.6	-1.2
LSP	Las Mesas	2.78	257	⇑eP	Pn	02 48 41.8	-0.4
LSP				eS	Sn	02 49 13.0	-1.5
CRPR	Cabo Rojo, PR	2.84	254	⇑eP	Pn	02 48 42.5	-0.6
CRPR				eS	Sn	02 49 15.2	-1.0

IDC 02 02:49:54.7±8.3, 1904N×14578E, h254km±77km, mb3.0/5, mb1 3.2/6, mb1mx3.0/19, mbtmp3.0/6, Error ellipse: s-maj=120.0km s-min=15.9km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	18.66	341	P	P	02 53 54.0	-0.1
	0.7nm,0.3s,baz=161,slow=10,SNR=5.1						
KSRS	Korea Array	24.09	323	P	P	02 54 47.2	0.0
	0.9nm,0.6s,baz=149,slow=11,SNR=3.6						
WRA	Warramunga Arr	40.33	197	P	P	02 57 07.9	0.0
	0.2nm,0.3s,baz=12,slow=8.5,SNR=14						
SONM	Songino Array	42.92	321	P	P	02 57 28.9	+0.3
	0.4nm,0.6s,baz=135,slow=9.9,SNR=5.2						
ASAR	Alice Springs	44.00	196	P	P	02 57 37.2	-0.1
	0.2nm,0.8s,baz=16,slow=6.8,SNR=4.2						
FINES	FINESS Array B	86.61	335	P	P	03 02 09.2	-0.1
	0.6nm,0.4s,baz=71,slow=6.5,SNR=6.0						

*ISK **02** 03:34:56.9, 3839N×3926E, h3km, MD3.5*
*ISCJB **02** 03:34:57.2±0.6, 3835N±003×3929E±003, h1km±6km, Error ellipse: s-maj=5.2km s-min=3.4km az=167.8*
*CSEM **02** 03:34:57.0±0.1, 3839N×3928E, h5km, MD3.5, Error ellipse: s-maj=1.8km s-min=1.3km az=171.0*
*DDA **02** 03:34:58.6, 3833N×3926E, h5km, Md3.5*
ISC 02 03:34:58.4±0.5, 3837N±003×3927E±003, h6km±5km, n25, σ0.78/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.26	300	i P	Pg	03 35 03.4	-0.1
ELZG				i S	Sg	03 35 07.0	+0.1
PTK	Pertek	0.53	10	PG	Pg	03 35 07.5	-1.2
PTK				SG	Sg	03 35 15.4	-0.2
MALT	Malatya	0.67	266	PG	Pg	03 35 10.3	-0.9
MALT				SG	Sg	03 35 20.4	+0.6
MYA	Malataya	0.67	267	PG	Pg	03 35 10.2	-1.0
DIY	Diyarbakir	0.89	122	PG	Pg	03 35 15.1	-0.4
URFA	Urfa	0.99	201	PG	Pg	03 35 17.5	+0.1
BINT	Bingol	1.08	62	PG	Pg	03 35 18.2	-0.9
EZC	Erzincan	1.44	17	PN	Pn	03 35 23.9	-1.2
BNGL	BINGOL	1.58	68	i P	Pn	03 35 28.1	+1.0
BNGL				i S	Sg	03 35 51.7	+2.4
MARD	Mardin	1.59	131	i P	Pn	03 35 26.5	-0.6
MARD				i S	Sn	03 35 47.5	-0.5
GZT	Gaziantep	1.69	234	i P	Pn	03 35 28.4	-0.1
GZT				i S	Sg	03 35 53.7	+1.1
BTMT	Batman	1.75	95	PN	Pn	03 35 27.8	-1.6
GAZ	Gaziantep	2.02	234	ePN	Pn	03 35 33.0	0.0
EZM	Erzurum	2.24	46	ePN	Pn	03 35 35.8	-0.2
ERZM	Erzurum	2.24	46	i P	Pn	03 35 37.3	+1.2
ERZM				i S	Sg	03 36 11.1	+0.8
SVSK	Karacayir	2.35	312	ePN	Pn	03 35 37.4	-0.1
SIRT	Sirnak	2.65	108	ePN	Pn	03 35 41.6	-0.1
BNN	Bunyan	2.73	281	ePN	Pn	03 35 43.1	+0.4
KOZT	Kozan	2.86	253	ePN	Pn	03 35 45.0	+0.4
AGRB	Hanur-Agry	3.14	66	ePN	Pn	03 35 48.7	+0.3
HTY	Hatay	3.36	229	ePN	Pn	03 35 51.9	+0.5
HAKT	HAKKARI	3.60	102	i P	Pn	03 35 53.8	-0.9
HAKT				i S	Sg	03 36 54.2	+0.2
CUKT	Cukurca	3.61	107	ePN	Pn	03 35 55.4	+0.5
HKR	Hakkari	3.62	101	ePN	Pn	03 35 55.5	+0.5
CORM	Corum	4.03	298	ePN	Pn	03 36 01.2	+0.6

IDC 02 03:39:31.4±5.0, 2556N×10975W, h0km, mb3.2/1, mb1 3.6/4, mb1mx3.5/19, mbtmp3.2/4, ML3.5/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/17, Error ellipse: s-maj=68.0km s-min=23.3km az=172.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	6.58	54	Pn	Pn	03 41 08.6	-0.8
	0.3nm,0.3s,baz=232,slow=14,SNR=20						
TXAR				Sn	Sn	03 42 24.2	-0.9
	1.0nm,0.3s,baz=234,slow=21,SNR=4.3						
TXAR				Lg		03 42 59.7	
	1.4nm,0.3s,baz=238,slow=31,SNR=7.0						
NVAR	Mina Array Bea	14.73	333	Pn	Pn	03 43 04.1	+3.2
	0.0nm,0.3s,baz=154,slow=15,SNR=2.8						
CMIG	Matias Romero	16.20	118	LR	LR	03 49 01.1	
	comp=Z,56nm,20.9s,baz=2.6,slow=35						
PDAR	Pinedale Array	17.16	0	P	Pn	03 43 34.5	+2.0
	0.0nm,0.3s,baz=171,slow=10,SNR=4.1						
TKL	Tuckaleechee C	24.45	60	LR	LR	03 54 40.7	
	comp=Z,44nm,19.3s,baz=265,slow=37						
JTS	JuntasAbangare	27.98	118	LR	LR	03 56 36.2	
	comp=Z,45nm,19.9s,baz=80,slow=37						
YKA	Yellowknife Ar	37.06	356	P	P	03 46 42.8	-0.1
	0.4nm,0.9s,baz=180,slow=8.1,SNR=5.3						
ATAH	Atahualpa	44.46	132	LR	LR	04 02 21.9	
	comp=Z,217nm,21.2s,baz=221,slow=31						

*MOS **02** 03:49:54.2±1.2, 689S×12952E, h33km, mb4.7/10, Error ellipse: s-maj=22.8km s-min=9.8km az=119.3*
*IDC **02** 03:49:59.2±4.5, 693S×12986E, h72km±45km, mb4.0/6, mb1 4.2/9, mb1mx4.0/16, mbtmp4.1/9, ML4.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/27, Error ellipse: s-maj=36.5km s-min=22.5km az=65.0*
*BJI **02** 03:50:00.0, 700S×12970E, h95km, mB5.1, mb4.7*
*NEIC **02** 03:50:01.7±1.4, 704S×12967E, h95km±15km, mb4.3/12, Error ellipse: s-maj=12.3km s-min=8.9km az=51.0*
*ISCJB **02** 03:50:04.4±1.4, 724S±007×12973E±006, h150km±15km, mb4.2/23, Error ellipse: s-maj=13.0km s-min=8.4km az=33.4*
ISC 02 03:49:57.1±1.6, 688S±008×12991E±007, h52km±17km, n56, σ0.77/62, mb4.4/23, 2C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.31	157	eP	Pn	03 51 32.5	+4.9
	163nm,0.6s						
KAKA				eS	Sn	03 52 37.3	-1.1
BATI	Kupang	7.01	241	P	Pn	03 51 42.8	+5.6
	113nm,0.3s,baz=109,slow=3.7,SNR=64						
BATI				S	Sn	03 52 55.5	-0.2
	20nm,0.3s,baz=342,slow=20,SNR=5.5						
FITZ	Fitzroy Crossi	11.91	200	eP	Pn	03 52 44.1	-0.2
	21nm,0.2s						
FITZ				eS	Sn	03 54 45.0	-11
FITZ	Fitzroy Crossi	11.91	200	P	Pn	03 52 44.8	+0.5
	6.8nm,0.3s,baz=31,slow=10,SNR=89						
FITZ				S	Sn	03 54 45.0	-11
	3.2nm,0.3s,baz=32,slow=15,SNR=7.1						
FITZ				LR	LR	03 57 53.6	
	comp=Z,66nm,18.6s,baz=194,slow=40						
WRA	Warramunga Arr	13.68	162	P	Pn	03 53 08.5	+0.1
	1.9nm,0.3s,baz=333,slow=13,SNR=53						
WRA				S	Sn	03 55 28.9	-10
	7.2nm,0.3s,baz=334,slow=23,SNR=15						
WB2	Warramunga Arr	13.68	162	eP	Pn	03 53 09.1	+0.6
WB2				eS	Sn	03 55 28.4	-11
COEN	Coen	14.81	119	ePn	Pn	03 53 29.5	+5.9
	9.5nm,0.7s						
COEN				eSn	Sn	03 56 00.2	-6.4
ASAR	Alice Springs	17.13	167	P	Pn	03 53 53.4	+0.4
	0.8nm,0.3s,baz=339,slow=9.8,SNR=28						
ASAR				S	S	03 56 51.6	-18
	0.8nm,0.3s,baz=351,slow=28,SNR=4.9						
PMG	Port Moresby	17.25	100	eP	Pn	03 54 00.8	+6.2
	58nm,1.0s						
PMG	Port Moresby	17.25	100	i P	Pn	03 54 01.5	+6.9
PMG	Port Moresby	17.25	100	P	Pn	03 54 00.8	+6.2
	0.8nm,0.3s,baz=283,slow=8.6,SNR=12						
MBWA	Marble Bar	17.28	214	ePn	Pn	03 53 54.9	+0.1
KKM	Kota Kinabalu	18.75	313	eP	Pn	03 54 11.9	-1.0
KSM	Kuching	21.25	292	eP	P	03 54 40.0	+0.9
FORT	Forrest	23.84	184	eP	P	03 55 06.4	+0.8
	18nm,1.3s,mb4.3						
FORT	Forrest	23.84	184	eP	P	03 55 06.0	+0.4
	2.7nm,0.9s,mb3.7						
STKA	Stephens Creek	27.16	158	eP	P	03 55 36.0	+0.4
	2.6nm,1.4s,mb3.6						
STKA	Stephens Creek	27.16	158	P	P	03 55 36.2	+0.6
	1.1nm,0.3s,mb3.8,baz=339,slow=10.0,SNR=5.0						
PSI	Prapat	32.39	286	P	P	03 56 22.2	-0.1
	5.3nm,0.5s,mb4.6,baz=155,slow=4.0,SNR=15						
CHTO	Chiang Mai	39.80	310	eP	P	03 57 25.1	-0.4
	3.9nm,0.8s,mb4.2						
CHTO	Chiang Mai	39.80	310	eP	P	03 57 25.1	-0.4
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
NJ2	Nanjing	40.12	345	eP	P	03 57 25.6	-2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
MJAR	Matsushiro Arr	43.89	10	P	P	03 57 58.8	+0.2
	comp=Z,2.6nm,0.9s,mb4.0,baz=187,slow=10,SNR=5.7						
BJT	Baijiatuau	48.36	346	eP	P	03 58 34.0	+0.4
	comp=Z,5.9nm,0.6s,mb4.8						
BJT	Baijiatuau	48.36	346	eP	P	03 58 34.0	+0.3
BJT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZH	Lanzhou	49.26	332	eP	P	03 58 42.5	+1.8
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,95nm,4.5s						
LZH	Lanzhou	49.26	332	eP	P	03 58 42.5	+1.8
	comp=Z,19nm,1.0s,mb5.1						
LZH				pP	pP	03 58 47.5	-7.1
LZH				sP	sP	03 58 49.5	-11
HHC	Hu-ho-hao-te	50.40	342	eP	P	03 58 49.1	-0.2
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
HHC				AMB	AMB		
	comp=Z,144nm,5.4s						
GTA	Gaotai	53.83	331	eP	P	03 59 15.3	+0.6
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.4						
ULN	Ulaanbaatar	58.12	342	eP	P	03 59 46.0	+0.7
	comp=Z,3.2nm,0.6s,mb4.5						
ULN	Ulaanbaatar	58.12	342	eP	P	03 59 46.0	+0.7
ULN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SONM	Songino Array	58.30	342	P	P	03 59 47.7	+1.1
	comp=Z,1.5nm,0.7s,mb4.1,baz=164,slow=6.8,SNR=14						
ZAK	Zakamensk	61.52	341	eP	P	04 00 09.1	+0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.8						
MOY	Mondy	63.37	340	eP	P	04 00 22.4	+1.5
MK31	Makanchi Array	68.08	327	eP	P	04 00 51.4	0.0
MKAR	Makanchi Array	68.08	327	⇑eP	P	04 00 51.5	+0.1
MKAR	Makanchi Array	68.08	327	P	P	04 00 51.3	0.0
	comp=Z,2.1nm,0.3s,mb4.6,baz=115,slow=8.1,SNR=94						
TKM2	Tokmak 2	69.84	321	eP	P	04 01 02.4	0.0
	comp=Z,2.0nm,0.8s,mb4.1						
TKM2	Tokmak 2	69.84	321	eP	P	04 01 02.4	0.0
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
AAK	Ala-Archa	70.39	320	eP	P	04 01 05.5	-0.3
	comp=Z,2.1nm,0.8s,mb4.1						
AAK	Ala-Archa	70.39	320	i P	P	04 01 06.0	+0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
EKS2	Erkin-Say	70.87	320	eP	P	04 01 09.2	+0.5
	comp=Z,2.8nm,1.1s,mb4.1						
ZAA0	Zalesovo Array	71.44	334	eP	P	04 01 10.9	-0.9
ZALV	Zalesovo Beam	71.44	334	P	P	04 01 11.1	-0.8
ZALV	Zalesovo Beam	71.44	334	P	P	04 01 11.1	-0.8
	comp=Z,1.7nm,0.3s,mb4.4,baz=113,slow=3.9,SNR=18						
ZAL	Zalesovo	71.44	334	P	P	04 01 11.1	-0.8
KURK	Kurchatov	72.37	329	eP	P	04 01 17.3	-0.2
	comp=Z,14nm,1.1s,mb4.8						
KURK	Kurchatov	72.37	329	i P	P	04 01 17.4	-0.1
NVS	Novosibirsk	72.72	334	eP	P	04 01 18.2	-1.3
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
BRVK	Borovoye	77.99	328	eP	P	04 01 49.2	-0.6
	comp=Z,3.9nm,0.8s,mb4.4						
BRVK	Borovoye	77.99	328	eP	P	04 01 49.2	-0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TIXI	Tiksi	78.37	360	⇑eP	P	04 01 51.5	-0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
QSPA	South Pole Qui	83.10	180	eP	P	04 02 16.0	-0.8
ARU	Arti	85.56	328	i P	P	04 02 29.2	-0.4
ARU				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
TOA0	Torodi Ar. Sit	128.70	281	ePKPdf	PKPdf	04 08 58.7	-1.0
TORD	Torodi Ar. Bea	128.70	281	PKP	PKPdf	04 08 58.4	-1.3
	comp=Z,0.5nm,0.5s,baz=127,slow=1.9,SNR=16						

*MOS **02** 03:55:37.8±0.8, 4752N×15253E, h43km, mb4.1/7, Error ellipse: s-maj=24.0km s-min=17.7km az=60.7*
*IDC **02** 03:55:39.7±4.8, 4678N×15247E, h86km±43km, mb3.4/9, mb1 3.5/10, mb1mx3.4/23, mbtmp3.4/10, MS3.3/1,*

Ms1 3.3/1, ms1mx2.7/19, Error ellipse: s-maj=29.6km s-min=24.5km az=108.0

*ISCJB **02** 03:55:41.2±1.4, 469N±0.1×1524E±02, h108^{km}±12^{km}, mb3.6/9, Error ellipse: s-maj=28.8km s-min=13.0km az=141.3*

ISC 02 03:55:42.1±1.4**, 469N**±01×**1524E**±02**, h100**^{km}±11^{km}**, n24,** σ**1**^{s}**25**/23**, mb3.6**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.58**	**244**	PN	**Pn**	**03 56 37.0**	**+1.5**
SKR	**Severo-Kuril's**	**4.53**	**31**	*e*PN	**Pn**	**03 56 48.0**	**-0.3**
YSS	**Yuzh-Sakhalins**	**6.63**	**274**	*i* PN	**Pn**	**03 57 16.7**	**-0.2**
ASAJ	**Asahikawa**	**7.44**	**252**	PN	**Pn**	**03 57 25.0**	**-2.9**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.44**	**252**	P	**Pn**	**03 57 25.0**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=51,slow=13,SNR=7.6						
ERM	**Erimo**	**8.22**	**237**	*i* PN	**Pn**	**03 57 43.0**	**+4.5**
KSRS	**Korea Array**	**20.39**	**251**	P	**P**	**04 00 10.0**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=51,slow=13,SNR=3.1						
TIXI	**Tiksi**	**27.23**	**344**	*i* P	**P**	**04 01 12.6**	**-3.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
TIXI				MLR	MLR		
	comp=Z,100nm,23.0s						
ZALV	**Zalesovo Beam**	**42.16**	**305**	LR	LR	04 22 03.4	
	comp=Z,37nm,19.4s,baz=54,slow=38						
MKAR	**Makanchi Array**	**46.47**	**297**	*e*P	**P**	**04 04 01.6**	**+2.9**
MKAR	**Makanchi Array**	**46.47**	**297**	P	**P**	**04 03 58.5**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=66,slow=7.8,SNR=4.1						
YKA	**Yellowknife Ar**	**51.11**	**37**	P	**P**	**04 04 34.5**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.5,baz=298,slow=7.0,SNR=3.5						
FINES	**FINESS Array B**	**63.73**	**334**	P	**P**	**04 06 03.1**	**+0.5**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**63.73**	**334**	P	**P**	**04 06 03.1**	**+0.6**
	comp=Z,2.6nm,0.8s,mb4.1,baz=43,slow=7.9,SNR=9.0						
NB2	**NORSAR Subarra**	**67.97**	**341**	P	**P**	**04 06 30.4**	**+0.7**
	comp=Z,1.5nm,0.6s,mb4.0,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**67.97**	**341**	P	**P**	**04 06 30.7**	**+1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**67.97**	**341**	P	**P**	**04 06 30.7**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.8,baz=26,slow=6.2,SNR=4.6						
AKASG	**Malin Array Be**	**71.19**	**326**	*e*P	**P**	**04 06 50.3**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.19**	**326**	P	**P**	**04 06 48.2**	**-1.4**
	comp=Z,1.6nm,0.5s,mb4.1,baz=34,slow=6.0,SNR=6.7						
ASAR	**Alice Springs**	**72.17**	**198**	P	**P**	**04 06 55.2**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.3,baz=12,slow=4.7,SNR=3.8						
TXAR	**Lajitas Array**	**77.84**	**60**	*e*P	**P**	**04 07 29.9**	**+1.4**
TXAR	**Lajitas Array**	**77.84**	**60**	P	**P**	**04 07 26.7**	**-1.8**
	comp=Z,0.3nm,0.6s,mb3.2,baz=294,slow=3.5,SNR=3.8						
BRTR	**Keskin Array B**	**77.98**	**316**	*e*P	**P**	**04 07 31.4**	**+2.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**77.98**	**316**	P	**P**	**04 07 28.1**	**-1.0**
	comp=Z,1.0nm,0.9s,mb3.6,baz=101,slow=3.9,SNR=5.8						

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*ISCJB **02** 04:35:02.6±0.5, 1535N±004×9375W±002, h56^{km}±6^{km}, mb4.0/15, Error ellipse: s-maj=7.0km s-min=3.1km az=21.5*

*IDC **02** 04:35:03.8±1.0, 1548N×9354W, h71^{km}±7^{km}, mb3.5/9, mb1 3.8/12, mb1mx3.6/23, mbtmp3.6/12, MS2.7/1, Ms1 2.7/1, ms1mx2.0/24, Error ellipse: s-maj=22.5km s-min=8.3km az=42.0*

*MEX **02** 04:35:04.8±0.5, 1533N×9379W, h36^{km}±42^{km}, MD4.5*

*CASC **02** 04:35:04.5±4.0, 1509N×9367W, h21^{km}±999^{km}, MD4.4, mb4.0(NEIC)*

*NEIC **02** 04:35:05.6, 1542N×9377W, h35^{km}, mb4.0/11, MD4.5(MEX), After MEX.*

ISC 02 04:35:04.2±0.4**, 1538N**±004×**9372W**±002**, h45**^{km}±6^{km}**, h71**^{km}±1.2^{km}**:pP-P, n60,** σ**1**^{s}**33**/72**, mb4.0**/15**, 3C-2D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**1.70**	**38**	*i* P	**Pn**	**04 35 31.8**	**+0.4**
SCX				*i* S	**Sn**	**04 35 50.8**	**-1.2**
CCIG	**Comitan**	**1.77**	**59**	*e*P	**Pn**	**04 35 32.6**	**+0.3**
CCIG				*i* S	**Sn**	**04 35 54.5**	**+0.9**
CMIG	**Matias Romero**	**2.03**	**327**	P	**Pn**	**04 35 36.3**	**+0.3**
	22nm,0.3s,baz=140,slow=11,SNR=158						
CMIG				S	**Sn**	**04 36 00.7**	**+0.5**
	123nm,0.3s,baz=180,slow=20,SNR=16						
CMIG	**Matias Romero**	**2.03**	**327**	*e*P	**Pn**	**04 35 35.1**	**-0.9**
CMIG				*i* S	**Sn**	**04 35 59.1**	**-1.0**
JAT	**Jato**	**2.28**	**117**	⇓*e*P	**Pn**	**04 35 39.7**	**+0.4**
JAT				*e*S	**Sn**	**04 36 04.8**	**-1.4**
HUIG	**Huatulco**	**2.33**	**280**	*e*P	**Pn**	**04 35 38.4**	**-1.7**
HUIG				*i* S	**Sn**	**04 36 04.7**	**-2.9**
TUIG	**Tuzandepetl**	**2.72**	**346**	*i* P	**Pn**	**04 35 44.4**	**-1.0**
TUIG				*i* S	**Sn**	**04 36 16.9**	**-0.2**
FUG	**Fuego 3**	**2.93**	**108**	⇓*e*P	**Pn**	**04 35 49.1**	**+0.7**
FUG				*e*S	**Sn**	**04 36 21.6**	**-0.7**
PCG	**Pacaya**	**3.17**	**108**	⇑*e*P	**Pn**	**04 35 53.6**	**+2.1**
PCG				*e*S	**Sn**	**04 36 30.8**	**+2.7**
OXX	**Oaxaca**	**3.34**	**301**	*e*P	**Pn**	**04 35 55.0**	**+1.0**
VHO	**Vista Hermosa**	**3.35**	**301**	*i* P	**Pn**	**04 35 55.3**	**+1.3**
VHO				*i* S	**Sn**	**04 36 31.0**	**-1.5**
VHO	**Vista Hermosa**	**3.35**	**301**	*i* P	**Pn**	**04 35 54.1**	**+0.1**
VHO				*i* S	**Sn**	**04 36 31.0**	**-1.5**
RBDL	**Robledal**	**4.10**	**107**	⇑*e*P	x	04 36 09.8	
RBDL				*e*S	x	04 36 59.8	
SBLS	**San Blas**	**4.25**	**111**	*e*P	x	04 36 12.1	
SBLS				*e*S	x	04 36 59.9	
SCIG	**Sabancuy**	**4.31**	**34**	*i* P	**Pn**	**04 36 06.3**	**-1.0**
SCIG				*i* S	**Sn**	**04 36 55.5**	**-0.7**
PNIG	**Pinotepa**	**4.36**	**284**	*i* P	**Pn**	**04 36 07.6**	**-0.4**
PNIG				*i* S	**Sn**	**04 36 57.6**	**+0.1**
BOQS	**Boqueron**	**4.60**	**110**	*e*P	x	04 36 16.9	
BOQS				*e*S	x	04 37 08.6	
UTMO	**Huajuapan**	**4.61**	**302**	*e*P	**Pn**	**04 36 11.9**	**+0.5**
UTMO				*i* S	**Sn**	**04 37 03.1**	**-0.6**
SNET	**Serv Nac Est T**	**4.66**	**111**	*e*P	x	04 36 10.9	
LBRS	**Las Brisas**	**4.81**	**109**	*e*P	x	04 36 20.6	
LBRS				*e*S	x	04 37 16.6	
LFRS	**El Faro**	**4.84**	**111**	⇑*e*P	x	04 36 20.5	
LFRS				*e*S	x	04 37 13.6	
LCBS	**La Ceiba**	**4.90**	**110**	*e*P	x	04 36 21.1	
LCBS				*e*S	x	04 37 15.3	
SNVI	**San Vicente**	**5.04**	**110**	*e*P	x	04 36 23.9	
SNVI				*e*S	x	04 37 20.5	
BLLM	**Bellamira**	**5.65**	**109**	*e*P	x	04 36 25.1	
PPM	**Popocatepetl**	**5.95**	**309**	*e*P	**Pn**	**04 36 34.0**	**+4.2**
PPM				*i* S	**Sn**	**04 37 37.3**	**+0.7**
PPM	**Popocatepetl**	**5.95**	**309**	*e*P	**Pn**	**04 36 34.0**	**+4.2**
PPM				*e*P		04 36 34.0	
PPM				*i* S	**Sn**	**04 37 37.3**	**+0.7**
MEIG	**Mezcala**	**6.19**	**295**	*i* P	**Pn**	**04 36 34.8**	**+1.7**
MEIG				*i* S	**Sn**	**04 37 40.8**	**-1.9**
PLIG	**Platanillo**	**6.29**	**299**	*i* S	**Sn**	**04 37 45.8**	**+0.7**
IIO	**Organos**	**6.35**	**312**	*e*P	**Pn**	**04 36 34.0**	**-1.3**
IIO				*i* S	**Sn**	**04 37 47.9**	**+1.4**
TGUH	**Tegucigalpa,Un**	**6.38**	**101**	*e*Pn	**Pn**	**04 36 36.4**	**+0.7**
	45nm,0.9s						
SZVM	**Salazar**	**6.67**	**307**	*i* P	**Pn**	**04 36 41.8**	**+2.0**
SZVM				*i* S	**Sn**	**04 37 55.6**	**+1.1**
TEIG	**Tepich**	**7.08**	**46**	P	**Pn**	**04 36 42.6**	**-2.6**
	32nm,0.3s,baz=224,slow=4.3,SNR=77						
TEIG				S	**Sn**	**04 37 58.4**	**-5.9**
	29nm,0.3s,baz=320,slow=23,SNR=12						
TEIG				LR	LR	04 40 02.3	
	comp=Z,67nm,20.9s,baz=56,slow=43						
JTS	**JuntasAbangare**	**9.93**	**120**	P	**Pn**	**04 37 22.2**	**-2.2**
	1.8nm,0.3s,baz=323,slow=17,SNR=6.7						
JTS				S	**Sn**	**04 39 15.4**	**+0.7**
	0.4nm,0.3s,baz=332,slow=17,SNR=1.9						
MGV	**Manicaragua**	**14.63**	**61**	*e*P	**Pn**	**04 38 29.5**	**+1.1**
LTX	**Lajitas**	**16.64**	**328**	*e*P	**Pn**	**04 38 56.4**	**+2.1**
	2.0nm,0.8s						
TXAR	**Lajitas Array**	**16.64**	**328**	P	**Pn**	**04 38 53.6**	**-0.7**
	0.1nm,0.3s,baz=149,slow=14,SNR=12						
LRAL	**Lakeview Retre**	**18.60**	**18**	*e*P	**Pn**	**04 39 17.4**	**-1.0**
	10nm,1.0s						
MNTX	**Cornudas Mount**	**19.42**	**329**	*e*P	**Pn**	**04 39 29.5**	**+1.2**
	1.5nm,0.8s						
WMOK	**Wichita Mounta**	**19.80**	**348**	*e*P	**Pn**	**04 39 32.5**	**-0.2**
	2.6nm,0.9s						
SWET	**Sewanee**	**20.95**	**18**	*e*P	**P**	**04 39 46.0**	**+2.6**
ANMO	**Albuquerque**	**22.60**	**332**	*e*P	**P**	**04 40 02.3**	**+1.4**
	1.0nm,0.7s,mb3.4						
ANMO	**Albuquerque**	**22.60**	**332**	P	**P**	**04 39 59.6**	**-1.4**
	0.4nm,0.3s,mb3.3,baz=135,slow=8.6,SNR=3.1						
SDV	**Santo Domingo**	**23.46**	**103**	P	**P**	**04 40 05.9**	**-4.2**
	1.3nm,0.6s,mb3.5,baz=345,slow=12,SNR=3.8						
SDV				pP		04 40 21.8	
	3.6nm,0.9s,baz=204,slow=2.6,SNR=3.4						
PDAR	**Pinedale Array**	**30.49**	**337**	P	**P**	**04 41 11.7**	**-1.2**
	0.4nm,0.8s,mb3.2,baz=151,slow=8.1,SNR=2.9						
PDAR				pP	pP	04 41 28.1	+3.2
	0.6nm,0.9s,baz=120,slow=10,SNR=3.6						
LOHW	**Long Hollow**	**31.61**	**336**	*e*P	**P**	**04 41 23.8**	**+1.0**
	11nm,1.5s,mb4.5						
TPAW	**Teton Pass**	**31.64**	**336**	*e*P	**P**	**04 41 24.3**	**+1.2**
	11nm,1.3s,mb4.5						
MOOW	**Moose Ponds**	**31.78**	**336**	*e*P	**P**	**04 41 25.3**	**+1.1**
	2.8nm,0.9s,mb4.1						
YMR	**Madison River**	**32.64**	**337**	*e*P	**P**	**04 41 37.7**	**+5.9**
	3.9nm,1.0s,mb4.3						
MCMT	**McKenzie Canyo**	**33.51**	**335**	*e*P	**P**	**04 41 41.2**	**+1.8**
DLMT	**Dillon**	**33.85**	**336**	*e*P	**P**	**04 41 41.1**	**-1.3**
	8.9nm,1.4s,mb4.5						
MSO	**Missoula**	**35.59**	**336**	*e*P	**P**	**04 41 58.0**	**+0.7**
	2.1nm,1.0s,mb4.0						
LPAZ	**La Paz**	**40.35**	**140**	P	**P**	**04 42 34.7**	**-3.1**
LPAZ	**La Paz**	**40.35**	**140**	P	**P**	**04 42 34.7**	**-3.1**
	0.7nm,0.6s,mb3.6,baz=304,slow=7.3,SNR=3.0						
SIV	**San Ignacio**	**44.85**	**133**	P	**P**	**04 43 09.4**	**-5.0**
	0.5nm,0.4s,mb3.7,baz=282,slow=8.0,SNR=5.2						
YKA	**Yellowknife Ar**	**49.31**	**347**	P	**P**	**04 43 44.9**	**-3.6**
YKA				pP	pP	04 44 02.9	+2.0
YKA	**Yellowknife Ar**	**49.31**	**347**	P	**P**	**04 43 44.9**	**-3.6**
	0.7nm,0.6s,mb3.9,baz=151,slow=7.6,SNR=14						
YKA				pP	pP	04 44 02.9	+2.0
	1.0nm,0.6s,baz=150,slow=7.4,SNR=8.8						
INK	**Inuvik**	**58.65**	**344**	P	**P**	**04 44 53.4**	**-3.2**
	0.8nm,0.6s,mb4.0,baz=136,slow=2.7,SNR=2.6						
INK				pP	pP	04 45 11.4	+2.1
	1.8nm,0.7s,baz=125,slow=5.3,SNR=3.7						
ARCES	**ARCESS Array B**	**85.35**	**18**	P	**P**	**04 47 30.7**	**-5.6**
ARCES	**ARCESS Array B**	**85.35**	**18**	P	**P**	**04 47 30.7**	**-5.6**
	4.8nm,0.9s,mb4.7,baz=302,slow=7.4,SNR=5.3						
FINES	**FINESS Array B**	**89.95**	**25**	P	**P**	**04 47 55.0**	**-3.6**
	0.9nm,0.9s,mb4.1,baz=289,slow=5.6,SNR=3.5						

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*BJI **02** 04:39:57.5, 3785N×12222W, h15^{km}, mB4.6, mb4.5, Ms4.5, Msz4.3*

*ISCJB **02** 04:39:59.2±0.2, 3786N±001×12209W±002, h10^{km}, mb4.1/7, MS3.3/5, Error ellipse: s-maj=2.5km s-min=1.6km az=157.0*

*NEIC **02** 04:40:00.8, 3790N×122.11W, h16^{km}, mb4.1/6, MW4.3(SLM), MW4.2(BRK), After NCEDC.*

NEIC Felt [V] at Alamo, Concord, Lafayette, Martinez, Moraga, Orinda, Pleasant Hill, Port Costa and Walnut Creek. Felt [IV] at Albany, Atherton, Benicia, Berkeley, Castro Valley, Clayton, Crockett, Danville, El Cerrito, El Sobrante, Emeryville, Fremont, Hayward, Hercules, Isleton, Oakland, Pinole, Pittsburg, Richmond, Rodeo, San Francisco, San Leandro, San Lorenzo, San Pablo and Vallejo. Felt as far north as Santa Rosa, as far east as Modesto and as far south as Santa Cruz.

*IDC **02** 04:40:00.4±1.2, 3785N×12192W, h0^{km}, mb3.8/4, mb1 4.2/9, mb1mx3.9/25, mbtmp3.9/9, ML4.0/5, MS3.4/8, Ms1 3.4/8, ms1mx3.2/40, Error ellipse: s-maj=16.4km s-min=13.4km az=59.0*

ISC 02 04:40:00.9±0.3**, 3787N**±001×**12211W**±002**, h14**^{km}±2^{km}**, n222,** σ**1**^{s}**09**/265**, mb4.1**/7**, MS3.3**/5**, 80C-75D, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDM	**Black Diamond**	**0.21**	**66**	⇓P	**Pg**	**04 40 06.2**	**+0.6**
	baz=0.2,SNR=1000						
BDM				⇓S	**Sg**	**04 40 10.1**	**+1.2**
	baz=0.2						
SAC	**San Andreas**	**0.37**	**220**	*e*Pn	**Pg**	**04 40 09.3**	**+0.9**
WENL	**Wente Brothers**	**0.37**	**131**	⇑P	**Pg**	**04 40 09.6**	**+1.2**
	baz=0.4,SNR=1000						
WENL				⇑S	**Sg**	**04 40 15.4**	**+1.9**
	baz=0.4						
JRSC	**Jasper Ridge**	**0.47**	**192**	⇓P	**Pg**	**04 40 10.7**	**+0.5**
	baz=0.5						
JRSC				⇓S	**Sg**	**04 40 18.4**	**+1.9**
	baz=0.5						
CVS	**Carmenet Viney**	**0.55**	**330**	⇓P	**Pg**	**04 40 11.0**	**-0.7**
	baz=0.5						
CVS				⇓S	**Sg**	**04 40 19.2**	**+0.2**
	baz=0.5						
MCCM	**Marconi Confer**	**0.67**	**295**	⇑*i*P	**Pg**	**04 40 13.6**	**-0.2**
MCCM				*e*S	**Sg**	**04 40 24.4**	**+1.7**
MCCM	**Marconi Confer**	**0.67**	**295**	⇓P	**Pg**	**04 40 13.4**	**-0.4**
	baz=0.7						
MCCM				⇑S	**Sg**	**04 40 22.5**	**-0.1**
	baz=0.7						
S04C	**Ingram Canyon,**	**0.72**	**120**	⇑P	**Pg**	**04 40 14.6**	**-0.3**
	baz=0.7,SNR=1000						
FARB	**Farallon Islan**	**0.72**	**257**	⇑P	**Pg**	**04 40 15.3**	**+0.3**
	baz=0.7,SNR=516						
FARB				⇑S	**Sg**	**04 40 24.9**	**+0.4**
	baz=0.7						
BNLO	**Ben Lomond (Sa**	**0.74**	**184**	⇓P	**Pg**	**04 40 15.5**	**+0.3**
	baz=0.8,SNR=1000						
BNLO				⇓S	**Sg**	**04 40 26.2**	**+1.3**
	baz=0.8						
NSHM	**Saint Helena R**	**0.76**	**329**	*e*Pg	**Pg**	**04 40 14.4**	**-1.2**
Q03C	**Winters**	**0.77**	**6**	P	**Pg**	**04 40 15.7**	**-0.1**
	baz=0.7,SNR=1000						
R04C	**Big Horse Ranc**	**1.01**	**67**	⇓P	**Pg**	**04 40 18.1**	**-2.2**
	baz=1.0,SNR=1000						
MNRC	**McLaughlin Nat**	**1.04**	**346**	⇓P	**Pg**	**04 40 19.2**	**-1.8**
	baz=1.0,SNR=1000						
PACP	**Pacheco Peak**	**1.08**	**142**	⇓P	**Pg**	**04 40 20.9**	**-0.9**
	baz=1.1,SNR=1000						
Q04C	**Lincoln**	**1.13**	**31**	P	**Pg**	**04 40 19.5**	**-3.1**
	baz=1.1,SNR=656						
Q04C				⇑S	**Sg**	**04 40 34.4**	**-3.0**
	baz=1.1						
SAO	**San Andreas Ge**	**1.22**	**154**	*e*Pn	**Pn**	**04 40 22.2**	**-1.3**
SAO				*e*Sn	**Sn**	**04 40 38.0**	**-1.9**
HOPS	**Hopland**	**1.35**	**327**	*e*Pn	**Pn**	**04 40 23.2**	**-2.1**
HOPS	**Hopland**	**1.35**	**327**	P	**Pn**	**04 40 23.3**	**-2.1**
	baz=1.3,SNR=532						
CMB	**Columbia Colle**	**1.38**	**82**	*e*Pn	**Pn**	**04 40 24.7**	**-0.9**
CMB				*e*Sn	**Sn**	**04 40 42.1**	**-1.5**
CMB	**Columbia Colle**	**1.38**	**82**	P	**Pn**	**04 40 24.5**	**-1.1**
	baz=1.4,SNR=1000						
CMB				⇑S	**Sb**	**04 40 41.3**	**-2.5**
	baz=1.4						
SUTB	**Sutter Butte**	**1.38**	**11**	⇓P	**Pn**	**04 40 22.2**	**-3.5**
	baz=1.4						
SUTB				⇓S	**Sb**	**04 40 39.4**	**-4.6**
	baz=1.4						
LAVA	**Lava Cap Winer**	**1.40**	**50**	P	**Pn**	**04 40 24.3**	**-1.6**
	baz=1.4,SNR=564						
T05C	**Eagle Field, D**	**1.50**	**130**	⇑P	**Pn**	**04 40 26.9**	**-0.5**
	baz=1.5,SNR=362						
S05C	**Merced**	**1.51**	**110**	P	**Pn**	**04 40 26.2**	**-1.3**
	baz=1.5,SNR=1000						
S05C				⇑S	**Sn**	**04 40 44.6**	**-2.4**
	baz=1.5						
HAST	**UC Hastings Re**	**1.54**	**163**	⇓P	**Pn**	**04 40 27.1**	**-0.8**
	baz=1.6,SNR=1000						
HAST				⇑S	**Sn**	**04 40 46.8**	**-0.9**
	baz=1.6						
OHCM	**Honcut**	**1.55**	**18**	*e*Pn	**Pn**	**04 40 25.0**	**-3.0**
ORV	**Oroville**	**1.75**	**16**	⇑P	**Pn**	**04 40 28.3**	**-2.6**
	baz=1.7,SNR=159						
ORV				⇑S	**Sn**	**04 40 49.4**	**-3.5**
	baz=1.7						
S06C	**San Francisco**	**1.79**	**89**	⇓P	**Pn**	**04 40 31.6**	**+0.3**
	baz=1.8						
R05C	**Kirkwood Meado**	**1.81**	**62**	P	**Pn**	**04 40 31.6**	**0.0**
	baz=1.8,SNR=522						
U04C	**Hernandez Rese**	**1.84**	**144**	⇑P	**Pn**	**04 40 31.3**	**-0.7**
	baz=1.9,SNR=534						
GASB	**Alder Springs**	**1.84**	**345**	⇓P	**Pn**	**04 40 30.9**	**-1.2**
	baz=1.8,SNR=71						
P05C	**Yuba Gap, Truc**	**1.86**	**39**	⇑P	**Pn**	**04 40 31.4**	**-0.9**
	baz=1.8,SNR=645						
P01C	**Double 8 Ranch**	**1.86**	**329**	P	**Pn**	**04 40 30.6**	**-1.7**
	baz=1.8,SNR=28						
V03C	**Hunter Liggett**	**1.97**	**159**	⇓P	**Pn**	**04 40 33.0**	**-0.8**
	baz=2.0,SNR=341						
V03C				⇑S	**Sn**	**04 40 57.4**	**-0.9**
	baz=2.0						
T06C	**Millerton Lake**	**2.10**	**113**	P	**Pn**	**04 40 35.1**	**-0.4**
	baz=2.1,SNR=810						
T06C				⇓S	**Sn**	**04 41 00.5**	**-1.0**
	baz=2.1						
O03C	**Acorn Hollow,**	**2.13**	**2**	⇓P	**Pn**	**04 40 33.3**	**-2.7**
	baz=2.1,SNR=36						
O03C				⇓S	**Sn**	**04 40 59.5**	**-2.7**
	baz=2.1						
KCPM	**Cahto Peak**	**2.15**	**328**	*e*Pn	**Pn**	**04 40 35.6**	**-0.6**
R06C	**Coleville**	**2.20**	**72**	⇓P	**Pn**	**04 40 38.5**	**+1.6**
	baz=2.2,SNR=1000						
WAKR	**Walker**	**2.20**	**72**	*e*Pn	**Pn**	**04 40 38.6**	**+1.6**
U05C	**Westside ANR,**	**2.21**	**133**	⇓P	**Pn**	**04 40 36.8**	**-0.2**
	baz=2.2,SNR=66						
U05C				⇑S	**Sn**	**04 41 03.7**	**-0.5**
	baz=2.2						
KIPM	**Iron Peak**	**2.21**	**332**	*e*Pn	**Pn**	**04 40 36.5**	**-0.7**
KIPM				*e*Pg	**Pg**	**04 40 43.0**	**-0.4**
KCC	**Kaiser Creek**	**2.29**	**103**	P	**Pn**	**04 40 38.5**	**+0.4**
	baz=2.3,SNR=657						
KCC				⇓S	**Sn**	**04 41 05.7**	**-0.4**
	baz=2.3						
O05C	**Quincy**	**2.29**	**24**	⇓P	**Pn**	**04 40 38.0**	**-0.2**
	baz=2.3,SNR=145						
O05C				⇑S	**Sn**	**04 41 04.4**	**-1.8**
	baz=2.3						
PKD	**Parkfield**	**2.29**	**146**	P	**Pn**	**04 40 37.7**	**-0.5**
	baz=2.3,SNR=326						
PKD				⇑S	**Sn**	**04 41 05.7**	**-0.6**
	baz=2.3						
WCN	**Washoe City**	**2.34**	**51**	⇑P	**Pn**	**04 40 39.4**	**+0.6**
	baz=2.3,SNR=717						
O02C	**Red Bluff**	**2.37**	**347**	⇑P	**Pn**	**04 40 37.7**	**-1.6**
	baz=2.3,SNR=46						
BEKR	**Beckwourth**	**2.42**	**34**	P	**Pn**	**04 40 40.3**	**+0.3**
	baz=2.4,SNR=1000						
R07C	**Lee Vining**	**2.43**	**84**	⇓P	**Pn**	**04 40 41.6**	**+1.4**
	baz=2.4,SNR=234						
R07C				⇑Sb	**Sb**	**04 41 13.8**	**-0.5**
	baz=2.4						
V04C	**Ramage Ranch,**	**2.44**	**155**	⇑P	**Pn**	**04 40 39.9**	**-0.4**
	baz=2.5						
V04C				⇓S	**Sn**	**04 41 08.4**	**-1.5**
	baz=2.5						
P06A	**Stead Airport,**	**2.50**	**43**	⇑P	**Pn**	**04 40 39.8**	**-1.4**
	baz=2.5						
O04C	**Chester**	**2.58**	**18**	⇓P	**Pn**	**04 40 41.7**	**-0.4**
	baz=2.5,SNR=798						
MLAC	**Mammoth Lakes**	**2.61**	**94**	⇓P	**Pn**	**04 40 44.6**	**+2.0**
	baz=2.6,SNR=29						
O01C	**Eel River Cons**	**2.63**	**330**	⇓P	**Pn**	**04 40 42.0**	**-0.9**
	baz=2.6						
V05C	**Boulder Hill,**	**2.67**	**138**	⇑P	**Pn**	**04 40 43.2**	**-0.3**
	baz=2.7,SNR=20						
PTRM	**Twissleman Ran**	**2.69**	**145**	*e*Pn	**Pn**	**04 40 43.1**	**-0.6**
WDC	**Whiskeytown Da**	**2.73**	**353**	*e*Pn	**Pn**	**04 40 41.8**	**-2.4**
WDC				*e*Pg	**Pg**	**04 40 50.8**	**-2.4**
WDC				*e*Sn	**Sn**	**04 41 12.7**	**-4.3**
WDC	**Whiskeytown Da**	**2.73**	**353**	⇑P	**Pn**	**04 40 41.6**	**-2.7**
	baz=2.7,SNR=71						
WDC				⇓S	**Sn**	**04 41 12.8**	**-4.2**
	baz=2.7						
HELL	**Mitchell Peak,**	**2.74**	**115**	⇑P	**Pn**	**04 40 44.3**	**0.0**
	baz=2.7,SNR=346						
RCTC	**Rector, Farmer**	**2.77**	**123**	⇑P	**Pn**	**04 40 44.1**	**-0.7**
	baz=2.8,SNR=10.0						
Q07A	**Schurz**	**2.81**	**67**	⇓Sb	**Sb**	**04 41 26.5**	**+1.4**
	baz=2.8						
MTUM	**Tungsten Hills**	**2.87**	**99**	*e*Pn	**Pn**	**04 40 47.7**	**+1.6**
O06A	**Flanigan**	**2.91**	**37**	⇓P	**Pn**	**04 40 46.4**	**-0.2**
	baz=2.9,SNR=26						
ELFS	**Eagle Lake Fie**	**2.95**	**21**	⇓P	**Pn**	**04 40 47.8**	**+0.5**
	baz=2.9						
HATC	**Hat Creek Radi**	**2.99**	**10**	⇑P	**Pn**	**04 40 48.0**	**+0.2**
	baz=3.0						
P07A	**Fallon**	**3.03**	**55**	⇑P	**Pn**	**04 40 48.2**	**-0.1**
	baz=3.0						
NVAR	**Mina Array Bea**	**3.06**	**78**	Pn	**Pn**	**04 40 49.7**	**+1.0**
	12nm,0.3s,baz=258,slow=16,SNR=222						
NVAR				Lg		04 41 33.2	
	101nm,0.3s,baz=259,slow=27,SNR=7.8						
SMMC	**Simmler**	**3.07**	**146**	⇑P	**Pn**	**04 40 48.3**	**-0.6**
	baz=3.1,SNR=29						
N02C	**Big Bar**	**3.09**	**343**	⇑P	**Pn**	**04 40 49.1**	**-0.1**
	baz=3.1						
S08C	**White Mtn Res**	**3.15**	**95**	⇓P	**Pn**	**04 40 50.9**	**+0.9**
	baz=3.1,SNR=68						
TIN	**Tinemaha**	**3.20**	**104**	⇑P	**Pn**	**04 40 52.1**	**+1.4**
	baz=3.2						
R08A	**Mina**	**3.20**	**80**	⇓P	**Pn**	**04 40 51.4**	**+0.7**
	baz=3.2						
N06A	**Buffalo Meadow**	**3.38**	**31**	⇑P	**Pn**	**04 40 52.8**	**-0.4**
	baz=3.3,SNR=132						
M03C	**McCloud**	**3.40**	**360**	⇑P	**Pn**	**04 40 53.7**	**+0.2**
	baz=3.4						
O07A	**Toulon**	**3.41**	**47**	P	**Pn**	**04 40 53.3**	**-0.3**
	baz=3.4,SNR=215						
Q08A	**Gabbs**	**3.43**	**72**	⇑P	**Pn**	**04 40 53.8**	**-0.2**
	baz=3.4,SNR=7.8						
PKM	**Peak Mountain**	**3.50**	**147**	⇓P	**Pn**	**04 40 55.1**	**+0.3**
	baz=3.5,SNR=14						
PKM				⇓S	**Sn**	**04 41 35.8**	**-0.2**
	baz=3.5						
CWC	**Cottonwood Cre**	**3.52**	**113**	⇓P	**Pn**	**04 40 56.4**	**+1.2**
	baz=3.5,SNR=41						
M06C	**Likely Place G**	**3.56**	**20**	⇑P	**Pn**	**04 40 56.0**	**+0.2**
	baz=3.5,SNR=16						
M05C	**Lookout**	**3.57**	**12**	⇓P	**Pn**	**04 40 55.7**	**-0.1**
	baz=3.5						
P08A	**Dixie Valley**	**3.64**	**59**	⇑P	**Pn**	**04 40 56.4**	**-0.4**
	baz=3.6						
ISA	**Isabella**	**3.66**	**126**	⇓P	**Pn**	**04 40 57.2**	**+0.2**
	baz=3.7,SNR=237						
N07B	**Gerlach**	**3.79**	**39**	P	**Pn**	**04 40 58.6**	**-0.2**
	baz=3.8,SNR=157						
ARVC	**Arvin**	**3.81**	**135**	⇓P	**Pn**	**04 40 58.6**	**-0.5**
	baz=3.8,SNR=52						
ARVC				⇓S	**Sn**	**04 41 42.4**	**-1.2**
	baz=3.8						
TPH	**Tonopah**	**3.87**	**85**	*e*Pn	**Pn**	**04 41 02.0**	**+2.0**
TPH				*e*Pg	**Pg**	**04 41 10.4**	**-4.6**
GRAC	**Grapevine Rang**	**3.87**	**101**	⇑P	**Pn**	**04 41 01.3**	**+1.3**
	baz=3.9,SNR=52						
S09A	**Goldfield**	**3.88**	**91**	⇑P	**Pn**	**04 41 01.0**	**+1.0**
	baz=3.9,SNR=20						
YBH	**Yreka Blue Hor**	**3.89**	**353**	*e*Pn	**Pn**	**04 41 01.6**	**+1.4**
KRMB	**Red Mountain**	**3.91**	**340**	*e*Pn	**Pn**	**04 41 01.3**	**+0.9**
M04C	**Macdoel**	**3.92**	**3**	⇓P	**Pn**	**04 41 01.4**	**+0.8**
	baz=3.9						
SBC	**Santa Barbara**	**3.93**	**150**	⇑P	**Pn**	**04 41 00.8**	**0.0**
	baz=4.0						
SBC				⇑S	**Sn**	**04 41 45.8**	**-1.0**
	baz=4.0						
DAC	**Darwin (Calif)**	**3.95**	**112**	*e*Pn	**Pn**	**04 41 01.2**	**+0.2**
DAC				*e*Sg	**Sg**	**04 41 59.1**	**-8.5**
Q09A	**Carvers**	**4.00**	**75**	⇓P	**Pn**	**04 41 01.6**	**-0.1**
	baz=4.0						
MPMC	**Manual Prospec**	**4.12**	**115**	⇓P	**Pn**	**04 41 03.9**	**+0.6**
	baz=4.1,SNR=57						
M07A	**Soldier Meadow**	**4.19**	**32**	⇓P	**Pn**	**04 41 04.4**	**+0.1**
	baz=4.2,SNR=113						
P09A	**Austin**	**4.24**	**65**	⇓P	**Pn**	**04 41 04.9**	**-0.1**
	baz=4.2,SNR=8.0						
N08A	**GE Springer Mi**	**4.24**	**45**	⇑P	**Pn**	**04 41 04.5**	**-0.6**
	baz=4.2,SNR=11						
N08A				⇑Sb	**Sb**	**04 42 08.8**	**+2.5**
	baz=4.2						
OSI	**Osito Adit**	**4.25**	**139**	⇓P	**Pn**	**04 41 05.1**	**-0.1**
	baz=4.3						
OSI				⇑S	**Sn**	**04 41 55.2**	**+0.7**
	baz=4.3						
MOD	**Modoc**	**4.26**	**18**	*e*Pn	**Pn**	**04 41 06.2**	**+0.9**
MOD				*e*Pg	**Pg**	**04 41 15.2**	**-7.3**
M01C	**Crescent City**	**4.26**	**339**	⇑P	**Pn**	**04 41 05.6**	**+0.3**
	baz=4.2						
LRMC	**Laurel Mountai**	**4.28**	**123**	⇑P	**Pn**	**04 41 05.3**	**-0.3**
	baz=4.3,SNR=10						
EDW2	**Edwards Air Fo**	**4.47**	**131**	P	**Pn**	**04 41 08.4**	**+0.3**
	baz=4.5,SNR=111						
O09A	**Fish Creek Ran**	**4.47**	**58**	⇑P	**Pn**	**04 41 07.9**	**-0.3**
	baz=4.4						
BLG	**Laguna Peak**	**4.49**	**146**	⇓P	**Pn**	**04 41 08.0**	**-0.5**
	baz=4.5,SNR=27						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLG				⇓S	Sn	04 41 59.3	-1.2
	baz=4.5						
BMN	Battle Mountai	4.58	55	*e*Pn	Pn	04 41 09.6	-0.1
BMN				*e*Pg	Pg	04 41 22.6	-6.0
BMN				*e*Sg	Sg	04 42 20.4	-7.6
M08A	Happy Creek Ra	4.59	38	⇓P	Pn	04 41 09.4	-0.5
	baz=4.6,SNR=42						
N09A	Rock Creek Ran	4.64	49	⇑P	Pn	04 41 10.2	-0.3
	baz=4.6,SNR=9.5						
N09A				⇑Sb	Sb	04 42 22.0	+4.2
	baz=4.6						
L07A	Adell	4.66	26	⇑P	Pn	04 41 11.4	+0.6
	baz=4.6,SNR=19						
P10A	Eureka	4.75	67	⇑P	Pn	04 41 12.1	0.0
	baz=4.7,SNR=8.5						
TPNV	Topopah Spring	4.76	99	*e*Pn	Pn	04 41 13.7	+1.5
TPNV	Topopah Spring	4.76	99	⇑P	Pn	04 41 12.8	+0.7
	baz=4.7,SNR=10						
K05A	Summer Lake	4.94	10	⇑P	Pn	04 41 15.3	+0.6
	baz=4.9,SNR=17						
GSC	Goldstone	4.98	119	⇓P	Pn	04 41 15.2	0.0
	baz=5.0,SNR=18						
O10A	Cortez Mining,	4.99	59	⇓P	Pn	04 41 15.1	-0.2
	baz=5.0,SNR=6.0						
M09A	Marrel Ranch,	5.06	44	⇓P	Pn	04 41 15.7	-0.6
	baz=5.0						
SNCC	San Nicolas Is	5.07	155	⇓P	Pn	04 41 15.9	-0.5
	baz=5.1,SNR=9.1						
SHOC	Shoshone	5.07	111	⇓P	Pn	04 41 16.6	+0.1
	baz=5.1						
RRX	Edison Barstow	5.09	124	⇓P	Pn	04 41 17.0	+0.3
	baz=5.1,SNR=26						
BFSC	Mount Baldy St	5.11	134	⇑P	Pn	04 41 16.8	-0.2
	baz=5.1,SNR=58						
BFSC				⇑S	Sn	04 42 15.8	0.0
	baz=5.1						
TRCR	Troy Canyon	5.17	83	*e*Pn	Pn	04 41 16.5	-1.3
TRCR				*e*Pg	Pg	04 41 36.4	-3.5
TRCR				*e*Sg	Sg	04 42 42.7	-4.2
L08A	Fields	5.20	33	⇑Sb	Sb	04 42 37.7	+3.9
	baz=5.2						
P11A	Circle Ranch,	5.25	69	⇑P	Pn	04 41 18.9	0.0
	baz=5.2,SNR=18						
WVOR	Wild Horse Val	5.28	29	*e*Pn	Pn	04 41 18.6	-0.8
	64nm,0.9s						
WVOR				*e*Pg	Pg	04 41 34.6	-7.4
L09A	Wilkinson Ranc	5.37	38	⇑P	Pn	04 41 20.3	-0.3
	baz=5.3						
CIS	Catalina Islan	5.38	145	⇓P	Pn	04 41 19.6	-1.1
	baz=5.4,SNR=14						
CIS				⇑S	Sn	04 42 19.6	-2.8
	baz=5.4						
J05A	Fort Rock	5.45	7	⇑P	Pn	04 41 22.7	+1.0
	baz=5.4,SNR=9.1						
T11A	Corn Creek, Al	5.51	94	⇓P	Pn	04 41 23.1	+0.6
	baz=5.5,SNR=16						
O11A	Cowboy Ranch,	5.51	64	⇓P	Pn	04 41 22.5	-0.1
	baz=5.5,SNR=14						
BBRC	Big Bear Sol-O	5.53	129	⇑P	Pn	04 41 22.5	-0.3
	baz=5.5,SNR=20						
TUQ	Turquoise Mtn.	5.54	114	⇓P	Pn	04 41 23.1	+0.3
	baz=5.5,SNR=34						
TUQ				⇑Sb	Sb	04 42 49.2	+5.7
	baz=5.5						
HEC	Hector,Ludlow	5.56	121	⇑P	Pn	04 41 23.2	0.0
	baz=5.6,SNR=38						
SHPR	Sheep Range	5.72	102	*e*Pn	Pn	04 41 27.4	+2.1
V11A	Goodsprings	5.73	109	⇓P	Pn	04 41 25.9	+0.5
	baz=5.7						
N11A	Elko Archery C	5.75	57	⇑P	Pn	04 41 25.6	-0.3
	baz=5.7						
MURC	Murrieta	5.84	135	P	Pn	04 41 26.5	-0.5
	baz=5.9,SNR=26						
P12A	McGill	5.86	72	⇑P	Pn	04 41 27.9	+0.5
	baz=5.8						
K09A	Rome	5.88	33	⇓P	Pn	04 41 28.2	+0.7
	baz=5.8						
L10A	Juniper Basin	6.04	44	⇑P	Pn	04 41 30.6	+0.9
	baz=6.0						
GMRC	Granite Mounta	6.05	119	P	Pn	04 41 29.7	-0.2
	baz=6.0,SNR=17						
ELK	Elko	6.06	60	*e*Pn	Pn	04 41 29.5	-0.4
	18nm,0.6s						
ELK				*e*Sg	Sg	04 43 07.8	-7.4
V12A	Nelson	6.21	108	⇓P	Pn	04 41 32.7	+0.6
	baz=6.2						
O12A	Currie	6.21	65	⇑P	Pn	04 41 32.1	0.0
	baz=6.2,SNR=16						
U12A	Valley of Fire	6.22	101	⇓P	Pn	04 41 32.7	+0.5
	baz=6.2						
I06A	Prineville	6.24	13	⇑P	Pn	04 41 34.8	+2.4
	baz=6.2						
N12A	Clover Valley,	6.24	59	⇓P	Pn	04 41 32.4	-0.1
	baz=6.2,SNR=19						
PFO	Pinyon Flat Ob	6.26	131	*e*Pn	Pn	04 41 32.6	-0.2
PFO	Pinyon Flat Ob	6.26	131	Pn	Pn	04 41 32.7	-0.1
	19nm,0.3s,baz=318,slow=11,SNR=170						
PFO				LR	LR	04 44 11.8	
	comp=Z,333nm,20.2s,baz=298,slow=41						
PFO	Pinyon Flat Ob	6.26	131	P	Pn	04 41 32.9	0.0
	baz=6.3,SNR=78						
BELC	Belle Mtn.	6.28	126	P	Pn	04 41 33.2	+0.1
	baz=6.3,SNR=17						
109C	Camp Elliot, M	6.43	139	⇑P	Pn	04 41 35.4	+0.2
	baz=6.5						
S13A	Holt Ranch, En	6.55	90	⇑P	Pn	04 41 38.0	+1.3
	baz=6.5						
U13A	Pakoon Wash	6.67	100	⇓P	Pn	04 41 39.2	+0.8
	baz=6.6,SNR=11						
O13A	Hicks Ranch, I	6.72	68	⇓P	Pn	04 41 39.2	0.0
	baz=6.7						
IRM	Iron Mountain	6.75	121	⇓P	Pn	04 41 38.9	-0.6
	baz=6.8,SNR=9.5						
MONP	Monument Peak	6.80	135	⇑P	Pn	04 41 40.2	-0.1
	baz=6.8,SNR=40						
BC3	Big Chuckw Mtn	6.85	126	P	Pn	04 41 40.4	-0.5
	baz=6.9,SNR=92						
ARUT	Antelope Range	6.87	88	*e*Pn	Pn	04 41 43.1	+2.0
CCUT	Cedar City	6.95	90	*e*Pn	Pn	04 41 43.9	+1.7
SWSC	Sam W. Stewart	7.12	132	⇑P	Pn	04 41 43.7	-1.0
	baz=7.1						
X13A	Yucca	7.45	114	⇑P	Pn	04 41 49.7	+0.6
	baz=7.4,SNR=7.2						
HOOD	Mount Hood Mea	7.46	3	*e*Pn	Pn	04 41 55.2	+6.0
N14A	Grayback Hills	7.53	64	⇓P	Pn	04 41 51.3	+1.1
	baz=7.5,SNR=34						
DUG	Dugway	7.60	69	*e*Pn	Pn	04 41 50.0	-1.2
DUG	Dugway	7.60	69	⇓P	Pn	04 41 52.2	+1.0
	baz=7.6						
GLA	Glamis	7.64	127	P	Pn	04 41 51.1	-0.7
	baz=7.6,SNR=59						
BGU	Big Grassy Mou	7.67	64	*e*Pn	Pn	04 41 53.2	+1.1
BGU				*e*Lg		04 44 00.7	
M14A	Sheep Mountain	7.67	59	⇓P	Pn	04 41 53.1	+0.9
	baz=7.6,SNR=7.0						
T15A	Red Dirt Ranch	7.79	93	⇑P	Pn	04 41 56.0	+2.2
	baz=7.8						
Y13A	Salome	7.85	119	⇑P	Pn	04 41 54.6	0.0
	baz=7.8,SNR=18						
MSU	Marysvale	7.85	82	*e*Pn	Pn	04 41 58.3	+3.7
BMO	Blue Mountains	7.86	26	*e*Pn	Pn	04 41 58.3	+3.6
HLID	Hailey	8.16	43	*e*Pn	Pn	04 42 02.2	+3.5
X14A	Yava	8.19	112	⇑P	Pn	04 42 00.9	+1.6
	baz=8.2						
TMUT	Trail Mountain	8.66	77	*e*Pn	Pn	04 42 10.3	+4.6
X15A	Humboldt	8.67	110	⇓P	Pn	04 42 07.6	+1.7
	baz=8.7						
Z14A	Wintersburg	8.71	118	⇓P	Pn	04 42 06.5	+0.1
	baz=8.7,SNR=8.0						
JLU	Jordanelle	8.71	68	*e*Pn	Pn	04 42 11.0	+4.5
HAWA	Hanford	8.73	12	*e*Pn	Pn	04 42 10.5	+3.8
LON	Longmire	8.88	1	*e*Pn	Pn	04 42 13.1	+4.4
WUAZ	Wupatki	8.94	102	*e*Pn	Pn	04 42 12.5	+3.0
HWUT	Hardware Ranch	8.94	62	*e*Pn	Pn	04 42 10.8	+1.2
SRU	San Rafael	9.17	79	*e*Pn	Pn	04 42 17.9	+5.1
115A	Sonoran Desert	9.58	120	⇑P	Pn	04 42 18.6	+0.2
	baz=9.6,SNR=16						
116A	Eloy	10.02	119	⇑P	Pn	04 42 24.4	-0.1
	baz=10.0						
REDW	Red Top Meadow	10.17	54	*e*Pn	Pn	04 42 31.9	+5.5
DLMT	Dillon	10.33	41	*e*Pn	Pn	04 42 32.1	+3.5
MOOW	Moose Ponds	10.43	52	*e*Pn	Pn	04 42 34.1	+4.3
LOHW	Long Hollow	10.45	53	*e*Pn	Pn	04 42 31.5	+1.4
BW06	Boulder Array	10.76	59	*e*Pn	Pn	04 42 37.7	+3.2
	10nm,1.3s						
PDAR	Pinedale Array	10.76	59	Pn	Pn	04 42 36.1	+1.6
	0.1nm,0.3s,baz=246,slow=11,SNR=13						
MSO	Missoula	10.80	31	*e*Pn	Pn	04 42 41.9	+6.9
	4.2nm,0.8s						
TUC	Tucson	10.81	117	*e*Pn	Pn	04 42 34.9	-0.2
NEW	Newport	11.01	18	*e*Pn	Pn	04 42 42.2	+4.3
NEW	Newport	11.01	18	Pn	Pn	04 42 42.5	+4.6
	0.3nm,0.3s,baz=200,slow=15,SNR=3.1						
NEW				LR	LR	04 47 08.4	
	comp=Z,288nm,18.3s,baz=202,slow=39						
BOZ	Bozeman (W)	11.03	42	*e*Pn	Pn	04 42 41.5	+3.4
	3.8nm,1.0s						
CHMT	Chamberlain Mo	11.16	33	*e*Pn	Pn	04 42 43.1	+3.3
BSMT	Bassoo Peak	11.33	26	*e*Pn	Pn	04 42 48.8	+6.6
RLMT	Red Lodge	12.05	49	*e*Pn	Pn	04 43 02.4	+10
GCMT	Greycliff	12.19	46	*e*Pn	Pn	04 42 58.8	+4.8
ANMO	Albuquerque	12.94	98	LR	LR	04 48 14.2	
	comp=Z,116nm,21.7s,baz=127,slow=39						
EGMT	Eagleton	13.58	38	*e*Pn	Pn	04 43 17.2	+4.2
	16nm,1.3s						
MNTX	Cornudas Mount	15.05	109	*e*Pn	Pn	04 43 40.0	+6.8
	5.0nm,1.1s						
EDM	Edmonton	16.52	19	Pn	Pn	04 43 51.6	-0.3
DGMT	Dagmar	16.79	45	*e*P	Pn	04 43 56.4	+1.0
	14nm,0.9s						
LTX	Lajitas	17.55	114	*e*P	Pn	04 44 08.8	+3.8
	22nm,1.2s						
TXAR	Lajitas Array	17.55	114	Pn	Pn	04 44 08.8	+3.7
	0.1nm,0.3s,baz=294,slow=9.5,SNR=42						
KSU1	Kansas State U	19.99	79	*e*P	Pn	04 44 34.6	0.0
	8.1nm,0.7s						
FFC	Flin Flon	21.73	33	*e*P	P	04 44 51.0	-0.5
	12nm,1.1s,mb4.2						
ULM	Lac du Bonnet	22.42	48	LR	LR	04 53 49.4	
	comp=Z,86nm,20.9s,MS3.2,baz=275,slow=37						
YKA	Yellowknife Ar	25.08	8	P	P	04 45 25.8	+1.1
	1.1nm,0.9s,mb3.4,baz=193,slow=9.8,SNR=7.7						
YKA				LR	LR	04 54 23.4	
	comp=Z,58nm,21.5s,MS3.0,baz=205,slow=34						
FCC	Fort Churchill	27.65	32	*e*P	P	04 45 47.9	0.0
	2.2nm,0.7s,mb3.9						
TKL	Tuckaleechee C	30.65	82	LR	LR	04 57 42.7	
	comp=Z,59nm,21.2s,MS3.2,baz=282,slow=35						
RES	Resolute Bay	39.08	11	*e*P	P	04 47 28.4	+1.5
	91nm,0.8s,mb5.6						
SCHQ	Schefferville	40.59	47	P	P	04 47 41.1	+1.3
	2.1nm,0.7s,mb3.9,baz=280,slow=10,SNR=6.6						
SCHQ				LR	LR	05 03 57.4	
	comp=Z,86nm,18.4s,MS3.6,baz=21,slow=36						
NOA	NORSAR Array B	74.36	22	LR	LR	05 25 18.0	
	comp=Z,34nm,20.4s,MS3.6,baz=300,slow=37						
FINES	FINESS Array B	77.71	15	P	P	04 52 00.3	+3.6
	0.8nm,0.7s,mb3.8,baz=354,slow=12,SNR=2.4						
SIV	San Ignacio	78.39	121	P	P	04 52 01.8	+0.7
	0.5nm,0.5s,mb3.7,baz=296,slow=7.3,SNR=4.0						
BJI	Beijing	85.85	319	P	P	04 52 39.3	-0.8
BJI				S	S	05 03 11.3	-1.6
HHC	Hu-ho-hao-te	87.56	322	*e*P	P	04 52 46.7	-1.7
HHC				AP	pP	04 52 52.0	-1.0
HHC				XP	sP	04 52 54.8	+0.1
WMQ	Urumqi	94.32	339	*e*P	P	04 53 20.0	+0.2
LZH	Lanzhou	95.00	324	*e*P	P	04 53 19.5	-3.6
LZH				AP	pP	04 53 25.0	-2.8
GYA	Guiyang	101.34	317	P	Pdif	04 53 51.2	-0.4

IDC 02 04:41:59.0±3.4**,3313N**×**8148E,h0**km**,mb3.4**/4**,mb1 3.6**/5**, mb1mx3.3**/22**,mbtmp3.5**/5**,ML3.1**/1**,Error ellipse: s-maj=91.3km s-min=36.6km az=125.0,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.66	2	Pn	Pn	04 45 13.5	-0.3
	0.1nm,0.3s,baz=181,slow=13,SNR=7.4						
ZALV	Zalesovo Beam	20.94	6	P	P	04 46 43.4	+0.3
	0.5nm,0.5s,baz=196,slow=10.0,SNR=2.3						
FINES	FINESS Array B	45.09	326	P	P	04 50 16.1	-0.4
	5.9nm,1.3s,baz=116,slow=9.7,SNR=3.4						
TORD	Torodi Ar. Bea	74.46	276	P	P	04 53 39.7	+0.2
	0.3nm,0.7s,baz=69,slow=2.0,SNR=4.0						
YKA	Yellowknife Ar	83.83	7	P	P	04 54 29.9	-0.1
	0.4nm,0.6s,baz=344,slow=5.0,SNR=7.8						

*NEIC **02** 04:49:33.0,1782N×6570W,h14km,MD2.7(RSPR),After RSPR.*

RSPR 02 04:49:33.0,1782N×**6570W,h14**km±18km**,MD2.7**/4**,13C-3D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPD	Cerro la Pandu	0.30	316	*e*S	Sg	04 49 44.2	+0.8
CPD	Cerro la Pandu	0.30	316	⇑*e*P	Pg	04 49 39.1	-0.1
CPD	Cerro la Pandu	0.30	316	*e*S	Sg	04 49 43.9	+0.5
CPD	Cerro la Pandu	0.30	316	⇑*e*P	Pg	04 49 39.0	-0.1
CPD				*e*S	Sg	04 49 44.2	+0.8
MTP	Monte Pirata	0.31	27	⇓*e*P	Pg	04 49 39.3	-0.1
MTP	Monte Pirata	0.31	27	*e*S	Sg	04 49 44.0	+0.3
MTP	Monte Pirata	0.31	27	⇓*e*P	Pg	04 49 39.3	0.0
MTP	Monte Pirata	0.31	27	*e*S	Sg	04 49 44.0	+0.3
MTP	Monte Pirata	0.31	27	⇓*e*P	Pg	04 49 39.3	0.0
MTP				*e*S	Sg	04 49 44.0	+0.3
HUMP	Col San Antoni	0.35	336	⇑*e*P	Pg	04 49 39.9	-0.2
HUMP	Col San Antoni	0.35	336	*e*S	Sg	04 49 45.4	+0.4
HUMP	Col San Antoni	0.35	336	⇑*e*P	Pg	04 49 40.0	-0.2
HUMP	Col San Antoni	0.35	336	*e*S	Sg	04 49 45.0	+0.1
HUMP	Col San Antoni	0.35	336	⇑*e*P	Pg	04 49 40.0	-0.2
HUMP				*e*S	Sg	04 49 45.4	+0.4
CBYP	Canovanas	0.47	342	⇑*e*P	Pg	04 49 41.6	-0.7
CBYP	Canovanas	0.47	342	*e*S	Sg	04 49 49.5	+0.8
CBYP	Canovanas	0.47	342	⇑*e*P	Pg	04 49 42.0	-0.4
CBYP	Canovanas	0.47	342	*e*S	Sg	04 49 48.9	+0.2
CBYP	Canovanas	0.47	342	⇑*e*P	Pg	04 49 42.0	-0.4
CBYP				*e*S	Sg	04 49 49.5	+0.8
SJG	San Juan	0.52	304	⇑*e*P	Pg	04 49 42.7	-0.4
SJG				*e*S	Sg	04 49 51.1	+1.0
SJG	San Juan	0.52	304	⇑*e*P	Pg	04 49 42.1	-1.0
SJG	San Juan	0.52	304	*e*S	Sg	04 49 50.9	+0.8
SJG	San Juan	0.52	304	⇑*e*P	Pg	04 49 42.0	-1.1
SJG				*e*S	Sg	04 49 50.7	+0.6
SJG	San Juan	0.52	304	⇑*e*P	Pg	04 49 42.6	-0.6
SJG	San Juan	0.52	304	*e*S	Sg	04 49 50.0	-0.1
SJG	San Juan	0.52	304	⇑*e*P	Pg	04 49 42.6	-0.6
SJG				*e*S	Sg	04 49 50.9	+0.8

*IDC **02** 05:06:57.8±7.2,3588N×7099E,h64km±63km,mb3.6/9, mb1 3.7/11,mb1mx3.5/23,mbtmp3.6/11,ML3.8/2,Error ellipse: s-maj=35.3km s-min=20.3km az=20.0*
*BJI **02** 05:06:59.2,3663N×7023E,h112km,mb4.4*
*ISCJB **02** 05:07:04.4±0.6,3632N±003×7125E±007,h123km±8km, mb3.6/8,Error ellipse: s-maj=9.1km s-min=4.1km az=164.8*
*NEIC **02** 05:07:04.8±0.7,3626N×7125E,h112km±7km,mb4.3/7, Error ellipse: s-maj=9.5km s-min=6.6km az=68.0*
*NNC **02** 05:07:09.3±6.6,3699N×7099E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=64.1km s-min=62.4km az=20.0*
ISC 02 05:07:05.4±0.6**,3631N**±003×**7123E**±007**,h119**km±7km**, n50,**σ1**§**33**/65**,mb3.6**/8**,1C-4D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.51	226	*e*Pn	Pn	05 07 45.0	-0.2
KBL				*e*Sn	Sn	05 08 23.6	+7.8
KSH	Kashi	4.93	48	*e*P	Pn	05 08 20.7	+3.3
KSH				*e*S	Sn	05 09 15.9	+2.6
KSH				Smax			
	comp=N,797nm,0.2s						
KSH				Smax			
	comp=E,817nm,0.6s						
THN	Thein Dam	5.36	135	*e*P	Pn	05 08 25.5	+2.3
THN				*e*S	Sn	05 09 25.6	+1.9
DLH	Dalhousie	5.43	132	*e*P	Pn	05 08 26.0	+1.9
DLH				*e*S	Sn	05 09 27.0	+1.6
AML	Almayashu	6.12	17	*e*Pn	Pn	05 08 33.1	-0.2
	comp=E,93nm,0.4s						
AML				*e*Sn	Sn	05 09 35.5	-6.5
AML	Almayashu	6.12	17	P	Pn	05 08 33.4	+0.1
	SNR=218						
UCH	Uchtor	6.44	22	*e*Pn	Pn	05 08 37.8	+0.2
	comp=E,11nm,0.4s						
UCH				*e*Sn	Sn	05 09 47.0	-2.6
UCH	Uchtor	6.44	22	P	Pn	05 08 38.0	+0.4
	SNR=22						
KZA	Kyzart	6.55	27	P	Pn	05 08 39.6	+0.4
	SNR=31						
EKS2	Erkin-Say	6.64	16	*e*Pn	Pn	05 08 40.2	-0.2
	comp=E,13nm,0.6s						
EKS2				*e*Sn	Sn	05 09 51.8	-2.8
EKS2	Erkin-Say	6.64	16	P	Pn	05 08 40.5	0.0
	SNR=16						
SDNR	Sundarnagar	6.77	133	*e*P	Pn	05 08 42.0	-0.2
SDNR				*e*S	Sn	05 09 56.0	-1.8
AAK	Ala-Archa	6.80	21	*e*Pn	Pn	05 08 41.6	-0.9
	comp=E,16nm,0.4s						
AAK				*e*Sn	Sn	05 09 57.4	-1.1
AAK	Ala-Archa	6.80	21	P	Pn	05 08 42.9	+0.3
	SNR=30						
KK31	Karatay Array	6.81	356	⇓P	Pn	05 08 41.1	-1.5
	comp=E,10nm,0.3s,baz=180,slow=13,SNR=745						
KK31				⇓S	Sn	05 09 52.8	-5.8
	comp=E,16nm,0.5s,baz=188,slow=24						
KBK	Karagaybulak	6.96	23	P	Pn	05 08 47.1	+2.4
	SNR=7.0						
ULHL	Ulahol	7.09	32	P	Pn	05 08 48.2	+1.7
	SNR=7.7						
CHMS	Chumysh	7.21	21	P	Pn	05 08 48.1	0.0
	SNR=13						
USP	Ospenovka	7.39	19	P	Pn	05 08 50.6	+0.1
	SNR=27						
TKM2	Tokmak 2	7.41	26	⇓P	Pn	05 08 50.9	+0.1
	comp=E,1.3nm,0.8s						
TKM2				⇓S	Sn	05 10 11.4	-1.9
	comp=E,3.6nm,0.8s						
TKM2	Tokmak 2	7.41	26	*e*Pn	Pn	05 08 50.7	-0.1
	comp=E,10.0nm,0.5s						
TKM2	Tokmak 2	7.41	26	P	Pn	05 08 51.7	+0.9
	SNR=15						
JOSI	Joshimath	9.02	127	*e*x	x	05 08 48.4	
JOSI				AMb	AMB	05 08 50.1	
	comp=Z,26nm,0.4s						
JOSI				*e*S	Sn	05 10 50.4	-2.0
KHET	Khetri	9.08	153	*e*P	Pn	05 09 13.5	0.0
KHET				AMb	AMB	05 09 15.3	
	comp=Z,5.4nm,0.4s						
KHET				*e*S	Sn	05 10 46.9	-7.0
NDI	New Delhi	9.13	145	*e*P	Pn	05 09 14.0	-0.2
NDI				*e*S	Sn	05 10 48.0	-7.1
AYAN	Aya Nagar	9.26	146	*e*P	Pn	05 09 13.8	-2.2
KUDL	Kundal	9.28	150	*e*P	Pn	05 09 15.8	-0.4
KUDL				AMb	AMB	05 09 20.2	
	comp=Z,3.4nm,0.3s						
KUDL				*e*S	Sn	05 10 52.0	-6.8
MK31	Makanchi Array	13.34	35	⇑P	Pn	05 10 12.9	+3.0
	comp=Z,1.3nm,0.6s,baz=222,slow=12,SNR=16						
MKAR	Makanchi Array	13.34	35	P	Pn	05 10 09.9	0.0
	comp=Z,0.1nm,0.3s,baz=222,slow=14,SNR=11						
GKN	Gorkha	14.05	122	*e*P	Pn	05 10 18.8	-0.4
JIRN	Jiri	15.34	120	*e*P	Pn	05 10 34.8	-0.6
	comp=Z,20nm,0.3s						
JIRN				*e*S	S	05 13 16.3	-17
KURK	Kurchatov	15.35	18	*e*P	Pn	05 10 36.8	+1.4
	comp=Z,2.1nm,0.6s						
TAPN	Taplejung	16.60	118	*e*P	Pn	05 10 50.3	-0.7
	comp=Z,29nm,0.5s						
ODAN	Odare	16.67	120	*e*P	Pn	05 10 52.3	+0.4
	comp=Z,16nm,0.5s						
BRVK	Borovoye	16.76	358	*e*P	Pn	05 10 52.7	-0.1
	comp=Z,4.3nm,0.7s						
AKTK	Aktyubinsk	17.04	330	P	Pn	05 10 55.5	-0.6
AKTO	Aktyubinsk	17.04	330	P	Pn	05 10 55.5	-0.6
	comp=Z,1.4nm,0.3s,baz=138,slow=12,SNR=11						
ZAA0	Zalesovo Array	20.01	24	*e*P	P	05 11 28.8	+0.3
ZALV	Zalesovo Beam	20.01	24	P	P	05 11 28.7	+0.2
	comp=Z,11nm,0.5s,baz=223,slow=11,SNR=51						
ARU	Arti	21.87	341	*e*P	P	05 11 50.7	+2.3
SONM	Songino Array	28.30	55	P	P	05 12 50.3	+2.8
	comp=Z,0.2nm,0.6s,mb2.8,baz=264,slow=10.0,SNR=2.5						
FINES	FINESS Array B	37.74	326	P	P	05 14 10.1	+0.8
FINES	FINESS Array B	37.74	326	P	P	05 14 10.1	+0.8
	comp=Z,1.1nm,0.7s,mb3.8,baz=105,slow=12,SNR=3.5						
ARCES	ARCESS Array B	41.39	338	P	P	05 14 40.5	+1.1
	comp=Z,6.6nm,1.0s,mb4.4,baz=118,slow=7.7,SNR=7.5						
NB2	NORSAR Subarra	44.64	323	P	P	05 15 05.7	0.0
	comp=Z,0.7nm,0.5s,mb3.6,baz=98,slow=7.9						
NOA	NORSAR Array B	44.64	323	P	P	05 15 06.0	+0.3
	comp=Z,1.2nm,0.7s,mb3.8,baz=97,slow=7.8,SNR=5.7						
TORD	Torodi Ar. Bea	65.90	269	P	P	05 17 35.5	-3.2
	comp=Z,0.4nm,0.7s,mb3.3,baz=51,slow=4.2,SNR=3.8						
YKA	Yellowknife Ar	81.43	3	P	P	05 19 08.5	-0.2
	comp=Z,0.5nm,0.6s,mb3.5,baz=350,slow=5.6,SNR=12						
WRA	Warramunga Arr	81.73	122	P	P	05 19 08.9	-2.0
	comp=Z,0.7nm,0.8s,mb3.5,baz=324,slow=4.7,SNR=3.4						
ASAR	Alice Springs	84.00	125	P	P	05 19 21.9	-0.6
	comp=Z,0.5nm,0.7s,mb3.4,baz=320,slow=4.5,SNR=5.2						

IDC 02 05:09:42.0±3.2**,3160S**×**17748W,h0**km**,mb3.8**/2**, mb1 4.1**/3**,mb1mx3.9**/12**,mbtmp3.8**/3**,ML3.7**/1**,Error ellipse: s-maj=73.7km s-min=37.0km az=116.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.99	212	Pn	Pn	05 11 38.6	-0.7
	1.0nm,0.3s,baz=45,slow=10.0,SNR=4.3						
URZ				Sn	Sn	05 13 12.0	+1.6
	0.8nm,0.3s,baz=131,slow=20,SNR=2.9						
ASAR	Alice Springs	43.50	268	P	P	05 17 47.4	0.0
	0.8nm,0.5s,baz=106,slow=7.5,SNR=11						
WRA	Warramunga Arr	44.60	273	P	P	05 17 56.1	-0.1
	0.8nm,0.5s,baz=110,slow=8.1,SNR=17						
YKA	Yellowknife Ar	106.33	26	P	Pdif	05 23 57.7	+0.6
	0.1nm,0.4s,baz=295,slow=6.2,SNR=3.4						
FINES	FINESS Array B	146.43	340	PKPbc	PKPbc	05 29 23.4	-0.7
	2.9nm,1.1s,baz=48,slow=2.8,SNR=4.9						

*IDC **02** 05:13:41.5±1.9,3744N×13976E,h167km±16km,mb2.8/4, mb1 3.0/4,mb1mx2.8/20,mbtmp2.8/4,Error ellipse: s-maj=35.8km s-min=22.9km az=86.0*
*ISCJB **02** 05:13:43.0±0.8,3553N±006×14006E±009,h78km±5km, mb3.4/2,Error ellipse: s-maj=14.1km s-min=7.1km az=140.3*
*JMA **02** 05:13:43.4±0.2,3561N×14007E,h68km±2km,M2.9*
ISC 02 05:13:44.0±0.8**,3553N**±006×**14004E**±008**,h71**km±5km**, n15,**σ**0**§**62**/20**,mb3.4**/2**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.17	132	P	Pn	05 13 54.6	-0.1
JCN				S	Sn	05 14 03.1	+0.7
TOK	Tokyo	0.28	303	P	Pn	05 13 55.0	-0.2
TOK				S	Sn	05 14 03.8	+0.4
BSO3	Boso 3	0.82	152	P	Pn	05 13 59.9	-0.6
BSO3				*e*S	Sn	05 14 13.2	+0.6
JOD2	Odawara 2	0.82	251	P	Pn	05 14 00.2	-0.2
JOD2				S	Sn	05 14 12.0	-0.6
JIM2	Oshima 3	0.96	212	P	Pn	05 14 01.4	-0.6
JAG	Ashikaga	1.01	332	P	Pn	05 14 01.6	-1.1
JRY	Ryogami san	1.04	298	P	Pn	05 14 03.1	0.0
JYN	Shimob	1.22	269	P	Pn	05 14 05.4	0.0
JIZS	Izushimoda	1.25	230	P	Pn	05 14 05.8	0.0
JKT	Katashina	1.39	333	P	Pn	05 14 06.7	-0.8
MJAR	Matsushiro Arr	1.79	305	P	Pn	05 14 12.7	-0.2
	5.2nm,0.3s,baz=102,slow=15,SNR=17						
MJAR				S	Sn	05 14 36.5	+1.7
	11nm,0.3s,baz=162,slow=20,SNR=13						
MAT	Matsushiro	1.80	305	P	Pn	05 14 12.9	0.0
MAT				S	Sn	05 14 35.2	+0.3
WRA	Warramunga Arr	55.44	187	P	P	05 23 11.4	+0.2
	0.3nm,0.6s,mb3.5,baz=0.7,slow=7.5,SNR=5.6						
ASAR	Alice Springs	59.16	187	P	P	05 23 38.3	+0.9
	0.1nm,0.3s,mb3.4,baz=11,slow=7.5,SNR=4.1						
LPAZ	La Paz	148.40	60	PKPbc		05 33 06.2	
	0.6nm,0.5s,baz=22,slow=25,SNR=4.4						
LPAZ				pPKPbc	pPKPbc	05 33 45.6	+2.6
	0.7nm,1.0s,baz=22,slow=25,SNR=4.7						

CASC 02 05:42:56.5±3.0**,953N**×**8400W,h14**km±8km**,MD3.8,7C-6D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	Quepos	0.19	238	⇑*i*P	Pg	05 43 01.7	+0.8
LCR2	La Lucha 2	0.21	359	⇑*i*P	Pg	05 43 02.7	+1.4
BUS	Buena Vista	0.24	84	⇓*i*P	Pg	05 43 03.6	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LAJ	**Bijagual**	**0.35**	**340**	⇓*e*P	Pg	05 43 07.6	+3.9
LAJ				*e*S	Sg	05 43 16.4	+7.9
URSC	**Urasca**	**0.37**	**36**	⇓*i*P	Pg	05 43 05.2	+1.2
URSC				*e*S	Sg	05 43 11.0	+1.9
SJS	**Escuela Geolog**	**0.41**	**352**	⇓*e*P	Pg	05 43 05.3	+0.5
SJS				*e*S	Sg	05 43 12.0	+1.7
ICR	**Volcan Irazu**	**0.48**	**20**	⇑*i*P	Pg	05 43 06.8	+0.8
ICR				*e*S	Sg	05 43 13.6	+1.2
PRS1	**Puriscal**	**0.55**	**326**	⇓*i*P	Pg	05 43 06.2	-1.1
PRS1				*e*S	Sg	05 43 13.6	-1.0
CGA2	**Cerro Gallo 2**	**0.67**	**317**	⇓*e*P	Pg	05 43 08.8	-0.7
CGA2				*e*S	Sg	05 43 17.7	-0.6
BAR1		**0.74**	**113**	⇑*e*P	Pg	05 43 10.6	-0.3
JCR	**Jicaral**	**1.14**	**286**	*e*P	Pb	05 43 15.9	-2.1
FORC	**Fortuna**	**1.15**	**325**	⇑*e*P	Pb	05 43 16.9	-1.2
FORC				*e*S	Sb	05 43 31.9	-1.0
CTCR	**Cotoan**	**1.38**	**117**	*e*P	Pn	05 43 20.6	-0.7
CTCR				*e*S	Sn	05 43 37.6	-1.8
CNI	**Changuinola**	**1.47**	**94**	*e*P	Pn	05 43 21.0	-1.6
CNI				*e*S	Sn	05 43 42.3	+0.7
TBS2		**1.51**	**119**	⇑*e*P	Pn	05 43 27.9	+4.7
TBS2				*e*S	Sn	05 43 46.6	+3.9
BRU	**Baru**	**1.59**	**117**	*e*P	Pn	05 43 23.8	-0.5
BRU				*e*S	Sn	05 43 45.3	+0.6
CUI		**1.62**	**314**	*e*P	Pn	05 43 23.9	-0.8
CUI				*e*S	Sn	05 43 46.4	+1.0
LIM1	**Limonal**	**1.70**	**313**	⇑*e*P	Pn	05 43 27.4	+1.6
LIM1				*e*S	Sn	05 43 46.6	-0.7

GUC 02 06:17:07.6±0.7**,3147S×7165W,h13**km±3km**,MD3.7, ML3.5,2C-3D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.43**	**163**	⇓*i*P	Pg	06 17 02.3	-14
CHNG				*i* S	Sg	06 17 08.6	-13
CMCH	**Combarbala**	**0.63**	**62**	⇑*i*P	Pg	06 17 19.8	-0.1
CMCH				*i* S	Sg	06 17 29.1	+0.9
CMCH				AML	AML	06 17 34.1	
	comp=N,4μm,0.5s						
OVCH	**Ovalle**	**0.94**	**24**	*i* P	Pb	06 17 24.6	-1.1
OVCH				*i* S	Sg	06 17 37.8	-0.3
OVCH				AML	AML	06 17 43.6	
	comp=E,7μm,0.5s						
PACH	**Papudo**	**1.08**	**170**	⇓*i*P	Pb	06 17 26.4	-1.8
PACH				*i* S	Sb	06 17 41.4	-0.7
TLL	**Tololo Astrono**	**1.49**	**29**	⇓*i*P	Pn	06 17 33.6	-0.4
TLL				*i* S	Sn	06 17 53.6	+0.3
TLL				AML	AML	06 17 58.1	
	comp=E,667nm,0.3s						
LSCH	**La Serena**	**1.60**	**13**	*i* P	Pn	06 17 35.2	-0.3
LSCH				*i* S	Sn	06 17 55.2	-0.8
FCH	**Farellones**	**2.18**	**148**	⇑*i*P	Pn	06 17 44.1	+0.5
FCH				*i* S	Sn	06 18 12.5	+2.1
LNV	**Longovilo**	**2.49**	**175**	*i* P	Pn	06 17 48.7	+0.9
LNV				*i* S	Sn	06 18 20.1	+2.1
CHCH	**Chadas Angostu**	**2.60**	**161**	*i* P	Pn	06 17 50.3	+1.0
CHCH				*i* S	Sn	06 18 22.9	+2.2
CACH	**El Canelo**	**2.78**	**162**	*i* S	Sn	06 18 28.7	+3.4

IDC 02 06:27:09.5±9.5**,329S×14065E,h0**km**,mb3.3**/2**,mb1 3.6**/3**, mb1mx3.4**/12**,mbtmp3.4**/3**,ML3.4**/1**,Error ellipse: s-maj=368.9km s-min=32.7km az=89.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.66**	**200**	P	Pn	06 31 15.5	-1.5
	0.1nm,0.3s,baz=24,slow=13,SNR=6.5						
ASAR	**Alice Springs**	**21.28**	**197**	P	P	06 31 58.6	+1.0
	0.5nm,0.6s,baz=28,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**71.44**	**322**	P	P	06 38 31.8	+0.1
	0.3nm,0.7s,baz=107,slow=7.7,SNR=4.0						

*NEIC **02** 06:31:32.4,1605N×98.16W,h5km,MD4.0(MEX),After MEX.*
MEX 02 06:31:32.2±1.1**,1607N×9817W,h1**km±8km**,MD4.0,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.33**	**6**	*i* P	Pg	06 31 37.5	-1.0
PNIG				*i* S	Sg	06 31 44.0	+1.2
PNIG	**Pinotepa**	**0.33**	**6**	*i* P	Pg	06 31 37.5	-1.0
PNIG				*i* S	Sg	06 31 43.6	+0.8
VHO	**Vista Hermosa**	**1.70**	**54**	*e*P	Pn	06 31 59.7	-3.3
VHO				*i* S	Sn	06 32 20.4	-5.0
OXX	**Oaxaca**	**1.71**	**54**	*e*P	Pn	06 32 00.0	-3.2
UTMO	**Huajuapan**	**1.79**	**11**	*e*P	Pn	06 32 01.9	-2.4
UTMO				*i* S	Sn	06 32 23.8	-3.9
ACX	**Acapulco**	**1.86**	**296**	*e*P	Pn	06 31 54.5	-11
CAIG	**El Cayaco**	**2.24**	**296**	*i* P	Pn	06 32 06.9	-3.6
CAIG				*i* S	Sn	06 32 34.2	-4.6
MEIG	**Mezcala**	**2.31**	**323**	*i* P	Pn	06 32 08.8	-2.7
MEIG				*i* S	Sn	06 32 36.0	-4.6
PLIG	**Platanillo**	**2.64**	**331**	*i* P	Pn	06 32 15.3	-0.7
PLIG				*i* S	Sn	06 32 44.8	-3.9
YAIG	**Yautepec**	**2.91**	**343**	*i* P	Pn	06 32 16.8	-2.9
YAIG				*i* S	Sn	06 32 51.8	-3.5
PPM	**Popocatepetl**	**3.02**	**352**	*i* P	Pn	06 32 13.1	-8.1
PPM				*i* S	Sn	06 32 53.2	-4.8
PPM	**Popocatepetl**	**3.02**	**352**	*i* P	Pn	06 32 16.5	-4.7
PPM				*e*P		06 32 22.0	
PPM				*i* S	Sn	06 32 53.2	-4.8
SZVM	**Salazar**	**3.44**	**340**	*i* P	Pn	06 32 22.2	-4.8
SZVM				*i* S	Sn	06 33 06.5	-2.0
IIO	**Organos**	**3.55**	**351**	*i* P	Pn	06 32 28.1	-0.3

*IDC **02** 06:53:58.5±4.9,546S×15108E,h119km±30km,mb3.7/4, mb1 3.8/5,mb1mx3.5/15,mbtmp3.6/5,Error ellipse: s-maj=69.2km s-min=24.2km az=109.0*
*NEIC **02** 06:54:03.7±3.0,548S×15067E,h145km±20km,mb4.7/2, Error ellipse: s-maj=47.6km s-min=22.0km az=111.0*
ISC 02 06:54:02.7±4.6**,55S**±03×**1509E**±05**,h148**km±28km**,n10, σ0s43**/10**,mb4.0**/4**,2D,New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.33**	**223**	P	**Pn**	**06 55 20.0**	**-0.4**
	1.9nm,0.3s,baz=45,slow=11,SNR=5.4						
PMG				S	**Sn**	**06 56 21.7**	**+0.5**
	7.8nm,0.3s,baz=331,slow=19,SNR=10						
KAKA	**Kakadu**	**19.53**	**247**	*e*P	**P**	**06 58 18.6**	**-0.3**
	10nm,0.4s						
WB2	**Warramunga Arr**	**21.52**	**227**	⇓*i*P	**P**	**06 58 39.7**	**-0.5**
WB2	**Warramunga Arr**	**21.52**	**227**	*e*P	**P**	**06 58 40.1**	**-0.1**
WRA	**Warramunga Arr**	**21.53**	**227**	P	**P**	**06 58 40.0**	**-0.3**
	2.9nm,0.4s,mb4.0,baz=51,slow=9.8,SNR=35						
WRA				PcP	PcP	07 02 36.8	-0.3
	0.5nm,0.6s,baz=48,slow=1.7,SNR=5.3						
WRA				ScP	ScP	07 06 04.8	+4.3
	0.2nm,0.9s,baz=44,slow=2.6,SNR=5.3						
ASAR	**Alice Springs**	**24.33**	**220**	P	**P**	**06 59 07.5**	**+0.6**
	1.1nm,0.3s,mb3.8,baz=52,slow=8.9,SNR=25						
FITZ	**Fitzroy Crossi**	**27.62**	**241**	⇓*i*P	**P**	**06 59 36.2**	**-0.4**
	15nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**27.62**	**241**	P	**P**	**06 59 36.4**	**-0.2**
	9.2nm,0.8s,mb4.6,baz=82,slow=11,SNR=27						
SONM	**Songino Array**	**65.92**	**329**	P	**P**	**07 04 33.2**	**+0.5**
	0.2nm,0.4s,mb3.3,baz=141,slow=4.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**148.67**	**286**	PKPbc	PKPbc	07 13 31.0	-2.5
	1.0nm,0.8s,baz=80,slow=1.8,SNR=7.0						

*PRU **02** 06:59:05.8,5030N×1878E,h0km*
WAR 02 06:59:04.9,5025N×1888E,ML2.6,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.59**	**92**	*e*Pg	Pg	06 59 16.6	+0.4
OJC				*e*Sg	Sg	06 59 24.5	+0.7
OKC	**Ostrava-Krasne**	**0.63**	**229**	*e*PG	Pg	06 59 17.4	+0.5
OKC				*e*SG	Sg	06 59 25.7	+0.7
	24nm,0.5s						
NIE	**Niedzica**	**1.24**	**131**	*e*Pg	Pg	06 59 29.0	+0.3
NIE				*e*Sg	Sg	06 59 46.0	+1.2
DPC	**Dobruska-Polom**	**1.65**	**275**	*e*PG	Pg	06 59 34.3	-2.1
DPC				*e*SG	Sg	06 59 56.3	-1.4
	16nm,0.5s						
KOLL	**Kolacno**	**1.70**	**191**	*e*PN	Pn	06 59 36.9	+1.1
KOLL				*e*SN	Sn	06 59 59.7	+1.5
STHS	**Stebnicka Huta**	**1.74**	**118**	*e*PN	Pn	06 59 37.7	+1.4
STHS				*e*SN	Sn	07 00 02.7	+3.5
VYHS	**Vyhne**	**1.75**	**181**	*e*PN	Pn	06 59 35.7	-0.8
VYHS				*e*SN	Sn	06 59 58.1	-1.4
UPC	**Upice**	**1.86**	**279**	*e*SG	Sg	07 00 01.9	-2.6
KECS	**Kecovo**	**2.05**	**149**	*e*PN	Pn	06 59 42.9	+2.3
KECS				*e*SN	Sn	07 00 07.9	+1.0
CRVS	**Cervenica-Dubn**	**2.15**	**128**	*e*PN	Pn	06 59 45.7	+3.7
CRVS				*e*SN	Sn	07 00 13.8	+4.5
PRU	**Pruhonice**	**2.81**	**266**	*e*SG	Sg	07 00 31.5	-3.5
	10nm,0.9s						
KHC	**Kasperske Hory**	**3.62**	**254**	*e*PG	Pg	07 00 11.0	-3.3
KHC				*e*x	x	07 00 54.0	
KHC				*e*SG	Sg	07 00 58.6	-2.6
	6.7nm,0.5s						

IDC 02 07:05:08.2±2.5**,554N×12630E,h0**km**,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.4**/18**,mbtmp3.5**/3**,MS3.7**/1**,Ms1 3.7**/1**, ms1mx2.8**/22**,Error ellipse: s-maj=210.0km s-min=26.1km az=66.0,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**26.25**	**33**	LR	LR	07 20 39.1	
	comp=Z,147nm,19.1s,baz=309,slow=36						
WRA	**Warramunga Arr**	**26.52**	**163**	P	P	07 10 47.6	-0.1
	0.9nm,0.5s,baz=342,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**29.96**	**166**	P	P	07 11 18.7	+0.3
	0.2nm,0.7s,baz=357,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	**55.84**	**325**	P	P	07 14 47.5	0.0
	0.5nm,0.6s,baz=124,slow=8.3,SNR=6.5						

IDC 02 07:08:50.9±5.2**,265S×13929E,h0**km**,mb3.3**/2**,mb1 3.5**/3**, mb1mx3.3**/12**,mbtmp3.3**/3**,ML3.2**/1**,Error ellipse: s-maj=204.3km s-min=31.4km az=87.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.85**	**195**	P	Pn	07 13 01.9	+1.0
	0.1nm,0.3s,baz=18,slow=14,SNR=4.9						
ASAR	**Alice Springs**	**21.53**	**194**	P	P	07 13 42.0	+0.2
	0.5nm,0.5s,baz=27,slow=10,SNR=7.6						
MKAR	**Makanchi Array**	**70.10**	**322**	P	P	07 20 04.8	-0.2
	0.3nm,0.7s,baz=100,slow=6.4,SNR=3.6						

*PRU **02** 07:09:05.4,5031N×1884E,h0km*
WAR 02 07:09:04.9,5024N×1895E,ML2.5,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.55**	**92**	*e*Pg	Pg	07 09 15.8	+0.5
OJC				*e*Sg	Sg	07 09 23.7	+1.3
OKC	**Ostrava-Krasne**	**0.66**	**232**	*e*PG	Pg	07 09 17.8	+0.3
OKC				*e*SG	Sg	07 09 27.0	+1.0
	23nm,0.7s						
NIE	**Niedzica**	**1.21**	**133**	*e*Pg	Pg	07 09 28.6	+0.6
NIE				*e*Sg	Sg	07 09 46.0	+2.3
DPC	**Dobruska-Polom**	**1.69**	**275**	*e*PG	Pg	07 09 34.6	-2.6
DPC				*e*SG	Sg	07 09 58.3	-0.8
	13nm,0.5s						
STHS	**Stebnicka Huta**	**1.70**	**118**	*e*PN	Pn	07 09 37.4	+1.6
STHS				*e*SN	Sn	07 10 01.1	+2.9
KOLL	**Kolacno**	**1.71**	**192**	*e*PN	Pn	07 09 37.5	+1.7
KOLL				*e*SN	Sn	07 09 59.9	+1.6
VYHS	**Vyhne**	**1.75**	**182**	*e*PN	Pn	07 09 35.4	-1.1
VYHS				*e*SN	Sn	07 09 58.5	-1.0
UPC	**Upice**	**1.90**	**279**	*e*SG	Sg	07 10 04.8	-1.1
KECS	**Kecovo**	**2.03**	**150**	*e*PN	Pn	07 09 39.6	-0.7
KECS				*e*SN	Sn	07 10 09.3	+3.0
CRVS	**Cervenica-Dubn**	**2.12**	**128**	*e*PN	Pn	07 09 43.9	+2.4
CRVS				*e*SN	Sn	07 10 12.2	+3.8
PRU	**Pruhonice**	**2.85**	**267**	*e*SG	Sg	07 10 33.6	-2.8
KHC	**Kasperske Hory**	**3.66**	**254**	*e*SG	Sg	07 11 00.8	-1.7

IDC 02 07:10:33.5±2.1**,537N×12634E,h0**km**,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.4**/18**,mbtmp3.5**/3**,Error ellipse: s-maj=155.0km s-min=26.1km az=66.0,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.35**	**163**	P	P	07 16 11.5	0.0
	0.5nm,0.4s,baz=343,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**29.79**	**166**	P	P	07 16 42.2	+0.1
	0.4nm,1.0s,baz=358,slow=8.3,SNR=2.8						
MKAR	**Makanchi Array**	**56.00**	**325**	P	P	07 20 13.9	0.0
	0.6nm,0.6s,baz=124,slow=8.5,SNR=7.3						

IDC 02 07:14:20.1±2.1**,538N×12622E,h0**km**,mb3.5**/4**,mb1 3.7**/4**, mb1mx3.4**/19**,mbtmp3.5**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.8**/18**,Error ellipse: s-maj=123.2km s-min=25.2km az=69.0,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**21.42**	**5**	LR	LR	07 26 59.3	
	comp=Z,98nm,21.8s,baz=93,slow=35						
FITZ	**Fitzroy Crossi**	**23.34**	**181**	P	P	07 19 30.4	+0.2
	1.7nm,0.9s,baz=356,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**26.40**	**163**	P	P	07 19 59.1	+0.6
	0.8nm,0.4s,baz=341,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**29.83**	**166**	P	P	07 20 28.4	-0.6
	0.4nm,1.0s,baz=356,slow=8.4,SNR=3.5						
MKAR	**Makanchi Array**	**55.92**	**325**	P	P	07 23 59.8	0.0
	0.3nm,0.4s,baz=123,slow=7.8,SNR=5.4						

*ISCJB **02** 07:42:40.8±0.6,1978N±004×7491W±004,h10km,Error ellipse: s-maj=7.6km s-min=4.2km az=135.7*
*SSNC **02** 07:42:42.0,1971N×7476W,h5km,MD3.3,ML2.9*
*JSN **02** 07:42:45.6±1.2,1969N×75.12W,h1km±504km,MD4.1*
ISC 02 07:42:41.5±0.6**,1981N**±004×**7491W**±004**,h10**km**,n12, σ1s35**/20**,8D,Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.74**	**60**	*e*PG	**Pg**	**07 42 55.6**	**-0.1**
MASC				*e*SG	**Sg**	**07 43 04.5**	**-0.9**
	comp=N,12nm,0.2s						
MASC				*e*			
	comp=E,14nm,0.2s						
RCC	**Rio Carpintero**	**0.76**	**284**	*e*P	**Pg**	**07 42 58.0**	**+1.8**
RCC				*e*S	**Sg**	**07 43 09.0**	**+2.9**
	comp=N,1μm,0.2s						
RCC				*e*			
	comp=E,2μm,0.3s						
MOAC	**Moa**	**0.85**	**357**	*i* P	**Pg**	**07 42 59.2**	**+1.3**
MOAC				*i* S	**Sg**	**07 43 08.6**	**-0.3**
	comp=N,2μm,0.4s						
MOAC				*e*			
	comp=E,2μm,0.8s						
LMGC	**Las Mercedes**	**1.99**	**278**	*e*P	**Pn**	**07 43 13.9**	**-1.2**
LMGC				*e*S	**Sn**	**07 43 38.7**	**-1.4**
	comp=N,466nm,0.3s						
LMGC				*e*			
	comp=E,403nm,0.3s						
CMJ	**Castle Mountai**	**2.16**	**220**	⇓*e*P	**Pn**	**07 43 18.6**	**+1.0**
GWJ	**Greenwich**	**2.44**	**225**	⇓*i*P	**Pn**	**07 43 21.8**	**+0.5**
STH	**Stony Hill**	**2.49**	**227**	⇓*i*P	**Pn**	**07 43 22.4**	**+0.4**
STH				⇓*e*S	**Sn**	**07 43 49.9**	**-2.5**
BBJ	**Bamboo Saint A**	**2.64**	**238**	⇓*e*P	**Pn**	**07 43 24.5**	**+0.4**
PCJ	**Portland Cotta**	**2.96**	**226**	⇓*i*P	**Pn**	**07 43 30.1**	**+1.6**
PCJ				⇓*i*S	**Sn**	**07 44 03.3**	**-0.8**
CCCC	**Cccc**	**3.01**	**298**	*e*P	**Pn**	**07 43 28.2**	**-1.1**
CCCC				*e*S	**Sn**	**07 44 02.9**	**-2.5**
	comp=N,7.2nm,0.7s						
CCCC				*e*			
	comp=E,6.7nm,0.7s						
MCJ	**Malvern**	**3.23**	**235**	⇓*e*P	**Pn**	**07 43 33.9**	**+1.7**
MCJ				*e*S	**Sn**	**07 44 09.4**	**-1.3**
MGV	**Manicaragua**	**5.26**	**297**	*e*P	**Pb**	**07 44 18.0**	**+4.4**

IDC 02 09:00:15.7±10.0**,5211N×3579E,h0**km**,mb1 3.7**/4**, mb1mx3.4**/21**,mbtmp3.7**/4**,ML3.3**/4**,Error ellipse: s-maj=121.0km s-min=19.6km az=126.0,Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	**Malin Array Be**	**4.35**	**254**	Pg	Pg	09 01 31.1	-7.7
	3.8nm,0.3s,baz=58,slow=16,SNR=8.7						
AKASG				Sn	Sn	09 02 06.6	-7.6
	2.6nm,0.3s,baz=60,slow=25,SNR=4.9						
AKASG				Lg		09 02 26.5	
	4.3nm,0.3s,baz=70,slow=29,SNR=10						
FINES	**FINESS Array B**	**10.75**	**334**	Pn	Pn	09 02 44.8	-5.9
	0.2nm,0.3s,baz=156,slow=15,SNR=4.3						
FINES				Sn	Sn	09 04 34.2	-17
	0.2nm,0.3s,baz=151,slow=27,SNR=4.2						
HFS	**Hagfors**	**14.65**	**312**	Pn	Pn	09 03 35.6	-8.2
	0.1nm,0.3s,baz=100,slow=16,SNR=3.6						
NOA	**NORSAR Array B**	**16.13**	**313**	Pn	Pn	09 03 55.5	-8.0
	0.2nm,0.3s,baz=113,slow=13,SNR=3.2						
ARCES	**ARCESS Array B**	**18.14**	**348**	Pn	Pn	09 04 23.6	-4.9
	0.3nm,0.3s,baz=165,slow=10.0,SNR=8.9						

*SZGRF **02** 09:05:48.4,2277S×17725W,h33km,South of Fiji Islands*
*ORF **02** 09:06:05.4,1779S×17943E,h30km,mb6.1*
*MOS **02** 09:06:28.1±1.1,2136S×17788W,h334km,mb5.1/23, Error ellipse: s-maj=10.1km s-min=8.1km az=161.0*
*BJI **02** 09:06:31.9,21.13S×17738W,h380km,mB5.3,mb5.2*
*ISCJB **02** 09:06:32.8±0.1,2159S±003×17790W±003,h383km, mb4.9/89,Error ellipse: s-maj=4.6km s-min=2.5km az=36.7*
*GCMT **02** 09:06:33.6±0.4,2158S×17781W,h389km±2km,MW5.2/46, Moment Tensor Solution. s46,c70; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.56±.31; $M_{\theta\theta}$0.88±.57; $M_{\phi\phi}$3.68±.52; $M_{r\theta}$0.19±.43; $M_{\theta\phi}$2.60±.44; $M_{\phi r}$-7.16±.40; Best double couple: $M_0$8.68600×10^{16} NP1:ϕ_s232.00000°,δ23.00000°,λ-45.00000°. NP2: ϕ_s5.00000°,δ74.00000°,λ-106.00000°. Principal axes: T 8.4460, Plg27.0000°, Azm108.0000°; N 0.4760, Plg16.0000°, Azm10.0000°; P -8.9250, Plg58.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s.*
*BGS **02** 09:06:33.6,2161S×17785W,h380km,mb5.0(NEIC)*
*NEIC **02** 09:06:33.6±0.1,2161S×17785W,mb5.0/55,Error ellipse: s-maj=5.3km s-min=3.4km az=129.0*
*IDC **02** 09:06:33.8±0.7,2161S×17786W,h386km±6km,mb4.6/23, mb1 4.6/26,mb1mx4.6/26,mbtmp4.6/26,Error ellipse: s-maj=9.8km s-min=7.8km az=146.0*
ISC 02 09:06:34.1±0.1**,2166S**±002×**17784W**±003**,h385**km**, h385**km±.9km**:pP-P,n785,σ0s79**/471**,mb4.9**/89**,112C-119D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.63**	**38**	*e*Pn	**Pn**	**09 08 39.9**	**-8.0**
	141nm,0.4s						
AFI	**Afiamalu**	**9.63**	**38**	*e*P	**Pn**	**09 08 39.9**	**-7.9**
AFI				pmax	pmax		
	comp=Z,141nm,0.4s						
AFI	**Afiamalu**	**9.63**	**38**	P	**Pn**	**09 08 38.8**	**-9.0**
	comp=Z,50nm,0.3s,baz=297,slow=1.0,SNR=87						
AFI				S	**S**	**09 10 17.7**	**-20**
	comp=Z,333nm,0.3s,baz=198,slow=23,SNR=12						
DZM	**Mont Dzumac**	**14.60**	**265**	*e*P	**P**	**09 09 44.3**	**+1.4**
DZM	**Mont Dzumac**	**14.60**	**265**	P	**P**	**09 09 44.3**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=80,slow=17,SNR=33						
DZM				S	**S**	**09 12 21.0**	**+1.8**
	baz=103,slow=20,SNR=3.2						
OUZ	**Omahuta**	**15.46**	**207**	*e*P	**P**	**09 09 54.9**	**+2.8**
OUZ	**Omahuta**	**15.46**	**207**	*e*PN	**P**	**09 09 54.9**	**+2.9**
WCZ	**Waipu Caves**	**15.79**	**204**	*e*P	**P**	**09 09 58.7**	**+3.1**
WCZ	**Waipu Caves**	**15.79**	**204**	*e*PN	**P**	**09 09 58.7**	**+3.1**
MXZ	**Matakaoa Point**	**16.20**	**191**	*e*P	**P**	**09 10 00.7**	**+0.7**
MXZ	**Matakaoa Point**	**16.20**	**191**	*e*PN	**P**	**09 10 00.7**	**+0.7**
PUZ	**Puketiti**	**16.70**	**191**	*e*SN	**S**	**09 12 58.2**	**-2.3**
RAR	**Rarotonga**	**16.83**	**92**	P	**P**	**09 10 05.8**	**-1.2**
	comp=Z,4.1nm,0.3s,baz=250,slow=7.0,SNR=22						
MWZ	**Matawai**	**17.10**	**192**	*e*P	**P**	**09 10 08.3**	**-1.3**
MWZ	**Matawai**	**17.10**	**192**	*e*PN	**P**	**09 10 08.3**	**-1.3**
MWZ				SN	**S**	**09 13 06.8**	**-1.2**
URZ	**Urewera**	**17.11**	**194**	*e*P	**P**	**09 10 06.9**	**-2.9**
URZ	**Urewera**	**17.11**	**194**	P	**P**	**09 10 09.1**	**-0.7**
	comp=Z,3.6nm,0.3s,baz=326,slow=3.6,SNR=26						
URZ				S	**S**	**09 13 07.3**	**-1.1**
	comp=Z,2.8nm,0.3s,baz=188,slow=22,SNR=6.3						
URZ	**Urewera**	**17.11**	**194**	*e*PN	**P**	**09 10 06.9**	**-2.9**
URZ				SN	**S**	**09 13 07.6**	**-0.7**
HIZ	**Hauiti**	**17.94**	**199**	PN	**P**	**09 10 19.1**	**+0.5**
BKZ	**Black Stump Fm**	**18.12**	**194**	*e*P	**P**	**09 10 18.1**	**-2.3**
BKZ	**Black Stump Fm**	**18.12**	**194**	*e*PN	**P**	**09 10 18.1**	**-2.4**
TUVZ	**Tukino**	**18.42**	**196**	*e*PN	**P**	**09 10 25.1**	**+1.5**
RAEZ	**Rainy Point**	**18.79**	**199**	P	**P**	**09 10 30.7**	**+3.2**
RAEZ	**Rainy Point**	**18.79**	**199**	PN	**P**	**09 10 30.7**	**+3.2**
PXZ	**Pawanui**	**18.87**	**193**	*e*PN	**P**	**09 10 27.5**	**-0.8**
NEZ	**North Egmont**	**18.87**	**200**	*e*P	**P**	**09 10 31.9**	**+3.6**
NEZ	**North Egmont**	**18.87**	**200**	*e*PN	**P**	**09 10 31.9**	**+3.6**
NWEZ	**Newall Road**	**18.94**	**200**	*e*P	**P**	**09 10 32.4**	**+3.3**
NWEZ	**Newall Road**	**18.94**	**200**	*e*PN	**P**	**09 10 32.4**	**+3.3**
WAZ	**Wanganui**	**19.05**	**197**	*e*PN	**P**	**09 10 29.8**	**-0.5**
TSZ	**Takapari Road**	**19.09**	**195**	*e*P	**P**	**09 10 29.3**	**-1.3**
TSZ	**Takapari Road**	**19.09**	**195**	*e*PN	**P**	**09 10 29.3**	**-1.4**
BFZ	**Birch Farm**	**19.62**	**193**	*e*P	**P**	**09 10 35.1**	**-0.8**
BFZ	**Birch Farm**	**19.62**	**193**	*e*PN	**P**	**09 10 35.1**	**-0.8**
BFZ				SN	**S**	**09 13 54.9**	**+1.1**
MRZ	**Mangatainoka R**	**19.75**	**195**	*e*P	**P**	**09 10 35.0**	**-2.2**
MRZ	**Mangatainoka R**	**19.75**	**195**	*e*PN	**P**	**09 10 35.0**	**-2.2**
MRZ				SN	**S**	**09 13 56.4**	**+0.4**
KIW	**Kapiti Island**	**20.11**	**196**	*e*P	**P**	**09 10 39.0**	**-1.4**
KIW	**Kapiti Island**	**20.11**	**196**	*e*PN	**P**	**09 10 39.0**	**-1.4**
CAW	**Cannon Point**	**20.30**	**196**	PN	**P**	**09 10 41.4**	**-0.8**
MRW	**Makara Radio**	**20.51**	**196**	*e*P	**P**	**09 10 44.1**	**0.0**
MRW	**Makara Radio**	**20.51**	**196**	*e*PN	**P**	**09 10 44.1**	**+0.1**
SNZO	**South Karori**	**20.58**	**196**	*e*P	**P**	**09 10 44.5**	**-0.2**
SNZO	**South Karori**	**20.58**	**196**	*e*PN	**P**	**09 10 44.5**	**-0.2**
TCW	**Tory Channel**	**20.61**	**197**	P	**P**	**09 10 45.5**	**+0.5**
TCW	**Tory Channel**	**20.61**	**197**	PN	**P**	**09 10 45.5**	**+0.6**
QRZ	**Quartz Range**	**20.78**	**201**	*e*P	**P**	**09 10 47.5**	**+0.9**
QRZ	**Quartz Range**	**20.78**	**201**	*e*PN	**P**	**09 10 47.5**	**+0.9**
NNZ	**Nelson**	**20.87**	**199**	*e*P	**P**	**09 10 47.3**	**-0.1**
NNZ	**Nelson**	**20.87**	**199**	*e*PN	**P**	**09 10 47.3**	**0.0**
TUWZ	**Tuamarina**	**20.90**	**198**	*e*PN	**P**	**09 10 47.8**	**+0.1**
THZ	**Tophouse**	**21.51**	**199**	*e*P	**P**	**09 10 53.4**	**+0.2**
THZ	**Tophouse**	**21.51**	**199**	*e*PN	**P**	**09 10 53.4**	**+0.2**
DSZ	**Denniston Nort**	**21.85**	**201**	*e*P	**P**	**09 10 55.2**	**-1.1**
DSZ	**Denniston Nort**	**21.85**	**201**	*e*PN	**P**	**09 10 55.2**	**-1.1**
DSZ				SN	**S**	**09 14 38.7**	**+8.8**
KHZ	**Kahutara**	**21.93**	**197**	*e*P	**P**	**09 10 56.4**	**-0.6**
KHZ	**Kahutara**	**21.93**	**197**	*e*PN	**P**	**09 10 56.4**	**-0.5**
LTZ	**Lake Taylor**	**22.63**	**199**	*e*P	**P**	**09 11 02.4**	**-1.0**
LTZ	**Lake Taylor**	**22.63**	**199**	*e*PN	**P**	**09 11 02.4**	**-1.0**
LTZ				SN	**S**	**09 14 45.6**	**+3.3**
WVZ	**Waitaha Valley**	**23.39**	**201**	*e*P	**P**	**09 11 07.7**	**-2.5**
WVZ	**Waitaha Valley**	**23.39**	**201**	*e*PN	**P**	**09 11 07.7**	**-2.6**
RPZ	**Rata Peaks**	**23.86**	**200**	P	**P**	**09 11 14.6**	**+0.2**
	comp=Z,42nm,0.5s,mb5.1,baz=237,slow=3.5,SNR=20						
RPZ				S	**S**	**09 15 01.8**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=224,slow=11,SNR=1.8						
FOZ	**Fox Glacier**	**24.19**	**203**	*e*P	**P**	**09 11 15.2**	**-2.2**
FOZ	**Fox Glacier**	**24.19**	**203**	*e*PN	**P**	**09 11 15.2**	**-2.2**
HNR	**Honiara**	**24.57**	**296**	P	**P**	**09 11 19.5**	**-1.7**
	comp=Z,143nm,0.7s,mb5.5,baz=299,slow=2.1,SNR=5.1						
JCZ	**Jackson Bay**	**24.96**	**203**	*e*P	**P**	**09 11 24.1**	**-0.2**
JCZ				S	PcP	09 14 45.8	-1.8
JCZ	**Jackson Bay**	**24.96**	**203**	*e*PN	**P**	**09 11 24.1**	**-0.3**
WKZ	**Wanaka**	**25.52**	**202**	*e*P	**P**	**09 11 28.6**	**-0.7**
WKZ	**Wanaka**	**25.52**	**202**	*e*PN	**P**	**09 11 28.6**	**-0.7**
MLZ	**Mavora Lakes**	**26.27**	**203**	*e*P	**P**	**09 11 36.9**	**+1.0**
MLZ	**Mavora Lakes**	**26.27**	**203**	*e*PN	**P**	**09 11 36.9**	**+1.0**
DCZ	**Deep Cove**	**26.76**	**204**	*e*P	**P**	**09 11 41.0**	**+0.8**
DCZ	**Deep Cove**	**26.76**	**204**	*e*PN	**P**	**09 11 41.0**	**+0.8**
WHZ	**Wether Hill Ro**	**26.82**	**202**	*e*P	**P**	**09 11 41.8**	**+1.0**
WHZ	**Wether Hill Ro**	**26.82**	**202**	*e*PN	**P**	**09 11 41.8**	**+1.0**
PAE	**Paea**	**26.89**	**87**	*e*P	**P**	**09 11 40.7**	**-1.1**
	comp=Z,112nm,0.9s,mb5.3						
PAE	**Paea**	**26.89**	**87**	*e*P	**P**	**09 11 40.7**	**-1.1**
PAE				pmax	pmax		
	comp=Z,112nm,0.9s,mb5.3						
PPT	**Papeete**	**26.91**	**86**	*e*P	**P**	**09 11 40.3**	**-1.7**
	comp=Z,157nm,1.0s,mb5.4						
PPT	**Papeete**	**26.91**	**86**	*e*P	**P**	**09 11 41.8**	**-0.2**
PPT	**Papeete**	**26.91**	**86**	P	**P**	**09 11 41.3**	**-0.7**
	comp=Z,140nm,0.8s,mb5.5,baz=236,slow=3.6,SNR=12						

TVO Taravao 27.17 87 *e*P **P 09 11 43.5 -0.7**
comp=Z,143nm,0.9s,mb5.4
TVO Taravao 27.17 87 *e*P **P 09 11 43.5 -0.7**
TVO pmax pmax
comp=Z,143nm,0.9s,mb5.4
APZ The Paps 27.62 201 *e*PN **P 09 11 48.9 +1.0**
EIDS Eidsvold 28.70 257 *e*P **P 09 11 57.7 0.0**
comp=Z,52nm,1.3s,mb4.7
ARMA Armidale 28.72 246 *e*P **P 09 11 59.4 +1.7**
PMOR Pomariorio Ree 29.15 82 *e*P **P 09 12 00.5 -1.2**
comp=Z,96nm,1.0s,mb5.1
PMOR *e*pP 09 13 05.7
comp=Z,238nm,1.5s
VAH Vaihoa 29.33 83 *e*P **P 09 12 01.8 -1.5**
comp=Z,152nm,0.9s,mb5.3
RIV Riverview 29.88 239 *e*P **P 09 12 09.8 +1.9**
CNB Canberra Magne 31.72 237⇓*i*P **P 09 12 25.5 +1.6**
comp=Z,251nm,0.9s,mb5.5
CTA Charters Tower 33.54 266⇓*i*P **P 09 12 39.8 +0.1**
comp=Z,70nm,0.7s,mb5.1
CTA *e* 09 13 14.7
CTA Charters Tower 33.54 266⇓*i*P **P 09 12 39.8 +0.1**
CTA pmax pmax
comp=Z,70nm,0.7s
CTA Charters Tower 33.54 266 P **P 09 12 40.0 +0.3**
comp=Z,94nm,0.8s,mb5.2,baz=94,slow=11,SNR=92
CTA PcP PcP 09 15 10.2 0.0
comp=Z,7.3nm,0.6s,baz=107,slow=5.9,SNR=4.3
CTA ScP ScP 09 18 18.6 +1.0
comp=Z,8.0nm,0.9s,baz=122,slow=8.0,SNR=4.2
CTAO Charters Tower 33.54 266 *e*P **P 09 12 40.1 +0.4**
comp=Z,102nm,0.8s,mb5.2
CTAO Charters Tower 33.54 266 *e*P **P 09 12 40.1 +0.4**
CTAO pmax pmax
comp=Z,102nm,0.8s,mb5.2
TOO Toolangi 35.35 235⇓*i*P **P 09 12 55.9 +1.1**
comp=Z,70nm,0.8s,mb5.0
TOO Toolangi 35.35 235⇓*i*P **P 09 12 55.9 +1.1**
TOO pmax pmax
comp=Z,70nm,0.8s,mb5.0
PMG Port Moresby 35.76 284 *e*P **P 09 12 58.0 -0.5**
comp=Z,258nm,0.8s,mb5.6
PMG *e*PcP PcP 09 15 17.7 +0.9
PMG Port Moresby 35.76 284*d i*P **P 09 12 57.9 -0.7**
PMG Port Moresby 35.76 284 P **P 09 12 58.0 -0.5**
comp=Z,208nm,0.8s,mb5.5,baz=92,slow=5.6,SNR=78
PMG PcP PcP 09 15 16.9 +0.1
comp=Z,18nm,0.9s,baz=148,slow=4.5,SNR=3.3
TAU Tasmania Unive 35.92 226 *e*P **P 09 13 00.3 +0.8**
comp=Z,42nm,0.8s,mb4.8
TAU Tasmania Unive 35.92 226 *e*P **P 09 13 00.3 +0.8**
TAU pmax pmax
comp=Z,41nm,0.8s,mb4.8
STKA Stephens Creek 37.43 246⇓*i*P **P 09 13 12.9 +0.6**
comp=Z,82nm,0.7s,mb5.2
STKA *e* 09 18 32.4
STKA Stephens Creek 37.43 246 P **P 09 13 13.2 +0.9**
comp=Z,142nm,0.9s,mb5.3,baz=88,slow=9.1,SNR=224
STKA ScP ScP 09 18 31.4 -0.3
comp=Z,7.9nm,0.9s,baz=36,slow=4.5,SNR=5.2
COEN Coen 37.82 275 *e*P **P 09 13 15.1 -0.6**
comp=Z,48nm,0.8s,mb4.9
RKT Rikitea 39.56 100 *e*P **P 09 13 28.9 -1.0**
comp=Z,166nm,1.2s,mb5.2
RKT Rikitea 39.56 100 *e*P **P 09 13 28.9 -1.0**
RKT pmax pmax
comp=Z,166nm,1.2s,mb5.2
ASAR Alice Springs 44.41 258 P **P 09 14 08.3 -0.4**
ASAR PcP PcP 09 15 44.4 -0.4
ASAR ScP ScP 09 19 00.2 +0.8
ASAR S **S 09 20 13.1 -1.0**
ASAR Alice Springs 44.41 258 P **P 09 14 08.3 -0.4**
ASAR 09 15 44.4
ASAR S **S 09 20 13.1 -0.9**
ASAR Alice Springs 44.41 258 P **P 09 14 08.3 -0.4**
comp=Z,111nm,0.8s,mb5.3,baz=100,slow=7.6,SNR=463
ASAR PcP PcP 09 15 44.4 -0.4
comp=Z,9.9nm,0.7s,baz=109,slow=2.6,SNR=6.4
ASAR ScP ScP 09 19 00.2 +0.8
comp=Z,6.1nm,0.9s,baz=98,slow=3.8,SNR=7.8
ASAR S **S 09 20 13.1 -1.0**
comp=Z,3.9nm,0.9s,baz=91,slow=16,SNR=7.3
ASAR PKiKP PKiKP 09 22 41.2 -2.4
comp=Z,0.6nm,0.6s,baz=100,slow=1.4,SNR=7.0
WB2 Warramunga Arr 44.59 263⇓*i*P **P 09 14 08.9 -1.2**
WB2 *i* 09 14 42.4
WRA Warramunga Arr 44.60 263 P **P 09 14 09.1 -1.1**
WRA PcP PcP 09 15 44.5 -0.9
WRA ScP ScP 09 19 00.7 +0.4
WRA S **S 09 20 13.2 -3.6**
WRA Warramunga Arr 44.60 263 P **P 09 14 09.1 -1.1**
WRA 09 15 44.5
WRA S **S 09 20 13.2 -3.6**
WRA Warramunga Arr 44.60 263 P **P 09 14 09.1 -1.1**
comp=Z,54nm,0.9s,mb4.9,baz=98,slow=7.7,SNR=130
WRA PcP PcP 09 15 44.5 -0.9
comp=Z,12nm,0.9s,baz=94,slow=3.8,SNR=5.8
WRA ScP ScP 09 19 00.7 +0.4
comp=Z,3.3nm,0.8s,baz=96,slow=4.1,SNR=4.6
WRA S **S 09 20 13.2 -3.6**
comp=Z,0.6nm,0.8s,baz=54,slow=29,SNR=3.2
WRA PKiKP PKiKP 09 22 42.3 -1.6
comp=Z,1.6nm,0.7s,baz=95,slow=0.4,SNR=8.7
HKL Haleakala 47.09 28 *e*pP pP 09 15 49.3 +3.1
KAKA Kakadu 48.16 272⇓*i*P **P 09 14 36.3 -1.2**
comp=Z,51nm,0.6s,mb5.0
FORT Forrest 48.98 248⇓*i*P **P 09 14 43.2 -0.4**
comp=Z,353nm,0.7s,mb5.8
FORT *e* 09 19 20.4
FORT *e*S **S 09 21 16.8 -1.3**
GUMO Guam 50.66 310 P **P 09 14 55.2 -0.9**
comp=Z,194nm,0.8s,mb5.4,baz=156,slow=4.2,SNR=4.7
FITZ Fitzroy Crossi 53.03 263⇓*i*P **P 09 15 13.0 -0.5**
comp=Z,122nm,1.1s,mb5.0
FITZ Fitzroy Crossi 53.03 263 P **P 09 15 13.3 -0.2**
comp=Z,62nm,0.9s,mb4.8,baz=96,slow=6.6,SNR=75
VNDA Vanda 56.78 185 *e*P **P 09 15 42.1 +3.0**
comp=Z,12nm,0.7s,mb4.3
VNDA Vanda 56.78 185 *e*P **P 09 15 42.1 +3.0**
VNDA pmax pmax
comp=Z,12nm,0.7s
VNDA Vanda 56.78 185 P **P 09 15 41.8 +2.7**
comp=Z,7.3nm,0.6s,mb4.2,baz=11,slow=7.2,SNR=12
VNDA PcP PcP 09 16 29.8 0.0
comp=Z,7.8nm,0.8s,baz=301,slow=3.9,SNR=3.7
KLBR Kellerberrin 57.71 246⇓*i*P **P 09 15 46.1 -0.2**
comp=Z,318nm,1.0s,mb5.6
MBWA Marble Bar 57.75 258 *e*P **P 09 15 46.1 -0.7**
comp=Z,141nm,0.6s,mb5.5
MBWA *e*PcP PcP 09 16 35.8 +1.1
NWAO Narrogin (SRO) 57.99 244 *e*P **P 09 15 48.2 0.0**
comp=Z,92nm,1.0s,mb5.1
NWAO Narrogin (SRO) 57.99 244 *e*P **P 09 15 48.2 0.0**
NWAO pmax pmax
comp=Z,92nm,1.0s
MUN Mundaring 58.97 245 *e*P **P 09 15 54.9 0.0**
CASY Casey 62.99 206 *e*P **P 09 16 21.8 +0.8**
MYLDM Lahad Datu 67.78 285⇑P **P 09 16 53.6 +1.4**
TSM Tawau 67.96 284⇑P **P 09 16 54.1 +0.7**
QSPA South Pole Qui 68.42 180 *e*P **P 09 16 57.9 +2.8**
comp=Z,118nm,0.8s,mb5.6
SDKM Sandakan 69.15 285⇓P **P 09 17 00.8 +0.2**
KDM Kudat 70.02 286⇓P **P 09 17 06.2 +0.3**
KKM Kota Kinabalu 70.20 285 *e*P **P 09 17 06.9 -0.1**
KKM Kota Kinabalu 70.20 285⇓P **P 09 17 07.4 +0.4**
JOW Kunigami 71.02 310 P **P 09 17 11.2 -0.4**
comp=Z,42nm,0.7s,mb5.1,baz=150,slow=7.2,SNR=9.9
MJAR Matsushiro Arr 71.22 324 *e*P **P 09 17 10.9 -1.6**
comp=Z,6.4nm,0.5s,mb4.4,baz=157,slow=6.3,SNR=30
MAJO Matsushiro 71.23 324 *e*P **P 09 17 11.2 -1.4**
comp=Z,66nm,1.6s,mb4.9
MAJO Matsushiro 71.23 324 *e*P **P 09 17 11.2 -1.4**
MAJO pmax pmax
comp=Z,66nm,1.6s,mb4.9
BTM Bintulu 71.86 281⇑P **P 09 17 17.8 +0.9**
SBUM Sibu 72.35 280⇓P **P 09 17 19.9 +0.1**
KSM Kuching 73.72 278 *e*P **P 09 17 27.6 -0.1**
KSM Kuching 73.72 278⇑P **P 09 17 28.3 +0.6**
XMIS Christmas Isla 73.75 265 *e*P **P 09 17 27.5 -0.4**
NACB Ninganchiao 74.45 304 *e*P **P 09 17 30.2 -1.4**
ASAJ Asahikawa 74.81 332 P **P 09 17 33.5 +0.3**
comp=Z,40nm,0.6s,mb5.2,baz=224,slow=10,SNR=49
YHNB Yeheng 74.88 305 *e*P **P 09 17 33.0 -1.0**
TATO Taipei 74.96 305 *e*P **P 09 17 33.2 -1.3**
comp=Z,134nm,0.7s,mb5.7

YSS Yuzh-Sakhalins 76.99 333 *e*P **P 09 17 44.6 -0.7**
comp=Z,64nm,0.8s,mb5.3
YSS Yuzh-Sakhalins 76.99 333⇓*e*P **P 09 17 45.0 -0.3**
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.3
YSS pmax pmax
comp=E,50nm,1.2s
QZH Quanzhou 77.17 304⇑*i*P **P 09 17 48.8 +2.0**
QZH AMB AMB
comp=Z,270nm,0.8s,mb5.9
KSRS Korea Array 77.85 319 P **P 09 17 49.9 -0.4**
comp=Z,6.2nm,0.8s,mb4.3,baz=142,slow=6.4,SNR=21
HAST UC Hastings Re 78.47 43⇑P **P 09 17 53.6 0.0**
baz=79
MCCM Marconi Confer 78.73 41⇓P **P 09 17 56.9 +1.9**
baz=79
U04C Hernandez Rese 78.94 44⇓P **P 09 17 56.8 +0.6**
baz=79
PACP Pacheco Peak 79.02 43⇑P **P 09 17 56.6 0.0**
baz=79
HOPS Hopland 79.15 40⇑P **P 09 17 57.9 +0.7**
baz=79
P01C Double 8 Ranch 79.29 40⇑P **P 09 17 57.7 -0.2**
baz=79
S04C Ingram Canyon, 79.29 42⇓P **P 09 17 58.1 0.0**
baz=79
VLA Vladivostok 79.31 325 P **P 09 17 57.0 -1.0**
VLA S S 09 27 25.0 -0.7
VLA pmax pmax
comp=Z,88nm,1.5s,mb5.2
MNRC McLaughlin Nat 79.46 41⇓P **P 09 17 58.9 +0.1**
baz=80
Q03C Winters 79.56 41⇓P **P 09 18 00.4 +1.0**
baz=80
MURC Murrieta 79.71 48⇑P **P 09 17 60.0 -0.4**
baz=80
BFSC Mount Baldy St 79.76 47⇑P **P 09 18 00.2 -0.4**
baz=80
GASB Alder Springs 79.77 40⇓P **P 09 18 01.2 +0.7**
baz=80
MYKOM Kota Tinggi 79.80 276⇓P **P 09 18 02.0 +0.7**
MONP Monument Peak 79.86 49⇑P **P 09 18 01.3 +0.2**
baz=80
EDW2 Edwards Air Fo 79.91 46⇓P **P 09 18 01.3 -0.1**
baz=80
T06C Millerton Lake 80.02 44⇑P **P 09 18 02.2 +0.3**
baz=80
ISA Isabella 80.03 45⇑P **P 09 18 01.7 -0.3**
baz=80
O02C Red Bluff 80.06 40⇑P **P 09 18 02.4 +0.4**
baz=80
Q04C Lincoln 80.08 41⇑P **P 09 18 03.1 +1.0**
baz=80
CMB Columbia Colle 80.21 42 *e*P **P 09 18 02.9 0.0**
comp=Z,4.6nm,0.7s,mb4.2
CMB pP pP 09 19 29.7 -0.3
CMB Columbia Colle 80.21 42 *e*P **P 09 18 02.9 0.0**
CMB pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
CMB Columbia Colle 80.21 42⇓P **P 09 18 03.8 +0.9**
baz=80
HELL Mitchell Peak, 80.27 44⇑P **P 09 18 03.8 +0.6**
baz=80
KGM Kluang 80.38 276⇓P **P 09 18 05.1 +0.7**
O03C Acorn Hollow, 80.40 40⇑P **P 09 18 03.9 +0.1**
baz=80
GZH Guangzhou 80.42 299 P **P 09 18 04.0 -0.3**
GZH AMB AMB
comp=Z,189nm,1.0s,mb5.7
ORV Oroville 80.45 41⇓P **P 09 18 03.8 -0.3**
baz=80
S06C San Francisco 80.45 43⇑P **P 09 18 05.4 +1.2**
baz=81
KCC Kaiser Creek 80.46 44⇑P **P 09 18 04.5 +0.3**
baz=81
WDC Whiskeytown Da 80.47 39 *e*P **P 09 18 04.1 -0.1**
comp=Z,5.6nm,0.8s,mb4.2
WDC Whiskeytown Da 80.47 39 *e*P **P 09 18 04.1 -0.1**
WDC pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
WDC Whiskeytown Da 80.47 39⇓P **P 09 18 05.2 +1.0**
baz=81
MAW Mawson 80.53 200 P **P 09 18 04.2 0.0**
comp=Z,33nm,0.6s,mb5.2,baz=135,slow=5.6,SNR=21
NJ2 Nanjing 80.73 310 *e*P **P 09 18 05.7 -0.1**
NJ2 AP pP 09 19 31.8 -1.2
NJ2 XP sP 09 20 12.6 -0.7
NJ2 PP PP 09 21 15.9 -0.5
NJ2 S S 09 27 38.0 -2.9
NJ2 XS sS 09 30 09.0 -6.9
NJ2 AMB AMB
comp=Z,40nm,0.8s,mb5.2
NJ2 AMB AMB
comp=Z,240nm,6.0s
NJ2 LR LR
comp=N,1μm,30.9s
NJ2 LR LR
comp=E,1μm,30.4s
NJ2 LR LR
comp=Z,760nm,24.9s
BELC Belle Mtn. 80.77 48⇓P **P 09 18 05.5 -0.4**
baz=81
R05C Kirkwood Meado 80.81 42⇑P **P 09 18 05.1 -0.9**
baz=81
P05C Yuba Gap, Truc 80.84 41⇓P **P 09 18 06.2 0.0**
baz=81
MTUM Tungsten Hills 80.96 44 *e*P **P 09 18 07.5 +0.7**
MTUM *e*pP pP 09 19 35.0 +0.8
DAC Darwin (Calif) 80.97 45 *e*pP pP 09 19 37.7 +3.4
O05C Quincy 81.05 41⇑P **P 09 18 06.7 -0.6**
baz=81
WAKR Walker 81.09 43 *e*P **P 09 18 08.4 +0.9**
R06C Coleville 81.09 43⇓P **P 09 18 08.1 +0.6**
baz=81
YBH Yreka Blue Hor 81.10 38 *e*P **P 09 18 07.6 +0.2**
comp=Z,9.8nm,0.6s,mb4.7
YBH *e*pP pP 09 19 35.3 +0.5
YBH Yreka Blue Hor 81.10 38 *e*P **P 09 18 07.6 +0.2**
YBH pmax pmax
comp=Z,10.0nm,0.6s
YBH Yreka Blue Hor 81.10 38 P **P 09 18 08.4 +1.0**
baz=81,SNR=8.0
M03C McCloud 81.15 39⇓P **P 09 18 08.1 +0.4**
baz=81
O04C Chester 81.17 40⇓P **P 09 18 08.5 +0.7**
baz=81
HATC Hat Creek Radi 81.25 40⇓P **P 09 18 08.3 +0.1**
baz=81
S08C White Mtn Res 81.30 44 P **P 09 18 09.9 +1.3**
baz=81,SNR=9.1
WCN Washoe City 81.36 42⇑P **P 09 18 09.8 +0.9**
baz=82
P06A Stead Airport, 81.50 41⇓P **P 09 18 09.3 -0.3**
baz=82
HABR Khabarovsk 81.52 330⇓*e*P **P 09 18 09.6 +0.1**
HABR S S 09 27 48.0 -0.2
HABR *e* 09 33 13.7
HABR pmax pmax
comp=Z,75nm,1.0s,mb5.4
GRAC Grapevine Rang 81.53 45⇓P **P 09 18 09.8 0.0**
baz=82
ELFS Eagle Lake Fie 81.57 40⇓P **P 09 18 10.9 +1.0**
baz=82
NVAR Mina Array Bea 81.76 43 P **P 09 18 11.6 +0.6**
NVAR pP pP 09 19 37.7 -0.8
NVAR PKKPbc PKKPbc 09 36 42.2 +1.1
NVAR Mina Array Bea 81.76 43 P **P 09 18 11.6 +0.6**
comp=Z,5.1nm,0.8s,mb4.3,baz=210,slow=7.3,SNR=21
NVAR pP pP 09 19 37.7 -0.8
comp=Z,4.1nm,1.0s,baz=211,slow=6.8,SNR=4.2
NVAR PKKPbc PKKPbc 09 36 42.2 +1.1
comp=Z,0.7nm,0.6s,baz=91,slow=4.2,SNR=4.9
M05C Lookout 81.78 39⇓P **P 09 18 11.3 +0.4**
baz=82
KTGM Kuala Trenggan 81.81 279⇓P **P 09 18 12.6 +0.8**
R08A Mina 81.84 43⇑P **P 09 18 11.7 +0.3**
baz=82
O06A Flanigan 81.84 41 P **P 09 18 11.6 +0.3**
baz=82,SNR=8.7
BBOR Butler Butte 81.85 38 P **P 09 18 11.9 +0.6**
L04A Klamath Falls 81.85 38⇓P **P 09 18 11.7 +0.4**
baz=82
KDAK Kodiak Island 81.90 13 P **P 09 18 11.1 -0.1**
KDAK Kodiak Island 81.90 13 P **P 09 18 11.1 -0.1**
comp=Z,19nm,0.8s,mb4.9,baz=133,slow=17,SNR=6.2
M06C Likely Place G 82.08 40 P **P 09 18 13.3 +0.8**
baz=82,SNR=6.5

Y13A Salome 82.17 49⇓P **P 09 18 13.4 +0.2**
baz=82
N06A Buffalo Meadow 82.19 41⇑P **P 09 18 13.1 0.0**
baz=82
PDMCI Parker Dam,Lak 82.22 49⇓P **P 09 18 13.9 +0.5**
baz=82
TPNV Topopah Spring 82.24 45 *e*P **P 09 18 14.2 +0.7**
comp=Z,91nm,3.0s
TPNV Topopah Spring 82.24 45 *e*P **P 09 18 14.2 +0.7**
TPNV pmax pmax
comp=Z,91nm,3.0s
TPNV Topopah Spring 82.24 45⇓P **P 09 18 13.1 -0.4**
baz=82
Q08A Gabbs 82.25 43 P **P 09 18 13.7 +0.2**
baz=82,SNR=7.3
J04A Umpqua Nationa 82.39 38⇑P **P 09 18 14.5 +0.4**
baz=82
FRIM Kepong 82.41 277⇓P **P 09 18 15.0 +0.1**
O07A Toulon 82.42 41 P **P 09 18 14.7 +0.3**
baz=82,SNR=17
R09A Tonopah 82.44 44 P **P 09 18 14.6 +0.2**
baz=82,SNR=6.0
Z14A Wintersburg 82.56 50⇑P **P 09 18 15.4 +0.2**
baz=83
S10A Tonopah Range, 82.57 44 P **P 09 18 15.6 +0.4**
baz=83,SNR=12
I04A Tendick Farm, 82.58 37⇑P **P 09 18 15.1 +0.1**
baz=83
MOD Modoc 82.61 39 *e*P **P 09 18 15.6 +0.4**
comp=Z,5.8nm,0.8s,mb4.4
MOD *e*pP pP 09 19 43.1 +0.1
MOD Modoc 82.61 39 P **P 09 18 15.7 +0.5**
baz=83,SNR=8.8
H03A Soap Creek Ran 82.65 36⇓P **P 09 18 15.2 -0.2**
baz=83
SHPR Sheep Range 82.72 46 *e*P **P 09 18 15.7 -0.3**
SHPR *e*pP pP 09 19 44.4 +0.7
115A Sonoran Desert 82.73 51⇑P **P 09 18 16.2 +0.1**
baz=83
K05A Summer Lake 82.77 39 P **P 09 18 17.0 +1.0**
baz=83,SNR=7.4
Y14A Wickenburg 82.82 49⇑P **P 09 18 16.7 +0.2**
baz=83
J05A Fort Rock 82.92 38 P **P 09 18 17.5 +0.7**
baz=83,SNR=12
R10A Warm Springs 82.96 44 P **P 09 18 17.9 +0.7**
baz=83,SNR=9.0
S11A Rachel 82.96 45⇓P **P 09 18 17.1 -0.1**
baz=83
M07A Soldier Meadow 82.97 40 P **P 09 18 17.4 +0.3**
baz=83,SNR=8.8
116A Eloy 83.03 51⇑P **P 09 18 17.5 -0.2**
baz=83
T11A Corn Creek, Al 83.09 46 P **P 09 18 18.6 +0.8**
baz=83,SNR=7.0
X14A Yava 83.18 49⇑P **P 09 18 18.2 -0.1**
baz=83
K06A Valley Falls 83.19 39 P **P 09 18 18.8 +0.7**
baz=83,SNR=5.8
N08A GE Springer Mi 83.25 41 P **P 09 18 18.8 +0.3**
baz=83,SNR=9.4
WHN Wuhan 83.25 306 P **P 09 18 18.5 -0.3**
L07A Adell 83.25 40 P **P 09 18 19.3 +0.8**
baz=83,SNR=5.8
H04A Detroit Lake 83.26 36 P **P 09 18 18.5 0.0**
baz=83,SNR=5.3
CN2 Changchun 83.30 322 *e*P **P 09 18 18.1 -0.6**
CN2 AMB AMB
comp=Z,40nm,1.2s,mb5.0
IPM Ipoh 83.43 277⇓P **P 09 18 20.7 +0.6**
I05A Bend 83.45 37⇑P **P 09 18 19.5 +0.1**
baz=84
R11A Troy Canyon, C 83.46 44⇓P **P 09 18 20.8 +1.2**
baz=84
O09A Fish Creek Ran 83.47 42⇑P **P 09 18 19.6 0.0**
baz=84
U13A Pakoon Wash 83.48 47⇓P **P 09 18 20.6 +0.8**
baz=84
M08A Happy Creek Ra 83.49 41⇑P **P 09 18 20.0 +0.3**
baz=84
J06A Christmas Vall 83.52 38⇓P **P 09 18 19.3 -0.6**
baz=84
S12A Delamar Landin 83.54 45 P **P 09 18 21.4 +1.4**
baz=84,SNR=10
TUC Tucson 83.57 52 *e*P **P 09 18 21.1 +0.7**
TUC *e*pP pP 09 19 51.0 +2.7
KLR Kul'dur 83.59 329 *e*P **P 09 18 16.8 -3.2**
KLR pmax pmax
comp=E,30nm,1.2s
KLR pmax pmax
comp=Z,43nm,1.2s,mb5.0
BMN Battle Mountai 83.61 42 *e*P **P 09 18 20.3 0.0**
comp=Z,7.1nm,0.8s,mb4.5
BMN *e*pP pP 09 19 48.6 +0.4
BMN Battle Mountai 83.61 42 *e*P **P 09 18 20.3 0.0**
BMN pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
P10A Eureka 83.62 43⇑P **P 09 18 20.7 +0.3**
baz=84
N09A Rock Creek Ran 83.66 42⇓P **P 09 18 20.6 0.0**
baz=84
Q11A Duckwater 83.70 44⇓P **P 09 18 20.5 -0.4**
baz=84
K07A Rock Creek Ran 83.71 39 P **P 09 18 20.9 +0.1**
baz=84,SNR=8.5
E03A Lebam 83.72 34⇑P **P 09 18 20.5 -0.2**
baz=84
H05A Madras 83.77 37⇑P **P 09 18 21.4 +0.4**
baz=84
T13A Saint George 83.84 46⇑P **P 09 18 21.5 -0.1**
baz=84
I06A Prineville 83.91 38 P **P 09 18 22.4 +0.7**
baz=84,SNR=13
WVOR Wild Horse Val 83.92 40 *e*P **P 09 18 21.9 +0.1**
comp=Z,5.3nm,0.8s,mb4.3
WVOR Wild Horse Val 83.92 40 *e*P **P 09 18 21.9 +0.1**
WVOR pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
F04A Amboy 83.93 35⇓P **P 09 18 22.2 +0.4**
baz=84
L08A Fields 83.95 40 P **P 09 18 22.3 +0.3**
baz=84,SNR=12
U14A Mt Trumbull 84.01 47 P **P 09 18 23.5 +1.0**
baz=84,SNR=9.3
LVP Lakeview Peak 84.02 35 P **P 09 18 22.2 0.0**
VIPM Ingram Point 84.03 37 P **P 09 18 22.5 +0.2**
M09A Marrel Ranch, 84.04 41⇑P **P 09 18 23.4 +0.9**
baz=84
KULM Kulim 84.08 278 *e*P **P 09 18 23.4 0.0**
KULM Kulim 84.08 278⇓P **P 09 18 23.8 +0.5**
J07A Hines 84.08 39⇓P **P 09 18 22.7 0.0**
baz=84
G05A Wamic 84.09 36⇑P **P 09 18 23.3 +0.7**
baz=84
K08A Mann Creek Ran 84.18 40 P **P 09 18 23.4 +0.3**
baz=84,SNR=11
L09A Wilkinson Ranc 84.25 41⇓P **P 09 18 24.4 +0.9**
baz=84
H06A Lindquist Farm 84.33 37 P **P 09 18 23.9 +0.1**
baz=84,SNR=13
Q12A Willow Creek R 84.34 44⇓P **P 09 18 24.0 -0.1**
baz=84
I07A Izee 84.40 38 P **P 09 18 24.8 +0.6**
baz=84,SNR=6.8
SVW2 Sparrevohn 84.40 11 *e*P **P 09 18 22.4 -1.4**
O11A Cowboy Ranch, 84.42 43⇓P **P 09 18 24.6 +0.3**
baz=84
F05A White Salmon 84.42 36⇑P **P 09 18 24.3 +0.1**
baz=84
T14A Hurricane 84.42 47⇑P **P 09 18 24.7 +0.2**
baz=84
G06A Carlson Farm, 84.47 37⇓P **P 09 18 23.9 -0.5**
baz=85
P12A McGill 84.53 44⇓P **P 09 18 25.2 +0.2**
baz=85
J08A Circle Bar Ran 84.56 39⇓P **P 09 18 25.0 0.0**
baz=85
K09A Rome 84.62 40 P **P 09 18 25.6 +0.2**
baz=85,SNR=8.4
M10A I.L. Ranch, Tu 84.66 41⇓P **P 09 18 25.8 +0.3**
baz=85
H07A Lands Inn, Kim 84.67 38⇓P **P 09 18 25.9 +0.4**
baz=85
F06A Goldendale 84.72 36⇓P **P 09 18 25.5 -0.2**
baz=85
PSI Prapat 84.74 275 P **P 09 18 26.0 -0.6**
PSI Prapat 84.74 275 P **P 09 18 26.0 -0.6**

comp=Z,71nm,0.9s,mb5.4,baz=153,slow=4.8,SNR=51
C04A Brinnon 84.78 34 ⇓P **P** **09 18 25.2 -0.8**
baz=85
WUAZ Wupatki 84.79 49 *e*P **P** **09 18 26.6 +0.3**
SNG Songkhla 84.82 280 P **P** **09 18 27.0 0.0**
comp=Z,258nm,1.0s,mb5.9
I08A Drewsey 84.84 39 ⇓P **P** **09 18 27.6 +1.3**
baz=85,SNR=5.1
T15A Red Dirt Ranch 84.88 47 ⇑P **P** **09 18 26.9 +0.2**
baz=85
MA2 Magadan 84.93 345 *e*P **P** **09 18 24.7 -1.7**
comp=Z,33nm,0.8s,mb5.1
MA2 Magadan 84.93 345 *e*P **P** **09 18 25.2 -1.2**
MA2 pmax pmax
comp=Z,50nm,0.8s,mb5.3
D05A Enumclaw 84.96 35 ⇓P **P** **09 18 27.9 +1.0**
baz=85
L10A Juniper Basin 85.01 41 P **P** **09 18 27.4 +0.2**
baz=85,SNR=6.3
G07A Ruggs Ranch, H 85.03 37 ⇑P **P** **09 18 27.0 -0.3**
baz=85
M11A Holland Ranch, 85.06 42 ⇓P **P** **09 18 28.1 +0.6**
baz=85
O12A Currie 85.07 43 ⇓P **P** **09 18 27.2 -0.4**
baz=85
E06A Yakima 85.09 35 ⇑P **P** **09 18 27.0 -0.5**
baz=85
H08A Prairie City 85.14 38 ⇑P **P** **09 18 27.9 0.0**
baz=85
K10A MacKenzie Ranc 85.17 40 ⇑P **P** **09 18 28.3 +0.3**
baz=85
N12A Clover Valley, 85.21 43 ⇓P **P** **09 18 27.3 -1.0**
baz=85
F07A Phinny Hill Vi 85.27 36 ⇓P **P** **09 18 28.5 +0.1**
baz=85
GAMB Gambell 85.28 3 *e*P **P** **09 18 27.0 -1.0**
C05A Tolt Reservoir 85.44 34 ⇓P **P** **09 18 28.7 -0.5**
baz=86
G08A Pilot Rock 85.44 37 P **P** **09 18 29.3 0.0**
baz=86,SNR=12
L11A Cat Creek Ranc 85.50 41 ⇓P **P** **09 18 30.0 +0.3**
baz=86
D06A Cle Elum 85.57 35 ⇑P **P** **09 18 29.9 +0.1**
baz=86
B05A Bryant 85.59 34 ⇑P **P** **09 18 30.0 +0.1**
baz=86
M12A Wells 85.60 42 ⇓P **P** **09 18 29.8 -0.3**
baz=86
SYO Syowa Base 85.64 193 ⇑*i*P **P** **09 18 28.9 -1.1**
SYO Syowa Base 85.64 193 ⇓*i*PcP PcP 09 18 30.0 -2.2
SYO Syowa Base 85.64 193 *e*SH S 09 28 26.6 -1.9
K11A Parker Ranch, 85.68 41 ⇑P **P** **09 18 31.4 +0.9**
baz=86
E07A Sunnyside 85.71 36 P **P** **09 18 30.9 +0.4**
baz=86,SNR=5.8
HAWA Hanford 85.79 36 *e*P **P** **09 18 30.9 0.0**
comp=Z,20nm,1.2s,mb4.7
HAWA *e*pP pP 09 19 59.1 -0.3
MSU Marysvale 85.80 46 *e*P **P** **09 18 31.4 +0.2**
MSU *e*pP pP 09 20 01.0 +1.3
H09A Durkee 85.81 38 P **P** **09 18 31.1 0.0**
baz=86,SNR=7.0
I10A Payette 85.97 39 ⇓P **P** **09 18 30.7 -1.2**
baz=86
D07A Quincy 86.04 35 ⇑P **P** **09 18 32.2 +0.1**
baz=86
M13A Montello 86.04 43 ⇑P **P** **09 18 32.9 +0.5**
baz=86
TTA Tatalina 86.05 10 *e*P **P** **09 18 31.6 -0.2**
G09A Cove 86.10 38 ⇓P **P** **09 18 32.5 0.0**
baz=86
PMR Palmer 86.10 13 *e*P **P** **09 18 30.6 -1.5**
comp=Z,17nm,0.8s,mb4.8
PMR Palmer 86.10 13 *e*P **P** **09 18 30.6 -1.5**
PMR pmax pmax
comp=Z,17nm,0.8s,mb4.8
BMO Blue Mountains 86.12 38 *e*P **P** **09 18 32.5 -0.1**
comp=Z,4.6nm,0.8s,mb4.3
BMO *e*pP pP 09 20 01.1 -0.1
BMO Blue Mountains 86.12 38 *e*P **P** **09 18 32.5 -0.1**
BMO pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
MFID Camas Ranch 86.17 40 ⇓P **P** **09 18 32.2 -0.6**
baz=86
F09A S2 Ranch, Elgi 86.28 37 P **P** **09 18 33.3 -0.1**
baz=86,SNR=5.8
H10A Noah's Angus R 86.29 39 ⇑P **P** **09 18 32.8 -0.6**
baz=86
C07A Waterville 86.30 35 P **P** **09 18 32.8 -0.5**
baz=86,SNR=5.5
WTV Waterville 86.36 35 P **P** **09 18 33.3 -0.4**
I11A Placerville 86.37 40 ⇑P **P** **09 18 33.5 -0.3**
baz=86
A06A Chilliwack 86.43 33 ⇓P **P** **09 18 32.8 -1.2**
baz=86
J12A Stokes Ranch, 86.51 41 ⇑P **P** **09 18 33.9 -0.7**
baz=87
D08A Wollman Farm, 86.52 36 P **P** **09 18 34.5 +0.1**
baz=87,SNR=7.3
E09A Wood Farm, Sta 86.63 37 ⇓P **P** **09 18 35.0 0.0**
baz=87
M14A Sheep Mountain 86.64 43 ⇓P **P** **09 18 35.4 +0.2**
baz=87
B07A Winthrop 86.74 34 ⇑P **P** **09 18 34.9 -0.6**
baz=87
H11A Donnelly 86.79 39 P **P** **09 18 35.6 -0.1**
baz=87,SNR=13
K13A Stover Farm, H 86.80 42 ⇓P **P** **09 18 36.1 +0.2**
baz=87
BJI Beijing 86.81 315 P **P** **09 18 35.9 -0.1**
BJI AP pP 09 20 03.5 -1.2
BJI XP sP 09 20 43.3 -1.4
BJI PP PP 09 22 03.9 -1.6
BJI S S 09 28 39.8 -0.8
BJI SS SS 09 34 34.5 +0.9
BJI AMB AMB
comp=Z,193nm,2.2s,mb5.4
BJI LR LR
comp=N,145nm,24.9s
BJI LR LR
comp=E,166nm,25.4s
BJI LR LR
comp=Z,98nm,27.4s
BJI Beijing 86.81 315 P **P** **09 18 35.9 -0.1**
BJI pP pP 09 20 03.5 -1.2
BJI sP sP 09 20 43.3 -1.4
BJI PP PP 09 22 03.9 -1.6
BJI S S 09 28 39.8 -0.8
BJI SS SS 09 34 34.5 +0.9
BJI LR LR
comp=Z,100nm,27.4s
F10A Beach Ranch, E 86.82 37 P **P** **09 18 35.5 -0.4**
baz=87,SNR=27
OD2 Odessa Site #2 86.84 36 P **P** **09 18 35.9 -0.1**
TMUT Trail Mountain 86.85 46 *e*pP pP 09 20 06.7 +1.8
SNAA Sanae 86.86 178 P **P** **09 18 36.1 +0.3**
comp=Z,2.2nm,0.7s,mb4.0,baz=211,slow=5.0,SNR=20
D09A Jones Farm, Ri 86.86 36 P **P** **09 18 35.9 -0.1**
baz=87,SNR=8.4
C08A Higginbotham F 86.90 35 P **P** **09 18 35.9 -0.3**
baz=87,SNR=8.7
A07A Ashnola River, 86.96 34 ⇓P **P** **09 18 36.3 -0.2**
baz=87
VNA3 Neumayer Olymp 86.98 176 *e*P **P** **09 18 37.1 +0.7**
VNA3 *e* 09 18 42.9
VNA3 *e* 09 18 47.6
VNA3 *e* 09 18 51.9
VNA3 *e* 09 18 57.1
VNA3 *e* 09 19 00.7
VNA3 *e* 09 19 04.6
VNA3 *e* pP 09 20 07.1 +2.0
B08A Colville Reser 87.09 35 P **P** **09 18 36.5 -0.7**
baz=87,SNR=14
HLID Hailey 87.10 41 *e*P **P** **09 18 37.6 +0.3**
comp=Z,2.3nm,0.6s,mb4.1
HLID *e*pP pP 09 20 06.5 +0.4
HLID Hailey 87.10 41 P **P** **09 18 37.7 +0.4**
baz=87,SNR=6.5
J13A Cove Ranch, Pi 87.16 41 P **P** **09 18 38.1 +0.5**
baz=87,SNR=6.0
E10A Myers Farm, Un 87.19 37 ⇓P **P** **09 18 36.7 -0.9**
baz=87
SRU San Rafael 87.21 46 *e*P **P** **09 18 38.0 0.0**
comp=Z,3.1nm,0.6s,mb4.2
SRU *e*pP pP 09 20 07.0 +0.3
SRU San Rafael 87.21 46 *e*P **P** **09 18 38.0 +0.1**
SRU pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
LENM Lemitar 87.26 52 P **P** **09 18 38.1 -0.2**
LENM *e*pP pP 09 20 07.6 +0.5
MNTX Cornudas Mount 87.30 54 *e*P **P** **09 18 39.0 +0.5**
comp=Z,2.0nm,0.6s,mb4.0
MNTX *e*pP pP 09 20 07.7 +0.4
K14A Jones Ranch, D 87.31 42 ⇓P **P** **09 18 37.9 -0.4**
baz=87
C09A Chrisman Ranch 87.32 36 P **P** **09 18 38.1 -0.1**
baz=87,SNR=5.7
GYA Guiyang 87.35 300 ⇑*i*P **P** **09 18 39.6 +0.7**
GYA AP pP 09 20 08.2 +0.5
GYA XP sP 09 20 47.5 -0.2
GYA PP PP 09 22 11.3 +1.3
GYA SKS 09 28 27.0
GYA S S 09 28 44.0 -2.2
GYA XS sS 09 31 21.4 -2.6
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,80nm,5.0s
JLU Jordanelle 87.37 44 *e*pP pP 09 20 08.4 +0.9
F11A Grangeville 87.38 38 P **P** **09 18 37.4 -1.2**
baz=88,SNR=6.3
H12A Diamond D Ranc 87.39 40 P **P** **09 18 38.9 +0.2**
baz=88,SNR=10
D10A Wagner Farm, O 87.43 37 P **P** **09 18 38.2 -0.5**
baz=88,SNR=17
VNA2 Neumayer--Watz 87.43 177 *e*P **P** **09 18 39.4 +0.9**
VNA2 *e* 09 18 45.0
VNA2 *e* 09 18 48.7
VNA2 *e* 09 18 53.5
VNA2 *e* 09 18 59.2
VNA2 *e* 09 19 02.8
VNA2 *e* 09 19 05.9
VNA2 *e* pP 09 20 08.4 +1.1
I13A Wildhorse Cree 87.47 40 ⇑P **P** **09 18 39.3 +0.3**
baz=88
A08A Turner Farm, O 87.48 34 P **P** **09 18 38.8 -0.1**
baz=88,SNR=9.5
LTX Lajitas 87.55 57 *e*pP pP 09 20 10.0 +1.3
TXAR Lajitas Array 87.55 57 P **P** **09 18 39.8 0.0**
comp=Z,1.9nm,0.7s,mb3.9,baz=222,slow=6.5,SNR=23
TXAR pP pP 09 20 08.2 -0.5
comp=Z,9.7nm,1.1s,baz=216,slow=6.2,SNR=8.0
TXAR PKKPbc PKKPbc 09 36 26.8 0.0
comp=Z,1.0nm,0.7s,baz=158,slow=3.0,SNR=15
E11A Bogner Ranch, 87.62 38 P **P** **09 18 38.4 -1.3**
baz=88,SNR=5.6
VNA1 Neumayer--Stat 87.65 177 *e*P **P** **09 18 41.1 +1.6**
VNA1 *e* 09 18 46.6
VNA1 *e* 09 18 50.1
VNA1 *e* 09 18 55.6
VNA1 *e* 09 19 00.9
VNA1 *e* 09 19 04.4
VNA1 *e* 09 19 07.4
H13A Challis 87.75 40 ⇑P **P** **09 18 40.3 0.0**
baz=88
B09A Rice 87.76 35 P **P** **09 18 39.9 -0.4**
baz=88,SNR=9.0
HWUT Hardware Ranch 87.82 43 *e*P **P** **09 18 40.0 -0.7**
comp=Z,1.5nm,0.6s,mb3.9
HWUT pP pP 09 20 09.6 -0.1
F12A Elk City 87.83 38 ⇓P **P** **09 18 40.3 -0.3**
baz=88
A09A Danville 87.86 35 P **P** **09 18 40.6 -0.1**
baz=88,SNR=6.5
ANMO Albuquerque 88.01 51 *e*P **P** **09 18 42.0 +0.2**
comp=Z,1.4nm,0.7s,mb3.8
ANMO *e*pP pP 09 20 09.6 -1.2
ANMO Albuquerque 88.01 51 *e*P **P** **09 18 42.0 +0.2**
ANMO pmax pmax
comp=Z,1.0nm,0.7s
G13A Cobalt 88.06 39 P **P** **09 18 41.7 0.0**
baz=88,SNR=8.1
NEW Newport 88.22 36 *e*P **P** **09 18 42.0 -0.5**
comp=Z,44nm,2.4s,mb4.8
NEW Newport 88.22 36 *e*P **P** **09 18 42.0 -0.4**
NEW pmax pmax
comp=Z,44nm,2.4s
GDL2 Guadalupe Moun 88.30 54 *e*P **P** **09 18 44.5 +1.3**
GDL2 *e*pP pP 09 20 13.1 +0.8
F13A Darby 88.38 39 P **P** **09 18 42.6 -0.6**
baz=88,SNR=10
A10A Northport 88.41 35 ⇑P **P** **09 18 43.0 -0.3**
baz=88
D12A Red Ives Fores 88.50 37 ⇓P **P** **09 18 42.9 -0.9**
baz=89
G14A Jackson 88.59 40 P **P** **09 18 44.5 +0.3**
baz=89,SNR=6.3
B11A Sandpoint 88.73 36 ⇓P **P** **09 18 44.8 0.0**
baz=89
MCMT McKenzie Canyo 88.73 40 *e*P **P** **09 18 45.3 +0.4**
MCMT *e*pP pP 09 20 14.3 +0.2
E13A Victor 88.83 38 ⇓P **P** **09 18 45.3 0.0**
baz=89
XAN Xi'an 88.95 307 P **P** **09 18 46.7 +0.5**
XAN AMB AMB
comp=Z,64nm,1.3s,mb5.2
F14A Wisdom 88.96 39 P **P** **09 18 46.0 +0.1**
baz=89,SNR=5.1
D13A Huson 89.03 38 ⇑P **P** **09 18 46.2 0.0**
baz=89
A11A Hall Mountain, 89.03 35 P **P** **09 18 46.7 +0.5**
baz=89,SNR=5.3
G15A Dillon 89.13 40 P **P** **09 18 47.0 +0.3**
baz=89,SNR=15
B12A Libby 89.17 36 ⇑P **P** **09 18 46.9 0.0**
baz=89
REDW Red Top Meadow 89.19 42 *e*P **P** **09 18 47.1 +0.1**
comp=Z,4.9nm,0.8s,mb4.3
REDW *e*pP pP 09 20 16.2 -0.1
TPAW Teton Pass 89.19 42 *e*P **P** **09 18 47.6 +0.5**
comp=Z,6.2nm,1.0s,mb4.3
TPAW pP pP 09 20 16.2 -0.1
E14A Clinton 89.21 39 P **P** **09 18 47.0 -0.1**
baz=89,SNR=5.6
BSMT Bassoo Peak 89.27 37 *e*P **P** **09 18 46.8 -0.6**
C13A Hot Springs 89.29 37 ⇑P **P** **09 18 47.7 +0.3**
baz=89
COLA College 89.30 12 *e*P **P** **09 18 44.8 -2.3**
comp=Z,34nm,0.6s,mb5.2
COLA College 89.30 12 *e*P **P** **09 18 45.0 -2.1**
IMA2 Indian Mountai 89.35 10 *e*P **P** **09 18 45.8 -1.5**
A12A Yaak River Ran 89.40 36 P **P** **09 18 47.9 -0.1**
baz=90,SNR=5.6
MOOW Moose Ponds 89.45 42 *e*P **P** **09 18 48.3 0.0**
comp=Z,25nm,2.3s,mb4.5
LOHW Long Hollow 89.47 42 *e*P **P** **09 18 48.4 0.0**
comp=Z,4.8nm,0.7s,mb4.3
LOHW *e*pP pP 09 20 16.3 -1.3
F15A Butte 89.49 39 ⇓P **P** **09 18 47.8 -0.7**
baz=90
D14A Greenough 89.57 38 ⇓P **P** **09 18 47.8 -1.0**
baz=90
QLMT Earthquake Lak 89.59 41 *e*P **P** **09 18 48.7 -0.2**
QLMT *e*pP pP 09 20 18.6 +0.4
CHMT Chamberlain Mo 89.62 38 *e*P **P** **09 18 48.5 -0.5**
CHMT *e*pP pP 09 20 19.3 +1.0
BW06 Boulder Array 89.70 43 *e*P **P** **09 18 49.3 -0.2**
PDAR Pinedale Array 89.70 43 P **P** **09 18 49.2 -0.3**
comp=Z,4.4nm,0.8s,mb4.4,baz=207,slow=2.5,SNR=38
PDAR pP pP 09 20 19.0 +0.3
comp=Z,1.7nm,1.1s,baz=207,slow=3.8,SNR=2.4
PDAR PKKP PKKPbc 09 36 18.9 -3.4
comp=Z,0.7nm,0.8s,baz=90,slow=7.4,SNR=6.5
E15A Deer Lodge 89.71 39 ⇓P **P** **09 18 48.8 -0.7**
baz=90
HIA Hailar 89.72 325 *e*P **P** **09 18 47.6 -1.8**
B13A Whitefish 89.74 37 ⇑P **P** **09 18 49.5 0.0**
baz=90
YMR Madison River 89.79 41 *e*P **P** **09 18 49.9 0.0**
comp=Z,8.5nm,0.7s,mb4.7
YMR *e*pP pP 09 20 19.2 +0.1
C14A Swan Lake 89.81 37 ⇑P **P** **09 18 49.5 -0.3**
baz=90
BOZ Bozeman (W) 89.90 40 *e*P **P** **09 18 50.5 +0.2**
comp=Z,4.2nm,0.7s,mb4.4
BOZ *e*pP pP 09 20 19.4 -0.2
BOZ Bozeman (W) 89.90 40 *e*P **P** **09 18 50.5 +0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BOZ Bozeman (W) 89.90 40 P **P** **09 18 50.7 +0.3**
baz=90,SNR=9.4
SDCO Great Sand Dun 90.00 49 *e*pP pP 09 20 23.7 +3.5
KMI Kunming 90.00 297 P **P** **09 18 52.1 +0.8**
KMI AMB AMB
comp=Z,40nm,1.2s,mb5.1
KMI AMB AMB
comp=Z,127nm,3.2s
LKWY Lake 90.08 41 *e*P **P** **09 18 53.2 +2.0**
BDT Bhumibol Dam 90.12 288 P **P** **09 18 53.0 +1.0**
comp=Z,2.0nm,8.0s
BILL Bilibino 90.19 354 *e*P **P** **09 18 50.0 -1.1**
comp=Z,11nm,0.6s,mb4.8
BILL Bilibino 90.19 354 ⇑*i*P **P** **09 18 49.9 -1.3**
BILL pmax pmax
comp=Z,10.0nm,0.9s,mb4.7
HHC Hu-ho-hao-te 90.26 314 *e*P **P** **09 18 52.1 0.0**
HHC AP pP 09 20 21.1 -0.3
HHC XP sP 09 20 59.7 -1.5
HHC PP PP 09 22 34.8 +2.1
HHC SKS 09 28 44.4
HHC S S 09 29 10.2 -2.3
HHC SS SS 09 35 24.9 +1.5
HHC AMB AMB
comp=Z,23nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,181nm,5.6s
HRY Holter Researc 90.34 39 *e*P **P** **09 18 56.8 +4.4**
EGAK Eagle 90.68 15 *e*P **P** **09 18 52.4 -1.0**
comp=Z,14nm,0.6s,mb5.0
CHG Chiang Mai 90.77 290 ⇓P **P** **09 18 55.7 +0.7**
comp=Z,11nm,0.8s,mb4.7
CHTO Chiang Mai 90.77 290 *e*P **P** **09 18 55.3 +0.2**
comp=Z,68nm,1.1s,mb5.4
CHTO Chiang Mai 90.77 290 *e*P **P** **09 18 55.3 +0.3**
CHTO pmax pmax
comp=Z,68nm,1.1s,mb5.4
CD2 Chengdu 91.53 303 *e*P **P** **09 18 58.3 0.0**
CD2 AP pP 09 20 27.4 -0.2
CD2 XP sP 09 21 06.0 -1.4
CD2 PP PP 09 22 44.3 +1.4
CD2 SKS 09 28 52.5
CD2 S S 09 29 21.8 -2.6
CD2 XS sS 09 31 59.8 -4.0
CLNS Chul'man 91.72 332 *e*P **P** **09 18 57.6 -0.9**
CLNS *e*S S 09 29 30.2 +5.4
CLNS *e**SS sS 09 31 29.6 -35
CLNS pmax pmax
comp=Z,16nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,11nm,1.4s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS smax
comp=N,72nm,11.8s
CLNS smax
comp=E,51nm,13.4s
EGMT Eagleton 92.23 39 *e*pP pP 09 20 30.9 +0.4
LZH Lanzhou 93.59 307 *e*P **P** **09 19 08.8 +1.2**
LZH AP pP 09 20 42.0 +4.9
LZH AMB AMB
comp=Z,51nm,1.1s,mb5.5
LZH AMB AMB
comp=Z,264nm,5.2s
LZH Lanzhou 93.59 307 *e*P **P** **09 19 08.8 +1.2**
comp=Z,51nm,1.1s,mb5.5
LZH pP pP 09 20 42.0 +4.9
LZH sP sP 09 21 23.5 +6.7
INK Inuvik 95.34 15 *e*P **P** **09 19 14.1 -0.7**
ULN Ulaanbaatar 96.33 319 *e*P **P** **09 19 18.5 -1.3**
SONM Songino Array 96.72 319 P **P** **09 19 20.2 -1.3**
SONM PP PP 09 23 21.6 -0.9
SONM Songino Array 96.72 319 P **P** **09 19 20.2 -1.3**
comp=Z,2.0nm,1.0s,mb4.2,baz=59,slow=1.6,SNR=9.2
SONM PP PP 09 23 21.6 -0.9
comp=Z,1.2nm,0.8s,baz=134,slow=6.1,SNR=6.7
SONM PKiKP PKiKP 09 23 56.0 +0.1
comp=Z,0.6nm,0.5s,baz=73,slow=1.4,SNR=4.4
BOD Bodaibo 97.16 330 *e*P **P** **09 19 18.6 -4.6**
BOD pmax pmax
comp=Z,3.0nm,2.3s,mb4.0
YKA Yellowknife Ar 97.50 25 P **P** **09 19 23.1 -1.5**
YKA pP pP 09 20 52.4 -2.0
YKA Yellowknife Ar 97.50 25 P **P** **09 19 23.1 -1.5**
comp=Z,0.4nm,0.5s,mb3.8,baz=242,slow=4.3,SNR=10
YKA pP pP 09 20 52.3 -2.0
comp=Z,0.3nm,0.6s,baz=242,slow=3.7,SNR=2.9
YKA PKiKP PKiKP 09 23 55.5 -1.3
comp=Z,0.1nm,0.5s,baz=215,slow=1.4,SNR=3.7
YKA PKKP PKKPbc 09 35 56.7 -6.0
comp=Z,0.7nm,0.5s,baz=39,slow=2.4,SNR=14
GTA Gaotai 97.82 309 *e*P **P** **09 19 26.8 +0.1**
GTA AP pP 09 20 56.7 +0.3
GTA XP sP 09 21 34.5 -1.6
GTA PP PP 09 23 31.1 0.0
GTA SKS 09 29 26.5
GTA S S 09 30 06.2 -12
GTA XS sS 09 32 52.5 -6.8
GTA AMB AMB
comp=Z,9.0nm,1.3s,mb4.8
GTA AMB AMB
comp=Z,204nm,7.3s
GTA LR LR
comp=N,205nm,16.4s
GTA LR LR
comp=E,269nm,15.7s
GTA LR LR
comp=Z,112nm,11.5s
ZAK Zakamensk 99.61 320 *e*P Pdif 09 19 31.0 -3.6
ZAK *e* 09 23 47.1
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb4.4
TLY Talaya 99.89 322 *e*P Pdif 09 19 34.0 -1.8
TLY pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
TIXI Tiksi 99.90 345 *e*Pdif Pdif 09 19 34.1 -1.8
comp=Z,4.5nm,0.9s
TIXI Tiksi 99.90 345 *e*P Pdif 09 19 32.4 -3.4
TIXI pmax pmax
comp=Z,9.0nm,1.5s,mb5.0
ZALV Zalesovo Beam 111.48 321 PKiKP PKiKP 09 24 20.7 -2.1
comp=Z,3.9nm,0.6s,baz=146,slow=1.3,SNR=16
ZAL Zalesovo 111.49 321 PKiKP PKiKP 09 24 20.7 -2.2
MKAR Makanchi Array 112.09 313 Pdif Pdif 09 20 31.4 +1.4
MKAR PKPdif PKiKP 09 24 22.1 -2.1
MKAR Makanchi Array 112.09 313 Pdiff Pdif 09 20 31.4 +1.4
comp=Z,0.4nm,0.4s,baz=93,slow=5.2,SNR=8.2
MKAR PKiKP PKiKP 09 24 22.1 -2.1
comp=Z,7.7nm,0.8s,baz=70,slow=2.6,SNR=33
NVS Novosibirsk 112.50 322 *e*PKiKP PKiKP 09 24 22.7 -2.1
NVS *e* 09 30 28.9
NVS pmax pmax
comp=Z,12nm,1.1s
NVS pmax pmax
comp=E,13nm,1.4s
NDI New Delhi 112.70 293 *e*P PKiKP 09 24 23.0 -3.0
KURK Kurchatov 114.94 317 *e*PKP PKPdf 09 24 27.6 -2.0
KURK Kurchatov 114.94 317 *i* PKiKP PKPdf 09 24 27.7 -1.9
ULHL Ulahol 115.80 308 P PKPdf 09 24 30.6 -0.9
SNR=7.3
TKM2 Tokmak 2 116.34 308 *e*PKPdf PKPdf 09 24 31.1 -1.5
TKM2 *e*PP PP 09 25 44.2 -1.2
TKM2 Tokmak 2 116.34 308 P PKPdf 09 24 31.1 -1.5
SNR=9.5
KZA Kyzart 116.51 307 P PKPdf 09 24 34.5 +1.6
SNR=7.9
KBK Karagaybulak 116.79 308 P PKPdf 09 24 32.4 -1.1
SNR=5.4
UCH Uchtor 117.07 307 P PKPdf 09 24 33.6 -0.4
SNR=15
AAK Ala-Archa 117.12 308 *e*PKPdf PKPdf 09 24 31.7 -2.3
AAK *e*PP PP 09 25 49.0 -1.8
AAK Ala-Archa 117.12 308 P PKPdf 09 24 32.6 -1.4
SNR=5.7
USP Ospenovka 117.17 309 P PKPdf 09 24 34.4 +0.3
SNR=10
EKS2 Erkin-Say 117.65 308 *e*PKPdf PKPdf 09 24 33.9 -1.2
EKS2 *e*PP PP 09 25 53.2 -1.3
EKS2 Erkin-Say 117.65 308 P PKPdf 09 24 35.8 +0.7
SNR=8.0
AML Almayashu 117.67 307 *e*PKPdf PKPdf 09 24 34.2 -0.9
AML Almayashu 117.67 307 P PKPdf 09 24 34.4 -0.7
SNR=17
KBL Kabul 120.57 298 *e*PKPdf PKPdf 09 24 40.5 -0.5
BOSA Boshof 125.28 205 PKP PKPdf 09 24 50.6 +0.3
comp=E,6.7nm,0.7s,baz=149,slow=2.1,SNR=16
SOKR Solikamsk 126.15 329 *c i* PKiKP PKPdf 09 24 49.9 -0.9

Sta	Name	Dist	Az	Phase	ID	Time	Res
SOKR				pmax	pmax		
	comp=Z,60nm,1.0s						
ARU	Arti	126.23	325	ePKPdf	PKPdf	09 24 50.3	-0.8
ARU	Arti	126.23	325	i PKIKP	PKPdf	09 24 50.1	-1.0
ARU				e		09 26 50.0	
ARCES	ARCESS Array B	130.08	350	PKP	PKPdf	09 24 56.4	-1.6
	comp=Z,7.5nm,0.5s,baz=64,slow=1.1,SNR=34						
TMCR	Tamitsa	131.31	340	ePKIKP	PKPdf	09 25 00.0	-0.5
JOF	Joensuu	134.27	342	epkp	SKPbc	09 27 57.9	-1.0
KAF	Kangasniemi	136.30	344	epkp	SKPbc	09 28 03.3	-1.9
	baz=35,slow=2.8						
FINES	FINESS Array B	136.92	343	PKhKP		09 24 58.2	
	comp=Z,1.1nm,0.4s,baz=54,slow=3.3,SNR=12						
FINES				SKPbc	SKPbc	09 28 06.4	-0.7
	comp=Z,3.1nm,0.6s,baz=61,slow=3.3,SNR=7.4						
OBN	Obninsk	137.84	331	i PKIKP	PKPdf	09 25 11.7	-1.3
OBN				e		09 28 10.3	
OBN				pmax	pmax		
	comp=Z,27nm,1.1s						
QRN	Al-Qurain	138.20	289	eP		09 25 04.8	
QRN				AMb	AMB	09 25 18.1	
	comp=Z,154nm,0.5s						
RDF	Al-Radifah	138.52	290	eP		09 25 04.9	
RDF				AMb	AMB	09 25 18.6	
	comp=Z,92nm,0.4s						
MIB	Mutribah	138.71	291	eP		09 25 05.7	
MIB				AMb	AMB	09 25 18.7	
	comp=Z,52nm,0.7s						
NAY	Al-Naaiem	138.80	290	eP		09 25 06.0	
NAY				AMb	AMB	09 25 18.7	
	comp=Z,17nm,0.7s						
KMBO	Kilima Mbogo	138.93	241	PKhKP		09 25 07.5	
	comp=Z,3.2nm,0.7s,baz=67,slow=5.4,SNR=11						
KMBO				SKPbc	SKPbc	09 28 14.9	+0.6
	comp=Z,7.1nm,1.0s,baz=63,slow=2.1,SNR=9.0						
KIV	Kislovodsk	139.86	313	ePKIKP	PKPdf	09 25 15.5	-1.5
KIV				e		09 28 16.8	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NB2	NORSAR Subarra	140.14	353	PKP	PKPdf	09 25 07.7	-9.3
	comp=Z,3.5nm,0.7s,baz=16,slow=3.2						
NOA	NORSAR Array B	140.14	353	PKhKP		09 25 07.6	
	comp=Z,3.7nm,0.5s,baz=16,slow=4.6,SNR=16						
NOA				SKPbc	SKPbc	09 28 16.6	+0.5
	comp=Z,3.2nm,0.8s,baz=15,slow=4.3,SNR=6.1						
HAKT	HAKKARI	140.90	303	i P	PKPdf	09 25 12.1	-7.0
TUTA	Tutak	141.15	306	i P	PKPdf	09 25 12.6	-7.0
ARTV	Artvin	141.29	309	i P	PKPdf	09 25 14.7	-5.1
KONO	Kongsberg	141.68	354	ePKPdf	PKPdf	09 25 13.9	-5.9
SOC	Sochi	141.99	314	i PKIKP	PKPdf	09 25 22.7	+1.8
ERZM	Erzurum	142.09	308	i P	PKPdf	09 25 16.5	-4.7
ANN	Anapa	142.97	317	i PKIKP	PKPdf	09 25 19.8	-2.8
ANN				e		09 31 55.7	
ANN				pmax	pmax		
	comp=Z,39nm,0.8s						
MLA1	Latheron	143.17	5	⇑eP	PKPdf	09 25 18.2	-4.3
MVH1	Achvaich	143.48	6	⇑eP	PKPdf	09 25 19.1	-3.9
KELT	Kelkit	143.55	309	i P	PKPdf	09 25 21.2	-2.5
KAC	Achnashellach	143.78	7	⇑eP	PKPdf	09 25 20.7	-2.9
MCD	Coleburn Disti	143.90	5	⇑eP	PKPdf	09 25 20.3	-3.5
KPL	Plockton	143.90	7	eP	PKPdf	09 25 20.1	-3.7
KPL				AMb	AMB	09 25 22.2	
	comp=Z,230nm,2.1s						
MDO	Dochfour	143.94	6	⇑eP	PKPdf	09 25 20.8	-3.1
SUW	Suwalki	143.97	339	ePKP	PKPdf	09 25 21.6	-2.4
SUW				e		09 25 25.5	
KSB	Sheil Bridge	144.06	7	eP	PKPdf	09 25 21.4	-2.6
AKASG	Malin Array Be	144.09	330	PKP	PKPdf	09 25 21.1	-3.3
	comp=Z,130nm,0.5s,baz=43,slow=4.1,SNR=254						
MME1	Meikle Cairn	144.19	5	⇑eP	PKPdf	09 25 22.6	-1.6
ELZG	Elazig	144.27	306	i P	PKPdf	09 25 24.0	-1.0
KAR1	Arisaig	144.29	8	eP	PKPdf	09 25 21.8	-2.7
MALT	Malatya	144.74	306	⇓iP	PKPdf	09 25 25.7	-0.2
MUD	Monsted U'grnd	144.86	353	i PKIKP	PKPdf	09 25 25.5	0.0
MUD				pmax	pmax		
	comp=Z,120nm,0.5s						
MUD	Monsted U'grnd	144.86	353	i P	PKPdf	09 25 25.5	0.0
	comp=Z,115nm,0.5s						
SIM	Simferopol'	144.97	319c	iPKIKP	PKPdf	09 25 24.7	-1.3
SIM				pmax	pmax		
	comp=Z,228nm,0.8s						
ATAB	Bozova	145.09	305	i P	PKPdf	09 25 26.4	-0.1
COP	Copenhagen	145.16	350	⇑iPKIKP	PKPdf	09 25 26.6	+0.6
COP				pmax	pmax		
	comp=Z,100nm,0.9s						
COP	Copenhagen	145.16	350	⇑iP	PKPdf	09 25 26.6	+0.6
	comp=Z,105nm,0.9s						
EAB	Aberfoyle	145.18	6	eP	PKPdf	09 25 24.4	-1.6
BSD	Bornholm Skovb	145.24	347	i PKIKP	PKPdf	09 25 24.9	-1.3
BSD				pmax	pmax		
	comp=Z,190nm,0.7s						
BSD	Bornholm Skovb	145.24	347	i P	PKPdf	09 25 24.9	-1.3
	comp=Z,194nm,0.7s						
BSD				i		09 33 17.8	
SVSK	Karacayir	145.26	310	eP	PKPdf	09 25 26.2	-0.5
TOKT	Tokat	145.43	310	eP	PKPdf	09 25 27.4	+0.4
KVT	Kavak	145.48	312	eP	PKPdf	09 25 26.9	-0.2
PGBU	Glenifferbraes	145.53	7	eP	PKPdf	09 25 25.6	-1.0
PGBU				AMb	AMB	09 25 28.1	
	comp=Z,191nm,1.9s						
EDI	Edinburgh	145.55	5	eP	PKPdf	09 25 26.4	-0.3
EDI				AMb	AMB	09 25 28.1	
	comp=Z,75nm,1.6s						
ESY	Stoneypath	145.60	5	eP	PKPdf	09 25 25.8	-0.9
EAU	Auchinoon	145.60	6	eP	PKPdf	09 25 26.3	-0.5
GZT	Gaziantep	145.68	305	i P	PKPdf	09 25 27.9	+0.4
EBL	Broad Law	145.71	5	eP	PKPdf	09 25 26.5	-0.5
GMK	Mull of Kintyr	145.86	8	⇑eP	PKPdf	09 25 26.6	-0.6
GAZ	Gaziantep	146.00	305	eP	PKPdf	09 25 29.1	+1.1
XSO	Sourhope Farm	146.05	4	eP	PKPdf	09 25 27.4	-0.1
GCL	Cushendall	146.05	9	eP	PKPdf	09 25 27.5	0.0
BOYT	Boyabat	146.13	313	i P	PKPdf	09 25 29.4	+1.2
ESK	Eskdalemuir	146.15	6	eP	PKPdf	09 25 27.1	-0.6
ESK				AMb	AMB	09 25 27.9	
	comp=Z,145nm,1.5s						
WAR	Warsaw	146.16	339	ePKP	PKPdf	09 25 28.9	+1.0
BYBT	Boyabat	146.20	313	eP	PKPdf	09 25 29.2	+0.9
BWH	Wardlaw	146.25	6	eP	PKPdf	09 25 27.2	-0.7
ECK	Cauldkaine Hil	146.29	5	eP	PKPdf	09 25 28.1	+0.2
BHH	Howats Hill	146.37	6	eP	PKPdf	09 25 27.8	-0.2
GKP	Gorka Klasztor	146.39	344	ePKP	PKPdf	09 25 28.5	+0.3
GKP				e		09 25 30.9	
GAL1	Galloway	146.44	7	eP	PKPdf	09 25 27.9	-0.3
BNN	Bunyan	146.47	308	eP	PKPdf	09 25 29.1	+0.3
BZK	Bozkurt	146.49	315	eP	PKPdf	09 25 29.7	+0.9
ANDN	Andirin	146.53	306	i P	PKPdf	09 25 28.2	-0.8
CTKT	Corum	146.54	312	i P	PKPdf	09 25 28.6	-0.2
YOZ	Yozgat	146.56	310	eP	PKPdf	09 25 30.4	+1.4
XAL	Allendale	146.68	5	eP	PKPdf	09 25 29.4	+0.8
BBO1	Bothel	146.72	6	eP	PKPdf	09 25 28.7	0.0
CORM	Corum	146.84	311	eP	PKPdf	09 25 30.1	+0.8
GMM	Mts of Mourne	146.89	9	eP	PKPdf	09 25 30.4	+1.4
TOS	Tosya	146.89	313	eP	PKPdf	09 25 31.5	+2.1
KOZT	Kozan	146.95	306	eP	PKPdf	09 25 30.7	+1.1
LVV	L'vov	147.00	334	i PKIKP	PKPdf	09 25 30.5	+1.2
GIM	North Isle of	147.03	7	eP	PKPdf	09 25 30.1	+0.9
BALT	Daday	147.10	314	i P	PKPdf	09 25 28.1	-1.7
CEYT	Ceyhan	147.16	305	eP	PKPdf	09 25 31.4	+1.3
BSEG	Bad Segeberg	147.18	351	ePKPbc	PKPbc	09 25 31.2	-1.1
AVNT	Avonos	147.22	309	i P	PKPdf	09 25 30.7	+0.6
CDAG	Cicekdag	147.24	310	i P	PKPdf	09 25 27.6	-2.4
CANT	Cankiri	147.35	313	eP	PKPdf	09 25 31.4	+1.1
FKH	Fakeheh	147.41	300	eP	PKPbc	09 25 33.8	+0.2
ASF	Jabal al Asfar	147.43	296	PKPbc	PKPbc	09 25 32.1	-1.6
	comp=Z,56nm,0.6s,baz=334,slow=1.8,SNR=70						
ELDT	Eldivan	147.54	312	i P	PKPbc	09 25 33.0	-0.7
KARA	Karaisali	147.61	306	eP	PKPdf	09 25 31.8	+1.1
HPK	Haverah Park	147.62	4	eP	PKPdf	09 25 31.8	+1.6
HPK				AMb	AMB	09 25 34.6	
	comp=Z,136nm,1.0s						
NIG	Nigde	147.64	308	eP	PKPbc	09 25 33.6	-0.5
KWP	Kalwaria	147.69	335	ePKP	PKPbc	09 25 32.9	-1.0
KWP				e		09 25 37.2	
KWP	Kalwaria	147.69	335	⇓iP	PKPbc	09 25 32.9	-0.9
SAFT	Safranbolu	147.70	314	eP	PKPdf	09 25 32.5	+1.7
BRTR	Keskin Array B	147.72	311	PKPbc	PKPbc	09 25 33.0	-1.3
	comp=Z,54nm,0.7s,baz=130,slow=3.8,SNR=116						
KAMT	Kaman	147.81	310	eP	PKPdf	09 25 32.3	+1.3
RUE	Ruedersdorf	147.95	347	ePKPbc	PKPbc	09 25 33.7	-0.7
LHO	Holmfirth	148.02	5	⇑eP	PKPbc	09 25 33.4	-1.2
RCY	Rachaya	148.06	299	eP	PKPbc	09 25 35.5	+0.2
BHL	Bhannes	148.10	300	eP	PKPbc	09 25 35.2	-0.2
BURAR	Bucovina Array	148.13	330	⇑iP	PKPbc	09 25 34.8	-0.2
MERS	Mersin	148.14	306	eP	PKPdf	09 25 33.3	+1.7
ANTO	Ankara	148.24	312	eP	PKPdf	09 25 32.7	+1.0
ANTO	Ankara	148.24	312	ePKPbc	PKPbc	09 25 35.1	-0.4
LOD	Lodumlu	148.26	312	eP	PKPdf	09 25 33.3	+1.5
OJC	Ojcow	148.28	338	ePKP	PKPbc	09 25 33.7	-1.6
KBI1	Birley Grange	148.33	4	eP	PKPdf	09 25 32.8	+1.4
KOLS	Kolonicke sedl	148.41	334	ePKIKP	PKPdf	09 25 33.1	+1.4
KOLS				e		09 25 36.6	
KOLS	Kolonicke sedl	148.41	334	ePKP	PKPdf	09 25 33.1	+1.4
KOLS				e		09 25 36.6	
KOLS				e		09 25 40.0	
STHS	Stebnicka Huta	148.43	336	ePKP	PKPbc	09 25 36.6	+0.9
STHS				e		09 25 41.1	
SGKT	Sivrigoynuk	148.43	314	i P	PKPdf	09 25 33.6	+1.6
KDZE	Karadeniz Ereo	148.49	315	eP	PKPbc	09 25 34.0	-2.1
SBD1	Bryn Du	148.53	6	eP	PKPbc	09 25 34.1	-1.7
KWE	Weaver Farm	148.54	5	eP	PKPbc	09 25 34.1	-1.8
TIRR	Tirgusor	148.60	323	PKP2	PKPbc	09 25 37.0	+0.7
TIRR	Tirgusor	148.60	323	⇓iP	PKPbc	09 25 35.7	-0.6
VRI	Vrincioaia	148.61	326	⇓iP	PKPbc	09 25 35.3	-1.0
NRDL	Niedersach Rie	148.61	351	ePKPbc	PKPbc	09 25 35.0	-1.1
UZH	Uzhgorod	148.65	334d	iPKP2	PKPbc	09 25 35.7	-0.6
PLOR	Plostina	148.66	326	⇓iP	PKPbc	09 25 35.6	-0.8
WIT	Witteveen	148.70	355	ePKP	PKPbc	09 25 38.0	+1.7
CRVS	Cervenica-Dubn	148.76	335	ePKP	PKPdf	09 25 33.4	+1.2
CRVS				e		09 25 36.8	
CRVS				e		09 25 41.7	
NIE	Niedzica	148.77	337	ePKP	PKPbc	09 25 36.5	-0.1
NIE				e		09 25 42.2	
KSP	Ksiaz	148.83	343	ePKP	PKPbc	09 25 36.1	-0.5
KSP				e		09 25 42.6	
KSP	Ksiaz	148.83	343	ePKP2	PKPab	09 25 42.0	+0.1
CWF	Charnwood Fore	148.86	4	eP	PKPdf	09 25 34.8	+2.6
CWF				AMb	AMB	09 25 37.2	
	comp=Z,71nm,1.7s						
HLM1	Long Mynd	148.95	6	eP	PKPdf	09 25 34.9	+2.5
IKL	Isikli	148.98	305	eP	PKPdf	09 25 35.1	+2.1
HENT	Hendek	149.09	315	i P	PKPbc	09 25 36.0	-1.6
IBBN	Ibbenburen	149.10	353	ePKPbc	PKPbc	09 25 36.6	-0.7
OKC	Ostrava-Krasne	149.16	340	ePKP2	PKPbc	09 25 36.8	-0.7
OKC	Ostrava-Krasne	149.16	340	⇑ePKP	PKPbc	09 25 36.8	-0.7
OKC				ePKPAB	PKPab	09 25 43.4	+0.1
CLZ	Clausthal	149.20	350	ePKPbc	PKPbc	09 25 36.7	-0.8
PSN	Preselentsi	149.20	322	P	PKPbc	09 25 36.9	-0.9
UPC	Upice	149.21	343	ePKHKP	PKPbc	09 25 36.9	-0.7
UPC				e		09 25 43.5	
UPC	Upice	149.21	343	⇑ePKP	PKPbc	09 25 36.9	-0.7
UPC				ePKPAB	PKPab	09 25 43.5	0.0
CLL	Collm	149.22	347	⇓ePKIKP	PKPdf	09 25 32.0	-0.9
CLL				i		09 25 41.9	
CLL				pmax	pmax		
	comp=Z,62nm,1.2s						
CLL				pmax	pmax		
	comp=Z,104nm,0.7s						
CLL				pmax	pmax		
	comp=Z,79nm,0.8s						
CLL	Collm	149.22	347	ePKPdf	PKPdf	09 25 32.0	-0.9
CLL				⇓iPKPbc	PKPbc	09 25 36.6	-1.0
	comp=Z,62nm,1.2s						
CLL				⇑iPKiKP	PKiKP	09 25 38.4	-0.2
	comp=Z,104nm,0.7s						
CLL				i PKPab	PKPab	09 25 41.9	-1.6
	comp=Z,79nm,0.8s						
CLL				epPKPbc	pPKPbc	09 27 13.0	+1.7
CLL	Collm	149.22	347	ePKPdf	PKPdf	09 25 32.2	-0.7
CLL				ePKPbc	PKPbc	09 25 36.7	-0.9
CLL				ePKiKP	PKiKP	09 25 38.5	-0.1
CLL				ePKPab	PKPab	09 25 42.6	-0.9
DPC	Dobruska-Polom	149.27	342	ePKP2	PKPbc	09 25 37.3	-0.4
DPC	Dobruska-Polom	149.27	342	⇑ePKP	PKPbc	09 25 37.3	-0.4
DPC				ePKPAB	PKPab	09 25 44.0	+0.3
MLR	Muntele Rosu	149.27	326	PKP	PKPdf	09 25 31.9	-1.2
	comp=Z,27nm,1.0s,baz=323,slow=6.0,SNR=6.0						
MLR				PKPbc	PKPbc	09 25 36.5	-1.5
	comp=Z,31nm,0.7s,baz=315,slow=3.5,SNR=33						
KIZT	Kizilcal	149.31	311	eP	PKPdf	09 25 36.4	+2.9
KONT	Konya--Tatoy	149.35	309	eP	PKPdf	09 25 35.5	+2.0
MORC	Moravsky Berou	149.41	340	⇓iP	PKPdf	09 25 35.8	+2.6
BRG	Berggiesshubel	149.41	345	ePKIKP	PKPdf	09 25 32.6	-0.6
BRG				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BRG	Berggiesshubel	149.41	345	ePKPbc	PKPbc	09 25 36.7	-1.4
BRG	Berggiesshubel	149.41	345	ePKP	PKPdf	09 25 32.6	-0.6
	comp=Z,12nm,1.4s						
BRG	Berggiesshubel	149.41	345	i PKP	PKPbc	09 25 37.4	-0.7
	comp=Z,51nm,0.8s						
BRG	Berggiesshubel	149.41	345	i PKP	PKPab	09 25 44.0	-0.3
	comp=Z,57nm,0.7s						
BRG				epPKP	pPKPdf	09 27 13.6	+5.7
	comp=Z,26nm,1.5s						
MCH1	Michaelchurch	149.45	6	⇑eP	PKPdf	09 25 34.3	+1.1
MCH1				AMb	AMB	09 25 35.2	
	comp=Z,60nm,1.6s						
EIL	Elat	149.46	292	PKP	PKPdf	09 25 32.4	-1.6
	comp=Z,7.0nm,0.8s,baz=346,slow=1.4,SNR=6.9						
EIL				PKPbc	PKPbc	09 25 38.2	-0.7
	comp=Z,74nm,0.6s,baz=28,slow=1.7,SNR=72						
KECS	Kecovo	149.48	336	ePKP	PKPbc	09 25 37.7	-0.6
KECS				e		09 25 44.7	
FBE	Freiberg	149.50	346	ePKPbc	PKPbc	09 25 37.0	-1.3
WTSB	Winterswijk	149.53	354	ePKP	PKPbc	09 25 36.7	-1.6
	comp=Z,117nm,0.9s						
GULT	Gulveren	149.53	314	eP	PKPbc	09 25 38.0	-0.7
PVCC	Panska Ves	149.58	344	ePKHKP	PKPbc	09 25 38.0	-0.5
PVCC				e		09 25 45.1	
PVCC	Panska Ves	149.58	344	⇑ePKP	PKPbc	09 25 38.0	-0.5
PVCC				ePKPAB	PKPab	09 25 45.1	+0.1
SSW	Stow on the Wo	149.59	5	eP	PKPbc	09 25 37.2	-1.3
CSS	Prodhromos	149.66	303	eP	PKPbc	09 25 37.6	-1.6
GPA	Golpazari	149.74	314	eP	PKPbc	09 25 37.4	-1.8
ESKT	Eskisehir	149.74	313	eP	PKPbc	09 25 37.8	-1.5
ESKT	Eskisehir	149.74	313	i P	PKPdf	09 25 36.5	+2.4
VOIR		149.76	327	⇑iP	PKPbc	09 25 38.1	-1.0
HGH	Gray Hill	149.82	6	eP	PKPbc	09 25 37.3	-1.8
DRGR		149.89	331	PKHKP	PKPbc	09 25 38.6	-0.8
HRT	Hereke	149.89	316	eP	PKPbc	09 25 37.5	-2.1
PRD	Provadia	149.95	321	i P	PKPbc	09 25 39.2	-0.4
BUG	Bochum--Univer	150.00	354	ePKPbc	PKPbc	09 25 38.3	-1.2
ADVT	Abdulvahap	150.05	315	eP	PKPdf	09 25 36.9	+2.3
PRU	Pruhonice	150.08	344	ePKHKP	PKPbc	09 25 38.9	-0.8
PRU				e		09 25 46.9	
PRU	Pruhonice	150.08	344	⇑ePKP	PKPbc	09 25 38.9	-0.8
PRU				ePKPAB	PKPab	09 25 46.9	-0.2
VYHS	Vyhne	150.08	337	i PKP	PKPbc	09 25 39.0	-0.8
VYHS				i		09 25 47.5	
VRAC	Vranov	150.12	341	PKHKP	PKPbc	09 25 39.3	-0.5
VRAC	Vranov	150.12	341	⇓iP	PKPbc	09 25 38.5	-1.3
MOX	Moxa	150.13	348	ePKP	PKPdf	09 25 33.5	-0.8
MOX				e		09 25 39.0	
	comp=Z,73nm,1.5s						
MOX	Moxa	150.13	348	ePKPbc	PKPbc	09 25 38.9	-0.9
MOX				ePKPab	PKPab	09 25 46.7	-0.6
KOLL	Kolacno	150.16	338	ePKP	PKPbc	09 25 39.2	-0.7
KOLL				e		09 25 47.9	
PSZ	Piszkesteto	150.17	336	⇑PKHKP	PKPbc	09 25 38.9	-1.1
PSZ	Piszkesteto	150.17	336	⇑ePKP	PKPbc	09 25 39.5	-0.5
PSZ	Piszkesteto	150.17	336	⇑iP	PKPbc	09 25 38.8	-1.2
TANN	Tannenbergstha	150.17	347	ePKPbc	PKPbc	09 25 39.0	-0.9
WERD	Werda	150.18	347	ePKPbc	PKPbc	09 25 38.9	-1.0
WERD				ePKPab	PKPab	09 25 46.9	-0.6
YLV	Yalova	150.22	315	eP	PKPdf	09 25 37.2	+2.4
GUNZ	Gunzen	150.25	347	ePKPbc	PKPbc	09 25 39.3	-0.8
GUNZ				ePKPab	PKPab	09 25 47.4	-0.4
UBBA	Unterbreizbach	150.25	350	ePKPbc	PKPbc	09 25 38.8	-1.3
IZI	Iznik	150.27	315	eP	PKPbc	09 25 38.8	-1.7
WERN	Wernitzgruen	150.31	347	ePKPbc	PKPbc	09 25 39.5	-0.7
WERN				ePKPab	PKPab	09 25 47.8	-0.2
NKC	Novy Kostel	150.35	347	ePKIKP	PKPbc	09 25 39.5	-0.8
NKC				e		09 25 47.3	
NKC	Novy Kostel	150.35	347	⇑ePKP	PKPbc	09 25 39.5	-0.8
NKC				ePKPAB	PKPab	09 25 47.3	-0.9
SHUT	Suhut-Afyon	150.39	311	eP	PKPdf	09 25 34.9	-0.3
GEMT	Gemlik	150.41	315	eP	PKPbc	09 25 39.6	-1.2
ULDT	Uludag	150.59	315	i P	PKPbc	09 25 39.5	-1.7
MANZ	Manzenberg	150.65	347	ePKPbc	PKPbc	09 25 40.3	-0.7
ISP	Isparta	150.73	310	eP	PKPdf	09 25 37.9	+2.2
ISP	Isparta	150.73	310	PKIKP	PKPbc	09 25 40.4	-1.2
ISP	Isparta	150.73	310	⇑iP	PKPbc	09 25 40.0	-1.6
SZH	Strazhica	150.74	323	i P	PKPbc	09 25 39.8	-1.7
BEBN	Eben Emael	150.79	355	PKPbc	PKPbc	09 25 40.5	-0.8
HGN	Heimansgroeve	150.80	355	ePKP	PKPbc	09 25 40.0	-1.4
	comp=Z,23nm,0.9s						
HGN				ex	PKPab	09 25 49.8	-0.3
ROTZ	Rotzenmuhle	150.84	347	ePKPbc	PKPbc	09 25 40.5	-1.0
ROTZ				ePKPab	PKPab	09 25 49.6	-0.7
BUD	Budapest	150.86	336	⇓ePKP	PKPbc	09 25 40.6	-1.0
UCC	Uccle	150.86	357	PKPbc	PKPbc	09 25 42.0	+0.5
GDZ	Gediz	150.88	313	i P	PKPdf	09 25 37.9	+2.1
GZR	Gura Zlata	150.91	329	⇓iP	PKPbc	09 25 40.2	-1.6
ZST	Bratislava	150.93	339	ePKIKP	PKPbc	09 25 41.1	-0.7
ZST				e		09 25 50.5	
ZST	Bratislava	150.93	339	ePKP	PKPbc	09 25 41.0	-0.8
ZST				e		09 25 50.5	
MEM	Membach	150.95	355	PKPbc	PKPbc	09 25 41.0	-0.7
TNS	Taunus Mts	151.06	352	ePKPbc	PKPbc	09 25 40.9	-1.1
TNS				ePKPab	PKPab	09 25 50.1	-1.1
PVL	Pavlikeni	151.11	323	P	PKPbc	09 25 42.1	-0.2
GRF	Grafenberg Arr	151.12	348	ePKPbc	PKPbc	09 25 41.2	-0.9
GRF				ePKPab	PKPab	09 25 51.2	-0.2
KHC	Kasperske Hory	151.12	344	ePKPDF	PKPdf	09 25 35.0	-0.9
KHC				⇑ePKP	PKPbc	09 25 41.2	-0.9
KHC				ePKPAB	PKPab	09 25 50.4	-1.0
EDRB	Edirne	151.15	320	eP	PKPbc	09 25 40.5	-1.9
SNF	Seneffe	151.16	357	PKPbc	PKPbc	09 25 42.0	-0.2
BCLA	Clavier	151.19	356	PKPab	PKPab	09 25 49.8	-1.9
KHL	Karahalli	151.21	311	eP	PKPbc	09 25 41.2	-1.6
BNT	Bandirma	151.27	316	eP	PKPbc	09 25 40.1	-2.7
WET	Wettzell	151.27	345	ePKPbc	PKPbc	09 25 41.5	-1.0
WET				ePKPab	PKPab	09 25 51.8	-0.3
BZS	Buzias	151.28	331	⇑iP	PKPbc	09 25 41.0	-1.6
GEC2	GERESS Array S	151.35	344	ePKPbc	PKPbc	09 25 41.6	-1.1
GEC2				ePKPab	PKPab	09 25 51.8	-0.6
GERES	GERESS Array B	151.35	344	PKP	PKPdf	09 25 35.5	-0.8
	comp=Z,1.8nm,0.8s,baz=123,slow=4.9,SNR=4.9						
GERES				PKPbc	PKPbc	09 25 41.4	-1.3
	comp=Z,13nm,0.6s,baz=22,slow=0.7,SNR=9.8						
BTOK	Tokmak	151.51	315	i P	PKPbc	09 25 42.1	-1.3
GIVF	Givet	151.53	356	ePKP1	PKPbc	09 25 42.0	-1.1
	comp=Z,66nm,0.7s						
DOU	Dourbes	151.55	357	PKPbc	PKPbc	09 25 42.2	-0.9
SOP	Sopron	151.56	339	ePKP	PKPbc	09 25 40.5	-2.7
CONA	Conrad Observa	151.56	340	⇑iPKPdf	PKPdf	09 25 34.8	-1.8
	comp=Z,5.0nm,1.1s,SNR=15						
CONA				⇓iPKPbc	PKPbc	09 25 42.7	-0.5
	comp=Z,28nm,0.6s						
BAIF	Baives	151.61	357	ePKP1	PKPbc	09 25 42.2	-1.0
	comp=Z,38nm,0.8s						
ELL	Elmali	151.62	308	eP	PKPbc	09 25 42.3	-1.4
GOLH	Golhisar	151.67	309	i P	PKPdf	09 25 38.6	+1.5
BALB	Balikesir	151.68	315	eP	PKPdf	09 25 37.9	+0.8
KULA	Kula-Manisa	151.72	312	eP	PKPbc	09 25 41.4	-2.5
WLF	Walferdange	151.87	354	PKPbc	PKPbc	09 25 43.7	-0.2
KDZ	Kurdzhali	152.06	321	i P	PKPbc	09 25 43.5	-1.0
PKSM	Moragy	152.06	335	⇑PKIKP	PKPdf	09 25 37.1	-0.3
PKSM	Moragy	152.06	335	⇑iP	PKPdf	09 25 37.0	-0.4
MOA	Molln	152.11	342	⇓i	PKPab	09 25 55.5	-0.2
	comp=Z,18nm,0.7s						
MOA	Molln	152.11	342	⇑iPKPbc	PKPbc	09 25 43.5	-0.9
	comp=Z,14nm,0.7s,SNR=8.4						
MOA				⇑iPKPab	PKPab	09 25 54.9	-0.8
	comp=Z,18nm,0.7s						
AKS	Akhisar	152.11	314	eP	PKPbc	09 25 41.8	-2.9
PGB	Panagyurishte	152.19	324	P	PKPbc	09 25 43.6	-1.2
FETY	Fethiye	152.27	308	eP	PKPbc	09 25 43.4	-1.8
RZN	Rozhen	152.44	322	P	PKPbc	09 25 45.1	-0.3
DALT	Dalyan (Mudla)	152.54	309	eP	PKPbc	09 25 41.7	-4.1
EZN	Ezine	152.58	317	eP	PKPbc	09 25 43.6	-2.1
YER	Yerkesik	152.63	310	eP	PKPbc	09 25 44.8	-1.2
VTS	Vitosha	152.69	325	P	PKPbc	09 25 45.8	-0.1
VTS	Vitosha	152.69	325	⇓iP	PKPbc	09 25 44.1	-1.8
IZM	Izmir	152.73	313	eP	PKPbc	09 25 43.2	-2.9
FLN	La Foliniere	152.87	4	ePKP1	PKPbc	09 25 44.5	-1.6
	comp=Z,30nm,0.6s						
BFO	Black Forest	152.93	351	ePKPbc	PKPbc	09 25 44.6	-1.6
BFO				ePKPab	PKPab	09 25 58.0	-1.1
PERS	Pernice	152.95	340	i PKPbc	PKPbc	09 25 44.6	-1.7
CDF	Champ du Feu	152.99	352	ePKP1	PKPbc	09 25 45.1	-1.2
	comp=Z,33nm,0.8s						
ROSF	Rostrenen	153.03	8	ePKP1	PKPbc	09 25 44.7	-1.7
LDF	La Druitiere	153.06	3	ePKP1	PKPbc	09 25 44.8	-1.7
	comp=Z,22nm,0.7s						
KBA	Koelnbreinsper	153.07	343	⇑i	PKPdf	09 25 45.2	+6.4
	comp=Z,18nm,0.7s						
KBA	Koelnbreinsper	153.07	343	⇑i	PKPab	09 26 00.9	+1.2
	comp=Z,30nm,0.6s						
KBA	Koelnbreinsper	153.07	343	⇑iPKPdf	PKPdf	09 25 36.6	-2.3
	comp=Z,3.6nm,1.1s						
KBA				⇑iPKPbc	PKPbc	09 25 45.2	-1.3
	comp=Z,18nm,0.7s						
KBA				⇑iPKPab	PKPab	09 26 00.9	+1.2
	comp=Z,30nm,0.6s						
MEZF	Maizieres J'vi	153.11	356	ePKP1	PKPbc	09 25 45.6	-1.0
	comp=Z,33nm,0.8s						
SGMF	Saint Gilles	153.19	7	ePKP1	PKPbc	09 25 45.1	-1.7
	comp=Z,37nm,0.8s						
ECH	Echery	153.20	353	PKP	PKPbc	09 25 46.6	-0.2
GRR	Gorron	153.22	4	ePKP1	PKPbc	09 25 45.4	-1.4
	comp=Z,27nm,0.6s						
DAT	Datca	153.31	310	eP	PKPbc	09 25 45.3	-2.1
WTTA	Wattenberg	153.33	346	⇓iP	PKPdf	09 25 39.9	+0.7
	comp=Z,12nm,1.1s,SNR=11						
WTTA	Wattenberg	153.33	346	⇑i	PKPbc	09 25 46.4	-0.7
	comp=Z,39nm,0.7s						
WTTA	Wattenberg	153.33	346	⇓i	PKPab	09 26 00.4	-0.4
	comp=Z,55nm,0.6s						
WTTA	Wattenberg	153.33	346	⇑iPKPdf	PKPdf	09 25 38.5	-0.8
	comp=Z,12nm,1.1s,SNR=11						
WTTA				⇑iPKPbc	PKPbc	09 25 46.4	-0.7
	comp=Z,39nm,0.7s						
WTTA				⇓iPKPab	PKPab	09 26 00.4	-0.4
	comp=Z,55nm,0.6s						
MYKA	Terra Mystica	153.40	342	⇓iPKPdf	PKPdf	09 25 38.2	-1.2
	comp=Z,1.7nm,0.5s						
MYKA				⇓iPKPbc	PKPbc	09 25 45.4	-1.9
	comp=Z,17nm,0.7s						
MYKA				⇑iPKPab	PKPab	09 26 00.3	-0.8
	comp=Z,26nm,0.6s						
HAU	Haudompre	153.50	354	ePKP1	PKPbc	09 25 46.1	-1.3
	comp=Z,17nm,0.5s						
MOF	Molkenrain	153.56	352	PKP	PKPbc	09 25 48.1	+0.5
ABTA	Abfaltersbach	153.59	344	⇑iPKPdf	PKPdf	09 25 38.1	-1.5
	comp=Z,14nm,1.3s						
ABTA				⇑iPKPbc	PKPbc	09 25 46.4	-1.3
	comp=Z,29nm,0.6s						
ABTA				⇓iPKPab	PKPab	09 26 01.5	-0.5
	comp=Z,25nm,0.6s						
HINF	Hinteralfeld	153.63	353	ePKP1	PKPbc	09 25 46.7	-1.0
	comp=Z,12nm,0.6s						
VOY	Vojsko	153.86	341	ePKPbc	PKPbc	09 25 46.5	-1.8
VOY				e		09 25 48.2	
VOY				e		09 26 01.8	
VAY	Valandovo	153.90	323	i PKP	PKPbc	09 25 48.1	-0.5
VAY				e1		09 26 03.2	
VAY				i 2		09 26 10.6	
BOJS	Bojanci	153.90	339	ePKPdf	PKPdf	09 25 41.6	+1.5
BOJS				ePKPbc	PKPbc	09 25 47.5	-0.9
BOJS				i		09 25 49.2	
BOJS				i		09 26 02.2	
BOJS				e		09 26 12.0	
JAVS	Javornik	153.94	341	ePKPbc	PKPbc	09 25 47.9	-0.6
JAVS				e		09 26 01.8	
SKO	Skopje	154.06	326	ePKP	PKPbc	09 25 49.9	+1.0
LOMF	Lomont	154.09	353	PKP	PKPbc	09 25 49.2	+0.5
LOR	Lormes	154.41	357	ePKP1	PKPbc	09 25 48.3	-1.1
KRUS	Krusevo	154.59	325	i PKP	PKPdf	09 25 48.9	+7.7
KRUS				e1		09 26 06.3	
SSF	Saint Saulge	154.63	358	ePKP1	PKPbc	09 25 48.7	-1.2
CABF	La Chapelle	154.90	354	ePKP1	PKPbc	09 25 49.8	-0.7
	comp=Z,23nm,0.8s						
TCF	Toulx Ste Croi	155.43	360	ePKP1	PKPdf	09 25 50.1	+7.9
	comp=Z,14nm,0.8s						
SAOF	Saorge	157.28	350	PKP	PKPdf	09 25 56.3	+12
LUCF	Luceram	157.41	350	PKP	PKPdf	09 25 58.7	+14
MVIF	Mont Vial	157.44	351	PKP	PKPdf	09 25 55.0	+10
CALN	Calern	157.62	351	PKP	PKPdf	09 25 58.3	+13
ESDC	Sonseca Array	161.29	15	PKPab	PKPab	09 26 34.5	-1.0
	comp=Z,0.3nm,0.3s,baz=334,slow=2.1,SNR=6.1						
LIC	Lamto	163.16	155	ePKIKP	PKPdf	09 25 51.0	-1.0
	comp=Z,35nm,0.9s						
LIC	Lamto	163.16	155	⇓iPKIKP	PKPdf	09 25 51.1	-0.9
	comp=Z,49nm,0.9s						
KIC	Kosan Boka	163.39	155	⇓iPKIKP	PKPdf	09 25 51.2	-1.0
	comp=Z,85nm,0.8s						
TIC	Toumodi	163.54	154	⇓iPKIKP	PKPdf	09 25 51.5	-0.9
	comp=Z,68nm,0.9s						

KEST	**Kesra**	**164.63**	**337**	PKPab	PKPab	09 26 50.0	-0.4
	comp=Z,4.5nm,0.6s,baz=271,slow=0.9,SNR=11						
TORD	**Torodi Ar. Bea**	**171.53**	**177**	PKP	PKPdf	09 25 56.1	-1.8
	comp=Z,6.8nm,0.9s,baz=334,slow=0.6,SNR=39						
TORD				PKPab	PKPab	09 27 21.1	-0.1
	comp=Z,11nm,0.8s,baz=167,slow=4.4,SNR=28						

CASC 02 09:09:31.8±2.6**,906N**×**8397W,h0**^{km}±4^{km}**,MD3.8,ML2.1, 3C-6D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.41**	**332**	⇓*i*P	Pg	09 09 40.3	+0.6
QCR				*e*S	Sg	09 09 47.3	+2.3
BUS	**Buena Vista**	**0.53**	**23**	⇓*i*P	Pg	09 09 43.8	+1.7
BUS				*e*S	Sg	09 09 53.6	+4.7
BAR1		**0.67**	**74**	*e*P	Pg	09 09 45.9	+1.2
BAR1				*e*S	Sg	09 09 58.3	+4.9
LCR2	**La Lucha 2**	**0.68**	**357**	⇓*i*P	Pg	09 09 45.6	+0.7
URSC	**Urasca**	**0.79**	**14**	⇓*i*P	Pg	09 09 48.0	+1.0
URSC				*e*S	Sg	09 10 00.4	+3.1
LAJ	**Bijagual**	**0.81**	**349**	⇓*e*P	Pg	09 09 47.9	+0.5
SJS	**Escuela Geolog**	**0.88**	**354**	*e*P	Pg	09 09 48.9	+0.3
SJS				*e*S	Sg	09 10 02.9	+2.8
ICR	**Volcan Irazu**	**0.92**	**8**	*e*P	Pg	09 09 50.2	+0.6
ICR				*e*S	Sg	09 10 06.0	+4.4
PRS1	**Puriscal**	**0.98**	**340**	⇓*e*P	Pg	09 09 48.7	-1.8
CGA2	**Cerro Gallo 2**	**1.07**	**333**	⇑*e*P	Pg	09 09 51.7	-0.6
CGA2				*e*S	Sg	09 10 07.1	+0.9
BRU	**Baru**	**1.41**	**100**	*e*P	Pn	09 09 57.5	-1.2
CNI	**Changuinola**	**1.48**	**76**	⇑*i*P	Pn	09 09 59.9	+0.3
2RIO	**Dos Rios de Up**	**1.92**	**320**	*e*P	Pn	09 10 12.4	+6.7
CUI		**1.99**	**323**	⇑*i*P	Pn	09 10 07.8	+1.1
CUI				*e*S	Sn	09 10 35.8	+3.4
BOAB	**BOACO BROADBAN**	**3.76**	**334**	*e*P	Pn	09 10 31.8	+0.7
BOAB				*i*		09 11 30.5	
	comp=N,5.7nm,0.6s						

DDA ***02*** *09:17:47.3,3864N×39.18E,h5^{km},Md3.0*
ISCJB ***02*** *09:17:50.9±0.6,3836N±003×3929E±003,h5^{km}±6^{km}, Error ellipse: s-maj=4.9km s-min=4.3km az=163.4*
CSEM ***02*** *09:17:50.4±0.1,3836N×3926E,h5^{km},MD3.0,Error ellipse: s-maj=2.1km s-min=1.9km az=161.0*
ISK ***02*** *09:17:50.0,3836N×3926E,h2^{km},MD3.0*
ISC 02 09:17:51.5±0.5**,3837N**±003×**3929E**±003**,h9**^{km}±5^{km}**,n20,** σ**0^{s}87**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.27**	**299**	*i* P	**Pg**	**09 17 50.8**	**-6.2**
ELZG				*i* S	**Sg**	**09 18 00.6**	**-0.1**
PTK	**Pertek**	**0.53**	**9**	PG	**Pg**	**09 18 01.2**	**-0.7**
PTK				SG	**Sg**	**09 18 09.8**	**+0.9**
MALT	**Malatya**	**0.68**	**266**	PG	**Pg**	**09 18 03.3**	**-1.3**
MYA	**Malataya**	**0.68**	**267**	PG	**Pg**	**09 18 03.4**	**-1.2**
MYA				SG	**Sg**	**09 18 13.5**	**0.0**
DIY	**Diyarbakir**	**0.88**	**122**	PG	**Pg**	**09 18 08.1**	**-0.3**
DIY				SG	**Sg**	**09 18 21.2**	**+1.4**
URFA	**Urfa**	**0.99**	**202**	PG	**Pg**	**09 18 10.1**	**-0.5**
BINT	**Bingol**	**1.07**	**61**	*e*PN	**Pn**	**09 18 12.5**	**-0.2**
ATAB	**Bozova**	**1.19**	**222**	*i* P	**Pb**	**09 18 14.2**	**0.0**
ATAB				*i* S	**Sb**	**09 18 30.6**	**+1.0**
ATAB	**Bozova**	**1.19**	**222**	*i* P	**Pb**	**09 18 14.2**	**0.0**
ATAB				*i* S	**Sb**	**09 18 30.6**	**+1.0**
EZC	**Erzincan**	**1.44**	**17**	*e*PN	**Pn**	**09 18 17.5**	**-0.3**
BNGL	**BINGOL**	**1.57**	**68**	*i* P	**Pn**	**09 18 19.2**	**-0.4**
MARD	**Mardin**	**1.58**	**131**	*i* P	**Pn**	**09 18 19.6**	**-0.1**
MARD				*i* S	**Sn**	**09 18 40.0**	**-0.3**
GZT	**Gaziantep**	**1.69**	**234**	*i* P	**Pn**	**09 18 19.8**	**-1.5**
GZT				*i* S	**Sg**	**09 18 47.8**	**+1.8**
BTMT	**Batman**	**1.74**	**95**	*e*PN	**Pn**	**09 18 20.0**	**-1.9**
KELT	**Kelkit**	**1.78**	**359**	*i* P	**Pn**	**09 18 22.9**	**+0.4**
GAZ	**Gaziantep**	**2.03**	**235**	*e*PN	**Pn**	**09 18 26.1**	**+0.2**
GUMT	**Gumushane**	**2.10**	**4**	*e*PN	**Pn**	**09 18 27.7**	**+0.9**
EZM	**Erzurum**	**2.23**	**46**	*e*PN	**Pn**	**09 18 29.5**	**+0.9**
SVSK	**Karacayir**	**2.36**	**312**	*e*PN	**Pn**	**09 18 31.4**	**+1.0**
HAKT	**HAKKARI**	**3.59**	**102**	*i* P	**Pb**	**09 18 55.3**	**+0.2**

CSEM ***02*** *09:24:39.7±0.1,3455N×4.17W,h40^{km},ML3.9/6,Error ellipse: s-maj=4.7km s-min=2.7km az=105.0*
ISCJB ***02*** *09:24:39.5±0.4,3463N±002×443W±003,h63^{km}±8^{km}, Error ellipse: s-maj=4.8km s-min=3.3km az=20.2*
NEIC ***02*** *09:24:40.6,3462N×431W,h20^{km},MG3.6(MDD),After MDD.*
CNRM ***02*** *09:24:41.3,3457N×436W,h17^{km},MD3.4*
MDD ***02*** *09:24:41.7±0.5,3457N×432W,h46^{km}±12^{km},mb3.8/7, Error ellipse: s-maj=5.7km s-min=3.3km az=113.0, PRXIMO*
INMG ***02*** *09:24:42.0±1.2,3467N×436W,h31^{km},ML2.5,Error ellipse: s-maj=7.6km s-min=4.1km az=179.0*
ISC 02 09:24:40.8±0.4**,3462N**±002×**441W**±003**,h49**^{km}±12^{km}**,n58,** σ**1^{s}28**/101**,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TZK	**Tazeka**	**0.56**	**161**	*i* P	**Pn**	**09 24 52.0**	**-0.7**
TZK				*i* S	**Sn**	**09 25 00.5**	**-0.7**
TOU	**Touzarine**	**0.64**	**57**	*i* P	**Pn**	**09 24 53.0**	**-0.7**
TOU				*i* S	**Sn**	**09 25 02.0**	**-1.0**
MPAL	**Palemas**	**0.72**	**32**	*i* P	**Pn**	**09 24 55.0**	**+0.3**
MPAL				*i* S	**Sn**	**09 25 06.0**	**+1.2**
TGT	**Taghat**	**0.76**	**225**	*i* P	**Pn**	**09 24 56.0**	**+0.7**
TGT				*i* S	**Sn**	**09 25 07.5**	**+1.6**
DKH	**Dar Kharkhour**	**1.17**	**318**	P	**Pn**	**09 25 03.0**	**+2.3**
DKH				S	**Sn**	**09 25 17.0**	**+1.4**
DKH	**Dar Kharkhour**	**1.17**	**318**	*e*P	**Pn**	**09 25 03.0**	**+2.3**
MIF	**Mishlifen**	**1.38**	**210**	P	**Pn**	**09 25 04.0**	**+0.3**
MIF				S	**Sn**	**09 25 19.0**	**-1.8**
MIF	**Mishlifen**	**1.38**	**210**	*e*P	**Pn**	**09 25 04.0**	**+0.3**
ZAI	**Zaio**	**1.41**	**75**	P	**Pn**	**09 25 05.0**	**+1.0**
ZAI				S	**Sn**	**09 25 21.0**	**-0.5**
CZD	**Col de Zad**	**1.67**	**199**	*i* P	**Pn**	**09 25 08.0**	**+0.5**
CZD				*i* S	**Sn**	**09 25 27.0**	**-0.7**
EALB	**Alboran**	**1.73**	**40**	S	**Sn**	**09 25 27.0**	**-2.3**
	33nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.73**	**40**	S	**Sn**	**09 25 27.0**	**-2.4**
	33nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.97**	**351**	P	**Pn**	**09 25 10.3**	**-1.3**
EMIJ				S	**Sn**	**09 25 32.4**	**-2.7**
EMIJ	**Mijas**	**1.97**	**351**	P	**Pn**	**09 25 11.2**	**-0.4**
	0.9nm,0.1s,SNR=7.1						
EMIJ				S	**Sn**	**09 25 32.4**	**-2.7**
	37nm,0.2s,SNR=17						
EMIJ	**Mijas**	**1.97**	**351**	P	**Pn**	**09 25 10.3**	**-1.3**
	0.9nm,0.1s,SNR=7.1						
EGUA	**Guajares**	**2.32**	**17**	P	**Pn**	**09 25 15.9**	**-0.6**
	1.3nm,0.1s,SNR=7.9						
EGUA				S	**Sn**	**09 25 42.5**	**-1.2**
	4.6nm,0.1s,SNR=7.9						
ERON	**Agron**	**2.45**	**11**	S	**Sn**	**09 25 47.8**	**+0.9**
	5.4nm,0.2s,SNR=7.9						
KIB	**El Ksiba**	**2.45**	**214**	P	**Pn**	**09 25 18.5**	**+0.3**
KIB				S	**Sn**	**09 25 46.0**	**-0.9**
KIB	**El Ksiba**	**2.45**	**214**	*e*P	**Pn**	**09 25 18.5**	**+0.3**
ESPR	**Espera**	**2.54**	**333**	S	**Sn**	**09 25 50.4**	**+1.3**
	6.5nm,0.2s,SNR=7.9						
ESPR	**Espera**	**2.54**	**333**	S	**Sn**	**09 25 50.4**	**+1.3**
	6.5nm,0.2s,SNR=7.9						
ZFT	**Errachidia**	**2.58**	**179**	*e*P	**Pn**	**09 25 20.0**	**0.0**
ZFT				*i* S	**Sn**	**09 25 48.0**	**-2.1**
EBER	**Berja**	**2.59**	**28**	P	**Pn**	**09 25 20.2**	**+0.1**
	1.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**09 25 48.5**	**-1.9**
	10nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.59**	**28**	P	**Pn**	**09 25 20.2**	**0.0**
	1.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**09 25 48.5**	**-1.9**
	10nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.70**	**17**	P	**Pn**	**09 25 22.9**	**+1.2**
	1.2nm,0.2s,SNR=5.2						
EQUE				S	**Sn**	**09 25 53.1**	**+0.1**
	4.8nm,0.3s,SNR=5.5						
ELUQ	**Luque**	**2.94**	**2**	S	**Sn**	**09 26 03.7**	**+4.7**
	10nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.36**	**18**	P	**Pn**	**09 25 34.1**	**+3.4**
EQES				S	**Sn**	**09 26 11.3**	**+2.0**
EQES	**Quesada**	**3.36**	**18**	P	**Pn**	**09 25 33.1**	**+2.4**
	1.1nm,0.1s,SNR=4.0						
EQES				S	**Sn**	**09 26 10.0**	**+0.7**
	14nm,0.3s,SNR=4.5						
EQES	**Quesada**	**3.36**	**18**	P	**Pn**	**09 25 34.1**	**+3.4**
	1.1nm,0.1s,SNR=4.0						
EQES				S	**Sn**	**09 26 11.3**	**+2.0**
	14nm,0.3s,SNR=4.5						
EADA	**Adamuz**	**3.55**	**358**	P	**Pn**	**09 25 34.1**	**+0.8**
	0.0nm,0.0s,SNR=10						
EADA				S	**Sn**	**09 26 15.3**	**+1.4**
	3.9nm,0.2s,SNR=5.7						
EADA	**Adamuz**	**3.55**	**358**	P	**Pn**	**09 25 34.1**	**+0.8**
	SNR=10						
EADA				S	**Sn**	**09 26 15.3**	**+1.4**
	3.9nm,0.2s,SNR=5.7						
EMIN	**Mina Concepcio**	**3.64**	**330**	P	**Pn**	**09 25 36.3**	**+1.7**
	0.9nm,0.1s,SNR=8.8						
EMIN				S	**Sn**	**09 26 15.1**	**-1.1**
	2.0nm,0.2s						
EMIN	**Mina Concepcio**	**3.64**	**330**	P	**Pn**	**09 25 36.3**	**+1.8**
	0.9nm,0.1s,SNR=8.8						
EGRO	**El Granado**	**3.83**	**320**	P	**Pn**	**09 25 38.3**	**+1.1**
EGRO				S	**Sn**	**09 26 19.4**	**-1.6**
EGRO	**El Granado**	**3.83**	**320**	P	**Pn**	**09 25 38.3**	**+1.1**
	0.7nm,0.0s,SNR=19						
EGRO				S	**Sn**	**09 26 19.4**	**-1.6**
	5.1nm,0.1s,SNR=5.8						
EGRO	**El Granado**	**3.83**	**320**	P	**Pn**	**09 25 38.3**	**+1.1**
PVAQ	**Vaqueiros**	**3.86**	**317**	*e*Pn	**Pn**	**09 25 38.3**	**+0.7**
PVAQ				*e*Sn	**Sn**	**09 26 20.3**	**-1.4**
PVAQ				A		09 26 23.6	
	9.4nm,0.1s						
PVAQ	**Vaqueiros**	**3.86**	**317**	*e*Pn	**Pn**	**09 25 38.3**	**+0.7**
PVAQ				*e*Sn	**Sn**	**09 26 20.3**	**-1.4**
	9.4nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.88**	**314**	*e*Pn	**Pn**	**09 25 38.2**	**+0.4**
PBDV				*e*Sn	**Sn**	**09 26 20.8**	**-1.3**
PBDV				A		09 26 25.3	
	4.1nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.88**	**314**	*e*Pn	**Pn**	**09 25 38.2**	**+0.4**
PBDV				*e*Sn	**Sn**	**09 26 20.8**	**-1.3**
	4.1nm,0.1s						
PBAR	**Barrancos**	**4.14**	**330**	*e*Pn	**Pn**	**09 25 43.1**	**+1.7**
PBAR				*e*Sn	**Sn**	**09 26 27.4**	**-1.0**
PBAR				A		09 26 30.4	
	6.0nm,0.1s						
PBAR	**Barrancos**	**4.14**	**330**	*e*Pn	**Pn**	**09 25 43.1**	**+1.7**
PBAR				*e*Sn	**Sn**	**09 26 27.4**	**-1.0**
	6.0nm,0.1s						
MORF	**Marmelete**	**4.36**	**309**	*e*Pn	**Pn**	**09 25 46.6**	**+2.1**
MORF				*e*Sn	**Sn**	**09 26 33.6**	**-0.4**
MORF				A		09 26 37.1	
	8.8nm,0.1s						
MORF	**Marmelete**	**4.36**	**309**	*e*Pn	**Pn**	**09 25 46.6**	**+2.1**
MORF				*e*Sn	**Sn**	**09 26 33.6**	**-0.4**
	8.8nm,0.1s						
PFVI	**Vila Bisbo**	**4.38**	**306**	*e*Pn	**Pn**	**09 25 45.8**	**+1.1**
PFVI				*e*Sn	**Sn**	**09 26 32.2**	**-2.2**
PFVI				A		09 26 38.5	
	4.5nm,0.1s						
PFVI	**Vila Bisbo**	**4.38**	**306**	*e*Pn	**Pn**	**09 25 45.8**	**+1.1**
PFVI				*e*Sn	**Sn**	**09 26 32.2**	**-2.2**
	4.5nm,0.1s						
PTEO	**Sao Teotonio**	**4.56**	**311**	*e*Pn	**Pn**	**09 25 48.4**	**+1.3**
PTEO				*e*Sn	**Sn**	**09 26 37.6**	**-1.2**
EBAD	**Badajoz**	**4.63**	**334**	P	**Pn**	**09 25 49.5**	**+1.3**
	0.5nm,0.1s,SNR=9.3						
EBAD				S	**Sn**	**09 26 39.5**	**-1.1**
	10nm,0.2s,SNR=6.0						
EBAD	**Badajoz**	**4.63**	**334**	P	**Pn**	**09 25 49.5**	**+1.4**
ETOB	**Tobarra**	**4.63**	**29**	P	**Pn**	**09 25 48.8**	**+0.6**
ETOB				S	**Sn**	**09 26 40.0**	**-0.6**
ETOB	**Tobarra**	**4.63**	**29**	P	**Pn**	**09 25 48.8**	**+0.6**
	1.0nm,0.2s,SNR=4.0						
ETOB				S	**Sn**	**09 26 37.9**	**-2.7**
	3.6nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**4.63**	**29**	P	**Pn**	**09 25 48.8**	**+0.6**
ETOB				S	**Sn**	**09 26 40.0**	**-0.6**
EVO	**Evora**	**4.87**	**324**	*e*Pn	**Pn**	**09 25 52.1**	**+0.7**
EVO				*e*Sn	**Sn**	**09 26 45.6**	**-0.8**
EVO				A		09 26 48.7	
	8.4nm,0.1s						
EVO	**Evora**	**4.87**	**324**	*e*Pn	**Pn**	**09 25 52.1**	**+0.7**
EVO				*e*Sn	**Sn**	**09 26 45.6**	**-0.8**
	8.4nm,0.1s						
PESTR	**Estremoz**	**4.95**	**330**	*e*Pn	**Pn**	**09 25 54.1**	**+1.5**
PESTR				*e*Sn	**Sn**	**09 26 46.6**	**-1.9**
MOE	**Montemor**	**5.03**	**322**	*e*Pn	**Pn**	**09 25 56.4**	**+2.8**
MOE				*e*Sn	**Sn**	**09 26 50.1**	**-0.2**
PCBR	**Castelo Branco**	**5.76**	**336**	*e*Sn	**Sn**	**09 27 06.6**	**-1.8**
PCBR				A		09 27 10.5	
	2.5nm,0.1s						
PCBR	**Castelo Branco**	**5.76**	**336**	Sn	**Sn**	**09 27 06.6**	**-1.8**
	1.2nm,0.1s						

ISCJB ***02*** *09:28:25.9±0.7,3874N±003×12273W±005,h10^{km},Error ellipse: s-maj=5.7km s-min=4.9km az=178.1*
NEIC ***02*** *09:28:30.8,3878N×12272W,h4^{km},ML3.1(NCEDC), After NCEDC.*
NEIC Felt [IV] at Middletown and [II] at Dublin. Also felt at Albany, Calistoga, Fairfield, Hayward, Hercules, Kelseyville, Mountain View, Napa, Novato, Pleasanton, San Francisco, Santa Rosa and Sausalito.
ISC 02 09:28:27.3±0.8**,3873N**±004×**12272W**±006**,h10**^{km}**,n15,** σ**1^{s}79**/23**,1C-1D,Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSHM	**Saint Helena R**	**0.23**	**157**	*e*Pg	**Pg**	**09 28 29.7**	**-2.2**
NSHM				*e*Sg	**Sg**	**09 28 36.3**	**+1.2**
MNRC	**McLaughlin Nat**	**0.26**	**55**	P	**Pg**	**09 28 30.0**	**-2.5**
	baz=0.2,SNR=143						
MNRC				⇓S	**Sg**	**09 28 34.4**	**-1.7**
	baz=0.2						
HOPS	**Hopland**	**0.38**	**314**	*e*Pg	**Pg**	**09 28 31.9**	**-2.9**
HOPS				*e*Sg	**Sg**	**09 28 38.2**	**-1.6**
HOPS				*e*Sg	**Sg**	**09 28 45.1**	**+5.3**
HOPS	**Hopland**	**0.38**	**314**	⇑P	**Pg**	**09 28 31.8**	**-3.0**
	baz=0.3						
CVS	**Carmenet Viney**	**0.43**	**152**	P	**Pg**	**09 28 33.7**	**-2.0**
	baz=0.5,SNR=76						
MCCM	**Marconi Confer**	**0.60**	**192**	*e*Pg	**Pg**	**09 28 38.9**	**+0.1**
MCCM				*e*Sg	**Sg**	**09 28 52.3**	**+5.6**
OHCM	**Honcut**	**1.14**	**57**	*e*Pg	**Pg**	**09 28 50.5**	**+1.5**
OHCM				*e*Sg	**Sg**	**09 29 04.4**	**+0.5**
WDC	**Whiskeytown Da**	**1.85**	**4**	*e*Pn	**Pn**	**09 29 02.5**	**+3.5**
CMB	**Columbia Colle**	**1.96**	**110**	*e*Pg	**Pg**	**09 29 04.4**	**-0.4**
CMB				*e*Sg	**Sg**	**09 29 30.0**	**-0.3**
SAO	**San Andreas Ge**	**2.21**	**152**	*e*Pn	**Pn**	**09 29 06.7**	**+2.7**
MTUM	**Tungsten Hills**	**3.56**	**111**	*e*Pn	**Pn**	**09 29 26.2**	**+3.7**
MOD	**Modoc**	**3.67**	**29**	*e*Pn	**Pn**	**09 29 25.1**	**+1.1**
DAC	**Darwin (Calif)**	**4.75**	**119**	*e*Pn	**Pb**	**09 29 45.8**	**-4.8**
DAC				*e*Sn	**Sb**	**09 30 50.8**	**+2.9**
WVOR	**Wild Horse Val**	**4.83**	**39**	*e*Pg	**Pg**	**09 30 03.5**	**+3.7**
TPNV	**Topopah Spring**	**5.42**	**107**	*e*Pg	**Pg**	**09 30 08.1**	**-3.0**
	7.9nm,1.0s						

ISK ***02*** *09:30:31.7,3841N×3922E,h5^{km},MD2.8*
ISCJB ***02*** *09:30:32.9±0.5,3840N±003×3928E±003,h5^{km},Error ellipse: s-maj=4.7km s-min=3.7km az=7.6*
CSEM ***02*** *09:30:32.2±0.1,3841N×3925E,h5^{km},MD3.0,Error ellipse: s-maj=2.8km s-min=2.5km az=166.0*
DDA ***02*** *09:30:33.2,3833N×3925E,h5^{km},Md3.0*
ISC 02 09:30:33.4±0.6**,3841N**±004×**3927E**±004**,h8**^{km}±6^{km}**,n14,** σ**0^{s}97**/22**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**292**	*i* P	**Pg**	**09 30 38.0**	**-0.3**
ELZG				*i* S	**Sg**	**09 30 42.0**	**+0.5**
PTK	**Pertek**	**0.49**	**11**	PG	**Pg**	**09 30 42.5**	**-0.5**
PTK				SG	**Sg**	**09 30 50.6**	**+1.1**
MALT	**Malatya**	**0.67**	**262**	PG	**Pg**	**09 30 45.0**	**-1.3**
MALT				SG	**Sg**	**09 30 55.0**	**0.0**
MYA	**Malataya**	**0.67**	**263**	PG	**Pg**	**09 30 44.9**	**-1.4**
DIY	**Diyarbakir**	**0.91**	**124**	PG	**Pg**	**09 30 50.4**	**-0.5**
DIY				SG	**Sg**	**09 31 05.0**	**+2.3**
URFA	**Urfa**	**1.03**	**200**	PG	**Pg**	**09 30 52.7**	**-0.4**
BINT	**Bingol**	**1.06**	**63**	*e*PN	**Pn**	**09 30 54.3**	**-0.3**
ATAB	**Bozova**	**1.21**	**220**	*i* P	**Pb**	**09 30 57.1**	**+0.6**
ATAB				*i* S	**Sg**	**09 31 13.2**	**+0.9**
ATAB	**Bozova**	**1.21**	**220**	*i* P	**Pb**	**09 30 57.1**	**+0.5**
ATAB				*i* S	**Sg**	**09 31 13.2**	**+0.9**
BNGL	**BINGOL**	**1.57**	**69**	*i* P	**Pn**	**09 31 02.4**	**+0.8**
MARD	**Mardin**	**1.62**	**132**	*i* P	**Pn**	**09 31 01.1**	**-1.1**
MARD				*i* S	**Sn**	**09 31 22.4**	**-0.7**
GZT	**Gaziantep**	**1.71**	**233**	*i* P	**Pn**	**09 31 03.2**	**-0.3**
GZT				*i* S	**Sn**	**09 31 28.4**	**+2.9**
BTMT	**Batman**	**1.76**	**96**	*e*PN	**Pn**	**09 31 03.4**	**-0.7**
SVSK	**Karacayir**	**2.32**	**311**	*e*PN	**Pn**	**09 31 12.4**	**+0.5**

CASC 02 09:40:52.9±1.5**,820N**×**8273W,h16**^{km}±6^{km}**,MD3.6,1C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.59**	**4**	⇓*i*P	Pg	09 41 04.4	-0.2
BRU2				*e*S	Sg	09 41 14.4	+1.9
TBS2		**0.60**	**7**	⇓*e*P	Pg	09 41 10.9	+6.2
TBS2				*e*S	Sg	09 41 20.4	+7.7
BRU	**Baru**	**0.63**	**16**	⇓*i*P	Pg	09 41 05.6	+0.3
CTCR	**Cotoan**	**0.69**	**358**	⇑*e*P	Pg	09 41 05.9	-0.6
CTCR				*e*S	Sg	09 41 15.9	+0.1
BAR1		**1.19**	**331**	*e*P	Pn	09 41 13.4	-1.4
BAR1				*e*S	Sb	09 41 29.2	-1.0
CNI	**Changuinola**	**1.23**	**10**	*e*P	Pn	09 41 13.8	-1.8
QCR	**Quepos**	**1.87**	**311**	*e*P	Pn	09 41 23.6	-0.7
QCR				*e*S	Sn	09 41 47.8	+0.2
URSC	**Urasca**	**1.93**	**328**	*e*P	Pn	09 41 24.6	-0.5
URSC				*e*S	Sn	09 41 49.8	+0.8
LCR2	**La Lucha 2**	**1.98**	**321**	*e*P	Pn	09 41 26.6	+0.8
LCR2				*e*S	Sn	09 41 51.5	+1.1
PRS1	**Puriscal**	**2.36**	**319**	*e*P	Pn	09 41 31.1	0.0
PRS1				*e*S	Sn	09 42 00.6	+0.8
PTP	**Ponta Puerca**	**19.40**	**57**	*e*P		09 40 57.0	

ISCJB ***02*** *09:56:00.7±0.4,4085N±003×2286E±004,h17^{km}±7^{km}, Error ellipse: s-maj=5.7km s-min=3.6km az=140.5*
ATH ***02*** *09:56:00.9,4087N×2287E,h22^{km}±5^{km},MD3.3/3*
THE ***02*** *09:56:00.9,4084N×2282E,h1^{km},ML3.2*
SKO ***02*** *09:56:00.4,4085N×2280E,h15^{km},M2.2,ML2.5*
CSEM ***02*** *09:56:00.7±0.1,4086N×2282E,h5^{km}±1^{km},ML3.2,Error ellipse: s-maj=2.4km s-min=1.4km az=42.0*
ISC 02 09:56:00.4±0.5**,4085N**±003×**2283E**±004**,h17**^{km}±5^{km}**,n17,** σ**0^{s}69**/31**,1C,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.24**	**155**	*e*Pg	**Pg**	**09 56 05.3**	**-0.5**
THE				*e*Sg	**Sg**	**09 56 08.6**	**-0.9**
KNT	**Kendrikon**	**0.32**	**9**	*e*Pg	**Pg**	**09 56 07.1**	**-0.1**
KNT				*e*Sg	**Sg**	**09 56 12.8**	**+1.1**
HORT	**Hortiatis**	**0.32**	**141**	*e*Pg	**Pg**	**09 56 06.9**	**-0.4**
HORT				*e*Sg	**Sg**	**09 56 11.4**	**-0.5**
GRG	**Griva**	**0.34**	**289**	*e*Pg	**Pg**	**09 56 07.3**	**-0.3**
GRG				*e*Sg	**Sg**	**09 56 12.3**	**-0.1**
SOH	**Sokhos**	**0.40**	**94**	*e*Pg	**Pg**	**09 56 08.5**	**-0.1**
SOH				*e*Sg	**Sg**	**09 56 14.2**	**+0.1**
VAY	**Valandovo**	**0.51**	**337**	*e*Pg	**Pg**	**09 56 10.2**	**-0.5**
VAY				*e*Sg	**Sg**	**09 56 17.9**	**+0.3**
VAY	**Valandovo**	**0.51**	**337**	*i* Pg	**Pg**	**09 56 10.4**	**-0.3**
VAY				*i* Sg	**Sg**	**09 56 17.6**	**0.0**
VAY				*e*Lg		09 56 17.9	
	comp=E,152nm,0.2s						
VAY				*e*Lg		09 56 17.9	
	comp=N,178nm,0.2s						
VAY	**Valandovo**	**0.51**	**337**	*e*Pg	**Pg**	**09 56 10.1**	**-0.6**
VAY				*e*Sg	**Sg**	**09 56 17.9**	**+0.3**
PLG	**Polygyros**	**0.67**	**135**	*e*Pg	**Pg**	**09 56 13.1**	**-0.4**
PLG				*e*Sg	**Sg**	**09 56 23.4**	**+1.1**
PLG	**Polygyros**	**0.67**	**135**	*e*PB	**Pb**	**09 56 13.2**	**-0.4**
PLG				*e*SN	**Sg**	**09 56 22.7**	**+0.4**
LIT	**Litokhoron**	**0.79**	**199**	*e*Pg	**Pg**	**09 56 15.3**	**-0.5**
LIT				*e*Sg	**Sg**	**09 56 27.4**	**+1.2**
NVR	**Nevrokopi**	**0.93**	**57**	⇑*i*PN	**Pn**	**09 56 18.5**	**-0.2**
NVR				*e*SN	**Sn**	**09 56 30.4**	**-1.2**
STIP	**Stip**	**0.98**	**330**	*i* Pg	**Pg**	**09 56 19.7**	**+0.4**
OUR	**Ouranopolis**	**1.01**	**120**	*e*Pg	**Pg**	**09 56 20.2**	**+0.1**
PAIG	**Paliouri**	**1.12**	**145**	*e*Pg	**Pg**	**09 56 21.6**	**-0.6**
PAIG				*e*Sg	**Sg**	**09 56 38.4**	**+1.5**
KRUS	**Krusevo**	**1.30**	**294**	*i* Pg	**Pg**	**09 56 25.3**	**-0.3**
KRUS				*i* Sg	**Sg**	**09 56 42.8**	**+0.2**
RDO	**Rodhopi**	**2.07**	**81**	*e*PN	**Pn**	**09 56 36.1**	**+1.7**

NIED ***02*** *10:03:00,4540N×14200E,h300^{km},Mw3.8 Best double couple: $M_0$5.89000×10^{14} NP1:ϕ_s76.00000°,δ47.00000°, λ155.00000°. NP2:ϕ_s183.00000°,δ72.00000°,λ46.00000°.*
MOS ***02*** *10:03:30.8±1.0,4542N×14176E,h302^{km},mb3.5/1,Error ellipse: s-maj=29.9km s-min=17.6km az=97.1*
IDC ***02*** *10:03:32.0±0.6,4541N×14194E,h299^{km}±6^{km},mb3.2/10, mb1 3.4/11,mb1mx3.3/22,mbtmp3.2/11,Error ellipse: s-maj=17.2km s-min=14.1km az=136.0*
JMA ***02*** *10:03:31.8±0.2,4538N×14202E,h306^{km}±2^{km},M3.6*
ISCJB ***02*** *10:03:31.4±0.4,4535N±005×14206E±009,h308^{km}±3^{km}, mb3.4/10,Error ellipse: s-maj=10.7km s-min=7.9km az=169.9*
NEIC ***02*** *10:03:32.0±0.7,4537N×14194E,h300^{km}±7^{km},Error ellipse: s-maj=16.1km s-min=10.9km az=117.0*
ISC 02 10:03:32.2±0.4**,4534N**±005×**14205E**±010**,h302**^{km}±3^{km}**, n42,** σ**0^{s}79**/61**,mb3.4**/10**,1C,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.11**	**260**	P	**Pn**	**10 04 10.5**	**0.0**
JWK2				*e*S	**S**	**10 04 40.7**	**-0.2**
JSE	**Soyaes**	**0.53**	**135**	P	**Pn**	**10 04 11.2**	**0.0**
JSE				*e*S	**S**	**10 04 41.6**	**-0.6**
JRR	**Rishiri**	**0.56**	**250**	P	**Pn**	**10 04 11.5**	**+0.3**
JRR				*e*S	**S**	**10 04 42.7**	**+0.5**
JSS	**Shosan**	**0.94**	**189**	P	**Pn**	**10 04 13.1**	**+0.4**
JSS				*e*S	**S**	**10 04 45.6**	**+0.8**
JYG	**Yagishiri**	**1.01**	**206**	P	**Pn**	**10 04 13.2**	**+0.3**
JYG				*e*S	**S**	**10 04 45.5**	**+0.2**
ASAJ	**Asahikawa**	**1.28**	**162**	P	**Pn**	**10 04 14.7**	**+0.4**
ASAJ				*e*S	**S**	**10 04 48.3**	**+0.5**
ASAJ	**Asahikawa**	**1.28**	**162**	PN	**Pn**	**10 04 14.3**	**0.0**
ASAJ				S	**S**	**10 04 48.2**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**1.28**	**162**	P	**Pn**	**10 04 14.3**	**0.0**
	comp=N,18nm,0.3s,baz=300,slow=6.7,SNR=133						
ASAJ				S	**S**	**10 04 48.2**	**+0.4**
	comp=N,1.4nm,0.3s,baz=113,slow=33,SNR=11						
JKK2	**Kamakawa 2**	**1.54**	**161**	P	**Pn**	**10 04 16.6**	**+0.6**
JKK2				*e*S	**S**	**10 04 51.8**	**+1.0**
JHR	**Hokuryu**	**1.61**	**188**	P	**Pn**	**10 04 16.9**	**+0.5**
JMP	**Maruseppu**	**1.62**	**144**	P	**Pn**	**10 04 16.9**	**+0.4**
JMP				*e*S	**S**	**10 04 52.5**	**+0.8**
YSS	**Yuzh-Sakhalins**	**1.69**	**17**	*e*P	**Pn**	**10 04 16.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**1.69**	**17**	⇑*i*PN	**Pn**	**10 04 16.6**	**-0.2**
YSS				*i* S	**S**	**10 04 50.8**	**-1.5**
YSS				pmax	pmax		
	comp=N,50nm,0.4s						
YSS				pmax	pmax		
	comp=Z,110nm,0.4s						
YSS				smax			
	comp=E,150nm,0.8s						
YSS				smax			
	comp=Z,80nm,0.8s						
JAB	**Ashibetsu**	**1.83**	**176**	P	**Pn**	**10 04 18.3**	**+0.3**
JTKR	**Abashiri--Toko**	**1.90**	**135**	P	**Pn**	**10 04 19.1**	**+0.6**
JTKR				*e*S	**S**	**10 04 55.9**	**+0.6**
JFR	**Furan**	**2.21**	**170**	P	**Pn**	**10 04 20.9**	**0.0**
JFR				*e*S	**S**	**10 04 58.6**	**-1.1**
JSK	**Shakotan**	**2.28**	**210**	P	**Pn**	**10 04 21.6**	**+0.1**
JAR	**Ashorobuto**	**2.38**	**148**	P	**Pn**	**10 04 22.7**	**+0.3**
JAR				*e*S	**S**	**10 05 02.2**	**-0.2**
JEW	**Eniwo**	**2.53**	**190**	P	**Pn**	**10 04 24.4**	**+0.6**
JEW				*e*S	**S**	**10 05 05.2**	**+0.3**
JRA	**Rausu**	**2.60**	**121**	P	**Pn**	**10 04 25.4**	**+1.1**
JCH	**Churui**	**2.88**	**160**	P	**Pn**	**10 04 25.7**	**-1.3**
JCH				*e*S	**S**	**10 05 06.4**	**-4.4**
JAK	**Akkeshi**	**3.02**	**140**	*e*S	**S**	**10 05 09.9**	**-3.2**
JNBK	**Urakawa-nobuka**	**3.10**	**170**	P	**Pn**	**10 04 29.0**	**-0.1**
JNBK				*e*S	**S**	**10 05 13.1**	**-1.5**
NEM2	**Nemuro 2**	**3.30**	**125**	P	**Pn**	**10 04 30.5**	**-0.7**
NEM2				*e*S	**S**	**10 05 14.7**	**-3.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
JKB	Kayabe	3.52	192	P	Pn	10 04 32.4	-1.1
JKB				eS	S	10 05 17.7	-4.8
VLA	Vladivostok	7.62	257	ePN	Pn	10 05 29.3	+8.1
VLA				pmax	pmax		
	comp=Z,50nm,0.8s						
KLR	Kul'dur	8.01	303	ePN	Pn	10 05 21.7	-4.1
MJAR	Matsushiro Arr	9.25	200	P	Pn	10 05 40.3	-0.8
	comp=Z,0.4nm,0.3s,baz=26,slow=13,SNR=4.7						
SONM	Songino Array	24.50	289	P	P	10 08 24.4	0.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	24.50	289	P	P	10 08 24.4	0.0
	comp=Z,1.0nm,0.5s,mb3.4,baz=85,slow=9.0,SNR=9.2						
MKAR	Makanchi Array	40.61	294	P	P	10 10 42.2	-0.8
MKAR	Makanchi Array	40.61	294	P	P	10 10 42.2	-0.8
	comp=Z,0.3nm,0.3s,mb3.1,baz=80,slow=8.0,SNR=4.3						
YKA	Yellowknife Ar	56.48	33	P	P	10 12 42.1	-0.7
YKA						10 13 35.8	
YKA	Yellowknife Ar	56.48	33	P	P	10 12 42.1	-0.7
	comp=Z,0.4nm,0.5s,mb3.1,baz=306,slow=6.9,SNR=13						
YKA				PcP	PcP	10 13 35.8	+0.2
	comp=Z,0.1nm,0.4s,baz=308,slow=3.8,SNR=5.0						
FINES	FINESS Array B	61.76	331	P	P	10 13 17.7	-1.0
	comp=Z,0.8nm,0.6s,mb3.5,baz=89,slow=13,SNR=2.8						
WRA	Warramunga Arr	65.34	188	P	P	10 13 42.5	0.0
	comp=Z,0.4nm,1.0s,mb3.0,baz=128,slow=39,SNR=3.3						
ASAR	Alice Springs	69.07	188	P	P	10 14 06.8	+1.2
	comp=Z,0.3nm,0.6s,mb3.2,baz=5.3,slow=6.2,SNR=6.7						
NVAR	Mina Array Bea	69.76	56	P	P	10 14 11.2	+1.2
	comp=Z,1.9nm,0.6s,mb4.0,baz=313,slow=4.5,SNR=13						
PDAR	Pinedale Array	71.60	47	P	P	10 14 21.5	+0.7
	comp=Z,1.6nm,0.6s,mb3.8,baz=293,slow=1.8,SNR=21						
ULM	Lac du Bonnet	72.36	35	P	P	10 14 24.4	-0.8
	comp=Z,2.2nm,0.9s,mb3.8,baz=245,slow=10,SNR=4.5						
TXAR	Lajitas Array	84.71	53	P	P	10 15 33.5	+0.9
TXAR	Lajitas Array	84.71	53	P	P	10 15 33.5	+0.9
	comp=Z,0.3nm,0.5s,mb3.4,baz=290,slow=3.9,SNR=8.7						

MAN 02 10:06:41,1795N×12105E,h19^{km},mb3.7,ML2.5,MS2.0, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APYP	Conner	0.20	116	eP	Pg	10 06 48.2	+2.1
APYP				eS	Sg	10 06 55.3	+5.7
ABRA	Dolores	0.44	227	eP	Pg	10 06 51.4	+1.3
CVP	Callao Caves	0.78	108	eP	Pb	10 06 57.1	+1.2
CVP				eS	Sb	10 07 10.0	+3.9
CAUP	Cauayan	1.24	143	eP	Pn	10 07 04.6	+1.2

GUC 02 10:18:50.2±0.9,3075S×7187W,h33^{km}±8^{km},MD3.9, ML3.6,5C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.59	76	⇓iP	Pn	10 19 02.0	-0.3
OVCH				iS	Sb	10 19 10.4	-0.2
OVCH				AML	AML	10 19 10.7	
	comp=E,8μm,0.7s						
CMCH	Combarbala	0.86	120	⇑iP	Pn	10 19 06.0	+0.1
CMCH				iS	Sn	10 19 18.4	+1.1
CMCH				AML	AML	10 19 20.6	
	comp=E,8μm,0.6s						
LSCH	La Serena	1.00	33	⇑iP	Pn	10 19 08.5	+0.6
LSCH				iS	Sn	10 19 21.9	+1.1
TLL	Tololo Astrono	1.09	58	⇓iP	Pn	10 19 10.2	+1.1
TLL				iS	Sn	10 19 25.4	+2.3
TLL				AML	AML	10 19 31.9	
	comp=N,2μm,0.8s						
CHNG	Los Chungos	1.17	164	⇓e	Pn	10 18 41.5	-29
CHNG				⇑iP		10 18 56.6	
CHNG				iS	Sn	10 19 12.8	-12
CHNG				AML	AML	10 19 19.4	
	comp=E,1μm,0.6s						
PACH	Papudo	1.82	168	⇑iP	Pn	10 19 20.6	+1.5
VACH	Vallenar	2.38	24	⇑iP	Pn	10 19 27.7	+0.9
VACH				iS	Sn	10 19 57.5	+2.7

*ISCJB **02** 10:19:13.2±0.4,2361S±003×13672E±003,h10^{km}, mb3.9/3,Error ellipse: s-maj=4.8km s-min=4.3km az=137.2*
*IDC **02** 10:19:15.2±1.4,2363S×13666E,h0^{km},mb3.8/3, mb1 4.1/8,mb1mx4.1/15,mbtmp4.1/8,ML3.9/5,MS3.1/2, Ms1 3.1/2,ms1mx2.7/19,Error ellipse: s-maj=28.2km s-min=15.6km az=172.0*
*AUST **02** 10:19:18.3,2352S×13670E,h0^{km},ML3.6*
*NEIC **02** 10:19:18.0,2352S×13670E,h0^{km},ML3.6(AUST),After AUST.*
ISC 02 10:19:15.3±1.4,2358S±003×13671E±003,h7^{km}±9^{km},n32, σ1.36/56,mb3.9/3,5C,Northern Territory

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	2.57	268	Pn	Pn	10 20 00.4	+3.0
	86nm,0.3s,baz=84,slow=16,SNR=1810						
ASAR				Pg	Pg	10 20 03.2	-1.4
	86nm,0.3s,baz=83,slow=17,SNR=1429						
ASAR				Sn	Sn	10 20 28.9	0.0
	27nm,0.3s,baz=68,slow=13,SNR=4.8						
ASAR				Lg		10 20 35.1	
	345nm,0.3s,baz=87,slow=27,SNR=36						
QIS	Mount Isa	4.03	42	eP	Pn	10 20 17.8	+0.3
QIS				eS	Sn	10 21 03.4	-1.6
	134nm,0.3s						
WB2	Warramunga Arr	4.23	328	eP	Pn	10 20 20.9	+0.7
WB2				eS	Sn	10 21 09.8	-0.1
WRA	Warramunga Arr	4.24	328	Pn	Pn	10 20 20.6	+0.3
	11nm,0.3s,baz=141,slow=14,SNR=429						
WRA				Sn	Sn	10 21 09.5	-0.5
	49nm,0.3s,baz=143,slow=25,SNR=19						
WRA				Lg		10 21 26.3	
	122nm,0.3s,baz=161,slow=23,SNR=24						
QLP	Quilpie	7.45	115	⇑iP	Pn	10 21 05.6	+1.2
QLP				eS	Sn	10 22 29.5	+0.3
MTSU	Mount Surprise	8.94	54	eP	Pn	10 21 25.3	+0.4
BBOO	Buckleboo	9.21	183	⇑iP	Pn	10 21 30.9	+2.3
BBOO				eS	Sn	10 23 12.2	-0.3
	12nm,0.3s						
BBOO	Buckleboo	9.21	183	⇑iP	Pn	10 21 30.9	+2.3
	12nm,0.3s						
BBOO				eS	Sn	10 23 12.2	-0.3
STKA	Stephens Creek	9.33	153	eP	Pn	10 21 31.0	+0.8
STKA				eS	Sn	10 23 14.1	-1.3
	7.7nm,0.3s						
STKA	Stephens Creek	9.33	153	eP	Pn	10 21 31.0	+0.8
	7.7nm,0.3s						
STKA				eS	Sn	10 23 14.1	-1.3
STKA	Stephens Creek	9.33	153	Pn	Pn	10 21 30.9	+0.7
	1.1nm,0.3s,baz=321,slow=13,SNR=8.9						
STKA				Sn	Sn	10 23 11.8	-3.5
	2.3nm,0.3s,baz=342,slow=7.5,SNR=2.9						
STKA				Lg		10 24 16.1	
	1.9nm,0.3s,baz=321,slow=10.0,SNR=2.2						
CTA	Charters Tower	9.52	70	Pn	Pn	10 21 33.8	+0.9
CTA				Sn	Sn	10 23 17.9	-2.3
CTA				Lg		10 24 10.3	
CTA				LR	LR	10 25 27.4	
CTA	Charters Tower	9.52	70	Pn	Pn	10 21 33.8	+0.9
	1.0nm,0.3s,baz=259,slow=14,SNR=12						
CTA				Sn	Sn	10 23 17.9	-2.3
	3.6nm,0.3s,baz=255,slow=16,SNR=6.1						
CTA				Lg		10 24 10.3	
	5.7nm,0.3s,baz=196,slow=5.5,SNR=6.0						
CTA				LR	LR	10 25 27.4	
	comp=Z,69nm,20.8s,baz=216,slow=39						
CTAO	Charters Tower	9.52	70	eP	Pn	10 21 33.6	+0.8
	21nm,1.0s						
FORT	Forrest	10.52	225	eP	Pn	10 21 48.4	+1.9
FORT				eS	Sn	10 23 35.6	-9.0
	28nm,0.4s						
FORT	Forrest	10.52	225	eP	Pn	10 21 48.4	+1.9
	28nm,0.4s						
FORT				eS	Sn	10 23 35.6	-9.0
CMSA	Cobar Meteorol	11.23	137	eP	Pn	10 21 56.4	+0.1
CMSA				eS	Sn	10 23 58.1	-4.1
	4.9nm,0.5s						
CMSA	Cobar Meteorol	11.23	137	eP	Pn	10 21 56.4	+0.1
	4.9nm,0.5s						
CMSA				eS	Sn	10 23 58.1	-4.1
COEN	Coen	11.36	34	eP	Pn	10 21 56.9	-1.2
COEN				eS	Sn	10 23 52.5	-13
	35nm,0.6s						
COEN	Coen	11.36	34	eP	Pn	10 21 56.9	-1.2
	35nm,0.6s						
COEN				eS	Sn	10 23 52.5	-13
FITZ	Fitzroy Crossi	11.69	296	⇑iP	Pn	10 22 02.5	-0.1
FITZ				eS	Sn	10 24 06.6	-6.9
	16nm,0.3s						
FITZ	Fitzroy Crossi	11.69	296	⇑iP	Pn	10 22 02.5	-0.1
	16nm,0.3s						
FITZ				eS	Sn	10 24 06.6	-6.9
FITZ	Fitzroy Crossi	11.69	296	Pn	Pn	10 22 02.6	0.0
	1.3nm,0.3s,baz=111,slow=11,SNR=33						
FITZ				Sn	Sn	10 24 06.9	-6.6
	2.6nm,0.3s,baz=333,slow=12,SNR=8.3						
FITZ				Lg		10 25 20.5	
	3.5nm,0.3s,baz=334,slow=12,SNR=5.3						
KMBL	Kambalda	15.26	236	eP	Pn	10 22 49.0	-2.2
	49nm,0.6s						
KMBL				eS	Sn	10 25 28.2	-12
	56nm,0.4s						
KLBR	Kellerberrin	18.58	240	eP	Pn	10 23 30.0	-3.2
NWAO	Narrogin (SRO)	19.49	237	P	Pn	10 23 42.2	-2.0
	0.6nm,0.3s,baz=52,slow=14,SNR=4.8						
NWAO				S	Sn	10 27 07.9	-15
	0.8nm,0.3s,baz=346,slow=11,SNR=3.3						
NWAO				LR	LR	10 31 22.1	
	comp=Z,78nm,20.4s,baz=283,slow=37						
MUN	Mundaring	19.95	241	eP	Pn	10 23 48.6	-1.0
KSRS	Korea Array	61.27	352	P	P	10 29 32.4	+1.3
	1.4nm,0.8s,mb4.2,baz=168,slow=8.5,SNR=4.8						
SONM	Songino Array	76.13	339	P	P	10 31 05.3	+1.7
	0.5nm,0.8s,mb3.5,baz=151,slow=6.2,SNR=4.8						
VNA2	Neumayer--Watz	82.45	191	e	P	10 31 40.4	+2.4
	baz=150,slow=2.5						
VNA2				e	pP	10 31 42.9	+2.6
VNA3	Neumayer Olymp	82.58	190	e	P	10 31 40.1	+1.5
VNA3				e	pP	10 31 42.4	+1.5
MKAR	Makanchi Array	85.54	326	P	P	10 31 55.3	+1.4
	0.7nm,0.7s,mb4.0,baz=126,slow=6.2,SNR=7.8						

GUC 02 10:23:45.5±0.4,2778S×7054W,h58^{km}±6^{km},ML3.7, 1C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	0.45	22	⇑iP	Pn	10 23 56.8	+0.1
CPCH				iS	Sn	10 24 05.7	+0.9
CPCH				AML	AML	10 24 06.0	
	comp=N,77μm,0.1s						
CDCH	Caldera	0.75	340	⇓iP	Pn	10 24 00.4	+0.2
CDCH				iS	Sn	10 24 11.6	+0.7
CDCH				AML	AML	10 24 13.0	
	comp=N,2μm,0.3s						
VACH	Vallenar	0.82	194	⇓iP	Pn	10 24 01.6	+0.5
VACH				iS	Sn	10 24 13.4	+0.8
VACH				AML	AML	10 24 14.2	
	comp=E,4μm,0.1s						
TLL	Tololo Astrono	2.39	186	⇓iP	Pn	10 24 23.4	+1.1
TLL				iS	Sn	10 24 52.3	+1.8
TLL				AML	AML	10 25 22.6	
	comp=N,101nm,0.3s						

*CSEM **02** 10:38:15.7±0.3,3844N×3915E,h30^{km},MD2.6,Error ellipse: s-maj=9.3km s-min=5.3km az=124.0*
*ISCJB **02** 10:38:16.5±0.7,3834N±004×3928E±005,h7^{km}±13^{km}, Error ellipse: s-maj=7.0km s-min=6.3km az=162.8*
*DDA **02** 10:38:16.9,3841N×3932E,h9^{km},Md3.1*
*ISK **02** 10:38:16.4,3839N×3920E,h3^{km},MD2.6*
ISC 02 10:38:17.3±0.7,3838N±004×3926E±005,h14^{km}±10^{km},n7, σ0.71/12,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.25	300	iP	Pg	10 38 22.3	-0.3
ELZG				iS	Sg	10 38 27.0	+0.8
PTK	Pertek	0.53	12	PG	Pg	10 38 27.1	-0.5
PTK				SG	Sg	10 38 35.4	+0.7
MALT	Malatya	0.66	265	PG	Pg	10 38 29.3	-0.8
MALT				SG	Sg	10 38 38.2	-0.5
MYA	Malataya	0.66	266	PG	Pg	10 38 29.0	-1.1
URFA	Urfa	1.00	200	ePG	Pg	10 38 36.3	-0.2
MARD	Mardin	1.60	131	iP	Pn	10 38 44.6	-0.5
MARD				iS	Sg	10 39 09.1	+0.2
GZT	Gaziantep	1.68	233	iP	Pn	10 38 47.3	+1.0
GZT				iS	Sg	10 39 12.6	+1.1

*NEIC **02** 10:52:09.2,1806N×6930W,h139^{km},MD3.8(RSPR), After RSPR.*
RSPR 02 10:52:09.2,1806N×6930W,h139^{km}±2^{km},MD3.8/4, MD3.8/4,4C,Dominican Republic region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STDO	Santo Domingo	0.71	303	eS	Sn	10 52 47.5	+0.7
CRPR	Cabo Rojo, PR	2.08	91	⇑eP	Pn	10 52 44.5	-0.1
CRPR				eS	Sn	10 53 12.7	+0.9
AGPR	Aguadilla, PR	2.12	79	eS	Sn	10 53 13.1	+0.6
AOPR	Arecibo Observ	2.43	83	⇑eP	Pn	10 52 49.3	+0.3
AOPR				eS	Sn	10 53 20.0	+0.5
CELP	Cerrillos	2.58	89	eS	Sn	10 53 23.9	+1.1
CBYP	Canovanas	3.28	86	⇑eP	Pn	10 52 59.6	-0.1
CBYP				eS	Sn	10 53 39.5	+0.8
MTP	Monte Pirata	3.56	89	⇑eP	Pn	10 53 03.7	+0.3
MTP				eS	Sn	10 53 46.2	+0.8

*CSEM **02** 10:54:51.5±0.1,3845N×3929E,h5^{km},MD2.9,Error ellipse: s-maj=2.8km s-min=1.8km az=150.0*
*ISK **02** 10:54:51.8,3844N×3930E,h9^{km},MD2.9*
*ISCJB **02** 10:54:52.2±0.5,3843N±005×3932E±004,h9^{km}±7^{km}, Error ellipse: s-maj=8.5km s-min=4.2km az=155.1*
*DDA **02** 10:54:53.0,3834N×3926E,h5^{km},Md2.9*
ISC 02 10:54:52.8±0.6,3844N±005×3932E±004,h11^{km}±7^{km},n12, σ0.94/19,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	282	iP	Pg	10 54 57.4	-0.9
ELZG				iS	Sg	10 55 02.8	+0.8
PTK	Pertek	0.45	7	PG	Pg	10 55 01.3	-0.3
PTK				SG	Sg	10 55 08.4	+0.8
MYA	Malataya	0.71	261	PG	Pg	10 55 05.1	-1.5
MYA				SG	Sg	10 55 15.9	0.0
MALT	Malatya	0.71	260	PG	Pg	10 55 05.2	-1.4
MALT				SG	Sg	10 55 16.3	+0.4
BINT	Bingol	1.01	64	PG	Pg	10 55 11.9	-0.3
URFA	Urfa	1.08	202	PG	Pg	10 55 13.0	-0.5
BNGL	BINGOL	1.52	70	iP	Pg	10 55 22.2	+0.3
BNGL				iS	Sg	10 55 44.9	+3.3
MARD	Mardin	1.61	134	iP	Pn	10 55 20.4	-0.7
MARD				iS	Sn	10 55 42.8	+0.9
BTMT	Batman	1.72	98	ePN	Pn	10 55 21.4	-1.2
GZT	Gaziantep	1.76	233	iP	Pn	10 55 23.7	+0.5
GZT				iS	Sg	10 55 51.5	+2.0
GAZ	Gaziantep	2.10	233	ePN	Pn	10 55 27.9	+0.1
SVSK	Karacayir	2.33	310	ePN	Pn	10 55 31.2	+0.2

IDC 02 11:17:25.4±2.0,067S×12820E,h0^{km},mb3.3/3,mb1 3.5/3, mb1mx3.3/16,mbtmp3.4/3,Error ellipse: s-maj=132.5km s-min=25.8km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.07	163	P	P	11 22 00.5	-0.1
	0.5nm,0.7s,baz=343,slow=12,SNR=6.3						
ASAR	Alice Springs	23.52	167	P	P	11 22 37.5	+0.1
	0.5nm,0.4s,baz=345,slow=11,SNR=10.0						
MKAR	Makanchi Array	61.99	326	P	P	11 27 47.5	0.0
	0.4nm,0.3s,baz=115,slow=7.6,SNR=7.0						

IDC 02 11:24:00.5±10.0,635N×6179E,h0^{km},mb3.6/4,mb1 3.7/4, mb1mx3.4/21,mbtmp3.6/4,MS3.7/2,Ms1 3.7/2, ms1mx3.0/28,Error ellipse: s-maj=318.4km s-min=38.8km az=76.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	25.59	254	LR	LR	11 38 26.6	
	comp=Z,60nm,18.4s,baz=88,slow=34						
MKAR	Makanchi Array	43.99	20	P	P	11 32 09.9	+0.4
	0.2nm,0.2s,baz=207,slow=9.1,SNR=3.5						
ZALV	Zalesovo Beam	51.00	17	P	P	11 33 03.7	-0.3
	0.3nm,0.3s,baz=204,slow=6.3,SNR=3.3						
SONM	Songino Array	56.09	35	P	P	11 33 41.6	+0.1
	0.5nm,0.9s,baz=233,slow=6.1,SNR=4.5						
BATI	Kupang	63.78	105	LR	LR	11 59 05.0	
	comp=Z,150nm,19.0s,baz=359,slow=33						
ASAR	Alice Springs	76.35	116	P	P	11 35 52.2	+0.2
	0.4nm,0.7s,baz=287,slow=7.0,SNR=5.6						

*CSEM **02** 11:34:52.8±0.1,3925N×4022E,h12^{km},MD2.8,Error ellipse: s-maj=2.6km s-min=2.2km az=159.0*
*ISK **02** 11:34:52.6,3927N×4025E,h17^{km},MD2.8*
*ISCJB **02** 11:34:53.8±0.6,3924N±004×4023E±005,h12^{km},Error ellipse: s-maj=6.3km s-min=5.0km az=159.4*
*DDA **02** 11:34:57.4,3917N×4043E,h12^{km},Md2.7*
ISC 02 11:34:53.5±0.8,3929N±004×4023E±005,h2^{km}±9^{km},n9, σ1.22/14,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.46	154	PG	Pg	11 35 02.0	-0.4
BINT				SG	Sg	11 35 08.4	0.0
EZC	Erzincan	0.56	325	PG	Pg	11 35 09.4	+5.2
PTK	Pertek	0.76	239	PG	Pg	11 35 08.0	-0.2
PTK				SG	Sg	11 35 19.1	+1.1
BNGL	BINGOL	0.79	115	iP	Pg	11 35 08.8	0.0
BNGL				iS	Sg	11 35 17.0	-2.1
EZM	Erzurum	1.07	55	ePG	Pg	11 35 13.2	-0.8
ERZM	Erzurum	1.07	55	iP	Pg	11 35 15.9	+1.8
ERZM				iS	Sg	11 35 29.4	+1.4
GUMT	Gumushane	1.30	334	ePN	Pn	11 35 17.0	-1.7
MALT	Malatya	1.71	236	ePN	Pn	11 35 22.6	-1.8
MARD	Mardin	2.02	167	iP	Pn	11 35 29.4	+0.7
MARD				iS	Sn	11 35 56.0	+1.6

*ISCJB **02** 11:46:00.5±0.5,283S±005×13869E±009,h33^{km}, mb4.4/10,MS3.8/5,Error ellipse: s-maj=13.6km s-min=7.0km az=176.4*
*NEIC **02** 11:46:03.3±2.0,268S×13877E,h44^{km}±19^{km},mb4.4/3, Error ellipse: s-maj=17.0km s-min=12.6km az=71.0*
NEIC Felt [III] at Sarmi.
*IDC **02** 11:46:05.9±3.4,281S×13871E,h66^{km}±32^{km},mb4.1/8, mb1 4.2/11,mb1mx4.0/15,mbtmp4.1/11,ML3.7/2,MS3.8/7, Ms1 3.8/7,ms1mx3.5/19,Error ellipse: s-maj=25.3km s-min=12.3km az=79.0*
ISC 02 11:46:02.8±0.5,280S±006×1386E±01,h35^{km},n30, σ0.95/28,mb4.4/10,MS3.8/5,Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	10.71	128	P	Pn	11 48 34.2	+0.3
	0.9nm,0.3s,baz=302,slow=8.1,SNR=12						
COEN	Coen	11.96	158	eP	Pn	11 48 50.1	-0.7
BATI	Kupang	16.59	243	P	Pn	11 49 59.7	+6.8
	6.1nm,0.3s,baz=291,slow=1.9,SNR=5.4						
WB2	Warramunga Arr	17.54	193	eP	Pn	11 50 03.4	-1.3
WB2				eS	S	11 53 14.9	-11
WRA	Warramunga Arr	17.55	194	P	Pn	11 50 03.5	-1.2
	1.3nm,0.3s,baz=18,slow=13,SNR=27						
WRA				S	S	11 53 15.1	-11
	0.3nm,0.3s,baz=14,slow=22,SNR=4.4						
CTA	Charters Tower	18.72	157	P	Pn	11 50 20.8	+1.7
	0.4nm,0.3s,baz=350,slow=12,SNR=5.1						
CTA				LR	LR	11 57 47.4	
	comp=Z,355nm,20.5s,baz=198,slow=38						
CTAO	Charters Tower	18.72	157	eP	Pn	11 50 21.4	+2.3
FITZ	Fitzroy Crossi	19.84	219	eP	Pn	11 50 32.6	+0.1
	12nm,0.7s						
FITZ	Fitzroy Crossi	19.84	219	P	Pn	11 50 32.0	-0.5
	0.2nm,0.3s,baz=42,slow=18,SNR=7.6						
FITZ				LR	LR	11 59 04.6	
	comp=Z,223nm,20.3s,baz=46,slow=39						
ASAR	Alice Springs	21.24	192	P	P	11 50 46.4	+0.5
	16nm,0.7s,mb4.5,baz=22,slow=10,SNR=33						
ASAR				S	S	11 54 39.5	-0.6
	3.4nm,1.0s,baz=14,slow=26,SNR=4.3						
MBWA	Marble Bar	25.92	224	eP	P	11 51 32.7	+0.9
STKA	Stephens Creek	29.05	175	P	P	11 52 01.3	+1.5
STKA				LR	LR	12 04 50.3	
STKA	Stephens Creek	29.05	175	P	P	11 52 01.3	+1.5
	1.9nm,0.6s,mb4.0,baz=314,slow=15,SNR=3.6						
STKA				LR	LR	12 04 50.3	
	comp=Z,279nm,18.0s,MS3.9,baz=19,slow=39						
DZM	Mont Dzumac	33.10	128	LR	LR	12 02 37.7	
	comp=Z,127nm,20.8s,MS3.6,baz=154,slow=30						
PSI	Prapat	40.09	278	P	P	11 53 36.4	+1.0
	4.7nm,0.8s,mb4.2,baz=190,slow=1.8,SNR=6.7						
KSRS	Korea Array	41.27	347	LR	LR	12 09 14.0	
	comp=Z,78nm,19.4s,MS3.6,baz=325,slow=34						
RPZ	Rata Peaks	49.85	149	P	P	11 54 51.8	-0.7
	20nm,0.7s,mb5.2,baz=331,slow=4.3,SNR=19						
SONM	Songino Array	57.77	335	P	P	11 55 50.7	+0.3
	1.0nm,0.7s,mb4.0,baz=144,slow=5.2,SNR=10.0						
SONM				LR	LR	12 18 43.5	
	comp=Z,71nm,19.1s,MS3.8,baz=335,slow=34						
RAR	Rarotonga	62.55	112	LR	LR	12 20 49.7	
	comp=Z,139nm,20.2s,MS4.1,baz=61,slow=33						
MK31	Makanchi Array	69.82	322	eP	P	11 57 10.2	+0.4
MKAR	Makanchi Array	69.82	322	P	P	11 57 10.3	+0.5
MKAR	Makanchi Array	69.82	322	P	P	11 57 10.3	+0.5
	4.1nm,0.7s,mb4.5,baz=111,slow=8.1,SNR=29						
ZALV	Zalesovo Beam	71.98	330	P	P	11 57 21.6	-1.1
	0.9nm,0.6s,mb3.9,baz=114,slow=6.4,SNR=6.6						
KURK	Kurchatov	73.75	325	eP	P	11 57 33.0	-0.3
	1.3nm,0.7s,mb4.0						
VNDA	Vanda	75.69	175	P	P	11 57 44.1	0.0
	6.2nm,0.8s,mb4.6,baz=344,slow=3.1,SNR=7.5						
BRVK	Borovoye	79.42	325	eP	P	11 58 05.0	-0.3
COLA	College	85.58	24	eP	P	11 58 34.2	-3.0
QSPA	South Pole Qui	87.14	180	eP	P	11 58 45.0	+0.3
	6.0nm,0.6s,mb5.0						
TORD	Torodi Ar. Bea	136.21	286	PKP	PKPdf	12 05 20.2	-1.4
	0.4nm,0.7s,baz=60,slow=1.9,SNR=3.5						
LPAZ	La Paz	147.45	126	PKPbc	PKPbc	12 05 43.6	-0.5
	1.9nm,0.9s,baz=292,slow=2.3,SNR=4.9						

MAN 02 11:56:16,691N×12513E,h22^{km},mb4.5,ML3.4,MS3.2, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KCP	Kidapawan	0.10	338	⇑iP	Pb	11 56 18.7	-1.5
KCP				iS	Sb	11 56 21.3	-1.8
DAV	Davao City (W)	0.47	71	⇓eP	Pb	11 56 26.0	+0.3
BUKP	Musuan	0.96	356	eP	Pb	11 56 33.6	-0.4
MATI	Mati	1.12	88	eP	Pn	11 56 36.3	-0.1
MATI				eS	Sb	11 56 52.1	+1.2
PAGZ	Pagadian	1.97	298	eP	Pn	11 56 49.0	+1.0

*ISCJB **02** 12:12:33.5±1.4,2981N±004×362E±01,h0^{km},Error ellipse: s-maj=14.0km s-min=6.1km az=5.2*
*HLW **02** 12:12:33.2,2992N×3660E,h21^{km},Mb3.5*
*CSEM **02** 12:12:34.5±0.2,2975N×3609E,h1^{km},ML2.1,Error ellipse: s-maj=6.3km s-min=3.1km az=94.0,Mining explosion.*
*GII **02** 12:12:34.8±3.4,2987N×3614E,h0^{km},ML2.1/2*
*SGS **02** 12:12:37.2,2978N×3601E,h6^{km}*
ISC 02 12:12:33.7±1.3,2980N±004×362E±01,h0^{km},n18, σ0.39/22,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HQLS		1.14	244	P	Pg	12 12 55.2	-0.3
HQLS		1.14	244	P	Pg	12 12 55.2	-0.3
HQLS				S	Sg	12 13 10.5	+0.3
ZFRI	Zfri	1.18	310	Pg	Pg	12 12 55.8	-0.5
JLOS		1.25	212	S	Sg	12 13 13.0	-0.7
JLOS		1.25	212	P	Pg	12 12 57.6	+0.1
JLOS		1.25	212	P	Pg	12 12 57.6	0.0
JLOS				S	Sg	12 13 13.0	-0.7
KRMI	Paran Flat	1.35	284	Pg	Pg	12 12 59.4	-0.1
HBST	Basata	1.43	246	P	Pn	12 13 01.5	+0.6
RMNI	Mount Ramon	1.50	302	Pn	Pn	12 13 01.4	-0.4
RMNI				Sn	Sn	12 13 22.2	+0.1
RMNI	Mount Ramon	1.50	302	Pn	Pn	12 13 01.4	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RMNI				Sn	**Sn**	**12 13 22.2**	**+0.1**
MZDA	**Masada**	**1.68**	**334**	Pn	**Pn**	**12 13 04.1**	**-0.3**
HDHB	**Dhahab**	**1.77**	**233**	P	**Pn**	**12 13 06.1**	**+0.5**
DSI	**Dead Sea**	**1.91**	**338**	Pn	**Pn**	**12 13 07.7**	**+0.2**
RSHS		**1.96**	**220**	P	**Pn**	**12 13 07.8**	**-0.3**
HNKL	**Nakhl**	**1.96**	**274**	P	**Pn**	**12 13 08.4**	**+0.2**
HKAT	**Jabal Katrina**	**2.34**	**238**	P	**Pn**	**12 13 13.8**	**+0.5**
AMAG	**Maghara**	**2.75**	**288**	P	**Pn**	**12 13 18.8**	**-0.3**
SUZ		**2.96**	**272**	P	**Pn**	**12 13 22.5**	**+0.6**

CSEM ***02*** *12:23:37.9, 4063N×2154E, h11km, MD3.4/3, After ATH*
ATH ***02*** *12:23:37.9, 4063N×2154E, h11km, MD3.4/3*
ISCJB ***02*** *12:23:41.7±1.3, 4048N±007×218E±02, h10km, Error ellipse: s-maj=17.3km s-min=10.0km az=7.3*
ISC 02 12:23:41.7±1.2**, 4052N**±008×**219E**±01**, h10**km**, n4,** σ**1s46**/5**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.22**	**201**	⇑*i*PB	**Pg**	**12 23 45.0**	**-1.3**
KZN				*e*SB	**Sg**	**12 23 50.9**	**+1.5**
THL	**Klokotos Trika**	**0.95**	**174**	*e*PB	**Pb**	**12 23 59.3**	**-1.0**
KRUS	**Krusevo**	**0.98**	**331**	*e*Pn	**Pn**	**12 24 01.7**	**+0.2**
PLG	**Polygyros**	**1.21**	**96**	*e*PB	**Pb**	**12 24 05.2**	**+0.6**

ISCJB ***02*** *12:31:54.5±0.3, 2197N±005×14304E±007, h33km, mb4.5/52, MS3.5/9, Error ellipse: s-maj=9.1km s-min=7.3km az=156.9*
MOS ***02*** *12:31:54.1±0.8, 2199N×14305E, h33km, mb4.8/22, Error ellipse: s-maj=15.3km s-min=7.4km az=110.5*
BJI ***02*** *12:31:56.9, 2230N×14290E, h31km, mB5.0, mb4.7, Ms4.8, Msz4.5*
NEIC ***02*** *12:31:59.0±5.2, 2197N×14307E, h59km±47km, mb4.7/22, Error ellipse: s-maj=11.6km s-min=6.6km az=59.0*
IDC ***02*** *12:32:03.3±6.2, 2192N×14298E, h100km±56km, mb4.0/19, mb1 4.1/19, mb1mx4.1/26, mbtmp4.0/19, MS3.5/11, Ms1 3.5/11, ms1mx3.4/39, Error ellipse: s-maj=21.9km s-min=11.4km az=73.0*
ISC 02 12:31:53.8±3.3**, 2201N**±006×**14314E**±007**, h17**km±20km**, h19**km±2.1km**: pP-P, n101,** σ**0s94**/97**, mb4.5**/52**, MS3.5**/9**, 1C-1D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**14.36**	**292**	LR	LR	12 39 46.5	
	comp=Z,267nm,21.0s,baz=179,slow=32						
JNU	**Nakatsue**	**15.50**	**318**	LR	LR	12 40 59.8	
	comp=Z,68nm,21.1s,baz=220,slow=35						
KSRS	**Korea Array**	**20.24**	**323**	P	**P**	**12 36 31.6**	**+3.5**
	5.1nm,0.8s,baz=144,slow=7.6,SNR=16						
KSRS				LR	LR	12 42 49.5	
	comp=Z,86nm,21.4s,MS3.1,baz=348,slow=32						
ASAJ	**Asahikawa**	**22.05**	**359**	LR	LR	12 45 52.6	
	comp=Z,69nm,19.4s,MS3.1,baz=359,slow=38						
NJ2	**Nanjing**	**23.78**	**300**	*e*P	**P**	**12 37 03.8**	**-1.9**
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.0						
YSS	**Yuzh-Sakhalins**	**24.89**	**359**	*i* P	**P**	**12 37 16.2**	**+0.6**
YSS				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
SNY	**Shenyang**	**25.70**	**325**	⇑P	**P**	**12 37 22.6**	**-0.5**
SNY				S	**S**	**12 41 51.7**	**+0.7**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
SNY				AMB	AMB		
	comp=Z,200nm,4.5s						
SNY				LR	LR		
	comp=N,261nm,5.1s						
SNY				LR	LR		
	comp=Z,218nm,6.1s						
HABR	**Khabarovsk**	**27.18**	**348**	P	**P**	**12 37 34.4**	**-2.0**
HABR				*e*S	**S**	**12 42 13.5**	**-0.8**
HABR				*e*		12 42 28.3	
HABR				*e*		12 43 23.2	
PMG	**Port Moresby**	**31.47**	**172**	P	**P**	**12 38 14.6**	**-0.1**
	comp=Z,7.6nm,0.9s,mb4.5,baz=21,slow=4.0,SNR=3.7						
HNR	**Honiara**	**35.33**	**150**	LR	LR	12 52 09.0	
	comp=Z,158nm,21.2s,MS3.7,baz=360,slow=34						
BATI	**Kupang**	**37.28**	**213**	LR	LR	12 51 50.0	
	comp=Z,136nm,19.8s,MS3.8,baz=317,slow=32						
MA2	**Magadan**	**37.92**	**6**	P	**P**	**12 39 08.8**	**-1.2**
MA2				pmax	pmax		
	comp=Z,20nm,0.3s,mb5.3						
ULN	**Ulaanbaatar**	**38.70**	**321**	*e*P	**P**	**12 39 16.7**	**0.0**
	comp=Z,9.1nm,1.1s,mb4.4						
ULN	**Ulaanbaatar**	**38.70**	**321**	*i* P	**P**	**12 39 17.0**	**+0.3**
SONM	**Songino Array**	**39.07**	**320**	P	**P**	**12 39 20.4**	**+0.5**
	comp=Z,4.7nm,0.8s,mb4.2,baz=130,slow=7.3,SNR=32						
SONM				LR	LR	12 56 37.9	
	comp=Z,51nm,19.3s,MS3.4,baz=156,slow=38						
GTA	**Gaotai**	**40.66**	**305**	*e*P	**P**	**12 39 34.0**	**+0.8**
GTA				AP	pP	12 39 38.3	-0.2
GTA				XP	sP	12 39 41.9	+1.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.8s,mb3.8						
BOD	**Bodaibo**	**41.53**	**337**	*e*P	**P**	**12 39 39.5**	**-0.6**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.7						
CTA	**Charters Tower**	**41.95**	**176**	*e*P	**P**	**12 39 43.7**	**-0.2**
	comp=Z,8.3nm,0.9s,mb4.4						
CTA	**Charters Tower**	**41.95**	**176**	*e*P	**P**	**12 39 43.7**	**-0.2**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTA	**Charters Tower**	**41.95**	**176**	P	**P**	**12 39 43.4**	**-0.6**
	comp=Z,14nm,1.0s,mb4.5,baz=349,slow=9.3,SNR=8.4						
CTA				LR	LR	12 54 44.7	
	comp=Z,80nm,18.0s,MS3.6,baz=233,slow=32						
ZAK	**Zakamensk**	**42.07**	**322**	*e*P	**P**	**12 39 44.3**	**-0.3**
IRK	**Irkutsk**	**42.43**	**325**	*e*P	**P**	**12 39 48.1**	**+0.6**
IRK				pmax	pmax		
	comp=Z,29nm,2.5s,mb4.5						
TLY	**Talaya**	**42.48**	**324**	*e*P	**P**	**12 39 48.9**	**+0.9**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
WB2	**Warramunga Arr**	**42.57**	**192**	*e*P	**P**	**12 39 48.1**	**-0.9**
WRA	**Warramunga Arr**	**42.57**	**192**	*i* P	**P**	**12 39 48.2**	**-0.8**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRA	**Warramunga Arr**	**42.57**	**192**	P	**P**	**12 39 48.3**	**-0.7**
	comp=Z,5.0nm,0.9s,mb4.3,baz=14,slow=8.7,SNR=17						
WRA				LR	LR	12 56 55.2	
	comp=Z,54nm,18.6s,MS3.5,baz=75,slow=35						
FITZ	**Fitzroy Crossi**	**43.39**	**205**	*e*P	**P**	**12 39 57.1**	**+1.5**
	comp=Z,7.9nm,0.8s,mb4.5						
MOY	**Mondy**	**43.94**	**323**	*e*P	**P**	**12 40 00.1**	**+0.3**
ASAR	**Alice Springs**	**46.28**	**192**	P	**P**	**12 40 17.5**	**-1.1**
	comp=Z,1.3nm,0.6s,mb4.1,baz=18,slow=9.5,SNR=27						
PSI	**Prapat**	**46.96**	**252**	P	**P**	**12 40 25.1**	**+0.9**
	comp=Z,2.0nm,0.3s,mb4.5,baz=133,slow=5.3,SNR=4.7						
LSA	**Lhasa**	**47.08**	**291**	*e*P	**P**	**12 40 27.1**	**+2.1**
	comp=Z,3.3nm,0.6s,mb4.4						
LSA	**Lhasa**	**47.08**	**291**	*e*P	**P**	**12 40 27.2**	**+2.2**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
BILL	**Bilibino**	**48.22**	**11**	*e*P	**P**	**12 40 32.4**	**-0.8**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
TIXI	**Tiksi**	**50.34**	**354**	*e*P	**P**	**12 40 48.4**	**-0.9**
	comp=Z,1.6nm,0.7s,mb4.2						
TIXI	**Tiksi**	**50.34**	**354**	*i* P	**P**	**12 40 49.1**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
WMQ	**Urumqi**	**50.35**	**309**	*e*P	**P**	**12 40 51.0**	**+1.1**
STKA	**Stephens Creek**	**53.60**	**182**	*e*P	**P**	**12 41 13.4**	**-0.7**
	comp=Z,3.2nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**53.60**	**182**	P	**P**	**12 41 13.7**	**-0.5**
	comp=Z,2.5nm,0.7s,mb4.2,baz=340,slow=9.6,SNR=6.2						
STKA				LR	LR	13 03 42.8	
	comp=Z,91nm,18.1s,MS3.9,baz=24,slow=36						
ZALV	**Zalesovo Beam**	**53.94**	**322**	P	**P**	**12 41 15.9**	**-0.5**
	comp=Z,10nm,0.9s,mb4.8,baz=98,slow=6.3,SNR=39						
ZALV				PcP	PcP	12 42 20.1	-1.5
	comp=Z,4.8nm,1.1s,baz=82,slow=3.1,SNR=3.8						
ZAL	**Zalesovo**	**53.95**	**322**	P	**P**	**12 41 15.9**	**-0.6**
ZAL						12 42 20.1	
MK31	**Makanchi Array**	**54.45**	**312**	*e*P	**P**	**12 41 20.0**	**-0.3**
MKAR	**Makanchi Array**	**54.45**	**312**	P	**P**	**12 41 20.8**	**+0.4**
	comp=Z,1.6nm,0.6s,mb4.1,baz=92,slow=9.7,SNR=17						
MKAR				PcP	PcP	12 42 22.7	-1.1
	comp=Z,1.5nm,0.8s,baz=114,slow=2.9,SNR=5.8						
NVS	**Novosibirsk**	**55.03**	**322**	*e*P	**P**	**12 41 23.7**	**-0.6**
NVS				pmax	pmax		
	comp=N,4.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,11nm,1.3s						
NVS				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.8						
KURK	**Kurchatov**	**57.22**	**317**	*e*P	**P**	**12 41 39.7**	**-0.3**
	comp=Z,12nm,1.0s,mb4.9						
KURK	**Kurchatov**	**57.22**	**317**	*i* P	**P**	**12 41 39.6**	**-0.4**
TKM2	**Tokmak 2**	**59.12**	**308**	*e*P	**P**	**12 41 54.7**	**+1.2**
	comp=Z,9.1nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**59.12**	**308**	*e*P	**P**	**12 41 54.7**	**+1.2**
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
TKM2	**Tokmak 2**	**59.12**	**308**	P	**P**	**12 41 54.9**	**+1.4**
	SNR=9.6						
KZA	**Kyzart**	**59.41**	**307**	P	**P**	**12 41 57.4**	**+1.8**
	SNR=10						
KBK	**Karagaybulak**	**59.61**	**307**	P	**P**	**12 41 57.7**	**+0.9**
	SNR=6.5						
USP	**Ospenovka**	**59.91**	**308**	P	**P**	**12 41 59.6**	**+0.7**
	SNR=6.2						
AAK	**Ala-Archa**	**59.94**	**307**	*e*P	**P**	**12 41 59.0**	**-0.2**
	comp=Z,11nm,1.5s,mb4.7						
AAK	**Ala-Archa**	**59.94**	**307**	*e*P	**P**	**12 41 59.0**	**-0.2**
AAK				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
UCH	**Uchtor**	**59.95**	**307**	*e*P	**P**	**12 42 00.5**	**+1.3**
	comp=Z,18nm,1.3s,mb4.9						
UCH	**Uchtor**	**59.95**	**307**	P	**P**	**12 42 00.9**	**+1.7**
	SNR=15						
EKS2	**Erkin-Say**	**60.47**	**308**	P	**P**	**12 42 03.7**	**+0.9**
	SNR=7.1						
AML	**Almayashu**	**60.56**	**307**	*e*P	**P**	**12 42 04.5**	**+1.1**
	comp=Z,12nm,1.0s,mb5.0						
AML	**Almayashu**	**60.56**	**307**	P	**P**	**12 42 05.0**	**+1.5**
	SNR=12						
BRVK	**Borovoye**	**62.47**	**319**	*e*P	**P**	**12 42 15.7**	**-0.4**
	comp=Z,16nm,1.0s,mb5.1						
BRVK	**Borovoye**	**62.47**	**319**	*e*P	**P**	**12 42 15.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
KBL	**Kabul**	**65.15**	**299**	*e*P	**P**	**12 42 34.2**	**0.0**
INK	**Inuvik**	**67.30**	**24**	P	**P**	**12 42 47.8**	**+0.5**
	comp=Z,1.6nm,0.6s,mb4.2,baz=264,slow=6.1,SNR=5.1						
ARU	**Arti**	**68.99**	**324**	*e*P	**P**	**12 42 57.6**	**-0.5**
	comp=Z,17nm,1.3s,mb4.8						
ARU	**Arti**	**68.99**	**324**	*d i*P	**P**	**12 42 57.3**	**-0.8**
ARU				*e*		12 43 19.8	
ARU				*e*		12 45 29.0	
ARU				*e*S	S	12 52 00.7	-1.3
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
AKTK	**Aktyubinsk**	**70.31**	**317**	P	**P**	**12 43 05.3**	**-1.0**
AKTO	**Aktyubinsk**	**70.31**	**317**	P	**P**	**12 43 05.3**	**-1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=87,slow=12,SNR=4.8						
YKA	**Yellowknife Ar**	**76.20**	**28**	P	**P**	**12 43 40.8**	**-0.1**
YKA				LR	LR	13 16 03.0	
YKA	**Yellowknife Ar**	**76.20**	**28**	P	**P**	**12 43 40.8**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.2,baz=292,slow=5.8,SNR=25						
YKA				LR	LR	13 16 03.0	
	comp=Z,40nm,19.4s,MS3.7,baz=270,slow=35						
ARCES	**ARCESS Array B**	**78.61**	**341**	P	**P**	**12 43 53.2**	**-1.1**
	comp=Z,13nm,1.1s,mb4.8,baz=55,slow=7.9,SNR=4.7						
OBN	**Obninsk**	**81.20**	**326**	*i* P	**P**	**12 44 08.6**	**0.0**
OBN				*e*	pP	12 44 14.3	+0.1
OBN				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
BMO	**Blue Mountains**	**81.24**	**45**	*e*P	**P**	**12 44 08.9**	**-0.1**
	comp=Z,2.0nm,0.8s,mb4.1						
BMO	**Blue Mountains**	**81.24**	**45**	*e*P	**P**	**12 44 08.9**	**-0.1**
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
VRSR	**Storozhevoye**	**81.43**	**322**	*e*P	**P**	**12 44 08.8**	**-1.1**
VRSR				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
VRSR				pmax	pmax		
	comp=N,2.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.8s						
VORD	**Divnogorie**	**81.47**	**322**	*e*P	**P**	**12 44 08.3**	**-1.8**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
VORD				pmax	pmax		
	comp=N,20nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
CMB	**Columbia Colle**	**81.61**	**52**	*e*P	**P**	**12 44 11.7**	**+0.6**
	comp=E,12nm,1.3s,mb4.7						
CMB	**Columbia Colle**	**81.61**	**52**	*e*P	**P**	**12 44 11.7**	**+0.6**
CMB				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
ZEI	**Tsey**	**81.81**	**313**	*e*P	**P**	**12 44 11.0**	**-1.1**
ZEI				*i*	pP	12 44 18.1	+0.4
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KIV	**Kislovodsk**	**82.17**	**314**	*e*P	**P**	**12 44 14.2**	**+0.3**
	comp=Z,7.2nm,0.4s,mb5.0						
KIV	**Kislovodsk**	**82.17**	**314**	*i* P	**P**	**12 44 14.3**	**+0.3**
KIV				*e*SS	SS	12 59 46.6	-0.9
KIV				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
FINES	**FINESS Array B**	**82.88**	**334**	*i* P	**P**	**12 44 17.0**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**82.88**	**334**	P	**P**	**12 44 16.4**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.2,baz=66,slow=4.6,SNR=6.4						
NVAR	**Mina Array Bea**	**82.98**	**51**	P	**P**	**12 44 19.4**	**+1.1**
	comp=Z,3.5nm,0.8s,mb4.5,baz=270,slow=3.9,SNR=29						
QLMT	**Earthquake Lak**	**85.06**	**44**	*e*P	**P**	**12 44 30.1**	**+1.3**
YMR	**Madison River**	**85.43**	**44**	*e*P	**P**	**12 44 32.3**	**+1.7**
	comp=Z,3.3nm,0.7s,mb4.6						
FFC	**Flin Flon**	**85.59**	**32**	*e*P	**P**	**12 44 31.1**	**0.0**
	comp=Z,22nm,1.1s,mb5.3						
FFC	**Flin Flon**	**85.59**	**32**	*e*P	**P**	**12 44 31.1**	**-0.1**
FFC				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.3						
TPAW	**Teton Pass**	**85.97**	**45**	*e*P	**P**	**12 44 33.9**	**+0.6**
DUG	**Dugway**	**86.16**	**48**	*e*P	**P**	**12 44 34.2**	**-0.2**
	comp=Z,5.1nm,1.0s,mb4.7						
DUG	**Dugway**	**86.16**	**48**	*e*P	**P**	**12 44 34.2**	**-0.1**
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
HWUT	**Hardware Ranch**	**86.40**	**46**	*e*P	**P**	**12 44 35.8**	**+0.3**
	comp=Z,7.6nm,1.0s,mb4.9						
ARUT	**Antelope Range**	**86.75**	**51**	*e*P	**P**	**12 44 38.1**	**+0.8**
FCC	**Fort Churchill**	**86.78**	**26**	*e*P	**P**	**12 44 36.0**	**-1.0**
	comp=Z,9.2nm,1.2s,mb4.9						
FCC	**Fort Churchill**	**86.78**	**26**	*e*P	**P**	**12 44 36.0**	**-1.0**
FCC				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.9						
JLU	**Jordanelle**	**86.92**	**47**	*e*P	**P**	**12 44 38.8**	**+0.7**
PDAR	**Pinedale Array**	**87.20**	**45**	P	**P**	**12 44 39.5**	**+0.1**
	comp=Z,0.8nm,0.9s,mb4.0,baz=259,slow=3.0,SNR=6.0						
AKASG	**Malin Array Be**	**87.23**	**324**	P	**P**	**12 44 37.5**	**-1.8**
	comp=Z,0.4nm,0.3s,mb4.1,baz=48,slow=5.0,SNR=7.3						
SRU	**San Rafael**	**88.23**	**48**	*e*P	**P**	**12 44 44.5**	**+0.1**
	comp=Z,5.2nm,1.1s,mb4.7						
SRU	**San Rafael**	**88.23**	**48**	*e*P	**P**	**12 44 44.5**	**+0.1**
SRU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.7						
PV10	**Paradox Valley**	**89.59**	**48**	*e*P	**P**	**12 44 51.6**	**+0.8**
BRTR	**Keskin Array B**	**90.10**	**313**	P	**P**	**12 44 51.7**	**-1.4**
	comp=Z,3.0nm,0.9s,mb4.6,baz=70,slow=4.7,SNR=13						
LPAZ	**La Paz**	**149.96**	**85**	PKPbc	PKPbc	12 51 44.6	+0.5
	comp=Z,6.7nm,0.9s,baz=315,slow=2.4,SNR=14						
LPAZ				PKPab	PKPab	12 51 50.9	+1.0
	comp=Z,3.1nm,0.7s,baz=208,slow=3.0,SNR=8.7						

NEIC ***02*** *12:46:04.0, 1875N×6853W, h144km, MD3.8(RSPR), After RSPR.*
RSPR 02 12:46:04.0, 1875N×6853W, h144km±2km**, MD3.8**/8**, MD3.8**/8**, 5C-2D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**1.38**	**101**	⇑*e*P	Pn	12 46 31.6	-0.2
AGPR				*e*S	Sn	12 46 55.8	+2.7
AOPR	**Arecibo Observ**	**1.73**	**103**	⇓*e*P	Pn	12 46 36.3	+0.5
AOPR				*e*S	Sn	12 47 02.1	+2.1
GBPR	**Guanica, Bosqu**	**1.75**	**116**	*e*S	Sn	12 47 00.1	-0.1
CELP	**Cerrillos**	**1.97**	**110**	⇑*e*P	Pn	12 46 38.5	+0.1
CELP				*e*S	Sn	12 47 06.1	+1.2
CBYP	**Canovanas**	**2.58**	**100**	⇑*e*P	Pn	12 46 45.7	-0.2
CBYP				*e*S	Sn	12 47 18.7	+0.6
CPD	**Cerro la Pandu**	**2.58**	**105**	⇓*e*P	Pn	12 46 45.8	-0.1
CPD				*e*S	Sn	12 47 18.3	+0.2
HUMP	**Col San Antoni**	**2.62**	**103**	⇑*e*P	Pn	12 46 46.6	+0.3
HUMP				*e*S	Sn	12 47 19.2	+0.3
MTP	**Monte Pirata**	**2.90**	**102**	⇑*e*P	Pn	12 46 50.4	+0.5
MTP				*e*S	Sn	12 47 26.3	+1.0

KNET ***02*** *12:57:07.6±0.6, 4132N×73.18E, h9km±3km, ml3.4, Error ellipse: s-maj=3.5km s-min=2.4km az=25.0*
NNC ***02*** *12:57:07.4±3.7, 4144N×7299E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=46.2km s-min=17.1km az=171.0*
ISC 02 12:57:07.7±1.2**, 4125N**±009×**7291E**±008**, h10**km**, n14,** σ**1s33**/23**, 11C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.06**	**33**	⇓P	**Pg**	**12 57 25.5**	**-2.6**
	142nm,0.2s,SNR=188						
AML				⇓S	**Sg**	**12 57 38.9**	**-3.0**
	258nm,0.2s						
UCH	**Uchtor**	**1.55**	**50**	⇓P	**Pn**	**12 57 33.6**	**-1.7**
	123nm,0.2s,SNR=310						
UCH				⇓S	**Sn**	**12 57 53.9**	**-1.6**
	386nm,0.3s						
EKS2	**Erkin-Say**	**1.55**	**24**	⇑P	**Pn**	**12 57 34.3**	**-1.1**
	41nm,0.2s,SNR=72						
EKS2				⇓S	**Sn**	**12 57 54.7**	**-0.9**
	68nm,0.2s						
AAK	**Ala-Archa**	**1.82**	**40**	P	**Pn**	**12 57 39.0**	**-0.1**
	172nm,0.3s,SNR=270						
AAK				⇓S	**Sn**	**12 58 02.6**	**+0.4**
	484nm,0.2s						
KZA	**Kyzart**	**1.94**	**64**	⇓P	**Pn**	**12 57 40.0**	**-0.7**
	95nm,0.4s,SNR=188						
KZA				⇑S	**Sn**	**12 58 04.9**	**-0.2**
	191nm,0.2s						
KBK	**Karagaybulak**	**2.07**	**47**	⇓P	**Pn**	**12 57 43.3**	**+0.7**
	50nm,0.2s,SNR=56						
KBK				⇓S	**Sn**	**12 58 10.8**	**+2.4**
	285nm,0.2s						
CHMS	**Chumysh**	**2.22**	**38**	⇑P	**Pn**	**12 57 45.0**	**+0.4**
	34nm,0.2s,SNR=40						
CHMS				⇓S	**Sn**	**12 58 14.4**	**+2.4**
	263nm,0.4s						
USP	**Ospenovka**	**2.34**	**30**	⇑P	**Pn**	**12 57 46.4**	**+0.2**
	38nm,0.2s,SNR=33						
USP				⇓S	**Sn**	**12 58 18.0**	**+3.1**
	177nm,0.3s						
KK31	**Karatay Array**	**2.57**	**317**	Pn	**Pn**	**12 57 50.5**	**+1.1**
	23nm,0.3s,baz=127,slow=13,SNR=475						
KK31				⇑Lg		12 58 27.7	
	59nm,0.4s,baz=135,slow=30,SNR=12						
TKM2	**Tokmak 2**	**2.61**	**49**	⇓Pn	**Pn**	**12 57 50.6**	**+0.7**
	1.2nm,0.3s						
TKM2				⇓Lg		12 58 24.5	
	17nm,0.6s						
TKM2	**Tokmak 2**	**2.61**	**49**	⇑P	**Pn**	**12 57 50.8**	**+0.9**
	51nm,0.3s,SNR=68						
TKM2				⇑S	**Sn**	**12 58 24.0**	**+2.4**
	225nm,0.5s						
ULHL	**Ulahol**	**2.69**	**67**	⇑P	**Pn**	**12 57 51.2**	**+0.2**
	23nm,0.2s,SNR=27						
MK31	**Makanchi Array**	**8.74**	**48**	⇑Pn	**Pn**	**12 59 13.6**	**-0.5**
	0.7nm,0.5s,baz=229,slow=14,SNR=5.7						
MK31				⇑Lg		13 01 34.7	
	3.5nm,0.8s						
AB31	**Akbulak array**	**12.13**	**316**	⇑P	**Pn**	**13 00 00.2**	**-0.3**
	0.7nm,0.4s						

IDC ***02*** *13:01:44.5±0.9, 1883S×173.14W, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.4/21, mbtmp4.3/14, ML4.3/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/30, Error ellipse: s-maj=36.6km s-min=15.8km az=148.0*
NEIC ***02*** *13:01:46.0±0.6, 1858S×17324W, h10km, mb4.7/5, Error ellipse: s-maj=24.5km s-min=10.1km az=141.0*
ISCJB ***02*** *13:01:47.8±0.6, 188S±02×1732W±0.1, h33km, mb4.4/16, MS3.7/2, Error ellipse: s-maj=26.4km s-min=10.6km az=147.2*
ISC 02 13:01:49.8±0.6**, 188S**±02×**1732W**±01**, h35**km**, n36,** σ**1s10**/30**, mb4.4**/16**, MS3.7**/2**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.01**	**16**	Pn	**Pn**	**13 02 57.3**	**-5.3**
	6.4nm,0.3s,baz=114,slow=18,SNR=10.0						
AFI				Sn	**Sn**	**13 03 49.1**	**-10**
	18nm,0.3s,baz=210,slow=23,SNR=5.9						
AFI				LR	LR	13 03 56.0	
	comp=Z,235nm,19.8s,baz=186,slow=26						
RAR	**Rarotonga**	**12.89**	**103**	Pn	**Pn**	**13 04 39.4**	**-11**
	1.2nm,0.3s,baz=248,slow=7.2,SNR=6.4						
RAR				LR	LR	13 07 41.8	
	comp=Z,352nm,20.0s,baz=31,slow=28						
DZM	**Mont Dzumac**	**19.33**	**257**	P	**Pn**	**13 06 13.4**	**-0.1**
	0.8nm,0.3s,baz=76,slow=18,SNR=5.8						
URZ	**Urewera**	**21.18**	**201**	P	**P**	**13 06 33.0**	**+0.8**
	8.2nm,0.6s,mb4.2,baz=342,slow=4.6,SNR=10						
URZ				S	**S**	**13 10 17.2**	**-8.6**
	1.9nm,0.7s,baz=315,slow=19,SNR=2.6						
PPT	**Papeete**	**22.50**	**91**	*e*LQ		13 10 56.2	
	533nm,25.8s						
PPT				*e*LR	LR	13 11 53.5	
	576nm,26.0s						
PPT	**Papeete**	**22.50**	**91**	LR	LR	13 12 43.9	
	comp=Z,286nm,21.2s,MS3.7,baz=357,slow=29						
RPZ	**Rata Peaks**	**28.18**	**205**	P	**P**	**13 07 45.0**	**+6.1**
RPZ	**Rata Peaks**	**28.18**	**205**	P	**P**	**13 07 45.0**	**+6.1**
	18nm,0.6s,mb4.8,baz=338,slow=1.7,SNR=24						
RKT	**Rikitea**	**35.92**	**104**	*e*LR	LR	13 18 16.0	
	355nm,25.2s						
CTA	**Charters Tower**	**38.17**	**261**	*e*P	**P**	**13 09 05.0**	**-1.2**
	7.0nm,0.5s,mb4.7						
CTA	**Charters Tower**	**38.17**	**261**	P	**P**	**13 09 05.9**	**-0.3**
	8.3nm,0.5s,mb4.8,baz=96,slow=9.7,SNR=16						
CTAO	**Charters Tower**	**38.17**	**261**	*e*P	**P**	**13 09 05.1**	**-1.1**
	8.2nm,0.6s,mb4.6						
PMG	**Port Moresby**	**39.45**	**278**	LR	LR	13 21 47.6	
	comp=Z,104nm,18.9s,MS3.7,baz=202,slow=30						
STKA	**Stephens Creek**	**42.59**	**243**	*e*P	**P**	**13 09 41.9**	**-0.7**
	2.6nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**42.59**	**243**	P	**P**	**13 09 42.1**	**-0.5**
	3.8nm,0.8s,mb4.2,baz=114,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**49.31**	**255**	P	**P**	**13 10 35.3**	**-0.4**
	13nm,0.7s,mb5.1,baz=91,slow=8.0,SNR=147						
WB2	**Warramunga Arr**	**49.31**	**260**	*e*P	**P**	**13 10 34.6**	**-1.1**
WRA	**Warramunga Arr**	**49.32**	**260**	P	**P**	**13 10 34.9**	**-1.0**
	3.7nm,0.6s,mb4.6,baz=96,slow=8.6,SNR=43						
FITZ	**Fitzroy Crossi**	**57.74**	**260**	P	**P**	**13 11 38.0**	**+0.3**
	2.2nm,0.8s,mb4.2,baz=131,slow=9.3,SNR=5.3						
MBWA	**Marble Bar**	**62.63**	**255**	*e*P	**P**	**13 12 10.8**	**-0.3**
MJAR	**Matsushiro Arr**	**71.60**	**320**	P	**P**	**13 13 09.0**	**+1.3**
	2.2nm,0.8s,mb4.1,baz=164,slow=5.1,SNR=6.4						
NVAR	**Mina Array Bea**	**76.71**	**41**	P	**P**	**13 13 37.9**	**+0.5**
	0.9nm,0.7s,mb3.8,baz=219,slow=7.7,SNR=8.8						
KSM	**Kuching**	**77.67**	**276**	*e*P	**P**	**13 13 45.9**	**+2.5**
KSRS	**Korea Array**	**78.66**	**316**	P	**P**	**13 13 50.9**	**+2.6**
	2.8nm,0.9s,mb4.2,baz=122,slow=5.9,SNR=8.6						
TXAR	**Lajitas Array**	**82.35**	**56**	P	**P**	**13 14 08.8**	**+0.4**
	0.8nm,0.7s,mb3.7,baz=219,slow=8.2,SNR=10						
PV10	**Paradox Valley**	**82.72**	**46**	*e*P	**P**	**13 14 10.6**	**+0.6**
PV01	**Paradox Valley**	**82.92**	**46**	*e*P	**P**	**13 14 10.9**	**-0.1**
PDAR	**Pinedale Array**	**84.64**	**42**	P	**P**	**13 14 19.9**	**+0.1**
	1.2nm,0.7s,mb4.1,baz=220,slow=3.3,SNR=13						
COLA	**College**	**85.61**	**11**	*e*P	**P**	**13 14 23.9**	**-0.2**
	5.3nm,0.8s,mb4.8						
RLMT	**Red Lodge**	**86.05**	**40**	*e*P	**P**	**13 14 24.7**	**-2.1**
	7.2nm,0.8s,mb5.0						
PSI	**Prapat**	**88.85**	**273**	P	**P**	**13 14 42.8**	**+1.7**
	2.2nm,0.4s,mb4.9,baz=184,slow=7.9,SNR=4.9						
YKA	**Yellowknife Ar**	**93.09**	**23**	P	**P**	**13 14 58.0**	**-1.5**
	0.1nm,0.4s,mb3.6,baz=236,slow=4.4,SNR=3.5						
KMBO	**Kilima Mbogo**	**144.12**	**240**	PKP	PKPdf	13 21 23.3	+0.4
KMBO	**Kilima Mbogo**	**144.12**	**240**	PKP	PKPdf	13 21 23.3	+0.4
	0.7nm,0.4s,baz=135,slow=5.7,SNR=4.5						
CLL	**Collm**	**147.14**	**353**	*e*PKPbc	PKPbc	13 21 31.0	+2.0
	comp=Z,6.0nm,0.8s						
CLL				*e*pPKPbc	pPKPbc	13 21 37.0	-3.4
BRTR	**Keskin Array B**	**148.79**	**318**	PKPbc	PKPbc	13 21 35.0	+1.2
	comp=Z,0.7nm,0.6s,baz=58,slow=3.1,SNR=3.9						

MOS ***02*** *13:07:28.5±0.9, 3086S×7139W, h33km, mb5.9/20, MS4.8/4, Error ellipse: s-maj=24.2km s-min=6.5km*

az=107.7

GUC ***02*** *13:07:29.6±0.9, 30.88S×71.68W, h33km±6km, ML5.7*

ISCJB ***02*** *13:07:30.3±0.1, 30.81S±0.02×71.09W±0.05, h48km, mb5.5/69, MS4.8/14, Error ellipse: s-maj=6.2km s-min=2.9km az=162.2*

BJI ***02*** *13:07:30.1, 30.87S×70.61W, h48km, mB5.4, Ms5.3, Msz5.2*

GCMT ***02*** *13:07:31.3±0.2, 30.93S×71.64W, h55km, MW5.4/76, Moment Tensor Solution. s76,c119; s71,c134; Duration: 1.2s Moment tensor: Scale 10^{17}Nm; M_{rr}1.37±.03; $M_{\theta\theta}$0.21±.03; $M_{\phi\phi}$-1.58±.03; $M_{r\theta}$0.12±.02; $M_{\theta\phi}$-0.04±.03; $M_{\phi r}$-0.54±.03; Best double couple: $M_0$1.57600×10^{17} NP1:ϕ_s7.00000°, δ35.00000°, λ100.00000°. NP2:ϕ_s176.00000°, δ55.00000°, λ83.00000°. Principal axes: T 1.4770, Plg79.0000°, Azm61.0000°; N 0.1960, Plg6.0000°, Azm179.0000°; P -1.6750, Plg10.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***02*** *13:07:31.3±0.1, 30.88S×71.19W, mb5.6/47, MW5.4 Error ellipse: s-maj=7.9km s-min=3.9km az=73.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}1.72; $M_{\theta\theta}$0.01; $M_{\phi\phi}$-1.73; $M_{r\theta}$0.13; $M_{\theta\phi}$0.02; $M_{\phi r}$-0.37; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s3.00000°, δ39.00000°, λ96.00000°. NP2:ϕ_s175.00000°, δ51.00000°, λ85.00000°. Principal axes: T 1.7700, Plg83.0000°, Azm56.0000°; N 0.0000, Plg4.0000°, Azm178.0000°; P -1.7700, Plg6.0000°, Azm269.0000°;*

NEIC Felt [IV] at Illapel, Monte Patria and Ovalle; [II] at Coquimbo, La Serena, Quillota, Santiago, Valparaiso and Vina del Mar. Also felt at Mendoza, Vallenar and Vicuna.

IDC ***02*** *13:07:31.5±0.3, 30.89S×71.16W, h48km±2km, mb4.9/21, mb1 5.0/23, mb1mx5.0/23, mbtmp4.9/23, MS4.7/10, Ms1 4.7/10, ms1mx4.5/15 Error ellipse: s-maj=17.0km s-min=8.7km az=75.0*

ISC 02 13:07:32.1±0.1**, 30.85S**±0.02×**71.16W**±0.05**, h50km, h50km**±.5km**:pP-P, n611, σ0.67**/502**, mb5.5**/69**, MS4.8**/14**, 147C-137D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	Tololo Astrono	0.74	24	eP	Pn	13 07 47.5	+1.1
TLL				iS	Sn	13 08 00.2	+3.4
TLL				AML	AML	13 08 01.4	
	comp=N,100μm,0.5s						
LSCH	La Serena	0.94	355	eP	Pn	13 07 48.6	-0.4
LSCH				iS	Sn	13 08 02.0	+0.6
CHNG	Los Chungos	1.07	196	iP	Pn	13 07 35.8	-15
CHNG				iS	Sn	13 07 47.7	-17
PACH	Papudo	1.70	188	⇓iP	Pn	13 07 58.2	-1.2
LCO	Las Campanas	1.87	12	ePn	Pn	13 08 02.5	+0.8
LCO				eSn	Sn	13 08 16.6	-7.6
VACH	Vallenar	2.29	9	eP	Pn	13 08 08.3	+0.9
VACH				iS	Sn	13 08 37.8	+3.4
VACH				AML	AML	13 08 57.0	
	comp=N,161μm,0.6s						
FCH	Farellones	2.58	164	⇑iP	Pn	13 08 13.1	+1.6
CLCH	Cerro Calan	2.60	168	eP	Pn	13 08 13.1	+1.4
CLCH				AML	AML	13 08 56.5	
	comp=E,47μm,0.6s						
CFAA	Coronel Fontan	2.62	108	P	Pn	13 08 15.8	+3.9
CFAA				S	Sn	13 08 52.0	+10
CFAA	Coronel Fontan	2.62	108	P	Pn	13 08 15.8	+3.9
	comp=E,94nm,0.3s,baz=295,slow=12,SNR=1217						
CFAA				S	Sn	13 08 52.0	+10
	comp=E,140nm,0.3s,baz=129,slow=20,SNR=7.1						
SAN	Santiago	2.63	171	eP	Pn	13 08 12.4	+0.2
ANTU	Antumapu	2.75	171	⇓eP	Pn	13 08 14.1	+0.3
ANTU				iS	Sn	13 08 47.8	+2.0
ANTU				AML	AML	13 09 01.3	
	comp=N,29μm,0.7s						
TACH	Talagante	2.81	176	eP	Pn	13 08 14.0	-0.6
PCH	Pirque	2.82	169	⇓eP	Pn	13 08 15.1	+0.4
MDZ	Mendoza	2.83	137	eP	Pn	13 08 16.0	+1.2
LNV	Longovilo	3.11	184	⇓iP	Pn	13 08 16.9	-1.8
CACH	El Canelo	3.30	172	iP	Pn	13 08 21.8	+0.6
CICH	Cipreses	3.52	170	eP	Pn	13 08 24.9	+0.5
SFDO	San Fernando	3.76	178	eP	Pn	13 08 26.7	-0.9
CPN1	Cerro Paranal	6.23	6	eP	Pn	13 08 59.7	-1.8
PLCA	Paso Flores	9.88	177	eP	Pn	13 09 49.9	-1.5
	comp=N,12nm,1.5s						
PLCA	Paso Flores	9.88	177	eP	Pn	13 09 49.9	-1.5
PLCA				pmax	pmax		
	comp=Z,12nm,1.5s						
TRQA	Tornquist	10.44	136	ePn	Pn	13 09 58.7	-0.5
	comp=Z,187nm,0.7s						
LPA	La Plata	11.83	114	⇑eP	Pn	13 10 20.9	+2.7
	comp=Z,394nm,0.8s						
LPA				esP		13 10 34.9	
LPA				eS	Sn	13 12 29.0	+0.3
ARE	Arequipa	14.32	359	eP	Pn	13 10 53.0	+0.9
LPAZ	La Paz	14.75	11	ePn	Pn	13 11 00.1	+2.3
	comp=Z,43nm,0.7s						
LPAZ	La Paz	14.75	11	eP	Pn	13 11 00.1	+2.3
LPAZ				pmax	pmax		
	comp=Z,43nm,0.7s						
LPAZ	La Paz	14.75	11	P	Pn	13 10 59.4	+1.6
	comp=Z,1.6nm,0.3s,baz=176,slow=6.2,SNR=72						
SIV	San Ignacio	17.43	34	P	Pn	13 11 31.8	+0.1
	comp=Z,6.7nm,0.3s,baz=221,slow=11,SNR=190						
NNA	Nana	19.49	343	ePn	Pn	13 11 55.5	-1.2
EFI	East Falkland	22.95	159	eP	P	13 12 31.3	-0.6
	comp=Z,246nm,1.1s,mb5.5						
EFI	East Falkland	22.95	159	eP	P	13 12 31.3	-0.7
EFI				pmax	pmax		
	comp=Z,246nm,1.1s,mb5.5						
USHA	Ushuaia	24.05	176	P	P	13 12 42.0	-0.4
	comp=Z,151nm,0.9s,mb5.4,baz=334,slow=6.0,SNR=33						
USHA				pP		13 12 54.6	
	comp=Z,155nm,0.9s,baz=327,slow=8.8,SNR=8.2						
USHA				LR	LR	13 22 32.1	
	comp=Z,2μm,20.8s,MS4.6,baz=342,slow=38						
ATAH	Atahualpa	24.67	343	P	P	13 12 49.5	+1.1
	comp=Z,13nm,0.9s,baz=165,slow=9.2,SNR=8.4						
ATAH				LR	LR	13 20 44.6	
	comp=Z,838nm,19.4s,MS4.2,baz=271,slow=32						
RPN	Rapa Nui	33.49	267	LR	LR	13 23 57.1	
	comp=Z,1μm,22.0s,MS4.6,baz=289,slow=29						
PAYG	Puerto Ayora	35.06	325	eP	P	13 14 22.0	+1.5
	comp=Z,68nm,1.1s,mb5.5						
ROSC	El Rosal	35.63	355	eP	P	13 14 27.4	+2.2
ROSC	El Rosal	35.63	355	P	P	13 14 27.4	+2.1
	comp=Z,17nm,0.7s,mb5.1,baz=91,slow=20,SNR=10						
SDV	Santo Domingo	39.51	1	eP	P	13 14 57.1	-0.9
BCIP	Isla Barro Col	40.64	347	eP	P	13 15 08.7	+1.2
	comp=Z,69nm,1.2s,mb5.2						
BCIP				epP	pP	13 15 21.3	+0.6
JTS	JuntasAbangare	42.99	340	eP	P	13 15 26.3	-0.3
	comp=Z,157nm,1.8s,mb5.4						
JTS	JuntasAbangare	42.99	340	⇑iP	P	13 15 26.7	+0.1
BIM	Bigot	46.13	14	eP	P	13 15 51.5	-0.2
MVM	Montagne Vaucl	46.20	14	eP	P	13 15 51.3	-0.9
FDF	Fort de France	46.33	13	eP	P	13 15 51.6	-1.5
TGUH	Tegucigalpa,Un	47.26	338	eP	P	13 16 00.8	+0.4
	comp=Z,63nm,0.9s,mb5.5						
CPD	Cerro la Pandu	48.86	7	eP	P	13 16 11.1	-1.7
CPD	Cerro la Pandu	48.86	7	eP	P	13 16 18.9	+6.1
CPD				e*PP	pP	13 16 27.2	+0.8
SJG	San Juan	48.91	6	eP	P	13 16 12.3	-0.9
	comp=Z,101nm,0.9s,mb5.8						
SJG	San Juan	48.91	6	eP	P	13 16 12.3	-0.9
SJG				e*PP	pP	13 16 25.7	-1.1
MPR	Mayaguez	48.92	5	eP	P	13 16 12.8	-0.5
MTP	Monte Pirata	48.96	7	eP	P	13 16 12.5	-1.0
HUMP	Col San Antoni	48.97	7	eP	P	13 16 13.3	-0.4
CBYP	Canovanas	49.10	7	eP	P	13 16 13.4	-1.2
SDDR	Presa de Saban	49.54	360	eP	P	13 16 17.8	-0.1
VNA3	Neumayer Olymp	52.01	159	eP	P	13 16 35.5	-0.5
VNA3				e		13 16 38.2	
VNA3				e	pP	13 16 49.7	0.0
VNA3				e		13 16 55.8	
VNA3				e		13 17 03.4	
VNA3				e		13 17 07.5	
VNA3				e		13 17 27.0	
VNA3				e		13 17 44.9	
VNA1	Neumayer--Stat	52.29	158	eP	P	13 16 38.5	+0.4
VNA1				e		13 16 40.9	
VNA1				e	pP	13 16 52.3	+0.5
VNA1				e		13 16 58.3	
VNA1				e		13 17 07.1	
VNA1				e		13 17 09.9	
VNA1				e		13 17 29.5	
VNA1				e		13 17 46.7	
VNA2	Neumayer--Watz	52.64	158	eP	P	13 16 40.4	-0.3
	baz=288,slow=9.1						
VNA2				e		13 16 42.7	
VNA2				e	pP	13 16 54.2	-0.2
VNA2				e		13 17 00.5	
VNA2				e		13 17 05.9	
VNA2				e		13 17 10.6	
VNA2				e		13 17 32.9	
VNA2				e		13 17 50.2	
TEIG	Tepich	53.38	340	eP	P	13 16 46.4	-0.2
	comp=Z,111nm,0.8s,mb5.8						
TEIG				epP	pP	13 16 59.6	-0.8
SNAA	Sanae	54.23	159c	iP	P	13 16 52.2	-0.1
SNAA	Sanae	54.23	159	P	P	13 16 51.8	-0.6
	comp=Z,21nm,0.7s,mb5.2,baz=280,slow=6.2,SNR=98						
SNAA				pP	pP	13 17 04.6	-1.5
	comp=Z,40nm,0.9s,baz=286,slow=5.7,SNR=22						
IIO	Organos	56.71	329	iP	P	13 17 13.0	+2.3
IIO				iS	pP	13 17 27.9	+3.3
RKT	Rikitea	56.73	261	eS	S	13 25 04.7	+4.4
	comp=Z,809nm,36.2s						
RKT				eLR	LR	13 33 54.2	
	comp=Z,1μm,27.8s						
MAIT	Maitri	58.90	157	eP	P	13 17 25.2	-0.3
QSPA	South Pole Qui	59.38	180	eP	P	13 17 28.2	-0.5
QSPA				epP	pP	13 17 42.3	-0.3
HKT	Hockley	64.86	336	eP	P	13 18 05.1	-0.8
	comp=Z,66nm,1.4s,mb5.5						
HKT	Hockley	64.86	336	eP	P	13 18 05.1	-0.8
HKT				pmax	pmax		
	comp=Z,66nm,1.4s,mb5.5						
GOGA	Godfrey	64.96	349	eP	P	13 18 06.0	-0.5
JSC	Jenkinsville	65.47	351	eP	P	13 18 09.2	-0.6
JCT	Junction City	66.79	333	eP	P	13 18 18.6	+0.2
JCT				pmax	pmax		
	comp=Z,95nm,1.0s,mb5.8						
TKL	Tuckaleechee C	67.20	349	P	P	13 18 20.1	-0.7
TKL				pP	pP	13 18 33.7	-1.3
TKL	Tuckaleechee C	67.20	349	P	P	13 18 20.1	-0.7
	comp=Z,49nm,0.7s,mb5.6,baz=165,slow=6.7,SNR=25						
TKL				pP	pP	13 18 33.7	-1.3
	comp=Z,41nm,0.9s,baz=143,slow=8.4,SNR=6.8						
OXF	Oxford	67.25	344	eP	P	13 18 20.6	-0.6
VNDA	Vanda	67.33	191	P	P	13 18 21.6	+0.3
	comp=Z,19nm,1.2s,mb5.0,baz=161,slow=3.7,SNR=5.0						
LTX	Lajitas	67.38	329	eP	P	13 18 22.4	+0.3
LTX				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.6						
TXAR	Lajitas Array	67.38	329	P	P	13 18 22.2	+0.1
TXAR				*PP	pP	13 18 35.8	-0.5
TXAR	Lajitas Array	67.38	329	P	P	13 18 22.2	+0.1
	comp=Z,6.0nm,0.7s,mb4.7,baz=154,slow=8.1,SNR=76						
TXAR				pP	pP	13 18 35.8	-0.5
	comp=Z,9.0nm,0.7s,baz=139,slow=5.6,SNR=16						
TXAR				PKPPKP		13 46 43.8	
	comp=Z,2.7nm,1.1s,baz=270,slow=1.3,SNR=11						
ELN	Prospectdale	68.31	352	eP	P	13 18 27.5	-0.3
URVA	University of	68.32	355	eP	P	13 18 28.1	+0.3
MIAR	Mount Ida	68.39	340	eP	P	13 18 28.1	-0.3
PVMO	Portageville	69.13	344	eP	P	13 18 32.8	-0.2
	comp=Z,428nm,0.8s,mb6.4						
PARMO	Parma	69.38	344	eP	P	13 18 34.4	-0.1
WCI	Wyandotte Cave	70.15	347	eP	P	13 18 38.4	-0.8
WMOK	Wichita Mounta	70.23	336	eP	P	13 18 39.3	-0.5
MCWV	Mont Chateau	70.61	353	eP	P	13 18 41.7	-0.2
	comp=Z,58nm,1.3s,mb5.3						
FVM	French Village	70.80	344	eP	P	13 18 42.8	-0.3
VAH	Vaihoa	70.88	263	eP	P	13 18 47.1	+2.8
	comp=Z,138nm,1.2s,mb5.8						
TVO	Taravao	71.10	260	eP	P	13 18 48.8	+3.2
	comp=Z,258nm,1.0s,mb6.1						
TVO	Taravao	71.10	260	eP	P	13 18 48.8	+3.2
TVO				pmax	pmax		
	comp=Z,258nm,1.0s,mb6.1						
BLO	Bloomington	71.11	347	eP	P	13 18 44.3	-0.7
BLO				e*PP	pP	13 18 59.9	+0.6
BLO				pmax	pmax		
	comp=Z,44nm,0.6s,mb5.6						
SLM	Saint Louis	71.38	344	eP	P	13 18 46.5	-0.1
SLM				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7						
SSPA	Standing Stone	71.39	355	eP	P	13 18 45.8	-0.9
	comp=Z,51nm,1.3s,mb5.3						
PAE	Paea	71.43	260	eP	P	13 18 50.5	+2.9
	comp=Z,269nm,1.2s,mb6.0						
PAE	Paea	71.43	260	eP	P	13 18 50.5	+2.9
PAE				pmax	pmax		
	comp=Z,269nm,1.2s,mb6.0						
PPT	Papeete	71.47	260	eS	S	13 28 07.3	+4.3
	comp=Z,667nm,32.8s						
PPT				eLR	LR	13 40 43.7	
	comp=Z,1μm,24.5s						
PPT	Papeete	71.47	260	eP	P	13 18 51.1	+3.3
	comp=Z,174nm,1.5s,mb5.8						
PPT				eS	S	13 28 07.3	+4.3
PPT	Papeete	71.47	260	eP	P	13 18 51.1	+3.3
PPT				eS	S	13 28 07.3	+4.3
PPT				pmax	pmax		
	comp=Z,174nm,1.5s						
PPT	Papeete	71.47	260	pP	pP	13 19 02.0	-0.1
	comp=Z,73nm,0.9s,baz=51,slow=9.1,SNR=5.0						
PPT				LR	LR	13 41 44.1	
	comp=Z,527nm,20.0s,MS4.8,baz=84,slow=29						
BNM	Barren Site	72.79	330	eP	P	13 18 55.9	+0.6
BNM				epP	pP	13 19 08.5	-1.0
ERPA	Erie	73.06	353	epP	pP	13 19 08.3	-2.6
	comp=Z,26nm,1.0s						
LIC	Lamto	73.08	72	eP	P	13 18 57.6	+0.2
	comp=Z,210nm,0.9s,mb6.0						
TUC	Tucson	73.17	326	eP	P	13 18 57.1	-0.4
	comp=Z,118nm,1.8s,mb5.5						
TUC				epP	pP	13 19 10.6	-1.2
TUC	Tucson	73.17	326	eP	P	13 18 57.1	-0.4
TUC				e*PP	pP	13 19 10.6	-1.2
TUC				pmax	pmax		
	comp=Z,118nm,1.8s,mb5.5						
TIC	Toumodi	73.32	72	eP	P	13 18 59.0	+0.1
	comp=Z,534nm,1.3s,mb6.3						
KIC	Kosan Boka	73.39	72	eP	P	13 18 59.6	+0.3
	comp=Z,603nm,0.9s,mb6.5						
ANMO	Albuquerque	73.40	330c	iP	P	13 18 59.2	+0.4
ANMO	Albuquerque	73.40	330	P	P	13 18 59.5	+0.7
	comp=Z,17nm,1.1s,mb4.9,baz=154,slow=7.1,SNR=26						
ANMO				pP	pP	13 19 13.2	+0.1
	comp=Z,20nm,1.0s,baz=149,slow=7.6,SNR=13						
116A	Eloy	73.82	325	⇑P	P	13 19 01.7	+0.4
	baz=74,SNR=11						
115A	Sonoran Desert	74.19	325	⇓P	P	13 19 04.1	+0.6
	baz=74,SNR=16						
CBKS	Cedar Bluff	74.24	337	eP	P	13 19 03.8	+0.2
CBKS				e*PP	pP	13 19 18.1	+0.1
LBNH	Lisbon	74.72	359	eP	P	13 19 06.2	-0.1
	comp=Z,40nm,1.1s,mb5.3						
LBNH				e	pP	13 19 20.9	+0.3
LBNH	Lisbon	74.72	359	eP	P	13 19 06.2	-0.1
LBNH				e	pP	13 19 21.0	+0.4
LBNH				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
Z14A	Wintersburg	75.08	325	⇑P	P	13 19 08.8	+0.2
	baz=75						
LONY	Lake Ozonia	75.17	357	epP	pP	13 19 21.6	-1.6
JFWS	Jewell Farm	75.46	346	eP	P	13 19 10.2	-0.4
MSNY	Massena	75.56	357	eP	P	13 19 10.9	-0.1
Y14A	Wickenburg	75.57	325	⇓P	P	13 19 11.8	+0.3
	baz=76,SNR=16						
SADO	Sadowa	75.60	354	P	P	13 19 11.0	-0.3
	baz=188,slow=6.7						
SADO				pP	pP	13 19 25.2	-0.5
	baz=211,slow=6.5						
X15A	Humboldt	75.64	326	⇑P	P	13 19 12.4	+0.6
	baz=76,SNR=40						
SUR	Sutherland	75.71	119	eP	P	13 19 13.5	+1.0
	comp=Z,113nm,1.0s,mb5.8						
GLA	Glamis	75.78	323	⇑P	P	13 19 13.0	+0.3
	baz=76,SNR=7.0						
Y13A	Salome	75.88	324	⇑P	P	13 19 13.5	+0.3
	baz=76,SNR=14						
X14A	Yava	75.94	325	⇑P	P	13 19 14.0	+0.5
	baz=76,SNR=15						
MAW	Mawson	75.99	164	P	P	13 19 13.1	-0.3
MAW				*PP	pP	13 19 27.1	-0.7
MAW	Mawson	75.99	164	P	P	13 19 13.1	-0.3
	comp=Z,37nm,0.9s,mb5.3,baz=249,slow=7.2,SNR=10						
MAW				pP	pP	13 19 27.1	-0.7
	comp=Z,55nm,1.1s,baz=201,slow=4.4,SNR=5.6						
MAW				LR	LR	13 55 28.2	
	comp=Z,709nm,19.1s,MS5.0,baz=233,slow=38						
WUAZ	Wupatki	76.07	327	⇑P	P	13 19 14.8	+0.6
	baz=76						
DVTC	Desert V Tower	76.14	322	⇓P	P	13 19 15.1	+0.4
	baz=76,SNR=6.2						
Y12C	Blythe	76.18	324	⇑P	P	13 19 15.5	+0.6
	baz=76,SNR=11						
MVCO	Mesa Verde	76.19	330	⇓P	P	13 19 15.4	+0.6
	baz=76						
SWSC	Sam W. Stewart	76.20	323	⇑P	P	13 19 15.4	+0.4
	baz=76,SNR=7.1						
W15A	Williams	76.22	326	⇑P	P	13 19 15.9	+0.8
	baz=76,SNR=14						
PDMCI	Parker Dam,Lak	76.42	325	⇑P	P	13 19 16.7	+0.4
	baz=77						
MONP	Monument Peak	76.49	322	⇑P	P	13 19 17.3	+0.6
	baz=77						
X13A	Yucca	76.50	325	⇑P	P	13 19 17.1	+0.4
	baz=77,SNR=31						
BC3	Big Chuckw Mtn	76.58	323	⇑P	P	13 19 17.7	+0.5
	baz=77,SNR=17						
W14A	Seligman	76.64	326	⇑P	P	13 19 18.2	+0.8
	baz=77,SNR=17						
IRM	Iron Mountain	76.82	324	⇑P	P	13 19 18.8	+0.3
	baz=77,SNR=6.3						
109C	Camp Elliot, M	76.85	322	⇓P	P	13 19 19.0	+0.3
	baz=77						
W13A	Hualapai Mount	76.94	325	⇑P	P	13 19 20.0	+0.9
	baz=77,SNR=20						
PV01	Paradox Valley	77.00	331	eP	P	13 19 19.7	+0.3
PV01				epP	pP	13 19 33.0	-0.8
NEE2	Needles Airpor	77.03	324	⇓P	P	13 19 20.0	+0.3
	baz=77						
PFO	Pinyon Flat Ob	77.06	323	eP	P	13 19 20.4	+0.5
PFO	Pinyon Flat Ob	77.06	323	P	P	13 19 21.2	+1.3
	comp=Z,24nm,1.1s,mb5.1,baz=125,slow=5.0,SNR=13						
PFO				pP	pP	13 19 34.8	+0.5
	comp=Z,46nm,1.0s,baz=132,slow=4.3,SNR=17						
PFO	Pinyon Flat Ob	77.06	323	⇓P	P	13 19 20.4	+0.5
	baz=77,SNR=12						
BELC	Belle Mtn.	77.13	323	⇑P	P	13 19 20.9	+0.6
	baz=77						
ISCO	Idaho Springs	77.23	333	eP	P	13 19 21.5	+0.9
PV10	Paradox Valley	77.40	330	eP	P	13 19 21.7	0.0
PV10				epP	pP	13 19 34.5	-1.6
MURC	Murrieta	77.45	322	⇑P	P	13 19 22.6	+0.5
	baz=78,SNR=7.5						
GMRC	Granite Mounta	77.57	324	⇑P	P	13 19 23.4	+0.7
	baz=78,SNR=19						
W12A	Cal Nev Ari	77.58	325	⇑P	P	13 19 22.9	+0.2
	baz=78						
U14A	Mt Trumbull	77.65	326	⇑P	P	13 19 24.1	+1.0
	baz=78,SNR=45						
SCI	San Clemente I	77.70	321	⇓P	P	13 19 24.1	+0.6
	baz=78						
T15A	Red Dirt Ranch	77.76	327	⇑P	P	13 19 24.8	+1.1
	baz=78,SNR=9.7						
BBRC	Big Bear Sol-O	77.81	323	⇓P	P	13 19 25.0	+0.9
	baz=78						
V12A	Nelson	77.91	325	⇑P	P	13 19 24.7	+0.2
	baz=78,SNR=18						
CIS	Catalina Islan	77.94	321	⇑P	P	13 19 25.0	+0.2
	baz=78						
HEC	Hector,Ludlow	77.95	323	⇓P	P	13 19 25.5	+0.7
	baz=78,SNR=22						
U13A	Pakoon Wash	78.03	326	⇑P	P	13 19 25.8	+0.6
	baz=78,SNR=17						
FMP	Fort Macarthur	78.11	321	⇓P	P	13 19 25.4	-0.3
	baz=78						
T14A	Hurricane	78.13	327	⇓P	P	13 19 26.4	+0.7
	baz=78,SNR=22						
BFSC	Mount Baldy St	78.18	322	⇓P	P	13 19 26.7	+0.6
	baz=78,SNR=8.1						
TUQ	Turquoise Mtn.	78.22	324	⇑P	P	13 19 26.9	+0.7
	baz=78,SNR=5.2						
V11A	Goodsprings	78.29	325	⇓P	P	13 19 27.1	+0.4
	baz=79,SNR=7.4						
U12A	Valley of Fire	78.32	326	⇑P	P	13 19 27.3	+0.5
	baz=79,SNR=12						
RRX	Edison Barstow	78.33	323	⇓P	P	13 19 27.5	+0.6
	baz=79						
SNCC	San Nicolas Is	78.44	320	⇑P	P	13 19 27.9	+0.4
	baz=79						
T13A	Saint George	78.48	326	P	P	13 19 28.6	+0.9
	baz=79,SNR=18						
DECC	Green Verdugo	78.55	322	⇓P	P	13 19 28.6	+0.5
	baz=79						
GSC	Goldstone	78.56	323	⇑P	P	13 19 28.7	+0.5
	baz=79,SNR=7.9						
T12A	Moapa	78.64	326	⇓P	P	13 19 28.8	+0.2
	baz=79						
SRU	San Rafael	78.65	330	eP	P	13 19 29.2	+0.6
CCUT	Cedar City	78.65	327	eP	P	13 19 29.5	+0.9
CCUT				epP	pP	13 19 42.8	-0.3
S14A	Cedar City	78.73	327	⇑P	P	13 19 29.9	+0.9
	baz=79,SNR=12						
SHOC	Shoshone	78.76	324	⇓P	P	13 19 29.6	+0.4
	baz=79						
BLG	Laguna Peak	78.84	321	⇑P	P	13 19 30.1	+0.4
	baz=79						
EDW2	Edwards Air Fo	78.85	322	⇓P	P	13 19 29.8	0.0
	baz=79,SNR=8.6						
ARUT	Antelope Range	78.88	327	eP	P	13 19 30.5	+0.6
ARUT				epP	pP	13 19 42.7	-1.6
MSU	Marysvale	78.89	328	eP	P	13 19 30.6	+0.7
S13A	Holt Ranch, En	78.91	327	⇓P	P	13 19 30.9	+0.8
	baz=79,SNR=36						
OSI	Osito Adit	79.04	322	⇑P	P	13 19 31.2	+0.4
	baz=79						
BSC	Santa Cruz Isl	79.06	321	⇓P	P	13 19 30.8	-0.1
	baz=79						
R14A	James Farms, M	79.10	328	⇑P	P	13 19 31.8	+0.7
	baz=79,SNR=10						
LRMC	Laurel Mountai	79.15	323	⇑P	P	13 19 32.1	+0.7
	baz=79						
U10A	Ash Meadows, A	79.19	324	⇑P	P	13 19 32.4	+0.8
	baz=80,SNR=8.6						
T11A	Corn Creek, Al	79.29	326	⇑P	P	13 19 33.0	+0.9
	baz=80,SNR=42						
TSUM	Tsumeb	79.36	106	eP	P	13 19 33.2	+0.1
	comp=Z,107nm,1.3s,mb5.6						
TSUM				epP	pP	13 19 47.6	+0.1
S12A	Delamar Landin	79.40	326	⇑P	P	13 19 33.7	+0.9
	baz=80,SNR=13						
SBC	Santa Barbara	79.44	321	⇓P	P	13 19 33.5	+0.5
	baz=80						
ARVC	Arvin	79.48	322	⇑P	P	13 19 33.8	+0.6
	baz=80						
FURC	Furnace Creek,	79.50	324	P	P	13 19 33.9	+0.6
	baz=80,SNR=11						
MPMC	Manual Prospec	79.50	323	⇑P	P	13 19 33.6	+0.3
	baz=80,SNR=7.0						
TPNV	Topopah Spring	79.57	325	eP	P	13 19 34.7	+1.1
TPNV	Topopah Spring	79.57	325	⇑P	P	13 19 34.4	+0.7
	baz=80						
ISA	Isabella	79.70	323	⇑P	P	13 19 35.1	+0.7
	baz=80,SNR=20						
DAC	Darwin (Calif)	79.72	323	eP	P	13 19 34.8	+0.3
	comp=Z,91nm,1.1s,mb5.6						
DAC				epP	pP	13 19 48.3	-0.7
DAC	Darwin (Calif)	79.72	323	eP	P	13 19 34.8	+0.3
DAC				e*PP	pP	13 19 48.3	-0.7
DAC				pmax	pmax		
	comp=Z,91nm,1.1s,mb5.6						
PKM	Peak Mountain	79.84	321	P	P	13 19 36.2	+1.0
	baz=80,SNR=7.5						
R12A	Pony Springs,	79.86	327	⇑P	P	13 19 36.1	+0.9
	baz=80,SNR=25						
S11A	Rachel	79.87	326	⇓P	P	13 19 36.1	+0.8
	baz=80,SNR=5.5						
DRV	Dumont d'Urvil	79.93	192	P	P	13 19 34.0	-1.3
DRV				S	S	13 29 44.0	+9.2
DRV				L		13 41 00.0	
DRV				R		13 45 00.0	
DAU	Daniels Canyon	80.04	330	eP	P	13 19 37.2	+1.1
DAU				e*PP	pP	13 19 50.2	-0.4
CWC	Cottonwood Cre	80.10	323	⇑P	P	13 19 37.0	+0.5
	baz=80						
GRAC	Grapevine Rang	80.17	324	⇑P	P	13 19 37.6	+0.7
	baz=80,SNR=5.4						
SMMC	Simmler	80.25	321	⇓P	P	13 19 38.0	+0.7
	baz=80,SNR=8.8						
R11A	Troy Canyon, C	80.34	326	P	P	13 19 38.6	+0.8

baz=81,SNR=34
TRCR **Troy Canyon** 80.34 326 eP P 13 19 38.5 +0.7
TRCR epP pP 13 19 52.2 -0.1
S10A **Tonopah Range,** 80.50 325 ⇑P P 13 19 39.0 +0.4
baz=81,SNR=20
EYMN **Ely** 80.53 346 eP P 13 19 37.2 -1.3
comp=Z,80nm,1.2s,mb5.5
EYMN epP pP 13 19 53.1 +0.1
Q12A **Willow Creek R** 80.53 327 ⇑P P 13 19 39.1 +0.3
baz=81,SNR=7.3
DUG **Dugway** 80.54 329 eP P 13 19 39.0 +0.2
comp=Z,156nm,1.5s,mb5.7
DUG epP pP 13 19 53.1 -0.2
DUG **Dugway** 80.54 329 eP P 13 19 39.0 +0.2
DUG e*PP pP 13 19 53.1 -0.2
DUG pmax pmax
comp=Z,156nm,1.5s,mb5.7
DUG **Dugway** 80.54 329 ⇑P P 13 19 39.3 +0.5
baz=81
RCTC **Rector, Farmer** 80.60 322 ⇓P P 13 19 38.3 -0.9
baz=81,SNR=5.8
V05C **Boulder Hill,** 80.61 322 ⇓P P 13 19 39.7 +0.4
baz=81
PTRM **Twissleman Ran** 80.62 321 eP P 13 19 40.3 +1.0
PTRM epP pP 13 19 53.9 0.0
R10A **Warm Springs** 80.64 326 ⇓P P 13 19 39.9 +0.5
baz=81,SNR=27
TIN **Tinemaha** 80.64 324 ⇓P P 13 19 39.9 +0.5
baz=81
S09A **Goldfield** 80.66 325 ⇓P P 13 19 39.8 +0.3
baz=81,SNR=18
HELL **Mitchell Peak,** 80.77 323 ⇓P P 13 19 39.8 -0.3
baz=81,SNR=25
Q11A **Duckwater** 80.77 326 ⇓P P 13 19 40.4 +0.3
baz=81,SNR=25
BOSA **Boshof** 80.88 118 eP P 13 19 40.7 -0.4
comp=Z,110nm,1.4s,mb5.6
BOSA epP pP 13 19 55.1 -0.5
BOSA **Boshof** 80.88 118 P P 13 19 41.4 +0.3
BOSA pmax pmax
comp=Z,110nm,1.3s,mb5.6
BOSA **Boshof** 80.88 118 P P 13 19 41.5 +0.4
comp=Z,30nm,0.9s,mb5.2,baz=244,slow=4.6,SNR=42
BOSA pP pP 13 19 55.3 -0.3
comp=Z,16nm,0.9s,baz=240,slow=8.7,SNR=8.7
BOSA LR LR 13 50 49.7
comp=Z,623nm,19.7s,MS5.0,baz=243,slow=32
P12A **McGill** 80.92 327 ⇓P P 13 19 41.1 +0.3
baz=81,SNR=6.8
TPH **Tonopah** 80.93 325 epP pP 13 19 55.3 -0.2
comp=Z,67nm,1.2s
TPH **Tonopah** 80.93 325 eP P 13 19 42.0 +1.1
TPH e pP 13 19 55.5 +0.1
S08C **White Mtn Res** 80.96 324 ⇓P P 13 19 41.6 +0.5
baz=81,SNR=10.0
V04C **Ramage Ranch,** 80.96 321 ⇑P P 13 19 41.7 +0.5
baz=81
R09A **Tonopah** 80.98 325 P P 13 19 41.5 +0.3
baz=81,SNR=17
N15A **Stansbury Isla** 80.98 330 ⇑P P 13 19 41.1 0.0
baz=81
PKD **Parkfield** 81.01 321 ⇓P P 13 19 41.6 +0.2
baz=81
O13A **Hicks Ranch, I** 81.02 328 ⇓P P 13 19 41.6 +0.3
baz=81,SNR=7.5
U05C **Westside ANR,** 81.08 322 ⇓P P 13 19 42.0 +0.2
baz=81
Q10A **Clear Creek Ra** 81.11 326 ⇓P P 13 19 42.4 +0.5
baz=81,SNR=18
HWUT **Hardware Ranch** 81.16 331 eP P 13 19 41.7 -0.4
comp=Z,62nm,0.8s,mb5.6
HWUT epP pP 13 19 55.8 -0.8
N14A **Grayback Hills** 81.24 329 ⇓P P 13 19 42.4 -0.2
baz=82,SNR=12
PDAR **Pinedale Array** 81.30 332 P P 13 19 42.4 -0.4
comp=Z,6.5nm,0.8s,mb4.6,baz=144,slow=5.3,SNR=42
PDAR pP pP 13 19 56.3 -1.0
comp=Z,6.2nm,0.6s,baz=139,slow=7.3,SNR=9.3
PDAR PKKPbc PKKPbc 13 38 16.7 -2.7
comp=Z,0.8nm,0.8s,baz=295,slow=1.0,SNR=5.6
PDAR LR LR 13 52 33.6
comp=Z,350nm,20.9s,MS4.7,baz=141,slow=33
T06C **Milleton Lake** 81.37 323 ⇓P P 13 19 42.4 -0.9
baz=82
P11A **Circle Ranch,** 81.38 327 ⇓P P 13 19 43.5 +0.2
baz=82
MLAC **Mammoth Lakes** 81.40 324 ⇑P P 13 19 43.7 +0.2
baz=82
KCC **Kaiser Creek** 81.41 323 P P 13 19 43.7 +0.2
baz=82,SNR=7.3
M15A **Larsen Ranch,** 81.42 330 ⇑P P 13 19 43.2 -0.3
baz=82,SNR=7.5
V03C **Hunter Liggett** 81.44 321 ⇑P P 13 19 44.3 +0.6
baz=82
U04C **Hernandez Rese** 81.45 322 ⇓P P 13 19 44.4 +0.6
baz=82,SNR=7.4
O12A **Currie** 81.47 328 ⇓P P 13 19 43.9 +0.1
baz=82,SNR=22
Q09A **Carvers** 81.50 325 ⇑P P 13 19 44.3 +0.4
baz=82
N13A **Wendover, West** 81.70 328 ⇓P P 13 19 44.8 -0.2
baz=82,SNR=10
NVAR **Mina Array Bea** 81.74 324 P P 13 19 45.6 +0.4
comp=Z,9.7nm,0.9s,mb4.7,baz=140,slow=6.1,SNR=48
NVAR pP 13 19 59.5 -0.3
comp=Z,18nm,0.8s,baz=146,slow=7.0,SNR=27
NVAR PKKPbc PKKPbc 13 38 17.6 -0.5
comp=Z,1.0nm,0.7s,baz=337,slow=1.9,SNR=6.8
P10A **Eureka** 81.77 326 ⇓P P 13 19 45.7 +0.4
baz=82,SNR=17
O11A **Cowboy Ranch,** 81.79 327 ⇑P P 13 19 45.6 +0.1
baz=82,SNR=40
T05C **Eagle Field, D** 81.80 322 ⇑P P 13 19 46.1 +0.5
baz=82
HVU **Hansel Valley** 81.82 330 eP P 13 19 45.6 0.0
M14A **Sheep Mountain** 81.84 329 ⇑P P 13 19 45.5 -0.2
baz=82,SNR=27
R07C **Lee Vining** 81.85 324 P P 13 19 46.7 +0.9
baz=82,SNR=6.5
Q08A **Gabbs** 81.89 325 ⇓P P 13 19 45.9 -0.1
baz=82,SNR=18
HAST **UC Hastings Re** 81.89 321 ⇓P P 13 19 46.5 +0.4
baz=82,SNR=5.9
AHID **Auburn Hatcher** 81.92 331 eP P 13 19 45.8 -0.3
S05C **Merced** 81.95 322 ⇑P P 13 19 46.6 +0.3
baz=82,SNR=11
P09A **Austin** 82.04 326 ⇑P P 13 19 46.7 -0.1
baz=82,SNR=9.3
N12A **Clover Valley,** 82.08 328 ⇓P P 13 19 46.8 -0.1
baz=82,SNR=16
M13A **Montello** 82.09 329 ⇓P P 13 19 46.7 -0.2
baz=82,SNR=19
S06C **San Francisco** 82.11 323 ⇓P P 13 19 47.3 +0.1
baz=82,SNR=13
PACP **Pacheco Peak** 82.21 322 ⇓P P 13 19 47.9 +0.2
baz=82
O10A **Cortez Mining,** 82.31 327 ⇑P P 13 19 48.0 -0.2
baz=83,SNR=7.1
N11A **Elko Archery C** 82.37 327 ⇑P P 13 19 48.3 -0.1
baz=83
R06C **Coleville** 82.39 324 ⇓P P 13 19 49.4 +0.8
baz=83,SNR=23
TOA0 **Torodi Ar. Sit** 82.43 70 eP P 13 19 48.9 -0.5
TOA0 epP pP 13 20 03.2 -0.7
TORD **Torodi Ar. Bea** 82.43 70 P P 13 19 49.1 -0.3
comp=Z,46nm,0.8s,mb5.5,baz=260,slow=4.9,SNR=224
TORD pP pP 13 20 03.4 -0.6
comp=Z,41nm,0.9s,baz=253,slow=4.6,SNR=18
TORD PKKP PKKPbc 13 38 05.0 -10
comp=Z,0.4nm,1.0s,baz=272,slow=5.5,SNR=3.7
TORD LR LR 13 54 15.4
comp=Z,943nm,19.9s,MS5.2,baz=230,slow=34
TPAW **Teton Pass** 82.47 332 eP P 13 19 48.3 -0.6
comp=Z,87nm,1.4s,mb5.5
TPAW epP pP 13 20 01.6 -1.9
M12A **Wells** 82.47 328 ⇑P P 13 19 48.7 -0.3
baz=83,SNR=17
CMB **Columbia Colle** 82.50 323 ⇓P P 13 19 49.0 -0.2
baz=83,SNR=8.9
O09A **Fish Creek Ran** 82.54 326 ⇓P P 13 19 49.1 -0.3
baz=83,SNR=6.8
L13A **Double Diamond** 82.58 329 ⇓P P 13 19 49.6 +0.1
baz=83,SNR=40
MOOW **Moose Ponds** 82.60 332 eP P 13 19 48.8 -0.8
comp=Z,109nm,2.0s,mb5.5
S04C **Ingram Canyon,** 82.60 322 ⇓P P 13 19 49.8 0.0
baz=83
P08A **Dixie Valley** 82.61 325 ⇓P P 13 19 49.7 0.0
baz=83
K14A **Jones Ranch, D** 82.61 330 ⇓P P 13 19 48.9 -0.8
baz=83,SNR=9.8
DCID1 **Drake Creek** 82.65 332 eP P 13 19 49.0 -0.8
DCID1 epP pP 13 20 03.8 -0.6
N10A **Dunphy** 82.65 327 ⇓P P 13 19 49.6 -0.3
baz=83
BMN **Battle Mountai** 82.76 326 eP P 13 19 49.7 -0.8
comp=Z,8.8nm,1.1s,mb4.7
BMN epP pP 13 20 05.7 +0.6
BMN **Battle Mountai** 82.76 326 eP P 13 19 49.7 -0.8
BMN e*PP pP 13 20 05.7 +0.6
BMN pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
BNLO **Ben Lomond (Sa** 82.77 321 ⇑P P 13 19 50.8 +0.1
baz=83
R05C **Kirkwood Meado** 82.84 324 ⇓P P 13 19 51.4 +0.4
baz=83,SNR=11
M11A **Holland Ranch,** 82.88 328 ⇑P P 13 19 51.4 +0.3
baz=83,SNR=53
P07A **Fallon** 82.88 325 ⇑P P 13 19 51.5 +0.4
baz=83
WENL **Wente Brothers** 82.91 322 ⇓P P 13 19 52.0 +0.6
baz=83
R04C **Big Horse Ranc** 82.95 323 ⇑P P 13 19 51.8 +0.2
baz=83,SNR=6.0
JRSC **Jasper Ridge** 83.01 321 ⇑P P 13 19 52.0 +0.1
baz=83
K13A **Stover Farm, H** 83.09 330 ⇓P P 13 19 52.0 -0.2
baz=83,SNR=7.8
L12A **House Creek Ra** 83.10 329 ⇑P P 13 19 52.2 0.0
baz=83,SNR=22
O08A **Rochester Mine** 83.10 326 ⇑P P 13 19 52.2 -0.1
baz=83
WCN **Washoe City** 83.14 324 ⇓P P 13 19 52.8 +0.3
baz=83,SNR=6.5
LKWY **Lake** 83.14 333 eP P 13 19 53.0 +0.6
comp=Z,3.6nm,0.8s,mb4.5
LKWY epP pP 13 20 07.3 +0.4
LKWY **Lake** 83.14 333 eP P 13 19 53.0 +0.6
LKWY e*PP pP 13 20 07.4 +0.4
LKWY pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
RLMT **Red Lodge** 83.17 334 eP P 13 19 51.8 -0.8
comp=Z,160nm,1.8s,mb5.8
RLMT epP pP 13 20 06.4 -0.7
BDM **Black Diamond** 83.22 322 ⇑P P 13 19 53.5 +0.5
baz=84
YFT **Old Faithful** 83.22 333 eP P 13 19 54.0 +1.2
YFT epP pP 13 20 07.8 +0.5
LAVA **Lava Cap Winer** 83.22 323 ⇓P P 13 19 52.6 -0.3
baz=84,SNR=14
N09A **Rock Creek Ran** 83.23 326 ⇑P P 13 19 52.5 -0.4
baz=84
M10A **I.L. Ranch, Tu** 83.30 327 ⇑P P 13 19 53.0 -0.3
baz=84,SNR=12
O07A **Toulon** 83.36 325 ⇑P P 13 19 53.5 0.0
baz=84,SNR=11
YNR **Norris Junctio** 83.38 333 P P 13 19 52.8 -0.8
K12A **Draper Farm, C** 83.44 329 ⇓P P 13 19 54.2 +0.3
baz=84,SNR=23
L11A **Cat Creek Ranc** 83.45 328 ⇑P P 13 19 54.1 0.0
baz=84,SNR=25
YMR **Madison River** 83.45 333 eP P 13 19 54.5 +0.6
comp=Z,182nm,1.5s,mb5.9
YMR epP pP 13 20 08.2 -0.4
N08A **GE Springer Mi** 83.47 326 ⇑P P 13 19 53.5 -0.7
baz=84,SNR=8.1
P06A **Stead Airport,** 83.49 324 ⇑P P 13 19 54.7 +0.4
baz=84
P05C **Yuba Gap, Truc** 83.57 324 P P 13 19 55.0 +0.3
baz=84,SNR=12
Q04C **Lincoln** 83.62 323 ⇑P P 13 19 55.2 +0.2
baz=84,SNR=6.3
M09A **Marrel Ranch,** 83.64 327 ⇓P P 13 19 54.8 -0.3
baz=84,SNR=5.6
ULM **Lac du Bonnet** 83.66 344 P P 13 19 53.8 -1.1
comp=Z,41nm,0.9s,mb5.6,baz=164,slow=4.2,SNR=51
ULM pP pP 13 20 07.9 -1.5
comp=Z,40nm,1.0s,baz=163,slow=2.9,SNR=13
L10A **Juniper Basin** 83.70 328 P P 13 19 55.3 0.0
baz=84,SNR=27
J13A **Cove Ranch, Pi** 83.73 330 ⇓P P 13 19 55.5 0.0
baz=84,SNR=34
Q03C **Winters** 83.80 322 ⇑P P 13 19 56.7 +0.7
baz=84
CVS **Carmenet Viney** 83.82 322 ⇑P P 13 19 55.9 -0.1
baz=84,SNR=5.8
O06A **Flanigan** 83.83 325 ⇑P P 13 19 56.1 +0.1
baz=84,SNR=8.1
BEKR **Beckwourth** 83.87 324 ⇓P P 13 19 56.3 +0.1
baz=84,SNR=13
N07B **Gerlach** 83.88 326 ⇓P P 13 19 56.1 -0.1
baz=84,SNR=35
GCMT **Greycliff** 83.89 334 eP P 13 19 55.3 -0.9
MCCM **Marconi Confer** 83.90 322 ⇑P P 13 19 56.4 0.0
baz=84
HLID **Hailey** 83.97 330 eP P 13 19 56.5 -0.2
comp=Z,50nm,1.1s,mb5.6
HLID epP pP 13 20 09.8 -1.5
HLID **Hailey** 83.97 330 ⇓P P 13 19 57.0 +0.3
baz=84,SNR=31
J12A **Stokes Ranch,** 84.02 329 ⇓P P 13 19 56.8 -0.1
baz=84,SNR=18
NSHM **Saint Helena R** 84.03 322 eP P 13 19 57.0 -0.1
NSHM epP pP 13 20 11.1 -0.6
OHCM **Honcut** 84.04 323 epP pP 13 20 10.8 -0.9
K11A **Parker Ranch,** 84.05 329 ⇓P P 13 19 56.9 -0.2
baz=84
M08A **Happy Creek Ra** 84.10 326 ⇓P P 13 19 57.2 -0.2
baz=84,SNR=9.1
SUTB **Sutter Butte** 84.12 323 ⇑P P 13 19 57.2 -0.3
baz=84
I13A **Wildhorse Cree** 84.13 330 ⇓P P 13 19 57.6 +0.1
baz=84,SNR=46
MNRC **McLaughlin Nat** 84.20 322 ⇑P P 13 19 58.1 +0.1
baz=84
L09A **Wilkinson Ranc** 84.21 327 ⇑P P 13 19 57.5 -0.4
baz=84,SNR=9.4
ORV **Oroville** 84.22 323 ⇑P P 13 19 58.0 0.0
baz=84,SNR=14
O05C **Quincy** 84.22 324 ⇓P P 13 19 58.2 +0.2
baz=84
N06A **Buffalo Meadow** 84.27 325 ⇓P P 13 19 58.1 -0.1
baz=85,SNR=42
DGMT **Dagmar** 84.31 339 eP P 13 19 57.9 -0.4
comp=Z,108nm,0.9s,mb6.0
DGMT epP pP 13 20 12.1 -0.8
MCMT **McKenzie Canyo** 84.34 332 eP P 13 19 58.9 +0.4
MCMT epP pP 13 20 12.9 -0.2
K10A **MacKenzie Ranc** 84.44 328 ⇓P P 13 19 58.7 -0.3
baz=85,SNR=11
M07A **Soldier Meadow** 84.44 326 ⇓P P 13 19 58.9 -0.2
baz=85,SNR=11
MFID **Camas Ranch** 84.47 329 P P 13 19 59.0 -0.2
baz=85,SNR=10
G15A **Dillon** 84.47 332 P P 13 19 59.2 0.0
baz=85,SNR=28
BOZ **Bozeman (W)** 84.53 333 eP P 13 19 58.4 -1.0
comp=Z,74nm,1.8s,mb5.5
BOZ epP pP 13 20 13.0 -1.0
BOZ **Bozeman (W)** 84.53 333 eP P 13 19 58.4 -1.0
BOZ e*PP pP 13 20 13.0 -1.0
BOZ pmax pmax
comp=Z,74nm,1.8s,mb5.5
BOZ **Bozeman (W)** 84.53 333 ⇑P P 13 19 58.8 -0.6
baz=85
O04C **Chester** 84.58 324 ⇑P P 13 19 59.5 -0.3
baz=85,SNR=12
ELFS **Eagle Lake Fie** 84.62 324 ⇑P P 13 20 00.0 0.0
baz=85,SNR=14
HOPS **Hopland** 84.62 322 ⇓P P 13 20 00.6 +0.5
baz=85
L08A **Fields** 84.66 327 ⇓P P 13 19 59.8 -0.3
baz=85,SNR=17
H13A **Challis** 84.71 331 ⇑P P 13 20 00.4 0.0
baz=85,SNR=39
K09A **Rome** 84.77 327 P P 13 20 00.5 -0.3
baz=85,SNR=14
O03C **Acorn Hollow,** 84.82 323 ⇓P P 13 19 59.9 -1.1
baz=85
J10A **Berg Farm, Mel** 84.90 328 ⇓P P 13 20 00.7 -0.7
baz=85
GASB **Alder Springs** 84.92 323 ⇑P P 13 20 02.3 +0.7
baz=85,SNR=8.3
I11A **Placerville** 84.92 329 ⇑P P 13 20 00.8 -0.6
baz=85
G14A **Jackson** 84.93 331 ⇓P P 13 20 01.5 0.0
baz=85,SNR=7.0
M06C **Likely Place G** 84.94 325 ⇑P P 13 20 01.6 0.0
baz=85,SNR=16
H12A **Diamond D Ranc** 84.95 330 ⇓P P 13 20 01.4 -0.2
baz=85,SNR=11
WVOR **Wild Horse Val** 84.99 327 eP P 13 20 01.4 -0.4
comp=Z,73nm,1.4s,mb5.6
WVOR epP pP 13 20 15.8 -0.7
WVOR **Wild Horse Val** 84.99 327 eP P 13 20 01.4 -0.4
WVOR e*PP pP 13 20 15.8 -0.6
WVOR pmax pmax
comp=Z,73nm,1.4s,mb5.6
L07A **Adell** 85.00 326 P P 13 20 02.2 +0.3
baz=85,SNR=14
F15A **Butte** 85.03 332 ⇑P P 13 20 02.0 +0.1
baz=85,SNR=19
P01C **Double 8 Ranch** 85.11 322 ⇓P P 13 20 03.1 +0.6
baz=85
G13A **Cobalt** 85.13 331 ⇓P P 13 20 02.5 +0.1
baz=86,SNR=38
HATC **Hat Creek Radi** 85.14 324 ⇑P P 13 20 02.3 -0.3
baz=85,SNR=7.7
K08A **Mann Creek Ran** 85.14 327 ⇑P P 13 20 02.6 0.0
baz=86,SNR=7.5
J09A **Fry Pan Ranch,** 85.28 328 ⇑P P 13 20 03.0 -0.3
baz=86,SNR=13
O02C **Red Bluff** 85.34 323 ⇓P P 13 20 03.5 -0.2
baz=86
F14A **Wisdom** 85.36 332 ⇑P P 13 20 03.8 +0.2
baz=86,SNR=33
MOD **Modoc** 85.38 325 eP P 13 20 03.7 -0.1
comp=Z,103nm,1.5s,mb5.7
MOD epP pP 13 20 17.4 -1.0
MOD **Modoc** 85.38 325 ⇑P P 13 20 03.8 0.0
baz=86,SNR=16
M05C **Lookout** 85.39 325 ⇓P P 13 20 03.6 -0.2
baz=86
KCPM **Cahto Peak** 85.40 322 eP P 13 20 04.0 +0.1
KCPM epP pP 13 20 18.9 +0.3
SCHQ **Schefferville** 85.41 3 eP P 13 20 02.1 -1.5
comp=Z,55nm,1.2s,mb5.6
SCHQ epP pP 13 20 16.5 -1.7
SCHQ **Schefferville** 85.41 3 P P 13 20 02.8 -0.8
comp=Z,25nm,1.1s,mb5.3,baz=170,slow=3.0,SNR=17
SCHQ pP pP 13 20 17.6 -0.7
comp=Z,46nm,1.1s,baz=159,slow=3.0,SNR=13
SCHQ LR LR 13 57 46.2
comp=Z,192nm,21.0s,MS4.5,baz=338,slow=35
LTIM **Timbered Crate** 85.42 324 P P 13 20 03.9 -0.1
KIPM **Iron Peak** 85.43 322 eP P 13 20 04.2 0.0
I10A **Payette** 85.43 329 ⇓P P 13 20 03.9 -0.1
baz=86,SNR=5.4
K07A **Rock Creek Ran** 85.47 327 P P 13 20 04.6 +0.4
baz=86,SNR=31
WDC **Whiskeytown Da** 85.51 323 eP P 13 20 02.8 -1.7
comp=Z,86nm,1.4s,mb5.8
WDC epP pP 13 20 17.0 -2.1
WDC **Whiskeytown Da** 85.51 323 eP P 13 20 02.8 -1.7
WDC e*PP pP 13 20 17.0 -2.1
WDC pmax pmax
comp=Z,86nm,1.4s,mb5.8
WDC **Whiskeytown Da** 85.51 323 P P 13 20 03.4 -1.1
baz=86,SNR=6.9
E15A **Deer Lodge** 85.57 333 P P 13 20 04.4 -0.2
baz=86,SNR=12
H11A **Donnelly** 85.58 330 ⇑P P 13 20 04.1 -0.6
baz=86,SNR=15
J08A **Circle Bar Ran** 85.62 327 ⇓P P 13 20 05.2 +0.2
baz=86,SNR=57
F13A **Darby** 85.73 331 P P 13 20 05.4 0.0
baz=86,SNR=38
L05A **Lakeview** 85.75 325 ⇓P P 13 20 06.2 +0.6
baz=86
I09A **Lost Marbles R** 85.77 328 ⇑P P 13 20 05.5 -0.2
baz=86,SNR=26
H10A **Noah's Angus R** 85.81 329 ⇓P P 13 20 05.3 -0.6
baz=86
EGMT **Eagleton** 85.81 335 ⇑P P 13 20 04.8 -1.0
baz=86
M03C **McCloud** 85.81 324 ⇓P P 13 20 05.2 -0.8
baz=86,SNR=5.7
O01C **Eel River Cons** 85.85 322 ⇓P P 13 20 06.6 +0.4
baz=86
E14A **Clinton** 85.90 332 ⇑P P 13 20 06.2 0.0
baz=86,SNR=12
J07A **Hines** 86.03 327 ⇓P P 13 20 06.9 0.0
baz=86,SNR=7.3
D15A **Lincoln** 86.03 333 ⇓P P 13 20 06.9 +0.1
baz=86,SNR=18
K06A **Valley Falls** 86.03 326 P P 13 20 07.2 +0.2
baz=86,SNR=9.7
M04C **Macdoel** 86.05 325 ⇓P P 13 20 06.9 -0.2
baz=86,SNR=12
F12A **Elk City** 86.09 331 ⇓P P 13 20 06.8 -0.4
baz=86
I08A **Drewsey** 86.09 328 ⇑P P 13 20 07.2 -0.1
baz=86,SNR=11
E13A **Victor** 86.20 332 ⇑P P 13 20 07.7 0.0
baz=86,SNR=29
CHMT **Chamberlain Mo** 86.21 333 eP P 13 20 07.4 -0.4
CHMT epP pP 13 20 20.7 -1.7
G11A **Walters Elk Ra** 86.24 330 ⇓P P 13 20 07.8 -0.2
baz=87
BMO **Blue Mountains** 86.26 329 eP P 13 20 07.5 -0.6
comp=Z,90nm,1.6s,mb5.8
BMO epP pP 13 20 21.3 -1.4
H09A **Durkee** 86.27 329 ⇑P P 13 20 08.0 -0.1
baz=87
J06A **Christmas Vall** 86.33 326 P P 13 20 08.5 0.0
baz=87,SNR=16
URZ **Urewera** 86.33 227 P P 13 20 08.8 -0.1
comp=Z,6.7nm,0.8s,mb5.0,baz=229,slow=14,SNR=3.1
L04A **Klamath Falls** 86.36 325 ⇑P P 13 20 08.4 -0.2
baz=87,SNR=7.8
MSO **Missoula** 86.42 332 eP P 13 20 08.5 -0.3
comp=Z,48nm,1.6s,mb5.5
MSO epP pP 13 20 22.6 -0.8
D14A **Greenough** 86.45 333 ⇑P P 13 20 08.6 -0.3
baz=87,SNR=16
YBH **Yreka Blue Hor** 86.45 324 eP P 13 20 07.7 -1.4
comp=Z,40nm,1.2s,mb5.5
YBH epP pP 13 20 22.1 -1.7
YBH **Yreka Blue Hor** 86.45 324 eP P 13 20 07.7 -1.4
YBH e*PP pP 13 20 22.1 -1.6
YBH pmax pmax
comp=Z,40nm,1.2s
JCC **Jacoby Creek** 86.45 323 ⇓P P 13 20 09.2 +0.1
baz=87
RPZ **Rata Peaks** 86.53 220 P P 13 20 10.0 +0.3
comp=Z,48nm,1.0s,mb5.7,baz=136,slow=3.3,SNR=22
RPZ pP pP 13 20 24.4 +0.1
comp=Z,37nm,0.9s,baz=151,slow=5.9,SNR=7.7
F11A **Grangeville** 86.58 330 ⇓P P 13 20 08.9 -0.8
baz=87,SNR=11
H08A **Prairie City** 86.61 328 P P 13 20 09.8 0.0
baz=87,SNR=8.4
K04A **Chilquin** 86.61 325 ⇓P P 13 20 09.9 0.0
baz=87
I07A **Izee** 86.66 327 ⇑P P 13 20 10.3 +0.2
baz=87,SNR=20
G09A **Cove** 86.80 329 ⇑P P 13 20 10.3 -0.4
baz=87
D13A **Huson** 86.84 332 P P 13 20 10.5 -0.3
baz=87,SNR=20
J05A **Fort Rock** 86.87 326 ⇑P P 13 20 11.2 +0.1
baz=87,SNR=16
I06A **Prineville** 86.88 327 ⇓P P 13 20 11.2 0.0
baz=87,SNR=28
KRMB **Red Mountain** 86.90 323 eP P 13 20 10.9 -0.4
KRMB epP pP 13 20 26.0 0.0
E11A **Bogner Ranch,** 86.97 331 P P 13 20 10.5 -1.0
baz=87,SNR=10
H07A **Lands Inn, Kim** 87.08 328 ⇓P P 13 20 12.0 -0.1
baz=87
C14A **Swan Lake** 87.10 333 ⇓P P 13 20 11.8 -0.4
baz=87
F10A **Beach Ranch, E** 87.10 330 ⇑P P 13 20 11.6 -0.6
baz=87,SNR=11
D12A **Red Ives Fores** 87.17 331 ⇓P P 13 20 11.9 -0.6
baz=88
F09A **S2 Ranch, Elgi** 87.19 329 ⇓P P 13 20 11.8 -0.8
baz=88,SNR=6.2
L02A **Cave Junction** 87.21 324 ⇓P P 13 20 12.7 -0.1
baz=88
M01C **Crescent City** 87.25 323 ⇓P P 13 20 13.1 +0.1

baz=88
J04A Umpqua Nationa 87.26 325 ⇓P P 13 20 12.8 -0.2
baz=88,SNR=5.3
G08A Pilot Rock 87.34 328 ⇓P P 13 20 13.0 -0.4
baz=88,SNR=15
C13A Hot Springs 87.36 332 ⇑P P 13 20 12.9 -0.5
baz=88,SNR=21
E10A Myers Farm, Un 87.45 330 ⇑P P 13 20 13.0 -0.9
baz=88,SNR=13
VIPM Ingram Point 87.50 327 P P 13 20 14.6 +0.5
H06A Lindquist Farm 87.54 327 ⇑P P 13 20 14.3 0.0
baz=88,SNR=20
I05A Bend 87.55 326 ⇑P P 13 20 14.8 +0.5
baz=88,SNR=9.7
G07A Ruggs Ranch, H 87.64 328 ⇓P P 13 20 15.0 +0.2
baz=88,SNR=20
I04A Tendick Farm, 87.82 326 ⇑P P 13 20 14.9 -0.8
baz=88
B13A Whitefish 87.87 333 ⇓P P 13 20 15.2 -0.6
baz=88,SNR=12
H05A Madras 87.89 327 ⇑P P 13 20 16.0 0.0
baz=88
D10A Wagner Farm, O 87.97 330 P P 13 20 15.2 -1.1
baz=88,SNR=10
G06A Carlson Farm, 88.06 327 ⇓P P 13 20 16.7 0.0
baz=88,SNR=10
J02A Umpqua 88.08 325 ⇓P P 13 20 16.7 -0.2
baz=88
F07A Phinny Hill Vi 88.24 328 ⇑P P 13 20 17.6 0.0
baz=89,SNR=6.9
A13A Flathead Natio 88.31 333 ⇑P P 13 20 17.6 -0.3
baz=89
E08A Dider Farm, El 88.31 329 ⇑P P 13 20 17.0 -0.9
baz=89,SNR=6.9
H04A Detroit Lake 88.37 326 ⇓P P 13 20 17.6 -0.7
baz=89,SNR=12
I03A Eugene 88.38 325 ⇓P P 13 20 18.3 -0.1
baz=89
G05A Wamic 88.38 327 ⇑P P 13 20 18.3 0.0
baz=89
B12A Libby 88.40 332 ⇑P P 13 20 17.9 -0.4
baz=89,SNR=17
D09A Jones Farm, Ri 88.42 330 ⇓P P 13 20 17.7 -0.7
baz=89,SNR=9.6
HAWA Hanford 88.44 329 *e*P P 13 20 18.0 -0.6
comp=Z,174nm,1.4s,mb6.1
HAWA *e*pP pP 13 20 32.2 -1.0
F06A Goldendale 88.53 328 ⇓P P 13 20 18.9 -0.1
baz=89,SNR=11
C10A Spilker Farm, 88.59 331 ⇑P P 13 20 18.5 -0.6
baz=89
I02A Mapleton 88.67 325 ⇓P P 13 20 19.7 0.0
baz=89
D08A Wollman Farm, 88.68 330 P P 13 20 19.2 -0.5
baz=89,SNR=8.9
B11A Sandpoint 88.69 332 ⇑P P 13 20 19.1 -0.5
baz=89
E07A Sunnyside 88.71 329 ⇓P P 13 20 19.7 -0.1
baz=89,SNR=7.1
A12A Yaak River Ran 88.79 332 ⇓P P 13 20 19.4 -0.8
baz=89,SNR=12
OD2 Odessa Site #2 88.85 330 P P 13 20 20.4 0.0
NEW Newport 88.86 331 *e*P P 13 20 19.2 -1.2
comp=Z,53nm,1.4s,mb5.7
NEW *e*pP pP 13 20 33.2 -1.9
NEW Newport 88.86 331 *e*P P 13 20 19.2 -1.3
NEW *e**PP pP 13 20 33.2 -2.0
NEW pmax pmax
comp=Z,53nm,1.4s
NEW Newport 88.86 331 P P 13 20 19.1 -1.4
comp=Z,3.4nm,0.5s,mb4.9,baz=127,slow=2.6,SNR=8.7
NEW pP pP 13 20 33.7 -1.4
comp=Z,26nm,1.2s,baz=122,slow=7.0,SNR=9.0
G04A Mulino 88.90 326 ⇑P P 13 20 20.2 -0.5
baz=89,SNR=8.8
H03A Soap Creek Ran 88.90 326 ⇑P P 13 20 20.7 -0.1
baz=89
F05A White Salmon 88.93 327 ⇑P P 13 20 20.6 -0.3
baz=89,SNR=7.6
C09A Chrisman Ranch 88.98 330 ⇑P P 13 20 20.3 -0.8
baz=89,SNR=17
A11A Hall Mountain, 89.10 332 ⇓P P 13 20 20.7 -0.8
baz=89,SNR=20
E06A Yakima 89.20 328 ⇑P P 13 20 21.7 -0.5
baz=90,SNR=7.5
D07A Quincy 89.25 329 ⇑P P 13 20 21.9 -0.4
baz=90,SNR=7.3
FFC Flin Flon 89.26 343 *e*P P 13 20 20.1 -2.0
comp=Z,118nm,1.6s,mb6.0
FFC *e*pP pP 13 20 34.9 -2.0
FFC Flin Flon 89.26 343 P P 13 20 21.3 -0.9
FFC pmax pmax
comp=Z,120nm,1.6s,mb6.0
C08A Higginbotham F 89.30 330 ⇑P P 13 20 21.7 -0.9
baz=90,SNR=5.9
EBG Ellensburg 89.30 329 P P 13 20 22.8 +0.3
G03A Yamhill 89.36 326 ⇓P P 13 20 22.7 -0.2
baz=90
B09A Rice 89.41 331 ⇓P P 13 20 22.0 -1.0
baz=90,SNR=18
F04A Amboy 89.41 327 ⇑P P 13 20 22.2 -0.9
baz=90,SNR=6.4
E05A Randle 89.57 328 ⇓P P 13 20 22.9 -0.9
baz=90,SNR=6.6
A10A Northport 89.60 332 ⇑P P 13 20 22.7 -1.3
baz=90,SNR=12
D06A Cle Elum 89.63 329 ⇓P P 13 20 23.2 -1.0
baz=90
C07A Waterville 89.67 329 ⇑P P 13 20 23.3 -1.0
baz=90,SNR=21
B08A Colville Reser 89.86 330 ⇓P P 13 20 23.9 -1.3
baz=90,SNR=8.3
A09A Danville 90.02 331 ⇓P P 13 20 24.7 -1.2
baz=90,SNR=12
E04A Onalaska 90.04 327 ⇑P P 13 20 25.1 -1.0
baz=90
LSZ Lusaka 90.07 108 *e*P P 13 20 28.5 +1.5
comp=Z,77nm,1.2s,mb5.9
LSZ *e*pP pP 13 20 42.1 +0.3
LSZ Lusaka 90.07 108 *e*P P 13 20 28.5 +1.4
LSZ *e**PP pP 13 20 42.1 +0.3
LSZ pmax pmax
comp=Z,77nm,1.2s,mb5.9
D05A Enumclaw 90.15 328 ⇑P P 13 20 25.5 -1.0
baz=90,SNR=8.2
B07A Winthrop 90.28 330 P P 13 20 26.2 -0.9
baz=91,SNR=17
A08A Turner Farm, O 90.29 331 ⇓P P 13 20 26.3 -0.8
baz=91,SNR=16
C05A Tolt Reservoir 90.39 329 ⇓P P 13 20 26.1 -1.5
baz=91
E03A Lebam 90.40 327 ⇓P P 13 20 26.4 -1.3
baz=91
A07A Ashnola River, 90.84 330 ⇑P P 13 20 28.9 -0.8
baz=91,SNR=15
B06A Marblemount 90.92 329 ⇑P P 13 20 28.7 -1.4
baz=91
C04A Brinnon 90.99 328 ⇑P P 13 20 29.5 -0.9
baz=91
B05A Bryant 91.00 329 ⇑P P 13 20 29.4 -1.1
baz=91,SNR=6.2
FCC Fort Churchill 91.29 348 *e*P P 13 20 30.6 -0.9
comp=Z,137nm,1.4s,mb6.1
FCC *e*pP pP 13 20 45.2 -1.1
FCC Fort Churchill 91.29 348 *e*P P 13 20 30.7 -0.9
FCC *e**PP pP 13 20 45.2 -1.1
FCC pmax pmax
comp=Z,137nm,1.4s,mb6.1
ESDC Sonseca Array 93.85 45 P P 13 20 43.6 -0.3
comp=Z,3.7nm,1.1s,mb4.7,baz=278,slow=2.2,SNR=5.5
ESDC pP pP 13 20 59.1 +0.5
comp=Z,5.6nm,1.1s,baz=247,slow=4.7,SNR=3.9
ESDC LR LR 14 02 49.7
comp=Z,376nm,18.8s,MS4.9,baz=225,slow=35
YKA Yellowknife Ar 99.32 341 P P 13 21 06.6 -1.4
YKA pP pP 13 21 21.8 -1.1
YKA PKKPbc PKKPbc 13 37 30.3 -3.6
YKA PKKP PKKPbc 13 37 44.6 +11
YKA Yellowknife Ar 99.32 341 P P 13 21 06.6 -1.5
YKA *PP pP 13 21 21.8 -1.0
YKA Yellowknife Ar 99.32 341 P P 13 21 06.6 -1.4
comp=Z,1.5nm,0.6s,mb4.7,baz=141,slow=5.0,SNR=26
YKA pP pP 13 21 21.7 -1.1
comp=Z,6.1nm,1.0s,baz=143,slow=4.7,SNR=13
YKA PKKPbc PKKPbc 13 37 30.3 -3.6
comp=Z,0.5nm,0.9s,baz=325,slow=3.7,SNR=6.2
YKA PKKP PKKPbc 13 37 44.6 +11
comp=Z,0.4nm,0.8s,baz=339,slow=2.8,SNR=6.8
INK Inuvik 108.98 340 PKKPbc PKKPbc 13 37 02.8 -2.0
comp=Z,2.9nm,1.1s,baz=273,slow=5.4,SNR=5.5
INK PKKPab PKKPab 13 37 13.9 +1.1
comp=Z,2.4nm,0.8s,baz=311,slow=0.6,SNR=6.4
GERES GERESS Array B 109.40 44 PP PP 13 26 28.7 +1.4
comp=Z,1.1nm,0.8s,baz=282,slow=4.9,SNR=4.5
GERES PKKPbc PKKPbc 13 37 02.0 -0.8
comp=Z,0.7nm,0.8s,baz=75,slow=1.5,SNR=4.4
BRG Berggiesshubel 110.38 42 *e*P Pdif 13 21 51.4 -6.5
comp=Z,9.4nm,1.1s
BRG *e* 13 21 58.1
comp=Z,3.3nm,0.8s
ISP Isparta 116.70 60 PKIKP PKPdf 13 26 19.9 +9.2
AKASG Malin Array Be 119.49 46 PKIKP PKPdf 13 26 14.2 -1.5
AKASG 13 26 29.3
AKASG Malin Array Be 119.49 46 PKP PKPdf 13 26 14.2 -1.5
comp=Z,0.5nm,0.4s,baz=265,slow=3.2,SNR=7.7
AKASG pPKP pPKPdf 13 26 29.2 -1.6
comp=Z,2.6nm,0.6s,baz=267,slow=2.5,SNR=4.6
AKASG PKKPab PKKPab 13 36 26.7 -0.8
comp=Z,0.4nm,0.4s,baz=67,slow=3.2,SNR=4.8
BRTR Keskin Array B 119.61 59 PKIKP PKPdf 13 26 15.5 -0.8
BRTR 13 26 30.8
BRTR Keskin Array B 119.61 59 PKP PKPdf 13 26 15.4 -0.8
comp=Z,0.5nm,0.7s,baz=242,slow=2.7,SNR=3.8
BRTR pPKP pPKPdf 13 26 30.8 -0.7
comp=Z,1.8nm,0.9s,baz=321,slow=1.6,SNR=4.3
BRTR PP PP 13 27 34.2 -5.6
comp=Z,1.3nm,0.8s,baz=238,slow=4.9,SNR=3.0
FINES FINESS Array B 119.97 33 PKKPab PKKPab 13 36 23.4 -1.5
comp=Z,0.6nm,0.6s,baz=69,slow=10,SNR=3.8
ASAR Alice Springs 120.71 207 PKIKP PKPdf 13 26 16.8 -2.2
ASAR 13 26 31.4
ASAR Alice Springs 120.71 207 PKP PKPdf 13 26 16.8 -2.3
comp=Z,5.5nm,0.7s,baz=129,slow=1.7,SNR=80
ASAR pPKP pPKPdf 13 26 31.4 -2.9
comp=Z,8.4nm,0.9s,baz=138,slow=1.7,SNR=17
ASAR PKKPbc PKKPbc 13 36 22.9 -0.3
comp=Z,1.1nm,0.8s,baz=337,slow=3.0,SNR=11
ARCES ARCESS Array B 120.84 24 PKKPbc PKKPbc 13 36 20.9 -2.6
comp=Z,7.7nm,1.0s,baz=89,slow=3.7,SNR=3.7
ANN Anapa 123.61 54 *i* PKIKP PKPdf 13 26 26.1 +2.3
ANN *e**PP 13 26 36.7
ANN *e* 13 33 27.8
ANN pmax pmax
comp=Z,25nm,0.7s
WB2 Warramunga Arr 123.87 209 *e*PDIF PKPdf 13 26 23.3 -1.8
WB2 *e* 13 26 38.0
WRA Warramunga Arr 123.87 209 PKIKP PKPdf 13 26 23.3 -1.9
WRA 13 26 38.1
WRA Warramunga Arr 123.87 209 PKP PKPdf 13 26 23.3 -1.8
comp=Z,14nm,0.7s,baz=161,slow=1.7,SNR=123
WRA pPKP pPKPdf 13 26 38.1 -2.3
comp=Z,23nm,0.9s,baz=158,slow=1.5,SNR=25
WRA PKKPbc PKKPbc 13 36 10.3 -0.8
comp=Z,0.8nm,0.7s,baz=342,slow=4.6,SNR=7.6
COEN Coen 124.56 222 *e*PKPdf PKPdf 13 26 25.4 -1.2
COEN *ep*PKPdf pPKPdf 13 26 39.9 -1.9
OBN Obninsk 124.61 42 *i* PKIKP PKPdf 13 26 23.3 -2.1
OBN pmax pmax
comp=Z,9.0nm,1.0s
OBN MLR MLR
comp=Z,400nm,21.0s,MS5.1
PMG Port Moresby 125.66 229 *e*PKPdf PKPdf 13 26 28.2 -0.5
PMG *ep*PKPdf pPKPdf 13 26 41.9 -2.0
PMG Port Moresby 125.66 229 PKIKP PKPdf 13 26 28.3 -0.4
PMG *e* 13 26 42.2
PMG Port Moresby 125.66 229 PKP PKPdf 13 26 27.9 -0.8
comp=Z,15nm,1.0s,baz=354,slow=3.1,SNR=6.2
PMG pPKP pPKPdf 13 26 42.6 -1.4
comp=Z,34nm,1.0s,baz=58,slow=4.8,SNR=9.3
KIV Kislovodsk 127.16 56 *i* PKIKP PKPdf 13 26 27.9 -2.7
KIV pmax pmax
comp=Z,6.0nm,0.8s
FITZ Fitzroy Crossi 128.72 201 *e*PDIF PKPdf 13 26 33.1 -1.4
comp=Z,24nm,0.9s
FITZ *e* 13 26 47.9
FITZ Fitzroy Crossi 128.72 201 PKP PKPdf 13 26 33.7 -0.8
comp=Z,14nm,0.9s,baz=221,slow=5.4,SNR=13
FITZ pPKP pPKPdf 13 26 48.4 -1.3
comp=Z,22nm,0.9s,baz=218,slow=3.7,SNR=9.7
BILL Bilibino 130.31 335 *e*PKPdf PKPdf 13 26 33.6 -2.2
BILL *ep*PKPdf pPKPdf 13 26 49.8 -1.3
BILL Bilibino 130.31 335 *i* PKIKP PKPdf 13 26 34.6 -1.3
BILL *e* 13 28 48.6
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,200nm,23.0s,MS4.8
ARU Arti 136.85 39 *e*PKPdf PKPdf 13 26 48.6 +0.2
ARU Arti 136.85 39 *i* PKIKP PKPdf 13 26 47.9 -0.6
ARU 13 29 28.3
ARU pmax pmax
comp=Z,350nm,22.0s
TIXI Tiksi 137.72 351 *e*PKPdf PKPdf 13 26 47.7 -2.0
TIXI Tiksi 137.72 351 *i* PKIKP PKPdf 13 26 47.2 -2.5
TIXI pmax pmax
comp=Z,11nm,1.1s
TIXI MLR MLR
comp=Z,247nm,22.0s,MS4.9
MA2 Magadan 139.89 328 *i* PKIKP PKPdf 13 26 53.3 -0.7
MA2 pmax pmax
comp=Z,10.0nm,0.7s
BRVK Borovoye 144.36 40 *e*PKPdf PKPdf 13 27 00.4 -1.7
BRVK *ep*PKPdf pPKPdf 13 27 15.5 -1.8
PALK Pallekele 144.74 126 *e*PKPdf PKPdf 13 27 02.3 -1.8
KAD Karad 145.76 105 *i* P PKPdf 13 27 05.8 +0.2
YAK Yakutsk 145.98 343 *e*PKP2 PKPab 13 27 04.3 -1.8
YAK *e* 13 30 24.8
YAK *e*SSS 13 54 55.7
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=Z,113nm,0.9s
YAK pmax pmax
comp=E,18nm,1.1s
POO Poona 146.07 103 ⇓*i*P PKPdf 13 27 06.0 -0.1
comp=E,130nm,1.0s
KBL Kabul 146.45 73 *e*PKPdf PKPdf 13 27 06.0 -0.3
JASL Jaisalmer 146.66 87 *ex* x 13 26 51.1
YSS Yuzh-Sakhalins 149.38 311 *e*PKPbc PKPbc 13 27 14.1 -1.1
YSS Yuzh-Sakhalins 149.38 311 ⇑*i*PKP2 PKPab 13 27 13.6 -6.5
YSS pmax pmax
comp=Z,20nm,0.7s
HYB Hyderabad 149.41 109 *e*P PKPdf 13 27 11.0 -0.7
HYB *e* 13 27 16.0
HYB *e* 13 27 20.5
HYB *e* 13 27 30.0
HYB Hyderabad 149.41 109 *e*PKHKP 13 27 11.0
HYB *e* 13 27 20.5
HYB Hyderabad 149.41 109 *i* PKP PKPdf 13 27 11.0 -0.7
HYB *e* 13 27 16.0
HYB *e*PKPAB PKPab 13 27 20.5 -0.5
HYB *e* 13 27 30.0
HYB *e* 13 27 36.5
EKS2 Erkin-Say 149.74 57 *e*PKPdf PKPdf 13 27 11.8 +0.3
EKS2 Erkin-Say 149.74 57 P PKPbc 13 27 16.6 +0.4
SNR=11
AJM Ajmer 149.75 90 *e*P PKPdf 13 27 12.0 0.0
AML Almayashu 149.78 58 *e*PKP 13 27 00.9
AML *e*PKPdf PKPbc 13 27 15.4 -0.9
NVS Novosibirsk 149.86 30 *e*PKHKP 13 27 14.7
NVS pmax pmax
comp=N,8.0nm,1.3s
NVS pmax pmax
comp=E,27nm,1.3s
NVS pmax pmax
comp=Z,94nm,1.3s
KURK Kurchatov 150.03 40 *e*PKPdf PKPdf 13 27 11.9 +0.2
USP Ospenovka 150.13 56 P PKPbc 13 27 17.2 +0.1
SNR=17
AAK Ala-Archa 150.26 57 *e*PKPbc PKPbc 13 27 16.7 -0.8
AAK Ala-Archa 150.26 57 P PKPbc 13 27 18.5 +1.0
SNR=24
FRU Bishkek 150.31 57 *e*PKIKP PKPbc 13 27 17.5 -0.1
FRU *i* 13 27 32.0
FRU pmax pmax
comp=Z,125nm,1.8s
UCH Uchtor 150.36 58 *e*PKPbc PKPbc 13 27 18.6 +0.8
UCH Uchtor 150.36 58 P PKPbc 13 27 18.8 +1.1
SNR=18
CHMS Chumysh 150.37 56 P PKPbc 13 27 18.3 +0.5
SNR=12
PSI Prapat 150.57 160 PKP PKPdf 13 27 12.7 -1.1
PSI PKPbc PKPbc 13 27 17.9 -1.2
PSI pPKPbc pPKPbc 13 27 32.1 -2.2
PSI Prapat 150.57 160 PKIKP PKPdf 13 27 12.7 -1.0
PSI 13 27 17.9
PSI Prapat 150.57 160 PKP PKPdf 13 27 12.7 -1.1
comp=Z,28nm,1.0s,baz=189,slow=13,SNR=5.8
PSI PKPbc PKPbc 13 27 17.9 -1.2
comp=Z,57nm,0.8s,baz=228,slow=2.2,SNR=61
PSI pPKPbc pPKPbc 13 27 32.1 -2.2
comp=Z,116nm,1.1s,baz=187,slow=5.4,SNR=17
KBK Karagaybulak 150.59 57 P PKPbc 13 27 19.1 +0.8
SNR=11
KSM Kuching 150.75 183 *e*PKP PKPdf 13 27 13.1 -0.9
KSM *e*PKPdf PKPdf 13 27 17.6 +3.6
KZA Kyzart 150.93 58 P PKPbc 13 27 20.4 +1.3
SNR=9.0
TKM2 Tokmak 2 150.99 56 *e*PKPdf PKPdf 13 27 13.4 0.0
TKM2 *e*PKPbc PKPbc 13 27 19.4 +0.2
TKM2 *e*PKPab PKPab 13 27 27.4 +0.5
TKM2 Tokmak 2 150.99 56 P PKPbc 13 27 19.6 +0.4
SNR=10
ZAL Zalesovo 151.15 30 PKIKP PKPdf 13 27 12.3 -1.0
ZAL 13 27 18.5
ZALV Zalesovo Beam 151.15 30 PKP PKPdf 13 27 12.3 -1.0
ZALV PKPbc PKPbc 13 27 18.5 -0.7
ZALV pPKPbc pPKPbc 13 27 34.2 -0.1
ZALV Zalesovo Beam 151.15 30 PKP PKPdf 13 27 12.3 -1.0
comp=Z,2.4nm,0.7s,baz=267,slow=3.1,SNR=11
ZALV PKPbc PKPbc 13 27 18.5 -0.7
comp=Z,21nm,0.5s,baz=309,slow=3.0,SNR=78
ZALV pPKPbc pPKPbc 13 27 34.2 -0.1
comp=Z,91nm,0.9s,baz=298,slow=3.2,SNR=21
KHET Khetri 151.16 87 *e*P PKPdf 13 27 13.5 -0.6
ULHL Ulahol 151.61 57 P PKPbc 13 27 21.0 +0.3
SNR=9.2
KUDL Kundal 151.76 87 *e*P PKPdf 13 27 14.5 -0.5
THN Thein Dam 151.81 78 *ex* x 13 27 20.2
RTK Rohtak 151.89 85 *e*P PKPdf 13 27 14.9 -0.3
SONA Sohna 152.30 87 *e*P PKPdf 13 27 14.9 -0.9
AYAN Aya Nagar 152.39 87 *e*P PKPdf 13 27 15.9 -0.1
NDI New Delhi 152.51 86 *e*P PKPdf 13 27 17.0 +0.8
BOD Bodaibo 152.80 354 *e*PKIKP PKPdf 13 27 12.2 -3.4
BOD *e* 13 27 32.3
BOD pmax pmax
comp=Z,9.0nm,1.5s
HABR Khabarovsk 153.42 319 ⇑*i*PKIKP PKPdf 13 27 14.4 -2.4
HABR *e* 13 27 23.1
HABR *e* 13 27 35.7
HABR *e* 13 34 19.0
HABR *e* 13 50 44.4
HABR *e* 13 56 34.3
KULM Kulim 153.44 162 *e*PKPbc PKPbc 13 27 23.4 -2.3
KULM *ep*PKP pPKPdf 13 27 36.9 +3.7
MK31 Makanchi Array 154.07 45 *e*PKPbc PKPbc 13 27 24.8 -1.1
MKAR Makanchi Array 154.07 45 PKP PKPdf 13 27 16.2 -1.6
MKAR PKPbc PKPbc 13 27 25.0 -1.0
MKAR PKPab PKPab 13 27 39.4 -0.3
MKAR PP PP 13 31 15.3 +0.7
MKAR Makanchi Array 154.07 45 PKP PKPdf 13 27 16.2 -1.6
comp=Z,0.9nm,0.7s,baz=17,slow=1.3,SNR=7.9
MKAR PKPbc PKPbc 13 27 25.0 -1.0
comp=Z,24nm,1.3s,baz=318,slow=1.6,SNR=11
MKAR PKPab PKPab 13 27 39.4 -0.3
comp=Z,13nm,0.8s,baz=291,slow=2.7,SNR=29
MKAR PP PP 13 31 15.3 +0.7
comp=Z,2.6nm,0.9s,baz=302,slow=6.6,SNR=3.9
KLR Kul'dur 154.77 323 *e*PKIKP PKPdf 13 27 14.2 -4.5
JOSI Joshimath 154.85 83 *e*P PKPdf 13 27 19.5 +0.1
MJAR Matsushiro Arr 154.97 291 PKIKP PKPdf 13 27 18.0 -1.4
MJAR 13 27 28.6
MJAR 13 27 41.3
MJAR Matsushiro Arr 154.97 291 PKP PKPdf 13 27 18.0 -1.5
comp=Z,2.4nm,1.1s,baz=102,slow=0.3,SNR=5.6
MJAR PKPbc PKPbc 13 27 28.6 +0.4
comp=Z,5.6nm,1.1s,baz=64,slow=0.6,SNR=4.6
MJAR PKPab PKPab 13 27 41.3 -2.6
comp=Z,9.7nm,1.2s,baz=87,slow=0.8,SNR=7.5
MJAR pPKPab pPKPab 13 27 57.5 -1.2
comp=Z,29nm,0.9s,baz=109,slow=2.3,SNR=18
MAT Matsushiro 154.97 291 PKP PKPdf 13 27 17.7 -1.7
MOY Mondy 158.40 13 *e*PKIKP PKPdf 13 27 38.3 -0.3
CIT Chita 158.56 352 *e*PKP2 PKPab 13 27 59.2 +0.5
CIT *e* 13 31 44.4
CIT pmax pmax
comp=Z,128nm,2.0s
TLY Talaya 158.83 9 *e*PKPdf PKPdf 13 27 23.6 -0.3
TLY Talaya 158.83 9 *i* PKIKP PKPdf 13 27 23.9 +0.1
TLY *e* 13 27 38.5
TLY *e* 13 28 00.2
TLY pmax pmax
comp=Z,21nm,1.1s
WMQ Urumqi 158.85 46 PKP PKPdf 13 27 23.0 -1.1
WMQ APKP 13 27 37.5
WMQ XPKP 13 27 44.0
WMQ PKP2 PKPab 13 28 01.2 +0.9
WMQ PKS 13 30 55.0
WMQ PP PP 13 31 43.0 +1.8
WMQ SKKS SKKSac 13 38 26.0 +0.3
WMQ PP PP
comp=Z,39nm,7.6s
WMQ LR LR
comp=N,302nm,28.3s,MS5.1
WMQ LR LR
comp=E,207nm,28.3s,MS5.1
WMQ LR LR
comp=Z,348nm,28.2s,MS5.0
ZAK Zakamensk 160.04 10 *e*PKIKP PKPdf 13 27 24.2 -1.1
ZAK pmax pmax
comp=Z,3.0nm,1.3s
CN2 Changchun 161.56 319 *e*PKP PKPdf 13 27 29.0 +1.9
CN2 PKP2 PKPab 13 28 16.5 +4.4
CN2 LR LR
comp=Z,200nm,17.0s
KSRS Korea Array 162.90 298 PKP PKPdf 13 27 27.6 -1.2
comp=Z,0.9nm,0.8s,baz=204,slow=2.7,SNR=4.2
KSRS pPKP pPKPdf 13 27 41.6 -2.4
comp=Z,4.7nm,1.1s,baz=97,slow=1.4,SNR=5.5
KSRS PKPab PKPab 13 28 17.8 -0.5
comp=Z,3.7nm,1.0s,baz=83,slow=4.0,SNR=4.8
KSRS pPKPab pPKPab 13 28 32.0 -1.0
comp=Z,18nm,1.1s,baz=76,slow=4.2,SNR=16
SONM Songino Array 162.93 6 PKIKP PKPdf 13 27 27.7 -0.7
SONM 13 27 42.1
SONM 13 28 17.9
SONM 13 32 02.9
SONM Songino Array 162.93 6 PKP PKPdf 13 27 27.7 -0.7
comp=Z,0.5nm,1.0s,baz=318,slow=1.9,SNR=4.4
SONM pPKP pPKPdf 13 27 42.1 -1.6
comp=Z,1.7nm,1.0s,baz=13,slow=1.0,SNR=7.0
SONM PKPab PKPab 13 28 17.9 +0.1
comp=Z,2.8nm,0.9s,baz=332,slow=4.2,SNR=7.7
SONM pPKPab pPKPab 13 28 32.5 -0.1
comp=Z,9.6nm,1.0s,baz=344,slow=3.3,SNR=11
SONM PP PP 13 32 02.9 +0.8
comp=Z,5.7nm,1.1s,baz=354,slow=3.7,SNR=9.9
BDT Bhumibol Dam 163.76 144 P PKPdf 13 27 29.0 -1.1
SHL Shillong 164.16 105 *e*PKP PKPdf 13 27 30.0 -0.3
SHL *ep*PP PP 13 32 12.0 +1.6
LSA Lhasa 164.67 90 PKP PKPdf 13 27 31.2 +0.6
CHG Chiang Mai 165.04 141 ⇓P pPKPdf 13 27 44.6 -1.9
comp=Z,35nm,1.0s
QIZ Qiongzhong 168.20 185 PKP PKPdf 13 27 33.1 -0.5
QIZ PP PP 13 32 34.5 +5.1
QIZ LR LR
comp=N,192nm,21.8s
QIZ LR LR
comp=Z,341nm,18.9s
GTA Gaotai 168.71 38 PKP PKPdf 13 27 33.2 -0.1
GTA APKP 13 27 43.9
GTA XPKP 13 27 47.9
GTA PKS 13 31 04.0
GTA SKS SKSdf 13 34 32.8 0.0
GTA SKKS SKKSac 13 39 14.9 -0.9
GTA PP PP
comp=Z,194nm,9.2s
GTA LR LR
comp=N,135nm,15.7s
GTA LR LR
comp=E,185nm,14.9s
GTA LR LR
comp=Z,251nm,22.2s
BJI Beijing 169.05 329 PKP PKPdf 13 27 32.0 -1.5
BJI PP PP 13 32 32.8 -1.5
BJI LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,159nm,28.2s						
BJI				LR	LR		
	comp=E,125nm,28.8s						
BJI				LR	LR		
	comp=Z,234nm,28.1s						
SSE	Sheshan	169.40	275	PKP	PKPdf	13 27 35.0	+0.9
SSE				PP	PP	13 32 40.0	+2.5
SSE				SS	SS	13 53 32.8	+2.0
SSE				PP	PP		
	comp=Z,256nm,6.2s						
SSE				LR	LR		
	comp=N,68nm,21.0s						
SSE				LR	LR		
	comp=E,104nm,21.0s						
SSE				LR	LR		
	comp=Z,165nm,24.0s						
SSE	Sheshan	169.40	275	PKP	PKPdf	13 27 35.5	+1.4
SSE				PP	PP	13 32 40.0	+2.5
SSE				SS	SS	13 53 32.8	+2.0
SSE				LR	LR		
	comp=Z,170nm,24.0s						
NJ2	Nanjing	171.36	281	*e*PKP	PKPdf	13 27 36.7	+1.6
KMI	Kunming	172.16	135	PKP	PKPdf	13 27 32.0	-3.7
KMI	Kunming	172.16	135	PKP	PKPdf	13 27 32.1	-3.6
KMI				P		13 27 50.1	
KMI				pPKP	pPKPdf	13 27 50.3	-0.7
KMI				sPKP		13 27 57.0	
LZH	Lanzhou	173.31	37	*e*PKP	PKPdf	13 27 36.4	+0.6
LZH				APKP		13 27 47.0	
LZH				XPKP		13 27 51.0	
LZH				PP	PP	13 32 58.2	+2.6
LZH				SKS	SKSdf	13 34 32.2	-2.6
LZH				SKKS	SKKSac	13 39 40.3	+2.1
LZH				PP	PP		
	comp=Z,157nm,4.1s						
LZH				LR	LR		
	comp=N,362nm,16.0s						
LZH				LR	LR		
	comp=Z,467nm,19.0s						
GYA	Guiyang	175.23	156	*i* PKP	PKPdf	13 27 35.4	-1.4
GYA				APKP		13 27 51.2	
GYA				XPKP		13 27 56.7	
GYA				PKP2	PKPab	13 29 14.2	+1.4
GYA				PKS		13 31 06.9	
GYA				PP	PP	13 33 07.4	+2.9
GYA				SKS	SKSdf	13 34 32.0	-3.8
GYA				SKKS	SKKSac	13 39 47.4	-0.1
GYA				PP	PP		
	comp=Z,890nm,9.7s						
GYA				LR	LR		
	comp=N,680nm,25.6s						
GYA				LR	LR		
	comp=E,670nm,22.4s						
GYA				LR	LR		
	comp=Z,840nm,24.9s						
CD2	Chengdu	175.63	88	PKP	PKPdf	13 27 37.0	+0.3
CD2				APKP		13 27 50.8	
CD2				XPKP		13 27 56.3	
CD2				PKP2	PKPab	13 29 16.7	+1.8
CD2				PP	PP	13 33 10.7	+2.6
CD2				SKS	SKSdf	13 34 34.7	-1.0
CD2				PP	PP		
	comp=Z,160nm,10.8s						
CD2				LR	LR		
	comp=N,230nm,31.2s						
CD2				LR	LR		
	comp=E,260nm,26.4s						
CD2				LR	LR		
	comp=Z,220nm,20.4s						

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*IDC **02** 13:34:45.6±1.1, 106S×12730E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.9/17, mbtmp3.9/6, ML3.5/1, MS3.5/1, Ms1 3.5/1, ms1mx2.9/24, Error ellipse: s-maj=114.1km s-min=18.4km az=68.0*

*NEIC **02** 13:34:47.1±0.9, 108S×12727E, h10^{km}, mb4.4/1, Error ellipse: s-maj=139.0km s-min=11.8km az=67.0*

*ISCJB **02** 13:34:48.2±1.1, 10S±04×1276E±10, h33^{km}, mb4.0/5, Error ellipse: s-maj=150.2km s-min=12.8km az=157.2*

ISC 02 13:34:50.3±1.1**, 11S**±04×**1274E**±09**, h35**^{km}**, n10,** σ**1^{s}01**/9**, mb4.0**/5**, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.89	161	P	Pn	13 39 18.7	-1.9
	0.1nm,0.3s,baz=339,slow=11,SNR=11						
WB2	Warramunga Arr	19.90	161	*e*P	Pn	13 39 20.5	-0.2
PMG	Port Moresby	21.28	113	LR	LR	13 47 53.3	
	comp=Z,124nm,19.8s,baz=251,slow=37						
ASAR	Alice Springs	23.28	165	P	P	13 39 55.5	+0.4
	4.4nm,0.8s,mb4.0,baz=345,slow=11,SNR=41						
STKA	Stephens Creek	33.39	158	*e*P	P	13 41 27.8	+2.3
	4.7nm,0.9s,mb4.4						
STKA	Stephens Creek	33.39	158	P	P	13 41 27.9	+2.3
	6.2nm,0.9s,mb4.5,baz=338,slow=9.9,SNR=8.2						
SONM	Songino Array	52.09	342	P	P	13 43 56.3	-0.5
	0.5nm,0.8s,mb3.5,baz=159,slow=9.1,SNR=4.1						
SONM				PcP	PcP	13 45 09.2	+0.8
	0.4nm,0.8s,baz=146,slow=2.8,SNR=2.6						
MKAR	Makanchi Array	61.94	326	P	P	13 45 06.7	+0.2
	0.9nm,0.7s,mb4.0,baz=113,slow=9.6,SNR=3.5						
AKTK	Aktyubinsk	77.89	322	P	P	13 46 44.5	0.0
AKTO	Aktyubinsk	77.89	322	P	P	13 46 44.5	0.0
	1.2nm,0.7s,mb3.9,baz=91,slow=5.8,SNR=5.8						

IDC 02 14:23:24.3±3.1**, 2243S**×**17477W, h0**^{km}**, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.9**/14**, mbtmp3.8**/5**, MS3.7**/6**, Ms1 3.7**/6**, ms1mx3.4**/23**, Error ellipse: s-maj=208.9km s-min=25.7km az=157.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	13.98	88	LR	LR	14 30 37.0	
	comp=Z,178nm,21.4s,baz=47,slow=31						
DZM	Mont Dzumac	17.40	268	LR	LR	14 32 51.0	
	comp=Z,260nm,21.9s,baz=48,slow=33						
HNR	Honiara	27.48	294	LR	LR	14 37 26.4	
	comp=Z,188nm,19.6s,baz=180,slow=31						
CTA	Charters Tower	36.34	266	LR	LR	14 43 37.5	
	comp=Z,99nm,20.3s,baz=48,slow=33						
PMG	Port Moresby	38.71	283	LR	LR	14 43 00.4	
	comp=Z,95nm,22.0s,baz=174,slow=30						
ASAR	Alice Springs	47.04	258	P	P	14 31 57.5	-0.3
	1.4nm,1.0s,baz=77,slow=8.7,SNR=6.2						
WRA	Warramunga Arr	47.34	263	P	P	14 31 59.7	-0.6
	0.5nm,0.7s,baz=96,slow=9.2,SNR=3.8						
VNDA	Vanda	56.28	186	LR	LR	14 52 36.9	
	comp=Z,142nm,18.2s,baz=100,slow=31						
NVAR	Mina Array Bea	80.41	42	P	P	14 35 36.5	-1.2
	1.1nm,0.9s,baz=206,slow=8.6,SNR=5.4						
TXAR	Lajitas Array	85.59	56	P	P	14 36 05.6	+0.8
	0.5nm,0.8s,baz=218,slow=5.7,SNR=2.8						
YKA	Yellowknife Ar	97.02	24	P	P	14 36 58.3	+0.9
	0.2nm,0.4s,baz=227,slow=5.0,SNR=5.4						
BRTR	Keskin Array B	150.36	312	PKPbc	PKPbc	14 43 19.8	+2.0
	0.6nm,0.6s,baz=127,slow=3.8,SNR=3.5						
GERES	GERESS Array B	152.80	348	PKPbc	PKPbc	14 43 22.0	-1.1
	0.4nm,0.5s,baz=70,slow=1.5,SNR=2.4						

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*ISCJB **02** 14:36:19.1±1.8, 18.1S±0.1×70.1W±0.1, h118^{km}±16^{km}, mb4.3/9, Error ellipse: s-maj=22.9km s-min=18.9km az=176.8*

*IDC **02** 14:36:19.4±3.1, 1798S×70.19W, h96^{km}±25^{km}, mb3.7/6, mb1 4.0/8, mb1mx3.9/17, mbtmp3.8/8, Error ellipse: s-maj=34.4km s-min=23.9km az=42.0*

ISC 02 14:36:20.0±1.7**, 181S**±01×**701W**±01**, h109**^{km}±15^{km}**, n16,** σ**0^{s}70**/12**, mb4.3**/9**, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	2.63	46	P	Pn	14 37 01.9	+0.8
	28nm,0.3s,baz=242,slow=10,SNR=417						
SIV	San Ignacio	8.91	78	P	Pn	14 38 24.8	-1.0
	9.3nm,0.3s,baz=268,slow=11,SNR=282						
CFAA	Coronel Fontan	13.53	173	P	Pn	14 39 27.6	+0.1
	0.1nm,0.3s,baz=328,slow=11,SNR=3.7						
TXAR	Lajitas Array	57.22	325	P	P	14 45 54.6	-1.4
	0.5nm,1.0s,mb3.5,baz=138,slow=11,SNR=3.3						
LIC	Lamto	68.60	76	*e*P	P	14 47 12.0	+0.3
	18nm,0.9s,mb4.9						
TIC	Toumodi	68.76	75	*e*P	P	14 47 12.1	-0.6
	7.9nm,0.2s,mb5.1						
KIC	Kosan Boka	68.91	76	*e*P	P	14 47 14.3	+0.6
	24nm,0.5s,mb5.3						
PDAR	Pinedale Array	70.63	330	P	P	14 47 23.8	+0.3
	0.2nm,0.5s,mb3.2,baz=133,slow=10.0,SNR=3.3						
ULM	Lac du Bonnet	71.77	343	P	P	14 47 29.6	-0.6
	2.6nm,0.3s,mb4.5,baz=155,slow=6.4,SNR=14						
NVAR	Mina Array Bea	72.14	322	P	P	14 47 33.7	+1.0
	0.4nm,0.7s,mb3.4,baz=139,slow=6.0,SNR=3.4						
TORD	Torodi Ar. Bea	77.33	72	P	P	14 48 03.5	+0.4
	2.0nm,0.3s,mb4.3,baz=255,slow=4.9,SNR=28						
YKA	Yellowknife Ar	87.64	341	P	P	14 48 55.7	+0.1
	2.5nm,0.7s,mb4.3,baz=135,slow=4.9,SNR=44						
ASAR	Alice Springs	132.31	210	PKP	PKPdf	14 55 24.1	+2.0
	0.3nm,0.6s,baz=135,slow=2.2,SNR=7.4						
WRA	Warramunga Arr	135.20	214	PKP	PKPdf	14 55 29.8	+2.3
	0.5nm,0.5s,baz=148,slow=1.8,SNR=9.7						
ZALV	Zalesovo Beam	139.34	23	PKP	PKPdf	14 55 36.5	+2.4
	0.7nm,0.6s,baz=262,slow=4.0,SNR=4.4						
SONM	Songino Array	150.23	5	PKPbc	PKPbc	14 55 59.9	+1.8
	0.4nm,0.6s,baz=28,slow=0.5,SNR=4.6						
SONM				PKPab	PKPab	14 56 05.3	+0.8
	0.9nm,0.4s,baz=313,slow=2.2,SNR=4.3						

IDC 02 14:47:49.2±3.1**, 2771N**×**5545E, h0**^{km}**, mb3.6**/4**, mb1 3.6**/4**, mb1mx3.3**/23**, mbtmp3.6**/4**, Error ellipse: s-maj=70.0km s-min=32.8km az=151.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRTR	Keskin Array B	21.68	309	P	P	14 52 43.3	+1.7
	0.7nm,0.6s,baz=125,slow=15,SNR=4.2						
ZALV	Zalesovo Beam	33.92	31	P	P	14 54 34.2	+0.4
	0.4nm,0.4s,baz=236,slow=12,SNR=3.9						
HFS	Hagfors	42.99	331	P	P	14 55 48.6	-1.4
	0.9nm,0.5s,baz=123,slow=10,SNR=5.5						
TORD	Torodi Ar. Bea	52.04	265	P	P	14 57 00.9	0.0
	0.6nm,0.6s,baz=60,slow=7.8,SNR=7.1						

IDC 02 15:08:40.3±10.0**, 2770N**×**4475W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/21**, mbtmp3.8**/3**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.8**/22**, Error ellipse: s-maj=265.6km s-min=46.3km az=172.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	45.60	99	LR	LR	15 34 13.3	
	comp=Z,74nm,18.2s,baz=220,slow=34						
PDAR	Pinedale Array	53.79	304	P	P	15 18 04.4	-0.2
	0.4nm,0.6s,baz=99,slow=5.6,SNR=5.0						
YKA	Yellowknife Ar	56.55	329	P	P	15 18 24.5	+0.3
	0.7nm,0.9s,baz=90,slow=7.6,SNR=8.9						
FINES	FINESS Array B	56.95	33	P	P	15 18 27.1	0.0
	1.9nm,0.9s,baz=274,slow=8.2,SNR=5.1						

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*NEIC **02** 15:16:31.2, 1595N×9687W, h15^{km}, MD3.9(MEX), After MEX.*

MEX 02 15:16:30.7±0.5**, 1596N**×**9685W, h8**^{km}±7^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.74	105	*i* P	Pg	15 16 43.3	-1.7
HUIG				*i* S	Sg	15 16 53.0	-1.6
HUIG	Huatulco	0.74	105	*i* P	Pg	15 16 43.5	-1.5
HUIG				*i* S	Sg	15 16 53.0	-1.6
VHO	Vista Hermosa	1.11	6	*i* P	Pg	15 16 48.7	-3.3
VHO				*i* S	Sg	15 17 02.5	-3.9
VHO	Vista Hermosa	1.11	6	*i* P	Pg	15 16 48.5	-3.5
VHO				*i* S	Sg	15 17 03.0	-3.4
OXX	Oaxaca	1.12	6	*e*P	Pg	15 16 49.0	-3.2
OXX				*i* S	Sg	15 17 03.5	-3.2
PNIG	Pinotepa	1.30	289	*i* P	Pn	15 16 52.1	-3.0
PNIG				*i* S	Sb	15 17 07.2	-5.0
CMIG	Matias Romero	2.19	59	*e*P	Pn	15 17 03.8	-3.6
CMIG				*i* S	Sn	15 17 28.8	-6.0
CMIG	Matias Romero	2.19	59	*e*P	Pn	15 17 03.8	-3.6
CMIG				*i* S	Sn	15 17 31.3	-3.4
TPIG	Tehuac#an	2.49	349	*i* S	Sn	15 17 37.3	-4.8
PPM	Popocatepetl	3.52	331	*e*P	Pn	15 17 21.7	-3.9
PPM				*e*S	Sn	15 18 02.1	-5.4
PPM	Popocatepetl	3.52	331	*e*P	Pn	15 17 24.3	-1.4
PPM				*e*S	Sn	15 18 05.7	-1.8

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*IDC **02** 15:28:03.6±3.3, 4874N×1861E, h0^{km}, mb1 3.1/1, mb1mx2.8/18, mbtmp2.7/1, ML2.7/1, Error ellipse: s-maj=29.5km s-min=23.3km az=83.0*

*ISCJB **02** 15:28:04.4±0.4, 4877N±002×1846E±003, h0^{km}, Error ellipse: s-maj=3.3km s-min=2.9km az=10.8*

*PRU **02** 15:28:05.7, 4870N×1851E, h0^{km}, Explosion Novaky, Slovakia Mining explosion.*

ISC 02 15:28:05.2±0.4**, 4873N**±002×**1851E**±003**, h0**^{km}**, n19,** σ**1^{s}03**/32**, 3D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOLL	Kolacno	0.17	205	*i* PG	Pg	15 28 08.7	+0.2
KOLL				*e*SG	Sg	15 28 11.3	+0.6
VYHS	Vyhne	0.32	138	*i* PG	Pg	15 28 11.3	-0.1
VYHS				*e*SG	Sg	15 28 17.3	+1.7
LIKS	Likavka	0.51	51	*e*SG	Sg	15 28 20.5	-1.0
SMOL	Smolenice	0.75	253	*i* PG	Pg	15 28 19.7	+0.1
SMOL				*e*SG	Sg	15 28 30.5	+1.2
ZST	Bratislava	1.08	241	*e*PN	Pn	15 28 25.8	-1.8
ZST				*e*SN	Sn	15 28 42.3	-0.9
OKC	Ostrava-Krasne	1.13	348	*e*PG	Pg	15 28 27.1	+0.2
OKC				*e*SG	Sg	15 28 43.1	+1.6
	27nm,0.4s						
PSZ	Piszkesteto	1.23	131	⇓*e*	Pg	15 28 28.6	-0.2
PSZ				*e*		15 28 40.9	
KECS	Kecovo	1.33	100	*e*PN	Pn	15 28 29.4	-1.7
KECS				*e*SN	Sn	15 28 49.8	+0.3
NIE	Niedzica	1.37	59	*e*Pg	Pg	15 28 31.5	0.0
NIE				*e*Sg	Sg	15 28 54.1	+4.9
VRAC	Vranov	1.39	295	Pg	Pg	15 28 30.5	-1.3
	5.0nm,0.3s,baz=116,slow=14,SNR=22						
VRAC				Lg		15 28 49.1	
	2.7nm,0.3s,baz=38,slow=18,SNR=6.6						
OJC	Ojcow	1.71	29	*e*Pg	Pg	15 28 35.0	-3.0
OJC				*e*Sg	Sg	15 29 02.2	+2.1
STHS	Stebnicka Huta	1.92	68	*e*PN	Pn	15 28 39.3	+0.1
CONA	Conrad Observa	1.94	246	⇓*e*Pn	Pn	15 28 39.0	-0.5
	1.0nm,0.2s						
CONA				⇓*i*Sn	Sn	15 29 04.1	-0.4
	5.0nm,0.4s						
DPC	Dobruska-Polom	2.16	319	PN	Pn	15 28 42.4	0.0
DPC				*e*PG	Pg	15 28 45.7	-0.8
DPC				*e*SG	Sg	15 29 14.5	0.0
	10nm,0.6s						
UPC	Upice	2.41	318	*e*PG	Pg	15 28 50.1	-1.2
PRU	Pruhonice	2.88	297	*e*SG	Sg	15 29 38.0	+0.2
	27nm,1.5s						
GERES	GERESS Array B	3.18	274	Pn	Pn	15 28 56.7	+0.3
	0.9nm,0.3s,baz=88,slow=13,SNR=12						
GERES				Sn	Sn	15 29 35.8	+0.8
	0.5nm,0.3s,baz=91,slow=27,SNR=3.5						
KHC	Kasperske Hory	3.28	279	*e*PN	Pn	15 29 00.0	+2.2
KHC				*e*SG	Sg	15 29 49.9	-0.5
BRG	Berggiesshubel	3.65	308	SG	Sg	15 30 03.0	+0.5
	5.8nm,0.8s						

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*ISCJB **02** 16:03:17.6±0.2, 2798S±003×6662W±003, h171^{km}, mb4.5/44, Error ellipse: s-maj=4.5km s-min=3.4km az=30.6*

*IDC **02** 16:03:18.5±0.6, 2799S×6653W, h173^{km}±5^{km}, mb4.1/12, mb1 4.3/15, mb1mx4.2/19, mbtmp4.1/15, Error ellipse: s-maj=15.8km s-min=9.9km az=90.0*

*GUC **02** 16:03:18.2±0.7, 2794S×6675W, h180^{km}, mb4.6(NEIC)*

*NEIC **02** 16:03:18.1±0.2, 2791S×6649W, mb4.6/34, Error ellipse: s-maj=9.3km s-min=6.0km az=81.0*

*BJI **02** 16:03:18.1, 2790S×6650W, h172^{km}, mB4.7*

ISC 02 16:03:19.3±0.2**, 2801S**±003×**6667W**±004**, h173**^{km}**, h173**^{km}±1.0^{km}**:pP-P, n245,** σ**0^{s}85**/229**, mb4.5**/44**, 56C-65D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	3.33	280	*e*P	Pn	16 04 10.7	-1.0
CPCH				*i* S	Sn	16 04 51.0	-1.5
VACH	Vallenar	3.65	260	⇓*i*P	Pn	16 04 15.9	+0.2
VACH				*i* S	Sn	16 04 59.1	-0.6
LCO	Las Campanas	3.69	253	⇑*i*Pn	Pn	16 04 16.5	+0.4
LCO				*e*Sn	Sn	16 05 00.8	+0.3
CDCH	Caldera	3.81	283	⇑*i*P	Pn	16 04 16.7	-1.0
CDCH				*i* S	Sn	16 04 59.5	-3.8
CFAA	Coronel Fontan	3.83	200	P	Pn	16 04 18.3	+0.3
	30nm,0.3s,baz=20,slow=13,SNR=2090						
CFAA				S	Sn	16 05 03.4	-0.5
	87nm,0.3s,baz=267,slow=19,SNR=55						
TLL	Tololo Astrono	4.21	238	*i* P	Pn	16 04 23.5	+0.6
TLL				*i* S	Sn	16 05 13.5	+1.0
LSCH	La Serena	4.43	244	*i* S	Sn	16 05 16.1	-1.5
OVCH	Ovalle	4.73	236	*i* P	Pn	16 04 29.0	-0.6
OVCH				*i* S	Sn	16 05 23.4	-1.1
CPN1	Cerro Paranal	4.75	314	*e*P	Pn	16 04 29.7	-0.2
CPN1				*e*S	Sn	16 05 23.8	-1.4
CMCH	Combarbala	4.92	229	*i* S	Sn	16 05 28.8	-0.2
MDZ	Mendoza	5.21	201	*e*P	Pn	16 04 36.9	+1.1
MDZ				*e*		16 04 55.7	
MDZ				*e*		16 05 33.7	
MDZ				*e*S	Sn	16 05 49.1	+13
ANCH	Antofagasta	5.47	321	⇓*i*P	Pn	16 04 38.2	-1.1
ANCH				*i* S	Sn	16 05 38.8	-3.3
CEN1	Los Morros	5.60	325	⇑*i*P	Pn	16 04 39.1	-1.8
CHNG	Los Chungos	5.70	226	*e*P	Pn	16 04 27.5	-15
CHNG				*i* S	Sn	16 05 31.0	-16
RCDM	Rinconada Maip	6.52	212	*e*P	Pn	16 04 52.5	-0.4
RCDM				*i* S	Sn	16 06 05.7	-1.1
TRQA	Tornquist	10.76	160	*e*Pn	Pn	16 05 47.4	-1.3
TRQA				*e*		16 05 58.3	
LPAZ	La Paz	11.74	353	*e*Pn	Pn	16 05 59.1	-2.5
	72nm,0.5s						
LPAZ				*e*		16 06 08.5	
LPAZ				*e*Sn	Sn	16 08 02.1	-10
LPAZ	La Paz	11.74	353	P	Pn	16 05 59.5	-2.2
	5.3nm,0.3s,baz=165,slow=8.3,SNR=91						
SIV	San Ignacio	13.03	25	P	Pn	16 06 14.9	-3.2
	2.6nm,0.3s,baz=211,slow=13,SNR=53						
PLCA	Paso Flores	13.09	193	*e*Pn	Pn	16 06 17.9	-0.7
	16nm,1.1s						
NNA	Nana	18.57	327	*e*P	P	16 07 23.6	+0.5
	34nm,1.0s						
ATAH	Atahualpa	23.66	330	P	P	16 08 14.8	-0.3
	4.0nm,0.6s,mb4.1,baz=129,slow=13,SNR=2.7						
ROSC	El Rosal	33.50	346	P	P	16 09 42.3	-0.1
ROSC	El Rosal	33.50	346	P	P	16 09 43.0	+0.6
	7.4nm,0.4s,mb4.8,baz=102,slow=18,SNR=2.7						
RCBR	Riachuelo	36.58	59	*e*P	P	16 10 05.3	-3.5
	8.2nm,0.8s,mb4.4						
SDV	Santo Domingo	36.88	353	*e*P	P	16 10 08.3	-2.9
	11nm,0.4s,mb4.8						
JTS	JuntasAbangare	41.99	333	*e*P	P	16 10 52.9	-0.5
	3.5nm,0.6s,mb4.2						
SJG	San Juan	45.85	1	*e*P	P	16 11 19.9	-4.2
	15nm,0.6s,mb4.8						
TGUH	Tegucigalpa,Un	46.34	332	*e*P	P	16 11 27.4	-0.7
	30nm,0.8s,mb5.0						
SDDR	Presa de Saban	46.93	354	P	P	16 11 25.4	-7.1
	28nm,1.2s,mb4.8						
TEIG	Tepich	52.31	334	*e*P	P	16 12 11.6	-1.6
	32nm,0.6s,mb5.1						
VNA3	Neumayer Olymp	53.28	160	*e*P	P	16 12 20.7	+1.0
VNA3				*e*	pP	16 12 59.3	+0.3
VNA3				*e*		16 13 20.5	
VNA3				*e*		16 13 24.1	
VNA1	Neumayer--Stat	53.50	159	*e*P	P	16 12 22.5	+1.2
VNA1				*e*	pP	16 13 01.5	+0.9
VNA1				*e*		16 13 22.8	
VNA1				*e*		16 13 27.1	
VNA2	Neumayer--Watz	53.86	160	*e*P	P	16 12 24.7	+0.8
	baz=293,slow=8.2						
VNA2				*e*	pP	16 13 03.8	+0.5
VNA2				*e*		16 13 23.6	
VNA2				*e*		16 13 27.5	
SNAA	Sanae	55.49	160	P	P	16 12 35.6	0.0
	1.6nm,0.9s,mb3.8,baz=257,slow=8.1,SNR=14						
SNAA				pP	pP	16 13 14.6	-0.6
	2.2nm,0.9s,baz=305,slow=6.9,SNR=7.3						
SWET	Sewanee	65.47	343	*e*P	P	16 13 41.8	-1.8
JCT	Junction City	66.21	329	*e*P	P	16 13 47.9	-0.5
	15nm,0.7s,mb4.9						
LTX	Lajitas	67.11	325	*e*P	P	16 13 53.7	-0.5
	2.7nm,0.7s,mb4.2						
TXAR	Lajitas Array	67.11	325	P	P	16 13 54.0	-0.2
	2.5nm,0.9s,mb4.0,baz=146,slow=8.1,SNR=16						
MIAR	Mount Ida	67.22	336	*e*P	P	16 13 53.4	-1.4
	5.6nm,0.6s,mb4.6						
LIC	Lamto	68.45	70	*e*P	P	16 13 59.5	-3.4
	26nm,0.6s,mb5.1						
TIC	Toumodi	68.69	70	*e*P	P	16 14 01.3	-3.1
	25nm,0.5s,mb5.2						
KIC	Kosan Boka	68.77	70	*e*P	P	16 14 01.9	-3.0
	81nm,0.6s						
WMOK	Wichita Mounta	69.40	332	*e*P	P	16 14 06.3	-2.0
	5.0nm,0.9s,mb4.2						
ACSO	Alum Creek Sta	69.57	347	*e*P	P	16 14 06.2	-2.9
	17nm,0.6s,mb4.9						
SYO	Syowa Base	69.72	158	⇓*e*pP	pP	16 14 50.0	-1.2
PKME	Peaks-Kenny Pk	72.96	358	*e*P	P	16 14 28.8	-0.6
	42nm,1.2s,mb5.0						
ANMO	Albuquerque	73.04	327	*e*P	P	16 14 26.9	-3.3
	3.4nm,0.7s,mb4.2						
SUR	Sutherland	73.63	118	*e*P	P	16 14 33.7	-0.1
	6.5nm,0.6s,mb4.5						
SDCO	Great Sand Dun	74.86	329	*e*P	P	16 14 40.6	0.0
	2.1nm,0.8s,mb3.8						
Z14A	Wintersburg	75.18	321	⇓P	P	16 14 43.0	+0.4
	baz=76						
X15A	Humboldt	75.64	322	⇓P	P	16 14 45.9	+0.7
	baz=76						
Y14A	Wickenburg	75.65	322	⇑P	P	16 14 45.7	+0.5
	baz=76						
MVCO	Mesa Verde	75.84	327	⇓P	P	16 14 46.8	+0.6
	baz=76						
WUAZ	Wupatki	75.97	324	⇑P	P	16 14 47.8	+0.8
	baz=76						
X14A	Yava	75.98	322	⇓P	P	16 14 47.9	+0.8
	baz=76						
Y13A	Salome	76.01	321	⇑P	P	16 14 48.0	+0.7
	baz=76						
TSUM	Tsumeb	76.32	105	*e*P	P	16 14 47.9	-1.6
	3.7nm,0.7s,mb4.1						
Y12C	Blythe	76.35	321	⇓P	P	16 14 50.0	+0.8
	baz=77						
ECSD	EROS,Sioux Fal	76.49	338	*e*P	P	16 14 48.5	-1.2
	5.3nm,0.6s,mb4.3						
X13A	Yucca	76.59	322	P	P	16 14 51.6	+1.1
	baz=77,SNR=5.6						
W14A	Seligman	76.64	322	⇑P	P	16 14 51.7	+0.9
	baz=77						
BC3	Big Chuckw Mtn	76.81	320	⇓P	P	16 14 52.3	+0.6
	baz=77						
W13A	Hualapai Mount	77.00	322	⇑P	P	16 14 53.6	+0.8
	baz=77						
IRM	Iron Mountain	77.00	320	⇑P	P	16 14 53.6	+0.7
	baz=77						
PV10	Paradox Valley	77.02	327	P	P	16 14 47.9	-5.0
U14A	Mt Trumbull	77.60	323	⇑P	P	16 14 57.3	+1.1
	baz=78						
T15A	Red Dirt Ranch	77.64	324	⇓P	P	16 14 57.4	+1.1
	baz=78						
GMRC	Granite Mounta	77.74	321	⇓P	P	16 14 57.8	+0.8
	baz=78						
TOA0	Torodi Ar. Sit	77.76	68	*e*P	P	16 14 54.7	-2.8
TOA0				*e*pP	pP	16 15 35.9	-3.8
TORD	Torodi Ar. Bea	77.76	68	P	P	16 14 55.0	-2.5
	20nm,0.7s,mb4.8,baz=272,slow=5.8,SNR=118						
TORD				pP	pP	16 15 37.5	-2.2
	2.3nm,0.6s,baz=253,slow=5.4,SNR=1.8						
MURC	Murrieta	77.77	319	⇓P	P	16 14 58.0	+0.8
	baz=78						
V12A	Nelson	77.99	322	⇓P	P	16 14 58.9	+0.7
	baz=78						
U13A	Pakoon Wash	78.02	323	⇓P	P	16 14 59.1	+0.7
	baz=78						
T14A	Hurricane	78.04	324	⇓P	P	16 14 59.2	+0.7
	baz=78						
HEC	Hector,Ludlow	78.16	320	⇑P	P	16 15 00.1	+0.9
	baz=78						
SRU	San Rafael	78.31	327	*e*P	P	16 15 00.2	+0.2
	7.8nm,0.9s,mb4.3						
U12A	Valley of Fire	78.34	322	⇓P	P	16 15 01.0	+0.8
	baz=79						
T13A	Saint George	78.44	323	⇓P	P	16 15 01.5	+0.8
	baz=79						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CCUT	Cedar City	78.55	324	eP	P	16 15 02.4	+1.0
CCUT				epP	pP	16 15 45.5	+1.9
BOSA	Boshof	78.67	116	P	P	16 15 01.4	-1.0
	6.9nm,0.5s,mb4.5,baz=244,slow=4.0,SNR=24						
ARUT	Antelope Range	78.77	324	eP	P	16 15 03.6	+1.0
RWWY	Rawlins	78.83	330	eP	P	16 15 03.1	+0.3
	19nm,0.8s,mb4.8						
S13A	Holt Ranch, En	78.83	324	⇑P	P	16 15 03.7	+0.8
	baz=79						
T11A	Corn Creek, Al	79.31	322	⇑P	P	16 15 06.2	+0.8
	baz=80						
TPNV	Topopah Spring	79.65	322	⇑P	P	16 15 08.1	+0.8
	baz=80						
R12A	Pony Springs,	79.78	324	P	P	16 15 09.1	+1.0
	baz=80,SNR=6.6						
JLU	Jordanelle	79.92	327	eP	P	16 15 08.1	-0.6
DUG	Dugway	80.28	326	P	P	16 15 07.6	-3.0
	3.9nm,0.8s,mb4.1						
DUG	Dugway	80.28	326	⇑P	P	16 15 11.3	+0.7
	baz=81						
R11A	Troy Canyon, C	80.32	323	P	P	16 15 11.8	+0.9
	baz=81,SNR=6.1						
Q12A	Willow Creek R	80.43	324	⇓P	P	16 15 12.2	+0.8
	baz=81						
LBTB	Lobatse	80.52	113	eP	P	16 15 11.1	-1.4
	12nm,1.0s,mb4.5						
S10A	Tonopah Range,	80.55	322	⇓P	P	16 15 12.7	+0.6
	baz=81						
R10A	Warm Springs	80.66	323	P	P	16 15 13.9	+1.2
	baz=81,SNR=5.9						
PDAR	Pinedale Array	80.74	329	P	P	16 15 12.8	-0.2
	3.3nm,0.6s,mb4.2,baz=128,slow=7.7,SNR=41						
HWUT	Hardware Ranch	80.75	328	eP	P	16 15 12.9	-0.2
	7.6nm,0.8s,mb4.4						
P12A	McGill	80.79	324	⇑P	P	16 15 14.4	+1.0
	baz=81						
HELL	Mitchell Peak,	81.01	320	⇓P	P	16 15 14.6	0.0
	baz=81						
R09A	Tonopah	81.04	322	⇓P	P	16 15 15.1	+0.4
	baz=81						
Q10A	Clear Creek Ra	81.10	323	⇑P	P	16 15 15.8	+0.8
	baz=81						
S08C	White Mtn Res	81.11	321	⇓P	P	16 15 15.6	+0.5
	baz=81						
O12A	Currie	81.30	325	⇓P	P	16 15 16.8	+0.8
	baz=82						
HVU	Hansel Valley	81.47	327	eP	P	16 15 16.4	-0.4
	4.4nm,0.6s,mb4.3						
Q09A	Carvers	81.53	322	⇓P	P	16 15 17.8	+0.5
	baz=82						
M14A	Sheep Mountain	81.53	326	P	P	16 15 17.2	0.0
	baz=82,SNR=5.6						
O11A	Cowboy Ranch,	81.67	324	⇓P	P	16 15 18.7	+0.7
	baz=82						
P10A	Eureka	81.71	323	⇓P	P	16 15 18.9	+0.6
	baz=82						
M13A	Montello	81.83	326	⇑P	P	16 15 18.8	0.0
	baz=82						
NVAR	Mina Array Bea	81.85	322	P	P	16 15 18.5	-0.4
	1.0nm,0.6s,mb3.6,baz=150,slow=7.0,SNR=5.9						
LOHW	Long Hollow	81.87	329	eP	P	16 15 18.6	-0.3
	3.3nm,0.6s,mb4.1						
N12A	Clover Valley,	81.89	325	⇓P	P	16 15 19.3	+0.2
	baz=82						
Q08A	Gabbs	81.95	322	⇓P	P	16 15 19.7	+0.2
	baz=82						
ULM	Lac du Bonnet	82.11	342	P	P	16 15 17.9	-2.0
	5.2nm,0.7s,mb4.3,baz=153,slow=4.7,SNR=9.0						
K14A	Jones Ranch, D	82.24	327	⇑P	P	16 15 21.0	+0.1
	baz=82						
M12A	Wells	82.24	326	⇓P	P	16 15 21.2	+0.3
	baz=82						
L13A	Double Diamond	82.27	327	⇑P	P	16 15 21.5	+0.5
	baz=83						
SCHQ	Schefferville	82.50	360	eP	P	16 15 20.2	-1.7
	8.2nm,0.8s,mb4.4						
SCHQ	Schefferville	82.50	360	P	P	16 15 20.3	-1.6
	4.8nm,0.8s,mb4.2,baz=203,slow=1.9,SNR=6.6						
R06C	Coleville	82.55	321	⇓P	P	16 15 23.4	+0.8
	baz=83						
M11A	Holland Ranch,	82.69	325	P	P	16 15 24.1	+0.8
	baz=83,SNR=5.3						
K13A	Stover Farm, H	82.76	327	⇑P	P	16 15 24.0	+0.4
	baz=83						
YMR	Madison River	82.86	330	eP	P	16 15 24.6	+0.5
	12nm,0.8s,mb4.7						
K12A	Draper Farm, C	83.15	326	P	P	16 15 26.3	+0.7
	baz=83,SNR=5.2						
L11A	Cat Creek Ranc	83.22	326	P	P	16 15 26.4	+0.5
	baz=84,SNR=6.4						
J13A	Cove Ranch, Pi	83.37	327	P	P	16 15 27.2	+0.6
	baz=84,SNR=8.4						
O07A	Toulon	83.39	322	⇑P	P	16 15 27.0	+0.1
	baz=84						
LAVA	Lava Cap Winer	83.43	320	⇓P	P	16 15 27.2	+0.1
	baz=84						
N08A	GE Springer Mi	83.44	323	⇓P	P	16 15 27.4	+0.3
	baz=84						
L10A	Juniper Basin	83.52	325	P	P	16 15 27.7	+0.3
	baz=84,SNR=5.9						
HLID	Hailey	83.61	327	eP	P	16 15 28.2	+0.3
	7.4nm,0.9s,mb4.4						
HLID				epP	pP	16 16 11.2	+0.5
HLID	Hailey	83.61	327	P	P	16 15 28.6	+0.7
	baz=84,SNR=13						
J12A	Stokes Ranch,	83.70	327	P	P	16 15 28.8	+0.4
	baz=84,SNR=6.7						
I13A	Wildhorse Cree	83.73	328	P	P	16 15 29.1	+0.6
	baz=84,SNR=8.1						
P05C	Yuba Gap, Truc	83.74	321	⇓P	P	16 15 29.0	+0.4
	baz=84						
K11A	Parker Ranch,	83.81	326	⇑P	P	16 15 29.1	+0.2
	baz=84						
BOZ	Bozeman (W)	83.92	330	⇓P	P	16 15 29.3	-0.1
	baz=84						
G15A	Dillon	83.93	329	⇑P	P	16 15 29.6	+0.1
	baz=84						
BEKR	Beckwourth	83.99	321	⇑P	P	16 15 30.2	+0.3
	baz=84						
MFID	Camas Ranch	84.18	326	⇓P	P	16 15 31.3	+0.5
	baz=84						
H13A	Challis	84.28	328	P	P	16 15 32.1	+0.8
	baz=85,SNR=8.3						
N06A	Buffalo Meadow	84.32	322	⇓P	P	16 15 31.8	+0.3
	baz=85						
ORV	Oroville	84.41	321	⇓P	P	16 15 32.3	+0.3
	baz=85						
M07A	Soldier Meadow	84.42	323	⇓P	P	16 15 32.3	+0.3
	baz=85						
G14A	Jackson	84.43	329	⇑P	P	16 15 32.3	+0.3
	baz=85						
F15A	Butte	84.45	330	P	P	16 15 32.5	+0.4
	baz=85,SNR=11						
H12A	Diamond D Ranc	84.56	328	⇑P	P	16 15 33.0	+0.4
	baz=85						
L08A	Fields	84.56	324	⇑P	P	16 15 32.7	0.0
	baz=85						
K09A	Rome	84.60	325	⇓P	P	16 15 32.9	0.0
	baz=85						
I11A	Placerville	84.61	327	⇑P	P	16 15 32.9	-0.1
	baz=85						
G13A	Cobalt	84.67	328	P	P	16 15 33.8	+0.6
	baz=85,SNR=9.3						
ELFS	Eagle Lake Fie	84.72	322	⇑P	P	16 15 34.1	+0.5
	baz=85						
F14A	Wisdom	84.82	329	P	P	16 15 34.8	+0.8
	baz=85,SNR=7.9						
L07A	Adell	84.95	323	⇑P	P	16 15 35.2	+0.5
	baz=85						
E15A	Deer Lodge	84.97	330	⇑P	P	16 15 34.9	+0.3
	baz=85						
M06C	Likely Place G	84.99	322	⇓P	P	16 15 35.1	+0.2
	baz=85						
K08A	Mann Creek Ran	85.02	324	⇑P	P	16 15 36.3	+1.3
	baz=85						
J09A	Fry Pan Ranch,	85.09	325	⇓P	P	16 15 35.6	+0.2
	baz=85						
I10A	Payette	85.15	326	⇓P	P	16 15 35.8	+0.1
	baz=85						
H11A	Donnelly	85.22	327	⇓P	P	16 15 36.2	+0.2
	baz=86						
F13A	Darby	85.24	329	P	P	16 15 36.2	+0.2
	baz=86,SNR=9.6						
HATC	Hat Creek Radi	85.25	322	⇓P	P	16 15 36.4	+0.2
	baz=86						
E14A	Clinton	85.34	330	⇓P	P	16 15 37.1	+0.6
	baz=86						
K07A	Rock Creek Ran	85.38	324	⇓P	P	16 15 37.5	+0.6
	baz=86						
MOD	Modoc	85.38	323	⇑P	P	16 15 37.1	+0.3
	baz=86						
D15A	Lincoln	85.39	331	P	P	16 15 37.2	+0.4
	baz=86,SNR=6.2						
M05C	Lookout	85.46	322	⇑P	P	16 15 36.9	-0.3
	baz=86						
J08A	Circle Bar Ran	85.46	325	⇓P	P	16 15 37.5	+0.4
	baz=86						
H10A	Noah's Angus R	85.49	327	P	P	16 15 37.2	-0.1
	baz=86,SNR=6.9						
I09A	Lost Marbles R	85.53	326	⇓P	P	16 15 37.7	+0.1
	baz=86						
F12A	Elk City	85.65	328	⇑P	P	16 15 38.1	+0.1
	baz=86						
E13A	Victor	85.67	329	⇑P	P	16 15 38.5	+0.3
	baz=86						
L05A	Lakeview	85.77	323	⇓P	P	16 15 39.2	+0.4
	baz=86						
D14A	Greenough	85.85	330	⇑P	P	16 15 39.3	+0.3
	baz=86						
G11A	Walters Elk Ra	85.86	327	⇓P	P	16 15 39.4	+0.3
	baz=86						
M03C	McCloud	85.93	322	⇑P	P	16 15 39.2	-0.4
	baz=86						
K06A	Valley Falls	85.98	324	⇓P	P	16 15 39.8	0.0
	baz=86						
M04C	Macdoel	86.13	322	⇓P	P	16 15 40.4	-0.1
	baz=86						
F11A	Grangeville	86.17	328	⇓P	P	16 15 40.1	-0.5
	baz=86						
J06A	Christmas Vall	86.25	324	⇓P	P	16 15 41.0	0.0
	baz=86						
D13A	Huson	86.29	330	P	P	16 15 41.2	0.0
	baz=87,SNR=5.1						
H08A	Prairie City	86.39	326	⇑P	P	16 15 41.7	0.0
	baz=87						
L04A	Klamath Falls	86.42	322	⇓P	P	16 15 41.7	-0.3
	baz=87						
C14A	Swan Lake	86.48	330	⇓P	P	16 15 42.2	+0.1
	baz=87						
G09A	Cove	86.50	327	⇓P	P	16 15 42.5	+0.3
	baz=87						
I07A	Izee	86.50	325	⇑P	P	16 15 42.5	+0.3
	baz=87						
E11A	Bogner Ranch,	86.54	328	⇓P	P	16 15 41.8	-0.6
	baz=87						
YBH	Yreka Blue Hor	86.57	322	⇑P	P	16 15 41.7	-1.0
	baz=87						
K04A	Chilquin	86.64	323	⇑P	P	16 15 42.0	-0.9
	baz=87						
D12A	Red Ives Fores	86.66	329	⇑P	P	16 15 43.1	+0.1
	baz=87						
F10A	Beach Ranch, E	86.74	327	⇓P	P	16 15 44.0	+0.7
	baz=87						
I06A	Prineville	86.76	324	⇓P	P	16 15 44.1	+0.6
	baz=87						
C13A	Hot Springs	86.78	330	P	P	16 15 43.5	0.0
	baz=87,SNR=5.4						
J05A	Fort Rock	86.84	323	⇑P	P	16 15 44.0	+0.1
	baz=87						
F09A	S2 Ranch, Elgi	86.87	327	⇓P	P	16 15 44.1	+0.1
	baz=87						
E10A	Myers Farm, Un	87.06	328	⇑P	P	16 15 44.6	-0.3
	baz=87						
G08A	Pilot Rock	87.08	326	⇓P	P	16 15 45.1	0.0
	baz=87						
LSZ	Lusaka	87.13	106	eP	P	16 15 45.9	-0.2
	10nm,0.7s,mb4.8						
B13A	Whitefish	87.26	330	⇑P	P	16 15 45.8	0.0
	baz=88						
H06A	Lindquist Farm	87.38	325	⇑P	P	16 15 46.5	0.0
	baz=88						
G07A	Ruggs Ranch, H	87.42	326	⇓P	P	16 15 46.7	+0.1
	baz=88						
D10A	Wagner Farm, O	87.55	328	⇑P	P	16 15 46.5	-0.8
	baz=88						
A13A	Flathead Natio	87.66	331	⇑P	P	16 15 47.9	+0.2
	baz=88						
B12A	Libby	87.82	330	⇓P	P	16 15 48.6	+0.1
	baz=88						
D09A	Jones Farm, Ri	88.04	328	⇑P	P	16 15 49.4	-0.2
	baz=88						
A12A	Yaak River Ran	88.20	330	⇑P	P	16 15 50.2	-0.1
	baz=88						
NEW	Newport	88.36	329	P	P	16 15 51.2	+0.1
	13nm,1.5s,mb4.5						
A11A	Hall Mountain,	88.53	330	⇑P	P	16 15 51.5	-0.4
	baz=89						
C09A	Chrisman Ranch	88.56	328	⇑P	P	16 15 52.0	0.0
	baz=89						
ESDC	Sonseca Array	89.09	43	P	P	16 15 52.7	-2.0
	2.3nm,0.6s,mb4.3,baz=240,slow=4.3,SNR=7.0						
FCC	Fort Churchill	89.41	346	eP	P	16 15 54.4	-1.3
	3.7nm,0.5s,mb4.6						
B07A	Winthrop	89.89	328	⇑P	P	16 15 57.8	-0.4
	baz=90						
D05A	Enumclaw	89.92	326	⇑P	P	16 15 58.1	-0.2
	baz=90						
A07A	Ashnola River,	90.43	328	⇓P	P	16 16 00.7	0.0
	baz=91						
EDM	Edmonton	90.49	334	eP	P	16 15 58.6	-2.3
YKA	Yellowknife Ar	97.97	340	P	P	16 16 33.2	-1.7
YKA	Yellowknife Ar	97.97	340	P	P	16 16 33.2	-1.6
	0.7nm,0.6s,mb4.3,baz=134,slow=4.3,SNR=24						
ASAR	Alice Springs	124.93	203	PKP	PKPdf	16 21 58.3	-0.9
	2.1nm,0.6s,baz=134,slow=1.7,SNR=46						
ASAR				pPKP	pPKPdf	16 22 44.4	-0.2
	2.8nm,0.8s,baz=133,slow=1.7,SNR=12						
WRA	Warramunga Arr	128.18	205	PKP	PKPdf	16 22 05.1	-0.4
WRA				pPKP	pPKPdf	16 22 51.1	+0.2
WRA				SKPbc		16 25 06.8	
WRA	Warramunga Arr	128.18	205	PKP	PKPdf	16 22 05.1	-0.4
	1.4nm,0.3s,baz=155,slow=2.0,SNR=84						
WRA				pPKP	pPKPdf	16 22 51.1	+0.2
	4.5nm,0.6s,baz=169,slow=1.7,SNR=16						
WRA				SKPbc		16 25 06.8	
	0.5nm,0.6s,baz=156,slow=3.0,SNR=6.7						
EKS2	Erkin-Say	144.91	55	P	PKPdf	16 22 35.2	-0.3
	SNR=12						
AML	Almayashu	144.96	56	P	PKPdf	16 22 35.4	-0.2
	SNR=13						
USP	Ospenovka	145.30	54	P	PKPdf	16 22 36.1	-0.1
	SNR=14						
KURK	Kurchatov	145.35	40	ePKPdf	PKPdf	16 22 35.8	-0.2
AAK	Ala-Archa	145.44	55	P	PKPdf	16 22 37.3	+0.8
	SNR=67						
UCH	Uchtor	145.53	55	P	PKPdf	16 22 37.8	+1.2
	SNR=54						
CHMS	Chumysh	145.54	54	P	PKPdf	16 22 37.2	+0.6
	SNR=20						
KBK	Karagaybulak	145.76	54	P	PKPdf	16 22 38.0	+1.0
	SNR=38						
KZA	Kyzart	146.10	55	P	PKPdf	16 22 39.2	+1.6
	SNR=33						
TKM2	Tokmak 2	146.16	54	P	PKPdf	16 22 38.6	+0.9
	SNR=20						
HYB	Hyderabad	146.34	101	eP	PKPdf	16 22 39.5	+0.8
HYB	Hyderabad	146.34	101	i PKP	PKPdf	16 22 39.5	+0.8
ZALV	Zalesovo Beam	146.73	31	PKPbc	PKPbc	16 22 38.3	-1.9
	12nm,0.4s,baz=308,slow=3.5,SNR=62						
ZALV				SKPbc	SKPbc	16 26 02.1	-0.3
	1.2nm,0.5s,baz=317,slow=3.4,SNR=4.7						
ULHL	Ulahol	146.78	55	P	PKPdf	16 22 41.4	+2.7
	SNR=12						
MK31	Makanchi Array	149.31	44	ePKPbc	PKPbc	16 22 46.5	-0.8
MK31				ePKPab	PKPab	16 22 50.2	-2.2
MKAR	Makanchi Array	149.31	44	PKPbc	PKPbc	16 22 46.7	-0.5
	9.4nm,0.6s,baz=297,slow=2.8,SNR=83						
MKAR				pPKPbc	pPKPbc	16 23 32.5	+0.1
	3.3nm,0.7s,baz=306,slow=2.9,SNR=2.1						
MKAR				PP	PP	16 26 19.7	-1.2
	0.2nm,0.2s,baz=264,slow=7.0,SNR=2.0						
ASAJ	Asahikawa	151.60	312	PKPbc	PKPbc	16 22 52.4	-0.4
	6.9nm,0.8s,baz=215,slow=3.6,SNR=6.2						
SONM	Songino Array	159.48	13	PKP	PKPdf	16 22 57.0	+0.2
	1.2nm,1.0s,baz=258,slow=1.8,SNR=7.4						
SONM				PKPab	PKPab	16 23 35.3	-0.3
	2.7nm,0.6s,baz=324,slow=4.0,SNR=22						
KSRS	Korea Array	164.54	311	PKPab	PKPab	16 23 58.6	+0.4
	0.9nm,0.6s,baz=62,slow=4.2,SNR=5.5						
HHC	Hu-ho-hao-te	167.11	6	ePKP	PKPdf	16 23 01.0	-3.2
HHC				APKP		16 23 43.7	
HHC				PKS		16 26 32.8	
HHC				PP	PP	16 27 57.8	+0.9
HHC				SKS	SKSdf	16 29 47.0	-4.7
HHC				SKKS	SKKSac	16 34 25.8	-2.2
HHC				SS	SS	16 48 25.7	-0.8
HHC				PP	PP		
	comp=Z,148nm,5.1s						
BJI	Beijing	167.77	350	PKP	PKPdf	16 23 02.0	-2.7
BJI				LR	LR		
	comp=N,182nm,5.5s						
BJI				LR	LR		
	comp=E,147nm,10.2s						
BJI				LR	LR		
	comp=Z,54nm,17.2s						
LZH	Lanzhou	168.62	43	ePKP	PKPdf	16 23 04.5	-0.9
KMI	Kunming	170.09	104	PKP	PKPdf	16 23 02.8	-3.8
KMI				APKP		16 23 47.8	
CD2	Chengdu	171.17	69	ePKP	PKPdf	16 23 06.5	-0.5
CD2				APKP		16 23 49.0	
CD2				XPKP		16 24 05.4	
CD2				PP	PP	16 28 19.7	+0.6
CD2				SS	SS	16 49 06.8	-3.3
CD2				PP	PP		
	comp=Z,60nm,10.2s						
GYA	Guiyang	173.87	103	ePKP	PKPdf	16 23 06.0	-2.3
GYA				APKP		16 23 52.0	
GYA				XPKP		16 24 09.7	
GYA				PKS		16 26 37.0	
GYA				PP	PP	16 28 31.9	-0.6
GYA				PP	PP		
	comp=Z,80nm,8.6s						

IDC 02 16:20:20.4±1.3**,2108N**×**14555E,h0**km**,mb3.4**/4**, mb1 3.7**/4**,mb1mx3.4**/21**,mbtmp3.4**/4**,Error ellipse: s-maj=60.6km s-min=24.9km az=96.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.22	196	P	P	16 28 15.8	+0.4
	1.3nm,1.1s,baz=16,slow=9.3,SNR=7.1						
ASAR	Alice Springs	45.90	195	P	P	16 28 44.5	-0.4
	0.3nm,0.8s,baz=7.4,slow=9.3,SNR=2.5						
ZALV	Zalesovo Beam	56.06	322	P	P	16 30 01.2	+0.1
	0.2nm,0.3s,baz=98,slow=10,SNR=2.0						
YKA	Yellowknife Ar	75.96	28	P	P	16 32 08.8	-0.1
	0.3nm,0.5s,baz=288,slow=5.5,SNR=5.9						

IDC 02 16:27:55.7±2.0**,063N**×**12547E,h0**km**,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.4**/17**,mbtmp3.5**/3**,Error ellipse: s-maj=182.7km s-min=26.7km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.22	157	P	P	16 32 53.3	-0.7
	1.2nm,0.5s,baz=336,slow=11,SNR=20						
ASAR	Alice Springs	25.50	162	P	P	16 33 26.6	+0.7
	0.5nm,0.5s,baz=344,slow=9.0,SNR=13						
MKAR	Makanchi Array	59.41	327	P	P	16 38 00.0	0.0
	0.1nm,0.3s,baz=124,slow=8.1,SNR=3.8						

*IDC **02** 16:34:53.6±1.1, 023N×12598E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/17, mbtmp3.7/6, Error ellipse: s-maj=205.6km s-min=17.3km az=67.0*
*NEIC **02** 16:34:55.7±0.5, 025S×12502E, h10km, mb4.4/4, Error ellipse: s-maj=57.2km s-min=9.3km az=62.0*
*ISCJB **02** 16:34:56.9±0.6, 02S±02×125.1E±05, h33km, mb4.0/9, Error ellipse: s-maj=76.5km s-min=10.9km az=153.7*
ISC 02 16:34:59.3±0.6**,03S**±02×**1251E**±05**,h35**km**,n12,**σ**0**^{s}**94**/12**, mb4.0**/9**,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.57	156	P	**P**	**16 39 45.2**	**-0.7**
	1.0nm,0.4s,mb3.6,baz=338,slow=11,SNR=20						
WB2	Warramunga Arr	21.57	156	eP	**P**	**16 39 45.4**	**-0.6**
ASAR	Alice Springs	24.80	160	P	**P**	**16 40 19.7**	**+1.6**
	1.2nm,0.3s,mb3.9,baz=345,slow=12,SNR=44						
CTAO	Charters Tower	28.61	135	P	**P**	**16 40 52.9**	**+0.4**
	5.3nm,0.8s,mb4.3						
STKA	Stephens Creek	35.12	155	P	**P**	**16 41 49.0**	**-0.5**
	9.7nm,1.4s,mb4.5						
STKA	Stephens Creek	35.12	155	P	**P**	**16 41 49.2**	**-0.3**
	2.0nm,0.9s,mb4.1,baz=103,slow=16,SNR=3.6						
ULN	Ulaanbaatar	50.43	344	P	**P**	**16 43 55.0**	**+1.7**
	1.8nm,0.9s,mb4.1						
SONM	Songino Array	50.58	344	P	**P**	**16 43 52.7**	**-1.8**
	0.2nm,0.4s,mb3.4,baz=160,slow=6.3,SNR=5.0						
MK31	Makanchi Array	59.93	327	eP	**P**	**16 45 02.2**	**+0.3**
MKAR	Makanchi Array	59.93	327	P	**P**	**16 45 01.9**	**-0.1**
	0.6nm,0.3s,mb4.1,baz=120,slow=8.4,SNR=9.7						
ZALV	Zalesovo Beam	63.42	335	P	**P**	**16 45 24.8**	**-0.4**
	0.3nm,0.4s,mb3.8,baz=157,slow=7.8,SNR=2.7						
KURK	Kurchatov	64.25	329	P	**P**	**16 45 30.9**	**+0.1**
	2.6nm,0.6s,mb4.4						

*IDC **02** 16:35:52.2±3.0, 2188S×170.16E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.9/14, mbtmp3.8/6, ML3.7/1, MS3.8/2, Ms1 3.8/2, ms1mx3.0/18, Error ellipse: s-maj=88.4km s-min=29.0km az=152.0*
ISC 02 16:35:58.3±5.2**,222S**±04×**1702E**±03**,h50**km±35km**,n10,** σ**1**^{s}**16**/8**,mb4.0**/6**,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.46	271	Pn	**Pn**	**16 36 49.4**	**-0.3**
	6.4nm,0.3s,baz=86,slow=19,SNR=400						
DZM				Sn	**Sn**	**16 37 29.8**	**+0.3**
	16nm,0.3s,baz=133,slow=22,SNR=14						
URZ	Urewera	17.11	161	LR	LR	16 45 26.0	
	comp=Z,179nm,19.3s,baz=49,slow=33						
CTA	Charters Tower	22.41	271	P	**P**	**16 40 53.3**	**+0.5**
	3.6nm,0.8s,mb3.9,baz=117,slow=11,SNR=3.5						
ASAR	Alice Springs	33.39	260	P	**P**	**16 42 32.0**	**-0.1**
	0.5nm,0.6s,mb3.6,baz=90,slow=9.3,SNR=7.8						
WRA	Warramunga Arr	33.47	267	P	**P**	**16 42 32.2**	**-0.8**
	0.4nm,0.5s,mb3.6,baz=95,slow=8.4,SNR=6.0						
VNDA	Vanda	55.55	182	LR	LR	17 05 20.8	
	comp=Z,117nm,18.5s,baz=81,slow=32						
MJAR	Matsushiro Arr	65.74	332	P	**P**	**16 46 36.6**	**-1.3**
	1.0nm,0.5s,mb4.1,baz=151,slow=5.9,SNR=4.4						
SONM	Songino Array	90.08	323	P	**P**	**16 48 53.4**	**+0.8**
	0.4nm,0.6s,mb3.9,baz=139,slow=5.2,SNR=6.0						
INK	Inuvik	99.04	18	P	**P**	**16 49 36.9**	**+3.7**
	1.0nm,0.4s,mb4.7,baz=224,slow=4.7,SNR=4.8						
GERES	GERESS Array B	147.47	331	PKPbc	PKPbc	16 55 37.2	+0.5
	1.0nm,0.7s,baz=64,slow=3.1,SNR=5.5						

*NEIC **02** 17:07:13.5±1.0, 271S×141.15E, h10km, mb4.4/4, Error ellipse: s-maj=32.8km s-min=12.0km az=86.0*
*IDC **02** 17:07:14.4±3.1, 256S×14052E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/13, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=109.0km s-min=22.7km az=95.0*
*ISCJB **02** 17:07:15.2±1.1, 276S±009×141.1E±02, h33km, mb4.0/7, Error ellipse: s-maj=35.8km s-min=13.1km az=175.6*
ISC 02 17:07:17.2±1.1**,277S**±009×**1412E**±02**,h35**km**,n10,** σ**1**^{s}**01**/10**,mb4.0**/7**,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTAO	Charters Tower	17.92	164	P	**Pn**	**17 11 22.8**	**-0.9**
	98nm,2.1s						
WRA	Warramunga Arr	18.32	201	P	**Pn**	**17 11 29.7**	**+1.0**
	0.3nm,0.3s,baz=18,slow=12,SNR=11						
FITZ	Fitzroy Crossi	21.54	224	P	**P**	**17 12 02.4**	**-1.2**
	2.5nm,0.9s,mb3.6,baz=30,slow=16,SNR=2.6						
ASAR	Alice Springs	21.93	198	P	**P**	**17 12 09.7**	**+1.9**
	1.7nm,0.5s,mb3.7,baz=26,slow=11,SNR=17						
MBWA	Marble Bar	27.74	227	P	**P**	**17 13 01.6**	**-1.1**
	31nm,1.2s,mb4.8						
MK31	Makanchi Array	71.34	322	eP	**P**	**17 18 33.8**	**+0.4**
MKAR	Makanchi Array	71.34	322	P	**P**	**17 18 33.5**	**0.0**
	1.8nm,0.7s,mb4.1,baz=113,slow=7.9,SNR=17						
ZALV	Zalesovo Beam	73.23	329	P	**P**	**17 18 43.6**	**-1.0**
	0.4nm,0.3s,mb3.8,baz=110,slow=5.7,SNR=5.3						
UCH	Uchtor	74.82	315	eP	**P**	**17 18 55.2**	**+1.1**
	1.0nm,0.7s,mb3.9						
KURK	Kurchatov	75.18	324	P	**P**	**17 18 56.0**	**0.0**
	3.0nm,1.1s,mb4.1						

*CSEM **02** 17:17:46.8±0.1, 3839N×3922E, h6km±1km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.9km az=7.0*

*ISK **02** 17:17:46.8, 3839N×3920E, h5km, MD3.0*
*ISCJB **02** 17:17:47.2±0.6, 3837N±004×3922E±004, h4km±7km, Error ellipse: s-maj=6.1km s-min=4.9km az=15.5*
*DDA **02** 17:17:48.5, 3832N×39.17E, h2km, Md2.8*
ISC 02 17:17:47.8±0.6**, 3838N**±004×**3921E**±004**, h6**km±6km**, n14, σ0.85**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.21**	**303**	*i* P	**Pg**	**17 17 52.6**	**+0.5**
ELZG				*i* S	**Sg**	**17 17 55.8**	**+0.9**
PTK	**Pertek**	**0.53**	**15**	PG	**Pg**	**17 17 57.6**	**-0.4**
PTK				SG	**Sg**	**17 18 05.0**	**+0.1**
MALT	**Malatya**	**0.62**	**264**	PG	**Pg**	**17 17 58.7**	**-1.0**
MALT				SG	**Sg**	**17 18 08.0**	**+0.2**
MYA	**Malataya**	**0.62**	**265**	PG	**Pg**	**17 17 59.5**	**-0.3**
DIY	**Diyarbakir**	**0.94**	**121**	PG	**Pg**	**17 18 05.1**	**-0.6**
DIY				SG	**Sg**	**17 18 18.8**	**+0.9**
URFA	**Urfa**	**0.99**	**198**	PG	**Pg**	**17 18 06.7**	**-0.1**
BINT	**Bingol**	**1.11**	**63**	PN	**Pn**	**17 18 08.9**	**-1.0**
EZC	**Erzincan**	**1.44**	**19**	*e*PN	**Pn**	**17 18 13.7**	**-0.7**
BNGL	**BINGOL**	**1.62**	**69**	*i* P	**Pn**	**17 18 18.8**	**+2.0**
BNGL				*i* S	**Sn**	**17 18 41.9**	**+3.9**
MARD	**Mardin**	**1.64**	**130**	*i* P	**Pn**	**17 18 16.8**	**-0.3**
MARD				*i* S	**Sn**	**17 18 39.0**	**+0.7**
GZT	**Gaziantep**	**1.66**	**232**	*i* P	**Pn**	**17 18 17.3**	**0.0**
GZT				*i* S	**Sn**	**17 18 43.2**	**+4.3**
BTMT	**Batman**	**1.80**	**95**	*e*PN	**Pn**	**17 18 17.5**	**-1.8**
GAZ	**Gaziantep**	**1.99**	**233**	*e*PN	**Pn**	**17 18 22.1**	**+0.1**
SVSK	**Karacayir**	**2.31**	**312**	*e*PN	**Pn**	**17 18 26.4**	**+0.1**

IDC 02 17:32:14.0±2.5**, 549N×12650E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=215.4km s-min=25.9km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.42**	**163**	P	P	17 37 52.3	-0.3
	0.8nm,0.4s,baz=342,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**29.87**	**166**	P	P	17 38 23.9	+0.6
	0.2nm,0.7s,baz=356,slow=7.3,SNR=5.9						
MKAR	**Makanchi Array**	**55.99**	**325**	P	P	17 41 54.3	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=2.4						

*ISCJB **02** 17:51:43.4±0.7, 2421N±005×12549E±004, h33km, mb3.4/3, Error ellipse: s-maj=7.9km s-min=4.6km az=158.7*
*JMA **02** 17:51:43.5±0.1, 2422N×12546E, h52km±4km, M3.2*
*IDC **02** 17:51:49.6±2.3, 2244N×12175E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, Error ellipse: s-maj=212.5km s-min=25.4km az=64.0*
ISC 02 17:51:43.8±0.7**, 2420N**±006×**12548E**±004**, h35**km**, n19, σ0.78**/25**, mb3.4**/3**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.56**	**353**	P	**Pn**	**17 51 55.4**	**+0.1**
JOGS				*e*S	**Sn**	**17 52 04.4**	**+1.1**
JMJ	**Miyako jima 2**	**0.63**	**344**	P	**Pn**	**17 51 56.2**	**-0.1**
JMJ				*e*S	**Sn**	**17 52 05.4**	**+0.2**
JTJ	**Tarama**	**0.83**	**302**	P	**Pn**	**17 51 58.8**	**-0.3**
JTJ				*e*S	**Sn**	**17 52 09.7**	**-0.5**
JIJ	**Ishigaki jima**	**1.23**	**278**	P	**Pn**	**17 52 04.4**	**-0.2**
JIJ				*e*S	**Sn**	**17 52 19.3**	**-0.7**
JKRS	**Kuro-shima**	**1.35**	**272**	P	**Pn**	**17 52 06.7**	**+0.6**
JKRS				*e*S	**Sn**	**17 52 23.0**	**+0.2**
HATJ	**Hateruma jima**	**1.54**	**265**	P	**Pn**	**17 52 09.0**	**+0.2**
HATJ				*e*S	**Sn**	**17 52 26.9**	**-0.7**
IRIF	**Iriomote-Funau**	**1.61**	**275**	P	**Pn**	**17 52 09.9**	**+0.2**
IRIF				*e*S	**Sn**	**17 52 29.1**	**-0.1**
YOJ	**Yonaguni jima**	**2.27**	**277**	P	**Pn**	**17 52 19.1**	**+0.3**
JKE	**Kume jima 2**	**2.42**	**29**	P	**Pn**	**17 52 20.9**	**0.0**
JJT2	**Tamagusuku 2**	**2.81**	**46**	P	**Pn**	**17 52 26.9**	**+0.6**
JIH	**Iheya**	**3.60**	**38**	P	**Pn**	**17 52 38.2**	**+1.1**
JOW	**Kunigami**	**3.63**	**43**	P	**Pn**	**17 52 37.5**	**-0.1**
JTK	**Tokunoshima**	**4.74**	**40**	P	**Pn**	**17 52 51.8**	**-1.0**
JMZ	**Minamidaito 2**	**5.45**	**72**	P	**Pn**	**17 53 00.0**	**-2.5**
JAM	**Amami Oshima**	**5.59**	**41**	P	**Pn**	**17 53 03.0**	**-1.5**
MKAR	**Makanchi Array**	**41.10**	**314**	P	**P**	**17 59 24.6**	**+0.4**
	0.3nm,0.2s,mb3.5,baz=98,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**44.72**	**168**	P	**P**	**17 59 57.5**	**+3.8**
	0.8nm,1.1s,mb3.5,baz=347,slow=8.8,SNR=3.8						
ASAR	**Alice Springs**	**48.28**	**170**	P	**P**	**18 00 25.6**	**+4.0**
	0.3nm,0.9s,mb3.3,baz=359,slow=8.5,SNR=4.1						
FINES	**FINESS Array B**	**73.39**	**330**	P	pP	18 03 23.2	+0.4
	1.3nm,0.9s,baz=60,slow=6.6,SNR=3.6						

*ATH **02** 17:54:09.4, 3829N×2223E, h22km±4km, MD3.1/5*
*NEIC **02** 17:54:09.4, 3829N×2223E, h22km, MD3.1(ATH), After ATH.*
*ISCJB **02** 17:54:10.1±0.5, 3837N±003×2222E±004, h13km±5km, Error ellipse: s-maj=5.2km s-min=4.8km az=25.9*
*CSEM **02** 17:54:10.7±0.2, 3836N×2221E, h10km, ML3.0, Error ellipse: s-maj=3.4km s-min=3.2km az=105.0*
*THE **02** 17:54:10.8, 3838N×2225E, h3km, ML3.0*
ISC 02 17:54:11.0±0.5**, 3837N**±003×**2223E**±004**, h13**km±5km**, n13, σ1.09**/22**, 1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELA	**Sela**	**0.28**	**250**	*e*Pg	**Pg**	**17 54 16.2**	**-0.7**
SELA				*e*Sg	**Sg**	**17 54 20.7**	**-0.1**
EVR	**Evrytania**	**0.64**	**329**	*e*PN	**Pn**	**17 54 23.0**	**-2.8**
EVR				*e*SN	**Sg**	**17 54 33.4**	**+1.5**
AGG	**Agios Georgios**	**0.66**	**7**	*e*Pg	**Pg**	**17 54 22.6**	**-1.2**
AGG				*e*Sg	**Sg**	**17 54 33.6**	**+1.1**
LKR	**Lokris**	**0.67**	**65**	⇓*i*PN	**Pg**	**17 54 23.2**	**-0.8**
LKR				*e*SN	**Sg**	**17 54 33.3**	**+0.6**
LTK	**Loutraki**	**0.68**	**121**	*e*Pg	**Pg**	**17 54 23.6**	**-0.5**
LTK				*e*Sg	**Sg**	**17 54 33.3**	**+0.2**
LTK	**Loutraki**	**0.68**	**121**	*e*Pg	**Pg**	**17 54 23.6**	**-0.6**
LTK				*e*Sg	**Sg**	**17 54 33.3**	**+0.2**
RLS	**Riolos of Patr**	**0.68**	**243**	*e*PN	**Pn**	**17 54 22.2**	**-4.1**
DID	**Didima**	**1.17**	**137**	*e*Pg	**Pg**	**17 54 32.8**	**-0.8**
DID				*e*Sg	**Sg**	**17 54 50.5**	**+1.6**
THL	**Klokotos Trika**	**1.20**	**352**	*e*PN	**Pn**	**17 54 33.7**	**+0.1**
THL				*e*SN	**Sn**	**17 54 51.9**	**+2.1**
XOR	**Xorichti**	**1.25**	**37**	*e*Pg	**Pg**	**17 54 33.8**	**-1.2**
VLS	**Valsamata**	**1.31**	**262**	*e*PN	**Pn**	**17 54 34.3**	**-0.7**
AOS	**Alonnisos**	**1.52**	**58**	*e*Pg	**Pn**	**17 54 37.5**	**-0.4**
PYL	**PYLOS**	**1.52**	**195**	*e*Pg	**Pn**	**17 54 38.7**	**+0.8**
PYL				*e*Sg	**Sg**	**17 55 01.0**	**+0.9**

*IDC **02** 18:09:26.7±1.3, 570N×12662E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=191.2km s-min=16.6km az=68.0*
*MAN **02** 18:09:32, 569N×12735E, h59km, mb5.1, ML4.0, MS4.2*
*ISCJB **02** 18:09:35.3±1.4, 587N±0.10×127.1E±0.1, h92km±14km, mb3.5/6, Error ellipse: s-maj=25.5km s-min=14.1km az=159.5*
ISC 02 18:09:36.4±1.4**, 585N**±010×**1271E**±02**, h82**km±14km**, n19, σ0.99**/22**, mb3.5**/6**, 2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.39**	**322**	*e*P	**Pn**	**18 09 59.3**	**-1.1**
MATI	**Mati**	**1.39**	**322**	*e*P	**Pn**	**18 09 59.3**	**-1.2**
MATI				*e*S	**Sn**	**18 10 14.7**	**-3.9**
KCP	**Kidapawan**	**2.33**	**300**	⇓*e*P	**Pn**	**18 10 13.2**	**+0.4**
KCP				*i* S	**Sn**	**18 10 40.6**	**0.0**
BUKP	**Musuan**	**2.88**	**315**	*e*P	**Pn**	**18 10 20.7**	**+0.5**
BUKP	**Musuan**	**2.88**	**315**	*e*P	**Pn**	**18 10 20.7**	**+0.6**
BUTP	**Butuan**	**3.44**	**334**	*e*P	**Pn**	**18 10 28.8**	**+1.0**
BUTP				*e*S	**Sn**	**18 11 10.8**	**+3.3**
BUTP	**Butuan**	**3.44**	**334**	*e*P	**Pn**	**18 10 28.9**	**+1.1**
PAGZ	**Pagadian**	**4.22**	**298**	*e*P	**Pn**	**18 10 39.0**	**+0.7**
PAGZ	**Pagadian**	**4.22**	**298**	*e*P	**Pn**	**18 10 38.7**	**+0.4**
SCPH	**Surigao**	**4.23**	**338**	⇓*e*P	**Pn**	**18 10 38.8**	**+0.3**
MSLP	**Maasin**	**4.81**	**332**	*e*P	**Pn**	**18 10 44.6**	**-1.9**
MSLP	**Maasin**	**4.81**	**332**	*e*P	**Pn**	**18 10 46.1**	**-0.4**
BOLP	**Bolinao**	**12.63**	**327**	*e*P	**Pn**	**18 12 31.0**	**-2.0**
WRA	**Warramunga Arr**	**26.59**	**165**	P	**P**	**18 15 07.5**	**+0.4**
	0.3nm,0.3s,mb3.3,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**30.07**	**168**	P	**P**	**18 15 37.5**	**-0.6**
	0.3nm,0.3s,mb3.4,baz=344,slow=7.1,SNR=18						
ASAR				PcP	PcP	18 18 38.1	0.0
	0.2nm,0.4s,baz=352,slow=2.6,SNR=4.9						
STKA	**Stephens Creek**	**39.97**	**161**	P	**P**	**18 17 03.5**	**+0.6**
	0.5nm,0.3s,mb3.8,baz=343,slow=17,SNR=2.3						
SONM	**Songino Array**	**45.44**	**340**	P	**P**	**18 17 48.0**	**+1.0**
	0.2nm,0.8s,mb2.9,baz=131,slow=4.4,SNR=3.4						
MKAR	**Makanchi Array**	**56.06**	**324**	P	**P**	**18 19 06.8**	**-0.1**
	0.9nm,0.4s,mb4.2,baz=122,slow=8.3,SNR=20						
ZALV	**Zalesovo Beam**	**58.90**	**332**	P	**P**	**18 19 25.8**	**-0.9**
	0.3nm,0.4s,mb3.7,baz=131,slow=5.9,SNR=2.5						

*ISCJB **02** 18:13:56.9±0.4, 3838N±003×3925E±003, h5km, Error ellipse: s-maj=4.1km s-min=3.5km az=10.4*
*CSEM **02** 18:13:56.3±0.1, 3839N×3923E, h5km, MD2.9, Error ellipse: s-maj=1.8km s-min=1.3km az=1.0*
*ISK **02** 18:13:56.2, 3839N×3923E, h4km, MD3.2*
*DDA **02** 18:13:57.6, 3836N×3927E, h5km, Md2.9*
ISC 02 18:13:57.2±0.6**, 3838N**±003×**3926E**±004**, h1**km±6km**, n19, σ1.09**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**299**	*i* P	**Pg**	**18 14 02.0**	**0.0**
ELZG				*i* S	**Sg**	**18 14 04.6**	**-0.5**
PTK	**Pertek**	**0.52**	**12**	PG	**Pg**	**18 14 06.7**	**-0.6**
PTK				SG	**Sg**	**18 14 14.6**	**+0.5**
MALT	**Malatya**	**0.66**	**264**	PG	**Pg**	**18 14 09.0**	**-0.8**
MALT				SG	**Sg**	**18 14 18.8**	**+0.5**
MYA	**Malataya**	**0.66**	**266**	PG	**Pg**	**18 14 08.9**	**-0.9**
DIY	**Diyarbakir**	**0.90**	**122**	PG	**Pg**	**18 14 14.6**	**0.0**
DIY				SG	**Sg**	**18 14 27.7**	**+1.4**
URFA	**Urfa**	**1.00**	**200**	PG	**Pg**	**18 14 16.1**	**-0.3**
BINT	**Bingol**	**1.08**	**62**	PN	**Pn**	**18 14 18.2**	**-1.3**
ATAB	**Bozova**	**1.19**	**220**	*i* P	**Pg**	**18 14 20.4**	**+0.4**
ATAB				*i* S	**Sg**	**18 14 36.7**	**+1.4**
EZC	**Erzincan**	**1.43**	**17**	PN	**Pn**	**18 14 22.7**	**-1.6**
BNGL	**BINGOL**	**1.59**	**68**	*i* P	**Pn**	**18 14 28.9**	**+2.4**
BNGL				*i* S	**Sn**	**18 14 51.7**	**+4.1**
MARD	**Mardin**	**1.61**	**131**	*i* P	**Pn**	**18 14 25.7**	**-1.0**
MARD				*i* S	**Sn**	**18 14 47.3**	**-0.7**
GZT	**Gaziantep**	**1.69**	**233**	*i* P	**Pn**	**18 14 26.7**	**-1.0**
GZT				*i* S	**Sn**	**18 14 53.3**	**+3.4**
BTMT	**Batman**	**1.77**	**95**	PN	**Pn**	**18 14 26.9**	**-2.0**
KELT	**Kelkit**	**1.77**	**360**	*i* P	**Pn**	**18 14 30.0**	**+1.1**
KELT				*i* S	**Sn**	**18 14 54.6**	**+2.6**
GAZ	**Gaziantep**	**2.02**	**234**	*e*PN	**Pn**	**18 14 32.1**	**-0.3**
EZM	**Erzurum**	**2.24**	**46**	*e*PN	**Pn**	**18 14 35.1**	**-0.2**
SVSK	**Karacayir**	**2.33**	**312**	*e*PN	**Pn**	**18 14 36.8**	**+0.1**
SIRT	**Sirnak**	**2.66**	**108**	*e*PN	**Pn**	**18 14 42.0**	**+0.8**
KOZT	**Kozan**	**2.86**	**253**	*e*PN	**Pn**	**18 14 43.9**	**0.0**

*ISCJB **02** 18:15:49.0±0.5, 3838N±003×3925E±003, h2km±6km, Error ellipse: s-maj=4.6km s-min=3.5km az=157.0*
*CSEM **02** 18:15:48.6±0.1, 3838N×3924E, h5km, MD3.1, Error ellipse: s-maj=1.6km s-min=1.2km az=7.0*
*ISK **02** 18:15:48.6, 3838N×3925E, h5km, MD3.2*
*DDA **02** 18:15:50.2, 3836N×3921E, h2km, Md3.1*
ISC 02 18:15:49.9±0.5**, 3838N**±003×**3926E**±003**, h7**km±5km**, n20, σ1.04**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**299**	*i* P	**Pg**	**18 15 54.2**	**-0.5**
ELZG				*i* S	**Sg**	**18 15 56.8**	**-1.2**
PTK	**Pertek**	**0.52**	**12**	PG	**Pg**	**18 15 59.0**	**-1.0**
PTK				SG	**Sg**	**18 16 07.4**	**+0.6**
MALT	**Malatya**	**0.66**	**264**	PG	**Pg**	**18 16 01.6**	**-0.9**
MYA	**Malataya**	**0.66**	**265**	PG	**Pg**	**18 16 01.4**	**-1.1**
MYA				SG	**Sg**	**18 16 10.9**	**-0.2**
DIY	**Diyarbakir**	**0.91**	**122**	PG	**Pg**	**18 16 06.7**	**-0.6**
DIY				SG	**Sg**	**18 16 19.3**	**+0.3**
URFA	**Urfa**	**1.00**	**200**	PG	**Pg**	**18 16 08.6**	**-0.5**
BINT	**Bingol**	**1.08**	**63**	PN	**Pn**	**18 16 09.9**	**-1.5**
ATAB	**Bozova**	**1.19**	**220**	*i* P	**Pg**	**18 16 12.5**	**-0.2**
ATAB				*i* S	**Sg**	**18 16 29.0**	**+1.0**
EZC	**Erzincan**	**1.43**	**18**	PN	**Pn**	**18 16 15.3**	**-0.9**
BNGL	**BINGOL**	**1.59**	**68**	*i* P	**Pn**	**18 16 19.9**	**+1.6**
BNGL				*i* S	**Sg**	**18 16 43.8**	**+2.9**
MARD	**Mardin**	**1.61**	**131**	*i* P	**Pn**	**18 16 18.2**	**-0.4**
MARD				*i* S	**Sn**	**18 16 39.3**	**-0.3**
GZT	**Gaziantep**	**1.69**	**233**	*i* P	**Pn**	**18 16 18.7**	**-1.0**
GZT				*i* S	**Sg**	**18 16 45.5**	**+1.4**
KELT	**Kelkit**	**1.77**	**360**	*i* P	**Pn**	**18 16 22.0**	**+1.2**
KELT				*i* S	**Sg**	**18 16 47.7**	**+1.1**
BTMT	**Batman**	**1.77**	**95**	PN	**Pn**	**18 16 18.9**	**-1.9**
GAZ	**Gaziantep**	**2.02**	**234**	*e*PN	**Pn**	**18 16 24.1**	**-0.2**
EZM	**Erzurum**	**2.23**	**46**	*e*PN	**Pn**	**18 16 27.3**	**+0.1**
SVSK	**Karacayir**	**2.33**	**312**	*e*PN	**Pn**	**18 16 28.7**	**+0.1**
ANDN	**Andirin**	**2.44**	**252**	*i* P	**Pn**	**18 16 32.8**	**+2.8**
ANDN				*i* S	**Sg**	**18 17 09.3**	**+1.2**
SIRT	**Sirnak**	**2.67**	**108**	*e*PN	**Pn**	**18 16 33.7**	**+0.5**
KOZT	**Kozan**	**2.86**	**253**	*e*PN	**Pn**	**18 16 36.2**	**+0.4**

IDC 02 18:43:46.6±31.0**, 1803S×17585W, h0**km**, mb4.3**/4**, mb1 4.5**/4**, mb1mx3.9**/15**, mbtmp4.3**/4**, Error ellipse: s-maj=607.8km s-min=156.0km az=86.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.71**	**242**	P	P	18 51 29.5	+0.3
	0.6nm,0.3s,baz=90,slow=6.1,SNR=3.6						
WRA	**Warramunga Arr**	**47.00**	**259**	P	P	18 52 20.2	+0.2
	2.3nm,0.5s,baz=97,slow=7.6,SNR=19						
ASAR	**Alice Springs**	**47.10**	**254**	P	P	18 52 20.9	+0.1
	7.9nm,0.5s,baz=90,slow=9.2,SNR=46						
FITZ	**Fitzroy Crossi**	**55.41**	**260**	P	P	18 53 22.3	-0.9
	3.6nm,1.0s,baz=90,slow=9.1,SNR=5.6						

*NEIC **02** 18:56:00.6, 1824N×10027W, h54km, MD3.9(MEX), After MEX.*
MEX 02 18:56:00.6±0.5**, 1824N×10028W, h53**km±11km**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.70**	**116**	*i* P	Pn	18 56 13.0	-1.5
MEIG				*i* S	Sn	18 56 22.7	-1.8
PLIG	**Platanillo**	**0.75**	**78**	*i* P	Pn	18 56 13.8	-1.4
PLIG				*i* S	Sn	18 56 24.3	-1.5
CAIG	**El Cayaco**	**1.19**	**180**	*i* P	Pn	18 56 19.0	-1.9
CAIG				*i* S	Sn	18 56 34.4	-1.6
ZIIG	**Zihuatanejo**	**1.29**	**241**	*i* P	Pn	18 56 20.8	-1.5
ZIIG				*i* S	Sn	18 56 38.1	-0.5
ZIIG	**Zihuatanejo**	**1.29**	**241**	*i* P	Pn	18 56 20.8	-1.5
ZIIG				*i* S	Sn	18 56 36.3	-2.3
YAIG	**Yautepec**	**1.30**	**61**	*i* P	Pn	18 56 21.1	-1.4
YAIG				*i* S	Sn	18 56 37.2	-1.6
ACX	**Acapulco**	**1.41**	**166**	*i* P	Pn	18 56 24.5	+0.6
PTVM	**Pico Tres Padr**	**1.74**	**39**	*i* P	Pn	18 56 25.8	-2.6
PTVM				*i* S	Sn	18 56 43.4	-6.1
PTVM	**Pico Tres Padr**	**1.74**	**39**	*i* P	Pn	18 56 25.9	-2.5
PTVM				*i* S	Sn	18 56 48.1	-1.4
PPM	**Popocatepetl**	**1.77**	**62**	*i* P	Pn	18 56 28.6	-0.2
PPM				*i* P		18 56 29.0	
PPM				*i* S	Sn	18 56 50.0	-0.1
MMIG	**Aquila**	**2.92**	**271**	*i* P	Pn	18 56 44.1	-0.4
MMIG				*i* S	Sn	18 57 17.8	-0.6
VHO	**Vista Hermosa**	**3.57**	**108**	*i* P	Pn	18 56 54.5	+0.9
VHO				*i* S	Sn	18 57 33.5	-1.0
OXX	**Oaxaca**	**3.58**	**108**	*e*P	Pn	18 56 53.0	-0.6
OXX				*i* S	Sn	18 57 33.0	-1.7
CMIG	**Matias Romero**	**5.27**	**102**	*i* P	Pn	18 57 16.7	0.0
CMIG				*i* S	Sn	18 58 13.7	-2.5

IDC 02 18:58:40.6±8.1**, 637S×14887E, h58**km±59km**, mb3.8**/3**, mb1 4.1**/5**, mb1mx3.6**/15**, mbtmp4.0**/5**, ML3.1**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.4**/21**, Error ellipse: s-maj=63.2km s-min=50.6km az=99.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.46**	**209**	P	Pn	18 59 32.9	+0.8
	15nm,0.3s,baz=44,slow=5.7,SNR=51						
PMG				S	Sn	19 00 12.4	+0.5
	58nm,0.3s,baz=113,slow=20,SNR=20						
PMG				LR	LR	19 01 08.8	
	comp=Z,150nm,21.3s,baz=61,slow=43						
WRA	**Warramunga Arr**	**19.53**	**225**	P	Pn	19 03 03.4	-1.8
	1.6nm,0.3s,baz=50,slow=11,SNR=63						
ASAR	**Alice Springs**	**22.43**	**218**	P	P	19 03 34.7	+0.1
	2.7nm,0.4s,baz=58,slow=9.4,SNR=130						
FITZ	**Fitzroy Crossi**	**25.49**	**241**	*e*P	P	19 04 04.1	+0.4
	14nm,1.1s						
FITZ	**Fitzroy Crossi**	**25.49**	**241**	P	P	19 04 03.8	+0.1
	5.1nm,0.5s,baz=89,slow=9.0,SNR=11						
STKA	**Stephens Creek**	**26.28**	**194**	P	P	19 04 10.9	+0.3
	0.5nm,0.3s,baz=354,slow=14,SNR=2.8						
TORD	**Torodi Ar. Bea**	**146.99**	**284**	PKPbc	PKPbc	19 18 16.8	-1.1
	0.3nm,0.5s,baz=63,slow=2.9,SNR=4.1						

*IDC **02** 18:58:59.8±0.7, 122N×12692E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.1/18, mbtmp4.1/10, ML4.0/1, Error ellipse: s-maj=50.8km s-min=14.0km az=76.0*
*NEIC **02** 18:59:01.4±0.3, 126N×12699E, h10km, mb4.5/6, Error ellipse: s-maj=26.5km s-min=6.0km az=75.0*
*ISCJB **02** 18:59:02.8±0.5, 120N±008×1268E±02, h33km, mb4.3/13, Error ellipse: s-maj=35.5km s-min=8.6km az=165.9*
ISC 02 18:59:05.0±0.5**, 119N**±008×**1269E**±02**, h35**km**, n22, σ0.62**/22**, mb4.3**/13**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.21**	**184**	*e*P	**Pn**	**19 03 26.4**	**-0.9**
	15nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.21**	**184**	P	**Pn**	**19 03 26.0**	**-1.3**
	0.3nm,0.3s,baz=25,slow=7.9,SNR=5.4						
WRA	**Warramunga Arr**	**22.24**	**161**	P	**P**	**19 03 58.8**	**0.0**
	8.7nm,0.6s,mb4.4,baz=337,slow=11,SNR=27						
WB2	**Warramunga Arr**	**22.24**	**161**	*e*P	**P**	**19 03 59.0**	**+0.1**
ASAR	**Alice Springs**	**25.63**	**165**	P	**P**	**19 04 31.8**	**+0.3**
	12nm,0.9s,mb4.4,baz=348,slow=13,SNR=31						
ASAR				PcP	PcP	19 08 01.3	-0.5
	0.4nm,0.5s,baz=339,slow=1.5,SNR=5.6						
FORT	**Forrest**	**31.81**	**178**	*e*P	**P**	**19 05 27.3**	**+0.9**
	10nm,0.5s,mb4.9						
STKA	**Stephens Creek**	**35.72**	**158**	*e*P	**P**	**19 06 00.5**	**+0.1**
	2.3nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**35.72**	**158**	*e*P	**P**	**19 06 00.5**	**+0.1**
	1.8nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**35.72**	**158**	P	**P**	**19 06 00.5**	**+0.1**
	1.6nm,0.4s,mb4.3,baz=296,slow=6.4,SNR=6.8						
KSRS	**Korea Array**	**36.10**	**1**	P	**P**	**19 06 03.9**	**+0.4**
	1.3nm,0.6s,mb4.0,baz=180,slow=9.5,SNR=9.4						
MJAR	**Matsushiro Arr**	**36.70**	**15**	P	**P**	**19 06 07.4**	**-1.3**
	2.1nm,0.9s,mb4.0,baz=185,slow=9.4,SNR=7.0						
BJT	**Baijiatuau**	**39.86**	**347**	*e*P	**P**	**19 06 35.6**	**+0.3**
	4.3nm,0.3s,mb4.7						
ULN	**Ulaanbaatar**	**49.57**	**343**	*e*P	**P**	**19 07 53.2**	**+0.7**
	4.4nm,0.9s,mb4.5						
SONM	**Songino Array**	**49.74**	**342**	P	**P**	**19 07 54.5**	**+0.7**
	2.5nm,0.9s,mb4.2,baz=152,slow=8.7,SNR=19						
MK31	**Makanchi Array**	**59.73**	**326**	*e*P	**P**	**19 09 06.4**	**+0.1**
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**19 09 06.7**	**+0.5**
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**19 09 06.7**	**+0.5**
	1.3nm,0.5s,mb4.2,baz=122,slow=8.3,SNR=24						
ZALV	**Zalesovo Beam**	**62.91**	**334**	P	**P**	**19 09 27.5**	**-0.1**
ZALV	**Zalesovo Beam**	**62.91**	**334**	P	**P**	**19 09 27.5**	**-0.1**
	0.9nm,0.8s,mb4.0,baz=134,slow=6.4,SNR=5.4						
KURK	**Kurchatov**	**63.96**	**328**	*e*P	**P**	**19 09 34.5**	**-0.2**
	7.5nm,0.8s,mb4.8						
AKTK	**Aktyubinsk**	**75.74**	**322**	P	**P**	**19 10 46.3**	**-0.8**
AKTO	**Aktyubinsk**	**75.74**	**322**	P	**P**	**19 10 46.3**	**-0.8**
	1.2nm,0.8s,mb3.9,baz=202,slow=7.4,SNR=4.1						

IDC 02 19:06:24.2±2.1**, 082S×12781E, h0**km**, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=153.7km s-min=26.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.05**	**162**	P	P	19 10 59.9	+0.8
	0.8nm,0.9s,baz=341,slow=12,SNR=7.9						
ASAR	**Alice Springs**	**23.46**	**166**	P	P	19 11 35.1	-0.6
	0.8nm,0.9s,baz=346,slow=12,SNR=6.7						
MKAR	**Makanchi Array**	**61.90**	**326**	P	P	19 16 45.6	+0.1
	0.3nm,0.5s,baz=115,slow=8.0,SNR=5.4						

*IDC **02** 19:14:21.0±1.1, 3339N×9128E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, ML2.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.9/30, Error ellipse: s-maj=70.2km s-min=19.9km az=57.0*
*ISCJB **02** 19:14:23.4±0.7, 3321N±007×907E±0.1, h33km, mb3.6/6, Error ellipse: s-maj=18.2km s-min=8.8km az=20.2*
ISC 02 19:14:22.1±6.0**, 3325N**±007×**908E**±02**, h8**km±40km**, n13, σ1.55**/13**, mb3.6**/6**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**6.45**	**205**	*e*P	**Pn**	**19 15 59.6**	**+2.3**
	3.9nm,0.4s						
JIRN	**Jiri**	**6.83**	**217**	*e*P	**Pn**	**19 16 04.9**	**+2.3**
ODAN	**Odare**	**7.01**	**206**	*e*P	**Pn**	**19 16 03.2**	**-1.8**
	12nm,0.4s						
KKN	**Kakani**	**7.21**	**222**	*e*P	**Pn**	**19 16 07.9**	**+0.1**
	16nm,0.5s						
GKN	**Gorkha**	**7.43**	**227**	*e*P	**Pn**	**19 16 09.0**	**-1.9**
MKAR	**Makanchi Array**	**14.99**	**337**	Pn	**Pn**	**19 17 52.3**	**-1.9**
	0.0nm,0.3s,baz=145,slow=14,SNR=6.3						
SONM	**Songino Array**	**18.74**	**34**	P	**Pn**	**19 18 43.7**	**+2.1**
	0.1nm,0.3s,baz=210,slow=15,SNR=6.0						
SONM				LR	LR	19 26 57.9	
	comp=Z,101nm,18.4s,baz=221,slow=41						
ZALV	**Zalesovo Beam**	**21.12**	**350**	P	**P**	**19 19 06.3**	**-0.8**
	0.5nm,0.4s,mb3.2,baz=165,slow=12,SNR=6.0						
FINES	**FINESS Array B**	**49.40**	**325**	P	**P**	**19 23 13.3**	**+1.3**
	0.8nm,0.8s,mb3.8,baz=62,slow=9.6,SNR=2.3						
GERES	**GERESS Array B**	**57.75**	**310**	P	**P**	**19 24 15.2**	**+1.8**
	0.4nm,0.6s,mb3.6,baz=69,slow=4.9,SNR=3.6						
WRA	**Warramunga Arr**	**67.29**	**135**	P	**P**	**19 25 16.8**	**-0.6**
	0.6nm,0.6s,mb3.8,baz=323,slow=6.2,SNR=8.9						
ASAR	**Alice Springs**	**69.95**	**138**	P	**P**	**19 25 32.8**	**-1.2**
	0.6nm,0.8s,mb3.6,baz=328,slow=6.0,SNR=6.6						
YKA	**Yellowknife Ar**	**82.43**	**12**	P	**P**	**19 26 43.6**	**-0.9**
	0.4nm,0.6s,mb3.5,baz=331,slow=5.1,SNR=8.6						

*IDC **02** 19:18:53.2±1.1, 4655N×15546E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.4/22, mbtmp3.5/5, Error ellipse: s-maj=39.5km s-min=28.3km az=89.0*
*MOS **02** 19:19:04.8±0.9, 4648N×15436E, h89km, mb3.9/1, Error ellipse: s-maj=99.2km s-min=33.7km az=85.7*
*ISCJB **02** 19:19:07.2±3.2, 466N±02×1552E±04, h128km±30km, mb3.3/5, Error ellipse: s-maj=41.7km s-min=34.1km az=6.7*
ISC 02 19:18:57.8±4.2**, 466N**±02×**1554E**±04**, h29**km±30km**, n7, σ0.98**/7**, mb3.5**/5**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.15**	**6**	*e*PN	**Pb**	**19 20 10.0**	**0.0**
MKAR	**Makanchi Array**	**48.43**	**298**	P	**P**	**19 27 36.4**	**-0.8**
	0.3nm,0.7s,mb3.4,baz=68,slow=8.0,SNR=3.3						
FINES	**FINESS Array B**	**64.87**	**336**	P	**P**	**19 29 34.6**	**+0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**64.87**	**336**	P	**P**	**19 29 34.6**	**+0.9**
	comp=Z,1.0nm,0.7s,mb3.9,baz=28,slow=8.6,SNR=5.6						
WRA	**Warramunga Arr**	**68.88**	**201**	P	**P**	**19 29 59.0**	**-0.6**
	comp=Z,0.3nm,0.7s,mb3.3,baz=22,slow=7.7,SNR=2.9						
ASAR	**Alice Springs**	**72.56**	**201**	P	**P**	**19 30 22.9**	**+1.0**
	comp=Z,0.4nm,0.9s,mb3.4,baz=14,slow=6.4,SNR=6.0						
TXAR	**Lajitas Array**	**76.19**	**62**	P	**P**	**19 30 42.9**	**-0.5**
	comp=Z,0.2nm,0.6s,mb3.2,baz=304,slow=4.1,SNR=4.2						

GUC 02 19:26:15.5±0.4**, 3100S×7150W, h43**km±3km**, MD3.6, ML2.7, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.46**	**112**	⇑*i*P	Pn	19 26 26.1	+0.3
CMCH				*i* S	Sn	19 26 34.1	+1.0
CMCH				AML	AML	19 26 36.2	
	comp=E,1μm,0.6s						
OVCH	**Ovalle**	**0.47**	**33**	⇑*i*P	Pn	19 26 26.2	+0.2
OVCH				*i* S	Sn	19 26 34.1	+0.7
OVCH				AML	AML	19 26 34.4	
	comp=N,832nm,0.4s						
CHNG	**Los Chungos**	**0.88**	**180**	⇓*i*P	Pn	19 26 17.3	-14

CHNG				*i*S	Sn	19 26 29.9	-13
CHNG				AML	AML	19 26 30.9	
	comp=N,467nm,0.6s						
TLL	Tololo Astrono	1.03	36⇓	*i*P	Pn	19 26 34.6	+1.2
TLL				*i*S	Sn	19 26 49.4	+2.8
TLL				AML	AML	19 26 52.5	
	comp=E,191nm,0.6s						
PACH	Papudo	1.53	178⇑	*i*P	Pn	19 26 41.3	+1.0
PACH				*i*S	Sn	19 27 00.8	+1.8

*IDC **02** 19:44:15.8±1.1, 472N×12384E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, Error ellipse: s-maj=104.1km s-min=17.9km az=69.0*
*MAN **02** 19:44:15, 468N×12402E, h12km, mb5.3, ML4.3, MS4.5*
*ISCJB **02** 19:44:20.2±1.3, 494N±008×12408E±010, h52km±17km, mb3.6/6, Error ellipse: s-maj=17.1km s-min=11.3km az=150.0*
ISC 02 19:44:21.3±1.3, 490N±008×12412E±010, h42km±17km, n19, σ1s11/20, mb3.6/6, 1C, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZMPH	Zamboanga City	2.89	315⇑	*i*P	Pn	19 45 05.1	+0.3
MATI	Mati	2.94	46	*e*P	Pn	19 45 04.7	-0.8
PAGZ	Pagadian	3.02	346	*e*P	Pn	19 45 06.7	+0.1
PAGZ				*e*S	Sn	19 45 38.3	-3.2
BUKP	Musuan	3.10	17	*e*P	Pn	19 45 08.5	+0.7
DCPH	Dipolog City	3.73	348	*e*P	Sn	19 45 59.0	-0.2
BUTP	Butuan	4.30	20	*e*P	Pn	19 45 27.2	+2.9
MSLP	Maasin	5.25	8	*e*P	Pn	19 45 41.9	+4.6
GUIM	Jordan	5.88	345	*e*P	Sn	19 46 49.9	-2.3
BATP	Bataraza	7.37	302	*e*P	Pn	19 46 06.3	-0.1
ENPP	El Nido	7.80	324	*e*P	Pn	19 46 13.1	+0.8
FITZ	Fitzroy Crossi	22.91	176	*e*P	P	19 49 22.4	+0.8
	13nm,0.9s,mb4.3						
FITZ	Fitzroy Crossi	22.91	176	P	P	19 49 21.3	-0.4
	3.1nm,0.7s,mb3.8,baz=137,slow=22,SNR=7.9						
WRA	Warramunga Arr	26.66	158	P	P	19 49 55.3	-1.0
	1.1nm,0.5s,mb3.6,baz=333,slow=11,SNR=9.6						
WB2	Warramunga Arr	26.66	158	*e*P	P	19 50 03.6	+7.2
ASAR	Alice Springs	29.96	162	P	P	19 50 24.9	-0.8
	0.3nm,0.6s,mb3.2,baz=341,slow=7.2,SNR=6.4						
STKA	Stephens Creek	40.18	157	*e*P	P	19 51 58.0	+4.4
	3.6nm,1.0s,mb4.1						
STKA	Stephens Creek	40.18	157	P	P	19 51 53.0	-0.6
	1.5nm,0.8s,mb3.8,baz=320,slow=17,SNR=2.6						
SONM	Songino Array	45.40	343	P	P	19 52 37.0	+1.4
	0.2nm,0.7s,mb3.1,baz=153,slow=9.7,SNR=2.4						
MKAR	Makanchi Array	55.12	326	P	P	19 53 49.8	+0.5
	0.5nm,0.7s,mb3.7,baz=133,slow=7.1,SNR=7.7						

IDC 02 19:51:01.1±1.9, 2542S×17645W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/13, mbtmp4.1/4, MS4.0/3, Ms1 4.0/3, ms1mx3.2/29, Error ellipse: s-maj=74.6km s-min=38.8km az=5.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	15.87	78	LR	LR	19 59 41.6	
	comp=Z,192nm,18.0s,baz=286,slow=33						
CTA	Charters Tower	34.73	271	P	P	19 57 54.9	+1.8
	2.1nm,0.7s,baz=112,slow=9.6,SNR=3.9						
STKA	Stephens Creek	37.21	250	P	P	19 58 14.7	+0.4
	1.0nm,0.5s,baz=105,slow=14,SNR=6.7						
STKA				LR	LR	20 12 30.8	
	comp=Z,80nm,18.3s,baz=194,slow=35						
ASAR	Alice Springs	44.99	261	P	P	19 59 18.1	-0.4
	2.9nm,0.5s,baz=89,slow=7.0,SNR=50						
WRA	Warramunga Arr	45.54	266	P	P	19 59 21.0	-1.8
	0.7nm,0.5s,baz=103,slow=8.4,SNR=8.2						
CBIJ	Chichi jima	65.69	320	LR	LR	20 24 21.6	
	comp=Z,1µm,20.8s,baz=310,slow=30						
NB2	NORSAR Subarra	144.01	354	PKP	PKPdf	20 10 36.7	-1.3
	comp=Z,1.1nm,0.7s,baz=9.2,slow=3.4						
NOA	NORSAR Array B	144.01	354	PKP	PKPdf	20 10 36.7	-1.3
	comp=Z,1.6nm,0.8s,baz=3.6,slow=2.2,SNR=5.4						
BRTR	Keskin Array B	151.07	307	PKPbc	PKPbc	20 10 56.6	+0.4
	comp=Z,0.3nm,0.4s,baz=126,slow=2.0,SNR=3.2						
TORD	Torodi Ar. Bea	167.67	171	PKPab	PKPab	20 12 15.8	-0.2
	comp=Z,1.1nm,0.9s,baz=186,slow=5.4,SNR=5.2						

*NIED **02** 20:14:00, 4130N×14280E, h23km, Mw4.9 Best double couple: Mo2.90000×10^16 NP1:φs41.00000°, δ33.00000°, λ75.00000°. NP2:φs238.00000°, δ59.00000°, λ99.00000°.*
*JMA **02** 20:14:04.5±0.2, 4127N×14282E, h18km±4km, M4.8*
JMA Felt II J1.
*MOS **02** 20:14:05.6±1.1, 4137N×14271E, h37km, mb4.9/60, MS4.5/26, Error ellipse: s-maj=7.0km s-min=4.6km az=98.2*
*SZGRF **02** 20:14:05.2, 41.14N×14348E, h33km, mb4.4, MS4.9, Hokkaido, Japan, region*
*BJI **02** 20:14:06.3, 4131N×14280E, h54km, mB5.0, mb4.6, Ms4.5, Msz4.3*
*ISCJB **02** 20:14:06.4±0.1, 4137N±002×14274E±002, h42km, mb4.7/110, MS4.5/44, Error ellipse: s-maj=3.5km s-min=2.1km az=154.7*
*GCMT **02** 20:14:08.1±0.5, 4135N×14272E, h31km±1km, MW5.0/60, Moment Tensor Solution. s28,c36; s60,c96; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.91±.23; Mθθ-1.36±.14; Mφφ-1.55±.16; Mrθ-0.64±.18; Mθφ-2.09±.10; Mφr-0.21±.18; Best double couple: Mo3.30300×10^16 NP1:φs36.00000°, δ40.00000°, λ78.00000°. NP2: φs231.00000°, δ51.00000°, λ100.00000°. Principal axes: T 3.0050, Plg81.0000°, Azm189.0000°; N 0.5960, Plg7.0000°, Azm45.0000°; P -3.6010, Plg5.0000°, Azm314.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 20:14:08.1±0.2, 4135N×14272E, mb4.9/72, MW4.9(NIED) Error ellipse: s-maj=6.0km s-min=3.5km az=158.0*
NEIC Recorded [2 JMA] in south-central Hokkaido and [1 JMA] in southwestern Hokkaido and in the Tomakomai area. Also recorded [1 JMA] in Aomori and Iwate Prefectures, Honshu.
*IDC **02** 20:14:10.6±1.6, 4129N×14273E, h72km±13km, mb4.1/20, mb1 4.2/24, mb1mx4.2/28, mbtmp4.1/24, MS4.4/25, Ms1 4.4/25, ms1mx4.2/40, Error ellipse: s-maj=14.2km s-min=9.5km az=107.0*
ISC 02 20:14:08.5±0.1, 4141N±002×14272E±002, h44km, h44km±.8km:pP-P, n457, σ0s95/487, mb4.7/110, MS4.5/44, 61C-75D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	0.69	28	*e*Pg	Pn	20 14 19.6	-2.2
ERM	Erimo	0.69	28⇑	*i*P	Pn	20 14 19.4	-2.4
JEM	Erimo	0.69	28	⇓P	Pn	20 14 19.2	-2.6
JEM				S	Sn	20 14 29.3	-2.1
JNBK	Urakawa-nobuka	0.87	2	⇓P	Pn	20 14 23.2	-1.1
JNBK				*e*S	Sn	20 14 37.1	+1.3
JOT	Ohata	1.26	269	⇓P	Pn	20 14 28.1	-1.5
JOT				*e*S	Sn	20 14 45.3	0.0
JCH	Churui	1.29	22	⇓P	Pn	20 14 29.3	-0.8
JCH				*e*S	Sn	20 14 47.0	+0.8
JKB	Kayabe	1.35	291	⇓P	Pn	20 14 29.6	-1.2
JKB				*e*S	Sn	20 14 49.1	+1.5
JANG	Nango	1.38	222	P	Pn	20 14 27.8	-3.5
JBT2	Biratori 2	1.39	349	⇓P	Pn	20 14 31.6	+0.2
JBT2				*e*S	Sn	20 14 53.4	+4.9
JTM	Tenmabayashi	1.40	244	⇓P	Pn	20 14 29.7	-1.8
JTM				*e*S	Sn	20 14 47.9	-0.8
JEW	Eniwo	1.71	327	⇓P	Pn	20 14 36.3	+0.5
JEW				*e*S	Sn	20 15 00.8	+4.4
JFR	Furan	1.75	357	⇓P	Pn	20 14 36.4	+0.1
JAR	Ashorobuto	2.04	22	⇑P	Pn	20 14 39.3	-1.0
JAR				*e*S	Sn	20 15 05.5	+1.0
JAK	Akkeshi	2.16	42	P	Pn	20 14 39.7	-2.2
JAK				*e*S	Sn	20 15 05.5	-2.0
JOM	Ohasama	2.22	210	P	Pn	20 14 40.5	-2.3
JOM				*e*S	Sn	20 15 06.8	-2.2
ASAJ	Asahikawa	2.70	358	P	Pn	20 14 52.1	+2.7
ASAJ				S	Sn	20 15 27.7	+6.8
ASAJ				pmax	pmax		
	comp=Z,108nm,0.3s						
ASAJ				smax			
	comp=N,53nm,0.3s						
ASAJ	Asahikawa	2.70	358	P	Pn	20 14 52.0	+2.6
	comp=N,108nm,0.3s,baz=205,slow=14,SNR=306						
ASAJ				S	Sn	20 15 27.6	+6.8
	comp=N,53nm,0.3s,baz=220,slow=29,SNR=8.5						
ASAJ				LR	LR	20 16 08.0	
	comp=N,4µm,20.8s,baz=195,slow=41						
YUK	Yuzh-Kuril'sk	3.50	40⇓	*i*P	Pn	20 14 59.5	-0.8
YUK				*i*S	Sn	20 15 37.9	-2.5
YUK				pmax	pmax		
	comp=E,580nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2µm,0.4s						
YUK				pmax	pmax		
	comp=N,760nm,0.3s						
YUK				pmax	pmax		
	comp=N,3µm,0.6s						
YUK				pmax	pmax		
	comp=Z,3µm,0.6s						
YUK				pmax	pmax		
	comp=E,5µm,0.8s						
YUK				smax			
	comp=N,12µm,0.8s						
YUK				smax			
	comp=E,13µm,0.8s						
YUK				smax			
	comp=N,11µm,0.6s						
YUK				smax			
	comp=E,13µm,0.7s						
KUR	Kuril'sk	5.36	43⇓	*i*P	Pn	20 15 24.2	-1.6
KUR				*i*S	Sn	20 16 23.3	-2.8
KUR				pmax	pmax		
	comp=N,190nm,0.5s						
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1µm,0.5s						
KUR				pmax	pmax		
	comp=Z,4µm,3.0s						
KUR				smax			
	comp=N,4µm,2.0s						
KUR				smax			
	comp=N,610nm,0.6s						
KUR				smax			
	comp=E,700nm,0.6s						
YSS	Yuzh-Sakhalins	5.54	0	*e*Pn	Pn	20 15 30.3	+2.0
YSS	Yuzh-Sakhalins	5.54	0⇓	*i*P	Pn	20 15 30.6	+2.3
YSS				*e*S	Sn	20 16 27.0	-3.6
YSS				pmax	pmax		
	comp=N,110nm,0.9s						
YSS				pmax	pmax		
	comp=E,60nm,0.9s						
YSS				pmax	pmax		
	comp=Z,110nm,0.9s						
YSS				MLR	MLR		
	comp=Z,3µm,17.0s						
YSS				MLR	MLR		
	comp=N,2µm,18.0s						
YSS				MLR	MLR		
	comp=E,2µm,19.0s						
MAJO	Matsushiro	6.00	217	*e*Pn	Pn	20 15 34.7	0.0
MAT	Matsushiro	6.00	217	P	Pn	20 15 34.2	-0.5
MAT				*e*S	Sn	20 16 44.0	+1.9
MJAR	Matsushiro Arr	6.00	217	P	Pn	20 15 34.5	-0.2
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	Matsushiro Arr	6.00	217	P	Pn	20 15 34.5	-0.1
	comp=Z,2.6nm,0.3s,baz=31,slow=13,SNR=77						
UGL	Uglegorsk	7.68	357	P	Pn	20 15 58.0	+0.4
UGL				pmax	pmax		
	comp=Z,146nm,1.0s						
UGL				MLR	MLR		
	comp=Z,2µm,16.0s						
UGL				MLR	MLR		
	comp=N,3µm,17.0s						
UGL				MLR	MLR		
	comp=E,2µm,17.0s						
VLA	Vladivostok	8.21	286	P	Pn	20 16 04.0	-0.9
VLA				*e*S	Sn	20 17 31.7	-4.6
VLA				pmax	pmax		
	comp=Z,18nm,1.0s						
VLA				MLR	MLR		
	comp=Z,2µm,14.0s						
HABR	Khabarovsk	8.91	325⇓	*e*P	Pn	20 16 13.2	-1.2
HABR				*e*		20 17 52.1	
HABR				pmax	pmax		
	comp=Z,59nm,2.5s						
HABR				MLR	MLR		
	comp=Z,4µm,22.0s						
MDJ	Mudanjiang	10.13	293	P	Pn	20 16 30.8	-0.5
MDJ				S	Sn	20 18 24.0	+0.6
MDJ				SCP	ScP	20 26 05.9	-0.6
MDJ				PCS	PcS	20 26 10.5	-0.8
MDJ				SCS	ScS	20 29 41.4	+0.3
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,264nm,5.2s						
MDJ				LR	LR		
	comp=N,1µm,11.5s						
MDJ				LR	LR		
	comp=E,971nm,12.5s						
MDJ				LR	LR		
	comp=Z,2µm,11.5s						
KLR	Kul'dur	10.98	319	*e*P	Pn	20 16 43.2	+0.4
KLR				*e*		20 18 55.2	
KLR				pmax	pmax		
	comp=N,28nm,1.6s						
KLR				pmax	pmax		
	comp=E,100nm,1.6s						
KLR				pmax	pmax		
	comp=Z,100nm,1.6s						
KLR				pmax	pmax		
	comp=Z,700nm,7.5s						
KLR				MLR	MLR		
	comp=Z,7µm,13.0s						
KSRS	Korea Array	12.10	256	P	Pn	20 17 00.1	+1.9
	comp=Z,1.2nm,0.3s,baz=65,slow=14,SNR=20						
KSRS				S	Sn	20 19 18.0	+6.3
	comp=Z,0.6nm,0.3s,baz=68,slow=24,SNR=8.2						
KSRS				LR	LR	20 21 34.8	
	comp=Z,1µm,18.2s,baz=64,slow=37						
KS15	Wonju Array Si	12.14	256	*e*Pn	Pn	20 17 04.1	+5.4
JNU	Nakatsue	12.54	232	P	Pn	20 17 05.1	+0.9
JNU				LR	LR	20 22 00.1	
JNU	Nakatsue	12.54	232	P	Pn	20 17 05.1	+0.9
	comp=Z,0.3nm,0.3s,baz=55,slow=12,SNR=3.5						
JNU				LR	LR	20 22 00.1	
	comp=Z,1µm,19.6s,baz=49,slow=38						
CN2	Changchun	12.95	286	*e*P	Pn	20 17 13.0	+3.3
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,900nm,12.0s						
CN2				LR	LR		
	comp=E,1µm,12.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
SKR	Severo-Kuril's	13.12	41	*e*P	Pn	20 17 10.0	-2.0
SKR				S	Sn	20 19 27.5	-8.8
SKR				MLR	MLR		
	comp=E,3µm,20.0s						
SKR				MLR	MLR		
	comp=Z,2µm,20.0s						
SNY	Shenyang	14.33	278	⇑P	Pn	20 17 32.5	+4.0
SNY				AMB	AMB		
	comp=Z,15nm,0.5s						
SNY				AMB	AMB		
	comp=Z,390nm,4.7s						
SNY				LR	LR		
	comp=E,1µm,16.9s						
SNY				LR	LR		
	comp=Z,1µm,17.1s						
PET	Petropavlovsk	15.83	37	*e*P	Pn	20 17 43.4	-4.7
PET				*e*		20 20 36.5	
PET				MLR	MLR		
	comp=Z,1µm,20.0s						
HIA	Hailar	17.91	304	*e*P	Pn	20 18 15.5	+1.5
	comp=Z,7.7nm,0.8s						
HIA	Hailar	17.91	304	*e*P	Pn	20 18 15.5	+1.4
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JOW	Kunigami	18.79	224	LR	LR	20 26 05.0	
	comp=Z,1µm,21.3s,baz=76,slow=38						
MA2	Magadan	18.86	13	*e*P	Pn	20 18 23.1	-2.5
MA2	Magadan	18.86	13	*e*P	Pn	20 18 23.2	-2.3
MA2				*e*S	S	20 21 48.0	-8.5
MA2				pmax	pmax		
	comp=N,30nm,1.0s						
MA2				pmax	pmax		
	comp=Z,50nm,1.0s						
MA2				MLR	MLR		
	comp=Z,300nm,19.0s						
NRGR	Nerungri	19.19	329	*e*P	Pn	20 18 28.1	-1.4
CLNS	Chul'man	19.25	329	*e*P	Pn	20 18 28.3	-1.9
CLNS				pmax	pmax		
	comp=E,17nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,39nm,0.8s						
CLNS				pmax	pmax		
	comp=N,16nm,0.6s						
CLNS				MLR	MLR		
	comp=E,1µm,15.0s						
CLNS				MLR	MLR		
	comp=Z,2µm,15.0s						
CLNS				MLR	MLR		
	comp=N,600nm,14.0s						
SSE	Sheshan	20.14	246	P	P	20 18 36.5	-2.3
SSE				S	S	20 22 20.8	-1.7
SSE				XS	sS	20 22 37.6	-1.9
SSE				AMB	AMB		
	comp=Z,25nm,0.7s						
SSE				AMB	AMB		
	comp=Z,168nm,6.7s						
SSE				LR	LR		
	comp=N,169nm,24.0s,MS3.6						
SSE				LR	LR		
	comp=E,245nm,24.0s,MS3.6						
SSE				LR	LR		
	comp=Z,361nm,20.8s,MS3.7						
SSE	Sheshan	20.14	246	P	P	20 18 36.5	-2.3
	comp=Z,25nm,0.7s						
SSE				S	S	20 22 20.8	-1.7
SSE				sS	sS	20 22 37.6	-1.9
SSE				LR	LR		
	comp=Z,360nm,20.8s,MS3.7						
BJI	Beijing	20.14	275	P	P	20 18 37.1	-1.6
BJI				AP		20 18 46.8	
BJI				S	S	20 22 20.5	-1.9
BJI				XS	sS	20 22 37.1	-2.4
BJI				PCP	PcP	20 22 51.7	-0.4
BJI				AMB	AMB		
	comp=Z,7.0nm,1.2s						
BJI				AMB	AMB		
	comp=Z,152nm,3.0s						
BJI				LR	LR		
	comp=N,602nm,14.2s,MS4.4						
BJI				LR	LR		
	comp=E,1µm,16.0s,MS4.4						
BJI				LR	LR		
	comp=Z,796nm,19.3s,MS4.1						
BJI	Beijing	20.14	275	P	P	20 18 37.1	-1.6
BJI				pP		20 18 46.8	
BJI				sP	sP	20 18 52.4	-2.5
BJI				S	S	20 22 20.5	-1.9
BJI				sS	sS	20 22 37.1	-2.4
BJI				PcP	PcP	20 22 51.7	-0.4
BJI				LR	LR		
	comp=Z,800nm,19.3s,MS4.1						
BJT	Baijiatuau	20.15	275	*e*P	P	20 18 37.5	-1.4
	comp=Z,42nm,1.2s						
BJT	Baijiatuau	20.15	275	*e*P	P	20 18 37.5	-1.4
BJT				pmax	pmax		
	comp=Z,42nm,1.2s						
NJ2	Nanjing	21.23	252	*e*P	P	20 18 48.6	-2.0
NJ2				AP		20 19 01.8	
NJ2				XP	sP	20 19 08.5	+1.7
NJ2				PP		20 19 16.3	
NJ2				S	S	20 22 38.0	-6.1
NJ2				XS	sS	20 22 58.0	-3.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,440nm,4.5s						
NJ2				LR	LR		
	comp=N,1µm,14.6s,MS4.5						
NJ2				LR	LR		
	comp=E,2µm,19.2s,MS4.5						
NJ2				LR	LR		
	comp=Z,2µm,19.2s,MS4.4						
YAK	Yakutsk	22.09	344	*e*P	P	20 18 57.5	-1.9
YAK				*e**PP		20 19 06.6	
YAK				*e*S	S	20 22 57.5	-2.7
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.6						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				smax			
	comp=N,171nm,1.7s						
YAK				smax			
	comp=Z,26nm,1.4s						
YAK				smax			
	comp=E,93nm,1.6s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.3						
YAK				MLR	MLR		
	comp=N,723nm,15.0s,MS4.4						
YAK				MLR	MLR		
	comp=E,864nm,15.0s,MS4.4						
CIT	Chita	22.49	308	*e*P	P	20 18 56.8	-7.0
HHC	Hu-ho-hao-te	23.41	279	*e*P	P	20 19 13.7	+0.2
HHC				AP		20 19 25.0	
HHC				XP	sP	20 19 31.6	+1.6
HHC				PP		20 19 46.0	
HHC				PCP	PcP	20 23 01.4	+2.8
HHC				*e*S	S	20 23 19.4	-3.9
HHC				XS	sS	20 23 39.2	-3.5
HHC				SS		20 24 09.4	
HHC				PCS	PcS	20 26 38.4	+0.6
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.4						
HHC				AMB	AMB		
	comp=Z,150nm,4.6s						
HHC				LR	LR		
	comp=N,279nm,9.6s						
HHC				LR	LR		
	comp=E,617nm,15.8s						
HHC				LR	LR		
	comp=Z,734nm,15.9s,MS4.2						
BOD	Bodaibo	24.54	322	*e*P	P	20 19 21.5	-2.1
BOD				*e*		20 19 30.6	
BOD				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
BTO	Baotou	24.61	279	*e*P	P	20 19 25.2	+0.7
WHN	Wuhan	25.28	254	⇓P	P	20 19 30.4	-0.3
WHN				LR	LR		
	comp=Z,2µm,18.5s,MS4.7						
QZH	Quanzhou	25.90	238	*e*P	P	20 19 35.6	-0.7
QZH				S	S	20 24 08.0	+4.7
QZH				LR	LR		
	comp=Z,1µm,19.3s,MS4.4						
ULN	Ulaanbaatar	26.02	296	*e*P	P	20 19 38.0	+0.9
	comp=Z,104nm,2.6s,mb4.9						
ULN	Ulaanbaatar	26.02	296	*i*P	P	20 19 38.1	+1.0
SONM	Songino Array	26.46	296	P	P	20 19 41.7	+0.6
SONM				pmax	pmax		
	comp=Z,4.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,1µm,19.8s						
SONM	Songino Array	26.46	296	P	P	20 19 41.7	+0.5
	comp=Z,3.9nm,0.5s,mb4.2,baz=75,slow=8.7,SNR=27						
SONM				LR	LR	20 30 58.1	
	comp=Z,1µm,19.8s,MS4.4,baz=91,slow=38						
XAN	Xi'an	27.60	266	P	P	20 19 50.6	-0.9
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.1						
GUMO	Guam	27.78	176	LR	LR	20 30 05.1	
	comp=Z,748nm,19.9s,MS4.3,baz=105,slow=34						
IRK	Irkutsk	28.13	306	*e*P	P	20 19 56.8	+0.8
IRK				*e*		20 20 13.7	
IRK				pmax	pmax		
	comp=Z,24nm,2.0s,mb4.5						
TLY	Talaya	28.45	305	*e*P	P	20 19 59.9	+1.0
	comp=Z,9.4nm,1.0s,mb4.4						
TLY	Talaya	28.45	305	*e*P	P	20 20 00.3	+1.4
TLY				*e*S	S	20 24 48.2	+5.2
TLY				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						

TLY MLR MLR
comp=Z,663nm,15.0s,MS4.4
ZAK Zakamensk 28.58 302 *e*P **P** **20 20 01.0 +0.9**
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.1
BILL Bilibino 29.55 18 *e*P **P** **20 20 08.6 +0.1**
comp=Z,2.9nm,0.6s,mb4.2
BILL Bilibino 29.55 18 *i* P **P** **20 20 08.2 -0.3**
BILL pmax pmax
comp=Z,17nm,2.6s,mb4.3
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.1
MOY Mondy 30.10 304 *e*P **P** **20 20 16.0 +2.5**
MOY pmax pmax
comp=Z,32nm,2.0s,mb4.7
LZH Lanzhou 30.60 273 *e*P **P** **20 20 18.8 +0.7**
LZH AP pP 20 20 29.5 -0.4
LZH PP PP 20 21 22.5 -5.1
LZH PCP PcP 20 23 15.7 0.0
LZH *e*S **S** **20 25 10.0 -7.1**
LZH SS SS 20 27 01.1 -27
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,70nm,4.2s
LZH LR LR
comp=E,584nm,14.3s
LZH LR LR
comp=Z,906nm,15.2s,MS4.5
LZH Lanzhou 30.60 273 *e*P **P** **20 20 18.8 +0.7**
comp=Z,15nm,1.0s,mb4.8
LZH pP pP 20 20 29.5 -0.4
LZH sP sP 20 20 32.0 -3.2
LZH PP PP 20 21 22.5 -5.1
LZH PcP PcP 20 23 15.7 0.0
LZH *e*S **S** **20 25 10.0 -7.1**
LZH sS sS 20 25 29.0 -7.8
LZH SS SS 20 27 01.1 -27
LZH pmax pmax
comp=Z,910nm,15.2s,MS4.5
LZH Lanzhou 30.60 273 *e*P **P** **20 20 18.8 +0.7**
LZH *PP pP 20 20 29.5 -0.4
LZH *SP sP 20 20 32.0 -3.2
LZH 20 21 22.5
LZH 20 23 15.7
LZH *e*S **S** **20 25 10.0 -7.1**
LZH *SS sS 20 25 29.0 -7.8
LZH SS SS 20 27 01.1 -27
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.8
LZH MLR MLR
comp=Z,910nm,15.2s,MS4.5
TIXI Tiksi 31.09 352 *e*P **P** **20 20 17.3 -4.7**
TIXI pmax pmax
comp=Z,7.0nm,1.7s,mb4.2
TIXI MLR MLR
comp=Z,420nm,14.0s,MS4.2
GTA Gaotai 32.49 281 *e*P **P** **20 20 35.7 +1.0**
GTA AP pP 20 20 47.2 +0.7
GTA XP sP 20 20 53.2 +1.4
GTA PP PP 20 21 44.4 -4.1
GTA PCP PcP 20 23 22.3 +1.5
GTA S **S** **20 25 50.3 +3.8**
GTA XS sS 20 26 09.3 +3.0
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.1
GTA AMB AMB
comp=Z,165nm,8.8s
GTA LR LR
comp=N,605nm,15.7s,MS4.6
GTA LR LR
comp=E,783nm,18.7s,MS4.6
GTA LR LR
comp=Z,938nm,18.7s,MS4.5
CD2 Chengdu 32.91 264 *e*P **P** **20 20 38.8 +0.3**
CD2 AP pP 20 20 50.6 +0.3
CD2 XP sP 20 20 55.9 +0.3
CD2 PP PP 20 21 50.0 -3.3
CD2 S **S** **20 25 52.8 -0.4**
CD2 XS sS 20 26 13.1 0.0
CD2 SS SS 20 27 54.6 -21
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,330nm,14.4s,MS4.4
CD2 LR LR
comp=E,480nm,14.4s,MS4.4
CD2 LR LR
comp=Z,230nm,14.4s,MS4.0
GYA Guiyang 33.16 255 P **P** **20 20 41.5 +0.8**
GYA AP pP 20 20 53.9 +1.4
GYA XP sP 20 20 58.8 +1.0
GYA PP PP 20 21 53.7 -2.5
GYA PCP PcP 20 23 24.5 +1.7
GYA S **S** **20 25 57.2 0.0**
GYA XS sS 20 26 17.5 +0.5
GYA SCP ScP 20 27 04.2 +0.8
GYA PCS PcS 20 27 09.8 +1.3
GYA SCS ScS 20 31 03.0 -1.1
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,90nm,4.8s
GYA LR LR
comp=N,340nm,17.9s,MS4.3
GYA LR LR
comp=E,410nm,18.4s,MS4.3
GYA LR LR
comp=Z,370nm,17.8s,MS4.1
GAMB Gambell 34.49 34 *e*P **P** **20 20 51.4 -0.4**
QIZ Qiongzhong 35.79 241 P **P** **20 21 03.3 -0.2**
QIZ XP sP 20 21 18.7 -1.9
QIZ S **S** **20 26 38.7 +0.9**
QIZ XS sS 20 26 55.8 -1.9
QIZ AMB AMB
comp=Z,14nm,1.5s,mb4.7
QIZ LR LR
comp=N,281nm,21.6s
QIZ LR LR
comp=Z,377nm,21.0s,MS4.1
KMI Kunming 36.80 256 P **P** **20 21 11.3 -0.8**
KMI AP pP 20 21 23.9 -0.1
KMI XP sP 20 21 28.2 -1.1
KMI PP PP 20 22 36.7 +0.3
KMI S **S** **20 26 53.2 0.0**
KMI XS sS 20 27 12.8 -0.4
KMI SS SS 20 29 23.2 -12
KMI AMB AMB
comp=Z,8.0nm,1.8s,mb4.2
KMI AMB AMB
comp=Z,70nm,4.8s
KMI LR LR
comp=N,463nm,16.7s,MS4.5
KMI LR LR
comp=E,451nm,16.7s,MS4.5
KMI LR LR
comp=Z,525nm,19.4s,MS4.3
KMI Kunming 36.80 256 P **P** **20 21 11.3 -0.8**
comp=Z,8.0nm,1.8s,mb4.2
KMI pP pP 20 21 23.9 -0.1
KMI sP sP 20 21 28.2 -1.1
KMI PP PP 20 22 36.7 +0.3
KMI PPP 20 22 59.6
KMI S **S** **20 26 53.2 0.0**
KMI sS sS 20 27 12.8 -0.4
KMI SS SS 20 29 23.2 -12
KMI SSS 20 29 50.4
KMI LR LR
comp=Z,520nm,19.4s,MS4.3
KMI Kunming 36.80 256 P **P** **20 21 11.3 -0.8**
KMI *PP pP 20 21 23.9 -0.1
KMI *SP sP 20 21 28.2 -1.1
KMI 20 22 36.7
KMI PPP 20 22 59.6
KMI S **S** **20 26 53.2 0.0**
KMI *SS sS 20 27 12.8 -0.4
KMI SS SS 20 29 23.2 -12
KMI SSS 20 29 50.4
KMI pmax pmax
comp=Z,8.0nm,1.8s,mb4.2
KMI MLR MLR
comp=Z,520nm,19.4s,MS4.3

ZALV Zalesovo Beam 39.84 309 P **P** **20 21 37.7 +0.4**
ZALV LR LR 20 39 21.8
ZALV Zalesovo Beam 39.84 309 P **P** **20 21 37.7 +0.4**
comp=Z,6.6nm,0.5s,mb4.6,baz=89,slow=8.3,SNR=33
ZALV LR LR 20 39 21.8
comp=Z,717nm,18.4s,MS4.5,baz=87,slow=38
ZAL Zalesovo 39.86 309 P **P** **20 21 37.7 +0.3**
WMQ Urumqi 39.94 292 ⇓P **P** **20 21 38.3 +0.1**
WMQ AP pP 20 21 50.3 0.0
WMQ XP sP 20 21 55.3 -0.2
WMQ PP PP 20 23 14.8 +4.4
WMQ PCP PcP 20 23 43.8 +0.9
WMQ SCP ScP 20 27 27.3 -0.9
WMQ S **S** **20 27 40.5 +0.4**
WMQ XS sS 20 28 01.3 +1.1
WMQ AMB AMB
comp=Z,18nm,0.9s,mb4.8
WMQ AMB AMB
comp=Z,146nm,4.2s
WMQ LR LR
comp=N,213nm,17.6s,MS4.3
WMQ LR LR
comp=E,288nm,17.0s,MS4.3
WMQ LR LR
comp=Z,428nm,18.0s,MS4.3
NVS Novosibirsk 40.67 310 *e*P **P** **20 21 43.3 -0.8**
NVS *e* 20 23 42.2
NVS *e*S **S** **20 27 51.6 +0.8**
NVS pmax pmax
comp=N,6.0nm,1.5s
NVS pmax pmax
comp=E,29nm,1.5s
NVS pmax pmax
comp=Z,31nm,1.5s,mb4.7
NVS smax
comp=E,14nm,1.9s
NVS smax
comp=N,13nm,1.9s
TTA Tatalina 41.29 37 *e*P **P** **20 21 49.8 +0.7**
SVW2 Sparrevohn 41.48 40 *e*P **P** **20 21 52.3 +1.6**
IMA2 Indian Mountai 42.43 33 *e*P **P** **20 21 58.7 +0.3**
MK31 Makanchi Array 42.79 298 *e*P **P** **20 22 01.5 -0.1**
MKAR Makanchi Array 42.79 298 P **P** **20 22 01.8 +0.2**
MKAR LR LR 20 41 12.9
MKAR Makanchi Array 42.79 298 P **P** **20 22 01.8 +0.2**
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR MLR MLR
comp=Z,720nm,18.1s
MKAR Makanchi Array 42.79 298 P **P** **20 22 01.8 +0.2**
comp=Z,4.1nm,0.6s,mb4.3,baz=83,slow=9.5,SNR=37
MKAR LR LR 20 41 12.9
comp=Z,720nm,18.1s,MS4.6,baz=299,slow=38
LSA Lhasa 42.98 271 *e*P **P** **20 22 04.3 +1.0**
comp=Z,42nm,1.5s,mb5.0
LSA Lhasa 42.98 271 *e*P **P** **20 22 04.3 +1.0**
LSA pmax pmax
comp=Z,42nm,1.5s,mb5.0
KDAK Kodiak Island 43.23 45 P **P** **20 22 04.1 -0.8**
comp=Z,15nm,0.6s,mb4.9,baz=260,slow=7.2,SNR=11
CHTO Chiang Mai 43.47 252 *e*P **P** **20 22 07.1 -0.3**
comp=Z,14nm,1.2s,mb4.5
CHTO *e*pP pP 20 22 20.5 +1.0
CHTO Chiang Mai 43.47 252 *e*P **P** **20 22 07.1 -0.3**
CHTO *e**PP pP 20 22 20.5 +0.9
CHTO pmax pmax
comp=Z,14nm,1.2s,mb4.6
SLKM Skilak Lake 44.13 41 P **P** **20 22 11.6 -0.7**
KURK Kurchatov 44.15 305 *e*P **P** **20 22 12.1 -0.4**
comp=Z,17nm,0.8s,mb4.8
KURK Kurchatov 44.15 305 ⇑*i*P **P** **20 22 12.1 -0.3**
SHL Shillong 44.61 266 *e*P **P** **20 22 18.0 +1.5**
COLA College 44.87 35 *e*P **P** **20 22 18.9 +0.9**
comp=Z,51nm,0.9s,mb5.3
COLA College 44.87 35 *e*P **P** **20 22 18.9 +0.9**
COLA pmax pmax
comp=Z,51nm,0.9s,mb5.3
TAPN Taplejung 46.78 271 *e*P **P** **20 22 34.8 +1.2**
comp=Z,7.0nm,0.3s,mb5.1
ODAN Odare 47.28 270 *e*P **P** **20 22 38.1 +0.6**
comp=Z,14nm,0.5s,mb5.1
EGAK Eagle 47.72 34 *e*P **P** **20 22 41.3 +0.9**
comp=Z,23nm,1.0s,mb5.2
JIRN Jiri 47.76 272 *e*P **P** **20 22 42.6 +1.4**
KKN Kakani 48.37 273 *e*P **P** **20 22 45.9 -0.1**
comp=Z,19nm,0.6s,mb5.3
KKN Kakani 48.37 273 *e*P **P** **20 22 45.9 -0.1**
KKN pmax pmax
comp=Z,19nm,0.6s,mb5.3
BRVK Borovoye 48.52 310 *e*P **P** **20 22 48.6 +1.9**
comp=Z,9.6nm,0.8s,mb4.9
BRVK Borovoye 48.52 310 *e*P **P** **20 22 48.6 +1.9**
BRVK pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TKM2 Tokmak 2 48.55 295 *e*P **P** **20 22 47.3 +0.2**
comp=Z,19nm,0.7s,mb5.2
TKM2 Tokmak 2 48.55 295 *e*P **P** **20 22 47.3 +0.2**
TKM2 pmax pmax
comp=Z,19nm,0.7s,mb5.2
GKN Gorkha 48.74 273 *e*P **P** **20 22 49.1 +0.3**
comp=Z,14nm,0.4s,mb5.4
AAK Ala-Archa 49.41 296 *e*P **P** **20 22 52.6 -1.1**
comp=Z,3.9nm,0.4s,mb4.8
AAK Ala-Archa 49.41 296 *i* P **P** **20 22 52.6 -1.1**
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
AAK MLR MLR
comp=Z,400nm,23.0s,MS4.3
UCH Uchtor 49.56 295 *e*P **P** **20 22 57.5 +2.6**
comp=Z,1.9nm,0.6s,mb4.3
UCH *e*pP pP 20 23 05.7 -1.5
EKS2 Erkin-Say 49.89 296 *e*P **P** **20 22 57.0 -0.4**
comp=Z,4.3nm,0.7s,mb4.6
INK Inuvik 50.05 29 *e*P **P** **20 22 58.4 +0.3**
comp=Z,1μm,1.0s
AML Almayashu 50.16 295 *e*P **P** **20 22 59.8 +0.4**
comp=Z,4.5nm,0.4s,mb4.8
KK31 Karatay Array 51.90 298 *i* P **P** **20 23 11.5 -1.0**
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
SVE Sverdlovsk 52.60 317 ⇑*e*P **P** **20 23 18.0 +0.6**
SVE *e* 20 23 37.9
SVE *e*S **S** **20 30 53.0 +12**
SVE pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SVE MLR MLR
comp=Z,833nm,18.0s,MS4.8
ARU Arti 53.81 317 *e*P **P** **20 23 27.3 +1.0**
comp=Z,20nm,1.0s,mb5.0
ARU Arti 53.81 317 *d i*P **P** **20 23 26.2 -0.1**
ARU *e* 20 24 26.8
ARU *e* 20 25 29.9
ARU *e*S **S** **20 30 56.7 -0.9**
ARU SS SS 20 34 33.0 -5.3
ARU pmax pmax
comp=Z,25nm,2.5s,mb4.7
ARU pmax pmax
comp=Z,678nm,18.0s
BATI Kupang 54.28 203 LR LR 20 43 53.1
comp=Z,247nm,20.5s,MS4.3,baz=305,slow=33
DLBC Dease Lake 54.59 40 *e*P **P** **20 23 33.5 +1.6**
AKTK Aktyubinsk 56.56 310 P **P** **20 23 45.8 -0.5**
AKTK LR LR 20 49 47.8
AKTO Aktyubinsk 56.56 310 P **P** **20 23 45.8 -0.5**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
AKTO MLR MLR
comp=Z,558nm,20.2s,MS4.7
AKTO Aktyubinsk 56.56 310 P **P** **20 23 45.8 -0.5**
comp=Z,2.1nm,0.6s,mb4.3,baz=41,slow=9.3,SNR=7.6
AKTO LR LR 20 49 47.8
comp=Z,558nm,20.2s,MS4.7,baz=64,slow=38
KBL Kabul 56.88 289 *e*P **P** **20 23 48.1 -0.6**
RES Resolute Bay 58.12 15 *e*P **P** **20 23 56.3 -0.5**
comp=Z,383nm,0.8s
RES Resolute Bay 58.12 15 *e*P **P** **20 23 56.3 -0.6**
RES pmax pmax
comp=Z,383nm,0.8s
YKW3 Yellowknife Ar 59.50 32 *e*P **P** **20 24 05.8 -0.8**
YKA Yellowknife Ar 59.54 32 P **P** **20 24 06.6 -0.3**
YKA LR LR 20 55 06.2
YKA Yellowknife Ar 59.54 32 P **P** **20 24 06.6 -0.3**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA MLR MLR
comp=Z,101nm,18.5s
YKA Yellowknife Ar 59.54 32 P **P** **20 24 06.6 -0.3**
comp=Z,1.4nm,0.6s,mb4.2,baz=301,slow=6.8,SNR=24
YKA LR LR 20 55 06.2
comp=Z,101nm,18.5s,MS4.0,baz=210,slow=41
KEV Kevo 59.72 339 *ep* **P** **20 24 07.5 -0.6**
ARCES ARCESS Array B 60.27 339 P **P** **20 24 11.9 +0.1**
ARCES pmax pmax
comp=Z,3.0nm,0.8s
ARCES MLR MLR
comp=Z,600nm,18.1s
ARCES ARCESS Array B 60.27 339 P **P** **20 24 11.8 0.0**
comp=Z,2.9nm,0.8s,mb4.3,baz=38,slow=6.1,SNR=5.6
ARCES LR LR 20 56 06.7
comp=Z,600nm,18.1s,MS4.8,baz=40,slow=42
CTA Charters Tower 61.27 176 P **P** **20 24 17.7 -1.4**
CTA pmax pmax
comp=Z,4.0nm,0.9s
CTA Charters Tower 61.27 176 P **P** **20 24 17.7 -1.4**
comp=Z,4.1nm,0.9s,mb4.5,baz=321,slow=14,SNR=2.6
DAG Danmarks Havn 61.50 355 ⇓*e*P **P** **20 24 19.6 -0.5**
DAG pmax pmax
comp=Z,3.0nm,0.4s,mb4.8
DAG Danmarks Havn 61.50 355 ⇓*i*P **P** **20 24 19.6 -0.5**
comp=Z,3.4nm,0.4s,mb4.8
WB2 Warramunga Arr 61.53 189 *e*P **P** **20 24 18.4 -2.4**
WRA Warramunga Arr 61.53 189 P **P** **20 24 18.6 -2.3**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA MLR MLR
comp=Z,174nm,19.0s
WRA Warramunga Arr 61.53 189 P **P** **20 24 18.6 -2.3**
comp=Z,2.9nm,0.8s,mb4.5,baz=6.3,slow=6.9,SNR=28
WRA LR LR 20 49 39.5
comp=Z,174nm,19.0s,MS4.2,baz=30,slow=35
JOF Joensuu 62.60 331 *ep* **P** **20 24 24.5 -3.1**
comp=Z,5.1nm,0.7s,mb4.8
JOF Joensuu 62.60 331 *e*P **P** **20 24 24.5 -3.1**
JOF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
A07A Ashnola River, 64.10 47 ⇑P **P** **20 24 37.0 -0.7**
baz=64
B07A Winthrop 64.57 47 ⇓P **P** **20 24 39.8 -1.1**
baz=64
F04A Amboy 64.69 50 ⇑P **P** **20 24 40.0 -1.7**
baz=64
E05A Randle 64.72 49 ⇑P **P** **20 24 40.5 -1.4**
baz=64
A08A Turner Farm, O 64.76 46 ⇓P **P** **20 24 41.7 -0.4**
baz=64
D06A Cle Elum 64.89 48 ⇑P **P** **20 24 42.2 -0.7**
baz=65
KAF Kangasniemi 64.90 332 *ep* **P** **20 24 41.4 -1.3**
comp=Z,5.6nm,0.6s,mb4.8,baz=47,slow=6.2
KAF Kangasniemi 64.90 332 *e*P **P** **20 24 41.4 -1.3**
KAF pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
C07A Waterville 65.04 48 ⇑P **P** **20 24 43.5 -0.4**
baz=65
B08A Colville Reser 65.06 47 ⇑P **P** **20 24 43.7 -0.4**
baz=65
A09A Danville 65.12 46 ⇑P **P** **20 24 44.0 -0.4**
baz=65
E06A Yakima 65.18 49 ⇓P **P** **20 24 43.8 -1.1**
baz=65
OBN Obninsk 65.22 323 *i* P **P** **20 24 45.4 +0.4**
OBN *e**PP pP 20 24 54.1 -3.6
OBN *e* 20 25 14.4
OBN *e* 20 27 08.3
OBN *e*SS SS 20 37 39.3 +2.3
OBN pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
OBN MLR MLR
comp=Z,900nm,16.0s,MS5.1
ASAR Alice Springs 65.26 189 P **P** **20 24 43.9 -1.6**
ASAR pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 65.26 189 P **P** **20 24 43.9 -1.6**
comp=Z,2.7nm,0.8s,mb4.3,baz=4.2,slow=4.8,SNR=30
D07A Quincy 65.37 48 ⇓P **P** **20 24 44.7 -1.4**
baz=65
FINES FINESS Array B 65.43 332 P **P** **20 24 45.8 -0.4**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES MLR MLR
comp=Z,794nm,18.7s
FINES FINESS Array B 65.43 332 P **P** **20 24 45.8 -0.4**
comp=Z,3.6nm,0.6s,mb4.6,baz=52,slow=7.4,SNR=41
FINES LR LR 20 56 24.2
comp=Z,794nm,18.7s,MS4.9,baz=29,slow=39
H04A Detroit Lake 65.53 51 ⇓P **P** **20 24 46.1 -1.1**
baz=65
A10A Northport 65.67 45 ⇑P **P** **20 24 46.6 -1.4**
baz=66
B09A Rice 65.67 46 ⇑P **P** **20 24 46.6 -1.4**
baz=66
E07A Sunnyside 65.81 49 ⇑P **P** **20 24 47.5 -1.4**
baz=66
JMIC Jan Mayen 66.02 350 LR LR 20 51 57.5
comp=Z,376nm,20.5s,MS4.6,baz=275,slow=34
D08A Wollman Farm, 66.04 48 ⇓P **P** **20 24 49.7 -0.7**
baz=66
HAWA Hanford 66.08 49 *e*P **P** **20 24 51.3 +0.6**
comp=Z,16nm,1.2s,mb4.9
HAWA *e*pP pP 20 25 04.0 +0.5
G06A Carlson Farm, 66.12 50 ⇓P **P** **20 24 50.2 -0.7**
baz=66
A11A Hall Mountain, 66.32 45 ⇑P **P** **20 24 52.4 +0.2**
baz=66
NEW Newport 66.32 46 *e*P **P** **20 24 52.0 -0.2**
comp=Z,14nm,1.1s,mb4.9
NEW *e*pP pP 20 25 05.0 0.0
NEW Newport 66.32 46 *e*P **P** **20 24 52.0 -0.2**
NEW *e**PP pP 20 25 05.0 +0.1
NEW pmax pmax
comp=Z,15nm,1.1s
D09A Jones Farm, Ri 66.38 47 ⇓P **P** **20 24 51.5 -1.1**
baz=66
E09A Wood Farm, Sta 66.79 48 P **P** **20 24 55.6 +0.5**
baz=67,SNR=7.0
J05A Fort Rock 66.90 52 ⇓P **P** **20 24 55.2 -0.7**
baz=67
YBH Yreka Blue Hor 66.91 54 *e*P **P** **20 24 56.6 +0.5**
comp=Z,8.5nm,1.0s,mb4.7
YBH Yreka Blue Hor 66.91 54 *e*P **P** **20 24 56.6 +0.5**
YBH pmax pmax
comp=Z,8.0nm,1.0s
YBH Yreka Blue Hor 66.91 54 ⇑P **P** **20 24 56.3 +0.2**
baz=67
N02C Big Bar 67.07 55 ⇓P **P** **20 24 55.4 -1.7**
baz=67
L04A Klamath Falls 67.15 53 ⇑P **P** **20 24 57.2 -0.4**
baz=67
A13A Flathead Natio 67.36 44 ⇑P **P** **20 24 57.4 -1.4**
baz=67
E10A Myers Farm, Un 67.38 47 ⇑P **P** **20 24 57.9 -1.1**
baz=67
M04C Macdoel 67.41 54 ⇑P **P** **20 24 58.5 -0.7**
baz=67
I07A Izee 67.45 51 ⇑P **P** **20 24 59.0 -0.4**
baz=67
M03C McCloud 67.54 54 ⇑P **P** **20 24 60.0 -0.1**
baz=67
J06A Christmas Vall 67.56 52 ⇑P **P** **20 24 59.7 -0.4**
baz=67
F10A Beach Ranch, E 67.62 48 ⇑P **P** **20 25 00.1 -0.4**
baz=67
H08A Prairie City 67.67 50 ⇓P **P** **20 25 00.7 -0.1**
baz=68
B13A Whitefish 67.67 45 ⇑P **P** **20 25 00.0 -0.7**
baz=68,SNR=6.1
WDC Whiskeytown Da 67.69 55 *e*P **P** **20 25 01.2 +0.3**
comp=Z,35nm,1.5s,mb5.2
WDC Whiskeytown Da 67.69 55 *e*P **P** **20 25 01.2 +0.2**
WDC pmax pmax
comp=Z,35nm,1.5s,mb5.2
WDC Whiskeytown Da 67.69 55 ⇓P **P** **20 25 00.6 -0.4**
baz=68,SNR=5.6
G09A Cove 67.73 49 ⇑P **P** **20 25 00.4 -0.7**
baz=68
K06A Valley Falls 67.77 52 ⇓P **P** **20 25 01.4 -0.1**
baz=68
O02C Red Bluff 67.77 56 ⇓P **P** **20 25 01.8 +0.3**
baz=68
L05A Lakeview 67.86 53 ⇑P **P** **20 25 02.3 +0.2**
baz=68
E11A Bogner Ranch, 67.96 47 ⇓P **P** **20 25 02.2 -0.4**

baz=68
GOF Gofitskoye 67.97 311 *e*P P **20 24 59.4 -3.3**
D12A Red Ives Fores 68.00 46 ⇓P P **20 25 02.8 -0.1**
baz=68
C13A Hot Springs 68.04 45 ⇓P P **20 25 02.7 -0.4**
baz=68
M05C Lookout 68.08 54 P P **20 25 04.0 +0.6**
baz=68,SNR=6.7
GASB Alder Springs 68.12 56 ⇓P P **20 25 04.0 +0.3**
baz=68,SNR=5.8
HATC Hat Creek Radi 68.21 54 ⇑P P **20 25 02.9 -1.4**
baz=68
BMO Blue Mountains 68.25 49 *e*P P **20 25 04.4 -0.1**
comp=Z,19nm,1.6s,mb4.9
MOD Modoc 68.27 53 *e*P P **20 25 05.0 +0.4**
comp=Z,5.3nm,1.0s,mb4.5
MOD Modoc 68.27 53 ⇑P P **20 25 04.9 +0.2**
baz=68
F11A Grangeville 68.27 48 ⇓P P **20 25 04.1 -0.4**
baz=68
C14A Swan Lake 68.43 45 ⇓P P **20 25 04.8 -0.7**
baz=68
K07A Rock Creek Ran 68.43 52 P P **20 25 06.3 +0.7**
baz=68,SNR=7.1
D13A Huson 68.46 46 ⇓P P **20 25 05.0 -0.7**
baz=68
J08A Circle Bar Ran 68.48 51 ⇓P P **20 25 05.8 -0.1**
baz=68
G11A Walters Elk Ra 68.51 48 ⇑P P **20 25 05.9 -0.1**
baz=68
H10A Noah's Angus R 68.73 49 P P **20 25 07.4 -0.1**
baz=68,SNR=7.2
O04C Chester 68.74 55 P P **20 25 08.4 +0.8**
baz=68,SNR=9.1
MNRC McLaughlin Nat 68.75 57 ⇓P P **20 25 07.9 +0.3**
baz=69
L07A Adell 68.78 52 P P **20 25 08.8 +1.1**
baz=69,SNR=8.5
ELFS Eagle Lake Fie 68.78 54 P P **20 25 09.1 +1.3**
baz=69,SNR=8.7
KIV Kislovodsk 68.83 310 *e*P P **20 25 09.3 +1.2**
comp=Z,17nm,0.9s,mb5.0
KIV Kislovodsk 68.83 310 *i* P P **20 25 09.0 +0.9**
KIV *e**PP pP 20 25 19.5 -1.4
KIV *e* 20 25 31.9
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,400nm,16.0s,MS4.8
ZEI Tsey 68.84 309 *e*P P **20 25 07.4 -0.8**
ZEI *e**PP pP 20 25 17.3 -3.7
ZEI pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
F12A Elk City 68.85 47 P P **20 25 09.0 +0.8**
baz=69,SNR=9.7
K08A Mann Creek Ran 68.85 51 ⇓P P **20 25 08.8 +0.6**
baz=69
MSO Missoula 68.91 46 *e*P P **20 25 08.6 +0.1**
comp=Z,6.4nm,1.3s,mb4.4
MSO *e*pP pP 20 25 21.1 -0.2
J09A Fry Pan Ranch, 68.91 50 P P **20 25 09.6 +1.0**
baz=69,SNR=7.2
ORV Oroville 68.94 56 P P **20 25 08.6 -0.2**
baz=69,SNR=5.3
WVOR Wild Horse Val 68.94 52 *e*P P **20 25 08.9 +0.1**
comp=Z,28nm,1.6s,mb5.0
WVOR Wild Horse Val 68.94 52 *e*P P **20 25 08.9 +0.1**
WVOR pmax pmax
comp=Z,28nm,1.6s,mb4.9
D14A Greenough 68.98 45 ⇓P P **20 25 08.9 -0.1**
baz=69
H11A Donnelly 69.08 48 ⇑P P **20 25 09.2 -0.4**
baz=69
OHCM Honcut 69.08 56 *e*P P **20 25 09.4 -0.3**
N06A Buffalo Meadow 69.24 54 P P **20 25 11.2 +0.5**
baz=69,SNR=10
M07A Soldier Meadow 69.26 53 P P **20 25 11.7 +1.0**
baz=69,SNR=12
L08A Fields 69.26 52 P P **20 25 11.8 +1.0**
baz=69,SNR=7.5
F13A Darby 69.34 47 ⇑P P **20 25 10.1 -1.1**
baz=69
BEKR Beckwourth 69.45 55 P P **20 25 12.3 +0.3**
baz=69,SNR=21
FFC Flin Flon 69.50 34 *e*P P **20 25 12.0 0.0**
comp=Z,20nm,1.3s,mb4.9
FFC *e*pP pP 20 25 24.6 -0.2
FFC Flin Flon 69.50 34 *e*P P **20 25 12.0 0.0**
FFC *e**PP pP 20 25 24.6 -0.3
FFC pmax pmax
comp=Z,20nm,1.3s,mb4.9
O06A Flanigan 69.60 54 P P **20 25 13.5 +0.6**
baz=69,SNR=11
P05C Yuba Gap, Truc 69.64 55 ⇓P P **20 25 13.1 -0.1**
baz=69
FCC Fort Churchill 69.65 28 *e*P P **20 25 12.2 -0.6**
comp=Z,21nm,1.1s,mb5.0
FCC *e*pP pP 20 25 24.9 -0.9
FCC Fort Churchill 69.65 28 *e*P P **20 25 12.3 -0.6**
FCC *e**PP pP 20 25 24.9 -0.8
FCC pmax pmax
comp=Z,21nm,1.1s,mb5.0
M08A Happy Creek Ra 69.69 52 ⇑P P **20 25 14.0 +0.6**
baz=70
K10A MacKenzie Ranc 69.77 51 P P **20 25 14.9 +1.0**
baz=70,SNR=5.7
H12A Diamond D Ranc 69.82 48 ⇓P P **20 25 13.8 -0.4**
baz=70
G13A Cobalt 69.83 47 P P **20 25 14.2 0.0**
baz=70,SNR=6.2
E15A Deer Lodge 69.86 45 P P **20 25 14.5 +0.1**
baz=70,SNR=5.3
BNLO Ben Lomond (Sa 69.97 58 ⇑P P **20 25 15.2 -0.1**
baz=70
MFID Camas Ranch 69.97 49 ⇑P P **20 25 14.4 -0.7**
baz=70
H13A Challis 70.15 48 P P **20 25 16.6 +0.5**
baz=70,SNR=11
PAHR Pah Rah Range 70.15 54 *e*P P **20 25 17.0 +0.7**
comp=Z,48nm,1.4s,mb5.2
WCN Washoe City 70.17 55 P P **20 25 17.1 +0.7**
baz=70,SNR=7.2
O07A Toulon 70.18 54 P P **20 25 17.2 +0.7**
baz=70,SNR=18
N08A GE Springer Mi 70.25 53 ⇑P P **20 25 16.8 -0.1**
baz=70
K11A Parker Ranch, 70.26 50 ⇓P P **20 25 16.5 -0.4**
baz=70
F15A Butte 70.31 46 P P **20 25 17.5 +0.4**
baz=70,SNR=14
R05C Kirkwood Meado 70.33 56 ⇓P P **20 25 17.1 -0.4**
baz=70
LRM Limekiln Ridge 70.34 46 *e*P P **20 25 17.6 +0.2**
EGMT Eagleton 70.34 43 *e*P P **20 25 17.6 +0.2**
comp=Z,30nm,1.4s,mb5.0
EGMT *e*pP pP 20 25 29.3 -0.9
EGMT Eagleton 70.34 43 ⇓P P **20 25 16.6 -0.7**
baz=70
L10A Juniper Basin 70.43 51 P P **20 25 18.5 +0.5**
baz=70,SNR=6.5
NB2 NORSAR Subarra 70.55 337 P P **20 25 17.7 -0.6**
comp=Z,7.9nm,1.0s,mb4.6,baz=36,slow=6.5
NB2 NORSAR Subarra 70.55 337 P P **20 25 17.7 -0.6**
NB2 pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
NOA NORSAR Array B 70.55 337 P P **20 25 17.9 -0.4**
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,477nm,19.8s
NOA NORSAR Array B 70.55 337 P P **20 25 17.9 -0.5**
comp=Z,2.4nm,0.7s,mb4.2,baz=36,slow=6.2,SNR=8.4
NOA LR LR 20 59 37.0
comp=Z,477nm,19.8s,MS4.8,baz=5.0,slow=39
CMB Columbia Colle 70.55 56 *e*P P **20 25 18.8 0.0**
comp=Z,25nm,1.4s,mb5.0
CMB *e*pP pP 20 25 31.9 +0.2
CMB Columbia Colle 70.55 56 *e*P P **20 25 18.8 0.0**
CMB *e**PP pP 20 25 31.9 +0.3
CMB pmax pmax
comp=Z,25nm,1.4s,mb5.0
CMB Columbia Colle 70.55 56 P P **20 25 19.3 +0.6**
baz=70,SNR=7.3
DLMT Dillon 70.56 46 *e*P P **20 25 19.4 +0.7**
comp=Z,23nm,1.1s,mb5.0
DLMT *e*pP pP 20 25 31.9 +0.3
N09A Rock Creek Ran 70.57 52 P P **20 25 20.0 +1.2**
baz=70,SNR=5.4
PACP Pacheco Peak 70.61 58 ⇓P P **20 25 19.4 +0.3**
baz=70
I13A Wildhorse Cree 70.63 48 P P **20 25 19.9 +0.7**
baz=70,SNR=11
HLID Hailey 70.69 49 *e*P P **20 25 20.0 +0.5**
comp=Z,60nm,2.6s,mb5.1
HLID Hailey 70.69 49 ⇑P P **20 25 19.4 -0.1**
baz=70
M10A I.L. Ranch, Tu 70.74 51 P P **20 25 21.2 +1.4**
baz=70,SNR=8.5
G15A Dillon 70.74 46 P P **20 25 20.5 +0.7**
baz=70,SNR=11
MCMT McKenzie Canyo 70.76 47 *e*P P **20 25 19.6 -0.3**
L11A Cat Creek Ranc 70.79 50 P P **20 25 21.4 +1.2**
baz=71,SNR=10
R06C Coleville 70.83 55 P P **20 25 21.3 +0.8**
baz=71,SNR=9.9
WAKR Walker 70.85 55 *e*P P **20 25 21.4 +0.8**
BOZ Bozeman (W) 70.90 46 *e*P P **20 25 20.8 +0.1**
comp=Z,16nm,1.3s,mb4.8
BOZ *e*pP pP 20 25 33.6 0.0
BOZ Bozeman (W) 70.90 46 *e*P P **20 25 20.8 +0.1**
BOZ *e**PP pP 20 25 33.6 0.0
BOZ pmax pmax
comp=Z,16nm,1.3s,mb4.8
BOZ Bozeman (W) 70.90 46 ⇑P P **20 25 21.6 +0.9**
baz=71
S06C San Francisco 70.98 56 P P **20 25 21.6 +0.2**
baz=71,SNR=12
K12A Draper Farm, C 70.99 50 ⇓P P **20 25 21.0 -0.4**
baz=71
S05C Merced 71.00 57 ⇓P P **20 25 21.5 -0.1**
baz=71
BMN Battle Mountai 71.01 53 *e*P P **20 25 22.1 +0.6**
comp=Z,19nm,1.2s,mb4.9
BMN *e*pP pP 20 25 34.6 +0.2
BMN Battle Mountai 71.01 53 *e*P P **20 25 22.1 +0.6**
BMN *e**PP pP 20 25 34.6 +0.2
BMN pmax pmax
comp=Z,19nm,1.2s,mb4.9
O09A Fish Creek Ran 71.19 53 ⇓P P **20 25 23.2 +0.6**
baz=71,SNR=7.5
M11A Holland Ranch, 71.23 51 P P **20 25 24.1 +1.2**
baz=71,SNR=9.6
L12A House Creek Ra 71.23 50 ⇑P P **20 25 22.8 -0.1**
baz=71
U04C Hernandez Rese 71.32 58 ⇑P P **20 25 23.4 -0.1**
baz=71
AKASG Malin Array Be 71.47 322 P P **20 25 23.6 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG MLR MLR
comp=Z,514nm,18.1s
AKASG Malin Array Be 71.47 322 P P **20 25 23.6 -0.5**
comp=Z,2.3nm,0.4s,mb4.4,baz=43,slow=6.4,SNR=15
AKASG LR LR 21 00 04.2
comp=Z,514nm,18.1s,MS4.8,baz=40,slow=38
QLMT Earthquake Lak 71.53 46 *e*P P **20 25 25.6 +1.0**
QLMT *e*pP pP 20 25 38.6 +1.1
Q08A Gabbs 71.56 54 P P **20 25 25.4 +0.6**
baz=71,SNR=12
NVAR Mina Array Bea 71.60 55 P P **20 25 25.8 +0.6**
comp=Z,8.8nm,0.9s,mb4.7,baz=304,slow=4.5,SNR=34
T06C Millerton Lake 71.60 57 ⇑P P **20 25 25.4 +0.3**
baz=71
KCC Kaiser Creek 71.65 56 ⇓P P **20 25 25.4 -0.1**
baz=72
M12A Wells 71.75 51 P P **20 25 27.1 +1.2**
baz=72,SNR=12
R08A Mina 71.77 55 ⇑P P **20 25 26.1 -0.1**
baz=72,SNR=6.5
YNR Norris Junctio 72.01 46 *e*P P **20 25 29.1 +1.6**
YNR *e*pP pP 20 25 40.8 +0.4
K14A Jones Ranch, D 72.03 49 ⇓P P **20 25 27.2 -0.4**
baz=72
N12A Clover Valley, 72.04 51 P P **20 25 28.8 +1.1**
baz=72,SNR=6.5
YFT Old Faithful 72.10 46 *e*P P **20 25 30.4 +2.4**
MTUM Tungsten Hills 72.11 56 *e*P P **20 25 27.9 -0.3**
O11A Cowboy Ranch, 72.13 52 P P **20 25 29.1 +0.8**
baz=72,SNR=5.9
M13A Montello 72.22 50 P P **20 25 29.5 +0.7**
baz=72,SNR=6.0
HELL Mitchell Peak, 72.24 57 P P **20 25 28.8 -0.2**
baz=72,SNR=7.5
S08C White Mtn Res 72.26 56 P P **20 25 29.9 +0.9**
baz=72,SNR=8.2
R09A Tonopah 72.47 54 P P **20 25 30.8 +0.4**
baz=72,SNR=11
RLMT Red Lodge 72.50 45 *e*P P **20 25 30.8 +0.4**
comp=Z,20nm,1.6s,mb4.8
RLMT *e*pP pP 20 25 43.4 +0.1
Q10A Clear Creek Ra 72.51 54 ⇑P P **20 25 30.5 -0.1**
baz=72
O12A Currie 72.58 52 P P **20 25 31.7 +0.8**
baz=72,SNR=12
M14A Shep Mountain 72.60 50 ⇑P P **20 25 31.6 +0.6**
baz=72,SNR=6.4
MOOW Moose Ponds 72.61 47 *e*P P **20 25 32.1 +1.0**
comp=Z,24nm,1.4s,mb4.9
MOOW *e*pP pP 20 25 44.7 +0.7
TPAW Teton Pass 72.66 47 *e*P P **20 25 32.9 +1.5**
comp=Z,24nm,1.3s,mb5.0
TPAW *e*pP pP 20 25 45.2 +0.9
S09A Goldfield 72.70 55 P P **20 25 32.2 +0.5**
baz=72,SNR=9.4
LOHW Long Hollow 72.77 47 *e*P P **20 25 32.2 +0.2**
comp=Z,17nm,1.5s,mb4.8
LOHW *e*pP pP 20 25 45.7 +0.7
REDW Red Top Meadow 72.80 47 *e*P P **20 25 33.5 +1.3**
comp=Z,34nm,1.5s,mb5.0
PKM Peak Mountain 72.84 59 ⇓P P **20 25 32.3 -0.3**
baz=73
R10A Warm Springs 72.91 54 ⇑P P **20 25 33.9 +0.9**
baz=73
STKA Stephens Creek 72.93 181 *e*P P **20 25 32.1 -0.8**
comp=Z,6.0nm,1.2s,mb4.4
STKA Stephens Creek 72.93 181 P P **20 25 32.4 -0.5**
comp=Z,1.7nm,0.8s,mb4.0,baz=346,slow=8.3,SNR=3.9
STKA LR LR 21 00 01.8
comp=Z,148nm,18.6s,MS4.3,baz=27,slow=38
S10A Tonopah Range, 72.96 54 P P **20 25 33.8 +0.5**
baz=73,SNR=7.8
P12A McGill 72.99 52 P P **20 25 34.5 +1.0**
baz=73,SNR=6.5
N14A Grayback Hills 73.12 50 ⇑P P **20 25 34.0 -0.1**
baz=73
M15A Larsen Ranch, 73.14 49 ⇑P P **20 25 34.5 +0.2**
baz=73
ISA Isabella 73.22 57 ⇓P P **20 25 33.5 -1.4**
baz=73
R11A Troy Canyon, C 73.31 53 P P **20 25 35.8 +0.5**
baz=73,SNR=12
TRCR Troy Canyon 73.31 53 *e*P P **20 25 35.1 -0.1**
TRCR *e*pP pP 20 25 49.0 +0.8
Q12A Willow Creek R 73.32 53 P P **20 25 36.1 +0.8**
baz=73,SNR=5.0
DAC Darwin (Calif) 73.39 56 *e*P P **20 25 35.7 -0.1**
comp=Z,13nm,1.4s,mb4.7
DAC *e*pP pP 20 25 48.8 +0.1
DAC Darwin (Calif) 73.39 56 *e*P P **20 25 35.7 -0.1**
DAC *e**PP pP 20 25 48.8 +0.1
DAC pmax pmax
comp=Z,13nm,1.4s,mb4.7
HWUT Hardware Ranch 73.55 49 *e*P P **20 25 36.7 0.0**
comp=Z,28nm,1.5s,mb5.0
HWUT *e*pP pP 20 25 50.5 +0.9
MPMC Manual Prospec 73.59 56 P P **20 25 37.7 +0.7**
baz=73,SNR=6.3
FURC Furnace Creek, 73.72 56 ⇓P P **20 25 38.0 +0.3**
baz=74
DUG Dugway 73.76 51 *e*P P **20 25 38.9 +1.0**
comp=Z,29nm,1.4s,mb5.0
DUG *e*pP pP 20 25 50.5 -0.4
DUG Dugway 73.76 51 *e*P P **20 25 38.9 +1.0**
DUG *e**PP pP 20 25 50.5 -0.4
DUG pmax pmax
comp=Z,29nm,1.4s,mb5.0
DUG Dugway 73.76 51 ⇓P P **20 25 37.8 -0.1**
baz=74
TPNV Topopah Spring 73.79 55 *e*P P **20 25 38.6 +0.4**
comp=Z,23nm,1.2s,mb5.0
TPNV Topopah Spring 73.79 55 *e*P P **20 25 38.6 +0.4**
TPNV pmax pmax
comp=Z,23nm,1.2s,mb5.0
TPNV Topopah Spring 73.79 55 ⇑P P **20 25 38.8 +0.6**
baz=74
LRMC Laurel Mountai 73.83 57 ⇑P P **20 25 37.8 -0.7**
baz=74
BW06 Boulder Array 73.91 47 *e*P P **20 25 38.5 -0.3**
comp=Z,21nm,1.4s,mb4.9
BW06 *e*pP pP 20 25 50.6 -1.1
PDAR Pinedale Array 73.91 47 P P **20 25 38.7 0.0**
comp=Z,4.8nm,0.9s,mb4.4,baz=253,slow=1.8,SNR=24
PDAR LR LR 20 55 15.5
comp=Z,120nm,21.3s,MS4.2,baz=339,slow=33
R12A Pony Springs, 73.91 53 ⇑P P **20 25 38.7 -0.1**
baz=74
EDW2 Edwards Air Fo 74.02 58 ⇑P P **20 25 39.5 -0.1**
baz=74
T11A Corn Creek, Al 74.24 54 P P **20 25 41.4 +0.6**
baz=74,SNR=7.5
JLU Jordanelle 74.28 50 *e*P P **20 25 41.7 +0.8**
NLU North Lily Min 74.34 50 *e*P P **20 25 42.0 +0.6**
NLU *e*pP pP 20 25 54.7 +0.4
LVV L'vov 74.44 324 *e*P pP 20 25 57.2 +2.5
LVV *e* 20 26 03.4
LVV MLR MLR
comp=N,300nm,15.0s,MS4.8
LVV MLR MLR
comp=E,200nm,15.0s,MS4.8
LVV MLR MLR
comp=Z,300nm,15.0s,MS4.7
GSC Goldstone 74.50 57 ⇑P P **20 25 42.0 -0.4**
baz=74
DAU Daniels Canyon 74.52 50 *e*P P **20 25 43.7 +1.4**
DAU *e*pP pP 20 25 55.4 +0.1
MPU Maple Canyon 74.56 50 *e*P P **20 25 42.8 +0.2**
comp=Z,9.2nm,0.9s,mb4.7
MPU *e*pP pP 20 25 55.8 +0.3
SHPR Sheep Range 74.75 55 *e*P P **20 25 44.8 +1.0**
SHPR *e*pP pP 20 25 57.7 +1.0
S13A Holt Ranch, En 74.84 53 P P **20 25 45.0 +0.8**
baz=75,SNR=6.6
MALT Malatya 74.88 308 *e*P P **20 25 46.3 +1.8**
comp=Z,15nm,1.4s,mb4.7
MALT *e*pP pP 20 25 58.0 +0.5
MALT Malatya 74.88 308 *e*P P **20 25 46.3 +1.8**
MALT *e**PP pP 20 25 58.0 +0.5
MALT pmax pmax
comp=Z,15nm,1.4s,mb4.7
MALT Malatya 74.88 308 ⇓*i*P P **20 25 47.3 +2.8**
TUQ Turquoise Mtn. 74.97 56 ⇓P P **20 25 45.3 +0.3**
baz=75
KWP Kalwaria 75.17 324 *e*P P **20 25 47.0 +1.1**
KWP Kalwaria 75.17 324 ⇑*i*P P **20 25 46.6 +0.7**
U12A Valley of Fire 75.18 54 ⇓P P **20 25 47.1 +0.9**
baz=75
T13A Saint George 75.18 54 ⇑P P **20 25 47.5 +1.2**
baz=75
MSU Marysvale 75.23 52 *e*P P **20 25 47.4 +0.9**
MSU *e*pP pP 20 26 00.2 +0.7
V12A Nelson 75.44 55 P P **20 25 48.9 +1.2**
baz=75,SNR=5.1
BURAR Bucovina Array 75.51 322 ⇑P P **20 25 48.0 +0.1**
BURAR Bucovina Array 75.51 322 ⇑*i*P P **20 25 48.0 +0.1**
U13A Pakoon Wash 75.54 54 P P **20 25 49.2 +0.9**
baz=75,SNR=7.8
GMRC Granite Mounta 75.55 56 P P **20 25 49.0 +0.6**
baz=75,SNR=5.2
PFO Pinyon Flat Ob 75.81 58 LR LR 20 53 14.7
comp=Z,196nm,19.7s,MS4.4,baz=279,slow=31
PFO Pinyon Flat Ob 75.81 58 ⇓P P **20 25 48.5 -1.4**
baz=76
RWWY Rawlins 75.92 46 *e*P P **20 25 49.7 -0.7**
comp=Z,26nm,1.0s,mb5.1
OJC Ojcow 75.97 326 *e*P P **20 25 47.4 -3.1**
U14A Mt Trumbull 76.01 54 ⇓P P **20 25 51.3 +0.3**
baz=76
IRM Iron Mountain 76.28 57 ⇓P P **20 25 51.9 -0.7**
baz=76
TRPA Tarpa 76.35 323 ⇓*i*P P **20 25 53.1 +0.4**
BC3 Big Chuckw Mtn 76.42 57 ⇓P P **20 25 53.3 0.0**
baz=76
W13A Hualapai Mount 76.45 55 ⇓P P **20 25 53.8 +0.3**
baz=76
BRTR Keskin Array B 76.71 312 P P **20 25 55.1 +0.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 76.71 312 P P **20 25 55.0 +0.1**
comp=Z,0.9nm,0.7s,mb3.8,baz=53,slow=5.3,SNR=5.1
X13A Yucca 76.82 55 P P **20 25 56.0 +0.4**
baz=77,SNR=7.1
W14A Seligman 76.87 55 P P **20 25 56.5 +0.6**
baz=77,SNR=9.3
Y12C Blythe 76.94 57 ⇓P P **20 25 56.2 0.0**
baz=77
OKC Ostrava-Krasne 76.95 327 *e*P P **20 25 56.9 +0.9**
OKC *e*pP pP 20 26 09.2 +0.1
PV10 Paradox Valley 77.15 50 *e*P P **20 25 58.2 +0.8**
PV10 *e*pP pP 20 26 11.6 +1.2
VOIR 77.17 320 ⇓P P **20 25 58.4 +1.0**
VOIR 77.17 320 ⇓*i*P P **20 25 58.4 +1.0**
MORC Moravsky Berou 77.24 327 *e*P P **20 25 58.0 +0.4**
comp=Z,13nm,1.2s,mb4.7
MORC *e*pP pP 20 26 10.2 -0.5
MORC Moravsky Berou 77.24 327 ⇑*i*P P **20 25 58.0 +0.3**
DPC Dobruska-Polom 77.29 328 *e*P P **20 25 58.3 +0.4**
DPC *e*pP pP 20 26 11.0 0.0
W15A Williams 77.39 54 ⇑P P **20 25 59.4 +0.6**
baz=77
X14A Yava 77.48 55 P P **20 26 00.1 +0.8**
baz=77,SNR=7.8
WUAZ Wupatki 77.71 53 *e*P P **20 26 01.7 +1.2**
comp=Z,15nm,1.1s,mb4.8
WUAZ *e*pP pP 20 26 14.5 +1.0
WUAZ Wupatki 77.71 53 ⇓P P **20 26 00.8 +0.3**
baz=78
Y14A Wickenburg 77.76 56 ⇑P P **20 26 00.8 0.0**
baz=78
SMCO Snowmass 77.78 48 *e*P P **20 26 01.9 +1.0**
comp=Z,18nm,1.4s,mb4.8
CLL Collm 77.80 330 *e*P P **20 26 01.0 +0.2**
CLL *i* *PP pP 20 26 14.0 +0.2
CLL pmax pmax
comp=Z,14nm,1.5s,mb4.7
CLL Collm 77.80 330 *e*P P **20 26 01.0 +0.2**
comp=Z,14nm,1.5s,mb4.7
CLL *i* P(2) 20 26 06.6
CLL *i* pP pP 20 26 14.0 +0.2
X15A Humboldt 77.87 55 P P **20 26 02.5 +1.0**
baz=78,SNR=6.8
ISCO Idaho Springs 78.10 47 *e*P P **20 26 03.5 +0.8**
comp=Z,22nm,1.5s,mb4.9
ISCO Idaho Springs 78.10 47 *e*P P **20 26 03.5 +0.8**
ISCO pmax pmax
comp=Z,22nm,1.5s,mb4.9
MVCO Mesa Verde 78.26 51 ⇓P P **20 26 02.5 -1.1**
baz=78
PRU Pruhonice 78.28 329 *e*P P **20 26 07.9 +4.5**
PRU *e*pP pP 20 26 16.1 -0.4
BZS Buzias 78.66 322 ⇑*i*P P **20 25 57.8 -7.8**
115A Sonoran Desert 79.07 56 ⇓P P **20 26 08.1 0.0**
baz=79
KHC Kasperske Hory 79.34 329 *e*P P **20 26 09.6 +0.3**
KHC *e*PCP PcP 20 26 18.0 +0.6
KHC *e*pP pP 20 26 22.2 -0.1
GERES GERESS Array B 79.52 329 P P **20 26 09.3 -0.9**
comp=Z,0.3nm,0.3s,mb3.6,baz=53,slow=7.0,SNR=4.2
GERES LR LR 21 07 39.7
comp=Z,275nm,18.1s,MS4.6,baz=271,slow=40
SDCO Great Sand Dun 79.60 48 *e*P P **20 26 11.2 +0.2**
comp=Z,52nm,2.3s,mb5.1
SDCO *e*pP pP 20 26 23.9 -0.1
GRA1 Grafenberg Arr 79.78 330 *e*P P **20 26 11.6 -0.1**
comp=Z,6.0nm,1.2s,mb4.4
GRA1 LR LR
comp=Z,500nm,19.3s,MS4.9
GRF Grafenberg Arr 79.78 330 *e*P P **20 26 11.6 -0.1**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GRF MLR MLR
comp=Z,500nm,19.3s,MS4.9
GRF Grafenberg Arr 79.78 330 *e*P P **20 26 11.6 -0.1**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GRF MLR MLR
comp=Z,500nm,19.3s,MS4.9
GRF Grafenberg Arr 79.78 330 *e*P P **20 26 11.6 -0.1**
comp=Z,6.0nm,1.2s,mb4.4
GRF *e*L 21 04 26.4
comp=Z,488nm,19.3s

ECSD	EROS,Sioux Fal	79.87	39	eP	P	20 26 11.5	-0.8
	comp=Z,14nm,1.1s,mb4.8						
VTS	Vitosha	80.17	319	⇓P	P	20 26 13.9	0.0
VTS	Vitosha	80.17	319	⇓iP	P	20 26 13.9	0.0
SCHQ	Schefferville	80.86	17	P	P	20 26 16.9	-0.4
SCHQ				LR	LR	21 08 23.6	
SCHQ	Schefferville	80.86	17	P	P	20 26 16.9	-0.4
	comp=Z,2.5nm,0.8s,mb4.2,baz=348,slow=6.8,SNR=7.3						
SCHQ				LR	LR	21 08 23.6	
	comp=Z,137nm,18.3s,MS4.3,baz=340,slow=40						
ANMO	Albuquerque	81.02	51	eP	P	20 26 19.3	+0.7
	comp=Z,7.7nm,1.1s,mb4.5						
ANMO				epP	pP	20 26 31.6	-0.1
ANMO	Albuquerque	81.02	51	eP	P	20 26 19.3	+0.7
ANMO				e*PP	pP	20 26 31.6	-0.1
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CDF	Champ du Feu	82.28	332	eP	P	20 26 22.4	-2.6
EIL	Elat	82.83	303	P	P	20 26 30.1	+1.9
	comp=Z,3.9nm,0.8s,mb4.5,baz=90,slow=7.1,SNR=3.6						
MNTX	Cornudas Mount	83.95	53	eP	P	20 26 33.7	-0.2
	comp=Z,13nm,1.5s,mb4.8						
MNTX				epP	pP	20 26 47.3	+0.2
LOR	Lormes	84.45	333	eP	P	20 26 35.4	-0.8
	comp=Z,43nm,1.4s,mb5.1						
LOR	Lormes	84.45	333	eP	P	20 26 35.4	-0.8
	comp=Z,22nm,1.4s,mb5.1						
LOR	Lormes	84.45	333	eP	P	20 26 35.4	-0.8
LOR				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.1						
LPL	La Plagne	84.94	331	eP	P	20 26 38.3	-0.4
LPG	La Plagne	84.95	331	eP	P	20 26 38.3	-0.4
	comp=Z,16nm,1.0s,mb4.8						
LPG	La Plagne	84.95	331	eP	P	20 26 38.3	-0.4
	comp=Z,8.3nm,1.0s,mb4.8						
LPG	La Plagne	84.95	331	eP	P	20 26 38.3	-0.4
LPG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
AVF	Avril sur Loir	85.03	333	eP	P	20 26 38.3	-0.8
	comp=Z,26nm,1.0s,mb5.0						
AVF	Avril sur Loir	85.03	333	eP	P	20 26 38.3	-0.8
	comp=Z,13nm,1.0s,mb5.0						
AVF	Avril sur Loir	85.03	333	eP	P	20 26 38.3	-0.8
AVF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
PMOR	Pomariorio Ree	85.04	115	eT		22 00 14.2	
	comp=Z,15nm,0.2s						
WMOK	Wichita Mounta	85.52	47	eP	P	20 26 41.1	-0.6
	comp=Z,14nm,1.5s,mb5.0						
WMOK				epP	pP	20 26 54.9	-0.1
WMOK	Wichita Mounta	85.52	47	eP	P	20 26 41.1	-0.7
WMOK				e*PP	pP	20 26 54.9	-0.1
WMOK				pmax	pmax		
	comp=Z,14nm,1.5s,mb5.0						
PPT	Papeete	85.73	118	eLR	LR	20 53 51.0	
	comp=Z,566nm,21.2s,baz=314						
LTX	Lajitas	86.67	53	eP	P	20 26 47.7	+0.1
	comp=Z,24nm,1.8s,mb5.1						
LTX				epP	pP	20 27 01.1	+0.3
LTX	Lajitas	86.67	53	eP	P	20 26 47.7	+0.1
LTX				e*PP	pP	20 27 01.1	+0.3
LTX				pmax	pmax		
	comp=Z,24nm,1.8s,mb5.1						
TXAR	Lajitas Array	86.67	53	P	P	20 26 47.8	+0.2
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	86.67	53	P	P	20 26 47.8	+0.2
	comp=Z,3.7nm,0.9s,mb4.6,baz=292,slow=4.3,SNR=22						
KEST	Kesra	92.13	324	LR	LR	21 13 22.0	
	comp=Z,212nm,18.0s,MS4.6,baz=331,slow=38						
TKL	Tuckaleechee C	92.25	36	LR	LR	21 08 52.4	
	comp=Z,262nm,20.9s,MS4.7,baz=70,slow=36						
ESDC	Sonseca Array	93.79	335	LR	LR	21 15 52.8	
	comp=Z,378nm,18.2s,MS4.9,baz=30,slow=39						
TORD	Torodi Ar. Bea	114.88	318	PKP	PKiKP	20 32 43.5	-1.2
	comp=Z,0.3nm,0.8s,baz=33,slow=2.8,SNR=3.5						
LPAZ	La Paz	143.50	56	ePKPdf	PKPdf	20 33 36.5	-2.0
VNA2	Neumayer--Watz	146.80	197	ePKPdf	PKPdf	20 33 43.2	+0.7
VNA2				e		20 33 46.0	
VNA2				e		20 33 50.4	
VNA2				e		20 33 54.8	
VNA2				e		20 34 01.6	
VNA2				e		20 34 05.5	
VNA3	Neumayer Olymp	147.05	196	ePKPdf	PKPdf	20 33 43.6	+0.6
VNA3				e		20 33 46.6	
VNA3				e		20 33 50.8	
VNA3				e		20 33 55.2	
VNA3				e		20 34 02.1	
VNA3				e		20 34 05.6	

*NEIC **02** 20:19:17.3, 58.87N×134.37W, h5km, ML3.4(PMR), ML3.0(PGC), ML2.9(AEIC), After PGC.*

PGC 02 20:19:17.3±17.0**, 58.87N×134.37W, h5km, ML3.0**/3**, 55km Ese of Haines, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKAG	Skagway	0.77	320	eP	Pg	20 19 30.1	-1.9
WHY	Whitehorse	1.81	352	Pn	Pn	20 19 48.5	-0.6
WHY				Sg	Sg	20 20 15.1	-0.3
WHY				Trac			
SIT	Sitka	1.89	196	eP	Pn	20 19 48.5	-1.7
DLBC	Dease Lake	2.31	99	Pn	Pn	20 19 56.4	+0.5
DLBC				Pg	Pg	20 19 58.0	-3.5
DLBC				Sg	Sg	20 20 29.2	-2.3
DLBC	Dease Lake	2.31	99	Trac			
HYT	Haines Junctio	2.52	322	Pn	Pn	20 19 59.0	+0.3
HYT				Sg	Sg	20 20 35.2	-2.8
HYT	Haines Junctio	2.52	322	Trac			
WRAK	Wrangell Islan	2.69	155	ePn	Pn	20 20 02.5	+1.4
PNL	Peninsula	2.70	289	P	Pn	20 19 59.1	-2.1
DAWY	Dawson	5.74	337	Pn	Pn	20 20 42.8	-0.1
DAWY				Pg	Pg	20 21 01.0	-6.1
DAWY				Sg	Sg	20 22 14.9	-6.4
DAWY	Dawson	5.74	337	Pn	Pn	20 20 42.9	-0.1
DAWY				Pg	Pg	20 21 01.0	-6.1
DAWY				Sg	Sg	20 22 14.9	-6.4

*IDC **02** 20:22:57.2±0.8, 1.16S×127.22E, h0km, mb4.2/7, mb1 4.2/9, mb1mx4.1/19, mbtmp4.1/9, ML3.9/2, Error ellipse: s-maj=74.8km s-min=10.9km az=70.0*

*BJI **02** 20:22:57.8, 1.58S×127.48E, h35km, mB4.9, mb4.6*

*NEIC **02** 20:22:58.7±0.4, 1.08S×127.34E, h10km, mb4.6/13, Error ellipse: s-maj=16.8km s-min=6.5km az=66.0*

*ISCJB **02** 20:23:00.1±0.5, 1.11S±0.07×127.4E±0.1, h33km, mb4.4/22, Error ellipse: s-maj=19.8km s-min=8.1km az=158.6*

ISC 02 20:23:02.4±0.5**, 1.12S**±0.07×**127.3E**±0.1**, h35km, n32, σ1.04s**/33**, mb4.4**/22**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.96	186	Pn	Pn	20 26 57.1	+0.1
	0.1nm,0.3s,baz=350,slow=12,SNR=2.4						
KSM	Kuching	17.23	279	eP	Pn	20 26 58.0	-2.4
WRA	Warramunga Arr	19.92	160	P	Pn	20 27 30.3	-2.7
	0.9nm,0.3s,baz=345,slow=12,SNR=25						
WRA				S	S	20 31 16.1	+2.4
	0.1nm,0.3s,baz=334,slow=23,SNR=3.7						
WB2	Warramunga Arr	19.92	160	eP	Pn	20 27 31.8	-1.3
ASAR	Alice Springs	23.30	165	P	P	20 28 07.2	-0.3
	4.3nm,0.4s,mb4.2,baz=345,slow=12,SNR=34						
STKA	Stephens Creek	33.42	158	eP	P	20 29 39.5	+1.6
	4.6nm,0.8s,mb4.5						
STKA	Stephens Creek	33.42	158	eP	P	20 29 38.9	+0.9
	7.4nm,0.8s,mb4.7						
STKA	Stephens Creek	33.42	158	P	P	20 29 39.4	+1.5
	5.6nm,0.8s,mb4.6,baz=336,slow=11,SNR=11						
KSRS	Korea Array	38.39	1	P	P	20 30 20.7	+0.3
	1.1nm,0.8s,mb3.6,baz=171,slow=11,SNR=4.6						
XAN	Xi'an	39.03	335	P	P	20 30 26.0	+0.2
XAN				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.5						
LZH	Lanzhou	43.01	332	eP	P	20 31 04.2	+5.7
LZH				AP	pP	20 31 09.5	+0.6
LZH				XP	sP	20 31 12.1	-0.9
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,89nm,4.3s						
LSA	Lhasa	46.17	315	eP	P	20 31 24.6	+0.7
	comp=Z,3.4nm,0.7s,mb4.4						
TAPN	Taplejung	47.47	310	eP	P	20 31 33.7	-0.4
	comp=Z,4.3nm,0.5s,mb4.6						
ODAN	Odare	47.47	309	eP	P	20 31 34.2	0.0
	comp=Z,12nm,0.8s,mb4.9						
GTA	Gaotai	47.58	331	eP	P	20 31 35.3	+0.5
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.5						
JIRN	Jiri	48.79	309	eP	P	20 31 45.0	+0.6
KKN	Kakani	49.56	309	eP	P	20 31 50.8	+0.5
	comp=Z,17nm,1.0s,mb5.0						
GKN	Gorkha	50.17	309	eP	P	20 31 55.1	+0.3
	comp=Z,14nm,0.9s,mb5.0						
ULN	Ulaanbaatar	51.90	343	eP	P	20 32 07.2	-0.2
	comp=Z,2.1nm,0.6s,mb4.2						
SONM	Songino Array	52.07	342	P	P	20 32 08.9	+0.2
	comp=Z,1.1nm,0.8s,mb3.8,baz=154,slow=8.3,SNR=10						
SONM				PcP	PcP	20 33 20.9	+0.4
	comp=Z,0.6nm,0.8s,baz=163,slow=4.6,SNR=2.8						
MK31	Makanchi Array	61.89	327	eP	P	20 33 18.3	0.0
MKAR	Makanchi Array	61.89	327	P	P	20 33 18.6	+0.2
	comp=Z,3.4nm,0.5s,mb4.8,baz=118,slow=8.1,SNR=68						
YAK	Yakutsk	63.01	1	eP	P	20 33 24.8	-0.7
	comp=Z,5.9nm,0.6s,mb4.9						
UCH	Uchtor	64.17	319	eP	P	20 33 35.7	+2.1
	comp=Z,2.4nm,0.9s,mb4.2						
AAK	Ala-Archa	64.38	319	eP	P	20 33 37.0	+2.1
	comp=Z,2.5nm,1.0s,mb4.2						
AML	Almayashu	64.67	318	eP	P	20 33 37.3	+0.4
	comp=Z,3.1nm,0.8s,mb4.4						
ZALV	Zalesovo Beam	65.17	334	P	P	20 33 38.9	-1.0
	comp=Z,0.6nm,0.4s,mb4.0,baz=125,slow=7.2,SNR=5.0						
KURK	Kurchatov	66.15	329	eP	P	20 33 45.5	-0.7
	comp=Z,3.5nm,0.6s,mb4.6						
BRVK	Borovoye	71.78	328	eP	P	20 34 20.1	-1.1
TIXI	Tiksi	72.66	1	eP	P	20 34 24.6	-1.4
	comp=Z,1.2nm,0.5s,mb4.1						
AKTK	Aktyubinsk	77.83	322	P	P	20 34 56.1	-0.1
AKTO	Aktyubinsk	77.83	322	P	P	20 34 56.2	-0.1
	comp=Z,1.8nm,0.7s,mb4.1,baz=129,slow=6.5,SNR=4.2						

*IDC **02** 20:42:01.9±0.7, 18.25N×120.01E, h0km, mb4.0/14, mb1 4.2/16, mb1mx4.1/22, mbtmp4.1/16, ML3.8/2, MS3.8/2, Ms1 3.8/2, ms1mx3.1/40, Error ellipse: s-maj=27.7km s-min=14.6km az=73.0*

*BJI **02** 20:42:04.4, 17.82N×119.69E, h28km, mB4.8, mb4.0, Ms3.8, Msz3.5*

*MOS **02** 20:42:05.2±1.4, 18.33N×120.18E, h33km, mb4.3/7, Error ellipse: s-maj=25.1km s-min=9.9km az=109.8*

*NEIC **02** 20:42:07.5±1.5, 18.28N×120.18E, h38km±13km, mb4.4/8, Error ellipse: s-maj=14.3km s-min=8.7km az=58.0*

*ISCJB **02** 20:42:08.6±0.8, 18.44N±0.04×120.14E±0.08, h57km±9km, mb4.0/22, MS3.8/2, Error ellipse: s-maj=12.6km s-min=5.9km az=0.8*

*MAN **02** 20:42:12, 18.16N×120.32E, h12km, mb4.8, ML3.7, MS3.7*

ISC 02 20:42:10.2±0.7**, 18.40N**±0.03×**120.18E**±0.08**, h57km**±8km**, n57, σ1.08s**/64**, mb4.0**/22**, MS3.8**/2**, 2C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.90	145	eP	Pn	20 42 24.2	-2.5
APYP	Conner	1.14	117	eP	Pn	20 42 29.7	-0.3
APYP				eS	Sn	20 42 44.6	-0.2
CVP	Callao Caves	1.71	114	eP	Pn	20 42 38.4	+0.7
CVP				eS	Sn	20 43 07.3	+8.9
SGCP	Mt. Cagua	1.78	95	eP	Pn	20 42 40.3	+1.7
BCPH	Baguio City Da	2.04	169	⇓eP	Pn	20 42 40.2	-1.9
BCPH				eS	Sn	20 43 18.5	+12
CAUP	Cauayan	2.13	132	eP	Pn	20 42 45.2	+1.9
SCZP	Santa Cruz	2.62	186	eP	Pn	20 42 52.0	+2.0
PCPH	Palayan	2.95	163	⇓eP	Pn	20 42 55.8	+1.2
BALP	Baler	2.96	153	eP	Pn	20 42 55.6	+0.9
LUBP	Lubang	4.63	179	eP	Pn	20 43 22.0	+4.3
NACB	Ninganchiao	5.90	13	ePn	Pn	20 43 34.7	-0.3
NACB				Sn	Sn	20 44 42.1	+0.9
YHNB	Yeheng	6.34	10	ePn	Pn	20 43 39.8	-1.3
YHNB				eSn	Sn	20 44 51.7	-0.4
BUSP	Coron	6.36	180	eP	Pn	20 43 40.3	-1.0
QIZ	Qiongzhong	9.81	275	P	Pn	20 44 20.0	-8.6
QIZ				S	Sn	20 46 05.5	-12
QIZ				AMB	AMB		
	comp=Z,17nm,1.6s						
QIZ				LR	LR		
	comp=N,283nm,13.6s						
QIZ				LR	LR		
	comp=E,180nm,13.8s						
QIZ				LR	LR		
	comp=Z,264nm,19.4s						
JOW	Kunigami	11.24	40	Pn	Pn	20 44 46.4	-1.7
	comp=Z,1.6nm,0.3s,baz=157,slow=13,SNR=3.6						
JNU	Nakatsue	17.53	31	P	Pn	20 46 10.7	+0.1
	comp=Z,0.2nm,0.3s,baz=198,slow=6.4,SNR=6.3						
KSRS	Korea Array	20.17	18	P	P	20 46 40.4	+0.5
	comp=Z,7.9nm,1.0s,baz=198,slow=12,SNR=23						
LZH	Lanzhou	22.77	324	eP	P	20 47 09.0	+1.2
LZH				AP		20 47 17.5	
LZH				XP	sP	20 47 21.0	-6.7
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.4						
LZH	Lanzhou	22.77	324	eP	P	20 47 09.0	+1.2
	comp=Z,16nm,1.0s,mb4.4						
LZH				pP		20 47 17.5	
LZH				sP	sP	20 47 21.0	-6.7
MJAR	Matsushiro Arr	24.07	38	P	P	20 47 20.7	+0.5
	comp=Z,0.9nm,0.7s,mb3.3,baz=230,slow=9.7,SNR=4.0						
SONM	Songino Array	31.45	342	P	P	20 48 24.9	-1.2
	comp=Z,0.7nm,0.8s,mb3.5,baz=155,slow=8.8,SNR=5.7						
SONM				LR	LR	21 01 00.4	
	comp=Z,117nm,18.1s,MS3.6,baz=107,slow=36						
HABR	Khabarovsk	32.34	19	eP	P	20 48 31.0	-2.9
HABR				e		20 49 38.7	
HABR				e		20 51 18.1	
HABR				e		20 55 41.4	
ZAK	Zakamensk	34.65	341	eP	P	20 48 54.1	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.8						
WRA	Warramunga Arr	40.55	159	iP	P	20 49 42.7	-1.5
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	Warramunga Arr	40.55	159	P	P	20 49 41.1	-3.1
	comp=Z,3.6nm,0.7s,mb4.1,baz=342,slow=9.0,SNR=15						
MK31	Makanchi Array	42.03	321	eP	P	20 49 57.0	+0.9
MKAR	Makanchi Array	42.03	321	P	P	20 49 56.7	+0.7
MKAR	Makanchi Array	42.03	321	⇑eP	P	20 49 57.2	+1.2
MKAR	Makanchi Array	42.03	321	P	P	20 49 56.7	+0.7
	comp=Z,1.2nm,0.8s,mb3.5,baz=112,slow=9.6,SNR=10						
ASAR	Alice Springs	43.90	162	P	P	20 50 10.3	-1.0
	comp=Z,5.1nm,0.8s,mb4.3,baz=344,slow=7.4,SNR=48						
ZALV	Zalesovo Beam	44.70	331	P	P	20 50 17.2	-0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=116,slow=6.8,SNR=5.4						
ZAL	Zalesovo	44.71	331	P	P	20 50 17.2	-0.3
UCH	Uchtor	45.34	312	eP	P	20 50 24.1	+1.4
	comp=Z,3.2nm,0.9s,mb4.2						
KURK	Kurchatov	46.07	324	eP	P	20 50 28.1	-0.2
	comp=Z,3.4nm,0.8s,mb4.3						
KURK	Kurchatov	46.07	324	iP	P	20 50 28.6	+0.3
KBL	Kabul	48.02	300	eP	P	20 50 43.9	+0.1
BRVK	Borovoye	51.74	324	eP	P	20 51 11.9	+0.2
	comp=Z,2.3nm,0.8s,mb4.2						
TIXI	Tiksi	53.50	3	eP	P	20 51 24.4	0.0
	comp=Z,2.8nm,1.0s,mb4.2						
TIXI	Tiksi	53.50	3	iP	P	20 51 24.6	+0.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
STKA	Stephens Creek	54.04	157	eP	P	20 51 28.5	-0.4
	comp=Z,2.7nm,0.7s,mb4.3						
STKA				LR	LR	21 15 38.8	
STKA	Stephens Creek	54.04	157	P	P	20 51 28.7	-0.2
	comp=Z,3.2nm,0.8s,mb4.3,baz=346,slow=5.9,SNR=5.8						
STKA				LR	LR	21 15 38.8	
	comp=Z,123nm,18.1s,MS4.0,baz=162,slow=37						
BILL	Bilibino	57.43	19	eP	P	20 51 53.3	+0.6
	comp=Z,2.6nm,0.4s,mb4.6						
BILL	Bilibino	57.43	19	eP	P	20 51 53.5	+0.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
SVE	Sverdlovsk	58.22	326	⇓eP	P	20 51 58.6	+0.2
ARU	Arti	59.23	325	eP	P	20 52 05.0	-0.4
	comp=Z,2.7nm,0.5s,mb4.5						
ARU	Arti	59.23	325	d iP	P	20 52 04.5	-0.9
ARU						20 54 11.7	
ARU				eS	S	21 00 10.5	+1.5
ARU				SS	SS	21 03 59.9	-4.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
OBN	Obninsk	71.49	323	eP	P	20 53 21.8	-2.9
OBN				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ARCES	ARCESS Array B	74.55	339	P	P	20 53 42.5	-0.1
	comp=Z,4.2nm,1.0s,mb4.3,baz=82,slow=7.5,SNR=3.6						
FINES	FINESS Array B	75.97	330	iP	P	20 53 50.9	+0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	75.97	330	P	P	20 53 50.5	-0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=68,slow=6.2,SNR=16						
AKASG	Malin Array Be	76.58	319	P	P	20 53 53.4	-1.1
AKASG	Malin Array Be	76.58	319	P	P	20 53 53.4	-1.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=65,slow=6.1,SNR=2.4						
NOA	NORSAR Array B	82.89	332	P	P	20 54 28.1	-0.3
	comp=Z,0.6nm,0.6s,mb3.8,baz=64,slow=5.3,SNR=3.3						
GERES	GERESS Array B	86.70	321	P	P	20 54 48.0	+0.1
	comp=Z,0.2nm,0.4s,mb3.7,baz=66,slow=9.8,SNR=3.7						
YKA	Yellowknife Ar	88.65	22	P	P	20 54 58.3	+1.3
YKA	Yellowknife Ar	88.65	22	⇑eP	P	20 54 58.2	+1.2
YKA	Yellowknife Ar	88.65	22	P	P	20 54 58.3	+1.3
	comp=Z,0.9nm,0.6s,mb4.3,baz=315,slow=4.4,SNR=20						

IDC 02 20:50:25.4±2.2**, 0.99S×127.40E, h0km, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/16**, mbtmp3.4**/3**, MS3.9**/2**, Ms1 3.9**/2**, ms1mx3.1**/20**, Error ellipse: s-maj=194.6km s-min=26.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.02	161	P	P	20 55 00.5	+0.6
	0.6nm,0.4s,baz=343,slow=12,SNR=9.6						
ASAR	Alice Springs	23.41	165	P	P	20 55 35.9	-0.4
	0.5nm,0.3s,baz=346,slow=12,SNR=12						
CTA	Charters Tower	26.47	137	LR	LR	21 06 58.8	
	comp=Z,99nm,20.6s,baz=131,slow=38						
JHJ	Hachijo jima 2	35.88	18	LR	LR	21 08 47.2	
	comp=Z,461nm,21.8s,baz=53,slow=31						
MKAR	Makanchi Array	61.81	326	P	P	21 00 46.2	+0.1
	0.2nm,0.3s,baz=118,slow=8.2,SNR=5.4						

IDC 02 21:10:12.7±5.2**, 18.29S×174.27W, h0km, mb3.9**/4**, mb1 4.3**/4**, mb1mx3.9**/15**, mbtmp3.9**/4**, MS3.9**/12**, Ms1 3.9**/12**, ms1mx3.6**/33**, Error ellipse: s-maj=353.4km s-min=27.2km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.97	29	Pn	Pn	21 11 20.5	-8.1
	3.6nm,0.3s,baz=210,slow=20,SNR=6.0						
RAO	Raoul Island	11.41	196	LR	LR	21 16 17.2	
	comp=Z,405nm,18.2s,baz=37,slow=32						
RAR	Rarotonga	13.95	104	LR	LR	21 17 09.3	
	comp=Z,100nm,20.8s,baz=32,slow=30						
DZM	Mont Dzumac	18.49	255	LR	LR	21 20 15.2	
	comp=Z,428nm,21.8s,baz=100,slow=33						
HNR	Honiara	26.51	286	LR	LR	21 24 36.1	
	comp=Z,260nm,18.4s,baz=180,slow=33						
CTA	Charters Tower	37.27	261	LR	LR	21 30 24.8	
	comp=Z,154nm,19.1s,baz=61,slow=32						
WRA	Warramunga Arr	48.43	259	P	P	21 18 56.4	-0.8
	0.6nm,0.6s,baz=97,slow=8.0,SNR=4.6						
WRA				LR	LR	21 35 39.0	
	comp=Z,121nm,18.1s,baz=225,slow=32						
ASAR	Alice Springs	48.48	254	P	P	21 18 57.9	+0.4
	2.9nm,0.9s,baz=89,slow=8.3,SNR=15						
FITZ	Fitzroy Crossi	56.85	260	LR	LR	21 42 01.1	
	comp=Z,89nm,19.6s,baz=143,slow=34						
JOW	Kunigami	71.54	307	LR	LR	21 49 12.7	
	comp=Z,108nm,18.9s,baz=161,slow=33						
NVAR	Mina Array Bea	77.02	42	P	P	21 22 08.3	+0.8
	0.8nm,0.8s,baz=225,slow=8.9,SNR=4.3						
KSRS	Korea Array	77.64	316	LR	LR	21 53 01.8	
	comp=Z,81nm,19.2s,baz=336,slow=33						
PDAR	Pinedale Array	84.96	42	P	P	21 22 49.5	-0.3
	0.7nm,0.9s,baz=224,slow=3.8,SNR=4.0						
PDAR				LR	LR	21 55 35.3	
	comp=Z,46nm,19.7s,baz=258,slow=32						
CMIG	Matias Romero	85.62	71	LR	LR	21 51 37.9	
	comp=Z,70nm,19.0s,baz=6.6,slow=29						
LPAZ	La Paz	99.60	111	LR	LR	21 59 12.1	
	comp=Z,86nm,21.1s,baz=16,slow=30						
BRTR	Keskin Array B	147.79	317	PKPbc	PKPbc	21 29 59.7	-0.1
	0.7nm,0.8s,baz=56,slow=3.1,SNR=4.9						
GERES	GERESS Array B	148.84	350	PKPbc	PKPbc	21 30 01.8	-0.4
	0.7nm,0.9s,baz=20,slow=3.1,SNR=3.6						

*IDC **02** 21:10:43.6±0.8, 46.54N×155.52E, h0km, mb3.6/11, mb1 3.8/13, mb1mx3.7/24, mbtmp3.6/13, ML3.3/1, Error ellipse: s-maj=22.5km s-min=18.7km az=147.0*

*ISCJB **02** 21:10:46.7±0.7, 46.5N±0.1×155.4E±0.2, h33km, mb3.6/11, Error ellipse: s-maj=19.9km s-min=12.6km az=149.0*

*MOS **02** 21:10:47.5±1.3, 46.54N×155.38E, h43km, mb4.0/5, Error ellipse: s-maj=26.0km s-min=20.6km az=56.2*

ISC 02 21:10:48.9±0.7**, 46.5N**±0.1×**155.4E**±0.2**, h35km, n20, σ1.07s**/20**, mb3.6**/11**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.19	6	ePN	Pn	21 11 42.0	-8.3
ASAJ	Asahikawa	9.36	260	Pn	Pn	21 13 01.6	+0.4
	0.3nm,0.3s,baz=86,slow=16,SNR=4.1						
MJAR	Matsushiro Arr	16.27	238	Pn	Pn	21 14 33.7	-0.9
	baz=32,slow=13,SNR=3.3						
SONM	Songino Array	32.92	291	P	P	21 17 19.7	+0.1
SONM	Songino Array	32.92	291	P	P	21 17 19.7	+0.1
	0.3nm,0.7s,mb3.3,baz=54,slow=7.3,SNR=3.2						
ZALV	Zalesovo Beam	44.04	307	P	P	21 18 51.8	-1.0
	0.4nm,0.5s,mb3.4,baz=57,slow=5.3,SNR=3.1						
MKAR	Makanchi Array	48.47	299	P	P	21 19 27.4	-0.3
	0.2nm,0.2s,mb3.7,baz=71,slow=5.7,SNR=3.1						
YKA	Yellowknife Ar	50.15	37	P	P	21 19 38.4	-1.9
	0.3nm,0.6s,mb3.5,baz=294,slow=6.6,SNR=3.9						
PDAR	Pinedale Array	63.58	55	P	P	21 21 16.8	+1.0
	0.7nm,1.0s,mb3.6,baz=323,slow=1.4,SNR=3.0						
FINES	FINESS Array B	64.92	336	P	P	21 21 23.5	-0.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	64.92	336	P	P	21 21 23.5	-0.8
	comp=Z,0.6nm,0.5s,mb3.9,baz=44,slow=7.0,SNR=11						
WRA	Warramunga Arr	68.85	201	P	P	21 21 49.1	-0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	68.85	201	P	P	21 21 49.1	-0.5
	comp=Z,1.0nm,0.8s,mb3.8,baz=20,slow=6.8,SNR=5.8						
NOA	NORSAR Array B	68.95	342	P	P	21 21 51.9	+2.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	68.95	342	P	P	21 21 51.9	+2.0
	comp=Z,0.5nm,0.7s,mb3.5,baz=27,slow=6.5,SNR=2.7						
ASAR	Alice Springs	72.53	201	P	P	21 22 13.3	+1.3
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	72.53	201	P	P	21 22 13.3	+1.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=18,slow=5.3,SNR=8.8						
AKASG	Malin Array Be	72.62	327	P	P	21 22 13.8	+1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	72.62	327	P	P	21 22 13.8	+1.5
	comp=Z,1.3nm,0.8s,mb3.9,baz=35,slow=3.2,SNR=2.4						
TXAR	Lajitas Array	76.20	62	P	P	21 22 33.0	-0.6
	comp=Z,0.4nm,0.6s,mb3.5,baz=288,slow=5.7,SNR=4.7						

IDC 02 21:20:50.9±2.1**, 1.49N×126.81E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=173.3km s-min=25.0km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.54	161	P	P	21 25 51.5	-1.2
	0.6nm,0.4s,baz=340,slow=11,SNR=20						
ASAR	Alice Springs	25.94	165	P	P	21 26 26.6	+1.4
	0.2nm,0.4s,baz=345,slow=11,SNR=4.6						
MKAR	Makanchi Array	59.44	326	P	P	21 30 55.5	0.0
	0.2nm,0.4s,baz=118,slow=8.1,SNR=3.1						

IDC 02 21:41:27.4±3.0**, 5.69S×147.77E, h165km**±38km**, mb3.2**/4**,**

mb1 3.3/6,mb1mx3.2/15,mbtmp3.1/6,Error ellipse: s-maj=75.0km s-min=26.2km az=111.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.74**	**189**	P	Pn	21 42 26.4	+1.7
	0.7nm,0.3s,baz=17,slow=11,SNR=3.0						
PMG				S	Sn	21 43 09.4	0.0
	5.4nm,0.3s,baz=221,slow=20,SNR=13						
WRA	**Warramunga Arr**	**19.27**	**221**	P	P	21 45 39.8	+0.4
	0.5nm,0.3s,baz=49,slow=12,SNR=30						
ASAR	**Alice Springs**	**22.31**	**215**	P	P	21 46 12.4	+0.9
	2.1nm,0.4s,baz=48,slow=8.5,SNR=53						
FITZ	**Fitzroy Crossi**	**24.88**	**238**	P	P	21 46 34.7	-0.4
	1.2nm,0.5s,baz=47,slow=16,SNR=7.5						
SONM	**Songino Array**	**64.51**	**330**	P	P	21 51 46.8	+0.3
	0.3nm,0.7s,baz=149,slow=5.8,SNR=2.8						
MKAR	**Makanchi Array**	**77.75**	**320**	P	P	21 53 05.2	-0.9
	0.2nm,0.7s,baz=120,slow=7.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**145.75**	**285**	PKPbc	PKPbc	22 00 47.0	-1.1
	0.4nm,0.6s,baz=87,slow=3.0,SNR=7.7						

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*ISK **02** 22:00:20.6,3946N×2621E,h8km,MD3.1*
*NEIC **02** 22:00:20.0,3945N×2616E,h8km,MD3.4(ATH), MD3.2(ISK),After ISK.*
*ATH **02** 22:00:21.2,3945N×2634E,h28km±2km,MD3.4/5*
*ISCJB **02** 22:00:21.1±0.5,3948N±002×2622E±004,h5km±4km, Error ellipse: s-maj=4.9km s-min=2.8km az=164.9*
*CSEM **02** 22:00:21.5±0.1,3948N×2630E,h12km,MD3.4,Error ellipse: s-maj=1.9km s-min=1.2km az=73.0*
*THE **02** 22:00:22.9,3947N×2621E,h11km,ML3.9*
*DDA **02** 22:00:22.4,3950N×2627E,h5km,Md3.1*
ISC 02 22:00:22.0±0.4,**3948N**±002×**2623E**±004,**h10**km±3km,**n33**, σ**0^{s}75**/47,**1C,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.24**	**173**	ePB	**Pg**	**22 00 27.4**	**+0.5**
PRK				eSB	**Sg**	**22 00 31.6**	**+1.4**
EZN	**Ezine**	**0.35**	**12**	i PG	**Pg**	**22 00 28.8**	**-0.1**
EZN				i SG	**Sg**	**22 00 34.0**	**+0.4**
BOZC	**Bozcaada**	**0.38**	**339**	i P	**Pg**	**22 00 29.7**	**+0.1**
BOZC				i S	**Sg**	**22 00 35.0**	**+0.2**
AYVA	**Ayvalik**	**0.39**	**116**	i P	**Pg**	**22 00 29.6**	**-0.1**
AYVA				i S	**Sg**	**22 00 35.6**	**+0.6**
GADA	**Gvkgeada**	**0.75**	**340**	PG	**Pg**	**22 00 36.0**	**-0.5**
LIA	**Limnos Island**	**0.91**	**297**	⇑iPN	**Pn**	**22 00 42.2**	**+1.4**
LIA				eSN	**Sn**	**22 00 54.6**	**+0.7**
LPK	**Lapseki**	**0.97**	**24**	PG	**Pg**	**22 00 40.1**	**-0.7**
LOS	**Limnos**	**1.00**	**297**	ePg	**Pg**	**22 00 41.5**	**+0.3**
CHOS	**Chios island**	**1.10**	**187**	ePg	**Pg**	**22 00 42.4**	**-0.8**
CHOS				eSg	**Sg**	**22 00 58.7**	**+1.1**
URLA	**Izmir**	**1.16**	**166**	i P	**Pb**	**22 00 43.4**	**-0.6**
URLA				i S	**Sb**	**22 00 59.0**	**0.0**
ENEZ	**Enez**	**1.25**	**357**	PN	**Pn**	**22 00 45.4**	**-0.1**
BLCB	**Balcova**	**1.27**	**150**	PN	**Pn**	**22 00 45.0**	**-0.6**
BLCB				SN	**Sn**	**22 01 02.5**	**-0.1**
BLCB	**Balcova**	**1.27**	**150**	ePg	**Pg**	**22 00 45.4**	**-0.9**
BLCB				eSg	**Sg**	**22 01 02.5**	**-0.2**
BALB	**Balikesir**	**1.28**	**82**	PN	**Pn**	**22 00 45.3**	**-0.6**
BALB				SN	**Sn**	**22 01 04.1**	**+1.0**
KDAG	**Bornova**	**1.35**	**143**	i P	**Pn**	**22 00 48.5**	**+1.7**
KDAG				i S	**Sb**	**22 01 05.2**	**+0.7**
IZM	**Izmir**	**1.35**	**143**	PN	**Pn**	**22 00 46.1**	**-0.7**
AKS	**Akhisar**	**1.37**	**116**	PN	**Pn**	**22 00 46.3**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.40**	**31**	PN	**Pn**	**22 00 46.8**	**-0.8**
SART	**Tekirdag**	**1.41**	**31**	i P	**Pn**	**22 00 47.4**	**-0.2**
SART				i S	**Sn**	**22 01 06.8**	**+0.6**
ALN	**Alexandroupoli**	**1.42**	**354**	ePg	**Pg**	**22 00 47.9**	**-1.3**
ALN				eSg	**Sg**	**22 01 06.7**	**-1.0**
MFT	**Murefte**	**1.53**	**31**	PN	**Pn**	**22 00 49.5**	**+0.2**
MRMT	**Marmara Adasi**	**1.53**	**43**	PN	**Pn**	**22 00 49.5**	**+0.2**
BNT	**Bandirma**	**1.56**	**56**	PN	**Pn**	**22 00 49.4**	**-0.3**
RDO	**Rodhopi**	**1.74**	**342**	ePN	**Pn**	**22 00 52.4**	**+0.2**
SMG	**Samos**	**1.83**	**165**	ePN	**Pn**	**22 00 52.5**	**-1.0**
SMG				eSN	**Sn**	**22 01 14.9**	**-1.8**
DST	**Dursunbey**	**1.85**	**85**	PN	**Pn**	**22 00 54.2**	**+0.4**
KULA	**Kula-Manisa**	**2.12**	**116**	ePN	**Pn**	**22 00 57.4**	**-0.1**
PLG	**Polygyros**	**2.32**	**293**	ePN	**Pn**	**22 01 00.6**	**+0.4**
EDRB	**Edirne**	**2.39**	**9**	ePN	**Pn**	**22 01 01.5**	**+0.3**
APE	**Apeiranthos**	**2.47**	**193**	ePN	**Pn**	**22 01 01.2**	**-1.1**
NVR	**Nevrokopi**	**2.60**	**317**	ePN	**Pn**	**22 01 04.1**	**+0.1**
IZI	**Iznik**	**2.63**	**70**	ePN	**Pn**	**22 01 05.2**	**+0.7**
YLV	**Yalova**	**2.64**	**65**	ePN	**Pn**	**22 01 05.7**	**+1.1**

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*TIF **02** 22:21:40.9,4277N×4628E,h28km±4km*
*MOS **02** 22:21:42.3±0.4,4262N×4603E,h6km,mb3.5/1,Error ellipse: s-maj=58.7km s-min=11.8km az=25.9*
ISC 02 22:21:40.4±1.8,**428N**±01×**463E**±01,**h6**km±8km,**n9**, σ**0^{s}58**/17,**1C-1D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**1.15**	**285**	ePG	**Pg**	**22 22 02.1**	**-0.2**
SNJR				eS	**Sg**	**22 22 17.7**	**+0.5**
BTKR	**Batakoyurt**	**1.43**	**295**	ePG	**Pg**	**22 22 07.2**	**-0.6**
BTKR				eS	**Sb**	**22 22 26.8**	**+0.9**
LACR	**Lac**	**1.49**	**272**	⇓iPG	**Pn**	**22 22 06.9**	**-0.8**
LACR				i S	**Sn**	**22 22 26.4**	**-1.1**
DGRG	**David-gareji**	**1.51**	**208**	P	**Pn**	**22 22 09.2**	**+1.3**
ARNR	**Ardon**	**1.55**	**286**	ePG	**Pn**	**22 22 08.6**	**+0.1**
ARNR				eS	**Sn**	**22 22 29.4**	**+0.4**
KORR	**Kora**	**1.68**	**281**	ePG	**Pn**	**22 22 10.4**	**+0.1**
KORR				eS	**Sn**	**22 22 32.5**	**+0.3**
ZEI	**Tsey**	**1.79**	**270**	ePG	**Pn**	**22 22 11.4**	**-0.3**
ZEI				eS	**Sn**	**22 22 34.3**	**-0.4**
LSNR	**Lesken**	**1.90**	**286**	ePN	**Pn**	**22 22 13.5**	**+0.2**
LSNR				eS	**Sn**	**22 22 38.0**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.02**	**274**	⇑iPN	**Pn**	**22 22 14.7**	**-0.3**
DIGR				eS	**Sn**	**22 22 40.3**	**-0.2**

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*ISCJB **02** 22:42:55.7±0.8,3784N±004×2116E±005,h6km,Error ellipse: s-maj=6.8km s-min=4.7km az=31.0*
*ATH **02** 22:42:55.8,3786N×2120E,h5km±2km,MD3.3/3*
*NEIC **02** 22:42:55.8,3786N×2120E,h5km,MD3.3(ATH),After ATH.*
*CSEM **02** 22:42:56.6±0.1,3790N×2117E,h6km±1km,MD3.3,Error ellipse: s-maj=2.7km s-min=0.9km az=34.0*
*THE **02** 22:42:56.5,3784N×2117E,h3km,ML3.4*
ISC 02 22:42:55.9±0.9,**3784N**±005×**2114E**±005,**h3**km±11km,**n11**, σ**1^{s}11**/16,**1C-1D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.34**	**49**	ePG	**Pg**	**22 43 00.9**	**-1.6**
RLS				eSG	**Sg**	**22 43 05.8**	**-1.1**
KFL	**Anninata**	**0.39**	**314**	ePg	**Pg**	**22 43 04.2**	**+0.7**
VLS	**Valsamata**	**0.55**	**308**	⇑iPB	**Pg**	**22 43 07.2**	**+0.7**
SELA	**Sela**	**0.74**	**53**	ePg	**Pg**	**22 43 08.8**	**-1.3**
SELA				eSg	**Sg**	**22 43 20.5**	**+0.8**
ITM	**Ithomi**	**0.91**	**136**	⇓iPB	**Pb**	**22 43 12.6**	**-1.7**
LKD	**Levkas**	**0.95**	**336**	ePg	**Pg**	**22 43 13.6**	**-0.6**
LKD				eSg	**Sg**	**22 43 30.3**	**+3.8**
VLX	**Vlachokerasia**	**1.09**	**115**	ePg	**Pg**	**22 43 17.0**	**+0.2**
VLX				eSg	**Sg**	**22 43 32.3**	**+1.4**
LTK	**Loutraki**	**1.46**	**82**	ePg	**Pg**	**22 43 23.1**	**-0.7**
LTK				eSg	**Sg**	**22 43 44.8**	**+2.1**
DID	**Didima**	**1.69**	**101**	ePb	**Pn**	**22 43 26.3**	**-0.1**
VLI	**Veliai**	**1.82**	**127**	ePN	**Pb**	**22 43 29.8**	**0.0**
THL	**Klokotos Trika**	**1.86**	**21**	ePN	**Pn**	**22 43 29.6**	**+1.0**

MEX 02 22:50:12.8±1.1,**1692N**×**9472W**,**h126**km±11km,**MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.24**	**317**	i P	Pn	22 50 29.2	-1.0
CMIG				i S	Sn	22 50 41.2	-2.1
HUIG	**Huatulco**	**1.76**	**230**	i P	Pn	22 50 41.7	-1.9
HUIG				i S	Sn	22 51 06.0	-1.1
OXX	**Oaxaca**	**1.93**	**275**	eP	Pn	22 50 45.5	-0.1
VHO	**Vista Hermosa**	**1.94**	**275**	i P	Pn	22 50 45.1	-0.6
VHO				i S	Sn	22 51 09.2	-1.7

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*BJI **02** 23:22:08.1,5133N×9821E,h10km,mB4.5,mb4.1,Ms4.0, Msz4.0*
*ASRS **02** 23:22:09.9±0.7,5092N×9807E,h15km,Ms3.8*
*BYKL **02** 23:22:10.3±0.7,5086N×9802E*
*IDC **02** 23:22:11.1±0.8,5114N×9837E,h0km,mb3.7/7, mb1 3.7/10,mb1mx3.5/24,mbtmp3.5/10,ML2.9/3,MS2.8/1, Ms1 2.8/1,ms1mx2.4/31,Error ellipse: s-maj=25.4km s-min=13.0km az=21.0*
*ISCJB **02** 23:22:11.1±0.3,5116N±004×9841E±003,h10km,mb3.6/9, Error ellipse: s-maj=5.9km s-min=2.7km az=2.7*
*MOS **02** 23:22:12.3±2.0,5097N×9813E,h17km,mb4.8/7,Error ellipse: s-maj=10.0km s-min=9.1km az=137.0*
*NEIC **02** 23:22:13.1±0.6,5107N×9834E,h10km,mb3.8/5,Error ellipse: s-maj=13.6km s-min=8.4km az=201.0*
ISC 02 23:22:13.1±0.3,**5111N**±004×**9834E**±003,**h10**km,**n84**, σ**1^{s}57**/103,**mb3.6**/9,**5C-3D,Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.70**	**32**	ePN	**Pg**	**23 22 46.7**	**+0.9**
ORL				e		23 23 13.0	
ORL				pmax	pmax		
	comp=Z,398nm,0.6s						
ORL				smax			
	comp=E,2μm,0.7s						
ORL	**Orlik**	**1.70**	**32**	⇑iPg	**Pg**	**23 22 46.6**	**+0.8**
ORL				Pmax		23 22 48.5	
	comp=E,384nm,0.9s						
ORL				i Sg	**Sg**	**23 23 13.2**	**+5.4**
ORL				Smax		23 23 17.8	
	comp=E,2μm,1.6s						
MOY	**Mondy**	**1.76**	**70**	⇑iPN	**Pg**	**23 22 47.2**	**+0.4**
MOY				e		23 23 13.7	
MOY				pmax	pmax		
	comp=Z,380nm,0.4s						
MOY				smax			
	comp=N,3μm,0.6s						
MOY	**Mondy**	**1.76**	**70**	ePg	**Pg**	**23 22 47.2**	**+0.4**
MOY				Pmax		23 22 48.8	
	comp=N,381nm,0.4s						
MOY				i Sg	**Sg**	**23 23 14.2**	**+4.6**
MOY				e		23 23 16.9	
MOY				Smax		23 23 17.5	
	comp=N,3μm,1.2s						
TDJR	**Todzha**	**1.90**	**314**	e	**Pn**	**23 22 42.4**	**-3.2**
TDJR				⇑iPg	**Pg**	**23 22 46.2**	**-3.4**
TDJR				i Sg	**Sg**	**23 23 12.7**	**-1.5**
KZLR	**Kyzyl**	**2.50**	**285**	ePg	**Pg**	**23 22 53.5**	**-7.6**
KZLR				eSg	**Sg**	**23 23 25.1**	**-8.4**
ARS	**Arshan**	**2.68**	**71**	ePN	**Pn**	**23 22 59.8**	**+3.5**
ARS				e		23 23 04.7	
ARS				e		23 23 41.9	
ARS				pmax	pmax		
	comp=Z,153nm,0.3s						
ARS				smax			
	comp=E,2μm,0.6s						
ARS	**Arshan**	**2.68**	**71**	ePn	**Pn**	**23 22 59.7**	**+3.4**
ARS				ePg	**Pg**	**23 23 03.1**	**-1.4**
ARS				Pmax		23 23 14.3	
	comp=E,201nm,0.6s						
ARS				eSg	**Sg**	**23 23 41.6**	**+2.4**
ARS				Smax		23 23 48.6	
	comp=E,2μm,0.8s						
ZAK	**Zakamensk**	**3.22**	**101**	ePN	**Pn**	**23 23 04.7**	**+1.0**
ZAK				e		23 23 54.6	
ZAK				pmax	pmax		
	comp=Z,216nm,0.6s						
ZAK				smax			
	comp=N,1μm,0.6s						
ZAK	**Zakamensk**	**3.22**	**101**	ePn	**Pn**	**23 23 04.7**	**+1.0**
ZAK				ePg	**Pg**	**23 23 10.4**	**-4.4**
ZAK				Pmax		23 23 11.6	
	comp=N,216nm,0.8s						
ZAK				e		23 23 14.3	
ZAK				eSg	**Sg**	**23 23 54.8**	**-1.8**
ZAK				Smax		23 24 01.9	
	comp=N,1μm,1.9s						
TLY	**Talaya**	**3.37**	**78**	ePn	**Pn**	**23 23 08.0**	**+2.2**
TLY				e		23 23 14.8	
TLY				eSn	**Sg**	**23 24 02.3**	**+0.8**
TLY	**Talaya**	**3.37**	**78**	ePN	**Pn**	**23 23 08.5**	**+2.7**
TLY				e		23 23 14.8	
TLY				e		23 24 02.3	
TLY				pmax	pmax		
	comp=Z,66nm,0.5s						
TLY				smax			
	comp=N,1μm,1.6s						
TLY	**Talaya**	**3.37**	**78**	ePn	**Pn**	**23 23 08.2**	**+2.4**
TLY				⇑iPg	**Pg**	**23 23 15.1**	**-2.6**
TLY				Pmax		23 23 28.6	
	comp=N,92nm,0.9s						
TLY				eSg	**Sg**	**23 24 02.4**	**+1.0**
TLY				Smax		23 24 07.7	
	comp=N,1μm,1.5s						
ARDR	**Aradan**	**3.38**	**298**	ePn	**Pn**	**23 23 05.2**	**-0.7**
ARDR				⇓iPg	**Pg**	**23 23 09.1**	**-8.8**
ARDR				eSg	**Sg**	**23 23 52.5**	**-9.2**
IRK	**Irkutsk**	**3.87**	**71**	ePN	**Pb**	**23 23 24.1**	**+2.8**
IRK				e		23 24 16.6	
IRK				pmax	pmax		
	comp=Z,153nm,0.4s						
IRK				smax			
	comp=N,2μm,1.0s						
IRK	**Irkutsk**	**3.87**	**71**	ePg	**Pg**	**23 23 24.2**	**-2.9**
IRK				Pmax		23 23 31.4	
	comp=N,22nm,1.1s						
IRK				eSg	**Sg**	**23 24 17.5**	**+0.3**
IRK				Smax		23 24 19.0	
	comp=N,217nm,1.1s						
LSTR	**Listvyanka**	**4.13**	**77**	ePN	**Pn**	**23 23 19.6**	**+3.4**
LSTR				e		23 23 28.5	
LSTR				e		23 24 24.2	
LSTR				pmax	pmax		
	comp=Z,43nm,1.4s						
LSTR				smax			
	comp=N,315nm,1.0s						
LSTR	**Listvyanka**	**4.13**	**77**	ePn	**Pn**	**23 23 19.5**	**+3.3**
LSTR				⇑iPg	**Pg**	**23 23 27.7**	**-4.5**
LSTR				Pmax		23 23 33.6	
	comp=N,39nm,1.0s						
LSTR				i Sg	**Sg**	**23 24 25.2**	**-0.5**
LSTR				Smax		23 24 32.2	
	comp=N,311nm,1.0s						
CERR	**Cheremushki**	**4.62**	**295**	ePN	**Pb**	**23 23 32.7**	**-1.5**
CERR				e		23 24 31.5	
CERR	**Cheremushki**	**4.62**	**295**	i Pg	**Pb**	**23 23 32.7**	**-1.5**
CERR				i Sg	**Sb**	**23 24 31.5**	**+1.6**
STDB	**Stepnoy Dvoret**	**5.11**	**75**	eSg	**Sg**	**23 24 55.5**	**-1.7**
STDB				Smax		23 25 28.3	
	comp=N,1μm,1.3s						
TRG	**Tyrgan**	**5.23**	**68**	ePn	**Pn**	**23 23 33.0**	**+1.8**
TRG				e		23 23 44.0	
TRG				max		23 24 06.9	
	comp=N,33nm,0.7s						
TRG				eSg	**Sg**	**23 24 59.7**	**-1.1**
TRG				Smax		23 25 05.6	
	comp=N,345nm,2.0s						
KAB	**Kabansk**	**5.27**	**76**	eSg	**Sg**	**23 25 01.0**	**-1.3**
KAB				Smax		23 25 20.0	
	comp=N,959nm,1.8s						
SONM	**Songino Array**	**6.19**	**119**	Pn	**Pn**	**23 23 43.2**	**-1.2**
	comp=N,0.4nm,0.3s,baz=303,slow=14,SNR=16						
SONM				Pg	**Pg**	**23 24 02.3**	**-9.3**
	comp=N,4.7nm,0.3s,baz=292,slow=18,SNR=71						
SONM				Lg		23 25 27.1	
	comp=N,10nm,0.3s,baz=294,slow=29,SNR=11						
OGRR	**Ongureny**	**6.21**	**62**	ePN	**Pb**	**23 23 57.9**	**-3.4**
OGRR				eS	**Sg**	**23 25 29.7**	**-2.7**
OGRR				smax			
	comp=E,700nm,1.4s						
OGRR	**Ongureny**	**6.21**	**62**	ePn	**Pn**	**23 23 47.6**	**+2.8**
OGRR				ePg	**Pg**	**23 24 07.9**	**-4.1**
OGRR				Pmax		23 24 20.8	
	comp=E,32nm,0.7s						
OGRR				i Sg	**Sg**	**23 25 31.5**	**-0.9**
OGRR				Smax		23 25 34.8	
	comp=E,711nm,1.3s						
ULN	**Ulaanbaatar**	**6.54**	**116**	ePn	**Pn**	**23 23 48.1**	**-1.1**
	comp=E,18nm,0.4s						
ULN				e		23 24 08.2	
ULN				eSn	**Sg**	**23 25 39.2**	**-3.7**
ULN	**Ulaanbaatar**	**6.54**	**116**	ePN	**Pn**	**23 23 48.2**	**-1.1**
ULN				pmax	pmax		
	comp=Z,18nm,0.4s						
ULN	**Ulaanbaatar**	**6.54**	**116**	ePg	**Pg**	**23 24 08.9**	**-9.4**
ULN				i Sg	**Sg**	**23 25 35.8**	**-7.1**
AKAR	**Aktash**	**6.85**	**268**	ePg	**Pb**	**23 24 11.0**	**-1.2**
AKAR				eSg	**Sb**	**23 25 37.3**	**+3.3**
SYVR	**Suvo**	**7.58**	**66**	eSg	**Sg**	**23 26 15.1**	**-1.1**
SYVR				Smax		23 26 19.2	
	comp=Z,247nm,2.5s						
ELT	**Yel'tsovka**	**7.75**	**291**	eSg	Sx	23 26 08.4	
NIZ	**Nizh Angarsk**	**8.16**	**51**	eP	**Pn**	**23 24 15.7**	**+4.2**
NIZ				pmax	pmax		
	comp=Z,17nm,0.6s						
NIZ	**Nizh Angarsk**	**8.16**	**51**	ePn	**Pn**	**23 24 15.1**	**+3.6**
NIZ				ePg	Pn	23 24 42.6	+31
NIZ				Pmax		23 24 56.0	
	comp=Z,13nm,0.7s						
NIZ				eSn	**Sn**	**23 25 56.4**	**+13**
NIZ				eSg	Sn	23 26 32.2	+49
NIZ				Smax		23 26 38.0	
	comp=Z,672nm,1.7s						
YLYR	**Ulyunkhan**	**8.61**	**59**	ePn	**Pn**	**23 24 22.4**	**+4.8**
YLYR				ePg	Pn	23 24 51.0	+33
YLYR				Pmax		23 25 05.1	
	comp=Z,6.0nm,0.8s						
YLYR				e		23 26 11.9	
YLYR				eSg	Sn	23 26 44.8	+50
YLYR				Smax		23 26 50.1	
	comp=Z,506nm,2.4s						
ZAA0	**Zalesovo Array**	**8.72**	**294**	ePn	**Pn**	**23 24 21.9**	**+2.8**
ZALV	**Zalesovo Beam**	**8.72**	**294**	Pn	**Pn**	**23 24 18.9**	**-0.2**
ZALV				Lg		23 26 39.7	
ZALV				LR	LR	23 27 35.7	
ZALV	**Zalesovo Beam**	**8.72**	**294**	Pn	**Pn**	**23 24 18.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=116,slow=13,SNR=2.8						
ZALV				Lg		23 26 39.7	
	comp=Z,2.0nm,0.3s,baz=110,slow=25,SNR=12						
ZALV				LR	LR	23 27 35.7	
	comp=Z,59nm,18.0s,baz=68,slow=37						
ZAL	**Zalesovo**	**8.73**	**294**	P	**Pn**	**23 24 18.9**	**-0.4**
KMO	**Kumora**	**9.04**	**53**	ePn	**Pn**	**23 24 27.0**	**+3.5**
KMO				e		23 25 02.6	
KMO				max		23 25 12.5	
	comp=Z,12nm,0.4s						
KMO				eSn	**Sn**	**23 26 16.5**	**+11**
KMO				eSg	Sn	23 26 58.4	+53
KMO				Smax		23 27 18.3	
	comp=Z,221nm,1.3s						
KPC	**Khapcheranga**	**9.08**	**93**	ePn	**Pn**	**23 24 25.6**	**+1.5**
KPC				e		23 24 56.9	
KPC				max		23 24 59.1	
	comp=Z,4.0nm,1.2s						
KPC				eSg	Sn	23 26 59.8	+54
KPC				Smax		23 27 08.1	
	comp=Z,194nm,1.7s						
YOA	**Uoyan**	**9.41**	**52**	eSg	Sx	23 27 12.6	
YOA				Smax		23 27 30.7	
	comp=Z,1μm,1.4s						
CIT	**Chita**	**9.52**	**79**	eSg	Sx	23 27 12.9	
CIT				Smax		23 27 33.9	
	comp=Z,105nm,2.5s						
NVS	**Novosibirsk**	**9.85**	**298**	eSg	Sx	23 27 13.6	
UKT	**Uakit**	**10.15**	**58**	ePn	**Pn**	**23 24 42.3**	**+3.6**
UKT				e		23 25 15.0	
UKT				max		23 25 37.6	
	comp=Z,4.0nm,0.8s						
UKT				eSn	**Sn**	**23 26 45.9**	**+14**
UKT				eSg	Sn	23 27 31.5	+59
UKT				Smax		23 27 48.2	
	comp=Z,127nm,2.0s						
SVKR	**Severomuysk**	**10.34**	**55**	e	Sx	23 27 03.9	
SVKR				eSg	Sx	23 27 41.1	
SVKR				Smax		23 27 59.4	
	comp=Z,366nm,1.6s						
BOD	**Bodaibo**	**11.31**	**47**	eP	**Pn**	**23 24 56.5**	**+1.9**
BOD				pmax	pmax		
	comp=Z,3.0nm,2.3s						
BOD	**Bodaibo**	**11.31**	**47**	e	Sx	23 27 13.5	
BOD				i Sg	Sx	23 28 11.5	
BOD				Smax		23 28 17.3	
	comp=Z,106nm,1.6s						
MK31	**Makanchi Array**	**11.39**	**254**	⇓Pn	Px	23 25 37.8	
	comp=Z,2.1nm,0.8s,baz=68,slow=17,SNR=3.6						
MK31				⇓Lg		23 28 00.4	
	comp=Z,12nm,0.8s,baz=65,slow=35,SNR=4.1						
MKAR	**Makanchi Array**	**11.39**	**254**	Pn	**Pn**	**23 24 54.7**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=72,slow=14,SNR=2.9						
MKAR				Lg		23 28 02.0	
	comp=Z,0.2nm,0.3s,baz=66,slow=32,SNR=5.5						
NLYR	**Nelyaty**	**11.59**	**56**	eSg	Sx	23 28 17.2	
GTA	**Gaotai**	**11.74**	**174**	eP	**Pn**	**23 25 03.7**	**+3.1**
GTA				AP		23 25 08.6	
GTA				XP		23 25 11.9	
GTA				S	**Sn**	**23 27 23.6**	**+12**
GTA				XS		23 27 27.0	
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s						
GTA				AMB	AMB		
	comp=Z,168nm,6.9s						
GTA				LR	LR		
	comp=N,134nm,8.8s						
GTA				LR	LR		
	comp=E,277nm,9.9s						
GTA				LR	LR		
	comp=Z,202nm,9.9s						
KURK	**Kurchatov**	**12.45**	**276**	eP	**Pn**	**23 25 08.8**	**-1.4**
CRS	**Chara**	**13.06**	**56**	eSg	Sx	23 29 02.3	
CRS				Smax		23 29 13.4	
	comp=Z,120nm,2.8s						
TUP	**Tupik**	**13.49**	**67**	eSg	Sx	23 29 17.6	
TUP				Smax		23 29 39.1	
	comp=Z,80nm,2.0s						
HIA	**Hailar**	**13.83**	**89**	eSg	Sx	23 29 24.5	
LZH	**Lanzhou**	**15.53**	**163**	eP	**Pn**	**23 25 51.0**	**-1.0**
LZH				AP	pP	23 25 56.3	-2.9
LZH				XP	sP	23 25 58.5	-2.0
LZH				PP		23 26 02.1	
LZH				AMB	AMB		
	comp=Z,19nm,1.3s						
LZH				AMB	AMB		
	comp=Z,86nm,4.0s						
LZH				LR	LR		
	comp=E,298nm,9.1s						
LZH				LR	LR		
	comp=Z,655nm,10.6s						
LZH	**Lanzhou**	**15.53**	**163**	eP	**Pn**	**23 25 51.0**	**-1.0**
	comp=Z,19nm,1.3s						
LZH				pP	pP	23 25 56.3	-2.9
LZH				sP	sP	23 25 58.5	-2.0
LZH				PP		23 26 02.1	
LZH				eS	Sn	23 28 18.0	-26
LZH				sS	sS	23 28 27.2	-37
LZH				eSS		23 28 33.5	
LZH	**Lanzhou**	**15.53**	**163**	eP	**Pn**	**23 25 51.0**	**-1.0**
LZH				eSS		23 28 33.5	
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
BRVK	**Borovoye**	**17.31**	**287**	ePn	**Pn**	**23 26 14.5**	**-0.1**
	comp=Z,2.1nm,0.7s						
BRVK	**Borovoye**	**17.31**	**287**	eP	**Pn**	**23 26 14.5**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	**Ala-Archa**	**18.31**	**252**	eP	**Pn**	**23 26 26.8**	**-0.2**
	comp=Z,0.7nm,0.6s						
AAK	**Ala-Archa**	**18.31**	**252**	eP	**Pn**	**23 26 26.8**	**-0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSA	**Lhasa**	**22.05**	**197**	eP	**P**	**23 27 09.7**	**+1.8**
	comp=Z,3.1nm,0.8s,mb3.8						
LSA	**Lhasa**	**22.05**	**197**	eP	**P**	**23 27 09.7**	**+1.9**
LSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
TIXI	**Tiksi**	**24.73**	**23**	eP	**P**	**23 27 34.7**	**+0.6**
	comp=Z,6.6nm,1.0s,mb4.1						
TIXI	**Tiksi**	**24.73**	**23**	eP	**P**	**23 27 35.8**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.1						
KSRS	**Korea Array**	**25.00**	**112**	P	**P**	**23 27 35.8**	**-1.1**
	comp=Z,0.6nm,0.6s,mb3.3,baz=318,slow=11,SNR=3.1						
AKTK	**Aktyubinsk**	**25.29**	**284**	P	**P**	**23 27 40.9**	**+1.4**
AKTO	**Aktyubinsk**	**25.29**	**284**	P	**P**	**23 27 40.9**	**+1.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
AKTO	**Aktyubinsk**	**25.29**	**284**	P	**P**	**23 27 40.9**	**+1.4**
	comp=Z,1.5nm,0.5s,mb3.7,baz=83,slow=11,SNR=7.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**39.37**	**314**	P	**P**	**23 29 40.2**	**-2.1**
FINES	**FINESS Array B**	**39.37**	**314**	P	**P**	**23 29 40.2**	**-2.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**39.37**	**314**	P	**P**	**23 29 40.2**	**-2.1**
	comp=Z,0.6nm,0.7s,mb3.5,baz=90,slow=12,SNR=3.8						
NOA	**NORSAR Array B**	**46.09**	**318**	P	**P**	**23 30 35.8**	**-1.0**
NOA	**NORSAR Array B**	**46.09**	**318**	P	**P**	**23 30 35.8**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**46.09**	**318**	P	**P**	**23 30 35.8**	**-1.0**
	comp=Z,0.8nm,0.7s,mb3.7,baz=60,slow=7.9,SNR=2.7						
YKA	**Yellowknife Ar**	**63.78**	**16**	*i* P	**P**	**23 32 44.5**	**-0.2**
YKA	**Yellowknife Ar**	**63.78**	**16**	P	**P**	**23 32 44.1**	**-0.6**
	comp=Z,0.4nm,0.8s,mb3.5,baz=335,slow=6.8,SNR=5.2						
WRA	**Warramunga Arr**	**77.49**	**145**	P	**P**	**23 34 08.9**	**+0.3**
WRA	**Warramunga Arr**	**77.49**	**145**	P	**P**	**23 34 09.0**	**+0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**77.49**	**145**	P	**P**	**23 34 09.0**	**+0.3**
	comp=Z,0.5nm,0.8s,mb3.5,baz=345,slow=6.2,SNR=3.0						
ASAR	**Alice Springs**	**80.77**	**147**	P	**P**	**23 34 27.2**	**+0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**80.77**	**147**	P	**P**	**23 34 27.2**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.6,baz=342,slow=5.8,SNR=4.6						

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*ISCJB **02** 23:34:36.4±3.6, 179S±04×1782W±02, h647km±47km, mb3.7/8, Error ellipse: s-maj=66.4km s-min=21.8km az=156.6*
*NEIC **02** 23:34:36.0±4.3, 1780S×178.14W, h626km±52km, mb4.3/2, Error ellipse: s-maj=42.7km s-min=24.3km az=165.0*
*IDC **02** 23:34:38.5±3.2, 1826S×17801W, h665km±38km, mb3.0/6, mb1 3.3/6, mb1mx3.1/12, mbtmp3.0/6, Error ellipse: s-maj=38.4km s-min=17.0km az=156.0*
ISC 02 23:34:37.4±3.5**, 179S**±04×**1782W**±02**, h640**km±44km**, n12,** σ**0.28**/10**, mb3.7**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAO	**Charters Tower**	**33.66**	**260**	P	**P**	**23 40 28.2**	**+0.1**
	2.6nm,0.7s,mb3.9						
PMG	**Port Moresby**	**34.65**	**279**	*e*P	**P**	**23 40 36.0**	**-0.4**
	11nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**38.84**	**241**	P	**P**	**23 41 10.3**	**+0.1**
	0.7nm,0.4s,mb3.5,baz=96,slow=10,SNR=2.6						
WB2	**Warramunga Arr**	**44.84**	**259**	*e*P	**P**	**23 41 57.0**	**-0.1**
WRA	**Warramunga Arr**	**44.85**	**259**	P	**P**	**23 41 57.3**	**+0.1**
	3.7nm,0.4s,mb4.0,baz=97,slow=7.3,SNR=156						
WRA				PcP	PcP	23 43 24.0	-0.6
	0.4nm,0.4s,baz=93,slow=3.2,SNR=4.2						
ASAR	**Alice Springs**	**45.01**	**254**	P	**P**	**23 41 58.5**	**+0.1**
	6.7nm,0.8s,mb4.0,baz=90,slow=7.8,SNR=71						
ASAR				PcP	PcP	23 43 24.6	-0.5
	0.8nm,0.4s,baz=104,slow=3.9,SNR=7.0						
ASAR				S	**S**	**23 47 52.2**	**-0.3**
	1.0nm,0.8s,baz=83,slow=16,SNR=6.4						
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**23 46 11.2**	**+0.1**
	0.3nm,0.6s,mb3.1,baz=214,slow=4.2,SNR=4.0						
PDAR	**Pinedale Array**	**87.16**	**43**	P	**P**	**23 46 16.8**	**-0.4**
	0.2nm,0.5s,mb3.0,baz=207,slow=7.7,SNR=3.0						
SONM	**Songino Array**	**93.64**	**319**	P	**P**	**23 46 47.6**	**+0.6**
	0.2nm,0.7s,mb3.3,baz=112,slow=3.9,SNR=1.9						
BRTR	**Keskin Array B**	**144.88**	**315**	PKPbc	PKPdf	23 53 04.2	+0.9
	1.1nm,0.9s,baz=92,slow=3.3,SNR=5.8						
GERES	**GERESS Array B**	**147.60**	**345**	PKPbc	PKPbc	23 53 11.3	0.0
	0.2nm,0.6s,baz=29,slow=3.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**175.33**	**179**	PKPab	PKPab	23 55 13.5	-3.8
	0.4nm,1.0s,baz=264,slow=2.9,SNR=2.3						

CASC 02 23:35:43.2±1.5**, 1071N**×**8634W, h8**km±6km**, MD3.6, ML3.2, 5C-4D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.75**	**40**	*e*P	Pg	23 35 57.5	-0.2
SSNN				*e*S	Sg	23 36 09.9	+2.5
VCR	**Vista de Mar**	**0.91**	**130**	*e*P	Pg	23 36 00.2	-0.4
VCR				*e*S	Sg	23 36 14.0	+1.6
MADN	**Villa Maderas**	**1.05**	**49**	⇓*e*P	Pg	23 36 02.6	-0.8
CONN	**Concepcion**	**1.10**	**39**	⇓*e*P	Pg	23 36 03.2	-1.2
2RIO	**Dos Rios de Up**	**1.10**	**99**	⇑*i*P	Pg	23 36 00.9	-3.5
2RIO				*e*S	Sg	23 36 14.2	-4.5
CUI		**1.14**	**92**	⇑*i*P	Pg	23 36 04.1	-1.1
CUI				*e*S	Sg	23 36 20.2	+0.1
APON	**Apoyo**	**1.23**	**13**	*e*P	Pn	23 36 05.7	-1.0
TICN	**Ticuantepe**	**1.32**	**5**	⇓*e*P	Pn	23 36 07.3	-0.7
TISN	**Laguna Tiscapa**	**1.43**	**3**	*e*P	Pn	23 36 08.8	-0.7
XAVN	**Gruta Xavier**	**1.43**	**1**	*e*P	Pn	23 36 08.7	-0.8
MGAN	**Managua**	**1.43**	**4**	*e*P	Pn	23 36 08.9	-0.6
MGAN				*e*S	Sn	23 36 28.9	+0.4
MGAN				*i*		23 36 29.7	
	comp=E,353nm,0.2s						
COPN	**Copaltepe**	**1.48**	**350**	⇑*e*P	Pn	23 36 08.9	-1.3
COPN				*e*S	Sn	23 36 30.1	+0.3
HUEN		**1.63**	**6**	⇑*e*P	Pn	23 36 10.9	-1.3
HUEN				*e*S	Sn	23 36 33.6	+0.2
MOMJ	**Momotombo**	**1.70**	**353**	⇓*e*P	Pn	23 36 11.8	-1.3
MOMJ				*e*S	Sn	23 36 34.8	-0.4
TEL3	**Telica 3**	**1.92**	**345**	*e*P	Pn	23 36 15.9	-0.3
TEL3				*e*S	Sn	23 36 41.9	+1.3
TELN	**Telica**	**1.94**	**346**	⇑*e*P	Pn	23 36 16.0	-0.6
TELN				*e*S	Sn	23 36 42.5	+1.3
CGA2	**Cerro Gallo 2**	**1.97**	**110**	*e*P	Pn	23 36 16.3	-0.6
PRS1	**Puriscal**	**2.12**	**110**	*e*P	Pn	23 36 19.9	+0.9
LCR2	**La Lucha 2**	**2.49**	**112**	*e*P	Pn	23 36 23.8	-0.3
QCR	**Quepos**	**2.49**	**121**	*e*P	Pn	23 36 24.7	+0.6
URSC	**Urasca**	**2.67**	**109**	*e*P	Pn	23 36 27.1	+0.6
BAR1		**3.32**	**116**	*e*P	Pn	23 36 35.3	-0.2

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*CSEM **02** 23:51:48.8±0.2, 3805N×3873E, h2km, MD3.0, Error ellipse: s-maj=4.4km s-min=3.3km az=72.0*
*ISK **02** 23:51:48.8, 3804N×3871E, h3km, MD3.0*
*ISCJB **02** 23:51:49.8±0.4, 3808N±003×3878E±004, h7km, Error ellipse: s-maj=4.3km s-min=3.7km az=4.7*
*DDA **02** 23:51:50.9, 38.14N×3872E, h7km, Md3.4*
ISC 02 23:51:50.2±0.6**, 3808N**±003×**3877E**±004**, h6**km±6km**, n14,** σ**0.82**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.36**	**310**	PG	**Pg**	**23 51 56.6**	**-0.5**
MALT				SG	**Sg**	**23 52 02.3**	**+0.5**
MYA	**Malataya**	**0.37**	**312**	PG	**Pg**	**23 51 56.7**	**-0.6**
MYA				SG	**Sg**	**23 52 02.6**	**+0.5**
ELZG	**Elazig**	**0.45**	**22**	*i* P	**Pg**	**23 51 58.8**	**0.0**
ELZG				*i* S	**Sg**	**23 52 04.5**	**-0.1**
URFA	**Urfa**	**0.64**	**177**	PG	**Pg**	**23 52 01.5**	**-1.0**
URFA				SG	**Sg**	**23 52 10.3**	**-0.5**
ATAB	**Bozova**	**0.72**	**212**	*i* P	**Pg**	**23 52 05.4**	**+1.4**
ATAB				*i* S	**Sg**	**23 52 12.9**	**-0.5**
PTK	**Pertek**	**0.94**	**31**	PG	**Pg**	**23 52 08.4**	**+0.1**
GZT	**Gaziantep**	**1.20**	**233**	*i* P	**Pg**	**23 52 12.7**	**-0.5**
GZT				*i* S	**Sg**	**23 52 30.5**	**+1.7**
GAZ	**Gaziantep**	**1.54**	**234**	*e*PN	**Pn**	**23 52 17.9**	**-0.3**
MARD	**Mardin**	**1.77**	**115**	*i* P	**Pn**	**23 52 22.3**	**+1.0**
MARD				*i* S	**Sn**	**23 52 44.2**	**+0.1**
EZC	**Erzincan**	**1.85**	**26**	*e*PN	**Pn**	**23 52 22.2**	**-0.3**
ANDN	**Andirin**	**1.99**	**256**	*i* P	**Pn**	**23 52 23.9**	**-0.4**
ANDN				*i* S	**Sn**	**23 52 54.2**	**+4.6**
BTMT	**Batman**	**2.14**	**86**	*e*PN	**Pn**	**23 52 25.7**	**-0.8**
KOZT	**Kozan**	**2.41**	**256**	*e*PN	**Pn**	**23 52 29.2**	**-1.0**
SIRT	**Sirnak**	**2.96**	**100**	*e*PN	**Pn**	**23 52 39.8**	**+2.0**

IDC 02 23:52:05.8±1.5**, 111S**×**12714E, h0**km**, mb3.4**/3**, mb1 3.5**/4**, mb1mx3.4**/17**, mbtmp3.3**/4**, ML3.0**/1**, Error ellipse: s-maj=162.3km s-min=22.8km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.00**	**160**	P	Pn	23 56 40.0	-1.7
	0.1nm,0.3s,baz=338,slow=11,SNR=2.8						
ASAR	**Alice Springs**	**23.36**	**164**	P	P	23 57 16.2	+0.1
	0.4nm,0.6s,baz=346,slow=11,SNR=3.4						
SONM	**Songino Array**	**52.00**	**342**	P	P	00 01 16.9	+0.1
	0.5nm,0.7s,baz=142,slow=8.2,SNR=4.3						
MKAR	**Makanchi Array**	**61.77**	**327**	P	P	00 02 26.4	+0.1
	0.3nm,0.4s,baz=108,slow=7.8,SNR=5.0						

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*NIED **02** 23:55:00, 3350N×13520E, h23km, Mw3.3 Best double couple: M0 9.05000×10^13 NP1:φs283.00000°, δ51.00000°, λ-158.00000°. NP2:φs178.00000°, δ73.00000°, λ-41.00000°.*
*ISCJB **02** 23:55:51.1±1.2, 3349N±008×13522E±005, h31km, Error ellipse: s-maj=11.1km s-min=6.3km az=7.6*
*JMA **02** 23:55:51.3, 3350N×13524E, h31km, M3.5*
JMA Felt I J1.
ISC 02 23:55:51.8±1.2**, 3351N**±006×**13520E**±005**, h5**km±9km**, n6,** σ**0.77**/12**, 3C-1D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.36**	**22**	⇑P	**Pg**	**23 55 59.5**	**+0.7**
JWM				S	**Sg**	**23 56 05.1**	**+1.6**
JWZ	**Kozaga**	**0.43**	**88**	⇑P	**Pg**	**23 56 00.0**	**-0.2**
JWZ				*e*S	**Sg**	**23 56 06.1**	**+0.2**
JAI	**Aioi**	**0.68**	**294**	P	**Pg**	**23 56 04.9**	**0.0**
JAI				S	**Sg**	**23 56 14.6**	**+0.9**
JWY	**Kouya**	**0.78**	**25**	⇑P	**Pg**	**23 56 05.8**	**-1.0**
JWY				S	**Sg**	**23 56 16.2**	**-0.7**
JAJ2	**Tsuna**	**0.94**	**344**	⇓P	**Pg**	**23 56 08.8**	**-1.1**
JAJ2				*e*S	**Sg**	**23 56 21.4**	**-0.7**
MAT	**Matsushiro**	**3.90**	**38**	P	**Pn**	**23 56 52.0**	**-0.4**
MAT				*e*S	**Sn**	**23 57 39.2**	**+0.6**

IDC 03 00:07:05.8±2.5**, 463N**×**9493E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.4**/21**, mbtmp3.6**/5**, Error ellipse: s-maj=139.7km s-min=21.7km az=54.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**43.41**	**347**	P	P	00 15 10.6	+0.5
	0.5nm,0.4s,baz=167,slow=8.1,SNR=7.2						
WRA	**Warramunga Arr**	**45.78**	**124**	P	P	00 15 29.7	+0.1
	0.7nm,0.5s,baz=302,slow=9.4,SNR=9.2						
ASAR	**Alice Springs**	**47.27**	**128**	P	P	00 15 41.2	-0.1
	0.2nm,0.4s,baz=320,slow=8.5,SNR=2.9						
ZALV	**Zalesovo Beam**	**49.85**	**352**	P	P	00 16 00.3	-0.4
	0.7nm,0.5s,baz=182,slow=6.5,SNR=5.3						
FINES	**FINESS Array B**	**75.93**	**332**	P	P	00 18 54.1	-0.2
	0.2nm,0.3s,baz=103,slow=6.3,SNR=6.7						

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*ISCJB **03** 00:58:40.9±0.5, 3789N±003×2301E±004, h6km±6km, Error ellipse: s-maj=5.4km s-min=4.5km az=34.2*
*CSEM **03** 00:58:41.6±0.1, 3787N×2302E, h5km, ML3.0, Error ellipse: s-maj=1.8km s-min=1.5km az=166.0*
*THE **03** 00:58:41.7, 3788N×2299E, h3km, ML3.0*
*ATH **03** 00:58:41.1, 3790N×2297E, h12km±3km, MD3.0/5, ML2.6*
*NEIC **03** 00:58:41.1, 3790N×2297E, h12km, ML2.6(ATH), After ATH.*
ISC 03 00:58:41.2±0.5**, 3790N**±003×**2303E**±004**, h12**km±5km**, n12,** σ**0.74**/20**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.13**	**340**	*e*Pg	**Pg**	**00 58 44.6**	**+0.1**
LTK				*e*Sg	**Sg**	**00 58 47.2**	**+0.3**
NAIG	**Nisos Aigina**	**0.39**	**111**	*e*PB	**Pg**	**00 58 49.4**	**+0.4**
DID	**Didima**	**0.43**	**157**	*e*Pg	**Pg**	**00 58 49.1**	**-0.5**
DID				*e*Sg	**Sg**	**00 58 56.5**	**+1.2**
ATH	**Athens Observa**	**0.55**	**82**	*e*PB	**Pb**	**00 58 52.5**	**-0.3**
ATH				*e*SB	**Sb**	**00 59 00.0**	**-0.6**
KVR	**Kavouri**	**0.59**	**97**	*e*PB	**Pb**	**00 58 53.7**	**+0.2**
VLX	**Vlachokerasia**	**0.73**	**224**	*e*Pg	**Pg**	**00 58 54.7**	**-0.8**
VLX				*e*Sg	**Sg**	**00 59 05.2**	**+0.2**
SELA	**Sela**	**0.97**	**293**	*e*Pg	**Pg**	**00 58 59.8**	**-0.1**
SELA				*e*Sg	**Sg**	**00 59 13.4**	**+0.9**
ITM	**Ithomi**	**1.13**	**231**	*e*PB	**Pb**	**00 59 01.9**	**-0.7**
ITM				*e*SB	**Sb**	**00 59 17.0**	**-0.2**
VLI	**Veliai**	**1.18**	**183**	*e*PB	**Pb**	**00 59 03.7**	**+0.2**
VLI				*e*SB	**Sb**	**00 59 19.4**	**+0.7**
PYL	**PYLOS**	**1.43**	**226**	*e*Pg	**Pg**	**00 59 07.5**	**-1.2**
PYL				*e*Sg	**Sg**	**00 59 27.1**	**-0.2**
XOR	**Xorichti**	**1.47**	**5**	*e*Pg	**Pg**	**00 59 08.3**	**-1.2**
THL	**Klokotos Trika**	**1.84**	**335**	*e*PN	**Pn**	**00 59 14.4**	**+1.8**

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*ISCJB **03** 01:21:06.3±1.1, 557S±02×269W±06, h10km, mb4.1/4, Error ellipse: s-maj=45.6km s-min=22.6km az=172.7*
*IDC **03** 01:21:06.2±1.0, 5580S×2693W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/12, mbtmp3.9/3, Error ellipse: s-maj=45.2km s-min=31.3km az=89.0*
*NEIC **03** 01:21:07.7±0.6, 5570S×2692W, h10km, mb4.4/2, Error ellipse: s-maj=30.8km s-min=16.3km az=83.0*
ISC 03 01:21:08.3±1.1**, 558S**±02×**269W**±06**, h10**km**, n9,** σ**0.63**/5**, mb4.1**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**34.50**	**180**	*e*P	**P**	**01 27 56.3**	**+0.5**
	2.6nm,0.4s,mb4.5						
VNDA	**Vanda**	**46.88**	**183**	*e*P	**P**	**01 29 37.8**	**-0.1**
	1.5nm,0.6s,mb4.1						
VNDA	**Vanda**	**46.88**	**183**	P	**P**	**01 29 36.9**	**-1.0**
	3.9nm,1.0s,mb4.3,baz=168,slow=6.8,SNR=4.3						
LPAZ	**La Paz**	**50.36**	**305**	P	**P**	**01 30 05.4**	**0.0**
	1.0nm,0.6s,mb4.0,baz=137,slow=5.4,SNR=4.6						
TORD	**Torodi Ar. Bea**	**72.70**	**29**	P	**P**	**01 32 36.1**	**0.0**
	0.3nm,0.4s,mb3.6,baz=204,slow=6.3,SNR=11						
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP	PKPdf	01 40 26.7	-1.3
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP	PKPdf	01 40 26.7	-1.3
	0.2nm,0.7s,baz=130,slow=1.9,SNR=5.1						
INK	**Inuvik**	**145.69**	**321**	PKPbc	PKPbc	01 40 44.8	-0.8
	1.3nm,0.4s,baz=62,slow=3.6,SNR=7.6						
SONM	**Songino Array**	**150.52**	**86**	PKPbc	PKPbc	01 40 58.8	-0.3
	0.9nm,0.8s,baz=224,slow=2.7,SNR=6.7						

IDC 03 01:26:27.8±1.1**, 2164N**×**12049E, h0**km**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/19**, mbtmp3.6**/4**, Error ellipse: s-maj=70.5km s-min=23.6km az=68.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.76**	**318**	P	P	01 34 01.9	-0.3
	0.3nm,0.6s,baz=115,slow=9.4,SNR=3.4						
WRA	**Warramunga Arr**	**43.49**	**161**	P	P	01 34 32.4	-0.5
	1.7nm,0.6s,baz=344,slow=9.0,SNR=21						
ASAR	**Alice Springs**	**46.88**	**163**	P	P	01 35 00.5	+0.6
	0.3nm,0.4s,baz=347,slow=8.2,SNR=7.1						
YKA	**Yellowknife Ar**	**85.55**	**22**	P	P	01 39 07.8	+0.3
	0.4nm,0.8s,baz=310,slow=4.7,SNR=7.7						

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*ISCJB **03** 01:29:33.6±0.9, 2162N±0.10×1205E±02, h10km, mb3.7/5, Error ellipse: s-maj=30.4km s-min=13.9km az=179.6*
*IDC **03** 01:29:33.8±1.0, 2164N×12059E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=69.2km s-min=20.8km az=67.0*
*NEIC **03** 01:29:35.2±0.7, 2166N×12060E, h10km, Error ellipse: s-maj=25.5km s-min=11.5km az=88.0*
ISC 03 01:29:35.3±0.9**, 2166N**±010×**1206E**±02**, h10**km**, n8,** σ**0.57**/8**, mb3.6**/5**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**2.67**	**20**	*e*Pn	**Pn**	**01 30 17.2**	**-1.1**
YHNB	**Yeheng**	**3.08**	**13**	*e*P	**Pn**	**01 30 24.9**	**+0.9**
MKAR	**Makanchi Array**	**39.81**	**318**	P	**P**	**01 37 08.3**	**-0.3**
MKAR	**Makanchi Array**	**39.81**	**318**	P	**P**	**01 37 08.3**	**-0.3**
	0.4nm,0.7s,mb3.3,baz=108,slow=9.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**42.09**	**329**	P	**P**	**01 37 27.3**	**+0.1**
	0.3nm,0.3s,mb3.4,baz=90,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**43.47**	**161**	P	**P**	**01 37 38.6**	**-0.2**
	3.3nm,0.7s,mb4.2,baz=344,slow=9.1,SNR=21						
ASAR	**Alice Springs**	**46.88**	**163**	P	**P**	**01 38 05.9**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=345,slow=7.8,SNR=6.5						
YKA	**Yellowknife Ar**	**85.50**	**22**	P	**P**	**01 42 13.6**	**+0.5**
	0.5nm,0.8s,mb3.7,baz=313,slow=4.6,SNR=9.0						

IDC 03 02:11:45.0±1.1**, 2170N**×**12056E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/19**, mbtmp3.6**/5**, Error ellipse: s-maj=72.5km s-min=20.5km az=68.0, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**28.46**	**340**	P	P	02 17 41.8	+0.2
	0.3nm,0.8s,baz=167,slow=6.8,SNR=2.2						
MKAR	**Makanchi Array**	**39.76**	**318**	P	P	02 19 19.2	-0.2
	0.4nm,0.7s,baz=115,slow=9.1,SNR=3.7						
WRA	**Warramunga Arr**	**43.52**	**161**	P	P	02 19 50.3	-0.2
	2.5nm,0.7s,baz=344,slow=9.1,SNR=18						
ASAR	**Alice Springs**	**46.93**	**163**	P	P	02 20 17.7	+0.2
	0.2nm,0.3s,baz=343,slow=7.4,SNR=4.8						
YKA	**Yellowknife Ar**	**85.47**	**22**	P	P	02 24 24.6	+0.2
	0.3nm,0.6s,baz=310,slow=4.3,SNR=5.6						

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*NEIC **03** 02:21:30.2, 19.16N×6726W, h5km, MD3.5(RSPR), After RSPR.*
RSPR 03 02:21:30.2, 1916N×**6726W, h5**km±31km**, MD3.5**/15**, MD3.5**/15**, 9C-5D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.70**	**168**	⇓*e*P	Pg	02 21 43.1	-0.6
AGPR				*e*S	Sg	02 21 53.5	+0.7
AOPR	**Arecibo Observ**	**0.94**	**149**	⇓*e*P	Pg	02 21 46.0	-2.2
AOPR				*e*S	Sg	02 21 59.9	-0.6
LSP	**Las Mesas**	**0.99**	**170**	⇑*e*P	Pg	02 21 47.0	-2.2
CRPR	**Cabo Rojo, PR**	**1.16**	**173**	⇑*e*P	Pg	02 21 49.4	-3.0
CRPR				*e*S	Sg	02 22 04.6	-2.8
GBPR	**Guanica, Bosqu**	**1.23**	**163**	⇓*e*P	Pg	02 21 51.7	-2.2
GBPR	**Guanica, Bosqu**	**1.23**	**163**	*e*S	Sg	02 22 07.0	-2.8
CELP	**Cerrillos**	**1.26**	**149**	⇓*e*P	Pg	02 21 51.1	-3.2
CELP				*e*S	Sg	02 22 08.4	-2.2
OBIP	**Obispado Ponce**	**1.27**	**151**	⇑*e*P	Pg	02 21 50.9	-3.7
OBIP				*e*S	Sg	02 22 07.9	-3.2
ICM	**Isla Caja Muer**	**1.44**	**151**	⇑*e*P	Pn	02 21 54.8	-2.2
ICM				*e*S	Sb	02 22 12.5	-3.7
SJG	**San Juan**	**1.48**	**135**	⇑*e*P	Pn	02 21 54.7	-2.8
SJG				*e*S	Sn	02 22 13.3	-4.0
SJG	**San Juan**	**1.48**	**135**	⇑*e*P	Pn	02 21 54.4	-3.1
SJG				*e*S	Sn	02 22 13.3	-4.0
CBYP	**Canovanas**	**1.60**	**123**	⇑*e*P	Pn	02 21 55.5	-3.5
CBYP				*e*S	Sn	02 22 16.6	-3.5
HUMP	**Col San Antoni**	**1.68**	**127**	⇑*e*P	Pn	02 21 57.2	-3.0
HUMP				*e*S	Sn	02 22 18.5	-3.6
CPD	**Cerro la Pandu**	**1.69**	**131**	⇑*e*P	Pn	02 21 57.4	-3.0
CPD				*e*S	Sn	02 22 19.1	-3.5
MTP	**Monte Pirata**	**1.93**	**123**	⇓*e*P	Pn	02 22 00.5	-3.2
MTP	**Monte Pirata**	**1.93**	**123**	*e*Pn	Pn	02 22 00.3	-3.4
MTP				*e*Sn	Sn	02 22 21.6	-6.9
SDDR	**Presa de Saban**	**3.81**	**268**	*e*Pn	Pn	02 22 27.6	-2.0
SDDR				*e*Sg	Sg	02 23 24.6	-8.1

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*ISCJB **03** 02:30:40.6±2.6, 960S±005×12277E±0.10, h12km±16km, mb4.3/20, Error ellipse: s-maj=16.3km s-min=7.5km az=164.2*
*NEIC **03** 02:30:44.4±2.3, 960S×12277E, h24km±17km, mb4.5/12, Error ellipse: s-maj=10.2km s-min=6.2km az=66.0*
*BJI **03** 02:30:44.4, 960S×12280E, h24km, mB5.1, mb4.6*
*IDC **03** 02:30:46.3±2.4, 956S×12277E, h38km±18km, mb4.2/10, mb1 4.3/11, mb1mx4.1/17, mbtmp4.2/11, ML4.4/1, MS3.4/2, Ms1 3.4/2, ms1mx3.0/22, Error ellipse: s-maj=24.5km s-min=12.7km az=77.0*
ISC 03 02:30:46.3±1.3**, 970S**±005×**12273E**±009**, h41**km±13km**, n45,** σ**1.09**/49**, mb4.3**/20**, 1C, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.05**	**119**	Pn	**Pn**	**02 31 08.6**	**+4.0**
	226nm,0.3s,baz=356,slow=1.3,SNR=78						
BATI				Sn	**Sn**	**02 31 22.8**	**+4.7**
	1µm,0.3s,baz=320,slow=20,SNR=21						
FITZ	**Fitzroy Crossi**	**8.82**	**162**	*e*P	**Pn**	**02 32 51.5**	**+0.2**
	22nm,0.3s						
FITZ				*e*S	**Sn**	**02 34 21.5**	**-7.9**
FITZ	**Fitzroy Crossi**	**8.82**	**162**	Pn	**Pn**	**02 32 51.3**	**0.0**
	3.1nm,0.3s,baz=8.4,slow=13,SNR=101						
FITZ				Sn	**Sn**	**02 34 22.5**	**-7.0**
	19nm,0.3s,baz=66,slow=24,SNR=20						
MBWA	**Marble Bar**	**11.75**	**194**	*e*Pn	**Pn**	**02 33 32.3**	**+0.8**
	8.4nm,0.6s						
MBWA				*e*Sn	**Sn**	**02 35 38.4**	**-3.0**
WRA	**Warramunga Arr**	**15.15**	**134**	Pn	**Pn**	**02 34 13.5**	**-4.1**
	1.8nm,0.3s,baz=298,slow=14,SNR=51						
WRA				Sn	**Sn**	**02 36 49.8**	**-14**
	8.4nm,0.3s,baz=310,slow=24,SNR=14						
WRA				LR	LR	02 40 49.4	
	comp=Z,74nm,20.2s,baz=95,slow=40						
WB2	**Warramunga Arr**	**15.15**	**134**	⇑*i*P	**Pn**	**02 34 12.7**	**-4.9**
WB2				*e*S	**Sn**	**02 36 48.3**	**-16**
KKM	**Kota Kinabalu**	**16.93**	**337**	*e*P	**Pn**	**02 34 40.7**	**+0.4**
ASAR	**Alice Springs**	**17.52**	**144**	P	**Pn**	**02 34 46.2**	**-1.4**
	2.2nm,0.3s,baz=320,slow=12,SNR=92						
ASAR				S	**Sn**	**02 37 46.9**	**-15**
	1.9nm,0.3s,baz=321,slow=24,SNR=14						
COEN	**Coen**	**20.45**	**104**	*e*P	**P**	**02 35 20.6**	**0.0**
COEN				*e*S	**S**	**02 38 52.7**	**-15**
FORT	**Forrest**	**21.55**	**167**	*e*P	**P**	**02 35 33.5**	**+1.2**
	16nm,0.6s,mb4.6						
FORT				*e*S	**S**	**02 39 27.7**	**-1.2**
KLBR	**Kellerberrin**	**22.27**	**191**	*e*P	**P**	**02 35 41.3**	**+1.4**
	7.2nm,0.4s,mb4.5						
KLBR				*e*S	**S**	**02 39 40.4**	**-2.4**
NWAO	**Narrogin (SRO)**	**23.67**	**192**	P	**P**	**02 35 54.4**	**+0.2**
NWAO				S	**S**	**02 40 10.4**	**+4.3**
NWAO	**Narrogin (SRO)**	**23.67**	**192**	P	**P**	**02 35 54.4**	**+0.2**
	12nm,0.8s,mb4.3,baz=324,slow=6.3,SNR=4.0						
NWAO				S	**S**	**02 40 10.4**	**+4.3**
	9.3nm,0.8s,baz=120,slow=20,SNR=3.2						
PMG	**Port Moresby**	**24.09**	**91**	*e*P	**P**	**02 35 57.5**	**-0.8**
	8.6nm,0.8s,mb4.2						
PMG	**Port Moresby**	**24.09**	**91**	P	**P**	**02 35 58.3**	**0.0**
	5.1nm,0.6s,mb4.1,baz=355,slow=1.5,SNR=3.8						
CTA	**Charters Tower**	**24.94**	**117**	P	**P**	**02 36 06.9**	**+0.9**
	9.3nm,0.8s,mb4.3,baz=273,slow=12,SNR=8.8						
CTAO	**Charters Tower**	**24.94**	**117**	*e*P	**P**	**02 36 06.7**	**+0.7**
	8.9nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**28.16**	**144**	*e*P	**P**	**02 36 35.6**	**+0.8**
	3.8nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**28.16**	**144**	P	**P**	**02 36 35.8**	**+0.9**
	6.2nm,0.5s,mb4.5,baz=323,slow=8.7,SNR=18						
XAN	**Xi'an**	**45.43**	**344**	P	**P**	**02 39 00.0**	**-1.2**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.6						
KSRS	**Korea Array**	**47.15**	**6**	P	**P**	**02 39 16.0**	**+1.3**
	comp=Z,0.6nm,0.5s,mb3.8,baz=178,slow=9.1,SNR=3.4						
MJAR	**Matsushiro Arr**	**48.24**	**17**	P	**P**	**02 39 21.4**	**-1.7**
	comp=Z,0.9nm,0.4s,mb4.2,baz=191,slow=7.7,SNR=5.4						
ULN	**Ulaanbaatar**	**58.97**	**348**	*e*P	**P**	**02 40 41.8**	**+0.2**
	comp=Z,1.5nm,0.6s,mb4.2						
SONM	**Songino Array**	**59.08**	**347**	P	**P**	**02 40 42.1**	**-0.2**
	comp=Z,1.0nm,0.5s,mb4.1,baz=172,slow=6.6,SNR=9.1						
MKAR	**Makanchi Array**	**66.80**	**331**	P	**P**	**02 41 33.7**	**+0.1**
MKAR				LR	LR	03 10 56.1	
MKAR	**Makanchi Array**	**66.80**	**331**	P	**P**	**02 41 33.7**	**+0.1**
	comp=Z,2.3nm,0.7s,mb4.3,baz=140,slow=7.7,SNR=23						
MKAR				LR	LR	03 10 56.1	
	comp=Z,47nm,18.8s,baz=354,slow=36						
AAK	**Ala-Archa**	**68.18**	**324**	*e*P	**P**	**02 41 41.4**	**-1.1**
	comp=Z,2.1nm,0.6s,mb4.3						
AML	**Almayashu**	**68.35**	**323**	*e*P	**P**	**02 41 44.3**	**+0.8**
	comp=Z,3.5nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**68.62**	**323**	*e*P	**P**	**02 41 45.5**	**+0.3**
	comp=Z,2.4nm,0.9s,mb4.1						
VNDA	**Vanda**	**70.75**	**172**	*e*P	**P**	**02 41 59.0**	**+1.2**
	comp=Z,5.3nm,1.0s,mb4.4						
VNDA	**Vanda**	**70.75**	**172**	P	**P**	**02 41 58.4**	**+0.5**
	comp=Z,9.9nm,1.2s,mb4.6,baz=35,slow=4.5,SNR=6.8						
ZAA0	**Zalesovo Array**	**71.05**	**337**	*e*P	**P**	**02 41 58.5**	**-1.3**
ZALV	**Zalesovo Beam**	**71.05**	**337**	P	**P**	**02 41 58.4**	**-1.5**
	comp=Z,2.4nm,0.5s,mb4.4,baz=128,slow=5.2,SNR=11						
KURK	**Kurchatov**	**71.28**	**332**	*e*P	**P**	**02 42 01.0**	**-0.4**
	comp=Z,3.9nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**80.30**	**180**	*e*P	**P**	**02 42 54.4**	**+1.9**
	comp=Z,3.0nm,0.4s,mb4.6						
AKTK	**Aktyubinsk**	**81.91**	**324**	P	**P**	**02 43 02.2**	**+0.7**
AKTO	**Aktyubinsk**	**81.91**	**324**	P	**P**	**02 43 02.2**	**+0.7**
	comp=Z,0.6nm,0.3s,mb4.0,baz=97,slow=5.2,SNR=5.2						
YKA	**Yellowknife Ar**	**113.28**	**25**	PKiKP	PKiKP	02 49 19.5	+0.3
	comp=Z,0.1nm,0.4s,baz=304,slow=1.4,SNR=3.4						
TOA0	**Torodi Ar. Sit**	**122.20**	**279**	*e*PKPdf	PKPdf	02 49 38.5	+0.7
TORD	**Torodi Ar. Bea**	**122.20**	**279**	PKP	PKPdf	02 49 38.3	+0.6
	comp=Z,0.4nm,0.7s,baz=33,slow=2.2,SNR=7.9						
LOHW	**Long Hollow**	**122.87**	**44**	*e*PKPdf	PKPdf	02 49 39.0	+0.8
PDAR	**Pinedale Array**	**123.87**	**45**	PKP	PKPdf	02 49 41.6	+1.5
	comp=Z,0.4nm,0.8s,baz=132,slow=4.2,SNR=4.5						

TXAR	**Lajitas Array**	**132.48**	**59**	PKP	PKPdf	02 49 58.4	+1.4
	comp=Z,0.3nm,0.6s,baz=217,slow=2.5,SNR=5.2						
TXAR				SKPbc	SKPbc	02 53 18.9	-2.0
	comp=Z,0.5nm,0.6s,baz=250,slow=3.6,SNR=7.0						
WVT	**Waverly**	**141.77**	**42**	*e*PKPdf	PKPdf	02 50 15.0	+1.1
LPAZ	**La Paz**	**152.03**	**157**	PKPbc	PKPbc	02 50 40.0	+1.8
	comp=Z,2.0nm,0.8s,baz=178,slow=6.5,SNR=6.2						
LPAZ				PKPab	PKPab	02 50 49.9	+2.5
	comp=Z,1.8nm,0.5s,baz=248,slow=2.8,SNR=7.7						

CASC 03 02:46:23.3±3.7**, 1401N**×**9098W, h81**km±34km**, MD3.6, 2C-4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.46**	**16**	⇓*e*P	Pn	02 46 36.7	-0.2
PCG	**Pacaya**	**0.53**	**43**	⇓*i*P	Pn	02 46 37.6	+0.2
JAT	**Jato**	**0.71**	**296**	⇑*e*P	Pn	02 46 40.0	+0.8
JAT				*e*S	Sn	02 46 51.0	0.0
RBDL	**Robledal**	**1.26**	**85**	⇓*e*P	x	02 46 58.5	
RBDL				*e*S	x	02 47 15.7	
RTR	**El Retiro**	**1.30**	**95**	⇓*e*P	x	02 46 59.5	
RTR				*e*S	x	02 47 18.9	
SBLS	**San Blas**	**1.32**	**97**	*e*P	x	02 46 59.9	
SBLS				*e*S	x	02 47 18.7	
SNJE	**San Jose**	**1.34**	**96**	⇑*e*P	x	02 46 59.7	
SNJE				*e*S	x	02 47 19.5	
BOQS	**Boqueron**	**1.67**	**99**	*e*P	x	02 47 04.5	
BOQS				*e*S	x	02 47 23.5	
LFRS	**El Faro**	**1.90**	**101**	*e*P	x	02 47 07.3	
LFRS				*e*S	x	02 47 31.2	

*LDG **03** 03:13:39.4±0.2, 1462S×17185E, h600km, Mb4.0/1, Error ellipse: s-maj=29.1km s-min=4.4km az=117.0*
*ISCJB **03** 03:13:43.2±1.6, 149S±02×1712E±0.1, h659km±23km, mb4.2/17, Error ellipse: s-maj=25.6km s-min=15.7km az=169.1*
*IDC **03** 03:13:43.8±2.0, 1481S×17126E, h649km±25km, mb3.6/12, mb1 3.7/13, mb1mx3.5/20, mbtmp3.6/13, Error ellipse: s-maj=23.5km s-min=14.1km az=168.0*
*NEIC **03** 03:13:43.0±1.1, 1476S×17127E, h639km±12km, mb4.4/5, Error ellipse: s-maj=14.2km s-min=9.7km az=178.0*
ISC 03 03:13:43.5±1.6**, 148S**±02×**1713E**±01**, h641**km±21km**, n50, σ0.s55**/23**, mb4.2**/16**, 1C, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.55**	**212**	P	**P**	**03 15 49.2**	**-0.1**
	1.6nm,0.3s,baz=50,slow=22,SNR=12						
URZ	**Urewera**	**23.93**	**169**	P	**P**	**03 18 10.1**	**0.0**
	11nm,0.7s,mb4.4,baz=357,slow=3.2,SNR=8.1						
PMG	**Port Moresby**	**24.16**	**280**	P	**P**	**03 18 12.2**	**-0.3**
	3.2nm,0.5s,mb4.0,baz=87,slow=12,SNR=3.6						
COEN	**Coen**	**27.21**	**268**	*e*P	**P**	**03 18 39.3**	**0.0**
STKA	**Stephens Creek**	**31.95**	**233**	*e*P	**P**	**03 19 20.8**	**+1.2**
	3.9nm,0.3s,mb4.4						
STKA	**Stephens Creek**	**31.95**	**233**	P	**P**	**03 19 20.7**	**+1.1**
	3.9nm,0.3s,mb4.4,baz=59,slow=7.5,SNR=19						
WB2	**Warramunga Arr**	**35.55**	**256**	⇑*i*P	**P**	**03 19 49.3**	**-0.4**
WRA	**Warramunga Arr**	**35.56**	**256**	P	**P**	**03 19 49.1**	**-0.6**
	15nm,0.8s,mb4.6,baz=88,slow=8.6,SNR=58						
ASAR	**Alice Springs**	**36.27**	**250**	P	**P**	**03 19 55.5**	**0.0**
	18nm,0.5s,mb4.9,baz=76,slow=9.4,SNR=263						
ASAR				PcP	PcP	03 22 02.5	+0.3
	1.9nm,0.9s,baz=74,slow=2.9,SNR=7.4						
ASAR				S	**S**	**03 24 52.4**	**-0.5**
	1.5nm,0.8s,baz=80,slow=18,SNR=6.8						
FORT	**Forrest**	**42.60**	**241**	*e*P	**P**	**03 20 46.1**	**+0.2**
	18nm,0.6s,mb4.7						
FORT	**Forrest**	**42.60**	**241**	*e*P	**P**	**03 20 45.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**43.80**	**259**	*e*P	**P**	**03 20 55.8**	**+0.5**
	12nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**43.80**	**259**	P	**P**	**03 20 55.7**	**+0.5**
	7.0nm,0.6s,mb4.2,baz=132,slow=6.8,SNR=23						
BATI	**Kupang**	**46.62**	**270**	P	**P**	**03 21 18.0**	**+1.2**
	33nm,0.6s,mb4.9,baz=354,slow=1.6,SNR=5.9						
MBWA	**Marble Bar**	**49.25**	**255**	*e*P	**P**	**03 21 36.0**	**-0.1**
	3.9nm,0.4s,mb4.1						
KLBR	**Kellerberrin**	**51.45**	**241**	*e*P	**P**	**03 21 51.6**	**-0.2**
	19nm,0.8s,mb4.4						
NWAO	**Narrogin (SRO)**	**52.03**	**240**	P	**P**	**03 21 55.2**	**-0.8**
	14nm,0.8s,mb4.3,baz=101,slow=4.8,SNR=8.1						
CHTO	**Chiang Mai**	**78.64**	**293**	*e*P	**P**	**03 24 42.0**	**+0.6**
	4.1nm,0.6s,mb4.1						
NVAR	**Mina Array Bea**	**84.42**	**48**	P	**P**	**03 25 10.6**	**+0.2**
	0.6nm,0.7s,mb3.3,baz=224,slow=7.6						
SONM	**Songino Array**	**84.88**	**322**	P	**P**	**03 25 12.2**	**-0.1**
	0.3nm,0.6s,mb3.1,baz=120,slow=3.0,SNR=3.4						
TXAR	**Lajitas Array**	**92.93**	**61**	P	**P**	**03 25 50.6**	**+0.4**
	0.2nm,0.6s,mb3.3,baz=209,slow=7.2,SNR=2.7						
YKA	**Yellowknife Ar**	**95.86**	**27**	P	**P**	**03 26 01.7**	**-1.0**
	0.5nm,0.6s,mb3.8,baz=255,slow=4.6,SNR=9.2						
MKAR	**Makanchi Array**	**99.93**	**316**	P	Pdif	03 26 21.3	+0.1
	0.2nm,0.2s,baz=88,slow=5.3,SNR=3.3						
ARCES	**ARCESS Array B**	**121.25**	**347**	PKP	PKPdf	03 31 23.6	-1.0
	5.4nm,1.0s,baz=52,slow=2.0,SNR=13						
FINES	**FINESS Array B**	**127.17**	**340**	PKP	PKPdf	03 31 35.1	-0.9
	1.0nm,1.0s,baz=90,slow=1.9,SNR=6.1						
LBTB	**Lobatse**	**128.16**	**221**	*e*PKPdf	PKPdf	03 31 39.4	+0.2
NOA	**NORSAR Array B**	**131.62**	**347**	PKP	PKPdf	03 31 44.8	+0.2
	0.7nm,0.8s,baz=13,slow=4.0,SNR=2.6						
GERES	**GERESS Array B**	**141.37**	**336**	PKhKP		03 31 58.4	
	0.3nm,0.5s,baz=278,slow=3.9,SNR=3.8						
CDF	**Champ du Feu**	**143.97**	**342**	*e*PKP1	PKPdf	03 32 06.6	-0.9
	24nm,0.9s						
MEZF	**Maizieres J'vi**	**144.52**	**344**	*e*PKP1	PKPdf	03 32 07.9	-0.5
	43nm,1.1s						
HAU	**Haudompre**	**144.61**	**342**	*e*PKP1	PKPdf	03 32 08.4	-0.2
HINF	**Hinteralfeld**	**144.63**	**342**	*e*PKP1	PKPdf	03 32 08.2	-0.4
	6.0nm,0.6s						
FLN	**La Foliniere**	**145.46**	**350**	*e*PKP1	PKPbc	03 32 10.6	-1.0
GRR	**Gorron**	**145.88**	**351**	*e*PKP1	PKPbc	03 32 11.5	-1.3
CABF	**La Chapelle**	**145.94**	**342**	*e*PKP1	PKPbc	03 32 11.4	-1.6
	10nm,0.5s						
LOR	**Lormes**	**145.97**	**345**	*e*PKP1	PKPbc	03 32 12.4	-0.7
	6.9nm,0.7s						
SSF	**Saint Saulge**	**146.25**	**345**	*e*PKP1	PKPbc	03 32 12.6	-1.2
SGMF	**Saint Gilles**	**146.25**	**353**	*e*PKP1	PKPbc	03 32 12.9	-0.9
AVF	**Avril sur Loir**	**146.54**	**345**	*e*PKP1	PKPbc	03 32 13.0	-1.6
SMF	**Signal de Mont**	**146.55**	**344**	*e*PKP1	PKPbc	03 32 13.6	-1.1
LPL	**La Plagne**	**146.71**	**340**	*e*PKP1	PKPbc	03 32 15.0	-0.1
	6.4nm,0.7s						
LPG	**La Plagne**	**146.72**	**340**	*e*PKP1	PKPbc	03 32 15.1	-0.1
	7.2nm,0.7s						
BGF	**Bois d'Agland**	**146.88**	**345**	*e*PKP1	PKPbc	03 32 14.9	-0.6
	15nm,0.7s						
TCF	**Toulx Ste Croi**	**147.29**	**346**	*e*PKP1	PKPbc	03 32 15.9	-0.7
	6.2nm,0.5s						
MBDF	**Montbardon**	**147.40**	**339**	*e*PKP1	PKPbc	03 32 16.1	-0.8
ORIF	**Oris-en-Rattie**	**147.52**	**340**	*e*PKP1	PKPbc	03 32 16.8	-0.4
	4.9nm,0.6s						
EPF	**Esparros**	**150.81**	**346**	*e*PKP1	PKPbc	03 32 25.0	-0.2
	4.4nm,0.7s						
SJPF	**Ste Jean**	**151.06**	**349**	*e*PKP1	PKPbc	03 32 25.5	-0.2
ETSF	**Etsaut**	**151.13**	**347**	*e*PKP1	PKPbc	03 32 25.6	-0.3
TORD	**Torodi Ar. Bea**	**169.74**	**262**	PKPab	PKPab	03 33 58.8	-0.3
	0.6nm,0.8s,baz=94,slow=4.6,SNR=14						

*CSEM **03** 03:19:26.5±0.1, 3838N×3923E, h10km, MD2.8, Error ellipse: s-maj=2.4km s-min=2.2km az=19.0*
*ISK **03** 03:19:26.8, 3846N×3918E, h30km, MD2.8*
*ISCJB **03** 03:19:27.4±0.8, 3844N±007×3920E±006, h31km±11km, Error ellipse: s-maj=11.5km s-min=7.7km az=164.3*
ISC 03 03:19:27.5±0.7**, 384N**±01×**392E**±01**, h26**km±15km**, n6, σ0.s46**/10**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.20**	**294**	*i* P	**Pb**	**03 19 32.6**	**-0.6**
ELZG				*i* S	**Sb**	**03 19 37.2**	**+0.1**
PTK	**Pertek**	**0.49**	**17**	PG	**Pb**	**03 19 37.6**	**-0.1**
PTK				SG	**Sb**	**03 19 44.7**	**+0.1**
MYA	**Malataya**	**0.62**	**262**	PG	**Pb**	**03 19 40.1**	**+0.2**
MYA				SG	**Sb**	**03 19 49.0**	**+0.7**
MALT	**Malatya**	**0.63**	**261**	PG	**Pb**	**03 19 39.2**	**-0.7**
DIY	**Diyarbakir**	**0.95**	**123**	*e*PG	**Pn**	**03 19 44.9**	**-0.3**
DIY				*e*SG	**Sn**	**03 19 58.6**	**+0.6**
URFA	**Urfa**	**1.02**	**198**	*e*PG	**Pn**	**03 19 45.8**	**-0.4**

*ISCJB **03** 03:25:01.0±0.7, 3408N±007×261E±0.1, h2km, Error ellipse: s-maj=17.7km s-min=5.3km az=150.6*
*CSEM **03** 03:25:01.6±0.1, 3406N×26.16E, h2km, ML3.0, Error ellipse: s-maj=5.5km s-min=1.8km az=51.0*
*ATH **03** 03:25:05.5, 3427N×2598E, h27km±2km, MD3.2/3*
*NEIC **03** 03:25:05.5, 3427N×2598E, h27km, MD3.2(ATH), After ATH.*
*HLW **03** 03:25:10.5, 3389N×2634E, h30km, Mb3.0*
ISC 03 03:25:03.0±1.9**, 3414N**±008×**261E**±01**, h4**km±18km**, n12, σ0.s45**/14**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.79**	**338**	*e*PN	**Pg**	**03 25 18.4**	**+0.3**
XRY				*e*SN	**Sg**	**03 25 28.0**	**-0.3**
NPS	**Neapolis**	**1.17**	**342**	*e*PN	**Pn**	**03 25 25.3**	**-0.9**
KARP	**Karpathos**	**1.67**	**33**	*e*PN	**Pn**	**03 25 33.9**	**+0.9**
VAM	**Vamos**	**1.98**	**310**	*e*PN	**Pn**	**03 25 37.7**	**+0.4**
GLL	**Jalalah**	**6.62**	**132**	P	**Pn**	**03 26 40.7**	**-0.4**
AMAG	**Maghara**	**6.98**	**118**	P	**Pn**	**03 26 46.2**	**+0.1**
AMAG				S	**Sn**	**03 27 55.8**	**-10**
SUZ		**7.18**	**125**	P	**Pn**	**03 26 48.4**	**-0.3**
HFRF	**Wahat Farafira**	**7.24**	**164**	P	**Pn**	**03 26 49.7**	**+0.1**
HNKL	**Nakhl**	**7.93**	**120**	P	**Pn**	**03 26 58.8**	**-0.3**
ASUT		**8.22**	**143**	P	**Pn**	**03 27 03.0**	**-0.1**
ASUT		**8.22**	**143**	P	**Pn**	**03 27 03.0**	**-0.1**
	277nm,0.2s						
HDK1	**Dakhla**	**9.05**	**160**	P	**Pn**	**03 27 14.8**	**+0.3**

IDC 03 03:31:42.3±9.5**, 2137S**×**6803W, h136**km±63km**, mb3.5**/2**, mb1 3.5**/4**, mb1mx3.3**/16**, mbtmp3.3**/4**, Error ellipse: s-maj=106.0km s-min=32.5km az=9.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.05**	**359**	P	Pn	03 32 57.2	+1.0
	0.6nm,0.3s,baz=177,slow=9.3,SNR=17						
SIV	**San Ignacio**	**8.49**	**52**	P	Pn	03 33 41.9	-0.5
	1.5nm,0.3s,baz=246,slow=11,SNR=30						
SIV				S	Sn	03 35 17.7	+1.1
	baz=290,slow=22,SNR=4.4						
TORD	**Torodi Ar. Bea**	**76.54**	**70**	P	P	03 43 17.9	-0.2
	0.6nm,0.4s,baz=258,slow=5.7,SNR=27						
YKA	**Yellowknife Ar**	**91.34**	**340**	P	P	03 44 31.4	-0.6
	0.3nm,0.6s,baz=133,slow=4.7,SNR=8.3						
MKAR	**Makanchi Array**	**145.05**	**36**	PKPbc	PKPbc	03 51 04.0	+0.9
	0.2nm,0.2s,baz=325,slow=2.3,SNR=1.3						

IDC 03 03:36:58.3±3.8**, 702S**×**15534E, h0**km**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.4**/14**, mbtmp3.3**/2**, Error ellipse: s-maj=215.8km s-min=50.9km az=132.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.09**	**236**	P	P	03 42 15.6	-0.1
	0.7nm,0.5s,baz=61,slow=9.3,SNR=9.1						
ASAR	**Alice Springs**	**26.42**	**229**	P	P	03 42 36.8	0.0
	0.3nm,0.7s,baz=57,slow=9.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**153.36**	**285**	PKPbc	PKPbc	03 56 59.8	+0.2
	0.7nm,0.7s,baz=72,slow=2.4,SNR=5.8						

*NEIC **03** 04:02:02.3, 1557N×9279W, h148km, MD4.1(MEX), After MEX.*
MEX 03 04:02:02.3±1.0**, 1557N**×**9279W, h148**km±18km**, MD4.1, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**0.95**	**42**	*i* P	Pn	04 02 25.0	-1.5
CCIG				*i* S	Sn	04 02 43.5	-1.6
SCX	**San Cristobal**	**1.17**	**7**	*i* P	Pn	04 02 27.5	-1.0
SCX				*i* S	Sn	04 02 47.5	-1.0
CMIG	**Matias Romero**	**2.52**	**307**	*i* P	Pn	04 02 41.9	-1.6
CMIG				*i* S	Sn	04 03 13.0	-2.3
HUIG	**Huatulco**	**3.20**	**274**	*i* P	Pn	04 02 50.9	-1.2
HUIG				*i* S	Sn	04 03 29.1	-1.6
OXX	**Oaxaca**	**4.06**	**292**	*e*P	Pn	04 03 02.0	-1.3
OXX				*e*S	Sn	04 03 47.5	-3.3
VHO	**Vista Hermosa**	**4.07**	**292**	*i* P	Pn	04 03 03.8	+0.4
VHO				*i* S	Sn	04 03 48.6	-2.3

*BJI **03** 04:04:17.5, 150S×13471E, h39km, mB5.2, mb4.9, Ms4.8, Msz4.4*
*IDC **03** 04:04:19.8±0.5, 086S×13406E, h0km, mb4.7/18, mb1 4.7/22, mb1mx4.7/24, mbtmp4.7/22, ML4.9/3, MS4.1/14, Ms1 4.1/14, ms1mx3.9/23, Error ellipse: s-maj=23.3km s-min=11.1km az=81.0*
*ISCJB **03** 04:04:22.3±1.2, 088S±003×13429E±005, h30km±8km, mb4.9/71, MS4.2/23, Error ellipse: s-maj=7.9km s-min=5.2km az=178.6*
*MOS **03** 04:04:24.1±0.9, 067S×13403E, h33km, mb5.2/25, Error ellipse: s-maj=14.8km s-min=6.7km az=114.5*
*NEIC **03** 04:04:26.0±1.6, 085S×13406E, h40km±15km, mb5.1/35, Error ellipse: s-maj=9.3km s-min=5.7km az=66.0*
NEIC Some houses and a television tower damaged in the epicentral area. Felt [V] at Manokwari.
*GCMT **03** 04:04:26.0±0.2, 077S×13407E, h13km, MW4.9/70, Moment Tensor Solution. s38,c45; s70,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.58±.14; $M_{\theta\theta}$-2.35±.10; $M_{\phi\phi}$-0.23±.10; $M_{r\theta}$-0.60±.21; $M_{\theta\phi}$1.20±.07; $M_{\phi r}$0.66±.28; Best double couple: $M_0$2.88300×10^{16} NP1:ϕ_s106.00000°,δ37.00000°,λ77.00000°. NP2: ϕ_s302.00000°,δ54.00000°,λ100.00000°. Principal axes: T 2.7510, Plg78.0000°, Azm249.0000°; N 0.2560, Plg8.0000°, Azm116.0000°; P -3.0140, Plg8.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 03 04:04:25.8±0.9**, 090S**±004×**13426E**±005**, h43**km±9km**, h39**km±2.3km**: pP-P, n179, σ1.s12**/181**, mb4.9**/71**, MS4.2**/23**, 16C-6D, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**4.95**	**198**	P	**Pn**	**04 05 37.0**	**-0.7**
	87μm,2.6s						
AAI	**Ambon**	**6.66**	**245**	P	**Pn**	**04 06 01.0**	**-0.2**
	557nm,0.9s						
BATI	**Kupang**	**14.02**	**228**	Pn	**Pn**	**04 07 37.6**	**-4.3**
	2.3nm,0.3s,baz=17,slow=17,SNR=2.2						
BATI				Sn	**Sn**	**04 10 19.2**	**+3.0**
	2.4nm,0.3s,baz=342,slow=20,SNR=3.1						
BATI				LR	LR	04 13 18.5	
	comp=Z,596nm,20.6s,baz=260,slow=39						
PMG	**Port Moresby**	**15.37**	**124**	*e*Pn	**Pn**	**04 08 03.8**	**+3.9**
	86nm,1.1s						
PMG	**Port Moresby**	**15.37**	**124**	*e*P	**Pn**	**04 08 03.8**	**+3.9**
PMG				pmax	pmax		
	comp=Z,86nm,1.1s						
PMG	**Port Moresby**	**15.37**	**124**	Pn	**Pn**	**04 08 00.9**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=323,slow=6.7,SNR=10						
MYLDM	**Lahad Datu**	**16.86**	**291**	⇑P	**Pn**	**04 08 22.9**	**+4.0**
TSM	**Tawau**	**17.16**	**288**	⇑P	**Pn**	**04 08 23.3**	**+0.6**
GUMO	**Guam**	**17.83**	**36**	LR	LR	04 14 09.2	
	comp=Z,42nm,21.0s,baz=274,slow=33						
SDKM	**Sandakan**	**18.23**	**291**	⇑P	**Pn**	**04 08 31.3**	**-4.5**
WB2	**Warramunga Arr**	**18.93**	**180**	⇓*i*P	**Pn**	**04 08 42.6**	**-1.6**
WB2				*e*S	**S**	**04 12 08.0**	**-8.1**
WRA	**Warramunga Arr**	**18.93**	**180**	P	**Pn**	**04 08 42.5**	**-1.6**
	comp=Z,4.6nm,0.3s,baz=355,slow=12,SNR=153						
WRA				S	**S**	**04 12 05.8**	**-10**
	comp=Z,0.8nm,0.3s,baz=357,slow=23,SNR=3.8						
KDM	**Kudat**	**19.04**	**294**	⇓P	**Pn**	**04 08 47.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**19.08**	**206**	*e*P	**Pn**	**04 08 43.1**	**-2.9**
	comp=Z,60nm,0.8s						
FITZ				*e*S	**S**	**04 12 03.4**	**-16**
FITZ	**Fitzroy Crossi**	**19.08**	**206**	P	**Pn**	**04 08 45.2**	**-0.8**
	comp=Z,2.8nm,0.3s,baz=35,slow=12,SNR=68						
FITZ				S	**S**	**04 12 03.9**	**-15**
	comp=Z,1.7nm,0.3s,baz=163,slow=11,SNR=6.4						
FITZ				LR	LR	04 17 12.4	
	comp=Z,269nm,19.3s,baz=223,slow=41						
KKM	**Kota Kinabalu**	**19.29**	**291**	*e*P	**Pn**	**04 08 46.5**	**-2.0**
KKM	**Kota Kinabalu**	**19.29**	**291**	⇑P	**Pn**	**04 08 48.9**	**+0.3**
NBBI	**Negara**	**20.92**	**249**	P	**P**	**04 09 11.2**	**+6.2**
	comp=Z,195nm,1.3s						
BTM	**Bintulu**	**21.55**	**281**	⇓P	**P**	**04 09 13.3**	**+1.5**
SBUM	**Sibu**	**22.28**	**279**	⇑P	**P**	**04 09 20.8**	**+1.2**
CTA	**Charters Tower**	**22.39**	**149**	*e*P	**P**	**04 09 24.8**	**+4.1**
	comp=Z,31nm,0.6s,mb4.9						
CTA	**Charters Tower**	**22.39**	**149**	*e*P	**P**	**04 09 24.8**	**+4.1**
CTA				pmax	pmax		
	comp=Z,31nm,0.6s						
CTA	**Charters Tower**	**22.39**	**149**	P	**P**	**04 09 22.0**	**+1.3**
	comp=Z,36nm,0.6s,mb5.0,baz=327,slow=11,SNR=59						
CTAO	**Charters Tower**	**22.39**	**149**	*e*P	**P**	**04 09 24.6**	**+3.9**
	comp=Z,28nm,0.6s,mb4.9						
CTAO	**Charters Tower**	**22.39**	**149**	*e*P	**P**	**04 09 24.6**	**+3.9**
CTAO				pmax	pmax		
	comp=Z,28nm,0.6s,mb4.9						
ASAR	**Alice Springs**	**22.64**	**181**	P	**P**	**04 09 23.4**	**+0.2**
	comp=Z,22nm,0.7s,mb4.7,baz=7.9,slow=11,SNR=158						
ASAR				S	**S**	**04 13 24.2**	**-4.4**
	comp=Z,0.9nm,0.8s,baz=342,slow=32,SNR=2.6						
KSM	**Kuching**	**24.06**	**276**	*e*P	**P**	**04 09 37.1**	**-0.3**
KSM	**Kuching**	**24.06**	**276**	⇑P	**P**	**04 09 37.6**	**+0.3**
MBWA	**Marble Bar**	**24.63**	**214**	*e*P	**P**	**04 09 44.2**	**+1.8**
	comp=Z,70nm,1.3s,mb5.0						
BJII	**Banjamegara**	**25.29**	**255**	P	**P**	**04 09 55.5**	**+6.9**
	comp=Z,140nm,1.4s,mb5.3						
JOW	**Kunigami**	**28.16**	**349**	LR	LR	04 18 44.7	
	comp=Z,506nm,21.4s,MS4.1,baz=202,slow=31						
QZH	**Quanzhou**	**29.84**	**330**	*e*P	**P**	**04 10 30.9**	**+1.8**
FORT	**Forrest**	**30.30**	**191**	*e*P	**P**	**04 10 33.6**	**+0.5**
	comp=Z,33nm,0.6s,mb5.2						
MYKOM	**Kota Tinggi**	**30.52**	**275**	⇓P	**P**	**04 10 38.0**	**+2.6**
QIZ	**Qiongzhong**	**31.10**	**311**	P	**P**	**04 10 41.1**	**+0.8**
QIZ				S	**S**	**04 15 45.6**	**+2.5**
QIZ				LR	LR		
	comp=N,262nm,14.0s						
QIZ				LR	LR		
	comp=Z,187nm,12.8s,MS3.9						
STKA	**Stephens Creek**	**31.58**	**168**	*e*P	**P**	**04 10 44.9**	**+0.5**
	comp=Z,8.2nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**31.58**	**168**	P	**P**	**04 10 43.9**	**-0.6**
	comp=Z,7.2nm,0.5s,mb4.8,baz=337,slow=8.5,SNR=42						
STKA				LR	LR	04 24 48.2	
	comp=Z,605nm,20.4s,MS4.3,baz=248,slow=39						
KTGM	**Kuala Trenggan**	**31.69**	**282**	⇑P	**P**	**04 10 45.5**	**-0.2**
FRIM	**Kepong**	**32.88**	**277**	⇓P	**P**	**04 10 56.1**	**0.0**
IPM	**Ipoh**	**33.63**	**279**	⇑P	**P**	**04 11 02.8**	**+0.1**
ARMA	**Armidale**	**33.68**	**152**	*e*P	**P**	**04 11 05.4**	**+2.6**
JNU	**Nakatsue**	**33.99**	**355**	P	**P**	**04 11 04.5**	**-1.0**
	comp=Z,28nm,1.1s,mb5.1,baz=150,slow=12,SNR=8.5						
JNU				LR	LR	04 23 25.0	
	comp=Z,153nm,18.1s,MS3.8,baz=176,slow=34						
SSE	**Sheshan**	**34.16**	**340**	P	**P**	**04 11 08.7**	**+1.8**
SSE				S	**S**	**04 16 35.4**	**+5.0**
SSE				AMB	AMB		
	comp=Z,41nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,189nm,5.5s						
SSE				LR	LR		
	comp=N,156nm,19.8s,MS3.8						
SSE				LR	LR		
	comp=E,26nm,19.9s,MS3.8						
SSE				LR	LR		
	comp=Z,175nm,19.6s,MS3.8						
SSE	**Sheshan**	**34.16**	**340**	P	**P**	**04 11 08.7**	**+1.8**
	comp=Z,41nm,0.7s,mb5.5						
SSE				S	**S**	**04 16 35.4**	**+5.0**
SSE				LR	LR		
	comp=Z,180nm,19.6s,MS3.8						
JHJ	**Hachijo jima 2**	**34.23**	**8**	LR	LR	04 21 39.5	
	comp=Z,356nm,20.7s,MS4.1,baz=100,slow=30						
KLBR	**Kellerberrin**	**34.29**	**205**	*e*P	**P**	**04 11 08.7**	**+0.6**
	comp=Z,12nm,0.6s,mb5.0						
KKTK	**Khon Kaen**	**35.44**	**300**	P	**P**	**04 11 17.5**	**-0.7**
PSI	**Prapat**	**35.51**	**276**	P	**P**	**04 11 17.3**	**-1.6**
	comp=Z,9.9nm,0.9s,mb4.8,baz=115,slow=4.6,SNR=6.0						
NWAO	**Narrogin (SRO)**	**35.66**	**205**	P	**P**	**04 11 17.9**	**-1.9**
	comp=Z,6.3nm,0.8s,mb4.6,baz=346,slow=7.8,SNR=2.0						
NWAO				LR	LR	04 26 27.2	
	comp=Z,140nm,20.1s,MS3.7,baz=26,slow=37						
NJ2	**Nanjing**	**35.87**	**337**	*e*P	**P**	**04 11 22.1**	**+0.4**
NJ2				AP	pP	04 11 33.0	-0.5
NJ2				XP	sP	04 11 36.1	-2.5
NJ2				PP	PP	04 12 42.8	-1.1
NJ2				S	**S**	**04 16 56.0**	**-0.7**
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,490nm,6.0s						
NJ2				LR	LR		
	comp=N,920nm,24.2s						
NJ2				LR	LR		
	comp=E,690nm,18.9s						
NJ2				LR	LR		
	comp=Z,680nm,18.9s						
WHN	**Wuhan**	**36.56**	**330**	⇓P	**P**	**04 11 28.4**	**+0.8**
MJAR	**Matsushiro Arr**	**37.43**	**5**	P	**P**	**04 11 33.0**	**-1.9**
	comp=Z,2.5nm,0.7s,mb4.2,baz=181,slow=7.9,SNR=5.6						
MJAR				LR	LR	04 24 07.9	
	comp=Z,236nm,19.3s,MS4.0,baz=175,slow=32						
MAT	**Matsushiro**	**37.43**	**5**	P	**P**	**04 11 32.4**	**-2.5**
NST	**Nakhon Sawan**	**37.52**	**297**	P	**P**	**04 11 34.0**	**-2.0**
TOO	**Toolangi**	**37.94**	**165**	*e*P	**P**	**04 11 38.6**	**-0.6**
	comp=Z,8.8nm,0.6s,mb4.7						
TOO	**Toolangi**	**37.94**	**165**	*e*P	**P**	**04 11 38.6**	**-0.6**
TOO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
GYA	**Guiyang**	**38.05**	**318**	P	**P**	**04 11 41.9**	**+1.6**
GYA				AP	pP	04 11 52.0	-0.1
GYA				XP	sP	04 11 56.0	-1.3
GYA				PP	PP	04 13 12.3	+4.4
GYA				S	**S**	**04 17 31.6**	**+1.5**
GYA				XS	sS	04 17 48.6	-1.2
GYA				SCS	ScS	04 21 49.3	+0.2
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,6.4s						
GYA				LR	LR		
	comp=N,640nm,17.6s,MS4.6						
GYA				LR	LR		
	comp=E,510nm,18.0s,MS4.6						
GYA				LR	LR		
	comp=Z,670nm,17.4s,MS4.5						
KSRS	**Korea Array**	**38.61**	**352**	P	**P**	**04 11 44.0**	**-0.9**
	comp=Z,2.2nm,0.9s,mb3.9,baz=173,slow=10,SNR=10						
KSRS				PcP	PcP	04 13 57.2	+0.6
	comp=Z,1.5nm,0.7s,baz=150,slow=2.7,SNR=5.1						
KSRS				LR	LR	04 26 49.2	
	comp=Z,86nm,20.3s,MS3.6,baz=177,slow=35						
CHRT	**Chiangrai**	**39.60**	**303**	⇑P	**P**	**04 11 52.7**	**-0.7**
	comp=Z,176nm,1.1s,mb5.7						
CHTO	**Chiang Mai**	**39.84**	**301**	*e*P	**P**	**04 11 54.5**	**-0.9**
	comp=Z,17nm,0.8s,mb4.8						
CHTO	**Chiang Mai**	**39.84**	**301**	*e*P	**P**	**04 11 54.5**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
KMI	**Kunming**	**39.99**	**312**	P	**P**	**04 12 00.6**	**+4.0**
KMI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.6						
KMI				LR	LR		
	comp=Z,79nm,19.7s,MS3.6						
KMI	**Kunming**	**39.99**	**312**	P	**P**	**04 12 00.6**	**+4.0**
	comp=Z,11nm,0.8s,mb4.6						
KMI				LR	LR		
	comp=Z,80nm,19.7s,MS3.6						
XAN	**Xi'an**	**42.12**	**328**	P	**P**	**04 12 12.8**	**-1.1**
XAN				AMB	AMB		
	comp=Z,11nm,1.5s,mb4.3						
CD2	**Chengdu**	**42.90**	**320**	*e*P	**P**	**04 12 20.4**	**0.0**
CD2				AP	pP	04 12 32.5	+0.2
CD2				XP	sP	04 12 38.2	+0.8
CD2				PP	PP	04 14 02.6	+2.0
CD2				PCP	PcP	04 14 12.4	+1.7
CD2				S	**S**	**04 18 39.5**	**-2.8**
CD2				SCS	ScS	04 22 15.5	-2.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,110nm,16.8s,MS4.1						
CD2				LR	LR		
	comp=E,200nm,19.2s,MS4.1						
CD2				LR	LR		
	comp=Z,140nm,12.0s						
BJT	**Baijiatuau**	**43.95**	**340**	*e*P	**P**	**04 12 27.7**	**-0.9**

comp=Z,72nm,1.4s,mb5.2
BJT Baijiatuau 43.95 340 *e*P **P** **04 12 27.7 -1.0**
BJT pmax pmax
comp=Z,72nm,1.4s
BJI Beijing 43.97 340 P **P** **04 12 26.8 -2.0**
BJI AP pP 04 12 35.7 -5.1
BJI XP sP 04 12 39.6 -6.3
BJI SCP ScP 04 18 03.2 +0.6
BJI S **S** **04 18 54.2 -3.4**
BJI SS SS 04 22 10.6 -5.1
BJI AMB AMB
comp=Z,37nm,1.3s,mb5.0
BJI LR LR
comp=N,134nm,24.7s,MS3.9
BJI LR LR
comp=E,98nm,23.3s,MS3.9
BJI LR LR
comp=Z,192nm,22.1s,MS4.0
BJI Beijing 43.97 340 P **P** **04 12 26.8 -2.0**
BJI pP pP 04 12 35.7 -5.1
BJI sP sP 04 12 39.6 -6.3
BJI ScP ScP 04 18 03.2 +0.6
BJI S **S** **04 18 54.2 -3.4**
BJI SS SS 04 22 10.6 -5.1
BJI LR LR
comp=Z,190nm,22.1s,MS4.0
CN2 Changchun 45.19 351 *e*P **P** **04 12 40.0 +1.5**
CN2 *e*AP pP 04 12 49.9 -0.7
CN2 PCP PcP 04 14 19.4 +1.2
CN2 *e*S **S** **04 19 17.5 +2.2**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,14.0s,MS5.2
CN2 LR LR
comp=E,2µm,14.0s,MS5.2
CN2 LR LR
comp=Z,2µm,15.0s,MS5.2
ASAJ Asahikawa 45.43 8 P **P** **04 12 40.5 +0.2**
comp=Z,14nm,0.8s,mb4.9,baz=217,slow=19,SNR=4.3
MDJ Mudanjiang 45.51 355 P **P** **04 12 41.1 +0.1**
MDJ AP pP 04 12 49.6 -3.4
MDJ PCP PcP 04 14 20.5 +1.2
MDJ S **S** **04 19 24.2 +4.4**
MDJ AMB AMB
comp=Z,20nm,1.5s,mb4.8
MDJ AMB AMB
comp=Z,139nm,5.1s
HHC Hu-ho-hao-te 46.40 336 *e*P **P** **04 12 48.7 +0.6**
HHC AP pP 04 13 00.8 +0.7
HHC XP sP 04 13 06.3 +1.1
HHC PCP PcP 04 14 22.6 +0.1
HHC PP PP 04 14 38.0 +0.3
HHC SCP ScP 04 18 10.9 -1.7
HHC PCS PcS 04 18 17.5 +0.5
HHC S **S** **04 19 31.8 -0.9**
HHC XS sS 04 19 52.9 0.0
HHC AMB AMB
comp=Z,28nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,175nm,5.9s
HHC LR LR
comp=N,193nm,9.5s
HHC LR LR
comp=E,310nm,14.3s
HHC LR LR
comp=Z,204nm,15.5s,MS4.2
LZH Lanzhou 46.42 326 *e*P **P** **04 12 48.3 -0.1**
LZH AP pP 04 12 58.0 -2.4
LZH XP sP 04 13 02.5 -3.0
LZH PP PP 04 14 37.3 -0.7
LZH *e*S **S** **04 19 33.0 -0.3**
LZH AMB AMB
comp=Z,56nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,206nm,4.1s
LZH LR LR
comp=E,1µm,14.6s
LZH LR LR
comp=Z,2µm,15.8s,MS5.1
LZH Lanzhou 46.42 326 *e*P **P** **04 12 48.3 -0.1**
comp=Z,56nm,1.5s,mb5.3
LZH pP pP 04 12 58.0 -2.4
LZH sP sP 04 13 02.5 -3.0
LZH PP PP 04 14 37.3 -0.7
LZH *e*S **S** **04 19 33.0 -0.3**
LZH *e*SS SS 04 22 51.6 -8.0
LZH LR LR
comp=Z,2µm,15.8s,MS5.1
LZH Lanzhou 46.42 326 *e*P **P** **04 12 48.3 -0.1**
LZH *PP pP 04 12 58.0 -2.4
LZH *SP sP 04 13 02.5 -3.0
LZH 04 14 37.3
LZH *e*S **S** **04 19 33.0 -0.3**
LZH *SS sS 04 19 49.3 -4.1
LZH *e*SS SS 04 22 51.6 -8.0
LZH pmax pmax
comp=Z,56nm,1.5s,mb5.3
LZH MLR MLR
comp=Z,2µm,15.8s,MS5.1
YSS Yuzh-Sakhalins 48.23 8 *e*P **P** **04 13 02.0 -0.2**
comp=Z,32nm,0.7s,mb5.5
YSS Yuzh-Sakhalins 48.23 8 *e*P **P** **04 13 02.1 -0.1**
YSS pmax pmax
comp=Z,31nm,0.7s,mb5.5
SHL Shillong 48.66 306 *e*P **P** **04 13 05.0 -1.0**
HABR Khabarovsk 49.18 1 *e*P **P** **04 13 07.2 -2.3**
HABR *e* pP 04 13 17.0 -4.6
HABR *e* 04 14 26.4
HABR *e*S **S** **04 20 10.0 -1.9**
HABR *e* 04 20 26.5
HABR *e* 04 23 42.1
HABR pmax pmax
comp=Z,46nm,1.6s,mb5.3
KLR Kul'dur 49.98 358 *e*P **P** **04 13 11.0 -4.5**
KLR pmax pmax
comp=Z,46nm,1.8s,mb5.2
GTA Gaotai 51.02 326 ⇑P **P** **04 13 24.2 +0.5**
GTA AP pP 04 13 36.6 +0.7
GTA XP sP 04 13 41.8 +0.9
GTA PCP PcP 04 14 31.0 -8.3
GTA PP PP 04 15 21.3 +0.7
GTA S **S** **04 20 37.6 -0.4**
GTA XS sS 04 20 58.5 +0.2
GTA SS SS 04 24 11.7 -1.9
GTA AMB AMB
comp=Z,21nm,1.3s,mb4.9
GTA AMB AMB
comp=Z,359nm,6.5s
GTA LR LR
comp=N,182nm,13.3s,MS4.3
GTA LR LR
comp=E,146nm,16.0s,MS4.3
GTA LR LR
comp=Z,192nm,15.2s,MS4.2
LSA Lhasa 51.14 310 P **P** **04 13 25.0 +0.3**
LSA Lhasa 51.14 310 *e*P **P** **04 13 25.6 +0.9**
comp=Z,10nm,0.9s,mb4.8
LSA Lhasa 51.14 310 *e*P **P** **04 13 25.6 +0.9**
LSA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TAPN Taplejung 52.80 306 *e*P **P** **04 13 36.5 -0.6**
comp=Z,86nm,1.4s,mb5.5
ODAN Odare 52.86 305 *e*P **P** **04 13 37.0 -0.6**
comp=Z,28nm,0.8s,mb5.3
ULN Ulaanbaatar 54.03 338 *e*P **P** **04 13 46.0 +0.2**
comp=Z,13nm,1.1s,mb4.8
ULN Ulaanbaatar 54.03 338 *c i*P **P** **04 13 45.5 -0.3**
SONM Songino Array 54.26 337 P **P** **04 13 47.7 +0.3**
SONM 04 14 52.0
SONM Songino Array 54.26 337 P **P** **04 13 47.7 +0.2**
comp=Z,2.4nm,1.0s,mb4.1,baz=148,slow=6.7,SNR=16
SONM PcP PcP 04 14 52.0 +0.7
comp=Z,0.9nm,0.5s,baz=153,slow=4.0,SNR=3.7
SONM LR LR 04 34 19.6
comp=Z,125nm,19.9s,MS4.0,baz=353,slow=33
KKN Kakani 54.95 305 *e*P **P** **04 13 52.2 -0.7**
comp=Z,21nm,0.8s,mb5.2
KKN Kakani 54.95 305 *e*P **P** **04 13 52.2 -0.7**
KKN pmax pmax
comp=Z,21nm,0.8s,mb5.2

CIT Chita 55.55 345 *e*P **P** **04 13 54.1 -2.5**
CIT *e* 04 14 56.2
GKN Gorkha 55.56 305 *e*P **P** **04 13 56.3 -0.9**
comp=Z,17nm,0.7s,mb5.2
PET Petropavlovsk 57.47 17 *e*P **P** **04 14 11.6 +1.3**
PET *e*S **S** **04 22 05.2 +0.7**
PET *e*SS SS 04 25 55.0 +0.1
PET pmax pmax
comp=Z,27nm,1.3s,mb5.1
ZAK Zakamensk 57.53 337 *e*P **P** **04 14 10.2 -0.6**
ZAK *e* 04 15 04.8
ZAK pmax pmax
comp=Z,8.0nm,1.7s,mb4.5
TLY Talaya 58.43 338 *e*P **P** **04 14 17.6 +0.6**
TLY *e*S **S** **04 22 27.5 +11**
TLY *e* 04 23 58.0
TLY pmax pmax
comp=Z,11nm,1.5s,mb4.7
MOY Mondy 59.43 337 *e*P **P** **04 14 25.0 +1.0**
MOY pmax pmax
comp=Z,50nm,2.7s,mb5.1
BOD Bodaibo 60.73 348 *e*P **P** **04 14 31.7 -1.1**
BOD pmax pmax
comp=Z,10.0nm,1.4s,mb4.8
WMQ Urumqi 60.86 323⇑ *i*P **P** **04 14 34.7 +0.7**
WMQ AP pP 04 14 47.5 +1.0
WMQ XP sP 04 14 52.7 +1.3
WMQ PCP PcP 04 15 17.7 +0.4
WMQ SCP ScP 04 19 14.2 -1.3
WMQ S **S** **04 22 46.9 -1.8**
WMQ AMB AMB
comp=Z,33nm,0.7s,mb5.6
WMQ LR LR
comp=N,100nm,17.8s,MS4.1
WMQ LR LR
comp=E,68nm,16.5s,MS4.1
WMQ LR LR
comp=Z,58nm,21.6s
MA2 Magadan 61.67 9 *e*P **P** **04 14 39.8 +0.7**
MA2 pmax pmax
comp=Z,30nm,1.2s,mb5.3
YAK Yakutsk 62.86 358 *e*P **P** **04 14 47.0 0.0**
comp=Z,29nm,0.8s,mb5.5
YAK Yakutsk 62.86 358 *e*P **P** **04 14 46.9 -0.1**
YAK *e* 04 15 19.3
YAK *e*S **S** **04 23 14.9 +1.7**
YAK *e*SS SS 04 27 23.6 +4.6
YAK pmax pmax
comp=Z,46nm,1.0s,mb5.6
YAK pmax pmax
comp=N,28nm,1.6s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK smax
comp=N,135nm,4.8s
YAK smax
comp=E,111nm,3.3s
MK31 Makanchi Array 65.67 324 *e*P **P** **04 15 06.0 +0.2**
MKAR Makanchi Array 65.67 324⇑ *e*P **P** **04 15 06.3 +0.5**
MKAR Makanchi Array 65.67 324 P **P** **04 15 06.2 +0.5**
comp=E,6.2nm,0.5s,mb4.9,baz=110,slow=8.4,SNR=116
MKAR LR LR 04 44 45.4
comp=E,92nm,18.5s,MS4.0,baz=353,slow=37
KZA Kyzart 68.10 317 P **P** **04 15 23.0 +1.6**
SNR=20
ZALV Zalesovo Beam 68.17 331 P **P** **04 15 20.8 -0.8**
comp=E,6.4nm,0.9s,mb4.7,baz=111,slow=6.5,SNR=27
ZAL Zalesovo 68.18 331 P **P** **04 15 20.8 -0.8**
TKM2 Tokmak 2 68.19 317 *e*P **P** **04 15 21.9 0.0**
comp=E,35nm,1.6s,mb5.1
TKM2 Tokmak 2 68.19 317 *e*P **P** **04 15 21.9 0.0**
TKM2 pmax pmax
comp=Z,35nm,1.6s,mb5.1
TKM2 Tokmak 2 68.19 317 P **P** **04 15 22.6 +0.7**
SNR=6.1
UCH Uchtor 68.67 316 *e*P **P** **04 15 26.0 +1.1**
comp=Z,51nm,1.6s,mb5.2
UCH Uchtor 68.67 316 P **P** **04 15 26.4 +1.5**
SNR=16
FRU Bishkek 68.83 317 *e*P **P** **04 15 26.0 +0.1**
AAK Ala-Archa 68.83 317 *e*P **P** **04 15 25.3 -0.6**
comp=Z,11nm,1.3s,mb4.6
AAK Ala-Archa 68.83 317 *e*P **P** **04 15 25.3 -0.6**
AAK pmax pmax
comp=Z,11nm,1.3s,mb4.6
AAK Ala-Archa 68.83 317 P **P** **04 15 26.6 +0.7**
SNR=5.4
USP Ospenovka 69.07 317 P **P** **04 15 27.8 +0.5**
SNR=15
AML Almayashu 69.20 316 *e*P **P** **04 15 29.2 +1.1**
comp=Z,28nm,1.2s,mb5.1
AML Almayashu 69.20 316 P **P** **04 15 29.5 +1.3**
SNR=14
EKS2 Erkin-Say 69.33 317 *e*P **P** **04 15 29.6 +0.6**
comp=Z,39nm,1.7s,mb5.1
EKS2 Erkin-Say 69.33 317 P **P** **04 15 29.9 +0.9**
SNR=7.9
NVS Novosibirsk 69.44 331 *e*P **P** **04 15 28.7 -0.7**
NVS pmax pmax
comp=N,23nm,1.5s
NVS pmax pmax
comp=E,24nm,1.5s
NVS pmax pmax
comp=Z,36nm,1.5s,mb5.1
KURK Kurchatov 69.71 326 P **P** **04 15 31.7 +0.6**
comp=Z,125nm,1.4s,mb5.7,SNR=16
KURK Kurchatov 69.71 326 *e*P **P** **04 15 30.9 -0.2**
comp=Z,39nm,1.3s,mb5.2
KURK Kurchatov 69.71 326 *c i*P **P** **04 15 31.0 -0.1**
KK31 Karatay Array 71.74 316 *i*P **P** **04 15 43.3 -0.4**
KK31 pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
BILL Bilibino 72.27 12⇑ *e*P **P** **04 15 46.3 0.0**
BILL *e*PP pP 04 16 05.2 +6.1
BILL *e*S S 04 25 09.7 +3.8
BILL pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
TIXI Tiksi 72.51 358 *e*P **P** **04 15 46.6 -1.1**
comp=Z,10nm,1.1s,mb4.7
TIXI Tiksi 72.51 358 *e*P **P** **04 15 48.0 +0.3**
TIXI pmax pmax
comp=Z,17nm,2.0s,mb4.6
BRVK Borovoye 75.38 326 P **P** **04 16 05.9 +1.1**
comp=Z,119nm,1.5s,mb5.6,SNR=9.6
BRVK Borovoye 75.38 326 *e*P **P** **04 16 04.7 -0.1**
comp=Z,30nm,1.1s,mb5.1
BRVK Borovoye 75.38 326 *e*P **P** **04 16 04.7 -0.1**
BRVK pmax pmax
comp=Z,30nm,1.1s,mb5.1
GAMB Gambell 75.70 22 *e*P **P** **04 16 07.2 +0.7**
VNDA Vanda 78.00 174 *e*P **P** **04 16 21.1 +1.9**
comp=Z,13nm,1.2s,mb4.7
VNDA Vanda 78.00 174 *e*P **P** **04 16 21.1 +1.9**
VNDA pmax pmax
comp=Z,13nm,1.2s
VNDA Vanda 78.00 174 P **P** **04 16 18.7 -0.5**
comp=Z,3.6nm,0.7s,mb4.4,baz=328,slow=6.1,SNR=9.6
VNDA LR LR 04 49 50.9
comp=Z,256nm,18.4s,MS4.6,baz=344,slow=35
TTA Tatalina 81.68 26 *e*P **P** **04 16 41.1 +1.8**
comp=Z,37nm,1.5s,mb5.1
TTA Tatalina 81.68 26 *e*P **P** **04 16 41.2 +1.8**
TTA pmax pmax
comp=Z,37nm,1.5s,mb5.1
SVE Sverdlovsk 81.83 328 *e*P **P** **04 16 40.5 +0.2**
SVE pmax pmax
comp=Z,13nm,0.9s,mb4.9
AKTK Aktyubinsk 81.94 321 P **P** **04 16 40.2 -0.8**
AKTO Aktyubinsk 81.94 321 P **P** **04 16 40.2 -0.8**
comp=Z,7.2nm,1.1s,mb4.5,baz=78,slow=9.0,SNR=3.7
MAW Mawson 82.14 202 P **P** **04 16 42.9 +1.2**
comp=Z,6.2nm,0.6s,mb4.7,baz=78,slow=7.3,SNR=3.5
MAW LR LR 04 53 11.5
comp=Z,189nm,18.3s,MS4.5,baz=74,slow=36
ARU Arti 82.86 327 *e*P **P** **04 16 45.0 -0.7**
comp=Z,9.7nm,1.1s,mb4.8
ARU Arti 82.86 327 *c i*P **P** **04 16 45.1 -0.5**
ARU *e* 04 19 55.2
ARU S S 04 27 01.6 +0.7
ARU SS SS 04 32 23.7 -0.7
ARU pmax pmax
comp=Z,23nm,1.7s,mb4.9
IMA2 Indian Mountai 83.60 23 *e*P **P** **04 16 50.5 +1.3**
MCK McKinley 84.97 26 *e*P **P** **04 16 56.8 +0.5**
comp=Z,31nm,1.5s,mb5.2
MCK McKinley 84.97 26 *e*P **P** **04 16 56.8 +0.5**
MCK pmax pmax
comp=Z,31nm,1.5s,mb5.2
COLA College 85.67 25 *e*P **P** **04 17 00.4 +0.6**
comp=Z,4.1nm,0.6s,mb4.8
COLA College 85.67 25 *e*P **P** **04 17 00.4 +0.7**
COLA pmax pmax
comp=Z,4.0nm,0.6s,mb4.8
DAWY Dawson 89.20 26 *e*P **P** **04 17 18.0 +1.2**
ZEI Tsey 90.87 313 *e*P **P** **04 17 24.0 -1.0**
ZEI pmax pmax
comp=Z,4.0nm,1.2s,mb4.6
INK Inuvik 91.65 22 *e*P **P** **04 17 27.8 -0.3**
ARCES ARCESS Array B 97.33 340 P **P** **04 17 53.0 -1.0**
comp=Z,3.0nm,0.6s,mb4.9,baz=69,slow=6.6,SNR=10
BRTR Keskin Array B 98.74 310 P **P** **04 18 00.6 -0.5**
comp=Z,0.1nm,0.3s,baz=65,slow=8.4,SNR=2.7
FINES FINESS Array B 99.41 332 P **P** **04 18 02.3 -1.3**
comp=Z,0.9nm,0.8s,mb4.4,baz=207,slow=2.1,SNR=4.2
FINES LR LR 05 08 41.9
comp=Z,140nm,21.2s,MS4.4,baz=327,slow=39
AKASG Malin Array Be 100.19 321 *i*P Pdif 04 18 06.0 -1.2
AKASG Malin Array Be 100.19 321 P Pdif 04 18 05.2 -2.0
comp=Z,0.4nm,0.5s,baz=63,slow=4.9,SNR=5.0
YKA Yellowknife Ar 100.44 26 P Pdif 04 18 08.6 +0.3
YKA PKKP PKKPbc 04 34 28.9 +2.6
YKA Yellowknife Ar 100.44 26 P Pdif 04 18 08.6 +0.3
comp=Z,0.5nm,0.7s,baz=295,slow=4.6,SNR=7.0
YKA PKKP PKKPbc 04 34 28.9 +2.6
comp=Z,0.3nm,0.7s,baz=106,slow=2.6,SNR=5.9
NVAR Mina Array Bea 104.18 51 Pdiff Pdif 04 18 27.0 +2.1
comp=Z,0.9nm,0.9s,baz=258,slow=4.1,SNR=3.9
HFS Hagfors 105.54 333 Pdiff Pdif 04 18 29.4 -1.5
comp=Z,6.9nm,1.2s,baz=58,slow=14,SNR=4.7
PDAR Pinedale Array 109.60 45 PKiKP PKiKP 04 22 52.1 0.0
comp=Z,0.2nm,0.8s,baz=128,slow=2.8,SNR=2.5
PDAR PKKP PKKPbc 04 34 13.2 +15
comp=Z,0.6nm,0.9s,baz=153,slow=5.0,SNR=3.6
ULM Lac du Bonnet 115.05 33 PKP PKiKP 04 23 04.1 +1.8
comp=Z,1.2nm,0.9s,baz=53,slow=1.3,SNR=3.0
MNTX Cornudas Mount 116.03 55 *e*PKPdf PKPdf 04 23 06.2 +1.5
TXAR Lajitas Array 118.11 57 PKP PKPdf 04 23 10.3 +1.5
comp=Z,0.2nm,0.9s,baz=315,slow=0.3,SNR=3.1
JCT Junction City 120.96 55 *e*PKPdf PKPdf 04 23 15.0 +0.7
WCI Wyandotte Cave 127.44 40 *e*PKPdf PKPdf 04 23 27.3 +0.8
TOA0 Torodi Ar. Sit 131.48 287 *e*PKPdf PKPdf 04 23 35.7 +0.9
TORD Torodi Ar. Bea 131.48 287 PKP PKPdf 04 23 35.3 +0.6
comp=Z,1.3nm,0.7s,baz=64,slow=2.3,SNR=7.8
TRQA Tornquist 138.44 161 *e*PKPdf PKPdf 04 23 48.9 +1.7
LCO Las Campanas 141.86 143 *e*PKPdf PKPdf 04 23 56.0 +2.4
ROSC El Rosal 151.19 82 *e*PKPdf PKPdf 04 24 11.7 +2.0
ROSC *e*PKPbc PKPbc 04 24 17.5 +1.9
ROSC PKPbc PKPbc 04 24 18.2 +2.5
ROSC *e*PKPab PKPab 04 24 24.2 +0.6
ROSC El Rosal 151.19 82 PKPbc PKPbc 04 24 18.2 +2.5
comp=Z,16nm,0.6s,baz=104,slow=16,SNR=14
LPAZ La Paz 152.07 129 *e*PKPdf PKPdf 04 24 13.1 +2.2
LPAZ *e*PKPbc PKPbc 04 24 20.8 +3.3
LPAZ La Paz 152.07 129 PKP PKPdf 04 24 13.8 +2.9
comp=Z,2.7nm,1.1s,baz=79,slow=4.8,SNR=4.1
LPAZ PKPbc PKPbc 04 24 19.9 +2.3
comp=Z,8.1nm,0.8s,baz=65,slow=0.3,SNR=19
SDV Santo Domingo 153.98 71 *e*PKPbc PKPbc 04 24 21.4 -0.5

IDC 03 04:14:07.2±1.7, 070N×12588E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=106.8km s-min=23.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.69**	**181**	P		Pn	04 18 26.2	-1.2
	0.1nm,0.3s,baz=13,slow=19,SNR=2.4							
WRA	**Warramunga Arr**	**22.13**	**158**	P		P	04 19 03.9	-0.7
	1.1nm,0.4s,baz=337,slow=11,SNR=22							
ASAR	**Alice Springs**	**25.45**	**163**	P		P	04 19 38.1	+1.2
	0.9nm,0.3s,baz=345,slow=12,SNR=16							
STKA	**Stephens Creek**	**35.66**	**157**	P		P	04 21 06.9	-0.3
	0.9nm,0.3s,baz=331,slow=8.2,SNR=4.6							
MKAR	**Makanchi Array**	**59.57**	**327**	P		P	04 24 12.7	0.0
	0.2nm,0.3s,baz=118,slow=8.9,SNR=5.3							

*IDC **03** 04:16:50.4±2.8, 691S×154 94E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.8/14, mbtmp3.8/6, Error ellipse: s-maj=95.0km s-min=26.2km az=106.0*
*NEIC **03** 04:16:53.2±1.5, 694S×154 92E, h10km, mb4.1/1, Error ellipse: s-maj=45.6km s-min=21.5km az=117.0*
*ISCJB **03** 04:16:54.8±1.5, 70S±02×1547E±03, h33km, mb3.6/7, Error ellipse: s-maj=39.3km s-min=17.1km az=25.3*
ISC 03 04:16:56.3±1.5, 70S±02×1548E±03, h35km, n12, σ0s71/10, mb3.6/7, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.93**	**252**	*e*Pn		**Pn**	**04 18 48.9**	**-0.3**
WRA	**Warramunga Arr**	**23.67**	**235**	P		P	**04 22 04.7**	**-0.2**
	0.5nm,0.4s,mb3.3,baz=60,slow=10.0,SNR=12							
ASAR	**Alice Springs**	**26.04**	**228**	P		P	**04 22 27.6**	**+1.0**
	0.7nm,0.8s,mb3.3,baz=56,slow=9.3,SNR=7.7							
STKA	**Stephens Creek**	**27.68**	**205**	*e*P		P	**04 22 40.6**	**-0.6**
STKA	**Stephens Creek**	**27.68**	**205**	P		P	**04 22 40.9**	**-0.3**
	1.8nm,0.7s,mb3.8,baz=79,slow=5.2,SNR=3.3							
SONM	**Songino Array**	**69.19**	**327**	P		P	**04 27 59.8**	**+0.4**
	0.6nm,0.9s,mb3.5,baz=107,slow=3.5,SNR=2.6							
MK31	**Makanchi Array**	**83.23**	**319**	*e*P		P	**04 29 19.9**	**+0.7**
MKAR	**Makanchi Array**	**83.23**	**319**	P		P	**04 29 19.5**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=95,slow=5.7,SNR=6.4							
ZALV	**Zalesovo Beam**	**84.03**	**326**	P		P	**04 29 21.5**	**-1.6**
	0.4nm,0.5s,mb3.8,baz=123,slow=5.3,SNR=2.3							
TKM2	**Tokmak 2**	**86.83**	**314**	*e*P		P	**04 29 37.5**	**+0.1**
	0.7nm,0.5s,mb4.2							
TOA0	**Torodi Ar. Sit**	**152.81**	**285**	*e*PKPbc		PKPbc	04 36 50.6	-0.1
TOA0				*e*PKPab		PKPab	04 37 02.0	+0.3
TORD	**Torodi Ar. Bea**	**152.81**	**285**	PKPbc		PKPbc	04 36 51.0	+0.3
	0.9nm,0.7s,baz=80,slow=2.2,SNR=12							
TORD				PKPab		PKPab	04 37 02.4	+0.7
	1.0nm,0.7s,baz=74,slow=3.1,SNR=5.3							

IDC 03 04:27:16.6±2.3, 084S×13387E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.6/17, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=101.7km s-min=22.1km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.96**	**205**	*e*P		Pn	04 31 41.2	+1.1
	9.9nm,1.1s							
FITZ	**Fitzroy Crossi**	**18.96**	**205**	P		Pn	04 31 40.5	+0.3
	0.5nm,0.3s,baz=37,slow=13,SNR=12							
FITZ				S		Sn	04 34 60.0	-13
	0.1nm,0.3s,baz=114,slow=17,SNR=2.5							
WB2	**Warramunga Arr**	**18.99**	**179**	*e*P		Pn	04 31 39.6	-0.8
WRA	**Warramunga Arr**	**18.99**	**179**	P		Pn	04 31 39.4	-1.1
	0.1nm,0.3s,baz=356,slow=12,SNR=4.6							
ASAR	**Alice Springs**	**22.69**	**180**	P		P	04 32 19.9	0.0
	1.3nm,0.9s,baz=2.7,slow=12,SNR=11							
MKAR	**Makanchi Array**	**65.40**	**324**	P		P	04 38 01.3	+0.2
	0.7nm,0.6s,baz=119,slow=7.5,SNR=7.7							
ZALV	**Zalesovo Beam**	**67.94**	**331**	P		P	04 38 16.8	-0.3
	0.3nm,0.4s,baz=99,slow=7.4,SNR=3.1							

IDC 03 04:39:30.5±13.0, 725N×9346E, h0km, mb4.0/4, mb1 4.0/4, mb1mx3.5/22, mbtmp4.0/4, Error ellipse: s-maj=314.7km s-min=127.9km az=128.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.56**	**348**	P		P	04 47 11.7	+0.1
	1.3nm,0.7s,baz=168,slow=7.7,SNR=13							
ZALV	**Zalesovo Beam**	**47.09**	**353**	P		P	04 48 03.8	-0.2
	0.9nm,0.3s,baz=184,slow=8.8,SNR=6.8							
AKTO	**Aktyubinsk**	**52.18**	**332**	P		P	04 48 42.9	-0.1
	0.8nm,0.5s,baz=111,slow=8.6,SNR=3.3							
FINES	**FINESS Array B**	**72.95**	**332**	P		P	04 51 01.7	+0.1
	0.8nm,0.8s,baz=108,slow=4.5,SNR=3.4							

*CSEM **03** 04:41:20.9±0.1, 3476N×2761E, h100km, ML3.8, Error ellipse: s-maj=6.2km s-min=1.8km az=40.0*
*ISCJB **03** 04:41:21.3±0.6, 3466N±009×2747E±009, h97km±18km,*

Error ellipse: s-maj=18.1km s-min=7.7km az=34.4
*HLW **03** 04:41:22.8,3467N×2764E,h22km,Mb3.8*
*ATH **03** 04:41:24.1,3484N×2730E,h90km±3km*
ISC 03 04:41:22.7±0.7**,3467N**±008×**2746E**±008**,h85**km±23km**, n17,**σ**0.77**/22**,2C-1D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.91**	**344**	eP	**Pn**	**04 41 41.0**	**-0.1**
KARP				eS	**Sn**	**04 41 54.3**	**-0.5**
NPS	**Neapolis**	**1.63**	**292**	eP	**Pn**	**04 41 50.5**	**+0.6**
ARG	**Arkhangelos**	**1.64**	**19**	eP	**Pn**	**04 41 51.7**	**+1.7**
ARG				eS	**Sn**	**04 42 11.2**	**+0.5**
VAM	**Vamos**	**2.78**	**286**	eP	**Pn**	**04 42 06.3**	**+1.2**
APE	**Apeiranthos**	**2.87**	**327**	eP	**Pn**	**04 42 06.6**	**+0.3**
APE				eS	**Sn**	**04 42 37.9**	**-1.9**
VLI	**Veliai**	**4.21**	**300**	eP	**Pn**	**04 42 24.2**	**-0.4**
VLI				eS	**Sn**	**04 43 08.7**	**-3.9**
ITM	**Ithomi**	**5.14**	**301**	eP	**Pn**	**04 42 37.4**	**+0.2**
HNAT	**Natroun**	**5.69**	**151**	⇓iP	**Pn**	**04 42 44.2**	**-0.4**
HHAG	**Hagoal**	**6.12**	**139**	P	**Pn**	**04 42 50.4**	**-0.2**
GLL	**Jalalah**	**6.22**	**143**	⇑eP	**Pn**	**04 42 51.6**	**-0.4**
AMAG	**Maghara**	**6.29**	**128**	P	**Pn**	**04 42 52.2**	**-0.7**
SUZ		**6.62**	**135**	P	**Pn**	**04 42 57.6**	**+0.2**
SUZ				S	**Sn**	**04 44 05.7**	**-5.7**
ZNM		**7.00**	**137**	P	**Pn**	**04 43 02.3**	**-0.2**
HNKL	**Nakhl**	**7.26**	**129**	P	**Pn**	**04 43 05.7**	**-0.5**
HKAT	**Jabal Katrina**	**8.28**	**136**	P	**Pn**	**04 43 20.1**	**+0.1**
HKAT	**Jabal Katrina**	**8.28**	**136**	P	**Pn**	**04 43 20.0**	**0.0**
HDK1	**Dakhla**	**9.25**	**169**	⇑eP	**Pn**	**04 43 34.1**	**+0.9**

IDC 03 05:15:23.4±1.5**,1489S**×**17374W,h0**km**,mb3.8**/5**, mb1 4.1**/6**,mb1mx3.8**/15**,mbtmp3.8**/6**,ML2.0**/1**,Error ellipse: s-maj=155.3km s-min=17.7km az=154.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.13**	**63**	Pn	Pn	05 16 00.2	-0.1
	25nm,0.3s,baz=125,slow=20,SNR=8.8						
AFI				Sn	Sn	05 16 26.8	-0.7
	39nm,0.3s,baz=348,slow=14,SNR=9.4						
STKA	**Stephens Creek**	**44.01**	**239**	P	P	05 23 33.2	+0.3
	1.5nm,0.6s,baz=90,slow=10,SNR=2.6						
WRA	**Warramunga Arr**	**49.65**	**256**	P	P	05 24 17.1	-0.1
	0.3nm,0.3s,baz=91,slow=7.4,SNR=9.5						
ASAR	**Alice Springs**	**49.96**	**251**	P	P	05 24 19.1	-0.4
	2.2nm,0.6s,baz=89,slow=8.1,SNR=30						
NVAR	**Mina Array Bea**	**74.17**	**42**	P	P	05 27 03.6	+1.6
	0.4nm,0.7s,baz=220,slow=8.3,SNR=3.3						
TXAR	**Lajitas Array**	**80.60**	**56**	P	P	05 27 37.9	-0.3
	0.2nm,0.7s,baz=237,slow=4.2,SNR=2.2						

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*ISCJB **03** 05:20:57.8±1.4,50S±02×1528E±02,h47km,mb3.6/4, Error ellipse: s-maj=23.2km s-min=21.4km az=33.8*
*IDC **03** 05:20:58.8±6.2,497S×15288E,h42km±56km,mb3.5/4, mb1 3.9/6,mb1mx3.6/17,mbtmp3.8/6,ML4.9/1,MS3.2/1, Ms1 3.2/1,ms1mx2.7/23,Error ellipse: s-maj=42.7km s-min=33.8km az=32.0*
*NEIC **03** 05:20:59.1±3.5,498S×15286E,h47km±30km,mb3.9/1, Error ellipse: s-maj=28.8km s-min=20.1km az=218.0*
ISC 03 05:20:59.1±4.1**,50S**±02×**1529E**±02**,h41**km±36km**,n10, σ0.98**/8**,mb3.6**/4**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.15**	**232**	P	**Pn**	**05 22 41.2**	**0.0**
	0.7nm,0.3s,baz=45,slow=9.5,SNR=3.3						
CTA	**Charters Tower**	**16.31**	**203**	P	**Pn**	**05 24 45.5**	**+0.1**
CTA				LR	LR	05 30 10.7	
CTA	**Charters Tower**	**16.31**	**203**	P	**Pn**	**05 24 45.5**	**+0.2**
	2.7nm,0.3s,baz=49,slow=20,SNR=12						
CTA				LR	LR	05 30 10.7	
	comp=Z,77nm,18.1s,baz=227,slow=34						
CTAO	**Charters Tower**	**16.31**	**203**	eP	**Pn**	**05 24 45.1**	**-0.2**
	5.8nm,0.6s						
DZM	**Mont Dzumac**	**21.47**	**143**	P	**P**	**05 25 44.2**	**-0.1**
	11nm,1.1s,mb4.1,baz=322,slow=18,SNR=5.8						
WRA	**Warramunga Arr**	**23.35**	**229**	P	**P**	**05 26 03.0**	**-1.2**
	2.6nm,0.8s,mb3.7,baz=54,slow=9.5,SNR=8.7						
ASAR	**Alice Springs**	**26.04**	**223**	P	**P**	**05 26 29.9**	**+1.2**
	0.7nm,0.7s,mb3.3,baz=59,slow=9.3,SNR=4.7						
SONM	**Songino Array**	**66.53**	**328**	P	**P**	**05 31 44.8**	**+0.1**
	0.1nm,0.5s,mb3.1,baz=131,slow=4.1,SNR=1.7						
TORD	**Torodi Ar. Bea**	**150.42**	**288**	PKPbc	PKPbc	05 40 46.0	-1.3
TORD	**Torodi Ar. Bea**	**150.42**	**288**	PKPbc	PKPbc	05 40 46.0	-1.3
	0.4nm,0.7s,baz=69,slow=2.1,SNR=3.2						

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*IDC **03** 05:27:38.2±1.5,1.18S×13342E,h0km,mb3.9/3,mb1 4.1/5, mb1mx3.8/18,mbtmp3.9/5,ML4.0/2,Error ellipse: s-maj=52.6km s-min=13.4km az=80.0*
*ISCJB **03** 05:27:41.1±0.9,1.15S±007×1333E±02,h33km,mb4.0/4, Error ellipse: s-maj=24.0km s-min=10.6km az=0.5*
*NEIC **03** 05:27:42.9±0.6,108S×13355E,h35km,mb4.0/4,Error ellipse: s-maj=23.7km s-min=9.0km az=70.0*
ISC 03 05:27:45.0±5.3**,12S**±01×**1335E**±03**,h55**km±54km**,n12, σ0.52**/16**,mb4.0**/4**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COEN	**Coen**	**15.91**	**143**	eP	**Pn**	**05 31 19.3**	**-6.2**
	4.8nm,1.0s						
FITZ	**Fitzroy Crossi**	**18.47**	**204**	eP	**Pn**	**05 31 57.5**	**+0.4**
	8.7nm,0.8s						
FITZ				eS	**S**	**05 35 17.3**	**-6.6**
FITZ	**Fitzroy Crossi**	**18.47**	**204**	P	**Pn**	**05 31 57.1**	**-0.1**
	0.5nm,0.3s,baz=34,slow=15,SNR=12						
FITZ				S	**S**	**05 35 16.8**	**-7.2**
	0.1nm,0.3s,baz=199,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**18.65**	**177**	P	**Pn**	**05 31 58.9**	**-0.4**
	0.4nm,0.3s,baz=356,slow=11,SNR=17						
WRA				S	**S**	**05 35 27.7**	**-0.4**
	0.1nm,0.3s,baz=357,slow=25,SNR=3.5						
WB2	**Warramunga Arr**	**18.65**	**177**	eP	**Pn**	**05 31 59.2**	**-0.1**
WB2	**Warramunga Arr**	**18.65**	**177**	eP	**Pn**	**05 31 58.7**	**-0.6**
ASAR	**Alice Springs**	**22.34**	**179**	P	**P**	**05 32 39.6**	**+1.3**
	1.6nm,0.5s,mb3.7,baz=7.0,slow=11,SNR=32						
ASAR				S	**S**	**05 36 45.9**	**+4.9**
	0.8nm,0.9s,baz=16,slow=20,SNR=3.5						
CTA	**Charters Tower**	**22.57**	**147**	P	**P**	**05 32 40.9**	**+0.2**
	2.8nm,0.6s,mb3.8,baz=315,slow=13,SNR=5.5						
CTAO	**Charters Tower**	**22.57**	**147**	eP	**P**	**05 32 40.6**	**-0.1**
	3.5nm,0.7s,mb3.9						
MK31	**Makanchi Array**	**65.44**	**324**	eP	**P**	**05 38 22.1**	**0.0**
MKAR	**Makanchi Array**	**65.44**	**324**	P	**P**	**05 38 22.2**	**+0.1**
	1.8nm,0.6s,mb4.3,baz=121,slow=6.9,SNR=19						
KURK	**Kurchatov**	**69.51**	**326**	eP	**P**	**05 38 47.3**	**-0.5**
	1.9nm,0.8s,mb4.1						

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*IDC **03** 05:32:10.3±2.6,4988N×13032W,h0km,mb3.3/1, mb1 3.9/4,mb1mx3.6/21,mbtmp3.4/4,ML3.6/3,MS3.4/1, Ms1 3.3/1,ms1mx2.4/12,Error ellipse: s-maj=52.1km s-min=19.0km az=62.0*
*PGC **03** 05:32:11.4±2.8,4986N×13001W,h10km,ML3.0/8,206km Wsw of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **03** 05:32:12.3±1.7,5013N±005×12984W±007,h13km±12km, mb3.9/6,Error ellipse: s-maj=9.6km s-min=5.6km az=44.5*
*NEIC **03** 05:32:16.4±1.5,5019N×12947W,h10km,mb3.9/8,Error ellipse: s-maj=17.5km s-min=11.5km az=89.0*
ISC 03 05:32:14.6±2.0**,5021N**±005×**12977W**±008**,h14**km±14km**, n47,σ1.36**/44**,mb3.9**/6**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.13**	**67**	P	**Pb**	**05 32 35.0**	**-1.0**
HOLB	**Holberg**	**1.13**	**67**	Trac			
HOLB	**Holberg**	**1.13**	**67**	P	**Pb**	**05 32 35.2**	**-0.8**
BPBC	**Brooks Peninsu**	**1.29**	**92**	P	**Pn**	**05 32 35.5**	**-2.7**
BPBC				S	**Sb**	**05 32 53.7**	**-1.2**
BPBC	**Brooks Peninsu**	**1.29**	**92**	Trac			
PHC	**Port Hardy**	**1.57**	**71**	Pn	**Pn**	**05 32 41.4**	**-0.7**
PHC				Sn	**Sn**	**05 33 02.9**	**+0.7**
PHC	**Port Hardy**	**1.57**	**71**	Trac			
MAYB	**Maynard**	**1.68**	**82**	Trac			
MAYB	**Maynard**	**1.68**	**82**	Pn	**Pn**	**05 32 41.6**	**-1.9**
EDB	**Eliza Dome**	**1.74**	**100**	Sn	**Sn**	**05 33 02.9**	**-3.4**
EDB	**Eliza Dome**	**1.74**	**100**	Trac			
WOSB	**Woss**	**2.06**	**90**	Trac			
WOSB	**Woss**	**2.06**	**90**	Pn	**Pn**	**05 32 47.1**	**-1.6**
BBB	**Bella Bella**	**2.23**	**27**	Trac			
BBB	**Bella Bella**	**2.23**	**27**	Pn	**Pn**	**05 32 52.3**	**+1.1**
BBB				Sn	**Sn**	**05 33 21.1**	**+2.6**
GDR	**Gold River**	**2.45**	**99**	Pn	**Pn**	**05 32 51.7**	**-2.5**
GDR				Sn	**Sn**	**05 33 21.8**	**-2.0**
GDR	**Gold River**	**2.45**	**99**	Trac			
DIB	**Dawson Inlet,**	**3.44**	**332**	Pn	**Pn**	**05 33 07.2**	**-0.5**
DIB				Sn	**Sn**	**05 33 48.5**	**+0.4**
	SNR=6.7						
VIB	**Van Inlet**	**3.50**	**332**	Pn	**Pn**	**05 33 07.3**	**-1.3**
VIB				Sn	**Sn**	**05 33 47.6**	**-2.1**
PGC	**Sidney**	**4.41**	**108**	ePn	**Pn**	**05 33 20.1**	**-0.9**
FMW	**Mount Fremont**	**6.29**	**118**	P	**Pn**	**05 33 47.1**	**+0.2**
LTY	**Liberty**	**6.70**	**113**	P	**Pn**	**05 33 52.8**	**+0.2**
TBM	**Table Mountain**	**6.79**	**113**	P	**Pn**	**05 33 54.1**	**+0.3**
WTV	**Waterville**	**6.94**	**107**	P	**Pn**	**05 33 55.7**	**0.0**
EBG	**Ellensburg**	**6.94**	**115**	P	**Pn**	**05 33 56.1**	**+0.3**
MDW	**Midway**	**7.57**	**115**	P	**Pn**	**05 34 04.2**	**-0.3**
OD2	**Odessa Site #2**	**7.83**	**107**	P	**Pn**	**05 34 07.4**	**-0.6**
NEW	**Newport**	**8.50**	**98**	ePn	**Pn**	**05 34 17.1**	**-0.1**
	14nm,1.5s						
MCMT	**McKenzie Canyo**	**12.63**	**109**	ePn	**Pn**	**05 35 13.1**	**-0.6**
NVAR	**Mina Array Bea**	**14.33**	**141**	Pn	**Pn**	**05 35 37.4**	**+0.4**
	0.1nm,0.3s,baz=323,slow=10,SNR=3.9						
MOOW	**Moose Ponds**	**14.49**	**109**	ePn	**Pn**	**05 35 40.9**	**+1.9**
	12nm,1.1s						
TPAW	**Teton Pass**	**14.51**	**110**	eP	**Pn**	**05 35 48.1**	**+8.8**
	24nm,1.1s						
REDW	**Red Top Meadow**	**14.64**	**111**	ePn	**Pn**	**05 35 42.9**	**+1.8**
	29nm,1.4s						
LOHW	**Long Hollow**	**14.65**	**109**	ePn	**Pn**	**05 35 43.5**	**+2.3**
	9.7nm,1.1s						
YKA	**Yellowknife Ar**	**14.85**	**28**	Pn	**Pn**	**05 35 44.3**	**+0.5**
	0.2nm,0.3s,baz=222,slow=12,SNR=16						
DUG	**Dugway**	**15.56**	**124**	eP	**Pn**	**05 35 54.4**	**+1.0**
	3.5nm,1.0s						
BW06	**Boulder Array**	**15.76**	**110**	eP	**Pn**	**05 35 58.1**	**+2.2**
	8.7nm,1.5s						
PDAR	**Pinedale Array**	**15.76**	**110**	Pn	**Pn**	**05 35 58.1**	**+2.2**
	0.1nm,0.3s,baz=305,slow=11,SNR=12						
FFC	**Flin Flon**	**17.47**	**64**	eP	**Pn**	**05 36 18.9**	**+1.3**
	7.0nm,0.8s						
PV10	**Paradox Valley**	**18.91**	**121**	eP	**Pn**	**05 36 34.1**	**-1.1**
SDCO	**Great Sand Dun**	**21.34**	**116**	eP	**P**	**05 37 02.9**	**+1.8**
	26nm,2.0s,mb4.2						
ULM	**Lac du Bonnet**	**21.58**	**77**	LR	LR	05 45 40.8	
	comp=Z,95nm,19.0s,baz=213,slow=37						
FCC	**Fort Churchill**	**22.18**	**54**	eP	**P**	**05 37 12.4**	**+2.4**
	3.7nm,0.9s,mb3.8						
ANMO	**Albuquerque**	**22.82**	**123**	eP	**P**	**05 37 16.6**	**-0.4**
	8.5nm,1.6s,mb3.9						
ECSD	**EROS,Sioux Fal**	**23.40**	**93**	eP	**P**	**05 37 24.3**	**+1.4**
	10nm,1.0s,mb4.2						
MNTX	**Cornudas Mount**	**25.91**	**126**	eP	**P**	**05 37 44.2**	**-1.9**
	4.8nm,1.4s,mb3.8						
TXAR	**Lajitas Array**	**28.68**	**127**	P	**P**	**05 38 10.2**	**-0.7**
	0.3nm,0.7s,mb3.2,baz=317,slow=7.8,SNR=3.3						

MAN 03 05:36:10,1034N×**12518E,h7**km**,mb4.3,ML3.1,MS2.9, 1C-1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.38**	**237**	eP	Pg	05 36 19.1	+1.7
MSLP				eS	Sg	05 36 25.5	+3.1
SCPH	**Surigao**	**0.64**	**151**	⇓eP	Pg	05 36 22.9	+0.7
PLP	**Palo**	**0.84**	**346**	eP	Pg	05 36 26.7	+0.5
PLP				eS	Sg	05 36 38.5	+1.3
LLP	**Lapu-Lapu**	**1.20**	**269**	⇑eP	Pg	05 36 33.1	+0.2
LLP				eS	Sg	05 36 50.0	+1.6

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*MOS **03** 05:36:59.1±0.9,3641N×7040E,h209km,mb4.0/20,Error ellipse: s-maj=10.6km s-min=6.5km az=83.5*
*NNC **03** 05:36:59.3±10.0,3698N×7050E,h0km,mb4.8,mpv4.3, Error ellipse: s-maj=90.5km s-min=72.1km az=31.0*
*ISCJB **03** 05:37:00.8±0.2,3652N±002×7043E±004,h227km, mb3.9/29,Error ellipse: s-maj=4.5km s-min=3.1km az=10.4*
*IDC **03** 05:37:02.2±0.5,3646N×7040E,h229km±4km,mb3.7/15, mb1 3.8/17,mb1mx3.7/23,mbtmp3.7/17,Error ellipse: s-maj=11.4km s-min=10.0km az=28.0*
*NEIC **03** 05:37:02.0±0.3,3649N×7045E,mb4.3/15,Error ellipse: s-maj=7.8km s-min=5.8km az=119.0*
*BJI **03** 05:37:02.0,3650N×7050E,h228km,mB4.9,mb4.5*
ISC 03 05:37:02.2±0.2**,3652N**±002×**7048E**±004**,h229**km**, h229**km±2.6km**:pP-P,n134,σ1.22**/151**,mb3.9**/29**,5C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.29**	**211**	ePn	**Pn**	**05 37 44.4**	**-1.5**
KBL				eSn	**S**	**05 38 16.0**	**-4.1**
CEP	**Cherat**	**2.94**	**156**	⇓P	**Pn**	**05 37 52.8**	**+0.1**
THW	**Thamme Wali**	**3.86**	**164**	P	**Pn**	**05 38 03.2**	**-0.2**
SBDP	**Sheikh Budin**	**4.22**	**176**	P	**Pn**	**05 38 06.1**	**-1.7**
DRP	**Derazinda**	**4.77**	**183**	P	**Pn**	**05 38 14.2**	**-0.3**
DRP				S	**S**	**05 39 04.0**	**-7.9**
SARP	**Sargodha**	**4.93**	**158**	P	**Pn**	**05 38 16.0**	**-0.5**
JMU	**Jammu**	**5.26**	**135**	eS	**S**	**05 39 16.0**	**-6.9**
KSH	**Kashi**	**5.27**	**54**	P	**Pn**	**05 38 21.3**	**+0.7**
KSH				S	**S**	**05 39 15.0**	**-8.0**
KSH				Smax			
	comp=N,3μm,1.0s						
KSH				Smax			
	comp=E,3μm,0.8s						
THN	**Thein Dam**	**5.95**	**132**	eP	**Pn**	**05 38 28.4**	**-0.8**
THN				ex	x	05 39 35.3	
DLH	**Dalhousie**	**6.02**	**130**	eP	**Pn**	**05 38 29.0**	**-1.2**
DLH				ex	x	05 39 36.0	
AML	**Almayashu**	**6.13**	**23**	ePn	**Pn**	**05 38 31.2**	**-0.3**
	comp=E,326nm,0.5s						
AML				eS	**S**	**05 39 39.8**	**-2.9**
AML	**Almayashu**	**6.13**	**23**	P	**Pn**	**05 38 31.2**	**-0.2**
	SNR=176						
UCH	**Uchtor**	**6.50**	**28**	ePn	**Pn**	**05 38 36.1**	**0.0**
	comp=E,189nm,0.7s						
UCH				eS	**S**	**05 39 48.9**	**-2.2**
UCH	**Uchtor**	**6.50**	**28**	P	**Pn**	**05 38 36.3**	**+0.2**
	SNR=98						
KK31	**Karatay Array**	**6.58**	**0**	⇑Pn	**Pn**	**05 38 36.1**	**-0.9**
	comp=E,10nm,0.4s,baz=175,slow=11,SNR=266						
KK31				Pg	**Pn**	**05 38 48.3**	**+11**
	comp=E,19nm,0.4s,baz=190,slow=16,SNR=10						
KK31				⇑Sn	**S**	**05 39 46.6**	**-6.3**
	comp=E,146nm,0.8s,baz=182,slow=19,SNR=11						
EKS2	**Erkin-Say**	**6.64**	**22**	ePn	**Pn**	**05 38 37.8**	**-0.1**
	comp=E,86nm,0.7s						
EKS2				eS	**S**	**05 39 51.9**	**-2.5**
EKS2	**Erkin-Say**	**6.64**	**22**	P	**Pn**	**05 38 37.6**	**-0.3**
	SNR=124						
KZA	**Kyzart**	**6.67**	**32**	P	**Pn**	**05 38 38.2**	**0.0**
	SNR=132						
AAK	**Ala-Archa**	**6.85**	**26**	ePn	**Pn**	**05 38 39.5**	**-1.0**
	comp=E,66nm,0.4s						
AAK				eS	**S**	**05 39 55.8**	**-3.4**
AAK	**Ala-Archa**	**6.85**	**26**	d iPN	**Pn**	**05 38 39.6**	**-0.9**
AAK	**Ala-Archa**	**6.85**	**26**	P	**Pn**	**05 38 40.7**	**+0.1**
	SNR=157						
KBK	**Karagaybulak**	**7.03**	**28**	P	**Pn**	**05 38 43.3**	**+0.4**
	SNR=25						
FRU	**Bishkek**	**7.07**	**26**	⇓iPN	**Pn**	**05 38 43.0**	**-0.3**
FRU				i S	**S**	**05 40 02.4**	**-1.9**
FRU				pmax	pmax		
	comp=Z,170nm,1.9s						
FRU				smax			
	comp=E,2μm,1.8s						
ULHL	**Ulahol**	**7.25**	**36**	P	**Pn**	**05 38 45.5**	**-0.2**
	SNR=93						
CHMS	**Chumysh**	**7.26**	**26**	P	**Pn**	**05 38 45.4**	**-0.3**
	SNR=17						
SDNR	**Sundarnagar**	**7.36**	**131**	eP	**Pn**	**05 38 46.0**	**-1.2**
SDNR				eS	**S**	**05 40 06.2**	**-5.0**
USP	**Ospenovka**	**7.41**	**23**	P	**Pn**	**05 38 47.2**	**-0.5**
	SNR=76						
TKM2	**Tokmak 2**	**7.51**	**30**	⇓Pn	**Pn**	**05 38 48.8**	**-0.2**
	comp=E,12nm,0.7s						
TKM2				⇓Sn	**S**	**05 40 11.6**	**-3.1**
	comp=E,18nm,0.8s						
TKM2	**Tokmak 2**	**7.51**	**30**	ePn	**Pn**	**05 38 48.8**	**-0.2**
TKM2				eS	**S**	**05 40 06.0**	**-8.6**
TKM2	**Tokmak 2**	**7.51**	**30**	P	**Pn**	**05 38 49.0**	**+0.1**
	SNR=45						
DDI	**Dehra Dun**	**8.85**	**132**	ex	x	05 39 20.5	
KHET	**Khetri**	**9.55**	**150**	eP	**Pn**	**05 39 13.3**	**-1.9**
KHET				eS	**S**	**05 40 54.8**	**-8.0**
KHET				AML	AML	05 41 15.1	
	comp=N,80nm,0.9s						
KHET				AML	AML	05 41 15.3	
	comp=E,80nm,0.8s						
JOSI	**Joshimath**	**9.63**	**126**	eP	**Pn**	**05 39 16.5**	**+0.2**
JOSI				ex	x	05 40 29.0	
JOSI				AML	AML	05 40 41.6	
	comp=N,203nm,0.8s						
JOSI				AML	AML	05 40 43.0	
	comp=E,254nm,0.8s						
NDI	**New Delhi**	**9.66**	**142**	ex	x	05 39 13.0	
NDI				eS	**S**	**05 40 56.5**	**-8.8**
KUDL	**Kundal**	**9.78**	**147**	eP	**Pn**	**05 39 16.5**	**-1.7**
KUDL				eS	**S**	**05 40 58.9**	**-9.2**
SONA	**Sohna**	**9.96**	**144**	eP	**Pn**	**05 39 20.2**	**-0.2**
SONA				eS	**S**	**05 41 03.6**	**-8.7**
SONA				AML	AML	05 41 36.0	
	comp=E,89nm,0.8s						
SONA				AML	AML	05 41 41.9	
	comp=N,58nm,0.4s						
MK31	**Makanchi Array**	**13.53**	**37**	Pn	**Pn**	**05 40 04.8**	**-0.2**
	comp=N,53nm,1.1s,baz=204,slow=8.8,SNR=155						
MK31	**Makanchi Array**	**13.53**	**37**	eP	**Pn**	**05 40 04.7**	**-0.3**
MKAR	**Makanchi Array**	**13.53**	**37**	i P	**Pn**	**05 40 04.8**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MKAR	**Makanchi Array**	**13.53**	**37**	P	**Pn**	**05 40 04.8**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=225,slow=11,SNR=97						
MKAR				sP		05 41 00.9	
	comp=Z,0.1nm,0.3s,baz=225,slow=12,SNR=3.0						
GKN	**Gorkha**	**14.67**	**121**	eP	**Pn**	**05 40 22.1**	**+2.9**
AB31	**Akbulak array**	**14.87**	**332**	Pn	**Pn**	**05 40 19.4**	**-1.9**
	comp=Z,3.9nm,0.4s,baz=149,slow=11,SNR=62						
AB31				⇑Sn	**S**	**05 43 05.2**	**-0.4**
	comp=Z,9.6nm,0.7s,baz=140,slow=24,SNR=3.8						
WMQ	**Urumqi**	**15.03**	**56**	P	**Pn**	**05 40 24.2**	**+0.8**
KKN	**Kakani**	**15.25**	**121**	eP	**Pn**	**05 40 29.5**	**+3.3**
	comp=Z,55nm,0.6s						
KURK	**Kurchatov**	**15.35**	**20**	⇓Pn	**Pn**	**05 40 25.5**	**-1.6**
	comp=Z,13nm,0.8s						
KURK	**Kurchatov**	**15.35**	**20**	eP	**Pn**	**05 40 25.6**	**-1.5**
	comp=Z,24nm,0.8s						
KURK	**Kurchatov**	**15.35**	**20**	i P	**Pn**	**05 40 26.3**	**-0.8**
JIRN	**Jiri**	**15.96**	**119**	eP	**Pn**	**05 40 38.1**	**+3.4**
	comp=Z,15nm,0.2s						
BRVK	**Borovoye**	**16.54**	**360**	eP	**P**	**05 40 40.4**	**+0.6**
	comp=Z,33nm,0.8s						
BRVK	**Borovoye**	**16.54**	**360**	eP	**P**	**05 40 40.4**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,33nm,0.8s						
AKTK	**Aktyubinsk**	**16.56**	**331**	P	**P**	**05 40 41.1**	**+1.1**
AKTO	**Aktyubinsk**	**16.56**	**331**	P	**P**	**05 40 41.1**	**+1.1**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.56**	**331**	P	**P**	**05 40 41.1**	**+1.1**
	comp=Z,2.0nm,0.3s,baz=141,slow=10,SNR=41						
TAPN	**Taplejung**	**17.23**	**117**	eP	**P**	**05 40 50.4**	**+2.7**
	comp=Z,31nm,0.7s						
ODAN	**Odare**	**17.30**	**119**	eP	**P**	**05 40 50.6**	**+2.2**
	comp=Z,28nm,0.6s						
LSA	**Lhasa**	**18.59**	**106**	P	**P**	**05 41 06.3**	**+3.9**
LSA	**Lhasa**	**18.59**	**106**	eP	**P**	**05 41 03.5**	**+1.1**
	comp=Z,6.3nm,0.6s						
LSA	**Lhasa**	**18.59**	**106**	eP	**P**	**05 41 03.5**	**+1.1**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAL	**Zalesovo**	**20.06**	**25**	P	**P**	**05 41 18.8**	**+1.0**
ZAL				*SP	sP	05 42 23.9	-0.4
ZAA0	**Zalesovo Array**	**20.07**	**25**	eP	**P**	**05 41 18.6**	**+0.6**
ZALV	**Zalesovo Beam**	**20.07**	**25**	P	**P**	**05 41 18.8**	**+0.8**
	comp=Z,15nm,0.6s,baz=222,slow=10,SNR=76						
ZALV				sP	sP	05 42 23.9	-0.6
	comp=Z,15nm,0.6s,baz=219,slow=10,SNR=2.5						
UMR	**Umm Al-Rimmam**	**20.28**	**257**	eP	**P**	**05 41 21.5**	**+1.0**
UMR				AMb	AMB	05 41 23.5	
	comp=Z,43nm,0.6s						
NVS	**Novosibirsk**	**20.32**	**22**	eP	**P**	**05 41 21.3**	**+0.7**
NVS				eS	**S**	**05 44 54.2**	**-0.9**
NVS				pmax	pmax		
	comp=N,67nm,1.7s						
NVS				pmax	pmax		
	comp=E,19nm,1.7s						
NVS				pmax	pmax		
	comp=Z,58nm,1.7s						
NVS				smax			
	comp=N,26nm,1.9s						
NVS				smax			
	comp=E,18nm,1.9s						
HYB	**Hyderabad**	**20.33**	**157**	eP	**P**	**05 41 24.5**	**+3.5**
HYB				eS	**S**	**05 44 56.0**	**0.0**
HYB	**Hyderabad**	**20.33**	**157**	i P	**P**	**05 41 24.5**	**+3.5**
HYB				esP	sP	05 42 27.0	-0.4
HYB				eS	**S**	**05 44 56.0**	**0.0**
MIB	**Mutribah**	**20.47**	**258**	eP	**P**	**05 41 22.1**	**-0.4**
MIB				AMb	AMB	05 41 26.2	
	comp=Z,40nm,0.8s						
RDF	**Al-Radifah**	**20.69**	**255**	eP	**P**	**05 41 22.0**	**-2.8**
RDF				AMb	AMB	05 41 29.6	
	comp=Z,66nm,1.4s						
NAY	**Al-Naaiem**	**20.79**	**256**	eP	**P**	**05 41 23.4**	**-2.4**
NAY				AMb	AMB	05 41 30.9	
	comp=Z,32nm,1.3s						
ZEI	**Tsey**	**21.35**	**295**	eP	**P**	**05 41 30.7**	**-0.9**
SVE	**Sverdlovsk**	**21.36**	**345**	P	**P**	**05 41 32.2**	**+0.6**
ARU	**Arti**	**21.48**	**342**	c iP	**P**	**05 41 33.3**	**+0.6**
ARU				eS	**S**	**05 45 22.5**	**+7.8**
ARU				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
KIV	**Kislovodsk**	**22.41**	**298**	⇑eP	**P**	**05 41 42.6**	**+1.2**
KIV				e*PP		05 42 24.3	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
GTA	**Gaotai**	**23.27**	**74**	P	**P**	**05 41 53.8**	**+4.5**
GTA				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.1						
ZAK	**Zakamensk**	**27.30**	**49**	eP	**P**	**05 42 27.7**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
SONM	**Songino Array**	**28.67**	**55**	P	**P**	**05 42 39.1**	**+1.6**
	comp=Z,2.5nm,0.8s,mb3.9,baz=260,slow=9.5,SNR=24						
SONM				pP	pP	05 43 26.1	+2.8
	comp=Z,1.6nm,0.8s,baz=263,slow=8.9,SNR=4.4						
SONM				sP	sP	05 43 51.7	+1.8
	comp=Z,2.9nm,1.0s,baz=261,slow=8.3,SNR=4.9						
BRTR	**Keskin Array B**	**29.03**	**288**	P	**P**	**05 42 40.9**	**+0.1**
BRTR				*PP	pP	05 43 26.2	-0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**29.03**	**288**	P	**P**	**05 42 40.9**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.5,baz=110,slow=11,SNR=4.9						
BRTR				pP	pP	05 43 26.1	-0.4
	comp=Z,1.3nm,0.7s,baz=98,slow=10,SNR=5.2						
ULN	**Ulaanbaatar**	**29.11**	**56**	eP	**P**	**05 42 44.5**	**+3.0**
	comp=Z,1.1nm,0.7s,mb3.6						
ULN	**Ulaanbaatar**	**29.11**	**56**	i P	**P**	**05 42 44.5**	**+3.0**
OBN	**Obninsk**	**29.65**	**320**	⇓eP	**P**	**05 42 48.2**	**+2.1**
OBN				i *PP	pP	05 43 32.7	+0.8
OBN				e		05 43 56.5	
OBN				eS	**S**	**05 47 31.8**	**+7.6**
OBN				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.3						
CHTO	**Chiang Mai**	**30.60**	**118**	eP	**P**	**05 42 55.3**	**+0.4**
	comp=Z,1.8nm,0.6s,mb3.9						
CHTO	**Chiang Mai**	**30.60**	**118**	eP	**P**	**05 42 55.3**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
AKASG	**Malin Array Be**	**32.60**	**309**	P	**P**	**05 43 11.6**	**-0.4**
AKASG				pP	pP	05 43 57.5	-0.7
AKASG	**Malin Array Be**	**32.60**	**309**	P	**P**	**05 43 11.6**	**-0.4**
AKASG				*PP	pP	05 43 57.5	-0.7
AKASG				pmax	pmax		
	comp=N,3.0nm,0.8s						
AKASG	**Malin Array Be**	**32.60**	**309**	P	**P**	**05 43 11.6**	**-0.4**
	comp=N,0.1nm,0.2s,mb2.9,baz=91,slow=7.3,SNR=7.9						
AKASG				pP	pP	05 43 57.5	-0.7
	comp=N,3.4nm,0.8s,baz=85,slow=7.6,SNR=4.0						
CIT	**Chita**	**33.96**	**49**	eP	**P**	**05 43 26.9**	**+3.2**
CIT				e	pP	05 44 13.0	+2.9
CIT				e		05 44 45.2	
BOD	**Bodaibo**	**35.60**	**39**	eP	**P**	**05 43 39.8**	**+2.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOD				*e*	pP	05 44 25.1	+0.7
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb3.9						
JOF	Joensuu	35.64	330	*e*p	P	05 43 38.8	+0.9
	comp=Z,2.2nm,0.4s,mb4.0						
JOF	Joensuu	35.64	330	*e*P	P	05 43 38.8	+0.9
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
FINES	FINESS Array B	37.23	326	P	P	05 43 51.8	+0.4
FINES				pP	pP	05 44 39.0	+0.5
FINES				sP	sP	05 45 04.3	-0.4
FINES	FINESS Array B	37.23	326	P	P	05 43 51.8	+0.5
FINES				*PP	pP	05 44 39.0	+0.6
FINES				*SP	sP	05 45 04.3	-0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	37.23	326	P	P	05 43 51.8	+0.4
	comp=Z,1.0nm,0.5s,mb3.6,baz=113,slow=7.6,SNR=11						
FINES				pP	pP	05 44 39.0	+0.5
	comp=Z,1.8nm,0.8s,baz=48,slow=5.7,SNR=2.8						
FINES				sP	sP	05 45 04.3	-0.4
	comp=Z,3.5nm,0.8s,baz=121,slow=14,SNR=3.8						
ARCES	ARCESS Array B	40.97	338	P	P	05 44 22.8	+0.7
ARCES	ARCESS Array B	40.97	338	P	P	05 44 22.8	+0.7
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	40.97	338	P	P	05 44 22.8	+0.7
	comp=Z,2.7nm,0.7s,mb3.8,baz=108,slow=7.8,SNR=6.2						
BRG	Berggiesshubel	42.28	308	*e*(P)	pP	05 45 23.2	+2.1
	comp=Z,7.3nm,1.3s						
PSI	Prapat	42.59	135	P	P	05 44 35.5	-0.4
PSI				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
PSI	Prapat	42.59	135	P	P	05 44 35.5	-0.4
	comp=Z,3.2nm,0.5s,mb4.0,baz=323,slow=15,SNR=4.7						
HFS	Hagfors	42.79	322	P	P	05 44 37.0	+0.1
HFS				*PP	pP	05 45 26.0	+0.8
HFS				*SP	sP	05 45 50.2	-1.0
HFS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HFS				pmax	pmax		
	comp=N,4.0nm,0.6s						
HFS				pmax	pmax		
	comp=N,5.0nm,0.6s						
HFS	Hagfors	42.79	322	P	P	05 44 37.0	+0.1
	comp=N,2.6nm,0.8s,mb3.7,baz=93,slow=12,SNR=9.4						
HFS				pP	pP	05 45 26.0	+0.8
	comp=N,3.9nm,0.6s,baz=99,slow=9.2,SNR=3.8						
HFS				sP	sP	05 45 50.2	-1.0
	comp=N,4.9nm,0.6s,baz=96,slow=11,SNR=3.3						
NB2	NORSAR Subarra	44.11	323	P	P	05 44 48.2	+0.8
	comp=Z,1.8nm,0.7s,mb3.5,baz=96,slow=8.6						
NB2	NORSAR Subarra	44.11	323	P	pP	05 45 35.6	-0.4
	comp=Z,1.6nm,0.6s,baz=96,slow=8.6						
NOA	NORSAR Array B	44.11	323	P	P	05 44 47.7	+0.3
NOA				pP	pP	05 45 35.5	-0.5
NOA				sP	sP	05 46 00.9	-1.0
NOA	NORSAR Array B	44.11	323	P	P	05 44 47.7	+0.3
NOA				*PP	pP	05 45 35.5	-0.5
NOA				*SP	sP	05 46 00.9	-1.0
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	44.11	323	P	P	05 44 47.7	+0.3
	comp=Z,2.8nm,0.8s,mb3.7,baz=97,slow=7.8,SNR=14						
NOA				pP	pP	05 45 35.5	-0.5
	comp=Z,3.7nm,0.9s,baz=97,slow=8.2,SNR=4.6						
NOA				sP	sP	05 46 00.9	-1.0
	comp=Z,2.7nm,0.6s,baz=98,slow=8.1,SNR=3.5						
KSRS	Korea Array	45.27	71	pP	pP	05 45 47.0	+1.3
	comp=Z,1.9nm,1.0s,baz=277,slow=7.2,SNR=2.5						
TIXI	Tiksi	45.91	22	*e*P	P	05 45 02.7	+1.2
	comp=Z,3.1nm,0.8s,mb3.7						
TIXI	Tiksi	45.91	22	*e*P	P	05 45 03.7	+2.3
TIXI				*e*	pP	05 45 49.6	-0.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.8						
KMBO	Kilima Mbogo	48.53	227	*e*P	P	05 45 23.2	+0.8
	comp=Z,3.5nm,0.5s,mb4.0						
KMBO	Kilima Mbogo	48.53	227	P	P	05 45 23.5	+1.1
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KMBO	Kilima Mbogo	48.53	227	P	P	05 45 23.5	+1.2
	comp=Z,3.8nm,0.6s,mb3.9,baz=33,slow=13,SNR=16						
ESDC	Sonseca Array	57.07	298	pP	pP	05 47 15.9	+0.3
	comp=Z,1.0nm,0.5s,baz=54,slow=7.5,SNR=3.0						
BILL	Bilibino	58.77	26⇓	*e*P	P	05 46 34.5	-1.3
BILL				*i* *PP	pP	05 47 29.1	+1.9
BILL				*e*		05 48 55.9	
BILL				*e*S	S	05 54 22.4	+0.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb3.8						
LSZ	Lusaka	65.17	226	*e*P	P	05 47 19.2	+0.3
	comp=Z,2.7nm,0.7s,mb4.0						
LSZ	Lusaka	65.17	226	*e*P	P	05 47 19.2	+0.3
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
TOA0	Torodi Ar. Sit	65.30	268	*e*P	P	05 47 18.2	-1.7
TORD	Torodi Ar. Bea	65.30	268	P	P	05 47 18.2	-1.6
	comp=Z,1.6nm,0.5s,mb3.9,baz=48,slow=6.1,SNR=41						
INK	Inuvik	73.95	9	*e*P	P	05 48 13.4	+1.6
LBTB	Lobatse	74.41	222	*e*P	P	05 48 16.1	+1.1
	comp=Z,57nm,1.8s,mb4.9						
LBTB	Lobatse	74.41	222	*e*P	P	05 48 16.1	+1.1
LBTB				pmax	pmax		
	comp=Z,57nm,1.8s,mb4.9						
TSUM	Tsumeb	74.60	231	*e*P	P	05 48 16.2	+0.1
	comp=Z,2.2nm,0.6s,mb4.0						
BOSA	Boshof	77.49	220	*e*P	P	05 48 32.3	+0.1
	comp=Z,5.2nm,0.8s,mb4.2						
BOSA	Boshof	77.49	220	P	P	05 48 32.7	+0.4
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
BOSA	Boshof	77.49	220	P	P	05 48 32.6	+0.4
	comp=Z,2.5nm,0.5s,mb4.1,baz=20,slow=7.4,SNR=6.5						
YKA	Yellowknife Ar	81.25	2	P	P	05 48 53.3	+1.2
YKA				pP	pP	05 49 46.6	-0.4
YKA	Yellowknife Ar	81.25	2	P	P	05 48 53.3	+1.2
YKA				*PP	pP	05 49 46.6	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	81.25	2	P	P	05 48 53.3	+1.2
	comp=Z,0.9nm,0.5s,mb3.7,baz=349,slow=5.4,SNR=25						
YKA				pP	pP	05 49 46.6	-0.4
	comp=Z,2.7nm,0.8s,baz=350,slow=5.3,SNR=9.9						
WRA	Warramunga Arr	82.36	122	*i* P	P	05 48 57.9	-0.6
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	82.36	122	P	P	05 48 57.9	-0.6
	comp=Z,2.2nm,0.6s,mb4.0,baz=325,slow=4.9,SNR=41						
WRA				pP	pP	05 49 54.7	+1.1
	comp=Z,1.5nm,0.7s,baz=323,slow=4.9,SNR=5.8						
WB2	Warramunga Arr	82.37	122	*e*P	P	05 48 57.9	-0.7
ASAR	Alice Springs	84.61	125	P	P	05 49 09.5	-0.4
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
ASAR	Alice Springs	84.61	125	P	P	05 49 09.4	-0.5
	comp=N,2.3nm,0.7s,mb4.0,baz=310,slow=4.8,SNR=41						
ASAR				pP	pP	05 50 06.8	+1.6
	comp=N,1.4nm,0.8s,baz=319,slow=5.0,SNR=6.1						
FORT	Forrest	85.99	133	*e*P	P	05 49 16.9	+0.3
	comp=N,2.2nm,0.8s,mb3.9						
CFAA	Coronel Fontan	145.64	266	PKPbc	PKPbc	05 56 13.6	-0.2
	comp=N,0.2nm,0.6s,baz=105,slow=3.0,SNR=3.7						

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*IDC **03** 05:48:07.4±1.7, 4266S×1579W, h0^{km}, mb4.0/7, mb1 4.1/7, mb1mx3.9/14, mbtmp4.0/7, MS3.8/6, Ms1 3.9/6, ms1mx3.7/15, Error ellipse: s-maj=64.8km s-min=22.7km az=174.0*
*ISCJB **03** 05:48:10.3±1.7, 420S±04×159W±02, h10^{km}, mb4.0/8, MS3.9/6, Error ellipse: s-maj=57.0km s-min=17.1km az=175.6*
*NEIC **03** 05:48:10.8±1.3, 4227S×1583W, h10^{km}, mb4.4/1, Error ellipse: s-maj=46.6km s-min=16.3km az=175.0*
ISC 03 05:48:11.7±1.7**, 421S**±04×**158W**±02**, h10^{km}, n20, σ0^{s}90**/11**, mb4.0**/8**, MS3.9**/6**, Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	Sanae	30.30	172	LR	LR	06 01 53.6	
	comp=Z,56nm,20.2s,MS3.2,baz=302,slow=28						
TSUM	Tsumeb	36.36	61	P	P	05 55 16.5	+0.6
TSUM	Tsumeb	36.36	61	P	P	05 55 16.5	+0.6
	0.8nm,0.4s,mb4.0,baz=225,slow=19,SNR=3.8						
MATP	Matopo	43.03	74	P	P	05 56 10.0	-1.5
	1.6nm,0.7s,mb3.9,baz=217,slow=10,SNR=3.7						
LSZ	Lusaka	46.27	68	*e*P	P	05 56 37.7	+0.3
	2.8nm,0.8s,mb4.2						
SIV	San Ignacio	46.64	290	P	P	05 56 39.1	-1.2
	0.8nm,0.8s,mb3.7,baz=167,slow=12,SNR=3.3						
LPAZ	La Paz	51.46	284	P	P	05 57 18.0	+0.8
LPAZ				LR	LR	06 17 57.7	
LPAZ	La Paz	51.46	284	P	P	05 57 18.0	+0.8
	0.6nm,0.8s,mb3.6,baz=106,slow=7.4,SNR=3.6						
LPAZ				LR	LR	06 17 57.7	
	comp=Z,138nm,19.5s,MS4.0,baz=276,slow=35						
TOA0	Torodi Ar. Sit	57.33	20	*e*P	P	05 57 59.8	-0.1
TORD	Torodi Ar. Bea	57.33	20	P	P	05 57 59.0	-0.8
	3.4nm,1.1s,mb4.3,baz=206,slow=6.2,SNR=11						
KMBO	Kilima Mbogo	62.63	64	LR	LR	06 23 44.5	
	comp=Z,149nm,19.8s,MS4.2,baz=118,slow=34						
ROSC	El Rosal	70.67	296	LR	LR	06 27 58.2	
	comp=Z,125nm,20.8s,MS4.2,baz=24,slow=34						
KEST	Kesra	80.85	21	LR	LR	06 32 49.5	
	comp=Z,45nm,21.4s,MS3.8,baz=283,slow=33						
ESDC	Sonseca Array	82.14	9	P	P	06 00 32.6	+0.5
	1.3nm,0.8s,mb3.9,baz=188,slow=4.5,SNR=5.1						
BRTR	Keskin Array B	93.02	36	P	P	06 01 26.3	+1.3
	1.7nm,0.9s,mb4.5,baz=176,slow=7.1,SNR=8.4						
BRTR				LR	LR	06 41 59.4	
	comp=Z,55nm,19.0s,MS4.0,baz=322,slow=35						
MKAR	Makanchi Array	123.90	55	PKP	PKPdf	06 07 05.3	-4.0
	0.4nm,0.9s,baz=241,slow=1.5,SNR=2.6						
YKA	Yellowknife Ar	130.15	323	PKP	PKPdf	06 07 17.1	-3.6
YKA	Yellowknife Ar	130.15	323	PKP	PKPdf	06 07 17.1	-3.6
	0.7nm,1.0s,baz=113,slow=1.8,SNR=6.4						
SONM	Songino Array	139.56	61	PKP	PKPdf	06 07 37.3	-1.5
SONM	Songino Array	139.56	61	PKhKP		06 07 32.0	
	0.5nm,1.0s,baz=229,slow=1.3,SNR=3.3						
SONM				PKP	PKPdf	06 07 37.3	-1.5
	0.2nm,0.6s,baz=242,slow=3.1,SNR=3.6						

IDC 03 06:18:29.6±2.9**, 3953N**×**11062E, h0^{km}, mb3.3**/2**, mb1 3.6**/3**, mb1mx3.3**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=52.7km s-min=40.2km az=39.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	8.84	341	Pn	Pn	06 20 38.9	+0.3
	0.2nm,0.3s,baz=156,slow=13,SNR=30						
SONM				Lg		06 23 10.7	
	0.1nm,0.3s,baz=153,slow=32,SNR=5.3						
MKAR	Makanchi Array	21.82	299	P	P	06 23 23.1	-0.2
	1.0nm,0.8s,baz=96,slow=12,SNR=11						
YKA	Yellowknife Ar	72.03	20	P	P	06 29 55.0	+0.2
	0.2nm,0.6s,baz=320,slow=5.7,SNR=4.8						

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*IDC **03** 06:35:07.6±7.0, 38.18N×7385E, h128^{km}±58^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.1/23, mbtmp3.2/5, MS3.7/1, Ms1 3.7/1, ms1mx2.7/26, Error ellipse: s-maj=77.2km s-min=29.2km az=157.0*
*ISCJB **03** 06:35:08.9±0.6, 38.14N±004×739E±0.1, h157^{km}±8^{km}, mb3.3/3, Error ellipse: s-maj=13.6km s-min=6.3km az=171.8*
*NEIC **03** 06:35:10.9±1.6, 3823N×7398E, h161^{km}±13^{km}, mb3.9/1, Error ellipse: s-maj=19.7km s-min=14.9km az=201.0*
*BJI **03** 06:35:13.4, 3889N×7392E, h168^{km}, mb4.1*
*NNC **03** 06:35:14.3±2.9, 3882N×7337E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=27.7km s-min=17.4km az=1.0*
ISC 03 06:35:09.9±0.6**, 3813N**±004×**739E**±01**, h152^{km}**±8^{km}**, n34, σ1^{s}07**/43**, mb3.3**/3**, 7C-3D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.10	48⇑	*i*P	Pn	06 35 47.5	+1.3
KSH				S	Sn	06 36 14.4	+0.1
KSH				Smax			
	comp=N,14μm,0.3s						
KSH				Smax			
	comp=E,9μm,0.3s						
AML	Almayashu	4.00	357	*e*Pn	Pn	06 36 10.8	+0.7
AML				*e*Sn	Sn	06 36 55.3	-1.6
AML	Almayashu	4.00	357	P	Pn	06 36 10.8	+0.8
	SNR=350						
KZA	Kyzart	4.07	14	P	Pn	06 36 11.3	+0.4
	SNR=259						
UCH	Uchtor	4.12	6⇑	*i*Pn	Pn	06 36 12.2	+0.7
UCH				*e*Sn	Sn	06 36 59.0	-0.6
UCH	Uchtor	4.12	6	P	Pn	06 36 12.3	+0.8
	SNR=48						
ULHL	Ulahol	4.47	22	P	Pn	06 36 16.4	+0.2
	SNR=5.6						
AAK	Ala-Archa	4.52	5⇑	*i*Pn	Pn	06 36 16.5	-0.3
AAK	Ala-Archa	4.52	5	P	Pn	06 36 17.6	+0.8
	SNR=9.1						
EKS2	Erkin-Say	4.53	358	*e*Pn	Pn	06 36 18.1	+1.2
EKS2				*e*Sn	Sn	06 37 09.1	-0.2
EKS2	Erkin-Say	4.53	358	P	Pn	06 36 17.6	+0.7
	SNR=20						
KBK	Karagaybulak	4.58	9	P	Pn	06 36 18.7	+0.9
	SNR=48						
CHMS	Chumysh	4.90	7	P	Pn	06 36 22.6	+0.7
	SNR=13						
TKM2	Tokmak 2	4.95	14	⇓Pn	Pn	06 36 22.8	+0.3
	comp=E,0.6nm,0.5s						
TKM2				⇑Sn	Sn	06 37 17.0	-2.2
	comp=E,0.8nm,0.5s						
TKM2	Tokmak 2	4.95	14⇑	*i*Pn	Pn	06 36 22.7	+0.2
TKM2				*e*Sn	Sn	06 37 17.4	-1.8
TKM2	Tokmak 2	4.95	14	P	Pn	06 36 22.9	+0.4
	SNR=9.6						
USP	Ospenovka	5.15	5	P	Pn	06 36 25.7	+0.5
	SNR=5.7						
KK31	Karatay Array	5.61	333	⇓Pn	Pn	06 36 31.3	0.0
	comp=E,1.6nm,0.3s,baz=153,slow=23,SNR=70						
KK31				⇓Sn	Sn	06 37 30.5	-4.5
	comp=E,6.7nm,0.3s,baz=159,slow=24,SNR=17						
DLH	Dalhousie	5.82	163	*e*P	Pn	06 36 35.0	+0.9
DLH				*e*x	x	06 37 39.0	
THN	Thein Dam	5.87	165	*e*P	Pn	06 36 34.3	-0.5
THN				*e*x	x	06 37 40.1	
JOSI	Joshimath	8.87	147	*e*x	x	06 37 40.5	
JOSI				*e*S	Sn	06 38 43.2	-10
JOSI				AML	AML	06 38 52.6	
	comp=E,96nm,0.7s						
JOSI				AML	AML	06 38 53.2	
	comp=N,65nm,0.8s						
KHET	Khetri	10.15	171	*e*P	Pn	06 37 29.5	-2.3
KHET				*e*S	Sn	06 39 14.9	-9.3
KHET				AML	AML	06 39 19.3	
	comp=E,11nm,0.5s						
KHET				AML	AML	06 39 21.4	
	comp=N,9.2nm,0.5s						
KUDL	Kundal	10.19	167	*e*P	Pn	06 37 31.0	-1.3
KUDL				*e*S	Sn	06 39 14.7	-10
MK31	Makanchi Array	10.62	33	*e*Pn	Pn	06 37 37.5	-0.3
MKAR	Makanchi Array	10.62	33	P	Pn	06 37 36.0	-1.8
	comp=N,0.1nm,0.3s,baz=220,slow=14,SNR=6.2						
KURK	Kurchatov	13.01	13	*e*P	Pn	06 38 13.3	+4.4
AB31	Akbulak array	15.01	322	⇑Pn	Pn	06 38 36.8	+2.7
	comp=N,1.0nm,0.8s,baz=127,slow=13,SNR=5.2						
AB31				⇑Sn	Sn	06 41 11.1	-10
	comp=N,2.2nm,0.8s,baz=145,slow=22,SNR=3.2						
LSA	Lhasa	16.56	115	*e*P	Pn	06 38 54.5	+1.2
	comp=N,2.4nm,0.4s						
ZALV	Zalesovo Beam	17.49	22	P	Pn	06 39 02.5	-1.8
	comp=N,0.8nm,0.3s,baz=213,slow=11,SNR=20						
GTA	Gaotai	20.20	78	*e*P	P	06 39 36.5	+3.8
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	25.48	57	P	P	06 40 24.2	+0.4
	comp=Z,0.8nm,0.8s,mb3.3,baz=258,slow=11,SNR=8.4						
JNU	Nakatsue	45.94	78	LR	LR	07 04 35.3	
	comp=Z,98nm,20.6s,baz=317,slow=38						
TORD	Torodi Ar. Bea	68.09	270	P	P	06 45 53.3	-0.2
	comp=Z,0.6nm,0.6s,mb3.5,baz=48,slow=5.4,SNR=8.3						
YKA	Yellowknife Ar	79.48	4	P	P	06 46 59.1	+0.1
	comp=Z,0.3nm,0.5s,mb3.2,baz=347,slow=5.6,SNR=8.3						

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*NEIC **03** 06:41:33.3±0.9, 4881N×15600E, h10^{km}, mb4.4/1, Error ellipse: s-maj=25.4km s-min=11.2km az=139.0*
*ISCJB **03** 06:41:36.1±1.9, 489N±0.1×1560E±02, h42^{km}±15^{km}, mb3.5/6, Error ellipse: s-maj=27.3km s-min=9.9km az=37.5*
*MOS **03** 06:41:36.3±1.0, 4892N×15594E, h45^{km}, mb4.0/3, Error ellipse: s-maj=29.3km s-min=15.0km az=73.3*
*IDC **03** 06:41:39.6±7.1, 4892N×15600E, h55^{km}±84^{km}, mb3.2/6, mb1 3.4/7, mb1mx3.3/22, mbtmp3.3/7, ML3.6/1, Error ellipse: s-maj=93.1km s-min=30.5km az=1.0*
ISC 03 06:41:36.8±4.0**, 4890N**±009×**1559E**±02**, h31^{km}**±29^{km}**, n18, σ0^{s}84**/19**, mb3.5**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.79	4	*e*PN	Pn	06 42 05.4	-0.2
SKR				*e*S	Sn	06 42 26.0	-1.3
SKR				pmax	pmax		
	comp=Z,40nm,0.4s						
SKR				smax			
	comp=N,350nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
PET	Petropavlovsk	4.48	22	*e*Pn	Pn	06 42 42.6	+0.1
PET	Petropavlovsk	4.48	22	*e*PN	Pn	06 42 42.7	+0.2
PET				*e*S	Sn	06 43 35.0	+1.4
PET				pmax	pmax		
	comp=Z,23nm,1.0s						
PET				smax			
	comp=N,91nm,0.7s						
PET				smax			
	comp=E,74nm,0.6s						
ASAJ	Asahikawa	10.34	247	PN	Pn	06 44 06.5	+3.6
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.34	247	P	Pn	06 44 06.5	+3.6
	comp=Z,0.6nm,0.3s,baz=208,slow=24,SNR=7.0						
MAJO	Matsushiro	17.88	233	*e*Pn	Pn	06 45 42.3	-0.7
	comp=Z,8.3nm,0.3s						
MAJO	Matsushiro	17.88	233	*e*P	Pn	06 45 42.3	-0.7
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
SONM	Songino Array	32.45	287	P	P	06 48 04.0	+0.1
	comp=Z,0.2nm,0.8s,mb3.0,baz=77,slow=9.0,SNR=2.4						
MKAR	Makanchi Array	47.64	297	P	P	06 50 10.4	+0.7
MKAR				*PP	pP	06 50 22.4	+3.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	47.64	297	P	P	06 50 10.4	+0.6
	comp=Z,0.5nm,0.8s,mb3.6,baz=68,slow=5.7,SNR=5.2						
MKAR				pP	pP	06 50 22.4	+3.3
	comp=Z,0.2nm,0.5s,baz=64,slow=8.2,SNR=3.2						
YKA	Yellowknife Ar	48.08	39	P	P	06 50 11.9	-1.0
	comp=Z,0.1nm,0.5s,mb3.1,baz=292,slow=7.4,SNR=2.6						
PDAR	Pinedale Array	61.98	56	pP	pP	06 52 07.7	+4.5
	comp=Z,0.7nm,1.0s,baz=318,slow=2.0,SNR=3.0						
FINES	FINESS Array B	62.88	336	P	P	06 51 59.0	-0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	62.88	336	P	P	06 51 59.0	-0.3
	comp=Z,0.7nm,0.5s,mb4.0,baz=46,slow=8.2,SNR=6.8						
EKA	Eskdalemuir Ar	74.67	348	P	P	06 53 13.3	+0.6
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	Eskdalemuir Ar	74.67	348	P	P	06 53 13.3	+0.6
	comp=Z,0.8nm,0.6s,mb3.9,baz=20,slow=4.9,SNR=3.8						
TXAR	Lajitas Array	74.82	63	P	P	06 53 14.1	0.0
TXAR				pP	pP	06 53 26.5	+2.7
TXAR	Lajitas Array	74.82	63	P	P	06 53 14.1	0.0
	comp=Z,0.2nm,0.6s,mb3.2,baz=275,slow=6.1,SNR=3.6						
TXAR				pP	pP	06 53 26.5	+2.7
	comp=Z,0.3nm,0.5s,baz=308,slow=5.3,SNR=4.1						

IDC 03 06:43:27.7±3.5**, 1872N**×**14765E, h0^{km}, mb3.6**/7**, mb1 3.7**/7**, mb1mx3.6**/19**, mbtmp3.6**/7**, Error ellipse: s-maj=135.6km s-min=22.6km az=81.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	25.42	321	P	P	06 48 58.0	+0.9
	0.4nm,0.3s,baz=149,slow=9.1,SNR=4.6						
WRA	Warramunga Arr	40.58	199	P	P	06 51 08.8	-0.4
	0.5nm,0.6s,baz=25,slow=8.9,SNR=4.0						
ASAR	Alice Springs	44.21	198	P	P	06 51 39.2	+0.5
	0.2nm,0.3s,baz=22,slow=6.7,SNR=5.0						
SONM	Songino Array	44.29	320	P	P	06 51 39.8	+0.7
	0.3nm,0.3s,baz=133,slow=7.8,SNR=9.9						
ZALV	Zalesovo Beam	59.12	322	P	P	06 53 29.6	-0.4
	0.7nm,0.6s,baz=111,slow=8.1,SNR=4.7						
MKAR	Makanchi Array	59.78	314	P	P	06 53 33.6	-1.0
	0.5nm,0.7s,baz=90,slow=6.2,SNR=5.2						
FINES	FINESS Array B	87.63	336	P	P	06 56 17.9	+0.1
	0.5nm,0.5s,baz=66,slow=3.5,SNR=4.7						

JMA 03 06:59:30.2, 3491N×**13278E, h11^{km}**±1^{km}**, M3.5, 3C-3D Broadband fault plane solution: P waves. NP1:** ϕ_s306.00000°**,** δ54.00000°**,** λ-19.00000°. **NP2:** ϕ_s48.00000°**,** δ75.00000°**,** λ-143.00000°. **Principal axes:** T Plg13.0000°**,** Azm173.0000°**;** N Plg50.0000°**,** Azm67.0000°**;** P Plg37.0000°**,** Azm273.0000°**; Western Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHS	Saijyo	0.29	72	⇓P	Pg	06 59 36.2	+0.1
JHS				S	Sg	06 59 40.2	+0.2
JGT	Gotsu	0.39	288	⇓P	Pg	06 59 37.8	0.0
JGT				S	Sg	06 59 43.1	+0.1
JHT	Toyohira	0.39	230	⇓P	Pg	06 59 37.9	+0.1
JHT				S	Sg	06 59 43.2	+0.2
JJG	Jouge	0.41	131	⇑P	Pg	06 59 38.5	+0.3
JJG				S	Sg	06 59 44.2	+0.5
JNM	Ikuma	0.62	19	⇑P	Pg	06 59 42.4	+0.2
JNM				S	Sg	06 59 51.2	+0.8
JHM	Kurahashi	0.80	195	⇑P	Pg	06 59 45.2	-0.4
JHM				S	Sg	06 59 55.7	-0.3

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*ISCJB **03** 07:09:27.4±2.0, 277S±0.1×1798W±02, h429^{km}±31^{km}, mb4.0/7 Error ellipse: s-maj=24.3km s-min=13.5km az=24.0*
*IDC **03** 07:09:29.2±2.7, 2768S×17984W, h431^{km}±34^{km}, mb3.6/5, mb1 3.9/8, mb1mx3.6/15, mbtmp3.8/8, Error ellipse: s-maj=27.5km s-min=18.6km az=154.0*
*NEIC **03** 07:09:29.0±1.5, 2765S×17984W, h433^{km}±21^{km}, mb4.2/4, Error ellipse: s-maj=23.5km s-min=12.7km az=134.0*
ISC 03 07:09:29.2±1.3**, 2771S**±009×**1799W**±02**, h431^{km}**±24^{km}**, n41, σ1^{s}04**/39**, mb4.0**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	9.95	188	*e*PN	P	07 11 48.4	+2.8
PUZ	Puketiti	10.46	188	*e*PN	P	07 11 51.7	+0.5
PUZ				*e*SN	S	07 13 46.4	-1.8
MWZ	Matawai	10.82	191	*e*PN	P	07 11 56.0	+0.9
URZ	Urewera	10.82	193	P	P	07 11 56.7	+1.5
	34nm,0.3s,baz=320,slow=1.9,SNR=111						
URZ				S	S	07 13 56.6	+1.0
	7.1nm,0.3s,baz=76,slow=22,SNR=9.3						
URZ	Urewera	10.82	193	PN	P	07 11 55.3	+0.1
URZ				SN	S	07 13 56.5	+0.9
KNZ	Kokohu	11.47	190	*e*PN	P	07 12 03.2	+0.9
BKZ	Black Stump Fm	11.82	194	*e*PN	P	07 12 06.0	-0.2
PXZ	Pawanui	12.59	192	*e*PN	P	07 12 13.5	-0.9
BFZ	Birch Farm	13.33	193	*e*PN	P	07 12 23.0	+0.4
MRZ	Mangatainoka R	13.46	195	*e*PN	P	07 12 22.4	-1.5
CAW	Cannon Point	14.00	196	*e*PN	P	07 12 29.8	0.0
SNZO	South Karori	14.28	197	*e*P	P	07 12 33.9	+1.0
TCW	Tory Channel	14.31	198	*e*PN	P	07 12 33.1	0.0
QRZ	Quartz Range	14.51	204	PN	P	07 12 37.7	+2.4
NNZ	Nelson	14.58	201	*e*PN	P	07 12 35.4	-0.7
TUWZ	Tuamarina	14.60	199	PN	P	07 12 36.2	-0.1
THZ	Tophouse	15.22	201	*e*PN	P	07 12 42.5	-0.4
AFI	Afiamalu	15.66	30	P	P	07 12 46.7	-1.2
	6.5nm,0.3s,baz=186,slow=17,SNR=9.7						
LTZ	Lake Taylor	16.34	201	*e*PN	P	07 12 54.5	-0.4
WVZ	Waitaha Valley	17.12	204	*e*PN	P	07 13 02.6	-0.5
RPZ	Rata Peaks	17.57	202	P	P	07 13 07.6	-0.2
	3.1nm,0.3s,baz=104,slow=0.4,SNR=24						
FOZ	Fox Glacier	17.93	205	*e*PN	P	07 13 10.0	-1.6
LBZ	Lake Benmore	18.46	203	*e*PN	P	07 13 15.7	-1.4
JCZ	Jackson Bay	18.72	206	*e*PN	P	07 13 18.9	-0.9
ODZ	Otahua Downs	18.89	201	*e*PN	P	07 13 22.0	+0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNB	Canberra Magne	27.24	246	eP	P	07 14 39.9	+3.3
	7.1nm,0.9s,mb4.1						
CTA	Charters Tower	31.83	276	eP	P	07 15 17.7	+0.9
	3.6nm,0.3s,mb4.2						
CTA	Charters Tower	31.83	276	P	P	07 15 17.7	+0.9
	5.1nm,0.3s,mb4.3,baz=110,slow=10,SNR=10						
STKA	Stephens Creek	33.59	253	eP	P	07 15 32.7	+1.0
	2.6nm,0.6s,mb3.7						
STKA	Stephens Creek	33.59	253	P	P	07 15 32.5	+0.7
	3.3nm,0.6s,mb3.9,baz=95,slow=9.9,SNR=7.5						
ASAR	Alice Springs	41.68	265	P	P	07 16 38.5	0.0
	2.5nm,0.5s,mb3.8,baz=96,slow=7.6,SNR=64						
WB2	Warramunga Arr	42.41	270	eP	P	07 16 43.8	-0.5
WB2	Warramunga Arr	42.41	270	eP	P	07 16 43.8	-0.5
WRA	Warramunga Arr	42.42	270	P	P	07 16 43.8	-0.6
	5.2nm,0.6s,mb4.0,baz=103,slow=8.3,SNR=76						
FORT	Forrest	45.22	253	eP	P	07 17 05.4	-0.8
	10nm,0.5s,mb4.4						
NVAR	Mina Array Bea	87.40	44	P	P	07 21 30.5	+1.3
	1.1nm,0.8s,mb3.7,baz=208,slow=6.4,SNR=8.4						
FINES	FINESS Array B	142.07	340	PKhKP		07 28 05.5	
	0.4nm,0.3s,baz=48,slow=4.2,SNR=6.0						
NB2	NORSAR Subarra	145.85	350	PKP	PKPdf	07 28 17.4	+0.4
	comp=Z,0.6nm,0.5s,baz=26,slow=3.2						
NOA	NORSAR Array B	145.85	350	PKPbc	PKPbc	07 28 17.2	-1.3
	comp=Z,0.7nm,0.7s,baz=21,slow=4.3,SNR=3.6						
AKASG	Malin Array Be	148.18	324	PKPbc	PKPbc	07 28 23.9	-1.1
AKASG	Malin Array Be	148.18	324	PKPbc	PKPbc	07 28 23.9	-1.1
	comp=Z,0.9nm,0.4s,baz=55,slow=3.9,SNR=4.5						

*IDC **03** 07:15:52.6±3.7, 762S×15755E, h0km, mb4.1/5, mb1 4.2/6, mb1mx4.0/15, mbtmp4.1/6, ML3.3/1, MS4.1/1, Ms1 4.1/1, ms1mx2.8/21, Error ellipse: s-maj=107.2km s-min=27.9km az=118.0*

NEIC 03 07:16:09.8±9.1**, 739S**×**15654E, h102**km±54km**, mb4.5**/1**, Error ellipse: s-maj=107.1km s-min=18.9km az=108.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	9.49	257	Pn	Pn	07 18 23.5	-0.1
	1.2nm,0.3s,baz=68,slow=19,SNR=3.8						
WB2	Warramunga Arr	24.87	238	eP	P	07 21 23.7	+0.6
WRA	Warramunga Arr	24.88	238	P	P	07 21 23.6	+0.4
	3.0nm,0.5s,baz=67,slow=11,SNR=29						
ASAR	Alice Springs	27.09	231	P	P	07 21 43.4	+0.3
	0.8nm,0.7s,baz=61,slow=9.6,SNR=8.6						
FITZ	Fitzroy Crossi	31.91	248	eP	P	07 22 24.9	-0.9
	15nm,1.7s						
RAO	Raoul Island	32.43	135	LR	LR	07 32 49.2	
	comp=Z,372nm,21.5s,baz=126,slow=32						
SONM	Songino Array	70.49	327	P	P	07 27 14.1	+0.7
	1.2nm,0.8s,baz=138,slow=6.5,SNR=9.3						
MK31	Makanchi Array	84.71	318	eP	P	07 28 32.8	+0.3
MKAR	Makanchi Array	84.71	318	P	P	07 28 33.0	+0.5
	0.8nm,0.4s,baz=101,slow=6.5,SNR=17						
ZALV	Zalesovo Beam	85.36	326	P	P	07 28 35.0	-0.6
	0.9nm,0.4s,baz=110,slow=5.9,SNR=6.3						
TORD	Torodi Ar. Bea	154.60	285	PKPbc	PKPbc	07 35 59.7	-0.1
	0.2nm,0.5s,baz=91,slow=1.0,SNR=3.8						
TORD				PKPab	PKPab	07 36 14.9	+0.1
	0.3nm,0.6s,baz=75,slow=3.9,SNR=2.1						

*MOS **03** 07:25:08.8±1.2, 5275N×14273E, h32km, mb4.0/2, Error ellipse: s-maj=92.9km s-min=88.4km az=119.6*
*ISCJB **03** 07:25:09.1±1.7, 527N±03×1428E±03, h33km, mb3.6/3, Error ellipse: s-maj=47.5km s-min=23.9km az=159.7*
*IDC **03** 07:25:28.9±10.0, 4621N×15658E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.4/21, mbtmp3.8/3, Error ellipse: s-maj=710.8km s-min=32.2km az=132.0*

ISC 03 07:25:10.8±1.7**, 528N**±03×**1427E**±03**, h35**km**, n6,** σ**0.83**/6**, mb3.6**/3**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	8.63	99	ePN	Pn	07 27 13.0	0.0
WRA	Warramunga Arr	72.83	188	P	P	07 36 34.7	-0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	72.83	188	P	P	07 36 34.7	-0.8
	comp=Z,0.7nm,0.7s,mb3.7,baz=23,slow=7.0,SNR=3.6						
ASAR	Alice Springs	76.55	188	P	P	07 36 57.9	+0.8
	comp=Z,0.2nm,0.6s,mb3.2,baz=19,slow=5.9,SNR=4.8						
TXAR	Lajitas Array	79.94	54	P	P	07 37 16.0	0.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	79.94	54	P	P	07 37 16.0	0.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=310,slow=4.6,SNR=16						

*NEIC **03** 07:39:32.0±0.8, 440N×9466E, h30km, Error ellipse: s-maj=35.0km s-min=10.3km az=48.0*
*ISCJB **03** 07:39:34.7±3.9, 45N±02×948E±02, h69km±32km, mb3.7/8, Error ellipse: s-maj=49.5km s-min=15.9km az=142.5*
*IDC **03** 07:39:35.4±5.1, 455N×9487E, h52km±43km, mb3.6/8, mb1 3.7/9, mb1mx3.5/22, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=52.7km s-min=17.7km az=52.0*

ISC 03 07:39:36.5±3.7**, 45N**±02×**948E**±03**, h68**km±31km**, n12,** σ**0.66**/13**, mb3.7**/8**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	4.42	112	P	Pn	07 40 40.8	-0.2
	1.3nm,0.3s,baz=332,slow=16,SNR=9.5						
PSI				S	Sn	07 41 31.6	+0.4
	2.0nm,0.3s,baz=352,slow=16,SNR=4.8						
MBWA	Marble Bar	35.28	137	eP	P	07 46 23.8	-1.2
	55nm,1.6s						
MKAR	Makanchi Array	43.55	348	P	P	07 47 32.6	-0.8
	0.6nm,0.5s,mb3.6,baz=170,slow=7.4,SNR=9.6						
SONM	Songino Array	44.35	11	P	P	07 47 40.4	+0.5
	0.1nm,0.5s,mb2.8,baz=198,slow=9.5,SNR=2.3						
SONM				PcP	PcP	07 49 23.8	+0.9
	0.3nm,0.5s,baz=172,slow=4.9,SNR=3.9						
WRA	Warramunga Arr	45.78	123	P	P	07 47 52.0	+0.3
	1.9nm,0.6s,mb4.0,baz=301,slow=9.4,SNR=19						
WB2	Warramunga Arr	45.79	123	eP	P	07 47 51.6	-0.2
ASAR	Alice Springs	47.25	128	P	P	07 48 03.7	+0.5
	0.7nm,0.7s,mb3.5,baz=299,slow=7.6,SNR=10						
ZALV	Zalesovo Beam	50.01	352	P	P	07 48 22.9	-0.9
	1.1nm,0.5s,mb4.0,baz=161,slow=7.3,SNR=5.1						
BRTR	Keskin Array B	65.18	312	P	P	07 50 11.8	+1.1
	0.4nm,0.5s,mb3.5,baz=107,slow=7.1,SNR=2.6						
FINES	FINESS Array B	76.03	333	P	P	07 51 16.6	+0.3
	0.5nm,0.3s,mb3.7,baz=117,slow=5.4,SNR=10						
ARCES	ARCESS Array B	78.69	340	P	P	07 51 31.3	+0.3
ARCES	ARCESS Array B	78.69	340	P	P	07 51 31.3	+0.3
	6.7nm,1.1s,mb4.4,baz=91,slow=6.2,SNR=6.3						

CASC 03 07:50:15.6±1.3**, 872N**×**8324W, h3**km±6km**, MD3.5, 2C-1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCR	Cotoan	0.51	69	⇓iP	Pg	07 50 26.3	+1.0
CTCR				eS	Sg	07 50 35.4	+3.4
BAR1		0.53	352	⇑eP	Pg	07 50 26.7	+0.9
BAR1				eS	Sg	07 50 35.0	+2.4
CNI	Changuinola	1.00	46	⇑iP	Pg	07 50 34.7	-0.1
QCR	Quepos	1.15	308	eP	Pg	07 50 37.4	-0.3
QCR				eS	Sg	07 50 55.0	+2.2
URSC	Urasca	1.23	334	eP	Pg	07 50 37.9	-1.4
URSC				eS	Sg	07 50 56.0	+0.7
LCR2	La Lucha 2	1.27	324	eP	Pg	07 50 39.0	-0.9
LCR2				eS	Sg	07 50 57.3	+0.9
PRS1	Puriscal	1.65	320	eP	Pn	07 50 44.6	-0.9
PRS1				eS	Sn	07 51 06.8	-0.3

CASC 03 07:58:26.1±1.9**, 873N**×**8321W, h5**km±10km**, MD3.6, 1C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCR	Cotoan	0.47	70	⇓iP	Pg	07 58 36.2	+1.0
CTCR				eS	Sg	07 58 45.1	+3.7
BRU2	Volcan	0.52	83	⇓iP	Pg	07 58 36.7	+0.7
BRU2				eS	Sg	07 58 44.9	+2.1
BAR1		0.52	349	eS	Sg	07 58 45.0	+2.2
BRU	Baru	0.65	83	eS	Sg	07 58 48.6	+1.7
CNI	Changuinola	0.97	45	⇑iP	Pg	07 58 44.6	0.0
URSC	Urasca	1.23	333	eP	Pg	07 58 48.0	-1.8
URSC				eS	Sg	07 59 06.3	+0.5
LCR2	La Lucha 2	1.27	322	eP	Pn	07 58 49.5	-1.0
LAJ	Bijagual	1.44	321	eP	Pn	07 58 55.6	+2.7
PRS1	Puriscal	1.65	319	eP	Pn	07 58 53.7	-2.0
PRS1				eS	Sn	07 59 17.6	+0.2
CGA2	Cerro Gallo 2	1.78	316	eP	Pn	07 58 58.3	+0.8
PTP	Ponta Puerca	19.52	59	eS		07 58 48.3	

*ISCJB **03** 08:13:02.9±0.8, 2394S±004×6653W±010, h199km±12km, mb3.3/4, Error ellipse: s-maj=14.3km s-min=6.8km az=3.5*
*IDC **03** 08:13:02.8±1.6, 2388S×6655W, h183km±16km, mb3.2/4, mb1 3.4/6, mb1mx3.3/16, mbtmp3.2/6, Error ellipse: s-maj=30.3km s-min=13.1km az=93.0*
*NEIC **03** 08:13:03.6±0.8, 2388S×6647W, h192km±9km, mb3.8/1, Error ellipse: s-maj=19.6km s-min=8.3km az=99.0*
*GUC **03** 08:13:06.6±0.8, 2405S×6704W, h230km, ML4.6*

ISC 03 08:13:03.6±0.8**, 2391S**±005×**6651W**±010**, h190**km±11km**, n20,** σ**1.13**/27**, mb3.4**/4**, 3C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	3.42	278	⇓iP	Pn	08 14 00.8	+2.9
CEN1				i S	Sn	08 14 41.1	+0.8
CEN1				AML	AML	08 14 41.7	
	comp=N,369nm,0.5s						
ANCH	Antofagasta	3.58	273	⇑iP	Pn	08 14 01.2	+1.4
ANCH				i S	Sn	08 14 42.3	-1.4
ANCH				AML	AML	08 14 44.5	
	comp=N,1µm,0.3s						
CPN1	Cerro Paranal	3.62	258	⇑iP	Pn	08 14 01.8	+1.4
CPN1				i S	Sn	08 14 44.0	-0.7
CPN1				AML	AML	08 14 46.2	
	comp=E,573nm,0.3s						
CPCH	Copiapo	4.88	224	⇓iP	Pn	08 14 17.2	+1.0
CPCH				i S	Sn	08 15 12.6	-0.8
CDCH	Caldera	5.02	230	⇑iP	Pn	08 14 17.5	-0.5
CDCH				i S	Sn	08 15 12.9	-3.5
LCO	Las Campanas	6.32	216	ePn	Pn	08 14 35.1	+0.2
LCO				eSn	Sn	08 15 39.7	-7.3
LPAZ	La Paz	7.73	348	P	Pn	08 14 54.2	+0.8
	comp=E,0.7nm,0.3s,baz=168,slow=13,SNR=18						
LPAZ				S	Sn	08 16 19.1	-1.5
	comp=E,0.1nm,0.3s,baz=342,slow=19,SNR=4.5						
CFAA	Coronel Fontan	7.82	191	P	Pn	08 14 55.4	+1.0
CFAA				S	Sn	08 16 18.7	-3.7
CFAA	Coronel Fontan	7.82	191	P	Pn	08 14 55.4	+1.0
	comp=E,0.1nm,0.3s,baz=17,slow=14,SNR=26						
CFAA				S	Sn	08 16 18.7	-3.7
	comp=E,0.6nm,0.3s,baz=300,slow=18,SNR=20						
SIV	San Ignacio	9.39	34	P	Pn	08 15 14.7	-0.5
	comp=E,0.4nm,0.3s,baz=220,slow=13,SNR=17						
SIV				S	Sn	08 17 08.7	+8.7
	comp=E,0.1nm,0.3s,baz=170,slow=18,SNR=3.3						
TRQA	Tornquist	14.62	166	ePn	Pn	08 16 20.3	-1.2
PLCA	Paso Flores	17.12	190	eP	Pn	08 16 51.6	0.0
	comp=E,2.0nm,0.4s						
SNAA	Sanae	59.29	161	P	P	08 22 46.5	+1.6
	comp=E,0.6nm,0.6s,mb3.6,baz=269,slow=9.8,SNR=4.5						
TORD	Torodi Ar. Bea	76.12	69	P	P	08 24 30.3	-0.6
	comp=E,1.1nm,0.6s,mb3.7,baz=258,slow=5.4,SNR=12						
PDAR	Pinedale Array	77.30	329	P	P	08 24 36.2	-0.7
PDAR	Pinedale Array	77.30	329	P	P	08 24 36.2	-0.7
	comp=E,0.1nm,0.4s,mb2.8,baz=101,slow=3.8,SNR=2.3						
YKA	Yellowknife Ar	94.19	340	P	P	08 26 00.2	-0.1
	comp=E,0.2nm,0.6s,mb3.4,baz=128,slow=4.0,SNR=4.2						
ASAR	Alice Springs	128.72	204	PKP	PKPdf	08 31 49.1	+0.2
	comp=E,0.5nm,0.8s,baz=118,slow=2.4,SNR=5.5						
WRA	Warramunga Arr	131.91	207	PKP	PKPdf	08 31 54.3	-0.8
	comp=E,0.2nm,0.4s,baz=159,slow=1.8,SNR=7.5						
MKAR	Makanchi Array	146.17	40	PKPbc	PKPbc	08 32 21.0	-0.4
	comp=E,0.5nm,0.4s,baz=307,slow=2.6,SNR=6.1						

*CSEM **03** 08:21:08.9±0.1, 4031N×3775E, h5km, MD3.4, Error ellipse: s-maj=1.6km s-min=1.0km az=4.0*
*ISK **03** 08:21:08.8, 4032N×3775E, h5km, MD3.6*
*DDA **03** 08:21:09.7, 4034N×3783E, h6km±2km, Md3.4*
*ISCJB **03** 08:21:10.1±0.3, 4032N±003×3774E±002, h10km, Error ellipse: s-maj=4.6km s-min=2.7km az=173.1*

ISC 03 08:21:10.8±0.3**, 4033N**±003×**3776E**±002**, h10**km**, n35,** σ**1.04**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRSN	GIRESUNGRSN	0.71	33	i P	Pg	08 21 22.9	-1.6
GRSN				i S	Sg	08 21 32.8	-1.0
SVSK	Karacayir	0.71	235	i PG	Pg	08 21 22.9	-1.7
SVSK				i SG	Sg	08 21 33.1	-0.8
TOKT	Tokat	0.93	270	i PG	Pg	08 21 26.6	-2.1
TOKT				i SG	Sg	08 21 40.2	-0.5
KELT	Kelkit	1.16	98	i P	Pb	08 21 31.2	-1.7
KELT				i S	Sb	08 21 46.6	-1.4
GUMT	Gumushane	1.32	84	i PN	Pn	08 21 34.0	-1.3
KVT	Kavak	1.50	300	PN	Pn	08 21 37.3	-0.5
MACK	Trabzon	1.65	68	i P	Pn	08 21 39.9	+0.2
MACK				i S	Sn	08 22 02.6	+1.6
KTUT	Trabzon	1.66	66	PN	Pn	08 21 39.6	-0.4
EZC	Erzincan	1.68	110	i PN	Pn	08 21 34.8	-5.4
EZC				i SN	Sn	08 21 53.8	-8.0
PTK	Pertek	1.91	138	PN	Pn	08 21 43.0	-0.4
YOZ	Yozgat	2.00	251	PN	Pn	08 21 44.4	-0.2
ELZG	Elazig	2.06	152	i P	Pn	08 21 47.2	+1.8
ELZG				i S	Sg	08 22 16.8	-0.2
MYA	Malataya	2.07	165	ePN	Pn	08 21 45.0	-0.5
MALT	Malatya	2.08	165	ePN	Pn	08 21 45.8	+0.1
BNN	Bunyan	2.09	226	ePN	Pn	08 21 45.7	-0.1
CTKT	Corum	2.28	278	i P	Pn	08 21 48.8	+0.3
DIKM	Dikmen	2.31	306	ePN	Pn	08 21 48.8	0.0
CORM	Corum	2.40	267	ePN	Pn	08 21 50.0	-0.1
BOYT	Boyabat	2.42	298	i P	Pn	08 21 54.3	+3.9
BINT	Bingol	2.56	124	ePN	Pn	08 21 52.5	+0.2
CDAG	Cicekdag	2.70	256	i P	Pn	08 21 57.8	+3.6
CDAG				i S	Sg	08 22 40.3	+2.9
AVNT	Avonos	2.73	236	i P	Pn	08 21 59.2	+4.6
EZM	Erzurum	2.79	98	ePN	Pn	08 21 56.4	+0.9
ERZM	Erzurum	2.80	98	i P	Pn	08 22 01.4	+5.8
TOS	Tosya	2.93	285	ePN	Pn	08 21 57.4	0.0
BNGL	BINGOL	2.96	117	i P	Pg	08 22 06.6	-0.8
ANDN	Andirin	2.96	202	i P	Pn	08 21 59.4	+1.6
BCA	Borcka	3.13	68	ePN	Pn	08 22 01.0	+0.8
CANT	Cankiri	3.17	276	ePN	Pn	08 22 00.9	+0.2
KAMT	Kaman	3.26	254	ePN	Pn	08 22 02.0	+0.1
BZK	Bozkurt	3.27	301	ePN	Pn	08 22 02.3	+0.2
ARTV	Artvin	3.28	74	i P	Pn	08 22 04.5	+2.3
ARTV				i S	Sb	08 22 50.3	+1.3
NIG	Nigde	3.30	229	ePN	Pn	08 22 02.6	+0.1
BALT	Daday	3.52	291	i P	Pn	08 22 06.6	+1.0
BALT				i S	Sg	08 23 04.1	+0.1
ANTO	Ankara	3.84	265	ePN	Pn	08 22 10.1	+0.2

*MOS **03** 08:35:35.4±1.8, 5731N×12205E, h9km, mb4.5/7, Error ellipse: s-maj=12.1km s-min=8.6km az=71.1*
*BYKL **03** 08:35:36.3±0.5, 5729N×12219E*
*IDC **03** 08:35:37.4±0.9, 5742N×12081E, h0km, mb3.6/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.6/9, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/35, Error ellipse: s-maj=26.6km s-min=19.3km az=90.0*

ISC 03 08:35:35.1±0.4**, 5723N**±004×**12208E**±003**, h10**km**, n64,** σ**1.54**/94**, mb3.6**/10**, 2C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHNR	Khani	1.19	256	ePg	Pg	08 35 59.8	+1.9
KHNR				i Sg	Sg	08 36 15.9	+2.5
NRGR	Nerungri	1.56	110	eP	Pn	08 36 05.1	+2.3
NRGR				S	Sn	08 36 24.3	+1.3
NRGR				smax			
	comp=N,571nm,0.2s						
CLNS	Chul'man	1.58	103	eP	Pn	08 36 05.1	+1.9
CLNS				e		08 36 24.8	
CLNS				pmax	pmax		
	comp=Z,727nm,0.5s						
CLNS				pmax	pmax		
	comp=N,196nm,0.4s						
CLNS				pmax	pmax		
	comp=E,400nm,0.6s						
CLNS				smax			
	comp=E,4µm,0.4s						
CLNS				smax			
	comp=N,3µm,0.3s						
CLNS				smax			
	comp=Z,1µm,0.3s						
CLNS	Chul'man	1.58	103	⇑iPg	Pg	08 36 05.2	-0.3
CLNS				i Sg	Sg	08 36 25.6	-0.4
IENR	Iengra	1.83	122	ePn	Pn	08 36 07.4	+0.8
IENR				ePg	Pg	08 36 09.2	-1.0
IENR				i Sg	Sg	08 36 33.1	-0.8
CRS	Chara	2.11	263	eP	Pn	08 36 13.0	+2.6
CRS				e		08 36 40.0	
CRS				pmax	pmax		
	comp=Z,449nm,0.7s						
CRS				smax			
	comp=E,3µm,0.4s						
CRS	Chara	2.11	263	ePn	Pn	08 36 12.7	+2.3
CRS				⇑iPg	Pg	08 36 15.1	-0.4
CRS				Pmax		08 36 15.8	
	comp=E,679nm,0.8s						
CRS				eSg	Sg	08 36 42.4	-0.4
CRS				Smax		08 36 43.0	
	comp=E,3µm,0.5s						
ALDR	Aldan	2.25	51	ePg	Pg	08 36 14.8	-3.5
ALDR				eSg	Sg	08 36 43.6	-3.9
TNDR	Tynda	2.55	144	ePn	Pn	08 36 17.8	+1.3
TNDR				ePg	Pg	08 36 23.1	-0.9
TNDR				e		08 36 43.3	
TNDR				eSg	Sg	08 36 56.4	-0.6
TUP	Tupik	3.05	204	eP	Pn	08 36 24.2	+0.8
TUP				eS	Sn	08 37 00.9	+1.0
TUP				pmax	pmax		
	comp=Z,192nm,0.4s						
TUP				smax			
	comp=E,2µm,1.1s						
TUP	Tupik	3.05	204	⇓iPn	Pn	08 36 24.3	+0.9
TUP				ePg	Pg	08 36 30.2	-3.4
TUP				Pmax		08 36 36.3	
	comp=E,379nm,1.6s						
TUP				eSn	Sn	08 37 00.5	+0.6
TUP				eSg	Sg	08 37 10.8	-2.3
TUP				Smax		08 37 17.9	
	comp=E,2µm,1.2s						
NLYR	Nelyaty	3.58	261	eP	Pn	08 36 32.4	+1.8
NLYR				pmax	pmax		
	comp=Z,26nm,0.9s						
NLYR	Nelyaty	3.58	261	ePn	Pn	08 36 32.5	+1.9
NLYR				ePg	Pg	08 36 40.5	-3.2
NLYR				eSg	Sg	08 37 29.3	-0.7
KROS	Kirovskiy	3.93	133	ePn	Pn	08 36 33.7	-1.7
KROS				i Pg	Pg	08 36 44.8	-5.5
KROS				Pmax		08 36 47.0	
	comp=Z,250nm,0.6s						
KROS				i Sg	Sg	08 37 34.1	-7.1
KROS				Smax		08 37 38.9	
	comp=Z,420nm,0.6s						
BOD	Bodaibo	4.40	281	eP	Pn	08 36 42.3	+0.5
BOD				eS	Sn	08 37 32.1	-0.9
BOD				pmax	pmax		
	comp=Z,65nm,0.7s						
BOD				smax			
	comp=N,268nm,1.5s						
BOD	Bodaibo	4.40	281	ePn	Pn	08 36 43.2	+1.4
BOD				ePg	Pg	08 36 55.0	-4.3
BOD				Pmax		08 37 05.1	
	comp=N,64nm,0.8s						
BOD				eSn	Sn	08 37 33.5	+0.5
BOD				eSg	Sg	08 37 51.9	-4.3
BOD				Smax		08 38 01.6	
	comp=N,1µm,1.4s						
ZEA	Zeya	4.57	138	eSg	Sg	08 37 55.7	-5.9
ZEA				Smax		08 37 59.0	
	comp=N,1µm,1.5s						
CGD	Chagda	4.79	68	ePn	Pn	08 36 48.4	+1.1
CGD				ePg	Pg	08 36 59.8	-7.0
CGD				eSn	Sn	08 37 38.7	-4.1
CGD				eSg	Sg	08 38 02.3	-6.5
CGD				e		08 39 56.0	
SVKR	Severomuysk	4.83	260	eSn	rx	08 37 22.8	
SVKR				eSg	Sg	08 38 07.9	-2.2
SVKR				Smax		08 38 22.9	
	comp=N,2µm,1.1s						
UKT	Uakit	5.01	253	eP	Pb	08 37 04.5	+1.6
UKT				eS	Sn	08 37 49.0	+0.8
UKT				pmax	pmax		
	comp=Z,91nm,0.7s						
UKT				smax			
	comp=N,576nm,0.9s						
UKT	Uakit	5.01	253	ePn	Pn	08 36 52.1	+1.8
UKT				ePg	Pg	08 37 07.5	-3.6
UKT				Pmax		08 37 10.4	
	comp=N,75nm,1.3s						
UKT				eSg	Sg	08 38 12.5	-3.5
UKT				Smax		08 38 22.7	
	comp=N,665nm,2.2s						
YOA	Uoyan	5.82	264	ePg	Pg	08 37 21.5	-4.9
YOA				Pmax		08 37 37.4	
	comp=N,151nm,1.2s						
YOA				eSg	Sg	08 38 38.9	-2.7
YOA				Smax		08 38 53.2	
	comp=N,3µm,2.6s						
KMO	Kumora	6.17	262	eP	Pn	08 37 07.9	+1.8
KMO				eS	Sn	08 38 16.5	-0.1
KMO				pmax	pmax		
	comp=Z,32nm,0.5s						
KMO				smax			
	comp=E,566nm,1.2s						
KMO	Kumora	6.17	262	ePn	Pn	08 37 08.1	+2.0
KMO				ePg	Pg	08 37 26.9	-6.2
KMO				Pmax		08 37 30.3	
	comp=E,31nm,0.6s						
KMO				eSg	Sg	08 38 47.2	-5.7
KMO				Smax		08 39 02.6	
	comp=E,567nm,1.2s						
YAK	Yakutsk	6.17	35	eP	Pn	08 37 04.4	-1.7
YAK				e		08 38 11.7	
YAK				pmax	pmax		
	comp=E,3.0nm,0.3s						
YAK				pmax	pmax		
	comp=Z,9.0nm,0.3s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.2s						
YAK				smax			
	comp=N,80nm,0.5s						
YAK				smax			
	comp=E,102nm,0.5s						
YAK				smax			
	comp=Z,78nm,0.6s						
YLYR	Ulyunkhan	6.56	254	eP	Pn	08 37 13.6	+2.1
YLYR				eS	Sn	08 38 25.0	-1.2
YLYR				pmax	pmax		
	comp=Z,23nm,0.6s						
YLYR				smax			
	comp=N,414nm,1.3s						
YLYR	Ulyunkhan	6.56	254	ePn	Pn	08 37 13.4	+1.9
YLYR				e		08 37 22.4	
YLYR				ePg	Pg	08 37 34.3	-6.3
YLYR				Pmax		08 37 41.1	
	comp=N,23nm,1.0s						
YLYR				eSg	Sg	08 39 00.0	-5.4
YLYR				Smax		08 39 15.4	
	comp=N,409nm,1.1s						
NIZ	Nizh Angarsk	7.09	263	ePn	Pn	08 37 23.0	+4.1
NIZ				ePg	Pg	08 37 46.3	-4.5
NIZ				Pmax		08 37 51.7	
	comp=N,15nm,0.8s						
NIZ				eSg	Sg	08 39 19.4	-3.2
NIZ				Smax		08 39 32.3	
	comp=N,329nm,1.3s						
CIT	Chita	7.19	227	ePn	Pn	08 37 20.8	+0.6
CIT				max		08 37 30.3	
	comp=N,16nm,0.4s						
CIT				eSg	Sg	08 39 22.6	-3.0
CIT				Smax		08 39 40.6	
	comp=N,356nm,1.7s						
SYVR	Suvo	7.74	248	ePg	Px	08 37 56.6	
SYVR				Pmax		08 37 59.3	
	comp=N,22nm,1.5s						
SYVR				eSg	Sx	08 39 37.3	
SYVR				Smax		08 39 52.8	
	comp=N,317nm,1.2s						
HIA	Hailar	8.10	191	eP	Pn	08 37 33.8	+1.2
HIA	Hailar	8.10	191	eSg	Sx	08 39 51.1	
OGRR	Ongureny	8.98	253	ePn	Pn	08 37 36.0	-8.7
OGRR				ePg	Px	08 38 19.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OGRR				Pmax		08 38 29.4	
	comp=N,5.0nm,1.0s						
OGRR				eSg	Sx	08 40 16.7	
OGRR				Smax		08 40 32.4	
	comp=N,138nm,2.2s						
KPC	Khapcheranga	9.49	222	e	Pn	08 37 51.8	+0.1
KPC				max		08 38 01.7	
	comp=N,5.0nm,0.7s						
KPC				eSg	Sx	08 40 31.7	
KPC				Smax		08 40 51.8	
	comp=N,175nm,1.3s						
KLR	Kul'dur	9.88	140	eP	Pn	08 37 54.2	-2.8
KLR				e		08 40 02.0	
TRG	Tyrgan	10.08	250	eSg	Sx	08 40 51.5	
TRG				Smax		08 41 14.1	
	comp=N,68nm,2.4s						
KAB	Kabansk	10.33	246	eSg	Sx	08 40 59.4	
KAB				Smax		08 41 24.7	
	comp=N,850nm,1.4s						
LSTR	Listvyanka	11.35	249	eSg	Sx	08 41 30.3	
LSTR				Smax		08 41 46.2	
	comp=N,114nm,3.6s						
IRK	Irkutsk	11.43	252	eSg	Sx	08 41 32.2	
IRK				Smax		08 42 09.8	
	comp=N,181nm,1.1s						
TLY	Talaya	12.06	250	eP	Pn	08 38 26.9	0.0
TLY	Talaya	12.06	250	eSg	Sx	08 41 54.0	
TLY				Smax		08 42 30.7	
	comp=N,98nm,1.8s						
ZAK	Zakamensk	13.03	246	eSg	Sx	08 42 24.6	
ZAK				Smax		08 43 00.5	
	comp=N,124nm,1.7s						
ULN	Ulaanbaatar	13.07	231	eP	Pn	08 38 41.4	+0.8
SONM	Songino Array	13.37	232	Pn	Pn	08 38 44.0	-0.8
	comp=N,0.2nm,0.3s,baz=34,slow=14,SNR=8.1						
SONM				Lg		08 42 28.9	
	comp=N,0.5nm,0.3s,baz=35,slow=21,SNR=3.9						
SONM				LR	LR	08 44 07.5	
	comp=N,36nm,18.3s,baz=358,slow=39						
TIXI	Tiksi	14.76	8	eP	Pn	08 38 57.7	-5.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSRS	Korea Array	20.16	166	P	P	08 40 18.9	+10
	comp=Z,0.7nm,0.6s,baz=354,slow=11,SNR=3.9						
KSRS				Lg		08 46 21.5	
	comp=Z,2.9nm,1.0s,baz=351,slow=30,SNR=4.5						
ZALV	Zalesovo Beam	21.14	277	P	P	08 40 23.6	+3.8
	comp=Z,1.3nm,0.8s,mb3.3,baz=51,slow=9.7,SNR=5.1						
ZALV				Lg		08 46 36.3	
	comp=Z,0.4nm,0.3s,baz=72,slow=38,SNR=2.3						
ZAL	Zalesovo	21.15	277	P	P	08 40 23.6	+3.6
MJAR	Matsushiro Arr	23.33	146	P	P	08 40 52.2	+8.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	Matsushiro Arr	23.33	146	P	P	08 40 52.2	+8.9
	comp=Z,0.9nm,0.6s,mb3.4,baz=328,slow=11,SNR=5.0						
MKAR	Makanchi Array	26.25	264	P	P	08 41 12.9	+2.8
	comp=Z,0.2nm,0.2s,mb3.2,baz=54,slow=7.3,SNR=2.2						
AAK	Ala-Archa	33.18	265	eP	P	08 42 10.1	-1.4
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
INK	Inuvik	43.22	32	P	P	08 43 42.9	+7.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	Inuvik	43.22	32	P	P	08 43 42.9	+7.1
	comp=Z,1.0nm,0.9s,mb3.6,baz=292,slow=5.4,SNR=2.7						
FINES	FINESS Array B	44.88	317	i P	P	08 43 48.2	-0.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	44.88	317	P	P	08 43 48.2	-0.9
	comp=Z,0.6nm,0.4s,mb3.8,baz=48,slow=10,SNR=8.8						
NB2	NORSAR Subarra	50.30	324	P	P	08 44 29.9	-1.3
	comp=Z,0.7nm,0.6s,mb3.9,baz=39,slow=7.4						
NOA	NORSAR Array B	50.30	324	P	P	08 44 30.3	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	50.30	324	P	P	08 44 30.3	-0.9
	comp=Z,0.6nm,0.5s,mb3.9,baz=40,slow=7.0,SNR=2.9						
YKA	Yellowknife Ar	52.81	29	P	P	08 44 54.1	+4.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	52.81	29	P	P	08 44 54.1	+4.2
	comp=Z,1.1nm,0.6s,mb4.0,baz=329,slow=6.7,SNR=12						
PDAR	Pinedale Array	71.39	38	P	P	08 47 01.0	+6.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=350,slow=2.0,SNR=3.8						
WRA	Warramunga Arr	77.55	168	P	P	08 47 35.7	+4.8
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	Warramunga Arr	77.55	168	P	P	08 47 35.7	+4.9
	comp=Z,0.8nm,1.0s,mb3.6,baz=347,slow=6.7,SNR=2.4						

*NEIC **03** 08:39:11.9, 1643N×9453W, h84km, MD4.0(MEX), After MEX.*

MEX 03 08:39:11.9±0.8**, 1643N×9453W, h84**km±11km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.74	333	i P	Pn	08 39 27.2	-1.1
CMIG				i S	Sn	08 39 39.0	-1.6
TUIG	Tuzandepetl	1.60	4	i P	Pn	08 39 37.2	-1.5
TUIG				i S	Sn	08 39 57.0	-1.9
HUIG	Huatulco	1.65	247	i P	Pn	08 39 37.5	-1.9
HUIG				i S	Sn	08 39 58.8	-1.5
SCX	San Cristobal	1.84	80	i P	Pn	08 39 42.5	+0.7
SCX				i S	Sn	08 40 04.5	-0.1
OXX	Oaxaca	2.20	287	eP	Pn	08 39 47.0	+0.4
OXX				i S	Sn	08 40 13.0	-0.1
VHO	Vista Hermosa	2.21	287	i P	Pn	08 39 46.3	-0.4
VHO				i S	Sn	08 40 11.8	-1.4
CCIG	Comitan	2.30	93	i P	Pn	08 39 48.3	+0.4
CCIG				i S	Sn	08 40 13.7	-1.8
PPM	Popocatepetl	4.70	304	i P	Pn	08 40 16.9	-3.6
PPM				i S	Sn	08 41 15.8	+2.1
PPM	Popocatepetl	4.70	304	i P	Pn	08 40 20.4	0.0
PPM				i S	Sn	08 41 13.3	-0.5

*IDC **03** 08:43:47.6±6.4, 2476S×17992W, h361km±92km, mb3.4/4, mb1 3.7/6, mb1mx3.4/14, mbtmp3.6/6, Error ellipse: s-maj=74.7km s-min=25.5km az=134.0*

*ISCJB **03** 08:43:50.4±1.5, 2524S±009×179.1W±0.1, h471km±25km, mb3.7/6, Error ellipse: s-maj=19.4km s-min=10.5km az=30.4*

*NEIC **03** 08:43:51.5±0.9, 2523S×17920W, h465km±19km, mb4.1/2, Error ellipse: s-maj=19.2km s-min=11.9km az=109.0*

ISC 03 08:43:51.5±1.0**, 2515S**±007×**1791W**±01**, h476**km±19km**, n19, σ1§13**/21**, mb3.7**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	13.09	189	ePN	P	08 46 40.6	-1.0
AFI	Afiamalu	13.12	33	P	P	08 46 43.5	+1.2
	3.5nm,0.3s,baz=233,slow=21,SNR=5.4						
AFI				S	S	08 49 02.4	-0.8
	1.0nm,0.3s,baz=324,slow=18,SNR=2.3						
MWZ	Matawai	13.46	192	eP	P	08 46 45.0	-0.6
MWZ	Matawai	13.46	192	ePN	P	08 46 45.0	-0.5
URZ	Urewera	13.47	193	eP	P	08 46 44.7	-0.9
URZ	Urewera	13.47	193	P	P	08 46 46.1	+0.4
	7.8nm,0.3s,baz=3.3,slow=2.8,SNR=43						
URZ				S	S	08 49 11.2	+1.8
	0.6nm,0.3s,baz=209,slow=19,SNR=4.8						
URZ	Urewera	13.47	193	ePN	P	08 46 44.7	-0.9
DZM	Mont Dzumac	13.62	280	P	P	08 46 47.3	-0.2
	2.0nm,0.3s,baz=113,slow=21,SNR=15						
HIZ	Hauiti	14.28	200	eP	P	08 47 00.8	+6.5
HIZ	Hauiti	14.28	200	PN	P	08 46 55.9	+1.6
CTA	Charters Tower	32.34	272	eP	P	08 49 40.7	+0.2
	6.6nm,0.8s,mb4.1						
ASAR	Alice Springs	42.67	262	P	P	08 51 05.1	-0.3
	1.7nm,0.4s,mb3.8,baz=94,slow=7.2,SNR=48						
WB2	Warramunga Arr	43.16	267	eP	P	08 51 08.7	-0.6
WRA	Warramunga Arr	43.17	267	P	P	08 51 08.3	-1.1
	2.3nm,0.4s,mb3.9,baz=100,slow=7.2,SNR=74						
FITZ	Fitzroy Crossi	51.58	266	eP	P	08 52 13.0	+0.1
	4.7nm,0.6s,mb4.0						
MJAR	Matsushiro Arr	73.39	325	P	P	08 54 36.5	+2.3
	0.4nm,0.4s,mb3.3,baz=156,slow=6.6,SNR=4.9						
KSRS	Korea Array	79.73	320	P	P	08 55 12.5	+3.4
	0.6nm,0.6s,mb3.3,baz=124,slow=7.0,SNR=4.1						
VNA3	Neumayer Olymp	83.59	177	ePKPdf	P	08 55 27.0	-1.4
VNA3				e		08 55 39.4	
VNA3				e		08 55 42.6	
VNA3				e		08 55 48.2	
VNA3				e		08 55 52.4	
VNA2	Neumayer--Watz	84.02	177	ePKPdf	P	08 55 24.1	-6.5
VNA2				e		08 55 37.0	
VNA2				e		08 55 39.3	
VNA2				e		08 55 43.9	
VNA2				e		08 55 48.9	

CASC 03 08:46:58.7±3.5**, 1274N×8835W, h36**km±737km**, MD3.9, ML3.5, 5C-11D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLLM	Bellamira	0.71	9	⇓eP	x	08 47 29.1	
BLLM				eS	x	08 47 40.4	
CNCH	Conchagua	0.73	44	⇓eP	x	08 47 29.2	
CNCH				eS	x	08 47 42.8	
SNVI	San Vicente	0.99	331	⇓eP	x	08 47 32.8	
SNVI				eS	x	08 47 46.0	
CAHU	Cacacuatique	1.03	8	⇓eP	x	08 47 33.7	
CAHU				eS	x	08 47 49.0	
LCBS	La Ceiba	1.09	326	⇓eP	x	08 47 34.2	
LCBS				eS	x	08 47 48.3	
LFRS	El Faro	1.12	322	⇓iP	x	08 47 34.4	
LFRS				eS	x	08 47 48.9	
LBRS	Las Brisas	1.20	326	⇑eP	x	08 47 36.0	
LBRS				eS	x	08 47 49.6	
LFU	La Fuente	1.25	324	eP	x	08 47 36.5	
LFU				eS	x	08 47 54.7	
SNET	Serv Nac Est T	1.27	318	eP	x	08 47 19.3	
SNET				eS	x	08 47 35.6	
BOQS	Boqueron	1.34	318	⇑eP	x	08 47 37.7	
BOQS				eS	x	08 47 55.7	
TEL3	Telica 3	1.48	96	eP	Pn	08 47 23.1	+0.3
TEL3				eS	Sn	08 47 42.2	+1.2
TELN	Telica	1.49	95	eP	Pn	08 47 23.3	+0.3
CNGN	Cerro Negro	1.63	98	⇓eP	Pn	08 47 24.0	-0.9
CNGN				eS	Sn	08 47 45.4	+0.6
CNGN				i		08 47 49.5	
	comp=E,819nm,0.2s						
SBLS	San Blas	1.65	312	eP	x	08 47 42.3	
SBLS				eS	x	08 48 03.3	
SNJE	San Jose	1.66	313	eP	x	08 47 42.2	
SNJE				eS	x	08 48 03.4	
RTR	El Retiro	1.70	313	eP	x	08 47 43.0	
RTR				eS	x	08 48 04.0	
MOMJ	Momotombo	1.80	100	⇑eP	Pn	08 47 27.3	0.0
MOMJ				eS	Sn	08 47 49.0	+0.1
COPN	Copaltepe	1.81	108	⇑eP	Pn	08 47 27.2	-0.1
COPN				eS	Sn	08 47 48.9	-0.2
RBDL	Robledal	1.88	317	eP	x	08 47 45.4	
RBDL				eS	x	08 48 08.5	
MTO2	Montecristo 2	1.92	329	⇓eP	x	08 47 45.9	
MTO2				eS	x	08 48 12.0	
XAVN	Gruta Xavier	2.06	106	⇓eP	Pn	08 47 31.4	+0.5
XAVN				eS	Sn	08 47 56.4	+0.9
TISN	Laguna Tiscapa	2.12	106	eP	Pn	08 47 32.0	+0.3
TISN				eS	Sn	08 47 55.9	-0.9
MGAN	Managua	2.14	106	⇓eP	Pn	08 47 31.9	0.0
MGAN				eS	Sn	08 47 57.3	0.0
MGAN				i		08 47 58.7	
	comp=N,362nm,0.2s						
HUEN		2.17	100	⇓eP	Pn	08 47 32.5	+0.3
TICN	Ticuantepe	2.19	109	⇑eP	Pn	08 47 33.1	+0.5
TICN				eS	Sn	08 47 58.4	-0.1
APON	Apoyo	2.38	110	eP	Pn	08 47 37.5	+2.2
BOAB	BOACO BROADBAN	2.64	96	eP	Pn	08 47 38.0	-0.8
BOAB				eS	Sn	08 48 09.6	0.0
CGA2	Cerro Gallo 2	4.68	125	eP	Pn	08 48 09.1	+2.2
PRS1	Puriscal	4.82	124	eP	Pn	08 48 08.3	-0.5
LAJ	Bijagual	5.04	124	eP	Pn	08 48 10.2	-1.6
LCR2	La Lucha 2	5.21	124	eP	Pn	08 48 16.9	+2.9
QCR	Quepos	5.27	128	eP	Pn	08 48 16.2	+1.2
URSC	Urasca	5.34	122	eP	Pn	08 48 19.5	+3.6
URSC				eS	Sn	08 49 14.7	-1.5
BAR1		6.05	125	eP	Pn	08 48 27.4	+1.7
BAR1				eS	Sn	08 49 37.5	+3.7

IDC 03 08:56:02.5±5.8**, 569S×14764E, h182**km±54km**, mb2.4**/1**, mb1 2.9**/3**, mb1mx2.8**/13**, mbtmp2.8**/3**, Error ellipse: s-maj=103.1km s-min=52.2km az=119.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.73	187	P	Pn	08 57 01.3	+1.0
	5.2nm,0.3s,baz=353,slow=4.5,SNR=15						
PMG				S	Sn	08 57 45.7	+0.3
	2.8nm,0.3s,baz=252,slow=23,SNR=7.2						
WRA	Warramunga Arr	19.18	221	P	P	09 00 12.4	-0.1
	0.2nm,0.3s,baz=48,slow=12,SNR=14						
ASAR	Alice Springs	22.24	215	P	P	09 00 45.0	+0.4
	0.2nm,0.5s,baz=50,slow=8.5,SNR=7.3						
TORD	Torodi Ar. Bea	145.63	285	PKPbc	PKPbc	09 15 19.5	-1.3
	0.2nm,0.8s,baz=96,slow=1.2,SNR=2.8						

*IDC **03** 09:06:50.5±3.2, 3596N×14126E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.4/20, mbtmp3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=83.1km s-min=31.5km az=55.0*

*ISCJB **03** 09:06:56.3±0.8, 3573N±004×14096E±009, h53km±6km, mb3.6/2, Error ellipse: s-maj=12.1km s-min=6.9km az=165.7*

*JMA **03** 09:06:57.5±0.1, 3568N×14072E, h47km±1km, M3.0*

*NEIC **03** 09:06:57.5, 3568N×14072E, h47km, MG3.0(JMA), After JMA.*

ISC 03 09:06:58.0±0.8**, 3572N**±004×**14081E**±010**, h45**km±7km**, n20, σ0§94**/23**, mb3.5**/2**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.04	108	P	Pn	09 07 04.9	-0.1
CHOJ				eS	Sn	09 07 10.4	+0.4
JCN	Nagara	0.58	239	P	Pn	09 07 09.2	-0.7
JYT	Yasato	0.71	316	P	Pn	09 07 11.0	-0.7
BSO4	Boso 4	0.82	208	P	Pn	09 07 12.4	-0.7
JHO	Hitachi	0.91	348	P	Pn	09 07 14.7	+0.3
BSO3	Boso 3	0.94	195	P	Pn	09 07 13.9	-0.9
BSO3				S	Sn	09 07 28.5	+1.4
BSO2	Boso 2	0.96	183	S	Sn	09 07 28.9	+1.3
BSO1	Boso 1	1.07	172	P	Pn	09 07 15.9	-0.6
JAG	Ashikaga	1.30	303	P	Pn	09 07 18.8	-0.9
JOD2	Odawara 2	1.47	253	P	Pn	09 07 20.7	-1.3
JIM2	Oshima 3	1.50	229	P	Pn	09 07 20.4	-2.0
MJAR	Matsushiro Arr	2.26	292	Pn	Pn	09 07 33.2	+0.4
MJAR	Matsushiro Arr	2.26	292	Pn	Pn	09 07 33.2	+0.4
	8.6nm,0.3s,baz=99,slow=15,SNR=103						
MAJO	Matsushiro	2.26	292	ePn	Pn	09 07 33.6	+0.8
MAJO				eSn	Sn	09 08 04.1	+4.6
MAT	Matsushiro	2.26	292	P	Pn	09 07 33.8	+1.0
MAT				S	Sn	09 08 03.1	+3.6
ERM	Erimo	6.55	16	ePn	Pn	09 08 31.8	+0.2
JNU	Nakatsue	8.60	255	LR	LR	09 12 46.0	
	comp=Z,140nm,19.0s,baz=3.4,slow=39						
MKAR	Makanchi Array	44.42	303	P	P	09 15 03.9	-0.1
MKAR	Makanchi Array	44.42	303	P	P	09 15 03.9	-0.1
	0.4nm,0.3s,mb3.6,baz=84,slow=9.9,SNR=5.8						
WRA	Warramunga Arr	55.69	187	P	P	09 16 30.5	+0.8
	0.3nm,0.7s,mb3.5,baz=1.2,slow=7.7,SNR=6.7						

*NIED **03** 09:26:00, 3570N×14080E, h53km, Mw4.3 Best double couple: M0 2.73000×10^15 NP1:φs166.00000°, δ19.00000°, λ72.00000°. NP2:φs5.00000°, δ72.00000°, λ96.00000°.*

*BJI **03** 09:26:11.6, 3570N×14070E, h47km, mB4.5, mb4.6*

*MOS **03** 09:26:12.8±1.2, 3572N×14078E, h52km, mb4.4/12, Error ellipse: s-maj=16.1km s-min=9.1km az=117.7*

*JMA **03** 09:26:13.6±0.1, 3568N×14073E, h48km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs207.00000°, δ20.00000°, λ106.00000°. NP2: φs10.00000°, δ70.00000°, λ84.00000°. Principal axes: T Plg64.0000°, Azm271.0000°; N Plg6.0000°, Azm12.0000°; P Plg25.0000°, Azm105.0000°;*

JMA Felt II J1.

*NEIC **03** 09:26:13.6, 3568N×14073E, h48km, mb4.7/7, MW4.2(NIED), After JMA.*

*ISCJB **03** 09:26:13.1±0.5, 3569N±004×14080E±006, h53km±3km, mb4.2/25, Error ellipse: s-maj=8.2km s-min=7.2km az=155.9*

*IDC **03** 09:26:17.6±2.6, 3563N×14051E, h75km±23km, mb3.6/16, mb1 3.8/19, mb1mx3.8/25, mbtmp3.6/19, MS3.1/4, Ms1 3.1/4, ms1mx2.9/30, Error ellipse: s-maj=20.1km s-min=14.1km az=83.0*

ISC 03 09:26:14.2±0.5**, 3569N**±004×**14079E**±006**, h46**km±3km**, n68, σ0§98**/69**, mb4.2**/25**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.06	81	P	Pn	09 26 21.1	-0.3
CHOJ				S	Sn	09 26 26.7	+0.3
JCN	Nagara	0.55	240	⇓P	Pn	09 26 25.4	-0.5
JCN				S	Sn	09 26 34.4	+0.2
JYT	Yasato	0.72	318	⇓P	Pn	09 26 27.2	-0.9
JYT				eS	Sn	09 26 37.3	-0.7
BSO4	Boso 4	0.79	208	⇓P	Pn	09 26 28.3	-0.7
JHO	Hitachi	0.93	349	⇓P	Pn	09 26 30.9	0.0
BSO1	Boso 1	1.05	171	P	Pn	09 26 31.8	-0.7
JAG	Ashikaga	1.30	304	⇓P	Pn	09 26 34.8	-1.2
MJAR	Matsushiro Arr	2.25	293	P	Pn	09 26 49.3	+0.3
MJAR				pmax	pmax		
	comp=Z,43nm,0.3s						
MJAR	Matsushiro Arr	2.25	293	P	Pn	09 26 49.3	+0.3
	comp=Z,42nm,0.3s,baz=99,slow=7.6,SNR=354						
MAJO	Matsushiro	2.25	293	ePn	Pn	09 26 49.6	+0.6
MAT	Matsushiro	2.25	293	P	Pn	09 26 49.6	+0.6
MAT				S	Sn	09 27 17.2	+1.6
JHJ	Hachijo jima 2	2.70	198	LR	LR	09 27 24.9	
	comp=Z,278nm,21.5s,baz=290,slow=26						
ASAJ	Asahikawa	8.53	9	P	Pn	09 28 13.6	-1.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	8.53	9	P	Pn	09 28 13.6	-1.5
	comp=Z,1.1nm,0.3s,baz=215,slow=11,SNR=7.0						
JNU	Nakatsue	8.58	255	P	Pn	09 28 17.4	+1.6
	comp=Z,0.4nm,0.3s,baz=57,slow=15,SNR=4.9						
JNU				LR	LR	09 30 23.5	
	comp=Z,64nm,21.7s,baz=74,slow=30						
KSRS	Korea Array	10.49	283	P	Pn	09 28 44.6	+2.6
	comp=Z,0.3nm,0.3s,baz=100,slow=14,SNR=15						
KSRS				LR	LR	09 32 48.6	
	comp=Z,142nm,21.1s,baz=170,slow=38						
YSS	Yuzh-Sakhalins	11.35	7	eP	Pn	09 28 55.0	+1.4
SONM	Songino Array	28.14	306	P	P	09 31 59.8	-2.0
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,60nm,20.3s						
SONM	Songino Array	28.14	306	P	P	09 31 59.8	-2.1
	comp=Z,1.6nm,0.7s,mb3.7,baz=106,slow=9.3,SNR=10						
SONM				LR	LR	09 43 21.9	
	comp=Z,60nm,20.3s,baz=190,slow=37						
BOD	Bodaibo	28.41	330	eP	P	09 32 03.5	-0.6
GYA	Guiyang	30.52	262	P	P	09 32 20.8	-2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
ZALV	Zalesovo Beam	42.46	313	P	P	09 34 04.3	-0.1
	comp=Z,3.5nm,0.7s,mb4.1,baz=92,slow=7.2,SNR=18						
ZALV				PcP	PcP	09 35 56.2	-0.4
	comp=Z,0.6nm,0.4s,baz=72,slow=4.2,SNR=3.8						
ZAL	Zalesovo	42.47	313	P	P	09 34 04.4	-0.1
ZAL						09 35 56.2	
NVS	Novosibirsk	43.41	315	eP	P	09 34 11.6	-0.5
MK31	Makanchi Array	44.41	303	eP	P	09 34 20.2	-0.1
MKAR	Makanchi Array	44.41	303	P	P	09 34 19.9	-0.4
MKAR				PcP	PcP	09 36 03.8	+0.5
MKAR	Makanchi Array	44.41	303	P	P	09 34 19.9	-0.4
MKAR						09 36 03.8	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	44.41	303	P	P	09 34 19.9	-0.4
	comp=Z,2.3nm,0.5s,mb4.1,baz=86,slow=9.8,SNR=21						
MKAR				PcP	PcP	09 36 03.8	+0.5
	comp=Z,0.2nm,0.2s,baz=64,slow=3.4,SNR=2.6						
TAPN	Taplejung	45.54	275	eP	P	09 34 29.8	+0.3
	comp=Z,6.3nm,0.4s,mb4.9						
ODAN	Odare	46.00	274	eP	P	09 34 33.2	0.0
	comp=Z,6.5nm,0.5s,mb4.8						
KURK	Kurchatov	46.37	309	eP	P	09 34 35.2	-0.6
	comp=Z,12nm,0.8s,mb4.9						
KURK				epP	pP	09 34 47.0	-1.3
KURK				esP	sP	09 34 52.8	-0.9
KURK	Kurchatov	46.37	309	eP	P	09 34 35.2	-0.5
KURK				e*PP	pP	09 34 47.0	-1.3
KURK				e*SP	sP	09 34 52.8	-0.9
KURK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
JIRN	Jiri	46.65	276	eP	P	09 34 39.0	+0.8
KKN	Kakani	47.33	277	eP	P	09 34 44.2	+0.7
GKN	Gorkha	47.76	277	eP	P	09 34 47.3	+0.4
	comp=Z,13nm,0.5s,mb5.2						
TKM2	Tokmak 2	49.83	299	eP	P	09 35 03.4	+0.8
	comp=Z,4.2nm,0.6s,mb4.7						
TKM2	Tokmak 2	49.83	299	eP	P	09 35 03.4	+0.8
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
AML	Almayashu	51.40	299	eP	P	09 35 15.0	+0.6
	comp=Z,5.3nm,0.6s,mb4.7						
AML				epP	pP	09 35 27.4	+0.2
FITZ	Fitzroy Crossi	55.39	198	P	P	09 35 43.3	-0.5
	comp=Z,4.4nm,1.0s,mb4.4,baz=36,slow=19,SNR=6.8						
WB2	Warramunga Arr	55.66	187	eP	P	09 35 47.1	+1.4
WRA	Warramunga Arr	55.67	187	P	P	09 35 44.1	-1.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	55.67	187	P	P	09 35 44.1	-1.7
	comp=Z,1.1nm,0.4s,mb4.2,baz=1.0,slow=7.6,SNR=27						
INK	Inuvik	55.81	27	P	P	09 35 47.2	+1.0
	comp=Z,0.4nm,0.6s,mb3.6,baz=246,slow=11,SNR=3.4						
AKTK	Aktyubinsk	59.20	312	P	P	09 36 09.4	-0.9
AKTO	Aktyubinsk	59.20	312	P	P	09 36 09.5	-0.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AKTO	Aktyubinsk	59.20	312	P	P	09 36 09.4	-0.9
	comp=Z,1.3nm,0.6s,mb4.1,baz=70,slow=12,SNR=5.4						
ASAR	Alice Springs	59.39	187	P	P	09 36 12.1	+0.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	59.39	187	P	P	09 36 12.1	+0.1
	comp=Z,0.7nm,0.5s,mb4.0,baz=19,slow=12,SNR=18						
YKA	Yellowknife Ar	65.22	30	P	P	09 36 51.1	+0.7
	comp=Z,0.2nm,0.7s,mb3.3,baz=302,slow=6.5,SNR=5.2						
JOF	Joensuu	66.91	332	ep	P	09 37 00.5	-0.8
	comp=Z,1.3nm,0.3s,mb4.4						
JOF	Joensuu	66.91	332	eP	P	09 37 00.5	-0.8
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KAF	Kangasniemi	69.27	333	ep	P	09 37 14.7	-1.4
	comp=Z,1.3nm,0.5s,mb4.1,baz=50,slow=5.8						
KAF	Kangasniemi	69.27	333	eP	P	09 37 14.7	-1.4
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
FINES	FINESS Array B	69.76	332	P	P	09 37 19.1	-0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	69.76	332	P	P	09 37 19.1	-0.1
	comp=Z,2.0nm,0.9s,mb4.0,baz=55,slow=5.9,SNR=7.3						
AKASG	Malin Array Be	75.05	322	P	P	09 37 50.3	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	75.05	322	P	P	09 37 50.3	-0.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=47,slow=6.2,SNR=6.4						
NB2	NORSAR Subarra	75.22	337	P	P	09 37 51.8	+0.1
	comp=Z,1.0nm,0.6s,mb3.9,baz=42,slow=5.9						
NB2	NORSAR Subarra	75.22	337	P	P	09 37 51.8	+0.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NOA	NORSAR Array B	75.22	337	P	P	09 37 51.6	-0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	75.22	337	P	P	09 37 51.6	0.0
	comp=Z,2.0nm,0.8s,mb4.1,baz=41,slow=5.8,SNR=7.4						
NVAR	Mina Array Bea	76.20	53	P	P	09 37 59.5	+1.9
	comp=Z,0.3nm,0.5s,mb3.4,baz=307,slow=6.7,SNR=3.1						
PDAR	Pinedale Array	78.97	45	P	P	09 38 15.0	+1.9
	comp=Z,0.3nm,0.6s,mb3.4,baz=258,slow=0.8,SNR=3.3						
CLL	Collm	82.00	330	eP	P	09 38 29.0	-0.2
GERES	GERESS Array B	83.58	328	P	P	09 38 36.8	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.5s,mb3.7,baz=108,slow=1.2,SNR=3.5						
TXAR	Lajitas Array	91.34	52	P	P	09 39 16.7	+1.5
	comp=Z,0.2nm,0.6s,mb3.6,baz=350,slow=4.9,SNR=2.8						
LPAZ	La Paz	147.80	61	PKP2	PKPbc	09 45 55.8	+1.3
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ	La Paz	147.80	61	PKPbc	PKPbc	09 45 55.8	+1.3
	comp=Z,0.6nm,0.6s,baz=0.2,slow=9.8,SNR=3.5						

IDC 03 09:37:38.1±2.3, 462S×12982E, h0km, mb3.7/2, mb1 3.6/4, mb1mx3.4/13, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=221.8km s-min=27.3km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.86	164	Pn	Pn	09 41 21.6	-1.2
	0.1nm,0.3s,baz=342,slow=11,SNR=4.9						
WRA				Sn	Sn	09 44 06.4	-13
	0.1nm,0.3s,baz=339,slow=22,SNR=4.6						
ASAR	Alice Springs	19.34	169	P	Pn	09 42 06.0	-0.3
	0.1nm,0.3s,baz=349,slow=11,SNR=7.3						
MKAR	Makanchi Array	66.15	326	P	P	09 48 28.2	+0.8
	0.3nm,0.4s,baz=119,slow=8.4,SNR=5.8						
ZALV	Zalesovo Beam	69.38	333	P	P	09 48 47.1	-0.5
	0.5nm,0.5s,baz=104,slow=6.1,SNR=2.9						

*IDC **03** 09:42:30.2±3.1, 3238S×17820W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.6/13, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=73.5km s-min=46.5km az=123.0*

ISC 03 09:42:34.7±3.6, 325S±01×1782W±06, h35km, n5, σ1§23/6, mb3.3/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	6.29	207	eP*	Pn	09 44 04.3	-0.6
PUZ				S*	Sn	09 45 18.8	+3.3
URZ	Urewera	6.93	213	Pn	Pn	09 44 13.6	-0.1
	0.7nm,0.3s,baz=238,slow=13,SNR=5.9						
URZ				Sn	Sn	09 45 30.3	-1.0
	0.5nm,0.3s,baz=268,slow=23,SNR=6.5						
ASAR	Alice Springs	42.91	269	P	P	09 50 30.2	+0.1
	0.3nm,0.8s,mb3.1,baz=109,slow=7.9,SNR=3.4						
WRA	Warramunga Arr	44.09	274	P	P	09 50 39.9	+0.2
	0.4nm,0.4s,mb3.5,baz=112,slow=8.1,SNR=9.6						
FINES	FINESS Array B	147.06	339	PKPbc	PKPbc	10 02 13.1	+0.1
	1.2nm,0.9s,baz=35,slow=4.7,SNR=5.8						

*ISCJB **03** 10:09:18.0±4.0, 27N±0.1×94.16E±0.10, h31km±30km, mb4.2/7, Error ellipse: s-maj=26.7km s-min=13.1km az=23.1*
*NEIC **03** 10:09:19.6±0.8, 268N×94.16E, mb4.3/1, Error ellipse: s-maj=20.6km s-min=9.9km az=22.0*
*IDC **03** 10:09:20.0±1.6, 272N×9409E, h29km±5km, mb3.8/5, mb1 3.8/6, mb1mx3.5/22, mbtmp3.8/6, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/27, Error ellipse: s-maj=58.4km s-min=15.0km az=58.0*

ISC 03 10:09:20.2±3.9, 27N±01×9415E±009, h33km±29km, h31km±.7km:pP-P, n13, σ0§86/12, mb4.2/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	4.77	88	Pn	Pn	10 10 30.9	+1.1
	2.1nm,0.3s,baz=305,slow=6.2,SNR=7.4						
PSI				LR	LR	10 12 40.5	
	comp=Z,103nm,20.0s,baz=38,slow=42						
KULM	Kulim	6.98	68	ePn	Pn	10 11 00.1	-0.1
PALK	Pallekele	14.15	289	ePn	Pn	10 12 38.1	-0.4
	2.5nm,0.9s						
KKM	Kota Kinabalu	22.25	81	eP	P	10 14 12.2	-2.3
MK31	Makanchi Array	45.14	349	eP	P	10 17 34.0	+0.5
MK31				epP	pP	10 17 42.1	-1.3
MKAR	Makanchi Array	45.14	349	P	P	10 17 33.6	+0.1
	2.2nm,0.5s,mb4.2,baz=166,slow=8.6,SNR=28						
MKAR				pP	pP	10 17 42.2	-1.2
	1.5nm,0.6s,baz=165,slow=8.5,SNR=7.3						
WRA	Warramunga Arr	45.40	122	P	P	10 17 36.5	+0.5
	0.9nm,0.9s,mb3.6,baz=305,slow=8.8,SNR=4.7						
WRA				pP	pP	10 17 45.6	-0.3
	1.0nm,0.7s,baz=302,slow=9.0,SNR=4.4						
SONM	Songino Array	46.21	11	P	P	10 17 42.0	+0.1
	1.2nm,0.7s,mb4.0,baz=190,slow=9.2,SNR=10						
SONM				pP	pP	10 17 50.8	-1.1
	1.3nm,0.7s,baz=194,slow=8.6,SNR=6.8						
ASAR	Alice Springs	46.71	126	P	P	10 17 47.1	+0.8
	0.3nm,0.5s,mb3.5,baz=296,slow=7.7,SNR=3.8						
ASAR				pP	pP	10 17 56.9	+0.6
	0.4nm,0.4s,baz=297,slow=7.3,SNR=3.9						
ASAR				PcP	PcP	10 19 19.9	+0.3
	0.3nm,0.6s,baz=309,slow=3.2,SNR=5.3						
ASAR				pPcP		10 19 29.1	
	0.2nm,0.6s,baz=294,slow=3.0,SNR=4.4						
GUMO	Guam	51.26	75	eP	P	10 18 21.6	+0.3
	42nm,0.6s,mb5.5						
GUMO				epP	pP	10 18 30.2	-1.1
ZALV	Zalesovo Beam	51.67	353	P	P	10 18 24.1	+0.3
	3.5nm,0.3s,mb4.7,baz=168,slow=7.5,SNR=24						
ZALV				pP	pP	10 18 32.5	-1.3
	1.4nm,0.3s,baz=182,slow=7.0,SNR=8.3						
PMG	Port Moresby	54.16	104	eP	P	10 18 41.4	-1.4
	2.4nm,0.8s,mb4.2						
TXAR	Lajitas Array	143.88	27	PKP	PKPdf	10 28 51.2	-1.7
	0.1nm,0.4s,baz=59,slow=1.5,SNR=4.2						

*IDC **03** 10:25:20.8±2.8, 3244S×178.19W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/13, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=66.9km s-min=35.2km az=119.0*

ISC 03 10:25:27.1±2.4, 327S±01×1784W±04, h35km, n10, σ0§84/12, mb3.8/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	6.08	206	ePN	Pn	10 26 54.6	+0.2
PUZ				SN	Sn	10 28 08.0	+5.3
MWZ	Matawai	6.59	209	ePN	Pn	10 27 01.7	+0.3
URZ	Urewera	6.71	212	Pn	Pn	10 27 04.4	+1.4
	1.3nm,0.3s,baz=22,slow=17,SNR=9.3						
URZ				Sn	Sn	10 28 23.3	+5.1
	1.4nm,0.3s,baz=281,slow=23,SNR=8.6						
URZ	Urewera	6.71	212	ePN	Pn	10 27 04.5	+1.4
BFZ	Birch Farm	9.11	207	SN	Sn	10 29 17.7	+0.4
MRZ	Mangatainoka R	9.36	210	ePN	Pn	10 27 37.4	-2.1
MRZ				SN	Sn	10 29 22.9	-0.5
NNZ	Nelson	10.80	215	SN	Sn	10 29 58.8	0.0
ASAR	Alice Springs	42.72	270	P	P	10 33 21.3	+0.3
	1.2nm,0.8s,mb3.7,baz=108,slow=7.4,SNR=13						
WRA	Warramunga Arr	43.92	275	P	P	10 33 30.4	-0.3
	0.9nm,0.3s,mb3.9,baz=112,slow=8.0,SNR=29						
FINES	FINESS Array B	147.13	339	PKPbc	PKPbc	10 45 03.8	-1.8
	1.1nm,0.5s,baz=50,slow=4.7,SNR=21						

IDC 03 10:46:00.9±8.6, 1787S×17071W, h0km, mb4.4/5, mb1 4.5/5, mb1mx4.0/18, mbtmp4.4/5, Error ellipse: s-maj=169.4km s-min=150.8km az=4.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.87	255	P	P	10 50 56.6	+1.2
	4.9nm,0.5s,baz=90,slow=20,SNR=4.8						
CTA	Charters Tower	40.68	260	P	P	10 53 42.5	-0.8
	5.9nm,0.6s,baz=95,slow=11,SNR=8.8						
STKA	Stephens Creek	45.12	243	P	P	10 54 18.7	-0.5
	1.8nm,0.6s,baz=96,slow=10,SNR=4.3						
WRA	Warramunga Arr	51.84	258	P	P	10 55 11.2	+0.1
	2.8nm,0.5s,baz=97,slow=7.9,SNR=67						
ASAR	Alice Springs	51.85	254	P	P	10 55 11.5	+0.3
	3.9nm,0.7s,baz=95,slow=7.5,SNR=57						

*IDC **03** 10:54:26.7±2.1, 528N×12528E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.7/4, Error ellipse: s-maj=215.3km s-min=24.3km az=64.0*
*ISCJB **03** 10:54:31.3±0.8, 544N±006×12628E±009, h33km, mb3.5/4, Error ellipse: s-maj=13.7km s-min=7.4km az=153.1*

ISC 03 10:54:32.9±0.8, 549N±006×12625E±009, h35km, n8, σ1§00/11, mb3.5/4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	1.43	295⥣	eP	Pn	10 54 57.0	+0.7
GSPH				eS	Sn	10 55 12.1	-1.8
MATI	Mati	1.45	0	eP	Pn	10 54 56.5	-0.1
MATI				eS	Sn	10 55 13.4	-1.0
KCP	Kidapawan	1.90	323⥣	eP	Pn	10 55 04.7	+1.9
KCP				i S	Sn	10 55 26.5	+0.9
BUKP	Musuan	2.65	334	eP	Pn	10 55 13.5	+0.3
WRA	Warramunga Arr	26.49	163	P	P	11 00 07.0	-0.1
	0.2nm,0.4s,mb3.0,baz=340,slow=9.9,SNR=4.7						
ASAR	Alice Springs	29.92	166	P	P	11 00 37.5	-0.2
	0.4nm,0.6s,mb3.3,baz=345,slow=7.0,SNR=7.7						
STKA	Stephens Creek	39.93	159	P	P	11 02 03.8	0.0
	1.3nm,0.5s,mb4.0,baz=333,slow=10,SNR=6.6						
MKAR	Makanchi Array	55.85	325	P	P	11 04 03.2	-3.6
	0.3nm,0.5s,mb3.6,baz=113,slow=7.8,SNR=7.2						

*NIED **03** 10:58:00, 21.10N×122.10E, h32km, Mw4.7 Best double couple: M₀1.17000×10^16 NP1:φs93.00000°, δ12.00000°, λ-45.00000°. NP2:φs228.00000°, δ81.00000°, λ-99.00000°.*
*IDC **03** 10:58:14.2±0.6, 2072N×12196E, h0km, mb4.3/15, mb1 4.4/18, mb1mx4.3/24, mbtmp4.4/18, ML4.3/3, MS3.9/16, Ms1 3.9/16, ms1mx3.7/34, Error ellipse: s-maj=22.7km s-min=14.0km az=73.0*
*ISCJB **03** 10:58:18.5±0.2, 2091N±002×122.14E±003, h33km, mb4.5/50, MS4.1/28, Error ellipse: s-maj=4.2km s-min=2.4km az=22.8*
*JMA **03** 10:58:20.9±0.6, 2108N×122.10E, h106km, M4.1*
*MOS **03** 10:58:20.7±1.1, 21.18N×12196E, h33km, mb4.8/18, MS4.2/8, Error ellipse: s-maj=11.2km s-min=6.7km az=107.8*
*MAN **03** 10:58:21, 2058N×12232E, h29km, mb4.6, ML3.5, MS3.4*
*NEIC **03** 10:58:25.5±0.3, 21.19N×12193E, mb4.5/33, Error ellipse: s-maj=7.4km s-min=6.2km az=132.0*
*BJI **03** 10:58:25.1, 21.19N×12188E, h60km, mB4.9, mb4.5, ML4.0, Ms4.4, Msz4.1*

ISC 03 10:58:20.3±0.2, 2088N±002×12220E±003, h35km, n159, σ1§16/190, mb4.5/50, MS4.1/28, 11C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	2.62	183	eP	Pn	10 58 58.8	-1.4
SGCP	Mt. Cagua	2.62	183	eP	Pn	10 58 58.8	-1.5
PIP	Pasuquin	2.94	211⥣	iP	Pn	10 59 03.4	-1.2
PIP				eS	Sn	10 59 37.6	-1.1
APYP	Conner	3.13	197	eP	Pn	10 59 05.7	-1.5
APYP				eS	Sn	10 59 40.6	-2.7
APYP	Conner	3.13	197	eP	Pn	10 59 05.4	-1.7
CVP	Callao Caves	3.18	186	eP	Pn	10 59 06.0	-1.8
CVP				eS	Sn	10 59 42.5	-2.0
NACB	Ninganchiao	3.33	351	ePn	Pn	10 59 08.2	-1.7
NACB				eSn	Sn	10 59 45.2	-3.0
HATJ	Hateruma jima	3.50	25	P	Pn	10 59 12.7	+0.5
HATJ				eS	Sn	10 59 51.3	-1.1
ABRA	Dolores	3.50	204	eP	Pn	10 59 12.8	+0.4
ABRA	Dolores	3.50	204	eP	Pn	10 59 12.3	0.0
YOJ	Yonaguni jima	3.65	12	P	Pn	10 59 14.0	-0.3
YOJ				eS	Sn	10 59 55.5	-0.6
IRIF	Iriomote-Funau	3.72	22	P	Pn	10 59 14.8	-0.5
IRIF				eS	Sn	10 59 56.8	-1.2
JKRS	Kuro-shima	3.74	26	P	Pn	10 59 16.2	+0.6
JKRS				eS	Sn	10 59 57.8	-0.6
YHNB	Yeheng	3.85	349	ePn	Pn	10 59 17.1	0.0
YHNB				eSn	Sn	10 59 57.4	-3.7
JIJ	Ishigaki jima	3.91	27	P	Pn	10 59 17.3	-0.6
JIJ				eS	Sn	11 00 01.2	-1.4
CAUP	Cauayan	3.93	185	eP	Pn	10 59 18.4	+0.3
CAUP	Cauayan	3.93	185	eP	Pn	10 59 19.3	+1.1
TATO	Taipei	4.13	351	ePn	Pn	10 59 21.5	+0.6
TATO				eSn	Sn	11 00 04.0	-4.0
JTJ	Tarama	4.40	31	P	Pn	10 59 24.4	-0.3
JTJ				eS	Sn	11 00 13.6	-1.1
BCPH	Baguio City Da	4.73	199⥣	eP	Pn	10 59 31.0	+1.9
	83μm,2.0s						
JMJ	Miyako jima 2	4.85	36	eS	Sn	11 00 26.0	+0.2
JOGS	Gusukube	4.87	37	P	Pn	10 59 32.7	+1.6
JOGS				eS	Sn	11 00 26.9	+0.7
BOLP	Bolinao	4.97	206	eP	Pn	10 59 33.2	+0.8
BOLP	Bolinao	4.97	206	eP	Pn	10 59 33.5	+1.0
BALP	Baler	5.14	187	eP	Pn	10 59 34.5	-0.4
BALP	Baler	5.14	187	eP	Pn	10 59 34.4	-0.5
QZH	Quanzhou	5.24	321	P	Pn	10 59 36.0	-0.1
QZH				S	Sn	11 00 30.4	-4.9
QZH				Smax			
	comp=N,110nm,0.6s						
QZH				Smax			
	comp=E,130nm,0.7s						
QZH				LR	LR		
	comp=N,2μm,11.5s						
QZH				LR	LR		
	comp=E,2μm,12.0s						
QZH				LR	LR		
	comp=Z,4μm,10.1s						
SCZP	Santa Cruz	5.52	204	eP	Pn	10 59 41.0	+1.0
LUBP	Lubang	7.34	195	eP	Pn	11 00 06.3	+1.2
LUBP	Lubang	7.34	195	eP	Pn	11 00 06.2	+1.1
JOW	Kunigami	8.13	42	P	Pn	11 00 16.2	+0.3
JOW				eS	Sn	11 01 45.8	-0.7
JOW	Kunigami	8.13	42	Pn	Pn	11 00 16.2	+0.3
	comp=Z,20nm,0.3s,baz=212,slow=14,SNR=31						
JOW				LR	LR	11 03 28.7	
	comp=Z,952nm,18.8s,baz=119,slow=37						
JTK	Tokunoshima	9.23	41	P	Pn	11 00 30.0	-1.0
SSE	Sheshan	10.22	355	P	Pn	11 00 44.1	-0.4
SSE				AMB	AMB		
	comp=Z,27nm,0.7s						
SSE				AMB	AMB		
	comp=Z,186nm,7.3s						
SSE	Sheshan	10.22	355	P	Pn	11 00 44.1	-0.4
	comp=Z,27nm,0.7s						
NJ2	Nanjing	11.52	346	eP	Pn	11 01 06.4	+4.0
NJ2				PP		11 01 17.0	
NJ2				XP		11 01 25.4	
NJ2				S	Sn	11 03 11.0	+1.2
NJ2				AMB	AMB		
	comp=Z,430nm,3.9s						
NJ2				LR	LR		
	comp=N,2μm,12.9s						
NJ2				LR	LR		
	comp=E,2μm,16.7s						
NJ2				LR	LR		
	comp=Z,2μm,16.7s						
QIZ	Qiongzhong	11.76	263	P	Pn	11 01 06.0	+0.3
QIZ				S	Sn	11 03 17.0	+1.3
QIZ				AMB	AMB		
	comp=Z,16nm,1.7s						
QIZ				LR	LR		
	comp=N,846nm,15.3s						
QIZ				LR	LR		
	comp=E,987nm,14.0s						
QIZ				LR	LR		
	comp=Z,923nm,13.6s						
WHN	Wuhan	11.94	325	eP	Pn	11 01 09.7	+1.7
WHN				S	Sn	11 03 18.6	-1.4
WHN				LR	LR		
	comp=Z,2μm,11.2s						
JNU	Nakatsue	14.44	31	Pn	Pn	11 01 41.5	-0.7
	comp=Z,0.4nm,0.3s,baz=214,slow=6.1,SNR=4.2						
JNU				LR	LR	11 07 16.5	
	comp=Z,257nm,18.4s,baz=70,slow=37						
GYA	Guiyang	15.27	294	P	Pn	11 01 55.6	+2.3
GYA				AP	pP	11 02 06.4	-0.6
GYA				S	S	11 04 37.7	-19
GYA				XS	sS	11 04 55.2	-16
GYA				SS		11 04 57.4	
GYA				PCP	PcP	11 07 01.0	+3.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.4s						
GYA				AMB	AMB		
	comp=Z,270nm,4.4s						
GYA				LR	LR		
	comp=N,440nm,15.9s						
GYA				LR	LR		
	comp=E,410nm,14.4s						
GYA				LR	LR		
	comp=Z,570nm,13.8s						
INCN	Inchon	16.99	12	ePn	Pn	11 02 16.0	+0.8
	comp=Z,30nm,0.9s						
KS15	Wonju Array Si	17.23	15	eP	Pn	11 02 22.1	+3.9
KSRS	Korea Array	17.25	16	P	Pn	11 02 19.4	+1.0
	comp=Z,1.4nm,0.3s,baz=198,slow=12,SNR=50						
KSRS				LR	LR	11 09 23.8	
	comp=Z,254nm,20.3s,baz=322,slow=38						
XAN	Xi'an	17.60	321	P	Pn	11 02 23.9	+1.1
XAN				AMB	AMB		
	comp=Z,11nm,1.2s						
XAN				LR	LR		
	comp=N,444nm,22.8s						
XAN				LR	LR		
	comp=E,441nm,21.8s						
XAN				LR	LR		
	comp=Z,796nm,17.0s						
KMI	Kunming	18.40	287	P	Pn	11 02 33.5	+0.8
KMI				AP	pP	11 02 47.4	+5.8
KMI				PP		11 02 50.1	
KMI				S	S	11 05 48.8	-12
KMI				XS	sS	11 06 09.4	-6.0
KMI				SS		11 06 15.7	
KMI				AMB	AMB		
	comp=Z,16nm,1.3s						
KMI				AMB	AMB		
	comp=Z,86nm,3.2s						
KMI				LR	LR		
	comp=N,593nm,13.8s						
KMI				LR	LR		
	comp=E,447nm,14.3s						
KMI				LR	LR		
	comp=Z,443nm,13.8s						
KMI	Kunming	18.40	287	P	Pn	11 02 33.5	+0.8
	comp=Z,16nm,1.3s						
KMI				pP	pP	11 02 42.2	+0.6
KMI				sP	sP	11 02 47.4	+1.3
KMI				PP		11 02 50.1	
KMI				PPP		11 02 58.2	
KMI				S	S	11 05 48.8	-12
KMI				sS	sS	11 06 09.4	-6.0
KMI				SS		11 06 15.7	
CD2	Chengdu	19.34	305	P	Pn	11 02 43.5	-0.5
CD2				AP	pP	11 02 56.7	+4.8
CD2				PP		11 03 02.9	
CD2				XP	sP	11 03 07.6	+11
CD2				S	S	11 06 09.2	-11
CD2				XS	sS	11 06 29.3	-5.1
CD2				SS		11 06 37.9	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,170nm,5.4s						
CD2				LR	LR		
	comp=N,510nm,12.4s						
CD2				LR	LR		
	comp=E,490nm,12.8s						
CD2				LR	LR		
	comp=Z,420nm,13.2s						
BJT	Baijiatuau	19.76	346	eP	Pn	11 02 47.3	-1.7
	comp=Z,31nm,0.6s						
BJT	Baijiatuau	19.76	346	eP	Pn	11 02 47.3	-1.7
BJT				pmax	pmax		
	comp=Z,31nm,0.6s						
BJI	Beijing	19.78	346	P	Pn	11 02 47.4	-1.8
BJI				AP	pP	11 03 00.2	+3.5
BJI				XP	sP	11 03 08.2	+7.0
BJI				S	S	11 06 23.4	-5.1
BJI				AMB	AMB		
	comp=Z,47nm,0.9s						
BJI				AMB	AMB		
	comp=Z,226nm,3.5s						
BJI				LR	LR		
	comp=N,566nm,14.3s						
BJI				LR	LR		
	comp=E,406nm,13.4s						
BJI				LR	LR		
	comp=Z,293nm,14.3s						
BJI	Beijing	19.78	346	P	Pn	11 02 47.4	-1.8
	comp=Z,0.1nm,0.9s						
BJI				pP	pP	11 03 00.2	+3.5
BJI				sP	sP	11 03 08.2	+7.0
BJI				S	S	11 06 23.4	-5.1
BJI				sS	sS	11 06 46.2	+3.1
SNY	Shenyang	20.92	3	⥣P	P	11 03 03.6	+3.8
SNY				AMB	AMB		
	comp=Z,10.0nm,0.5s						
SNY				LR	LR		
	comp=N,189nm,10.8s,MS4.2						
SNY				LR	LR		
	comp=E,628nm,13.9s,MS4.2						
SNY				LR	LR		
	comp=Z,547nm,13.9s,MS4.1						
MAJO	Matsushiro	20.95	38	eP	P	11 03 04.0	+3.9
	comp=Z,6.6nm,0.7s						
MAJO				ePn	P	11 03 04.3	+4.1
MAJO	Matsushiro	20.95	38	eP	P	11 03 04.0	+3.8
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAT	Matsushiro	20.95	38	P	P	11 03 02.5	+2.3
MAT				S	S	11 06 57.8	+6.1
MJAR	Matsushiro Arr	20.95	38	P	P	11 03 02.7	+2.5
MJAR				LR	LR	11 11 09.3	
MJAR	Matsushiro Arr	20.95	38	P	P	11 03 02.7	+2.5
	comp=Z,1.6nm,0.7s,baz=227,slow=11,SNR=9.7						
MJAR				LR	LR	11 11 09.3	
	comp=Z,138nm,18.2s,MS3.4,baz=230,slow=36						
HHC	Hu-ho-hao-te	21.87	338	eP	P	11 03 09.3	-0.7
HHC				AP		11 03 22.9	
HHC				XP	sP	11 03 30.6	+6.9
HHC				S	S	11 06 57.5	-12
HHC				PCP	PcP	11 07 12.2	+3.5
HHC				XS	sS	11 07 22.9	-1.6
HHC				SS		11 07 36.5	
HHC				PCS	PcS	11 10 48.0	+1.0
HHC				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
HHC				AMB	AMB		
	comp=Z,219nm,5.9s						
HHC				LR	LR		
	comp=N,722nm,15.2s,MS4.3						
HHC				LR	LR		
	comp=E,575nm,12.5s,MS4.3						
HHC				LR	LR		
	comp=Z,745nm,13.4s,MS4.3						
CHTO	Chiang Mai	21.96	269	eP	P	11 03 12.1	+0.9
	comp=Z,35nm,1.6s,mb4.5						
CHTO	Chiang Mai	21.96	269	eP	P	11 03 12.1	+0.9
CHTO				pmax	pmax		
	comp=Z,35nm,1.6s,mb4.5						
CM31	Chiang Mai Arr	22.02	268	eP	P	11 03 12.6	+0.8
	comp=Z,24nm,1.6s,mb4.4						
LZH	Lanzhou	22.07	317	eP	P	11 03 13.0	+0.8
LZH				AP		11 03 28.0	
LZH				XP	sP	11 03 34.0	+8.0
LZH				PP		11 03 38.2	
LZH				eS	S	11 06 58.2	-16
LZH				PCP	PcP	11 07 12.6	+3.4
LZH				XS	sS	11 07 25.0	-3.7
LZH				SS		11 07 41.1	
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,175nm,4.5s						
LZH				LR	LR		
	comp=N,749nm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,15.5s,MS4.4						
LZH	Lanzhou	22.07	317	eP	P	11 03 13.0	+0.8
	comp=Z,25nm,1.0s,mb4.6						
LZH				pP		11 03 28.0	
LZH				sP	sP	11 03 34.0	+8.0
LZH				PP		11 03 38.2	
LZH				eS	S	11 06 58.2	-16
LZH				PcP	PcP	11 07 12.6	+3.4
LZH				sS	sS	11 07 25.0	-3.7
LZH				SS		11 07 41.1	
LZH				LR	LR		
	comp=Z,1μm,15.5s,MS4.4						
LZH	Lanzhou	22.07	317	eP	P	11 03 13.0	+0.8
LZH				*PP		11 03 28.0	
LZH				*SP	sP	11 03 34.0	+8.0
LZH						11 03 38.2	
LZH				eS	S	11 06 58.2	-16
LZH						11 07 12.6	
LZH				SS		11 07 41.1	

LZH pmax pmax
comp=Z,25nm,1.0s,mb4.6
LZH MLR MLR
comp=Z,1μm,15.5s,MS4.4
GUMO Guam 22.82 105 LR LR 11 11 54.6
comp=Z,218nm,18.6s,MS3.6,baz=105,slow=36
CN2 Changchun 23.02 6 *e*P **P** **11 03 25.0 +2.8**
CN2 *e*AP 11 03 39.2
CN2 *e*S **S** **11 07 24.5 -5.8**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.3
CN2 LR LR
comp=E,700nm,15.0s,MS4.3
CN2 LR LR
comp=Z,500nm,17.0s,MS4.0
VLA Vladivostok 23.62 18 P **P** **11 03 27.0 -1.2**
VLA MLR MLR
comp=Z,500nm,16.0s,MS4.1
MDJ Mudanjiang 24.46 13 P **P** **11 03 37.7 +1.9**
MDJ XP sP 11 03 59.8 +10
MDJ AMB AMB
comp=Z,15nm,1.2s,mb4.3
MDJ LR LR
comp=E,312nm,17.9s
MDJ LR LR
comp=Z,239nm,17.9s,MS3.7
GTA Gaotai 26.63 319 *e*P **P** **11 03 55.9 +0.3**
GTA AP pP 11 04 10.4 +4.8
GTA XP sP 11 04 17.5 +7.6
GTA PP 11 04 41.7
GTA PCP PcP 11 07 19.4 +0.4
GTA S **S** **11 08 24.2 -4.1**
GTA XS sS 11 08 49.3 +4.4
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.0
GTA AMB AMB
comp=Z,168nm,6.1s
GTA LR LR
comp=N,294nm,20.5s,MS4.1
GTA LR LR
comp=E,368nm,16.7s,MS4.1
GTA LR LR
comp=Z,558nm,17.5s,MS4.2
ASAJ Asahikawa 28.71 32 P **P** **11 04 16.6 +2.4**
comp=Z,3.4nm,0.6s,mb4.3,baz=238,slow=12,SNR=4.9
KLR Kul'dur 29.30 13 *e*P **P** **11 04 18.2 -1.1**
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS4.9
ULN Ulaanbaatar 29.57 339 *e*P **P** **11 04 21.4 -0.3**
comp=Z,13nm,0.8s,mb4.7
ULN Ulaanbaatar 29.57 339 *e*P **P** **11 04 21.4 -0.3**
ULN pmax pmax
comp=Z,13nm,0.8s,mb4.7
SONM Songino Array 29.77 338 P **P** **11 04 22.7 -0.8**
SONM 11 07 25.9
SONM Songino Array 29.77 338 P **P** **11 04 22.7 -0.8**
comp=Z,8.7nm,0.8s,mb4.5,baz=158,slow=9.6,SNR=68
SONM PcP PcP 11 07 25.9 -0.7
comp=Z,0.4nm,0.4s,baz=160,slow=4.2,SNR=4.1
SONM LR LR 11 17 04.9
comp=Z,280nm,18.1s,MS3.9,baz=3.3,slow=38
YSS Yuzh-Sakhalins 30.92 28 *e*P **P** **11 04 34.5 +0.9**
comp=Z,50nm,2.0s,mb5.0
YSS Yuzh-Sakhalins 30.92 28↑ *e*P **P** **11 04 37.0 +3.3**
YSS pmax pmax
comp=Z,20nm,1.0s,mb4.9
YSS MLR MLR
comp=Z,400nm,16.0s,MS4.2
BATI Kupang 30.92 177 LR LR 11 18 06.6
comp=Z,123nm,18.4s,MS3.6,baz=332,slow=39
ZAK Zakamensk 33.02 338 *e*P **P** **11 04 49.0 -3.0**
ZAK pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
TLY Talaya 33.98 339 *e*P **P** **11 05 00.2 -0.2**
comp=Z,2.3nm,0.7s,mb4.2
TLY Talaya 33.98 339 *e*P **P** **11 04 59.9 -0.5**
TLY pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TLY MLR MLR
comp=Z,258nm,14.0s,MS4.1
WMQ Urumqi 36.65 317 ↑P **P** **11 05 24.0 +0.5**
WMQ AP pP 11 05 39.0 +5.3
WMQ XP sP 11 05 46.0 +8.1
WMQ PP PP 11 06 48.1 +0.8
WMQ S **S** **11 10 58.5 -5.8**
WMQ XS sS 11 11 24.5 +3.4
WMQ AMB AMB
comp=Z,5.0nm,0.6s,mb4.5
WMQ AMB AMB
comp=Z,43nm,3.5s
WMQ LR LR
comp=N,114nm,17.7s,MS3.9
WMQ LR LR
comp=E,162nm,20.0s,MS3.9
WMQ LR LR
comp=Z,182nm,20.0s,MS3.9
PMG Port Moresby 38.83 138 *e*P **P** **11 05 48.5 +6.3**
comp=Z,4.9nm,0.7s,mb4.3
PMG Port Moresby 38.83 138 *e*P **P** **11 05 48.5 +6.3**
PMG pmax pmax
comp=Z,5.0nm,0.7s
MK31 Makanchi Array 41.39 318 *e*P **P** **11 06 03.3 +0.2**
MKAR Makanchi Array 41.39 318 P **P** **11 06 03.5 +0.4**
MKAR 11 08 00.4
MKAR Makanchi Array 41.39 318 P **P** **11 06 03.5 +0.4**
comp=Z,19nm,0.8s,mb4.8,baz=111,slow=9.8,SNR=125
MKAR PcP PcP 11 08 00.4 -0.3
comp=Z,0.8nm,0.5s,baz=90,slow=2.9,SNR=3.1
MKAR LR LR 11 24 47.1
comp=Z,252nm,18.5s,MS4.1,baz=173,slow=38
MBWA Marble Bar 41.85 183 *e*P **P** **11 06 12.0 +5.0**
comp=Z,5.5nm,0.8s,mb4.2
WRA Warramunga Arr 42.27 163 P **P** **11 06 08.1 -2.5**
comp=Z,1.0nm,0.5s,mb3.7,baz=344,slow=9.1,SNR=22
WB2 Warramunga Arr 42.27 163 *e*P **P** **11 06 10.0 -0.6**
PALK Pallekele 42.32 258 *e*P **P** **11 06 10.5 -0.6**
comp=Z,8.9nm,1.2s,mb4.3
PET Petropavlovsk 42.55 32 *e*P **P** **11 06 15.0 +2.5**
comp=Z,37nm,1.4s,mb4.9
PET Petropavlovsk 42.55 32 *e*P **P** **11 06 15.1 +2.6**
PET *e*S **S** **11 12 32.7 +0.2**
PET pmax pmax
comp=Z,22nm,1.1s,mb4.8
PET MLR MLR
comp=Z,500nm,21.0s,MS4.4
ZALV Zalesovo Beam 43.53 329 P **P** **11 06 19.7 -0.7**
ZALV LR LR 11 25 13.6
ZALV Zalesovo Beam 43.53 329 P **P** **11 06 19.7 -0.7**
comp=Z,7.8nm,0.5s,mb4.7,baz=114,slow=8.8,SNR=42
ZALV LR LR 11 25 13.6
comp=Z,134nm,19.5s,MS3.9,baz=309,slow=37
ZAL Zalesovo 43.53 329 P **P** **11 06 19.7 -0.7**
MA2 Magadan 43.70 21 *e*P **P** **11 06 23.7 +2.0**
comp=Z,5.0nm,0.8s,mb4.3
MA2 Magadan 43.70 21 P **P** **11 06 23.5 +1.8**
MA2 pmax pmax
comp=Z,30nm,2.0s,mb4.7
TKM2 Tokmak 2 44.57 310 *e*P **P** **11 06 28.8 -0.2**
comp=Z,3.5nm,0.6s,mb4.4
TKM2 Tokmak 2 44.57 310 *e*P **P** **11 06 28.8 -0.1**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
NVS Novosibirsk 44.80 329 *i* P **P** **11 06 29.9 -0.6**
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.5
NVS pmax pmax
comp=N,15nm,1.9s
NVS pmax pmax
comp=E,18nm,1.9s
KURK Kurchatov 45.24 322 *e*P **P** **11 06 33.7 -0.4**
comp=E,25nm,0.7s,mb5.2
KURK Kurchatov 45.24 322 *e*P **P** **11 06 33.7 -0.4**
KURK pmax pmax
comp=Z,25nm,0.7s,mb5.2
AAK Ala-Archa 45.29 310 *e*P **P** **11 06 34.5 -0.1**
comp=Z,1.7nm,0.6s,mb4.0
AAK Ala-Archa 45.29 310 *e*P **P** **11 06 34.5 -0.1**
AAK pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
ASAR Alice Springs 45.72 165 P **P** **11 06 36.7 -1.5**
comp=Z,0.6nm,0.4s,mb3.9,baz=350,slow=9.8,SNR=19
AML Almayashu 45.76 309 *e*P **P** **11 06 38.7 +0.4**
comp=Z,8.3nm,1.0s,mb4.6
EKS2 Erkin-Say 45.81 310 *e*P **P** **11 06 39.6 +0.9**
comp=Z,2.5nm,0.7s,mb4.2
CTA Charters Tower 47.03 148 LR LR 11 24 15.1
comp=Z,163nm,19.6s,MS4.0,baz=45,slow=33
KBL Kabul 48.48 298 *e*P **P** **11 06 60.0 +0.3**
BRVK Borovoye 50.90 322 *e*P **P** **11 07 17.7 -0.1**
comp=Z,14nm,0.6s,mb5.1
BRVK Borovoye 50.90 322 *e*P **P** **11 07 17.7 -0.1**
BRVK pmax pmax
comp=Z,14nm,0.6s,mb5.1
TIXI Tiksi 50.93 3 *e*P **P** **11 07 17.2 -0.6**
comp=Z,2.2nm,0.6s,mb4.3
TIXI Tiksi 50.93 3 *e*P **P** **11 07 17.0 -0.8**
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
TIXI MLR MLR
comp=Z,381nm,16.0s,MS4.5
KLBR Kellerberrin 52.34 185 *e*P **P** **11 07 27.5 -1.2**
comp=Z,14nm,0.9s,mb4.9
NWAO Narrogin (SRO) 53.71 185 *e*P **P** **11 07 43.8 +5.0**
comp=Z,4.5nm,0.8s,mb4.5
NWAO Narrogin (SRO) 53.71 185 *e*P **P** **11 07 43.8 +5.0**
NWAO pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 54.48 19 *e*P **P** **11 07 45.0 +0.9**
comp=Z,3.0nm,0.7s,mb4.3
BILL Bilibino 54.48 19↑ *e*P **P** **11 07 44.3 +0.2**
BILL *e* 11 09 45.5
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
STKA Stephens Creek 55.65 160 *e*P **P** **11 07 52.7 -0.2**
comp=Z,1.9nm,0.6s,mb4.3
STKA Stephens Creek 55.65 160 P **P** **11 07 52.5 -0.4**
comp=Z,2.6nm,0.6s,mb4.4,baz=0.4,slow=5.4,SNR=11
STKA LR LR 11 31 15.1
comp=Z,90nm,19.7s,MS3.9,baz=64,slow=36
SVE Sverdlovsk 57.26 325↑ *e*P **P** **11 08 04.9 +0.7**
SVE *i* 11 09 01.4
SVE pmax pmax
comp=Z,27nm,0.6s,mb5.5
AKTK Aktyubinsk 57.80 317 P **P** **11 08 07.7 -0.4**
AKTK LR LR 11 35 04.7
AKTO Aktyubinsk 57.80 317 P **P** **11 08 07.7 -0.4**
comp=Z,1.8nm,0.6s,mb4.3,baz=86,slow=7.2,SNR=7.3
AKTO LR LR 11 35 04.7
comp=Z,180nm,19.8s,MS4.2,baz=265,slow=38
ARU Arti 58.31 324 *e*P **P** **11 08 10.9 -0.6**
ARU Arti 58.31 324 *d i*P **P** **11 08 10.6 -0.9**
ARU 11 10 14.9
ARU S **S** **11 16 06.2 -5.2**
ARU SS SS 11 19 56.8 -6.5
ARU pmax pmax
comp=Z,35nm,0.7s,mb5.5
KIV Kislovodsk 68.41 310 *e*P **P** **11 09 18.5 -0.1**
comp=Z,6.8nm,0.6s,mb4.8
KIV Kislovodsk 68.41 310↑ *e*P **P** **11 09 18.0 -0.6**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.8
KIV MLR MLR
comp=Z,100nm,18.0s,MS4.1
IMA2 Indian Mountai 68.74 26 *e*P **P** **11 09 23.0 +2.7**
MCK McKinley 71.01 28 *e*P **P** **11 09 36.1 +1.9**
comp=Z,9.5nm,1.2s,mb4.6
MCK McKinley 71.01 28 *e*P **P** **11 09 36.1 +1.9**
MCK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
COLA College 71.30 27 *e*P **P** **11 09 37.7 +1.7**
comp=Z,2.3nm,0.5s,mb4.4
COLA College 71.30 27 *e*P **P** **11 09 37.7 +1.8**
COLA pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
KEV Kevo 72.38 339 *e*P **P** **11 09 40.9 -1.5**
comp=Z,41nm,1.2s,mb5.2
KEV Kevo 72.38 339 *e*P **P** **11 09 40.9 -1.5**
KEV pmax pmax
comp=Z,41nm,1.2s,mb5.2
MALT Malatya 72.63 305 *e*P **P** **11 09 45.4 +0.9**
comp=Z,18nm,1.4s,mb4.8
MALT Malatya 72.63 305 *e*P **P** **11 09 45.4 +0.9**
MALT pmax pmax
comp=Z,18nm,1.4s,mb4.8
AFI Afiamalu 73.48 112 LR LR 11 38 41.8
comp=Z,4.1nm,20.2s,baz=328,slow=33
EGAK Eagle 74.11 26 *e*P **P** **11 09 54.4 +1.7**
FINES FINESS Array B 74.77 330↑ *e*P **P** **11 09 56.5 0.0**
FINES FINESS Array B 74.77 330 P **P** **11 09 55.7 -0.8**
comp=Z,1.3nm,0.5s,mb4.1,baz=60,slow=5.9,SNR=12
FINES LR LR 11 47 11.7
comp=Z,136nm,18.5s,MS4.3,baz=92,slow=39
DAWY Dawson 75.05 27 *e*P **P** **11 09 59.8 +1.7**
BRTR Keskin Array B 75.90 307↑ *e*P **P** **11 10 03.7 +0.2**
BRTR Keskin Array B 75.90 307 P **P** **11 10 02.8 -0.7**
comp=Z,1.9nm,0.7s,mb4.1,baz=116,slow=5.8,SNR=11
INK Inuvik 75.93 22 *e*P **P** **11 10 04.3 +1.2**
AKASG Malin Array Be 75.96 319 P **P** **11 10 01.8 -1.9**
comp=Z,3.1nm,0.6s,mb4.5,baz=65,slow=5.9,SNR=6.5
ANTO Ankara 76.48 308 P **P** **11 10 06.9 +0.1**
comp=Z,27nm,0.9s,mb5.2
ANTO Ankara 76.48 308 P **P** **11 10 06.9 +0.1**
ANTO pmax pmax
comp=Z,27nm,0.9s,mb5.2
KWP Kalwaria 80.28 319 *e*P **P** **11 10 27.7 +0.1**
NB2 NORSAR Subarra 81.58 333 P **P** **11 10 33.3 -0.9**
comp=Z,2.1nm,1.0s,mb4.0,baz=62,slow=5.6
NB2 NORSAR Subarra 81.58 333 P **P** **11 10 33.3 -0.9**
NB2 pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
NOA NORSAR Array B 81.58 333 P **P** **11 10 33.2 -1.0**
comp=Z,1.4nm,0.7s,mb4.0,baz=61,slow=4.9,SNR=7.7
NOA LR LR 11 50 51.7
comp=Z,150nm,20.0s,MS4.3,baz=45,slow=39
RES Resolute Bay 81.76 9 *e*P **P** **11 10 35.6 +0.6**
CLL Collm 85.25 323 *i* P **P** **11 10 54.3 +1.0**
CLL *i* PcP PcP 11 10 57.5 +1.1
YKW3 Yellowknife Ar 85.59 23 *e*P **P** **11 10 54.9 +0.1**
YKA Yellowknife Ar 85.64 23↑ *e*P **P** **11 10 55.5 +0.4**
YKA Yellowknife Ar 85.64 23 P **P** **11 10 55.1 +0.1**
comp=Z,5.5nm,0.7s,mb4.9,baz=308,slow=4.7,SNR=114
YKA LR LR 11 56 28.9
comp=Z,34nm,18.0s,MS3.8,baz=330,slow=41
GERES GERESS Array B 85.99 321 P **P** **11 10 56.5 -0.6**
comp=Z,0.8nm,0.7s,mb4.1,baz=53,slow=5.5,SNR=6.1
GERES LR LR 11 49 23.6
comp=Z,95nm,18.4s,MS4.2,baz=283,slow=36
EDM Edmonton 92.01 30 *e*P **P** **11 11 25.8 +0.4**

IDC 03 11:02:02.4±4.3, 1912S×17483W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/15, mbtmp3.6/4, Error ellipse: s-maj=282.6km s-min=31.2km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.62**	**262**	P	P	11 09 12.1	+1.5
	1.1nm,0.5s,baz=110,slow=12,SNR=2.8						
ASAR	**Alice Springs**	**47.74**	**255**	P	P	11 10 40.9	-0.6
	0.3nm,0.6s,baz=92,slow=8.8,SNR=4.1						
WRA	**Warramunga Arr**	**47.76**	**260**	P	P	11 10 41.0	-0.6
	0.2nm,0.3s,baz=97,slow=7.5,SNR=10						
NVAR	**Mina Array Bea**	**77.99**	**42**	P	P	11 14 03.1	+0.4
	0.5nm,0.7s,baz=225,slow=8.9,SNR=4.0						

*MOS **03** 11:20:29.9±2.2,5175N×10001E,h8km,mb4.4/1, Error ellipse: s-maj=17.3km s-min=12.2km az=152.3*

BYKL 03 11:20:27.5±0.5, 5163N×9984E, h1km±19km, 5C-1D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	**0.72**	**87**↑	*i*PG	Pg	11 20 41.2	-0.1
MOY				*e*		11 20 51.1	
MOY				pmax	pmax		
	comp=Z,197nm,0.4s						
MOY				smax			
	comp=N,3μm,0.4s						
MOY	**Mondy**	**0.72**	**87**↑	*i*Pg	Pg	11 20 41.1	-0.2
MOY				*i* Sg	Sg	11 20 50.9	+0.3
MOY				Pmax			
	comp=N,203nm,0.4s						
MOY				Smax			
	comp=N,3μm,0.4s						
ORL	**Orlik**	**0.91**	**359**↓	*i*PG	Pg	11 20 44.8	-0.1
ORL				*e*		11 20 56.7	
ORL				pmax	pmax		
	comp=Z,123nm,0.2s						
ORL				smax			
	comp=E,2μm,0.4s						
ORL	**Orlik**	**0.91**	**359**↑	*i*Pg	Pg	11 20 44.8	-0.1
ORL				*i* Sg	Sg	11 20 56.6	-0.1
ORL				Pmax			
	comp=E,140nm,0.5s						
ORL				Smax			
	comp=E,2μm,0.6s						
ARS	**Arshan**	**1.63**	**79**	*e*PG	Pg	11 20 57.7	-1.0
ARS				*e*		11 21 19.2	
ARS				pmax	pmax		
	comp=Z,114nm,0.1s						
ARS				smax			
	comp=E,2μm,0.4s						
ARS	**Arshan**	**1.63**	**79**	*e*Pn	Pn	11 20 56.7	-0.6
ARS				*e*Pg	Pg	11 20 57.8	-0.9
ARS				*i* Sg	Sg	11 21 18.8	-1.1
ARS				Pmax			
	comp=E,119nm,0.2s						
ARS				Smax			
	comp=E,2μm,0.4s						
TLY	**Talaya**	**2.37**	**87**↑	*i*PN	Pn	11 21 09.6	+2.1
TLY				*e*S	Sn	11 21 36.1	-1.0
TLY				*e*		11 21 40.9	
TLY				pmax	pmax		
	comp=Z,40nm,0.2s						
TLY				smax			
	comp=E,334nm,0.3s						
TLY	**Talaya**	**2.37**	**87**	*e*Pg	Pg	11 21 09.6	-3.3
TLY				*e*		11 21 13.0	
TLY				*e*Sg	Sg	11 21 40.9	-2.7
TLY				max			
	comp=E,38nm,0.6s						
TLY				Smax			
	comp=E,317nm,0.4s						
TDJR	**Todzha**	**2.44**	**290**↑	*i*Pg	Pg	11 21 11.2	-3.0
TDJR				*e*Sg	Sg	11 21 43.6	-2.1
ZAK	**Zakamensk**	**2.51**	**119**	*e*PN	Pn	11 21 07.5	-1.8
ZAK				*e*		11 21 45.7	
ZAK				pmax	pmax		
	comp=Z,135nm,0.5s						
ZAK				smax			
	comp=N,334nm,0.3s						
ZAK	**Zakamensk**	**2.51**	**119**	*e*Pn	Pn	11 21 08.5	-0.8
ZAK				*e*Pg	Pg	11 21 12.1	-3.4
ZAK				*e*Sg	Sg	11 21 46.1	-1.9
ZAK				Pmax			
	comp=N,136nm,0.5s						
ZAK				Smax			
	comp=N,336nm,0.3s						
IRK	**Irkutsk**	**2.81**	**76**	*e*PN	Pn	11 21 17.5	+4.0
IRK				*e*		11 21 53.0	
IRK				pmax	pmax		
	comp=Z,146nm,0.1s						
IRK				smax			
	comp=N,2μm,0.5s						
IRK	**Irkutsk**	**2.81**	**76**	*e*Pg	Pg	11 21 17.5	-3.8
IRK				*e*Sg	Sg	11 21 53.5	-4.2
IRK				Pmax			
	comp=N,160nm,0.2s						
IRK				Smax			
	comp=N,2μm,0.8s						
LSTR	**Listvyanka**	**3.11**	**84**	*e*Pg	Pg	11 21 22.8	-4.3
LSTR				*e*Sg	Sg	11 22 02.6	-4.8
LSTR				Pmax			
	comp=N,29nm,0.5s						
LSTR				Smax			
	comp=N,405nm,1.5s						
ARDR	**Aradan**	**4.07**	**286**	*e*Pn	Pn	11 21 31.6	+0.9
ARDR				*e*Pg	Pg	11 21 39.7	-5.6
ARDR				*e*Sg	Sg	11 22 31.2	-6.8
STDB	**Stepnoy Dvoret**	**4.08**	**80**	*e*Sg	Sg	11 22 34.2	-4.2
STDB				Smax			
	comp=N,1μm,1.0s						
TRG	**Tyrgan**	**4.16**	**72**	*e*PN	Pn	11 21 44.0	+12
TRG				*e*S	Sn	11 22 19.7	-1.6
TRG				*e*		11 22 33.8	
TRG				pmax	pmax		
	comp=Z,46nm,0.5s						
TRG				smax			
	comp=N,156nm,0.3s						
TRG	**Tyrgan**	**4.16**	**72**	*e*Pn	Pn	11 21 34.1	+2.0
TRG				*e*Pg	Pg	11 21 41.2	-6.0
TRG				*e*Sg	Sg	11 22 33.9	-7.2
TRG				Pmax			
	comp=N,48nm,0.6s						
TRG				Smax			
	comp=N,156nm,0.3s						
KAB	**Kabansk**	**4.25**	**82**	*e*Sg	Sg	11 22 38.7	-5.1
KAB				Smax			
	comp=N,663nm,0.9s						
FFNB	**Fofonovo**	**4.32**	**82**	*e*Pg	Pg	11 21 45.5	-4.6
FFNB				*e*		11 22 33.8	
FFNB				*e*Sg	Sg	11 22 40.4	-5.6
FFNB				Pmax			
	comp=N,74nm,0.5s						
FFNB				Smax			
	comp=N,526nm,0.6s						
HRMR	**Khuramsha**	**4.43**	**87**	*e*	Pn	11 21 42.0	+6.2
HRMR				*e*Pg	Pg	11 21 47.1	-5.3
HRMR				*e*		11 22 37.3	
HRMR				*e*Sg	Sg	11 22 44.0	-5.8
HRMR				Pmax			
	comp=N,46nm,0.6s						
HRMR				Smax			
	comp=N,513nm,0.6s						
ZRHB	**Zarechye**	**4.60**	**76**	*e*Pn	Pn	11 21 38.6	+0.5
ZRHB				*e*		11 22 04.8	
ZRHB				*e*Sg	Sg	11 22 50.5	-4.8
ZRHB				max			
	comp=N,104nm,0.7s						
ZRHB				Smax			
	comp=N,645nm,1.3s						
TRTB	**Turuntaevo**	**4.86**	**80**	*e*	Pn	11 21 46.0	+4.4
TRTB				*e*Pg	Pg	11 21 55.0	-5.5
TRTB				*e*Sn	Sn	11 22 45.3	+6.8
TRTB				*e*Sg	Sg	11 22 57.5	-5.9
TRTB				Pmax			
	comp=N,24nm,0.7s						
TRTB				Smax			
	comp=N,212nm,1.0s						
UUDB	**Ulan-Yde**	**4.87**	**84**	*e*Sg	Sg	11 22 56.5	-7.2
UUDB				Smax			
	comp=N,110nm,1.6s						
OGRR	**Ongureny**	**5.13**	**64**	*e*PN	Pn	11 21 47.2	+1.8
OGRR				*e*		11 22 01.3	
OGRR				*e*		11 23 05.7	
OGRR				pmax	pmax		
	comp=Z,38nm,0.7s						
OGRR				smax			
	comp=N,210nm,1.1s						
OGRR	**Ongureny**	**5.13**	**64**	*e*Pn	Pn	11 21 45.9	+0.5
OGRR				*e*Pg	Pg	11 21 58.9	-6.9
OGRR				*e*Sg	Sg	11 23 05.4	-6.9
OGRR				Pmax			
	comp=N,38nm,0.7s						
OGRR				Smax			
	comp=N,198nm,0.9s						
ULN	**Ulaanbaatar**	**6.00**	**126**	*e*	Pn	11 22 10.0	+13
ULN				*e*Pg	Pg	11 22 16.0	-6.5
ULN				*e*Sg	Sg	11 23 34.3	-5.9
SYVR	**Suvo**	**6.51**	**68**	*e*PN	Pn	11 22 24.2	+20
SYVR	**Suvo**	**6.51**	**68**	*e*Sg	Sg	11 23 46.3	-10
SYVR				Smax			
	comp=N,92nm,2.4s						
NIZ	**Nizh Angarsk**	**7.10**	**50**	*e*PN	Pn	11 22 13.1	+0.8
NIZ				*e*		11 22 35.2	
NIZ				*e*		11 24 04.4	
NIZ				pmax	pmax		
	comp=Z,14nm,0.6s						
NIZ				smax			
	comp=N,106nm,1.3s						
NIZ	**Nizh Angarsk**	**7.10**	**50**	*e*Pn	Pn	11 22 14.0	+1.7
NIZ				*e*Sn	Sn	11 23 30.9	-2.7
NIZ				*e*Sg	Sg	11 24 06.5	-8.7
NIZ				max			
	comp=N,22nm,0.9s						
NIZ				Smax			
	comp=N,108nm,1.3s						

YLYR	Ulyunkhan	7.53	60	ePG	Pg	11 22 45.3	-6.3
YLYR				e		11 24 18.2	
YLYR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
YLYR				smax			
	comp=N,85nm,1.5s						
YLYR	Ulyunkhan	7.53	60	ePn	Pn	11 22 19.7	+1.4
YLYR				ePg	Pg	11 22 42.5	-9.1
YLYR				e		11 23 48.9	
YLYR				eSg	Sg	11 24 19.6	-9.5
YLYR				Pmax			
	comp=N,8.0nm,0.6s						
YLYR				Smax			
	comp=N,85nm,1.5s						
KMO	Kumora	7.97	53	ePn	Pn	11 22 25.2	+0.9
KMO				eSg	Sg	11 24 33.8	-9.3
KMO				max			
	comp=N,9.0nm,0.4s						
KMO				Smax			
	comp=N,87nm,1.6s						
KPC	Khapcheranga	8.20	99	ePG	Pg	11 22 57.0	-7.4
KPC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KPC	Khapcheranga	8.20	99	ePg	Pg	11 22 55.3	-9.1
KPC				eSg	Sg	11 24 41.7	-8.8
YOA	Uoyan	8.34	53	eSg	Sg	11 24 46.6	-8.5
YOA				Smax			
	comp=Z,217nm,1.5s						
CIT	Chita	8.51	82	eSg	Sg	11 24 52.9	-7.5
CIT				Smax			
	comp=Z,38nm,1.5s						
UKT	Uakit	9.07	59	ePG	Pn	11 23 12.2	+33
UKT				e		11 25 05.3	
UKT				pmax	pmax		
	comp=Z,2.0nm,0.7s						
UKT				smax			
	comp=N,37nm,1.6s						
UKT	Uakit	9.07	59	ePn	Pn	11 22 39.2	-0.2
UKT				e		11 22 59.3	
UKT				e		11 24 32.9	
UKT				eSg	Sn	11 25 07.2	+45
UKT				max			
	comp=N,4.0nm,1.1s						
UKT				Smax			
	comp=N,37nm,1.6s						
SVKR	Severomuysk	9.26	56	eSg	Sn	11 25 14.7	+48
SVKR				Smax			
	comp=N,88nm,1.0s						
BOD	Bodaibo	10.26	47	eSg	Sn	11 25 46.8	+56
BOD				Smax			
	comp=N,18nm,1.2s						
TUP	Tupik	12.42	69	eSg	Sn	11 26 51.7	+68
TUP				Smax			
	comp=N,23nm,2.1s						

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*ISCJB **03** 11:24:22.5±0.5, 51.60N±0.03×7.77E±0.04, h0km, Error ellipse: s-maj=4.0km s-min=3.5km az=146.7*
*BUG **03** 11:24:23.0, 51.63N×7.78E, h1km, ML1.9*
*LDG **03** 11:24:24.5±0.1, 51.72N×7.61E, h1km, Ml2.7/5, Error ellipse: s-maj=2.2km s-min=1.9km az=39.0, Suspected Mining induced.*
*BGR **03** 11:24:24.5±0.4, 51.62N×7.80E, h1km, ML2.3/1, Error ellipse: s-maj=6.7km s-min=4.4km az=154.0*
*NEIC **03** 11:24:24.5, 51.72N×7.61E, h1km, ML2.7(LDG), After LDG.*
*BNS **03** 11:24:24.7±0.6, 51.71N×7.61E, h1km, ML2.1*
*CSEM **03** 11:24:24.6±0.1, 51.70N×7.63E, h1km, ML2.6/4, Error ellipse: s-maj=2.8km s-min=1.6km az=55.0, Suspected Mining induced.*
ISC 03 11:24:23.5±0.5, 51.63N±0.03×7.75E±0.04, h0km, n30, σ1.10/66, 1C, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUG	Bochum--Univer	0.35	239⇑	ePg	Pg	11 24 30.9	+0.6
BUG				Sg	Sg	11 24 36.7	+1.9
WTSB	Winterswijk	0.68	300	ePg	Pg	11 24 37.8	+1.2
	11nm,0.3s						
WTSB				eSg	Sg	11 24 47.1	+1.6
IBBN	Ibbenburen	0.68	0	ePg	Pg	11 24 37.6	+1.0
	SNR=3.8						
HOBG	Hohbusch	0.69	202	ePg	Pg	11 24 38.7	+1.9
HOBG				eSg	Sg	11 24 49.8	+4.0
	150nm,0.4s						
BNS	Bensberg	0.75	209	ePg	Pg	11 24 40.0	+2.0
STB	Steinbach	1.18	209	ePg	Pg	11 24 47.1	+0.9
STB				eSg	Sg	11 25 03.2	+1.8
	42nm,0.5s						
KLL	Kalltalsperre	1.33	223	ePg	Pg	11 24 49.1	+0.1
KLL				eSg	Sg	11 25 06.8	+0.4
	24nm,0.3s						
DREG	Dreilaegerbach	1.36	225	ePg	Pg	11 24 49.4	-0.1
DREG				eSg	Sg	11 25 07.5	+0.4
	28nm,0.6s						
HGN	Heimansgroeve	1.43	234	ePg	Pg	11 24 50.7	-0.2
	10nm,0.1s,baz=40						
HGN				eSg	Sg	11 25 09.2	-0.3
HGN	Heimansgroeve	1.43	234	ePg	Pg	11 24 50.7	-0.2
	10nm,0.1s						
HGN				eSg	Sg	11 25 09.2	-0.3
BGG	Burgeitz	1.44	191	ePg	Pg	11 24 51.6	+0.4
BGG				eSg	Sg	11 25 10.7	+0.8
TNS	Taunus Mts	1.47	162	ePg	Pg	11 24 52.3	+0.6
	SNR=3.1						
TNS				eSg	Sg	11 25 10.5	-0.2
	SNR=5.7						
MEM	Membach	1.50	228	P	Pn	11 24 51.6	0.0
MEM				S	Sg	11 25 11.6	0.0
	comp=E,42nm,0.0s						
MEM	Membach	1.50	228	P	Pn	11 24 51.6	0.0
MEM				S	Sg	11 25 11.5	-0.1
CLZ	Clausthal	1.65	81	ePg	Pg	11 24 54.1	-0.9
	SNR=4.3						
CLZ				eSg	Sg	11 25 16.5	+0.1
	SNR=3.7						
GIVF	Givet	2.40	232	ePg	Pg	11 25 09.1	-0.4
GIVF				eSn	Sn	11 25 30.8	-3.3
GIVF				eSg	Sg	11 25 39.7	-0.9
	comp=E,11nm,0.3s						
GIVF	Givet	2.40	232	ePn	Pn	11 25 02.9	-1.1
GIVF				ePg	Pg	11 25 09.1	-0.4
GIVF				eSn	Sn	11 25 30.8	-3.3
GIVF				eSg	Sg	11 25 39.7	-0.9
GIVF	Givet	2.40	232	ePg	Pg	11 25 09.1	-0.4
GIVF				eSn	Sn	11 25 30.8	-3.3
GIVF				eSg	Sg	11 25 39.7	-0.9
	comp=E,5.4nm,0.3s						
BAIF	Baives	2.74	236	ePg	Pg	11 25 14.9	-1.1
BAIF				eSn	Sn	11 25 38.7	-3.7
BAIF				eSg	Sg	11 25 50.2	-1.2
	comp=E,4.5nm,0.3s						
BAIF	Baives	2.74	236	ePn	Pn	11 25 07.8	-0.9
BAIF				ePg	Pg	11 25 14.9	-1.1
BAIF				eSn	Sn	11 25 38.7	-3.7
BAIF				eSg	Sg	11 25 50.2	-1.2
BAIF	Baives	2.74	236	ePg	Pg	11 25 14.9	-1.1
BAIF				eSn	Sn	11 25 38.7	-3.7
BAIF				eSg	Sg	11 25 50.2	-1.2
	comp=E,2.2nm,0.3s						
CDF	Champ du Feu	3.23	186	ePn	Pn	11 25 15.8	+0.4
CDF				eSn	Sn	11 25 53.6	-1.0
CDF				eSg	Sg	11 26 08.9	+1.6
	comp=E,2.9nm,0.3s						
CDF	Champ du Feu	3.23	186	ePn	Pn	11 25 15.8	+0.4
CDF				eSn	Sn	11 25 53.6	-1.0
CDF				eSg	Sg	11 26 08.9	+1.6
	comp=E,1.5nm,0.3s						
HAU	Haudompre	3.73	195	ePn	Pn	11 25 22.1	-0.3
SFTF	Sexfontaines	3.84	208	ePn	Pn	11 25 23.3	-0.6
LOR	Lormes	5.04	212	ePn	Pn	11 25 39.7	-0.7
LOR				eSn	Sn	11 26 35.7	-3.6
LOR				eSg	Sg	11 27 04.0	-1.5
	comp=E,1.3nm,0.3s						
LOR	Lormes	5.04	212	ePn	Pn	11 25 39.7	-0.7
LOR				eSn	Sn	11 26 35.7	-3.6
LOR				eSg	Sg	11 27 04.0	-1.5
	comp=E,0.6nm,0.3s						
CABF	La Chapelle	5.13	193	ePn	Pn	11 25 41.4	-0.2
FLN	La Foliniere	6.01	245	ePn	Pn	11 25 51.7	-1.9
GRR	Gorron	6.42	243	ePn	Pn	11 25 57.4	-1.9
GRR				eSn	Sn	11 27 07.0	-6.2

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*IDC **03** 11:26:48.8±1.7, 2.35N×126.83E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/16, mbtmp3.7/5, Error ellipse: s-maj=110.8km s-min=22.3km az=68.0*
*NEIC **03** 11:26:50.8±0.7, 2.29N×126.63E, h10km, mb3.9/1, Error ellipse: s-maj=20.1km s-min=8.3km az=45.0*
*ISCJB **03** 11:26:51.8±1.0, 2.3N±0.1×126.6E±0.1, h33km, mb3.7/5, Error ellipse: s-maj=27.6km s-min=11.1km az=136.3*
ISC 03 11:26:54.2±1.0, 2.3N±0.1×126.6E±0.1, h35km, n10, σ0.63/10, mb3.7/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	11.00	290	ePn	Pn	11 29 28.8	-0.4
KSM	Kuching	16.28	268	ePn	Pn	11 30 40.1	-0.2
FITZ	Fitzroy Crossi	20.24	183	P	P	11 31 28.1	+1.5
	4.8nm,1.0s,baz=13,slow=15,SNR=2.6						
WRA	Warramunga Arr	23.33	161	P	P	11 31 58.6	-1.0
	0.8nm,0.4s,mb3.5,baz=339,slow=11,SNR=24						
WB2	Warramunga Arr	23.34	161	eP	P	11 31 59.8	+0.2
ASAR	Alice Springs	26.73	165	P	P	11 32 30.6	+0.1
	0.5nm,0.5s,mb3.3,baz=346,slow=12,SNR=8.1						
CTAO	Charters Tower	29.42	140	eP	P	11 32 54.7	0.0
	2.0nm,0.9s,mb3.9						
STKA	Stephens Creek	36.81	158	P	P	11 33 58.3	-0.7
	2.4nm,0.9s,mb4.0,baz=319,slow=9.3,SNR=3.2						
MK31	Makanchi Array	58.68	326	eP	P	11 36 48.6	+0.4
MKAR	Makanchi Array	58.68	326	P	P	11 36 48.5	+0.3
	0.3nm,0.4s,mb3.7,baz=119,slow=8.4,SNR=9.2						

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*ISCJB **03** 11:33:02.4±1.7, 17.7S±0.2×179.0W±0.2, h490km±29km, mb3.6/5, Error ellipse: s-maj=37.9km s-min=20.1km az=42.9*
*IDC **03** 11:33:03.4±1.8, 17.68S×178.83W, h493km±25km, mb3.3/6, mb1 3.5/7, mb1mx3.2/17, mbtmp3.3/7, Error ellipse: s-maj=26.2km s-min=15.4km az=139.0*
ISC 03 11:33:03.4±1.6, 17.7S±0.2×178.9W±0.2, h490km±29km, n10, σ0.75/8, mb3.6/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.78	62	P	P	11 34 58.1	+0.8
	2.3nm,0.3s,baz=331,slow=4.1,SNR=4.8						
AFI				S	S	11 36 30.1	-0.6
	1.4nm,0.3s,baz=229,slow=20,SNR=3.2						
URZ	Urewera	20.80	189	P	P	11 37 09.4	-0.3
	3.5nm,0.3s,baz=14,slow=4.2,SNR=12						
WRA	Warramunga Arr	44.26	259	P	P	11 40 28.2	-0.6
	0.5nm,0.5s,mb3.2,baz=96,slow=7.7,SNR=15						
ASAR	Alice Springs	44.44	254	P	P	11 40 30.4	+0.2
	4.3nm,0.4s,mb4.2,baz=88,slow=8.1,SNR=109						
ASAR				PcP	PcP	11 42 03.2	-0.3
	0.4nm,0.4s,baz=104,slow=3.9,SNR=7.7						
FITZ	Fitzroy Crossi	52.65	260	P	P	11 41 32.1	+0.6
	1.3nm,0.5s,mb3.5,baz=162,slow=20,SNR=4.9						
MJAR	Matsushiro Arr	67.47	324	P	P	11 43 09.4	-0.5
	1.0nm,0.5s,mb3.7,baz=158,slow=5.7,SNR=6.1						
PDAR	Pinedale Array	87.48	44	P	P	11 44 58.6	+0.4
	0.4nm,0.5s,mb3.4,baz=182,slow=4.4,SNR=5.9						
ARCES	ARCESS Array B	126.02	350	PKP	PKPdf	11 51 07.6	-1.0
	2.0nm,0.8s,baz=90,slow=0.4,SNR=2.8						
BRTR	Keskin Array B	144.32	315	PKP	PKPdf	11 51 42.7	-0.7
	0.5nm,0.4s,baz=113,slow=4.2,SNR=4.7						
GERES	GERESS Array B	147.28	345	PKPbc	PKPbc	11 51 50.5	-0.7
	0.8nm,0.5s,baz=44,slow=3.0,SNR=3.6						

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*MOS **03** 11:54:24.8±0.6, 41.85S×16.24W, h10km, mb5.4/25, MS4.4/4, Error ellipse: s-maj=26.2km s-min=8.8km az=82.6*
*IDC **03** 11:54:24.3±0.5, 41.70S×16.21W, h0km, mb4.5/16, mb1 4.6/16, mb1mx4.5/18, mbtmp4.5/16, MS4.3/13, Ms1 4.3/13, ms1mx4.2/15, Error ellipse: s-maj=18.2km s-min=14.5km az=151.0*
*ISCJB **03** 11:54:25.1±0.3, 41.80S±0.06×16.1W±0.1, h10km, mb5.0/68, MS4.3/18, Error ellipse: s-maj=12.2km s-min=8.6km az=24.6*
*GCMT **03** 11:54:26.4±0.3, 42.16S×16.16W, h12km, MW5.0/80, Moment Tensor Solution. s28,c33; s80,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr-3.59±.12; Mθθ0.24±.14; Mφφ3.35±.11; Mrθ-2.93±.50; Mθφ-1.03±.10; Mφr-0.51±.35; Best double couple: $M_0$4.48200×10^{16} NP1:φs8.00000°,δ48.00000°,λ-49.00000°. NP2: φs135.00000°,δ56.00000°,λ-126.00000°. Principal axes: T 3.6860, Plg4.0000°, Azm250.0000°; N 1.5970, Plg29.0000°, Azm158.0000°; P -5.2780, Plg60.0000°, Azm347.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **03** 11:54:26.3, 41.80S×16.10W, h10km, Msz4.9*
*NEIC **03** 11:54:26.4±0.2, 41.80S×16.11W, h10km, mb5.2/44, MS4.4/5, Error ellipse: s-maj=9.2km s-min=6.8km az=118.0*
ISC 03 11:54:26.8±0.3, 41.78S±0.06×16.1W±0.1, h10km, n164, σ0.72/142, mb5.0/68, MS4.3/18, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	30.69	172	P	P	12 00 42.4	+1.2
	1.2nm,0.8s,baz=310,slow=16,SNR=3.6						
SNAA				LR	LR	12 09 39.1	
	comp=Z,160nm,18.9s,baz=117,slow=30						
PMSA	Palmer Station	35.47	213	P	P	12 01 23.6	+0.6
	20nm,0.9s,mb5.1,baz=15,slow=12,SNR=3.1						
BOSA	Boshof	35.93	82	P	P	12 01 26.5	-0.8
BOSA				LR	LR	12 13 28.4	
BOSA	Boshof	35.93	82	P	P	12 01 26.5	-0.8
	8.3nm,1.1s,mb4.6,baz=168,slow=12,SNR=4.3						
BOSA				LR	LR	12 13 28.4	
	comp=Z,432nm,21.4s,MS4.2,baz=222,slow=32						
USHA	Ushuaia	36.31	231	P	P	12 01 29.8	-0.5
	23nm,1.1s,mb5.0,baz=45,slow=16,SNR=2.1						
TSUM	Tsumeb	36.38	62	P	P	12 01 30.0	-1.3
	5.3nm,1.0s,mb4.4,baz=203,slow=6.7,SNR=6.8						
LBTB	Lobatse	38.21	77	P	P	12 01 43.6	-3.2
	7.5nm,1.1s,mb4.3,baz=230,slow=16,SNR=3.0						
CFAA	Coronel Fontan	42.44	266	P	P	12 02 19.7	-2.1
	1.9nm,1.0s,baz=112,slow=7.8,SNR=6.6						
CFAA				PcP	PcP	12 04 10.6	-4.2
	0.3nm,0.3s,baz=158,slow=4.9,SNR=8.6						
MATP	Matopo	43.14	74	P	P	12 02 26.1	-1.5
	10nm,1.0s,mb4.5,baz=221,slow=9.9,SNR=12						
SIV	San Ignacio	46.31	290	P	P	12 02 52.0	-0.8
	4.7nm,0.8s,mb4.5,baz=152,slow=9.8,SNR=9.6						
MAW	Mawson	48.10	150	P	P	12 03 05.9	-0.3
	17nm,0.9s,mb5.1,baz=263,slow=9.7,SNR=6.5						
MAW				LR	LR	12 18 34.5	
	comp=Z,264nm,21.4s,MS4.2,baz=132,slow=30						
QSPA	South Pole Qui	48.48	180	eP	P	12 03 09.8	+0.8
	44nm,1.0s,mb5.5						
LIC	Lamto	48.83	15	eP	P	12 03 11.3	-1.1
	92nm,1.2s,mb5.4						
LIC				eMLR	MLR		
	comp=Z,320nm,21.8s,MS4.0						
LIC	Lamto	48.83	15	eP	P	12 03 11.7	-0.7
	comp=Z,97nm,1.2s,mb5.7						
LIC	Lamto	48.83	15	eP	P	12 03 11.3	-1.1
	comp=Z,46nm,1.2s,mb5.4						
LIC				LR	LR		
	comp=Z,160nm,21.8s,MS4.0						
KIC	Kosan Boka	49.02	15	eP	P	12 03 13.2	-0.6
	comp=Z,92nm,0.8s,mb5.8						
TIC	Toumodi	49.24	15	eP	P	12 03 14.7	-0.9
	comp=Z,94nm,1.0s,mb5.8						
LPAZ	La Paz	51.17	284	P	P	12 03 28.4	-1.8
	comp=Z,3.3nm,0.8s,mb4.3,baz=175,slow=5.8,SNR=9.8						
LPAZ				LR	LR	12 24 04.1	
	comp=Z,420nm,21.2s,MS4.4,baz=104,slow=35						
ARE	Arequipa	53.51	281	eP	P	12 03 48.0	+0.4
TOA0	Torodi Ar. Sit	57.06	21	eP	P	12 04 12.6	-0.5
TORD	Torodi Ar. Bea	57.06	21	P	P	12 04 11.6	-1.6
TORD				LR	LR	12 23 25.4	
TORD	Torodi Ar. Bea	57.06	21	P	P	12 04 11.6	-1.6
	comp=Z,12nm,1.1s,mb4.9,baz=206,slow=4.4,SNR=30						
TORD				LR	LR	12 23 25.4	
	comp=Z,272nm,19.6s,MS4.4,baz=200,slow=30						
VNDA	Vanda	60.97	179	P	P	12 04 39.6	+0.1
	comp=Z,12nm,0.9s,mb5.0,baz=204,slow=5.3,SNR=6.7						
VNDA				LR	LR	12 27 01.0	
	comp=Z,223nm,18.2s,MS4.3,baz=176,slow=32						
KMBO	Kilima Mbogo	62.66	65	LR	LR	12 30 01.6	
	comp=Z,376nm,19.6s,MS4.6,baz=97,slow=34						
ROSC	El Rosal	70.32	296	LR	LR	12 34 45.8	
	comp=Z,464nm,20.4s,MS4.7,baz=208,slow=34						
SDV	Santo Domingo	70.91	302	eP	P	12 05 43.5	-0.9
	comp=Z,14nm,1.2s,mb4.8						
EJIF	Jimena Fronter	78.46	9	P	P	12 06 28.4	+0.9
	comp=Z,22nm,1.0s,mb5.0						
EJIF	Jimena Fronter	78.46	9	P	P	12 06 28.4	+0.8
EJIF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
EMIJ	Mijas	78.65	9	P	P	12 06 27.7	-1.0
	comp=Z,14nm,0.8s,mb5.0						
PFVI	Vila Bisbo	78.81	6	eP	P	12 06 30.9	+1.4
	comp=Z,55nm,1.4s,mb5.3						
ESPR	Espera	78.83	8	P	P	12 06 29.9	+0.3
	comp=Z,25nm,0.8s,mb5.2						
PBDV	Barranco-do-Ve	79.00	7	eP	P	12 06 31.1	+0.6
	comp=Z,31nm,1.4s,mb5.0						
MORF	Marmelete	79.00	6	eP	P	12 06 31.8	+1.3
	comp=Z,30nm,1.3s,mb5.1						
PVAQ	Vaqueiros	79.17	7	eP	P	12 06 32.4	+0.9
	comp=Z,47nm,1.7s,mb5.1						
ERON	Agron	79.22	10	P	P	12 06 31.6	-0.1
	comp=Z,3.5nm,0.6s,mb4.5						
EBER	Berja	79.22	11	P	P	12 06 32.6	+0.9
	comp=Z,22nm,1.0s,mb5.0						
ELOJ	Sierra Loja	79.30	10	P	P	12 06 32.8	+0.6
	comp=Z,2.9nm,0.4s,mb4.6						
ELOJ	Sierra Loja	79.30	10	P	P	12 06 32.8	+0.6
ELOJ				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
EGRO	El Granado	79.32	7	P	P	12 06 32.6	+0.3
	comp=Z,24nm,0.9s,mb5.1						
ENIJ	Nijar	79.39	11	P	P	12 06 33.2	+0.5
	comp=Z,12nm,0.6s,mb5.0						
ENIJ	Nijar	79.39	11	P	P	12 06 33.2	+0.5
ENIJ				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
ECOG	Cogollos-Vega	79.51	10	P	P	12 06 33.2	-0.1
	comp=Z,6.8nm,0.6s,mb4.8						
ECOG	Cogollos-Vega	79.51	10	P	P	12 06 33.2	-0.1
ECOG				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
EMIN	Mina Concepcio	79.63	8	P	P	12 06 34.2	+0.2
	comp=Z,19nm,0.9s,mb5.0						
ELUQ	Luque	79.70	10	P	P	12 06 34.8	+0.5
	comp=Z,5.2nm,0.6s,mb4.6						
ELUQ	Luque	79.70	10	P	P	12 06 34.8	+0.5
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
PBEJ	Beja	79.78	7	eP	P	12 06 35.9	+1.1
	comp=Z,21nm,1.8s,mb4.8						
PBAR	Barrancos	80.00	7	eP	P	12 06 37.0	+1.0
	comp=Z,13nm,1.3s,mb4.7						
EQES	Quesada	80.09	10	P	P	12 06 36.0	-0.4
	comp=Z,13nm,0.9s,mb4.8						
EMUR	La Murta	80.39	12	P	P	12 06 38.5	+0.4
	comp=Z,22nm,0.9s,mb5.1						
EBAD	Badajoz	80.58	7	P	P	12 06 39.2	+0.1
	comp=Z,27nm,0.9s,mb5.2						
KEST	Kesra	80.58	21	P	P	12 06 39.5	+0.4
	comp=Z,5.1nm,0.9s,mb4.5,baz=208,slow=3.3,SNR=8.6						
KEST				LR	LR	12 38 33.5	
	comp=Z,123nm,19.9s,MS4.3,baz=200,slow=33						
PESTR	Estremoz	80.64	7	eP	P	12 06 41.0	+1.6
	comp=Z,26nm,1.3s,mb5.0						
EVIA	Vianos	80.99	11	P	P	12 06 41.8	+0.6
	comp=Z,6.4nm,0.8s,mb4.6						
EVIA	Vianos	80.99	11	P	P	12 06 41.8	+0.5
EVIA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ESDC	Sonseca Array	81.82	9	P	P	12 06 45.5	-0.1
	comp=Z,8.5nm,0.9s,mb4.7						
ESDC	Sonseca Array	81.82	9	P	P	12 06 46.1	+0.5
	comp=Z,5.7nm,0.9s,mb4.5,baz=183,slow=5.3,SNR=17						
ESDC				LR	LR	12 39 41.7	
	comp=Z,93nm,18.7s,MS4.2,baz=130,slow=33						
ECHE	Chera	82.15	12	P	P	12 06 48.4	+1.0
	comp=Z,3.6nm,0.7s,mb4.4						
ECHE	Chera	82.15	12	P	P	12 06 48.4	+1.0
ECHE				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
GUD	Guadarrama	82.75	9	P	P	12 06 51.2	+0.8
	comp=Z,9.2nm,0.9s,mb4.8						
GUD	Guadarrama	82.75	9	P	P	12 06 51.2	+0.7
GUD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ETOR	Torete	83.19	11	P	P	12 06 53.1	+0.3
	comp=Z,9.1nm,0.9s,mb4.8						
ETOR	Torete	83.19	11	P	P	12 06 53.1	+0.3
ETOR				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ELAN	Lanestosa	85.39	9	P	P	12 07 03.6	-0.3
	comp=Z,52nm,1.1s,mb5.6						
ETSF	Etsaut	85.45	11	eP	P	12 07 04.2	0.0
	comp=Z,28nm,1.1s,mb5.0						
ETSF	Etsaut	85.45	11	eP	P	12 07 04.2	0.0
	comp=Z,14nm,1.1s,mb5.0						
ETSF	Etsaut	85.45	11	eP	P	12 07 04.2	0.0
ETSF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
SJPF	Ste Jean	85.56	11	eP	P	12 07 04.8	+0.1
	comp=Z,34nm,1.1s,mb5.2						
SJPF	Ste Jean	85.56	11	eP	P	12 07 04.8	+0.1
	comp=Z,17nm,1.1s,mb5.2						
SJPF	Ste Jean	85.56	11	eP	P	12 07 04.8	+0.1
SJPF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.2						
EJON	La Jonquera	85.58	14	P	P	12 07 03.8	-1.0
	comp=Z,8.4nm,0.7s,mb5.1						
EPF	Esparros	85.71	12	eP	P	12 07 05.3	-0.2
	comp=Z,24nm,1.2s,mb5.0						
EPF	Esparros	85.71	12	eP	P	12 07 05.3	-0.2
	comp=Z,12nm,1.2s,mb5.0						
EPF	Esparros	85.71	12	eP	P	12 07 05.3	-0.2
EPF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.0						
MTLF	Montolieu	86.32	13	eP	P	12 07 08.6	+0.1
	comp=Z,29nm,1.0s,mb5.2						
MTLF	Montolieu	86.32	13	eP	P	12 07 08.6	+0.1
	comp=Z,15nm,1.0s,mb5.2						
MTLF	Montolieu	86.32	13	eP	P	12 07 08.6	+0.1
MTLF				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.2						
LMR	La Mourre	87.14	16	eP	P	12 07 12.4	-0.1
LASF	Ste Croix	87.33	14	eP	P	12 07 13.1	-0.3
	comp=Z,109nm,1.6s,mb5.5						
FRF	La Foret Royal	87.38	16	eP	P	12 07 13.5	-0.1
	comp=Z,28nm,1.1s,mb5.1						
FRF	La Foret Royal	87.38	16	eP	P	12 07 13.5	-0.1
	comp=Z,14nm,1.1s,mb5.1						
FRF	La Foret Royal	87.38	16	eP	P	12 07 13.5	-0.1
FRF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
SMRF	Simiane la Rot	87.56	15	eP	P	12 07 14.1	-0.4
LFF	La Frestale	87.64	12	eP	P	12 07 14.8	0.0
CAF	Calviac	87.84	13	eP	P	12 07 15.7	-0.1
	comp=Z,27nm,1.1s,mb5.1						
CAF	Calviac	87.84	13	eP	P	12 07 15.7	-0.1
	comp=Z,14nm,1.1s,mb5.1						
CAF	Calviac	87.84	13	eP	P	12 07 15.7	-0.1
CAF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
SBF	Sospel	87.84	17	eP	P	12 07 15.9	+0.1
RJF	Les Rejaudoux	88.12	12	eP	P	12 07 17.0	-0.1
RJF				eMLR	MLR		
	comp=Z,151nm,20.0s,MS4.1						
RJF	Les Rejaudoux	88.12	12	eP	P	12 07 17.0	-0.1
RJF				MLR	MLR		
	comp=Z,150nm,20.0s,MS4.4						
VIVF	Saint-Julien-l	88.23	15	eP	P	12 07 17.4	-0.3
MBDF	Montbardon	88.53	16	eP	P	12 07 19.2	+0.1
	comp=Z,81nm,1.8s,mb5.5						
MBDF	Montbardon	88.53	16	eP	P	12 07 19.2	+0.1
	comp=Z,40nm,1.8s,mb5.5						
MBDF	Montbardon	88.53	16	eP	P	12 07 19.2	+0.1
MBDF				pmax	pmax		
	comp=Z,41nm,1.8s,mb5.5						
ORIF	Oris-en-Rattie	88.53	15	eP	P	12 07 19.1	0.0
	comp=Z,52nm,1.5s,mb5.3						
ORIF				eMLR	MLR		
	comp=Z,362nm,20.8s,MS4.5						
ORIF	Oris-en-Rattie	88.53	15	eP	P	12 07 19.1	0.0
	comp=Z,26nm,1.5s,mb5.3						
ORIF	Oris-en-Rattie	88.53	15	eP	P	12 07 19.1	0.0
ORIF				pmax	pmax		
	comp=Z,26nm,1.5s,mb5.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TCF	**Toulx Ste Croi**	**89.19**	**13**	*e*P	**P**	**12 07 22.3**	**+0.2**
	comp=Z,148nm,1.7s,mb5.7						
TCF	**Toulx Ste Croi**	**89.19**	**13**	*e*P	**P**	**12 07 22.3**	**+0.2**
	comp=Z,74nm,1.7s,mb5.7						
TCF	**Toulx Ste Croi**	**89.19**	**13**	*e*P	**P**	**12 07 22.3**	**+0.2**
TCF				pmax	pmax		
	comp=Z,74nm,1.7s,mb5.7						
LPG	**La Plagne**	**89.26**	**16**	*e*P	**P**	**12 07 23.1**	**+0.6**
	comp=Z,58nm,1.4s,mb5.4						
LPG	**La Plagne**	**89.26**	**16**	*e*P	**P**	**12 07 23.1**	**+0.6**
	comp=Z,29nm,1.4s,mb5.4						
LPG	**La Plagne**	**89.26**	**16**	*e*P	**P**	**12 07 23.1**	**+0.6**
LPG				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.4						
LPL	**La Plagne**	**89.27**	**16**	*e*P	**P**	**12 07 22.9**	**+0.3**
	comp=Z,86nm,1.5s,mb5.5						
LPL	**La Plagne**	**89.27**	**16**	*e*P	**P**	**12 07 22.9**	**+0.3**
	comp=Z,43nm,1.5s,mb5.6						
LPL	**La Plagne**	**89.27**	**16**	*e*P	**P**	**12 07 22.9**	**+0.3**
LPL				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.6						
BGF	**Bois d'Agland**	**89.55**	**13**	*e*P	**P**	**12 07 23.9**	**+0.1**
SMF	**Signal de Mont**	**89.81**	**14**	*e*P	**P**	**12 07 25.0**	**0.0**
	comp=Z,80nm,1.5s,mb5.5						
SMF	**Signal de Mont**	**89.81**	**14**	*e*P	**P**	**12 07 25.0**	**0.0**
	comp=Z,40nm,1.5s,mb5.5						
SMF	**Signal de Mont**	**89.81**	**14**	*e*P	**P**	**12 07 25.0**	**0.0**
SMF				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.5						
AVF	**Avril sur Loir**	**89.86**	**13**	*e*P	**P**	**12 07 25.4**	**+0.1**
	comp=Z,102nm,1.6s,mb5.6						
AVF	**Avril sur Loir**	**89.86**	**13**	*e*P	**P**	**12 07 25.4**	**+0.1**
	comp=Z,51nm,1.6s,mb5.6						
AVF	**Avril sur Loir**	**89.86**	**13**	*e*P	**P**	**12 07 25.4**	**+0.1**
AVF				pmax	pmax		
	comp=Z,51nm,1.6s,mb5.6						
QUIF	**Quistinic**	**90.04**	**9**	*e*P	**P**	**12 07 25.9**	**-0.2**
	comp=Z,263nm,1.7s,mb6.0						
QUIF	**Quistinic**	**90.04**	**9**	*e*P	**P**	**12 07 25.9**	**-0.2**
	comp=Z,131nm,1.7s,mb6.0						
QUIF	**Quistinic**	**90.04**	**9**	*e*P	**P**	**12 07 25.9**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,131nm,1.7s,mb6.0						
SSF	**Saint Saulge**	**90.15**	**13**	*e*P	**P**	**12 07 26.8**	**+0.2**
	comp=Z,64nm,1.5s,mb5.4						
SSF	**Saint Saulge**	**90.15**	**13**	*e*P	**P**	**12 07 26.8**	**+0.2**
	comp=Z,32nm,1.5s,mb5.4						
SSF	**Saint Saulge**	**90.15**	**13**	*e*P	**P**	**12 07 26.8**	**+0.2**
SSF				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.4						
CABF	**La Chapelle**	**90.19**	**15**	*e*P	**P**	**12 07 27.2**	**+0.4**
	comp=Z,13nm,0.7s,mb5.1						
CABF	**La Chapelle**	**90.19**	**15**	*e*P	**P**	**12 07 27.2**	**+0.4**
	comp=Z,6.4nm,0.7s,mb5.1						
CABF	**La Chapelle**	**90.19**	**15**	*e*P	**P**	**12 07 27.2**	**+0.4**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb5.0						
LOR	**Lormes**	**90.42**	**13**	*e*P	**P**	**12 07 28.0**	**+0.2**
	comp=Z,66nm,1.5s,mb5.5						
LOR				*e*MLR	MLR		
	comp=Z,156nm,20.5s,MS4.1						
LOR	**Lormes**	**90.42**	**13**	*e*P	**P**	**12 07 28.0**	**+0.2**
	comp=Z,33nm,1.5s,mb5.5						
LOR				LR	LR		
	comp=Z,160nm,20.5s,MS4.4						
LOR	**Lormes**	**90.42**	**13**	*e*P	**P**	**12 07 28.0**	**+0.2**
LOR				pmax	pmax		
	comp=Z,33nm,1.5s,mb5.4						
LOR				MLR	MLR		
	comp=Z,160nm,20.5s,MS4.4						
ROSF	**Rostrenen**	**90.44**	**9**	*e*P	**P**	**12 07 27.2**	**-0.8**
SGMF	**Saint Gilles**	**90.44**	**9**	*e*P	**P**	**12 07 27.7**	**-0.3**
GRR	**Gorron**	**90.79**	**10**	*e*P	**P**	**12 07 29.4**	**-0.1**
	comp=Z,47nm,1.3s,mb5.4						
GRR	**Gorron**	**90.79**	**10**	*e*P	**P**	**12 07 29.4**	**-0.1**
	comp=Z,24nm,1.3s,mb5.4						
GRR	**Gorron**	**90.79**	**10**	*e*P	**P**	**12 07 29.4**	**-0.1**
GRR				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.4						
LDF	**La Druitiere**	**91.09**	**11**	*e*P	**P**	**12 07 30.8**	**-0.1**
FLN	**La Foliniere**	**91.20**	**10**	*e*P	**P**	**12 07 31.4**	**-0.1**
FLN				*e*MLR	MLR		
	comp=Z,161nm,19.5s,MS4.2						
FLN	**La Foliniere**	**91.20**	**10**	*e*P	**P**	**12 07 31.4**	**-0.1**
FLN				MLR	MLR		
	comp=Z,160nm,19.5s,MS4.5						
HINF	**Hinteralfeld**	**91.50**	**15**	*e*P	**P**	**12 07 32.3**	**-0.6**
HAU	**Haudompre**	**91.58**	**15**	*e*P	**P**	**12 07 32.9**	**-0.3**
HAU				*e*MLR	MLR		
	comp=Z,138nm,19.8s,MS4.1						
HAU	**Haudompre**	**91.58**	**15**	*e*P	**P**	**12 07 32.9**	**-0.3**
HAU				MLR	MLR		
	comp=Z,140nm,19.8s,MS4.4						
MEZF	**Maizieres J'vi**	**91.82**	**14**	*e*P	**P**	**12 07 34.3**	**0.0**
	comp=Z,39nm,1.0s,mb5.4						
MEZF	**Maizieres J'vi**	**91.82**	**14**	*e*P	**P**	**12 07 34.3**	**0.0**
	comp=Z,39nm,1.0s,mb5.7						
BRTR	**Keskin Array B**	**92.85**	**36**	P	**P**	**12 07 40.2**	**+0.8**
	comp=Z,4.9nm,1.0s,mb4.9,baz=181,slow=4.9,SNR=12						
BRTR				LR	LR	12 48 28.8	
	comp=Z,84nm,19.7s,MS4.2,baz=141,slow=35						
BAIF	**Baives**	**93.17**	**13**	*e*P	**P**	**12 07 40.2**	**-0.4**
	comp=Z,81nm,1.6s,mb5.6						
BAIF	**Baives**	**93.17**	**13**	*e*P	**P**	**12 07 40.2**	**-0.4**
	comp=Z,40nm,1.6s,mb5.6						
BAIF	**Baives**	**93.17**	**13**	*e*P	**P**	**12 07 40.2**	**-0.4**
BAIF				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.6						
GIVF	**Givet**	**93.32**	**13**	*e*P	**P**	**12 07 40.6**	**-0.6**
GERES	**GERESS Array B**	**93.99**	**19**	P	**P**	**12 07 45.2**	**+0.8**
	comp=Z,0.3nm,0.5s,mb4.0,baz=240,slow=5.5,SNR=2.1						
GERES				LR	LR	12 45 46.3	
	comp=Z,168nm,18.4s,MS4.5,baz=274,slow=33						
VRAC	**Vranov**	**95.16**	**21**	LR	LR	12 50 02.0	
	comp=Z,90nm,19.9s,MS4.2,baz=214,slow=35						
AAK	**Ala-Archa**	**116.98**	**56**	*i* PKIKP	PKPdf	12 13 06.3	-5.0
PDAR	**Pinedale Array**	**118.83**	**303**	PKP	PKPdf	12 13 13.1	-1.8
	comp=Z,0.7nm,0.9s,baz=125,slow=2.3,SNR=4.5						
NVAR	**Mina Array Bea**	**122.34**	**295**	PKP	PKPdf	12 13 19.1	-2.6
	comp=Z,0.2nm,0.6s,baz=123,slow=4.4,SNR=2.5						
NVAR				PKKPbc	PKKPbc	12 23 18.9	+2.3
	comp=Z,0.6nm,0.9s,baz=291,slow=5.7,SNR=3.3						
KURK	**Kurchatov**	**123.47**	**49**	*i* PKIKP	PKPdf	12 13 21.9	-1.6
MKAR	**Makanchi Array**	**123.87**	**55**	PKP	PKPdf	12 13 22.6	-1.8
	comp=Z,1.5nm,1.0s,baz=265,slow=4.0,SNR=8.8						
MKAR				PKKPbc	PKKPbc	12 23 14.5	+3.8
	comp=Z,0.6nm,0.9s,baz=64,slow=2.8,SNR=4.0						
NVS	**Novosibirsk**	**127.71**	**46**	*e*PKIKP	PKPdf	12 13 28.7	-2.8
ZAL	**Zalesovo**	**128.24**	**48**	PKIKP	PKPdf	12 13 30.5	-2.0
ZALV	**Zalesovo Beam**	**128.26**	**48**	PKP	PKPdf	12 13 30.5	-2.1
	comp=Z,1.2nm,0.6s,baz=279,slow=2.9,SNR=7.3						
YKA	**Yellowknife Ar**	**129.73**	**323**	PKP	PKPdf	12 13 33.5	-1.6
YKA	**Yellowknife Ar**	**129.73**	**323**	PKP	PKPdf	12 13 33.5	-1.6
	comp=Z,3.5nm,0.9s,baz=104,slow=2.1,SNR=31						
TLY	**Talaya**	**138.63**	**55**	*i* PKHKP		12 13 44.6	
SONM	**Songino Array**	**139.58**	**61**	PKP	PKPdf	12 13 53.6	-0.3
SONM	**Songino Array**	**139.58**	**61**	PKhKP		12 13 46.5	
	comp=Z,3.0nm,0.9s,baz=253,slow=2.5,SNR=5.0						
SONM				PKP	PKPdf	12 13 53.6	-0.3
	comp=Z,2.8nm,0.8s,baz=215,slow=2.9,SNR=15						
ULN	**Ulaanbaatar**	**140.01**	**61**	*i* PKIKP	PKPdf	12 13 53.2	-1.6
COLA	**College**	**144.37**	**327**	*i* PKIKP	PKPdf	12 13 58.3	-3.7
CN2	**Changchun**	**151.88**	**73**	*e*PKP	PKPbc	12 14 20.6	-0.8
KSRS	**Korea Array**	**152.09**	**87**	PKPbc	PKPbc	12 14 20.9	-1.2
	comp=Z,1.2nm,0.9s,baz=226,slow=4.8,SNR=4.1						
KSRS				PKPab	PKPab	12 14 31.2	-0.5
	comp=Z,5.1nm,1.0s,baz=236,slow=3.5,SNR=14						
MAT	**Matsushiro**	**159.44**	**96**	PKP	PKPab	12 15 02.7	-0.6
MJAR	**Matsushiro Arr**	**159.45**	**96**	PKPab	PKPab	12 15 02.0	-1.3
	comp=Z,4.5nm,1.0s,baz=238,slow=3.9,SNR=13						

IDC 03 12:14:54.8±9.1**,2181N**×**14281E,h246**km±90km**,mb2.8**/7**, mb1 3.0**/7**,mb1mx2.9**/21**,mbtmp2.8**/7**,Error ellipse: s-maj=50.0km s-min=16.7km az=83.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.22**	**324**	P	P	12 19 11.7	+0.3
	1.1nm,0.8s,baz=144,slow=10,SNR=4.5						
SONM	**Songino Array**	**39.03**	**321**	P	P	12 21 57.3	-0.5
	0.4nm,0.5s,baz=124,slow=7.8,SNR=2.5						
WRA	**Warramunga Arr**	**42.31**	**192**	P	P	12 22 24.8	0.0
	0.6nm,0.8s,baz=10,slow=9.0,SNR=3.6						
ASAR	**Alice Springs**	**46.02**	**191**	P	P	12 22 54.0	-0.1
	0.4nm,0.7s,baz=17,slow=9.4,SNR=7.1						
ZALV	**Zalesovo Beam**	**53.91**	**322**	P	P	12 23 52.6	-0.3
	0.3nm,0.3s,baz=95,slow=6.6,SNR=3.7						
MKAR	**Makanchi Array**	**54.37**	**313**	P	P	12 23 56.9	+0.6
	0.2nm,0.6s,baz=90,slow=10,SNR=2.1						
YKA	**Yellowknife Ar**	**76.52**	**28**	P	P	12 26 17.6	+0.1
	0.3nm,0.5s,baz=293,slow=6.0,SNR=6.1						

IDC 03 12:59:19.8±4.0**,842S**×**12003E,h192**km±37km**,mb3.1**/2**, mb1 3.1**/4**,mb1mx2.9**/18**,mbtmp3.0**/4**,Error ellipse: s-maj=161.4km s-min=32.1km az=28.0,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.00**	**117**	P	Pn	13 00 19.6	-1.8
	1.2nm,0.3s,baz=324,slow=8.7,SNR=3.3						
BATI				S	Sn	13 01 11.0	+1.4
	1.8nm,0.3s,baz=131,slow=20,SNR=2.8						
FITZ	**Fitzroy Crossi**	**11.06**	**151**	S	Sn	13 03 51.2	-5.0
	0.2nm,0.3s,baz=294,slow=22,SNR=5.1						
WRA	**Warramunga Arr**	**17.97**	**131**	P	Pn	13 03 15.9	-2.2
	0.1nm,0.3s,baz=310,slow=12,SNR=10						
WRA				S	S	13 06 32.6	+0.3
	0.0nm,0.3s,baz=306,slow=27,SNR=3.8						
WB2	**Warramunga Arr**	**17.98**	**131**	*e*P	Pn	13 03 16.1	-2.1
ASAR	**Alice Springs**	**20.16**	**140**	P	P	13 03 39.8	+0.2
	0.8nm,0.4s,baz=315,slow=9.1,SNR=18						
STKA	**Stephens Creek**	**30.77**	**142**	P	P	13 05 17.9	+0.6
	0.5nm,0.3s,baz=322,slow=11,SNR=4.4						

*ISCJB **03** 13:08:25.8±0.6,4322N±004×4576E±003,h4km±4km, Error ellipse: s-maj=6.7km s-min=3.1km az=13.4*
*CSEM **03** 13:08:25.1,4308N×4576E,h12km,mb4.0,After OBN*
*MOS **03** 13:08:25.9±0.9,4308N×4576E,h12km,mb4.0/1,Error ellipse: s-maj=23.8km s-min=6.9km az=13.2*
*TIF **03** 13:08:25.3,4330N×4583E,h18km±2km*
ISC 03 13:08:26.4±0.6**,4324N**±004×**4579E**±003**,h5**km±4km**,n26,** σ**1**§**30**/50**,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.73**	**257**	*e*Pg	**Pg**	**13 08 40.3**	**-0.1**
SNJR				*e*Sg	**Sg**	**13 08 51.8**	**+1.9**
DBC	**Dubki**	**0.80**	**105**	*e*PG	**Pg**	**13 08 42.0**	**+0.4**
DBC				*i* S	**Sg**	**13 08 55.0**	**+3.1**
VLKR	**Vladikavkaz**	**0.83**	**257**	*e*Pg	**Pg**	**13 08 42.5**	**+0.2**
VLKR				*e*Sg	**Sg**	**13 08 55.3**	**+2.2**
UNCR	**Uncukul**	**0.91**	**125**	*e*PG	**Pg**	**13 08 43.0**	**-0.7**
UNCR				S	**Sg**	**13 08 57.0**	**+1.5**
UNCR				pmax	pmax		
	comp=Z,36nm,0.2s						
UNCR	**Uncukul**	**0.91**	**125**	*e*Pg	**Pg**	**13 08 43.0**	**-0.7**
	comp=Z,36nm,0.2s						
UNCR				Sg	**Sg**	**13 08 57.0**	**+1.5**
KRNR	**Karanay**	**0.92**	**116**	*e*PG	**Pg**	**13 08 42.3**	**-1.7**
KRNR				*e*S	**Sg**	**13 08 55.5**	**-0.4**
KRNR				pmax	pmax		
	comp=Z,25nm,0.2s						
KRNR	**Karanay**	**0.92**	**116**	*e*Pg	**Pg**	**13 08 42.3**	**-1.7**
	comp=Z,25nm,0.2s						
KRNR				*e*Sg	**Sg**	**13 08 55.5**	**-0.4**
KMSR	**Komsomolskaya**	**1.10**	**278**	*e*Pg	**Pg**	**13 08 47.3**	**-0.1**
KMSR				*e*Sg	**Sg**	**13 09 04.2**	**+2.5**
ARNR	**Ardon**	**1.10**	**268**	*e*Pg	**Pg**	**13 08 46.9**	**-0.6**
ARNR				*e*Sg	**Sg**	**13 09 03.1**	**+1.3**
LACR	**Lac**	**1.17**	**250**	*i* Pg	**Pg**	**13 08 46.7**	**-2.0**
LACR				*e*Sg	**Sg**	**13 09 02.7**	**-1.1**
KORR	**Kora**	**1.27**	**264**	*i* Pg	**Pg**	**13 08 49.1**	**-1.5**
KORR				*e*Sg	**Sg**	**13 09 07.1**	**+0.1**
LSNR	**Lesken**	**1.44**	**272**	*e*Pg	**Pg**	**13 08 51.8**	**-2.1**
LSNR				*e*Sg	**Sg**	**13 09 12.1**	**-0.5**
ZEI	**Tsey**	**1.46**	**252**	*e*Pg	**Pn**	**13 08 51.0**	**-2.4**
ZEI				*e*Sg	**Sn**	**13 09 10.3**	**-2.6**
DIGR	**Digorskoe uzhe**	**1.65**	**259**	*e*Pg	**Pn**	**13 08 54.0**	**-2.0**
DIGR				*e*Sg	**Sn**	**13 09 15.6**	**-2.0**
TBLG	**Delisi**	**1.69**	**208**	P	**Pn**	**13 08 57.4**	**+0.9**
TBLG				S	**Sg**	**13 09 21.0**	**+0.3**
MTA	**Mtatsminda**	**1.71**	**206**	P	**Pn**	**13 08 57.3**	**+0.5**
MTA				S	**Sg**	**13 09 20.9**	**-0.3**
DGRG	**David-gareji**	**1.81**	**190**	P	**Pn**	**13 09 00.2**	**+2.0**
DGRG				S	**Sg**	**13 09 28.3**	**+3.8**
KUBR	**Kubataba**	**1.82**	**289**	PN	**Pn**	**13 08 58.1**	**-0.2**
KUBR				pmax	pmax		
	comp=Z,7.0nm,0.2s						
KUBR	**Kubataba**	**1.82**	**289**	Pn	**Pn**	**13 08 58.1**	**-0.2**
	comp=Z,7.0nm,0.2s						
BEYR	**Belyy Ugol+**	**2.29**	**291**	PN	**Pn**	**13 09 04.9**	**+0.1**
BEYR				S	**Sn**	**13 09 34.6**	**+1.2**
BEYR				smax			
	comp=N,278nm,0.2s						
BEYR	**Belyy Ugol+**	**2.29**	**291**	Pn	**Pn**	**13 09 04.9**	**+0.1**
	comp=N,278nm,0.2s						
BEYR				Sn	**Sn**	**13 09 34.6**	**+1.2**
SHAR	**Shatzhatmas**	**2.32**	**284**	PN	**Pn**	**13 09 04.8**	**-0.5**
SHAR				S	**Sn**	**13 09 35.5**	**+1.3**
SHAR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
SHAR	**Shatzhatmas**	**2.32**	**284**	Pn	**Pn**	**13 09 04.8**	**-0.5**
	comp=Z,3.0nm,0.2s						
SHAR				Sn	**Sn**	**13 09 35.5**	**+1.3**
KIV0	**Kislovodsk Arr**	**2.36**	**289**	Pn	**Pn**	**13 09 05.5**	**-0.2**
KIV0				Sn	**Sn**	**13 09 36.0**	**+1.0**
KIV	**Kislovodsk**	**2.36**	**289**	PN	**Pn**	**13 09 05.9**	**+0.1**
KIV				S	**Sn**	**13 09 36.0**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KIV				smax			
	comp=N,19nm,0.5s						
KIV	**Kislovodsk**	**2.36**	**289**	Pn	**Pn**	**13 09 05.9**	**+0.1**
	comp=N,6.0nm,0.5s						
KIV				Sn	**Sn**	**13 09 36.0**	**+0.8**
	comp=N,19nm,0.5s						

*ISCJB **03** 13:11:00.3±0.3,5195N±003×10083E±003,h10km, mb3.6/7,Error ellipse: s-maj=4.1km s-min=2.3km az=5.6*
*IDC **03** 13:11:00.6±1.3,5173N×10053E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/23,mbtmp3.5/7,ML2.7/1,MS3.0/1, Ms1 3.0/1,ms1mx2.7/27,Error ellipse: s-maj=77.4km s-min=14.9km az=37.0*
*MOS **03** 13:11:01.0±1.1,5180N×10053E,h11km,mb4.6/5,Error ellipse: s-maj=10.3km s-min=8.7km az=23.3*
MOS Felt (III) at Mondy.
*BYKL **03** 13:11:01.2±0.5,5181N×10054E,FELT I=III MSK at Mondy, II-III at Sorok*
*ASRS **03** 13:11:02.9±1.9,5194N×10033E,h15km,Ms3.7*
ISC 03 13:11:02.4±0.3**,5192N**±003×**10076E**±002**,h10**km**,n73,** σ**1**§**58**/127**,mb3.6**/7**,9C-1D,Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**0.29**	**150**⇑	*i*PG	**Pg**	**13 11 07.1**	**-1.0**
MOY				*e*		13 11 11.6	
MOY				pmax	pmax		
	comp=Z,7μm,0.2s						
MOY				smax			
	comp=N,19μm,0.1s						
MOY	**Mondy**	**0.29**	**150**⇑	*i*Pg	**Pg**	**13 11 07.1**	**-1.0**
MOY				Pmax		13 11 07.5	
	comp=N,9μm,0.3s						
MOY				*i* Sg	**Sg**	**13 11 11.6**	**-0.4**
MOY				Smax		13 11 12.4	
	comp=N,28μm,1.2s						
ORL	**Orlik**	**0.85**	**317**⇑	*i*PG	**Pg**	**13 11 17.0**	**-1.8**
ORL				*e*		13 11 28.1	
ORL				pmax	pmax		
	comp=Z,445nm,0.2s						
ORL				smax			
	comp=N,3μm,0.3s						
ORL	**Orlik**	**0.85**	**317**⇑	*i*Pg	**Pg**	**13 11 17.0**	**-1.8**
ORL				*e*		13 11 17.8	
ORL				max		13 11 18.5	
	comp=N,454nm,0.3s						
ORL				*i* Sg	**Sg**	**13 11 28.2**	**-1.7**
ORL				*e*Sb	**Sb**	**13 11 31.6**	**+0.8**
ORL				max		13 11 33.8	
	comp=N,3μm,0.5s						
ARS	**Arshan**	**1.03**	**89**	*e*PG	**Pg**	**13 11 22.6**	**+0.5**
ARS				*e*		13 11 37.9	
ARS				pmax	pmax		
	comp=Z,1μm,0.3s						
ARS				smax			
	comp=E,9μm,0.4s						
ARS	**Arshan**	**1.03**	**89**	*e*Pg	**Pg**	**13 11 22.2**	**+0.1**
ARS				*e*Pb	**Pb**	**13 11 23.1**	**+0.9**
ARS				*e*		13 11 25.5	
ARS				max		13 11 26.9	
	comp=E,1μm,0.3s						
ARS				*e*Sg	**Sg**	**13 11 38.8**	**+3.3**
ARS				*e*		13 11 44.1	
ARS				max		13 11 45.5	
	comp=E,9μm,0.8s						
TLY	**Talaya**	**1.81**	**96***c*	*i*PN	**Pn**	**13 11 34.8**	**+1.3**
TLY	**Talaya**	**1.81**	**96**	*e*Pg	**Pg**	**13 11 35.0**	**-1.9**
TLY				Pmax		13 11 36.8	
	comp=E,329nm,0.4s						
TLY				*e*Sg	**Sg**	**13 12 00.4**	**+0.1**
TLY				Smax		13 12 02.9	
	comp=E,2μm,0.3s						
TLY				*e*L		13 12 04.7	
IRK	**Irkutsk**	**2.19**	**80**⇑	*i*PN	**Pn**	**13 11 43.0**	**+4.2**
IRK				*e*		13 12 13.2	
IRK				pmax	pmax		
	comp=Z,1μm,0.3s						
IRK				smax			
	comp=N,6μm,0.4s						
IRK	**Irkutsk**	**2.19**	**80**	*e*Pg	**Pg**	**13 11 42.9**	**-1.4**
IRK				Pmax		13 11 44.4	
	comp=N,1μm,0.3s						
IRK				*i* Sg	**Sg**	**13 12 13.1**	**+0.4**
IRK				Smax		13 12 18.7	
	comp=N,5μm,0.5s						
ZAK	**Zakamensk**	**2.21**	**133**	*e*PN	**Pn**	**13 11 40.6**	**+1.6**
ZAK				*e*		13 12 09.9	
ZAK				pmax	pmax		
	comp=Z,706nm,0.4s						
ZAK				smax			
	comp=N,7μm,0.4s						
ZAK	**Zakamensk**	**2.21**	**133**	*e*Pn	**Pn**	**13 11 39.4**	**+0.4**
ZAK				⇑*i*Pg	**Pg**	**13 11 41.0**	**-3.7**
ZAK				Pmax		13 11 41.4	
	comp=N,695nm,0.4s						
ZAK				*e*Sg	**Sg**	**13 12 12.2**	**-1.1**
ZAK				Smax		13 12 13.5	
	comp=N,3μm,0.7s						
LSTR	**Listvyanka**	**2.52**	**90**⇑	*i*PN	**Pg**	**13 11 47.9**	**-2.8**
LSTR				*e*		13 11 49.1	
LSTR				*e*		13 12 22.3	
LSTR				pmax	pmax		
	comp=Z,152nm,0.7s						
LSTR				smax			
	comp=N,1μm,1.4s						
LSTR	**Listvyanka**	**2.52**	**90**⇓	*i*Pg	**Pg**	**13 11 47.9**	**-2.8**
LSTR				Pmax		13 11 51.7	
	comp=N,149nm,0.6s						
LSTR				*i* Sg	**Sg**	**13 12 22.2**	**-1.1**
LSTR				Smax		13 12 23.6	
	comp=N,1μm,0.9s						
TDJR	**Todzha**	**2.91**	**281**	*e*Pn	**Pn**	**13 11 47.7**	**-1.0**
TDJR				*e*		13 11 50.7	
TDJR				*e*Pg	**Pg**	**13 11 51.8**	**-6.3**
TDJR				*e*Sg	**Sg**	**13 12 29.1**	**-6.7**
STDB	**Stepnoy Dvoret**	**3.47**	**84**	*e*	**Pn**	**13 12 02.1**	**+5.8**
STDB				*e*Pg	**Pg**	**13 12 07.2**	**-1.6**
STDB				Pmax		13 12 10.0	
	comp=N,363nm,0.7s						
STDB				*e*		13 12 49.1	
STDB				*e*Sg	**Sg**	**13 12 55.0**	**+1.3**
STDB				Smax		13 13 05.0	
	comp=N,6μm,1.4s						
TRG	**Tyrgan**	**3.53**	**74**	*e*PN	**Pg**	**13 12 08.3**	**-1.6**
TRG				*e*		13 12 52.8	
TRG				pmax	pmax		
	comp=Z,223nm,0.3s						
TRG				smax			
	comp=N,442nm,0.3s						
TRG	**Tyrgan**	**3.53**	**74**	*e*Pn	**Pn**	**13 11 59.4**	**+2.2**
TRG				*e*		13 12 00.6	
TRG				*e*Pg	**Pg**	**13 12 07.4**	**-2.5**
TRG				Pmax		13 12 09.5	
	comp=N,224nm,0.3s						
TRG				*e*Sn	**Sn**	**13 12 45.2**	**+6.3**
TRG				*e*Sg	**Sg**	**13 12 56.6**	**+1.0**
TRG				Smax		13 12 57.4	
	comp=N,383nm,0.3s						
KAB	**Kabansk**	**3.65**	**86**	*e*PN	**Pg**	**13 12 09.0**	**-3.1**
KAB				*e*		13 12 57.5	
KAB				pmax	pmax		
	comp=Z,143nm,0.5s						
KAB				smax			
	comp=N,2μm,0.5s						
KAB	**Kabansk**	**3.65**	**86**	*e*Pn	**Pn**	**13 12 02.0**	**+3.2**
KAB				*e*Pg	**Pg**	**13 12 08.9**	**-3.2**
KAB				Pmax		13 12 16.1	
	comp=N,261nm,1.0s						
KAB				*e*Sn	**Sn**	**13 12 43.1**	**+1.3**
KAB				*e*Sg	**Sg**	**13 12 57.9**	**-1.4**
KAB				Smax		13 13 06.8	
	comp=N,2μm,0.9s						
FFNB	**Fofonovo**	**3.71**	**86**	*e*Pn	**Pn**	**13 12 04.7**	**+5.0**
FFNB				*e*Pg	**Pg**	**13 12 09.2**	**-4.2**
FFNB				Pmax		13 12 13.5	
	comp=N,289nm,0.2s						
FFNB				*e*Sg	**Sg**	**13 12 58.8**	**-2.7**
FFNB				Smax		13 13 03.2	
	comp=N,3μm,0.7s						
KZLR	**Kyzyl**	**3.92**	**269**	*e*Pg	**Pg**	**13 12 08.6**	**-8.8**
KZLR				*e*Sg	**Sg**	**13 12 56.1**	**-12**
ZRHB	**Zarechye**	**3.98**	**78**	*e*Pn	**Pn**	**13 12 07.4**	**+4.1**
ZRHB				⇑*i*Pg	**Pg**	**13 12 16.5**	**-2.0**
ZRHB				Pmax		13 12 17.4	
	comp=N,475nm,0.8s						
ZRHB				*e*		13 12 57.8	
ZRHB				*e*Sg	**Sg**	**13 13 10.4**	**+0.3**
ZRHB				Smax		13 13 25.2	
	comp=N,2μm,1.6s						
TRTB	**Turuntaevo**	**4.25**	**83**	*e*Pn	**Pn**	**13 12 09.8**	**+2.8**
TRTB				*e*		13 12 11.2	
TRTB				*e*Pg	**Pg**	**13 12 19.1**	**-4.6**
TRTB				Pmax		13 12 21.5	
	comp=N,177nm,0.7s						
TRTB				*e*Sn	**Sn**	**13 12 56.5**	**-0.1**
TRTB				*e*		13 13 07.7	
TRTB				*e*Sg	**Sg**	**13 13 16.8**	**-1.9**
TRTB				Smax		13 13 20.7	
	comp=N,765nm,0.9s						
UUDB	**Ulan-Yde**	**4.28**	**88**	*e*Pn	**Pn**	**13 12 12.4**	**+5.0**
UUDB				*e*Pg	**Pg**	**13 12 20.3**	**-3.9**
UUDB				*e*Sg	**Sg**	**13 13 20.3**	**+0.8**
OGRR	**Ongureny**	**4.50**	**65**	*e*PN	**Pn**	**13 12 13.0**	**+2.6**
OGRR				*e*		13 12 24.7	
OGRR				*e*S	**Sn**	**13 13 04.7**	**+2.0**
OGRR				*e*		13 13 23.0	
OGRR				pmax	pmax		
	comp=Z,132nm,0.6s						
OGRR				smax			
	comp=E,585nm,0.6s						
OGRR	**Ongureny**	**4.50**	**65**	*e*Pn	**Pn**	**13 12 12.8**	**+2.4**
OGRR				*e*Pg	**Pg**	**13 12 23.4**	**-5.0**
OGRR				Pmax		13 12 28.6	
	comp=E,131nm,0.6s						
OGRR				*e*Sn	**Sn**	**13 13 06.9**	**+4.2**
OGRR				*e*Sg	**Sg**	**13 13 23.0**	**-3.6**
OGRR				Smax		13 13 30.4	
	comp=E,591nm,0.6s						
ARDR	**Aradan**	**4.55**	**281**	*e*Pn	**Pn**	**13 12 11.3**	**+0.1**
ARDR				*e*		13 12 17.3	
ARDR				*e*Pg	**Pg**	**13 12 20.0**	**-10**
ARDR				*e*Sg	**Sg**	**13 13 16.6**	**-12**
MXMB	**Maximikha**	**5.05**	**71**	*e*Pn	**Pn**	**13 12 19.9**	**+1.9**
MXMB				*e*Pg	**Pg**	**13 12 35.1**	**-3.9**
MXMB				Pmax		13 12 43.1	
	comp=E,80nm,0.7s						
MXMB				*e*Sn	**Sn**	**13 13 20.6**	**+4.2**
MXMB				*e*Sg	**Sg**	**13 13 42.5**	**-1.9**
MXMB				Smax		13 13 48.8	
	comp=E,628nm,0.8s						
SONM	**Songino Array**	**5.47**	**136**	Pn	**Pn**	**13 12 23.4**	**-0.5**
	comp=E,0.3nm,0.3s,baz=312,slow=14,SNR=6.1						
SONM				Pg	**Pg**	**13 12 37.9**	**-9.2**
	comp=E,18nm,0.3s,baz=320,slow=18,SNR=151						
SONM				Sn	**Sn**	**13 13 27.4**	**+0.6**
	comp=E,8.8nm,0.3s,baz=325,slow=18,SNR=4.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM				Lg		13 13 52.5	
	comp=E,40nm,0.3s,baz=320,slow=30,SNR=16						
SONM				LR	LR	13 14 36.3	
	comp=E,164nm,21.0s,baz=26,slow=40						
ULN	Ulaanbaatar	5.74	132	ePN	Pn	13 12 29.6	+2.1
ULN	Ulaanbaatar	5.74	132	ePg	Pg	13 12 43.9	-8.3
ULN				eSg	Sg	13 14 00.4	-6.1
CERR	Cheremushki	5.80	283	ePN	Pb	13 12 42.8	-0.7
CERR				e		13 13 56.7	
CERR	Cheremushki	5.80	283	ePg	Pb	13 12 42.8	-0.7
CERR				eSg	Sg	13 13 56.7	-12
SYVR	Suvo	5.87	69	ePN	Pn	13 12 33.0	+3.7
SYVR				e		13 12 47.1	
SYVR				eS	Sn	13 13 40.0	+3.4
SYVR				e		13 14 09.5	
SYVR				pmax	pmax		
	comp=Z,31nm,0.5s						
SYVR				smax			
	comp=E,75nm,0.6s						
SYVR	Suvo	5.87	69	ePn	Pn	13 12 31.6	+2.3
SYVR				ePg	Pg	13 12 48.7	-6.0
SYVR				Pmax		13 12 52.6	
	comp=E,39nm,1.4s						
SYVR				eSn	Sn	13 13 40.2	+3.6
SYVR				eSg	Sg	13 14 06.3	-4.3
SYVR				Smax		13 14 17.2	
	comp=E,134nm,1.7s						
NIZ	Nizh Angarsk	6.47	50	ePN	Pn	13 12 40.8	+3.2
NIZ				e		13 13 01.6	
NIZ				eS	Sn	13 13 54.3	+2.9
NIZ				e		13 14 26.8	
NIZ				pmax	pmax		
	comp=Z,60nm,0.7s						
NIZ				smax			
	comp=N,571nm,1.3s						
NIZ	Nizh Angarsk	6.47	50	ePn	Pn	13 12 40.3	+2.7
NIZ				ePg	Pg	13 12 59.3	-6.9
NIZ				Pmax		13 13 06.8	
	comp=N,61nm,0.3s						
NIZ				eSn	Sn	13 13 52.0	+0.6
NIZ				i Sg	Sg	13 14 26.9	-3.1
NIZ				Smax		13 14 31.0	
	comp=N,104nm,2.0s						
YLYR	Ulyunkhan	6.89	60	ePN	Pn	13 12 46.6	+3.3
YLYR				e		13 13 09.0	
YLYR				e		13 14 37.3	
YLYR				pmax	pmax		
	comp=Z,36nm,0.6s						
YLYR				smax			
	comp=N,199nm,1.1s						
YLYR	Ulyunkhan	6.89	60	ePn	Pn	13 12 46.1	+2.8
YLYR				ePg	Pg	13 13 07.6	-6.5
YLYR				Pmax		13 13 14.3	
	comp=N,36nm,0.6s						
YLYR				eSg	Sg	13 14 39.9	-3.4
YLYR				Smax		13 14 57.8	
	comp=N,198nm,1.4s						
KMO	Kumora	7.34	53	ePn	Pn	13 12 52.6	+3.2
KMO				e		13 12 54.8	
KMO				max		13 13 55.7	
	comp=N,65nm,0.3s						
KMO				eSn	Sn	13 14 12.6	0.0
KMO				eSg	Sg	13 14 54.6	-3.0
KMO				Smax		13 15 12.8	
	comp=N,260nm,1.0s						
KPC	Khapcheranga	7.69	102	ePN	Pn	13 12 56.3	+2.1
KPC				e		13 13 22.4	
KPC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KPC	Khapcheranga	7.69	102	ePn	Pn	13 12 56.1	+1.9
KPC				e		13 13 00.2	
KPC				ePg	Pg	13 13 22.5	-6.9
KPC				Pmax		13 13 28.3	
	comp=Z,6.0nm,0.6s						
KPC				eSg	Sg	13 15 04.7	-4.2
KPC				Smax		13 15 20.2	
	comp=Z,223nm,1.7s						
YOA	Uoyan	7.71	53	eSn	Sn	13 14 23.1	+1.3
YOA				eSg	Sg	13 15 07.1	-2.5
CIT	Chita	7.90	84	ePn	Pn	13 12 56.9	-0.3
CIT				e		13 13 01.3	
CIT				max		13 13 02.2	
	comp=Z,21nm,0.3s						
CIT				eSg	Sn	13 15 12.4	+46
CIT				Smax		13 15 24.5	
	comp=Z,86nm,0.7s						
AKAR	Aktash	8.42	264	ePG	Px	13 13 32.3	
AKAR	Aktash	8.42	264	ePg	Px	13 13 32.3	
AKAR				eSg	Sx	13 15 15.8	
UKT	Uakit	8.43	60	ePn	Pn	13 13 07.2	+2.8
UKT				e		13 13 20.8	
UKT				max		13 13 23.8	
	comp=Z,13nm,0.5s						
UKT				ePg	Pn	13 13 35.2	+31
UKT				eSg	Sn	13 15 25.0	+46
UKT				Smax		13 15 46.0	
	comp=Z,85nm,1.5s						
ELT	Yel'tsovka	8.95	284	eSg	Px	13 15 33.8	
BOD	Bodaibo	9.65	47	ePn	Pn	13 13 23.1	+2.1
BOD				e		13 13 28.8	
BOD				max		13 13 29.5	
	comp=Z,18nm,0.4s						
BOD				e		13 15 05.5	
BOD				eSg	Sn	13 16 05.4	+56
BOD				Smax		13 16 16.1	
	comp=Z,69nm,1.7s						
ZALV	Zalesovo Beam	9.84	288	Pn	Pn	13 13 25.4	+1.7
	comp=Z,0.1nm,0.3s,baz=76,slow=6.1,SNR=2.5						
ZALV				Lg		13 15 58.7	
	comp=Z,0.5nm,0.3s,baz=110,slow=22,SNR=4.0						
NLYR	Nelyaty	9.88	57	ePn	Pn	13 13 27.9	+3.7
NLYR				e		13 15 30.8	
NLYR				eSg	Sn	13 16 10.9	+56
NVS	Novosibirsk	10.87	293	eSg	Sn	13 15 32.4	-6.9
CRS	Chara	11.35	57	ePn	Pn	13 13 49.4	+5.1
CRS				e		13 14 14.3	
CRS				ePg	Pn	13 14 28.7	+44
CRS				Pmax		13 14 35.5	
	comp=Z,9.0nm,0.8s						
CRS				e		13 16 26.1	
CRS				eSg	Sn	13 16 58.4	+67
CRS				Smax		13 17 30.8	
	comp=Z,100nm,1.5s						
TUP	Tupik	11.79	70	eSg	Sx	13 17 13.2	
TUP				Smax		13 17 44.5	
	comp=Z,65nm,1.4s						
MKAR	Makanchi Array	13.07	254	Pn	Pn	13 14 09.3	+1.3
	comp=Z,0.0nm,0.3s,baz=66,slow=11,SNR=3.0						
MKAR				Lg		13 17 46.2	
	comp=Z,0.1nm,0.3s,baz=61,slow=28,SNR=5.2						
KURK	Kurchatov	13.89	274	eP	Pn	13 14 18.5	-0.6
BRVK	Borovoye	18.53	286	eP	Pn	13 15 17.7	-1.2
YAK	Yakutsk	18.57	46	eP	Pn	13 15 18.6	-0.6
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	20.00	253	eP	Pn	13 15 35.7	-0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TIXI	Tiksi	23.41	22	eP	P	13 16 12.3	+1.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
SVE	Sverdlovsk	23.63	298	P	P	13 16 13.4	0.0
KSRS	Korea Array	23.94	116	P	P	13 16 16.8	+0.4
	comp=Z,0.3nm,0.4s,mb3.0,baz=319,slow=7.0,SNR=2.6						
AKTO	Aktyubinsk	26.56	284	P	P	13 16 38.1	-2.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
AKTO	Aktyubinsk	26.56	284	P	P	13 16 38.1	-2.0
	comp=Z,0.7nm,0.6s,mb3.4,baz=81,slow=6.7,SNR=4.1						
FINES	FINESS Array B	39.90	314	i P	P	13 18 34.7	-1.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	39.90	314	P	P	13 18 35.4	-0.5
	comp=Z,0.9nm,0.6s,mb3.7,baz=70,slow=9.5,SNR=8.0						
BRTR	Keskin Array B	46.73	283	i P	P	13 19 31.3	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	46.73	283	P	P	13 19 31.4	+0.1
	comp=Z,0.6nm,0.6s,mb3.7,baz=23,slow=6.7,SNR=3.8						
YKA	Yellowknife Ar	62.56	18	i P	P	13 21 28.8	+3.0
WRA	Warramunga Arr	77.33	148	P	P	13 22 56.7	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	77.33	148	P	P	13 22 56.7	-0.2
	comp=Z,0.5nm,0.5s,mb3.7,baz=344,slow=6.5,SNR=3.0						
ASAR	Alice Springs	80.67	149	P	P	13 23 14.9	-0.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=342,slow=6.1,SNR=3.3						

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*ISCJB **03** 13:12:42.1±3.7, 2195N±008×1429E±02, h79km±33km, mb4.1/14, Error ellipse: s-maj=28.5km s-min=12.7km az=174.9*
*IDC **03** 13:12:43.1±5.7, 2198N×14297E, h75km±51km, mb3.8/15, mb1 4.0/16, mb1mx3.9/24, mbtmp3.8/16, MS3.7/14, Ms1 3.7/14, ms1mx3.6/29, Error ellipse: s-maj=26.1km s-min=13.3km az=81.0*
ISC 03 13:12:44.1±3.3**, 2197N**±008×**1429E**±02**, h83**km±30km**, n26, σ0ˢ55**/17**, mb4.1**/14**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	8.54	167	LR	LR	13 17 39.8	
	comp=Z,156nm,21.5s,baz=87,slow=35						
JHJ	Hachijo jima 2	11.45	347	LR	LR	13 18 39.3	
	comp=Z,186nm,20.0s,baz=86,slow=31						
JOW	Kunigami	14.20	293	LR	LR	13 20 39.3	
	comp=Z,251nm,19.9s,baz=134,slow=34						
MJAR	Matsushiro Arr	15.09	345	P	Pn	13 16 12.6	-0.1
	baz=159,slow=12,SNR=3.1						
JNU	Nakatsue	15.40	319	LR	LR	13 20 27.8	
	comp=Z,128nm,20.2s,baz=231,slow=30						
KSRS	Korea Array	20.15	323	P	P	13 17 11.8	+0.2
	1.2nm,0.9s,baz=128,slow=11,SNR=6.1						
KSRS				LR	LR	13 23 57.8	
	comp=Z,108nm,21.0s,baz=140,slow=33						
SONM	Songino Array	38.98	320	P	P	13 20 01.8	-0.2
	3.3nm,1.0s,mb4.1,baz=123,slow=9.2,SNR=4.7						
CTA	Charters Tower	41.93	175	P	P	13 20 26.4	-0.2
	13nm,1.0s,mb4.6,baz=343,slow=3.5,SNR=6.1						
WB2	Warramunga Arr	42.49	192	eP	P	13 20 31.1	-0.1
WRA	Warramunga Arr	42.49	192	P	P	13 20 31.2	0.0
	3.4nm,0.9s,mb4.1,baz=13,slow=8.7,SNR=15						
WRA				LR	LR	13 36 12.7	
	comp=Z,110nm,18.6s,baz=225,slow=33						
ASAR	Alice Springs	46.20	191	P	P	13 21 00.8	0.0
	1.5nm,0.6s,mb3.9,baz=19,slow=9.3,SNR=33						
STKA	Stephens Creek	53.56	181	P	P	13 21 56.5	+0.1
	0.9nm,0.3s,mb4.3,baz=337,slow=7.7,SNR=2.9						
STKA				LR	LR	13 45 04.8	
	comp=Z,95nm,18.4s,baz=206,slow=36						
ZALV	Zalesovo Beam	53.85	322	P	P	13 21 58.1	-0.3
	9.7nm,1.0s,mb4.8,baz=103,slow=6.7,SNR=20						
ZALV				PcP	PcP	13 23 03.5	+0.5
	1.6nm,1.0s,baz=78,slow=4.8,SNR=3.1						
ZALV				LR	LR	13 47 02.0	
	comp=Z,49nm,18.6s,baz=197,slow=38						
MKAR	Makanchi Array	54.34	313	P	P	13 22 03.1	+1.0
	1.5nm,0.9s,mb4.0,baz=94,slow=11,SNR=4.4						
MKAR				PcP	PcP	13 23 06.7	+1.6
	2.1nm,1.1s,baz=90,slow=2.9,SNR=4.3						
INK	Inuvik	67.42	24	P	P	13 23 30.1	-0.3
	3.1nm,1.1s,mb4.0,baz=293,slow=12,SNR=4.7						
RAR	Rarotonga	70.48	124	LR	LR	13 53 20.7	
	comp=Z,104nm,19.1s,baz=243,slow=35						
YKA	Yellowknife Ar	76.33	28	P	P	13 24 23.5	-0.2
	0.8nm,0.6s,mb3.6,baz=294,slow=5.6,SNR=14						
YKA				LR	LR	13 55 31.2	
	comp=Z,44nm,19.2s,baz=210,slow=34						
PPT	Papeete	76.86	115	LR	LR	13 49 57.9	
	comp=Z,163nm,20.9s,baz=216,slow=29						
FINES	FINESS Array B	82.83	334	P	P	13 24 57.8	-1.2
	0.9nm,0.6s,mb3.8,baz=70,slow=5.1,SNR=6.4						
NVAR	Mina Array Bea	83.16	51	P	P	13 25 02.5	+1.3
	2.3nm,0.9s,mb4.0,baz=268,slow=3.9,SNR=15						
AKASG	Malin Array Be	87.15	324	P	P	13 25 20.6	-0.3
	2.2nm,0.9s,mb4.1,baz=47,slow=5.0,SNR=6.4						
PDAR	Pinedale Array	87.37	45	P	P	13 25 21.8	-0.3
	0.7nm,1.0s,mb3.6,baz=132,slow=2.2,SNR=3.9						
PDAR				LR	LR	13 58 21.6	
	comp=Z,73nm,20.0s,baz=276,slow=31						
NOA	NORSAR Array B	88.61	339	LR	LR	14 04 60.0	
	comp=Z,68nm,18.6s,baz=90,slow=35						
BRTR	Keskin Array B	89.98	313	P	P	13 25 35.1	+0.7
	3.0nm,1.0s,mb4.4,baz=90,slow=3.7,SNR=7.5						
TXAR	Lajitas Array	98.09	54	LR	LR	14 08 19.8	
	comp=Z,57nm,18.4s,baz=340,slow=34						
LPAZ	La Paz	150.15	85	PKPbc	PKPbc	13 32 26.0	-0.1
	5.5nm,1.0s,baz=333,slow=3.1,SNR=12						

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*NEIC **03** 13:28:58.0, 1658N×9892W, h11km, MD3.7(MEX), After MEX.*
MEX 03 13:28:58.3±0.8**, 1659N**×**9890W, h13**km±18km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	1.02	286	i P	Pb	13 29 14.5	-3.3
ACX				i S	Sb	13 29 25.5	-5.5
CAIG	El Cayaco	1.39	289	i P	Pn	13 29 20.0	-3.4
CAIG				i S	Sn	13 29 37.1	-4.5
MEIG	Mezcala	1.50	333	eP	Pn	13 29 21.7	-3.2
MEIG				i S	Sn	13 29 39.8	-4.5
VHO	Vista Hermosa	2.13	77	i P	Pn	13 29 29.5	-4.0
VHO				i S	Sn	13 29 56.5	-3.4
PPM	Popocatepetl	2.48	6	i P	Pn	13 29 34.8	-3.6
PPM				i S	Sn	13 30 04.0	-4.6

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*ISCJB **03** 14:18:04.0±1.8, 24N±0.1×1254E±04, h128km±20km, mb3.8/7, Error ellipse: s-maj=73.9km s-min=12.2km az=164.5*
*IDC **03** 14:18:04.1±3.8, 234N×12522E, h108km±35km, mb3.5/8, mb1 3.6/8, mb1mx3.5/19, mbtmp3.5/8, Error ellipse: s-maj=64.6km s-min=11.7km az=72.0*
ISC 03 14:18:05.0±1.5**, 24N**±01×**1254E**±04**, h118**km±17km**, n11, σ1ˢ03**/13**, mb3.8**/7**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	3.68	353⥣	eP	Pn	14 19 01.2	+0.9
GSPH				eS	Sn	14 19 42.6	-0.6
FITZ	Fitzroy Crossi	20.38	179	eP	P	14 22 34.2	+1.6
	19nm,1.8s						
FITZ	Fitzroy Crossi	20.38	179	P	P	14 22 33.5	+1.0
	4.5nm,1.0s,baz=6.7,slow=17,SNR=9.3						
WRA	Warramunga Arr	23.88	159	P	P	14 23 07.0	-0.9
	5.1nm,0.4s,mb4.2,baz=338,slow=10,SNR=94						
WRA				S	S	14 27 17.9	+2.2
	1.5nm,0.7s,baz=346,slow=19,SNR=5.1						
WB2	Warramunga Arr	23.89	159	eP	P	14 23 07.0	-0.9
ASAR	Alice Springs	27.21	163	P	P	14 23 37.9	+0.1
	0.8nm,0.4s,mb3.6,baz=348,slow=13,SNR=22						
KSRS	Korea Array	34.95	4	P	P	14 24 47.9	+2.2
	0.3nm,0.6s,mb3.3,baz=179,slow=9.4,SNR=4.9						
STKA	Stephens Creek	37.41	157	P	P	14 25 05.7	-1.0
	1.6nm,0.7s,mb4.1,baz=345,slow=9.8,SNR=6.2						
SONM	Songino Array	48.14	343	P	P	14 26 32.3	-0.7
	0.5nm,0.5s,mb3.6,baz=165,slow=6.2,SNR=4.8						
MKAR	Makanchi Array	57.89	326	P	P	14 27 44.6	0.0
	1.6nm,0.5s,mb4.3,baz=122,slow=8.1,SNR=51						
ZALV	Zalesovo Beam	61.17	334	P	P	14 28 06.5	-0.5
	0.4nm,0.5s,mb3.7,baz=141,slow=5.5,SNR=2.9						

IDC 03 14:28:12.4±2.2**, 670S**×**12958E, h0**km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.3**/15**, mbtmp3.3**/4**, ML3.1**/3**, Error ellipse: s-maj=86.1km s-min=29.2km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.96	198	Pn	Pn	14 31 04.7	+0.4
	0.1nm,0.3s,baz=6.3,slow=18,SNR=4.4						
FITZ				Sn	Sn	14 33 04.7	-14
	0.1nm,0.3s,baz=345,slow=20,SNR=3.4						
WRA	Warramunga Arr	13.95	161	Pn	Pn	14 31 30.1	-1.3
	0.1nm,0.3s,baz=339,slow=14,SNR=5.4						
WRA				Sn	Sn	14 33 53.5	-14
	0.2nm,0.3s,baz=336,slow=23,SNR=6.8						
ASAR	Alice Springs	17.37	167	P	Pn	14 32 17.1	+0.8
	0.1nm,0.3s,baz=344,slow=9.7,SNR=12						
MKAR	Makanchi Array	67.75	327	P	P	14 39 11.9	+0.1
	0.2nm,0.4s,baz=119,slow=7.7,SNR=4.1						

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*ISCJB **03** 14:34:39.9±1.2, 4568N±006×2672E±007, h126km±8km, Error ellipse: s-maj=10.2km s-min=7.4km az=27.5*
*CSEM **03** 14:34:39.4±1.4, 4561N×2664E, h129km±14km, MD3.8/2, Error ellipse: s-maj=11.4km s-min=7.2km az=33.0, After BUC*
*BUC **03** 14:34:39.2±1.9, 4566N×2672E, h134km±17km, MD3.8/2, Error ellipse: s-maj=15.3km s-min=11.7km az=23.0*
*NEIC **03** 14:34:39.2, 4579N×2673E, h124km, MD3.3(BUC), After BUC.*
ISC 03 14:34:40.3±1.3**, 4568N**±006×**2672E**±007**, h126**km±9km**, n16, σ0ˢ62**/27**, 6C-9D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRI	Vrincioaia	0.19	2⥣	iP	Pn	14 34 57.2	-0.3
VRI				i S	Sn	14 35 10.2	-0.4
BRD	Bordesti	0.25	119	⥥P	Pn	14 34 58.6	+1.0
BRD	Bordesti	0.25	119⥥	iP	Pn	14 34 58.7	+1.0
ISR	Istrita	0.57	193	⥥P	Pn	14 34 60.0	+0.7
ISR	Istrita	0.57	193⥥	iP	Pn	14 35 00.0	+0.7
MLR	Muntele Rosu	0.57	251	S	Sn	14 35 13.8	+0.1
GHRR		0.62	51⥣	iP	Pn	14 34 59.6	0.0
GHRR				i S	Sn	14 35 14.3	+0.1
TUDR		0.67	97⥥	iP	Pn	14 34 59.4	-0.5
TUDR				i S	Sn	14 35 14.9	+0.1
SECR		0.79	216⥣	iP	Pn	14 35 01.3	+0.4
SECR				i S	Sn	14 35 17.7	+1.2
CFR	Carcaliu	1.11	116⥥	iP	Pn	14 35 03.4	-0.5
CFR				i S	Sn	14 35 21.4	-0.4
VOIR		1.20	259	⥣P	Pn	14 35 03.9	-0.9
VOIR				S	Sn	14 35 22.0	-1.3
VOIR		1.20	259⥣	iP	Pn	14 35 03.8	-0.9
VOIR				i S	Sn	14 35 22.0	-1.3
TIRR	Tirgusor	1.71	135	⥥P	Pn	14 35 10.3	-0.2
TIRR				S	Sn	14 35 33.5	0.0
TIRR	Tirgusor	1.71	135⥥	iP	Pn	14 35 10.3	-0.2
TIRR				i S	Sn	14 35 33.5	0.0
BURAR	Bucovina Array	2.20	332	⥥P	Pn	14 35 17.2	+0.8
BURAR				S	Sn	14 35 44.3	+0.1
BURAR	Bucovina Array	2.20	332⥣	iP	Pn	14 35 17.2	+0.8
BURAR				i S	Sn	14 35 44.3	+0.1

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*NAO **03** 14:56:09.7, 3795N×1994E, h33km, mb4.0*
*BEO **03** 14:56:22.9±1.2, 3954N×1952E, h20km±6km, ML3.9/7*
*ATH **03** 14:56:24.7, 4023N×1936E, h11km±1km, MD4.1/18, ML4.3*
*ISCJB **03** 14:56:26.4±0.4, 4009N±001×1948E±002, h4km±2km, mb3.8/13, Error ellipse: s-maj=2.8km s-min=1.8km az=35.8*
*LDG **03** 14:56:26.3±0.1, 4033N×1970E, h10km, Mb4.8/14, Ms2.7/5, Error ellipse: s-maj=5.6km s-min=3.1km az=23.0*
*ROM **03** 14:56:26.7±0.7, 4014N×2006E, h10km, Ml4.3/3, Error ellipse: s-maj=15.1km s-min=7.6km az=175.0*
*MOS **03** 14:56:26.5±1.2, 3997N×1948E, h10km, mb4.0/9, Error ellipse: s-maj=5.8km s-min=3.4km az=114.2*
*IDC **03** 14:56:27.4±1.0, 4013N×1980E, h0km, mb3.8/12, mb1 3.9/18, mb1mx3.8/27, mbtmp3.7/18, ML3.7/6, Error ellipse: s-maj=16.8km s-min=15.3km az=13.0*
*TIR **03** 14:56:27.5±5.6, 4018N×1965E, h6km±14km, ML3.6*
*PRU **03** 14:56:27.3, 4010N×1979E, h0km, M4.2*
*CSEM **03** 14:56:28.2±0.0, 4013N×1942E, h12km, Ms2.7, Error ellipse: s-maj=1.5km s-min=0.9km az=26.0*
*NEIC **03** 14:56:29.3±0.3, 4004N×1954E, h10km, mb4.2/5, ML4.3(ATH), ML4.3(ROM), ML3.8(PDG), Error ellipse: s-maj=5.3km s-min=3.4km az=212.0*
*THE **03** 14:56:30.1, 4007N×1975E, h3km, ML4.5*
*PDG **03** 14:56:30.0±0.5, 4010N×1974E, h7km±1km, MD3.9/1, ML3.8/10, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*
ISC 03 14:56:28.5±0.4**, 4007N**±001×**1956E**±002**, h5**km±2km**, n253, σ1ˢ40**/330**, mb3.8**/13**, 38C-24D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	Sarande	0.39	119	i PG	Pg	14 56 35.0	-0.9
SRN				i SG	Sg	14 56 40.9	-0.1
KEK	Kerkira	0.40	152	ePB	Pg	14 56 37.3	+1.1
KEK				eSB	Sg	14 56 45.3	+4.0
VLO	Vlora	0.40	353	i Pg	Pg	14 56 37.0	+0.7
VLO				i Sg	Sg	14 56 45.4	+3.8
TPE	Tepelena	0.41	56	i PG	Pg	14 56 33.1	-3.4
TPE				i SG	Sg	14 56 37.4	-4.5
IGT	Igoumenitsa	0.80	132	ePg	Pg	14 56 42.8	-1.0
IGT				eSg	Sg	14 56 53.8	-0.4
LSK	Leskovik	0.80	84	i PG	Pg	14 56 40.0	-3.9
LSK				i SG	Sg	14 56 51.6	-2.7
JAN	Janina	1.07	112	ePN	Pn	14 56 48.1	-2.1
KBN	Korca	1.09	59	i PG	Pg	14 56 47.9	-1.5
KBN				i SG	Sg	14 57 03.1	-0.4
LCI	Lecce	1.14	284	Pg	Pg	14 56 53.4	+3.0
LCI				Sg	Sg	14 57 14.1	+9.0
TIR	Tirane	1.30	10	i PN	Pn	14 56 55.2	+1.9
TIR	Tirane	1.30	10	P	Pn	14 56 55.4	+2.1
MEV	Metsovon	1.31	102	ePg	Pn	14 56 51.8	-1.7
MEV				eSg	Sn	14 57 08.3	-3.1
OHR	Ohrid	1.41	42⥣	iPg	Pn	14 56 53.5	-1.3
OHR				i Sg	Sn	14 57 11.6	-2.2
OHR	Ohrid	1.41	42⥣	iPg	Pn	14 56 53.5	-1.3
OHR				i Sg	Sn	14 57 11.5	-2.2
FNA	Florina	1.56	62	ePg	Pn	14 56 55.1	-1.8
FNA				eSg	Sn	14 57 17.3	-0.2
LKD	Levkas	1.60	148	ePg	Pn	14 56 57.6	+0.2
LKD				eSg	Sg	14 57 19.5	-0.4
BIA	Bitola	1.65	54	i Pn	Pn	14 56 55.6	-2.5
BIA				i Sn	Sn	14 57 20.3	+0.6
KZN	Kozani	1.71	81	ePN	Pn	14 56 58.4	-0.6
KZN				eSN	Sg	14 57 23.8	+0.4
PHP	Peshkopia	1.75	22	i PN	Pn	14 57 00.2	+0.7
PHP				i SN	Sg	14 57 25.8	+1.1
KRUS	Krusevo	1.83	44	i Pn	Pn	14 57 01.2	+0.6
KRUS				i Sn	Sn	14 57 23.9	-0.2
ULC	Ulcinj	1.91	353⥥	iPn	Pn	14 57 03.0	+1.3
ULC				eSn	Sg	14 57 30.7	+0.9
THL	Klokotos Trika	1.96	104⥣	iPN	Pn	14 57 02.8	+0.4
THL				eSN	Sn	14 57 29.7	+2.4
PUK	Puka	1.99	7	i PN	Pn	14 57 03.4	+0.6
PUK				i SN	Sg	14 57 31.8	-0.6
NOCI	Noci	2.04	292	Pg	Pb	14 57 05.2	-0.8
VLS	Valsamata	2.05	157	ePN	Pn	14 57 04.0	+0.4
VLS				eSN	Sg	14 57 34.2	-0.1
EVR	Evrytania	2.08	123⥥	iPN	Pn	14 57 05.5	+1.4
EVR				eSN	Sg	14 57 34.1	-1.4
KFL	Anninata	2.18	154	ePn	Pn	14 57 05.7	+0.3
LIT	Litokhoron	2.25	88	ePn	Pn	14 57 05.8	-0.6
LIT				eSn	Sn	14 57 33.3	-1.2
BUM	Brajici-Budva	2.29	348⥥	iPn	Pn	14 57 09.0	+2.1
BUM				eSn	Sg	14 57 39.8	-2.1
BUM	Brajici-Budva	2.29	348	i PN	Pn	14 57 09.0	+2.1
BUM				i SG	Sg	14 57 39.8	-2.1
BAI	Bari	2.29	298	ePn	Pn	14 57 08.9	+1.9
SG1	Sgolgore (BA)	2.33	290	ePn	Pn	14 57 09.3	+1.8
TIP	Timpagrande	2.34	249	ePn	Pn	14 57 10.4	+2.8
TIP				Pg	Pg	14 57 11.3	-2.0
TIP	Timpagrande	2.34	249	ePn	Pn	14 57 10.4	+2.8
TIP	Timpagrande	2.34	249	Pg	Pg	14 57 11.3	-2.0
GRG	Griva	2.34	67	ePn	Pn	14 57 07.8	+0.1
PDG	Podgorica	2.37	355	i PN	Pn	14 57 09.3	+1.2
PDG				i SG	Sg	14 57 41.8	-2.9
TTG	Podgorica	2.37	355⥥	iPn	Pn	14 57 09.3	+1.2
TTG				eSn	Sg	14 57 41.8	-2.9
SKO	Skopje	2.38	36	i Pn	Pn	14 57 08.4	+0.2
SKO				i Sn	Sn	14 57 37.1	-0.5
SKO	Skopje	2.38	36	i Pn	Pn	14 57 08.3	+0.2
SKO				i Sn	Sn	14 57 37.1	-0.6
AGG	Agios Georgios	2.38	115	ePn	Pn	14 57 08.5	+0.3
AGG				eSn	Sn	14 57 37.5	-0.3
AMUR	Altamura	2.41	291	Pg	Pn	14 57 10.5	+2.0
RLS	Riolos of Patr	2.50	143	ePN	Pn	14 57 10.9	+1.1
HCY	Herceg Novi	2.51	342⥥	iPn	Pn	14 57 12.5	+2.5
HCY				eSn	Sg	14 57 45.9	-3.2
HCY	Herceg Novi	2.51	342	i PN	Pn	14 57 12.5	+2.5
HCY				i SG	Sg	14 57 45.9	-3.2
PVY	Plav	2.54	7⥥	iPn	Pn	14 57 11.2	+0.7
PVY				eSn	Sn	14 57 44.8	+3.0
PVY	Plav	2.54	7	i PN	Pn	14 57 11.2	+0.7
PVY				i SG	Sn	14 57 44.8	+3.0
SELA	Sela	2.55	134	ePn	Pn	14 57 10.8	+0.3
SELA				eSn	Sn	14 57 43.0	+1.1
STIP	Stip	2.57	50	i Pn	Pn	14 57 10.9	+0.1
STIP	Stip	2.57	50	i Pn	Pn	14 57 10.8	0.0
VAY	Valandovo	2.61	60	i Pn	Pn	14 57 10.9	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VAY				*i* Sn	Sn	14 57 46.8	+3.4
VAY	Valandovo	2.61	60	*i* Pn	Pn	14 57 10.8	-0.5
VAY				*i* Sn	Sn	14 57 46.8	+3.4
THE	Thessaloniki	2.66	77	*e*Pn	Pn	14 57 12.1	+0.1
CDT	Castel del Mon	2.70	293	*e*Pn	Pn	14 57 14.7	+2.1
HORT	Hortiatis	2.76	78	*e*Pn	Pn	14 57 12.8	-0.6
HORT				*e*Sn	Sn	14 57 46.9	-0.2
HORT	Hortiatis	2.76	78	*e*Pn	Pn	14 57 12.8	-0.6
HORT				*e*Sn	Sn	14 57 46.8	-0.3
KNT	Kendrikon	2.77	66	*e*Pn	Pn	14 57 13.4	-0.1
NKY	Niksic	2.78	351	⇑*i*Pn	Pn	14 57 16.1	+2.5
NKY				*e*Sn	Sn	14 57 51.4	+3.9
BEY	Berane	2.81	5	⇑*i*Pn	Pn	14 57 15.7	+1.6
IVA	Berane	2.81	5	⇑*i*Pn	Pn	14 57 15.7	+1.6
IVA				*e*Sn	Sn	14 57 51.3	+2.8
XOR	Xorichti	2.89	103	*e*Pn	Pn	14 57 15.1	0.0
XOR				*e*Sn	Sn	14 57 50.1	-0.2
NEO	Neokhori	2.93	104	*e*PN	Pn	14 57 16.4	+0.7
BRY	Bratogost	2.93	345	⇓*i*Pn	Pn	14 57 18.3	+2.5
BRY				*e*Sn	Sn	14 57 55.3	+3.9
PLG	Polygyros	2.99	83	*e*PN	Pn	14 57 16.5	-0.1
SOH	Sokhos	2.99	74	*e*Pn	Pn	14 57 16.8	+0.2
SOH				*e*Sn	Sn	14 57 52.6	-0.3
LKR	Lokris	3.02	117	*e*PN	Pn	14 57 17.9	+0.9
MGR	Morigerati	3.07	273	Pg	Pb	14 57 22.9	-0.8
STON	Ston	3.13	334	*e*Pn	Pn	14 57 21.0	+2.5
STON				Sn	Sn	14 57 55.4	-0.9
PAIG	Paliouri	3.17	91	*e*Pn	Pn	14 57 18.0	-1.0
PAIG				*e*Sn	Sn	14 57 57.1	-0.1
UPM	Unac-Piva	3.17	351	⇑*i*Pn	Pn	14 57 21.4	+2.3
UPM				*e*Sn	Sn	14 58 00.9	+3.6
FGMS	Monte Sant'Ang	3.19	302	Pg	Pn	14 57 21.1	+1.8
MS1	Monte Sant'Ang	3.19	302	*e*Pn	Pn	14 57 16.6	-2.8
BARS	Barje	3.23	31	*i* Pn	Pn	14 57 19.4	-0.5
BARS				*e*Sn	Sn	14 58 01.7	+2.9
BARS	Barje	3.23	31	Pn	Pn	14 57 19.5	-0.4
BARS				Sn	Sn	14 58 01.8	+3.0
PLE	Pljevlja	3.26	358	⇑*i*Pn	Pn	14 57 22.2	+1.9
PLE				*e*Sn	Sn	14 58 02.7	+3.2
LTK	Loutraki	3.35	126	*e*Pn	Pn	14 57 21.5	0.0
ITM	Ithomi	3.43	147	*e*PN	Pn	14 57 23.9	+1.3
AOS	Alonnisos	3.46	104	*e*Pn	Pn	14 57 22.9	-0.1
VLX	Vlachokerasia	3.48	140	*e*Pn	Pn	14 57 24.4	+1.1
NVR	Nevrokopi	3.51	67	*e*PN	Pn	14 57 22.9	-0.8
VTS	Vitosha	3.73	46	⇑P	Pn	14 57 27.0	+0.2
VTS	Vitosha	3.73	46	⇑*i*P	Pn	14 57 27.0	+0.3
BBLS	Bajina Basta -	3.80	358	*e*Pn	Pn	14 57 28.2	+0.5
BBLS				*e*Sg	Sg	14 58 40.2	+10
BBLS	Bajina Basta -	3.80	358	Pn	Pn	14 57 28.2	+0.5
DID	Didima	3.85	131	*e*Pn	Pn	14 57 28.2	-0.1
ATH	Athens Observa	3.85	122	*e*PN	Pn	14 57 29.3	+0.8
PTL	Penteli	3.91	120	*e*PN	Pn	14 57 29.1	-0.1
GRUS	Gruza	3.91	12	*e*Pn	Pn	14 57 28.5	-0.8
GRUS				*e*Sn	Sn	14 58 18.6	+3.0
GRUS	Gruza	3.91	12	Pn	Pn	14 57 28.5	-0.8
KVR	Kavouri	3.97	123	*e*PN	Pn	14 57 30.8	+0.7
DIVS	Divcibare	4.04	4	*e*Pn	Pn	14 57 29.9	-1.1
DIVS				*e*Sn	Sn	14 58 21.6	+2.9
DIVS	Divcibare	4.04	4	Pn	Pn	14 57 30.0	-1.0
VLI	Veliai	4.27	141	*e*PN	Pn	14 57 34.9	+0.8
MOCO	Biccari - m.te	4.31	289	Pn	Pn	14 57 29.3	-5.4
	396nm,0.7s						
MIDA	Miranda	4.32	293	Pn	Pn	14 57 38.6	+3.7
	153nm,0.7s						
SVIS	Svilajnac	4.40	16	*e*Pn	Pn	14 57 35.3	-0.7
SVIS				*e*Sg	Sg	14 58 59.5	+10
SVIS	Svilajnac	4.40	16	Pn	Pn	14 57 35.4	-0.6
KYTH	Kithira	4.67	143	*e*PN	Pn	14 57 41.0	+1.4
RDO	Rodhopi	4.68	75	*e*PN	Pn	14 57 39.1	-0.6
ALN	Alexandroupoli	5.01	78	*e*Pn	Pn	14 57 45.5	+1.1
FAGN	Fagnano	5.02	298	Pn	Pn	14 57 48.8	+4.4
	237nm,0.6s						
PTQR	Pietraquaria	5.05	295	Pn	Pn	14 57 49.1	+4.2
	39nm,0.6s						
FGSL	Fruska Gora	5.09	2	*e*Pn	Pn	14 57 44.0	-1.4
FGSL				*e*Sg	Sg	14 59 20.7	+8.8
FGSL	Fruska Gora	5.09	2	Pn	Pn	14 57 44.0	-1.4
AQU	L'Aquila	5.18	298	⇑*i*P	Pn	14 57 51.5	+4.9
APE	Apeiranthos	5.55	121	*e*P	Pn	14 57 51.1	-0.7
BZS	Buzias	5.75	15	*e*Pn	Pn	14 57 52.8	-1.7
BZS	Buzias	5.75	15	⇑*i*P	Pn	14 57 55.7	+1.2
CING	Cingoli	5.80	307	Pn	Pn	14 57 56.6	+1.5
GZR	Gura Zlata	5.83	23	⇑P	Pn	14 57 57.2	+1.7
GZR	Gura Zlata	5.83	23	⇑*i*P	Pn	14 57 57.2	+1.7
PKSM	Moragy	6.18	354	*e*Pn	Pn	14 58 01.4	+1.0
PKSM	Moragy	6.18	354	⇑*i*P	Pn	14 58 04.5	+4.1
BOJS	Bojanci	6.29	331	*i* Pn	Pn	14 58 02.1	+0.2
BOJS				*i* Sn	Sn	14 59 13.6	-0.5
IDI	Anoyia	6.37	137	Pn	Pn	14 58 00.3	-2.8
	1.3nm,0.3s,baz=317,slow=11,SNR=10						
IDI				Sn	Sn	14 59 08.8	-7.5
	1.1nm,0.3s,baz=288,slow=19,SNR=3.0						
CRE	Caprese Michel	6.70	304	Pn	Pn	14 58 10.7	+3.2
VOIR		6.72	35	⇓P	Pn	14 58 09.6	+1.8
VOIR		6.72	35	⇓*i*P	Pn	14 58 09.6	+1.9
CEY	Cerknica	6.80	328	*i* Pn	Pn	14 58 09.1	+0.1
CEY				*i* Sn	Sn	14 59 27.0	+0.2
DRGR		7.10	18	⇑*i*P	Pn	14 58 15.1	+2.1
MLR	Muntele Rosu	7.17	39	⇑P	Pn	14 58 15.5	+1.6
MLR	Muntele Rosu	7.17	39	⇑P	Pn	14 58 15.5	+1.5
MLR	Muntele Rosu	7.17	39	Pn	Pn	14 58 12.9	-1.1
	0.2nm,0.3s,baz=145,slow=12,SNR=2.0						
MLR	Muntele Rosu	7.17	39	⇑*i*P	Pn	14 58 15.5	+1.5
VOY	Vojsko	7.26	327	*e*Pn	Pn	14 58 15.3	+0.1
VOY				*e*		14 58 17.3	
VOY				*e*Sn	Sn	14 59 35.5	-2.5
PERS	Pernice	7.32	335	*i* Pn	Pn	14 58 16.3	+0.3
PERS				*i* Sn	Sn	14 59 35.4	-4.1
OBKA	Obir	7.40	332	⇑*i*Sn	Sn	14 59 39.1	-2.4
OBKA	Obir	7.40	332	⇑*i*Pn	Pn	14 58 17.4	+0.3
OBKA				*i* Sn	Sn	14 59 39.1	-2.4
OBKA	Obir	7.40	332	⇑*i*Pn	Pn	14 58 17.4	+0.3
OBKA				⇓*i*Sn	Sn	14 59 41.6	+0.1
PLOR	Plostina	7.77	40	⇓*i*P	Pn	14 58 24.3	+2.1
PTCC	Patocco-Chiusa	7.79	326	Pn	Pn	14 58 23.9	+1.5
VRI	Vrincioaia	7.82	40	⇓*i*P	Pn	14 58 25.4	+2.5
TIRR	Tirgusor	7.89	53	⇓P	Pn	14 58 25.6	+1.7
TIRR	Tirgusor	7.89	53	⇓*i*P	Pn	14 58 25.6	+1.7
CTI	Castel Tesino	8.32	319	Pn	Pn	14 58 29.8	+0.1
KBA	Koelnbreinsper	8.33	329	⇓*i*Pn	Pn	14 58 30.9	+1.0
KBA				⇓*i*Sn	Sn	15 00 01.5	-2.9
KBA	Koelnbreinsper	8.33	329	Pn	Pn	14 58 30.9	+1.0
ABTA	Abfaltersbach	8.42	325	⇑*i*Pn	Pn	14 58 31.1	0.0
ABTA				⇓*i*Sn	Sn	15 00 05.0	-1.4
KECS	Kecovo	8.44	4	*e*PN	Pn	14 58 28.1	-3.3
KECS				*e*		14 58 38.3	
VYHS	Vyhne	8.44	357	*e*PN	Pn	14 58 31.8	+0.4
BURAR	Bucovina Array	8.58	27	⇑P	Pn	14 58 35.1	+1.8
BURAR	Bucovina Array	8.58	27	⇑*i*P	Pn	14 58 35.1	+1.8
MOA	Molln	8.66	336	⇑*i*Pn	Pn	14 58 35.3	+0.9
MOA				⇓*i*Sn	Sn	15 00 09.9	-2.6
CRVS	Cervenica-Dubn	8.94	8	*e*PN	Pn	14 58 39.6	+1.4
KOLS	Kolonicke sedl	9.07	11	*e*PN	Pn	14 58 39.8	-0.3
WTTA	Wattenberg	9.20	324	⇑*i*Sn	Sn	15 00 22.4	-3.3
WTTA	Wattenberg	9.20	324	⇑*i*Pn	Pn	14 58 43.4	+1.6
WTTA				*i* Sn	Sn	15 00 22.4	-3.3
WTTA	Wattenberg	9.20	324	⇑*i*Pn	Pn	14 58 43.4	+1.6
WTTA				⇓*i*Sn	Sn	15 00 25.7	+0.1
WATA	Walderalm	9.28	324	⇓*i*Sn	Sn	15 00 24.5	-3.2
WATA	Walderalm	9.28	324	⇑*i*Pn	Pn	14 58 43.6	+0.7
WATA				*i* Sn	Sn	15 00 24.5	-3.2
WATA	Walderalm	9.28	324	⇑*i*Pn	Pn	14 58 43.6	+0.7
WATA				⇓*i*Sn	Sn	15 00 28.6	+0.9
SQTA	Sankt Quirin	9.36	323	⇓*i*Sn	Sn	15 00 26.9	-2.8
SQTA	Sankt Quirin	9.36	323	⇑*i*Pn	Pn	14 58 45.0	+0.9
SQTA				*i* Sn	Sn	15 00 26.9	-2.8
SQTA	Sankt Quirin	9.36	323	⇑*i*Pn	Pn	14 58 45.0	+1.0
SQTA				⇓*i*Sn	Sn	15 00 29.6	-0.1
MOTA	Moosalm	9.50	323	⇑*i*Sn	Sn	15 00 29.7	-3.4
MOTA	Moosalm	9.50	323	⇑*i*Pn	Pn	14 58 46.5	+0.5
MOTA				*i* Sn	Sn	15 00 29.7	-3.4
MOTA	Moosalm	9.50	323	⇑*i*Pn	Pn	14 58 46.5	+0.5
MOTA				⇑*i*Sn	Sn	15 00 30.6	-2.6
GERES	GERESS Array B	9.72	336	P	Pn	14 58 49.6	+0.7
GERES						15 00 34.5	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	GERESS Array B	9.72	336	Pn	Pn	14 58 49.6	+0.7
	comp=Z,0.5nm,0.3s,baz=156,slow=13,SNR=8.0						
GERES				Sn	Sn	15 00 34.5	-3.9
	comp=Z,0.4nm,0.3s,baz=147,slow=22,SNR=4.3						
DAVOX	Davos/Dischmat	9.72	317	Pn	Pn	14 58 51.8	+2.8
	comp=Z,0.4nm,0.3s,baz=267,slow=18,SNR=3.6						
DAVOX				Sn	Sn	15 00 37.7	-0.8
	comp=Z,0.5nm,0.3s,baz=324,slow=19,SNR=2.8						
SBF	Sospel	9.79	297	*e*P	Pn	14 58 48.4	-1.6
	comp=Z,185nm,1.3s						
SBF	Sospel	9.79	297	*e*P	Pn	14 58 48.4	-1.6
	comp=Z,93nm,1.3s						
KHC	Kasperske Hory	10.01	337	*e*P	Pn	14 58 54.2	+1.3
KHC				*e*S	Sn	15 00 43.0	-2.6
FRF	La Foret Royal	10.25	294	*e*P	Pn	14 58 56.4	+0.2
LMR	La Mourre	10.29	293	*e*P	Pn	14 58 57.4	+0.6
MBDF	Montbardon	10.54	300	*e*P	Pn	14 59 00.9	+0.7
	comp=Z,14nm,0.8s						
MBDF	Montbardon	10.54	300	*e*P	Pn	14 59 00.9	+0.7
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MBDF	Montbardon	10.54	300	*e*P	Pn	14 59 00.9	+0.7
	comp=Z,6.9nm,0.8s						
LPG	La Plagne	10.86	304	*e*P	Pn	14 59 05.1	+0.5
	comp=Z,10nm,0.7s						
LPG	La Plagne	10.86	304	*e*P	Pn	14 59 05.1	+0.5
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LPG	La Plagne	10.86	304	*e*P	Pn	14 59 05.1	+0.5
	comp=Z,5.1nm,0.7s						
LPL	La Plagne	10.88	304	*e*P	Pn	14 59 05.4	+0.6
	comp=Z,15nm,0.8s						
LPL	La Plagne	10.88	304	*e*P	Pn	14 59 05.4	+0.6
LPL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPL	La Plagne	10.88	304	*e*P	Pn	14 59 05.4	+0.6
	comp=Z,7.3nm,0.8s						
SMRF	Simiane la Rot	11.11	295	*e*P	Pn	14 59 08.6	+0.6
ORIF	Oris-en-Rattie	11.20	300	*e*P	Pn	14 59 09.7	+0.5
ORIF				*e*MLR	MLR		
	comp=Z,114nm,19.2s						
CABF	La Chapelle	11.78	308	*e*P	Pn	14 59 16.7	-0.5
	comp=Z,72nm,1.4s						
CABF	La Chapelle	11.78	308	*e*P	Pn	14 59 16.7	-0.5
CABF				pmax	pmax		
	comp=Z,36nm,1.4s						
CABF	La Chapelle	11.78	308	*e*P	Pn	14 59 16.7	-0.5
	comp=Z,36nm,1.4s						
HINF	Hinteralfeld	11.98	314	*e*P	Pn	14 59 18.8	-1.1
	comp=Z,3.2nm,0.4s						
HINF	Hinteralfeld	11.98	314	*e*P	Pn	14 59 18.8	-1.1
HINF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HINF	Hinteralfeld	11.98	314	*e*P	Pn	14 59 18.8	-1.1
	comp=Z,1.6nm,0.4s						
VIVF	Saint-Julien-l	11.99	298	*e*P	Pn	14 59 20.3	+0.3
	comp=Z,19nm,1.1s						
VIVF	Saint-Julien-l	11.99	298	*e*P	Pn	14 59 20.3	+0.3
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VIVF	Saint-Julien-l	11.99	298	*e*P	Pn	14 59 20.3	+0.3
	comp=Z,9.4nm,1.1s						
CDF	Champ du Feu	12.12	318	*e*P	Pn	14 59 20.5	-1.3
LASF	Ste Croix	12.34	294	*e*P	Pn	14 59 25.2	+0.5
HAU	Haudompre	12.37	314	*e*P	Pn	14 59 24.1	-1.1
	comp=Z,7.2nm,0.6s						
HAU				*e*MLR	MLR		
	comp=Z,99nm,20.0s						
HAU	Haudompre	12.37	314	*e*P	Pn	14 59 24.1	-1.1
HAU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HAU	Haudompre	12.37	314	*e*P	Pn	14 59 24.1	-1.1
	comp=Z,3.6nm,0.6s						
AKASG	Malin Array Be	12.61	29	Pn	Pn	14 59 26.6	-1.8
	comp=Z,0.2nm,0.3s,baz=213,slow=13,SNR=4.1						
SMF	Signal de Mont	13.18	305	*e*P	Pn	14 59 35.5	-0.8
MTLF	Montolieu	13.37	290	*e*P	Pn	14 59 39.2	+0.4
MEZF	Maizieres J'vi	13.37	314	*e*P	Pn	14 59 36.7	-2.1
LOR	Lormes	13.44	308	*e*P	Pn	14 59 38.9	-0.9
LOR				*e*MLR	MLR		
	comp=Z,82nm,17.2s						
AVF	Avril sur Loir	13.55	305	*e*P	Pn	14 59 40.3	-1.0
SSF	Saint Saulge	13.56	306	*e*P	Pn	14 59 40.4	-1.1
BGF	Bois d'Agland	13.78	304	*e*P	Pn	14 59 43.5	-0.9
CAF	Calviac	13.79	296	*e*P	Pn	14 59 44.1	-0.4
TCF	Toulx Ste Croi	14.09	302	*e*P	Pn	14 59 47.5	-1.2
RJF	Les Rejaudoux	14.26	297	*e*P	Pn	14 59 50.2	-0.8
RJF				*e*MLR	MLR		
	comp=Z,96nm,17.8s						
EPF	Esparros	14.69	288	*e*P	Pn	14 59 56.2	-0.7
	comp=Z,31nm,1.5s						
EPF	Esparros	14.69	288	*e*P	Pn	14 59 56.2	-0.7
EPF				pmax	pmax		
	comp=Z,16nm,1.5s						
EPF	Esparros	14.69	288	*e*P	Pn	14 59 56.2	-0.7
	comp=Z,16nm,1.5s						
BAIF	Baives	14.72	318	*e*P	Pn	14 59 54.8	-2.4
ETSF	Etsaut	15.34	287	*e*P	Pn	15 00 03.7	-1.9
	comp=Z,36nm,1.5s						
ETSF	Etsaut	15.34	287	*e*P	Pn	15 00 03.7	-1.9
ETSF				pmax	pmax		
	comp=Z,18nm,1.5s						
ETSF	Etsaut	15.34	287	*e*P	Pn	15 00 03.7	-1.9
	comp=Z,18nm,1.5s						
SJPF	Ste Jean	15.84	288	*e*P	Pn	15 00 11.2	-1.0
LDF	La Druitiere	16.43	308	*e*P	Pn	15 00 17.0	-2.6
FLN	La Foliniere	16.71	308	*e*P	Pn	15 00 20.3	-3.0
FLN				*e*MLR	MLR		
	comp=Z,44nm,21.8s						
GRR	Gorron	16.80	306	*e*P	Pn	15 00 21.9	-2.4
KIV	Kislovodsk	17.61	70	⇑*e*P	Pn	15 00 29.1	-5.4
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
SGMF	Saint Gilles	17.81	305	*e*P	Pn	15 00 35.3	-1.7
ESDC	Sonseca Array	18.06	276	P	Pn	15 00 41.9	+1.8
	comp=Z,0.2nm,0.3s,baz=296,slow=36,SNR=2.5						
QUIF	Quistinic	18.09	303	*e*P	Pn	15 00 38.6	-1.9
	comp=Z,196nm,1.6s						
QUIF	Quistinic	18.09	303	*e*P	Pn	15 00 38.6	-1.9
QUIF				pmax	pmax		
	comp=Z,98nm,1.6s						
QUIF	Quistinic	18.09	303	*e*P	Pn	15 00 38.6	-1.9
	comp=Z,98nm,1.6s						
ROSF	Rostrenen	18.29	304	*e*P	Pn	15 00 40.4	-2.5
	comp=Z,81nm,1.3s						
ROSF	Rostrenen	18.29	304	*e*P	Pn	15 00 40.4	-2.5
ROSF				pmax	pmax		
	comp=Z,41nm,1.3s						
ROSF	Rostrenen	18.29	304	*e*P	Pn	15 00 40.4	-2.5
	comp=Z,40nm,1.3s						
OBN	Obninsk	18.85	31	⇓*e*P	Pn	15 00 44.5	-5.1
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
VSU	Vasula	18.98	12	*e*P	Pn	15 00 48.0	-3.2
HFS	Hagfors	20.42	352	P	P	15 01 05.6	-0.7
HFS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HFS	Hagfors	20.42	352	P	P	15 01 05.6	-0.7
	comp=Z,4.5nm,0.7s,baz=168,slow=8.9,SNR=9.6						
KONO	Kongsberg	20.58	346	*e*P	P	15 01 10.9	+2.9
EKA	Eskdalemuir Ar	21.46	323	P	P	15 01 17.8	+0.2
EKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EKA	Eskdalemuir Ar	21.46	323	P	P	15 01 17.8	+0.2
	comp=Z,2.8nm,0.8s,mb3.6,baz=123,slow=10,SNR=4.6						
NB2	NORSAR Subarra	21.62	349	P	P	15 01 18.0	-1.2
	comp=Z,4.5nm,0.8s,mb4.0,baz=163,slow=10						
NB2	NORSAR Subarra	21.62	349	P	P	15 01 18.0	-1.2
NB2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
NOA	NORSAR Array B	21.62	349	P	P	15 01 18.4	-0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	NORSAR Array B	21.62	349	P	P	15 01 18.4	-0.9
	comp=Z,2.4nm,0.6s,mb3.8,baz=161,slow=11,SNR=13						
FINES	FINESS Array B	21.77	8	P	P	15 01 17.7	-3.2
FINES	FINESS Array B	21.77	8	P	P	15 01 17.7	-3.2
	comp=Z,2.6nm,0.7s,mb3.8,baz=161,slow=8.1,SNR=9.6						
FINES	FINESS Array B	21.77	8	*e*P	P	15 01 21.5	+0.6
KAF	Kangasniemi	22.45	8	*e*p	P	15 01 24.7	-3.4
	comp=Z,5.6nm,0.8s,mb4.0						
KAF	Kangasniemi	22.45	8	*e*P	P	15 01 24.7	-3.4
KAF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
JOF	Joensuu	23.95	13	*e*p	P	15 01 45.6	+2.3
	comp=Z,5.3nm,0.9s,mb4.0						
JOF	Joensuu	23.95	13	*e*P	P	15 01 45.6	+2.3
JOF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
AKTK	Aktyubinsk	28.69	56	P	P	15 02 24.0	-2.3
AKTO	Aktyubinsk	28.69	56	P	P	15 02 24.0	-2.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
AKTO	Aktyubinsk	28.69	56	P	P	15 02 24.0	-2.3
	comp=Z,0.5nm,0.4s,mb3.6,baz=267,slow=15,SNR=4.0						
TORD	Torodi Ar. Bea	31.08	215	P	P	15 02 48.8	+1.1
	comp=Z,0.8nm,0.8s,mb3.6,baz=21,slow=8.6,SNR=4.7						
MKAR	Makanchi Array	44.97	60	P	P	15 04 42.0	-2.5
MKAR	Makanchi Array	44.97	60	*i* P	P	15 04 42.0	-2.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	44.97	60	P	P	15 04 42.0	-2.5
	comp=Z,1.5nm,0.5s,mb4.1,baz=281,slow=7.0,SNR=22						
ZAL	Zalesovo	45.00	49	P	P	15 04 41.7	-2.9
ZALV	Zalesovo Beam	45.01	49	P	P	15 04 41.7	-3.0
	comp=Z,1.4nm,0.5s,mb4.1,baz=282,slow=9.3,SNR=9.7						
SONM	Songino Array	59.85	51	P	P	15 06 33.4	-1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	59.85	51	P	P	15 06 33.4	-1.4
	comp=Z,0.5nm,0.8s,mb3.6,baz=293,slow=9.8,SNR=4.0						
YKA	Yellowknife Ar	71.36	339	P	P	15 07 47.9	-1.0
	comp=Z,1.1nm,1.0s,mb3.8,baz=36,slow=5.4,SNR=8.1						
KSRS	Korea Array	78.71	50	P	P	15 08 32.2	+0.4
	comp=Z,1.0nm,0.8s,mb3.8,baz=318,slow=4.1,SNR=4.1						
MJAR	Matsushiro Arr	85.19	45	P	P	15 09 06.3	+0.3
	comp=Z,0.5nm,0.7s,mb3.7,baz=325,slow=5.4,SNR=4.1						

*NEIC **03** 14:57:25.7, 4506S×16625E, h11km, ML4.1(WEL), After WEL.*

WEL 03 14:57:25.2±0.5**, 4506S×16627E, h5**km**, ML4.0**/12**, 1D, Error ellipse: s-maj=5.1km s-min=2.3km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.75	124	P	Pg	14 57 39.9	+0.2
DCZ				S	Sg	14 57 49.9	+0.4
DCZ	Deep Cove	0.75	124	⇓P*	Pb	14 57 39.9	-0.9
DCZ				S*	Sb	14 57 49.9	-1.5
MSZ	Milford Sound	1.24	73	P	Pg	14 57 47.9	-1.1
MSZ				S	Sg	14 58 05.3	+0.2
MSZ	Milford Sound	1.24	73	P*	Pb	14 57 47.9	-1.2
MLZ	Mavora Lakes	1.38	103	P	Pn	14 57 50.1	-1.0
MLZ	Mavora Lakes	1.38	103	PN	Pn	14 57 50.1	-1.0
MLZ				S*	Sb	14 58 07.6	-1.7
WHZ	Wether Hill Ro	1.45	126	P	Pn	14 57 51.0	-1.0
WHZ				S	Sb	14 58 10.0	-1.4
WHZ	Wether Hill Ro	1.45	126	PN	Pn	14 57 51.0	-1.0
WHZ				SN	Sn	14 58 10.0	-1.5
WKZ	Wanaka	1.97	84	*e*P	Pn	14 58 00.5	+1.4
WKZ	Wanaka	1.97	84	PN	Pn	14 58 00.5	+1.4
JCZ	Jackson Bay	2.03	62	P	Pn	14 57 59.2	-0.9
JCZ	Jackson Bay	2.03	62	PN	Pn	14 57 59.2	-0.8
APZ	The Paps	2.15	147	PN	Pn	14 58 00.8	-0.8
EAZ	Earnscleugh	2.16	96	P	Pn	14 58 02.9	+1.1
EAZ	Earnscleugh	2.16	96	PN	Pn	14 58 02.9	+1.1
EAZ				SN	Sn	14 58 29.5	+0.6
SYZ	Scrubby Hill	2.50	127	PN	Pn	14 58 06.6	+0.2
TUZ	Tuapeka	2.53	112	*e*P	Pn	14 58 07.7	+0.8
TUZ	Tuapeka	2.53	112	PN	Pn	14 58 07.7	+0.8
LBZ	Lake Benmore	2.87	78	*e*P	Pn	14 58 12.1	+0.5
LBZ	Lake Benmore	2.87	78	PN	Pn	14 58 12.1	+0.5
FOZ	Fox Glacier	2.87	60	*e*P	Pn	14 58 11.2	-0.4
FOZ	Fox Glacier	2.87	60	PN	Pn	14 58 10.8	-0.8
ODZ	Otahua Downs	3.10	91	*e*P	Pn	14 58 14.8	0.0
ODZ	Otahua Downs	3.10	91	PN	Pn	14 58 14.8	+0.1
RPZ	Rata Peaks	3.68	70	PN	Pn	14 58 22.0	-0.8
WVZ	Waitaha Valley	3.78	60	*e*P	Pn	14 58 22.4	-1.7
WVZ	Waitaha Valley	3.78	60	PN	Pn	14 58 22.4	-1.7
LTZ	Lake Taylor	4.89	64	*e*P	Pn	14 58 37.6	-1.8
LTZ	Lake Taylor	4.89	64	PN	Pn	14 58 37.6	-1.8
DSZ	Denniston Nort	5.21	53	*e*P	Pn	14 58 42.5	-1.3
DSZ	Denniston Nort	5.21	53	PN	Pn	14 58 42.5	-1.3
THZ	Tophouse	5.85	58	*e*P	Pn	14 58 51.7	-0.8
THZ	Tophouse	5.85	58	PN	Pn	14 58 51.7	-0.8
QRZ	Quartz Range	6.24	50	*e*P	Pn	14 58 56.3	-1.6
QRZ	Quartz Range	6.24	50	PN	Pn	14 58 56.3	-1.6
NNZ	Nelson	6.46	56	*e*P	Pn	14 59 00.2	-0.7
NNZ	Nelson	6.46	56	PN	Pn	14 59 00.2	-0.8

IDC 03 15:00:41.7±57.0**, 2314S×17866W, h0**km**, mb4.5**/3**, mb1 4.7**/3**, mb1mx4.0**/13**, mbtmp4.5**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.9**/24**, 1D, Error ellipse: s-maj=1036.0km s-min=143.0km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.50	193	LR	LR	15 08 49.8	
	comp=Z,125nm,20.9s,baz=104,slow=32						
STKA	Stephens Creek	36.15	247	*e*P	P	15 07 45.3	-0.5
	2.0nm,0.4s						
STKA	Stephens Creek	36.15	247	P	P	15 07 45.2	-0.6
	2.2nm,0.4s,baz=95,slow=6.6,SNR=15						
ASAR	Alice Springs	43.38	260	P	P	15 08 46.0	-0.1
	1.3nm,0.3s,baz=94,slow=7.2,SNR=36						
WB2	Warramunga Arr	43.68	265	⇓*i*P	P	15 08 49.0	+0.4
WRA	Warramunga Arr	43.69	265	P	P	15 08 49.2	+0.5
	4.0nm,0.3s,baz=101,slow=8.4,SNR=280						
FORT	Forrest	47.73	249	*e*P	P	15 09 17.1	-3.4
	12nm,0.6s						
FITZ	Fitzroy Crossi	52.12	265	*e*P	P	15 09 53.7	-0.4
	16nm,1.5s						
KLBR	Kellerberrin	56.42	247	*e*P	P	15 10 20.7	-4.5
	79nm,1.6s						

*ISCJB **03** 15:13:29.9±0.4, 3879N±003×2148E±003, h10km, Error ellipse: s-maj=4.0km s-min=3.7km az=38.7*
*CSEM **03** 15:13:31.4±0.1, 3877N×2149E, h2km, MD3.4, Error ellipse: s-maj=2.3km s-min=1.6km az=110.0*
*THE **03** 15:13:31.4, 3876N×2151E, h5km, ML3.5*
*ATH **03** 15:13:31.1, 3875N×2150E, h16km±1km, MD3.4/8*
*NEIC **03** 15:13:31.1, 3875N×2150E, h16km, MD3.4(ATH), After ATH.*

ISC 03 15:13:30.5±0.4**, 3879N**±002×**2147E**±003**, h10**km**, n20, σ1§12**/28**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	Evrytania	0.30	65	*e*PB	Pg	15 13 37.5	+1.1
EVR				*e*SB	Sg	15 13 42.3	+1.9
SELA	Sela	0.61	147	*e*Pg	Pg	15 13 42.4	0.0
SELA				*e*Sg	Sg	15 13 50.8	+0.4
LKD	Levkas	0.64	263	*e*Pg	Pg	15 13 43.6	+0.7
LKD				*e*Sg	Sg	15 13 54.6	+3.2
AGG	Agios Georgios	0.71	71	*e*Pg	Pg	15 13 44.0	-0.2
AGG				*e*Sg	Sg	15 13 54.5	+0.9
AGG	Agios Georgios	0.71	71	*e*Pg	Pg	15 13 44.0	-0.3
AGG				*e*Sg	Sg	15 13 54.5	+0.9
RLS	Riolos of Patr	0.73	180	*e*PN	Pn	15 13 44.6	-2.3
RLS				*e*SN	Sg	15 13 54.3	+0.1
KFL	Anninata	0.86	218	*e*Pg	Pg	15 13 47.8	+0.7
THL	Klokotos Trika	0.88	29	*e*PB	Pb	15 13 47.9	0.0
THL				*e*SN	Sn	15 14 00.8	-1.1
VLS	Valsamata	0.92	229	*e*PN	Pn	15 13 48.5	-1.0
JAN	Janina	0.99	331	*e*PN	Pn	15 13 50.6	+0.2
MEV	Metsovon	1.01	350	*e*Pg	Pg	15 13 51.1	+1.2
IGT	Igoumenitsa	1.15	310	*e*Sg	Sg	15 14 06.3	-1.3
LKR	Lokris	1.21	96	*e*PN	Pn	15 13 53.0	-0.4
XOR	Xorichti	1.46	66	*e*Pg	Pg	15 13 57.1	-1.4
LIT	Litokhoron	1.53	31	*e*Pg	Pg	15 13 58.5	-1.3
LIT				*e*Sg	Sg	15 14 20.1	+0.4
KEK	Kerkira	1.59	306	*e*PN	Pg	15 14 01.7	+0.7
ITM	Ithomi	1.65	167	*e*PN	Pn	15 14 01.0	+1.5
VLI	Veliai	2.37	150	*e*PB	Pb	15 14 10.9	-2.4
KRUS	Krusevo	2.58	356	*e*Pn	Pb	15 14 16.5	-0.4
KRUS	Krusevo	2.58	356	*e*Pn	Pb	15 14 16.4	-0.5

IDC 03 15:16:14.9±2.2**, 101S×12751E, h0**km**, mb3.6**/2**, mb1 3.7**/3**, mb1mx3.4**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=192.3km s-min=24.5km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.97	161	P	Pn	15 20 49.0	-1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.2nm,0.3s,baz=343,slow=12,SNR=16						
ASAR	**Alice Springs**	**23.36**	**165**	P	P	15 21 25.1	-0.1
	0.9nm,0.7s,baz=344,slow=11,SNR=17						
MKAR	**Makanchi Array**	**61.89**	**326**	P	P	15 26 36.2	+0.1
	0.6nm,0.5s,baz=114,slow=7.6,SNR=9.9						

*NEIC **03** 15:23:34.5, 1667N×9976W, h1km, MD4.2(MEX), After MEX.*

MEX 03 15:23:34.4±0.6**, 1666N×9977W, h1km**±7km**, MD4.2, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.25**	**325**	*i* P	Pg	15 23 39.0	-0.3
ACX				*i* S	Sg	15 23 42.6	0.0
CAIG	**El Cayaco**	**0.62**	**309**	*i* P	Pg	15 23 46.0	-0.3
CAIG				*i* S	Sg	15 23 55.2	+0.9
MEIG	**Mezcala**	**1.27**	**6**	*i* P	Pg	15 23 55.6	-3.2
MEIG				*i* S	Sg	15 24 11.7	-3.6
PNIG	**Pinotepa**	**1.59**	**99**	*i* P	Pn	15 24 00.1	-3.6
PNIG				*i* S	Sn	15 24 20.0	-5.0
PLIG	**Platanillo**	**1.75**	**8**	*i* P	Pn	15 24 02.9	-3.0
PLIG				*i* S	Sn	15 24 25.1	-3.6
ZIIG	**Zihuatanejo**	**1.88**	**300**	*e*P	Pn	15 24 04.8	-2.8
ZIIG				*i* S	Sn	15 24 26.9	-5.1
YAIG	**Yautepec**	**2.29**	**17**	*i* P	Pn	15 24 12.1	-1.2
YAIG				*i* S	Sn	15 24 38.0	-4.2
PPM	**Popocatepetl**	**2.63**	**24**	*e*P	Pn	15 24 18.9	+0.9
PPM				*i* S	Sn	15 24 51.9	+1.3
PPM	**Popocatepetl**	**2.63**	**24**	*e*P	Pn	15 24 16.9	-1.1
PPM				*i* S	Sn	15 24 49.0	-1.6
SZVM	**Salazar**	**2.68**	**8**	*e*P	Pn	15 24 13.3	-5.3
SZVM				*i* S	Sn	15 24 49.6	-2.1
TPIG	**Tehuac#an**	**2.89**	**52**	*e*P	Pn	15 24 17.4	-4.2
TPIG				*i* S	Sn	15 24 54.4	-2.5
VHO	**Vista Hermosa**	**2.93**	**81**	*i* P	Pn	15 24 23.3	+1.2
VHO				*i* S	Sn	15 24 59.9	+1.9
VHO	**Vista Hermosa**	**2.93**	**81**	*e*P	Pn	15 24 18.5	-3.7
VHO				*i* S	Sn	15 24 52.0	-6.1
OXX	**Oaxaca**	**2.94**	**81**	*e*P	Pn	15 24 24.0	+1.7
OXX	**Oaxaca**	**2.94**	**81**	*e*P	Pn	15 24 23.5	+1.2
PTVM	**Pico Tres Padr**	**2.99**	**12**	*i* P	Pn	15 24 19.8	-3.1
PTVM				*i* S	Sn	15 24 54.6	-4.7
IIO	**Organos**	**3.08**	**19**	*e*P	Pn	15 24 25.8	+1.6
IIO				*i* S	Sn	15 24 55.5	-6.3
MOIG	**Morelia**	**3.30**	**336**	*i* S	Sn	15 25 04.3	-2.7
HUIG	**Huatulco**	**3.62**	**104**	*i* P	Pn	15 24 28.8	-2.9
HUIG				*i* S	Sn	15 25 08.6	-6.4
MMIG	**Aquila**	**3.78**	**296**	*i* P	Pn	15 24 31.3	-2.6
MMIG				*i* S	Sn	15 25 15.1	-3.9
CMIG	**Matias Romero**	**4.69**	**84**	*e*P	Pn	15 24 44.7	-1.7
CMIG				*i* S	Sn	15 25 38.2	-3.3

FUNV 03 16:36:13.9, 850N×7145W, h5km, MW3.5, 5C-3D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIGV	**El Vigia**	**0.35**	**14**	⇑*i*P	Pg	16 36 19.2	-1.5
VIGV				*e*S	Sg	16 36 24.2	-1.1
SOCV	**Socops**	**0.62**	**110**	⇑*e*P	Pg	16 36 23.3	-2.7
CAPV	**Capacho**	**1.06**	**234**	⇑*i*P	Pg	16 36 33.8	-0.5
CAPV				*e*S	Sg	16 36 48.6	+0.6
QARV	**Quebrada Arrib**	**1.93**	**28**	⇓*e*P	Pn	16 36 47.3	-0.2
QARV				*e*S	Sn	16 37 11.8	-0.3
CURV	**Curarigua**	**2.11**	**44**	⇓*e*P	Pn	16 36 49.5	-0.3
CURV				*e*S	Sn	16 37 16.2	-0.2
SANV	**Sanarito**	**2.14**	**62**	⇑*e*P	Pn	16 36 51.4	+1.1
SANV				*e*S	Sn	16 37 17.4	+0.2
VIRV	**Villa del Rosa**	**2.21**	**335**	*e*P	Pn	16 36 50.4	-0.8
ELOV	**Elorza**	**2.45**	**127**	*e*P	Pn	16 36 53.5	-1.1
ELOV				*e*S	Sn	16 37 23.6	-1.3
DABV	**Dabajuro**	**2.54**	**18**	⇓*e*P	Pn	16 36 55.5	-0.3
DABV				*e*S	Sn	16 37 26.0	-1.2
TEPV	**Terepaima**	**2.67**	**57**	*e*P	Pn	16 36 57.0	-0.5
TEPV				*e*S	Sn	16 37 28.8	-1.5
SIQV	**Siquisique**	**2.68**	**37**	*e*P	Pn	16 36 57.6	-0.2
SIQV				*e*S	Sn	16 37 28.8	-1.9
BAUV	**El Baul**	**3.40**	**82**	⇑*e*P	Pn	16 37 05.8	-1.8
BAUV				*e*S	Sn	16 37 45.0	-3.4
TURV	**Turiamo**	**4.06**	**61**	*e*P	Pn	16 37 15.9	-0.8
TURV				*e*S	Sn	16 38 00.8	-3.9
CAOV	**Caicara del Or**	**5.21**	**103**	*e*P	Pn	16 37 30.9	-1.6
BIRV	**Birongo**	**5.48**	**69**	*e*P	Pn	16 37 34.5	-1.7
CUPV	**Cœpira**	**5.80**	**74**	*e*P	Pn	16 37 39.0	-1.6

*MOS **03** 17:13:54.2±3.5, 5000N×10243E, h11km, mb4.3/1, Error ellipse: s-maj=30.2km s-min=11.3km az=79.9*

BYKL 03 17:13:35.6±0.6**, 4887N×10216E, h5km**±19km**, 3C-1D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK	**Zakamensk**	**1.68**	**25**	*e*PG	Pg	17 14 05.7	-2.1
ZAK				pmax	pmax		
	comp=Z,113nm,0.2s						
ZAK	**Zakamensk**	**1.68**	**25**	⇓*i*Pg	Pg	17 14 06.0	-1.8
ZAK				*e*Sg	Sg	17 14 27.9	-1.6
ZAK				Pmax			
	comp=Z,119nm,0.2s						
ZAK				Smax			
	comp=Z,791nm,0.8s						
MOY	**Mondy**	**2.90**	**345**	⇑*e*PN	Pn	17 14 23.7	+1.4
MOY				*i*		17 14 27.8	
MOY				pmax	pmax		
	comp=Z,46nm,0.4s						
MOY	**Mondy**	**2.90**	**345**	*e*Pn	Pn	17 14 23.8	+1.5
MOY				*e*Pg	Pg	17 14 27.8	-3.3
MOY				*i* Sg	Sg	17 15 05.9	-2.7
MOY				Pmax			
	comp=Z,52nm,0.7s						
MOY				Smax			
	comp=Z,338nm,1.0s						
TLY	**Talaya**	**2.97**	**18**	*e*PN	Pn	17 14 29.1	+5.8
TLY				pmax	pmax		
	comp=Z,42nm,0.3s						
TLY	**Talaya**	**2.97**	**18**	*e*Pn	Pn	17 14 24.2	+0.9
TLY				⇑*i*Pg	Pg	17 14 29.1	-3.4
TLY				*i* Sg	Sg	17 15 07.6	-3.4
TLY				*e*L		17 15 17.0	
TLY				Pmax			
	comp=Z,42nm,0.3s						
TLY				Smax			
	comp=Z,256nm,1.1s						
ARS	**Arshan**	**3.06**	**3**	*e*PN	Pn	17 14 25.6	+1.1
ARS				*e*		17 14 32.0	
ARS				pmax	pmax		
	comp=Z,23nm,0.4s						
ARS	**Arshan**	**3.06**	**3**	*e*Pn	Pn	17 14 25.5	+1.0
ARS				*e*Pg	Pg	17 14 31.8	-2.4
ARS				*e*Sg	Sg	17 15 10.9	-2.9
ARS				Pmax			
	comp=Z,23nm,0.4s						
ARS				Smax			
	comp=Z,310nm,0.9s						
ULN	**Ulaanbaatar**	**3.41**	**105**	*e*Pn	Pn	17 14 29.5	+0.1
ULN				*e*Pg	Pg	17 14 37.1	-3.9
ULN				*e*Sn	Sn	17 15 11.6	+1.4
ULN				*e*Sg	Sg	17 15 21.8	-3.4
LSTR	**Listvyanka**	**3.46**	**29**	*e*PN	Pn	17 14 37.7	+7.7
LSTR				pmax	pmax		
	comp=Z,21nm,0.6s						
LSTR	**Listvyanka**	**3.46**	**29**	*e*Pg	Pg	17 14 37.5	-4.3
LSTR				*e*Sn	Sn	17 15 02.7	-8.5
LSTR				*e*Sg	Sg	17 15 22.5	-4.0
LSTR				Pmax			
	comp=Z,20nm,1.0s						
LSTR				Smax			
	comp=Z,124nm,1.4s						
IRK	**Irkutsk**	**3.64**	**21**	*e*PN	Pn	17 14 41.1	+8.6
IRK				pmax	pmax		
	comp=Z,90nm,0.1s						
IRK	**Irkutsk**	**3.64**	**21**	*e*Sg	Sg	17 15 27.8	-4.5
IRK				Smax			
	comp=Z,577nm,1.0s						
ORL	**Orlik**	**3.96**	**339**	*e*PN	Pn	17 14 47.1	+10
ORL				pmax	pmax		
	comp=Z,17nm,0.5s						
ORL	**Orlik**	**3.96**	**339**	*e*Pn	Pn	17 14 38.1	+1.1
ORL				*e*Pg	Pg	17 14 46.4	-5.1
ORL				⇑*i*		17 14 47.7	
ORL				*e*Sg	Sg	17 15 38.2	-4.7
ORL				max			
	comp=Z,16nm,0.6s						
ORL				Smax			
	comp=Z,113nm,1.0s						
STDB	**Stepnoy Dvoret**	**4.25**	**38**	*e*Pg	Pg	17 14 52.5	-4.6
STDB				*e*Sg	Sg	17 15 49.9	-2.3
KAB	**Kabansk**	**4.29**	**40**	*e*Sg	Sg	17 15 49.9	-3.3
KAB				Smax			
	comp=Z,388nm,0.9s						
FFNB	**Fofonovo**	**4.33**	**41**	*e*Sg	Sg	17 15 48.0	-6.6
FFNB				Smax			
	comp=Z,230nm,0.4s						
UUDB	**Ulan-Yde**	**4.63**	**47**	*e*Pg	Pg	17 14 58.7	-5.5
UUDB				*e*Sg	Sg	17 15 59.7	-4.4
TRG	**Tyrgan**	**4.71**	**33**	*e*Pn	Pn	17 14 47.6	+0.3
TRG				*e*Pg	Pg	17 14 59.5	-6.3
TRG				*e*Sg	Sg	17 16 00.6	-6.3
TRG				Pmax			
	comp=Z,8.0nm,0.5s						
TRG				Smax			
	comp=Z,65nm,0.4s						
TRTB	**Turuntaevo**	**4.84**	**44**	*e*Pn	Pn	17 14 49.4	+0.3
TRTB				*e*Pg	Pg	17 15 01.2	-7.2
TRTB				*e*Sg	Sg	17 16 05.9	-5.2
TRTB				*e*		17 16 10.0	
TRTB				Pmax			
	comp=Z,25nm,0.9s						
TRTB				max			
	comp=Z,84nm,1.0s						
ZRHB	**Zarechye**	**4.86**	**39**	*e*Pg	Pg	17 15 02.6	-6.1
ZRHB				*e*Sg	Sg	17 16 07.4	-4.3
ZRHB				Pmax			
	comp=Z,52nm,0.9s						
ZRHB				Smax			
	comp=Z,184nm,0.9s						
TDJR	**Todzha**	**5.23**	**315**	*e*Pg	Pg	17 15 09.2	-6.5
TDJR				*e*Sg	Sg	17 16 19.1	-4.3
OGRR	**Ongureny**	**5.87**	**33**	*e*PN	Pn	17 15 04.4	+1.2
OGRR				*e*		17 15 21.9	
OGRR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
OGRR	**Ongureny**	**5.87**	**33**	*e*Pn	Pn	17 15 04.4	+1.2
OGRR				*e*Pg	Pg	17 15 20.1	-7.9
OGRR				*e*		17 15 22.9	
OGRR				*e*Sg	Sg	17 16 36.7	-7.3
OGRR				max			
	comp=Z,4.0nm,0.6s						
OGRR				Smax			
	comp=Z,48nm,0.5s						
MXMB	**Maximikha**	**6.05**	**41**	*e*Pn	Pn	17 15 05.8	+0.2
MXMB				*e*Pg	Pg	17 15 23.5	-7.8
MXMB				*e*Sg	Sg	17 16 43.6	-6.0
MXMB				Pmax			
	comp=Z,13nm,0.9s						
MXMB				Smax			
	comp=Z,78nm,0.8s						
ARDR	**Aradan**	**6.67**	**307**	*e*Pg	Pg	17 15 34.9	-8.4
ARDR				*e*Sg	Sg	17 17 02.8	-6.8
KPC	**Khapcheranga**	**6.74**	**79**	*e*Pn	Pn	17 15 13.7	-1.4
KPC				*e*Pg	Pg	17 15 36.7	-7.9
KPC				*e*Sg	Sg	17 17 03.9	-7.9
KPC				Pmax			
	comp=Z,3.0nm,0.4s						
KPC				Smax			
	comp=Z,92nm,1.6s						
SYVR	**Suvo**	**6.87**	**43**	*e*Pg	Pg	17 15 38.2	-8.8
SYVR				*e*Sg	Sg	17 17 07.4	-8.5
SYVR				Pmax			
	comp=Z,5.0nm,0.5s						
SYVR				Smax			
	comp=Z,40nm,1.3s						
CIT	**Chita**	**7.93**	**62**	*e*Sg	Sg	17 17 40.0	-10
CIT				Smax			
	comp=Z,55nm,1.2s						
YLYR	**Ulyunkhan**	**8.19**	**39**	*e*Sg	Sg	17 17 49.9	-8.5
YLYR				Smax			
	comp=Z,11nm,1.0s						
NIZ	**Nizh Angarsk**	**8.26**	**30**	*e*PG	Pg	17 16 06.9	-6.7
NIZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NIZ	**Nizh Angarsk**	**8.26**	**30**	*e*Sg	Sg	17 17 51.4	-9.0
NIZ				Smax			
	comp=Z,16nm,1.1s						
KMO	**Kumora**	**8.94**	**35**	*e*Sg	Sn	17 18 13.6	+48
KMO				Smax			
	comp=Z,18nm,0.9s						

*NIED **03** 17:21:00, 4670N×15320E, h17km, Mw5.5 Best double couple: M0 1.68000×10^17 NP1:φs223.00000°, δ50.00000°, λ-144.00000°. NP2:φs109.00000°, δ63.00000°, λ-46.00000°.*

*JMA **03** 17:21:47.5±0.6, 4672N×153.18E, h30km, M5.7*

*SKHL **03** 17:21:47.6±0.6, 4658N×15309E, h64km±31km, mb6.0/3, Ms5.1/2, msh5.5/1*

*ISCJB **03** 17:21:48.3±0.1, 4679N±002×15267E±002, h38km, mb5.0/160, MS4.7/51, Error ellipse: s-maj=3.8km s-min=1.5km az=156.5*

*MOS **03** 17:21:48.3±1.0, 4683N×15263E, h35km, mb5.1/73, MS4.6/28, Error ellipse: s-maj=7.0km s-min=4.6km az=96.1*

*BJI **03** 17:21:48.5, 4687N×15282E, h49km, mB5.1, mb5.2, Ms4.9, Msz4.8*

*NEIC **03** 17:21:49.8±0.1, 4681N×15263E, mb5.0/104, MS4.7/3, Error ellipse: s-maj=4.1km s-min=2.5km az=158.0*

*GCMT **03** 17:21:49.8±0.1, 4674N×15301E, h50km±1km, MW5.4/96, Moment Tensor Solution. s72,c126; s96,c181; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.28±.02; Mθθ0.71±.02; Mφφ-0.99±.02; Mrθ-0.74±.03; Mθφ-0.02±.02; Mφr0.88±.03; Best double couple: M0 1.45300×10^17 NP1:φs222.00000°, δ36.00000°, λ168.00000°. NP2:φs322.00000°, δ83.00000°, λ55.00000°. Principal axes: T 1.4130, Plg41.0000°, Azm199.0000°; N 0.0810, Plg35.0000°, Azm327.0000°; P -1.4930, Plg29.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SZGRF **03** 17:21:49.0, 4655N×15356E, h33km, mb4.8, Kuril Islands, Russia*

*IDC **03** 17:21:52.1±0.4, 4686N×15258E, h55km±3km, mb4.5/29, mb1 4.7/29, mb1mx4.6/32, mbtmp4.5/29, MS4.6/21, Ms1 4.6/21, ms1mx4.3/50, Error ellipse: s-maj=12.2km s-min=7.9km az=125.0*

ISC 03 17:21:50.7±0.1**, 4682N**±002×**15264E**±002**, h40km**±1.4km**:pP-P, n748, σ0s81**/784**, mb5.0**/160**, MS4.7**/51**, 147C-124D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.68**	**246**	*j i*PN	**Pn**	**17 22 46.4**	**+1.4**
KUR				*i* S	**Sn**	**17 23 30.0**	**+2.9**
KUR				pmax	pmax		
	comp=N,5μm,1.4s						
KUR				pmax	pmax		
	comp=E,8μm,1.4s						
KUR				pmax	pmax		
	comp=Z,12μm,1.4s						
KUR				pmax	pmax		
	comp=N,3μm,0.8s						
KUR				pmax	pmax		
	comp=E,970nm,0.8s						
KUR				pmax	pmax		
	comp=Z,6μm,0.8s						
KUR				smax			
	comp=N,24μm,1.6s						
KUR				smax			
	comp=E,45μm,1.6s						
KUR				MLR	MLR		
	comp=N,32μm,13.0s						
KUR				MLR	MLR		
	comp=E,29μm,13.0s						
KUR				MLR	MLR		
	comp=Z,24μm,13.0s						
KUR	**Kuril'sk**	**3.68**	**246**	⇑*i*P	**Pn**	**17 22 46.4**	**+1.4**
KUR				⇓*i*P		17 22 46.4	
KUR				AMB	AMB	17 22 48.0	
	comp=Z,12μm,1.4s						
KUR				AMB	AMB	17 22 48.0	
	comp=Z,4μm,1.4s						
KUR				AMB	AMB	17 22 48.0	
	comp=Z,7μm,1.4s						
KUR				AMB	AMB	17 22 49.2	
	comp=Z,3μm,0.8s						
KUR				AMB	AMB	17 22 49.2	
	comp=Z,968nm,0.8s						
KUR				AMB	AMB	17 22 49.2	
	comp=Z,6μm,0.8s						
KUR				*i* S	**Sn**	**17 23 30.0**	**+2.9**
KUR				A		17 23 47.0	
	comp=Z,25μm,1.6s						
KUR				A		17 23 47.0	
	comp=Z,30μm,1.6s						
KUR				A		17 23 47.4	
	comp=Z,24μm,1.6s						
KUR				A		17 23 47.4	
	comp=Z,45μm,1.6s						
KUR				AMS	AMS	17 24 14.0	
	comp=Z,26μm,13.0s						
KUR				AMS	AMS	17 24 14.0	
	comp=Z,21μm,13.0s						
KUR				AMS	AMS	17 24 14.0	
	comp=Z,32μm,13.0s						
KUR				AMS	AMS	17 24 14.0	
	comp=Z,29μm,13.0s						
KUR				AMS	AMS	17 24 14.0	
	comp=Z,24μm,13.0s						
SKR	**Severo-Kuril's**	**4.50**	**29**	*e*P	**Pn**	**17 22 56.0**	**-0.2**
SKR				AMB	AMB	17 22 57.5	
	comp=Z,60nm,0.4s						
SKR				AMB	AMB	17 22 57.5	
	comp=Z,320nm,0.5s						
SKR				AMB	AMB	17 22 57.5	
	comp=Z,420nm,0.5s						
SKR				AMB	AMB	17 23 03.0	
	comp=Z,2μm,2.0s						
SKR				AMB	AMB	17 23 03.0	
	comp=Z,3μm,2.0s						
SKR				*e*S	**Sn**	**17 23 41.0**	**-6.3**
SKR				A		17 23 59.0	
	comp=Z,12μm,8.0s						
SKR				A		17 23 59.0	
	comp=Z,5μm,8.0s						
SKR				A		17 23 59.0	
	comp=Z,5μm,6.0s						
SKR				A		17 23 59.0	
	comp=Z,13μm,8.0s						
SKR				A		17 23 59.0	
	comp=Z,5μm,8.0s						
SKR				A		17 23 59.0	
	comp=Z,5μm,6.0s						
SKR				A		17 24 03.0	
	comp=Z,2μm,0.5s						
SKR				A		17 24 03.0	
	comp=Z,810nm,0.5s						
SKR				A		17 24 03.0	
	comp=Z,550nm,0.5s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,14μm,12.0s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,15μm,12.0s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,4μm,10.0s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,8μm,10.0s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,4μm,10.0s						
SKR				AMS	AMS	17 24 46.0	
	comp=Z,8μm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.52**	**242**	*e*PN	**Pn**	**17 23 13.8**	**+3.5**
YUK				*i* S	**Sn**	**17 24 18.9**	**+6.4**
YUK				pmax	pmax		
	comp=N,700nm,0.4s						
YUK				pmax	pmax		
	comp=Z,5μm,0.4s						
YUK				pmax	pmax		
	comp=E,1μm,0.5s						
YUK				pmax	pmax		
	comp=N,4μm,1.5s						
YUK				pmax	pmax		
	comp=Z,9μm,1.5s						
YUK				pmax	pmax		
	comp=E,5μm,1.0s						
YUK				smax			
	comp=N,2μm,0.7s						
YUK				smax			
	comp=E,690nm,0.5s						
YUK				smax			
	comp=N,40μm,1.3s						
YUK				smax			
	comp=E,15μm,1.2s						
YUK				MLR	MLR		
	comp=Z,6μm,17.0s						
YUK				MLR	MLR		
	comp=N,18μm,15.0s						
YUK	**Yuzh-Kuril'sk**	**5.52**	**242**	*e*P	**Pn**	**17 23 13.8**	**+3.5**
YUK				AMB	AMB	17 23 15.5	
	comp=N,700nm,0.4s						
YUK				AMB	AMB	17 23 15.5	
	comp=N,5μm,0.4s						
YUK				AMB	AMB	17 23 15.5	
	comp=N,1μm,0.5s						
YUK				AMB	AMB	17 23 21.2	
	comp=N,4μm,1.5s						
YUK				AMB	AMB	17 23 21.2	
	comp=N,4μm,1.0s						
YUK				AMB	AMB	17 23 21.2	
	comp=N,9μm,1.0s						
YUK				*e*S	**Sn**	**17 24 18.9**	**+6.4**
YUK				A		17 24 39.7	
	comp=N,7μm,0.5s						
YUK				A		17 24 39.7	
	comp=N,24μm,0.7s						
YUK				A		17 24 43.0	
	comp=N,15μm,1.2s						
YUK				A		17 24 43.0	
	comp=N,40μm,1.3s						
NEM2	**Nemuro 2**	**5.98**	**237**	⇑P	**Pn**	**17 23 16.9**	**+0.4**
NEM2				*e*S	**Sn**	**17 24 23.0**	**-0.7**
JRA	**Rausu**	**6.03**	**244**	⇑P	**Pn**	**17 23 20.4**	**+3.2**
JRA				*e*S	**Sn**	**17 24 31.4**	**+6.5**
JNK	**Nakash**	**6.46**	**243**	P	**Pn**	**17 23 25.5**	**+2.3**
JNK				*e*S	**Sn**	**17 24 38.3**	**+2.7**
JTKR	**Abashiri--Toko**	**6.77**	**248**	⇑P	**Pn**	**17 23 31.1**	**+3.6**
YSS	**Yuzh-Sakhalins**	**6.78**	**275**	⇓*i*Pn	**Pn**	**17 23 32.0**	**+4.5**
	comp=N,454nm,0.9s						
YSS				*e*Sn	**Sn**	**17 24 48.5**	**+5.2**
YSS	**Yuzh-Sakhalins**	**6.78**	**275**	⇓*e*PN	**Pn**	**17 23 32.0**	**+4.5**
YSS				*e*S	**Sn**	**17 24 46.2**	**+2.9**
YSS				pmax	pmax		
	comp=Z,4μm,1.0s						
YSS				smax			
	comp=N,23μm,0.7s						
YSS				smax			
	comp=E,32μm,0.7s						
YSS				MLR	MLR		
	comp=Z,9μm,17.0s						
JAK	**Akkeshi**	**6.81**	**239**	P	**Pn**	**17 23 28.3**	**+0.3**
JAK				*e*S	**Sn**	**17 24 43.2**	**-1.0**
JMP	**Maruseppu**	**7.11**	**250**	⇑P	**Pn**	**17 23 36.0**	**+3.9**
JAR	**Ashorobuto**	**7.20**	**244**	P	**Pn**	**17 23 35.9**	**+2.6**
JAR				*e*S	**Sn**	**17 24 57.8**	**+4.1**
JSE	**Soyaes**	**7.26**	**259**	⇑P	**Pn**	**17 23 39.2**	**+5.1**
PET	**Petropavlovsk**	**7.32**	**30**	*e*Pn	**Pn**	**17 23 35.7**	**+0.8**
	comp=Z,295nm,1.0s						
PET				*e*Sn	**Sn**	**17 24 54.5**	**-2.2**
PET	**Petropavlovsk**	**7.32**	**30**	*e*PN	**Pn**	**17 23 35.9**	**+0.9**
PET				pmax	pmax		
	comp=Z,500nm,5.4s						
PET				pmax	pmax		
	comp=Z,1μm,7.9s						
PET				MLR	MLR		
	comp=Z,4μm,16.0s						
PET				MLR	MLR		
	comp=Z,4μm,15.0s						
JOB	**Onbets**	**7.38**	**241**	P	**Pn**	**17 23 36.6**	**+0.9**
JOB				*e*S	**Sn**	**17 24 58.0**	**-0.1**
UGL	**Uglegorsk**	**7.45**	**292**	*e*PN	**Pn**	**17 23 42.0**	**+5.3**
UGL				S	**Sn**	**17 25 08.0**	**+8.1**
UGL				pmax	pmax		
	comp=N,112nm,1.0s						
UGL				pmax	pmax		
	comp=E,112nm,1.0s						
UGL				pmax	pmax		
	comp=Z,605nm,1.0s						
UGL				pmax	pmax		
	comp=Z,1μm,5.0s						

UGL smax
comp=N,127nm,0.6s
UGL smax
comp=E,95nm,0.6s
UGL MLR MLR
comp=E,6µm,18.0s
UGL MLR MLR
comp=Z,6µm,18.0s
UGL MLR MLR
comp=N,3µm,16.0s
UGL Uglegorsk 7.45 292 *e*P **Pn 17 23 42.0 +5.3**
UGL ⇓*i*P 17 23 42.0
UGL AMB AMB 17 23 43.5
comp=N,112nm,1.0s
UGL AMB AMB 17 23 43.5
comp=N,605nm,1.0s
UGL AMB AMB 17 23 44.0
comp=N,1µm,5.0s
ASAJ Asahikawa 7.56 253 P **Pn 17 23 43.2 +5.0**
ASAJ Asahikawa 7.56 253 PN **Pn 17 23 43.3 +5.1**
ASAJ S **Sn 17 25 11.6 +9.1**
ASAJ pmax pmax
comp=Z,48nm,0.3s
ASAJ smax
comp=N,7.0nm,0.3s
ASAJ MLR MLR
comp=Z,7µm,20.0s
ASAJ Asahikawa 7.56 253 P **Pn 17 23 43.2 +5.0**
comp=Z,48nm,0.3s,baz=85,slow=17,SNR=388
ASAJ S **Sn 17 25 11.6 +9.0**
comp=Z,6.6nm,0.3s,baz=138,slow=16,SNR=1.5
ASAJ LR LR 17 26 30.4
comp=Z,7µm,20.0s,baz=65,slow=37
JKK2 Kamakawa 2 7.56 251 P **Pn 17 23 42.6 +4.3**
JWK2 Keihoku 7.62 263 P **Pn 17 23 46.3 +7.2**
TYV Tymovskoe 7.73 305 *e*PN **Pn 17 23 46.0 +5.5**
TYV pmax pmax
comp=N,61nm,0.8s
TYV pmax pmax
comp=E,61nm,0.8s
TYV pmax pmax
comp=Z,121nm,0.8s
TYV MLR MLR
comp=Z,55µm,18.0s
TYV MLR MLR
comp=N,25µm,13.0s
TYV MLR MLR
comp=E,75µm,16.0s
JCH Churui 7.83 241 P **Pn 17 23 42.5 +0.6**
JCH *e*S **Sn 17 25 08.1 -1.1**
JSS Shosan 7.94 256 P **Pn 17 23 50.1 +6.7**
JFR Furan 8.00 246 ⇑P **Pn 17 23 47.3 +3.0**
JAB Ashibetsu 8.07 250 P **Pn 17 23 50.0 +4.8**
JHR Hokuryu 8.29 252 P **Pn 17 23 53.2 +5.0**
ERM Erimo 8.31 238 Pn **Pn 17 23 50.8 +2.3**
comp=E,3µm,0.6s
ERM Erimo 8.31 238 *e*Pn **Pn 17 23 50.0 +1.5**
comp=E,4.1nm,0.6s
ERM Erimo 8.31 238*c i*PN **Pn 17 23 50.5 +2.0**
JEM Erimo 8.31 238 P **Pn 17 23 49.6 +1.1**
JBT2 Biratori 2 8.35 245 P **Pn 17 23 50.7 +1.7**
JNBK Urakawa-nobuka 8.39 241 P **Pn 17 23 49.5 -0.1**
JNBK *e*S **Sn 17 25 22.1 -0.9**
JEW Eniwo 8.89 247 P **Pn 17 23 59.2 +2.7**
JEW *e*S **Sn 17 25 45.1 +10**
OKH Okha 9.17 321 *e*PN **Pn 17 24 00.0 -0.2**
OKH *e*S **Sn 17 25 43.0 +1.0**
OKH smax
comp=N,10.0nm,0.8s
OKH smax
comp=Z,3.0nm,1.1s
JNB Noboribetsu 9.34 246 P **Pn 17 24 03.6 +1.0**
JNB *e*S **Sn 17 25 46.7 +0.4**
JKB Kayabe 9.66 244 P **Pn 17 24 06.5 -0.5**
JKB *e*S **Sn 17 25 50.3 -3.9**
JSH Shimam 9.88 250 P **Pn 17 24 12.3 +2.2**
JYM2 Yakumo 2 9.95 246 P **Pn 17 24 11.8 +0.9**
NKL Nikolayevsk 9.97 314 *i* P **Pn 17 24 10.0 -1.2**
NKL AMB AMB 17 24 12.8
comp=Z,45nm,1.3s
NKL AMB AMB 17 24 12.8
comp=Z,60nm,1.3s
NKL AMB AMB 17 24 12.8
comp=Z,220nm,1.3s
NKL AMB AMB 17 24 14.0
comp=Z,350nm,3.0s
JSR Shiriuchi 10.24 243 P **Pn 17 24 14.3 -0.7**
JSR *e*S **Sn 17 26 04.1 -4.4**
JTM Tenmabayashi 10.30 238 P **Pn 17 24 14.3 -1.5**
JTM *e*S **Sn 17 26 03.2 -6.8**
JANG Nango 10.32 235 P **Pn 17 24 13.7 -2.3**
JANG *e*S **Sn 17 26 01.3 -9.0**
JTH Tanohata 10.42 233 P **Pn 17 24 14.5 -3.0**
JTH *e*S **Sn 17 26 02.4 -10**
JOSM Okushiri--Mats 10.53 248 P **Pn 17 24 19.6 +0.7**
OFUJ Ofunato 11.15 230 P **Pn 17 24 24.1 -3.3**
OFUJ *e*S **Sn 17 26 20.3 -10**
TEY Ternei 11.31 267 *e*P **Pn 17 24 31.0 +1.4**
TEY AMB AMB 17 24 36.5
comp=Z,110nm,1.3s
TEY AMB AMB 17 24 36.5
comp=Z,180nm,1.3s
TEY AMB AMB 17 24 36.5
comp=Z,260nm,1.3s
JRG Rokugo 11.48 234 P **Pn 17 24 29.1 -2.8**
JRG *e*S **Sn 17 26 27.4 -11**
JOG2 Oga 2 11.61 238 P **Pn 17 24 32.2 -1.5**
JYW Yuwa 11.62 236 P **Pn 17 24 32.8 -1.0**
JIO Ouri 11.78 229 P **Pn 17 24 32.6 -3.4**
JIO *e*S **Sn 17 26 35.7 -10**
HABR Khabarovsk 11.98 284 *e*PN **Pn 17 24 37.5 -1.2**
HABR *e*S **Sn 17 27 01.0 +10**
HABR pmax pmax
comp=Z,13nm,1.8s
HABR MLR MLR
comp=Z,4µm,14.0s
JYA Atsumi 12.55 234 P **Pn 17 24 43.9 -2.7**
JYA *e*S **Sn 17 26 59.2 -5.8**
MA2 Magadan 12.83 356 ⇑*i*Pn **Pn 17 24 51.9 +1.7**
comp=Z,53nm,0.6s
MA2 Magadan 12.83 356*d i*PN **Pn 17 24 52.1 +1.9**
MA2 pmax pmax
comp=Z,60nm,0.6s
MA2 MLR MLR
comp=Z,2µm,17.0s
JFK Kawauchi 12.85 227 P **Pn 17 24 47.5 -3.2**
JFK *e*S **Sn 17 27 02.4 -10**
JAW Awa shima 12.91 234 P **Pn 17 24 49.3 -2.1**
JFY Yanaizu 13.42 230 P **Pn 17 24 56.3 -2.2**
JFY *e*S **Sn 17 27 17.8 -8.4**
KLR Kul'dur 14.18 287 *e*P **Pn 17 25 10.2 +1.5**
KLR pmax pmax
comp=E,240nm,2.0s
KLR pmax pmax
comp=Z,200nm,2.0s
KLR MLR MLR
comp=Z,8µm,12.5s
JAG Ashikaga 14.30 228 P **Pn 17 25 07.9 -2.5**
JJN Nakama 14.48 233 P **Pn 17 25 11.0 -1.8**
MJAR Matsushiro Arr 14.86 231 P **Pn 17 25 15.6 -2.4**
MJAR pmax pmax
comp=Z,4.0nm,0.3s
MJAR Matsushiro Arr 14.86 231 P **Pn 17 25 15.6 -2.3**
comp=Z,3.9nm,0.3s,baz=26,slow=14,SNR=151
MAJO Matsushiro 14.86 231⇑*e*Pn **Pn 17 25 14.9 -3.0**
comp=Z,144nm,0.6s
MAJO Matsushiro 14.86 231⇑*e*P **Pn 17 25 14.9 -3.1**
MAJO pmax pmax
comp=Z,144nm,0.6s
MAT Matsushiro 14.86 231 P **Pn 17 25 15.5 -2.5**
MAT *e*S **Sn 17 28 07.8 +6.5**
MAT Matsushiro 14.86 231 P **Pn 17 25 15.8 -2.2**
VLA Vladivostok 15.13 263 P **Pn 17 25 21.0 -0.5**
VLA pmax pmax
comp=Z,90nm,0.8s
VLA MLR MLR
comp=Z,4µm,17.9s
JNY Yasuok 15.94 229 P **Pn 17 25 30.5 -1.5**
MDJ Mudanjiang 16.24 271 P **Pn 17 25 37.6 +1.9**
MDJ AP pP 17 25 50.9 +2.8
MDJ XP sP 17 25 57.2 +4.1
MDJ S **S** **17 28 32.9 -13**
MDJ PCP PcP 17 30 28.7 +0.6
MDJ SCP ScP 17 33 58.0 -1.2
MDJ AMB AMB
comp=Z,34nm,1.1s
MDJ LR LR
comp=N,2µm,19.1s
MDJ LR LR
comp=E,2µm,20.1s
MDJ LR LR
comp=Z,4µm,19.1s
TSUJ Tsu 2 17.20 231 P **Pn 17 25 47.0 -0.8**
JIE Ise 17.29 230 P **Pn 17 25 48.1 -0.8**
JWT Wachi 17.33 234 P **Pn 17 25 48.4 -1.0**
JKSM Kasumi 17.53 237 P **Pn 17 25 51.3 -0.6**
JKS Kasai 17.86 235 P **Pn 17 25 55.3 -0.7**
JGT Gotsu 19.28 240 P **Pn 17 26 13.6 +0.5**
CN2 Changchun 19.32 271 *e*P **Pn 17 26 11.3 -2.3**
CN2 *e*XP sP 17 26 29.7 +2.5
CN2 *e*S **S** **17 29 39.8 -8.9**
CN2 AMB AMB
comp=Z,30nm,0.6s
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,17.0s
CN2 LR LR
comp=E,3µm,17.0s
CN2 LR LR
comp=Z,3µm,17.0s
MRT2 Murotomisaki 2 19.43 233 P **Pn 17 26 15.0 0.0**
CLNS Chul'man 19.73 311 *e*P **Pn 17 26 20.5 +2.2**
CLNS *e*S **S** **17 29 58.8 +2.2**
CLNS pmax pmax
comp=E,20nm,0.8s
CLNS pmax pmax
comp=Z,41nm,0.8s
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS smax
comp=N,47nm,1.2s
CLNS smax
comp=E,44nm,1.2s
CLNS smax
comp=Z,11nm,1.1s
CLNS MLR MLR
comp=Z,2µm,15.0s
CLNS MLR MLR
comp=N,800nm,14.0s
CLNS MLR MLR
comp=E,2µm,16.0s
JET Tanbara 19.75 236 P **Pn 17 26 18.6 -0.2**
NRGR Nerungri 19.76 310 *e*P pP 17 26 32.7 +5.8
NRGR *e*S **S** **17 30 05.9 +8.6**
NRGR smax
comp=N,79nm,1.0s
JKU Kubokawa 20.09 235 P **P** **17 26 22.2 +1.5**
YAK Yakutsk 20.09 328 *e*P **P** **17 26 22.0 +1.5**
comp=N,206nm,1.1s
YAK Yakutsk 20.09 328 *e*P **P** **17 26 22.3 +1.8**
YAK *e**PP 17 26 31.9
YAK *e* 17 26 40.8
YAK *e*S **S** **17 30 04.9 +1.2**
YAK *e* 17 37 43.4
YAK pmax pmax
comp=Z,33nm,0.7s
YAK pmax pmax
comp=N,12nm,1.3s
YAK pmax pmax
comp=E,14nm,1.2s
YAK pmax pmax
comp=Z,319nm,1.6s
YAK pmax pmax
comp=N,410nm,2.1s
YAK pmax pmax
comp=E,280nm,1.4s
YAK smax
comp=N,250nm,1.9s
YAK smax
comp=E,129nm,1.6s
YAK MLR MLR
comp=Z,604nm,23.0s,MS3.9
YAK MLR MLR
comp=N,820nm,16.0s
YAK MLR MLR
comp=E,521nm,13.0s
JNA Nagahama 20.24 236 P **P** **17 26 24.0 +1.7**
UWA2 Uwa jima 2 20.41 235 P **P** **17 26 26.0 +1.8**
KSRS Korea Array 20.51 252 P **P** **17 26 26.6 +1.3**
comp=E,44nm,0.8s,baz=56,slow=11,SNR=58
KSRS PcP PcP 17 30 35.9 +0.4
comp=E,3.9nm,0.9s,baz=21,slow=1.6,SNR=6.2
KSRS LR LR 17 33 20.1
comp=E,2µm,20.2s,MS4.5,baz=64,slow=34
KSRS ScP ScP 17 34 08.0 -0.6
comp=E,5.5nm,1.2s,baz=3.8,slow=3.8,SNR=6.3
SNY Shenyang 21.32 267 ⇓P **P** **17 26 33.9 0.0**
SNY S **S** **17 30 30.0 +1.7**
SNY AMB AMB
comp=Z,49nm,0.7s,mb5.0
SNY LR LR
comp=N,2µm,17.4s
SNY LR LR
comp=E,2µm,23.7s
SNY LR LR
comp=Z,4µm,20.4s,MS4.8
INCN Inchon 21.34 253 *e*P **P** **17 26 35.6 +1.4**
comp=Z,78nm,0.8s,mb5.1
CBIJ Chichi jima 21.35 206 P **P** **17 26 34.8 +0.4**
comp=Z,433nm,0.8s,mb5.8,baz=32,slow=5.8,SNR=11
JNU Nakatsue 21.48 238 P **P** **17 26 36.9 +1.1**
comp=Z,119nm,0.9s,mb5.2,baz=50,slow=9.0,SNR=84
JNU LR LR 17 35 33.9
comp=Z,903nm,18.8s,MS4.2,baz=266,slow=38
JII Iki 21.68 241 P **P** **17 26 38.6 +0.7**
HIA Hailar 22.04 289 *e*P **P** **17 26 39.1 -2.5**
comp=Z,25nm,0.8s,mb4.7
HIA Hailar 22.04 289 *e*P **P** **17 26 39.1 -2.4**
HIA pmax pmax
comp=Z,25nm,0.9s
BILL Bilibino 22.40 13 *e*P **P** **17 26 43.5 -1.7**
comp=Z,18nm,0.9s,mb4.5
BILL Bilibino 22.40 13 *e*P **P** **17 26 43.8 -1.4**
BILL *i* S **S** **17 30 47.2 -1.7**
BILL pmax pmax
comp=Z,19nm,1.0s,mb4.5
BILL MLR MLR
comp=Z,4µm,19.0s,MS4.8
BOD Bodaibo 25.69 310 *e*P **P** **17 27 15.9 -0.8**
BOD pmax pmax
comp=Z,17nm,1.2s,mb4.5
CIT Chita 25.72 296 *e*P pP 17 27 27.8 0.0
CIT *e* 17 27 57.0
CIT *e* 17 28 10.6
GAMB Gambell 25.96 36 *e*P **P** **17 27 18.8 -0.2**
GAMB *e* 17 27 32.8
BJI Beijing 27.15 269 P **P** **17 27 29.4 -0.6**
TIXI Tiksi 27.31 344 *e*P **P** **17 27 29.6 -1.5**
comp=Z,14nm,1.1s,mb4.4
TIXI Tiksi 27.31 344 *e*P **P** **17 27 30.4 -0.7**
TIXI pmax pmax
comp=Z,11nm,1.1s,mb4.3
TIXI MLR MLR
comp=Z,816nm,14.0s,MS4.5
JOW Kunigami 27.70 232 P **P** **17 27 35.0 -0.1**
comp=Z,51nm,0.8s,mb5.2,baz=13,slow=6.1,SNR=8.1
TNA Tin City 28.16 34 *e*P **P** **17 27 38.1 -0.6**
comp=Z,24nm,1.1s,mb4.8
TIA Tai'an 28.40 261 *e*P **P** **17 27 42.1 +0.9**
SSE Sheshan 28.82 248 P **P** **17 27 45.9 +0.9**
SSE S **S** **17 32 29.4 -2.7**
SSE XS sS 17 32 48.8 -1.5
SSE AMB AMB
comp=Z,33nm,1.1s,mb5.0
SSE AMB AMB
comp=Z,243nm,6.4s
SSE LR LR
comp=N,2µm,25.6s,MS4.6
SSE LR LR
comp=E,641nm,25.7s,MS4.6
SSE LR LR
comp=Z,1µm,24.2s,MS4.5
SSE Sheshan 28.82 248 P **P** **17 27 45.9 +0.9**
comp=Z,33nm,1.1s,mb5.0
SSE sP sP 17 27 57.5 -3.1
SSE S **S** **17 32 29.4 -2.7**
SSE sS sS 17 32 48.8 -1.5
SSE LR LR
comp=Z,2µm,24.2s,MS4.5
NJ2 Nanjing 29.70 252 *e*P **P** **17 27 53.6 +0.8**
NJ2 AP pP 17 28 10.0 +6.3
NJ2 XP sP 17 28 14.9 +6.4
NJ2 PP PP 17 28 52.2 -8.0
NJ2 S **S** **17 32 43.0 -3.0**
NJ2 XS sS 17 33 07.0 +2.8
NJ2 AMB AMB
comp=Z,50nm,0.9s,mb5.2
NJ2 AMB AMB
comp=Z,210nm,9.0s
NJ2 LR LR
comp=N,2µm,15.9s,MS5.0
NJ2 LR LR
comp=E,2µm,20.4s,MS5.0
NJ2 LR LR
comp=Z,2µm,20.4s,MS4.8
HHC Hu-ho-hao-te 29.96 274 *e*P **P** **17 27 55.4 +0.4**
HHC AP pP 17 28 05.1 -0.8
HHC XP sP 17 28 09.2 -1.5
HHC PP PP 17 28 53.3 -10
HHC PCP PcP 17 30 58.2 +1.6
HHC *e*S **S** **17 32 48.9 -1.0**
HHC SS SS 17 34 24.8 -33
HHC PCS PcS 17 34 40.4 +0.5
HHC AMB AMB
comp=Z,41nm,0.8s,mb5.2
HHC AMB AMB
comp=Z,188nm,5.5s
HHC LR LR
comp=N,1µm,15.9s,MS4.8
HHC LR LR
comp=E,2µm,19.4s,MS4.8
HHC LR LR
comp=Z,2µm,20.5s,MS4.7
ULN Ulaanbaatar 30.57 289 *e*P **P** **17 28 00.1 -0.2**
comp=Z,33nm,1.0s,mb5.1
ULN *e*ScP ScP 17 34 34.1 -3.2
ULN Ulaanbaatar 30.57 289 *e*P **P** **17 28 00.1 -0.2**
ULN *e* 17 34 34.1
ULN pmax pmax
comp=Z,33nm,1.0s,mb5.1
SONM Songino Array 31.00 289 P **P** **17 28 03.3 -0.8**
comp=Z,1.8nm,0.7s,mb4.0,baz=71,slow=7.3,SNR=17
SONM ScP ScP 17 34 34.6 -4.1
comp=Z,1.5nm,0.9s,baz=91,slow=2.4,SNR=4.4
SONM LR LR 17 41 39.9
comp=Z,2µm,18.3s,MS4.8,baz=81,slow=38
TLY Talaya 31.86 297 *e*P **P** **17 28 10.5 -1.1**
comp=Z,4.6nm,0.6s,mb4.5
TLY Talaya 31.86 297 *e*P **P** **17 28 11.4 -0.2**
TLY *e* 17 29 38.6
TLY *e*S **S** **17 33 20.2 +0.9**
TLY *e*SS SS 17 35 38.0 +1.4
TLY pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TLY MLR MLR
comp=Z,2µm,20.0s,MS4.7
ZAK Zakamensk 32.35 295 *e*P **P** **17 28 14.8 -1.1**
ZAK *e* 17 31 01.6
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TTA Tatalina 32.59 42 *e*P **P** **17 28 18.0 +0.2**
SVW2 Sparrevohn 32.67 45 *e*P **P** **17 28 19.1 +0.5**
WHN Wuhan 33.63 255 ⇓*i*P **P** **17 28 28.1 +0.8**
WHN LR LR
comp=Z,2µm,15.7s,MS5.0
GUMO Guam 33.76 194 LR LR 17 39 25.3
comp=Z,1µm,20.7s,MS4.6,baz=59,slow=31
IMA2 Indian Mountai 33.94 36 *e*P **P** **17 28 29.6 0.0**
KDAK Kodiak Island 34.31 51 P **P** **17 28 31.2 -1.7**
comp=Z,271nm,0.9s,mb6.2,SNR=6.0
KDAK Kodiak Island 34.31 51 P **P** **17 28 31.6 -1.4**
comp=Z,34nm,0.8s,mb5.3,baz=330,slow=3.4,SNR=12
QZH Quanzhou 34.77 243 ⇑*i*P **P** **17 28 40.4 +3.2**
QZH S **S** **17 34 07.0 +2.1**
QZH AMB AMB
comp=Z,80nm,0.8s,mb5.7
QZH AMB AMB
comp=Z,1µm,5.1s
QZH LR LR
comp=N,1µm,13.2s
QZH LR LR
comp=E,2µm,19.5s
QZH LR LR
comp=Z,3µm,35.5s
XAN Xi'an 35.20 265 P **P** **17 28 41.0 +0.2**
XAN AMB AMB
comp=Z,74nm,1.1s,mb5.5
XAN LR LR
comp=N,466nm,22.9s,MS4.7
XAN LR LR
comp=E,1µm,19.4s,MS4.7
XAN LR LR
comp=Z,2µm,17.7s,MS4.8
SLKM Skilak Lake 35.31 46 *e*P **P** **17 28 39.7 -1.8**
PMR Palmer 35.78 44 *e*P **P** **17 28 45.2 -0.3**
comp=Z,24nm,1.1s,mb5.0
PMR Palmer 35.78 44 *e*P **P** **17 28 45.2 -0.3**
PMR pmax pmax
comp=Z,24nm,1.1s,mb5.0
MCK McKinley 35.81 40 *e*P **P** **17 28 45.0 -0.7**
comp=Z,16nm,1.1s,mb4.9
MCK *e*sP sP 17 28 59.7 -1.9
MCK McKinley 35.81 40 P **P** **17 28 45.8 0.0**
MCK pmax pmax
comp=Z,16nm,1.0s,mb4.9
SML Sawmill 36.15 44 *e*P **P** **17 28 48.2 -0.4**
SML *e*pP pP 17 28 59.1 -0.6
SML Sawmill 36.15 44 P **P** **17 28 48.6 0.0**
SML *e* pP 17 28 59.4 -0.3
COLA College 36.29 38 *e*P **P** **17 28 49.7 -0.1**
comp=Z,77nm,1.3s,mb5.5
COLA *e*pP pP 17 29 03.3 +2.5
COLA College 36.29 38 P **P** **17 28 50.0 +0.2**
COLA pmax pmax
comp=Z,77nm,1.2s,mb5.5
LZH Lanzhou 37.56 271 ⇓*i*P **P** **17 29 02.6 +1.6**
LZH AP pP 17 29 16.0 +3.9
LZH XP sP 17 29 21.0 +4.2
LZH PP PP 17 30 33.2 +6.2
LZH PCP PcP 17 31 19.7 +1.5
LZH *e*S **S** **17 34 45.0 -2.4**
LZH SS SS 17 37 18.0 -15
LZH AMB AMB
comp=Z,69nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,252nm,4.2s
LZH LR LR
comp=E,2µm,14.6s
LZH LR LR
comp=Z,3µm,16.3s,MS5.1
LZH Lanzhou 37.56 271 ⇓*i*P **P** **17 29 02.6 +1.6**
comp=Z,69nm,1.5s,mb5.2
LZH pP pP 17 29 16.0 +3.9
LZH sP sP 17 29 21.0 +4.2
LZH PP PP 17 30 33.2 +6.2
LZH PcP PcP 17 31 19.7 +1.5
LZH *e*S **S** **17 34 45.0 -2.4**
LZH sS sS 17 35 04.2 -1.6
LZH SS SS 17 37 18.0 -15
LZH LR LR
comp=Z,3µm,16.3s,MS5.1
LZH Lanzhou 37.56 271 ⇓*i*P **P** **17 29 02.6 +1.6**
LZH *PP pP 17 29 16.0 +3.9
LZH 17 30 33.2
LZH 17 31 19.7
LZH *e*S **S** **17 34 45.0 -2.4**
LZH *SS sS 17 35 04.2 -1.6
LZH SS SS 17 37 18.0 -15
LZH pmax pmax
comp=Z,69nm,1.5s,mb5.2
LZH MLR MLR
comp=Z,3µm,16.3s,MS5.1
MENT Mentasta 38.20 42 *e*P **P** **17 29 07.0 +1.0**
GTA Gaotai 38.64 279 *e*P **P** **17 29 10.2 +0.2**
GTA AP pP 17 29 26.1 +5.0
GTA XP sP 17 29 32.5 +6.7
GTA PP PP 17 30 45.2 +6.4
GTA PCP PcP 17 31 18.3 -3.2
GTA S **S** **17 35 03.4 -0.2**
GTA XS sS 17 35 30.4 +8.3
GTA SS SS 17 37 48.4 -6.1
GTA AMB AMB
comp=Z,17nm,0.9s,mb4.8

GTA AMB AMB
comp=Z,113nm,5.3s
GTA LR LR
comp=N,654nm,17.5s,MS4.6
GTA LR LR
comp=E,642nm,18.2s,MS4.6
GTA LR LR
comp=Z,1μm,18.2s,MS4.8
EGAK Eagle 39.15 38 *e*P **P 17 29 13.0 -1.0**
comp=Z,69nm,1.1s,mb5.3
EGAK *ep*P pP 17 29 23.8 -1.3
EGAK *es*P sP 17 29 27.5 -2.3
GZH Guangzhou 39.39 247 P **P 17 29 11.9 -4.6**
GZH S **S 17 35 11.2 -4.0**
GZH LR LR
comp=N,983nm,24.9s,MS4.6
GZH LR LR
comp=E,541nm,21.1s,MS4.6
GZH LR LR
comp=Z,2μm,21.8s,MS4.8
CD2 Chengdu 40.56 265⇑ *i*P **P 17 29 26.7 +0.6**
CD2 AP pP 17 29 36.3 -1.0
CD2 XP sP 17 29 40.4 -1.6
CD2 PP PP 17 31 03.9 +4.0
CD2 PCP PcP 17 31 28.8 +1.0
CD2 S **S 17 35 30.5 -2.1**
CD2 SS SS 17 38 27.0 -6.2
CD2 AMB AMB
comp=Z,100nm,0.9s,mb5.5
CD2 AMB AMB
comp=Z,120nm,4.3s
CD2 LR LR
comp=N,480nm,16.4s,MS4.6
CD2 LR LR
comp=E,550nm,18.0s,MS4.6
CD2 LR LR
comp=Z,680nm,17.6s,MS4.6
GYA Guiyang 41.41 257⇑ *i*P **P 17 29 34.0 +0.9**
GYA AP pP 17 29 48.4 +4.1
GYA XP sP 17 29 54.5 +5.5
GYA PP PP 17 31 13.5 +4.3
GYA PCP PcP 17 31 32.3 +1.7
GYA SCP ScP 17 35 16.3 -0.9
GYA S **S 17 35 44.5 -0.8**
GYA XS sS 17 36 09.0 +5.1
GYA SS SS 17 38 43.0 -7.2
GYA SCS ScS 17 39 30.8 -2.8
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,130nm,4.9s
GYA LR LR
comp=N,640nm,17.8s,MS4.6
GYA LR LR
comp=E,510nm,18.4s,MS4.6
GYA LR LR
comp=Z,670nm,17.9s,MS4.6
INK Inuvik 41.77 32 *e*P **P 17 29 35.4 -0.2**
comp=Z,2μm,1.1s
INK *ep*P pP 17 29 45.8 -1.0
INK *es*P sP 17 29 49.7 -1.8
INK Inuvik 41.77 32 P **P 17 29 35.9 +0.3**
INK *PP pP 17 29 50.0 +3.2
INK pmax pmax
comp=Z,18nm,0.8s
INK Inuvik 41.77 32 P **P 17 29 35.9 +0.3**
comp=Z,18nm,0.8s,mb4.8,baz=287,slow=6.7,SNR=67
INK pP pP 17 29 50.0 +3.2
comp=Z,38nm,1.0s,baz=279,slow=6.1,SNR=18
ZALV Zalesovo Beam 42.31 306 P **P 17 29 39.0 -1.1**
comp=Z,3.2nm,0.5s,mb4.2,baz=63,slow=6.9,SNR=23
ZALV PcP PcP 17 31 32.0 -1.1
comp=Z,3.3nm,0.7s,baz=40,slow=2.5,SNR=6.7
ZALV LR LR 17 48 54.8
comp=Z,750nm,18.1s,MS4.6,baz=68,slow=38
ZAL Zalesovo 42.32 306 P **P 17 29 39.0 -1.2**
ZAL 17 31 32.0
SKAG Skagway 42.85 46 *e*P **P 17 29 44.4 -0.1**
comp=Z,18nm,1.1s,mb4.7
NVS Novosibirsk 42.89 307 *e*P pP 17 29 55.4 -0.7
NVS pmax pmax
comp=Z,24nm,2.3s,mb4.5
NVS pmax pmax
comp=E,13nm,2.4s
QIZ Qiongzhong 44.58 246 P **P 17 29 58.1 -0.7**
QIZ PP PP 17 31 43.8 +0.6
QIZ S **S 17 36 32.0 +0.2**
QIZ AMB AMB
comp=Z,42nm,1.5s,mb5.0
QIZ LR LR
comp=E,941nm,21.5s
QIZ LR LR
comp=Z,972nm,24.3s,MS4.6
QIZ Qiongzhong 44.58 246 *e*P **P 17 30 01.2 +2.4**
comp=Z,48nm,1.2s,mb5.2
WMQ Urumqi 44.60 291 P **P 17 29 59.5 +0.8**
WMQ AP pP 17 30 09.5 -0.5
WMQ XP sP 17 30 14.0 -0.7
WMQ PP PP 17 31 44.8 +1.8
WMQ AMB AMB
comp=Z,7.0nm,0.8s,mb4.5
WMQ LR LR
comp=N,203nm,18.0s,MS4.3
WMQ LR LR
comp=E,262nm,20.0s,MS4.3
WMQ LR LR
comp=Z,294nm,20.0s,MS4.2
KMI Kunming 44.93 259 P **P 17 30 02.3 +0.7**
KMI AP pP 17 30 11.0 -1.9
KMI PP PP 17 31 49.5 +2.5
KMI S **S 17 36 33.1 -3.9**
KMI AMB AMB
comp=Z,32nm,1.2s,mb5.0
KMI AMB AMB
comp=Z,118nm,3.9s
KMI LR LR
comp=N,784nm,15.7s,MS4.8
KMI LR LR
comp=E,451nm,17.6s,MS4.8
KMI LR LR
comp=Z,909nm,19.6s,MS4.7
KMI Kunming 44.93 259 P **P 17 30 02.3 +0.7**
comp=Z,32nm,1.2s,mb5.0
KMI pP pP 17 30 11.0 -1.9
KMI sP sP 17 30 14.3 -3.3
KMI PP PP 17 31 49.5 +2.5
KMI PPP 17 32 25.2
KMI S **S 17 36 33.1 -3.9**
KMI sS sS 17 36 45.7 -10
KMI SS SS 17 39 43.1 -16
KMI LR LR
comp=Z,910nm,19.6s,MS4.7
KMI Kunming 44.93 259 P **P 17 30 02.3 +0.7**
KMI *SP sP 17 30 14.3 -3.3
KMI 17 31 49.5
KMI PPP 17 32 25.2
KMI S **S 17 36 33.1 -3.9**
KMI *SS sS 17 36 45.7 -10
KMI SS SS 17 39 43.1 -16
KMI pmax pmax
comp=Z,32nm,1.2s,mb5.0
KMI MLR MLR
comp=Z,910nm,19.6s,MS4.7
DLBC Dease Lake 45.78 46 P **P 17 30 09.6 +1.7**
baz=300,slow=8.1
MK31 Makanchi Array 46.62 297 *e*P **P 17 30 13.4 -1.2**
MK31 Makanchi Array 46.62 297 P **P 17 30 13.8 -0.9**
MKAR Makanchi Array 46.62 297 P **P 17 30 13.7 -1.0**
MKAR LR LR 17 51 04.2
MKAR Makanchi Array 46.62 297 *i* P **P 17 30 13.6 -1.1**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 46.62 297 P **P 17 30 13.7 -1.0**
comp=Z,6.8nm,0.8s,mb4.7,baz=67,slow=7.0,SNR=54
MKAR LR LR 17 51 04.2
comp=Z,1μm,19.8s,MS4.9,baz=56,slow=38
KURK Kurchatov 47.05 303 *e*P **P 17 30 16.9 -1.1**
comp=Z,9.6nm,0.6s,mb4.9
KURK Kurchatov 47.05 303⇑ *e*P **P 17 30 17.4 -0.6**
ALE Alert 49.71 6 P **P 17 30 37.0 -1.1**
comp=Z,56nm,0.7s,mb5.7,SNR=5.9
LSA Lhasa 49.94 273 P **P 17 30 42.6 +2.1**
LSA PP PP 17 32 40.5 +5.0
LSA S **S 17 37 45.6 -2.5**
LSA AMB AMB
comp=Z,80nm,0.6s,mb5.9
LSA LR LR
comp=E,920nm,23.1s
LSA LR LR
comp=Z,2μm,24.0s,MS4.9
LSA Lhasa 49.94 273 *e*P **P 17 30 42.5 +2.0**
comp=Z,56nm,0.6s,mb5.8
LSA *ep*P pP 17 30 51.6 -0.3
LSA Lhasa 49.94 273 *e*P **P 17 30 42.5 +2.0**
LSA *e**PP pP 17 30 51.6 -0.3
LSA pmax pmax
comp=Z,56nm,0.6s,mb5.8
CHRT Chiangrai 50.51 256⇑P **P 17 30 45.5 +0.6**
comp=Z,184nm,0.8s,mb6.1
BRVK Borovoye 50.60 309 P **P 17 30 44.3 -0.9**
comp=Z,51nm,0.5s,mb5.7,SNR=6.5
BRVK Borovoye 50.60 309 *e*P **P 17 30 44.4 -0.7**
comp=Z,7.3nm,0.8s,mb4.7
BRVK Borovoye 50.60 309 P **P 17 30 44.8 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
RES Resolute Bay 50.88 18 *e*P **P 17 30 46.5 -0.5**
comp=Z,336nm,1.0s,mb6.2
RES Resolute Bay 50.88 18 P **P 17 30 46.9 0.0**
KKTK Khon Kaen 51.05 251⇑P **P 17 30 49.5 +0.6**
comp=Z,556nm,0.7s
YKA Yellowknife Ar 51.06 37 P **P 17 30 48.2 -0.3**
YKA pP pP 17 31 02.4 +2.4
YKA LR LR 17 55 45.2
YKA Yellowknife Ar 51.06 37 P **P 17 30 48.2 -0.3**
YKA *PP pP 17 31 02.4 +2.5
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA MLR MLR
comp=Z,347nm,19.0s
YKA Yellowknife Ar 51.06 37 P **P 17 30 48.2 -0.3**
comp=Z,3.9nm,0.7s,mb4.4,baz=299,slow=7.3,SNR=37
YKA pP pP 17 31 02.4 +2.5
comp=Z,29nm,1.0s,baz=297,slow=7.2,SNR=22
YKA LR LR 17 55 45.2
comp=Z,347nm,19.0s,MS4.4,baz=220,slow=40
CHG Chiang Mai 51.82 256⇑P **P 17 30 55.6 +0.9**
comp=Z,126nm,0.8s,mb5.9
CHTO Chiang Mai 51.82 256 *e*P **P 17 30 55.5 +0.8**
comp=Z,43nm,0.8s,mb5.4
CHTO Chiang Mai 51.82 256 P **P 17 30 55.7 +1.0**
CHTO pmax pmax
comp=Z,43nm,0.8s,mb5.4
TKM2 Tokmak 2 52.67 296 *e*P **P 17 31 00.4 -0.4**
comp=Z,6.6nm,0.8s,mb4.6
TKM2 Tokmak 2 52.67 296 P **P 17 31 01.4 +0.6**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TKM2 Tokmak 2 52.67 296 P **P 17 31 01.2 +0.4**
SNR=6.3
BDT Bhumibol Dam 52.89 255 P **P 17 31 04.0 +1.3**
USP Ospenovka 53.16 297 P **P 17 31 05.8 +1.5**
SNR=13
KBK Karagaybulak 53.22 296 P **P 17 31 05.3 +0.5**
SNR=11
NST Nakhon Sawan 53.29 252 P **P 17 31 07.0 +1.4**
comp=Z,40nm,0.8s,mb5.4
FRU Bishkek 53.33 296 *e*P **P 17 31 05.0 -0.6**
FRU MLR MLR
comp=Z,1μm,18.0s,MS4.9
KZA Kyzart 53.35 295 P **P 17 31 07.3 +1.5**
SNR=12
AAK Ala-Archa 53.51 296 P **P 17 31 06.0 -1.0**
comp=Z,59nm,0.9s,mb5.5,SNR=9.6
AAK Ala-Archa 53.51 296 *e*P **P 17 31 05.5 -1.4**
comp=Z,8.0nm,0.8s,mb4.7
AAK *ep*P pP 17 31 17.6 -0.8
AAK Ala-Archa 53.51 296 P **P 17 31 05.7 -1.3**
AAK pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
AAK Ala-Archa 53.51 296 P **P 17 31 07.7 +0.7**
SNR=13
SVE Sverdlovsk 53.56 317 *e*P **P 17 31 05.9 -1.2**
SVE pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SVE MLR MLR
comp=Z,646nm,16.0s,MS4.8
EKS2 Erkin-Say 53.94 296 *e*P **P 17 31 09.7 -0.4**
comp=Z,9.6nm,0.8s,mb4.8
EKS2 Erkin-Say 53.94 296 P **P 17 31 10.0 -0.1**
SNR=14
B04A Port Angeles 53.96 56⇑P **P 17 31 10.3 +0.2**
baz=54
VDB Vedder Mountai 54.23 54 P **P 17 31 11.7 -0.4**
A05A Maple Falls 54.25 54⇑P **P 17 31 11.8 -0.4**
baz=54
AML Almayashu 54.28 296 *e*P **P 17 31 13.3 +0.7**
comp=Z,5.7nm,0.8s,mb4.5
AML Almayashu 54.28 296 P **P 17 31 13.2 +0.6**
SNR=7.8
KSH Kashi 54.33 292 *e*P **P 17 31 14.6 +1.7**
KSH *eAP pP 17 31 26.5 +2.0
KSH PCP PcP 17 32 17.0 +0.5
KSH SCP ScP 17 36 07.3 -4.1
KSH *eS **S 17 38 45.3 -2.6**
KSH XS sS 17 39 12.4 +5.4
KSH SCS ScS 17 40 50.2 -8.6
KSH AMB AMB
comp=Z,5.0nm,0.1s,mb5.4
KSH AMB AMB
comp=Z,804nm,4.4s
KSH LR LR
comp=N,1μm,10.9s
KSH LR LR
comp=E,2μm,8.6s
KSH LR LR
comp=Z,2μm,12.0s,MS5.5
C04A Brinnon 54.45 56⇑P **P 17 31 13.4 -0.3**
baz=54
A06A Chilliwack 54.53 54⇑P **P 17 31 14.0 -0.3**
baz=54
B05A Bryant 54.64 55⇓P **P 17 31 15.0 -0.1**
baz=54,SNR=5.7
ARU Arti 54.74 317 *c i*P **P 17 31 14.3 -1.4**
ARU 17 33 15.4
ARU S **S 17 38 49.8 -3.2**
ARU SSS 17 44 32.6
ARU pmax pmax
comp=Z,10.0nm,1.2s,mb4.7
ARU MLR MLR
comp=Z,397nm,19.0s,MS4.5
B06A Marblemount 54.85 54⇑P **P 17 31 16.2 -0.3**
baz=55
A07A Ashnola River, 55.17 53⇓P **P 17 31 18.5 -0.3**
baz=55,SNR=10
C05A Tolt Reservoir 55.19 55⇑P **P 17 31 18.9 -0.1**
baz=55,SNR=5.7
E04A Onalaska 55.21 57⇓P **P 17 31 19.3 +0.1**
baz=55
D05A Enumclaw 55.30 56⇓P **P 17 31 20.0 +0.2**
baz=55
C06A Tall Timber Ra 55.51 55⇑P **P 17 31 21.2 -0.1**
baz=55
G03A Yamhill 55.59 58⇑P **P 17 31 22.2 +0.2**
baz=55
B07A Winthrop 55.64 54⇑P **P 17 31 21.9 -0.3**
baz=55,SNR=7.1
F04A Amboy 55.75 57⇓P **P 17 31 22.8 -0.3**
baz=56
E05A Randle 55.77 56⇓P **P 17 31 22.9 -0.4**
baz=56
A08A Turner Farm, O 55.83 53 P **P 17 31 23.2 -0.4**
baz=56,SNR=13
D06A Cle Elum 55.94 55⇓P **P 17 31 24.4 -0.1**
baz=56,SNR=5.8
I02A Mapleton 56.01 60⇓P **P 17 31 25.0 0.0**
baz=56
TBM Table Mountain 56.09 55 P **P 17 31 25.6 +0.1**
C07A Waterville 56.10 54⇓P **P 17 31 25.0 -0.6**
baz=56,SNR=7.0
B08A Colville Reser 56.13 53⇓P **P 17 31 25.4 -0.4**
baz=56,SNR=13
PMG Port Moresby 56.18 187 P **P 17 31 26.5 0.0**
PMG pmax pmax
comp=Z,15nm,0.9s
PMG Port Moresby 56.18 187 P **P 17 31 26.5 0.0**
comp=Z,15nm,0.9s,mb5.0,baz=26,slow=9.6,SNR=5.4
A09A Danville 56.19 52⇑P **P 17 31 26.2 0.0**
baz=56,SNR=13
E06A Yakima 56.23 56⇓P **P 17 31 26.3 -0.2**
baz=56
EBG Ellensburg 56.26 55 P **P 17 31 26.9 +0.1**
F05A White Salmon 56.33 57⇓P **P 17 31 27.1 -0.2**
baz=56
I03A Eugene 56.36 60⇑P **P 17 31 27.2 -0.2**
baz=56
D07A Quincy 56.43 55⇓P **P 17 31 27.9 -0.1**
baz=56
EDM Edmonton 56.50 46 *e*P **P 17 31 28.1 -0.2**
EDM *epP pP 17 31 40.0 +0.1
EDM Edmonton 56.50 46 *e*P **P 17 31 28.5 +0.1**
J02A Umpqua 56.53 60⇓P **P 17 31 29.4 +0.7**
baz=56
DAG Danmarks Havn 56.56 358⇑*e*P **P 17 31 26.9 -1.6**
DAG pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
DAG Danmarks Havn 56.56 358⇑*i*P **P 17 31 26.9 -1.6**
comp=Z,1.7nm,0.4s,mb4.4
H04A Detroit Lake 56.59 58⇓P **P 17 31 29.3 +0.2**
baz=56,SNR=8.3
C08A Higginbotham F 56.61 54⇓P **P 17 31 28.7 -0.6**
baz=56,SNR=12
VFP Flag Point 56.65 57 P **P 17 31 30.4 +0.8**
B09A Rice 56.74 53⇑P **P 17 31 30.0 -0.1**
baz=56,SNR=7.2
A10A Northport 56.74 52⇑P **P 17 31 29.9 -0.3**
baz=56,SNR=6.9
G05A Wamic 56.78 57⇑P **P 17 31 30.6 +0.2**
baz=57
F06A Goldendale 56.79 57⇓P **P 17 31 30.5 0.0**
baz=57
E07A Sunnyside 56.86 55⇓P **P 17 31 31.0 0.0**
baz=57,SNR=7.8
J03A Ideyld Park 56.89 60⇑P **P 17 31 31.7 +0.5**
baz=57
FRIS Frissel Point 56.91 59 P **P 17 31 32.5 +1.0**
I04A Tendick Farm, 56.97 59⇓P **P 17 31 31.9 +0.1**
baz=57,SNR=5.9
OD2 Odessa Site #2 57.02 54 P **P 17 31 31.9 -0.3**
C09A Chrisman Ranch 57.03 53⇑P **P 17 31 32.1 -0.1**
baz=57
D08A Wollman Farm, 57.10 54⇓P **P 17 31 32.4 -0.3**
baz=57,SNR=5.4
HAWA Hanford 57.14 55 *e*P **P 17 31 32.9 -0.1**
comp=Z,28nm,1.3s,mb5.1
HAWA *esP sP 17 31 47.1 -2.1
APA Apatity 57.15 337⇑*e*P **P 17 31 30.0 -2.7**
APA *i* 17 32 29.5
APA pmax pmax
comp=Z,13nm,1.0s,mb4.9
H05A Madras 57.17 58⇓P **P 17 31 33.6 +0.3**
baz=57,SNR=7.8
G06A Carlson Farm, 57.18 57⇑P **P 17 31 33.7 +0.4**
baz=57
L02A Cave Junction 57.21 62⇓P **P 17 31 34.2 +0.6**
baz=57
B10A Chitwood Farm, 57.32 52⇓P **P 17 31 34.0 -0.3**
baz=57
E08A Dider Farm, El 57.35 55⇓P **P 17 31 34.1 -0.3**
baz=57
NEW Newport 57.39 52 *e*P **P 17 31 34.2 -0.6**
comp=Z,19nm,1.2s,mb5.0
NEW *esP sP 17 31 49.2 -1.7
NEW Newport 57.39 52 P **P 17 31 34.3 -0.5**
NEW pmax pmax
comp=Z,19nm,1.1s
A11A Hall Mountain, 57.40 51⇑P **P 17 31 35.0 +0.2**
baz=57,SNR=12
D09A Jones Farm, Ri 57.44 54⇑P **P 17 31 34.7 -0.3**
baz=57,SNR=5.9
C10A Spilker Farm, 57.55 53⇓P **P 17 31 35.6 -0.3**
baz=57
H06A Lindquist Farm 57.64 57 P **P 17 31 36.7 +0.2**
baz=57,SNR=10.0
ARCES ARCESS Array B 57.68 341 P **P 17 31 35.4 -1.1**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARCES MLR MLR
comp=Z,389nm,20.7s
ARCES ARCESS Array B 57.68 341 P **P 17 31 35.4 -1.1**
comp=Z,3.6nm,0.7s,mb4.5,baz=44,slow=7.3,SNR=6.4
ARCES LR LR 18 01 57.1
comp=Z,389nm,20.7s,MS4.5,baz=36,slow=42
B11A Sandpoint 57.70 52⇑P **P 17 31 36.8 -0.2**
baz=58
G07A Ruggs Ranch, H 57.71 57⇓P **P 17 31 37.1 0.0**
baz=58
A12A Yaak River Ran 57.80 51⇑P **P 17 31 37.8 +0.2**
baz=58
E09A Wood Farm, Sta 57.85 55⇑P **P 17 31 37.9 -0.1**
baz=58,SNR=8.6
F08A Pendleton 57.91 56 P **P 17 31 38.6 +0.2**
baz=58,SNR=7.5
J05A Fort Rock 57.96 59⇑P **P 17 31 39.4 +0.5**
baz=58,SNR=12
YBH Yreka Blue Hor 58.00 61⇑P **P 17 31 39.6 +0.5**
baz=58,SNR=5.0
D10A Wagner Farm, O 58.02 54 P **P 17 31 38.6 -0.5**
baz=58,SNR=9.0
G08A Pilot Rock 58.10 56⇓P **P 17 31 39.8 0.0**
baz=58,SNR=13
H07A Lands Inn, Kim 58.17 57⇑P **P 17 31 40.7 +0.4**
baz=58
I06A Prineville 58.18 58⇓P **P 17 31 41.0 +0.6**
baz=58,SNR=9.7
N02C Big Bar 58.18 63⇓P **P 17 31 40.3 -0.1**
baz=58
L04A Klamath Falls 58.23 61⇑P **P 17 31 41.4 +0.7**
baz=58
KSM Kuching 58.26 232 *e*P **P 17 31 42.4 +1.2**
AKTK Aktyubinsk 58.44 312 P **P 17 31 40.9 -1.2**
AKTO Aktyubinsk 58.44 312 P **P 17 31 40.9 -1.1**
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
AKTO Aktyubinsk 58.44 312 P **P 17 31 40.9 -1.2**
comp=Z,2.6nm,0.7s,mb4.4,baz=79,slow=5.7,SNR=9.9
E10A Myers Farm, Un 58.44 54 P **P 17 31 42.1 0.0**
baz=58,SNR=8.1
F09A S2 Ranch, Elgi 58.45 55⇑P **P 17 31 42.5 +0.2**
baz=58,SNR=5.5
A13A Flathead Natio 58.46 51⇑P **P 17 31 41.9 -0.3**
baz=58
M04C Macdoel 58.49 61⇑P **P 17 31 42.9 +0.3**
baz=58
K05A Summer Lake 58.50 60⇓P **P 17 31 43.2 +0.7**
baz=58
I07A Izee 58.51 58 P **P 17 31 43.1 +0.5**
baz=58,SNR=8.1
J06A Christmas Vall 58.62 59⇑P **P 17 31 43.7 +0.3**
baz=58,SNR=7.3
M03C McCloud 58.63 62⇑P **P 17 31 43.5 0.0**
baz=58
F10A Beach Ranch, E 58.68 55 P **P 17 31 44.2 +0.4**
baz=58,SNR=7.3
H08A Prairie City 58.73 57⇓P **P 17 31 44.5 +0.4**
baz=58,SNR=14
B13A Whitefish 58.76 51⇓P **P 17 31 44.4 +0.1**
baz=58,SNR=25
G09A Cove 58.78 56⇑P **P 17 31 44.5 0.0**
baz=58
WDC Whiskeytown Da 58.79 62⇓P **P 17 31 44.4 -0.2**
baz=59
K06A Valley Falls 58.83 59⇑P **P 17 31 45.7 +0.8**
baz=59,SNR=12
O02C Red Bluff 58.88 63⇓P **P 17 31 45.6 +0.3**
baz=59
L05A Lakeview 58.94 60⇓P **P 17 31 46.4 +0.8**
baz=59,SNR=8.6
P01C Double 8 Ranch 58.97 64⇓P **P 17 31 46.0 +0.1**
baz=59
E11A Bogner Ranch, 59.02 54⇓P **P 17 31 45.8 -0.4**
baz=59,SNR=12
D12A Red Ives Fores 59.08 53⇓P **P 17 31 46.3 -0.3**
baz=59
C13A Hot Springs 59.12 52⇑P **P 17 31 47.0 +0.2**
baz=59,SNR=7.8
I08A Drewsey 59.15 57⇓P **P 17 31 47.4 +0.3**
baz=59,SNR=6.5
M05C Lookout 59.16 61⇑P **P 17 31 47.7 +0.5**
baz=59,SNR=7.8
H09A Durkee 59.22 56⇓P **P 17 31 48.1 +0.6**
baz=59,SNR=7.3
GASB Alder Springs 59.24 63⇑P **P 17 31 48.5 +0.7**
baz=59,SNR=6.2
HATC Hat Creek Radi 59.30 62⇑P **P 17 31 48.4 +0.2**
baz=59
BMO Blue Mountains 59.31 56 *e*P **P 17 31 48.1 0.0**
comp=Z,34nm,1.4s,mb5.2
BMO *ep*P pP 17 31 58.0 -1.8

BMO esP sP 17 32 03.0 -1.4
MOD Modoc 59.34 60 eP P 17 31 48.6 +0.1
comp=Z,6.5nm,0.8s,mb4.7
MOD epP pP 17 31 59.5 -0.6
MOD esP sP 17 32 04.8 +0.1
MOD Modoc 59.34 60 P P 17 31 49.2 +0.8
baz=59,SNR=18
K07A Rock Creek Ran 59.49 59 P P 17 31 49.8 +0.4
baz=59,SNR=11
C14A Swan Lake 59.51 51 ⇓P P 17 31 49.7 +0.2
baz=59
D13A Huson 59.54 52 P P 17 31 49.5 -0.2
baz=59,SNR=7.1
J08A Circle Bar Ran 59.54 58 ⇑P P 17 31 50.5 +0.7
baz=59,SNR=5.8
G11A Walters Elk Ra 59.56 55 ⇑P P 17 31 49.6 -0.3
baz=59
I09A Lost Marbles R 59.59 57 ⇓P P 17 31 50.5 +0.4
baz=59
M06C Likely Place G 59.66 61 ⇑P P 17 31 51.0 +0.3
baz=59
H10A Noah's Angus R 59.78 56 ⇑P P 17 31 51.4 -0.1
baz=60,SNR=12
O04C Chester 59.83 62 ⇑P P 17 31 52.1 +0.3
baz=60
L07A Adell 59.84 59 P P 17 31 52.5 +0.7
baz=60,SNR=11
ELFS Eagle Lake Fie 59.86 61 ⇑P P 17 31 52.7 +0.6
baz=60,SNR=8.9
MNRC McLaughlin Nat 59.88 64 ⇑P P 17 31 52.6 +0.4
baz=60
K08A Mann Creek Ran 59.91 58 ⇑P P 17 31 52.6 +0.3
baz=60,SNR=11
F12A Elk City 59.91 54 P P 17 31 52.7 +0.4
baz=60,SNR=16
J09A Fry Pan Ranch, 59.96 57 P P 17 31 53.3 +0.6
baz=60,SNR=13
MSO Missoula 59.98 52 eP P 17 31 53.0 +0.2
comp=Z,32nm,1.3s,mb5.2
MSO epP pP 17 32 07.5 +3.1
WVOR Wild Horse Val 60.00 59 eP P 17 31 53.1 +0.1
comp=Z,19nm,1.0s,mb5.1
WVOR Wild Horse Val 60.00 59 eP P 17 31 53.1 +0.1
WVOR pmax pmax
comp=Z,19nm,1.0s,mb5.1
ORV Oroville 60.04 63 ⇓P P 17 31 52.6 -0.8
baz=60,SNR=5.2
I10A Payette 60.06 56 ⇑P P 17 31 53.7 +0.4
baz=60
D14A Greenough 60.06 52 P P 17 31 53.2 -0.1
baz=60,SNR=32
SUTB Sutter Butte 60.07 63 ⇑P P 17 31 52.9 -0.6
baz=60
E13A Victor 60.08 53 ⇑P P 17 31 53.1 -0.4
baz=60,SNR=8.3
H11A Donnelly 60.13 55 ⇓P P 17 31 53.4 -0.5
baz=60,SNR=16
OHCM Honcut 60.19 63 eP P 17 31 53.7 -0.6
OHCM epP pP 17 32 02.9 -3.1
OHCM esP sP 17 32 07.7 -2.9
CHMT Chamberlain Mo 60.30 52 eP P 17 31 55.0 0.0
CHMT epP pP 17 32 04.9 -1.7
CHMT esP sP 17 32 09.1 -2.1
N06A Buffalo Meadow 60.32 61 ⇑P P 17 31 55.6 +0.3
baz=60,SNR=11
L08A Fields 60.32 59 P P 17 31 55.6 +0.5
baz=60,SNR=16
M07A Soldier Meadow 60.33 60 ⇑P P 17 31 55.7 +0.4
baz=60,SNR=22
K09A Rome 60.37 58 ⇑P P 17 31 55.8 +0.3
baz=60,SNR=8.3
F13A Darby 60.40 53 ⇑P P 17 31 55.5 -0.1
baz=60,SNR=9.3
E14A Clinton 60.48 52 ⇓P P 17 31 56.1 0.0
baz=60,SNR=13
BEKR Beckwourth 60.55 62 ⇑P P 17 31 56.8 0.0
baz=60,SNR=7.5
D15A Lincoln 60.62 51 ⇓P P 17 31 57.2 +0.1
baz=60,SNR=5.4
O06A Flanigan 60.69 61 ⇓P P 17 31 57.7 0.0
baz=60,SNR=7.6
P05C Yuba Gap, Truc 60.74 63 ⇑P P 17 31 58.0 -0.1
baz=60
M08A Happy Creek Ra 60.76 59 ⇑P P 17 31 58.7 +0.5
baz=60,SNR=7.3
KULM Kulim 60.81 244 eP P 17 31 59.5 +0.7
KULM epP pP 17 32 10.7 +0.2
KULM esP sP 17 32 14.9 -0.1
N07B Gerlach 60.82 60 ⇑P P 17 31 58.7 +0.1
baz=61
K10A MacKenzie Ranc 60.82 57 P P 17 31 59.1 +0.5
baz=61,SNR=13
H12A Diamond D Ranc 60.88 55 ⇑P P 17 31 58.3 -0.6
baz=61
G13A Cobalt 60.89 54 P P 17 31 58.8 -0.2
baz=61,SNR=24
FFC Flin Flon 60.90 40 P P 17 31 58.6 -0.3
comp=Z,109nm,1.2s,mb5.9,SNR=7.4
FFC Flin Flon 60.90 40 eP P 17 31 58.9 0.0
comp=Z,28nm,1.2s,mb5.3
FFC epP pP 17 32 11.7 +1.2
FFC esP sP 17 32 15.5 +0.3
FFC Flin Flon 60.90 40 eP P 17 31 58.9 0.0
FFC e*PP pP 17 32 11.7 +1.1
FFC e*SP sP 17 32 15.5 +0.3
FFC pmax pmax
comp=Z,27nm,1.2s,mb5.2
F14A Wisdom 60.92 53 P P 17 31 59.3 +0.1
baz=61,SNR=5.7
E15A Deer Lodge 60.94 52 P P 17 31 59.2 0.0
baz=61,SNR=15
MFID Camas Ranch 61.03 56 ⇓P P 17 31 59.9 -0.1
baz=61,SNR=6.5
COEN Coen 61.09 191 eP P 17 32 00.4 -0.1
comp=Z,34nm,1.1s,mb5.4
COEN pP pP 17 32 11.3 -0.9
COEN esP sP 17 32 15.9 -0.9
JOF Joensuu 61.13 333 ep P 17 31 59.2 -1.1
comp=Z,6.3nm,0.7s,mb4.8
JOF Joensuu 61.13 333 eP P 17 31 59.2 -1.1
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
H13A Challis 61.20 55 ⇑P P 17 32 00.9 -0.2
baz=61,SNR=22
G14A Jackson 61.22 54 ⇓P P 17 32 00.9 -0.4
baz=61
PAHR Pah Rah Range 61.24 62 eP P 17 32 01.6 +0.1
comp=Z,23nm,1.3s,mb5.2
PAHR esP sP 17 32 15.9 -1.8
O07A Toulon 61.26 61 ⇓P P 17 32 01.6 0.0
baz=61,SNR=11
WCN Washoe City 61.26 62 ⇑P P 17 32 02.0 +0.4
baz=61,SNR=5.0
K11A Parker Ranch, 61.31 57 ⇑P P 17 32 02.0 +0.2
baz=61,SNR=6.5
N08A GE Springer Mi 61.32 60 P P 17 32 02.3 +0.4
baz=61,SNR=7.5
M09A Marrel Ranch, 61.32 59 ⇓P P 17 32 02.3 +0.3
baz=61
F15A Butte 61.38 53 ⇓P P 17 32 02.5 +0.2
baz=61,SNR=22
FCC Fort Churchill 61.38 33 eP P 17 32 01.2 -0.9
comp=Z,20nm,1.0s,mb5.2
FCC Fort Churchill 61.38 33 P P 17 32 01.7 -0.4
FCC pmax pmax
comp=Z,20nm,1.0s,mb5.2
R05C Kirkwood Meado 61.44 63 ⇓P P 17 32 02.8 -0.1
baz=61
EGMT Eagleton 61.46 49 eP P 17 32 02.9 0.0
comp=Z,32nm,1.0s,mb5.4
EGMT epP pP 17 32 13.8 -0.7
EGMT esP sP 17 32 17.9 -1.2
EGMT Eagleton 61.46 49 ⇑P P 17 32 03.0 +0.1
baz=61
L10A Juniper Basin 61.49 58 ⇑P P 17 32 03.3 +0.2
baz=61,SNR=10
J12A Stokes Ranch, 61.55 56 P P 17 32 03.9 +0.4
baz=61,SNR=11
N09A Rock Creek Ran 61.63 60 ⇑P P 17 32 04.3 +0.2
baz=61,SNR=7.9
P07A Fallon 61.64 61 ⇑P P 17 32 04.4 +0.2
baz=61
CMB Columbia Colle 61.67 64 ⇑P P 17 32 04.1 -0.3
baz=62,SNR=6.6
I13A Wildhorse Cree 61.69 55 ⇑P P 17 32 04.9 +0.5
baz=61,SNR=12
KBL Kabul 61.74 291 eP P 17 32 04.3 -0.6

PACP Pacheco Peak 61.75 65 ⇓P P 17 32 04.8 -0.1
baz=62
M10A I.L. Ranch, Tu 61.80 58 ⇑P P 17 32 05.5 +0.3
baz=62,SNR=12
G15A Dillon 61.81 53 ⇑P P 17 32 04.9 -0.3
baz=62,SNR=14
MCMT McKenzie Canyo 61.82 54 eP P 17 32 05.2 -0.1
MCMT epP pP 17 32 15.9 -1.1
MCMT esP sP 17 32 20.4 -1.2
L11A Cat Creek Ranc 61.85 57 ⇓P P 17 32 05.9 +0.4
baz=62,SNR=7.2
R06C Coleville 61.94 63 ⇓P P 17 32 06.7 +0.5
baz=62,SNR=5.8
BOZ Bozeman (W) 61.97 52 eP P 17 32 07.0 +0.7
comp=Z,30nm,1.3s,mb5.3
BOZ esP sP 17 32 21.3 -1.3
BOZ Bozeman (W) 61.97 52 eP P 17 32 06.9 +0.6
BOZ pmax pmax
comp=Z,30nm,1.2s,mb5.3
BOZ Bozeman (W) 61.97 52 ⇑P P 17 32 06.6 +0.3
baz=62
J13A Cove Ranch, Pi 61.98 56 ⇓P P 17 32 06.7 +0.4
baz=62,SNR=12
K12A Draper Farm, C 62.04 57 P P 17 32 07.0 +0.2
baz=62,SNR=8.3
BMN Battle Mountai 62.08 60 eP P 17 32 07.1 0.0
comp=Z,6.5nm,0.7s,mb4.9
BMN epP pP 17 32 16.8 -2.0
BMN Battle Mountai 62.08 60 P P 17 32 07.9 +0.8
BMN e pP 17 32 18.5 -0.3
BMN pmax pmax
comp=Z,7.0nm,0.6s,mb5.0
S06C San Francisco 62.09 63 ⇓P P 17 32 07.1 -0.2
baz=62,SNR=5.5
S05C Merced 62.13 64 ⇓P P 17 32 06.9 -0.6
baz=62
O09A Fish Creek Ran 62.26 60 ⇑P P 17 32 08.7 +0.3
baz=62
L12A House Creek Ra 62.29 57 ⇑P P 17 32 08.9 +0.4
baz=62
M11A Holland Ranch, 62.29 58 ⇑P P 17 32 09.0 +0.5
baz=62
R07C Lee Vining 62.45 63 ⇓P P 17 32 09.9 +0.3
baz=62,SNR=12
U04C Hernandez Rese 62.47 65 ⇓P P 17 32 10.2 +0.3
baz=62
K13A Stover Farm, H 62.50 56 ⇑P P 17 32 10.2 +0.3
baz=62
O10A Cortez Mining, 62.59 59 ⇑P P 17 32 10.8 +0.2
baz=62
QLMT Earthquake Lak 62.60 53 eP P 17 32 11.2 +0.7
QLMT epP pP 17 32 21.6 -0.7
QLMT esP sP 17 32 25.9 -1.0
Q08A Gabbs 62.64 62 P P 17 32 11.3 +0.4
baz=62,SNR=8.0
P09A Austin 62.68 60 ⇓P P 17 32 11.1 0.0
baz=62
NVAR Mina Array Bea 62.69 62 P P 17 32 11.8 +0.5
NVAR Mina Array Bea 62.69 62 P P 17 32 11.8 +0.5
comp=Z,3.8nm,0.7s,mb4.6,baz=302,slow=5.4,SNR=36
N11A Elko Archery C 62.71 59 ⇓P P 17 32 11.5 +0.2
baz=62
T06C Millerton Lake 62.73 64 ⇑P P 17 32 11.1 -0.4
baz=62
KCC Kaiser Creek 62.77 64 ⇑P P 17 32 11.6 -0.2
baz=63
M12A Wells 62.81 58 ⇓P P 17 32 12.2 +0.3
baz=63,SNR=12
V04C Ramage Ranch, 62.88 66 ⇓P P 17 32 12.4 -0.1
baz=63
PKD Parkfield 62.89 66 ⇑P P 17 32 12.5 -0.1
baz=63
L13A Double Diamond 62.94 57 ⇑P P 17 32 13.1 +0.3
baz=63,SNR=10
YMR Madison River 62.96 53 eP P 17 32 12.8 -0.1
comp=Z,18nm,1.0s,mb5.2
YMR esP sP 17 32 27.3 -1.9
P10A Eureka 63.04 60 ⇑P P 17 32 13.8 +0.2
baz=63
K14A Jones Ranch, D 63.09 56 ⇓P P 17 32 14.4 +0.6
baz=63,SNR=6.2
N12A Clover Valley, 63.10 58 ⇑P P 17 32 13.9 +0.1
baz=63
Q09A Carvers 63.11 61 ⇓P P 17 32 14.3 +0.2
baz=63
O11A Cowboy Ranch, 63.19 59 ⇓P P 17 32 14.6 +0.1
baz=63,SNR=8.9
MTUM Tungsten Hills 63.22 63 eP P 17 32 14.8 +0.1
MTUM esP sP 17 32 28.3 -2.7
KAF Kangasniemi 63.24 335 ep P 17 32 12.6 -1.9
comp=Z,4.5nm,0.6s,mb4.8,baz=37,slow=6.1
KAF Kangasniemi 63.24 335 eP P 17 32 12.6 -1.9
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.8
S08C White Mtn Res 63.36 63 ⇓P P 17 32 16.0 +0.3
baz=63
HELL Mitchell Peak, 63.37 64 P P 17 32 15.2 -0.5
baz=63,SNR=11
R09A Tonopah 63.56 62 P P 17 32 16.8 -0.2
baz=63,SNR=16
N13A Wendover, West 63.58 58 ⇑P P 17 32 17.3 +0.2
baz=63
RLMT Red Lodge 63.59 52 eP P 17 32 17.2 +0.2
comp=Z,21nm,1.1s,mb5.1
RLMT epP pP 17 32 26.4 -2.4
RLMT esP sP 17 32 32.5 -0.8
Q10A Clear Creek Ra 63.59 61 ⇓P P 17 32 17.3 +0.1
baz=63,SNR=6.8
O12A Currie 63.64 59 ⇓P P 17 32 17.6 +0.1
baz=63,SNR=15
M14A Sheep Mountain 63.66 57 ⇓P P 17 32 17.7 +0.2
baz=63,SNR=7.5
MOOW Moose Ponds 63.67 53 eP P 17 32 18.1 +0.5
comp=Z,18nm,1.2s,mb5.0
MOOW esP sP 17 32 32.8 -1.1
TPAW Teton Pass 63.73 54 eP P 17 32 19.1 +1.1
comp=Z,51nm,1.3s,mb5.4
TPAW esP sP 17 32 33.9 -0.4
S09A Goldfield 63.80 62 ⇓P P 17 32 18.6 0.0
baz=64,SNR=8.0
PSI Prapat 63.82 244 P P 17 32 19.7 +0.8
PSI *PP pP 17 32 35.0 +4.3
PSI pmax pmax
comp=Z,14nm,0.7s,mb5.1
PSI Prapat 63.82 244 P P 17 32 19.7 +0.8
comp=Z,14nm,0.7s,mb5.1,baz=8.2,slow=6.0,SNR=14
PSI pP pP 17 32 35.0 +4.3
comp=Z,14nm,0.8s,baz=57,slow=4.3,SNR=2.9
FIA1 FINESS Array S 63.84 335 eP P 17 32 17.3 -1.2
LOHW Long Hollow 63.84 53 eP P 17 32 19.3 +0.6
comp=Z,34nm,1.4s,mb5.2
LOHW epP pP 17 32 29.8 -0.7
LOHW esP sP 17 32 34.0 -1.1
FINES FINESS Array B 63.84 335 i P P 17 32 17.5 -0.9
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 63.84 335 P P 17 32 17.4 -1.0
comp=Z,6.3nm,0.4s,mb5.0,baz=37,slow=7.8,SNR=123
FINES LR LR 18 04 32.6
comp=Z,422nm,19.3s,MS4.6,baz=38,slow=40
REDW Red Top Meadow 63.86 54 eP P 17 32 20.1 +1.1
comp=Z,43nm,1.2s,mb5.4
REDW epP pP 17 32 30.3 -0.4
REDW esP sP 17 32 34.9 -0.4
R10A Warm Springs 63.99 61 ⇓P P 17 32 19.5 -0.3
baz=64
DGMT Dagmar 64.00 46 eP P 17 32 19.7 0.0
comp=Z,32nm,0.8s,mb5.4
DGMT epP pP 17 32 29.8 -1.6
Q11A Duckwater 64.02 60 ⇑P P 17 32 20.0 0.0
baz=64
S10A Tonopah Range, 64.05 62 ⇓P P 17 32 20.1 -0.1
baz=64,SNR=7.1
P12A McGill 64.06 59 ⇓P P 17 32 20.1 -0.1
baz=64,SNR=6.7
LAO LASA Array 64.16 49 eP P 17 32 21.3 +0.5
comp=Z,36nm,1.0s,mb5.4
LAO epP pP 17 32 31.7 -0.9
GRAC Grapevine Rang 64.17 63 ⇑P P 17 32 21.4 +0.3
baz=64
O13A Hicks Ranch, I 64.18 58 ⇓P P 17 32 21.1 +0.1
baz=64
M15A Larsen Ranch, 64.20 56 ⇑P P 17 32 21.1 -0.1
baz=64,SNR=15
SPUT South Promonto 64.30 56 eP P 17 32 22.1 +0.4
SPUT pP pP 17 32 32.3 -1.3
SPUT esP sP 17 32 36.8 -1.3

ISA Isabella 64.36 65 ⇑P P 17 32 22.5 +0.2
baz=64
R11A Troy Canyon, C 64.38 61 P P 17 32 22.4 +0.1
baz=64,SNR=13
Q12A Willow Creek R 64.38 60 ⇓P P 17 32 22.4 0.0
baz=64,SNR=5.0
DAC Darwin (Calif) 64.50 64 eP P 17 32 21.8 -1.4
comp=Z,23nm,2.0s,mb4.9
DAC epP pP 17 32 33.2 -1.8
DAC esP sP 17 32 37.8 -1.8
DAC Darwin (Calif) 64.50 64 eP P 17 32 21.8 -1.4
DAC e*PP pP 17 32 33.2 -1.8
DAC e*SP sP 17 32 37.8 -1.8
DAC pmax pmax
comp=Z,23nm,2.0s,mb4.9
HWUT Hardware Ranch 64.61 56 eP P 17 32 23.9 +0.1
comp=Z,18nm,1.2s,mb5.0
HWUT epP pP 17 32 36.1 +0.5
MPMC Manual Prospec 64.71 64 ⇑P P 17 32 24.3 -0.3
baz=64,SNR=7.2
S11A Rachel 64.74 61 ⇓P P 17 32 24.8 0.0
baz=64,SNR=5.7
DUG Dugway 64.81 58 eP P 17 32 25.1 -0.1
comp=Z,31nm,1.2s,mb5.2
DUG epP pP 17 32 35.3 -1.7
DUG esP sP 17 32 40.3 -1.2
DUG Dugway 64.81 58 eP P 17 32 25.1 -0.1
DUG e*PP pP 17 32 35.3 -1.6
DUG e*SP sP 17 32 40.3 -1.2
DUG pmax pmax
comp=Z,31nm,1.2s,mb5.2
DUG Dugway 64.81 58 ⇑P P 17 32 25.0 -0.2
baz=65
FURC Furnace Creek, 64.83 63 ⇑P P 17 32 25.3 -0.1
baz=65
OSI Osito Adit 64.88 66 ⇑P P 17 32 25.8 +0.1
baz=65
TPNV Topopah Spring 64.89 62 eP P 17 32 25.8 +0.1
comp=Z,30nm,1.4s,mb5.1
TPNV epP pP 17 32 35.6 -1.9
TPNV esP sP 17 32 40.3 -1.7
TPNV Topopah Spring 64.89 62 eP P 17 32 25.8 +0.1
TPNV e*PP pP 17 32 35.6 -1.9
TPNV e*SP sP 17 32 40.3 -1.8
TPNV pmax pmax
comp=Z,30nm,1.4s,mb5.1
TPNV Topopah Spring 64.89 62 ⇑P P 17 32 25.4 -0.3
baz=65
PDAR Pinedale Array 64.97 54 P P 17 32 26.4 +0.2
comp=Z,9.4nm,0.8s,mb4.8,baz=288,slow=1.8,SNR=76
PDAR LR LR 18 03 25.0
comp=Z,210nm,18.7s,MS4.4,baz=333,slow=38
R12A Pony Springs, 64.98 60 P P 17 32 26.6 +0.3
baz=65,SNR=5.8
OBN Obninsk 65.07 325 eP P 17 32 25.5 -1.1
OBN pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
EDW2 Edwards Air Fo 65.17 65 ⇑P P 17 32 27.3 -0.3
baz=65,SNR=7.0
SNCC San Nicolas Is 65.27 67 ⇓P P 17 32 27.8 -0.4
baz=65
S12A Delamar Landin 65.31 61 ⇓P P 17 32 28.4 0.0
baz=65
T11A Corn Creek, Al 65.32 61 ⇓P P 17 32 28.7 +0.1
baz=65,SNR=7.7
NLU North Lily Min 65.40 57 eP P 17 32 29.3 +0.3
NLU epP pP 17 32 39.4 -1.4
NLU esP sP 17 32 44.0 -1.3
DAU Daniels Canyon 65.57 56 eP P 17 32 31.1 +1.0
DAU epP pP 17 32 41.2 -0.6
DAU esP sP 17 32 45.6 -0.8
DAU Daniels Canyon 65.57 56 P P 17 32 31.0 +0.9
DAU e 17 32 45.7
MPU Maple Canyon 65.61 57 eP P 17 32 30.3 -0.1
comp=Z,21nm,1.3s,mb5.0
MPU epP pP 17 32 40.7 -1.4
GSC Goldstone 65.62 64 ⇓P P 17 32 29.9 -0.6
baz=65
BFSC Mount Baldy St 65.79 65 ⇑P P 17 32 31.3 -0.3
baz=66
S13A Holt Ranch, En 65.92 60 P P 17 32 32.7 +0.3
baz=66,SNR=7.9
ARUT Antelope Range 66.03 60 eP P 17 32 33.2 +0.1
V11A Goodsprings 66.12 63 ⇑P P 17 32 33.6 -0.1
baz=66
HEC Hector,Ludlow 66.23 64 ⇑P P 17 32 34.1 -0.3
baz=66,SNR=6.0
T13A Saint George 66.26 61 ⇑P P 17 32 34.8 +0.2
baz=66
MSU Marysvale 66.29 59 eP P 17 32 34.9 +0.2
MSU epP pP 17 32 45.6 -1.0
MSU esP sP 17 32 49.8 -1.4
MURC Murrieta 66.50 66 ⇓P P 17 32 36.2 0.0
baz=66
V12A Nelson 66.54 62 ⇑P P 17 32 36.5 +0.1
baz=66
U13A Pakoon Wash 66.62 61 ⇑P P 17 32 37.0 +0.1
baz=66,SNR=5.3
HYB Hyderabad 66.67 271 eP P 17 32 37.5 +0.1
comp=Z,55nm,1.0s,mb5.5
HYB Hyderabad 66.67 271 eP P 17 32 37.5 +0.1
HYB pmax pmax
comp=Z,55nm,1.0s,mb5.5
HYB Hyderabad 66.67 271 i P P 17 32 37.5 +0.1
comp=Z,55nm,1.0s,mb5.5
HYB epP pP 17 32 47.5 -1.7
HYB esP sP 17 32 53.0 -0.8
GMRC Granite Mounta 66.67 64 ⇑P P 17 32 37.0 -0.3
baz=66
ULM Lac du Bonnet 66.68 41 P P 17 32 36.4 -0.6
ULM Lac du Bonnet 66.68 41 P P 17 32 36.4 -0.6
comp=Z,3.2nm,0.7s,mb4.5,baz=312,slow=12,SNR=8.7
T14A Hurricane 66.72 60 ⇑P P 17 32 37.6 +0.1
baz=66
CTA Charters Tower 66.84 187 eP P 17 32 37.7 -0.5
comp=Z,15nm,0.9s,mb5.0
CTA e 17 32 53.3
CTA Charters Tower 66.84 187 eP P 17 32 37.7 -0.5
CTA e 17 32 53.3
CTA pmax pmax
comp=Z,15nm,0.9s
CTA Charters Tower 66.84 187 P P 17 32 37.6 -0.7
comp=Z,21nm,0.9s,mb5.2,baz=8.1,slow=6.5,SNR=12
CTAO Charters Tower 66.84 187 eP P 17 32 37.4 -0.8
comp=Z,94nm,1.7s,mb5.5
CTAO esP sP 17 32 52.9 -1.7
CTAO Charters Tower 66.84 187 P P 17 32 37.8 -0.4
CTAO pmax pmax
comp=Z,94nm,1.7s,mb5.5
SRU San Rafael 66.86 57 eP P 17 32 38.5 +0.1
comp=Z,26nm,1.0s,mb5.2
SRU epP pP 17 32 48.4 -1.8
SRU esP sP 17 32 53.2 -1.5
SRU San Rafael 66.86 57 eP P 17 32 38.5 +0.2
SRU e*PP pP 17 32 48.4 -1.7
SRU e*SP sP 17 32 53.2 -1.5
SRU pmax pmax
comp=Z,26nm,1.0s,mb5.2
U14A Mt Trumbull 67.09 61 ⇑P P 17 32 40.0 +0.1
baz=67,SNR=6.7
T15A Red Dirt Ranch 67.17 60 ⇓P P 17 32 40.7 +0.3
baz=67,SNR=6.1
IRM Iron Mountain 67.40 64 ⇓P P 17 32 41.9 0.0
baz=67
W13A Hualapai Mount 67.55 62 ⇓P P 17 32 42.5 -0.3
baz=67
X13A Yucca 67.92 63 ⇓P P 17 32 44.9 -0.3
baz=68
PDMCI Parker Dam,Lak 67.93 63 ⇓P P 17 32 44.8 -0.4
baz=68
W14A Seligman 67.96 62 P P 17 32 45.8 +0.5
baz=68,SNR=8.0
NB2 NORSAR Subarra 68.06 341 P P 17 32 44.8 -0.8
comp=Z,9.4nm,0.7s,mb4.9,baz=28,slow=6.5
NB2 NORSAR Subarra 68.06 341 P P 17 32 44.8 -0.8
NB2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
NOA NORSAR Array B 68.06 341 P P 17 32 45.0 -0.6
NOA pmax pmax
comp=Z,7.0nm,0.5s
NOA MLR MLR
comp=Z,298nm,18.4s
NOA NORSAR Array B 68.06 341 P P 17 32 45.0 -0.5
comp=Z,6.9nm,0.5s,mb4.9,baz=28,slow=6.3,SNR=54
NOA LR LR 18 05 43.7
comp=Z,298nm,18.4s,MS4.5,baz=10.0,slow=39

PV10 **Paradox Valley** 68.21 57 *eP* P 17 32 46.8 -0.1
PV10 *epP* pP 17 32 57.8 -0.9
PV10 *esP* sP 17 33 02.2 -1.1
NAO01 **NORSAR Array S** 68.31 341 *eP* P 17 32 45.7 -1.4
comp=Z,2.8nm,0.5s,mb4.5
GLA **Glamis** 68.34 65 ⇓P P 17 32 47.4 -0.5
baz=68
Y13A **Salome** 68.45 63 ⇓P P 17 32 48.0 -0.5
baz=68
WB2 **Warramunga Arr** 68.47 199 *eP* P 17 32 47.4 -1.1
WB2 *e* 17 33 03.6
WRA **Warramunga Arr** 68.47 199 P P 17 32 47.6 -0.9
WRA *PP pP 17 33 03.0 +2.6
WRA pmax pmax
comp=Z,23nm,0.9s
WRA MLR MLR
comp=Z,305nm,21.6s
WRA **Warramunga Arr** 68.47 199 P P 17 32 47.6 -1.0
comp=Z,23nm,0.9s,mb5.2,baz=18,slow=6.7,SNR=68
WRA pP pP 17 33 03.0 +2.6
comp=Z,19nm,0.8s,baz=16,slow=6.7,SNR=11
WRA LR LR 17 59 45.4
comp=Z,304nm,21.6s,MS4.5,baz=15,slow=33
W15A **Williams** 68.47 61 ⇑P P 17 32 48.4 -0.2
baz=68
X14A **Yava** 68.58 62 ⇓P P 17 32 49.2 -0.1
baz=68,SNR=5.6
PV01 **Paradox Valley** 68.64 57 *eP* P 17 32 49.6 0.0
PV01 *epP* pP 17 32 58.6 -2.9
WUAZ **Wupatki** 68.78 60 *eP* P 17 32 50.8 +0.2
comp=Z,2.6nm,0.8s,mb4.2
WUAZ pP pP 17 33 01.4 -1.0
WUAZ *esP* sP 17 33 05.8 -1.2
WUAZ **Wupatki** 68.78 60 ⇑P P 17 32 50.5 0.0
baz=69
Y14A **Wickenburg** 68.87 63 ⇓P P 17 32 50.8 -0.3
baz=69
X15A **Humboldt** 68.96 62 ⇑P P 17 32 52.2 +0.5
baz=69,SNR=5.5
FITZ **Fitzroy Crossi** 69.05 208 *eP* P 17 32 52.5 +0.3
comp=Z,49nm,0.8s,mb5.5
FITZ *e* 17 33 08.2
FITZ **Fitzroy Crossi** 69.05 208 P P 17 32 52.3 +0.1
comp=Z,35nm,0.9s,mb5.3,baz=8.1,slow=6.5,SNR=20
FITZ pP pP 17 33 08.1 +4.1
comp=Z,28nm,1.1s,baz=16,slow=3.5,SNR=5.3
ISCO **Idaho Springs** 69.17 54 *eP* P 17 32 53.2 +0.4
comp=Z,15nm,1.1s,mb4.8
ISCO *epP* pP 17 33 03.7 -0.9
ISCO **Idaho Springs** 69.17 54 P P 17 32 53.6 +0.8
ISCO pmax pmax
comp=Z,15nm,1.1s,mb4.8
MVCO **Mesa Verde** 69.32 57 *eP* P 17 32 53.1 -0.7
comp=Z,26nm,1.4s,mb5.0
MVCO *epP* pP 17 33 04.2 -1.5
MVCO *esP* sP 17 33 08.7 -1.5
MVCO **Mesa Verde** 69.32 57 ⇑P P 17 32 53.8 0.0
baz=69
115A **Sonoran Desert** 70.18 63 ⇓P P 17 32 59.1 -0.1
baz=70
KIV **Kislovodsk** 70.52 314 *eP* P 17 33 01.0 -0.1
comp=Z,6.9nm,0.6s,mb4.8
KIV **Kislovodsk** 70.52 314⇑*eP* P 17 33 00.9 -0.2
KIV *eS* S 17 42 03.7 -7.6
KIV pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KIV MLR MLR
comp=Z,500nm,15.0s,MS4.9
116A **Eloy** 70.60 63 ⇓P P 17 33 01.6 -0.1
baz=70
SDCO **Great Sand Dun** 70.66 55 *eP* P 17 33 01.7 -0.3
comp=Z,22nm,1.5s,mb4.9
SDCO pP pP 17 33 13.2 -0.7
SDCO *esP* sP 17 33 16.7 -1.8
ECSD **EROS,Sioux Fal** 71.07 46 *eP* P 17 33 03.3 -1.1
comp=Z,12nm,0.9s,mb4.8
ECSD *epP* pP 17 33 13.8 -2.6
AKASG **Malin Array Be** 71.31 326 P P 17 33 04.7 -1.0
AKASG **Malin Array Be** 71.31 326 *i* P P 17 33 04.6 -1.1
AKASG pmax pmax
comp=Z,13nm,0.6s
AKASG **Malin Array Be** 71.31 326 P P 17 33 04.7 -1.0
comp=Z,13nm,0.6s,mb5.0,baz=33,slow=6.3,SNR=64
AKBB **Malin Array Si** 71.31 326 *eP* P 17 33 04.4 -1.3
AKBB **Malin Array Si** 71.31 326 P P 17 33 05.0 -0.7
TUC **Tucson** 71.34 63 *eP* P 17 33 06.1 -0.1
comp=Z,10nm,1.1s,mb4.7
TUC *epP* pP 17 33 16.9 -1.2
TUC *esP* sP 17 33 21.0 -1.7
TUC **Tucson** 71.34 63 *eP* P 17 33 06.1 -0.1
TUC *e*PP pP 17 33 16.9 -1.2
TUC *e*SP sP 17 33 21.0 -1.7
TUC pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
ANMO **Albuquerque** 72.07 58 *eP* P 17 33 10.8 +0.2
comp=Z,4.0nm,1.1s,mb4.3
ANMO *epP* pP 17 33 20.8 -1.7
ANMO *esP* sP 17 33 25.2 -1.8
ANMO **Albuquerque** 72.07 58 P P 17 33 11.1 +0.5
ANMO *e* pP 17 33 21.9 -0.6
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ASAR **Alice Springs** 72.17 198 P P 17 33 11.3 +0.2
ASAR *PP pP 17 33 27.3 +4.3
ASAR pmax pmax
comp=Z,24nm,0.7s
ASAR **Alice Springs** 72.17 198 P P 17 33 11.2 +0.2
comp=Z,24nm,0.7s,mb5.3,baz=14,slow=5.3,SNR=198
ASAR pP pP 17 33 27.3 +4.3
comp=Z,8.8nm,0.9s,baz=11,slow=5.3,SNR=4.8
PALK **Pallekele** 72.38 262 P P 17 33 13.4 +0.7
comp=Z,220nm,0.7s,mb6.2,SNR=5.6
PALK **Pallekele** 72.38 262 *eP* P 17 33 12.9 +0.1
comp=Z,16nm,0.8s,mb5.0
LPM **Los Pinos Moun** 72.42 59 *eP* P 17 33 12.8 +0.1
LPM *esP* sP 17 33 27.6 -1.5
BNM **Barren Site** 72.54 59 *eP* P 17 33 13.5 +0.1
BNM *esP* sP 17 33 27.9 -2.0
SCHQ **Schefferville** 73.37 23 P P 17 33 18.2 +0.2
SCHQ LR LR 18 05 45.9
SCHQ **Schefferville** 73.37 23 P P 17 33 18.2 +0.2
comp=Z,1.7nm,0.6s,mb4.2,baz=340,slow=8.9,SNR=6.0
SCHQ LR LR 18 05 45.9
comp=Z,413nm,21.9s,MS4.7,baz=68,slow=36
KWP **Kalwaria** 74.60 329 ⇓P P 17 33 25.4 +0.1
KWP **Kalwaria** 74.60 329 ⇓*iP* P 17 33 25.4 +0.2
MNTX **Cornudas Mount** 75.02 60 *eP* P 17 33 27.5 -0.4
comp=Z,10nm,1.5s,mb4.5
MNTX pP pP 17 33 38.7 -1.2
MNTX *esP* sP 17 33 42.7 -1.8
STHS **Stebnicka Huta** 75.29 330 *i* P P 17 33 29.8 +0.6
comp=Z,7.3nm,0.7s,mb4.7
STHS **Stebnicka Huta** 75.29 330 *i* P P 17 33 29.8 +0.6
STHS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KOLS **Kolonicke sedl** 75.34 329 *eP* P 17 33 29.3 -0.2
BURAR **Bucovina Array** 75.35 326 ⇑P P 17 33 29.2 -0.5
BURAR **Bucovina Array** 75.35 326⇑*iP* P 17 33 29.2 -0.4
UZH **Uzhgorod** 75.59 329 *eP* P 17 33 33.0 +2.1
UZH *e* 17 33 39.0
CRVS **Cervenica-Dubn** 75.65 329 *eP* P 17 33 31.2 -0.1
KSP **Ksiaz** 75.69 333 *eP* P 17 33 33.1 +1.6
TRPA **Tarpa** 75.92 328⇑*iP* P 17 33 33.1 +0.3
OKC **Ostrava-Krasne** 75.98 332 *eP* P 17 33 33.1 0.0
UPC **Upice** 76.08 333 *eP* P 17 33 27.6 -6.1
DPC **Dobruska-Polom** 76.12 333 *eP* P 17 33 32.6 -1.3
DPC AMS AMS 18 09 50.0
comp=Z,400nm,16.5s
VRI **Vrincioaia** 76.20 324 ⇑P P 17 33 34.9 +0.4
VRI **Vrincioaia** 76.20 324⇑*iP* P 17 33 34.9 +0.4
MORC **Moravsky Berou** 76.23 332 *eP* P 17 33 34.1 -0.5
comp=Z,7.6nm,0.8s,mb4.7
MORC **Moravsky Berou** 76.23 332 ⇑P P 17 33 34.6 0.0
MORC **Moravsky Berou** 76.23 332⇑*iP* P 17 33 34.5 -0.1
CLL **Collm** 76.27 335⇑*iP* P 17 33 34.1 -0.7
comp=Z,13nm,1.0s,mb4.8
CLL *i* pP pP 17 33 49.5 +2.7
CLL *eS* S 17 43 17.0 +0.9
CLL LR LR
comp=Z,600nm,24.8s,MS4.8
CLL **Collm** 76.27 335⇑*iP* P 17 33 34.1 -0.7
CLL *i* *PP pP 17 33 49.5 +2.7
CLL *eS* S 17 43 17.0 +0.9
CLL pmax pmax
comp=Z,13nm,1.0s,mb4.8
CLL MLR MLR
comp=Z,600nm,24.8s,MS4.8
CLL **Collm** 76.27 335⇑*iP* P 17 33 34.1 -0.7
comp=Z,13nm,1.0s,mb4.8
CLL *i* sP sP 17 33 49.5 -1.8
CLL *i* sPcP 17 34 00.3
CLL *ex* x 17 34 07.0
CLL *eS* S 17 43 17.0 +0.9
CLL *e*(SS) 17 48 06.0
CLL *e*SSS 17 51 30.0
CLL **Collm** 76.27 335⇑*iP* P 17 33 34.1 -0.7
comp=Z,14nm,1.0s,mb4.8
CLL *es*P sP 17 33 49.1 -2.2
CLL *e*(S) S 17 43 20.9 +4.8
CLL *e*SS SS 17 48 14.8 +5.7
CLL *e*(SSS) 17 51 38.8
CLL *e*LR LR 17 59 09.4
KECS **Kecovo** 76.35 329 *eP* P 17 33 34.7 -0.6
comp=Z,2.6nm,0.8s,mb4.2
KECS **Kecovo** 76.35 329 *eP* P 17 33 34.7 -0.6
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
BRG **Berggiesshubel** 76.38 335 *eP* P 17 33 35.2 -0.2
comp=Z,4.7nm,1.2s,mb4.3
BRG *e* 17 33 56.0
BRG LR LR
comp=Z,370nm,31.5s,MS4.5
BRG **Berggiesshubel** 76.38 335 *eP* P 17 33 34.2 -1.2
comp=Z,8.0nm,1.2s,mb4.5
BRG **Berggiesshubel** 76.38 335 *eP* P 17 33 35.2 -0.2
comp=Z,7.8nm,1.2s,mb4.5
BRG *e* 17 33 56.0
comp=Z,8.9nm,1.2s
BRG
comp=N,651nm,20.9s
BRG
comp=E,529nm,19.9s
BRG
comp=Z,621nm,31.5s
PVCC **Panska Ves** 76.50 334 *eP* P 17 33 35.6 -0.5
FBE **Freiberg** 76.51 335 *eP* P 17 33 36.0 -0.1
comp=Z,10.0nm,1.0s,mb4.7
CLZ **Clausthal** 76.52 337 *eP* P 17 33 35.9 -0.3
CLZ pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
CLZ **Clausthal** 76.52 337 *eP* P 17 33 35.9 -0.3
comp=Z,10.0nm,0.9s,mb4.8
WMOK **Wichita Mounta** 76.58 53 *eP* P 17 33 35.8 -1.1
comp=Z,4.5nm,1.0s,mb4.3
WMOK *epP* pP 17 33 45.0 -3.8
WMOK **Wichita Mounta** 76.58 53 P P 17 33 36.2 -0.6
WMOK *e* pP 17 33 47.7 -1.1
WMOK pmax pmax
comp=Z,12nm,1.0s,mb4.8
TIRR **Tirgusor** 76.66 323 ⇓P P 17 33 37.1 0.0
TIRR **Tirgusor** 76.66 323⇓*iP* P 17 33 37.2 +0.1
MLR **Muntele Rosu** 76.82 325 ⇑P P 17 33 38.9 +0.9
MLR **Muntele Rosu** 76.82 325⇑*iP* P 17 33 38.9 +0.9
MALT **Malatya** 76.87 313 *eP* P 17 33 38.7 +0.3
comp=Z,101nm,0.4s,mb6.1
MALT **Malatya** 76.87 313⇑*iP* P 17 33 39.7 +1.3
ARMA **Armidale** 76.88 181 *eP* P 17 33 38.8 +0.5
VYHS **Vyhne** 76.91 330 *eP* P 17 33 38.0 -0.4
comp=Z,3.4nm,1.0s,mb4.2
VYHS **Vyhne** 76.91 330 *eP* P 17 33 38.0 -0.4
VYHS pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
VRAC **Vranov** 76.94 332 LR LR 18 11 18.3
comp=Z,646nm,21.1s,MS4.9,baz=27,slow=39
VRAC **Vranov** 76.94 332⇑*iP* P 17 33 38.8 +0.2
DRGR 76.98 327 ⇓P P 17 33 38.6 -0.3
DRGR 76.98 327⇓*iP* P 17 33 38.6 -0.3
PRU **Pruhonice** 76.98 334 *eP* P 17 33 38.8 0.0
PSZ **Piszkesteto** 77.04 330⇓*iP* P 17 33 39.8 +0.6
VOIR 77.22 325 ⇓P P 17 33 41.0 +0.8
VOIR 77.22 325⇓*iP* P 17 33 41.0 +0.7
MOX **Moxa** 77.26 336 *eP* P 17 33 40.6 +0.2
comp=Z,10.0nm,1.3s,mb4.6
MOX
comp=Z,300nm,20.0s
MOX **Moxa** 77.26 336 *eP* P 17 33 40.6 +0.2
MOX pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.6
GUNZ **Gunzen** 77.30 335 *eP* P 17 33 40.6 0.0
comp=Z,7.0nm,0.9s,mb4.6
NKC **Novy Kostel** 77.39 335 AMS AMS 18 11 30.0
comp=Z,500nm,23.0s
PSN **Preselentsi** 77.39 322 *i* P P 17 33 41.8 +0.6
LTX **Lajitas** 77.74 60 *eP* P 17 33 43.1 -0.4
comp=Z,26nm,0.9s,mb5.2
LTX *epP* pP 17 33 53.6 -1.9
LTX *esP* sP 17 33 58.2 -1.8
LTX **Lajitas** 77.74 60 P P 17 33 43.4 -0.1
LTX pmax pmax
comp=Z,26nm,1.0s,mb5.1
TXAR **Lajitas Array** 77.74 60 P P 17 33 43.3 -0.2
TXAR *PP pP 17 33 58.2 +2.7
TXAR pmax pmax
comp=Z,4.0nm,0.7s
TXAR **Lajitas Array** 77.74 60 P P 17 33 43.3 -0.1
comp=Z,4.3nm,0.7s,mb4.5,baz=298,slow=4.3,SNR=28
TXAR pP pP 17 33 58.1 +2.7
comp=Z,9.1nm,0.5s,baz=302,slow=5.1,SNR=18
KHC **Kasperske Hory** 78.03 334 *eP* P 17 33 44.5 -0.2
KHC *e* 17 34 00.4
KHC MLR MLR
comp=Z,600nm,17.8s,MS5.0
KHC **Kasperske Hory** 78.03 334 *eP* P 17 33 44.5 -0.2
KHC *epP* pP 17 34 00.4 +3.7
KHC *ex* x 17 37 17.0
KHC AMS AMS 18 14 40.0
comp=Z,600nm,17.8s
BRTR **Keskin Array B** 78.12 316 *i* P P 17 33 45.5 +0.1
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR **Keskin Array B** 78.12 316 P P 17 33 45.6 +0.2
comp=Z,3.1nm,0.8s,mb4.3,baz=63,slow=4.2,SNR=14
GZR **Gura Zlata** 78.14 326 ⇑P P 17 33 45.0 -0.3
GZR **Gura Zlata** 78.14 326⇑*iP* P 17 33 45.0 -0.3
GRA1 **Grafenberg Arr** 78.22 336 *eP* P 17 33 46.6 +0.8
GRF **Grafenberg Arr** 78.22 336 *eP* P 17 33 46.6 +0.8
WET **Wettzell** 78.23 334 *eP* P 17 33 46.0 +0.2
WET pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
WET **Wettzell** 78.23 334 *eP* P 17 33 46.0 +0.2
comp=Z,7.0nm,1.0s,mb4.5
GERES **GERESS Array B** 78.25 334 P P 17 33 45.9 0.0
GERES pmax pmax
comp=Z,2.0nm,0.6s
GERES MLR MLR
comp=Z,397nm,18.9s
GERES **GERESS Array B** 78.25 334 P P 17 33 45.9 0.0
comp=Z,1.8nm,0.6s,mb4.2,baz=33,slow=3.2,SNR=4.4
GERES LR LR 18 11 26.5
comp=Z,397nm,18.9s,MS4.8,baz=263,slow=38
UMR **Umm Al-Rimmam** 78.31 301 *eP* P 17 33 46.5 -0.1
UMR AMb AMB 17 33 48.1
comp=Z,84nm,0.8s,mb5.8
MIB **Mutribah** 78.35 301 *eP* P 17 33 46.7 -0.1
MIB AMb AMB 17 33 48.4
comp=Z,114nm,0.8s,mb5.9
BZS **Buzias** 78.38 327 ⇓P P 17 33 46.6 -0.1
BZS **Buzias** 78.38 327⇓*iP* P 17 33 46.7 0.0
CONA **Conrad Observa** 78.38 332⇑*iP* P 17 33 47.4 +0.7
comp=Z,9.5nm,1.1s,mb4.7
ANTO **Ankara** 78.40 317 ⇓P P 17 33 47.9 +0.9
ANTO **Ankara** 78.40 317⇓*iP* P 17 33 47.9 +1.0
TNS **Taunus Mts** 78.50 337 *eP* P 17 33 47.2 -0.1
TNS pmax pmax
comp=Z,42nm,2.6s,mb4.9
TNS **Taunus Mts** 78.50 337 *eP* P 17 33 47.2 -0.1
comp=Z,42nm,2.6s,mb4.9
KBD **Kabd** 78.60 300 *eP* P 17 33 47.6 -0.6
KBD AMb AMB 17 33 49.9
comp=Z,163nm,0.8s,mb6.0
SZH **Strazhica** 78.66 323 *i* P P 17 33 47.8 -0.5
RST **Umm Al-Ruwaisa** 78.77 301 *eP* P 17 33 48.7 -0.5
RST AMb AMB 17 33 50.5
comp=Z,98nm,0.8s,mb5.8
QRN **Al-Qurain** 78.78 300 *eP* P 17 33 49.0 -0.2
QRN AMb AMB 17 33 50.9
comp=Z,91nm,0.7s,mb5.8
NAY **Al-Naaiem** 78.81 301 *eP* P 17 33 49.2 -0.2
NAY AMb AMB 17 33 51.0
comp=Z,42nm,0.9s,mb5.4
RDF **Al-Radifah** 78.87 300 *eP* P 17 33 49.8 +0.1
RDF AMb AMB 17 33 51.6
comp=Z,103nm,1.0s,mb5.7
PKSM **Moragy** 78.94 329⇓*iP* P 17 33 48.8 -1.0
PVL **Pavlikeni** 78.95 324 *iP* P 17 33 50.2 +0.3
STKA **Stephens Creek** 78.96 190 *eP* P 17 33 46.6 -3.2
comp=Z,6.7nm,1.0s,mb4.5
STKA **Stephens Creek** 78.96 190 P P 17 33 49.3 -0.5
comp=Z,8.0nm,0.9s,mb4.7,baz=351,slow=6.6,SNR=8.4
STKA LR LR 18 04 14.1
comp=Z,310nm,20.1s,MS4.6,baz=21,slow=32
JMB **Yambol** 79.06 322 *iP* P 17 33 47.7 -2.8
JCT **Junction City** 79.17 57 *eP* P 17 33 50.4 -0.9
comp=Z,9.6nm,1.0s,mb4.7
JCT *epP* pP 17 34 00.7 -2.6
JCT *esP* sP 17 34 05.9 -2.0
JCT **Junction City** 79.17 57 P P 17 33 50.8 -0.5
JCT *e* pP 17 34 01.8 -1.5
JCT pmax pmax
comp=Z,9.0nm,0.6s,mb4.9
GIVF **Givet** 79.53 340 *eP* P 17 33 52.6 -0.3
MIAR **Mount Ida** 79.54 50 *eP* P 17 33 51.4 -1.9
comp=Z,12nm,1.2s,mb4.7
MIAR *epP* pP 17 34 02.4 -2.9
MIAR **Mount Ida** 79.54 50 P P 17 33 52.6 -0.6
MIAR *e* 17 33 57.5
MIAR pmax pmax
comp=Z,14nm,1.0s,mb4.8
PERS **Pernice** 79.76 332 *eP* P 17 33 54.2 -0.1
DIM **Dimitrovgrad** 79.84 323 *iP* P 17 33 55.1 +0.4
KBA **Koelnbreinsper** 79.93 333⇓*iP* P 17 33 55.7 +0.5
comp=Z,15nm,0.7s,mb5.0
KBA **Koelnbreinsper** 79.93 333⇓*iP* P 17 33 55.7 +0.5
KBA pmax pmax
comp=Z,15nm,0.7s,mb5.0
PLD **Plovdiv** 80.13 323 *iP* P 17 33 56.2 -0.1
KDZ **Kurdzhali** 80.22 323 *iP* P 17 33 56.9 +0.1
BFO **Black Forest** 80.26 337 *eP* P 17 33 56.5 -0.5
comp=Z,15nm,1.3s,mb4.8
BFO **Black Forest** 80.26 337 *eP* P 17 33 56.5 -0.4
BFO pmax pmax
comp=Z,15nm,1.3s,mb4.8
WTTA **Wattenberg** 80.29 334⇓*iP* P 17 33 57.5 +0.4
comp=Z,13nm,0.8s,mb4.9
WTTA **Wattenberg** 80.29 334⇓*iP* P 17 33 57.5 +0.4
WTTA pmax pmax
comp=Z,13nm,0.8s,mb4.9
VTS **Vitosha** 80.33 325 *iP* P 17 33 57.6 +0.2
VTS **Vitosha** 80.33 325⇑*iP* P 17 33 58.0 +0.6
FORT **Forrest** 80.36 201 *eP* P 17 33 57.2 -0.2
comp=Z,89nm,0.8s,mb5.8
CDF **Champ du Feu** 80.47 337 *eP* P 17 33 57.8 -0.2
comp=Z,39nm,1.2s,mb4.9
CDF **Champ du Feu** 80.47 337 *eP* P 17 33 57.8 -0.2
comp=Z,20nm,1.2s,mb4.9
CDF **Champ du Feu** 80.47 337 *eP* P 17 33 57.8 -0.2
CDF pmax pmax
comp=Z,20nm,1.2s,mb4.9
RZN **Rozhen** 80.48 323 *iP* P 17 33 58.0 -0.2
VISS **Visnje** 80.59 332 *iP* P 17 33 58.0 -0.7
BOJS **Bojanci** 80.72 331 *eP* P 17 33 59.6 +0.2
MEZF **Maizieres J'vi** 80.96 339 *eP* P 17 34 00.7 +0.1
comp=Z,10.0nm,0.7s,mb4.6
MEZF **Maizieres J'vi** 80.96 339 *eP* P 17 34 00.7 +0.1
comp=Z,10.0nm,0.7s,mb4.8
MMB **Musomiste** 80.96 324 *iP* P 17 34 00.9 +0.1
KKB **Krupnik** 80.99 324 *iP* P 17 34 02.2 +1.3
NATX **Nacogdoches** 81.09 53 P P 17 34 01.4 -0.3
HAU **Haudompre** 81.09 338 *eP* P 17 34 01.0 -0.3
HAU *e*MLR MLR
comp=Z,332nm,21.8s,MS4.3
HAU **Haudompre** 81.09 338 *eP* P 17 34 01.0 -0.3
HAU MLR MLR
comp=Z,330nm,21.8s,MS4.7
DAVOX **Davos/Dischmat** 81.24 335 LR LR 18 14 24.7
comp=Z,318nm,19.0s,MS4.7,baz=254,slow=39
TAOE **Nuku Hiva Isla** 81.28 113 *e*SS SS 17 49 22.2 -4.7
comp=Z,1μm,31.1s
TAOE *e*LR LR 17 59 22.8
comp=Z,2μm,22.4s
PMOR **Pomariorio Ree** 81.36 123 *e*T 19 03 08.3
comp=Z,39nm,0.2s
CSS **Prodhromos** 82.04 314 *eP* P 17 34 05.5 -1.1
comp=Z,14nm,0.8s,mb4.9
LOR **Lormes** 82.40 339 *eP* P 17 34 08.0 -0.3
comp=Z,38nm,1.0s,mb5.0
LOR *e*MLR MLR
comp=Z,752nm,23.0s,MS4.7
LOR **Lormes** 82.40 339 *eP* P 17 34 08.0 -0.3
comp=Z,19nm,1.0s,mb5.0
LOR LR LR
comp=Z,750nm,23.0s,MS5.0
LOR **Lormes** 82.40 339 *eP* P 17 34 08.0 -0.3
LOR pmax pmax
comp=Z,19nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,750nm,23.0s,MS5.0
GRR **Gorron** 82.41 343 *eP* P 17 34 08.4 +0.1
CABF **La Chapelle** 82.44 337 *eP* P 17 34 08.5 0.0
PPT **Papeete** 82.46 125 *e*LR LR 17 59 54.0
comp=Z,590nm,24.8s,baz=328
PPT **Papeete** 82.46 125 LR LR 18 04 01.3
comp=Z,444nm,20.8s,MS4.8,baz=276,slow=31
SSF **Saint Saulge** 82.68 339 *eP* P 17 34 09.5 -0.2
comp=Z,10.0nm,0.9s,mb4.5
SSF **Saint Saulge** 82.68 339 *eP* P 17 34 09.5 -0.2
comp=Z,5.0nm,0.9s,mb4.5
SSF **Saint Saulge** 82.68 339 *eP* P 17 34 09.5 -0.2
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
SWET **Sewanee** 82.88 45 *eP* P 17 34 09.6 -1.4
AVF **Avril sur Loir** 82.97 339 *eP* P 17 34 11.2 0.0
comp=Z,45nm,1.2s,mb5.1
AVF **Avril sur Loir** 82.97 339 *eP* P 17 34 11.2 0.0
comp=Z,22nm,1.2s,mb4.8
AVF **Avril sur Loir** 82.97 339 *eP* P 17 34 11.2 0.0
AVF pmax pmax
comp=Z,22nm,1.2s,mb5.1
SMF **Signal de Mont** 82.98 339 *eP* P 17 34 11.5 +0.2
comp=Z,72nm,1.2s,mb5.3
SMF **Signal de Mont** 82.98 339 *eP* P 17 34 11.5 +0.2
comp=Z,36nm,1.2s,mb5.3
SMF **Signal de Mont** 82.98 339 *eP* P 17 34 11.5 +0.2
SMF pmax pmax
comp=Z,36nm,1.2s,mb5.3
LPL **La Plagne** 83.28 337 *eP* P 17 34 13.6 +0.7
comp=Z,24nm,1.0s,mb4.9
LPL **La Plagne** 83.28 337 *eP* P 17 34 13.6 +0.7
comp=Z,12nm,1.0s,mb4.9
LPL **La Plagne** 83.28 337 *eP* P 17 34 13.6 +0.7
LPL pmax pmax
comp=Z,12nm,1.0s,mb4.9
LPG **La Plagne** 83.29 337 *eP* P 17 34 13.8 +0.9
comp=Z,31nm,1.0s,mb5.0
LPG **La Plagne** 83.29 337 *eP* P 17 34 13.8 +0.9
comp=Z,15nm,1.0s,mb5.0
LPG **La Plagne** 83.29 337 *eP* P 17 34 13.8 +0.9
LPG pmax pmax
comp=Z,15nm,1.0s,mb5.0
BGF **Bois d'Agland** 83.31 340 *eP* P 17 34 13.1 +0.1
comp=Z,26nm,1.1s,mb4.9
BGF **Bois d'Agland** 83.31 340 *eP* P 17 34 13.1 +0.1
comp=Z,13nm,1.1s,mb4.9
BGF **Bois d'Agland** 83.31 340 *eP* P 17 34 13.1 +0.1
BGF pmax pmax
comp=Z,13nm,1.1s,mb4.9
TKL **Tuckaleechee C** 83.55 43 LR LR 18 11 01.3
comp=Z,746nm,21.9s,MS5.0,baz=52,slow=35
TCF **Toulx Ste Croi** 83.71 340 *eP* P 17 34 15.3 +0.2
comp=Z,46nm,1.1s,mb5.2
TCF **Toulx Ste Croi** 83.71 340 *eP* P 17 34 15.3 +0.2
comp=Z,23nm,1.1s,mb5.2
TCF **Toulx Ste Croi** 83.71 340 *eP* P 17 34 15.3 +0.2
TCF pmax pmax
comp=Z,23nm,1.1s,mb5.2
MBDF **Montbardon** 84.00 336 *eP* P 17 34 17.1 +0.5
comp=Z,9.2nm,0.7s,mb4.7
MBDF **Montbardon** 84.00 336 *eP* P 17 34 17.1 +0.5
comp=Z,4.6nm,0.7s,mb4.7
MBDF **Montbardon** 84.00 336 *eP* P 17 34 17.1 +0.5
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
ORIF **Oris-en-Rattie** 84.06 337 *eP* P 17 34 17.4 +0.5
comp=Z,17nm,0.8s,mb4.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ORIF				eMLR	MLR		
	comp=Z,295nm,18.5s,MS4.4						
ORIF	Oris-en-Rattie	84.06	337	eP	P	17 34 17.4	+0.5
	comp=Z,8.4nm,0.8s,mb4.9						
ORIF	Oris-en-Rattie	84.06	337	eP	P	17 34 17.4	+0.5
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
KLBR	Kellerberrin	84.15	209	eP	P	17 34 16.7	-0.6
	comp=Z,25nm,0.8s,mb5.4						
VIVF	Saint-Julien-l	84.44	338	eP	P	17 34 18.4	-0.4
	comp=Z,39nm,1.2s,mb5.1						
VIVF	Saint-Julien-l	84.44	338	eP	P	17 34 18.4	-0.4
	comp=Z,20nm,1.2s,mb5.1						
VIVF	Saint-Julien-l	84.44	338	eP	P	17 34 18.4	-0.4
VIVF				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
NWAO	Narrogin (SRO)	85.55	209	eP	P	17 34 24.1	-0.2
	comp=Z,51nm,1.0s,mb5.7						
NWAO				esP	sP	17 34 39.8	-1.1
NWAO	Narrogin (SRO)	85.55	209	eP	P	17 34 24.1	-0.1
NWAO				e*SP	sP	17 34 39.8	-1.1
NWAO				pmax	pmax		
	comp=Z,51nm,1.0s						
NWAO	Narrogin (SRO)	85.55	209	P	P	17 34 24.0	-0.2
	comp=Z,33nm,0.8s,mb5.6,baz=28,slow=4.6,SNR=16						
NWAO				pP	pP	17 34 39.6	+3.3
	comp=Z,35nm,0.8s,baz=38,slow=3.2,SNR=6.7						
TIP	Timpagrande	85.75	327	eP	P	17 34 25.3	-0.1
ESDC	Sonseca Array	91.39	342	LR	LR	18 25 19.7	
	comp=Z,196nm,19.4s,MS4.6,baz=335,slow=42						
TORD	Torodi Ar. Bea	114.87	329	PKP	PKiKP	17 40 25.9	-1.4
	comp=Z,0.4nm,0.7s,baz=32,slow=2.4,SNR=3.6						
TORD				PKKPbc	PKKPbc	17 51 02.3	+0.1
	comp=Z,0.3nm,0.5s,baz=243,slow=0.3,SNR=4.7						
VNDA	Vanda	124.19	178	PKIKP	PKPdf	17 40 42.6	-0.7
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNDA	Vanda	124.19	178	PKP	PKPdf	17 40 42.5	-0.7
	comp=Z,2.2nm,0.9s,baz=297,slow=3.0,SNR=2.8						
LPAZ	La Paz	134.60	62	pPKP	pPKPdf	17 41 20.4	+2.9
	comp=Z,1.0nm,0.8s,baz=288,slow=6.4,SNR=2.6						
BOSA	Boshof	135.47	275	PKP	PKPdf	17 41 06.6	+0.4
BOSA	Boshof	135.47	275	PKIKP	PKPdf	17 41 06.6	+0.5
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	135.47	275	PKP	PKPdf	17 41 06.6	+0.4
	comp=Z,2.1nm,0.8s,baz=61,slow=2.2,SNR=3.6						
CFAA	Coronel Fontan	145.30	79	PKPbc	PKPbc	17 41 22.8	-0.8
	comp=Z,1.4nm,0.8s,baz=276,slow=4.0,SNR=21						
CFAA				pPKPbc	pPKPbc	17 41 38.3	+2.2
	comp=Z,4.0nm,1.1s,baz=266,slow=4.8,SNR=8.7						
PLCA	Paso Flores	148.54	95	ePKPbc	PKPbc	17 41 32.2	-0.3
MAIT	Maitri	149.59	204	ePKPdf	PKPdf	17 41 33.4	+3.7
SNAA	Sanae	152.53	197	PKPbc	PKPbc	17 41 39.8	-1.3
	comp=Z,1.5nm,0.6s,baz=226,slow=7.0,SNR=10						
SNAA				PKPab	PKPab	17 41 51.4	-0.3
	comp=Z,1.2nm,0.6s,baz=108,slow=5.3,SNR=6.3						
VNA2	Neumayer--Watz	153.99	195	ePKPdf	PKPbc	17 41 44.6	+0.3
	baz=126,slow=1.2						
VNA2				e		17 41 51.4	
VNA2				e		17 41 58.2	
VNA2				e		17 42 05.4	
VNA2				e		17 42 13.8	
VNA2				e		17 42 20.9	
VNA2				e		17 42 27.8	
VNA2				e		17 45 10.1	
VNA2				e		17 45 25.7	
VNA3	Neumayer Olymp	154.09	193	ePKPdf	PKPbc	17 41 44.0	-0.6
VNA3				e		17 41 51.1	
VNA3				e		17 41 58.4	
VNA3				e		17 42 05.6	
VNA3				e		17 42 13.1	
VNA3				e		17 42 20.6	
VNA3				e		17 42 26.9	
VNA3				e		17 45 09.8	
VNA3				e		17 45 25.8	

IDC 03 17:25:00.7±0.9, 4685N×15276E, h0km, mb4.1/9, mb1 4.4/9, mb1mx4.1/21, mbtmp4.2/9, MS4.5/3, Ms1 4.5/3, ms1mx3.9/55, Error ellipse: s-maj=28.5km s-min=23.6km az=103.0
NEIC 03 17:25:02.5±0.6, 4683N×15277E, h10km, mb4.6/9, Error ellipse: s-maj=14.6km s-min=12.9km az=184.0
MOS 03 17:25:03.7±1.5, 4679N×15289E, h33km, mb4.6/13, Error ellipse: s-maj=22.3km s-min=13.0km az=109.5
ISCJB 03 17:25:08.3±2.4, 468N±0.1×1527E±02, h69km±19km, mb4.4/20, Error ellipse: s-maj=20.5km s-min=14.4km az=137.6
ISC 03 17:25:10.7±2.0, 469N±01×1527E±02, h74km±15km, n43, σ0.83/40, mb4.4/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	6.81	274	ePn	Pn	17 26 48.6	+0.8
MA2	Magadan	12.79	356	ePn	Pn	17 28 09.4	+0.2
YAK	Yakutsk	20.07	328	eP	P	17 29 37.0	-0.7
	14nm,0.6s						
YAK	Yakutsk	20.07	328	eP	P	17 29 37.0	-0.7
YAK				pmax	pmax		
	comp=Z,14nm,0.6s						
KSRS	Korea Array	20.55	252	P	P	17 29 42.0	-1.1
	comp=Z,3.1nm,0.8s,baz=56,slow=12,SNR=3.2						
INCN	Inchon	21.38	253	P	P	17 29 46.2	-5.8
	comp=Z,9.3nm,0.4s,mb4.5						
HIA	Hailar	22.05	288	P	P	17 29 57.6	-1.5
	comp=Z,8.6nm,0.9s,mb4.1						
HIA	Hailar	22.05	288	P	P	17 29 57.6	-1.5
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK	Inuvik	41.72	32	P	P	17 32 51.7	0.0
	comp=Z,108nm,0.7s						
MKAR	Makanchi Array	46.63	297	P	P	17 33 31.1	-0.2
MKAR						17 35 03.8	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	46.63	297	P	P	17 33 31.1	-0.2
	comp=Z,1.8nm,0.8s,mb3.9,baz=64,slow=8.8,SNR=2.8						
MKAR				PcP	PcP	17 35 03.8	-0.2
	comp=Z,1.0nm,0.7s,baz=75,slow=2.1,SNR=5.4						
KURK	Kurchatov	47.06	303	P	P	17 33 33.1	-1.5
	comp=Z,3.7nm,0.7s,mb4.2						
KURK	Kurchatov	47.06	303	P	P	17 33 33.1	-1.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
LSA	Lhasa	49.98	273	eP	P	17 33 59.3	+2.1
	comp=Z,6.9nm,0.6s,mb4.8						
LSA	Lhasa	49.98	273	eP	P	17 33 59.3	+2.1
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
EKS2	Erkin-Say	53.95	296	P	P	17 34 28.2	+1.6
	comp=Z,6.7nm,1.1s,mb4.6						
ARU	Arti	54.73	317	P	P	17 34 31.7	-0.4
	comp=Z,3.9nm,0.8s,mb4.5						
ARU	Arti	54.73	317	P	P	17 34 31.7	-0.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
NVAR	Mina Array Bea	62.64	62	P	P	17 35 27.7	+0.5
	comp=Z,0.9nm,0.6s,mb3.9,baz=291,slow=7.5,SNR=2.3						
FINES	FINESS Array B	63.81	335	P	P	17 35 34.4	-0.2
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	FINESS Array B	63.81	335	P	P	17 35 34.4	-0.2
	comp=Z,3.3nm,0.4s,mb4.5,baz=39,slow=6.9,SNR=12						
PSI	Prapat	63.87	244	LR	LR	18 09 18.6	
	comp=Z,189nm,18.0s,baz=111,slow=42						
NB2	NORSAR Subarra	68.03	341	P	P	17 36 01.6	0.0
	comp=Z,4.5nm,0.6s,mb4.5,baz=30,slow=6.5						
NB2	NORSAR Subarra	68.03	341	P	P	17 36 01.6	0.0
NB2				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.5						
NOA	NORSAR Array B	68.03	341	P	P	17 36 01.8	+0.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	68.03	341	P	P	17 36 01.8	+0.2
	comp=Z,2.8nm,0.6s,mb4.3,baz=27,slow=6.3,SNR=5.2						
WRA	Warramunga Arr	68.52	199	P	P	17 36 04.0	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	Warramunga Arr	68.52	199	P	P	17 36 04.0	-1.1
	comp=Z,0.9nm,0.8s,mb3.6,baz=21,slow=7.0,SNR=3.1						
AKASG	Malin Array Be	71.29	326	P	P	17 36 21.6	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	71.29	326	P	P	17 36 21.6	-0.3
	comp=Z,2.5nm,0.3s,mb4.5,baz=36,slow=6.2,SNR=8.8						
ASAR	Alice Springs	72.22	198	P	P	17 36 28.1	+0.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	72.22	198	P	P	17 36 28.1	+0.5
	comp=Z,0.9nm,0.5s,mb3.8,baz=10,slow=6.7,SNR=5.7						
CLL	Collm	76.24	335	iP	P	17 36 50.8	0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
CLL	Collm	76.24	335	iP	P	17 36 50.8	0.0
	comp=Z,6.0nm,0.9s,mb4.3						
TXAR	Lajitas Array	77.69	60	P	P	17 36 58.6	-0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	77.69	60	P	P	17 36 58.6	-0.8
	comp=Z,0.8nm,0.6s,mb3.6,baz=285,slow=4.6,SNR=3.1						
MIB	Mutribah	78.36	301	eP	P	17 37 03.5	+0.5
MIB				AMb	AMB	17 37 04.9	
	comp=Z,23nm,0.7s,mb5.0						
RST	Umm Al-Ruwaisa	78.78	301	eP	P	17 37 05.4	+0.1
RST				AMb	AMB	17 37 08.4	
	comp=Z,14nm,1.0s,mb4.7						
QRN	Al-Qurain	78.79	300	eP	P	17 37 06.2	+0.8
QRN				AMb	AMB	17 37 07.9	
	comp=Z,40nm,1.1s,mb5.2						
NAY	Al-Naaiem	78.82	301	eP	P	17 37 05.6	+0.1
NAY				AMb	AMB	17 37 10.4	
	comp=Z,5.8nm,0.9s,mb4.4						
RDF	Al-Radifah	78.88	300	eP	P	17 37 06.2	+0.4
RDF				AMb	AMB	17 37 11.6	
	comp=Z,8.8nm,0.6s,mb4.8						
URZ	Urewera	87.52	161	LR	LR	18 08 42.7	
	comp=Z,238nm,20.2s,baz=312,slow=30						
TEIG	Tepich	93.60	55	LR	LR	18 20 58.5	
	comp=Z,364nm,21.7s,baz=339,slow=36						

IDC 03 17:27:45.9±2.2, 623S×13009E, h0km, mb3.8/1, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=96.2km s-min=27.9km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.57	200	Pn	Pn	17 30 45.8	-0.5
	baz=30,slow=20,SNR=3.5						
FITZ				Sn	Sn	17 32 57.5	-10
	0.3nm,0.3s,baz=218,slow=19,SNR=4.6						
WRA	Warramunga Arr	14.24	164	Pn	Pn	17 31 09.0	0.0
	0.2nm,0.3s,baz=347,slow=13,SNR=85						
WRA				Sn	Sn	17 33 36.4	-11
	0.5nm,0.3s,baz=326,slow=25,SNR=6.7						
ASAR	Alice Springs	17.72	168	P	Pn	17 31 54.7	+0.4
	0.2nm,0.3s,baz=343,slow=9.1,SNR=12						
MKAR	Makanchi Array	67.63	327	P	P	17 38 44.8	+0.1
	0.5nm,0.5s,baz=115,slow=6.5,SNR=8.3						

ISK 03 17:34:58.4, 3833N×3926E, h5km, MD3.1
ISCJB 03 17:34:59.6±0.4, 3833N±003×3930E±003, h5km, Error ellipse: s-maj=4.6km s-min=3.6km az=34.7
CSEM 03 17:34:59.0±0.1, 3834N×3926E, h5km, MD3.1, Error ellipse: s-maj=2.2km s-min=2.0km az=15.0
DDA 03 17:35:00.3, 3833N×3931E, h4km±6km, Md3.1
NSSC 03 17:35:02.2, 3843N×3965E, h15km±20km
ISC 03 17:34:59.6±0.8, 3833N±004×3932E±004, h1km±7km, n18, σ1.01/29, 3D, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.31	303	iP	Pg	17 35 05.1	-0.6
ELZG				iS	Sg	17 35 10.7	+1.0
PTK	Pertek	0.57	6	PG	Pg	17 35 10.6	+0.1
PTK				SG	Sg	17 35 19.9	+2.0
MALT	Malatya	0.70	269	PG	Pg	17 35 11.8	-1.3
MALT				SG	Sg	17 35 22.5	+0.3
MYA	Malataya	0.70	270	PG	Pg	17 35 12.2	-0.9
DIY	Diyarbakir	0.83	121	PG	Pg	17 35 16.4	+0.8
URFA	Urfa	0.97	204	PG	Pg	17 35 18.1	-0.1
BINT	Bingol	1.07	59	PN	Pn	17 35 20.5	-1.2
EZC	Erzincan	1.47	15	ePN	Pn	17 35 26.2	-1.1
DRBT	Darb Altahta	1.52	165	⇑P	Pg	17 35 37.2	+8.4
DRBT				⇓S	Sg	17 36 04.0	+15
MARD	Mardin	1.54	131	iP	Pn	17 35 26.8	-1.3
MARD				iS	Sn	17 35 48.4	-0.3
BNGL	BINGOL	1.56	66	iP	Pn	17 35 29.3	+0.8
BNGL				iS	Sg	17 35 57.0	+7.1
KBSD	Kabsdagh	1.64	143	⇑P	Pn	17 35 29.4	-0.1
KBSD				⇑S	Sn	17 35 51.2	0.0
KBSD	Kabsdagh	1.64	143	⇑iP	Pn	17 35 29.4	-0.2
KBSD				⇑iS	Sn	17 35 51.2	-0.1
GZT	Gaziantep	1.69	236	iP	Pn	17 35 29.4	-0.9
GZT				iS	Sn	17 35 53.7	+1.1
BTMT	Batman	1.71	94	ePN	Pn	17 35 29.5	-1.1
SFNV	Sufian	2.01	161	⇓P	Pn	17 35 36.3	+1.7
SFNV				⇑S	Sn	17 36 02.2	+1.9
SFNV	Sufian	2.01	161	⇓iP	Pn	17 35 36.3	+1.7
SFNV				⇑iS	Sn	17 36 02.2	+1.9
GAZ	Gaziantep	2.03	236	ePN	Pn	17 35 34.7	-0.2

ATH 03 17:37:39.7, 3864N×2235E, h25km±7km, MD3.1/4
ISCJB 03 17:37:40.4±0.6, 3866N±002×2224E±005, h21km±8km, Error ellipse: s-maj=7.1km s-min=4.1km az=3.1
CSEM 03 17:37:40.5±0.2, 3866N×2226E, h25km, ML3.2, Error ellipse: s-maj=4.8km s-min=3.2km az=89.0
THE 03 17:37:40.2, 3864N×2228E, h9km, ML3.2
ISC 03 17:37:39.6±0.5, 3864N±002×2235E±005, h19km±4km, n13, σ0.77/23, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGG	Agios Georgios	0.38	358	ePg	Pg	17 37 47.5	-0.1
AGG				eSg	Sg	17 37 53.7	+0.7
EVR	Evrytania	0.50	303	ePN	Pg	17 37 50.0	+0.2
EVR				eSN	Sg	17 37 57.6	+1.0
SELA	Sela	0.51	224	ePg	Pg	17 37 49.1	-0.7
SELA				eSg	Sg	17 37 56.6	-0.1
LTK	Loutraki	0.79	141	ePg	Pg	17 37 55.2	+0.2
LTK				eSg	Sg	17 38 08.6	+3.1
LTK	Loutraki	0.79	141	ePg	Pg	17 37 55.2	+0.2
LTK				eSg	Sg	17 38 08.6	+3.1
RLS	Riolos of Patr	0.90	230	ePN	Pn	17 37 56.8	-0.5
RLS				eSN	Sn	17 38 10.3	+0.5
NEO	Neokhori	0.95	46	ePN	Pn	17 37 58.0	0.0
THL	Klokotos Trika	0.96	345	ePN	Pn	17 37 58.3	+0.2
THL				eSN	Sn	17 38 11.6	+0.4
XOR	Xorichti	0.98	42	ePg	Pg	17 37 58.5	-0.1
VLX	Vlachokerasia	1.27	179	ePg	Pg	17 38 03.2	-0.9
VLX				eSg	Sg	17 38 20.7	0.0
AOS	Alonnisos	1.31	66	ePg	Pg	17 38 05.3	+0.4
DID	Didima	1.33	148	ePg	Pg	17 38 04.2	-1.1
DID				eSg	Sg	17 38 23.4	+0.7
LIT	Litokhoron	1.46	4	ePg	Pg	17 38 06.1	-1.7
LIT				eSg	Sg	17 38 26.4	-0.5

MOS 03 17:46:22.9±1.4, 4376N×4429E, h25km, mb3.5/1, Error ellipse: s-maj=0.1km s-min=0.0km az=65.3
ISC 03 17:46:20.1±1.9, 4392N±006×444E±01, h11km±6km, n11, σ0.84/21, 1C-1D, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRTR	Priterechnaya	0.20	214	⇓iPG	Pg	17 46 24.6	+0.1
KMSR	Komsomolskaya	0.56	191	ePG	Pg	17 46 31.6	+0.6
KMSR				eS	Sg	17 46 39.5	+1.1
KUBR	Kubataba	0.75	261	PG	Pg	17 46 36.4	+1.7
KUBR				S	Sg	17 46 46.0	+1.4
KUBR				pmax	pmax		
	comp=Z,4.0nm,0.1s						
KUBR				smax			
	comp=N,5.0nm,0.1s						
LSNR	Lesken	0.79	215	ePG	Pg	17 46 34.5	-0.9
LSNR				eS	Sg	17 46 44.3	-1.4
LACR	Lac	1.10	185	ePG	Pg	17 46 41.7	+0.4
LACR				eS	Sb	17 46 56.8	+1.3
BEYR	Belyy Ugol+	1.17	275	PG	Pg	17 46 42.8	+0.1
BEYR				S	Sb	17 46 57.4	-0.2
BEYR				smax			
	comp=N,194nm,0.2s						
DIGR	Digorskoe uzhe	1.20	212	⇑iPG	Pg	17 46 42.1	-1.0
DIGR				eS	Sb	17 46 57.6	-0.7
ZEI	Tsey	1.22	199	ePG	Pg	17 46 42.6	-0.9
ZEI				eS	Sb	17 46 58.5	-0.3
KIV0	Kislovodsk Arr	1.26	272	PG	Pg	17 46 43.8	-0.5
KIV0				S	Sb	17 47 00.0	-0.1
KIV	Kislovodsk	1.27	272	PG	Pg	17 46 44.0	-0.5
KIV				S	Sb	17 46 59.9	-0.4
KIV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KIV				smax			
	comp=N,13nm,0.2s						
SHAR	Shatzhatmas	1.29	263	PG	Pg	17 46 44.4	-0.6
SHAR				S	Sb	17 47 01.8	+0.8
SHAR				pmax	pmax		
	comp=Z,2.0nm,0.2s						

IDC 03 17:59:59.2±3.8, 497S×12979E, h271km±41km, mb2.6/1, mb1 2.9/4, mb1mx2.7/15, mbtmp2.7/4, Error ellipse: s-maj=73.0km s-min=16.6km az=72.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.67	197	P	Pn	18 03 00.9	-1.8
	0.1nm,0.3s,baz=28,slow=15,SNR=3.4						
FITZ				S	S	18 05 23.0	-11
	0.1nm,0.3s,baz=131,slow=20,SNR=2.4						
WRA	Warramunga Arr	15.53	164	P	Pn	18 03 23.5	-1.4
	0.1nm,0.3s,baz=344,slow=12,SNR=8.7						
WRA				S	S	18 06 10.4	-3.1
	0.1nm,0.3s,baz=345,slow=19,SNR=4.2						
ASAR	Alice Springs	19.00	168	P	P	18 04 01.9	+0.5
	0.2nm,0.3s,baz=349,slow=12,SNR=19						
ASAR				S	S	18 07 23.5	+1.0
	0.0nm,0.3s,baz=352,slow=26,SNR=3.5						
MKAR	Makanchi Array	66.43	326	P	P	18 10 19.6	0.0
	0.1nm,0.5s,baz=120,slow=8.5,SNR=2.1						

DDA 03 18:00:48.8, 3873N×3941E, h9km±2km, Md2.8
CSEM 03 18:00:49.9±0.1, 3835N×3919E, h15km, MD2.8, Error ellipse: s-maj=4.3km s-min=2.5km az=12.0
ISCJB 03 18:00:50.9±0.6, 3837N±004×3922E±004, h12km±9km, Error ellipse: s-maj=6.5km s-min=5.6km az=158.2
ISK 03 18:00:50.3, 3836N×3920E, h11km, MD2.8
ISC 03 18:00:51.4±0.6, 3838N±004×3920E±005, h17km±8km, n9, σ0.90/15, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.21	304	iP	Pg	18 00 56.1	-0.2
ELZG				iS	Sg	18 01 00.8	+1.2
PTK	Pertek	0.53	16	PG	Pg	18 01 01.1	-0.9
PTK				SG	Sg	18 01 10.1	+1.0
MALT	Malatya	0.61	264	PG	Pg	18 01 02.3	-1.2
MALT				SG	Sg	18 01 11.8	+0.1
MYA	Malataya	0.61	265	PG	Pg	18 01 02.4	-1.1
DIY	Diyarbakir	0.94	121	PG	Pg	18 01 08.6	-1.0
DIY				SG	Sg	18 01 22.1	+0.1
URFA	Urfa	0.99	198	ePG	Pg	18 01 09.9	-0.6
EZC	Erzincan	1.45	19	ePN	Pn	18 01 16.4	-0.4
MARD	Mardin	1.64	130	iP	Pn	18 01 19.8	+0.3
MARD				iS	Sb	18 01 42.6	+1.1
GZT	Gaziantep	1.65	232	iP	Pg	18 01 23.7	+0.6
GZT				iS	Sg	18 01 47.9	+3.3

CSEM 03 18:04:18.6, 3669N×4477E, h8km, MD3.3, After ISK
ISK 03 18:04:18.6, 3669N×4477E, h8km, MD3.3, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CUKT	Cukurca	1.09	301	PN	Pn	18 04 39.6	-0.5
CUKT				SN	Sn	18 04 55.3	0.0
HKR	Hakkari	1.21	317	PN	Pn	18 04 42.2	+0.4
HKR				SN	Sn	18 04 59.2	+0.8
MSL	Mosul	1.42	254	ex	x	18 04 48.5	
MSL				ex	x	18 05 02.5	
SIRT	Sirnak	2.03	294	ePN	Pn	18 04 54.1	+1.0
SIRT				eSN	Sn	18 05 20.0	+1.3

BJI 03 18:06:35.3, 1346N×5667E, h10km, mB5.0, mb4.6, Ms4.8, Msz4.5
IDC 03 18:06:39.5±0.5, 1379N×5726E, h0km, mb4.3/27, mb1 4.4/27, mb1mx4.3/33, mbtmp4.3/27, MS4.1/1, Ms1 4.1/1, ms1mx3.6/27, Error ellipse: s-maj=13.0km s-min=12.5km az=135.0
CSEM 03 18:06:39.0±0.1, 1369N×5684E, h16km, mb4.7/31, Error ellipse: s-maj=3.4km s-min=1.6km az=25.0
ISCJB 03 18:06:39.1±0.3, 1384N±006×5696E±004, h10km, mb4.5/70, MS4.4/3, Error ellipse: s-maj=8.2km s-min=5.7km az=13.4
MOS 03 18:06:40.1±2.5, 1382N×5711E, h33km, mb4.9/25, Error ellipse: s-maj=8.5km s-min=5.9km az=108.5
NEIC 03 18:06:40.7±0.3, 1379N×5699E, h10km, mb4.7/35, Error ellipse: s-maj=8.0km s-min=5.7km az=190.0
ISC 03 18:06:41.1±0.3, 1382N±006×5698E±004, h10km, (h15km±5.4km:pP-P), n180, σ1.11/172, mb4.5/70, MS4.4/3, Socotra region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDF	Al-Radifah	17.40	331	eP	Pn	18 10 42.9	-1.1
RDF				AMb	AMB	18 10 52.1	
	comp=Z,78nm,1.0s						
KBD	Kabd	17.54	332	eP	Pn	18 10 44.2	-1.6
KBD				AMb	AMB	18 10 50.3	
	comp=Z,129nm,0.7s						
KBD	Kabd	17.54	332	eP	Pn	18 10 44.2	-1.6
	comp=Z,129nm,0.7s						
NAY	Al-Naaiem	17.81	331	eP	Pn	18 10 48.4	-0.8
NAY				AMb	AMB	18 10 53.8	
	comp=Z,19nm,1.4s						
NAY	Al-Naaiem	17.81	331	eP	Pn	18 10 48.3	-0.9
	comp=Z,19nm,1.4s						
RST	Umm Al-Ruwaisa	18.14	331	eP	Pn	18 10 52.3	-0.9
RST				AMb	AMB	18 10 57.4	
	comp=Z,63nm,1.3s						
RST	Umm Al-Ruwaisa	18.14	331	eP	Pn	18 10 52.3	-0.9
	comp=Z,63nm,1.3s						
MIB	Mutribah	18.24	332	eP	Pn	18 10 53.0	-1.4
MIB				AMb	AMB	18 10 57.2	
	comp=Z,39nm,1.0s						
MIB	Mutribah	18.24	332	eP	Pn	18 10 53.0	-1.4
	comp=Z,39nm,1.0s						
HYB	Hyderabad	21.07	77	iP	P	18 11 27.0	+1.3
HYB	Hyderabad	21.07	77	eP	P	18 11 27.0	+1.3
KBL	Kabul	23.34	26	eP	P	18 11 52.3	+2.6
PALK	Pallekele	24.19	103	eP	P	18 11 56.8	-1.1
	comp=Z,12nm,1.0s,mb4.3						
PALK	Pallekele	24.19	103	eP	P	18 11 56.8	-1.2
	comp=Z,12nm,1.0s,mb4.3						
KMBO	Kilima Mbogo	24.55	234	P	P	18 12 02.7	+1.5
	comp=Z,2.2nm,0.8s,mb3.8,baz=61,slow=23,SNR=8.1						
EIL	Elat	25.76	311	P	P	18 12 15.5	+3.3
	comp=Z,12nm,1.1s,mb4.3,baz=67,slow=5.3,SNR=7.8						
ASF	Jabal al Asfar	25.91	318	P	P	18 12 15.9	+2.5
	comp=Z,18nm,0.9s,mb4.6,baz=4.2,slow=3.1,SNR=24						
MMAI	Mount Meron Ar	27.42	318	P	P	18 12 30.9	+3.8
	comp=Z,7.6nm,0.9s,mb4.2,baz=112,slow=11,SNR=9.6						
MALT	Malatya	29.43	329	eP	P	18 12 46.9	+2.0
	comp=Z,7.0nm,1.1s,mb4.3						
MALT	Malatya	29.43	329	eP	P	18 12 46.9	+2.0
MALT				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
MALT	Malatya	29.43	329	eP	P	18 12 46.9	+2.0
	comp=Z,6.9nm,1.1s,mb4.3						
UCH	Uchtor	32.12	25	eP	P	18 13 11.0	+2.4
	comp=Z,22nm,1.9s,mb4.7						
UCH	Uchtor	32.12	25	eP	P	18 13 11.0	+2.4
	comp=Z,22nm,1.9s,mb4.7						
EKS2	Erkin-Say	32.19	24	eP	P	18 13 11.5	+2.2
	comp=Z,10.0nm,1.2s,mb4.5						
EKS2	Erkin-Say	32.19	24	eP	P	18 13 11.5	+2.3
	comp=Z,10.0nm,1.2s,mb4.5						
KIV	Kislovodsk	32.44	341	eP	P	18 13 13.0	+1.7
	comp=Z,7.2nm,0.9s,mb4.5						
KIV	Kislovodsk	32.44	341	eP	P	18 13 13.0	+1.7

KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
KIV Kislovodsk 32.44 341 *eP* **P 18 13 13.0 +1.7**
comp=Z,7.2nm,0.9s,mb4.5
AAK Ala-Archa 32.45 24 *eP* **P 18 13 12.4 +0.9**
comp=Z,7.7nm,1.1s,mb4.5
AAK Ala-Archa 32.45 24 *eP* **P 18 13 12.4 +0.9**
AAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
AAK Ala-Archa 32.45 24 *eP* **P 18 13 12.4 +0.9**
comp=Z,7.7nm,1.1s,mb4.5
FRU Bishkek 32.67 24 *eP* **P 18 13 15.0 +1.6**
BRTR Keskin Array B 32.97 326 P **P 18 13 18.9 +2.8**
comp=Z,2.1nm,1.1s,mb4.0,baz=138,slow=13,SNR=5.0
TKM2 Tokmak 2 33.14 25 *eP* **P 18 13 18.7 +1.2**
comp=Z,2.1nm,0.8s,mb4.1
TKM2 Tokmak 2 33.14 25 *eP* **P 18 13 18.7 +1.2**
TKM2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
TKM2 Tokmak 2 33.14 25 *eP* **P 18 13 18.7 +1.2**
comp=Z,2.1nm,0.8s,mb4.1
AKTK Aktyubinsk 36.53 1 P **P 18 13 46.7 0.0**
AKTK Aktyubinsk 36.53 1 P **P 18 13 46.7 +0.1**
AKTO Aktyubinsk 36.53 1 P **P 18 13 46.7 0.0**
comp=Z,5.2nm,0.9s,mb4.3,baz=195,slow=8.3,SNR=12
MK31 Makanchi Array 39.12 28 *eP* **P 18 14 09.2 +0.6**
MK31 Makanchi Array 39.12 28 *eP* **P 18 14 09.2 +0.6**
MKAR Makanchi Array 39.12 28 P **P 18 14 09.3 +0.7**
MKAR Makanchi Array 39.12 28 P **P 18 14 09.3 +0.7**
comp=Z,1.7nm,0.8s,mb3.8,baz=216,slow=7.1,SNR=16
VRSR Storozhevoye 39.98 343 *eP* **P 18 14 16.4 +0.7**
VRSR pmax pmax
comp=N,3.0nm,0.9s
VRSR pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
VRSR pmax pmax
comp=E,5.0nm,2.7s
LSZ Lusaka 40.58 226 *eP* **P 18 14 24.9 +3.8**
comp=E,12nm,1.1s,mb4.4
LSZ Lusaka 40.58 226 *eP* **P 18 14 24.9 +3.8**
LSZ pmax pmax
comp=Z,12nm,1.1s,mb4.4
LSZ Lusaka 40.58 226 P **P 18 14 22.6 +1.5**
comp=Z,3.4nm,0.8s,mb4.0,baz=36,slow=8.7,SNR=3.7
LSZ LR LR 18 30 21.3
comp=Z,230nm,20.1s,MS4.0,baz=54,slow=35
KURK Kurchatov 40.78 21 *eP* **P 18 14 22.7 +0.4**
comp=Z,4.0nm,0.9s,mb4.0
KURK Kurchatov 40.78 21 *eP* **P 18 14 22.7 +0.4**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
KURK Kurchatov 40.78 21 *eP* **P 18 14 22.7 +0.4**
comp=Z,4.0nm,0.9s,mb4.0
MLR Muntele Rosu 41.05 326 P **P 18 14 29.2 +4.6**
comp=Z,3.6nm,0.9s,mb4.0,baz=135,slow=15,SNR=3.6
PSI Prapat 42.84 101 P **P 18 14 39.2 -0.6**
PSI Prapat 42.84 101 P **P 18 14 39.2 -0.6**
comp=Z,1.4nm,0.4s,mb4.1,baz=301,slow=5.9,SNR=3.8
AKASG Malin Array Be 43.13 334 P **P 18 14 42.0 +0.4**
comp=Z,1.8nm,0.9s,mb3.8,baz=140,slow=7.4,SNR=17
AKASG PP PP 18 16 21.5 -0.2
comp=Z,0.6nm,0.5s,baz=140,slow=10,SNR=9.7
AKASG Malin Array Be 43.13 334 PP PP 18 16 21.5 -0.2
TIP Timpagrande 43.46 313 *eP* **P 18 14 47.5 +3.1**
MATP Matopo 44.07 220 P **P 18 14 50.9 +1.3**
comp=Z,14nm,1.0s,mb4.6,baz=31,slow=10,SNR=15
KMI Kunming 44.39 68 P **P 18 14 51.6 -0.5**
KMI AP pP 18 14 58.0 +2.7
KMI XP sP 18 15 00.5 +4.0
KMI AMB AMB
comp=Z,8.0nm,1.4s,mb4.3
KMI Kunming 44.39 68 P **P 18 14 51.6 -0.5**
comp=Z,8.0nm,1.4s,mb4.3
KMI pP pP 18 14 58.0 +2.7
KMI sP sP 18 15 00.5 +4.0
KMI Kunming 44.39 68 P **P 18 14 51.6 -0.5**
comp=Z,8.0nm,1.4s,mb4.3
KMI pP pP 18 14 58.0 +2.7
MOS Moscow 44.43 344 *eP* **P 18 14 53.2 +1.2**
MOS *e* 18 16 39.7
MOS pmax pmax
comp=Z,84nm,1.3s,mb5.3
GTA Gaotai 45.41 48 *eP* **P 18 14 59.6 -0.5**
GTA AP pP 18 15 03.2 0.0
GTA XP sP 18 15 06.3 +1.9
GTA AMB AMB
comp=Z,3.0nm,1.4s,mb3.9
ZAL Zalesovo 45.62 23 P **P 18 15 01.4 0.0**
ZALV Zalesovo Beam 45.64 23 P **P 18 15 01.4 -0.2**
comp=Z,2.7nm,0.9s,mb4.2,baz=227,slow=7.9,SNR=11
SOKR Solikamsk 45.67 360 *eP* **P 18 15 03.0 +1.2**
SOKR pmax pmax
comp=Z,20nm,1.2s,mb4.9
NVS Novosibirsk 45.77 21 *i* P **P 18 15 02.6 0.0**
NVS pmax pmax
comp=Z,14nm,1.6s,mb4.6
NVS pmax pmax
comp=N,15nm,2.0s
CD2 Chengdu 46.12 60 *eP* **P 18 15 06.1 +0.3**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,30nm,5.4s
LZH Lanzhou 47.37 53 *eP* **P 18 15 15.0 -0.5**
LZH AP pP 18 15 18.0 -0.7
LZH AMB AMB
comp=Z,16nm,1.0s,mb4.9
LZH Lanzhou 47.37 53 *eP* **P 18 15 15.0 -0.5**
comp=Z,16nm,1.0s,mb4.9
LZH pP pP 18 15 18.0 -0.7
LZH sP sP 18 15 19.0 -0.9
LZH Lanzhou 47.37 53 *eP* **P 18 15 15.0 -0.5**
comp=Z,16nm,1.0s,mb4.9
LZH pP pP 18 15 18.0 -0.7
GYA Guiyang 48.04 67 P **P 18 15 21.2 +0.4**
GYA PCP PcP 18 16 50.9 +2.1
GYA PP PP 18 17 13.5 +0.5
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,70nm,6.4s
GYA LR LR
comp=N,340nm,19.9s,MS4.5
GYA LR LR
comp=E,410nm,19.4s,MS4.5
GYA LR LR
comp=Z,370nm,18.8s,MS4.4
LBTB Lobatse 49.26 219 *eP* **P 18 15 31.3 +1.1**
comp=Z,79nm,1.8s,mb5.4
LBTB Lobatse 49.26 219 *eP* **P 18 15 31.3 +1.1**
LBTB pmax pmax
comp=Z,79nm,1.8s,mb5.4
LBTB Lobatse 49.26 219 P **P 18 15 32.2 +2.0**
comp=Z,11nm,1.0s,mb4.8,baz=35,slow=8.7,SNR=5.8
TSUM Tsumeb 50.82 231 *eP* **P 18 15 44.5 +2.5**
comp=Z,13nm,1.1s,mb4.8
TSUM Tsumeb 50.82 231 P **P 18 15 44.9 +2.8**
comp=Z,6.5nm,1.0s,mb4.5,baz=64,slow=4.2,SNR=6.5
CLL Collm 51.43 326 *es*P sP 18 15 50.0 -0.6
SBF Sospel 51.70 315 *eP* **P 18 15 47.1 -1.3**
comp=Z,95nm,1.1s,mb5.3
SBF Sospel 51.70 315 *eP* **P 18 15 47.1 -1.3**
SBF pmax pmax
comp=Z,48nm,1.1s,mb5.3
SBF Sospel 51.70 315 *eP* **P 18 15 47.1 -1.3**
comp=Z,48nm,1.1s,mb5.3
JOF Joensuu 52.28 345 *ep* **P 18 15 51.8 -0.6**
comp=Z,12nm,0.9s,mb4.8
FINES FINESS Array B 52.51 342 P **P 18 15 54.4 +0.3**
FINES FINESS Array B 52.51 342 P **P 18 15 54.4 +0.3**
comp=Z,6.9nm,0.8s,mb4.6,baz=126,slow=9.7,SNR=25
LPG La Plagne 52.72 317 *eP* **P 18 15 55.8 -0.2**
comp=Z,39nm,1.4s,mb4.8
LPG La Plagne 52.72 317 *eP* **P 18 15 55.8 -0.2**
LPG pmax pmax
comp=Z,20nm,1.4s,mb4.8
LPG La Plagne 52.72 317 *eP* **P 18 15 55.8 -0.2**
comp=Z,20nm,1.4s,mb4.8
LPL La Plagne 52.74 317 *eP* **P 18 15 55.6 -0.5**
comp=Z,32nm,1.3s,mb4.8
LPL La Plagne 52.74 317 *eP* **P 18 15 55.6 -0.5**
LPL pmax pmax
comp=Z,16nm,1.3s,mb4.8
LPL La Plagne 52.74 317 *eP* **P 18 15 55.6 -0.5**
comp=Z,16nm,1.3s,mb4.8
KAF Kangasniemi 52.97 343 *ep* **P 18 15 55.5 -2.0**
baz=140,slow=7.3
SONM Songino Array 53.04 40 P **P 18 15 57.9 -0.4**
comp=Z,1.2nm,1.1s,mb3.7,baz=239,slow=7.1,SNR=6.3
SONM PcP PcP 18 17 06.5 -0.3
comp=Z,1.1nm,1.0s,baz=238,slow=3.2,SNR=4.7
SONM Songino Array 53.04 40 PcP PcP 18 17 06.5 -0.3
TLY Talaya 53.07 35 *eP* **P 18 15 59.5 +1.0**
TLY pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
ORIF Oris-en-Rattie 53.10 316 *eP* **P 18 15 58.6 -0.2**
comp=Z,31nm,1.3s,mb4.8
ORIF Oris-en-Rattie 53.10 316 *eP* **P 18 15 58.6 -0.2**
ORIF pmax pmax
comp=Z,15nm,1.3s,mb4.8
ORIF Oris-en-Rattie 53.10 316 *eP* **P 18 15 58.6 -0.2**
comp=Z,15nm,1.3s,mb4.8
CDF Champ du Feu 53.45 321 *eP* **P 18 16 00.9 -0.4**
comp=Z,6.1nm,0.7s,mb4.3
CDF Champ du Feu 53.45 321 *eP* **P 18 16 00.9 -0.4**
CDF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
CDF Champ du Feu 53.45 321 *eP* **P 18 16 00.9 -0.4**
comp=Z,3.0nm,0.7s,mb4.3
ULN Ulaanbaatar 53.46 40 P **P 18 16 02.7 +1.3**
ULN pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
ULN Ulaanbaatar 53.46 40 P **P 18 16 02.7 +1.3**
comp=Z,2.2nm,1.1s,mb4.0
HINF Hinteralfeld 53.48 320 *eP* **P 18 16 01.1 -0.5**
CABF La Chapelle 53.54 318 *eP* **P 18 16 01.5 -0.5**
comp=Z,6.8nm,0.6s,mb4.5
CABF La Chapelle 53.54 318 *eP* **P 18 16 01.5 -0.5**
CABF pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CABF La Chapelle 53.54 318 *eP* **P 18 16 01.5 -0.5**
comp=Z,3.4nm,0.6s,mb4.5
TOA0 Torodi Ar. Sit 53.67 276 *eP* **P 18 16 03.8 +0.3**
TOA0 Torodi Ar. Sit 53.67 276 *eP* **P 18 16 03.8 +0.4**
TORD Torodi Ar. Bea 53.67 276 P **P 18 16 04.8 +1.3**
comp=Z,2.4nm,0.9s,mb4.1,baz=91,slow=6.5,SNR=14
VIVF Saint-Julien-l 53.90 316 *eP* **P 18 16 04.2 -0.5**
LASF Ste Croix 54.22 315 *eP* **P 18 16 06.1 -0.9**
MEZF Maizieres J'vi 54.86 320 *eP* **P 18 16 11.1 -0.5**
SMF Signal de Mont 55.01 318 *eP* **P 18 16 12.2 -0.5**
MTLF Montolieu 55.17 313 *eP* **P 18 16 13.0 -0.9**
LOR Lormes 55.20 318 *eP* **P 18 16 12.9 -1.1**
comp=Z,69nm,1.6s,mb5.1
LOR Lormes 55.20 318 *eP* **P 18 16 12.9 -1.1**
LOR pmax pmax
comp=Z,34nm,1.6s,mb5.1
LOR Lormes 55.20 318 *eP* **P 18 16 12.9 -1.1**
comp=Z,34nm,1.6s,mb5.1
SSF Saint Saulge 55.36 318 *eP* **P 18 16 14.9 -0.3**
comp=Z,12nm,1.0s,mb4.6
SSF Saint Saulge 55.36 318 *eP* **P 18 16 14.9 -0.3**
SSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
SSF Saint Saulge 55.36 318 *eP* **P 18 16 14.9 -0.3**
comp=Z,5.8nm,1.0s,mb4.6
AVF Avril sur Loir 55.37 318 *eP* **P 18 16 14.8 -0.5**
comp=Z,20nm,1.1s,mb4.8
AVF Avril sur Loir 55.37 318 *eP* **P 18 16 14.8 -0.5**
AVF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
AVF Avril sur Loir 55.37 318 *eP* **P 18 16 14.8 -0.5**
comp=Z,10nm,1.1s,mb4.7
BGF Bois d'Agland 55.63 317 *eP* **P 18 16 16.4 -0.8**
comp=Z,11nm,0.8s,mb4.6
BGF Bois d'Agland 55.63 317 *eP* **P 18 16 16.4 -0.8**
BGF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BGF Bois d'Agland 55.63 317 *eP* **P 18 16 16.4 -0.8**
comp=Z,5.6nm,0.8s,mb4.6
CAF Calviac 55.69 315 *eP* **P 18 16 16.9 -0.8**
BAIF Baives 55.93 322 *eP* **P 18 16 18.9 -0.4**
comp=Z,28nm,1.1s,mb4.9
BAIF Baives 55.93 322 *eP* **P 18 16 18.9 -0.4**
BAIF pmax pmax
comp=Z,14nm,1.1s,mb4.9
BAIF Baives 55.93 322 *eP* **P 18 16 18.9 -0.4**
comp=Z,14nm,1.1s,mb4.9
HFS Hagfors 55.99 336 P **P 18 16 19.9 +0.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=148,slow=12,SNR=4.7
RJF Les Rejaudoux 56.17 316 *eP* **P 18 16 20.5 -0.6**
EPF Esparros 56.42 313 *eP* **P 18 16 22.1 -0.8**
ETSF Etsaut 57.04 312 *eP* **P 18 16 26.7 -0.6**
comp=Z,7.0nm,0.9s,mb4.4
ETSF Etsaut 57.04 312 *eP* **P 18 16 26.7 -0.6**
ETSF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ETSF Etsaut 57.04 312 *eP* **P 18 16 26.7 -0.6**
comp=Z,3.5nm,0.9s,mb4.4
NB2 NORSAR Subarra 57.51 336 P **P 18 16 31.2 +0.9**
comp=Z,0.9nm,0.8s,mb3.9,baz=117,slow=7.4
NB2 NORSAR Subarra 57.51 336 P **P 18 16 31.2 +0.9**
NB2 pmax pmax
comp=Z,1.0nm,0.8s,mb3.9
NOA NORSAR Array B 57.51 336 P **P 18 16 29.7 -0.6**
comp=Z,1.1nm,0.8s,mb4.0,baz=116,slow=7.6,SNR=4.5
BJI Beijing 57.72 51 P **P 18 16 33.5 +1.3**
LDF La Druitiere 58.15 319 *eP* **P 18 16 34.5 -0.5**
comp=Z,108nm,1.6s,mb5.3
LDF La Druitiere 58.15 319 *eP* **P 18 16 34.5 -0.5**
LDF pmax pmax
comp=Z,54nm,1.6s,mb5.3
LDF La Druitiere 58.15 319 *eP* **P 18 16 34.5 -0.5**
comp=Z,54nm,1.6s,mb5.3
FLN La Foliniere 58.42 319 *eP* **P 18 16 36.3 -0.6**
comp=Z,153nm,1.7s,mb5.5
FLN La Foliniere 58.42 319 *eP* **P 18 16 36.3 -0.6**
FLN pmax pmax
comp=Z,77nm,1.7s,mb5.5
FLN La Foliniere 58.42 319 *eP* **P 18 16 36.3 -0.6**
comp=Z,77nm,1.7s,mb5.5
GRR Gorron 58.56 319 *eP* **P 18 16 37.4 -0.5**
MDT Midelt 58.86 300 P **P 18 16 41.5 +1.2**
comp=Z,2.0nm,0.8s,mb4.2,baz=64,slow=7.5,SNR=6.9
ESDC Sonseca Array 59.00 308 P **P 18 16 41.6 +0.5**
comp=Z,1.2nm,0.7s,mb4.0,baz=82,slow=6.5,SNR=5.4
NJ2 Nanjing 59.05 61 *eP* **P 18 16 42.8 +1.2**
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb5.2
ARCES ARCESS Array B 59.10 348 P **P 18 16 41.1 -0.2**
comp=Z,9.4nm,0.9s,mb4.8,baz=164,slow=0.9,SNR=14
SGMF Saint Gilles 59.62 318 *eP* **P 18 16 44.9 -0.4**
QUIF Quistinic 59.94 318 *eP* **P 18 16 46.8 -0.7**
comp=Z,54nm,1.2s,mb5.1
QUIF Quistinic 59.94 318 *eP* **P 18 16 46.8 -0.7**
QUIF pmax pmax
comp=Z,27nm,1.3s,mb5.1
QUIF Quistinic 59.94 318 *eP* **P 18 16 46.8 -0.7**
comp=Z,27nm,1.2s,mb5.1
CN2 Changchun 65.05 48 *eP* **P 18 17 21.0 -0.7**
CN2 PCP PcP 18 17 54.0 -0.6
CN2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,22.0s,MS4.7
CN2 LR LR
comp=E,300nm,22.0s,MS4.7
CN2 LR LR
comp=Z,400nm,21.0s,MS4.6
KSRS Korea Array 66.66 55 P **P 18 17 30.8 -1.5**
comp=Z,2.3nm,0.8s,mb4.2,baz=263,slow=6.7,SNR=9.5
MDJ Mudanjiang 68.07 47 P **P 18 17 40.9 -0.1**
MDJ AMB AMB
comp=Z,4.0nm,2.1s,mb4.1
MDJ AMB AMB
comp=Z,103nm,5.9s
YAK Yakutsk 69.79 29 *eP* **P 18 17 50.3 -1.1**
comp=Z,14nm,0.9s,mb4.9
YAK Yakutsk 69.79 29 *eP* **P 18 17 49.5 -1.9**
YAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
YAK pmax pmax
comp=N,2.0nm,0.8s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK Yakutsk 69.79 29 *eP* **P 18 17 50.3 -1.1**
comp=E,14nm,0.9s,mb4.9
TIXI Tiksi 71.29 19 *eP* **P 18 17 59.3 -1.0**
comp=E,19nm,1.3s,mb4.9
TIXI Tiksi 71.29 19 *i* P **P 18 17 59.7 -0.7**
TIXI pmax pmax
comp=Z,20nm,1.5s,mb4.8
TIXI Tiksi 71.29 19 *i* P **P 18 17 59.7 -0.7**
comp=Z,20nm,1.5s,mb4.8
FITZ Fitzroy Crossi 74.75 113 P **P 18 18 20.0 -1.8**
comp=Z,7.2nm,0.9s,mb4.6,baz=262,slow=3.1,SNR=5.4
FITZ Fitzroy Crossi 74.75 113 *eP* **P 18 18 20.3 -1.5**
comp=Z,15nm,0.9s,mb4.9
MAJO Matsushiro 74.93 56 P **P 18 18 21.2 -1.4**
comp=Z,6.3nm,1.1s,mb4.5
MAJO Matsushiro 74.93 56 P **P 18 18 21.2 -1.4**
comp=Z,6.3nm,1.1s,mb4.5
MJAR Matsushiro Arr 74.93 56 P **P 18 18 21.7 -0.9**
MJAR Matsushiro Arr 74.93 56 P **P 18 18 21.7 -0.9**
comp=Z,1.1nm,0.7s,mb3.9,baz=271,slow=4.2,SNR=6.7
MJAR Matsushiro Arr 74.93 56 P **P 18 18 21.7 -0.9**
WRA Warramunga Arr 83.13 112 P **P 18 19 06.2 -1.6**
comp=Z,9.2nm,0.9s,mb4.8,baz=297,slow=4.3,SNR=36
WB2 Warramunga Arr 83.14 112 *eP* **P 18 19 06.1 -1.7**
ASAR Alice Springs 83.87 116 P **P 18 19 09.7 -1.8**
comp=Z,5.6nm,0.9s,mb4.7,baz=293,slow=5.2,SNR=39
BILL Bilibino 84.31 21 *eP* **P 18 19 13.2 +0.3**
BILL pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BILL Bilibino 84.31 21 *eP* **P 18 19 13.2 +0.3**
comp=Z,8.8nm,1.1s,mb4.8
YKA Yellowknife Ar 103.65 356 PP PP 18 24 58.3 +0.4
comp=Z,0.3nm,0.6s,baz=8.8,slow=7.2,SNR=5.7
USIN University of 118.74 329 *e*Pdif Pdif 18 21 45.4 -4.4
PDAR Pinedale Array 122.35 348 PKP PKPdf 18 25 36.6 -0.2
comp=Z,0.5nm,0.7s,baz=355,slow=1.6,SNR=5.0
CFAA Coronel Fontan 127.00 241 PKP PKPdf 18 25 46.5 +0.6
comp=Z,0.9nm,0.9s,baz=5.1,slow=1.7,SNR=11
NVAR Mina Array Bea 127.84 355 PKP PKPdf 18 25 48.4 +0.9
comp=Z,1.0nm,0.8s,baz=44,slow=2.8,SNR=4.0

IDC 03 18:07:42.8±5.8, 2179S×17289W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/16, mbtmp4.0/3, Error ellipse: s-maj=322.4km s-min=63.6km az=155.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.12**	**265**	P	P	18 15 03.9	0.0
	2.5nm,0.5s,baz=103,slow=13,SNR=8.8						
ASAR	**Alice Springs**	**48.88**	**257**	P	P	18 16 30.6	0.0
	0.5nm,0.4s,baz=94,slow=7.5,SNR=27						
WRA	**Warramunga Ar**	**49.15**	**262**	P	P	18 16 32.6	-0.2
	0.6nm,0.3s,baz=102,slow=7.5,SNR=59						
BRTR	**Keskin Array B**	**151.19**	**314**	PKPbc	PKPbc	18 27 38.3	0.0
	0.8nm,0.9s,baz=42,slow=5.0,SNR=2.8						

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*BJI **03** 18:08:45.5, 1324N×5657E, h10km, mB5.3, mb4.9, Ms5.1, Msz4.9*
*SZGRF **03** 18:08:50.0, 1393N×5847E, h33km, mb5.1, MS4.3, Owen Fracture Zone region*
*ISCJB **03** 18:08:51.8±0.2, 1383N±003×5705E±002, h10km, mb5.0/166, MS4.8/96, Error ellipse: s-maj=4.0km s-min=2.7km az=12.4*
*IDC **03** 18:08:51.9±0.3, 1383N×5725E, h0km, mb4.8/44, mb1 4.8/45, mb1mx4.8/46, mbtmp4.8/45, ML4.1/1, MS4.6/23, Ms1 4.6/23, ms1mx4.5/31, Error ellipse: s-maj=9.9km s-min=9.5km az=70.0*
*DHMR **03** 18:08:51.2±3.4, 1370N×5746E, h26km±999km, mb5.0*
*CSEM **03** 18:08:52.3±0.1, 1377N×5694E, h20km, mb5.0/33, Ms4.6, Mw5.3, Error ellipse: s-maj=3.7km s-min=2.9km az=173.0*
*NEIC **03** 18:08:53.3±0.2, 1380N×5709E, h10km, mb5.1/94, MS4.8/51, Error ellipse: s-maj=5.3km s-min=4.2km az=204.0*
*GCMT **03** 18:08:53.3±0.1, 1368N×5718E, h12km, MW5.3/90, Moment Tensor Solution. s58,c81; s90,c170; Duration: 1s1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.1±.02; $M_{\theta\theta}$0.54±.02; $M_{\phi\phi}$0.57±.02; $M_{r\theta}$0.18±.06; $M_{\theta\phi}$-0.58±.01; $M_{\phi r}$-0.13±.06; Best double couple: $M_0$1.14300×10^{17} NP1:ϕ_s138.00000°,δ40.00000°,λ-87.00000°. NP2: ϕ_s314.00000°,δ50.00000°,λ-92.00000°. Principal axes: T 1.1550, Plg5.0000°, Azm46.0000°; N -0.0210, Plg2.0000°, Azm315.0000°; P -1.1320, Plg84.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **03** 18:08:55.1±1.2, 1383N×5704E, h33km, mb5.4/60, MS4.6/25 Error ellipse: s-maj=6.7km s-min=3.5km az=115.7*

ISC 03 18:08:53.8±0.2, 1382N±003×5708E±002, h10km, (h15km,2.3km: pP-P), n559, σ1s22/535, mb5.0/165, MS4.8/96, 61C-47D, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHAO	**Shalim**	**4.41**	**342**	⇓P	Pn	18 10 00.1	-0.6
	SNR=49						
RBK	**Rabkut**	**4.59**	**323**	⇓P	Pn	18 10 03.1	-0.2
	SNR=17						
ABTO	**Aybut**	**5.06**	**314**	⇑P	Pn	18 10 10.9	+1.2
ABTO	**Aybut**	**5.06**	**314**	P	Pn	18 10 10.9	+1.2
WHFO	**Wadi Hawf**	**5.17**	**322**	⇓P	Pn	18 10 12.0	+0.8
	SNR=13						
MUKL	**Al Mukalla**	**7.83**	**276**	*e*P	Pn	18 10 48.6	+0.8
MUKL				AMb	AMB	18 10 49.0	
	comp=Z,7.5nm,0.2s						
MUKL	**Al Mukalla**	**7.83**	**276**	*e*P	Pn	18 10 48.6	+0.8
	comp=Z,3.8nm,0.2s						
JMDO	**Jabal Madar**	**8.56**	**6**	⇑P	Pn	18 10 57.0	-0.8
	SNR=7.7						
BSYO	**Bisya**	**8.87**	**1**	P	Pn	18 11 01.2	-0.8
	SNR=8.0						
BSY	**Bisya**	**8.88**	**1**	⇑P	Pn	18 11 01.2	-1.0
	SNR=8.0						
WBK	**Wadi Bani Khal**	**8.93**	**11**	⇑P	Pn	18 11 02.9	+0.1
	SNR=11						
SMDO	**Samad**	**9.24**	**6**	⇑P	Pn	18 11 08.5	+1.5
	SNR=14						
SMDO	**Samad**	**9.24**	**6**	P	Pn	18 11 08.5	+1.4
	SNR=14						
HOQ	**Hoqain**	**9.71**	**1**	⇑P	Pn	18 11 12.3	-1.4
	SNR=7.8						
ASHO	**Ashiyiah**	**10.85**	**355**	⇑P	Pn	18 11 30.5	+1.3
	SNR=7.6						
LBOS		**11.49**	**272**	⇑*e*P	Pn	18 11 38.9	+0.9
TRBA	**At Turbah**	**12.62**	**269**	*e*P	Pn	18 11 54.2	+0.8
TRBA				AMb	AMB	18 11 55.1	
	comp=Z,45nm,1.5s						
TRBA	**At Turbah**	**12.62**	**269**	*e*P	Pn	18 11 54.2	+0.7
	comp=Z,22nm,1.5s						
HAJJ	**Hajjah**	**13.17**	**280**	⇑*e*P	Pn	18 12 02.0	+1.0
ATD	**Arta Tunnel**	**14.07**	**262**	Pn	Pn	18 12 13.5	+0.2
	comp=Z,0.9nm,0.3s,baz=144,slow=21,SNR=3.6						
ATD				LR	LR	18 16 08.4	
	comp=Z,5μm,21.3s,baz=82,slow=31						
BHJ	**Bhuj**	**15.16**	**50**	⇑*e*P	Pn	18 12 26.3	-1.8
BHJ				*ex*	x	18 15 37.6	
BHJ				*ex*	x	18 17 56.1	
GOA	**Goa**	**16.29**	**82**	*e*P	Pn	18 12 45.2	+2.4
POO	**Poona**	**16.77**	**72**	⇓*i*P	Pn	18 12 51.0	+2.1
	comp=Z,140nm,1.0s						
KAD	**Karad**	**16.84**	**76**	*i* P	Pn	18 12 51.2	+1.4
QRN	**Al-Qurain**	**17.12**	**332**	*e*P	Pn	18 12 50.8	-2.3
QRN				AMb	AMB	18 12 58.0	
	comp=Z,312nm,1.6s						
MNGI	**Mangalore**	**17.29**	**91**	*i* P	Pn	18 12 56.7	+1.3
MNGI				*ex*	x	18 13 01.9	
	comp=Z,116nm,1.8s						
MNGI				*i* x	x	18 16 21.2	
RDF	**Al-Radifah**	**17.44**	**331**	*e*P	Pn	18 12 54.9	-2.4
RDF				AMb	AMB	18 13 04.6	
	comp=Z,359nm,1.3s						
RDF	**Al-Radifah**	**17.44**	**331**	*e*P	Pn	18 12 54.9	-2.3
	comp=Z,359nm,1.3s						
KBD	**Kabd**	**17.59**	**332**	*e*P	Pn	18 12 56.2	-2.8
KBD				AMb	AMB	18 13 07.4	
	comp=Z,887nm,1.9s						
NAY	**Al-Naaiem**	**17.86**	**331**	*e*P	Pn	18 12 59.4	-3.0
NAY				AMb	AMB	18 13 04.7	
	comp=Z,90nm,1.6s						
UMR	**Umm Al-Rimmam**	**17.89**	**333**	*e*P	Pn	18 13 00.3	-2.5
UMR				AMb	AMB	18 13 13.3	
	comp=Z,222nm,1.7s						
UMR	**Umm Al-Rimmam**	**17.89**	**333**	*e*P	Pn	18 13 00.3	-2.6
	comp=Z,222nm,1.7s						
RST	**Umm Al-Ruwaisa**	**18.18**	**331**	*e*P	Pn	18 13 03.3	-3.1

RST AMb AMB 18 13 13.2
comp=Z,122nm,1.2s
MIB Mutribah 18.28 332 *e*P **Pn 18 13 05.0 -2.6**
MIB AMb AMB 18 13 13.3
comp=Z,175nm,1.3s
MIB Mutribah 18.28 332 *e*P **Pn 18 13 05.0 -2.6**
comp=Z,175nm,1.3s
MSEY Mahe Island 18.44 185⇑*e*P **Pn 18 13 10.0 +0.4**
comp=Z,266nm,1.8s
FURI Furi 18.68 257 *e*P **Pn 18 13 14.8 +2.1**
TRD Trivandrum 20.20 103⇓*e*x x 18 13 39.0
AKL Akola 20.22 67⇑*i*P **P 18 13 31.5 +2.4**
AKL *i*S **S 18 17 17.6 +1.4**
KOD Kodaikanal 20.26 98 *e*P **P 18 13 31.5 +2.0**
KOD AMb AMB 18 13 37.1
comp=Z,142nm,1.5s
AJM Ajmer 20.72 50 *e*P **P 18 13 36.0 +1.6**
HYB Hyderabad 20.99 77 *e*P **P 18 13 38.5 +1.1**
comp=Z,100nm,1.0s
HYB *e*S **S 18 17 44.0 +13**
HYB eLR LR 18 20 54.0
HYB Hyderabad 20.99 77 *e*P **P 18 13 38.5 +1.1**
HYB *e*S **S 18 17 44.0 +13**
HYB pmax pmax
comp=Z,100nm,1.0s
HYB Hyderabad 20.99 77 *i*P **P 18 13 38.5 +1.1**
comp=Z,100nm,1.0s
HYB *e*S **S 18 17 30.0 -1.4**
HYB LR LR 18 20 54.0
comp=Z,6.0nm,16.0s
DRP Derazinda 21.52 32 P **P 18 13 45.8 +2.8**
NGP Nagpur 22.17 68 *i*P **P 18 13 49.7 -0.4**
NGP *ex* x 18 13 50.9
comp=Z,109nm,1.4s
NGP *e*S **S 18 17 56.8 +2.2**
SBDP Sheikh Budin 22.27 32 P **P 18 13 55.2 +4.1**
BHD Baghdad 22.55 331 *ex* x 18 13 52.0
BHD *ex* x 18 14 04.5
BHD *ex* x 18 17 48.0
BHD *ex* x 18 18 02.0
BHD *ex* x 18 18 43.0
THW Thamme Wali 23.15 33 P **P 18 14 02.1 +1.7**
KBL Kabul 23.30 26 *e*P **P 18 14 03.0 +1.0**
JBP Jabalpur 23.60 63⇑*i*P **P 18 14 05.2 +0.1**
JBP *ex* x 18 14 14.2
comp=Z,112nm,1.4s
JBP *ex* x 18 18 12.3
NDI New Delhi 23.84 48 *e*P **P 18 14 07.5 +0.2**
NDI AMb AMB 18 14 15.7
comp=Z,96nm,1.1s,mb5.1
JAWL J.Aulia 23.85 276 *i*P **P 18 14 08.9 +1.4**
baz=91,slow=11
JAWL AMb AMB 18 14 13.5
comp=Z,163nm,1.7s,mb5.2
JAWL *i*S **S 18 18 26.4 +2.9**
MRKH Merkhyat 23.96 278 *i*P **P 18 14 10.7 +2.2**
MRKH AMb AMB 18 14 14.8
comp=Z,168nm,2.0s,mb5.1
ABKT Ailbek 24.03 2 P **P 18 14 09.5 +0.6**
comp=Z,240nm,1.4s,mb5.4,SNR=9.8
CEP Cherat 24.04 32 P **P 18 14 11.2 +2.1**
PALK Pallekele 24.11 103 P **P 18 14 10.7 +0.8**
comp=Z,162nm,1.2s,mb5.3,SNR=10
PALK Pallekele 24.11 103 *e*P **P 18 14 08.9 -1.0**
comp=Z,142nm,1.8s,mb5.1
PALK LR LR
comp=Z,2µm,21.0s,MS4.7
PALK Pallekele 24.11 103 *e*P **P 18 14 08.9 -1.0**
comp=Z,142nm,1.8s,mb5.1
KMBO Kilima Mbogo 24.63 234 P **P 18 14 14.4 -0.1**
comp=Z,18nm,1.0s,mb4.5,baz=39,slow=12,SNR=18
KMBO LR LR 18 23 27.8
comp=Z,3µm,20.9s,MS4.8,baz=89,slow=35
KMBO Kilima Mbogo 24.63 234 P **P 18 14 14.4 -0.2**
MSL Mosul 25.65 333 *ex* x 18 14 26.0
MSL *ex* x 18 14 49.0
MSL *ex* x 18 15 06.0
MSL *ex* x 18 18 24.0
MSL *ex* x 18 18 32.0
MSL *ex* x 18 19 15.0
EIL Elat 25.83 311 P **P 18 14 27.4 +1.9**
EIL LR LR 18 24 39.5
EIL Elat 25.83 311 P **P 18 14 27.4 +1.9**
comp=Z,28nm,1.0s,mb4.7,baz=119,slow=3.5,SNR=18
EIL LR LR 18 24 39.5
comp=Z,3µm,18.4s,MS4.8,baz=121,slow=36
ASF Jabal al Asfar 25.97 318 P **P 18 14 29.0 +2.3**
comp=Z,40nm,0.8s,mb5.0,baz=348,slow=3.6,SNR=26
ASF LR LR 18 25 30.4
comp=Z,2µm,18.6s,MS4.6,baz=352,slow=38
HAKT HAKKARI 26.47 336⇓*i*P **P 18 14 32.5 +1.4**
HAKT HAKKARI 26.47 336 *i*P **P 18 14 32.5 +1.4**
TVAN Van 27.43 336⇓*i*P **P 18 14 43.1 +3.3**
MMAI Mount Meron Ar 27.48 318 P **P 18 14 41.9 +1.6**
comp=Z,26nm,0.9s,mb4.8,baz=108,slow=16,SNR=18
MMAI PcP PcP 18 17 60.0 +1.3
comp=Z,4.7nm,0.9s,baz=104,slow=9.2,SNR=3.6
MMAI LR LR 18 26 18.9
comp=Z,1µm,18.2s,MS4.5,baz=115,slow=38
MARD Mardin 27.55 331⇓*i*P **P 18 14 40.9 +0.1**
BHL Bhannes 27.89 319 *e*P **P 18 14 46.0 +2.2**
BHL Bhannes 27.89 319 *e*P **P 18 14 46.0 +2.1**
DYDN Diyadin 28.21 338⇓*i*P **P 18 14 48.2 +1.5**
TUTA Tutak 28.42 336⇓*i*P **P 18 14 50.8 +2.2**
BNGL BINGOL 28.72 334⇓*i*P **P 18 14 52.3 +1.1**
DIGO Kars 29.09 338⇑*i*P **P 18 14 56.6 +2.1**
GZT Gaziantep 29.19 327⇓*e*P **P 18 14 57.7 +2.3**
ELZG Elazig 29.34 330⇓*e*P **P 18 15 00.5 +3.7**
DGRG David-gareji 29.36 342 P **P 18 14 58.8 +2.0**
ERZM Erzurum 29.43 335⇓*i*P **P 18 15 01.5 +4.0**
MALT Malatya 29.47 329 *e*P **P 18 15 00.8 +2.8**
comp=Z,60nm,1.4s,mb5.1
MALT Malatya 29.47 329 *e*P **P 18 15 00.8 +2.9**
MALT pmax pmax
comp=Z,60nm,1.4s,mb5.1
MALT Malatya 29.47 329 *e*P **P 18 15 00.8 +2.9**
comp=Z,60nm,1.4s,mb5.1
MTA Mtatsminda 29.76 341 P **P 18 15 01.3 +0.9**
TBLG Delisi 29.81 341 P **P 18 15 03.3 +2.5**
KSH Kashi 30.53 30 *e*P **P 18 15 07.2 -0.1**
KSH AP pP 18 15 12.8 +2.4
KSH XP sP 18 15 14.3 +2.7
KSH PP PP 18 16 05.4 -11
KSH S **S 18 20 05.7 -3.2**
KSH PCS PcS 18 21 47.1 -2.8
KSH AMB AMB
comp=Z,18nm,0.1s,mb5.9
KSH AMB AMB
comp=Z,574nm,4.4s
KSH LR LR
comp=N,17µm,17.5s
KSH LR LR
comp=E,3µm,6.4s
KSH LR LR
comp=Z,15µm,16.7s,MS5.7
KELT Kelkit 30.54 333⇓*i*P **P 18 15 09.7 +2.4**
ZEI Tsey 31.01 341 *e*P **P 18 15 13.0 +1.5**
ZEI *i* 18 15 19.6
ZEI *e* 18 16 17.0
ZEI *e* 18 18 08.8
ZEI pmax pmax
comp=Z,37nm,1.5s,mb5.0
ZEI Tsey 31.01 341 *e*P **P 18 15 13.0 +1.5**
comp=Z,37nm,1.5s,mb5.0
AML Almayashu 31.67 24⇑*i*P **P 18 15 20.0 +2.7**
comp=Z,90nm,1.9s,mb5.3
AML Almayashu 31.67 24 P **P 18 15 20.3 +2.9**
SNR=10
UCH Uchtor 32.08 25⇑*e*P **P 18 15 23.6 +2.7**
comp=Z,67nm,1.7s,mb5.2
UCH LR LR
comp=Z,996nm,20.0s,MS4.5
UCH Uchtor 32.08 25 P **P 18 15 23.9 +2.9**
SNR=13
EKS2 Erkin-Say 32.16 23⇑*e*P **P 18 15 24.4 +2.8**
comp=Z,179nm,1.8s,mb5.6
EKS2 LR LR
comp=Z,2µm,22.0s,MS4.8
EKS2 Erkin-Say 32.16 23 P **P 18 15 25.5 +3.9**
SNR=29
KZA Kyzart 32.27 26 P **P 18 15 26.0 +3.4**
SNR=14
AAK Ala-Archa 32.42 24 P **P 18 15 25.1 +1.3**
comp=Z,188nm,1.6s,mb5.7,SNR=15
AAK Ala-Archa 32.42 24 *e*P **P 18 15 25.1 +1.3**
comp=Z,87nm,1.5s,mb5.4
AAK LR LR
comp=Z,2µm,22.0s,MS4.7
AAK Ala-Archa 32.42 24⇑*e*P **P 18 15 25.2 +1.4**
AAK pmax pmax
comp=Z,34nm,1.7s,mb4.9
AAK Ala-Archa 32.42 24 P **P 18 15 25.9 +2.1**
SNR=17
KIV Kislovodsk 32.46 340 P **P 18 15 25.3 +1.0**
comp=Z,154nm,1.6s,mb5.6,SNR=5.2
KIV Kislovodsk 32.46 340 *e*P **P 18 15 24.6 +0.3**
comp=Z,72nm,1.4s,mb5.3
KIV LR LR
comp=Z,676nm,22.0s,MS4.3
KIV Kislovodsk 32.46 340⇑*e*P **P 18 15 25.7 +1.4**
KIV *e* 18 16 35.3
KIV pmax pmax
comp=Z,98nm,2.5s,mb5.2
KIV MLR MLR
comp=Z,700nm,24.0s,MS4.3
KBK Karagaybulak 32.62 25 P **P 18 15 29.5 +3.9**
SNR=15
FRU Bishkek 32.63 24 P **P 18 15 26.0 +0.3**
FRU pmax pmax
comp=Z,200nm,2.1s,mb5.7
FRU MLR MLR
comp=Z,2µm,22.0s,MS4.7
USP Ospenovka 32.95 24 P **P 18 15 31.5 +2.9**
SNR=11
BRTR Keskin Array B 33.02 326 P **P 18 15 30.4 +1.2**
BRTR 18 18 13.3
BRTR Keskin Array B 33.02 326 P **P 18 15 30.4 +1.1**
comp=Z,3.1nm,0.9s,mb4.2,baz=124,slow=11,SNR=8.8
BRTR PP PP 18 16 48.1 +4.2
comp=Z,3.2nm,0.8s,baz=137,slow=13,SNR=4.0
BRTR PcP PcP 18 18 13.2 +0.3
comp=Z,2.3nm,0.8s,baz=117,slow=4.4,SNR=4.7
BRTR LR LR 18 30 41.0
comp=Z,1µm,20.6s,MS4.5,baz=141,slow=40
BR131 Keskin Array S 33.02 326 *e*P **P 18 15 31.2 +2.0**
comp=Z,1.8nm,0.3s,mb4.5
BR131 LR LR
comp=Z,876nm,20.0s,MS4.5
TKM2 Tokmak 2 33.10 25⇑*e*P **P 18 15 32.1 +2.2**
comp=Z,29nm,1.5s,mb5.0
TKM2 LR LR
comp=Z,2µm,21.0s,MS4.7
TKM2 Tokmak 2 33.10 25⇑*e*P **P 18 15 32.1 +2.2**
TKM2 pmax pmax
comp=Z,29nm,1.5s,mb5.0
TKM2 MLR MLR
comp=Z,2µm,21.0s,MS4.7
ANTO Ankara 33.59 325 *e*P **P 18 15 33.1 -1.1**
comp=Z,65nm,1.4s,mb5.4
ANTO *e*PP PP 18 16 53.3 +3.1
ANTO LR LR
comp=Z,994nm,22.0s,MS4.5
ANTO Ankara 33.59 325 *e*P **P 18 15 33.1 -1.1**
ANTO *e* 18 16 53.3
ANTO pmax pmax
comp=Z,65nm,1.4s,mb5.4
ANTO MLR MLR
comp=Z,994nm,22.0s,MS4.5
ANTO Ankara 33.59 325⇑*i*P **P 18 15 36.3 +2.1**
ISP Isparta 33.61 320 *e*P **P 18 15 34.7 +0.3**
comp=Z,55nm,1.3s,mb5.3
ISP Isparta 33.61 320*c i*P **P 18 15 35.3 +1.0**
OPO Ambohidratompo 33.63 197 P **P 18 15 36.7 +2.0**
comp=Z,9.1nm,1.1s,mb4.6,baz=47,slow=8.2,SNR=5.7
OPO LR LR 18 26 10.8
comp=Z,3µm,21.1s,MS5.0,baz=3.3,slow=31
ELDT Eldivan 33.68 327⇓*i*P **P 18 15 36.5 +1.5**
GOLH Golhisar 33.84 319⇑*i*P **P 18 15 38.0 +1.6**
ESKT Eskisehir 34.47 323⇑*i*P **P 18 15 43.0 +1.3**
SEYT Eskypehyr 34.47 323 *i*P **P 18 15 43.0 +1.2**
SHL Shillong 34.69 65 *ex* x 18 13 20.6
ANN Anapa 35.11 335 *e*P **P 18 15 49.3 +2.0**
ANN *e*S **S 18 21 26.0 +6.0**
ANN pmax pmax
comp=Z,90nm,1.1s,mb5.6
ANN MLR MLR
comp=Z,538nm,12.0s,MS4.5
IDI Anoyia 35.99 312 P **P 18 15 57.0 +1.9**
comp=Z,26nm,1.0s,mb5.1,baz=119,slow=9.3,SNR=8.4
IDI LR LR 18 31 31.3
comp=Z,541nm,20.3s,MS4.3,baz=101,slow=38
SANT Santorini 36.12 314 *e*P **P 18 15 54.5 -1.6**
comp=Z,5µm,1.4s
APE Apeiranthos 36.43 315*c i*P **P 18 16 00.0 +1.3**
APE Apeiranthos 36.43 315⇓*i*P **P 18 16 00.0 +1.3**
AKTK Aktyubinsk 36.52 1 P **P 18 15 59.6 +0.4**
AKTK LR LR 18 33 48.0
AKTO Aktyubinsk 36.52 1 P **P 18 15 59.6 +0.4**
comp=Z,13nm,1.1s,mb4.7,baz=180,slow=9.6,SNR=12
AKTO LR LR 18 33 48.0
comp=Z,729nm,18.4s,MS4.5,baz=171,slow=41
SIM Simferopol' **36.65 332***ce*P **P 18 16 01.8 +1.3**
SIM pmax pmax
comp=Z,51nm,1.4s,mb5.2
PSN Preselentsi 38.70 326 *i*P **P 18 16 14.3 -3.6**
PRD Provadia 38.82 325 *i*P **P 18 16 19.6 +0.7**
KDZ Kurdzhali 39.03 321 *i*P **P 18 16 21.7 +1.1**
MK31 Makanchi Array 39.08 28 *e*P **P 18 16 21.7 +0.7**
MK31 *e*PcP PcP 18 18 30.2 -0.6
MKAR Makanchi Array 39.08 28 P **P 18 16 21.6 +0.6**
MKAR 18 18 31.3
MKAR Makanchi Array 39.08 28 P **P 18 16 21.6 +0.6**
comp=Z,4.8nm,0.8s,mb4.3,baz=213,slow=8.6,SNR=22
MKAR PcP PcP 18 18 31.2 +0.5
comp=Z,3.0nm,0.9s,baz=243,slow=4.9,SNR=4.1
MKAR LR LR 18 34 09.8
comp=Z,995nm,20.1s,MS4.6,baz=210,slow=39
TIRR Tirgusor 39.10 327⇑*i*P **P 18 16 22.0 +0.8**
TIRR Tirgusor 39.10 327⇑*i*P **P 18 16 22.0 +0.8**
VRHR Novokhopersk 39.23 345 *e*P **P 18 16 22.7 +0.6**
VRHR pmax pmax
comp=Z,80nm,0.9s,mb5.5
VRHR pmax pmax
comp=N,330nm,1.7s
VRHR pmax pmax
comp=E,90nm,1.5s
RZN Rozhen 39.48 321 *i*P **P 18 16 25.8 +1.4**
WMQ Urumqi 39.75 35 P **P 18 16 27.0 +0.4**
WMQ AP pP 18 16 31.5 +1.8
WMQ XP sP 18 16 34.0 +3.1
WMQ PP PP 18 18 02.8 +4.9
WMQ AMB AMB
comp=Z,15nm,0.8s,mb4.8
WMQ LR LR
comp=N,302nm,18.5s,MS4.3
WMQ LR LR
comp=E,335nm,18.0s,MS4.3
WMQ LR LR
comp=Z,462nm,20.0s,MS4.3
VORD Divnogorie 39.76 342 *e*P **P 18 16 26.1 -0.4**
VORD pmax pmax
comp=Z,70nm,1.5s,mb5.2
VORD pmax pmax
comp=N,70nm,1.4s
VORD pmax pmax
comp=E,40nm,1.6s
VRSR Storozhevoye 40.01 343 *e*P **P 18 16 28.3 -0.3**
VRSR pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
VRSR pmax pmax
comp=N,9.0nm,0.8s
VRSR pmax pmax
comp=E,6.0nm,0.8s
VRSR MLR MLR
comp=E,60nm,19.0s
VRSR MLR MLR
comp=Z,50nm,19.0s
VRSR MLR MLR
comp=N,40nm,18.0s
PVL Pavlikeni 40.02 323 *i*P **P 18 16 30.7 +1.9**
MMB Musomiste 40.03 320 *i*P **P 18 16 29.0 0.0**
PGB Panagyurishte 40.31 322 *i*P **P 18 16 32.3 +1.0**
CM31 Chiang Mai Arr 40.41 78 *e*P **P 18 16 32.6 +0.1**
comp=N,84nm,1.3s,mb5.3
CM31 LR LR
comp=Z,750nm,21.0s,MS4.5
CHG Chiang Mai 40.42 77⇓*e*P **P 18 16 32.2 -0.3**
comp=Z,48nm,2.0s,mb4.9
CHG P 18 16 33.0
CHG P 18 16 42.5
CHTO Chiang Mai 40.42 77 *e*P **P 18 16 31.3 -1.2**
comp=Z,118nm,1.9s,mb5.3
CHTO *e*PcP PcP 18 18 34.3 -1.3
CHTO Chiang Mai 40.42 77 *e*P **P 18 16 31.3 -1.2**
CHTO *e* 18 18 34.3
CHTO pmax pmax
comp=Z,118nm,1.9s,mb5.3
VOR Voronezh 40.46 343⇑*i*P **P 18 16 32.0 -0.4**
VOR pmax pmax
comp=Z,260nm,2.0s,mb5.6
BRVK Borovoye 40.53 12 *e*P **P 18 16 33.8 +0.9**
comp=Z,53nm,1.9s,mb4.8
BRVK LR LR
comp=Z,1µm,19.0s,MS4.7
BRVK Borovoye 40.53 12 *e*P **P 18 16 33.8 +0.9**
BRVK pmax pmax
comp=Z,53nm,1.9s,mb4.8
BRVK MLR MLR
comp=Z,1µm,19.0s,MS4.7
KKB Krupnik 40.59 320 *i*P **P 18 16 34.0 +0.4**
LSZ Lusaka 40.65 226⇑*e*P **P 18 16 35.5 +1.1**
comp=Z,43nm,1.2s,mb5.0
LSZ LR LR
comp=Z,2µm,19.0s,MS5.0
LSZ Lusaka 40.65 226⇑*e*P **P 18 16 35.5 +1.1**
LSZ pmax pmax
comp=Z,43nm,1.2s,mb5.0
LSZ MLR MLR
comp=Z,2µm,19.0s,MS5.0
LSZ Lusaka 40.65 226 P **P 18 16 35.9 +1.6**
comp=Z,16nm,1.0s,mb4.6,baz=49,slow=9.6,SNR=11
KIS Kishinev 40.65 330 *e*P **P 18 16 33.0 -1.0**
KIS *e* 18 16 50.0
KIS *e* 18 18 05.0
KIS *e*S **S 18 22 48.0 +4.1**
KIS MLR MLR
comp=Z,300nm,17.0s,MS4.2
KIS MLR MLR
comp=Z,600nm,16.0s
KIS Kishinev 40.65 330 *e*P **P 18 16 33.0 -1.0**
KIS *e*S **S 18 22 48.0 +4.1**
KIS LRM 18 36 35.0
comp=Z,600nm,16.0s
KURK Kurchatov 40.74 21 P **P 18 16 35.3 +0.5**
comp=Z,64nm,1.0s,mb5.2,SNR=6.1
KURK Kurchatov 40.74 21⇑*e*P **P 18 16 35.6 +0.8**
comp=Z,15nm,1.1s,mb4.5
KURK LR LR
comp=Z,1µm,22.0s,MS4.7
KURK Kurchatov 40.74 21⇑*e*P **P 18 16 35.7 +0.9**
VTS Vitosha 40.92 321⇓P **P 18 16 37.0 +0.7**
VTS Vitosha 40.92 321 *i*P **P 18 16 37.4 +1.1**
VTS Vitosha 40.92 321⇓*i*P **P 18 16 37.4 +0.7**
VRI Vrincioaia 40.93 327⇑P **P 18 16 38.1 +1.8**
VRI Vrincioaia 40.93 327⇑*i*P **P 18 16 38.1 +1.8**
MLR Muntele Rosu 41.10 326⇓P **P 18 16 38.3 +0.5**
MLR Muntele Rosu 41.10 326 P **P 18 16 39.8 +2.0**
comp=Z,6.0nm,0.8s,mb4.3,baz=169,slow=7.9,SNR=8.8
MLR LR LR 18 34 39.3
comp=Z,512nm,20.8s,MS4.4,baz=270,slow=38
MLR Muntele Rosu 41.10 326⇓*i*P **P 18 16 38.3 +0.6**
VOIR 41.55 326⇑P **P 18 16 42.3 +0.9**
VOIR 41.55 326⇑*i*P **P 18 16 42.3 +0.8**
ARU Arti 42.54 1 P **P 18 16 50.9 +1.5**
comp=Z,139nm,1.1s,mb5.6,SNR=5.8
ARU Arti 42.54 1 *e*P **P 18 16 49.9 +0.6**
comp=Z,127nm,1.8s,mb5.3
ARU LR LR
comp=Z,613nm,20.0s,MS4.5
ARU Arti 42.54 1*c i*P **P 18 16 49.9 +0.5**
ARU *e* 18 18 29.7
ARU *e*PPP 18 18 58.0
ARU S **S 18 23 10.7 -0.9**
ARU pmax pmax
comp=Z,57nm,1.7s,mb5.0
PSI Prapat 42.75 101 P **P 18 16 51.1 -0.6**
PSI 18 18 42.5
PSI Prapat 42.75 101 P **P 18 16 51.1 -0.6**
comp=Z,11nm,0.8s,mb4.7,baz=235,slow=4.8,SNR=13
PSI PcP PcP 18 18 42.5 -0.9
comp=Z,3.0nm,0.4s,baz=230,slow=10,SNR=3.8
PSI LR LR 18 32 09.7
comp=Z,1µm,21.5s,MS4.8,baz=269,slow=33
BURAR Bucovina Array 42.86 328⇓P **P 18 16 52.9 +0.7**
BURAR Bucovina Array 42.86 328⇓*i*P **P 18 16 52.9 +0.8**
SVE Sverdlovsk 43.01 3 *i*P **P 18 16 53.9 +0.7**
SVE *e* 18 18 44.1
SVE *e*PPP 18 19 04.0
SVE *e*S **S 18 23 24.4 +5.9**
SVE *e* 18 26 47.4
SVE pmax pmax
comp=Z,57nm,1.8s,mb5.0
AKASG Malin Array Be 43.17 334 P **P 18 16 54.0 -0.6**
AKASG PP PP 18 18 34.2 -0.7
AKASG Malin Array Be 43.17 334 P **P 18 16 54.0 -0.6**
comp=Z,3.9nm,0.8s,mb4.2,baz=142,slow=7.7,SNR=21
AKASG PP PP 18 18 34.2 -0.7
comp=Z,13nm,1.1s,baz=140,slow=10,SNR=13
AKBB Malin Array Si 43.17 334 *e*P **P 18 16 53.0 -1.5**
TIP Timpagrande 43.53 313 P **P 18 16 58.3 +0.6**
BZS Buzias 43.58 324⇓P **P 18 16 57.9 -0.1**
BZS Buzias 43.58 324⇓*i*P **P 18 16 57.9 -0.1**
DRGR 43.66 326⇑P **P 18 17 00.6 +1.9**
DRGR 43.66 326⇑*i*P **P 18 17 00.6 +2.0**
DIVS Divcibare 43.70 321 P **P 18 16 57.8 -1.2**
KULM Kulim 43.73 97 *e*P **P 18 16 57.9 -1.8**
KULM *e*PcP PcP 18 18 43.9 -2.8
KULM Kulim 43.73 97⇓P **P 18 16 59.2 -0.5**
MATP Matopo 44.13 220 P **P 18 17 03.3 +0.6**
comp=Z,74nm,1.0s,mb5.4,baz=32,slow=10,SNR=36
OBN Obninsk 44.19 343 *e*P **P 18 17 02.8 +0.1**
comp=Z,230nm,1.6s,mb5.7
OBN Obninsk 44.19 343⇑*e*P **P 18 17 03.2 +0.5**
OBN *e* 18 18 48.2
OBN *i*S **S 18 23 30.9 -5.0**
OBN pmax pmax
comp=Z,206nm,1.9s,mb5.5
OBN MLR MLR
comp=Z,300nm,19.0s,MS4.2
IPM Ipoh 44.30 98⇓P **P 18 17 04.7 +0.4**
KMI Kunming 44.30 68 P **P 18 17 04.4 +0.3**
KMI AP pP 18 17 07.5 +0.2
KMI XP sP 18 17 09.2 +0.7
KMI PP PP 18 18 48.7 +1.2
KMI AMB AMB
comp=Z,17nm,1.3s,mb4.6
KMI AMB AMB
comp=Z,272nm,5.6s
KMI LR LR
comp=N,930nm,19.4s,MS4.9
KMI LR LR
comp=E,1µm,22.4s,MS4.9
KMI LR LR
comp=Z,2µm,21.5s,MS5.0
KMI Kunming 44.30 68 P **P 18 17 04.4 +0.3**
comp=Z,17nm,1.3s,mb4.6
KMI pP pP 18 17 07.5 +0.2
KMI sP sP 18 17 09.2 +0.7
KMI PP PP 18 18 48.7 +1.2
KMI PPP 18 19 24.6
KMI S **S 18 23 39.3 +0.9**
KMI sS sS 18 23 44.6 +1.0
KMI SS SS 18 26 50.3 -6.5
KMI SSS 18 27 46.1
KMI LR LR
comp=Z,2µm,21.5s,MS5.0
KMI Kunming 44.30 68 P **P 18 17 04.4 +0.3**
KMI 18 18 48.7
KMI PPP 18 19 24.6
KMI S **S 18 23 39.3 +0.9**
KMI *SS sS 18 23 44.6 +1.0
KMI SS SS 18 26 50.3 -6.5
KMI SSS 18 27 46.1
KMI pmax pmax
comp=Z,17nm,1.3s,mb4.6
KMI MLR MLR
comp=Z,2µm,21.5s,MS5.0
FGSL Fruska Gora 44.38 322 P **P 18 17 02.9 -1.5**
MOS Moscow 44.46 344 *e*P **P 18 17 04.7 -0.1**
MOS *e* 18 18 51.4
MOS pmax pmax
comp=Z,600nm,2.0s
MOS pmax pmax
comp=Z,238nm,1.6s,mb5.7
TRPA Tarpa 44.58 327⇑*i*P **P 18 17 05.8 -0.1**

VAE Valguarnera 44.60 310 LR LR 18 39 07.1
comp=Z,420nm,18.2s,MS4.4,baz=310,slow=41
LVV L'vov 44.91 330 eP P 18 17 09.6 +1.1
UZH Uzhgorod 45.02 328d iP P 18 17 08.0 -1.4
UZH i 18 18 54.5
FRIM Kepong 45.21 99 ⇓P P 18 17 11.5 0.0
KOLS Kolonicke sedl 45.22 328 eP P 18 17 12.9 +1.9
GTA Gaotai 45.35 48 P P 18 17 12.8 +0.6
GTA AP pP 18 17 16.9 +1.5
GTA XP sP 18 17 19.7 +3.1
GTA PCP PcP 18 18 52.0 +0.3
GTA PP PP 18 18 59.9 +1.6
GTA PCS PcS 18 22 45.3 -0.3
GTA S S 18 23 52.3 -0.8
GTA SS SS 18 27 08.9 -7.7
GTA AMB AMB
comp=Z,10.0nm,1.6s,mb4.4
GTA AMB AMB
comp=Z,332nm,5.7s
GTA LR LR
comp=N,934nm,19.0s,MS5.1
GTA LR LR
comp=E,2µm,21.3s,MS5.1
GTA LR LR
comp=Z,3µm,23.6s,MS5.1
KWP Kalwaria 45.44 329 eP P 18 17 14.1 +1.4
comp=Z,217nm,1.9s,mb5.7
KWP Kalwaria 45.44 329 eP P 18 17 14.1 +1.3
KWP pmax pmax
comp=Z,217nm,1.9s,mb5.7
ZAL Zalesovo 45.59 23 P P 18 17 13.7 -0.2
ZAL 18 18 51.2
ZAA0 Zalesovo Array 45.60 23 eP P 18 17 13.6 -0.3
ZALV Zalesovo Beam 45.60 23 P P 18 17 13.7 -0.3
comp=Z,7.7nm,0.8s,mb4.7,baz=223,slow=7.8,SNR=12
ZALV PcP PcP 18 18 51.2 -1.1
comp=Z,4.7nm,1.0s,baz=235,slow=5.1,SNR=2.7
ZALV LR LR 18 38 37.4
comp=Z,870nm,19.5s,MS4.7,baz=218,slow=39
CRVS Cervenica-Dubn 45.62 327 eP P 18 17 14.2 0.0
CRVS ePP PP 18 19 00.2 -0.8
CRVS Cervenica-Dubn 45.62 327 eP P 18 17 14.2 0.0
CRVS ePP PP 18 19 00.2 -0.8
PKSM Moragy 45.64 323⇓iP P 18 17 13.7 -0.7
SOKR Solikamsk 45.67 360c iP P 18 17 16.1 +1.7
SOKR S S 18 24 02.8 +5.6
SOKR pmax pmax
comp=Z,110nm,1.2s,mb5.7
NVS Novosibirsk 45.73 21⇑iP P 18 17 15.6 +0.6
NVS i 18 18 52.0
NVS i 18 19 08.4
NVS i S S 18 24 00.0 +1.8
NVS eSS SS 18 27 08.0 -15
NVS pmax pmax
comp=N,83nm,1.8s
NVS pmax pmax
comp=E,28nm,1.8s
NVS pmax pmax
comp=Z,67nm,1.8s,mb5.3
NVS smax
comp=N,33nm,1.9s
NVS smax
comp=E,15nm,2.0s
PSZ Piszkesteto 45.88 326 ⇓P P 18 17 16.5 +0.2
PSZ Piszkesteto 45.88 326⇓iP P 18 17 16.5 +0.2
KECS Kecovo 45.88 326 eP P 18 17 17.4 +1.1
comp=E,4.5nm,1.1s,mb4.3
KECS ePcP PcP 18 18 56.5 +3.1
KECS ePP PP 18 19 07.8 +4.0
KECS Kecovo 45.88 326 eP P 18 17 17.4 +1.1
KECS pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
KECS Kecovo 45.88 326 eP P 18 17 17.4 +1.1
KECS ePCP PcP 18 18 56.5 +3.1
KECS ePP PP 18 19 07.8 +4.0
CD2 Chengdu 46.04 60 eP P 18 17 17.0 -0.9
CD2 AP pP 18 17 21.3 +0.3
CD2 XP sP 18 17 23.4 +1.2
CD2 PCP PcP 18 18 52.8 -1.5
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
CD2 AMB AMB
comp=Z,130nm,5.8s
CD2 LR LR
comp=N,480nm,17.4s,MS4.6
CD2 LR LR
comp=E,440nm,19.2s,MS4.6
CD2 LR LR
comp=Z,540nm,21.0s,MS4.5
STHS Stebnicka Huta 46.05 328 eP P 18 17 17.8 +0.2
comp=Z,9.2nm,1.3s,mb4.5
STHS Stebnicka Huta 46.05 328 eP P 18 17 17.8 +0.2
STHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
KTGM Kuala Trenggan 46.12 96 ⇓P P 18 17 20.6 +1.9
VYHS Vyhne 46.78 326 eP P 18 17 23.1 -0.3
comp=Z,8.6nm,1.2s,mb4.6
VYHS ePcP PcP 18 18 55.4 -1.2
VYHS ePP PP 18 19 13.4 +0.1
VYHS Vyhne 46.78 326 eP P 18 17 23.1 -0.3
VYHS pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
VYHS Vyhne 46.78 326 eP P 18 17 23.1 -0.3
VYHS ePCP PcP 18 18 55.4 -1.2
VYHS ePP PP 18 19 13.4 +0.1
VYHS Vyhne 46.78 326 eP P 18 17 23.1 -0.3
comp=Z,8.6nm,1.2s,mb4.6
VYHS Vyhne 46.78 326 ePP PP 18 19 13.4 +0.1
KOLL Kolacno 47.07 325 eP P 18 17 25.4 -0.2
KGM Kluang 47.18 100 ⇑P P 18 17 28.7 +1.7
LZH Lanzhou 47.30 53 eP P 18 17 28.1 +0.4
LZH AP pP 18 17 30.5 -0.3
LZH XP sP 18 17 31.5 -0.5
LZH PCP PcP 18 18 59.2 +0.5
LZH PP PP 18 19 20.5 +1.7
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,136nm,4.3s
LZH LR LR
comp=E,2µm,14.1s
LZH LR LR
comp=Z,4µm,16.0s,MS5.5
LZH Lanzhou 47.30 53 eP P 18 17 28.1 +0.4
comp=Z,28nm,1.5s,mb5.0
LZH pP pP 18 17 30.5 -0.3
LZH sP sP 18 17 31.5 -0.5
LZH PcP PcP 18 18 59.2 +0.5
LZH PP PP 18 19 20.5 +1.7
LZH eS S 18 24 20.0 -1.3
LZH sS sS 18 24 27.0 +0.5
LZH SS SS 18 27 39.0 -10
LZH LR LR
comp=Z,4µm,16.0s,MS5.5
LZH Lanzhou 47.30 53 eP P 18 17 28.1 +0.4
LZH 18 18 59.2
LZH 18 19 20.5
LZH eS S 18 24 20.0 -1.3
LZH *SS sS 18 24 27.0 +0.5
LZH SS SS 18 27 39.0 -10
LZH pmax pmax
comp=Z,28nm,1.5s,mb5.0
LZH MLR MLR
comp=Z,4µm,16.0s,MS5.5
BOJS Bojanci 47.33 320 i P P 18 17 28.0 +0.3
ZST Bratislava 47.59 324 eP P 18 17 29.9 +0.2
comp=Z,94nm,2.2s,mb5.4
ZST ePP PP 18 19 24.8 +3.7
ZST LR LR
comp=Z,300nm,17.0s,MS4.3
ZST Bratislava 47.59 324 eP P 18 17 29.9 +0.2
ZST ePP PP 18 19 24.8 +3.7
ZST Bratislava 47.59 324 eP P 18 17 29.9 +0.2
comp=Z,94nm,2.2s,mb5.4
VISS Visnje 47.72 321 eP P 18 17 27.2 -3.6
MYKOM Kota Tinggi 47.75 100 ⇓P P 18 17 31.8 +0.3
OKC Ostrava-Krasne 47.92 327 eP P 18 17 32.1 -0.1
OKC ePP PP 18 19 20.4 -3.8
GYA Guiyang 47.95 67⇓iP P 18 17 33.0 +0.1
GYA PCP PcP 18 19 02.0 +0.8
GYA PP PP 18 19 24.9 0.0
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,150nm,6.9s
GYA LR LR
comp=N,840nm,19.0s,MS4.9
GYA LR LR
comp=E,910nm,19.6s,MS4.9
GYA LR LR
comp=Z,870nm,18.4s,MS4.8
KEST Kesra 47.96 306 P P 18 17 34.3 +1.5
comp=Z,1.5nm,0.9s,mb4.0,baz=64,slow=7.3,SNR=4.1
KEST PcP PcP 18 19 02.2 +1.1
comp=Z,6.5nm,1.1s,baz=15,slow=2.8,SNR=4.5
MORC Moravsky Berou 48.21 326 eP P 18 17 33.9 -0.6
comp=Z,72nm,1.8s,mb5.4
MORC Moravsky Berou 48.21 326⇓iP P 18 17 33.9 -0.6
JAVS Javornik 48.24 320 i P P 18 17 34.5 -0.4
VRAC Vranov 48.47 325 P P 18 17 36.5 0.0
comp=Z,1.8nm,0.4s,mb4.4,baz=124,slow=14,SNR=7.3
VRAC LR LR 18 41 09.0
comp=Z,348nm,19.2s,MS4.4,baz=109,slow=40
VRAC Vranov 48.47 325 eP P 18 17 36.8 +0.3
DPC Dobruska-Polom 49.18 326 eP P 18 17 41.4 -0.5
DPC AMS AMS 18 41 30.0
comp=Z,600nm,18.5s
LBTB Lobatse 49.32 219 eP P 18 17 44.1 +0.8
comp=Z,143nm,1.4s,mb5.8
LBTB ePcP PcP 18 19 05.2 -0.8
LBTB LR LR
comp=Z,1µm,19.0s,MS4.9
LBTB Lobatse 49.32 219 eP P 18 17 44.1 +0.8
LBTB e 18 19 05.2
LBTB pmax pmax
comp=Z,143nm,1.4s,mb5.8
LBTB MLR MLR
comp=Z,1µm,19.0s,MS4.9
LBTB Lobatse 49.32 219 P P 18 17 44.5 +1.2
comp=Z,45nm,1.0s,mb5.5,baz=51,slow=7.7,SNR=24
LBTB PcP PcP 18 19 07.0 +1.0
comp=Z,8.1nm,0.9s,baz=116,slow=4.6,SNR=2.3
UPC Upice 49.43 326 eP P 18 17 43.2 -0.7
KSP Ksiaz 49.47 327 eP P 18 17 45.4 +1.3
KSP Ksiaz 49.47 327 eP P 18 17 44.3 +0.2
GERES GERESS Array B 49.86 324 P P 18 17 45.7 -1.5
GERES 18 19 07.3
GERES GERESS Array B 49.86 324 P P 18 17 45.7 -1.4
comp=Z,1.3nm,0.8s,mb4.0,baz=94,slow=8.0,SNR=3.1
GERES PcP PcP 18 19 07.3 -0.3
comp=Z,2.6nm,0.9s,baz=108,slow=4.3,SNR=4.0
GERES LR LR 18 40 56.2
comp=Z,414nm,18.4s,MS4.5,baz=269,slow=38
PRU Pruhonice 49.96 325 eP P 18 17 47.8 -0.1
PRU AMS AMS 18 42 40.0
comp=Z,500nm,19.9s
KHC Kasperske Hory 50.07 324 eP P 18 17 46.6 -2.1
KHC ex x 18 18 08.5
PVCC Panska Ves 50.23 326 eP P 18 17 48.9 -1.0
QIZ Qiongzhong 50.73 77 P P 18 17 52.9 -1.3
QIZ AP pP 18 17 55.4 -2.0
QIZ S S 18 25 07.6 -2.4
QIZ AMB AMB
comp=Z,35nm,2.1s,mb4.9
QIZ AMB AMB
comp=Z,366nm,3.5s
QIZ LR LR
comp=E,437nm,23.1s
QIZ LR LR
comp=Z,605nm,39.3s
BRG Berggiesshubel 50.74 326 eP P 18 17 54.5 +0.7
comp=Z,63nm,2.6s,mb5.1
BRG e 18 19 14.1
BRG e 18 19 51.9
BRG Berggiesshubel 50.74 326 eP P 18 17 54.5 +0.7
BRG e 18 19 14.1
BRG e 18 19 51.9
BRG pmax pmax
comp=Z,63nm,2.6s,mb5.1
BRG Berggiesshubel 50.74 326 eP P 18 17 54.5 +0.7
comp=Z,106nm,2.6s,mb5.3
BRG e 18 19 14.1
comp=Z,8.9nm,1.2s
BRG e 18 19 51.9
comp=Z,38nm,1.7s
TSUM Tsumeb 50.89 231 eP P 18 17 56.7 +1.4
comp=Z,58nm,1.0s,mb5.5
TSUM ePcP PcP 18 19 11.9 0.0
TSUM LR LR
comp=Z,3µm,19.0s,MS5.3
TSUM Tsumeb 50.89 231 P P 18 17 57.2 +1.9
comp=Z,33nm,0.9s,mb5.3,baz=25,slow=7.5,SNR=35
XAN Xi'an 50.91 57 P P 18 17 54.3 -1.0
XAN S S 18 25 08.9 -3.1
XAN AMB AMB
comp=Z,26nm,1.6s,mb4.9
XAN LR LR
comp=N,197nm,15.7s
XAN LR LR
comp=E,644nm,25.5s
XAN LR LR
comp=Z,968nm,19.7s,MS4.8
DAVOX Davos/Dischmat 51.24 320 P P 18 17 56.9 -0.8
comp=Z,13nm,1.0s,mb4.8,baz=128,slow=10,SNR=4.9
DAVOX PcP PcP 18 19 12.3 -0.5
comp=Z,4.9nm,0.9s,baz=166,slow=4.2,SNR=2.9
NKC Novy Kostel 51.25 325 eP P 18 17 57.0 -0.6
CLL Collm 51.48 326⇑iP P 18 17 58.8 -0.5
comp=Z,115nm,2.2s,mb5.4
CLL i 18 18 09.6
CLL ePcP PcP 18 19 14.0 +0.5
CLL eS S 18 25 27.0 +7.6
CLL LR LR
comp=Z,500nm,18.3s,MS4.6
CLL Collm 51.48 326⇑iP P 18 17 58.8 -0.5
CLL i 18 18 09.6
CLL e 18 19 14.0
CLL eS S 18 25 27.0 +7.6
CLL pmax pmax
comp=Z,115nm,2.2s,mb5.4
CLL pmax pmax
comp=Z,25nm,1.5s,mb4.9
CLL MLR MLR
comp=Z,500nm,18.3s,MS4.6
CLL Collm 51.48 326⇑iP P 18 17 58.8 -0.5
comp=Z,115nm,2.2s,mb5.4
CLL i x x 18 18 09.6
CLL i x x 18 18 25.2
CLL ePcP PcP 18 19 14.0 +0.5
comp=Z,25nm,1.5s
CLL i PP PP 18 20 03.2 +6.7
comp=Z,74nm,2.0s
CLL eS S 18 25 27.0 +7.6
CLL eSS SS 18 29 18.0 +23
CLL eSSS 18 30 26.0
CLL Collm 51.48 326 eP P 18 17 59.1 -0.2
comp=Z,135nm,2.3s,mb5.5
CLL ePcP PcP 18 19 13.7 +0.2
CLL ePP PP 18 19 58.7 +2.2
CLL eS S 18 25 31.9 +13
CLL eSS SS 18 29 06.8 +12
CLL eSSS 18 30 25.2
MOY Mondy 51.57 33 eP P 18 18 00.6 +0.6
MOY pmax pmax
comp=Z,44nm,3.5s
GRA1 Grafenberg Arr 51.69 324 eP P 18 17 59.6 -1.4
comp=Z,22nm,0.8s,mb5.1
GRA1 ePP PP 18 20 04.5 +6.0
GRA1 LR LR
comp=Z,300nm,21.4s,MS4.3
GRF Grafenberg Arr 51.69 324 eP P 18 17 59.6 -1.4
GRF e 18 20 04.5
GRF pmax pmax
comp=Z,22nm,0.8s,mb5.1
GRF MLR MLR
comp=Z,300nm,21.4s,MS4.3
GRF Grafenberg Arr 51.69 324 eP P 18 17 59.6 -1.4
GRF e 18 20 04.5
GRF pmax pmax
comp=Z,22nm,0.8s,mb5.1
GRF MLR MLR
comp=Z,300nm,21.4s,MS4.3
GRF Grafenberg Arr 51.69 324 eP P 18 17 59.6 -1.4
comp=Z,22nm,0.8s,mb5.1
GRF ePP PP 18 20 04.5 +6.0
GRF eL 18 41 40.6
comp=Z,322nm,21.4s
SBF Sospel 51.76 315 eP P 18 18 00.3 -1.3
comp=Z,147nm,1.2s,mb5.5
SBF Sospel 51.76 315 eP P 18 18 00.3 -1.3
SBF pmax pmax
comp=Z,73nm,1.2s,mb5.5
SBF Sospel 51.76 315 eP P 18 18 00.3 -1.3
comp=Z,73nm,1.2s,mb5.5
MOX Moxa 51.92 325 eP P 18 18 02.0 -0.6
comp=Z,87nm,2.3s,mb5.3
MOX Moxa 51.92 325 eP P 18 18 02.0 -0.6
MOX pmax pmax
comp=Z,87nm,2.3s,mb5.3
TMCR Tamitsa 52.00 350 eP P 18 18 02.5 -0.5
FRF La Foret Royal 52.21 315 eP P 18 18 03.6 -1.3
comp=Z,39nm,1.2s,mb4.9
FRF La Foret Royal 52.21 315 eP P 18 18 03.6 -1.3
FRF pmax pmax
comp=Z,20nm,1.2s,mb4.9
FRF La Foret Royal 52.21 315 eP P 18 18 03.6 -1.3
comp=Z,20nm,1.2s,mb4.9
ZAK Zakamensk 52.21 36 eP P 18 18 03.1 -1.7
ZAK e 18 19 15.9
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
BOSA Boshof 52.22 216 eP P 18 18 05.5 +0.4
comp=Z,208nm,2.0s,mb5.7
BOSA LR LR
comp=Z,2µm,19.0s,MS5.2
BOSA Boshof 52.22 216 eP P 18 18 05.5 +0.4
BOSA pmax pmax
comp=Z,208nm,2.0s,mb5.7
BOSA MLR MLR
comp=Z,2µm,19.0s,MS5.2
BOSA Boshof 52.22 216 P P 18 18 05.3 +0.2
comp=Z,16nm,0.9s,mb4.9,baz=45,slow=8.9,SNR=10
LMR La Mourre 52.23 315 eP P 18 18 03.8 -1.3
comp=Z,52nm,1.0s,mb5.1
LMR La Mourre 52.23 315 eP P 18 18 03.8 -1.3
LMR pmax pmax
comp=Z,26nm,1.0s,mb5.1
LMR La Mourre 52.23 315 eP P 18 18 03.8 -1.3
comp=Z,26nm,1.0s,mb5.1
JOF Joensuu 52.31 345 ep P 18 18 03.6 -1.7
comp=Z,30nm,0.7s,mb5.3
JOF Joensuu 52.31 345 eP P 18 18 03.6 -1.7
JOF pmax pmax
comp=Z,31nm,0.7s,mb5.3
MBDF Montbardon 52.50 316 eP P 18 18 06.2 -0.9
comp=Z,19nm,1.0s,mb4.7
MBDF Montbardon 52.50 316 eP P 18 18 06.2 -0.9
MBDF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
MBDF Montbardon 52.50 316 eP P 18 18 06.2 -0.9
comp=Z,9.6nm,1.0s,mb4.7
FIA1 FINESS Array S 52.54 342 eP P 18 18 06.1 -0.9
FINES FINESS Array B 52.54 342 P P 18 18 06.6 -0.4
FINES FINESS Array B 52.54 342 i P P 18 18 06.5 -0.5
FINES pmax pmax
comp=Z,29nm,0.9s
FINES FINESS Array B 52.54 342 P P 18 18 06.6 -0.4
comp=Z,29nm,0.9s,mb5.2,baz=136,slow=8.8,SNR=34
LPG La Plagne 52.78 317 eP P 18 18 07.9 -1.2
comp=Z,41nm,1.0s,mb5.0
LPG La Plagne 52.78 317 eP P 18 18 07.9 -1.2
LPG pmax pmax
comp=Z,21nm,1.0s,mb5.0
LPG La Plagne 52.78 317 eP P 18 18 07.9 -1.2
comp=Z,21nm,1.0s,mb5.0
LPL La Plagne 52.80 317 eP P 18 18 08.0 -1.2
comp=Z,93nm,1.4s,mb5.2
LPL La Plagne 52.80 317 eP P 18 18 08.0 -1.2
LPL pmax pmax
comp=Z,46nm,1.4s,mb5.2
LPL La Plagne 52.80 317 eP P 18 18 08.0 -1.2
comp=Z,46nm,1.4s,mb5.2
BFO Black Forest 52.83 321 eP P 18 18 08.1 -1.3
comp=Z,28nm,1.5s,mb5.0
BFO ePcP PcP 18 19 18.2 -0.5
BFO Black Forest 52.83 321 eP P 18 18 08.1 -1.3
BFO e 18 19 18.2
BFO pmax pmax
comp=Z,28nm,1.5s,mb5.0
SONM Songino Array 52.98 40 P P 18 18 10.8 +0.2
comp=Z,4.3nm,1.0s,mb4.3,baz=251,slow=4.4,SNR=15
SONM PcP PcP 18 19 19.2 0.0
comp=Z,2.5nm,1.0s,baz=231,slow=3.0,SNR=4.6
KAF Kangasniemi 52.99 342 ep P 18 18 09.2 -1.2
comp=Z,65nm,1.1s,mb5.5,baz=141,slow=7.3
KAF Kangasniemi 52.99 342 eP P 18 18 09.2 -1.2
KAF pmax pmax
comp=Z,65nm,1.1s,mb5.5
TLY Talaya 53.02 34 P P 18 18 09.8 -0.9
comp=Z,7.5nm,1.0s,mb4.6
TLY LR LR
comp=Z,920nm,21.0s,MS4.8
TLY Talaya 53.02 34 eP P 18 18 12.3 +1.5
TLY e 18 19 19.4
TLY eS S 18 25 43.4 +2.9
TLY pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
TLY MLR MLR
comp=Z,904nm,16.0s,MS4.9
SMRF Simiane la Rot 53.07 315 eP P 18 18 09.8 -1.5
BTO Baotou 53.16 49 eP P 18 18 11.7 -0.3
BTO AMB AMB
comp=Z,7.0nm,1.5s,mb4.4
ORIF Oris-en-Rattie 53.16 316 eP P 18 18 10.9 -1.1
comp=Z,20nm,1.2s,mb4.6
ORIF eMLR MLR
comp=Z,559nm,21.2s,MS4.3
ORIF Oris-en-Rattie 53.16 316 eP P 18 18 10.9 -1.1
ORIF pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
ORIF Oris-en-Rattie 53.16 316 eP P 18 18 10.9 -1.1
comp=Z,9.9nm,1.2s,mb4.6
ULN Ulaanbaatar 53.41 40 eP P 18 18 14.3 +0.6
ULN LR LR
comp=Z,987nm,19.0s,MS4.9
CDF Champ du Feu 53.51 321 eP P 18 18 13.5 -0.9
HINF Hinteralfeld 53.54 320 eP P 18 18 13.6 -1.1
CABF La Chapelle 53.60 318 eP P 18 18 14.4 -0.7
comp=Z,132nm,1.3s,mb5.4
CABF La Chapelle 53.60 318 eP P 18 18 14.4 -0.7
CABF pmax pmax
comp=Z,66nm,1.3s,mb5.4
CABF La Chapelle 53.60 318 eP P 18 18 14.4 -0.7
comp=Z,66nm,1.3s,mb5.4
IRK Irkutsk 53.63 34 eP P 18 18 15.8 +0.6
IRK e 18 19 21.3
IRK pmax pmax
comp=Z,43nm,2.5s,mb4.9
TOA0 Torodi Ar. Sit 53.76 276 eP P 18 18 16.6 -0.1
TOA0 ePcP PcP 18 19 22.4 -0.5
TORD Torodi Ar. Bea 53.76 276 P P 18 18 16.9 +0.1
comp=Z,9.7nm,1.0s,mb4.7,baz=89,slow=6.2,SNR=26
TORD PcP PcP 18 19 22.9 0.0
comp=Z,4.5nm,1.0s,baz=82,slow=4.2,SNR=3.8
GZH Guangzhou 53.89 71 P P 18 18 19.2 +1.5
GZH S S 18 25 53.0 -0.3
GZH LR LR
comp=Z,792nm,26.4s,MS4.7
HAU Haudompre 53.93 320 eP P 18 18 16.4 -1.1
HAU eMLR MLR
comp=Z,304nm,19.5s,MS4.1
HAU Haudompre 53.93 320 eP P 18 18 16.4 -1.1
HAU MLR MLR
comp=Z,300nm,19.5s,MS4.4
VIVF Saint-Julien-l 53.96 316 eP P 18 18 16.8 -1.0
KSM Kuching 54.03 98 eP P 18 18 17.2 -1.6
KSM Kuching 54.03 98 ⇓P P 18 18 19.1 +0.3
LASF Ste Croix 54.29 315 eP P 18 18 19.0 -1.2
comp=Z,50nm,1.3s,mb5.0
LASF Ste Croix 54.29 315 eP P 18 18 19.0 -1.2
comp=Z,25nm,1.3s,mb5.0
HHC Hu-ho-hao-te 54.36 49 eP P 18 18 21.0 +0.2
HHC AP pP 18 18 25.7 +1.7
HHC XP sP 18 18 28.0 +2.8
HHC PCP PcP 18 19 25.1 +0.4
HHC AMB AMB
comp=Z,23nm,1.4s,mb4.9
HHC AMB AMB
comp=Z,291nm,3.7s
HHC LR LR
comp=N,840nm,21.4s,MS5.3
HHC LR LR
comp=E,2µm,19.0s,MS5.3

HHC LR LR
comp=Z,2µm,18.8s,MS5.3
TIY Taiyuan 54.37 53 P **P** **18 18 17.4 -3.5**
TIY PCP PcP 18 19 26.0 +1.2
TIY PP PP 18 20 27.5 +4.5
TIY S **S** **18 25 54.4 -4.9**
TIY LR LR
comp=N,583nm,15.0s,MS5.0
TIY LR LR
comp=E,932nm,16.1s,MS5.0
TIY LR LR
comp=Z,1µm,17.0s,MS5.0
WLF Walferdange 54.67 322 P **P** **18 18 22.4 -0.5**
MEZF Maizieres J'vi 54.91 320 *e*P **P** **18 18 23.5 -1.2**
comp=Z,52nm,1.0s,mb5.2
MEZF Maizieres J'vi 54.91 320 *e*P **P** **18 18 23.5 -1.2**
comp=Z,26nm,1.0s,mb5.2
WHN Wuhan 55.03 62 *e*P **P** **18 18 26.2 +0.3**
WHN S **S** **18 26 02.6 -5.8**
WHN LR LR
comp=Z,3µm,21.4s,MS5.3
SMF Signal de Mont 55.07 318 *e*P **P** **18 18 24.8 -1.0**
MTLF Montolieu 55.23 313 *e*P **P** **18 18 25.9 -1.2**
LOR Lormes 55.26 318 *e*P **P** **18 18 26.5 -0.7**
comp=Z,43nm,1.1s,mb5.1
LOR *e*MLR MLR
comp=Z,350nm,23.0s,MS4.1
LOR Lormes 55.26 318 *e*P **P** **18 18 26.5 -0.7**
comp=Z,21nm,1.1s,mb5.1
LOR LR LR
comp=Z,350nm,23.0s,MS4.4
LOR Lormes 55.26 318 *e*P **P** **18 18 26.5 -0.7**
LOR pmax pmax
comp=Z,21nm,1.1s,mb5.1
LOR MLR MLR
comp=Z,350nm,23.0s,MS4.4
SSF Saint Saulge 55.42 318 *e*P **P** **18 18 27.5 -0.8**
comp=Z,33nm,1.0s,mb5.0
SSF Saint Saulge 55.42 318 *e*P **P** **18 18 27.5 -0.8**
SSF pmax pmax
comp=Z,16nm,1.0s,mb5.0
SSF Saint Saulge 55.42 318 *e*P **P** **18 18 27.5 -0.8**
comp=Z,16nm,1.0s,mb5.0
AVF Avril sur Loir 55.43 318 *e*P **P** **18 18 27.4 -1.1**
comp=Z,26nm,1.0s,mb4.9
AVF Avril sur Loir 55.43 318 *e*P **P** **18 18 27.4 -1.1**
AVF pmax pmax
comp=Z,13nm,1.0s,mb4.9
AVF Avril sur Loir 55.43 318 *e*P **P** **18 18 27.4 -1.1**
comp=Z,13nm,1.0s,mb4.9
BCLA Clavier 55.46 322 P **P** **18 18 29.6 +1.0**
comp=Z,26nm,2.9s,mb4.8
BCLA Clavier 55.46 322 P **P** **18 18 29.5 +0.9**
comp=Z,26nm,2.9s,mb4.8
SBUM Sibu 55.61 97 ⇑P **P** **18 18 31.1 +0.8**
GIVF Givet 55.63 322 *e*P **P** **18 18 28.6 -1.2**
BGF Bois d'Agland 55.70 317 *e*P **P** **18 18 30.0 -0.3**
comp=Z,52nm,1.0s,mb5.2
BGF Bois d'Agland 55.70 317 *e*P **P** **18 18 30.0 -0.3**
BGF pmax pmax
comp=Z,26nm,1.0s,mb5.2
BGF Bois d'Agland 55.70 317 *e*P **P** **18 18 30.0 -0.3**
comp=Z,26nm,1.0s,mb5.2
DOU Dourbes 55.77 322 P **P** **18 18 30.3 -0.5**
comp=Z,34nm,2.4s,mb5.0
APA Apatity 55.90 349⇑*e*P **P** **18 18 28.7 -2.8**
BAIF Baives 55.98 322 *e*P **P** **18 18 31.2 -1.2**
comp=Z,52nm,1.0s,mb5.2
BAIF Baives 55.98 322 *e*P **P** **18 18 31.2 -1.2**
BAIF pmax pmax
comp=Z,26nm,1.0s,mb5.2
BAIF Baives 55.98 322 *e*P **P** **18 18 31.2 -1.2**
comp=Z,26nm,1.0s,mb5.2
HFS Hagfors 56.02 336 P **P** **18 18 31.6 -0.8**
comp=Z,8.1nm,0.9s,mb4.8,baz=144,slow=8.6,SNR=17
TCF Toulx Ste Croi 56.04 317 *e*P **P** **18 18 31.3 -1.5**
comp=Z,21nm,1.1s,mb4.8
TCF Toulx Ste Croi 56.04 317 *e*P **P** **18 18 31.3 -1.5**
TCF pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
TCF Toulx Ste Croi 56.04 317 *e*P **P** **18 18 31.3 -1.5**
comp=Z,10nm,1.1s,mb4.8
HYF Humbligny 56.04 318 *e*P **P** **18 18 31.7 -1.1**
RJF Les Rejaudoux 56.23 316 *e*P **P** **18 18 33.1 -1.1**
RJF *e*MLR MLR
comp=Z,311nm,22.5s,MS4.0
RJF Les Rejaudoux 56.23 316 *e*P **P** **18 18 33.1 -1.1**
RJF MLR MLR
comp=Z,310nm,22.5s,MS4.3
BTM Bintulu 56.26 95 ⇓P **P** **18 18 35.4 +0.5**
EPF Esparros 56.49 313 *e*P **P** **18 18 35.2 -0.9**
EBIE Bielsa 56.56 312 P **P** **18 18 36.0 -0.5**
comp=Z,4.1nm,0.9s,mb4.5
LFF La Frestale 56.67 315 *e*P **P** **18 18 36.0 -1.3**
EMUR La Murta 56.71 306 P **P** **18 18 38.5 +0.7**
comp=Z,6.6nm,1.0s,mb4.6
ETOB Tobarra 57.07 307 P **P** **18 18 46.3 +6.0**
comp=Z,6.4nm,1.1s,mb4.6
ETSF Etsaut 57.11 312 *e*P **P** **18 18 40.0 -0.5**
comp=Z,18nm,1.0s,mb4.8
ETSF Etsaut 57.11 312 *e*P **P** **18 18 40.0 -0.5**
ETSF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
ETSF Etsaut 57.11 312 *e*P **P** **18 18 40.0 -0.5**
comp=Z,9.2nm,1.0s,mb4.8
KONO Kongsberg 57.46 334⇑*e*P **P** **18 18 42.4 -0.3**
NB2 NORSAR Subarra 57.55 336 P **P** **18 18 41.7 -1.6**
comp=Z,2.4nm,0.8s,mb4.3,baz=120,slow=7.4
NB2 NORSAR Subarra 57.55 336 P **P** **18 18 41.7 -1.6**
comp=Z,2.4nm,0.8s,mb4.3
NB2 NORSAR Subarra 57.55 336 P **P** **18 18 41.7 -1.6**
NB2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
NOA NORSAR Array B 57.55 336 P **P** **18 18 42.1 -1.1**
comp=Z,3.6nm,0.8s,mb4.4,baz=117,slow=7.6,SNR=10
NOA LR LR 18 46 26.2
comp=Z,269nm,18.1s,MS4.4,baz=90,slow=39
SUR Sutherland 57.57 216 P **P** **18 18 45.0 +1.2**
comp=Z,54nm,1.1s,mb5.5
SUR Sutherland 57.57 216 P **P** **18 18 45.1 +1.3**
comp=Z,36nm,1.1s,mb5.3,baz=50,slow=3.6,SNR=5.1
SJPF Ste Jean 57.63 312 *e*P **P** **18 18 42.9 -1.3**
comp=Z,39nm,1.2s,mb5.0
SJPF Ste Jean 57.63 312 *e*P **P** **18 18 42.9 -1.3**
SJPF pmax pmax
comp=Z,20nm,1.2s,mb5.0
SJPF Ste Jean 57.63 312 *e*P **P** **18 18 42.9 -1.3**
comp=Z,20nm,1.2s,mb5.0
BJI Beijing 57.65 51 P **P** **18 18 43.1 -1.3**
ETOR Torete 57.80 310 P **P** **18 18 46.5 +1.1**
comp=Z,4.8nm,0.9s,mb4.5
ETOR Torete 57.80 310 P **P** **18 18 46.5 +1.1**
ETOR pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
EVIA Vianos 57.81 307 P **P** **18 18 45.6 +0.1**
comp=Z,21nm,1.3s,mb5.0
EVIA Vianos 57.81 307 P **P** **18 18 45.6 +0.1**
EVIA pmax pmax
comp=Z,21nm,1.3s,mb5.0
EBER Berja 57.88 305 P **P** **18 18 46.8 +0.7**
comp=Z,9.0nm,0.9s,mb4.8
EALB Alboran 57.89 304 P **P** **18 18 47.6 +1.5**
comp=Z,3.7nm,1.6s,mb4.2
EQES Quesada 58.14 306 P **P** **18 18 46.7 -1.2**
comp=Z,5.7nm,1.0s,mb4.6
LDF La Druitiere 58.21 319 *e*P **P** **18 18 47.0 -1.1**
comp=Z,71nm,1.2s,mb5.3
LDF La Druitiere 58.21 319 *e*P **P** **18 18 47.0 -1.1**
LDF pmax pmax
comp=Z,36nm,1.2s,mb5.3
LDF La Druitiere 58.21 319 *e*P **P** **18 18 47.0 -1.1**
comp=Z,36nm,1.2s,mb5.3
FLN La Foliniere 58.48 319 *e*P **P** **18 18 49.1 -0.9**
FLN *e*MLR MLR
comp=Z,423nm,23.0s,MS4.2
FLN La Foliniere 58.48 319 *e*P **P** **18 18 49.1 -0.9**
FLN MLR MLR
comp=Z,420nm,23.0s,MS4.5
GRR Gorron 58.62 319 *e*P **P** **18 18 49.7 -1.3**
ERON Agron 58.63 305 P **P** **18 18 52.0 +0.7**
comp=Z,7.4nm,0.8s,mb4.8
KKM Kota Kinabalu 58.64 91 ⇑P **P** **18 18 52.5 +0.8**
QZH Quanzhou 58.66 69 *e*P **P** **18 18 52.3 +0.6**
QZH S **S** **18 26 57.3 +0.8**
QZH LR LR
comp=N,460nm,9.7s
QZH LR LR
comp=E,690nm,9.2s
QZH LR LR
comp=Z,2µm,24.8s,MS5.0
CIT Chita 58.79 37 *e*P **P** **18 18 50.6 -1.5**
CIT *e* 18 20 58.6
CIT pmax pmax
comp=Z,31nm,2.5s,mb4.9
ELOJ Sierra Loja 58.92 305 P **P** **18 18 52.7 -0.6**
comp=Z,4.0nm,0.9s,mb4.5
ELOJ Sierra Loja 58.92 305 P **P** **18 18 52.7 -0.6**
ELOJ pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
MDT Midelt 58.94 300 P **P** **18 18 53.8 +0.2**
comp=Z,6.0nm,0.9s,mb4.6,baz=99,slow=7.9,SNR=16
NJ2 Nanjing 58.97 61 *e*P **P** **18 18 54.5 +0.7**
NJ2 AP pP 18 18 58.8 +1.8
NJ2 XP sP 18 19 02.2 +4.0
NJ2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
NJ2 AMB AMB
comp=Z,160nm,7.4s
NJ2 LR LR
comp=N,1µm,25.5s,MS5.1
NJ2 LR LR
comp=E,1µm,27.1s,MS5.1
NJ2 LR LR
comp=Z,1µm,27.1s,MS5.0
KEV Kevo 58.99 348 *e*p **P** **18 18 51.4 -1.8**
comp=Z,18nm,0.7s,mb5.2
KEV Kevo 58.99 348 *e*P **P** **18 18 51.4 -1.8**
KEV pmax pmax
comp=Z,18nm,0.7s,mb5.2
ELUQ Luque 59.05 306 P **P** **18 18 52.6 -1.6**
comp=Z,2.2nm,0.9s,mb4.2
ELUQ Luque 59.05 306 P **P** **18 18 52.6 -1.6**
ELUQ pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
KDM Kudat 59.06 90 ⇑P **P** **18 18 54.7 +0.1**
ESDC Sonseca Array 59.07 308 P **P** **18 18 53.1 -1.2**
comp=Z,5.3nm,0.8s,mb4.6
ESDC Sonseca Array 59.07 308 P **P** **18 18 53.1 -1.2**
comp=Z,5.6nm,0.8s,mb4.6,baz=92,slow=5.8,SNR=13
ESLA Sonseca Array 59.07 308 *e*P **P** **18 18 53.1 -1.2**
comp=Z,5.4nm,1.3s,mb4.4
ESLA LR LR
comp=Z,2µm,19.0s,MS5.2
ARCES ARCESS Array B 59.12 348 P **P** **18 18 53.4 -0.7**
ARCES LR LR 18 49 11.1
ARCES ARCESS Array B 59.12 348 P **P** **18 18 53.4 -0.7**
comp=Z,30nm,0.9s,mb5.3,baz=149,slow=7.6,SNR=31
ARCES LR LR 18 49 11.1
comp=Z,475nm,18.3s,MS4.7,baz=140,slow=41
ARE0 ARCESS Array S 59.12 348 *e*P **P** **18 18 53.3 -0.8**
EMIJ Mijas 59.35 304 P **P** **18 18 57.5 +1.2**
comp=Z,5.7nm,0.9s,mb4.6
GUD Guadarrama 59.35 309 P **P** **18 19 02.5 +6.2**
comp=Z,7.9nm,1.2s,mb4.6
GUD Guadarrama 59.35 309 P **P** **18 19 02.5 +6.3**
GUD pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
EADA Adamuz 59.36 306 P **P** **18 18 55.4 -1.0**
comp=Z,5.0nm,1.0s,mb4.5
SDKM Sandakan 59.68 92 ⇑P **P** **18 18 58.5 -0.4**
SGMF Saint Gilles 59.69 318 *e*P **P** **18 18 57.1 -1.3**
EJIF Jimena Fronter 59.90 304 P **P** **18 19 01.0 +0.9**
comp=Z,7.1nm,0.9s,mb4.7
EJIF Jimena Fronter 59.90 304 P **P** **18 19 01.0 +0.9**
EJIF pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ROSF Rostrenen 60.17 318 *e*P **P** **18 19 00.6 -1.1**
TSY Tnine Yamani 60.22 303 *i* P **P** **18 19 03.0 +0.7**
ESPR Espera 60.25 305 P **P** **18 19 01.0 -1.5**
comp=Z,9.6nm,0.8s,mb4.9
TSM Tawau 60.64 93 ⇓P **P** **18 19 04.7 -0.8**
SSE Sheshan 60.93 62 P **P** **18 19 07.7 +0.4**
comp=Z,21nm,1.0s,mb5.2
SSE pP pP 18 19 16.1 +5.6
SSE S **S** **18 27 18.6 -7.1**
SSE sS sS 18 27 35.5 +4.5
SSE AMB AMB
comp=Z,21nm,1.0s,mb5.2
SSE AMB AMB
comp=Z,120nm,4.2s
SSE LR LR
comp=N,353nm,19.7s,MS4.7
SSE LR LR
comp=E,397nm,20.2s,MS4.7
SSE LR LR
comp=Z,788nm,20.2s,MS4.8
SSE Sheshan 60.93 62 P **P** **18 19 07.7 +0.4**
comp=Z,21nm,1.0s,mb5.2
SSE pP pP 18 19 16.1 +5.6
SSE S **S** **18 27 18.6 -7.1**
SSE sS sS 18 27 35.5 +4.5
SSE LR LR
comp=Z,790nm,20.2s,MS4.9
EMIN Mina Concepcio 60.97 306 P **P** **18 19 05.5 -1.9**
comp=Z,5.4nm,1.0s,mb4.6
BOD Bodaibo 61.04 31 *e*P **P** **18 19 07.7 +0.2**
MYLDM Lahad Datu 61.05 92 ⇓P **P** **18 19 08.9 +0.6**
KIC Kosan Boka 61.18 270 *e*P **P** **18 19 09.6 +0.4**
comp=Z,173nm,1.2s
YHNB Yeheng 61.20 69 P **P** **18 19 09.2 0.0**
EBAD Badajoz 61.33 307 P **P** **18 19 08.9 -0.9**
comp=Z,6.6nm,1.2s,mb4.6
TIC Toumodi 61.39 270 *e*P **P** **18 19 10.9 +0.3**
comp=Z,350nm,1.4s
LIC Lamto 61.48 270 *e*P **P** **18 19 11.2 -0.1**
comp=Z,132nm,1.3s,mb5.6
LIC *e*MLR MLR
comp=Z,713nm,20.2s,MS4.5
LIC Lamto 61.48 270 *e*P **P** **18 19 11.7 +0.4**
comp=Z,136nm,1.3s,mb5.9
LIC Lamto 61.48 270 *e*P **P** **18 19 11.2 -0.1**
comp=Z,66nm,1.3s,mb5.6
LIC LR LR
comp=Z,360nm,20.3s,MS4.5
EGRO El Granado 61.59 305 P **P** **18 19 11.7 +0.1**
comp=Z,4.0nm,0.8s,mb4.6
OUK Oukaimeden 61.65 298 *i* P **P** **18 19 13.0 +0.9**
PBEJ Beja 61.93 306 *e*P **P** **18 19 13.8 -0.1**
comp=Z,25nm,2.5s,mb4.9
EVO Evora 62.09 306 *e*P **P** **18 19 14.7 -0.2**
SNY Shenyang 63.44 50 P **P** **18 19 26.0 +2.1**
SNY S **S** **18 27 54.1 -2.8**
SNY AMB AMB
comp=Z,221nm,12.0s
SNY LR LR
comp=N,600nm,21.9s,MS4.8
SNY LR LR
comp=E,391nm,20.7s,MS4.8
SNY LR LR
comp=Z,659nm,27.6s
KAPI Kappang 64.94 102 P **P** **18 19 31.4 -2.8**
comp=Z,663nm,1.0s,SNR=9.4
CN2 Changchun 64.98 48 *e*P **P** **18 19 33.1 -0.8**
CN2 *e*XP sP 18 19 40.5 +2.1
CN2 AMB AMB
comp=Z,20nm,1.7s,mb4.9
CN2 LR LR
comp=N,700nm,17.0s,MS5.0
CN2 LR LR
comp=E,500nm,17.0s,MS5.0
CN2 LR LR
comp=Z,600nm,18.0s,MS4.8
CLNS Chul'man 66.43 34 *e*P **P** **18 19 42.7 -0.4**
CLNS pmax pmax
comp=Z,24nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,4.0nm,0.9s
CLNS pmax pmax
comp=E,14nm,1.4s
CLNS MLR MLR
comp=Z,2µm,20.0s,MS5.3
CLNS MLR MLR
comp=N,200nm,19.0s,MS5.2
CLNS MLR MLR
comp=E,1µm,18.0s,MS5.2
KSRS Korea Array 66.59 55 P **P** **18 19 42.7 -1.8**
comp=E,3.9nm,0.8s,mb4.5,baz=262,slow=6.7,SNR=11
KSRS LR LR 18 50 59.2
comp=E,683nm,19.1s,MS4.9,baz=274,slow=38
JOW Kunigami 67.27 67 LR LR 18 51 47.2
comp=E,361nm,21.5s,MS4.6,baz=260,slow=38
SPB4 Spitsbergen Ar 67.42 352 *e*P **P** **18 19 48.4 -0.6**
MDJ Mudanjiang 68.00 47 P **P** **18 19 52.0 -1.3**
MDJ XP sP 18 19 56.5 -1.3
MDJ S S 18 28 58.7 +6.1
MDJ AMB AMB
comp=Z,87nm,3.5s
MDJ LR LR
comp=E,327nm,29.3s
MDJ LR LR
comp=Z,423nm,32.1s,MS4.5
MDJ Mudanjiang 68.00 47 PFAKE 18 20 00.0 +6.7
MDJ LR LR
comp=Z,418nm,19.0s,MS4.7
JNU Nakatsue 69.11 60 P **P** **18 19 59.1 -1.3**
comp=Z,7.9nm,0.9s,mb4.6,baz=238,slow=5.9,SNR=6.0
JNU LR LR 18 53 49.1
comp=Z,773nm,19.2s,MS5.0,baz=267,slow=39
YAK Yakutsk 69.74 29 *e*P **P** **18 20 01.6 -2.2**
comp=Z,27nm,0.8s,mb5.2
YAK LR LR
comp=Z,655nm,19.0s,MS4.9
YAK Yakutsk 69.74 29*d i*P **P** **18 20 02.3 -1.5**
YAK *e**PP pP 18 20 13.4 +6.4
YAK *e* 18 20 25.1
YAK *e* 18 22 34.4
YAK *e*S S 18 29 09.7 -2.9
YAK *e*SS SS 18 33 43.7 +3.0
YAK pmax pmax
comp=Z,41nm,1.7s,mb5.1
YAK pmax pmax
comp=N,4.0nm,2.3s
YAK pmax pmax
comp=E,40nm,1.8s
YAK smax
comp=E,138nm,4.8s
YAK smax
comp=N,171nm,5.1s
YAK MLR MLR
comp=N,368nm,18.0s,MS4.9
YAK MLR MLR
comp=Z,702nm,18.0s,MS5.0
YAK MLR MLR
comp=E,516nm,16.0s,MS4.9
BATI Kupang 70.23 106 P **P** **18 20 06.3 -1.3**
comp=E,26nm,0.9s,mb5.2,baz=277,slow=8.1,SNR=4.6
MBWA Marble Bar 70.65 119 *e*P **P** **18 20 07.8 -2.3**
comp=E,22nm,1.0s,mb5.0
MBWA LR LR
comp=Z,456nm,22.0s,MS4.7
BBTS Babate 71.03 281 P **P** **18 20 13.4 +0.9**
comp=Z,25nm,0.4s,mb5.5,baz=215,slow=3.4,SNR=4.2
TIXI Tiksi 71.26 19 *e*P **P** **18 20 11.4 -1.5**
comp=Z,62nm,1.4s,mb5.3
TIXI Tiksi 71.26 19 *e*P **P** **18 20 11.1 -1.8**
TIXI pmax pmax
comp=Z,78nm,1.7s,mb5.4
TIXI MLR MLR
comp=Z,979nm,15.0s,MS5.2
HABR Khabarovsk 71.83 43⇓*e*P **P** **18 20 15.5 -1.2**
HABR *e* 18 20 25.8
HABR *e* 18 20 29.5
HABR *e* 18 20 33.1
HABR *e* 18 22 54.1
HABR *e*S S 18 29 35.5 -1.9
HABR *e* 18 30 17.7
HABR *e* 18 34 12.8
HABR pmax pmax
comp=Z,60nm,2.0s,mb5.2
DAG Danmarks Havn 73.38 347⇑*i*P **P** **18 20 25.1 -0.4**
DAG pmax pmax
comp=Z,52nm,1.2s,mb5.3
DAG Danmarks Havn 73.38 347⇑*i*P **P** **18 20 25.1 -0.4**
comp=Z,52nm,1.2s,mb5.3
NWAO Narrogin (SRO) 73.85 131 P **P** **18 20 26.2 -2.8**
comp=Z,18nm,1.1s,mb4.9
NWAO Narrogin (SRO) 73.85 131 P **P** **18 20 26.2 -2.7**
NWAO pmax pmax
comp=Z,18nm,1.1s
NWAO Narrogin (SRO) 73.85 131 LR LR 18 44 24.5
comp=Z,200nm,21.4s,MS4.4,baz=231,slow=29
FITZ Fitzroy Crossi 74.67 113⇓*i*P **P** **18 20 32.4 -1.6**
comp=Z,48nm,0.9s,mb5.4
FITZ Fitzroy Crossi 74.67 113 P **P** **18 20 32.4 -1.6**
comp=Z,25nm,0.9s,mb5.2,baz=277,slow=6.2,SNR=19
MAJO Matsushiro 74.85 56 *e*P **P** **18 20 33.0 -1.9**
comp=Z,211nm,2.4s,mb5.6
MAJO LR LR
comp=Z,551nm,20.0s,MS4.8
MAJO Matsushiro 74.85 56 *e*P **P** **18 20 33.0 -1.8**
MAJO pmax pmax
comp=Z,211nm,2.4s,mb5.6
MAJO MLR MLR
comp=Z,551nm,20.0s,MS4.8
MAT Matsushiro 74.85 56 P **P** **18 20 33.2 -1.6**
MJAR Matsushiro Arr 74.85 56 P **P** **18 20 33.8 -1.0**
comp=Z,2.9nm,0.8s,mb4.2,baz=274,slow=4.1,SNR=15
MJAR LR LR 18 57 23.1
comp=Z,419nm,18.9s,MS4.8,baz=275,slow=39
YSS Yuzh-Sakhalins 77.11 44 *e*P **P** **18 20 48.2 +0.7**
comp=Z,11nm,1.0s,mb4.7
YSS Yuzh-Sakhalins 77.11 44⇑*e*P **P** **18 20 46.0 -1.5**
YSS pmax pmax
comp=Z,11nm,1.7s,mb4.5
ALE Alert 80.06 353 P **P** **18 21 03.9 +0.7**
comp=Z,88nm,1.4s,mb5.5,SNR=7.3
MA2 Magadan 80.07 31 *e*P **P** **18 21 02.9 -0.7**
comp=Z,117nm,1.7s,mb5.5
MA2 LR LR
comp=Z,545nm,22.0s,MS4.8
MA2 Magadan 80.07 31*d i*P **P** **18 21 03.0 -0.5**
MA2 *e* 18 24 05.0
MA2 *e*S S 18 31 03.0 -4.8
MA2 *e*PS 18 31 50.9
MA2 pmax pmax
comp=Z,100nm,1.9s,mb5.4
MA2 MLR MLR
comp=Z,1µm,23.1s,MS5.2
MAW Mawson 81.31 178 P **P** **18 21 10.6 +0.7**
comp=Z,13nm,0.9s,mb4.9,baz=306,slow=6.0,SNR=6.7
WRA Warramunga Arr 83.05 112 P **P** **18 21 18.3 -1.8**
comp=Z,30nm,0.9s,mb5.3,baz=298,slow=4.3,SNR=67
WB2 Warramunga Arr 83.06 112 *e*P **P** **18 21 18.6 -1.5**
SYO Syowa Base 83.54 186⇓*i*P **P** **18 21 21.0 -0.5**
SYO Syowa Base 83.54 186⇓*e*pP pP 18 21 24.2 -0.6
SYO Syowa Base 83.54 186⇑*e*PP PP 18 24 35.2 +1.1
ASAR Alice Springs 83.78 116 P **P** **18 21 22.2 -1.5**
comp=Z,19nm,0.9s,mb5.2,baz=290,slow=5.2,SNR=56
SFJD Kangerlussuaq 84.14 338 P **P** **18 21 24.2 -0.6**
comp=Z,14nm,1.0s,mb5.0,baz=42,slow=7.5,SNR=4.5
SFJD Kangerlussuaq 84.14 338 *i* P **P** **18 21 24.3 -0.5**
comp=Z,23nm,1.2s,mb5.2
BILL Bilibino 84.27 21 *e*P **P** **18 21 25.1 -0.4**
comp=Z,115nm,1.7s,mb5.7
BILL LR LR
comp=Z,686nm,19.0s,MS5.0
BILL Bilibino 84.27 21⇑*e*P **P** **18 21 25.4 0.0**
BILL pmax pmax
comp=Z,65nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,500nm,16.0s,MS5.0
PET Petropavlovsk 85.91 36 *e*P **P** **18 21 29.1 -4.8**
PET *e*S S 18 31 59.6 -7.9
PET *e*PS 18 33 02.7
PET *e*SS SS 18 37 36.6 -7.6
PET MLR MLR
comp=Z,1µm,16.0s,MS5.3
COEN Coen 89.58 104 *e*P **P** **18 21 50.9 -1.4**
comp=Z,71nm,2.0s,mb5.7
NVL N'lazarevskaya 89.84 194 *i* P **P** **18 21 53.0 +0.8**
NVL pmax pmax
comp=N,10.0nm,1.0s
NVL pmax pmax
comp=E,7.0nm,1.0s
NVL pmax pmax
comp=Z,35nm,1.0s,mb5.6
PMG Port Moresby 92.29 99 P **P** **18 22 03.5 -1.5**
comp=Z,12nm,0.9s,mb5.2
PMG Port Moresby 92.29 99 P **P** **18 22 03.5 -1.4**
PMG pmax pmax
comp=Z,12nm,0.9s
PMG Port Moresby 92.29 99 P **P** **18 22 04.2 -0.7**
comp=Z,20nm,1.2s,mb5.3,baz=262,slow=14,SNR=3.4
STKA Stephens Creek 92.62 122 *e*P **P** **18 22 04.3 -1.7**
comp=Z,5.9nm,1.2s,mb4.9
STKA Stephens Creek 92.62 122 P **P** **18 22 03.4 -2.7**
comp=Z,14nm,0.5s,mb4.7,baz=287,slow=5.8,SNR=3.9
GAMB Gambell 94.12 20 *e*P **P** **18 22 11.1 -1.2**
SCHQ Schefferville 96.89 331 PFAKE 18 22 40.0 +15

SCHQ				LR	LR		
	comp=Z,599nm,22.0s,MS5.0						
IMA2	**Indian Mountai**	**97.11**	**12**	*e*P	**P**	**18 22 25.7**	**-0.2**
INK	**Inuvik**	**97.74**	**4**	P	**P**	**18 22 29.0**	**+0.2**
	comp=Z,0.6nm,0.3s,mb4.5,baz=66,slow=3.5,SNR=4.8						
INK				PKKP	PKKPbc	18 39 02.5	-3.9
	comp=Z,0.4nm,0.3s,baz=172,slow=7.1,SNR=2.7						
MCK	**McKinley**	**100.13**	**11**	PFAKE		18 22 50.0	+10
MCK				LR	LR		
	comp=Z,280nm,19.0s,MS4.8						
PMR	**Palmer**	**102.03**	**12**	PFAKE		18 23 00.0	+12
PMR				LR	LR		
	comp=Z,369nm,20.0s,MS4.9						
YKA	**Yellowknife Ar**	**103.66**	**356**	Pdif	Pdif	18 22 55.6	+0.3
YKA				PP	PP	18 27 11.0	+0.3
YKA				PKKPbc	PKKPbc	18 38 44.8	-4.5
YKA	**Yellowknife Ar**	**103.66**	**356**	P	Pdif	18 22 55.7	+0.3
YKA						18 27 11.0	
YKA	**Yellowknife Ar**	**103.66**	**356**	Pdiff	Pdif	18 22 55.6	+0.3
	comp=Z,0.3nm,0.7s,baz=359,slow=5.1,SNR=4.1						
YKA				PP	PP	18 27 11.0	+0.3
	comp=Z,1.4nm,0.8s,baz=5.1,slow=7.4,SNR=4.4						
YKA				PKKPbc	PKKPbc	18 38 44.8	-4.5
	comp=Z,0.5nm,0.9s,baz=188,slow=3.4,SNR=6.4						
VNDA	**Vanda**	**106.59**	**167**	P	Pdif	18 23 12.7	+4.3
	comp=Z,44nm,1.9s						
VNDA	**Vanda**	**106.59**	**167**	P	Pdif	18 23 12.7	+4.3
VNDA				pmax	pmax		
	comp=Z,44nm,1.9s						
ACSO	**Alum Creek Sta**	**114.68**	**327**	PFAKE		18 27 50.0	+15
ACSO				LR	LR		
	comp=Z,409nm,19.0s,MS5.0						
SJG	**San Juan**	**115.65**	**298**	PFAKE		18 27 50.0	+13
SJG				LR	LR		
	comp=Z,373nm,22.0s,MS5.0						
NEW	**Newport**	**117.98**	**356**	PFAKE		18 27 50.0	+9.1
NEW				LR	LR		
	comp=Z,384nm,22.0s,MS5.0						
RSSD	**Black Hills**	**119.82**	**344**	PFAKE		18 28 00.0	+15
RSSD				LR	LR		
	comp=Z,819nm,19.0s,MS5.4						
BOZ	**Bozeman (W)**	**119.94**	**351**	PFAKE		18 28 00.0	+15
BOZ				LR	LR		
	comp=Z,395nm,21.0s,MS5.0						
WVT	**Waverly**	**120.28**	**327**	PFAKE		18 28 00.0	+14
WVT				LR	LR		
	comp=Z,7.0nm,20.0s						
SIV	**San Ignacio**	**120.38**	**259**	PKP	PKPdf	18 27 45.5	-0.8
	comp=Z,1.8nm,0.8s,baz=119,slow=5.1,SNR=7.3						
YMR	**Madison River**	**120.79**	**350**	PKPdf	PKPdf	18 27 47.1	+0.7
TRQA	**Tornquist**	**121.21**	**234**	*e*PKPdf	PKPdf	18 27 46.5	-0.8
TPAW	**Teton Pass**	**121.93**	**350**	*e*PKPdf	PKPdf	18 27 48.9	+0.2
OXF	**Oxford**	**122.34**	**327**	PFAKE		18 28 00.0	+10
OXF				LR	LR		
	comp=Z,641nm,20.0s,MS5.3						
HLID	**Hailey**	**122.37**	**353**	PFAKE		18 28 00.0	+11
HLID				LR	LR		
	comp=Z,262nm,22.0s,MS4.8						
BW06	**Boulder Array**	**122.37**	**348**	PFAKE		18 28 00.0	+10
BW06				LR	LR		
	comp=Z,217nm,19.0s,MS4.8						
PDAR	**Pinedale Array**	**122.37**	**348**	PKP	PKPdf	18 27 49.1	-0.4
	comp=Z,2.6nm,0.8s,baz=57,slow=2.0,SNR=16						
SDV	**Santo Domingo**	**123.42**	**291**	PFAKE		18 28 00.0	+7.7
SDV				LR	LR		
	comp=Z,84nm,19.0s,MS4.4						
HWUT	**Hardware Ranch**	**123.86**	**350**	*e*PKPdf	PKPdf	18 27 51.3	-1.1
ISCO	**Idaho Springs**	**124.28**	**344**	PFAKE		18 28 00.0	+6.7
ISCO				LR	LR		
	comp=Z,299nm,20.0s,MS5.0						
MIAR	**Mount Ida**	**124.40**	**331**	PFAKE		18 28 00.0	+6.3
MIAR				LR	LR		
	comp=Z,298nm,19.0s,MS5.0						
SDCO	**Great Sand Dun**	**126.16**	**343**	PFAKE		18 28 10.0	+13
SDCO				LR	LR		
	comp=Z,332nm,20.0s,MS5.0						
WMOK	**Wichita Mounta**	**126.54**	**335**	PFAKE		18 28 10.0	+12
WMOK				LR	LR		
	comp=Z,228nm,21.0s,MS4.8						
CFAA	**Coronel Fontan**	**127.08**	**241**	PKP	PKPdf	18 27 59.3	+0.5
	comp=Z,3.1nm,0.8s,baz=308,slow=1.8,SNR=37						
LPAZ	**La Paz**	**127.16**	**260**	*e*PKPdf	PKPdf	18 27 59.4	+0.1
LPAZ	**La Paz**	**127.16**	**260**	PKP	PKPdf	18 27 59.8	+0.5
	comp=Z,2.1nm,0.8s,baz=52,slow=9.5,SNR=5.7						
PLCA	**Paso Flores**	**127.23**	**229**	*e*PKPdf	PKPdf	18 27 59.8	+1.0
NVAR	**Mina Array Bea**	**127.85**	**355**	PKP	PKPdf	18 28 01.2	+1.1
	comp=Z,3.9nm,0.8s,baz=66,slow=1.8,SNR=14						
ANMO	**Albuquerque**	**129.04**	**343**	⇑*i*PKIKP	PKPdf	18 28 01.7	-0.8
ANMO	**Albuquerque**	**129.04**	**343**	PKP	PKPdf	18 28 02.8	+0.3
	comp=Z,1.9nm,0.8s,baz=146,slow=3.4,SNR=3.9						
TPNV	**Topopah Spring**	**129.12**	**353**	PFAKE		18 28 10.0	+7.4
TPNV				LR	LR		
	comp=Z,359nm,20.0s,MS5.1						
HKT	**Hockley**	**129.25**	**329**	*e*PKPdf	PKPdf	18 28 03.5	+0.4
BNM	**Barren Site**	**129.84**	**342**	*e*PKPdf	PKPdf	18 28 04.9	+0.8
MNTX	**Cornudas Mount**	**131.72**	**340**	*e*PKPdf	PKPdf	18 28 06.9	-0.8
LTX	**Lajitas**	**133.24**	**337**	*e*PKPdf	PKPdf	18 28 10.8	+0.1
TXAR	**Lajitas Array**	**133.24**	**337**	PKP	PKPdf	18 28 10.7	+0.1
	comp=Z,2.5nm,0.9s,baz=169,slow=2.0,SNR=8.1						
JTS	**JuntasAbangare**	**135.36**	**300**	PKPdf	PKPdf	18 28 15.6	+0.6
ATAH	**Atahualpa**	**135.74**	**274**	PKP	PKPdf	18 28 17.0	+1.3
	comp=Z,5.0nm,0.7s,baz=122,slow=2.9,SNR=4.1						
CMIG	**Matias Romero**	**138.65**	**317**	PKP	PKPdf	18 28 19.9	-1.1
	comp=Z,1.0nm,0.4s,baz=24,slow=6.1,SNR=4.0						
PAYG	**Puerto Ayora**	**145.16**	**289**	*e*PKPdf	PKPdf	18 28 32.9	+0.2
PPT	**Papeete**	**154.08**	**102**	*e*LR	LR	19 20 26.9	
	comp=Z,264nm,22.2s						
RKT	**Rikitea**	**165.30**	**131**	*e*LR	LR	19 25 45.1	
	comp=Z,642nm,38.0s						

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*MOS **03** 18:11:44.1±1.2, 5144N×17820E, h44km, mb4.5/17, Error ellipse: s-maj=13.6km s-min=9.8km az=72.4*

*BJI **03** 18:11:44.0, 52.10N×178.55E, h50km, mB4.8, mb4.6, Ms4.7, Msz4.5*

*ISCJB **03** 18:11:45.7±0.7, 5157N±007×17827E±005, h52km±5km, mb4.5/25, MS4.7/1, Error ellipse: s-maj=11.2km s-min=5.1km az=7.9*

*NEIC **03** 18:11:47.2±0.6, 5144N×17828E, mb4.6/13, ML4.3(AEIC), Error ellipse: s-maj=13.7km s-min=6.0km az=180.0*

*IDC **03** 18:11:48.0±4.2, 5156N×17832E, h58km±33km, mb3.8/11, mb1 4.0/11, mb1mx3.7/25, mbtmp3.8/11, Error ellipse: s-maj=46.9km s-min=16.7km az=8.0*

ISC 03 18:11:47.5±0.7**, 5154N**±007×**17828E**±005**, h52**km±5km**, h56**km±4.3km**:pP-P, n209, σ0.82**/213**, mb4.5**/25**, MS4.7**/1**, 50C-63D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.66**	**104**	P	**Pn**	**18 11 59.0**	**-1.7**
AMKA				S	**Sn**	**18 12 08.0**	**-2.3**
SMY	**Shemya**	**2.84**	**297**	*e*P	**Pn**	**18 12 30.7**	**+0.4**
ADK	**Adak**	**3.15**	**82**	P	**Pn**	**18 12 34.6**	**+0.1**
ATKA	**Atka Island**	**4.71**	**79**	P	**Pn**	**18 12 56.0**	**+0.1**
SPIA	**Saint Paul Isl**	**8.76**	**45**	P	**Pn**	**18 13 52.4**	**+1.1**
UNV	**Unalaska Valle**	**9.53**	**70**	P	**Pn**	**18 14 02.7**	**+0.9**
AKLV	**Akutan Long Va**	**9.89**	**68**	P	**Pn**	**18 14 07.7**	**+0.9**
AKUT	**Akutan**	**10.00**	**69**	*e*P	**Pn**	**18 14 10.8**	**+2.6**
	40nm,0.3s						
FALS	**False Pass**	**11.47**	**66**	*e*Pn	**Pn**	**18 14 30.2**	**+1.9**
SDPT	**Sand Point**	**13.21**	**65**	*e*P	**Pn**	**18 14 50.7**	**-1.4**
	45nm,0.6s						
CHGN	**Chignik**	**14.51**	**62**	*e*P	**Pn**	**18 15 07.9**	**-1.6**
SVW2	**Sparrevohn**	**17.25**	**46**	*e*P	**Pn**	**18 15 47.0**	**+2.6**
BILL	**Bilibino**	**17.56**	**345**	*e*Pn	**Pn**	**18 15 49.6**	**+1.5**
	5.8nm,0.9s						
BILL	**Bilibino**	**17.56**	**345**	⇑*e*P	**Pn**	**18 15 49.2**	**+1.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s						
TTA	**Tatalina**	**17.84**	**40**	*e*P	**Pn**	**18 15 50.2**	**-1.5**
	comp=Z,11nm,1.0s						
TTA	**Tatalina**	**17.84**	**40**	*e*P	**Pn**	**18 15 50.2**	**-1.4**
TTA				pmax	pmax		
	comp=Z,11nm,1.0s						
KDAK	**Kodiak Island**	**17.88**	**58**	P	**Pn**	**18 15 48.9**	**-3.3**
KDAK				*e*Pn	**Pn**	**18 15 50.5**	**-1.7**
KDAK	**Kodiak Island**	**17.88**	**58**	P	**Pn**	**18 15 48.9**	**-3.3**
	comp=Z,7.1nm,0.3s,baz=268,slow=6.5,SNR=112						
SLKM	**Skilak Lake**	**19.58**	**50**	*e*P	**Pn**	**18 16 10.9**	**-1.6**
IMA2	**Indian Mountai**	**20.30**	**34**	*e*P	**P**	**18 16 19.9**	**+1.4**
PMR	**Palmer**	**20.36**	**48**	*e*P	**P**	**18 16 21.2**	**+1.9**
	comp=Z,7.0nm,0.5s						
PMR	**Palmer**	**20.36**	**48**	*e*P	**P**	**18 16 21.2**	**+1.9**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SML	**Sawmill**	**20.78**	**47**	*e*P	**P**	**18 16 23.1**	**-0.7**
MCK	**McKinley**	**21.09**	**42**	*e*P	**P**	**18 16 26.9**	**-0.1**
	comp=Z,5.0nm,0.9s,mb3.8						
MCK	**McKinley**	**21.09**	**42**	*e*P	**P**	**18 16 27.0**	**-0.1**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
EYAK	**Cordova Ski Ar**	**21.76**	**52**	*e*P	**P**	**18 16 33.7**	**-0.7**
COLA	**College**	**21.93**	**40**	*e*P	**P**	**18 16 36.9**	**+0.7**
	comp=Z,6.4nm,0.7s,mb4.2						
COLA	**College**	**21.93**	**40**	*e*P	**P**	**18 16 36.9**	**+0.8**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
MENT	**Mentasta**	**23.13**	**46**	*e*P	**P**	**18 16 48.5**	**-0.3**
EGAK	**Eagle**	**24.64**	**42**	*e*P	**P**	**18 17 02.0**	**-0.7**
	comp=Z,20nm,0.8s,mb4.7						
DAWY	**Dawson**	**25.25**	**44**	*e*P	**P**	**18 17 07.8**	**-0.4**
INK	**Inuvik**	**28.39**	**36**	*e*P	**P**	**18 17 36.1**	**-0.3**
	comp=Z,66nm,0.6s,mb5.4						
INK				*e*PcP	PcP	18 20 37.3	-10
INK	**Inuvik**	**28.39**	**36**	P	**P**	**18 17 36.3**	**0.0**
	comp=Z,1.4nm,0.4s,mb4.0,baz=268,slow=9.7,SNR=13						
MDJ	**Mudanjiang**	**32.74**	**277**	P	**P**	**18 18 14.0**	**-1.0**
MDJ				AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,79nm,4.7s						
CN2	**Changchun**	**35.72**	**279**	*e*P	**P**	**18 18 40.3**	**-0.5**
CN2				*e*AP	pP	18 18 54.0	-0.2
BOD	**Bodaibo**	**36.41**	**306**	*e*P	**P**	**18 18 45.1**	**-1.4**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BOD				pmax	pmax		
	comp=Z,14nm,2.2s,mb4.5						
YKA	**Yellowknife Ar**	**36.44**	**46**	P	**P**	**18 18 46.5**	**-0.2**
YKA				ScP	ScP	18 24 50.2	-1.3
YKA	**Yellowknife Ar**	**36.44**	**46**	P	**P**	**18 18 46.5**	**-0.2**
	comp=Z,2.6nm,0.5s,mb4.4,baz=282,slow=8.2,SNR=36						
YKA				ScP	ScP	18 24 50.2	-1.3
	comp=Z,0.3nm,0.8s,baz=297,slow=2.7,SNR=5.0						
B08A	**Colville Reser**	**39.20**	**69**	⇑P	**P**	**18 19 10.9**	**+0.8**
	baz=39						
J02A	**Umpqua**	**39.22**	**78**	⇑P	**P**	**18 19 10.5**	**+0.2**
	baz=39						
H04A	**Detroit Lake**	**39.36**	**76**	⇓P	**P**	**18 19 12.1**	**+0.6**
	baz=39						
J03A	**Ideyld Park**	**39.59**	**78**	⇑P	**P**	**18 19 14.6**	**+1.2**
	baz=40						
B09A	**Rice**	**39.86**	**69**	⇑P	**P**	**18 19 15.1**	**-0.5**
	baz=40						
D08A	**Wollman Farm,**	**40.09**	**71**	⇓P	**P**	**18 19 16.6**	**-0.9**
	baz=40						
A11A	**Hall Mountain,**	**40.63**	**67**	⇑P	**P**	**18 19 21.8**	**-0.2**
	baz=40						
YBH	**Yreka Blue Hor**	**40.66**	**80**	P	**P**	**18 19 24.3**	**+1.9**
	baz=40,SNR=5.8						
J05A	**Fort Rock**	**40.69**	**77**	⇑P	**P**	**18 19 23.1**	**+0.5**
	baz=41						
N02C	**Big Bar**	**40.82**	**82**	⇑P	**P**	**18 19 23.9**	**+0.3**
	baz=41						
G08A	**Pilot Rock**	**40.98**	**73**	⇑P	**P**	**18 19 24.2**	**-0.7**
	baz=41						
D10A	**Wagner Farm, O**	**41.05**	**70**	⇓P	**P**	**18 19 24.2**	**-1.3**
	baz=41						
M04C	**Macdoel**	**41.17**	**79**	P	**P**	**18 19 28.0**	**+1.5**
	baz=41,SNR=6.4						
K05A	**Summer Lake**	**41.21**	**78**	⇓P	**P**	**18 19 27.6**	**+0.8**
	baz=41						
M03C	**McCloud**	**41.28**	**80**	⇑P	**P**	**18 19 27.8**	**+0.3**
	baz=41						
I07A	**Izee**	**41.30**	**75**	⇓P	**P**	**18 19 28.1**	**+0.5**
	baz=41						
J06A	**Christmas Vall**	**41.37**	**76**	⇓P	**P**	**18 19 28.3**	**+0.1**
	baz=41						
WDC	**Whiskeytown Da**	**41.43**	**81**	⇓P	**P**	**18 19 29.3**	**+0.6**
	baz=41						
E10A	**Myers Farm, Un**	**41.45**	**71**	⇑P	**P**	**18 19 27.7**	**-1.0**
	baz=41						
K06A	**Valley Falls**	**41.56**	**77**	⇓P	**P**	**18 19 30.2**	**+0.4**
	baz=41						
L05A	**Lakeview**	**41.63**	**78**	⇑P	**P**	**18 19 30.4**	**+0.1**
	baz=42						
F10A	**Beach Ranch, E**	**41.65**	**71**	⇓P	**P**	**18 19 29.7**	**-0.7**
	baz=42						
G09A	**Cove**	**41.69**	**72**	⇓P	**P**	**18 19 30.0**	**-0.7**
	baz=42						
M05C	**Lookout**	**41.84**	**79**	P	**P**	**18 19 33.2**	**+1.3**
	baz=42,SNR=7.2						
GASB	**Alder Springs**	**41.87**	**83**	⇑P	**P**	**18 19 33.1**	**+0.9**
	baz=42						
HATC	**Hat Creek Radi**	**41.96**	**80**	⇑P	**P**	**18 19 33.9**	**+1.0**
	baz=42						
B13A	**Whitefish**	**42.01**	**67**	⇓P	**P**	**18 19 32.7**	**-0.6**
	baz=42						
MOD	**Modoc**	**42.04**	**78**	⇓P	**P**	**18 19 33.7**	**0.0**
	baz=42						
E11A	**Bogner Ranch,**	**42.05**	**70**	⇑P	**P**	**18 19 32.3**	**-1.4**
	baz=42						
D12A	**Red Ives Fores**	**42.18**	**69**	⇓P	**P**	**18 19 33.7**	**-1.0**
	baz=42						
K07A	**Rock Creek Ran**	**42.23**	**77**	P	**P**	**18 19 35.8**	**+0.6**
	baz=42,SNR=5.9						
C13A	**Hot Springs**	**42.30**	**68**	⇓P	**P**	**18 19 35.4**	**-0.3**
	baz=42						
O04C	**Chester**	**42.48**	**81**	P	**P**	**18 19 38.6**	**+1.4**
	baz=42,SNR=5.5						
MNRC	**McLaughlin Nat**	**42.50**	**83**	⇓P	**P**	**18 19 36.9**	**-0.5**
	baz=42						
G11A	**Walters Elk Ra**	**42.52**	**71**	⇓P	**P**	**18 19 37.8**	**+0.2**
	baz=42						
ELFS	**Eagle Lake Fie**	**42.52**	**80**	P	**P**	**18 19 38.9**	**+1.3**
	baz=42,SNR=5.1						
L07A	**Adell**	**42.56**	**77**	⇓P	**P**	**18 19 38.3**	**+0.4**
	baz=42						
K08A	**Mann Creek Ran**	**42.67**	**76**	⇓P	**P**	**18 19 38.9**	**+0.1**
	baz=42						
D13A	**Huson**	**42.68**	**68**	⇑P	**P**	**18 19 37.7**	**-1.0**
	baz=42						
H10A	**Noah's Angus R**	**42.68**	**73**	⇓P	**P**	**18 19 37.7**	**-1.1**
	baz=42						
C14A	**Swan Lake**	**42.73**	**67**	⇑P	**P**	**18 19 38.9**	**-0.3**
	baz=43						
J09A	**Fry Pan Ranch,**	**42.77**	**75**	⇓P	**P**	**18 19 39.7**	**+0.1**
	baz=43						
O05C	**Quincy**	**42.80**	**81**	⇓P	**P**	**18 19 40.0**	**+0.2**
	baz=43						
F12A	**Elk City**	**42.93**	**70**	P	**P**	**18 19 40.6**	**-0.2**
	baz=43,SNR=7.6						
N06A	**Buffalo Meadow**	**43.00**	**79**	P	**P**	**18 19 42.3**	**+0.9**
	baz=43,SNR=9.9						
M07A	**Soldier Meadow**	**43.03**	**78**	P	**P**	**18 19 42.7**	**+1.0**
	baz=43,SNR=16						
H11A	**Donnelly**	**43.05**	**72**	⇓P	**P**	**18 19 41.4**	**-0.5**
	baz=43						
L08A	**Fields**	**43.07**	**77**	⇑P	**P**	**18 19 42.0**	**+0.1**
	baz=43						
BEKR	**Beckwourth**	**43.20**	**81**	⇓P	**P**	**18 19 43.3**	**+0.2**
	baz=43						
D14A	**Greenough**	**43.24**	**68**	⇓P	**P**	**18 19 42.6**	**-0.7**
	baz=43						
O06A	**Flanigan**	**43.35**	**80**	P	**P**	**18 19 45.3**	**+1.0**
	baz=43,SNR=6.1						
F13A	**Darby**	**43.45**	**70**	⇓P	**P**	**18 19 44.6**	**-0.4**
	baz=43						
M08A	**Happy Creek Ra**	**43.48**	**78**	⇓P	**P**	**18 19 45.6**	**+0.3**
	baz=43						
N07B	**Gerlach**	**43.51**	**79**	⇓P	**P**	**18 19 46.5**	**+1.0**
	baz=43						
K10A	**MacKenzie Ranc**	**43.62**	**75**	P	**P**	**18 19 47.3**	**+0.9**
	baz=44,SNR=6.9						
D15A	**Lincoln**	**43.83**	**67**	⇓P	**P**	**18 19 47.6**	**-0.4**
	baz=44						
H12A	**Diamond D Ranc**	**43.83**	**72**	⇑P	**P**	**18 19 46.9**	**-1.2**
	baz=44						
MFID	**Camas Ranch**	**43.89**	**74**	⇑P	**P**	**18 19 48.0**	**-0.6**
	baz=44						
G13A	**Cobalt**	**43.89**	**71**	⇓P	**P**	**18 19 47.8**	**-0.8**
	baz=44						
WCN	**Washoe City**	**43.91**	**81**	⇓P	**P**	**18 19 48.3**	**-0.5**
	baz=44						
O07A	**Toulon**	**43.93**	**79**	P	**P**	**18 19 50.1**	**+1.1**
	baz=44,SNR=6.3						
N08A	**GE Springer Mi**	**44.02**	**78**	⇓P	**P**	**18 19 48.9**	**-0.7**
	baz=44						
M09A	**Marrel Ranch,**	**44.06**	**77**	⇑P	**P**	**18 19 49.9**	**0.0**
	baz=44						
R05C	**Kirkwood Meado**	**44.08**	**82**	⇑P	**P**	**18 19 50.0**	**-0.2**
	baz=44						
E15A	**Deer Lodge**	**44.09**	**68**	⇓P	**P**	**18 19 48.4**	**-1.8**
	baz=44						
K11A	**Parker Ranch,**	**44.13**	**75**	⇓P	**P**	**18 19 50.6**	**+0.1**
	baz=44						
H13A	**Challis**	**44.17**	**71**	⇓P	**P**	**18 19 51.0**	**+0.2**
	baz=44						
G14A	**Jackson**	**44.26**	**70**	⇓P	**P**	**18 19 50.4**	**-1.1**
	baz=44						
L10A	**Juniper Basin**	**44.27**	**76**	⇓P	**P**	**18 19 51.3**	**-0.3**
	baz=44						
CMB	**Columbia Colle**	**44.30**	**83**	⇓P	**P**	**18 19 51.7**	**-0.2**
	baz=44						
J12A	**Stokes Ranch,**	**44.42**	**73**	⇓P	**P**	**18 19 53.2**	**+0.4**
	baz=44						
F15A	**Butte**	**44.50**	**69**	⇑P	**P**	**18 19 52.6**	**-0.8**
	baz=44						
M10A	**I.L. Ranch, Tu**	**44.55**	**76**	⇓P	**P**	**18 19 53.2**	**-0.7**
	baz=44						
R06C	**Coleville**	**44.57**	**82**	⇑P	**P**	**18 19 54.6**	**+0.5**
	baz=44						
I13A	**Wildhorse Cree**	**44.62**	**72**	⇑P	**P**	**18 19 53.9**	**-0.5**
	baz=44						
L11A	**Cat Creek Ranc**	**44.65**	**75**	⇓P	**P**	**18 19 54.7**	**0.0**
	baz=44						
P08A	**Dixie Valley**	**44.70**	**79**	⇓P	**P**	**18 19 54.7**	**-0.4**
	baz=45						
S06C	**San Francisco**	**44.72**	**83**	P	**P**	**18 19 56.3**	**+1.0**
	baz=45,SNR=7.7						
G15A	**Dillon**	**44.88**	**70**	⇑P	**P**	**18 19 55.6**	**-0.8**
	baz=45						
EGMT	**Eagleton**	**44.88**	**65**	⇑P	**P**	**18 19 56.0**	**-0.4**
	baz=45						
J13A	**Cove Ranch, Pi**	**44.88**	**73**	⇑P	**P**	**18 19 55.6**	**-0.9**
	baz=45						
K12A	**Draper Farm, C**	**44.89**	**74**	⇑P	**P**	**18 19 57.6**	**+1.1**
	baz=45						
SONM	**Songino Array**	**44.93**	**295**	P	**P**	**18 19 57.6**	**+0.8**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**44.93**	**295**	P	**P**	**18 19 57.6**	**+0.8**
	comp=Z,1.5nm,0.6s,mb4.0,baz=63,slow=7.4,SNR=13						
O09A	**Fish Creek Ran**	**44.96**	**78**	⇑P	**P**	**18 19 57.8**	**+0.6**
	baz=45						
R07C	**Lee Vining**	**45.09**	**82**	⇓P	**P**	**18 19 59.0**	**+0.8**
	baz=45						
U04C	**Hernandez Rese**	**45.10**	**85**	⇑P	**P**	**18 19 59.0**	**+0.7**
	baz=45						
L12A	**House Creek Ra**	**45.11**	**75**	P	**P**	**18 19 59.5**	**+1.2**
	baz=45,SNR=6.1						
BOZ	**Bozeman (W)**	**45.11**	**69**	⇑P	**P**	**18 19 57.4**	**-0.8**
	baz=45						
Q08A	**Gabbs**	**45.30**	**80**	P	**P**	**18 20 00.6**	**+0.7**
	baz=45,SNR=7.3						
O10A	**Cortez Mining,**	**45.31**	**78**	⇓P	**P**	**18 20 00.5**	**+0.6**
	baz=45						
T06C	**Millerton Lake**	**45.36**	**83**	⇑P	**P**	**18 20 00.7**	**+0.4**
	baz=45						
KCC	**Kaiser Creek**	**45.40**	**83**	⇓P	**P**	**18 20 00.4**	**-0.3**
	baz=45						
M12A	**Wells**	**45.60**	**75**	⇓P	**P**	**18 20 02.9**	**+0.6**
	baz=46						
P10A	**Eureka**	**45.74**	**78**	⇓P	**P**	**18 20 03.9**	**+0.5**
	baz=46						
N12A	**Clover Valley,**	**45.86**	**76**	⇓P	**P**	**18 20 05.2**	**+0.9**
	baz=46						
HHC	**Hu-ho-hao-te**	**45.88**	**284**	*e*P	**P**	**18 20 06.0**	**+1.6**
HHC				PP	PP	18 21 54.8	+2.3
HHC				S	**S**	**18 26 43.8**	**-1.0**
HHC				SS	SS	18 30 01.5	-8.0
HHC				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.5						
HHC				AMB	AMB		
	comp=Z,219nm,5.9s						
HHC				LR	LR		
	comp=N,513nm,22.6s,MS4.8						
HHC				LR	LR		
	comp=E,1µm,21.4s,MS4.8						
HHC				LR	LR		
	comp=Z,850nm,25.0s,MS4.6						
O11A	**Cowboy Ranch,**	**45.92**	**77**	⇓P	**P**	**18 20 05.3**	**+0.6**
	baz=46						
HELL	**Mitchell Peak,**	**45.99**	**83**	⇓P	**P**	**18 20 05.0**	**-0.3**
	baz=46						
S08C	**White Mtn Res**	**46.00**	**82**	⇑P	**P**	**18 20 05.8**	**+0.4**
	baz=46						
P11A	**Circle Ranch,**	**46.21**	**78**	⇓P	**P**	**18 20 07.3**	**+0.2**
	baz=46						
R09A	**Tonopah**	**46.22**	**80**	P	**P**	**18 20 07.5**	**+0.4**
	baz=46,SNR=12						
Q10A	**Clear Creek Ra**	**46.27**	**79**	P	**P**	**18 20 08.4**	**+1.0**
	baz=46,SNR=7.2						
O12A	**Currie**	**46.39**	**77**	⇑P	**P**	**18 20 09.0**	**+0.6**
	baz=46						
S09A	**Goldfield**	**46.44**	**81**	⇑P	**P**	**18 20 08.3**	**-0.6**
	baz=46						
R10A	**Warm Springs**	**46.66**	**80**	⇑P	**P**	**18 20 10.0**	**-0.5**
	baz=46						
S10A	**Tonopah Range,**	**46.71**	**80**	P	**P**	**18 20 11.6**	**+0.6**
	baz=47,SNR=8.1						
Q11A	**Duckwater**	**46.71**	**79**	⇓P	**P**	**18 20 10.5**	**-0.5**
	baz=47						
P12A	**McGill**	**46.78**	**78**	⇑P	**P**	**18 20 11.7**	**+0.2**
	baz=47						
N14A	**Grayback Hills**	**46.98**	**75**	⇓P	**P**	**18 20 12.7**	**-0.4**
	baz=47						
NJ2	**Nanjing**	**46.98**	**269**	*e*P	**P**	**18 20 14.8**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SBC	**Santa Barbara**	**47.00**	**86**	⇓P	**P**	**18 20 12.5**	**-0.8**
	baz=47						
R11A	**Troy Canyon, C**	**47.06**	**79**	P	**P**	**18 20 13.4**	**-0.3**
	baz=47,SNR=7.8						
S11A	**Rachel**	**47.40**	**80**	⇑P	**P**	**18 20 17.2**	**+0.8**
	baz=47						
TPNV	**Topopah Spring**	**47.54**	**81**	*e*P	**P**	**18 20 17.4**	**0.0**
	comp=Z,10nm,0.9s,mb4.8						
TPNV	**Topopah Spring**	**47.54**	**81**	*e*P	**P**	**18 20 17.5**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
TPNV	**Topopah Spring**	**47.54**	**81**	⇑P	**P**	**18 20 18.1**	**+0.7**
	baz=47						
DUG	**Dugway**	**47.61**	**75**	⇑P	**P**	**18 20 17.8**	**-0.1**
	baz=48						
S12A	**Delamar Landin**	**47.98**	**79**	⇓P	**P**	**18 20 20.9**	**+0.1**
	baz=48						
T11A	**Corn Creek, Al**	**47.98**	**80**	P	**P**	**18 20 21.3**	**+0.4**
	baz=48,SNR=8.1						
PDAR	**Pinedale Array**	**47.99**	**71**	P	**P**	**18 20 20.1**	**-0.7**
	comp=Z,3.4nm,0.6s,mb4.5,baz=306,slow=3.4,SNR=19						
GSC	**Goldstone**	**48.25**	**83**	⇑P	**P**	**18 20 23.3**	**+0.3**
	baz=48						
S13A	**Holt Ranch, En**	**48.60**	**79**	P	**P**	**18 20 26.2**	**+0.6**
	baz=48,SNR=5.7						
T13A	**Saint George**	**48.93**	**79**	⇓P	**P**	**18 20 27.6**	**-0.6**
	baz=49						
MSU	**Marysvale**	**49.04**	**77**	*e*P	**P**	**18 20 29.8**	**+0.8**
U13A	**Pakoon Wash**	**49.28**	**80**	⇑P	**P**	**18 20 30.9**	**0.0**
	baz=49						
GMRC	**Granite Mounta**	**49.30**	**83**	⇑P	**P**	**18 20 30.6**	**-0.4**
	baz=49						
T14A	**Hurricane**	**49.41**	**79**	⇓P	**P**	**18 20 31.6**	**-0.3**
	baz=49						
BELC	**Belle Mtn.**	**49.61**	**84**	⇓P	**P**	**18 20 32.9**	**-0.4**
	baz=50						
SRU	**San Rafael**	**49.66**	**75**	*e*P	**P**	**18 20 33.7**	**0.0**
	comp=Z,1.7nm,0.4s,mb4.4						
SRU	**San Rafael**	**49.66**	**75**	*e*P	**P**	**18 20 33.7**	**0.0**
SRU				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
U14A	**Mt Trumbull**	**49.77**	**80**	⇓P	**P**	**18 20 33.9**	**-0.6**
	baz=50						
T15A	**Red Dirt Ranch**	**49.87**	**78**	⇓P	**P**	**18 20 34.7**	**-0.6**
	baz=50						
W13A	**Hualapai Mount**	**50.19**	**81**	⇓P	**P**	**18 20 36.8**	**-1.0**
	baz=50						
W14A	**Seligman**	**50.61**	**81**	⇑P	**P**	**18 20 40.3**	**-0.7**
	baz=50						
Y13A	**Salome**	**51.08**	**83**	⇓P	**P**	**18 20 44.0**	**-0.4**
	baz=51						
W15A	**Williams**	**51.14**	**80**	⇑P	**P**	**18 20 44.5**	**-0.4**
	baz=51						
X14A	**Yava**	**51.22**	**81**	⇑P	**P**	**18 20 44.5**	**-1.1**
	baz=51						
WUAZ	**Wupatki**	**51.46**	**79**	⇑P	**P**	**18 20 47.0**	**-0.3**
	baz=51						

PV01 Paradox Valley 51.47 75 eP P 18 20 47.7 +0.4
Y14A Wickenburg 51.50 82 ⇑P P 18 20 47.6 -0.1
baz=51
X15A Humboldt 51.61 81 ⇑P P 18 20 47.4 -1.0
baz=52
MVCO Mesa Verde 52.11 76 ⇓P P 18 20 51.9 -0.3
baz=52
115A Sonoran Desert 52.82 82 ⇓P P 18 20 57.0 -0.5
baz=53
LZH Lanzhou 53.58 284 eP P 18 21 03.0 0.0
comp=Z,15nm,1.0s,mb4.9
LZH pP pP 18 21 19.0 +1.9
LZH sP sP 18 21 26.0 +3.0
LZH Lanzhou 53.58 284 eP P 18 21 03.0 0.0
LZH *PP pP 18 21 19.0 +1.9
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.9
ANMO Albuquerque 54.84 76 eP P 18 21 12.3 +0.1
CD2 Chengdu 57.15 280 eP P 18 21 29.5 +0.8
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,30nm,8.2s
KURK Kurchatov 57.57 312 eP P 18 21 29.6 -1.8
GYA Guiyang 58.49 274 P P 18 21 38.4 +0.2
GYA AP pP 18 21 54.0 +1.6
GYA PCP PcP 18 22 29.3 +1.1
GYA SCP ScP 18 26 23.8 -0.1
GYA S S 18 29 36.4 -1.3
GYA SCS ScS 18 31 20.4 -2.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
MKAR Makanchi Array 58.49 307 P P 18 21 37.3 -0.6
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 58.49 307 P P 18 21 37.3 -0.6
comp=Z,0.9nm,0.6s,mb4.0,baz=53,slow=7.1,SNR=7.0
TXAR Lajitas Array 60.43 79 P P 18 21 51.5 0.0
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR Lajitas Array 60.43 79 P P 18 21 51.5 0.0
comp=Z,1.9nm,0.6s,mb4.3,baz=304,slow=5.0,SNR=12
KMI Kunming 61.89 276 P P 18 22 02.0 +0.5
KMI AP pP 18 22 14.9 -0.9
KMI AMB AMB
comp=Z,6.0nm,0.9s,mb4.7
KMI AMB AMB
comp=Z,84nm,6.0s
KMI Kunming 61.89 276 P P 18 22 02.0 +0.5
comp=Z,6.0nm,0.9s,mb4.7
KMI pP pP 18 22 14.9 -0.9
KMI sP sP 18 22 22.4 +0.7
JOF Joensuu 62.95 344 ep P 18 22 07.4 -0.6
comp=Z,3.8nm,0.8s,mb4.6
JOF Joensuu 62.95 344 eP P 18 22 07.4 -0.6
JOF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
WCI Wyandotte Cave 64.23 61 eP P 18 22 17.1 +0.3
comp=Z,48nm,1.1s,mb5.4
WCI Wyandotte Cave 64.23 61 eP P 18 22 17.1 +0.3
WCI pmax pmax
comp=Z,48nm,1.1s,mb5.4
FINES FINESS Array B 65.20 346 P P 18 22 22.0 -0.7
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 65.20 346 P P 18 22 22.0 -0.8
comp=Z,2.1nm,0.9s,mb4.2,baz=12,slow=7.1,SNR=3.2
AKTK Aktyubinsk 66.48 323 P P 18 22 31.0 -0.1
AKTO Aktyubinsk 66.48 323 P P 18 22 31.0 -0.1
AKTO pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
AKTO Aktyubinsk 66.48 323 P P 18 22 31.0 -0.1
comp=Z,1.6nm,0.5s,mb4.3,baz=49,slow=8.9,SNR=6.6
NOA NORSAR Array B 67.30 353 P P 18 22 36.9 +0.8
comp=Z,0.2nm,0.5s,baz=11,slow=6.7,SNR=3.4
AKASG Malin Array Be 74.81 340 P P 18 23 21.5 -0.2
AKASG Malin Array Be 74.81 340 P P 18 23 21.5 -0.3
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 74.81 340 P P 18 23 21.5 -0.2
comp=Z,0.6nm,0.4s,mb3.9,baz=20,slow=5.9,SNR=8.9
CMIG Matias Romero 74.87 82 P P 18 23 22.8 +0.2
CMIG Matias Romero 74.87 82 P P 18 23 22.8 +0.2
comp=Z,2.8nm,0.8s,mb4.2,baz=335,slow=5.6,SNR=5.2

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*SZGRF **03** 18:13:25.7,2374S×17872W,h33km,South of Fiji Islands*
*ISCJB **03** 18:14:34.0±1.1,2170S±009×17944W±008,h610km±14km, mb4.3/37,Error ellipse: s-maj=14.5km s-min=9.6km az=145.3*
*NEIC **03** 18:14:34.1±0.8,2166S×17937W,h600km±9km,mb4.5/23, Error ellipse: s-maj=11.2km s-min=7.3km az=144.0*
*BJI **03** 18:14:34.0,2170S×17940W,h600km,mB5.0,mb4.6*
*IDC **03** 18:14:35.5±1.2,2168S×17951W,h605km±11km,mb3.8/19, mb1 3.9/20,mb1mx3.9/23,mbtmp3.8/20,Error ellipse: s-maj=12.7km s-min=10.5km az=151.0*
ISC 03 18:14:34.7±1.1,**2163S**±009×**17942W**±008,**h602**km±13km, **n137**,σ0s**91**/65,**mb4.3**/37,**13C-15D,Fiji Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AFI Afiamalu 10.58 45 eP P 18 16 58.6 -0.8
AFI eS S 18 18 50.8 -7.3
AFI Afiamalu 10.58 45 S S 18 18 50.3 -7.7
2.1nm,0.3s,baz=60,slow=20,SNR=3.7
DZM Mont Dzumac 13.13 265 P P 18 17 24.8 -0.1
1.8nm,0.3s,baz=90,slow=19,SNR=7.0
URZ Urewera 16.84 189 P P 18 17 55.9 -3.6
1.4nm,0.3s,baz=297,slow=3.2,SNR=7.0
URZ S S 18 20 37.0 -9.1
0.4nm,0.3s,baz=56,slow=21,SNR=8.9
HNR Honiara 23.25 298 eP P 18 18 53.4 -4.1
59nm,1.0s,mb5.2
HNR Honiara 23.25 298 P P 18 18 57.5 0.0
18nm,0.5s,mb5.0,baz=94,slow=3.0,SNR=4.1
ARMA Armidale 27.38 245 ⇓iP P 18 19 35.0 +1.3
CNB Canberra Magne 30.50 237 eP P 18 20 01.6 +1.1
25nm,0.7s,mb5.0
CTA Charters Tower 32.07 266 eP P 18 20 14.6 +0.5
12nm,0.4s,mb4.9
CTA Charters Tower 32.07 266 P P 18 20 14.9 +0.8
3.1nm,0.5s,mb4.2,baz=103,slow=13,SNR=5.5
CTAO Charters Tower 32.07 266 eP P 18 20 14.3 +0.2
24nm,0.9s,mb4.8
PMG Port Moresby 34.33 286 eP P 18 20 33.1 0.0
37nm,0.7s,mb5.1
PMG Port Moresby 34.33 286 P P 18 20 33.5 +0.4
40nm,0.7s,mb5.2,baz=90,slow=5.0,SNR=19
STKA Stephens Creek 36.10 245 ⇓iP P 18 20 48.1 +0.5
7.8nm,0.4s,mb4.6
STKA Stephens Creek 36.10 245 eP P 18 20 47.8 +0.2
13nm,0.6s,mb4.7
STKA Stephens Creek 36.10 245 P P 18 20 48.2 +0.6
12nm,0.5s,mb4.7,baz=92,slow=9.3,SNR=38
STKA ScP ScP 18 25 48.2 +1.8
2.1nm,1.0s,baz=99,slow=6.9,SNR=3.1
ASAR Alice Springs 42.98 258 P P 18 21 42.0 -0.6
6.9nm,0.7s,mb4.3,baz=295,slow=4.6,SNR=34
ASAR PcP PcP 18 23 18.9 -0.1
2.9nm,0.6s,baz=114,slow=3.7,SNR=6.8
ASAR ScP ScP 18 26 15.1 +1.5
2.7nm,1.0s,baz=102,slow=3.7,SNR=7.1
ASAR S S 18 27 23.8 -1.9
4.2nm,0.9s,baz=94,slow=15,SNR=18
WB2 Warramunga Arr 43.13 264 ⇓iP P 18 21 43.3 -0.5
WRA Warramunga Arr 43.14 264 P P 18 21 43.7 -0.2
13nm,0.3s,mb4.9,baz=96,slow=7.7,SNR=417
WRA ScP ScP 18 26 15.6 +1.4
2.8nm,1.0s,baz=88,slow=4.7,SNR=5.1
WRA S S 18 27 24.7 -3.4
1.3nm,0.8s,baz=97,slow=13,SNR=6.3
FORT Forrest 47.63 248 eP P 18 22 17.4 -0.5
29nm,0.6s,mb5.0
FITZ Fitzroy Crossi 51.57 264 eP P 18 22 47.2 +0.4
20nm,1.2s,mb4.3
FITZ Fitzroy Crossi 51.57 264 P P 18 22 47.0 +0.2
5.6nm,0.4s,mb4.3,baz=114,slow=4.8,SNR=38
BATI Kupang 55.63 272 P P 18 23 16.9 +1.4
25nm,0.4s,mb4.8,baz=105,slow=12,SNR=8.2
MBWA Marble Bar 56.32 258 eP P 18 23 19.4 -0.8
23nm,0.5s,mb4.7
KLBR Kellerberrin 56.38 246 ⇓iP P 18 23 19.8 -0.6
8.0nm,0.4s,mb4.3
VNDA Vanda 56.68 185 P P 18 23 22.4 +0.8
VNDA Vanda 56.68 185 P P 18 23 22.4 +0.8
2.1nm,0.9s,mb3.4,baz=70,slow=1.1,SNR=7.5
NWAO Narrogin (SRO) 56.68 244 P P 18 23 20.2 -2.2
8.4nm,1.0s,mb3.9
MUN Mundaring 57.64 245 ⇑iP P 18 23 29.0 0.0
QSPA South Pole Qui 68.44 180 eP P 18 24 37.4 +0.3
8.2nm,0.7s,mb4.3
QSPA South Pole Qui 68.44 180 P P 18 24 37.6 +0.5
8.2nm,0.8s,mb4.2,baz=33,slow=2.1,SNR=42
KKM Kota Kinabalu 68.77 286 P P 18 24 40.5 +0.2
MJAR Matsushiro Arr 70.34 325 P P 18 24 49.0 0.0
8.7nm,0.6s,mb4.3,baz=152,slow=5.7,SNR=58
MAJO Matsushiro 70.34 325 eP P 18 24 48.6 -0.5
8.5nm,0.8s,mb4.2
MAT Matsushiro 70.34 325 P P 18 24 49.2 +0.1
JNU Nakatsue 72.20 318 P P 18 25 00.2 +0.3
5.8nm,0.6s,mb4.3,baz=87,slow=7.9,SNR=7.9
KSM Kuching 72.26 279 eP P 18 25 00.8 0.0
ASAJ Asahikawa 74.09 333 P P 18 25 12.1 +1.6
11nm,0.7s,mb4.5,baz=214,slow=9.3,SNR=13
YSS Yuzh-Sakhalins 76.32 334 eP P 18 25 23.9 +1.2
8.3nm,0.6s,mb4.3
KSRS Korea Array 76.86 319 P P 18 25 27.2 +1.3
1.9nm,0.6s,mb3.7,baz=133,slow=5.1,SNR=11
CN2 Changchun 82.39 323 eP P 18 25 55.2 +0.5
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
KULM Kulim 82.62 279 eP P 18 25 56.6 0.0
NVAR Mina Array Bea 82.75 44 P P 18 25 57.1 +0.4
NVAR Mina Array Bea 82.75 44 P P 18 25 57.1 +0.4
comp=Z,1.4nm,0.7s,mb3.6,baz=225,slow=4.6,SNR=5.5
PSI Prapat 83.27 276 P P 18 25 58.6 -1.2
comp=Z,4.0nm,0.4s,mb4.3,baz=170,slow=3.7,SNR=6.8
MA2 Magadan 84.52 345 eP P 18 26 04.4 -0.5
comp=Z,4.0nm,0.9s,mb4.0
PMR Palmer 86.42 14 eP P 18 26 12.9 -1.0
comp=Z,9.1nm,1.0s,mb4.4
XAN Xi'an 87.77 308 P P 18 26 22.1 +1.2
XAN AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
MCK McKinley 88.36 13 eP P 18 26 21.4 -1.5
comp=Z,5.9nm,1.3s,mb4.2
TXAR Lajitas Array 88.78 58 P P 18 26 27.3 +1.5
comp=Z,1.3nm,0.7s,mb3.9,baz=256,slow=3.2,SNR=5.2
HIA Hailar 88.85 325 P P 18 26 24.4 -1.2
ANMO Albuquerque 89.14 52 P P 18 26 28.0 +0.7
comp=Z,6.0nm,1.4s,mb4.2
CHTO Chiang Mai 89.38 290 eP P 18 26 30.1 +1.3
comp=Z,11nm,1.0s,mb4.6
PLCA Paso Flores 89.46 134 eP P 18 26 28.5 -0.3
comp=Z,1.9nm,0.6s,mb4.1
IMA2 Indian Mountai 89.58 10 eP P 18 26 23.4 -5.2
COLA College 89.59 13 eP P 18 26 27.0 -1.6
comp=Z,3.6nm,0.8s,mb4.2
BILL Bilibino 90.02 355 eP P 18 26 30.4 -0.2
comp=Z,5.8nm,0.8s,mb4.5
PDAR Pinedale Array 90.69 44 P P 18 26 34.4 +0.2
PDAR Pinedale Array 90.69 44 P P 18 26 34.4 +0.2
comp=Z,0.6nm,0.9s,mb3.5,baz=205,slow=1.9,SNR=3.0
YAK Yakutsk 92.67 339 eP P 18 26 42.1 -0.8
comp=Z,12nm,0.8s,mb5.0
SONM Songino Array 95.73 319 P P 18 26 56.9 -0.2
comp=Z,0.4nm,0.6s,mb3.9,baz=84,slow=1.5,SNR=3.6
ZALV Zalesovo Beam 110.53 321 PKiKP PKiKP 18 31 57.9 -1.5
comp=Z,0.7nm,0.6s,baz=63,slow=0.3,SNR=4.5
MKAR Makanchi Array 111.00 313 PKiKP PKiKP 18 31 59.2 -1.2
comp=Z,0.3nm,0.4s,baz=156,slow=0.9,SNR=8.4
MKAR PKKPbc PKKPbc 18 42 58.8 -1.5
comp=Z,0.4nm,0.6s,baz=284,slow=3.1,SNR=5.1
MKAR PKKPab PKKPab 18 43 10.7 0.0
comp=Z,0.5nm,0.9s,baz=308,slow=4.0,SNR=3.6
AKTK Aktyubinsk 127.01 318 PKP PKPdf 18 32 31.3 +0.2
AKTO Aktyubinsk 127.01 318 PKP PKPdf 18 32 31.3 +0.2
comp=Z,0.7nm,0.3s,baz=72,slow=6.4,SNR=5.3
ARCES ARCESS Array B 129.78 349 PKP PKPdf 18 32 35.0 -0.9
comp=Z,5.9nm,0.8s,baz=20,slow=3.9,SNR=7.7
JOF Joensuu 133.78 341 ep PKPdf 18 32 41.7 -1.8
comp=Z,3.3nm,0.5s
KAF Kangasniemi 135.85 343 ep PKPdf 18 32 47.1 -0.3
comp=Z,3.1nm,0.6s
FINES FINESS Array B 136.46 343 PKP 18 32 35.4
FINES PKP PKPdf 18 32 47.2 -1.3
FINES SKPbc SKPbc 18 35 25.4 +0.2
FINES FINESS Array B 136.46 343 PKhKP 18 32 35.4
comp=Z,0.9nm,0.7s,baz=46,slow=4.7,SNR=6.2
FINES PKP PKPdf 18 32 47.2 -1.3
comp=Z,1.4nm,0.5s,baz=58,slow=1.8,SNR=8.4
FINES SKPbc SKPbc 18 35 25.4 +0.2
comp=Z,1.1nm,0.7s,baz=42,slow=3.1,SNR=4.9
NB2 NORSAR Subarra 139.92 352 PKP PKPdf 18 32 47.9 -7.0
comp=Z,0.6nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 139.92 352 PKhKP 18 32 47.5
comp=Z,1.6nm,0.7s,baz=16,slow=4.6,SNR=6.5
NOA PKP PKPdf 18 32 56.4 +1.5
comp=Z,0.6nm,0.5s,baz=16,slow=3.8,SNR=3.6
NOA SKPbc SKPbc 18 35 35.6 +0.7
comp=Z,1.0nm,0.7s,baz=16,slow=4.4,SNR=5.3
HFS Hagfors 140.43 350 PKP PKPdf 18 32 49.0 -6.8
HFS SKPbc SKPbc 18 35 36.3 +0.1
HFS Hagfors 140.43 350 PKhKP 18 32 49.0
comp=Z,2.0nm,0.3s,baz=52,slow=2.4,SNR=37
HFS SKPbc SKPbc 18 35 36.3 +0.1
comp=Z,2.2nm,0.8s,baz=318,slow=1.9,SNR=4.5
AKASG Malin Array Be 143.33 329 PKP PKPdf 18 32 58.8 -2.4
comp=Z,5.3nm,0.3s,baz=42,slow=4.2,SNR=109
AKASG SKPbc SKPbc 18 35 43.6 -0.1
comp=Z,0.4nm,0.5s,baz=46,slow=2.7,SNR=5.6
MALT Malatya 143.53 306 ⇓P PKPdf 18 33 01.8 -0.3
MALT Malatya 143.53 306 ⇓iP PKPdf 18 33 01.8 -0.2
ASF Jabal al Asfar 146.09 296 PKPbc PKPbc 18 33 09.1 +0.3
comp=Z,3.1nm,0.6s,baz=304,slow=2.6,SNR=6.4
EKA Eskdalemuir Ar 146.23 4 PKPbc PKPbc 18 33 07.8 -0.6
comp=Z,3.4nm,0.8s,baz=351,slow=2.4,SNR=8.9
BRTR Keskin Array B 146.58 310 PKPbc PKPbc 18 33 09.4 -0.4
comp=Z,4.5nm,0.7s,baz=121,slow=4.3,SNR=24
ANTO Ankara 147.12 311 ⇑iP PKPbc 18 33 11.7 +0.4
MMAI Mount Meron Ar 147.19 298 PKPbc PKPbc 18 33 12.2 +0.4
comp=Z,8.2nm,0.6s,baz=70,slow=7.4,SNR=24
MMAI PKPab PKPab 18 33 16.4 +0.9
comp=Z,7.1nm,0.6s,baz=73,slow=5.0,SNR=15
BURAR Bucovina Array 147.36 328 ⇑P PKPbc 18 33 12.4 +0.7
BURAR Bucovina Array 147.36 328 ⇑iP PKPbc 18 33 12.4 +0.7
KOLS Kolonicke sedl 147.74 333 ePKP PKPbc 18 33 13.1 +0.5
VRI Vrincioaia 147.75 325 ⇑P PKPbc 18 33 12.6 -0.2
VRI Vrincioaia 147.75 325 ⇑iP PKPbc 18 33 12.6 -0.1
STHS Stebnicka Huta 147.78 334 ePKP PKPbc 18 33 13.1 +0.4
PLOR Plostina 147.80 325 ⇑iP PKPbc 18 33 13.1 +0.3
EIL Elat 148.09 292 PKPbc PKPbc 18 33 14.4 +0.3
comp=Z,5.5nm,0.7s,baz=336,slow=4.1,SNR=6.9
EIL PKPab PKPab 18 33 20.4 +1.1
comp=Z,5.0nm,0.7s,baz=205,slow=0.4,SNR=5.3
CRVS Cervenica-Dubn 148.10 334 ePKP PKPbc 18 33 13.7 +0.2
KSP Ksiaz 148.35 341 eP PKPbc 18 33 14.4 +0.4
KSP e 18 33 20.3
MLR Muntele Rosu 148.41 325 ⇑P PKPbc 18 33 14.9 +0.5
MLR Muntele Rosu 148.41 325 PKPbc PKPbc 18 33 14.1 -0.3
comp=Z,4.4nm,0.7s,baz=182,slow=0.7,SNR=7.6
MLR Muntele Rosu 148.41 325 ⇑iP PKPbc 18 33 14.9 +0.5
OKC Ostrava-Krasne 148.61 338 ePKPbc PKPbc 18 33 14.7 0.0
UPC Upice 148.73 341 ePKPbc PKPbc 18 33 14.9 -0.1
UPC ePKPab PKPab 18 33 21.8 +0.6
DPC Dobruska-Polom 148.77 340 ePKPbc PKPbc 18 33 15.5 +0.4
DPC ePKPab PKPab 18 33 22.3 +0.9
CLL Collm 148.83 345 ⇓iPKP PKPbc 18 33 15.1 -0.1
CLL i PKP PKPab 18 33 21.5 -0.1
CLL i pPKP pPKPdf 18 35 38.8 +8.9
CLL Collm 148.83 345 ⇓iPKPbc PKPbc 18 33 15.1 -0.1
comp=Z,20nm,1.2s
CLL i PKPab PKPab 18 33 21.5 -0.1
comp=Z,10.0nm,0.8s
CLL i pPKPbc pPKPbc 18 35 38.8 +6.0
CLL Collm 148.83 345 i PKPbc PKPbc 18 33 15.2 0.0
comp=Z,21nm,1.2s
CLL i PKPab PKPab 18 33 21.6 0.0
KECS Kecovo 148.83 334 ePKP PKPbc 18 33 15.6 +0.3
MORC Moravsky Berou 148.87 339 ⇑P PKPbc 18 33 15.7 +0.4
MORC Moravsky Berou 148.87 339 ⇑iP PKPbc 18 33 15.7 +0.4
CLZ Clausthal 148.90 348 ePKPbc PKPbc 18 33 15.5 +0.2
BRG Berggiesshubel 148.99 343 ePKPbc PKPbc 18 33 15.6 0.0
BRG Berggiesshubel 148.99 343 eP PKPdf 18 33 15.5 +4.8
comp=Z,12nm,1.1s
BRG e 18 33 22.1
comp=Z,5.2nm,0.8s
BRG
comp=N,444nm,19.0s
BRG
comp=E,508nm,19.1s
BRG
comp=Z,605nm,20.3s
FBE Freiberg 149.10 344 ePKPbc PKPbc 18 33 16.2 +0.3
PVCC Panska Ves 149.13 342 ePKPbc PKPbc 18 33 16.4 +0.4
PVCC ePKPab PKPab 18 33 23.3 +0.4
DRGR 149.14 330 ⇓iP PKPbc 18 33 16.2 +0.1
VYHS Vyhne 149.47 336 ePKP PKPbc 18 33 16.9 +0.1
KOLL Kolacno 149.57 336 ePKP PKPbc 18 33 17.5 +0.4
VRAC Vranov 149.59 339 PKPbc PKPbc 18 33 17.4 +0.3
VRAC PKPab PKPab 18 33 25.9 +1.1
VRAC ⇑P 18 33 26.0
VRAC Vranov 149.59 339 PKPbc PKPbc 18 33 17.4 +0.3
comp=Z,2.8nm,0.6s,baz=23,slow=1.8,SNR=5.9
VRAC PKPab PKPab 18 33 25.9 +1.1
comp=Z,4.6nm,0.6s,baz=71,slow=3.4,SNR=8.8
VRAC Vranov 149.59 339 ⇑iP PKPab 18 33 26.0 +1.2
PRU Pruhonice 149.62 342 ePKPbc PKPbc 18 33 17.0 -0.1
PRU ePKPab PKPab 18 33 25.2 +0.3
MOX Moxa 149.77 346 ePKPbc PKPbc 18 33 17.4 -0.1
TANN Tannenbergstha 149.79 345 ePKPbc PKPbc 18 33 17.6 +0.1
WERD Werda 149.79 345 ePKPbc PKPbc 18 33 17.7 +0.2
GUNZ Gunzen 149.87 345 ePKPbc PKPbc 18 33 17.7 0.0
NKC Novy Kostel 149.96 345 ePKPbc PKPbc 18 33 18.1 +0.2
GZR Gura Zlata 150.12 328 ⇓P PKPbc 18 33 17.6 -0.9
GZR Gura Zlata 150.12 328 ⇓iP PKPbc 18 33 17.6 -0.9
MANZ Manzenberg 150.27 345 ePKPbc PKPbc 18 33 18.8 +0.1
ROTZ Rotzenmuhle 150.45 345 ePKPbc PKPbc 18 33 18.9 -0.2
BZS Buzias 150.52 329 ⇓P PKPbc 18 33 19.0 -0.4
BZS Buzias 150.52 329 ⇓iP PKPbc 18 33 19.0 -0.4
KHC Kasperske Hory 150.67 342 ePKPbc PKPbc 18 33 19.6 0.0
KHC ePKPab PKPab 18 33 29.7 +0.4
GRA1 Grafenberg Arr 150.75 346 ePKPbc PKPbc 18 33 19.7 -0.1
GRF Grafenberg Arr 150.75 346 ePKPbc PKPbc 18 33 19.7 -0.1
TNS Taunus Mts 150.80 350 ePKPbc PKPbc 18 33 19.9 0.0
GEC2 GERESS Array S 150.89 342 ePKPbc PKPbc 18 33 20.1 0.0
GERES GERESS Array B 150.89 342 PKPbc PKPbc 18 33 19.8 -0.3
comp=Z,3.0nm,0.7s,baz=302,slow=1.3,SNR=10
GERES PKPab PKPab 18 33 30.6 +0.3
comp=Z,1.4nm,0.7s,baz=340,slow=3.5,SNR=5.1
PKSM Moragy 151.40 333 ⇓P PKPbc 18 33 20.7 -0.7
PKSM Moragy 151.40 333 ⇓iP PKPbc 18 33 20.7 -0.6
KEST Kesra 163.99 333 PKPab PKPab 18 34 27.1 -0.3
comp=Z,1.2nm,0.8s,baz=282,slow=8.3,SNR=4.1
TORD Torodi Ar. Bea 171.50 187 PKPab PKPab 18 35 00.4 -0.6
comp=Z,0.5nm,0.9s,baz=150,slow=3.9,SNR=2.7

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*BJI **03** 18:22:56.1,5260N×16960W,h34km,mB4.5,mb4.3,Ms4.0, Msz3.8*
*IDC **03** 18:22:59.5±8.1,5389N×17033W,h75km±88km,mb3.5/5, mb1 3.9/6,mb1mx3.4/25,mbtmp3.6/6,ML4.6/1,Error ellipse: s-maj=175.5km s-min=29.8km az=166.0*
*ISCJB **03** 18:23:00.8±1.1,528N±0.1×16966W±0.10,h79km±11km, mb4.0/9,Error ellipse: s-maj=19.0km s-min=9.4km az=170.9*
*NEIC **03** 18:23:02.2,5264N×16959W,h34km,ML4.1(AEIC),After AEIC.*
ISC 03 18:23:02.1±1.1,**528N**±01×**16963W**±010,**h76**km±11km,**n24**, σ0s**78**/26,**mb4.0**/9,**Fox Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
UNV Unalaska Valle 2.17 59 P Pn 18 23 35.5 -0.7
UNV S Sn 18 24 01.1 -1.0
AKLV Akutan Long Va 2.61 56 P Pn 18 23 42.0 0.0
AKUT Akutan 2.69 58 eP Pn 18 23 43.8 +0.7
FALS False Pass 4.25 58 P Pn 18 24 04.1 -0.2
ADK Adak 4.41 261 P Pn 18 24 06.8 +0.3
SPIA Saint Paul Isl 4.45 356 P Pn 18 24 06.9 -0.1
SDPT Sand Point 5.99 61 eP Pn 18 24 28.2 +0.2
CHGN Chignik 7.43 57 eP Pn 18 24 48.0 +0.3
KDAK Kodiak Island 10.94 56 P Pn 18 25 30.6 -4.9
4.3nm,0.3s,baz=258,slow=7.5,SNR=31
KDAK S Sn 18 27 25.6 -10
0.1nm,0.3s,baz=72,slow=20,SNR=2.6
GAMB Gambell 11.11 355 ePn Pn 18 25 37.7 -0.1
SVW2 Sparrevohn 11.33 37 Pn Pn 18 25 41.9 +1.1
TTA Tatalina 12.48 30 Pn Pn 18 25 57.2 +0.8
SLKM Skilak Lake 13.17 46 ePn Pn 18 26 04.0 -1.6
PMR Palmer 14.15 43 eP Pn 18 26 13.8 -4.8
3.7nm,0.6s
NVAR Mina Array Bea 37.83 91 P P 18 30 12.2 +1.1
1.0nm,0.7s,mb3.8,baz=305,slow=6.2,SNR=6.1
MDJ Mudanjiang 39.85 283 P P 18 30 27.8 0.0
MDJ AMB AMB
comp=Z,7.0nm,1.6s,mb4.2
MDJ AMB AMB
comp=Z,174nm,6.4s
PDAR Pinedale Array 40.49 79 P P 18 30 33.8 +0.6
comp=Z,0.6nm,0.6s,mb3.6,baz=287,slow=4.9,SNR=5.2
BJI Beijing 50.51 287 P P 18 31 52.6 +0.3
TXAR Lajitas Array 52.90 89 P P 18 32 10.2 0.0
comp=Z,0.8nm,0.6s,mb3.9,baz=296,slow=5.0,SNR=6.2
LZH Lanzhou 60.30 291 eP P 18 33 02.5 0.0
LZH XP sP 18 33 18.0 -12
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.0
GYA Guiyang 65.69 282 P P 18 33 41.9 +3.5
GYA PCP PcP 18 34 12.4 +3.2
GYA SCP 18 38 08.9
GYA PCS 18 38 15.2
GYA S S 18 42 20.0 +1.5
GYA SCS ScS 18 43 27.2 -0.1
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
KMI Kunming 69.02 284 P P 18 33 58.5 -0.9
KMI AMB AMB
comp=Z,4.0nm,1.6s,mb4.0
WRA Warramunga Arr 87.12 231 P P 18 35 38.0 -1.4
comp=Z,0.2nm,0.4s,mb3.4,baz=35,slow=5.4,SNR=2.0
ASAR Alice Springs 90.52 230 P P 18 35 55.0 -0.3
comp=Z,0.3nm,0.5s,mb3.7,baz=28,slow=4.2,SNR=7.2

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*ISCJB **03** 18:46:52.8±0.7,37.16N±0.07×28.56E±0.05,h8km±8km, Error ellipse: s-maj=11.0km s-min=6.5km az=178.9*
*CSEM **03** 18:46:52.6±0.1,37.14N×28.54E,h15km,MD2.9,Error ellipse: s-maj=1.6km s-min=1.1km az=2.0*
*ISK **03** 18:46:52.9,37.14N×28.56E,h8km,MD2.9*
*DDA **03** 18:46:55.4,37.36N×28.42E,h7km±5km,Md3.0*
ISC 03 18:46:53.1±0.7,**3716N**±006×**2855E**±005,**h15**km±7km,**n11**, σ0s**96**/15,**Turkey**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
YER Yerkesik 0.22 263 i PG Pg 18 46 57.8 -0.2
YER i SG Sg 18 47 01.3 0.0
DALT Dalyan (Mudla) 0.40 170 PG Pg 18 47 00.6 -0.6
MLSB Milas 0.63 282 PG Pg 18 47 05.3 -0.2
FETY Fethiye 0.68 141 PG Pg 18 47 06.2 -0.2
DENT Denizli 0.70 33 PG Pg 18 47 07.2 +0.3
GOLH Golhisar 0.81 84 i P Pg 18 47 09.2 +0.3
GOLH i S Sg 18 47 25.3 +5.7
BDRM Kayabasi 0.89 264 i P Pb 18 47 09.5 -0.7
BDRM i S Sb 18 47 23.4 +1.5
DAT Datca 0.89 241 PG Pg 18 47 10.3 -0.1
BODT Bodrum 1.00 265 PG Pg 18 47 13.0 +0.6
KDAG Bornova 1.60 321 i P Pn 18 47 20.0 -0.9
KDAG i S Sn 18 47 38.6 -2.7
AKS Akhisar 1.81 341 ePN Pn 18 47 25.8 +2.1

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*ISCJB **03** 19:00:02.9±0.6,39.48N±0.02×26.02E±0.04,h4km±4km, Error ellipse: s-maj=5.2km s-min=3.4km az=163.8*
*ATH **03** 19:00:02.8,39.52N×26.31E,h27km±8km,MD3.3/3*
*ISK **03** 19:00:02.7,39.50N×25.99E,h9km,MD3.1*
*NEIC **03** 19:00:02.8,39.52N×26.31E,h27km,MD3.3(ATH), MD3.1(ISK),After ATH.*
*CSEM **03** 19:00:03.9±0.1,39.51N×26.09E,h12km,MD3.3,Error ellipse: s-maj=2.0km s-min=1.3km az=67.0*
*DDA **03** 19:00:04.0,39.47N×26.00E,h6km±3km,Md2.8*
*THE **03** 19:00:03.1,39.49N×26.12E,h3km,ML3.3*
ISC 03 19:00:03.6±0.5,**3949N**±002×**2599E**±004,**h10**km±4km,**n24**, σ0s**82**/37,**1C-1D,Aegean Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
PRK Paraskevi 0.33 138 ⇑iPB Pg 19 00 10.0 0.0
PRK eSB Sg 19 00 14.8 +0.4
BOZC Bozcaada 0.35 8 i P Pg 19 00 10.2 -0.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC				*i* S	**Sg**	**19 00 17.4**	**+2.0**
EZN	**Ezine**	**0.42**	**37**	PG	**Pg**	**19 00 10.9**	**-0.9**
EZN				SG	**Sg**	**19 00 17.9**	**+0.5**
AYVA	**Ayvalik**	**0.57**	**108**	*e*P	**Pg**	**19 00 14.7**	**0.0**
AYVA				*i* S	**Sg**	**19 00 27.6**	**+5.5**
GADA	**Gvkgeada**	**0.70**	**354**	PG	**Pg**	**19 00 16.7**	**-0.5**
LIA	**Limnos Island**	**0.74**	**303**	⇓*i*PN	**Pn**	**19 00 22.0**	**+1.8**
LIA				*e*SN	**Sg**	**19 00 34.4**	**+6.7**
LOS	**Limnos**	**0.83**	**303**	*e*Pg	**Pg**	**19 00 20.5**	**+0.9**
LOS				*e*Sg	**Sg**	**19 00 35.5**	**+5.0**
CHOS	**Chios island**	**1.10**	**177**	*e*Pg	**Pg**	**19 00 24.2**	**-0.6**
CHOS				*e*Sg	**Sg**	**19 00 40.1**	**+1.1**
URLA	**Izmir**	**1.22**	**157**	*i* P	**Pn**	**19 00 25.1**	**-1.7**
URLA				*i* S	**Sb**	**19 00 42.6**	**0.0**
ENEZ	**Enez**	**1.25**	**6**	PN	**Pn**	**19 00 26.6**	**-0.5**
BLCB	**Balcova**	**1.37**	**143**	*e*PN	**Pn**	**19 00 29.1**	**+0.3**
BLCB				*e*SN	**Sn**	**19 00 47.5**	**+0.4**
ALN	**Alexandroupoli**	**1.41**	**2**	*e*Pg	**Pg**	**19 00 29.2**	**-1.3**
ALN				*e*Sg	**Sg**	**19 00 48.4**	**-0.4**
BALB	**Balikesir**	**1.47**	**84**	*e*PN	**Pn**	**19 00 30.0**	**-0.1**
SART	**Tekirdag**	**1.50**	**37**	*i* P	**Pn**	**19 00 30.2**	**-0.4**
SART				*i* S	**Sn**	**19 00 51.5**	**+1.2**
AKS	**Akhisar**	**1.54**	**113**	*e*PN	**Pn**	**19 00 31.3**	**+0.2**
BTOK	**Tokmak**	**1.60**	**80**	*i* P	**Pn**	**19 00 31.4**	**-0.5**
BTOK				*i* S	**Sn**	**19 00 52.9**	**+0.3**
MFT	**Murefte**	**1.63**	**37**	*e*PN	**Pn**	**19 00 32.1**	**-0.2**
EDC	**Edincik**	**1.67**	**59**	*e*PN	**Pn**	**19 00 32.6**	**-0.3**
RDO	**Rodhopi**	**1.69**	**348**	*e*PN	**Pn**	**19 00 33.1**	**-0.1**
RDO				*e*SN	**Sn**	**19 00 54.8**	**-0.1**
BNT	**Bandirma**	**1.72**	**59**	*e*PN	**Pn**	**19 00 33.3**	**-0.2**
OUR	**Ouranopolis**	**1.76**	**299**	*e*Pb	**Pb**	**19 00 35.4**	**-0.5**
PAIG	**Paliouri**	**1.84**	**284**	*e*Pb	**Pb**	**19 00 35.8**	**-1.4**
KCT	**Karacabey**	**1.98**	**66**	*e*PN	**Pn**	**19 00 36.7**	**-0.4**
NVR	**Nevrokopi**	**2.47**	**319**	*e*PN	**Pn**	**19 00 45.6**	**+1.7**

*ISCJB **03** 19:01:32.2±0.3, 4380N±003×10518W±005, h0km, mb4.0/4, Error ellipse: s-maj=5.0km s-min=4.4km az=42.9*

*NEIC **03** 19:01:34.1±0.3, 4382N×10520W, h0km, ML3.4, Error ellipse: s-maj=3.9km s-min=3.4km az=134.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

*IDC **03** 19:01:35.0±0.8, 4408N×10567W, h0km, mb4.0/4, mb1 4.0/9, mb1mx3.7/23, mbtmp3.7/9, ML3.5/5, Error ellipse: s-maj=21.6km s-min=7.8km az=143.0*

ISC 03 19:01:34.2±0.3**, 4382N**±003×**10519W**±005**, h0**km**, n60, σ0ˢ96**/60**, mb4.0**/4**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.88**	**70**	*e*Pn	**Pn**	**19 01 53.3**	**-0.6**
PHWY	**Pilot Hill**	**2.52**	**185**	*e*Pn	**Pn**	**19 02 16.1**	**-0.2**
RWWY	**Rawlins**	**2.60**	**216**	*e*Pn	**Pn**	**19 02 18.1**	**+0.6**
LAO	**LASA Array**	**2.96**	**346**	*e*Pn	**Pn**	**19 02 23.0**	**+0.6**
RLMT	**Red Lodge**	**3.20**	**295**	*e*Pn	**Pn**	**19 02 25.9**	**+0.3**
BW06	**Boulder Array**	**3.36**	**253**	*e*Pn	**Pn**	**19 02 27.6**	**-0.3**
PDAR	**Pinedale Array**	**3.36**	**253**	Pn	**Pn**	**19 02 27.2**	**-0.6**
	4.5nm,0.3s,baz=69,slow=15,SNR=110						
PDAR				Lg		19 03 13.2	
	14nm,0.3s,baz=73,slow=31,SNR=9.4						
LKWY	**Lake**	**3.82**	**283**	*e*Pn	**Pn**	**19 02 34.8**	**+0.5**
LOHW	**Long Hollow**	**3.93**	**269**	*e*Pn	**Pn**	**19 02 35.7**	**0.0**
MOOW	**Moose Ponds**	**4.03**	**271**	*e*Pn	**Pn**	**19 02 37.6**	**+0.6**
ISCO	**Idaho Springs**	**4.03**	**185**	*e*Pn	**Pn**	**19 02 37.3**	**+0.3**
YNR	**Norris Junctio**	**4.05**	**285**	*e*Pn	**Pn**	**19 02 37.2**	**-0.1**
YFT	**Old Faithful**	**4.12**	**281**	*e*Pn	**Pn**	**19 02 41.0**	**+2.7**
REDW	**Red Top Meadow**	**4.14**	**266**	*e*Pn	**Pn**	**19 02 38.7**	**+0.1**
TPAW	**Teton Pass**	**4.20**	**267**	*e*Pn	**Pn**	**19 02 39.5**	**+0.2**
YMR	**Madison River**	**4.24**	**284**	*e*Pn	**Pn**	**19 02 39.8**	**-0.1**
AHID	**Auburn Hatcher**	**4.44**	**258**	Pn	**Pn**	**19 02 44.1**	**+1.3**
QLMT	**Earthquake Lak**	**4.59**	**285**	*e*Pn	**Pn**	**19 02 43.5**	**-1.3**
DGMT	**Dagmar**	**4.70**	**8**	*e*Pn	**Pn**	**19 02 48.8**	**+2.5**
BOZ	**Bozeman (W)**	**4.94**	**294**	*e*Pn	**Pn**	**19 02 43.1**	**-6.5**
HWUT	**Hardware Ranch**	**5.19**	**247**	*e*Pn	**Pn**	**19 02 52.3**	**-0.8**
	19nm,0.6s						
EGMT	**Eagleton**	**5.28**	**324**	*e*Pn	**Pn**	**19 02 54.4**	**+0.3**
	42nm,0.5s						
DLMT	**Dillon**	**5.51**	**289**	*e*Pn	**Pn**	**19 02 56.7**	**-0.7**
	15nm,0.7s						
MCMT	**McKenzie Canyo**	**5.59**	**283**	*e*Pn	**Pn**	**19 03 01.4**	**+2.9**
DAU	**Daniels Canyon**	**5.65**	**235**	*e*Pn	**Pn**	**19 02 59.3**	**-0.1**
JLU	**Jordanelle**	**5.65**	**237**	*e*Pn	**Pn**	**19 02 57.5**	**-1.9**
CTU	**Camp Tracy**	**5.79**	**240**	*e*Pn	**Pn**	**19 03 00.4**	**-0.8**
	16nm,0.5s						
SPUT	**South Promonto**	**5.92**	**247**	*e*Pn	**Pn**	**19 03 02.9**	**-0.2**
HVU	**Hansel Valley**	**5.94**	**253**	*e*Pn	**Pn**	**19 03 03.2**	**-0.2**
	11nm,0.6s						
SDCO	**Great Sand Dun**	**6.07**	**182**	*e*Pn	**Pn**	**19 03 05.1**	**0.0**
	6.5nm,0.6s						
MPU	**Maple Canyon**	**6.13**	**234**	*e*Pn	**Pn**	**19 03 05.8**	**-0.1**
	20nm,0.7s						
PV10	**Paradox Valley**	**6.17**	**209**	*e*Pn	**Pn**	**19 03 07.4**	**+1.0**
SRU	**San Rafael**	**6.18**	**222**	*e*Pn	**Pn**	**19 03 05.2**	**-1.4**
	23nm,0.5s						
ECSD	**EROS,Sioux Fal**	**6.21**	**88**	*e*Pn	**Pn**	**19 03 07.3**	**+0.4**
	12nm,0.6s						
PV01	**Paradox Valley**	**6.23**	**205**	*e*Pn	**Pn**	**19 03 07.8**	**+0.5**
TMUT	**Trail Mountain**	**6.39**	**227**	*e*Pn	**Pn**	**19 03 09.1**	**-0.4**
NLU	**North Lily Min**	**6.43**	**235**	*e*Pn	**Pn**	**19 03 09.3**	**-0.7**
CBKS	**Cedar Bluff**	**6.47**	**139**	*e*Pn	**Pn**	**19 03 12.4**	**+1.8**
	29nm,0.6s						
CHMT	**Chamberlain Mo**	**6.47**	**301**	*e*Pn	**Pn**	**19 03 10.7**	**+0.2**
BGU	**Big Grassy Mou**	**6.49**	**246**	*e*Pn	**Pn**	**19 03 10.1**	**-0.8**
HLID	**Hailey**	**6.70**	**271**	*e*Pn	**Pn**	**19 03 15.4**	**+1.7**
	2.9nm,0.6s						
DUG	**Dugway**	**6.74**	**240**	*e*Pn	**Pn**	**19 03 13.3**	**-0.9**
	124nm,1.4s						
MSO	**Missoula**	**6.87**	**299**	*e*P	**Pn**	**19 03 15.8**	**-0.2**
	3.2nm,0.6s						
MVCO	**Mesa Verde**	**7.07**	**202**	*e*Pn	**Pn**	**19 03 20.3**	**+1.5**
	8.3nm,0.6s						
MSU	**Marysvale**	**7.48**	**227**	*e*Pn	**Pn**	**19 03 23.8**	**-0.6**
AGMN	**Agassiz Refuge**	**7.88**	**52**	*e*Pn	**Pn**	**19 03 30.0**	**+0.1**
	25nm,0.5s						
BMO	**Blue Mountains**	**8.75**	**281**	*e*Pn	**Pn**	**19 03 43.2**	**+1.4**
CCUT	**Cedar City**	**8.82**	**228**	*e*Pn	**Pn**	**19 03 43.0**	**+0.2**
ULM	**Lac du Bonnet**	**9.04**	**41**	Pn	**Pn**	**19 03 44.8**	**-1.0**
	1.6nm,0.3s,baz=229,slow=12,SNR=24						
ULM				Lg		19 06 15.9	
	0.4nm,0.3s,baz=317,slow=18,SNR=2.3						
WUAZ	**Wupatki**	**9.56**	**212**	*e*Pn	**Pn**	**19 03 51.5**	**-1.6**
	11nm,0.6s						
WMOK	**Wichita Mounta**	**10.33**	**149**	*e*Pn	**Pn**	**19 04 03.8**	**+0.2**
	9.0nm,1.0s						
FFC	**Flin Flon**	**11.11**	**10**	*e*Pn	**Pn**	**19 04 13.4**	**-0.8**
	6.3nm,0.6s						
NVAR	**Mina Array Bea**	**11.26**	**246**	Pn	**Pn**	**19 04 17.6**	**+1.4**
	0.2nm,0.3s,baz=54,slow=12,SNR=2.9						
TXAR	**Lajitas Array**	**14.51**	**175**	Pn	**Pn**	**19 05 07.4**	**+6.7**
	0.1nm,0.3s,baz=359,slow=12,SNR=5.0						
TXAR				Lg		19 09 16.6	
	0.0nm,0.3s,baz=282,slow=21,SNR=3.3						
YKA	**Yellowknife Ar**	**19.50**	**347**	P	**Pn**	**19 06 01.3**	**-2.4**
	0.1nm,0.3s,baz=161,slow=12,SNR=8.1						
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**19 11 50.7**	**-0.3**
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**19 11 50.7**	**-0.3**
	4.2nm,0.9s,mb4.6,baz=340,slow=7.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**82.23**	**354**	P	**P**	**19 13 55.7**	**-1.1**
	0.9nm,0.6s,mb4.1,baz=346,slow=7.7,SNR=5.7						
SONM	**Songino Array**	**84.58**	**339**	P	**P**	**19 14 09.5**	**+0.4**
	0.2nm,0.6s,mb3.5,baz=10,slow=5.2,SNR=4.4						
MKAR	**Makanchi Array**	**89.53**	**355**	P	**P**	**19 14 33.0**	**-0.1**
	0.5nm,0.7s,mb3.9,baz=16,slow=4.7,SNR=8.0						

*DDA **03** 19:03:51.5, 3880N×3944E, h16km±3km, Md2.8*

*ISK **03** 19:03:53.2, 3840N×3924E, h5km, MD2.8*

*ISCJB **03** 19:03:54.3±0.5, 3839N±003×3929E±004, h5km, Error ellipse: s-maj=4.8km s-min=4.4km az=31.1*

*CSEM **03** 19:03:54.1±0.1, 3842N×3923E, h5km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.2km az=128.0*

ISC 03 19:03:54.7±0.7**, 3840N**±004×**3931E**±005**, h4**km±9km**, n10, σ0ˢ84**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.27**	**291**	*i* P	**Pg**	**19 03 59.7**	**-0.2**
ELZG				*i* S	**Sg**	**19 04 03.8**	**+0.4**
PTK	**Pertek**	**0.50**	**8**	PG	**Pg**	**19 04 04.2**	**0.0**
PTK				SG	**Sg**	**19 04 12.4**	**+1.7**
MALT	**Malatya**	**0.69**	**263**	PG	**Pg**	**19 04 06.8**	**-1.2**
MALT				SG	**Sg**	**19 04 16.9**	**-0.1**
MYA	**Malataya**	**0.69**	**264**	PG	**Pg**	**19 04 06.7**	**-1.3**
DIY	**Diyarbakir**	**0.88**	**124**	PG	**Pg**	**19 04 11.7**	**+0.1**
URFA	**Urfa**	**1.03**	**202**	*e*PG	**Pg**	**19 04 14.5**	**+0.1**
URFA				*e*SG	**Sg**	**19 04 29.0**	**+1.2**
EZC	**Erzincan**	**1.40**	**16**	*e*PN	**Pn**	**19 04 20.4**	**-0.6**
MARD	**Mardin**	**1.59**	**132**	*i* P	**Pn**	**19 04 23.3**	**-0.3**
MARD				*i* S	**Sn**	**19 04 44.8**	**+0.1**
GZT	**Gaziantep**	**1.73**	**233**	*i* P	**Pn**	**19 04 26.0**	**+0.5**
GZT				*i* S	**Sn**	**19 04 51.6**	**+3.6**
BTMT	**Batman**	**1.73**	**96**	*e*PN	**Pn**	**19 04 24.7**	**-0.8**

*ISCJB **03** 19:19:28.4±1.0, 197S±02×1774W±02, h580km±24km, mb4.2/8, Error ellipse: s-maj=27.2km s-min=19.3km az=135.2*

*NEIC **03** 19:19:28.9±1.0, 1977S×17737W, h565km±18km, mb4.4/6, Error ellipse: s-maj=19.5km s-min=16.9km az=147.0*

*IDC **03** 19:19:31.5±2.7, 1999S×17721W, h617km±51km, mb3.3/4, mb1 3.6/6, mb1mx3.3/15, mbtmp3.5/6, Error ellipse: s-maj=46.3km s-min=25.9km az=120.0*

ISC 03 19:19:28.8±1.0**, 197S**±02×**1774W**±02**, h566**km±21km**, n17, σ1ˢ04**/19**, mb4.2**/8**, 2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.83**	**44**	P	**P**	**19 21 26.5**	**+1.0**
AFI				*e*S	**S**	**19 22 58.0**	**-3.0**
AFI	**Afiamalu**	**7.83**	**44**	S	**S**	**19 22 59.8**	**-1.2**
	5.0nm,0.3s,baz=15,slow=21,SNR=7.6						
DZM	**Mont Dzumac**	**15.32**	**258**	P	**P**	**19 22 42.3**	**+0.9**
	1.5nm,0.3s,baz=96,slow=18,SNR=9.9						
URZ	**Urewera**	**19.15**	**193**	P	**P**	**19 23 13.6**	**-2.7**
	4.9nm,0.3s,baz=291,slow=4.2,SNR=24						
ARMA	**Armidale**	**29.97**	**243**	*e*P	**P**	**19 24 52.8**	**+0.6**
CTA	**Charters Tower**	**34.17**	**263**	⇓*i*P	**P**	**19 25 28.2**	**+0.3**
	7.5nm,0.3s,mb4.7						
CTAO	**Charters Tower**	**34.17**	**263**	*e*P	**P**	**19 25 28.0**	**+0.1**
	13nm,0.4s,mb4.8						
PMG	**Port Moresby**	**35.74**	**281**	*e*P	**P**	**19 25 40.7**	**-0.4**
	13nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**38.69**	**243**	*e*P	**P**	**19 26 05.3**	**+0.4**
	2.1nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**38.69**	**243**	*e*P	**P**	**19 26 05.0**	**+0.1**
	3.3nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**38.69**	**243**	P	**P**	**19 26 05.4**	**+0.4**
	2.1nm,0.6s,mb3.8,baz=103,slow=12,SNR=9.3						
ASAR	**Alice Springs**	**45.29**	**256**	P	**P**	**19 26 56.8**	**-0.1**
	7.6nm,0.4s,mb4.5,baz=87,slow=8.6,SNR=237						
ASAR				S	**S**	**19 32 54.5**	**-2.2**
	1.9nm,0.8s,baz=95,slow=16,SNR=13						
WB2	**Warramunga Arr**	**45.30**	**261**	⇓*i*P	**P**	**19 26 56.4**	**-0.6**
WRA	**Warramunga Arr**	**45.31**	**261**	P	**P**	**19 26 56.5**	**-0.5**
	5.1nm,0.5s,mb4.3,baz=97,slow=8.0,SNR=154						
FITZ	**Fitzroy Crossi**	**53.73**	**262**	*e*P	**P**	**19 27 59.2**	**+0.3**
	22nm,1.6s,mb4.2						
MJAR	**Matsushiro Arr**	**69.89**	**323**	P	**P**	**19 29 44.0**	**+0.6**
	0.6nm,0.6s,mb3.3,baz=156,slow=6.3,SNR=6.0						
QSPA	**South Pole Qui**	**70.41**	**180**	*e*P	**P**	**19 29 47.5**	**+1.6**
	3.9nm,0.7s,mb4.0						

*NIED **03** 20:01:00, 39.10N×143.70E, h23km, Mw4.5 Best double couple: M₀6.67000×10^15 NP1:φs196.00000°, δ32.00000°, λ83.00000°. NP2:φs25.00000°, δ58.00000°, λ95.00000°.*

*JMA **03** 20:01:24.3±0.1, 39.11N×143.65E, h22km±4km, M4.7*

JMA Felt I J1.

*IDC **03** 20:01:24.3±0.7, 3903N×14326E, h0km, mb4.3/22, mb1 4.4/24, mb1mx4.3/31, mbtmp4.3/24, ML3.8/2, MS4.3/5, Ms1 4.3/5, ms1mx3.7/35, Error ellipse: s-maj=18.9km s-min=16.0km az=109.0*

*ISCJB **03** 20:01:27.0±0.9, 3920N±003×14337E±004, h23km±6km, mb4.6/80, MS4.4/14, Error ellipse: s-maj=6.7km s-min=4.1km az=41.5*

*BJI **03** 20:01:27.1, 3923N×14327E, h25km, mB5.0, mb4.8, Ms4.5, Msz4.2*

*NEIC **03** 20:01:29.5±0.4, 39.13N×14329E, h30km, mb4.7/37, MW4.5(NIED), Error ellipse: s-maj=10.8km s-min=5.8km az=130.0*

NEIC Recorded [1 JMA] in Iwate and Miyagi Prefectures.

*MOS **03** 20:01:30.3±0.9, 3939N×14307E, h33km, mb4.9/46, Error ellipse: s-maj=9.5km s-min=4.9km az=107.9*

*SZGRF **03** 20:01:40.3, 4007N×14126E, h33km, mb4.7, Near east coast of eastern Honshu, Japan*

ISC 03 20:01:27.5±1.1**, 3916N**±003×**14341E**±004**, h16**km±6km**, h31**km±1.6km**: pP-P, n239, σ0ˢ99**/260**, mb4.7**/80**, MS4.4**/14**, 17C-9D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.30**	**289**	P	**Pn**	**20 01 50.3**	**-0.6**
MIYJ				*e*S	**Sb**	**20 02 09.1**	**+1.2**
OFUJ	**Ofunato**	**1.36**	**267**	P	**Pn**	**20 01 51.1**	**-0.6**
JTH	**Tanohata**	**1.43**	**304**	P	**Pn**	**20 01 52.1**	**-0.5**
JOM	**Ohasama**	**1.67**	**282**	P	**Pn**	**20 01 56.0**	**0.0**
JOM				*e*S	**Sn**	**20 02 20.0**	**+2.9**
JMK	**Ichinoseki**	**1.72**	**264**	P	**Pn**	**20 01 56.4**	**-0.2**
JIO	**Ouri**	**1.76**	**247**	P	**Pn**	**20 01 56.3**	**-0.9**
JIO				*e*S	**Sn**	**20 02 20.8**	**+1.6**
JANG	**Nango**	**1.90**	**310**	P	**Pn**	**20 01 58.4**	**-0.7**
JYK	**Kaneyama**	**2.39**	**265**	P	**Pn**	**20 02 06.2**	**+0.4**
JMM	**Marumori**	**2.42**	**239**	P	**Pn**	**20 02 05.6**	**-0.7**
ERM	**Erimo**	**2.86**	**356**	*e*Pn	**Pn**	**20 02 11.0**	**-1.3**
ERM	**Erimo**	**2.86**	**356**	*e*P	**Pn**	**20 02 11.5**	**-0.8**
JOT	**Ohata**	**2.86**	**322**	P	**Pn**	**20 02 12.4**	**0.0**
JNBK	**Urakawa-nobuka**	**3.16**	**351**	P	**Pn**	**20 02 16.2**	**-0.2**
JNBK				*e*S	**Sn**	**20 02 54.3**	**+0.6**
JKB	**Kayabe**	**3.27**	**327**	P	**Pn**	**20 02 18.0**	**0.0**
JAW	**Awa shima**	**3.33**	**259**	P	**Pn**	**20 02 19.4**	**+0.7**
JCH	**Churui**	**3.45**	**359**	P	**Pn**	**20 02 19.5**	**-1.0**
JCH				*e*S	**Sn**	**20 02 59.3**	**-1.7**
MJAR	**Matsushiro Arr**	**4.88**	**239**	Pn	**Pn**	**20 02 39.2**	**-0.9**
MJAR				Lg		20 03 51.6	
MJAR				LR	LR	20 04 27.5	
MJAR	**Matsushiro Arr**	**4.88**	**239**	P	**Pn**	**20 02 39.2**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,384nm,20.6s						
MJAR	**Matsushiro Arr**	**4.88**	**239**	Pn	**Pn**	**20 02 39.2**	**-0.8**
	comp=Z,9.6nm,0.3s,baz=50,slow=11,SNR=422						
MJAR				Lg		20 03 51.6	
	baz=44,slow=13,SNR=2.5						
MJAR				LR	LR	20 04 27.5	
	comp=Z,384nm,20.6s,baz=35,slow=39						
MAJO	**Matsushiro**	**4.88**	**239**	⇑*i*Pn	**Pn**	**20 02 41.4**	**+1.4**
MAT	**Matsushiro**	**4.88**	**239**	P	**Pn**	**20 02 41.2**	**+1.2**
MAT				*e*S	**Sn**	**20 03 39.3**	**+3.2**
ASAJ	**Asahikawa**	**4.99**	**353**	P	**Pn**	**20 02 41.4**	**-0.2**
ASAJ						20 03 37.8	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,817nm,19.7s						
ASAJ	**Asahikawa**	**4.99**	**353**	Pn	**Pn**	**20 02 41.4**	**-0.2**
	comp=Z,3.1nm,0.3s,baz=205,slow=14,SNR=49						
ASAJ				Sn	**Sn**	**20 03 37.8**	**-1.2**
	comp=Z,6.4nm,0.3s,baz=76,slow=22,SNR=3.3						
ASAJ				Lg		20 04 02.8	
	comp=Z,3.3nm,0.3s,baz=346,slow=33,SNR=5.0						
ASAJ				LR	LR	20 05 20.9	
	comp=Z,817nm,19.7s,baz=180,slow=46						
YUK	**Yuzh-Kuril'sk**	**5.21**	**20**	*e*P	**Pn**	**20 02 44.8**	**+0.2**
YUK				*e*S	**Sn**	**20 03 38.5**	**-5.7**
YUK				pmax	pmax		
	comp=Z,300nm,0.4s						
YUK				pmax	pmax		
	comp=N,100nm,0.4s						
YUK				smax			
	comp=N,1μm,0.6s						
YUK				smax			
	comp=E,2μm,0.8s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,6μm,2.0s						
JHJ	**Hachijo jima 2**	**6.70**	**207**	Sn	**Sn**	**20 04 13.9**	**-7.2**
	comp=E,68nm,0.3s,baz=62,slow=22,SNR=3.6						
KUR	**Kuril'sk**	**6.91**	**27**	P	**Pn**	**20 03 07.0**	**-1.0**
KUR				*e*S	**Sn**	**20 04 20.0**	**-6.2**
KUR				pmax	pmax		
	comp=Z,190nm,1.0s						
KUR				smax			
	comp=N,110nm,0.8s						
KUR				smax			
	comp=E,220nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.81**	**357**	*e*Pn	**Pn**	**20 03 20.8**	**+0.5**
	comp=E,21nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.81**	**357**	⇑*e*P	**Pn**	**20 03 20.8**	**+0.6**
YSS				*e*		20 04 46.9	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=N,700nm,15.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
VLA	**Vladivostok**	**9.55**	**298**	*e*P	**Pn**	**20 03 47.3**	**+3.2**
VLA				pmax	pmax		
	comp=Z,64nm,1.8s						
VLA				MLR	MLR		
	comp=Z,1μm,14.6s						
HABR	**Khabarovsk**	**11.09**	**330**	⇑*e*P	**Pn**	**20 04 04.0**	**-1.2**
HABR				*e*		20 05 58.1	
HABR				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ	**Mudanjiang**	**11.65**	**302**	P	**Pn**	**20 04 12.6**	**-0.3**
MDJ				AP		20 04 19.7	
MDJ				PP		20 04 22.9	
MDJ				S	**Sn**	**20 06 22.5**	**0.0**
MDJ				SS		20 06 37.2	
MDJ				PCS	PcS	20 13 35.6	-0.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s						
MDJ				AMB	AMB		
	comp=Z,153nm,6.9s						
MDJ				LR	LR		
	comp=N,504nm,14.5s						
MDJ				LR	LR		
	comp=E,794nm,15.0s						
MDJ				LR	LR		
	comp=Z,1μm,15.0s						
JNU	**Nakatsue**	**11.78**	**243**	Pn	**Pn**	**20 04 13.2**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=46,slow=16,SNR=13						
JNU				LR	LR	20 07 28.9	
	comp=Z,92nm,21.3s,baz=226,slow=31						
CBIJ	**Chichi jima**	**12.07**	**185**	Sn	**Sn**	**20 06 23.4**	**-10**
	comp=Z,10nm,0.3s,baz=285,slow=20,SNR=2.9						
KSRS	**Korea Array**	**12.29**	**267**	Pn	**Pn**	**20 04 21.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=80,slow=14,SNR=18						
KSRS				LR	LR	20 08 55.0	
	comp=Z,493nm,18.0s,baz=117,slow=37						
KLR	**Kul'dur**	**13.07**	**324**	*e*P	**Pn**	**20 04 28.0**	**-4.3**
KLR				MLR	MLR		
	comp=Z,4μm,12.5s						
CN2	**Changchun**	**14.24**	**295**	*e*P	**Pn**	**20 04 50.5**	**+2.3**
CN2				*e*AP	pP	20 04 57.7	-2.4
CN2				*e*S	**Sn**	**20 07 27.3**	**+1.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,13.0s						
CN2				LR	LR		
	comp=E,500nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
PET	**Petropavlovsk**	**17.38**	**32**	⇑*e*P	**Pn**	**20 05 31.1**	**+2.0**
HIA	**Hailar**	**19.67**	**309**	⇑*e*P	**Pn**	**20 05 52.6**	**-4.3**
	comp=Z,32nm,0.9s						
HIA				*e*		20 06 00.6	
HIA	**Hailar**	**19.67**	**309**	⇑*e*P	**Pn**	**20 05 52.6**	**-4.3**
HIA				pmax	pmax		
	comp=Z,33nm,0.9s						
MA2	**Magadan**	**20.97**	**10**	⇑*i*P	**P**	**20 06 09.7**	**+0.3**
	comp=Z,17nm,0.8s						
MA2	**Magadan**	**20.97**	**10**	*e*P	**P**	**20 06 08.9**	**-0.5**
MA2				pmax	pmax		
	comp=N,20nm,0.9s						
MA2				pmax	pmax		
	comp=Z,30nm,0.9s						
NJ2	**Nanjing**	**21.15**	**258**	*e*P	**P**	**20 06 12.0**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.4						
NRGR	**Nerungri**	**21.41**	**331**	*e*P	**P**	**20 06 14.4**	**+0.2**
NRGR				S	**S**	**20 09 58.3**	**-13**
NRGR				smax			
	comp=E,24nm,0.5s						
CLNS	**Chul'man**	**21.47**	**332**	*e*P	**P**	**20 06 14.2**	**-0.7**
CLNS				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.5						
CLNS				pmax	pmax		
	comp=N,16nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.8s						
TATO	**Taipei**	**23.27**	**239**	P	**P**	**20 06 32.6**	**-1.7**
	comp=E,53nm,1.2s,mb4.8						
YHNB	**Yeheng**	**23.55**	**239**	*e*P	**P**	**20 06 34.0**	**-3.2**
CIT	**Chita**	**24.34**	**312**	*e*P	**P**	**20 06 42.1**	**-2.1**
CIT				*e*		20 06 53.7	
CIT				*e*		20 07 14.4	
CIT				*e*		20 07 33.4	
CIT				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.0						
HHC	**Hu-ho-hao-te**	**24.39**	**284**	*e*P	**P**	**20 06 42.5**	**-2.2**
HHC				AP		20 06 51.8	
HHC				XP	sP	20 06 56.3	+4.5
HHC				PP		20 07 18.3	
HHC				PCP	PcP	20 10 22.6	-1.1
HHC				S	**S**	**20 10 59.4**	**-4.2**
HHC				XS	sS	20 11 13.2	+1.3
HHC				SS		20 11 51.6	
HHC				PCS	PcS	20 13 59.4	-4.1
HHC				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.4						
HHC				AMB	AMB		
	comp=Z,205nm,4.5s						
HHC				LR	LR		
	comp=N,841nm,9.2s						
HHC				LR	LR		
	comp=E,3μm,14.0s						
HHC				LR	LR		
	comp=Z,832nm,14.5s,MS4.4						
YAK	**Yakutsk**	**24.40**	**344**	*e*P	**P**	**20 06 43.0**	**-1.6**
	comp=Z,43nm,0.8s,mb4.9						
YAK	**Yakutsk**	**24.40**	**344**	*c i*P	**P**	**20 06 43.9**	**-0.7**
YAK				*e**PP		20 06 50.9	
YAK				*e*PPP		20 07 19.3	
YAK				*e*S	**S**	**20 10 54.8**	**-8.6**
YAK				*e*SSS		20 11 52.7	
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				pmax	pmax		
	comp=Z,53nm,1.1s,mb4.9						
YAK				smax			
	comp=N,127nm,6.2s						
YAK				smax			
	comp=E,168nm,6.1s						
YAK				MLR	MLR		
	comp=Z,302nm,13.0s,MS4.0						
YAK				MLR	MLR		
	comp=N,334nm,14.0s,MS4.0						
YAK				MLR	MLR		
	comp=E,158nm,16.0s,MS4.0						
WHN	**Wuhan**	**25.27**	**259**	⇑P	**P**	**20 06 52.5**	**-0.3**
WHN				AP	pP	20 07 00.1	+2.3
WHN				AMB	AMB		
	comp=Z,106nm,0.8s,mb5.4						
WHN				LR	LR		
	comp=Z,1μm,13.3s,MS4.6						
BOD	**Bodaibo**	**26.65**	**324**	*e*P	**P**	**20 07 04.3**	**-0.8**
BOD				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**27.55**	**300**	*e*P	**P**	**20 07 13.4**	**+0.1**
	comp=Z,13nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**27.55**	**300**	*e*P	**P**	**20 07 13.4**	**+0.1**
ULN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
SONM	**Songino Array**	**28.00**	**300**	P	**P**	**20 07 17.6**	**+0.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SONM	**Songino Array**	**28.00**	**300**	P	**P**	**20 07 17.6**	**+0.3**
	comp=Z,7.3nm,0.6s,mb4.5,baz=94,slow=8.8,SNR=73						
XAN	**Xi'an**	**28.05**	**270**	P	**P**	**20 07 16.7**	**-1.2**

XAN AMB AMB
comp=Z,12nm,0.9s,mb4.5
TLY Talaya 30.21 308 *e*P **P 20 07 36.6 -0.2**
comp=Z,8.0nm,0.8s,mb4.5
TLY Talaya 30.21 308 *e*P **P 20 07 37.1 +0.3**
TLY pmax pmax
comp=Z,13nm,1.3s,mb4.5
TLY MLR MLR
comp=Z,442nm,15.0s,MS4.2
ZAK Zakamensk 30.27 305 *e*P **P 20 07 37.3 -0.1**
ZAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
LZH Lanzhou 31.32 277 *e*P **P 20 07 45.5 -1.4**
LZH AP pP 20 07 53.5 +1.6
LZH XP sP 20 07 57.0 +3.0
LZH PP PP 20 08 49.0 -8.5
LZH *e*S **S 20 12 48.2 -4.9**
LZH XS sS 20 13 04.5 +3.1
LZH *e*SS SS 20 14 35.0 -32
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,96nm,4.3s
LZH LR LR
comp=N,1µm,14.6s
LZH LR LR
comp=Z,2µm,15.7s,MS4.8
LZH Lanzhou 31.32 277 *e*P **P 20 07 45.5 -1.4**
comp=Z,15nm,1.0s,mb4.8
LZH pP pP 20 07 53.5 +1.6
LZH sP sP 20 07 57.0 +3.0
LZH PP PP 20 08 49.0 -8.5
LZH *e*S **S 20 12 48.2 -4.9**
LZH sS sS 20 13 04.5 +3.1
LZH *e*SS SS 20 14 35.0 -32
LZH LR LR
comp=Z,2µm,15.7s,MS4.8
LZH Lanzhou 31.32 277 *e*P **P 20 07 45.5 -1.4**
LZH *SP sP 20 07 57.0 +3.0
LZH 20 08 49.0
LZH *e*S **S 20 12 48.2 -4.9**
LZH *SS sS 20 13 04.5 +3.1
LZH *e*SS SS 20 14 35.0 -32
LZH pmax pmax
comp=Z,15nm,1.0s,mb4.8
LZH MLR MLR
comp=Z,2µm,15.7s,MS4.8
BILL Bilibino 31.55 16 *e*P **P 20 07 45.4 -3.1**
comp=Z,9.3nm,1.3s,mb4.5
BILL Bilibino 31.55 16⇑ *e*P **P 20 07 48.0 -0.5**
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
BILL MLR MLR
comp=Z,100nm,15.0s,MS3.6
MOY Mondy 31.84 307 *e*P **P 20 07 51.6 +0.3**
GYA Guiyang 33.16 259 P **P 20 08 03.8 +0.7**
GYA AP pP 20 08 13.4 +5.3
GYA XP sP 20 08 16.8 +6.6
GYA PP PP 20 09 15.4 -2.7
GYA PCP PcP 20 10 47.3 +1.5
GYA S **S 20 13 20.4 -1.5**
GYA XS sS 20 13 35.2 +5.0
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,70nm,5.2s
GYA LR LR
comp=N,240nm,18.9s,MS4.2
GYA LR LR
comp=E,310nm,17.4s,MS4.2
GYA LR LR
comp=Z,370nm,19.8s,MS4.1
CD2 Chengdu 33.28 268 *e*P **P 20 08 03.5 -0.6**
CD2 AP pP 20 08 12.9 +3.7
CD2 XP sP 20 08 16.8 +5.6
CD2 PP PP 20 09 14.9 -4.5
CD2 S **S 20 13 19.8 -4.0**
CD2 XS sS 20 13 35.8 +3.7
CD2 SS SS 20 15 22.0 -25
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,150nm,12.4s
CD2 LR LR
comp=Z,110nm,14.2s,MS3.7
TIXI Tiksi 33.40 352 *e*P **P 20 08 04.1 -0.5**
comp=Z,4.3nm,1.1s,mb4.3
TIXI Tiksi 33.40 352 *e*P **P 20 08 03.3 -1.3**
TIXI pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
TIXI MLR MLR
comp=Z,204nm,15.0s,MS4.0
GTA Gaotai 33.50 285 *e*P **P 20 08 06.5 +0.6**
GTA AP pP 20 08 15.8 +4.8
GTA XP sP 20 08 20.0 +7.0
GTA PP PP 20 09 19.0 -2.7
GTA S **S 20 13 25.8 -1.2**
GTA XS sS 20 13 42.1 +6.8
GTA SS SS 20 15 30.9 -21
GTA AMB AMB
comp=Z,17nm,1.1s,mb4.9
GTA AMB AMB
comp=Z,153nm,4.6s
GTA LR LR
comp=N,295nm,14.4s,MS4.5
GTA LR LR
comp=E,587nm,17.1s,MS4.5
GTA LR LR
comp=Z,796nm,16.4s,MS4.5
KMI Kunming 36.86 260 P **P 20 08 34.8 -0.2**
KMI AP pP 20 08 44.7 +4.6
KMI XP sP 20 08 47.4 +5.2
KMI PP PP 20 10 03.7 +4.7
KMI S **S 20 14 17.7 -1.2**
KMI XS sS 20 14 30.5 +3.2
KMI AMB AMB
comp=Z,20nm,1.2s,mb4.8
KMI AMB AMB
comp=Z,159nm,4.9s
KMI Kunming 36.86 260 P **P 20 08 34.8 -0.2**
comp=Z,20nm,1.2s,mb4.8
KMI pP pP 20 08 44.7 +4.6
KMI sP sP 20 08 47.4 +5.2
KMI PP PP 20 10 03.7 +4.7
KMI PPP 20 10 19.7
KMI S **S 20 14 17.7 -1.2**
KMI sS sS 20 14 30.5 +3.2
KMI SS SS 20 16 43.5 -17
KMI SSS 20 17 13.6
KMI Kunming 36.86 260 P **P 20 08 34.8 -0.2**
KMI *PP pP 20 08 44.7 +4.6
KMI *SP sP 20 08 47.4 +5.2
KMI 20 10 03.7
KMI PPP 20 10 19.7
KMI S **S 20 14 17.7 -1.2**
KMI *SS sS 20 14 30.5 +3.2
KMI SS SS 20 16 43.5 -17
KMI SSS 20 17 13.6
KMI pmax pmax
comp=Z,20nm,1.2s,mb4.8
WMQ Urumqi 41.33 295⇑ *i*P **P 20 09 13.0 +0.8**
WMQ AP pP 20 09 23.0 +5.7
WMQ XP sP 20 09 27.5 +8.1
WMQ PP PP 20 10 51.5 +4.0
WMQ PCP PcP 20 11 12.5 +2.1
WMQ SCP ScP 20 14 58.0 -1.6
WMQ S **S 20 15 24.0 -1.8**
WMQ XS sS 20 15 40.0 +5.8
WMQ AMB AMB
comp=Z,24nm,1.0s,mb4.8
WMQ AMB AMB
comp=Z,101nm,3.6s
WMQ LR LR
comp=N,305nm,25.5s,MS4.4
WMQ LR LR
comp=E,576nm,25.8s,MS4.4
WMQ LR LR
comp=Z,325nm,27.2s,MS4.1
ZALV Zalesovo Beam 41.69 311 P **P 20 09 14.6 -0.4**
comp=Z,7.7nm,0.6s,mb4.5,baz=84,slow=7.9,SNR=33
ZAL Zalesovo 41.70 311 P **P 20 09 14.6 -0.5**
CHRT Chiangrai 42.08 256 ⇑P **P 20 09 19.0 +0.4**
comp=Z,118nm,0.8s,mb5.6
NVS Novosibirsk 42.55 312 *i* P **P 20 09 22.0 0.0**
NVS pmax pmax
comp=E,14nm,1.8s
NVS pmax pmax
comp=Z,16nm,1.8s,mb4.5
NVS pmax pmax
comp=N,9.0nm,2.0s
CHTO Chiang Mai 43.35 255 *e*P **P 20 09 28.2 -0.7**
comp=N,8.3nm,0.8s,mb4.5
CHTO Chiang Mai 43.35 255 *e*P **P 20 09 28.3 -0.6**
CHTO pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
CM31 Chiang Mai Arr 43.57 255 *e*P **P 20 09 29.6 -1.1**
LSA Lhasa 43.61 274 P **P 20 09 32.6 +1.7**
LSA Lhasa 43.61 274 *e*P **P 20 09 32.5 +1.6**
comp=Z,5.9nm,0.7s,mb4.4
LSA Lhasa 43.61 274 *e*P **P 20 09 32.5 +1.6**
LSA pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
IMA2 Indian Mountai 44.06 31 P **P 20 09 35.2 +1.2**
MK31 Makanchi Array 44.36 301 *e*P **P 20 09 36.6 -0.1**
MKAR Makanchi Array 44.36 301 *i* P **P 20 09 36.7 0.0**
MKAR pmax pmax
comp=Z,9.0nm,1.0s
MKAR Makanchi Array 44.36 301 P **P 20 09 36.8 +0.1**
comp=Z,8.8nm,0.9s,mb4.5,baz=82,slow=8.1,SNR=56
KDAK Kodiak Island 44.47 43 P **P 20 09 39.6 +2.1**
comp=Z,9.8nm,0.9s,mb4.5,baz=120,slow=8.6,SNR=3.2
KURK Kurchatov 45.90 307 *e*P **P 20 09 48.5 -0.3**
comp=Z,14nm,0.8s,mb5.0
KURK Kurchatov 45.90 307 *e*P **P 20 09 48.5 -0.3**
KURK pmax pmax
comp=Z,14nm,0.8s,mb4.9
COLA College 46.44 33 *e*P **P 20 09 56.8 +3.8**
TKM2 Tokmak 2 50.03 297 *e*P **P 20 10 21.8 +0.8**
comp=Z,16nm,0.9s,mb5.0
TKM2 Tokmak 2 50.03 297 *e*P **P 20 10 21.8 +0.8**
TKM2 pmax pmax
comp=Z,16nm,0.9s,mb5.0
TKM2 Tokmak 2 50.03 297 P **P 20 10 22.1 +1.1**
SNR=15
BRVK Borovoye 50.39 311 *e*P **P 20 10 23.5 0.0**
comp=Z,6.5nm,0.8s,mb4.7
BRVK Borovoye 50.39 311 *e*P **P 20 10 23.5 0.0**
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
KZA Kyzart 50.56 297 P **P 20 10 26.9 +1.8**
SNR=8.1
KBK Karagaybulak 50.57 297 P **P 20 10 25.9 +0.9**
SNR=19
USP Ospenovka 50.66 298 P **P 20 10 26.0 +0.3**
SNR=5.4
HNR Honiara 50.73 159 LR LR 20 29 56.0
comp=Z,3µm,21.8s,MS5.3,baz=359,slow=34
FRU Bishkek 50.74 298 *e*P **P 20 10 25.0 -1.3**
AAK Ala-Archa 50.89 297 *e*P **P 20 10 26.0 -1.5**
comp=Z,5.7nm,0.9s,mb4.5
AAK Ala-Archa 50.89 297 *e*P **P 20 10 26.0 -1.5**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
KSH Kashi 51.00 293 *e*P **P 20 10 30.3 +1.9**
KSH *e*AP pP 20 10 38.8 +5.2
KSH *e*XP sP 20 10 41.0 +5.4
KSH *e*PCP PcP 20 11 45.4 +1.1
KSH *e*PP PP 20 12 27.4 +2.7
KSH *e*SCP ScP 20 15 37.7 -2.2
KSH *e*PCS PcS 20 15 41.7 -0.1
KSH *e*S **S 20 17 44.0 -0.7**
KSH *e*XS sS 20 18 01.3 +8.0
KSH AMB AMB
comp=Z,36nm,0.6s,mb5.5
KSH AMB AMB
comp=Z,355nm,3.9s
KSH LR LR
comp=Z,712nm,7.7s
UCH Uchtor 51.02 297 *e*P **P 20 10 28.9 +0.5**
comp=Z,6.7nm,1.2s,mb4.5
KULM Kulim 51.24 240 P **P 20 10 25.6 -4.8**
EKS2 Erkin-Say 51.38 298 *e*P **P 20 10 31.0 -0.1**
comp=Z,3.3nm,0.8s,mb4.3
EKS2 Erkin-Say 51.38 298 P **P 20 10 31.5 +0.4**
SNR=7.2
AML Almayashu 51.62 297 *e*P **P 20 10 34.1 +1.1**
comp=Z,11nm,0.9s,mb4.8
AML *e* 20 10 42.8
AML Almayashu 51.62 297 P **P 20 10 34.7 +1.7**
SNR=9.0
INK Inuvik 51.78 28 P **P 20 10 35.0 +1.2**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 51.78 28 P **P 20 10 35.0 +1.3**
comp=Z,1.4nm,0.6s,mb4.1,baz=276,slow=6.1,SNR=6.3
PSI Prapat 54.23 240 P **P 20 10 51.8 -0.7**
PSI pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSI Prapat 54.23 240 P **P 20 10 51.8 -0.7**
comp=Z,3.8nm,0.8s,mb4.4,baz=0.0,slow=12,SNR=3.0
SVE Sverdlovsk 54.61 318 *i* P **P 20 10 55.6 +0.8**
SVE *e*S **S 20 18 40.8 +7.3**
SVE pmax pmax
comp=Z,17nm,0.8s,mb5.1
ARU Arti 55.83 318 *e*P **P 20 11 03.7 +0.2**
comp=Z,8.1nm,0.6s,mb4.9
ARU 20 11 13.5
ARU Arti 55.83 318c *i* P **P 20 11 02.6 -0.9**
ARU *e*PP pP 20 11 18.5 +10
ARU 20 13 03.8
ARU S **S 20 18 37.4 -12**
ARU pmax pmax
comp=Z,27nm,1.2s,mb5.2
KBL Kabul 58.14 291 *e*P **P 20 11 19.7 -0.6**
AKTK Aktyubinsk 58.44 312 P **P 20 11 21.9 -0.2**
AKTO Aktyubinsk 58.44 312 P **P 20 11 21.9 -0.2**
AKTO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
AKTO Aktyubinsk 58.44 312 P **P 20 11 21.9 -0.2**
comp=Z,5.7nm,0.7s,mb4.7
WRA Warramunga Arr 59.40 190 P **P 20 11 27.2 -1.8**
WRA pmax pmax
comp=Z,2.0nm,0.6s
WRA Warramunga Arr 59.40 190 P **P 20 11 27.2 -1.8**
comp=Z,1.6nm,0.6s,mb4.2,baz=7.4,slow=7.0,SNR=23
HYB Hyderabad 59.84 268 *i* P **P 20 11 32.0 -0.3**
YKA Yellowknife Ar 61.18 31 P **P 20 11 41.3 +0.6**
comp=Z,0.7nm,0.8s,mb3.9,baz=303,slow=6.5,SNR=10
ARCES ARCESS Array B 62.56 340 P **P 20 11 49.5 -0.5**
ARCES ARCESS Array B 62.56 340 P **P 20 11 49.5 -0.5**
ARCES pmax pmax
comp=Z,7.0nm,1.0s
ARCES ARCESS Array B 62.56 340 P **P 20 11 49.5 -0.5**
comp=Z,6.7nm,1.0s,mb4.7,baz=45,slow=7.0,SNR=3.9
ASAR Alice Springs 63.12 190 P **P 20 11 52.4 -1.8**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 63.12 190 P **P 20 11 52.4 -1.8**
comp=Z,0.9nm,0.9s,mb3.9,baz=7.6,slow=6.1,SNR=7.2
DZM Mont Dzumac 64.61 156 LR LR 20 37 04.1
comp=Z,2µm,20.5s,MS5.3,baz=286,slow=33
JOF Joensuu 64.83 332 *ep* **P 20 12 04.1 -0.9**
comp=Z,2.5nm,0.5s,mb4.5
JOF Joensuu 64.83 332 *e*P **P 20 12 04.1 -0.9**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
OBN Obninsk 67.34 323⇑ *e*P **P 20 12 20.4 -0.8**
OBN *e* 20 14 47.3
OBN *e*S S 20 21 05.2 -10
OBN pmax pmax
comp=Z,11nm,1.4s,mb4.7
FINES FINESS Array B 67.67 333 P **P 20 12 22.6 -0.6**
FINES pmax pmax
comp=Z,4.0nm,0.8s
FINES FINESS Array B 67.67 333 P **P 20 12 22.6 -0.6**
comp=Z,4.1nm,0.8s,mb4.5,baz=56,slow=7.4,SNR=13
VORD Divnogorie 68.45 319 *e*P **P 20 12 26.8 -1.5**
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,7.0nm,0.9s
KIV Kislovodsk 70.70 311 *e*P **P 20 12 43.4 +1.0**
comp=E,29nm,1.0s,mb5.2
KIV Kislovodsk 70.70 311⇓ *e*P **P 20 12 43.5 +1.2**
KIV pmax pmax
comp=Z,30nm,1.1s,mb5.1
HFS Hagfors 72.80 336 P **P 20 12 54.6 0.0**
HFS pmax pmax
comp=Z,4.0nm,0.7s
HFS Hagfors 72.80 336 P **P 20 12 54.6 -0.1**
comp=Z,3.7nm,0.7s,mb4.4,baz=35,slow=5.4,SNR=16
NB2 NORSAR Subarra 72.83 338 P **P 20 12 54.6 -0.2**
comp=Z,2.3nm,0.7s,mb4.2,baz=38,slow=6.2
NB2 NORSAR Subarra 72.83 338 P **P 20 12 54.6 -0.2**
NB2 pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
NOA NORSAR Array B 72.83 338 P **P 20 12 54.6 -0.2**
NOA pmax pmax
comp=Z,4.0nm,0.8s
NOA NORSAR Array B 72.83 338 P **P 20 12 54.6 -0.2**
comp=Z,4.1nm,0.8s,mb4.4,baz=38,slow=6.0,SNR=17
ANN Anapa 73.19 314 *e*P **P 20 13 02.8 +5.6**
ANN pmax pmax
comp=Z,178nm,1.7s,mb5.7
AKASG Malin Array Be 73.57 323 P **P 20 12 58.8 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 73.57 323 P **P 20 12 58.8 -0.6**
comp=Z,2.7nm,0.6s,mb4.4,baz=42,slow=5.8,SNR=11
PDAR Pinedale Array 75.06 47 P **P 20 13 09.1 +0.9**
comp=Z,0.5nm,0.6s,mb3.6,baz=275,slow=2.7,SNR=5.1
QRN Al-Qurain 76.38 296 *e*P **P 20 13 15.5 -0.5**
QRN AMb AMB 20 13 17.2
comp=Z,43nm,1.2s,mb5.3
RDF Al-Radifah 76.53 296 *e*P **P 20 13 15.8 -1.0**
RDF AMb AMB 20 13 18.1
comp=Z,30nm,0.8s,mb5.3
NAY Al-Naaiem 76.55 297 *e*P **P 20 13 15.7 -1.2**
NAY AMb AMB 20 13 18.0
comp=Z,9.5nm,1.1s,mb4.6
RST Umm Al-Ruwaisa 76.56 297 *e*P **P 20 13 15.7 -1.3**
RST AMb AMB 20 13 17.7
comp=Z,21nm,0.9s,mb5.0
MALT Malatya 76.69 309 *e*P **P 20 13 18.9 +1.2**
comp=Z,12nm,1.2s,mb4.7
MALT Malatya 76.69 309 *e*P **P 20 13 18.9 +1.3**
MALT pmax pmax
comp=Z,12nm,1.2s,mb4.7
MALT Malatya 76.69 309⇓ *i*P **P 20 13 19.6 +2.0**
BURAR Bucovina Array 77.61 322 ⇓P **P 20 13 23.5 +0.9**
BURAR Bucovina Array 77.61 322⇓ *i*P **P 20 13 23.5 +0.9**
KOLS Kolonicke sedl 78.02 325 *e*P **P 20 13 26.4 +1.6**
STHS Stebnicka Huta 78.12 326 *e*P **P 20 13 26.9 +1.5**
comp=Z,3.1nm,0.8s,mb4.3
STHS Stebnicka Huta 78.12 326 *e*P **P 20 13 26.9 +1.5**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
OJC Ojcow 78.14 327 *e*P **P 20 13 26.2 +0.7**
CRVS Cervenica-Dubn 78.40 325 *e*P **P 20 13 28.3 +1.3**
BRTR Keskin Array B 78.61 312 P **P 20 13 28.6 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 78.61 312 P **P 20 13 28.6 +0.3**
comp=Z,1.9nm,1.0s,mb4.0,baz=46,slow=3.6,SNR=6.4
OKC Ostrava-Krasne 79.13 327 *e*P **P 20 13 31.5 +0.6**
OKC *ex* x 20 13 39.8
MORC Moravsky Berou 79.43 328 *e*P **P 20 13 33.1 +0.6**
comp=Z,5.4nm,0.9s,mb4.5
MORC *e* 20 13 42.8
MORC Moravsky Berou 79.43 328 *e*P **P 20 13 33.1 +0.5**
MORC *e* 20 13 42.8
MORC pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
MORC Moravsky Berou 79.43 328⇓ *i*P **P 20 13 33.7 +1.1**
DPC Dobruska-Polom 79.48 329 *e*P **P 20 13 34.2 +1.3**
UPC Upice 79.49 329 *e*P **P 20 13 33.8 +0.9**
VYHS Vyhne 79.86 326 *e*P **P 20 13 35.7 +0.8**
BRG Berggiesshubel 80.01 330 *e*P **P 20 13 36.2 +0.5**
BRG *e* 20 13 44.7
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
BRG Berggiesshubel 80.01 330 *e*P **P 20 13 36.2 +0.5**
comp=Z,3.7nm,0.9s,mb4.3
BRG *e* 20 13 44.7
comp=Z,4.3nm,1.1s
CLL Collm 80.03 331 *i* P **P 20 13 35.8 0.0**
comp=Z,8.0nm,0.8s,mb4.7
CLL *i* 20 13 45.1
CLL Collm 80.03 331 *i* P **P 20 13 35.8 0.0**
CLL *i* 20 13 45.1
CLL pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
CLL Collm 80.03 331 *e*P **P 20 13 31.0 -4.8**
CLL *i* P(2) pP 20 13 35.8 -5.4
comp=Z,8.0nm,0.8s
CLL *i* pP(2) 20 13 45.1
PVCC Panska Ves 80.04 330 *e*P **P 20 13 37.1 +1.2**
VRAC Vranov 80.18 328 ⇑P **P 20 13 38.4 +1.8**
VRAC Vranov 80.18 328 P **P 20 13 36.4 -0.2**
comp=Z,5.9nm,0.8s,mb4.5,baz=53,slow=6.3,SNR=5.2
VRAC Vranov 80.18 328⇑ *i*P **P 20 13 38.4 +1.7**
PRU Pruhonice 80.48 329 *e*P **P 20 13 39.0 +0.7**
PRU *ep*P pP 20 13 49.0 +5.3
BZS Buzias 80.77 323 ⇓P **P 20 13 40.4 +0.5**
BZS Buzias 80.77 323⇓ *i*P **P 20 13 40.4 +0.5**
KHC Kasperske Hory 81.54 329 *e*P **P 20 13 44.7 +0.8**
KHC *ep*P pP 20 13 54.2 +4.8
EKA Eskdalemuir Ar 81.64 341 P **P 20 13 44.8 +0.5**
EKA pmax pmax
comp=Z,1.0nm,0.8s
EKA Eskdalemuir Ar 81.64 341 P **P 20 13 44.8 +0.4**
comp=Z,1.4nm,0.8s,mb3.9,baz=42,slow=5.7,SNR=3.5
GERES GERESS Array B 81.72 329 P **P 20 13 44.5 -0.4**
GERES pmax pmax
comp=Z,2.0nm,0.8s
GERES GERESS Array B 81.72 329 P **P 20 13 44.5 -0.4**
comp=Z,1.8nm,0.8s,mb4.0,baz=30,slow=11,SNR=4.0
GRA1 Grafenberg Arr 82.00 331 *e*P **P 20 13 47.1 +0.7**
comp=Z,9.0nm,0.9s,mb4.7
GRF Grafenberg Arr 82.00 331 *e*P **P 20 13 47.1 +0.7**
GRF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
GRF Grafenberg Arr 82.00 331 *e*P **P 20 13 47.1 +0.7**
GRF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
GRF Grafenberg Arr 82.00 331 *e*P **P 20 13 47.1 +0.7**
comp=Z,9.0nm,0.9s,mb4.7
MMAI Mount Meron Ar 82.00 306 P **P 20 13 44.8 -1.9**
comp=Z,4.8nm,0.8s,mb4.4,baz=54,slow=10,SNR=9.8
ANMO Albuquerque 82.02 51⇑ *e*P **P 20 13 52.5 +5.8**
VTS Vitosha 82.23 320 ⇓P **P 20 13 49.4 +1.7**
VTS Vitosha 82.23 320⇓ *i*P **P 20 13 49.4 +1.7**
URZ Urewera 83.03 154 LR LR 20 46 46.3
comp=Z,1µm,21.2s,MS5.3,baz=153,slow=33
CDF Champ du Feu 84.52 332 *e*P **P 20 13 59.3 -0.1**
comp=Z,15nm,1.1s,mb4.7
CDF Champ du Feu 84.52 332 *e*P **P 20 13 59.3 -0.1**
comp=Z,7.6nm,1.1s,mb4.7
CDF Champ du Feu 84.52 332 *e*P **P 20 13 59.3 -0.1**
CDF pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
HAU Haudompre 85.20 333 *e*P **P 20 14 02.6 -0.2**
MEZF Maizieres J'vi 85.23 334 *e*P **P 20 14 02.6 -0.3**
CABF La Chapelle 86.47 332 *e*P **P 20 14 09.5 +0.4**
LOR Lormes 86.70 334 *e*P **P 20 14 10.1 -0.1**
comp=Z,12nm,0.8s,mb4.9
LOR Lormes 86.70 334 *e*P **P 20 14 10.1 -0.1**
comp=Z,5.9nm,0.8s,mb4.9
LOR Lormes 86.70 334 *e*P **P 20 14 10.1 -0.1**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
SSF Saint Saulge 87.00 334 *e*P **P 20 14 11.6 -0.1**
comp=Z,15nm,1.1s,mb4.8
SSF Saint Saulge 87.00 334 *e*P **P 20 14 11.6 -0.1**
comp=Z,7.5nm,1.1s,mb4.8
SSF Saint Saulge 87.00 334 *e*P **P 20 14 11.6 -0.1**
SSF pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
LPL La Plagne 87.16 331 *e*P **P 20 14 12.4 -0.1**
LPG La Plagne 87.17 331 *e*P **P 20 14 12.7 +0.1**
comp=Z,16nm,1.1s,mb4.8
LPG La Plagne 87.17 331 *e*P **P 20 14 12.7 +0.1**
comp=Z,8.1nm,1.1s,mb4.9
LPG La Plagne 87.17 331 *e*P **P 20 14 12.7 +0.1**
LPG pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
SMF Signal de Mont 87.24 333 *e*P **P 20 14 13.0 +0.1**
AVF Avril sur Loir 87.29 334 *e*P **P 20 14 12.9 -0.2**
comp=Z,16nm,0.8s,mb5.0
AVF Avril sur Loir 87.29 334 *e*P **P 20 14 12.9 -0.2**
comp=Z,7.8nm,0.8s,mb5.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AVF	Avril sur Loir	87.29	334	eP	P	20 14 12.9	-0.2
AVF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
TXAR	Lajitas Array	87.59	54	P	P	20 14 16.8	+1.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	Lajitas Array	87.59	54	P	P	20 14 16.8	+1.9
	comp=Z,0.5nm,0.7s,mb3.9,baz=316,slow=7.1,SNR=3.8						
BGF	Bois d'Agland	87.66	334	eP	P	20 14 15.0	+0.1
MBDF	Montbardon	87.82	331	eP	P	20 14 15.8	+0.1
	comp=Z,15nm,1.0s,mb4.9						
MBDF	Montbardon	87.82	331	eP	P	20 14 15.8	+0.1
	comp=Z,7.6nm,1.0s,mb4.9						
MBDF	Montbardon	87.82	331	eP	P	20 14 15.8	+0.1
MBDF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
ORIF	Oris-en-Rattie	87.99	331	eP	P	20 14 16.5	0.0
TCF	Toulx Ste Croi	88.11	334	eP	P	20 14 16.6	-0.5
SBF	Sospel	88.29	330	eP	P	20 14 17.7	-0.3
	comp=Z,56nm,1.0s,mb5.5						
SBF	Sospel	88.29	330	eP	P	20 14 17.7	-0.3
	comp=Z,28nm,1.0s,mb5.5						
SBF	Sospel	88.29	330	eP	P	20 14 17.7	-0.3
SBF				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.5						
VIVF	Saint-Julien-l	88.49	332	eP	P	20 14 18.8	-0.1
LMR	La Mourre	89.09	330	eP	P	20 14 21.2	-0.6
	comp=Z,21nm,1.0s,mb5.1						
LMR	La Mourre	89.09	330	eP	P	20 14 21.2	-0.6
	comp=Z,10nm,1.0s,mb5.1						
LMR	La Mourre	89.09	330	eP	P	20 14 21.2	-0.6
LMR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
LASF	Ste Croix	89.46	332	eP	P	20 14 22.7	-0.7
	comp=Z,39nm,1.4s,mb5.2						
TORD	Torodi Ar. Bea	116.90	317	PP	PP	20 21 14.1	-5.5
	comp=Z,0.7nm,0.8s,baz=21,slow=4.9,SNR=4.4						
VNA2	Neumayer--Watz	144.79	196	ePKPdf	PKPdf	20 21 02.1	-0.1
	baz=148,slow=4.7						
VNA2				e		20 21 05.2	
VNA2				e		20 21 11.8	
VNA2				e		20 21 16.6	
VNA3	Neumayer Olymp	145.02	195	ePKPdf	PKPdf	20 21 02.0	-0.6
VNA3				e		20 21 05.4	
VNA3				e		20 21 12.2	
VNA3				e		20 21 17.5	

*CSEM **03** 20:02:34.7±0.1, 3877N×4035E, h8^{km}, MD2.9, Error ellipse: s-maj=3.5km s-min=2.0km az=166.0*
*ISK **03** 20:02:34.8, 3875N×4035E, h10^{km}, MD2.9*
*ISCJB **03** 20:02:35.2±0.6, 3870N±005×4039E±004, h10^{km}, Error ellipse: s-maj=7.2km s-min=4.4km az=159.5*
*DDA **03** 20:02:36.0, 3870N×4044E, h7^{km}±1^{km}, Md3.0*
ISC 03 20:02:35.3±0.7**, 3869N**±005×**4040E**±004**, h9**^{km}±7^{km}**, n12,** σ**0^{s}79**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	Bingol	0.19	21	i PG	Pg	20 02 38.8	-0.5
BINT				i SG	Sg	20 02 41.9	-0.1
BNGL	BINGOL	0.64	66	i P	Pg	20 02 47.5	-0.1
BNGL				i S	Sg	20 02 59.1	+3.1
PTK	Pertek	0.81	284	PG	Pg	20 02 49.7	-1.2
PTK				SG	Sg	20 03 01.3	-0.2
BTMT	Batman	0.99	120	PG	Pg	20 02 54.1	-0.2
ELZG	Elazig	1.13	260	i P	Pg	20 02 56.9	0.0
ELZG				i S	Sg	20 03 13.1	+1.6
EZC	Erzincan	1.15	337	PN	Pn	20 02 58.6	+1.1
MARD	Mardin	1.41	168	i P	Pn	20 03 00.9	-0.2
EZM	Erzurum	1.42	31	PN	Pn	20 03 01.3	0.0
ERZM	Erzurum	1.42	31	i P	Pn	20 03 00.8	-0.5
MYA	Malataya	1.59	257	ePN	Pn	20 03 03.0	-0.7
MALT	Malatya	1.59	257	ePN	Pn	20 03 03.9	+0.2
URFA	Urfa	1.77	225	ePN	Pn	20 03 06.0	0.0

*BJI **03** 20:08:26.7, 039S×12694E, h64^{km}, mB5.7, mb5.5, Ms5.0, Msz4.8*
*ISCJB **03** 20:08:27.7±0.1, 001S±002×12681E±003, h43^{km}, mb5.7/159, MS4.9/53, Error ellipse: s-maj=3.7km s-min=2.5km az=164.1*
*MOS **03** 20:08:28.9±1.4, 0.15N×12679E, h46^{km}, mb5.9/52, MS4.9/19, Error ellipse: s-maj=9.2km s-min=4.9km az=115.6*
*GCMT **03** 20:08:28.8±0.1, 006N×12690E, h22^{km}±1^{km}, MW5.9/85, Moment Tensor Solution. s84,c156; s85,c172; Duration: 2^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.50±.07; $M_{\theta\theta}$-0.13±.04; $M_{\phi\phi}$-1.37±.05; $M_{r\theta}$0.35±.09; $M_{\theta\phi}$0.34±.04; $M_{\phi r}$-8.26±.41; Best double couple: $M_0$8.39800×10^{17} NP1:ϕ_s336.00000°, δ5.00000°, λ69.00000°. NP2:ϕ_s177.00000°, δ85.00000°, λ92.00000°. Principal axes: T 8.4490, Plg50.0000°, Azm89.0000°; N -0.1010, Plg2.0000°, Azm357.0000°; P -8.3470, Plg40.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **03** 20:08:28.8±0.1, 001N×12681E, mb5.7/78, MS5.1/3, MW5.7 Error ellipse: s-maj=5.2km s-min=3.6km az=62.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}0.89; $M_{\theta\theta}$1.32; $M_{\phi\phi}$-2.21; $M_{r\theta}$0.30; $M_{\theta\phi}$-0.77; $M_{\phi r}$-3.85; Best double couple: $M_0$4.30000×10^{17} NP1: ϕ_s52.00000°, δ19.00000°, λ149.00000°. NP2: ϕ_s172.00000°, δ80.00000°, λ74.00000°. Principal axes: T 3.6900, Plg52.0000°, Azm63.0000°; N 1.1600, Plg16.0000°, Azm174.0000°; P -4.8500, Plg34.0000°, Azm275.0000°;*
NEIC Felt [V] on Ternate and [IV] at Labuha, Indonesia.
*IDC **03** 20:08:31.6±1.0, 001S×12672E, h65^{km}±7^{km}, mb5.2/31, mb1 5.2/32, mb1mx5.2/33, mbtmp5.2/32, MS4.8/13, Ms1 4.8/13, ms1mx4.6/37 Error ellipse: s-maj=11.5km s-min=6.0km az=75.0*
ISC 03 20:08:29.5±0.1**, 004S**±002×**12681E**±003**, h45**^{km}**, h45**^{km}±2.3^{km}**:pP-P, n815,** σ**1^{s}15**/676**, mb5.7**/158**, MS4.9**/53**, 62C-69D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	3.88	159	P	Pn	20 09 29.4	+2.7
	2µm,0.4s						
MATI	Mati	6.96	355	eP	Pn	20 10 10.8	+1.9
MATI				eS	Sn	20 11 29.8	+3.0
PCI	Palu	7.03	263	P	Pn	20 10 09.9	0.0
	2µm,1.1s						
DAV	Davao City (W)	7.17	350	eP	Pn	20 10 13.8	+2.0
DAV				eSn	Sn	20 11 38.0	+6.0
DAV	Davao City (W)	7.17	350	Pn	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	P	Pn	20 10 14.6	+2.8
	SNR=15						
DAV	Davao City (W)	7.17	350	⇑eP	Pn	20 10 14.0	+2.2
KCP	Kidapawan	7.21	346	⇓eP	Pn	20 10 16.3	+3.9
KCP				i S	Sn	20 11 37.8	+4.9
BUKP	Musuan	8.05	348	eP	Pn	20 10 24.4	+0.4
ZMPH	Zamboanga City	8.40	326	⇓eP	Pn	20 10 29.7	+0.9
PAGZ	Pagadian	8.54	336	eP	Pn	20 10 31.5	+0.8
KAPI	Kappang	8.61	235	Pn	Pn	20 10 33.1	+1.4
	10µm,1.0s						
BUTP	Butuan	9.02	352	eP	Pn	20 10 38.9	+1.6
DCPH	Dipolog City	9.23	338	eP	Pn	20 10 43.2	+3.0
BAKI	Biak	9.37	97	P	Pn	20 10 47.2	+5.2
	7µm,1.5s						
MYLDM	Lahad Datu	9.78	302	⇓P	Pn	20 10 51.0	+3.3
TARAI	Tarakan	9.82	290	P	Pn	20 10 49.0	+0.8
	1µm,1.1s						
SCPH	Surigao	9.84	352	⇓eP	Pn	20 10 48.9	+0.4
TSM	Tawau	9.91	296	⇓P	Pn	20 10 50.4	+1.0
TBP	Tagbilaran	10.10	343	eP	Pn	20 10 52.6	+0.6
MSLP	Maasin	10.29	349	eP	Pn	20 10 54.6	0.0
BATI	Kupang	10.58	197	P	Pn	20 11 02.9	+4.3
	5.4nm,0.3s,baz=27,slow=3.6,SNR=8.8						
LLP	Lapu-Lapu	10.67	345	⇑eP	Pn	20 11 00.9	+1.0
	266µm,2.0s						
LLP				eS	Sn	20 12 60.0	+2.0
SDKM	Sandakan	11.13	301	⇓P	Pn	20 11 07.4	+1.2
OCLP	Ormoc	11.23	349	eP	Pn	20 11 08.3	+0.8
PLP	Palo	11.28	351	eP	Pn	20 11 08.4	+0.2
GUIM	Jordan	11.39	339	eP	Pn	20 11 10.6	+0.8
KDM	Kudat	12.11	305	⇑P	Pn	20 11 23.2	+3.6
KKM	Kota Kinabalu	12.18	300	⇓iP	Pn	20 11 21.7	+1.2
KKM	Kota Kinabalu	12.18	300	⇓P	Pn	20 11 22.2	+1.7
RCP	Roxas	12.21	341	⇓eP	Pn	20 11 22.1	+1.2
CUYO	Cuyo Island	12.25	332	eP	Pn	20 11 22.7	+1.2
KALP	Kalibo	12.46	339	eP	Pn	20 11 30.0	+5.7
BATP	Bataraza	12.55	315	eP	Pn	20 11 25.0	-0.6
ENPP	El Nido	13.36	327	eP	Pn	20 11 37.0	+0.3
BUSP	Coron	13.64	331	eP	Pn	20 11 41.2	+0.7
PVCP	Virac	13.80	349	⇑eP	Pn	20 11 42.0	-0.6
PVCP	Virac	13.80	349	eP	Pn	20 11 42.5	-0.1
BTM	Bintulu	14.09	283	⇓P	Pn	20 11 47.1	+0.5
KMMI	Kalianget	14.58	241	P	Pn	20 11 58.2	+5.0
	1µm,1.6s						
SBUM	Sibu	14.79	280	⇓P	Pn	20 11 55.9	-0.1
LUBP	Lubang	15.15	335	eP	Pn	20 12 01.3	+0.7
POLP	Polilio Island	15.44	342	eP	Pn	20 12 03.4	-1.0
MMPI	Merauke	15.91	122	P	Pn	20 12 13.2	+2.8
	1µm,2.0s						
KRKI	Karangkates	16.43	240	P	Pn	20 12 19.9	+2.8
	2µm,2.2s						
BALP	Baler	16.51	342	eP	Pn	20 12 18.7	+0.7
KSM	Kuching	16.57	275	⇓iP	Pn	20 12 17.6	-1.2
KSM				eScP	ScP	20 20 37.1	-2.1
KSM	Kuching	16.57	275	⇓P	Pn	20 12 18.5	-0.4
SCZP	Santa Cruz	17.12	337	eP	Pn	20 12 23.9	-1.9
BCPH	Baguio City Da	17.43	340	⇓eP	Pn	20 12 30.9	+1.4
	136µm,25.0s						
CAUP	Cauayan	17.57	344	eP	Pn	20 12 30.9	-0.4
FITZ	Fitzroy Crossi	17.99	184	eP	Pn	20 12 37.0	+0.6
	330nm,1.7s						
FITZ				eS	S	20 15 56.6	-4.1
FITZ				eSCP	ScP	20 20 40.3	-1.7
FITZ				eSCS	ScS	20 24 19.6	-3.1
FITZ	Fitzroy Crossi	17.99	184	P	Pn	20 12 37.0	+0.6
	7.5nm,0.3s,baz=16,slow=11,SNR=47						
FITZ				S	S	20 15 55.1	-5.5
	0.6nm,0.3s,baz=242,slow=18,SNR=4.9						
FITZ				LR	LR	20 20 19.2	
	comp=Z,719nm,20.6s,baz=9.0,slow=39						
FITZ				ScP	ScP	20 20 39.5	-2.5
	1.8nm,0.3s,baz=54,slow=3.2,SNR=9.8						
BJII	Banjamegara	18.53	247	P	Pn	20 12 45.0	+1.9
	3µm,1.7s						
ABRA	Dolores	18.57	341	eP	Pn	20 12 41.2	-2.3
APYP	Conner	18.61	343	eP	Pn	20 12 42.2	-1.7
TPI	Tanjungpandan	19.34	262	P	Pn	20 12 50.0	-2.8
	575nm,1.5s						
LEM	Lembang	20.30	250	P	P	20 13 03.5	+1.6
	3µm,0.7s						
WRA	Warramunga Arr	21.11	160	P	P	20 13 10.4	-0.2
WRA				S	S	20 16 58.5	-4.7
WRA				ScP	ScP	20 20 47.1	-2.1
WRA				ScS	ScS	20 24 28.5	-4.6
WRA	Warramunga Arr	21.11	160	P	P	20 13 10.4	-0.2
WRA				S	S	20 16 58.5	-4.7
WRA						20 24 28.5	
WRA	Warramunga Arr	21.11	160	P	P	20 13 10.4	-0.2
	162nm,0.4s,mb5.7,baz=338,slow=11,SNR=544						
WRA				S	S	20 16 58.5	-4.7
	32nm,0.9s,baz=338,slow=20,SNR=5.9						
WRA				ScP	ScP	20 20 47.1	-2.1
	11nm,0.6s,baz=329,slow=2.4,SNR=17						
WRA				ScS	ScS	20 24 28.5	-4.6
	4.5nm,0.9s,baz=269,slow=2.4,SNR=6.9						
WRA				P3KPbc		20 47 09.8	
	0.6nm,0.5s,baz=154,slow=3.7,SNR=14						
WB2	Warramunga Arr	21.12	160	⇑iP	P	20 13 10.2	-0.4
WB2				eS	S	20 16 58.6	-4.6
WB2				eSCP	ScP	20 20 47.6	-1.6
WB2				eSCS	ScS	20 24 29.2	-3.9
SBJI	Serang	21.51	253	P	P	20 13 14.2	-0.7
	2µm,1.9s,mb6.2						
MBWA	Marble Bar	22.10	198	eP	P	20 13 21.2	0.0
	246nm,1.3s,mb5.5						
MBWA				ePcP	PcP	20 17 17.2	-0.4
MBWA				eS	S	20 17 21.3	-1.1
MBWA				eScP	ScP	20 20 49.0	-2.6
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
MBWA	Marble Bar	22.10	198	P	P	20 13 22.2	+1.1
	SNR=12						
PMG	Port Moresby	22.29	115	⇑eP	P	20 13 22.2	-1.0
	288nm,1.1s,mb5.6						
PMG				eScP	ScP	20 20 49.7	-2.6
PMG	Port Moresby	22.29	115	⇑eP	P	20 13 22.4	-0.9
PMG	Port Moresby	22.29	115	P	P	20 13 24.9	+1.7
	41nm,0.6s,mb5.0,baz=341,slow=7.6,SNR=32						
GUMO	Guam	22.43	52	LR	LR	20 21 05.3	
	comp=Z,11µm,20.8s,MS5.3,baz=239,slow=34						
MYKOM	Kota Tinggi	23.03	275	⇑P	P	20 13 29.8	-1.3
XMIS	Christmas Isla	23.46	243	⇓iP	P	20 13 34.4	-1.0
KGM	Kluang	23.57	275	⇓P	P	20 13 35.4	-1.1
KTGM	Kuala Trenggan	24.23	283	⇑P	P	20 13 42.8	+0.3
KSI	Kapahiang	24.47	261	P	P	20 13 44.3	-0.3
	482nm,0.8s,mb6.0						
ASAR	Alice Springs	24.48	164	P	P	20 13 44.9	+0.4
ASAR				S	S	20 18 02.1	+0.1
ASAR				ScP	ScP	20 20 56.2	-1.6
ASAR				ScS	ScS	20 24 41.9	-3.8
ASAR	Alice Springs	24.48	164	P	P	20 13 44.9	+0.4
ASAR				S	S	20 18 02.1	+0.1
ASAR						20 24 41.9	
ASAR	Alice Springs	24.48	164	P	P	20 13 44.9	+0.4
	410nm,0.5s,mb6.1,baz=340,slow=10.0,SNR=1800						
ASAR				S	S	20 18 02.1	+0.1
	107nm,0.9s,baz=347,slow=17,SNR=21						
ASAR				ScP	ScP	20 20 56.2	-1.6
	12nm,0.5s,baz=342,slow=2.5,SNR=18						
ASAR				ScS	ScS	20 24 41.9	-3.8
	3.9nm,0.8s,baz=0.1,slow=4.2,SNR=9.6						
ASAR				P3KPbc		20 46 55.2	
	0.6nm,0.9s,baz=145,slow=4.6,SNR=5.8						
NACB	Ninganchiao	24.59	348	eP	P	20 13 44.6	-1.0
YHNB	Yeheng	25.12	348	eP	P	20 13 49.6	-0.7
YHNB				eS	S	20 18 14.0	+1.8
QIZ	Qiongzhong	25.23	320	P	P	20 13 51.3	-0.1
QIZ				XP	sP	20 14 10.9	+2.4
QIZ				S	S	20 18 10.6	-3.4
QIZ				XS	sS	20 18 35.8	+2.0
QIZ				AMB	AMB		
	comp=Z,236nm,1.0s,mb5.7						
QIZ				AMB	AMB		
	comp=Z,1µm,4.9s						
QIZ				LR	LR		
	comp=Z,4µm,28.7s,MS4.8						
QIZ	Qiongzhong	25.23	320	eP	P	20 13 50.3	-1.1
	comp=Z,494nm,1.3s,mb5.9						
FRIM	Kepong	25.38	278	⇓P	P	20 13 53.0	+0.1
TATO	Taipei	25.39	349	eP	P	20 13 52.3	-0.6
	comp=Z,262nm,1.0s,mb5.7						
QZH	Quanzhou	26.07	343	⇓iP	P	20 14 00.8	+1.8
QZH				S	S	20 18 27.8	+0.5
QZH				AMB	AMB		
	comp=Z,180nm,0.7s,mb5.7						
QZH				AMB	AMB		
	comp=Z,2µm,5.9s						
QZH				LR	LR		
	comp=N,2µm,12.1s						
QZH				LR	LR		
	comp=E,1µm,7.8s						
QZH				LR	LR		
	comp=Z,2µm,14.3s,MS4.8						
IPM	Ipoh	26.15	280	⇑P	P	20 13 59.9	0.0
UBT	Ubonrachathani	26.35	306	⇑P	P	20 14 04.0	+2.4
PPI	Padang Panjang	26.42	269	P	P	20 14 01.3	-1.0
	comp=Z,404nm,1.2s,mb5.8						
GZH	Guangzhou	26.45	331	P	P	20 14 03.6	+1.1
GZH				S	S	20 18 37.1	+3.7
GZH				AMB	AMB		
	comp=Z,92nm,1.0s,mb5.3						
GZH				LR	LR		
	comp=N,2µm,19.9s,MS4.7						
GZH				LR	LR		
	comp=E,1µm,20.2s,MS4.7						
GZH				LR	LR		
	comp=Z,3µm,31.7s						
KULM	Kulim	26.65	282	⇓eP	P	20 14 03.3	-1.2
KULM	Kulim	26.65	282	⇑P	P	20 14 04.2	-0.2
JOW	Kunigami	26.75	3	P	P	20 14 06.2	+1.1
	comp=Z,168nm,0.7s,mb5.7,baz=187,slow=8.8,SNR=29						
SNG	Songkhla	27.09	286	P	P	20 14 08.0	-0.4
	comp=Z,254nm,1.0s,mb5.7						
CTA	Charters Tower	27.56	137	⇑iP	P	20 14 13.7	+1.2
	comp=Z,52nm,0.6s,mb5.3						
CTA				eSCP	ScP	20 21 06.6	-0.3
CTA	Charters Tower	27.56	137	⇑iP	P	20 14 13.7	+1.2
CTA				pmax	pmax		
	comp=Z,52nm,0.6s						
CTA	Charters Tower	27.56	137	P	P	20 14 13.7	+1.2
	comp=Z,80nm,0.7s,mb5.4,baz=329,slow=12,SNR=48						
CTA				ScP	ScP	20 21 05.6	-1.3
	comp=Z,18nm,0.7s,baz=262,slow=9.1,SNR=8.0						
CTAO	Charters Tower	27.56	137	⇑eP	P	20 14 13.3	+0.8
	comp=Z,141nm,1.0s,mb5.5						
CTAO				eScP	ScP	20 21 06.3	-0.6
CTAO	Charters Tower	27.56	137	⇑eP	P	20 14 13.3	+0.8
CTAO				pmax	pmax		
	comp=Z,141nm,1.0s,mb5.5						
PSI	Prapat	28.02	276	P	P	20 14 15.4	-1.2
	comp=Z,80nm,0.6s,mb5.5,baz=116,slow=4.9,SNR=78						
PSI				ScP	ScP	20 21 06.4	-2.1
	comp=Z,6.5nm,0.7s,baz=82,slow=4.6,SNR=6.0						
TSI	Tuntungan	28.45	277	P	P	20 14 19.5	-1.0
	comp=Z,255nm,0.9s,mb5.8						
KKTK	Khon Kaen	28.71	306	⇓P	P	20 14 22.0	-0.8
	comp=Z,25nm,22.0s						
FORT	Forrest	30.60	178	eP	P	20 14 39.6	+0.3
	comp=Z,239nm,0.7s,mb6.1						
FORT				ePCP	PcP	20 17 37.3	+0.1
FORT				eSCP	ScP	20 21 15.0	-1.3
NST	Nakhon Sawan	30.62	302	⇑P	P	20 14 39.0	-0.7
	comp=Z,122nm,1.0s,mb5.7						
CBIJ	Chichi jima	30.76	28	P	P	20 14 40.4	-0.4
	comp=Z,89nm,0.3s,mb6.0,baz=258,slow=23,SNR=6.1						
SSE	Sheshan	31.42	351	P	P	20 14 48.3	+1.8
SSE				XP	sP	20 15 06.7	+2.9
SSE				S	S	20 19 50.4	-0.8
SSE				AMB	AMB		
	comp=Z,45nm,1.0s,mb5.2						
SSE				AMB	AMB		
	comp=Z,383nm,7.0s						
SSE				LR	LR		
	comp=N,932nm,36.5s,MS4.5						
SSE				LR	LR		
	comp=E,2µm,35.4s,MS4.5						
SSE				LR	LR		
	comp=Z,1µm,29.2s						
SSE	Sheshan	31.42	351	P	P	20 14 48.3	+1.8
	comp=Z,45nm,1.0s,mb5.2						
SSE				sP	sP	20 15 06.7	+2.9
SSE				S	S	20 19 50.4	-0.8
SSE				sS	sS	20 20 12.6	+1.4
SSE				LR	LR		
	comp=Z,1µm,29.2s,MS4.4						
BSI	Banda Aceh	31.94	280	P	P	20 14 48.5	-2.9
	comp=Z,158nm,1.3s,mb5.7						
COCO	West Island	32.10	247	P	P	20 14 52.3	-0.5
	comp=Z,107nm,0.6s,mb5.8						
BDT	Bhumibol Dam	32.32	304	P	P	20 14 55.0	+0.3
	comp=Z,33nm,0.8s,mb5.2						
KLBR	Kellerberrin	32.53	194	eP	P	20 14 56.4	0.0
	comp=Z,66nm,0.7s,mb5.7						
KLBR				ePCP	PcP	20 17 42.7	+0.3
KLBR				eS	S	20 20 02.4	-6.3
KLBR				eSCP	ScP	20 21 21.0	-1.8
WHN	Wuhan	32.64	340	P	P	20 14 58.7	+1.4
WHN				XP	sP	20 15 22.7	+8.2
WHN				PP	PP	20 16 07.2	-4.5
WHN				S	S	20 20 12.4	+2.1
WHN				AMB	AMB		
	comp=Z,86nm,0.7s,mb5.8						
WHN				AMB	AMB		
	comp=Z,1µm,7.4s						
WHN				LR	LR		
	comp=Z,2µm,19.4s,MS4.9						
GYA	Guiyang	32.72	325	⇑iP	P	20 15 00.8	+2.7
GYA				AP	pP	20 15 13.8	+3.8
GYA				XP	sP	20 15 19.2	+3.9
GYA				PP	PP	20 16 11.8	-0.9
GYA				PCP	PcP	20 17 45.3	+2.3
GYA				S	S	20 20 14.0	+2.3
GYA				XS	sS	20 20 35.8	+4.1
GYA				SS	SS	20 22 14.6	-19
GYA				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.7						
GYA				AMB	AMB		
	comp=Z,1µm,6.8s						
GYA				LR	LR		
	comp=N,2µm,18.0s,MS5.1						
GYA				LR	LR		
	comp=E,3µm,17.6s,MS5.1						
GYA				LR	LR		
	comp=Z,2µm,18.4s,MS4.8						
NJ2	Nanjing	32.79	347	eP	P	20 15 00.7	+2.1
NJ2				AP	pP	20 15 13.6	+3.1
NJ2				XP	sP	20 15 18.3	+2.5
NJ2				PP	PP	20 16 11.7	-1.7
NJ2				S	S	20 20 14.0	+1.4
NJ2				AMB	AMB		
	comp=Z,120nm,0.8s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,740nm,11.6s						
NJ2				LR	LR		
	comp=N,5µm,30.5s,MS5.1						
NJ2				LR	LR		
	comp=E,4µm,31.5s,MS5.1						
NJ2				LR	LR		
	comp=Z,4µm,31.5s,MS4.9						
CM31	Chiang Mai Arr	32.97	305	eP	P	20 14 59.9	-0.4
CHG	Chiang Mai	33.16	306	⇓P	P	20 15 01.3	-0.7
	comp=Z,134nm,1.2s,mb5.8						
CHTO	Chiang Mai	33.16	306	⇓iP	P	20 15 01.1	-0.9
	comp=Z,59nm,1.0s,mb5.5						
CHTO				ePP	PP	20 16 16.0	-1.6
CHTO				ePcP	PcP	20 17 43.7	-0.6
CHTO				eScP	ScP	20 21 24.0	-1.2
CHTO	Chiang Mai	33.16	306	⇓iP	P	20 15 01.1	-0.9
CHTO				e		20 16 16.0	
CHTO				e		20 17 43.7	
CHTO				pmax	pmax		
	comp=Z,59nm,1.0s,mb5.5						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4
	SNR=33						
CHTO	Chiang Mai	33.16	306	P	P	20 15 01.6	-0.4

SNR=33
CHTO Chiang Mai 33.16 306 P P 20 15 01.6 -0.4
SNR=33
CHTO Chiang Mai 33.16 306 P P 20 15 01.6 -0.4
SNR=33
CHTO Chiang Mai 33.16 306 P P 20 15 01.6 -0.4
SNR=33
JNU Nakatsue 33.20 6 P P 20 15 01.4 -0.8
comp=Z,109nm,1.1s,mb5.7,baz=175,slow=8.7,SNR=31
MUN Mundaring 33.31 197⇑ *iP* **P 20 15 03.4 +0.2**
MUN *eS* **S 20 20 15.9 -4.9**
MUN *e*SCP ScP 20 21 23.7 -1.8
MUN Mundaring 33.31 197⇑ *iP* **P 20 15 03.4 +0.2**
MUN *eS* **S 20 20 15.9 -4.9**
NWAO Narrogin (SRO) 33.94 195 *eP* **P 20 15 07.9 -0.7**
comp=Z,40nm,0.8s,mb5.4
NWAO *e*ScP ScP 20 21 25.8 -1.9
NWAO Narrogin (SRO) 33.94 195 P P 20 15 09.2 +0.6
NWAO pmax pmax
comp=Z,40nm,0.8s
NWAO Narrogin (SRO) 33.94 195 P P 20 15 08.9 +0.3
comp=Z,18nm,0.5s,mb5.2,baz=21,slow=8.0,SNR=23
NWAO ScP ScP 20 21 25.9 -1.8
comp=Z,29nm,0.7s,baz=29,slow=2.2,SNR=12
KMI Kunming 34.17 319 P P 20 15 11.4 +0.7
KMI AP pP 20 15 23.9 +1.2
KMI XP sP 20 15 30.1 +2.1
KMI PP PP 20 16 27.3 -1.4
KMI S **S 20 20 29.8 -4.4**
KMI AMB AMB
comp=Z,44nm,1.4s,mb5.2
KMI AMB AMB
comp=Z,431nm,6.5s
KMI LR LR
comp=N,1μm,19.6s,MS4.8
KMI LR LR
comp=E,1μm,18.9s,MS4.8
KMI LR LR
comp=Z,2μm,35.5s
KMI Kunming 34.17 319 P P 20 15 11.4 +0.7
comp=Z,44nm,1.4s,mb5.2
KMI pP pP 20 15 23.9 +1.2
KMI sP sP 20 15 30.1 +2.1
KMI PP PP 20 16 27.3 -1.4
KMI PPP 20 16 38.5
KMI S **S 20 20 29.8 -4.4**
KMI sS sS 20 20 51.9 -2.3
KMI SS SS 20 22 39.8 -24
KMI SSS 20 23 02.6
KMI LR LR
comp=Z,2μm,35.5s,MS4.7
KMI Kunming 34.17 319 P P 20 15 11.4 +0.7
KMI *PP pP 20 15 23.9 +1.2
KMI *SP sP 20 15 30.1 +2.1
KMI 20 16 27.3
KMI PPP 20 16 38.5
KMI S **S 20 20 29.8 -4.4**
KMI *SS sS 20 20 51.9 -2.3
KMI SS SS 20 22 39.8 -24
KMI SSS 20 23 02.6
KMI pmax pmax
comp=Z,44nm,1.4s,mb5.2
KMI MLR MLR
comp=Z,2μm,35.5s,MS4.7
HNR Honiara 34.28 107⇑ *eP* **P 20 15 11.6 -0.3**
comp=Z,1μm,1.4s,mb6.7
HNR Honiara 34.28 107 P P 20 15 11.8 0.0
comp=Z,228nm,0.6s,mb6.3,baz=272,slow=1.7,SNR=25
EIDS Eidsvold 34.41 139⇑ *iP* **P 20 15 12.2 -0.6**
comp=Z,90nm,1.4s,mb5.5
EIDS *e*PP PP 20 16 30.1 -1.4
STKA Stephens Creek 34.62 158⇑ *iP* **P 20 15 15.0 +0.5**
comp=Z,156nm,0.7s,mb6.0
STKA *eS* **S 20 20 38.7 -2.3**
STKA *e*SCS ScS 20 25 28.1 -5.1
STKA Stephens Creek 34.62 158 P P 20 15 15.1 +0.6
comp=Z,192nm,0.6s,mb6.2,baz=330,slow=8.5,SNR=373
STKA S **S 20 20 37.8 -3.2**
comp=Z,9.5nm,0.6s,baz=225,slow=22,SNR=4.8
STKA ScP ScP 20 21 28.1 -2.1
comp=Z,9.6nm,0.8s,baz=266,slow=9.1,SNR=3.9
STKA LR LR 20 31 04.5
comp=Z,3μm,21.2s,MS5.0,baz=337,slow=39
TIA Tai'an 37.17 347 *eP* **P 20 15 36.8 +0.5**
TIA AMB AMB
comp=Z,61nm,0.8s,mb5.5
KSRS Korea Array 37.32 1 P P 20 15 38.0 +0.5
comp=Z,27nm,0.6s,mb5.2,baz=175,slow=9.1,SNR=117
KSRS PcP PcP 20 17 56.5 +0.4
comp=Z,7.3nm,0.6s,baz=185,slow=2.6,SNR=8.9
KSRS ScP ScP 20 21 37.3 -2.6
comp=Z,6.5nm,0.7s,baz=184,slow=3.3,SNR=15
INCN Inchon 37.33 360 *eP* **P 20 15 38.5 +0.8**
comp=Z,33nm,0.6s,mb5.3
CD2 Chengdu 37.76 327 P P 20 15 41.2 -0.2
CD2 AP pP 20 15 54.4 +0.9
CD2 PP PP 20 17 10.3 +2.0
CD2 PCP PcP 20 17 57.5 -0.2
CD2 S **S 20 21 26.4 -2.7**
CD2 SCS ScS 20 25 47.0 -3.7
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
CD2 AMB AMB
comp=Z,210nm,5.1s
CD2 LR LR
comp=N,770nm,16.8s,MS4.9
CD2 LR LR
comp=E,1μm,14.4s,MS4.9
CD2 LR LR
comp=Z,1μm,24.6s
XAN Xi'an 37.82 335 P P 20 15 41.5 -0.3
XAN XP sP 20 16 04.1 +4.9
XAN AMB AMB
comp=Z,143nm,1.2s,mb5.6
XAN AMB AMB
comp=Z,365nm,6.8s
XAN LR LR
comp=N,546nm,25.1s
XAN LR LR
comp=E,1μm,30.7s
XAN LR LR
comp=Z,1μm,26.8s,MS4.6
MAJO Matsushiro 37.90 15⇑ *iP* **P 20 15 40.8 -1.6**
comp=Z,40nm,0.6s,mb5.3
MAJO *e*PcP PcP 20 17 58.2 +0.3
MAJO *eS* **S 20 21 24.5 -6.5**
MAJO *e*ScP ScP 20 21 39.6 -2.5
MAJO Matsushiro 37.90 15⇑ *iP* **P 20 15 40.8 -1.7**
MAJO *e* 20 17 58.2
MAJO *eS* **S 20 21 24.5 -6.5**
MAJO pmax pmax
comp=Z,40nm,0.6s,mb5.3
MAT Matsushiro 37.90 15 P P 20 15 40.6 -1.9
MAT S **S 20 21 24.0 -7.0**
MJAR Matsushiro Arr 37.90 15 P P 20 15 40.9 -1.6
MJAR PcP PcP 20 17 58.2 +0.2
MJAR S **S 20 21 25.4 -5.5**
MJAR ScP ScP 20 21 40.0 -2.2
MJAR LR LR 20 31 36.2
MJAR Matsushiro Arr 37.90 15 P P 20 15 40.9 -1.6
MJAR 20 17 58.2
MJAR S **S 20 21 25.4 -5.6**
MJAR Matsushiro Arr 37.90 15 P P 20 15 40.9 -1.6
comp=Z,30nm,0.6s,mb5.2,baz=187,slow=9.0,SNR=241
MJAR PcP PcP 20 17 58.2 +0.2
comp=Z,15nm,0.7s,baz=177,slow=3.0,SNR=8.5
MJAR S **S 20 21 25.4 -5.5**
comp=Z,1.6nm,0.9s,baz=167,slow=8.5,SNR=3.6
MJAR ScP ScP 20 21 40.0 -2.2
comp=Z,8.2nm,0.7s,baz=180,slow=5.7,SNR=19
MJAR LR LR 20 31 36.2
comp=Z,918nm,18.7s,MS4.6,baz=205,slow=36
ARMA Armidale 38.34 144⇑ *iP* **P 20 15 47.4 +1.1**
ARMA *e*PP PP 20 17 18.1 +3.5
ARMA *eS* **S 20 21 35.7 -2.1**
DL2 Dalian 39.04 354 P P 20 15 52.1 +0.1
DL2 AP pP 20 16 06.4 +2.3
DL2 S **S 20 21 46.0 -2.2**
DL2 AMB AMB
comp=Z,60nm,0.6s,mb5.5
DL2 AMB AMB
comp=Z,200nm,6.5s
DL2 LR LR
comp=N,630nm,16.4s,MS4.9
DL2 LR LR
comp=E,1μm,16.4s,MS4.9
DL2 LR LR
comp=Z,840nm,16.7s,MS4.6
RIV Riverview 40.65 148 *eP* **P 20 16 07.5 +2.1**
RIV *e*PP PP 20 17 42.0 +2.2
CNB Canberra Magne 40.92 151 *eP* **P 20 16 08.8 +1.1**
comp=Z,275nm,1.8s,mb5.6
CNB *e*PP PP 20 17 47.2 +4.5
TOO Toolangi 41.14 157 *eP* **P 20 16 11.1 +1.7**
comp=Z,85nm,1.6s,mb5.1
TOO *e*PP PP 20 17 44.3 -0.8
TOO *eS* **S 20 22 23.3 +3.7**
TOO Toolangi 41.14 157 *eP* **P 20 16 11.1 +1.7**
TOO *e* 20 17 44.3
TOO *eS* **S 20 22 23.3 +3.7**
TOO pmax pmax
comp=Z,85nm,1.6s,mb5.1
LZH Lanzhou 41.80 332⇓ *iP* **P 20 16 16.1 +1.2**
LZH PP PP 20 17 59.0 +6.7
LZH PCP PcP 20 18 11.6 +1.1
LZH *eS* **S 20 22 28.1 -1.4**
LZH AMB AMB
comp=Z,264nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,690nm,4.4s
LZH LR LR
comp=E,1μm,14.7s
LZH LR LR
comp=Z,3μm,16.9s,MS5.2
LZH Lanzhou 41.80 332⇓ *iP* **P 20 16 16.1 +1.2**
comp=Z,264nm,1.5s,mb5.7
LZH pP pP 20 16 25.0 -2.1
LZH sP sP 20 16 31.0 -1.3
LZH PP PP 20 17 59.0 +6.7
LZH PcP PcP 20 18 11.6 +1.1
LZH *eS* **S 20 22 28.1 -1.4**
LZH sS sS 20 22 49.1 -0.7
LZH SS SS 20 25 28.0 -8.9
LZH LR LR
comp=Z,3μm,16.9s,MS5.2
LZH Lanzhou 41.80 332⇓ *iP* **P 20 16 16.1 +1.2**
LZH *SP sP 20 16 31.0 -1.3
LZH 20 17 59.0
LZH 20 18 11.6
LZH *eS* **S 20 22 28.1 -1.4**
LZH *SS sS 20 22 49.1 -0.7
LZH SS SS 20 25 28.0 -8.9
LZH pmax pmax
comp=Z,264nm,1.5s,mb5.7
LZH MLR MLR
comp=Z,3μm,16.9s,MS5.2
AGT Agartala 41.89 307 *eP* **P 20 16 12.0 -3.8**
AGT *ex* x 20 16 35.0
SHL Shillong 42.25 310 *i* P **P 20 16 19.0 +0.3**
SHL *ex* x 20 21 20.0
HHC Hu-ho-hao-te 42.99 343 *eP* **P 20 16 25.5 +1.1**
HHC AP pP 20 16 41.8 +5.1
HHC XP sP 20 16 47.9 +6.0
HHC PP PP 20 18 08.7 +3.7
HHC PCP PcP 20 18 15.8 +1.5
HHC SCP ScP 20 21 59.4 -2.6
HHC PCS PcS 20 22 06.5 0.0
HHC S **S 20 22 44.6 -2.1**
HHC XS sS 20 23 12.6 +5.4
HHC SS SS 20 25 52.4 -7.7
HHC SCS ScS 20 26 17.9 -3.5
HHC AMB AMB
comp=Z,75nm,0.6s,mb5.6
HHC AMB AMB
comp=Z,1μm,5.7s
HHC LR LR
comp=N,758nm,17.8s,MS4.9
HHC LR LR
comp=E,1μm,17.8s,MS4.9
HHC LR LR
comp=Z,2μm,26.1s
VLA Vladivostok 43.20 5*d* *iP* **P 20 16 25.3 -0.9**
VLA *i* S **S 20 22 47.8 -2.0**
VLA *e**SS sS 20 23 04.8 -5.5
VLA pmax pmax
comp=Z,198nm,1.9s,mb5.5
VLA MLR MLR
comp=Z,2μm,20.1s,MS4.9
BTO Baotou 43.24 341 *eP* **P 20 16 25.1 -1.4**
BTO AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 Changchun 43.66 359 *eP* **P 20 16 29.6 -0.2**
CN2 *e*AP pP 20 16 41.5 -0.6
CN2 PCP PcP 20 18 16.1 -0.4
CN2 SCP ScP 20 22 02.7 -1.9
CN2 *eS* **S 20 22 56.5 0.0**
CN2 AMB AMB
comp=Z,40nm,0.6s,mb5.3
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,500nm,20.0s,MS4.9
CN2 LR LR
comp=E,1μm,20.0s,MS4.9
CN2 LR LR
comp=Z,800nm,21.0s,MS4.6
ERM Erimo 44.38 17 *eP* **P 20 16 35.0 -0.6**
comp=Z,111nm,1.3s,mb5.4
ERM Erimo 44.38 17 *eP* **P 20 16 34.0 -1.7**
DZM Mont Dzumac 44.39 122 P **P 20 16 36.2 +0.2**
comp=Z,51nm,0.9s,mb5.2,baz=294,slow=7.2,SNR=12
MDJ Mudanjiang 44.53 3 P **P 20 16 37.1 +0.3**
MDJ SCP ScP 20 22 06.0 -2.2
MDJ PCS PcS 20 22 11.7 -1.0
MDJ S **S 20 23 06.5 -2.6**
MDJ AMB AMB
comp=Z,96nm,1.3s,mb5.5
MDJ AMB AMB
comp=Z,352nm,9.2s
MDJ LR LR
comp=N,841nm,37.5s
MDJ LR LR
comp=E,1μm,31.1s
MDJ LR LR
comp=Z,1μm,37.8s,MS4.5
LSA Lhasa 45.04 314 P **P 20 16 42.1 +1.0**
LSA XP sP 20 17 02.6 +4.0
LSA PP PP 20 18 29.4 +2.3
LSA S **S 20 23 14.1 -2.9**
LSA LR LR
comp=N,910nm,38.0s,MS4.8
LSA LR LR
comp=E,2μm,35.7s,MS4.8
LSA LR LR
comp=Z,3μm,33.0s,MS5.0
LSA Lhasa 45.04 314⇓ *iP* **P 20 16 41.8 +0.7**
comp=Z,154nm,0.6s,mb6.0
LSA *e*ScP ScP 20 22 08.3 -2.3
LSA *eS* **S 20 23 14.5 -2.5**
LSA Lhasa 45.04 314⇓ *iP* **P 20 16 41.8 +0.7**
LSA *eS* **S 20 23 14.5 -2.5**
LSA pmax pmax
comp=Z,154nm,0.6s,mb6.0
ASAJ Asahikawa 46.16 16 ScP ScP 20 22 12.6 -2.3
comp=Z,6.1nm,0.7s,baz=283,slow=3.5,SNR=4.3
TAPN Taplejung 46.37 309 *eP* **P 20 16 51.3 -0.4**
comp=Z,177nm,0.7s,mb6.1
GTA Gaotai 46.38 331 ⇓P **P 20 16 52.4 +0.9**
GTA AP pP 20 17 04.4 +0.6
GTA PCP PcP 20 18 27.2 +1.2
GTA SCP ScP 20 22 15.8 -0.2
GTA S **S 20 23 35.6 -0.4**
GTA SCS ScS 20 26 40.3 -2.8
GTA SS SS 20 26 55.2 -7.0
GTA AMB AMB
comp=Z,110nm,0.6s,mb6.0
GTA AMB AMB
comp=Z,452nm,5.7s
GTA LR LR
comp=N,1μm,22.1s,MS5.0
GTA LR LR
comp=E,1μm,20.5s,MS5.0
GTA LR LR
comp=Z,2μm,26.6s
ODAN Odare 46.38 308 *eP* **P 20 16 51.4 -0.4**
comp=Z,284nm,0.7s,mb6.3
PALK Pallekele 46.55 280 P **P 20 16 52.5 -0.8**
comp=Z,347nm,0.9s,mb6.3,SNR=14
PALK Pallekele 46.55 280⇓ *iP* **P 20 16 52.0 -1.3**
comp=Z,48nm,0.8s,mb5.5
PALK *e*ScP ScP 20 22 16.2 -1.1
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
PALK Pallekele 46.55 280 P **P 20 16 53.3 0.0**
SNR=8.6
JIRN Jiri 47.70 309 *eP* **P 20 17 01.9 -0.2**
comp=Z,96nm,0.6s,mb6.0
MDRS Chennai 47.95 288 *eP* **P 20 17 00.5 -3.6**
MDRS *ex* x 20 18 54.5
KKN Kakani 48.48 308 *eP* **P 20 17 07.5 -0.5**
comp=Z,143nm,0.6s,mb6.2
KKN Kakani 48.48 308 *eP* **P 20 17 07.5 -0.5**
KKN pmax pmax
comp=Z,143nm,0.6s,mb6.2
YSS Yuzh-Sakhalins 48.84 14 *eP* **P 20 17 09.7 -0.7**
comp=Z,43nm,0.8s,mb5.5
YSS *e* pP 20 17 20.2 -2.6
YSS Yuzh-Sakhalins 48.84 14*eP* **P 20 17 09.8 -0.6**
YSS *e* pP 20 17 19.0 -3.8
YSS *e* 20 18 35.0
YSS *eS* **S 20 24 07.0 -3.6**
YSS *e* 20 26 55.0
YSS pmax pmax
comp=Z,70nm,1.1s,mb5.6
YSS MLR MLR
comp=Z,600nm,18.0s,MS4.6
HABR Khabarovsk 48.84 7⇑ *iP* **P 20 17 11.0 +0.5**
HABR *e* pP 20 17 22.9 0.0
HABR *e* 20 18 33.1
HABR *e* 20 19 04.8
HABR *eS* **S 20 24 09.7 -1.0**
HABR *e* 20 24 30.9
HABR *e* 20 26 56.3
HABR pmax pmax
comp=Z,178nm,1.5s,mb5.9
GKN Gorkha 49.08 308 *eP* **P 20 17 12.1 -0.6**
comp=Z,175nm,0.8s,mb6.1
KLR Kul'dur 49.26 4⇓ *iP* **P 20 17 09.8 -3.8**
KLR *eS* **S 20 24 09.5 -7.0**
KLR pmax pmax
comp=N,35nm,1.8s
KLR pmax pmax
comp=E,42nm,1.8s
KLR pmax pmax
comp=Z,170nm,1.8s,mb5.8
KLR smax
comp=N,75nm,2.4s
KLR smax
comp=E,190nm,2.4s
KLR smax
comp=E,1μm,9.5s
KLR MLR MLR
comp=Z,1μm,15.0s,MS5.0
HIA Hailar 49.49 354⇑ *eP* **P 20 17 15.4 0.0**
comp=Z,78nm,1.2s,mb5.6
HIA Hailar 49.49 354⇑ *eP* **P 20 17 15.4 0.0**
HIA pmax pmax
comp=Z,78nm,1.2s
KOD Kodaikanal 50.12 283 *eP* **P 20 17 19.9 -1.0**
KOD AMb AMB 20 17 22.1
comp=Z,91nm,1.0s,mb5.8
TRD Trivandrum 50.38 281⇑ *ex* x 20 17 28.0
TRD *eS* **S 20 24 36.0 +2.7**
HYB Hyderabad 50.55 293 *eP* **P 20 17 23.0 -1.0**
comp=Z,180nm,1.0s,mb6.0
HYB *eS* **S 20 24 34.0 -1.5**
HYB Hyderabad 50.55 293 *eP* **P 20 17 23.0 -1.0**
HYB *eS* **S 20 24 34.0 -1.5**
HYB pmax pmax
comp=Z,180nm,1.0s,mb6.0
HYB Hyderabad 50.55 293 *i* P **P 20 17 23.0 -1.0**
comp=Z,180nm,1.0s,mb6.0
HYB *e*pP pP 20 17 35.0 -1.4
HYB *e*sP sP 20 17 40.0 -1.6
HYB *eS* **S 20 24 36.0 +0.5**
ULN Ulaanbaatar 50.71 343 P **P 20 17 25.8 +1.2**
SNR=66
SONM Songino Array 50.88 342 P **P 20 17 26.6 +0.7**
SONM PcP PcP 20 18 42.6 +0.6
SONM ScP ScP 20 22 32.9 -2.0
SONM LR LR 20 40 59.4
SONM P'P' 20 47 53.4
SONM Songino Array 50.88 342 P **P 20 17 26.6 +0.7**
SONM 20 18 42.6
SONM Songino Array 50.88 342 P **P 20 17 26.6 +0.7**
comp=Z,81nm,0.8s,mb5.7,baz=155,slow=8.3,SNR=142
SONM PcP PcP 20 18 42.6 +0.6
comp=Z,11nm,1.1s,baz=149,slow=3.4,SNR=1.5
SONM ScP ScP 20 22 32.9 -2.0
comp=Z,4.4nm,0.7s,baz=170,slow=5.0,SNR=6.6
SONM LR LR 20 40 59.4
comp=Z,706nm,21.6s,MS4.7,baz=152,slow=38
SONM PKPPKP 20 47 53.4
comp=Z,1.1nm,1.1s,baz=256,slow=1.4,SNR=4.3
NGP Nagpur 51.15 297 *eP* **P 20 17 25.1 -3.3**
NGP *ex* x 20 17 26.4
comp=Z,70nm,0.8s
NGP *eS* **S 20 24 39.2 -4.6**
AKL Akola 52.83 296⇑ *iP* **P 20 17 40.4 -0.6**
AKL *ex* x 20 17 42.7
comp=Z,236nm,0.9s
AKL *i* x x 20 25 01.2
FUNA Funafuti 52.86 101 *eP* **P 20 17 41.6 +0.3**
comp=Z,2μm,1.9s,mb6.6
FUNA *e* pP 20 17 55.7 +1.8
CIT Chita 53.06 350 *eP* **P 20 17 43.2 +1.1**
CIT *e* pP 20 17 51.7 -2.9
CIT *e* 20 18 47.5
CIT *e* 20 25 06.0
CIT pmax pmax
comp=Z,132nm,1.6s,mb5.6
MNGI Mangalore 53.11 286 *eP* **P 20 17 41.0 -2.1**
LGTI Lohaghat 53.17 308 *eP* **P 20 17 41.6 -1.8**
ZAK Zakamensk 54.09 342 *eP* **P 20 17 49.8 +0.1**
ZAK pmax pmax
comp=Z,28nm,1.4s,mb5.0
GOA Goa 54.53 289 *eP* **P 20 17 51.8 -1.7**
GOA AMb AMB 20 17 53.2
comp=Z,80nm,1.2s,mb5.6
KAD Karad 54.57 291 *eP* **P 20 17 52.1 -1.7**
TLY Talaya 55.12 343 P **P 20 17 58.8 +1.7**
comp=Z,625nm,0.7s,mb6.8,SNR=13
TLY Talaya 55.12 343 *eP* **P 20 17 57.8 +0.7**
comp=Z,68nm,0.7s,mb5.8
TLY Talaya 55.12 343 *eP* **P 20 17 58.5 +1.4**
TLY *e* 20 19 03.2
TLY *e*PPP 20 21 17.0
TLY *eS* **S 20 25 36.3 -0.4**
TLY *e*PS 20 25 55.6
TLY *e* 20 27 39.7
TLY pmax pmax
comp=Z,91nm,0.8s,mb5.9
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P 20 17 59.1 +2.0**
SNR=41

TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
TLY Talaya 55.12 343 P **P** **20 17 59.1 +2.0**
SNR=41
POO Poona 55.16 293⇓*e*P **P** **20 17 55.5 -2.5**
comp=Z,90nm,1.0s,mb5.8
NDI New Delhi 55.30 306 *e*P **P** **20 17 56.0 -2.9**
NDI *e*P 20 17 57.1
NDI AMb AMB 20 17 59.8
comp=Z,72nm,0.4s,mb6.0
IRK Irkutsk 55.43 343⇑*i*P **P** **20 17 59.7 +0.4**
IRK *e*S **S** **20 25 59.1 +18**
IRK pmax pmax
comp=Z,113nm,1.1s,mb5.8
WMQ Urumqi 55.86 327⇓*i*P **P** **20 18 03.7 +1.1**
WMQ AP pP 20 18 16.7 +1.4
WMQ PCP PcP 20 19 02.2 +1.1
WMQ PP PP 20 20 09.8 +2.1
WMQ SCP ScP 20 22 55.7 -1.0
WMQ S **S** **20 25 45.7 -1.2**
WMQ SCS ScS 20 27 45.2 -3.0
WMQ AMB AMB
comp=Z,563nm,2.0s,mb6.2
WMQ LR LR
comp=N,3μm,26.2s,MS5.2
WMQ LR LR
comp=E,1μm,27.2s,MS5.2
WMQ LR LR
comp=Z,2μm,28.4s,MS4.9
MOY Mondy 55.93 341 *e*P **P** **20 18 04.3 +1.3**
MOY pmax pmax
comp=Z,230nm,2.2s,mb5.8
NRGR Nerungri 56.54 359 *i* P **P** **20 18 08.2 +1.0**
NRGR S **S** **20 25 54.4 -1.1**
NRGR smax
comp=E,35nm,0.6s
SDNR Sundarnagar 56.59 309 *e*P **P** **20 18 08.8 +0.7**
SDNR *e*S **S** **20 25 57.8 +0.7**
AJM Ajmer 56.67 302 *e*P **P** **20 18 07.0 -1.7**
CLNS Chul'man 56.72 359 *e*P **P** **20 18 07.9 -0.5**
CLNS *e* 20 19 05.3
CLNS *e*S **S** **20 25 50.1 -7.7**
CLNS *e* 20 27 45.2
CLNS pmax pmax
comp=Z,41nm,0.9s,mb5.5
CLNS pmax pmax
comp=N,46nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS smax
comp=E,457nm,11.8s
CLNS smax
comp=Z,107nm,12.4s
CLNS smax
comp=N,126nm,13.5s
CLNS MLR MLR
comp=Z,700nm,16.0s,MS4.8
CLNS MLR MLR
comp=N,300nm,17.0s,MS4.6
CLNS MLR MLR
comp=E,300nm,15.0s,MS4.6
DLH Dalhousie 57.79 309 *e*P **P** **20 18 15.0 -1.5**
BOD Bodaibo 58.58 352 *e*P **P** **20 18 21.2 -0.3**
BOD pmax pmax
comp=Z,56nm,1.4s,mb5.4
RPZ Rata Peaks 58.68 144 P **P** **20 18 22.7 +0.2**
comp=Z,90nm,1.0s,mb5.7,baz=342,slow=2.2,SNR=22
RPZ LR LR 20 43 54.1
comp=Z,2μm,21.6s,MS5.2,baz=222,slow=36
PET Petropavlovsk 59.16 22⇑*i*P **P** **20 18 25.6 -0.1**
comp=Z,272nm,1.5s,mb6.1
PET Petropavlovsk 59.16 22 *e*P **P** **20 18 25.7 +0.1**
PET *e*S **S** **20 26 29.5 -0.4**
PET *e*PS 20 26 46.1
PET pmax pmax
comp=Z,124nm,1.4s,mb5.8
PET pmax pmax
comp=Z,600nm,20.3s
SNZO South Karori 59.63 140 *e*P **P** **20 18 28.6 -0.6**
comp=Z,61nm,0.7s,mb5.7
MK31 Makanchi Array 60.70 326⇓*i*P **P** **20 18 36.8 +0.5**
MK31 *e*ScSP 20 23 16.5
MK31 *e*S **S** **20 26 48.0 -1.9**
MKAR Makanchi Array 60.70 326 P **P** **20 18 37.0 +0.6**
MKAR ScP ScP 20 23 16.5 -1.5
MKAR S **S** **20 26 47.8 -2.1**
MKAR LR LR 20 46 56.0
MKAR P'P' 20 47 40.2
MKAR Makanchi Array 60.70 326 P **P** **20 18 37.0 +0.7**
MKAR S **S** **20 26 47.8 -2.1**
MKAR Makanchi Array 60.70 326 P **P** **20 18 37.0 +0.6**
comp=Z,137nm,0.6s,mb6.3,baz=121,slow=7.5,SNR=1331
MKAR ScP ScP 20 23 16.5 -1.5
comp=Z,4.7nm,0.7s,baz=123,slow=5.5,SNR=5.7
MKAR S **S** **20 26 47.8 -2.1**
comp=Z,1.5nm,0.9s,baz=135,slow=14,SNR=5.2
MKAR LR LR 20 46 56.0
comp=Z,975nm,19.6s,MS5.0,baz=119,slow=38
MKAR PKPPKP 20 47 40.2
comp=Z,0.8nm,0.8s,baz=302,slow=2.7,SNR=4.5
KSH Kashi 60.78 317 *i* P **P** **20 18 39.1 +2.0**
KSH *e*AP pP 20 18 51.6 +1.8
KSH *e*PCP PcP 20 19 21.7 +1.1
KSH PP PP 20 20 55.3 +3.8
KSH SCP ScP 20 23 17.6 -1.0
KSH PCS PcS 20 23 23.7 +0.5
KSH S **S** **20 26 50.1 -1.2**
KSH SCS ScS 20 28 21.4 -3.2
KSH SS SS 20 30 53.0 +2.1
KSH LR LR
comp=Z,5μm,25.8s,MS5.6
ULHL Ulahoi 61.89 319 P **P** **20 18 46.5 +2.0**
SNR=8.9
YAK Yakutsk 61.95 2⇑*i*P **P** **20 18 44.0 -0.5**
comp=Z,101nm,0.6s,mb6.1
YAK Yakutsk 61.95 2*c i*P **P** **20 18 44.1 -0.4**
YAK *e**PP pP 20 18 52.3 -4.9
YAK *e* 20 19 24.4
YAK *i* S **S** **20 27 00.8 -4.4**
YAK *e* 20 28 25.4
YAK pmax pmax
comp=Z,97nm,0.9s,mb5.9
YAK pmax pmax
comp=N,48nm,1.3s
YAK pmax pmax
comp=E,18nm,1.2s
YAK smax
comp=E,909nm,3.6s
YAK smax
comp=N,101nm,1.4s
YAK MLR MLR
comp=Z,803nm,19.0s,MS4.9
AFI Afiamalu 62.30 106 *e*P **P** **20 18 48.5 +0.7**
comp=Z,402nm,1.6s,mb6.3
AFI Afiamalu 62.30 106 *e*P **P** **20 18 48.5 +0.7**
AFI pmax pmax
comp=Z,402nm,1.6s,mb6.3
AFI Afiamalu 62.30 106 LR LR 20 42 08.9
comp=Z,853nm,21.4s,MS4.9,baz=269,slow=32
MA2 Magadan 62.32 13⇑*i*P **P** **20 18 47.6 +0.6**
comp=Z,373nm,1.4s,mb6.3
MA2 Magadan 62.32 13*c i*P **P** **20 18 47.7 +0.7**
MA2 *i* S **S** **20 27 10.0 0.0**
MA2 *i* PS 20 27 27.3
MA2 *i* 20 28 34.9
MA2 pmax pmax
comp=N,100nm,1.2s
MA2 pmax pmax
comp=Z,300nm,1.2s,mb6.3
KZA Kyzart 62.46 319 P **P** **20 18 50.3 +2.0**
SNR=217
TKM2 Tokmak 2 62.63 320⇓*i*P **P** **20 18 50.3 +0.8**
TKM2 Tokmak 2 62.63 320 P **P** **20 18 50.7 +1.2**
SNR=130
KBK Karagaybulak 62.93 319 P **P** **20 18 52.8 +1.4**
SNR=100
UCH Uchtor 63.01 319 *e*P **P** **20 18 53.6 +1.6**
comp=Z,108nm,0.7s,mb6.1
UCH *e*S **S** **20 27 20.3 +1.0**
UCH Uchtor 63.01 319 P **P** **20 18 53.9 +1.9**
SNR=228
AAK Ala-Archa 63.21 319 P **P** **20 18 53.8 +0.5**
comp=Z,332nm,0.6s,mb6.6,SNR=61
AAK Ala-Archa 63.21 319⇓*i*P **P** **20 18 53.3 0.0**
comp=Z,29nm,0.6s,mb5.6
AAK *e*S **S** **20 27 18.8 -3.0**
AAK Ala-Archa 63.21 319⇓*i*P **P** **20 18 53.3 0.0**
AAK *e*S **S** **20 27 18.8 -3.0**
AAK pmax pmax
comp=Z,29nm,0.6s,mb5.6
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 53.0 -0.3**
SNR=53
AAK Ala-Archa 63.21 319 P **P** **20 18 54.5 +1.1**
SNR=70
CHMS Chumysh 63.21 320 P **P** **20 18 53.8 +0.5**
SNR=34
FRU Bishkek 63.22 319⇓*i*P **P** **20 18 54.0 +0.6**
FRU *i* S **S** **20 27 23.0 +1.1**
FRU pmax pmax
comp=Z,260nm,2.3s,mb6.0
FRU smax
comp=N,3μm,9.0s
USP Ospenovka 63.50 320 P **P** **20 18 55.9 +0.6**
SNR=164
AML Almayashu 63.51 318⇓*i*P **P** **20 18 56.8 +1.5**
comp=N,125nm,0.7s,mb6.0
AML *e*S **S** **20 27 18.7 -6.8**
AML Almayashu 63.51 318 P **P** **20 18 57.0 +1.7**
SNR=195
EKS2 Erkin-Say 63.69 319⇓*i*P **P** **20 18 57.6 +1.1**
comp=N,102nm,0.7s,mb6.0
EKS2 *e*S **S** **20 27 19.3 -8.5**
EKS2 Erkin-Say 63.69 319 P **P** **20 18 57.9 +1.4**
SNR=165
KBL Kabul 63.90 309⇓*i*P **P** **20 18 58.3 +0.2**
KBL *e*S **S** **20 27 27.2 -3.5**
ZAA0 Zalesovo Array 63.97 334 *e*PKPdf **S** **20 27 26.4 -4.4**
ZALV Zalesovo Beam 63.97 334 P **P** **20 18 57.2 -0.8**
comp=N,79nm,0.9s,mb5.8,baz=114,slow=5.6,SNR=94
ZALV S **S** **20 27 25.8 -5.1**
comp=N,2.0nm,0.7s,baz=139,slow=7.3,SNR=4.8
ZALV PKPPKP 20 47 49.5
comp=N,4.5nm,1.0s,baz=338,slow=1.6,SNR=4.4
ZALV LR LR 20 49 18.7
comp=N,470nm,19.2s,MS4.7,baz=138,slow=38
ZAL Zalesovo 63.97 334 P **P** **20 18 57.3 -0.8**
ZAL S **S** **20 27 25.8 -5.0**
KURK Kurchatov 64.95 328 P **P** **20 19 04.6 0.0**
comp=N,2μm,0.7s
KURK Kurchatov 64.95 328⇓*i*P **P** **20 19 04.4 -0.2**
comp=N,247nm,0.7s,mb6.3
KURK *e*S **S** **20 27 34.6 -8.4**
KURK Kurchatov 64.95 328⇓*i*P **P** **20 19 04.4 -0.2**
KURK *e*S **S** **20 27 34.7 -8.4**
KURK pmax pmax
comp=Z,247nm,0.7s,mb6.3
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
KURK Kurchatov 64.95 328 P **P** **20 19 05.0 +0.4**
SNR=93
NVS Novosibirsk 65.26 334⇓*i*P **P** **20 19 05.7 -0.8**
NVS *i**PP pP 20 19 16.1 -3.2
NVS *i* S S 20 27 39.7 -6.9
NVS pmax pmax
comp=N,67nm,1.0s
NVS pmax pmax
comp=E,74nm,1.0s
NVS pmax pmax
comp=Z,120nm,1.0s,mb5.9
NVS smax
comp=N,145nm,2.0s
NVS smax
comp=E,103nm,1.8s
CASY Casey 67.11 187 *e*P **P** **20 19 18.8 +0.7**
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
WBK Wadi Bani Khal 69.62 294 P **P** **20 19 35.0 +0.3**
SNR=14
ADK Adak 70.03 33 *e*P **P** **20 19 35.9 -0.7**
comp=E,50nm,0.9s,mb5.5
ADK Adak 70.03 33 P **P** **20 19 36.8 +0.2**
ADK pmax pmax
comp=Z,50nm,0.9s,mb5.4
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
JMDO Jabal Madar 70.37 294 P **P** **20 19 39.7 +0.3**
SNR=25
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
BIDO Bidbid 70.52 295 P **P** **20 19 40.7 +0.4**
SNR=19
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
SMDO Samad 70.52 294 P **P** **20 19 40.8 +0.5**
SNR=17
BRVK Borovoye 70.58 328 P **P** **20 19 39.2 -0.8**
comp=Z,724nm,1.1s,mb6.5,SNR=69
BRVK Borovoye 70.58 328⇓*i*P **P** **20 19 39.6 -0.4**
comp=Z,173nm,1.0s,mb5.9
BRVK Borovoye 70.58 328⇓*i*P **P** **20 19 39.6 -0.4**
BRVK pmax pmax
comp=Z,173nm,1.0s,mb5.9
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BRVK Borovoye 70.58 328 P **P** **20 19 40.1 +0.1**
SNR=64
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
BSY Bisya 71.25 294 P **P** **20 19 45.3 +0.6**
SNR=13
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
HOQ Hoqain 71.27 295 P **P** **20 19 45.6 +0.8**
SNR=21
TIXI Tiksi 71.58 1⇑*i*P **P** **20 19 44.2 -1.5**
comp=Z,68nm,0.7s,mb5.7
TIXI Tiksi 71.58 1*c i*P **P** **20 19 44.6 -1.1**
TIXI *e*S S 20 28 56.2 -5.1
TIXI *e* 20 29 40.9
TIXI pmax pmax
comp=Z,162nm,1.5s,mb5.7
TIXI MLR MLR
comp=Z,505nm,17.0s,MS4.8
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
ARQ Araqi 71.95 294 P **P** **20 19 49.4 +0.5**
SNR=22
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
SHAO Shalim 72.14 289 P **P** **20 19 51.6 +1.5**
SNR=8.0
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8

SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
HATD Hatta, Dubai 72.52 296 P **P** **20 19 53.5 +1.3**
SNR=9.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
ASHO Ashiyiah 72.56 296 P **P** **20 19 53.9 +1.4**
SNR=6.8
BILL Bilibino 73.15 14⇑ *i*P **P** **20 19 54.0 -1.2**
comp=Z,74nm,1.6s,mb5.4
BILL Bilibino 73.15 14⇑ *e*P **P** **20 19 53.4 -1.7**
BILL *i* 20 22 34.8
BILL *e*S S 20 29 17.1 -2.3
BILL pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
BILL MLR MLR
comp=Z,900nm,21.0s,MS5.0
ABKT Ailbek 73.32 310 P **P** **20 19 57.5 +0.7**
comp=Z,862nm,0.7s,mb6.8,SNR=88
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
RBK Rabkut 73.44 288 P **P** **20 19 58.9 +1.1**
SNR=12
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
WHFO Wadi Hawf 73.89 289 P **P** **20 20 00.1 -0.4**
SNR=28
ABTO Aybut 74.28 288 P **P** **20 20 04.1 +1.3**
SNR=14
ABTO Aybut 74.28 288 P **P** **20 20 04.1 +1.3**
SNR=14
ABTO Aybut 74.28 288 P **P** **20 20 04.1 +1.3**
SNR=14
ABTO Aybut 74.28 288 P **P** **20 20 04.1 +1.3**
SNR=14
ABTO Aybut 74.28 288 P **P** **20 20 04.1 +1.3**
SNR=14
RAR Rarotonga 74.54 112 LR LR 20 51 05.6
comp=Z,974nm,18.7s,MS5.1,baz=310,slow=34
HON Honolulu 76.22 68 *e*P **P** **20 20 14.7 +0.9**
HON Honolulu 76.22 68 P **P** **20 20 15.4 +1.5**
UNV Unalaska Valle 76.47 34⇓ *e*P **P** **20 20 12.8 -1.8**
comp=Z,200nm,0.6s,mb6.2
AKTK Aktyubinsk 76.65 322 P **P** **20 20 15.3 -0.3**
AKTK S S 20 29 53.8 -5.3
AKTO Aktyubinsk 76.65 322 P **P** **20 20 15.3 -0.3**
comp=Z,32nm,0.5s,mb5.5,baz=108,slow=7.7,SNR=109
AKTO S S 20 29 53.8 -5.3
comp=Z,0.7nm,0.7s,baz=217,slow=15,SNR=6.0
AKUT Akutan 76.97 34 *e*P **P** **20 20 17.7 +0.3**
comp=Z,277nm,0.9s,mb6.2
SVE Sverdlovsk 77.20 329 *i* P **P** **20 20 18.0 -0.6**
SVE *e*S S 20 29 59.3 -5.4
SVE pmax pmax
comp=Z,65nm,0.7s,mb5.7
SVE MLR MLR
comp=Z,731nm,19.0s,MS5.0
GAMB Gambell 77.79 24 *e*P **P** **20 20 21.9 +0.2**
ARU Arti 78.15 328 P **P** **20 20 23.4 -0.5**
comp=Z,355nm,0.7s,mb6.4,SNR=22
ARU Arti 78.15 328 *e*P **P** **20 20 22.9 -1.1**
comp=Z,31nm,0.6s,mb5.4
ARU Arti 78.15 328 *d i*P **P** **20 20 22.8 -1.1**
ARU pP 20 20 30.8 -6.3
ARU *e* 20 23 19.5
ARU S S 20 30 13.8 -1.2
ARU SS SS 20 35 17.1 -0.4
ARU pmax pmax
comp=Z,60nm,1.0s,mb5.5
MUKL Al Mukalla 78.17 285 *e*P **P** **20 20 25.6 +0.7**
MUKL AMb AMB 20 20 25.9
comp=Z,34nm,0.6s,mb5.5
FALS False Pass 78.50 34 P **P** **20 20 24.1 -1.8**
VNDA Vanda 79.70 173⇑ *e*P **P** **20 20 31.4 -0.7**
comp=Z,49nm,1.4s,mb5.2
VNDA Vanda 79.70 173 P **P** **20 20 32.4 +0.3**
VNDA pmax pmax
comp=Z,49nm,1.4s
VNDA Vanda 79.70 173 P **P** **20 20 31.4 -0.6**
comp=Z,12nm,0.9s,mb4.8,baz=324,slow=4.4,SNR=21
TNA Tin City 80.01 23⇑ *i*P **P** **20 20 34.0 +0.1**
comp=Z,38nm,1.3s,mb5.2
SOKR Solikamsk 80.01 331 *d i*P **P** **20 20 34.1 0.0**
SOKR S S 20 30 39.3 +4.6
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.4
SOKR MLR MLR
comp=Z,380nm,16.0s,MS4.8
OPO Ambohidratompo 80.15 251 P **P** **20 20 35.9 +0.2**
comp=Z,7.5nm,0.7s,mb4.7,baz=84,slow=4.7,SNR=22
SDPT Sand Point 80.26 34 *e*P **P** **20 20 35.5 0.0**
comp=Z,383nm,0.7s,mb6.4
MAW Mawson 80.28 200 *e*P **P** **20 20 36.3 +1.0**
comp=Z,15nm,0.8s,mb5.0
MAW Mawson 80.28 200 *e*P **P** **20 20 36.3 +1.0**
MAW pmax pmax
comp=Z,15nm,0.8s
MAW Mawson 80.28 200 P **P** **20 20 35.4 +0.1**
comp=Z,16nm,0.8s,mb5.0,baz=67,slow=4.3,SNR=10.0
QRN Al-Qurain 80.28 299 *e*P **P** **20 20 35.6 -0.6**
QRN AMb AMB 20 20 40.0
comp=Z,220nm,0.7s,mb6.2
KBD Kabd 80.51 299 *e*P **P** **20 20 36.6 -0.8**
KBD AMb AMB 20 20 41.0
comp=Z,256nm,0.7s,mb6.3
UMR Umm Al-Rimmam 80.53 300 *e*P **P** **20 20 37.1 -0.4**
UMR AMb AMB 20 20 41.1
comp=Z,185nm,0.7s,mb6.2
RDF Al-Radifah 80.62 299 *e*P **P** **20 20 37.3 -0.7**
RDF AMb AMB 20 20 41.5
comp=Z,119nm,0.6s,mb6.0
SBA Scott Base 80.62 172 *e*P **P** **20 20 37.8 +0.8**
comp=Z,298nm,2.0s,mb5.9
SBA Scott Base 80.62 172 P **P** **20 20 39.3 +2.3**
SBA pmax pmax
comp=Z,300nm,2.0s,mb5.9
MIB Mutribah 80.88 300 *e*P **P** **20 20 38.9 -0.5**
MIB AMb AMB 20 20 43.0
comp=Z,344nm,0.7s,mb6.4
NAY Al-Naaiem 80.91 299 *e*P **P** **20 20 38.7 -0.9**
NAY AMb AMB 20 20 43.9
comp=Z,98nm,0.8s,mb5.8
RST Umm Al-Ruwaisa 81.15 300 *e*P **P** **20 20 40.0 -0.8**
RST AMb AMB 20 20 44.1
comp=Z,331nm,0.7s,mb6.4
CHGN Chignik 81.61 33 *e*P **P** **20 20 42.5 -0.2**
MAK Makhachkala 82.19 313 *e*P **P** **20 20 42.0 -4.0**
MAK *e**PP pP 20 20 52.9 -6.4
MAK *e**SP sP 20 21 02.5 -1.8
MAK *e*S S 20 30 48.4 -10
MAK pmax pmax
comp=Z,165nm,1.7s,mb5.7
MAK MLR MLR
comp=Z,766nm,24.0s,MS5.0
DHBB Dhamar BB 82.67 285 *e*P **P** **20 20 50.1 +1.0**
DHBB AMb AMB 20 20 51.5
comp=Z,102nm,1.1s,mb5.8
TRBA At Turbah 82.90 283 *e*P **P** **20 20 51.2 +0.9**
TRBA AMb AMB 20 20 52.8
comp=Z,127nm,1.6s,mb5.7
DGRG David-gareji 83.60 312 P **P** **20 20 54.2 +0.8**
BHD Baghdad 83.68 303 *ex* x 20 20 53.0
BHD Baghdad 83.68 303 *ex* x 20 31 09.0
PAE Paea 83.90 108 *e*P **P** **20 20 56.5 +1.1**
comp=Z,118nm,1.2s,mb5.9
PAE Paea 83.90 108 *e*P **P** **20 20 56.5 +1.1**
PAE pmax pmax
comp=Z,118nm,1.2s,mb5.9
PPT Papeete 83.90 108 *e*PP PP 20 24 02.8 -6.6
comp=Z,261nm,27.5s
PPT Papeete 83.90 108 *e*S S 20 31 16.0 -0.3
comp=Z,2µm,30.8s
PPT *e*SS SS 20 36 54.9 +10
comp=Z,901nm,30.8s
PPT *e*LR LR 20 47 28.4
comp=Z,3µm,30.5s
PPT Papeete 83.90 108 *e*P **P** **20 20 56.7 +1.3**
comp=Z,86nm,1.4s,mb5.7
PPT *e*PP PP 20 24 02.8 -6.6
PPT *e*S S 20 31 16.0 -0.3
PPT *e*SS SS 20 36 54.9 +10
PPT Papeete 83.90 108 *e*P **P** **20 20 56.7 +1.3**
PPT *e*S S 20 31 16.0 -0.3
PPT pmax pmax
comp=Z,86nm,1.4s
SVW2 Sparrevohn 84.05 28 *e*P **P** **20 20 55.4 +0.2**
MTA Mtatsminda 84.05 312 P **P** **20 20 55.9 +0.2**
TBLG Delisi 84.10 312 P **P** **20 20 55.9 0.0**
TTA Tatalina 84.20 27 *e*P **P** **20 20 56.1 +0.1**
TVO Taravao 84.21 108 *e*P **P** **20 20 58.4 +1.4**
comp=Z,192nm,1.2s,mb6.1
TVO Taravao 84.21 108 *e*P **P** **20 20 58.4 +1.4**
TVO pmax pmax
comp=Z,192nm,1.2s,mb6.1
GOR Gori 84.59 312 P **P** **20 20 58.9 +0.5**
DYDN Diyadin 84.71 310⇓ *i*P **P** **20 20 59.8 +0.7**
ZEI Tsey 84.81 313 *e*P **P** **20 20 59.6 +0.1**
ZEI *i* pP 20 21 17.4 +4.6
ZEI pmax pmax
comp=Z,48nm,0.7s,mb5.7
MSL Mosul 84.95 306 *ex* x 20 21 01.0
MSL Mosul 84.95 306 *ex* x 20 31 18.0
MSL *ex* x 20 31 39.0
KDAK Kodiak Island 85.01 32 P **P** **20 21 00.9 +0.8**
comp=Z,681nm,1.6s,mb6.5,SNR=12
KDAK Kodiak Island 85.01 32⇓ *e*P **P** **20 20 59.2 -1.0**
comp=Z,225nm,1.3s,mb6.1
KDAK Kodiak Island 85.01 32 P **P** **20 21 00.2 +0.1**
comp=Z,78nm,0.9s,mb5.8,baz=253,slow=3.4,SNR=22
DIGO Kars 85.02 310⇓ *e*P **P** **20 21 00.8 +0.2**
TUTA Tutak 85.38 309⇓ *i*P **P** **20 21 03.0 +0.6**
IMA2 Indian Mountai 85.77 24 *e*P **P** **20 21 03.9 +0.2**
KIV Kislovodsk 85.78 314 *e*P **P** **20 21 04.2 -0.1**
comp=Z,95nm,1.4s,mb5.8
KIV Kislovodsk 85.78 314⇑ *e*P **P** **20 21 04.3 0.0**
KIV *e* 20 24 27.9
KIV *e*S S 20 31 24.4 -10
KIV pmax pmax
comp=Z,30nm,1.5s,mb5.3
KIV MLR MLR
comp=Z,500nm,25.0s,MS4.8
ARTV Artvin 86.16 311⇓ *i*P **P** **20 21 06.2 0.0**
ERZM Erzurum 86.52 310⇓ *i*P **P** **20 21 08.7 +0.6**
SLKM Skilak Lake 86.56 29 *e*P **P** **20 21 06.6 -1.1**
SLKM Skilak Lake 86.56 29 P **P** **20 21 07.2 -0.5**
BNGL BINGOL 86.64 309⇓ *i*P **P** **20 21 09.3 +0.7**
MARD Mardin 86.86 307⇓ *i*P **P** **20 21 03.0 -6.8**
VRHR Novokhopersk 86.99 321 *e*P **P** **20 21 08.8 -1.3**
VRHR pmax pmax
comp=N,9.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.5
VRHR pmax pmax
comp=E,10.0nm,0.5s
PMR Palmer 87.19 28 *e*P **P** **20 21 10.5 -0.3**
comp=E,58nm,1.4s,mb5.6
PMR Palmer 87.19 28 P **P** **20 21 13.2 +2.4**
PMR pmax pmax
comp=Z,43nm,1.3s,mb5.5
MCK McKinley 87.48 26 *e*P **P** **20 21 10.5 -1.6**
comp=Z,31nm,1.4s,mb5.3
MCK McKinley 87.48 26 P **P** **20 21 11.3 -0.9**
MCK pmax pmax
comp=Z,31nm,1.3s,mb5.4
SML Sawmill 87.59 28 *e*P **P** **20 21 11.7 -1.0**
SML Sawmill 87.59 28 P **P** **20 21 12.6 -0.1**
SOC Sochi 87.91 313 *c i*P **P** **20 21 18.2 +3.5**
SOC *e*S S 20 31 41.0 -14
SOC *e*SS SS 20 37 40.6 -2.2
SOC pmax pmax
comp=Z,51nm,0.8s,mb5.8
COLA College 88.04 25 *e*P **P** **20 21 12.3 -2.5**
comp=Z,6.8nm,0.7s,mb5.0
COLA College 88.04 25 P **P** **20 21 13.0 -1.8**
COLA pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
KELT Kelkit 88.15 310⇓ *i*P **P** **20 21 16.8 +0.9**
VORD Divnogorie 88.46 321 *e*P **P** **20 21 15.5 -1.6**
VORD *e*S S 20 31 53.3 -6.2
VORD pmax pmax
comp=Z,60nm,1.1s,mb5.7
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,40nm,1.0s
VORD smax
comp=N,770nm,3.0s
VORD smax
comp=Z,110nm,2.7s
VORD smax
comp=E,260nm,2.3s
VRSR Storozhevoye 88.53 321 *e*P **P** **20 21 16.2 -1.2**
VRSR pmax pmax
comp=E,10.0nm,1.0s
VRSR pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
VRSR pmax pmax
comp=N,1.0nm,0.7s
VOR Voronezh 88.54 322 *e*P **P** **20 21 16.5 -1.0**
VOR pmax pmax
comp=Z,140nm,1.4s,mb6.1
MALT Malatya 88.75 308 *e*P **P** **20 21 19.1 +0.3**
comp=Z,75nm,1.5s,mb5.8
MALT Malatya 88.75 308⇑ *i*P **P** **20 21 20.4 +1.6**
SYO Syowa Base 88.97 201⇓ *e*P **P** **20 21 18.2 -0.9**
SYO Syowa Base 88.97 201⇑ *i*PcP PcP 20 21 20.0 -0.6
SYO Syowa Base 88.97 201⇑ *i*pP pP 20 21 33.0 +0.5
SYO Syowa Base 88.97 201⇓ *e*PP PP 20 24 50.0 +1.0
GZT Gaziantep 89.42 307⇓ *e*P **P** **20 21 21.6 -0.4**
TMCR Tamitsa 89.50 334 *e*P **P** **20 21 19.1 -2.6**
TMCR *e* 20 24 49.2
TMCR pmax pmax
comp=Z,58nm,1.2s,mb5.8
KMBO Kilima Mbogo 89.56 269 P **P** **20 21 24.3 +1.2**
comp=Z,3.2nm,0.7s,mb4.8,baz=62,slow=9.2,SNR=9.3
KMBO LR LR 21 02 05.1
comp=Z,538nm,20.3s,MS5.0,baz=97,slow=36
MOS Moscow 89.57 326 *e*P **P** **20 21 20.8 -1.4**
MOS *e**PP pP 20 21 36.9 +1.3
MOS *e* 20 24 49.8
MOS *e* 20 31 40.1
MOS *e*S S 20 32 02.0 -7.7
MOS *e*PS PS 20 33 11.8 -8.8
MOS pmax pmax
comp=Z,99nm,0.9s,mb6.1
ANN Anapa 89.58 315 *e*P **P** **20 21 27.2 +4.7**
ANN *e* 20 32 07.8
ANN pmax pmax
comp=Z,77nm,1.0s,mb6.0
ANN MLR MLR
comp=Z,910nm,28.0s,MS5.0
MENT Mentasta 89.79 27 *e*P **P** **20 21 22.9 -0.2**
QSPA South Pole Qui 89.89 180 *e*P **P** **20 21 23.5 +0.2**
comp=Z,31nm,0.7s,mb5.7
QSPA *e* pP 20 21 36.3 -0.3

OBN Obninsk 90.17 325 P **P** **20 21 23.1 -1.9**
comp=Z,594nm,0.6s,mb7.1,SNR=7.6
OBN Obninsk 90.17 325 *e*P **P** **20 21 23.5 -1.5**
comp=Z,50nm,0.6s,mb6.0
OBN Obninsk 90.17 325⇑ *e*P **P** **20 21 23.4 -1.6**
OBN *e* 20 24 57.7
OBN *i* S S 20 31 51.5 -24
OBN *i* PS PS 20 33 19.3 -8.0
OBN pmax pmax
comp=Z,116nm,1.1s,mb6.1
OBN MLR MLR
comp=Z,300nm,22.0s,MS4.7
EGAK Eagle 90.90 25 *e*P **P** **20 21 27.4 -0.8**
comp=Z,41nm,1.3s,mb5.6
EGAK *e*PP PP 20 24 56.8 -7.7
MMAI Mount Meron Ar 91.20 303 P **P** **20 21 29.8 -0.6**
comp=Z,15nm,1.0s,mb5.3,baz=84,slow=8.5,SNR=16
APA Apatity 91.34 337⇓ *i*P **P** **20 21 29.0 -1.2**
APA *i* pP 20 21 40.6 -3.0
APA pmax pmax
comp=Z,92nm,1.4s,mb5.9
SIM Simferopol' 91.94 315 P **P** **20 21 39.1 +5.6**
SIM 20 32 00.5
SIM S S 20 32 32.1 +0.2
SIM pmax pmax
comp=Z,21nm,0.8s,mb5.5
SIM MLR MLR
comp=Z,380nm,21.0s,MS4.8
BR131 Keskin Array S 92.47 310 *e*P **P** **20 21 34.2 -1.8**
comp=Z,5.3nm,0.6s,mb5.0
BRTR Keskin Array B 92.47 310 P **P** **20 21 34.4 -1.7**
comp=Z,4.5nm,0.8s,mb4.8,baz=112,slow=3.4,SNR=22
BRTR PP PP 20 25 17.6 0.0
comp=Z,2.0nm,0.8s,baz=81,slow=7.6,SNR=3.7
JOF Joensuu 92.55 333 *ep* **P** **20 21 33.1 -2.8**
comp=Z,9.3nm,0.5s,mb5.5
CSS Prodhromos 92.88 305 *e*P **P** **20 21 37.5 -0.6**
comp=Z,27nm,1.1s,mb5.6
TAOE Nuku Hiva Isla 93.00 99 *e*S S 20 32 39.4 -3.2
comp=Z,2µm,26.6s
TAOE *e*SS SS 20 39 03.9 +6.1
comp=Z,1µm,30.0s
TAOE *e*LR LR 20 51 29.2
comp=Z,6µm,24.4s
PUL Pulkovo 93.31 330 *e*P **P** **20 21 38.3 -1.2**
INK Inuvik 93.61 22 P **P** **20 21 39.3 -1.4**
comp=Z,14nm,0.7s,mb5.5,baz=280,slow=5.3,SNR=42
ARCES ARCESS Array B 93.99 340 P **P** **20 21 40.6 -1.8**
comp=Z,13nm,0.5s,mb5.6,baz=80,slow=5.9,SNR=71
ARCES PKiKP PKiKP 20 26 26.8 +0.2
comp=Z,2.8nm,0.8s,baz=24,slow=1.7,SNR=5.2
ARCES PKKPbc PKKPbc 20 38 44.3 -3.5
comp=Z,3.1nm,1.0s,baz=255,slow=3.2,SNR=7.7
ARE0 ARCESS Array S 93.99 340 *e*P **P** **20 21 40.8 -1.6**
SKAG Skagway 94.04 30 *e*P **P** **20 21 43.1 +0.3**
comp=Z,53nm,0.9s,mb6.0
SKAG LR LR
comp=Z,1µm,22.0s,MS5.2
AKASG Malin Array Be 94.84 321 P **P** **20 21 44.6 -2.1**
comp=Z,2.1nm,0.7s,mb4.7,baz=73,slow=4.2,SNR=18
AKASG LR LR 21 08 42.7
comp=Z,386nm,21.9s,MS4.8,baz=60,slow=38
KAF Kangasniemi 94.95 332 *ep* **P** **20 21 44.2 -2.7**
comp=Z,11nm,0.5s,mb5.5,baz=76,slow=4.2
KAF Kangasniemi 94.95 332 *e*P **P** **20 21 44.2 -2.7**
KAF pmax pmax
comp=Z,11nm,0.5s,mb5.5
FIA1 FINESS Array S 95.16 332 *e*P **P** **20 21 45.7 -2.3**
FINES FINESS Array B 95.17 332 P **P** **20 21 45.8 -2.1**
FINES 20 25 38.3
FINES FINESS Array B 95.17 332 P **P** **20 21 45.8 -2.1**
comp=Z,3.2nm,0.5s,mb5.0,baz=60,slow=5.5,SNR=78
FINES PP PP 20 25 38.3 +0.4
comp=Z,6.5nm,1.0s,baz=91,slow=9.5,SNR=4.1
FINES PKKPbc PKKPbc 20 38 43.6 -0.8
comp=Z,0.6nm,0.8s,baz=321,slow=2.7,SNR=4.3
KIS Kishinev 95.49 317 *e*P **P** **20 21 47.0 -2.7**
KIS *e* 20 34 14.0
KIS MLR MLR
comp=Z,1µm,20.0s,MS5.4
KIS MLR MLR
comp=Z,900nm,20.0s
TIRR Tirgusor 96.03 315⇑ P **P** **20 21 51.5 -0.7**
TIRR Tirgusor 96.03 315⇑ *i*P **P** **20 21 51.5 -0.8**
VRI Vrincioaia 97.05 316⇑ P **P** **20 21 56.4 -0.5**
VRI Vrincioaia 97.05 316⇑ *i*P **P** **20 21 56.4 -0.5**
RKT Rikitea 97.55 113 *e*LR LR 20 53 51.5
comp=Z,2µm,30.5s
MLR Muntele Rosu 97.64 316⇑ P **P** **20 21 59.0 -0.6**
MLR Muntele Rosu 97.64 316 P **P** **20 21 58.3 -1.3**
comp=Z,6.0nm,0.8s,mb5.2,baz=50,slow=2.2,SNR=12
MLR Muntele Rosu 97.64 316⇑ *i*P **P** **20 21 59.0 -0.6**
MATP Matopo 97.78 249 LR LR 21 00 16.2
comp=Z,658nm,21.8s,MS5.1,baz=87,slow=32
BURAR Bucovina Array 97.84 318⇑ *i*P **P** **20 21 59.9 -0.5**
SUW Suwalki 98.02 325 *e*P **P** **20 21 59.6 -1.4**
LVV L'vov 98.27 320 *e*P **P** **20 22 01.8 -0.4**
LSZ Lusaka 98.31 255 *e*PKPdf **P** **20 22 02.4 -0.8**
comp=Z,9.9nm,0.9s,mb5.3
LSZ Lusaka 98.31 255 *e*P **P** **20 22 02.4 -0.8**
LSZ pmax pmax
comp=Z,10.0nm,0.9s,mb5.3
KOLS Kolonicke sedl 99.56 320 *e*P Pdif 20 22 08.7 +0.8
KOLS Kolonicke sedl 99.56 320 PDIF Pdif 20 22 08.7 +0.8
UZH Uzhgorod 99.60 319 *e i*P Pdif 20 22 08.0 -0.1
UZH *e* 20 26 08.0
UZH *e* 20 32 39.0
UZH *e*S S 20 33 34.0 -4.0
UZH *e*SS SS 20 40 25.0 -4.2
DRGR 99.66 317⇓ P Pdif 20 22 07.7 -0.6
DRGR 99.66 317⇓ *i*P Pdif 20 22 07.7 -0.7
IDI Anoyia 99.75 306 P Pdif 20 22 08.5 -0.2
comp=Z,9.8nm,1.0s,baz=61,slow=15,SNR=2.7
VTS Vitosha 100.03 313⇓ P Pdif 20 22 09.2 -0.8
VTS Vitosha 100.03 313⇓ *i*P Pdif 20 22 09.2 -0.8
CRVS Cervenica-Dubn 100.09 320 *e*P Pdif 20 22 10.1 -0.1
CRVS Cervenica-Dubn 100.09 320 PDIF Pdif 20 22 10.1 -0.1
STHS Stebnicka Huta 100.12 320 *e*P Pdif 20 22 11.2 +0.8
comp=Z,4.2nm,0.9s
STHS *e*PP PP 20 26 13.7 -2.6
STHS Stebnicka Huta 100.12 320 *e*P Pdif 20 22 11.2 +0.8
STHS *e* 20 26 13.7
STHS pmax pmax
comp=Z,4.0nm,0.9s
STHS Stebnicka Huta 100.12 320 PDIF Pdif 20 22 11.2 +0.8
STHS *e*PP PP 20 26 13.7 -2.6
BOSA Boshof 100.13 241 P Pdif 20 22 11.1 +0.7
BOSA Boshof 100.13 241 P Pdif 20 22 11.1 +0.7
comp=Z,2.0nm,0.7s,baz=298,slow=6.8,SNR=4.0
NIE Niedzica 100.72 320 *e*P Pdif 20 22 14.1 +1.1
KECS Kecovo 100.81 319 *e*P Pdif 20 22 12.6 -0.8
comp=Z,4.8nm,0.9s
KECS Kecovo 100.81 319 *e*P Pdif 20 22 12.6 -0.8
KECS pmax pmax
comp=Z,5.0nm,0.9s
KECS Kecovo 100.81 319 PDIF Pdif 20 22 12.6 -0.8
OJC Ojcow 100.86 321 *e*P Pdif 20 22 13.4 -0.3
DAG Danmarks Havn 100.97 352⇑ *i*P Pdif 20 22 12.7 -1.5
DAG pmax pmax
comp=Z,7.0nm,0.6s
DAG Danmarks Havn 100.97 352⇑ *i*P Pdif 20 22 12.7 -1.5
comp=Z,6.7nm,0.6s
HFS Hagfors 101.36 332 P Pdif 20 22 13.9 -2.0
comp=Z,4.5nm,0.5s,baz=114,slow=3.7,SNR=41
VYHS Vyhne 101.87 320 *e*P Pdif 20 22 17.3 -0.9
VYHS *e*PP PP 20 26 31.8 +2.3
VYHS Vyhne 101.87 320 PDIF Pdif 20 22 17.3 -0.9
VYHS *e*PP PP 20 26 31.8 +2.3
NB2 NORSAR Subarra102.17 333 P Pdif 20 22 17.4 -2.1
comp=Z,5.3nm,0.6s,baz=68,slow=4.6
NB2 NORSAR Subarra102.17 333 P Pdif 20 22 17.4 -2.1
NB2 pmax pmax
comp=Z,5.0nm,0.6s
NOA NORSAR Array B 102.17 333 P Pdif 20 22 17.4 -2.1
comp=Z,3.3nm,0.5s,baz=61,slow=2.0,SNR=32
NOA PP PP 20 26 12.9 -18
comp=Z,1.6nm,0.8s,baz=68,slow=8.2,SNR=3.7
NOA PKKPbc PKKPbc 20 38 22.6 -2.2
comp=Z,1.4nm,0.9s,baz=67,slow=3.1,SNR=4.8
PKSM Moragy 102.53 317⇓ *i*P Pdif 20 22 21.4 +0.3
YKA Yellowknife Ar 102.87 25 P Pdif 20 22 22.0 -0.6
comp=Z,1.6nm,0.6s,baz=296,slow=4.5,SNR=20
YKA PKiKP PKiKP 20 26 42.0 -0.6
comp=Z,1.7nm,0.6s,baz=304,slow=1.8,SNR=16
YKA SKiKP 20 30 11.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.6nm,0.6s,baz=295,slow=1.8,SNR=4.8						
YKA				PKKPbc	PKKPbc	20 38 19.2	-3.6
	comp=Z,0.8nm,0.6s,baz=117,slow=2.9,SNR=8.4						
VNA2	Neumayer--Watz	103.22	194	*e*PKiKP	PKiKP	20 26 44.1	+1.1
	baz=62,slow=1.5						
VNA2				*e*		20 26 48.2	
VNA3	Neumayer Olymp	103.53	193	*e*PKiKP	PKiKP	20 26 44.4	+0.8
VNA3				*e*		20 26 49.0	
BRG	Berggiesshubel	104.28	323	*e*P	Pdif	20 22 28.3	-0.6
	comp=Z,4.3nm,1.1s						
BRG				*e*		20 22 38.4	
BRG				*e*		20 23 07.3	
BRG				*e*PP	PP	20 26 42.2	-5.2
BRG				*e*		20 26 52.5	
BRG				SKS		20 33 03.0	
BRG				S	Sdif	20 34 14.0	-2.8
BRG	Berggiesshubel	104.28	323	*e*P	Pdif	20 22 28.3	-0.6
BRG				*e*		20 26 52.5	
BRG						20 33 03.0	
BRG				S	Sdif	20 34 14.0	-2.8
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG	Berggiesshubel	104.28	323	*e*P	Pdif	20 22 28.3	-0.6
	comp=Z,7.2nm,1.1s						
BRG				*e*		20 22 38.4	
	comp=Z,4.3nm,1.0s						
BRG				*e*		20 23 07.3	
	comp=Z,12nm,1.3s						
BRG				*e*PP	PP	20 26 42.2	-5.2
	comp=Z,3.5nm,0.9s						
BRG				*e*		20 26 52.5	
	comp=Z,29nm,1.9s						
BRG				SKS		20 33 03.0	
BRG				S	Sdif	20 34 14.0	-2.8
BRG				SS	SS	20 41 06.0	-28
BRG							
	comp=N,220nm,22.7s						
BRG							
	comp=E,608nm,35.4s						
BRG							
	comp=Z,758nm,21.9s						
CLL	Collm	104.71	324	*e*Pdif	Pdif	20 22 30.0	-0.8
CLL				*e*PP	PP	20 26 42.0	-8.6
CLL				*e*SKS		20 33 04.0	
CLL				*e*Sdif	Sdif	20 34 18.0	-2.3
CLL				LR	LR		
	comp=Z,500nm,23.2s,MS5.0						
CLL	Collm	104.71	324	*e*Pdif	Pdif	20 22 30.0	-0.8
CLL				*e*(PP)		20 26 42.0	
CLL				*e*SKSac	SKSac	20 33 04.0	-3.4
CLL				*e*Sdif	Sdif	20 34 18.0	-2.3
CLL				*e*SP	SP	20 35 53.0	-5.8
CLL				*e*SPP		20 36 43.0	
CLL				*e*PPS		20 36 59.0	
CLL				*e*x	x	20 38 08.0	
CLL				*e*SS	SS	20 41 41.0	+1.4
CLL				*e*SSS		20 45 38.0	
CLL				*e*x	x	20 46 44.0	
CLL				*e*x	x	20 51 24.0	
CLL	Collm	104.71	324	*e*Pdiff	Pdif	20 22 30.1	-0.7
	comp=Z,19nm,1.9s						
CLL				*e*pPdiff		20 22 40.9	
CLL				*e*PP	PP	20 26 51.9	+1.3
CLL				*e*SKSac	SKSac	20 33 05.6	-1.8
CLL				*e*Sdiff	Sdif	20 34 16.6	-3.7
CLL				*e*PS	PS	20 36 02.8	-2.1
CLL				*e*SS	SS	20 41 42.8	+3.2
CLL				*e*SSS		20 45 36.5	
BOJS	Bojanci	105.00	317	*i* PP	PP	20 26 49.0	-4.0
KHC	Kasperske Hory	105.05	321	*e*x	PKiKP	20 26 46.0	-1.0
GERES	GERESS Array B	105.06	321	PKiKP	PKiKP	20 26 46.9	-0.1
	comp=Z,1.1nm,0.6s,baz=207,slow=2.7,SNR=4.1						
VISS	Visnje	105.20	318	*i* PP	PP	20 26 49.1	-5.3
CEY	Cerknica	105.49	318	*i* PP	PP	20 26 49.5	-7.1
WDC	Whiskeytown Da	105.60	48	*e*PKPdf	PKiKP	20 26 53.4	+5.1
GRF	Grafenberg Arr	106.32	322	*e*PP	PP	20 27 04.5	+2.0
GRF	Grafenberg Arr	106.32	322	*e*PP	PP	20 27 04.5	+2.0
WVOR	Wild Horse Val	107.94	45	*e*PKPdf	PKiKP	20 26 49.5	-3.1
TSUM	Tsumeb	108.12	250	*e*PKPdf	PKiKP	20 26 51.2	-2.3
DAVOX	Davos/Dischmat	108.16	320	PKiKP	PKiKP	20 26 52.6	-0.2
	comp=Z,2.3nm,0.7s,baz=209,slow=10,SNR=3.6						
CDF	Champ du Feu	109.20	322	*e*PKIKP	PKiKP	20 26 55.5	+0.8
HINF	Hinteralfeld	109.69	322	*e*PKIKP	PKiKP	20 26 56.5	+0.8
HAU	Haudompre	109.93	322	*e*PKIKP	PKiKP	20 26 57.3	+1.2
HAU				*e*MLR	MLR		
	comp=Z,486nm,22.5s,MS4.7						
HAU	Haudompre	109.93	322	*e*PKPdf	PKiKP	20 26 57.3	+1.2
HAU				LR	LR		
	comp=Z,490nm,22.5s,MS5.0						
CHMT	Chamberlain Mo	110.03	39	*e*PKPdf	PKiKP	20 26 55.6	-0.8
BAIF	Baives	110.35	325	*e*PKIKP	PKiKP	20 26 58.0	+1.1
HLID	Hailey	110.51	43	*e*PKPdf	PKiKP	20 26 57.9	+0.6
HLID				*e*SKP		20 30 28.0	
MEZF	Maizieres J'vi	110.52	323	*e*PKIKP	PKiKP	20 26 58.2	+1.0
	comp=Z,11nm,0.8s						
CABF	La Chapelle	110.65	321	*e*PKIKP	PKiKP	20 26 58.6	+1.1
	comp=Z,17nm,0.9s						
LPG	La Plagne	110.66	319	*e*PKIKP	PKiKP	20 26 59.3	+1.7
	comp=Z,10nm,0.8s						
LPL	La Plagne	110.66	319	*e*PKIKP	PKiKP	20 26 58.6	+1.0
	comp=Z,5.2nm,0.6s						
SBF	Sospel	110.81	318	*e*PKIKP	PKiKP	20 26 58.9	+1.0
	comp=Z,25nm,0.8s						
MBDF	Montbardon	110.93	319	*e*PKIKP	PKiKP	20 26 58.9	+0.8
TPNV	Topopah Spring	111.31	50	*e*Pdif	Pdif	20 23 06.9	+6.8
ORIF	Oris-en-Rattie	111.45	319	*e*PKIKP	PKiKP	20 27 00.0	+0.9
ORIF				*e*MLR	MLR		
	comp=Z,585nm,20.8s,MS4.8						
FRF	La Foret Royal	111.45	318	*e*PKIKP	PKiKP	20 27 00.2	+1.1
EKA	Eskdalemuir Ar	111.57	332	PKiKP	PKiKP	20 26 59.2	+0.3
	comp=Z,2.0nm,0.9s,baz=31,slow=2.8,SNR=3.6						
EKA				PP	PP	20 27 37.1	-3.1
	comp=Z,1.8nm,0.9s,baz=74,slow=7.0,SNR=3.9						
LMR	La Mourre	111.63	317	*e*PKIKP	PKiKP	20 27 00.5	+1.0
EGMT	Eagleton	111.74	37	*e*PKPdf	PKiKP	20 26 59.4	-0.1
EGMT				*e*PP	PP	20 27 39.2	-2.6
LOR	Lormes	111.77	322	*e*PKIKP	PKiKP	20 27 00.7	+1.1
LOR				*e*MLR	MLR		
	comp=Z,464nm,19.5s,MS4.8						
LOR	Lormes	111.77	322	*e*PKIKP	PKiKP	20 27 00.7	+1.1
LOR				MLR	MLR		
	comp=Z,460nm,19.5s,MS5.1						
SMRF	Simiane la Rot	112.01	318	*e*PKIKP	PKiKP	20 27 01.5	+1.3
	comp=Z,10nm,0.7s						
QLMT	Earthquake Lak	112.02	41	*e*PKPdf	PKiKP	20 27 01.1	+0.9
SMF	Signal de Mont	112.05	321	*e*PKIKP	PKiKP	20 27 01.3	+1.1
KEST	Kesra	112.06	309	PKiKP	PKiKP	20 27 00.7	+0.1
	comp=Z,0.8nm,0.7s,baz=143,slow=3.8,SNR=5.1						
KEST				PP	PP	20 27 44.4	-0.3
	comp=Z,4.3nm,0.9s,baz=149,slow=2.1,SNR=6.7						
SSF	Saint Saulge	112.08	322	*e*PKIKP	PKiKP	20 27 01.3	+1.1
	comp=Z,10.0nm,0.8s						
VIVF	Saint-Julien-l	112.26	319	*e*PKIKP	PKiKP	20 27 01.4	+0.8
AVF	Avril sur Loir	112.29	322	*e*PKIKP	PKiKP	20 27 01.8	+1.2
BGU	Big Grassy Mou	112.40	45	*e*PKPdf	PKiKP	20 27 01.2	+0.2
BGF	Bois d'Agland	112.70	322	*e*PKIKP	PKiKP	20 27 02.6	+1.2
	comp=Z,20nm,0.9s						
DUG	Dugway	112.81	46	*e*PKPdf	PKiKP	20 27 01.7	-0.1
DUG				*e*SKP		20 30 32.7	
REDW	Red Top Meadow	112.99	42	*e*PKPdf	PKiKP	20 27 02.2	+0.2
REDW				*e*SKP		20 30 32.9	
SFJD	Kangerlussuaq	113.15	359	PKiKP	PKiKP	20 27 01.3	-0.4
	comp=Z,6.1nm,0.7s,baz=50,slow=5.3,SNR=4.1						
HWUT	Hardware Ranch	113.18	44	*e*PKPdf	PKiKP	20 27 02.6	+0.1
HWUT				*e*PP	PP	20 27 48.8	-3.6
TCF	Toulx Ste Croi	113.22	322	*e*PKIKP	PKiKP	20 27 03.7	+1.3
FCC	Fort Churchill	113.23	22	*e*PKPdf	PKiKP	20 27 00.5	-1.6
MSU	Marysvale	113.86	47	*e*PKPdf	PKiKP	20 27 04.7	+0.8
CAF	Calviac	113.91	320	*e*PKIKP	PKiKP	20 27 05.1	+1.3
GRR	Gorron	114.07	325	*e*PKIKP	PKiKP	20 27 05.4	+1.4
	comp=Z,87nm,1.5s						
RJF	Les Rejaudoux	114.09	321	*e*PKIKP	PKiKP	20 27 05.3	+1.2
RJF				*e*MLR	MLR		
	comp=Z,572nm,22.2s,MS4.8						
RJF	Les Rejaudoux	114.09	321	*e*PKIKP	PKiKP	20 27 05.3	+1.2
RJF				MLR	MLR		
	comp=Z,570nm,22.3s,MS5.1						
PDAR	Pinedale Array	114.10	42	PKP	PKiKP	20 27 03.8	-0.5
	comp=Z,1.4nm,0.6s,baz=198,slow=3.0,SNR=12						
PDAR				SKP		20 30 34.5	
	comp=Z,0.8nm,0.6s,baz=152,slow=1.3,SNR=4.3						
PDAR				PKKPbc	PKKPbc	20 37 45.1	-1.4
	comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=4.9						
TMUT	Trail Mountain	114.29	46	*e*PKPdf	PKiKP	20 27 05.0	+0.3
TMUT				*e*SKP		20 30 36.4	
LAO	LASA Array	114.48	37	*e*PKPdf	PKiKP	20 27 02.2	-2.6
MTLF	Montolieu	114.50	319	*e*PKIKP	PKiKP	20 27 06.2	+1.2
	comp=Z,40nm,1.6s						
LFF	La Frestale	114.75	321	*e*PKIKP	PKiKP	20 27 06.6	+1.2
SRU	San Rafael	114.85	46	*e*PKPdf	PKiKP	20 27 05.5	-0.3
SRU				*e*SKP		20 30 36.6	
SGMF	Saint Gilles	115.11	325	*e*PKIKP	PKiKP	20 27 07.3	+1.3
ROSF	Rostrenen	115.47	326	*e*PKIKP	PKPdf	20 27 07.9	+1.2
EPF	Esparros	115.87	319	*e*PKIKP	PKPdf	20 27 09.0	+1.4
	comp=Z,5.3nm,0.8s						
PV10	Paradox Valley	116.21	46	*e*PKPdf	PKPdf	20 27 09.0	+0.6
PV10				*e*SKP		20 30 39.8	
ETSF	Etsaut	116.52	319	*e*PKIKP	PKPdf	20 27 10.2	+1.3
	comp=Z,13nm,0.8s						
PV01	Paradox Valley	116.64	47	*e*PKPdf	PKPdf	20 27 09.6	+0.3
PV01				*e*SKP		20 30 41.0	
SJPF	Ste Jean	116.85	320	*e*PKIKP	PKPdf	20 27 10.9	+1.4
	comp=Z,9.0nm,0.7s						
TUC	Tucson	117.01	53	*e*PKPdf	PKPdf	20 27 10.3	+0.1
TUC				*e*PP	PP	20 28 18.8	-1.0
MVCO	Mesa Verde	117.05	47	*e*PKPdf	PKPdf	20 27 10.7	+0.6
MVCO				*e*SKP		20 30 41.8	
ECRI	Cripan	117.92	320	PKP	PKPdf	20 27 13.5	+1.9
ISCO	Idaho Springs	118.05	44	*e*PKPdf	PKPdf	20 27 12.4	+0.5
ISCO				*e*SKP		20 30 43.8	
ULM	Lac du Bonnet	118.19	30	SKP		20 30 41.6	
	comp=Z,4.9nm,0.7s,baz=314,slow=3.1,SNR=9.7						
ELAN	Lanestosa	118.20	321	PKP	PKPdf	20 27 14.1	+1.9
SDCO	Great Sand Dun	119.01	46	*e*PKPdf	PKPdf	20 27 14.4	+0.6
EARI	Arriondas	119.28	322	PKP	PKPdf	20 27 16.0	+1.8
ANMO	Albuquerque	119.45	49	*e*PKPdf	PKPdf	20 27 14.9	+0.2
LPM	Los Pinos Moun	119.56	50	*e*PKPdf	PKPdf	20 27 15.2	+0.2
BNM	Barren Site	119.63	50	*e*PKPdf	PKPdf	20 27 15.5	+0.4
EVIA	Vianos	119.77	316	PKP	PKPdf	20 27 17.1	+1.8
GUD	Guadarrama	119.95	318	PKP	PKPdf	20 27 16.2	+0.7
ESDC	Sonseca Array	120.29	317	PKP	PKPdf	20 27 16.0	-0.2
ESDC	Sonseca Array	120.29	317	PKP	PKPdf	20 27 15.9	-0.3
	comp=Z,0.7nm,0.5s,baz=122,slow=1.9,SNR=8.1						
ESDC				PP	PP	20 28 43.4	+1.4
	comp=Z,2.9nm,0.8s,baz=64,slow=6.7,SNR=6.1						
ESLA	Sonseca Array	120.29	317	PKPdf	PKPdf	20 27 16.3	0.0
ENIJ	Nijar	120.30	314	PKP	PKPdf	20 27 16.5	+0.2
EPON	Pontenova	120.46	322	PKP	PKPdf	20 27 16.3	-0.1
EBER	Berja	120.83	314	PKP	PKPdf	20 27 16.1	-1.3
EBAN	Banos Encina	120.89	316	PKP	PKPdf	20 27 16.2	-1.2
ECOG	Cogollos-Vega	121.14	315	PKP	PKPdf	20 27 16.8	-1.2
EGUA	Guajares	121.34	314	PKP	PKPdf	20 27 17.9	-0.4
ERON	Agron	121.43	315	PKP	PKPdf	20 27 17.2	-1.3
EADA	Adamuz	121.43	316	PKP	PKPdf	20 27 18.0	-0.4
ELUQ	Luque	121.50	315	PKP	PKPdf	20 27 19.0	+0.4
MNTX	Cornudas Mount	121.52	52	*e*PKPdf	PKPdf	20 27 18.9	0.0
MNTX				*e*SKP		20 30 50.4	
MVO	Moncorvo	121.56	320	*e*PKPdf	PKPdf	20 27 20.9	+2.3
MVO	Moncorvo	121.56	320	*e*SS	SS	20 45 27.4	+4.6
ELOJ	Sierra Loja	121.61	315	PKP	PKPdf	20 27 18.6	-0.3
ECSD	EROS,Sioux Fal	121.80	36	*e*PKPdf	PKPdf	20 27 17.5	-1.5
ECSD				*e*SKP		20 30 48.3	
EYMN	Ely	121.87	29	*e*PKPdf	PKPdf	20 27 15.5	-3.5
PVRL	Vila Real	121.94	321	*e*PKPdf	PKPdf	20 27 18.9	-0.5
MTE	Manteigas	122.30	320	*e*PKPdf	PKPdf	20 27 22.4	+2.3
MTE	Manteigas	122.30	320	*e*SS	SS	20 45 37.3	+5.1
PCBR	Castelo Branco	122.55	319	*e*PKPdf	PKPdf	20 27 21.4	+0.8
EJIF	Jimena Fronter	122.87	315	PKP	PKPdf	20 27 20.7	-0.6
ESPR	Espera	122.95	315	PKP	PKPdf	20 27 21.7	+0.3
EMIN	Mina Concepcio	123.07	317	PKP	PKPdf	20 27 22.6	+0.9
PBAR	Barrancos	123.12	317	*e*PKPdf	PKPdf	20 27 22.5	+0.8
PBAR	Barrancos	123.12	317	*e*SS	SS	20 45 42.3	-0.5
PESTR	Estremoz	123.13	318	*e*PKPdf	PKPdf	20 27 22.2	+0.5
PESTR	Estremoz	123.13	318	*e*SS	SS	20 45 45.5	+2.5
EVO	Evora	123.59	318	*e*PKPdf	PKPdf	20 27 23.4	+0.8
EGRO	El Granado	123.75	317	PKP	PKPdf	20 27 25.1	+2.1
PBEJ	Beja	123.76	318	*e*PKPdf	PKPdf	20 27 22.4	-0.6
TXAR	Lajitas Array	123.78	54	PKP	PKPdf	20 27 22.6	-0.7
	comp=Z,2.7nm,0.8s,baz=318,slow=1.7,SNR=14						
PVAQ	Vaqueiros	123.97	317	*e*PKPdf	PKPdf	20 27 24.0	+0.6
PVAQ	Vaqueiros	123.97	317	*e*SS	SS	20 45 49.2	-4.5
TOA0	Torodi Ar. Sit	124.09	286	*e*PKPdf	PKPdf	20 27 23.9	-0.3
TOA0				*e*PP	PP	20 29 00.3	-8.7
TOA0				*e*SKP		20 30 55.1	
TORD	Torodi Ar. Bea	124.09	286	PKP	PKPdf	20 27 23.1	-1.1
TORD				PP	PP	20 29 13.8	+4.9
TORD				PKKPbc	PKKPbc	20 37 08.8	-0.5
TORD	Torodi Ar. Bea	124.09	286	PKP	PKPdf	20 27 23.1	-1.1
	comp=Z,5.6nm,0.4s,baz=72,slow=1.5,SNR=53						
TORD				PP	PP	20 29 13.8	+4.9
	comp=Z,7.8nm,1.0s,baz=67,slow=6.9,SNR=6.7						
TORD				PKKPbc	PKKPbc	20 37 08.8	-0.5
	comp=Z,6.0nm,0.7s,baz=279,slow=3.9,SNR=28						
PBDV	Barranco-do-Ve	124.20	317	*e*SS	SS	20 45 51.0	-5.6
SCHQ	Schefferville	124.25	10	PKP	PKPdf	20 27 23.3	0.0
	comp=Z,12nm,0.6s,baz=18,slow=2.3,SNR=30						
COWI	Conover	124.32	30	*e*PKPdf	PKPdf	20 27 23.0	-0.8
KSU1	Kansas State U	124.44	40	*e*PKPdf	PKPdf	20 27 23.4	-0.8
MORF	Marmelete	124.66	317	*e*PKPdf	PKPdf	20 27 26.0	+1.3
PFVI	Vila Bisbo	124.87	317	*e*PKPdf	PKPdf	20 27 26.0	+0.9
PFVI	Vila Bisbo	124.87	317	*e*SS	SS	20 46 11.0	+6.0
WMOK	Wichita Mounta	125.22	46	*e*PKPdf	PKPdf	20 27 25.1	-0.7
WMOK				*e*PP	PP	20 29 12.4	-3.1
JFWS	Jewell Farm	125.92	33	*e*PKPdf	PKPdf	20 27 26.0	-1.0
JCT	Junction City	126.39	51	*e*PKPdf	PKPdf	20 27 27.6	-0.6
MIAR	Mount Ida	128.99	43	*e*PKPdf	PKPdf	20 27 33.3	+0.2
MIAR				*e*PP	PP	20 29 35.8	-4.4
MIAR				*e*SKP		20 30 48.8	
UALR	University of	129.70	42	*e*PKPdf	PKPdf	20 27 34.1	-0.3
HKT	Hockley	129.70	50	*e*PKPdf	PKPdf	20 27 34.9	+0.3
HKT				*e*PP	PP	20 29 40.0	-5.2
HKT				*e*SKP		20 30 53.0	
SIUC	Southern Illin	129.92	37	*e*PKPdf	PKPdf	20 27 35.1	+0.4
SIUC				*e*SKP		20 30 51.7	
BLO	Bloomington	130.53	34	*e*PKPdf	PKPdf	20 27 35.7	-0.1
BLO				*e*SKP		20 30 53.2	
KIC	Kosan Boka	131.25	278	*e*PKIKP	PKPdf	20 27 38.6	+0.7
	comp=Z,55nm,0.7s						
TIC	Toumodi	131.50	279	*e*PKIKP	PKPdf	20 27 38.9	+0.5
	comp=Z,38nm,0.5s						
LIC	Lamto	131.55	278	*e*PKIKP	PKPdf	20 27 38.8	+0.3
	comp=Z,14nm,0.5s						
LIC				*e*MLR	MLR		
	comp=Z,489nm,22.5s,MS4.8						
LIC	Lamto	131.55	278	*e*PKIKP	PKPdf	20 27 39.0	+0.5
	comp=Z,37nm,0.7s						
LIC	Lamto	131.55	278	*e*PKPdf	PKPdf	20 27 38.8	+0.3
LIC				LR	LR		
	comp=Z,240nm,22.5s,MS4.8						
ERPA	Erie	131.65	27	*e*PKPdf	PKPdf	20 27 37.5	-0.4
ACSO	Alum Creek Sta	131.67	31	*e*PKPdf	PKPdf	20 27 36.6	-1.4
ACSO				*e*SKP		20 30 57.8	
LONY	Lake Ozonia	131.71	20	*e*PKPdf	PKPdf	20 27 37.1	-0.9
LONY				*e*SKP		20 30 56.6	
NCB	Newcomb	132.40	21	*e*PKPdf	PKPdf	20 27 39.8	+0.5
NCB				*e*SKP		20 30 59.6	
TZTN	Tazewell	134.05	34	*e*PKPdf	PKPdf	20 27 42.5	0.0
TZTN				*e*SKP		20 31 04.9	
CPCT	Cooper Cave	134.25	36	*e*PKPdf	PKPdf	20 27 41.4	-1.6
LRAL	Lakeview Retre	134.29	41	*e*PKPdf	PKPdf	20 27 43.1	-0.1
LRAL				*e*SKP		20 31 06.6	
MVL	Millersville	134.97	25	*e*PKPdf	PKPdf	20 27 44.3	+0.1
MVL				*e*SKP		20 31 08.8	
CMIG	Matias Romero	135.59	65	PKP	PKPdf	20 27 46.4	+0.4
	comp=Z,4.7nm,0.7s,baz=308,slow=2.6,SNR=12						
CMIG				PP	PP	20 30 22.3	-1.3
	comp=Z,0.6nm,0.5s,baz=259,slow=10,SNR=4.6						
CMIG				SKPbc	SKPbc	20 31 11.0	-2.9
	comp=Z,6.3nm,0.6s,baz=307,slow=3.6,SNR=14						
PLCA	Paso Flores	136.46	161	*e*PKPpre		20 27 34.2	
PLCA				*e*PKPdf	PKPdf	20 27 47.5	+0.5
PLCA				*e*SKP		20 31 14.5	
PLCA	Paso Flores	136.46	161	*e*PKHKP		20 27 34.2	
PLCA				*e*		20 27 47.5	
TRQA	Tornquist	141.24	169	*e*PKPpre		20 27 49.6	
TRQA				*e*SKP		20 31 27.2	
CMCH	Combarbala	144.66	153⇓	*i*P	PKPdf	20 28 00.2	-1.8
CFAA	Coronel Fontan	145.45	157	PKPbc	PKPbc	20 28 03.1	-0.3
	comp=Z,14nm,0.6s,baz=212,slow=3.9,SNR=169						
TLL	Tololo Astrono	145.60	152⇑	*i*P	PKPdf	20 28 03.9	+0.2
BBSR	BB Station	146.05	18	*e*PKPbc	PKPbc	20 28 05.4	+0.2
LCO	Las Campanas	146.62	151	*e*PKPbc	PKPbc	20 28 07.2	+0.2
JTS	JuntasAbangare	146.81	71	*e*PKPdf	PKPdf	20 28 05.3	-0.8
JTS	JuntasAbangare	146.81	71	PKIKP	PKPdf	20 28 06.3	+0.2
JTS				pmax	pmax		
	comp=Z,35nm,0.7s						
JTS	JuntasAbangare	146.81	71	PKPbc	PKPbc	20 28 06.3	-1.7
	comp=Z,35nm,0.7s,baz=334,slow=3.2,SNR=18						
BCIP	Isla Barro Col	151.96	70	*e*PKPbc	PKPbc	20 28 19.6	-1.3
NNA	Nana	153.66	118	PKP	PKPdf	20 28 17.3	+0.4
NNA				PKPbc	PKPbc	20 28 25.3	+0.7
NNA				PKPab	PKPab	20 28 38.0	+0.6
NNA	Nana	153.66	118	PKP	PKPdf	20 28 17.3	+0.5
	comp=Z,5.7nm,0.7s,baz=256,slow=4.2,SNR=2.5						
NNA				PKPbc	PKPbc	20 28 25.3	+0.7
	comp=Z,24nm,1.1s,baz=261,slow=2.8,SNR=4.5						
NNA				PKPab	PKPab	20 28 38.0	+0.6
	comp=Z,24nm,0.9s,baz=314,slow=3.8,SNR=4.3						
ATAH	Atahualpa	153.90	106	PKP	PKPdf	20 28 18.5	+1.2
	comp=Z,4.9nm,0.6s,baz=145,slow=8.5,SNR=8.1						
ATAH				PKPbc	PKPbc	20 28 26.8	+1.6
	comp=Z,15nm,0.8s,baz=173,slow=2.9,SNR=8.4						
ATAH				PKPab	PKPab	20 28 40.6	+2.2
	comp=Z,32nm,0.8s,baz=162,slow=3.5,SNR=4.3						
OTAV	Otavalo	154.74	90	*e*PKPdf	PKPdf	20 28 18.8	+0.4
SJG	San Juan	157.98	35	PKP2	PKPab	20 28 54.7	-0.9
SJG				pmax	pmax		
	comp=Z,23nm,0.6s						
SJG	San Juan	157.98	35	PKP	PKPdf	20 28 21.7	-0.8
	comp=Z,11nm,0.2s,baz=329,slow=17,SNR=3.0						
SJG				PKPab	PKPab	20 28 54.7	-0.9
	comp=Z,23nm,0.6s,baz=48,slow=8.1,SNR=5.1						
LPAZ	La Paz	158.08	138	*e*PKPbc	PKPdf	20 28 24.0	+1.3
LPAZ	La Paz	158.08	138	PKP2	PKPab	20 28 57.5	+1.4
LPAZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPAZ	La Paz	158.08	138	PKP	PKPdf	20 28 23.9	+1.3
	comp=Z,7.6nm,0.9s,baz=346,slow=1.3,SNR=22						
LPAZ				PKPab	PKPab	20 28 57.5	+1.3
	comp=Z,7.6nm,0.8s,baz=352,slow=2.3,SNR=4.4						
ROSC	El Rosal	158.35	77	PKP	PKPdf	20 28 23.4	+0.3
	comp=Z,5.8nm,0.4s,baz=91,slow=22,SNR=6.9						
ROSC				PKPab	PKPab	20 28 58.5	+0.9
	comp=Z,11nm,0.5s,baz=107,slow=21,SNR=4.7						
SDV	Santo Domingo	160.53	63	*e*PKPdf	PKPdf	20 28 25.0	-0.6
SDV				*e*PKPab	PKPab	20 29 07.3	+0.3
SDV	Santo Domingo	160.53	63	PKP	PKPdf	20 28 25.7	+0.1
	comp=Z,30nm,1.1s,baz=317,slow=2.4,SNR=25						
SDV				PKPab	PKPab	20 29 07.6	+0.7
	comp=Z,23nm,0.7s,baz=354,slow=1.0,SNR=14						
SIV	San Ignacio	162.28	154	PKP	PKPdf	20 28 27.6	+0.3
	comp=Z,8.7nm,0.9s,baz=250,slow=1.8,SNR=13						
SIV				PKPab	PKPab	20 29 14.5	+0.2
	comp=Z,7.8nm,0.5s,baz=220,slow=6.1,SNR=12						

*ISCJB **03** 20:15:01.7±1.0, 3.16S±0.06×75.64W±0.10, h152km±12km, mb3.6/7, Error ellipse: s-maj=15.8km s-min=9.5km az=177.9*

*NEIC **03** 20:15:01.6±1.1, 3.23S×75.70W, h139km±11km, mb3.9/3, Error ellipse: s-maj=19.7km s-min=10.3km az=72.0*

*IDC **03** 20:15:02.2±2.5, 3.18S×75.69W, h139km±26km, mb3.4/4, mb1 3.8/9, mb1mx3.6/21, mbtmp3.6/9, Error ellipse: s-maj=23.9km s-min=18.8km az=40.0*

ISC 03 20:15:02.6±0.9**, 3.13S**±0.06×**75.63W**±0.10**, h142**km±12km**, n30,** σ0s**90**/24**, mb3.6**/7**, 1C, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	Otavalo	4.38	320	*e*Pn	Pn	20 16 06.3	-1.3
OTAV				*e*Sn	Sn	20 16 40.4	-18
ATAH	Atahualpa	4.74	216	P	Pn	20 16 13.6	+1.1
	6.6nm,0.3s,baz=22,slow=8.2,SNR=34						
ATAH				S	Sn	20 17 06.9	+0.2
	8.5nm,0.3s,baz=134,slow=15,SNR=10						
ROSC	El Rosal	8.03	9	*e*Pn	Pn	20 16 58.2	+1.6
ROSC	El Rosal	8.03	9	P	Pn	20 17 06.1	+10
	2.6nm,0.3s,baz=100,slow=11,SNR=10						
NNA	Nana	8.88	188⇑	*e*Pn	Pn	20 17 06.9	-1.1
NNA				*e*Sn	Sn	20 18 35.7	-11
NNA	Nana	8.88	188	P	Pn	20 17 08.3	+0.3
	baz=4.4,slow=13						
NNA				S	Sn	20 18 42.4	-4.2
BCIP	Isla Barro Col	12.91	341	Pn	Pn	20 17 57.1	-4.0
SDV	Santo Domingo	12.93	23	*e*Pn	Pn	20 18 01.8	+0.5
SDV	Santo Domingo	12.93	23	P	Pn	20 18 02.3	+1.0
	1.5nm,0.3s,baz=218,slow=11,SNR=8.0						
LPAZ	La Paz	15.01	151	*e*Pn	Pn	20 18 24.9	-2.8
LPAZ	La Paz	15.01	151	P	Pn	20 18 26.8	-0.9
	0.6nm,0.3s,baz=337,slow=16,SNR=12						
SIV	San Ignacio	19.20	133	P	P	20 19 16.2	+0.5
	1.5nm,0.3s,baz=317,slow=11,SNR=21						
TRQA	Tornquist	36.94	162	*e*P	P	20 22 04.0	+6.0
	7.3nm,1.1s,mb4.2						
TXAR	Lajitas Array	42.00	322	P	P	20 22 40.1	+0.1
	0.3nm,0.5s,mb3.1,baz=155,slow=6.9,SNR=4.0						
TXAR				PcP	PcP	20 24 33.2	+0.6
	0.6nm,0.6s,baz=152,slow=6.7,SNR=6.2						
ANMO	Albuquerque	47.67	325	P	P	20 23 24.9	+0.1
	1.7nm,0.8s,mb3.7						
PDAR	Pinedale Array	55.01	330	PcP	PcP	20 25 19.2	-0.1
	0.5nm,0.5s,baz=129,slow=7.3,SNR=4.2						
NVAR	Mina Array Bea	57.11	321	P	P	20 24 35.4	+1.0
	1.8nm,0.7s,mb4.0,baz=134,slow=6.4,SNR=5.8						
HLID	Hailey	58.09	328	P	P	20 24 41.3	+0.1
	0.5nm,0.6s,mb3.5						
YKA	Yellowknife Ar	71.80	342	P	P	20 26 08.4	-0.9
	0.4nm,0.4s,mb3.5,baz=138,slow=5.9,SNR=9.1						
TORD	Torodi Ar. Bea	78.39	76	P	P	20 26 47.9	-0.3
TORD	Torodi Ar. Bea	78.39	76	P	P	20 26 47.9	-0.3
	0.3nm,0.3s,mb3.4,baz=282,slow=5.8,SNR=7.3						
ZALV	Zalesovo Beam	126.86	14	PKP	PKPdf	20 33 49.5	-0.1
ZALV				pPKP	pPKPdf	20 34 25.9	-1.4
ZALV	Zalesovo Beam	126.86	14	PKP	PKPdf	20 33 49.5	-0.1
	0.8nm,0.3s,baz=265,slow=1.2,SNR=8.1						
ZALV				pPKP	pPKPdf	20 34 25.9	-1.4
	0.8nm,0.4s,baz=236,slow=1.9,SNR=4.9						
MKAR	Makanchi Array	132.46	20	PKP	PKPdf	20 34 00.6	+0.2
MKAR				pPKP	pPKPdf	20 34 37.2	-1.0
MKAR	Makanchi Array	132.46	20	PKP	PKPdf	20 34 00.6	+0.2
	0.4nm,0.5s,baz=300,slow=2.6,SNR=15						
MKAR				pPKP	pPKPdf	20 34 37.2	-1.0
	0.3nm,0.4s,baz=291,slow=3.4,SNR=3.7						
MJAR	Matsushiro Arr	134.43	321	PKP	PKPdf	20 34 04.0	-0.5
	0.5nm,0.7s,baz=119,slow=2.3,SNR=3.3						
ASAR	Alice Springs	140.80	226	PKhKP		20 34 09.8	
	0.6nm,0.4s,baz=127,slow=3.8,SNR=21						
WB2	Warramunga Arr	142.69	231	*e*P		20 34 15.8	
WRA	Warramunga Arr	142.70	231	PKhKP		20 34 16.2	
	2.1nm,0.5s,baz=125,slow=2.6,SNR=71						
WRA				pPKP	pPKPdf	20 34 53.7	-4.1
	0.6nm,0.5s,baz=124,slow=2.8,SNR=2.4						
FITZ	Fitzroy Crossi	150.26	224	*e*P	PKPbc	20 34 38.2	+0.2
	13nm,0.9s						

NEIC 03 20:20:47.6, 53.46N×165.10W, h25km, ML4.2(PMR)**, ML3.7**(AEIC)**, After AEIC., Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKUT	Akutan	0.78	330	*e*P	Pb	20 21 01.0	-1.6
AKLV	Akutan Long Va	0.87	325	P	Pb	20 21 02.2	-1.8
AKLV				S	Sb	20 21 14.0	-1.2
UNV	Unalaska Valle	0.92	296	P	Pb	20 21 02.6	-2.2
FALS	False Pass	1.72	35	P	Pn	20 21 14.3	-1.5

*CSEM **03** 20:26:38.9±0.6, 38.49N×39.05E, h30km, MD2.7, Error ellipse: s-maj=26.3km s-min=7.1km az=138.0*

DDA 03 20:26:39.1, 38.53N×39.33E, h7km, Md2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	263	*i* P	Pg	20 26 44.2	-0.3
ELZG				*i* S	Sg	20 26 48.2	+0.2
PTK	Pertek	0.36	8	PG	Pg	20 26 49.9	+3.7
PTK				SG	Sg	20 26 58.2	+7.2
MYA	Malataya	0.74	254	PG	Pg	20 26 51.3	-2.0
MALT	Malatya	0.74	253	PG	Pg	20 26 51.2	-2.2
MARD	Mardin	1.67	136	*i* P	Pn	20 27 08.3	-0.4
MARD				*i* S	Sn	20 27 30.4	0.0
GZT	Gaziantep	1.82	230	*i* P	Pn	20 27 11.5	+0.7
GZT				*i* S	Sg	20 27 34.7	-2.9

*VIE **03** 20:35:32.9±0.4, 47.34N×16.93E, h8km±2km, mb2.6/7, ML3.1/7, Error ellipse: s-maj=3.0km s-min=1.8km az=132.0 25 km ESE of Lutzmannsburg*

*NEIC **03** 20:35:33.5±0.4, 47.32N×16.88E, h10km, ML3.0(SZGRF),*

ML2.5(BRA), Error ellipse: s-maj=6.4km s-min=4.0km az=153.0
NEIC Felt at Koszeg.
*CSEM **03** 20:35:33.9±0.1, 4737N×1693E, h10km, ML3.4/7, Error ellipse: s-maj=2.3km s-min=1.5km az=176.0*
*ISCJB **03** 20:35:33.0±0.4, 4743N±002×1692E±002, h5km±3km, Error ellipse: s-maj=3.1km s-min=2.2km az=167.7*
*LDG **03** 20:35:33.3±8.4, 4738N×1701E, h10km, Ml3.1/4, Error ellipse: s-maj=9999.9km s-min=9999.9km az=99.0*
*IPEC **03** 20:35:34.3±0.2, 4743N×1696E, h13km±1km, ML2.4/1, Error ellipse: s-maj=1.3km s-min=0.8km az=124.0*
*PRU **03** 20:35:34.7, 4746N×1684E, h0km*
*SZGRF **03** 20:35:35.0, 4762N×1701E, h10km, mb3.0, Hungary*
ISC 03 20:35:34.5±0.4**, 4745N**±002×**1688E**±002**, h10**km±2km**, n95,** σ**1ˢ41**/156**, 19C-15D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOP	**Sopron**	**0.32**	**317**	*e*Pg	**Pg**	**20 35 41.8**	**+1.0**
SOP				*e*Pn	**Sg**	**20 35 46.4**	**+1.4**
SOP	**Sopron**	**0.32**	**317**	*e*Pg	**Pg**	**20 35 41.7**	**+0.9**
SOP				*e*Sg	**Sg**	**20 35 46.2**	**+1.2**
ZST	**Bratislava**	**0.76**	**11**	*i* PG	**Pg**	**20 35 49.4**	**+0.3**
ZST				*e*SG	**Sg**	**20 35 59.5**	**+0.5**
CONA	**Conrad Observa**	**0.83**	**305**	*e*Pg	**Pg**	**20 35 51.3**	**+0.7**
	SNR=90						
CONA				⇓*i*Sg	**Sg**	**20 36 03.5**	**+2.1**
	97nm,0.3s						
ARSA	**Arzberg**	**0.94**	**258**	*e*Pg	**Pg**	**20 35 52.6**	**0.0**
	SNR=106						
ARSA				⇑*i*Sg	**Sg**	**20 36 04.9**	**0.0**
	comp=N,244nm,0.4s						
PKSG		**1.03**	**93**	⇓*i*Pn	**Pn**	**20 35 53.6**	**-1.4**
PKSG				*e*Sn	**Sn**	**20 36 08.4**	**-1.1**
SMOL	**Smolenice**	**1.12**	**19**	*e*PG	**Pg**	**20 35 56.8**	**+0.7**
GROS	**Grobnik**	**1.37**	**224**	*i* Pn	**Pn**	**20 35 58.5**	**-1.2**
GROS				*i* Sn	**Sn**	**20 36 18.7**	**+0.9**
PERS	**Pernice**	**1.46**	**236**	*i* Pn	**Pn**	**20 36 00.2**	**-0.7**
BUD	**Budapest**	**1.46**	**88**	*e*Pn	**Pn**	**20 35 53.8**	**-7.1**
BUD				*e*Sg	**Sg**	**20 36 22.4**	**+1.1**
BUD	**Budapest**	**1.46**	**88**	*e*Sn	**Sg**	**20 36 22.4**	**+1.1**
JAVC	**Velka Javorina**	**1.50**	**20**	*e*Pn	**Pn**	**20 36 01.4**	**-0.1**
KOLL	**Kolacno**	**1.52**	**42**	*e*SN	**Sn**	**20 36 23.6**	**+2.0**
ZAVS	**Zavodnje**	**1.63**	**232**	*i* Pn	**Pn**	**20 36 02.6**	**-0.6**
KRUC	**Moravsky**	**1.64**	**349**	*e*Sg	**Sg**	**20 36 26.3**	**-1.0**
	30nm,0.3s						
PENC	**Penc**	**1.66**	**77**	⇓*i*Pn	**Pn**	**20 36 02.9**	**-0.8**
VYHS	**Vyhne**	**1.68**	**51**	*i* PN	**Pn**	**20 36 02.3**	**-1.6**
VYHS				*e*SN	**Sn**	**20 36 23.0**	**-2.5**
PKSM	**Moragy**	**1.73**	**135**	⇓P	**Pn**	**20 36 02.9**	**-1.8**
PKSM	**Moragy**	**1.73**	**135**	⇓*i*P	**Pn**	**20 36 02.9**	**-1.8**
PKSM	**Moragy**	**1.73**	**135**	*e*Pn	**Pn**	**20 36 02.7**	**-2.0**
PKSM	**Moragy**	**1.73**	**135**	⇓P	**Pn**	**20 36 02.9**	**-1.8**
PKSM	**Moragy**	**1.73**	**135**	*e*Pg	**Pg**	**20 36 09.5**	**+1.7**
PKSM				*e*Sn	**Sn**	**20 36 29.0**	**+2.1**
PKSM				*e*Sg	**Sg**	**20 36 33.8**	**+3.5**
MOA	**Molln**	**1.81**	**284**	⇓*e*Pg	**Pg**	**20 36 08.3**	**-0.9**
MOA				*i* Sn	**Sn**	**20 36 30.2**	**+1.5**
MOA				*i* Sg	**Sg**	**20 36 35.2**	**+2.6**
MOA	**Molln**	**1.81**	**284**	⇓*e*Pg	**Pg**	**20 36 08.3**	**-0.9**
	SNR=42						
MOA				⇓*i*Sn	**Sn**	**20 36 30.2**	**+1.5**
MOA				⇑*i*Sg	**Sg**	**20 36 35.2**	**+2.6**
	46nm,0.4s						
MOA	**Molln**	**1.81**	**284**	Pg	**Pg**	**20 36 08.3**	**-0.9**
	42nm,5.0s						
MOA				Sn	**Sn**	**20 36 30.2**	**+1.5**
MOA				*e*Sg	**Sg**	**20 36 32.6**	**0.0**
RHK3	**Tenkes**	**1.83**	**148**	⇓*i*Pn	**Pn**	**20 36 04.7**	**-1.3**
RHK3				*e*Sn	**Sn**	**20 36 31.3**	**+2.1**
OBKA	**Obir**	**1.85**	**240**	⇑*e*Pg	**Pn**	**20 36 06.1**	**-0.2**
	SNR=20						
OBKA				⇑*i*Sn	**Sn**	**20 36 29.0**	**-0.7**
OBKA				⇓*i*Sg	**Sg**	**20 36 33.4**	**-0.6**
	77nm,0.6s						
OBKA	**Obir**	**1.85**	**240**	Pg	**Pn**	**20 36 06.1**	**-0.2**
	20nm,5.0s						
OBKA	**Obir**	**1.85**	**240**	*e*Pn	**Pn**	**20 36 06.3**	**0.0**
OBKA				Sn	**Sn**	**20 36 29.0**	**-0.8**
OBKA				Sg	**Sg**	**20 36 33.4**	**-0.6**
	77nm,0.6s						
VRAC	**Vranov**	**1.86**	**354**	⇑P	**Pn**	**20 36 07.4**	**+0.9**
VRAC	**Vranov**	**1.86**	**354**	⇑*i*P	**Pn**	**20 36 07.4**	**+0.9**
VRAC	**Vranov**	**1.86**	**354**	*e*Pn	**Pn**	**20 36 06.5**	**0.0**
VRAC	**Vranov**	**1.86**	**354**	⇑P	**Pn**	**20 36 07.4**	**+0.9**
PSZ	**Piszkesteto**	**2.09**	**76**	⇑P	**Pn**	**20 36 09.1**	**-0.5**
PSZ	**Piszkesteto**	**2.09**	**76**	*e*PB	**Pn**	**20 36 09.2**	**-0.4**
PSZ				*e*Pg	**Pg**	**20 36 14.1**	**-0.5**
PSZ				*e*Sg	**Sg**	**20 36 42.2**	**+0.5**
PSZ	**Piszkesteto**	**2.09**	**76**	⇑*i*P	**Pn**	**20 36 09.1**	**-0.5**
PSZ	**Piszkesteto**	**2.09**	**76**	*e*Pn	**Pn**	**20 36 09.1**	**-0.5**
MORC	**Moravsky Berou**	**2.37**	**11**	⇓P	**Pn**	**20 36 13.4**	**+0.1**
MORC	**Moravsky Berou**	**2.37**	**11**	⇓*i*P	**Pn**	**20 36 13.4**	**0.0**
MORC	**Moravsky Berou**	**2.37**	**11**	*e*Pn	**Pn**	**20 36 13.3**	**-0.1**
MORC				*e*Sn	**Sn**	**20 36 42.1**	**-0.3**
KBA	**Koelnbreinsper**	**2.44**	**262**	⇑*e*Pn	**Pn**	**20 36 14.9**	**+0.6**
	SNR=32						
KBA				⇑*i*Sn	**Sn**	**20 36 44.4**	**+0.3**
KBA	**Koelnbreinsper**	**2.44**	**262**	*e*Pn	**Pn**	**20 36 14.9**	**+0.6**
KBA				Sn	**Sn**	**20 36 44.4**	**+0.3**
VOY	**Vojsko**	**2.50**	**236**	*e*Pn	**Pn**	**20 36 14.7**	**-0.5**
VOY				*e*Sn	**Sg**	**20 36 55.1**	**+0.4**
OKC	**Ostrava-Krasne**	**2.53**	**19**	*e*PN	**Pn**	**20 36 15.5**	**-0.1**
OKC				*e*SN	**Sn**	**20 36 46.0**	**-0.5**
GEC2	**GERESS Array S**	**2.54**	**304**	*e*Pn	**Pn**	**20 36 17.3**	**+1.5**
KECS	**Kecovo**	**2.63**	**66**	*e*PN	**Pn**	**20 36 16.1**	**-0.9**
KECS				*e*SG	**Sg**	**20 36 59.0**	**-0.1**
KHC	**Kasperske Hory**	**2.77**	**309**	*e*PN	**Pn**	**20 36 20.5**	**+1.6**
KHC				*e*PG	**Pg**	**20 36 25.0**	**-2.5**
KHC				*e*SN	**Sn**	**20 36 51.5**	**-0.9**
KHC				*e*SG	**Sg**	**20 37 00.7**	**-2.7**
	32nm,0.6s						
DPC	**Dobruska-Polom**	**2.92**	**353**	*e*PN	**Pn**	**20 36 22.0**	**+1.0**
DPC				*e*SG	**Sg**	**20 37 07.3**	**-1.0**
DPC	**Dobruska-Polom**	**2.92**	**353**	*e*Pn	**Pn**	**20 36 21.6**	**+0.6**
PRU	**Pruhonice**	**2.97**	**329**	*e*PN	**Pn**	**20 36 23.1**	**+1.4**
PRU				*e*SG	**Sg**	**20 37 08.2**	**-1.7**
	19nm,0.4s						
NIE	**Niedzica**	**3.02**	**48**	*e*P	**Pn**	**20 36 22.7**	**+0.4**
NIE				*e*S	**Sn**	**20 36 57.3**	**-1.2**
FGSL	**Fruska Gora**	**3.07**	**137**	Pn	**Pn**	**20 36 21.8**	**-1.2**
FGSL				Sg	**Sg**	**20 37 12.6**	**-0.4**
UPC	**Upice**	**3.11**	**350**	*e*PN	**Pn**	**20 36 25.1**	**+1.5**
WET	**Wettzell**	**3.16**	**304**	*e*Sg	**Sg**	**20 37 12.2**	**-3.7**
CRVS	**Cervenica-Dubn**	**3.39**	**63**	*e*PN	**Pn**	**20 36 27.5**	**0.0**
CRVS				*e*SG	**Sg**	**20 37 24.8**	**+1.4**
CRVS	**Cervenica-Dubn**	**3.39**	**63**	*e*Pn	**Pn**	**20 36 27.6**	**+0.1**
CRVS				*e*Sg	**Sg**	**20 37 24.8**	**+1.4**
STHS	**Stebnicka Huta**	**3.51**	**54**	*e*PN	**Pn**	**20 36 30.3**	**+1.2**
STHS				*e*SN	**Sn**	**20 37 11.7**	**+1.1**
STHS	**Stebnicka Huta**	**3.51**	**54**	*e*Pn	**Pn**	**20 36 30.4**	**+1.3**
STHS				*e*Sn	**Sn**	**20 37 11.7**	**+1.1**
BZS	**Buzias**	**3.75**	**118**	⇑P	**Pn**	**20 36 31.1**	**-1.4**
BZS	**Buzias**	**3.75**	**118**	⇑*i*P	**Pn**	**20 36 31.1**	**-1.3**
SQTA	**Sankt Quirin**	**3.86**	**269**	⇑*i*Pn	**Pn**	**20 36 35.6**	**+1.6**
	SNR=7.7						
SQTA				⇑*i*Sn	**Sn**	**20 37 21.9**	**+2.6**
SQTA	**Sankt Quirin**	**3.86**	**269**	Pn	**Pn**	**20 36 35.6**	**+1.7**
	7.0nm,7.0s						
SQTA				Sn	**Sn**	**20 37 21.9**	**+2.6**
ROTZ	**Rotzenmuhle**	**3.87**	**308**	*e*Sg	**Sg**	**20 37 35.0**	**-3.6**
MOTA	**Moosalm**	**3.92**	**271**	⇓*i*Pn	**Pn**	**20 36 36.4**	**+1.6**
	SNR=6.4						
MOTA				⇑*i*Sn	**Sn**	**20 37 22.7**	**+1.9**
MOTA	**Moosalm**	**3.92**	**271**	Pn	**Pn**	**20 36 36.4**	**+1.6**
	6.0nm,4.0s						
MOTA				Sn	**Sn**	**20 37 22.7**	**+1.9**
BRG	**Berggiesshubel**	**3.93**	**332**	Pn	**Pn**	**20 36 38.0**	**+3.2**
BRG				Pg	**Pg**	**20 36 51.6**	**+1.9**
BRG				Sg	**Sg**	**20 37 38.8**	**-1.7**
BRG	**Berggiesshubel**	**3.93**	**332**	PN	**Pn**	**20 36 38.0**	**+3.2**
BRG				PG	**Pg**	**20 36 51.6**	**+1.9**
BRG				SG	**Sg**	**20 37 38.8**	**-1.7**
	12nm,0.5s						
DIVS	**Divcibare**	**4.00**	**146**	Pn	**Pn**	**20 36 34.9**	**-0.9**
DRGR		**4.04**	**97**	⇓*i*P	**Pn**	**20 36 35.2**	**-1.1**
TANN	**Tannenbergstha**	**4.15**	**317**	*e*Pn	**Pn**	**20 36 39.1**	**+1.2**
FETA	**Feichten**	**4.21**	**266**	⇑*i*Pn	**Pn**	**20 36 40.7**	**+2.0**
CLL	**Collm**	**4.61**	**328**	*i* Pn	**Pn**	**20 36 45.7**	**+1.5**
CLL				*e*Pg	**Pg**	**20 37 05.0**	**+2.2**
CLL				*i* Sg	**Sg**	**20 38 00.1**	**-2.4**
CLL	**Collm**	**4.61**	**328**	*i* Pn	**Pn**	**20 36 45.7**	**+1.5**
CLL				*e*Pg	**Pg**	**20 37 05.0**	**+2.2**
CLL				*e*(Sn)	**Sn**	**20 37 46.0**	**+8.2**
CLL				*i* Sb	**Sg**	**20 38 00.1**	**-2.4**
CLL				*i* Sg	**Sg**	**20 38 06.8**	**+4.3**
	comp=Z,16nm,0.6s						
MOX	**Moxa**	**4.71**	**315**	*e*SG	**Sg**	**20 38 03.4**	**-2.2**
MOX	**Moxa**	**4.71**	**315**	*e*Sg	**Sg**	**20 38 01.7**	**-3.9**
DAVA	**Damuels**	**4.76**	**271**	⇑*i*Pn	**Pn**	**20 36 47.4**	**+1.2**
	SNR=8.4						
DAVA	**Damuels**	**4.76**	**271**	Pn	**Pn**	**20 36 47.4**	**+1.2**
	comp=Z,8.0nm,4.0s						
BURAR	**Bucovina Array**	**5.65**	**85**	⇑*i*P	**Pn**	**20 36 52.0**	**-6.5**
CDF	**Champ du Feu**	**6.52**	**282**	*e*Pn	**Pn**	**20 37 09.0**	**-1.5**
CDF				*e*Sg	**Sg**	**20 39 00.3**	**-3.5**
	comp=Z,2.2nm,0.4s						
CDF	**Champ du Feu**	**6.52**	**282**	*e*Pn	**Pn**	**20 37 09.0**	**-1.5**
CDF				*e*Sg	**Sg**	**20 39 00.3**	**-3.5**
	comp=Z,1.1nm,0.4s						
HINF	**Hinteralfeld**	**6.78**	**277**	*e*Pn	**Pn**	**20 37 12.4**	**-1.6**
HINF				*e*Sg	**Sg**	**20 39 08.6**	**-3.5**
	comp=Z,1.9nm,0.3s						
HINF	**Hinteralfeld**	**6.78**	**277**	*e*Pn	**Pn**	**20 37 12.4**	**-1.6**
HINF				*e*Sg	**Sg**	**20 39 08.6**	**-3.5**
	comp=Z,0.9nm,0.3s						
HAU	**Haudompre**	**7.12**	**278**	*e*Pn	**Pn**	**20 37 16.8**	**-1.9**
HAU				*e*Sg	**Sg**	**20 39 19.3**	**-3.7**
	comp=Z,3.9nm,0.4s						
HAU	**Haudompre**	**7.12**	**278**	*e*Pn	**Pn**	**20 37 16.8**	**-1.9**
HAU				*e*Sg	**Sg**	**20 39 19.3**	**-3.7**
	comp=Z,2.0nm,0.4s						
LPG	**La Plagne**	**7.26**	**258**	*e*P	**Pn**	**20 37 22.6**	**+2.0**
LPL	**La Plagne**	**7.27**	**258**	*e*P	**Pn**	**20 37 22.2**	**+1.5**
MBDF	**Montbardon**	**7.54**	**252**	*e*Pn	**Pn**	**20 37 22.3**	**-2.1**
ORIF	**Oris-en-Rattie**	**8.04**	**256**	*e*P	**Pn**	**20 37 33.4**	**+2.1**
ORIF	**Oris-en-Rattie**	**8.04**	**256**	*e*Pn	**Pn**	**20 37 29.1**	**-2.2**
ORIF				*e*P		20 37 33.4	
ORIF	**Oris-en-Rattie**	**8.04**	**256**	*e*P	**Pn**	**20 37 33.4**	**+2.1**
FRF	**La Foret Royal**	**8.17**	**245**	*e*Pn	**Pn**	**20 37 30.0**	**-3.1**
SMRF	**Simiane la Rot**	**8.64**	**250**	*e*Pn	**Pn**	**20 37 36.3**	**-3.2**
SMF	**Signal de Mont**	**8.94**	**270**	*e*Pn	**Pn**	**20 37 41.3**	**-2.3**
AVF	**Avril sur Loir**	**9.25**	**271**	*e*Pn	**Pn**	**20 37 46.4**	**-1.4**
BGF	**Bois d'Agland**	**9.63**	**270**	*e*Pn	**Pn**	**20 37 50.9**	**-2.2**

GUC 03 20:50:58.4±0.8**, 3239S**×**7167W, h23**km±5km**, MD3.7, ML3.2, 6C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.24**	**126**	⇓*i*P	Pb	20 51 05.1	+0.7
PACH				*i* S	Sb	20 51 09.5	+1.0
CHNG	**Los Chungos**	**0.53**	**16**	⇓*i*P	Pb	20 50 55.1	-14
CHNG				*i* S	Sb	20 51 03.0	-13
CHNG				AML	AML	20 51 03.5	
	comp=E,809nm,0.2s						
IHA	**Instituto Hidr**	**0.63**	**178**	⇓*i*P	Pb	20 51 10.1	-0.7
IHA				*i* S	Sb	20 51 18.7	-0.4
ROCH	**El Roble**	**0.80**	**136**	⇑*i*P	Pb	20 51 13.2	-0.4
ROCH				*i* S	Sb	20 51 23.9	-0.1
JACH	**Jahuel**	**0.95**	**108**	*i* S	Sb	20 51 28.7	+0.2
LCCH	**Las Cruces**	**1.08**	**176**	⇑*i*P	Pn	20 51 17.5	-0.6
LCCH				*i* S	Sb	20 51 31.5	-0.7
PEL	**Peldehue**	**1.12**	**132**	⇑*i*P	Pn	20 51 18.1	-0.5
PEL				*i* S	Sb	20 51 33.2	+0.1
PEL				AML	AML	20 51 34.6	
	comp=E,5μm,0.3s						
RCDM	**Rinconada Maip**	**1.31**	**147**	⇑*i*P	Pn	20 51 21.2	-0.2
RCDM				*i* S	Sn	20 51 38.0	-0.1
RCDM				AML	AML	20 51 38.8	
	comp=N,745nm,0.2s						
CMCH	**Combarbala**	**1.34**	**25**	⇑*i*P	Pn	20 51 21.5	-0.3
CMCH				*i* S	Sn	20 51 39.3	+0.4
CMCH				AML	AML	20 51 43.7	
	comp=N,3μm,0.9s						
STL	**Santa Lucia**	**1.35**	**140**	*e*P	Pn	20 51 21.9	0.0
STL				*i* S	Sn	20 51 39.0	-0.1
STL				AML	AML	20 51 39.7	
	comp=N,108nm,0.3s						
CLCH	**Cerro Calan**	**1.38**	**137**	*e*P	Pn	20 51 23.4	+1.1
CLCH				*i* S	Sn	20 51 41.6	+1.8
CLCH				AML	AML	20 51 43.4	
	comp=E,743nm,0.8s						
TACH	**Talagante**	**1.40**	**154**	*e*P	Pn	20 51 22.6	+0.1
TACH				*i* S	Sn	20 51 40.1	-0.2
PCH	**Pirque**	**1.56**	**142**	⇑*i*P	Pn	20 51 25.4	+0.7
PCH				*i* S	Sn	20 51 46.5	+2.2
LNV	**Longovilo**	**1.57**	**172**	⇓*i*P	Pn	20 51 24.0	-0.9
CHCH	**Chadas Angostu**	**1.76**	**151**	*e*P	Pn	20 51 28.4	+1.0
CHCH				*i* S	Sn	20 51 51.2	+2.2
CACH	**El Canelo**	**1.94**	**153**	⇓*i*P	Pn	20 51 32.4	+2.5
CACH				*i* S	Sn	20 51 58.0	+4.4
CICH	**Cipreses**	**2.19**	**152**	⇓*i*P	Pn	20 51 34.7	+1.3
CICH				*i* S	Sn	20 52 02.4	+2.7
TLL	**Tololo Astrono**	**2.34**	**19**	AML	AML	20 52 16.0	
	comp=N,209nm,0.7s						

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*IDC **03** 20:52:06.0±0.4, 5506S×12970W, h0km, mb4.8/14, mb1 4.9/14, mb1mx4.8/17, mbtmp4.8/14, MS5.1/10, Ms1 5.1/10, ms1mx4.9/15, Error ellipse: s-maj=19.7km s-min=14.5km az=147.0*
*ISCJB **03** 20:52:07.1±0.3, 55.16S±005×1292W±0.1, h10km, mb5.1/39, MS5.2/57, Error ellipse: s-maj=9.3km s-min=7.2km az=158.9*
*BJI **03** 20:52:08.4, 5530S×12930W, h10km, mB5.6, Ms5.6, Msz5.2*
*BGS **03** 20:52:08.4, 5525S×12934W, h10km, MS5.1*
*GCMT **03** 20:52:08.4±0.1, 5527S×12931W, h20km, MW5.7/101, Moment Tensor Solution. s83,c165; s101,c267; Duration: 1ˢ8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.67±.05; $M_{\theta\theta}$3.38±.06; $M_{\phi\phi}$-2.71±.05; $M_{r\theta}$0.18±.12; $M_{\theta\phi}$3.93±.05; $M_{\phi r}$0.69±.11; Best double couple: $M_0$5.02600×10^{17} NP1:ϕ_s109.00000°, δ81.00000°, λ-2.00000°. NP2:ϕ_s199.00000°, δ88.00000°, λ-171.00000°. Principal axes: T 5.3430, Plg4.0000°, Azm334.0000°; N -0.6340, Plg81.0000°, Azm214.0000°; P -4.7090, Plg8.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **03** 20:52:08.4±0.2, 5525S×12934W, h10km, mb5.3/28, MS5.2/39 Error ellipse: s-maj=11.3km s-min=10.1km az=176.0*
*MOS **03** 20:52:09.9±2.4, 55.12S×13099W, h10km, mb5.4/12, MS5.2/14, Error ellipse: s-maj=24.7km s-min=13.5km az=87.5*
*CRAAG **03** 20:52:11.0, 55.13S×129.10W, Mb5.3*
*CSEM **03** 20:52:13.9, 5509S×12782W, h33km, ML5.7*
*SZGRF **03** 20:52:22.4, 5501S×12520W, h33km, mb5.3, Southern East Pacific Rise*
ISC 03 20:52:09.0±0.3**, 5514S**±005×**1291W**±01**, h10**km**, n398,** σ**1ˢ32**/88**, mb5.1**/39**, MS5.2**/57**, 28C-16D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**31.43**	**201**	P	**P**	**20 58 25.5**	**-4.3**
	110nm,1.7s,mb5.4						
SBA	**Scott Base**	**31.43**	**201**	P	**P**	**20 58 25.5**	**-4.3**
SBA				pmax	pmax		
	comp=Z,110nm,1.7s,mb5.4						
RPN	**Rapa Nui**	**31.48**	**35**	LR	LR	21 08 03.8	
	comp=Z,2μm,21.1s,MS4.7,baz=29,slow=30						
RKT	**Rikitea**	**32.27**	**350**	*e*S	**S**	**21 03 48.8**	**-2.0**
	comp=Z,1μm,40.8s						
RKT				*e*LR	LR	21 07 01.3	
	comp=Z,11μm,30.2s,baz=172						
VNDA	**Vanda**	**32.45**	**202**	*e*P	**P**	**20 58 36.6**	**-2.1**
	comp=Z,11nm,1.0s,mb4.7						
VNDA				LR	LR		
	comp=Z,1μm,20.0s,MS4.6						
VNDA	**Vanda**	**32.45**	**202**	*e*P	**P**	**20 58 36.6**	**-2.1**
VNDA				pmax	pmax		
	comp=Z,11nm,1.0s						
VNDA				MLR	MLR		
	comp=Z,1μm,20.0s						
VNDA	**Vanda**	**32.45**	**202**	P	**P**	**20 58 38.0**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=124,slow=6.8,SNR=2.2						
PMSA	**Palmer Station**	**32.51**	**134**	PFAKE		20 58 50.0	+11
PMSA				LR	LR		
	comp=Z,7μm,22.0s,MS5.3						
PMSA	**Palmer Station**	**32.51**	**134**	LR	LR	21 08 01.3	
	comp=Z,6μm,21.6s,MS5.3,baz=316,slow=29						
USHA	**Ushuaia**	**33.87**	**115**	P	**P**	**20 58 51.9**	**+0.6**
	comp=Z,11nm,0.7s,mb4.9,baz=217,slow=15,SNR=3.4						
USHA				LR	LR	21 07 33.6	
	comp=Z,1μm,21.2s,MS4.6,baz=229,slow=27						
QSPA	**South Pole Qui**	**35.04**	**180**	*e*P	**P**	**20 59 01.1**	**-0.1**
	comp=Z,105nm,1.1s,mb5.7						
PAE	**Paea**	**40.54**	**329**	*e*P	**P**	**20 59 48.8**	**+0.6**
	comp=Z,165nm,1.3s,mb5.5						
PAE	**Paea**	**40.54**	**329**	*e*P	**P**	**20 59 48.8**	**+0.6**
PAE				pmax	pmax		
	comp=Z,165nm,1.3s,mb5.5						
PLCA	**Paso Flores**	**40.57**	**94**	*e*P	**P**	**20 59 47.3**	**-1.0**
	comp=Z,84nm,1.3s,mb5.2						
PLCA				*e*PcP	PcP	21 01 48.3	-2.0
PLCA				LR	LR		
	comp=Z,3μm,20.0s,MS5.2						
PLCA	**Paso Flores**	**40.57**	**94**	*e*P	**P**	**20 59 47.3**	**-1.0**
PLCA				pmax	pmax		
	comp=Z,84nm,1.3s						
PLCA				MLR	MLR		
	comp=Z,3μm,20.0s						
PPT	**Papeete**	**40.63**	**329**	*e*S	**S**	**21 05 58.6**	**0.0**
	comp=Z,2μm,26.0s						
PPT				*e*LQ		21 08 59.2	
	comp=Z,2μm,24.5s						
PPT				*e*LR	LR	21 10 56.8	
	comp=Z,11μm,27.0s,baz=170						
PPT	**Papeete**	**40.63**	**329**	*e*P	**P**	**20 59 48.8**	**-0.1**
PPT				*e*S	**S**	**21 05 58.6**	**0.0**
PPT				*e*LQ		21 08 59.2	
PPT	**Papeete**	**40.63**	**329**	*e*P	**P**	**20 59 48.8**	**-0.1**
PPT				*e*S	**S**	**21 05 58.6**	**0.0**
PPT	**Papeete**	**40.63**	**329**	LR	LR	21 12 22.5	
	comp=Z,3μm,18.1s,MS5.1,baz=155,slow=30						
EFI	**East Falkland**	**40.84**	**116**	PFAKE		21 00 00.0	+10
EFI				LR	LR		
	comp=Z,6μm,19.0s,MS5.5						
VAH	**Vaihoa**	**42.31**	**333**	*e*P	**P**	**21 00 03.1**	**+0.4**
	comp=Z,138nm,1.2s,mb5.5						
VNA3	**Neumayer Olymp**	**46.90**	**157**	*e*P	**P**	**21 00 39.9**	**+1.1**
VNA3				*e*		21 00 47.5	
VNA3				*e*		21 00 49.7	
VNA3				*e*		21 00 54.2	
VNA3				*e*		21 00 58.6	
VNA3				*e*		21 01 03.1	
VNA3				*e*		21 01 11.2	
VNA3				*e*		21 02 11.8	
TAOE	**Nuku Hiva Isla**	**46.98**	**345**	*e*S	**S**	**21 07 29.8**	**-1.5**
	comp=Z,4μm,24.7s						
TAOE				*e*LR	LR	21 13 49.4	
	comp=Z,19μm,28.7s						
TAOE	**Nuku Hiva Isla**	**46.98**	**345**	*e*P	**P**	**21 00 40.6**	**+0.6**
	comp=Z,959nm,1.3s						
TAOE				*e*S	**S**	**21 07 29.8**	**-1.5**
MDZ	**Mendoza**	**47.01**	**88**	*e*P	**P**	**21 00 42.2**	**+2.0**
TRQA	**Tornquist**	**47.27**	**98**	*e*P	**P**	**21 00 40.9**	**-1.3**
	comp=Z,128nm,1.0s,mb5.8						
TRQA				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
VNA2	**Neumayer--Watz**	**47.64**	**158**	*e*P	**P**	**21 00 45.8**	**+1.3**
VNA2				*e*		21 00 53.6	
VNA2				*e*		21 00 55.6	
VNA2				*e*		21 00 59.1	
VNA2				*e*		21 01 03.8	
VNA2				*e*		21 01 08.1	
VNA2				*e*		21 01 16.5	
VNA2				*e*		21 02 13.8	
VNA1	**Neumayer--Stat**	**47.65**	**157**	*e*P	**P**	**21 00 46.8**	**+2.1**
VNA1				*e*		21 00 54.1	
VNA1				*e*		21 00 57.1	
VNA1				*e*		21 01 01.1	
VNA1				*e*		21 01 05.8	
TLL	**Tololo Astrono**	**47.90**	**83**	⇓*i*P	**P**	**21 00 48.4**	**+1.3**
SNAA	**Sanae**	**48.01**	**160**	P	**P**	**21 00 47.3**	**-0.1**
	comp=Z,4.1nm,0.8s,mb4.5,baz=246,slow=5.3,SNR=11						
CFAA	**Coronel Fontan**	**48.30**	**87**	P	**P**	**21 00 48.1**	**-2.1**
	comp=Z,9.5nm,0.9s,mb4.8,baz=226,slow=7.2,SNR=42						
LCO	**Las Campanas**	**48.83**	**82**	*e*P	**P**	**21 00 53.4**	**-0.9**
	comp=Z,112nm,0.8s,mb6.0						
CASY	**Casey**	**50.85**	**207**	PFAKE		21 01 20.0	+11
CASY				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
MAIT	**Maitri**	**51.33**	**164**	*e*P	**P**	**21 01 10.9**	**-1.8**
NVL	**N'lazarevskaya**	**51.35**	**165**	*i* P	**P**	**21 01 12.9**	**+0.1**
NVL				pmax	pmax		
	comp=N,17nm,1.6s						
NVL				pmax	pmax		
	comp=E,7.0nm,1.6s						
NVL				pmax	pmax		
	comp=Z,35nm,1.6s,mb5.0						
NVL				MLR	MLR		
	comp=Z,2μm,13.4s,MS5.3						
AFI	**Afiamalu**	**52.72**	**304**	*e*P	**P**	**21 01 23.6**	**0.0**
	comp=Z,54nm,0.9s,mb5.5						
AFI	**Afiamalu**	**52.72**	**304**	*e*P	**P**	**21 01 23.6**	**0.0**
AFI				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.5						
SYO	**Syowa Base**	**55.89**	**175**	⇑*e*P	**P**	**21 01 41.5**	**-4.6**
SYO	**Syowa Base**	**55.89**	**175**	⇑*e*pP	pP	21 01 45.6	-3.7
SYO	**Syowa Base**	**55.89**	**175**	⇓*e*PcP	PcP	21 02 42.6	-2.1
MAW	**Mawson**	**57.25**	**185**	*e*P	**P**	**21 01 57.5**	**+1.7**
	comp=Z,12nm,0.9s,mb4.9						
MAW				*e*S	**S**	**21 09 55.0**	**+3.9**
MAW	**Mawson**	**57.25**	**185**	*e*P	**P**	**21 01 57.5**	**+1.7**
MAW				*e*S	**S**	**21 09 55.0**	**+3.9**
MAW				pmax	pmax		
	comp=Z,12nm,0.9s						
MAW	**Mawson**	**57.25**	**185**	P	**P**	**21 01 55.5**	**-0.3**
	comp=Z,9.3nm,0.9s,mb4.8,baz=354,slow=3.0,SNR=5.9						
MAW				LR	LR	21 23 57.7	
	comp=Z,2μm,19.3s,MS5.2,baz=165,slow=33						
ARE	**Arequipa**	**58.30**	**72**	*e*P	**P**	**21 02 06.0**	**+2.1**
NNA	**Nana**	**59.16**	**64**	*e*P	**P**	**21 02 08.4**	**-1.5**
	comp=Z,93nm,1.5s,mb5.6						
NNA				LR	LR		
	comp=Z,868nm,19.0s,MS4.9						
LPAZ	**La Paz**	**60.30**	**75**	*e*P	**P**	**21 02 17.0**	**-0.7**
	comp=Z,179nm,1.3s,mb5.9						
LPAZ				LR	LR		
	comp=Z,747nm,21.0s,MS4.8						
LPAZ	**La Paz**	**60.30**	**75**	*e*P	**P**	**21 02 17.0**	**-0.7**
LPAZ				pmax	pmax		
	comp=Z,179nm,1.3s						
LPAZ				MLR	MLR		
	comp=Z,747nm,21.0s						
LPAZ	**La Paz**	**60.30**	**75**	P	**P**	**21 02 17.3**	**-0.4**
	comp=Z,88nm,1.1s,mb5.7,baz=204,slow=5.2,SNR=40						
STKA	**Stephens Creek**	**64.12**	**251**	P	**P**	**21 02 40.7**	**-2.4**
	comp=Z,7.9nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**64.12**	**251**	P	**P**	**21 02 40.1**	**-3.0**
	comp=Z,2.0nm,0.8s,mb4.2,baz=172,slow=2.3,SNR=2.5						
STKA				LR	LR	21 24 49.1	
	comp=Z,2μm,20.9s,MS5.3,baz=312,slow=31						
SIV	**San Ignacio**	**64.51**	**81**	P	**P**	**21 02 44.0**	**-1.8**
	comp=Z,77nm,0.8s,mb5.8,baz=223,slow=6.4,SNR=64						
CTA	**Charters Tower**	**70.72**	**262**	*e*P	**P**	**21 03 25.0**	**0.0**
	comp=Z,8.8nm,0.9s,mb4.7						
CTA				*e*S	S	21 12 42.6	+3.2
CTA	**Charters Tower**	**70.72**	**262**	*e*P	**P**	**21 03 25.0**	**0.0**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
CTAO	**Charters Tower**	**70.72**	**262**	*e*P	**P**	**21 03 23.6**	**-1.4**
CTAO				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
FORT	**Forrest**	**72.10**	**242**	*e*P	**P**	**21 03 35.7**	**+2.4**
	comp=Z,19nm,0.9s,mb5.0						
ASAR	**Alice Springs**	**74.75**	**251**	P	**P**	**21 03 45.0**	**-4.0**
	comp=Z,5.9nm,0.8s,mb4.5,baz=140,slow=6.0,SNR=32						
ROSC	**El Rosal**	**74.88**	**58**	*e*P	**P**	**21 03 49.7**	**0.0**
ROSC	**El Rosal**	**74.88**	**58**	P	**P**	**21 03 50.9**	**+1.1**
	comp=Z,39nm,0.9s,mb5.3,baz=134,slow=5.1,SNR=29						
ROSC				LR	LR	21 31 50.6	
	comp=Z,893nm,19.2s,MS5.1,baz=185,slow=32						
JTS	**JuntasAbangare**	**74.93**	**45**	*e*P	**P**	**21 03 48.6**	**-1.4**
	comp=Z,41nm,1.3s,mb5.2						
JTS				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
JTS	**JuntasAbangare**	**74.93**	**45**	*e*P	**P**	**21 03 49.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**75.56**	**233**	PFAKE		21 04 00.0	+6.5
NWAO				LR	LR		
	comp=Z,2μm,22.0s,MS5.2						

WB2 Warramunga Arr 77.51 253 *e*P P **P** **21 04 03.7 -1.0**
WRA Warramunga Arr 77.51 253 P P **P** **21 04 00.9 -3.9**
comp=Z,8,8nm,0.9s,mb4.7,baz=144,slow=5.1,SNR=42
WRA LR LR 21 34 50.3
comp=Z,1μm,19.4s,MS5.2,baz=160,slow=33
CMIG Matias Romero 77.60 33 P **P** **21 04 04.4 -0.6**
comp=Z,5.8nm,1.0s,mb4.5,baz=211,slow=4.8,SNR=9.2
SDV Santo Domingo 80.17 59 *e*P **P** **21 04 15.5 -3.8**
comp=Z,30nm,1.3s,mb5.1
SDV LR LR
comp=Z,344nm,20.0s,MS4.7
TEIG Tepich 82.73 38 *e*P **P** **21 04 31.3 -1.4**
comp=Z,45nm,1.0s,mb5.5
TEIG Tepich 82.73 38 P **P** **21 04 31.5 -1.2**
comp=Z,18nm,0.8s,mb5.2,baz=262,slow=7.0,SNR=7.4
FITZ Fitzroy Crossi 83.72 247 *e*P **P** **21 04 37.9 -0.1**
comp=Z,23nm,0.9s,mb5.3
MBWA Marble Bar 84.23 241 PFAKE 21 04 50.0 +9.4
MBWA LR LR
comp=Z,815nm,19.0s,MS5.1
LTX Lajitas 86.92 22 *e*P **P** **21 04 53.8 +0.2**
comp=Z,11nm,1.2s,mb5.0
LTX Lajitas 86.92 22 *e*P **P** **21 04 53.8 +0.2**
LTX pmax pmax
comp=Z,11nm,1.2s,mb5.0
TXAR Lajitas Array 86.92 22 P **P** **21 04 51.9 -1.7**
comp=Z,3.9nm,0.9s,mb4.6,baz=184,slow=6.8,SNR=16
RCBR Riachuelo 87.12 96 P **P** **21 04 53.8 -1.3**
comp=Z,35nm,1.3s,mb5.4
TUC Tucson 88.51 15 P **P** **21 04 59.7 -1.3**
comp=Z,5.9nm,0.9s,mb4.9
TUC Tucson 88.51 15 P **P** **21 04 59.7 -1.4**
TUC pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
MNTX Cornudas Mount 88.86 20 *e*PKPdf **P** **21 05 02.9 +0.2**
comp=Z,12nm,1.3s,mb5.1
JCT Junction City 88.91 25 *e*P **P** **21 05 04.0 +0.9**
comp=Z,15nm,1.0s,mb5.3
JCT Junction City 88.91 25 *e*P **P** **21 05 04.0 +1.0**
JCT pmax pmax
comp=Z,15nm,1.0s,mb5.3
PFO Pinyon Flat Ob 89.06 11 P **P** **21 05 04.3 +0.7**
PFO Pinyon Flat Ob 89.06 11 P **P** **21 05 04.3 +0.7**
comp=Z,7.5nm,1.1s,mb4.9,baz=158,slow=2.6,SNR=3.6
HKT Hockley 89.43 28 *e*P **P** **21 05 05.1 -0.4**
comp=Z,40nm,1.8s,mb5.4
HKT Hockley 89.43 28 *e*P **P** **21 05 05.1 -0.4**
HKT pmax pmax
comp=Z,40nm,1.8s,mb5.5
SJG San Juan 90.28 58 PFAKE 21 05 20.0 +10
SJG LR LR
comp=Z,614nm,22.0s,MS5.0
BNM Barren Site 91.00 19 *e*P **P** **21 05 14.2 +1.5**
LPM Los Pinos Moun 91.16 18 *e*P **P** **21 05 15.3 +1.9**
ANMO Albuquerque 91.81 18 *e*P **P** **21 05 15.9 -0.6**
comp=Z,6.3nm,0.9s,mb5.0
ANMO Albuquerque 91.81 18 *e*P **P** **21 05 16.5 +0.1**
ANMO Albuquerque 91.81 18 P **P** **21 05 15.8 -0.7**
comp=Z,4.5nm,0.8s,mb4.8,baz=173,slow=5.6,SNR=12
TPNV Topopah Spring 92.38 10 *e*P **P** **21 05 20.7 +1.7**
comp=Z,5.2nm,1.0s,mb4.8
TPNV Topopah Spring 92.38 10 *e*P **P** **21 05 20.7 +1.7**
TPNV pmax pmax
comp=Z,5.0nm,1.0s,mb4.8
CMB Columbia Colle 93.10 7 *e*P **P** **21 05 23.3 +1.0**
BOSA Boshof 93.74 158 PFAKE 21 05 40.0 +14
BOSA LR LR
comp=Z,3μm,19.0s,MS5.8
BOSA Boshof 93.74 158 LR LR 21 44 59.0
comp=Z,2μm,19.1s,MS5.5,baz=188,slow=34
PV01 Paradox Valley 94.56 16 *e*P **P** **21 05 32.3 +3.3**
SDCO Great Sand Dun 94.70 19 *e*P **P** **21 05 32.1 +2.4**
comp=Z,6.0nm,0.8s,mb5.1
PV10 Paradox Valley 94.72 16 *e*P **P** **21 05 33.0 +3.2**
LBTB Lobatse 97.29 157 PFAKE 21 05 50.0 +7.9
LBTB LR LR
comp=Z,2μm,20.0s,MS5.6
PDAR Pinedale Array 98.94 14 LR LR 21 41 43.7
comp=Z,847nm,20.1s,MS5.2,baz=206,slow=30
TSUM Tsumeb 100.72 148 PFAKE 21 06 10.0 +12
TSUM LR LR
comp=Z,3μm,22.0s,MS5.8
LSZ Lusaka 107.28 157 PFAKE 21 10 50.0 +14
LSZ LR LR
comp=Z,2μm,20.0s,MS5.7
FFC Flin Flon 111.75 17 PFAKE 21 10 50.0 +7.5
FFC LR LR
comp=Z,926nm,21.0s,MS5.3
YKA Yellowknife Ar 117.84 8 PKP PKPdf 21 10 52.7 -1.2
YKA PKKPbc PKKPbc 21 21 13.3 -1.4
YKA Yellowknife Ar 117.84 8 PKP PKPdf 21 10 52.7 -1.2
comp=Z,0.3nm,0.8s,baz=177,slow=2.3,SNR=5.4
YKA PKKPbc PKKPbc 21 21 13.3 -1.4
comp=Z,0.1nm,0.3s,baz=229,slow=3.0,SNR=3.0
MCK McKinley 119.52 350 PKPdf PKPdf 21 10 56.4 -0.7
MJAR Matsushiro Ar 120.44 291 PKP PKPdf 21 10 58.6 -1.3
comp=Z,0.8nm,0.7s,baz=167,slow=4.7,SNR=3.4
COLA College 120.54 351 *e*PKPdf PKPdf 21 10 58.1 -1.0
COLA LR LR
comp=Z,874nm,21.0s,MS5.4
COLA College 120.54 351 *i* PKIKP PKPdf 21 10 58.6 -0.5
IMA2 Indian Mountai 122.30 348 *e*PKPdf PKPdf 21 11 03.0 +0.5
QIZ Qiongzhong 123.04 255 PKP PKPdf 21 11 03.0 -2.4
QIZ PP PP 21 12 46.8 +2.1
QIZ SS SS 21 29 31.9 +3.0
QIZ PP PP
comp=Z,265nm,9.1s
QIZ LR LR
comp=E,238nm,24.8s
QIZ LR LR
comp=Z,289nm,38.3s
INK Inuvik 123.17 358 PKP PKPdf 21 11 03.2 -0.9
comp=Z,0.9nm,0.5s,baz=107,slow=9.7,SNR=4.1
TOA0 Torodi Ar. Sit 123.42 118 *e*PKPdf PKPdf 21 11 05.8 -0.5
TORD Torodi Ar. Bea 123.42 118 PKP PKPdf 21 11 03.0 -3.2
comp=Z,2.5nm,0.8s,baz=220,slow=1.0,SNR=15
TORD PP PP 21 12 48.5 +1.3
comp=Z,1.3nm,1.1s,baz=246,slow=5.6,SNR=3.9
TORD PKKPbc PKKPbc 21 20 50.6 -2.4
comp=Z,1.0nm,1.0s,baz=47,slow=1.4,SNR=4.1
YSS Yuzh-Sakhalins 125.69 303 PFAKE 21 11 20.0 +10
YSS LR LR
comp=Z,358nm,19.0s,MS5.1
PALK Pallekele 126.66 218 PFAKE 21 11 20.0 +7.5
PALK LR LR
comp=Z,448nm,20.0s,MS5.1
NJ2 Nanjing 127.96 273 *e*PKP PKPdf 21 11 12.8 -1.6
CM31 Chiang Mai Arr 128.44 244 PFAKE 21 11 30.0 +14
CM31 LR LR
comp=Z,420nm,21.0s,MS5.1
WHN Wuhan 129.43 268 *e*PKP PKPdf 21 11 18.3 +1.0
HABR Khabarovsk 130.52 299 *e*P Pdif 21 08 12.9 +2.9
HABR *e* 21 13 32.5
HABR *e* 21 16 28.4
HABR *e* 21 31 09.7
MA2 Magadan 130.88 318 *e*PKPdf PKPdf 21 11 17.2 -1.8
MA2 Magadan 130.88 318 *i* PKIKP PKPdf 21 11 17.9 -1.1
MA2 *e* 21 31 17.9
MA2 pmax pmax
comp=Z,10.0nm,0.8s
BILL Bilibino 131.75 333 PFAKE 21 11 30.0 +10
BILL LR LR
comp=Z,361nm,19.0s,MS5.1
BILL Bilibino 131.75 333 ⇑*i* PKIKP PKPdf 21 11 19.3 -1.2
BILL pmax pmax
comp=Z,5.0nm,1.7s
KMI Kunming 131.84 253 PKP PKPdf 21 11 23.6 +1.6
ENH Enshi 132.01 264 PFAKE 21 11 30.0 +7.8
ENH LR LR
comp=Z,4.0nm,19.0s
KLR Kul'dur 132.67 298 *e*PKIKP PKPdf 21 11 20.7 -2.1
CD2 Chengdu 135.74 259 *e*PKP PKPdf 21 11 29.8 +0.6
CD2 XPKP 21 11 38.2
CD2 PP PP 21 14 11.9 +4.2
CD2 PKS 21 15 04.4
CD2 SKS SKSdf 21 18 35.0 -4.9
CD2 SKKS SKKSac 21 20 58.8 -3.5
CD2 SS SS 21 32 05.1 -0.5
CD2 PP PP
comp=Z,90nm,8.8s
CD2 LR LR
comp=E,180nm,19.2s
CD2 LR LR
comp=Z,150nm,21.6s,MS4.7
EJIF Jimena Fronter 137.82 92 PKP PKPdf 21 11 35.1 +2.3

ESPR Espera 137.88 91 PKP PKPdf 21 11 35.8 +2.9
EMIN Mina Concepcio 138.04 90 PKP PKPdf 21 11 35.0 +1.8
HHC Hu-ho-hao-te 138.29 276 *e*PKP PKPdf 21 11 28.4 -5.1
HHC XPKP 21 11 42.9
HHC PP PP
comp=Z,182nm,5.6s
HHC LR LR
comp=N,295nm,23.8s,MS5.3
HHC LR LR
comp=E,639nm,21.4s,MS5.3
HHC LR LR
comp=Z,292nm,19.0s,MS5.0
HIA Hailar 138.95 291 PFAKE 21 11 50.0 +16
HIA LR LR
comp=Z,268nm,20.0s,MS5.0
ELOJ Sierra Loja 139.06 93 PKP PKPdf 21 11 36.0 +0.9
ELUQ Luque 139.28 92 PKP PKPdf 21 11 36.7 +1.2
EADA Adamuz 139.52 91 PKP PKPdf 21 11 38.0 +2.2
EBAN Banos Encina 139.97 92 PKP PKPdf 21 11 37.3 +0.6
ENIJ Nijar 140.05 94 PKP PKPdf 21 11 38.1 +1.2
EQES Quesada 140.13 93 PKP PKPdf 21 11 38.2 +1.2
YAK Yakutsk 140.76 313 PFAKE 21 11 50.0 +13
YAK LR LR
comp=Z,304nm,20.0s,MS5.0
YAK Yakutsk 140.76 313 *i* PKIKP PKPdf 21 11 37.9 +0.6
ESDC Sonseca Array 140.89 90 PKP PKPdf 21 11 35.0 -3.3
ESDC PKP PKPdf 21 11 38.7 +0.3
ESDC Sonseca Array 140.89 90 PKP PKPdf 21 11 35.0 -3.3
comp=Z,2.9nm,0.7s,baz=266,slow=1.5,SNR=24
ESLA Sonseca Array 140.89 90 *e*PKPdf PKPdf 21 11 38.1 -0.2
ESLA LR LR
comp=Z,4μm,22.0s,MS6.1
EVIA Vianos 141.03 92 PKP PKPdf 21 11 39.4 +0.8
GUD Guadarrama 141.42 89 PKP PKPdf 21 11 41.1 +1.9
LSA Lhasa 141.69 245 *e*PKPdf PKPdf 21 11 40.5 +0.4
LSA *e*PP PP 21 14 40.8 -3.5
LSA LR LR
comp=Z,469nm,20.0s,MS5.2
ETOR Torete 142.74 90 PKP PKPdf 21 11 38.6 -3.0
ELAN Lanestosa 143.49 86 PKP PKPdf 21 11 42.1 -0.7
CMER Merouana 143.68 104 P PKPdf 21 11 40.0 -3.4
CIT Chita 143.75 292 *e*PKIKP PKPdf 21 11 40.4 -2.6
CIT pmax pmax
comp=Z,64nm,2.0s
SET Setif 143.82 102 P PKPdf 21 11 43.0 -0.7
GTA Gaotai 144.08 265 *e*PKP PKPdf 21 11 39.8 -4.2
GTA APKP 21 11 43.4
GTA XPKP 21 11 46.1
GTA PP PP 21 14 59.3 +0.4
GTA PKS 21 15 14.5
GTA SKS SKSdf 21 18 47.4 -5.7
GTA SKKS SKKSac 21 21 47.7 -3.1
GTA SS SS 21 33 44.4 +1.0
GTA PP PP
comp=Z,305nm,6.5s
GTA LR LR
comp=N,230nm,16.0s,MS5.2
GTA LR LR
comp=E,171nm,15.2s,MS5.2
GTA LR LR
comp=Z,341nm,18.2s,MS5.2
ERTA Horta de San J 144.20 92 PKP PKPdf 21 11 43.7 -0.5
ESAC San Caprasio 144.23 90 PKP PKPdf 21 11 43.7 -0.5
CTEI Djebel Teioual 144.29 104 P PKPdf 21 11 45.0 +0.5
DFRA Djebel Bou Aff 144.34 102 P PKPdf 21 11 45.0 +0.5
CASM Ain Smara 144.48 103 P PKPdf 21 11 45.0 +0.2
TIXI Tiksi 144.52 328 *e*PKPdf PKPdf 21 11 39.3 -4.5
TIXI Tiksi 144.52 328 *i* PKIKP PKPdf 21 11 42.7 -1.1
TIXI pmax pmax
comp=Z,171nm,0.9s
SJPF Ste Jean 144.68 88 *e*PKP1 PKPdf 21 11 44.7 -0.2
comp=Z,155nm,1.3s
CKFL Kef-Lekhel 144.71 103 P PKPdf 21 11 45.5 +0.3
OSSF Osses 144.75 88 PKP PKPdf 21 11 45.2 +0.2
ETOS Mallorca 144.84 96 PKP PKPdf 21 11 45.7 +0.4
EPOB Poblet 144.88 92 PKP PKPdf 21 11 43.0 -2.3
ETSF Etsaut 144.93 89 *e*PKP1 PKPdf 21 11 45.6 +0.3
comp=Z,69nm,0.9s
ATE Arette 144.96 88 PKP PKPdf 21 11 46.2 +0.8
ABSA Djebel Ababsia 145.04 104 P PKPbc 21 11 46.0 +0.8
CAEH 'Ain El Ouahch 145.05 103 P PKPbc 21 11 46.5 +1.3
ULN Ulaanbaatar 145.12 282 *e*P PKPdf 21 11 41.7 -3.8
ULN LR LR
comp=Z,260nm,20.0s,MS5.0
ULN Ulaanbaatar 145.12 282 *i* PKIKP PKPdf 21 11 45.2 -0.3
CGMA Guelma 145.13 104 P PKPbc 21 11 47.0 +1.5
REYF Montagne du Re 145.13 88 PKP PKPdf 21 11 47.1 +1.4
EBIE Bielsa 145.20 89 PKP PKPdf 21 11 44.2 -1.6
VIEF Viey 145.25 89 PKP PKPdf 21 11 47.0 +1.1
CMAH Djebel Manchou 145.26 104 P PKPbc 21 11 47.0 +1.1
LABF Labassere 145.38 89 PKP PKPdf 21 11 47.6 +1.5
RESF Ens 145.39 89 PKP PKPbc 21 11 48.3 +2.2
SONM Songino Array 145.48 281 PKPbc PKPdf 21 11 43.0 -3.1
comp=Z,13nm,1.0s,baz=139,slow=4.0,SNR=37
EMIR Miracle 145.50 92 PKP PKPdf 21 11 47.9 +1.5
EPF Esparros 145.53 89 *e*PKP1 PKPbc 21 11 47.3 +0.8
comp=Z,65nm,0.9s
KEST Kesra 145.67 107 PKPbc PKPbc 21 11 46.3 -1.0
comp=Z,23nm,0.9s,baz=206,slow=2.6,SNR=45
SALF Salau 145.84 90 PKP PKPbc 21 11 48.9 +1.4
MLS Moulis 145.91 90 PKP PKPbc 21 11 49.2 +1.4
VALF Valcebollere 146.09 91 PKP PKPbc 21 11 49.4 +1.1
BOD Bodaibo 146.14 301 *e*PKHKP 21 11 43.6
BOD pmax pmax
comp=Z,21nm,0.9s
CARF Carcanieres 146.34 91 PKP PKPbc 21 11 50.3 +1.3
QUIF Quistinic 146.38 79 *e*PKP1 PKPbc 21 11 49.1 +0.1
comp=Z,44nm,0.8s
FILF Fillols 146.51 92 PKP PKPbc 21 11 50.8 +1.3
ROSF Rostrenen 146.54 79 *e*PKP1 PKPbc 21 11 49.5 +0.1
comp=Z,103nm,1.0s
EJON La Jonquera 146.62 92 PKP PKPbc 21 11 50.7 +0.8
MTLF Montolieu 146.80 90 *e*PKP1 PKPbc 21 11 50.3 0.0
comp=Z,30nm,0.9s
DCN Croghan 146.82 69⇑*i* P PKPdf 21 11 48.8 +0.6
SGMF Saint Gilles 146.90 79 *e*PKP1 PKPbc 21 11 50.3 -0.2
comp=Z,93nm,0.9s
LFF La Frestale 146.91 87 *e*PKP1 PKPbc 21 11 50.9 +0.3
comp=Z,154nm,1.4s
DLF Lyons Farm 147.20 69⇑*i* P PKPdf 21 11 50.1 +1.3
DAG Danmarks Havn 147.45 24⇓*e*PKIKP PKPbc 21 11 51.5 +0.2
DAG pmax pmax
comp=Z,8.0nm,0.8s
DAG Danmarks Havn 147.45 24⇓*i* P PKPbc 21 11 51.5 +0.2
comp=Z,8.2nm,0.8s
RJF Les Rejaudoux 147.57 87 *e*PKP1 PKPbc 21 11 52.6 +0.2
comp=Z,61nm,0.9s
RJF *e*MLR MLR
comp=Z,1μm,21.0s,MS5.3
RJF Les Rejaudoux 147.57 87 *e*PKIKP PKPbc 21 11 52.6 +0.2
RJF MLR MLR
comp=Z,1μm,21.0s,MS5.7
HEX Exmoor 147.64 74 *e*P PKPbc 21 11 53.4 +1.0
CAF Calviac 147.66 88 *e*PKP1 PKPbc 21 11 53.2 +0.5
comp=Z,50nm,0.9s
GMM Mts of Mourne 147.92 68⇑*e*P PKPbc 21 11 53.8 +0.7
GRR Gorron 147.93 80 *e*PKP1 PKPbc 21 11 53.2 -0.1
comp=Z,26nm,0.7s
GCL Cushendall 148.18 66 *e*P PKPbc 21 11 53.9 +0.2
LASF Ste Croix 148.19 90 *e*PKP1 PKPbc 21 11 54.4 +0.3
comp=Z,105nm,1.4s
FLN La Foliniere 148.34 80 *e*PKP1 PKPbc 21 11 54.5 +0.1
comp=Z,86nm,1.0s
FLN *e*MLR MLR
comp=Z,580nm,22.0s,MS5.0
FLN La Foliniere 148.34 80 *e*PKIKP PKPbc 21 11 54.5 +0.1
FLN MLR MLR
comp=Z,580nm,22.0s,MS5.3
LDF La Druitiere 148.46 80 *e*PKP1 PKPbc 21 11 54.6 -0.1
comp=Z,36nm,1.1s
HGH Gray Hill 148.46 74 *e*P PKPbc 21 11 54.7 +0.1
LBL Lubilhac 148.52 88 PKP PKPbc 21 11 56.2 +1.2
MCH1 Michaelchurch 148.52 73 *e*P PKPbc 21 11 54.7 0.0
MCH1 AMb AMB 21 11 56.6
comp=Z,103nm,1.3s
TCF Toulx Ste Croi 148.53 86 *e*PKP1 PKPbc 21 11 55.0 +0.1
comp=Z,78nm,1.2s
ZAK Zakamensk 148.55 283 *e*PKP2 PKPdf 21 11 52.6 +1.4
ZAK pmax pmax
comp=Z,13nm,1.4s
GMK Mull of Kintyr 148.57 66 *e*P PKPbc 21 11 55.5 +0.8
PYM Petit Puy Mans 148.69 87 PKP PKPbc 21 11 56.5 +1.1
HAE Alders End 148.79 73 *e*P PKPbc 21 11 55.9 +0.5
SBD1 Bryn Du 148.79 71 *e*P PKPbc 21 11 55.9 +0.5

HLM1 Long Mynd 148.82 72 *e*P PKPbc 21 11 55.9 +0.5
AGO Saint Agoulin 148.93 87 PKP PKPbc 21 11 56.3 +0.3
COLF Collangettes 148.94 88 PKP PKPbc 21 11 57.2 +1.2
SWN1 Swindon 148.96 74 *e*P PKPbc 21 11 54.8 -1.0
TLY Talaya 148.97 286 *e*PKPbc PKPbc 21 11 55.4 -0.4
TLY LR LR
comp=Z,374nm,21.0s,MS5.2
TLY Talaya 148.97 286 *e*PKIKP PKPdf 21 11 52.2 +0.4
TLY *e* 21 11 56.3
TLY pmax pmax
comp=Z,22nm,1.1s
TLY MLR MLR
comp=Z,404nm,21.0s,MS5.2
BGF Bois d'Agland 149.05 86 *e*PKP1 PKPbc 21 11 56.5 +0.3
comp=Z,61nm,0.8s
SMRF Simiane la Rot 149.11 92 *e*PKP1 PKPbc 21 11 57.2 +0.7
comp=Z,41nm,1.1s
VIVF Saint-Julien-l 149.12 90 *e*PKP1 PKPbc 21 11 56.8 +0.3
comp=Z,37nm,0.9s
SSW Stow on the Wo 149.14 74 *e*P PKPbc 21 11 55.3 -1.0
PLDF La Plantade 149.16 87 PKP PKPbc 21 11 57.9 +1.4
GCD Castle Douglas 149.25 67 *e*P PKPbc 21 11 57.1 +0.7
LMR La Mourre 149.25 94 *e*PKP1 PKPbc 21 11 57.0 +0.1
comp=Z,113nm,1.4s
KPL Plockton 149.28 62 *e*P PKPbc 21 11 55.6 -0.9
KPL AMb AMB 21 12 01.3
comp=Z,77nm,1.7s
KPL AMS AMS 21 18 39.1
comp=Z,454nm,21.1s,MS5.2
HYF Humbligny 149.32 84 *e*PKP1 PKPbc 21 11 56.9 0.0
PGBU Glenifferbraes 149.33 66 *e*P PKPbc 21 11 55.2 -1.4
PGBU AMb AMB 21 11 58.8
comp=Z,154nm,1.3s
AVF Avril sur Loir 149.47 86 *e*PKP1 PKPbc 21 11 57.1 -0.2
comp=Z,44nm,0.9s
FRF La Foret Royal 149.47 94 *e*PKP1 PKPbc 21 11 57.7 +0.3
comp=Z,58nm,1.0s
BWH Wardlaw 149.52 67 *e*P PKPbc 21 11 56.1 -1.0
SKP1 Kophill 149.60 75 *e*P PKPbc 21 11 57.7 +0.3
KWE Weaver Farm 149.61 72 *e*P PKPbc 21 11 58.0 +0.5
SMF Signal de Mont 149.67 86 *e*PKP1 PKPbc 21 11 57.8 0.0
comp=Z,61nm,1.0s
SSF Saint Saulge 149.71 85 *e*PKP1 PKPbc 21 11 57.6 -0.3
comp=Z,20nm,0.8s
VAE Valguarnera 149.71 110 PKPbc PKPbc 21 11 57.6 -0.6
comp=Z,18nm,1.0s,baz=84,slow=4.5,SNR=4.0
BHH Howats Hill 149.72 67 *e*P PKPbc 21 11 55.6 -2.0
CWF Charnwood Fore 149.78 73 *e*P PKPbc 21 11 56.8 -1.1
CWF AMb AMB 21 11 59.5
comp=Z,45nm,0.9s
ECK Cauldkaine Hil 149.80 67 *e*P PKPbc 21 11 56.7 -1.1
ESK Eskdalemuir 149.81 67 *e*P PKPbc 21 11 57.2 -0.7
ESK AMb AMB 21 12 01.0
comp=Z,85nm,1.5s
ESK AMS AMS 21 27 25.7
comp=Z,300nm,18.0s,MS5.1
ESK Eskdalemuir 149.81 67 P PKPbc 21 11 57.2 -0.7
ESK AMb AMB 21 12 01.0
comp=Z,85nm,1.5s
LHO Holmfirth 149.83 71 *e*P PKPbc 21 11 57.0 -1.0
ORIF Oris-en-Rattie 149.85 91 *e*PKP1 PKPbc 21 11 58.8 +0.5
comp=Z,37nm,0.9s
ORIF *e*MLR MLR
comp=Z,839nm,21.8s,MS5.2
BBH Bruntsheil 149.89 67 *e*P PKPbc 21 11 58.4 +0.4
MDO Dochfour 149.97 63 *e*P PKPbc 21 11 56.8 -1.4
LOR Lormes 150.02 85 *e*PKP1 PKPbc 21 11 58.7 +0.1
comp=Z,72nm,1.0s
LOR *e*MLR MLR
comp=Z,725nm,21.5s,MS5.1
LOR Lormes 150.02 85 *e*PKIKP PKPbc 21 11 58.7 +0.1
LOR MLR MLR
comp=Z,730nm,21.5s,MS5.4
EDI Edinburgh 150.05 66 *e*P PKPbc 21 11 57.9 -0.5
EDI AMb AMB 21 12 00.5
comp=Z,88nm,1.2s
EDI AMS AMS 21 24 34.5
comp=Z,297nm,18.8s,MS5.1
EDI Edinburgh 150.05 66 P PKPbc 21 11 57.9 -0.5
EDI AMb AMB 21 12 00.5
comp=Z,88nm,1.2s
SBF Sospel 150.11 94 *e*PKP1 PKPbc 21 11 59.0 +0.1
comp=Z,59nm,1.0s
HPK Haverah Park 150.12 70 *e*P PKPbc 21 11 57.4 -1.2
HPK AMb AMB 21 12 01.2
comp=Z,192nm,1.2s
HPK AMS AMS 21 23 37.8
comp=Z,298nm,19.5s,MS5.1
HPK Haverah Park 150.12 70 P PKPbc 21 11 57.4 -1.2
HPK AMb AMB 21 12 01.2
comp=Z,192nm,1.2s
XAL Allendale 150.16 68 *e*P PKPbc 21 11 56.7 -2.0
MVH1 Achvaich 150.22 62 *e*P PKPbc 21 11 57.9 -0.8
MBDF Montbardon 150.25 92 *e*PKP1 PKPbc 21 11 59.6 +0.4
comp=Z,34nm,1.0s
XSO Sourhope Farm 150.38 67 *e*P PKPbc 21 11 59.0 -0.2
BNI Bardonecchia 150.39 91 *e*PKPbc PKPbc 21 11 59.1 -0.4
BNI *e*PKPab PKPab 21 12 07.4 +1.3
MOY Mondy 150.43 284 *e*PKP2 PKPbc 21 12 00.0 +0.6
MOY pmax pmax
comp=Z,54nm,2.6s
MCD Coleburn Disti 150.58 63 *e*P PKPbc 21 11 59.8 +0.2
LPL La Plagne 150.69 91 *e*PKP1 PKPbc 21 12 01.1 +0.8
comp=Z,22nm,0.9s
LPG La Plagne 150.69 91 *e*PKP1 PKPbc 21 12 01.4 +1.1
comp=Z,47nm,1.1s
RSL Roselend 150.73 90 PKP PKPbc 21 12 01.7 +1.3
CABF La Chapelle 150.94 88 *e*PKP1 PKPbc 21 12 01.0 +0.2
comp=Z,49nm,1.1s
MEZF Maizieres J'vi 151.35 84 *e*PKP1 PKPbc 21 12 02.1 +0.4
comp=Z,83nm,0.9s
BAIF Baives 151.64 81 *e*PKP1 PKPbc 21 12 02.6 +0.3
comp=Z,74nm,1.0s
THEF They Montfort 151.75 85 PKP PKPbc 21 12 01.6 -1.0
LOMF Lomont 151.77 87 PKP PKPbc 21 12 03.1 +0.4
HAU Haudompre 151.84 86 *e*PKP1 PKPbc 21 12 02.9 +0.1
comp=Z,39nm,0.9s
HAU *e*MLR MLR
comp=Z,613nm,20.5s,MS5.1
HAU Haudompre 151.84 86 *e*PKIKP PKPbc 21 12 02.9 +0.1
HAU MLR MLR
comp=Z,610nm,20.5s,MS5.4
DOU Dourbes 151.88 81 PKPbc PKPbc 21 12 04.1 +1.3
SNF Seneffe 151.90 80 PKPbc PKPbc 21 12 04.1 +1.2
GIVF Givet 152.01 81 *e*PKP1 PKPbc 21 12 03.5 +0.3
comp=Z,33nm,1.0s
HINF Hinteralfeld 152.03 87 *e*PKP1 PKPbc 21 12 03.7 +0.4
comp=Z,63nm,0.9s
UCC Uccle 152.07 79 PKPbc PKPbc 21 12 04.6 +1.3
EIL Elat 152.11 149 PKPbc PKPbc 21 12 03.1 -0.9
comp=Z,4.6nm,1.0s,baz=186,slow=2.0,SNR=5.4
MOF Molkenrain 152.21 87 PKP PKPbc 21 12 03.1 -0.6
TIP Timpagrande 152.21 111 *e*PKPdf PKPdf 21 11 57.5 +0.2
TIP *e*PKPbc PKPbc 21 12 04.5 +0.5
TIP *e*PKPab PKPab 21 12 14.1 +0.3
ECH Echery 152.41 86 PKP PKPbc 21 12 02.0 -2.1
BCLA Clavier 152.43 81 PKPbc PKPbc 21 12 04.3 +0.2
AQU L'Aquila 152.55 102 *e*PKPbc PKPbc 21 12 04.0 -0.7
WLF Walferdange 152.56 83 *e*PKPbc PKPbc 21 12 04.7 +0.3
WLF *e*PKPab PKPab 21 12 16.1 +1.1
WLF Walferdange 152.56 83 PKPbc PKPbc 21 12 05.9 +1.5
WLF Walferdange 152.56 83 *e*PKPab PKPab 21 12 16.6 +1.6
CDF Champ du Feu 152.58 86 *e*PKP1 PKPbc 21 12 04.5 0.0
comp=Z,27nm,0.9s
FELD Feldberg im Sc 152.72 87 PKP PKPbc 21 12 01.6 -3.2
MEM Membach 152.92 81 PKPbc PKPbc 21 12 06.5 +1.3
BFO Black Forest 153.14 87 *e*PKPdf PKPdf 21 11 59.3 +1.0
BFO *e*PKPbc PKPbc 21 12 04.7 -1.1
BFO *e*PKPdf PKPbc 21 12 06.7 +1.0
BFO Black Forest 153.14 87 *e*PKPdf PKPbc 21 12 06.7 +1.0
IDI Anoyia 153.27 127 PKPab PKPab 21 12 18.7 +0.2
comp=Z,11nm,0.8s,baz=222,slow=12,SNR=7.7
DAVA Damuels 153.48 90⇑*i* P PKPdf 21 12 01.6 +2.7
comp=Z,10nm,1.2s
DAVA Damuels 153.48 90⇑*i* PKPbc 21 12 08.2 +1.6
comp=Z,18nm,0.9s
DAVA Damuels 153.48 90⇓*i* PKPab 21 12 17.8 -1.2
comp=Z,38nm,1.0s
DAVA Damuels 153.48 90⇑*i* P PKPdf 21 12 01.6 +2.7
DAVA Damuels 153.48 90⇑*i* PKPdf pPKPdf 21 12 01.6 -0.7
comp=Z,10nm,1.2s
DAVA ⇑*i* PKiKP PKiKP 21 12 08.2 +1.5
comp=Z,18nm,0.9s
DAVA ⇓*i* PKPab PKPab 21 12 17.8 -1.2
comp=Z,38nm,1.0s

WMQ	**Urumqi**	**153.84**	**260**	PKP	PKPdf	21 11 59.5	0.0
WMQ				APKP		21 12 04.3	
WMQ				XPKP		21 12 07.0	
WMQ				PKP2	PKPab	21 12 22.5	+1.9
WMQ				PKS		21 15 32.5	
WMQ				PP	PP	21 15 58.5	+2.9
WMQ				PP	PP		
	comp=Z,79nm,9.3s						
WMQ				LR	LR		
	comp=Z,149nm,32.5s,MS4.6						
STU	**Stuttgart**	**153.86**	**87**	*e*PKPdf	PKPbc	21 12 08.6	+1.3
BUG	**Bochum--Univer**	**154.00**	**80**	*e*PKPdf	PKPbc	21 12 09.1	+1.6
BUG				*e*PKPab	PKPab	21 12 22.4	+1.3
TNS	**Taunus Mts**	**154.13**	**83**	*e*PKPdf	PKPbc	21 12 08.9	+1.1
SQTA	**Sankt Quirin**	**154.21**	**91**	⇑*i*	PKPbc	21 12 09.5	+1.4
	comp=Z,14nm,1.2s						
SQTA	**Sankt Quirin**	**154.21**	**91**	⇓*i*	PKPab	21 12 19.6	-2.5
	comp=Z,35nm,1.1s						
SQTA	**Sankt Quirin**	**154.21**	**91**	⇓*i*PKPdf	PKPdf	21 12 01.3	+1.4
	comp=Z,8.6nm,1.5s						
SQTA				⇑*i*PKiKP	PKiKP	21 12 09.5	+1.4
	comp=Z,14nm,1.2s						
SQTA				⇓*i*PKPab	PKPab	21 12 19.6	-2.5
	comp=Z,35nm,1.1s						
SQTA	**Sankt Quirin**	**154.21**	**91**	⇓*i*PKIKP	PKPdf	21 12 01.3	+1.4
MOTA	**Moosalm**	**154.22**	**91**	⇓*i*P	PKPdf	21 12 01.9	+2.0
	comp=Z,15nm,1.5s						
MOTA	**Moosalm**	**154.22**	**91**	⇑*i*	PKPbc	21 12 09.4	+1.3
	comp=Z,10nm,1.0s						
MOTA	**Moosalm**	**154.22**	**91**	⇑*i*	PKPab	21 12 19.9	-2.2
	comp=Z,35nm,1.1s						
MOTA	**Moosalm**	**154.22**	**91**	⇓*i*P	PKPdf	21 12 01.9	+2.0
MOTA	**Moosalm**	**154.22**	**91**	⇓*i*pPKPdf	pPKPdf	21 12 01.9	-1.5
	comp=Z,15nm,1.5s						
MOTA				⇑*i*PKiKP	PKiKP	21 12 09.4	+1.2
	comp=Z,10nm,1.0s						
MOTA				⇑*i*PKPab	PKPab	21 12 19.9	-2.2
	comp=Z,35nm,1.1s						
MOTA	**Moosalm**	**154.22**	**91**	⇓*i*PKIKP	PKPdf	21 12 01.9	+2.0
IBBN	**Ibbenburen**	**154.64**	**78**	*e*PKPab	PKPab	21 12 25.0	+1.2
IBBN				*e*PP	PP	21 16 00.1	0.0
FUR	**Furstenfeldbru**	**154.75**	**89**	*e*PKPab	PKPab	21 12 25.7	+1.3
ASF	**Jabal al Asfar**	**155.02**	**151**	PKP	PKPdf	21 12 01.3	-0.2
	comp=Z,0.5nm,0.3s,baz=112,slow=6.9,SNR=2.3						
VOJS	**Vojsko**	**155.08**	**96**	*e*PKPdf	PKPdf	21 12 03.2	+2.1
VOY	**Vojsko**	**155.09**	**96**	*e*PKPab	PKPab	21 12 26.8	+0.9
JAVS	**Javornik**	**155.11**	**96**	*i* PKPab	PKPab	21 12 27.1	+1.1
GRA1	**Grafenberg Arr**	**155.47**	**86**	*e*PKPdf	PKPdf	21 12 11.1	+10
GRA1				*e*PKPab	PKPab	21 12 29.4	+2.0
GRA1				LR	LR		
	comp=Z,500nm,20.2s,MS5.3						
GRF	**Grafenberg Arr**	**155.47**	**86**	*e*PKP2	PKPab	21 12 29.4	+2.0
GRF				MLR	MLR		
	comp=Z,500nm,20.2s,MS5.3						
GRF	**Grafenberg Arr**	**155.47**	**86**	*e*PKPdf	PKPdf	21 12 11.1	+10
GRF				*e*PKPab	PKPab	21 12 29.4	+2.0
GRF				*e*L		22 19 21.1	
	comp=Z,524nm,20.2s						
BOJS	**Bojanci**	**155.56**	**98**	*i* PKPdf	PKPab	21 12 25.6	-2.3
BOJS				*i* PKPbc	PKPab	21 12 28.9	+1.0
BOJS				*e*PKPab	PKPab	21 12 36.6	+8.7
BOJS	**Bojanci**	**155.56**	**98**	*e*PKPab	PKPab	21 12 28.9	+1.0
BOJS				*e*		21 12 36.6	
CLZ	**Clausthal**	**155.93**	**81**	*e*PKP2	PKPab	21 12 30.6	+1.3
CLZ	**Clausthal**	**155.93**	**81**	*e*PKPdf	PKPdf	21 12 13.0	+11
CLZ				*e*PKPab	PKPab	21 12 30.6	+1.3
NRDL	**Niedersach Rie**	**156.04**	**79**	*e*PKPab	PKPab	21 12 31.4	+1.6
MANZ	**Manzenberg**	**156.11**	**86**	*e*PKPab	PKPab	21 12 31.2	+1.0
MOX	**Moxa**	**156.13**	**84**	*e*P	PKPdf	21 12 04.0	+1.6
	comp=Z,39nm,1.9s						
MOX	**Moxa**	**156.13**	**84**	*e*PKIKP	PKPdf	21 12 04.0	+1.6
MOX				pmax	pmax		
	comp=Z,39nm,1.9s						
PERS	**Pernice**	**156.13**	**96**	*i* PKPab	PKPab	21 12 31.4	+1.1
WERN	**Wernitzgruen**	**156.41**	**86**	*e*PKPdf	PKPdf	21 12 12.3	+10
GUNZ	**Gunzen**	**156.41**	**86**	*e*PKPab	PKPab	21 12 32.1	+0.7
NKC	**Novy Kostel**	**156.42**	**86**	*e*PKPdf	PKPdf	21 12 02.5	-0.3
WERD	**Werda**	**156.44**	**85**	*e*PKPdf	PKPdf	21 12 12.3	+10
GEC2	**GERESS Array S**	**156.48**	**90**	*e*PKPdf	PKPdf	21 12 02.6	-0.4
GERES	**GERESS Array B**	**156.48**	**90**	PKP	PKPdf	21 12 01.4	-1.5
	comp=Z,3.8nm,0.8s,baz=207,slow=2.4,SNR=12						
GERES				PKPab	PKPab	21 12 31.6	-0.2
	comp=Z,4.0nm,0.8s,baz=222,slow=1.8,SNR=5.6						
TANN	**Tannenbergstha**	**156.51**	**86**	*e*PP	PP	21 16 12.0	+1.4
KHC	**Kasperske Hory**	**156.55**	**89**	*e*PKP	PKPdf	21 12 03.6	+0.6
KHC				*e*		21 12 31.6	
KHC	**Kasperske Hory**	**156.55**	**89**	*e*PKPdf	PKPdf	21 12 03.6	+0.6
KHC				*e*PKPab	PKPab	21 12 31.6	-0.5
KHC				*e*PP	PP	21 16 11.5	+0.7
BSEG	**Bad Segeberg**	**156.67**	**76**	*e*PKPdf	PKPdf	21 12 12.9	+10
CLL	**Collm**	**157.21**	**84**	*i* PKP	PKPdf	21 12 05.2	+1.4
CLL				*i*		21 12 13.5	
CLL	**Collm**	**157.21**	**84**	⇑*i*PKIKP	PKPdf	21 12 05.2	+1.4
CLL				*i*		21 12 13.5	
CLL				*i*		21 12 35.9	
CLL				pmax	pmax		
	comp=Z,15nm,1.5s						
CLL				pmax	pmax		
	comp=Z,31nm,1.4s						
CLL				MLR	MLR		
	comp=Z,500nm,19.0s,MS5.4						
CLL	**Collm**	**157.21**	**84**	*i* PKPdf	PKPdf	21 12 05.2	+1.4
	comp=Z,15nm,1.5s						
CLL				*i* x	x	21 12 09.1	
CLL				*i* (sPKPdf)		21 12 13.5	
	comp=Z,38nm,1.7s						
CLL				⇑*i*PKPab	PKPab	21 12 35.9	+1.1
	comp=Z,31nm,1.4s						
CLL				*e*SS	SS	21 36 20.0	+11
CLL				*e*PSS		21 37 06.0	
CLL				*e*SSS		21 42 06.0	
CLL				*e*x	x	21 46 54.0	
CLL				Lm		22 19 00.0	
	comp=Z,500nm,19.0s						
CLL	**Collm**	**157.21**	**84**	*e*PKPdf	PKPdf	21 12 13.4	+10
CLL				*e*PKPab	PKPab	21 12 35.7	+0.9
FBE	**Freiberg**	**157.24**	**85**	*e*PKPdf	PKPdf	21 12 13.5	+10
PRU	**Pruhonice**	**157.51**	**88**	*e*PKPdf	PKPdf	21 12 05.2	+1.0
PRU				*e*PKPab	PKPab	21 12 37.2	+1.0
BRG	**Berggiesshubel**	**157.56**	**86**	*e*PKIKP	PKPdf	21 12 05.9	+1.7
BRG				*e*		21 12 37.2	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRG	**Berggiesshubel**	**157.56**	**86**	*e*PKPdf	PKPdf	21 12 13.6	+9.4
BRG				*e*PKPab	PKPab	21 12 37.1	+0.7
BRG	**Berggiesshubel**	**157.56**	**86**	*e*P	PKPdf	21 12 05.9	+1.6
	comp=Z,7.8nm,1.2s						
BRG				*e*		21 12 37.2	
	comp=Z,22nm,1.6s						
KONO	**Kongsberg**	**157.59**	**61**	PFAKE		21 12 10.0	+6.0
KONO				LR	LR		
	comp=Z,386nm,20.0s,MS5.2						
PVCC	**Panska Ves**	**157.77**	**87**	*e*PKPdf	PKPdf	21 12 05.8	+1.3
PKSM	**Moragy**	**157.89**	**100**	⇓*i*P	PKPab	21 12 38.5	+0.6
ZST	**Bratislava**	**158.11**	**94**	*e*PKP2	PKPab	21 12 39.3	+0.5
ZST	**Bratislava**	**158.11**	**94**	*e*PKP	PKPab	21 12 39.2	+0.4
VRAC	**Vranov**	**158.37**	**91**	PKP	PKPdf	21 12 05.4	+0.1
	comp=Z,1.5nm,0.8s,baz=270,slow=2.0,SNR=2.5						
VRAC				PKPab	PKPab	21 12 39.5	-0.4
	comp=Z,1.2nm,0.5s,baz=262,slow=7.1,SNR=4.8						
VRAC				PP	PP	21 16 20.8	0.0
	comp=Z,3.3nm,0.9s,baz=231,slow=5.3,SNR=5.7						
NB2	**NORSAR Subarra**	**158.50**	**58**	PKP	PKPab	21 12 40.2	+0.1
	comp=Z,9.7nm,0.9s,baz=269,slow=4.1						
NOA	**NORSAR Array B**	**158.50**	**58**	PKP	PKPdf	21 12 05.6	+0.6
	comp=Z,0.7nm,0.9s,baz=139,slow=8.2,SNR=2.6						
NOA				PKPab	PKPab	21 12 40.3	+0.2
	comp=Z,4.7nm,0.9s,baz=268,slow=4.4,SNR=13						
UPC	**Upice**	**158.59**	**88**	*e*PKP	PKPdf	21 12 10.2	+4.7
UPC				*e*		21 12 40.5	
UPC	**Upice**	**158.59**	**88**	*e*PKPdf	PKPdf	21 12 10.2	+4.7
UPC				*e*PKPab	PKPab	21 12 40.5	-0.3
MKAR	**Makanchi Array**	**158.67**	**260**	PKP	PKPdf	21 12 03.3	-2.4
	comp=Z,0.4nm,0.8s,baz=56,slow=2.2,SNR=3.9						
MKAR				PKPbc	PKPdf	21 12 15.2	+10
	comp=Z,0.5nm,0.8s,baz=90,slow=1.7,SNR=5.0						
MKAR				PKPab	PKPab	21 12 37.3	-4.0
	comp=Z,3.4nm,0.6s,baz=114,slow=3.6,SNR=14						
MKAR				PP	PP	21 16 18.1	-4.3
	comp=Z,0.7nm,0.9s,baz=106,slow=7.7,SNR=4.8						
DPC	**Dobruska-Polom**	**158.70**	**89**	*e*PKPdf	PKPdf	21 12 06.7	+1.1
DPC				*e*PKPab	PKPab	21 12 42.1	+0.8
KSP	**Ksiaz**	**158.89**	**87**	*e*PKP	PKPdf	21 12 12.9	+7.1
MORC	**Moravsky Berou**	**159.14**	**91**	⇑*i*P	PKPab	21 12 44.3	+1.1
BZS	**Buzias**	**159.20**	**105**	⇑P	PKPdf	21 12 07.5	+1.1
BZS	**Buzias**	**159.20**	**105**	⇑*i*P	PKPdf	21 12 07.5	+1.1
VYHS	**Vyhne**	**159.25**	**95**	*e*PKP	PKPdf	21 12 08.2	+1.9
VYHS				*e*		21 12 44.3	
VYHS	**Vyhne**	**159.25**	**95**	*e*PKP	PKPdf	21 12 08.2	+1.9
VYHS				*e*		21 12 44.2	
GZR	**Gura Zlata**	**159.70**	**107**	⇓*i*P	PKPab	21 12 46.4	+0.6
TKM2	**Tokmak 2**	**159.82**	**243**	PFAKE		21 12 20.0	+13
TKM2				LR	LR		
	comp=Z,415nm,20.0s,MS5.3						
UCH	**Uchtor**	**159.86**	**240**	PFAKE		21 12 20.0	+13
UCH				LR	LR		
	comp=Z,612nm,22.0s,MS5.4						
KECS	**Kecovo**	**160.19**	**97**	*i* PKP	PKPab	21 12 48.6	+0.8
FRU	**Bishkek**	**160.25**	**241**	*e*PKP2	PKPab	21 12 47.5	-0.8
FRU				pmax	pmax		
	comp=Z,80nm,2.7s						
ZALV	**Zalesovo Beam**	**160.37**	**281**	PKPbc	PKPdf	21 12 18.0	+11
	comp=Z,0.2nm,0.3s,baz=132,slow=2.2,SNR=4.0						
ZALV				PKPab	PKPab	21 12 45.3	-3.2
	comp=Z,7.2nm,0.8s,baz=108,slow=4.8,SNR=20						
DRGR		**160.51**	**104**	⇑*i*P	PKPab	21 12 51.0	+1.7
NIE	**Niedzica**	**160.56**	**94**	*e*PKP	PKPab	21 12 51.2	+1.8
OJC	**Ojcow**	**160.63**	**92**	*e*PKP	PKPab	21 12 50.9	+1.1
BRTR	**Keskin Array B**	**160.76**	**136**	PKPbc	PKPdf	21 12 18.7	+10
	comp=Z,1.3nm,1.0s,baz=243,slow=4.7,SNR=3.5						
BRTR				PKPab	PKPab	21 12 50.6	+0.1
	comp=Z,8.4nm,0.7s,baz=183,slow=6.3,SNR=26						
CRVS	**Cervenica-Dubn**	**160.96**	**97**	*e*PKP	PKPab	21 12 52.2	+1.0
VOIR		**160.97**	**110**	⇑*i*P	PKPab	21 12 51.4	+0.1
STHS	**Stebnicka Huta**	**161.09**	**95**	*e*PKP	PKPab	21 12 51.1	-0.7
KOLS	**Kolonicke sedl**	**161.44**	**98**	*e*PKP	PKPab	21 12 54.4	+1.1
MLR	**Muntele Rosu**	**161.49**	**111**	PKP	PKPdf	21 12 08.6	-0.3
	comp=Z,4.0nm,0.9s,baz=170,slow=1.5,SNR=4.0						
MLR				PKPab	PKPab	21 12 52.9	-0.7
	comp=Z,16nm,0.8s,baz=181,slow=3.8,SNR=17						
MLR				PP	PP	21 16 34.5	-3.1
	comp=Z,2.0nm,0.9s,baz=147,slow=13,SNR=3.7						
MLR	**Muntele Rosu**	**161.49**	**111**	⇑*i*P	PKPab	21 12 51.1	-2.5
NVS	**Novosibirsk**	**161.50**	**282**	*i* PKP2	PKPab	21 12 53.4	0.0
NVS				*e*		21 16 36.1	
NVS				pmax	pmax		
	comp=Z,32nm,2.0s						
NVS				pmax	pmax		
	comp=N,12nm,1.7s						
NVS				pmax	pmax		
	comp=E,15nm,1.7s						
ARCES	**ARCESS Array B**	**161.60**	**29**	PKPab	PKPab	21 12 53.5	+0.1
	comp=E,3.6nm,0.8s,baz=289,slow=3.7,SNR=6.3						
TIRR	**Tirgusor**	**162.08**	**117**	⇑*i*P	PKPab	21 12 56.4	+0.2
PLOR	**Plostina**	**162.10**	**111**	⇑*i*P	PKPab	21 12 57.6	+1.3
VRI	**Vrincioaia**	**162.15**	**111**	⇑*i*P	PKPab	21 12 56.2	-0.3
FINES	**FINESS Array B**	**165.58**	**54**	PKPab	PKPab	21 13 10.3	-0.8
	comp=E,1.8nm,0.9s,baz=358,slow=6.1,SNR=6.3						
AKASG	**Malin Array Be**	**166.23**	**100**	PKP	PKPdf	21 12 11.8	-1.3
AKASG				PKPab	PKPab	21 13 11.0	-3.4
AKASG				PP	PP	21 16 59.9	-2.8
AKASG	**Malin Array Be**	**166.23**	**100**	PKP	PKPdf	21 12 11.8	-1.3
	comp=E,0.1nm,0.2s,baz=255,slow=1.1,SNR=5.1						
AKASG				PKPab	PKPab	21 13 11.0	-3.4
	comp=E,7.7nm,0.8s,baz=252,slow=4.5,SNR=25						
AKASG				PP	PP	21 16 59.9	-2.7
	comp=E,0.1nm,0.2s,baz=231,slow=6.0,SNR=5.3						
KIV	**Kislovodsk**	**167.63**	**151**	*e*PKPdf	PKPdf	21 12 11.1	-3.2
KIV	**Kislovodsk**	**167.63**	**151**	*e*PKIKP	PKPdf	21 12 11.1	-3.3
GOF	**Gofitskoye**	**168.74**	**150**	*e*PKP2	PKPab	21 13 20.7	-4.8
OBN	**Obninsk**	**171.81**	**84**	PFAKE		21 12 30.0	+14
OBN				LR	LR		
	comp=Z,1μm,21.0s						
AKTO	**Aktyubinsk**	**173.60**	**226**	PKPab	PKPab	21 13 46.5	-0.4
	comp=Z,0.9nm,0.8s,baz=146,slow=3.6,SNR=3.1						
ARU	**Arti**	**175.46**	**290**	*e*PKPdf	PKPdf	21 12 15.8	-2.0
ARU				LR	LR		
	comp=Z,547nm,19.0s						
ARU	**Arti**	**175.46**	**290**	*e*PKIKP	PKPdf	21 12 15.8	-1.9
ARU				MLR	MLR		
	comp=Z,547nm,19.0s						

CASC 03 21:14:26.7±2.9**, 1468N**×**9072W, h178**^{km}±16^{km}**, MD3.5, 2C-4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG6		**0.20**	**232**	*e*P	Pn	21 14 52.5	+2.1
FG6				*e*S	Sn	21 15 11.7	+3.1
FUG	**Fuego 3**	**0.26**	**207**	⇑*i*P	Pn	21 14 51.7	+1.1
JAT	**Jato**	**0.96**	**248**	⇓*e*P	Pn	21 14 54.9	+0.9
RBDL	**Robledal**	**1.15**	**119**	⇓*i*P	x	21 14 56.1	
RBDL				*e*S	x	21 15 19.5	
MTO2	**Montecristo 2**	**1.35**	**102**	⇓*e*P	x	21 14 57.8	
MTO2				*e*S	x	21 15 21.7	
SNJE	**San Jose**	**1.35**	**127**	⇑*i*P	x	21 14 57.2	
SNJE				*e*S	x	21 15 21.0	
SNJE				*e*S	x	21 15 22.8	
SBLS	**San Blas**	**1.35**	**128**	⇓*i*P	x	21 14 58.0	
LCBS	**La Ceiba**	**1.97**	**121**	*e*P	x	21 15 04.0	

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*CSEM **03** 21:18:23.5±0.1, 3669N×2702E, h142^{km}, mb3.8/6, Error ellipse: s-maj=2.2km s-min=1.7km az=161.0*
*ISCJB **03** 21:18:24.2±0.3, 3663N±003×2696E±003, h143^{km}±3^{km}, mb3.7/11, Error ellipse: s-maj=5.6km s-min=4.6km az=168.5*
*IDC **03** 21:18:24.6±1.4, 3671N×2689E, h131^{km}±18^{km}, mb3.5/8, mb1 3.5/12, mb1mx3.4/24, mbtmp3.5/12, MS3.3/2, Ms1 3.3/2, ms1mx2.7/29, Error ellipse: s-maj=20.0km s-min=13.3km az=161.0*
*MOS **03** 21:18:24.7±1.6, 3663N×2697E, h150^{km}, mb3.9/5, Error ellipse: s-maj=13.2km s-min=9.8km az=135.6*
*ATH **03** 21:18:25.6, 3664N×2692E, h125^{km}±4^{km}*
*ISK **03** 21:18:25.9, 3666N×2690E, h127^{km}, MD3.1*
*NEIC **03** 21:18:25.2±0.3, 3663N×2694E, h143^{km}±4^{km}, mb3.9/4, Error ellipse: s-maj=7.0km s-min=4.2km az=172.0*
*HLW **03** 21:18:25.7, 3664N×2698E, h35^{km}, Mb4.4*
ISC 03 21:18:25.2±0.3**, 3661N**±003×**2696E**±003**, h138**^{km}±2^{km}**, n79, σ0^{s}98**/90**, mb3.7**/11**, 2C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.51**	**77**	*i* PG	**Pn**	**21 18 45.6**	**+0.4**
DAT				*i* SG	**Sn**	**21 18 59.6**	**-0.7**
BODT	**Bodrum**	**0.53**	**32**	*i* PG	**Pn**	**21 18 45.2**	**-0.1**
BODT				*i* SG	**Sn**	**21 18 59.0**	**-1.6**
BDRM	**Kayabasi**	**0.59**	**41**	*i* P	**Pn**	**21 18 45.9**	**+0.2**
BDRM				*i* S	**Sn**	**21 19 01.0**	**-0.3**
MLSB	**Milas**	**0.94**	**44**	*i* PG	**Pn**	**21 18 48.7**	**+0.4**
ARG	**Arkhangelos**	**1.02**	**113**	⇓*i*P	**Pn**	**21 18 50.0**	**+1.0**
ARG				*e*S	**Sn**	**21 19 06.5**	**-0.5**
SMG	**Samos**	**1.10**	**355**	⇓*i*P	**Pn**	**21 18 49.6**	**-0.1**
SMG				*e*S	**Sn**	**21 19 06.6**	**-1.8**
YER	**Yerkesik**	**1.18**	**63**	*i* PN	**Pn**	**21 18 51.5**	**+1.0**
YER				*i* SN	**Sn**	**21 19 09.8**	**0.0**
APE	**Apeiranthos**	**1.23**	**292**	⇑*i*P	**Pn**	**21 18 51.3**	**+0.3**
SANT	**Santorini**	**1.23**	**259**	*e*Pg	**Pn**	**21 18 51.1**	**+0.1**
SANT	**Santorini**	**1.23**	**259**	*e*Pg	**Pn**	**21 18 51.1**	**+0.1**
DALT	**Dalyan (Mudla)**	**1.36**	**83**	*i* PN	**Pn**	**21 18 53.7**	**+1.4**
FETY	**Fethiye**	**1.71**	**89**	*i* PN	**Pn**	**21 18 56.8**	**+0.7**
NPS	**Neapolis**	**1.74**	**219**	⇑*i*P	**Pn**	**21 18 56.8**	**+0.3**
DENT	**Denizli**	**2.01**	**55**	PN	**Pn**	**21 19 00.6**	**+0.9**
XRY	**Khrisi**	**2.02**	**211**	*e*P	**Pn**	**21 19 00.5**	**+0.7**
IDI	**Anoyia**	**2.14**	**232**	P	**Pn**	**21 19 01.2**	**-0.1**
	13nm,0.3s,baz=48,slow=11,SNR=214						
IDI				S	**Sn**	**21 19 26.5**	**-2.4**
	54nm,0.3s,baz=22,slow=19,SNR=29						
KSL	**Kastellorizon**	**2.17**	**102**	*e*P	**Pn**	**21 19 02.5**	**+0.9**
GOLH	**Golhisar**	**2.18**	**73**	*i* P	**Pn**	**21 19 03.1**	**+1.4**
GOLH				*i* S	**Sn**	**21 19 28.1**	**-1.6**
KULA	**Kula-Manisa**	**2.33**	**35**	PN	**Pn**	**21 19 04.2**	**+0.6**
ELL	**Elmali**	**2.37**	**86**	*e*PN	**Pn**	**21 19 05.2**	**+1.1**
VAM	**Vamos**	**2.54**	**243**	*e*P	**Pn**	**21 19 06.9**	**+0.7**
GVD	**Gavdhos**	**2.93**	**234**	*e*Pn	**Pn**	**21 19 11.3**	**+0.1**
GVD				*e*Sn	**Sn**	**21 19 40.6**	**-6.0**
GVD	**Gavdhos**	**2.93**	**234**	*e*Pn	**Pn**	**21 19 11.3**	**+0.1**
ISP	**Isparta**	**3.09**	**66**	*e*Pn	**Pn**	**21 19 13.6**	**+0.4**
KYTH	**Kithira**	**3.18**	**265**	*e*P	**Pn**	**21 19 14.8**	**+0.4**
VLI	**Veliai**	**3.24**	**273**	*e*P	**Pn**	**21 19 15.5**	**+0.4**
VLS	**Valsamata**	**5.31**	**289**	P	**Pn**	**21 19 44.2**	**+1.8**
SLUM		**5.31**	**196**	P	**Pn**	**21 19 42.3**	**-0.2**
CSS	**Prodhromos**	**5.43**	**106**	*e*Pn	**Pn**	**21 19 42.5**	**-1.6**
	8.8nm,0.5s						
CSS				*e*Sn	**Sn**	**21 20 41.9**	**-3.8**
CSS	**Prodhromos**	**5.43**	**106**	*e*Pn	**Pn**	**21 19 42.5**	**-1.7**
	8.8nm,0.5s						
BRTR	**Keskin Array B**	**6.11**	**57**	P	**Pn**	**21 19 54.6**	**+1.4**
	0.2nm,0.3s,baz=230,slow=13,SNR=14						
BR131	**Keskin Array S**	**6.11**	**57**	*e*Pn	**Pn**	**21 19 54.4**	**+1.2**
BR131	**Keskin Array S**	**6.11**	**57**	*e*Pn	**Pn**	**21 19 54.3**	**+1.1**
MMAI	**Mount Meron Ar**	**7.82**	**115**	P	**Pn**	**21 20 15.1**	**-1.1**
	11nm,0.3s,baz=309,slow=11,SNR=92						
MMAI				S	**Sn**	**21 21 39.3**	**-3.8**
	5.2nm,0.3s,baz=310,slow=25,SNR=13						
AMAG	**Maghara**	**7.91**	**137**	P	**Pn**	**21 20 17.2**	**-0.3**
HHAG	**Hagoal**	**7.91**	**146**	P	**Pn**	**21 20 18.5**	**+1.0**
GLL	**Jalalah**	**8.07**	**149**	P	**Pn**	**21 20 19.6**	**0.0**
SUZ		**8.35**	**142**	P	**Pn**	**21 20 23.2**	**-0.2**
TIP	**Timpagrande**	**8.46**	**291**	*e*Pn	**Pn**	**21 20 22.9**	**-1.9**
TIP	**Timpagrande**	**8.46**	**291**	*e*Pn	**Pn**	**21 20 22.9**	**-1.9**
HNKL	**Nakhl**	**8.88**	**137**	P	**Pn**	**21 20 29.6**	**-0.9**
MLR	**Muntele Rosu**	**8.90**	**355**	LR	LR	21 23 41.3	
	comp=Z,303nm,21.9s,baz=62,slow=36						
ASF	**Jabal al Asfar**	**9.33**	**115**	P	**Pn**	**21 20 36.5**	**+0.1**
ASF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASF	**Jabal al Asfar**	**9.33**	**115**	P	**Pn**	**21 20 36.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=164,slow=8.0,SNR=8.0						
HFRF	**Wahat Farafira**	**9.51**	**173**	P	**Pn**	**21 20 38.3**	**-0.5**
EIL	**Elat**	**9.63**	**134**	P	**Pn**	**21 20 40.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=167,slow=4.1,SNR=9.0						
EIL				S	**Sn**	**21 22 22.0**	**-5.0**
	comp=Z,1.7nm,0.3s,baz=126,slow=21,SNR=9.5						
ASUT		**9.98**	**156**	P	**Pn**	**21 20 45.0**	**-0.1**
ASUT		**9.98**	**156**	P	**Pn**	**21 20 45.0**	**-0.2**
HKAT	**Jabal Katrina**	**10.01**	**142**	P	**Pn**	**21 20 45.4**	**-0.1**
KIV	**Kislovodsk**	**14.05**	**54**	*e*Pn	**Pn**	**21 21 34.5**	**-3.6**
KIV	**Kislovodsk**	**14.05**	**54**	*e*P	**Pn**	**21 21 34.5**	**-3.6**
AKASG	**Malin Array Be**	**14.18**	**6**	P	**Pn**	**21 21 42.2**	**+2.6**
AKASG	**Malin Array Be**	**14.18**	**6**	P	**Pn**	**21 21 42.2**	**+2.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**14.18**	**6**	P	**Pn**	**21 21 42.2**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=193,slow=12,SNR=9.5						
KEST	**Kesra**	**14.26**	**272**	P	**Pn**	**21 21 43.9**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=338,slow=5.9,SNR=5.6						
KEST				LR	LR	21 27 51.9	
	comp=Z,93nm,19.0s,baz=52,slow=40						
ESDC	**Sonseca Array**	**24.45**	**287**	P	**P**	**21 23 30.5**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.0,baz=82,slow=9.3,SNR=5.2						
ESLA	**Sonseca Array**	**24.45**	**287**	*e*P	**P**	**21 23 29.9**	**-1.3**
	comp=Z,3.4nm,1.3s,mb3.7						
ESLA	**Sonseca Array**	**24.45**	**287**	*e*P	**P**	**21 23 29.9**	**-1.2**
	comp=Z,3.3nm,1.3s,mb3.7						
FINES	**FINESS Array B**	**24.86**	**359**	P	**P**	**21 23 33.2**	**-1.4**
FINES	**FINESS Array B**	**24.86**	**359**	P	**P**	**21 23 33.2**	**-1.4**
	comp=Z,0.4nm,0.4s,mb3.3,baz=164,slow=12,SNR=7.5						
HFS	**Hagfors**	**25.04**	**344**	P	**P**	**21 23 34.5**	**-1.7**
HFS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
HFS	**Hagfors**	**25.04**	**344**	P	**P**	**21 23 34.5**	**-1.6**
	comp=Z,2.2nm,1.0s,mb3.6,baz=142,slow=7.5,SNR=5.2						
TOA0	**Torodi Ar. Sit**	**32.54**	**231**	*e*P	**P**	**21 24 44.1**	**+0.9**
TOA0	**Torodi Ar. Sit**	**32.54**	**231**	*e*P	**P**	**21 24 44.1**	**+0.9**
TORD	**Torodi Ar. Bea**	**32.54**	**231**	P	**P**	**21 24 43.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**32.54**	**231**	P	**P**	**21 24 43.7**	**+0.5**
	comp=Z,1.6nm,0.3s,mb4.2,baz=32,slow=8.7,SNR=43						
ARCES	**ARCESS Array B**	**32.99**	**359**	P	**P**	**21 24 45.3**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**32.99**	**359**	P	**P**	**21 24 45.3**	**-1.3**
	comp=Z,2.4nm,0.8s,mb4.0,baz=168,slow=8.9,SNR=4.0						
AAK	**Ala-Archa**	**36.72**	**66**	P	**P**	**21 25 18.4**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.4						
AAK	**Ala-Archa**	**36.72**	**66**	P	**P**	**21 25 18.4**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.4						
KURK	**Kurchatov**	**39.13**	**52**	*e*P	**P**	**21 25 38.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
KURK	**Kurchatov**	**39.13**	**52**	*e*P	**P**	**21 25 38.5**	**-0.5**
	comp=Z,1.5nm,0.4s,mb4.0						
MK31	**Makanchi Array**	**41.76**	**58**	*e*P	**P**	**21 26 01.1**	**+0.4**
MK31	**Makanchi Array**	**41.76**	**58**	*e*P	**P**	**21 26 01.0**	**+0.3**
MKAR	**Makanchi Array**	**41.76**	**58**	P	**P**	**21 26 01.4**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**41.76**	**58**	P	**P**	**21 26 01.4**	**+0.7**
	comp=Z,1.3nm,0.3s,mb4.0,baz=269,slow=8.6,SNR=39						
ZAL	**Zalesovo**	**42.93**	**47**	P	**P**	**21 26 10.2**	**+0.2**
ZALV	**Zalesovo Beam**	**42.95**	**47**	P	**P**	**21 26 10.2**	**+0.1**
	comp=Z,2.2nm,0.3s,mb4.3,baz=271,slow=8.8,SNR=22						
SONM	**Songino Array**	**57.44**	**52**	P	**P**	**21 27 59.2**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=282,slow=7.0,SNR=4.9						

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*ISK **03** 21:36:59.8, 3840N×3921E, h5^{km}, MD2.8*
*ISCJB **03** 21:37:00.6±0.8, 3837N±004×3926E±004, h2^{km}±9^{km}, Error ellipse: s-maj=7.0km s-min=5.2km az=150.8*
*CSEM **03** 21:37:00.5±0.1, 3839N×3920E, h2^{km}, MD2.5, Error ellipse: s-maj=2.9km s-min=2.0km az=138.0*
*DDA **03** 21:37:00.6, 3846N×3930E, h3^{km}±3^{km}, Md2.5*
ISC 03 21:37:01.4±0.6**, 3839N**±004×**3923E**±005**, h11**^{km}±7^{km}**, n12, σ0^{s}77**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.22**	**301**	*i* P	**Pg**	**21 37 05.2**	**-0.9**
ELZG				*i* S	**Sg**	**21 37 08.8**	**-0.4**
PTK	**Pertek**	**0.52**	**14**	PG	**Pg**	**21 37 11.1**	**-0.5**
PTK				SG	**Sg**	**21 37 19.3**	**+0.8**
MALT	**Malatya**	**0.63**	**264**	PG	**Pg**	**21 37 13.0**	**-0.7**
MALT				SG	**Sg**	**21 37 22.8**	**+0.8**
MYA	**Malataya**	**0.63**	**265**	PG	**Pg**	**21 37 12.8**	**-0.9**
DIY	**Diyarbakir**	**0.93**	**122**	PG	**Pg**	**21 37 18.7**	**-0.6**
URFA	**Urfa**	**1.00**	**199**	PG	**Pg**	**21 37 20.5**	**-0.1**
ATAB	**Bozova**	**1.17**	**219**	*i* P	**Pb**	**21 37 24.5**	**+0.9**
ATAB				*i* S	**Sg**	**21 37 40.7**	**+1.5**
EZC	**Erzincan**	**1.44**	**18**	*e*PN	**Pn**	**21 37 27.8**	**+0.5**
MARD	**Mardin**	**1.63**	**131**	*i* P	**Pn**	**21 37 30.1**	**+0.1**
MARD				*i* S	**Sn**	**21 37 50.7**	**-0.3**
GZT	**Gaziantep**	**1.67**	**232**	*i* P	**Pn**	**21 37 31.1**	**+0.5**
GZT				*i* S	**Sn**	**21 37 50.5**	**-1.4**
BTMT	**Batman**	**1.79**	**96**	*e*PN	**Pn**	**21 37 31.6**	**-0.6**
EZM	**Erzurum**	**2.25**	**47**	*e*PN	**Pn**	**21 37 39.5**	**+1.0**

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*ISCJB **03** 21:59:11.1±0.6, 4549S±005×167.15E±008, h84^{km}±6^{km}, mb3.7/3, Error ellipse: s-maj=10.2km s-min=7.7km az=25.8*
*WEL **03** 21:59:12.6±0.3, 4555S×16697E, h69^{km}±1^{km}, ML4.3/18, Error ellipse: s-maj=3.2km s-min=1.2km az=90.0*
WEL Felt between Otago, Southland and Fiordland, maximum reported intensity MM 4.
*NEIC **03** 21:59:12.5, 4556S×16697E, h68^{km}, ML4.5(WEL), After WEL.*
*IDC **03** 21:59:15.2±5.7, 4528S×16734E, h101^{km}±53^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.5/10, mbtmp3.5/4, Error ellipse: s-maj=66.2km s-min=23.8km az=15.0*
ISC 03 21:59:12.4±0.6**, 4551S**±005×**16715E**±008**, h75**^{km}±6^{km}**, n52, σ1^{s}09**/56**, mb3.7**/3**, 3C-15D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.03**	**11**	⇑P	**Pn**	**21 59 22.6**	**-0.6**
DCZ				S	**Sn**	**21 59 30.0**	**-1.0**
DCZ	**Deep Cove**	**0.03**	**11**	⇑PN	**Pn**	**21 59 22.6**	**-0.6**
DCZ				SN	**Sn**	**21 59 30.0**	**-1.1**
WHZ	**Wether Hill Ro**	**0.68**	**125**	⇓P	**Pn**	**21 59 27.8**	**+0.3**
WHZ				S	**Sn**	**21 59 38.9**	**+0.3**
WHZ	**Wether Hill Ro**	**0.68**	**125**	⇓PN	**Pn**	**21 59 27.8**	**+0.3**
WHZ				SN	**Sn**	**21 59 38.9**	**+0.3**
MLZ	**Mavora Lakes**	**0.74**	**78**	⇓P	**Pn**	**21 59 28.8**	**+0.7**
MLZ	**Mavora Lakes**	**0.74**	**78**	⇓PN	**Pn**	**21 59 28.8**	**+0.7**
MLZ				SN	**Sn**	**21 59 40.4**	**+0.6**
MSZ	**Milford Sound**	**1.00**	**34**	P	**Pn**	**21 59 31.9**	**+0.7**
MSZ	**Milford Sound**	**1.00**	**34**	PN	**Pn**	**21 59 31.9**	**+0.6**
APZ	**The Paps**	**1.45**	**156**	⇓PN	**Pn**	**21 59 36.5**	**-0.3**
APZ				SN	**Sn**	**21 59 54.4**	**-0.8**
WKZ	**Wanaka**	**1.49**	**63**	⇓P	**Pn**	**21 59 39.3**	**+1.9**
WKZ	**Wanaka**	**1.49**	**63**	⇓PN	**Pn**	**21 59 39.3**	**+1.9**
WKZ				SN	**Sn**	**21 59 58.7**	**+2.5**
EAZ	**Earnscleugh**	**1.55**	**80**	⇓P	**Pn**	**21 59 39.7**	**+1.5**
EAZ	**Earnscleugh**	**1.55**	**80**	⇓PN	**Pn**	**21 59 39.7**	**+1.6**
SYZ	**Scrubby Hill**	**1.73**	**127**	PN	**Pn**	**21 59 40.6**	**+0.1**
TUZ	**Tuapeka**	**1.80**	**105**	⇓P	**Pn**	**21 59 42.2**	**+0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TUZ	Tuapeka	1.80	105	⇓PN	Pn	21 59 42.2	+0.7
JCZ	Jackson Bay	1.84	39	P	Pn	21 59 43.4	+1.4
JCZ	Jackson Bay	1.84	39	PN	Pn	21 59 43.4	+1.4
LBZ	Lake Benmore	2.43	64	⇓P	Pn	21 59 50.4	+0.4
LBZ	Lake Benmore	2.43	64	⇓PN	Pn	21 59 50.4	+0.4
HHSZ	Highcliff Hill	2.45	100	⇓PN	Pn	21 59 51.0	+0.9
ODZ	Otahua Downs	2.51	81	⇑P	Pn	21 59 51.3	+0.2
ODZ	Otahua Downs	2.51	81	⇓PN	Pn	21 59 51.3	+0.3
FOZ	Fox Glacier	2.66	44	eP	Pn	21 59 54.2	+1.1
FOZ	Fox Glacier	2.66	44	ePN	Pn	21 59 54.2	+1.1
RPZ	Rata Peaks	3.32	59	P	Pn	22 00 01.7	-0.3
	30nm,0.3s,baz=228,slow=5.9,SNR=376						
RPZ				S	Sn	22 00 38.8	-1.4
	58nm,0.3s,baz=116,slow=18,SNR=28						
RPZ	Rata Peaks	3.32	59	PN	Pn	22 00 01.6	-0.4
WVZ	Waitaha Valley	3.55	48	ePN	Pn	22 00 04.2	-0.9
MQZ	McQueen's Vall	4.33	67	eP	Pn	22 00 15.0	-0.7
MQZ	McQueen's Vall	4.33	67	ePN	Pn	22 00 15.0	-0.7
CRLZ	Canterbury Las	4.37	66	ePN	Pn	22 00 14.8	-1.5
LTZ	Lake Taylor	4.59	55	ePN	Pn	22 00 18.3	-1.0
DSZ	Denniston Nort	5.06	44	eP	Pn	22 00 24.4	-1.3
DSZ	Denniston Nort	5.06	44	ePN	Pn	22 00 24.4	-1.3
KHZ	Kahutara	5.55	58	eP	Pn	22 00 31.2	-1.3
KHZ	Kahutara	5.55	58	ePN	Pn	22 00 31.2	-1.2
THZ	Tophouse	5.61	50	ePN	Pn	22 00 31.7	-1.6
QRZ	Quartz Range	6.12	42	eP	Pn	22 00 39.1	-1.0
QRZ	Quartz Range	6.12	42	ePN	Pn	22 00 39.1	-1.0
NNZ	Nelson	6.25	49	ePN	Pn	22 00 42.9	+1.0
KIW	Kapiti Island	7.33	53	ePN	Pn	22 00 55.5	-1.2
MRZ	Mangatainoka R	7.85	55	ePN	Pn	22 01 00.9	-2.9
HIZ	Hauiti	9.04	42	ePN	Pn	22 01 19.7	-0.4
WCZ	Waipu Caves	11.01	32	ePN	Pn	22 01 47.9	+1.0
OUZ	Omahuta	11.39	28	ePN	Pn	22 01 53.1	+0.9
STKA	Stephens Creek	24.02	296	P	P	22 04 22.5	+2.3
	2.6nm,0.8s,mb3.6,baz=138,slow=15,SNR=4.7						
ASAR	Alice Springs	34.61	298	P	P	22 05 54.0	-0.2
	0.5nm,0.6s,mb3.5,baz=125,slow=5.0,SNR=9.3						
WRA	Warramunga Arr	37.15	302	P	P	22 06 15.7	-0.3
	1.1nm,0.6s,mb4.0,baz=138,slow=7.9,SNR=17						
TORD	Torodi Ar. Bea	145.46	206	PKPbc	PKPbc	22 18 41.7	-0.4
TORD				pPKPbc	pPKPbc	22 19 01.8	-1.3
TORD	Torodi Ar. Bea	145.46	206	PKPbc	PKPbc	22 18 41.7	-0.4
	2.7nm,0.7s,baz=147,slow=2.4,SNR=35						
TORD				pPKPbc	pPKPbc	22 19 01.8	-1.3
	0.9nm,0.7s,baz=158,slow=1.8,SNR=3.6						
BRTR	Keskin Array B	145.68	277	PKPbc	PKPbc	22 18 41.7	-0.4
	0.2nm,0.4s,baz=55,slow=4.0,SNR=2.7						
FINES	FINESS Array B	152.42	319	PKPbc	PKPbc	22 18 58.0	-0.7
	1.0nm,0.9s,baz=90,slow=9.5,SNR=4.0						

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*IDC **03** 22:40:23.6±3.6, 3131N×4997E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/22, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=84.4km s-min=41.5km az=123.0*
*KISR **03** 22:40:29.3±0.7, 3136N×4955E, h34km±49km, ML2.9*
*ISCJB **03** 22:40:30.2±1.8, 3144N±006×4960E±008, h19km±18km, mb3.6/3, Error ellipse: s-maj=13.9km s-min=6.7km az=39.0*
*CSEM **03** 22:40:30.0±0.1, 3147N×4959E, h20km, ML3.3, Error ellipse: s-maj=3.6km s-min=1.7km az=118.0*
*THR **03** 22:40:30.5±0.4, 3155N×4964E, h14km±6km, ML3.3*
ISC 03 22:40:30.0±1.9, **3145N**±006×**4957E**±008, **h9**km±13km, **n21**, σ**0.88**/35, **mb3.5**/3, **Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.93	315	ePg	Pg	22 40 47.5	-0.4
SHGR				eSg	Sg	22 41 00.1	0.0
SHGR				AML	AML	22 41 03.7	
	comp=N,1µm,0.5s						
SHGR	Shooshtar-Gavs	0.93	315	ePg	Pg	22 40 47.5	-0.4
	SNR=91						
SHGR				eSg	Sg	22 41 00.1	+0.1
	SNR=91						
UMR	Umm Al-Rimmam	2.48	221	eP	Pn	22 41 10.8	+0.2
UMR				eS	Sn	22 41 41.6	+0.6
UMR				AML	AML	22 41 43.8	
	comp=Z,46nm,0.3s						
UMR	Umm Al-Rimmam	2.48	221	eP	Pn	22 41 10.8	+0.3
UMR				eS	Sn	22 41 41.6	+0.7
MIB	Mutribah	2.53	230	eP	Pn	22 41 11.2	0.0
MIB				eS	Sn	22 41 42.9	+0.7
MIB				AML	AML	22 41 46.8	
	comp=Z,38nm,0.4s						
MIB	Mutribah	2.53	230	eP	Pn	22 41 11.2	0.0
MIB				eS	Sn	22 41 42.9	+0.7
KBD	Kabd	2.79	216	eP	Pn	22 41 14.2	-0.6
KBD				eS	Sn	22 41 48.7	+0.1
KBD				AML	AML	22 41 50.7	
	comp=Z,131nm,0.3s						
KBD	Kabd	2.79	216	eP	Pn	22 41 14.1	-0.7
KBD				eS	Sn	22 41 48.7	+0.1
	comp=Z,131nm,0.3s						
NAY	Al-Naaiem	2.98	223	eP	Pn	22 41 17.6	+0.2
NAY				eS	Sn	22 41 53.0	-0.2
NAY				AML	AML	22 41 56.8	
	comp=Z,15nm,0.5s						
NAY	Al-Naaiem	2.98	223	eP	Pn	22 41 17.6	+0.2
NAY				eS	Sn	22 41 53.0	-0.3
	comp=Z,15nm,0.5s						
QRN	Al-Qurain	3.05	208	eP	Pn	22 41 18.0	-0.4
NASN	Na'in	3.06	63	ePn	Pn	22 41 19.5	+1.0
RDF	Al-Radifah	3.06	215	eP	Pn	22 41 18.7	+0.1
RDF				eS	Sn	22 41 55.3	-0.1
RDF				AML	AML	22 41 56.3	
	comp=Z,31nm,0.4s						
RDF	Al-Radifah	3.06	215	eP	Pn	22 41 18.7	+0.1
RDF				eS	Sn	22 41 55.3	-0.1
ASAO	Ashtian	3.12	7	ePn	Pn	22 41 20.0	+0.7
ASAO				eSg	Sg	22 42 04.6	-5.5
ASAO				AML	AML	22 42 15.1	
	comp=N,75nm,0.3s						
ASAO	Ashtian	3.12	7	ePn	Pn	22 41 20.0	+0.7
	SNR=52						
ASAO				eSg	Sg	22 42 04.6	-5.5
	SNR=90						
GHVR	GHOM	3.35	25	ePn	Pn	22 41 22.5	0.0
BRTR	Keskin Array B	15.36	307	Pn	Pn	22 44 08.3	+1.5
	comp=N,0.1nm,0.3s,baz=137,slow=12,SNR=4.9						
FINES	FINESS Array B	33.70	340	P	P	22 47 07.7	-3.6
	comp=N,0.7nm,0.5s,mb3.9,baz=139,slow=8.7,SNR=16						
TORD	Torodi Ar. Bea	47.49	259	P	P	22 49 02.7	-2.9
	comp=N,0.2nm,0.8s,mb3.1,baz=50,slow=7.8,SNR=2.7						
YKA	Yellowknife Ar	85.53	353	P	P	22 53 04.7	-3.4
	comp=N,0.2nm,0.5s,mb3.6,baz=15,slow=5.7,SNR=4.4						

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*IDC **03** 23:02:57.3±4.1, 3063N×14131E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/19, mbtmp3.3/4, ML3.4/1, Error ellipse: s-maj=161.3km s-min=25.0km az=72.0*
*JMA **03** 23:02:57.5±0.6, 3150N×14259E, h0km, M3.6*
*ISCJB **03** 23:02:58.1±2.5, 313N±02×1427E±04, h67km±29km, mb3.5/3, Error ellipse: s-maj=67.1km s-min=19.6km az=159.5*
ISC 03 23:02:59.3±2.3, **313N**±02×**1427E**±04, **h56**km±27km, **n8**, σ**0.66**/10, **mb3.5**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	3.70	337	P	Pn	23 03 53.7	-0.3
JHU	Hanno	5.42	329	P	Pn	23 04 18.2	+0.7
JHU				eS	Sn	23 05 17.7	-0.8
JHO	Hitachi	5.64	342	P	Pn	23 04 20.9	+0.4
JHO				eS	Sn	23 05 23.5	-0.4
JRY	Ryogami san	5.73	327	P	Pn	23 04 22.0	+0.3
MJAR	Matsushiro Arr	6.48	326	Pn	Pn	23 04 32.1	+0.1
	0.8nm,0.3s,baz=158,slow=11,SNR=12						
MKAR	Makanchi Array	48.29	307	P	P	23 11 35.9	+1.1
	0.1nm,0.3s,mb3.4,baz=87,slow=10,SNR=4.3						
WRA	Warramunga Arr	51.53	190	P	P	23 11 58.3	-1.2
	0.4nm,0.4s,mb3.7,baz=5.5,slow=7.4,SNR=17						
ASAR	Alice Springs	55.26	190	P	P	23 12 26.9	+0.1
	0.3nm,0.7s,mb3.4,baz=9.5,slow=4.4,SNR=4.2						

IDC 03 23:15:34.5±25.0, **1610S**×**6840E**, **h0**km, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.3**/21, **mbtmp3.5**/3, **Error ellipse: s-maj=762.0km s-min=50.3km az=62.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	61.61	108	P	P	23 25 54.4	0.0
	0.4nm,0.8s,baz=271,slow=5.9,SNR=5.9						
WRA	Warramunga Arr	62.48	104	P	P	23 26 00.2	0.0
	0.3nm,0.5s,baz=270,slow=5.8,SNR=6.2						
SONM	Songino Array	72.14	26	P	P	23 27 01.2	+0.4
	0.2nm,0.8s,baz=225,slow=6.5,SNR=3.6						

IDC 03 23:16:48.4±2.5, **5495S**×**13987W**, **h0**km, **mb3.8**/2, **mb1 4.0**/2, **mb1mx3.8**/10, **mbtmp3.8**/2, **Error ellipse: s-maj=335.7km s-min=52.1km az=179.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	68.85	259	P	P	23 27 55.8	+1.1
	0.5nm,0.9s,baz=332,slow=32,SNR=2.8						
WRA	Warramunga Arr	71.53	262	P	P	23 28 09.7	-1.4
	0.6nm,0.8s,baz=143,slow=5.2,SNR=5.2						
TORD	Torodi Ar. Bea	128.67	129	PKP	PKPdf	23 35 57.0	-0.5
	0.3nm,0.8s,baz=225,slow=3.7,SNR=4.6						
MKAR	Makanchi Array	152.54	270	PKPbc	PKPbc	23 36 46.2	+0.6
	0.2nm,0.5s,baz=118,slow=3.3,SNR=5.1						

IDC 03 23:33:23.4±1.4, **177N**×**12626E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.6**/16, **mbtmp3.6**/4, **Error ellipse: s-maj=140.5km s-min=21.0km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.99	160	P	P	23 38 28.9	-1.0
	1.9nm,0.4s,baz=339,slow=11,SNR=43						
ASAR	Alice Springs	26.36	164	P	P	23 39 02.5	+1.1
	0.7nm,0.5s,baz=350,slow=14,SNR=9.3						
SONM	Songino Array	49.00	342	P	P	23 42 12.4	+0.6
	0.3nm,0.7s,baz=143,slow=7.6,SNR=2.7						
MKAR	Makanchi Array	58.90	326	P	P	23 43 23.8	-0.4
	1.0nm,0.8s,baz=121,slow=7.8,SNR=9.9						

IDC 04 00:13:22.1±1.6, **1517S**×**17589W**, **h0**km, **mb4.0**/5, **mb1 4.4**/6, **mb1mx4.0**/15, **mbtmp4.0**/6, **ML2.0**/1, **MS3.5**/3, **Ms1 3.5**/3, **ms1mx3.0**/29, **Error ellipse: s-maj=125.1km s-min=20.2km az=156.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.18	73	Pn	Pn	00 14 25.3	-1.7
	5.6nm,0.3s,baz=61,slow=12,SNR=8.3						
AFI				Sn	Sn	00 15 11.2	-5.5
	12nm,0.3s,baz=78,slow=22,SNR=7.8						
RAR	Rarotonga	16.45	114	LR	LR	00 20 53.3	
	comp=Z,104nm,20.6s,baz=268,slow=27						
HNR	Honiara	24.27	281	LR	LR	00 26 18.1	
	comp=Z,159nm,20.1s,baz=360,slow=32						
WRA	Warramunga Arr	47.55	257	P	P	00 21 58.8	-0.9
	3.7nm,0.8s,baz=90,slow=7.9,SNR=21						
WRA				LR	LR	00 38 21.9	
	comp=Z,56nm,21.9s,baz=80,slow=32						
ASAR	Alice Springs	47.90	252	P	P	00 22 03.0	+0.6
	4.7nm,0.8s,baz=83,slow=8.0,SNR=45						
NVAR	Mina Array Bea	75.78	43	P	P	00 25 09.8	-0.1
	0.5nm,0.7s,baz=217,slow=7.4,SNR=5.1						
TXAR	Lajitas Array	82.49	57	P	P	00 25 48.3	+1.5
	0.6nm,0.9s,baz=224,slow=3.8,SNR=3.8						
PDAR	Pinedale Array	83.71	43	P	P	00 25 53.4	+0.5
	1.0nm,0.8s,baz=230,slow=2.1,SNR=8.9						
BRTR	Keskin Array B	144.43	319	PKP	PKPdf	00 32 59.2	-1.4
	2.0nm,0.9s,baz=64,slow=2.9,SNR=11						
GERES	GERESS Array B	145.50	349	PKPbc	PKPbc	00 33 01.7	-0.5
	0.2nm,0.3s,baz=23,slow=5.3,SNR=2.5						

IDC 04 00:26:51.2±6.5, **819S**×**11642E**, **h0**km, **mb3.0**/3, **mb1 3.3**/3, **mb1mx3.1**/17, **mbtmp3.1**/3, **MS3.9**/1, **Ms1 3.9**/1, **ms1mx2.9**/12, **Error ellipse: s-maj=301.5km s-min=28.9km az=57.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.91	126	P	P	00 31 35.8	+0.4
	0.6nm,1.0s,baz=302,slow=12,SNR=5.0						
ASAR	Alice Springs	22.75	135	P	P	00 31 54.9	-0.2
	0.5nm,1.0s,baz=313,slow=8.7,SNR=6.0						
NWAO	Narrogin (SRO)	24.62	178	LR	LR	00 41 19.7	
	comp=Z,265nm,21.3s,baz=200,slow=35						
SONM	Songino Array	56.48	352	P	P	00 36 35.1	+0.2
	0.4nm,0.6s,baz=176,slow=8.2,SNR=4.1						

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*NEIC **04** 00:35:38.4, 1584N×9235W, h259km, mb4.4/1, MD4.5(MEX), After MEX.*
MEX 04 00:35:38.7±1.2, **1582N**×**9235W**, **h256**km±15km, **MD4.5**, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	Comitan	0.50	24	iP	Pn	00 36 10.5	-1.8
CCIG				iS	S	00 36 36.6	-2.3
SCX	San Cristobal	0.95	343	iP	Pn	00 36 13.5	-0.6
SCX				iS	S	00 36 41.5	-0.6
CMIG	Matias Romero	2.74	298	iP	Pn	00 36 27.1	-1.7
CMIG				iS	S	00 37 05.0	-3.5
HUIG	Huatulco	3.62	270	iP	Pn	00 36 36.8	-1.6
HUIG				iS	S	00 37 23.6	-2.1
OXX	Oaxaca	4.38	287	iP	Pn	00 36 48.0	+0.8
VHO	Vista Hermosa	4.39	287	iP	Pn	00 36 47.8	+0.5
VHO				iS	S	00 37 39.0	-2.9
UTMO	Huajuapan	5.59	292	iP	Pn	00 37 00.5	-1.5
UTMO				iS	S	00 38 07.0	-1.5
TEIG	Tepich	5.85	41	ePn	Pn	00 36 59.5	-5.6
	22nm,0.4s						
PPM	Popocatepetl	6.80	299	iP	Pn	00 37 18.9	+1.9
PPM				iS	S	00 38 34.4	-1.5
IIO	Organos	7.14	303	iP	Pn	00 37 23.2	+2.1

IDC 04 00:40:51.3±7.1, **602S**×**12857E**, **h280**km±75km, **mb2.7**/1, **mb1 3.0**/4, **mb1mx2.8**/15, **mbtmp2.8**/4, **Error ellipse: s-maj=92.8km s-min=23.6km az=55.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	6.39	229	P	Pn	00 42 25.0	0.0
	14nm,0.3s,baz=334,slow=18,SNR=14						
BATI				S	S	00 43 32.0	-8.3
	11nm,0.3s,baz=304,slow=16,SNR=8.3						
FITZ	Fitzroy Crossi	12.35	193	P	Pn	00 43 37.1	-1.4
	0.1nm,0.3s,baz=20,slow=15,SNR=6.5						
WRA	Warramunga Arr	14.94	158	P	Pn	00 44 09.9	+0.2
	0.3nm,0.3s,baz=338,slow=13,SNR=49						
WRA				S	S	00 46 50.0	-2.8
	0.1nm,0.3s,baz=338,slow=20,SNR=3.0						
ASAR	Alice Springs	18.28	164	P	P	00 44 45.9	+0.7
	0.2nm,0.3s,baz=344,slow=12,SNR=9.1						
MKAR	Makanchi Array	66.63	327	P	P	00 51 12.0	0.0
	0.3nm,0.9s,baz=122,slow=8.2,SNR=4.7						

IDC 04 00:42:19.2±2.2, **426S**×**13050E**, **h0**km, **mb3.5**/1, **mb1 3.7**/4, **mb1mx3.5**/15, **mbtmp3.5**/4, **ML3.4**/3, **Error ellipse: s-maj=94.1km s-min=28.0km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.56	199	Pn	Pn	00 45 46.9	+0.3
	0.1nm,0.3s,baz=27,slow=14,SNR=2.7						
WRA	Warramunga Arr	16.03	167	Pn	Pn	00 46 08.3	+2.1
	0.1nm,0.3s,baz=347,slow=11,SNR=5.1						
ASAR	Alice Springs	19.57	171	P	Pn	00 46 47.9	-2.2
	0.2nm,0.3s,baz=350,slow=10,SNR=7.0						
MKAR	Makanchi Array	66.23	326	P	P	00 53 09.2	+0.1
	0.1nm,0.4s,baz=116,slow=7.4,SNR=6.3						

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*CSEM **04** 00:42:35.8±0.1, 4007N×3865E, h8km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.9km az=122.0*
*ISK **04** 00:42:35.4, 4011N×3863E, h7km, MD3.2*
*ISCJB **04** 00:42:36.2±1.0, 4008N±003×3861E±006, h1km±9km, Error ellipse: s-maj=7.9km s-min=4.6km az=27.4*
*DDA **04** 00:42:36.5, 4004N×3864E, h7km±3km, Md3.0*
ISC 04 00:42:37.7±0.7, **4009N**±004×**3866E**±005, **h14**km±7km, **n14**, σ**1.11**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KELT	Kelkit	0.46	83	iP	Pg	00 42 46.3	-0.6
KELT				iS	Sg	00 42 53.4	+0.4
GUMT	Gumushane	0.73	60	PG	Pg	00 42 51.0	-0.9
GUMT				SG	Sg	00 43 00.8	-0.6
GRSN	GIRESUNGRSN	0.88	340	iP	Pg	00 42 54.5	-0.3
GRSN				iS	Sg	00 43 08.0	+1.7
EZC	Erzincan	0.95	111	PG	Pg	00 42 48.4	-7.8
MACK	Trabzon	1.20	45	iP	Pn	00 43 00.3	+0.3
MACK				iS	Sb	00 43 17.8	+2.3
KTUT	Trabzon	1.23	43	PN	Pn	00 42 58.6	-1.9
SVSK	Karacayir	1.29	263	PN	Pn	00 42 59.6	-1.7
SVSK				SN	Sn	00 43 18.3	0.0
PTK	Pertek	1.33	154	PN	Pn	00 43 01.2	-0.6
ELZG	Elazig	1.61	171	iP	Pn	00 43 05.2	-0.6
ELZG				iS	Sn	00 43 28.8	+2.4
MYA	Malataya	1.77	186	PN	Pn	00 43 07.4	-0.6
MALT	Malatya	1.79	186	PN	Pn	00 43 07.7	-0.4
BNN	Bunyan	2.50	241	ePN	Pn	00 43 17.7	-0.3
BCA	Borcka	2.62	58	ePN	Pn	00 43 20.1	+0.5
GZT	Gaziantep	2.87	198	iP	Pn	00 43 23.4	+0.4
GZT				iS	Sg	00 44 11.9	+2.1

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*ISK **04** 00:57:20.8, 3546N×2740E, h39km, MD3.4*
*CSEM **04** 00:57:21.2±0.2, 3566N×2753E, h8km, MD3.4, Error ellipse: s-maj=5.2km s-min=2.3km az=148.0*
*ATH **04** 00:57:22.4, 3564N×2761E, h87km±5km*
*ISCJB **04** 00:57:23.1±0.9, 3562N±007×2757E±006, h84km±13km, Error ellipse: s-maj=12.3km s-min=6.7km az=154.6*
ISC 04 00:57:23.9±0.9, **3561N**±007×**2758E**±006, **h79**km±14km, **n20**, σ**0.75**/27, **2C**, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.75	36	eP	Pn	00 57 39.5	-0.5
ARG				eS	Sn	00 57 52.1	+0.1
NISR	Nisiros	1.06	340	eP	Pn	00 57 42.8	-0.8
DAT	Datca	1.11	0	PN	Pn	00 57 43.3	-1.0
DAT				SN	Sn	00 57 58.7	-0.8
DALT	Dalyan (Mudla)	1.44	36	PN	Pn	00 57 48.5	+0.1
DALT				SN	Sn	00 58 08.4	+1.6
BDRM	Kayabasi	1.45	356	iP	Pn	00 57 47.7	-0.8
BDRM				iS	Sn	00 58 09.9	+2.7
BODT	Bodrum	1.46	352	PN	Pn	00 57 47.7	-1.0
FETY	Fethiye	1.59	50	PN	Pn	00 57 49.9	-0.5
YER	Yerkesik	1.62	20	PN	Pn	00 57 50.6	-0.2
NPS	Neapolis	1.64	258	eP	Pn	00 57 50.6	-0.4
NPS				eS	Sn	00 58 11.9	+0.4
MLSB	Milas	1.69	5	ePN	Pn	00 57 51.0	-0.6
XRY	Khrisi	1.71	245	eP	Pn	00 57 52.8	+0.9
SMG	Samos	2.17	344	⇑iP	Pn	00 57 58.5	+0.4
APE	Apeiranthos	2.20	312	⇑iP	Pn	00 57 58.0	-0.4
APE				eS	Sn	00 58 25.2	+0.4
ELL	Elmali	2.20	58	ePN	Pn	00 57 58.7	+0.3
GOLH	Golhisar	2.28	44	iP	Pn	00 58 00.0	+0.5
GOLH				iS	Sn	00 58 31.2	+4.5
VAM	Vamos	2.76	267	eP	Pn	00 58 06.0	0.0
BLCB	Balcova	2.80	351	ePN	Pn	00 58 06.4	-0.1
AKS	Akhisar	3.27	3	ePN	Pn	00 58 13.2	+0.4
VLI	Veliai	3.91	288	eP	Pn	00 58 22.1	+0.5
VLI	Veliai	3.91	288	eP	Pn	00 58 21.9	+0.3

IDC 04 01:31:09.2±5.1, **1270S**×**17736W**, **h0**km, **mb3.9**/3, **mb1 4.2**/3, **mb1mx3.8**/14, **mbtmp3.9**/3, **Error ellipse: s-maj=450.8km s-min=33.1km az=151.0, North of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.78	255	P	P	01 39 40.9	0.0
	2.4nm,1.0s,baz=90,slow=8.0,SNR=9.1						
ASAR	Alice Springs	47.37	250	P	P	01 39 45.3	-0.1
	1.6nm,0.8s,baz=85,slow=8.2,SNR=9.7						
PDAR	Pinedale Array	82.89	43	P	P	01 43 36.4	+0.5
	0.6nm,0.9s,baz=204,slow=3.3,SNR=4.5						
BRTR	Keskin Array B	141.64	320	PKP	PKPdf	01 50 41.1	-1.8
	0.9nm,1.0s,baz=56,slow=3.6,SNR=4.2						

IDC 04 01:37:49.8±6.5, **1332S**×**17693W**, **h0**km, **mb3.7**/3, **mb1 4.1**/3, **mb1mx3.7**/14, **mbtmp3.7**/3, **Error ellipse: s-maj=587.4km s-min=33.0km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.03	255	P	P	01 46 23.5	+0.1
	1.0nm,0.9s,baz=88,slow=7.6,SNR=5.7						
ASAR	Alice Springs	47.55	250	P	P	01 46 27.2	-0.1
	0.9nm,0.6s,baz=81,slow=8.0,SNR=16						
PDAR	Pinedale Array	83.05	43	P	P	01 50 17.7	+0.4
	0.4nm,0.7s,baz=234,slow=5.1,SNR=4.9						
BRTR	Keskin Array B	142.38	320	PKP	PKPdf	01 57 24.3	-0.5
	0.9nm,0.9s,baz=60,slow=3.4,SNR=4.1						

IDC 04 01:57:10.7±2.2, **107S**×**12727E**, **h0**km, **mb3.2**/2, **mb1 3.3**/3, **mb1mx3.2**/16, **mbtmp3.1**/3, **ML3.2**/1, **Error ellipse: s-maj=196.8km s-min=26.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.00	160	P	Pn	02 01 44.9	-1.7
	0.1nm,0.3s,baz=342,slow=12,SNR=7.9						
ASAR	Alice Springs	23.37	165	P	P	02 02 21.2	0.0
	0.3nm,0.5s,baz=340,slow=9.8,SNR=4.4						
MKAR	Makanchi Array	61.80	327	P	P	02 07 31.5	+0.1
	0.1nm,0.3s,baz=119,slow=7.9,SNR=7.3						

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*IDC **04** 02:04:53.7±0.6, 659S×13050E, h0km, mb4.5/12, mb1 4.5/15, mb1mx4.5/18, mbtmp4.5/15, ML4.3/3, MS3.7/4, Ms1 3.7/4, ms1mx3.3/20, Error ellipse: s-maj=27.4km s-min=13.3km az=75.0*
*ISCJB **04** 02:04:55.6±0.3, 669S±004×13076E±006, h33km, mb4.6/31, MS3.8/5, Error ellipse: s-maj=8.4km s-min=6.0km az=173.7*
*BJI **04** 02:04:56.3, 666S×13105E, h47km, mB5.0, mb4.6, Ms4.7*
*NEIC **04** 02:04:58.3±2.6, 664S×13055E, h32km±19km, mb4.7/22, Error ellipse: s-maj=9.3km s-min=6.1km az=57.0*
ISC 04 02:04:57.9±0.3, **667S**±004×**13079E**±006, **h35**km, **n70**, σ**1.07**/69, **mb4.6**/31, **MS3.8**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	7.88	243	Pn	Pn	02 06 54.5	+4.5
	8.2nm,0.3s,baz=96,slow=9.4,SNR=8.3						
BATI				Sn	Sn	02 08 18.9	+0.9
	8.5nm,0.3s,baz=52,slow=6.9,SNR=2.3						
FITZ	Fitzroy Crossi	12.42	203	eP	Pn	02 07 51.4	-0.9
	27nm,0.4s						
FITZ				eS	Sn	02 10 01.4	-8.1
FITZ	Fitzroy Crossi	12.42	203	Pn	Pn	02 07 51.7	-0.6
	2.7nm,0.3s,baz=30,slow=12,SNR=60						
FITZ				Sn	Sn	02 10 02.0	-7.5
	5.7nm,0.3s,baz=75,slow=24,SNR=9.1						
WRA	Warramunga Arr	13.63	166	Pn	Pn	02 08 06.9	-1.9
	1.8nm,0.3s,baz=340,slow=14,SNR=80						
WRA				Sn	Sn	02 10 31.2	-8.0
	4.5nm,0.3s,baz=350,slow=22,SNR=12						
WB2	Warramunga Arr	13.63	166	eP	Pn	02 08 07.3	-1.6
WB2				eS	Sn	02 10 29.2	-10
COEN	Coen	14.16	122	ePn	Pn	02 08 15.5	-0.7
	5.4nm,0.6s						
COEN				eSn	Sn	02 10 42.2	-10
PMG	Port Moresby	16.43	101	Pn	Pn	02 08 50.3	+4.3
	0.8nm,0.3s,baz=153,slow=3.3,SNR=3.9						
ASAR	Alice Springs	17.16	170	P	Pn	02 08 55.1	+0.1
	2.8nm,0.3s,baz=343,slow=8.5,SNR=108						
ASAR				S	S	02 11 57.2	-16
	0.9nm,0.3s,baz=5.9,slow=24,SNR=7.6						
MBWA	Marble Bar	17.94	216	eP	Pn	02 09 03.1	-1.6
	30nm,1.0s						
KKM	Kota Kinabalu	19.27	311	eP	Pn	02 09 20.2	-0.7
CTA	Charters Tower	20.07	133	eP	P	02 09 32.7	+4.2
	8.1nm,0.6s						
CTA	Charters Tower	20.07	133	P	P	02 09 32.7	+4.2
	13nm,0.7s,baz=303,slow=12,SNR=11						
CTA				LR	LR	02 17 46.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,131nm,20.3s,MS3.3,baz=231,slow=38						
CTAO	**Charters Tower**	**20.07**	**133**	eP	**P**	**02 09 32.3**	**+3.8**
	11nm,0.6s						
KSM	**Kuching**	**21.99**	**291**	eP	**P**	**02 09 48.0**	**-1.2**
FORT	**Forrest**	**24.12**	**186**	eP	**P**	**02 10 12.4**	**+1.9**
	25nm,0.6s,mb4.8						
FORT	**Forrest**	**24.12**	**186**	eP	**P**	**02 10 12.3**	**+1.9**
	5.1nm,0.8s,mb4.0						
FORT				epP		02 10 21.0	
STKA	**Stephens Creek**	**27.03**	**159**	eP	**P**	**02 10 39.1**	**+2.2**
	4.5nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**27.03**	**159**	P	**P**	**02 10 39.1**	**+2.2**
	2.0nm,0.5s,mb3.9,baz=2.5,slow=12,SNR=4.2						
HNR	**Honiara**	**28.99**	**97**	LR	LR	02 21 27.8	
	comp=Z,145nm,20.4s,MS3.6,baz=359,slow=34						
KULM	**Kulim**	**32.35**	**291**	eP	**P**	**02 11 23.2**	**-1.1**
PSI	**Prapat**	**33.18**	**285**	P	**P**	**02 11 29.9**	**-1.6**
PSI				LR	LR	02 25 23.3	
PSI	**Prapat**	**33.18**	**285**	P	**P**	**02 11 29.9**	**-1.6**
	4.0nm,0.8s,mb4.4,baz=130,slow=7.9,SNR=2.6						
PSI				LR	LR	02 25 23.3	
	comp=Z,101nm,21.2s,MS3.5,baz=139,slow=37						
JOW	**Kunigami**	**33.40**	**356**	P	**P**	**02 11 34.5**	**+1.2**
	20nm,0.5s,mb5.3,baz=206,slow=25,SNR=5.8						
CHTO	**Chiang Mai**	**40.34**	**309**	eP	**P**	**02 12 31.8**	**-0.6**
	7.3nm,0.8s,mb4.5						
MJAR	**Matsushiro Arr**	**43.55**	**9**	P	**P**	**02 12 57.2**	**-1.1**
	2.0nm,0.8s,mb3.9,baz=187,slow=8.7,SNR=11						
MAJO	**Matsushiro**	**43.55**	**9**	eP	**P**	**02 12 57.2**	**-1.2**
	4.4nm,0.7s,mb4.3						
MAT	**Matsushiro**	**43.55**	**9**	P	**P**	**02 12 56.8**	**-1.5**
KSRS	**Korea Array**	**43.98**	**357**	P	**P**	**02 13 02.2**	**+0.4**
	1.5nm,0.6s,mb3.9,baz=173,slow=9.6,SNR=6.2						
LZH	**Lanzhou**	**49.49**	**331**	eP	**P**	**02 13 46.5**	**+1.5**
LZH				AMB	AMB		
	comp=Z,23nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,87nm,4.1s						
LZH	**Lanzhou**	**49.49**	**331**	eP	**P**	**02 13 46.5**	**+1.5**
	comp=Z,23nm,1.3s,mb5.0						
LZH				pP	pP	02 13 50.5	-5.0
LZH				sP	sP	02 13 52.5	-7.1
HHC	**Hu-ho-hao-te**	**50.48**	**341**	eP	**P**	**02 13 52.3**	**-0.2**
HHC				AP	pP	02 14 00.9	-2.0
HHC				XP	sP	02 14 06.3	-0.8
HHC				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,119nm,4.9s						
HHC				LR	LR		
	comp=N,214nm,16.6s,MS4.6						
HHC				LR	LR		
	comp=E,478nm,19.0s,MS4.6						
ASAJ	**Asahikawa**	**51.67**	**11**	P	**P**	**02 14 01.6**	**+0.3**
	comp=E,5.0nm,0.8s,mb4.5,baz=169,slow=10,SNR=3.3						
LSA	**Lhasa**	**52.51**	**316**	eP	**P**	**02 14 07.5**	**-0.4**
	comp=E,6.1nm,0.6s,mb4.7						
ODAN	**Odare**	**53.64**	**310**	eP	**P**	**02 14 15.7**	**-0.5**
	comp=E,24nm,0.8s,mb5.2						
TAPN	**Taplejung**	**53.66**	**311**	eP	**P**	**02 14 15.9**	**-0.5**
	comp=E,22nm,0.7s,mb5.2						
GTA	**Gaotai**	**54.07**	**330**	eP	**P**	**02 14 19.5**	**+0.4**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.4						
JIRN	**Jiri**	**54.97**	**310**	eP	**P**	**02 14 26.0**	**+0.1**
GKN	**Gorkha**	**56.32**	**310**	eP	**P**	**02 14 35.0**	**-0.6**
	comp=Z,33nm,0.8s,mb5.4						
ULN	**Ulaanbaatar**	**58.20**	**341**	eP	**P**	**02 14 49.2**	**+0.7**
	comp=Z,6.3nm,0.7s,mb4.8						
SONM	**Songino Array**	**58.39**	**341**	P	**P**	**02 14 50.5**	**+0.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=160,slow=6.5,SNR=12						
WMQ	**Urumqi**	**63.55**	**326**	eP	**P**	**02 15 25.5**	**+0.6**
MKAR	**Makanchi Array**	**68.39**	**326**	P	**P**	**02 15 56.2**	**+0.3**
	comp=Z,22nm,0.7s,mb5.3,baz=123,slow=7.9,SNR=270						
YAK	**Yakutsk**	**68.51**	**359**	eP	**P**	**02 15 55.7**	**-0.7**
	comp=Z,22nm,0.6s,mb5.3						
KZA	**Kyzart**	**70.04**	**319**	P	**P**	**02 16 08.2**	**+1.8**
	SNR=5.9						
TKM2	**Tokmak 2**	**70.24**	**320**	eP	**P**	**02 16 07.8**	**+0.3**
	comp=Z,5.1nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**70.24**	**320**	P	**P**	**02 16 07.9**	**+0.4**
	SNR=6.7						
UCH	**Uchtor**	**70.59**	**319**	eP	**P**	**02 16 10.7**	**+1.0**
	comp=Z,7.0nm,0.8s,mb4.6						
UCH	**Uchtor**	**70.59**	**319**	P	**P**	**02 16 11.5**	**+1.8**
	SNR=10						
AAK	**Ala-Archa**	**70.80**	**319**	eP	**P**	**02 16 10.8**	**-0.2**
	comp=Z,7.4nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**70.80**	**319**	P	**P**	**02 16 11.8**	**+0.9**
	SNR=6.9						
AML	**Almayashu**	**71.08**	**319**	eP	**P**	**02 16 13.6**	**+0.9**
	comp=Z,16nm,1.1s,mb4.9						
AML	**Almayashu**	**71.08**	**319**	P	**P**	**02 16 14.0**	**+1.3**
	SNR=10						
USP	**Ospenovka**	**71.11**	**320**	P	**P**	**02 16 13.3**	**+0.5**
	SNR=12						
KBL	**Kabul**	**71.16**	**310**	eP	**P**	**02 16 12.9**	**-0.4**
EKS2	**Erkin-Say**	**71.28**	**319**	eP	**P**	**02 16 14.5**	**+0.7**
	comp=Z,5.8nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**71.28**	**319**	P	**P**	**02 16 15.2**	**+1.3**
	SNR=8.4						
ZAA0	**Zalesovo Array**	**71.64**	**333**	eP	**P**	**02 16 14.7**	**-1.1**
ZALV	**Zalesovo Beam**	**71.64**	**333**	P	**P**	**02 16 14.8**	**-1.0**
	comp=Z,5.9nm,0.8s,mb4.6,baz=115,slow=4.7,SNR=30						
KURK	**Kurchatov**	**72.65**	**328**	eP	**P**	**02 16 21.6**	**-0.3**
	comp=Z,8.9nm,0.8s,mb4.8						
VNDA	**Vanda**	**72.67**	**173**	P	**P**	**02 16 23.4**	**+1.7**
	comp=Z,1.2nm,0.6s,mb4.0,baz=326,slow=6.4,SNR=6.2						
MAW	**Mawson**	**75.54**	**202**	P	**P**	**02 16 40.1**	**+1.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=100,slow=4.9,SNR=5.5						
BRVK	**Borovoye**	**78.28**	**328**	eP	**P**	**02 16 54.0**	**-0.2**
	comp=Z,5.7nm,0.8s,mb4.5						
QSPA	**South Pole Qui**	**83.30**	**180**	eP	**P**	**02 17 22.0**	**+1.5**
	comp=Z,4.4nm,0.6s,mb4.7						
KDAK	**Kodiak Island**	**88.53**	**31**	LR	LR	02 55 35.9	
	comp=Z,57nm,18.1s,MS4.0,baz=198,slow=34						
TOA0	**Torodi Ar. Sit**	**129.52**	**281**	ePKPdf	PKPdf	02 24 04.4	+0.3
TORD	**Torodi Ar. Bea**	**129.52**	**281**	PKP	PKPdf	02 24 03.9	-0.2
	comp=Z,1.9nm,0.7s,baz=87,slow=2.0,SNR=19						
ATAH	**Atahualpa**	**147.87**	**114**	PKPbc	PKPbc	02 24 43.7	+3.2
	comp=Z,2.2nm,0.6s,baz=176,slow=5.2,SNR=4.5						
LPAZ	**La Paz**	**150.48**	**141**	ePKPbc	PKPbc	02 24 49.1	+2.2
LPAZ	**La Paz**	**150.48**	**141**	PKPbc	PKPbc	02 24 49.5	+2.6
	comp=Z,3.9nm,0.7s,baz=333,slow=1.9,SNR=10						
SIV	**San Ignacio**	**154.60**	**153**	PKPbc	PKPbc	02 24 57.6	+1.5
	comp=Z,0.3nm,0.4s,baz=198,slow=13,SNR=2.1						
SIV				PKPab	PKPab	02 25 12.6	+2.0
	comp=Z,0.9nm,0.5s,baz=240,slow=8.2,SNR=5.8						

*ISCJB **04** 02:07:45.2±0.9, 24.29S±0.05×67.1W±0.1, h162^{km}±15^{km}, mb3.5/2, Error ellipse: s-maj=16.3km s-min=7.9km az=0.6*
*IDC **04** 02:07:45.6±1.7, 24.28S×66.91W, h148^{km}±20^{km}, mb3.4/1, mb1 3.3/3, mb1mx3.1/15, mbtmp3.3/3, Error ellipse: s-maj=45.1km s-min=14.6km az=96.0*
*NEIC **04** 02:07:45.9±0.9, 24.32S×66.95W, h154^{km}±11^{km}, mb3.6/1, Error ellipse: s-maj=24.1km s-min=10.2km az=108.0*
ISC 04 02:07:46.0±0.8**, 24.29S**±0.05×**67.1W**±0.1**, h154**^{km}±14^{km}**, n12, σ0.94**/16**, mb3.5**/2**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.02**	**287**	⇓eP	**Pn**	**02 08 34.6**	**+0.9**
CEN1				iS	**Sn**	**02 09 09.7**	**-0.9**
CPN1	**Cerro Paranal**	**3.07**	**263**	⇑eP	**Pn**	**02 08 35.1**	**+0.7**
CPN1				iS	**Sn**	**02 09 10.7**	**-1.2**
ANCH	**Antofagasta**	**3.13**	**280**	⇑eP	**Pn**	**02 08 37.0**	**+1.9**
ANCH				iS	**Sn**	**02 09 13.0**	**-0.2**
LCO	**Las Campanas**	**5.73**	**214**	ePn	**Pn**	**02 09 08.3**	**-0.8**
	13nm,0.4s						
CFAA	**Coronel Fontan**	**7.37**	**188**	P	**Pn**	**02 09 31.9**	**+1.0**
	0.0nm,0.3s,baz=6.9,slow=14,SNR=4.8						
CFAA				S	**Sn**	**02 10 52.9**	**-0.4**
	0.1nm,0.3s,baz=258,slow=23,SNR=8.2						
LPAZ	**La Paz**	**8.02**	**353**	P	**Pn**	**02 09 41.1**	**+1.4**
	0.5nm,0.3s,baz=186,slow=12,SNR=13						
LPAZ				S	**Sn**	**02 11 08.4**	**-0.8**
	0.1nm,0.3s,baz=329,slow=23,SNR=3.3						
SIV	**San Ignacio**	**9.98**	**35**	P	**Pn**	**02 10 05.1**	**-0.7**
	0.8nm,0.3s,baz=218,slow=14,SNR=17						
SIV				S	**Sn**	**02 11 46.8**	**-10**
	0.1nm,0.3s,baz=234,slow=23,SNR=1.9						
TOA0	**Torodi Ar. Sit**	**76.72**	**69**	eP	**P**	**02 19 20.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**76.72**	**69**	P	**P**	**02 19 19.8**	**-0.9**
	0.9nm,0.8s,mb3.5,baz=260,slow=5.9,SNR=17						
HLID	**Hailey**	**80.30**	**327**	eP	**P**	**02 19 40.5**	**+0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	1.0nm,0.8s,mb3.5						
WRA	**Warramunga Arr**	**131.35**	**207**	PKP	PKPdf	02 26 40.6	-0.1
	0.3nm,0.9s,baz=158,slow=1.7,SNR=5.5						
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPbc	02 27 10.2	+0.5
	0.2nm,0.6s,baz=308,slow=2.5,SNR=3.3						

*ISCJB **04** 02:22:13.9±3.3, 58.2S±0.1×25.7W±0.3, h33^{km}±31^{km}, mb4.5/11, Error ellipse: s-maj=23.4km s-min=16.2km az=164.5*
*IDC **04** 02:22:16.9±6.2, 58.23S×25.77W, h44^{km}±55^{km}, mb4.0/6, mb1 4.0/7, mb1mx3.8/14, mbtmp3.9/7, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx3.0/19, Error ellipse: s-maj=34.6km s-min=21.0km az=62.0*
*NEIC **04** 02:22:16.9±2.2, 58.18S×25.70W, h47^{km}±19^{km}, mb4.3/3, Error ellipse: s-maj=15.2km s-min=9.5km az=55.0*
ISC 04 02:22:16.9±2.8**, 58.2S**±0.1×**25.7W**±0.3**, h43**^{km}±27^{km}**, n35, σ0.49**/17**, mb4.5**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.68**	**159**	e	**Pn**	**02 25 41.2**	**-0.1**
VNA3				e		02 25 45.9	
VNA3				e		02 25 48.8	
VNA3				e		02 25 54.1	
VNA3				e		02 25 57.7	
VNA3				e		02 26 06.1	
VNA2	**Neumayer--Watz**	**14.88**	**156**	e	**Pn**	**02 25 43.6**	**-0.3**
	baz=322,slow=9.3						
VNA2				e		02 25 48.0	
VNA2				e		02 25 49.9	
VNA2				e		02 25 54.8	
VNA2				e		02 25 58.4	
VNA2				e		02 26 08.1	
SNAA	**Sanae**	**16.43**	**154**	P	**Pn**	**02 26 04.2**	**+0.3**
	0.4nm,0.3s,baz=325,slow=17,SNR=17						
SNAA				S	**S**	**02 28 56.0**	**-19**
	0.1nm,0.3s,baz=12,slow=21,SNR=5.6						
USHA	**Ushuaia**	**23.53**	**260**	LR	LR	02 34 33.4	
	comp=Z,119nm,18.6s,baz=58,slow=31						
QSPA	**South Pole Qui**	**32.04**	**180**	eP	**P**	**02 28 39.7**	**+1.1**
	3.3nm,0.5s,mb4.4						
PLCA	**Paso Flores**	**33.22**	**282**	eP	**P**	**02 28 49.4**	**+0.1**
	5.3nm,1.0s,mb4.4						
VNDA	**Vanda**	**44.45**	**182**	P	**P**	**02 30 22.2**	**-0.5**
	1.2nm,0.8s,mb3.7,baz=233,slow=2.8,SNR=5.8						
SIV	**San Ignacio**	**49.66**	**313**	P	**P**	**02 31 03.3**	**-0.8**
	0.8nm,0.5s,mb4.0,baz=182,slow=9.6,SNR=11						
LPAZ	**La Paz**	**52.29**	**305**	eP	**P**	**02 31 24.1**	**+0.3**
	1.9nm,0.7s,mb4.1						
LPAZ	**La Paz**	**52.29**	**305**	P	**P**	**02 31 24.7**	**+0.9**
	1.7nm,0.7s,mb4.1,baz=73,slow=1.2,SNR=5.9						
LIC	**Lamto**	**66.35**	**23**	eP	**P**	**02 33 01.0**	**+0.2**
	35nm,1.1s,mb5.3						
KIC	**Kosan Boka**	**66.54**	**23**	eP	**P**	**02 33 02.0**	**-0.1**
	36nm,0.9s,mb5.4						
TIC	**Toumodi**	**66.76**	**22**	eP	**P**	**02 33 03.3**	**-0.1**
	19nm,0.7s,mb5.2						
TOA0	**Torodi Ar. Sit**	**74.56**	**28**	eP	**P**	**02 33 50.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**74.56**	**28**	P	**P**	**02 33 51.2**	**+0.4**
	1.3nm,0.3s,mb4.3,baz=197,slow=6.1,SNR=75						
STKA	**Stephens Creek**	**89.63**	**169**	P	**P**	**02 35 09.9**	**+0.2**
	0.8nm,0.5s,mb4.3,baz=108,slow=3.2,SNR=4.7						
ASAR	**Alice Springs**	**96.68**	**161**	P	**P**	**02 35 41.5**	**-0.8**
	0.7nm,0.8s,mb4.2,baz=195,slow=3.9,SNR=6.9						
PDAR	**Pinedale Array**	**122.17**	**300**	PKP	PKPdf	02 41 05.0	-0.7
	0.5nm,0.5s,baz=113,slow=4.5,SNR=8.5						
NVAR	**Mina Array Bea**	**122.97**	**291**	PKP	PKPdf	02 41 08.5	+1.1
NVAR	**Mina Array Bea**	**122.97**	**291**	PKP	PKPdf	02 41 08.5	+1.1
	0.6nm,0.6s,baz=131,slow=3.6,SNR=6.7						
LOHW	**Long Hollow**	**123.31**	**300**	ePKPdf	PKPdf	02 41 08.0	+0.1
TPAW	**Teton Pass**	**123.37**	**300**	ePKPdf	PKPdf	02 41 08.5	+0.5
MOOW	**Moose Ponds**	**123.47**	**300**	ePKPdf	PKPdf	02 41 08.2	0.0
FINES	**FINESS Array B**	**125.91**	**28**	PKP	PKPdf	02 41 11.8	-0.5
FINES	**FINESS Array B**	**125.91**	**28**	PKP	PKPdf	02 41 11.8	-0.5
	0.9nm,0.6s,baz=186,slow=1.3,SNR=9.1						
FCC	**Fort Churchill**	**128.50**	**322**	ePKPdf	PKPdf	02 41 16.7	-0.6
ARCES	**ARCESS Array B**	**132.64**	**22**	PKP	PKPdf	02 41 23.9	-1.0
	8.7nm,1.1s,baz=232,slow=3.0,SNR=4.2						
MKAR	**Makanchi Array**	**136.77**	**73**	PKP	PKPdf	02 41 34.3	+1.0
	0.3nm,0.9s,baz=245,slow=1.4,SNR=4.0						
YKA	**Yellowknife Ar**	**138.31**	**316**	PKP	PKPdf	02 41 35.3	-0.3
YKA	**Yellowknife Ar**	**138.31**	**316**	PKP	PKPdf	02 41 35.3	-0.3
	0.8nm,0.3s,baz=132,slow=2.2,SNR=16						
ZALV	**Zalesovo Beam**	**142.55**	**66**	PKhKP		02 41 39.3	
	0.5nm,0.4s,baz=229,slow=4.0,SNR=4.7						
ZALV				PKP	PKPdf	02 41 44.3	+0.8
	0.3nm,0.4s,baz=304,slow=3.3,SNR=2.5						
INK	**Inuvik**	**147.98**	**318**	ePKPbc	PKPbc	02 41 55.3	-0.3
SONM	**Songino Array**	**149.99**	**89**	PKPbc	PKPbc	02 42 00.9	-0.4
	1.5nm,0.3s,baz=220,slow=3.4,SNR=23						
SONM				PKPab	PKPab	02 42 07.2	0.0
	0.3nm,0.5s,baz=212,slow=4.1,SNR=4.0						
COLA	**College**	**152.56**	**308**	ePKPbc	PKPbc	02 42 05.8	-0.9
MCK	**McKinley**	**152.74**	**306**	ePKPbc	PKPbc	02 42 07.3	+0.2

*IDC **04** 02:38:20.1±1.3, 6.63S×131.85E, h0^{km}, mb4.0/2, mb1 4.7/6, mb1mx4.3/13, mbtmp4.6/6, Error ellipse: s-maj=46.2km s-min=20.9km az=79.0*
*NEIC **04** 02:38:22.5±0.6, 6.81S×131.58E, h10^{km}, mb4.3/5, Error ellipse: s-maj=13.0km s-min=9.8km az=72.0*
*ISCJB **04** 02:38:23.9±0.7, 6.93S±0.07×131.65E±0.08, h33^{km}, mb4.0/6, Error ellipse: s-maj=12.1km s-min=9.0km az=162.0*
ISC 04 02:38:26.9±0.8**, 7.05S**±0.06×**131.65E**±0.09**, h35**^{km}**, n19, σ1.64**/25**, mb4.0**/6**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**8.50**	**248**	Pn	**Pn**	**02 40 30.1**	**+2.6**
	25nm,0.3s,baz=89,slow=4.4,SNR=32						
BATI				Sn	**Sn**	**02 41 56.5**	**-5.8**
	10nm,0.3s,baz=139,slow=7.9,SNR=3.7						
FITZ	**Fitzroy Crossi**	**12.45**	**208**	eP	**Pn**	**02 41 22.1**	**+0.4**
	47nm,0.4s						
FITZ				eS	**Sn**	**02 43 34.1**	**-5.2**
FITZ	**Fitzroy Crossi**	**12.45**	**208**	Pn	**Pn**	**02 41 23.6**	**+1.8**
	8.5nm,0.3s,baz=36,slow=12,SNR=201						
FITZ				Sn	**Sn**	**02 43 34.2**	**-5.1**
	5.2nm,0.3s,baz=231,slow=20,SNR=14						
WRA	**Warramunga Arr**	**13.08**	**169**	Pn	**Pn**	**02 41 31.0**	**+0.7**
	3.5nm,0.3s,baz=356,slow=13,SNR=108						
WRA				Sn	**Sn**	**02 43 52.6**	**-2.0**
	4.0nm,0.3s,baz=348,slow=23,SNR=10						
WB2	**Warramunga Arr**	**13.08**	**169**	eP	**Pn**	**02 41 30.7**	**+0.4**
WB2				eS	**Sn**	**02 43 51.3**	**-3.4**
COEN	**Coen**	**13.24**	**122**	ePn	**Pn**	**02 41 33.5**	**+0.9**
	3.9nm,0.6s						
PMG	**Port Moresby**	**15.52**	**100**	eP	**Pn**	**02 42 03.7**	**+0.4**
	32nm,1.0s						
PMG	**Port Moresby**	**15.52**	**100**	Pn	**Pn**	**02 42 03.4**	**+0.1**
	1.1nm,0.3s,baz=214,slow=6.1,SNR=3.4						
ASAR	**Alice Springs**	**16.66**	**173**	P	**Pn**	**02 42 18.6**	**+0.7**
	3.1nm,0.3s,baz=353,slow=11,SNR=121						
ASAR				S	**S**	**02 45 20.3**	**-12**
	0.9nm,0.3s,baz=355,slow=27,SNR=12						
MBWA	**Marble Bar**	**18.16**	**218**	ePn	**Pn**	**02 42 36.8**	**+0.4**
FORT	**Forrest**	**23.85**	**188**	eP	**P**	**02 43 39.6**	**+2.6**
	19nm,0.5s,mb4.8						
FORT	**Forrest**	**23.85**	**188**	eP	**P**	**02 43 39.1**	**+2.1**
	3.2nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**26.39**	**161**	eP	**P**	**02 44 03.1**	**+3.0**
	1.7nm,0.4s,mb3.9						
STKA	**Stephens Creek**	**26.39**	**161**	P	**P**	**02 44 02.8**	**+2.7**
	1.3nm,0.5s,mb3.7,baz=332,slow=9.3,SNR=4.1						
KLBR	**Kellerberrin**	**27.66**	**206**	eP	**P**	**02 44 13.9**	**+2.4**
	22nm,1.2s,mb4.7						
SONM	**Songino Array**	**59.02**	**340**	P	**P**	**02 48 19.4**	**-3.7**
	0.2nm,0.5s,mb3.4,baz=134,slow=6.2,SNR=2.7						
MK31	**Makanchi Array**	**69.17**	**326**	eP	**P**	**02 49 27.9**	**-1.9**
MKAR	**Makanchi Array**	**69.17**	**326**	P	**P**	**02 49 27.1**	**-2.8**
	0.6nm,0.4s,mb3.9,baz=112,slow=7.9,SNR=13						
EKS2	**Erkin-Say**	**72.12**	**319**	eP	**P**	**02 49 47.1**	**-0.7**
	2.6nm,1.1s,mb4.1						

*NEIC **04** 02:47:21.7±0.4, 46.67N×155.62E, h10^{km}, mb4.3/17, Error ellipse: s-maj=12.2km s-min=5.6km az=155.0*
*ISCJB **04** 02:47:23.3±0.5, 46.71N±0.08×155.58E±0.07, h33^{km}, mb4.2/40, MS4.1/4, Error ellipse: s-maj=12.1km s-min=5.2km az=154.4*
*MOS **04** 02:47:24.9±1.3, 46.73N×155.48E, h50^{km}, mb4.3/18, Error ellipse: s-maj=10.3km s-min=8.8km az=78.8*
*BJI **04** 02:47:25.5, 47.43N×154.89E, h10^{km}, mB4.7, mb4.6, Ms4.4, Msz4.0*
*IDC **04** 02:47:26.4±3.8, 46.65N×155.47E, h42^{km}±36^{km}, mb3.8/18, mb1 4.0/20, mb1mx3.9/26, mbtmp3.8/20, ML3.8/2, MS3.8/2, Ms1 3.8/2, ms1mx3.0/38, Error ellipse: s-maj=26.0km s-min=15.3km az=169.0*
ISC 04 02:47:25.6±0.5**, 46.71N**±0.08×**155.55E**±0.07**, h35**^{km}**, (h6**^{km}±5.9^{km}**:pP-P), n95, σ1.06**/100**, mb4.2**/40**, MS4.1**/4**, 4C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.99**	**5**	ePN	**Pn**	**02 48 14.5**	**-10**
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
KUR	**Kuril'sk**	**5.56**	**257**	⇑iPN	**Pn**	**02 48 45.0**	**-0.8**
KUR				pmax	pmax		
	comp=N,70nm,0.7s						
KUR				pmax	pmax		
	comp=E,90nm,0.7s						
KUR				pmax	pmax		
	comp=Z,210nm,0.7s						
PET	**Petropavlovsk**	**6.63**	**16**	ePn	**Pn**	**02 48 55.5**	**-4.9**
PET				eSn	**Sn**	**02 50 04.7**	**-10**
PET	**Petropavlovsk**	**6.63**	**16**	ePN	**Pn**	**02 48 51.9**	**-8.5**
PET				pmax	pmax		
	comp=Z,31nm,0.8s						
YSS	**Yuzh-Sakhalins**	**8.78**	**276**	ePn	**Pn**	**02 49 30.8**	**+0.8**
YSS	**Yuzh-Sakhalins**	**8.78**	**276**	⇓ePN	**Pn**	**02 49 32.3**	**+2.3**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
ASAJ	**Asahikawa**	**9.48**	**259**	PN	**Pn**	**02 49 40.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.48**	**259**	P	**Pn**	**02 49 40.0**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=95,slow=18,SNR=7.5						
ERM	**Erimo**	**10.04**	**247**	ePn	**Pn**	**02 49 46.4**	**-0.8**
	comp=Z,35nm,0.7s						
ERM				eSn	**Sn**	**02 51 32.1**	**-6.5**
ERM	**Erimo**	**10.04**	**247**	ePN	**Pn**	**02 49 46.8**	**-0.4**
MA2	**Magadan**	**13.20**	**349**	ePN	**Pn**	**02 50 28.4**	**-1.9**
MA2				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KLR	**Kul'dur**	**16.12**	**288**	eP	**Pn**	**02 51 09.3**	**-0.1**
KLR				MLR	MLR		
	comp=Z,1μm,12.5s						
MAJO	**Matsushiro**	**16.44**	**238**	eP	**Pn**	**02 51 12.2**	**-1.3**
	comp=Z,11nm,0.7s						
MAJO	**Matsushiro**	**16.44**	**238**	eP	**Pn**	**02 51 12.2**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,11nm,0.7s						
MAT	**Matsushiro**	**16.44**	**238**	P	**Pn**	**02 51 12.2**	**-1.3**
MJAR	**Matsushiro Arr**	**16.44**	**238**	P	**Pn**	**02 51 12.3**	**-1.2**
MJAR				LR	LR	02 58 25.6	
MJAR	**Matsushiro Arr**	**16.44**	**238**	P	**Pn**	**02 51 12.3**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=30,slow=13,SNR=16						
MJAR				LR	LR	02 58 25.6	
	comp=Z,78nm,18.6s,baz=125,slow=40						
MDJ	**Mudanjiang**	**18.24**	**273**	P	**Pn**	**02 51 35.3**	**-0.5**
MDJ				AP	pP	02 51 38.4	-6.5
MDJ				XP	sP	02 51 39.9	-9.5
MDJ				S	**S**	**02 55 00.3**	**-2.2**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,41nm,4.1s						
CN2	**Changchun**	**21.33**	**273**	eP	**P**	**02 52 09.0**	**-0.4**
CN2				eXP	sP	02 52 15.0	-8.1
CN2				eS	**S**	**02 55 59.5**	**-4.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,15.0s,MS4.0						
CN2				LR	LR		
	comp=Z,500nm,16.0s,MS4.0						
BILL	**Bilibino**	**22.08**	**11**	eP	**P**	**02 52 19.1**	**+1.9**
	comp=Z,2.7nm,0.6s,mb3.9						
BILL	**Bilibino**	**22.08**	**11**	eP	**P**	**02 52 13.7**	**-3.5**
BILL				e		02 52 24.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
KSRS	**Korea Array**	**22.40**	**256**	P	**P**	**02 52 21.5**	**+0.6**
	comp=Z,4.9nm,0.8s,mb4.0,baz=60,slow=10,SNR=9.0						
TIXI	**Tiksi**	**28.00**	**342**	eP	**P**	**02 53 11.2**	**-1.4**
	comp=Z,1.9nm,0.6s,mb3.9						
TIXI	**Tiksi**	**28.00**	**342**	eP	**P**	**02 53 13.3**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
TTA	**Tatalina**	**31.34**	**41**	eP	**P**	**02 53 41.0**	**-1.3**
HHC	**Hu-ho-hao-te**	**31.97**	**276**	eP	**P**	**02 53 50.1**	**+2.0**
HHC				AP	pP	02 53 54.8	-3.4
HHC				XP	sP	02 53 57.5	-4.9
HHC				PP	PP	02 54 56.3	-4.2
HHC				PCP	PcP	02 56 38.8	+1.3
HHC				S	**S**	**02 58 59.4**	**+2.4**
HHC				XS	sS	02 59 07.5	-6.2
HHC				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.7						
HHC				AMB	AMB		
	comp=Z,95nm,5.1s						
HHC				LR	LR		
	comp=N,155nm,12.0s,MS4.3						
HHC				LR	LR		
	comp=E,351nm,14.2s,MS4.3						
HHC				LR	LR		
	comp=Z,202nm,13.1s,MS4.0						
IMA2	**Indian Mountai**	**32.85**	**36**	eP	**P**	**02 53 54.0**	**-1.5**
SONM	**Songino Array**	**32.93**	**290**	P	**P**	**02 53 55.9**	**-0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**32.93**	**290**	P	**P**	**02 53 55.9**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=61,slow=8.8,SNR=6.9						
TLY	**Talaya**	**33.69**	**298**	eP	**P**	**02 54 06.8**	**+3.8**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
MCK	**McKinley**	**34.59**	**40**	eP	**P**	**02 54 09.8**	**-0.9**
	comp=Z,2.7nm,0.9s,mb4.2						
MCK	**McKinley**	**34.59**	**40**	eP	**P**	**02 54 09.8**	**-0.9**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
COLA	**College**	**35.12**	**38**	eP	**P**	**02 54 15.2**	**-0.1**
	comp=Z,4.5nm,0.8s,mb4.5						
COLA	**College**	**35.12**	**38**	eP	**P**	**02 54 13.7**	**-1.6**
EGAK	**Eagle**	**37.99**	**38**	eP	**P**	**02 54 38.7**	**-1.0**
	comp=Z,7.1nm,0.8s,mb4.5						
DAWY	**Dawson**	**38.80**	**40**	eP	**P**	**02 54 45.8**	**-0.7**
LZH	**Lanzhou**	**39.57**	**274**	eP	**P**	**02 54 53.5**	**+0.3**
LZH				AP	pP	02 54 56.0	-7.5
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.7						
LZH	**Lanzhou**	**39.57**	**274**	eP	**P**	**02 54 53.5**	**+0.3**
	comp=Z,15nm,1.0s,mb4.7						
LZH				pP	pP	02 54 56.0	-7.5
LZH				sP	sP	02 54 58.0	-10
GTA	**Gaotai**	**40.63**	**280**	eP	**P**	**02 55 07.0**	**+5.0**
GTA				AP	pP	02 55 10.6	-1.7
GTA				XP	sP	02 55 13.1	-3.4
GTA				PP	PP	02 56 43.9	+8.1
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.0						
GTA				AMB	AMB		
	comp=Z,67nm,4.9s						
GTA				LR	LR		
	comp=N,116nm,12.9s,MS4.2						
GTA				LR	LR		
	comp=E,182nm,13.3s,MS4.2						
GTA				LR	LR		
	comp=Z,110nm,14.8s,MS3.8						
INK	**Inuvik**	**40.78**	**33**	eP	**P**	**02 55 02.8**	**-0.1**
	comp=Z,146nm,0.9s						
INK	**Inuvik**	**40.78**	**33**	P	**P**	**02 55 03.4**	**+0.5**
	comp=Z,3.6nm,0.6s,mb4.2,baz=293,slow=7.5,SNR=16						
CD2	**Chengdu**	**42.55**	**267**	eP	**P**	**02 55 18.5**	**+0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA	**Guiyang**	**43.35**	**260**	P	**P**	**02 55 26.8**	**+2.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
ZAA0	**Zalesovo Array**	**43.99**	**307**	eP	**P**	**02 55 29.9**	**+0.7**

ZALV Zalesovo Beam 43.99 307 P P 02 55 28.6 -0.6
comp=Z,1.3nm,0.6s,mb3.9,baz=68,slow=6.9,SNR=10
ZALV PcP PcP 02 57 15.0 +0.7
comp=Z,0.6nm,0.4s,baz=86,slow=2.2,SNR=4.7
ZAL Zalesovo 44.01 307 P P 02 55 28.6 -0.7
ZAL 02 57 15.0
WMQ Urumqi 46.50 292 ⇑P P 02 55 49.9 +0.7
WMQ AP pP 02 55 54.4 -5.2
WMQ XP sP 02 55 56.9 -6.8
WMQ PP PP 02 57 39.4 +0.9
WMQ AMB AMB
comp=Z,2.0nm,0.7s,mb4.2
MK31 Makanchi Array 48.44 298 *e*P P 02 56 04.4 +0.2
MKAR Makanchi Array 48.44 298 P P 02 56 04.0 -0.3
comp=Z,0.6nm,0.6s,mb3.8,baz=65,slow=6.3,SNR=7.5
MKAR PcP PcP 02 57 30.9 +0.8
comp=Z,0.7nm,0.7s,baz=54,slow=4.5,SNR=3.7
KURK Kurchatov 48.78 305 *e*P P 02 56 06.8 0.0
comp=Z,10nm,0.8s,mb4.9
KURK Kurchatov 48.78 305⇑*e*P P 02 56 06.3 -0.5
YKA Yellowknife Ar 49.94 37 P P 02 56 15.4 0.0
YKA Yellowknife Ar 49.94 37 P P 02 56 15.4 -0.1
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 49.94 37 P P 02 56 15.4 0.0
comp=Z,0.6nm,0.5s,mb3.9,baz=295,slow=7.4,SNR=9.4
BRVK Borovoye 52.21 310 *e*P P 02 56 32.8 +0.1
comp=Z,7.0nm,0.8s,mb4.6
BRVK Borovoye 52.21 310 *e*P P 02 56 32.8 +0.2
BRVK pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CHTO Chiang Mai 53.75 259 *e*P P 02 56 46.6 +2.2
comp=Z,2.1nm,0.6s,mb4.2
CHTO Chiang Mai 53.75 259 *e*P P 02 56 46.6 +2.2
CHTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SVE Sverdlovsk 54.99 318 P P 02 56 53.0 0.0
AAK Ala-Archa 55.35 298 *e*P P 02 56 56.0 +0.2
comp=Z,1.9nm,0.8s,mb4.2
AAK Ala-Archa 55.35 298 *e*P P 02 56 56.0 +0.2
AAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
EKS2 Erkin-Say 55.77 298 *e*P P 02 56 59.9 +1.1
comp=Z,1.7nm,0.6s,mb4.2
ARU Arti 56.17 318 *e*P P 02 57 01.3 -0.1
comp=Z,7.3nm,1.0s,mb4.7
ARU Arti 56.17 318*c i*P P 02 56 59.8 -1.6
ARU 02 57 54.0
ARU 02 59 03.5
ARU *e*S S 03 04 51.4 +3.5
ARU SS SS 03 08 36.5 +2.6
ARU pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BMO Blue Mountains 57.69 57 *e*P P 02 57 13.0 +0.6
comp=Z,0.6nm,0.6s,mb3.8
ARCES ARCESS Array B 58.43 342 P P 02 57 17.2 0.0
ARCES pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 58.43 342 P P 02 57 17.2 0.0
comp=Z,6.2nm,1.0s,mb4.6,baz=38,slow=8.2,SNR=4.1
FFC Flin Flon 59.68 41 *e*P P 02 57 26.3 +0.2
comp=Z,3.0nm,0.9s,mb4.3
FFC Flin Flon 59.68 41 *e*P P 02 57 26.3 +0.3
FFC pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
AKTK Aktyubinsk 59.99 313 P P 02 57 29.7 +1.4
AKTK PcP PcP 02 58 14.5 +0.4
AKTO Aktyubinsk 59.99 313 P P 02 57 29.7 +1.4
AKTO 02 58 14.5
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
AKTO Aktyubinsk 59.99 313 P P 02 57 29.7 +1.4
comp=Z,1.0nm,0.6s,mb4.1,baz=85,slow=8.7,SNR=3.7
AKTO PcP PcP 02 58 14.5 +0.4
comp=Z,1.7nm,0.8s,baz=21,slow=4.2,SNR=4.5
NVAR Mina Array Bea 60.95 64 P P 02 57 36.2 +1.1
NVAR Mina Array Bea 60.95 64 P P 02 57 36.2 +1.2
comp=Z,0.9nm,0.7s,mb4.0,baz=306,slow=6.1,SNR=8.5
PDAR Pinedale Array 63.40 55 P P 02 57 52.3 +1.0
comp=Z,0.6nm,0.8s,mb3.8,baz=86,slow=2.1,SNR=5.8
FINES FINESS Array B 64.78 336 P P 02 57 59.7 -0.3
FINES FINESS Array B 64.78 336 P P 02 57 59.7 -0.4
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 64.78 336 P P 02 57 59.7 -0.3
comp=Z,0.8nm,0.4s,mb4.2,baz=40,slow=7.1,SNR=13
SRU San Rafael 65.21 59 *e*P P 02 58 03.9 +0.7
comp=Z,1.2nm,0.6s,mb4.1
SRU San Rafael 65.21 59 *e*P P 02 58 03.9 +0.6
SRU pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
PSI Prapat 65.59 246 LR LR 03 30 53.5
comp=Z,245nm,18.1s,MS4.5,baz=254,slow=40
NB2 NORSAR Subarra 68.79 342 P P 02 58 26.1 +0.5
comp=Z,3.2nm,0.9s,mb4.2,baz=28,slow=6.5
NB2 NORSAR Subarra 68.79 342 P P 02 58 26.1 +0.5
NB2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
NOA NORSAR Array B 68.79 342 P P 02 58 26.2 +0.6
comp=Z,0.9nm,0.9s,mb3.7,baz=27,slow=6.3,SNR=3.0
AKASG Malin Array Be 72.50 328 P P 02 58 47.4 -0.9
AKASG Malin Array Be 72.50 328 P P 02 58 47.4 -1.0
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 72.50 328 P P 02 58 47.4 -0.9
comp=Z,1.4nm,0.5s,mb4.1,baz=32,slow=5.9,SNR=8.3
ASAR Alice Springs 72.73 201 P P 02 58 47.9 -2.0
ASAR pmax pmax
comp=Z,2.0nm,1.1s
ASAR Alice Springs 72.73 201 P P 02 58 47.9 -2.0
comp=Z,2.2nm,1.1s,mb4.0,baz=46,slow=6.9,SNR=2.3
TXAR Lajitas Array 76.04 62 P P 02 59 10.4 +1.1
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR Lajitas Array 76.04 62 P P 02 59 10.4 +1.0
comp=Z,1.6nm,0.7s,mb4.1,baz=293,slow=4.1,SNR=10
GERES GERESS Array B 79.21 335 P P 02 59 26.7 +0.1
comp=Z,0.4nm,0.5s,mb3.6,baz=35,slow=3.3,SNR=4.2
BRTR Keskin Array B 79.55 318 P P 02 59 28.5 -0.2
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR Keskin Array B 79.55 318 P P 02 59 28.4 -0.3
comp=Z,1.2nm,1.0s,mb3.8,baz=69,slow=6.8,SNR=4.0
MMAI Mount Meron Ar 84.08 313 P P 02 59 53.4 +0.7
comp=Z,2.4nm,0.6s,mb4.5,baz=47,slow=6.1,SNR=7.5

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*IDC **04** 02:50:00.9±0.5, 5.81S×152.51E, h0km, mb5.0/23, mb1 5.1/25, mb1mx5.1/26, mbtmp5.0/25, ML4.4/2, MS4.5/18, Ms1 4.5/18, ms1mx4.3/25, Error ellipse: s-maj=15.0km s-min=9.3km az=116.0*

*BJI **04** 02:50:04.7, 5.74S×152.84E, h46km, mB5.3, mb4.9, Ms5.0, Msz4.6*

*MOS **04** 02:50:05.3±1.0, 5.67S×152.34E, h33km, mb5.4/35, MS4.6/8, Error ellipse: s-maj=9.7km s-min=6.7km az=84.8*

*ISCJB **04** 02:50:05.6±0.1, 5.83S±0.04×152.37E±0.03, h38km, mb5.1/94, MS4.5/35, Error ellipse: s-maj=5.5km s-min=4.0km az=159.0*

*NEIC **04** 02:50:06.6±0.1, 5.83S×152.47E, mb5.2/56, Error ellipse: s-maj=5.8km s-min=4.3km az=120.0*

*GCMT **04** 02:50:06.6±0.1, 6.12S×152.75E, h12km, MW5.3/96, Moment Tensor Solution. s82,c126; s96,c174; Duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.25±.02; $M_{\theta\theta}$0.28±.01; $M_{\phi\phi}$0.96±.02; $M_{r\theta}$-0.44±.05; $M_{\theta\phi}$-0.43±.01; $M_{\phi r}$-0.31±.05; Best double couple: $M_0$1.30700×10^{17} NP1:ϕ_s137.00000°, δ46.00000°, λ-117.00000°. NP2:ϕ_s353.00000°, δ50.00000°, λ-65.00000°. Principal axes: T 1.1750, Plg2.0000°, Azm65.0000°; N 0.2640, Plg19.0000°, Azm156.0000°; P -1.4390, Plg71.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 02:50:07.3±0.1**, 5.88S**±0.03×**152.44E**±0.03**, h39**km**, h39**km±1.1km**: pP-P, n423,** σ0.80/394**, mb5.1**/92**, MS4.5**/35**, 74C-89D, New Britain region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PMG Port Moresby 6.30 236 *e*Pn Pn 02 51 38.9 +1.2
PMG *e*Sn Sn 02 52 54.3 +6.0
PMG Port Moresby 6.30 236*c i*P Pn 02 51 38.6 +0.9
PMG Port Moresby 6.30 236 Pn Pn 02 51 38.3 +0.7
24nm,0.3s,baz=48,slow=6.2,SNR=45
PMG Sn Sn 02 52 53.8 +5.4
83nm,0.3s,baz=359,slow=19,SNR=7.9
HNR Honiara 8.24 116 Pn Pn 02 52 01.9 -2.4
11nm,0.3s,baz=95,slow=2.3,SNR=6.4
COEN Coen 12.15 228 *e*Pn Pn 02 52 58.0 +0.2
18nm,0.8s
COEN *e* 02 53 13.0
CTA Charters Tower 15.35 202 *e*P Pn 02 53 43.4 +2.2
19nm,0.9s
CTA *e*S S 02 56 43.9 -1.3
CTA Charters Tower 15.35 202 *e*P Pn 02 53 43.4 +2.2
CTA *e*S S 02 56 43.9 -1.3
CTA pmax pmax
comp=Z,19nm,0.9s
CTA Charters Tower 15.35 202 Pn Pn 02 53 45.0 +3.8
comp=Z,0.8nm,0.3s,baz=33,slow=13,SNR=11
CTA LR LR 02 58 36.2
comp=Z,2µm,21.2s,baz=22,slow=33
CTAO Charters Tower 15.35 202 *e*Pn Pn 02 53 43.9 +2.7
EIDS Eidsvold 19.43 184 *e*P Pn 02 54 30.0 -1.7
comp=Z,38nm,1.1s
GUMO Guam 20.75 339 P P 02 54 44.6 -0.2
comp=Z,84nm,0.4s,baz=206,slow=12,SNR=4.1
DZM Mont Dzumac 21.04 141 P P 02 54 45.9 -2.0
comp=Z,54nm,0.9s,mb4.9,baz=350,slow=14,SNR=10
DZM LR LR 03 00 12.5
comp=Z,676nm,20.8s,MS4.0,baz=201,slow=29
WB2 Warramunga Arr 22.46 230 *e*P P 02 55 02.9 -0.2
WB2 *e*S S 02 59 08.1 +0.2
WRA Warramunga Arr 22.47 230 P P 02 55 03.0 -0.2
WRA S S 02 59 10.7 +2.7
WRA Warramunga Arr 22.47 230 P P 02 55 03.0 -0.2
comp=Z,14nm,0.5s,mb4.7,baz=56,slow=10,SNR=136
WRA S S 02 59 10.7 +2.6
comp=Z,14nm,1.2s,baz=54,slow=18,SNR=6.5
WRA LR LR 03 03 47.0
comp=Z,970nm,19.7s,MS4.2,baz=60,slow=37
ARMA Armidale 24.42 182 *e*P P 02 55 22.8 +0.6
ASAR Alice Springs 25.12 223 P P 02 55 28.9 +0.3
ASAR S S 02 59 58.7 +7.8
ASAR Alice Springs 25.12 223 P P 02 55 28.9 +0.3
comp=Z,45nm,0.9s,mb5.0,baz=61,slow=8.1,SNR=66
ASAR S S 02 59 58.7 +7.8
comp=Z,1.0nm,0.9s,baz=50,slow=15,SNR=2.7
ASAR ScP ScP 03 02 51.9 +13
comp=Z,0.9nm,0.7s,baz=50,slow=2.8,SNR=4.5
STKA Stephens Creek 27.78 200 *e*P P 02 55 51.3 -1.3
comp=Z,27nm,0.8s,mb4.9
STKA *e*S S 03 00 37.7 +4.9
STKA Stephens Creek 27.78 200 P P 02 55 51.4 -1.2
comp=Z,36nm,1.0s,mb5.0,baz=8.7,slow=8.8,SNR=27
STKA LR LR 03 07 56.7
comp=Z,1µm,18.1s,MS4.5,baz=271,slow=39
BATI Kupang 28.80 260 P P 02 56 03.4 +1.5
comp=Z,57nm,0.7s,mb5.4,baz=68,slow=2.2,SNR=6.5
FITZ Fitzroy Crossi 28.84 243 *e*P P 02 56 02.2 +0.1
comp=Z,96nm,0.8s,mb5.6
FITZ *e*S S 03 00 47.6 -2.1
FITZ Fitzroy Crossi 28.84 243 P P 02 56 02.4 +0.3
comp=Z,25nm,0.4s,mb5.3,baz=57,slow=7.8,SNR=168
FITZ LR LR 03 07 42.1
comp=Z,725nm,20.8s,MS4.3,baz=42,slow=37
FORT Forrest 33.73 220 *e*P P 02 56 44.6 -0.5
comp=Z,28nm,0.6s,mb5.4
CBIJ Chichi jima 34.25 344 LR LR 03 08 29.0
comp=Z,355nm,21.6s,MS4.1,baz=323,slow=32
MBWA Marble Bar 35.13 241 *e*P P 02 56 58.7 +1.4
comp=Z,25nm,0.8s,mb5.2
AFI Afiamalu 36.11 106 LR LR 03 09 02.5
comp=Z,512nm,20.8s,MS4.3,baz=80,slow=32
KKM Kota Kinabalu 38.05 288 *e*P P 02 57 22.8 +0.5
URZ Urewera 39.25 149 P P 02 57 31.5 -0.6
comp=Z,11nm,0.8s,mb4.6,baz=27,slow=5.3,SNR=5.9
URZ LR LR 03 10 23.4
comp=Z,744nm,19.4s,MS4.5,baz=190,slow=31
KLBR Kellerberrin 41.31 227 *e*P P 02 57 48.2 -1.0
comp=Z,15nm,0.5s,mb4.9
NWAO Narrogin (SRO) 42.38 226 P P 02 57 58.5 +0.5
NWAO LR LR 03 15 06.6
NWAO Narrogin (SRO) 42.38 226 P P 02 57 58.5 +0.5
comp=Z,18nm,1.1s,mb4.6,baz=40,slow=5.7,SNR=4.3
NWAO LR LR 03 15 06.6
comp=Z,2µm,20.6s,MS4.9,baz=55,slow=36
MUN Mundaring 42.64 228 *e*P P 02 57 59.6 -0.5
JNU Nakatsue 43.85 334 P P 02 58 09.3 -0.4
comp=Z,40nm,0.9s,mb5.2,baz=106,slow=7.8,SNR=18
MJAR Matsushiro Arr 44.25 344 P P 02 58 10.0 -2.9
MJAR PcP PcP 02 59 56.8 -0.2
MJAR Matsushiro Arr 44.25 344 P P 02 58 10.0 -2.9
comp=Z,6.9nm,0.8s,mb4.5,baz=167,slow=8.4,SNR=31
MJAR PcP PcP 02 59 56.8 -0.2
comp=Z,4.0nm,0.8s,baz=165,slow=3.8,SNR=5.1
MAJO Matsushiro 44.25 344 *e*P P 02 58 10.0 -3.0
comp=Z,17nm,0.8s,mb4.8
MAJO Matsushiro 44.25 344 *e*P P 02 58 10.0 -2.9
MAJO pmax pmax
comp=Z,17nm,0.8s,mb4.8
MAT Matsushiro 44.25 344 P P 02 58 09.7 -3.2
SSE Sheshan 47.37 323 P P 02 58 37.4 -0.2
SSE AMB AMB
comp=Z,21nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,176nm,3.7s
SSE LR LR
comp=N,216nm,18.1s,MS4.2
SSE LR LR
comp=E,144nm,18.6s,MS4.2
SSE LR LR
comp=Z,347nm,18.6s,MS4.3
SSE Sheshan 47.37 323 P P 02 58 37.4 -0.2
comp=Z,21nm,0.7s,mb5.2
SSE S S 03 05 37.8 +8.8
SSE LR LR
comp=Z,350nm,18.6s,MS4.4
QIZ Qiongzhong 48.71 302 P P 02 58 49.1 +0.9
QIZ AP pP 02 58 57.2 -2.4
QIZ XP sP 02 59 01.4 -2.8
QIZ S S 03 05 51.5 +3.1
QIZ XS sS 03 06 07.4 +0.2
QIZ AMB AMB
comp=Z,15nm,1.6s,mb4.8
QIZ LR LR
comp=E,334nm,23.8s
QIZ LR LR
comp=Z,634nm,30.5s
KSRS Korea Array 48.80 334 P P 02 58 47.4 -1.2
comp=Z,6.0nm,0.9s,mb4.6,baz=149,slow=9.3,SNR=9.3
KSRS LR LR 03 18 21.7
comp=Z,341nm,18.2s,MS4.4,baz=338,slow=35
INCN Inchon 49.40 333 *e*P P 02 58 53.5 +0.3
comp=Z,43nm,1.0s,mb5.4
ASAJ Asahikawa 50.55 351 P P 02 59 02.3 +0.5
comp=Z,6.7nm,0.5s,mb4.8,baz=210,slow=19,SNR=8.1
KULM Kulim 52.88 281 *e*P P 02 59 19.4 -0.4
YSS Yuzh-Sakhalins 53.30 352 *e*P P 02 59 19.7 -2.5
YSS pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
PSI Prapat 54.13 278 P P 02 59 31.1 +2.1
comp=Z,6.2nm,0.8s,mb4.6,baz=89,slow=9.6,SNR=4.8
MDJ Mudanjiang 54.30 340 P P 02 59 31.4 +1.8
MDJ AP pP 02 59 40.5 -0.6
MDJ XP sP 02 59 44.3 -1.4
MDJ PP PP 03 01 32.4 +0.5
MDJ S S 03 07 08.8 +4.2
MDJ AMB AMB
comp=Z,12nm,1.0s,mb4.8
MDJ AMB AMB
comp=Z,161nm,6.2s
MDJ LR LR
comp=N,255nm,13.2s,MS4.5
MDJ LR LR
comp=E,218nm,15.9s,MS4.5
MDJ LR LR
comp=Z,318nm,14.8s,MS4.5
MDJ Mudanjiang 54.30 340 *e*P P 02 59 28.5 -1.1
comp=Z,11nm,0.9s,mb4.8
GYA Guiyang 54.76 308⇑*i*P P 02 59 34.6 +1.3
GYA AP pP 02 59 46.8 +2.0
GYA XP sP 02 59 52.4 +3.0
GYA PCP PcP 03 00 37.6 +2.1
GYA PP PP 03 01 40.3 +3.9
GYA SCP ScP 03 04 31.4 +0.3
GYA S S 03 07 12.0 +0.5
GYA SCS ScS 03 09 18.2 -1.6
GYA SS SS 03 10 55.8 +0.6
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,6.9s
GYA LR LR
comp=N,640nm,18.8s,MS4.8
GYA LR LR
comp=E,510nm,19.4s,MS4.8
GYA LR LR
comp=Z,670nm,19.9s,MS4.7
CN2 Changchun 55.13 336 *e*P P 02 59 36.7 +1.1
CN2 *e*XP sP 02 59 53.5 +1.8
CN2 PCP PcP 03 00 36.5 0.0
CN2 *e*S S 03 07 16.3 +0.5
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,21.0s,MS4.9
CN2 LR LR
comp=E,500nm,21.0s,MS4.9
CN2 LR LR
comp=Z,500nm,21.0s,MS4.6
HABR Khabarovsk 56.23 346 *e*P P 02 59 39.9 -3.5
HABR *e*S S 03 07 27.3 -3.0
HABR *e* 03 09 25.5
HABR *e* 03 11 15.4
XAN Xi'an 57.15 317 P P 02 59 49.0 -1.3
XAN AMB AMB
comp=Z,8.0nm,1.4s,mb4.6
KMI Kunming 57.29 305 P P 02 59 55.2 +3.8
KMI AP pP 03 00 04.9 +1.9
KMI XP sP 03 00 09.4 +1.8
KMI PP PP 03 02 03.2 +4.2
KMI SCP ScP 03 04 43.0 +0.7
KMI S S 03 07 44.5 -0.6
KMI XS sS 03 08 04.6 +0.3
KMI SS SS 03 11 36.5 +1.4
KMI AMB AMB
comp=Z,11nm,0.8s,mb4.9
KMI AMB AMB
comp=Z,143nm,5.0s
KMI LR LR
comp=N,244nm,19.7s
KMI LR LR
comp=E,304nm,14.2s
KMI LR LR
comp=Z,330nm,21.3s,MS4.4
KMI Kunming 57.29 305 P P 02 59 55.2 +3.8
comp=Z,11nm,0.8s,mb4.9
KMI pP pP 03 00 04.9 +1.9
KMI sP sP 03 00 09.4 +1.8
KMI PP PP 03 02 03.2 +4.2
KMI PPP 03 03 22.4
KMI ScP ScP 03 04 43.0 +0.7
KMI S S 03 07 44.5 -0.6
KMI sS sS 03 08 04.6 +0.3
KMI SS SS 03 11 36.5 +1.4
KMI SSS 03 13 52.0
KMI LR LR
comp=Z,330nm,21.3s,MS4.4
KMI Kunming 57.29 305 P P 02 59 55.2 +3.8
KMI *PP pP 03 00 04.9 +1.9
KMI *SP sP 03 00 09.4 +1.8
KMI 03 02 03.2
KMI PPP 03 03 22.4
KMI S S 03 07 44.5 -0.6
KMI *SS sS 03 08 04.6 +0.3
KMI SS SS 03 11 36.5 +1.4
KMI SSS 03 13 52.0
KMI pmax pmax
comp=Z,11nm,0.8s,mb4.9
KMI MLR MLR
comp=Z,330nm,21.3s,MS4.4
PPT Papeete 57.75 107 *e*LR LR 03 16 49.1
comp=Z,704nm,34.5s
PPT Papeete 57.75 107 LR LR 03 21 28.1
comp=Z,204nm,19.1s,MS4.2,baz=277,slow=33
KLR Kul'dur 57.77 344 *e*P P 02 59 49.8 -4.5
CHTO Chiang Mai 58.13 296 *e*P P 02 59 57.4 0.0
comp=Z,8.4nm,1.1s,mb4.7
CHTO Chiang Mai 58.13 296 *e*P P 02 59 57.4 0.0
CHTO pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
PET Petropavlovsk 58.91 4 *e*P P 03 00 01.4 -0.8
comp=Z,32nm,0.8s,mb5.4
PET Petropavlovsk 58.91 4 *e*P P 03 00 01.6 -0.6
PET *e*S S 03 08 06.8 +1.5
PET *e*SS SS 03 12 02.8 +3.2
PET pmax pmax
comp=Z,47nm,0.8s,mb5.6
PET pmax pmax
comp=Z,200nm,15.2s
PET MLR MLR
comp=Z,100nm,20.0s,MS3.9
CD2 Chengdu 59.16 311 *e*P P 03 00 05.2 +0.8
CD2 AP pP 03 00 16.9 +0.9
CD2 XP sP 03 00 20.9 +0.3
CD2 PP PP 03 02 17.7 +2.2
CD2 S S 03 08 07.9 -1.5
CD2 XS sS 03 08 33.4 +4.7
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,260nm,15.6s,MS4.7
CD2 LR LR
comp=E,420nm,20.4s,MS4.7
CD2 LR LR
comp=Z,190nm,14.4s
HHC Hu-ho-hao-te 59.71 325 *e*P P 03 00 08.1 +0.1
HHC AP pP 03 00 18.3 -1.3
HHC XP sP 03 00 22.2 -2.0
HHC PCP PcP 03 00 54.5 -0.1
HHC PP PP 03 02 21.5 +1.3
HHC PCS PcS 03 04 54.9 -1.8
HHC S S 03 08 14.7 -1.4
HHC XS sS 03 08 32.2 -3.2
HHC SCS ScS 03 09 52.3 -2.9
HHC SS SS 03 12 13.1 +0.5
HHC AMB AMB
comp=Z,15nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,429nm,5.5s
HHC LR LR
comp=N,372nm,15.5s,MS4.8
HHC LR LR
comp=E,337nm,13.1s,MS4.8
HHC LR LR
comp=Z,395nm,16.6s,MS4.6
LZH Lanzhou 61.75 316 *e*P P 03 00 23.0 +1.0
LZH AP pP 03 00 33.0 -0.6
LZH XP sP 03 00 37.5 -0.7
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,77nm,4.2s
LZH LR LR
comp=E,1µm,13.3s
LZH LR LR
comp=Z,1µm,15.0s,MS5.2
LZH Lanzhou 61.75 316 *e*P P 03 00 23.0 +1.0
comp=Z,25nm,1.0s,mb5.3
LZH pP pP 03 00 33.0 -0.6
LZH sP sP 03 00 37.5 -0.7
LZH PcP PcP 03 00 40.7 -22
LZH PP PP 03 02 17.2 -21
LZH *e*S S 03 08 16.0 -26
LZH sS sS 03 08 29.0 -33
LZH SS SS 03 12 18.0 -27
LZH LR LR
comp=Z,1µm,15.0s,MS5.2
HIA Hailar 61.86 336 *e*P P 03 00 21.6 -0.9
comp=Z,11nm,0.7s,mb5.1
HIA *e*pP pP 03 00 33.6 -0.5
HIA Hailar 61.86 336 *e*P P 03 00 21.6 -0.8
HIA *e**PP pP 03 00 33.7 -0.4
HIA pmax pmax
comp=Z,11nm,0.7s
MA2 Magadan 65.26 359 *e*P P 03 00 43.4 -1.2
comp=Z,31nm,0.9s,mb5.3
MA2 *e*pP pP 03 00 55.4 -1.0

MA2 Magadan 65.26 359 *d* P **P** **03 00 43.6 -1.0**
MA2 *e* S S 03 09 23.8 -1.3
MA2 *e* 03 10 29.7
MA2 *e* SS SS 03 13 37.3 -1.4
MA2 pmax pmax
comp=Z,50nm,0.9s,mb5.5
MA2 MLR MLR
comp=Z,400nm,19.7s,MS4.6
GTA Gaotai 66.20 318 *e* P **P** **03 00 52.4 +1.3**
GTA AP pP 03 01 05.0 +2.1
GTA XP sP 03 01 09.9 +2.4
GTA PP PP 03 03 21.9 +4.5
GTA S S 03 09 40.7 +3.3
GTA XS sS 03 09 59.7 +2.8
GTA AMB AMB
comp=Z,9.0nm,1.9s,mb4.5
GTA AMB AMB
comp=Z,308nm,6.5s
GTA LR LR
comp=N,310nm,17.1s,MS4.7
GTA LR LR
comp=E,267nm,17.9s,MS4.7
GTA LR LR
comp=Z,329nm,17.9s,MS4.6
CLNS Chul'man 66.43 344 *e* P **P** **03 00 49.4 -2.9**
CLNS pmax pmax
comp=N,7.0nm,0.7s
CLNS pmax pmax
comp=Z,12nm,0.7s,mb5.0
CLNS pmax pmax
comp=E,5.0nm,1.0s
CLNS MLR MLR
comp=Z,300nm,17.0s,MS4.6
CLNS MLR MLR
comp=N,200nm,15.0s,MS4.8
CLNS MLR MLR
comp=E,400nm,13.0s,MS4.8
CIT Chita 66.51 335 *e* P **P** **03 00 53.3 +0.4**
SHL Shillong 66.54 301 *e* P **P** **03 00 52.0 -1.6**
ULN Ulaanbaatar 66.72 329 *e* P **P** **03 00 55.0 +0.8**
comp=E,9.7nm,0.8s,mb4.9
ULN Ulaanbaatar 66.72 329 *e* P **P** **03 00 55.0 +0.7**
ULN pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TAOE Nuku Hiva Isla 66.85 97 *e* LR LR 03 20 54.7
comp=Z,1μm,33.7s
SONM Songino Array 67.04 328 P **P** **03 00 56.2 -0.1**
comp=Z,9.5nm,0.8s,mb4.9,baz=147,slow=5.6,SNR=35
SONM LR LR 03 31 51.5
comp=Z,280nm,18.6s,MS4.5,baz=272,slow=38
UNV Unalaska Valle 68.75 25 *e* P **P** **03 01 06.2 -0.7**
comp=Z,77nm,0.7s,mb5.7
YAK Yakutsk 69.95 349⇑ *e* P **P** **03 01 13.8 -0.4**
YAK Yakutsk 69.95 349 *e* P **P** **03 01 13.1 -1.1**
YAK pmax pmax
comp=Z,14nm,0.8s,mb4.9
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.8s
ZAK Zakamensk 70.22 329⇓ *i* P **P** **03 01 16.8 +0.7**
ZAK pmax pmax
comp=Z,18nm,0.9s,mb5.0
TAPN Taplejung 70.65 302 *e* P **P** **03 01 19.6 +0.4**
comp=Z,22nm,0.8s,mb5.1
BOD Bodaibo 70.66 339 *e* P **P** **03 01 17.5 -1.1**
BOD pmax pmax
comp=Z,8.0nm,1.9s,mb4.3
ODAN Odare 70.78 301 *e* P **P** **03 01 20.4 +0.4**
comp=Z,36nm,0.7s,mb5.4
TLY Talaya 70.83 330 P **P** **03 01 20.5 +0.7**
comp=Z,54nm,0.8s,mb5.5,SNR=8.6
TLY Talaya 70.83 330 *e* P **P** **03 01 20.4 +0.6**
comp=Z,9.6nm,0.9s,mb4.7
TLY Talaya 70.83 330 *e* P **P** **03 01 20.1 +0.3**
TLY *e* pP 03 01 33.7 +2.1
TLY *e* S S 03 10 35.1 +3.2
TLY pmax pmax
comp=Z,11nm,1.0s,mb4.7
TLY MLR MLR
comp=Z,277nm,18.0s,MS4.6
IRK Irkutsk 70.87 331 *e* P **P** **03 01 19.2 -0.8**
IRK *e* pP 03 01 32.0 +0.1
IRK pmax pmax
comp=Z,43nm,1.7s,mb5.1
RKT Rikitea 71.72 112 *e* LR LR 03 23 13.1
comp=Z,1μm,30.5s
VNDA Vanda 71.77 178 *e* P **P** **03 01 24.5 -0.6**
comp=Z,7.0nm,0.9s,mb4.6
VNDA Vanda 71.77 178 *e* P **P** **03 01 24.5 -0.6**
VNDA pmax pmax
comp=Z,7.0nm,0.9s
VNDA Vanda 71.77 178 P **P** **03 01 25.1 0.0**
comp=Z,3.2nm,0.7s,mb4.3,baz=345,slow=6.1,SNR=7.8
VNDA LR LR 03 32 35.0
comp=Z,163nm,18.2s,MS4.3,baz=341,slow=36
MOY Mondy 72.15 329 *e* P **P** **03 01 28.4 +0.7**
MOY pmax pmax
comp=Z,86nm,2.0s,mb5.3
PALK Pallekele 72.75 279 *e* P **P** **03 01 33.0 +0.8**
comp=Z,21nm,0.9s,mb5.1
KKN Kakani 72.84 301 *e* P **P** **03 01 33.2 +0.8**
comp=Z,26nm,0.7s,mb5.3
KKN Kakani 72.84 301 *e* P **P** **03 01 33.2 +0.8**
KKN pmax pmax
comp=Z,26nm,0.7s,mb5.3
GKN Gorkha 73.45 301 *e* P **P** **03 01 36.3 +0.3**
comp=Z,29nm,0.8s,mb5.2
BILL Bilibino 74.39 5 *e* P **P** **03 01 40.2 -0.4**
comp=Z,24nm,0.8s,mb5.2
BILL Bilibino 74.39 5 *e* P **P** **03 01 38.5 -2.1**
BILL *i* pP 03 01 52.1 -0.5
BILL pmax pmax
comp=Z,27nm,1.0s,mb5.1
BILL MLR MLR
comp=Z,100nm,18.0s,MS4.2
GAMB Gambell 74.51 16 *e* P **P** **03 01 40.3 -1.1**
GAMB *e* pP pP 03 01 53.0 -0.3
WMQ Urumqi 76.29 318⇓ *i* P **P** **03 01 53.0 +1.0**
WMQ AP pP 03 02 03.5 -0.5
WMQ PCP PcP 03 02 05.5 +1.6
WMQ XP sP 03 02 08.0 -0.5
WMQ PP PP 03 04 46.0 +2.1
WMQ S S 03 11 33.5 -0.4
WMQ XS sS 03 11 50.7 -3.1
WMQ SKS 03 11 56.2
WMQ SCS ScS 03 12 02.0 -2.4
WMQ AMB AMB
comp=Z,22nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,434nm,3.7s
WMQ LR LR
comp=N,100nm,20.5s
WMQ LR LR
comp=E,69nm,26.6s
WMQ LR LR
comp=Z,145nm,22.6s,MS4.2
HYB Hyderabad 76.50 289 *e* P **P** **03 01 54.0 +0.2**
HYB Hyderabad 76.50 289 *i* P **P** **03 01 54.0 +0.2**
HYB *e* pP 03 02 04.5 -1.3
TNA Tin City 76.93 16 *e* P **P** **03 01 54.8 -0.4**
comp=Z,7.5nm,0.9s,mb4.6
KDAK Kodiak Island 77.30 27 P **P** **03 01 57.3 -0.1**
comp=Z,17nm,1.0s,mb4.9,baz=94,slow=5.1,SNR=4.6
SVW2 Sparrevohn 77.95 23 *e* P **P** **03 02 01.4 +0.4**
TTA Tatalina 78.90 21 *e* P **P** **03 02 06.3 +0.1**
TIXI Tiksi 78.91 353 *e* P **P** **03 02 05.1 -1.1**
comp=Z,18nm,0.9s,mb5.0
TIXI Tiksi 78.91 353⇑ *e* P **P** **03 02 05.0 -1.1**
TIXI pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SLKM Skilak Lake 79.79 25 *e* P **P** **03 02 10.4 -0.7**
NDI New Delhi 79.95 300 *ex* x 03 02 11.0
PMR Palmer 80.81 24 *e* P **P** **03 02 15.8 -0.8**
comp=Z,44nm,1.2s,mb5.3
PMR LR LR
comp=Z,500nm,22.0s,MS4.8
PMR Palmer 80.81 24 *e* P **P** **03 02 15.8 -0.8**
PMR pmax pmax
comp=Z,45nm,1.2s,mb5.3
PMR MLR MLR
comp=Z,500nm,22.0s,MS4.8
MK31 Makanchi Array 80.90 319 *e* P **P** **03 02 16.7 -0.7**
MK31 Makanchi Array 80.90 319 *i* P **P** **03 02 17.2 -0.2**
MK31 pmax pmax
comp=Z,15nm,0.7s,mb5.0
MKAR Makanchi Array 80.90 319 P **P** **03 02 15.6 -1.8**
MKAR LR LR 03 38 29.8
MKAR Makanchi Array 80.90 319⇑ *e* P **P** **03 02 15.6 -1.8**
MKAR Makanchi Array 80.90 319 P **P** **03 02 15.6 -1.8**
comp=Z,18nm,0.8s,mb5.0,baz=101,slow=6.0,SNR=103
MKAR LR LR 03 38 29.8
comp=Z,233nm,18.5s,MS4.6,baz=353,slow=36
SML Sawmill 81.25 24 *e* P **P** **03 02 18.5 -0.4**
IMA2 Indian Mountai 81.58 19 *e* P **P** **03 02 20.5 -0.1**
ZALV Zalesovo Beam 81.84 326 P **P** **03 02 21.4 -0.8**
ZALV LR LR 03 39 53.6
ZALV Zalesovo Beam 81.84 326 P **P** **03 02 21.4 -0.8**
comp=Z,14nm,0.7s,mb5.0,baz=115,slow=6.1,SNR=50
ZALV LR LR 03 39 53.7
comp=Z,150nm,18.3s,MS4.4,baz=315,slow=37
ZAL Zalesovo 81.85 326 P **P** **03 02 21.4 -0.9**
MCK McKinley 81.99 23 *e* P **P** **03 02 21.5 -1.2**
comp=Z,32nm,0.8s,mb5.3
MCK *e* pP pP 03 02 33.5 -1.4
MCK McKinley 81.99 23 *e* P **P** **03 02 21.5 -1.3**
MCK *e* *PP pP 03 02 33.5 -1.4
MCK pmax pmax
comp=Z,32nm,0.8s,mb5.3
THN Thein Dam 82.01 304 *ex* x 03 02 22.2
COLA College 82.98 22 *e* P **P** **03 02 25.9 -2.0**
comp=Z,43nm,0.8s,mb5.5
COLA *e* pP pP 03 02 37.7 -2.3
COLA College 82.98 22 *e* P **P** **03 02 25.9 -2.0**
COLA *e* *PP pP 03 02 37.7 -2.3
COLA pmax pmax
comp=Z,43nm,0.8s,mb5.5
NVS Novosibirsk 83.03 327⇓ *i* P **P** **03 02 27.8 -0.6**
NVS *i* S S 03 12 47.0 +2.2
NVS pmax pmax
comp=Z,66nm,2.3s,mb5.3
NVS pmax pmax
comp=N,19nm,2.0s
NVS pmax pmax
comp=E,35nm,2.2s
NVS smax
comp=N,24nm,2.8s
NVS smax
comp=E,75nm,2.8s
KSH Kashi 83.36 311 P **P** **03 02 28.4 -2.1**
KSH AP pP 03 02 38.6 -4.0
KSH *e* S S 03 12 39.9 -8.9
KSH SS SS 03 18 18.5 +3.7
MENT Mentasta 83.68 24 *e* P **P** **03 02 31.3 -0.3**
ULHL Ulahol 83.79 314 P **P** **03 02 33.9 +1.3**
SNR=15
QSPA South Pole Qui 84.09 180 *e* P **P** **03 02 32.7 -0.8**
comp=E,90nm,0.8s,mb6.0
KURK Kurchatov 84.39 322 P **P** **03 02 35.2 -0.3**
comp=E,190nm,1.0s,mb6.2,SNR=25
KURK Kurchatov 84.39 322 *e* P **P** **03 02 35.2 -0.3**
TKM2 Tokmak 2 84.41 314 *i* P **P** **03 02 34.0 -1.8**
TKM2 pmax pmax
comp=Z,23nm,0.8s,mb5.4
TKM2 Tokmak 2 84.41 314 P **P** **03 02 36.9 +1.1**
SNR=25
MAW Mawson 84.44 203 P **P** **03 02 34.7 -0.7**
comp=Z,4.6nm,0.6s,mb4.8,baz=110,slow=4.9,SNR=6.2
MAW LR LR 03 40 53.3
comp=Z,309nm,18.3s,MS4.7,baz=70,slow=36
KZA Kyzart 84.47 313 P **P** **03 02 38.3 +2.2**
SNR=71
KBK Karagaybulak 84.82 314 P **P** **03 02 38.7 +0.9**
SNR=30
CHMS Chumysh 85.03 314 P **P** **03 02 39.7 +0.8**
SNR=18
UCH Uchtor 85.04 313 *e* P **P** **03 02 40.5 +1.5**
comp=Z,39nm,1.0s,mb5.5
UCH Uchtor 85.04 313 P **P** **03 02 40.8 +1.9**
SNR=48
FRU Bishkek 85.09 314⇓ *e* P **P** **03 02 39.5 +0.3**
FRU pmax pmax
comp=Z,100nm,2.1s,mb5.6
AAK Ala-Archa 85.14 314 P **P** **03 02 39.8 +0.4**
comp=Z,164nm,0.8s,mb6.2,SNR=35
AAK Ala-Archa 85.14 314 *e* P **P** **03 02 39.4 0.0**
comp=Z,26nm,0.8s,mb5.4
AAK *e* pP pP 03 02 51.7 +0.1
AAK Ala-Archa 85.14 314 *e* P **P** **03 02 39.4 0.0**
AAK *e* *PP pP 03 02 51.7 +0.1
AAK pmax pmax
comp=Z,26nm,0.8s,mb5.4
AAK Ala-Archa 85.14 314 P **P** **03 02 40.5 +1.1**
SNR=28
USP Ospenovka 85.27 314 P **P** **03 02 40.9 +0.8**
SNR=53
EGAK Eagle 85.49 23 *e* P **P** **03 02 40.5 -0.1**
comp=Z,27nm,0.8s,mb5.4
AML Almayashu 85.61 313 *e* P **P** **03 02 43.3 +1.5**
comp=Z,82nm,0.9s,mb6.0
AML *e* pP pP 03 02 54.9 +1.0
AML Almayashu 85.61 313 P **P** **03 02 42.8 +1.0**
SNR=58
EKS2 Erkin-Say 85.66 314 *e* P **P** **03 02 42.9 +0.9**
comp=Z,36nm,0.9s,mb5.6
EKS2 *e* pP pP 03 02 55.3 +1.1
EKS2 Erkin-Say 85.66 314 P **P** **03 02 43.1 +1.1**
SNR=48
DAWY Dawson 85.91 24 *e* P **P** **03 02 42.9 +0.1**
SKAG Skagway 86.13 29 *e* P **P** **03 02 44.5 +0.6**
KBL Kabul 87.88 305 *e* P **P** **03 02 52.5 -0.5**
KBL *e* pP pP 03 03 03.5 -1.7
DLBC Dease Lake 88.49 31 *e* P **P** **03 02 56.1 +0.8**
DLBC Dease Lake 88.49 31 P **P** **03 02 56.1 +0.7**
baz=242,slow=5.8
INK Inuvik 89.58 21 *e* P **P** **03 02 59.5 -0.8**
comp=Z,471nm,0.9s
INK Inuvik 89.58 21 P **P** **03 02 59.5 -0.8**
comp=Z,13nm,0.9s,mb5.2,baz=249,slow=5.7,SNR=41
O02C Red Bluff 89.77 50⇓ P **P** **03 03 02.8 +1.0**
baz=90
MNRC McLaughlin Nat 89.86 51⇑ P **P** **03 03 03.1 +0.8**
baz=90
I03A Eugene 89.94 46⇓ P **P** **03 03 02.4 -0.1**
baz=90
BRVK Borovoye 89.95 323 P **P** **03 03 01.2 -1.1**
comp=Z,103nm,1.0s,mb6.1,SNR=12
BRVK Borovoye 89.95 323 *e* P **P** **03 03 01.3 -1.1**
comp=Z,15nm,0.9s,mb5.3
BRVK Borovoye 89.95 323 *e* P **P** **03 03 01.3 -1.0**
BRVK pmax pmax
comp=Z,15nm,0.9s,mb5.3
F03A Seaside 90.02 44⇓ P **P** **03 03 02.7 -0.1**
baz=90
H03A Soap Creek Ran 90.03 45⇓ P **P** **03 03 02.9 0.0**
baz=90
YBH Yreka Blue Hor 90.04 48 *e* P **P** **03 03 03.8 +0.8**
comp=Z,82nm,2.8s,mb5.6
YBH *e* pP pP 03 03 16.3 +1.1
YBH Yreka Blue Hor 90.04 48 *e* P **P** **03 03 03.8 +0.8**
YBH *e* *PP pP 03 03 16.3 +1.1
YBH pmax pmax
comp=Z,82nm,2.8s
YBH Yreka Blue Hor 90.04 48⇑ P **P** **03 03 03.5 +0.5**
baz=90
D03A Wishkah Elem. 90.05 43⇑ P **P** **03 03 03.4 +0.5**
baz=90
J03A Ideyld Park 90.08 47⇑ P **P** **03 03 02.8 -0.3**
baz=90
E03A Lebam 90.11 43⇑ P **P** **03 03 03.1 -0.1**
baz=90
HAST UC Hastings Re 90.25 54⇑ P **P** **03 03 04.5 +0.4**
baz=90
B04A Port Angeles 90.36 42⇓ P **P** **03 03 04.7 +0.3**
baz=90,SNR=5.0
M03C McCloud 90.42 49⇓ P **P** **03 03 05.0 +0.2**
baz=90,SNR=5.3
V03C Hunter Liggett 90.45 54⇓ P **P** **03 03 05.6 +0.5**
baz=90
PACP Pacheco Peak 90.53 53⇑ P **P** **03 03 05.7 +0.3**
baz=90
I04A Tendick Farm, 90.53 46⇓ P **P** **03 03 05.0 -0.3**
baz=90
S04C Ingram Canyon, 90.56 53⇑ P **P** **03 03 05.5 -0.1**
baz=91
C04A Brinnon 90.67 42⇓ P **P** **03 03 05.9 +0.1**
baz=91
J04A Umpqua Nationa 90.68 47⇓ P **P** **03 03 06.5 +0.5**
baz=91,SNR=5.8
V04C Ramage Ranch, 90.70 54⇓ P **P** **03 03 05.1 -1.2**
baz=91
GNW Green Mountain 90.75 42 *e* P **P** **03 03 06.6 +0.4**
H04A Detroit Lake 90.81 45⇓ P **P** **03 03 06.2 -0.4**
baz=91
U04C Hernandez Rese 90.86 54⇑ P **P** **03 03 07.8 +0.9**
baz=91
A04A Legoe Bay, Lum 90.98 41⇑ P **P** **03 03 08.1 +0.8**
baz=91,SNR=6.3
PKD Parkfield 91.00 54 P **P** **03 03 08.0 +0.4**
baz=91,SNR=9.1
M05C Lookout 91.16 49⇑ P **P** **03 03 08.3 +0.1**
baz=91
LAVA Lava Cap Winer 91.17 51⇑ P **P** **03 03 08.2 -0.2**
baz=91
J05A Fort Rock 91.32 47⇓ P **P** **03 03 09.5 +0.5**
baz=91,SNR=15
B05A Bryant 91.33 42⇓ P **P** **03 03 08.8 0.0**
baz=91
S05C Merced 91.33 53⇑ P **P** **03 03 09.3 +0.2**
baz=91
E05A Randle 91.34 44⇓ P **P** **03 03 08.1 -0.8**
baz=91
CMB Columbia Colle 91.36 52 *e* P **P** **03 03 09.0 -0.3**
comp=Z,3.6nm,1.1s,mb4.6
CMB *e* pP pP 03 03 20.6 -0.9
CMB Columbia Colle 91.36 52 *e* P **P** **03 03 09.0 -0.3**
CMB *e* *PP pP 03 03 20.6 -0.9
CMB pmax pmax
comp=Z,4.0nm,1.1s,mb4.7
CMB Columbia Colle 91.36 52⇓ P **P** **03 03 09.7 +0.4**
baz=91
SMMC Simmler 91.37 55⇑ P **P** **03 03 10.1 +0.7**
baz=91
U05C Westside ANR, 91.39 54⇑ P **P** **03 03 10.5 +1.0**
baz=91
I05A Bend 91.40 46⇓ P **P** **03 03 10.1 +0.8**
baz=91
A05A Maple Falls 91.43 41⇑ P **P** **03 03 09.5 +0.2**
baz=91
F05A White Salmon 91.47 44⇑ P **P** **03 03 09.3 -0.2**
baz=92
L05A Lakeview 91.47 48⇑ P **P** **03 03 09.9 +0.2**
baz=92
PKM Peak Mountain 91.48 55⇓ P **P** **03 03 10.5 +0.6**
baz=92
G05A Wamic 91.49 45⇓ P **P** **03 03 09.2 -0.5**
baz=92
K05A Summer Lake 91.50 47 P **P** **03 03 10.4 +0.6**
baz=92,SNR=6.1
C05A Tolt Reservoir 91.53 42⇓ P **P** **03 03 09.6 -0.2**
baz=92
BEKR Beckwourth 91.58 50 P **P** **03 03 11.2 +0.9**
baz=92,SNR=5.2
M06C Likely Place G 91.64 49⇓ P **P** **03 03 10.6 +0.1**
baz=92
B06A Marblemount 91.76 42⇑ P **P** **03 03 11.0 +0.1**
baz=92
S06C San Francisco 91.77 52⇑ P **P** **03 03 10.9 -0.2**
baz=92,SNR=9.6
T06C Millerton Lake 91.79 53⇑ P **P** **03 03 10.5 -0.7**
baz=92,SNR=6.6
A06A Chilliwack 91.83 41⇓ P **P** **03 03 11.0 -0.2**
baz=92
E06A Yakima 91.87 44 P **P** **03 03 11.7 +0.2**
baz=92,SNR=5.2
P06A Stead Airport, 91.92 50⇑ P **P** **03 03 11.9 +0.1**
baz=92
F06A Goldendale 91.92 44 P **P** **03 03 12.0 +0.3**
baz=92,SNR=6.0
G06A Carlson Farm, 91.97 45⇓ P **P** **03 03 11.7 -0.2**
baz=92
K06A Valley Falls 91.98 47⇑ P **P** **03 03 12.2 +0.2**
baz=92,SNR=5.9
WCN Washoe City 91.99 51 P **P** **03 03 13.2 +1.0**
baz=92,SNR=7.6
O06A Flanigan 92.02 50⇓ P **P** **03 03 12.5 +0.2**
baz=92,SNR=6.0
D06A Cle Elum 92.04 43⇓ P **P** **03 03 12.1 -0.1**
baz=92
N06A Buffalo Meadow 92.08 49⇑ P **P** **03 03 12.6 0.0**
baz=92
J06A Christmas Vall 92.10 47⇓ P **P** **03 03 12.7 +0.1**
baz=92,SNR=8.5
H06A Lindquist Farm 92.12 45⇓ P **P** **03 03 12.5 -0.1**
baz=92,SNR=10
KCC Kaiser Creek 92.13 53⇓ P **P** **03 03 13.4 +0.5**
baz=92
I06A Prineville 92.13 46⇑ P **P** **03 03 13.0 +0.3**
baz=92,SNR=7.8
R06C Coleville 92.14 52 P **P** **03 03 13.8 +0.9**
baz=92,SNR=7.5
WAKR Walker 92.15 52 *e* P **P** **03 03 13.8 +0.9**
HELL Mitchell Peak, 92.30 54⇑ P **P** **03 03 13.4 -0.3**
baz=92,SNR=10
PAHR Pah Rah Range 92.31 51 *e* P **P** **03 03 13.9 +0.3**
comp=Z,9.6nm,0.9s,mb5.1
PAHR *e* pP pP 03 03 24.4 -1.5
R07C Lee Vining 92.42 52⇓ P **P** **03 03 14.4 +0.2**
baz=92
CIS Catalina Islan 92.50 57⇓ P **P** **03 03 14.5 -0.1**
baz=92
F07A Phinny Hill Vi 92.53 44⇓ P **P** **03 03 14.9 +0.4**
baz=92
A07A Ashnola River, 92.55 41⇓ P **P** **03 03 14.6 +0.1**
baz=92
L07A Adell 92.57 48⇓ P **P** **03 03 14.7 -0.1**
baz=93,SNR=6.6
C07A Waterville 92.62 43 P **P** **03 03 14.4 -0.5**
baz=93,SNR=5.2
D07A Quincy 92.63 43⇓ P **P** **03 03 15.0 +0.1**
baz=93,SNR=7.9
M07A Soldier Meadow 92.64 49⇑ P **P** **03 03 14.6 -0.5**
baz=93
E07A Sunnyside 92.65 44⇑ P **P** **03 03 15.3 +0.3**
baz=93,SNR=6.9
ISA Isabella 92.65 55⇓ P **P** **03 03 14.7 -0.6**
baz=93
G07A Ruggs Ranch, H 92.65 45⇓ P **P** **03 03 14.9 -0.2**
baz=93,SNR=9.3
I07A Izee 92.65 46⇑ P **P** **03 03 15.3 +0.2**
baz=93,SNR=9.6
H07A Lands Inn, Kim 92.66 46⇓ P **P** **03 03 15.1 0.0**
baz=93
B07A Winthrop 92.66 42⇑ P **P** **03 03 14.8 -0.2**
baz=93
K07A Rock Creek Ran 92.70 48⇓ P **P** **03 03 15.5 +0.1**
baz=93,SNR=5.7
J07A Hines 92.72 47⇓ P **P** **03 03 16.0 +0.5**
baz=93
MTUM Tungsten Hills 92.73 53 *e* P **P** **03 03 16.5 +0.8**
MTUM *e* pP pP 03 03 27.5 -0.3
O07A Toulon 92.74 50 P **P** **03 03 15.9 +0.2**
baz=93,SNR=10
HAWA Hanford 92.85 44 *e* P **P** **03 03 16.4 +0.5**
comp=Z,7.3nm,0.8s,mb5.2
HAWA *e* pP pP 03 03 27.1 -1.1
TIN Tinemaha 92.97 53⇓ P **P** **03 03 17.6 +0.8**
baz=93,SNR=5.2
EDW2 Edwards Air Fo 92.97 55⇓ P **P** **03 03 16.7 -0.1**
baz=93,SNR=7.1
CWC Cottonwood Cre 93.03 54⇑ P **P** **03 03 17.7 +0.7**
baz=93
S08C White Mtn Res 93.05 53⇑ P **P** **03 03 17.0 -0.1**
baz=93,SNR=8.6
WVOR Wild Horse Val 93.13 48 *e* P **P** **03 03 17.0 -0.4**
comp=Z,4.8nm,1.0s,mb4.9
WVOR Wild Horse Val 93.13 48 *e* P **P** **03 03 17.0 -0.3**
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
G08A Pilot Rock 93.15 45 P **P** **03 03 17.5 +0.1**
baz=93,SNR=9.3
B08A Colville Reser 93.17 42 P **P** **03 03 16.9 -0.5**
baz=93,SNR=5.6
E08A Dider Farm, El 93.19 44⇑ P **P** **03 03 16.9 -0.6**
baz=93,SNR=5.5
LRMC Laurel Mountai 93.27 55⇑ P **P** **03 03 18.7 +0.5**
baz=93,SNR=6.6
H08A Prairie City 93.29 46⇓ P **P** **03 03 18.0 0.0**
baz=93
I08A Drewsey 93.31 46⇓ P **P** **03 03 17.5 -0.6**
baz=93
C08A Higginbotham F 93.31 42 P **P** **03 03 17.6 -0.4**
baz=93,SNR=7.0
F08A Pendleton 93.32 44⇓ P **P** **03 03 17.9 -0.2**
baz=93
L08A Fields 93.33 48⇓ P **P** **03 03 17.6 -0.7**
baz=93
J08A Circle Bar Ran 93.33 47 P **P** **03 03 18.4 +0.1**
baz=93,SNR=10
D08A Wollman Farm, 93.33 43⇑ P **P** **03 03 17.9 -0.2**

baz=93,SNR=5.2
Q08A Gabbs 93.36 51 ⇑P P 03 03 18.6 +0.1
baz=93,SNR=12
DAC Darwin (Calif) 93.41 54 eP P 03 03 18.7 -0.1
comp=Z,8.8nm,0.7s,mb5.3
DAC epP pP 03 03 30.8 -0.2
DAC Darwin (Calif) 93.41 54 eP P 03 03 18.7 -0.1
DAC e*PP pP 03 03 30.8 -0.2
DAC pmax pmax
comp=Z,9.0nm,0.7s,mb5.3
MPMC Manual Prospec 93.48 54 ⇓P P 03 03 19.0 -0.1
baz=94,SNR=9.0
GRAC Grapevine Rang 93.65 53 ⇓P P 03 03 19.6 -0.3
baz=94,SNR=5.4
A09A Danville 93.72 41 ⇓P P 03 03 19.9 0.0
baz=94,SNR=5.3
D09A Jones Farm, Ri 93.75 43 ⇓P P 03 03 19.3 -0.8
baz=94,SNR=6.7
E09A Wood Farm, Sta 93.82 44 ⇑P P 03 03 20.3 -0.1
baz=94,SNR=10
S09A Goldfield 93.82 53 ⇑P P 03 03 20.6 -0.1
baz=94,SNR=23
K09A Rome 93.82 48 ⇑P P 03 03 20.8 +0.3
baz=94
C09A Chrisman Ranch 93.83 43 ⇓P P 03 03 20.2 -0.2
baz=94
J09A Fry Pan Ranch, 93.85 47 ⇓P P 03 03 20.3 -0.4
baz=94,SNR=8.5
I09A Lost Marbles R 93.91 46 ⇑P P 03 03 21.2 +0.3
baz=94
F09A S2 Ranch, Elgi 93.92 45 ⇓P P 03 03 20.5 -0.4
baz=94
B09A Rice 93.96 42 ⇓P P 03 03 20.9 -0.2
baz=94,SNR=5.3
GSC Goldstone 93.97 55 ⇓P P 03 03 20.8 -0.6
baz=94
R09A Tonopah 93.98 52 ⇓P P 03 03 21.3 0.0
baz=94,SNR=9.9
FURC Furnace Creek, 94.02 54 ⇑P P 03 03 21.9 +0.3
baz=94,SNR=5.5
BMN Battle Mountai 94.03 50 eP P 03 03 23.2 +1.6
comp=Z,9.1nm,0.9s,mb5.2
BMN Battle Mountai 94.03 50 eP P 03 03 23.2 +1.7
BMN pmax pmax
comp=Z,9.0nm,0.9s,mb5.2
O09A Fish Creek Ran 94.03 50 P P 03 03 22.1 +0.5
baz=94,SNR=9.4
MONP Monument Peak 94.11 57 ⇓P P 03 03 23.1 +1.0
baz=94
PFO Pinyon Flat Ob 94.14 57 eP P 03 03 22.1 -0.1
comp=Z,5.3nm,0.8s,mb5.0
PFO Pinyon Flat Ob 94.14 57 eP P 03 03 22.1 -0.1
PFO pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
PFO Pinyon Flat Ob 94.14 57 ⇑P P 03 03 22.5 +0.3
baz=94
BMO Blue Mountains 94.28 46 eP P 03 03 22.3 -0.3
comp=Z,6.8nm,1.0s,mb5.0
BMO Blue Mountains 94.28 46 eP P 03 03 22.3 -0.3
BMO pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
S10A Tonopah Range, 94.33 52 P P 03 03 23.2 +0.2
baz=94,SNR=22
A10A Northport 94.39 41 ⇓P P 03 03 23.2 +0.2
baz=94,SNR=7.1
F10A Beach Ranch, E 94.42 44 ⇓P P 03 03 22.8 -0.3
baz=94,SNR=16
U10A Ash Meadows, A 94.44 54 ⇑P P 03 03 23.3 -0.2
baz=94
D10A Wagner Farm, O 94.45 43 P P 03 03 23.0 -0.3
baz=94,SNR=16
K10A MacKenzie Ranc 94.46 48 ⇑P P 03 03 23.7 +0.3
baz=94
E10A Myers Farm, Un 94.53 44 ⇓P P 03 03 23.3 -0.4
baz=94
TPNV Topopah Spring 94.54 53 eP P 03 03 23.8 -0.2
comp=Z,11nm,1.1s,mb5.2
TPNV Topopah Spring 94.54 53 eP P 03 03 23.8 -0.2
TPNV pmax pmax
comp=Z,11nm,1.1s,mb5.2
TPNV Topopah Spring 94.54 53 ⇑P P 03 03 23.7 -0.3
baz=94
Q10A Clear Creek Ra 94.55 52 ⇑P P 03 03 24.1 +0.2
baz=94
P10A Eureka 94.55 51 ⇓P P 03 03 24.5 +0.5
baz=94
B10A Chitwood Farm, 94.57 42 ⇓P P 03 03 24.0 +0.2
baz=95
O10A Cortez Mining, 94.57 50 ⇑P P 03 03 24.9 +0.9
baz=95
J10A Berg Farm, Mel 94.58 47 ⇓P P 03 03 24.9 +0.9
baz=95
NEW Newport 94.64 42 eP P 03 03 23.7 -0.5
comp=Z,7.7nm,0.8s,mb5.2
NEW epP pP 03 03 35.1 -1.2
NEW Newport 94.64 42 eP P 03 03 23.7 -0.4
NEW e*PP pP 03 03 35.1 -1.2
NEW pmax pmax
comp=Z,8.0nm,0.8s
H10A Noah's Angus R 94.66 46 P P 03 03 24.5 +0.1
baz=95,SNR=9.5
L10A Juniper Basin 94.71 48 ⇑P P 03 03 24.8 +0.2
baz=95
S11A Rachel 94.99 53 ⇓P P 03 03 26.4 +0.4
baz=95
G11A Walters Elk Ra 95.05 45 ⇓P P 03 03 25.8 -0.3
baz=95
K11A Parker Ranch, 95.07 48 ⇓P P 03 03 26.5 +0.2
baz=95
Q11A Duckwater 95.13 52 P P 03 03 26.8 +0.2
baz=95,SNR=12
E11A Bogner Ranch, 95.14 44 ⇓P P 03 03 26.1 -0.5
baz=95,SNR=8.7
B11A Sandpoint 95.15 42 ⇓P P 03 03 25.8 -0.6
baz=95,SNR=7.9
R11A Troy Canyon, C 95.16 52 ⇓P P 03 03 27.2 +0.4
baz=95,SNR=7.6
F11A Grangeville 95.16 45 ⇓P P 03 03 25.3 -1.2
baz=95
M11A Holland Ranch, 95.17 49 ⇓P P 03 03 27.8 +1.0
baz=95
A11A Hall Mountain, 95.18 41 P P 03 03 26.9 +0.3
baz=95,SNR=14
O11A Cowboy Ranch, 95.20 50 ⇓P P 03 03 27.6 +0.6
baz=95,SNR=6.2
L11A Cat Creek Banc 95.24 48 ⇓P P 03 03 27.1 0.0
baz=95
MFID Camas Ranch 95.26 47 ⇓P P 03 03 27.7 +0.6
baz=95
T11A Corn Creek, Al 95.38 53 ⇓P P 03 03 28.0 +0.1
baz=95,SNR=9.6
A12A Yaak River Ran 95.64 41 ⇓P P 03 03 29.4 +0.7
baz=96
B12A Libby 95.67 42 ⇓P P 03 03 29.1 +0.3
baz=96
N12A Clover Valley, 95.71 50 ⇑P P 03 03 29.7 +0.5
baz=96,SNR=12
P12A McGill 95.75 51 ⇑P P 03 03 30.0 +0.6
baz=96
D12A Red Ives Fores 95.77 43 ⇑P P 03 03 29.1 -0.2
baz=96
F12A Elk City 95.78 45 ⇑P P 03 03 28.4 -1.0
baz=96
J12A Stokes Ranch, 95.78 47 P P 03 03 29.8 +0.3
baz=96,SNR=6.4
Q12A Willow Creek R 95.78 51 ⇓P P 03 03 30.4 +0.7
baz=96,SNR=7.5
L12A House Creek Ra 95.79 48 ⇑P P 03 03 30.4 +0.8
baz=96
M12A Wells 95.83 49 ⇑P P 03 03 30.3 +0.5
baz=96
SVE Sverdlovsk 95.86 326⇑eP P 03 03 28.5 -1.0
SVE MLR MLR
comp=Z,574nm,20.0s,MS5.0
K12A Draper Farm, C 95.90 48 ⇑P P 03 03 30.4 +0.4
baz=96
O12A Currie 95.91 50 ⇓P P 03 03 30.3 +0.2
baz=96,SNR=6.8
AB31 Akbulak array 96.04 319⇑eP P 03 03 27.7 -2.8
HLID Hailey 96.29 47 eP P 03 03 31.3 -0.5
comp=Z,2.8nm,0.9s,mb4.7
HLID Hailey 96.29 47 ⇑P P 03 03 31.8 -0.1
baz=96
Y13A Salome 96.33 57 ⇓P P 03 03 31.0 -1.2
baz=96
M13A Montello 96.39 49 ⇑P P 03 03 32.8 +0.4
baz=96,SNR=7.9
B13A Whitefish 96.41 42 ⇑P P 03 03 32.4 +0.2
baz=96,SNR=9.5
T13A Saint George 96.42 53 ⇑P P 03 03 33.0 +0.5
baz=96
F13A Darby 96.43 45 ⇑P P 03 03 31.6 -0.7
baz=96,SNR=10
H13A Challis 96.44 46 ⇓P P 03 03 32.1 -0.4
baz=96
A13A Flathead Natio 96.46 42 ⇓P P 03 03 33.0 +0.5
baz=96
J13A Cove Ranch, Pi 96.46 47 ⇑P P 03 03 33.0 +0.4
baz=96
S13A Holt Ranch, En 96.48 53 ⇑P P 03 03 33.3 +0.5
baz=96
I13A Wildhorse Cree 96.52 47 ⇓P P 03 03 32.5 -0.4
baz=96,SNR=5.5
YKW3 Yellowknife Ar 96.54 28 eP P 03 03 32.1 -0.3
YKA Yellowknife Ar 96.54 28 P P 03 03 31.8 -0.7
comp=Z,3.1nm,0.7s,mb4.9,baz=272,slow=4.6,SNR=43
YKA LR LR 03 41 10.5
comp=Z,258nm,20.0s,MS4.7,baz=290,slow=32
E13A Victor 96.55 44 ⇑P P 03 03 33.7 +0.8
baz=96
L13A Double Diamond 96.58 48 ⇑P P 03 03 33.3 +0.2
baz=97
ARU Arti 97.00 326 eP P 03 03 33.3 -1.4
comp=Z,3.2nm,0.6s,mb4.9
ARU Arti 97.00 326 dP P 03 03 31.8 -2.9
ARU 03 07 27.4
ARU S SKSac 03 14 06.0 -2.6
ARU SS SS 03 21 26.5 -4.8
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
G14A Jackson 97.02 45 ⇑P P 03 03 34.6 -0.5
baz=97
K14A Jones Ranch, D 97.17 48 ⇓P P 03 03 35.3 -0.5
baz=97,SNR=6.3
EDM Edmonton 97.19 37 eP P 03 03 35.5 -0.2
AKTK Aktyubinsk 97.31 320 P P 03 03 34.0 -2.2
AKTO Aktyubinsk 97.31 320 P P 03 03 34.0 -2.2
comp=Z,2.0nm,0.8s,mb4.6,baz=113,slow=4.7,SNR=5.6
HVU Hansel Valley 97.45 49 eP P 03 03 37.7 +0.7
MCMT McKenzie Canyo 97.45 46 eP P 03 03 36.5 -0.5
M15A Larsen Ranch, 97.69 49 ⇑P P 03 03 38.1 0.0
baz=98
BOZ Bozeman (W) 98.32 45 eP P 03 03 41.9 +1.0
comp=Z,3.2nm,0.9s,mb4.8
BOZ Bozeman (W) 98.32 45 eP P 03 03 41.9 +1.0
BOZ pmax pmax
comp=Z,3.0nm,0.9s,mb4.8
HWUT Hardware Ranch 98.35 49 eP P 03 03 40.4 -0.8
comp=Z,2.7nm,0.8s,mb4.8
WUAZ Wupatki 98.42 55 eP P 03 03 41.9 +0.3
TMUT Trail Mountain 98.61 51 eP P 03 03 43.6 +1.3
TPAW Teton Pass 98.81 47 eP P 03 03 43.7 +0.6
REDW Red Top Meadow 98.88 47 eP P 03 03 44.1 +0.6
comp=Z,4.3nm,1.1s,mb4.9
MOOW Moose Ponds 98.96 47 eP P 03 03 43.8 0.0
BW06 Boulder Array 99.84 48 ePdif Pdif 03 03 46.2 -1.2
comp=Z,4.2nm,1.0s
PDAR Pinedale Array 99.84 48 P Pdif 03 03 47.0 -0.5
comp=Z,2.6nm,0.9s,baz=237,slow=1.8,SNR=19
PDAR PP PP 03 07 57.2 +4.5
comp=Z,0.5nm,0.8s,baz=318,slow=2.0,SNR=4.2
PDAR LR LR 03 43 31.7
comp=Z,477nm,19.3s,MS5.0,baz=268,slow=32
PV01 Paradox Valley 100.67 52 ePdif Pdif 03 03 51.9 +0.7
RES Resolute Bay 101.53 14 ePdif Pdif 03 03 54.5 -0.5
comp=Z,93nm,0.8s
RES Resolute Bay 101.53 14 eP Pdif 03 03 54.5 -0.5
RES pmax pmax
comp=Z,93nm,0.8s
FINES FINESS Array B 111.88 335 Pdif Pdif 03 04 39.5 -1.5
FINES FINESS Array B 111.88 335 iPKIKP PKiKP 03 08 37.0 -0.7
FINES FINESS Array B 111.88 335 Pdiff Pdif 03 04 39.5 -1.5
comp=Z,0.8nm,0.9s,baz=72,slow=6.2,SNR=5.3
AKASG Malin Array Be 115.15 324 PKP PKiKP 03 08 44.1 -0.3
comp=Z,0.2nm,0.3s,baz=58,slow=2.7,SNR=4.1
NB2 NORSAR Subarra 117.80 340 PKPdf PKPdf 03 08 47.4 -1.7
comp=Z,1.1nm,0.8s,baz=44,slow=1.9
NOA NORSAR Array B 117.80 340 PKP PKPdf 03 08 48.2 -0.9
NOA NORSAR Array B 117.80 340 PKP PKPdf 03 08 48.2 -0.9
comp=Z,1.3nm,0.7s,baz=46,slow=2.0,SNR=6.4
LSZ Lusaka 120.91 248 ePKPdf PKPdf 03 08 56.8 +0.4
JTS JuntasAbangare 123.07 82 ePKPdf PKPdf 03 08 60.0 -0.6
BRG Berggiesshubel 123.42 330 ePKIKP PKPdf 03 09 00.1 -0.1
BRG pmax pmax
comp=Z,2.0nm,1.0s
BRG Berggiesshubel 123.42 330 eP PKPdf 03 09 00.1 -0.1
comp=Z,3.2nm,1.0s
CLL Collm 123.61 331 ePKIKP PKPdf 03 08 55.0 -5.6
CLL e 03 09 01.0
CLL MLR MLR
comp=Z,200nm,17.7s,MS4.8
CLL Collm 123.61 331 ePKPdf PKPdf 03 09 01.0 +0.4
CLL ex x 03 09 06.0
KHC Kasperske Hory 124.67 328 ePKPDF PKPdf 03 09 02.5 -0.2
KHC epPKP pPKPdf 03 09 12.5 -2.8
GEC2 GERESS Array S 124.77 328 ePKPdf PKPdf 03 09 02.6 -0.3
GERES GERESS Array B 124.77 328 PKP PKPdf 03 09 03.1 +0.2
comp=Z,1.2nm,0.6s,baz=108,slow=2.1,SNR=8.5
GRA1 Grafenberg Arr 125.52 330 ePKP PKPdf 03 09 04.0 -0.3
GRF Grafenberg Arr 125.52 330 ePKP PKPdf 03 09 04.0 -0.3
LCO Las Campanas 125.93 132 ePKPdf PKPdf 03 09 05.7 -0.1
WLF Walferdange 127.95 333 PKP PKPdf 03 09 08.6 -0.3
GIVF Givet 128.23 334 ePKIKP PKPdf 03 09 07.8 -1.7
comp=Z,21nm,1.1s
CDF Champ du Feu 128.31 331 ePKIKP PKPdf 03 09 08.3 -1.4
HINF Hinteralfeld 128.92 331 ePKIKP PKPdf 03 09 09.5 -1.4
comp=Z,15nm,1.1s
HAU Haudompre 129.03 331 ePKIKP PKPdf 03 09 09.2 -1.9
MEZF Maizieres J'vi 129.29 332 ePKIKP PKPdf 03 09 09.6 -1.9
CABF La Chapelle 130.13 330 ePKIKP PKPdf 03 09 12.0 -1.2
LOR Lormes 130.74 332 ePKIKP PKPdf 03 09 12.0 -2.3
comp=Z,14nm,1.1s
SSF Saint Saulge 131.06 332 ePKIKP PKPdf 03 09 13.4 -1.5
comp=Z,22nm,1.3s
TCF Toulx Ste Croi 132.23 332 ePKIKP PKPdf 03 09 14.9 -2.3
ROSC El Rosal 133.44 89 PKP PKPdf 03 09 22.1 +1.6
comp=Z,3.3nm,0.5s,baz=101,slow=22,SNR=5.0
LPAZ La Paz 134.22 119 ePKPdf PKPdf 03 09 21.5 -0.2
LPAZ La Paz 134.22 119 PKP PKPdf 03 09 22.8 +1.1
comp=Z,3.4nm,0.9s,baz=276,slow=2.8,SNR=6.1
SDV Santo Domingo 137.20 83 ePKPdf PKPdf 03 09 27.4 0.0
ESDC Sonseca Array 140.20 331 PKP PKPdf 03 09 32.4 +0.3
comp=Z,0.2nm,0.4s,baz=13,slow=3.0,SNR=5.2
ESDC PP PP 03 12 28.6 -0.4
comp=Z,2.1nm,0.9s,baz=29,slow=6.9,SNR=7.3
TOA0 Torodi Ar. Sit 150.28 286 ePKPbc PKPbc 03 09 54.4 -0.9
TORD Torodi Ar. Bea 150.28 286 PKPbc PKPbc 03 09 54.4 -0.9
comp=Z,15nm,0.7s,baz=72,slow=2.3,SNR=84
TORD PKPab PKPab 03 10 01.4 -0.2
comp=Z,10nm,0.7s,baz=71,slow=2.7,SNR=12
KIC Kosan Boka 157.30 272 eP PKPab 03 10 33.4 +2.0
comp=Z,58nm,0.9s
TIC Toumodi 157.58 273 eP PKPab 03 10 34.5 +1.9
comp=Z,46nm,0.9s
LIC Lamto 157.59 272 eP PKPab 03 10 36.2 +3.6
comp=Z,28nm,1.0s

IDC 04 03:05:24.4±5.7, 810S×12407E, h75km±66km, mb3.0/2, mb1 3.3/5, mb1mx3.2/16, mbtmp3.2/5, ML3.6/2, Error ellipse: s-maj=60.0km s-min=35.0km az=50.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**2.13**	**191**	P		Pn	03 05 59.3	+1.4
	48nm,0.3s,baz=13,slow=4.0,SNR=50						
BATI				S		Sn	03 06 24.1	+0.5
	43nm,0.3s,baz=358,slow=7.9,SNR=14						
FITZ	**Fitzroy Crossi**	**10.06**	**171**	P		Pn	03 07 43.1	-3.0
	0.3nm,0.3s,baz=5.0,slow=14,SNR=20						
FITZ				S		Sn	03 09 24.1	-13
	0.7nm,0.3s,baz=106,slow=21,SNR=9.4						
WRA	**Warramunga Arr**	**15.41**	**141**	P		Pn	03 08 56.6	-0.9
	0.3nm,0.3s,baz=316,slow=14,SNR=25						
WRA				S		S	03 11 34.8	-24
	0.3nm,0.3s,baz=320,slow=25,SNR=6.8						
ASAR	**Alice Springs**	**18.12**	**150**	P		Pn	03 09 31.3	+0.1
	0.1nm,0.3s,baz=322,slow=11,SNR=11						
ASAR				S		S	03 12 35.8	-18
	0.0nm,0.3s,baz=332,slow=29,SNR=2.9						
SONM	**Songino Array**	**57.85**	**346**	P		P	03 15 08.6	+0.5
	0.2nm,0.4s,baz=156,slow=6.9,SNR=2.1						
MKAR	**Makanchi Array**	**66.07**	**330**	P		P	03 16 03.0	-0.4
	0.2nm,0.5s,baz=137,slow=7.7,SNR=3.7						

CASC 04 03:17:00.5±2.5, 1191N×8803W, h33km±25km, MD3.8, 2C-3D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLLM	**Bellamira**	**1.54**	**352**	⇓iP	x	03 17 44.5	
BLLM				eS	x	03 18 04.8	
SNVI	**San Vicente**	**1.87**	**335**	eP	x	03 17 51.2	
SNVI				eS	x	03 18 14.2	
LCBS	**La Ceiba**	**1.97**	**332**	eP	x	03 17 52.9	
LCBS				eS	x	03 18 16.2	
LFRS	**El Faro**	**1.98**	**329**	⇓eP	x	03 17 53.1	
LFRS				eS	x	03 18 17.1	
LBRS	**Las Brisas**	**2.07**	**332**	eP	x	03 17 53.4	
LBRS				eS	x	03 18 18.0	
SNET	**Serv Nac Est T**	**2.12**	**327**	⇑eP	x	03 17 46.1	
SNET				eS	x	03 18 09.5	
BOQS	**Boqueron**	**2.19**	**326**	eP	x	03 17 55.6	
BOQS				eS	x	03 18 22.9	
SBLS	**San Blas**	**2.47**	**321**	⇑eP	x	03 18 00.3	
SBLS				eS	x	03 18 31.1	
SNJE	**San Jose**	**2.48**	**322**	eP	x	03 18 00.0	
SNJE				eS	x	03 18 29.6	
RTR	**El Retiro**	**2.53**	**322**	eP	x	03 18 00.6	
RTR				eS	x	03 18 30.9	
JCR	**Jicaral**	**3.52**	**125**	eP	Pn	03 17 54.4	+1.6
CGA2	**Cerro Gallo 2**	**3.97**	**118**	eP	Pn	03 17 59.9	+0.9
CGA2				eS	Sn	03 18 46.1	+1.6
PRS1	**Puriscal**	**4.12**	**117**	eP	Pn	03 18 01.7	+0.6
LAJ	**Bijagual**	**4.34**	**118**	eP	Pn	03 18 00.8	-3.4
LAJ				eS	Sn	03 18 46.2	-7.4
LCR2	**La Lucha 2**	**4.50**	**118**	eP	Pn	03 18 06.1	-0.3
QCR	**Quepos**	**4.53**	**123**	eP	Pn	03 18 08.0	+1.3
URSC	**Urasca**	**4.65**	**116**	eP	Pn	03 18 08.9	+0.4
URSC				eS	Sn	03 19 03.7	+2.3
BAR1		**5.34**	**119**	⇓eP	Pn	03 18 17.6	-0.4

*ISCJB **04** 03:44:44.7±0.6, 2839S±008×1793W±0.1, h407km±8km, mb4.1/11, Error ellipse: s-maj=15.8km s-min=12.3km az=25.7*
*IDC **04** 03:44:46.7±1.1, 2834S×17930W, h413km±15km, mb3.7/6, mb1 3.9/8, mb1mx3.7/14, mbtmp3.7/8, Error ellipse: s-maj=28.6km s-min=14.9km az=154.0*
*NEIC **04** 03:44:46.4±0.7, 2835S×17921W, h417km±9km, mb4.2/6, Error ellipse: s-maj=12.0km s-min=11.7km az=45.0*

ISC 04 03:44:45.5±0.6, 2833S±006×1792W±01, h400km±7km, n33, σ1§07/33, mb4.1/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.48**	**129**	P	Pn	**03 45 40.6**	**+2.1**
	165nm,0.3s,baz=90,slow=22,SNR=8.9						
RAO				S	S	**03 46 20.2**	**-1.1**
	469nm,0.3s,baz=257,slow=22,SNR=6.3						
MXZ	**Matakaoa Point**	**9.44**	**192**	eP	P	**03 46 56.6**	**-0.1**
MXZ	**Matakaoa Point**	**9.44**	**192**	ePN	Pn	**03 46 55.6**	**-1.3**
URZ	**Urewera**	**10.37**	**196**	eP	P	**03 47 05.9**	**-1.1**
URZ	**Urewera**	**10.37**	**196**	P	P	**03 47 08.3**	**+1.3**
	1.9nm,0.3s,baz=6.6,slow=6.1,SNR=22						
URZ				S	S	**03 49 04.2**	**+0.6**
	4.1nm,0.3s,baz=103,slow=22,SNR=13						
URZ	**Urewera**	**10.37**	**196**	ePN	Pn	**03 47 07.4**	**-0.2**
KNZ	**Kokohu**	**10.97**	**193**	eP	P	**03 47 16.6**	**+3.0**
KNZ	**Kokohu**	**10.97**	**193**	PN	Pn	**03 47 12.3**	**-2.3**
BKZ	**Black Stump Fm**	**11.38**	**197**	eP	P	**03 47 18.5**	**+0.3**
BKZ	**Black Stump Fm**	**11.38**	**197**	ePN	Pn	**03 47 18.5**	**-0.8**
BFZ	**Birch Farm**	**12.87**	**196**	PN	P	**03 47 36.4**	**+1.9**
MRZ	**Mangatainoka R**	**13.03**	**198**	eP	P	**03 47 36.4**	**+0.2**
MRZ	**Mangatainoka R**	**13.03**	**198**	ePN	P	**03 47 36.4**	**+0.2**
DZM	**Mont Dzumac**	**14.38**	**292**	P	P	**03 47 52.6**	**+1.4**
	1.1nm,0.3s,baz=94,slow=15,SNR=11						
HNR	**Honiara**	**27.14**	**310**	eP	P	**03 49 54.4**	**+0.2**
	330nm,1.1s,mb5.7						
CTA	**Charters Tower**	**32.44**	**277**	eP	P	**03 50 41.1**	**+0.6**
	11nm,0.6s,mb4.4						
CTA	**Charters Tower**	**32.44**	**277**	P	P	**03 50 41.4**	**+0.9**
	14nm,0.7s,mb4.4,baz=104,slow=12						
CTAO	**Charters Tower**	**32.44**	**277**	eP	P	**03 50 41.0**	**+0.5**
	14nm,0.6s,mb4.5						
COEN	**Coen**	**37.69**	**284**	eP	P	**03 51 24.7**	**-0.1**
	6.6nm,0.9s,mb4.0						
ASAR	**Alice Springs**	**42.18**	**265**	P	P	**03 52 00.8**	**-0.2**
	3.6nm,0.7s,mb3.8,baz=95,slow=7.3,SNR=51						
ASAR				S	S	**03 57 50.7**	**-0.1**
	0.6nm,0.9s,baz=107,slow=16,SNR=3.4						
WB2	**Warramunga Arr**	**42.96**	**271**	eP	P	**03 52 06.2**	**-1.1**
WRA	**Warramunga Arr**	**42.97**	**271**	P	P	**03 52 06.8**	**-0.7**
	5.1nm,0.6s,mb4.1,baz=108,slow=6.2,SNR=137						
WRA				S	S	**03 57 59.6**	**-2.8**
	1.8nm,0.9s,baz=109,slow=14,SNR=5.9						
FITZ	**Fitzroy Crossi**	**51.30**	**269**	eP	P	**03 53 11.8**	**+0.9**
	11nm,1.2s,mb4.0						
MJAR	**Matsushiro Arr**	**75.93**	**326**	P	P	**03 55 48.5**	**-0.9**
	3.3nm,0.8s,mb4.0,baz=160,slow=5.5,SNR=14						
MAJO	**Matsushiro**	**75.93**	**326**	eP	P	**03 55 48.6**	**-0.8**
	6.7nm,0.8s,mb4.3						
KSRS	**Korea Array**	**82.07**	**320**	P	P	**03 56 23.3**	**+1.0**
	1.7nm,0.8s,mb3.8,baz=146,slow=6.7,SNR=3.5						
NVAR	**Mina Array Bea**	**87.46**	**43**	P	P	**03 56 49.4**	**+0.6**
	1.1nm,0.8s,mb3.6,baz=226,slow=7.3,SNR=6.3						
TUC	**Tucson**	**88.67**	**52**	eP	P	**03 56 54.8**	**+0.1**
	1.9nm,0.9s,mb3.8						
LAZ	**Ladron**	**92.37**	**52**	eP	P	**03 57 10.8**	**-0.9**
FINES	**FINESS Array B**	**142.84**	**340**	PKhKP		04 03 27.1	
	1.1nm,1.0s,baz=66,slow=4.7,SNR=5.4						
FINES				PKP	PKPdf	04 03 30.6	-0.7
	1.1nm,0.9s,baz=88,slow=4.4,SNR=4.1						
NOA	**NORSAR Array B**	**146.54**	**351**	PKPbc	PKPbc	04 03 39.4	-0.5
	1.0nm,0.7s,baz=16,slow=4.6,SNR=3.2						
MALT	**Malatya**	**147.19**	**298**	ePKPbc	PKPbc	04 03 40.4	-2.0
AKASG	**Malin Array Be**	**149.00**	**324**	PKPbc	PKPbc	04 03 46.0	-0.6
	1.1nm,0.5s,baz=48,slow=3.2,SNR=6.7						

*IDC **04** 03:45:07.4±4.5, 2311N×12157E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=96.4km s-min=54.0km az=6.0*
*ISCJB **04** 03:45:26.2±0.6, 2437N±009×12194E±004, h102km±6km, mb3.5/5, Error ellipse: s-maj=15.1km s-min=5.9km az=8.2*
*JMA **04** 03:45:27.8±0.2, 2460N×12201E, h86km±2km, M3.3*
*NEIC **04** 03:45:27.6±1.3, 2468N×12176E, h93km±8km, mb3.7/2, Error ellipse: s-maj=32.6km s-min=24.5km az=113.0*
*BJI **04** 03:45:30.2, 2458N×12173E, h107km, mb4.3*

ISC 04 03:45:26.8±0.6, 2428N±009×12195E±004, h100km±6km, n19, σ1§17/26, mb3.5/5, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.34**	**252**	ePn	Pn	**03 45 42.9**	**+1.3**
YHNB	**Yeheng**	**0.65**	**306**	ePn	Pn	**03 45 42.4**	**-1.4**
TATO	**Taipei**	**0.81**	**329**	ePn	Pn	**03 45 41.2**	**-4.1**
YOJ	**Yonaguni jima**	**0.98**	**79**	P	Pn	**03 45 46.5**	**-0.6**
YOJ				S	Sn	**03 46 00.4**	**-1.9**
IRIF	**Iriomote-Funau**	**1.62**	**88**	P	Pn	**03 45 54.9**	**+0.3**
IRIF				S	Sn	**03 46 14.7**	**-1.0**
HATJ	**Hateruma jima**	**1.71**	**97**	P	Pn	**03 45 56.6**	**+0.9**
HATJ				eS	Sn	**03 46 18.1**	**+0.5**
JKRS	**Kuro-shima**	**1.88**	**91**	P	Pn	**03 45 58.8**	**+1.0**
JKRS				S	Sn	**03 46 21.9**	**+0.4**
JIJ	**Ishigaki jima**	**2.00**	**87**	P	Pn	**03 45 59.5**	**+0.1**
JIJ				S	Sn	**03 46 24.1**	**-0.2**
JTJ	**Tarama**	**2.53**	**81**	eS	Sn	**03 46 37.1**	**+0.4**
QZH	**Quanzhou**	**3.13**	**283**	P	Pn	**03 46 16.1**	**+1.9**
QZH				S	Sn	**03 46 49.8**	**-1.0**
QZH				Smax			
	comp=N,660nm,0.5s						
QZH				Smax			
	comp=E,300nm,0.7s						
NJ2	**Nanjing**	**8.21**	**341**	eP	Pn	**03 47 27.4**	**+4.3**
NJ2				XP		03 47 48.6	
NJ2				S	Sn	**03 48 55.5**	**+1.4**
NJ2				Smax			
	comp=N,80nm,0.7s						
NJ2				Smax			
	comp=E,40nm,0.6s						
NJ2				LR	LR		
	comp=N,1μm,12.6s						
NJ2				LR	LR		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,960nm,17.3s						
NJ2				LR	LR		
	comp=Z,390nm,13.8s						
KSRS	**Korea Array**	**14.09**	**20**	Pn	**Pn**	**03 48 45.2**	**+3.5**
	comp=Z,0.6nm,0.3s,baz=201,slow=12,SNR=22						
CHTO	**Chiang Mai**	**22.07**	**260**	*e*P	**P**	**03 50 14.5**	**+0.8**
	comp=Z,1.8nm,0.6s,mb3.6						
SONM	**Songino Array**	**26.55**	**336**	P	**P**	**03 50 55.0**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.4,baz=155,slow=10.0,SNR=6.8						
MK31	**Makanchi Array**	**38.76**	**316**	*e*P	**P**	**03 52 41.8**	**+0.5**
MKAR	**Makanchi Array**	**38.76**	**316**	P	**P**	**03 52 38.8**	**-2.5**
	comp=Z,0.5nm,0.7s,mb3.5,baz=108,slow=9.7,SNR=5.6						
EKS2	**Erkin-Say**	**43.53**	**307**	*e*P	**P**	**03 53 18.1**	**-2.3**
	comp=Z,0.5nm,0.4s,mb3.6						
YKA	**Yellowknife Ar**	**82.61**	**23**	P	**P**	**03 57 38.4**	**-0.1**
YKA	**Yellowknife Ar**	**82.61**	**23**	P	**P**	**03 57 38.4**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=312,slow=4.9,SNR=8.0						

*ISCJB **04** 03:45:27.0±1.4, 174S±03×1790W±02, h513km±20km, mb3.8/13, Error ellipse: s-maj=49.3km s-min=12.3km az=152.1*
*IDC **04** 03:45:28.0±2.2, 1728S×17902W, h506km±29km, mb3.4/8, mb1 3.7/9, mb1mx3.5/15, mbtmp3.4/9, Error ellipse: s-maj=50.1km s-min=12.7km az=153.0*
*NEIC **04** 03:45:28.1±1.0, 1747S×17891W, h516km±13km, mb4.0/6, Error ellipse: s-maj=34.9km s-min=8.7km az=152.0*
ISC 04 03:45:28.1±1.4**, 175S**±03×**1789W**±02**, h513**km±19km**, n22, σ0^{s}77**/19**, mb3.8**/13**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.74**	**64**	P	**P**	**03 47 22.0**	**-0.3**
	4.6nm,0.3s,baz=352,slow=6.3,SNR=6.1						
ARMA	**Armidale**	**29.74**	**239**	*e*P	**P**	**03 50 53.4**	**+1.0**
CTAO	**Charters Tower**	**33.03**	**260**	*e*P	**P**	**03 51 21.1**	**+0.3**
	6.1nm,0.8s,mb4.2						
COEN	**Coen**	**36.60**	**270**	*e*P	**P**	**03 51 51.6**	**+0.9**
	2.0nm,0.8s,mb3.7						
STKA	**Stephens Creek**	**38.41**	**241**	⇓*i*P	**P**	**03 52 05.9**	**+0.6**
	3.5nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**03 52 06.0**	**+0.6**
	4.0nm,0.4s,mb4.3,baz=81,slow=9.8,SNR=18						
WRA	**Warramunga Arr**	**44.22**	**259**	P	**P**	**03 52 50.8**	**-0.8**
	0.8nm,0.3s,mb3.8,baz=94,slow=7.8,SNR=9.4						
ASAR	**Alice Springs**	**44.43**	**254**	P	**P**	**03 52 53.2**	**0.0**
	17nm,0.6s,mb4.7,baz=88,slow=8.1,SNR=57						
FORT	**Forrest**	**49.75**	**244**	*e*P	**P**	**03 53 31.9**	**-1.3**
	13nm,0.6s,mb4.5						
FORT	**Forrest**	**49.75**	**244**	*e*P	**P**	**03 53 32.0**	**-1.3**
	1.9nm,0.6s,mb3.7						
FITZ	**Fitzroy Crossi**	**52.61**	**260**	P	**P**	**03 53 54.7**	**+0.5**
	baz=90,slow=10						
KLBR	**Kellerberrin**	**58.58**	**243**	*e*P	**P**	**03 54 34.2**	**-1.4**
	24nm,1.3s,mb4.3						
MJAR	**Matsushiro Arr**	**67.24**	**324**	P	**P**	**03 55 31.0**	**-0.2**
	1.2nm,0.8s,mb3.5,baz=164,slow=7.0,SNR=4.1						
CMB	**Columbia Colle**	**77.85**	**44**	*e*P	**P**	**03 56 32.2**	**-0.3**
	2.0nm,0.9s,mb3.5						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**03 56 41.7**	**+0.8**
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**03 56 41.7**	**+0.8**
	1.1nm,0.6s,mb3.4,baz=219,slow=7.1,SNR=13						
TXAR	**Lajitas Array**	**86.18**	**58**	P	**P**	**03 57 16.1**	**+1.0**
	1.2nm,0.8s,mb3.6,baz=220,slow=8.1,SNR=8.7						
PDAR	**Pinedale Array**	**87.37**	**44**	P	**P**	**03 57 20.4**	**+0.1**
	0.8nm,0.5s,mb3.6,baz=218,slow=4.2,SNR=9.8						
YKA	**Yellowknife Ar**	**94.13**	**25**	P	**P**	**03 57 50.0**	**-1.1**
	0.1nm,0.4s,mb3.3,baz=244,slow=4.4,SNR=3.9						
AAK	**Ala-Archa**	**113.70**	**309**	*e*PKP	PKiKP	04 03 08.4	+0.3
MORC	**Moravsky Berou**	**145.12**	**341**	*e*PKPdf	PKPdf	04 04 06.0	-0.8
GERES	**GERESS Array B**	**147.04**	**345**	PKPbc	PKPbc	04 04 12.6	-0.4
	0.6nm,0.6s,baz=22,slow=3.2,SNR=4.1						

*NEIC **04** 03:50:43.0, 1698N×100.17W, h25km, MD3.6(MEX), After MEX.*
MEX 04 03:50:43.4±0.6**, 1698N**×**10016W, h20**km±7km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.12**	**303**	*i* P	Pb	03 50 46.7	-0.9
CAIG				*i* S	Sb	03 50 49.5	-0.9
ACX	**Acapulco**	**0.26**	**116**	*i* P	Pb	03 50 48.5	-0.9
ACX				*i* S	Sb	03 50 52.5	-1.0
MEIG	**Mezcala**	**1.07**	**29**	*i* P	Pb	03 50 59.9	-3.4
MEIG				*i* S	Sb	03 51 13.1	-3.7
UTMO	**Huajuapan**	**2.40**	**69**	*e*P	Pn	03 51 18.1	-3.5
UTMO				*i* S	Sn	03 51 48.4	-2.1
PPM	**Popocatepetl**	**2.54**	**35**	*i* P	Pn	03 51 21.8	-1.6
PPM				*i* S	Sn	03 51 52.7	-1.1
IIO	**Organos**	**2.93**	**28**	*i* P	Pn	03 51 27.2	-1.7
IIO				*i* S	Sn	03 51 58.0	-5.6

*ISCJB **04** 04:08:14.0±0.9, 3975N±005×2569E±005, h11km±6km, Error ellipse: s-maj=8.6km s-min=5.5km az=31.3*
*ATH **04** 04:08:13.5, 3982N×2575E, h21km±2km, MD3.3/3*
*NEIC **04** 04:08:13.5, 3982N×2575E, h21km, MD3.3(ATH), MD3.0(ISK), After ATH.*
*CSEM **04** 04:08:14.8±0.1, 3981N×2573E, h12km, MD3.0, Error ellipse: s-maj=2.2km s-min=1.4km az=9.0*
*ISK **04** 04:08:14.9, 3981N×2572E, h12km, MD3.0*
ISC 04 04:08:15.0±0.6**, 3978N**±004×**2569E**±004**, h12**km±5km**, n13, σ0^{s}70**/19**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.41**	**287**	*e*PB	**Pg**	**04 08 23.3**	**+0.3**
LIA				*e*SB	**Sg**	**04 08 29.1**	**+0.6**
GADA	**Gvkgeada**	**0.44**	**21**	*e*PG	**Pg**	**04 08 23.6**	**0.0**
GADA				*e*SG	**Sg**	**04 08 29.7**	**+0.2**
EZN	**Ezine**	**0.49**	**85**	*i* PG	**Pg**	**04 08 24.7**	**+0.1**
EZN				*i* SG	**Sg**	**04 08 31.6**	**+0.5**
PRK	**Paraskevi**	**0.70**	**140**	⇑*i*PB	**Pg**	**04 08 26.7**	**-1.8**
PRK				*e*SN	**Sg**	**04 08 37.7**	**+0.1**
ENEZ	**Enez**	**1.02**	**20**	*e*PG	**Pg**	**04 08 34.0**	**-0.6**
RDO	**Rodhopi**	**1.37**	**355**	*e*PN	**Pn**	**04 08 38.4**	**-1.5**
RDO				*e*SN	**Sn**	**04 08 57.4**	**-0.5**
MFT	**Murefte**	**1.58**	**50**	*e*PN	**Pn**	**04 08 42.7**	**0.0**
MRMT	**Marmara Adasi**	**1.67**	**60**	*e*PN	**Pn**	**04 08 44.7**	**+0.6**
BALB	**Balikesir**	**1.69**	**94**	*e*PN	**Pn**	**04 08 44.5**	**+0.2**
BNT	**Bandirma**	**1.80**	**71**	*e*PN	**Pn**	**04 08 46.6**	**+0.7**
PLG	**Polygyros**	**1.82**	**290**	*e*PN	**Pn**	**04 08 46.4**	**+0.3**
PLG				*e*SN	**Sn**	**04 09 09.8**	**+0.7**
NVR	**Nevrokopi**	**2.10**	**319**	*e*PB	**Pn**	**04 08 49.0**	**-0.9**
IZI	**Iznik**	**2.95**	**78**	*e*PN	**Pn**	**04 09 02.4**	**+0.7**

WEL 04 04:13:18.6±0.6**, 3551S**×**17766E, h33**km**, ML3.5**/3**, Error ellipse: s-maj=7.1km s-min=3.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.11**	**166**	P*	Pb	04 13 51.4	-4.8
MXZ				S*	Sb	04 14 15.7	-6.3
MXZ				S*	Sb	04 14 16.8	-5.1
URZ	**Urewera**	**2.78**	**189**	P*	Pb	04 14 00.8	-6.6
URZ				S*	Sb	04 14 33.0	-8.0
URZ				S*	Sb	04 14 33.4	-7.6
MWZ	**Matawai**	**2.82**	**182**	P*	Pb	04 14 01.3	-6.9
MWZ				S*	Sb	04 14 32.6	-10

*IDC **04** 04:35:15.5±1.3, 2197N×14320E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.7/20, mbtmp3.6/7, Error ellipse: s-maj=51.3km s-min=21.6km az=82.0*
*NEIC **04** 04:35:17.4±0.5, 2199N×143.11E, h10km, mb4.1/3, Error ellipse: s-maj=22.3km s-min=8.9km az=78.0*
*ISCJB **04** 04:35:19.1±0.7, 2197N±009×1430E±02, h33km, mb3.8/11, Error ellipse: s-maj=30.6km s-min=12.2km az=167.6*
ISC 04 04:35:21.1±0.7**, 2199N**±009×**1431E**±02**, h35**km**, n14, σ0^{s}71**/14**, mb3.8**/11**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAJO	**Matsushiro**	**15.11**	**345**	*e*Pn	**Pn**	**04 38 50.2**	**-1.7**
PMG	**Port Moresby**	**31.46**	**172**	*e*P	**P**	**04 41 39.7**	**+0.2**
	11nm,0.8s,mb4.7						
HIA	**Hailar**	**32.92**	**331**	*e*P	**P**	**04 41 52.4**	**+0.4**
SONM	**Songino Array**	**39.07**	**320**	P	**P**	**04 42 45.4**	**+0.8**
	0.6nm,0.5s,mb3.6,baz=131,slow=8.0,SNR=8.5						
WRA	**Warramunga Arr**	**42.55**	**192**	P	**P**	**04 43 13.0**	**-0.5**
	0.5nm,0.8s,mb3.3,baz=15,slow=9.4,SNR=4.7						
ASAR	**Alice Springs**	**46.26**	**192**	P	**P**	**04 43 42.8**	**-0.4**
	0.6nm,0.7s,mb3.7,baz=15,slow=10,SNR=9.9						
ZALV	**Zalesovo Beam**	**53.94**	**322**	P	**P**	**04 44 41.1**	**0.0**
	1.2nm,0.8s,mb3.9,baz=90,slow=5.9,SNR=4.7						
MK31	**Makanchi Array**	**54.45**	**312**	*e*P	**P**	**04 44 44.5**	**-0.5**
MKAR	**Makanchi Array**	**54.45**	**312**	P	**P**	**04 44 45.5**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=89,slow=8.1,SNR=5.0						
KURK	**Kurchatov**	**57.21**	**317**	*e*P	**P**	**04 45 05.0**	**+0.3**
	2.1nm,1.0s,mb4.1						
BRVK	**Borovoye**	**62.47**	**319**	*e*P	**P**	**04 45 41.7**	**+1.0**
	0.8nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**76.23**	**28**	P	**P**	**04 47 06.0**	**+0.3**
	0.3nm,0.4s,mb3.5,baz=293,slow=5.9,SNR=4.0						
FINES	**FINESS Array B**	**82.89**	**334**	P	**P**	**04 47 40.9**	**-1.0**
	0.7nm,0.8s,mb3.8,baz=77,slow=6.0,SNR=5.0						
FFC	**Flin Flon**	**85.61**	**32**	*e*P	**P**	**04 47 56.4**	**+0.5**
	0.8nm,0.8s,mb4.0						

JMA 04 04:41:57.1±0.1**, 2651N**×**13194E, h67**km**, M3.7, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMZ	**Minamidaito 2**	**0.94**	**223**	P	Pn	04 42 14.8	+0.1
JMZ				*e*S	Sn	04 42 28.0	+0.2
JAM	**Amami Oshima**	**2.81**	**313**	P	Pn	04 42 40.9	+1.2
JAM				S	Sn	04 43 12.6	+0.2
JTK	**Tokunoshima**	**2.95**	**296**	P	Pn	04 42 42.5	+0.9
JTK				*e*S	Sn	04 43 16.4	+0.5
JOW	**Kunigami**	**3.29**	**276**	P	Pn	04 42 47.4	+1.1
JOW				*e*S	Sn	04 43 24.6	+0.3
JIH	**Iheya**	**3.59**	**279**	P	Pn	04 42 52.0	+1.7
JIH				*e*S	Sn	04 43 33.0	+1.5
JAGN	**Aguni-jima**	**4.21**	**272**	*e*S	Sn	04 43 46.9	+0.2
JKE	**Kume jima 2**	**4.62**	**269**	*e*S	Sn	04 43 56.2	-0.7

*TEH **04** 04:41:58.0, 2831N×5730E, h28km, ML3.7*
*IDC **04** 04:42:21.4±1.1, 2827N×5726E, h0km, mb3.7/17, mb1 3.9/18, mb1mx3.8/25, mbtmp3.8/18, ML3.6/1, Error ellipse: s-maj=25.9km s-min=16.3km az=3.0*
*CSEM **04** 04:42:26.0±0.1, 2823N×5726E, h20km, ML4.4/2, Error ellipse: s-maj=1.7km s-min=1.1km az=75.0*
*ISCJB **04** 04:42:27.9±0.5, 2833N±003×57.17E±004, h66km±6km, mb3.7/21, Error ellipse: s-maj=5.6km s-min=5.0km az=168.9*
*KISR **04** 04:42:27.1±0.7, 2874N×5659E, h34km±891km, ML4.2*
*NEIC **04** 04:42:27.0, 2823N×5728E, h10km, mb3.7/8, MN3.7(TEH), After TEH.*
ISC 04 04:42:29.6±0.4**, 2833N**±003×**5717E**±003**, h63**km±5km**, n88, σ1^{s}27**/97**, mb3.8**/21**, 6C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BANOM	**Banah**	**2.52**	**198**	⇓P	**Pn**	**04 43 08.3**	**+0.2**
	SNR=61						
BANOM	**Banah**	**2.52**	**198**	P	**Pn**	**04 43 08.3**	**+0.2**
	SNR=61						
BANOM				Sn	**Sn**	**04 43 40.2**	**+2.5**
IBAF	**Bafgh**	**3.54**	**337**	*e*Pn	**Pn**	**04 43 23.7**	**+1.7**
IBAF				*e*		04 43 36.3	
	comp=Z,2μm,0.2s						
IBAF	**Bafgh**	**3.54**	**337**	Pn	**Pn**	**04 43 23.4**	**+1.4**
HATD	**Hatta, Dubai**	**3.61**	**195**	⇓P	**Pn**	**04 43 22.3**	**-0.8**
HATD	**Hatta, Dubai**	**3.61**	**195**	Pn	**Pn**	**04 43 23.4**	**+0.3**
ISRV	**Sarvestan**	**3.71**	**287**	*e*Pn	**Pn**	**04 43 27.8**	**+3.4**
ISRV	**Sarvestan**	**3.71**	**287**	Pn	**Pn**	**04 43 25.9**	**+1.5**
ASHO	**Ashiyiah**	**3.77**	**196**	⇑P	**Pn**	**04 43 26.6**	**+1.4**
	SNR=23						
ASHO	**Ashiyiah**	**3.77**	**196**	Pn	**Pn**	**04 43 26.1**	**+0.9**
	SNR=23						
ASHO	**Ashiyiah**	**3.77**	**196**	P	**Pn**	**04 43 26.6**	**+1.4**
	SNR=23						
IMEH	**Mehriz**	**3.77**	**325**	⇑*e*Pn	**Pn**	**04 43 27.0**	**+1.8**
IMEH				*e*		04 44 40.7	
	comp=Z,954nm,0.5s						
FAQ	**Al Faqa, Dubai**	**3.84**	**202**	Pn	**Pn**	**04 43 26.7**	**+0.5**
IMOK	**Mook**	**3.98**	**281**	*e*Pn	**Pn**	**04 43 29.5**	**+1.4**
ASUD	**Al Ashush, Dub**	**4.04**	**205**	Pn	**Pn**	**04 43 30.2**	**+1.3**
	SNR=20						
ASUD	**Al Ashush, Dub**	**4.04**	**205**	P	**Pn**	**04 43 30.5**	**+1.6**
	SNR=20						
IKOO		**4.38**	**21**	*e*Pn	**Pn**	**04 43 32.1**	**-1.4**
ICHK	**Chekchek**	**4.58**	**329**	*e*Pn	**Pn**	**04 43 38.0**	**+1.8**
ICHK				*e*		04 43 57.6	
	comp=Z,589nm,0.2s						
ICHK	**Chekchek**	**4.58**	**329**	Pn	**Pn**	**04 43 37.7**	**+1.5**
HOQ	**Hoqain**	**4.73**	**178**	⇓P	**Pn**	**04 43 36.7**	**-1.7**
	SNR=11						
ITEG		**4.75**	**16**	*e*Pn	**Pn**	**04 43 39.3**	**+0.7**
ITEG				*e*Sn	**Sn**	**04 44 30.6**	**-1.8**
BIDO	**Bidbid**	**4.87**	**170**	⇑P	**Pn**	**04 43 37.9**	**-2.3**
	SNR=12						
IDAH		**4.97**	**27**	*e*Pn	**Pn**	**04 43 42.2**	**+0.6**
ARQ	**Araqi**	**5.01**	**187**	⇑P	**Pn**	**04 43 42.9**	**+0.7**
	SNR=27						
SMDO	**Samad**	**5.31**	**171**	⇓P	**Pn**	**04 43 45.1**	**-1.2**
BSY	**Bisya**	**5.56**	**180**	⇑P	**Pn**	**04 43 50.6**	**+0.9**
	SNR=12						
BSYO	**Bisya**	**5.58**	**179**	P	**Pn**	**04 43 50.6**	**+0.6**
	SNR=12						
WBK	**Wadi Bani Khal**	**5.92**	**164**	⇑P	**Pn**	**04 43 52.8**	**-1.9**
	SNR=28						
IZEF	**Zefreh**	**6.17**	**319**	*e*	**Sn**	**04 45 13.6**	**+6.3**
	comp=Z,89nm,0.3s						
IZEF	**Zefreh**	**6.17**	**319**	Pn	**Pn**	**04 43 59.5**	**+1.4**
IKLH	**Kalahroud**	**6.92**	**317**	Pn	**Pn**	**04 44 09.7**	**+1.4**
IPIR	**Pirpir**	**6.94**	**310**	*e*Pn	**Pn**	**04 44 10.2**	**+1.6**
IPIR				*e*		04 45 34.4	
	comp=Z,155nm,0.2s						
BTHS		**7.10**	**235**	S	**Sn**	**04 45 21.6**	**-8.6**
BTHS		**7.10**	**235**	P	**Pn**	**04 44 09.8**	**-1.1**
BOQSS		**7.37**	**252**	P	**Pn**	**04 44 14.8**	**+0.3**
KFJS		**8.14**	**271**	P	**Pn**	**04 44 25.5**	**+0.5**
QRN	**Al-Qurain**	**8.15**	**275**	*e*P	**Pn**	**04 44 25.4**	**+0.2**
QRN				*e*S	**Sn**	**04 45 54.0**	**-1.8**
QRN				AML	AML	04 45 54.7	
	comp=Z,37nm,0.3s						
KBD	**Kabd**	**8.36**	**278**	*e*P	**Pn**	**04 44 28.5**	**+0.4**
KBD				*e*S	**Sn**	**04 45 58.8**	**-2.2**
KBD				AML	AML	04 46 00.2	
	comp=Z,25nm,0.2s						
UMR	**Umm Al-Rimmam**	**8.37**	**281**	*e*P	**Pn**	**04 44 27.7**	**-0.5**
UMR				*e*S	**Sn**	**04 45 58.8**	**-2.5**
UMR				AML	AML	04 46 00.5	
	comp=Z,28nm,0.3s						
RDF	**Al-Radifah**	**8.48**	**276**	*e*P	**Pn**	**04 44 29.8**	**+0.2**
RDF				*e*S	**Sn**	**04 46 01.6**	**-2.2**
RDF				AML	AML	04 46 02.8	
	comp=Z,16nm,0.3s						
MIB	**Mutribah**	**8.73**	**282**	*e*P	**Pn**	**04 44 33.4**	**+0.3**
MIB				*e*S	**Sn**	**04 46 07.0**	**-3.0**
MIB				AML	AML	04 46 08.2	
	comp=Z,16nm,0.6s						
NAY	**Al-Naaiem**	**8.76**	**278**	*e*P	**Pn**	**04 44 33.5**	**0.0**
NAY				*e*S	**Sn**	**04 46 08.6**	**-2.2**
NAY				AML	AML	04 46 11.0	
	comp=Z,12nm,0.4s						
RST	**Umm Al-Ruwaisa**	**8.99**	**280**	*e*P	**Pn**	**04 44 36.3**	**-0.4**
RST				*e*S	**Sn**	**04 46 14.3**	**-2.1**
RST				AML	AML	04 46 15.3	
	comp=Z,19nm,0.5s						
ASYS		**11.38**	**269**	P	**Pn**	**04 45 06.9**	**-2.4**
ASF	**Jabal al Asfar**	**17.93**	**287**	P	**Pn**	**04 46 34.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=119,slow=13,SNR=2.5						
MALT	**Malatya**	**18.53**	**307**	*e*P	**Pn**	**04 46 44.7**	**+3.0**
MMAI	**Mount Meron Ar**	**19.29**	**289**	P	**Pn**	**04 46 53.1**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=90,slow=13,SNR=3.1						
EKS2	**Erkin-Say**	**19.63**	**39**	*e*P	**Pn**	**04 46 51.9**	**-2.8**
	comp=Z,3.5nm,0.8s						
EKS2	**Erkin-Say**	**19.63**	**39**	*e*P	**Pn**	**04 46 51.9**	**-2.9**
	comp=Z,3.5nm,0.8s						
UCH	**Uchtor**	**19.77**	**41**	*e*P	**Pn**	**04 46 54.1**	**-2.2**
	comp=Z,0.7nm,0.4s						
UCH	**Uchtor**	**19.77**	**41**	*e*P	**Pn**	**04 46 54.2**	**-2.2**
	comp=Z,0.7nm,0.4s						
AAK	**Ala-Archa**	**20.01**	**40**	*e*P	**P**	**04 46 56.6**	**-0.4**
	comp=Z,1.9nm,0.8s						
AAK	**Ala-Archa**	**20.01**	**40**	*e*P	**P**	**04 46 56.6**	**-0.4**
	comp=Z,1.9nm,0.8s						
TKM2	**Tokmak 2**	**20.82**	**41**	*e*P	**P**	**04 47 05.2**	**-0.5**
	comp=Z,1.5nm,0.4s						
TKM2	**Tokmak 2**	**20.82**	**41**	*e*P	**P**	**04 47 05.2**	**-0.6**
	comp=Z,1.5nm,0.4s						
AKTK	**Aktyubinsk**	**22.09**	**1**	P	**P**	**04 47 19.8**	**+0.6**
AKTK	**Aktyubinsk**	**22.09**	**1**	P	**P**	**04 47 19.8**	**+0.6**
AKTO	**Aktyubinsk**	**22.09**	**1**	P	**P**	**04 47 19.8**	**+0.6**
	comp=Z,3.3nm,0.5s,mb4.1,baz=174,slow=12,SNR=15						
BRTR	**Keskin Array B**	**22.50**	**306**	P	**P**	**04 47 25.3**	**+1.5**
	comp=Z,3.0nm,0.8s,mb3.8,baz=108,slow=12,SNR=17						
MK31	**Makanchi Array**	**26.95**	**40**	*e*P	**P**	**04 48 03.6**	**-1.3**
MK31	**Makanchi Array**	**26.95**	**40**	*e*P	**P**	**04 48 03.6**	**-1.3**
MKAR	**Makanchi Array**	**26.95**	**40**	P	**P**	**04 48 04.5**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.2,baz=230,slow=9.5,SNR=7.0						
KURK	**Kurchatov**	**27.62**	**30**	*e*P	**P**	**04 48 09.7**	**-1.2**
	comp=Z,1.3nm,0.7s,mb3.7						
KURK	**Kurchatov**	**27.62**	**30**	*e*P	**P**	**04 48 09.7**	**-1.2**
	comp=Z,1.3nm,0.7s,mb3.7						
AKASG	**Malin Array Be**	**30.73**	**324**	P	**P**	**04 48 38.3**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.5,baz=120,slow=8.9,SNR=4.6						
ZAA0	**Zalesovo Array**	**32.61**	**31**	*e*P	**P**	**04 48 54.3**	**-0.6**
ZAA0	**Zalesovo Array**	**32.61**	**31**	*e*P	**P**	**04 48 54.3**	**-0.6**
ZALV	**Zalesovo Beam**	**32.61**	**31**	P	**P**	**04 48 54.6**	**-0.3**
	comp=Z,2.1nm,0.3s,mb4.5,baz=237,slow=8.9,SNR=16						
MORC	**Moravsky Berou**	**36.91**	**316**	*e*P	**P**	**04 49 32.4**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.9						
MORC	**Moravsky Berou**	**36.91**	**316**	*e*P	**P**	**04 49 32.4**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.9						
VRAC	**Vranov**	**37.33**	**315**	P	**P**	**04 49 36.6**	**+1.0**
	comp=Z,1.4nm,0.6s,mb4.0,baz=117,slow=4.5,SNR=3.6						
GERES	**GERESS Array B**	**39.01**	**314**	P	**P**	**04 49 50.2**	**+0.4**
	comp=Z,0.3nm,0.6s,mb3.2,baz=106,slow=10,SNR=5.7						
FINES	**FINESS Array B**	**39.04**	**337**	P	**P**	**04 49 49.2**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.5,baz=133,slow=8.5,SNR=7.9						
SONM	**Songino Array**	**42.55**	**49**	P	**P**	**04 50 19.0**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.5,baz=252,slow=9.8,SNR=6.6						
ULN	**Ulaanbaatar**	**42.99**	**49**	*e*P	**P**	**04 50 21.7**	**-0.7**
	comp=Z,1.4nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**42.99**	**49**	*e*P	**P**	**04 50 21.7**	**-0.8**
	comp=Z,1.4nm,0.6s,mb3.9						
NOA	**NORSAR Array B**	**44.71**	**330**	P	**P**	**04 50 36.4**	**+0.3**
	comp=Z,0.3nm,0.6s,mb3.3,baz=116,slow=6.5,SNR=3.3						
NAO01	**NORSAR Array S**	**44.77**	**330**	*e*P	**P**	**04 50 38.8**	**+2.2**
	comp=Z,5.7nm,0.9s,mb4.4						
NAO01	**NORSAR Array S**	**44.77**	**330**	*e*P	**P**	**04 50 38.8**	**+2.2**
	comp=Z,5.7nm,0.9s,mb4.4						
ARCES	**ARCESS Array B**	**45.10**	**345**	P	**P**	**04 50 39.5**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.0,baz=139,slow=8.1,SNR=6.2						
ESDC	**Sonseca Array**	**51.05**	**300**	P	**P**	**04 51 25.7**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=73,slow=7.2,SNR=7.9						
TOA0	**Torodi Ar. Sit**	**53.60**	**266**	*e*P	**P**	**04 51 45.0**	**+0.3**
TOA0	**Torodi Ar. Sit**	**53.60**	**266**	*e*P	**P**	**04 51 45.0**	**+0.4**
TORD	**Torodi Ar. Bea**	**53.60**	**266**	P	**P**	**04 51 44.9**	**+0.2**
	comp=Z,0.4nm,0.4s,mb3.7,baz=64,slow=6.9,SNR=13						
KSRS	**Korea Array**	**58.86**	**61**	P	**P**	**04 52 20.3**	**-1.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=279,slow=8.0,SNR=3.6						
WRA	**Warramunga Arr**	**88.62**	**113**	P	**P**	**04 55 17.0**	**+1.0**
	comp=Z,0.5nm,0.9s,mb3.8,baz=303,slow=6.0,SNR=3.7						
YKA	**Yellowknife Ar**	**89.26**	**356**	P	**P**	**04 55 18.9**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.9,baz=2.7,slow=5.0,SNR=9.8						
ASAR	**Alice Springs**	**90.17**	**117**	P	**P**	**04 55 24.0**	**+0.8**
	comp=Z,0.3nm,0.5s,mb3.9,baz=302,slow=5.3,SNR=3.1						

*IDC **04** 04:49:50.4±1.4, 5382N×16520W, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/25, mbtmp3.7/11, ML3.5/1, Error ellipse: s-maj=34.8km s-min=18.2km az=11.0*
*ISCJB **04** 04:49:52.0±0.8, 5348N±008×16494W±008, h33km, mb3.7/9, Error ellipse: s-maj=12.2km s-min=6.2km az=13.6*
*NEIC **04** 04:49:53.7, 5349N×165.14W, h48km, ML3.8(AEIC), After AEIC.*
ISC 04 04:49:54.9±0.7**, 5360N**±008×**16504W**±006**, h35**km**, n19, σ1^{s}05**/23**, mb3.7**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKUT	**Akutan**	**0.69**	**321**	P	**Pn**	**04 50 08.3**	**+0.2**
AKUT				S	**Sn**	**04 50 19.6**	**+2.0**
AKLV	**Akutan Long Va**	**0.78**	**316**	P	**Pn**	**04 50 09.2**	**-0.2**
AKLV				S	**Sn**	**04 50 20.5**	**+0.6**
AKGG	**Akutan Green G**	**0.82**	**317**	P	**Pn**	**04 50 10.1**	**+0.1**
UNV	**Unalaska Valle**	**0.91**	**286**	P	**Pn**	**04 50 09.7**	**-1.4**
UNV				S	**Sn**	**04 50 22.3**	**-0.6**
FALS	**False Pass**	**1.58**	**36**	P	**Pn**	**04 50 21.9**	**+1.6**
ADK	**Adak**	**7.28**	**261**	*e*Pn	**Pn**	**04 51 38.3**	**-0.3**
KDAK	**Kodiak Island**	**8.19**	**54**	Pn	**Pn**	**04 51 50.0**	**-0.9**
	0.6nm,0.3s,baz=310,slow=16,SNR=8.8						
KDAK				Sn	**Sn**	**04 53 20.2**	**-1.9**
	0.2nm,0.3s,baz=150,slow=20,SNR=2.8						
SVW2	**Sparrevohn**	**9.08**	**30**	*e*Pn	**Pn**	**04 52 03.3**	**+0.1**
SLKM	**Skilak Lake**	**10.61**	**43**	*e*Pn	**Pn**	**04 52 24.0**	**-0.2**
INK	**Inuvik**	**20.88**	**33**	P	**P**	**04 54 32.1**	**-1.4**
	1.5nm,0.5s,baz=241,slow=11,SNR=3.9						
YKA	**Yellowknife Ar**	**27.44**	**51**	P	**P**	**04 55 37.2**	**+0.3**
	0.6nm,0.5s,mb3.4,baz=274,slow=8.0,SNR=10						
NVAR	**Mina Array Bea**	**35.13**	**96**	P	**P**	**04 56 47.1**	**+2.4**
	2.2nm,0.8s,mb4.2,baz=308,slow=7.2,SNR=14						
PDAR	**Pinedale Array**	**37.63**	**84**	P	**P**	**04 57 07.2**	**+1.1**
	0.4nm,0.5s,mb3.4,baz=321,slow=3.6,SNR=4.8						
TXAR	**Lajitas Array**	**50.15**	**93**	P	**P**	**04 58 47.6**	**+1.0**
	1.3nm,0.6s,mb4.1,baz=300,slow=5.6,SNR=14						
SONM	**Songino Array**	**52.89**	**302**	P	**P**	**04 59 06.3**	**-0.6**
	0.6nm,0.8s,mb3.5,baz=43,slow=9.4,SNR=5.4						
MKAR	**Makanchi Array**	**64.81**	**316**	P	**P**	**05 00 28.3**	**-1.3**
	0.2nm,0.8s,mb3.2,baz=38,slow=7.3,SNR=2.9						
FINES	**FINESS Array B**	**64.96**	**354**	P	**P**	**05 00 29.5**	**-0.9**
	1.0nm,0.6s,mb4.0,baz=24,slow=7.9,SNR=8.5						
NOA	**NORSAR Array B**	**65.67**	**2**	P	**P**	**05 00 35.2**	**+0.3**
	0.6nm,0.7s,mb3.7,baz=0.2,slow=5.9,SNR=3.0						
BRTR	**Keskin Array B**	**85.66**	**346**	P	**P**	**05 02 30.3**	**+0.7**
	0.6nm,0.8s,mb3.9,baz=359,slow=1.9,SNR=3.3						

IDC 04 05:15:26.5±2.2**, 124N**×**12649E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=187.3km s-min=27.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.42**	**160**	P	P	05 20 26.0	-0.9
	0.5nm,0.5s,baz=339,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**25.79**	**164**	P	P	05 21 00.3	+1.0
	0.2nm,0.3s,baz=345,slow=9.9,SNR=4.6						
MKAR	**Makanchi Array**	**59.46**	**326**	P	P	05 25 31.2	0.0
	0.1nm,0.4s,baz=117,slow=6.4,SNR=3.7						

*NIED **04** 05:16:00, 3550N×13900E, h17km, Mw3.4 Best double couple: M0 1.40000×10^14 NP1:φs185.00000°, δ44.00000°, λ16.00000°. NP2:φs83.00000°, δ79.00000°, λ133.00000°.*
*ISCJB **04** 05:16:23.3±0.6, 3545N±003×13902E±006, h26km±7km, Error ellipse: s-maj=7.7km s-min=5.2km az=172.1*
*JMA **04** 05:16:23.5, 3546N×13900E, h23km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs182.00000°, δ42.00000°, λ16.00000°. NP2:φs80.00000°, δ79.00000°, λ131.00000°. Principal axes: T Plg41.0000°, Azm28.0000°; N Plg40.0000°, Azm250.0000°; P Plg23.0000°, Azm139.0000°;*
JMA Felt II J1.
ISC 04 05:16:23.3±0.6**, 3545N**±003×**13902E**±006**, h25**km±7km**, n8, σ0^{s}61**/16**, 1C-3D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOD2	**Odawara 2**	**0.19**	**163**	⇓P	**Pb**	**05 16 28.7**	**-0.1**
JOD2				S	**Sb**	**05 16 32.8**	**+0.3**
JYN	**Shimob**	**0.39**	**278**	⇓P	**Pb**	**05 16 31.3**	**-0.4**
JYN				S	**Sb**	**05 16 37.4**	**0.0**
JRY	**Ryogami san**	**0.58**	**351**	⇓P	**Pb**	**05 16 34.2**	**-0.6**
JRY				S	**Sb**	**05 16 41.9**	**-0.8**
JIZS	**Izushimoda**	**0.73**	**189**	P	**Pb**	**05 16 36.9**	**-0.6**
JIZS				S	**Sb**	**05 16 47.1**	**0.0**
SHZ3	**Shizuoka 3**	**0.76**	**240**	⇑P	**Pb**	**05 16 37.9**	**0.0**
SHZ3				S	**Sb**	**05 16 49.0**	**+1.1**
JIM2	**Oshima 3**	**0.80**	**155**	P	**Pb**	**05 16 38.0**	**-0.6**
JIM2				S	**Sb**	**05 16 49.4**	**+0.4**
JAG	**Ashikaga**	**1.04**	**20**	P	**Pn**	**05 16 42.0**	**-0.3**
JAG				S	**Sb**	**05 16 57.5**	**+1.7**
MAT	**Matsushiro**	**1.28**	**329**	P	**Pn**	**05 16 45.7**	**+0.1**
MAT				S	**Sn**	**05 17 02.2**	**+0.2**

MAN 04 05:28:23,1645N×12238E,h6km,mb3.8,ML2.5,MS2.1, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	Cauayan	0.72	313	eP	Pg	05 28 36.6	-0.3
BALP	Baler	1.05	228	eP	Pg	05 28 42.5	-0.6
CVP	Callao Caves	1.35	337	eP	Pn	05 28 47.3	-1.1
CVP				eS	Sb	05 29 04.0	-2.3
PCPH	Palayan	1.52	234	⇓iP	Pn	05 28 50.7	0.0
PCPH				iS	Sn	05 29 09.5	-1.3
POLP	Polilio Island	1.77	194	eP	Sn	05 29 12.0	-4.9
BOLP	Bolinao	2.37	269	eP	Pn	05 29 04.7	+2.3

*ISCJB **04** 05:31:13.7±0.6, 12.1S±0.1×65.7E±0.1, h10km, mb3.9/20, MS3.9/9, Error ellipse: s-maj=16.6km s-min=16.3km az=5.9*

*IDC **04** 05:31:13.0±1.0, 12.23S×65.59E, h0km, mb3.7/12, mb1 3.9/12, mb1mx3.8/21, mbtmp3.7/12, MS3.8/9, Ms1 3.8/9, ms1mx3.7/18, Error ellipse: s-maj=40.2km s-min=20.4km az=35.0*

*NEIC **04** 05:31:15.3±0.5, 12.11S×65.67E, h10km, mb4.3/7, Error ellipse: s-maj=16.5km s-min=15.4km az=88.0*

ISC 04 05:31:15.6±0.6**,12.1S**±0.1×**65.7E**±0.1**,h10km,n38,**σ1.04/25, **mb3.9**/20, **MS3.9**/9, **1D,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRD	Trivandrum	23.35	29	⇓eP	P	05 36 29.0	+4.5
KMBO	Kilima Mbogo	30.21	289	LR	LR	05 47 44.7	
	comp=Z,254nm,20.6s,MS3.9,baz=94,slow=33						
LSZ	Lusaka	36.52	261	eP	P	05 38 22.7	+1.1
	4.3nm,0.9s,mb4.3						
KBL	Kabul	46.49	4	eP	P	05 39 43.9	+0.8
EKS2	Erkin-Say	54.99	7	eP	P	05 40 49.0	+1.9
	2.0nm,0.9s,mb4.2						
AAK	Ala-Archa	55.06	8	eP	P	05 40 48.3	+0.7
	3.8nm,1.3s,mb4.3						
TKM2	Tokmak 2	55.50	9	eP	P	05 40 51.1	+0.4
	2.3nm,0.7s,mb4.3						
MALT	Malatya	56.25	334	eP	P	05 40 54.7	-1.5
	0.7nm,0.4s,mb4.0						
BRTR	Keskin Array B	59.53	332	P	P	05 41 19.5	+0.2
BRTR	Keskin Array B	59.53	332	P	P	05 41 19.5	+0.2
	0.7nm,0.8s,mb3.8,baz=147,slow=6.0,SNR=5.2						
MK31	Makanchi Array	60.48	13	eP	P	05 41 25.6	0.0
MKAR	Makanchi Array	60.48	13	P	P	05 41 24.4	-1.2
	0.4nm,0.7s,mb3.6,baz=202,slow=7.1,SNR=5.5						
MKAR				LR	LR	06 06 19.0	
	comp=Z,55nm,18.5s,MS3.7,baz=176,slow=35						
KURK	Kurchatov	63.56	9	eP	P	05 41 45.5	-0.7
	1.4nm,0.7s,mb4.1						
ASAR	Alice Springs	65.45	111	P	P	05 41 58.3	-0.9
	1.1nm,0.9s,mb3.9,baz=270,slow=6.2,SNR=8.1						
WRA	Warramunga Arr	66.10	107	P	P	05 42 02.8	-0.7
	1.0nm,0.7s,mb4.0,baz=275,slow=5.6,SNR=10						
WRA				LR	LR	06 05 30.0	
	comp=Z,64nm,19.9s,MS3.8,baz=210,slow=31						
ZALV	Zalesovo Beam	67.78	12	P	P	05 42 12.6	-0.8
	0.6nm,0.6s,mb3.8,baz=205,slow=6.2,SNR=4.8						
ZALV				LR	LR	06 11 01.0	
	comp=Z,33nm,18.6s,MS3.6,baz=177,slow=35						
TOA0	Torodi Ar. Sit	68.22	290	eP	P	05 42 16.6	-0.4
TORD	Torodi Ar. Bea	68.22	290	P	P	05 42 15.8	-1.1
	0.8nm,1.1s,mb3.7,baz=150,slow=2.1,SNR=4.4						
TORD				LR	LR	06 10 48.5	
	comp=Z,77nm,20.7s,MS3.9,baz=140,slow=35						
SONM	Songino Array	69.79	28	P	P	05 42 28.1	+2.0
	1.5nm,0.8s,mb4.0,baz=221,slow=6.2,SNR=11						
SONM				LR	LR	06 12 06.0	
	comp=Z,112nm,18.3s,MS4.2,baz=138,slow=35						
AKASG	Malin Array Be	70.14	336	P	P	05 42 26.6	-1.6
	0.7nm,0.6s,mb3.8,baz=143,slow=5.3,SNR=5.0						
KEST	Kesra	71.32	314	LR	LR	06 12 26.6	
	comp=Z,25nm,19.5s,MS3.5,baz=301,slow=35						
STKA	Stephens Creek	71.84	120	LR	LR	06 12 32.8	
	comp=Z,139nm,18.7s,MS4.2,baz=207,slow=34						
GERES	GERESS Array B	76.00	328	P	P	05 43 02.3	-0.7
	0.1nm,0.3s,mb3.2,baz=140,slow=8.4,SNR=4.6						
CLL	Collm	77.86	329	iP	P	05 43 14.8	+1.5
	comp=Z,6.0nm,1.3s,mb4.4						
QSPA	South Pole Qui	77.97	180	eP	P	05 43 14.7	+1.1
	comp=Z,3.8nm,1.1s,mb4.2						
VNDA	Vanda	79.61	167	LR	LR	06 13 39.9	
	comp=Z,112nm,20.3s,MS4.2,baz=82,slow=32						
FINES	FINESS Array B	79.65	342	P	P	05 43 22.7	-0.3
	comp=Z,0.9nm,0.9s,mb3.7,baz=355,slow=8.5,SNR=2.7						
ESDC	Sonseca Array	82.51	313	P	P	05 43 38.4	-0.3
	comp=Z,0.9nm,0.8s,mb3.9,baz=92,slow=4.7,SNR=4.9						
NOA	NORSAR Array B	84.55	337	P	P	05 43 49.7	+1.0
	comp=Z,0.8nm,0.8s,mb3.9,baz=146,slow=6.3,SNR=2.8						
LCO	Las Campanas	121.31	225	ePKPdf	PKPdf	05 50 10.3	+0.5
LPAZ	La Paz	126.30	239	ePKPdf	PKPdf	05 50 16.6	-3.1
YKA	Yellowknife Ar	129.68	0	PKP	PKPdf	05 50 24.2	-0.5
	comp=Z,0.2nm,0.7s,baz=340,slow=3.4,SNR=3.6						
ECSD	EROS,Sioux Fal	144.96	337	ePKPbc	PKPdf	05 50 53.4	0.0
DLMT	Dillon	146.81	358	ePKPbc	PKPbc	05 50 57.0	-1.2
MCMT	McKenzie Canyo	147.36	358	ePKPbc	PKPbc	05 50 57.5	-2.3
PDAR	Pinedale Array	149.16	353	PKPbc	PKPbc	05 51 04.2	-0.4
	comp=Z,0.7nm,0.7s,baz=67,slow=1.8,SNR=7.3						
HWUT	Hardware Ranch	150.50	356	ePKPbc	PKPbc	05 51 09.9	+2.0
NVAR	Mina Array Bea	153.54	7	PKPbc	PKPbc	05 51 13.8	-1.1
	comp=Z,0.5nm,1.0s,baz=287,slow=1.5,SNR=2.7						
NVAR				PKPab	PKPab	05 51 25.3	-1.8
	comp=Z,1.0nm,0.8s,baz=211,slow=5.8,SNR=5.4						

*NEIC **04** 05:36:42.1, 29.51S×71.12W, h71km, MG3.9(GUC), After GUC.*

GUC 04 05:36:42.1±0.7**,29.51S×71.12W,h71**km±5km**,ML3.9, 6C-1D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	La Serena	0.41	195	⇓iP	Pn	05 36 54.6	+0.4
LSCH				iS	Sn	05 37 03.4	+0.3
LCO	Las Campanas	0.61	37	ePn	Pn	05 36 57.6	+1.5
LCO				eSn	Sn	05 37 09.1	+2.7
TLL	Tololo Astrono	0.71	158	⇑iP	Pn	05 36 59.3	+2.1
TLL				iS	Sn	05 37 11.5	+3.2
VACH	Vallenar	0.98	19	⇑iP	Pn	05 37 02.0	+1.6
VACH				iS	Sn	05 37 16.0	+2.1
VACH	Vallenar	0.98	19	⇑iP	Pn	05 37 02.0	+1.6
VACH				iS	Sn	05 37 16.0	+2.1
VACH				AML	AML	05 37 18.4	
	comp=E,7μm,0.1s						
OVCH	Ovalle	1.10	184	eP	Pn	05 37 02.0	+0.1
OVCH				iS	Sn	05 37 16.8	+0.2
CMCH	Combarbala	1.66	177	eP	Pn	05 37 10.0	+0.7
CMCH				iS	Sn	05 37 30.8	+1.0
CMCH	Combarbala	1.66	177	eP	Pn	05 37 10.0	+0.7
CMCH				iS	Sn	05 37 30.8	+1.0
CMCH				AML	AML	05 37 32.6	
	comp=E,724nm,0.6s						
CPCH	Copiapo	2.25	18	⇑iP	Pn	05 37 17.3	+0.2
CPCH				iS	Sn	05 37 44.5	+0.7
CPCH	Copiapo	2.25	18	⇑iP	Pn	05 37 17.3	+0.2
CPCH				iS	Sn	05 37 44.5	+0.7
CPCH				AML	AML	05 37 49.1	
	comp=E,2μm,0.1s						
CHNG	Los Chungos	2.39	188	⇑iP	Pn	05 37 04.8	-14
CHNG				iS	Sn	05 37 32.7	-15
CDCH	Caldera	2.44	6	eP	Pn	05 37 20.0	+0.3
CDCH				iS	Sn	05 37 47.0	-1.5
PEL	Peldehue	3.64	174	iS	Sn	05 38 18.4	+0.6

*NEIC **04** 05:39:57.8±2.2, 21.42S×177.91W, h463km±22km, mb4.1/9, Error ellipse: s-maj=21.6km s-min=15.3km az=182.0*

*IDC **04** 05:40:01.2±4.3, 21.15S×178.19W, h486km±46km, mb3.4/7, mb1 3.6/8, mb1mx3.4/16, mbtmp3.4/8, Error ellipse: s-maj=26.1km s-min=23.2km az=45.0*

*ISCJB **04** 05:40:02.0±3.7, 21.3S±0.1×178.2W±0.2, h510km±41km, mb4.0/13, Error ellipse: s-maj=25.2km s-min=16.1km az=177.3*

ISC 04 05:39:58.1±2.7**,21.6S**±0.1×**178.0W**±0.1**,h459**km±30km**,n37,** σ0.83/23, **mb4.0**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.50	265	P	P	05 43 04.3	+0.6
	0.8nm,0.3s,baz=86,slow=19,SNR=4.9						
URZ	Urewera	17.17	193	P	P	05 43 31.4	-0.4
	5.4nm,0.3s,baz=174,slow=13,SNR=34						
URZ				S	S	05 46 27.5	-0.7
	0.9nm,0.3s,baz=266,slow=23,SNR=7.5						
RPZ	Rata Peaks	23.90	200	P	P	05 44 38.5	+4.5
	7.1nm,0.8s,mb4.1,baz=36,slow=14,SNR=4.7						
ARMA	Armidale	28.65	246	eP	P	05 45 18.3	+2.1
CTA	Charters Tower	33.44	266	eP	P	05 45 57.8	+0.1
	2.5nm,0.4s,mb4.0						
CTAO	Charters Tower	33.44	266	eP	P	05 45 57.3	-0.3
	3.9nm,0.5s,mb4.1						
PMG	Port Moresby	35.63	284	eP	P	05 46 15.2	-1.1
	9.4nm,0.8s,mb4.3						
PMG	Port Moresby	35.63	284	P	P	05 46 14.9	-1.3
	8.2nm,0.7s,mb4.3,baz=131,slow=12,SNR=3.9						
STKA	Stephens Creek	37.37	245	eP	P	05 46 31.6	+1.2
	2.4nm,0.4s,mb4.0						
STKA	Stephens Creek	37.37	245	P	P	05 46 31.3	+0.9
	3.5nm,0.5s,mb4.0,baz=90,slow=9.1,SNR=11						
COEN	Coen	37.70	275	eP	P	05 46 32.2	-1.2
	2.3nm,0.7s,mb3.7						
ASAR	Alice Springs	44.32	258	P	P	05 47 26.4	+0.2
	5.4nm,0.8s,mb4.0,baz=87,slow=8.6,SNR=41						
ASAR				PcP	PcP	05 49 01.2	+0.3
	0.7nm,0.7s,baz=98,slow=4.0,SNR=4.3						
WB2	Warramunga Arr	44.49	263	eP	P	05 47 27.1	-0.5
WRA	Warramunga Arr	44.50	263	P	P	05 47 27.0	-0.6
	1.4nm,0.3s,mb3.9,baz=96,slow=7.6,SNR=53						
FORT	Forrest	48.91	247	eP	P	05 48 00.8	-0.3
	16nm,0.6s,mb4.5						
FORT	Forrest	48.91	247	eP	P	05 48 01.3	+0.2
	3.0nm,0.8s,mb3.7						
FITZ	Fitzroy Crossi	52.93	263	eP	P	05 48 30.2	-0.5
	4.7nm,0.4s,mb4.2						
KLBR	Kellerberrin	57.65	246	eP	P	05 49 04.2	+0.7
	21nm,1.0s,mb4.4						
MBWA	Marble Bar	57.66	258	eP	P	05 49 03.4	-0.5
	5.1nm,0.6s,mb4.0						
MUN	Mundaring	58.91	245	eP	P	05 49 13.4	+1.3
TXAR	Lajitas Array	87.60	57	P	P	05 51 57.4	+0.7
	0.2nm,0.6s,mb3.0,baz=231,slow=6.9,SNR=3.3						
PDAR	Pinedale Array	89.71	43	P	P	05 52 05.8	-0.4
	0.7nm,0.7s,mb3.6,baz=192,slow=1.7,SNR=2.7						
MKAR	Makanchi Array	111.95	313	PKiKP	PKiKP	05 57 38.2	-1.9
	0.1nm,0.4s,baz=106,slow=3.1,SNR=3.1						
BRVK	Borovoye	119.98	320	ePKPdf	PKPdf	05 57 54.8	-0.5
ARCES	ARCESS Array B	129.97	349	PKP	PKPdf	05 58 12.5	-1.5
ARCES	ARCESS Array B	129.97	349	PKP	PKPdf	05 58 12.5	-1.5
	3.1nm,0.9s,baz=58,slow=3.0,SNR=5.7						
FINES	FINESS Array B	136.80	343	PKP	PKPdf	05 58 27.4	+0.4
	0.7nm,0.6s,baz=149,slow=1.1,SNR=5.6						
AKASG	Malin Array Be	143.96	330	PKP	PKPdf	05 58 37.2	-3.1
AKASG	Malin Array Be	143.96	330	PKP	PKPdf	05 58 37.2	-3.1
	3.9nm,0.5s,baz=42,slow=4.2,SNR=28						
AKBB	Malin Array Si	143.96	330	ePKPdf	PKPdf	05 58 38.2	-2.0
BR131	Keskin Array S	147.57	311	ePKPdf	PKPdf	05 58 45.1	-1.6
BRTR	Keskin Array B	147.57	311	PKPbc	PKPbc	05 58 49.5	-0.5
	1.2nm,0.6s,baz=127,slow=4.0,SNR=9.3						
CLL	Collm	149.10	347	ePKPbc	PKPbc	05 58 53.0	-0.5
CSS	Prodhromos	149.52	303	ePKPdf	PKPdf	05 58 49.2	-0.8
PSZ	Piszkesteto	150.04	336	ePKPdf	PKPdf	05 58 49.1	-1.3
PSZ				ePKPab	PKPab	05 59 02.3	-1.3
GERES	GERESS Array B	151.23	344	PKPbc	PKPbc	05 58 57.7	-0.9
	0.7nm,0.6s,baz=35,slow=1.4,SNR=6.9						
GERES				PKPab	PKPab	05 59 07.5	-1.1
	0.5nm,0.6s,baz=356,slow=4.4,SNR=3.1						
TORD	Torodi Ar. Bea	171.62	178	PKPab	PKPab	06 00 40.3	+2.0
	0.3nm,0.6s,baz=168,slow=2.9,SNR=2.9						

*NEIC **04** 05:41:35.8, 17.13N×100.96W, h26km, MD4.4(MEX), After MEX.*

MEX 04 05:41:36.1±0.9**,17.16N×100.94W,h22**km±22km**,MD4.4, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.65	100	iP	Pb	05 41 46.1	-2.7
CAIG				iS	Sb	05 41 55.3	-2.3
ZIIG	Zihuatanejo	0.67	311	iP	Pb	05 41 46.7	-2.4
ZIIG				eS	Sb	05 41 55.8	-2.1
ACX	Acapulco	1.02	107	iP	Pn	05 41 52.5	-2.6
ACX				iS	Sb	05 42 04.5	-3.7
MEIG	Mezcala	1.47	59	iP	Pn	05 41 58.8	-2.5
MEIG				eS	Sn	05 42 14.6	-5.3
PLIG	Platanillo	1.84	48	iP	Pn	05 42 03.5	-2.8
PLIG				iS	Sn	05 42 26.2	-2.7
YAIG	Yautepec	2.46	46	iP	Pn	05 42 14.0	-0.8
YAIG				iS	Sn	05 42 42.9	-1.3
MOIG	Morelia	2.51	355	iP	Pn	05 42 12.2	-3.5
MOIG				iS	Sn	05 42 41.4	-4.2
MMIG	Aquila	2.55	296	iP	Pn	05 42 14.9	-1.2
MMIG				iS	Sn	05 42 44.9	-1.6
SZVM	Salazar	2.61	34	iP	Pn	05 42 17.0	+0.1
SZVM				iS	Sn	05 42 43.8	-4.2
PNIG	Pinotepa	2.80	105	iP	Pn	05 42 17.6	-2.0
PNIG				iS	Sn	05 42 47.2	-5.6
PNIG	Pinotepa	2.80	105	iP	Pn	05 42 17.6	-2.0
PNIG				iS	Sn	05 42 49.0	-3.7
PPM	Popocatepetl	2.90	49	iP	Pn	05 42 17.3	-3.7
PPM				iS	Sn	05 42 53.9	-1.3
PTVM	Pico Tres Padr	2.98	35	iP	Pn	05 42 19.5	-2.5
PTVM				iS	Sn	05 42 57.2	+0.2
UTMO	Huajuapan	3.07	77	eP	Pn	05 42 20.5	-2.7
UTMO				iS	Sn	05 42 56.7	-2.5
IIO	Organos	3.21	41	iP	Pn	05 42 22.8	-2.4
IIO				iS	Sn	05 43 03.7	+1.0
TPIG	Tehuac#an	3.63	69	iP	Pn	05 42 27.4	-3.6
TPIG				iS	Sn	05 43 08.6	-4.6
SFJM	Santa Fe	3.86	329	iP	Pn	05 42 35.0	+0.9
VHO	Vista Hermosa	4.03	91	iP	Pn	05 42 34.0	-2.4
VHO				iS	Sn	05 43 22.0	-0.9
OXX	Oaxaca	4.03	91	eP	Pn	05 42 38.0	+1.5
HUIG	Huatulco	4.84	106	iS	Sn	05 43 41.2	-1.8
ANIG	Ahuacatlan	5.14	319	iP	Pn	05 42 49.2	-2.5
ZAIG	Zacatecas	5.78	345	eP	Pn	05 42 58.8	-1.8
ZAIG				iS	Sn	05 44 08.7	+2.4
ZAIG	Zacatecas	5.78	345	eP	Pn	05 42 58.8	-1.8
ZAIG				iS	Sn	05 44 03.8	-2.5
CMIG	Matias Romero	5.79	90	eP	Pn	05 43 02.6	+1.8
CMIG				iS	Sn	05 44 01.5	-5.0
CMIG	Matias Romero	5.79	90	eP	Pn	05 42 58.9	-1.8
CMIG				iS	Sn	05 44 03.9	-2.6
LNIG	Linares	7.82	10	iP	Pn	05 43 29.2	+0.6
LNIG				iS	Sn	05 44 56.0	-0.4

*NEIC **04** 05:56:53.4, 19.37N×68.35W, h25km, MD3.4(RSPR), After RSPR.*

RSPR 04 05:56:53.4,19.37N×68.35W,h25km±45km**,MD3.4**/4**, 6C,North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.47	127	⇑eP	Pn	05 57 15.4	-2.9
AGPR				eS	Sn	05 57 34.4	-2.5
CRPR	Cabo Rojo, PR	1.79	139	⇑eP	Pn	05 57 20.4	-2.3
CRPR				eS	Sn	05 57 41.5	-3.2
AOPR	Arecibo Observ	1.82	124	⇑eP	Pn	05 57 20.7	-2.4
AOPR				eS	Sn	05 57 43.6	-1.8
CBYP	Canovanas	2.60	114	⇑eP	Pn	05 57 33.1	-0.8
CBYP				eS	Sn	05 58 01.4	-3.2
HUMP	Col San Antoni	2.66	117	⇑eP	Pn	05 57 32.8	-2.0
HUMP				eS	Sn	05 58 04.1	-2.1
SDDR	Presa de Saban	2.81	263	ePn	Pn	05 57 38.7	+2.0
MTP	Monte Pirata	2.94	115	⇑eP	Pn	05 57 37.1	-1.4
MTP				eS	Sn	05 58 11.4	-1.5

*NEIC **04** 06:17:31.3, 41.07S×172.15E, h12km, ML4.0(WEL), After WEL.*

NEIC Felt at Karamea and Nelson.

WEL 04 06:17:31.4±0.3**,41.07S×172.15E,h12km,ML3.9**/43**,1C-3D, Error ellipse: s-maj=2.2km s-min=1.4km az=90.0,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.37	50	⇑P	Pg	06 17 38.9	+0.1
QRZ				S	Sg	06 17 44.1	+0.3
QRZ	Quartz Range	0.37	50	⇓P*	Pg	06 17 38.9	+0.1
QRZ				S*	Sg	06 17 44.1	+0.3
DSZ	Denniston Nort	0.73	201	⇓P	Pg	06 17 44.6	-0.9
DSZ	Denniston Nort	0.73	201	⇓P*	Pb	06 17 44.6	-1.4
DSZ				S*	Sb	06 17 54.3	-1.6
THZ	Tophouse	0.90	141	P	Pg	06 17 47.2	-1.5
THZ	Tophouse	0.90	141	P*	Pb	06 17 47.2	-1.7
THZ				S*	Sb	06 17 59.0	-1.8
NNZ	Nelson	0.94	100	P	Pg	06 17 47.7	-1.8
NNZ	Nelson	0.94	100	P*	Pb	06 17 47.7	-1.8
NNZ				S*	Sb	06 18 00.9	-1.1
DUWZ	D'Urville Isla	1.37	79	PN	Pn	06 17 55.5	-0.7
DUWZ				SN	Sn	06 18 13.0	-1.2
TUWZ	Tuamarina	1.40	106	PN	Pn	06 17 56.0	-0.6
TUWZ				SN	Sn	06 18 14.5	-0.6
BSWZ	Blackbirch Sta	1.45	117	P	Pn	06 17 57.3	-0.1
BSWZ	Blackbirch Sta	1.45	117	PN	Pn	06 17 57.3	-0.1
BSWZ				SN	Sn	06 18 17.1	+0.7
TCW	Tory Channel	1.61	96	P	Pn	06 17 59.5	-0.1
TCW	Tory Channel	1.61	96	PN	Pn	06 17 59.5	-0.1
TCW				SN	Sn	06 18 21.3	+1.0
KHZ	Kahutara	1.70	143	eP	Pn	06 18 01.0	+0.1
KHZ	Kahutara	1.70	143	ePN	Pn	06 18 01.0	+0.2
LTZ	Lake Taylor	1.72	177	eP	Pn	06 18 00.4	-0.7
LTZ	Lake Taylor	1.72	177	ePN	Pn	06 18 00.4	-0.6
MRW	Makara Radio	1.93	96	P	Pn	06 18 04.4	+0.4
MRW	Makara Radio	1.93	96	PN	Pn	06 18 04.4	+0.3
SNZO	South Karori	1.94	98	P	Pn	06 18 04.5	+0.3
SNZO	South Karori	1.94	98	PN	Pn	06 18 04.5	+0.3
WEL	Wellington	1.99	97	ePN	Pn	06 18 06.1	+1.3
BHW	Baring Head	2.08	100	P	Pn	06 18 07.1	+1.1
BHW	Baring Head	2.08	100	PN	Pn	06 18 07.1	+1.0
KIW	Kapiti Island	2.10	85	PN	Pn	06 18 06.2	-0.1
NRZ	Ngariki Road	2.20	39	ePN	Pn	06 18 07.8	+0.1
CAW	Cannon Point	2.21	92	ePN	Pn	06 18 08.3	+0.6
NWEZ	Newall Road	2.22	37	ePN	Pn	06 18 07.5	-0.4
WVZ	Waitaha Valley	2.27	207	ePN	Pn	06 18 07.6	-1.0
NEZ	North Egmont	2.33	40	ePN	Pn	06 18 09.1	-0.4
PKE	Pukeiti	2.34	38	P	Pn	06 18 09.1	-0.5
PKE	Pukeiti	2.34	38	PN	Pn	06 18 09.1	-0.5
RAEZ	Rainy Point	2.47	45	P	Pn	06 18 11.2	-0.2
RAEZ	Rainy Point	2.47	45	PN	Pn	06 18 11.2	-0.3
PAWZ	Paruwai Farm	2.49	98	P	Pn	06 18 10.7	-1.0
PAWZ	Paruwai Farm	2.49	98	PN	Pn	06 18 10.7	-1.0
WAZ	Wanganui	2.53	60	eP	Pn	06 18 13.2	+1.0
WAZ	Wanganui	2.53	60	ePN	Pn	06 18 13.2	+1.0
MTW	Mount Morrison	2.53	93	P	Pn	06 18 11.4	-0.9
MTW	Mount Morrison	2.53	93	PN	Pn	06 18 11.4	-0.9
MRZ	Mangatainoka R	2.63	82	ePN	Pn	06 18 13.1	-0.6
RPZ	Rata Peaks	2.77	197	ePN	Pn	06 18 14.9	-0.6
VRZ	Vera Road	2.79	47	PN	Pn	06 18 15.1	-0.7
PKVZ	Pokaka	3.02	55	PN	Pn	06 18 19.2	+0.2
TSZ	Takapari Road	3.07	72	ePN	Pn	06 18 19.3	-0.4
FOZ	Fox Glacier	3.09	215	eP	Pn	06 18 17.0	-3.0
FOZ	Fox Glacier	3.09	215	ePN	Pn	06 18 17.0	-3.0
TRVZ	Turoa	3.14	57	ePN	Pn	06 18 19.6	-1.1
WNVZ	Wahianoa	3.16	58	ePN	Pn	06 18 22.1	+1.2
FWVZ	Far West T-bar	3.17	56	ePN	Pn	06 18 21.1	+0.1
TWVZ	Taurewa	3.21	53	ePN	Pn	06 18 21.3	-0.3
TUVZ	Tukino	3.23	57	ePN	Pn	06 18 22.3	+0.5
NGZ	Ngauruhoe	3.25	56	PN	Pn	06 18 22.5	+0.4
WTVZ	West Tongariro	3.28	55	ePN	Pn	06 18 22.3	-0.3
HIZ	Hauiti	3.29	40	PN	Pn	06 18 21.5	-1.2
OTVZ	Oturere	3.30	56	PN	Pn	06 18 23.2	+0.4
KRVZ	Karewarewa	3.32	55	ePN	Pn	06 18 23.3	+0.2
KATZ	Kakaramea	3.43	54	ePN	Pn	06 18 24.3	-0.3
JCZ	Jackson Bay	3.91	219	ePN	Pn	06 18 29.3	-1.9
ODZ	Otahua Downs	4.13	195	eP	Pn	06 18 32.3	-1.9
ODZ	Otahua Downs	4.13	195	PN	Pn	06 18 32.3	-1.9
WKZ	Wanaka	4.41	210	eP	Pn	06 18 37.2	-0.8
WKZ	Wanaka	4.41	210	PN	Pn	06 18 37.2	-0.8
WTAZ	Waiatarua	4.54	25	PN	Pn	06 18 39.6	-0.3
KUZ	Kuaotunu	5.13	34	ePN	Pn	06 18 47.0	-1.1
TUZ	Tuapeka	5.22	200	ePN	Pn	06 18 47.9	-1.3
OUZ	Omahuta	5.95	11	eP	Pn	06 18 58.7	-0.5
OUZ	Omahuta	5.95	11	PN	Pn	06 18 58.7	-0.5

*NEIC **04** 06:29:23.7±1.8, 6.19S×129.62E, h189km±26km, mb4.0/2, Error ellipse: s-maj=18.4km s-min=9.2km az=69.0*

*ISCJB **04** 06:29:24.0±1.7, 6.21S±0.08×129.6E±0.1, h219km±26km, mb4.4/3, Error ellipse: s-maj=18.1km s-min=12.0km az=154.6*

*IDC **04** 06:29:30.7±7.3, 6.47S×129.30E, h260km±74km, mb3.3/1, mb1 3.3/5, mb1mx3.0/16, mbtmp3.2/5, Error ellipse: s-maj=82.6km s-min=58.0km az=2.0*

ISC 04 06:29:23.1±1.8**,6.19S**±0.08×**129.7E**±0.1**,h182**km±27km**,n11,** σ1.25/14, **mb4.5**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	7.19	236	P	Pn	06 31 08.1	+2.3
	7.3nm,0.3s,baz=13,slow=12,SNR=7.8						
BATI				S	Sn	06 32 26.1	-0.8
	2.8nm,0.3s,baz=87,slow=18,SNR=2.8						
FITZ	Fitzroy Crossi	12.49	198	P	Pn	06 32 15.1	+0.4
	0.1nm,0.3s,baz=27,slow=14,SNR=7.2						
FITZ				S	Sn	06 34 17.6	-16
	0.6nm,0.3s,baz=358,slow=19,SNR=6.9						
DAV	Davao City (W)	13.80	343	ePn	Pn	06 32 31.9	+0.5
	44nm,0.6s						
WRA	Warramunga Arr	14.39	162	P	Pn	06 32 40.3	+1.6
	0.5nm,0.3s,baz=343,slow=12,SNR=8.3						
WRA				S	Sn	06 35 00.4	-19
	0.4nm,0.3s,baz=341,slow=21,SNR=5.6						
WB2	Warramunga Arr	14.40	162	ePn	Pn	06 32 38.8	0.0
PMG	Port Moresby	17.59	102	eP	Pn	06 33 16.0	-1.4
	3.5nm,0.7s						
ASAR	Alice Springs	17.84	167	P	Pn	06 33 17.6	-2.6
	0.3nm,0.3s,baz=344,slow=9.2,SNR=20						
KKM	Kota Kinabalu	18.14	312	eP	P	06 33 20.2	-1.6
GUMO	Guam	24.76	37	eP	P	06 34 28.9	+0.7
	61nm,0.4s,mb5.5						
STKA	Stephens Creek	27.87	158	P	P	06 34 56.9	+1.0
	1.6nm,1.0s,mb3.7,baz=338,slow=11,SNR=2.5						
TLY	Talaya	61.82	342	eP	P	06 39 22.9	+0.3
	1.7nm,0.4s,mb4.2						

CASC 04 06:38:22.7±1.5**,10.09N×84.66W,h59**km±4km**,MD3.6, ML3.5,9C-7D,Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGA2	Cerro Gallo 2	0.21	111	⇑iP	Pn	06 38 32.1	0.0
JTS	JuntasAbangare	0.35	305	⇓eP	Pn	06 38 31.9	-1.3
JTS				eS	Sn	06 38 40.0	-0.7
PRS1	Puriscal	0.36	107	⇑iP	Pn	06 38 33.3	0.0
FORC	Fortuna	0.38	359	⇑eP	Pn	06 38 33.9	+0.5
FORC				eS	Sn	06 38 42.6	+1.4
JCR	Jicaral	0.50	242	⇓iP	Pn	06 38 34.5	-0.2
JCR				eS	Sn	06 38 44.0	+0.7
LAJ	Bijagual	0.58	113	⇓iP	Pn	06 38 33.6	-1.9
SJS	Escuela Geolog	0.62	104	eP	Pn	06 38 36.3	+0.4
SJS				eS	Sn	06 38 46.8	+1.3
2RIO	Dos Rios de Up	0.71	308	⇑iP	Pn	06 38 42.0	+5.0
2RIO				eS	Sn	06 38 56.6	+9.0
LCR2	La Lucha 2	0.74	118	⇑eP	Pn	06 38 37.5	+0.1
LCR2				eS	Sn	06 38 49.0	+1.0
CUI		0.76	318	⇑eP	Pn	06 38 37.8	+0.1
CUI				eS	Sn	06 38 49.5	+0.8
QCR	Quepos	0.82	143	⇑iP	Pn	06 38 38.1	-0.3
ICR	Volcan Irazu	0.83	98	⇑eP	Pn	06 38 39.5	+1.0
ICR				eS	Sn	06 38 52.3	+2.2
LIM1	Limonal	0.84	316	⇓iP	Pn	06 38 38.9	+0.3
LIM1				eS	Sn	06 38 50.8	+0.4
URSC	Urasca	0.91	106	⇓iP	Pn	06 38 40.6	+1.1
VCR	Vista de Mar	0.95	272	eP	Pn	06 38 40.0	-0.1
BUS	Buena Vista	1.04	121	eP	Pn	06 38 41.6	+0.4
BUS				eS	Sn	06 38 56.7	+1.7
BAR1		1.58	122	eP	Pn	06 38 48.8	+0.4
BAR1				eS	Sn	06 39 09.2	+1.4
SSN	San Juan del S	1.68	316	⇓eP	Pn	06 38 49.9	+0.1
SSN				eS	Sn	06 39 10.5	+0.2
CONN	Concepcion	1.74	327	eP	Pn	06 38 51.5	+0.8
BRU2	Volcan	2.33	123	⇓eP	Pn	06 38 59.6	+0.9
BOAB	BOACO BROADBAN	2.54	337	⇑iP	Pn	06 39 01.8	+0.2
MGAN	Managua	2.57	323	eP	Pn	06 39 02.9	+1.0
TGUH	Tegucigalpa,Un	4.70	327	eP	Pn	06 39 32.6	+1.5

*IDC **04** 06:39:30.9±0.8, 17.20S×172.83W, h0km, mb4.1/8,*

mb1 4.4/8, mb1mx4.2/15, mbtmp4.1/8, MS3.9/10, Ms1 3.9/10, ms1mx3.6/33, Error ellipse: s-maj=33.4km s-min=19.6km az=141.0
*NEIC **04** 06:39:30.5±0.6, 17.44S×172.51W, h10km, mb4.0/1, Error ellipse: s-maj=17.9km s-min=12.2km az=159.0*
*ISCJB **04** 06:39:31.9±0.6, 17.6S±0.1×172.45W±0.10, h33km, mb4.1/9, MS3.9/9, Error ellipse: s-maj=17.7km s-min=12.2km az=157.6*
ISC 04 06:39:34.3±0.6**, 17.6S**±0.1×**172.48W**±0.10**, h35km, n36, σ1^{s}06**/17**, mb4.1**/9**, MS3.9**/9**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.68**	**11**	Pn	**Pn**	**06 40 19.2**	**-9.5**
	9.5nm,0.3s,baz=225,slow=11,SNR=12						
AFI				Sn	**Sn**	**06 40 57.0**	**-14**
	23nm,0.3s,baz=37,slow=20,SNR=8.2						
RAR	**Rarotonga**	**12.53**	**109**	Pn	**Pn**	**06 42 29.1**	**-1.0**
	3.2nm,0.3s,baz=278,slow=9.7,SNR=6.5						
RAR				LR	LR	06 45 18.5	
	comp=Z,266nm,21.8s,baz=102,slow=27						
RAO	**Raoul Island**	**12.67**	**202**	*e*Pn	**Pn**	**06 42 32.7**	**+0.7**
DZM	**Mont Dzumac**	**20.33**	**254**	LR	LR	06 49 27.7	
	comp=Z,122nm,21.7s,MS3.2,baz=353,slow=30						
PPT	**Papeete**	**21.84**	**94**	*e*LR	LR	06 49 33.1	
	393nm,27.0s						
URZ	**Urewera**	**22.56**	**202**	P	**P**	**06 44 35.9**	**+4.5**
	19nm,0.7s,mb4.6,baz=337,slow=3.9,SNR=11						
HNR	**Honiara**	**27.97**	**283**	LR	LR	06 54 36.0	
	comp=Z,504nm,21.2s,MS4.1,baz=180,slow=33						
RKT	**Rikitea**	**35.53**	**105**	*e*LR	LR	06 55 44.2	
	252nm,28.5s						
PMG	**Port Moresby**	**40.01**	**276**	LR	LR	07 00 12.5	
	comp=Z,258nm,21.1s,MS4.0,baz=196,slow=31						
STKA	**Stephens Creek**	**43.77**	**242**	P	**P**	**06 47 36.9**	**+0.2**
STKA	**Stephens Creek**	**43.77**	**242**	P	**P**	**06 47 36.9**	**+0.3**
	2.7nm,0.8s,mb4.0,baz=101,slow=8.6,SNR=4.2						
WB2	**Warramunga Arr**	**50.23**	**258**	*e*P	**P**	**06 48 27.4**	**+0.1**
WRA	**Warramunga Arr**	**50.25**	**258**	P	**P**	**06 48 25.8**	**-1.6**
	2.5nm,0.7s,mb4.3,baz=94,slow=8.0,SNR=12						
WRA				LR	LR	07 09 08.4	
	comp=Z,161nm,18.9s,MS4.0,baz=60,slow=36						
ASAR	**Alice Springs**	**50.32**	**254**	P	**P**	**06 48 27.1**	**-0.7**
	7.0nm,0.6s,mb4.9,baz=86,slow=8.6,SNR=65						
FITZ	**Fitzroy Crossi**	**58.65**	**259**	LR	LR	07 12 37.2	
	comp=Z,104nm,21.9s,MS3.9,baz=203,slow=34						
NWAO	**Narrogin (SRO)**	**64.36**	**241**	LR	LR	07 18 43.3	
	comp=Z,213nm,18.1s,MS4.4,baz=8.9,slow=37						
MJAR	**Matsushiro Arr**	**71.14**	**320**	P	**P**	**06 50 49.3**	**-0.1**
	0.8nm,0.7s,mb3.8,baz=160,slow=5.3,SNR=4.2						
JNU	**Nakatsue**	**73.90**	**313**	LR	LR	07 18 17.5	
	comp=Z,88nm,19.2s,MS4.1,baz=12,slow=32						
KKM	**Kota Kinabalu**	**74.17**	**282**	*e*P	**P**	**06 51 08.1**	**+0.1**
HLID	**Hailey**	**80.73**	**39**	*e*P	**P**	**06 51 42.5**	**-1.5**
	1.1nm,0.6s,mb4.0						
JLU	**Jordanelle**	**80.93**	**42**	*e*P	**P**	**06 51 44.3**	**-0.8**
TXAR	**Lajitas Array**	**81.08**	**56**	P	**P**	**06 51 48.2**	**+2.1**
	0.6nm,0.9s,mb3.5,baz=232,slow=4.4,SNR=5.4						
TXAR				LR	LR	07 23 20.4	
	comp=Z,45nm,18.7s,MS3.9,baz=180,slow=32						
PDAR	**Pinedale Array**	**83.28**	**41**	P	**P**	**06 51 58.6**	**+1.3**
	1.6nm,1.0s,mb4.0,baz=176,slow=4.5,SNR=8.9						
YKA	**Yellowknife Ar**	**91.71**	**23**	P	**P**	**06 52 39.0**	**+1.3**
	0.8nm,1.0s,mb4.0,baz=235,slow=4.3,SNR=7.0						
LPAZ	**La Paz**	**98.25**	**110**	LR	LR	07 26 57.1	
	comp=Z,41nm,21.7s,MS3.9,baz=8.0,slow=29						
MKAR	**Makanchi Array**	**112.95**	**314**	PKiKP	PKiKP	06 58 08.8	+1.3
	0.2nm,0.6s,baz=253,slow=0.1,SNR=4.0						
KMBO	**Kilima Mbogo**	**145.33**	**241**	PKPbc	PKPbc	06 59 12.7	+3.4
	5.9nm,1.1s,baz=71,slow=5.8,SNR=6.5						
CLL	**Collm**	**146.04**	**354**	*e*PKPbc	PKPbc	06 59 13.0	+2.7
STHS	**Stebnicka Huta**	**146.33**	**344**	*e*PKP	PKPbc	06 59 14.9	+3.7
KOLS	**Kolonicke sedl**	**146.48**	**342**	*e*PKP	PKPbc	06 59 16.0	+4.3
KECS	**Kecovo**	**147.38**	**344**	*e*PKP	PKPbc	06 59 17.7	+3.4
VYHS	**Vyhne**	**147.78**	**346**	*e*PKP	PKPbc	06 59 18.2	+2.8
VYHS				*e*		08 12 15.1	
KOLL	**Kolacno**	**147.80**	**346**	*e*PKP	PKPbc	06 59 20.1	+4.7
BRTR	**Keskin Array B**	**148.37**	**320**	PKPbc	PKPbc	06 59 19.1	+1.9
	1.6nm,0.8s,baz=87,slow=4.2,SNR=8.4						
GERES	**GERESS Array B**	**148.38**	**352**	PKPbc	PKPbc	06 59 18.7	+1.8
	0.7nm,0.6s,baz=35,slow=4.9,SNR=6.5						
TORD	**Torodi Ar. Bea**	**172.88**	**127**	PKPab	PKPab	07 01 10.8	+3.7
	0.4nm,0.6s,baz=247,slow=3.2,SNR=5.5						

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*ISCJB **04** 07:07:57.1±4.0, 56.0S±0.1×27.3W±0.2, h125km±39km, mb4.8/12, Error ellipse: s-maj=18.8km s-min=14.6km az=34.0*
*IDC **04** 07:07:60.0±2.2, 56.04S×27.69W, h136km±17km, mb4.3/7, mb1 4.4/8, mb1mx4.1/14, mbtmp4.3/8, Error ellipse: s-maj=22.1km s-min=15.3km az=53.0*
*NEIC **04** 07:08:01.4±3.1, 56.01S×27.49W, h151km±27km, mb5.0/3, Error ellipse: s-maj=16.2km s-min=10.1km az=222.0*
ISC 04 07:07:59.4±3.9**, 56.0S**±0.1×**27.4W**±0.2**, h131km**±38km**, n44, σ0^{s}67**/23**, mb4.7**/12**, 1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.05**	**160**	*e*P	**Pn**	**07 11 49.6**	**+0.2**
VNA3				*e*		07 11 56.7	
VNA3				*e*		07 12 01.4	
VNA3				*e*		07 12 04.0	
VNA2	**Neumayer--Watz**	**17.25**	**158**	*e*P	**Pn**	**07 11 51.3**	**-0.6**
	baz=315,slow=13						
VNA2				*e*		07 11 57.5	
VNA2				*e*		07 12 01.9	
VNA2				*e*		07 12 04.6	
SNAA	**Sanae**	**18.81**	**156**	P	**P**	**07 12 08.3**	**0.0**
	4.5nm,0.3s,baz=306,slow=10,SNR=242						
PMSA	**Palmer Station**	**19.84**	**229**	*e*P	**P**	**07 12 20.9**	**+1.4**
	34nm,0.4s						
PMSA	**Palmer Station**	**19.84**	**229**	P	**P**	**07 12 22.7**	**+3.2**
	10.0nm,0.3s,baz=101,slow=6.9,SNR=25						
MAIT	**Maitri**	**22.31**	**147**	*e*P	**P**	**07 12 45.2**	**-0.6**
USHA	**Ushuaia**	**23.09**	**256**	P	**P**	**07 12 52.1**	**-1.2**
	5.2nm,0.8s,mb4.0,baz=94,slow=13,SNR=3.9						
SYO	**Syowa Base**	**31.67**	**141**⇓	*e*P	**P**	**07 14 08.9**	**-0.8**
QSPA	**South Pole Qui**	**34.23**	**180**	*e*P	**P**	**07 14 32.6**	**+0.8**
	29nm,0.5s,mb5.3						
MAW	**Mawson**	**40.23**	**144**	P	**P**	**07 15 23.4**	**+0.8**
	6.0nm,0.7s,mb4.3,baz=239,slow=12,SNR=8.2						
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**07 16 13.8**	**+0.4**
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**07 16 13.8**	**+0.4**
	8.3nm,0.6s,mb4.5,baz=190,slow=6.2,SNR=48						
LPAZ	**La Paz**	**50.28**	**305**	P	**P**	**07 16 42.7**	**+0.4**
LPAZ	**La Paz**	**50.28**	**305**	P	**P**	**07 16 42.7**	**+0.4**
	22nm,0.6s,mb4.9,baz=145,slow=6.1,SNR=110						
ARE	**Arequipa**	**51.70**	**302**	*e*P	**P**	**07 16 53.0**	**+0.1**
LIC	**Lamto**	**64.72**	**25**	*e*P	**P**	**07 18 23.5**	**+0.1**
	28nm,0.9s,mb5.1						
KIC	**Kosan Boka**	**64.92**	**25**	*e*P	**P**	**07 18 24.9**	**+0.2**
	45nm,1.0s,mb5.2						
TIC	**Toumodi**	**65.12**	**25**	*e*P	**P**	**07 18 25.9**	**-0.1**
	60nm,0.9s,mb5.4						
ROSC	**El Rosal**	**71.81**	**310**	P	**P**	**07 19 06.9**	**-0.7**
	3.9nm,0.6s,mb4.3,baz=100,slow=14,SNR=7.8						
TOA0	**Torodi Ar. Sit**	**73.08**	**30**	*e*P	**P**	**07 19 15.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**73.08**	**30**	P	**P**	**07 19 15.6**	**+0.6**
	9.6nm,0.8s,mb4.6,baz=199,slow=6.4,SNR=67						
SDV	**Santo Domingo**	**73.92**	**315**	*e*P	**P**	**07 19 19.4**	**-0.5**
	15nm,0.8s,mb4.8						
ASAR	**Alice Springs**	**99.05**	**163**	P	**P**	**07 21 24.6**	**-0.6**
	0.5nm,0.7s,mb4.1,baz=190,slow=3.7,SNR=10						
ASAR				PP	PP	07 25 24.3	-3.7
	1.3nm,1.0s,baz=186,slow=5.6,SNR=4.6						
WRA	**Warramunga Arr**	**102.76**	**162**	P	Pdif	07 21 41.0	-0.9
	0.5nm,1.0s,baz=190,slow=4.6,SNR=3.2						
WRA				PKKPbc	PKKPbc	07 37 39.0	+1.8
	0.4nm,0.4s,baz=353,slow=2.8,SNR=9.7						
BRTR	**Keskin Array B**	**108.48**	**45**	PKKPbc	PKKPbc	07 37 10.9	-10
	0.5nm,0.7s,baz=35,slow=4.5,SNR=3.6						
PV10	**Paradox Valley**	**116.59**	**300**	*e*PKPdf	PKPdf	07 26 26.4	-0.7
ULM	**Lac du Bonnet**	**120.16**	**316**	PKP	PKPdf	07 26 30.9	-2.6
	1.7nm,0.7s,baz=135,slow=1.4,SNR=5.3						
PDAR	**Pinedale Array**	**120.24**	**302**	PKP	PKPdf	07 26 32.9	-1.0
	0.4nm,0.5s,baz=124,slow=4.8,SNR=6.3						
FINES	**FINESS Array B**	**124.41**	**28**	PKP	PKPdf	07 26 40.8	-0.5
	1.7nm,0.6s,baz=172,slow=1.3,SNR=14						
KAF	**Kangasniemi**	**125.03**	**28**	*e*p	PKPdf	07 26 41.3	-1.2
	1.5nm,0.3s						
JOF	**Joensuu**	**127.03**	**29**	*e*p	PKPdf	07 26 40.4	-5.9
	4.3nm,1.0s						
ARCES	**ARCESS Array B**	**130.96**	**22**	PKP	PKPdf	07 26 53.1	-0.5
	4.7nm,1.0s,baz=222,slow=1.5,SNR=5.3						
YKA	**Yellowknife Ar**	**136.08**	**318**	PKP	PKPdf	07 27 03.2	-0.1
YKA				PP	PP	07 29 42.0	-3.6
YKA				SKPbc	SKPbc	07 30 20.9	-2.0
YKA	**Yellowknife Ar**	**136.08**	**318**	PKhKP		07 26 50.8	
	0.2nm,0.5s,baz=124,slow=2.5,SNR=5.6						
YKA				PKP	PKPdf	07 27 03.2	-0.1
	2.1nm,0.6s,baz=127,slow=2.4,SNR=26						
YKA				PP	PP	07 29 42.0	-3.6
	0.5nm,0.7s,baz=118,slow=6.7,SNR=5.9						
YKA				SKPbc	SKPbc	07 30 20.9	-2.0
	1.1nm,0.9s,baz=116,slow=2.1,SNR=9.5						
MKAR	**Makanchi Array**	**136.98**	**71**	PKP	PKPdf	07 27 06.8	+1.2
MKAR				SKPbc	SKPbc	07 30 25.3	-0.9
MKAR	**Makanchi Array**	**136.98**	**71**	PKP	PKPdf	07 27 06.8	+1.2
	0.5nm,0.6s,baz=273,slow=0.9,SNR=6.7						
MKAR				SKPbc	SKPbc	07 30 25.3	-0.9
	0.3nm,0.6s,baz=243,slow=3.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**142.45**	**64**	PKhKP		07 27 09.8	
	0.5nm,0.3s,baz=227,slow=5.6,SNR=4.8						
INK	**Inuvik**	**145.72**	**321**	*e*PKPdf	PKPdf	07 27 20.6	0.0
EGAK	**Eagle**	**147.64**	**313**	*e*PKPdf	PKPdf	07 27 23.5	-0.4
EGAK				*e*PKPbc	PKPbc	07 27 26.3	-0.6
EGAK				*e*PKPab	PKPab	07 27 29.4	-0.1
SLKM	**Skilak Lake**	**150.44**	**303**	*e*PKPbc	PKPbc	07 27 33.3	-0.6
SLKM				*e*PKPab	PKPab	07 27 40.6	-0.4
COLA	**College**	**150.45**	**312**	*e*PKPbc	PKPbc	07 27 33.4	-0.4
COLA				*e*PKPab	PKPab	07 27 40.9	-0.1
MCK	**McKinley**	**150.67**	**309**	*e*PKPbc	PKPbc	07 27 34.5	+0.1
SONM	**Songino Array**	**150.83**	**87**	PKPbc	PKPbc	07 27 35.7	+0.5
	7.0nm,0.5s,baz=221,slow=3.7,SNR=91						
SONM				PKPab	PKPab	07 27 45.1	+2.0
	0.9nm,0.6s,baz=209,slow=5.0,SNR=3.1						
IMA2	**Indian Mountai**	**153.02**	**314**	*e*PKPbc	PKPbc	07 27 40.0	+0.4
IMA2				*e*PKPab	PKPab	07 27 51.4	-0.4

IDC 04 07:29:04.8±39.0**, 29.91N**×**112.06E, h0km, mb3.5**/2**, mb1 3.3**/3**, mb1mx3.2**/21**, mbtmp3.3**/3**, Error ellipse: s-maj=663.1km s-min=111.7km az=127.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**18.42**	**348**	P	Pn	07 33 21.1	-0.4
	0.1nm,0.3s,baz=154,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**28.56**	**314**	P	P	07 35 01.9	-0.3
	0.3nm,0.8s,baz=113,slow=9.3,SNR=4.3						
ZALV	**Zalesovo Beam**	**31.08**	**328**	P	P	07 35 25.1	+0.7
	0.4nm,0.4s,baz=121,slow=8.7,SNR=3.1						

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*CSEM **04** 07:35:11.0±0.4, 38.53N×39.05E, h40km, MD2.7, Error ellipse: s-maj=16.2km s-min=7.4km az=133.0*
*DDA **04** 07:35:11.3, 38.31N×39.26E, h7km±1km, Md2.7*
*ISK **04** 07:35:11.1, 38.40N×39.20E, h5km, MD2.7*
*ISCJB **04** 07:35:12.2±0.7, 38.38N±0.03×39.26E±0.05, h5km, Error ellipse: s-maj=5.3km s-min=4.8km az=168.0*
ISC 04 07:35:12.5±0.9**, 38.37N**±0.04×**39.28E**±0.06**, h2km**±9km**, n7, σ0^{s}97**/13**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.26**	**298**⇑	*i*P	**Pg**	**07 35 17.6**	**+0.1**
ELZG				*i* S	**Sg**	**07 35 21.6**	**+0.7**
PTK	**Pertek**	**0.52**	**10**	PG	**Pg**	**07 35 22.2**	**-0.3**
PTK				SG	**Sg**	**07 35 30.7**	**+1.3**
MALT	**Malatya**	**0.67**	**265**	PG	**Pg**	**07 35 23.5**	**-1.9**
MYA	**Malataya**	**0.67**	**266**	PG	**Pg**	**07 35 24.3**	**-1.1**
MYA				SG	**Sg**	**07 35 34.0**	**-0.1**
URFA	**Urfa**	**1.00**	**201**	*e*PG	**Pg**	**07 35 31.6**	**0.0**
URFA				*e*SG	**Sg**	**07 35 46.3**	**+1.7**
MARD	**Mardin**	**1.59**	**131**	*i* P	**Pn**	**07 35 40.7**	**-1.0**
MARD				*i* S	**Sn**	**07 36 02.9**	**+0.1**
GZT	**Gaziantep**	**1.70**	**234**	*i* P	**Pn**	**07 35 42.3**	**-0.8**
GZT				*i* S	**Sn**	**07 36 06.5**	**+1.1**

MEX 04 07:40:40.7±1.5**, 16.82N**×**94.06W, h154km**±18km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.83**	**289**	*i* P	Pn	07 41 02.8	-1.7
CMIG				*i* S	Sn	07 41 20.4	-2.2
CCIG	**Comitan**	**1.92**	**106**	*i* P	Pn	07 41 14.2	-0.9
CCIG				*i* S	Sn	07 41 40.2	-1.3
HUIG	**Huatulco**	**2.22**	**242**	*i* P	Pn	07 41 16.1	-2.6
HUIG				*i* S	Sn	07 41 46.9	-1.0
OXX	**Oaxaca**	**2.56**	**276**	*i* P	Pn	07 41 23.5	+0.8
VHO	**Vista Hermosa**	**2.57**	**276**	*i* P	Pn	07 41 22.4	-0.5
VHO				*i* S	Sn	07 41 54.4	-0.9

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*ISCJB **04** 07:50:10.5±0.5, 21.83N±0.06×143.3E±0.1, h33km, mb4.2/31, Error ellipse: s-maj=14.6km s-min=8.7km az=172.0*
*MOS **04** 07:50:11.1±1.6, 21.86N×143.12E, h33km, mb4.7/14, Error ellipse: s-maj=19.9km s-min=8.3km az=110.0*
*IDC **04** 07:50:13.5±3.3, 21.90N×143.24E, h54km±28km, mb3.7/11, mb1 3.9/13, mb1mx3.8/22, mbtmp3.8/13, ML3.8/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/34, Error ellipse: s-maj=27.7km s-min=16.4km az=85.0*
*NEIC **04** 07:50:13.8±3.1, 21.84N×143.30E, h54km±27km, mb4.6/9, Error ellipse: s-maj=17.1km s-min=14.1km az=71.0*
*BJI **04** 07:50:16.0, 22.02N×143.55E, h76km, mb4.5*
ISC 04 07:50:12.2±0.5**, 21.81N**±0.06×**143.4E**±0.1**, h35km, n64, σ1^{s}23**/61**, mb4.2**/31**, 12C, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.38**	**348**	P	**Pn**	**07 51 29.3**	**-0.6**
	8.4nm,0.3s,baz=257,slow=18,SNR=3.4						
CBIJ				S	**Sn**	**07 52 29.8**	**-0.8**
	4.2nm,0.3s,baz=270,slow=20,SNR=2.3						
JOW	**Kunigami**	**14.66**	**293**	LR	LR	07 58 55.8	
	comp=Z,118nm,20.4s,baz=90,slow=36						
MJAR	**Matsushiro Arr**	**15.36**	**344**	P	**Pn**	**07 53 46.6**	**+0.3**
MJAR				LR	LR	07 59 02.4	
MJAR	**Matsushiro Arr**	**15.36**	**344**	P	**Pn**	**07 53 46.6**	**+0.3**
	0.4nm,0.3s,baz=162,slow=17,SNR=3.9						
MJAR				LR	LR	07 59 02.4	
	comp=Z,203nm,18.9s,baz=110,slow=35						
JNU	**Nakatsue**	**15.81**	**318**	LR	LR	07 57 58.9	
	comp=Z,48nm,21.6s,baz=45,slow=30						
KSRS	**Korea Array**	**20.55**	**323**	P	**P**	**07 54 50.3**	**+2.7**
	3.7nm,0.9s,baz=144,slow=8.6,SNR=5.6						
YSS	**Yuzh-Sakhalins**	**25.09**	**359**⇑	*e*P	**P**	**07 55 32.8**	**-0.6**
YSS				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.3						
HABR	**Khabarovsk**	**27.43**	**348**	*e*P	**P**	**07 55 50.0**	**-4.5**
HABR				*e*		07 59 13.9	
HIA	**Hailar**	**33.21**	**331**⇑	*e*P	**P**	**07 56 45.8**	**+0.2**
MA2	**Magadan**	**38.09**	**6**⇑	*e*P	**P**	**07 57 29.4**	**+2.1**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.1						
ULN	**Ulaanbaatar**	**39.00**	**321**⇑	*e*P	**P**	**07 57 36.1**	**+0.9**
SONM	**Songino Array**	**39.38**	**320**	P	**P**	**07 57 37.0**	**-1.3**
	comp=Z,2.3nm,0.8s,mb4.0,baz=129,slow=7.3,SNR=18						
YAK	**Yakutsk**	**41.29**	**350**⇑	*e*P	**P**	**07 57 54.4**	**+0.5**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.6						
CTA	**Charters Tower**	**41.73**	**176**	P	**P**	**07 58 02.7**	**+4.7**
CTA	**Charters Tower**	**41.73**	**176**	P	**P**	**07 58 02.7**	**+4.7**
	comp=Z,10.0nm,1.0s,mb4.4,baz=353,slow=10,SNR=5.1						
ZAK	**Zakamensk**	**42.38**	**322**	*e*P	**P**	**07 58 00.2**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.0						
WRA	**Warramunga Arr**	**42.43**	**193**	P	**P**	**07 58 03.4**	**-0.2**
	comp=Z,2.6nm,0.9s,mb3.9,baz=13,slow=8.7,SNR=8.4						
TLY	**Talaya**	**42.79**	**324**	*e*P	**P**	**07 58 07.8**	**+1.5**
TLY				*e*		08 04 19.1	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.2						
ASAR	**Alice Springs**	**46.13**	**192**	P	**P**	**07 58 32.7**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=16,slow=8.0,SNR=9.6						
BILL	**Bilibino**	**48.37**	**11**	*e*P	**P**	**07 58 51.3**	**+1.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.2						
TIXI	**Tiksi**	**50.56**	**354**⇑	*e*P	**P**	**07 59 07.1**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.1						
WMQ	**Urumqi**	**50.66**	**309**	*e*P	**P**	**07 59 09.7**	**+1.7**
ZAA0	**Zalesovo Array**	**54.25**	**322**	*e*P	**P**	**07 59 33.9**	**-0.5**
ZALV	**Zalesovo Beam**	**54.25**	**322**	P	**P**	**07 59 31.9**	**-2.5**
ZALV	**Zalesovo Beam**	**54.25**	**322**	P	**P**	**07 59 31.9**	**-2.5**
	comp=Z,5.0nm,0.9s,mb4.4,baz=103,slow=6.5,SNR=15						
ZAL	**Zalesovo**	**54.26**	**322**	P	**P**	**07 59 31.9**	**-2.6**
MKAR	**Makanchi Array**	**54.77**	**313**	P	**P**	**07 59 36.5**	**-1.9**
MKAR				PcP	PcP	08 00 37.9	-2.6
MKAR	**Makanchi Array**	**54.77**	**313**⇑	*e*P	**P**	**07 59 39.4**	**+1.1**
MKAR	**Makanchi Array**	**54.77**	**313**	P	**P**	**07 59 36.5**	**-1.9**
	comp=Z,0.9nm,0.6s,mb4.0,baz=90,slow=9.6,SNR=10						
MKAR				PcP	PcP	08 00 37.9	-2.6
	comp=Z,1.0nm,0.9s,baz=77,slow=5.2,SNR=4.6						
KURK	**Kurchatov**	**57.53**	**317**	*e*P	**P**	**07 59 57.5**	**-0.5**
	comp=Z,3.6nm,0.9s,mb4.4						
KURK	**Kurchatov**	**57.53**	**317**⇑	*e*P	**P**	**07 59 58.7**	**+0.7**
TKM2	**Tokmak 2**	**59.43**	**308**	*e*P	**P**	**08 00 11.0**	**-0.4**
	comp=Z,4.1nm,0.8s,mb4.5						
TKM2	**Tokmak 2**	**59.43**	**308**	*e*P	**P**	**08 00 11.0**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**60.26**	**308**⇑	*e*P	**P**	**08 00 17.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.8s,mb4.2						
UCH	**Uchtor**	**60.27**	**307**	*e*P	**P**	**08 00 18.6**	**+1.5**
	comp=Z,8.9nm,1.2s,mb4.7						
AML	**Almayashu**	**60.88**	**307**	*e*P	**P**	**08 00 21.0**	**-0.3**
	comp=Z,5.0nm,1.0s,mb4.6						
BRVK	**Borovoye**	**62.78**	**319**	*e*P	**P**	**08 00 33.4**	**-0.5**
	comp=Z,8.4nm,1.2s,mb4.8						
BRVK	**Borovoye**	**62.78**	**319**	*e*P	**P**	**08 00 33.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.7						
KBL	**Kabul**	**65.46**	**299**	*e*P	**P**	**08 00 51.0**	**-0.9**
SVE	**Sverdlovsk**	**68.10**	**324**	P	**P**	**08 01 09.3**	**+1.0**
ARU	**Arti**	**69.29**	**324**	P	**P**	**08 01 15.4**	**-0.3**
	comp=Z,9.8nm,0.9s,mb4.7						
ARU	**Arti**	**69.29**	**324***c*	*i*P	**P**	**08 01 15.8**	**+0.1**
ARU						08 03 45.9	
ARU				PPP		08 05 24.9	
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**08 01 55.0**	**-1.9**
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**08 01 55.0**	**-1.9**
	comp=Z,0.8nm,0.5s,mb3.9,baz=293,slow=5.3,SNR=3.8						
PPT	**Papeete**	**76.40**	**115**	LR	LR	08 28 23.2	
	comp=Z,51nm,20.7s,baz=213,slow=30						
WDC	**Whiskeytown Da**	**79.10**	**51**	*e*P	**P**	**08 02 10.0**	**-3.1**
	comp=Z,1.7nm,0.9s,mb4.0						
WDC	**Whiskeytown Da**	**79.10**	**51**	*e*P	**P**	**08 02 10.0**	**-3.2**
WDC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
OBN	**Obninsk**	**81.50**	**326**	*e*P	**P**	**08 02 26.8**	**+1.0**
OBN				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.7						
CMB	**Columbia Colle**	**81.54**	**53**	*e*P	**P**	**08 02 27.4**	**+1.0**
	comp=Z,8.4nm,1.4s,mb4.5						
CMB				*e*PcP	PcP	08 02 36.0	+3.7
CMB	**Columbia Colle**	**81.54**	**53**	*e*P	**P**	**08 02 27.4**	**+1.0**
CMB				*e*	pP	08 02 36.0	-1.4
CMB				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
KIV	**Kislovodsk**	**82.49**	**314**	*e*P	**P**	**08 02 32.4**	**+1.2**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
NVAR	**Mina Array Bea**	**82.92**	**52**	P	**P**	**08 02 32.4**	**-1.3**
	comp=Z,0.2nm,0.7s,mb3.3,baz=269,slow=5.0						
FINES	**FINESS Array B**	**83.17**	**335**	*i* P	**P**	**08 02 35.0**	**+0.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**83.17**	**335**	P	**P**	**08 02 32.9**	**-1.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=67,slow=6.4,SNR=6.3						
ANN	**Anapa**	**85.56**	**317**	*e*P	**P**	**08 02 40.9**	**-6.0**
ANN				pmax	pmax		
	comp=Z,123nm,1.7s						
FFC	**Flin Flon**	**85.63**	**32**	*e*P	**P**	**08 02 47.0**	**0.0**
	comp=Z,12nm,1.1s,mb5.0						
FFC	**Flin Flon**	**85.63**	**32**	*e*P	**P**	**08 02 47.0**	**0.0**
FFC				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
PDAR	**Pinedale Array**	**87.18**	**45**	P	**P**	**08 02 55.0**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.6,baz=291,slow=5.7,SNR=2.3						
AKASG	**Malin Array Be**	**87.53**	**324**	*i* P	**P**	**08 02 56.5**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**87.53**	**324**	P	**P**	**08 02 56.0**	**-0.4**
	comp=Z,0.8nm,0.7s,mb4.1,baz=47,slow=4.3,SNR=4.7						
BRTR	**Keskin Array B**	**90.41**	**313**⇑	*e*P	**P**	**08 03 10.6**	**+0.4**
BRTR	**Keskin Array B**	**90.41**	**313**	P	**P**	**08 03 07.2**	**-2.9**
	comp=Z,1.6nm,0.9s,mb4.3,baz=64,slow=5.6,SNR=6.9						
ANMO	**Albuquerque**	**93.00**	**51**⇑	*e*P	**P**	**08 03 25.2**	**+2.9**
LPAZ	**La Paz**	**149.73**	**85**	PKPbc	PKPbc	08 10 00.8	+1.7
	comp=Z,3.0nm,0.9s,baz=313,slow=2.5,SNR=7.6						

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*ISCJB **04** 08:06:38.0±1.2, 12.7N±0.1×143.8E±0.2, h214km±14km, mb3.5/6, Error ellipse: s-maj=38.5km s-min=18.6km az=167.1*
*IDC **04** 08:06:39.1±1.6, 12.72N×143.81E, h210km±37km, mb3.2/6, mb1 3.4/6, mb1mx3.2/19, mbtmp3.2/6, Error ellipse: s-maj=100.4km s-min=15.1km az=88.0*
*NEIC **04** 08:06:39.6±1.0, 12.70N×143.77E, h216km±12km, mb4.4/1, Error ellipse: s-maj=26.6km s-min=13.0km az=77.0*
ISC 04 08:06:39.3±1.1**, 12.7N**±0.1×**143.8E**±0.2**, h211km**±13km**, n10, σ0^{s}59**/12**, mb3.5**/6**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.37**	**50**	P	**Pn**	**08 07 13.8**	**+1.0**
GUMO				S	**S**	**08 07 38.2**	**-0.7**
GUMO	**Guam**	**1.37**	**50**	P	**Pn**	**08 07 13.8**	**+1.0**
	17nm,0.3s,baz=162,slow=18,SNR=7.3						
GUMO				S	**S**	**08 07 38.2**	**-0.7**
	46nm,0.3s,baz=185,slow=23,SNR=8.5						
MJAR	**Matsushiro Arr**	**24.26**	**349**	P	**P**	**08 11 37.8**	**+0.8**
	0.7nm,0.4s,mb3.6,baz=188,slow=6.1,SNR=5.0						
WRA	**Warramunga Arr**	**33.75**	**196**	P	**P**	**08 13 01.6**	**+0.6**
	1.1nm,0.6s,mb3.6,baz=16,slow=9.2,SNR=14						
ASAR	**Alice Springs**	**37.42**	**195**	P	**P**	**08 13 31.6**	**-0.6**
	0.2nm,0.4s,mb3.0,baz=9.2,slow=7.5,SNR=4.3						
FUNA	**Funafuti**	**41.01**	**119**	*e*P	**P**	**08 14 02.2**	**+0.1**
	256nm,1.8s						
SONM	**Songino Array**	**46.86**	**326**	P	**P**	**08 14 47.8**	**-0.4**
	0.4nm,0.6s,baz=144,slow=7.4,SNR=4.6						
TIXI	**Tiksi**	**59.61**	**355**	*e*P	**P**	**08 16 28.4**	**+7.8**
	2.5nm,0.3s,mb4.3						
MKAR	**Makanchi Array**	**61.40**	**317**	P	**P**	**08 16 33.0**	**-0.1**
	0.2nm,0.6s,mb3.0,baz=95,slow=8.3,SNR=5.9						
FINES	**FINESS Array B**	**91.52**	**335**	P	**P**	**08 19 21.1**	**-0.5**
	0.4nm,0.3s,mb3.8,baz=60,slow=4.3,SNR=10						

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*ISCJB **04** 08:11:53.3±4.3, 6.0S±0.2×147.6E±0.4, h51km±39km, mb3.7/4, Error ellipse: s-maj=61.8km s-min=31.6km az=6.6*
*IDC **04** 08:11:54.1±8.9, 6.01S×147.63E, h44km±63km, mb3.5/3, mb1 3.7/5, mb1mx3.4/14, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=80.9km s-min=51.2km az=67.0*
*NEIC **04** 08:11:54.5±3.4, 6.04S×147.63E, h47km±31km, mb4.1/1, Error ellipse: s-maj=43.6km s-min=28.5km az=105.0*
ISC 04 08:11:53.9±4.5**, 6.0S**±0.2×**147.5E**±0.3**, h39km**±41km**, n6, σ0^{s}66**/7**, mb3.7**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.42**	**186**	P	**Pn**	**08 12 44.8**	**0.0**
	3.4nm,0.3s,baz=16,slow=10,SNR=8.1						
PMG				S	**Sn**	**08 13 24.5**	**+0.3**
	0.9nm,0.3s,baz=206,slow=24,SNR=2.6						
WRA	**Warramunga Arr**	**18.89**	**222**	P	**Pn**	**08 16 11.2**	**-0.9**
	0.2nm,0.3s,baz=46,slow=11,SNR=13						
ASAR	**Alice Springs**	**21.93**	**215**	P	**P**	**08 16 44.4**	**+0.2**
	0.7nm,0.4s,mb3.4,baz=50,slow=9.4,SNR=29						
FITZ	**Fitzroy Crossi**	**24.52**	**239**	P	**P**	**08 17 10.6**	**+0.6**
	3.3nm,0.9s,mb3.9,baz=28,slow=11,SNR=6.7						
STKA	**Stephens Creek**	**26.35**	**191**	P	**P**	**08 17 25.9**	**-0.5**
	0.6nm,0.4s,mb3.5,baz=353,slow=12,SNR=3.4						
KURK	**Kurchatov**	**81.51**	**323**	*e*P	**P**	**08 24 07.4**	**+0.2**
	0.9nm,0.4s,mb4.0						

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*ISCJB **04** 08:36:34.1±0.5, 16.80N±0.04×99.74W±0.03, h10km, mb3.6/4, Error ellipse: s-maj=5.3km s-min=3.2km az=18.9*
*IDC **04** 08:36:36.9±6.2, 17.37N×99.38W, h0km, mb3.8/4, mb1 4.2/5, mb1mx3.8/17, mbtmp3.9/5, ML2.9/2, Error ellipse: s-maj=131.8km s-min=23.9km az=19.0*
*MEX **04** 08:36:36.6±0.8, 16.79N×99.82W, h6km±9km, MD4.3*

NEIC 04 08:36:36.7, 1679N×9983W, h7km, MD4.3(MEX), After MEX.

ISC 04 08:36:34.9±0.5, **1682N**±004×**9976W**±003, **h10**km, **n29**, σ1.16/50, **mb3.6**/4, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.16	288	iP	Pg	08 36 39.0	+0.5
ACX				iS	Sg	08 36 43.0	+2.1
CAIG	El Cayaco	0.54	295	iP	Pg	08 36 46.0	+0.5
CAIG				iS	Sg	08 36 53.0	+0.4
MEIG	Mezcala	1.11	7	iP	Pb	08 36 54.9	-1.4
MEIG				eS	Sg	08 37 10.0	-0.8
PLIG	Platanillo	1.59	9	eP	Pn	08 37 02.3	-0.8
PLIG				iS	Sn	08 37 23.4	-0.3
PNIG	Pinotepa	1.62	105	iP	Pn	08 37 03.5	0.0
PNIG				eS	Sn	08 37 24.7	+0.3
ZIIG	Zihuatanejo	1.81	296	iP	Pn	08 37 05.8	-0.4
ZIIG				eS	Sn	08 37 25.3	-4.0
UTMO	Huajuapan	2.12	61	iP	Pn	08 37 10.8	+0.3
UTMO				iS	Sn	08 37 38.0	+1.1
YAIG	Yautepec	2.14	18	iP	Pn	08 37 11.4	+0.7
YAIG				iS	Sn	08 37 38.7	+1.4
SZVM	Salazar	2.52	8	eP	Pn	08 37 18.2	+2.3
SZVM				iS	Sn	08 37 46.7	0.0
TPIG	Tehuac#an	2.79	55	iP	Pn	08 37 18.3	-1.3
TPIG				iS	Sn	08 37 55.4	+2.1
PTVM	Pico Tres Padr	2.83	12	iP	Pn	08 37 21.9	+1.7
PTVM				eS	Sn	08 37 54.4	0.0
PTVM	Pico Tres Padr	2.83	12	iP	Pn	08 37 21.6	+1.4
PTVM				eS	Sn	08 37 54.4	0.0
VHO	Vista Hermosa	2.91	85	iP	Pn	08 37 20.8	-0.4
VHO				iS	Sn	08 37 57.7	+1.5
OXX	Oaxaca	2.92	84	eP	Pn	08 37 21.0	-0.4
IIO	Organos	2.93	19	iP	Pn	08 37 21.2	-0.4
IIO				iS	Sn	08 37 56.4	-0.5
MOIG	Morelia	3.15	335	iP	Pn	08 37 23.9	-0.8
MOIG				iS	Sn	08 38 00.7	-1.7
HUIG	Huatulco	3.66	106	eP	Pn	08 37 31.1	-0.5
HUIG				iS	Sn	08 38 14.1	-0.7
MMIG	Aquila	3.72	294	iP	Pn	08 37 32.7	+0.2
MMIG				iS	Sn	08 38 13.3	-3.1
CMIG	Matias Romero	4.67	86	iP	Pn	08 37 45.7	+0.1
CMIG				iS	Sn	08 38 40.2	+0.4
CMIG				Lg		08 38 57.7	
CMIG	Matias Romero	4.67	86	Pn	Pn	08 37 43.9	-1.7
	0.4nm,0.3s,baz=229,slow=10.0,SNR=12						
CMIG				Sn	Sn	08 38 33.9	-6.0
	4.7nm,0.3s,baz=256,slow=15,SNR=5.3						
CMIG				Lg		08 38 57.7	
	6.4nm,0.3s,baz=234,slow=18,SNR=5.7						
CMIG	Matias Romero	4.67	86	iP	Pn	08 37 45.7	+0.1
CMIG				iS	Sn	08 38 40.2	+0.4
SFJM	Santa Fe	4.80	320	iP	Pn	08 37 53.0	+5.7
ANIG	Ahuacatlan	6.17	314	iP	Pn	08 38 09.5	+3.3
TEIG	Tepich	11.40	71	Pn	Pn	08 39 15.8	-2.2
	0.1nm,0.3s,baz=19,slow=14,SNR=2.7						
TEIG				Sn	Sn	08 41 14.9	-11
	0.4nm,0.3s,baz=180,slow=22,SNR=1.9						
NVAR	Mina Array Bea	26.98	327	P	P	08 42 18.8	+2.0
	1.7nm,0.9s,mb3.5,baz=145,slow=9.6,SNR=8.6						
PDAR	Pinedale Array	27.19	344	P	P	08 42 19.2	+0.6
	0.5nm,0.8s,mb3.1,baz=134,slow=8.5,SNR=5.7						
SCHQ	Schefferville	45.60	26	P	P	08 44 53.5	-1.7
SCHQ	Schefferville	45.60	26	P	P	08 44 53.5	-1.7
	2.0nm,0.8s,mb4.1,baz=225,slow=8.6,SNR=7.3						
YKA	Yellowknife Ar	46.80	351	P	P	08 45 03.1	-1.4
	1.0nm,0.8s,mb3.8,baz=160,slow=7.1,SNR=14						

NEIC 04 08:55:01.8, 1672N×9984W, h9km, MD3.5(MEX), After MEX.

MEX 04 08:55:01.8±0.4, **1672N**×**9984W**, **h9**km±4km, **MD3.5**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.17	334	iP	Pg	08 55 05.0	-0.4
ACX				iS	Sg	08 55 07.5	-0.3
CAIG	El Cayaco	0.53	309	iP	Pg	08 55 11.1	-1.0
CAIG				iS	Sg	08 55 19.0	+0.1
MEIG	Mezcala	1.22	10	iP	Pn	08 55 21.0	-4.0
MEIG				iS	Sb	08 55 36.3	-4.7
PLIG	Platanillo	1.70	11	iP	Pn	08 55 29.1	-2.5
PLIG				iS	Sn	08 55 49.0	-4.5
UTMO	Huajuapan	2.24	60	iP	Pn	08 55 36.7	-2.3
VHO	Vista Hermosa	2.99	83	iP	Pn	08 55 46.3	-3.1
VHO				iS	Sn	08 56 22.2	-3.2

IDC 04 08:58:01.6±0.9, 021S×12449E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, ML3.6/1, Error ellipse: s-maj=63.7km s-min=17.1km az=72.0
NEIC 04 08:58:03.0±0.5, 0.17S×12456E, h10km, mb4.4/1, Error ellipse: s-maj=33.6km s-min=8.5km az=72.0
ISCJB 04 08:58:04.4±0.6, 02S±0.1×1245E±03, h33km, mb4.0/8, Error ellipse: s-maj=42.9km s-min=10.8km az=162.4

ISC 04 08:58:06.7±0.6, **02S**±01×**1246E**±03, **h35**km, **n12**, σ0.76/12, **mb4.0**/8, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.81	177	P	Pn	09 02 12.6	+0.7
	0.1nm,0.3s,baz=9.4,slow=17,SNR=3.5						
WRA	Warramunga Arr	21.82	155	P	P	09 02 55.4	-0.6
	0.9nm,0.4s,mb3.6,baz=331,slow=11,SNR=22						
WB2	Warramunga Arr	21.82	155	eP	P	09 02 55.7	-0.4
ASAR	Alice Springs	25.01	159	P	P	09 03 27.6	+0.1
	2.5nm,0.7s,mb3.8,baz=335,slow=7.1,SNR=37						
MJAR	Matsushiro Arr	38.70	18	P	P	09 05 27.5	+0.3
	0.4nm,0.4s,mb3.5,baz=185,slow=9.0,SNR=4.0						
SONM	Songino Array	50.40	344	P	P	09 07 01.0	+0.5
	0.6nm,0.5s,mb3.9,baz=158,slow=8.4,SNR=8.5						
MK31	Makanchi Array	59.62	328	eP	P	09 08 07.1	-0.1
MKAR	Makanchi Array	59.62	328	P	P	09 08 07.0	-0.2
	1.2nm,0.5s,mb4.2,baz=120,slow=8.1,SNR=24						
ZALV	Zalesovo Beam	63.16	335	P	P	09 08 29.7	-1.3
ZALV	Zalesovo Beam	63.16	335	P	P	09 08 29.7	-1.3
	0.6nm,0.4s,mb4.1,baz=137,slow=6.4,SNR=4.8						
KURK	Kurchatov	63.95	329	eP	P	09 08 35.6	-0.6
	1.0nm,0.4s,mb4.2						
ARCES	ARCESS Array B	93.37	340	P	P	09 11 19.6	+1.8
	1.7nm,0.8s,mb4.5,baz=64,slow=6.1,SNR=2.2						

SZGRF 04 08:59:59.0, 1555S×2394E, h64km, mb4.4, Zambia
ISCJB 04 09:00:25.1±0.4, 1080S±005×2509E±008, h10km, mb4.2/14, MS3.5/2, Error ellipse: s-maj=11.2km s-min=6.7km az=165.4
IDC 04 09:00:25.9±0.7, 1070S×2505E, h0km, mb4.0/11, mb1 4.1/16, mb1mx4.0/23, mbtmp4.1/16, ML4.2/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/23, Error ellipse: s-maj=26.0km s-min=15.9km az=81.0
NEIC 04 09:00:27.3±0.3, 1074S×2503E, h10km, mb4.3/3, Error ellipse: s-maj=10.3km s-min=6.2km az=87.0

ISC 04 09:00:27.4±0.4, **1079S**±005×**2509E**±007, **h10**km, **n35**, σ0.90/39, **mb4.2**/14, **MS3.5**/2, **4C, Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	Lusaka	5.39	146	Pn	Pn	09 01 50.4	+2.5
	11nm,0.3s,baz=333,slow=12,SNR=180						
LSZ				Sn	Sn	09 02 47.7	-2.3
	23nm,0.3s,baz=324,slow=16,SNR=3.7						
LSZ				Lg		09 03 21.9	
	21nm,0.3s,baz=258,slow=23,SNR=7.2						
LSZ				LR	LR	09 04 16.2	
	comp=Z,489nm,19.9s,baz=140,slow=42						
TSUM	Tsumeb	11.07	220	Pn	Pn	09 03 07.0	+1.2
TSUM				Sn	Sn	09 05 00.6	-9.2
TSUM	Tsumeb	11.07	220	Pn	Pn	09 03 07.0	+1.2
	0.7nm,0.3s,baz=12,slow=11,SNR=15						
TSUM				Sn	Sn	09 05 00.6	-9.2
	2.6nm,0.3s,baz=291,slow=13,SNR=4.0						
LBTB	Lobatse	14.16	178	Pn	Pn	09 03 47.8	-0.3
LBTB				Sn	Sn	09 06 16.9	-8.4
LBTB				Lg		09 08 03.3	
LBTB	Lobatse	14.16	178	Pn	Pn	09 03 47.8	-0.3
	1.2nm,0.3s,baz=4.3,slow=15,SNR=23						
LBTB				Sn	Sn	09 06 16.9	-8.4
	0.9nm,0.3s,baz=348,slow=18,SNR=4.9						
LBTB				Lg		09 08 03.3	
	0.2nm,0.3s,baz=316,slow=21,SNR=3.7						
KMBO	Kilima Mbogo	15.43	52	Pn	Pn	09 04 05.2	-0.1
	0.2nm,0.3s,baz=242,slow=20,SNR=3.5						
KMBO				Sn	Sn	09 06 39.5	-17
	0.5nm,0.3s,baz=229,slow=21,SNR=5.9						
KMBO				Lg		09 08 25.4	
	0.2nm,0.3s,baz=326,slow=20,SNR=4.1						
KMBO				LR	LR	09 09 37.7	
	comp=Z,60nm,20.4s,baz=287,slow=36						
BOSA	Boshof	17.74	180	P	Pn	09 04 34.9	+0.3
	0.6nm,0.3s,baz=4.4,slow=12,SNR=12						
BOSA				S	Sn	09 07 40.6	-12
	0.5nm,0.3s,baz=127,slow=8.7,SNR=4.8						
SUR	Sutherland	21.85	190	eP	P	09 05 20.1	-0.1
	19nm,1.1s,mb4.5						
SUR	Sutherland	21.85	190	P	P	09 05 21.8	+1.7
	5.6nm,0.8s,mb4.1,baz=152,slow=18,SNR=3.0						
OPO	Ambohidratompo	22.72	112	P	P	09 05 31.4	+1.8
	2.7nm,0.8s,mb3.7,baz=299,slow=14,SNR=3.9						
TOA0	Torodi Ar. Sit	33.23	315	eP	P	09 07 04.7	-0.2
TORD	Torodi Ar. Bea	33.23	315	P	P	09 07 04.8	-0.2
	4.0nm,0.5s,mb4.6,baz=126,slow=8.2,SNR=64						
KIC	Kosan Boka	34.24	298	eP	P	09 07 12.9	-0.8
	23nm,0.6s,mb5.3						
LIC	Lamto	34.42	298	eP	P	09 07 14.3	-1.0
	40nm,1.6s,mb5.1						
TIC	Toumodi	34.62	299	eP	P	09 07 16.5	-0.5
	18nm,0.4s						
KEST	Kesra	48.60	343	LR	LR	09 31 28.2	
	comp=Z,29nm,21.6s,MS3.2,baz=200,slow=38						
BRTR	Keskin Array B	50.88	8	P	P	09 09 28.6	+0.2
	1.2nm,0.7s,mb4.0,baz=178,slow=8.5,SNR=8.9						
MLR	Muntele Rosu	56.02	1⇑	iP	P	09 10 06.9	+0.7
BZS	Buzias	56.23	357⇑	iP	P	09 10 08.6	+1.0
ESDC	Sonseca Array	57.00	333	P	P	09 10 13.2	0.0
	0.1nm,0.3s,mb3.3,baz=142,slow=11,SNR=4.4						
DRGR		57.35	358⇑	iP	P	09 10 16.8	+1.2
SYO	Syowa Base	58.92	174⇑	eP	P	09 10 17.5	-8.9
GERES	GERESS Array B	60.22	351	P	P	09 10 35.7	+0.2
	2.1nm,0.7s,mb4.2,baz=162,slow=5.6,SNR=21						
KHC	Kasperske Hory	60.51	351	eP	P	09 10 37.3	-0.2
KHC				ex	x	09 10 51.2	
AKASG	Malin Array Be	61.33	3	P	P	09 10 42.4	-0.7
AKASG	Malin Array Be	61.33	3	P	P	09 10 42.4	-0.7
	1.2nm,0.7s,mb4.2,baz=193,slow=7.3,SNR=5.8						
GRA1	Grafenberg Arr	61.44	350	eP	P	09 10 43.9	+0.1
	2.0nm,0.8s,mb4.3						
GRA1				epP	pP	09 11 01.2	+14
GRF	Grafenberg Arr	61.44	350	eP	P	09 10 43.9	+0.1
	comp=Z,2.0nm,0.8s,mb4.3						
GRF				epP	pP	09 11 01.2	+14
FINES	FINESS Array B	72.00	0	P	P	09 11 50.5	-0.5
	comp=Z,0.4nm,0.6s,mb3.5,baz=115,slow=32,SNR=3.1						
FINES				LR	LR	09 43 58.2	
	comp=Z,50nm,18.8s,MS3.8,baz=159,slow=36						
NOA	NORSAR Array B	72.43	353	P	P	09 11 53.2	-0.4
NOA	NORSAR Array B	72.43	353	P	P	09 11 53.2	-0.3
	comp=Z,0.3nm,0.5s,mb3.4,baz=156,slow=4.4,SNR=3.4						
MKAR	Makanchi Array	76.67	36	P	P	09 12 17.9	-0.6
	comp=Z,0.9nm,0.8s,mb3.8,baz=238,slow=4.1,SNR=9.1						
ARCES	ARCESS Array B	80.12	0	P	P	09 12 36.8	-0.3
	comp=Z,3.7nm,0.8s,mb4.3,baz=187,slow=5.2,SNR=5.5						
YKA	Yellowknife Ar	120.84	340	PKP	PKPdf	09 19 19.2	-0.3
	comp=Z,0.2nm,0.5s,baz=20,slow=1.7,SNR=3.4						
TXAR	Lajitas Array	128.88	299	PKP	PKPdf	09 19 33.7	-2.3
	comp=Z,0.1nm,0.4s,baz=76,slow=5.3,SNR=3.6						

NEIC 04 09:16:13.6±0.3, 100S×12747E, h10km, mb4.7/14, Error ellipse: s-maj=13.9km s-min=6.0km az=65.0
MOS 04 09:16:14.5±0.8, 1.10S×12744E, h33km, mb4.8/15, Error ellipse: s-maj=24.8km s-min=9.8km az=115.6
BJI 04 09:16:15.0, 039S×12777E, h10km, mB5.1, mb4.5, Ms4.6, Msz4.2
IDC 04 09:16:16.7±2.6, 1.14S×12741E, h33km±18km, mb4.3/9, mb1 4.3/11, mb1mx4.1/18, mbtmp4.2/11, ML4.2/2, MS3.6/7, Ms1 3.6/7, ms1mx3.3/31, Error ellipse: s-maj=32.5km s-min=11.5km az=74.0
ISCJB 04 09:16:17.0±1.5, 108S±006×12744E±009, h54km±14km, mb4.5/30, MS3.7/5, Error ellipse: s-maj=16.4km s-min=6.9km az=152.9

ISC 04 09:16:17.9±1.3, **107S**±006×**12750E**±009, **h43**km±12km, **h8**km±7.7km**:pP-P**, **n62**, σ1.05/61, **mb4.5**/30, **MS3.7**/5, **5C-3D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	2.69	165	P	Pn	09 16 59.2	+0.5
	855nm,0.8s						
PCI	Palu	7.67	271	P	Pn	09 18 07.7	+0.6
	258nm,1.1s						
BATI	Kupang	9.84	203	LR	LR	09 22 25.8	
	comp=Z,604nm,20.0s,baz=35,slow=38						
KKM	Kota Kinabalu	13.30	302	ePn	Pn	09 19 22.0	-2.3
FITZ	Fitzroy Crossi	17.02	186	eP	Pn	09 20 14.9	+2.0
	14nm,0.8s						
FITZ	Fitzroy Crossi	17.02	186	Pn	Pn	09 20 12.0	-0.9
	0.2nm,0.3s,baz=25,slow=13,SNR=4.3						
FITZ				LR	LR	09 26 57.6	
	comp=Z,174nm,19.1s,baz=15,slow=38						
BJII	Banjamegara	18.79	250	P	Pn	09 20 36.7	+2.0
	50nm,1.8s						
WRA	Warramunga Arr	19.91	161	iP	Pn	09 20 45.2	-2.8
WRA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WRA	Warramunga Arr	19.91	161	P	Pn	09 20 45.3	-2.7
	comp=Z,1.5nm,0.3s,baz=342,slow=12,SNR=61						
WRA				S	S	09 24 22.8	-5.2
	comp=Z,0.1nm,0.3s,baz=331,slow=24,SNR=4.2						
WRA				LR	LR	09 28 36.4	
	comp=Z,130nm,18.4s,baz=355,slow=37						
WB2	Warramunga Arr	19.92	161⇓	iP	Pn	09 20 45.3	-2.7
COEN	Coen	20.11	130	ePn	P	09 20 50.8	+2.5
	comp=Z,24nm,0.9s						
ASAR	Alice Springs	23.30	165	P	P	09 21 21.6	-0.7
	comp=Z,9.3nm,0.6s,mb4.4,baz=345,slow=11,SNR=114						
ASAR				S	S	09 25 31.1	-0.6
	comp=Z,2.6nm,1.1s,baz=340,slow=21,SNR=6.9						
PSI	Prapat	28.83	278	P	P	09 22 11.8	-0.6
PSI	Prapat	28.83	278	P	P	09 22 11.8	-0.6
	comp=Z,11nm,0.7s,mb4.7,baz=100,slow=6.0,SNR=13						
FORT	Forrest	29.55	179	eP	P	09 22 19.4	+0.8
	comp=Z,12nm,1.0s,mb4.6						
STKA	Stephens Creek	33.41	158	eP	P	09 22 54.0	+1.5
	comp=Z,6.5nm,0.7s,mb4.7						
STKA	Stephens Creek	33.41	158	P	P	09 22 53.9	+1.4
	comp=Z,7.8nm,0.7s,mb4.8,baz=328,slow=8.3,SNR=17						
STKA				LR	LR	09 37 14.7	
	comp=Z,168nm,18.4s,MS3.8,baz=19,slow=38						
NJ2	Nanjing	33.95	347	eP	P	09 22 52.0	-5.2
JHJ	Hachijo jima 2	35.93	18	LR	LR	09 38 54.1	
	comp=Z,85nm,18.1s,MS3.5,baz=175,slow=38						
KSRS	Korea Array	38.33	1	P	P	09 23 35.1	+0.5
	comp=Z,3.1nm,0.8s,mb4.1,baz=177,slow=9.5,SNR=6.5						
KSRS				LR	LR	09 38 42.3	
	comp=Z,52nm,18.8s,MS3.4,baz=140,slow=35						
MJAR	Matsushiro Arr	38.72	14	P	P	09 23 38.0	+0.1
	comp=Z,1.2nm,0.4s,mb4.0,baz=194,slow=9.5,SNR=7.3						
XAN	Xi'an	39.05	335	P	P	09 23 40.7	0.0
XAN				AP	pP	09 23 43.3	-9.1
XAN				AMB	AMB		
	comp=Z,14nm,1.5s,mb4.5						
LZH	Lanzhou	43.04	332	eP	P	09 24 10.0	-3.5
LZH				AP	pP	09 24 14.5	-11
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,123nm,4.1s						
LZH	Lanzhou	43.04	332	eP	P	09 24 10.0	-3.5
	comp=Z,25nm,1.0s,mb4.9						
LZH				pP	pP	09 24 14.5	-11
LZH				sP	sP	09 24 16.5	-14
SHL	Shillong	43.44	310	eP	P	09 24 17.0	+0.1
LSA	Lhasa	46.25	314	eP	P	09 24 40.0	+0.8
	comp=Z,4.9nm,0.6s,mb4.6						
LSA	Lhasa	46.25	314	eP	P	09 24 40.0	+0.7
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ASAJ	Asahikawa	46.97	15	LR	LR	09 44 35.1	
	comp=Z,52nm,18.2s,MS3.5,baz=321,slow=36						
GTA	Gaotai	47.61	331	eP	P	09 24 50.6	+0.9
GTA				AP	pP	09 24 56.2	-5.5
GTA				XP	sP	09 24 59.2	-7.5
GTA				PCP	PcP	09 26 20.1	+1.2
GTA				PP	PP	09 26 42.1	+0.5
GTA				S	S	09 31 45.2	+2.9
GTA				XS	sS	09 31 53.9	-8.3
GTA				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.7						
GTA				AMB	AMB		
	comp=Z,100nm,5.3s						
GTA				LR	LR		
	comp=N,135nm,11.8s,MS4.3						
GTA				LR	LR		
	comp=E,117nm,10.3s,MS4.3						
GTA				LR	LR		
	comp=Z,112nm,11.0s,MS4.1						
HYB	Hyderabad	51.58	293	eP	P	09 25 20.5	+0.2
HYB	Hyderabad	51.58	293	iP	P	09 25 20.5	+0.2
ULN	Ulaanbaatar	51.90	343	eP	P	09 25 22.3	+0.2
	comp=Z,19nm,1.5s,mb4.8						
ULN	Ulaanbaatar	51.90	343	eP	P	09 25 22.3	+0.2
ULN				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.8						
SONM	Songino Array	52.07	342	P	P	09 25 23.8	+0.4
	comp=Z,1.7nm,0.7s,mb4.1,baz=155,slow=7.0,SNR=15						
SONM				ScP	ScP	09 30 31.1	+2.3
	comp=Z,0.3nm,0.6s,baz=144,slow=2.8,SNR=3.7						
ZAK	Zakamensk	55.28	341	eP	P	09 25 40.6	-6.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.6						
TLY	Talaya	56.30	342⇓	eP	P	09 25 55.3	+1.1
TLY				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
WMQ	Urumqi	57.10	327	eP	P	09 26 01.0	+1.0
MK31	Makanchi Array	61.94	326	iP	P	09 26 32.9	-0.4
MK31				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.6						
MKAR	Makanchi Array	61.94	326	iP	P	09 26 33.2	-0.1
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	61.94	326	P	P	09 26 33.2	0.0
	comp=Z,4.8nm,0.5s,mb4.9,baz=120,slow=8.3,SNR=55						
MKAR				ScP	ScP	09 31 15.2	+2.9
	comp=Z,0.9nm,0.9s,baz=109,slow=5.9,SNR=5.3						
YAK	Yakutsk	62.96	1⇑	eP	P	09 26 39.9	+0.1
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
MA2	Magadan	63.16	13	eP	P	09 26 42.3	+1.1
	comp=Z,6.2nm,0.8s,mb4.8						
MA2	Magadan	63.16	13⇑	eP	P	09 26 42.9	+1.7
MA2				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
TKM2	Tokmak 2	63.86	320	eP	P	09 26 45.8	-0.4
	comp=Z,2.4nm,0.6s,mb4.4						
TKM2	Tokmak 2	63.86	320	eP	P	09 26 45.8	-0.4
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
UCH	Uchtor	64.24	319	eP	P	09 26 49.0	+0.3
	comp=Z,4.9nm,1.0s,mb4.5						
AAK	Ala-Archa	64.44	319⇑	eP	P	09 26 50.3	+0.3
AAK				i *PP	PcP	09 27 26.1	+2.0
AAK				pmax	pmax		
	comp=Z,9.0nm,2.3s,mb4.4						
AML	Almayashu	64.74	318	eP	P	09 26 52.2	+0.2
	comp=Z,5.9nm,0.9s,mb4.6						
ZALV	Zalesovo Beam	65.20	334	P	P	09 26 53.9	-0.8
	comp=Z,0.5nm,0.3s,mb4.0,baz=106,slow=4.8,SNR=6.1						
ZAL	Zalesovo	65.20	334	P	P	09 26 53.9	-0.8
KURK	Kurchatov	66.19	328	eP	P	09 27 00.4	-0.7
	comp=Z,9.5nm,0.8s,mb4.9						
KURK	Kurchatov	66.19	328⇑	eP	P	09 27 00.6	-0.6
KURK				e*PP	PcP	09 27 36.3	+5.2
NVS	Novosibirsk	66.48	334	eP	P	09 27 02.7	-0.2
NVS				pmax	pmax		
	comp=Z,16nm,2.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,9.0nm,1.7s						
KK31	Karatay Array	67.28	318	iP	P	09 27 07.6	-0.6
KK31				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
BRVK	Borovoye	71.82	328	eP	P	09 27 35.5	-0.5
	comp=Z,1.3nm,0.5s,mb4.1						
BRVK	Borovoye	71.82	328	eP	P	09 27 35.6	-0.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
TIXI	Tiksi	72.60	0	eP	P	09 27 40.3	-0.1
	comp=Z,1.8nm,0.4s,mb4.3						
TIXI	Tiksi	72.60	0⇑	eP	P	09 27 40.0	-0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
SVE	Sverdlovsk	78.44	329	P	P	09 28 13.9	-0.2
ARU	Arti	79.39	328d	iP	P	09 28 17.4	-1.9
ARU				e		09 31 20.2	
ARU				S	S	09 38 08.0	-8.9
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ARCES	ARCESS Array B	95.19	340	P	P	09 29 35.1	-1.3
	comp=Z,2.7nm,0.9s,mb4.7,baz=92,slow=8.1,SNR=3.3						
TORD	Torodi Ar. Bea	125.03	285	PKP	PKPdf	09 35 13.1	-1.5
	comp=Z,0.5nm,0.8s,baz=135,slow=0.2,SNR=2.9						

NEIC 04 09:36:04.8, 1657N×9826W, h20km, MD4.1(MEX), After MEX.

MEX 04 09:36:04.8±0.7, **1657N**×**9826W**, **h20**km±16km, **MD4.1**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.22	143	iP	Pb	09 36 09.1	-1.1
PNIG				iS	Sb	09 36 13.2	-0.6
UTMO	Huajuapan	1.33	19	iS	Sn	09 36 41.5	-3.9
VHO	Vista Hermosa	1.55	71	iP	Pn	09 36 28.7	-2.5
VHO				iS	Sn	09 36 46.3	-4.4
MEIG	Mezcala	1.87	316	iP	Pn	09 36 32.0	-3.7
MEIG				iS	Sn	09 36 54.4	-4.4
TPIG	Tehuac#an	2.03	25	iP	Pn	09 36 36.9	-1.0
TPIG				iS	Sn	09 36 59.5	-3.2
PPM	Popocatepetl	2.51	352	iP	Pn	09 36 42.8	-1.6
PPM				iS	Sn	09 37 10.8	-3.7
IIO	Organos	3.04	352	iP	Pn	09 36 47.6	-4.2
IIO				iS	Sn	09 37 23.7	-3.8

IDC 04 09:36:38.4±2.4, **941S**×**11287E**, **h0**km, **mb3.4**/5, **mb1 3.5**/5, **mb1mx3.4**/17, **mbtmp3.4**/5, **Error ellipse: s-maj=118.5km s-min=21.9km az=50.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.23	119	P	P	09 41 46.8	-0.6
	0.3nm,0.8s,baz=294,slow=11,SNR=3.6						
ASAR	Alice Springs	24.59	128	P	P	09 42 00.7	+0.3
	0.3nm,0.7s,baz=302,slow=9.1,SNR=7.1						
SONM	Songino Array	57.28	355	P	P	09 46 28.1	+0.5
	0.6nm,0.5s,baz=170,slow=8.6,SNR=6.9						
MKAR	Makanchi Array	62.25	337	P	P	09 47 02.1	+0.2
	0.3nm,0.4s,baz=144,slow=8.2,SNR=9.6						
ZALV	Zalesovo Beam	67.43	342	P	P	09 47 35.4	-0.2
	0.4nm,0.4s,baz=104,slow=4.6,SNR=3.5						

ISCJB 04 10:02:39.2±0.9, 137N±0.1×57.1E±0.1, h10km, mb4.0/19, MS3.4/2, Error ellipse: s-maj=21.1km s-min=16.8km az=25.3
IDC 04 10:02:39.6±1.0, 1363N×57.15E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.9/21, mbtmp3.9/13, MS3.4/2, Ms1 3.4/2, ms1mx2.9/33, Error ellipse: s-maj=28.1km s-min=21.2km az=38.0
NEIC 04 10:02:42.0±0.8, 1373N×5721E, h10km, mb4.6/3, Error ellipse: s-maj=19.7km s-min=18.0km az=133.0
CSEM 04 10:02:43.0±0.1, 1370N×5698E, h33km, mb4.6/3, Error ellipse: s-maj=8.4km s-min=4.7km az=50.0
MOS 04 10:02:44.1±1.4, 1386N×5727E, h33km, mb5.0/2, Error ellipse: s-maj=23.4km s-min=13.4km az=96.3

ISC 04 10:02:41.2±0.9, **136N**±01×**572E**±01, **h10**km, **n29**, σ0.85/26, **mb4.0**/19, **MS3.4**/2, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	24.58	235	P	P	10 08 05.8	+4.2
	1.9nm,0.9s,mb3.6,baz=41,slow=18,SNR=4.8						
KMBO				LR	LR	10 17 38.7	
	comp=Z,110nm,18.6s,MS3.4,baz=95,slow=37						
ASF	Jabal al Asfar	26.15	318	P	P	10 08 19.1	+3.4
	5.9nm,0.8s,mb4.1,baz=340,slow=1.6,SNR=9.3						
EKS2	Erkin-Say	32.29	23	eP	P	10 09 13.2	+2.9
	5.9nm,1.2s,mb4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EKS2	Erkin-Say	32.29	23	eP	P	10 09 13.2	+3.0
	5.9nm,1.2s,mb4.3						
AKTK	Aktyubinsk	36.70	1	P	P	10 09 48.6	+0.3
AKTO	Aktyubinsk	36.70	1	P	P	10 09 48.6	+0.3
	1.6nm,0.6s,mb4.1,baz=171,slow=11,SNR=7.9						
MKAR	Makanchi Array	39.20	28	P	P	10 10 10.4	+1.0
	0.6nm,0.6s,mb3.5,baz=210,slow=8.4,SNR=11						
AKASG	Malin Array Be	43.36	334	P	P	10 10 42.7	-0.8
	0.2nm,0.3s,mb3.3,baz=138,slow=7.4,SNR=4.4						
ZAL	Zalesovo	45.72	23	P	P	10 11 02.7	+0.3
ZALV	Zalesovo Beam	45.74	23	P	P	10 11 02.7	+0.1
ZALV				LR	LR	10 30 35.7	
ZALV	Zalesovo Beam	45.74	23	P	P	10 11 02.7	+0.1
	0.9nm,0.4s,mb4.1,baz=240,slow=5.9,SNR=5.6						
ZALV				LR	LR	10 30 35.7	
	comp=Z,35nm,18.5s,MS3.3,baz=164,slow=37						
JOF	Joensuu	52.50	345	ep	P	10 11 53.5	-0.7
	7.2nm,0.6s,mb4.8						
FINES	FINESS Array B	52.73	342	P	P	10 11 56.1	+0.2
	6.4nm,0.8s,mb4.6,baz=133,slow=8.8,SNR=26						
SONM	Songino Array	53.08	40	P	P	10 11 59.0	+0.2
	0.3nm,0.7s,mb3.3,baz=238,slow=8.3,SNR=2.9						
KAF	Kangasniemi	53.18	342	ep	P	10 11 59.0	-0.3
	4.0nm,0.7s,mb4.5,baz=141,slow=7.4						
KAF	Kangasniemi	53.18	342	eP	P	10 11 59.0	-0.3
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
TORD	Torodi Ar. Bea	53.85	276	P	P	10 12 05.6	+0.7
	comp=Z,0.4nm,0.7s,mb3.5,baz=76,slow=7.4,SNR=3.1						
NOA	NORSAR Array B	57.74	336	P	P	10 12 31.3	-0.8
	comp=Z,0.9nm,0.8s,mb3.9,baz=119,slow=7.9,SNR=3.3						
KEV	Kevo	59.18	348	ep	P	10 12 41.3	-0.7
	comp=Z,9.5nm,0.7s,mb4.9						
KEV	Kevo	59.18	348	eP	P	10 12 41.3	-0.7
KEV				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
ESDC	Sonseca Array	59.24	308	P	P	10 12 42.5	-0.4
	comp=Z,0.2nm,0.3s,mb3.6,baz=83,slow=4.4,SNR=3.0						
ARCES	ARCESS Array B	59.31	348	P	P	10 12 42.6	-0.3
	comp=Z,2.1nm,0.6s,mb4.3,baz=131,slow=6.6,SNR=11						
KSRS	Korea Array	66.63	55	P	P	10 13 30.6	-1.6
	comp=Z,1.3nm,0.9s,mb4.0,baz=263,slow=7.2,SNR=2.8						
WRA	Warramunga Arr	82.92	112	P	P	10 15 06.7	-0.1
	comp=Z,2.0nm,0.9s,mb4.2,baz=298,slow=4.2,SNR=10						
ASAR	Alice Springs	83.64	116	P	P	10 15 10.7	+0.1
	comp=Z,1.6nm,1.0s,mb4.1,baz=274,slow=5.2,SNR=9.4						
ASAR	Alice Springs	83.64	116	P	P	10 15 10.6	+0.1
PDAR	Pinedale Array	122.56	348	PKP	PKPdf	10 21 36.6	-0.7
	comp=Z,0.3nm,0.6s,baz=73,slow=4.2,SNR=2.6						
NVAR	Mina Array Bea	128.03	355	PKP	PKPdf	10 21 50.0	+2.0
NVAR	Mina Array Bea	128.03	355	PKP	PKPdf	10 21 50.0	+2.0
	comp=Z,0.5nm,0.6s,baz=318,slow=2.0,SNR=4.9						

IDC 04 10:10:42.0±8.0**,644N×9604E,h0^{km},mb3.4**/3**,mb1 3.6**/3**, mb1mx3.3**/21**,mbtmp3.4**/3**,Error ellipse: s-maj=440.7km s-min=27.5km az=58.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	41.91	346	P	P	10 18 34.2	0.0
	0.4nm,0.4s,baz=170,slow=8.2,SNR=8.1						
WRA	Warramunga Arr	45.90	126	P	P	10 19 07.4	+0.8
	0.3nm,0.8s,baz=307,slow=8.8,SNR=4.8						
ASAR	Alice Springs	47.55	130	P	P	10 19 18.8	-0.8
	0.2nm,0.4s,baz=299,slow=7.3,SNR=3.1						

IDC 04 10:13:00.1±9.1**,2187N×14288E,h132^{km}**±83^{km}**,mb3.3**/10**, mb1 3.5**/10**,mb1mx3.4**/21**,mbtmp3.3**/10**,Error ellipse: s-maj=38.1km s-min=16.6km az=79.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.21	324	P	P	10 17 25.1	+0.6
	1.6nm,0.7s,baz=146,slow=7.9,SNR=6.1						
SONM	Songino Array	39.03	320	P	P	10 20 13.3	-0.5
	0.8nm,0.6s,baz=127,slow=6.3,SNR=7.3						
WRA	Warramunga Arr	42.38	192	P	P	10 20 41.4	-0.1
	1.4nm,0.9s,baz=15,slow=9.4,SNR=4.1						
ASAR	Alice Springs	46.09	191	P	P	10 21 10.9	-0.1
	0.6nm,0.6s,baz=17,slow=10,SNR=14						
ZALV	Zalesovo Beam	53.90	322	P	P	10 22 09.4	-0.3
	1.5nm,0.7s,baz=95,slow=6.4,SNR=6.7						
MKAR	Makanchi Array	54.38	313	P	P	10 22 13.8	+0.6
	0.7nm,0.8s,baz=90,slow=9.2,SNR=9.7						
YKA	Yellowknife Ar	76.44	28	P	P	10 24 34.6	-0.3
	0.3nm,0.7s,baz=295,slow=5.9,SNR=4.7						
FINES	FINESS Array B	82.91	334	P	P	10 25 09.6	-0.3
	1.1nm,0.9s,baz=88,slow=4.3,SNR=3.9						
NVAR	Mina Array Bea	83.26	51	P	P	10 25 13.0	+0.9
	0.6nm,0.7s,baz=275,slow=3.4,SNR=4.9						
BRTR	Keskin Array B	90.02	313	P	P	10 25 45.4	+0.4
	0.4nm,0.5s,baz=12,slow=14,SNR=2.2						

*NIED **04** 10:29:00,4700N×15320E,h35^{km},Mw4.1 Best double couple: M$_0$1.78000×10^{15} NP1:ϕ_s219.00000°,δ63.00000°, λ167.00000°. NP2:ϕ_s315.00000°,δ78.00000°,λ27.00000°.*
*BJI **04** 10:29:19.3,4700N×15270E,h10^{km},mB4.9,mb4.5,Ms4.7*
*NEIC **04** 10:29:19.4±0.3,4699N×15275E,h10^{km},mb4.4/5,Error ellipse: s-maj=9.8km s-min=6.9km az=148.0*
*ISCJB **04** 10:29:22.8±0.4,4692N±006×15280E±008,h50^{km}, mb4.1/25,MS3.5/3,Error ellipse: s-maj=10.9km s-min=3.5km az=140.8*
*JMA **04** 10:29:22.0±0.8,4701N×153.16E,h30^{km},M4.5*
*MOS **04** 10:29:22.5±0.9,4693N×15279E,h49^{km},mb4.4/16,Error ellipse: s-maj=14.4km s-min=9.1km az=90.6*
*IDC **04** 10:29:24.8±0.5,4697N×15272E,h50^{km}±4^{km},mb3.7/18, mb1 3.9/19,mb1mx3.9/24,mbtmp3.7/19,MS3.5/5, Ms1 3.5/5,ms1mx3.2/40,Error ellipse: s-maj=16.9km s-min=12.4km az=143.0*
ISC 04 10:29:25.0±0.4**,4693N**±006×**15283E**±008**,h52^{km}, h52^{km}**±2.0^{km}**:pP-P,n90,**σ**1ˢ20**/100**,mb4.1**/25**,MS3.5**/3**, 8C-7D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.84	246⇑	iPN	Pn	10 30 23.0	+1.4
KUR				eS	Sn	10 31 06.0	+0.5
KUR				pmax	pmax		
	comp=Z,140nm,0.5s						
KUR				smax			
	comp=N,2μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR				smax			
	comp=N,430nm,0.8s						
KUR				smax			
	comp=E,320nm,0.8s						
SKR	Severo-Kuril's	4.34	29	ePN	Pn	10 30 26.4	-2.0
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
NEM2	Nemuro 2	6.15	237	P	Pn	10 30 53.2	+0.1
NEM2				eS	Sn	10 32 00.4	-1.6
JRA	Rausu	6.19	244	P	Pn	10 30 57.1	+3.4
JNK	Nakash	6.63	243	P	Pn	10 31 01.6	+1.9
YSS	Yuzh-Sakhalins	6.90	274⇑	iPN	Pn	10 31 08.3	+4.9
YSS				eS	Sn	10 32 25.0	+4.6
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
JTKR	Abashiri--Toko	6.93	248	P	Pn	10 31 07.1	+3.2
JAK	Akkeshi	6.98	239	P	Pn	10 31 04.6	+0.1
JAK				eS	Sn	10 32 20.5	-2.0
PET	Petropavlovsk	7.16	29	ePN	Pn	10 31 15.1	+8.1
PET				pmax	pmax		
	comp=Z,24nm,0.8s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
JMP	Maruseppu	7.27	250	P	Pn	10 31 12.7	+4.2
JAR	Ashorobuto	7.36	244	P	Pn	10 31 11.9	+2.1
JAR				eS	Sn	10 32 33.0	+1.1
JOB	Onbets	7.54	241	P	Pn	10 31 13.2	+0.9
JOB				eS	Sn	10 32 34.9	-1.5
ASAJ	Asahikawa	7.71	252	P	Pn	10 31 19.4	+4.8
ASAJ	Asahikawa	7.71	252	P	Pn	10 31 18.2	+3.6
	comp=Z,1.6nm,0.3s,baz=85,slow=10.0,SNR=17						
ASAJ				LR	LR	10 34 05.9	
	comp=Z,231nm,18.5s,baz=101,slow=37						
JKK2	Kamakawa 2	7.72	250	P	Pn	10 31 18.5	+3.8
JCH	Churui	8.00	241	P	Pn	10 31 18.9	+0.4
JCH				eS	Sn	10 32 45.0	-2.4
ERM	Erimo	8.48	238⇑	ePN	Pn	10 31 25.9	+0.8
JBT2	Biratori 2	8.51	245	P	Pn	10 31 27.2	+1.7
JBT2				eS	Sn	10 33 00.9	+0.8
JNBK	Urakawa-nobuka	8.56	241	P	Pn	10 31 26.0	-0.1
JNBK				eS	Sn	10 32 58.1	-3.1
JEW	Eniwo	9.05	247	P	Pn	10 31 35.5	+2.6
JNB	Noboribetsu	9.50	246	P	Pn	10 31 39.8	+0.7
JNB				eS	Sn	10 33 23.8	-0.6
JKB	Kayabe	9.83	243	P	Pn	10 31 43.4	-0.1
JSH	Shimam	10.04	249	P	Pn	10 31 48.5	+2.0
JYM2	Yakumo 2	10.11	246	P	Pn	10 31 47.9	+0.5
JTM	Tenmabayashi	10.47	238	P	Pn	10 31 49.9	-2.4
JANG	Nango	10.49	235	P	Pn	10 31 49.7	-2.9
JTH	Tanohata	10.59	233	eS	Sn	10 33 39.5	-12
JOSM	Okushiri--Mats	10.69	248	P	Pn	10 31 56.4	+1.1
JRG	Rokugo	11.65	234	P	Pn	10 32 06.7	-1.7
HABR	Khabarovsk	12.08	284	ePN	Pn	10 32 14.1	-0.1
MA2	Magadan	12.73	355	ePN	Pn	10 32 23.8	+0.8
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAT	Matsushiro	15.03	232	P	Pn	10 32 58.2	+4.1
MJAR	Matsushiro Arr	15.03	232	P	Pn	10 32 51.9	-2.2
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=3.3						
MJAR				LR	LR	10 38 05.4	
	comp=Z,172nm,19.9s,baz=220,slow=35						
YAK	Yakutsk	20.06	327⇓	eP	P	10 33 56.0	+2.4
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	Korea Array	20.66	252	P	P	10 34 00.9	+0.6
	comp=Z,3.5nm,1.1s,baz=50,slow=11,SNR=4.1						
BILL	Bilibino	22.26	13⇑	eP	P	10 34 21.2	+4.1
BILL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb3.9						
NJ2	Nanjing	29.86	252	eP	P	10 35 27.0	-0.4
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
ULN	Ulaanbaatar	30.65	289⇓	eP	P	10 35 34.5	+0.3
SONM	Songino Array	31.09	289	P	P	10 35 38.3	+0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM				MLR	MLR		
	comp=Z,79nm,19.8s						
SONM	Songino Array	31.09	289	P	P	10 35 38.3	+0.2
	comp=Z,0.7nm,1.1s,mb3.4,baz=57,slow=10,SNR=3.3						
SONM				LR	LR	10 48 53.2	
	comp=Z,79nm,19.8s,MS3.4,baz=338,slow=38						
COLA	College	36.12	39	ePn	P	10 36 21.4	-0.1
	comp=Z,2.6nm,0.8s,mb4.2						
COLA	College	36.12	39⇑	eP	P	10 36 21.9	+0.4
INK	Inuvik	41.61	32	P	P	10 37 07.9	+0.6
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	41.61	32	P	P	10 37 07.9	+0.6
	comp=Z,3.0nm,0.7s,mb4.0,baz=282,slow=7.2,SNR=16						
ZALV	Zalesovo Beam	42.35	306	P	P	10 37 12.8	-0.7
ZALV				PcP	PcP	10 39 06.0	-0.1
ZALV	Zalesovo Beam	42.35	306	P	P	10 37 12.8	-0.7
	comp=Z,0.4nm,0.4s,mb3.4,baz=40,slow=5.1,SNR=2.8						
ZALV				PcP	PcP	10 39 06.0	-0.1
	comp=Z,0.9nm,0.6s,baz=98,slow=4.5,SNR=4.2						
ZALV				LR	LR	10 55 52.3	
	comp=Z,48nm,20.1s,MS3.4,baz=73,slow=38						
ZAL	Zalesovo	42.36	306	P	P	10 37 12.8	-0.9
ZAL						10 39 06.0	
MKAR	Makanchi Array	46.68	297	P	P	10 37 47.0	-1.3
MKAR				PcP	PcP	10 39 21.1	0.0
MKAR	Makanchi Array	46.68	297⇑	eP	P	10 37 48.7	+0.5
MKAR	Makanchi Array	46.68	297	P	P	10 37 47.0	-1.3
	comp=Z,0.3nm,0.4s,mb3.6,baz=58,slow=6.8,SNR=7.3						
MKAR				PcP	PcP	10 39 21.1	0.0
	comp=Z,0.5nm,0.7s,baz=22,slow=2.7,SNR=3.9						
MKAR				LR	LR	10 58 45.9	
	comp=Z,83nm,18.1s,MS3.7,baz=352,slow=38						
KURK	Kurchatov	47.10	303	eP	P	10 37 51.3	-0.1
	comp=Z,1.5nm,0.8s,mb4.0						
KURK	Kurchatov	47.10	303⇓	iP	P	10 37 51.3	-0.1
YKA	Yellowknife Ar	50.90	37	P	P	10 38 20.6	+0.3
YKA	Yellowknife Ar	50.90	37	iP	P	10 38 20.6	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	50.90	37	P	P	10 38 20.6	+0.3
	comp=Z,1.3nm,0.7s,mb4.0,baz=297,slow=7.2,SNR=19						
YKA				pP	pP	10 38 33.8	-0.4
	comp=Z,1.6nm,0.6s,baz=298,slow=7.3,SNR=12						
YKA				PcP	PcP	10 39 35.9	-0.1
	comp=Z,0.2nm,0.4s,baz=306,slow=3.2,SNR=4.4						
AAK	Ala-Archa	53.58	296⇓	iP	P	10 38 39.6	-0.9
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.1						
KEV	Kevo	57.11	340	ep	P	10 39 04.2	-1.2
ARCES	ARCESS Array B	57.62	341	P	P	10 39 08.1	-0.9
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES	ARCESS Array B	57.62	341	P	P	10 39 08.1	-0.9
	comp=Z,3.1nm,0.7s,mb4.4,baz=26,slow=7.1,SNR=5.9						
JOF	Joensuu	61.09	334	ep	P	10 39 32.2	-0.8
	comp=Z,0.6nm,0.3s,mb4.2						
JOF	Joensuu	61.09	334	eP	P	10 39 32.2	-0.8
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.4						
NVAR	Mina Array Bea	62.52	62	P	P	10 39 43.7	+0.6
NVAR				pP	pP	10 39 57.7	+0.2
NVAR	Mina Array Bea	62.52	62	P	P	10 39 43.7	+0.6
	comp=Z,0.9nm,0.7s,mb4.0,baz=306,slow=6.0,SNR=7.4						
NVAR				pP	pP	10 39 57.7	+0.2
	comp=Z,0.3nm,0.4s,baz=288,slow=3.9,SNR=2.8						
KAF	Kangasniemi	63.20	335	ep	P	10 39 46.5	-0.7
	comp=Z,2.7nm,0.6s,mb4.5,baz=37,slow=6.2						
KAF	Kangasniemi	63.20	335	eP	P	10 39 46.5	-0.7
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
FINES	FINESS Array B	63.79	335	iP	P	10 39 50.5	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	63.79	335	P	P	10 39 50.1	-1.0
	comp=Z,1.7nm,0.4s,mb4.4,baz=40,slow=6.9,SNR=29						
PDAR	Pinedale Array	64.80	54	P	P	10 39 58.4	+0.3
	comp=Z,1.7nm,0.8s,mb4.1,baz=289,slow=1.8,SNR=16						
PDAR				pP	pP	10 40 12.7	+0.2
	comp=Z,0.6nm,0.8s,baz=294,slow=1.5,SNR=4.2						
NB2	NORSAR Subarra	68.00	341	P	P	10 40 17.3	-0.8
	comp=Z,2.0nm,0.6s,mb4.3,baz=28,slow=6.5						
NB2	NORSAR Subarra	68.00	341	P	P	10 40 17.3	-0.8
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NOA	NORSAR Array B	68.00	341	P	P	10 40 17.8	-0.3
NOA				*SP	sP	10 40 38.1	-0.4
NOA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NOA				pmax	pmax		
	comp=N,1.0nm,0.6s						
NOA	NORSAR Array B	68.00	341	P	P	10 40 17.8	-0.3
	comp=N,5.6nm,0.9s,mb4.6,baz=27,slow=6.3,SNR=14						
NOA				sP	sP	10 40 38.1	-0.5
	comp=N,0.5nm,0.6s,baz=27,slow=6.5,SNR=1.7						
PV10	Paradox Valley	68.04	57	eP	P	10 40 18.9	+0.1
WRA	Warramunga Arr	68.62	199	P	P	10 40 21.6	-0.8
WRA				*PP	pP	10 40 36.7	-0.3
WRA				pmax	pmax		
	comp=N,2.0nm,1.1s						
WRA	Warramunga Arr	68.62	199	P	P	10 40 21.6	-0.8
	comp=N,0.4nm,0.9s,mb3.4,baz=8.9,slow=6.7,SNR=3.9						
WRA				pP	pP	10 40 36.7	-0.3
	comp=N,2.1nm,1.1s,baz=22,slow=6.9,SNR=5.8						
AKASG	Malin Array Be	71.29	326	iP	P	10 40 42.7	+4.1
AKASG	Malin Array Be	71.29	326	P	P	10 40 37.8	-0.8
	comp=N,3.4nm,0.3s,mb4.7,baz=34,slow=6.0,SNR=15						
ANMO	Albuquerque	71.90	58⇑	eP	P	10 40 42.7	+0.1
ASAR	Alice Springs	72.32	198	P	P	10 40 46.1	+1.2
ASAR				*PP	pP	10 40 59.0	-0.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	72.32	198	P	P	10 40 46.0	+1.1
	comp=Z,0.6nm,0.7s,mb3.6,baz=13,slow=5.8,SNR=8.7						
ASAR				pP	pP	10 40 59.0	-0.6
	comp=Z,1.0nm,0.5s,baz=13,slow=5.6,SNR=6.5						
SCHQ	Schefferville	73.22	23	P	P	10 40 49.8	-0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=333,slow=4.5,SNR=2.5						
CLL	Collm	76.22	335⇓	iP	P	10 41 07.0	-0.4
	comp=Z,4.0nm,1.0s,mb4.3						
CLL	Collm	76.22	335⇓	iP	P	10 41 07.0	-0.4
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
CLL	Collm	76.22	335⇓	iP	P	10 41 07.0	-0.4
	comp=Z,4.0nm,1.0s,mb4.3						
TXAR	Lajitas Array	77.58	60	P	P	10 41 15.4	-0.1
TXAR				*PP	pP	10 41 30.5	+0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	77.58	60	P	P	10 41 15.4	0.0
	comp=Z,1.3nm,0.6s,mb4.1,baz=301,slow=5.0,SNR=20						
TXAR				pP	pP	10 41 30.5	+0.2
	comp=Z,1.1nm,0.6s,baz=302,slow=5.3,SNR=8.0						
BRTR	Keskin Array B	78.12	317⇑	eP	P	10 41 19.1	+0.8
BRTR	Keskin Array B	78.12	317	P	P	10 41 18.6	+0.3
	comp=Z,1.2nm,0.8s,mb3.9,baz=52,slow=8.0,SNR=5.7						
GERES	GERESS Array B	78.21	334	P	P	10 41 18.5	-0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	78.21	334	P	P	10 41 18.5	-0.1
	comp=Z,0.5nm,0.4s,mb3.8,baz=36,slow=5.0,SNR=6.5						

IDC 04 10:34:32.0±0.9**,5587S×12910W,h0^{km},mb3.9**/4**, mb1 4.2**/4**,mb1mx4.0**/12**,mbtmp3.9**/4**,MS3.7**/4**,Ms1 3.8**/4**, ms1mx3.4**/21**,Error ellipse: s-maj=61.7km s-min=27.3km az=162.0,Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	Rikitea	32.99	350	eT		11 14 40.5	
	8.6nm,0.3s						
PPT	Papeete	41.27	330	eLR	LR	10 53 19.4	
	403nm,26.0s						
PPT	Papeete	41.27	330	LR	LR	10 53 40.9	
	comp=Z,331nm,19.9s,baz=263,slow=28						
VAH	Vaihoa	42.97	333	eT		11 27 11.7	
	44nm,0.2s						
TAOE	Nuku Hiva Isla	47.70	345	eLR	LR	10 56 24.5	
	951nm,26.3s						
CFAA	Coronel Fontan	48.32	86	LR	LR	10 58 38.0	
	comp=Z,20nm,21.7s,baz=216,slow=30						
LPAZ	La Paz	60.47	75	P	P	10 44 44.5	+1.0
	2.1nm,0.9s,baz=128,slow=5.8,SNR=4.5						
LPAZ				LR	LR	11 03 41.9	
	comp=Z,54nm,19.1s,baz=96,slow=29						
STKA	Stephens Creek	63.90	251	LR	LR	11 07 35.8	
	comp=Z,128nm,21.4s,baz=25,slow=31						
ASAR	Alice Springs	74.53	251	P	P	10 46 12.4	0.0
	1.1nm,0.9s,baz=139,slow=5.4,SNR=8.6						
WRA	Warramunga Arr	77.32	253	P	P	10 46 28.1	-0.3
	1.0nm,0.9s,baz=146,slow=5.3,SNR=6.7						
TXAR	Lajitas Array	87.60	22	P	P	10 47 21.1	-0.5
	0.5nm,0.9s,baz=184,slow=9.4,SNR=2.9						
SONM	Songino Array	145.64	280	PKPbc	PKPbc	10 54 12.3	+0.8
	0.3nm,0.3s,baz=114,slow=2.9,SNR=6.7						
MKAR	Makanchi Array	158.55	258	PKPab	PKPab	10 55 05.2	-0.3
	0.6nm,0.6s,baz=118,slow=4.7,SNR=7.2						
BRTR	Keskin Array B	160.21	137	PKPab	PKPab	10 55 12.6	-0.3
	1.0nm,0.7s,baz=187,slow=9.6,SNR=7.8						

*ISCJB **04** 11:01:28.8±0.5,942S±008×10752E±008,h13^{km}, mb4.2/18,Error ellipse: s-maj=13.7km s-min=8.8km az=142.2*
*BJI **04** 11:01:28.1,940S×10750E,h10^{km},mB5.1,mb4.6*
*IDC **04** 11:01:29.5±0.8,923S×10764E,h0^{km},mb4.0/9, mb1 4.2/10,mb1mx4.0/20,mbtmp4.1/10,ML4.4/1,Error ellipse: s-maj=36.5km s-min=15.9km az=58.0*
*NEIC **04** 11:01:30.1±0.5,943S×10746E,h10^{km},mb4.5/9,Error ellipse: s-maj=17.0km s-min=10.7km az=59.0*
ISC 04 11:01:30.7±0.5**,948S**±008×**10748E**±009**,h14^{km}, h14^{km}**±2.9^{km}**:pP-P,n29,**σ**1ˢ16**/27**,mb4.2**/18**,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	Christmas Isla	2.06	241	ePn	Pn	11 02 03.4	-1.5
BATI	Kupang	15.96	94	Pn	Pn	11 05 13.6	-1.5
	1.4nm,0.3s,baz=124,slow=11,SNR=1.8						
MBWA	Marble Bar	16.55	136	eP	Pn	11 05 20.7	-1.9
	18nm,1.1s						
MBWA				eS	Sn	11 08 10.8	-15
NWAO	Narrogin (SRO)	25.01	160	P	P	11 06 55.5	+1.2
	3.6nm,0.8s,mb4.0,baz=304,slow=7.3,SNR=2.5						
WRA	Warramunga Arr	27.94	115	P	P	11 07 21.8	+0.9
	2.0nm,0.9s,mb3.8,baz=287,slow=12,SNR=6.3						
ASAR	Alice Springs	28.91	122	P	P	11 07 30.9	+1.3
	0.8nm,0.7s,mb3.5,baz=302,slow=8.1,SNR=8.3						
ASAR				PcP	PcP	11 10 40.8	+2.1
	0.3nm,0.6s,baz=317,slow=2.5,SNR=4.9						
SHL	Shillong	38.00	337	eP	P	11 08 48.0	-0.5
STKA	Stephens Creek	38.66	130	eP	P	11 08 56.0	+1.9
	4.7nm,1.0s,mb4.2						
STKA	Stephens Creek	38.66	130	P	P	11 08 56.0	+1.9
	3.3nm,0.9s,mb4.1,baz=293,slow=8.7,SNR=5.6						
LSA	Lhasa	42.01	339	P	P	11 09 23.5	+1.8
LSA	Lhasa	42.01	339	eP	P	11 09 23.3	+1.6
	6.7nm,0.6s,mb4.5						
XAN	Xi'an	43.30	2	P	P	11 09 31.8	-0.3
XAN				AP	pP	11 09 36.1	-0.4
XAN				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.5						
LZH	Lanzhou	45.45	356	eP	P	11 09 49.5	+0.2
LZH				AP	pP	11 09 52.0	-1.7
LZH				AMB	AMB		
	comp=Z,31nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,145nm,4.8s						
LZH	Lanzhou	45.45	356	eP	P	11 09 49.5	+0.2
	comp=Z,31nm,1.4s,mb5.0						
LZH				pP	pP	11 09 52.0	-1.7
LZH				sP	sP	11 09 53.0	-2.4
GTA	Gaotai	49.16	352	eP	P	11 10 19.7	+1.6
GTA				AP	pP	11 10 24.8	+2.2
GTA				XP	sP	11 10 27.8	+3.5
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.4						
MJAR	Matsushiro Arr	54.13	31	P	P	11 10 52.5	-2.9
	comp=Z,1.0nm,0.7s,mb3.9,baz=211,slow=7.6,SNR=6.1						
SONM	Songino Array	57.07	359	P	P	11 11 16.7	+0.4
	comp=Z,3.1nm,0.7s,mb4.5,baz=172,slow=8.3,SNR=29						
ULN	Ulaanbaatar	57.09	360	eP	P	11 11 16.6	+0.2
	comp=Z,3.9nm,0.5s,mb4.7						
ULN				e		11 11 26.5	
TKM2	Tokmak 2	59.71	333	eP	P	11 11 34.3	-0.6
	comp=Z,2.6nm,0.6s,mb4.4						
MKAR	Makanchi Array	60.36	340	P	P	11 11 39.5	+0.2
MKAR	Makanchi Array	60.36	340	P	P	11 11 39.5	+0.2
	comp=Z,1.0nm,0.5s,mb4.1,baz=148,slow=7.7,SNR=17						
KURK	Kurchatov	64.98	340	eP	P	11 12 10.1	+0.2
	comp=Z,4.6nm,0.9s,mb4.5						
ZALV	Zalesovo Beam	66.04	346	P	P	11 12 16.0	-0.8
	comp=Z,1.2nm,0.3s,mb4.3,baz=143,slow=5.7,SNR=9.7						
BRVK	Borovoye	69.89	337	eP	P	11 12 40.6	-0.4
	comp=Z,5.9nm,1.1s,mb4.4						
MA2	Magadan	77.02	21	eP	P	11 13 21.3	-1.6
	comp=Z,1.2nm,0.4s,mb4.2						
MA2				e		11 13 31.7	
BRTR	Keskin Array B	83.82	312	P	P	11 14 00.8	+0.9
	comp=Z,0.3nm,0.5s,mb3.7,baz=35,slow=5.3,SNR=4.3						
TXAR	Lajitas Array	144.78	52	PKP	PKPdf	11 21 08.7	+0.8
	comp=Z,1.0nm,0.9s,baz=296,slow=2.1,SNR=7.9						
LPAZ	La Paz	154.03	190	PKP	PKPdf	11 21 25.9	+3.0
LPAZ				PKPbc	PKPbc	11 21 32.8	+1.8
LPAZ	La Paz	154.03	190	PKP	PKPdf	11 21 25.9	+3.0
	comp=Z,0.6nm,0.4s,baz=166,slow=1.4,SNR=4.3						
LPAZ				PKPbc	PKPbc	11 21 32.8	+1.8
	comp=Z,0.9nm,0.3s,baz=295,slow=5.4,SNR=4.6						

*IDC **04** 11:21:13.3±1.0,944S×15840E,h0^{km},mb4.2/6,mb1 4.4/7, mb1mx4.2/15,mbtmp4.2/7,ML4.1/1,MS3.8/9,Ms1 3.8/9, ms1mx3.6/24,Error ellipse: s-maj=31.9km s-min=19.5km az=152.0*
*ISCJB **04** 11:21:14.2±5.8,95S±02×15846E±008,h17^{km}±44^{km}, mb4.1/6,MS3.7/7,Error ellipse: s-maj=35.2km s-min=9.8km az=163.5*
ISC 04 11:21:15.6±6.4**,95S**±02×**15852E**±007**,h17^{km}**±40^{km}**,n18,** σ**0ˢ84**/12**,mb4.1**/6**,MS3.7**/7**,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.42	87	Pn	Pn	11 21 40.7	+0.1
	34nm,0.3s,baz=266,slow=6.0,SNR=26						
HNR				Sn	Sn	11 21 58.2	-0.6
	126nm,0.3s,baz=270,slow=10,SNR=9.9						
HNR				LR	LR	11 22 22.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3µm,18.0s,baz=202,slow=45						
PMG	**Port Moresby**	**11.20**	**270**	LR	LR	11 27 57.1	
	comp=Z,687nm,19.6s,baz=270,slow=36						
CTA	**Charters Tower**	**15.83**	**227**	*e*P	**Pn**	**11 24 57.5**	**-0.3**
	10nm,0.8s						
CTA	**Charters Tower**	**15.83**	**227**	Pn	**Pn**	**11 24 57.3**	**-0.5**
	0.5nm,0.3s,baz=43,slow=14,SNR=7.7						
CTA				LR	LR	11 30 07.6	
	comp=Z,252nm,21.0s,baz=48,slow=34						
WB2	**Warramunga Arr**	**25.53**	**243**	*e*P	**P**	**11 26 43.3**	**-0.2**
WRA	**Warramunga Arr**	**25.54**	**243**	P	**P**	**11 26 43.5**	**-0.1**
	9.3nm,0.9s,mb4.3,baz=71,slow=9.9,SNR=24						
STKA	**Stephens Creek**	**27.22**	**213**	*e*P	**P**	**11 27 00.0**	**+1.3**
	4.5nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**27.22**	**213**	P	**P**	**11 26 59.9**	**+1.2**
	4.1nm,0.7s,mb4.0,baz=35,slow=11,SNR=7.0						
STKA				LR	LR	11 36 56.7	
	comp=Z,265nm,20.4s,MS3.8,baz=26,slow=35						
ASAR	**Alice Springs**	**27.40**	**236**	P	**P**	**11 26 59.7**	**-0.7**
	1.8nm,0.6s,mb3.8,baz=65,slow=9.4,SNR=9.8						
AFI	**Afiamalu**	**29.40**	**101**	LR	LR	11 36 44.7	
	comp=Z,297nm,20.7s,MS3.9,baz=260,slow=32						
FITZ	**Fitzroy Crossi**	**33.00**	**251**	LR	LR	11 40 22.8	
	comp=Z,112nm,18.0s,MS3.6,baz=337,slow=35						
URZ	**Urewera**	**33.14**	**153**	LR	LR	11 38 59.2	
	comp=Z,214nm,19.9s,MS3.9,baz=260,slow=32						
RPZ	**Rata Peaks**	**35.77**	**164**	LR	LR	11 41 50.1	
	comp=Z,86nm,18.0s,MS3.6,baz=128,slow=34						
JHJ	**Hachijo jima 2**	**46.00**	**338**	LR	LR	11 47 28.1	
	comp=Z,99nm,20.6s,MS3.7,baz=61,slow=34						
KSRS	**Korea Array**	**54.81**	**330**	LR	LR	11 53 14.7	
	comp=Z,52nm,20.2s,MS3.6,baz=50,slow=35						
SONM	**Songino Array**	**73.34**	**326**	P	**P**	**11 32 46.1**	**-0.2**
	1.4nm,0.9s,mb3.9,baz=129,slow=5.2,SNR=9.9						
MKAR	**Makanchi Array**	**87.59**	**318**	P	**P**	**11 34 02.5**	**-0.4**
	2.3nm,1.0s,mb4.4,baz=104,slow=5.2,SNR=5.0						
NVAR	**Mina Array Bea**	**90.56**	**51**	P	**P**	**11 34 20.0**	**+2.9**
	1.1nm,0.8s,mb4.2,baz=216,slow=4.3,SNR=4.0						

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*NIED **04** 11:22:00, 44.60N×148.50E, h83km, Mw4.3 Best double couple: $M_0$3.36000×10[15] NP1:ϕ_s57.00000°, δ24.00000°, λ113.00000°. NP2:ϕ_s212.00000°, δ68.00000°, λ80.00000°.*
*MOS **04** 11:22:13.0±0.9, 44.90N×148.23E, h66km, mb4.6/21, Error ellipse: s-maj=13.6km s-min=8.3km az=70.3*
*ISCJB **04** 11:22:17.9±0.5, 44.77N±0.04×148.24E±0.05, h113km±5km, mb4.3/55, Error ellipse: s-maj=7.3km s-min=4.9km az=145.5*
*JMA **04** 11:22:17.5±0.4, 44.62N×148.48E, h83km, M4.9*
JMA Felt I J1.
*SKHL **04** 11:22:18.9±1.9, 44.97N×148.39E, h70km±18km, mb5.0/6*
*NEIC **04** 11:22:18.0±0.8, 44.90N×148.21E, h98km±8km, mb4.5/35, Error ellipse: s-maj=9.3km s-min=5.9km az=148.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*BJI **04** 11:22:18.7, 45.20N×148.27E, h102km, mB4.9, mb4.7*
*IDC **04** 11:22:20.2±2.3, 45.02N×148.17E, h117km±21km, mb3.8/17, mb1 3.9/20, mb1mx3.9/27, mbtmp3.8/20, MS3.2/4, Ms1 3.2/4, ms1mx2.9/36, Error ellipse: s-maj=18.0km s-min=12.9km az=152.0*
ISC 04 11:22:19.2±0.5, **44.77N**±0.04×**148.24E**±0.05, **h106**km±5km, **n393**, σ**0.81**/411, **mb4.3**/55, **89C-116D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.53**	**330**	⇑*i*PN	**Pn**	**11 22 30.8**	**-5.0**
KUR				pmax	pmax		
	comp=Z,6µm,1.0s						
KUR				pmax	pmax		
	comp=N,980nm,0.4s						
KUR				pmax	pmax		
	comp=E,2µm,0.4s						
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR	**Kuril'sk**	**0.53**	**330**	⇑*i*P	**Pn**	**11 22 30.8**	**-5.0**
KUR				AMB	AMB	11 22 31.0	
	comp=Z,5µm,1.0s						
KUR				AMB	AMB	11 22 31.0	
	comp=Z,2µm,1.0s						
KUR				AMB	AMB	11 22 31.0	
	comp=Z,2µm,1.0s						
KUR				AMB	AMB	11 22 31.4	
	comp=Z,978nm,0.4s						
KUR				AMB	AMB	11 22 31.4	
	comp=Z,2µm,0.4s						
KUR				AMB	AMB	11 22 31.4	
	comp=Z,2µm,0.4s						
KUR				*i* S	**Sn**	**11 22 41.2**	**-7.1**
KUR				A		11 22 42.0	
	comp=Z,35µm,1.0s						
KUR				A		11 22 42.0	
	comp=Z,38µm,1.0s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**247**	*e*PN	**Pn**	**11 22 50.9**	**+0.7**
YUK				pmax	pmax		
	comp=N,2µm,1.0s						
YUK				pmax	pmax		
	comp=Z,3µm,1.0s						
YUK				pmax	pmax		
	comp=E,2µm,0.8s						
YUK				pmax	pmax		
	comp=N,380nm,0.4s						
YUK				pmax	pmax		
	comp=E,460nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.86**	**247**	*e*P	**Pn**	**11 22 50.9**	**+0.7**
YUK				AMB	AMB	11 22 51.3	
	comp=Z,2µm,0.8s						
YUK				AMB	AMB	11 22 51.3	
	comp=Z,3µm,1.0s						
YUK				AMB	AMB	11 22 51.3	
	comp=Z,2µm,1.0s						
YUK				AMB	AMB	11 22 51.5	
	comp=Z,380nm,0.4s						
YUK				AMB	AMB	11 22 51.5	
	comp=Z,460nm,0.4s						
YUK				AMB	AMB	11 22 51.5	
	comp=Z,2µm,0.4s						
YUK				*e*S	**Sn**	**11 23 13.5**	**-0.3**
YUK				A		11 23 18.1	
	comp=Z,20µm,1.0s						
YUK				A		11 23 18.1	
	comp=Z,26µm,1.0s						
YUK				A		11 23 21.0	
	comp=Z,4µm,0.5s						
YUK				A		11 23 21.0	
	comp=Z,15µm,0.5s						
NEM2	**Nemuro 2**	**2.28**	**233**	P	**Pn**	**11 22 54.5**	**-1.2**
NEM2				*e*S	**Sn**	**11 23 23.0**	**-0.6**
JRA	**Rausu**	**2.39**	**251**	P	**Pn**	**11 22 57.1**	**+0.1**
JNK	**Nakash**	**2.80**	**246**	P	**Pn**	**11 23 03.0**	**+0.6**
JAK	**Akkeshi**	**3.12**	**236**	P	**Pn**	**11 23 06.0**	**-0.6**
JAK				*e*S	**Sn**	**11 23 42.9**	**-0.3**
JTKR	**Abashiri--Toko**	**3.21**	**257**	P	**Pn**	**11 23 08.5**	**+0.7**
JTKR				*e*S	**Sn**	**11 23 48.7**	**+3.4**
JAR	**Ashorobuto**	**3.54**	**247**	P	**Pn**	**11 23 13.5**	**+1.2**
JMP	**Maruseppu**	**3.58**	**259**	P	**Pn**	**11 23 13.6**	**+0.8**
JMP				*e*S	**Sn**	**11 23 56.8**	**+2.5**
JOB	**Onbets**	**3.69**	**241**	P	**Pn**	**11 23 14.5**	**+0.2**
JOB				*e*S	**Sn**	**11 23 57.6**	**+0.6**
JSE	**Soyaes**	**4.03**	**275**	P	**Pn**	**11 23 19.4**	**+0.6**
JKK2	**Kamakawa 2**	**4.04**	**259**	P	**Pn**	**11 23 20.2**	**+1.2**
ASAJ	**Asahikawa**	**4.09**	**263**	P	**Pn**	**11 23 21.0**	**+1.3**
ASAJ	**Asahikawa**	**4.09**	**263**	P	**Pn**	**11 23 20.4**	**+0.7**
	comp=Z,19nm,0.3s,baz=103,slow=12,SNR=229						
ASAJ				S	**Sn**	**11 24 08.5**	**+1.9**
	comp=Z,8.7nm,0.3s,baz=75,slow=20,SNR=2.7						
ASAJ				LR	LR	11 25 05.7	
	comp=Z,247nm,21.0s,baz=326,slow=40						
JCH	**Churui**	**4.14**	**240**	P	**Pn**	**11 23 20.0**	**-0.4**
JCH				*e*S	**Sn**	**11 24 08.2**	**+0.4**
JFR	**Furan**	**4.38**	**250**	P	**Pn**	**11 23 24.9**	**+1.3**
YSS	**Yuzh-Sakhalins**	**4.41**	**302**	*e*Pn	**Pn**	**11 23 23.4**	**-0.5**
YSS	**Yuzh-Sakhalins**	**4.41**	**302**	⇓*i*PN	**Pn**	**11 23 23.1**	**-0.8**
YSS				*i* S	**Sn**	**11 24 10.5**	**-3.6**
YSS				pmax	pmax		
	comp=N,90nm,0.6s						
YSS				pmax	pmax		
	comp=E,160nm,0.6s						
YSS				pmax	pmax		
	comp=Z,180nm,0.6s						
YSS				smax			
	comp=N,120nm,0.7s						
YSS				smax			
	comp=E,100nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.41**	**302**	⇓*i*P	**Pn**	**11 23 23.1**	**-0.8**
YSS				AMB	AMB	11 23 24.0	
	comp=E,180nm,0.6s						
YSS				AMB	AMB	11 23 24.0	
	comp=E,90nm,0.6s						
YSS				AMB	AMB	11 23 24.0	
	comp=E,160nm,0.6s						
YSS				*i* S	**Sn**	**11 24 10.5**	**-3.6**
YSS				A		11 24 14.6	
	comp=E,120nm,0.7s						
YSS				A		11 24 14.6	
	comp=E,100nm,0.7s						
JAB	**Ashibetsu**	**4.51**	**256**	P	**Pn**	**11 23 27.4**	**+2.1**
JWK2	**Keihoku**	**4.53**	**279**	P	**Pn**	**11 23 27.4**	**+1.9**
JWK2				*e*S	**Sn**	**11 24 21.0**	**+4.0**
JSS	**Shosan**	**4.58**	**268**	P	**Pn**	**11 23 28.8**	**+2.6**
ERM	**Erimo**	**4.62**	**235**	*e*Pn	**Pn**	**11 23 27.5**	**+0.8**
ERM				*e*Sn	**Sn**	**11 24 19.2**	**0.0**
ERM	**Erimo**	**4.62**	**235**	*c* *i*PN	**Pn**	**11 23 27.4**	**+0.6**
JEM	**Erimo**	**4.62**	**235**	P	**Pn**	**11 23 26.6**	**-0.1**
JBT2	**Biratori 2**	**4.70**	**247**	P	**Pn**	**11 23 28.1**	**+0.2**
JNBK	**Urakawa-nobuka**	**4.70**	**240**	P	**Pn**	**11 23 27.0**	**-0.9**
JNBK				*e*S	**Sn**	**11 24 21.4**	**+0.1**
JHR	**Hokuryu**	**4.79**	**260**	P	**Pn**	**11 23 31.0**	**+1.9**
JEW	**Eniwo**	**5.28**	**251**	P	**Pn**	**11 23 37.2**	**+1.5**
JNB	**Noboribetsu**	**5.71**	**249**	P	**Pn**	**11 23 41.7**	**+0.1**
JNB				*e*S	**Sn**	**11 24 46.5**	**+0.7**
JSK	**Shakotan**	**5.77**	**258**	P	**Pn**	**11 23 45.4**	**+3.0**
JKB	**Kayabe**	**5.99**	**244**	P	**Pn**	**11 23 44.1**	**-1.3**
JKB				*e*S	**Sn**	**11 24 50.7**	**-1.9**
UGL	**Uglegorsk**	**6.03**	**318**	*e*P	**Pn**	**11 23 45.5**	**-0.4**
UGL				AMB	AMB	11 23 47.3	
	comp=E,60nm,0.8s						
JSH	**Shimam**	**6.31**	**253**	P	**Pn**	**11 23 50.7**	**+1.0**
JYM2	**Yakumo 2**	**6.31**	**248**	P	**Pn**	**11 23 49.7**	**0.0**
JSR	**Shiriuchi**	**6.57**	**243**	P	**Pn**	**11 23 52.3**	**-1.0**
JSR				*e*S	**Sn**	**11 25 05.0**	**-1.7**
JTM	**Tenmabayashi**	**6.61**	**235**	P	**Pn**	**11 23 51.6**	**-2.2**
JTM				*e*S	**Sn**	**11 25 01.4**	**-6.2**
JANG	**Nango**	**6.63**	**231**	P	**Pn**	**11 23 51.5**	**-2.5**
JANG				*e*S	**Sn**	**11 25 01.7**	**-6.4**
JTH	**Tanohata**	**6.75**	**227**	P	**Pn**	**11 23 52.5**	**-3.2**
JOSM	**Okushiri--Mats**	**6.92**	**250**	P	**Pn**	**11 23 58.1**	**+0.1**
TYV	**Tymovskoe**	**7.16**	**330**	*e*P	**Pn**	**11 24 00.5**	**-0.6**
TYV				AMB	AMB	11 24 02.5	
	comp=E,13nm,1.0s						
TYV				AMB	AMB	11 24 02.5	
	comp=E,22nm,1.0s						
OFUJ	**Ofunato**	**7.50**	**223**	P	**Pn**	**11 24 03.5**	**-2.4**
JRG	**Rokugo**	**7.80**	**229**	P	**Pn**	**11 24 08.3**	**-1.6**
JRG				*e*S	**Sn**	**11 25 32.6**	**-3.9**
JIO	**Ouri**	**8.15**	**222**	P	**Pn**	**11 24 11.8**	**-2.9**
JIO				*e*S	**Sn**	**11 25 38.0**	**-7.1**
TEY	**Ternei**	**8.27**	**276**	*e*P	**Pn**	**11 24 15.0**	**-1.2**
TEY				AMB	AMB	11 24 17.0	
	comp=E,80nm,1.0s						
JYA	**Atsumi**	**8.87**	**229**	P	**Pn**	**11 24 23.1**	**-1.4**
JFY	**Yanaizu**	**9.78**	**224**	P	**Pn**	**11 24 35.0**	**-1.8**
HABR	**Khabarovsk**	**9.80**	**297**	⇑*e*PN	**Pn**	**11 24 39.0**	**+2.0**
HABR				pmax	pmax		
	comp=Z,54nm,1.4s						
MAJO	**Matsushiro**	**11.20**	**226**	*e*Pn	**Pn**	**11 24 53.6**	**-2.4**
	comp=Z,5.9nm,0.5s						
MAJO	**Matsushiro**	**11.20**	**226**	*e*PN	**Pn**	**11 24 53.6**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAT	**Matsushiro**	**11.20**	**226**	P	**Pn**	**11 24 53.7**	**-2.3**
MAT				*e*S	**Sn**	**11 27 00.2**	**+1.0**
MJAR	**Matsushiro Arr**	**11.20**	**226**	PN	**Pn**	**11 24 54.0**	**-2.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**11.20**	**226**	P	**Pn**	**11 24 54.0**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=30,slow=13,SNR=17						
MDJ	**Mudanjiang**	**13.27**	**276**	P	**Pn**	**11 25 26.0**	**+2.7**
MDJ				AMB	AMB		
	comp=Z,216nm,3.5s						
JHJ	**Hachijo jima 2**	**13.36**	**212**	LR	LR	11 29 43.1	
	comp=Z,147nm,21.5s,baz=135,slow=33						
MA2	**Magadan**	**14.90**	**5**	*e*P	**Pn**	**11 25 42.4**	**-1.7**
	comp=Z,3.3nm,0.6s						
MA2	**Magadan**	**14.90**	**5**	*e*P	**Pn**	**11 25 41.4**	**-2.7**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2	**Changchun**	**16.34**	**275**	*e*P	**Pn**	**11 26 03.3**	**+1.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
KSRS	**Korea Array**	**16.94**	**251**	P	**Pn**	**11 26 09.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=58,slow=10,SNR=11						
KSRS				LR	LR	11 32 34.2	
	comp=Z,40nm,20.8s,baz=156,slow=36						
JNU	**Nakatsue**	**17.78**	**235**	P	**Pn**	**11 26 21.1**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=101,slow=10,SNR=6.1						
YAK	**Yakutsk**	**20.39**	**334**	⇑*e*P	**P**	**11 26 45.5**	**-1.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NJ2	**Nanjing**	**26.14**	**251**	*e*P	**P**	**11 27 50.0**	**+6.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8						
HHC	**Hu-ho-hao-te**	**27.04**	**275**	*e*P	**P**	**11 27 53.9**	**+2.6**
HHC				PCP	PcP	11 31 11.0	+1.2
HHC				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.5						
HHC				AMB	AMB		
	comp=Z,199nm,4.2s						
ULN	**Ulaanbaatar**	**28.37**	**291**	⇓*e*P	**P**	**11 28 02.4**	**-0.7**
SONM	**Songino Array**	**28.82**	**291**	P	**P**	**11 28 07.5**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,72nm,18.2s						
SONM	**Songino Array**	**28.82**	**291**	P	**P**	**11 28 07.5**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.6,baz=78,slow=8.8,SNR=7.3						
SONM				LR	LR	11 39 57.2	
	comp=Z,72nm,18.2s,baz=156,slow=37						
TNA	**Tin City**	**31.57**	**33**	*e*P	**P**	**11 28 29.5**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.0						
LZH	**Lanzhou**	**34.53**	**271**	*e*P	**P**	**11 28 57.5**	**+0.3**
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8						
LZH	**Lanzhou**	**34.53**	**271**	*e*P	**P**	**11 28 57.5**	**+0.3**
	comp=Z,16nm,1.0s,mb4.8						
LZH				pP	pP	11 29 00.0	-21
LZH				sP	sP	11 29 02.0	-31
TTA	**Tatalina**	**36.14**	**40**	*e*P	**P**	**11 29 09.3**	**-1.4**
	comp=Z,6.6nm,0.8s,mb4.6						
TTA	**Tatalina**	**36.14**	**40**	*e*P	**P**	**11 29 09.3**	**-1.4**
TTA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
CD2	**Chengdu**	**37.29**	**264**	*e*P	**P**	**11 29 26.8**	**+6.0**
CD2				PP	PP	11 30 56.1	+8.3
CD2				LR	LR		
	comp=N,100nm,14.8s						
CD2				LR	LR		
	comp=Z,120nm,12.4s						
IMA2	**Indian Mountai**	**37.39**	**35**	*e*P	**P**	**11 29 19.6**	**-1.6**
GYA	**Guiyang**	**37.94**	**255**	P	**P**	**11 29 33.2**	**+6.9**
GYA				PP	PP	11 31 04.8	+10
GYA				PCP	PcP	11 31 47.4	+7.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,4.9s						
GYA				LR	LR		
	comp=N,340nm,18.0s						
GYA				LR	LR		
	comp=E,210nm,17.6s						
GYA				LR	LR		
	comp=Z,470nm,19.2s						
KDAK	**Kodiak Island**	**37.98**	**48**	P	**P**	**11 29 24.3**	**-2.0**
	comp=Z,15nm,0.7s,mb5.0,baz=325,slow=2.6,SNR=10						
MCK	**McKinley**	**39.35**	**39**	*e*P	**P**	**11 29 34.9**	**-2.7**
	comp=Z,2.2nm,0.7s,mb4.1						
MCK	**McKinley**	**39.35**	**39**	*e*P	**P**	**11 29 34.9**	**-2.7**
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
SML	**Sawmill**	**39.73**	**42**	*e*P	**P**	**11 29 40.1**	**-0.8**
COLA	**College**	**39.78**	**37**	*e*P	**P**	**11 29 39.5**	**-1.7**
	comp=Z,8.3nm,0.8s,mb4.6						
COLA	**College**	**39.78**	**37**	*c* *i*P	**P**	**11 29 39.8**	**-1.4**
KMI	**Kunming**	**41.50**	**257**	P	**P**	**11 30 03.7**	**+7.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
EGAK	**Eagle**	**42.65**	**37**	*e*P	**P**	**11 30 02.2**	**-2.4**
	comp=Z,5.0nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**44.81**	**297**	*i* P	**P**	**11 30 21.6**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.81**	**297**	P	**P**	**11 30 21.1**	**-1.2**
	comp=Z,0.7nm,0.6s,mb3.6,baz=74,slow=9.4,SNR=8.8						
MKAR				PcP	PcP	11 32 00.8	-1.4
	comp=Z,0.9nm,0.7s,baz=71,slow=4.3,SNR=3.8						
INK	**Inuvik**	**45.13**	**31**	P	**P**	**11 30 22.9**	**-1.5**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**45.13**	**31**	P	**P**	**11 30 22.9**	**-1.5**
	comp=Z,2.9nm,0.5s,mb4.2,baz=301,slow=6.9,SNR=12						
KURK	**Kurchatov**	**45.61**	**303**	⇓*e*P	**P**	**11 30 28.4**	**-0.1**
DLBC	**Dease Lake**	**49.40**	**43**	*e*P	**P**	**11 30 57.6**	**0.0**
TAPN	**Taplejung**	**50.77**	**271**	*e*P	**P**	**11 31 08.3**	**-0.1**
	comp=Z,11nm,0.5s,mb5.2						
ODAN	**Odare**	**51.29**	**271**	*e*P	**P**	**11 31 12.6**	**+0.2**
	comp=Z,6.8nm,0.4s,mb5.0						
AAK	**Ala-Archa**	**51.62**	**295**	⇑*e*P	**P**	**11 31 13.6**	**-1.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.7s,mb4.2						
JIRN	**Jiri**	**51.67**	**273**	*e*P	**P**	**11 31 14.8**	**-0.3**
	comp=Z,23nm,0.4s						
KKN	**Kakani**	**52.24**	**273**	*e*P	**P**	**11 31 18.3**	**-1.1**
	comp=Z,22nm,0.7s,mb5.3						
KKN	**Kakani**	**52.24**	**273**	*e*P	**P**	**11 31 18.3**	**-1.1**
KKN				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
GKN	**Gorkha**	**52.57**	**274**	*e*P	**P**	**11 31 21.0**	**-0.8**
	comp=Z,41nm,0.9s						
YKA	**Yellowknife Ar**	**54.52**	**34**	*i* P	**P**	**11 31 34.0**	**-1.5**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	**Yellowknife Ar**	**54.52**	**34**	P	**P**	**11 31 34.1**	**-1.4**
	comp=Z,1.5nm,0.5s,mb4.3,baz=302,slow=7.2,SNR=25						
B07A	**Winthrop**	**59.32**	**51**	⇑P	**P**	**11 32 09.4**	**-0.3**
	baz=59						
F04A	**Amboy**	**59.44**	**54**	⇓P	**P**	**11 32 10.8**	**+0.2**
	baz=59						
A08A	**Turner Farm, O**	**59.51**	**50**	⇓P	**P**	**11 32 10.6**	**-0.3**
	baz=59						
D06A	**Cle Elum**	**59.63**	**52**	⇓P	**P**	**11 32 11.4**	**-0.4**
	baz=59						
H03A	**Soap Creek Ran**	**59.64**	**56**	⇑P	**P**	**11 32 12.8**	**+0.9**
	baz=59						
C07A	**Waterville**	**59.79**	**51**	⇓P	**P**	**11 32 12.3**	**-0.5**
	baz=59						
B08A	**Colville Reser**	**59.81**	**50**	⇑P	**P**	**11 32 12.5**	**-0.5**
	baz=59						
G04A	**Mulino**	**59.82**	**55**	⇓P	**P**	**11 32 13.4**	**+0.3**
	baz=59						
A09A	**Danville**	**59.87**	**50**	⇑P	**P**	**11 32 13.1**	**-0.3**
	baz=59,SNR=5.7						
E06A	**Yakima**	**59.92**	**53**	⇑P	**P**	**11 32 13.4**	**-0.4**
	baz=59						
D07A	**Quincy**	**60.12**	**52**	⇑P	**P**	**11 32 14.7**	**-0.4**
	baz=60						
J02A	**Umpqua**	**60.22**	**57**	⇓P	**P**	**11 32 16.0**	**+0.2**
	baz=60						
H04A	**Detroit Lake**	**60.29**	**55**	⇓P	**P**	**11 32 16.4**	**+0.1**
	baz=60						
C08A	**Higginbotham F**	**60.30**	**51**	⇓P	**P**	**11 32 14.9**	**-1.4**
	baz=60						
A10A	**Northport**	**60.42**	**49**	⇑P	**P**	**11 32 17.0**	**-0.2**
	baz=60						
B09A	**Rice**	**60.42**	**50**	⇓P	**P**	**11 32 16.9**	**-0.2**
	baz=60						
G05A	**Wamic**	**60.47**	**54**	⇓P	**P**	**11 32 17.7**	**+0.2**
	baz=60						
F06A	**Goldendale**	**60.48**	**54**	⇑P	**P**	**11 32 17.9**	**+0.3**
	baz=60						
E07A	**Sunnyside**	**60.55**	**52**	⇑P	**P**	**11 32 18.2**	**+0.1**
	baz=60						
I04A	**Tendick Farm,**	**60.67**	**56**	⇓P	**P**	**11 32 19.0**	**+0.1**
	baz=60						
C09A	**Chrisman Ranch**	**60.71**	**50**	⇓P	**P**	**11 32 18.7**	**-0.5**
	baz=60						
D08A	**Wollman Farm,**	**60.79**	**51**	⇑P	**P**	**11 32 19.4**	**-0.3**
	baz=60						
H05A	**Madras**	**60.87**	**55**	⇓P	**P**	**11 32 20.4**	**+0.1**
	baz=60						
F07A	**Phinny Hill Vi**	**60.89**	**53**	P	**P**	**11 32 21.0**	**+0.6**
	baz=60,SNR=7.8						
L02A	**Cave Junction**	**60.90**	**58**	⇑P	**P**	**11 32 20.3**	**-0.2**
	baz=60						
E08A	**Dider Farm, El**	**61.04**	**52**	⇓P	**P**	**11 32 21.2**	**-0.1**
	baz=60						
NEW	**Newport**	**61.07**	**50**	*e*P	**P**	**11 32 20.6**	**-1.0**
	comp=Z,3.9nm,1.0s,mb4.4						
NEW	**Newport**	**61.07**	**50**	*e*P	**P**	**11 32 20.6**	**-1.0**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.0s						
A11A	**Hall Mountain,**	**61.07**	**49**	⇑P	**P**	**11 32 21.8**	**+0.2**
	baz=60						
I05A	**Bend**	**61.12**	**55**	⇓P	**P**	**11 32 21.9**	**-0.1**
	baz=60						
J04A	**Umpqua Nationa**	**61.16**	**57**	⇓P	**P**	**11 32 23.0**	**+0.7**
	baz=60						
H06A	**Lindquist Farm**	**61.34**	**54**	⇓P	**P**	**11 32 23.4**	**0.0**
	baz=61						
G07A	**Ruggs Ranch, H**	**61.41**	**53**	⇓P	**P**	**11 32 24.2**	**+0.3**
	baz=61						
A12A	**Yaak River Ran**	**61.47**	**48**	⇓P	**P**	**11 32 24.7**	**+0.4**
	baz=61						
E09A	**Wood Farm, Sta**	**61.54**	**52**	⇓P	**P**	**11 32 24.8**	**0.0**
	baz=61						
JOF	**Joensuu**	**61.55**	**332**	*e*p	**P**	**11 32 19.9**	**-4.6**
F08A	**Pendleton**	**61.60**	**53**	⇑P	**P**	**11 32 25.4**	**+0.2**
	baz=61						
J05A	**Fort Rock**	**61.66**	**56**	P	**P**	**11 32 26.7**	**+1.1**
	baz=61,SNR=7.4						
YBH	**Yreka Blue Hor**	**61.69**	**58**	⇓P	**P**	**11 32 26.5**	**+0.6**
	baz=61						
D10A	**Wagner Farm, O**	**61.70**	**51**	⇓P	**P**	**11 32 25.1**	**-0.7**
	baz=61						
K04A	**Chilquin**	**61.76**	**57**	⇑P	**P**	**11 32 26.8**	**+0.5**
	baz=61						
G08A	**Pilot Rock**	**61.80**	**53**	⇑P	**P**	**11 32 26.6**	**+0.1**
	baz=61						
N02C	**Big Bar**	**61.86**	**59**	⇓P	**P**	**11 32 27.5**	**+0.5**
	baz=61						
H07A	**Lands Inn, Kim**	**61.86**	**54**	⇑P	**P**	**11 32 27.3**	**+0.3**
	baz=61						
I06A	**Prineville**	**61.87**	**55**	⇓P	**P**	**11 32 27.5**	**+0.5**
	baz=61						
L04A	**Klamath Falls**	**61.92**	**57**	⇑P	**P**	**11 32 27.9**	**+0.5**
	baz=61						
A13A	**Flathead Natio**	**62.12**	**48**	⇑P	**P**	**11 32 28.5**	**-0.1**
	baz=62						
E10A	**Myers Farm, Un**	**62.13**	**51**	⇑P	**P**	**11 32 28.6**	**-0.1**
	baz=62						
F09A	**S2 Ranch, Elgi**	**62.15**	**52**	⇓P	**P**	**11 32 29.2**	**+0.4**
	baz=62						
M04C	**Macdoel**	**62.18**	**58**	⇑P	**P**	**11 32 29.5**	**+0.4**
	baz=62						
K05A	**Summer Lake**	**62.19**	**56**	P	**P**	**11 32 30.2**	**+1.0**
	baz=62,SNR=6.3						
I07A	**Izee**	**62.20**	**54**	⇓P	**P**	**11 32 29.5**	**+0.2**
	baz=62						
M03C	**McCloud**	**62.31**	**58**	⇑P	**P**	**11 32 30.5**	**+0.4**
	baz=62						
J06A	**Christmas Vall**	**62.31**	**56**	⇓P	**P**	**11 32 30.4**	**+0.4**
	baz=62,SNR=5.3						
H08A	**Prairie City**	**62.42**	**54**	⇓P	**P**	**11 32 30.5**	**-0.2**
	baz=62						
B13A	**Whitefish**	**62.43**	**48**	P	**P**	**11 32 30.7**	**0.0**
	baz=62,SNR=6.7						
WDC	**Whiskeytown Da**	**62.47**	**59**	⇑P	**P**	**11 32 30.9**	**-0.2**
	baz=62						
G09A	**Cove**	**62.48**	**53**	⇑P	**P**	**11 32 31.2**	**+0.2**
	baz=62						
K06A	**Valley Falls**	**62.53**	**56**	P	**P**	**11 32 32.1**	**+0.7**
	baz=62,SNR=7.6						
O02C	**Red Bluff**	**62.56**	**60**	⇑P	**P**	**11 32 32.1**	**+0.4**
	baz=62						
L05A	**Lakeview**	**62.63**	**57**	⇑P	**P**	**11 32 32.6**	**+0.5**
	baz=62						
P01C	**Double 8 Ranch**	**62.64**	**61**	⇓P	**P**	**11 32 31.9**	**-0.3**
	baz=62						
E11A	**Bogner Ranch,**	**62.71**	**51**	⇓P	**P**	**11 32 32.2**	**-0.4**
	baz=62						
J07A	**Hines**	**62.73**	**55**	P	**P**	**11 32 33.7**	**+0.9**
	baz=62,SNR=6.0						
D12A	**Red Ives Fores**	**62.76**	**50**	⇓P	**P**	**11 32 32.3**	**-0.5**
	baz=62						
C13A	**Hot Springs**	**62.80**	**49**	⇓P	**P**	**11 32 32.5**	**-0.6**
	baz=62						
I08A	**Drewsey**	**62.84**	**54**	⇑P	**P**	**11 32 34.0**	**+0.5**

	baz=62,SNR=10						
M05C	Lookout	62.85	58	⇑P	P	11 32 33.3	-0.3
	baz=62						
H09A	Durkee	62.91	53	⇑P	P	11 32 34.1	+0.2
	baz=62						
GASB	Alder Springs	62.92	60	⇑P	P	11 32 35.0	+0.9
	baz=62						
HATC	Hat Creek Radi	62.99	58	⇑P	P	11 32 34.9	+0.3
	baz=62						
F11A	Grangeville	63.02	51	⇑P	P	11 32 34.1	-0.5
	baz=62						
MOD	Modoc	63.03	57	⇑P	P	11 32 35.1	+0.3
	baz=62						
K07A	Rock Creek Ran	63.18	56	⇓P	P	11 32 35.8	0.0
	baz=62						
C14A	Swan Lake	63.18	48	⇓P	P	11 32 35.6	-0.1
	baz=63						
D13A	Huson	63.21	49	P	P	11 32 35.5	-0.4
	baz=63,SNR=7.1						
J08A	Circle Bar Ran	63.23	55	⇓P	P	11 32 36.2	+0.1
	baz=63						
G11A	Walters Elk Ra	63.25	52	⇓P	P	11 32 36.1	-0.1
	baz=63						
I09A	Lost Marbles R	63.28	54	⇓P	P	11 32 36.7	+0.3
	baz=63						
H10A	Noah's Angus R	63.48	53	⇓P	P	11 32 37.4	-0.3
	baz=63						
O04C	Chester	63.52	59	⇓P	P	11 32 38.2	+0.2
	baz=63						
L07A	Adell	63.53	56	⇓P	P	11 32 38.7	+0.6
	baz=63						
ELFS	Eagle Lake Fie	63.55	58	⇓P	P	11 32 38.7	+0.4
	baz=63						
MNRC	McLaughlin Nat	63.55	61	⇑P	P	11 32 38.7	+0.4
	baz=63						
F12A	Elk City	63.60	51	P	P	11 32 39.0	+0.5
	baz=63,SNR=6.9						
K08A	Mann Creek Ran	63.60	55	P	P	11 32 38.9	+0.4
	baz=63,SNR=5.9						
J09A	Fry Pan Ranch,	63.66	54	⇓P	P	11 32 39.4	+0.5
	baz=63						
MSO	Missoula	63.66	49	*e*P	P	11 32 38.5	-0.3
	comp=Z,6.5nm,1.3s,mb4.3						
ORV	Oroville	63.73	60	⇑P	P	11 32 38.6	-0.8
	baz=63						
D14A	Greenough	63.73	49	P	P	11 32 39.1	-0.2
	baz=63,SNR=7.2						
SUTB	Sutter Butte	63.75	60	⇓P	P	11 32 39.1	-0.5
	baz=63						
I10A	Payette	63.75	53	⇑P	P	11 32 40.0	+0.5
	baz=63						
E13A	Victor	63.76	50	⇓P	P	11 32 39.2	-0.3
	baz=63						
H11A	Donnelly	63.82	52	P	P	11 32 39.6	-0.3
	baz=63,SNR=5.5						
O05C	Quincy	63.83	59	P	P	11 32 40.2	+0.1
	baz=63,SNR=5.9						
N06A	Buffalo Meadow	64.01	58	⇓P	P	11 32 41.1	-0.2
	baz=63						
L08A	Fields	64.02	56	⇓P	P	11 32 41.7	+0.5
	baz=63						
M07A	Soldier Meadow	64.02	57	P	P	11 32 42.0	+0.7
	baz=63,SNR=18						
K09A	Rome	64.07	55	⇓P	P	11 32 41.4	-0.2
	baz=63						
F13A	Darby	64.09	50	⇓P	P	11 32 41.1	-0.6
	baz=63						
E14A	Clinton	64.16	50	P	P	11 32 41.8	-0.3
	baz=64,SNR=5.4						
BEKR	Beckwourth	64.23	59	P	P	11 32 42.7	0.0
	baz=64,SNR=9.0						
D15A	Lincoln	64.29	49	⇓P	P	11 32 42.6	-0.3
	baz=64						
FINES	FINESS Array B	64.32	333	*i* P	P	11 32 41.4	-1.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	64.32	333	P	P	11 32 39.9	-3.0
	comp=Z,1.4nm,0.5s,mb4.0,baz=44,slow=8.1,SNR=20						
O06A	Flanigan	64.37	58	⇑P	P	11 32 43.7	+0.1
	baz=64						
P05C	Yuba Gap, Truc	64.43	59	⇓P	P	11 32 43.5	-0.5
	baz=64						
K10A	MacKenzie Ranc	64.52	54	⇑P	P	11 32 44.9	+0.4
	baz=64,SNR=5.4						
L09A	Wilkinson Ranc	64.52	55	⇓P	P	11 32 45.2	+0.6
	baz=64						
H12A	Diamond D Ranc	64.57	52	P	P	11 32 44.5	-0.3
	baz=64,SNR=6.4						
G13A	Cobalt	64.57	51	⇓P	P	11 32 44.3	-0.6
	baz=64,SNR=8.0						
F14A	Wisdom	64.60	50	⇓P	P	11 32 44.8	-0.2
	baz=64						
E15A	Deer Lodge	64.61	49	⇑P	P	11 32 44.8	-0.2
	baz=64						
LAVA	Lava Cap Winer	64.68	60	⇓P	P	11 32 45.3	-0.3
	baz=64,SNR=5.2						
MFID	Camas Ranch	64.72	53	⇑P	P	11 32 45.7	-0.2
	baz=64						
H13A	Challis	64.89	52	⇓P	P	11 32 46.5	-0.5
	baz=64,SNR=11						
G14A	Jackson	64.91	51	⇑P	P	11 32 46.7	-0.2
	baz=64						
WCN	Washoe City	64.95	59	⇓P	P	11 32 47.8	+0.4
	baz=64,SNR=5.5						
O07A	Toulon	64.95	58	P	P	11 32 47.9	+0.5
	baz=64,SNR=6.2						
K11A	Parker Ranch,	65.00	54	⇓P	P	11 32 47.3	-0.4
	baz=64						
N08A	GE Springer Mi	65.01	57	⇑P	P	11 32 47.7	-0.1
	baz=64						
M09A	Marrel Ranch,	65.02	56	⇓P	P	11 32 47.5	-0.3
	baz=64						
F15A	Butte	65.06	50	⇑P	P	11 32 48.1	+0.1
	baz=64,SNR=5.7						
EGMT	Eagleton	65.12	46	⇓P	P	11 32 47.9	-0.5
	baz=64						
R05C	Kirkwood Meado	65.12	60	⇑P	P	11 32 47.8	-0.8
	baz=64						
L10A	Juniper Basin	65.18	55	⇓P	P	11 32 48.8	0.0
	baz=64						
J12A	Stokes Ranch,	65.24	53	⇑P	P	11 32 49.1	-0.1
	baz=65,SNR=5.8						
N09A	Rock Creek Ran	65.33	56	⇓P	P	11 32 50.3	+0.5
	baz=65						
CMB	Columbia Colle	65.34	60	*e*P	P	11 32 49.6	-0.3
	comp=Z,3.2nm,0.7s,mb4.3						
CMB	Columbia Colle	65.34	60	*e*P	P	11 32 49.6	-0.4
CMB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
CMB	Columbia Colle	65.34	60	⇓P	P	11 32 49.8	-0.1
	baz=65,SNR=6.7						
I13A	Wildhorse Cree	65.38	52	⇑P	P	11 32 50.2	+0.1
	baz=65,SNR=7.5						
PACP	Pacheco Peak	65.42	62	⇑P	P	11 32 50.8	+0.4
	baz=65						
HLID	Hailey	65.43	52	*e*P	P	11 32 50.4	-0.1
	comp=Z,3.0nm,0.9s,mb4.1						
HLID	Hailey	65.43	52	⇓P	P	11 32 50.5	0.0
	baz=65						
G15A	Dillon	65.49	50	P	P	11 32 50.6	-0.1
	baz=65,SNR=14						
M10A	I.L. Ranch, Tu	65.49	55	⇑P	P	11 32 51.5	+0.7
	baz=65						
MCMT	McKenzie Canyo	65.50	51	*e*P	P	11 32 50.0	-0.8
L11A	Cat Creek Ranc	65.54	54	P	P	11 32 51.5	+0.4
	baz=65,SNR=6.2						
R06C	Coleville	65.62	59	P	P	11 32 52.1	+0.4
	baz=65,SNR=6.1						
HAST	UC Hastings Re	65.64	62	⇑P	P	11 32 51.8	0.0
	baz=65						
WRA	Warramunga Arr	65.64	194	P	P	11 32 52.1	+0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	65.64	194	P	P	11 32 52.1	+0.2
	comp=Z,0.5nm,0.7s,mb3.4,baz=13,slow=6.4,SNR=4.5						
BOZ	Bozeman (W)	65.65	49	*e*P	P	11 32 51.8	0.0
	comp=Z,4.6nm,0.5s,mb4.6						
BOZ	Bozeman (W)	65.65	49	*e*P	P	11 32 51.8	0.0
BOZ				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.6						
BOZ	Bozeman (W)	65.65	49	P	P	11 32 52.2	+0.4
	baz=65,SNR=17						
J13A	Cove Ranch, Pi	65.67	52	P	P	11 32 52.4	+0.4
	baz=65,SNR=6.9						
K12A	Draper Farm, C	65.74	53	⇑P	P	11 32 52.6	+0.2
	baz=65						
S06C	San Francisco	65.77	60	⇓P	P	11 32 52.5	-0.2
	baz=65						
S05C	Merced	65.81	61	⇓P	P	11 32 52.4	-0.6
	baz=65						
T05C	Eagle Field, D	65.88	61	⇑P	P	11 32 53.5	+0.1
	baz=65						
O09A	Fish Creek Ran	65.95	57	⇓P	P	11 32 54.2	+0.4
	baz=65						
L12A	House Creek Ra	65.98	54	P	P	11 32 54.5	+0.5
	baz=65,SNR=5.5						
M11A	Holland Ranch,	65.98	55	⇓P	P	11 32 54.7	+0.7
	baz=65						
V03C	Hunter Liggett	66.07	62	⇓P	P	11 32 54.3	-0.3
	baz=65						
R07C	Lee Vining	66.14	60	P	P	11 32 55.8	+0.7
	baz=66,SNR=12						
K13A	Stover Farm, H	66.20	53	⇑P	P	11 32 56.4	+1.0
	baz=66						
O10A	Cortez Mining,	66.29	56	⇑P	P	11 32 56.5	+0.5
	baz=66						
Q08A	Gabbs	66.33	58	P	P	11 32 56.6	+0.3
	baz=66,SNR=5.8						
P09A	Austin	66.37	57	⇓P	P	11 32 57.1	+0.6
	baz=66						
NVAR	Mina Array Bea	66.38	59	P	P	11 32 57.0	+0.4
NVAR	Mina Array Bea	66.38	59	P	P	11 32 57.0	+0.4
	comp=Z,4.4nm,0.7s,mb4.4,baz=306,slow=5.7,SNR=38						
T06C	Millerton Lake	66.41	61	⇓P	P	11 32 56.5	-0.2
	baz=66						
KCC	Kaiser Creek	66.45	60	⇑P	P	11 32 57.2	+0.1
	baz=66						
M12A	Wells	66.50	55	⇑P	P	11 32 57.9	+0.6
	baz=66						
R08A	Mina	66.55	59	⇑P	P	11 32 58.2	+0.5
	baz=66						
PKD	Parkfield	66.55	62	⇓P	P	11 32 57.7	-0.1
	baz=66						
L13A	Double Diamond	66.63	53	⇓P	P	11 32 58.7	+0.5
	baz=66						
P10A	Eureka	66.73	57	⇑P	P	11 32 59.2	+0.4
	baz=66						
K14A	Jones Ranch, D	66.78	53	⇓P	P	11 32 59.9	+0.8
	baz=66,SNR=6.6						
N12A	Clover Valley,	66.79	55	⇓P	P	11 32 59.9	+0.7
	baz=66						
O11A	Cowboy Ranch,	66.89	56	⇑P	P	11 33 00.2	+0.5
	baz=66						
M13A	Montello	66.97	54	P	P	11 33 00.6	+0.3
	baz=66,SNR=5.7						
HELL	Mitchell Peak,	67.04	61	⇑P	P	11 33 00.3	-0.5
	baz=66,SNR=9.6						
S08C	White Mtn Res	67.05	60	P	P	11 33 01.4	+0.5
	baz=66,SNR=5.3						
P11A	Circle Ranch,	67.20	57	⇑P	P	11 33 02.4	+0.7
	baz=66						
DCID1	Drake Creek	67.21	51	*e*P	P	11 33 02.2	+0.4
R09A	Tonopah	67.25	58	⇑P	P	11 33 02.1	0.0
	baz=67,SNR=6.6						
N13A	Wendover, West	67.27	55	⇑P	P	11 33 02.9	+0.6
	baz=67						
Q10A	Clear Creek Ra	67.28	57	⇓P	P	11 33 02.2	0.0
	baz=67						
SMMC	Simmler	67.30	62	⇓P	P	11 33 03.3	+0.8
	baz=67						
O12A	Currie	67.34	55	⇓P	P	11 33 03.1	+0.5
	baz=67,SNR=6.0						
M14A	Sheep Mountain	67.35	54	⇓P	P	11 33 03.2	+0.5
	baz=67						
MOOW	Moose Ponds	67.36	50	*e*P	P	11 33 02.9	+0.2
	comp=Z,1.9nm,0.8s,mb4.0						
TPAW	Teton Pass	67.41	51	*e*P	P	11 33 03.8	+0.8
	comp=Z,7.0nm,0.8s,mb4.5						
S09A	Goldfield	67.48	59	⇑P	P	11 33 03.9	+0.4
	baz=67						
REDW	Red Top Meadow	67.55	51	*e*P	P	11 33 03.8	-0.1
	comp=Z,12nm,1.3s,mb4.6						
DGMT	Dagmar	67.61	43	*e*P	P	11 33 03.4	-0.9
	comp=Z,12nm,0.6s,mb4.9						
PKM	Peak Mountain	67.67	63	⇓P	P	11 33 05.3	+0.5
	baz=67						
R10A	Warm Springs	67.68	58	⇓P	P	11 33 05.1	+0.3
	baz=67						
Q11A	Duckwater	67.71	57	⇑P	P	11 33 05.0	0.0
	baz=67						
S10A	Tonopah Range,	67.74	58	⇓P	P	11 33 05.4	+0.2
	baz=67						
P12A	McGill	67.75	56	⇑P	P	11 33 05.7	+0.4
	baz=67						
GRAC	Grapevine Rang	67.86	60	⇓P	P	11 33 06.7	+0.8
	baz=67,SNR=5.3						
N14A	Grayback Hills	67.87	54	⇓P	P	11 33 05.8	-0.1
	baz=67						
M15A	Larsen Ranch,	67.89	53	⇓P	P	11 33 06.1	0.0
	baz=67,SNR=11						
R11A	Troy Canyon, C	68.07	57	⇑P	P	11 33 07.1	-0.1
	baz=67,SNR=6.0						
Q12A	Willow Creek R	68.08	56	⇑P	P	11 33 07.8	+0.6
	baz=67						
HWUT	Hardware Ranch	68.30	53	*e*P	P	11 33 08.6	-0.1
	comp=Z,6.4nm,1.1s,mb4.4						
MPMC	Manual Prospec	68.39	60	⇑P	P	11 33 09.4	+0.1
	baz=68,SNR=7.7						
S11A	Rachel	68.43	58	P	P	11 33 10.1	+0.5
	baz=68,SNR=6.3						
DUG	Dugway	68.51	54	*e*P	P	11 33 10.0	+0.1
	comp=Z,6.9nm,1.0s,mb4.4						
DUG	Dugway	68.51	54	*e*P	P	11 33 10.0	0.0
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
DUG	Dugway	68.51	54	⇑P	P	11 33 10.2	+0.2
	baz=68,SNR=9.2						
FURC	Furnace Creek,	68.51	60	P	P	11 33 10.3	+0.3
	baz=68,SNR=14						
OSI	Osito Adit	68.55	62	⇓P	P	11 33 10.6	+0.3
	baz=68						
TPNV	Topopah Spring	68.58	59	*e*P	P	11 33 10.4	-0.1
	comp=Z,4.5nm,0.8s,mb4.3						
TPNV	Topopah Spring	68.58	59	*e*P	P	11 33 10.4	0.0
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
TPNV	Topopah Spring	68.58	59	⇓P	P	11 33 10.6	+0.1
	baz=68,SNR=6.8						
LRMC	Laurel Mountai	68.64	61	⇑P	P	11 33 10.9	0.0
	baz=68						
BW06	Boulder Array	68.65	51	*e*P	P	11 33 10.4	-0.4
	comp=Z,12nm,1.4s,mb4.5						
PDAR	Pinedale Array	68.65	51	P	P	11 33 10.6	-0.3
	comp=Z,3.6nm,0.6s,mb4.3,baz=271,slow=1.5,SNR=37						
R12A	Pony Springs,	68.67	57	⇓P	P	11 33 11.3	+0.2
	baz=68						
EDW2	Edwards Air Fo	68.83	62	⇓P	P	11 33 11.9	-0.2
	baz=68,SNR=5.1						
U10A	Ash Meadows, A	68.87	59	⇑P	P	11 33 12.7	+0.5
	baz=68						
NB2	NORSAR Subarra	68.93	339	P	P	11 33 09.2	-3.0
	comp=Z,0.5nm,0.6s,mb3.5,baz=30,slow=6.2						
NB2	NORSAR Subarra	68.93	339	P	P	11 33 09.2	-3.0
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
NOA	NORSAR Array B	68.93	339	P	P	11 33 10.5	-1.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	68.93	339	P	P	11 33 10.5	-1.7
	comp=Z,0.6nm,0.6s,mb3.6,baz=24,slow=4.6,SNR=3.8						
S12A	Delamar Landin	69.00	58	⇓P	P	11 33 13.7	+0.7
	baz=68						
T11A	Corn Creek, Al	69.01	58	P	P	11 33 13.3	+0.2
	baz=68,SNR=5.9						
DECC	Green Verdugo	69.03	62	⇓P	P	11 33 13.3	0.0
	baz=68						
HFS	Hagfors	69.05	338	P	P	11 33 11.0	-1.9
	comp=Z,0.4nm,0.5s,mb3.5,baz=79,slow=7.7,SNR=5.7						
SHOC	Shoshone	69.24	60	⇓P	P	11 33 14.5	-0.1
	baz=69						
GSC	Goldstone	69.30	61	⇓P	P	11 33 15.1	+0.1
	baz=69						
ASAR	Alice Springs	69.36	194	P	P	11 33 16.8	+1.6
ASAR	Alice Springs	69.36	194	P	P	11 33 16.8	+1.6
	comp=Z,0.3nm,0.8s,baz=12,slow=6.3,SNR=6.7						
BFSC	Mount Baldy St	69.46	62	⇓P	P	11 33 16.0	+0.1
	baz=69						
S13A	Holt Ranch, En	69.61	57	⇑P	P	11 33 17.3	+0.6
	baz=69						
SCI	San Clemente I	69.72	63	⇑P	P	11 33 18.1	+0.6
	baz=69						
TUQ	Turquoise Mtn.	69.76	60	⇓P	P	11 33 18.1	+0.4
	baz=69						
V11A	Goodsprings	69.80	59	⇓P	P	11 33 18.4	+0.4
	baz=69						
S14A	Cedar City	69.90	57	⇓P	P	11 33 18.9	+0.3
	baz=69						
HEC	Hector,Ludlow	69.90	61	P	P	11 33 19.0	+0.4
	baz=69,SNR=6.9						
BBRC	Big Bear Sol-O	69.91	61	⇓P	P	11 33 18.4	-0.3
	baz=69						
T13A	Saint George	69.95	58	⇓P	P	11 33 19.5	+0.6
	baz=69						
U12A	Valley of Fire	69.95	58	⇓P	P	11 33 19.5	+0.5
	baz=69						
MSU	Marysvale	69.99	55	*e*P	P	11 33 19.4	+0.3
TMUT	Trail Mountain	70.03	54	*e*P	P	11 33 19.6	+0.2
ULM	Lac du Bonnet	70.21	38	P	P	11 33 18.9	-1.4
	comp=Z,3.5nm,0.6s,mb4.4,baz=313,slow=6.2,SNR=9.3						
U13A	Pakoon Wash	70.31	58	⇓P	P	11 33 21.6	+0.5
	baz=70,SNR=6.7						
GMRC	Granite Mounta	70.35	60	⇓P	P	11 33 21.3	-0.1
	baz=70						
T14A	Hurricane	70.41	57	⇓P	P	11 33 22.3	+0.5
	baz=70						
SRU	San Rafael	70.55	54	*e*P	P	11 33 22.8	+0.3
	comp=Z,8.8nm,0.8s,mb4.6						
SRU	San Rafael	70.55	54	*e*P	P	11 33 22.8	+0.3
SRU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
PFO	Pinyon Flat Ob	70.63	62	⇑P	P	11 33 22.8	-0.3
	baz=70						
BELC	Belle Mtn.	70.65	61	⇑P	P	11 33 22.8	-0.5
	baz=70						
U14A	Mt Trumbull	70.78	58	⇑P	P	11 33 24.6	+0.6
	baz=70						
T15A	Red Dirt Ranch	70.86	57	⇓P	P	11 33 24.8	+0.4
	baz=70						
IRM	Iron Mountain	71.08	61	⇓P	P	11 33 25.9	+0.1
	baz=70						
MONP	Monument Peak	71.12	62	⇓P	P	11 33 26.0	-0.1
	baz=70						
BC3	Big Chuckw Mtn	71.22	61	⇑P	P	11 33 26.5	-0.2
	baz=70						
DVTC	Desert V Tower	71.48	62	⇑P	P	11 33 27.9	-0.3
	baz=71						
SWSC	Sam W. Stewart	71.48	62	⇓P	P	11 33 27.6	-0.7
	baz=71						
X13A	Yucca	71.60	59	⇓P	P	11 33 29.2	+0.2
	baz=71						
PDMCI	Parker Dam,Lak	71.61	60	⇓P	P	11 33 29.2	+0.2
	baz=71						
W14A	Seligman	71.64	59	⇓P	P	11 33 30.0	+0.8
	baz=71						
AGMN	Agassiz Refuge	71.66	39	*e*P	P	11 33 26.9	-2.1
	comp=Z,2.1nm,0.6s,mb4.1						
Y12C	Blythe	71.74	61	⇓P	P	11 33 30.1	+0.3
	baz=71						
PV10	Paradox Valley	71.90	54	*e*P	P	11 33 31.3	+0.6
Y13A	Salome	72.12	60	⇓P	P	11 33 32.4	+0.3
	baz=71						
X14A	Yava	72.26	59	⇑P	P	11 33 33.3	+0.4
	baz=72						
PV01	Paradox Valley	72.33	54	*e*P	P	11 33 33.3	0.0
WUAZ	Wupatki	72.47	57	⇑P	P	11 33 34.7	+0.6
	baz=72						
Y14A	Wickenburg	72.55	59	⇑P	P	11 33 34.7	+0.1
	baz=72						
X15A	Humboldt	72.65	59	⇑P	P	11 33 36.2	+1.0
	baz=72,SNR=5.3						
ISCO	Idaho Springs	72.85	51	*e*P	P	11 33 36.4	+0.1
	comp=Z,7.4nm,1.3s,mb4.4						
ISCO	Idaho Springs	72.85	51	*e*P	P	11 33 36.4	+0.1
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
MVCO	Mesa Verde	73.01	54	*e*P	P	11 33 37.2	-0.1
	comp=Z,3.4nm,0.8s,mb4.2						
MVCO	Mesa Verde	73.01	54	⇓P	P	11 33 37.5	+0.2
	baz=72						
116A	Eloy	74.28	60	⇑P	P	11 33 45.5	+0.7
	baz=74						
SDCO	Great Sand Dun	74.35	52	*e*P	P	11 33 45.1	0.0
	comp=Z,1.4nm,0.7s,mb3.8						
ECSD	EROS,Sioux Fal	74.69	43	*e*P	P	11 33 45.7	-1.2
	comp=Z,2.4nm,0.6s,mb4.1						
ANMO	Albuquerque	75.77	55	*e*P	P	11 33 53.1	-0.2
	comp=Z,1.6nm,0.8s,mb3.8						
ANMO	Albuquerque	75.77	55	*e*P	P	11 33 53.1	-0.2
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SCHQ	Schefferville	76.40	20	P	P	11 33 54.9	-1.6
	comp=Z,4.4nm,0.9s,mb4.2,baz=11,slow=8.8,SNR=3.5						
CLL	Collm	76.77	333	*i* (pP)	pP	11 34 20.7	-5.0
EKA	Eskdalemuir Ar	77.37	344	P	P	11 33 59.9	-2.0
EKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKA	Eskdalemuir Ar	77.37	344	P	P	11 33 59.9	-2.0
	comp=Z,2.4nm,0.9s,mb3.9,baz=15,slow=5.9,SNR=3.0						
BRTR	Keskin Array B	77.40	314	P	P	11 34 02.1	-0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	77.40	314	P	P	11 34 02.1	-0.3
	comp=Z,0.6nm,0.7s,mb3.4,baz=101,slow=2.5,SNR=4.1						
KSU1	Kansas State U	78.15	46	*e*P	P	11 34 04.7	-1.9
	comp=Z,8.9nm,0.4s,mb4.8						
AMTX	Amarillo	78.55	52	*e*P	P	11 34 08.8	0.0
	comp=Z,3.4nm,0.6s,mb4.3						
GERES	GERESS Array B	78.64	331	P	P	11 34 09.4	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	78.64	331	P	P	11 34 09.4	+0.3
	comp=Z,1.2nm,0.7s,mb3.8,baz=23,slow=5.3,SNR=4.0						
LTX	Lajitas	81.44	57	*e*P	P	11 34 24.4	-0.1
	comp=Z,5.6nm,0.6s,mb4.6						
LTX	Lajitas	81.44	57	*e*P	P	11 34 24.4	-0.1
LTX				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
TXAR	Lajitas Array	81.44	57	P	P	11 34 24.4	-0.1
TXAR	Lajitas Array	81.44	57	P	P	11 34 24.4	-0.1
TXAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TXAR	Lajitas Array	81.44	57	P	P	11 34 24.4	-0.1
	comp=Z,5.8nm,0.6s,mb4.6,baz=295,slow=4.2,SNR=104						
JCT	Junction City	82.86	54	*e*P	P	11 34 31.4	-0.5
	comp=Z,4.4nm,0.6s,mb4.5						
JCT	Junction City	82.86	54	*e*P	P	11 34 31.4	-0.5
JCT				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
TORD	Torodi Ar. Bea	114.85	324	PKP	PKiKP	11 40 45.8	-1.9
	comp=Z,0.2nm,0.4s,baz=25,slow=1.3,SNR=5.4						
CFAA	Coronel Fontan	148.73	78	PKPbc	PKPbc	11 41 53.7	-0.2
	comp=Z,0.6nm,0.5s,baz=272,slow=2.1,SNR=7.7						

MOS ***04*** *11:26:10.8±1.9, 3383N×3856W, h10km, mb5.1/65, MS4.9/39, Error ellipse: s-maj=8.3km s-min=4.0km az=45.3*

IDC ***04*** *11:26:10.6±0.7, 3394N×3868W, h0km, mb4.2/26, mb1 4.3/26, mb1mx4.3/29, mbtmp4.2/26, MS4.7/26, Ms1 4.7/26, ms1mx4.7/30, Error ellipse: s-maj=20.4km s-min=11.3km az=165.0*

ISCJB ***04*** *11:26:10.2±0.3, 3377N±007×3860W±002, h10km, mb4.8/150, MS4.9/194, Error ellipse: s-maj=10.6km s-min=2.8km az=174.6*

NEIC ***04*** *11:26:12.0±0.5, 3379N×3847W, h10km, mb5.0/95, MS4.9/158, MW5.6, Error ellipse: s-maj=15.1km s-min=4.4km az=174.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M_{rr}0.15; $M_{\theta\theta}$0.60; $M_{\phi\phi}$-0.75; $M_{r\theta}$-0.19; $M_{\theta\phi}$2.74; $M_{\phi r}$0.72; Best double couple: $M_0$2.90000×10^{17} NP1:ϕ_s96.00000°, δ77.00000°, λ-4.00000°. NP2:ϕ_s187.00000°, δ86.00000°, λ-167.00000°. Principal axes: T 2.7800, Plg7.0000°, Azm321.0000°; N 0.2600, Plg76.0000°, Azm203.0000°; P -3.0500, Plg12.0000°, Azm53.0000°;*

BJI ***04*** *11:26:11.9, 3380N×3850W, h10km, mB5.8, mb5.4, Ms5.4, Msz5.1*

CSEM ***04*** *11:26:12.2, 3405N×3875W, h10km, ML5.6*

GCMT ***04*** *11:26:12.0±0.1, 3375N×3855W, h14km, MW5.6/97, Moment Tensor Solution. s81,c130; s97,c246; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.30±.04; $M_{\theta\theta}$1.25±.04; $M_{\phi\phi}$-0.94±.04; $M_{r\theta}$-0.16±.07; $M_{\theta\phi}$2.63±.04; $M_{\phi r}$-0.04±.07; Best double couple: $M_0$2.85500×10^{17} NP1:ϕ_s191.00000°, δ87.00000°, λ179.00000°. NP2:ϕ_s281.00000°, δ89.00000°, λ3.00000°. Principal axes: T 3.0080, Plg3.0000°, Azm146.0000°; N -0.3090, Plg87.0000°, Azm299.0000°; P -2.7010, Plg1.0000°, Azm56.0000°; nsta1 refers to body waves,*

cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

SZGRF ***04*** *11:26:13.0, 3348N×3860W, h33km, mb4.6, MS5.0, Northern Mid-Atlantic Ridge*

ISC 04 11:26:12.5±0.3**, 3383N**±008×**3858W**±002**, h10**km**, (h11**km±1.6km**:pP-P), n580,** σ1§39/486**, mb4.8**/150**, MS4.9**/194**, 51C-41D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSR	BB Station	21.91	273	PFAKE		11 31 20.0	+14
BBSR				LR	LR		
	comp=Z,882nm,21.0s,MS4.2						
MORF	Marmelete	24.54	73	eP	P	11 31 34.0	+1.7
PBDV	Barranco-do-Ve	25.12	73	eP	P	11 31 39.6	+2.1
PVAQ	Vaqueiros	25.28	73	eP	P	11 31 41.0	+1.9
PESTR	Estremoz	25.39	70	eP	P	11 31 41.4	+1.4
PBAR	Barrancos	25.81	71	eP	P	11 31 45.4	+1.6
WES	Weston	27.01	298	PFAKE		11 32 10.0	+15
WES				LR	LR		
	comp=Z,2µm,21.0s,MS4.6						
HRV	Harvard--Oak R	27.20	298	PFAKE		11 32 10.0	+14
HRV				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
LBNH	Lisbon	27.74	302	PFAKE		11 32 10.0	+8.9
LBNH				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
PAB	San Pablo	27.93	68	PFAKE		11 32 10.0	+7.1
PAB				LR	LR		
	comp=Z,1µm,20.0s,MS4.5						
BBGH	Gun Hill	28.07	228	PFAKE		11 32 20.0	+16
BBGH				LR	LR		
	comp=Z,3µm,21.0s,MS4.9						
ESDC	Sonseca Array	28.23	68	P	P	11 32 04.6	-0.9
	comp=Z,0.5nm,0.5s,mb3.4,baz=269,slow=10.0,SNR=4.5						
ESDC				LR	LR	11 40 10.0	
	comp=Z,1µm,20.8s,MS4.4,baz=205,slow=30						
ESLA	Sonseca Array	28.23	68	PFAKE		11 32 20.0	+14
ESLA				LR	LR		
	comp=Z,12µm,22.0s,MS5.4						
MDT	Midelt	28.33	82	P	P	11 32 06.0	-0.6
MDT				LR	LR	11 41 29.6	
MDT	Midelt	28.33	82	P	P	11 32 06.0	-0.6
	comp=Z,0.8nm,0.8s,mb3.4,baz=260,slow=7.5,SNR=3.8						
MDT				LR	LR	11 41 29.6	
	comp=Z,1µm,18.3s,MS4.5,baz=286,slow=32						
MDT	Midelt	28.33	82	P	P	11 32 05.9	-0.6
SCHQ	Schefferville	28.81	325	P	P	11 32 08.1	-2.5
SCHQ				LR	LR	11 43 12.2	
SCHQ	Schefferville	28.81	325	P	P	11 32 08.1	-2.5
	comp=Z,4.5nm,1.0s,mb4.2,baz=110,slow=11,SNR=6.1						
SCHQ				LR	LR	11 43 12.2	
	comp=Z,1µm,18.5s,MS4.6,baz=131,slow=36						
SJG	San Juan	29.19	244	PFAKE		11 32 30.0	+16
SJG				LR	LR		
	comp=Z,988nm,21.0s,MS4.4						
SJG	San Juan	29.19	244	LR	LR	11 39 43.1	
	comp=Z,567nm,21.2s,MS4.2,baz=61,slow=28						
NCB	Newcomb	29.33	301	PFAKE		11 32 30.0	+15
NCB				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
LONY	Lake Ozonia	29.68	302	PFAKE		11 32 30.0	+12
LONY				LR	LR		
	comp=Z,2µm,22.0s,MS4.7						
SJPF	Ste Jean	30.47	61	eP	P	11 32 23.8	-1.6
	comp=Z,40nm,1.1s,mb4.8						
SJPF	Ste Jean	30.47	61	eP	P	11 32 23.8	-1.6
SJPF				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
SJPF	Ste Jean	30.47	61	eP	P	11 32 23.8	-1.6
	comp=Z,20nm,1.1s,mb4.8						
ETSF	Etsaut	30.94	62	eP	P	11 32 27.7	-1.8
	comp=Z,25nm,1.1s,mb4.7						
ETSF	Etsaut	30.94	62	eP	P	11 32 27.7	-1.8
ETSF				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
ETSF	Etsaut	30.94	62	eP	P	11 32 27.7	-1.8
	comp=Z,12nm,1.1s,mb4.7						
CBN	Corbin	31.52	289	PFAKE		11 32 50.0	+15
CBN				LR	LR		
	comp=Z,931nm,21.0s,MS4.4						
GRR	Gorron	31.57	51	eP	P	11 32 33.5	-1.5
	comp=Z,124nm,1.4s,mb5.2						
GRR	Gorron	31.57	51	eP	P	11 32 33.5	-1.5
GRR				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.2						
GRR	Gorron	31.57	51	eP	P	11 32 33.5	-1.5
	comp=Z,62nm,1.4s,mb5.2						
EPF	Esparros	31.60	62	eP	P	11 32 35.2	-0.2
	comp=Z,82nm,1.5s,mb5.0						
EPF	Esparros	31.60	62	eP	P	11 32 35.2	-0.2
EPF				pmax	pmax		
	comp=Z,41nm,1.5s,mb5.0						
EPF	Esparros	31.60	62	eP	P	11 32 35.2	-0.2
	comp=Z,41nm,1.5s,mb5.0						
SSPA	Standing Stone	31.83	294	PFAKE		11 32 50.0	+13
SSPA				LR	LR		
	comp=Z,758nm,22.0s,MS4.3						
LFF	La Frestale	32.06	58	eP	P	11 32 37.6	-1.8
	comp=Z,257nm,1.8s,mb5.5						
LFF	La Frestale	32.06	58	eP	P	11 32 37.6	-1.8
LFF				pmax	pmax		
	comp=Z,128nm,1.8s,mb5.5						
LFF	La Frestale	32.06	58	eP	P	11 32 37.6	-1.8
	comp=Z,128nm,1.8s,mb5.5						
LDF	La Druitiere	32.09	51	eP	P	11 32 38.7	-0.9
CNNC	Cliffs of the	32.27	284	PFAKE		11 32 50.0	+8.6
CNNC				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
ESK	Eskdalemuir	32.58	38	PFAKE		11 33 00.0	+16
ESK				LR	LR		
	comp=Z,3µm,19.0s,MS5.1						
EKA	Eskdalemuir Ar	32.61	38	P	P	11 32 42.7	-1.3
	comp=Z,1.1nm,0.8s,mb3.9,baz=262,slow=4.9,SNR=2.8						
RJF	Les Rejaudoux	32.65	57	eP	P	11 32 42.8	-1.7
RJF				eMLR	MLR		
	comp=Z,2µm,22.0s,MS4.5						
RJF	Les Rejaudoux	32.65	57	eP	P	11 32 42.8	-1.7
RJF				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.8						
SDDR	Presa de Saban	32.65	251	PFAKE		11 33 00.0	+15
SDDR				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
MTLF	Montolieu	32.99	61	eP	P	11 32 45.6	-2.0
	comp=Z,63nm,1.5s,mb5.0						
MTLF	Montolieu	32.99	61	eP	P	11 32 45.6	-2.0
MTLF				pmax	pmax		
	comp=Z,31nm,1.5s,mb5.0						
MTLF	Montolieu	32.99	61	eP	P	11 32 45.6	-2.0
	comp=Z,31nm,1.5s,mb5.0						
CAF	Calviac	32.99	58	eP	P	11 32 46.3	-1.3
	comp=Z,33nm,1.2s,mb4.9						
CAF	Calviac	32.99	58	eP	P	11 32 46.3	-1.3
CAF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
CAF	Calviac	32.99	58	eP	P	11 32 46.3	-1.3
	comp=Z,17nm,1.2s,mb4.9						
TCF	Toulx Ste Croi	33.25	56	eP	P	11 32 47.7	-2.1
	comp=Z,50nm,1.0s,mb5.1						
TCF	Toulx Ste Croi	33.25	56	eP	P	11 32 47.7	-2.1
TCF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
TCF	Toulx Ste Croi	33.25	56	eP	P	11 32 47.7	-2.1
	comp=Z,25nm,1.0s,mb5.1						
ERPA	Erie	33.41	297	PFAKE		11 33 00.0	+8.8
ERPA				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
BGF	Bois d'Agland	33.72	55	eP	P	11 32 52.6	-1.3
SFJD	Kangerlussuaq	33.95	352	PFAKE		11 33 10.0	+14
SFJD				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
SFJD	Kangerlussuaq	33.95	352	LR	LR	11 42 38.6	
	comp=Z,2µm,19.9s,MS4.9,baz=151,slow=29						
BLA	Blacksburg	34.02	288	PFAKE		11 33 10.0	+13
BLA				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
AVF	Avril sur Loir	34.09	55	eP	P	11 32 55.8	-1.3
LASF	Ste Croix	34.22	60	eP	P	11 32 56.4	-1.8
	comp=Z,58nm,1.4s,mb5.0						
LASF	Ste Croix	34.22	60	eP	P	11 32 56.4	-1.8
	comp=Z,29nm,1.4s,mb5.0						
SSF	Saint Saulge	34.23	55	eP	P	11 32 56.3	-2.0
	comp=Z,77nm,1.6s,mb5.1						
SSF	Saint Saulge	34.23	55	eP	P	11 32 56.3	-2.0
SSF				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
SSF	Saint Saulge	34.23	55	eP	P	11 32 56.3	-2.0
	comp=Z,38nm,1.6s,mb5.1						
SMF	Signal de Mont	34.41	55	eP	P	11 32 58.1	-1.8
	comp=Z,50nm,1.3s,mb5.0						
SMF	Signal de Mont	34.41	55	eP	P	11 32 58.1	-1.8
SMF				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
SMF	Signal de Mont	34.41	55	eP	P	11 32 58.1	-1.8
	comp=Z,25nm,1.3s,mb5.0						
LOR	Lormes	34.50	54	eP	P	11 32 58.9	-1.7
	comp=Z,58nm,1.4s,mb5.0						
LOR				eMLR	MLR		
	comp=Z,2µm,19.5s,MS4.5						
LOR	Lormes	34.50	54	eP	P	11 32 58.9	-1.7
	comp=Z,29nm,1.4s,mb5.0						
LOR				LR	LR		
	comp=Z,2µm,19.5s,MS4.8						
LOR	Lormes	34.50	54	eP	P	11 32 58.9	-1.7
LOR				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
LOR				MLR	MLR		
	comp=Z,2µm,19.5s,MS4.8						
NHSC	New Hope	34.54	281	PFAKE		11 33 10.0	+8.8
NHSC				LR	LR		
	comp=Z,1µm,20.0s,MS4.6						
VIVF	Saint-Julien-l	34.84	59	eP	P	11 33 01.5	-2.1
	comp=Z,78nm,1.6s,mb5.1						
VIVF	Saint-Julien-l	34.84	59	eP	P	11 33 01.5	-2.1
VIVF				pmax	pmax		
	comp=Z,39nm,1.6s,mb5.1						
VIVF	Saint-Julien-l	34.84	59	eP	P	11 33 01.5	-2.1
	comp=Z,39nm,1.6s,mb5.1						
BAIF	Baives	35.17	49	eP	P	11 33 04.6	-1.8
	comp=Z,79nm,1.3s,mb5.2						
BAIF	Baives	35.17	49	eP	P	11 33 04.6	-1.8
BAIF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
BAIF	Baives	35.17	49	eP	P	11 33 04.6	-1.8
	comp=Z,40nm,1.3s,mb5.2						
SNF	Seneffe	35.31	49	P	P	11 33 10.3	+2.8
	comp=Z,32nm,2.0s,mb4.9						
UCC	Uccle	35.41	48	P	P	11 33 10.0	+1.5
DOU	Dourbes	35.42	49	P	P	11 33 11.3	+2.7
	comp=Z,15nm,2.0s,mb4.6						
SMRF	Simiane la Rot	35.45	60	eP	P	11 33 06.3	-2.6
	comp=Z,90nm,1.6s,mb5.1						
SMRF	Simiane la Rot	35.45	60	eP	P	11 33 06.3	-2.6
	comp=Z,45nm,1.6s,mb5.1						
MEZF	Maizieres J'vi	35.46	52	eP	P	11 33 07.2	-1.7
	comp=Z,59nm,1.0s,mb5.2						
MEZF	Maizieres J'vi	35.46	52	eP	P	11 33 07.2	-1.7
	comp=Z,30nm,1.0s,mb5.2						
GIVF	Givet	35.57	50	eP	P	11 33 07.8	-2.0
ORIF	Oris-en-Rattie	35.70	59	eP	P	11 33 09.1	-1.9
ORIF				eMLR	MLR		
	comp=Z,2µm,20.8s,MS4.5						
ACSO	Alum Creek Sta	35.73	293	PFAKE		11 33 20.0	+8.7
ACSO				LR	LR		
	comp=Z,874nm,22.0s,MS4.5						
BCLA	Clavier	35.93	49	P	P	11 33 16.9	+4.0
	comp=Z,15nm,1.6s,mb4.7						
CABF	La Chapelle	35.95	56	eP	P	11 33 11.1	-2.0
	comp=Z,196nm,1.6s,mb5.5						
CABF	La Chapelle	35.95	56	eP	P	11 33 11.1	-2.0
CABF				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.5						
CABF	La Chapelle	35.95	56	eP	P	11 33 11.1	-2.0
	comp=Z,98nm,1.6s,mb5.5						
LMR	La Mourre	36.12	61	eP	P	11 33 12.6	-2.1
AAM	Ann Arbor	36.13	297	PFAKE		11 33 30.0	+15
AAM				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
FRF	La Foret Royal	36.22	61	eP	P	11 33 12.4	-3.1
	comp=Z,51nm,1.4s,mb5.0						
FRF	La Foret Royal	36.22	61	eP	P	11 33 12.4	-3.1
FRF				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
FRF	La Foret Royal	36.22	61	eP	P	11 33 12.4	-3.1
	comp=Z,26nm,1.4s,mb5.0						
BEBN	Eben Emael	36.23	49	P	P	11 33 18.4	+2.9
HAU	Haudompre	36.26	53	eP	P	11 33 14.6	-1.1
HAU				eMLR	MLR		
	comp=Z,2µm,19.2s,MS4.7						
HAU	Haudompre	36.26	53	eP	P	11 33 14.6	-1.1
HAU				MLR	MLR		
	comp=Z,2µm,19.3s,MS5.0						
MBDF	Montbardon	36.33	59	eP	P	11 33 14.3	-2.1
LPG	La Plagne	36.34	58	eP	P	11 33 14.8	-1.7
WLF	Walferdange	36.34	51	P	P	11 33 15.4	-1.1
	comp=Z,22nm,1.8s,mb4.8						
MEM	Membach	36.41	49	P	P	11 33 23.8	+6.8
HINF	Hinteralfeld	36.57	54	eP	P	11 33 15.5	-3.0
TZTN	Tazewell	36.60	287	PFAKE		11 33 30.0	+11
TZTN				LR	LR		
	comp=Z,931nm,22.0s,MS4.5						
GLMI	Grayling	36.82	301	PFAKE		11 33 30.0	+9.4
GLMI				LR	LR		
	comp=Z,811nm,20.0s,MS4.5						
CDF	Champ du Feu	36.92	53	eP	P	11 33 20.3	-1.1
	comp=Z,84nm,1.5s,mb5.1						
CDF	Champ du Feu	36.92	53	eP	P	11 33 20.3	-1.1
CDF				pmax	pmax		
	comp=Z,42nm,1.5s,mb5.0						
CDF	Champ du Feu	36.92	53	eP	P	11 33 20.3	-1.1
	comp=Z,42nm,1.5s,mb5.1						
TKL	Tuckaleechee C	36.94	286	P	P	11 33 21.0	-0.7
	comp=Z,4.0nm,0.8s,mb4.3,baz=94,slow=18,SNR=4.4						
TKL				LR	LR	11 45 09.6	
	comp=Z,1µm,19.9s,MS4.8,baz=90,slow=31						
DWPF	Disney	36.98	273	PFAKE		11 33 30.0	+7.8
DWPF				LR	LR		
	comp=Z,803nm,21.0s,MS4.5						
GOGA	Godfrey	37.16	282	PFAKE		11 33 40.0	+16
GOGA				LR	LR		
	comp=Z,966nm,20.0s,MS4.6						
BFO	Black Forest	37.61	53	eP	P	11 33 29.9	+2.6
	comp=Z,59nm,1.5s,mb5.1						
BFO				LR	LR		
	comp=Z,2µm,21.0s,MS4.8						
BFO	Black Forest	37.61	53	eP	P	11 33 29.9	+2.7
BFO				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.1						
BFO				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.8						
VAI	Varese	37.77	57	P	P	11 33 28.3	-0.3
VAI				pmax	pmax		
	comp=Z,70nm,1.5s,mb5.2						
VAI	Varese	37.77	57	P	P	11 33 28.3	-0.3
	comp=Z,70nm,1.5s,mb5.2						
WCI	Wyandotte Cave	38.50	291	PFAKE		11 33 50.0	+15
WCI				LR	LR		
	comp=Z,912nm,19.0s,MS4.6						
SDV	Santo Domingo	38.54	237	eP	P	11 33 34.8	-0.7
	comp=Z,34nm,1.2s,mb5.0						
SDV	Santo Domingo	38.54	237	P	P	11 33 35.3	-0.1
	comp=Z,13nm,0.8s,mb4.7,baz=45,slow=5.0,SNR=7.6						
SDV				LR	LR	11 46 26.4	
	comp=Z,460nm,19.4s,MS4.3,baz=239,slow=32						
SDV	Santo Domingo	38.54	237	eP	P	11 33 34.8	-0.6
	comp=Z,34nm,1.2s,mb5.0						
DAVOX	Davos/Dischmat	38.56	56	P	P	11 33 36.8	+1.5
	comp=Z,5.6nm,0.9s,mb4.3,baz=310,slow=14,SNR=5.0						
DAVOX				LR	LR	11 46 39.1	
	comp=Z,2µm,19.3s,MS4.8,baz=259,slow=32						
SWET	Sewanee	38.75	286	eP	P	11 33 37.0	0.0
SWET	Sewanee	38.75	286	eP	P	11 33 37.0	0.0
BRMO	Bormio	38.90	56	P	P	11 33 42.2	+4.1
	comp=Z,9.5nm,0.9s,mb4.5						
KEST	Kesra	39.10	73	P	P	11 33 42.0	+2.0
	comp=Z,2.0nm,1.0s,mb3.8,baz=246,slow=7.2,SNR=3.4						
KEST				LR	LR	11 46 57.7	
	comp=Z,272nm,21.6s,MS4.0,baz=76,slow=32						
SQTA	Sankt Quirin	39.48	55⇑	iP	P	11 33 42.2	-0.8
	comp=Z,60nm,1.5s,mb5.1						
SQTA	Sankt Quirin	39.48	55⇑	iP	P	11 33 42.3	-0.7
SQTA				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.1						
MUD	Monsted U'grnd	39.50	40	iP	P	11 33 50.2	+7.2
	comp=Z,12nm,1.1s,mb4.5						
MUD				iS	S	11 39 55.2	+10
MUD				i		11 42 49.6	
MUD							
	comp=Z,1µm,19.0s						
RCBR	Riachuelo	39.52	176	PFAKE		11 33 50.0	+6.4
RCBR				LR	LR		
	comp=Z,1µm,21.0s,MS4.8						
GRFO	Grafenberg	39.62	51	PFAKE		11 33 50.0	+5.9
GRFO				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
GRA1	Grafenberg Arr	39.62	51	eP	P	11 33 42.9	-1.2
	comp=Z,21nm,1.3s,mb4.7						
GRA1				ePP	PP	11 35 17.3	+2.4
GRA1				eS	S	11 39 51.5	+4.6
GRA1				LR	LR		
	comp=Z,2µm,20.6s,MS5.0						
GRF	Grafenberg Arr	39.62	51	eP	P	11 33 42.9	-1.2
GRF				e		11 35 17.3	
GRF				eS	S	11 39 51.5	+4.6
GRF				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.7						
GRF				MLR	MLR		
	comp=Z,2µm,20.6s,MS5.0						
GRF	Grafenberg Arr	39.62	51	eP	P	11 33 42.9	-1.2
	comp=Z,21nm,1.3s,mb4.7						
GRF				ePP	PP	11 35 17.3	+2.4
GRF				eS	S	11 39 51.5	+4.6
GRF				eL		11 46 47.7	
	comp=Z,2µm,20.6s						
WTTA	Wattenberg	39.78	55⇓	iP	P	11 33 43.4	-2.0
	comp=Z,23nm,1.2s,mb4.8						
WTTA	Wattenberg	39.78	55⇓	iP	P	11 33 43.4	-2.1
WTTA				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.8						
CTI	Castel Tesino	39.78	57	P	P	11 33 44.3	-1.2
CTI				pmax	pmax		
	comp=Z,55nm,1.6s,mb5.0						
CTI	Castel Tesino	39.78	57	P	P	11 33 44.3	-1.2
	comp=Z,55nm,1.6s,mb5.0						
MOX	Moxa	39.95	50	eP	P	11 33 48.4	+1.6
	comp=Z,17nm,1.6s,mb4.5						
MOX							
	comp=Z,2µm,23.0s						
MOX	Moxa	39.95	50	eP	P	11 33 48.4	+1.6
MOX				pmax	pmax		
	comp=Z,17nm,1.6s,mb4.5						
MOX				MLR	MLR		
	comp=Z,2µm,23.0s,MS5.0						
LRAL	Lakeview Retre	40.12	283	PFAKE		11 34 00.0	+12
LRAL				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
ABTA	Abfaltersbach	40.37	56⇑	iP	P	11 33 49.2	-1.2
	comp=Z,24nm,1.2s,mb4.8						
NKC	Novy Kostel	40.45	50	eP	P	11 33 49.8	-1.2
NKC				eS	S	11 40 06.0	+6.7
NKC	Novy Kostel	40.45	50	eP	P	11 33 49.8	-1.2
NKC				eS	S	11 40 06.0	+6.7
NKC				AMS	AMS	11 47 50.0	
	comp=Z,3µm,19.4s						
PLAL	Pickwick Lake	40.52	286	PFAKE		11 34 00.0	+8.2
PLAL				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
FVI	Forni Avoltri	40.56	56	P	P	11 33 54.5	+2.6
KONO	Kongsberg	40.60	36	PFAKE		11 34 00.0	+7.9
KONO				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
BRAL	Brewton	40.72	280	PFAKE		11 34 10.0	+16
BRAL				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
SNTG	Esanatoglia	40.82	61	P	P	11 33 52.8	-1.3
	comp=Z,29nm,0.8s,mb5.0						
SIUC	Southern Illin	40.87	290	eP	P	11 33 55.5	+0.9
	comp=Z,12nm,0.8s,mb4.6						
SIUC	Southern Illin	40.87	290	eP	P	11 33 55.5	+0.9
	comp=Z,12nm,0.8s,mb4.6						
CLL	Collm	40.88	49	iP	P	11 33 54.4	-0.1
	comp=Z,26nm,1.5s,mb4.6						
CLL				e		11 34 20.0	
CLL				eS	S	11 40 08.0	+2.2
CLL				LR	LR		
	comp=Z,2µm,24.6s,MS5.0						
CLL	Collm	40.88	49	iP	P	11 33 54.4	-0.1
CLL				eS	S	11 40 08.0	+2.2
CLL				pmax	pmax		
	comp=Z,26nm,1.5s,mb4.6						
CLL				MLR	MLR		
	comp=Z,2µm,24.6s,MS5.0						
CLL	Collm	40.88	49	iP	P	11 33 54.4	-0.1
CLL				epP	pP	11 33 57.0	-0.7
CLL				isP	sP	11 33 58.5	-0.4
	comp=Z,26nm,1.5s						
CLL				ex	x	11 34 20.0	
CLL				eS	S	11 40 08.0	+2.2
	comp=N,500nm,20.6s						
CLL				eS	S	11 40 08.0	+2.2
	comp=E,1µm,23.6s						
CLL				ex	x	11 40 36.0	
CLL				eSS	SS	11 43 18.0	+11
JFWS	Jewell Farm	40.95	298	PFAKE		11 34 10.0	+15
JFWS				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
PTCC	Patocco-Chiusa	40.96	56	P	P	11 33 57.0	+1.8
NRCA	Norcia	40.98	62	P	P	11 33 51.2	-4.3
	comp=Z,11nm,1.0s,mb4.4						
KHC	Kasperske Hory	41.12	52⇑	eP	P	11 33 58.0	+1.4
KHC	Kasperske Hory	41.12	52	eP	P	11 33 56.3	-0.3
KHC				e		11 34 05.5	
KHC				eS	S	11 40 11.0	+1.5
KHC				MLR	MLR		
	comp=Z,2µm,20.8s,MS4.8						
KHC	Kasperske Hory	41.12	52	eP	P	11 33 56.3	-0.3
KHC				ex	x	11 34 05.5	
KHC				eS	S	11 40 11.0	+1.5
KHC				AMS	AMS	11 47 30.0	
	comp=Z,2µm,20.8s						
TIC	Toumodi	41.17	123	eP	P	11 33 52.9	-4.4
	comp=Z,32nm,1.0s,mb4.9						
GERES	GERESS Array B	41.20	53	P	P	11 33 56.8	-0.3
	comp=Z,1.4nm,0.7s,mb3.7,baz=264,slow=7.6,SNR=10						
GERES				LR	LR	11 48 04.1	
	comp=Z,1µm,18.5s,MS4.8,baz=256,slow=32						
AQU	L'Aquila	41.24	62	eP	P	11 34 00.6	+3.0
	comp=Z,39nm,1.0s,mb5.0						
AQU	L'Aquila	41.24	62	eP	P	11 34 00.6	+3.0
AQU				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.0						
PTQR	Pietraquaria	41.27	63	P	P	11 33 56.2	-1.7
VOY	Vojsko	41.34	57	eP	P	11 34 02.7	+4.3
BRG	Berggiesshubel	41.44	49	eP	P	11 33 59.2	0.0
	comp=Z,5.3nm,1.1s,mb4.1						
LIC	Lamto	41.46	124	eP	P	11 33 54.1	-5.7
	comp=Z,35nm,1.0s,mb4.6						
LIC				eMLR	MLR		
	comp=Z,3µm,21.5s,MS4.8						
LIC	Lamto	41.46	124	eP	P	11 33 55.3	-4.5
	comp=Z,45nm,1.0s,mb5.0						
LIC	Lamto	41.46	124	eP	P	11 33 54.1	-5.7
	comp=Z,18nm,1.0s,mb4.7						
LIC				LR	LR		
	comp=Z,2µm,21.5s,MS4.8						
JAVS	Javornik	41.47	57	eP	P	11 33 59.4	0.0
RUE	Ruedersdorf	41.47	47	eP	P	11 34 01.0	+1.7
	comp=Z,56nm,1.5s,mb5.0						
KIC	Kosan Boka	41.56	123	eP	P	11 33 56.7	-3.9
	comp=Z,88nm,1.1s,mb5.3						
NAO01	NORSAR Array S	41.58	34	eP	P	11 34 01.1	+0.9
	comp=Z,10nm,1.0s,mb4.4						
NAO01	NORSAR Array S	41.58	34	eP	P	11 34 01.1	+1.0
	comp=Z,10nm,1.0s,mb4.4						
EYMN	Ely	41.61	306	PFAKE		11 34 10.0	+9.4
EYMN				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
OXF	Oxford	41.69	286	PFAKE		11 34 10.0	+8.5
OXF				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
FVM	French Village	41.76	291	eP	P	11 34 01.9	0.0
	comp=Z,13nm,1.0s,mb4.5						
FVM	French Village	41.76	291	eP	P	11 34 01.9	0.0
FVM				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
FVM	French Village	41.76	291	eP	P	11 34 01.9	0.0
	comp=Z,13nm,1.0s,mb4.5						
PRU	Pruhonice	41.78	51	eP	P	11 34 01.6	-0.4
PRU				eS	S	11 40 24.1	+4.9
PRU				AMS	AMS	11 48 00.0	
	comp=Z,2µm,16.6s						
NB2	NORSAR Subarra	41.79	34	P	P	11 34 01.4	-0.4
	comp=Z,11nm,0.9s,mb4.5,baz=251,slow=8.6						
NB2	NORSAR Subarra	41.79	34	P	P	11 34 01.4	-0.4
NB2				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
NOA	NORSAR Array B	41.79	34	P	P	11 34 02.6	+0.7
	comp=Z,5.5nm,0.9s,mb4.2,baz=253,slow=8.6,SNR=7.1						

NOA LR LR 11 48 30.4
comp=Z,896nm,19.8s,MS4.7,baz=245,slow=32
PVCC Panska Ves 41.82 50 *e*P **P** **11 34 06.1 +3.8**
PVCC *e*S **S** **11 40 25.4 +5.7**
PVCC AMS AMS 11 48 20.0
comp=Z,3µm,18.9s
TORD Torodi Ar. Bea 41.93 110 P **P** **11 34 00.1 -3.5**
comp=Z,6.9nm,1.1s,mb4.2,baz=302,slow=5.5,SNR=22
TORD LR LR 11 49 34.9
comp=Z,2µm,18.1s,MS5.0,baz=260,slow=33
VISS Visnje 42.01 57 *i* P **P** **11 34 02.7 -1.1**
BOJS Bojanci 42.31 57 *e*P **P** **11 34 08.7 +2.4**
TREC Trest 42.38 52 *e*P **P** **11 34 09.3 +2.5**
TREC *e*S **S** **11 40 30.8 +2.8**
BSD Bornholm Skovb 42.43 43 *e*P **P** **11 34 10.9 +3.7**
BSD *e*S **S** **11 40 35.8 +7.1**
BSD pmax pmax
comp=Z,28nm,1.1s,mb4.8
BSD MLR MLR
comp=Z,1µm,19.0s,MS4.8
BSD Bornholm Skovb 42.43 43 *i* P **P** **11 34 10.9 +3.7**
comp=Z,28nm,1.1s,mb4.8
BSD *e*S **S** **11 40 35.8 +7.1**
BSD *i* 11 43 45.2
BSD
comp=Z,1µm,19.0s
HFS Hagfors 42.72 36 P **P** **11 34 08.2 -1.3**
comp=Z,2.0nm,0.8s,mb3.9,baz=243,slow=6.3,SNR=3.2
HFS LR LR 11 48 26.5
comp=Z,1µm,21.9s,MS4.8,baz=246,slow=31
UPC Upice 42.74 50 *e*P **P** **11 34 08.6 -1.2**
VAE Valguarnera 42.75 69 LR LR 11 49 07.8
comp=Z,1µm,18.7s,MS4.9,baz=100,slow=32
SGO Sicignano 42.88 65 P **P** **11 34 10.7 -0.4**
KSP Ksiaz 42.93 50 *e*P **P** **11 34 14.0 +2.7**
KSP *e*S **S** **11 40 38.5 +2.4**
KSP *e*SS SS 11 43 53.0 +5.6
KSP LR LR
comp=Z,6µm,24.0s,MS5.4
KSP Ksiaz 42.93 50 *e*P **P** **11 34 14.0 +2.7**
KSP *e*S **S** **11 40 38.5 +2.4**
DPC Dobruska-Polom 42.94 50 *e*P **P** **11 34 10.2 -1.1**
DPC *e*S **S** **11 40 42.3 +6.1**
DPC AMS AMS 11 49 20.0
comp=Z,2µm,18.1s
VRAC Vranov 43.10 52 P **P** **11 34 12.6 -0.1**
comp=Z,1.0nm,0.4s,mb3.9,baz=265,slow=11,SNR=2.6
VRAC LR LR 11 49 12.5
comp=Z,922nm,18.8s,MS4.7,baz=251,slow=32
SOP Sopron 43.11 54 ⇓*e*pP pP 11 34 16.8 +0.9
ZST Bratislava 43.46 53 *e*P **P** **11 34 15.0 -0.6**
comp=Z,167nm,2.7s,mb5.3
ZST LR LR
comp=Z,700nm,18.6s,MS4.6
GKP Gorka Klasztor 43.62 46 *e*P **P** **11 34 17.5 +0.7**
GKP *e*pP pP 11 34 19.9 -0.1
GKP LMZ 11 48 48.6
comp=Z,2µm,23.4s
GKP Gorka Klasztor 43.62 46 *e*P **P** **11 34 17.5 +0.7**
GKP *e*pP pP 11 34 19.9 0.0
GKP LR LR
comp=Z,2µm,23.4s,MS5.0
GKP Gorka Klasztor 43.62 46 *e*P **P** **11 34 17.5 +0.7**
GKP *e**PP pP 11 34 19.9 0.0
MORC Moravsky Berou 43.72 51 *e*P **P** **11 34 20.2 +2.6**
comp=Z,106nm,2.7s,mb5.1
MORC Moravsky Berou 43.72 51 *e*P **P** **11 34 20.3 +2.6**
MORC pmax pmax
comp=Z,106nm,2.7s,mb5.1
DAG Danmarks Havn 43.99 6 *e*P **P** **11 34 18.0 -1.5**
DAG Danmarks Havn 43.99 6 *i* P **P** **11 34 18.0 -1.5**
FCC Fort Churchill 44.06 322 *e*P **P** **11 34 19.5 -0.8**
FCC Fort Churchill 44.06 322 *e*P **P** **11 34 19.5 -0.8**
OKC Ostrava-Krasne 44.11 51 *e*P **P** **11 34 19.5 -1.3**
OKC *e*S **S** **11 41 01.5 +8.1**
OKC Ostrava-Krasne 44.11 51 *e*P **P** **11 34 19.5 -1.3**
OKC *e*S **S** **11 41 01.5 +8.1**
OKC AMS AMS 11 50 10.0
comp=Z,1µm,14.6s
ULM Lac du Bonnet 44.47 310 P **P** **11 34 21.4 -2.3**
comp=Z,5.7nm,0.7s,mb4.4,baz=80,slow=7.7,SNR=13
ULM LR LR 11 51 48.9
comp=Z,2µm,20.9s,MS4.9,baz=90,slow=35
AGMN Agassiz Refuge 44.53 307 *e*P **P** **11 34 22.8 -1.3**
comp=Z,9.0nm,0.8s,mb4.7
AGMN LR LR
comp=Z,2µm,19.0s,MS5.0
AGMN Agassiz Refuge 44.53 307 *e*P **P** **11 34 22.8 -1.4**
comp=Z,9.0nm,0.8s,mb4.7
VYHS Vyhne 44.60 53 *e*P **P** **11 34 26.6 +1.8**
comp=Z,32nm,2.1s,mb4.8
VYHS *e* 11 34 51.8
VYHS Vyhne 44.60 53 *e*P **P** **11 34 26.6 +1.8**
VYHS pmax pmax
comp=Z,32nm,2.1s,mb4.8
MIAR Mount Ida 45.01 287 *e*P **P** **11 34 28.5 +0.2**
comp=Z,7.6nm,0.8s,mb4.6
MIAR LR LR
comp=Z,1µm,19.0s,MS4.8
MIAR Mount Ida 45.01 287 *e*P **P** **11 34 28.5 +0.3**
comp=Z,7.6nm,0.8s,mb4.6
OJC Ojcow 45.16 50 *e*P **P** **11 34 28.7 -0.5**
OJC *e*sP sP 11 34 32.4 -1.2
OJC *e*S **S** **11 41 08.0 -0.7**
OJC L 11 50 19.0
comp=Z,2.0nm,20.5s
OJC Ojcow 45.16 50 *e*P **P** **11 34 28.7 -0.5**
OJC *e**SP sP 11 34 32.4 -1.2
OJC *e*S **S** **11 41 08.0 -0.7**
PSZ Piszkesteto 45.34 54 *e*P **P** **11 34 34.0 +3.2**
comp=Z,60nm,1.9s,mb5.1
PSZ Piszkesteto 45.34 54 *e*P **P** **11 34 34.0 +3.3**
PSZ pmax pmax
comp=Z,60nm,1.9s,mb5.1
PSZ Piszkesteto 45.34 54 ⇑*e*pP pP 11 34 33.8 -0.1
ECSD EROS,Sioux Fal 45.48 300 *e*P **P** **11 34 30.6 -1.2**
comp=Z,25nm,1.4s,mb4.9
ECSD LR LR
comp=Z,1µm,19.0s,MS4.8
ECSD EROS,Sioux Fal 45.48 300 *e*P **P** **11 34 30.6 -1.2**
comp=Z,25nm,1.4s,mb4.9
KECS Kecovo 45.70 53 *e*P **P** **11 34 39.4 +5.9**
comp=Z,3.2nm,1.3s,mb4.1
KECS Kecovo 45.70 53 *e*P **P** **11 34 39.4 +5.9**
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
TEIG Tepich 45.89 266 PFAKE 11 34 50.0 +15
TEIG LR LR
comp=Z,1µm,20.0s,MS4.9
WAR Warsaw 45.89 48 *e*P **P** **11 34 35.9 +0.9**
WAR LMZ 11 49 24.9
comp=Z,2µm,28.3s
WAR Warsaw 45.89 48 *e*P **P** **11 34 35.9 +0.9**
WAR LR LR
comp=Z,2µm,28.3s,MS4.9
STHS Stebnicka Huta 46.14 52 *e*P **P** **11 34 40.3 +3.3**
comp=Z,9.3nm,1.3s,mb4.5
STHS *e* 11 34 58.7
STHS Stebnicka Huta 46.14 52 *e*P **P** **11 34 40.3 +3.3**
STHS pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
KSU1 Kansas State U 46.29 294 *e*P **P** **11 34 38.8 +0.5**
comp=Z,16nm,1.1s,mb4.9
KSU1 LR LR
comp=Z,675nm,20.0s,MS4.6
KSU1 Kansas State U 46.29 294 *e*P **P** **11 34 38.8 +0.5**
comp=Z,16nm,1.1s,mb4.9
NATX Nacogdoches 46.69 284 PFAKE 11 34 50.0 +8.4
NATX LR LR
comp=Z,1µm,22.0s,MS4.8
KOLS Kolonicke sedl 46.85 52 *e*P **P** **11 34 45.8 +3.3**
UZH Uzhgorod 46.89 53 *e*P **P** **11 34 44.4 +1.6**
UZH *i* 11 34 51.0
UZH *i* S **S** **11 41 32.4 -1.1**
UZH *i* SP 11 41 43.0
UZH *e*SS SS 11 44 56.0 -3.8
KWP Kalwaria 47.07 51 *e*P **P** **11 34 43.2 -1.1**
KWP *e*pP pP 11 34 47.9 +0.5
KWP LMZ 11 49 24.7
comp=Z,2µm,30.6s
KWP Kalwaria 47.07 51 *e*P **P** **11 34 46.6 +2.3**
comp=Z,21nm,1.0s,mb5.0
KWP *e*pP pP 11 34 47.9 +0.5
KWP Kalwaria 47.07 51 *e*P **P** **11 34 43.2 -1.1**
KWP *e**PP pP 11 34 47.9 +0.5

SUW Suwalki 47.17 45 *e*P **P** **11 34 45.9 +0.9**
SUW *e*pP pP 11 34 47.7 -0.4
SUW LMZ 11 50 59.9
comp=Z,3µm,25.1s
SUW Suwalki 47.17 45 *e*P **P** **11 34 45.9 +0.9**
SUW *e**PP pP 11 34 47.7 -0.4
ASCN Ascension 47.47 147 PFAKE 11 35 00.0 +12
ASCN LR LR
comp=Z,2µm,21.0s,MS5.0
LVV L'vov 47.91 51 *e*P **P** **11 34 53.8 +3.0**
LVV *i* S **S** **11 41 49.4 +1.3**
LVV MLR MLR
comp=Z,300nm,16.0s,MS4.4
FFC Flin Flon 48.12 316 *e*P **P** **11 34 51.5 -0.8**
comp=Z,9.8nm,1.0s,mb4.8
FFC LR LR
comp=Z,2µm,21.0s,MS5.0
FFC Flin Flon 48.12 316 *e*P **P** **11 34 51.5 -0.8**
FFC pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
FFC MLR MLR
comp=Z,2µm,21.0s,MS5.0
FFC Flin Flon 48.12 316 *e*P **P** **11 34 51.5 -0.8**
comp=Z,9.8nm,1.0s,mb4.8
TGUH Tegucigalpa,Un 48.17 258 PFAKE 11 35 10.0 +17
TGUH LR LR
comp=Z,870nm,21.0s,MS4.7
HKT Hockley 48.24 282 PFAKE 11 35 10.0 +16
HKT LR LR
comp=Z,584nm,19.0s,MS4.6
JTS JuntasAbangare 48.43 252 PFAKE 11 35 10.0 +15
JTS LR LR
comp=Z,983nm,20.0s,MS4.8
CBKS Cedar Bluff 48.73 294 *e*P **P** **11 34 59.4 +2.1**
comp=Z,20nm,0.9s,mb5.1
CBKS LR LR
comp=Z,1µm,22.0s,MS4.9
CBKS Cedar Bluff 48.73 294 *e*P **P** **11 34 59.4 +2.1**
CBKS pmax pmax
comp=Z,20nm,0.9s,mb5.2
CBKS MLR MLR
comp=Z,1µm,22.0s,MS4.9
FINES FINESS Array B 48.91 35 P **P** **11 34 56.5 -1.8**
comp=Z,2.2nm,0.9s,mb4.2,baz=264,slow=5.6,SNR=4.2
FINES LR LR 11 53 09.2
comp=Z,1µm,18.2s,MS4.8,baz=34,slow=33
RES Resolute Bay 48.94 343 *e*P **P** **11 34 56.5 -1.9**
comp=Z,215nm,1.0s,mb6.1
RES Resolute Bay 48.94 343 *e*P **P** **11 34 56.5 -1.9**
comp=Z,215nm,1.0s,mb6.1
KAF Kangasniemi 49.06 34 *e*p **P** **11 35 03.3 +3.8**
comp=Z,14nm,0.9s,mb5.0,baz=266,slow=7.8
KAF Kangasniemi 49.06 34 *e*P **P** **11 35 03.3 +3.8**
KAF pmax pmax
comp=Z,14nm,0.9s,mb5.0
WMOK Wichita Mounta 49.08 289 *e*P **P** **11 34 57.9 -2.1**
comp=Z,11nm,1.0s,mb4.8
WMOK LR LR
comp=Z,1µm,19.0s,MS4.9
WMOK Wichita Mounta 49.08 289 *e*P **P** **11 34 57.9 -2.1**
WMOK pmax pmax
comp=Z,11nm,1.0s,mb4.8
WMOK MLR MLR
comp=Z,1µm,19.0s,MS4.9
VSU Vasula 49.14 39 *ce*P **P** **11 35 03.9 +3.7**
ARCES ARCESS Array B 49.71 25 P **P** **11 35 03.5 -0.8**
comp=Z,5.0nm,1.0s,mb4.5,baz=233,slow=8.8,SNR=3.4
ARCES LR LR 11 50 54.2
comp=Z,709nm,21.6s,MS4.6,baz=260,slow=30
KBS Kingsbay 49.76 11 PFAKE 11 35 20.0 +15
KBS LR LR
comp=Z,598nm,20.0s,MS4.6
MNK Minsk 49.88 44 *e*P **P** **11 35 00.0 -5.8**
MNK *e* 11 42 20.0
DGMT Dagmar 50.03 308 *e*P **P** **11 35 08.2 +1.1**
comp=Z,32nm,1.2s,mb5.2
DGMT LR LR
comp=Z,2µm,19.0s,MS5.0
DGMT Dagmar 50.03 308 *e*P **P** **11 35 08.2 +1.1**
comp=Z,32nm,1.2s,mb5.2
RSSD Black Hills 50.69 302 PFAKE 11 35 20.0 +7.8
RSSD LR LR
comp=Z,1µm,20.0s,MS5.0
KVTX Kingsville 50.79 280 PFAKE 11 35 30.0 +17
KVTX LR LR
comp=Z,1µm,19.0s,MS5.0
AKASG Malin Array Be 51.12 49 P **P** **11 35 14.6 -0.7**
comp=Z,13nm,0.9s,mb4.8,baz=273,slow=7.2,SNR=12
AKASG LR LR 11 54 40.3
comp=Z,2µm,20.5s,MS5.0,baz=280,slow=33
JCT Junction City 51.27 284 *e*P **P** **11 35 15.3 -1.5**
comp=Z,12nm,1.0s,mb4.8
JCT LR LR
comp=Z,850nm,20.0s,MS4.8
JCT Junction City 51.27 284 *e*P **P** **11 35 15.3 -1.4**
JCT pmax pmax
comp=Z,12nm,1.0s,mb4.8
JCT MLR MLR
comp=Z,850nm,20.0s,MS4.8
JCT Junction City 51.27 284 *e*P **P** **11 35 15.3 -1.4**
comp=Z,12nm,1.0s,mb4.8
AMTX Amarillo 51.31 290 *e*P **P** **11 35 18.6 +1.6**
comp=Z,21nm,1.0s,mb5.0
AMTX LR LR
comp=Z,1µm,21.0s,MS4.9
AMTX Amarillo 51.31 290 *e*P **P** **11 35 18.6 +1.6**
comp=Z,20nm,1.0s,mb5.0
JOF Joensuu 51.41 33 *e*p **P** **11 35 19.9 +2.6**
comp=Z,17nm,1.0s,mb4.9
JOF Joensuu 51.41 33 *e*P **P** **11 35 19.9 +2.6**
JOF pmax pmax
comp=Z,17nm,1.0s,mb4.9
KIS Kishinev 51.47 54 *e*P **P** **11 35 20.0 +2.1**
KIS LRM 11 53 48.0
comp=Z,600nm,20.0s
LAO LASA Array 51.69 306 *e*P **P** **11 35 20.2 +0.6**
comp=Z,35nm,1.5s,mb5.1
LAO LR LR
comp=Z,2µm,20.0s,MS5.1
LAO LASA Array 51.69 306 *e*P **P** **11 35 20.2 +0.6**
comp=Z,35nm,1.5s,mb5.1
APA Apatity 52.37 27 ⇓*i*P **P** **11 35 30.0 +5.6**
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
ISCO Idaho Springs 52.88 297 *e*P **P** **11 35 27.8 -0.7**
ISCO LR LR
comp=Z,1µm,22.0s,MS4.9
ISCO Idaho Springs 52.88 297 *e*P **P** **11 35 27.8 -0.7**
SDCO Great Sand Dun 53.38 295 *e*P **P** **11 35 35.6 +3.3**
SDCO LR LR
comp=Z,942nm,20.0s,MS4.8
EGMT Eagleton 53.77 308 *e*P **P** **11 35 36.3 +1.4**
comp=Z,18nm,1.0s,mb4.9
EGMT LR LR
comp=Z,2µm,20.0s,MS5.1
EGMT Eagleton 53.77 308 ⇓P **P** **11 35 36.1 +1.2**
baz=53
EGMT Eagleton 53.77 308 *e*P **P** **11 35 36.3 +1.3**
comp=Z,18nm,1.0s,mb4.9
RLMT Red Lodge 54.11 304 PFAKE 11 35 50.0 +13
RLMT LR LR
comp=Z,1µm,19.0s,MS5.0
YKW3 Yellowknife Ar 54.26 326 *e*P **P** **11 35 38.1 -0.2**
YKW3 Yellowknife Ar 54.26 326 *e*P **P** **11 35 38.1 -0.2**
YKA Yellowknife Ar 54.26 326 P **P** **11 35 36.9 -1.4**
YKA LR LR 11 58 03.6
YKA Yellowknife Ar 54.26 326 *i* P **P** **11 35 36.9 -1.4**
YKA pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 54.26 326 P **P** **11 35 36.9 -1.4**
comp=Z,2.9nm,1.0s,mb4.2,baz=84,slow=7.2,SNR=16
YKA LR LR 11 58 03.6
comp=Z,919nm,19.1s,MS4.9,baz=100,slow=35
YKA Yellowknife Ar 54.26 326 P **P** **11 35 36.9 -1.4**
LTX Lajitas 54.81 284 PFAKE 11 36 00.0 +17
LTX LR LR
comp=Z,951nm,20.0s,MS4.9
TXAR Lajitas Array 54.81 284 P **P** **11 35 41.7 -1.2**
TXAR LR LR 11 56 16.5
TXAR Lajitas Array 54.81 284 P **P** **11 35 41.7 -1.2**
comp=Z,0.9nm,0.7s,mb3.9,baz=92,slow=6.4,SNR=4.0
TXAR LR LR 11 56 16.5
comp=Z,810nm,20.7s,MS4.8,baz=30,slow=33
OBN Obninsk 54.82 43 *e*P **P** **11 35 44.6 +2.1**
comp=Z,88nm,1.4s,mb5.6
OBN LR LR
comp=Z,2µm,20.0s,MS5.2
OBN Obninsk 54.82 43 *e*P **P** **11 35 44.3 +1.8**
OBN *i* 11 36 46.4
OBN *e* 11 37 50.4
OBN *i* S **S** **11 43 21.8 -1.4**
OBN *i* SS SS 11 47 05.6 -0.4
OBN pmax pmax
comp=Z,72nm,1.3s,mb5.5
BW06 Boulder Array 54.92 302 *e*P **P** **11 35 43.6 +0.1**
comp=Z,16nm,1.2s,mb4.9
BW06 LR LR
comp=Z,788nm,21.0s,MS4.8
BW06 Boulder Array 54.92 302 *e*P **P** **11 35 43.6 +0.2**
comp=Z,16nm,1.2s,mb4.9
PDAR Pinedale Array 54.92 302 P **P** **11 35 43.2 -0.2**
comp=Z,2.3nm,0.9s,mb4.2,baz=79,slow=7.7,SNR=14
PDAR LR LR 12 00 02.1
comp=Z,521nm,18.9s,MS4.6,baz=85,slow=37
EDM Edmonton 54.95 315 *e*P **P** **11 35 44.5 +1.0**
EDM Edmonton 54.95 315 *e*P **P** **11 35 44.5 +1.0**
ANMO Albuquerque 55.01 292 *e*P **P** **11 35 47.2 +3.0**
comp=Z,8.6nm,1.2s,mb4.7
ANMO LR LR
comp=Z,832nm,19.0s,MS4.8
ANMO Albuquerque 55.01 292 *e*P **P** **11 35 47.2 +3.0**
ANMO pmax pmax
comp=Z,9.0nm,1.2s
ANMO MLR MLR
comp=Z,832nm,19.0s
LKWY Lake 55.03 304 PFAKE 11 36 00.0 +16
LKWY LR LR
comp=Z,2µm,19.0s,MS5.2
MOS Moscow 55.30 42 *e*P **P** **11 35 48.7 +2.7**
MOS *e* 11 35 56.7
MOS *e* 11 37 51.0
MOS pmax pmax
comp=Z,42nm,1.0s,mb5.4
MNTX Cornudas Mount 55.30 288 PFAKE 11 36 00.0 +14
MNTX LR LR
comp=Z,810nm,21.0s,MS4.8
YMR Madison River 55.39 304 *e*P **P** **11 35 47.9 +1.1**
comp=Z,25nm,1.2s,mb5.1
YMR LR LR
comp=Z,1µm,20.0s,MS5.0
YMR Madison River 55.39 304 *e*P **P** **11 35 47.9 +1.1**
comp=Z,25nm,1.2s,mb5.1
BNM Barren Site 55.41 291 *e*P **P** **11 35 48.9 +1.8**
BNM Barren Site 55.41 291 *e*P **P** **11 35 48.9 +1.8**
LOHW Long Hollow 55.43 303 *e*P **P** **11 35 47.6 +0.6**
comp=Z,8.7nm,1.2s,mb4.7
LOHW Long Hollow 55.43 303 *e*P **P** **11 35 47.6 +0.5**
comp=Z,8.7nm,1.2s,mb4.7
MOOW Moose Ponds 55.49 303 *e*P **P** **11 35 49.6 +2.1**
comp=Z,35nm,2.2s,mb5.0
MOOW Moose Ponds 55.49 303 *e*P **P** **11 35 49.6 +2.1**
comp=Z,35nm,2.2s,mb5.0
SIM Simferopol' 55.53 55 *e*P **P** **11 35 51.8 +4.0**
SIM *e*PPP 11 39 15.0
SIM *e*S **S** **11 43 36.0 +3.0**
SIM *e*SS SS 11 47 16.0 -1.5
SIM pmax pmax
comp=Z,137nm,14.0s
PV01 Paradox Valley 55.57 296 *e*P **P** **11 35 49.4 +1.2**
PV01 Paradox Valley 55.57 296 *e*P **P** **11 35 49.4 +1.2**
BOZ Bozeman (W) 55.59 306 *e*P **P** **11 35 48.8 +0.6**
comp=Z,13nm,1.6s,mb4.7
BOZ LR LR
comp=Z,1µm,19.0s,MS5.0
BOZ Bozeman (W) 55.59 306 *e*P **P** **11 35 48.8 +0.6**
BOZ pmax pmax
comp=Z,13nm,1.6s,mb4.7
BOZ MLR MLR
comp=Z,1µm,19.0s,MS5.0
BOZ Bozeman (W) 55.59 306 ⇑P **P** **11 35 48.9 +0.7**
baz=55
BOZ Bozeman (W) 55.59 306 *e*P **P** **11 35 48.8 +0.6**
comp=Z,13nm,1.6s,mb4.7
REDW Red Top Meadow 55.67 303 *e*P **P** **11 35 48.5 -0.4**
comp=Z,29nm,1.4s,mb5.1
REDW Red Top Meadow 55.67 303 *e*P **P** **11 35 48.5 -0.3**
comp=Z,29nm,1.4s,mb5.1
TPAW Teton Pass 55.70 303 *e*P **P** **11 35 50.5 +1.4**
comp=Z,21nm,1.4s,mb5.0
TPAW Teton Pass 55.70 303 *e*P **P** **11 35 50.5 +1.4**
comp=Z,21nm,1.4s,mb5.0
LAZ Ladron 55.72 291 *e*P **P** **11 35 51.3 +2.0**
LAZ Ladron 55.72 291 *e*P **P** **11 35 51.3 +2.0**
MVCO Mesa Verde 55.81 295 *e*P **P** **11 35 52.4 +2.4**
MVCO LR LR
comp=Z,903nm,21.0s,MS4.8
MVCO Mesa Verde 55.81 295 ⇑P **P** **11 35 49.8 -0.1**
baz=55
MVCO Mesa Verde 55.81 295 *e*P **P** **11 35 52.3 +2.3**
D15A Lincoln 55.82 307 ⇑P **P** **11 35 50.2 +0.3**
baz=55,SNR=6.0
AHID Auburn Hatcher 56.01 302 PFAKE 11 36 00.0 +8.7
AHID LR LR
comp=Z,726nm,21.0s,MS4.7
ANTO Ankara 56.05 62 PFAKE 11 36 00.0 +8.4
ANTO LR LR
comp=Z,559nm,21.0s,MS4.6
E15A Deer Lodge 56.06 307 ⇓P **P** **11 35 52.2 +0.6**
baz=56,SNR=5.1
F15A Butte 56.12 306 ⇓P **P** **11 35 52.4 +0.4**
baz=56
G15A Dillon 56.30 305 ⇓P **P** **11 35 53.4 +0.1**
baz=56
DLMT Dillon 56.32 305 *e*P **P** **11 35 53.3 -0.1**
comp=Z,32nm,1.3s,mb5.2
DLMT Dillon 56.32 305 *e*P **P** **11 35 53.3 -0.1**
comp=Z,32nm,1.3s,mb5.2
CHMT Chamberlain Mo 56.34 307 *e*P **P** **11 35 53.6 +0.1**
CHMT Chamberlain Mo 56.34 307 *e*P **P** **11 35 53.6 0.0**
C14A Swan Lake 56.44 309 ⇑P **P** **11 35 52.0 -2.3**
baz=56
D14A Greenough 56.46 308 ⇑P **P** **11 35 52.6 -1.8**
baz=56
A13A Flathead Natio 56.57 310 ⇓P **P** **11 35 54.4 -0.8**
baz=56
E14A Clinton 56.63 307 ⇑P **P** **11 35 54.5 -1.2**
baz=56
HWUT Hardware Ranch 56.69 301 *e*P **P** **11 35 56.8 +0.7**
comp=Z,28nm,1.8s,mb5.0
HWUT LR LR
comp=Z,763nm,19.0s,MS4.8
HWUT Hardware Ranch 56.69 301 *e*P **P** **11 35 56.8 +0.7**
comp=Z,28nm,1.8s,mb5.0
BRTR Keskin Array B 56.72 61 P **P** **11 35 54.5 -1.9**
comp=Z,5.3nm,1.0s,mb4.5,baz=287,slow=4.9,SNR=16
F14A Wisdom 56.72 306 ⇓P **P** **11 35 56.0 -0.3**
baz=56
B13A Whitefish 56.75 309 ⇑P **P** **11 35 54.7 -1.7**
baz=56
MSO Missoula 56.82 307 *e*P **P** **11 35 57.8 +0.8**
comp=Z,4.6nm,1.1s,mb4.4
MSO LR LR
comp=Z,1µm,22.0s,MS5.0
DAU Daniels Canyon 56.83 299 *e*P **P** **11 35 56.5 -0.6**
DAU Daniels Canyon 56.83 299 *e*P **P** **11 35 56.5 -0.7**
JLU Jordanelle 56.91 300 *e*P **P** **11 35 55.9 -1.8**
JLU Jordanelle 56.91 300 *e*P **P** **11 35 55.9 -1.8**
C13A Hot Springs 57.00 309 ⇑P **P** **11 35 57.2 -1.1**
baz=56
VOR Voronezh 57.08 46 P **P** **11 36 01.0 +2.3**
VOR pmax pmax
comp=Z,60nm,1.4s,mb5.4
D13A Huson 57.09 308 ⇓P **P** **11 35 57.7 -1.1**
baz=57
E13A Victor 57.09 307 ⇓P **P** **11 35 58.5 -0.4**
baz=57
BSMT Bassoo Peak 57.09 309 *e*P **P** **11 35 57.5 -1.4**
BSMT Bassoo Peak 57.09 309 *e*P **P** **11 35 57.5 -1.4**
MPU Maple Canyon 57.23 299 *e*P **P** **11 36 02.4 +2.4**
comp=Z,6.6nm,1.1s,mb4.6
MPU LR LR
comp=Z,1µm,20.0s,MS5.1
MPU Maple Canyon 57.23 299 *e*P **P** **11 36 02.4 +2.4**
comp=Z,6.6nm,1.1s,mb4.6
LPAZ La Paz 57.25 214 P **P** **11 36 01.4 +1.1**
comp=Z,1.0nm,0.5s,mb4.1,baz=34,slow=8.8,SNR=5.6
LPAZ LR LR 11 58 50.4
comp=Z,785nm,21.9s,MS4.8,baz=31,slow=34
G13A Cobalt 57.50 306 ⇓P **P** **11 36 03.2 +1.3**
baz=57
A11A Hall Mountain, 57.80 310 ⇓P **P** **11 36 02.7 -1.2**
baz=57

ANN Anapa 57.83 55 *e*P P 11 36 01.6 -2.6
ANN *e**PP pP 11 36 04.6 -2.8
ANN *e*S S 11 43 58.5 -5.0
ANN pmax pmax
comp=Z,45nm,1.5s,mb5.3
ANN MLR MLR
comp=E,683nm,17.0s
ANN MLR MLR
comp=Z,872nm,17.0s,MS4.9
F12A Elk City 57.99 307 ⇓P P 11 36 06.6 +1.3
baz=58,SNR=9.9
DUG Dugway 58.03 300 *e*P P 11 36 06.5 +0.9
comp=Z,26nm,1.4s,mb5.1
DUG LR LR
comp=Z,942nm,19.0s,MS4.9
DUG Dugway 58.03 300 *e*P P 11 36 06.5 +0.9
DUG pmax pmax
comp=Z,26nm,1.4s,mb5.1
DUG MLR MLR
comp=Z,942nm,19.0s,MS4.9
DUG Dugway 58.03 300 *e*P P 11 36 06.5 +0.9
comp=Z,26nm,1.4s,mb5.1
N14A Grayback Hills 58.08 300 ⇓P P 11 36 06.5 +0.5
baz=58
H12A Diamond D Ranc 58.09 305 ⇓P P 11 36 06.3 +0.3
baz=58,SNR=6.9
HLID Hailey 58.09 304 *e*P P 11 36 06.1 +0.1
comp=Z,13nm,1.7s,mb4.7
HLID LR LR
comp=Z,1µm,19.0s,MS5.1
HLID Hailey 58.09 304 ⇑P P 11 36 06.3 +0.4
baz=58
HLID Hailey 58.09 304 *e*P P 11 36 06.1 +0.1
comp=Z,13nm,1.7s,mb4.7
MVU Marysvale 58.16 298 PFAKE 11 36 20.0 +13
MVU LR LR
comp=Z,1µm,19.0s,MS5.0
NNA Nana 58.32 225 PFAKE 11 36 20.0 +12
NNA LR LR
comp=Z,602nm,20.0s,MS4.7
E11A Bogner Ranch, 58.45 307 ⇑P P 11 36 07.2 -1.3
baz=58,SNR=7.8
NEW Newport 58.48 310 *e*P P 11 36 07.2 -1.5
comp=Z,16nm,0.9s,mb5.0
NEW LR LR
comp=Z,2µm,21.0s,MS5.1
NEW Newport 58.48 310 *e*P P 11 36 07.2 -1.5
NEW pmax pmax
comp=Z,16nm,0.9s
NEW MLR MLR
comp=Z,2µm,21.0s
NEW Newport 58.48 310 *e*P P 11 36 07.2 -1.5
comp=Z,16nm,0.9s,mb5.0
B10A Chitwood Farm, 58.54 310 ⇓P P 11 36 08.7 -0.3
baz=58
A10A Northport 58.55 311 ⇑P P 11 36 08.5 -0.6
baz=58
WUAZ Wupatki 58.58 294 *e*P P 11 36 11.2 +1.7
comp=Z,13nm,1.3s,mb4.8
WUAZ LR LR
comp=Z,536nm,20.0s,MS4.7
WUAZ Wupatki 58.58 294 *e*P P 11 36 11.2 +1.7
comp=Z,13nm,1.3s,mb4.8
J12A Stokes Ranch, 58.66 304 ⇑P P 11 36 11.1 +1.1
baz=58
VRHR Novokhopersk 58.71 47 *e*P P 11 36 12.4 +2.2
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRHR pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,0.5s
K12A Draper Farm, C 58.72 303 ⇓P P 11 36 12.3 +1.9
baz=58
G11A Walters Elk Ra 58.78 306 ⇑P P 11 36 11.1 +0.3
baz=58
H11A Donnelly 58.83 306 ⇑P P 11 36 11.7 +0.6
baz=58,SNR=6.7
D10A Wagner Farm, O 58.94 308 ⇓P P 11 36 10.4 -1.5
baz=58,SNR=7.0
L12A House Creek Ra 58.96 302 ⇓P P 11 36 13.7 +1.6
baz=58
E10A Myers Farm, Un 59.01 308 ⇑P P 11 36 13.8 +1.5
baz=58
B09A Rice 59.09 310 ⇓P P 11 36 11.7 -1.1
baz=59,SNR=10
MFID Camas Ranch 59.11 304 ⇓P P 11 36 14.7 +1.5
baz=59
S14A Cedar City 59.12 297 ⇑P P 11 36 12.7 -0.6
baz=59
A09A Danville 59.20 311 ⇑P P 11 36 13.1 -0.6
baz=59,SNR=6.5
ARUT Antelope Range 59.31 297 *e*P P 11 36 13.1 -1.5
ARUT Antelope Range 59.31 297 *e*P P 11 36 13.1 -1.5
TUC Tucson 59.32 290 PFAKE 11 36 30.0 +15
TUC LR LR
comp=Z,923nm,21.0s,MS4.9
K11A Parker Ranch, 59.46 303 ⇓P P 11 36 15.2 -0.3
baz=59
ELK Elko 59.59 301 PFAKE 11 36 30.0 +14
ELK LR LR
comp=Z,786nm,20.0s,MS4.8
BMO Blue Mountains 59.65 306 *e*P P 11 36 18.4 +1.6
comp=Z,15nm,1.6s,mb4.8
BMO LR LR
comp=Z,1µm,19.0s,MS5.1
BMO Blue Mountains 59.65 306 *e*P P 11 36 18.4 +1.6
BMO pmax pmax
comp=Z,15nm,1.6s,mb4.8
BMO MLR MLR
comp=Z,1µm,19.0s,MS5.1
BMO Blue Mountains 59.65 306 *e*P P 11 36 18.4 +1.6
comp=Z,15nm,1.6s,mb4.8
E09A Wood Farm, Sta 59.68 308 ⇑P P 11 36 17.4 +0.4
baz=59,SNR=5.6
SOC Sochi 59.77 55*d i*P P 11 36 19.4 +1.7
SOC *e* 11 38 28.6
SOC *e*PPP 11 39 52.9
SOC *e*S S 11 44 34.5 +5.7
SOC *e* 11 46 07.8
SOC pmax pmax
comp=Z,25nm,0.9s,mb5.2
SOC MLR MLR
comp=Z,503nm,18.0s,MS4.7
G09A Cove 59.83 307 ⇓P P 11 36 17.8 -0.3
baz=59
C08A Higginbotham F 59.86 310 ⇓P P 11 36 17.7 -0.4
baz=59
B08A Colville Reser 59.86 310 ⇑P P 11 36 17.2 -1.0
baz=59
R12A Pony Springs, 59.98 298 ⇓P P 11 36 18.8 -0.3
baz=60
D08A Wollman Farm, 60.01 309 ⇑P P 11 36 18.8 -0.5
baz=60
E08A Dider Farm, El 60.28 308 ⇑P P 11 36 21.7 +0.6
baz=60,SNR=5.6
A07A Ashnola River, 60.30 311 ⇑P P 11 36 20.2 -1.0
baz=60
J09A Fry Pan Ranch, 60.46 305 ⇓P P 11 36 21.7 -0.7
baz=60
HAWA Hanford 60.62 308 *e*P P 11 36 24.3 +0.8
comp=Z,20nm,1.2s,mb5.1
HAWA LR LR
comp=Z,1µm,22.0s,MS5.0
HAWA Hanford 60.62 308 *e*P P 11 36 24.3 +0.8
comp=Z,20nm,1.2s,mb5.1
H08A Prairie City 60.68 306 ⇑P P 11 36 24.4 +0.5
baz=60
R11A Troy Canyon, C 60.69 299 ⇓P P 11 36 24.9 +0.8
baz=60
MALT Malatya 60.70 62 *e*P P 11 36 24.7 +0.6
comp=Z,33nm,1.3s,mb5.3
MALT Malatya 60.70 62 *e*P P 11 36 24.7 +0.6
MALT pmax pmax
comp=Z,33nm,1.3s,mb5.3
MALT Malatya 60.70 62 *e*P P 11 36 24.7 +0.6
comp=Z,33nm,1.3s,mb5.3
INK Inuvik 60.80 335 *e*P P 11 36 24.0 -0.3
comp=Z,1µm,1.2s
INK Inuvik 60.80 335 P P 11 36 23.3 -1.1
comp=Z,12nm,1.1s,mb4.9,baz=64,slow=8.8,SNR=14
INK Inuvik 60.80 335 *e*P P 11 36 24.0 -0.3
comp=Z,1µm,1.2s
T11A Corn Creek, Al 60.83 297 ⇑P P 11 36 25.1 0.0
baz=60
J08A Circle Bar Ran 60.95 305 ⇑P P 11 36 25.9 +0.2
baz=60,SNR=6.6

BMN Battle Mountai 61.11 301 PFAKE 11 36 40.0 +13
BMN LR LR
comp=Z,647nm,21.0s,MS4.8
K08A Mann Creek Ran 61.17 304 ⇓P P 11 36 27.1 -0.1
baz=61
D06A Cle Elum 61.20 310 ⇑P P 11 36 25.5 -1.9
baz=61
H07A Lands Inn, Kim 61.26 306 ⇓P P 11 36 29.0 +1.2
baz=61,SNR=5.6
L08A Fields 61.27 303 ⇓P P 11 36 28.2 +0.3
baz=61
WVOR Wild Horse Val 61.38 304 *e*P P 11 36 30.4 +1.7
comp=Z,15nm,1.7s,mb4.8
WVOR LR LR
comp=Z,913nm,19.0s,MS5.0
WVOR Wild Horse Val 61.38 304 *e*P P 11 36 30.4 +1.7
WVOR pmax pmax
comp=Z,15nm,1.7s,mb4.8
WVOR MLR MLR
comp=Z,913nm,19.0s,MS5.0
WVOR Wild Horse Val 61.38 304 *e*P P 11 36 30.4 +1.7
comp=Z,15nm,1.7s,mb4.8
E06A Yakima 61.51 309 ⇑P P 11 36 28.9 -0.6
baz=61
S10A Tonopah Range, 61.59 298 ⇓P P 11 36 29.6 -0.6
baz=61
KIV Kislovodsk 61.67 54 PFAKE 11 36 40.0 +9.4
KIV LR LR
comp=Z,571nm,19.0s,MS4.8
KIV Kislovodsk 61.67 54 *e*P P 11 36 32.4 +1.8
KIV *e*S S 11 44 56.1 +3.1
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,399nm,16.0s,MS4.7
TPNV Topopah Spring 61.70 297 *e*P P 11 36 34.9 +4.0
comp=Z,27nm,2.2s,mb5.0
TPNV LR LR
comp=Z,1µm,20.0s,MS5.0
TPNV Topopah Spring 61.70 297 *e*P P 11 36 34.9 +4.0
TPNV pmax pmax
comp=Z,27nm,2.2s,mb5.0
TPNV MLR MLR
comp=Z,1µm,20.0s,MS5.0
K07A Rock Creek Ran 61.71 304 ⇑P P 11 36 31.0 +0.1
baz=61
H06A Lindquist Farm 61.72 307 ⇑P P 11 36 31.3 +0.4
baz=61
R09A Tonopah 61.81 299 ⇓P P 11 36 30.7 -1.0
baz=61
TPH Tonopah 61.99 299 PFAKE 11 36 50.0 +17
TPH LR LR
comp=Z,992nm,19.0s,MS5.0
L07A Adell 62.02 304 ⇑P P 11 36 32.6 -0.4
baz=62
F05A White Salmon 62.05 308 ⇓P P 11 36 32.8 -0.4
baz=62
NVAR Mina Array Bea 62.64 300 P P 11 36 35.8 -1.4
comp=Z,1.2nm,0.8s,mb4.1,baz=76,slow=7.2,SNR=7.8
MOD Modoc 62.73 304 PFAKE 11 36 50.0 +12
MOD LR LR
comp=Z,607nm,19.0s,MS4.8
GSC Goldstone 62.76 296 ⇓P P 11 36 38.2 +0.1
baz=62
K05A Summer Lake 62.83 305 ⇓P P 11 36 37.9 -0.5
baz=62
J05A Fort Rock 62.85 306 ⇑P P 11 36 38.0 -0.5
baz=62
S08C White Mtn Res 62.90 299 ⇓P P 11 36 38.9 -0.1
baz=62
ZEI Tsey 62.92 55 *e*P P 11 36 42.6 +3.6
ZEI *i* pP 11 36 46.5 +4.2
DAC Darwin (Calif) 62.96 297 *e*P P 11 36 39.4 0.0
comp=Z,4.0nm,1.2s,mb4.4
DAC LR LR
comp=Z,871nm,20.0s,MS4.9
DAC Darwin (Calif) 62.96 297 *e*P P 11 36 39.4 0.0
DAC pmax pmax
comp=Z,4.0nm,1.2s,mb4.4
DAC MLR MLR
comp=Z,871nm,20.0s,MS4.9
DAC Darwin (Calif) 62.96 297 *e*P P 11 36 39.4 0.0
comp=Z,4.0nm,1.2s,mb4.4
MPMC Manual Prospec 62.97 297 ⇑P P 11 36 38.6 -0.8
baz=62
NLWA Neilton Lookou 63.06 311 *e*P P 11 36 39.0 -0.8
comp=Z,52nm,1.5s,mb5.4
NLWA LR LR
comp=Z,4µm,20.0s,MS5.6
NLWA Neilton Lookou 63.06 311 *e*P P 11 36 39.0 -0.9
comp=Z,52nm,1.5s,mb5.4
PFO Pinyon Flat Ob 63.18 294 PFAKE 11 36 50.0 +9.1
PFO LR LR
comp=Z,900nm,20.0s,MS4.9
R07C Lee Vining 63.31 299 ⇑P P 11 36 41.0 -0.7
baz=63
ELFS Eagle Lake Fie 63.52 303 ⇑P P 11 36 42.5 -0.5
baz=63
COR Corvallis 63.74 307 PFAKE 11 37 00.0 +16
COR LR LR
comp=Z,1µm,22.0s,MS5.1
HELL Mitchell Peak, 63.85 298 ⇑P P 11 36 44.6 -0.6
baz=63
CMB Columbia Colle 64.30 300 PFAKE 11 37 00.0 +12
CMB LR LR
comp=Z,602nm,20.0s,MS4.8
YBH Yreka Blue Hor 64.46 304 PFAKE 11 37 00.0 +11
YBH LR LR
comp=Z,840nm,19.0s,MS5.0
WRAK Wrangell Islan 64.51 322 PFAKE 11 37 00.0 +11
WRAK LR LR
comp=Z,2µm,21.0s,MS5.4
OHCM Honcut 64.56 302 *e*P P 11 36 50.2 +0.3
OHCM Honcut 64.56 302 *e*P P 11 36 50.2 +0.3
WDC Whiskeytown Da 64.80 303 PFAKE 11 37 00.0 +8.6
WDC LR LR
comp=Z,1µm,20.0s,MS5.0
EGAK Eagle 64.97 333 *e*P P 11 36 51.5 -0.6
comp=Z,11nm,1.1s,mb4.8
EGAK LR LR
comp=Z,1µm,22.0s,MS5.0
EGAK Eagle 64.97 333 *e*P P 11 36 51.5 -0.6
comp=Z,11nm,1.1s,mb4.8
U04C Hernandez Rese 65.28 298 ⇓P P 11 36 53.4 -1.2
baz=65
SAO San Andreas Ge 65.59 299 PFAKE 11 37 10.0 +13
SAO LR LR
comp=Z,1µm,20.0s,MS5.0
SIT Sitka 65.75 323 PFAKE 11 37 10.0 +13
SIT LR LR
comp=Z,3µm,21.0s,MS5.4
HOPS Hopland 65.83 302 PFAKE 11 37 10.0 +12
HOPS LR LR
comp=Z,846nm,20.0s,MS4.9
MCCM Marconi Confer 66.05 301 PFAKE 11 37 10.0 +10
MCCM LR LR
comp=Z,833nm,19.0s,MS5.0
ARU Arti 66.22 37 *e*P P 11 37 03.2 +2.9
comp=Z,21nm,1.1s,mb5.1
ARU LR LR
comp=Z,1µm,19.0s,MS5.1
ARU Arti 66.22 37*c i*P P 11 37 03.2 +2.9
ARU *e* 11 37 31.6
ARU 11 39 23.6
ARU S S 11 45 53.1 +4.0
ARU SS SS 11 50 08.8 +4.5
ARU pmax pmax
comp=Z,26nm,1.7s,mb5.0
SVE Sverdlovsk 67.07 36⇑*e*P P 11 37 10.2 +4.5
SVE *e*PPP 11 41 11.5
SVE *e*SS SS 11 50 15.7 -1.8
SVE pmax pmax
comp=Z,25nm,1.6s,mb5.0
COLA College 67.43 334 PFAKE 11 37 20.0 +12
COLA LR LR
comp=Z,1µm,22.0s,MS5.0
COLA College 67.43 334⇑*e*P P 11 37 09.0 +1.1
MCK McKinley 68.44 333 *e*P P 11 37 15.9 +1.6
comp=Z,7.0nm,1.4s,mb4.5
MCK LR LR
comp=Z,423nm,22.0s,MS4.6
MCK McKinley 68.44 333 *e*P P 11 37 15.9 +1.6
MCK pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
MCK MLR MLR
comp=Z,423nm,22.0s,MS4.6

MCK McKinley 68.44 333 *e*P P 11 37 15.9 +1.6
comp=Z,7.0nm,1.4s,mb4.5
AKTK Aktyubinsk 68.60 43 P P 11 37 15.3 -0.2
AKTO Aktyubinsk 68.60 43 P P 11 37 15.3 -0.2
comp=Z,4.2nm,0.8s,mb4.4,baz=294,slow=7.2,SNR=16
IMA2 Indian Mountai 68.78 337 *e*P P 11 37 16.1 -0.3
IMA2 Indian Mountai 68.78 337 *e*P P 11 37 16.1 -0.3
LCO Las Campanas 69.50 210 PFAKE 11 37 30.0 +8.8
LCO LR LR
comp=Z,963nm,21.0s,MS5.0
PMR Palmer 69.70 331 *e*P P 11 37 21.7 -0.4
comp=Z,7.5nm,0.8s,mb4.7
PMR LR LR
comp=Z,726nm,22.0s,MS4.9
PMR Palmer 69.70 331 *e*P P 11 37 21.7 -0.4
PMR pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
PMR MLR MLR
comp=Z,726nm,22.0s,MS4.9
PMR Palmer 69.70 331 *e*P P 11 37 21.7 -0.4
comp=Z,7.5nm,0.8s,mb4.7
CFAA Coronel Fontan 70.84 207 P P 11 37 28.6 -0.7
comp=Z,0.1nm,0.3s,baz=56,slow=3.6,SNR=2.5
CFAA Coronel Fontan 70.84 207 P P 11 37 28.6 -0.8
KDAK Kodiak Island 73.35 329 PFAKE 11 38 00.0 +16
KDAK LR LR
comp=Z,543nm,20.0s,MS4.8
TNA Tin City 73.48 340 *e*P P 11 37 44.9 0.0
comp=Z,5.4nm,1.1s,mb4.4
TNA LR LR
comp=Z,455nm,22.0s,MS4.7
TNA Tin City 73.48 340 *e*P P 11 37 44.9 +0.1
comp=Z,5.4nm,1.1s,mb4.4
BRVK Borovoye 73.78 37 *e*P P 11 37 52.0 +5.2
BRVK LR LR
comp=Z,1µm,19.0s,MS5.2
TIXI Tiksi 74.44 4 *e*P P 11 37 53.4 +3.0
comp=Z,25nm,1.7s,mb4.9
TIXI LR LR
comp=Z,236nm,22.0s,MS4.4
TIXI Tiksi 74.44 4⇑*e*P P 11 37 51.6 +1.2
TIXI pmax pmax
comp=Z,12nm,1.8s,mb4.5
TRQA Tornquist 74.76 199 PFAKE 11 38 00.0 +7.5
TRQA LR LR
comp=Z,527nm,19.0s,MS4.8
TSUM Tsumeb 75.11 126 PFAKE 11 38 10.0 +15
TSUM LR LR
comp=Z,999nm,21.0s,MS5.1
BILL Bilibino 76.74 351 PFAKE 11 38 20.0 +16
BILL LR LR
comp=Z,4µm,22.0s,MS5.7
BILL Bilibino 76.74 351⇓*e*P P 11 38 06.0 +2.4
BILL *i* 11 38 14.7
BILL pmax pmax
comp=Z,12nm,1.6s,mb4.6
NVS Novosibirsk 78.57 30 *e*P P 11 38 14.2 +0.2
NVS pmax pmax
comp=Z,31nm,1.8s,mb4.9
NVS pmax pmax
comp=N,23nm,2.4s
NVS pmax pmax
comp=E,5.0nm,1.5s
KMBO Kilima Mbogo 78.88 99 PFAKE 11 38 30.0 +14
KMBO LR LR
comp=Z,1µm,22.0s,MS5.2
KMBO Kilima Mbogo 78.88 99 LR LR 12 11 09.6
comp=Z,680nm,18.4s,MS5.0,baz=97,slow=34
KURK Kurchatov 79.29 35 *e*P P 11 38 22.1 +4.0
comp=Z,21nm,1.3s,mb4.9
KURK LR LR
comp=Z,508nm,19.0s,MS4.9
KURK Kurchatov 79.29 35⇑*e*P P 11 38 17.7 -0.4
ZAL Zalesovo 79.86 30 P P 11 38 24.0 +2.9
ZALV Zalesovo Beam 79.86 30 P P 11 38 24.0 +2.9
comp=Z,1.5nm,0.7s,mb4.0,baz=316,slow=4.0,SNR=6.0
LSZ Lusaka 80.11 116 PFAKE 11 38 30.0 +7.0
LSZ LR LR
comp=Z,1µm,20.0s,MS5.3
UNV Unalaska Valle 81.76 332 PFAKE 11 38 40.0 +8.7
UNV LR LR
comp=Z,3µm,21.0s,MS5.5
EKS2 Erkin-Say 81.92 44 *e*P P 11 38 35.7 +3.4
comp=Z,16nm,1.4s,mb4.8
EKS2 LR LR
comp=Z,1µm,19.0s,MS5.2
AML Almayashu 82.20 44 *e*P P 11 38 37.2 +3.3
comp=Z,15nm,1.1s,mb4.8
AML LR LR
comp=Z,1µm,22.0s,MS5.2
FRU Bishkek 82.29 43 *e*P P 11 38 39.3 +5.0
FRU *e* 11 38 45.5
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.0
FRU MLR MLR
comp=Z,1µm,20.0s,MS5.2
AAK Ala-Archa 82.34 43 *e*P P 11 38 37.9 +3.3
comp=Z,7.6nm,1.1s,mb4.5
AAK LR LR
comp=Z,785nm,19.0s,MS5.1
AAK Ala-Archa 82.34 43 *e*P P 11 38 37.9 +3.3
AAK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
AAK MLR MLR
comp=Z,785nm,19.0s,MS5.1
UCH Uchtor 82.61 44 *e*P P 11 38 40.1 +4.2
comp=Z,8.5nm,1.0s,mb4.7
UCH LR LR
comp=Z,1µm,19.0s,MS5.2
TKM2 Tokmak 2 82.78 42 *e*P P 11 38 40.9 +4.0
comp=Z,15nm,1.4s,mb4.8
TKM2 LR LR
comp=Z,834nm,22.0s,MS5.1
TKM2 Tokmak 2 82.78 42 *e*P P 11 38 40.9 +4.0
TKM2 pmax pmax
comp=Z,15nm,1.4s,mb4.8
TKM2 MLR MLR
comp=Z,834nm,22.0s,MS5.1
MK31 Makanchi Array 83.73 36 *i* P P 11 38 43.3 +1.6
MK31 pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
MKAR Makanchi Array 83.73 36 *i* P P 11 38 44.4 +2.7
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 83.73 36 P P 11 38 41.8 +0.1
comp=Z,2.5nm,0.9s,mb4.3,baz=316,slow=5.1,SNR=9.0
YAK Yakutsk 84.00 6 PFAKE 11 38 50.0 +7.3
YAK LR LR
comp=Z,346nm,20.0s,MS4.7
YAK Yakutsk 84.00 6⇑*e*P P 11 38 43.9 +1.2
YAK pmax pmax
comp=Z,8.0nm,0.6s,mb5.0
KSH Kashi 85.20 45 *e*P P 11 38 54.8 +5.5
KSH AP pP 11 38 59.2 +6.6
KSH *e*XP sP 11 39 05.1 +11
KSH *e*PP PP 11 42 13.8 +7.7
KSH SKS 11 49 14.3
KSH S S 11 49 25.6 +6.2
KSH AMB AMB
comp=Z,43nm,0.2s,mb6.2
KSH AMB AMB
comp=Z,880nm,2.9s
KSH LR LR
comp=N,2µm,6.9s
KSH LR LR
comp=E,2µm,11.3s
KSH LR LR
comp=Z,7µm,24.7s
BOD Bodaibo 85.83 14 *e*P P 11 38 51.0 -1.0
BOD pmax pmax
comp=Z,21nm,1.2s,mb5.2
MA2 Magadan 86.62 355 PFAKE 11 39 10.0 +14
MA2 LR LR
comp=Z,456nm,21.0s,MS4.8
BOSA Boshof 86.63 128 LR LR 12 15 16.3
comp=Z,907nm,20.6s,MS5.2,baz=115,slow=34
EFI East Falkland 86.84 192 PFAKE 11 39 10.0 +13
EFI LR LR
comp=Z,1µm,19.0s,MS5.3
ADK Adak 87.09 336 PFAKE 11 39 10.0 +12
ADK LR LR
comp=Z,789nm,19.0s,MS5.1
WMQ Urumqi 88.52 36 ⇑P P 11 39 06.7 +1.4
WMQ AP pP 11 39 10.7 +2.0
WMQ XP sP 11 39 13.7 +3.9
WMQ PP PP 11 42 37.7 +5.1

WMQ				SKS		11 49 33.1	
WMQ				eS	S	11 49 49.7	-1.6
WMQ				XS	sS	11 49 58.7	+1.9
WMQ				LR	LR		
	comp=N,895nm,17.6s,MS5.4						
WMQ				LR	LR		
	comp=E,1μm,20.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,503nm,22.0s,MS4.9						
TLY	**Talaya**	**88.62**	**22**	PFAKE		11 39 20.0	+14
TLY				LR	LR		
	comp=Z,327nm,22.0s,MS4.7						
PET	**Petropavlovsk**	**92.22**	**350**	PFAKE		11 39 30.0	+7.6
PET				LR	LR		
	comp=Z,487nm,20.0s,MS5.0						
PET	**Petropavlovsk**	**92.22**	**350**⇑	eP	**P**	**11 39 21.9**	**-0.5**
PET				pmax	pmax		
	comp=Z,89nm,1.6s,mb5.8						
SONM	**Songino Array**	**92.85**	**23**	P	**P**	**11 39 26.2**	**+0.8**
	comp=Z,0.3nm,0.8s,mb3.8,baz=306,slow=5.0,SNR=3.1						
SONM				LR	LR	12 22 14.7	
	comp=Z,337nm,21.1s,MS4.8,baz=350,slow=36						
ULN	**Ulaanbaatar**	**93.04**	**22**	PFAKE		11 39 40.0	+14
ULN				LR	LR		
	comp=Z,485nm,20.0s,MS5.0						
ULN	**Ulaanbaatar**	**93.04**	**22**⇑	eP	**P**	**11 39 29.3**	**+3.0**
HIA	**Hailar**	**95.05**	**14**	PFAKE		11 39 50.0	+15
HIA				LR	LR		
	comp=Z,416nm,20.0s,MS4.9						
GTA	**Gaotai**	**97.57**	**31**	eP	**P**	**11 39 52.2**	**+5.1**
GTA				AP	pP	11 39 55.8	+5.3
GTA				XP	sP	11 39 58.7	+7.0
GTA				PP	PP	11 43 51.8	+8.2
GTA				SKS		11 50 29.6	
GTA				S	S	11 51 16.0	+3.7
GTA				XS	sS	11 51 23.9	+6.1
GTA				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.7						
GTA				AMB	AMB		
	comp=Z,80nm,4.6s						
GTA				LR	LR		
	comp=N,570nm,17.5s,MS5.2						
GTA				LR	LR		
	comp=E,477nm,19.0s,MS5.2						
GTA				LR	LR		
	comp=Z,607nm,19.4s,MS5.1						
HABR	**Khabarovsk**	**97.87**	**4**	eP	**P**	**11 39 46.5**	**-1.8**
HABR				e		11 43 46.2	
HABR				S	SKSac	11 50 24.3	-1.7
HABR				e		11 51 12.2	
HABR				e		11 57 52.7	
YSS	**Yuzh-Sakhalins**	**99.58**	**359**	PFAKE		11 40 10.0	+14
YSS				LR	LR		
	comp=Z,487nm,19.0s,MS5.0						
YSS	**Yuzh-Sakhalins**	**99.58**	**359**⇑	eP		11 39 54.0	
YSS				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.3						
HHC	**Hu-ho-hao-te**	**100.75**	**23**	eP	Pdif	11 40 02.0	+0.7
HHC				AP		11 40 06.8	
HHC				XP		11 40 09.1	
HHC				PP	PP	11 44 08.4	+0.7
HHC				SKS		11 50 37.3	
HHC				S	Sdif	11 51 32.5	-6.4
HHC				AMB	AMB		
	comp=Z,4.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,104nm,5.0s						
HHC				LR	LR		
	comp=N,581nm,16.7s,MS5.4						
HHC				LR	LR		
	comp=E,954nm,19.0s,MS5.4						
HHC				LR	LR		
	comp=Z,370nm,19.0s,MS4.9						
LSA	**Lhasa**	**100.94**	**43**	PFAKE		11 40 10.0	+7.9
LSA				LR	LR		
	comp=Z,403nm,20.0s,MS4.9						
MDJ	**Mudanjiang**	**101.19**	**9**	P	Pdif	11 40 03.2	0.0
MDJ				AP		11 40 12.2	
MDJ				XP		11 40 15.9	
MDJ				S	Sdif	11 51 38.5	-4.0
MDJ				SS	SS	11 58 37.9	-1.9
MDJ				AMB	AMB		
	comp=Z,12nm,1.7s						
MDJ				AMB	AMB		
	comp=Z,86nm,3.3s						
MDJ				LR	LR		
	comp=N,170nm,35.7s						
MDJ				LR	LR		
	comp=Z,238nm,29.8s						
CN2	**Changchun**	**101.38**	**12**	eP	Pdif	11 40 02.6	-1.4
LZH	**Lanzhou**	**102.09**	**30**	eP	Pdif	11 40 09.6	+2.4
LZH				AP		11 40 14.0	
LZH				XP		11 40 15.0	
LZH				AMB	AMB		
	comp=Z,16nm,1.4s						
LZH				AMB	AMB		
	comp=Z,86nm,4.2s						
LZH				LR	LR		
	comp=N,810nm,17.6s						
LZH				LR	LR		
	comp=Z,759nm,18.8s,MS5.2						
LZH	**Lanzhou**	**102.09**	**30**	eP	Pdif	11 40 09.6	+2.4
	comp=Z,16nm,1.4s						
LZH				pP		11 40 14.0	
LZH				sP		11 40 15.0	
LZH				LR	LR		
	comp=Z,760nm,18.8s,MS5.2						
BJT	**Baijiatuau**	**102.90**	**20**	PFAKE		11 40 20.0	+9.2
BJT				LR	LR		
	comp=Z,565nm,20.0s,MS5.1						
TAOE	**Nuku Hiva Isla**	**104.46**	**269**	eLR	LR	12 14 32.1	
	comp=Z,1μm,25.4s						
ERM	**Erimo**	**104.51**	**359**	PFAKE		11 40 30.0	+12
ERM				LR	LR		
	comp=Z,444nm,19.0s,MS5.0						
CD2	**Chengdu**	**106.45**	**33**	ePDIF	Pdif	11 40 23.9	-2.7
CD2				PP	PP	11 44 50.0	-0.5
CD2				PP	PP		
	comp=Z,80nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,24.2s						
CD2				LR	LR		
	comp=Z,100nm,20.4s,MS4.4						
RKT	**Rikitea**	**107.56**	**254**	eLR	LR	12 15 59.9	
	comp=Z,305nm,30.5s						
PALK	**Pallekele**	**109.53**	**67**	PFAKE		11 44 50.0	+6.0
PALK				LR	LR		
	comp=Z,276nm,20.0s,MS4.8						
MAJO	**Matsushiro**	**109.92**	**3**	PFAKE		11 45 00.0	+16
MAJO				LR	LR		
	comp=Z,440nm,20.0s,MS5.0						
KMI	**Kunming**	**110.80**	**37**	PKP	PKiKP	11 44 47.6	+1.4
KMI				sPKP		11 44 52.1	
KMI				PP	PP	11 45 28.3	+5.9
KMI				PPP		11 47 48.5	
KMI				PKS		11 48 23.1	
KMI				SKS	SKSdf	11 51 57.6	-1.0
KMI				SKKS	SKKSac	11 52 21.6	-5.0
KMI				SS	SS	12 00 53.8	+1.8
KMI				SSS		12 05 02.0	
KMI				LR	LR		
	comp=Z,420nm,18.3s,MS5.0						
KMI	**Kunming**	**110.80**	**37**	PKIKP	PKiKP	11 44 47.6	+1.4
KMI						11 44 52.1	
KMI						11 45 28.3	
KMI				PPP		11 47 48.5	
KMI						11 51 57.6	
KMI				SS	SS	12 00 53.8	+1.8
KMI				SSS		12 05 02.0	
KMI				MLR	MLR		
	comp=Z,420nm,18.3s,MS5.0						
NJ2	**Nanjing**	**111.11**	**20**	ePKP	PKiKP	11 44 45.0	-1.6
GYA	**Guiyang**	**111.56**	**33**	PDIF	Pdif	11 40 51.5	+2.2
GYA				PKP	PKiKP	11 44 49.0	+1.4
GYA				PP	PP	11 45 33.0	+5.3
GYA				PKS		11 48 24.5	
GYA				SKS	SKSdf	11 51 59.4	-0.6
GYA				SKKS	SKKSac	11 52 26.1	-5.7
GYA				S	Sdif	11 53 06.4	-2.6
GYA				SS	SS	12 01 02.9	+0.9
GYA				PP	PP		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,440nm,20.8s,MS5.1						
GYA				LR	LR		
	comp=E,310nm,19.9s,MS5.1						
GYA				LR	LR		
	comp=Z,470nm,20.4s,MS5.1						
CHTO	**Chiang Mai**	**113.82**	**44**	PFAKE		11 45 00.0	+7.9
CHTO				LR	LR		
	comp=Z,260nm,21.0s,MS4.8						
PPT	**Papeete**	**116.79**	**266**	eLR	LR	12 20 14.9	
	comp=Z,217nm,25.0s						
PPT	**Papeete**	**116.79**	**266**	eLR	LR	11 44 47.5	
	comp=Z,117nm,23.5s						
QIZ	**Qiongzhong**	**119.42**	**35**	PKP	PKPdf	11 44 59.8	-3.0
QIZ				PP	PP	11 46 27.9	+4.8
QIZ				SS	SS	12 02 47.6	+2.3
QIZ				LR	LR		
	comp=E,308nm,15.7s						
QIZ				LR	LR		
	comp=Z,339nm,24.0s						
QIZ	**Qiongzhong**	**119.42**	**35**	PFAKE		11 45 10.0	+7.2
QIZ				LR	LR		
	comp=Z,350nm,22.0s,MS5.0						
QSPA	**South Pole Qui**	**123.72**	**180**	PFAKE		11 45 20.0	+11
QSPA				LR	LR		
	comp=Z,445nm,20.0s,MS5.1						
CASY	**Casey**	**142.73**	**160**	PFAKE		11 46 00.0	+15
CASY				LR	LR		
	comp=Z,830nm,21.0s,MS5.5						
HNR	**Honiara**	**150.34**	**321**	PFAKE		11 46 10.0	+10
HNR				LR	LR		
	comp=Z,904nm,21.0s,MS5.5						
SNZO	**South Karori**	**152.70**	**244**	PFAKE		11 46 10.0	+7.7
SNZO				LR	LR		
	comp=Z,560nm,19.0s,MS5.4						
PMG	**Port Moresby**	**155.12**	**346**	PFAKE		11 46 20.0	+13
PMG				LR	LR		
	comp=Z,466nm,20.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**159.79**	**94**	PFAKE		11 46 20.0	+8.2
NWAO				LR	LR		
	comp=Z,244nm,19.0s,MS5.1						
WRA	**Warramunga Arr**	**164.80**	**26**	PKPab	PKPab	11 47 13.4	+0.6
	comp=Z,2.1nm,1.2s,baz=345,slow=4.3,SNR=2.7						
CTAO	**Charters Tower**	**165.65**	**341**	PFAKE		11 46 30.0	+12
CTAO				LR	LR		
	comp=Z,732nm,20.0s						
ASAR	**Alice Springs**	**167.92**	**35**	PKPab	PKPab	11 47 24.3	-2.3
	comp=Z,0.5nm,0.9s,baz=333,slow=4.5,SNR=2.7						

FUNV 04 11:26:47.3, 1058N×6322W, h5km, MW3.1, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.10**	**353**⇑	eP	Pg	11 26 48.2	-1.3
CRUV				eS	Sg	11 26 50.7	-0.2
GUNV	**Guanoco**	**0.50**	**146**	eP	Pg	11 26 56.6	-0.3
GUNV				eS	Sg	11 27 05.4	+2.1
ITEV	**Isla Los Testi**	**0.78**	**7**	eP	Pg	11 27 02.1	-0.2
ITEV				eS	Sg	11 27 12.8	+0.4
GUIV	**Guiria**	**0.99**	**86**	eP	Pg	11 27 05.5	-0.8
GUIV				eS	Sg	11 27 20.2	+1.1
PCRV	**Puerto La Cruz**	**1.45**	**254**	eP	Pn	11 27 13.2	-0.9
TCE	**Chacachacare**	**1.45**	**85**	eP	Pn	11 27 15.2	+1.1
TCE				eS	Sb	11 27 36.5	+2.9
ORIV	**Oritupano**	**1.51**	**187**	eP	Pn	11 27 14.2	-0.7
PRGV	**PARIAGUAN**	**2.29**	**218**	eP	Pn	11 27 25.0	-0.6
TPR	**Prospect**	**2.48**	**76**	eP	Pn	11 27 30.4	+2.1
CUPV	**Cœpira**	**2.58**	**259**	eP	Pn	11 27 28.9	-0.7
LUEV	**Luepa**	**5.02**	**160**	eP	Pn	11 28 01.2	-2.1
BAUV	**El Baul**	**5.02**	**252**	eP	Pn	11 28 02.5	-0.7

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*IDC **04** 11:30:23.1±1.5, 1134N×12640E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.7/19, mbtmp4.0/6, Error ellipse: s-maj=183.0km s-min=19.1km az=69.0*
*ISCJB **04** 11:30:33.1±1.1, 1100N±008×1255E±0.1, h84km±8km, mb3.8/6, Error ellipse: s-maj=20.1km s-min=10.4km az=152.5*
*MAN **04** 11:30:37, 1090N×12530E, h42km, mb4.7, ML3.5, MS3.5*
ISC 04 11:30:33.4±1.4**, 1104N**±009×**1256E**±01**, h74**km±10km**, n14, σ0§94**/17**, mb3.8**/6**, 1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.62**	**282**	eP	**Pn**	**11 30 48.1**	**+0.3**
PLP				eS	**Sn**	**11 30 56.9**	**-1.5**
SCPH	**Surigao**	**1.25**	**185**	eP	**Pn**	**11 30 56.1**	**+0.7**
SCPH				eS	**Sn**	**11 31 12.4**	**+0.6**
LLP	**Lapu-Lapu**	**1.76**	**246**	eP	**Pn**	**11 31 00.9**	**-1.0**
LLP				eS	**Sn**	**11 31 19.1**	**-4.5**
TBP	**Tagbilaran**	**2.17**	**232**	eP	**Pn**	**11 31 08.0**	**+0.5**
RCP	**Roxas**	**2.85**	**281**⇓	eP	**Pn**	**11 31 18.4**	**+1.8**
SNPH	**Sibulan**	**2.87**	**234**	eP	**Pn**	**11 31 17.0**	**0.0**
GUIM	**Jordan**	**2.98**	**262**	eP	**Pn**	**11 31 18.6**	**+0.1**
DCPH	**Dipolog City**	**3.29**	**222**	i P	**Pn**	**11 31 22.7**	**0.0**
WRA	**Warramunga Arr**	**31.97**	**164**	P	**P**	**11 36 50.4**	**-2.2**
	0.4nm,0.6s,mb3.3,baz=344,slow=9.2,SNR=4.9						
ASAR	**Alice Springs**	**35.44**	**167**	P	**P**	**11 37 22.1**	**-0.5**
	0.8nm,0.5s,mb3.8,baz=351,slow=7.7,SNR=19						
STKA	**Stephens Creek**	**45.34**	**161**	P	**P**	**11 38 44.6**	**+0.3**
	1.2nm,0.5s,mb3.9,baz=339,slow=8.2,SNR=5.6						
MKAR	**Makanchi Array**	**51.02**	**323**	P	**P**	**11 39 29.2**	**+1.3**
	0.5nm,0.3s,mb4.1,baz=134,slow=6.5,SNR=12						
ARCES	**ARCESS Array B**	**83.25**	**340**	P	**P**	**11 42 51.4**	**-0.1**
	3.1nm,1.0s,mb4.1,baz=79,slow=6.3,SNR=6.4						
FINES	**FINESS Array B**	**84.91**	**332**	P	**P**	**11 42 59.6**	**-0.4**
	0.5nm,0.5s,mb3.7,baz=86,slow=4.9,SNR=11						

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*ISCJB **04** 11:31:01.0±0.7, 1054N±003×6333W±002, h3km±6km, Error ellipse: s-maj=5.3km s-min=4.0km az=169.8*
*FUNV **04** 11:31:02.4, 1056N×6322W, h9km, MW3.5*
*TRN **04** 11:31:03.5, 1067N×6323W, h3km, MD3.4*
*NEIC **04** 11:31:03.5, 1067N×6323W, h3km, MD3.4(TRN), After TRN.*
ISC 04 11:31:01.4±0.6**, 1053N**±003×**6332W**±002**, h0**km±5km**, n20, σ1§03**/33**, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.16**	**28**⇑	iP	**Pg**	**11 31 04.1**	**-0.4**
CRUV				eS	**Sg**	**11 31 06.6**	**-0.1**
GUNV	**Guanoco**	**0.52**	**135**⇓	eP	**Pg**	**11 31 11.3**	**-0.1**
GUNV				eS	**Sg**	**11 31 18.4**	**+0.3**
ITEV	**Isla Los Testi**	**0.84**	**12**⇑	iP	**Pg**	**11 31 17.1**	**-0.4**
ITEV				eS	**Sg**	**11 31 28.5**	**+0.1**
GUIV	**Guiria**	**1.08**	**84**	eP	**Pg**	**11 31 20.4**	**-1.7**
GUIV				eS	**Sg**	**11 31 34.0**	**-2.2**
PCRV	**Puerto La Cruz**	**1.35**	**255**	eP	**Pg**	**11 31 27.8**	**+0.5**
PCRV				eS	**Sg**	**11 31 46.3**	**+1.5**
ORIV	**Oritupano**	**1.45**	**184**	eP	**Pn**	**11 31 29.4**	**+0.5**
ORIV				eS	**Sg**	**11 31 48.1**	**-0.1**
TCE	**Chacachacare**	**1.54**	**84**	eP	**Pn**	**11 31 29.5**	**-0.7**
TCE				eS	**Sn**	**11 31 51.0**	**+0.2**
TPP	**Pointe-a-Pierr**	**1.85**	**96**	eP	**Pn**	**11 31 36.3**	**+2.0**
TRN	**Trinidad (W)**	**1.88**	**86**	eP	**Pn**	**11 31 36.0**	**+1.2**
TRN				eS	**Sn**	**11 31 59.6**	**+0.3**
PRGV	**PARIAGUAN**	**2.19**	**217**	eP	**Pn**	**11 31 40.0**	**+0.9**
PRGV				eS	**Sn**	**11 32 07.2**	**+0.2**
TBH	**Brigand Hill**	**2.21**	**91**	eP	**Pn**	**11 31 42.4**	**+3.1**
CUPV	**Cœpira**	**2.48**	**259**	eP	**Pn**	**11 31 43.4**	**+0.3**
CUPV				eS	**Sn**	**11 32 13.5**	**-0.5**
TPR	**Prospect**	**2.58**	**75**	eP	**Pn**	**11 31 45.9**	**+1.5**
GURV	**El Guri**	**2.76**	**175**	eP	**Pn**	**11 31 46.9**	**0.0**
BIRV	**Birongo**	**2.91**	**269**	eP	**Pn**	**11 31 49.3**	**+0.4**
BIRV				eS	**Sn**	**11 32 23.5**	**-1.0**
MERV	**Las Mercedes**	**3.20**	**247**	eP	**Pn**	**11 31 54.0**	**+1.0**
MERV				eS	**Sn**	**11 32 30.5**	**-1.3**
CAOV	**Caicara del Or**	**4.35**	**223**	eP	**Pn**	**11 32 09.0**	**+0.2**
CAOV				eS	**Sn**	**11 32 57.9**	**-2.4**
TURV	**Turiamo**	**4.45**	**269**	eP	**Pn**	**11 32 10.4**	**+0.3**
BAUV	**El Baul**	**4.92**	**252**	eP	**Pn**	**11 32 15.3**	**-1.3**
LUEV	**Luepa**	**5.00**	**158**	eP	**Pn**	**11 32 16.4**	**-1.3**

IDC 04 11:35:13.0±2.2**, 038N**×**12703E, h0**km**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=188.7km s-min=26.6km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.42**	**161**	P	P	11 40 02.5	-0.3
	0.8nm,0.3s,baz=340,slow=9.9,SNR=23						
ASAR	**Alice Springs**	**24.81**	**165**	P	P	11 40 37.1	+0.2
	1.2nm,0.4s,baz=340,slow=10.0,SNR=31						
MKAR	**Makanchi Array**	**60.48**	**326**	P	P	11 45 24.9	+0.2
	0.2nm,0.4s,baz=120,slow=6.4,SNR=4.4						

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*ISCJB **04** 11:43:36.6±0.5, 3381N±009×3851W±008, h10km, mb4.3/26, MS3.9/6, Error ellipse: s-maj=13.7km s-min=9.0km az=10.2*
*IDC **04** 11:43:37.0±0.7, 3382N×3848W, h0km, mb4.0/16, mb1 4.2/16, mb1mx4.1/22, mbtmp4.0/16, MS3.9/6, Ms1 3.9/6, ms1mx3.5/24, Error ellipse: s-maj=22.2km s-min=14.4km az=169.0*
*CSEM **04** 11:43:38.1, 3378N×3847W, h10km, mb4.7/8, Mw4.9, After NEIC*
*GCMT **04** 11:43:38.1±0.5, 3376N×3874W, h15km, MW4.9/57, Moment Tensor Solution. s13,c14; s57,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70±.13; $M_{\theta\theta}$1.85±.14; $M_{\phi\phi}$-1.15±.13; $M_{r\theta}$-0.98±.45; $M_{\theta\phi}$2.22±.09; $M_{\phi r}$-0.95±.43; Best double couple: $M_0$2.93900×10^{16} NP1:ϕ_s289.00000°, δ67.00000°, λ2.00000°. NP2: ϕ_s198.00000°, δ88.00000°, λ157.00000°. Principal axes: T 3.4480, Plg18.0000°, Azm151.0000°; N -1.0200, Plg67.0000°, Azm14.0000°; P -2.4310, Plg15.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 11:43:38.1±0.5, 3378N×3847W, h10km, mb4.6/8 Error ellipse: s-maj=14.1km s-min=8.6km az=174.0*
ISC 04 11:43:38.5±0.5**, 3381N**±009×**3847W**±008**, h10**km**, n47, σ0§84**/44**, mb4.3**/26**, MS3.9**/6**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**28.88**	**325**	P	**P**	**11 49 37.0**	**-0.1**
SCHQ	**Schefferville**	**28.88**	**325**	P	**P**	**11 49 37.0**	**-0.1**
	4.0nm,0.7s,mb4.2,baz=125,slow=9.0,SNR=7.9						
SCHQ				LR	LR	12 00 57.6	
	comp=Z,112nm,19.0s,MS3.5,baz=222,slow=36						
SJG	**San Juan**	**29.27**	**245**	LR	LR	11 58 52.5	
	comp=Z,153nm,19.5s,MS3.6,baz=275,slow=31						
ACSO	**Alum Creek Sta**	**35.82**	**293**	eP	**P**	**11 50 38.7**	**+0.7**
	33nm,1.2s,mb5.1						
ACSO	**Alum Creek Sta**	**35.82**	**293**	eP	**P**	**11 50 38.7**	**+0.7**
	33nm,1.2s,mb5.1						
SDV	**Santo Domingo**	**38.60**	**237**	P	**P**	**11 51 02.9**	**+1.0**
	21nm,0.8s,mb4.9,baz=63,slow=4.9,SNR=20						
SDV	**Santo Domingo**	**38.60**	**237**	eP	**P**	**11 51 02.6**	**+0.7**
	20nm,0.8s,mb4.9						
CLL	**Collm**	**40.83**	**49**	eP	**P**	**11 51 20.0**	**0.0**
TIC	**Toumodi**	**41.08**	**124**	ePKP2	**P**	**11 51 25.5**	**+3.0**
	30nm,1.0s,mb4.9						
GERES	**GERESS Array B**	**41.14**	**52**	P	**P**	**11 51 22.7**	**+0.1**
	0.3nm,0.6s,baz=266,slow=12,SNR=4.9						
GERES				LR	LR	12 07 44.1	
	comp=Z,153nm,18.4s,MS3.9,baz=245,slow=35						
LIC	**Lamto**	**41.38**	**124**	ePKP2	**P**	**11 51 24.1**	**-0.9**
	39nm,1.2s,mb4.9						
KIC	**Kosan Boka**	**41.48**	**124**	ePKP2	**P**	**11 51 25.2**	**-0.6**
	54nm,1.1s,mb5.1						
NOA	**NORSAR Array B**	**41.75**	**34**	P	**P**	**11 51 28.0**	**+0.6**
NOA	**NORSAR Array B**	**41.75**	**34**	P	**P**	**11 51 28.0**	**+0.6**
	1.4nm,0.9s,mb3.6,baz=255,slow=8.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**41.84**	**110**	P	**P**	**11 51 28.7**	**0.0**
	4.0nm,1.1s,mb4.0,baz=300,slow=4.0,SNR=14						
ROSC	**El Rosal**	**44.03**	**237**	LR	LR	12 06 17.3	
	comp=Z,197nm,18.7s,MS4.0,baz=8.5,slow=31						
ULM	**Lac du Bonnet**	**44.55**	**310**	P	**P**	**11 51 49.7**	**-0.6**
ULM	**Lac du Bonnet**	**44.55**	**310**	P	**P**	**11 51 49.7**	**-0.6**
	7.6nm,0.7s,mb4.6,baz=87,slow=9.2,SNR=24						
AGMN	**Agassiz Refuge**	**44.61**	**307**	eP	**P**	**11 51 51.3**	**+0.5**
	6.6nm,0.9s,mb4.5						
AGMN	**Agassiz Refuge**	**44.61**	**307**	eP	**P**	**11 51 51.3**	**+0.5**
	6.6nm,0.9s,mb4.5						
FINES	**FINESS Array B**	**48.88**	**35**	P	**P**	**11 52 24.4**	**+0.4**
	1.1nm,0.8s,mb3.9,baz=258,slow=6.7,SNR=2.0						
WMOK	**Wichita Mounta**	**49.17**	**289**	eP	**P**	**11 52 25.8**	**-0.8**
	6.4nm,1.0s,mb4.6						
WMOK	**Wichita Mounta**	**49.17**	**289**	eP	**P**	**11 52 25.8**	**-0.9**
	6.4nm,1.0s,mb4.6						
AKASG	**Malin Array Be**	**51.07**	**49**	P	**P**	**11 52 41.5**	**+0.7**
	4.9nm,0.8s,mb4.5,baz=273,slow=7.1,SNR=14						
YKA	**Yellowknife Ar**	**54.33**	**326**	P	**P**	**11 53 05.0**	**+0.4**
YKA				PcP	PcP	11 54 09.6	+1.0
YKA	**Yellowknife Ar**	**54.33**	**326**	P	**P**	**11 53 05.0**	**+0.4**
	2.0nm,0.8s,mb4.1,baz=83,slow=7.5,SNR=24						
YKA				PcP	PcP	11 54 09.5	+1.0
	0.7nm,0.9s,baz=83,slow=5.0,SNR=4.5						
YKA				LR	LR	12 13 26.4	
	comp=Z,197nm,18.4s,MS4.2,baz=140,slow=33						
YKA	**Yellowknife Ar**	**54.33**	**326**	PcP	PcP	11 54 09.6	+1.0
TXAR	**Lajitas Array**	**54.91**	**284**	P	**P**	**11 53 09.2**	**-0.3**
	0.9nm,0.8s,mb3.9,baz=96,slow=7.9,SNR=9.2						
PDAR	**Pinedale Array**	**55.01**	**302**	P	**P**	**11 53 10.0**	**0.0**
	2.4nm,0.9s,mb4.2,baz=73,slow=6.5,SNR=12						
BW06	**Boulder Array**	**55.01**	**302**	eP	**P**	**11 53 09.9**	**-0.1**
	5.4nm,1.2s,mb4.5						
BW06	**Boulder Array**	**55.01**	**302**	eP	**P**	**11 53 09.9**	**-0.1**
	5.4nm,1.2s,mb4.5						
BRTR	**Keskin Array B**	**56.64**	**61**	P	**P**	**11 53 21.9**	**+0.1**
	0.5nm,0.8s,mb3.6,baz=305,slow=4.4,SNR=3.7						
LPAZ	**La Paz**	**57.29**	**214**	P	**P**	**11 53 26.9**	**+0.4**
	0.9nm,0.7s,mb3.9,baz=16,slow=6.1,SNR=3.9						
LPAZ				LR	LR	12 15 00.5	
	comp=Z,158nm,20.9s,MS4.1,baz=309,slow=33						
DUG	**Dugway**	**58.12**	**300**	eP	**P**	**11 53 30.0**	**-2.2**
	5.8nm,1.3s,mb4.5						
NEW	**Newport**	**58.56**	**310**	eP	**P**	**11 53 34.8**	**-0.3**
	11nm,1.0s,mb4.9						
NEW	**Newport**	**58.56**	**310**	eP	**P**	**11 53 34.8**	**-0.3**
	11nm,1.0s,mb4.9						
INK	**Inuvik**	**60.86**	**335**	eP	**P**	**11 53 51.3**	**+0.7**
	550nm,1.4s						
INK	**Inuvik**	**60.86**	**335**	eP	**P**	**11 53 51.3**	**+0.7**
	550nm,1.4s						
NVAR	**Mina Array Bea**	**62.73**	**300**	P	**P**	**11 54 03.9**	**+0.2**
	1.2nm,0.7s,mb4.1,baz=73,slow=7.2,SNR=11						
NVAR	**Mina Array Bea**	**62.73**	**300**	P	**P**	**11 54 03.8**	**+0.1**
MCK	**McKinley**	**68.50**	**333**	eP	**P**	**11 54 41.2**	**+0.6**
	2.9nm,1.1s,mb4.1						
MCK	**McKinley**	**68.50**	**333**	eP	**P**	**11 54 41.2**	**+0.7**
	2.9nm,1.1s,mb4.1						
IMA2	**Indian Mountai**	**68.84**	**337**	eP	**P**	**11 54 43.9**	**+1.3**
IMA2	**Indian Mountai**	**68.84**	**337**	eP	**P**	**11 54 43.9**	**+1.3**
ZALV	**Zalesovo Beam**	**79.83**	**30**	P	**P**	**11 55 46.7**	**-0.2**
	0.3nm,0.3s,mb3.7,baz=319,slow=4.0,SNR=2.5						
MKAR	**Makanchi Array**	**83.69**	**36**	P	**P**	**11 56 06.0**	**-1.4**
	0.5nm,0.8s,mb3.7,baz=328,slow=4.3,SNR=4.7						
SONM	**Songino Array**	**92.83**	**23**	P	**P**	**11 56 49.2**	**-2.0**
	0.2nm,0.6s,mb3.8,baz=336,slow=4.4,SNR=3.0						

IDC 04 12:02:21.5±2.1**, 017N**×**9754E, h0**km**, mb3.4**/5**, mb1 3.5**/6**, mb1mx3.3**/22**, mbtmp3.4**/6**, ML2.5**/1**, Error ellipse: s-maj=66.2km s-min=23.3km az=63.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.95**	**28**	Pn	Pn	12 03 08.6	-1.1
	0.7nm,0.3s,baz=191,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**41.21**	**121**	P	P	12 10 08.0	-0.3
	0.4nm,0.9s,baz=313,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**42.51**	**126**	P	P	12 10 19.1	+0.1
	0.2nm,0.5s,baz=301,slow=7.8,SNR=5.4						
SONM	**Songino Array**	**48.09**	**8**	P	P	12 11 03.2	+0.4
	0.2nm,0.4s,baz=183,slow=5.8,SNR=2.6						
MKAR	**Makanchi Array**	**48.32**	**346**	P	P	12 11 04.5	-0.1
	0.4nm,0.8s,baz=157,slow=6.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**54.62**	**351**	P	P	12 11 51.4	-0.3
	0.7nm,0.4s,baz=168,slow=7.6,SNR=4.9						

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*IDC **04** 12:04:38.0±0.8, 1378N×12101E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/20, mbtmp3.9/9, Error ellipse: s-maj=87.2km s-min=17.5km az=67.0*
*MAN **04** 12:04:51, 1356N×12046E, h152km, mb3.8, ML2.6, MS2.2*
*ISCJB **04** 12:04:52.2±0.8, 135N±0.1×1205E±0.1, h136km±5km, mb3.6/9, Error ellipse: s-maj=23.6km s-min=16.4km az=155.9*
ISC 04 12:04:53.5±0.7**, 135N**±01×**1205E**±01**, h134**km±5km**, n13,**

σ0ˢ92/15,mb3.6/9,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.30	313	eP	Pn	12 05 12.6	+0.4
LUBP				eS	Sn	12 05 25.3	-1.0
TGY	Tagaytay City	0.73	38	⇓iP	Pn	12 05 17.2	+2.6
TGY				iS	Sn	12 05 31.3	+0.8
POLP	Polilio Island	1.86	50	eP	Pn	12 05 24.9	-1.2
BOLP	Bolinao	2.89	349	eP	Pn	12 05 37.6	-1.3
WRA	Warramunga Arr	35.95	157	P	P	12 11 40.7	-0.6
	1.0nm,0.9s,mb3.5,baz=341,slow=9.0,SNR=9.1						
SONM	Songino Array	36.16	344	P	P	12 11 42.9	+0.1
	0.7nm,0.6s,mb3.5,baz=163,slow=9.2,SNR=6.9						
SONM				PcP	PcP	12 14 10.1	+4.6
	0.3nm,0.7s,baz=142,slow=4.9,SNR=2.7						
ASAR	Alice Springs	39.23	160	P	P	12 12 09.1	+0.2
	0.4nm,0.3s,mb3.5,baz=336,slow=7.7,SNR=24						
MKAR	Makanchi Array	46.04	324	P	P	12 13 05.0	+1.4
	1.2nm,0.7s,mb3.7,baz=130,slow=9.0,SNR=13						
ZALV	Zalesovo Beam	49.11	333	P	P	12 13 27.0	-0.2
	1.6nm,0.4s,mb4.0,baz=116,slow=6.1,SNR=9.0						
ARCES	ARCESS Array B	79.17	339	P	P	12 16 43.0	0.0
	2.3nm,0.8s,mb3.9,baz=54,slow=6.2,SNR=3.6						
FINES	FINESS Array B	80.33	331	P	P	12 16 49.5	0.0
	1.6nm,1.1s,mb3.6,baz=358,slow=9.7,SNR=2.7						
NOA	NORSAR Array B	87.31	333	P	P	12 17 25.4	+0.5
	0.5nm,0.9s,mb3.4,baz=87,slow=1.8,SNR=2.8						
YKA	Yellowknife Ar	93.02	22	P	P	12 17 50.7	-0.9
	0.3nm,0.8s,mb3.5,baz=310,slow=3.8,SNR=5.8						

CASC 04 12:10:16.1±1.5,837N×8280W,h18km±8km,MD4.0,3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	David	0.35	80	⇑iP	Pg	12 10 23.2	-0.2
BAR1		1.00	329	eP	Pb	12 10 33.7	-1.2
CNI	Changuinola	1.07	15	⇓iP	Pb	12 10 35.3	-0.9
BUS	Buena Vista	1.51	321	eP	Pn	12 10 41.8	-0.5
BUS				eS	Sn	12 11 04.1	+2.5
QCR	Quepos	1.71	308	⇑eP	Pn	12 10 44.5	-0.5
QCR				eS	Sn	12 11 06.4	-0.1
URSC	Urasca	1.75	326	⇓eP	Pn	12 10 45.6	+0.1
URSC				eS	Sn	12 11 08.5	+1.2
LCR2	La Lucha 2	1.81	319	eP	Pn	12 10 45.9	-0.5
LCR2				eS	Sn	12 11 10.2	+1.2
ICR	Volcan Irazu	1.90	327	⇓eP	Pn	12 10 47.9	+0.3
ICR				eS	Sn	12 11 13.9	+2.8
LAJ	Bijagual	1.98	319	eP	Pn	12 10 51.0	+2.2
LAJ				eS	Sn	12 11 19.8	+6.8
PRS1	Puriscal	2.19	317	⇑eP	Pn	12 10 51.4	-0.3
PRS1				eS	Sn	12 11 17.9	-0.4
CGA2	Cerro Gallo 2	2.32	315	eP	Pn	12 10 54.2	+0.8
CGA2				eS	Sn	12 11 24.1	+2.6
AZU	Azuero	2.56	103	eP	Pn	12 10 56.7	-0.1

IDC 04 12:17:50.9±1.3,115S×12714E,h0km,mb3.8/4,mb1 3.9/5, mb1mx3.7/17,mbtmp3.8/5,ML3.9/1,Error ellipse: s-maj=143.5km s-min=19.4km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.96	160	P	Pn	12 22 24.0	-2.4
	0.3nm,0.3s,baz=342,slow=12,SNR=24						
ASAR	Alice Springs	23.32	164	P	P	12 23 00.6	-0.2
	1.8nm,0.6s,baz=346,slow=11,SNR=23						
STKA	Stephens Creek	33.47	157	P	P	12 24 32.7	+0.9
	2.4nm,0.8s,baz=337,slow=10,SNR=4.3						
SONM	Songino Array	52.04	342	P	P	12 27 02.2	0.0
	0.4nm,0.7s,baz=158,slow=6.5,SNR=3.9						
MKAR	Makanchi Array	61.80	327	P	P	12 28 11.7	+0.1
	1.1nm,0.6s,baz=124,slow=8.4,SNR=18						

*CSEM **04** 12:25:43.8±0.1,3539N×3641W,h6km,mb4.8/12,Mw5.0, Error ellipse: s-maj=6.8km s-min=2.9km az=171.0*

*IDC **04** 12:25:44.2±0.7,3534N×3631W,h0km,mb4.1/14, mb1 4.3/14,mb1mx4.0/25,mbtmp4.1/14,MS4.1/31, Ms1 4.1/31,ms1mx4.1/41,Error ellipse: s-maj=22.2km s-min=14.7km az=174.0*

*BJI **04** 12:25:44.9,3530N×3630W,h10km,mB5.6,mb5.1,Ms5.1, Msz4.6*

*ISCJB **04** 12:25:44.7±0.5,354N±0.1×3638W±006,h10km,mb4.5/44, MS4.2/34,Error ellipse: s-maj=16.0km s-min=7.5km az=179.3*

*GCMT **04** 12:25:45.9±0.3,3546N×3635W,h14km±1km,MW5.0/63, Moment Tensor Solution. s11,c18; s63,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.03±.23; $M_{\theta\theta}$0.12±.13; $M_{\phi\phi}$2.91±.15; $M_{r\theta}$1.38±.41; $M_{\theta\phi}$0.91±.10; $M_{\phi r}$-0.10±.25; Best double couple: $M_0$3.38700×10^{16} NP1:ϕ_s357.00000°,δ46.00000°,λ-120.00000°. NP2: ϕ_s217.00000°,δ52.00000°,λ-62.00000°. Principal axes: T 3.1970, Plg3.0000°, Azm288.0000°; N 0.3840, Plg21.0000°, Azm19.0000°; P -3.5760, Plg68.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 12:25:45.9±0.4,3527N×3632W,h10km,mb4.7/28 Error ellipse: s-maj=13.8km s-min=6.5km az=177.0*

ISC 04 12:25:46.5±0.5,354N±01×3631W±007,h10km,n198, σ0ˢ86/171,mb4.5/44,MS4.2/34,38C-45D,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	25.94	71	LR	LR	12 39 40.3	
	comp=Z,307nm,18.2s,MS3.9,baz=270,slow=32						
MDT	Midelt	26.32	86	P	P	12 31 22.9	+0.5
	1.2nm,0.9s,mb3.4,baz=249,slow=14,SNR=2.2						
MDT				LR	LR	12 39 42.3	
	comp=Z,590nm,19.7s,MS4.1,baz=299,slow=32						
SCHQ	Schefferville	28.69	322	LR	LR	12 42 01.5	
	comp=Z,435nm,19.5s,MS4.1,baz=98,slow=34						
SJG	San Juan	31.53	245	LR	LR	12 42 00.5	
	comp=Z,209nm,19.0s,MS3.8,baz=206,slow=31						
PCRV	Puerto La Cruz	35.95	233	LR	LR	12 45 06.4	
	comp=Z,138nm,20.7s,MS3.7,baz=58,slow=32						
DAVOX	Davos/Dischmat	36.16	57	LR	LR	12 45 07.1	
	comp=Z,356nm,20.4s,MS4.1,baz=260,slow=32						
ACSO	Alum Creek Sta	36.87	292	eP	P	12 32 55.7	+0.7
	9.1nm,0.9s,mb4.6						
ACSO				e		12 33 02.0	
ACSO	Alum Creek Sta	36.87	292	eP	P	12 32 55.7	+0.7
KEST	Kesra	36.89	76	LR	LR	12 46 58.8	
	comp=Z,102nm,19.2s,MS3.6,baz=182,slow=34						
TKL	Tuckaleechee C	38.34	285	P	P	12 33 08.3	+0.8
	7.7nm,1.0s,mb4.4,baz=73,slow=8.5,SNR=3.6						
TKL				LR	LR	12 45 32.1	
	comp=Z,290nm,21.1s,MS4.1,baz=105,slow=31						
CLL	Collm	38.47	50	eSS	SS	12 41 54.0	+1.8
JMIC	Jan Mayen	38.63	14	LR	LR	12 43 46.9	
	comp=Z,76nm,19.6s,MS3.5,baz=62,slow=28						
GERES	GERESS Array B	38.79	54	LR	LR	12 45 57.3	
	comp=Z,239nm,21.5s,MS4.0,baz=271,slow=31						
NB2	NORSAR Subarra	39.48	34	P	P	12 33 17.9	+1.2
	comp=Z,0.6nm,0.7s,mb3.4,baz=252,slow=8.6						
NOA	NORSAR Array B	39.48	34	P	P	12 33 17.0	+0.3
NOA				LR	LR	12 46 48.2	
NOA	NORSAR Array B	39.48	34	P	P	12 33 17.0	+0.3
	comp=Z,1.2nm,0.8s,mb3.7,baz=252,slow=8.6,SNR=4.0						
NOA				LR	LR	12 46 48.2	
	comp=Z,75nm,19.1s,MS3.5,baz=265,slow=32						
SWET	Sewanee	40.16	285	P	P	12 33 22.4	-0.3
SWET				e		12 33 29.1	
SWET	Sewanee	40.16	285	P	P	12 33 22.4	-0.3
TORD	Torodi Ar. Bea	40.74	113	P	P	12 33 26.4	-1.3
	comp=Z,3.5nm,1.1s,mb3.9,baz=315,slow=5.3,SNR=10						
TORD				LR	LR	12 48 52.4	
	comp=Z,814nm,19.9s,MS4.6,baz=310,slow=34						
SDV	Santo Domingo	40.93	238	eP	P	12 33 28.6	-0.7
	comp=Z,11nm,1.1s,mb4.4						
SDV	Santo Domingo	40.93	238	P	P	12 33 28.7	-0.6
	comp=Z,7.2nm,0.9s,mb4.3,baz=68,slow=6.7,SNR=7.7						
SDV	Santo Domingo	40.93	238	eP	P	12 33 28.6	-0.7
	comp=Z,11nm,1.1s,mb4.4						
SIUC	Southern Illin	42.11	289	eP	P	12 33 39.0	+0.3
	comp=Z,21nm,1.0s,mb4.7						
SIUC				e		12 33 45.0	
SIUC	Southern Illin	42.11	289	eP	P	12 33 39.0	+0.2
OXF	Oxford	43.10	285	eP	P	12 33 45.5	-1.3
	comp=Z,31nm,1.1s,mb5.0						
OXF	Oxford	43.10	285	eP	P	12 33 45.5	-1.4
	comp=Z,31nm,1.1s,mb5.0						
ULM	Lac du Bonnet	44.97	308	P	P	12 34 00.5	-1.1
	comp=Z,6.0nm,1.1s,mb4.4,baz=84,slow=6.4						
ULM				LR	LR	12 50 27.8	
	comp=Z,682nm,20.8s,MS4.6,baz=343,slow=33						
ECSD	EROS,Sioux Fal	46.34	300	eP	P	12 34 10.9	-1.7
	comp=Z,6.2nm,0.8s,mb4.6						
ROSC	El Rosal	46.36	238	LR	LR	12 51 10.0	
	comp=Z,304nm,21.6s,MS4.2,baz=44,slow=33						
MIAR	Mount Ida	46.37	286	eP	P	12 34 12.3	-0.6
	comp=Z,16nm,1.1s,mb4.8						
MIAR				e		12 34 18.9	
MIAR	Mount Ida	46.37	286	eP	P	12 34 12.3	-0.6
FINES	FINESS Array B	46.59	36	P	P	12 34 14.5	+0.3
FINES				LR	LR	12 52 40.8	
FINES	FINESS Array B	46.59	36	P	P	12 34 14.5	+0.3
	comp=Z,1.8nm,0.9s,mb4.0,baz=284,slow=7.7,SNR=4.0						
FINES				LR	LR	12 52 40.8	
	comp=Z,126nm,18.4s,MS3.9,baz=162,slow=35						
KSU1	Kansas State U	47.40	293	eP	P	12 34 20.1	-0.8
	comp=Z,12nm,0.8s,mb4.9						
KSU1	Kansas State U	47.40	293	eP	P	12 34 20.1	-0.8
	comp=Z,12nm,0.8s,mb4.9						
AKASG	Malin Array Be	48.71	50	P	P	12 34 29.4	-1.6
AKASG				LR	LR	12 53 17.6	
AKASG	Malin Array Be	48.71	50	P	P	12 34 29.4	-1.6
	comp=Z,1.8nm,0.8s,mb4.2,baz=272,slow=7.7,SNR=8.1						
AKASG				LR	LR	12 53 17.6	
	comp=Z,269nm,19.8s,MS4.2,baz=285,slow=34						
WMOK	Wichita Mounta	50.37	289	eP	P	12 34 42.7	-1.1
	comp=Z,5.9nm,0.8s,mb4.7						
WMOK				e		12 34 48.6	
WMOK	Wichita Mounta	50.37	289	eP	P	12 34 42.7	-1.1
DGMT	Dagmar	50.60	307	eP	P	12 34 45.7	+0.4
	comp=Z,13nm,1.0s,mb4.8						
DGMT				e		12 34 51.5	
JTS	JuntasAbangare	50.67	253	LR	LR	12 53 21.6	
	comp=Z,326nm,20.0s,MS4.3,baz=139,slow=33						
AMTX	Amarillo	52.56	290	eP	P	12 34 59.2	-1.0
	comp=Z,8.2nm,0.8s,mb4.7						
AMTX				e		12 35 05.9	
AMTX	Amarillo	52.56	290	eP	P	12 34 59.2	-1.0
ISCO	Idaho Springs	53.86	297	eP	P	12 35 10.1	+0.4
	comp=Z,2.0nm,0.7s,mb4.2						
ISCO				e		12 35 15.4	
ISCO	Idaho Springs	53.86	297	eP	P	12 35 10.1	+0.4
YKA	Yellowknife Ar	54.05	326	P	P	12 35 10.0	-0.7
YKA				PcP	PcP	12 36 15.1	-0.4
YKA				LR	LR	12 58 13.3	
YKA	Yellowknife Ar	54.05	326	P	P	12 35 10.0	-0.7
	comp=Z,1.1nm,0.8s,mb3.9,baz=83,slow=7.2,SNR=14						
YKA				PcP	PcP	12 36 15.1	-0.4
	comp=Z,1.1nm,0.9s,baz=80,slow=4.6,SNR=5.3						
YKA				LR	LR	12 58 13.3	
	comp=Z,102nm,19.4s,MS3.9,baz=120,slow=36						
YKA	Yellowknife Ar	54.05	326	PcP	PcP	12 36 15.1	-0.4
BRTR	Keskin Array B	54.35	63	LR	LR	12 55 40.6	
	comp=Z,134nm,20.8s,MS4.0,baz=316,slow=33						
SDCO	Great Sand Dun	54.46	294	eP	P	12 35 14.2	+0.1
	comp=Z,2.4nm,1.0s,mb4.1						
SDCO				e		12 35 21.2	
PDAR	Pinedale Array	55.72	301	P	P	12 35 21.9	-1.3
	comp=Z,2.1nm,0.9s,mb4.2,baz=75,slow=7.8,SNR=14						
PDAR				LR	LR	12 58 53.4	
	comp=Z,276nm,20.3s,MS4.3,baz=100,slow=36						
BW06	Boulder Array	55.73	301	eP	P	12 35 22.4	-0.7
	comp=Z,6.4nm,1.0s,mb4.6						
BW06				e		12 35 28.3	
BW06	Boulder Array	55.73	301	eP	P	12 35 22.5	-0.7
YMR	Madison River	56.09	304	eP	P	12 35 25.8	0.0
	comp=Z,9.0nm,0.9s,mb4.8						
YMR				e		12 35 31.9	
YMR	Madison River	56.09	304	eP	P	12 35 25.8	+0.1
ANMO	Albuquerque	56.19	292	eP	P	12 35 27.3	+0.7
	comp=Z,2.0nm,0.8s,mb4.2						
ANMO				e		12 35 33.3	
ANMO	Albuquerque	56.19	292	LR	LR	12 57 17.1	
	comp=Z,422nm,21.5s,MS4.5,baz=262,slow=34						
ANMO	Albuquerque	56.19	292	eP	P	12 35 27.3	+0.7
BOZ	Bozeman (W)	56.23	305	⇓P	P	12 35 25.6	-1.1
	baz=56						
TXAR	Lajitas Array	56.25	284	P	P	12 35 27.1	0.0
	comp=Z,2.0nm,0.9s,mb4.2,baz=83,slow=6.8,SNR=16						
TXAR				LR	LR	12 58 21.3	
	comp=Z,340nm,19.9s,MS4.4,baz=45,slow=35						
D15A	Lincoln	56.40	307	⇓P	P	12 35 26.7	-1.2
	baz=56						
PV01	Paradox Valley	56.59	296	eP	P	12 35 31.5	+2.1
BNM	Barren Site	56.62	291	eP	P	12 35 27.9	-1.8
BNM	Barren Site	56.62	291	eP	P	12 35 28.0	-1.7
E15A	Deer Lodge	56.66	306	⇓P	P	12 35 28.9	-0.9
	baz=56						
F15A	Butte	56.75	306	⇑P	P	12 35 27.7	-2.7
	baz=56						
PV10	Paradox Valley	56.85	296	eP	P	12 35 32.3	+1.0
PV10	Paradox Valley	56.85	296	eP	P	12 35 32.3	+1.0
MVCO	Mesa Verde	56.88	295	eP	P	12 35 32.5	+1.0
	comp=Z,16nm,1.2s,mb4.9						
MVCO	Mesa Verde	56.88	295	⇑P	P	12 35 32.9	+1.4
	baz=57,SNR=6.6						
MVCO	Mesa Verde	56.88	295	eP	P	12 35 32.5	+1.0
	comp=Z,16nm,1.2s,mb4.9						
LAZ	Ladron	56.91	291	eP	P	12 35 31.5	-0.3
LAZ	Ladron	56.91	291	eP	P	12 35 31.5	-0.3
G15A	Dillon	56.96	305	⇑P	P	12 35 31.7	-0.2
	baz=57,SNR=8.7						
C14A	Swan Lake	56.97	308	⇑P	P	12 35 29.9	-2.1
	baz=57						
DLMT	Dillon	56.97	305	eP	P	12 35 32.1	+0.1
	comp=Z,12nm,0.8s,mb5.0						
DLMT	Dillon	56.97	305	eP	P	12 35 32.1	+0.1
	comp=Z,12nm,0.8s,mb5.0						
D14A	Greenough	57.02	307	⇑P	P	12 35 31.2	-1.2
	baz=57						
E14A	Clinton	57.23	307	⇑P	P	12 35 33.8	0.0
	baz=57						
B13A	Whitefish	57.24	309	⇓P	P	12 35 33.7	-0.2
	baz=57,SNR=6.7						
MCMT	McKenzie Canyo	57.31	305	eP	P	12 35 34.7	+0.3
HWUT	Hardware Ranch	57.52	301	eP	P	12 35 35.9	0.0
	comp=Z,9.9nm,1.2s,mb4.7						
HWUT				e		12 35 41.6	
HWUT	Hardware Ranch	57.52	301	eP	P	12 35 35.9	0.0
C13A	Hot Springs	57.53	308	⇑P	P	12 35 35.7	-0.2
	baz=57						
SRU	San Rafael	57.66	298	eP	P	12 35 36.9	-0.1
SRU	San Rafael	57.66	298	eP	P	12 35 36.9	-0.1
ATAH	Atahualpa	57.83	232	LR	LR	12 57 49.0	
	comp=Z,268nm,21.1s,MS4.3,baz=254,slow=33						
F13A	Darby	57.98	306	⇓P	P	12 35 38.9	-0.2
	baz=58						
MMAI	Mount Meron Ar	58.14	70	LR	LR	13 00 19.3	
	comp=Z,70nm,19.5s,MS3.8,baz=290,slow=36						
G13A	Cobalt	58.15	305	⇓P	P	12 35 39.7	-0.6
	baz=58						
M15A	Larsen Ranch,	58.19	301	⇓P	P	12 35 39.8	-0.9
	baz=58						
A11A	Hall Mountain,	58.25	310	⇑P	P	12 35 40.9	0.0
	baz=58						
K14A	Jones Ranch, D	58.31	302	⇓P	P	12 35 41.0	-0.5
	baz=58						
MALT	Malatya	58.34	63	eP	P	12 35 43.9	+2.1
	comp=Z,13nm,1.5s,mb4.7						
MALT				e		12 35 51.7	
MALT	Malatya	58.34	63	eP	P	12 35 43.9	+2.2
H13A	Challis	58.34	305	⇑P	P	12 35 41.8	+0.2
	baz=58						
F12A	Elk City	58.60	306	⇑P	P	12 35 43.2	-0.2
	baz=58,SNR=7.7						
J13A	Cove Ranch, Pi	58.70	303	⇓P	P	12 35 44.8	+0.7
	baz=58						
H12A	Diamond D Ranc	58.75	305	⇑P	P	12 35 44.8	+0.2
	baz=58						
HLID	Hailey	58.80	304	eP	P	12 35 44.9	0.0
	comp=Z,1.1nm,0.8s,mb3.9						
HLID	Hailey	58.80	304	⇑P	P	12 35 44.7	-0.2
	baz=59						
HLID	Hailey	58.80	304	eP	P	12 35 44.9	0.0
	comp=Z,1.1nm,0.8s,mb3.9						
M14A	Sheep Mountain	58.80	301	⇓P	P	12 35 44.8	-0.2
	baz=59						
DUG	Dugway	58.91	300	eP	P	12 35 45.8	+0.1
	comp=Z,11nm,1.4s,mb4.7						
DUG	Dugway	58.91	300	⇑P	P	12 35 46.3	+0.6
	baz=59,SNR=7.5						
DUG	Dugway	58.91	300	eP	P	12 35 45.8	+0.1
	comp=Z,11nm,1.4s,mb4.7						
N14A	Grayback Hills	58.93	300	⇓P	P	12 35 45.7	-0.1
	baz=59						
NEW	Newport	58.95	310	eP	P	12 35 44.9	-1.0
	comp=Z,12nm,0.9s,mb4.9						
NEW				e		12 35 51.3	
NEW	Newport	58.95	310	eP	P	12 35 44.8	-1.1
L13A	Double Diamond	59.01	302	⇓P	P	12 35 46.1	-0.2
	baz=59,SNR=10						
E11A	Bogner Ranch,	59.02	307	⇓P	P	12 35 45.1	-1.2
	baz=59,SNR=8.2						
MSU	Marysvale	59.09	298	eP	P	12 35 47.6	+0.6
MSU	Marysvale	59.09	298	eP	P	12 35 47.6	+0.6
F11A	Grangeville	59.15	307	⇓P	P	12 35 46.1	-1.2
	baz=59						
J12A	Stokes Ranch,	59.38	304	⇓P	P	12 35 48.5	-0.4
	baz=59						
G11A	Walters Elk Ra	59.39	306	⇓P	P	12 35 48.1	-0.9
	baz=59						
D10A	Wagner Farm, O	59.47	308	⇓P	P	12 35 48.4	-1.1
	baz=59						
K12A	Draper Farm, C	59.47	303	⇓P	P	12 35 50.7	+1.1
	baz=59						
H11A	Donnelly	59.47	305	⇓P	P	12 35 48.9	-0.6
	baz=59						
B09A	Rice	59.54	310	⇑P	P	12 35 49.8	-0.1
	baz=59						
LPAZ	La Paz	59.57	216	P	P	12 35 50.4	0.0
	comp=Z,3.7nm,0.9s,mb4.4,baz=5.8,slow=5.2,SNR=12						
A09A	Danville	59.62	311	⇑P	P	12 35 50.7	+0.2
	baz=59						
WUAZ	Wupatki	59.67	294	eP	P	12 35 52.1	+1.0
	comp=Z,11nm,1.3s,mb4.7						
WUAZ				e		12 35 57.7	
WUAZ	Wupatki	59.67	294	⇓P	P	12 35 52.4	+1.3
	baz=59						
WUAZ	Wupatki	59.67	294	eP	P	12 35 52.1	+1.1
L12A	House Creek Ra	59.73	302	⇓P	P	12 35 52.4	+1.1
	baz=60						
T15A	Red Dirt Ranch	59.82	296	⇓P	P	12 35 50.9	-1.1
	baz=60						
M12A	Wells	59.93	302	⇑P	P	12 35 53.2	+0.4
	baz=60,SNR=6.4						
S14A	Cedar City	60.10	297	⇑P	P	12 35 54.7	+0.7
	baz=60						
K11A	Parker Ranch,	60.19	303	⇑P	P	12 35 55.0	+0.5
	baz=60						
E09A	Wood Farm, Sta	60.22	308	⇓P	P	12 35 54.6	0.0
	baz=60						
INK	Inuvik	60.23	335	LR	LR	12 58 04.4	
	comp=Z,136nm,21.4s,MS4.1,baz=102,slow=32						
L11A	Cat Creek Ranc	60.23	303	⇓P	P	12 35 56.0	+1.3
	baz=60						
O12A	Currie	60.25	300	⇓P	P	12 35 54.7	-0.2
	baz=60						
ARUT	Antelope Range	60.28	297	eP	P	12 35 54.5	-0.8
ARUT				e		12 36 06.5	
ARUT	Antelope Range	60.28	297	eP	P	12 35 54.5	-0.7
C08A	Higginbotham F	60.33	310	⇑P	P	12 35 53.9	-1.5
	baz=60						
M11A	Holland Ranch,	60.53	302	⇓P	P	12 35 57.3	+0.5
	baz=60,SNR=5.8						
U14A	Mt Trumbull	60.65	296	⇓P	P	12 35 57.7	0.0
	baz=60						
S13A	Holt Ranch, En	60.67	297	⇓P	P	12 35 58.4	+0.5
	baz=60						
P12A	McGill	60.67	300	⇑P	P	12 35 58.4	+0.6
	baz=60						
A07A	Ashnola River,	60.71	311	⇓P	P	12 35 58.5	+0.6
	baz=60						
L10A	Juniper Basin	60.76	303	⇓P	P	12 35 58.8	+0.4
	baz=60						
K10A	MacKenzie Ranc	60.76	304	⇑P	P	12 35 59.8	+1.4
	baz=60						
Q12A	Willow Creek R	60.79	299	⇑P	P	12 35 59.9	+1.2
	baz=61						
E08A	Dider Farm, El	60.81	308	⇑P	P	12 35 59.1	+0.4
	baz=61						
I09A	Lost Marbles R	60.89	305	⇑P	P	12 35 59.3	0.0
	baz=61						
R12A	Pony Springs,	60.91	298	⇑P	P	12 35 58.3	-1.2
	baz=61						
O11A	Cowboy Ranch,	60.95	300	⇓P	P	12 36 00.5	+0.8
	baz=61						
W14A	Seligman	61.07	294	⇓P	P	12 36 02.5	+1.9
	baz=61						
D07A	Quincy	61.13	309	⇑P	P	12 36 01.0	+0.1
	baz=61						
J09A	Fry Pan Ranch,	61.14	305	⇓P	P	12 36 02.0	+1.1
	baz=61,SNR=11						
HAWA	Hanford	61.15	308	eP	P	12 36 01.4	+0.4
	comp=Z,6.1nm,0.9s,mb4.7						
HAWA				e		12 36 07.0	
HAWA	Hanford	61.15	308	eP	P	12 36 01.4	+0.4
U13A	Pakoon Wash	61.22	296	⇓P	P	12 36 03.1	+1.4
	baz=61						
X14A	Yava	61.23	294	⇑P	P	12 36 03.4	+1.6
	baz=61						
H08A	Prairie City	61.30	306	⇑P	P	12 36 01.9	-0.1
	baz=61						
K09A	Rome	61.37	304	⇓P	P	12 36 02.4	-0.1
	baz=61						
Q11A	Duckwater	61.46	299	⇓P	P	12 36 03.4	+0.2
	baz=61						
I08A	Drewsey	61.47	305	⇓P	P	12 36 03.7	+0.5
	baz=61						
L09A	Wilkinson Ranc	61.60	303	⇑P	P	12 36 04.6	+0.5
	baz=61,SNR=6.8						
R11A	Troy Canyon, C	61.61	299	⇑P	P	12 36 05.0	+0.8
	baz=61						
J08A	Circle Bar Ran	61.62	305	⇓P	P	12 36 06.0	+1.8
	baz=61						
T11A	Corn Creek, Al	61.80	297	⇑P	P	12 36 06.5	+1.0
	baz=62						
H07A	Lands Inn, Kim	61.86	306	⇓P	P	12 36 06.6	+0.7
	baz=62,SNR=6.0						
K08A	Mann Creek Ran	61.88	304	⇓P	P	12 36 06.8	+0.9
	baz=62,SNR=5.5						
X13A	Yucca	61.88	294	⇓P	P	12 36 06.0	-0.1
	baz=62						
L08A	Fields	61.99	304	⇑P	P	12 36 07.5	+0.8
	baz=62,SNR=12						
O09A	Fish Creek Ran	62.01	301	⇑P	P	12 36 07.3	+0.5
	baz=62						
E06A	Yakima	62.02	309	⇑P	P	12 36 06.6	-0.2
	baz=62						
Y13A	Salome	62.22	293	⇓P	P	12 36 07.8	-0.6
	baz=62						
S10A	Tonopah Range,	62.51	299	⇓P	P	12 36 09.8	-0.5
	baz=62,SNR=7.8						
TPNV	Topopah Spring	62.67	297	eP	P	12 36 11.2	-0.2
	comp=Z,5.0nm,1.3s,mb4.5						
TPNV	Topopah Spring	62.67	297	eP	P	12 36 11.2	-0.2
	comp=Z,4.9nm,1.3s,mb4.5						
J05A	Fort Rock	63.49	306	⇑P	P	12 36 17.7	+0.9
	baz=63,SNR=6.6						
K05A	Summer Lake	63.50	305	⇓P	P	12 36 17.5	+0.7
	baz=63,SNR=6.6						
NVAR	Mina Array Bea	63.52	300	P	P	12 36 16.2	-0.8
	comp=Z,1.0nm,0.7s,mb4.0,baz=75,slow=7.4,SNR=9.9						
BBB	Bella Bella	64.02	317	LR	LR	13 04 07.2	
	comp=Z,295nm,19.0s,MS4.5,baz=346,slow=36						
R07C	Lee Vining	64.19	300	⇓P	P	12 36 21.6	+0.2
	baz=64,SNR=6.0						
PFO	Pinyon Flat Ob	64.27	294	LR	LR	13 02 41.0	
	comp=Z,325nm,20.8s,MS4.5,baz=292,slow=34						
ELFS	Eagle Lake Fie	64.28	303	⇑P	P	12 36 22.1	+0.2
	baz=64,SNR=8.9						
O04C	Chester	64.65	303	⇑P	P	12 36 25.1	+0.7
	baz=64,SNR=5.8						
PMR	Palmer	69.25	332	eP	P	12 36 53.0	-0.3
	comp=Z,10nm,1.3s,mb4.6						
PMR	Palmer	69.25	332	eP	P	12 36 53.0	-0.3
	comp=Z,10nm,1.3s,mb4.6						
KDAK	Kodiak Island	72.99	330	LR	LR	13 10 36.4	
	comp=Z,212nm,19.9s,MS4.4,baz=10.0,slow=37						
KMBO	Kilima Mbogo	77.29	101	LR	LR	13 08 09.7	
	comp=Z,145nm,20.9s,MS4.3,baz=277,slow=33						
AML	Almayashu	79.81	45	eP	P	12 37 55.5	+0.6
	comp=Z,6.0nm,1.3s,mb4.4						
AML	Almayashu	79.81	45	eP	P	12 37 55.5	+0.5
	comp=Z,6.0nm,1.3s,mb4.4						
MKAR	Makanchi Array	81.39	38	P	P	12 38 02.1	-1.3
	comp=Z,0.5nm,0.8s,mb3.5,baz=333,slow=4.5,SNR=5.2						
MKAR				LR	LR	13 13 54.6	
	comp=Z,145nm,20.4s,MS4.3,baz=350,slow=36						
BOSA	Boshof	86.11	129	LR	LR	13 14 07.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,216nm,21.4s,MS4.5,baz=222,slow=34						
WMQ	Urumqi	86.19	37	⇑P	P	12 38 29.1	+1.1
WMQ				AP	pP	12 38 33.1	+1.8
WMQ				XP	sP	12 38 36.1	+3.6
WMQ				PP	PP	12 41 52.1	+4.3
WMQ				SKS		12 48 51.7	
WMQ				eS	S	12 49 02.6	-0.2
WMQ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.8						
WMQ				LR	LR		
	comp=N,75nm,19.0s,MS4.3						
WMQ				LR	LR		
	comp=E,100nm,19.5s,MS4.3						
WMQ				LR	LR		
	comp=Z,132nm,18.4s,MS4.4						
HHC	Hu-ho-hao-te	98.62	24	eP	P	12 39 25.6	-0.1
HHC				AP	pP	12 39 30.0	+0.9
HHC				XP	sP	12 39 32.3	+2.0
HHC				PP	PP	12 43 27.1	+1.7
HHC				SKS		12 50 02.0	
HHC				S	S	12 50 49.5	-5.5
HHC				SS	SS	12 57 37.9	-0.4
HHC				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,175nm,4.8s						
HHC				LR	LR		
	comp=N,300nm,15.5s,MS5.2						
HHC				LR	LR		
	comp=E,465nm,16.7s,MS5.2						
HHC				LR	LR		
	comp=Z,164nm,15.5s,MS4.6						
MDJ	Mudanjiang	99.39	10	P	P	12 39 28.0	-1.1
MDJ				AMB	AMB		
	comp=Z,13nm,1.8s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,184nm,5.9s						
LZH	Lanzhou	99.82	32	eP	Pdif	12 39 32.0	+0.9
LZH				AP		12 39 35.5	
LZH				AMB	AMB		
	comp=Z,15nm,1.1s,mb5.3						
LZH	Lanzhou	99.82	32	eP	Pdif	12 39 32.0	+0.9
	comp=Z,15nm,1.1s						
LZH				pP		12 39 34.0	
LZH				sP		12 39 35.5	
LZH	Lanzhou	99.82	32	eP	Pdif	12 39 32.0	+0.9
	comp=Z,15nm,1.1s						
LZH				pP		12 39 34.0	
KMI	Kunming	108.45	39	P	PKiKP	12 44 14.0	-1.7
GYA	Guiyang	109.26	35	ePDIF	Pdif	12 40 13.0	0.0
GYA				PKP	PKiKP	12 44 16.8	-0.3
GYA				PP	PP	12 44 49.5	+4.4
GYA				PKS		12 47 52.3	
GYA				S	Sdif	12 52 20.3	-3.5
GYA				SS	SS	13 00 05.7	+0.6
GYA				PP	PP		
	comp=Z,110nm,8.4s						
GYA				LR	LR		
	comp=N,340nm,20.0s,MS5.0						
GYA				LR	LR		
	comp=E,210nm,21.6s,MS5.0						
GYA				LR	LR		
	comp=Z,470nm,20.2s,MS5.0						

IDC 04 12:28:24.1±1.8**,3381N**×**3843W,h0**km**,mb3.9**/8**, mb1 4.1**/8**,mb1mx3.7**/23**,mbtmp3.9**/8**,Error ellipse: s-maj=42.8km s-min=29.1km az=151.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	28.90	325	P	P	12 34 25.5	+1.1
	1.8nm,0.8s,baz=159,slow=14,SNR=2.8						
SDV	Santo Domingo	38.63	238	P	P	12 35 50.0	+0.7
	4.9nm,0.9s,baz=55,slow=11,SNR=4.6						
ULM	Lac du Bonnet	44.58	310	P	P	12 36 37.0	-0.7
	2.4nm,0.6s,baz=86,slow=8.0,SNR=7.4						
AKASG	Malin Array Be	51.04	49	P	P	12 37 27.6	-0.2
	1.7nm,0.8s,baz=273,slow=7.0,SNR=6.3						
YKA	Yellowknife Ar	54.34	326	P	P	12 37 52.5	+0.5
	1.1nm,1.0s,baz=82,slow=7.7,SNR=6.0						
TXAR	Lajitas Array	54.94	284	P	P	12 37 57.0	+0.1
	0.2nm,0.7s,baz=72,slow=8.6,SNR=3.0						
PDAR	Pinedale Array	55.04	302	P	P	12 37 57.0	-0.3
	0.5nm,0.6s,baz=68,slow=7.2,SNR=3.8						
NVAR	Mina Array Bea	62.76	300	P	P	12 38 50.6	-0.5
	0.2nm,0.7s,baz=76,slow=7.4,SNR=3.7						

IDC 04 12:36:16.2±1.2**,156S**×**12624E,h0**km**,mb3.8**/4**,mb1 3.9**/5**, mb1mx3.7**/17**,mbtmp3.8**/5**,ML3.8**/1**,Error ellipse: s-maj=130.8km s-min=19.6km az=67.0,Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.91	157	P	Pn	12 40 48.0	-3.2
	0.3nm,0.3s,baz=336,slow=11,SNR=25						
ASAR	Alice Springs	23.20	162	P	P	12 41 24.9	+0.1
	1.6nm,0.6s,baz=342,slow=11,SNR=25						
STKA	Stephens Creek	33.45	156	P	P	12 42 58.5	+1.4
	1.1nm,0.7s,baz=333,slow=14,SNR=2.8						
SONM	Songino Array	52.16	343	P	P	12 45 28.7	+0.2
	0.4nm,0.7s,baz=159,slow=8.1,SNR=3.5						
MKAR	Makanchi Array	61.65	327	P	P	12 46 35.8	-0.1
	0.9nm,0.3s,baz=114,slow=7.9,SNR=24						

*IDC **04** 12:44:01.6±5.5,3623N×7144E,h64km±47km,mb3.8/12, mb1 3.9/14,mb1mx3.7/24,mbtmp3.8/14,ML3.8/2,Error ellipse: s-maj=29.2km s-min=19.2km az=21.0*

*BJI **04** 12:44:02.6,3633N×7131E,h64km,mb3.9,ML4.1*

*ISCJB **04** 12:44:03.9±0.5,3637N±002×7145E±005,h101km±7km, mb4.1/19,Error ellipse: s-maj=7.0km s-min=3.8km az=172.9*

*NEIC **04** 12:44:03.1±1.2,3624N×7135E,h78km±11km,mb4.3/6, Error ellipse: s-maj=14.9km s-min=5.2km az=53.0*

*NNC **04** 12:44:08.2±11.0,3679N×7052E,h88km±175km,mb3.8, mpv4.4,Error ellipse: s-maj=89.3km s-min=61.7km az=11.0*

ISC 04 12:44:05.7±0.4**,3637N**±002×**7145E**±005**,h103**km±6km**, n76,**σ**1s24**/90**,mb4.1**/19**,3C-7D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.57	172	⇓P	Pn	12 44 49.0	+3.2
THW	Thamme Wali	3.58	176	P	Pn	12 45 01.4	+2.2
SBDP	Sheikh Budin	4.10	188	P	Pn	12 45 07.5	+1.3
DRP	Derazinda	4.73	193	P	Pn	12 45 16.5	+1.7
DRP				S	Sn	12 46 07.0	-1.5
KSH	Kashi	4.75	47	P	Pn	12 45 18.5	+3.5
KSH				S	Sn	12 46 09.8	+0.8
KSH				Smax			
	comp=N,1μm,0.8s						
KSH				Smax			
	comp=E,1μm,0.6s						
THN	Thein Dam	5.28	137	eP	Pn	12 45 24.6	+2.5
THN				eS	Sn	12 46 24.5	+2.8
DLH	Dalhousie	5.34	134	eP	Pn	12 45 23.0	+0.1
DLH				eS	Sn	12 46 23.0	-0.2
AML	Almayashu	6.01	16	ePn	Pn	12 45 32.2	+0.2
AML				eSn	Sn	12 46 37.7	-1.6
AML	Almayashu	6.01	16	P	Pn	12 45 32.3	+0.4
	SNR=380						
UCH	Uchtor	6.31	21	ePn	Pn	12 45 36.6	+0.5
	comp=E,31nm,0.4s						
UCH				eSn	Sn	12 46 44.1	-2.6
UCH	Uchtor	6.31	21	P	Pn	12 45 36.4	+0.3
	SNR=69						
KZA	Kyzart	6.41	26	P	Pn	12 45 37.9	+0.4
	SNR=48						
EKS2	Erkin-Say	6.53	15	ePn	Pn	12 45 39.2	+0.1
	comp=E,30nm,0.4s						
EKS2	Erkin-Say	6.53	15	P	Pn	12 45 39.4	+0.3
	SNR=60						
SDNR	Sundarnagar	6.68	135	eP	Pn	12 45 42.4	+1.2
SDNR				eS	Sn	12 46 55.0	-0.8
AAK	Ala-Archa	6.68	20	ePn	Pn	12 45 40.7	-0.4
	comp=E,63nm,0.4s						
AAK	Ala-Archa	6.68	20	P	Pn	12 45 41.8	+0.7
	SNR=122						
KK31	Karatay Array	6.76	354	⇓P	Pn	12 45 40.6	-1.6
	comp=E,72nm,0.3s,baz=177,slow=12,SNR=2153						
KK31				⇑S	Sn	12 46 51.4	-6.3
	comp=E,22nm,0.3s,baz=188,slow=26						
KBK	Karagaybulak	6.83	22	P	Pn	12 45 43.6	+0.4
	SNR=31						
ULHL	Ulahol	6.94	31	P	Pn	12 45 46.2	+1.5
	SNR=16						
CHMS	Chumysh	7.09	20	P	Pn	12 45 46.9	+0.2
	SNR=27						
USP	Ospenovka	7.27	18	P	Pn	12 45 48.6	-0.6
	SNR=62						
TKM2	Tokmak 2	7.28	25	⇓P	Pn	12 45 50.0	+0.7
	comp=E,2.0nm,0.5s						
TKM2				⇓S	Sn	12 47 10.5	+0.3
	comp=E,1.2nm,0.8s						
TKM2	Tokmak 2	7.28	25	ePn	Pn	12 45 49.6	+0.4
TKM2	Tokmak 2	7.28	25	P	Pn	12 45 49.9	+0.7
	SNR=65						
JOSI	Joshimath	8.91	128	eP	Pn	12 46 13.1	+1.6
JOSI				eS	Sn	12 47 47.5	-2.7
JOSI				AML	AML	12 47 56.1	
	comp=N,185nm,1.0s						
JOSI				AML	AML	12 47 59.5	
	comp=E,159nm,0.8s						
KHET	Khetri	9.06	155	eP	Pn	12 46 12.2	-1.3
KHET				eS	Sn	12 47 45.9	-7.7
KUDL	Kundal	9.24	151	eP	Pn	12 46 15.0	-1.1
KUDL				eS	Sn	12 47 51.0	-7.2
SONA	Sohna	9.39	148	eP	Pn	12 46 17.2	-0.9
SONA				eS	Sn	12 47 56.1	-5.7
SONA				AML	AML	12 48 01.8	
	comp=E,41nm,0.3s						
SONA				AML	AML	12 48 02.9	
	comp=N,38nm,0.3s						
AGRA	Agra	10.65	147	eP	Pn	12 46 33.2	-1.9
AGRA				eS	Sn	12 48 25.1	-7.3
AGRA				AML	AML	12 48 34.0	
	comp=E,94nm,0.4s						
AGRA				AML	AML	12 48 34.8	
	comp=N,63nm,0.5s						
MK31	Makanchi Array	13.19	34	⇓P	Pn	12 47 14.1	+5.4
	comp=N,2.4nm,0.7s,baz=207,slow=11,SNR=16						
MKAR	Makanchi Array	13.19	34	P	Pn	12 47 08.7	0.0
	comp=N,0.1nm,0.3s,baz=219,slow=12,SNR=9.7						
GKN	Gorkha	13.93	123	eP	Pn	12 47 16.6	-1.9
	comp=N,77nm,0.4s						
GKN	Gorkha	13.93	123	eP	Pn	12 47 16.5	-2.0
	comp=N,77nm,0.4s						
GKN	Gorkha	13.93	123	eP	Pn	12 47 16.5	-2.0
	comp=N,77nm,0.4s						
KKN	Kakani	14.50	122	eP	Pn	12 47 24.3	-1.5
	comp=N,33nm,0.4s						
KKN	Kakani	14.50	122	eP	Pn	12 47 24.3	-1.5
	comp=N,33nm,0.4s						
JIRN	Jiri	15.21	121	eP	Pn	12 47 33.5	-1.3
	comp=N,48nm,0.3s						
JIRN	Jiri	15.21	121	eP	Pn	12 47 33.6	-1.2
	comp=N,48nm,0.3s						
KURK	Kurchatov	15.24	18	⇑P	Pn	12 47 36.0	+0.9
	comp=N,2.9nm,1.2s						
AB31	Akbulak array	15.37	330	⇑P	Pn	12 47 32.2	-4.5
	comp=N,4.3nm,0.3s						
AB31				⇓S	S	12 50 11.6	-24
	comp=N,2.3nm,0.5s						
TAPN	Taplejung	16.46	119	eP	Pn	12 47 49.1	-1.4
	comp=N,74nm,0.6s						
TAPN	Taplejung	16.46	119	eP	Pn	12 47 49.1	-1.4
	comp=N,74nm,0.6s						
ODAN	Odare	16.54	120	eP	Pn	12 47 48.7	-2.7
	comp=N,19nm,0.5s						
ODAN	Odare	16.54	120	eP	Pn	12 47 49.9	-1.5
	comp=N,19nm,0.5s						
ODAN	Odare	16.54	120	eP	Pn	12 47 49.9	-1.5
	comp=N,19nm,0.5s						
BRVK	Borovoye	16.71	358	⇓P	Pn	12 47 51.0	-2.2
	comp=N,1.8nm,1.2s						
BRVK	Borovoye	16.71	358	eP	Pn	12 47 52.2	-1.0
	comp=N,3.1nm,0.5s						
AKTK	Aktyubinsk	17.07	330	P	Pn	12 47 56.0	-1.8
AKTO	Aktyubinsk	17.07	330	P	Pn	12 47 56.0	-1.8
	comp=N,1.7nm,0.3s,baz=141,slow=13,SNR=24						
LSA	Lhasa	17.79	106	P	Pn	12 48 08.4	+1.8
LSA	Lhasa	17.79	106	eP	Pn	12 48 08.0	+1.4
	comp=N,4.2nm,0.8s						
ZALV	Zalesovo Beam	19.88	24	P	P	12 48 28.2	-0.3
	comp=N,9.5nm,0.3s,baz=207,slow=10,SNR=73						
QRN	Al-Qurain	21.21	256	eP	P	12 48 43.9	+0.8
QRN				AMb	AMB	12 48 45.8	
	comp=Z,15nm,0.4s,mb4.7						
RDF	Al-Radifah	21.42	257	eP	P	12 48 44.6	-0.7
RDF				AMb	AMB	12 48 46.2	
	comp=Z,19nm,1.0s,mb4.4						
NAY	Al-Naaiem	21.52	258	eP	P	12 48 45.5	-0.9
NAY				AMb	AMB	12 48 49.0	
	comp=Z,7.9nm,0.6s,mb4.2						
RST	Umm Al-Ruwaisa	21.61	259	eP	P	12 48 45.6	-1.7
RST				AMb	AMB	12 48 47.4	
	comp=Z,14nm,0.7s,mb4.4						
ARU	Arti	21.87	341	eP	P	12 48 50.6	+0.7
	comp=Z,4.4nm,0.5s,mb4.0						
GTA	Gaotai	22.55	74	P	P	12 49 01.4	+4.2
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb3.8						
AKASG	Malin Array Be	33.31	309	P	P	12 50 33.6	+0.3
	comp=Z,3.1nm,0.6s,mb4.3,baz=79,slow=7.5,SNR=16						
JOF	Joensuu	36.16	330	ep	P	12 50 57.9	+0.2
	comp=Z,7.0nm,0.3s,mb5.1						
FINES	FINESS Array B	37.79	326	P	P	12 51 12.3	+0.7
FINES	FINESS Array B	37.79	326	P	P	12 51 12.3	+0.7
	comp=Z,1.5nm,0.3s,mb4.3,baz=122,slow=8.7,SNR=24						
KAF	Kangasniemi	37.93	327	ep	P	12 51 13.4	+0.7
	baz=111,slow=8.6						
KEV	Kevo	41.06	338	ep	P	12 51 38.5	0.0
	comp=Z,18nm,1.0s,mb4.9						
ARCES	ARCESS Array B	41.40	338	P	P	12 51 42.1	+0.8
	comp=Z,3.2nm,0.4s,mb4.5,baz=118,slow=9.1,SNR=49						
GERES	GERESS Array B	43.30	305	P	P	12 51 58.2	+1.2
	comp=Z,0.3nm,0.7s,mb3.1,baz=106,slow=6.2,SNR=3.3						
NB2	NORSAR Subarra	44.70	323	P	P	12 52 07.8	-0.2
	comp=Z,5.7nm,0.6s,mb4.5,baz=95,slow=7.9						
NOA	NORSAR Array B	44.70	323	P	P	12 52 08.1	0.0
NOA	NORSAR Array B	44.70	323	P	P	12 52 08.1	+0.1
	comp=Z,8.0nm,0.8s,mb4.5,baz=96,slow=7.8,SNR=34						
TORD	Torodi Ar. Bea	66.08	269	P	P	12 54 41.5	-0.4
	comp=Z,1.6nm,0.4s,mb4.2,baz=50,slow=5.8,SNR=20						
INK	Inuvik	73.97	9	P	P	12 55 30.2	+0.9
	comp=Z,1.0nm,0.5s,mb3.8,baz=320,slow=5.0,SNR=5.2						
YKA	Yellowknife Ar	81.36	3	P	P	12 56 10.8	+0.4
	comp=Z,0.7nm,0.5s,mb3.8,baz=351,slow=5.5,SNR=22						
WRA	Warramunga Arr	81.61	122	P	P	12 56 12.4	+0.1
	comp=Z,0.3nm,0.4s,mb3.5,baz=325,slow=5.0,SNR=7.0						
SCHQ	Schefferville	82.36	337	P	P	12 56 18.0	+2.2
	comp=Z,1.8nm,1.1s,mb3.8,baz=59,slow=5.9,SNR=3.3						
ASAR	Alice Springs	83.88	125	P	P	12 56 24.4	+0.3
	comp=Z,0.2nm,0.8s,mb3.0,baz=312,slow=4.7,SNR=5.1						

IDC 04 12:49:39.8±4.4**,1745S**×**7209W,h94**km±31km**,mb3.6**/8**, mb1 3.8**/11**,mb1mx3.7**/18**,mbtmp3.7**/11**,MS4.1**/2**, Ms1 4.2**/2**,ms1mx3.4**/21**,Error ellipse: s-maj=55.2km s-min=20.9km az=31.0,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.96	74	P	Pn	12 50 39.5	+1.1
	4.5nm,0.3s,baz=261,slow=7.6,SNR=35						
NNA	Nana	7.12	319	P	Pn	12 51 12.0	-9.3
	5.0nm,0.3s,baz=132,slow=10,SNR=8.8						
NNA				S	Sn	12 52 28.0	-13
	5.4nm,0.3s,baz=144,slow=20,SNR=2.3						
SIV	San Ignacio	10.65	84	P	Pn	12 52 08.9	-0.6
	2.0nm,0.3s,baz=273,slow=10,SNR=39						
SIV				S	Sn	12 54 15.2	+8.3
	baz=343,slow=19,SNR=2.2						
ATAH	Atahualpa	12.07	329	P	Pn	12 52 28.0	-0.7
	0.4nm,0.3s,baz=210,slow=3.3,SNR=5.6						
ATAH				S	Sn	12 54 51.9	+10
	0.2nm,0.3s,baz=17,slow=20,SNR=2.4						
CFAA	Coronel Fontan	14.52	167	P	Pn	12 52 50.6	-10
	0.1nm,0.3s,baz=339,slow=12,SNR=9.9						
CFAA				LR	LR	12 58 08.7	
	comp=Z,24nm,18.1s,baz=93,slow=35						
ROSC	El Rosal	22.27	354	P	P	12 54 30.2	+0.8
	5.1nm,0.4s,baz=73,slow=19,SNR=2.5						
SDV	Santo Domingo	26.20	3	P	P	12 55 06.4	+0.5
	1.7nm,0.5s,baz=307,slow=10,SNR=2.7						
PCRV	Puerto La Cruz	28.42	16	LR	LR	13 07 51.3	
	comp=Z,253nm,18.6s,baz=193,slow=38						
TXAR	Lajitas Array	55.61	326	P	P	12 59 05.4	-0.6
	0.2nm,0.5s,baz=163,slow=13,SNR=3.9						
ANMO	Albuquerque	61.49	328	P	P	12 59 47.5	+0.7
	0.2nm,0.3s,baz=90,slow=6.1,SNR=3.6						
PDAR	Pinedale Array	69.13	331	P	P	13 00 36.2	+0.3
	0.2nm,0.8s,baz=113,slow=4.2,SNR=2.6						
NVAR	Mina Array Bea	70.47	323	P	P	13 00 43.3	-1.0
	0.4nm,0.7s,baz=177,slow=6.0,SNR=3.7						
TORD	Torodi Ar. Bea	78.91	72	P	P	13 01 33.2	-0.3
	1.2nm,0.6s,baz=253,slow=5.4,SNR=10						
VNDA	Vanda	80.29	190	LR	LR	13 37 19.3	
	comp=Z,166nm,18.2s,baz=194,slow=36						
YKA	Yellowknife Ar	86.40	342	P	P	13 02 10.8	-0.5
	2.1nm,0.7s,baz=137,slow=4.9,SNR=54						
WRA	Warramunga Arr	134.68	216	PKP	PKPdf	13 08 47.4	-0.9
	0.4nm,0.8s,baz=131,slow=2.1,SNR=2.8						
ZALV	Zalesovo Beam	139.41	21	PKP	PKPdf	13 08 56.5	+0.5
	0.6nm,0.5s,baz=275,slow=3.1,SNR=4.8						
MKAR	Makanchi Array	143.89	30	PKP	PKPdf	13 09 02.8	-1.5
	0.4nm,0.8s,baz=347,slow=3.7,SNR=4.3						
MJAR	Matsushiro Arr	147.19	311	PKPbc	PKPbc	13 09 13.3	+0.8
	1.7nm,0.7s,baz=94,slow=1.5,SNR=5.0						
SONM	Songino Array	149.67	2	PKPbc	PKPbc	13 09 19.9	+1.3
	0.6nm,0.7s,baz=334,slow=1.8,SNR=4.9						

*NEIC **04** 12:58:40.3,1433N×9309W,h20km,MD4.2(MEX),After MEX.*

MEX 04 12:58:40.4±0.3**,1434N**×**9308W,h22**km±999km**,MD4.2, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	2.14	25	i P	Pn	12 59 11.8	-3.1
CCIG				i S	Sn	12 59 37.6	-3.1
SCX	San Cristobal	2.42	10	i P	Pn	12 59 17.5	-1.3
CMIG	Matias Romero	3.25	328	i P	Pn	12 59 27.8	-2.3
CMIG				i S	Sn	13 00 04.5	-3.5
VHO	Vista Hermosa	4.45	308	i P	Pn	12 59 42.5	-4.1
VHO				i S	Sn	13 00 35.5	-2.3
VHO	Vista Hermosa	4.45	308	i P	Pn	12 59 45.4	-1.2
VHO				i S	Sn	13 00 35.5	-2.3
UTMO	Huajuapan	5.72	308	i P	Pn	13 00 02.5	-1.6
UTMO				i S	Sn	13 01 06.5	-2.6
PPM	Popocatepetl	7.10	312	i P	Pn	13 00 27.8	+4.8
PPM				i S	Sn	13 01 47.9	+4.8
PPM	Popocatepetl	7.10	312	i P	Pn	13 00 21.3	-1.7
PPM				i S	Sn	13 01 42.0	-1.1

*IDC **04** 12:58:57.6±3.8,585S×15106E,h27km±22km,mb3.9/8, mb1 4.1/9,mb1mx4.0/14,mbtmp3.9/9,ML3.0/1,Error ellipse: s-maj=44.1km s-min=18.6km az=116.0*

*ISCJB **04** 12:59:00.1±4.1,59S±02×1509E±03,h62km±33km, mb3.9/8,Error ellipse: s-maj=44.7km s-min=22.9km az=22.7*

ISC 04 12:59:01.4±3.9**,59S**±02×**1510E**±03**,h60**km±31km**,n13,** σ**0s34**/11**,mb3.9**/8**,1C,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.14	228	Pn	Pn	13 00 16.2	+0.3
	3.8nm,0.3s,baz=50,slow=12,SNR=15						
PMG				Sn	Sn	13 01 13.5	-0.4
	15nm,0.3s,baz=223,slow=20,SNR=12						
WB2	Warramunga Arr	21.36	228	⇑i P	P	13 03 44.0	+0.2
WRA	Warramunga Arr	21.36	228	P	P	13 03 44.2	+0.2
	6.3nm,0.5s,mb4.2,baz=53,slow=10,SNR=107						
WRA				PcP	PcP	13 07 47.2	+1.0
	0.3nm,0.5s,baz=44,slow=2.0,SNR=9.4						
WRA				ScP	ScP	13 11 21.6	+3.4
	0.3nm,0.6s,baz=58,slow=2.8,SNR=5.6						
ASAR	Alice Springs	24.12	221	P	P	13 04 12.2	+0.5
	10nm,0.7s,mb4.4,baz=56,slow=9.4,SNR=145						
ASAR				ScP	ScP	13 11 29.5	+4.2
	0.7nm,0.9s,baz=45,slow=3.2,SNR=4.7						
STKA	Stephens Creek	27.28	198	P	P	13 04 39.9	-0.3
	2.4nm,0.7s,mb3.8,baz=3.3,slow=13,SNR=4.1						
FITZ	Fitzroy Crossi	27.55	242	P	P	13 04 42.9	0.0
	2.3nm,0.5s,mb4.1,baz=49,slow=11,SNR=9.4						
SONM	Songino Array	66.34	329	P	P	13 09 44.1	+0.4
	0.7nm,0.5s,mb3.9,baz=147,slow=4.9,SNR=4.4						
MKAR	Makanchi Array	80.00	319	P	P	13 11 04.4	+0.1
	0.5nm,0.8s,mb3.5,baz=107,slow=6.4,SNR=5.0						
ZALV	Zalesovo Beam	81.10	327	P	P	13 11 09.4	-0.6
	0.7nm,0.6s,mb3.8,baz=125,slow=6.8,SNR=3.6						
YKA	Yellowknife Ar	97.25	28	P	P	13 12 27.1	-0.3
	0.2nm,0.5s,mb3.9,baz=275,slow=4.4,SNR=5.2						
PDAR	Pinedale Array	100.92	48	P	Pdif	13 12 44.1	+0.1
	0.5nm,0.7s,baz=280,slow=2.3,SNR=4.6						
GERES	GERESS Array B	124.05	327	PKP	PKPdf	13 17 53.8	+0.7
	0.5nm,0.4s,baz=75,slow=1.5,SNR=7.9						
TORD	Torodi Ar. Bea	148.92	286	PKPbc	PKPbc	13 18 43.6	+0.1
	8.6nm,0.7s,baz=59,slow=3.1,SNR=45						

IDC 04 13:19:40.4±2.1**,062S**×**12852E,h0**km**,mb3.1**/3**,mb1 3.3**/3**, mb1mx3.2**/16**,mbtmp3.2**/3**,Error ellipse: s-maj=143.5km s-min=26.8km az=68.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.03	164	P	P	13 24 15.4	+0.4
	0.5nm,0.9s,baz=344,slow=11,SNR=3.8						
ASAR	Alice Springs	23.50	168	P	P	13 24 51.9	-0.3
	0.6nm,0.9s,baz=342,slow=11,SNR=5.2						
MKAR	Makanchi Array	62.13	326	P	P	13 30 03.3	+0.1
	0.4nm,0.7s,baz=110,slow=7.7,SNR=5.7						

*NEIC **04** 13:22:56.2,3847S×17589E,h169km,MG4.2(WEL),After WEL.*

WEL 04 13:22:56.7±0.2**,3848S**×**17589E,h166**km±1km**,ML4.2**/24**, Error ellipse: s-maj=1.2km s-min=1.2km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTZ	Whakaora	0.20	164	P	Pn	13 23 19.1	+0.3
WHTZ	Whakaora	0.20	164	PN	Pn	13 23 19.1	+0.3
WATZ	Wairara	0.26	208	P	Pn	13 23 19.1	+0.2
WATZ	Wairara	0.26	208	PN	Pn	13 23 19.1	+0.2
PATZ	Paeroa	0.31	71	P	Pn	13 23 19.3	+0.3
PATZ	Paeroa	0.31	71	PN	Pn	13 23 19.3	+0.3
RATZ	Rangitukua	0.40	193	P	Pn	13 23 19.4	+0.1
RATZ	Rangitukua	0.40	193	PN	Pn	13 23 19.4	0.0
HATZ	Hinemaiaia	0.44	159	P	Pn	13 23 19.4	-0.1
HATZ	Hinemaiaia	0.44	159	PN	Pn	13 23 19.4	-0.1
HATZ				SN	Sn	13 23 36.1	-1.0
RITZ	Rihia Road	0.50	183	P	Pn	13 23 20.2	+0.5
RITZ	Rihia Road	0.50	183	PN	Pn	13 23 20.2	+0.4
KATZ	Kakaramea	0.52	197	P	Pn	13 23 20.0	+0.2
KATZ	Kakaramea	0.52	197	PN	Pn	13 23 20.0	+0.1
KARZ	Kaharoa	0.54	32	P	Pn	13 23 20.0	0.0
KARZ	Kaharoa	0.54	32	PN	Pn	13 23 20.0	0.0
TAZ	Tarawera	0.55	63	P	Pn	13 23 19.8	-0.2
TAZ	Tarawera	0.55	63	PN	Pn	13 23 19.8	-0.2
LIRZ	Lichensteins R	0.61	40	P	Pn	13 23 20.4	0.0
LIRZ	Lichensteins R	0.61	40	PN	Pn	13 23 20.4	0.0
KRVZ	Karewarewa	0.65	197	PN	Pn	13 23 20.5	0.0
WTVZ	West Tongariro	0.68	200	P	Pn	13 23 20.7	0.0
WTVZ	West Tongariro	0.68	200	PN	Pn	13 23 20.7	+0.1
TWVZ	Taurewa	0.69	211	P	Pn	13 23 20.8	+0.1
TWVZ	Taurewa	0.69	211	PN	Pn	13 23 20.8	+0.1
OTVZ	Oturere	0.71	194	PN	Pn	13 23 20.9	+0.1
NGZ	Ngauruhoe	0.73	198	P	Pn	13 23 21.0	0.0
NGZ	Ngauruhoe	0.73	198	PN	Pn	13 23 21.0	0.0
EDRZ	Edgecumbe	0.77	61	P	Pn	13 23 21.0	-0.2
EDRZ	Edgecumbe	0.77	61	PN	Pn	13 23 21.0	-0.3
WPVZ	Whakapapa	0.77	200	PN	Pn	13 23 21.0	-0.2
TOZ	Tahuroa Road	0.81	338	P	Pn	13 23 21.6	+0.1
TOZ				S	Sn	13 23 40.4	-0.1
TOZ	Tahuroa Road	0.81	338	PN	Pn	13 23 21.6	0.0
TOZ				SN	Sn	13 23 40.4	-0.1
TUVZ	Tukino	0.81	193	P	Pn	13 23 21.8	+0.3
TUVZ	Tukino	0.81	193	PN	Pn	13 23 21.8	+0.3
HIZ	Hauiti	0.81	267	P	Pn	13 23 21.4	-0.1
HIZ				S	Sn	13 23 40.4	-0.1
HIZ	Hauiti	0.81	267	PN	Pn	13 23 21.4	-0.1
HIZ				SN	Sn	13 23 40.4	-0.1
FWVZ	Far West T-bar	0.82	199	P	Pn	13 23 21.6	0.0
FWVZ	Far West T-bar	0.82	199	PN	Pn	13 23 21.6	0.0
OPRZ	Ohinepanea	0.82	40	PN	Pn	13 23 21.5	-0.1

OPRZ				SN	Sn	13 23 40.6	-0.1
BKZ	**Black Stump Fm**	**0.83**	**146**	P	Pn	13 23 21.8	+0.1
BKZ	**Black Stump Fm**	**0.83**	**146**	PN	Pn	13 23 21.8	+0.2
DRZ	**Dome Shelter**	**0.83**	**198**	PN	Pn	13 23 22.2	+0.5
TRVZ	**Turoa**	**0.86**	**198**	PN	Pn	13 23 22.1	+0.2
WNVZ	**Wahianoa**	**0.88**	**195**	P	Pn	13 23 22.2	+0.2
WNVZ	**Wahianoa**	**0.88**	**195**	PN	Pn	13 23 22.2	+0.3
PKVZ	**Pokaka**	**0.91**	**207**	PN	Pn	13 23 22.3	+0.1
MOVZ	**Moawhango**	**0.93**	**186**	P	Pn	13 23 22.3	-0.1
MOVZ	**Moawhango**	**0.93**	**186**	PN	Pn	13 23 22.3	-0.1
URZ	**Urewera**	**0.98**	**78**	P	Pn	13 23 22.3	-0.5
URZ	**Urewera**	**0.98**	**78**	PN	Pn	13 23 22.3	-0.5
VRZ	**Vera Road**	**1.09**	**233**	P	Pn	13 23 23.6	0.0
VRZ	**Vera Road**	**1.09**	**233**	PN	Pn	13 23 23.6	-0.1
MWZ	**Matawai**	**1.30**	**84**	P	Pn	13 23 25.3	-0.1
MWZ	**Matawai**	**1.30**	**84**	PN	Pn	13 23 25.3	-0.1
RAEZ	**Rainy Point**	**1.42**	**235**	P	Pn	13 23 26.7	+0.1
RAEZ	**Rainy Point**	**1.42**	**235**	PN	Pn	13 23 26.7	+0.1
WAZ	**Wanganui**	**1.46**	**209**	P	Pn	13 23 26.7	-0.2
WAZ	**Wanganui**	**1.46**	**209**	PN	Pn	13 23 26.7	-0.2
KNZ	**Kokohu**	**1.50**	**112**	P	Pn	13 23 27.8	+0.5
KNZ	**Kokohu**	**1.50**	**112**	PN	Pn	13 23 27.8	+0.4
TSZ	**Takapari Road**	**1.58**	**178**	*e*P	Pn	13 23 28.0	-0.2
TSZ	**Takapari Road**	**1.58**	**178**	PN	Pn	13 23 28.0	-0.1
NEZ	**North Egmont**	**1.61**	**240**	P	Pn	13 23 28.7	+0.2
NEZ	**North Egmont**	**1.61**	**240**	PN	Pn	13 23 28.7	+0.3
PKE	**Pukeiti**	**1.65**	**244**	P	Pn	13 23 28.8	-0.1
PKE	**Pukeiti**	**1.65**	**244**	PN	Pn	13 23 28.8	-0.1
PXZ	**Pawanui**	**1.73**	**154**	PN	Pn	13 23 29.8	+0.1
KUZ	**Kuaotunu**	**1.73**	**356**	*e*P	Pn	13 23 29.6	-0.3
KUZ	**Kuaotunu**	**1.73**	**356**	PN	Pn	13 23 29.6	-0.3
NRZ	**Ngariki Road**	**1.75**	**240**	P	Pn	13 23 29.6	-0.4
NRZ	**Ngariki Road**	**1.75**	**240**	PN	Pn	13 23 29.6	-0.4
NWEZ	**Newall Road**	**1.77**	**243**	P	Pn	13 23 30.0	-0.1
NWEZ	**Newall Road**	**1.77**	**243**	PN	Pn	13 23 30.0	-0.1
PUZ	**Puketiti**	**1.91**	**78**	*e*P	Pn	13 23 31.3	-0.4
PUZ	**Puketiti**	**1.91**	**78**	PN	Pn	13 23 31.3	-0.4
MXZ	**Matakaoa Point**	**2.12**	**65**	PN	Pn	13 23 33.9	-0.2
MRZ	**Mangatainoka R**	**2.19**	**186**	P	Pn	13 23 33.8	-1.1
MRZ	**Mangatainoka R**	**2.19**	**186**	PN	Pn	13 23 33.8	-1.1
BFZ	**Birch Farm**	**2.22**	**173**	P	Pn	13 23 34.4	-0.7
BFZ	**Birch Farm**	**2.22**	**173**	PN	Pn	13 23 34.4	-0.8
TIWZ	**Tintock**	**2.29**	**180**	PN	Pn	13 23 35.0	-1.1
KIW	**Kapiti Island**	**2.50**	**197**	P	Pn	13 23 36.8	-1.6
KIW	**Kapiti Island**	**2.50**	**197**	PN	Pn	13 23 36.8	-1.7
MTW	**Mount Morrison**	**2.69**	**186**	P	Pn	13 23 38.9	-1.9
MTW	**Mount Morrison**	**2.69**	**186**	PN	Pn	13 23 38.9	-1.9
CAW	**Cannon Point**	**2.70**	**193**	PN	Pn	13 23 39.1	-1.8
DUWZ	**D’Urville Isla**	**2.77**	**213**	PN	Pn	13 23 39.8	-2.0
MRW	**Makara Radio**	**2.90**	**198**	P	Pn	13 23 41.3	-2.0
MRW	**Makara Radio**	**2.90**	**198**	PN	Pn	13 23 41.3	-2.0
PAWZ	**Paruwai Farm**	**2.92**	**187**	P	Pn	13 23 41.5	-2.1
PAWZ	**Paruwai Farm**	**2.92**	**187**	PN	Pn	13 23 41.5	-2.1
TRWZ	**Traveller**	**2.92**	**183**	PN	Pn	13 23 41.7	-1.8
WEL	**Wellington**	**2.93**	**197**	P	Pn	13 23 41.6	-2.1
WEL	**Wellington**	**2.93**	**197**	PN	Pn	13 23 41.6	-2.1
SNZO	**South Karori**	**2.97**	**197**	PN	Pn	13 23 41.9	-2.3
MSWZ	**Moikau Station**	**2.97**	**189**	P	Pn	13 23 42.1	-2.1
MSWZ	**Moikau Station**	**2.97**	**189**	PN	Pn	13 23 42.1	-2.2
TCW	**Tory Channel**	**3.00**	**204**	P	Pn	13 23 42.4	-2.2
TCW	**Tory Channel**	**3.00**	**204**	PN	Pn	13 23 42.4	-2.2
BHW	**Baring Head**	**3.03**	**195**	P	Pn	13 23 42.6	-2.3
BHW	**Baring Head**	**3.03**	**195**	PN	Pn	13 23 42.6	-2.3
TUWZ	**Tuamarina**	**3.31**	**206**	PN	Pn	13 23 45.8	-2.6
NNZ	**Nelson**	**3.35**	**214**	P	Pn	13 23 46.1	-2.8
NNZ	**Nelson**	**3.35**	**214**	PN	Pn	13 23 46.1	-2.8
QRZ	**Quartz Range**	**3.50**	**227**	P	Pn	13 23 47.6	-3.2
QRZ	**Quartz Range**	**3.50**	**227**	PN	Pn	13 23 47.6	-3.2
BSWZ	**Blackbirch Sta**	**3.58**	**205**	P	Pn	13 23 49.3	-2.6
BSWZ	**Blackbirch Sta**	**3.58**	**205**	PN	Pn	13 23 49.3	-2.6
THZ	**Tophouse**	**4.00**	**214**	*e*P	Pn	13 23 54.1	-3.1
THZ	**Tophouse**	**4.00**	**214**	PN	Pn	13 23 54.1	-3.1
KHZ	**Kahutara**	**4.32**	**204**	P	Pn	13 23 58.7	-2.7
KHZ	**Kahutara**	**4.32**	**204**	PN	Pn	13 23 58.7	-2.7
DSZ	**Denniston Nort**	**4.52**	**223**	P	Pn	13 24 00.2	-3.8
DSZ	**Denniston Nort**	**4.52**	**223**	PN	Pn	13 24 00.2	-3.8
LTZ	**Lake Taylor**	**5.10**	**211**	*e*P	Pn	13 24 07.3	-4.3
LTZ	**Lake Taylor**	**5.10**	**211**	PN	Pn	13 24 07.3	-4.3
CRLZ	**Canterbury Las**	**5.66**	**205**	*e*P	Pn	13 24 14.4	-4.5
CRLZ	**Canterbury Las**	**5.66**	**205**	PN	Pn	13 24 14.4	-4.5
MQZ	**McQueen’s Vall**	**5.77**	**204**	P	Pn	13 24 15.5	-4.8
MQZ	**McQueen’s Vall**	**5.77**	**204**	PN	Pn	13 24 15.5	-4.8
WVZ	**Waitaha Valley**	**6.03**	**219**	*e*P	Pn	13 24 19.5	-4.3
WVZ	**Waitaha Valley**	**6.03**	**219**	PN	Pn	13 24 19.5	-4.3
RPZ	**Rata Peaks**	**6.38**	**213**	*e*P	Pn	13 24 24.2	-4.2
RPZ	**Rata Peaks**	**6.38**	**213**	PN	Pn	13 24 24.2	-4.1
FOZ	**Fox Glacier**	**6.91**	**221**	*e*P	Pn	13 24 29.4	-6.0
FOZ	**Fox Glacier**	**6.91**	**221**	PN	Pn	13 24 29.4	-6.0
LBZ	**Lake Benmore**	**7.29**	**214**	*e*P	Pn	13 24 35.7	-4.8
ODZ	**Otahua Downs**	**7.64**	**209**	*e*P	Pn	13 24 40.7	-4.4
ODZ	**Otahua Downs**	**7.64**	**209**	PN	Pn	13 24 40.7	-4.4
JCZ	**Jackson Bay**	**7.75**	**222**	*e*P	Pn	13 24 41.5	-5.0
WKZ	**Wanaka**	**8.16**	**217**	*e*P	Pn	13 24 46.5	-5.5
EAZ	**Earnscleugh**	**8.34**	**214**	*e*P	Pn	13 24 49.4	-4.9
TUZ	**Tuapeka**	**8.79**	**210**	*e*P	Pn	13 24 56.4	-3.9
TUZ	**Tuapeka**	**8.79**	**210**	PN	Pn	13 24 56.4	-3.8

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*MOS **04** 13:40:37.7±1.4, 4873N×15167E, h34km, mb4.2/11, Error ellipse: s-maj=20.7km s-min=13.4km az=73.3*
*ISCJB **04** 13:40:43.8±1.1, 476N±0.1×1523E±0.1, h153km±10km, mb3.6/17, Error ellipse: s-maj=23.6km s-min=11.6km az=148.2*
*IDC **04** 13:40:47.3±3.6, 4751N×15220E, h174km±35km, mb3.4/15, mb1 3.6/16, mb1mx3.4/25, mbtmp3.4/16, MS3.4/1, Ms1 3.4/1, ms1mx2.7/25, Error ellipse: s-maj=23.3km s-min=16.3km az=175.0*
ISC 04 13:40:44.9±1.0**, 476N**±01**×1523E**±01**, h147**km±10km**, n35, σ0.55**/34**, mb3.6**/17**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril’sk**	**3.85**	**234**	*e*PN	**Pn**	**13 41 42.6**	**-0.6**
KUR				pmax	pmax		
	comp=Z,60nm,0.6s						
SKR	**Severo-Kuril’s**	**3.99**	**38**	*e*PN	**Pn**	**13 41 44.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**6.51**	**268**⇓	*e*PN	**Pn**	**13 42 08.1**	**-10**
YSS				pmax	pmax		
	comp=Z,25nm,1.7s						
ASAJ	**Asahikawa**	**7.60**	**246**	P	**Pn**	**13 42 34.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=98,slow=15,SNR=3.4						
CBIJ	**Chichi jima**	**21.93**	**205**	LR	LR	13 51 21.0	
	comp=Z,120nm,21.8s,baz=118,slow=29						
TLY	**Talaya**	**31.30**	**296**⇑	*e*P	**P**	**13 46 51.3**	**+0.6**
TLY				pmax	pmax		
	comp=Z,2.0nm,2.1s,mb3.5						
COLA	**College**	**35.84**	**39***c*	*i*P	**P**	**13 47 30.2**	**+0.4**
INK	**Inuvik**	**41.25**	**33**	P	**P**	**13 48 15.8**	**+0.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**41.25**	**33**	P	**P**	**13 48 15.8**	**+0.9**
	comp=Z,1.1nm,0.4s,mb3.9,baz=284,slow=5.7,SNR=5.3						
MKAR	**Makanchi Array**	**46.06**	**296**	*i*P	**P**	**13 48 52.5**	**-1.1**
MKAR	**Makanchi Array**	**46.06**	**296**	P	**P**	**13 48 52.6**	**-1.0**
	comp=Z,0.2nm,0.5s,mb3.0,baz=66,slow=6.1,SNR=6.0						
MKAR				PcP	PcP	13 50 25.2	-2.2
	comp=Z,0.1nm,0.6s,baz=83,slow=4.5,SNR=2.6						
YKA	**Yellowknife Ar**	**50.59**	**37**	*i*P	**P**	**13 49 28.5**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**50.59**	**37**	P	**P**	**13 49 28.5**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.5,baz=300,slow=7.2,SNR=8.7						
YKA				PcP	PcP	13 50 42.6	-0.8
	comp=Z,0.3nm,0.7s,baz=301,slow=3.4,SNR=3.7						
ARCES	**ARCESS Array B**	**56.88**	**340**	P	**P**	**13 50 13.6**	**0.0**
ARCES				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARCES	**ARCESS Array B**	**56.88**	**340**	P	**P**	**13 50 13.6**	**0.0**
	comp=Z,8.2nm,1.1s,mb4.5,baz=12,slow=9.2,SNR=3.3						
NVAR	**Mina Array Bea**	**62.55**	**62**	P	**P**	**13 50 52.8**	**-0.1**
	comp=Z,0.7nm,0.7s,mb3.6,baz=295,slow=7.2,SNR=4.8						
FINES	**FINESS Array B**	**63.04**	**334**	*i*P	**P**	**13 50 55.0**	**-0.8**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.04**	**334**	P	**P**	**13 50 55.4**	**-0.4**
	comp=Z,0.9nm,0.4s,mb3.9,baz=35,slow=7.2,SNR=14						
PDAR	**Pinedale Array**	**64.71**	**54**	P	**P**	**13 51 07.0**	**+0.1**
	comp=Z,0.5nm,0.7s,mb3.4,baz=319,slow=3.3,SNR=4.8						
NB2	**NORSAR Subarra**	**67.25**	**341**	P	**P**	**13 51 23.2**	**+0.3**
	comp=Z,0.4nm,0.5s,mb3.5,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**67.25**	**341**	P	**P**	**13 51 23.2**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**67.25**	**341**	P	**P**	**13 51 23.2**	**+0.3**
	comp=Z,1.2nm,0.8s,mb3.8,baz=28,slow=6.4,SNR=3.2						
HFS	**Hagfors**	**67.47**	**339**	P	**P**	**13 51 24.2**	**-0.1**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS	**Hagfors**	**67.47**	**339**	P	**P**	**13 51 24.2**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.1,baz=61,slow=7.0,SNR=22						
AKASG	**Malin Array Be**	**70.54**	**326**	*i*P	**P**	**13 51 42.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.54**	**326**	P	**P**	**13 51 42.6**	**-0.8**
	comp=Z,0.6nm,0.4s,mb3.7,baz=35,slow=6.3,SNR=4.7						
SCHQ	**Schefferville**	**72.76**	**22**	P	**P**	**13 51 56.6**	**0.0**
	comp=Z,0.7nm,0.4s,mb3.7,baz=323,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**72.83**	**198**	P	**P**	**13 51 57.0**	**-0.2**
	comp=Z,0.2nm,0.7s,mb3.0,baz=9.4,slow=5.7,SNR=3.6						
CLL	**Collm**	**75.47**	**335**	*i*P	**P**	**13 52 12.3**	**-0.1**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
BRTR	**Keskin Array B**	**77.39**	**316**	*i*P	**P**	**13 52 24.7**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**77.39**	**316**	P	**P**	**13 52 23.2**	**-0.2**
	comp=Z,0.8nm,0.9s,mb3.4,baz=54,slow=8.3,SNR=3.9						
GERES	**GERESS Array B**	**77.46**	**333**	P	**P**	**13 52 23.8**	**+0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**77.46**	**333**	P	**P**	**13 52 23.8**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.5,baz=32,slow=6.0,SNR=8.8						
TXAR	**Lajitas Array**	**77.57**	**60**	P	**P**	**13 52 24.1**	**-0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**77.57**	**60**	P	**P**	**13 52 24.1**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.5,baz=295,slow=4.1,SNR=7.1						

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*MOS **04** 14:04:56.9±2.2, 5020N×10354E, h10km, mb4.3/1, Error ellipse: s-maj=36.6km s-min=12.4km az=99.3*
BYKL 04 14:04:21.0±0.8**, 4817N×10397E, h6**km±27km**, 2C, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULN	**Ulaanbaatar**	**2.09**	**97**⇑	*i*Pg	Pg	14 04 58.1	-3.0
ULN				*e*		14 04 59.4	
ULN				*e*Sg	Sg	14 05 25.4	-2.8
ULN				*e*		14 05 26.8	
ZAK	**Zakamensk**	**2.26**	**349**	*e*PG	Pg	14 05 00.7	-3.6
ZAK				*e*		14 05 02.1	
ZAK				smax			
	comp=E,675nm,0.2s						
ZAK	**Zakamensk**	**2.26**	**349**	*e*Pn	Pn	14 05 00.4	+1.6
ZAK			⇑	*i*Pg	Pg	14 05 02.4	-1.9
ZAK				*e*Sg	Sg	14 05 32.1	-1.5
ZAK				Pmax			
	comp=E,100nm,0.2s						
ZAK				Smax			
	comp=E,669nm,0.2s						
TLY	**Talaya**	**3.52**	**357**	*e*PG	Pg	14 05 23.7	-4.7
TLY				pmax	pmax		
	comp=Z,24nm,0.4s						
TLY	**Talaya**	**3.52**	**357**	*e*Pg	Pg	14 05 23.5	-4.9
TLY				*i* Sg	Sg	14 06 09.6	-4.4
TLY				*e*L		14 06 19.2	
TLY				Pmax			
	comp=Z,31nm,0.7s						
TLY				Smax			
	comp=Z,71nm,0.3s						
LSTR	**Listvyanka**	**3.74**	**8**	*e*PN	Pn	14 05 28.7	+9.5
LSTR				pmax	pmax		
	comp=Z,13nm,0.4s						
LSTR	**Listvyanka**	**3.74**	**8**	*e*Pg	Pg	14 05 27.8	-4.9
LSTR				*e*		14 05 56.2	
LSTR				*i* Sg	Sg	14 06 17.1	-4.1
LSTR				*e*L		14 06 38.1	
LSTR				Pmax			
	comp=Z,11nm,0.6s						
LSTR				Smax			
	comp=Z,56nm,1.4s						
ARS	**Arshan**	**3.88**	**346**	*e*PN	Pn	14 05 31.9	+11
ARS				pmax	pmax		
	comp=Z,25nm,0.3s						
ARS	**Arshan**	**3.88**	**346**	*e*Pn	Pn	14 05 22.5	+1.3
ARS				*e*Pg	Pg	14 05 31.0	-4.4
ARS				*e*Sg	Sg	14 06 21.6	-4.1
ARS				Pmax			
	comp=Z,25nm,0.6s						
ARS				Smax			
	comp=Z,413nm,1.3s						
MOY	**Mondy**	**3.99**	**332**	*e*Pg	Pg	14 05 33.2	-4.3
MOY				*i* Sg	Sg	14 06 25.6	-3.6
MOY				Pmax			
	comp=Z,28nm,0.5s						
MOY				Smax			
	comp=Z,227nm,1.0s						
IRK	**Irkutsk**	**4.08**	**3**	*e*PN	Pn	14 05 33.7	+10
IRK				pmax	pmax		
	comp=Z,69nm,0.1s						
IRK	**Irkutsk**	**4.08**	**3**	*e*Sg	Sg	14 06 26.8	-5.2
IRK				Smax			
	comp=Z,558nm,0.5s						
KAB	**Kabansk**	**4.25**	**23**	*e*Sg	Sg	14 06 33.8	-3.6
KAB				Smax			
	comp=Z,215nm,0.5s						
STDB	**Stepnoy Dvoret**	**4.29**	**20**	*e*Sg	Sg	14 06 35.0	-3.7
STDB				Smax			
	comp=Z,726nm,1.0s						
TRG	**Tyrgan**	**4.84**	**17**	*e*Pn	Pn	14 05 34.8	+0.5
TRG				*e*Pg	Pg	14 05 46.7	-7.0
TRG				*e*		14 05 49.8	
TRG				*i* Sg	Sg	14 06 49.5	-6.8
TRG				max			
	comp=Z,7.0nm,0.4s						
TRG				Smax			
	comp=Z,29nm,0.6s						
ORL	**Orlik**	**5.12**	**330**	*e*PN	Pn	14 05 53.3	+15
ORL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ORL	**Orlik**	**5.12**	**330**	*e*	Pn	14 05 48.0	+10
ORL				*e*Pg	Pg	14 05 53.3	-5.7
ORL				*e*Sg	Sg	14 07 01.4	-3.9
ORL				Pmax			
	comp=Z,6.0nm,0.8s						
ORL				Smax			
	comp=Z,97nm,1.0s						
KPC	**Khapcheranga**	**5.75**	**71**	*e*Pn	Pn	14 05 46.4	-0.4
KPC				*e*		14 06 06.1	
KPC				*e*Sg	Sg	14 07 17.6	-7.9
KPC				max			
	comp=Z,5.0nm,0.3s						
KPC				Smax			
	comp=Z,80nm,1.0s						
OGRR	**Ongureny**	**5.94**	**21**	*e*Sg	Sg	14 07 25.3	-6.3
OGRR				Smax			
	comp=Z,27nm,1.3s						
TDJR	**Todzha**	**6.58**	**313**	*e*Pg	Pg	14 06 19.1	-7.9
TDJR				*e*Sg	Sg	14 07 44.7	-7.5
SYVR	**Suvo**	**6.69**	**32**	*e*Sg	Sg	14 07 49.9	-5.6
SYVR				Smax			
	comp=Z,16nm,0.9s						
CIT	**Chita**	**7.27**	**54**	*e*Sg	Sg	14 08 04.5	-10
CIT				Smax			
	comp=Z,25nm,1.1s						
ARDR	**Aradan**	**8.05**	**307**	*e*Sg	Sg	14 08 29.5	-10
YLYR	**Ulyunkhan**	**8.07**	**31**	*e*Sg	Sg	14 08 31.2	-8.7
YLYR				Smax			
	comp=Z,7.0nm,1.3s						
NIZ	**Nizh Angarsk**	**8.35**	**22**	*e*Sg	Sn	14 08 41.3	+44
NIZ				Smax			
	comp=Z,8.0nm,0.9s						
KMO	**Kumora**	**8.92**	**27**	*e*Sg	Sn	14 08 57.5	+47
KMO				Smax			
	comp=Z,13nm,0.8s						
UKT	**Uakit**	**9.45**	**36**	*e*Sg	Sn	14 09 12.8	+49
UKT				Smax			
	comp=Z,7.0nm,1.2s						
NLYR	**Nelyaty**	**10.98**	**36**	*e*Sg	Sn	14 10 02.9	+61
CRS	**Chara**	**12.31**	**39**	*e*Sg	Sn	14 10 43.0	+69
CRS				Smax			
	comp=Z,10.0nm,1.0s						

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*ISCJB **04** 14:13:03.4±2.4, 473N±0.10×1243E±02, h404km±29km, mb3.5/9, Error ellipse: s-maj=31.5km s-min=12.5km az=161.4*
*NEIC **04** 14:13:04.0±1.8, 477N×12434E, h390km±21km, mb3.3/1, Error ellipse: s-maj=21.1km s-min=8.4km az=71.0*
*IDC **04** 14:13:05.0±6.2, 474N×12432E, h404km±76km, mb3.2/8, mb1 3.3/8, mb1mx3.2/20, mbtmp3.2/8, Error ellipse: s-maj=46.0km s-min=14.1km az=79.0*
ISC 04 14:13:04.0±2.4**, 475N**±010**×1243E**±02**, h391**km±28km**, n15, σ0.65**/15**, mb3.5**/9**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**8.19**	**279**	*e*P	**Pn**	**14 15 00.8**	**-0.3**
KSM	**Kuching**	**14.38**	**257**	*e*P	**P**	**14 16 10.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**22.74**	**177**	*e*P	**P**	**14 17 34.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**22.74**	**177**	P	**P**	**14 17 32.9**	**-1.3**
	2.7nm,0.8s,mb3.8,baz=189,slow=14,SNR=7.3						
MBWA	**Marble Bar**	**26.14**	**190**	*e*P	**P**	**14 18 04.1**	**-0.5**
WRA	**Warramunga Arr**	**26.43**	**158**	P	**P**	**14 18 06.8**	**-0.4**
	0.6nm,0.4s,mb3.4,baz=330,slow=11,SNR=14						
ASAR	**Alice Springs**	**29.74**	**162**	P	**P**	**14 18 36.8**	**+0.5**
	0.8nm,0.4s,mb3.4,baz=342,slow=7.6,SNR=37						
MJAR	**Matsushiro Arr**	**34.11**	**20**	P	**P**	**14 19 13.3**	**-0.5**
	1.1nm,0.6s,mb3.4,baz=196,slow=11,SNR=4.5						
STKA	**Stephens Creek**	**39.96**	**157**	*e*P	**P**	**14 20 03.4**	**+1.0**
STKA	**Stephens Creek**	**39.96**	**157**	P	**P**	**14 20 03.4**	**+0.9**
	1.4nm,0.4s,mb3.7,baz=351,slow=7.7,SNR=6.5						
ULN	**Ulaanbaatar**	**45.45**	**344**	P	**P**	**14 20 46.5**	**+0.8**
	0.8nm,0.6s,mb3.2						
SONM	**Songino Array**	**45.61**	**343**	P	**P**	**14 20 47.4**	**+0.5**
	0.7nm,0.5s,mb3.3,baz=158,slow=8.7,SNR=7.6						
MK31	**Makanchi Array**	**55.37**	**326**	*e*P	**P**	**14 21 59.2**	**+0.1**
MKAR	**Makanchi Array**	**55.37**	**326**	P	**P**	**14 21 59.3**	**+0.2**
	1.3nm,0.4s,mb3.5,baz=121,slow=7.8,SNR=49						
MKAR				PcP	PcP	14 22 53.3	-0.8
	0.5nm,0.5s,baz=113,slow=4.7,SNR=5.9						
FINES	**FINESS Array B**	**89.81**	**332**	P	**P**	**14 25 17.8**	**-1.3**
	1.0nm,0.8s,mb3.7,baz=46,slow=5.5,SNR=6.3						

SKHL 04 14:29:40.7±0.4**, 5029N×13053E, h10**km**, mb3.9**/4**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul’dur**	**1.32**	**143**	*i* Pg	Pg	14 30 03.3	-2.8
KLR				AMB	AMB	14 30 04.4	
	32nm,0.7s						
KLR				AMB	AMB	14 30 04.4	
	56nm,0.7s						
KLR				*e*Sg	Sg	14 30 20.1	-3.1
EKMR	**Ekimchan**	**3.17**	**27**	*e*Pn	Pn	14 30 31.2	+0.7
EKMR				*e*Pg	Pg	14 30 38.0	-3.3
EKMR				AMB	AMB	14 30 42.9	
	6.0nm,0.2s						
EKMR				AMB	AMB	14 30 42.9	
	12nm,0.2s						
EKMR				*e*Sg	Sg	14 31 18.8	-3.5
EKMR				A		14 31 22.5	
	39nm,0.5s						
EKMR				A		14 31 22.5	
	76nm,0.5s						
EKMR				A		14 31 22.5	
	57nm,0.5s						
HABR	**Khabarovsk**	**3.47**	**120**	*e*Pn	Pn	14 30 37.1	+2.4
HABR				*e*rx	rx	14 30 46.7	
HABR				*e*Sg	Sg	14 31 30.7	-1.3
HABR				A		14 31 36.9	
	26nm,0.7s						
GRNR	**Gornyy**	**3.79**	**80**	*e*Pg	Pg	14 30 48.5	-4.8
GRNR				*e*Sg	Sg	14 31 38.0	-4.3
GRNR				A		14 31 39.9	
	28nm,0.8s						
ZEA	**Zeya**	**4.00**	**331**	*e*Pn	Pn	14 30 43.0	+1.0
ZEA				*e*Pg	Pg	14 30 53.0	-4.3
ZEA				AMB	AMB	14 30 56.3	
	17nm,0.5s						
ZEA				*e*S	Sn	14 31 28.9	0.0
ZEA				*e*Sg	Sg	14 31 45.6	-3.6
ZEA				A		14 31 49.8	
	34nm,0.5s						
ZEA				A		14 31 49.8	
	24nm,0.5s						
ZEA				A		14 31 49.8	
	12nm,0.5s						
BMKR	**Bomnak**	**4.55**	**348**	*e*Pn	Pn	14 30 50.3	+0.8
BMKR				*e*Pg	Pg	14 31 02.0	-5.7
BMKR				AMB	AMB	14 31 04.5	
	6.0nm,0.5s						
BMKR				AMB	AMB	14 31 04.5	
	9.0nm,0.5s						
BMKR				*e*S	Sn	14 31 42.0	-0.3
BMKR				*e*Sg	Sg	14 32 01.6	-5.0
BMKR				A		14 32 06.4	
	9.0nm,0.5s						
BMKR				A		14 32 06.4	
	14nm,0.5s						
BMKR				A		14 32 06.4	
	10.0nm,0.5s						
KROS	**Kirovskiy**	**4.69**	**334**	*e*Sg	Sg	14 32 07.5	-3.6
KROS				A		14 32 12.4	
	13nm,0.5s						
NKL	**Nikolayevsk**	**6.92**	**62**	*e*Sg	Sg	14 33 16.0	-6.8
NKL				A		14 33 19.0	
	8.0nm,0.8s						

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*NNC **04** 14:54:50.4±4.7, 4336N×8469E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=45.6km s-min=31.5km az=124.0*
BJI 04 14:54:56.7, 4367N×8480E, h11km**, ML2.8, 6C, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.10**	**85**	P	Pn	14 55 33.0	+1.2
WMQ				SG	Sg	14 56 01.0	-3.3
WMQ				Smax			
	comp=N,86nm,0.4s						
WMQ				Smax			
	comp=E,61nm,0.5s						
MK31	**Makanchi Array**	**3.59**	**331**	⇑Pn	Pn	14 55 53.0	+0.7
	comp=E,0.2nm,0.3s,baz=152,slow=15,SNR=14						
MK31				Pg	Pg	14 56 02.0	-3.5
	comp=E,0.5nm,0.2s,baz=150,slow=16,SNR=14						
MK31				⇑Lg		14 56 49.1	
	comp=E,2.4nm,0.2s,baz=142,slow=29,SNR=11						
TKM2	**Tokmak 2**	**6.76**	**267**	⇑Pg	Pg	14 56 49.8	-16
	comp=E,0.7nm,1.2s						
TKM2				⇑Lg		14 58 25.6	
	comp=E,0.5nm,0.8s						
KURK	**Kurchatov**	**8.21**	**331**	⇑Pn	Pn	14 56 55.5	-0.1
	comp=E,0.4nm,0.7s						
KURK				⇑Lg		14 59 14.2	
	comp=E,2.2nm,0.7s						

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*ISCJB **04** 15:02:41.5±0.8, 6048S±008×1538E±04, h10km, mb4.0/4, MS3.9/3, Error ellipse: s-maj=26.1km s-min=11.6km az=178.3*
*IDC **04** 15:02:41.7±1.9, 6058S×15351E, h0km, mb4.2/4, mb1 4.3/5, mb1mx4.2/10, mbtmp4.1/5, ML3.9/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/22, Error ellipse: s-maj=46.3km s-min=33.8km az=62.0*
*NEIC **04** 15:02:43.3±0.7, 6051S×15371E, h10km, Error ellipse: s-maj=24.5km s-min=10.8km az=88.0*
ISC 04 15:02:43.4±0.8**, 6051S**±008**×1537E**±04**, h10**km**, n10, σ0.80**/7**, mb4.0**/4**, MS3.9**/3**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.65**	**27**	*e*P	**Pn**	**15 04 20.1**	**-0.9**
VNDA	**Vanda**	**17.30**	**174**	P	**Pn**	**15 06 43.3**	**-1.2**
	0.4nm,0.3s,baz=348,slow=12,SNR=12						
VNDA				LR	LR	15 12 33.2	
	comp=Z,167nm,21.8s,baz=107,slow=34						
SBA	**Scott Base**	**17.94**	**171**	*e*P	**Pn**	**15 06 53.4**	**+0.9**
RPZ	**Rata Peaks**	**19.79**	**40**	LR	LR	15 13 29.9	
	comp=Z,254nm,20.9s,baz=175,slow=32						
URZ	**Urewera**	**26.70**	**44**	P	**P**	**15 08 23.4**	**+1.0**
	3.6nm,0.8s,mb3.9,baz=218,slow=7.1,SNR=4.6						
URZ				LR	LR	15 17 36.0	
	comp=Z,157nm,19.4s,MS3.6,baz=32,slow=33						
STKA	**Stephens Creek**	**29.74**	**339**	P	**P**	**15 08 49.7**	**+0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	2.2nm,0.8s,mb4.0,baz=166,slow=7.2,SNR=4.1						
ASAR	**Alice Springs**	**39.31**	**331**	P	**P**	**15 10 12.7**	**+0.4**
	1.5nm,0.8s,mb3.8,baz=159,slow=8.7,SNR=26						
WRA	**Warramunga Arr**	**42.80**	**333**	P	**P**	**15 10 40.7**	**-0.3**
	4.0nm,1.0s,mb4.1,baz=165,slow=7.6,SNR=28						
HNR	**Honiara**	**51.19**	**8**	LR	LR	15 27 35.5	
	comp=Z,226nm,18.9s,MS4.2,baz=181,slow=29						
PMG	**Port Moresby**	**51.23**	**352**	LR	LR	15 32 26.1	
	comp=Z,130nm,19.4s,MS4.0,baz=69,slow=35						

*NEIC **04** 15:08:11.7, 16.38N×100.07W, h25km, MD4.2(MEX), After MEX.*

MEX 04 15:08:11.9±0.5**, 16.39N×100.07W, h26**km±13km**, MD4.2, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.69**	**344**	*i* P	Pb	15 08 23.1	-2.2
CAIG				*i* S	Sb	15 08 31.7	-2.7
MEIG	**Mezcala**	**1.59**	**16**	*i* P	Pn	15 08 36.5	-1.9
MEIG				*i* S	Sn	15 08 55.0	-3.0
ZIIG	**Zihuatanejo**	**1.81**	**313**	*i* P	Pn	15 08 40.0	-1.3
ZIIG				*i* S	Sn	15 09 00.0	-3.3
PNIG	**Pinotepa**	**1.86**	**90**	*i* P	Pn	15 08 40.0	-2.2
PNIG				*i* S	Sn	15 09 01.6	-3.3
PLIG	**Platanillo**	**2.07**	**15**	*e*P	Pn	15 08 42.6	-2.3
PLIG				*i* S	Sn	15 09 07.8	-2.0
UTMO	**Huajuapan**	**2.60**	**56**	*i* P	Pn	15 08 49.6	-2.6
UTMO				*i* S	Sn	15 09 19.3	-3.6
YAIG	**Yautepec**	**2.64**	**21**	*i* P	Pn	15 08 50.4	-2.4
YAIG				*i* S	Sn	15 09 21.4	-2.6
SZVM	**Salazar**	**3.00**	**13**	*e*P	Pn	15 08 56.4	-1.3
SZVM				*i* S	Sn	15 09 30.3	-2.4
PPM	**Popocatepetl**	**3.00**	**27**	*e*P	Pn	15 08 55.8	-1.9
PPM				*i* S	Sn	15 09 31.8	-1.1
VHO	**Vista Hermosa**	**3.27**	**77**	⇑*i*P	Pn	15 09 00.0	-1.4
VHO				*i* S	Sn	15 09 36.4	-3.1
OXX	**Oaxaca**	**3.28**	**77**	*e*P	Pn	15 09 01.0	-0.6
TPIG	**Tehuac#an**	**3.28**	**52**	*i* P	Pn	15 08 59.1	-2.5
TPIG				*i* S	Sn	15 09 39.2	-0.7
PTVM	**Pico Tres Padr**	**3.32**	**16**	*e*P	Pn	15 08 59.2	-2.9
PTVM				*i* S	Sn	15 09 40.8	+0.1
IIO	**Organos**	**3.44**	**22**	*i* P	Pn	15 09 02.4	-1.3
IIO				*i* S	Sn	15 09 44.7	+1.1
MOIG	**Morelia**	**3.44**	**342**	*i* P	Pn	15 09 06.5	+2.7
MOIG				*i* S	Sn	15 09 39.4	-4.4
MOIG	**Morelia**	**3.44**	**342**	*i* P	Pn	15 09 03.7	-0.1
MOIG				*i* S	Sn	15 09 40.5	-3.2
MMIG	**Aquila**	**3.66**	**302**	*i* P	Pn	15 09 06.8	0.0
MMIG				*i* S	Sn	15 09 48.8	-0.3
HUIG	**Huatulco**	**3.86**	**99**	*i* S	Sn	15 09 48.8	-5.3
CMIG	**Matias Romero**	**5.02**	**81**	*i* P	Pn	15 09 25.4	-0.1
CMIG				*i* S	Sn	15 10 21.1	-1.5

*ISCJB **04** 15:09:14.6±1.4, 9.79N±0.09×42.61E±0.06, h10km, Error ellipse: s-maj=14.5km s-min=4.9km az=153.4*
*DHMR **04** 15:09:18.6±2.9, 9.90N×42.41E, h49km±24km, ML3.6*

ISC 04 15:09:15.6±1.5**, 9.72N**±0.10×**42.64E**±0.06**, h10**km**, n8, σ1s14**/14**, Ethiopia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DESE	**Dese**	**3.27**	**295**	*e*P	**Pg**	**15 10 15.2**	**-3.0**
DESE				S	**Sg**	**15 11 01.6**	**+1.1**
TRBA	**At Turbah**	**3.78**	**22**	*i* P	**Pn**	**15 10 15.0**	**+1.1**
TRBA				*i* S	**Sn**	**15 10 58.7**	**+0.3**
TRBA				AML	AML	15 11 13.9	
	comp=N,214nm,0.8s						
FURI	**Furi**	**3.99**	**259**	*e*PN	**Pg**	**15 10 31.5**	**-0.6**
FURI				*e*SN	**Sg**	**15 11 28.3**	**+4.4**
UDYN	**Al 'Udayn**	**4.42**	**17**	*i* P	**Pn**	**15 10 23.9**	**+1.2**
UDYN				*i* S	**Sn**	**15 11 14.2**	**0.0**
UDYN				AML	AML	15 11 33.8	
	comp=Z,191nm,0.6s						
UDYN	**Al 'Udayn**	**4.42**	**17**	*i* P	**Pn**	**15 10 23.9**	**+1.2**
UDYN				*i* S	**Sn**	**15 11 14.2**	**0.0**
	comp=Z,95nm,0.6s						
LBOS		**4.85**	**32**	*i* P	**Pn**	**15 10 29.3**	**+0.6**
LBOS				*i* S	**Sn**	**15 11 24.9**	**0.0**
BDHA	**Al Bayda'**	**5.11**	**34**	*i* P	**Pn**	**15 10 31.7**	**-0.5**
DHBB	**Dhamar BB**	**5.12**	**19**	*i* S	**Sn**	**15 11 29.1**	**-2.4**

*NEIC **04** 15:20:30.8±2.3, 24.06N×122.84E, h10km, MG3.2(JMA), Error ellipse: s-maj=35.0km s-min=15.2km az=175.0*
*JMA **04** 15:20:36.7±0.2, 24.37N×122.49E, h57km±2km, M3.2*
*ISCJB **04** 15:20:37.4±0.8, 24.2N±0.1×122.55E±0.04, h56km±8km, mb3.3/3, Error ellipse: s-maj=22.3km s-min=6.2km az=4.7*
*IDC **04** 15:20:38.5±29.0, 24.57N×121.54E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/21, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=505.4km s-min=67.5km az=147.0*

ISC 04 15:20:37.5±0.8**, 24.2N**±0.1×**122.51E**±0.04**, h42**km±11km**, n14, σ0s90**/21**, mb3.3**/3**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.55**	**56**	P	**Pn**	**15 20 48.3**	**-0.7**
YOJ				S	**Sn**	**15 20 56.6**	**-0.6**
NACB	**Ninganchiao**	**0.83**	**271**	*e*Pg	**Pn**	**15 20 53.0**	**+0.2**
NACB				*e*Sg	**Sn**	**15 21 01.0**	**-2.9**
IRIF	**Iriomote-Funau**	**1.13**	**81**	P	**Pn**	**15 20 56.3**	**-0.6**
IRIF				*e*S	**Sn**	**15 21 11.5**	**+0.3**
YHNB	**Yeheng**	**1.15**	**297**	*e*Pg	**Pn**	**15 20 58.7**	**+1.5**
HATJ	**Hateruma jima**	**1.19**	**95**	P	**Pn**	**15 20 58.3**	**+0.6**
HATJ				*e*S	**Sn**	**15 21 13.5**	**+0.8**
TATO	**Taipei**	**1.23**	**312**	*e*Pg	**Pn**	**15 21 00.2**	**+1.9**
JKRS	**Kuro-shima**	**1.38**	**86**	P	**Pn**	**15 21 00.1**	**-0.1**
JKRS				S	**Sn**	**15 21 18.0**	**+0.8**
JIJ	**Ishigaki jima**	**1.51**	**82**	P	**Pn**	**15 21 01.4**	**-0.7**
JIJ				*e*S	**Sn**	**15 21 19.8**	**-0.7**
JTJ	**Tarama**	**2.06**	**76**	P	**Pn**	**15 21 09.7**	**+0.1**
JTJ				*e*S	**Sn**	**15 21 33.4**	**-0.7**
JMJ	**Miyako jima 2**	**2.62**	**75**	*e*S	**Sn**	**15 21 48.7**	**+0.7**
KSRS	**Korea Array**	**14.04**	**18**	Pn	**Pn**	**15 23 58.4**	**+4.6**
	0.2nm,0.3s,baz=199,slow=12,SNR=4.6						
SONM	**Songino Array**	**26.88**	**336**	P	**P**	**15 26 14.3**	**+0.1**
	0.4nm,0.4s,mb3.3,baz=148,slow=9.5,SNR=4.3						
MKAR	**Makanchi Array**	**39.20**	**315**	P	**P**	**15 28 01.6**	**+0.1**
	0.2nm,0.4s,mb3.2,baz=99,slow=7.9,SNR=9.6						
ZALV	**Zalesovo Beam**	**40.93**	**327**	P	**P**	**15 28 14.6**	**-1.1**
	0.5nm,0.3s,mb3.6,baz=126,slow=7.3,SNR=3.7						

*SZGRF **04** 15:26:41.6, 22.12S×177.99W, h33km, South of Fiji Islands*
*ISCJB **04** 15:27:41.2±1.3, 21.27S±0.08×178.74W±0.09, h548km±16km, mb4.2/17, Error ellipse: s-maj=15.8km s-min=10.0km az=42.3*
*IDC **04** 15:27:42.4±1.6, 21.28S×178.73W, h549km±17km, mb3.6/13, mb1 3.8/16, mb1mx3.7/20, mbtmp3.6/16, Error ellipse: s-maj=21.4km s-min=12.1km az=153.0*
*NEIC **04** 15:27:42.1±0.9, 21.21S×178.73W, h550km±9km, mb4.4/7, Error ellipse: s-maj=14.9km s-min=7.6km az=147.0*

ISC 04 15:27:42.1±1.2**, 21.2S**±0.1×**178.8W**±0.1**, h543**km±15km**, n128, σ0s89**/39**, mb4.2**/17**, 13C-18D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.82**	**44**	*e*P	**P**	**15 29 57.6**	**-0.6**
AFI				S	**S**	**15 31 44.1**	**-6.0**
AFI	**Afiamalu**	**9.82**	**44**	P	**P**	**15 29 57.9**	**-0.3**
	1.8nm,0.3s,baz=28,slow=18,SNR=9.1						
AFI				S	**S**	**15 31 44.1**	**-6.0**
	3.5nm,0.3s,baz=49,slow=23,SNR=9.2						
DZM	**Mont Dzumac**	**13.78**	**264**	P	**P**	**15 30 39.6**	**+0.5**
	0.4nm,0.3s,baz=93,slow=19,SNR=3.3						
URZ	**Urewera**	**17.40**	**191**	P	**P**	**15 31 12.5**	**-2.1**
	0.9nm,0.3s,baz=333,slow=3.7,SNR=7.5						
URZ				S	**S**	**15 34 01.7**	**-6.2**
	0.2nm,0.3s,baz=195,slow=22,SNR=5.6						
EIDS	**Eidsvold**	**27.98**	**256**	*e*P	**P**	**15 32 50.1**	**+0.6**
ARMA	**Armidale**	**28.13**	**245**	*e*P	**P**	**15 32 52.1**	**+1.4**
CTA	**Charters Tower**	**32.71**	**266**	*e*P	**P**	**15 33 30.7**	**+0.5**
	4.0nm,0.4s,mb4.3						
CTA	**Charters Tower**	**32.71**	**266**	P	**P**	**15 33 30.9**	**+0.7**
	4.2nm,0.3s,mb4.4,baz=88,slow=12,SNR=34						
CTAO	**Charters Tower**	**32.71**	**266**	*e*P	**P**	**15 33 30.4**	**+0.2**
	4.8nm,0.5s,mb4.3						
PMG	**Port Moresby**	**34.80**	**284**	*e*P	**P**	**15 33 48.5**	**+0.6**
PMG	**Port Moresby**	**34.80**	**284**	P	**P**	**15 33 48.7**	**+0.8**
	29nm,0.8s,mb4.9,baz=103,slow=4.2,SNR=9.0						
STKA	**Stephens Creek**	**36.85**	**245**	⇓*i*P	**P**	**15 34 05.2**	**+0.6**
	4.4nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**36.85**	**245**	P	**P**	**15 34 05.3**	**+0.7**
	5.6nm,0.5s,mb4.3,baz=93,slow=9.0,SNR=15						
ASAR	**Alice Springs**	**43.67**	**258**	P	**P**	**15 34 59.1**	**0.0**
	18nm,0.6s,mb4.8,baz=97,slow=7.8,SNR=343						
ASAR				PcP	PcP	15 36 34.0	-0.4
	2.5nm,0.6s,baz=106,slow=3.5,SNR=10						
ASAR				S	**S**	**15 40 45.4**	**-4.5**
	1.2nm,1.0s,baz=86,slow=16,SNR=6.4						
WB2	**Warramunga Arr**	**43.79**	**263**	*e*P	**P**	**15 34 59.5**	**-0.7**
WB2	**Warramunga Arr**	**43.79**	**263**	*e*P	**P**	**15 34 59.1**	**-1.0**
WRA	**Warramunga Arr**	**43.80**	**263**	P	**P**	**15 34 59.6**	**-0.7**
	4.2nm,0.3s,mb4.5,baz=97,slow=7.3,SNR=266						
WRA				PcP	PcP	15 36 34.5	-0.4
	1.2nm,0.6s,baz=96,slow=3.3,SNR=4.4						
WRA				S	**S**	**15 40 47.5**	**-4.3**
	1.4nm,0.9s,baz=102,slow=19,SNR=4.3						
FORT	**Forrest**	**48.37**	**247**	*e*P	**P**	**15 35 33.9**	**-0.9**
	21nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.23**	**263**	*e*P	**P**	**15 36 03.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**52.23**	**263**	*e*P	**P**	**15 36 03.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**52.23**	**263**	P	**P**	**15 36 03.3**	**+0.2**
	2.9nm,0.4s,mb4.0,baz=243,slow=20,SNR=21						
QSPA	**South Pole Qui**	**68.90**	**180**	*e*P	**P**	**15 37 53.1**	**+1.0**
MJAR	**Matsushiro Arr**	**70.32**	**324**	P	**P**	**15 38 00.8**	**-0.4**
	1.9nm,0.5s,mb3.9,baz=153,slow=5.6,SNR=8.1						
NVAR	**Mina Array Bea**	**82.00**	**44**	P	**P**	**15 39 06.8**	**+1.4**
NVAR	**Mina Array Bea**	**82.00**	**44**	P	**P**	**15 39 06.8**	**+1.4**
	2.2nm,0.7s,mb3.7,baz=213,slow=6.2,SNR=19						
PSI	**Prapat**	**83.84**	**275**	P	**P**	**15 39 14.4**	**-0.9**
	3.6nm,0.4s,mb4.3,baz=223,slow=8.9,SNR=4.3						
MCK	**McKinley**	**87.78**	**13**	*e*P	**P**	**15 39 32.0**	**-0.8**
	3.5nm,0.9s,mb4.1						
TXAR	**Lajitas Array**	**88.02**	**58**	P	**P**	**15 39 36.4**	**+1.5**
	0.8nm,0.8s,mb3.5,baz=210,slow=5.2,SNR=7.8						
COLA	**College**	**89.01**	**13**	*e*P	**P**	**15 39 37.7**	**-0.9**
	10nm,0.9s,mb4.7						
IMA2	**Indian Mountai**	**89.02**	**10**	*e*P	**P**	**15 39 38.8**	**+0.1**
PDAR	**Pinedale Array**	**89.94**	**44**	P	**P**	**15 39 44.3**	**+0.8**
	1.9nm,0.7s,mb4.0,baz=208,slow=3.6,SNR=20						
EGAK	**Eagle**	**90.43**	**15**	*e*P	**P**	**15 39 45.4**	**+0.2**
	2.9nm,0.7s,mb4.2						
SONM	**Songino Array**	**95.78**	**319**	P	**P**	**15 40 09.2**	**-0.8**
	0.5nm,1.1s,mb3.7,baz=132,slow=4.4,SNR=3.6						
YKA	**Yellowknife Ar**	**97.42**	**25**	P	**P**	**15 40 16.3**	**-0.7**
	0.4nm,0.8s,mb3.7,baz=248,slow=4.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**110.56**	**321**	PKiKP	PKiKP	15 45 11.0	-1.6
	1.0nm,0.5s,baz=353,slow=0.8,SNR=5.4						
MK31	**Makanchi Array**	**111.13**	**313**	*e*PKiKP	PKiKP	15 45 12.4	-1.5
MKAR	**Makanchi Array**	**111.13**	**313**	PKPdf	PKiKP	15 45 12.6	-1.4
MKAR	**Makanchi Array**	**111.13**	**313**	PKiKP	PKiKP	15 45 12.6	-1.4
	0.3nm,0.4s,baz=175,slow=0.5,SNR=4.1						
ARCES	**ARCESS Array B**	**129.44**	**349**	PKP	PKPdf	15 45 47.5	-0.8
	3.3nm,0.5s,baz=56,slow=0.9,SNR=22						
JOF	**Joensuu**	**133.54**	**342**	*e*p	PKPdf	15 45 54.7	-1.6
	4.3nm,0.5s						
KAF	**Kangasniemi**	**135.59**	**343**	*e*p	PKPdf	15 45 58.8	-1.3
	3.7nm,0.6s						
FINES	**FINESS Array B**	**136.20**	**343**	PKhKP		15 45 47.4	
	0.2nm,0.4s,baz=17,slow=1.5,SNR=5.0						
FINES				PKP	PKPdf	15 46 02.1	+0.8
	2.4nm,0.7s,baz=42,slow=1.4,SNR=12						
NB2	**NORSAR Subarra**	**139.55**	**353**	PKP	PKPdf	15 45 59.0	-8.4
	comp=Z,0.9nm,0.5s,baz=12,slow=3.1						
NOA	**NORSAR Array B**	**139.55**	**353**	PKP	PKPdf	15 45 58.7	-8.8
NOA				PKP	PKPdf	15 46 07.9	+0.5
NOA				SKPbc	SKPbc	15 48 51.2	-0.8
NOA	**NORSAR Array B**	**139.55**	**353**	PKhKP		15 45 58.7	
	comp=Z,1.1nm,0.5s,baz=16,slow=4.7,SNR=6.7						
NOA				PKP	PKPdf	15 46 07.9	+0.5
	comp=Z,1.4nm,0.7s,baz=17,slow=4.0,SNR=5.1						
NOA				SKPbc	SKPbc	15 48 51.2	-0.8
	comp=Z,0.3nm,0.6s,baz=15,slow=4.4,SNR=3.7						
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	PKPdf	15 46 11.3	-3.0
AKASG	**Malin Array Be**	**143.24**	**330**	PKP	PKPdf	15 46 11.3	-3.0
	comp=Z,14nm,0.4s,baz=43,slow=4.2,SNR=102						
AKBB	**Malin Array Si**	**143.24**	**330**	*e*PKPpre		15 46 11.0	
MALT	**Malatya**	**143.75**	**306**	⇑P	PKPdf	15 46 15.0	-0.6
MALT	**Malatya**	**143.75**	**306**	⇑*i*P	PKPdf	15 46 15.0	-0.6
BSEG	**Bad Segeberg**	**146.56**	**350**	*e*PKPbc	PKPbc	15 46 22.4	0.0
BRTR	**Keskin Array B**	**146.74**	**311**	PKPbc	PKPbc	15 46 22.8	-0.6
	comp=Z,4.0nm,0.6s,baz=128,slow=4.4,SNR=19						
KWP	**Kalwaria**	**146.88**	**334**	⇑P	PKPbc	15 46 23.5	+0.1
KWP	**Kalwaria**	**146.88**	**334**	⇑*i*P	PKPbc	15 46 23.5	+0.1
ANTO	**Ankara**	**147.28**	**312**	*e*PKPbc	PKPbc	15 46 24.2	-0.7
BURAR	**Bucovina Array**	**147.28**	**329**	⇓P	PKPbc	15 46 25.1	+0.5
BURAR	**Bucovina Array**	**147.28**	**329**	⇓*i*P	PKPbc	15 46 25.1	+0.5
OJC	**Ojcow**	**147.51**	**338**	*e*PX	PKPbc	15 46 24.8	-0.3
KOLS	**Kolonicke sedl**	**147.60**	**334**	*e*PKP	PKPbc	15 46 25.8	+0.5
KOLS				*e*		15 46 33.5	
STHS	**Stebnicka Huta**	**147.63**	**335**	*e*PKP	PKPbc	15 46 25.8	+0.4
VRI	**Vrincioaia**	**147.72**	**326**	⇓P	PKPbc	15 46 25.8	+0.1
VRI	**Vrincioaia**	**147.72**	**326**	⇓*i*P	PKPbc	15 46 25.8	0.0
PLOR	**Plostina**	**147.77**	**326**	⇑*i*P	PKPbc	15 46 25.5	-0.4
CRVS	**Cervenica-Dubn**	**147.95**	**335**	*e*PKP	PKPbc	15 46 26.1	-0.1
NRDL	**Niedersach Rie**	**147.98**	**350**	*e*PKPbc	PKPbc	15 46 26.0	-0.2
OKC	**Ostrava-Krasne**	**148.40**	**339**	*e*PKPbc	PKPbc	15 46 26.8	-0.5
OKC				*e*PKPab	PKPab	15 46 32.9	+0.2
UPC	**Upice**	**148.49**	**342**	*e*PKPbc	PKPbc	15 46 27.4	-0.1
UPC				*e*PKPab	PKPab	15 46 33.9	+0.9
DPC	**Dobruska-Polom**	**148.53**	**341**	*e*PKPbc	PKPbc	15 46 27.8	+0.1
DPC				*e*PKPab	PKPab	15 46 33.7	+0.5
CLL	**Collm**	**148.54**	**346**	⇓*i*PKP	PKPbc	15 46 27.5	-0.1
CLL				*i* PKP	PKPab	15 46 33.0	-0.2
CLL	**Collm**	**148.54**	**346**	⇓*i*PKPbc	PKPbc	15 46 27.5	-0.1
	comp=Z,13nm,0.7s						
CLL				*i* PKPab	PKPab	15 46 33.0	-0.2
CLL	**Collm**	**148.54**	**346**	*e*PKPbc	PKPbc	15 46 27.4	-0.2
CLZ	**Clausthal**	**148.57**	**349**	*e*PKPbc	PKPbc	15 46 27.7	0.0
MORC	**Moravsky Berou**	**148.66**	**340**	⇓*i*P	PKPbc	15 46 28.3	+0.3
KECS	**Kecovo**	**148.68**	**335**	*e*PKP	PKPbc	15 46 28.4	+0.3
KECS				*e*		15 46 34.2	
BRG	**Berggiesshubel**	**148.72**	**344**	*e*PKPbc	PKPbc	15 46 28.0	-0.1
BRG	**Berggiesshubel**	**148.72**	**344**	*i* PKP	PKPdf	15 46 27.8	+4.3
	comp=Z,7.2nm,0.7s						
BRG				*i*		15 46 33.1	
	comp=Z,9.5nm,1.1s						
FBE	**Freiberg**	**148.82**	**345**	*e*PKPbc	PKPbc	15 46 28.4	+0.1
PVCC	**Panska Ves**	**148.87**	**343**	*e*PKPbc	PKPbc	15 46 28.5	0.0
VOIR		**148.88**	**327**	⇓P	PKPbc	15 46 28.3	-0.4
VOIR		**148.88**	**327**	⇓*i*P	PKPbc	15 46 28.3	-0.4
DRGR		**149.05**	**331**	⇓P	PKPbc	15 46 29.0	-0.1
DRGR		**149.05**	**331**	⇓*i*P	PKPbc	15 46 29.0	0.0
VYHS	**Vyhne**	**149.30**	**337**	*e*PKP	PKPbc	15 46 29.2	-0.4
VYHS				*e*		15 46 37.0	
PSZ	**Piszkesteto**	**149.37**	**335**	⇑P	PKPbc	15 46 29.6	-0.2
PSZ	**Piszkesteto**	**149.37**	**335**	⇑*i*P	PKPbc	15 46 29.6	-0.2
PRU	**Pruhonice**	**149.37**	**343**	*e*PKPbc	PKPbc	15 46 29.7	0.0
VRAC	**Vranov**	**149.37**	**340**	⇑P	PKPbc	15 46 30.0	+0.3
VRAC	**Vranov**	**149.37**	**340**	⇑*i*P	PKPbc	15 46 30.0	+0.3
KOLL	**Kolacno**	**149.38**	**337**	*e*PKP	PKPbc	15 46 29.5	-0.3
KOLL				*e*		15 46 37.5	
MOX	**Moxa**	**149.47**	**347**	*e*PKPbc	PKPbc	15 46 28.6	-1.3
TANN	**Tannenbergstha**	**149.50**	**346**	*e*PKPbc	PKPbc	15 46 30.0	0.0
WERD	**Werda**	**149.50**	**346**	*e*PKPbc	PKPbc	15 46 30.0	0.0
GUNZ	**Gunzen**	**149.57**	**346**	*e*PKPbc	PKPbc	15 46 30.3	+0.1
WERN	**Wernitzgruen**	**149.64**	**346**	*e*PKPbc	PKPbc	15 46 30.7	+0.4
NKC	**Novy Kostel**	**149.67**	**346**	*e*PKPbc	PKPbc	15 46 30.6	+0.2
NKC				*e*PKPab	PKPab	15 46 38.0	+0.1
TREC	**Trest**	**149.72**	**341**	*e*PKPbc	PKPbc	15 46 30.5	0.0
MANZ	**Manzenberg**	**149.98**	**346**	*e*PKPbc	PKPbc	15 46 31.1	0.0
GZR	**Gura Zlata**	**150.05**	**329**	⇓*i*P	PKPbc	15 46 30.9	-0.5
ROTZ	**Rotzenmuhle**	**150.16**	**346**	*e*PKPbc	PKPbc	15 46 31.1	-0.5
KHC	**Kasperske Hory**	**150.41**	**343**	*e*PKPbc	PKPbc	15 46 32.0	-0.2
KHC				*e*PKPab	PKPab	15 46 41.3	+0.3
BZS	**Buzias**	**150.43**	**330**	⇑P	PKPbc	15 46 32.2	-0.1
BZS	**Buzias**	**150.43**	**330**	⇑*i*P	PKPbc	15 46 32.2	-0.1
TNS	**Taunus Mts**	**150.45**	**351**	*e*PKPbc	PKPbc	15 46 32.3	+0.1
GRA1	**Grafenberg Arr**	**150.45**	**347**	*e*PKPbc	PKPbc	15 46 32.2	0.0
GRF	**Grafenberg Arr**	**150.45**	**347**	*e*PKPbc	PKPbc	15 46 32.2	0.0
GEC2	**GERESS Array S**	**150.64**	**343**	*e*PKPbc	PKPbc	15 46 32.3	-0.4
GERES	**GERESS Array B**	**150.64**	**343**	PKPbc	PKPbc	15 46 32.5	-0.2
	comp=Z,4.8nm,0.7s,baz=32,slow=2.6,SNR=42						
CONA	**Conrad Observa**	**150.81**	**340**	⇑*i*PKiKP	PKiKP	15 46 33.1	-0.5
	comp=Z,10nm,0.6s						
GIVF	**Givet**	**150.99**	**355**	*e*PKIKP	PKPbc	15 46 33.2	-0.2
	comp=Z,28nm,0.8s						
BAIF	**Baives**	**151.07**	**356**	*e*PKIKP	PKPbc	15 46 33.4	-0.2
	comp=Z,30nm,1.0s						
PKSM	**Moragy**	**151.25**	**334**	⇓P	PKPbc	15 46 33.9	-0.3
PKSM	**Moragy**	**151.25**	**334**	⇓*i*P	PKPbc	15 46 33.9	-0.3
WLF	**Walferdange**	**151.30**	**353**	*e*PKPbc	PKPbc	15 46 34.7	+0.5
STU	**Stuttgart**	**151.73**	**349**	*e*PKPbc	PKPbc	15 46 34.9	-0.3
VTS	**Vitosha**	**151.79**	**324**	⇓P	PKPdf	15 46 28.3	-0.3
VTS	**Vitosha**	**151.79**	**324**	⇓*i*P	PKPdf	15 46 28.3	-0.3
BFO	**Black Forest**	**152.31**	**350**	*e*PKPbc	PKPbc	15 46 36.3	-0.2
CDF	**Champ du Feu**	**152.39**	**351**	*e*PKIKP	PKPbc	15 46 36.2	-0.4
	comp=Z,14nm,0.9s						
FLN	**La Foliniere**	**152.43**	**2**	*e*PKIKP	PKPbc	15 46 35.9	-0.8
LDF	**La Druitiere**	**152.62**	**2**	*e*PKIKP	PKPbc	15 46 36.3	-0.8
WTTA	**Wattenberg**	**152.63**	**344**	⇑*i*P	PKPbc	15 46 37.1	-0.1
	comp=Z,4.8nm,0.5s						
GRR	**Gorron**	**152.79**	**3**	*e*PKIKP	PKPbc	15 46 36.7	-0.8
	comp=Z,11nm,0.6s						
SGMF	**Saint Gilles**	**152.81**	**6**	*e*PKIKP	PKPbc	15 46 36.9	-0.6
ABTA	**Abfaltersbach**	**152.88**	**343**	⇓*i*PKPbc	PKPbc	15 46 36.7	-1.1
	comp=Z,6.6nm,0.6s						
HAU	**Haudompre**	**152.91**	**352**	*e*PKIKP	PKPbc	15 46 37.2	-0.6
MBDF	**Montbardon**	**156.06**	**350**	*e*PKIKP	PKPdf	15 46 41.6	+7.2
	comp=Z,6.7nm,0.9s						
VIVF	**Saint-Julien-l**	**156.21**	**354**	*e*PKIKP	PKPdf	15 46 41.5	+6.9
	comp=Z,5.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**172.01**	**183**	PKP	PKPdf	15 46 47.5	-1.9
	comp=Z,1.1nm,0.8s,baz=331,slow=0.5,SNR=6.2						
TORD				PKPab	PKPab	15 48 14.6	-1.4
	comp=Z,0.5nm,0.9s,baz=174,slow=3.4,SNR=2.6						

*IDC **04** 15:45:48.0±0.8, 47.09N×156.05E, h0km, mb3.6/11, mb1 3.8/12, mb1mx3.7/23, mbtmp3.6/12, ML3.4/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/40, Error ellipse: s-maj=25.5km s-min=18.6km az=157.0*
*NEIC **04** 15:45:49.5±0.7, 47.14N×156.09E, h10km, mb4.2/3, Error ellipse: s-maj=17.4km s-min=13.5km az=159.0*
*ISCJB **04** 15:45:50.3±3.1, 47.1N±0.1×156.0E±0.1, h27km±22km, mb3.8/17, Error ellipse: s-maj=18.5km s-min=14.0km az=156.2*
*MOS **04** 15:45:53.2±1.1, 46.99N×155.85E, h52km, mb4.1/6, Error ellipse: s-maj=14.9km s-min=14.4km az=12.7*

ISC 04 15:45:54.0±1.7**, 47.1N**±0.1×**156.0E**±0.1**, h41**km±15km**, n34, σ0s98**/35**, mb3.8**/17**, 3C-2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**5.95**	**255**	*e*PN	**Pn**	**15 47 15.5**	**-4.0**
YSS	**Yuzh-Sakhalins**	**9.06**	**274**	*e*P	**Pn**	**15 48 03.4**	**+1.3**
	5.1nm,0.5s						
YSS	**Yuzh-Sakhalins**	**9.06**	**274**	⇑*e*PN	**Pn**	**15 48 03.2**	**+1.1**
ASAJ	**Asahikawa**	**9.86**	**257**	Pn	**Pn**	**15 48 12.9**	**-0.1**
	0.4nm,0.3s,baz=62,slow=13,SNR=5.3						
ASAJ				LR	LR	15 51 43.9	
	comp=Z,66nm,18.2s,baz=350,slow=36						
MAJO	**Matsushiro**	**16.90**	**238**	*e*P	**Pn**	**15 49 46.2**	**-1.1**
YAK	**Yakutsk**	**21.16**	**325**	*e*P	**P**	**15 50 31.7**	**-3.6**
	7.2nm,0.6s,mb4.2						
YAK	**Yakutsk**	**21.16**	**325**	⇑*e*P	**P**	**15 50 32.0**	**-3.3**
BILL	**Bilibino**	**21.67**	**10**	⇓*e*P	**P**	**15 50 39.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb3.9						
KSRS	**Korea Array**	**22.79**	**255**	P	**P**	**15 50 52.8**	**-0.1**
	comp=Z,1.6nm,0.9s,mb3.5,baz=57,slow=9.3,SNR=3.2						
SONM	**Songino Array**	**33.09**	**290**	P	**P**	**15 52 24.9**	**-0.8**
	comp=Z,0.2nm,0.7s,mb3.1,baz=85,slow=6.4,SNR=2.6						
ZALV	**Zalesovo Beam**	**44.02**	**306**	P	**P**	**15 53 55.6**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=90,slow=5.8,SNR=2.8						
ZALV				LR	LR	16 12 15.1	
	comp=Z,25nm,19.2s,baz=15,slow=36						
ZAL	**Zalesovo**	**44.04**	**306**	P	**P**	**15 53 55.7**	**-1.6**
MK31	**Makanchi Array**	**48.54**	**298**	*e*P	**P**	**15 54 33.5**	**+0.7**
MKAR	**Makanchi Array**	**48.54**	**298**	*e*P	**P**	**15 54 34.2**	**+1.4**
MKAR	**Makanchi Array**	**48.54**	**298**	P	**P**	**15 54 33.0**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=68,slow=7.8,SNR=9.6						
KURK	**Kurchatov**	**48.83**	**304**	*e*P	**P**	**15 54 35.6**	**+0.7**
	comp=Z,2.5nm,0.8s,mb4.3						
KURK	**Kurchatov**	**48.83**	**304**	*e*P	**P**	**15 54 35.7**	**+0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
YKA	**Yellowknife Ar**	**49.47**	**38**	P	**P**	**15 54 39.0**	**-0.6**
YKA	**Yellowknife Ar**	**49.47**	**38**	*e*P	**P**	**15 54 39.7**	**+0.1**
YKA	**Yellowknife Ar**	**49.47**	**38**	P	**P**	**15 54 39.0**	**-0.6**
	comp=Z,0.6nm,0.9s,mb3.6,baz=293,slow=7.3,SNR=4.2						
BRVK	**Borovoye**	**52.21**	**310**	*e*P	**P**	**15 55 00.6**	**+0.2**
	comp=Z,1.8nm,0.7s,mb4.1						
BRVK	**Borovoye**	**52.21**	**310**	*e*P	**P**	**15 55 00.6**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AAK	**Ala-Archa**	**55.46**	**298**	⇑*e*P	**P**	**15 55 25.6**	**+1.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
ARU	**Arti**	**56.10**	**318**	*d i*P	**P**	**15 55 30.3**	**+1.6**
ARU						15 57 31.7	
ARU				S	**S**	**16 03 13.1**	**-1.2**
ARU				SS	SS	16 07 04.0	+3.8
ARU				pmax	pmax		
	comp=Z,16nm,2.5s,mb4.6						
PDAR	**Pinedale Array**	**62.94**	**56**	P	**P**	**15 56 16.3**	**+0.3**
	comp=Z,0.5nm,0.9s,mb3.6,baz=280,slow=5.4,SNR=3.5						
FINES	**FINESS Array B**	**64.57**	**336**	P	**P**	**15 56 26.7**	**+0.2**
FINES	**FINESS Array B**	**64.57**	**336**	*e*P	**P**	**15 56 27.5**	**+1.0**
FINES	**FINESS Array B**	**64.57**	**336**	P	**P**	**15 56 26.7**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=46,slow=6.3,SNR=6.2						
WRA	**Warramunga Arr**	**69.51**	**202**	P	**P**	**15 56 57.4**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**69.51**	**202**	P	**P**	**15 56 57.4**	**-0.8**
	comp=Z,0.6nm,0.8s,mb3.5,baz=21,slow=7.1,SNR=3.5						
AKASG	**Malin Array Be**	**72.36**	**328**	P	**P**	**15 57 15.8**	**+0.6**
	comp=Z,0.1nm,0.3s,mb3.3,baz=31,slow=6.1,SNR=2.4						
ASAR	**Alice Springs**	**73.19**	**201**	P	**P**	**15 57 21.1**	**+0.8**
	comp=Z,0.4nm,0.7s,mb3.5,baz=18,slow=5.9,SNR=7.7						
TXAR	**Lajitas Array**	**75.59**	**62**	P	**P**	**15 57 34.6**	**+0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**75.59**	**62**	P	**P**	**15 57 34.5**	**0.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=312,slow=5.0,SNR=8.2						

*NIED **04** 15:56:00, 43.50N×144.30E, h122km, Mw4.1 Best double couple: M0 1.41000×10^15 NP1:φs54.00000°, δ23.00000°, λ173.00000°. NP2:φs151.00000°, δ87.00000°, λ67.00000°.*
*ISCJB **04** 15:56:11.8±0.3, 43.48N±0.04×144.29E±0.04, h134km±2km, mb4.0/28, Error ellipse: s-maj=6.3km s-min=4.7km az=148.0*
*MOS **04** 15:56:11.5±1.0, 43.51N×144.23E, h131km, mb4.2/19, Error ellipse: s-maj=14.3km s-min=8.7km az=88.8*
*JMA **04** 15:56:12.8±0.1, 43.48N×144.28E, h130km±1km, M3.8*
JMA Felt I J1.
*NEIC **04** 15:56:12.8±0.6, 43.51N×144.26E, h128km±6km, mb4.3/11, Error ellipse: s-maj=7.4km s-min=5.8km az=132.0*
*BJI **04** 15:56:12.3, 43.62N×144.51E, h151km, mB5.1, mb4.3*
*IDC **04** 15:56:13.1±1.1, 43.52N×144.28E, h130km±8km, mb3.8/16, mb1 3.9/18, mb1mx3.8/25, mbtmp3.8/18, Error ellipse: s-maj=15.0km s-min=12.8km az=137.0*

ISC 04 15:56:12.9±0.3**, 43.49N**±0.04×**144.29E**±0.04**, h128**km±2km**, n84, σ0s69**/98**, mb4.0**/28**, 10C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNK	**Nakash**	**0.33**	**72**	⇓P	**Pn**	**15 56 31.0**	**+0.1**
JNK				*e*S	**Sn**	**15 56 44.6**	**+0.1**
JAR	**Ashorobuto**	**0.42**	**244**	⇑P	**Pn**	**15 56 31.8**	**+0.5**
JAR				S	**Sn**	**15 56 46.0**	**+0.8**
JTKR	**Abashiri--Toko**	**0.56**	**330**	⇑P	**Pn**	**15 56 32.2**	**+0.1**
JTKR				*e*S	**Sn**	**15 56 46.3**	**-0.4**
JAK	**Akkeshi**	**0.57**	**149**	⇑P	**Pn**	**15 56 32.2**	**0.0**
JAK				S	**Sn**	**15 56 46.5**	**-0.3**
JOB	**Onbets**	**0.67**	**210**	⇑P	**Pn**	**15 56 33.3**	**+0.4**
JOB				S	**Sn**	**15 56 48.2**	**+0.3**
JRA	**Rausu**	**0.75**	**53**	⇓P	**Pn**	**15 56 33.9**	**+0.4**
JMP	**Maruseppu**	**0.85**	**308**	⇑P	**Pn**	**15 56 34.3**	**0.0**
JMP				*e*S	**Sn**	**15 56 49.9**	**-0.6**
NEM2	**Nemuro 2**	**1.06**	**96**	⇓P	**Pn**	**15 56 35.9**	**-0.3**
NEM2				*e*S	**Sn**	**15 56 52.5**	**-1.4**
JCH	**Churui**	**1.10**	**218**	⇑P	**Pn**	**15 56 36.5**	**-0.1**
JCH				*e*S	**Sn**	**15 56 53.9**	**-0.7**
JKK2	**Kamakawa 2**	**1.18**	**290**	⇑P	**Pn**	**15 56 37.7**	**+0.3**
JKK2				*e*S	**Sn**	**15 56 55.8**	**-0.3**
JFR	**Furan**	**1.28**	**256**	⇑P	**Pn**	**15 56 38.7**	**+0.3**
JFR				*e*S	**Sn**	**15 56 58.4**	**+0.6**
ASAJ	**Asahikawa**	**1.38**	**298**	PN	**Pn**	**15 56 40.2**	**+0.7**
ASAJ				S	**Sn**	**15 56 59.8**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,101nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAJ				smax			
	comp=N,16nm,0.3s						
ASAJ	**Asahikawa**	**1.38**	**298**	P	**Pn**	**15 56 40.2**	**+0.7**
	comp=N,100nm,0.3s,baz=117,slow=11,SNR=1207						
ASAJ				S	**Sn**	**15 56 59.8**	**0.0**
	comp=N,16nm,0.3s,baz=313,slow=32,SNR=28						
JNBK	**Urakawa-nobuka**	**1.65**	**224**	⇑P	**Pn**	**15 56 42.1**	**-0.5**
JNBK				*e*S	**Sn**	**15 57 04.0**	**-1.2**
ERM	**Erimo**	**1.69**	**210**	*e*Pn	**Pn**	**15 56 44.0**	**+1.0**
JHR	**Hokuryu**	**1.88**	**279**	⇑P	**Pn**	**15 56 46.0**	**+0.7**
JSE	**Soyaes**	**1.92**	**321**	P	**Pn**	**15 56 45.9**	**+0.2**
KUR	**Kuril'sk**	**3.10**	**54**	*i* S	**Sn**	**15 57 39.0**	**+1.3**
KUR				smax			
	comp=N,200nm,0.6s						
KUR				smax			
	comp=E,150nm,0.6s						
YSS	**Yuzh-Sakhalins**	**3.63**	**343**	*e*P	**Pn**	**15 57 07.4**	**-0.3**
MAJO	**Matsushiro**	**8.36**	**216**	*e*P	**Pn**	**15 58 10.0**	**-1.2**
	comp=E,24nm,1.3s						
MAJO	**Matsushiro**	**8.36**	**216**	*e*PN	**Pn**	**15 58 10.0**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,24nm,1.3s						
MAT	**Matsushiro**	**8.36**	**216**	P	**Pn**	**15 58 10.2**	**-1.0**
MAT				*e*S	**Sn**	**15 59 45.8**	**+2.0**
MJAR	**Matsushiro Arr**	**8.36**	**216**	PN	**Pn**	**15 58 10.2**	**-0.9**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**8.36**	**216**	P	**Pn**	**15 58 10.2**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=28,slow=12,SNR=17						
MDJ	**Mudanjiang**	**10.64**	**281**	P	**Pn**	**15 58 41.7**	**0.0**
KSRS	**Korea Array**	**13.83**	**250**	P	**Pn**	**15 59 23.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=4.8						
MA2	**Magadan**	**16.59**	**12**	*e*P	**Pn**	**15 59 56.9**	**-0.7**
	comp=Z,4.2nm,0.9s						
MA2	**Magadan**	**16.59**	**12**	*e*P	**Pn**	**15 59 56.9**	**-0.7**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**24.32**	**275**	*e*P	**P**	**16 01 19.1**	**+0.7**
HHC				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.2						
HHC				AMB	AMB		
	comp=Z,266nm,4.6s						
ULN	**Ulaanbaatar**	**26.21**	**293**	*e*P	**P**	**16 01 35.9**	**+0.5**
	comp=Z,2.2nm,0.8s,mb3.8						
ULN	**Ulaanbaatar**	**26.21**	**293**	*e*P	**P**	**16 01 35.9**	**+0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
SONM	**Songino Array**	**26.66**	**293**	P	**P**	**16 01 39.5**	**+0.1**
SONM				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SONM	**Songino Array**	**26.66**	**293**	P	**P**	**16 01 39.5**	**+0.1**
	comp=Z,6.0nm,0.5s,mb4.5,baz=82,slow=8.6,SNR=54						
ZAK	**Zakamensk**	**28.55**	**298**	*e*P	**P**	**16 01 56.5**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
ZALV	**Zalesovo Beam**	**39.50**	**307**	P	**P**	**16 03 30.2**	**-0.3**
ZALV				ScP	ScP	16 09 12.2	+0.1
ZALV	**Zalesovo Beam**	**39.50**	**307**	P	**P**	**16 03 30.2**	**-0.3**
	comp=Z,1.5nm,0.6s,mb3.8,baz=75,slow=8.1,SNR=9.1						
ZALV				ScP	ScP	16 09 12.2	+0.1
	comp=Z,0.8nm,0.8s,baz=96,slow=4.6,SNR=4.1						
ZAL	**Zalesovo**	**39.51**	**307**	P	**P**	**16 03 30.2**	**-0.4**
ZAL						16 09 12.2	
IMA2	**Indian Mountai**	**40.06**	**34**	*e*P	**P**	**16 03 34.5**	**-0.5**
KDAK	**Kodiak Island**	**40.95**	**47**	P	**P**	**16 03 41.4**	**-1.1**
	comp=Z,5.1nm,0.7s,mb4.2,baz=98,slow=17,SNR=13						
MCK	**McKinley**	**42.11**	**38**	*e*P	**P**	**16 03 52.2**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.7						
MCK	**McKinley**	**42.11**	**38**	*e*P	**P**	**16 03 52.3**	**+0.5**
MCK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
PMR	**Palmer**	**42.22**	**41**	*e*P	**P**	**16 03 53.2**	**+0.6**
	comp=Z,4.6nm,0.5s,mb4.4						
PMR	**Palmer**	**42.22**	**41**	*e*P	**P**	**16 03 53.3**	**+0.6**
PMR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
COLA	**College**	**42.51**	**36**	*e*P	**P**	**16 03 55.6**	**+0.6**
	comp=Z,11nm,0.9s,mb4.5						
COLA	**College**	**42.51**	**36**	*e*P	**P**	**16 03 55.6**	**+0.6**
COLA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
MK31	**Makanchi Array**	**42.86**	**297**	*e*P	**P**	**16 03 57.9**	**-0.2**
MKAR	**Makanchi Array**	**42.86**	**297**	P	**P**	**16 03 58.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	**42.86**	**297**	P	**P**	**16 03 58.1**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.2,baz=82,slow=10,SNR=93						
KURK	**Kurchatov**	**43.95**	**303**	*e*P	**P**	**16 04 06.3**	**-0.5**
	comp=Z,1.9nm,0.3s,mb4.2						
KURK	**Kurchatov**	**43.95**	**303**	*e*P	**P**	**16 04 06.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.2						
EGAK	**Eagle**	**45.36**	**35**	*e*P	**P**	**16 04 17.8**	**+0.1**
	comp=Z,2.7nm,0.6s,mb4.0						
INK	**Inuvik**	**47.67**	**30**	*e*P	**P**	**16 04 35.0**	**-0.7**
INK	**Inuvik**	**47.67**	**30**	P	**P**	**16 04 35.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	**Inuvik**	**47.67**	**30**	P	**P**	**16 04 35.5**	**-0.3**
	comp=Z,5.4nm,0.5s,mb4.4,baz=305,slow=6.8,SNR=22						
TKM2	**Tokmak 2**	**48.73**	**294**	*e*P	**P**	**16 04 45.1**	**+0.9**
	comp=Z,4.3nm,0.7s,mb4.2						
TKM2	**Tokmak 2**	**48.73**	**294**	*e*P	**P**	**16 04 45.2**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**57.16**	**33**	P	**P**	**16 05 46.0**	**+0.3**
YKA	**Yellowknife Ar**	**57.16**	**33**	P	**P**	**16 05 46.0**	**+0.3**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**57.16**	**33**	P	**P**	**16 05 46.0**	**+0.3**
	comp=Z,1.7nm,0.6s,mb4.0,baz=304,slow=6.9,SNR=36						
JOF	**Joensuu**	**61.34**	**331**	*e*p	**P**	**16 06 12.2**	**-2.2**
	comp=Z,0.9nm,0.3s,mb4.1						
JOF	**Joensuu**	**61.34**	**331**	*e*P	**P**	**16 06 12.2**	**-2.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
KAF	**Kangasniemi**	**63.60**	**332**	*e*p	**P**	**16 06 28.7**	**-0.8**
	comp=Z,1.6nm,0.5s,mb4.1,baz=45,slow=6.4						
KAF	**Kangasniemi**	**63.60**	**332**	*e*P	**P**	**16 06 28.7**	**-0.8**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
WRA	**Warramunga Arr**	**63.77**	**190**	P	**P**	**16 06 31.0**	**0.0**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**63.77**	**190**	P	**P**	**16 06 31.0**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.5,baz=6.1,slow=6.8,SNR=6.0						
FINES	**FINESS Array B**	**64.15**	**332**	P	**P**	**16 06 32.8**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**64.15**	**332**	P	**P**	**16 06 32.8**	**-0.3**
	comp=Z,2.1nm,0.5s,mb4.2,baz=52,slow=7.7,SNR=33						
FCC	**Fort Churchill**	**67.27**	**29**	*e*P	**P**	**16 06 52.8**	**-0.3**
	comp=Z,3.4nm,0.5s,mb4.4						
FCC	**Fort Churchill**	**67.27**	**29**	*e*P	**P**	**16 06 52.8**	**-0.3**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
ASAR	**Alice Springs**	**67.50**	**190**	P	**P**	**16 06 55.8**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**67.50**	**190**	P	**P**	**16 06 55.8**	**+0.9**
	comp=Z,0.9nm,0.8s,mb3.7,baz=3.1,slow=5.1,SNR=13						
NB2	**NORSAR Subarra**	**69.08**	**338**	P	**P**	**16 07 03.8**	**-0.6**
	comp=Z,1.7nm,0.7s,mb3.9,baz=34,slow=6.5						
NOA	**NORSAR Array B**	**69.08**	**338**	P	**P**	**16 07 04.1**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**69.08**	**338**	P	**P**	**16 07 04.1**	**-0.2**
	comp=Z,1.8nm,0.7s,mb3.9,baz=34,slow=6.2,SNR=12						
NVAR	**Mina Array Bea**	**69.47**	**56**	P	**P**	**16 07 07.4**	**+0.2**
	comp=Z,1.0nm,0.7s,mb3.7,baz=298,slow=4.8,SNR=5.2						
AKASG	**Malin Array Be**	**70.54**	**322**	P	**P**	**16 07 13.2**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.54**	**322**	P	**P**	**16 07 13.2**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.7,baz=42,slow=6.3,SNR=6.1						
BW06	**Boulder Array**	**71.65**	**48**	*e*P	**P**	**16 07 20.8**	**+0.4**
PDAR	**Pinedale Array**	**71.65**	**48**	P	**P**	**16 07 21.1**	**+0.7**
	comp=Z,1.0nm,0.5s,mb3.8,baz=2.2,slow=0.1,SNR=11						
ULM	**Lac du Bonnet**	**72.94**	**36**	P	**P**	**16 07 26.5**	**-1.4**
	comp=Z,1.4nm,0.7s,mb3.8,baz=343,slow=9.7,SNR=3.2						
PV10	**Paradox Valley**	**74.94**	**51**	*e*P	**P**	**16 07 40.7**	**+1.0**
SCHQ	**Schefferville**	**78.53**	**18**	P	**P**	**16 07 59.6**	**+0.1**
	comp=Z,1.1nm,0.4s,mb3.9,baz=140,slow=12,SNR=11						
TXAR	**Lajitas Array**	**84.51**	**54**	P	**P**	**16 08 32.4**	**+0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**84.51**	**54**	P	**P**	**16 08 32.4**	**+0.9**
	comp=Z,0.9nm,0.6s,mb3.7,baz=289,slow=2.8,SNR=13						

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*NEIC **04** 15:57:50.0, 2969S×7184W, h15^{km}, ML3.5(GUC), After GUC.*

GUC 04 15:57:50.0±0.7**, 2969S×7184W, h15**^{km}±6^{km}**, ML3.5, 1C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.56**	**113**	⇓*i*P	Pg	15 58 00.6	-0.4
LSCH				*i* S	Sg	15 58 08.5	0.0
TLL	**Tololo Astrono**	**1.01**	**118**	⇓*i*P	Pb	15 58 08.4	-0.9
TLL				*i* S	Sb	15 58 22.6	+0.2
TLL	**Tololo Astrono**	**1.01**	**118**	⇓*i*P	Pb	15 58 08.4	-0.9
TLL				*i* S	Sb	15 58 22.6	+0.2
TLL				AML	AML	15 58 29.0	
	comp=N,746nm,0.7s						
OVCH	**Ovalle**	**1.07**	**149**	⇑*i*P	Pb	15 58 08.8	-1.3
OVCH				*i* S	Sb	15 58 23.2	-0.7
LCO	**Las Campanas**	**1.21**	**56**	*e*P	Pn	15 58 10.7	-1.6
LCO				*e*S	Sb	15 58 27.6	-0.3
VACH	**Vallenar**	**1.46**	**41**	⇓*i*P	Pn	15 58 15.1	-0.8
VACH				*i* S	Sn	15 58 34.1	-0.6
VACH	**Vallenar**	**1.46**	**41**	⇓*i*P	Pn	15 58 15.1	-0.8
VACH				*i* S	Sn	15 58 34.1	-0.6
VACH				AML	AML	15 58 36.9	
	comp=N,2μm,0.5s						
CMCH	**Combarbala**	**1.64**	**154**	*e*P	Pn	15 58 17.9	-0.4
CMCH				*i* S	Sn	15 58 39.0	-0.2
CMCH	**Combarbala**	**1.64**	**154**	*e*P	Pn	15 58 17.9	-0.4
CMCH				*i* S	Sn	15 58 39.0	-0.2
CMCH				AML	AML	15 58 46.5	
	comp=E,2μm,0.7s						
CHNG	**Los Chungos**	**2.20**	**172**	*e*P	Pn	15 58 12.9	-13
CHNG				*i* S	Sn	15 58 41.0	-12

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*IDC **04** 16:10:08.9±0.7, 561S×15328E, h0^{km}, mb4.3/13, mb1 4.4/15, mb1mx4.4/20, mbtmp4.4/15, ML3.7/2, MS4.0/11, Ms1 4.0/11, ms1mx3.8/20, Error ellipse: s-maj=21.7km s-min=14.5km az=89.0*

*ISCJB **04** 16:10:09.1±2.2, 568S±005×15342E±007, h13^{km}±14^{km}, mb4.6/47, MS4.1/16, Error ellipse: s-maj=12.2km s-min=7.7km az=20.3*

*MOS **04** 16:10:11.0±1.2, 570S×15359E, h33^{km}, mb4.9/13, Error ellipse: s-maj=13.0km s-min=9.6km az=89.6*

*BJI **04** 16:10:13.4, 538S×15383E, h49^{km}, mB5.3, mb4.8, Ms4.8, Msz4.6*

*NEIC **04** 16:10:14.9±2.3, 567S×15331E, h45^{km}±20^{km}, mb4.8/23, Error ellipse: s-maj=15.5km s-min=10.0km az=65.0*

ISC 04 16:10:12.9±2.5**, 573S**±006×**15351E**±007**, h30**^{km}±17^{km}**, h34**^{km}±1.8^{km}**: pP-P, n94, σ1ˢ33**/91**, mb4.6**/47**, MS4.1**/16**, 12C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.27**	**239**	*e*Pn	**Pn**	**16 11 57.2**	**-0.1**
	73nm,0.9s						
PMG				*e*Sn	**Sn**	**16 13 18.8**	**0.0**
PMG	**Port Moresby**	**7.27**	**239**	*ce*P	**Pn**	**16 11 57.6**	**+0.4**
PMG	**Port Moresby**	**7.27**	**239**	Pn	**Pn**	**16 11 56.4**	**-0.8**
	7.0nm,0.3s,baz=40,slow=2.4,SNR=29						
PMG				Sn	**Sn**	**16 13 18.7**	**-0.2**
	4.6nm,0.3s,baz=108,slow=20,SNR=6.7						
CTA	**Charters Tower**	**15.92**	**206**	Pn	**Pn**	**16 13 56.6**	**+1.8**
	0.2nm,0.3s,baz=24,slow=12,SNR=3.7						
CTA				LR	LR	16 19 12.3	
	comp=Z,389nm,21.9s,baz=40,slow=34						
CTAO	**Charters Tower**	**15.92**	**206**	*e*P	**Pn**	**16 13 54.6**	**-0.3**
	11nm,0.9s						
CTAO	**Charters Tower**	**15.92**	**206**	*e*P	**Pn**	**16 13 54.6**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,11nm,0.9s						
EIDS	**Eidsvold**	**19.66**	**187**	*e*P	**Pn**	**16 14 39.3**	**-1.8**
	comp=Z,8.0nm,0.8s						
DZM	**Mont Dzumac**	**20.50**	**144**	P	**P**	**16 14 52.7**	**+3.9**
	comp=Z,11nm,0.8s,baz=12,slow=18,SNR=4.6						
WB2	**Warramunga Arr**	**23.37**	**231**	*e*P	**P**	**16 15 19.4**	**0.0**
WRA	**Warramunga Arr**	**23.38**	**231**	P	**P**	**16 15 17.5**	**-2.0**
	comp=Z,4.5nm,0.8s,mb4.0,baz=57,slow=9.4,SNR=19						
WRA				LR	LR	16 24 22.3	
	comp=Z,226nm,19.7s,MS3.6,baz=65,slow=37						
ARMA	**Armidale**	**24.62**	**184**	*e*P	**P**	**16 15 31.4**	**+0.6**
ASAR	**Alice Springs**	**25.96**	**225**	P	**P**	**16 15 42.1**	**-0.9**
	comp=Z,7.5nm,0.8s,mb4.3,baz=56,slow=8.8,SNR=53						
ASAR				PcP	PcP	16 19 12.7	+1.4
	comp=Z,1.5nm,0.9s,baz=62,slow=2.0,SNR=4.6						
STKA	**Stephens Creek**	**28.30**	**202**	*e*P	**P**	**16 16 05.2**	**+1.3**
	comp=Z,4.5nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**28.30**	**202**	P	**P**	**16 16 04.7**	**+0.8**
	comp=Z,4.0nm,1.0s,mb4.0,baz=3.7,slow=12,SNR=5.3						
STKA				LR	LR	16 28 04.8	
	comp=Z,406nm,18.5s,MS4.0,baz=137,slow=38						
FITZ	**Fitzroy Crossi**	**29.85**	**243**	*e*P	**P**	**16 16 16.2**	**-1.7**
	comp=Z,16nm,1.1s,mb4.7						
FITZ	**Fitzroy Crossi**	**29.85**	**243**	P	**P**	**16 16 16.5**	**-1.4**
	comp=Z,5.2nm,0.7s,mb4.3,baz=74,slow=12,SNR=9.5						
FITZ				LR	LR	16 29 02.3	
	comp=Z,150nm,22.0s,MS3.6,baz=299,slow=38						
FORT	**Forrest**	**34.53**	**221**	*e*P	**P**	**16 16 57.5**	**-1.3**
	comp=Z,23nm,0.8s,mb5.2						
URZ	**Urewera**	**38.83**	**150**	P	**P**	**16 17 37.8**	**+2.5**
	comp=Z,5.3nm,0.9s,mb4.3,baz=315,slow=2.9,SNR=2.5						
RPZ	**Rata Peaks**	**40.87**	**160**	P	**P**	**16 17 53.5**	**+1.4**
	comp=Z,8.5nm,0.8s,mb4.4,baz=299,slow=1.1,SNR=4.5						
NWAO	**Narrogin (SRO)**	**43.25**	**227**	LR	LR	16 37 03.0	
	comp=Z,423nm,19.4s,MS4.3,baz=39,slow=37						
MJAR	**Matsushiro Arr**	**44.42**	**342**	P	**P**	**16 18 18.5**	**-2.7**
	comp=Z,1.4nm,0.6s,mb3.8,baz=162,slow=7.4,SNR=5.0						
MJAR				LR	LR	16 34 51.2	
	comp=Z,172nm,18.8s,MS4.0,baz=180,slow=34						
KSRS	**Korea Array**	**49.14**	**333**	P	**P**	**16 18 58.5**	**+0.4**
	comp=Z,4.9nm,1.1s,mb4.5,baz=124,slow=11,SNR=4.9						
KSRS				LR	LR	16 35 23.1	
	comp=Z,78nm,22.0s,MS3.6,baz=130,slow=31						
NJ2	**Nanjing**	**50.01**	**321**	*e*P	**P**	**16 19 07.0**	**+2.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
MDJ	**Mudanjiang**	**54.53**	**339**	P	**P**	**16 19 40.2**	**+2.1**
MDJ				AP	pP	16 19 49.2	+2.0
MDJ				XP	sP	16 19 52.9	+2.2
MDJ				PCP	PcP	16 20 42.8	+1.6
MDJ				PP	PP	16 21 39.9	-0.9
MDJ				AMB	AMB		
	comp=Z,27nm,2.4s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,402nm,4.3s						
MDJ				LR	LR		
	comp=N,109nm,44.7s,MS3.7						
MDJ				LR	LR		
	comp=E,86nm,44.1s,MS3.7						
MDJ				LR	LR		
	comp=Z,53nm,18.1s						
CN2	**Changchun**	**55.43**	**336**	*e*P	**P**	**16 19 44.0**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA	**Guiyang**	**55.51**	**308**	P	**P**	**16 19 47.6**	**+2.0**
GYA				AP	pP	16 19 58.9	+4.2
GYA				XP	sP	16 20 03.4	+5.2
GYA				PCP	PcP	16 20 47.9	+2.5
GYA				PP	PP	16 21 54.5	+4.6
GYA				SCP	ScP	16 24 42.5	+0.1
GYA				S	**S**	**16 27 30.0**	**+0.8**
GYA				SCS	ScS	16 29 31.3	-1.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,440nm,18.0s,MS4.7						
GYA				LR	LR		
	comp=E,310nm,17.6s,MS4.7						
GYA				LR	LR		
	comp=Z,470nm,19.2s,MS4.6						
KLR	**Kul'dur**	**57.93**	**343**	*e*P	**P**	**16 19 58.1**	**-4.2**
KMI	**Kunming**	**58.09**	**304**	P	**P**	**16 20 06.4**	**+2.5**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.6						
KMI	**Kunming**	**58.09**	**304**	P	**P**	**16 20 06.4**	**+2.5**
	comp=Z,10.0nm,1.5s,mb4.6						
CD2	**Chengdu**	**59.87**	**311**	*e*P	**P**	**16 20 18.4**	**+2.2**
CD2				AP	pP	16 20 28.3	+3.0
CD2				XP	sP	16 20 32.6	+3.7
CD2				PP	PP	16 22 32.6	+4.0
CD2				S	**S**	**16 28 26.7**	**+0.4**
CD2				XS	sS	16 28 43.6	+2.2
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=E,130nm,15.6s						
CD2				LR	LR		
	comp=Z,280nm,13.2s,MS4.6						
HHC	**Hu-ho-hao-te**	**60.21**	**324**	*e*P	**P**	**16 20 18.3**	**0.0**
HHC				AP	pP	16 20 28.4	+1.0
HHC				XP	sP	16 20 32.9	+1.9
HHC				PCP	PcP	16 21 03.7	+0.1
HHC				PP	PP	16 22 32.7	+1.3
HHC				PCS	PcS	16 25 03.9	-2.0
HHC				S	**S**	**16 28 27.3**	**-2.9**
HHC				XS	sS	16 28 44.9	-0.4
HHC				SCS	ScS	16 30 02.5	-4.4
HHC				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.5						
HHC				AMB	AMB		
	comp=Z,212nm,3.8s						
HHC				LR	LR		
	comp=N,233nm,14.3s,MS4.6						
HHC				LR	LR		
	comp=E,196nm,11.9s,MS4.6						
HHC				LR	LR		
	comp=Z,192nm,15.5s,MS4.3						
HIA	**Hailar**	**62.16**	**336**	*e*P	**P**	**16 20 30.6**	**-0.7**
	comp=Z,9.6nm,0.9s,mb4.9						
HIA	**Hailar**	**62.16**	**336**	⇑*e*P	**P**	**16 20 31.0**	**-0.3**
LZH	**Lanzhou**	**62.38**	**316**	*e*P	**P**	**16 20 34.5**	**+1.4**
	comp=Z,29nm,1.5s,mb5.2						
LZH				pP	pP	16 20 42.5	+0.2
LZH				sP	sP	16 20 47.5	+1.7
LZH	**Lanzhou**	**62.38**	**316**	*e*P	**P**	**16 20 34.5**	**+1.4**
LZH				*PP	pP	16 20 42.5	+0.2
LZH				*SP	sP	16 20 47.5	+1.7
LZH				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.2						
MA2	**Magadan**	**65.14**	**358**	*e*P	**P**	**16 20 49.5**	**-1.2**
	comp=Z,1.4nm,0.7s,mb4.1						
MA2	**Magadan**	**65.14**	**358**	*e*P	**P**	**16 20 49.4**	**-1.3**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
GTA	**Gaotai**	**66.81**	**317**	*e*P	**P**	**16 21 03.2**	**+1.2**
GTA				AP	pP	16 21 14.3	+3.1
GTA				XP	sP	16 21 18.5	+3.8
GTA				PP	PP	16 23 32.2	+2.7
GTA				S	S	16 29 53.9	+1.3
GTA				XS	sS	16 30 11.4	+3.5
GTA				AMB	AMB		
	comp=Z,7.0nm,1.5s,mb4.5						
GTA				AMB	AMB		
	comp=Z,113nm,5.0s						
GTA				LR	LR		
	comp=N,161nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=E,164nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=Z,144nm,16.0s,MS4.3						
ULN	**Ulaanbaatar**	**67.15**	**328**	*e*P	**P**	**16 21 04.6**	**+0.6**
	comp=Z,24nm,1.8s,mb4.9						
ULN	**Ulaanbaatar**	**67.15**	**328**	⇑*e*P	**P**	**16 21 05.0**	**+1.1**
SHL	**Shillong**	**67.38**	**301**	*i* P	**P**	**16 21 06.5**	**+0.6**
SONM	**Songino Array**	**67.48**	**328**	P	**P**	**16 21 06.3**	**+0.3**
	comp=Z,1.6nm,0.6s,mb4.2,baz=139,slow=3.7,SNR=16						
SONM				LR	LR	16 51 47.4	
	comp=Z,134nm,18.1s,MS4.2,baz=355,slow=37						
LSA	**Lhasa**	**69.34**	**305**	P	**P**	**16 21 19.4**	**+1.3**
LSA	**Lhasa**	**69.34**	**305**	*e*P	**P**	**16 21 19.6**	**+1.5**
	comp=Z,7.6nm,1.0s,mb4.6						
LSA	**Lhasa**	**69.34**	**305**	*e*P	**P**	**16 21 19.6**	**+1.5**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
YAK	**Yakutsk**	**70.02**	**348**	*de*P	**P**	**16 21 21.9**	**+0.4**
YAK				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
ZAK	**Zakamensk**	**70.65**	**329**	⇑*i*P	**P**	**16 21 26.2**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
BOD	**Bodaibo**	**70.91**	**339**	*e*P	**P**	**16 21 25.3**	**-1.7**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
TLY	**Talaya**	**71.23**	**330**	*e*P	**P**	**16 21 29.2**	**+0.1**
	comp=Z,15nm,1.7s,mb4.7						
TLY	**Talaya**	**71.23**	**330**	⇑*e*P	**P**	**16 21 29.7**	**+0.6**
TLY				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb4.1						
TAPN	**Taplejung**	**71.48**	**301**	*e*P	**P**	**16 21 29.9**	**-1.3**
	comp=Z,0.1nm,0.0s,mb4.1						
ODAN	**Odare**	**71.62**	**301**	*e*P	**P**	**16 21 32.1**	**+0.1**
	comp=Z,20nm,1.0s,mb5.0						
MOY	**Mondy**	**72.57**	**329**	*e*P	**P**	**16 21 37.3**	**+0.1**
MOY				pmax	pmax		
	comp=Z,28nm,2.2s,mb4.8						
JIRN	**Jiri**	**72.87**	**301**	*e*P	**P**	**16 21 37.5**	**-2.0**
KKN	**Kakani**	**73.68**	**301**	*e*P	**P**	**16 21 42.4**	**-1.9**
	comp=Z,8.3nm,0.8s,mb4.7						
KKN	**Kakani**	**73.68**	**301**	*e*P	**P**	**16 21 42.4**	**-1.9**
KKN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BILL	**Bilibino**	**74.15**	**5**	*e*P	**P**	**16 21 44.9**	**-1.3**
	comp=Z,3.9nm,1.0s,mb4.3						
BILL	**Bilibino**	**74.15**	**5**	*e*P	**P**	**16 21 44.3**	**-1.8**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.3						
GKN	**Gorkha**	**74.28**	**301**	*e*P	**P**	**16 21 44.9**	**-2.9**
	comp=Z,12nm,0.7s,mb4.9						
WMQ	**Urumqi**	**76.90**	**317**	⇑P	**P**	**16 22 03.5**	**+1.1**
WMQ				AP	pP	16 22 13.5	+1.6
WMQ				XP	sP	16 22 17.8	+2.5
WMQ				PP	PP	16 24 58.0	+2.2
WMQ				S	S	16 31 47.5	-1.0
WMQ				XS	sS	16 32 04.5	+0.5
WMQ				SKS		16 32 08.0	
WMQ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.4						
WMQ				LR	LR		
	comp=N,54nm,18.3s,MS4.0						
WMQ				LR	LR		
	comp=E,29nm,19.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,45nm,17.3s,MS3.9						
TIXI	**Tiksi**	**78.91**	**352**	⇑*e*P	**P**	**16 22 09.6**	**-3.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.9s,mb4.3						
MKAR	**Makanchi Array**	**81.48**	**319**	P	**P**	**16 22 27.1**	**-0.3**
	comp=Z,3.1nm,0.7s,mb4.3,baz=102,slow=5.1,SNR=26						
MKAR				LR	LR	16 59 21.1	
	comp=Z,57nm,18.7s,MS4.0,baz=354,slow=36						
ZALV	**Zalesovo Beam**	**82.31**	**326**	P	**P**	**16 22 31.1**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.2,baz=101,slow=7.7,SNR=14						
ZAL	**Zalesovo**	**82.32**	**326**	P	**P**	**16 22 31.1**	**-0.6**
COLA	**College**	**82.45**	**22**	⇑*e*P	**P**	**16 22 30.2**	**-1.9**
NVS	**Novosibirsk**	**83.49**	**327**	⇑*i*P	**P**	**16 22 37.4**	**-0.3**
NVS				pmax	pmax		
	comp=N,17nm,1.5s						
NVS				pmax	pmax		
	comp=E,25nm,1.5s						
NVS				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.2						
QSPA	**South Pole Qui**	**84.23**	**180**	*e*P	**P**	**16 22 41.6**	**+0.5**
	comp=Z,19nm,1.0s,mb5.2						
KURK	**Kurchatov**	**84.93**	**322**	*e*P	**P**	**16 22 44.8**	**-0.4**
	comp=Z,34nm,1.5s,mb5.3						
KURK	**Kurchatov**	**84.93**	**322**	⇑*e*P	**P**	**16 22 44.7**	**-0.4**
TKM2	**Tokmak 2**	**85.08**	**314**	*e*P	**P**	**16 22 46.8**	**+0.7**
	comp=Z,6.4nm,0.9s,mb4.8						
TKM2	**Tokmak 2**	**85.08**	**314**	*e*P	**P**	**16 22 46.8**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
TKM2	**Tokmak 2**	**85.08**	**314**	P	**P**	**16 22 47.1**	**+1.1**
	SNR=5.3						
KZA	**Kyzart**	**85.15**	**313**	P	**P**	**16 22 48.5**	**+2.1**
	SNR=7.6						
DAWY	**Dawson**	**85.35**	**24**	*e*P	**P**	**16 22 45.5**	**-1.4**
UCH	**Uchtor**	**85.72**	**313**	*e*P	**P**	**16 22 51.0**	**+1.8**
	comp=Z,12nm,1.2s,mb5.0						
UCH	**Uchtor**	**85.72**	**313**	P	**P**	**16 22 51.3**	**+2.0**
	SNR=7.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	85.81	313	eP	P	16 22 49.1	-0.6
	comp=Z,4.5nm,1.0s,mb4.7						
AAK	Ala-Archa	85.81	313c	iP	P	16 22 49.3	-0.4
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.7						
USP	Ospenovka	85.94	314	P	P	16 22 51.4	+1.1
	SNR=5.8						
AML	Almayashu	86.29	313	eP	P	16 22 53.3	+1.2
	comp=Z,9.7nm,1.1s,mb5.0						
AML	Almayashu	86.29	313	P	P	16 22 54.2	+2.0
	SNR=6.0						
BRVK	Borovoye	90.47	323	eP	P	16 23 11.0	-0.8
	comp=Z,5.9nm,1.0s,mb4.9						
BRVK	Borovoye	90.47	323	eP	P	16 23 11.0	-0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
YKA	Yellowknife Ar	95.92	28	P	P	16 23 35.3	-1.3
YKA				LR	LR	17 02 16.4	
YKA	Yellowknife Ar	95.92	28	P	P	16 23 35.3	-1.3
	comp=Z,0.1nm,0.3s,mb3.7,baz=264,slow=4.2,SNR=3.7						
YKA				LR	LR	17 02 16.4	
	comp=Z,58nm,19.7s,MS4.1,baz=205,slow=33						
ARU	Arti	97.48	326	P	P	16 23 42.2	-1.6
ARU	Arti	97.48	326	⇑eP	P	16 23 42.1	-1.7
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
PDAR	Pinedale Array	98.95	48	LR	LR	17 05 05.9	
	comp=Z,182nm,18.8s,MS4.6,baz=268,slow=33						
AKASG	Malin Array Be	115.66	324	PKP	PKPdf	16 28 51.2	-1.1
AKASG	Malin Array Be	115.66	324	PKP	PKPdf	16 28 51.2	-1.1
	comp=Z,0.1nm,0.3s,baz=64,slow=1.8,SNR=4.1						
GERES	GERESS Array B	125.21	329	PKP	PKPdf	16 29 11.0	+0.3
	comp=Z,1.0nm,0.9s,baz=52,slow=2.4,SNR=7.7						
MDT	Midelt	146.21	326	PKPbc	PKPbc	16 29 52.3	+1.2
	comp=Z,5.1nm,0.9s,baz=58,slow=3.8,SNR=11						
TORD	Torodi Ar. Bea	151.25	287	PKPbc	PKPbc	16 30 03.7	-0.9
TORD	Torodi Ar. Bea	151.25	287	PKPbc	PKPbc	16 30 03.7	-0.9
	comp=Z,4.8nm,0.8s,baz=45,slow=1.8,SNR=22						

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*DDA **04** 16:14:31.5, 4009N×2530E, h12km±3km, Md4.1*
*ISK **04** 16:14:32.1, 4001N×2528E, h11km, ML4.2*
*IDC **04** 16:14:32.1±0.9, 3999N×2527E, h0km, mb3.5/9, mb1 3.7/14, mb1mx3.6/25, mbtmp3.6/14, ML3.9/6, MS3.1/8, Ms1 3.1/8, ms1mx2.9/28, Error ellipse: s-maj=15.8km s-min=12.9km az=102.0*
*ATH **04** 16:14:32.8, 3999N×2532E, h33km±1km, MD4.0/16, ML4.0*
*THE **04** 16:14:32.3, 3997N×2532E, h3km, ML4.6*
*SOF **04** 16:14:32.2, 4010N×2536E, h7km, MD3.8*
*ISCJB **04** 16:14:33.6±0.3, 4000N±002×2529E±002, h23km±3km, mb3.5/10, MS3.0/4, Error ellipse: s-maj=2.6km s-min=2.0km az=17.2*
*MOS **04** 16:14:33.0±1.5, 4007N×2542E, h21km, mb4.0/2, Error ellipse: s-maj=7.6km s-min=4.3km az=100.4*
*CSEM **04** 16:14:34.7±0.0, 4002N×2535E, h40km, ML4.0, Error ellipse: s-maj=1.1km s-min=0.8km az=24.0*
*NEIC **04** 16:14:34.4±0.9, 3999N×2533E, h19km±7km, mb3.9/2, ML4.0(ATH), Error ellipse: s-maj=5.1km s-min=3.8km az=80.0*
*BEO **04** 16:14:36.0±0.7, 4022N×2545E, ML4.2/9*

ISC 04 16:14:32.7±0.3, 4001N±001×2530E±001, h4km±2km, n216, σ1.07/258, mb3.5/10, MS3.0/4, 13C-9D, Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIA	Limnos Island	0.14	220	⇑iPb	Pg	16 14 39.0	+3.5
LIA				eSb	Sg	16 14 41.8	+4.4
LOS	Limnos	0.18	247	ePg	Pg	16 14 37.2	+0.9
GADA	Gvkgeada	0.49	68	i PG	Pg	16 14 42.8	+0.6
GADA				i SG	Sg	16 14 49.9	+1.3
BOZC	Bozcaada	0.60	106	i P	Pg	16 14 44.5	+0.2
BOZC				i S	Sg	16 14 52.7	+0.6
EZN	Ezine	0.81	103	i PG	Pg	16 14 48.1	-0.1
EZN				i SG	Sg	16 15 00.8	+2.1
ENEZ	Enez	0.98	42	i PG	Pg	16 14 51.6	+0.1
ENEZ				i SG	Sg	16 15 05.7	+1.6
ALN	Alexandroupoli	1.05	32	ePg	Pg	16 14 52.5	-0.4
ALN				eSg	Sg	16 15 08.0	+1.4
OUR	Ouranopolis	1.06	288	ePg	Pg	16 14 53.4	+0.3
OUR	Ouranopolis	1.06	288	ePg	Pg	16 14 53.3	+0.2
PRK	Paraskevi	1.07	135	ePN	Pn	16 14 53.1	-1.3
PRK				eSN	Sn	16 15 06.8	-2.8
PRK	Paraskevi	1.07	135	ePn	Pn	16 14 53.1	-1.3
PRK				eSn	Sn	16 15 07.6	-2.0
RDO	Rodhopi	1.15	9	⇑iPN	Pn	16 14 54.4	-1.2
LPK	Lapseki	1.18	71	PN	Pn	16 14 55.2	-0.7
PAIG	Paliouri	1.25	267	ePg	Pg	16 14 55.6	-1.0
PAIG				eSg	Sg	16 15 13.8	+0.9
AYVA	Ayvalik	1.28	123	i P	Pg	16 14 56.5	-0.7
AYVA				i S	Sg	16 15 13.9	+0.1
AOS	Alonnisos	1.38	233	ePg	Pg	16 14 57.6	-1.6
PLG	Polygyros	1.47	285	⇓iPB	Pb	16 14 58.7	-1.8
RKY	Sarkoy-Tekirda	1.59	64	PN	Pn	16 15 01.0	-0.5
SART	Tekirdag	1.59	64	i P	Pn	16 15 00.9	-0.6
SART				i S	Sn	16 15 22.6	+0.1
KDZ	Kurdzhali	1.64	3	P	Pn	16 15 01.2	-1.1
KDZ				Pg	Pg	16 15 03.3	-0.9
SOH	Sokhos	1.69	299	ePb	Pb	16 15 02.5	-1.9
SOH				eSb	Sb	16 15 26.5	+0.5
MFT	Murefte	1.70	62	PN	Pn	16 15 02.8	-0.3
CHOS	Chios island	1.72	160	ePb	Pn	16 15 02.7	-0.7
CHOS				eSb	Sb	16 15 29.2	+2.4
NVR	Nevrokopi	1.73	321	⇓iPB	Pn	16 15 03.0	-0.5
NVR				eSN	Sn	16 15 24.9	-1.1
RZN	Rozhen	1.74	345	P	Pn	16 15 03.4	-0.2
XOR	Xorichti	1.75	249	ePb	Pn	16 15 02.3	-1.4
NEO	Neokhori	1.75	247	ePN	Pn	16 15 02.5	-1.3
HORT	Hortiatis	1.78	290	ePb	Pn	16 15 03.6	-0.6
HORT				eSb	Sb	16 15 29.1	+0.5
MRMT	Marmara Adasi	1.85	71	PN	Pn	16 15 04.2	-1.0
THE	Thessaloniki	1.89	290	ePb	Pn	16 15 04.8	-0.9
THE				eSb	Sb	16 15 33.8	+2.1
URLA	Izmir	1.93	148	i P	Pn	16 15 05.5	-0.7
URLA				i S	Sg	16 15 36.3	+1.6
MMB	Musomiste	1.98	323	P	Pn	16 15 06.4	-0.5
EDC	Edincik	1.99	79	PN	Pn	16 15 07.5	+0.4
BALB	Balikesir	2.02	100	PN	Pn	16 15 07.4	-0.1
BNT	Bandirma	2.04	79	PN	Pn	16 15 07.5	-0.2
DIM	Dimitrovgrad	2.05	5	P	Pn	16 15 07.6	-0.3
DIM				Pg	Pg	16 15 11.3	-0.7
BLCB	Balcova	2.11	140	PN	Pn	16 15 08.5	-0.2
EDRB	Edirne	2.14	30	PN	Pn	16 15 09.4	+0.3
LIT	Litokhoron	2.16	273	ePn	Pn	16 15 08.3	-1.1
KNT	Kendrikon	2.16	303	ePn	Pn	16 15 09.3	-0.1
KDAG	Bornova	2.21	136	i P	Pn	16 15 10.1	0.0
KDAG				i S	Sg	16 15 45.7	+1.9
IZM	Izmir	2.21	136	PN	Pn	16 15 10.3	+0.2
LKR	Lokris	2.24	234	ePN	Pn	16 15 09.6	-0.9
AKS	Akhisar	2.25	119	PN	Pn	16 15 10.8	+0.2
KCT	Karacabey	2.36	83	PN	Pn	16 15 11.8	-0.3
ATH	Athens Observa	2.38	212	ePN	Pn	16 15 11.4	-1.0
GRG	Griva	2.41	294	ePn	Pn	16 15 12.6	-0.2
VAY	Valandovo	2.46	303	ePn	Pn	16 15 13.4	-0.1
VAY				i Sn	Sg	16 15 52.6	+0.9
VAY	Valandovo	2.46	303	ePn	Pn	16 15 13.3	-0.2
KVR	Kavouri	2.48	209	ePN	Pn	16 15 13.0	-0.8
AGG	Agios Georgios	2.50	248	ePn	Pn	16 15 13.2	-0.9
KKB	Krupnik	2.50	319	P	Pn	16 15 13.7	-0.4
KKB				Pg	Pg	16 15 20.5	-0.2
THL	Klokotos Trika	2.57	261	⇓iPN	Pn	16 15 14.4	-0.6
SMG	Samos	2.59	152	ePN	Pn	16 15 14.5	-0.8
DST	Dursunbey	2.59	98	PN	Pn	16 15 15.4	0.0
CTT	Catalca	2.64	63	PN	Pn	16 15 15.5	-0.5
JMB	Yambol	2.64	21	P	Pn	16 15 15.6	-0.4
JMB				Pg	Pg	16 15 22.4	-0.9
NAIG	Nisos Aigina	2.65	213	ePN	Pn	16 15 15.5	-0.7
LTK	Loutraki	2.69	223	ePn	Pn	16 15 15.8	-0.9
LTK				eSn	Sn	16 15 49.6	-0.1
KZN	Kozani	2.72	277	⇓iPN	Pn	16 15 17.0	-0.1
STIP	Stip	2.90	307	i Pn	Pn	16 15 20.0	+0.4
STIP				i Sn	Sg	16 16 06.6	+0.6
EVR	Evrytania	2.92	249	ePN	Pn	16 15 19.6	-0.2
APE	Apeiranthos	2.94	176	⇑iPN	Pn	16 15 19.4	-0.7
APE	Apeiranthos	2.94	176	⇑iP	Pn	16 15 17.8	-2.3
APE	Apeiranthos	2.94	176	⇑iPn	Pn	16 15 19.4	-0.7
ULDT	Uludag	2.94	86	i P	Pn	16 15 20.2	0.0
ULDT				i S	Sg	16 16 06.3	-1.0
DID	Didima	2.97	214	ePn	Pn	16 15 19.1	-1.5
DID				eSn	Sn	16 15 52.8	-3.8
KULA	Kula-Manisa	3.00	119	PN	Pn	16 15 21.0	0.0
GEMT	Gemlik	3.01	81	PN	Pn	16 15 21.3	+0.3
VTS	Vitosha	3.02	329	ePn	Pn	16 15 22.1	+0.8
VTS				eSg	Sg	16 16 10.0	+0.1
VTS	Vitosha	3.02	329	P	Pn	16 15 22.0	+0.7
ISK	Istanbul-Kandi	3.05	69	PN	Pn	16 15 21.1	-0.6
FNA	Florina	3.10	286	ePn	Pn	16 15 22.4	+0.2
KLYT	Kilyos	3.11	65	PN	Pn	16 15 21.9	-0.5
YLV	Yalova	3.16	79	ePN	Pn	16 15 23.3	+0.1
BIA	Bitola	3.20	290	i Pn	Pn	16 15 23.5	-0.1
PVL	Pavlikeni	3.21	0	P	Pn	16 15 22.8	-1.0
PVL				Pg	Pg	16 15 31.8	-2.4
IZI	Iznik	3.21	83	ePN	Pn	16 15 24.0	+0.1
MLSB	Milas	3.33	144	ePN	Pn	16 15 25.7	+0.2
BODT	Bodrum	3.34	151	ePN	Pn	16 15 25.6	0.0
GDZ	Gediz	3.36	105	i P	Pn	16 15 26.3	+0.5
GDZ				i S	Sg	16 16 18.6	-2.0
KRUS	Krusevo	3.37	295	⇓iPn	Pn	16 15 26.8	+0.8
KRUS	Krusevo	3.37	295	⇓iPn	Pn	16 15 26.7	+0.7
BDRM	Kayabasi	3.38	150	i P	Pn	16 15 25.8	-0.5
BDRM				i S	Sg	16 16 19.0	-2.4
GEDT	Gedikpinar	3.40	89	ePN	Pn	16 15 27.4	+1.0
ADVT	Abdulvahap	3.42	81	ePN	Pn	16 15 27.7	+0.9
HRT	Hereke	3.43	75	ePN	Pn	16 15 27.4	+0.5
JAN	Janina	3.44	266	P	Pn	16 15 32.1	+5.0
VLX	Vlachokerasia	3.49	222	ePn	Pn	16 15 27.4	-0.3
SKO	Skopje	3.52	305	ePn	Pn	16 15 29.7	+1.6
SKO	Skopje	3.52	305	ePn	Pn	16 15 29.6	+1.5
PRD	Provadia	3.56	26	eP	Pn	16 15 28.0	-0.6
OHR	Ohrid	3.60	289	ePn	Pn	16 15 29.3	0.0
OHR	Ohrid	3.60	289	ePn	Pn	16 15 29.2	0.0
SANT	Santorini	3.63	178	P	Pn	16 15 35.7	+6.0
DENT	Denizli	3.68	127	ePN	Pn	16 15 31.1	+0.8
KHL	Karahalli	3.69	116	ePN	Pn	16 15 30.6	+0.2
YER	Yerkesik	3.70	140	ePN	Pn	16 15 31.1	+0.5
DAT	Datca	3.73	151	ePN	Pn	16 15 31.1	+0.1
VLI	Veliai	3.77	210	ePN	Pn	16 15 31.0	-0.6
BARS	Barje	3.84	318	ePn	Pn	16 15 33.7	+1.2
BARS				i Sg	Sg	16 16 35.0	-1.0
BARS	Barje	3.84	318	Pn	Pn	16 15 33.8	+1.3
BARS				Sg	Sg	16 16 35.0	-1.0
GPA	Golpazari	3.85	84	ePN	Pn	16 15 32.5	-0.1
ITM	Ithomi	3.87	224	P	Pn	16 15 34.1	+1.2
GULT	Gulveren	4.01	82	ePN	Pn	16 15 35.7	+0.8
DALT	Dalyan (Mudla)	4.16	140	ePN	Pn	16 15 37.6	+0.7
KEK	Kerkira	4.25	268	P	Pn	16 15 40.8	+2.7
ESKT	Eskisehir	4.30	95	i P	Pn	16 15 39.5	+0.6
ESKT				i S	Sg	16 16 48.0	-3.0
ESKT	Eskisehir	4.30	95	ePn	Pn	16 15 40.2	+1.3
SEYT	Eskypehyr	4.30	95	i P	Pn	16 15 39.5	+0.6
SHUT	Suhut-Afyon	4.33	108	ePN	Pn	16 15 40.8	+1.6
GOLH	Golhisar	4.33	128	i P	Pn	16 15 40.6	+1.3
GOLH				i S	Sn	16 16 31.8	+1.6
HENT	Hendek	4.35	77	i P	Pn	16 15 40.3	+0.8
HENT				i S	Sg	16 16 50.7	-1.7
FETY	Fethiye	4.49	137	ePN	Pn	16 15 42.6	+1.1
BOLS	Boljevac	4.56	328	Pn	Pn	16 15 42.5	+0.1
ISP	Isparta	4.60	116	ePN	Pn	16 15 44.4	+1.5
ISP	Isparta	4.60	116	P	Pn	16 15 42.1	-0.8
KARP	Karpathos	4.69	161	P	Pn	16 15 44.6	+0.4
IDI	Anoyia	4.72	184	Pn	Pn	16 15 43.7	-1.0
	2.2nm,0.3s,baz=324,slow=14,SNR=15						
IDI				Sn	Sn	16 16 36.1	-3.7
	5.2nm,0.3s,baz=278,slow=18,SNR=4.4						
NPS	Neapolis	4.74	177	P	Pn	16 15 45.0	+0.1
GRUS	Gruza	5.17	320	ePn	Pn	16 15 50.7	-0.1
GRUS	Gruza	5.17	320	Pn	Pn	16 15 50.8	0.0
SJES	Sjenica	5.17	311	eSg	Sg	16 17 19.1	+0.4
KIZT	Kizilcal	5.22	100	ePN	Pn	16 15 52.3	+0.9
GVD	Gavdhos	5.25	191	eP	Pn	16 15 51.9	0.0
	70nm,0.6s						
GVD	Gavdhos	5.25	191	eP	Pn	16 15 51.9	0.0
	70nm,0.6s						
SVIS	Svilajnac	5.25	326	ePn	Pn	16 15 54.1	+2.2
SVIS				eSg	Sg	16 17 19.2	-2.1
SVIS	Svilajnac	5.25	326	Pn	Pn	16 15 54.1	+2.2
SVIS				Sg	Sg	16 17 19.2	-2.1
VOIR		5.43	358	P	Pn	16 15 54.5	+0.1
VOIR		5.43	358	⇑iP	Pn	16 15 54.3	0.0
VOIR		5.43	358	P	Pn	16 15 54.5	+0.2
MLR	Muntele Rosu	5.50	5	Pn	Pn	16 15 56.4	+1.1
	3.9nm,0.3s,baz=242,slow=4.2,SNR=60						
MLR				Lg		16 17 28.8	
	4.5nm,0.3s,baz=117,slow=17,SNR=3.6						
MLR				LR	LR	16 17 42.5	
	comp=Z,92nm,21.6s,baz=112,slow=34						
DIVS	Divcibare	5.69	318	ePn	Pn	16 15 57.4	-0.4
DIVS	Divcibare	5.69	318	Pn	Pn	16 15 57.5	-0.3
GZR	Gura Zlata	5.70	342	P	Pn	16 15 57.8	-0.1
GZR	Gura Zlata	5.70	342	⇑iP	Pn	16 15 57.7	-0.3
GZR	Gura Zlata	5.70	342	P	Pn	16 15 57.8	-0.2
ANTO	Ankara	5.76	89	eP	Pn	16 16 00.8	+1.9
	26nm,0.6s						
ANTO	Ankara	5.76	89	⇑iP	Pn	16 16 01.0	+2.1
ANTO	Ankara	5.76	89	eP	Pn	16 16 00.8	+1.9
	26nm,0.6s						
BBLS	Bajina Basta -	5.85	313	ePn	Pn	16 16 02.6	+2.6
BBLS	Bajina Basta -	5.85	313	Pn	Pn	16 16 02.7	+2.7
PLOR	Plostina	5.92	9	⇑iP	Pn	16 16 02.7	+1.6
VRI	Vrincioaia	5.95	10	P	Pn	16 16 02.8	+1.4
VRI	Vrincioaia	5.95	10	⇓iP	Pn	16 16 03.0	+1.5
VRI	Vrincioaia	5.95	10	P	Pn	16 16 02.8	+1.3
BZS	Buzias	6.23	335	P	Pn	16 16 05.1	-0.2
BZS	Buzias	6.23	335	ePn	Pn	16 16 04.5	-0.8
BZS	Buzias	6.23	335	⇓iP	Pn	16 16 05.2	-0.1
CANT	Cankiri	6.39	82	ePN	Pn	16 16 09.2	+1.7
BRTR	Keskin Array B	6.42	90	P	Pn	16 16 08.1	+0.1
BRTR						16 17 19.1	
BRTR	Keskin Array B	6.42	90	Pn	Pn	16 16 08.1	+0.1
	1.7nm,0.3s,baz=266,slow=10,SNR=46						
BRTR				Sn	Sn	16 17 19.1	-2.6
	baz=251,slow=15,SNR=2.6						
BRTR				Lg		16 17 56.9	
	0.3nm,0.3s,baz=268,slow=20,SNR=3.2						
BRTR				LR	LR	16 19 06.8	
	comp=Z,148nm,18.6s,baz=318,slow=43						
BRTR	Keskin Array B	6.42	90	Pn	Pn	16 16 08.1	+0.1
BRTR				Sn	Sn	16 17 19.0	-2.6
FGSL	Fruska Gora	6.55	324	ePn	Pn	16 16 12.6	+2.9
FGSL	Fruska Gora	6.55	324	Pn	Pn	16 16 12.7	+3.0
TIP	Timpagrande	6.65	266	ePg	Pn	16 16 11.4	+0.3
TIP	Timpagrande	6.65	266	ePg	Pn	16 16 11.4	+0.3
DRGR		7.04	345	⇑P	Pn	16 16 16.0	-0.4
DRGR		7.04	345	⇑iP	Pn	16 16 16.0	-0.4
KIS	Kishinev	7.44	19	eP	Pn	16 16 20.0	-1.9
BURAR	Bucovina Array	7.61	360	P	Pn	16 16 25.6	+1.4
BURAR	Bucovina Array	7.61	360	⇓iP	Pn	16 16 25.4	+1.2
BURAR	Bucovina Array	7.61	360	P	Pn	16 16 25.5	+1.3
SEV	Sevastopol'	7.68	51	eP	Pn	16 16 22.2	-3.1
SEV				eS	Sn	16 17 44.0	-8.7
SEV				pmax	pmax		
	comp=E,3.0nm,0.3s						
PKSM	Moragy	7.88	324	⇑P	Pn	16 16 26.8	-1.2
PKSM	Moragy	7.88	324	ePn	Pn	16 16 28.1	+0.1
PKSM	Moragy	7.88	324	⇑iP	Pn	16 16 26.8	-1.2
ALU	Alushta	8.20	52	eP	Pn	16 16 31.0	-1.3
ALU				eS	Sn	16 17 58.0	-7.4
SUDU	Sudak	8.67	53	eP	Pn	16 16 36.4	-2.4
PSZ	Piszkesteto	8.81	336	eP	Pn	16 16 39.6	-1.1
KECS	Kecovo	9.15	339	ePN	Pn	16 16 44.6	-0.7
KOLS	Kolonicke sedl	9.18	347	ePN	Pn	16 16 45.9	+0.1
KOLS				eSG	Sn	16 19 32.4	+63
BOJS	Bojanci	9.21	310	i Pn	Pn	16 16 48.1	+1.9
CRVS	Cervenica-Dubn	9.31	344	ePn	Pn	16 16 53.5	+6.0
CRVS				eSg	Sn	16 19 33.4	+61
CRVS	Cervenica-Dubn	9.31	344	eSG	Sx	16 19 33.4	
CRVS	Cervenica-Dubn	9.31	344	e	Pn	16 16 53.5	+6.0
VISS	Visnje	9.61	310	i Pn	Pn	16 16 53.2	+1.5
VYHS	Vyhne	9.67	334	ePN	Pn	16 16 56.7	+4.3
VYHS				eSG	Sn	16 19 37.9	+57
STHS	Stebnicka Huta	9.84	344	ePN	Pn	16 16 54.5	-0.3
STHS				eSG	Sn	16 19 55.3	+70
LVV	L'vov	9.85	355	eP	Pn	16 16 55.6	+0.6
LVV				eS	Sn	16 18 44.2	-1.7
LVV				MLR	MLR		
	comp=Z,200nm,9.0s						
LVV	L'vov	9.85	355	eP	Pn	16 16 55.6	+0.6
	comp=Z,200nm,9.0s						
JAVS	Javornik	10.12	309	i Pn	Pn	16 17 00.0	+1.4
VOY	Vojsko	10.29	310	ePn	Pn	16 17 02.7	+1.7
MMAI	Mount Meron Ar	10.71	128	Pn	Pn	16 17 06.3	-0.4
	comp=Z,1.3nm,0.3s,baz=300,slow=13,SNR=5.5						
MMAI				Sn	Sn	16 19 01.9	-5.1
	comp=Z,0.4nm,0.3s,baz=309,slow=28,SNR=2.5						
AKASG	Malin Array Be	11.04	13	Pn	Pn	16 17 09.8	-1.5
	comp=Z,1.7nm,0.3s,baz=197,slow=12,SNR=11						
AKASG				Lg		16 20 23.9	
	baz=187,slow=29,SNR=3.5						
VRAC	Vranov	11.17	329	LR	LR	16 21 29.5	
	comp=Z,108nm,18.9s,baz=324,slow=37						
DAVOX	Davos/Dischmat	13.09	306	Pn	Pn	16 17 39.5	+0.2
	comp=Z,0.5nm,0.3s,baz=135,slow=16,SNR=9.2						
DAVOX				LR	LR	16 22 50.2	
	comp=Z,152nm,18.8s,baz=267,slow=38						
DAVOS	Davos	13.17	306	P	Pn	16 17 39.5	-0.8
MBDF	Montbardon	14.48	295	eP	Pn	16 18 00.7	+2.4
	comp=Z,11nm,0.7s						
MBDF	Montbardon	14.48	295	eP	Pn	16 18 00.7	+2.4
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MBDF	Montbardon	14.48	295	eP	Pn	16 18 00.7	+2.4
	comp=Z,5.7nm,0.7s						
LPG	La Plagne	14.68	298	eP	Pn	16 18 01.8	+0.8
	comp=Z,20nm,1.1s						
LPG	La Plagne	14.68	298	eP	Pn	16 18 01.8	+0.8
LPG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPG	La Plagne	14.68	298	eP	Pn	16 18 01.8	+0.8
	comp=Z,10nm,1.1s						
LPL	La Plagne	14.70	298	eP	Pn	16 18 02.8	+1.6
ORIF	Oris-en-Rattie	15.14	295	eP	Pn	16 18 08.2	+1.0
	comp=Z,11nm,0.9s						
ORIF	Oris-en-Rattie	15.14	295	eP	Pn	16 18 08.2	+1.0
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ORIF	Oris-en-Rattie	15.14	295	eP	Pn	16 18 08.2	+1.0
	comp=Z,5.6nm,0.9s						
CDF	Champ du Feu	15.39	309	eP	Pn	16 18 14.0	+3.5
HFS	Hagfors	21.42	344	P	P	16 19 21.7	+0.4
	comp=Z,1.5nm,0.9s,mb3.3,baz=119,slow=12,SNR=4.0						
HFS				LR	LR	16 28 36.9	
	comp=Z,88nm,18.6s,MS3.2,baz=95,slow=39						
FINES	FINESS Array B	21.47	1	P	P	16 19 22.2	+0.4
	comp=Z,0.9nm,0.5s,mb3.4,baz=161,slow=10,SNR=10						
FINES				LR	LR	16 29 12.7	
	comp=Z,55nm,18.7s,MS3.0,baz=331,slow=41						
KAF	Kangasniemi	22.14	1	ep	P	16 19 29.7	+0.6
	baz=176,slow=12						
ESDC	Sonseca Array	22.43	279	P	P	16 19 31.3	-1.1
	comp=Z,0.1nm,0.3s,mb2.7,baz=62,slow=9.9,SNR=5.1						
NB2	NORSAR Subarra	22.78	342	P	P	16 19 33.8	-2.1
	comp=Z,4.4nm,1.0s,mb3.8,baz=146,slow=9.3						
NB2	NORSAR Subarra	22.78	342	P	P	16 19 33.8	-2.1
NB2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
NOA	NORSAR Array B	22.78	342	P	P	16 19 34.4	-1.5
	comp=Z,1.9nm,0.9s,mb3.5,baz=147,slow=9.2,SNR=5.2						
NOA				LR	LR	16 28 24.5	
	comp=Z,31nm,19.6s,MS2.8,baz=280,slow=36						
JOF	Joensuu	23.23	7	ep	P	16 19 41.5	+1.0
	comp=Z,2.8nm,0.6s,mb3.9						
AKTK	Aktyubinsk	25.10	55	P	P	16 19 58.1	-0.1
AKTK	Aktyubinsk	25.10	55	P	P	16 19 58.2	0.0
AKTO	Aktyubinsk	25.10	55	P	P	16 19 58.1	-0.1
	comp=Z,0.2nm,0.3s,mb3.1,baz=157,slow=7.7,SNR=2.1						
ARCES	ARCESS Array B	29.59	0	LR	LR	16 31 11.8	
	comp=Z,51nm,21.6s,MS3.1,baz=66,slow=34						
TORD	Torodi Ar. Bea	33.87	224	P	P	16 21 16.4	+0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=32,slow=8.3,SNR=15						
MKAR	Makanchi Array	41.17	61	i P	P	16 22 21.1	+3.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	41.17	61	P	P	16 22 18.9	+0.9
	comp=Z,0.7nm,0.5s,mb3.5,baz=277,slow=6.8,SNR=15						
ZALV	Zalesovo Beam	41.69	50	P	P	16 22 22.1	0.0
	comp=Z,0.7nm,0.6s,mb3.5,baz=264,slow=9.7,SNR=5.6						
YKA	Yellowknife Ar	72.88	342	P	P	16 26 04.2	+1.8
	comp=Z,0.2nm,0.5s,mb3.4,baz=41,slow=5.7,SNR=4.0						

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*ISCJB **04** 16:41:44.3±1.2, 586N±008×1273E±02, h110km±10km, mb4.1/12, Error ellipse: s-maj=25.7km s-min=11.8km az=167.1*
*NEIC **04** 16:41:45.7±2.2, 584N×12728E, h108km±17km, mb4.8/1, Error ellipse: s-maj=49.9km s-min=8.9km az=71.0*
*IDC **04** 16:41:46.7±7.2, 586N×12737E, h118km±69km, mb3.7/10, mb1 3.8/10, mb1mx3.6/20, mbtmp3.7/10, Error ellipse: s-maj=39.1km s-min=13.7km az=81.0*
*MAN **04** 16:41:55, 640N×12663E, h59km, mb4.6, ML3.5, MS3.4*

ISC 04 16:41:45.3±1.2, 585N±008×1273E±02, h103km±10km, n24, σ0.95/25, mb4.1/12, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	1.52	316	eP	Pn	16 42 11.3	-0.5
MATI				eS	Sn	16 42 28.9	-3.2
DAV	Davao City (W)	2.11	305	eP	Pn	16 42 19.4	0.0
KCP	Kidapawan	2.50	298	⇑eP	Pn	16 42 26.4	+2.0
BIPH	Bislig	2.51	338	⇓iP	Pn	16 42 24.8	+0.2
BIPH				i S	Sn	16 42 48.8	-6.0
BUKP	Musuan	3.02	312	eP	Pn	16 42 31.0	-0.3
BUTP	Butuan	3.53	332	eP	Pn	16 42 39.8	+1.6
PAGZ	Pagadian	4.39	297	eP	Pn	16 42 48.8	-0.9
FITZ	Fitzroy Crossi	23.86	184	P	P	16 46 49.3	0.0
	7.0nm,1.1s,mb3.9,baz=301,slow=14,SNR=5.7						
CBIJ	Chichi jima	25.43	32	P	P	16 47 03.0	-0.5
	102nm,0.8s,mb5.3,baz=255,slow=18,SNR=4.1						
WRA	Warramunga Arr	26.54	165	P	P	16 47 13.4	-0.2
	0.7nm,0.6s,mb3.4,baz=341,slow=10,SNR=10.0						
ASAR	Alice Springs	30.03	168	P	P	16 47 44.0	-0.5
	0.4nm,0.3s,mb3.5,baz=344,slow=7.0,SNR=21						
ASAR				PcP	PcP	16 50 44.4	0.0
	0.2nm,0.5s,baz=345,slow=2.3,SNR=4.2						
NWAO	Narrogin (SRO)	39.73	193	P	P	16 49 07.8	-0.1
	3.3nm,0.4s,mb4.5,baz=6.8,slow=7.0,SNR=8.8						
STKA	Stephens Creek	39.91	161	P	P	16 49 10.1	+0.8
STKA	Stephens Creek	39.91	161	P	P	16 49 10.1	+0.8
	1.5nm,0.6s,mb4.0,baz=349,slow=11,SNR=5.1						
SONM	Songino Array	45.50	340	P	P	16 49 55.8	+1.5
	0.4nm,0.5s,mb3.4,baz=155,slow=7.4,SNR=4.1						
MK31	Makanchi Array	56.18	324	eP	P	16 51 14.6	+0.2
MKAR	Makanchi Array	56.18	324	P	P	16 51 14.9	+0.5
	1.3nm,0.4s,mb4.3,baz=116,slow=7.5,SNR=15						
ZALV	Zalesovo Beam	58.99	332	P	P	16 51 32.9	-1.1
	0.6nm,0.6s,mb3.8,baz=115,slow=6.4,SNR=3.1						
UCH	Uchtor	59.04	316	eP	P	16 51 35.5	+0.9
	16nm,1.8s,mb4.8						
ARCES	ARCESS Array B	88.68	340	P	P	16 54 25.7	-1.0
ARCES	ARCESS Array B	88.68	340	P	P	16 54 25.7	-1.0
	3.3nm,0.9s,mb4.3,baz=79,slow=6.3,SNR=5.0						
FINES	FINESS Array B	90.25	332	P	P	16 54 33.2	-1.1
FINES	FINESS Array B	90.25	332	P	P	16 54 33.2	-1.1
	1.2nm,0.9s,mb4.0,baz=60,slow=7.5,SNR=6.8						
TORD	Torodi Ar. Bea	122.79	290	PKP	PKPdf	17 00 29.5	-0.8
	0.6nm,0.7s,baz=21,slow=2.1,SNR=3.7						

GUC 04 16:45:47.0±0.5, 3313S×7028W, h21km±2km, MD3.6, ML2.2, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FCH	Farellones	0.20	183	eP	Pb	16 45 50.1	-2.1
FCH				i S	Sb	16 45 53.9	-1.9
PEL	Peldehue	0.34	267	eP	Pb	16 45 54.0	-0.4
PEL				i S	Sb	16 45 59.5	0.0
PEL				AML	AML	16 46 04.7	
	comp=E,260nm,0.7s						
CLCH	Cerro Calan	0.34	219	i P	Pb	16 45 54.4	-0.1
CLCH				i S	Sb	16 45 60.0	+0.4
CLCH				AML	AML	16 46 03.0	
	comp=E,778nm,0.5s						
PCH	Pirque	0.53	202	eP	Pb	16 45 57.4	-0.3
PCH				i S	Sb	16 46 05.3	+0.5
RCDM	Rinconada Maip	0.57	231	eP	Pb	16 45 58.4	+0.1
RCDM				i S	Sb	16 46 06.7	+0.7
TACH	Talagante	0.76	226	eP	Pb	16 46 01.4	-0.1
CHCH	Chadas Angostu	0.86	201	eP	Pb	16 46 02.9	-0.3
CHCH				i S	Sb	16 46 14.9	+0.6
CACH	El Canelo	1.02	195	⇓iP	Pb	16 46 06.1	+0.1
CACH				i S	Sb	16 46 21.4	+2.5
CICH	Cipreses	1.19	186	eP	Pn	16 46 09.0	+0.6
CICH				i S	Sb	16 46 25.4	+1.5
LNV	Longovilo	1.25	229	⇑iP	Pn	16 46 09.7	+0.4
LNV				i S	Sn	16 46 26.7	+1.2
SFDO	San Fernando	1.60	202	eP	Pn	16 46 15.6	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFDO				*i* S	Sn	16 46 37.4	+3.3

MAN 04 16:50:24,1029N×12476E,h44km,mb3.5,ML2.2,MS1.6, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.18**	**146**	*e*P	Pn	16 50 34.2	+2.7
OCLP	**Ormoc**	**0.77**	**349**	*e*P	Pn	16 50 40.6	+2.1
PLP	**Palo**	**0.90**	**14**	*e*P	Pn	16 50 42.0	+1.7
PLP				*e*S	Sn	16 50 54.8	+2.6

*NEIC **04** 16:56:17.3,1384N×9247W,h100km,mb4.7/1, MD4.3(MEX),After MEX.*
MEX 04 16:56:17.3±0.4,1384N×9247W,h100km,MD4.3,Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.45**	**8**	*i* P	Pn	16 56 54.8	-1.0
CCIG				*i* S	Sn	16 57 24.3	-0.9
RBDL	**Robledal**	**2.72**	**84**	*e*P	x	16 56 55.8	
RBDL				*e*S	x	16 57 27.8	
RTR	**El Retiro**	**2.75**	**88**	*e*P	x	16 56 56.1	
SBLS	**San Blas**	**2.77**	**90**	*e*P	x	16 56 57.4	
SNJE	**San Jose**	**2.78**	**89**	*e*P	x	16 56 56.8	
SNJE				*e*S	x	16 57 31.0	
SCX	**San Cristobal**	**2.88**	**357**	*e*P	Pn	16 56 57.5	-4.0
MTO2	**Montecristo 2**	**3.07**	**79**	*e*P	x	16 56 59.8	
BOQS	**Boqueron**	**3.10**	**92**	*e*P	x	16 57 01.5	
LFRS	**El Faro**	**3.32**	**93**	*e*P	x	16 57 04.1	
LCBS	**La Ceiba**	**3.40**	**93**	*e*P	x	16 57 04.8	
SNVI	**San Vicente**	**3.54**	**93**	*e*P	x	16 57 07.1	
CMIG	**Matias Romero**	**3.98**	**325**	*i* P	Pn	16 57 15.6	-0.6
CMIG				*i* S	Sn	16 58 00.2	-1.7
CNCH	**Conchagua**	**4.54**	**97**	*e*P	x	16 57 22.1	
VHO	**Vista Hermosa**	**5.22**	**309**	*i* P	Pn	16 57 30.7	-2.2
VHO				*i* S	Sn	16 58 32.4	+0.5
PPM	**Popocatepetl**	**7.87**	**312**	*i* P	Pn	16 58 08.1	-0.9
PPM				*i* S	Sn	16 59 34.7	-1.7
JTS	**JuntasAbangare**	**8.15**	**115**	Pn	Pn	16 58 10.5	-2.5
	16nm,0.8s						

IDC 04 17:00:01.2±3.0,452S×13314E,h0km,mb3.4/1,mb1 3.8/4, mb1mx3.6/13,mbtmp3.6/4,ML3.6/3,Error ellipse: s-maj=130.8km s-min=29.1km az=80.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.36**	**208**	Pn	Pn	17 03 39.3	-0.2
	0.3nm,0.3s,baz=15,slow=11,SNR=14						
FITZ				Sn	Sn	17 06 24.4	-6.1
	0.5nm,0.3s,baz=76,slow=23,SNR=6.6						
WRA	**Warramunga Arr**	**15.38**	**176**	Pn	Pn	17 03 37.7	-2.0
	0.2nm,0.3s,baz=355,slow=14,SNR=8.0						
WRA				Sn	Sn	17 06 18.6	-12
	0.1nm,0.3s,baz=354,slow=25,SNR=5.0						
ASAR	**Alice Springs**	**19.05**	**178**	P	Pn	17 04 26.1	+0.3
	0.4nm,0.3s,baz=3.8,slow=10,SNR=22						
ASAR				S	Sn	17 07 48.2	-12
	0.0nm,0.3s,baz=355,slow=26,SNR=4.9						
MKAR	**Makanchi Array**	**67.94**	**325**	P	P	17 11 01.9	+0.1
	0.2nm,0.6s,baz=121,slow=7.4,SNR=5.5						

RSPR 04 17:01:48.5,1995N×6338W,h53km±43km,MD3.8/3, MD3.8/3,2C-1D,Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.92**	**218**	⇓*e*P	Pn	17 02 18.3	-0.5
TBVI	**Tortola**	**1.92**	**218**	*e*S	Sn	17 02 40.6	-1.2
MTP	**Monte Pirata**	**2.76**	**229**	⇑*e*P	Pn	17 02 29.7	-0.6
MTP	**Monte Pirata**	**2.76**	**229**	*e*S	Sn	17 03 02.8	+0.3
CBYP	**Canovanas**	**2.88**	**235**	⇑*e*P	Pn	17 02 31.1	-0.8
CBYP	**Canovanas**	**2.88**	**235**	*e*S	Sn	17 03 05.2	-0.1
HUMP	**Col San Antoni**	**2.95**	**233**	*e*S	Sn	17 03 05.7	-1.4

*DDA **04** 17:11:21.6,3974N×2541E,h7km±5km,Md3.3*
*ISCJB **04** 17:11:23.3±0.5,3971N±002×2553E±003,h3km±4km, Error ellipse: s-maj=4.1km s-min=3.8km az=159.6*
*ISK **04** 17:11:24.3,3973N×2561E,h6km,MD3.2*
*CSEM **04** 17:11:24.3±0.1,3971N×2558E,h10km,ML3.4,Error ellipse: s-maj=1.9km s-min=1.5km az=90.0*
*ATH **04** 17:11:25.2,3984N×2581E,h21km±3km,MD3.4/5*
*THE **04** 17:11:25.4,3975N×2557E,h11km,ML3.4*
*NEIC **04** 17:11:25.2,3984N×2581E,h21km,MD3.4(ATH),After ATH.*
ISC 04 17:11:24.2±0.4,3971N±002×2553E±003,h8km±4km,n32, σ0.86/44,1D,Aegean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.33**	**305**	⇓*i*PB	**Sg**	**17 11 35.1**	**+0.1**
LOS	**Limnos**	**0.41**	**303**	*e*Pg	**Pg**	**17 11 34.2**	**+2.0**
BOZC	**Bozcaada**	**0.42**	**72**	*i* P	**Pg**	**17 11 31.8**	**-0.6**
BOZC				*i* S	**Sg**	**17 11 38.7**	**+0.7**
GADA	**Gvkgeada**	**0.56**	**30**	PG	**Pg**	**17 11 34.9**	**-0.1**
GADA				SG	**Sg**	**17 11 42.3**	**+0.1**
EZN	**Ezine**	**0.62**	**79**	PG	**Pg**	**17 11 35.5**	**-0.7**
EZN				SG	**Sg**	**17 11 44.1**	**-0.2**
PRK	**Paraskevi**	**0.74**	**129**	*e*PN	**Pg**	**17 11 38.5**	**+0.1**
AYVA	**Ayvalik**	**0.98**	**114**	*i* P	**Pg**	**17 11 43.4**	**+0.3**
AYVA				*i* S	**Sg**	**17 11 58.1**	**+2.2**
ENEZ	**Enez**	**1.13**	**25**	PN	**Pn**	**17 11 45.8**	**-0.5**
ENEZ				SN	**Sn**	**17 12 00.7**	**-1.3**
ALN	**Alexandroupoli**	**1.25**	**18**	*e*Pg	**Pg**	**17 11 47.3**	**-0.9**
ALN				*e*Sg	**Sg**	**17 12 03.4**	**-0.9**
OUR	**Ouranopolis**	**1.34**	**298**	*e*Pg	**Pg**	**17 11 49.7**	**-0.3**
CHOS	**Chios island**	**1.38**	**163**	*e*Pg	**Pg**	**17 11 49.9**	**-0.9**
CHOS				*e*Sg	**Sg**	**17 12 08.9**	**+0.2**
CHOS	**Chios island**	**1.38**	**163**	*e*Pg	**Pg**	**17 11 49.9**	**-0.9**
CHOS				*e*Sg	**Sg**	**17 12 08.9**	**+0.2**
AOS	**Alonnisos**	**1.39**	**248**	*e*Pg	**Pg**	**17 11 50.6**	**-0.2**
RDO	**Rodhopi**	**1.43**	**0**	*e*PN	**Pn**	**17 11 50.3**	**-0.2**
PAIG	**Paliouri**	**1.44**	**279**	*e*Pg	**Pg**	**17 11 50.9**	**-1.0**
URLA	**Izmir**	**1.58**	**148**	*i* P	**Pn**	**17 11 52.1**	**-0.5**
URLA				*i* S	**Sn**	**17 12 12.1**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.59**	**52**	*e*PN	**Pn**	**17 11 53.0**	**+0.3**
SART	**Tekirdag**	**1.60**	**52**	*i* P	**Pn**	**17 11 52.9**	**+0.2**
SART				*i* S	**Sg**	**17 12 16.2**	**+0.7**
MFT	**Murefte**	**1.72**	**51**	*e*PN	**Pn**	**17 11 54.8**	**+0.4**
MRMT	**Marmara Adasi**	**1.81**	**60**	*e*PN	**Pn**	**17 11 56.1**	**+0.4**
KDAG	**Bornova**	**1.88**	**134**	*i* P	**Pn**	**17 11 56.9**	**+0.3**
KDAG				*i* S	**Sn**	**17 12 19.2**	**-1.3**
IZM	**Izmir**	**1.88**	**134**	*e*PN	**Pn**	**17 11 56.8**	**+0.2**
EDC	**Edincik**	**1.90**	**70**	*e*PN	**Pn**	**17 11 56.6**	**-0.3**
BNT	**Bandirma**	**1.94**	**70**	*e*PN	**Pn**	**17 11 58.5**	**+1.0**
AKS	**Akhisar**	**1.96**	**114**	*e*PN	**Pn**	**17 11 58.1**	**+0.4**
NVR	**Nevrokopi**	**2.07**	**323**	*e*PB	**Pb**	**17 12 01.2**	**-0.9**
SMG	**Samos**	**2.25**	**153**	*e*PB	**Pb**	**17 12 04.2**	**-0.8**
EDRB	**Edirne**	**2.32**	**23**	*e*PN	**Pn**	**17 12 03.9**	**+1.2**
AGG	**Agios Georgios**	**2.58**	**256**	*e*Pn	**Pn**	**17 12 07.4**	**+1.2**
CTT	**Catalca**	**2.64**	**56**	*e*PN	**Pn**	**17 12 08.0**	**+1.0**
ULDT	**Uludag**	**2.81**	**80**	*i* P	**Pn**	**17 12 10.6**	**+1.2**
ULDT				*i* S	**Sg**	**17 12 52.2**	**-2.1**
IZI	**Iznik**	**3.09**	**77**	*e*PN	**Pn**	**17 12 14.3**	**+1.0**

*ISCJB **04** 17:24:53.1±1.3,2058S±0.10×178.1W±0.1,h448km±18km, mb3.6/9,Error ellipse: s-maj=19.3km s-min=11.5km az=39.4*
*IDC **04** 17:24:55.1±2.4,2063S×17807W,h460km±30km,mb3.2/9, mb1 3.5/11,mb1mx3.4/17,mbtmp3.3/11,Error ellipse: s-maj=30.4km s-min=14.6km az=150.0*
*NEIC **04** 17:24:55.3±1.2,2068S×17802W,h467km±15km,mb3.7/1, Error ellipse: s-maj=19.5km s-min=10.5km az=147.0*
ISC 04 17:24:55.1±1.5,208S±01×1780W±01,h461km±19km,n18, σ0.72/19,mb3.6/9,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.05**	**42**	*e*P	**P**	**17 27 01.2**	**-0.8**
AFI				S	**S**	**17 28 40.3**	**-6.0**
AFI	**Afiamalu**	**9.05**	**42**	P	**P**	**17 27 00.8**	**-1.2**
	2.1nm,0.3s,baz=288,slow=9.6,SNR=4.9						
AFI				S	**S**	**17 28 40.3**	**-6.0**
	1.1nm,0.3s,baz=49,slow=19,SNR=3.0						
URZ	**Urewera**	**17.94**	**193**	P	**P**	**17 28 38.4**	**+1.8**
	1.4nm,0.3s,baz=330,slow=3.2,SNR=11						
URZ				S	**S**	**17 31 37.0**	**-1.1**
	0.2nm,0.3s,baz=18,slow=20,SNR=3.8						
EIDS	**Eidsvold**	**28.76**	**255**	P	**P**	**17 30 14.3**	**+0.2**
CTA	**Charters Tower**	**33.45**	**265**	P	**P**	**17 30 55.1**	**+0.5**
	2.8nm,0.7s,mb3.8,baz=72,slow=12,SNR=4.2						
CTAO	**Charters Tower**	**33.45**	**265**	*e*P	**P**	**17 30 55.0**	**+0.4**
	1.1nm,0.4s,mb3.6						
STKA	**Stephens Creek**	**37.66**	**244**	P	**P**	**17 31 29.3**	**-0.3**
	2.2nm,0.5s,mb3.8,baz=107,slow=13,SNR=5.8						
ASAR	**Alice Springs**	**44.45**	**257**	P	**P**	**17 32 23.6**	**-0.3**
	6.2nm,0.7s,mb4.1,baz=100,slow=7.7,SNR=67						
WRA	**Warramunga Arr**	**44.55**	**262**	P	**P**	**17 32 24.2**	**-0.7**
	1.3nm,0.3s,mb3.9,baz=97,slow=7.4,SNR=16						
FITZ	**Fitzroy Crossi**	**52.98**	**263**	P	**P**	**17 33 27.7**	**-0.1**
	3.8nm,0.8s,mb3.8,baz=93,slow=10.0,SNR=5.8						
QSPA	**South Pole Qui**	**69.31**	**180**	*e*P	**P**	**17 35 14.5**	**0.0**
MJAR	**Matsushiro Arr**	**70.41**	**324**	P	**P**	**17 35 22.2**	**+0.5**
	0.3nm,0.4s,mb3.2,baz=154,slow=6.3,SNR=4.6						
NVAR	**Mina Array Bea**	**81.22**	**43**	P	**P**	**17 36 21.6**	**-0.3**
	0.4nm,0.3s,mb3.4,baz=203,slow=5.8,SNR=3.6						
TXAR	**Lajitas Array**	**87.21**	**57**	P	**P**	**17 36 52.4**	**+0.7**
TXAR	**Lajitas Array**	**87.21**	**57**	P	**P**	**17 36 52.4**	**+0.7**
	0.5nm,0.9s,mb3.2,baz=209,slow=10.0,SNR=4.2						
PDAR	**Pinedale Array**	**89.16**	**43**	P	**P**	**17 37 00.9**	**+0.4**
	0.2nm,0.5s,mb3.2,baz=207,slow=1.0,SNR=4.8						
AKASG	**Malin Array Be**	**143.23**	**331**	PKP	PKPdf	17 43 33.2	-2.5
	1.6nm,0.4s,baz=42,slow=4.0,SNR=16						
BRTR	**Keskin Array B**	**147.00**	**312**	PKPbc	PKPbc	17 43 45.0	-0.3
	0.5nm,0.7s,baz=131,slow=4.0,SNR=4.3						

*NEIC **04** 17:29:05.1,3434S×7020W,h8km,ML2.5(GUC),After GUC.*
GUC 04 17:29:05.1±0.6,3434S×7020W,h8km±13km,MD3.6, ML2.5,4C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CICH	**Cipreses**	**0.18**	**277**	*e*P	Pg	17 29 09.1	+0.3
CICH				*i* S	Sg	17 29 11.9	+0.5
CACH	**El Canelo**	**0.40**	**304**	*e*P	Pg	17 29 12.7	-0.2
CACH				*i* S	Sg	17 29 18.2	0.0
CHCH	**Chadas Angostu**	**0.55**	**317**	*e*P	Pg	17 29 15.7	-0.1
CHCH				*i* S	Sg	17 29 23.4	+0.4
SFDO	**San Fernando**	**0.72**	**248**	*e*P	Pg	17 29 18.6	-0.5
SFDO				*i* S	Sg	17 29 28.9	+0.4
PCH	**Pirque**	**0.77**	**340**	*e*P	Pg	17 29 19.4	-0.4
PCH				*i* S	Sg	17 29 30.0	+0.2
ANTU	**Antumapu**	**0.85**	**335**	*e*P	Pg	17 29 21.0	-0.5
ANTU				*i* S	Sg	17 29 33.3	+0.7
ANTU	**Antumapu**	**0.85**	**335**	*e*P	Pg	17 29 21.0	-0.5
ANTU				*i* S	Sg	17 29 33.3	+0.7
ANTU				AML	AML	17 29 33.8	
	comp=N,256nm,0.2s						
TACH	**Talagante**	**0.92**	**318**	⇑*i*P	Pg	17 29 21.9	-0.9
TACH				*i* S	Sg	17 29 35.0	+0.3
RCDM	**Rinconada Maip**	**0.99**	**329**	⇑*i*P	Pg	17 29 23.8	-0.3
RCDM				*i* S	Sg	17 29 37.1	+0.2
RCDM	**Rinconada Maip**	**0.99**	**329**	⇑*i*P	Pg	17 29 23.8	-0.3
RCDM				*i* S	Sg	17 29 37.1	+0.2
RCDM				AML	AML	17 29 38.4	
	comp=E,279nm,0.1s						
FCH	**Farellones**	**1.02**	**356**	⇓*i*P	Pg	17 29 23.9	-0.7
FCH				*i* S	Sg	17 29 38.2	+0.5
LNV	**Longovilo**	**1.07**	**291**	⇑*i*P	Pg	17 29 24.6	-1.1
LNV				*i* S	Sg	17 29 39.3	-0.4
PEL	**Peldehue**	**1.26**	**341**	⇓*i*P	Pn	17 29 28.3	-0.7
PEL				*i* S	Sb	17 29 45.7	+0.2
PEL				AML	AML	17 29 47.0	
	comp=E,199nm,0.3s						

IDC 04 17:42:41.1±2.5,2692N×4422W,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.5/20,mbtmp3.7/6,MS3.6/2,Ms1 3.6/2, ms1mx3.0/23,Error ellipse: s-maj=72.4km s-min=27.5km az=16.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**45.01**	**98**	P	P	17 50 58.8	+0.1
	1.1nm,1.1s,baz=270,slow=5.5,SNR=3.6						
TXAR	**Lajitas Array**	**51.99**	**287**	LR	LR	18 11 56.3	
	comp=Z,52nm,19.1s,baz=210,slow=34						
PDAR	**Pinedale Array**	**54.62**	**305**	P	P	17 52 12.7	+1.1
	0.6nm,0.8s,baz=101,slow=12,SNR=4.9						
YKA	**Yellowknife Ar**	**57.45**	**329**	P	P	17 52 30.2	-1.2
	0.8nm,1.0s,baz=88,slow=7.4,SNR=5.2						
YKA				LR	LR	18 15 44.5	
	comp=Z,49nm,18.1s,baz=80,slow=34						
ARCES	**ARCESS Array B**	**57.97**	**23**	P	P	17 52 35.7	+0.7
	1.5nm,0.7s,baz=260,slow=5.4,SNR=4.5						
AKASG	**Malin Array Be**	**59.38**	**45**	P	P	17 52 46.0	+0.9
	0.1nm,0.3s,baz=271,slow=6.5,SNR=4.5						
BRTR	**Keskin Array B**	**64.44**	**57**	P	P	17 53 18.6	-0.7
	0.6nm,0.9s,baz=340,slow=7.8,SNR=3.1						

*IDC **04** 17:44:15.3±0.8,3484N×7300E,h0km,mb3.9/12, mb1 4.1/14,mb1mx3.9/22,mbtmp4.0/14,ML4.0/2,Error ellipse: s-maj=24.0km s-min=17.2km az=33.0*
*ISCJB **04** 17:44:19.5±0.4,3488N±002×7326E±004,h49km±6km, mb4.2/18,Error ellipse: s-maj=5.2km s-min=3.4km az=168.5*
*NEIC **04** 17:44:19.4±2.5,3478N×7323E,h30km±19km,mb3.9/4, Error ellipse: s-maj=12.3km s-min=7.0km az=52.0*
*NNC **04** 17:44:21.3±5.8,3543N×7286E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=61.6km s-min=33.9km az=44.0*
*BJI **04** 17:44:25.2,3505N×7371E,h30km,mb4.0,ML3.3*
ISC 04 17:44:21.8±0.3,3487N±002×7315E±004,h50km±5km,n74, σ1.31/90,mb4.2/18,4C-3D,Pakistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.21**	**175**	P	**Pn**	**17 44 40.2**	**-2.1**
CEP	**Cherat**	**1.46**	**225**	P	**Pn**	**17 44 43.7**	**-2.0**
THW	**Thamme Wali**	**2.37**	**210**	P	**Pn**	**17 44 59.4**	**+1.1**
JMU	**Jammu**	**2.59**	**145**	*e*P	**Pn**	**17 45 03.0**	**+1.7**
JMU				*e*S	**Sn**	**17 45 35.5**	**+3.9**
SBDP	**Sheikh Budin**	**3.22**	**218**	P	**Pn**	**17 45 10.7**	**+0.8**
THN	**Thein Dam**	**3.24**	**138**	*e*P	**Pn**	**17 45 12.2**	**+2.1**
THN				*e*x	x	17 45 59.6	
DLH	**Dalhousie**	**3.30**	**134**	*e*P	**Pn**	**17 45 13.0**	**+2.0**
DLH				*e*x	x	17 45 58.0	
KBL	**Kabul**	**3.40**	**266**	*e*Pn	**Pn**	**17 45 13.9**	**+1.7**
KBL				Sn	**Sn**	**17 45 52.9**	**+1.7**
DRP	**Derazinda**	**3.97**	**219**	P	**Pn**	**17 45 21.5**	**+1.3**
SDNR	**Sundarnagar**	**4.64**	**135**	*e*P	**Pn**	**17 45 30.4**	**+1.0**
SDNR				*e*x	x	17 46 41.6	
SMLA	**Simla**	**5.03**	**137**	*e*P	**Pn**	**17 45 36.5**	**+1.8**
SMLA				*e*S	**Sn**	**17 46 36.4**	**+4.9**
KSH	**Kashi**	**5.16**	**25**	P	**Pn**	**17 45 39.5**	**+3.0**
KSH				S	**Sn**	**17 46 34.0**	**-0.7**
KSH				Smax			
	comp=N,256nm,0.4s						
KSH				Smax			
	comp=E,192nm,0.3s						
JOSI	**Joshimath**	**6.90**	**127**	*e*P	**Pn**	**17 46 01.7**	**+1.3**
JOSI				*e*S	**Sn**	**17 47 19.0**	**+1.4**
JOSI				AML	AML	17 48 01.8	
	comp=N,120nm,0.5s						
JOSI				AML	AML	17 48 03.7	
	comp=E,109nm,0.6s						
NDI	**New Delhi**	**7.07**	**150**	*e*x	x	17 46 08.0	
NDI				*e*S	**Sn**	**17 47 22.0**	**+0.3**
KHET	**Khetri**	**7.14**	**161**	*e*P	**Pn**	**17 46 03.4**	**-0.3**
KHET				*e*S	**Sn**	**17 47 19.8**	**-3.7**
KHET				AML	AML	17 47 26.6	
	comp=N,58nm,0.3s						
KHET				AML	AML	17 47 26.7	
	comp=E,93nm,0.5s						
AML	**Almayashu**	**7.27**	**3**	P	**Pn**	**17 46 06.2**	**+0.9**
	SNR=27						
KUDL	**Kundal**	**7.28**	**156**	*e*P	**Pn**	**17 46 05.2**	**-0.4**
KUDL				*e*S	**Sn**	**17 47 26.7**	**-0.2**
KZA	**Kyzart**	**7.39**	**12**	P	**Pn**	**17 46 08.2**	**+1.2**
	SNR=14						
SONA	**Sohna**	**7.40**	**152**	*e*P	**Pn**	**17 46 05.5**	**-1.7**
SONA				*e*S	**Sn**	**17 47 27.6**	**-2.2**
SONA				AML	AML	17 48 26.0	
	comp=E,71nm,0.6s						
SONA				AML	AML	17 48 26.6	
	comp=N,39nm,0.6s						
UCH	**Uchtor**	**7.43**	**8**	*e*Pn	**Pn**	**17 46 08.0**	**+0.5**
	comp=N,14nm,0.6s						
UCH				*e*Sn	**Sn**	**17 47 30.3**	**-0.1**
UCH	**Uchtor**	**7.43**	**8**	P	**Pn**	**17 46 09.0**	**+1.4**
	SNR=17						
EKS2	**Erkin-Say**	**7.80**	**3**	*e*Pn	**Pn**	**17 46 12.6**	**0.0**
	comp=N,8.7nm,0.5s						
EKS2				*e*Sn	**Sn**	**17 47 39.5**	**0.0**
EKS2	**Erkin-Say**	**7.80**	**3**	P	**Pn**	**17 46 13.5**	**+0.8**
	SNR=16						
AAK	**Ala-Archa**	**7.83**	**7**	*e*Pn	**Pn**	**17 46 12.5**	**-0.5**
	comp=N,4.2nm,0.4s						
AAK	**Ala-Archa**	**7.83**	**7**	P	**Pn**	**17 46 13.8**	**+0.7**
	SNR=6.4						
KBK	**Karagaybulak**	**7.91**	**10**	P	**Pn**	**17 46 16.1**	**+2.0**
	SNR=8.8						
PTH	**Pithoragarh**	**8.00**	**130**	*e*P	**Pn**	**17 46 15.5**	**+0.1**
TKM2	**Tokmak 2**	**8.27**	**13**	⇓Pn	**Pn**	**17 46 19.7**	**+0.6**
	comp=N,0.3nm,0.5s						
TKM2				⇑Sn	**Sn**	**17 47 50.4**	**-0.6**
	comp=N,0.5nm,0.6s						
TKM2	**Tokmak 2**	**8.27**	**13**	*e*Pn	**Pn**	**17 46 19.6**	**+0.6**
	comp=N,4.9nm,0.4s						
TKM2	**Tokmak 2**	**8.27**	**13**	P	**Pn**	**17 46 20.3**	**+1.2**
	SNR=9.7						
AJM	**Ajmer**	**8.46**	**171**	*e*P	**Pn**	**17 46 21.0**	**-0.7**
AJM				*e*S	**Sn**	**17 47 52.0**	**-3.8**
KK31	**Karatay Array**	**8.48**	**347**	⇓Pn	**Pn**	**17 46 20.8**	**-1.1**
	comp=N,3.5nm,0.3s,baz=159,slow=11,SNR=196						
KK31				⇑Sn	**Sn**	**17 47 52.6**	**-3.5**
	comp=N,3.8nm,0.3s,baz=173,slow=22,SNR=7.6						
AGRA	**Agra**	**8.65**	**150**	*e*P	**Pn**	**17 46 23.7**	**-0.7**
AGRA				*e*S	**Sn**	**17 47 59.0**	**-1.5**
AGRA				AML	AML	17 49 06.7	
	comp=N,53nm,0.4s						
AGRA				AML	AML	17 49 09.0	
	comp=E,64nm,0.6s						
GKN	**Gorkha**	**11.96**	**122**	*e*P	**Pn**	**17 47 07.4**	**-2.2**
	comp=E,26nm,0.5s						
KKN	**Kakani**	**12.54**	**121**	*e*P	**Pn**	**17 47 14.6**	**-2.9**
	comp=E,19nm,0.5s						
JIRN	**Jiri**	**13.26**	**119**	*e*P	**Pn**	**17 47 24.1**	**-3.3**
	comp=E,29nm,0.4s						
MK31	**Makanchi Array**	**13.77**	**27**	Pn	**Pn**	**17 47 33.1**	**-1.1**
	comp=E,0.6nm,0.4s,baz=196,slow=11,SNR=8.1						
MK31	**Makanchi Array**	**13.77**	**27**	*e*Pn	**Pn**	**17 47 33.6**	**-0.5**
MKAR	**Makanchi Array**	**13.77**	**27**	Pn	**Pn**	**17 47 32.1**	**-2.0**
	comp=E,0.2nm,0.3s,baz=210,slow=15,SNR=6.6						
TAPN	**Taplejung**	**14.54**	**117**	*e*P	**Pn**	**17 47 40.6**	**-4.0**
	comp=E,7.3nm,0.3s						
ODAN	**Odare**	**14.59**	**119**	*e*P	**Pn**	**17 47 41.2**	**-4.1**
	comp=E,12nm,0.5s						
LSA	**Lhasa**	**16.07**	**104**	P	**Pn**	**17 48 06.8**	**+2.4**
LSA	**Lhasa**	**16.07**	**104**	Pn	**Pn**	**17 48 00.5**	**-3.8**
	comp=E,5.4nm,0.7s						
KURK	**Kurchatov**	**16.34**	**12**	⇑Pn	**Pn**	**17 48 05.9**	**-1.6**
	comp=E,6.7nm,2.5s						
AB31	**Akbulak array**	**17.36**	**330**	Pn	**Pn**	**17 48 17.7**	**-2.7**
	comp=E,1.0nm,0.4s,baz=132,slow=14,SNR=32						
AB31				⇓Sn	**Sn**	**17 51 20.4**	**-12**
	comp=E,0.6nm,0.5s,baz=153,slow=20,SNR=4.5						
HYB	**Hyderabad**	**18.04**	**163**	*e*P	**Pn**	**17 48 20.0**	**-8.8**
HYB	**Hyderabad**	**18.04**	**163**	*i* P	**Pn**	**17 48 27.0**	**-1.8**
HYB				*e*S	**S**	**17 51 38.0**	**-15**
BRVK	**Borovoye**	**18.30**	**354**	⇑Pn	**Pn**	**17 48 31.0**	**-0.9**
	comp=E,1.7nm,0.7s						
BRVK	**Borovoye**	**18.30**	**354**	*e*P	**Pn**	**17 48 31.3**	**-0.5**
	comp=E,5.4nm,0.8s						
AKTK	**Aktyubinsk**	**19.07**	**329**	P	**Pn**	**17 48 39.8**	**-1.4**
AKTO	**Aktyubinsk**	**19.07**	**329**	P	**Pn**	**17 48 39.8**	**-1.4**
	comp=E,2.1nm,0.3s,baz=130,slow=11,SNR=38						
ZALV	**Zalesovo Beam**	**20.77**	**20**	P	**P**	**17 48 57.6**	**-0.8**
	comp=E,12nm,0.4s,baz=218,slow=10,SNR=42						
GTA	**Gaotai**	**21.71**	**70**	*e*P	**P**	**17 49 14.4**	**+5.9**
GTA				AP		17 49 17.2	
GTA				XP	sP	17 49 19.3	-7.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb3.8						
QRN	**Al-Qurain**	**22.26**	**261**	*e*P	**P**	**17 49 14.5**	**0.0**
QRN				AMb	AMB	17 49 15.5	
	comp=Z,25nm,0.5s,mb4.9						
MIB	**Mutribah**	**22.36**	**264**	*e*P	**P**	**17 49 15.2**	**-0.4**
MIB				AMb	AMB	17 49 17.0	
	comp=Z,18nm,0.7s,mb4.6						
RDF	**Al-Radifah**	**22.49**	**262**	*e*P	**P**	**17 49 16.8**	**-0.2**
RDF				AMb	AMB	17 49 18.4	
	comp=Z,49nm,0.8s,mb5.0						
NAY	**Al-Naaiem**	**22.63**	**263**	*e*P	**P**	**17 49 18.5**	**+0.1**
NAY				AMb	AMB	17 49 21.3	
	comp=Z,6.4nm,0.6s,mb4.2						
RST	**Umm Al-Ruwaisa**	**22.74**	**264**	*e*P	**P**	**17 49 19.2**	**-0.4**
RST				AMb	AMB	17 49 20.5	
	comp=Z,24nm,0.6s,mb4.8						
SONM	**Songino Array**	**27.89**	**52**	P	**P**	**17 50 09.1**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=284,slow=30,SNR=3.1						
AKASG	**Malin Array Be**	**35.33**	**310**	P	**P**	**17 51 11.2**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.6,baz=83,slow=7.6,SNR=4.1						
JOF	**Joensuu**	**38.15**	**330**	*e*p	**P**	**17 51 35.5**	**-0.4**
	comp=Z,3.9nm,0.4s,mb4.5						
FINES	**FINESS Array B**	**39.81**	**327**	P	**P**	**17 51 49.8**	**+0.1**
	comp=Z,1.4nm,0.6s,mb3.9,baz=121,slow=11,SNR=13						
KAF	**Kangasniemi**	**39.94**	**328**	*e*p	**P**	**17 51 50.1**	**-0.7**
	comp=Z,5.3nm,0.8s,mb4.3,baz=111,slow=8.4						
KEV	**Kevo**	**42.96**	**338**	*e*p	**P**	**17 52 16.9**	**+1.4**
ARCES	**ARCESS Array B**	**43.32**	**338**	P	**P**	**17 52 19.2**	**+0.9**
	comp=Z,1.7nm,0.5s,mb4.1,baz=117,slow=8.3,SNR=38						
NB2	**NORSAR Subarra**	**46.73**	**324**	P	**P**	**17 52 45.1**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**46.73**	**324**	P	**P**	**17 52 45.2**	**-0.3**
NOA	**NORSAR Array B**	**46.73**	**324**	P	**P**	**17 52 45.2**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=96,slow=7.7,SNR=7.9						
MJAR	**Matsushiro Arr**	**51.94**	**68**	P	**P**	**17 53 26.9**	**+1.2**
	comp=Z,1.5nm,0.6s,mb4.1,baz=290,slow=9.2,SNR=5.9						
TORD	**Torodi Ar. Bea**	**67.45**	**271**	P	**P**	**17 55 12.3**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=46,slow=5.6,SNR=11						
WRA	**Warramunga Arr**	**79.64**	**123**	P	**P**	**17 56 25.5**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=323,slow=5.2,SNR=13						
ASAR	**Alice Springs**	**81.88**	**126**	P	**P**	**17 56 37.3**	**+1.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=307,slow=5.3,SNR=13						
YKA	**Yellowknife Ar**	**82.78**	**4**	P	**P**	**17 56 40.6**	**+0.6**
	comp=Z,0.6nm,0.6s,mb3.8,baz=348,slow=5.4,SNR=5.1						
SCHQ	**Schefferville**	**84.27**	**338**	P	**P**	**17 56 48.0**	**+0.1**
	comp=Z,0.4nm,0.3s,mb4.0,baz=41,slow=11,SNR=3.4						

*ISCJB **04** 17:46:24.7±1.6,3077N±008×1423E±05,h10km,mb3.4/3, Error ellipse: s-maj=60.1km s-min=6.6km az=170.7*
*JMA **04** 17:46:26.2±0.3,3079N×14187E,h8km,M3.9*
*IDC **04** 17:46:27.9±4.0,3054N×14145E,h0km,mb3.3/3, mb1 3.5/5,mb1mx3.3/21,mbtmp3.4/5,ML3.1/2,Error ellipse: s-maj=159.7km s-min=20.8km az=71.0*
ISC 04 17:46:26.6±1.6,3077N±008×1423E±05,h10km,n11, σ0.74/13,mb3.4/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.66**	**182**	P	**Pn**	**17 47 25.1**	**+1.9**
CBIJ	**Chichi jima**	**3.66**	**182**	Pn	**Pn**	**17 47 23.4**	**+0.2**
	2.2nm,0.3s,baz=270,slow=20,SNR=2.6						
CBIJ				Sn	**Sn**	**17 48 05.3**	**-1.1**
	5.0nm,0.3s,baz=287,slow=19,SNR=4.0						
BSO1	**Boso 1**	**4.04**	**344**	P	**Pn**	**17 47 28.1**	**-0.3**
JOD2	**Odawara 2**	**5.24**	**330**	P	**Pn**	**17 47 45.6**	**+0.7**
JHU	**Hanno**	**5.67**	**334**	P	**Pn**	**17 47 51.1**	**+0.2**
JRY	**Ryogami san**	**5.96**	**332**	P	**Pn**	**17 47 55.2**	**+0.3**
JHO	**Hitachi**	**6.01**	**346**	P	**Pn**	**17 47 54.6**	**-0.9**
JHO				S	**Sn**	**17 49 00.2**	**-4.1**
MJAR	**Matsushiro Arr**	**6.70**	**330**	Pn	**Pn**	**17 48 05.0**	**0.0**
	0.6nm,0.3s,baz=155,slow=11,SNR=8.9						
MKAR	**Makanchi Array**	**48.29**	**307**	P	**P**	**17 55 07.2**	**-0.7**
	0.2nm,0.6s,mb3.3,baz=93,slow=8.8,SNR=4.0						
MKAR				pP	pP	17 55 19.5	+8.5
	0.4nm,0.7s,baz=89,slow=8.4,SNR=4.9						
WRA	**Warramunga Arr**	**51.00**	**190**	P	**P**	**17 55 28.7**	**+0.1**
	0.2nm,0.3s,mb3.5,baz=6.7,slow=7.7,SNR=7.8						
ASAR	**Alice Springs**	**54.72**	**189**	P	**P**	**17 55 56.9**	**+0.8**
	0.3nm,0.8s,mb3.4,baz=8.5,slow=7.0,SNR=4.5						

*NEIC **04** 17:50:33.0,3533S×71.18W,h88km,MD3.4(GUC),After GUC.*
GUC 04 17:50:33.0±0.8,3533S×7118W,h88km±5km,MD3.4,

ML3.5,7C-6D,Central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NICH	**Los Niches**	**0.33**	**352**⇑	*i*P	Pn	17 50 46.5	+0.1
NICH				*i* S	Sn	17 50 56.3	-0.1
TALC	**Talca**	**0.38**	**260**⇓	*i*P	Pn	17 50 39.7	-6.9
TALC				*i* S	Sn	17 50 49.3	-7.6
TALC				AML	AML	17 50 50.0	
	comp=N,17μm,0.1s						
SFDO	**San Fernando**	**0.73**	**11**⇓	*i*P	Pn	17 50 49.8	+0.2
CICH	**Cipreses**	**1.19**	**32**	*e*P	Pn	17 50 56.5	+1.7
CICH				*i* S	Sn	17 51 13.7	+2.6
CACH	**El Canelo**	**1.30**	**22**⇑	*i*P	Pn	17 50 57.0	+0.8
CACH				*i* S	Sn	17 51 14.5	+0.9
LNV	**Longovilo**	**1.39**	**352**	*e*P	Pn	17 50 57.2	-0.1
LNV				*i* S	Sn	17 51 15.1	-0.5
CHCH	**Chadas Angostu**	**1.46**	**17**	*e*P	Pn	17 50 58.6	+0.4
CHCH				*i* S	Sn	17 51 17.5	+0.3
CCHI	**Chillan**	**1.46**	**210**⇑	*i*P	Pn	17 50 58.5	+0.3
CCHI				*i* S	Sn	17 51 17.3	+0.1
CCHI	**Chillan**	**1.46**	**210**⇑	*i*P	Pn	17 50 58.5	+0.3
CCHI				*i* S	Sn	17 51 17.3	+0.1
CCHI				AML	AML	17 51 18.6	
	comp=N,357nm,0.6s						
COCH	**Cobquecura**	**1.54**	**238**	*i* S	Sn	17 51 19.6	+0.8
PCH	**Pirque**	**1.79**	**18**⇑	*i*P	Pn	17 51 03.0	+0.6
PCH				*i* S	Sn	17 51 26.0	+1.2
ANTU	**Antumapu**	**1.82**	**14**	*e*P	Pn	17 51 03.5	+0.8
ANTU				*i* S	Sn	17 51 26.3	+1.0
ANTU	**Antumapu**	**1.82**	**14**	*e*P	Pn	17 51 03.5	+0.8
ANTU				*i* S	Sn	17 51 26.3	+1.0
ANTU				AML	AML	17 51 27.6	
	comp=E,308nm,0.3s						
RCDM	**Rinconada Maip**	**1.86**	**10**⇓	*i*P	Pn	17 51 03.4	0.0
RCDM				*i* S	Sn	17 51 26.7	+0.2
RCDM	**Rinconada Maip**	**1.86**	**10**⇓	*i*P	Pn	17 51 03.4	0.0
RCDM				*i* S	Sn	17 51 26.7	+0.2
RCDM				AML	AML	17 51 29.1	
	comp=E,675nm,0.1s						
CLCH	**Cerro Calan**	**2.00**	**15**⇓	*i*P	Pn	17 51 06.5	+1.3
CLCH				*i* S	Sn	17 51 31.5	+1.8
CLCH	**Cerro Calan**	**2.00**	**15**⇓	*i*P	Pn	17 51 06.5	+1.3
CLCH				*i* S	Sn	17 51 31.5	+1.8
CLCH				AML	AML	17 51 33.3	
	comp=E,334nm,0.3s						
FCH	**Farellones**	**2.13**	**20**⇑	*i*P	Pn	17 51 08.2	+1.4
FCH				*i* S	Sn	17 51 35.1	+2.4
PEL	**Peldehue**	**2.22**	**11**⇑	*i*P	Pn	17 51 08.6	+0.5
PEL				*i* S	Sn	17 51 35.5	+0.7
PEL				AML	AML	17 51 37.8	
	comp=N,557nm,0.3s						

IDC 04 18:28:03.7±1.1**,4667N**×**15563E,h0**km**,mb3.6**/4**, mb1 3.9**/4**,mb1mx3.4**/21**,mbtmp3.6**/4**,Error ellipse: s-maj=55.0km s-min=29.9km az=105.0,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**64.84**	**336**	P	P	18 38 43.9	0.0
	0.6nm,0.7s,baz=33,slow=7.3,SNR=5.5						
WRA	**Warramunga Arr**	**69.04**	**201**	P	P	18 39 10.3	-0.7
	1.0nm,1.2s,baz=20,slow=6.9,SNR=6.0						
ASAR	**Alice Springs**	**72.72**	**201**	P	P	18 39 34.2	+0.9
	0.4nm,0.6s,baz=18,slow=5.6,SNR=6.9						
TXAR	**Lajitas Array**	**76.01**	**62**	P	P	18 39 52.9	+0.1
	0.4nm,0.6s,baz=311,slow=4.0,SNR=4.4						

IDC 04 18:28:17.9±19.0**,2186N**×**14299E,h170**km±187km**, mb3.1**/7**,mb1 3.3**/7**,mb1mx3.1**/20**,mbtmp3.1**/7**,Error ellipse: s-maj=58.9km s-min=19.2km az=74.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.10**	**320**	P	P	18 35 28.3	-0.2
	0.5nm,0.5s,baz=126,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**42.40**	**192**	P	P	18 35 56.3	+0.6
	0.3nm,0.6s,baz=15,slow=8.8,SNR=4.0						
ASAR	**Alice Springs**	**46.10**	**192**	P	P	18 36 24.6	-0.5
	0.4nm,0.6s,baz=17,slow=11,SNR=10						
ZALV	**Zalesovo Beam**	**53.97**	**322**	P	P	18 37 23.7	-0.3
	0.7nm,0.6s,baz=94,slow=6.2,SNR=4.1						
MKAR	**Makanchi Array**	**54.46**	**313**	P	P	18 37 28.4	+0.7
	0.3nm,0.6s,baz=96,slow=9.1,SNR=4.7						
YKA	**Yellowknife Ar**	**76.40**	**28**	P	P	18 39 48.4	+0.2
	0.4nm,0.5s,baz=292,slow=5.9,SNR=5.8						
FINES	**FINESS Array B**	**82.96**	**334**	P	P	18 40 23.3	-0.3
	1.0nm,1.0s,baz=48,slow=2.1,SNR=3.4						

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*NIED **04** 18:46:00,4670N×15320E,h8km,Mw4.1 Best double couple: M₀1.72000×10¹⁵ NP1:φs230.00000°,δ46.00000°,λ144.00000°. NP2:φs347.00000°,δ65.00000°,λ50.00000°.*

*IDC **04** 18:46:12.0±1.1,4637N×15300E,h0km,mb4.2/14, mb1 4.4/15,mb1mx4.2/23,mbtmp4.2/15,ML3.4/1,MS3.7/6, Ms1 3.7/6,ms1mx3.3/44,Error ellipse: s-maj=35.0km s-min=16.8km az=178.0*

*SZGRF **04** 18:46:12.1,4551N×15437E,h33km,mb4.4,East of Kuril Islands, Russia*

*ISCJB **04** 18:46:13.0±1.3,4640N±006×15312E±007,h15km±9km, mb4.5/52,MS3.8/4,Error ellipse: s-maj=11.6km s-min=4.4km az=143.5*

*SKHL **04** 18:46:13.3±0.6,4623N×15375E,h66km±32km,mb4.9/6, msh5.4/1*

*BJI **04** 18:46:17.7,4668N×15309E,h52km,mB5.0,mb4.6,Ms4.6, Msz4.5*

*NEIC **04** 18:46:20.5±1.1,4656N×15309E,h55km±8km,mb4.6/32, Error ellipse: s-maj=12.4km s-min=6.5km az=153.0*

*MOS **04** 18:46:21.2±1.1,4679N×15281E,h60km,mb4.7/26,Error ellipse: s-maj=10.3km s-min=6.4km az=110.4*

ISC 04 18:46:17.9±0.7**,4644N**±006×**15312E**±008**,h35**km±5km**, n191,**σ1§**02**/202**,mb4.5**/52**,MS3.8**/4**,24C-19D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.86**	**254**⇓	*i*PN	**Pn**	**18 47 14.3**	**-0.5**
KUR				*e*S	**Sn**	**18 48 00.5**	**+1.6**
KUR				pmax	pmax		
	comp=N,110nm,0.5s						
KUR				pmax	pmax		
	comp=E,200nm,0.5s						
KUR				pmax	pmax		
	comp=Z,460nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				smax			
	comp=N,4μm,2.0s						
KUR				smax			
	comp=E,3μm,3.0s						
KUR				smax			
	comp=N,530nm,0.6s						
KUR				smax			
	comp=E,420nm,0.6s						
KUR	**Kuril'sk**	**3.86**	**254**⇓	*i*P	**Pn**	**18 47 14.3**	**-0.5**
KUR				AMB	AMB	18 47 16.2	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	18 47 16.2	
	comp=E,106nm,0.5s						
KUR				AMB	AMB	18 47 16.2	
	comp=E,198nm,0.5s						
KUR				AMB	AMB	18 47 16.2	
	comp=E,456nm,0.5s						
KUR				*e*S	**Sn**	**18 48 00.5**	**+1.6**
KUR				A		18 48 04.8	
	comp=E,2μm,2.0s						
KUR				A		18 48 04.8	
	comp=E,2μm,2.0s						
KUR				A		18 48 13.8	
	comp=E,532nm,0.6s						
KUR				A		18 48 13.8	
	comp=E,418nm,0.6s						
SKR	**Severo-Kuril's**	**4.69**	**24**	*e*P	**Pn**	**18 47 26.5**	**+0.3**
SKR				AMB	AMB	18 47 30.6	
	comp=E,80nm,0.5s						
SKR				*e*S	**Sn**	**18 48 17.4**	**-1.9**
SKR				A		18 48 31.5	
	comp=E,110nm,0.5s						
SKR				A		18 48 31.5	
	comp=E,80nm,0.5s						
SKR				A		18 48 31.5	
	comp=E,140nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.66**	**248**	PN	**Pn**	**18 47 45.5**	**+6.0**
YUK				*e*S	**Sn**	**18 48 45.2**	**+2.0**
YUK				smax			
	comp=E,370nm,0.6s						
YUK				smax			
	comp=N,180nm,0.4s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**5.66**	**248**	*e*P	**Pn**	**18 47 45.5**	**+6.0**
YUK				A		18 48 50.0	
	comp=E,180nm,0.4s						
YUK				A		18 48 50.0	
	comp=E,370nm,0.6s						
NEM2	**Nemuro 2**	**6.07**	**242**	P	**Pn**	**18 47 42.5**	**-2.6**
NEM2				*e*S	**Sn**	**18 48 48.7**	**-4.6**
JRA	**Rausu**	**6.18**	**249**	P	**Pn**	**18 47 46.8**	**+0.2**
JRA				*e*S	**Sn**	**18 48 55.6**	**-0.3**
JNK	**Nakash**	**6.60**	**247**	P	**Pn**	**18 47 52.0**	**-0.4**
JAK	**Akkeshi**	**6.91**	**243**	P	**Pn**	**18 47 54.5**	**-2.2**
JAK				*e*S	**Sn**	**18 49 09.4**	**-4.7**
JTKR	**Abashiri--Toko**	**6.96**	**253**	P	**Pn**	**18 47 57.8**	**+0.5**
YSS	**Yuzh-Sakhalins**	**7.15**	**278**	*e*Pn	**Pn**	**18 48 04.1**	**+4.2**
	comp=E,22nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.15**	**278**⇓	*e*PN	**Pn**	**18 48 03.6**	**+3.7**
YSS				*e*S	**Sn**	**18 49 23.8**	**+4.0**
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				smax			
	comp=N,30nm,0.8s						
YSS				smax			
	comp=E,30nm,0.8s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
JMP	**Maruseppu**	**7.31**	**254**	P	**Pn**	**18 48 03.0**	**+0.9**
JAR	**Ashorobuto**	**7.35**	**248**	P	**Pn**	**18 48 02.3**	**-0.3**
JAR				*e*S	**Sn**	**18 49 24.1**	**-0.6**
JOB	**Onbets**	**7.50**	**245**	P	**Pn**	**18 48 03.6**	**-1.1**
JOB				*e*S	**Sn**	**18 49 24.5**	**-4.0**
PET	**Petropavlovsk**	**7.50**	**26**	*e*S	**Sn**	**18 49 30.2**	**+1.7**
PET				smax			
	comp=E,93nm,1.0s						
PET				smax			
	comp=N,80nm,0.8s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
JKK2	**Kamakawa 2**	**7.77**	**254**	P	**Pn**	**18 48 09.3**	**+0.9**
ASAJ	**Asahikawa**	**7.78**	**256**	P	**Pn**	**18 48 10.3**	**+1.8**
ASAJ	**Asahikawa**	**7.78**	**256**	Pn	**Pn**	**18 48 10.1**	**+1.6**
	comp=Z,1.9nm,0.3s,baz=89,slow=17,SNR=16						
ASAJ				LR	LR	18 50 59.5	
	comp=Z,271nm,19.1s,baz=348,slow=38						
UGL	**Uglegorsk**	**7.90**	**294**	*e*P	**Pn**	**18 48 14.0**	**+3.8**
UGL				AMB	AMB	18 48 16.5	
	comp=Z,46nm,0.7s						
JCH	**Churui**	**7.95**	**245**	P	**Pn**	**18 48 09.1**	**-1.8**
JCH				*e*S	**Sn**	**18 49 34.5**	**-5.0**
TYV	**Tymovskoe**	**8.22**	**306**	*e*P	**Pn**	**18 48 17.0**	**+2.4**
TYV				AMB	AMB	18 48 22.2	
	comp=Z,15nm,0.8s						
TYV				AMB	AMB	18 48 22.2	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	18 48 22.2	
	comp=Z,26nm,1.0s						
ERM	**Erimo**	**8.41**	**242**	*e*Pn	**Pn**	**18 48 18.9**	**+1.8**
	comp=Z,44nm,0.4s						
ERM	**Erimo**	**8.41**	**242**	*e*PN	**Pn**	**18 48 19.0**	**+1.9**
ERM				pmax	pmax		
	comp=Z,44nm,0.4s						
JBT2	**Biratori 2**	**8.50**	**248**	P	**Pn**	**18 48 17.5**	**-0.9**
JBT2				*e*S	**Sn**	**18 49 52.3**	**-0.7**
JNBK	**Urakawa-nobuka**	**8.51**	**244**	P	**Pn**	**18 48 17.7**	**-0.8**
JNBK				*e*S	**Sn**	**18 49 48.1**	**-5.1**
JNB	**Noboribetsu**	**9.50**	**250**	P	**Pn**	**18 48 31.9**	**-0.3**
OKH	**Okha**	**9.68**	**321**	*e*P	**Pn**	**18 48 34.8**	**+0.3**
NKL	**Nikolayevsk**	**10.47**	**314**	*e*P	**Pn**	**18 48 43.0**	**-2.4**
NKL				AMB	AMB	18 48 46.5	
	comp=Z,15nm,1.0s						
NKL				AMB	AMB	18 48 46.5	
	comp=Z,26nm,1.0s						
OFUJ	**Ofunato**	**11.17**	**233**	*e*S	**Sn**	**18 50 46.6**	**-12**
HABR	**Khabarovsk**	**12.40**	**286**	*e*PN	**Pn**	**18 49 14.9**	**+3.1**
MA2	**Magadan**	**13.24**	**355**	*e*Pn	**Pn**	**18 49 23.9**	**+0.7**
	comp=Z,3.7nm,0.6s						
MA2	**Magadan**	**13.24**	**355**⇑	*e*PN	**Pn**	**18 49 24.4**	**+1.3**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.7s						
MJAR	**Matsushiro Arr**	**14.89**	**234**	Pn	**Pn**	**18 49 41.5**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=28,slow=12,SNR=5.7						
MJAR				LR	LR	18 55 03.6	
	comp=Z,145nm,18.1s,baz=225,slow=36						
MAJO	**Matsushiro**	**14.89**	**234**	*e*P	**Pn**	**18 49 51.3**	**+5.5**
	comp=Z,6.2nm,0.5s						
MAJO	**Matsushiro**	**14.89**	**234**	*e*P	**Pn**	**18 49 51.3**	**+5.5**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MAT	**Matsushiro**	**14.89**	**234**	P	**Pn**	**18 49 51.0**	**+5.2**
YAK	**Yakutsk**	**20.59**	**328**	*e*P	**P**	**18 50 53.0**	**-0.5**
	comp=Z,14nm,0.6s						
YAK	**Yakutsk**	**20.59**	**328***d*	*i*P	**P**	**18 50 53.5**	**0.0**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
KSRS	**Korea Array**	**20.71**	**253**	P	**P**	**18 50 56.0**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=60,slow=10,SNR=11						
BILL	**Bilibino**	**22.70**	**13**	*e*P	**P**	**18 51 14.2**	**-1.8**
	comp=Z,4.9nm,0.8s,mb4.0						
BILL	**Bilibino**	**22.70**	**13**⇑	*e*P	**P**	**18 51 15.7**	**-0.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BOD	**Bodaibo**	**26.19**	**310**	*e*P	**P**	**18 51 45.4**	**-3.5**
TNA	**Tin City**	**28.29**	**33**	*e*P	**P**	**18 52 14.5**	**+6.9**
	comp=Z,1.3nm,0.8s,mb3.6						
ULN	**Ulaanbaatar**	**31.01**	**290**⇑	*i*P	**P**	**18 52 31.1**	**-0.7**
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**18 52 34.7**	**-1.0**
SONM						18 55 28.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,126nm,19.4s						
SONM	**Songino Array**	**31.44**	**290**	P	**P**	**18 52 34.7**	**-1.0**
	comp=Z,0.9nm,0.8s,mb3.6,baz=74,slow=7.6,SNR=3.6						
SONM				PcP	PcP	18 55 28.5	+0.4
	comp=Z,0.6nm,0.7s,baz=144,slow=1.2,SNR=4.4						
SONM				LR	LR	19 06 06.8	
	comp=Z,126nm,19.4s,MS3.6,baz=6.2,slow=38						
TLY	**Talaya**	**32.33**	**298**⇓	*e*P	**P**	**18 52 42.5**	**-0.9**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
ZAK	**Zakamensk**	**32.82**	**295**	*e*P	**P**	**18 52 46.0**	**-1.7**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
IMA2	**Indian Mountai**	**34.06**	**36**	*e*P	**P**	**18 52 58.3**	**0.0**
COLA	**College**	**36.38**	**38**⇓	*e*P	**P**	**18 53 14.4**	**-3.9**
LZH	**Lanzhou**	**37.90**	**272**	*e*P	**P**	**18 53 32.5**	**+0.9**
LZH				AMB	AMB		
	comp=Z,32nm,1.1s,mb5.0						
LZH				AMB	AMB		
	comp=Z,127nm,4.0s						
LZH	**Lanzhou**	**37.90**	**272**	*e*P	**P**	**18 53 32.5**	**+0.9**
	comp=Z,32nm,1.1s,mb5.0						
LZH				pP	pP	18 53 58.0	+16
LZH				sP	sP	18 54 10.0	+24
GTA	**Gaotai**	**39.02**	**279**	⇓P	**P**	**18 53 42.1**	**+1.2**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
EGAK	**Eagle**	**39.24**	**38**	*e*P	**P**	**18 53 42.1**	**-0.4**
	comp=Z,2.7nm,0.8s,mb4.0						
INK	**Inuvik**	**41.92**	**32**	P	**P**	**18 54 05.2**	**+0.7**
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**41.92**	**32**	P	**P**	**18 54 05.2**	**+0.7**
	comp=Z,2.5nm,0.9s,mb3.9,baz=297,slow=8.8,SNR=8.6						
ZALV	**Zalesovo Beam**	**42.80**	**306**	P	**P**	**18 54 10.2**	**-1.6**
	comp=Z,1.7nm,0.4s,mb4.1,baz=63,slow=6.3,SNR=13						
ZALV				PcP	PcP	18 56 02.2	-0.3
	comp=Z,1.4nm,0.8s,baz=72,slow=4.8,SNR=5.3						
ZALV				LR	LR	19 13 18.5	
	comp=Z,135nm,18.6s,MS3.9,baz=66,slow=38						
ZAL	**Zalesovo**	**42.81**	**306**	P	**P**	**18 54 10.2**	**-1.7**
ZAL						18 56 02.2	
MK31	**Makanchi Array**	**47.09**	**298**	*e*P	**P**	**18 54 44.7**	**-1.4**
MKAR	**Makanchi Array**	**47.09**	**298**	P	**P**	**18 54 45.0**	**-1.1**
MKAR				PcP	PcP	18 56 17.4	0.0
MKAR				LR	LR	19 15 42.0	
MKAR	**Makanchi Array**	**47.09**	**298**	P	**P**	**18 54 45.0**	**-1.0**
MKAR						18 56 17.5	
MKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,158nm,18.3s						
MKAR	**Makanchi Array**	**47.09**	**298**	P	**P**	**18 54 45.0**	**-1.1**
	comp=Z,6.2nm,0.9s,mb4.5,baz=66,slow=7.5,SNR=42						
MKAR				PcP	PcP	18 56 17.4	0.0
	comp=Z,0.8nm,0.8s,baz=63,slow=3.3,SNR=3.6						
MKAR				LR	LR	19 15 42.0	
	comp=Z,158nm,18.3s,MS4.0,baz=354,slow=38						
KURK	**Kurchatov**	**47.54**	**304**	*e*P	**P**	**18 54 47.6**	**-1.9**
	comp=Z,8.9nm,0.9s,mb4.8						
KURK	**Kurchatov**	**47.54**	**304**⇑	*e*P	**P**	**18 54 47.8**	**-1.7**
LSA	**Lhasa**	**50.30**	**273**	*e*P	**P**	**18 55 12.6**	**+1.7**
	comp=Z,6.1nm,0.6s,mb4.8						
LSA	**Lhasa**	**50.30**	**273**	*e*P	**P**	**18 55 12.6**	**+1.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
BRVK	**Borovoye**	**51.10**	**310**	*e*P	**P**	**18 55 15.2**	**-1.4**
YKA	**Yellowknife Ar**	**51.17**	**37**	P	**P**	**18 55 17.3**	**+0.3**
YKA	**Yellowknife Ar**	**51.17**	**37**	P	**P**	**18 55 17.3**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.17**	**37**	P	**P**	**18 55 17.3**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=296,slow=7.2,SNR=12						
CHTO	**Chiang Mai**	**52.05**	**257**	*e*P	**P**	**18 55 24.4**	**+0.3**
	comp=Z,7.9nm,0.9s,mb4.6						
CHTO	**Chiang Mai**	**52.05**	**257**	*e*P	**P**	**18 55 24.4**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SHL	**Shillong**	**52.37**	**269**	*e*P	**P**	**18 55 27.0**	**+0.6**
SHL				*e*x	x	22 42 23.0	
TKM2	**Tokmak 2**	**53.14**	**296**	*e*P	**P**	**18 55 32.1**	**+0.2**
USP	**Ospenovka**	**53.63**	**297**	P	**P**	**18 55 35.6**	**+0.1**
	SNR=13						
KBK	**Karagaybulak**	**53.69**	**296**	P	**P**	**18 55 36.2**	**+0.3**
	SNR=5.6						
KZA	**Kyzart**	**53.81**	**296**	P	**P**	**18 55 38.0**	**+1.2**
	SNR=6.7						
AAK	**Ala-Archa**	**53.98**	**297**	*e*P	**P**	**18 55 36.9**	**-1.2**
	comp=Z,5.3nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**53.98**	**297***d*	*i*P	**P**	**18 55 37.0**	**-1.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**53.98**	**297**	P	**P**	**18 55 38.0**	**0.0**
	SNR=7.7						
TAPN	**Taplejung**	**54.12**	**273**	*e*P	**P**	**18 55 39.4**	**+0.1**
	comp=Z,7.8nm,0.5s,mb4.9						
EKS2	**Erkin-Say**	**54.41**	**297**	*e*P	**P**	**18 55 40.8**	**-0.4**
	comp=Z,6.3nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**54.41**	**297**	P	**P**	**18 55 41.4**	**+0.2**
	SNR=8.8						
ODAN	**Odare**	**54.65**	**273**	*e*P	**P**	**18 55 46.2**	**+3.0**
	comp=Z,8.0nm,0.5s,mb5.0						
AML	**Almayashu**	**54.75**	**296**	*e*P	**P**	**18 55 44.4**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.4						
JIRN	**Jiri**	**54.98**	**275**	*e*P	**P**	**18 55 46.3**	**+0.8**
	comp=Z,15nm,0.6s,mb5.2						
ARU	**Arti**	**55.25**	**318**	*e*P	**P**	**18 55 45.2**	**-1.8**
	comp=Z,2.4nm,0.3s,mb4.7						
ARU	**Arti**	**55.25**	**318***c*	*i*P	**P**	**18 55 45.4**	**-1.7**
ARU						18 57 52.4	
ARU				PPP		18 59 04.1	
ARU				S	**S**	**19 03 31.1**	**+3.2**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KKN	**Kakani**	**55.52**	**276**	*e*P	**P**	**18 55 50.5**	**+1.0**
	comp=Z,28nm,0.9s,mb5.3						
KKN	**Kakani**	**55.52**	**276**	*e*P	**P**	**18 55 50.5**	**+1.0**
KKN				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
GKN	**Gorkha**	**55.83**	**276**	*e*P	**P**	**18 55 52.4**	**+0.7**
	comp=Z,22nm,0.6s,mb5.4						
ARCES	**ARCESS Array B**	**58.15**	**341**	P	**P**	**18 56 06.9**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**58.15**	**341**	P	**P**	**18 56 06.9**	**-0.6**
	comp=Z,2.1nm,0.6s,mb4.3,baz=31,slow=7.3,SNR=8.4						
KBL	**Kabul**	**62.19**	**292**	*e*P	**P**	**18 56 34.8**	**-0.9**
NVAR	**Mina Array Bea**	**62.58**	**62**	P	**P**	**18 56 38.7**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.9,baz=2.7,slow=33,SNR=3.6						
KAF	**Kangasniemi**	**63.73**	**335**	*e*p	**P**	**18 56 52.0**	**+6.5**
	comp=Z,1.1nm,0.5s,mb4.1						
KAF	**Kangasniemi**	**63.73**	**335**	*e*P	**P**	**18 56 52.0**	**+6.5**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
FINES	**FINESS Array B**	**64.33**	**335**	P	**P**	**18 56 48.6**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**64.33**	**335**	P	**P**	**18 56 48.5**	**-0.8**
	comp=Z,2.2nm,0.5s,mb4.5,baz=36,slow=7.7,SNR=32						
PDAR	**Pinedale Array**	**64.93**	**54**	P	**P**	**18 56 54.2**	**+0.6**
	comp=Z,1.0nm,0.8s,mb3.9,baz=250,slow=1.4,SNR=12						
PV10	**Paradox Valley**	**68.14**	**57**	*e*P	**P**	**18 57 15.2**	**+1.0**
NB2	**NORSAR Subarra**	**68.53**	**341**	P	**P**	**18 57 15.6**	**-0.6**
	comp=Z,3.1nm,0.6s,mb4.4,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**68.53**	**341**	P	**P**	**18 57 15.6**	**-0.6**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
NOA	**NORSAR Array B**	**68.53**	**341**	P	**P**	**18 57 16.0**	**-0.2**
NOA				LR	LR	19 32 04.4	
NOA	**NORSAR Array B**	**68.53**	**341**	P	**P**	**18 57 16.0**	**-0.2**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,44nm,18.8s						
NOA	**NORSAR Array B**	**68.53**	**341**	P	**P**	**18 57 16.0**	**-0.2**
	comp=Z,4.2nm,0.6s,mb4.6,baz=28,slow=6.4,SNR=16						
NOA				LR	LR	19 32 04.4	
	comp=Z,44nm,18.8s,MS3.7,baz=50,slow=40						
GOF	**Gofitskoye**	**70.05**	**315**	*e*P	**P**	**18 57 34.6**	**+8.7**
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**18 57 35.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**18 57 35.7**	**-0.8**
	comp=Z,5.6nm,0.4s,mb4.8,baz=34,slow=5.9,SNR=41						
AKBB	**Malin Array Si**	**71.81**	**326**	*e*P	**P**	**18 57 35.5**	**-1.0**
KWP	**Kalwaria**	**75.10**	**329**	⇑P	**P**	**18 57 56.2**	**+0.4**
KWP	**Kalwaria**	**75.10**	**329**⇑	*i*P	**P**	**18 57 56.3**	**+0.4**
STHS	**Stebnicka Huta**	**75.79**	**330**	*e*P	**P**	**18 58 00.5**	**+0.7**
	comp=Z,3.7nm,0.9s,mb4.3						
STHS	**Stebnicka Huta**	**75.79**	**330**	*e*P	**P**	**18 58 00.5**	**+0.7**
STHS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BURAR	**Bucovina Array**	**75.85**	**327**	⇓P	**P**	**18 58 00.5**	**+0.3**
BURAR	**Bucovina Array**	**75.85**	**327**⇓	*i*P	**P**	**18 58 00.5**	**+0.3**
UPC	**Upice**	**76.57**	**333**	*e*P	**P**	**18 58 04.4**	**+0.2**
DPC	**Dobruska-Polom**	**76.61**	**333**	*e*P	**P**	**18 58 05.4**	**+0.9**
DPC				*e*x	x	18 58 15.6	
MORC	**Moravsky Berou**	**76.72**	**332**	⇑P	**P**	**18 58 05.8**	**+0.7**
MORC	**Moravsky Berou**	**76.72**	**332**⇑	*i*P	**P**	**18 58 05.8**	**+0.7**
CLL	**Collm**	**76.75**	**336**	*i* P	**P**	**18 58 04.8**	**-0.5**
	comp=Z,9.0nm,0.6s,mb4.9						
CLL				*i*		18 58 09.7	
CLL				*i*	pP	18 58 16.1	-0.2
CLL	**Collm**	**76.75**	**336**	*i* P	**P**	**18 58 04.8**	**-0.5**
CLL				*i*	pP	18 58 16.1	-0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
LIKS	**Likavka**	**76.83**	**331**	*e*P	**P**	**18 58 04.4**	**-1.4**
KECS	**Kecovo**	**76.85**	**330**	*e*P	**P**	**18 58 07.7**	**+1.8**
	comp=Z,1.5nm,0.6s,mb4.1						
KECS	**Kecovo**	**76.85**	**330**	*e*P	**P**	**18 58 07.7**	**+1.8**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
MLR	**Muntele Rosu**	**77.33**	**325**⇓	*i*P	**P**	**18 58 08.0**	**-0.6**
MALT	**Malatya**	**77.37**	**313**	⇓P	**P**	**18 58 10.7**	**+1.7**
MALT	**Malatya**	**77.37**	**313**⇓	*i*P	**P**	**18 58 10.7**	**+1.7**
VYHS	**Vyhne**	**77.40**	**331**	*e*P	**P**	**18 58 09.1**	**+0.1**
VRAC	**Vranov**	**77.43**	**333**	⇑P	**P**	**18 58 10.0**	**+0.9**
VRAC	**Vranov**	**77.43**	**333**⇑	*i*P	**P**	**18 58 10.0**	**+0.9**
PRU	**Pruhonice**	**77.47**	**334**	*e*P	**P**	**18 58 09.6**	**+0.3**
DRGR		**77.48**	**328**	⇑P	**P**	**18 58 09.6**	**+0.1**
DRGR		**77.48**	**328**⇑	*i*P	**P**	**18 58 09.6**	**+0.1**
TXAR	**Lajitas Array**	**77.64**	**60**	P	**P**	**18 58 10.5**	**-0.2**
TXAR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.64**	**60**	P	**P**	**18 58 10.4**	**-0.2**
	comp=Z,1.3nm,0.6s,mb4.1,baz=296,slow=4.1,SNR=19						
VOIR		**77.72**	**325**	⇑iP	**P**	**18 58 11.9**	**+1.1**
ZST	**Bratislava**	**78.24**	**332**	eP	**P**	**18 58 13.8**	**+0.2**
	comp=Z,4.7nm,1.0s,mb4.4						
ZST	**Bratislava**	**78.24**	**332**	eP	**P**	**18 58 13.8**	**+0.2**
ZST				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KHC	**Kasperske Hory**	**78.53**	**334**	eP	**P**	**18 58 15.5**	**+0.3**
KHC				ex	x	18 58 25.1	
BRTR	**Keskin Array B**	**78.62**	**317**	iP	**P**	**18 58 16.8**	**+0.9**
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**78.62**	**317**	P	**P**	**18 58 16.9**	**+1.0**
	comp=Z,2.9nm,1.0s,mb4.2,baz=107,slow=4.3,SNR=11						
GZR	**Gura Zlata**	**78.64**	**327**	⇑P	**P**	**18 58 16.3**	**+0.4**
GZR	**Gura Zlata**	**78.64**	**327**	⇑iP	**P**	**18 58 16.3**	**+0.4**
GRA1	**Grafenberg Arr**	**78.71**	**336**	eP	**P**	**18 58 16.1**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**78.71**	**336**	eP	**P**	**18 58 16.1**	**-0.1**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**78.71**	**336**	eP	**P**	**18 58 16.1**	**-0.1**
GRF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**78.71**	**336**	eP	**P**	**18 58 16.1**	**-0.1**
	comp=Z,6.0nm,1.0s,mb4.5						
GERES	**GERESS Array B**	**78.74**	**334**	P	**P**	**18 58 16.3**	**-0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**78.74**	**334**	P	**P**	**18 58 16.3**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.0,baz=25,slow=5.3,SNR=15						
MIB	**Mutribah**	**78.83**	**302**	eP	**P**	**18 58 17.5**	**+0.3**
MIB				AMb	AMB	18 58 18.7	
	comp=Z,26nm,0.6s,mb5.3						
BZS	**Buzias**	**78.88**	**328**	⇓P	**P**	**18 58 17.5**	**+0.3**
BZS	**Buzias**	**78.88**	**328**	⇓iP	**P**	**18 58 17.5**	**+0.3**
RST	**Umm Al-Ruwaisa**	**79.26**	**302**	eP	**P**	**18 58 19.5**	**-0.1**
RST				AMb	AMB	18 58 22.0	
	comp=Z,28nm,0.7s,mb5.3						
QRN	**Al-Qurain**	**79.26**	**300**	eP	**P**	**18 58 19.6**	**0.0**
QRN				AMb	AMB	18 58 21.1	
	comp=Z,26nm,0.6s,mb5.4						
NAY	**Al-Naaiem**	**79.30**	**301**	eP	**P**	**18 58 19.3**	**-0.5**
NAY				AMb	AMB	18 58 20.4	
	comp=Z,5.9nm,0.8s,mb4.5						
RDF	**Al-Radifah**	**79.35**	**301**	eP	**P**	**18 58 20.6**	**+0.5**
RDF				AMb	AMB	18 58 21.8	
	comp=Z,22nm,0.6s,mb5.2						
PKSM	**Moragy**	**79.44**	**330**	⇓P	**P**	**18 58 20.2**	**0.0**
PKSM	**Moragy**	**79.44**	**330**	⇓iP	**P**	**18 58 20.2**	**-0.1**
KBA	**Koelnbreinsper**	**80.42**	**333**	⇑iP	**P**	**18 58 24.8**	**-0.7**
	comp=Z,15nm,0.8s,mb5.0						
KBA	**Koelnbreinsper**	**80.42**	**333**	⇑iP	**P**	**18 58 24.8**	**-0.8**
KBA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
WATA	**Walderalm**	**80.73**	**335**	⇑iP	**P**	**18 58 27.4**	**+0.2**
	comp=Z,6.1nm,1.0s,mb4.5						
WATA	**Walderalm**	**80.73**	**335**	⇑iP	**P**	**18 58 27.4**	**+0.2**
WATA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
WTTA	**Wattenberg**	**80.78**	**335**	⇑iP	**P**	**18 58 27.7**	**+0.3**
	comp=Z,9.8nm,0.6s,mb4.9						
WTTA	**Wattenberg**	**80.78**	**335**	⇑iP	**P**	**18 58 27.7**	**+0.2**
WTTA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VTS	**Vitosha**	**80.83**	**325**	⇓P	**P**	**18 58 28.3**	**+0.5**
VTS	**Vitosha**	**80.83**	**325**	⇓iP	**P**	**18 58 28.3**	**+0.5**
SQTA	**Sankt Quirin**	**80.94**	**335**	⇑iP	**P**	**18 58 29.0**	**+0.6**
	comp=Z,12nm,1.2s,mb4.7						
SQTA	**Sankt Quirin**	**80.94**	**335**	⇑iP	**P**	**18 58 29.0**	**+0.7**
SQTA				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
CDF	**Champ du Feu**	**80.95**	**338**	eP	**P**	**18 58 28.4**	**0.0**
	comp=Z,6.1nm,0.6s,mb4.4						
CDF	**Champ du Feu**	**80.95**	**338**	eP	**P**	**18 58 28.4**	**0.0**
	comp=Z,3.0nm,0.6s,mb4.4						
CDF	**Champ du Feu**	**80.95**	**338**	eP	**P**	**18 58 28.4**	**0.0**
CDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
HAU	**Haudompre**	**81.57**	**338**	eP	**P**	**18 58 30.4**	**-1.2**
LOR	**Lormes**	**82.87**	**339**	eP	**P**	**18 58 37.9**	**-0.6**
AVF	**Avril sur Loir**	**83.44**	**340**	eP	**P**	**18 58 40.6**	**-0.8**
SMF	**Signal de Mont**	**83.46**	**339**	eP	**P**	**18 58 40.6**	**-0.9**
	comp=Z,49nm,1.3s,mb5.1						
SMF	**Signal de Mont**	**83.46**	**339**	eP	**P**	**18 58 40.6**	**-0.9**
	comp=Z,25nm,1.3s,mb5.1						
SMF	**Signal de Mont**	**83.46**	**339**	eP	**P**	**18 58 40.6**	**-0.9**
SMF				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
LPL	**La Plagne**	**83.76**	**337**	eP	**P**	**18 58 42.9**	**-0.2**
LPG	**La Plagne**	**83.78**	**337**	eP	**P**	**18 58 43.2**	**0.0**
	comp=Z,25nm,1.2s,mb4.9						
LPG	**La Plagne**	**83.78**	**337**	eP	**P**	**18 58 43.2**	**0.0**
	comp=Z,12nm,1.2s,mb4.9						
LPG	**La Plagne**	**83.78**	**337**	eP	**P**	**18 58 43.2**	**0.0**
LPG				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.9						
TCF	**Toulx Ste Croi**	**84.19**	**340**	eP	**P**	**18 58 45.3**	**0.0**
MBDF	**Montbardon**	**84.48**	**337**	eP	**P**	**18 58 46.8**	**0.0**
	comp=Z,5.9nm,0.8s,mb4.5						
MBDF	**Montbardon**	**84.48**	**337**	eP	**P**	**18 58 46.8**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.5						
MBDF	**Montbardon**	**84.48**	**337**	eP	**P**	**18 58 46.8**	**0.0**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
ORIF	**Oris-en-Rattie**	**84.55**	**337**	eP	**P**	**18 58 46.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**115.37**	**329**	PKP	PKPdf	19 04 55.1	-1.0
	comp=Z,0.3nm,0.7s,baz=343,slow=3.4,SNR=3.0						
CFAA	**Coronel Fontan**	**145.05**	**80**	PKPbc	PKPbc	19 05 49.7	-0.9
CFAA	**Coronel Fontan**	**145.05**	**80**	PKPbc	PKPbc	19 05 49.7	-0.9
	comp=Z,0.2nm,0.7s,baz=248,slow=3.7,SNR=5.2						

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*IDC **04** 18:51:59.7±1.6, 1023S×119.13E, h0^{km}, mb3.6/3, mb1 4.1/7, mb1mx3.9/16, mbtmp3.9/7, ML3.8/4, MS3.6/4, Ms1 3.6/4, ms1mx3.2/27, Error ellipse: s-maj=63.4km s-min=19.9km az=52.0*

*ISCJB **04** 18:52:06.7±2.6, 102S±02×1195E±02, h75^{km}±23^{km}, mb3.5/3, Error ellipse: s-maj=39.4km s-min=14.5km az=141.9*

ISC 04 18:52:08.3±2.2, 102S±02×1195E±02, h69^{km}±18^{km}, n11, σ0^{s}70/13, mb3.5/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.12**	**90**	Pn	**Pn**	**18 53 08.8**	**0.0**
	6.0nm,0.3s,baz=243,slow=2.3,SNR=12						
FITZ	**Fitzroy Crossi**	**9.84**	**143**	eP	**Pn**	**18 54 27.0**	**0.0**
	13nm,0.8s						
FITZ				eS	**Sn**	**18 56 11.9**	**-4.0**
FITZ	**Fitzroy Crossi**	**9.84**	**143**	Pn	**Pn**	**18 54 26.9**	**-0.1**
	0.4nm,0.3s,baz=98,slow=23,SNR=10						
FITZ				Sn	**Sn**	**18 56 10.5**	**-5.4**
	0.7nm,0.3s,baz=182,slow=17,SNR=3.6						
FITZ				LR	LR	18 58 44.4	
	comp=Z,179nm,18.6s,baz=332,slow=40						
WRA	**Warramunga Arr**	**17.28**	**126**	P	**Pn**	**18 56 04.5**	**-0.6**
	0.3nm,0.3s,baz=304,slow=13,SNR=21						
WRA				S	**S**	**18 59 11.9**	**-10**
	0.1nm,0.3s,baz=301,slow=23,SNR=4.3						
WB2	**Warramunga Arr**	**17.29**	**126**	eP	**Pn**	**18 56 04.9**	**-0.3**
ASAR	**Alice Springs**	**19.18**	**136**	P	**Pn**	**18 56 29.8**	**+1.7**
	0.3nm,0.3s,baz=319,slow=13,SNR=33						
ASAR				S	**S**	**19 00 00.2**	**-0.1**
	0.1nm,0.3s,baz=305,slow=22,SNR=5.5						
PSI	**Prapat**	**24.22**	**301**	LR	LR	19 09 38.6	
	comp=Z,208nm,18.5s,baz=124,slow=44						
CTA	**Charters Tower**	**27.59**	**114**	LR	LR	19 07 31.1	
	comp=Z,99nm,20.1s,baz=124,slow=33						
STKA	**Stephens Creek**	**29.71**	**140**	P	**P**	**18 58 07.9**	**0.0**
	2.3nm,0.7s,mb3.9,baz=323,slow=6.4,SNR=3.0						
STKA				LR	LR	19 10 40.7	
	comp=Z,137nm,20.8s,baz=22,slow=38						
SONM	**Songino Array**	**58.96**	**350**	P	**P**	**19 02 01.1**	**+0.6**
	0.2nm,0.5s,mb3.4,baz=172,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**65.76**	**333**	P	**P**	**19 02 45.1**	**-0.8**
	0.2nm,0.7s,mb3.1,baz=152,slow=7.8,SNR=4.0						

IDC 04 19:01:02.9±2.1, 124S×12698E, h0^{km}, mb3.3/2, mb1 3.4/3, mb1mx3.2/16, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=165.8km s-min=27.2km az=66.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.93**	**159**	P	Pn	19 05 36.3	-1.8
	0.1nm,0.3s,baz=338,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**23.28**	**164**	P	P	19 06 12.7	+0.3
	0.3nm,0.4s,baz=344,slow=11,SNR=6.7						
MKAR	**Makanchi Array**	**61.79**	**327**	P	P	19 11 23.5	0.0
	0.3nm,0.6s,baz=112,slow=8.5,SNR=4.8						

IDC 04 19:08:48.0±2.1, 104S×12711E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=197.5km s-min=24.5km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.08**	**160**	P	P	19 13 23.1	-0.1
	0.6nm,0.7s,baz=342,slow=12,SNR=8.6						
ASAR	**Alice Springs**	**23.44**	**164**	P	P	19 13 59.3	+0.1
	0.5nm,0.5s,baz=343,slow=11,SNR=11						
MKAR	**Makanchi Array**	**61.69**	**327**	P	P	19 19 08.0	+0.1
	0.3nm,0.4s,baz=115,slow=7.8,SNR=12						

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*LDG **04** 19:15:40.6±0.9, 1576S×16727E, h10^{km}, Mb4.5/2, Error ellipse: s-maj=117.8km s-min=66.0km az=39.0*

*ISCJB **04** 19:15:52.0±4.4, 155S±02×1674E±02, h99^{km}±45^{km}, mb4.2/10, Error ellipse: s-maj=37.8km s-min=24.8km az=137.9*

*IDC **04** 19:15:55.2±4.0, 1558S×16762E, h125^{km}±35^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.9/17, mbtmp3.9/10, Error ellipse: s-maj=29.1km s-min=24.4km az=144.0*

*NEIC **04** 19:15:55.4±2.2, 1557S×16761E, h127^{km}±21^{km}, mb4.4/3, Error ellipse: s-maj=22.4km s-min=14.5km az=154.0*

ISC 04 19:15:54.0±3.7, 155S±02×1675E±02, h106^{km}±40^{km}, n50, σ0^{s}55/18, mb4.2/10, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.63**	**188**	P	**Pn**	**19 17 29.4**	**+0.5**
	7.2nm,0.3s,baz=33,slow=16,SNR=64						
DZM				S	**Sn**	**19 18 42.4**	**-0.6**
	6.4nm,0.3s,baz=135,slow=21,SNR=5.6						
STKA	**Stephens Creek**	**28.68**	**231**	eP	**P**	**19 21 41.6**	**+0.6**
	1.7nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**28.68**	**231**	P	**P**	**19 21 41.7**	**+0.7**
	1.9nm,0.5s,mb4.0,baz=52,slow=7.4,SNR=10						
WB2	**Warramunga Arr**	**31.85**	**257**	eP	**P**	**19 22 09.1**	**0.0**
WRA	**Warramunga Arr**	**31.86**	**257**	P	**P**	**19 22 08.9**	**-0.4**
	0.3nm,0.3s,mb3.5,baz=79,slow=6.1,SNR=20						
WRA				PcP	PcP	19 24 56.3	-1.5
	0.6nm,0.7s,baz=84,slow=2.4,SNR=5.0						
ASAR	**Alice Springs**	**32.62**	**250**	P	**P**	**19 22 15.8**	**0.0**
	1.6nm,0.3s,mb4.3,baz=79,slow=8.9,SNR=85						
ASAR				PcP	PcP	19 24 58.0	-1.7
	0.3nm,0.6s,baz=82,slow=2.9,SNR=4.4						
FORT	**Forrest**	**39.10**	**240**	eP	**P**	**19 23 11.0**	**-0.1**
	10nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**40.09**	**260**	eP	**P**	**19 23 20.2**	**+0.7**
	15nm,1.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**40.09**	**260**	P	**P**	**19 23 20.1**	**+0.6**
	2.5nm,0.7s,mb4.2,baz=67,slow=13,SNR=5.9						
MJAR	**Matsushiro Arr**	**58.67**	**333**	P	**P**	**19 25 39.5**	**-0.8**
	1.7nm,0.9s,mb4.1,baz=169,slow=7.3,SNR=6.1						
ULN	**Ulaanbaatar**	**82.87**	**324**	eP	**P**	**19 28 06.9**	**+0.3**
SONM	**Songino Array**	**83.23**	**324**	P	**P**	**19 28 09.1**	**+0.6**
	2.9nm,0.7s,mb4.2,baz=156,slow=10,SNR=20						
INK	**Inuvik**	**93.53**	**19**	P	**P**	**19 28 57.9**	**+0.5**
INK	**Inuvik**	**93.53**	**19**	P	**P**	**19 28 57.9**	**+0.5**
	0.9nm,0.4s,mb4.4,baz=169,slow=5.7,SNR=2.2						
MKAR	**Makanchi Array**	**97.89**	**316**	P	**P**	**19 29 17.5**	**-0.2**
MKAR	**Makanchi Array**	**97.89**	**316**	P	**P**	**19 29 17.5**	**-0.2**
	0.2nm,0.5s,mb3.9,baz=96,slow=5.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**98.12**	**324**	P	**P**	**19 29 17.5**	**-1.1**
	0.9nm,0.7s,mb4.4,baz=101,slow=4.7,SNR=4.6						
ARCES	**ARCESS Array B**	**121.03**	**345**	PKP	PKPdf	19 34 31.6	-1.9
	1.0nm,0.5s,baz=67,slow=2.0,SNR=13						
FIA1	**FINESS Array S**	**126.50**	**338**	ePKPdf	PKPdf	19 34 44.0	-0.2
FINES	**FINESS Array B**	**126.50**	**338**	PKP	PKPdf	19 34 43.0	-1.2
	0.4nm,0.3s,baz=109,slow=3.6,SNR=8.6						
NOA	**NORSAR Array B**	**131.40**	**345**	PKP	PKPdf	19 34 52.8	-0.7
	1.8nm,1.1s,baz=27,slow=3.4,SNR=2.7						
AKASG	**Malin Array Be**	**131.48**	**326**	PKP	PKPdf	19 34 52.3	-1.7
	0.6nm,0.4s,baz=46,slow=2.8,SNR=4.3						
BRTR	**Keskin Array B**	**133.16**	**310**	PKP	PKPdf	19 34 56.2	-1.3
	0.6nm,0.8s,baz=80,slow=3.4,SNR=3.1						
CDF	**Champ du Feu**	**143.35**	**338**	ePKP1	PKPdf	19 35 12.3	-3.6
DAVOX	**Davos/Dischmat**	**143.65**	**334**	PKP	PKPdf	19 35 13.9	-2.6
	1.7nm,0.4s,baz=162,slow=19,SNR=8.7						
HINF	**Hinteralfeld**	**144.01**	**338**	ePKP1	PKPdf	19 35 14.2	-2.9
HAU	**Haudompre**	**144.03**	**338**	ePKP1	PKPdf	19 35 14.5	-2.6
MEZF	**Maizieres J'vi**	**144.05**	**340**	ePKP1	PKPdf	19 35 14.9	-2.2
CABF	**La Chapelle**	**145.30**	**337**	ePKP1	PKPbc	19 35 19.5	+0.2
FLN	**La Foliniere**	**145.38**	**346**	ePKP1	PKPbc	19 35 18.4	-1.1
	7.8nm,0.4s						
LOR	**Lormes**	**145.52**	**340**	ePKP1	PKPbc	19 35 19.5	-0.5
SSF	**Saint Saulge**	**145.81**	**340**	⇑iPKP1	PKPbc	19 35 20.5	-0.4
	7.2nm,0.5s						
GRR	**Gorron**	**145.81**	**346**	ePKP1	PKPbc	19 35 20.1	-0.8
LPL	**La Plagne**	**145.97**	**336**	ePKP1	PKPbc	19 35 21.5	+0.1
	6.0nm,0.6s						
LPG	**La Plagne**	**145.97**	**336**	ePKP1	PKPbc	19 35 21.6	+0.2
	8.2nm,0.6s						
SMF	**Signal de Mont**	**146.07**	**340**	ePKP1	PKPbc	19 35 21.0	-0.7
AVF	**Avril sur Loir**	**146.10**	**340**	ePKP1	PKPbc	19 35 20.8	-1.0
	7.3nm,0.7s						
SGMF	**Saint Gilles**	**146.31**	**348**	ePKP1	PKPbc	19 35 21.4	-0.9
	9.2nm,0.5s						
BGF	**Bois d'Agland**	**146.47**	**341**	ePKP1	PKPbc	19 35 22.2	-0.7
	5.1nm,0.4s						
MBDF	**Montbardon**	**146.60**	**335**	ePKP1	PKPbc	19 35 23.2	-0.1
ORIF	**Oris-en-Rattie**	**146.80**	**336**	ePKP1	PKPbc	19 35 23.5	-0.4
TCF	**Toulx Ste Croi**	**146.91**	**341**	ePKP1	PKPbc	19 35 23.4	-0.7
SBF	**Sospel**	**147.01**	**333**	ePKP1	PKPbc	19 35 23.5	-1.0
FRF	**La Foret Royal**	**147.59**	**334**	ePKP1	PKPbc	19 35 25.1	-1.0
SMRF	**Simiane la Rot**	**147.70**	**335**	ePKP1	PKPbc	19 35 26.0	-0.4
LMR	**La Mourre**	**147.84**	**333**	ePKP1	PKPbc	19 35 25.7	-1.1
	3.6nm,0.5s						
MTLF	**Montolieu**	**149.52**	**339**	ePKP1	PKPbc	19 35 30.4	-0.7
ETSF	**Etsaut**	**150.82**	**342**	ePKP1	PKPbc	19 35 34.0	-0.2
KEST	**Kesra**	**151.93**	**320**	PKPbc	PKPbc	19 35 36.3	-0.7
	2.6nm,0.8s,baz=145,slow=1.1,SNR=25						
TORD	**Torodi Ar. Bea**	**166.04**	**262**	PKP	PKPdf	19 35 46.1	-1.4
	0.5nm,0.8s,baz=121,slow=2.5,SNR=3.2						

IDC 04 19:18:00.4±2.8, 2285N×1164W, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.4/19, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=80.3km s-min=35.9km az=74.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**15.93**	**125**	Pn	Pn	19 21 47.2	+1.2
	0.2nm,0.3s,baz=312,slow=12,SNR=15						
TORD				Sn	Sn	19 24 42.9	-0.5
	0.1nm,0.3s,baz=310,slow=22,SNR=3.2						
GERES	**GERESS Array B**	**32.79**	**31**	P	P	19 24 34.2	-1.0
	0.3nm,0.5s,baz=211,slow=7.5,SNR=4.4						
FINES	**FINESS Array B**	**46.43**	**24**	P	P	19 26 29.0	+0.4
	0.6nm,0.5s,baz=226,slow=5.0,SNR=5.9						
MKAR	**Makanchi Array**	**76.28**	**45**	P	P	19 29 51.8	+0.7
	0.3nm,0.5s,baz=290,slow=5.7,SNR=8.2						
WRA	**Warramunga Arr**	**148.23**	**91**	PKPbc	PKPbc	19 37 48.8	-0.3
	0.6nm,0.7s,baz=293,slow=2.2,SNR=5.8						
ASAR	**Alice Springs**	**148.38**	**98**	PKPbc	PKPbc	19 37 48.0	-1.4
	0.5nm,0.7s,baz=282,slow=2.0,SNR=5.8						

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*ISCJB **04** 19:38:02.4±0.9, 31.18S±007×179.1W±03, h434^{km}±12^{km}, mb3.4/4, Error ellipse: s-maj=41.3km s-min=7.7km az=12.5*

*IDC **04** 19:38:04.8±1.1, 31.10S×17968W, h400^{km}±14^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.3/14, mbtmp3.3/5, Error ellipse: s-maj=41.3km s-min=16.8km az=117.0*

*NEIC **04** 19:38:05.0±0.8, 3093S×17964W, h406^{km}±15^{km}, Error ellipse: s-maj=34.1km s-min=14.3km az=100.0*

ISC 04 19:38:04.9±0.7, 3115S±007×1797W±02, h401^{km}±10^{km}, n46, σ1^{s}05/58, mb3.4/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.42**	**39**	P	**Pn**	**19 39 03.1**	**-0.7**
	84nm,0.3s,baz=253,slow=19,SNR=2.1						
RAO				S	**S**	**19 39 51.2**	**-0.1**
	181nm,0.3s,baz=90,slow=20,SNR=2.8						
MXZ	**Matakaoa Point**	**6.62**	**194**	eP	**Pn**	**19 39 45.0**	**+0.8**
MXZ	**Matakaoa Point**	**6.62**	**194**	ePN	**Pn**	**19 39 43.0**	**-1.1**
PUZ	**Puketiti**	**7.12**	**193**	eP	**Pn**	**19 39 49.5**	**-0.2**
PUZ				S	**S**	**19 41 15.1**	**-0.4**
PUZ	**Puketiti**	**7.12**	**193**	ePN	**Pn**	**19 39 49.5**	**-0.3**
PUZ				SN	**S**	**19 41 15.1**	**-0.4**
MWZ	**Matawai**	**7.53**	**197**	eP	**P**	**19 39 53.7**	**-1.2**
MWZ	**Matawai**	**7.53**	**197**	ePN	**Pn**	**19 39 53.7**	**-0.8**
MWZ				SN	**S**	**19 41 25.3**	**+1.2**
URZ	**Urewera**	**7.58**	**200**	eP	**P**	**19 39 53.3**	**-2.1**
URZ	**Urewera**	**7.58**	**200**	P	**P**	**19 39 55.3**	**-0.1**
	11nm,0.3s,baz=71,slow=17,SNR=61						
URZ				S	**S**	**19 41 25.0**	**0.0**
	5.0nm,0.3s,baz=247,slow=23,SNR=21						
URZ	**Urewera**	**7.58**	**200**	ePN	**Pn**	**19 39 53.3**	**-1.6**
URZ				SN	**S**	**19 41 22.7**	**-2.2**
KNZ	**Kokohu**	**8.15**	**195**	eP	**P**	**19 40 02.1**	**+0.3**
KNZ	**Kokohu**	**8.15**	**195**	ePN	**Pn**	**19 40 02.1**	**+0.6**
BKZ	**Black Stump Fm**	**8.60**	**200**	eP	**P**	**19 40 05.9**	**-0.8**
BKZ				S	**S**	**19 41 47.1**	**+0.7**
BKZ	**Black Stump Fm**	**8.60**	**200**	ePN	**Pn**	**19 40 05.9**	**-0.7**
BKZ				SN	**S**	**19 41 47.1**	**+0.7**
TUVZ	**Tukino**	**8.96**	**204**	ePN	**Pn**	**19 40 12.0**	**+1.2**
FWVZ	**Far West T-bar**	**8.98**	**204**	eP	**P**	**19 40 12.4**	**+1.4**
FWVZ	**Far West T-bar**	**8.98**	**204**	ePN	**Pn**	**19 40 12.4**	**+1.4**
WNVZ	**Wahianoa**	**9.03**	**204**	eP	**P**	**19 40 11.3**	**-0.3**
WNVZ	**Wahianoa**	**9.03**	**204**	ePN	**Pn**	**19 40 11.3**	**-0.3**
PKVZ	**Pokaka**	**9.09**	**205**	ePN	**Pn**	**19 40 14.0**	**+1.8**
PXZ	**Pawanui**	**9.30**	**197**	ePN	**Pn**	**19 40 14.3**	**-0.4**
TSZ	**Takapari Road**	**9.58**	**201**	ePN	**Pn**	**19 40 18.1**	**+0.2**
BFZ	**Birch Farm**	**10.07**	**198**	eP	**P**	**19 40 25.6**	**+2.5**
BFZ	**Birch Farm**	**10.07**	**198**	ePN	**Pn**	**19 40 25.6**	**+2.0**
MRZ	**Mangatainoka R**	**10.25**	**201**	eP	**P**	**19 40 23.9**	**-1.1**
MRZ				S	**S**	**19 42 18.5**	**-2.0**
MRZ	**Mangatainoka R**	**10.25**	**201**	ePN	**Pn**	**19 40 23.9**	**-1.7**
MRZ				SN	**S**	**19 42 18.5**	**-2.1**
TIWZ	**Tintock**	**10.26**	**199**	ePN	**Pn**	**19 40 27.1**	**+1.3**
KIW	**Kapiti Island**	**10.64**	**203**	ePN	**Pn**	**19 40 29.5**	**-0.7**
MTW	**Mount Morrison**	**10.72**	**200**	eP	**P**	**19 40 31.2**	**+0.9**
MTW	**Mount Morrison**	**10.72**	**200**	ePN	**Pn**	**19 40 31.2**	**+0.1**
CAW	**Cannon Point**	**10.81**	**202**	eP	**P**	**19 40 31.7**	**+0.4**
CAW	**Cannon Point**	**10.81**	**202**	ePN	**Pn**	**19 40 31.7**	**-0.5**
SNZO	**South Karori**	**11.11**	**203**	P	**P**	**19 40 35.9**	**+1.3**
SNZO				eS	**S**	**19 42 38.2**	**0.0**
TCW	**Tory Channel**	**11.17**	**204**	eP	**P**	**19 40 35.6**	**+0.4**
TCW	**Tory Channel**	**11.17**	**204**	ePN	**Pn**	**19 40 35.6**	**-0.7**
TUWZ	**Tuamarina**	**11.48**	**205**	ePN	**Pn**	**19 40 39.1**	**-0.8**
QRZ	**Quartz Range**	**11.54**	**211**	ePN	**Pn**	**19 40 40.5**	**-0.1**
THZ	**Tophouse**	**12.16**	**207**	eP	**P**	**19 40 46.9**	**+0.7**
THZ				S	**S**	**19 42 58.4**	**-1.0**
THZ	**Tophouse**	**12.16**	**207**	ePN	**Pn**	**19 40 46.9**	**-0.8**
THZ				SN	**S**	**19 42 58.4**	**-1.0**
KHZ	**Kahutara**	**12.49**	**204**	eP	**P**	**19 40 52.6**	**+2.8**
KHZ	**Kahutara**	**12.49**	**204**	ePN	**P**	**19 40 52.6**	**+2.8**
STKA	**Stephens Creek**	**32.92**	**258**	P	**P**	**19 44 05.2**	**+1.4**
	0.5nm,0.3s,mb3.3,baz=90,slow=10,SNR=2.3						
ASAR	**Alice Springs**	**41.65**	**269**	P	**P**	**19 45 15.6**	**-0.7**
	0.3nm,0.4s,mb3.0,baz=104,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	**42.71**	**274**	P	**P**	**19 45 23.8**	**-1.0**
	1.3nm,0.3s,mb3.7,baz=111,slow=8.1,SNR=80						
FITZ	**Fitzroy Crossi**	**50.94**	**271**	P	**P**	**19 46 27.5**	**0.0**
	4.2nm,1.0s,mb3.6,baz=54,slow=19						
FINES	**FINESS Array B**	**145.33**	**338**	PKPbc	PKPbc	19 56 54.8	-1.0
	0.3nm,0.3s,baz=45,slow=3.6,SNR=6.7						

IDC 04 19:42:50.0±2.8, 042S×12851E, h0^{km}, mb3.0/3, mb1 3.3/3, mb1mx3.2/16, mbtmp3.1/3, Error ellipse: s-maj=225.1km s-min=27.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.23**	**164**	P	P	19 47 26.7	-0.1
	0.3nm,0.7s,baz=344,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**23.70**	**168**	P	P	19 48 03.8	+0.1
	0.3nm,0.6s,baz=340,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**61.96**	**326**	P	P	19 53 11.8	+0.1
	0.1nm,0.3s,baz=118,slow=7.8,SNR=4.0						

IDC 04 20:01:04.8±1.8, 338S×12549E, h0^{km}, mb3.1/2, mb1 3.5/3, mb1mx3.3/16, mbtmp3.3/3, ML3.7/1, Error ellipse: s-maj=161.9km s-min=26.5km az=63.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.59**	**153**	P	Pn	20 05 24.4	+0.5
	0.2nm,0.3s,baz=331,slow=10,SNR=26						
WB2	**Warramunga Arr**	**18.60**	**153**	eP	Pn	20 05 27.0	+3.1
ASAR	**Alice Springs**	**21.75**	**159**	P	P	20 05 56.7	-1.3
	0.6nm,0.6s,baz=345,slow=16,SNR=7.8						
MKAR	**Makanchi Array**	**62.77**	**328**	P	P	20 11 32.6	+0.6
	0.2nm,0.5s,baz=122,slow=8.6,SNR=5.0						

MAN 04 20:11:21, 1228N×12646E, h36^{km}, mb4.3, ML3.1, MS2.9, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.20**	**236**	eP	Pn	20 11 41.6	+0.3
CNP	**Catarman**	**1.77**	**278**	eP	Pn	20 11 51.0	+1.9
PLP	**Palo**	**1.82**	**233**	eP	Pn	20 11 50.2	+0.3
PLP				eS	Sn	20 12 09.2	-2.5
OCLP	**Ormoc**	**2.18**	**236**	eP	Pn	20 12 01.1	+6.3
PVCP	**Virac**	**2.60**	**301**	⇓eP	Pn	20 12 04.8	+4.2
PVCP	**Virac**	**2.60**	**301**	eP	Pn	20 12 01.8	+1.2
MSLP	**Maasin**	**2.64**	**217**	eP	Pn	20 12 03.2	+2.0
SCPH	**Surigao**	**2.65**	**201**	eP	Pn	20 12 05.1	+3.8
SCPH				eS	Sn	20 12 23.1	-9.2
RCP	**Roxas**	**3.70**	**259**	⇓eP	Pn	20 12 19.0	+3.3
RCP				eS	Sn	20 13 00.3	+2.2
GUIM	**Jordan**	**4.13**	**247**	eP	Pn	20 12 23.8	+2.2
POLP	**Polilio Island**	**5.02**	**300**	eP	Pn	20 12 38.1	+4.2
CAUP	**Cauayan**	**6.45**	**317**	eP	Pn	20 12 55.3	+1.8
APYP	**Conner**	**7.50**	**318**	eP	Pn	20 13 11.1	+3.2
ABRA	**Dolores**	**7.70**	**315**	eP	Pn	20 13 13.7	+3.0

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*ISCJB **04** 20:15:21.6±0.2, 5564N±002×11022E±003, h10^{km}, mb3.8/19, Error ellipse: s-maj=3.1km s-min=2.0km az=149.4*

*MOS **04** 20:15:21.7±1.0, 5577N×110.18E, h9^{km}, mb4.6/16, Error ellipse: s-maj=8.5km s-min=5.8km az=69.2*

*IDC **04** 20:15:22.2±0.9, 5583N×11024E, h0^{km}, mb3.7/13, mb1 3.9/16, mb1mx3.8/26, mbtmp3.7/16, ML3.8/3, Error ellipse: s-maj=23.0km s-min=18.7km az=59.0*

*BYKL **04** 20:15:23.5±0.2, 5571N×11020E, h9^{km}±3^{km}, FELT I=II-III MSK at Verchnya Zaimka, Kichera, Severobaykalsk*

*NEIC **04** 20:15:23.4±0.3, 5582N×11024E, h10^{km}, mb4.1/6, Error ellipse: s-maj=6.8km s-min=6.4km az=151.0*

ISC 04 20:15:23.4±0.2, 5565N±002×11023E±003, h10^{km}, n111, σ1^{s}28/162, mb3.8/19, 14C-4D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.41**	**288**	ePG	**Pg**	**20 15 30.9**	**-0.6**
NIZ				e		20 15 36.6	
NIZ				pmax	pmax		
	comp=Z,2μm,0.4s						
NIZ				smax			
	comp=N,7μm,0.4s						
NIZ	**Nizh Angarsk**	**0.41**	**288**	⇑iPg	**Pg**	**20 15 30.9**	**-0.6**
NIZ				Pmax		20 15 31.4	
	comp=N,2μm,0.6s						
NIZ				e		20 15 34.6	
NIZ				i Sg	**Sg**	**20 15 36.9**	**0.0**
NIZ				Smax		20 15 37.1	
	comp=N,7μm,0.4s						
KMO	**Kumora**	**0.60**	**66**	⇑iPG	**Pg**	**20 15 34.0**	**-1.0**
KMO				e		20 15 41.0	
KMO				pmax	pmax		
	comp=Z,1μm,0.3s						
KMO				smax			
	comp=E,4μm,1.0s						
KMO	**Kumora**	**0.60**	**66**	⇑iPg	**Pg**	**20 15 34.0**	**-1.0**
KMO				Pmax		20 15 34.4	
	comp=E,1μm,0.3s						
KMO				i Sg	**Sg**	**20 15 41.8**	**-1.0**

KMO Smax 20 15 44.4
comp=E,4μm,1.1s
YLYR Ulyunkhan 0.94 145⇑ *i*PG Pg 20 15 41.4 -0.1
YLYR *e* 20 15 54.3
YLYR pmax pmax
comp=Z,488nm,0.1s
YLYR smax
comp=N,1μm,0.2s
YLYR Ulyunkhan 0.94 145⇑ *i*Pg Pg 20 15 41.4 -0.1
YLYR *e* 20 15 41.9
YLYR Pmax 20 15 42.3
comp=N,484nm,0.2s
YLYR *i* Sg **Sg 20 15 54.6 +0.9**
YLYR Smax 20 15 55.4
comp=N,2μm,0.4s
YLYR *e*L 20 16 04.0
YOA Uoyan 0.97 59⇓ *i*PG Pg 20 15 40.9 -1.2
YOA *i* 20 15 54.7
YOA pmax pmax
comp=Z,360nm,0.2s
YOA smax
comp=N,3μm,0.4s
YOA Uoyan 0.97 59⇓ *i*Pg Pg 20 15 40.8 -1.3
YOA Pmax 20 15 46.2
comp=N,470nm,0.2s
YOA *i* Sg **Sg 20 15 54.7 0.0**
YOA Smax 20 16 04.4
comp=N,3μm,0.4s
SVKR Severomuysk 1.93 75 *e*PN Pn 20 15 57.6 +1.3
SVKR *e* 20 15 58.5
SVKR *e*S **Sn 20 16 20.8 +0.2**
SVKR *e* 20 16 23.8
SVKR pmax pmax
comp=Z,851nm,0.3s
SVKR smax
comp=N,5μm,1.6s
SVKR Severomuysk 1.93 75 *e*Pn Pn 20 15 57.7 +1.4
SVKR *e*Pg **Pg 20 15 58.6 -1.9**
SVKR Pmax 20 15 59.4
comp=N,852nm,0.3s
SVKR *e*Sg **Sg 20 16 24.6 -0.9**
SVKR Smax 20 16 26.9
comp=N,5μm,1.1s
UKT Uakit 1.94 93⇑ *e*PN Pn 20 15 56.1 -0.2
UKT *i* 20 15 57.9
UKT *e*S **Sn 20 16 21.9 +1.2**
UKT *e* 20 16 24.2
UKT pmax pmax
comp=Z,677nm,0.5s
UKT smax
comp=N,2μm,0.2s
UKT Uakit 1.94 93⇑ *i*Pg Pg 20 15 58.1 -2.4
UKT Pmax 20 15 59.4
comp=N,1μm,1.0s
UKT *e* 20 16 02.6
UKT *e*Sg **Sg 20 16 24.4 -1.2**
UKT Smax 20 16 26.9
comp=N,2μm,0.3s
SYVR Suvo 2.00 184 *e*PN Pn 20 16 00.2 +3.0
SYVR *e* 20 16 27.9
SYVR pmax pmax
comp=Z,516nm,0.5s
SYVR smax
comp=E,2μm,0.7s
SYVR Suvo 2.00 184 *e*Pn Pn 20 15 58.4 +1.2
SYVR ⇑ *i*Pg **Pg 20 16 00.3 -1.4**
SYVR Pmax 20 16 00.8
comp=E,576nm,0.7s
SYVR *e* 20 16 02.4
SYVR *e*Sg **Sg 20 16 28.0 +0.4**
SYVR Smax 20 16 30.1
comp=E,3μm,0.8s
OGRR Ongureny 2.53 218 *e*PN Pn 20 16 06.3 +1.8
OGRR *e* 20 16 10.1
OGRR *e* 20 16 42.2
OGRR pmax pmax
comp=Z,117nm,0.3s
OGRR smax
comp=E,800nm,0.7s
OGRR Ongureny 2.53 218 *e*Pn Pn 20 16 06.3 +1.8
OGRR *e*Pg **Pg 20 16 08.9 -2.9**
OGRR *e* 20 16 13.9
OGRR max 20 16 14.3
comp=E,118nm,0.4s
OGRR *e*Sg **Sg 20 16 42.6 -1.9**
OGRR Smax 20 16 46.3
comp=E,807nm,0.6s
MXMB Maximikha 2.54 201 *e*Pn Pn 20 16 06.0 +1.3
MXMB *e*Pg **Pg 20 16 10.5 -1.6**
MXMB Pmax 20 16 13.4
comp=E,202nm,0.9s
MXMB *e*Sg **Sg 20 16 45.1 0.0**
MXMB Smax 20 16 51.2
comp=E,2μm,0.8s
BOD Bodaibo 3.01 42 *e*PN Pn 20 16 11.0 -0.1
BOD *e* 20 16 16.4
BOD *e* 20 16 54.0
BOD pmax pmax
comp=Z,35nm,0.2s
BOD smax
comp=E,579nm,0.4s
BOD Bodaibo 3.01 42 *e*Pn Pn 20 16 11.7 +0.6
BOD *e*Pg **Pg 20 16 15.1 -5.9**
BOD Pmax 20 16 20.5
comp=E,76nm,0.5s
BOD *e*Sn **Sn 20 16 47.8 +0.7**
BOD *e*Sg **Sg 20 16 55.1 -4.9**
BOD Smax 20 16 56.5
comp=E,627nm,1.0s
ZRHB Zarechye 3.59 212 *e*Pn Pn 20 16 21.1 +2.0
ZRHB *e*Pg **Pg 20 16 29.6 -2.6**
ZRHB Pmax 20 16 33.6
comp=E,105nm,0.7s
ZRHB *e*Sg **Sg 20 17 17.3 -1.4**
ZRHB Smax 20 17 33.5
comp=E,1μm,1.0s
TRG Tyrgan 3.69 220 *e*PN Pn 20 16 22.2 +1.8
TRG *e* 20 16 30.2
TRG *e*S **Sn 20 17 04.6 +0.8**
TRG *e* 20 17 17.7
TRG pmax pmax
comp=Z,57nm,0.3s
TRG smax
comp=E,406nm,0.6s
TRG Tyrgan 3.69 220 *e*Pn Pn 20 16 22.0 +1.6
TRG max 20 16 27.6
comp=E,102nm,0.5s
TRG *e*Sn **Sn 20 17 07.4 +3.6**
TRG *e*Sg **Sg 20 17 18.0 -3.7**
TRG Smax 20 17 25.8
comp=E,408nm,0.6s
TRTB Turuntaevo 3.75 205 *e*Pn Pn 20 16 22.8 +1.5
TRTB *e* 20 16 27.5
TRTB *e*Pg **Pg 20 16 30.6 -4.7**
TRTB Pmax 20 16 42.9
comp=E,60nm,0.7s
TRTB *e*Sn **Sn 20 17 06.5 +1.0**
TRTB *e*Sg **Sg 20 17 20.3 -3.6**
TRTB Smax 20 17 29.5
comp=E,364nm,1.4s
UUDB Ulan-Yde 4.08 203 *e*Sg Sg 20 17 32.4 -2.1
UUDB Smax 20 17 46.2
comp=E,308nm,1.0s
CIT Chita 4.13 150 *e*PN Pg 20 16 38.5 -4.0
CIT *e* 20 17 31.2
CIT pmax pmax
comp=Z,231nm,1.0s
CIT smax
comp=E,421nm,0.8s
CIT Chita 4.13 150 *e*Pn Pn 20 16 27.4 +0.9
CIT *e*Pg **Pg 20 16 38.3 -4.2**
CIT Pmax 20 16 39.2
comp=E,218nm,0.9s
CIT *e* 20 17 21.7
CIT *e*Sg **Sg 20 17 32.7 -3.3**
CIT Smax 20 17 38.3
comp=E,439nm,0.6s
FFNB Fofonovo 4.15 211 *e*Pn Pn 20 16 28.2 +1.4
FFNB *e* 20 16 42.3
FFNB max 20 16 44.5
FFNB *e* 20 17 21.1
FFNB *e*Sg **Sg 20 17 32.2 -4.4**
FFNB Smax 20 17 35.1
comp=E,633nm,0.6s

KAB Kabansk 4.18 212 *e*Sg Sg 20 17 34.5 -3.1
KAB Smax 20 17 58.0
comp=E,1μm,1.0s
CRS Chara 4.65 71 *e*PN Pb 20 16 47.6 +2.6
CRS *e* 20 17 45.8
CRS pmax pmax
comp=Z,239nm,1.0s
CRS smax
comp=N,411nm,1.5s
CRS Chara 4.65 71 *e*Pn Pn 20 16 34.7 +1.1
CRS *i* 20 16 48.2
CRS max 20 16 50.0
comp=N,240nm,1.0s
CRS *e*Sg **Sg 20 17 46.1 -6.6**
CRS Smax 20 17 52.9
comp=N,414nm,1.5s
IRK Irkutsk 4.90 228 *e*PN Pn 20 16 38.9 +1.8
IRK *e*S **Sn 20 17 34.1 +0.3**
IRK *e*S **Sg 20 17 55.1 -5.6**
IRK smax
comp=N,1μm,0.9s
IRK Irkutsk 4.90 228 *e*Pn Pn 20 16 38.0 +0.9
IRK *e* 20 16 41.2
IRK max 20 16 43.7
comp=N,67nm,0.4s
IRK *e*Sn **Sn 20 17 34.9 +1.1**
IRK *e*Sg **Sg 20 17 57.7 -3.0**
IRK Smax 20 18 07.9
comp=N,1μm,0.9s
LSTR Listvyanka 4.96 222 *e*Pn Pn 20 16 39.2 +1.3
LSTR *e* 20 16 42.1
LSTR max 20 16 44.4
comp=N,32nm,1.1s
LSTR *e*Sn **Sn 20 17 34.7 -0.5**
LSTR *e*Sg **Sg 20 17 56.4 -6.1**
LSTR Smax 20 18 04.9
comp=N,251nm,2.0s
KHNR Khani 5.58 73 *e*Sg Sg 20 18 14.6 -7.7
TLY Talaya 5.58 227 *e*Pn Pn 20 16 47.5 +1.1
comp=N,23nm,0.6s
TLY *e*Sn **Sn 20 17 51.3 +0.9**
TLY Talaya 5.58 227 *e*PN Pn 20 16 47.5 +1.1
TLY *e* 20 17 51.3
TLY pmax pmax
comp=Z,23nm,0.6s
TLY Talaya 5.58 227 *e*Pn Pn 20 16 46.2 -0.2
TLY *e* 20 17 09.4
TLY max 20 17 10.2
TLY *e*Sn **Sn 20 17 49.9 -0.6**
TLY *e*Sg **Sg 20 18 16.0 -6.4**
TLY Smax 20 18 21.4
comp=Z,215nm,1.1s
TUP Tupik 5.72 98 *e*PN Pn 20 16 48.6 +0.2
TUP *e* 20 17 06.0
TUP *e*S **Sn 20 17 53.8 -0.2**
TUP *e* 20 18 21.4
TUP pmax pmax
comp=Z,62nm,0.8s
TUP smax
comp=N,487nm,1.3s
TUP Tupik 5.72 98⇓ *i*Pn Pn 20 16 49.0 +0.6
TUP *e*Pg **Pg 20 17 06.9 -6.1**
TUP Pmax 20 17 16.8
comp=N,76nm,1.7s
TUP *e*Sg **Sg 20 18 22.0 -5.0**
TUP Smax 20 18 32.2
comp=N,484nm,1.4s
ARS Arshan 5.95 234 *e*PN Pn 20 16 52.4 +1.0
ARS *e*S **Sn 20 17 59.0 -0.5**
ARS *e*S **Sg 20 18 27.1 -7.0**
ARS smax
comp=E,1μm,0.7s
KPC Khapcheranga 6.10 167 *e*Pn Pn 20 16 53.8 +0.3
KPC *e*Pg **Pg 20 17 13.7 -6.4**
KPC Pmax 20 17 15.8
comp=E,30nm,0.9s
KPC *e* 20 18 06.8
KPC *e*Sg **Sg 20 18 34.2 -4.8**
KPC Smax 20 18 44.0
comp=E,372nm,1.2s
ZAK Zakamensk 6.74 221 *e*PN Pn 20 17 03.8 +1.5
ZAK *e* 20 17 26.4
ZAK *e* 20 18 54.2
ZAK pmax pmax
comp=Z,12nm,0.6s
ZAK smax
comp=E,161nm,1.2s
ZAK Zakamensk 6.74 221 *e*Pn Pn 20 17 04.3 +2.0
ZAK *e* 20 17 30.5
ZAK max 20 17 31.5
comp=E,10.0nm,0.5s
ZAK *e* 20 18 22.9
ZAK *e*Sg **Sg 20 18 54.3 -5.2**
ZAK Smax 20 19 00.1
comp=E,161nm,1.1s
MOY Mondy 6.79 238⇑ *i*PN Pn 20 17 05.3 +2.4
MOY *e* 20 17 26.7
MOY *e*S **Sn 20 18 20.5 +0.4**
MOY *e* 20 18 53.4
MOY pmax pmax
comp=E,16nm,0.4s
MOY smax
comp=E,214nm,1.2s
MOY Mondy 6.79 238⇑ *i*Pn Pn 20 17 05.2 +2.3
MOY max 20 17 12.1
comp=E,72nm,0.7s
MOY *e*Sn **Sn 20 18 19.0 -1.1**
MOY *e*Sg **Sg 20 18 52.6 -8.4**
MOY Smax 20 18 56.6
comp=E,218nm,1.1s
ORL Orlik 6.88 247 *e*PN Pn 20 17 06.2 +2.0
ORL *e*S **Sn 20 18 21.4 -1.0**
ORL *e*S **Sg 20 18 56.2 -7.7**
ORL smax
comp=N,369nm,0.7s
ORL Orlik 6.88 247⇑ *i*Pn Pn 20 17 06.1 +1.9
ORL max 20 17 09.5
comp=N,32nm,1.1s
ORL *i*Sn **Sn 20 18 21.2 -1.2**
ORL *i*Sg **Sg 20 18 55.6 -8.3**
ORL Smax 20 18 58.9
comp=N,370nm,0.7s
ULN Ulaanbaatar 8.04 195 *e*Pn Pn 20 17 23.5 +3.4
comp=N,5.2nm,0.5s
ULN *e*Sn **Sn 20 18 55.5 +4.5**
ULN Ulaanbaatar 8.04 195 *e*PN Pn 20 17 23.5 +3.4
ULN *e* 20 18 55.5
ULN pmax pmax
comp=Z,5.0nm,0.5s
ULN Ulaanbaatar 8.04 195 *e*Sg Sx 20 19 35.6
SONM Songino Array 8.18 198 PN Pn 20 17 24.0 +2.0
SONM 20 18 57.3
SONM pmax pmax
comp=Z,1.0nm,0.3s
SONM smax
comp=N,1.0nm,0.3s
SONM Songino Array 8.18 198 Pn Pn 20 17 24.0 +2.0
comp=N,0.5nm,0.3s,baz=5.0,slow=14,SNR=17
SONM Sn **Sn 20 18 57.3 +2.9**
comp=N,0.8nm,0.3s,baz=28,slow=25,SNR=3.5
SONM Lg 20 19 41.7
comp=N,5.6nm,0.3s,baz=22,slow=28,SNR=10
CLNS Chul'man 8.26 76 *e*Sg Sx 20 19 39.6
TNDR Tynda 8.27 88 *e*Sg Sx 20 19 40.3
HIA Hailar 8.63 134 Pn Pn 20 17 29.4 +1.1
HIA Hailar 8.63 134 *e*Sg Sx 20 19 52.7
TDJR Todzha 8.93 254 *e*Pn Pn 20 17 33.4 +1.1
TDJR *e*Sg Sn 20 19 58.2 +45
ARDR Aradan 10.33 260 *e*Sg Sx 20 20 43.2
YAK Yakutsk 11.90 50 Pn Pn 20 18 12.3 -0.6
YAK Yakutsk 11.90 50 *e*P Pn 20 18 14.1 +1.2
YAK pmax pmax
comp=Z,3.0nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK MLR MLR
comp=Z,67nm,6.0s
ZAA0 Zalesovo Array 14.73 274 *e*Pn Pn 20 18 52.0 +0.5
ZALV Zalesovo Beam 14.73 274 Pn Pn 20 18 51.9 +0.3
comp=Z,0.5nm,0.3s,baz=73,slow=10,SNR=9.6
ZALV Lg 20 22 59.9
comp=Z,0.1nm,0.3s,baz=77,slow=25,SNR=2.3

ZAL Zalesovo 14.74 274 P Pn 20 18 51.9 +0.2
NVS Novosibirsk 15.38 278 *e*P Pn 20 19 04.1 +3.8
NVS *e* 20 21 46.2
TIXI Tiksi 17.91 19 *e*Pn Pn 20 19 27.5 -4.7
comp=Z,3.8nm,0.6s
TIXI Tiksi 17.91 19⇑ *e*P Pn 20 19 30.9 -1.3
TIXI pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 19.47 269 *e*P Pn 20 19 50.0 -1.3
comp=Z,10nm,0.8s
KURK Kurchatov 19.47 269 *e*P Pn 20 19 50.0 -1.3
KURK pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 19.50 255 *e*P Pn 20 19 51.2 -0.4
MKAR Makanchi Array 19.50 255 P Pn 20 19 51.0 -0.7
MKAR Makanchi Array 19.50 255 *i* P Pn 20 19 51.0 -0.6
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR Makanchi Array 19.50 255 P Pn 20 19 51.0 -0.7
comp=Z,0.5nm,0.3s,baz=62,slow=9.3,SNR=45
MA2 Magadan 21.81 63⇓ *e*P P 20 20 16.7 +1.3
MA2 pmax pmax
comp=Z,4.0nm,1.3s,mb3.7
YSS Yuzh-Sakhalins 21.94 100⇑ *e*P P 20 20 15.4 -1.4
YSS pmax pmax
comp=Z,8.0nm,1.3s,mb4.0
CHKZ Chkalovo 22.79 282 P P 20 20 25.1 -0.7
BRVK Borovoye 23.20 280 *e*P P 20 20 30.1 0.0
comp=Z,3.7nm,0.6s,mb4.0
BRVK Borovoye 23.20 280 *e*P P 20 20 30.1 0.0
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.0
TKM2 Tokmak 2 25.63 255 *e*P P 20 20 52.2 -0.6
comp=Z,4.6nm,0.9s,mb4.0
TKM2 Tokmak 2 25.63 255 *e*P P 20 20 52.2 -0.6
TKM2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
AAK Ala-Archa 26.43 256 P P 20 20 58.8 -1.2
AAK Ala-Archa 26.43 256⇑ *e*P P 20 21 00.1 +0.1
MAJO Matsushiro 26.93 123 P P 20 21 05.1 +0.4
AKTK Aktyubinsk 31.19 283 P P 20 21 41.9 -0.5
AKTO Aktyubinsk 31.19 283 P P 20 21 41.9 -0.4
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb3.8
AKTO Aktyubinsk 31.19 283 P P 20 21 41.9 -0.5
comp=Z,0.7nm,0.7s,mb3.6,baz=34,slow=11,SNR=3.3
KEV Kevo 37.29 325 P P 20 22 34.9 0.0
ARCES ARCESS Array B 37.86 325 P P 20 22 38.9 -0.9
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 37.86 325 P P 20 22 38.9 -0.9
comp=Z,2.7nm,0.9s,mb4.0,baz=69,slow=8.8,SNR=9.3
FINES FINESS Array B 41.39 314 P P 20 23 08.4 -0.8
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 41.39 314 P P 20 23 08.4 -0.8
comp=Z,1.3nm,0.6s,mb3.7,baz=92,slow=8.5,SNR=8.5
KIV Kislovodsk 43.43 284 *e*P P 20 23 29.6 +3.5
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
AKASG Malin Array Be 46.20 300 P P 20 23 47.3 -0.8
comp=Z,0.2nm,0.3s,mb3.5,baz=45,slow=8.1,SNR=4.0
HFS Hagfors 47.09 317 P P 20 23 53.5 -1.3
HFS pmax pmax
comp=Z,1.0nm,0.6s
HFS Hagfors 47.09 317 P P 20 23 53.5 -1.3
comp=Z,1.3nm,0.6s,mb4.0,baz=61,slow=8.6,SNR=10.0
NB2 NORSAR Subarra 47.44 319 P P 20 23 56.7 -0.9
comp=Z,5.4nm,1.1s,mb4.4,baz=50,slow=7.9
NB2 NORSAR Subarra 47.44 319 P P 20 23 56.7 -0.9
NB2 pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
NOA NORSAR Array B 47.44 319 P P 20 23 56.9 -0.7
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 47.44 319 P P 20 23 56.9 -0.7
comp=Z,0.9nm,0.7s,mb3.8,baz=45,slow=7.0,SNR=4.4
INK Inuvik 47.81 27 P P 20 23 59.9 -0.5
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 47.81 27 P P 20 23 59.9 -0.5
comp=Z,0.6nm,0.6s,mb3.8,baz=333,slow=2.3,SNR=2.4
BRTR Keskin Array B 51.26 286 P P 20 24 29.0 +1.9
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 51.26 286 P P 20 24 29.0 +1.9
comp=Z,0.8nm,0.9s,mb3.6,baz=56,slow=6.1,SNR=3.2
PSZ Piszkesteto 52.60 302 *e*P P 20 24 36.4 -0.6
comp=Z,1.6nm,0.6s,mb4.1
PSZ Piszkesteto 52.60 302 *e*P P 20 24 36.4 -0.6
PSZ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
GERES GERESS Array B 54.84 307 P P 20 24 52.8 -0.5
comp=Z,0.3nm,0.7s,mb3.4,baz=38,slow=6.8,SNR=3.9
YKA Yellowknife Ar 57.11 23 *i* P P 20 25 08.6 -0.8
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 57.11 23 P P 20 25 08.0 -1.3
comp=Z,0.5nm,0.7s,mb3.6,baz=330,slow=7.1,SNR=7.2
WRA Warramunga Arr 78.03 157 *i* P P 20 27 24.7 +2.9
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 78.03 157 P P 20 27 22.2 +0.3
comp=Z,0.6nm,0.7s,mb3.6,baz=349,slow=6.2,SNR=5.5
ASAR Alice Springs 81.54 158 P P 20 27 43.5 +2.7
comp=Z,0.4nm,0.6s,mb3.5,baz=357,slow=5.1,SNR=6.8
TORD Torodi Ar. Bea 89.39 293 P P 20 28 19.9 -0.4
comp=Z,0.3nm,0.8s,mb3.7,baz=46,slow=2.6,SNR=2.7

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*JMA **04** 20:19:59.3±0.6, 47.10N×153.01E, h30km, M4.2*
*ISCJB **04** 20:20:01.3±1.2, 466N×02×153.1E±02, h85km±11km, mb3.7/12, Error ellipse: s-maj=29.9km s-min=9.1km az=144.8*
*IDC **04** 20:20:04.5±4.5, 47.17N×152.92E, h74km±46km, mb3.5/11, mb1 3.7/13, mb1mx3.5/25, mbtmp3.5/13, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/28, Error ellipse: s-maj=44.6km s-min=23.3km az=179.0*
*MOS **04** 20:20:05.2±1.6, 47.11N×152.71E, h95km, mb3.9/7, Error ellipse: s-maj=23.9km s-min=13.2km az=67.1*
ISC 04 20:20:03.1±1.1, 466N±01×1531E±02, h84km±10km, n35, σ1°26/40, mb3.7/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.91**	**251**	***e***PN		**Pn**	**Pn**	**20 21 02.0**	**+1.2**
KUR				*e*S		**Sn**	**Sn**	**20 21 45.0**	**-0.5**
KUR				pmax	pmax				
	comp=N,50nm,0.5s								
KUR				pmax	pmax				
	comp=E,30nm,0.5s								
KUR				pmax	pmax				
	comp=Z,90nm,0.5s								
KUR				smax					
	comp=N,530nm,0.6s								
KUR				smax					
	comp=E,420nm,0.6s								
SKR	**Severo-Kuril's**	**4.51**	**25**	***e***PN		**Pn**	**Pn**	**20 21 08.5**	**-0.4**
NEM2	**Nemuro 2**	**6.16**	**240**	P		**Pn**	**Pn**	**20 21 29.7**	**-1.7**
NEM2				*e*S		**Sn**	**Sn**	**20 22 36.6**	**-3.7**
JRA	**Rausu**	**6.24**	**247**	P		**Pn**	**Pn**	**20 21 33.9**	**+1.4**
JRA				*e*S		**Sn**	**Sn**	**20 22 44.5**	**+2.2**
JNK	**Nakash**	**6.67**	**246**	P		**Pn**	**Pn**	**20 21 38.0**	**-0.3**
JNK				*e*S		**Sn**	**Sn**	**20 22 53.7**	**+0.9**
JAK	**Akkeshi**	**7.00**	**242**	P		**Pn**	**Pn**	**20 21 40.9**	**-1.9**
JAK				*e*S		**Sn**	**Sn**	**20 22 57.6**	**-3.2**
JMP	**Maruseppu**	**7.35**	**253**	P		**Pn**	**Pn**	**20 21 49.2**	**+1.6**
JAR	**Ashorobuto**	**7.41**	**247**	P		**Pn**	**Pn**	**20 21 48.7**	**+0.2**
JAR				*e*S		Sx	Sx	20 23 11.9	
JOB	**Onbets**	**7.58**	**244**	P		**Pn**	**Pn**	**20 21 49.9**	**-0.8**
JOB				*e*S		Sx	Sx	20 23 12.8	
JKK2	**Kamakawa 2**	**7.81**	**253**	P		**Pn**	**Pn**	**20 21 55.1**	**+1.2**
ASAJ	**Asahikawa**	**7.81**	**255**	P		**Pn**	**Pn**	**20 21 55.1**	**+1.2**
	comp=E,0.6nm,0.3s,baz=100,slow=9.6,SNR=5.7								
ASAJ				LR		LR	LR	20 25 29.1	
	comp=E,56nm,18.4s,baz=5.8,slow=41								
JCH	**Churui**	**8.03**	**243**	P		**Pn**	**Pn**	**20 21 55.2**	**-1.6**
JCH				*e*S		Sx	Sx	20 23 22.2	
JNBK	**Urakawa-nobuka**	**8.59**	**243**	P		**Pn**	**Pn**	**20 22 02.3**	**-2.2**
JNBK				*e*S		Sx	Sx	20 23 34.5	
MJAR	**Matsushiro Arr**	**15.01**	**233**	P		**Pn**	**Pn**	**20 23 36.9**	**+6.4**
	comp=E,0.2nm,0.3s,baz=42,slow=8.3,SNR=6.4								
BILL	**Bilibino**	**22.50**	**13**	***e***P		**P**	**P**	**20 24 55.9**	**+0.7**
BILL				pmax	pmax				

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.0nm,1.2s,mb3.5						
MKAR	**Makanchi Array**	**46.98**	**297**	*i* P	**P**	**20 28 27.7**	**+2.4**
MKAR	**Makanchi Array**	**46.98**	**297**	P	**P**	**20 28 24.3**	**-1.0**
	comp=Z,0.2nm,0.4s,mb3.2,baz=51,slow=5.2,SNR=5.0						
MKAR				PcP	PcP	20 29 57.5	+1.2
	comp=Z,0.2nm,0.6s,baz=87,slow=2.8,SNR=3.0						
YKA	**Yellowknife Ar**	**51.02**	**37**	*i* P	**P**	**20 28 56.5**	**+0.6**
YKA	**Yellowknife Ar**	**51.02**	**37**	P	**P**	**20 28 56.5**	**+0.6**
	comp=Z,0.4nm,0.7s,mb3.6,baz=294,slow=7.1,SNR=5.8						
ARCES	**ARCESS Array B**	**57.95**	**341**	P	**P**	**20 29 44.8**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARCES	**ARCESS Array B**	**57.95**	**341**	P	**P**	**20 29 44.8**	**-1.2**
	comp=Z,6.7nm,1.1s,mb4.6,baz=22,slow=12,SNR=3.0						
FINES	**FINESS Array B**	**64.13**	**335**	P	**P**	**20 30 27.2**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**64.13**	**335**	P	**P**	**20 30 27.2**	**-0.7**
	comp=Z,0.9nm,0.6s,mb3.8,baz=46,slow=8.2,SNR=7.7						
PDAR	**Pinedale Array**	**64.82**	**54**	P	**P**	**20 30 33.6**	**+0.9**
	comp=Z,0.2nm,0.5s,mb3.2,baz=45,slow=0.8,SNR=3.8						
NB2	**NORSAR Subarra**	**68.33**	**341**	P	**P**	**20 30 54.0**	**-0.7**
	comp=Z,0.8nm,0.7s,mb3.7,baz=27,slow=6.2						
NOA	**NORSAR Array B**	**68.33**	**341**	P	**P**	**20 30 53.9**	**-0.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**68.33**	**341**	P	**P**	**20 30 53.9**	**-0.9**
	comp=Z,1.3nm,0.7s,mb3.9,baz=27,slow=6.4,SNR=5.0						
HFS	**Hagfors**	**68.55**	**340**	P	**P**	**20 30 55.1**	**-1.0**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**68.55**	**340**	P	**P**	**20 30 55.1**	**-1.0**
	comp=Z,2.1nm,0.7s,mb4.1,baz=27,slow=5.0,SNR=10						
AKASG	**Malin Array Be**	**71.63**	**326**	P	**P**	**20 31 14.3**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.63**	**326**	P	**P**	**20 31 14.2**	**-0.9**
	comp=Z,0.7nm,0.3s,mb3.9,baz=34,slow=6.3,SNR=4.6						
TXAR	**Lajitas Array**	**77.56**	**61**	P	**P**	**20 31 51.3**	**+1.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.56**	**61**	P	**P**	**20 31 51.3**	**+1.5**
	comp=Z,0.5nm,0.6s,mb3.4,baz=294,slow=5.2,SNR=7.1						
GERES	**GERESS Array B**	**78.55**	**334**	P	**P**	**20 31 54.5**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.3,baz=39,slow=8.6,SNR=4.5						
MMAI	**Mount Meron Ar**	**82.88**	**311**	P	**P**	**20 32 19.4**	**+1.1**
	comp=Z,0.8nm,0.6s,mb3.8,baz=8.5,slow=2.9,SNR=3.2						

IDC 04 20:56:45.3±8.0**,755S×12953E,h126**km±85km**,mb2.9**/1**, mb1 3.4**/5**,mb1mx3.2**/15**,mbtmp3.2**/5**,Error ellipse: s-maj=73.3km s-min=25.6km az=33.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.37**	**245**	P	Pn	20 58 18.9	+2.0
	7.1nm,0.3s,baz=122,slow=2.3,SNR=7.1						
BATI				S	Sn	20 59 27.4	-1.0
	3.5nm,0.3s,baz=307,slow=20,SNR=4.0						
FITZ	**Fitzroy Crossi**	**11.15**	**200**	P	Pn	20 59 21.1	0.0
	0.3nm,0.3s,baz=1.8,slow=19,SNR=22						
FITZ				S	Sn	21 01 17.9	-6.1
	1.2nm,0.3s,baz=64,slow=20,SNR=8.8						
WRA	**Warramunga Arr**	**13.17**	**160**	P	Pn	20 59 46.1	-1.4
	0.5nm,0.3s,baz=344,slow=13,SNR=34						
WRA				S	Sn	21 02 05.7	-7.2
	0.5nm,0.3s,baz=329,slow=23,SNR=8.5						
ASAR	**Alice Springs**	**16.56**	**166**	P	Pn	21 00 31.7	+1.5
	0.2nm,0.3s,baz=339,slow=8.9,SNR=14						
ASAR				S	S	21 03 26.7	-8.2
	0.1nm,0.3s,baz=340,slow=32,SNR=4.5						
MKAR	**Makanchi Array**	**68.43**	**327**	P	P	21 07 33.5	0.0
	0.1nm,0.4s,baz=116,slow=5.0,SNR=5.9						

PRE 04 21:18:14.3±1.2**,2191S×3368E,h5**km**,ML4.2, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.42**	**262**	*e*P	Pn	21 19 08.6	+0.3
MSNA				*e*S	Sn	21 19 49.4	+0.1
MSNA				AML	AML	21 20 07.4	
	comp=Z,201nm,0.7s						
KSR	**Koster**	**7.34**	**236**	*e*P	Pn	21 20 03.9	+1.6
KSR				*e*S	Sn	21 21 23.3	-2.7
KSR				AML	AML	21 22 06.9	
	comp=Z,25nm,0.7s						
PRYS	**Parys**	**7.62**	**228**	*e*P	Pn	21 20 07.4	+1.3
PRYS				*e*S	Sn	21 21 28.9	-3.9
PRYS				AML	AML	21 22 23.1	
	comp=Z,13nm,0.6s						
SEK	**Senekal**	**8.42**	**219**	*e*P	Pn	21 20 17.7	+0.7
SEK				*e*S	Sn	21 21 49.1	-3.3
SEK				AML	AML	21 22 31.5	
	comp=Z,11nm,0.5s						
HVD	**Hendrik Verwoe**	**11.35**	**219**	*e*P	Pn	21 20 59.4	+2.2
HVD				*e*S	Sn	21 22 58.5	-5.9
HVD				AML	AML	21 24 23.0	
	comp=Z,10nm,0.8s						
UPI	**Upington**	**12.96**	**238**	*e*P	Pn	21 21 20.7	+1.5
UPI				*e*S	Sn	21 23 37.0	-6.7
UPI				AML	AML	21 23 59.2	
	comp=Z,2.8nm,0.6s						

IDC 04 21:20:05.9±2.8**,3227S×17818W,h0**km**,mb3.9**/2**, mb1 4.1**/3**,mb1mx3.9**/12**,mbtmp3.9**/3**,ML3.6**/1**,MS3.5**/1**, Ms1 3.5**/1**,ms1mx2.8**/21**,Error ellipse: s-maj=70.3km s-min=44.1km az=128.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.02**	**4**	LR	LR	21 21 44.5	
	comp=Z,768nm,21.4s,baz=9.3,slow=33						
URZ	**Urewera**	**7.11**	**211**	Pn	Pn	21 21 50.8	-0.4
	1.1nm,0.3s,baz=63,slow=5.2,SNR=5.4						
URZ				Sn	Sn	21 23 07.4	-5.3
	1.3nm,0.3s,baz=106,slow=23,SNR=5.6						
ASAR	**Alice Springs**	**42.89**	**269**	P	P	21 28 06.5	+0.2
	1.0nm,0.7s,baz=106,slow=7.8,SNR=8.4						
WRA	**Warramunga Arr**	**44.05**	**274**	P	P	21 28 15.4	-0.3
	0.9nm,0.3s,baz=112,slow=8.1,SNR=25						
JOF	**Joensuu**	**144.09**	**337**	*e*p	PKPdf	21 39 38.4	-4.3
KAF	**Kangasniemi**	**146.25**	**339**	*e*p	PKPdf	21 39 46.3	-0.1
	1.7nm,0.6s						
FINES	**FINESS Array B**	**146.84**	**339**	PKPbc	PKPbc	21 39 48.5	-0.7
	0.7nm,0.4s,baz=43,slow=3.7,SNR=19						

FUNV 04 21:21:26.4,885N×6248W,h16km**,MW3.7,2C-1D, Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ORIV	**Oritupano**	**0.95**	**283**	*e*P	Pb	21 21 43.9	-0.6
ORIV				*e*S	Sb	21 21 57.3	+0.6
RIOV	**Rio Grande**	**1.02**	**140**	*e*P	Pb	21 21 45.5	-0.1
RIOV				*e*S	Sb	21 21 58.7	0.0
GURV	**El Guri**	**1.24**	**209**⇑	*e*P	Pn	21 21 48.7	-0.4
GURV				*e*S	Sb	21 22 05.2	-0.1
GUNV	**Guanoco**	**1.38**	**340**⇓	*e*P	Pn	21 21 50.4	-0.5
GUNV				*e*S	Sn	21 22 07.8	-1.1
GUIV	**Guiria**	**1.80**	**8**	*e*P	Pn	21 21 55.7	-1.0
GUIV				*e*S	Sn	21 22 19.1	-0.2
CRUV	**Carupano**	**1.96**	**338**	*e*P	Pn	21 21 58.3	-0.7
PRGV	**PARIAGUAN**	**2.15**	**268**	*e*P	Pn	21 22 00.4	-1.1
PRGV				*e*S	Sn	21 22 27.2	-0.6
PCRV	**Puerto La Cruz**	**2.50**	**302**	*e*P	Pn	21 22 05.2	-1.2
PCRV				*e*S	Sn	21 22 33.7	-3.0
ITEV	**Isla Los Testi**	**2.57**	**345**	*e*P	Pn	21 22 06.3	-1.0
ITEV				*e*S	Sn	21 22 36.0	-2.2
LUEV	**Luepa**	**3.16**	**161**	*e*P	Pn	21 22 15.1	-0.3
LUEV				*e*S	Sn	21 22 50.6	-2.1
CUPV	**Cœpira**	**3.48**	**290**	*e*P	Pn	21 22 18.4	-1.5
CUPV				*e*S	Sn	21 22 57.4	-3.3
MERV	**Las Mercedes**	**3.80**	**276**	*e*P	Pn	21 22 22.5	-1.7
MERV				*e*S	Sn	21 23 04.8	-3.7
BIRV	**Birongo**	**4.07**	**294**	*e*P	Pn	21 22 27.1	-0.9
CAOV	**Caicara del Or**	**4.10**	**249**	*e*P	Pn	21 22 26.7	-1.7
CAOV				*e*S	Sn	21 23 12.7	-3.3
BAUV	**El Baul**	**5.50**	**271**⇑	*e*P	Pn	21 22 45.2	-2.5
TURV	**Turiamo**	**5.52**	**287**	*e*P	Pn	21 22 46.8	-1.1
TEPV	**Terepaima**	**6.72**	**280**	*e*P	Pn	21 23 02.2	-2.2

PRE 04 21:23:29.7±1.4**,2194S×3369E,h5**km**,ML4.4, Mozambique**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.42**	**263**	*e*P	Pn	21 24 24.0	+0.3
MSNA				*e*S	Sn	21 25 04.8	+0.1
MSNA				AML	AML	21 25 22.3	
	comp=Z,483nm,0.5s						
SLR	**Silverton**	**6.22**	**232**	*e*P	Pn	21 25 03.5	+1.3
SLR				*e*S	Sn	21 26 12.4	-1.4
SLR				AML	AML	21 26 37.6	
	comp=Z,42nm,0.8s						
KSR	**Koster**	**7.33**	**237**	*e*P	Pn	21 25 19.1	+1.7
KSR				*e*S	Sn	21 26 37.8	-3.3
KSR				AML	AML	21 26 55.6	
	comp=Z,42nm,0.5s						
PRYS	**Parys**	**7.61**	**228**	*e*P	Pn	21 25 21.7	+0.5
PRYS				*e*S	Sn	21 26 45.0	-2.8
PRYS				AML	AML	21 27 39.0	
	comp=Z,25nm,0.5s						
SEK	**Senekal**	**8.40**	**220**	*e*P	Pn	21 25 34.0	+1.9
SEK				*e*S	Sn	21 27 02.9	-4.4
SEK				AML	AML	21 27 12.7	
	comp=Z,20nm,0.6s						
HVD	**Hendrik Verwoe**	**11.33**	**219**	*e*P	Pn	21 26 13.8	+1.6
HVD				*e*S	Sn	21 28 13.5	-5.8
HVD				AML	AML	21 28 54.2	
	comp=Z,6.4nm,0.7s						
UPI	**Upington**	**12.94**	**238**	*e*P	Pn	21 26 35.9	+1.6
UPI				*e*S	Sn	21 28 51.7	-7.1
UPI				AML	AML	21 29 01.0	
	comp=Z,8.2nm,0.4s						
SUR	**Sutherland**	**15.46**	**225**	*e*P	Pn	21 27 11.0	+2.6

IDC 04 21:24:22.6±1.0**,1716S×17291W,h0**km**,mb4.3**/5**, mb1 4.5**/5**,mb1mx4.1**/17**,mbtmp4.3**/5**,MS3.7**/1**,Ms1 3.7**/1**, ms1mx3.1**/27**,Error ellipse: s-maj=37.4km s-min=24.9km az=130.0,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.41**	**19**	Pn	Pn	21 25 10.2	-6.9
	8.2nm,0.3s,baz=157,slow=7.7,SNR=13						
AFI				Sn	Sn	21 25 46.7	-12
	25nm,0.3s,baz=219,slow=23,SNR=8.6						
RAR	**Rarotonga**	**13.05**	**110**	Pn	Pn	21 27 19.1	-10
	2.6nm,0.3s,baz=256,slow=16,SNR=3.7						
URZ	**Urewera**	**22.77**	**201**	P	P	21 29 27.1	+0.5
	10nm,0.6s,baz=3.2,slow=2.1,SNR=14						
HNR	**Honiara**	**27.48**	**283**	LR	LR	21 39 27.3	
	comp=Z,163nm,19.7s,baz=0.3,slow=33						
RPZ	**Rata Peaks**	**29.75**	**204**	P	P	21 30 31.5	+0.8
	7.8nm,1.0s,baz=342,slow=23,SNR=2.8						
WRA	**Warramunga Arr**	**49.92**	**258**	P	P	21 33 17.5	-1.0
	1.4nm,0.5s,baz=96,slow=7.5,SNR=52						
ASAR	**Alice Springs**	**50.03**	**253**	P	P	21 33 18.8	-0.5
	6.3nm,0.6s,baz=89,slow=8.4,SNR=72						
PDAR	**Pinedale Array**	**83.26**	**42**	P	P	21 36 50.5	-0.7
	0.4nm,0.8s,baz=243,slow=3.8,SNR=4.3						
BRTR	**Keskin Array B**	**147.80**	**320**	PKPbc	PKPbc	21 44 11.1	+1.3
	0.9nm,0.7s,baz=81,slow=3.2,SNR=5.3						
GERES	**GERESS Array B**	**147.94**	**352**	PKPbc	PKPbc	21 44 10.7	+0.8
	0.2nm,0.4s,baz=9.5,slow=3.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**173.44**	**127**	PKPab	PKPab	21 46 02.1	-1.4
	0.4nm,0.6s,baz=248,slow=6.1,SNR=5.5						

IDC 04 21:25:36.3±8.6**,847N×9352E,h0**km**,mb3.8**/4**,mb1 3.9**/4**, mb1mx3.5**/20**,mbtmp3.8**/4**,Error ellipse: s-maj=179.7km s-min=96.9km az=150.0,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**3.25**	**346**	*e*P	x	21 26 36.3	
PBA				*e*S	x	21 26 57.8	
PBA				*e*x	x	21 27 30.1	
	comp=N,143nm,0.9s						
PBA				*e*x	x	21 27 31.3	
	comp=E,111nm,0.0s						
ODAN	**Odare**	**19.19**	**343**	*e*P	Pn	21 30 08.9	+6.4
	comp=E,3.3nm,0.4s						
TAPN	**Taplejung**	**19.56**	**344**	*e*P	Pn	21 30 07.0	0.0
	comp=E,6.3nm,0.5s						
JIRN	**Jiri**	**20.30**	**341**	*e*P	P	21 30 15.6	+1.7
	comp=E,3.9nm,0.4s						
KKN	**Kakani**	**20.73**	**339**	*e*P	P	21 30 19.6	+1.1
	comp=E,5.0nm,0.6s						
GKN	**Gorkha**	**21.16**	**338**	*e*P	P	21 30 21.3	-1.9
	comp=E,23nm,0.5s						
MKAR	**Makanchi Array**	**39.37**	**348**	P	P	21 33 07.1	-0.4
	comp=E,0.6nm,0.7s,baz=170,slow=8.1,SNR=8.3						
SONM	**Songino Array**	**40.72**	**13**	P	P	21 33 18.6	-0.1
	comp=E,0.7nm,1.0s,baz=197,slow=4.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**45.89**	**353**	P	P	21 34 01.0	+0.6
	comp=E,1.1nm,0.5s,baz=178,slow=7.2,SNR=5.1						
ARCES	**ARCESS Array B**	**74.50**	**340**	P	P	21 37 16.4	+0.1
	comp=E,2.6nm,0.8s,baz=108,slow=7.8,SNR=6.7						

*IDC **04** 21:27:52.5±3.0, 2530S×17948W, h420km±35km, mb3.4/3, mb1 3.6/6, mb1mx3.4/14, mbtmp3.6/6, Error ellipse: s-maj=26.6km s-min=20.6km az=114.0*
*ISCJB **04** 21:27:54.0±2.4, 2532S±008×1794W±01, h463km±44km, mb4.2/5, Error ellipse: s-maj=20.8km s-min=9.9km az=23.6*
*NEIC **04** 21:27:54.6±1.1, 2535S×17933W, h461km±18km, mb4.4/1, Error ellipse: s-maj=18.2km s-min=13.1km az=109.0*
ISC 04 21:27:54.8±1.3**,2537S**±008×**1793W**±01**,h475**km±29km**, n12,σ0§52**/12**,mb4.2**/5**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.22**	**193**	P	**P**	**21 30 46.9**	**+0.6**
	7.6nm,0.3s,baz=333,slow=2.2,SNR=22						
URZ				S	**S**	**21 33 07.5**	**-0.4**
	0.6nm,0.3s,baz=270,slow=23,SNR=4.7						
AFI	**Afiamalu**	**13.39**	**33**	P	**P**	**21 30 48.6**	**+0.1**
	3.1nm,0.3s,baz=60,slow=17,SNR=4.7						
AFI				S	**S**	**21 33 11.7**	**-0.2**
	0.8nm,0.3s,baz=118,slow=22,SNR=2.2						
DZM	**Mont Dzumac**	**13.51**	**281**	P	**P**	**21 30 49.8**	**+0.1**
	0.4nm,0.3s,baz=121,slow=19,SNR=3.4						
RPZ	**Rata Peaks**	**19.94**	**201**	P	**P**	**21 31 53.6**	**-0.4**
	0.5nm,0.3s,baz=201,slow=23,SNR=2.4						
HNR	**Honiara**	**25.34**	**305**	*e*P	**P**	**21 32 41.8**	**-1.1**
	78nm,0.9s,mb5.1						
CTAO	**Charters Tower**	**32.19**	**272**	*e*P	**P**	**21 33 42.6**	**0.0**
	7.4nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**34.84**	**250**	P	**P**	**21 34 05.5**	**+0.5**
	1.5nm,0.8s,mb3.5,baz=109,slow=7.7,SNR=3.8						
ASAR	**Alice Springs**	**42.49**	**262**	P	**P**	**21 35 07.5**	**+0.1**
	1.7nm,0.4s,mb3.9,baz=93,slow=7.5,SNR=10						
WRA	**Warramunga Arr**	**43.01**	**267**	P	**P**	**21 35 11.2**	**-0.3**
	1.9nm,0.3s,mb4.0,baz=98,slow=6.8,SNR=49						
GUMO	**Guam**	**52.17**	**314**	P	**P**	**21 36 21.5**	**+0.9**
BRTR	**Keskin Array B**	**149.00**	**306**	PKPbc	PKPbc	21 46 51.0	+2.4
	0.4nm,0.5s,baz=95,slow=3.5,SNR=4.2						
BRTR				PKPab	PKPab	21 46 56.8	+2.1
	1.1nm,0.7s,baz=90,slow=5.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**167.81**	**184**	PKPab	PKPab	21 48 19.9	+3.5
	0.3nm,0.9s,baz=164,slow=3.3,SNR=5.8						

*ISCJB **04** 21:34:37.8±0.4, 3837N±003×3925E±003, h5km, Error ellipse: s-maj=3.9km s-min=3.4km az=1.1*
*CSEM **04** 21:34:37.1±0.1, 3839N×3923E, h5km, MD2.8, Error ellipse: s-maj=1.8km s-min=1.6km az=7.0*
*DDA **04** 21:34:37.0, 3834N×3925E, h7km±7km, Md2.8*
*ISK **04** 21:34:37.2, 3839N×3922E, h5km, MD3.4*
ISC 04 21:34:38.2±0.6**,3837N**±003×**3924E**±003**,h3**km±5km**,n19, σ0§99**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**302**	*i* P	**Pg**	**21 34 42.9**	**+0.1**
ELZG				*i* S	**Sg**	**21 34 46.8**	**+0.9**
PTK	**Pertek**	**0.53**	**13**	PG	**Pg**	**21 34 47.6**	**-0.8**
PTK				SG	**Sg**	**21 34 55.6**	**+0.2**
MALT	**Malatya**	**0.65**	**265**	PG	**Pg**	**21 34 49.3**	**-1.2**
MALT				SG	**Sg**	**21 34 58.4**	**-0.5**
MYA	**Malataya**	**0.65**	**266**	PG	**Pg**	**21 34 50.1**	**-0.5**
DIY	**Diyarbakir**	**0.91**	**121**	PG	**Pg**	**21 34 55.3**	**-0.3**
DIY				SG	**Sg**	**21 35 09.0**	**+1.6**
URFA	**Urfa**	**0.99**	**200**	PG	**Pg**	**21 34 57.0**	**-0.1**
BINT	**Bingol**	**1.10**	**62**	PN	**Pn**	**21 34 58.8**	**-1.6**
ATAB	**Bozova**	**1.17**	**220**	*i* P	**Pg**	**21 35 01.6**	**+1.0**
ATAB				*i* S	**Sg**	**21 35 16.7**	**+0.9**
EZC	**Erzincan**	**1.45**	**18**	*e*PN	**Pn**	**21 35 03.4**	**-1.8**
BNGL	**BINGOL**	**1.60**	**68**	*i* P	**Pn**	**21 35 08.1**	**+0.8**
BNGL				*i* S	**Sn**	**21 35 31.7**	**+3.2**
MARD	**Mardin**	**1.61**	**130**	*i* P	**Pn**	**21 35 06.4**	**-1.0**
MARD				*i* S	**Sn**	**21 35 28.1**	**-0.6**
GZT	**Gaziantep**	**1.67**	**233**	*i* P	**Pn**	**21 35 07.7**	**-0.6**
GZT				*i* S	**Sn**	**21 35 30.8**	**+0.7**
KELT	**Kelkit**	**1.77**	**0**	*i* P	**Pn**	**21 35 10.3**	**+0.6**
KELT				*i* S	**Sn**	**21 35 34.7**	**+2.0**
BTMT	**Batman**	**1.78**	**95**	*e*PN	**Pn**	**21 35 07.9**	**-1.8**
GAZ	**Gaziantep**	**2.01**	**234**	*e*PN	**Pn**	**21 35 12.9**	**0.0**
EZM	**Erzurum**	**2.25**	**46**	*e*PN	**Pn**	**21 35 16.6**	**+0.4**
SVSK	**Karacayir**	**2.33**	**312**	*e*PN	**Pn**	**21 35 17.0**	**-0.3**
BNN	**Bunyan**	**2.71**	**281**	*e*PN	**Pn**	**21 35 22.6**	**+0.1**
CUKT	**Cukurca**	**3.63**	**107**	*e*PN	**Pn**	**21 35 36.0**	**+0.8**

*IDC **04** 21:36:58.7±1.1, 1537N×12022E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.6/20, mbtmp3.6/7, MS3.1/1, Ms1 3.1/1, ms1mx2.8/26, Error ellipse: s-maj=161.7km s-min=18.1km az=66.0*
*ISCJB **04** 21:37:04.8±0.8, 1532N±005×11963E±009, h45km±9km, mb3.6/7, Error ellipse: s-maj=14.1km s-min=7.6km az=176.1*
*MAN **04** 21:37:04, 1531N×11974E, h23km, mb4.4, ML3.3, MS3.1*
ISC 04 21:37:05.9±0.9**,1534N**±005×**11966E**±009**,h41**km±11km**, n22,σ1§34**/25**,mb3.6**/7**,2D,Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.50**	**29**	*e*P	**Pn**	**21 37 15.2**	**-1.6**
SCZP				*e*S	**Sn**	**21 37 23.0**	**-1.4**
BOLP	**Bolinao**	**1.07**	**13**	*e*P	**Pn**	**21 37 23.2**	**-1.2**
BOLP				*e*S	**Sn**	**21 37 29.9**	**-8.1**
BCPH	**Baguio City Da**	**1.36**	**40**⇓	*e*P	**Pn**	**21 37 27.8**	**-0.7**
BCPH				*e*S	**Sn**	**21 37 46.9**	**+1.6**
PCPH	**Palayan**	**1.40**	**81**⇓	*e*P	**Pn**	**21 37 27.9**	**-1.1**
PCPH				*e*S	**Sn**	**21 37 44.8**	**-1.5**
LUBP	**Lubang**	**1.69**	**160**	*e*P	**Pn**	**21 37 32.5**	**-0.4**
BALP	**Baler**	**1.89**	**77**	*e*P	**Pn**	**21 37 35.5**	**-0.2**
POLP	**Polilio Island**	**2.28**	**105**	*e*P	**Pn**	**21 37 42.7**	**+1.6**
ABRA	**Dolores**	**2.51**	**23**	*e*P	**Pn**	**21 37 45.1**	**+0.9**
CAUP	**Cauayan**	**2.62**	**52**	*e*P	**Pn**	**21 37 48.7**	**+2.9**
APYP	**Conner**	**2.93**	**31**	*e*P	**Pn**	**21 37 52.1**	**+2.0**
BUSP	**Coron**	**3.35**	**171**	*e*P	**Pn**	**21 37 56.5**	**+0.6**
OTRP	**Odiongan**	**3.74**	**142**	*e*P	**Pn**	**21 38 05.5**	**+4.3**
CUYO	**Cuyo Island**	**4.65**	**163**	*e*P	**Pn**	**21 38 13.8**	**+0.1**
PVCP	**Virac**	**4.68**	**111**	*e*P	**Pn**	**21 38 16.6**	**+2.5**
KSRS	**Korea Array**	**23.22**	**17**	LR	LR	21 51 36.2	
	comp=Z,52nm,20.3s,baz=151,slow=38						
SONM	**Songino Array**	**34.22**	**344**	P	**P**	**21 43 48.0**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=164,slow=10,SNR=6.4						
WRA	**Warramunga Arr**	**37.91**	**157**	P	**P**	**21 44 16.1**	**-3.3**
	0.5nm,0.5s,mb3.5,baz=329,slow=10,SNR=11						
ASAR	**Alice Springs**	**41.19**	**160**	P	**P**	**21 44 44.5**	**-2.2**
	0.3nm,0.5s,mb3.2,baz=330,slow=7.2,SNR=5.3						
MKAR	**Makanchi Array**	**44.13**	**323**	P	**P**	**21 45 11.7**	**+1.4**
	0.6nm,0.5s,mb3.6,baz=113,slow=9.3,SNR=12						
MKAR				PcP	PcP	21 46 55.9	+1.1
	0.5nm,0.8s,baz=104,slow=4.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**47.15**	**333**	P	**P**	**21 45 34.2**	**+0.1**
	0.6nm,0.5s,mb3.8,baz=120,slow=8.8,SNR=3.7						
FINES	**FINESS Array B**	**78.38**	**331**	P	**P**	**21 49 01.2**	**-0.7**
	0.4nm,0.6s,mb3.5,baz=63,slow=6.8,SNR=4.5						
NOA	**NORSAR Array B**	**85.36**	**332**	P	**P**	**21 49 38.0**	**-0.6**
	0.3nm,0.6s,mb3.6,baz=69,slow=5.2,SNR=3.0						

KRSC 04 21:56:47.0±0.3**,5374N×16149E,h10**km±10km**,ML3.6,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.09**	**234**	*e*P	Pb	21 57 07.4	-0.5
SPN				*i* S	Sg	21 57 22.6	+0.6
KII	**Karymskiy**	**1.24**	**285**	*e*P	Pn	21 57 10.4	0.0
KII				*i* S	Sb	21 57 27.2	+0.6
NLC	**Nalytchevo**	**1.40**	**247**	*e*P	Pn	21 57 13.5	+0.9
NLC				*i* S	Sn	21 57 32.2	+1.1
AVH	**Avacha**	**1.71**	**255**	*e*P	Pn	21 57 17.7	+0.9
AVH				*i* S	Sn	21 57 40.5	+1.8
TUMR	**Tumrok**	**1.73**	**334**	P	Pn	21 57 17.4	+0.3
TUMR				*i* S	Sn	21 57 39.9	+0.6
PET	**Petropavlovsk**	**1.84**	**248**	P	Pn	21 57 19.4	+0.8
PET				*i* S	Sn	21 57 42.4	+0.4
GNL	**Ganaly**	**2.11**	**270**	*e*P	Pn	21 57 24.0	+1.7
GNL				*i* S	Sn	21 57 50.7	+2.2
KMNR	**Kamenistaya**	**2.15**	**341**	*e*P	Pn	21 57 24.0	+1.2
KMNR				*i* S	Sn	21 57 50.4	+0.9
RUS	**Russkaya**	**2.22**	**235**	P	Pn	21 57 24.9	+1.1
RUS				*i* S	Sn	21 57 53.5	+2.2
ZLN	**Zelenaya**	**2.32**	**350**	P	Pn	21 57 26.7	+1.6
ZLN				*i* S	Sn	21 57 54.8	+1.2
KPT	**Kopyto**	**2.35**	**342**	P	Pn	21 57 26.7	+1.1
GRL	**Gorelyy**	**2.38**	**241**	P	Pn	21 57 26.7	+0.7
KRSR	**Krestovskiy**	**2.54**	**348**	P	Pn	21 57 29.9	+1.7
KBTR	**Krutoberegovo**	**2.59**	**17**	*e*P	Pn	21 57 28.1	-0.8
KBTR				*i* S	Sn	21 57 58.2	-2.2
SRDR	**Sredinnyy**	**2.78**	**339**	P	Pn	21 57 32.4	+0.9
SRDR				*i* S	Sn	21 58 05.5	+0.5
SRKR	**Sorokina**	**2.93**	**357**	P	Pn	21 57 36.0	+2.5

*ISCJB **04** 21:58:28.6±0.5, 345N±01×3694W±009, h10km, mb4.0/17, MS3.7/8, Error ellipse: s-maj=17.3km s-min=9.6km az=159.3*
*IDC **04** 21:58:29.1±0.8, 3460N×3695W, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.9/21, mbtmp3.9/14, MS3.7/8, Ms1 3.7/8, ms1mx3.4/29, Error ellipse: s-maj=25.8km s-min=15.4km az=155.0*
*CSEM **04** 21:58:30.0, 3444N×3693W, h10km, mb4.4/5, After NEIC*
*NEIC **04** 21:58:30.0±0.3, 3444N×3693W, h10km, mb4.4/5, Error ellipse: s-maj=11.9km s-min=6.4km az=159.0*
*SZGRF **04** 21:59:09.8, 3655N×3252W, h33km, mb4.6, Azores Islands region*
ISC 04 21:58:30.3±0.5**,345N**±01×**3693W**±009**,h10**km**,n39, σ0§62**/36**,mb4.0**/17**,MS3.7**/8**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBSR	**BB Station**	**23.24**	**273**	P	**P**	**22 03 37.9**	**+0.1**
ESDC	**Sonseca Array**	**26.71**	**69**	P	**P**	**22 04 09.7**	**0.0**
	1.7nm,0.9s,mb3.6,baz=304,slow=26,SNR=4.5						
ESLA	**Sonseca Array**	**26.71**	**69**	*e*P	**P**	**22 04 09.8**	**+0.1**
ESLA	**Sonseca Array**	**26.71**	**69**	*e*P	**P**	**22 04 09.8**	**+0.1**
MDT	**Midelt**	**26.89**	**84**	LR	LR	22 12 21.6	
	comp=Z,85nm,18.7s,MS3.3,baz=206,slow=31						
SCHQ	**Schefferville**	**29.07**	**324**	LR	LR	22 15 25.6	
	comp=Z,149nm,18.0s,MS3.6,baz=28,slow=35						
MTP	**Monte Pirata**	**30.27**	**245**	P	**P**	**22 04 41.5**	**0.0**
MTP	**Monte Pirata**	**30.27**	**245**	P	**P**	**22 04 41.5**	**-0.1**
SFJD	**Kangerlussuaq**	**33.52**	**350**	LR	LR	22 15 56.1	
	comp=Z,179nm,18.5s,MS3.8,baz=93,slow=31						
GRA1	**Grafenberg Arr**	**38.14**	**52**	*e*P	**P**	**22 05 50.3**	**+0.8**
	8.0nm,1.1s,mb4.4						
GRF	**Grafenberg Arr**	**38.14**	**52**	*e*P	**P**	**22 05 50.3**	**+0.8**
	comp=Z,8.0nm,1.1s,mb4.4						
GERES	**GERESS Array B**	**39.71**	**53**	P	**P**	**22 06 03.2**	**+0.6**
	comp=Z,1.7nm,0.9s,mb3.8,baz=263,slow=6.6,SNR=11						
SDV	**Santo Domingo**	**40.04**	**238**	P	**P**	**22 06 06.6**	**+0.9**
SDV	**Santo Domingo**	**40.04**	**238**	P	**P**	**22 06 07.3**	**+1.5**
	comp=Z,3.6nm,0.8s,mb4.2,baz=4.5,slow=11,SNR=2.9						
SDV	**Santo Domingo**	**40.04**	**238**	P	**P**	**22 06 06.6**	**+0.8**
NOA	**NORSAR Array B**	**40.48**	**34**	P	**P**	**22 06 09.7**	**+0.8**
	comp=Z,1.0nm,0.9s,mb3.5,baz=252,slow=8.5,SNR=2.6						
TOA0	**Torodi Ar. Sit**	**40.89**	**112**	*e*P	**P**	**22 06 12.2**	**-0.6**
TOA0	**Torodi Ar. Sit**	**40.89**	**112**	*e*P	**P**	**22 06 12.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**40.89**	**112**	P	**P**	**22 06 12.3**	**-0.4**
TORD				LR	LR	22 20 56.9	
TORD	**Torodi Ar. Bea**	**40.89**	**112**	P	**P**	**22 06 12.3**	**-0.4**
	comp=Z,1.5nm,1.0s,mb3.6,baz=263,slow=3.3,SNR=6.0						
TORD				LR	LR	22 20 56.9	
	comp=Z,151nm,21.7s,MS3.8,baz=290,slow=33						
FINES	**FINESS Array B**	**47.59**	**35**	P	**P**	**22 07 05.7**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.8nm,0.8s,mb3.8,baz=263,slow=11,SNR=2.8						
ARCES	ARCESS Array B	48.54	25	P	P	22 07 13.0	-0.1
	comp=Z,1.6nm,0.9s,mb4.1,baz=244,slow=9.8,SNR=3.6						
ARCES				LR	LR	22 22 28.7	
	comp=Z,76nm,20.3s,MS3.7,baz=41,slow=30						
AKASG	Malin Array Be	49.66	50	P	P	22 07 21.6	-0.4
	comp=Z,1.8nm,0.7s,mb4.2,baz=275,slow=7.4,SNR=9.0						
YKA	Yellowknife Ar	54.47	326	P	P	22 07 58.0	+0.4
YKA				LR	LR	22 30 21.7	
YKA	Yellowknife Ar	54.47	326	P	P	22 07 58.0	+0.4
	comp=Z,1.3nm,1.0s,mb3.8,baz=82,slow=7.3,SNR=6.0						
YKA				LR	LR	22 30 21.7	
	comp=Z,52nm,18.6s,MS3.6,baz=65,slow=35						
PDAR	Pinedale Array	55.74	302	P	P	22 08 05.5	-1.6
	comp=Z,0.6nm,1.0s,mb3.6,baz=99,slow=5.8,SNR=3.2						
PDAR				LR	LR	22 28 59.6	
	comp=Z,100nm,21.2s,MS3.9,baz=104,slow=33						
TXAR	Lajitas Array	55.97	285	P	P	22 08 09.0	0.0
	comp=Z,1.0nm,1.0s,mb3.8,baz=92,slow=5.8,SNR=2.9						
TXAR				LR	LR	22 29 36.7	
	comp=Z,97nm,18.1s,MS3.9,baz=350,slow=33						
TXAR	Lajitas Array	55.97	285	P	P	22 08 08.9	-0.1
TXAR				LR	LR	22 29 36.7	
LPAZ	La Paz	58.57	216	eP	P	22 08 26.8	-0.5
	comp=Z,1.9nm,0.8s,mb4.2						
LPAZ	La Paz	58.57	216	P	P	22 08 30.0	+2.7
	comp=Z,0.7nm,0.6s,mb3.9,baz=31,slow=8.5,SNR=4.3						
LPAZ	La Paz	58.57	216	eP	P	22 08 26.8	-0.5
	comp=Z,1.9nm,0.8s,mb4.2						
BRVK	Borovoye	72.43	37	eP	P	22 09 56.0	-0.6
	comp=Z,4.8nm,1.0s,mb4.4						
BRVK	Borovoye	72.43	37	eP	P	22 09 56.0	-0.6
	comp=Z,4.8nm,1.0s,mb4.4						
KURK	Kurchatov	77.96	36	eP	P	22 10 28.5	0.0
	comp=Z,7.7nm,1.1s,mb4.5						
KURK	Kurchatov	77.96	36	eP	P	22 10 28.5	0.0
	comp=Z,7.7nm,1.1s,mb4.5						
ZALV	Zalesovo Beam	78.60	31	P	P	22 10 31.5	-0.5
	comp=Z,0.8nm,0.6s,mb3.8,baz=291,slow=6.2,SNR=7.3						
MK31	Makanchi Array	82.39	37	eP	P	22 10 52.5	+0.1
MK31	Makanchi Array	82.39	37	eP	P	22 10 52.5	+0.1
MKAR	Makanchi Array	82.39	37	P	P	22 10 52.7	+0.3
	comp=Z,2.2nm,1.0s,mb4.0,baz=305,slow=5.3,SNR=14						

*ISCJB **04** 21:59:35.0±3.5, 25N±0.1×122.9E±0.3, h509km±55km, mb3.5/8, Error ellipse: s-maj=48.1km s-min=17.7km az=168.6*

*IDC **04** 21:59:35.1±1.9, 2.55N×122.95E, h488km±25km, mb2.9/9, mb1 3.0/9, mb1mx2.9/18, mbtmp2.9/9, Error ellipse: s-maj=37.1km s-min=10.7km az=75.0*

ISC 04 21:59:35.4±2.8**, 2.6N**±0.1×**123.0E**±0.3**, h493**km±44km**, n11, σ0.62**/10**, mb3.4**/8**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	12.69	177	P	P	22 02 21.2	-0.2
	4.6nm,0.3s,baz=338,slow=11,SNR=3.6						
FITZ	Fitzroy Crossi	20.69	173	P	P	22 03 40.8	0.0
	2.7nm,0.8s,baz=254,slow=23,SNR=2.4						
WRA	Warramunga Arr	24.98	154	P	P	22 04 19.3	+0.1
	0.4nm,0.4s,mb3.2,baz=337,slow=9.5,SNR=13						
ASAR	Alice Springs	28.14	158	P	P	22 04 47.5	+0.4
	0.2nm,0.3s,mb3.0,baz=334,slow=8.3,SNR=3.2						
ASAR				ScP	ScP	22 10 41.3	+1.4
	0.8nm,0.5s,baz=339,slow=2.7,SNR=9.7						
KSRS	Korea Array	35.02	7	P	P	22 05 46.9	+1.0
	1.6nm,0.7s,mb3.5,baz=190,slow=9.6,SNR=4.6						
MJAR	Matsushiro Arr	36.62	21	P	P	22 05 58.2	-1.0
	1.4nm,0.5s,mb3.7,baz=186,slow=8.4,SNR=4.5						
STKA	Stephens Creek	38.53	154	P	P	22 06 14.8	-0.2
	0.8nm,0.4s,mb3.5,baz=322,slow=12,SNR=2.9						
SONM	Songino Array	47.33	345	P	P	22 07 24.4	+0.7
	1.7nm,0.7s,mb3.6,baz=162,slow=8.8,SNR=16						
MKAR	Makanchi Array	56.46	327	P	P	22 08 29.9	+0.2
	0.6nm,0.4s,mb3.3,baz=125,slow=8.2,SNR=18						
ZALV	Zalesovo Beam	60.00	335	P	P	22 08 52.5	-1.1
	0.4nm,0.3s,mb3.3,baz=134,slow=5.6,SNR=3.7						
TORD	Torodi Ar. Bea	119.71	287	PKP	PKPdf	22 17 29.1	-1.0
	0.2nm,0.5s,baz=93,slow=1.4,SNR=3.5						

KRSC 04 22:14:04.5±0.5**, 55.88N**×**163.06E, h18**km±17km**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.36	338	i P	Pg	22 14 13.0	+1.0
KBTR				i S	Sg	22 14 19.7	+2.7
ZLN	Zelenaya	1.28	277	eP	Pn	22 14 28.8	+1.4
ZLN				eS	Sb	22 14 46.2	+2.2
SRKR	Sorokina	1.31	307	eP	Pn	22 14 29.1	+1.3
SRKR				eS	Sn	22 14 46.5	+1.7
KLY	Klyuchi	1.42	289	eP	Pn	22 14 28.8	-0.5
KLY				eS	Sn	22 14 46.9	-0.6
KRSR	Krestovskiy	1.44	285	i P	Pn	22 14 30.4	+0.8
KRSR				eS	Sn	22 14 48.8	+0.8
KMNR	Kamenistaya	1.60	267	eP	Pn	22 14 33.5	+1.7
KMNR				eS	Sn	22 14 54.4	+2.5
KPT	Kopyto	1.60	274	i P	Pn	22 14 33.3	+1.5
KPT				eS	Sn	22 14 53.8	+1.8
TUMR	Tumrok	1.76	251	eP	Pn	22 14 35.7	+1.7
TUMR				eS	Sn	22 14 59.0	+3.1
KOZ	Kozyrevsk	1.80	277	eP	Pn	22 14 36.7	+2.1
KOZ				eS	Sn	22 15 00.2	+3.3
SRDR	Sredinnyy	1.92	285	eP	Pn	22 14 38.1	+1.8
SRDR				eS	Sn	22 15 03.1	+3.1
SPN	Mys Shipunski	3.30	214	S	Sn	22 15 32.0	-2.0
NLC	Nalytchevo	3.47	220	S	Sn	22 15 38.8	+0.7
AVH	Avacha	3.63	226	P	Pn	22 15 02.6	+2.9
GNL	Ganaly	3.68	236	P	Pn	22 15 02.9	+2.4

*DDA **04** 22:18:03.1, 38.34N×39.35E, h7km±2km, Md3.0*

*ISCJB **04** 22:18:04.5±0.5, 38.37N±0.04×39.25E±0.04, h14km±6km, Error ellipse: s-maj=6.8km s-min=5.8km az=8.6*

*CSEM **04** 22:18:04.1±0.1, 38.40N×39.24E, h10km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.7km az=165.0*

*ISK **04** 22:18:04.4, 38.38N×39.24E, h11km, MD2.9*

ISC 04 22:18:05.0±0.5**, 38.38N**±0.04×**39.25E**±0.04**, h17**km±6km**, n11, σ0.61**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.23	299	i P	Pg	22 18 10.0	-0.4
ELZG				i S	Sg	22 18 14.7	+0.6
PTK	Pertek	0.52	13	PG	Pg	22 18 14.9	-0.5
PTK				SG	Sg	22 18 23.1	+0.6
MALT	Malatya	0.65	264	PG	Pg	22 18 17.1	-0.7
MALT				SG	Sg	22 18 26.7	+0.3
MYA	Malataya	0.65	265	PG	Pg	22 18 17.0	-0.8
DIY	Diyarbakir	0.91	122	PG	Pg	22 18 22.4	-0.4
DIY				SG	Sg	22 18 35.4	+0.6
URFA	Urfa	1.00	200	PG	Pg	22 18 24.5	+0.1
BINT	Bingol	1.09	63	ePN	Pn	22 18 26.2	+0.7
EZC	Erzincan	1.43	18	ePN	Pn	22 18 30.0	-0.2
MARD	Mardin	1.62	131	i P	Pn	22 18 32.3	-0.4
MARD				i S	Sn	22 18 53.4	+0.3
GZT	Gaziantep	1.68	233	i P	Pn	22 18 34.8	+1.2
GZT				i S	Sn	22 18 60.0	+5.2
BTMT	Batman	1.78	95	ePN	Pn	22 18 33.9	-1.0

*IDC **04** 22:26:44.8±1.1, 0.74N×125.92E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.9/16, mbtmp3.9/6, Error ellipse: s-maj=199.5km s-min=17.0km az=67.0*

*NEIC **04** 22:26:45.3±0.6, 1.27N×127.15E, h10km, mb4.4/2, Error ellipse: s-maj=78.3km s-min=9.2km az=67.0*

*ISCJB **04** 22:26:47.1±0.7, 1.1N±0.3×126.8E±0.6, h33km, mb4.0/8, Error ellipse: s-maj=98.9km s-min=11.5km az=157.2*

ISC 04 22:26:49.4±0.7**, 1.1N**±0.3×**126.9E**±0.6**, h35**km**, n10, σ0.80**/10**, mb4.0**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.15	161	P	P	22 31 42.6	+0.3
	3.5nm,0.6s,mb4.0,baz=339,slow=11,SNR=18						
WB2	Warramunga Arr	22.16	161	eP	P	22 31 43.1	+0.7
ASAR	Alice Springs	25.55	165	P	P	22 32 15.2	+0.2
	3.6nm,0.8s,mb3.9,baz=347,slow=13,SNR=22						
ASAR				PcP	PcP	22 35 47.0	+1.0
	0.5nm,0.6s,baz=342,slow=2.0,SNR=4.2						
STKA	Stephens Creek	35.64	158	P	P	22 33 43.8	-0.3
	1.8nm,0.6s,mb4.2,baz=320,slow=13,SNR=2.8						
ARMA	Armidale	39.22	145	P	P	22 34 13.5	-1.0
ULN	Ulaanbaatar	49.65	343	P	P	22 35 37.8	+0.2
	0.7nm,0.3s,mb4.2						
SONM	Songino Array	49.83	342	P	P	22 35 40.8	+1.9
	0.2nm,0.4s,mb3.5,baz=35,slow=46,SNR=3.8						
MKAR	Makanchi Array	59.80	326	P	P	22 36 50.6	-0.5
	0.7nm,0.5s,mb4.0,baz=119,slow=8.1,SNR=18						
ZALV	Zalesovo Beam	62.99	334	P	P	22 37 11.5	-1.0
	0.3nm,0.4s,mb3.8,baz=118,slow=8.8,SNR=3.4						
KURK	Kurchatov	64.03	328	eP	P	22 37 19.2	-0.3
	3.7nm,0.8s,mb4.5						

*ISCJB **04** 22:31:41.0±0.2, 5.37S±0.04×151.21E±0.04, h33km, mb4.8/43, MS4.0/12, Error ellipse: s-maj=6.5km s-min=4.1km az=139.8*

*BJI **04** 22:31:42.0, 5.24S×151.74E, h62km, mB5.5, mb4.8, Msz4.1*

*GCMT **04** 22:31:44.1±0.4, 5.72S×151.51E, h50km±1km, MW5.0/41, Moment Tensor Solution. s39,c53; s41,c52; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.58±.20; $M_{\theta\theta}$-3.24±.14; $M_{\phi\phi}$0.65±.16; $M_{r\theta}$0.61±.14; $M_{\theta\phi}$-1.40±.14; $M_{\phi r}$-0.82±.15; Best double couple: $M_0$3.39000×10^{16} NP1:ϕ_s228.00000°, δ48.00000°, λ54.00000°. NP2: ϕ_s96.00000°, δ53.00000°, λ123.00000°. Principal axes: T 3.0700, Plg64.0000°, Azm66.0000°; N 0.6360, Plg26.0000°, Azm254.0000°; P -3.7090, Plg3.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 22:31:44.1±0.6, 5.40S×151.30E, h53km±5km, mb4.9/29, MS4.2/1 Error ellipse: s-maj=6.4km s-min=5.3km az=123.0*

*IDC **04** 22:31:46.6±2.0, 5.47S×151.21E, h75km±17km, mb4.4/16, mb1 4.5/18, mb1mx4.5/20, mbtmp4.4/18, MS4.1/12, Ms1 4.1/12, ms1mx3.9/20, Error ellipse: s-maj=17.9km s-min=9.4km az=121.0*

ISC 04 22:31:45.6±1.1**, 5.47S**±0.05×**151.23E**±0.04**, h62**km±10km**, h48**km±1.7km**:pP-P, n218, σ0.80**/203**, mb4.8**/43**, 57C-48D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.62	226	ePn	Pn	22 33 08.2	+1.6
PMG				eSn	Sn	22 34 13.8	+4.0
PMG	Port Moresby	5.62	226	P	Pn	22 33 08.4	+1.8
	20nm,0.3s,baz=60,slow=5.7,SNR=30						
PMG				S	Sn	22 34 10.1	+0.2
	32nm,0.3s,baz=85,slow=11,SNR=4.6						
HNR	Honiara	9.50	115	Pn	Pn	22 33 57.7	-1.9
COEN	Coen	11.58	223	ePn	Pn	22 34 28.8	+0.7
	6.0nm,0.8s						
CTA	Charters Tower	15.31	198	eP	Pn	22 35 22.7	+4.6
	6.9nm,0.6s						
CTA	Charters Tower	15.31	198	P	Pn	22 35 19.0	+0.9
CTA				LR	LR	22 40 46.6	
CTA	Charters Tower	15.31	198	P	Pn	22 35 19.0	+0.9
	0.7nm,0.3s,baz=19,slow=15,SNR=4.1						
CTA				LR	LR	22 40 46.6	
	comp=Z,691nm,20.0s,baz=22,slow=35						
EIDS	Eidsvold	19.79	180	eP	Pn	22 36 10.7	-2.2
	14nm,1.0s						
WB2	Warramunga Arr	21.83	227	⇑iP	P	22 36 32.6	-0.3
WB2				eS	S	22 40 30.4	-0.5
WRA	Warramunga Arr	21.84	227	P	P	22 36 33.2	+0.1
	34nm,0.7s,mb4.9,baz=52,slow=9.7,SNR=85						
WRA				S	S	22 40 30.2	-0.9
	5.7nm,0.8s,baz=52,slow=16,SNR=8.0						
WRA				LR	LR	22 45 20.1	
	comp=Z,297nm,20.0s,baz=45,slow=37						
DZM	Mont Dzumac	22.11	140	P	P	22 36 34.9	-1.1
	10nm,1.0s,mb4.2,baz=222,slow=19,SNR=2.7						
DZM				LR	LR	22 43 56.7	
	comp=Z,900nm,21.4s,baz=307,slow=33						
ASAR	Alice Springs	24.61	221	P	P	22 37 00.6	+0.3
	21nm,1.0s,mb4.6,baz=61,slow=8.9,SNR=65						
ASAR				PcP	PcP	22 40 36.9	+0.1
	2.3nm,0.8s,baz=58,slow=2.5,SNR=4.3						
ASAR				S	S	22 41 17.3	0.0
	0.5nm,0.7s,baz=37,slow=9.3,SNR=2.5						
ASAR				ScP	ScP	22 44 12.8	+2.3
	0.5nm,0.6s,baz=40,slow=1.6,SNR=4.2						
ARMA	Armidale	24.82	179	eP	P	22 37 02.4	+0.4
BATI	Kupang	27.70	259	P	P	22 37 27.2	-1.0
	52nm,1.0s,mb5.1,baz=263,slow=17,SNR=2.5						
STKA	Stephens Creek	27.78	198	eP	P	22 37 29.3	+0.6
	15nm,0.9s,mb4.6						
STKA	Stephens Creek	27.78	198	P	P	22 37 30.4	+1.7
	2.7nm,0.5s,mb4.2,baz=4.1,slow=7.2,SNR=5.2						
STKA				LR	LR	22 48 37.7	
	comp=Z,358nm,18.5s,baz=120,slow=36						
FITZ	Fitzroy Crossi	27.97	241	⇑iP	P	22 37 30.7	+0.1
	42nm,0.5s,mb5.3						
FITZ	Fitzroy Crossi	27.97	241	P	P	22 37 30.7	+0.1
	25nm,0.5s,mb5.1,baz=74,slow=7.5,SNR=50						
FITZ				LR	LR	22 50 10.5	
	comp=Z,214nm,18.4s,baz=69,slow=40						
FORT	Forrest	33.29	218	eP	P	22 38 22.4	+5.0
	9.9nm,0.5s,mb5.0						
FORT				e		22 38 28.1	
FORT	Forrest	33.29	218	eP	P	22 38 22.5	+5.1
	8.3nm,0.8s,mb4.7						
FORT				e		22 38 28.1	
MBWA	Marble Bar	34.28	240	eP	P	22 38 26.5	+0.4
	21nm,0.7s,mb5.2						
RAO	Raoul Island	37.54	133	P	P	22 38 53.9	0.0
JOW	Kunigami	39.05	326	LR	LR	22 52 03.7	
	comp=Z,354nm,19.5s,baz=62,slow=31						
URZ	Urewera	40.23	148	LR	LR	22 52 31.5	
	comp=Z,257nm,18.3s,baz=25,slow=31						
KLBR	Kellerberrin	40.71	226	⇑iP	P	22 39 19.2	-1.2
	9.9nm,0.5s,mb4.7						
KLBR				i	pP	22 39 31.1	-4.9
NACB	Ninganchiao	41.26	317	eP	P	22 39 28.1	+3.2
YHNB	Yeheng	41.74	317	P	P	22 39 27.5	-1.3
NWAO	Narrogin (SRO)	41.81	225	P	P	22 39 27.9	-1.4
	4.9nm,0.8s,mb4.2,baz=36,slow=20,SNR=4.5						
NWAO				LR	LR	22 57 24.9	
	comp=Z,226nm,20.7s,baz=170,slow=37						
RPZ	Rata Peaks	41.90	158	LR	LR	22 54 35.2	
	comp=Z,420nm,21.2s,baz=8.9,slow=33						
MUN	Mundaring	42.03	227	eP	P	22 39 30.4	-0.8
MUN				i	pP	22 39 42.4	-4.4
MJAR	Matsushiro Arr	43.53	345	P	P	22 39 42.3	-0.9
	0.6nm,0.3s,mb3.8,baz=175,slow=10,SNR=4.6						
MJAR				LR	LR	22 55 12.2	
	comp=Z,173nm,20.2s,baz=190,slow=32						
KSRS	Korea Array	47.91	335	P	P	22 40 17.9	+0.1
	7.6nm,1.2s,mb4.6,baz=147,slow=9.3,SNR=5.5						
KSRS				LR	LR	22 58 06.0	
	comp=Z,149nm,20.6s,baz=160,slow=33						
YSS	Yuzh-Sakhalins	52.73	353	P	P	22 40 53.3	-0.7
BJT	Baijiatuau	55.59	328	P	P	22 41 13.4	-1.5
KMI	Kunming	56.08	305	P	P	22 41 20.6	+1.9
KMI				AP	pP	22 41 33.7	-1.3
KMI				S	S	22 48 55.2	-8.0
KMI				AMB	AMB		
	comp=Z,9.0nm,1.4s,mb4.6						
KMI				LR	LR		
	comp=Z,198nm,21.9s						
KMI	Kunming	56.08	305	P	P	22 41 20.6	+1.9
	comp=Z,9.0nm,1.4s,mb4.6						
KMI				pP	pP	22 41 33.7	-1.3
KMI				S	S	22 48 55.2	-8.0
KMI				LR	LR		
	comp=Z,200nm,21.9s						
HHC	Hu-ho-hao-te	58.69	325	eP	P	22 41 37.3	+0.5
HHC				AP	pP	22 41 49.3	-3.9
HHC				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,164nm,3.9s						
LZH	Lanzhou	60.63	317	eP	P	22 41 51.5	+1.2
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.1						
LZH				AMB	AMB		
	comp=Z,89nm,4.3s						
LZH	Lanzhou	60.63	317	eP	P	22 41 51.5	+1.2
	comp=Z,20nm,1.2s,mb5.1						
LZH				pP	pP	22 41 56.5	-10
LZH				sP	sP	22 41 58.0	-16
HIA	Hailar	61.02	337	eP	P	22 41 53.1	+0.5
	comp=Z,10nm,0.7s,mb5.1						
MA2	Magadan	64.84	360	eP	P	22 42 16.3	-1.4
	comp=Z,7.0nm,1.1s,mb4.6						
GTA	Gaotai	65.09	318	eP	P	22 42 20.8	+0.9
GTA				AP	pP	22 42 35.1	-1.4
GTA				XP	sP	22 42 40.3	-3.1
GTA				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.7						
ULN	Ulaanbaatar	65.75	329	eP	P	22 42 24.9	+1.0
SONM	Songino Array	66.07	329	P	P	22 42 26.8	+0.8
	comp=Z,9.4nm,0.8s,mb4.9,baz=145,slow=4.9,SNR=49						
SONM				LR	LR	23 08 47.4	
	comp=Z,135nm,18.6s,baz=3.5,slow=34						
LSA	Lhasa	67.33	305	P	P	22 42 36.1	+1.7
LSA	Lhasa	67.33	305	eP	P	22 42 35.9	+1.5
	comp=Z,8.1nm,0.8s,mb4.8						
TAPN	Taplejung	69.42	302	eP	P	22 42 48.0	+0.5
	comp=Z,32nm,1.1s,mb5.1						
ODAN	Odare	69.54	301	eP	P	22 42 48.1	-0.2
	comp=Z,38nm,1.0s,mb5.3						
TLY	Talaya	69.88	331	P	P	22 42 48.8	-1.0
JIRN	Jiri	70.80	302	eP	P	22 42 56.2	+0.3
	comp=Z,23nm,1.0s,mb5.1						
KKN	Kakani	71.61	302	eP	P	22 43 00.6	-0.2
	comp=Z,28nm,1.0s,mb5.1						
GKN	Gorkha	72.21	302	eP	P	22 43 04.2	-0.3
	comp=Z,50nm,1.1s,mb5.4						
VNDA	Vanda	72.22	178	P	P	22 43 03.5	-0.1
	comp=Z,3.0nm,0.9s,mb4.2,baz=32,slow=2.1,SNR=5.7						
WMQ	Urumqi	75.18	318	eP	P	22 43 21.7	+0.2
TIXI	Tiksi	78.36	353	eP	P	22 43 37.4	-1.4
MKAR	Makanchi Array	79.81	319	P	P	22 43 47.0	-0.3
MKAR				PP	PP	22 46 48.8	-0.5
MKAR	Makanchi Array	79.81	319	P	P	22 43 47.0	-0.3
	comp=Z,3.0nm,0.8s,mb4.3,baz=99,slow=7.6,SNR=40						
MKAR				PP	PP	22 46 48.8	-0.5
	comp=Z,1.2nm,1.1s,baz=95,slow=9.3,SNR=4.0						
POO	Poona	79.84	290	ex	P	22 43 47.0	-1.0
ZAA0	Zalesovo Array	80.84	327	eP	P	22 43 51.6	-1.1
ZALV	Zalesovo Beam	80.84	327	P	P	22 43 51.1	-1.5
	comp=Z,5.3nm,0.7s,mb4.6,baz=109,slow=5.5,SNR=30						
IMA2	Indian Mountai	81.61	20	eP	P	22 43 55.0	-1.4
IMA2				ePcP	PcP	22 44 01.3	-0.9
IMA2				ePP	PP	22 47 01.6	-2.2
MCK	McKinley	82.08	23	eP	P	22 43 57.1	-1.9
COLA	College	83.05	22	eP	P	22 44 02.0	-2.0
	comp=Z,3.6nm,0.6s,mb4.6						
TKM2	Tokmak 2	83.27	314	eP	P	22 44 06.0	+0.4
	comp=Z,2.2nm,0.6s,mb4.4						
KZA	Kyzart	83.32	313	P	P	22 44 07.2	+1.2
	SNR=5.1						
KURK	Kurchatov	83.34	322	eP	P	22 44 05.0	-0.7
	comp=Z,10nm,1.1s,mb4.8						
UCH	Uchtor	83.89	313	eP	P	22 44 08.9	+0.1
	comp=Z,6.1nm,1.0s,mb4.7						
UCH	Uchtor	83.89	313	P	P	22 44 10.5	+1.6
	SNR=7.3						
AAK	Ala-Archa	83.99	314	eP	P	22 44 08.8	-0.6
	comp=Z,3.4nm,0.7s,mb4.6						
AAK	Ala-Archa	83.99	314	P	P	22 44 09.8	+0.4
	SNR=5.7						
USP	Ospenovka	84.13	314	P	P	22 44 09.9	-0.1
	SNR=10						
AML	Almayashu	84.46	313	eP	P	22 44 11.5	-0.3
	comp=Z,14nm,1.0s,mb5.1						
AML				e	pP	22 44 26.0	-3.0
AML	Almayashu	84.46	313	P	P	22 44 13.2	+1.5
	SNR=12						
QSPA	South Pole Qui	84.49	180	P	pP	22 44 23.5	-4.9
EKS2	Erkin-Say	84.52	314	eP	P	22 44 12.5	+0.5
	comp=Z,10nm,1.1s,mb4.9						
EKS2	Erkin-Say	84.52	314	P	P	22 44 12.7	+0.7
	SNR=9.5						
EGAK	Eagle	85.59	23	eP	P	22 44 16.1	-0.7
CHKZ	Chkalovo	88.83	324	P	P	22 44 33.0	+0.3
BRVK	Borovoye	88.91	323	eP	P	22 44 31.7	-1.5
	comp=Z,2.0nm,0.5s,mb4.7						
O02C	Red Bluff	90.42	50	⇑PP	P	22 44 40.7	+0.2
	baz=90						
MNRC	McLaughlin Nat	90.54	51	⇑PP	P	22 44 41.1	0.0
	baz=90						
WDC	Whiskeytown Da	90.66	49	⇑PP	P	22 44 42.6	+1.0
	baz=91						
YBH	Yreka Blue Hor	90.66	48	eP	P	22 44 42.0	+0.4
YBH	Yreka Blue Hor	90.66	48	⇑PP	P	22 44 41.9	+0.3
	baz=91						
M03C	McCloud	91.05	49	⇑PP	P	22 44 43.4	0.0
	baz=91						
C04A	Brinnon	91.18	42	⇓PP	P	22 44 44.0	+0.2
	baz=91						
V03C	Hunter Liggett	91.19	54	⇓PP	P	22 44 46.5	+2.3
	baz=91						
PACP	Pacheco Peak	91.25	53	⇓PP	P	22 44 46.0	+1.6
	baz=91						
S04C	Ingram Canyon,	91.27	53	⇑PP	P	22 44 45.9	+1.4
	baz=91						
J04A	Umpqua Nationa	91.28	47	⇑PP	P	22 44 45.1	+0.6
	baz=91						
M04C	Macdoel	91.32	48	⇑PP	P	22 44 44.7	+0.1
	baz=91						
L04A	Klamath Falls	91.32	48	⇓PP	P	22 44 44.4	-0.3
	baz=91						
ORV	Oroville	91.34	51	⇑PP	P	22 44 44.3	-0.5
	baz=91						
H04A	Detroit Lake	91.38	45	⇑PP	P	22 44 45.0	+0.1
	baz=91						
U04C	Hernandez Rese	91.58	54	⇓PP	P	22 44 47.3	+1.3
	baz=92						
T05C	Eagle Field, D	91.72	53	⇑PP	P	22 44 48.3	+1.6
	baz=92						
O04C	Chester	91.73	50	⇑PP	P	22 44 46.1	-0.5
	baz=92						
PKD	Parkfield	91.74	54	⇓PP	P	22 44 47.2	+0.5
	baz=92						
D05A	Enumclaw	91.78	43	⇑PP	P	22 44 46.2	-0.5
	baz=92						
M05C	Lookout	91.79	49	⇑PP	P	22 44 47.3	+0.4
	baz=92						
O05C	Quincy	91.83	50	⇓PP	P	22 44 47.0	0.0
	baz=92						
LAVA	Lava Cap Winer	91.85	51	⇓PP	P	22 44 47.6	+0.4
	baz=92						
E05A	Randle	91.87	44	⇑PP	P	22 44 46.3	-0.8
	baz=92						
J05A	Fort Rock	91.92	47	⇑PP	P	22 44 47.2	-0.2
	baz=92						
I05A	Bend	91.98	46	⇓PP	P	22 44 47.9	+0.3
	baz=92						
P05C	Yuba Gap, Truc	92.00	51	⇓PP	P	22 44 48.2	+0.3
	baz=92						
ELFS	Eagle Lake Fie	92.03	50	⇑PP	P	22 44 48.9	+0.9
	baz=92						
CMB	Columbia Colle	92.06	52	eP	P	22 44 47.9	-0.3
	comp=Z,6.9nm,1.2s,mb4.9						
CMB	Columbia Colle	92.06	52	⇓PP	P	22 44 48.0	-0.2
	baz=92						
L05A	Lakeview	92.09	48	⇑PP	P	22 44 47.9	-0.3
	baz=92						
K05A	Summer Lake	92.11	47	⇑PP	P	22 44 48.4	+0.1
	baz=92						
BEKR	Beckwourth	92.25	50	⇓PP	P	22 44 48.8	-0.2
	baz=92						
M06C	Likely Place G	92.28	49	⇑PP	P	22 44 48.6	-0.5
	baz=92						
R05C	Kirkwood Meado	92.36	52	⇓PP	P	22 44 49.8	+0.3
	baz=92						
S06C	San Francisco	92.47	52	⇓PP	P	22 44 49.4	-0.7
	baz=92						
MOD	Modoc	92.47	48	eP	P	22 44 50.0	0.0
	comp=Z,7.7nm,1.1s,mb5.0						
MOD	Modoc	92.47	48	⇑PP	P	22 44 50.0	0.0
	baz=92						
F06A	Goldendale	92.47	44	⇓PP	P	22 44 50.2	+0.3
	baz=92						
T06C	Millerton Lake	92.50	53	⇓PP	P	22 44 49.8	-0.5
	baz=92						
K06A	Valley Falls	92.59	47	⇓PP	P	22 44 50.3	-0.2
	baz=92						
WCN	Washoe City	92.66	51	⇑PP	P	22 44 51.3	+0.4
	baz=93						
O06A	Flanigan	92.68	50	⇑PP	P	22 44 50.0	-1.0
	baz=93						
H06A	Lindquist Farm	92.70	46	⇓PP	P	22 44 50.9	-0.1
	baz=93						
J06A	Christmas Vall	92.70	47	⇑PP	P	22 44 50.7	-0.4
	baz=93						
I06A	Prineville	92.72	46	⇓PP	P	22 44 50.9	-0.1
	baz=93						
N06A	Buffalo Meadow	92.72	50	⇑PP	P	22 44 51.3	+0.1

	baz=93						
R06C	Coleville	92.83	52	⇓PP	P	22 44 52.1	+0.3
	baz=93						
KCC	Kaiser Creek	92.84	53	⇓PP	P	22 44 51.7	-0.1
	baz=93						
WAKR	Walker	92.84	52	eP	P	22 44 52.3	+0.5
HELL	Mitchell Peak,	93.03	54	⇑PP	P	22 44 52.0	-0.7
	baz=93						
R07C	Lee Vining	93.12	52	⇓PP	P	22 44 53.6	+0.6
	baz=93						
L07A	Adell	93.20	48	⇑PP	P	22 44 53.4	0.0
	baz=93						
G07A	Ruggs Ranch, H	93.21	45	⇓PP	P	22 44 52.9	-0.4
	baz=93						
H07A	Lands Inn, Kim	93.23	46	⇑PP	P	22 44 53.1	-0.4
	baz=93						
I07A	Izee	93.24	46	⇑PP	P	22 44 53.3	-0.2
	baz=93						
M07A	Soldier Meadow	93.27	49	⇓PP	P	22 44 54.0	+0.2
	baz=93						
K07A	Rock Creek Ran	93.32	48	⇓PP	P	22 44 53.1	-0.8
	baz=93						
N07B	Gerlach	93.38	50	⇓PP	P	22 44 54.4	+0.2
	baz=93						
O07A	Toulon	93.41	50	⇑PP	P	22 44 54.5	+0.1
	baz=93						
MTUM	Tungsten Hills	93.44	53	eP	P	22 44 55.0	+0.4
G08A	Pilot Rock	93.71	45	⇓PP	P	22 44 56.0	+0.4
	baz=94						
NVAR	Mina Array Bea	93.72	52	P	P	22 44 56.0	+0.1
	comp=Z,5.1nm,0.9s,mb5.0,baz=259,slow=3.9,SNR=21						
EDW2	Edwards Air Fo	93.73	55	⇑PP	P	22 44 56.3	+0.3
	baz=94						
S08C	White Mtn Res	93.77	53	⇑PP	P	22 44 56.1	0.0
	baz=94						
M08A	Happy Creek Ra	93.87	49	⇓PP	P	22 44 57.1	+0.6
	baz=94						
I08A	Drewsey	93.90	46	⇑PP	P	22 44 56.8	+0.3
	baz=94						
J08A	Circle Bar Ran	93.93	47	⇓PP	P	22 44 55.8	-0.9
	baz=94						
L08A	Fields	93.95	48	⇓PP	P	22 44 56.6	-0.2
	baz=94						
P08A	Dixie Valley	93.98	51	⇓PP	P	22 44 57.8	+0.8
	baz=94						
N08A	GE Springer Mi	94.01	50	⇓PP	P	22 44 57.8	+0.7
	baz=94						
LRMC	Laurel Mountai	94.02	55	⇓PP	P	22 44 58.1	+0.9
	baz=94						
Q08A	Gabbs	94.05	52	⇓PP	P	22 44 57.3	0.0
	baz=94						
MPMC	Manual Prospec	94.22	54	⇑PP	P	22 44 58.5	+0.3
	baz=94						
K09A	Rome	94.44	48	⇑PP	P	22 44 58.9	-0.2
	baz=94						
J09A	Fry Pan Ranch,	94.45	47	⇓PP	P	22 44 59.3	+0.2
	baz=94						
S09A	Goldfield	94.53	53	⇓PP	P	22 44 59.5	0.0
	baz=94						
G09A	Cove	94.54	45	⇑PP	P	22 44 58.9	-0.5
	baz=94						
R09A	Tonopah	94.68	52	⇑PP	P	22 45 00.3	0.0
	baz=95						
GSC	Goldstone	94.72	55	⇓PP	P	22 45 01.0	+0.5
	baz=95						
BMO	Blue Mountains	94.86	46	eP	P	22 45 00.3	-0.6
	comp=Z,7.2nm,1.4s,mb4.9						
PFO	Pinyon Flat Ob	94.92	57	P	P	22 45 01.2	-0.3
PFO	Pinyon Flat Ob	94.92	57	P	P	22 45 01.2	-0.3
	comp=Z,3.6nm,0.9s,mb4.8,baz=234,slow=3.1,SNR=3.5						
D10A	Wagner Farm, O	94.98	43	⇑PP	P	22 45 00.8	-0.6
	baz=95						
S10A	Tonopah Range,	95.04	52	⇓PP	P	22 45 01.9	0.0
	baz=95						
U10A	Ash Meadows, A	95.17	54	⇑PP	P	22 45 03.0	+0.5
	baz=95						
SHOC	Shoshone	95.19	55	⇓PP	P	22 45 03.0	+0.4
	baz=95						
H10A	Noah's Angus R	95.24	46	⇑PP	P	22 45 01.8	-0.8
	baz=95						
TPNV	Topopah Spring	95.26	53	eP	P	22 45 03.2	+0.3
	comp=Z,8.3nm,1.0s,mb5.1						
TPNV	Topopah Spring	95.26	53	⇓PP	P	22 45 03.1	+0.2
	baz=95						
BELC	Belle Mtn.	95.32	56	⇑P	P	22 45 03.9	+0.6
	baz=95						
TUQ	Turquoise Mtn.	95.45	55	⇑P	P	22 45 04.0	+0.2
	baz=95						
GMRC	Granite Mounta	95.64	56	⇓P	P	22 45 05.6	+0.9
	baz=96						
A11A	Hall Mountain,	95.67	41	⇓P	P	22 45 04.5	0.0
	baz=96						
BC3	Big Chuckw Mtn	95.75	57	⇑P	P	22 45 06.6	+1.3
	baz=96						
Q11A	Duckwater	95.82	52	⇑P	P	22 45 05.8	+0.3
	baz=96						
R11A	Troy Canyon, C	95.85	52	⇓P	P	22 45 06.0	+0.4
	baz=96						
V11A	Goodsprings	95.87	55	⇑P	P	22 45 06.6	+0.8
	baz=96						
ARU	Arti	96.00	326	eP	P	22 45 03.6	-2.2
IRM	Iron Mountain	96.03	56	⇑P	P	22 45 07.7	+1.2
	baz=96						
T11A	Corn Creek, Al	96.10	53	⇑P	P	22 45 07.0	+0.2
	baz=96						
SHPR	Sheep Range	96.12	54	eP	P	22 45 07.6	+0.7
ELK	Elko	96.21	50	P	P	22 45 07.0	-0.2
GLA	Glamis	96.25	57	⇑P	P	22 45 12.1	+4.6
	baz=96						
D12A	Red Ives Fores	96.30	43	⇓P	P	22 45 06.7	-0.7
	baz=96						
V12A	Nelson	96.34	55	⇑P	P	22 45 08.6	+0.7
	baz=96						
N12A	Clover Valley,	96.36	50	⇑P	P	22 45 08.4	+0.6
	baz=96						
YKA	Yellowknife Ar	96.74	28	P	P	22 45 07.7	-1.3
YKA				PKKPbc	PKKPbc	23 01 50.1	-4.1
YKA	Yellowknife Ar	96.74	28	P	P	22 45 07.7	-1.3
	comp=Z,0.5nm,0.8s,mb4.0,baz=274,slow=4.5,SNR=6.8						
YKA				PKKPbc	PKKPbc	23 01 50.1	-4.1
	comp=Z,0.1nm,0.3s,baz=83,slow=2.5,SNR=6.2						
F13A	Darby	96.98	45	⇓P	P	22 45 09.8	-0.7
	baz=97						
H13A	Challis	97.02	46	⇑P	P	22 45 10.5	-0.3
	baz=97						
G13A	Cobalt	97.04	45	⇑P	P	22 45 10.2	-0.6
	baz=97						
I13A	Wildhorse Cree	97.11	47	⇓P	P	22 45 11.0	-0.2
	baz=97						
T13A	Saint George	97.14	53	⇓P	P	22 45 11.8	+0.4
	baz=97						
S13A	Holt Ranch, En	97.19	53	⇑P	P	22 45 12.0	+0.3
	baz=97						
MSO	Missoula	97.26	44	eP	P	22 45 08.6	-3.2
U14A	Mt Trumbull	97.71	54	⇑P	P	22 45 14.7	+0.6
	baz=98						
T14A	Hurricane	97.80	53	⇓P	P	22 45 14.2	-0.3
	baz=98						
HRY	Holter Researc	98.71	44	eP	P	22 45 18.1	-0.2
HRY				epP	pP	22 45 39.8	+4.0
HRY				ePKKPbc	PKKPbc	23 02 01.6	+13
CTU	Camp Tracy	98.86	50	eP	P	22 45 19.1	0.0
	comp=Z,266nm,1.4s						
JLU	Jordanelle	99.09	50	eP	P	22 45 19.9	-0.2
RRI2	Red Ridge	99.14	47	epP	pP	22 45 34.1	-3.7
BW06	Boulder Array	100.45	48	ePdif	Pdif	22 45 25.3	-0.6
	comp=Z,2.7nm,1.2s						
PDAR	Pinedale Array	100.45	48	Pdiff	Pdif	22 45 25.1	-0.8
	comp=Z,2.7nm,1.1s,baz=242,slow=3.2,SNR=8.3						
PV10	Paradox Valley	101.00	52	Pdif	Pdif	22 45 28.9	+0.6
PV01	Paradox Valley	101.38	52	Pdif	Pdif	22 45 30.7	+0.7
RES	Resolute Bay	101.44	14	ePKKPbc	PKKPbc	23 01 39.8	-1.5
ARCES	ARCESS Array B	107.04	343	PKiKP	PKiKP	22 50 02.5	-1.4
	comp=Z,2.4nm,0.8s,baz=48,slow=1.3,SNR=5.1						
FINES	FINESS Array B	111.01	335	Pdiff	Pdif	22 46 11.1	-1.7
	comp=Z,1.1nm,0.8s,baz=52,slow=3.1,SNR=6.3						
FINES				PKiKP	PKiKP	22 50 08.9	-2.7
	comp=Z,0.5nm,0.7s,baz=128,slow=3.1,SNR=4.2						
KWP	Kalwaria	118.37	325	Pdif	Pdif	22 46 46.4	+0.9
LBTB	Lobatse	119.10	238	PKPdf	PKPdf	22 50 28.7	+0.4
CLL	Collm	122.67	330	ePKPdf	PKPdf	22 50 34.0	-0.3
GERES	GERESS Array B	123.79	328	PKP	PKPdf	22 50 36.0	-0.5
	comp=Z,1.8nm,0.6s,baz=61,slow=1.6,SNR=14						
LHS	Liberty Hill	124.01	52	ePKKPbc	PKKPbc	23 00 18.6	-5.3
NNA	Nana	129.15	110	PKPdf	PKPdf	22 50 47.5	-0.3
KEST	Kesra	133.81	316	PKP	PKPdf	22 50 54.3	-1.7
	comp=Z,0.9nm,0.9s,baz=151,slow=3.0,SNR=6.7						
MDT	Midelt	144.68	323	PKP	PKPdf	22 51 14.4	-1.5
	comp=Z,1.4nm,0.5s,baz=355,slow=8.6,SNR=7.7						
TOA0	Torodi Ar. Sit	149.01	286	ePKP	PKPbc	22 51 26.9	-0.9
TORD	Torodi Ar. Bea	149.01	286	PKP	PKPdf	22 51 22.4	-1.2
	comp=Z,0.5nm,0.6s,baz=101,slow=38,SNR=10						
TORD				PKPbc	PKPbc	22 51 26.9	-0.9
	comp=Z,7.1nm,0.7s,baz=93,slow=3.0,SNR=90						

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*SZGRF **04** 22:39:18.3, 3378N×3775W, h33km, mb5.1, MS4.0, Northern Mid-Atlantic Ridge*

*CSEM **04** 22:39:20.1±0.2, 3455N×3725W, h10km, mb5.1/67, Ms4.0, Error ellipse: s-maj=11.8km s-min=4.4km az=172.0*

*BJI **04** 22:39:21.9, 3473N×3782W, h19km, mB5.8, mb5.4, Ms5.3, Msz4.8*

*IDC **04** 22:39:21.9±0.5, 3453N×3692W, h0km, mb4.7/26, mb1 4.9/26, mb1mx4.9/27, mbtmp4.7/26, MS4.2/22, Ms1 4.3/22, ms1mx4.2/26, Error ellipse: s-maj=16.2km s-min=10.2km az=176.0*

*ISCJB **04** 22:39:22.3±0.2, 3457N±005×3693W±001, h10km, mb5.1/235, MS4.2/43, Error ellipse: s-maj=6.6km s-min=1.6km az=176.9*

*MOS **04** 22:39:22.3±0.8, 3456N×3693W, h10km, mb5.4/99, Error ellipse: s-maj=6.9km s-min=3.1km az=139.3*

*NEIC **04** 22:39:23.9±0.1, 3449N×3690W, h10km, mb5.2/133, Error ellipse: s-maj=4.4km s-min=1.5km az=176.0*

*PDA **04** 22:39:23.9, 3447N×3689W, h10km, mb5.2*

*GCMT **04** 22:39:23.9±0.3, 3449N×3703W, h12km, MW5.1/71, Moment Tensor Solution. s24,c30; s71,c108; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-4.45±.16; Mθθ1.92±.15; Mφφ2.53±.14; Mrθ-0.99±.47; Mθφ3.24±.13; Mφr0.76±.48; Best double couple: Mo5.16700×10^16 NP1:φs205.00000°, δ47.00000°, λ-115.00000°. NP2: φs59.00000°, δ48.00000°, λ-66.00000°. Principal axes: T 5.4800, Plg1.0000°, Azm132.0000°; N -0.6260, Plg18.0000°, Azm223.0000°; P -4.8540, Plg72.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 22:39:23.7±1.4, **3453N**±005×**3690W**±002, **h7**km±8km, **h15**km±3.1km**:pP-P, n871,** σ**0.71**/865, **mb5.1**/235, **MS4.2**/43, **123C-120D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAC	Faja de Cima	9.65	67	ePn	Pn	22 41 44.2	+1.2
CML	Cha da Macela	9.73	67	ePn	Pn	22 41 44.8	+0.7
PVER	Pico Vermelho	9.77	67	ePn	Pn	22 41 44.7	+0.2
PRCH	Ribeira Ch	9.77	68	ePn	Pn	22 41 44.8	+0.2
LFA	Lagoa do Fogo	9.78	67	ePn	Pn	22 41 44.7	0.0
PMAT	Coroa da Mata	9.80	67	ePn	Pn	22 41 45.6	+0.6
VIF	Vila Franca	9.81	68	ePn	Pn	22 41 45.2	+0.1
MESC	Monte Escuro	9.82	67	ePn	Pn	22 41 45.7	+0.5
PCNG	Congro	9.85	68	ePn	Pn	22 41 45.6	0.0
FRA1	Furnas	9.87	68	ePn	Pn	22 41 45.9	-0.1
PFAD	Fenais da Ajud	9.92	67	ePn	Pn	22 41 46.6	-0.1
MIRA	Miradouro	9.94	68	ePn	Pn	22 41 46.5	-0.4
PMAFR	Mafra	22.53	71	eP	P	22 44 23.4	-0.6
	248nm,1.7s,mb5.4						
PMAFR				eS	S	22 48 31.3	-0.3
PFVI	Vila Bisbo	22.88	75	eP	P	22 44 28.0	+0.3
	161nm,1.3s,mb5.3						
PFVI				eS	S	22 48 42.7	+4.9
PTEO	Sao Teotonio	22.95	74	eP	P	22 44 29.8	+1.3
	86nm,1.1s,mb5.1						
MORF	Marmelete	23.01	75	eP	P	22 44 29.4	+0.3
	88nm,1.1s,mb5.1						
MORF				eS	S	22 48 43.3	+3.3
BBSR	BB Station	23.27	273	eP	P	22 44 31.4	-0.5
EVO	Evora	23.51	72	eP	P	22 44 33.8	-0.6
PBDV	Barranco-do-Ve	23.59	75	eP	P	22 44 35.2	0.0
	126nm,1.7s,mb5.1						
PBDV				eS	S	22 48 52.3	+2.9
PBEJ	Beja	23.62	73	eP	P	22 44 36.1	+0.6
	52nm,1.5s,mb4.7						
PVIS	Viseu	23.73	66	eP	P	22 44 36.4	0.0
	77nm,1.4s,mb4.9						
PCAB	Cabril	23.75	64	eP	P	22 44 36.9	+0.3
	71nm,1.5s,mb4.9						
PVAQ	Vaqueiros	23.75	75	eP	P	22 44 37.0	+0.3
	41nm,1.6s,mb4.6						
PVAQ				eS	S	22 48 56.6	+4.6
PESTR	Estremoz	23.84	71	eP	P	22 44 37.4	-0.1
	67nm,2.0s,mb4.7						
PESTR				eS	S	22 48 57.4	+3.9
PVRL	Vila Real	23.92	65	eP	P	22 44 38.6	+0.4
	86nm,1.6s,mb4.9						
EGRO	El Granado	23.93	74	P	P	22 44 38.7	+0.3
	13nm,0.9s,mb4.3						
MTE	Manteigas	23.96	67	eS	S	22 48 59.9	+4.5
PCBR	Castelo Branco	23.97	69	eP	P	22 44 38.7	0.0
	52nm,1.5s,mb4.7						
PBAR	Barrancos	24.27	73	eS	S	22 49 05.7	+5.2
EBAD	Badajoz	24.29	71	P	P	22 44 42.0	+0.4
	471nm,3.4s						
MVO	Moncorvo	24.42	65	eP	P	22 44 42.8	0.0
	76nm,1.1s,mb5.0						
MVO				eS	S	22 49 11.4	+8.6
ERUA	La Rua	24.50	62	P	P	22 44 43.6	+0.2
	41nm,1.2s,mb4.7						
ERUA	La Rua	24.50	62	P	P	22 44 43.6	+0.2
ERUA				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.7						
EMIN	Mina Concepcio	24.57	74	P	P	22 44 44.5	+0.4
	comp=Z,598nm,3.5s						
PBRG	Braganca	24.71	64	eP	P	22 44 46.3	+0.9
	comp=Z,48nm,1.4s,mb4.8						
SFS	San Fernando	25.02	77	eP	P	22 44 47.0	-1.2
	comp=Z,87nm,0.7s,mb5.4						
SFS	San Fernando	25.02	77	eP	P	22 44 47.0	-1.2
SFS				pmax	pmax		
	comp=Z,87nm,0.7s,mb5.4						
ESPR	Espera	25.26	76	P	P	22 44 51.3	+0.8
	comp=Z,65nm,1.2s,mb5.0						
TSY	Tnine Yamani	25.32	79	i P	P	22 44 53.0	+2.0
EJIF	Jimena Fronter	25.61	77	⇑P	P	22 44 55.0	+1.4
	comp=Z,102nm,1.4s,mb5.2						
EJIF	Jimena Fronter	25.61	77	⇑P	P	22 44 55.0	+1.4
EJIF				pmax	pmax		
	comp=Z,102nm,1.4s,mb5.2						
DKH	Dar Kharkhour	25.80	79	i P	P	22 44 57.0	+1.7
EARI	Arriondas	26.04	61	P	P	22 44 58.2	+0.8
	comp=Z,168nm,1.6s,mb5.3						
EMIJ	Mijas	26.16	76	P	P	22 44 59.3	+0.8
	comp=Z,37nm,1.0s,mb4.9						
EADA	Adamuz	26.21	73	P	P	22 44 59.5	+0.5
	comp=Z,192nm,3.1s						
TGT	Taghat	26.26	82	i P	P	22 45 00.0	+0.5
PAB	San Pablo	26.38	69	eP	P	22 45 00.3	-0.2
	comp=Z,17nm,1.1s,mb4.5						
PAB	San Pablo	26.38	69	eP	P	22 45 00.3	-0.2
PAB				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
ELUQ	Luque	26.49	74	⇑P	P	22 45 02.1	+0.5
	comp=Z,34nm,1.4s,mb4.7						
ELUQ	Luque	26.49	74	⇑P	P	22 45 02.1	+0.6
ELUQ				pmax	pmax		
	comp=Z,34nm,1.4s,mb4.7						
GUD	Guadarrama	26.56	67	⇑P	P	22 45 02.4	+0.2
	comp=Z,26nm,1.2s,mb4.6						
GUD	Guadarrama	26.56	67	⇑P	P	22 45 02.4	+0.3
GUD				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.6						
ELOJ	Sierra Loja	26.60	75	P	P	22 45 02.9	+0.3
	comp=Z,13nm,0.9s,mb4.5						
ELOJ	Sierra Loja	26.60	75	P	P	22 45 02.9	+0.3
ELOJ				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
ESDC	Sonseca Array	26.67	69	⇓P	P	22 45 02.8	-0.4
	comp=Z,11nm,0.9s,mb4.4						
ESDC	Sonseca Array	26.67	69	P	P	22 45 03.0	-0.2
	comp=Z,31nm,1.2s,mb4.7,baz=269,slow=8.3,SNR=28						
ESDC				LR	LR	22 53 26.4	
	comp=Z,239nm,18.6s,MS3.8,baz=345,slow=32						
EBAN	Banos Encina	26.84	73	P	P	22 45 04.1	-0.6
	comp=Z,66nm,1.7s,mb4.9						
EBAN	Banos Encina	26.84	73	P	P	22 45 04.1	-0.6
EBAN				pmax	pmax		
	comp=Z,66nm,1.7s,mb4.9						
MDT	Midelt	26.86	84	P	P	22 45 03.3	-1.7
	comp=Z,7.1nm,1.1s,mb4.1,baz=297,slow=8.9,SNR=7.3						
MDT				LR	LR	22 53 34.2	
	comp=Z,695nm,19.1s,MS4.2,baz=285,slow=32						
ERON	Agron	26.89	75	P	P	22 45 05.8	+0.6
ECOG	Cogollos-Vega	27.06	74	P	P	22 45 07.0	+0.3
	comp=Z,39nm,1.3s,mb4.8						
ECOG	Cogollos-Vega	27.06	74	P	P	22 45 07.0	+0.3
ECOG				pmax	pmax		
	comp=Z,39nm,1.3s,mb4.8						
EGUA	Guajares	27.10	75	P	P	22 45 07.8	+0.7
	comp=Z,2.8nm,0.7s,mb3.9						
EGUA	Guajares	27.10	75	P	P	22 45 07.8	+0.7
EGUA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
EQES	Quesada	27.42	73	P	P	22 45 09.2	-0.7
EVIA	Vianos	27.82	71	P	P	22 45 13.8	+0.3
	comp=Z,21nm,0.9s,mb4.8						
EVIA	Vianos	27.82	71	P	P	22 45 13.8	+0.3
EVIA				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.8						
ETOR	Torete	28.16	67	P	P	22 45 16.7	+0.2
	comp=Z,8.8nm,1.3s,mb4.2						
ETOR	Torete	28.16	67	P	P	22 45 16.7	+0.2
ETOR				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
QUIF	Quistinic	28.43	52	eP	P	22 45 17.7	-1.2
ROSF	Rostrenen	28.48	51	eP	P	22 45 19.0	-0.3
	comp=Z,166nm,1.4s,mb5.2						
ROSF	Rostrenen	28.48	51	eP	P	22 45 19.0	-0.3
ROSF				pmax	pmax		
	comp=Z,83nm,1.4s,mb5.2						
ROSF	Rostrenen	28.48	51	eP	P	22 45 19.0	-0.3
	comp=Z,83nm,1.4s,mb5.2						
ETOB	Tobarra	28.57	71	P	P	22 45 21.2	+1.0
	comp=Z,21nm,1.1s,mb4.8						
EMUR	La Murta	28.86	73	P	P	22 45 23.2	+0.4
	comp=Z,20nm,1.0s,mb4.8						
SJPF	Ste Jean	28.91	62	eP	P	22 45 22.7	-0.5
	comp=Z,78nm,1.2s,mb5.0						
SJPF	Ste Jean	28.91	62	eP	P	22 45 22.7	-0.5
SJPF				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.0						
SJPF	Ste Jean	28.91	62	eP	P	22 45 22.7	-0.5
	comp=Z,39nm,1.2s,mb5.0						
SGMF	Saint Gilles	28.92	51	eP	P	22 45 22.7	-0.5
	comp=Z,161nm,1.3s,mb5.3						
SGMF	Saint Gilles	28.92	51	eP	P	22 45 22.7	-0.5
SGMF				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.3						
SGMF	Saint Gilles	28.92	51	eP	P	22 45 22.7	-0.5
	comp=Z,80nm,1.3s,mb5.3						
ECHE	Chera	28.99	69	P	P	22 45 24.5	+0.6
SCHQ	Schefferville	29.05	324	P	P	22 45 22.4	-1.9
	comp=Z,3.6nm,1.0s,mb4.1,baz=90,slow=12,SNR=3.8						
SCHQ				LR	LR	22 55 47.8	
	comp=Z,1μm,20.6s,MS4.5,baz=114,slow=34						
CART	Cartagena	29.07	73	eP	P	22 45 24.4	-0.3
	comp=Z,91nm,1.1s,mb5.4						
EMOS	Mosqueruela	29.36	68	P	P	22 45 28.2	+1.0
	comp=Z,30nm,0.9s,mb5.0						
ETSF	Etsaut	29.38	63	eP	P	22 45 27.1	-0.2
	comp=Z,52nm,1.2s,mb4.8						
ETSF	Etsaut	29.38	63	eP	P	22 45 27.1	-0.2
ETSF				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.8						
ETSF	Etsaut	29.38	63	eP	P	22 45 27.1	-0.2
	comp=Z,26nm,1.2s,mb4.8						
ESAC	San Caprasio	29.38	65	P	P	22 45 27.2	-0.1
	comp=Z,28nm,0.8s,mb5.0						
ERTA	Horta de San J	29.97	67	P	P	22 45 33.2	+0.6
	comp=Z,18nm,0.9s,mb4.8						
EPF	Esparros	30.05	62	eP	P	22 45 33.1	-0.2
	comp=Z,54nm,1.2s,mb4.8						
EPF	Esparros	30.05	62	eP	P	22 45 33.1	-0.2
EPF				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.8						
EPF	Esparros	30.05	62	eP	P	22 45 33.1	-0.2
	comp=Z,27nm,1.2s,mb4.8						
GRR	Gorron	30.05	52	eP	P	22 45 32.9	-0.3
FLN	La Foliniere	30.38	51	eP	P	22 45 35.9	-0.2
	comp=Z,44nm,1.0s,mb4.8						
FLN				eMLR	MLR		
	comp=Z,762nm,22.0s,MS4.0						
FLN	La Foliniere	30.38	51	eP	P	22 45 35.9	-0.2
	comp=Z,22nm,1.0s,mb4.8						
FLN				LR	LR		
	comp=Z,760nm,22.0s,MS4.3						
FLN	La Foliniere	30.38	51	eP	P	22 45 35.9	-0.2
FLN				pmax	pmax		
	comp=Z,22nm,1.0s,mb4.8						
FLN				MLR	MLR		
	comp=Z,760nm,22.0s,MS4.3						
LFF	La Frestale	30.51	59	eP	P	22 45 36.7	-0.6
	comp=Z,60nm,1.1s,mb5.0						
LFF	La Frestale	30.51	59	eP	P	22 45 36.7	-0.6
LFF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
LFF	La Frestale	30.51	59	eP	P	22 45 36.7	-0.6
	comp=Z,30nm,1.1s,mb5.0						
EPOB	Poblet	30.53	66	P	P	22 45 37.6	+0.1
	comp=Z,18nm,0.9s,mb4.9						
LDF	La Druitiere	30.57	51	eP	P	22 45 37.3	-0.5
	comp=Z,104nm,1.2s,mb5.2						
LDF	La Druitiere	30.57	51	eP	P	22 45 37.3	-0.5
LDF				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.2						
LDF	La Druitiere	30.57	51	eP	P	22 45 37.3	-0.5
	comp=Z,52nm,1.2s,mb5.2						
CPD	Cerro la Pandu	30.62	245	eP	P	22 45 34.6	-3.9
SJG	San Juan	30.75	245	LR	LR	22 54 58.6	
	comp=Z,225nm,21.3s,MS3.8,baz=93,slow=30						
RJF	Les Rejaudoux	31.10	58	eP	P	22 45 41.7	-0.8
	comp=Z,48nm,1.2s,mb4.9						
RJF				eMLR	MLR		
	comp=Z,306nm,19.2s,MS3.7						
RJF	Les Rejaudoux	31.10	58	eP	P	22 45 41.7	-0.8
	comp=Z,24nm,1.2s,mb4.9						
RJF				LR	LR		
	comp=Z,310nm,19.3s,MS4.0						
RJF	Les Rejaudoux	31.10	58	eP	P	22 45 41.7	-0.8
RJF				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.9						
RJF				MLR	MLR		
	comp=Z,310nm,19.3s,MS4.0						
MTLF	Montolieu	31.44	62	eP	P	22 45 44.9	-0.6
	comp=Z,42nm,1.0s,mb4.9						
MTLF	Montolieu	31.44	62	eP	P	22 45 44.9	-0.6
MTLF				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.9						
MTLF	Montolieu	31.44	62	eP	P	22 45 44.9	-0.6
	comp=Z,21nm,1.0s,mb4.9						
CAF	Calviac	31.44	59	eP	P	22 45 44.8	-0.8
	comp=Z,23nm,1.1s,mb4.6						
CAF	Calviac	31.44	59	eP	P	22 45 44.8	-0.8
CAF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
CAF	Calviac	31.44	59	eP	P	22 45 44.8	-0.8
	comp=Z,11nm,1.1s,mb4.6						
BORG	Borgarnes	31.70	13	P	P	22 45 46.6	-0.9
	comp=Z,69nm,1.2s,mb5.4,baz=200,slow=6.7,SNR=4.8						
BORG				LR	LR	22 54 40.4	
	comp=Z,484nm,21.7s,MS4.1,baz=213,slow=29						
TCF	Toulx Ste Croi	31.70	56	eP	P	22 45 47.6	-0.2
	comp=Z,138nm,1.3s,mb5.3						
TCF	Toulx Ste Croi	31.70	56	eP	P	22 45 47.6	-0.2
TCF				pmax	pmax		
	comp=Z,69nm,1.3s,mb5.3						
TCF	Toulx Ste Croi	31.70	56	eP	P	22 45 47.6	-0.2
	comp=Z,69nm,1.3s,mb5.3						
EJON	La Jonquera	31.90	64	P	P	22 45 49.7	+0.1
	comp=Z,17nm,0.9s,mb4.9						
BGF	Bois d'Agland	32.17	56	eP	P	22 45 51.5	-0.5
PYM	Petit Puy Mans	32.19	57	eP	P	22 45 51.6	-0.5
LBL	Lubilhac	32.31	58	eP	P	22 45 53.7	+0.6
MENF	Mencas	32.49	48	eP	P	22 45 55.2	+0.5
AVF	Avril sur Loir	32.55	56	eP	P	22 45 54.4	-0.9
PLDF	La Plantade	32.64	57	eP	P	22 45 56.5	+0.5
LASF	Ste Croix	32.66	61	eP	P	22 45 56.2	-0.1
	comp=Z,127nm,1.3s,mb5.4						
LASF	Ste Croix	32.66	61	eP	P	22 45 56.2	-0.1
	comp=Z,64nm,1.3s,mb5.4						
SSF	Saint Saulge	32.69	55	eP	P	22 45 56.4	-0.1
	comp=Z,84nm,1.6s,mb5.1						
SSF	Saint Saulge	32.69	55	eP	P	22 45 56.4	-0.1
SSF				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.1						
SSF	Saint Saulge	32.69	55	eP	P	22 45 56.4	-0.1
	comp=Z,42nm,1.6s,mb5.1						
SMF	Signal de Mont	32.87	56	eP	P	22 45 57.7	-0.3

comp=Z,105nm,1.4s,mb5.3
SMF Signal de Mont 32.87 56 *e*P **P 22 45 57.7 -0.3**
SMF pmax pmax
comp=Z,52nm,1.4s,mb5.3
SMF Signal de Mont 32.87 56 *e*P **P 22 45 57.7 -0.3**
comp=Z,52nm,1.4s,mb5.3
LOR Lormes 32.96 55 *e*P **P 22 45 58.2 -0.6**
comp=Z,59nm,1.3s,mb5.1
LOR *e*MLR MLR
comp=Z,198nm,22.8s
LOR Lormes 32.96 55 *e*P **P 22 45 58.2 -0.6**
comp=Z,30nm,1.3s,mb5.1
LOR LR LR
comp=Z,200nm,22.8s,MS3.8
LOR Lormes 32.96 55 *e*P **P 22 45 58.2 -0.6**
LOR pmax pmax
comp=Z,30nm,1.3s,mb5.1
LOR MLR MLR
comp=Z,200nm,22.8s,MS3.8
VIVF Saint-Julien-l 33.29 59 *e*P **P 22 46 01.7 0.0**
comp=Z,164nm,1.9s,mb5.3
VIVF Saint-Julien-l 33.29 59 *e*P **P 22 46 01.7 0.0**
VIVF pmax pmax
comp=Z,82nm,1.9s,mb5.3
VIVF Saint-Julien-l 33.29 59 *e*P **P 22 46 01.7 0.0**
comp=Z,82nm,1.9s,mb5.3
SFJD Kangerlussuaq 33.48 350 P **P 22 46 02.5 -0.6**
comp=Z,16nm,1.1s,mb4.9,baz=141,slow=12,SNR=8.0
SFJD LR LR 22 56 17.5
comp=Z,873nm,20.9s,MS4.5,baz=146,slow=30
BAIF Baives 33.66 50 *e*P **P 22 46 04.3 -0.6**
comp=Z,143nm,1.1s,mb5.5
BAIF Baives 33.66 50 *e*P **P 22 46 04.3 -0.6**
BAIF pmax pmax
comp=Z,72nm,1.1s,mb5.5
BAIF Baives 33.66 50 *e*P **P 22 46 04.3 -0.6**
comp=Z,72nm,1.1s,mb5.5
SADO Sadowa 33.76 300 P **P 22 46 04.3 -1.5**
SNF Seneffe 33.80 49 P **P 22 46 06.0 -0.1**
comp=Z,55nm,1.4s,mb5.3
SMRF Simiane la Rot 33.90 61 *e*P **P 22 46 07.5 +0.5**
comp=Z,148nm,1.9s,mb5.3
SMRF Simiane la Rot 33.90 61 *e*P **P 22 46 07.5 +0.5**
comp=Z,74nm,1.9s,mb5.3
UCC Uccle 33.91 49 P **P 22 46 07.0 0.0**
comp=Z,68nm,1.1s,mb5.5
DOU Dourbes 33.91 50 P **P 22 46 06.5 -0.6**
MEZF Maizieres J'vi 33.93 53 *e*P **P 22 46 06.9 -0.4**
comp=Z,227nm,1.2s,mb5.7
MEZF Maizieres J'vi 33.93 53 *e*P **P 22 46 06.9 -0.4**
comp=Z,114nm,1.2s,mb5.7
GIVF Givet 34.06 50 *e*P **P 22 46 07.6 -0.7**
comp=Z,102nm,1.1s,mb5.4
GIVF Givet 34.06 50 *e*P **P 22 46 07.6 -0.7**
GIVF pmax pmax
comp=Z,51nm,1.1s,mb5.4
GIVF Givet 34.06 50 *e*P **P 22 46 07.6 -0.7**
comp=Z,51nm,1.1s,mb5.4
ORIF Oris-en-Rattie 34.15 59 *e*P **P 22 46 09.9 +0.7**
ORIF *e*MLR MLR
comp=Z,344nm,19.5s,MS3.8
CABF La Chapelle 34.40 56 *e*P **P 22 46 11.4 0.0**
comp=Z,195nm,1.7s,mb5.5
CABF La Chapelle 34.40 56 *e*P **P 22 46 11.4 0.0**
CABF pmax pmax
comp=Z,98nm,1.7s,mb5.5
CABF La Chapelle 34.40 56 *e*P **P 22 46 11.4 0.0**
comp=Z,98nm,1.7s,mb5.5
BCLA Clavier 34.42 49 P **P 22 46 11.5 0.0**
comp=Z,14nm,1.1s,mb4.8
THEF They Montfort 34.51 53 *e*P **P 22 46 12.6 +0.3**
LMR La Mourre 34.57 62 *e*P **P 22 46 12.7 -0.2**
FRF La Foret Royal 34.67 62 *e*P **P 22 46 13.5 -0.2**
comp=Z,42nm,1.2s,mb5.0
FRF La Foret Royal 34.67 62 *e*P **P 22 46 13.5 -0.2**
FRF pmax pmax
comp=Z,21nm,1.2s,mb4.9
FRF La Foret Royal 34.67 62 *e*P **P 22 46 13.5 -0.2**
comp=Z,21nm,1.2s,mb5.0
BNI Bardonecchia 34.72 59 *e*P **P 22 46 15.9 +1.8**
comp=Z,76nm,1.7s,mb5.3
BNI Bardonecchia 34.72 59 *e*P **P 22 46 15.9 +1.7**
BNI pmax pmax
comp=Z,76nm,1.7s,mb5.3
HAU Haudompre 34.72 54 *e*P **P 22 46 13.6 -0.5**
comp=Z,137nm,1.4s,mb5.4
HAU *e*MLR MLR
comp=Z,347nm,22.5s,MS3.7
HAU Haudompre 34.72 54 *e*P **P 22 46 13.6 -0.5**
comp=Z,69nm,1.4s,mb5.4
HAU LR LR
comp=Z,350nm,22.5s,MS4.0
HAU Haudompre 34.72 54 *e*P **P 22 46 13.6 -0.5**
HAU pmax pmax
comp=Z,69nm,1.4s,mb5.4
HAU MLR MLR
comp=Z,350nm,22.5s,MS4.0
BEBN Eben Emael 34.73 49 P **P 22 46 14.2 +0.1**
MBDF Montbardon 34.77 60 *e*P **P 22 46 15.4 +0.8**
comp=Z,44nm,1.2s,mb5.0
MBDF Montbardon 34.77 60 *e*P **P 22 46 15.4 +0.8**
MBDF pmax pmax
comp=Z,22nm,1.2s,mb5.0
MBDF Montbardon 34.77 60 *e*P **P 22 46 15.4 +0.8**
comp=Z,22nm,1.2s,mb5.0
LPL La Plagne 34.78 58 *e*P **P 22 46 15.3 +0.6**
comp=Z,36nm,1.2s,mb4.9
LPL La Plagne 34.78 58 *e*P **P 22 46 15.3 +0.6**
LPL pmax pmax
comp=Z,18nm,1.2s,mb4.9
LPL La Plagne 34.78 58 *e*P **P 22 46 15.3 +0.6**
comp=Z,18nm,1.2s,mb4.9
LPG La Plagne 34.79 58 *e*P **P 22 46 15.4 +0.6**
comp=Z,85nm,1.6s,mb5.1
LPG La Plagne 34.79 58 *e*P **P 22 46 15.4 +0.6**
LPG pmax pmax
comp=Z,42nm,1.6s,mb5.1
LPG La Plagne 34.79 58 *e*P **P 22 46 15.4 +0.6**
comp=Z,42nm,1.6s,mb5.1
WLF Walferdange 34.83 51 *e*P **P 22 46 11.5 -3.5**
WLF Walferdange 34.83 51 P **P 22 46 15.0 0.0**
comp=Z,47nm,1.3s,mb5.2
MEM Membach 34.90 49 P **P 22 46 15.6 0.0**
LOMF Lomont 34.97 55 *e*P **P 22 46 17.2 +0.9**
PZZ Prazzo 35.00 60 *i* Pu **P 22 46 17.9 +1.3**
HINF Hinteralfeld 35.04 54 *e*P **P 22 46 16.2 -0.7**
comp=Z,88nm,1.5s,mb5.2
HINF Hinteralfeld 35.04 54 *e*P **P 22 46 16.2 -0.7**
HINF pmax pmax
comp=Z,44nm,1.5s,mb5.2
HINF Hinteralfeld 35.04 54 *e*P **P 22 46 16.2 -0.7**
comp=Z,44nm,1.5s,mb5.2
DOI San Damiano 35.11 60 *i* Pu **P 22 46 19.2 +1.7**
comp=Z,82nm,1.2s,mb5.5
DOI San Damiano 35.11 60 *i* P **P 22 46 19.2 +1.7**
DOI pmax pmax
comp=Z,82nm,1.2s,mb5.5
MOF Molkenrain 35.23 54 *e*P **P 22 46 18.7 +0.2**
ECH Echery 35.28 54 *e*P **P 22 46 19.1 +0.1**
CDF Champ du Feu 35.38 53 *e*P **P 22 46 19.5 -0.4**
comp=Z,161nm,1.2s,mb5.5
CDF Champ du Feu 35.38 53 *e*P **P 22 46 19.5 -0.4**
CDF pmax pmax
comp=Z,81nm,1.2s,mb5.5
CDF Champ du Feu 35.38 53 *e*P **P 22 46 19.5 -0.4**
comp=Z,81nm,1.2s,mb5.5
RUP Ruppelstein 35.41 51 *e*P **P 22 46 20.6 +0.5**
BBS Basel-Blauen 35.45 55 *e*P **P 22 46 20.8 +0.4**
ORO Oropa 35.66 58 *i* Pu **P 22 46 23.5 +1.3**
ABH Alteburg 35.75 51 *e*P **P 22 46 24.1 +1.1**
LANF Langenberg 35.80 52 *e*P **P 22 46 24.1 +0.7**
FELD Feldberg im Sc 35.81 54 *e*P **P 22 46 23.7 +0.1**
BUG Bochum-Univer 35.84 48 *e*P **P 22 46 23.8 +0.1**
comp=Z,44nm,1.1s,mb5.3
BFO Black Forest 36.08 54 P **P 22 46 26.8 +1.0**
comp=Z,235nm,1.3s,mb6.0,SNR=9.5
BFO Black Forest 36.08 54 *e*P **P 22 46 25.9 +0.1**
BFO pmax pmax
comp=Z,87nm,1.3s,mb5.5
BFO Black Forest 36.08 54 *e*P **P 22 46 25.9 +0.1**
comp=Z,87nm,1.3s,mb5.5
VAI Varese 36.22 58 *i* Pu **P 22 46 28.0 +1.0**
IBBN Ibbenburen 36.30 47 *e*P **P 22 46 27.2 -0.4**
comp=Z,59nm,1.2s,mb5.4
SPAK Spaichingen-Ko 36.36 54 *e*P **P 22 46 29.1 +0.9**
TNS Taunus Mts 36.37 50 *e*P **P 22 46 28.9 +0.6**
TNS pmax pmax
comp=Z,65nm,1.3s,mb5.4
TNS Taunus Mts 36.37 50 *e*P **P 22 46 28.9 +0.6**
comp=Z,65nm,1.3s,mb5.4
TOD Tromm 36.52 51 *e*P **P 22 46 29.9 +0.3**
STU Stuttgart 36.69 53 *e*P **P 22 46 31.1 +0.1**
comp=Z,56nm,1.1s,mb5.3
VSL Villasalto 36.97 68 *e*P **P 22 46 33.2 -0.3**
comp=Z,47nm,1.2s,mb5.2
DAVA Damuels 37.04 55⇓ *i*P **P 22 46 35.0 +0.9**
comp=Z,36nm,1.2s,mb5.1
DAVA Damuels 37.04 55⇓ *i*pP pP 22 46 35.0 -1.3
comp=Z,36nm,1.2s
BRMO Bormio 37.35 57 P **P 22 46 37.7 +1.0**
GSCL Gusciola 37.50 60 P **P 22 46 38.7 +0.7**
comp=Z,117nm,2.6s,mb5.2
KEST Kesra 37.57 75 P **P 22 46 38.2 -0.4**
comp=Z,5.8nm,1.2s,mb4.2,baz=111,slow=4.9,SNR=9.1
KEST LR LR 22 59 48.5
comp=Z,68nm,18.7s,baz=317,slow=33
FETA Feichten 37.61 56⇑ *i*pP pP 22 46 39.9 -1.2
comp=Z,26nm,1.3s
RETA Reutte 37.65 55⇑ *i*P **P 22 46 39.9 +0.7**
comp=Z,49nm,1.2s,mb5.1
TZTN Tazewell 37.73 287 *e*P **P 22 46 40.9 +0.9**
NRDL Niedersach Rie 37.75 47 *e*P **P 22 46 40.4 +0.4**
comp=Z,58nm,1.3s,mb5.2
CLZ Clausthal 37.81 48 *e*P **P 22 46 40.6 +0.1**
CLZ pmax pmax
comp=Z,67nm,1.1s,mb5.3
CLZ Clausthal 37.81 48 *e*P **P 22 46 40.6 +0.1**
comp=Z,67nm,1.1s,mb5.3
GRFL Gerfalco 37.83 62 *i* Pu **P 22 46 41.2 +0.4**
MOTA Moosalm 37.88 55⇑ *i*P **P 22 46 41.5 +0.4**
comp=Z,62nm,1.3s,mb5.2
MOTA Moosalm 37.88 55⇑ *i*P **P 22 46 41.5 +0.4**
MOTA pmax pmax
comp=Z,62nm,1.3s,mb5.2
SQTA Sankt Quirin 37.94 56⇑ *i*P **P 22 46 42.1 +0.4**
comp=Z,66nm,1.2s,mb5.2
SQTA Sankt Quirin 37.94 56⇑ *i*P **P 22 46 42.1 +0.4**
SQTA pmax pmax
comp=Z,67nm,1.2s,mb5.2
FUR Furstenfeldbru 38.03 54 *e*P **P 22 46 42.3 -0.1**
FUR pmax pmax
comp=Z,91nm,1.8s,mb5.2
FUR Furstenfeldbru 38.03 54 *e*P **P 22 46 42.3 -0.1**
comp=Z,91nm,1.8s,mb5.2
TKL Tuckaleechee C 38.09 286 P **P 22 46 41.5 -1.6**
comp=Z,16nm,1.1s,mb4.7,baz=88,slow=11,SNR=6.7
GRFO Grafenberg 38.09 52 *e*P **P 22 46 43.3 +0.4**
comp=Z,40nm,1.0s,mb5.1
GRFO Grafenberg 38.09 52 *e*P **P 22 46 43.3 +0.4**
GRFO pmax pmax
comp=Z,40nm,1.0s,mb5.1
GRA1 Grafenberg Arr 38.09 52 *e*P **P 22 46 43.0 +0.1**
comp=Z,72nm,1.1s,mb5.3
GRA1 LR LR
comp=Z,200nm,21.2s,MS3.9
GRF Grafenberg Arr 38.09 52 *e*P **P 22 46 43.0 +0.1**
GRF pmax pmax
comp=Z,72nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,200nm,21.2s,MS3.9
GRF Grafenberg Arr 38.09 52 *e*P **P 22 46 43.0 +0.1**
GRF pmax pmax
comp=Z,72nm,1.1s,mb5.3
GRF MLR MLR
comp=Z,200nm,21.2s,MS3.9
GRF Grafenberg Arr 38.09 52 *e*P **P 22 46 43.0 +0.1**
comp=Z,72nm,1.1s,mb5.3
GRF *e*L 22 58 39.1
comp=Z,240nm,21.2s
BSEG Bad Segeberg 38.13 45 *e*P **P 22 46 43.4 +0.2**
BSEG pmax pmax
comp=Z,106nm,1.0s,mb5.5
BSEG Bad Segeberg 38.13 45 *e*P **P 22 46 43.4 +0.2**
comp=Z,106nm,1.0s,mb5.5
WATA Walderalm 38.20 55⇓ *i*P **P 22 46 44.3 +0.5**
comp=Z,51nm,1.1s,mb5.2
WATA Walderalm 38.20 55⇓ *i*P **P 22 46 44.3 +0.5**
WATA pmax pmax
comp=Z,51nm,1.1s,mb5.2
CTI Castel Tesino 38.23 58 P **P 22 46 43.9 -0.2**
WTTA Wattenberg 38.23 56⇓ *i*P **P 22 46 44.9 +0.8**
comp=Z,86nm,1.3s,mb5.3
WTTA Wattenberg 38.23 56⇓ *i*pP pP 22 46 44.9 -1.5
comp=Z,86nm,1.3s
WTTA Wattenberg 38.23 56⇓ *i*P **P 22 46 44.9 +0.8**
WTTA pmax pmax
comp=Z,86nm,1.3s,mb5.3
MOX Moxa 38.44 50 *e*P **P 22 46 46.1 +0.3**
comp=Z,56nm,1.4s,mb5.1
MOX
comp=Z,300nm,18.0s
MOX Moxa 38.44 50 *e*P **P 22 46 46.1 +0.3**
MOX pmax pmax
comp=Z,56nm,1.4s,mb5.1
MOX MLR MLR
comp=Z,300nm,18.0s,MS4.2
MOX Moxa 38.44 50 *e*P **P 22 46 45.2 -0.6**
comp=Z,38nm,1.2s,mb5.0
MANZ Manzenberg 38.69 51 *e*P **P 22 46 47.4 -0.5**
comp=Z,38nm,1.1s,mb5.0
ROTZ Rotzenmuhle 38.74 52 *e*P **P 22 46 48.2 -0.1**
comp=Z,54nm,1.9s,mb5.0
ABTA Abfaltersbach 38.83 56⇑ *i*P **P 22 46 49.5 +0.4**
comp=Z,72nm,1.1s,mb5.3
WERD Werda 38.86 50 *e*P **P 22 46 49.2 -0.1**
comp=Z,40nm,1.3s,mb5.0
GUNZ Gunzen 38.87 51 *e*P **P 22 46 49.4 0.0**
comp=Z,44nm,1.2s,mb5.1
WERN Wernitzgruen 38.89 51 *e*P **P 22 46 49.8 +0.2**
comp=Z,60nm,1.2s,mb5.2
NKC Novy Kostel 38.93 51 *e*P **P 22 46 50.4 +0.5**
TANN Tannenbergstha 38.95 51 *e*P **P 22 46 50.4 +0.3**
comp=Z,35nm,1.4s,mb4.9
FVI Forni Avoltri 39.01 57 *i* Pu **P 22 46 50.9 +0.2**
FSSB Fossombrone 39.11 61 *i* Pu **P 22 46 50.7 -0.8**
comp=Z,1.8nm,0.2s,mb4.5
WET Wettzell 39.14 53 *e*P **P 22 46 51.4 -0.3**
WET pmax pmax
comp=Z,39nm,1.2s,mb5.0
WET Wettzell 39.14 53 *e*P **P 22 46 51.4 -0.3**
comp=Z,39nm,1.2s,mb5.0
KONO Kongsberg 39.22 36 *e*P **P 22 46 53.1 +0.8**
KONO Kongsberg 39.22 36⇑ *e*P **P 22 46 54.4 +2.1**
SNTG Esanatoglia 39.26 62 *i* Pu **P 22 46 52.6 -0.2**
CLL Collm 39.37 49⇓ *i*P **P 22 46 53.4 -0.2**
comp=Z,43nm,1.1s,mb5.1
CLL LR LR
comp=Z,300nm,20.9s,MS4.1
CLL Collm 39.37 49⇓ *i*P **P 22 46 53.4 -0.2**
CLL pmax pmax
comp=Z,43nm,1.1s,mb5.1
CLL MLR MLR
comp=Z,300nm,20.9s,MS4.1
CLL Collm 39.37 49⇓ *i*P **P 22 46 53.4 -0.2**
comp=Z,43nm,1.1s,mb5.1
CLL Lm 22 59 00.0
comp=Z,300nm,20.9s
CLL Collm 39.37 49 *e*P **P 22 46 53.5 -0.1**
comp=Z,44nm,1.1s,mb5.1
KBA Koelnbreinsper 39.40 56⇓ *i*P **P 22 46 54.1 +0.2**
comp=Z,53nm,1.2s,mb5.1
KBA Koelnbreinsper 39.40 56⇓ *i*P **P 22 46 54.1 +0.2**
KBA pmax pmax
comp=Z,53nm,1.3s,mb5.1
PTCC Patocco-Chiusa 39.41 57 P **P 22 46 53.5 -0.5**
NRCA Norcia 39.42 63 *i* Pu **P 22 46 53.9 -0.3**
comp=Z,4.2nm,1.1s,mb4.1
FBE Freiberg 39.56 50 *e*P **P 22 46 54.8 -0.4**
comp=Z,56nm,1.1s,mb5.2
KHC Kasperske Hory 39.60 53 *e*P **P 22 46 55.5 0.0**
GEC2 GERESS Array S 39.67 53 *e*P **P 22 46 55.6 -0.5**
GEC2 pmax pmax
comp=Z,31nm,1.1s,mb5.0
GEC2 GERESS Array S 39.67 53 *e*P **P 22 46 55.6 -0.5**
comp=Z,31nm,1.1s,mb5.0
GERES GERESS Array B 39.67 53 P **P 22 46 56.3 +0.2**
comp=Z,14nm,0.9s,mb4.7,baz=263,slow=6.6,SNR=81
GERES LR LR 22 59 58.6
comp=Z,154nm,20.5s,MS3.8,baz=269,slow=31
AQU L'Aquila 39.68 63 *e*P **P 22 46 56.9 +0.6**
comp=Z,44nm,0.9s,mb5.2
AQU L'Aquila 39.68 63 *e*P **P 22 46 56.9 +0.6**
AQU pmax pmax
comp=Z,44nm,0.9s,mb5.2
AQU L'Aquila 39.68 63⇓ *i*P **P 22 46 57.0 +0.7**
PTQR Pietraquaria 39.71 64 P **P 22 46 57.0 +0.4**
VOY Vojsko 39.79 58 *e*P **P 22 46 56.7 -0.5**
GORS Gorjuse 39.86 57 *e*P **P 22 46 57.2 -0.5**
SWET Sewanee 39.91 285 *e*P **P 22 46 59.1 +0.9**
JAVS Javornik 39.92 58 *i* P **P 22 46 57.9 -0.3**
BRG Berggiesshubel 39.93 50 *i* P **P 22 46 57.8 -0.5**
BRG pmax pmax
comp=Z,21nm,1.2s,mb4.7
BRG Berggiesshubel 39.93 50 *e*P **P 22 46 58.2 -0.1**
comp=Z,36nm,1.2s,mb5.0
BRG Berggiesshubel 39.93 50 *i* P **P 22 46 57.8 -0.5**
comp=Z,36nm,1.2s,mb5.0
RUE Ruedersdorf 39.97 47 *e*P **P 22 46 58.4 -0.2**
comp=Z,16nm,0.5s,mb5.0
RUE Ruedersdorf 39.97 47 *e*P **P 22 46 58.6 0.0**
comp=Z,66nm,1.3s,mb5.2
MOA Molln 40.02 55⇓ *i*P **P 22 46 58.9 -0.2**
comp=Z,50nm,1.2s,mb5.1
SDI San Donato 40.05 64 P **P 22 46 59.4 0.0**
SDV Santo Domingo 40.09 238 *e*P **P 22 47 00.6 +0.6**
RCBR Riachuelo 40.15 178 P **P 22 46 59.8 -0.6**
LJU Ljubljana 40.23 57 *i* P **P 22 47 00.8 0.0**
OBKA Obir 40.23 57⇓ *i*P **P 22 47 00.7 -0.1**
comp=Z,74nm,0.9s,mb5.4
PRU Pruhonice 40.26 51 *e*P **P 22 47 01.7 +0.7**
PVCC Panska Ves 40.30 51 *e*P **P 22 47 01.4 0.0**
TIC Toumodi 40.42 126 *e*P **P 22 47 00.4 -2.3**
comp=Z,11nm,0.2s,mb5.2
NB2 NORSAR Subarra 40.43 34 P **P 22 47 02.0 -0.3**
comp=Z,31nm,1.1s,mb5.0,baz=252,slow=8.6
NB2 NORSAR Subarra 40.43 34 P **P 22 47 02.0 -0.3**
NB2 pmax pmax
comp=Z,31nm,1.1s,mb5.0
NOA NORSAR Array B 40.43 34 P **P 22 47 02.4 +0.1**
NOA 22 49 03.7
NOA NORSAR Array B 40.43 34 P **P 22 47 02.4 +0.1**
comp=Z,28nm,1.2s,mb4.9,baz=252,slow=8.5,SNR=14
NOA PcP PcP 22 49 03.6 -1.4
comp=Z,1.1nm,0.8s,baz=250,slow=5.2,SNR=3.5
NOA LR LR 23 00 50.9
comp=Z,197nm,18.2s,MS4.0,baz=275,slow=32
PERS Pernice 40.62 57 *i* P **P 22 47 02.9 -1.2**
LIC Lamto 40.73 126 *e*P **P 22 47 03.2 -2.1**
comp=Z,52nm,1.1s,mb4.8
LIC *e*MLR MLR
comp=Z,1μm,20.2s,MS4.4
LIC Lamto 40.73 126 *e*P **P 22 47 03.0 -2.3**
comp=Z,60nm,1.1s,mb5.1
LIC Lamto 40.73 126 *e*P **P 22 47 03.2 -2.1**
comp=Z,26nm,1.1s,mb4.8
LIC LR LR
comp=Z,560nm,20.3s,MS4.4
BOJS Bojanci 40.77 58 *e*P **P 22 47 05.4 +0.1**
GIB Gibilmanna 40.80 70 P **P 22 47 05.5 -0.1**
comp=Z,41nm,1.0s,mb5.0
GIB Gibilmanna 40.80 70 P **P 22 47 05.5 -0.1**
GIB pmax pmax
comp=Z,41nm,1.0s,mb5.0
KIC Kosan Boka 40.82 126 *e*P **P 22 47 02.8 -3.2**
comp=Z,95nm,0.9s,mb5.4
TREC Trest 40.85 52 *e*P **P 22 47 06.1 +0.2**
TOA0 Torodi Ar. Sit 40.88 112 *e*P **P 22 47 05.6 -0.9**
TORD Torodi Ar. Bea 40.88 112 P **P 22 47 05.5 -0.9**
comp=Z,23nm,1.1s,mb4.7,baz=307,slow=5.1,SNR=64
TORD PcP PcP 22 49 04.6 -2.6
comp=Z,1.7nm,1.0s,baz=311,slow=5.3,SNR=3.0
TORD LR LR 23 02 33.2
comp=Z,1μm,19.7s,MS4.8,baz=300,slow=34
ARSA Arzberg 40.88 56⇑ *i*P **P 22 47 05.6 -0.7**
comp=Z,31nm,1.1s,mb4.9
CSSN Cassano Irpino 41.07 65 *i* Pu **P 22 47 08.4 +0.6**
comp=Z,33nm,1.0s,mb4.9
CONA Conrad Observa 41.10 55⇑ *i*P **P 22 47 07.8 -0.2**
comp=Z,20nm,1.1s,mb4.7
UPC Upice 41.22 51 *e*P **P 22 47 09.1 +0.1**
LRAL Lakeview Retre 41.32 283 *e*P **P 22 47 10.6 +0.6**
comp=Z,93nm,2.1s,mb5.0
SGO Sicignano 41.33 66 *i* Pu **P 22 47 10.7 +0.7**
KSP Ksiaz 41.41 50 *e*P **P 22 47 10.7 +0.2**
KSP Ksiaz 41.41 50 *e*P **P 22 47 10.5 0.0**
DPC Dobruska-Polom 41.42 51 *e*P **P 22 47 09.5 -1.1**
VRAC Vranov 41.58 52⇑ *i*P **P 22 47 12.1 +0.2**
VRAC Vranov 41.58 52 *e*P **P 22 47 11.6 -0.3**
MGR Morigerati 41.58 66 P **P 22 47 12.1 0.0**
comp=Z,114nm,1.1s,mb5.4
PLAL Pickwick Lake 41.67 286 *e*P **P 22 47 13.0 +0.1**
comp=Z,130nm,2.2s,mb5.2
ZST Bratislava 41.93 54 *e*P **P 22 47 14.3 -0.5**
comp=Z,17nm,1.1s,mb4.6
ZST *e* 22 52 07.2
ZST LR LR
comp=Z,200nm,20.8s,MS4.0
ZST Bratislava 41.93 54 *e*P **P 22 47 14.3 -0.5**
ZST *e* 22 52 07.2
ZST Bratislava 41.93 54 *e*P **P 22 47 14.3 -0.5**
comp=Z,17nm,1.1s,mb4.6
SIUC Southern Illin 41.93 290 *e*P **P 22 47 15.7 +0.7**
GKP Gorka Klasztor 42.13 47 *e*P **P 22 47 17.0 +0.6**
SMOL Smolenice 42.13 54 *e*P **P 22 47 16.3 -0.2**
MORC Moravsky Berou 42.20 52 P **P 22 47 17.7 +0.8**
MORC Moravsky Berou 42.20 52⇑ *i*P **P 22 47 17.2 +0.3**
MORC Moravsky Berou 42.20 52 *e*P **P 22 47 16.8 -0.1**
GLAT Glass 42.31 288 *e*P **P 22 47 24.1 +6.1**
OKC Ostrava-Krasne 42.59 52 *e*P **P 22 47 20.3 +0.2**
TIP Timpagrande 42.67 67 *e*P **P 22 47 19.6 -1.4**
KOLL Kolacno 42.78 54 *i* P **P 22 47 21.5 -0.2**
FVM French Village 42.81 291 *e*P **P 22 47 22.6 +0.5**
PKSG 42.83 55⇑ *i*P **P 22 47 21.8 -0.3**
RHK3 Tenkes 42.84 57⇑ *i*P **P 22 47 22.1 -0.1**
OXF Oxford 42.85 286 *e*P **P 22 47 22.8 +0.3**
comp=Z,54nm,1.1s,mb5.2
OXF Oxford 42.85 286 *e*P **P 22 47 22.8 +0.3**
OXF pmax pmax
comp=Z,54nm,1.1s,mb5.2
GNAR Gosnell 42.96 288 P **P 22 47 24.3 +1.0**
VYHS Vyhne 43.07 54 *i* P **P 22 47 23.6 -0.5**
VYHS pmax pmax
comp=Z,15nm,1.2s,mb4.6
VYHS Vyhne 43.07 54 *i* P **P 22 47 23.6 -0.5**
comp=Z,15nm,1.2s,mb4.6
PKSM Moragy 43.08 57 P **P 22 47 24.1 0.0**
PKSM Moragy 43.08 57⇑ *i*P **P 22 47 24.2 0.0**
DAG Danmarks Havn 43.14 6⇑ *i*P **P 22 47 24.1 -0.2**
DAG pmax pmax
comp=Z,23nm,0.7s,mb5.0
DAG Danmarks Havn 43.14 6⇑ *i*P **P 22 47 24.1 -0.2**
comp=Z,23nm,0.7s,mb5.0
PENC Penc 43.41 55⇑ *i*P **P 22 47 27.0 +0.2**
OJC Ojcow 43.65 51 *e*P **P 22 47 28.4 -0.3**
PSZ Piszkesteto 43.81 54 *e*P **P 22 47 29.9 -0.2**
comp=Z,61nm,1.4s,mb5.1
PSZ Piszkesteto 43.81 54 P **P 22 47 30.5 +0.5**
PSZ Piszkesteto 43.81 54⇑ *i*P **P 22 47 30.2 +0.2**
FGSL Fruska Gora 44.00 58 P **P 22 47 31.6 0.0**
NIE Niedzica 44.01 52 *e*P **P 22 47 32.9 +1.3**
KECS Kecovo 44.17 54 *e*P **P 22 47 32.6 -0.3**
comp=Z,8.5nm,1.3s,mb4.3
KECS Kecovo 44.17 54 *e*P **P 22 47 32.6 -0.3**
KECS pmax pmax
comp=Z,9.0nm,1.3s,mb4.3
DIVS Divcibare 44.26 60 P **P 22 47 33.2 -0.5**
FCC Fort Churchill 44.38 321 *e*P **P 22 47 34.8 +0.3**
comp=Z,56nm,1.4s,mb5.1
FCC Fort Churchill 44.38 321 *e*P **P 22 47 34.8 +0.3**
FCC pmax pmax
comp=Z,57nm,1.4s,mb5.1
STHS Stebnicka Huta 44.61 52 *i* P **P 22 47 37.9 +1.4**
STHS pmax pmax
comp=Z,26nm,1.1s,mb5.0
STHS Stebnicka Huta 44.61 52 *i* P **P 22 47 37.9 +1.4**
comp=Z,26nm,1.1s,mb5.0
CRVS Cervenica-Dubn 44.79 53 *i* P **P 22 47 38.0 +0.2**
GRUS Gruza 44.80 60 P **P 22 47 36.1 -2.0**
ULM Lac du Bonnet 45.11 309 P **P 22 47 38.9 -1.5**
comp=Z,12nm,1.1s,mb4.6,baz=111,slow=5.1,SNR=10
ULM LR LR 23 06 22.7
comp=Z,1μm,18.7s,MS4.8,baz=312,slow=36
BZS Buzias 45.21 58 P **P 22 47 41.7 +0.4**
BZS Buzias 45.21 58⇑ *i*P **P 22 47 42.0 +0.8**
AGMN Agassiz Refuge 45.23 306 *e*P **P 22 47 41.2 -0.2**
KOLS Kolonicke sedl 45.32 53 *e*P **P 22 47 43.0 +0.9**
UZH Uzhgorod 45.35 53 *c i*P **P 22 47 42.2 -0.2**
ROSC El Rosal 45.51 238 P **P 22 47 43.5 -0.5**

comp=Z,2.1nm,0.3s,mb4.5,baz=106,slow=23,SNR=7.7
ROSC LR LR 23 04 04.1

comp=Z,287nm,21.9s,MS4.2,baz=17,slow=33
KWP Kalwaria 45.55 52 *eP* **P 22 47 44.8 +0.9**
KWP Kalwaria 45.55 52⇑*iP* **P 22 47 45.0 +1.1**
KRUS Krusevo 45.62 63 *iP* **P 22 47 45.5 +0.9**
KRUS Krusevo 45.62 63 *iP* **P 22 47 45.4 +0.8**
SKO Skopje 45.65 63 *iP* **P 22 47 45.2 +0.5**
SUW Suwalki 45.69 46 *eP* **P 22 47 44.4 -0.6**
BIA Bitola 45.74 64 *iP* **P 22 47 45.7 +0.2**
DRGR 45.82 56 P **P 22 47 46.2 +0.2**
DRGR 45.82 56⇑*iP* **P 22 47 46.3 +0.2**
GZR Gura Zlata 46.05 58 P **P 22 47 48.5 +0.7**
GZR Gura Zlata 46.05 58⇓*iP* **P 22 47 47.4 -0.5**
MIAR Mount Ida 46.14 287 *eP* **P 22 47 49.0 +0.2**
comp=Z,51nm,1.4s,mb5.3
MIAR Mount Ida 46.14 287 *eP* **P 22 47 49.0 +0.2**
MIAR pmax pmax

comp=Z,51nm,1.4s,mb5.3
STIP Stip 46.25 63 *iP* **P 22 47 49.0 -0.6**
STIP Stip 46.25 63 *iP* **P 22 47 48.9 -0.6**
ECSD EROS,Sioux Fal 46.33 300 *eP* **P 22 47 49.5 -0.7**
LVV L'vov 46.39 51⇓*iP* **P 22 47 50.9 +0.3**
LVV *eS* **S 22 54 43.1 +4.8**
LVV MLR MLR

comp=Z,200nm,16.0s,MS4.2
VAY Valandovo 46.60 63 *iP* **P 22 47 52.0 -0.3**
VAY Valandovo 46.60 63 *iP* **P 22 47 52.0 -0.3**
VTS Vitosha 46.82 61⇓**P P 22 47 54.7 +0.7**
VTS Vitosha 46.82 61 P **P 22 47 59.8 +5.8**
VTS Vitosha 46.82 61⇓*iP* **P 22 47 54.7 +0.7**
KKB Krupnik 46.87 62 P **P 22 47 54.2 -0.2**
KSU1 Kansas State U 47.28 294 *eP* **P 22 47 57.4 -0.3**
comp=Z,25nm,1.0s,mb5.1
MMB Musomiste 47.40 63 P **P 22 47 59.6 +1.1**
BURAR Bucovina Array 47.41 54⇑**P P 22 47 59.2 +0.7**
BURAR Bucovina Array 47.41 54⇑*iP* **P 22 47 59.3 +0.7**
FINES FINESS Array B 47.54 35 P **P 22 47 58.3 -1.0**
comp=Z,6.2nm,0.8s,mb4.7,baz=250,slow=5.5,SNR=21
FINES LR LR 23 05 43.1

comp=Z,118nm,19.4s,MS3.9,baz=155,slow=33
VOIR 47.62 57 P **P 22 48 00.6 +0.4**
VOIR 47.62 57⇓*iP* **P 22 48 01.4 +1.2**
KAF Kangasniemi 47.70 35 *eP* **P 22 47 58.6 -2.0**
comp=Z,30nm,0.9s,mb5.3,baz=264,slow=7.8
KAF Kangasniemi 47.70 35 *eP* **P 22 47 58.6 -2.0**
KAF pmax pmax

comp=Z,31nm,0.9s,mb5.3
PVL Pavlikeni 48.23 60 *eP* **P 22 48 04.5 -0.4**
MLR Muntele Rosu 48.23 57⇓*iP* **P 22 48 05.8 +0.8**
ARCES ARCESS Array B 48.49 25 P **P 22 48 05.8 -0.9**
comp=Z,13nm,0.9s,mb4.9,baz=248,slow=6.4,SNR=13
ARCES LR LR 23 03 02.7

comp=Z,156nm,21.1s,MS4.0,baz=279,slow=29
FFC Flin Flon 48.59 315 P **P 22 48 07.1 -0.5**
comp=Z,91nm,1.4s,mb5.6,SNR=11
FFC Flin Flon 48.59 315 *eP* **P 22 48 07.8 +0.2**
KDZ Kurdzhali 48.62 62 P **P 22 48 07.6 -0.4**
PLOR Plostina 48.66 56⇑*iP* **P 22 48 08.1 -0.1**
RES Resolute Bay 48.69 343 *eP* **P 22 48 08.4 +0.4**
VRI Vrincioaia 48.71 56⇓**P P 22 48 08.8 +0.2**
VRI Vrincioaia 48.71 56⇓*iP* **P 22 48 08.8 +0.2**
ALE Alert 48.91 356 P **P 22 48 09.0 -0.7**
comp=Z,158nm,1.5s,mb5.8,SNR=14
KEV Kevo 49.05 24 *ep* **P 22 48 10.7 -0.2**
comp=Z,6.2nm,0.8s,mb4.7
KEV Kevo 49.05 24 *eP* **P 22 48 10.7 -0.2**
KEV pmax pmax

comp=Z,6.0nm,0.8s,mb4.7
HKT Hockley 49.46 282 *eP* **P 22 48 13.8 -0.7**
comp=Z,38nm,1.8s,mb5.1
HKT *ePcP* PcP 22 49 37.2 +0.5
HKT Hockley 49.46 282 *eP* **P 22 48 13.9 -0.7**
HKT *e* 22 49 37.2
HKT pmax pmax

comp=Z,38nm,1.8s,mb5.1
AKASG Malin Array Be 49.61 50 P **P 22 48 14.3 -1.1**
comp=Z,43nm,1.1s,mb5.4,baz=273,slow=7.7,SNR=30
AKBB Malin Array Si 49.61 50 *eP* **P 22 48 14.7 -0.8**
CBKS Cedar Bluff 49.71 294 *eP* **P 22 48 16.2 -0.1**
APE Apeiranthos 49.89 68⇓*eP* **P 22 48 17.4 -0.4**
KIS Kishinev 49.93 55 *eP* **P 22 48 15.0 -2.9**
KIS *e* 22 55 30.0
KIS MLR MLR

comp=Z,200nm,19.0s,MS4.1
JTS JuntasAbangare 49.97 253⇑*eP* **P 22 48 17.7 -0.9**
SANT Santorini 50.04 69 *eP* **P 22 48 18.9 0.0**
JOF Joensuu 50.06 34 *ep* **P 22 48 17.5 -1.2**
comp=Z,34nm,1.0s,mb5.3
JOF Joensuu 50.06 34 *eP* **P 22 48 17.5 -1.2**
JOF pmax pmax

comp=Z,34nm,1.0s,mb5.3
TIRR Tirgusor 50.15 58⇑**P P 22 48 19.1 -0.6**
TIRR Tirgusor 50.15 58⇑*iP* **P 22 48 19.0 -0.7**
WMOK Wichita Mounta 50.17 289 *eP* **P 22 48 19.3 -0.7**
DGMT Dagmar 50.71 308 *eP* **P 22 48 24.5 +0.6**
comp=Z,40nm,1.4s,mb5.2
APA Apatity 51.11 28⇓*iP* **P 22 48 26.0 -0.6**
APA pmax pmax

comp=Z,54nm,1.2s,mb5.3
OTAV Otavalo 51.67 238 *eP* **P 22 48 31.4 0.0**
comp=Z,44nm,1.4s,mb5.2
GDZ Gediz 52.28 64 *iP* **P 22 48 34.4 -1.3**
AMTX Amarillo 52.38 290 *eP* **P 22 48 36.4 -0.2**
LAO LASA Array 52.42 306 *eP* **P 22 48 36.6 0.0**
comp=Z,41nm,1.4s,mb5.2
JCT Junction City 52.45 284 *eP* **P 22 48 36.6 -0.5**
comp=Z,36nm,1.3s,mb5.1
JCT Junction City 52.45 284 *eP* **P 22 48 36.6 -0.5**
JCT pmax pmax

comp=Z,36nm,1.3s,mb5.1
GOLH Golhisar 52.91 67 *iP* **P 22 48 36.6 -3.8**
TMCR Tamitsa 53.04 32 *eP* **P 22 48 31.2 -10**
OBN Obninsk 53.36 43 P **P 22 48 43.8 +0.4**
comp=Z,510nm,1.4s,mb6.3,SNR=6.2
OBN Obninsk 53.36 43 *eP* **P 22 48 43.4 -0.1**
OBN Obninsk 53.36 43*dP* **P 22 48 42.5 -0.9**
OBN *i* 22 49 50.7
OBN *e* 22 50 43.6
OBN pmax pmax

comp=Z,193nm,1.6s,mb5.8
ISP Isparta 53.43 66 P **P 22 48 43.0 -1.2**
ISCO Idaho Springs 53.80 297 *eP* **P 22 48 47.2 +0.3**
comp=Z,38nm,1.7s,mb5.0
ISCO Idaho Springs 53.80 297 *eP* **P 22 48 47.2 +0.3**
ISCO pmax pmax

comp=Z,38nm,1.7s,mb5.0
MOS Moscow 53.85 42 *eP* **P 22 48 46.2 -0.8**
MOS pmax pmax

comp=Z,88nm,1.5s,mb5.5
SIM Simferopol' 53.98 56⇓*eP* **P 22 48 48.9 +0.7**
SIM S **S 22 56 17.0 -7.2**
SIM pmax pmax

comp=Z,31nm,1.2s,mb5.1
SIM MLR MLR

comp=Z,140nm,16.0s,MS4.1
SDCO Great Sand Dun 54.36 295 *eP* **P 22 48 51.5 +0.4**
comp=Z,49nm,2.0s,mb5.1
EGMT Eagleton 54.44 308 *eP* **P 22 48 51.1 -0.4**
comp=Z,33nm,1.4s,mb5.1
EGMT Eagleton 54.44 308⇑**P P 22 48 51.1 -0.3**
baz=54,SNR=6.0
YKW3 Yellowknife Ar 54.45 326 *eP* **P 22 48 50.8 -0.5**
YKA Yellowknife Ar 54.46 326 P **P 22 48 50.8 -0.5**
YKA PcP PcP 22 49 53.9 -1.0
YKA LR LR 23 11 16.1
YKA Yellowknife Ar 54.46 326 P **P 22 48 50.8 -0.5**
YKA 22 49 53.9
YKA Yellowknife Ar 54.46 326 P **P 22 48 50.8 -0.5**
comp=Z,7.5nm,1.0s,mb4.6,baz=83,slow=7.3,SNR=52
YKA PcP PcP 22 49 53.8 -1.0

comp=Z,3.5nm,0.9s,baz=79,slow=4.5,SNR=10
YKA LR LR 23 11 16.1

comp=Z,350nm,19.0s,MS4.5,baz=100,slow=35
RLMT Red Lodge 54.86 304 *eP* **P 22 48 54.7 +0.1**
BRTR Keskin Array B 55.16 62 LR LR 23 12 25.1
comp=Z,70nm,19.1s,MS3.8,baz=318,slow=36
GDL2 Guadalupe Moun 55.43 288 *eP* **P 22 48 58.9 +0.1**
VRSR Storozhevoye 55.70 48 *eP* **P 22 48 59.8 -0.7**
VRSR pmax pmax

comp=Z,5.0nm,1.2s,mb4.4
VRSR pmax pmax

comp=N,4.0nm,1.0s
VRSR pmax pmax

comp=E,6.0nm,1.0s
PDAR Pinedale Array 55.74 302 P **P 22 49 00.2 -0.7**
comp=E,11nm,1.1s,mb4.8,baz=77,slow=6.4,SNR=26
PDAR LR LR 23 11 51.2

comp=E,567nm,20.5s,MS4.6,baz=99,slow=35
BW06 Boulder Array 55.74 302 *eP* **P 22 49 00.3 -0.6**
comp=E,30nm,1.4s,mb5.1
LKWY Lake 55.79 304 *eP* **P 22 49 03.1 +1.8**
LTX Lajitas 55.99 285 *eP* **P 22 49 03.1 +0.2**
TXAR Lajitas Array 55.99 285 P **P 22 49 02.5 -0.4**
comp=E,13nm,1.2s,mb4.8,baz=91,slow=5.3,SNR=36
TXAR LR LR 23 13 38.2

comp=E,690nm,18.0s,MS4.8,baz=0.0,slow=37
ANMO Albuquerque 56.04 292 *eP* **P 22 49 03.9 +0.7**
ANMO Albuquerque 56.04 292 P **P 22 49 03.7 +0.5**
comp=E,3.6nm,1.0s,mb4.4,baz=79,slow=7.7,SNR=9.9
ANMO LR LR 23 11 46.8

comp=E,590nm,19.0s,MS4.7,baz=68,slow=35
YFT Old Faithful 56.13 304 *eP* **P 22 49 05.7 +2.0**
YMR Madison River 56.15 304 *eP* **P 22 49 04.0 +0.1**
comp=E,66nm,1.3s,mb5.5
YMR *ePcP* PcP 22 50 02.9 +1.2
LOHW Long Hollow 56.22 303 *eP* **P 22 49 04.1 -0.2**
MOOW Moose Ponds 56.27 303 *eP* **P 22 49 04.5 -0.2**
ANN Anapa 56.29 55 *eP* **P 22 49 02.9 -2.0**
ANN *e**PP pP 22 49 05.6 -1.6
ANN *eS* **S 22 56 57.4 +2.3**
ANN pmax pmax

comp=Z,66nm,1.1s,mb5.6
ANN MLR MLR

comp=Z,292nm,15.0s,MS4.5
BOZ Bozeman (W) 56.31 306⇓**P P 22 49 04.9 -0.1**
baz=56,SNR=7.6
IMW Indian Meadow 56.36 303 *eP* **P 22 49 05.4 0.0**
comp=Z,46nm,1.4s,mb5.3
LPM Los Pinos Moun 56.41 291 *eP* **P 22 49 06.5 +0.6**
MNTX Cornudas Mount 56.42 288 *eP* **P 22 49 05.1 -0.8**
QLMT Earthquake Lak 56.42 305 *eP* **P 22 49 06.3 +0.6**
BNM Barren Site 56.46 291 *eP* **P 22 49 06.1 -0.2**
TPAW Teton Pass 56.49 303 *eP* **P 22 49 06.3 0.0**
comp=Z,45nm,1.5s,mb5.3
D15A Lincoln 56.51 307⇓**P P 22 49 05.6 -0.8**
baz=56,SNR=6.8
DCID1 Drake Creek 56.62 303 *eP* **P 22 49 08.0 +0.7**
LENM Lemitar 56.72 291 *eP* **P 22 49 09.5 +1.4**
E15A Deer Lodge 56.76 307⇑**P P 22 49 07.6 -0.5**
baz=57,SNR=7.2
LAZ Ladron 56.76 292 *eP* **P 22 49 08.0 -0.4**
PV10 Paradox Valley 56.78 297 *eP* **P 22 49 08.9 +0.5**
PV10 *ePcP* PcP 22 50 04.8 +0.5
MVCO Mesa Verde 56.78 295 *eP* **P 22 49 09.5 +1.0**
MVCO Mesa Verde 56.78 295⇓**P P 22 49 09.4 +0.9**
baz=57,SNR=18
LRM Limekiln Ridge 56.81 306 *eP* **P 22 49 08.9 +0.4**
AHID Auburn Hatcher 56.82 302 *eP* **P 22 49 09.1 +0.4**
F15A Butte 56.84 306⇓**P P 22 49 08.5 -0.3**
baz=57,SNR=9.4
CHMT Chamberlain Mo 57.02 307 *eP* **P 22 49 10.3 +0.3**
G15A Dillon 57.03 305⇑**P P 22 49 10.0 -0.1**
baz=57,SNR=15
DLMT Dillon 57.05 305 *eP* **P 22 49 10.3 +0.1**
C14A Swan Lake 57.10 309⇓**P P 22 49 09.2 -1.3**
baz=57
D14A Greenough 57.14 308⇓**P P 22 49 09.8 -1.0**
baz=57,SNR=8.2
A13A Flathead Natio 57.19 310⇓**P P 22 49 08.9 -2.2**
baz=57
VRHR Novokhopersk 57.22 47 *eP* **P 22 49 11.2 -0.1**
VRHR pmax pmax

comp=Z,10.0nm,0.3s,mb5.3
VRHR pmax pmax

comp=N,20nm,0.4s
VRHR pmax pmax

comp=E,9.0nm,0.4s
E14A Clinton 57.33 307⇓**P P 22 49 11.7 -0.5**
baz=57,SNR=8.3
B13A Whitefish 57.38 309⇓**P P 22 49 11.3 -1.3**
baz=57,SNR=8.3
F14A Wisdom 57.43 306⇑**P P 22 49 12.6 -0.3**
baz=57,SNR=5.4
MSO Missoula 57.50 307 *eP* **P 22 49 13.2 -0.2**
HWUT Hardware Ranch 57.52 301 *eP* **P 22 49 13.2 -0.4**
comp=E,27nm,1.4s,mb5.1
SRU San Rafael 57.62 298 *eP* **P 22 49 14.3 -0.1**
C13A Hot Springs 57.66 309⇓**P P 22 49 13.6 -0.9**
baz=58
G14A Jackson 57.66 306⇑**P P 22 49 14.3 -0.2**
baz=58,SNR=5.0
DAU Daniels Canyon 57.70 300 *eP* **P 22 49 14.6 -0.3**
BSMT Bassoo Peak 57.74 309 *eP* **P 22 49 14.4 -0.7**
D13A Huson 57.76 308⇑**P P 22 49 14.2 -1.0**
baz=58,SNR=8.2
JLU Jordanelle 57.78 300 *eP* **P 22 49 15.5 0.0**
TMUT Trail Mountain 58.05 298 *eP* **P 22 49 18.2 +0.8**
F13A Darby 58.08 306⇑**P P 22 49 16.8 -0.7**
baz=58,SNR=11
MPU Maple Canyon 58.11 299 *eP* **P 22 49 18.2 +0.4**
M15A Larsen Ranch, 58.20 301⇓**P P 22 49 17.9 -0.5**
baz=58,SNR=9.0
G13A Cobalt 58.23 306⇓**P P 22 49 18.4 -0.2**
baz=58,SNR=9.8
SOC Sochi 58.23 56 *eP* **P 22 49 17.6 -1.0**
SOC *e* 22 50 16.0
SOC *e* 22 51 29.9
SOC *eS* **S 22 57 19.7 -1.0**
SOC pmax pmax

comp=Z,31nm,1.1s,mb5.2
NOQ North Oquirrh 58.24 300 *eP* **P 22 49 19.3 +0.6**
SPUT South Promonto 58.25 301 *eP* **P 22 49 18.1 -0.7**
HVU Hansel Valley 58.32 302 *eP* **P 22 49 19.0 -0.2**
K14A Jones Ranch, D 58.34 302⇑**P P 22 49 19.0 -0.4**
baz=58,SNR=14
A11A Hall Mountain, 58.41 310⇑**P P 22 49 18.9 -0.9**
baz=58,SNR=5.9
N15A Stansbury Isla 58.44 300 P **P 22 49 19.9 -0.2**
baz=58,SNR=5.1
NLU North Lily Min 58.45 299 *eP* **P 22 49 20.6 +0.5**
I13A Wildhorse Cree 58.54 304 P **P 22 49 21.0 +0.3**
baz=58,SNR=14
LPAZ La Paz 58.62 216 P **P 22 49 21.1 -0.3**
comp=Z,14nm,1.1s,mb4.9,baz=28,slow=9.5,SNR=30
LPAZ LR LR 23 13 53.5

comp=Z,91nm,18.4s,MS3.9,baz=77,slow=35
F12A Elk City 58.70 307 P **P 22 49 21.6 -0.2**
baz=59,SNR=23
J13A Cove Ranch, Pi 58.75 304⇓**P P 22 49 22.8 +0.6**
baz=59,SNR=7.4
BGU Big Grassy Mou 58.79 301 *eP* **P 22 49 22.0 -0.6**
M14A Sheep Mountain 58.82 301⇓**P P 22 49 22.0 -0.7**
baz=59,SNR=11
H12A Diamond D Ranc 58.83 305⇓**P P 22 49 23.2 +0.4**
baz=59,SNR=15
HLID Hailey 58.86 304 *eP* **P 22 49 23.2 +0.3**
comp=Z,53nm,2.0s,mb5.2
HLID Hailey 58.86 304⇓**P P 22 49 23.3 +0.3**
baz=59,SNR=13
DUG Dugway 58.89 300 *eP* **P 22 49 23.4 +0.2**
DUG Dugway 58.89 300 P **P 22 49 23.5 +0.3**
baz=59,SNR=23
N14A Grayback Hills 58.93 301⇑**P P 22 49 23.1 -0.4**
baz=59,SNR=14
K13A Stover Farm, H 58.94 303⇓**P P 22 49 23.7 +0.2**
baz=59
L13A Double Diamond 59.03 302 P **P 22 49 24.4 +0.1**
baz=59,SNR=14
MSU Marysvale 59.04 298 *eP* **P 22 49 24.9 +0.6**
NEW Newport 59.11 310 *eP* **P 22 49 23.8 -0.8**
comp=Z,20nm,1.1s,mb5.1
NEW Newport 59.11 310 *eP* **P 22 49 23.8 -0.8**
NEW pmax pmax

comp=Z,20nm,1.1s
E11A Bogner Ranch, 59.13 308⇓**P P 22 49 23.7 -1.1**
baz=59,SNR=16
MALT Malatya 59.15 62 *eP* **P 22 49 24.8 -0.2**
A10A Northport 59.15 311⇑**P P 22 49 23.7 -1.3**
baz=59
B10A Chitwood Farm, 59.16 310⇑**P P 22 49 24.2 -0.8**
baz=59
F11A Grangeville 59.25 307⇑**P P 22 49 24.6 -1.1**
baz=59,SNR=5.5
J12A Stokes Ranch, 59.43 304⇓**P P 22 49 27.1 +0.2**
baz=59,SNR=7.4
M13A Montello 59.44 301⇓**P P 22 49 26.5 -0.5**
baz=59,SNR=6.4
G11A Walters Elk Ra 59.49 307⇓**P P 22 49 26.7 -0.6**
baz=59
K12A Draper Farm, C 59.51 303 P **P 22 49 28.1 +0.7**
baz=59,SNR=21
H11A Donnelly 59.55 306⇓**P P 22 49 27.5 -0.2**
baz=59,SNR=11
WUAZ Wupatki 59.56 294 *eP* **P 22 49 28.9 +0.9**
comp=Z,39nm,1.4s,mb5.2
WUAZ Wupatki 59.56 294⇓**P P 22 49 28.4 +0.5**
baz=59,SNR=12
D10A Wagner Farm, O 59.60 309⇑**P P 22 49 26.9 -1.1**
baz=60,SNR=8.6
E10A Myers Farm, Un 59.68 308⇑**P P 22 49 28.1 -0.5**
baz=60
B09A Rice 59.70 310 P **P 22 49 28.2 -0.5**
baz=60,SNR=17
R14A James Farms, M 59.73 298⇓**P P 22 49 29.8 +0.7**
baz=60
T15A Red Dirt Ranch 59.74 296⇑**P P 22 49 28.9 -0.3**
baz=60,SNR=15
O13A Hicks Ranch, I 59.75 300⇑**P P 22 49 29.7 +0.5**
baz=60,SNR=8.4
L12A House Creek Ra 59.76 303⇓**P P 22 49 29.7 +0.5**
baz=60,SNR=11
A09A Danville 59.80 311⇑**P P 22 49 28.9 -0.4**
baz=60,SNR=9.8
MFID Camas Ranch 59.87 304⇑**P P 22 49 29.9 -0.1**
baz=60,SNR=10
F10A Beach Ranch, E 59.93 307⇓**P P 22 49 29.3 -1.0**
baz=60
M12A Wells 59.95 302⇑**P P 22 49 30.8 +0.2**
baz=60,SNR=17
GOF Gofitskoye 59.98 54⇑*iP* **P 22 49 37.1 +6.4**
GOF pmax pmax

comp=Z,50nm,1.3s,mb5.4
S14A Cedar City 60.04 297⇓**P P 22 49 31.9 +0.7**
baz=60,SNR=6.9
H10A Noah's Angus R 60.09 306⇑**P P 22 49 31.3 -0.1**
baz=60
KIV Kislovodsk 60.13 55 P **P 22 49 32.4 +0.7**
comp=Z,114nm,1.1s,mb5.8,SNR=5.8
KIV Kislovodsk 60.13 55 *eP* **P 22 49 32.6 +0.9**
comp=Z,33nm,1.2s,mb5.2
KIV Kislovodsk 60.13 55⇑*eP* **P 22 49 32.7 +1.0**
KIV pmax pmax

comp=Z,37nm,1.3s,mb5.2
KIV MLR MLR

comp=Z,100nm,17.0s,MS4.0
KIV Kislovodsk 60.13 55 P **P 22 49 33.1 +1.3**
SNR=6.5
KIV Kislovodsk 60.13 55 P **P 22 49 33.1 +1.3**
SNR=6.5
KIV Kislovodsk 60.13 55 P **P 22 49 33.1 +1.3**
SNR=6.5
KIV Kislovodsk 60.13 55 P **P 22 49 33.1 +1.3**
SNR=6.5
A08A Turner Farm, O 60.23 311⇓**P P 22 49 31.4 -0.9**
baz=60
ARUT Antelope Range 60.23 297 *eP* **P 22 49 33.0 +0.5**
K11A Parker Ranch, 60.24 304⇑**P P 22 49 32.9 +0.4**
baz=60,SNR=10
N12A Clover Valley, 60.24 301⇓**P P 22 49 32.7 +0.1**
baz=60
T14A Hurricane 60.25 297 P **P 22 49 32.5 -0.2**
baz=60,SNR=8.0
O12A Currie 60.25 301⇑**P P 22 49 32.7 +0.1**
baz=60,SNR=7.5
D09A Jones Farm, Ri 60.26 309⇑**P P 22 49 31.6 -1.0**
baz=60
CCUT Cedar City 60.27 297 *eP* **P 22 49 32.8 +0.1**
CCUT *ePcP* PcP 22 50 17.3 -0.8
BMO Blue Mountains 60.37 306 *eP* **P 22 49 32.9 -0.4**
TUC Tucson 60.38 291 *eP* **P 22 49 33.4 -0.3**
B08A Colville Reser 60.47 311⇑**P P 22 49 33.0 -1.0**
baz=60
C08A Higginbotham F 60.48 310⇓**P P 22 49 32.6 -1.5**
baz=60,SNR=5.3
G09A Cove 60.53 307⇑**P P 22 49 33.9 -0.6**
baz=60
M11A Holland Ranch, 60.56 302 P **P 22 49 35.6 +0.9**
baz=60,SNR=13
U14A Mt Trumbull 60.57 296 P **P 22 49 35.5 +0.7**
baz=60,SNR=11
ARTV Artvin 60.60 58 *iP* **P 22 49 30.1 -4.9**
S13A Holt Ranch, En 60.62 297⇑**P P 22 49 35.7 +0.5**
baz=60,SNR=9.3
X15A Humboldt 60.62 293⇓**P P 22 49 36.3 +1.0**
baz=60,SNR=8.3
P12A McGill 60.66 300⇓**P P 22 49 35.5 +0.1**
baz=60,SNR=6.2
H09A Durkee 60.67 306⇓**P P 22 49 35.1 -0.4**
baz=60
Q12A Willow Creek R 60.77 299⇑**P P 22 49 36.7 +0.5**
baz=61,SNR=11
L10A Juniper Basin 60.80 303⇑**P P 22 49 36.8 +0.5**
baz=61,SNR=13
T13A Saint George 60.87 297⇓**P P 22 49 37.5 +0.6**
baz=61,SNR=13
R12A Pony Springs, 60.88 298⇓**P P 22 49 37.2 +0.2**
baz=61,SNR=7.5
A07A Ashnola River, 60.89 312⇑**P P 22 49 36.3 -0.5**
baz=61,SNR=12
B07A Winthrop 60.93 311⇑**P P 22 49 36.0 -1.1**
baz=61
E08A Dider Farm, El 60.94 308⇑**P P 22 49 36.8 -0.4**
baz=61
O11A Cowboy Ranch, 60.95 301 P **P 22 49 37.7 +0.3**
baz=61,SNR=10
W14A Seligman 60.97 295⇓**P P 22 49 38.9 +1.3**
baz=61,SNR=8.0
I09A Lost Marbles R 60.97 305⇑**P P 22 49 37.5 0.0**
baz=61,SNR=7.1
F08A Pendleton 61.00 308⇑**P P 22 49 36.5 -1.1**
baz=61
X14A Yava 61.12 294⇓**P P 22 49 39.7 +1.0**
baz=61,SNR=7.6
U13A Pakoon Wash 61.15 296⇓**P P 22 49 39.7 +0.9**
baz=61,SNR=12
C07A Waterville 61.16 310⇑**P P 22 49 37.3 -1.4**
baz=61,SNR=5.4
J09A Fry Pan Ranch, 61.21 305⇑**P P 22 49 39.5 +0.4**
baz=61,SNR=47
P11A Circle Ranch, 61.23 300⇑**P P 22 49 40.6 +1.2**
baz=61
D07A Quincy 61.28 309 P **P 22 49 38.4 -1.1**
baz=61,SNR=5.3
HAWA Hanford 61.28 308 *eP* **P 22 49 39.2 -0.4**
comp=Z,29nm,1.3s,mb5.2
G08A Pilot Rock 61.31 307⇓**P P 22 49 39.3 -0.4**
baz=61
S12A Delamar Landin 61.33 298⇑**P P 22 49 41.5 +1.5**
baz=61,SNR=6.9
ZEI Tsey 61.38 56 *eP* **P 22 49 40.7 +0.4**
ZEI *e**PP pP 22 49 43.7 +1.1
ZEI *e* 22 51 54.4
ZEI pmax pmax

comp=Z,40nm,1.1s,mb5.5
H08A Prairie City 61.40 306⇓**P P 22 49 40.1 -0.2**
baz=61,SNR=8.4
Y14A Wickenburg 61.42 293⇓**P P 22 49 41.3 +0.6**
baz=61
K09A Rome 61.43 304⇓**P P 22 49 40.4 -0.2**
baz=61,SNR=8.9
E07A Sunnyside 61.43 309⇓**P P 22 49 40.9 +0.3**
baz=61
Q11A Duckwater 61.44 299⇓**P P 22 49 40.5 -0.2**
baz=61,SNR=6.7
I08A Drewsey 61.55 306 P **P 22 49 40.0 -1.4**
baz=61,SNR=9.8
U12A Valley of Fire 61.57 296⇓**P P 22 49 42.4 +0.8**
baz=61
R11A Troy Canyon, C 61.58 299⇓**P P 22 49 41.4 -0.2**
baz=62,SNR=17
TRCR Troy Canyon 61.58 299 *eP* **P 22 49 40.2 -1.5**
Z14A Wintersburg 61.61 293⇑**P P 22 49 42.9 +0.9**
baz=62
W13A Hualapai Mount 61.62 295⇓**P P 22 49 43.3 +1.4**
baz=62,SNR=7.8
J08A Circle Bar Ran 61.69 305⇑**P P 22 49 43.2 +0.8**
baz=62,SNR=16
P10A Eureka 61.72 300⇑**P P 22 49 42.5 -0.1**
baz=62,SNR=5.9
M09A Marrel Ranch, 61.72 303⇓**P P 22 49 43.2 +0.6**
baz=62,SNR=5.6
F07A Phinny Hill Vi 61.72 308⇓**P P 22 49 42.8 +0.3**
baz=62
T11A Corn Creek, Al 61.75 297⇓**P P 22 49 43.3 +0.5**
baz=62,SNR=15
X13A Yucca 61.78 294⇓**P P 22 49 44.2 +1.1**
baz=62,SNR=13

G07A Ruggs Ranch, H 61.78 307 ⇓P P 22 49 41.8 -1.1
baz=62
D06A Cle Elum 61.83 310 ⇑P P 22 49 42.1 -1.2
baz=62
DlGO Kars 61.91 59 *i* P P 22 49 43.9 0.0
K08A Mann Creek Ran 61.94 304 ⇓P P 22 49 44.2 +0.2
baz=62,SNR=14
H07A Lands Inn, Kim 61.96 307 ⇑P P 22 49 44.3 +0.2
baz=62
Q10A Clear Creek Ra 61.98 300 ⇓P P 22 49 44.6 +0.2
baz=62,SNR=10.0
N09A Rock Creek Ran 61.99 302 ⇓P P 22 49 44.4 0.0
baz=62
O09A Fish Creek Ran 62.02 301 P P 22 49 44.9 +0.3
baz=62,SNR=9.6
L08A Fields 62.05 304 ⇓P P 22 49 45.2 +0.5
baz=62,SNR=31
V12A Nelson 62.08 296 ⇑P P 22 49 45.9 +0.7
baz=62,SNR=16
Y13A Salome 62.10 293 ⇑P P 22 49 45.6 +0.3
baz=62
I07A Izee 62.11 306 ⇑P P 22 49 45.8 +0.7
baz=62,SNR=6.6
R10A Warm Springs 62.12 299 ⇑P P 22 49 46.1 +0.8
baz=62
WVOR Wild Horse Val 62.15 304 *eP* P 22 49 45.5 0.0
comp=Z,43nm,1.4s,mb5.4
WVOR *ePcP* PcP 22 50 26.3 +0.7
WVOR Wild Horse Val 62.15 304 *eP* P 22 49 45.5 0.0
WVOR *e* 22 50 26.3
WVOR pmax pmax
comp=Z,43nm,1.4s,mb5.4
E06A Yakima 62.16 309 ⇓P P 22 49 44.9 -0.6
baz=62,SNR=11
F06A Goldendale 62.32 308 ⇑P P 22 49 46.3 -0.3
baz=62,SNR=5.8
TBLG Delisi 62.35 57 P P 22 49 47.5 +0.6
MTA Mtatsminda 62.40 57 P P 22 49 47.2 +0.1
H06A Lindquist Farm 62.42 307 ⇑P P 22 49 46.9 -0.3
baz=62,SNR=5.4
G06A Carlson Farm, 62.43 308 ⇑P P 22 49 46.8 -0.4
baz=62
N08A GE Springer Mi 62.44 302 ⇑P P 22 49 47.2 -0.2
baz=62,SNR=8.0
V11A Goodsprings 62.47 296 P P 22 49 48.2 +0.5
baz=62,SNR=6.2
K07A Rock Creek Ran 62.47 305 ⇓P P 22 49 47.9 +0.3
baz=62,SNR=15
DYDN Diyadin 62.47 59 *i* P P 22 49 47.1 -0.5
S10A Tonopah Range, 62.48 299 P P 22 49 47.5 -0.3
baz=62,SNR=14
TPNV Topopah Spring 62.62 298 *eP* P 22 49 49.2 +0.5
comp=Z,24nm,1.4s,mb5.1
TPNV Topopah Spring 62.62 298 *eP* P 22 49 49.2 +0.5
TPNV pmax pmax
comp=Z,24nm,1.4s,mb5.1
TPNV Topopah Spring 62.62 298 ⇓P P 22 49 49.2 +0.5
baz=62,SNR=9.8
TVAN Van 62.67 60 *i* P P 22 49 49.2 +0.2
VIPM Ingram Point 62.69 307 P P 22 49 49.8 +0.7
R09A Tonopah 62.70 299 ⇑P P 22 49 49.0 -0.2
baz=63,SNR=8.8
SOKR Solikamsk 62.70 35 *d i* P P 22 49 47.8 -1.1
SOKR pmax pmax
comp=Z,40nm,1.2s,mb5.4
F05A White Salmon 62.72 309 ⇓P P 22 49 49.2 +0.1
baz=63
L07A Adell 62.79 304 P P 22 49 50.8 +1.0
baz=63,SNR=22
DLBC Dease Lake 62.86 324 *eP* P 22 49 51.4 +1.5
J06A Christmas Vall 62.87 305 ⇑P P 22 49 50.1 -0.2
baz=63,SNR=5.7
U10A Ash Meadows, A 62.89 297 ⇓P P 22 49 50.6 0.0
baz=63,SNR=6.2
M07A Soldier Meadow 62.92 303 ⇑P P 22 49 50.7 +0.1
baz=63,SNR=8.0
VFP Flag Point 62.94 308 P P 22 49 50.6 -0.1
IRM Iron Mountain 62.95 294 ⇓P P 22 49 51.2 +0.2
baz=63,SNR=6.8
C04A Brinnon 62.98 311 ⇑P P 22 49 50.5 -0.4
baz=63
TUQ Turquoise Mtn. 63.00 296 ⇓P P 22 49 52.0 +0.7
baz=63,SNR=13
S09A Goldfield 63.01 299 ⇓P P 22 49 50.8 -0.5
baz=63,SNR=6.4
N07B Gerlach 63.03 302 ⇑P P 22 49 50.7 -0.6
baz=63,SNR=12
Q08A Gabbs 63.06 300 ⇓P P 22 49 51.2 -0.4
baz=63,SNR=8.7
GMRC Granite Mounta 63.08 295 P P 22 49 52.5 +0.7
baz=63,SNR=7.9
K06A Valley Falls 63.11 305 ⇑P P 22 49 52.0 +0.1
baz=63,SNR=6.4
PINOR Pine Mountain 63.13 306 P P 22 49 53.7 +1.7
O07A Toulon 63.21 302 ⇓P P 22 49 52.1 -0.5
baz=63,SNR=9.1
I05A Bend 63.26 307 ⇑P P 22 49 54.0 +1.2
baz=63,SNR=6.0
FURC Furnace Creek, 63.26 297 ⇑P P 22 49 54.2 +1.3
baz=63
HAKT HAKKARI 63.28 61 *i* P P 22 49 51.8 -1.3
MSL Mosul 63.36 63 *ex* x 22 49 53.5
BC3 Big Chuckw Mtn 63.39 294 P P 22 49 54.6 +0.7
baz=63,SNR=5.1
GRAC Grapevine Rang 63.42 298 ⇑P P 22 49 54.2 +0.2
baz=63
MOD Modoc 63.50 304 *eP* P 22 49 55.0 +0.6
comp=Z,22nm,1.3s,mb5.1
MOD Modoc 63.50 304 ⇑P P 22 49 55.0 +0.5
baz=63,SNR=17
NVAR Mina Array Bea 63.50 300 P P 22 49 53.6 -1.0
comp=Z,8.3nm,1.1s,mb4.7,baz=78,slow=7.1,SNR=22
HEC Hector,Ludlow 63.55 295 ⇓P P 22 49 56.2 +1.3
baz=63
K05A Summer Lake 63.57 305 ⇑P P 22 49 55.6 +0.6
baz=63,SNR=27
J05A Fort Rock 63.58 306 ⇑P P 22 49 55.9 +0.9
baz=63,SNR=26
G04A Mulino 63.64 308 ⇑P P 22 49 55.2 -0.2
baz=64
N06A Buffalo Meadow 63.64 303 ⇑P P 22 49 55.2 -0.2
baz=64,SNR=14
BELC Belle Mtn. 63.66 294 ⇑P P 22 49 56.6 +1.0
baz=64,SNR=8.8
NLWA Neilton Lookou 63.66 311 *eP* P 22 49 56.0 +0.5
GSC Goldstone 63.71 296 ⇓P P 22 49 56.8 +0.8
baz=64,SNR=7.5
PAHR Pah Rah Range 63.75 301 *eP* P 22 49 55.9 -0.2
comp=Z,30nm,1.3s,mb5.2
S08C White Mtn Res 63.79 299 ⇓P P 22 49 56.5 0.0
baz=64,SNR=8.4
L05A Lakeview 63.80 304 ⇑P P 22 49 57.5 +1.1
baz=64,SNR=34
O06A Flanigan 63.87 302 ⇑P P 22 49 56.8 -0.1
baz=64,SNR=5.9
MPMC Manual Prospec 63.90 297 ⇑P P 22 49 58.2 +1.0
baz=64,SNR=24
M06C Likely Place G 63.90 303 P P 22 49 57.9 +0.7
baz=64,SNR=15
SWSC Sam W. Stewart 63.96 293 ⇓P P 22 49 58.3 +0.7
baz=64
MTUM Tungsten Hills 64.14 299 *eP* P 22 49 59.5 +0.8
PFO Pinyon Flat Ob 64.17 294 *eP* P 22 49 59.9 +0.9
comp=Z,33nm,1.4s,mb5.2
PFO Pinyon Flat Ob 64.17 294 *eP* P 22 49 59.9 +0.9
PFO pmax pmax
comp=Z,33nm,1.4s,mb5.2
PFO Pinyon Flat Ob 64.17 294 P P 22 49 59.9 +0.9
comp=Z,9.1nm,1.1s,mb4.7,baz=58,slow=5.5,SNR=11
PFO Pinyon Flat Ob 64.17 294 ⇓P P 22 49 60.0 +1.0
baz=64,SNR=5.9
R07C Lee Vining 64.18 300 ⇑P P 22 49 59.5 +0.5
baz=64,SNR=9.6
J04A Umpqua Nationa 64.18 306 ⇓P P 22 49 59.7 +0.8
baz=64
M05C Lookout 64.30 304 ⇓P P 22 49 59.9 +0.2
baz=64,SNR=13
ELFS Eagle Lake Fie 64.31 303 ⇓P P 22 50 00.3 +0.5
baz=64,SNR=14
BEKR Beckwourth 64.37 302 ⇑P P 22 49 59.5 -0.7
baz=64,SNR=11
M04C Macdoel 64.60 304 ⇓P P 22 50 01.8 +0.1
baz=64,SNR=5.4
LTIM Timbered Crate 64.61 304 P P 22 50 01.8 +0.1
DAWY Dawson 64.65 332 *eP* P 22 50 02.3 +0.7
O04C Chester 64.69 303 ⇑P P 22 50 02.3 0.0
baz=64,SNR=16

MURC Murrieta 64.73 295 ⇑P P 22 50 03.3 +0.6
baz=65
HATC Hat Creek Radi 64.74 303 ⇑P P 22 50 02.8 +0.2
baz=65,SNR=7.9
HELL Mitchell Peak, 64.75 298 ⇑P P 22 50 03.1 +0.3
baz=65,SNR=25
EDW2 Edwards Air Fo 64.77 296 ⇓P P 22 50 03.7 +0.8
baz=65,SNR=12
P05C Yuba Gap, Truc 64.78 302 ⇓P P 22 50 03.0 +0.1
baz=65
ISA Isabella 64.79 297 ⇑P P 22 50 04.1 +1.1
baz=65,SNR=6.8
BFSC Mount Baldy St 64.80 295 ⇓P P 22 50 04.2 +1.0
baz=65
ARU Arti 64.82 38 P P 22 50 02.4 -0.5
comp=Z,196nm,1.2s,mb6.0,SNR=14
ARU Arti 64.82 38 *eP* P 22 50 01.7 -1.2
ARU Arti 64.82 38 *eP* P 22 50 02.2 -0.7
ARU 22 50 35.0
ARU 22 52 22.6
ARU S S 22 58 44.3 +0.5
ARU SS SS 23 02 52.4 -2.0
S06C San Francisco 64.84 300 ⇓P P 22 50 03.8 +0.5
baz=65,SNR=27
LHEM Herd Peak 64.92 304 P P 22 50 03.8 0.0
EGAK Eagle 65.00 333 *eP* P 22 50 04.5 +0.6
M03C McCloud 65.00 304 ⇓P P 22 50 04.4 0.0
baz=65,SNR=6.2
LAVA Lava Cap Winer 65.10 301 ⇑P P 22 50 05.0 0.0
baz=65
T06C Millerton Lake 65.11 299 ⇑P P 22 50 04.6 -0.5
baz=65,SNR=5.2
CMB Columbia Colle 65.16 300 *eP* P 22 50 04.9 -0.5
comp=Z,25nm,1.5s,mb5.0
CMB *ePP* PP 22 52 28.7 +0.3
CMB Columbia Colle 65.16 300 *eP* P 22 50 04.9 -0.5
CMB *e* 22 52 28.7
CMB pmax pmax
comp=Z,25nm,1.5s,mb5.0
CMB Columbia Colle 65.16 300 ⇑P P 22 50 05.2 -0.2
baz=65,SNR=9.8
YBH Yreka Blue Hor 65.21 305 *eP* P 22 50 04.7 -1.0
comp=Z,30nm,1.8s,mb5.0
YBH Yreka Blue Hor 65.21 305 *eP* P 22 50 04.7 -1.0
YBH pmax pmax
comp=Z,30nm,1.8s
YBH Yreka Blue Hor 65.21 305 ⇑P P 22 50 04.2 -1.5
baz=65
ORV Oroville 65.30 302 ⇓P P 22 50 05.3 -1.0
baz=65,SNR=6.6
OHCM Honcut 65.38 302 *eP* P 22 50 06.4 -0.4
SVE Sverdlovsk 65.68 37 *i* P P 22 50 08.4 -0.1
SVE pmax pmax
comp=Z,56nm,1.4s,mb5.4
N02C Big Bar 66.00 304 ⇓P P 22 50 09.9 -0.9
baz=66
PKM Peak Mountain 66.11 297 ⇓P P 22 50 12.6 +1.0
baz=66,SNR=6.3
U04C Hernandez Rese 66.17 299 ⇑P P 22 50 13.1 +1.1
baz=66,SNR=6.1
PACP Pacheco Peak 66.25 299 ⇑P P 22 50 12.7 +0.3
baz=66
HOPS Hopland 66.64 302 *eP* P 22 50 15.7 +0.8
HOPS Hopland 66.64 302 ⇓P P 22 50 15.1 +0.2
baz=66,SNR=8.2
V03C Hunter Liggett 66.65 299 ⇓P P 22 50 15.8 +0.8
baz=66
HAST UC Hastings Re 66.71 299 ⇓P P 22 50 15.4 0.0
baz=67
COLA College 67.41 334 *eP* P 22 50 18.5 -0.8
comp=Z,16nm,1.4s,mb4.9
COLA College 67.41 334 ⇓*iP* P 22 50 18.6 -0.8
MCK McKinley 68.44 334 *eP* P 22 50 26.2 +0.3
comp=Z,20nm,1.5s,mb4.9
MCK McKinley 68.44 334 *eP* P 22 50 26.2 +0.3
MCK pmax pmax
comp=Z,20nm,1.5s,mb4.9
IMA2 Indian Mountai 68.69 337 *eP* P 22 50 27.9 +0.5
SML Sawmill 69.31 332 *eP* P 22 50 32.2 +0.9
RST Umm Al-Ruwaisa 69.33 68 *eP* P 22 50 30.7 -1.3
RST AMb AMB 22 50 32.3
comp=Z,22nm,0.8s,mb5.2
RST Umm Al-Ruwaisa 69.33 68 *eP* P 22 50 30.7 -1.3
comp=Z,22nm,0.8s,mb5.2
MIB Mutribah 69.45 67 *eP* P 22 50 31.9 -0.9
MIB AMb AMB 22 50 33.1
comp=Z,34nm,0.8s,mb5.3
MIB Mutribah 69.45 67 *eP* P 22 50 31.9 -0.8
comp=Z,34nm,0.8s,mb5.3
NAY Al-Naaiem 69.64 68 *eP* P 22 50 32.7 -1.3
NAY AMb AMB 22 50 34.4
comp=Z,19nm,0.8s,mb5.0
NAY Al-Naaiem 69.64 68 *eP* P 22 50 32.7 -1.2
comp=Z,19nm,0.8s,mb5.0
PMR Palmer 69.75 332 *eP* P 22 50 34.9 +0.9
PMR LR LR
comp=Z,146nm,2.2s,mb5.5
comp=Z,500nm,20.0s,MS4.8
PMR Palmer 69.75 332 *eP* P 22 50 34.9 +0.9
PMR pmax pmax
comp=Z,146nm,2.2s,mb5.5
PMR MLR MLR
comp=Z,500nm,20.0s,MS4.8
UMR Umm Al-Rimmam 69.86 68 *eP* P 22 50 34.1 -1.2
UMR AMb AMB 22 50 35.8
comp=Z,36nm,0.8s,mb5.3
UMR Umm Al-Rimmam 69.86 68 *eP* P 22 50 34.1 -1.2
comp=Z,36nm,0.8s,mb5.3
KBD Kabd 70.02 68 *eP* P 22 50 35.7 -0.6
KBD AMb AMB 22 50 38.6
comp=Z,170nm,1.5s,mb5.8
KBD Kabd 70.02 68 *eP* P 22 50 35.7 -0.6
comp=Z,170nm,1.5s,mb5.8
QRN Al-Qurain 70.40 68 *eP* P 22 50 37.7 -1.0
QRN AMb AMB 22 50 39.2
comp=Z,36nm,0.8s,mb5.3
SLKM Skilak Lake 70.82 331 *eP* P 22 50 40.7 +0.1
BRVK Borovoye 72.38 37 P P 22 50 50.3 +0.1
comp=Z,261nm,1.0s,mb6.1,SNR=35
BRVK Borovoye 72.38 37 *eP* P 22 50 50.1 -0.1
BRVK Borovoye 72.38 37 P P 22 50 50.5 +0.3
SNR=21
BRVK Borovoye 72.38 37 P P 22 50 50.5 +0.3
SNR=21
BRVK Borovoye 72.38 37 P P 22 50 50.5 +0.3
SNR=21
BRVK Borovoye 72.38 37 P P 22 50 50.5 +0.3
SNR=21
SVW2 Sparrevohn 72.50 333 *eP* P 22 50 50.5 -0.3
ABKT Ailbek 73.25 55 P P 22 50 55.1 -0.5
comp=Z,49nm,1.3s,mb5.3,SNR=5.3
TNA Tin City 73.29 341 *eP* P 22 50 56.0 +0.7
TIXI Tiksi 73.64 5 *eP* P 22 50 57.7 +0.4
TIXI Tiksi 73.64 5 *i* P P 22 50 57.5 +0.2
TIXI pmax pmax
comp=Z,62nm,2.2s,mb5.2
TSUM Tsumeb 74.41 127 P P 22 51 02.6 +0.1
GAMB Gambell 75.70 341 *eP* P 22 51 09.7 +0.3
TRQA Tornquist 75.88 200 *eP* P 22 51 09.9 -0.7
comp=Z,15nm,1.2s,mb4.8
TRQA *ePcP* PcP 22 51 21.3 -1.7
BILL Bilibino 76.28 351 *eP* P 22 51 13.0 +0.4
comp=Z,33nm,1.4s,mb5.1
BILL *ePcP* PcP 22 51 23.9 -0.6
BILL Bilibino 76.28 351 *d iP* P 22 51 12.4 -0.2
BILL *i* 22 51 23.8
BILL pmax pmax
comp=Z,35nm,1.6s,mb5.0
BILL MLR MLR
comp=Z,300nm,19.0s,MS4.6
NVS Novosibirsk 77.26 31 ⇓*iP* P 22 51 17.5 -0.9
NVS pmax pmax
comp=E,12nm,1.4s
NVS pmax pmax
comp=Z,70nm,1.4s,mb5.4
NVS pmax pmax
comp=N,17nm,1.5s
KMBO Kilima Mbogo 77.62 100 P P 22 51 22.5 +1.5
comp=N,6.0nm,1.1s,mb4.4,baz=310,slow=4.5,SNR=8.5
KMBO LR LR 23 28 20.4
comp=N,266nm,18.6s,MS4.6,baz=94,slow=38
KURK Kurchatov 77.91 36 P P 22 51 21.1 -1.0
comp=N,310nm,1.1s,mb6.2,SNR=32
KURK Kurchatov 77.91 36 *eP* P 22 51 21.5 -0.6
KURK Kurchatov 77.91 36 P P 22 51 21.8 -0.3
SNR=19

KURK Kurchatov 77.91 36 P P 22 51 21.8 -0.3
SNR=19
KURK Kurchatov 77.91 36 P P 22 51 21.8 -0.3
SNR=19
KURK Kurchatov 77.91 36 P P 22 51 21.8 -0.3
SNR=19
KK31 Karatay Array 78.27 46 *i* P P 22 51 22.4 -1.8
KK31 pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ZAL Zalesovo 78.55 31 P P 22 51 24.8 -0.7
ZAA0 Zalesovo Array 78.55 31 *eP* P 22 51 24.6 -1.0
ZALV Zalesovo Beam 78.55 31 P P 22 51 24.8 -0.7
comp=Z,19nm,1.0s,mb5.0,baz=299,slow=6.6,SNR=63
LSZ Lusaka 79.17 117 *eP* P 22 51 29.6 +0.1
comp=Z,47nm,1.6s,mb5.2
LSZ Lusaka 79.17 117 *eP* P 22 51 29.6 +0.1
LSZ pmax pmax
comp=Z,47nm,1.6s,mb5.2
HOQ Hoqain 80.28 68 P P 22 51 34.7 -0.8
SNR=6.9
HOQ Hoqain 80.28 68 P P 22 51 34.7 -0.8
SNR=6.9
HOQ Hoqain 80.28 68 P P 22 51 34.7 -0.8
SNR=6.9
HOQ Hoqain 80.28 68 P P 22 51 34.7 -0.8
SNR=6.9
EKS2 Erkin-Say 80.45 44 *eP* P 22 51 36.4 +0.3
comp=Z,40nm,1.4s,mb5.2
EKS2 Erkin-Say 80.45 44 P P 22 51 36.7 +0.6
SNR=16
AML Almayashu 80.73 45 *eP* P 22 51 38.4 +0.8
comp=Z,42nm,1.1s,mb5.3
AML Almayashu 80.73 45 P P 22 51 38.6 +1.0
SNR=34
CHMS Chumysh 80.80 44 P P 22 51 38.1 +0.2
SNR=11
FRU Bishkek 80.82 44 ⇑*iP* P 22 51 38.5 +0.4
FRU pmax pmax
comp=Z,110nm,2.0s,mb5.4
AAK Ala-Archa 80.88 44 P P 22 51 38.6 +0.2
comp=Z,62nm,1.3s,mb5.4,SNR=11
AAK Ala-Archa 80.88 44 *eP* P 22 51 37.8 -0.6
AAK Ala-Archa 80.88 44 ⇑*eP* P 22 51 37.9 -0.5
AAK pmax pmax
comp=Z,36nm,2.2s,mb4.9
AAK Ala-Archa 80.88 44 P P 22 51 38.3 -0.2
SNR=8.5
AAK Ala-Archa 80.88 44 P P 22 51 38.3 -0.2
SNR=8.5
AAK Ala-Archa 80.88 44 P P 22 51 38.3 -0.2
SNR=8.5
AAK Ala-Archa 80.88 44 P P 22 51 38.3 -0.2
SNR=8.5
AAK Ala-Archa 80.88 44 P P 22 51 39.5 +1.0
SNR=12
BIDO Bidbid 80.94 68 P P 22 51 38.5 -0.6
SNR=5.4
BIDO Bidbid 80.94 68 P P 22 51 38.5 -0.6
SNR=5.4
BIDO Bidbid 80.94 68 P P 22 51 38.5 -0.6
SNR=5.4
BIDO Bidbid 80.94 68 P P 22 51 38.5 -0.6
SNR=5.4
KBK Karagaybulak 81.12 44 P P 22 51 40.2 +0.5
SNR=15
SMDO Samad 81.13 68 P P 22 51 39.7 -0.4
SNR=5.3
SMDO Samad 81.13 68 P P 22 51 39.7 -0.4
SNR=5.3
SMDO Samad 81.13 68 P P 22 51 39.7 -0.4
SNR=5.3
UCH Uchtor 81.14 44 *eP* P 22 51 40.2 +0.3
comp=Z,44nm,1.2s,mb5.3
UCH Uchtor 81.14 44 P P 22 51 41.4 +1.5
SNR=34
TKM2 Tokmak 2 81.33 43 *eP* P 22 51 40.9 +0.1
comp=Z,40nm,1.4s,mb5.2
TKM2 Tokmak 2 81.33 43 *eP* P 22 51 40.9 +0.1
TKM2 pmax pmax
comp=Z,40nm,1.4s,mb5.2
TKM2 Tokmak 2 81.33 43 P P 22 51 41.3 +0.5
SNR=13
KZA Kyzart 81.66 44 P P 22 51 44.3 +1.7
SNR=14
MK31 Makanchi Array 82.34 37 *i* P P 22 51 44.5 -1.6
MK31 pmax pmax
comp=Z,53nm,1.1s,mb5.4
MKAR Makanchi Array 82.34 37 P P 22 51 45.8 -0.3
comp=Z,23nm,1.0s,mb5.1,baz=319,slow=3.5,SNR=110
KBL Kabul 82.46 53 *eP* P 22 51 46.5 -0.4
YAK Yakutsk 83.17 6 *eP* P 22 51 50.5 +0.4
YAK pmax pmax
comp=Z,25nm,1.6s,mb5.0
YAK pmax pmax
comp=N,24nm,1.5s
YAK pmax pmax
comp=E,7.0nm,1.4s
LBTB Lobatse 83.76 126 *eP* P 22 51 53.4 -0.2
comp=E,18nm,1.1s,mb5.1
LBTB Lobatse 83.76 126 *eP* P 22 51 53.4 -0.2
LBTB pmax pmax
comp=Z,18nm,1.1s,mb5.1
BOD Bodaibo 84.81 15 *eP* P 22 51 57.2 -1.3
BOD pmax pmax
comp=Z,74nm,1.3s,mb5.7
MA2 Magadan 86.03 356 ⇑*eP* P 22 52 04.2 -0.4
MA2 pmax pmax
comp=Z,9.0nm,1.5s,mb4.8
MOY Mondy 86.56 25 *eP* P 22 52 07.4 0.0
MOY pmax pmax
comp=Z,77nm,2.9s,mb5.4
WMQ Urumqi 87.13 37 ⇓*iP* P 22 52 10.5 +0.2
WMQ AP pP 22 52 14.5 +1.8
WMQ XP sP 22 52 17.5 +3.9
WMQ PP PP 22 55 36.5 +3.4
WMQ SKS 23 02 32.5
WMQ *eS* S 23 02 46.5 -3.5
WMQ AMB AMB
comp=Z,15nm,1.6s,mb5.0
WMQ AMB AMB
comp=Z,136nm,3.2s
WMQ LR LR
comp=N,115nm,19.3s,MS4.3
WMQ LR LR
comp=E,63nm,22.3s,MS4.3
WMQ LR LR
comp=Z,146nm,20.0s,MS4.4
IRK Irkutsk 87.16 23 *eP* P 22 52 09.0 -1.3
IRK pmax pmax
comp=Z,58nm,1.5s,mb5.6
TLY Talaya 87.44 23 P P 22 52 11.2 -0.4
comp=Z,58nm,1.2s,mb5.7,SNR=5.2
TLY Talaya 87.44 23 *eP* P 22 52 11.1 -0.5
TLY pmax pmax
comp=Z,23nm,1.6s,mb5.2
TLY Talaya 87.44 23 P P 22 52 12.3 +0.7
SNR=7.5
TLY Talaya 87.44 23 P P 22 52 12.3 +0.7
SNR=7.5
ZAK Zakamensk 88.43 24 *eP* P 22 52 16.0 -0.4
ZAK pmax pmax
comp=Z,5.0nm,1.7s,mb4.5
SONM Songino Array 91.66 24 P P 22 52 31.2 -0.3
SONM LR LR 23 37 19.8
SONM Songino Array 91.66 24 P P 22 52 31.2 -0.3
comp=Z,5.0nm,1.1s,mb4.8,baz=327,slow=4.7,SNR=22
SONM LR LR 23 37 19.8
comp=Z,87nm,18.4s,MS4.2,baz=178,slow=38
ULN Ulaanbaatar 91.85 23 *eP* P 22 52 32.4 0.0
HIA Hailar 94.03 15 ⇑*eP* P 22 52 41.8 -0.6
GTA Gaotai 96.25 32 ⇑P P 22 52 52.8 0.0
GTA AP pP 22 53 00.1 +4.9
GTA XP sP 22 53 04.1 +8.0
GTA PP PP 22 56 52.8 +7.8
GTA SKS 23 03 26.3
GTA S S 23 04 12.7 -0.1
GTA AMB AMB
comp=Z,14nm,1.4s,mb5.2
GTA AMB AMB
comp=Z,145nm,7.2s
GTA LR LR
comp=N,124nm,14.8s,MS4.7
GTA LR LR
comp=E,150nm,16.7s,MS4.7
GTA LR LR
comp=Z,223nm,20.9s,MS4.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HABR	**Khabarovsk**	**97.06**	**5**	*e*P	**P**	**22 52 54.7**	**-1.5**
HABR				*e*		22 56 51.4	
HABR				*e*S	SKSac	23 03 31.9	-1.8
HABR				*e*		23 04 19.7	
HHC	**Hu-ho-hao-te**	**99.57**	**24**	*e*P	**P**	**22 53 06.1**	**-1.6**
HHC				AP	pP	22 53 10.8	+0.7
HHC				AP	pP	22 53 13.2	+3.1
HHC				PP	PP	22 57 11.8	+1.5
HHC				SKS		23 03 42.4	
HHC				S	S	23 04 33.6	-7.4
HHC				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb5.0						
HHC				AMB	AMB		
	comp=Z,164nm,4.2s						
HHC				LR	LR		
	comp=N,216nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=E,190nm,16.6s,MS4.8						
HHC				LR	LR		
	comp=Z,178nm,15.5s,MS4.7						
MDJ	**Mudanjiang**	**100.28**	**10**	P	Pdif	22 53 10.6	-0.2
MDJ				AMB	AMB		
	comp=Z,23nm,1.9s						
LZH	**Lanzhou**	**100.78**	**31**	*e*P	Pdif	22 53 07.5	-5.5
	comp=Z,15nm,1.5s						
LZH				pP		22 53 16.0	
LZH				sP		22 53 20.0	
LZH	**Lanzhou**	**100.78**	**31**	*e*P	Pdif	22 53 07.5	-5.5
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI	**Kunming**	**109.39**	**38**	PKP	PKiKP	22 57 57.0	+1.9
KMI				SKKS	SKKSac	23 05 20.5	-8.4
KMI				SS	SS	23 13 42.0	-3.1
KMI				LR	LR		
	comp=Z,70nm,18.2s,MS4.3						
NJ2	**Nanjing**	**109.95**	**22**	*e*PKP	PKiKP	22 57 52.0	-4.0
GYA	**Guiyang**	**110.21**	**35**	PDIF	Pdif	22 53 54.1	-0.8
GYA				PKP	PKiKP	22 57 55.6	-1.1
GYA				PP	PP	22 58 33.0	+3.4
GYA				PKS		23 01 31.0	
GYA				SKS	SKSdf	23 05 05.6	-3.7
GYA				S	Sdif	23 06 04.8	-4.9
GYA				SS	SS	23 13 54.8	-1.0
GYA				PP	PP		
	comp=Z,130nm,8.9s						
GYA				LR	LR		
	comp=N,240nm,20.8s,MS4.8						
GYA				LR	LR		
	comp=E,110nm,21.9s,MS4.8						
GYA				LR	LR		
	comp=Z,270nm,22.4s,MS4.8						
VNDA	**Vanda**	**136.12**	**186**	PKP	PKPdf	22 58 44.1	-0.3
	comp=Z,4.9nm,1.2s,baz=50,slow=5.6,SNR=4.2						
BATI	**Kupang**	**149.97**	**41**	PKPbc	PKPbc	22 59 16.0	+0.6
	comp=Z,120nm,0.8s,baz=281,slow=6.2,SNR=6.8						
URZ	**Urewera**	**152.46**	**252**	PKP	PKPdf	22 59 11.9	-1.7
	comp=Z,7.3nm,1.1s,baz=329,slow=6.8,SNR=2.9						
URZ				PKPbc	PKPbc	22 59 19.4	-1.1
	comp=Z,7.6nm,0.9s,baz=126,slow=5.0,SNR=4.5						
WRA	**Warramunga Arr**	**163.53**	**30**	PKP	PKPdf	22 59 25.7	-2.0
	comp=Z,0.8nm,0.9s,baz=191,slow=5.0,SNR=6.0						
WRA				PKPab	PKPab	23 00 18.3	-0.6
	comp=Z,7.2nm,1.0s,baz=343,slow=4.5,SNR=19						
ASAR	**Alice Springs**	**166.53**	**39**	PKP	PKPdf	22 59 30.2	+0.1
	comp=Z,0.5nm,1.0s,baz=297,slow=0.8,SNR=2.9						
ASAR				PKPab	PKPab	23 00 30.1	-2.0
	comp=Z,3.2nm,1.0s,baz=327,slow=4.5,SNR=12						
STKA	**Stephens Creek**	**177.07**	**26**	PKP	PKPdf	22 59 34.0	-0.9
	comp=Z,4.7nm,1.1s,baz=127,slow=2.5,SNR=4.8						

MAN 04 22:41:14, 1034N×12186E, h48km, mb4.4, ML3.2, MS3.0, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.77**	**68**	*e*P	Pn	22 41 27.8	-0.8
GUIM				*e*S	Sn	22 41 40.8	+1.6
CUYO	**Cuyo Island**	**0.98**	**302**	*e*P	Pn	22 41 32.4	+1.0
CUYO				*e*S	Sn	22 41 46.4	+2.2
RCP	**Roxas**	**1.49**	**35**	*e*P	Pn	22 41 40.1	+1.7
SNPH	**Sibulan**	**1.67**	**126**	*e*P	Pn	22 41 42.0	+1.1
OTRP	**Odiongan**	**2.02**	**4**	*e*P	Pn	22 41 46.8	+1.1
BUSP	**Coron**	**2.33**	**316**	*e*P	Pn	22 41 51.7	+1.9
BUSP				*e*S	Sn	22 42 21.4	+4.2
ENPP	**El Nido**	**2.55**	**290**	*e*P	Pn	22 41 54.7	+1.9
MSLP	**Maasin**	**2.96**	**94**	*e*P	Pn	22 42 00.6	+2.2
LUBP	**Lubang**	**3.73**	**335**	*e*P	Pn	22 42 10.7	+1.6

*CSEM **04** 22:49:18.9±0.1, 3765N×2690E, h20km, MD2.8, Error ellipse: s-maj=3.7km s-min=1.1km az=79.0*
*ISCJB **04** 22:49:19.4±1.2, 3764N±0.04×2688E±0.1, h7km±9km, Error ellipse: s-maj=19.5km s-min=4.8km az=163.0*
*DDA **04** 22:49:19.2, 3763N×2685E, h7km±2km, Md2.7*
*ISK **04** 22:49:20.7, 3769N×2709E, h5km, MD2.8*
ISC 04 22:49:19.9±1.3, **3764N**±0.04×**268E**±0.1, **h11**km±14km, **n7**, σ**0.59**/12, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.69**	**147**	PG	**Pg**	**22 49 33.8**	**+0.6**
BODT				SG	**Sg**	**22 49 42.8**	**+0.6**
URLA	**Izmir**	**0.75**	**345**	*i* P	**Pg**	**22 49 34.1**	**-0.3**
URLA				*i* S	**Sg**	**22 49 44.8**	**+0.7**
BDRM	**Kayabasi**	**0.75**	**140**	*i* P	**Pg**	**22 49 33.7**	**-0.7**
BDRM				*i* S	**Sg**	**22 49 44.0**	**-0.1**
BLCB	**Balcova**	**0.76**	**12**	PG	**Pg**	**22 49 34.5**	**-0.2**
BLCB				SG	**Sg**	**22 49 44.8**	**+0.1**
IZM	**Izmir**	**0.83**	**24**	PG	**Pg**	**22 49 35.2**	**-0.7**
KDAG	**Bornova**	**0.83**	**24**	*i* P	**Pg**	**22 49 34.9**	**-1.1**
KDAG				*i* S	**Sg**	**22 49 47.8**	**+0.8**
AKS	**Akhisar**	**1.46**	**31**	*e*PN	**Pn**	**22 49 46.4**	**+0.3**

*BJI **04** 22:55:49.0, 930S×10780E, h10km, mb4.3*
*ISCJB **04** 22:55:51.3±5.4, 931S±0.10×10773E±0.07, h17km±42km, mb4.2/17, Error ellipse: s-maj=16.4km s-min=11.7km az=172.1*
*IDC **04** 22:55:51.8±1.6, 902S×10806E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.7/17, mbtmp3.9/6, Error ellipse: s-maj=80.7km s-min=21.4km az=50.0*
*NEIC **04** 22:55:52.1±0.5, 926S×10778E, h10km, mb4.6/11, Error ellipse: s-maj=17.7km s-min=10.8km az=51.0*
ISC 04 22:55:53.0±5.9, **935S**±0.08×**10770E**±0.08, **h16**km±38km, **n22**, σ**1.14**/22, **mb4.2**/17, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**2.31**	**241**	*e*Pn	**Pn**	**22 56 30.9**	**+0.4**
XMIS				*e*Sn	**Sn**	**22 56 57.8**	**-0.8**
MBWA	**Marble Bar**	**16.50**	**137**	Pn	**Pn**	**22 59 43.7**	**-0.3**
	19nm,1.1s						
WRA	**Warramunga Arr**	**27.80**	**115**	P	**P**	**23 01 39.4**	**-2.2**
	0.2nm,0.4s,mb3.1,baz=288,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**28.80**	**123**	P	**P**	**23 01 52.7**	**+2.2**
	0.6nm,0.6s,mb3.5,baz=302,slow=9.1,SNR=7.2						
ASAR				PcP	PcP	23 05 00.2	-0.1
	0.3nm,0.6s,baz=309,slow=1.4,SNR=4.6						
ODAN	**Odare**	**41.03**	**332**	*e*P	**P**	**23 03 35.0**	**-0.8**
	7.4nm,0.6s,mb4.5						
TAPN	**Taplejung**	**41.30**	**333**	*e*P	**P**	**23 03 37.8**	**-0.2**
	9.0nm,0.8s,mb4.5						
LSA	**Lhasa**	**41.96**	**338**	*e*P	**P**	**23 03 44.2**	**+0.8**
	1.9nm,0.4s,mb4.1						
JIRN	**Jiri**	**42.27**	**331**	*e*P	**P**	**23 03 45.7**	**-0.2**
	14nm,0.8s,mb4.6						
KKN	**Kakani**	**42.82**	**330**	*e*P	**P**	**23 03 49.0**	**-1.4**
	12nm,0.9s,mb4.6						
GKN	**Gorkha**	**43.32**	**330**	*e*P	**P**	**23 03 53.4**	**-1.0**
	5.6nm,0.4s,mb4.7						
LZH	**Lanzhou**	**45.33**	**356**	*e*P	**P**	**23 04 09.5**	**-0.9**
LZH				AP	pP	23 04 15.3	0.0
LZH				XP	sP	23 04 17.6	+0.4
LZH				AMB	AMB		
	comp=Z,17nm,1.4s,mb4.7						
LZH	**Lanzhou**	**45.33**	**356**	*e*P	**P**	**23 04 09.5**	**-0.9**
	comp=Z,17nm,1.4s,mb4.7						
LZH				pP	pP	23 04 15.3	0.0
LZH				sP	sP	23 04 17.6	+0.4
GTA	**Gaotai**	**49.05**	**352**	*e*P	**P**	**23 04 40.1**	**+0.7**
GTA				AP	pP	23 04 44.2	-0.1
GTA				XP	sP	23 04 47.1	+0.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.3						
SONM	**Songino Array**	**56.94**	**359**	P	**P**	**23 05 37.0**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=181,slow=9.0,SNR=14						
TKM2	**Tokmak 2**	**59.69**	**333**	*e*P	**P**	**23 05 57.6**	**+0.8**
	comp=Z,2.8nm,0.7s,mb4.4						
TKM2				*e*PcP	PcP	23 06 44.5	+0.9
MKAR	**Makanchi Array**	**60.31**	**340**	P	**P**	**23 06 01.0**	**+0.1**
	comp=Z,3.2nm,0.6s,mb4.5,baz=142,slow=7.6,SNR=62						
ZALV	**Zalesovo Beam**	**65.96**	**345**	P	**P**	**23 06 37.9**	**-0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=131,slow=6.1,SNR=4.7						
BRVK	**Borovoye**	**69.85**	**337**	*e*P	**P**	**23 07 04.2**	**+1.4**
	comp=Z,2.6nm,0.6s,mb4.3						
MALT	**Malatya**	**79.91**	**312**	P	**P**	**23 08 03.1**	**+1.8**
TIXI	**Tiksi**	**82.04**	**7**	*e*P	**P**	**23 08 10.5**	**-1.4**
	comp=Z,1.7nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**83.89**	**312**	P	**P**	**23 08 24.7**	**+2.4**
	comp=Z,1.4nm,1.1s,mb4.0,baz=103,slow=6.2,SNR=4.0						
TXAR	**Lajitas Array**	**144.53**	**52**	PKP	PKPdf	23 15 28.9	-0.5
	comp=Z,0.2nm,0.5s,baz=305,slow=4.0,SNR=4.0						

IDC 04 22:59:02.7±1.4, **3357N**×**3868W**, **h0**km, **mb3.6**/7, **mb1 3.8**/7, **mb1mx3.5**/21, **mbtmp3.6**/7, **MS3.7**/5, **Ms1 3.7**/5, **ms1mx3.4**/20, **Error ellipse: s-maj=47.2km s-min=21.6km az=8.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**28.98**	**326**	LR	LR	23 14 56.4	
	comp=Z,141nm,18.5s,baz=268,slow=33						
SJG	**San Juan**	**29.01**	**245**	LR	LR	23 13 17.5	
	comp=Z,151nm,19.0s,baz=93,slow=30						
GERES	**GERESS Array B**	**41.42**	**52**	LR	LR	23 23 56.9	
	comp=Z,86nm,18.1s,baz=359,slow=36						
TORD	**Torodi Ar. Bea**	**41.93**	**109**	P	P	23 06 55.2	0.0
	0.6nm,0.8s,baz=292,slow=6.1,SNR=5.4						
TORD				LR	LR	23 24 41.4	
	comp=Z,52nm,18.2s,baz=325,slow=37						
ULM	**Lac du Bonnet**	**44.57**	**310**	P	P	23 07 16.5	+0.3
	1.1nm,0.6s,baz=56,slow=11,SNR=3.3						
FINES	**FINESS Array B**	**49.17**	**35**	P	P	23 07 52.6	+0.6
	3.6nm,1.2s,baz=243,slow=4.5,SNR=2.4						
AKASG	**Malin Array Be**	**51.35**	**49**	P	P	23 08 08.1	-0.7
	0.7nm,0.7s,baz=274,slow=6.7,SNR=3.4						
YKA	**Yellowknife Ar**	**54.43**	**326**	P	P	23 08 31.2	0.0
	0.1nm,0.3s,baz=89,slow=7.6,SNR=5.1						
TXAR	**Lajitas Array**	**54.80**	**284**	P	P	23 08 35.0	+0.5
	0.3nm,0.8s,baz=83,slow=3.9,SNR=2.7						
PDAR	**Pinedale Array**	**54.99**	**302**	P	P	23 08 35.2	-0.5
	0.5nm,1.0s,baz=113,slow=6.9,SNR=2.4						
LPAZ	**La Paz**	**56.99**	**214**	LR	LR	23 29 09.4	
	comp=Z,61nm,19.3s,baz=260,slow=32						

*IDC **04** 23:13:05.0±1.3, 070S×12770E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/16, mbtmp3.6/5, Error ellipse: s-maj=127.9km s-min=20.5km az=70.0*
*ISCJB **04** 23:13:07.3±1.2, 04S±03×1286E±07, h33km, mb4.1/8, Error ellipse: s-maj=104.2km s-min=13.8km az=158.6*
*NEIC **04** 23:13:09.7±1.1, 054S×12832E, h35km, mb4.5/3, Error ellipse: s-maj=97.2km s-min=13.3km az=68.0*
*BJI **04** 23:13:09.6, 050S×12830E, h35km, mb4.7*
ISC 04 23:13:09.8±1.2, **05S**±03×**1284E**±07, **h35**km, **n10**, σ**0.88**/10, **mb4.1**/8, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.15**	**164**	P	**P**	**23 17 41.0**	**-0.2**
	1.4nm,0.8s,baz=341,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**23.61**	**167**	P	**P**	**23 18 18.1**	**+0.3**
	1.1nm,0.5s,mb3.5,baz=343,slow=11,SNR=15						
LZH	**Lanzhou**	**43.01**	**330**	*e*P	**P**	**23 21 11.5**	**+5.5**
LZH				AP	pP	23 21 16.3	0.0
LZH				AP	pP	23 21 18.1	+1.8
LZH				AMB	AMB		
	comp=Z,16nm,1.5s,mb4.5						
LZH	**Lanzhou**	**43.01**	**330**	*e*P	**P**	**23 21 11.5**	**+5.5**
	comp=Z,16nm,1.5s,mb4.5						
LZH				pP	pP	23 21 16.3	0.0
LZH				sP	sP	23 21 18.1	-2.4
LSA	**Lhasa**	**46.54**	**313**	*e*P	**P**	**23 21 34.6**	**+0.4**
	comp=Z,3.5nm,0.6s,mb4.5						
GTA	**Gaotai**	**47.59**	**330**	*e*P	**P**	**23 21 43.3**	**+1.0**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.3						
SONM	**Songino Array**	**51.84**	**341**	P	**P**	**23 22 15.5**	**+1.1**
	comp=Z,1.0nm,1.0s,mb3.7,baz=154,slow=7.4,SNR=4.8						
MKAR	**Makanchi Array**	**62.00**	**326**	P	**P**	**23 23 25.5**	**-1.0**
	comp=Z,1.0nm,0.6s,mb4.1,baz=116,slow=8.0,SNR=16						
ZALV	**Zalesovo Beam**	**65.12**	**333**	P	**P**	**23 23 45.2**	**-1.8**
	comp=Z,0.2nm,0.4s,mb3.5,baz=103,slow=4.6,SNR=4.1						
KURK	**Kurchatov**	**66.22**	**328**	*e*P	**P**	**23 23 54.1**	**0.0**
	comp=Z,4.4nm,0.8s,mb4.5						
KURK				*e*PP	PP	23 26 15.5	-4.7

IDC 04 23:37:44.7±6.6, **2751N**×**4449W**, **h0**km, **mb3.8**/4, **mb1 4.0**/4, **mb1mx3.5**/20, **mbtmp3.8**/4, **Error ellipse: s-maj=207.7km s-min=38.2km az=8.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDAR	**Pinedale Array**	**54.09**	**304**	P	P	23 47 11.3	+0.1
	0.5nm,0.8s,baz=96,slow=12,SNR=3.5						
YKA	**Yellowknife Ar**	**56.82**	**329**	P	P	23 47 30.5	0.0
	0.5nm,0.7s,baz=93,slow=7.5,SNR=8.5						
BRTR	**Keskin Array B**	**64.31**	**57**	P	P	23 48 22.3	+0.2
	1.1nm,0.9s,baz=302,slow=2.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**87.82**	**27**	P	P	23 50 35.9	+0.1
	1.1nm,0.8s,baz=318,slow=4.2,SNR=5.2						

*SZGRF **04** 23:42:06.8, 2235S×17793W, h33km, South of Fiji Islands*
*ISCJB **04** 23:43:08.7±0.8, 2074S±0.05×17883W±0.05, h538km±10km, mb4.6/54, Error ellipse: s-maj=8.9km s-min=5.2km az=45.0*
*MOS **04** 23:43:10.8±1.3, 2062S×17880W, h561km, mb4.7/21, Error ellipse: s-maj=11.6km s-min=9.2km az=46.8*
*NEIC **04** 23:43:11.9±0.7, 2077S×17876W, h567km±9km, mb4.7/43, Error ellipse: s-maj=7.7km s-min=5.1km az=136.0*
*IDC **04** 23:43:11.5±1.1, 2074S×17866W, h563km±11km, mb3.9/15, mb1 4.1/18, mb1mx4.1/19, mbtmp3.9/18, Error ellipse: s-maj=13.6km s-min=10.2km az=137.0*
*BJI **04** 23:43:11.9, 2080S×17880W, h567km, mB5.5, mb4.8*
ISC 04 23:43:11.8±0.9, **2078S**±0.05×**17880W**±0.05, **h563**km±11km, **n610**, σ**0.61**/445, **mb4.6**/54, **160C-127D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.48**	**175**	S	**S**	**23 46 48.1**	**-7.1**
	31nm,0.3s,baz=282,slow=23,SNR=2.5						
AFI	**Afiamalu**	**9.57**	**46**	*e*P	**P**	**23 45 23.7**	**-1.9**
AFI				*e*S	**S**	**23 47 08.4**	**-7.1**
AFI	**Afiamalu**	**9.57**	**46**	P	**P**	**23 45 23.2**	**-2.4**
	28nm,0.3s,baz=26,slow=4.1,SNR=40						
AFI				S	**S**	**23 47 05.1**	**-10**
	4.6nm,0.3s,baz=11,slow=23,SNR=4.3						
DZM	**Mont Dzumac**	**13.80**	**262**	P	**P**	**23 46 10.8**	**+1.9**
	0.8nm,0.3s,baz=101,slow=16,SNR=6.5						
PUZ	**Puketiti**	**17.43**	**188**	SN	**S**	**23 49 33.9**	**-2.2**
TOZ	**Tahuroa Road**	**17.60**	**195**	P	**P**	**23 46 47.7**	**+2.4**
TOZ	**Tahuroa Road**	**17.60**	**195**	PN	**P**	**23 46 47.7**	**+2.4**
RAR	**Rarotonga**	**17.77**	**95**	P	**P**	**23 46 45.7**	**-1.3**
	1.1nm,0.3s,baz=218,slow=3.0,SNR=2.9						
URZ	**Urewera**	**17.78**	**191**	P	**P**	**23 46 44.3**	**-2.6**
	12nm,0.3s,baz=13,slow=2.5,SNR=59						
URZ				S	**S**	**23 49 33.7**	**-8.2**
	2.1nm,0.3s,baz=94,slow=19,SNR=6.9						
MWZ	**Matawai**	**17.79**	**189**	*e*P	**P**	**23 46 44.9**	**-2.0**
MWZ	**Matawai**	**17.79**	**189**	PN	**P**	**23 46 45.2**	**-1.8**
TUVZ	**Tukino**	**19.04**	**193**	PN	**P**	**23 46 58.0**	**-0.3**
MRZ	**Mangatainoka R**	**20.39**	**192**	*e*P	**P**	**23 47 08.6**	**-2.0**
MRZ	**Mangatainoka R**	**20.39**	**192**	PN	**P**	**23 47 09.6**	**-1.0**
SNZO	**South Karori**	**21.20**	**194**	*e*P	**P**	**23 47 17.2**	**-0.7**
	78nm,0.7s,mb5.4						
QRZ	**Quartz Range**	**21.31**	**198**	P	**P**	**23 47 19.8**	**+1.0**
QRZ	**Quartz Range**	**21.31**	**198**	PN	**P**	**23 47 20.3**	**+1.4**
NNZ	**Nelson**	**21.43**	**196**	P	**P**	**23 47 19.6**	**-0.4**
NNZ	**Nelson**	**21.43**	**196**	PN	**P**	**23 47 19.6**	**-0.4**
THZ	**Tophouse**	**22.07**	**197**	P	**P**	**23 47 25.1**	**-0.5**
THZ	**Tophouse**	**22.07**	**197**	PN	**P**	**23 47 25.1**	**-0.5**
DSZ	**Denniston Nort**	**22.37**	**199**	*e*P	**P**	**23 47 28.4**	**+0.1**
DSZ	**Denniston Nort**	**22.37**	**199**	PN	**P**	**23 47 28.6**	**+0.3**
KHZ	**Kahutara**	**22.52**	**195**	PN	**P**	**23 47 28.9**	**-0.8**
RPZ	**Rata Peaks**	**24.39**	**198**	P	**P**	**23 47 45.4**	**-0.8**
	23nm,0.5s,mb5.1,baz=37,slow=4.5,SNR=22						
LBZ	**Lake Benmore**	**25.26**	**199**	*e*P	**P**	**23 47 52.9**	**-1.0**
LBZ	**Lake Benmore**	**25.26**	**199**	PN	**P**	**23 47 52.9**	**-1.0**
JCZ	**Jackson Bay**	**25.44**	**201**	P	**P**	**23 47 55.9**	**+0.4**
JCZ	**Jackson Bay**	**25.44**	**201**	PN	**P**	**23 47 55.9**	**+0.4**
ARMA	**Armidale**	**28.27**	**244**	*e*P	**P**	**23 48 23.1**	**+2.5**
CTA	**Charters Tower**	**32.72**	**265**	*e*P	**P**	**23 49 00.2**	**+1.3**
	6.3nm,0.7s,mb4.2						
CTA	**Charters Tower**	**32.72**	**265**	*e*P	**P**	**23 49 00.2**	**+1.3**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CTAO	**Charters Tower**	**32.72**	**265**	*e*P	**P**	**23 49 00.3**	**+1.4**
	comp=Z,48nm,1.5s,mb4.8						
CTAO				*e*PcP	PcP	23 51 26.5	-1.0
CTAO	**Charters Tower**	**32.72**	**265**	*e*P	**P**	**23 49 00.3**	**+1.4**
CTAO				*e*		23 51 26.5	
CTAO				pmax	pmax		
	comp=Z,48nm,1.5s,mb4.8						
PMG	**Port Moresby**	**34.68**	**284**	*e*P	**P**	**23 49 17.0**	**+1.6**
	comp=Z,50nm,1.0s,mb5.0						
PMG	**Port Moresby**	**34.68**	**284**	*e*P	**P**	**23 49 17.0**	**+1.6**
PMG				pmax	pmax		
	comp=Z,50nm,1.0s						
PMG	**Port Moresby**	**34.68**	**284**	P	**P**	**23 49 16.7**	**+1.3**
	comp=Z,57nm,1.1s,mb5.0,baz=114,slow=4.5,SNR=5.0						
STKA	**Stephens Creek**	**36.99**	**244**	⇑*i*P	**P**	**23 49 35.9**	**+1.6**
	comp=Z,10nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**36.99**	**244**	P	**P**	**23 49 34.9**	**+0.6**
	comp=Z,8.9nm,0.6s,mb4.4,baz=94,slow=9.0,SNR=24						
STKA				PcP	PcP	23 51 40.3	+0.2
	comp=Z,1.2nm,0.4s,baz=91,slow=3.1,SNR=2.9						
STKA				ScP	ScP	23 54 34.8	+0.9
	comp=Z,2.7nm,0.8s,baz=42,slow=1.8,SNR=3.7						
ASAR	**Alice Springs**	**43.73**	**257**	P	**P**	**23 50 29.1**	**+1.0**
	comp=Z,14nm,0.7s,mb4.6,baz=87,slow=8.4,SNR=106						
ASAR				PcP	PcP	23 52 02.4	0.0
	comp=Z,6.1nm,0.7s,baz=104,slow=3.9,SNR=17						
ASAR				S	**S**	**23 56 16.9**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=93,slow=15,SNR=16						
WB2	**Warramunga Arr**	**43.81**	**262**	*e*P	**P**	**23 50 28.9**	**+0.2**
WB2				*e*PcP	PcP	23 52 03.1	+0.4
WRA	**Warramunga Arr**	**43.82**	**262**	P	**P**	**23 50 29.1**	**+0.3**
	comp=Z,3.4nm,0.3s,mb4.3,baz=97,slow=7.5,SNR=190						
WRA				ScP	ScP	23 55 02.3	+1.1
	comp=Z,1.4nm,1.1s,baz=56,slow=5.8,SNR=4.6						
WRA				S	**S**	**23 56 17.1**	**-2.3**
	comp=Z,1.3nm,0.8s,baz=100,slow=13,SNR=5.6						
POHA	**Pohakuloa**	**46.28**	**31**	P	**P**	**23 50 47.4**	**-0.1**
FORT	**Forrest**	**48.50**	**247**	*e*P	**P**	**23 51 04.2**	**+0.1**
	comp=Z,19nm,0.6s,mb4.8						
GUMO	**Guam**	**49.41**	**311**	*e*P	**P**	**23 51 10.6**	**-0.3**
	comp=Z,232nm,1.0s						
GUMO	**Guam**	**49.41**	**311**	*e*P	**P**	**23 51 10.6**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,231nm,1.0s						
MBWA	**Marble Bar**	**57.06**	**258**	*e*P	**P**	**23 52 05.2**	**0.0**
	comp=Z,15nm,0.8s,mb4.3						
SBA	**Scott Base**	**57.55**	**184**	*e*P	**P**	**23 52 09.3**	**+1.7**
	comp=Z,16nm,0.8s,mb4.3						
SBA	**Scott Base**	**57.55**	**184**	*e*P	**P**	**23 52 09.3**	**+1.7**
SBA				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.3						
VNDA	**Vanda**	**57.57**	**185**	*e*P	**P**	**23 52 09.7**	**+2.0**
	comp=Z,46nm,1.8s,mb4.4						
VNDA				ScP	ScP	23 55 57.9	-1.4
VNDA	**Vanda**	**57.57**	**185**	*e*P	**P**	**23 52 09.7**	**+2.0**
VNDA						23 55 57.9	
VNDA				pmax	pmax		
	comp=Z,46nm,1.8s						
VNDA	**Vanda**	**57.57**	**185**	P	**P**	**23 52 09.0**	**+1.3**
	comp=Z,4.9nm,0.8s,mb3.8,baz=352,slow=7.5,SNR=18						
VNDA				ScP	ScP	23 55 57.9	-1.4
	comp=Z,3.1nm,1.0s,baz=331,slow=4.6,SNR=5.5						
NWAO	**Narrogin (SRO)**	**57.58**	**244**	P	**P**	**23 52 08.7**	**+0.2**
CASY	**Casey**	**63.40**	**205**	P	**P**	**23 52 47.0**	**+0.7**
QSPA	**South Pole Qui**	**69.29**	**180**	*e*P	**P**	**23 53 23.8**	**+1.3**
	comp=Z,61nm,0.7s,mb5.2						
QSPA				PcP	PcP	23 53 42.1	+0.6
MJAR	**Matsushiro Arr**	**69.99**	**324**	P	**P**	**23 53 27.0**	**-0.3**
	comp=Z,5.3nm,0.7s,mb4.2,baz=157,slow=6.1,SNR=10						
MAJO	**Matsushiro**	**69.99**	**324**	P	**P**	**23 53 26.4**	**-0.9**
	comp=Z,5.7nm,0.5s,mb4.4						
MAJO	**Matsushiro**	**69.99**	**324**	P	**P**	**23 53 26.4**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
UNV	**Unalaska Valle**	**75.07**	**8**	*e*P	**P**	**23 53 54.9**	**-1.2**
	comp=Z,36nm,0.5s,mb5.1						
YSS	**Yuzh-Sakhalins**	**75.81**	**334**	P	**P**	**23 54 00.0**	**-0.4**
YSS	**Yuzh-Sakhalins**	**75.81**	**334**	⇑*e*P	**P**	**23 54 01.0**	**+0.6**
YSS				pmax	pmax		
	comp=Z,44nm,1.5s,mb4.7						
KSRS	**Korea Array**	**76.60**	**319**	P	**P**	**23 54 05.9**	**+0.9**
	comp=Z,3.8nm,0.8s,mb3.9,baz=136,slow=6.0,SNR=6.6						
BSC	**Santa Cruz Isl**	**78.33**	**47**	⇑P	**P**	**23 54 14.4**	**0.0**
	baz=78						
V03C	**Hunter Liggett**	**78.44**	**44**	⇓P	**P**	**23 54 15.7**	**+0.8**
	baz=79,SNR=5.7						
HAST	**UC Hastings Re**	**78.45**	**44**	⇓P	**P**	**23 54 15.4**	**+0.4**
	baz=79,SNR=27						
V04C	**Ramage Ranch,**	**78.45**	**45**	⇓P	**P**	**23 54 15.5**	**+0.5**
	baz=79						
BNLO	**Ben Lomond (Sa**	**78.50**	**43**	⇓P	**P**	**23 54 15.2**	**0.0**
	baz=79						
SCI	**San Clemente I**	**78.51**	**48**	⇓P	**P**	**23 54 15.0**	**-0.4**
	baz=79						
JRSC	**Jasper Ridge**	**78.62**	**43**	⇑P	**P**	**23 54 16.1**	**+0.2**
	baz=79						
MCCM	**Marconi Confer**	**78.67**	**42**	⇑P	**P**	**23 54 16.0**	**-0.1**
	baz=79						
PKM	**Peak Mountain**	**78.72**	**46**	⇑P	**P**	**23 54 16.5**	**+0.1**
	baz=79						
SAO	**San Andreas Ge**	**78.74**	**44**	*e*P	**P**	**23 54 15.9**	**-0.6**
	comp=Z,16nm,0.9s,mb4.4						
SAO	**San Andreas Ge**	**78.74**	**44**	*e*P	**P**	**23 54 15.9**	**-0.6**
SAO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.3						
PKD	**Parkfield**	**78.85**	**45**	⇑P	**P**	**23 54 17.6**	**+0.4**
	baz=79						
U04C	**Hernandez Rese**	**78.94**	**44**	⇓P	**P**	**23 54 18.3**	**+0.7**
	baz=79,SNR=6.9						
PACP	**Pacheco Peak**	**78.99**	**43**	⇑P	**P**	**23 54 18.2**	**+0.4**
	baz=79,SNR=11						
CVS	**Carmenet Viney**	**79.05**	**42**	⇓P	**P**	**23 54 18.3**	**+0.1**
	baz=79,SNR=6.9						
HOPS	**Hopland**	**79.07**	**41**	*e*P	**P**	**23 54 17.9**	**-0.3**
	comp=Z,32nm,1.0s,mb4.6						
HOPS	**Hopland**	**79.07**	**41**	⇑P	**P**	**23 54 18.7**	**+0.5**
	baz=79,SNR=8.2						
KCPM	**Cahto Peak**	**79.19**	**40**	*e*P	**P**	**23 54 19.5**	**+0.7**
P01C	**Double 8 Ranch**	**79.20**	**40**	⇓P	**P**	**23 54 19.0**	**+0.2**
	baz=79						
S04C	**Ingram Canyon,**	**79.26**	**43**	⇑P	**P**	**23 54 19.6**	**+0.4**
	baz=79,SNR=9.7						
O01C	**Eel River Cons**	**79.33**	**40**	⇑P	**P**	**23 54 20.7**	**+1.2**
	baz=80,SNR=9.8						
MNRC	**McLaughlin Nat**	**79.39**	**41**	⇑P	**P**	**23 54 20.8**	**+0.9**
	baz=80,SNR=19						
109C	**Camp Elliot, M**	**79.47**	**49**	⇓P	**P**	**23 54 20.4**	**0.0**
	baz=80						
ARVC	**Arvin**	**79.52**	**46**	⇓P	**P**	**23 54 20.9**	**+0.2**
	baz=80						
GASB	**Alder Springs**	**79.69**	**41**	P	**P**	**23 54 22.7**	**+1.3**
	baz=80,SNR=14						
MURC	**Murrieta**	**79.79**	**48**	⇑P	**P**	**23 54 21.8**	**-0.3**
	baz=80						
S05C	**Merced**	**79.81**	**44**	⇑P	**P**	**23 54 22.3**	**+0.1**
	baz=80,SNR=5.7						
BFSC	**Mount Baldy St**	**79.82**	**47**	⇓P	**P**	**23 54 22.1**	**-0.2**
	baz=80						
EDW2	**Edwards Air Fo**	**79.95**	**47**	P	**P**	**23 54 22.9**	**0.0**
	baz=80,SNR=13						
MONP	**Monument Peak**	**79.95**	**49**	⇓P	**P**	**23 54 23.3**	**+0.3**
	baz=80,SNR=8.0						
O02C	**Red Bluff**	**79.97**	**40**	P	**P**	**23 54 23.8**	**+0.9**
	baz=80,SNR=25						
SUTB	**Sutter Butte**	**80.00**	**41**	⇓P	**P**	**23 54 22.7**	**-0.4**
	baz=80						
T06C	**Millerton Lake**	**80.01**	**44**	⇓P	**P**	**23 54 22.9**	**-0.3**
	baz=80,SNR=11						
N02C	**Big Bar**	**80.06**	**39**	⇑P	**P**	**23 54 23.5**	**+0.1**
	baz=80,SNR=10						
DVTC	**Desert V Tower**	**80.06**	**50**	⇑P	**P**	**23 54 23.5**	**-0.1**

baz=80,SNR=5.6
ISA **Isabella** 80.06 46 ⇑P P 23 54 23.5 0.0
baz=80,SNR=11
CMB **Columbia Colle** 80.17 43 eP P 23 54 23.6 -0.5
comp=Z,24nm,1.2s,mb4.4
CMB **Columbia Colle** 80.17 43 eP P 23 54 23.6 -0.4
CMB pmax pmax
comp=Z,24nm,1.2s,mb4.4
CMB **Columbia Colle** 80.17 43 P P 23 54 24.0 -0.1
baz=80,SNR=18
M01C **Crescent City** 80.22 38 ⇓P P 23 54 24.2 0.0
baz=80
OHCM **Honcut** 80.25 41 eP P 23 54 24.5 +0.1
HELL **Mitchell Peak,** 80.27 45 ⇑P P 23 54 24.3 -0.3
baz=80,SNR=10
MDJ **Mudanjiang** 80.31 325 P P 23 54 25.1 +0.5
O03C **Acorn Hollow,** 80.32 41 ⇓P P 23 54 25.0 +0.3
baz=80
PFO **Pinyon Flat Ob** 80.32 49 P P 23 54 24.4 -0.5
comp=Z,0.9nm,0.4s,baz=282,slow=6.9,SNR=4.7
PFO **Pinyon Flat Ob** 80.32 49 ⇓P P 23 54 24.6 -0.3
baz=80
WDC **Whiskeytown Da** 80.36 40 eP P 23 54 25.1 +0.1
comp=Z,38nm,1.4s,mb4.5
WDC **Whiskeytown Da** 80.36 40 eP P 23 54 25.1 +0.1
WDC pmax pmax
comp=Z,39nm,1.4s,mb4.5
WDC **Whiskeytown Da** 80.36 40 ⇓P P 23 54 25.1 +0.2
baz=80,SNR=14
LAVA **Lava Cap Winer** 80.37 42 ⇑P P 23 54 24.9 -0.2
baz=80,SNR=7.0
ORV **Oroville** 80.38 41 P P 23 54 25.0 0.0
baz=81,SNR=12
SWSC **Sam W. Stewart** 80.42 49 ⇓P P 23 54 25.6 +0.2
baz=81,SNR=5.3
KCC **Kaiser Creek** 80.45 44 P P 23 54 26.0 +0.5
baz=81,SNR=9.4
LRMC **Laurel Mountai** 80.49 46 ⇓P P 23 54 26.0 +0.3
baz=81,SNR=6.9
K01A **Sixes** 80.63 37 ⇑P P 23 54 26.7 +0.4
baz=81
L02A **Cave Junction** 80.72 38 ⇓P P 23 54 26.9 +0.1
baz=81
R05C **Kirkwood Meado** 80.76 43 P P 23 54 27.1 +0.1
baz=81,SNR=20
CWC **Cottonwood Cre** 80.76 45 ⇓P P 23 54 27.4 +0.3
baz=81,SNR=6.1
P05C **Yuba Gap, Truc** 80.78 42 P P 23 54 27.5 +0.3
baz=81,SNR=17
BELC **Belle Mtn.** 80.85 48 P P 23 54 27.7 +0.1
baz=81,SNR=11
MPMC **Manual Prospec** 80.95 46 ⇓P P 23 54 28.2 +0.1
baz=81,SNR=16
MTUM **Tungsten Hills** 80.96 44 eP P 23 54 28.5 +0.4
YBH **Yreka Blue Hor** 80.97 39 eP P 23 54 28.6 +0.6
comp=Z,21nm,0.8s,mb4.6
YBH **Yreka Blue Hor** 80.97 39 eP P 23 54 28.6 +0.5
YBH pmax pmax
comp=Z,21nm,0.8s
YBH **Yreka Blue Hor** 80.97 39 P P 23 54 28.8 +0.7
baz=81,SNR=22
O05C **Quincy** 80.98 41 P P 23 54 28.4 +0.2
baz=81,SNR=9.5
GSC **Goldstone** 80.99 47 P P 23 54 28.2 -0.2
baz=81,SNR=8.9
M03C **McCloud** 81.04 40 P P 23 54 28.9 +0.5
baz=81,SNR=20
BC3 **Big Chuckw Mtn** 81.05 49 ⇓P P 23 54 28.7 +0.1
baz=81
MAW **Mawson** 81.05 200 P P 23 54 28.2 +0.1
comp=Z,8.7nm,0.8s,mb4.2,baz=165,slow=4.2,SNR=4.5
WAKR **Walker** 81.05 43 eP P 23 54 28.9 +0.3
R06C **Coleville** 81.06 43 P P 23 54 29.0 +0.4
baz=81,SNR=16
HEC **Hector,Ludlow** 81.06 48 P P 23 54 28.6 -0.1
baz=81,SNR=8.8
R07C **Lee Vining** 81.06 44 P P 23 54 28.9 +0.3
baz=81,SNR=15
O04C **Chester** 81.09 41 P P 23 54 29.1 +0.4
baz=81,SNR=7.1
HATC **Hat Creek Radi** 81.16 40 ⇑P P 23 54 29.4 +0.3
baz=81,SNR=17
GLA **Glamis** 81.17 50 ⇓P P 23 54 29.9 +0.6
baz=81,SNR=9.7
BEKR **Beckwourth** 81.27 42 ⇑P P 23 54 29.4 -0.2
baz=81,SNR=22
S08C **White Mtn Res** 81.30 45 P P 23 54 30.5 +0.6
baz=82,SNR=35
WCN **Washoe City** 81.31 42 ⇑P P 23 54 30.2 +0.3
baz=82,SNR=10
ELFS **Eagle Lake Fie** 81.49 41 ⇑P P 23 54 31.3 +0.5
baz=82
GMRC **Granite Mounta** 81.50 48 ⇓P P 23 54 31.1 +0.1
baz=82,SNR=7.9
M04C **Macdoel** 81.52 39 ⇓P P 23 54 31.2 +0.4
baz=82,SNR=16
IRM **Iron Mountain** 81.53 49 P P 23 54 31.5 +0.4
baz=82,SNR=10
GRAC **Grapevine Rang** 81.55 45 ⇑P P 23 54 31.5 +0.3
baz=82
FURC **Furnace Creek,** 81.60 46 ⇓P P 23 54 31.6 +0.2
baz=82
TUQ **Turquoise Mtn.** 81.67 47 ⇑P P 23 54 31.8 0.0
baz=82,SNR=13
M05C **Lookout** 81.68 40 P P 23 54 32.0 +0.4
baz=82,SNR=21
SHOC **Shoshone** 81.68 47 ⇑P P 23 54 31.5 -0.3
baz=82
L04A **Klamath Falls** 81.73 39 ⇓P P 23 54 32.1 +0.2
baz=82,SNR=14
NVAR **Mina Array Bea** 81.74 44 P P 23 54 32.2 +0.1
NVAR **Mina Array Bea** 81.74 44 P P 23 54 32.2 +0.1
comp=Z,10nm,0.7s,mb4.3,baz=210,slow=6.7,SNR=69
Y12C **Blythe** 81.76 49 ⇑P P 23 54 32.3 0.0
baz=82,SNR=7.5
O06A **Flanigan** 81.77 42 ⇓P P 23 54 32.2 0.0
baz=82,SNR=25
PAHR **Pah Rah Range** 81.78 42 eP P 23 54 32.4 +0.1
comp=Z,32nm,1.2s,mb4.6
J03A **Ideyld Park** 81.84 38 ⇑P P 23 54 32.8 +0.3
baz=82
U10A **Ash Meadows, A** 81.93 46 ⇑P P 23 54 33.3 +0.2
baz=82,SNR=5.6
M06C **Likely Place G** 81.99 40 P P 23 54 33.8 +0.5
baz=82,SNR=17
I03A **Eugene** 82.04 37 ⇓P P 23 54 33.7 +0.2
baz=82
S09A **Goldfield** 82.05 45 ⇓P P 23 54 33.5 -0.2
baz=82
H02A **Toledo** 82.08 36 ⇓P P 23 54 33.6 -0.1
baz=82
K04A **Chilquin** 82.09 39 ⇓P P 23 54 34.4 +0.6
baz=82
N06A **Buffalo Meadow** 82.11 41 ⇑P P 23 54 32.9 -1.1
baz=82,SNR=24
NEE2 **Needles Airpor** 82.22 48 ⇓P P 23 54 35.2 +0.5
baz=82
Q08A **Gabbs** 82.22 43 ⇓P P 23 54 34.4 -0.1
baz=82,SNR=15
V11A **Goodsprings** 82.23 47 ⇑P P 23 54 34.6 0.0
baz=82,SNR=6.3
J04A **Umpqua Nationa** 82.25 38 ⇓P P 23 54 34.9 +0.3
baz=82,SNR=13
TPNV **Topopah Spring** 82.27 46 eP P 23 54 34.9 +0.1
comp=Z,19nm,0.8s,mb4.6
TPNV **Topopah Spring** 82.27 46 eP P 23 54 34.9 +0.1
TPNV pmax pmax
comp=Z,19nm,0.8s,mb4.6
TPNV **Topopah Spring** 82.27 46 ⇓P P 23 54 34.8 0.0
baz=82
L05A **Lakeview** 82.28 40 ⇓P P 23 54 35.2 +0.4
baz=82,SNR=14
Y13A **Salome** 82.28 50 ⇑P P 23 54 35.4 +0.4
baz=82,SNR=8.0
PDMCI **Parker Dam,Lak** 82.31 49 ⇓P P 23 54 35.2 +0.1
baz=82,SNR=6.3
O07A **Toulon** 82.36 42 ⇓P P 23 54 34.9 -0.3
baz=82,SNR=32
I04A **Tendick Farm,** 82.42 37 ⇓P P 23 54 35.2 -0.2
baz=83,SNR=6.6
R09A **Tonopah** 82.43 44 ⇑P P 23 54 35.3 -0.3
baz=83,SNR=15
H03A **Soap Creek Ran** 82.47 36 ⇑P P 23 54 36.3 +0.6
baz=83,SNR=6.3
MOD **Modoc** 82.51 40 eP P 23 54 36.0 +0.1
comp=Z,12nm,0.8s,mb4.5
MOD **Modoc** 82.51 40 ⇑P P 23 54 35.9 0.0
baz=83,SNR=9.4

V12A **Nelson** 82.57 47 ⇑P P 23 54 36.3 0.0
baz=83,SNR=8.5
U11A **Corn Creek** 82.57 47 ⇓P P 23 54 36.9 +0.5
baz=83
S10A **Tonopah Range,** 82.57 45 ⇓P P 23 54 36.3 0.0
baz=83,SNR=47
P08A **Dixie Valley** 82.60 43 ⇓P P 23 54 37.1 +0.7
baz=83,SNR=5.5
K05A **Summer Lake** 82.65 39 ⇑P P 23 54 37.0 +0.4
baz=83,SNR=22
X13A **Yucca** 82.69 49 ⇑P P 23 54 37.0 +0.1
baz=83,SNR=6.8
Z14A **Wintersburg** 82.69 50 ⇓P P 23 54 37.4 +0.4
baz=83,SNR=6.3
BROR **Big Rock Looko** 82.69 37 P P 23 54 36.9 +0.2
Q09A **Carvers** 82.69 44 ⇓P P 23 54 37.2 +0.3
baz=83
SHPR **Sheep Range** 82.77 47 eP P 23 54 37.6 +0.2
J05A **Fort Rock** 82.78 38 ⇑P P 23 54 37.8 +0.6
baz=83,SNR=55
115A **Sonoran Desert** 82.87 51 ⇑P P 23 54 38.1 +0.2
baz=83
G03A **Yamhill** 82.88 36 ⇓P P 23 54 37.6 -0.1
baz=83
M07A **Soldier Meadow** 82.89 41 ⇑P P 23 54 37.8 0.0
baz=83,SNR=18
W13A **Hualapai Mount** 82.91 48 ⇓P P 23 54 38.2 +0.2
baz=83,SNR=7.8
Y14A **Wickenburg** 82.94 50 ⇓P P 23 54 38.2 0.0
baz=83,SNR=9.6
R10A **Warm Springs** 82.97 45 P P 23 54 38.6 +0.4
baz=83,SNR=22
S11A **Rachel** 82.98 45 ⇑P P 23 54 38.1 -0.3
baz=83
SSOR **Sweet Springs** 83.05 37 P P 23 54 38.6 +0.1
KULM **Kulim** 83.07 278 P P 23 54 37.1 -2.3
K06A **Valley Falls** 83.07 39 ⇑P P 23 54 38.7 0.0
baz=83,SNR=23
H04A **Detroit Lake** 83.10 37 P P 23 54 38.5 -0.3
baz=83,SNR=12
F03A **Seaside** 83.12 35 ⇓P P 23 54 39.1 +0.2
baz=83
P09A **Austin** 83.12 43 ⇓P P 23 54 39.0 0.0
baz=83
T11A **Corn Creek, Al** 83.12 46 P P 23 54 39.4 +0.3
baz=83,SNR=24
BKCOR **Black Crater** 83.14 37 P P 23 54 39.4 +0.4
U12A **Valley of Fire** 83.15 47 ⇓P P 23 54 39.7 +0.4
baz=83
L07A **Adell** 83.16 40 P P 23 54 39.5 +0.3
baz=83,SNR=18
N08A **GE Springer Mi** 83.18 42 ⇓P P 23 54 39.2 -0.1
baz=83,SNR=18
116A **Eloy** 83.19 52 ⇑P P 23 54 39.9 +0.4
baz=83
Q10A **Clear Creek Ra** 83.20 44 ⇑P P 23 54 39.4 0.0
baz=83,SNR=9.0
G04A **Mulino** 83.26 36 ⇑P P 23 54 39.8 +0.2
baz=84
X14A **Yava** 83.29 49 ⇑P P 23 54 39.7 -0.3
baz=83,SNR=16
I05A **Bend** 83.30 38 ⇑P P 23 54 40.2 +0.4
baz=84,SNR=6.6
J06A **Christmas Vall** 83.40 39 ⇓P P 23 54 40.0 -0.3
baz=84,SNR=24
M08A **Happy Creek Ra** 83.41 41 ⇑P P 23 54 40.6 +0.2
baz=84,SNR=11
O09A **Fish Creek Ran** 83.43 43 ⇑P P 23 54 40.7 +0.2
baz=84,SNR=8.4
R11A **Troy Canyon, C** 83.47 45 P P 23 54 40.5 -0.4
baz=84,SNR=7.9
E03A **Lebam** 83.51 35 ⇓P P 23 54 41.0 +0.3
baz=84,SNR=6.8
W14A **Seligman** 83.53 49 ⇑P P 23 54 41.8 +0.7
baz=84,SNR=19
U13A **Pakoon Wash** 83.54 47 ⇓P P 23 54 41.5 +0.3
baz=84,SNR=25
S12A **Delamar Landin** 83.57 46 ⇓P P 23 54 42.1 +0.8
baz=84,SNR=14
P10A **Eureka** 83.59 44 ⇑P P 23 54 41.6 +0.2
baz=84
K07A **Rock Creek Ran** 83.61 40 ⇑P P 23 54 41.5 +0.2
baz=84,SNR=18
N09A **Rock Creek Ran** 83.61 42 ⇑P P 23 54 41.3 -0.1
baz=84,SNR=5.5
H05A **Madras** 83.61 37 ⇑P P 23 54 41.5 +0.2
baz=84
Q11A **Duckwater** 83.70 45 ⇑P P 23 54 41.5 -0.4
baz=84,SNR=12
F04A **Amboy** 83.74 36 ⇑P P 23 54 41.7 -0.2
baz=84,SNR=6.1
D03A **Wishkah Elem.** 83.76 34 ⇓P P 23 54 42.5 +0.5
baz=84
X15A **Humboldt** 83.76 50 ⇓P P 23 54 42.6 +0.3
baz=84,SNR=15
I06A **Prineville** 83.78 38 ⇑P P 23 54 42.8 +0.6
baz=84,SNR=23
WVOR **Wild Horse Val** 83.82 40 eP P 23 54 42.2 -0.3
comp=Z,15nm,1.0s,mb4.5
WVOR **Wild Horse Val** 83.82 40 eP P 23 54 42.2 -0.2
WVOR pmax pmax
comp=Z,15nm,1.0s,mb4.5
MA2 **Magadan** 83.85 345 eP P 23 54 41.1 -1.1
comp=Z,5.3nm,0.7s,mb4.2
MA2 **Magadan** 83.85 345 eP P 23 54 40.9 -1.2
MA2 pmax pmax
comp=Z,20nm,1.0s,mb4.6
L08A **Fields** 83.86 41 ⇑P P 23 54 42.7 +0.1
baz=84,SNR=17
VIPM **Ingram Point** 83.88 38 P P 23 54 42.8 +0.2
NLWA **Neilton Lookou** 83.88 34 eP P 23 54 42.8 +0.2
T13A **Saint George** 83.89 47 ⇓P P 23 54 43.1 +0.2
baz=84,SNR=5.3
O10A **Cortez Mining,** 83.94 43 ⇑P P 23 54 43.1 0.0
baz=84
J07A **Hines** 83.97 39 P P 23 54 43.7 +0.6
baz=84,SNR=5.5
M09A **Marrel Ranch,** 83.97 42 ⇓P P 23 54 43.9 +0.7
baz=84
E04A **Onalaska** 83.99 35 ⇑P P 23 54 44.2 +1.0
baz=84
P11A **Circle Ranch,** 84.02 44 ⇑P P 23 54 43.5 0.0
baz=84
U14A **Mt Trumbull** 84.08 48 ⇑P P 23 54 44.2 +0.4
baz=84,SNR=20
K08A **Mann Creek Ran** 84.08 40 P P 23 54 44.0 +0.3
baz=84,SNR=19
W15A **Williams** 84.09 49 ⇑P P 23 54 44.9 +1.0
baz=84
R12A **Pony Springs,** 84.11 45 ⇑P P 23 54 43.9 0.0
baz=84,SNR=7.0
H06A **Lindquist Farm** 84.18 38 P P 23 54 44.1 0.0
baz=84,SNR=26
S13A **Holt Ranch, En** 84.22 46 ⇑P P 23 54 44.1 -0.4
baz=84
F05A **White Salmon** 84.24 36 ⇓P P 23 54 44.2 -0.2
baz=84
I07A **Izee** 84.27 39 ⇑P P 23 54 44.5 0.0
baz=84,SNR=19
G06A **Carlson Farm,** 84.31 37 ⇑P P 23 54 44.3 -0.5
baz=84,SNR=8.7
Q12A **Willow Creek R** 84.34 45 ⇑P P 23 54 45.0 -0.1
baz=84,SNR=8.0
O11A **Cowboy Ranch,** 84.39 43 ⇓P P 23 54 45.3 0.0
baz=85,SNR=6.0
J08A **Circle Bar Ran** 84.45 40 P P 23 54 45.7 +0.2
baz=85,SNR=14
GAMB **Gambell** 84.45 3 eP P 23 54 40.5 -4.5
HDW **Hoodsport** 84.47 34 P P 23 54 45.8 +0.3
T14A **Hurricane** 84.48 47 ⇑P P 23 54 45.3 -0.5
baz=85
E05A **Randle** 84.49 36 ⇓P P 23 54 45.2 -0.4
baz=85,SNR=8.6
P12A **McGill** 84.52 44 ⇓P P 23 54 46.0 +0.1
baz=85,SNR=5.7
K09A **Rome** 84.53 40 ⇑P P 23 54 45.9 0.0
baz=85,SNR=17
H07A **Lands Inn, Kim** 84.53 38 ⇑P P 23 54 45.2 -0.6
baz=85
CCUT **Cedar City** 84.54 47 eP P 23 54 46.5 +0.4
GNW **Green Mountain** 84.54 34 eP P 23 54 46.1 +0.2
F06A **Goldendale** 84.54 37 ⇑P P 23 54 46.1 +0.2
baz=85,SNR=5.1
C04A **Brinnon** 84.56 34 ⇓P P 23 54 46.1 +0.1
baz=85,SNR=7.8
LON **Longmire** 84.58 35 eP P 23 54 45.8 -0.2
M10A **I.L. Ranch, Tu** 84.60 42 ⇓P P 23 54 46.6 +0.3
baz=85,SNR=7.2

ARUT **Antelope Range** 84.61 46 P P 23 54 46.7 +0.3
I08A **Drewsey** 84.72 39 ⇓P P 23 54 46.9 +0.1
baz=85,SNR=9.4
D05A **Enumclaw** 84.75 35 ⇑P P 23 54 47.4 +0.6
baz=85,SNR=7.2
S14A **Cedar City** 84.78 46 ⇓P P 23 54 47.2 0.0
baz=85
G07A **Ruggs Ranch, H** 84.87 37 ⇓P P 23 54 47.3 -0.2
baz=85,SNR=15
J09A **Fry Pan Ranch,** 84.88 40 ⇓P P 23 54 47.6 0.0
baz=85,SNR=18
WUAZ **Wupatki** 84.89 49 eP P 23 54 47.9 +0.1
comp=Z,11nm,1.0s,mb4.3
WUAZ **Wupatki** 84.89 49 ⇓P P 23 54 48.1 +0.2
baz=85
E06A **Yakima** 84.90 36 ⇓P P 23 54 47.7 0.0
baz=85,SNR=7.5
T15A **Red Dirt Ranch** 84.94 47 ⇑P P 23 54 48.1 0.0
baz=85,SNR=8.5
L10A **Juniper Basin** 84.95 41 ⇑P P 23 54 47.7 -0.3
baz=85,SNR=14
H08A **Prairie City** 85.01 39 ⇓P P 23 54 47.9 -0.3
baz=85,SNR=5.7
M11A **Holland Ranch,** 85.02 42 ⇓P P 23 54 48.4 +0.1
baz=85,SNR=6.9
O12A **Currie** 85.05 44 ⇓P P 23 54 48.2 -0.3
baz=85
K10A **MacKenzie Ranc** 85.09 41 ⇓P P 23 54 48.6 -0.1
baz=85,SNR=10
F07A **Phinny Hill Vi** 85.10 37 ⇓P P 23 54 48.9 +0.3
baz=85
N12A **Clover Valley,** 85.18 43 ⇑P P 23 54 49.1 0.0
baz=85,SNR=6.5
C05A **Tolt Reservoir** 85.22 35 P P 23 54 49.0 -0.1
baz=85,SNR=8.2
I09A **Lost Marbles R** 85.24 39 ⇑P P 23 54 49.5 +0.2
baz=85
G08A **Pilot Rock** 85.29 38 P P 23 54 49.6 +0.1
baz=86,SNR=34
A04A **Legoe Bay, Lum** 85.33 33 ⇑P P 23 54 49.2 -0.4
baz=86
TTA **Tatalina** 85.35 10 eP P 23 54 48.9 -0.5
comp=Z,67nm,1.8s,mb4.9
TTA **Tatalina** 85.35 10 eP P 23 54 48.9 -0.5
TTA pmax pmax
comp=Z,67nm,1.8s,mb4.9
B05A **Bryant** 85.36 34 ⇑P P 23 54 49.6 -0.2
baz=86,SNR=8.1
D06A **Cle Elum** 85.37 35 ⇓P P 23 54 50.0 +0.1
baz=86,SNR=7.0
PMR **Palmer** 85.46 14 eP P 23 54 48.8 -1.2
comp=Z,52nm,1.5s,mb4.8
PMR **Palmer** 85.46 14 eP P 23 54 48.8 -1.1
PMR pmax pmax
comp=Z,52nm,1.5s,mb4.8
J10A **Berg Farm, Mel** 85.52 40 ⇑P P 23 54 51.1 +0.4
baz=86
E07A **Sunnyside** 85.53 36 ⇑P P 23 54 50.7 0.0
baz=86,SNR=14
BJT **Baijiatuau** 85.56 316 P P 23 54 49.8 -1.2
M12A **Wells** 85.56 43 ⇓P P 23 54 50.8 -0.1
baz=86,SNR=6.1
RSW **Rattlesnake Hi** 85.58 37 P P 23 54 51.3 +0.4
HAWA **Hanford** 85.61 37 eP P 23 54 51.0 0.0
comp=Z,21nm,0.8s,mb4.8
H09A **Durkee** 85.68 39 ⇑P P 23 54 51.3 -0.1
baz=86,SNR=13
F08A **Pendleton** 85.69 37 ⇑P P 23 54 51.2 -0.2
baz=86,SNR=11
C06A **Tall Timber Ra** 85.79 35 ⇓P P 23 54 51.6 -0.2
baz=86
A05A **Maple Falls** 85.82 34 ⇓P P 23 54 51.6 -0.4
baz=86
MSU **Marysvale** 85.84 46 eP P 23 54 53.2 +0.8
B06A **Marblemount** 85.84 34 ⇓P P 23 54 52.2 +0.2
baz=86
D07A **Quincy** 85.85 36 ⇓P P 23 54 52.1 -0.1
baz=86,SNR=5.7
I10A **Payette** 85.86 40 ⇑P P 23 54 52.7 +0.4
baz=86,SNR=7.0
L12A **House Creek Ra** 85.89 42 ⇓P P 23 54 53.0 +0.5
baz=86
E08A **Dider Farm, El** 85.94 37 ⇑P P 23 54 52.9 +0.3
baz=86
G09A **Cove** 85.96 38 ⇓P P 23 54 52.2 -0.5
baz=86
BMO **Blue Mountains** 86.00 39 eP P 23 54 52.5 -0.4
M13A **Montello** 86.01 43 ⇑P P 23 54 52.9 -0.1
baz=86,SNR=13
MFID **Camas Ranch** 86.08 41 ⇓P P 23 54 53.1 -0.3
baz=86,SNR=12
C07A **Waterville** 86.09 35 ⇑P P 23 54 52.8 -0.5
baz=86,SNR=12
F09A **S2 Ranch, Elgi** 86.14 38 ⇓P P 23 54 53.7 +0.2
baz=86
EPH **Ephrata** 86.15 36 P P 23 54 53.5 0.0
WTV **Waterville** 86.16 35 P P 23 54 53.2 -0.4
H10A **Noah's Angus R** 86.18 39 ⇓P P 23 54 53.4 -0.4
baz=86
A06A **Chilliwack** 86.20 34 ⇓P P 23 54 53.6 -0.1
baz=86,SNR=6.2
K12A **Draper Farm, C** 86.22 42 ⇓P P 23 54 53.9 -0.1
baz=86,SNR=7.2
DUG **Dugway** 86.27 45 eP P 23 54 53.6 -0.8
DUG **Dugway** 86.27 45 ⇑P P 23 54 54.0 -0.4
baz=86
D08A **Wollman Farm,** 86.35 36 ⇓P P 23 54 54.3 -0.2
baz=86,SNR=16
J12A **Stokes Ranch,** 86.44 41 ⇑P P 23 54 55.1 0.0
baz=87,SNR=18
E09A **Wood Farm, Sta** 86.46 37 ⇑P P 23 54 54.7 -0.3
baz=87,SNR=10
TNA **Tin City** 86.47 5 eP P 23 54 54.1 -0.5
B07A **Winthrop** 86.53 35 ⇑P P 23 54 54.9 -0.4
baz=87,SNR=16
L13A **Double Diamond** 86.53 42 ⇑P P 23 54 55.3 -0.2
baz=87
M14A **Sheep Mountain** 86.61 43 ⇑P P 23 54 55.5 -0.4
baz=87,SNR=8.7
OD2 **Odessa Site #2** 86.66 36 P P 23 54 56.0 0.0
F10A **Beach Ranch, E** 86.68 38 P P 23 54 55.6 -0.4
baz=87,SNR=49
H11A **Donnelly** 86.68 39 ⇑P P 23 54 55.9 -0.3
baz=87,SNR=40
D09A **Jones Farm, Ri** 86.69 37 P P 23 54 56.1 0.0
baz=87,SNR=19
C08A **Higginbotham F** 86.70 36 ⇑P P 23 54 55.7 -0.5
baz=87,SNR=13
A07A **Ashnola River,** 86.74 34 ⇓P P 23 54 56.1 -0.2
baz=87,SNR=13
K13A **Stover Farm, H** 86.74 42 ⇑P P 23 54 56.9 +0.5
baz=87,SNR=6.3
TMUT **Trail Mountain** 86.88 46 eP P 23 54 58.1 +0.9
B08A **Colville Reser** 86.89 35 ⇑P P 23 54 56.2 -0.8
baz=87,SNR=24
G11A **Walters Elk Ra** 86.91 39 ⇑P P 23 54 57.0 -0.3
baz=87
HLID **Hailey** 87.02 41 eP P 23 54 57.7 -0.1
comp=Z,15nm,1.0s,mb4.6
HLID **Hailey** 87.02 41 ⇓P P 23 54 58.2 +0.4
baz=87,SNR=25
E10A **Myers Farm, Un** 87.03 38 ⇓P P 23 54 57.8 +0.1
baz=87,SNR=7.2
SPUT **South Promonto** 87.08 44 eP P 23 54 58.2 +0.1
J13A **Cove Ranch, Pi** 87.08 41 P P 23 54 58.5 +0.5
baz=87,SNR=21
HVU **Hansel Valley** 87.12 43 eP P 23 54 58.5 +0.3
C09A **Chrisman Ranch** 87.14 36 ⇓P P 23 54 57.8 -0.4
baz=87,SNR=8.4
M15A **Larsen Ranch,** 87.16 44 P P 23 54 58.2 -0.3
baz=87,SNR=6.0
F11A **Grangeville** 87.25 38 P P 23 54 57.3 -1.5
baz=87,SNR=17
SRU **San Rafael** 87.25 46 eP P 23 54 59.2 +0.2
K14A **Jones Ranch, D** 87.26 42 P P 23 54 59.0 0.0
baz=87,SNR=7.6
D10A **Wagner Farm, O** 87.26 37 ⇑P P 23 54 58.2 -0.7
baz=87,SNR=23
A08A **Turner Farm, O** 87.27 35 ⇑P P 23 54 58.5 -0.3
baz=88,SNR=23
H12A **Diamond D Ranc** 87.29 40 ⇑P P 23 54 58.8 -0.2
baz=88,SNR=43
JLU **Jordanelle** 87.38 45 eP P 23 54 59.8 +0.3
I13A **Wildhorse Cree** 87.39 41 ⇓P P 23 54 59.8 +0.2
baz=88,SNR=14
MCK **McKinley** 87.40 13 eP P 23 54 57.3 -1.8
comp=Z,11nm,0.8s,mb4.5

MCK McKinley 87.40 13 eP P 23 54 57.3 -1.8
MCK pmax pmax
comp=Z,11nm,0.8s,mb4.5
DAU Daniels Canyon 87.41 45 eP P 23 55 00.2 +0.5
E11A Bogner Ranch, 87.48 38 P P 23 54 58.4 -1.4
baz=88,SNR=16
MNTX Cornudas Mount 87.52 55 eP P 23 55 00.5 +0.1
comp=Z,14nm,1.0s,mb4.6
B09A Rice 87.56 36 ⇓P P 23 54 59.7 -0.4
baz=88,SNR=17
A09A Danville 87.65 35 ⇑P P 23 55 00.3 -0.3
baz=88,SNR=17
H13A Challis 87.66 40 P P 23 55 00.8 +0.1
baz=88,SNR=14
C10A Spilker Farm, 87.68 36 ⇑P P 23 55 00.7 0.0
baz=88
F12A Elk City 87.70 39 P P 23 55 00.6 -0.3
baz=88,SNR=45
MVCO Mesa Verde 87.74 49 ⇓P P 23 55 01.0 -0.3
baz=88
LPM Los Pinos Moun 87.75 52 eP P 23 55 01.7 +0.3
HWUT Hardware Ranch 87.81 44 eP P 23 55 01.2 -0.3
comp=Z,1.9nm,0.8s,mb3.9
LTX Lajitas 87.83 58 eP P 23 55 02.3 +0.3
comp=Z,16nm,0.9s,mb4.8
LTX Lajitas 87.83 58 eP P 23 55 02.3 +0.4
LTX pmax pmax
comp=Z,16nm,0.9s,mb4.8
TXAR Lajitas Array 87.83 58 P P 23 55 02.5 +0.6
comp=Z,9.9nm,0.8s,mb4.6,baz=219,slow=6.0,SNR=91
PV10 Paradox Valley 87.91 48 eP P 23 55 01.8 -0.3
PV10 e 23 57 21.1
G13A Cobalt 87.95 40 ⇑P P 23 55 01.9 -0.2
baz=88,SNR=19
NEW Newport 88.03 36 eP P 23 55 01.4 -0.9
comp=Z,10.0nm,1.2s,mb4.4
NEW Newport 88.03 36 eP P 23 55 01.5 -0.9
NEW pmax pmax
comp=Z,10.0nm,1.2s
PV01 Paradox Valley 88.12 48 eP P 23 55 02.6 -0.5
ANMO Albuquerque 88.16 52 eP P 23 55 03.2 -0.1
comp=Z,15nm,1.3s,mb4.5
ANMO Albuquerque 88.16 52 eP P 23 55 03.2 -0.1
ANMO pmax pmax
comp=Z,15nm,1.3s
A10A Northport 88.20 35 P P 23 55 03.0 -0.2
baz=88,SNR=7.5
F13A Darby 88.27 39 ⇑P P 23 55 02.9 -0.6
baz=88,SNR=22
D12A Red Ives Fores 88.36 38 ⇓P P 23 55 03.4 -0.6
baz=88
HIA Hailar 88.48 325 P P 23 55 04.8 +0.3
G14A Jackson 88.50 40 P P 23 55 04.8 +0.2
baz=89,SNR=7.9
GDL2 Guadalupe Moun 88.52 55 eP P 23 55 05.6 +0.5
B11A Sandpoint 88.55 36 ⇑P P 23 55 04.2 -0.6
baz=89,SNR=14
COLA College 88.64 13 eP P 23 55 03.0 -1.8
comp=Z,36nm,1.0s,mb5.2
COLA College 88.64 13 ceP P 23 55 02.1 -2.7
IMA2 Indian Mountai 88.64 10 eP P 23 55 04.1 -0.7
MCMT McKenzie Canyo 88.65 41 eP P 23 55 05.3 0.0
AHID Auburn Hatcher 88.69 43 eP P 23 55 05.7 +0.1
comp=Z,12nm,1.1s,mb4.7
E13A Victor 88.70 39 ⇑P P 23 55 04.8 -0.8
baz=89
A11A Hall Mountain, 88.84 36 P P 23 55 06.5 +0.3
baz=89,SNR=10
F14A Wisdom 88.85 40 ⇑P P 23 55 05.8 -0.4
baz=89
D13A Huson 88.89 38 ⇓P P 23 55 05.3 -1.1
baz=89,SNR=7.3
B12A Libby 89.00 36 ⇑P P 23 55 07.0 +0.2
baz=89,SNR=5.2
G15A Dillon 89.04 40 P P 23 55 07.2 0.0
baz=89,SNR=14
DLMT Dillon 89.08 40 eP P 23 55 07.7 +0.4
comp=Z,15nm,1.0s,mb4.8
E14A Clinton 89.09 39 ⇑P P 23 55 07.0 -0.4
baz=89,SNR=7.2
BSMT Bassoo Peak 89.11 37 eP P 23 55 07.0 -0.4
C13A Hot Springs 89.14 37 ⇓P P 23 55 06.6 -1.0
baz=89
REDW Red Top Meadow 89.14 43 eP P 23 55 07.8 +0.1
TPAW Teton Pass 89.14 42 eP P 23 55 08.0 +0.3
comp=Z,16nm,1.0s,mb4.8
A12A Yaak River Ran 89.22 36 ⇓P P 23 55 07.8 -0.1
baz=89,SNR=12
BILL Bilibino 89.23 354 eP P 23 55 06.4 -1.1
comp=Z,2.8nm,0.6s,mb4.3
BILL Bilibino 89.23 354 ⇑eP P 23 55 06.6 -0.9
BILL pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
IMW Indian Meadow 89.35 42 eP P 23 55 08.9 +0.2
F15A Butte 89.39 40 ⇓P P 23 55 08.4 -0.3
baz=90,SNR=7.1
MOOW Moose Ponds 89.40 42 eP P 23 55 08.8 -0.1
LRM Limekiln Ridge 89.40 40 eP P 23 55 08.6 -0.3
LOHW Long Hollow 89.42 42 eP P 23 55 09.0 0.0
D14A Greenough 89.44 38 P P 23 55 07.8 -1.2
baz=90,SNR=8.1
CHMT Chamberlain Mo 89.50 39 eP P 23 55 08.6 -0.7
QLMT Earthquake Lak 89.52 41 eP P 23 55 10.4 +1.1
B13A Whitefish 89.57 37 ⇓P P 23 55 08.3 -1.2
baz=90,SNR=6.0
E15A Deer Lodge 89.60 39 ⇓P P 23 55 09.4 -0.3
baz=90
PLCA Paso Flores 89.63 134 P P 23 55 11.3 +1.1
CHTO Chiang Mai 89.63 290 eP P 23 55 11.1 +0.6
comp=Z,4.3nm,0.7s,mb4.4
CHTO Chiang Mai 89.63 290 eP P 23 55 11.1 +0.6
CHTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
C14A Swan Lake 89.66 38 ⇓P P 23 55 09.3 -0.7
baz=90
PDAR Pinedale Array 89.68 44 P P 23 55 09.9 -0.3
comp=Z,9.6nm,0.7s,mb4.8,baz=212,slow=3.2,SNR=93
YFT Old Faithful 89.69 42 eP P 23 55 12.5 +2.3
BOZ Bozeman (W) 89.81 40 ⇑P P 23 55 10.5 -0.2
baz=90
A13A Flathead Natio 89.90 36 ⇑P P 23 55 10.5 -0.5
baz=90
DAWY Dawson 89.93 16 eP P 23 55 10.2 -0.6
D15A Lincoln 89.99 39 ⇓P P 23 55 10.9 -0.6
baz=90,SNR=8.6
LKWY Lake 90.02 42 eP P 23 55 13.5 +1.8
EGAK Eagle 90.06 15 eP P 23 55 10.2 -1.2
comp=Z,27nm,1.1s,mb5.0
SDCO Great Sand Dun 90.10 49 eP P 23 55 11.9 -0.4
comp=Z,10.0nm,1.1s,mb4.6
YAK Yakutsk 92.09 338 ⇑eP P 23 55 19.6 -1.2
YAK pmax pmax
comp=Z,21nm,1.0s,mb5.1
EGMT Eagleton 92.10 39 ⇓P P 23 55 21.0 -0.3
baz=92
LZH Lanzhou 92.34 308 eP P 23 55 22.0 -0.6
LZH AMB AMB
comp=Z,16nm,1.0s,mb5.0
EDM Edmonton 92.75 33 eP P 23 55 23.1 -1.0
SONM Songino Array 95.47 319 P P 23 55 35.8 -0.8
comp=Z,0.5nm,0.9s,mb3.6,baz=93,slow=4.7,SNR=3.7
YKA Yellowknife Ar 97.08 25 P P 23 55 42.3 -1.1
YKA Yellowknife Ar 97.08 25 P P 23 55 42.3 -1.1
comp=Z,1.4nm,0.7s,mb4.3,baz=243,slow=4.5,SNR=23
YKA PKiKP PKiKP 00 00 12.7 -2.7
comp=Z,0.1nm,0.6s,baz=243,slow=1.2,SNR=3.1
JTS JuntasAbangare 97.14 82 P P 23 55 44.0 -0.9
ZALV Zalesovo Beam 110.24 321 PKiKP PKiKP 00 00 37.9 -1.9
comp=Z,2.5nm,0.5s,baz=98,slow=1.0,SNR=21
ZAL Zalesovo 110.25 321 PKiKP PKiKP 00 00 37.9 -1.9
MKAR Makanchi Array 110.84 313 Pdif Pdif 23 56 45.1 0.0
MKAR PKPdf PKiKP 00 00 39.6 -1.5
MKAR PKKPbc PKKPbc 00 11 40.0 -1.7
MKAR Makanchi Array 110.84 313 ⇑PKiKP PKiKP 00 00 39.5 -1.6
MKAR Makanchi Array 110.84 313 Pdiff Pdif 23 56 45.1 0.0
comp=Z,0.3nm,0.7s,baz=108,slow=5.5,SNR=2.9
MKAR PKiKP PKiKP 00 00 39.6 -1.5
comp=Z,1.2nm,0.4s,baz=140,slow=0.8,SNR=43
MKAR PKKPbc PKKPbc 00 11 40.0 -1.7
comp=Z,0.4nm,0.6s,baz=261,slow=3.8,SNR=6.1
KURK Kurchatov 113.69 317 ePKiKP PKiKP 00 00 44.7 -1.8
AAK Ala-Archa 115.88 308 iPKiKP PKPdf 00 00 47.2 -3.7
BRVK Borovoye 118.87 320 ePKPdf PKPdf 00 00 55.1 -1.2
SCHQ Schefferville 119.35 38 PKP PKPdf 00 00 55.2 -2.0
SCHQ Schefferville 119.35 38 PKP PKPdf 00 00 55.2 -2.0
comp=Z,0.9nm,0.8s,baz=256,slow=4.2,SNR=3.8

SFJD Kangerlussuaq 123.48 22 ePKiKP PKPdf 00 01 02.9 -1.9
SFJD pmax pmax
comp=Z,6.0nm,0.5s
SFJD Kangerlussuaq 123.48 22 iP PKPdf 00 01 02.9 -1.9
comp=Z,5.5nm,0.5s
SVE Sverdlovsk 123.79 325 PKiKP PKPdf 00 01 04.7 -1.0
SOKR Solikamsk 124.94 329 ePKiKP PKPdf 00 01 06.7 -1.1
SOKR pmax pmax
comp=Z,20nm,0.9s
ARU Arti 125.00 325 ePKPdf PKPdf 00 01 06.3 -1.7
ARU Arti 125.00 325 iPKiKP PKPdf 00 01 07.0 -1.0
ARU 00 03 05.1
ARCES ARCESS Array B 129.05 349 PKP PKPdf 00 01 14.1 -1.3
comp=Z,6.2nm,0.6s,baz=86,slow=1.4,SNR=18
JOF Joensuu 133.16 342 ep PKPdf 00 01 21.0 -2.3
comp=Z,8.0nm,0.5s
KAF Kangasniemi 135.21 344 ep PKPdf 00 01 23.8 -3.4
comp=Z,6.4nm,0.5s
FINES FINESS Array B 135.82 343 PKP 00 01 13.3
FINES PKP PKPdf 00 01 28.6 +0.3
FINES SKPbc SKPbc 00 04 05.9 -1.5
FINES FINESS Array B 135.82 343 PKHKP 00 01 13.3
FINES 00 01 28.6
FINES FINESS Array B 135.82 343 PKhKP 00 01 13.3
comp=Z,1.3nm,0.9s,baz=27,slow=3.6,SNR=8.4
FINES PKP PKPdf 00 01 28.6 +0.3
comp=Z,2.7nm,0.5s,baz=62,slow=3.3,SNR=15
FINES SKPbc SKPbc 00 04 05.9 -1.5
comp=Z,6.3nm,0.8s,baz=64,slow=4.4,SNR=18
OBN Obninsk 136.64 331 iPKiKP PKPdf 00 01 30.0 0.0
OBN e 00 27 01.4
OBN pmax pmax
comp=Z,12nm,0.7s
KMBO Kilima Mbogo 138.55 243 PKhKP 00 01 31.9
comp=Z,1.7nm,1.1s,baz=56,slow=22,SNR=3.6
KMBO SKPbc SKPbc 00 04 16.9 -0.1
comp=Z,0.7nm,0.5s,baz=43,slow=22,SNR=4.2
NB2 NORSAR Subarra 139.16 353 PKP 00 01 25.0
comp=Z,2.5nm,0.8s,baz=16,slow=3.2
NOA NORSAR Array B 139.16 353 PKP 00 01 25.0
NOA PKP PKPdf 00 01 34.2 -0.3
NOA SKPbc SKPbc 00 04 15.7 -1.4
NOA NORSAR Array B 139.16 353 PKHKP 00 01 25.0
NOA 00 01 34.2
NOA NORSAR Array B 139.16 353 PKhKP 00 01 25.0
comp=Z,2.7nm,0.8s,baz=9.4,slow=2.3,SNR=7.9
NOA PKP PKPdf 00 01 34.2 -0.3
comp=Z,1.6nm,0.6s,baz=14,slow=4.0,SNR=6.3
NOA SKPbc SKPbc 00 04 15.7 -1.4
comp=Z,3.4nm,0.9s,baz=13,slow=4.5,SNR=5.4
SUW Suwalki 142.83 339 ePKP PKPdf 00 01 38.2 -3.0
SUW e 00 01 39.4
SUW Suwalki 142.83 339 ePKP PKPdf 00 01 38.3 -2.9
SUW e 00 01 39.4
AKASG Malin Array Be 142.89 330 PKP PKPdf 00 01 37.2 -4.0
AKASG SKPbc SKPbc 00 01 44.4 -2.4
AKASG Malin Array Be 142.89 330 PKhKP 00 01 37.5
comp=Z,20nm,0.4s,baz=42,slow=4.2,SNR=195
AKASG SKPbc SKPbc 00 04 24.4 -2.4
comp=Z,1.3nm,0.7s,baz=44,slow=2.4,SNR=7.1
MALT Malatya 143.50 307 ePKP PKPdf 00 01 41.6 -1.4
MALT Malatya 143.50 307 ⇓iP PKPdf 00 01 42.1 -0.8
SIM Simferopol' 143.72 319 iPKiKP PKPdf 00 01 41.5 -1.6
SIM pmax pmax
comp=Z,61nm,0.7s
MUD Monsted U'grnd 143.88 352 iPKiKP PKPdf 00 01 41.2 -1.8
MUD pmax pmax
comp=Z,97nm,1.2s
MUD Monsted U'grnd 143.88 352 iP PKPdf 00 01 41.2 -1.8
comp=Z,97nm,1.2s
BSD Bornholm Skovb 144.19 347 ⇓iPKiKP PKPdf 00 01 41.9 -1.7
BSD pmax pmax
comp=Z,84nm,1.0s
BSD Bornholm Skovb 144.19 347 ⇓iP PKPdf 00 01 41.9 -1.7
comp=Z,84nm,1.0s
WAR Warsaw 145.02 339 ePKP PKPdf 00 01 45.6 +0.5
WAR e 00 01 47.4
WAR Warsaw 145.02 339 ePKP PKPdf 00 01 45.6 +0.5
WAR 00 01 47.4
GKP Gorka Klasztor 145.30 343 ePKP PKPdf 00 01 45.8 +0.3
KIS Kishinev 145.55 326 eP PKPdf 00 01 45.0 -1.2
LVV L'vov 145.82 333 ⇑iPKiKP PKPdf 00 01 47.1 +0.6
BSEG Bad Segeberg 146.17 350 ePKPbc PKPbc 00 01 48.3 -0.9
BSEG Bad Segeberg 146.17 350 ePKPbc PKPbc 00 01 48.3 -0.9
BR131 Keskin Array S 146.47 312 ePKP PKPdf 00 01 49.3 +1.4
BRTR Keskin Array B 146.47 312 PKP PKPdf 00 01 46.2 -1.7
comp=Z,8.3nm,0.7s,baz=153,slow=2.3,SNR=31
BRTR PKPbc PKPbc 00 01 50.0 -0.5
comp=Z,8.3nm,0.7s,baz=127,slow=3.8,SNR=46
KWP Kalwaria 146.51 334 ePKP PKPbc 00 01 49.7 -0.5
KWP e 00 01 53.1
KWP Kalwaria 146.51 334 ePKP PKPbc 00 01 49.7 -0.5
KWP e 00 01 53.1
DCN Croghan 146.84 9 ⇓iP PKPdf 00 01 49.7 +1.6
RUE Ruedersdorf 146.88 346 ePKPbc PKPbc 00 01 50.6 -0.5
BURAR Bucovina Array 146.93 330 ⇓P PKPbc 00 01 51.3 -0.2
BURAR Bucovina Array 146.93 330 ⇓iP PKPbc 00 01 51.3 -0.1
DLF Lyons Farm 147.00 9 ⇓iP PKPdf 00 01 50.0 +1.6
OJC Ojcow 147.14 338 ePKP PKPbc 00 01 51.1 -0.8
TIRR Tîrgusor 147.36 323 ⇓P PKPbc 00 01 52.2 -0.4
TIRR Tîrgusor 147.36 323 ⇓iP PKPbc 00 01 52.2 -0.5
VRI Vrincioaia 147.38 326 ⇑iP PKPbc 00 01 52.1 -0.6
UZH Uzhgorod 147.47 334 ciPKP2 PKPbc 00 01 52.0 -0.8
NRDL Niedersach Rie 147.60 350 ePKPbc PKPbc 00 01 51.7 -1.3
NIE Niedzica 147.62 336 ePKP PKPbc 00 01 53.4 +0.2
NIE e 00 01 57.6
NIE Niedzica 147.62 336 ePKP PKPbc 00 01 53.4 +0.2
NIE e 00 01 57.6
KSP Ksiaz 147.73 342 ePKP PKPbc 00 01 53.2 -0.2
KSP Ksiaz 147.73 342 ePKP PKPbc 00 01 53.1 -0.3
KSP e 00 01 57.8
OKC Ostrava-Krasne 148.03 339 ePKP PKPbc 00 01 53.7 -0.5
OKC e 00 01 58.4
OKC Ostrava-Krasne 148.03 339 ⇑ePKP PKPbc 00 01 53.7 -0.5
OKC ePKPAB PKPab 00 01 58.4 -0.6
MLR Muntele Rosu 148.04 326 ⇑P PKPbc 00 01 53.7 -0.7
MLR Muntele Rosu 148.04 326 ⇑iP PKPbc 00 01 53.7 -0.7
UPC Upice 148.11 342 ePKPDF PKPdf 00 01 49.8 -0.5
UPC ⇑ePKP PKPbc 00 01 53.5 -0.9
UPC ePKPAB PKPab 00 01 59.2 -0.1
IBBN Ibbenburen 148.12 352 ePKPbc PKPbc 00 01 53.4 -0.9
CLL Collm 148.15 346 ePKP PKPdf 00 01 49.0 -1.4
CLL ⇓iPKP PKPbc 00 01 53.6 -0.8
CLL iPKP PKPab 00 01 58.0 -1.5
CLL Collm 148.15 346 ePKPdf PKPdf 00 01 49.0 -1.4
CLL ⇓iPKPbc PKPbc 00 01 53.6 -0.8
comp=Z,53nm,0.9s
CLL iPKPab PKPab 00 01 58.0 -1.5
comp=Z,27nm,0.8s
CLL ePSKdf 00 05 23.0
CLL Collm 148.15 346 ePKPdf PKPdf 00 01 49.1 -1.3
CLL ⇓iPKPbc PKPbc 00 01 53.6 -0.8
comp=Z,53nm,0.9s
CLL ePKPab PKPab 00 01 58.6 -0.9
comp=Z,27nm,0.8s
CLL ePKPbc pPKPbc 00 04 06.6 +2.3
CLL ePSKdf 00 05 23.0
DPC Dobruska-Polom 148.16 342 ePKPDF PKPdf 00 01 49.6 -0.8
DPC ⇑ePKP PKPbc 00 01 54.2 -0.3
DPC ePKPAB PKPab 00 01 58.8 -0.7
CLZ Clausthal 148.18 349 ePKPbc PKPbc 00 01 53.1 -1.4
CLZ Clausthal 148.18 349 ePKPbc PKPbc 00 01 53.1 -1.4
BRG Berggiesshubel 148.33 345 ePKP PKPdf 00 01 50.4 -0.3
BRG iPKP PKPbc 00 01 54.1 -0.8
BRG iPKP PKPab 00 01 59.7 -0.5
BRG Berggiesshubel 148.33 345 ePKPbc PKPbc 00 01 53.7 -1.2
BRG ePKPab PKPab 00 01 59.6 -0.6
BRG Berggiesshubel 148.33 345 ePKP PKPdf 00 01 50.4 -0.3
comp=Z,11nm,1.4s
BRG Berggiesshubel 148.33 345 iPKP PKPbc 00 01 54.1 -0.8
comp=Z,27nm,0.9s
BRG Berggiesshubel 148.33 345 iPKP PKPab 00 01 59.7 -0.5
comp=Z,14nm,0.7s
CSS Prodhromos 148.43 303 ePKP PKPbc 00 01 55.1 -0.6
FBE Freiberg 148.43 345 ePKPbc PKPbc 00 01 54.3 -0.9
FBE ePKPab PKPab 00 02 00.2 -0.4
PVCC Panska Ves 148.49 344 ePKP PKPbc 00 01 54.8 -0.5
PVCC Panska Ves 148.49 344 ⇑ePKP PKPbc 00 01 54.8 -0.5
VOIR 148.54 327 ⇑P PKPbc 00 01 55.3 -0.3
VOIR 148.54 327 ⇑iP PKPbc 00 01 55.3 -0.3
DRGR 148.69 331 ⇓P PKPbc 00 01 55.4 -0.6
DRGR 148.69 331 ⇓iP PKPbc 00 01 55.4 -0.5
PRU Pruhonice 148.99 343 ePKP PKPbc 00 01 55.8 -0.7
PRU e 00 02 02.6
PRU Pruhonice 148.99 343 ⇑ePKP PKPbc 00 01 55.8 -0.7
PRU ePKPAB PKPab 00 02 02.6 -0.4
PSZ Piszkesteto 149.00 335 ⇑P PKPbc 00 01 56.3 -0.3
PSZ Piszkesteto 149.00 335 ⇑ePKP PKPbc 00 01 56.4 -0.2
PSZ Piszkesteto 149.00 335 ⇑iP PKPbc 00 01 56.3 -0.3
BUG Bochum--Univer 149.03 353 ePKPbc PKPbc 00 01 55.6 -1.0
MOX Moxa 149.08 347 eP PKPbc 00 01 56.1 -0.6
comp=Z,41nm,1.4s
MOX e 00 02 02.5
MOX Moxa 149.08 347 ePKPbc PKPbc 00 01 55.7 -1.0
MOX ePKPab PKPab 00 02 02.5 -0.8
TANN Tannenbergstha 149.11 346 ePKPbc PKPbc 00 01 55.8 -1.0
TANN ePKPab PKPab 00 02 02.8 -0.7
WERD Werda 149.12 346 ePKPbc PKPbc 00 01 55.7 -1.1
WERD ePKPab PKPab 00 02 02.9 -0.6
GUNZ Gunzen 149.19 346 ePKPbc PKPbc 00 01 56.0 -1.0
GUNZ ePKPab PKPab 00 02 03.3 -0.5
WERN Wernitzgruen 149.25 346 ePKPbc PKPbc 00 01 56.3 -0.9
WERN ePKPab PKPab 00 02 03.6 -0.4
NKC Novy Kostel 149.28 346 ePKP PKPbc 00 01 56.5 -0.7
NKC e 00 02 03.5
NKC Novy Kostel 149.28 346 ⇑ePKP PKPbc 00 01 56.5 -0.7
NKC ePKPAB PKPab 00 02 03.5 -0.7
TREC Trest 149.34 342 ePKPDF PKPdf 00 01 51.4 -0.9
TREC ⇑ePKP PKPbc 00 01 56.5 -0.9
TREC ePKPAB PKPab 00 02 03.8 -0.7
MANZ Manzenberg 149.59 346 ePKPbc PKPbc 00 01 57.2 -0.8
MANZ ePKPab PKPab 00 02 05.1 -0.4
BUD Budapest 149.69 336 ⇑ePKP PKPbc 00 01 57.9 -0.4
GZR Gura Zlata 149.70 329 ⇓iP PKPbc 00 01 58.0 -0.4
ROTZ Rotzenmuhle 149.78 346 ePKPbc PKPbc 00 01 57.6 -0.8
KHC Kasperske Hory 150.03 344 ePKPDF PKPdf 00 01 52.9 -0.5
KHC ⇑ePKP PKPbc 00 01 58.5 -0.5
KHC ePKPAB PKPab 00 02 07.3 0.0
TNS Taunus Mts 150.06 351 ePKPbc PKPbc 00 01 58.2 -0.9
TNS ePKPab PKPab 00 02 06.7 -0.7
TNS Taunus Mts 150.06 351 ePKPbc PKPbc 00 01 58.2 -0.9
TNS ePKPab PKPab 00 02 06.7 -0.7
GRA1 Grafenberg Arr 150.06 347 ePKPbc PKPbc 00 01 58.1 -1.0
GRA1 ePKPab PKPab 00 02 06.8 -0.7
GRF Grafenberg Arr 150.06 347 ePKP PKPbc 00 01 58.1 -1.0
GRF ePKP PKPab 00 02 06.8 -0.7
GRF Grafenberg Arr 150.06 347 ePKP2 PKPab 00 02 06.8 -0.7
GRF Grafenberg Arr 150.06 347 ePKPbc PKPbc 00 01 58.1 -1.0
GRF ePKPab PKPab 00 02 06.8 -0.7
BZS Buzias 150.08 331 ⇓iP PKPbc 00 01 58.2 -1.1
WET Wettzell 150.19 344 ePKPbc PKPbc 00 01 58.5 -0.9
WET ePKPab PKPab 00 02 07.4 -0.6
WET Wettzell 150.19 344 ePKPbc PKPbc 00 01 58.5 -0.9
WET ePKPab PKPab 00 02 07.4 -0.6
GEC2 GERESS Array S 150.26 343 ePKPbc PKPbc 00 01 58.7 -0.9
GEC2 ePKPab PKPab 00 02 07.9 -0.4
GEC2 GERESS Array S 150.26 343 ePKPbc PKPbc 00 01 58.7 -0.9
GEC2 ePKPab PKPab 00 02 07.9 -0.4
GERES GERESS Array B 150.26 343 PKP PKPdf 00 01 52.9 -0.9
comp=Z,0.6nm,0.7s,baz=333,slow=1.5,SNR=5.2
GERES PKPbc PKPbc 00 01 58.5 -1.0
comp=Z,9.1nm,0.8s,baz=113,slow=2.0,SNR=19
GERES PKPab PKPab 00 02 07.9 -0.4
comp=Z,2.3nm,0.7s,baz=35,slow=4.9,SNR=7.1
SOP Sopron 150.42 339 ⇓ePKP PKPbc 00 01 59.4 -0.6
CONA Conrad Observa 150.44 340 ⇑iPKPdf PKPdf 00 01 50.9 -3.2
comp=Z,3.3nm,1.2s
CONA ⇑iPKiKP PKiKP 00 01 59.9 -0.6
comp=Z,15nm,0.6s
CONA ⇑iPKPab PKPab 00 02 09.5 +0.4
comp=Z,19nm,1.3s
GIVF Givet 150.60 355 ePKIKP PKPbc 00 01 59.3 -1.0
comp=Z,38nm,0.7s
BAIF Baives 150.68 356 ePKIKP PKPbc 00 01 59.5 -1.0
comp=Z,23nm,0.7s
PKSM Moragy 150.89 335 ⇑P PKPbc 00 02 00.4 -0.8
PKSM Moragy 150.89 335 ⇑iP PKPbc 00 02 00.4 -0.7
WLF Walferdange 150.91 353 ePKPbc PKPbc 00 01 59.9 -1.1
STU Stuttgart 151.34 349 ePKPbc PKPbc 00 02 01.3 -0.8
STU ePKPab PKPab 00 02 12.0 -0.8
VTS Vitosha 151.46 325 ⇑P PKPbc 00 02 02.0 -0.6
VTS Vitosha 151.46 325 ⇑iP PKPbc 00 02 02.0 -0.5
FUR Furstenfeldbru 151.49 346 ePKPbc PKPbc 00 02 01.4 -1.0
FUR Furstenfeldbru 151.49 346 ePKPbc PKPbc 00 02 01.4 -1.0
PERS Pernice 151.82 339 iPKPbc PKPbc 00 02 01.9 -1.3
BFO Black Forest 151.92 350 ePKPbc PKPbc 00 02 01.7 -1.7
BFO ePKPab PKPab 00 02 14.5 -0.8
BFO Black Forest 151.92 350 ePKPbc PKPbc 00 02 01.7 -1.7
BFO ePKPab PKPab 00 02 14.5 -0.8
KBA Koelnbreinsper 151.97 342 ⇑i PKPbc 00 02 02.3 -1.2
comp=Z,6.6nm,0.6s
KBA Koelnbreinsper 151.97 342 ⇑i PKPab 00 02 16.5 +1.0
comp=Z,7.3nm,0.8s
KBA Koelnbreinsper 151.97 342 ⇑iPKPdf PKPdf 00 01 52.5 -3.9
comp=Z,2.4nm,1.0s,SNR=8.5
KBA ⇑iPKPbc PKPbc 00 02 02.3 -1.2
comp=Z,6.6nm,0.6s
KBA ⇑iPKPab PKPab 00 02 16.5 +1.0
comp=Z,7.3nm,0.8s
KBA Koelnbreinsper 151.97 342 ⇑iPKIKP PKPdf 00 01 52.5 -3.9
CDF Champ du Feu 152.00 351 ePKIKP PKPbc 00 02 02.3 -1.2
comp=Z,15nm,0.7s
FLN La Foliniere 152.04 2 ePKIKP PKPbc 00 02 02.0 -1.6
MEZF Maizieres J'vi 152.16 355 ePKIKP PKPbc 00 02 02.9 -1.0
comp=Z,98nm,1.3s
LDF La Druitiere 152.23 2 ePKIKP PKPbc 00 02 02.4 -1.6
comp=Z,6.8nm,0.5s
WTTA Wattenberg 152.25 345 ⇑i PKPbc 00 02 03.5 -0.7
comp=Z,12nm,0.5s
WTTA Wattenberg 152.25 345 ⇑i PKPab 00 02 16.7 0.0
comp=Z,11nm,0.7s
WTTA Wattenberg 152.25 345 ⇑iPKPdf PKPdf 00 01 54.7 -2.1
comp=Z,3.2nm,0.8s
WTTA ⇑iPKPbc PKPbc 00 02 03.5 -0.7
comp=Z,12nm,0.5s
WTTA ⇑iPKPab PKPab 00 02 16.7 0.0
comp=Z,11nm,0.7s
MOTA Moosalm 152.30 345 ⇑i PKPbc 00 02 03.3 -1.0
comp=Z,9.3nm,1.0s
MOTA Moosalm 152.30 345 ⇑i PKPab 00 02 16.4 -0.6
comp=Z,9.0nm,0.9s
MOTA Moosalm 152.30 345 ⇑iPKPdf PKPdf 00 01 56.4 -0.4
comp=Z,34nm,2.0s
MOTA ⇑iPKPbc PKPbc 00 02 03.3 -1.0
comp=Z,9.3nm,1.0s
MOTA ⇑iPKPab PKPab 00 02 16.4 -0.6
comp=Z,9.0nm,0.9s
GRR Gorron 152.40 3 ePKIKP PKPbc 00 02 02.8 -1.6
comp=Z,10nm,0.5s
SGMF Saint Gilles 152.42 5 ePKIKP PKPbc 00 02 02.6 -1.9
comp=Z,23nm,0.8s
HAU Haudompre 152.52 352 ePKIKP PKPbc 00 02 03.2 -1.5
comp=Z,20nm,0.8s
LJU Ljubljana 152.53 340 iPKPbc PKPbc 00 02 03.7 -1.1
HINF Hinteralfeld 152.64 352 ePKIKP PKPbc 00 02 03.4 -1.6
comp=Z,12nm,0.9s
BOJS Bojanci 152.76 338 iPKPbc PKPbc 00 02 04.5 -0.8
BOJS e 00 02 19.8
JAVS Javornik 152.81 340 iPKPbc PKPbc 00 02 04.0 -1.4
JAVS i 00 02 16.8
LOR Lormes 153.49 356 ePKIKP PKPbc 00 02 05.5 -1.3
SSF Saint Saulge 153.71 356 ePKIKP PKPbc 00 02 06.0 -1.3
CABF La Chapelle 153.92 352 ePKIKP PKPbc 00 02 07.1 -0.6
LPL La Plagne 154.91 351 ePKIKP PKPdf 00 02 09.4 +8.8
ORIF Oris-en-Rattie 155.61 352 ePKIKP PKPdf 00 02 09.5 +7.9
MBDF Montbardon 155.67 350 ePKIKP PKPdf 00 02 10.4 +8.7
comp=Z,9.9nm,0.8s
ESDC Sonseca Array 160.65 12 PKPab PKPab 00 02 51.9 -1.4
comp=Z,6.1nm,1.0s,baz=347,slow=3.8,SNR=13
KEST Kesra 163.47 336 PKPab PKPab 00 03 05.2 -0.7
comp=Z,2.0nm,1.0s,baz=329,slow=2.5,SNR=6.4
LIC Lamto 164.32 156 eP PKPdf 00 02 09.1 -3.0
comp=Z,40nm,1.2s
KIC Kosan Boka 164.56 157 eP PKPdf 00 02 10.9 -1.4
comp=Z,66nm,1.3s
TIC Toumodi 164.71 156 eP PKPdf 00 02 09.6 -2.8
comp=Z,5.2nm,0.2s
TORD Torodi Ar. Bea 172.40 184 PKP PKPdf 00 02 15.3 -2.0
comp=Z,2.5nm,0.8s,baz=273,slow=0.4,SNR=14
TORD PKPab PKPab 00 03 43.6 -2.0
comp=Z,1.1nm,0.8s,baz=164,slow=3.6,SNR=6.8

*ISCJB **04** 23:49:24.0±0.2, 1761S±007, 17338W±006, h33km, mb4.9/46, MS4.7/26, Error ellipse: s-maj=10.9km s-min=5.7km az=143.6*

IDC **04** 23:49:26.6±3.0, 17.81S×173.10W, h52km±26km, mb4.4/15, mb1 4.6/16, mb1mx4.5/21, mbtmp4.4/16, ML3.4/1, MS4.6/22, Ms1 4.6/22, ms1mx4.4/33, Error ellipse: s-maj=20.1km s-min=11.7km az=145.0

BJI **04** 23:49:26.1, 17.42S×172.76W, h49km, mB5.8, mb5.2, Ms5.5, Msz4.7

GCMT **04** 23:49:26.2±0.3, 17.81S×172.41W, h20km, MW5.1/76, Moment Tensor Solution. s39,c48; s76,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.14±.28; $M_{\theta\theta}$-2.05±.17; $M_{\phi\phi}$-4.09±.18; $M_{r\theta}$1.53±.34; $M_{\theta\phi}$-1.88±.11; $M_{\phi r}$2.48±.31; Best double couple: $M_0$6.37900×10^{16} NP1:ϕ_s210.00000°, δ31.00000°, λ89.00000°. NP2: ϕ_s31.00000°, δ59.00000°, λ90.00000°. Principal axes: T 6.8450, Plg76.0000°, Azm302.0000°; N -0.9310, Plg0.0000°, Azm211.0000°; P -5.9130, Plg14.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC **04** 23:49:26.2±0.2, 17.57S×173.35W, h35km, mb5.1/29 Error ellipse: s-maj=12.2km s-min=6.0km az=142.0

SZGRF **04** 23:49:27.8, 16.97S×172.29W, h33km, Samoa Islands region

MOS **04** 23:49:30.6±1.7, 16.04S×173.59W, h33km, mb5.4/18, MS5.0/4, Error ellipse: s-maj=14.9km s-min=11.2km az=91.2

ISC 04 23:49:25.9±0.2, **17.58S**±006×**173.38W**±006, **h35**km, **n292**, σ1s**14**/125, **mb4.9**/46, **MS4.7**/26, **30C-12D**, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.96**	**23**	ePn	**Pn**	**23 50 15.0**	**-9.2**
AFI				eSn	**Sn**	**23 51 00.6**	**-8.9**
AFI	**Afiamalu**	**3.96**	**23**	P	**Pn**	**23 50 14.7**	**-10**
	14nm,0.3s,baz=221,slow=17,SNR=6.3						
AFI				S	**Sn**	**23 50 54.9**	**-15**
	90nm,0.3s,baz=173,slow=20,SNR=8.2						
AFI				LR	LR	23 51 31.6	
	comp=Z,3µm,19.5s,baz=173,slow=31						
RAO	**Raoul Island**	**12.34**	**199**	S	**Sn**	**23 54 30.4**	**-5.1**
	185nm,0.3s,baz=278,slow=20,SNR=3.8						
RAR	**Rarotonga**	**13.33**	**108**	P	**Pn**	**23 52 16.1**	**-17**
	4.9nm,0.3s,baz=265,slow=9.4,SNR=10						
RAR				LR	LR	23 56 27.6	
	comp=Z,3µm,20.7s,baz=298,slow=32						
DZM	**Mont Dzumac**	**19.50**	**253**	P	**Pn**	**23 53 50.0**	**-1.6**
	0.1nm,0.3s,baz=51,slow=22,SNR=2.3						
URZ	**Urewera**	**22.22**	**200**	P	**P**	**23 54 17.7**	**-1.7**
	175nm,0.9s,mb5.5,baz=14,slow=5.0,SNR=47						
URZ				S	**S**	**23 58 09.5**	**-13**
	3.9nm,0.6s,baz=127,slow=24,SNR=2.3						
PPT	**Papeete**	**22.69**	**94**	eLR	LR	23 59 43.9	
	1µm,21.2s,baz=254						
PPT	**Papeete**	**22.69**	**94**	LR	LR	00 01 30.7	
	comp=Z,2µm,18.4s,MS4.6,baz=256,slow=32						
SNZO	**South Karori**	**25.77**	**201**	P	**P**	**23 54 54.3**	**+0.8**
	53nm,0.9s,mb5.1						
HNR	**Honiara**	**27.15**	**284**	eP	**P**	**23 55 05.3**	**-0.8**
	35nm,0.6s,mb5.1						
HNR	**Honiara**	**27.15**	**284**	eP	**P**	**23 55 05.3**	**-0.8**
HNR				pmax	pmax		
	comp=Z,35nm,0.6s,mb5.1						
HNR	**Honiara**	**27.15**	**284**	LR	LR	00 04 38.8	
	comp=Z,2µm,18.3s,MS4.6,baz=178,slow=33						
RPZ	**Rata Peaks**	**29.19**	**204**	P	**P**	**23 55 23.0**	**-1.0**
	comp=Z,9.5nm,1.0s,mb4.5,baz=79,slow=18,SNR=2.9						
TAOE	**Nuku Hiva Isla**	**33.44**	**79**	eLR	LR	00 04 48.3	
	comp=Z,2µm,20.9s						
RKT	**Rikitea**	**36.35**	**105**	eLR	LR	00 05 49.7	
	comp=Z,906nm,28.0s,baz=279						
CTA	**Charters Tower**	**38.23**	**260**	eP	**P**	**23 56 42.4**	**-0.4**
	comp=Z,8.4nm,0.6s,mb4.7						
CTA	**Charters Tower**	**38.23**	**260**	eP	**P**	**23 56 42.4**	**-0.4**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CTAO	**Charters Tower**	**38.23**	**260**	eP	**P**	**23 56 42.5**	**-0.3**
PMG	**Port Moresby**	**39.16**	**277**	eP	**P**	**23 56 50.9**	**+0.2**
	comp=Z,13nm,0.8s,mb4.7						
PMG	**Port Moresby**	**39.16**	**277**	eP	**P**	**23 56 50.9**	**+0.2**
PMG				pmax	pmax		
	comp=Z,13nm,0.8s						
PMG	**Port Moresby**	**39.16**	**277**	P	**P**	**23 56 51.7**	**+1.0**
	comp=Z,23nm,1.1s,mb4.8,baz=165,slow=6.9,SNR=2.4						
TAU	**Tasmania Unive**	**41.76**	**224**	eP	**P**	**23 57 11.7**	**-0.1**
	comp=Z,36nm,1.2s,mb4.9						
TAU	**Tasmania Unive**	**41.76**	**224**	eP	**P**	**23 57 11.7**	**-0.1**
TAU				pmax	pmax		
	comp=Z,36nm,1.2s,mb4.9						
COEN	**Coen**	**41.90**	**269**	eP	**P**	**23 57 13.7**	**+0.4**
	comp=Z,7.5nm,0.8s,mb4.4						
COEN				ePP	PP	23 58 51.3	+0.6
STKA	**Stephens Creek**	**43.00**	**242**	eP	**P**	**23 57 21.7**	**-0.4**
	comp=Z,9.8nm,0.9s,mb4.5						
STKA				ePP	PP	23 59 03.1	+0.8
STKA	**Stephens Creek**	**43.00**	**242**	P	**P**	**23 57 21.8**	**-0.3**
	comp=Z,14nm,1.0s,mb4.7,baz=91,slow=8.2,SNR=12						
STKA				LR	LR	00 14 17.6	
	comp=Z,974nm,18.6s,MS4.7,baz=320,slow=35						
WB2	**Warramunga Arr**	**49.39**	**259**	eP	**P**	**23 58 11.8**	**-0.7**
WB2				ePcP	PcP	23 59 34.3	-0.4
WRA	**Warramunga Arr**	**49.40**	**259**	P	**P**	**23 58 11.6**	**-1.0**
	comp=Z,9.4nm,0.5s,mb5.0,baz=98,slow=6.8,SNR=131						
ASAR	**Alice Springs**	**49.49**	**254**	P	**P**	**23 58 13.5**	**+0.3**
	comp=Z,64nm,0.7s,mb5.8,baz=89,slow=8.4,SNR=299						
ASAR				S	**S**	**00 05 18.5**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=96,slow=15,SNR=7.2						
FITZ	**Fitzroy Crossi**	**57.81**	**259**	LR	LR	00 24 14.0	
	comp=Z,517nm,18.0s,MS4.7,baz=173,slow=36						
RPN	**Rapa Nui**	**59.45**	**111**	LR	LR	00 20 26.9	
	comp=Z,589nm,18.4s,MS4.8,baz=76,slow=32						
SBA	**Scott Base**	**61.09**	**185**	eP	**P**	**23 59 37.4**	**+1.4**
	comp=Z,14nm,0.8s,mb5.1						
VNDA	**Vanda**	**61.22**	**186**	P	**P**	**23 59 37.3**	**+0.5**
VNDA				LR	LR	00 22 37.4	
VNDA	**Vanda**	**61.22**	**186**	P	**P**	**23 59 35.2**	**-1.7**
	comp=Z,4.9nm,0.8s,mb4.7,baz=12,slow=9.3,SNR=8.6						
VNDA				LR	LR	00 22 37.4	
	comp=Z,313nm,18.5s,MS4.5,baz=18,slow=33						
MBWA	**Marble Bar**	**62.80**	**255**	eP	**P**	**23 59 48.9**	**+0.5**
	comp=Z,21nm,1.0s,mb5.2						
KLBR	**Kellerberrin**	**63.26**	**243**	eP	**P**	**23 59 51.7**	**+0.4**
	comp=Z,31nm,1.1s,mb5.3						
NWAO	**Narrogin (SRO)**	**63.59**	**242**	eP	**P**	**23 59 54.7**	**+1.2**
	comp=Z,37nm,1.2s,mb5.3						
NWAO	**Narrogin (SRO)**	**63.59**	**242**	eP	**P**	**23 59 54.7**	**+1.2**
NWAO				pmax	pmax		
	comp=Z,37nm,1.2s						
NWAO	**Narrogin (SRO)**	**63.59**	**242**	LR	LR	00 27 13.2	
	comp=Z,567nm,18.1s,MS4.8,baz=186,slow=36						
MUN	**Mundaring**	**64.54**	**242**	eP	**P**	**00 00 00.3**	**+0.6**
CASY	**Casey**	**68.45**	**205**	P	**P**	**00 00 25.6**	**+1.6**
MJAR	**Matsushiro Arr**	**70.61**	**320**	P	**P**	**00 00 38.9**	**+1.1**
	comp=Z,8.1nm,0.9s,mb4.7,baz=157,slow=5.8,SNR=11						
MJAR				LR	LR	00 24 58.1	
	comp=Z,279nm,20.0s,MS4.5,baz=155,slow=30						
LPIG	**La Paz**	**74.16**	**58**	LR	LR	00 29 04.6	
	comp=Z,336nm,18.3s,MS4.7,baz=225,slow=32						
CMB	**Columbia Colle**	**74.38**	**41**	eP	**P**	**00 00 58.7**	**-1.6**
	comp=Z,5.2nm,0.9s,mb4.5						
CMB	**Columbia Colle**	**74.38**	**41**	eP	**P**	**00 00 58.7**	**-1.5**
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
PFO	**Pinyon Flat Ob**	**74.39**	**47**	P	**P**	**00 00 58.1**	**-2.3**
	comp=Z,1.2nm,0.7s,mb4.0,baz=53,slow=8.7,SNR=2.8						
MTUM	**Tungsten Hills**	**75.13**	**42**	eP	**P**	**00 01 04.0**	**-0.6**
WAKR	**Walker**	**75.26**	**41**	eP	**P**	**00 01 04.3**	**-1.0**
YBH	**Yreka Blue Hor**	**75.32**	**37**	eP	**P**	**00 01 06.5**	**+1.0**
	comp=Z,20nm,1.3s,mb4.9						
YBH	**Yreka Blue Hor**	**75.32**	**37**	eP	**P**	**00 01 06.6**	**+1.0**
YBH				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS	**Yuzh-Sakhalins**	**75.38**	**331**	P	**P**	**00 01 02.9**	**-2.9**
YSS	**Yuzh-Sakhalins**	**75.38**	**331**⇑	eP	**P**	**00 01 07.2**	**+1.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
NVAR	**Mina Array Bea**	**75.93**	**42**	P	**P**	**00 01 07.9**	**-1.2**
	comp=Z,3.2nm,0.8s,mb4.3,baz=220,slow=8.2,SNR=16						
PAHR	**Pah Rah Range**	**76.02**	**40**	eP	**P**	**00 01 11.2**	**+1.5**
	comp=Z,31nm,1.5s,mb5.0						
TPNV	**Topopah Spring**	**76.40**	**44**	eP	**P**	**00 01 13.0**	**+1.2**
	comp=Z,55nm,2.1s,mb5.1						
TPNV	**Topopah Spring**	**76.40**	**44**	eP	**P**	**00 01 13.0**	**+1.1**
TPNV				pmax	pmax		
	comp=Z,55nm,2.1s,mb5.1						
MOD	**Modoc**	**76.82**	**38**	eP	**P**	**00 01 14.6**	**+0.5**
SHPR	**Sheep Range**	**76.88**	**45**	eP	**P**	**00 01 15.5**	**+0.9**
KSRS	**Korea Array**	**77.73**	**316**	P	**P**	**00 01 22.1**	**+2.7**
	comp=Z,17nm,1.1s,mb4.9,baz=132,slow=6.3,SNR=16						
KSRS				LR	LR	00 35 31.5	
	comp=Z,173nm,19.0s,MS4.4,baz=332,slow=35						
TUC	**Tucson**	**77.75**	**50**	eP	**P**	**00 01 16.6**	**-3.0**
MSU	**Marysvale**	**79.96**	**44**	eP	**P**	**00 01 31.5**	**0.0**
HABR	**Khabarovsk**	**80.19**	**328**	eP	**P**	**00 01 33.7**	**+1.2**
HABR				eS	S	00 11 36.3	+1.4
HABR				e		00 11 46.6	
HABR				pmax	pmax		
	comp=Z,130nm,1.8s,mb5.6						
BMO	**Blue Mountains**	**80.34**	**37**	eP	**P**	**00 01 31.6**	**-1.9**
TMUT	**Trail Mountain**	**81.01**	**44**	eP	**P**	**00 01 38.7**	**+1.5**
GAMB	**Gambell**	**81.10**	**1**	eP	**P**	**00 01 36.9**	**-0.2**
PMR	**Palmer**	**81.24**	**11**	eP	**P**	**00 01 36.8**	**-1.0**
	comp=Z,7.9nm,0.8s,mb4.7						
PMR	**Palmer**	**81.24**	**11**	eP	**P**	**00 01 36.8**	**-1.1**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
SRU	**San Rafael**	**81.37**	**44**	eP	**P**	**00 01 40.7**	**+1.6**
TTA	**Tatalina**	**81.40**	**8**	eP	**P**	**00 01 35.8**	**-2.9**
	comp=Z,4.1nm,0.1s,mb5.3						
TTA	**Tatalina**	**81.40**	**8**	eP	**P**	**00 01 35.8**	**-2.9**
TTA				pmax	pmax		
	comp=Z,4.0nm,0.1s,mb5.3						
MNTX	**Cornudas Mount**	**81.51**	**53**	eP	**P**	**00 01 38.9**	**-1.1**
	comp=Z,17nm,1.5s,mb4.8						
JLU	**Jordanelle**	**81.54**	**43**	eP	**P**	**00 01 40.8**	**+0.9**
DAU	**Daniels Canyon**	**81.56**	**43**	eP	**P**	**00 01 45.9**	**+5.8**
LPM	**Los Pinos Moun**	**81.76**	**50**	P	**P**	**00 01 40.8**	**-0.5**
LTX	**Lajitas**	**81.81**	**56**	eP	**P**	**00 01 42.9**	**+1.2**
	comp=Z,22nm,1.5s,mb4.9						
LTX	**Lajitas**	**81.81**	**56**	eP	**P**	**00 01 42.9**	**+1.3**
LTX				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
TXAR	**Lajitas Array**	**81.81**	**56**	P	**P**	**00 01 39.2**	**-2.5**
TXAR				LR	LR	00 34 13.7	
TXAR	**Lajitas Array**	**81.81**	**56**	P	**P**	**00 01 39.2**	**-2.5**
	comp=Z,1.5nm,1.0s,mb3.9,baz=235,slow=5.9,SNR=10						
TXAR				LR	LR	00 34 13.7	
	comp=Z,310nm,18.8s,MS4.7,baz=275,slow=33						
HWUT	**Hardware Ranch**	**81.99**	**42**	eP	**P**	**00 01 51.1**	**+8.8**
PV10	**Paradox Valley**	**82.00**	**46**	eP	**P**	**00 01 41.1**	**-1.4**
ANMO	**Albuquerque**	**82.18**	**50**	eP	**P**	**00 01 42.9**	**-0.6**
PV01	**Paradox Valley**	**82.21**	**46**	eP	**P**	**00 01 42.5**	**-1.1**
MA2	**Magadan**	**82.24**	**342**	eP	**P**	**00 01 43.9**	**+0.7**
	comp=Z,4.8nm,0.8s,mb4.5						
MA2	**Magadan**	**82.24**	**342**	eP	**P**	**00 01 43.1**	**-0.1**
MA2				eS	S	00 11 51.8	-4.0
MA2				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
MA2				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.7						
NEW	**Newport**	**82.49**	**34**	P	**P**	**00 01 44.7**	**0.0**
GDL2	**Guadalupe Moun**	**82.50**	**53**	eP	**P**	**00 01 46.3**	**+1.1**
TNA	**Tin City**	**82.99**	**2**	eP	**P**	**00 01 47.5**	**+0.6**
PAYG	**Puerto Ayora**	**83.21**	**89**	P	**P**	**00 01 50.1**	**+0.8**
MCK	**McKinley**	**83.25**	**11**	eP	**P**	**00 01 47.6**	**-0.7**
REDW	**Red Top Meadow**	**83.36**	**41**	eP	**P**	**00 01 49.7**	**+0.3**
TPAW	**Teton Pass**	**83.37**	**41**	eP	**P**	**00 01 50.2**	**+0.8**
	comp=Z,14nm,1.0s,mb5.0						
DLMT	**Dillon**	**83.37**	**38**	eP	**P**	**00 01 49.7**	**+0.3**
	comp=Z,33nm,1.4s,mb5.2						
BSMT	**Bassoo Peak**	**83.52**	**35**	eP	**P**	**00 01 50.8**	**+0.7**
IMW	**Indian Meadow**	**83.59**	**40**	eP	**P**	**00 01 50.6**	**0.0**
MOOW	**Moose Ponds**	**83.63**	**40**	eP	**P**	**00 01 51.1**	**+0.3**
	comp=Z,26nm,1.8s,mb5.1						
LOHW	**Long Hollow**	**83.65**	**41**	eP	**P**	**00 01 51.4**	**+0.5**
	comp=Z,25nm,1.5s,mb5.1						
LRM	**Limekiln Ridge**	**83.71**	**38**	eP	**P**	**00 01 52.8**	**+1.7**
QIZ	**Qiongzhong**	**83.74**	**292**	P	**P**	**00 01 50.0**	**-1.9**
QIZ				S	S	00 12 03.4	-9.3
QIZ				XS	sS	00 12 38.6	+7.6
QIZ				AMB	AMB		
	comp=Z,307nm,11.7s						
QIZ				LR	LR		
	comp=Z,191nm,25.6s,MS4.4						
QLMT	**Earthquake Lak**	**83.78**	**39**	eP	**P**	**00 01 52.8**	**+1.3**
CHMT	**Chamberlain Mo**	**83.85**	**37**	eP	**P**	**00 01 51.0**	**-0.8**
PDAR	**Pinedale Array**	**83.87**	**42**	P	**P**	**00 01 50.4**	**-1.6**
	comp=Z,1.4nm,0.8s,mb4.1,baz=198,slow=3.2,SNR=12						
PDAR				LR	LR	00 34 44.7	
	comp=Z,311nm,18.6s,MS4.7,baz=257,slow=32						
BOZ	**Bozeman (W)**	**84.10**	**38**	eP	**P**	**00 01 54.1**	**+1.0**
SDCO	**Great Sand Dun**	**84.16**	**48**	eP	**P**	**00 01 53.9**	**+0.3**
YNR	**Norris Junctio**	**84.18**	**40**	eP	**P**	**00 01 57.2**	**+3.7**
LKWY	**Lake**	**84.27**	**40**	eP	**P**	**00 01 55.9**	**+1.9**
	comp=Z,15nm,1.1s,mb5.0						
LKWY	**Lake**	**84.27**	**40**	eP	**P**	**00 01 55.9**	**+1.9**
LKWY				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
COLA	**College**	**84.49**	**11**	eP	**P**	**00 01 53.5**	**-1.1**
CMIG	**Matias Romero**	**84.59**	**70**	LR	LR	00 33 32.8	
	comp=Z,589nm,18.1s,MS5.0,baz=208,slow=31						
IMA2	**Indian Mountai**	**84.70**	**8**	eP	**P**	**00 01 55.1**	**-0.6**
DAWY	**Dawson**	**85.52**	**14**	eP	**P**	**00 01 59.3**	**-0.5**
EGAK	**Eagle**	**85.72**	**13**	eP	**P**	**00 02 00.5**	**-0.3**
MAW	**Mawson**	**85.75**	**199**	LR	LR	00 40 02.8	
	comp=Z,681nm,18.8s,MS5.1,baz=246,slow=36						
COCO	**West Island**	**86.19**	**258**	P	**P**	**00 02 04.6**	**+0.2**
BILL	**Bilibino**	**86.66**	**352**	eP	**P**	**00 02 05.7**	**+0.4**
	comp=Z,48nm,1.5s,mb5.5						
BILL	**Bilibino**	**86.66**	**352**α	iP	**P**	**00 02 05.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.4						
BJT	**Baijiatuau**	**86.97**	**314**	eP	**P**	**00 02 06.7**	**-0.9**
	comp=Z,203nm,2.1s,mb6.0						
BJT	**Baijiatuau**	**86.97**	**314**	eP	**P**	**00 02 06.7**	**-0.9**
BJT				pmax	pmax		
	comp=Z,203nm,2.1s						
EDM	**Edmonton**	**87.32**	**31**	eP	**P**	**00 02 08.0**	**-1.0**
PLCA	**Paso Flores**	**88.04**	**132**	P	**P**	**00 02 12.9**	**+0.1**
HIA	**Hailar**	**88.94**	**323**	eP	**P**	**00 02 18.0**	**+1.3**
XAN	**Xi'an**	**89.92**	**306**	P	**P**	**00 02 23.3**	**+1.6**
XAN				AMB	AMB		
	comp=Z,10.0nm,3.0s						
CLNS	**Chul'man**	**90.14**	**331**	eP	**P**	**00 02 20.8**	**-1.4**
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.7s						
INK	**Inuvik**	**90.37**	**14**	eP	**P**	**00 02 22.3**	**-0.6**
HHC	**Hu-ho-hao-te**	**90.52**	**313**	eP	**P**	**00 02 26.3**	**+2.0**
HHC				AMB	AMB		
	comp=Z,19nm,0.9s,mb5.4						
HHC				AMB	AMB		
	comp=Z,338nm,5.3s						
JTS	**JuntasAbangare**	**91.57**	**80**	eP	**P**	**00 02 29.4**	**-0.4**
JTS	**JuntasAbangare**	**91.57**	**80**	LR	LR	00 34 37.8	
	comp=Z,452nm,18.1s,MS5.0,baz=82,slow=30						
KMI	**Kunming**	**91.98**	**296**	P	**P**	**00 02 35.4**	**+3.9**
KMI				AP	pP	00 02 45.8	+3.2
KMI				SKS		00 13 04.6	
KMI				S	S	00 13 23.3	-7.9
KMI				AMB	AMB		
	comp=Z,17nm,1.0s,mb5.3						
KMI				LR	LR		
	comp=Z,126nm,40.2s,MS4.1						
KMI	**Kunming**	**91.98**	**296**	P	**P**	**00 02 35.4**	**+3.9**
	comp=Z,17nm,1.0s,mb5.3						
KMI				pP	pP	00 02 45.8	+3.2
KMI				SKS		00 13 04.6	
KMI				S	S	00 13 23.3	-7.9
KMI				SS	SS	00 19 22.6	-18
KMI				LR	LR		
	comp=Z,130nm,40.2s,MS4.1						
YKA	**Yellowknife Ar**	**92.08**	**23**	P	**P**	**00 02 29.8**	**-1.2**
	comp=Z,1.6nm,1.0s,mb4.3,baz=238,slow=3.8,SNR=16						
ATAH	**Atahualpa**	**92.63**	**98**	LR	LR	00 37 24.9	
	comp=Z,536nm,18.1s,MS5.0,baz=198,slow=31						
LZH	**Lanzhou**	**94.53**	**306**	eP	**P**	**00 02 46.2**	**+3.2**
LZH				AP	pP	00 02 54.0	-0.1
LZH				AMB	AMB		
	comp=Z,42nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,302nm,4.2s						
LZH	**Lanzhou**	**94.53**	**306**	eP	**P**	**00 02 46.2**	**+3.2**
	comp=Z,42nm,1.5s,mb5.7						
LZH				pP	pP	00 02 52.0	-2.1
LZH				sP	sP	00 02 54.0	-4.1
ULN	**Ulaanbaatar**	**96.07**	**318**⇑	eP	**P**	**00 02 48.3**	**-1.4**
SONM	**Songino Array**	**96.47**	**318**	P	**P**	**00 02 52.2**	**+0.7**
	comp=Z,0.6nm,1.0s,mb4.0,baz=72,slow=5.0,SNR=3.0						
SONM				LR	LR	00 40 49.6	
	comp=Z,190nm,21.3s,MS4.5,baz=2.6,slow=32						
LPAZ	**La Paz**	**99.05**	**110**	LR	LR	00 38 33.0	
	comp=Z,180nm,19.1s,MS4.6,baz=291,slow=30						
TKL	**Tuckaleechee C**	**99.72**	**56**	LR	LR	00 45 55.7	
	comp=Z,223nm,18.3s,MS4.7,baz=71,slow=34						
ROSC	**El Rosal**	**100.06**	**88**	LR	LR	00 40 35.6	
	comp=Z,75nm,18.0s,MS4.2,baz=206,slow=31						
ZALV	**Zalesovo Beam**	**110.95**	**322**	PKiKP	PKiKP	00 07 53.8	-1.4
	comp=Z,1.3nm,0.9s,baz=96,slow=1.5,SNR=4.4						
MKAR	**Makanchi Array**	**112.36**	**314**	PKiKP	PKiKP	00 07 57.8	-0.3
	comp=Z,1.4nm,0.8s,baz=72,slow=2.1,SNR=8.0						
KURK	**Kurchatov**	**114.78**	**318**	ePKiKP	PKiKP	00 08 02.3	-0.3
UCH	**Uchtor**	**117.88**	**309**	ePKPdf	PKPdf	00 08 09.8	+0.9
AAK	**Ala-Archa**	**117.89**	**309**⇑	iPKIKP	PKPdf	00 08 08.1	-0.8
CHKZ	**Chkalovo**	**119.35**	**322**	PKPdf	PKPdf	00 08 11.0	-0.4
BRVK	**Borovoye**	**119.66**	**322**	eP	PKPdf	00 08 11.9	-0.1
KBL	**Kabul**	**122.28**	**300**	ePKPdf	PKPdf	00 08 18.6	+1.0
ARU	**Arti**	**125.19**	**328**	ePKPdf	PKPdf	00 08 22.9	+0.4
ARU	**Arti**	**125.19**	**328**	i PKIKP	PKPdf	00 08 23.2	+0.7
ARU						00 10 08.7	
ARU				PPP		00 12 48.1	
ARU						00 15 23.2	
ARU				SS	SS	00 27 01.0	-5.7
ARCES	**ARCESS Array B**	**126.76**	**352**	PKP	PKPdf	00 08 22.8	-2.3
	comp=Z,4.5nm,1.0s,baz=20,slow=3.9,SNR=4.7						
JOF	**Joensuu**	**131.57**	**345**	ep	PKPdf	00 08 29.8	-4.6
	comp=Z,2.4nm,0.7s						
FINES	**FINESS Array B**	**134.06**	**347**	PKP	PKPdf	00 08 39.7	+0.5
FINES	**FINESS Array B**	**134.06**	**347**⇑	iPKIKP	PKPdf	00 08 42.7	+3.5
FINES	**FINESS Array B**	**134.06**	**347**	PKP	PKPdf	00 08 39.7	+0.5
	comp=Z,1.9nm,0.8s,baz=108,slow=6.2,SNR=6.9						
OBN	**Obninsk**	**136.10**	**336**	P	PKPdf	00 08 43.0	-0.1
OBN	**Obninsk**	**136.10**	**336**	i PKIKP	PKPdf	00 08 48.0	+4.8
OBN				e		00 08 58.2	
OBN				pmax	pmax		
	comp=Z,30nm,1.6s						
ZEI	**Tsey**	**139.65**	**316**	ePKIKP	PKPdf	00 08 52.0	+1.9
KIV	**Kislovodsk**	**139.87**	**319**	eP	PKPdf	00 08 51.2	+0.7
KIV	**Kislovodsk**	**139.87**	**319**	ePKIKP	PKPdf	00 08 51.2	+0.7
AKASG	**Malin Array Be**	**142.34**	**336**	PKP	PKPdf	00 08 50.9	-3.8
	comp=Z,0.7nm,0.6s,baz=39,slow=3.5,SNR=5.4						
ERZM	**Erzurum**	**142.63**	**314**	i P	PKPdf	00 08 58.6	+3.0
KELT	**Kelkit**	**143.95**	**315**	i P	PKPdf	00 08 58.0	+0.1
MARD	**Mardin**	**144.15**	**310**	i P	PKPdf	00 08 57.2	-1.1
KMBO	**Kilima Mbogo**	**144.57**	**241**	PKP	PKPdf	00 09 00.2	+0.4
KMBO	**Kilima Mbogo**	**144.57**	**241**	PKP	PKPdf	00 09 00.2	+0.4
	comp=Z,23nm,1.0s,baz=74,slow=4.0,SNR=22						
RUE	**Ruedersdorf**	**144.72**	**352**	ePKPbc	PKPdf	00 08 58.0	-0.8
LVV	**L'vov**	**144.91**	**340**⇓	iPKHKP		00 08 58.5	
ELZG	**Elazig**	**144.92**	**313**	i P	PKPdf	00 08 57.6	-2.0
NRDL	**Niedersach Rie**	**145.05**	**356**	ePKPbc	PKPbc	00 08 59.0	+0.2
IBBN	**Ibbenburen**	**145.34**	**359**	ePKPbc	PKPbc	00 08 59.9	+0.2
MALT	**Malatya**	**145.39**	**313**	ePKPbc	PKPbc	00 09 01.5	+1.1
MALT	**Malatya**	**145.39**	**313**⇑	iP	PKPbc	00 09 02.3	+1.9
KWP	**Kalwaria**	**145.49**	**341**	ePKP	PKPdf	00 09 01.5	+1.2
KWP	**Kalwaria**	**145.49**	**341**⇓	iP	PKPdf	00 09 00.7	+0.5
CLZ	**Clausthal**	**145.69**	**356**	ePKIKP	PKPdf	00 09 00.9	+0.4
CLZ	**Clausthal**	**145.69**	**356**	ePKPbc	PKPbc	00 09 00.9	0.0
WTSB	**Winterswijk**	**145.69**	**360**	eP	PKPdf	00 09 00.5	0.0
	comp=Z,91nm,2.2s						
OJC	**Ojcow**	**145.76**	**345**	ePKP	PKPdf	00 09 01.4	+0.7
KSP	**Ksiaz**	**145.93**	**349**	ePKP	PKPdf	00 09 02.5	+1.5
KSP	**Ksiaz**	**145.93**	**349**	ePKIKP	PKPdf	00 09 02.3	+1.3
CLL	**Collm**	**145.97**	**353**⇑	iPKP	PKPdf	00 09 01.9	+0.9
CLL				i pPKP	pPKPdf	00 09 04.8	-7.7
CLL	**Collm**	**145.97**	**353**⇑	iPKPbc	PKPbc	00 09 01.9	+0.2
	comp=Z,80nm,1.1s						
CLL				i PKiKP	PKiKP	00 09 04.8	-0.4
CLL				i x	x	00 09 08.4	
CLL	**Collm**	**145.97**	**353**	ePKPbc	PKPbc	00 09 01.0	-0.7
BOYT	**Boyabat**	**146.06**	**320**	i P	PKPdf	00 09 04.5	+3.0
BUG	**Bochum--Univer**	**146.21**	**359**	ePKPbc	PKPbc	00 09 02.2	-0.3
BRG	**Berggiesshubel**	**146.27**	**352**	ePKPbc	PKPbc	00 09 02.5	-0.2
BRG	**Berggiesshubel**	**146.27**	**352**	i PKP	PKPdf	00 09 02.8	+1.3
	comp=Z,88nm,1.5s						
UPC	**Upice**	**146.30**	**349**	ePKPdf	PKPdf	00 09 02.1	+0.5
FBE	**Freiberg**	**146.31**	**352**	ePKPbc	PKPbc	00 09 02.9	+0.1
NIE	**Niedzica**	**146.37**	**344**	ePKP	PKPdf	00 09 03.9	+2.2
BURAR	**Bucovina Array**	**146.38**	**337**	⇓P	PKPbc	00 09 04.4	+1.3
BURAR	**Bucovina Array**	**146.38**	**337**⇓	iP	PKPbc	00 09 04.4	+1.3
DPC	**Dobruska-Polom**	**146.39**	**349**	ePKPdf	PKPdf	00 09 03.7	+1.9
GZT	**Gaziantep**	**146.44**	**312**	i P	PKPdf	00 09 05.1	+2.8
UZH	**Uzhgorod**	**146.50**	**341**	d iPKIKP	PKPdf	00 09 03.8	+1.8
UZH				i		00 09 16.6	
OKC	**Ostrava-Krasne**	**146.51**	**346**	ePKPdf	PKPdf	00 09 03.8	+1.8
PVCC	**Panska Ves**	**146.52**	**351**	ePKPdf	PKPdf	00 09 04.2	+2.2
CTKT	**Corum**	**146.59**	**319**	i P	PKPdf	00 09 03.5	+1.1
MORC	**Moravsky Berou**	**146.70**	**347**	⇑P	PKPdf	00 09 04.5	+2.2
MORC	**Moravsky Berou**	**146.70**	**347**⇑	iP	PKPdf	00 09 04.5	+2.2
MOX	**Moxa**	**146.77**	**354**	ePKP	PKPdf	00 09 04.5	+2.1
	comp=Z,78nm,1.9s						
MOX				e		00 09 33.0	
MOX	**Moxa**	**146.77**	**354**	ePKPbc	PKPbc	00 09 03.9	-0.2
HGN	**Heimansgroeve**	**146.89**	**1**	eP	PKPdf	00 09 03.5	+0.9
	comp=Z,82nm,2.2s						
WERD	**Werda**	**146.90**	**353**	ePKPbc	PKPbc	00 09 04.6	+0.1
TANN	**Tannenbergstha**	**146.91**	**353**	ePKPbc	PKPbc	00 09 04.8	+0.3
GUNZ	**Gunzen**	**146.98**	**353**	ePKPbc	PKPbc	00 09 04.5	-0.2
WERN	**Wernitzgruen**	**147.05**	**353**	ePKPbc	PKPbc	00 09 05.5	+0.6
PRU	**Pruhonice**	**147.05**	**351**	ePKPdf	PKPbc	00 09 05.5	+0.6
NKC	**Novy Kostel**	**147.09**	**353**	ePKPdf	PKPbc	00 09 05.7	+0.6
ANDN	**Andirin**	**147.19**	**313**	i P	PKPdf	00 09 04.9	+1.4
VRAC	**Vranov**	**147.34**	**348**	⇑P	PKPbc	00 09 05.9	+0.1
VRAC	**Vranov**	**147.34**	**348**⇑	iP	PKPbc	00 09 05.9	+0.1
MANZ	**Manzenberg**	**147.37**	**353**	ePKPbc	PKPbc	00 09 06.2	+0.3
TNS	**Taunus Mts**	**147.40**	**358**	ePKIKP	PKPbc	00 09 06.1	+0.2
TNS	**Taunus Mts**	**147.40**	**358**	ePKPbc	PKPbc	00 09 06.1	+0.2
CDAG	**Cicekdag**	**147.43**	**318**	i P	PKPbc	00 09 05.7	-0.7
ELDT	**Eldivan**	**147.51**	**320**	i P	PKPbc	00 09 06.7	+0.1
GIVF	**Givet**	**147.53**	**2**	ePKP1	PKPbc	00 09 05.5	-0.8
	comp=Z,72nm,1.2s						
BAIF	**Baives**	**147.54**	**3**	ePKP1	PKPbc	00 09 05.8	-0.5
	comp=Z,86nm,1.3s						
TIRR	**Tirgusor**	**147.55**	**330**	⇑P	PKPbc	00 09 09.3	+2.8
TIRR	**Tirgusor**	**147.55**	**330**⇑	iP	PKPbc	00 09 09.3	+2.8
TREC	**Trest**	**147.56**	**349**	ePKPdf	PKPbc	00 09 06.4	0.0
TREC				ex	x	00 09 17.5	
AVNT	**Avonos**	**147.58**	**316**	i P	PKPbc	00 09 08.2	+1.4
ROTZ	**Rotzenmuhle**	**147.58**	**353**	ePKPbc	PKPbc	00 09 06.7	+0.3
GRF	**Grafenberg Arr**	**147.75**	**354**	ePKP	PKPbc	00 09 07.1	+0.2
GRF	**Grafenberg Arr**	**147.75**	**354**	ePKPbc	PKPbc	00 09 07.1	+0.2
GRFO	**Grafenberg**	**147.75**	**354**	ePKPdf	PKPdf	00 09 05.3	+1.2
BR131	**Keskin Array S**	**147.83**	**319**	PKPdf	PKPdf	00 09 05.4	+0.9
BR131				ePKPab	PKPab	00 09 11.2	+1.2
BRTR	**Keskin Array B**	**147.83**	**319**	PKPbc	PKPbc	00 09 08.3	+0.9
	comp=Z,16nm,1.0s,baz=87,slow=2.9,SNR=31						
MLR	**Muntele Rosu**	**147.84**	**334**	⇑P	PKPbc	00 09 08.6	+1.4
MLR	**Muntele Rosu**	**147.84**	**334**⇑	iP	PKPbc	00 09 08.6	+1.3
PSZ	**Piszkesteto**	**147.85**	**343**	⇓P	PKPbc	00 09 08.3	+1.1
PSZ	**Piszkesteto**	**147.85**	**343**⇑	ePKP	PKPbc	00 09 07.6	+0.4
PSZ	**Piszkesteto**	**147.85**	**343**⇓	iP	PKPbc	00 09 08.3	+1.1
DRGR		**147.98**	**339**	⇓P	PKPbc	00 09 08.5	+0.9
DRGR		**147.98**	**339**⇓	iP	PKPbc	00 09 08.5	+0.9
WLF	**Walferdange**	**147.99**	**1**	ePKPdf	PKPdf	00 09 05.0	+0.6
KHC	**Kasperske Hory**	**148.03**	**351**⇑	iPKP2	PKPbc	00 09 08.6	+0.9
KHC	**Kasperske Hory**	**148.03**	**351**	ePKPdf	PKPbc	00 09 08.1	+0.4
KHC				ex	x	00 09 19.4	
WET	**Wettzell**	**148.11**	**352**	ePKIKP	PKPbc	00 09 08.1	+0.2
WET	**Wettzell**	**148.11**	**352**	ePKPbc	PKPbc	00 09 08.1	+0.2
VOIR		**148.25**	**335**	⇑P	PKPab	00 09 13.4	+2.0
VOIR		**148.25**	**335**⇑	iP	PKPab	00 09 13.4	+2.0
ANTO	**Ankara**	**148.27**	**320**	ePKPdf	PKPdf	00 09 05.9	+0.7
GEC2	**GERESS Array S**	**148.29**	**351**	ePKIKP	PKPbc	00 09 08.5	+0.1
GEC2	**GERESS Array S**	**148.29**	**351**	ePKPbc	PKPbc	00 09 08.5	+0.1
GERES	**GERESS Array B**	**148.29**	**351**	PKPbc	PKPbc	00 09 08.2	-0.2
	comp=Z,4.2nm,0.8s,baz=38,slow=2.4,SNR=29						
FLN	**La Foliniere**	**148.37**	**9**	ePKP1	PKPbc	00 09 07.0	-1.6
	comp=Z,178nm,1.4s						
FLN				eMLR	MLR		
	comp=Z,341nm,17.0s,MS4.9						
FLN	**La Foliniere**	**148.37**	**9**	ePKIKP	PKPdf	00 09 07.0	+1.9
FLN				MLR	MLR		
	comp=Z,340nm,17.0s,MS5.2						
BUD	**Budapest**	**148.48**	**344**	ePKP	PKPdf	00 09 09.3	+4.0
QUIF	**Quistinic**	**148.70**	**13**	ePKP1	PKPbc	00 09 07.8	-1.6
CONA	**Conrad Observa**	**148.80**	**348**⇑	iPKiKP	PKiKP	00 09 10.2	-0.9
	comp=Z,25nm,1.1s,SNR=10						
SOP	**Sopron**	**148.89**	**347**⇑	ePKP	PKPbc	00 09 10.6	+0.7
MEZF	**Maizieres J'vi**	**149.13**	**2**	ePKP1	PKPbc	00 09 10.0	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,138nm,1.6s						
GZR	**Gura Zlata**	**149.16**	**338**	⇑P	PKPbc	00 09 11.6	+0.9
GZR	**Gura Zlata**	**149.16**	**338**	⇑*i*P	PKPbc	00 09 11.6	+0.9
CDF	**Champ du Feu**	**149.25**	**359**	*e*PKP1	PKPbc	00 09 10.2	-0.6
FUR	**Furstenfeldbru**	**149.26**	**354**	*e*PKIKP	PKPbc	00 09 11.1	+0.2
FUR	**Furstenfeldbru**	**149.26**	**354**	*e*PKPbc	PKPbc	00 09 11.1	+0.2
BFO	**Black Forest**	**149.30**	**358**	*e*PKIKP	PKPbc	00 09 10.6	-0.3
BFO	**Black Forest**	**149.30**	**358**	*e*PKPbc	PKPbc	00 09 10.6	-0.3
BZS	**Buzias**	**149.38**	**339**	⇓P	PKPbc	00 09 12.0	+0.7
BZS	**Buzias**	**149.38**	**339**	⇓*i*P	PKPbc	00 09 12.0	+0.8
HAU	**Haudompre**	**149.66**	**0**	*e*PKP1	PKPbc	00 09 11.2	-0.6
	comp=Z,46nm,1.1s						
HAU				*e*MLR	MLR		
	comp=Z,434nm,17.0s,MS5.0						
HAU	**Haudompre**	**149.66**	**0**	*e*PKIKP	PKPbc	00 09 11.2	-0.6
HAU				MLR	MLR		
	comp=Z,430nm,17.0s,MS5.3						
BORA	**Eskisehir**	**149.67**	**322**	*i* P	PKPdf	00 09 05.5	-2.0
PKSM	**Moragy**	**149.76**	**343**	⇑P	PKPbc	00 09 11.9	-0.3
PKSM	**Moragy**	**149.76**	**343**	⇑*i*P	PKPbc	00 09 11.9	-0.2
HINF	**Hinteralfeld**	**149.84**	**360**	*e*PKP1	PKPbc	00 09 11.3	-1.0
MOTA	**Moosalm**	**150.09**	**354**	⇑*i*P	PKPbc	00 09 12.3	-0.6
	comp=Z,17nm,1.2s,SNR=11						
WTTA	**Wattenberg**	**150.11**	**353**	*i* P	PKPbc	00 09 13.3	+0.4
	SNR=6.9						
PERS	**Pernice**	**150.19**	**348**	*i* PKPbc	PKPbc	00 09 13.0	-0.2
SQTA	**Sankt Quirin**	**150.20**	**354**	⇑*i*P	PKPbc	00 09 13.3	+0.1
	comp=Z,22nm,1.2s,SNR=8.0						
LOR	**Lormes**	**150.31**	**4**	*e*PKP1	PKPbc	00 09 12.7	-0.7
	comp=Z,84nm,1.5s						
LOR				*e*MLR	MLR		
	comp=Z,489nm,17.0s,MS5.1						
LOR	**Lormes**	**150.31**	**4**	*e*PKIKP	PKPbc	00 09 12.7	-0.7
LOR				MLR	MLR		
	comp=Z,490nm,17.0s,MS5.4						
FETA	**Feichten**	**150.45**	**354**	⇓*i*PKPbc	PKPbc	00 09 11.9	-1.9
	comp=Z,23nm,1.0s,SNR=11						
SSF	**Saint Saulge**	**150.49**	**4**	*e*PKP1	PKPbc	00 09 13.1	-0.8
	comp=Z,63nm,1.2s						
ABTA	**Abfaltersbach**	**150.51**	**352**	⇑*i*PKPbc	PKPbc	00 09 13.7	-0.3
	comp=Z,23nm,1.0s,SNR=11						
CSS	**Prodhromos**	**150.59**	**311**	*e*PKPdf	PKPdf	00 09 10.1	+1.0
CSS				*e*PKPbc	PKPbc	00 09 15.7	+1.2
AVF	**Avril sur Loir**	**150.75**	**5**	*e*PKP1	PKPbc	00 09 13.3	-1.2
GDZ	**Gediz**	**150.76**	**322**	*i* P	PKPdf	00 09 14.8	+5.6
LJU	**Ljubljana**	**150.87**	**349**	*i* PKPbc	PKPbc	00 09 14.6	-0.2
SMF	**Signal de Mont**	**150.93**	**4**	*e*PKP1	PKPbc	00 09 13.8	-1.1
BGF	**Bois d'Agland**	**150.94**	**5**	*e*PKP1	PKPbc	00 09 14.0	-1.0
CABF	**La Chapelle**	**151.05**	**1**	*e*PKP1	PKPbc	00 09 15.0	-0.2
	comp=Z,66nm,1.1s						
JAVS	**Javornik**	**151.10**	**349**	*e*PKPbc	PKPbc	00 09 15.5	+0.2
TCF	**Toulx Ste Croi**	**151.14**	**6**	*e*PKP1	PKPbc	00 09 14.2	-1.2
	comp=Z,34nm,1.1s						
BOJS	**Bojanci**	**151.24**	**347**	*i* PKPbc	PKPbc	00 09 16.1	+0.4
BOJS				*i*		00 09 18.7	
GOLH	**Golhisar**	**151.88**	**319**	*i* P	PKPdf	00 09 10.2	-0.8
LPL	**La Plagne**	**152.15**	**360**	*e*PKP1	PKPbc	00 09 17.9	+0.1
LPG	**La Plagne**	**152.16**	**360**	*e*PKP1	PKPbc	00 09 17.9	+0.1
BDRM	**Kayabasi**	**153.30**	**321**	*i* P	PKPdf	00 09 11.8	-1.3
ESDC	**Sonseca Array**	**156.14**	**21**	PKPab	PKPab	00 09 43.3	-1.2
	comp=Z,0.7nm,0.7s,baz=327,slow=3.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**173.52**	**132**	PKP	PKPdf	00 09 30.2	-2.4
	comp=Z,1.5nm,1.1s,baz=355,slow=0.9,SNR=5.2						
TORD				PKPab	PKPab	00 10 58.0	-3.6
	comp=Z,5.1nm,1.1s,baz=286,slow=3.7,SNR=10						

IDC 04 23:57:52.7±3.8**, 2162S×17567W, h0**km**, mb4.1**/2**, mb1 4.4**/2**, mb1mx3.8**/14**, mbtmp4.1**/2**, Error ellipse: s-maj=188.1km s-min=45.9km az=149.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.39**	**257**	P	P	00 06 21.8	+0.6
	2.0nm,0.5s,baz=95,slow=7.6,SNR=27						
ASAR				PcP	PcP	00 07 55.2	-1.0
	0.4nm,0.6s,baz=107,slow=3.8,SNR=4.3						
WB2	**Warramunga Arr**	**46.59**	**263**	*e*P	P	00 06 22.0	-0.8
WRA	**Warramunga Arr**	**46.60**	**263**	P	P	00 06 22.2	-0.7
	0.9nm,0.3s,baz=97,slow=7.4,SNR=62						
AKASG	**Malin Array Be**	**145.03**	**332**	PKPbc	PKPbc	00 17 31.4	+0.3
	1.1nm,0.4s,baz=44,slow=4.1,SNR=11						
BRTR	**Keskin Array B**	**149.20**	**312**	PKPbc	PKPbc	00 17 43.1	-0.3
	0.5nm,0.6s,baz=64,slow=3.4,SNR=3.9						

IDC 05 00:05:46.9±2.2**, 096S×12706E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=196.6km s-min=25.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.17**	**160**	P	P	00 10 22.6	-0.4
	0.2nm,0.5s,baz=342,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**23.53**	**164**	P	P	00 10 59.3	+0.2
	0.6nm,0.7s,baz=341,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**61.60**	**327**	P	P	00 16 06.3	+0.1
	0.2nm,0.3s,baz=114,slow=7.8,SNR=7.6						

IDC 05 00:22:02.1±6.0**, 978S×11640E, h0**km**, mb3.4**/3**, mb1 3.9**/5**, mb1mx3.6**/18**, mbtmp3.8**/5**, ML3.9**/2**, Error ellipse: s-maj=81.3km s-min=54.3km az=154.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**7.17**	**94**	Pn	Pn	00 23 49.4	+1.1
	1.5nm,0.3s,baz=274,slow=13,SNR=3.1						
BATI				Sn	Sn	00 25 13.2	+2.7
	1.4nm,0.3s,baz=313,slow=19,SNR=2.1						
FITZ	**Fitzroy Crossi**	**12.20**	**134**	Pn	Pn	00 24 58.9	+1.6
	0.6nm,0.3s,baz=311,slow=17,SNR=14						
FITZ				Sn	Sn	00 27 13.6	-0.5
	0.6nm,0.3s,baz=145,slow=17,SNR=6.6						
WRA	**Warramunga Arr**	**20.05**	**122**	P	P	00 26 35.8	-1.3
	0.9nm,0.5s,baz=299,slow=12,SNR=6.7						
ASAR	**Alice Springs**	**21.69**	**132**	P	P	00 26 54.0	-0.7
	0.3nm,0.4s,baz=305,slow=9.6,SNR=5.7						
STKA	**Stephens Creek**	**32.07**	**137**	P	P	00 28 31.4	+0.6
	1.4nm,0.9s,baz=323,slow=11,SNR=2.9						

*IDC **05** 00:24:11.8±9.7, 1589N×9069W, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.5/17, mbtmp3.3/4, ML4.1/2, MS4.3/1, Ms1 4.3/1, ms1mx2.7/24, Error ellipse: s-maj=164.9km s-min=32.6km az=164.0*

*MEX **05** 00:24:19.2±0.4, 1652N×9075W, h83km±18km, MD4.3*

*NEIC **05** 00:24:19.3, 1651N×9076W, h83km, MD4.3(MEX), After MEX.*

*ISCJB **05** 00:24:22.6±0.8, 1671N±007×9101W±004, h41km±14km, mb3.6/2, Error ellipse: s-maj=12.3km s-min=6.3km az=171.7*

ISC 05 00:24:23.4±1.8**, 1664N**±009×**9100W**±004**, h28**km±16km**, n16, σ1§27**/31**, mb3.6**/2**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.15**	**252**	*i* P	**Pn**	**00 24 41.5**	**-2.0**
CCIG				*i* S	**Sb**	**00 24 59.2**	**+0.2**
SCX	**San Cristobal**	**1.57**	**274**	*i* P	**Pn**	**00 24 48.0**	**-1.3**
SCX				*i* S	**Sn**	**00 25 10.0**	**+1.3**
CMIG	**Matias Romero**	**3.74**	**277**	*e*P	**Pn**	**00 25 17.4**	**-1.9**
CMIG				Pn	**Pn**	**00 25 17.8**	**-1.5**
CMIG				Pg	**Pn**	**00 25 26.8**	**+7.5**
CMIG				Sn	**Sn**	**00 25 58.3**	**-4.2**
CMIG				*i* S	**Sn**	**00 26 03.3**	**+0.8**
CMIG				Lg		00 26 14.6	
CMIG	**Matias Romero**	**3.74**	**277**	Pn	**Pn**	**00 25 17.8**	**-1.5**
	0.1nm,0.3s,baz=72,slow=20,SNR=2.7						
CMIG				Pg	**Pn**	**00 25 26.8**	**+7.5**
	4.7nm,0.3s,baz=79,slow=12,SNR=22						
CMIG				Sn	**Sn**	**00 25 58.3**	**-4.2**
	7.7nm,0.3s,baz=76,slow=15,SNR=6.5						
CMIG				Lg		00 26 14.6	
	11nm,0.3s,baz=179,slow=23,SNR=13						
CMIG	**Matias Romero**	**3.74**	**277**	*e*P	**Pn**	**00 25 17.4**	**-1.9**
CMIG				*i* S	**Sn**	**00 26 03.3**	**+0.8**
TEIG	**Tepich**	**4.40**	**36**	*e*Pn	**Pn**	**00 25 27.3**	**-1.1**
TEIG				*e*Sn	**Sn**	**00 26 19.4**	**+0.6**
TEIG	**Tepich**	**4.40**	**36**	Pn	**Pn**	**00 25 27.3**	**-1.1**
	36nm,0.3s,baz=259,slow=2.9,SNR=154						
TEIG				Sn	**Sn**	**00 26 18.2**	**-0.5**
	32nm,0.3s,baz=60,slow=22,SNR=13						
TEIG				Lg		00 26 41.2	
	23nm,0.3s,baz=303,slow=23,SNR=4.8						
TGUH	**Tegucigalpa,Un**	**4.42**	**125**	*e*Pn	**Pn**	**00 25 29.2**	**+0.6**
VHO	**Vista Hermosa**	**5.50**	**275**	*i* P	**Pn**	**00 25 43.5**	**0.0**
VHO				*i* S	**Sn**	**00 26 45.5**	**-0.4**
UTMO	**Huajuapan**	**6.61**	**281**	*i* P	**Pn**	**00 26 01.0**	**+2.4**
UTMO				*i* S	**Sn**	**00 27 11.7**	**-1.4**
PPM	**Popocatepetl**	**7.65**	**290**	*i* P	**Pn**	**00 26 17.5**	**+4.5**
PPM				*i* S	**Sn**	**00 27 39.1**	**+0.3**
PPM	**Popocatepetl**	**7.65**	**290**	*i* P	**Pn**	**00 26 15.0**	**+2.0**
PPM				*i* S	**Sn**	**00 27 39.1**	**+0.3**
TXAR	**Lajitas Array**	**17.17**	**320**	P	**Pn**	**00 28 22.9**	**+1.6**
	0.0nm,0.3s,baz=146,slow=9.7,SNR=3.5						
SDV	**Santo Domingo**	**21.29**	**109**	P	**P**	**00 29 08.7**	**+0.7**
NVAR	**Mina Array Bea**	**32.30**	**318**	P	**P**	**00 30 51.0**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=121,slow=9.9,SNR=3.8						
YKA	**Yellowknife Ar**	**48.70**	**346**	P	**P**	**00 33 02.6**	**-2.4**
	0.5nm,0.5s,mb3.8,baz=142,slow=7.7,SNR=6.9						

*NEIC **05** 00:49:43.1, 1307N×6075W, h107km, MD3.7(TRN), After TRN.*

TRN 05 00:49:42.0, 1294N×6060W, h76km**, MD3.7, M3.3**(FDF)**, 4C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHS	**Barnard House**	**0.62**	**305**	*e*P	Pn	00 49 58.0	+1.4
BHS				*e*S	Sn	00 50 09.0	+1.7
SSV	**Crater Summit**	**0.69**	**304**	*e*P	Pn	00 49 58.4	+1.1
SSV				*e*S	Sn	00 50 10.3	+1.7
SVV	**Soufriere Volc**	**0.71**	**302**	⇑*e*P	Pn	00 49 58.7	+1.3
SVV				*e*S	Sn	00 50 11.2	+2.3
SVB	**Belmont**	**0.72**	**297**	⇑*e*P	Pn	00 49 58.6	+1.1
SVB				*e*S	Sn	00 50 10.9	+1.9
SLB	**Belfond**	**0.98**	**334**	⇑*i*P	Pn	00 50 02.3	+1.7
SLB				*i* S	Sn	00 50 14.4	-0.1
SLW	**Petit Monier**	**1.12**	**343**	*e*P	Pn	00 50 02.6	+0.3
GRIC	**Isle de Caille**	**1.16**	**236**	*e*P	Pn	00 50 04.0	+1.2
GRIC				*e*S	Sn	00 50 20.1	+1.7
GRSS	**Sisters**	**1.18**	**237**	⇑*e*P	Pn	00 50 03.8	+0.8
GRSS				*e*S	Sn	00 50 20.1	+1.4
GRHS	**Sauteurs**	**1.24**	**235**	*e*P	Pn	00 50 05.2	+1.4
GRHS				*e*S	Sn	00 50 21.3	+1.1
GRW	**Mount Saint Ca**	**1.29**	**233**	⇓*e*P	Pn	00 50 05.9	+1.4
GRW				*e*S	Sn	00 50 23.1	+1.7
MVM	**Montagne Vaucl**	**1.63**	**350**	*e*P	Pn	00 50 09.2	+0.3
BIM	**Bigot**	**1.63**	**344**	*e*P	Pn	00 50 10.0	+1.1
FDF	**Fort de France**	**1.86**	**343**	*e*P	Pn	00 50 13.4	+1.5
FDF				*e*S	Sn	00 50 36.7	+2.1
TRN	**Trinidad (W)**	**2.41**	**199**	*e*P	Pn	00 50 21.4	+2.1
TBG	**Guadaloupe-3**	**3.07**	**341**	*e*P	Pn	00 50 31.4	+3.2
HMG	**Houelmont**	**3.21**	**341**	*e*P	Pn	00 50 33.5	+3.5
SCG	**Saint Claude**	**3.25**	**341**	*e*P	Pn	00 50 33.2	+2.6
DEG	**La Desirade**	**3.38**	**352**	*e*P	Pn	00 50 33.1	+0.6
DEG				*e*S	Sn	00 51 11.6	+0.1

*ISCJB **05** 00:52:01.3±1.8, 1.1S±03×677E±03, h10km, mb3.8/7, MS3.8/4, Error ellipse: s-maj=57.5km s-min=20.6km az=143.4*

*IDC **05** 00:52:03.2±1.6, 094S×6791E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, MS3.9/4, Ms1 3.9/4, ms1mx3.5/31, Error ellipse: s-maj=55.7km s-min=24.7km az=54.0*

*NEIC **05** 00:52:03.3±1.7, 109S×6767E, h10km, Error ellipse: s-maj=57.4km s-min=21.6km az=54.0*

ISC 05 00:52:03.4±1.8**, 11S**±03×**677E**±03**, h10**km**, n11, σ0§91**/8**, mb3.8**/7**, MS3.8**/4**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**30.41**	**270**	LR	LR	01 08 40.3	
	comp=Z,268nm,18.4s,MS3.9,baz=279,slow=32						
PSI	**Prapat**	**31.49**	**83**	LR	LR	01 09 16.8	
	comp=Z,262nm,18.7s,MS3.9,baz=247,slow=33						
MKAR	**Makanchi Array**	**49.39**	**13**	P	**P**	**01 00 54.0**	**+0.8**
	0.3nm,0.7s,mb3.4,baz=180,slow=6.7,SNR=2.9						
MKAR				LR	LR	01 21 50.1	
	comp=Z,82nm,18.9s,MS3.8,baz=175,slow=36						
BRTR	**Keskin Array B**	**51.17**	**326**	P	**P**	**01 01 07.5**	**+0.7**
	1.2nm,1.1s,mb3.8,baz=128,slow=7.6,SNR=3.7						
AKTK	**Aktyubinsk**	**52.00**	**352**	P	**P**	**01 01 12.4**	**-0.4**
AKTO	**Aktyubinsk**	**52.00**	**352**	P	**P**	**01 01 12.4**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=168,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**56.68**	**12**	P	**P**	**01 01 44.8**	**-2.0**
	1.6nm,1.1s,mb4.0,baz=184,slow=4.3,SNR=2.0						
ZALV				LR	LR	01 24 34.8	
	comp=Z,61nm,19.8s,MS3.7,baz=245,slow=35						
SONM	**Songino Array**	**59.24**	**29**	P	**P**	**01 02 06.1**	**+1.2**
	0.4nm,0.9s,mb3.4,baz=201,slow=7.7,SNR=3.0						
WRA	**Warramunga Arr**	**67.74**	**111**	P	**P**	**01 03 02.1**	**+0.4**
	2.0nm,1.1s,mb4.1,baz=287,slow=6.1,SNR=5.4						
ASAR	**Alice Springs**	**67.86**	**115**	P	**P**	**01 03 01.9**	**-0.5**
	0.6nm,0.8s,mb3.7,baz=300,slow=5.7,SNR=4.5						
TXAR	**Lajitas Array**	**150.73**	**344**	PKPbc	PKPbc	01 12 00.1	+3.4
	0.9nm,0.9s,baz=64,slow=3.1,SNR=3.2						

IDC 05 01:03:02.8±2.0**, 018S×12746E, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/16**, mbtmp3.8**/3**, Error ellipse: s-maj=162.0km s-min=25.0km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.76**	**161**	P	P	01 07 46.0	+0.6
	3.4nm,0.6s,baz=340,slow=11,SNR=21						
WB2	**Warramunga Arr**	**20.76**	**161**	*e*P	P	01 07 46.2	+0.8
ASAR	**Alice Springs**	**24.16**	**165**	P	P	01 08 20.6	-0.2
	1.8nm,0.4s,baz=345,slow=10,SNR=28						
MKAR	**Makanchi Array**	**61.18**	**326**	P	P	01 13 19.3	+0.1
	0.2nm,0.4s,baz=107,slow=5.0,SNR=3.0						

*IDC **05** 01:10:09.9±0.6, 3020S×17776W, h0km, mb4.6/8, mb1 4.9/9, mb1mx4.7/14, mbtmp4.6/9, ML4.8/1, MS4.9/1, Ms1 4.9/1, ms1mx3.5/20, Error ellipse: s-maj=21.1km s-min=15.4km az=103.0*

*ISCJB **05** 01:10:13.8±0.5, 3051S±005×1778W±0.1, h33km, mb4.8/17, Error ellipse: s-maj=13.6km s-min=5.0km az=22.3*

*GCMT **05** 01:10:15.1±0.4, 3007S×17735W, h40km±1km, MW5.1/46, Moment Tensor Solution. s35,c40; s46,c62; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.76±.31; $M_{\theta\theta}$0.50±.23; $M_{\phi\phi}$-4.25±.19; $M_{r\theta}$0.69±.26; $M_{\theta\phi}$-1.58±.20; $M_{\phi r}$2.08±.19; Best double couple: $M_0$4.77600×10^{16} NP1:ϕ_s196.00000°, δ31.00000°, λ88.00000°. NP2: ϕ_s18.00000°, δ59.00000°, λ91.00000°. Principal axes: T 4.2930, Plg76.0000°, Azm291.0000°; N 0.9750, Plg1.0000°, Azm197.0000°; P -5.2590, Plg14.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 01:10:15.1±0.5, 3031S×17775W, h35km, mb5.1/12 Error ellipse: s-maj=16.3km s-min=9.1km az=116.0*

ISC 05 01:10:15.7±0.5**, 3042S**±005×**1778W**±01**, h35**km**, n96, σ1§41**/68**, mb4.8**/17**, 3D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.17**	**354**	Pn	**Pn**	**01 10 32.1**	**-3.5**
	963nm,0.3s,baz=115,slow=4.6,SNR=23						
RAO				Sn	**Sn**	**01 10 44.2**	**-6.2**
	6µm,0.3s,baz=90,slow=20,SNR=34						
PUZ	**Puketiti**	**8.30**	**202**	SN	**Sn**	**01 13 47.0**	**+0.9**
MWZ	**Matawai**	**8.79**	**205**	P	**Pn**	**01 12 17.3**	**-2.9**
MWZ	**Matawai**	**8.79**	**205**	PN	**Pn**	**01 12 17.3**	**-2.9**
MWZ				SN	**Sn**	**01 13 59.4**	**+1.4**
URZ	**Urewera**	**8.88**	**207**	P	**Pn**	**01 12 19.0**	**-2.5**
URZ	**Urewera**	**8.88**	**207**	Pn	**Pn**	**01 12 19.1**	**-2.4**
	1.8nm,0.3s,baz=273,slow=4.8,SNR=6.9						
URZ				Sn	**Sn**	**01 14 01.4**	**+1.1**
	8.9nm,0.3s,baz=270,slow=22,SNR=10						
URZ	**Urewera**	**8.88**	**207**	PN	**Pn**	**01 12 19.0**	**-2.5**
URZ				SN	**Sn**	**01 14 02.1**	**+1.8**
KNZ	**Kokohu**	**9.35**	**202**	P	**Pn**	**01 12 31.2**	**+3.2**
KNZ				S	**Sn**	**01 14 10.0**	**-1.9**
KNZ	**Kokohu**	**9.35**	**202**	PN	**Pn**	**01 12 31.2**	**+3.3**
KNZ				SN	**Sn**	**01 14 10.0**	**-1.9**
BFZ	**Birch Farm**	**11.32**	**204**	SN	**Sn**	**01 14 53.6**	**-6.7**
BFZ				SN	**Sn**	**01 14 53.8**	**-6.4**
MRZ	**Mangatainoka R**	**11.55**	**206**	P	**Pn**	**01 12 57.1**	**-1.0**
MRZ				S	**Sn**	**01 14 59.2**	**-6.6**
MRZ	**Mangatainoka R**	**11.55**	**206**	PN	**Pn**	**01 12 57.1**	**-0.9**
MRZ				SN	**Sn**	**01 14 59.2**	**-6.6**
KIW	**Kapiti Island**	**11.98**	**208**	SN	**Sn**	**01 15 11.9**	**-4.5**
TCW	**Tory Channel**	**12.54**	**209**	SN	**Sn**	**01 15 22.8**	**-7.1**
THZ	**Tophouse**	**13.58**	**211**	P	**Pn**	**01 13 27.5**	**+1.7**
THZ	**Tophouse**	**13.58**	**211**	PN	**Pn**	**01 13 27.5**	**+1.7**
KHZ	**Kahutara**	**13.85**	**208**	P	**Pn**	**01 13 26.2**	**-3.2**
KHZ				S	**Sn**	**01 15 54.0**	**-7.8**
KHZ	**Kahutara**	**13.85**	**208**	PN	**Pn**	**01 13 26.2**	**-3.2**
KHZ				SN	**Sn**	**01 15 53.1**	**-8.8**
RPZ	**Rata Peaks**	**15.96**	**211**	Pn	**Pn**	**01 13 57.3**	**-0.2**
	3.3nm,0.3s,baz=320,slow=0.4,SNR=17						
RPZ				Sn	S	01 16 40.5	-26
	1.2nm,0.3s,baz=290,slow=15,SNR=5.2						
JCZ	**Jackson Bay**	**17.30**	**214**	P	**Pn**	**01 14 12.6**	**-1.8**
JCZ	**Jackson Bay**	**17.30**	**214**	PN	**Pn**	**01 14 12.6**	**-1.7**
AFI	**Afiamalu**	**17.34**	**20**	*e*Pn	**Pn**	**01 14 08.0**	**-7.2**
	41nm,0.8s						
WKZ	**Wanaka**	**17.74**	**212**	*e*PN	**Pn**	**01 14 19.6**	**-0.2**
RAR	**Rarotonga**	**18.61**	**65**	P	**Pn**	**01 14 23.9**	**-6.7**
	1.1nm,0.3s,baz=68,slow=6.8,SNR=4.0						
TBI	**Tubuai**	**26.18**	**81**	*e*LR	LR	01 22 04.2	
	1µm,27.2s,baz=246						
PPT	**Papeete**	**28.69**	**70**	*e*S	**S**	**01 20 47.6**	**-8.7**
	175nm,24.8s						
PPT				*e*LR	LR	01 23 10.7	
	1µm,26.2s,baz=236						
CTA	**Charters Tower**	**33.98**	**279**	⇓*i*P	**P**	**01 16 58.6**	**+2.4**
	15nm,0.5s,mb5.2						
CTA	**Charters Tower**	**33.98**	**279**	P	**P**	**01 16 58.2**	**+2.1**
	22nm,0.5s,mb5.3,baz=107,slow=11,SNR=25						
CTAO	**Charters Tower**	**33.98**	**279**	*e*P	**P**	**01 16 57.8**	**+1.7**
	37nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**34.65**	**257**	⇓*i*P	**P**	**01 17 04.4**	**+2.6**
	22nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**34.65**	**257**	*e*P	**P**	**01 17 04.8**	**+3.0**
STKA	**Stephens Creek**	**34.65**	**257**	P	**P**	**01 17 02.7**	**+0.9**
	22nm,0.8s,mb5.1,baz=89,slow=8.7,SNR=27						
RKT	**Rikitea**	**38.73**	**90**	*e*LR	LR	01 27 49.0	
	932nm,27.8s						
TAOE	**Nuku Hiva Isla**	**41.15**	**67**	*e*S	**S**	**01 23 59.2**	**-8.7**
	416nm,27.3s						
TAOE				*e*LR	LR	01 28 57.7	
	2µm,25.8s						
ASAR	**Alice Springs**	**43.29**	**267**	P	**P**	**01 18 13.5**	**-0.7**
	8.3nm,0.9s,mb4.5,baz=109,slow=6.8,SNR=34						
WB2	**Warramunga Arr**	**44.27**	**272**	*e*P	**P**	**01 18 22.8**	**+0.7**
WB2	**Warramunga Arr**	**44.27**	**272**	*e*P	**P**	**01 18 22.0**	**-0.1**
WRA	**Warramunga Arr**	**44.28**	**272**	P	**P**	**01 18 21.5**	**-0.7**
	15nm,0.7s,mb4.8,baz=110,slow=8.1,SNR=218						
FORT	**Forrest**	**46.22**	**255**	*e*P	**P**	**01 18 38.2**	**+0.7**
	9.9nm,0.6s,mb4.9						
SBA	**Scott Base**	**48.03**	**184**	P	**P**	**01 18 54.0**	**+3.1**
	151nm,1.9s,mb5.7						
VNDA	**Vanda**	**48.09**	**186**	*e*P	**P**	**01 18 54.0**	**+2.6**
	0.8nm,0.4s,mb4.1						
VNDA	**Vanda**	**48.09**	**186**	P	**P**	**01 18 57.2**	**+5.8**
	2.7nm,1.0s,mb4.2,baz=17,slow=9.2,SNR=5.9						
FITZ	**Fitzroy Crossi**	**52.54**	**270**	*e*P	**P**	**01 19 27.5**	**+1.6**
	11nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**52.54**	**270**	P	**P**	**01 19 26.0**	**+0.1**
	6.7nm,0.7s,mb4.7,baz=58,slow=5.1,SNR=7.8						
KLBR	**Kellerberrin**	**54.51**	**251**	*e*P	**P**	**01 19 39.7**	**-0.5**
	38nm,1.3s,mb5.3						
CASY	**Casey**	**55.20**	**208**	*e*P	**P**	**01 19 44.7**	**+0.1**
	26nm,0.7s,mb5.4						
MBWA	**Marble Bar**	**56.40**	**264**	*e*P	**P**	**01 19 53.2**	**-0.7**
	9.1nm,0.8s,mb4.9						
BATI	**Kupang**	**57.83**	**277**	LR	LR	01 44 51.7	
	comp=Z,995nm,20.2s,baz=110,slow=36						
QSPA	**South Pole Qui**	**59.69**	**180**	*e*P	**P**	**01 20 18.8**	**+2.8**
	14nm,0.5s,mb5.3						
QSPA	**South Pole Qui**	**59.69**	**180**	P	**P**	**01 20 18.8**	**+2.8**
	12nm,0.9s,mb4.9,baz=49,slow=2.9,SNR=16						
VNA3	**Neumayer Olymp**	**78.27**	**176**	*e*	**P**	**01 22 12.8**	**+1.3**
VNA3				*e*	pP	01 22 20.2	-2.3
VNA3				*e*		01 22 26.9	
VNA3				*e*		01 22 31.9	
VNA3				*e*		01 22 34.2	
VNA3				*e*		01 22 37.8	
VNA3				*e*		01 22 40.1	
VNA3				*e*		01 22 49.2	
VNA2	**Neumayer--Watz**	**78.71**	**177**	*e*	**P**	**01 22 15.9**	**+2.0**
	baz=187,slow=3.8						
VNA2				*e*	pP	01 22 23.8	-1.1
VNA2				*e*		01 22 29.8	
VNA2				*e*		01 22 34.1	
VNA2				*e*		01 22 36.4	
VNA2				*e*		01 22 40.7	
VNA2				*e*		01 22 43.2	
VNA2				*e*		01 22 52.3	
NSHM	**Saint Helena R**	**85.73**	**40**	*e*P	**P**	**01 22 49.9**	**-1.2**
MTUM	**Tungsten Hills**	**87.26**	**43**	*e*P	**P**	**01 22 58.4**	**-0.2**
NVAR	**Mina Array Bea**	**88.13**	**43**	P	**P**	**01 23 02.8**	**+0.1**
	2.5nm,0.9s,mb4.5,baz=207,slow=6.9,SNR=15						
TPNV	**Topopah Spring**	**88.38**	**45**	*e*P	**P**	**01 23 03.9**	**0.0**
	9.0nm,1.2s,mb4.9						
WUAZ	**Wupatki**	**90.54**	**48**	*e*P	**P**	**01 23 15.1**	**+1.0**
	18nm,1.6s,mb5.1						
TXAR	**Lajitas Array**	**92.25**	**57**	P	**P**	**01 23 21.0**	**-1.1**
TXAR	**Lajitas Array**	**92.25**	**57**	P	**P**	**01 23 21.0**	**-1.1**
	1.1nm,1.0s,mb4.2,baz=198,slow=7.5,SNR=5.7						
PDAR	**Pinedale Array**	**96.03**	**43**	P	**P**	**01 23 38.7**	**-0.4**
	0.3nm,0.8s,mb3.8,baz=224,slow=2.5,SNR=2.8						
MKAR	**Makanchi Array**	**117.93**	**310**	PKP	PKPdf	01 28 56.4	-1.9
	1.0nm,0.6s,baz=151,slow=0.5,SNR=11						
ZALV	**Zalesovo Beam**	**118.17**	**318**	PKP	PKPdf	01 28 56.7	-1.8
	0.6nm,0.6s,baz=270,slow=0.1,SNR=4.3						
KURK	**Kurchatov**	**121.20**	**314**	*e*PKPdf	PKPdf	01 29 02.6	-1.9
UCH	**Uchtor**	**122.17**	**303**	*e*PKPdf	PKPdf	01 29 06.8	+0.2
AML	**Almayashu**	**122.74**	**303**	*e*PKPdf	PKPdf	01 29 07.2	-0.5
EKS2	**Erkin-Say**	**122.80**	**304**	*e*PKPdf	PKPdf	01 29 06.8	-1.0
KBL	**Kabul**	**124.40**	**293**	*e*PKPdf	PKPdf	01 29 10.5	-0.6
BRVK	**Borovoye**	**126.61**	**316**	*e*PKPdf	PKPdf	01 29 12.7	-2.0
ARCES	**ARCESS Array B**	**138.65**	**348**	PKhKP		01 29 28.3	
	3.6nm,0.8s,baz=15,slow=5.0,SNR=5.3						
JOF	**Joensuu**	**142.51**	**339**	*e*p	PKPdf	01 29 37.2	-6.9
KAF	**Kangasniemi**	**144.63**	**341**	*e*p		01 29 37.4	
	baz=39,slow=3.1						
FIA1	**FINESS Array S**	**145.23**	**340**	*e*PKPdf	PKPdf	01 29 46.7	-2.2
FINES	**FINESS Array B**	**145.23**	**340**	PKPbc	PKPbc	01 29 46.9	-1.8
	23nm,0.7s,baz=71,slow=3.9,SNR=149						
MSL	**Mosul**	**145.55**	**291**	*e*x	x	01 29 49.0	
NB2	**NORSAR Subarra**	**148.80**	**352**	PKP	PKPdf	01 29 57.3	+2.4
	comp=Z,16nm,1.1s,baz=12,slow=2.6						
NB2	**NORSAR Subarra**	**148.80**	**352**	PKPab	PKPdf	01 29 57.3	+2.4
NOA	**NORSAR Array B**	**148.80**	**352**	PKPbc	PKPbc	01 29 57.2	-1.6
	comp=Z,5.6nm,0.8s,baz=15,slow=4.2,SNR=16						
MALT	**Malatya**	**149.24**	**295**	*e*PKPbc	PKPbc	01 30 00.2	-0.4
AKASG	**Malin Array Be**	**151.43**	**323**	PKPbc	PKPbc	01 30 04.0	-1.4
	comp=Z,11nm,0.8s,baz=48,slow=2.2,SNR=38						
SUW	**Suwalki**	**151.98**	**333**	*e*PX	PKPbc	01 30 06.0	-0.6
SUW	**Suwalki**	**151.98**	**333**	*e*P	PKPbc	01 30 06.0	-0.6
BR131	**Keskin Array S**	**152.77**	**298**	PKPbc	PKPbc	01 30 07.8	-1.1
BRTR	**Keskin Array B**	**152.77**	**298**	PKPbc	PKPbc	01 30 07.0	-1.8
	comp=Z,2.4nm,0.5s,baz=152,slow=5.6,SNR=19						
ANTO	**Ankara**	**153.38**	**299**	*e*PKPbc	PKPbc	01 30 09.8	-0.4
KWP	**Kalwaria**	**155.35**	**327**	*e*PX	PKPab	01 30 30.2	-0.2
KWP	**Kalwaria**	**155.35**	**327**	*e*P	PKPab	01 30 30.2	-0.2
UPC	**Upice**	**157.43**	**337**	*e*PKPab	PKPab	01 30 39.0	-0.3
DPC	**Dobruska-Polom**	**157.45**	**336**	*e*PKPab	PKPab	01 30 39.2	-0.2
CLL	**Collm**	**157.65**	**342**	⇓*i*PKPab	PKPab	01 30 38.9	-1.3
	comp=Z,12nm,1.2s						
BRG	**Berggiesshubel**	**157.77**	**340**	*e*P	PKPab	01 30 40.1	-0.6
	comp=Z,6.3nm,1.0s						
PVCC	**Panska Ves**	**157.88**	**339**	*e*PKPab	PKPab	01 30 39.9	-1.3
PRU	**Pruhonice**	**158.36**	**338**	*e*PKPab	PKPab	01 30 42.9	-0.4
NKC	**Novy Kostel**	**158.77**	**342**	*e*PKPab	PKPab	01 30 43.7	-1.4
KHC	**Kasperske Hory**	**159.42**	**338**	*e*PKPab	PKPab	01 30 47.4	-0.5
GERES	**GERESS Array B**	**159.63**	**338**	PKPab	PKPab	01 30 47.7	-1.2
	comp=Z,1.3nm,0.9s,baz=47,slow=2.7,SNR=8.2						
TORD	**Torodi Ar. Bea**	**162.80**	**178**	PKP	PKPdf	01 30 14.3	-0.4
	comp=Z,1.5nm,1.2s,baz=110,slow=2.1,SNR=3.4						
TORD				PKPab	PKPab	01 31 03.3	-0.2
	comp=Z,2.9nm,1.0s,baz=170,slow=4.0,SNR=13						

*BJI **05** 01:15:47.7, 3073S×17731W, h42km, mB5.7, mb5.4, Ms5.3, Msz5.0*

*GCMT **05** 01:15:49.2±0.5, 3021S×17733W, h44km±1km, MW5.0/47, Moment Tensor Solution. s30,c44; s47,c56; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.48±.29; $M_{\theta\theta}$0.52±.22; $M_{\phi\phi}$-4.00±.18; $M_{r\theta}$0.04±.17; $M_{\theta\phi}$-1.24±.17;*

Mφr1.96±.14; Best double couple: M₀4.37200×10[16] NP1:φs203.00000°,δ33.00000°,λ104.00000°. NP2: φs7.00000°,δ59.00000°,λ81.00000°. Principal axes: T 3.9830, Plg75.0000°, Azm253.0000°; N 0.7810, Plg7.0000°, Azm12.0000°; P -4.7620, Plg13.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*ISCJB **05** 01:15:49.2±1.3, 3081S±004×17776W±007, h44km±11km, mb5.0/34, MS4.5/14 Error ellipse: s-maj=11.2km s-min=5.8km az=29.0*

*NEIC **05** 01:15:49.1±0.3, 3065S×17756W, h35km, mb5.2/18, Error ellipse: s-maj=12.3km s-min=7.3km az=127.0*

*MOS **05** 01:15:49.8±2.8, 3009S×17797W, h33km, mb5.5/11, Error ellipse: s-maj=14.1km s-min=13.0km az=62.5*

*IDC **05** 01:15:51.7±1.4, 3007S×17780W, h51km±11km, mb4.5/11, mb1 4.7/11, mb1mx4.6/14, mbtmp4.4/11, MS4.2/11, Ms1 4.2/11, ms1mx4.0/22, Error ellipse: s-maj=16.2km s-min=15.3km az=90.0*

ISC 05 01:15:50.2±1.2**, 3068S**±005×**17775W**±007**, h37**km±10km**, h33**km±1.5km**:pP-P, n252,** σ1s33/118**, mb5.0**/34**, MS4.5**/14**,**
23C-13D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.43**	**354**	*e*Pn	**Pn**	**01 16 06.4**	**-7.2**
RAO	**Raoul Island**	**1.43**	**354**	P	**Pn**	**01 16 06.5**	**-7.1**
	2μm,0.3s,baz=138,slow=1.8,SNR=32						
RAO				S	**Sn**	**01 16 19.6**	**-11**
	17μm,0.3s,baz=288,slow=19,SNR=35						
PUZ	**Puketiti**	**8.08**	**203**	*e*P	**Pn**	**01 17 44.2**	**-0.8**
PUZ	**Puketiti**	**8.08**	**203**	*e*PN	**Pn**	**01 17 44.2**	**-0.8**
PUZ				SN	**Sn**	**01 19 18.3**	**+3.2**
OUZ	**Omahuta**	**8.57**	**236**	*e*P	**Pn**	**01 18 01.1**	**+9.4**
OUZ	**Omahuta**	**8.57**	**236**	*e*PN	**Pn**	**01 18 01.1**	**+9.4**
MWZ	**Matawai**	**8.58**	**206**	*e*P	**Pn**	**01 17 52.0**	**+0.2**
MWZ				S	**Sn**	**01 19 33.0**	**+5.7**
MWZ	**Matawai**	**8.58**	**206**	*e*PN	**Pn**	**01 17 52.0**	**+0.2**
MWZ				SN	**Sn**	**01 19 33.0**	**+5.8**
URZ	**Urewera**	**8.67**	**208**	P	**Pn**	**01 17 51.5**	**-1.7**
	0.8nm,0.3s,baz=299,slow=4.3,SNR=4.4						
URZ				S	**Sn**	**01 19 34.6**	**+5.0**
	25nm,0.3s,baz=226,slow=11,SNR=5.2						
URZ	**Urewera**	**8.67**	**208**	*e*PN	**Pn**	**01 17 51.1**	**-2.1**
URZ				SN	**Sn**	**01 19 35.1**	**+5.4**
KNZ	**Kokohu**	**9.13**	**203**	*e*P	**Pn**	**01 17 59.7**	**+0.2**
KNZ				S	**Sn**	**01 19 42.5**	**+1.5**
KNZ	**Kokohu**	**9.13**	**203**	*e*PN	**Pn**	**01 17 59.7**	**+0.2**
KNZ				SN	**Sn**	**01 19 41.1**	**+0.2**
KNZ				SN	**Sn**	**01 19 42.5**	**+1.6**
BKZ	**Black Stump Fm**	**9.70**	**208**	*e*P	**Pn**	**01 18 08.8**	**+1.6**
BKZ				S	**Sn**	**01 19 58.3**	**+3.5**
BKZ	**Black Stump Fm**	**9.70**	**208**	*e*PN	**Pn**	**01 18 08.8**	**+1.6**
BKZ				SN	**Sn**	**01 19 58.3**	**+3.5**
BFZ	**Birch Farm**	**11.11**	**204**	*e*SN	**Sn**	**01 20 29.2**	**-0.1**
MRZ	**Mangatainoka R**	**11.34**	**207**	*e*P	**Pn**	**01 18 27.0**	**-2.7**
MRZ				S	**Sn**	**01 20 33.7**	**-1.3**
MRZ	**Mangatainoka R**	**11.34**	**207**	*e*PN	**Pn**	**01 18 27.0**	**-2.7**
MRZ				SN	**Sn**	**01 20 33.7**	**-1.3**
KIW	**Kapiti Island**	**11.78**	**208**	SN	**Sn**	**01 20 43.1**	**-2.6**
MTW	**Mount Morrison**	**11.80**	**206**	SN	**Sn**	**01 20 44.3**	**-1.9**
MRW	**Makara Radio**	**12.17**	**208**	SN	**Sn**	**01 20 54.2**	**-1.1**
TCW	**Tory Channel**	**12.33**	**209**	SN	**Sn**	**01 20 59.1**	**-0.3**
TUWZ	**Tuamarina**	**12.65**	**210**	SN	**Sn**	**01 21 05.7**	**-1.5**
NNZ	**Nelson**	**12.73**	**212**	SN	**Sn**	**01 21 08.2**	**-0.8**
CMWZ	**Cape Campbell**	**12.81**	**208**	SN	**Sn**	**01 21 12.1**	**+1.2**
THZ	**Tophouse**	**13.38**	**212**	*e*P	**Pn**	**01 19 02.5**	**+5.0**
THZ	**Tophouse**	**13.38**	**212**	*e*PN	**Pn**	**01 18 59.0**	**+1.4**
THZ				SN	**Sn**	**01 21 22.1**	**-2.8**
KHZ	**Kahutara**	**13.64**	**208**	*e*P	**Pn**	**01 18 59.7**	**-1.4**
KHZ	**Kahutara**	**13.64**	**208**	*e*PN	**Pn**	**01 18 59.7**	**-1.4**
KHZ				SN	**Sn**	**01 21 26.2**	**-5.1**
DSZ	**Denniston Nort**	**13.89**	**214**	SN	**Sn**	**01 21 33.6**	**-3.6**
MQZ	**McQueen's Vall**	**15.07**	**208**	SN	**Sn**	**01 21 57.4**	**-8.7**
RPZ	**Rata Peaks**	**15.76**	**211**	P	**Pn**	**01 19 31.7**	**+2.4**
	3.2nm,0.3s,baz=59,slow=11,SNR=8.1						
RPZ				S	**S**	**01 22 15.1**	**-21**
	1.4nm,0.3s,baz=172,slow=19,SNR=8.1						
RPZ				LR	LR	01 25 38.3	
	comp=Z,992nm,21.4s,baz=182,slow=36						
DZM	**Mont Dzumac**	**16.54**	**297**	*e*P	**Pn**	**01 19 41.8**	**+2.3**
DZM	**Mont Dzumac**	**16.54**	**297**	LR	LR	01 24 02.6	
	comp=Z,859nm,18.8s,baz=122,slow=30						
AFI	**Afiamalu**	**17.57**	**20**	LR	LR	01 24 51.0	
	comp=Z,547nm,20.3s,baz=197,slow=32						
RAR	**Rarotonga**	**18.69**	**64**	LR	LR	01 24 46.2	
	comp=Z,887nm,21.0s,baz=266,slow=29						
TBI	**Tubuai**	**26.19**	**81**	*e*LR	LR	01 27 39.6	
	1μm,26.8s,baz=249						
ARMA	**Armidale**	**26.34**	**263**	*e*P	**P**	**01 21 25.7**	**+3.0**
ARMA	**Armidale**	**26.34**	**263**	*e*P	**P**	**01 21 25.7**	**+3.0**
	1.1nm,1.1s						
CNB	**Canberra Magne**	**27.89**	**252**	*e*P	**P**	**01 21 40.7**	**+4.1**
	34nm,0.9s,mb5.0						
EIDS	**Eidsvold**	**27.97**	**273**	*e*P	**P**	**01 21 38.8**	**+1.4**
	11nm,0.8s,mb4.5						
PPT	**Papeete**	**28.74**	**69**	*e*LR	LR	01 28 47.0	
	1μm,26.2s,baz=241						
PPT	**Papeete**	**28.74**	**69**	LR	LR	01 29 39.4	
	comp=Z,780nm,20.1s,MS4.3,baz=239,slow=29						
HNR	**Honiara**	**29.64**	**311**	LR	LR	01 31 50.9	
	comp=Z,201nm,18.7s,MS3.8,baz=180,slow=33						
TAU	**Tasmania Unive**	**30.31**	**236**	P	**P**	**01 22 00.5**	**+2.5**
	19nm,0.9s,mb4.8						
TAU	**Tasmania Unive**	**30.31**	**236**	P	**P**	**01 22 00.5**	**+2.5**
TAU				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
TOO	**Toolangi**	**31.05**	**247**	*e*P	**P**	**01 22 08.1**	**+3.5**
	comp=Z,36nm,1.1s,mb5.1						
TOO	**Toolangi**	**31.05**	**247**	*e*P	**P**	**01 22 08.1**	**+3.5**
TOO				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.1						
CTA	**Charters Tower**	**34.06**	**279**⇑	*i*P	**P**	**01 22 32.5**	**+1.4**
	comp=Z,76nm,0.8s,mb5.7						
CTA	**Charters Tower**	**34.06**	**279**⇑	*i*P	**P**	**01 22 32.5**	**+1.4**
CTA				pmax	pmax		
	comp=Z,76nm,0.8s						
CTA	**Charters Tower**	**34.06**	**279**	P	**P**	**01 22 32.5**	**+1.4**
	comp=Z,97nm,0.8s,mb5.8,baz=101,slow=10,SNR=78						
CTA				LR	LR	01 33 41.3	
	comp=Z,884nm,19.8s,MS4.5,baz=53,slow=32						
CTAO	**Charters Tower**	**34.06**	**279**⇑	*e*P	**P**	**01 22 32.5**	**+1.4**
	comp=Z,99nm,0.8s,mb5.8						
CTAO	**Charters Tower**	**34.06**	**279**⇑	*e*P	**P**	**01 22 32.5**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,99nm,0.8s,mb5.8						
STKA	**Stephens Creek**	**34.63**	**257**	*e*P	**P**	**01 22 38.6**	**+2.7**
	comp=Z,49nm,0.9s,mb5.4						
STKA	**Stephens Creek**	**34.63**	**257**	*e*P	**P**	**01 22 38.8**	**+2.9**
	comp=Z,89nm,1.0s,mb5.7						
STKA	**Stephens Creek**	**34.63**	**257**	P	**P**	**01 22 38.9**	**+2.9**
	comp=Z,70nm,0.9s,mb5.6,baz=93,slow=9.0,SNR=68						
STKA				LR	LR	01 35 20.0	
	comp=Z,595nm,18.9s,MS4.3,baz=284,slow=34						
RKT	**Rikitea**	**38.70**	**89**	*e*LR	LR	01 33 28.0	
	comp=Z,762nm,26.5s						
PMG	**Port Moresby**	**38.92**	**295**	LR	LR	01 36 17.1	
	comp=Z,428nm,20.7s,MS4.2,baz=136,slow=32						
COEN	**Coen**	**39.55**	**286**	*e*P	**P**	**01 23 17.7**	**-0.2**
	comp=Z,16nm,1.0s,mb4.7						
TAOE	**Nuku Hiva Isla**	**41.22**	**66**	*e*LR	LR	01 34 29.7	
	comp=Z,2μm,27.0s,baz=243						
ASAR	**Alice Springs**	**43.31**	**267**	P	**P**	**01 23 48.5**	**-0.2**
	comp=Z,24nm,0.9s,mb4.9,baz=110,slow=8.0,SNR=66						
ASAR				ScP	ScP	01 29 25.9	+0.4
	comp=Z,1.5nm,0.7s,baz=119,slow=4.1,SNR=8.6						
WB2	**Warramunga Arr**	**44.31**	**272**⇑	*i*P	**P**	**01 23 55.8**	**-0.9**
WB2				*e*S	**S**	**01 30 26.6**	**-1.9**
WB2	**Warramunga Arr**	**44.31**	**272**	*e*P	**P**	**01 23 56.1**	**-0.7**
WB2				*e*P		01 23 56.4	
WRA	**Warramunga Arr**	**44.32**	**272**	P	**P**	**01 23 56.0**	**-0.9**
	comp=Z,36nm,0.6s,mb5.3,baz=110,slow=8.1,SNR=196						
WRA				S	**S**	**01 30 27.5**	**-1.1**
	comp=Z,2.0nm,1.1s,baz=108,slow=15,SNR=4.9						
FORT	**Forrest**	**46.19**	**255**	*e*P	**P**	**01 24 11.7**	**+0.2**
	comp=Z,20nm,0.6s,mb5.2						
SBA	**Scott Base**	**47.78**	**184**	*e*P	**P**	**01 24 31.6**	**+8.3**
	comp=Z,48nm,1.3s,mb5.4						
SBA	**Scott Base**	**47.78**	**184**	*e*P	**P**	**01 24 31.6**	**+8.3**
SBA				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.4						
VNDA	**Vanda**	**47.84**	**186**	P	**P**	**01 24 29.7**	**+5.9**
VNDA				LR	LR	01 39 40.9	
VNDA	**Vanda**	**47.84**	**186**	P	**P**	**01 24 29.7**	**+5.9**
	comp=Z,1.9nm,0.5s,mb4.3,baz=12,slow=7.4,SNR=3.2						
VNDA				LR	LR	01 39 40.9	
	comp=Z,204nm,21.3s,MS4.1,baz=12,slow=30						
FITZ	**Fitzroy Crossi**	**52.58**	**270**	*e*P	**P**	**01 24 59.8**	**-0.6**
	comp=Z,27nm,0.7s,mb5.3						
FITZ	**Fitzroy Crossi**	**52.58**	**270**	*e*P	**P**	**01 24 59.7**	**-0.7**
	comp=Z,29nm,0.8s,mb5.3						
KLBR	**Kellerberrin**	**54.47**	**251**	*e*P	**P**	**01 25 13.5**	**-0.6**
	comp=Z,36nm,1.1s,mb5.2						
CASY	**Casey**	**55.00**	**208**	*e*P	**P**	**01 25 19.3**	**+1.9**
	comp=Z,56nm,1.0s,mb5.5						
MUN	**Mundaring**	**55.61**	**250**	*e*P	**P**	**01 25 22.1**	**-0.3**
MBWA	**Marble Bar**	**56.41**	**264**	*e*P	**P**	**01 25 27.6**	**-0.7**
	comp=Z,11nm,0.8s,mb4.9						
QSPA	**South Pole Qui**	**59.44**	**180**	P	**P**	**01 25 53.1**	**+4.5**
	comp=Z,17nm,1.0s,mb5.0,baz=41,slow=2.9,SNR=18						
SYO	**Syowa Base**	**76.90**	**193**⇑	*e*P	**P**	**01 27 39.0**	**+0.9**
SYO	**Syowa Base**	**76.90**	**193**⇓	*i*sP	sP	01 27 53.2	-0.6
VNA3	**Neumayer Olymp**	**78.02**	**176**	*e*P	**P**	**01 27 46.7**	**+2.4**
VNA3				*e*	pP	01 27 55.3	-0.5
VNA3				*e*		01 28 00.9	
VNA3				*e*		01 28 04.0	
VNA3				*e*		01 28 08.2	
VNA3				*e*		01 28 13.4	
VNA3				*e*		01 28 18.5	
VNA2	**Neumayer--Watz**	**78.45**	**177**	*e*P	**P**	**01 27 48.3**	**+1.5**
VNA2				*e*	pP	01 27 57.7	-0.5
VNA2				*e*		01 28 02.4	
VNA2				*e*		01 28 06.2	
VNA2				*e*		01 28 10.4	
VNA2				*e*		01 28 16.0	
VNA2				*e*		01 28 20.7	
MJAR	**Matsushiro Arr**	**78.59**	**325**	P	**P**	**01 27 44.8**	**-3.0**
	comp=Z,3.6nm,0.7s,mb4.4,baz=154,slow=6.5,SNR=8.5						
MAIT	**Maitri**	**78.61**	**183**⇓	*i*P	**P**	**01 27 48.8**	**+1.2**
KSRS	**Korea Array**	**84.69**	**320**	P	**P**	**01 28 18.4**	**-1.8**
	comp=Z,2.5nm,0.7s,mb4.4,baz=134,slow=4.7,SNR=5.2						
YSS	**Yuzh-Sakhalins**	**85.09**	**334**⇑	*e*P	**P**	**01 28 20.7**	**-1.1**
YSS				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.3						
PSI	**Prapat**	**85.68**	**276**	P	**P**	**01 28 23.7**	**-1.9**
	comp=Z,3.5nm,0.7s,mb4.7,baz=195,slow=15,SNR=4.9						
NJ2	**Nanjing**	**86.59**	**310**	*e*P	**P**	**01 28 30.0**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.6						
MTUM	**Tungsten Hills**	**87.42**	**43**	*e*P	**P**	**01 28 33.6**	**0.0**
WAKR	**Walker**	**87.69**	**42**	*e*P	**P**	**01 28 34.7**	**-0.1**
NVAR	**Mina Array Bea**	**88.29**	**43**	P	**P**	**01 28 37.1**	**-0.6**
	comp=Z,4.1nm,1.0s,mb4.6,baz=207,slow=6.4,SNR=19						
TPNV	**Topopah Spring**	**88.54**	**45**	*e*P	**P**	**01 28 38.8**	**-0.1**
	comp=Z,50nm,2.4s,mb5.4						
TPNV	**Topopah Spring**	**88.54**	**45**	*e*P	**P**	**01 28 38.8**	**-0.1**
TPNV				pmax	pmax		
	comp=Z,50nm,2.4s,mb5.4						
MDJ	**Mudanjiang**	**88.97**	**325**	P	**P**	**01 28 41.3**	**+0.6**
MDJ				AP	pP	01 28 51.0	-1.4
MDJ				XP	sP	01 28 55.4	-1.2
MDJ				S	S	01 39 27.4	+1.4
MDJ				AMB	AMB		
	comp=Z,613nm,4.7s						
MDJ				LR	LR		
	comp=N,88nm,28.9s,MS4.1						
MDJ				LR	LR		
	comp=E,61nm,26.0s,MS4.1						
MDJ				LR	LR		
	comp=Z,97nm,28.9s,MS4.1						
TUC	**Tucson**	**89.11**	**51**	*e*P	**P**	**01 28 42.3**	**+0.6**
WUAZ	**Wupatki**	**90.68**	**48**	*e*P	**P**	**01 28 48.8**	**-0.1**
	comp=Z,7.5nm,1.1s,mb4.9						
GYA	**Guiyang**	**91.87**	**300**	P	**P**	**01 28 54.9**	**+0.2**
GYA				AP	pP	01 29 06.8	+0.4
GYA				XP	sP	01 29 10.9	+0.3
GYA				PP	PP	01 32 37.2	+2.6
GYA				SKS		01 39 24.0	
GYA				S	S	01 39 51.4	-2.1
GYA				SS	SS	01 46 03.3	+0.5
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,440nm,20.8s,MS5.1						
GYA				LR	LR		
	comp=E,510nm,19.9s,MS5.1						
GYA				LR	LR		
	comp=Z,470nm,20.4s,MS4.9						
TXAR	**Lajitas Array**	**92.36**	**57**	P	**P**	**01 28 56.3**	**-0.6**
	comp=Z,1.2nm,1.0s,mb4.2,baz=206,slow=7.8,SNR=7.0						
BJI	**Beijing**	**93.27**	**315**	P	**P**	**01 29 01.6**	**+0.8**
BJI				SKS		01 39 30.1	
BJI				S	S	01 40 03.2	-2.1
BJI				SS	SS	01 46 26.9	+4.5
BJI				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.9						
BJI				LR	LR		
	comp=Z,167nm,22.3s,MS4.4						
BJI	**Beijing**	**93.27**	**315**	P	**P**	**01 29 01.6**	**+0.8**
BJI						01 39 30.1	
BJI				S	S	01 40 03.2	-2.1
BJI				SS	SS	01 46 26.9	+4.5
BJI				MLR	MLR		
	comp=Z,170nm,22.3s,MS4.5						
ANMO	**Albuquerque**	**93.58**	**51**⇑	*e*P	**P**	**01 29 01.9**	**-0.5**
SPUT	**South Promonto**	**93.59**	**43**	*e*P	**P**	**01 29 02.5**	**+0.2**
MA2	**Magadan**	**93.61**	**345**	*e*P	**P**	**01 28 59.5**	**-2.4**
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
HLID	**Hailey**	**93.87**	**41**	*e*P	**P**	**01 29 03.1**	**-0.4**
KMI	**Kunming**	**94.14**	**297**	P	**P**	**01 29 05.8**	**+0.6**
KMI				S	S	01 40 13.9	+0.3
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb5.2						
KMI				LR	LR		
	comp=Z,79nm,21.1s,MS4.2						
KMI	**Kunming**	**94.14**	**297**	P	**P**	**01 29 05.8**	**+0.6**
	comp=Z,9.0nm,0.8s,mb5.2						
KMI				S	S	01 40 13.9	+0.3
KMI				LR	LR		
	comp=Z,80nm,21.1s,MS4.2						
GAMB	**Gambell**	**94.25**	**3**	*e*P	**P**	**01 29 04.4**	**-0.4**
PDAR	**Pinedale Array**	**96.18**	**43**	P	**P**	**01 29 13.2**	**-0.9**
	comp=Z,0.7nm,1.0s,mb4.0,baz=232,slow=4.9,SNR=3.9						
PDAR				PKKPbc	PKKPbc	01 46 01.9	+0.3
	comp=Z,0.6nm,0.7s,baz=81,slow=4.9,SNR=5.8						
PDAR				LR	LR	02 05 53.3	
	comp=Z,144nm,18.1s,MS4.5,baz=265,slow=31						
TNA	**Tin City**	**96.22**	**4**	*e*P	**P**	**01 29 12.5**	**-1.2**
CD2	**Chengdu**	**96.42**	**302**	*e*P	**P**	**01 29 16.4**	**+0.9**
CD2				AP	pP	01 29 26.8	-0.3
CD2				XP	sP	01 29 30.7	-0.6
CD2				PP	PP	01 33 12.7	+2.7
CD2				SKS		01 39 48.8	
CD2				S	S	01 40 31.2	-2.0
CD2				XS	sS	01 40 48.7	-3.9
CD2				SS	SS	01 47 08.1	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,30nm,9.4s						
CD2				LR	LR		
	comp=N,130nm,14.4s						
CD2				LR	LR		
	comp=Z,200nm,8.4s						
HHC	**Hu-ho-hao-te**	**96.58**	**314**	*e*P	**P**	**01 29 17.0**	**+1.0**
HHC				AP	pP	01 29 27.2	-0.4
HHC				XP	sP	01 29 31.5	-0.3
HHC				PP	PP	01 33 13.5	+2.4
HHC				SKS		01 39 49.1	
HHC				*e*S	S	01 40 31.1	-3.0
HHC				XS	sS	01 40 49.0	-4.6
HHC				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,148nm,4.5s						
HHC				LR	LR		
	comp=N,164nm,15.5s,MS5.1						
HHC				LR	LR		
	comp=E,485nm,16.7s,MS5.1						
HHC				LR	LR		
	comp=Z,168nm,14.3s,MS4.7						
LZH	**Lanzhou**	**99.06**	**307**	*e*P	**P**	**01 29 28.5**	**+1.3**
LZH				AP	pP	01 29 39.0	+0.1
LZH				XP	sP	01 29 43.1	0.0
LZH				PP	PP	01 33 33.0	+2.8
LZH				*e*SKS		01 40 04.0	
LZH				*e*S	S	01 40 53.0	-2.4
LZH				XS	sS	01 41 11.0	-4.0
LZH				SS	SS	01 47 45.1	+0.5
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.5						
LZH				AMB	AMB		
	comp=Z,101nm,4.9s						
LZH				LR	LR		
	comp=E,890nm,18.0s						
LZH				LR	LR		
	comp=Z,1μm,18.9s,MS5.5						
LZH	**Lanzhou**	**99.06**	**307**	*e*P	**P**	**01 29 28.5**	**+1.3**
	comp=Z,15nm,1.0s,mb5.5						
LZH				pP	pP	01 29 39.0	+0.1
LZH				sP	sP	01 29 43.1	0.0
LZH				PP	PP	01 33 33.0	+2.8
BILL	**Bilibino**	**99.14**	**354**	P	**P**	**01 29 25.0**	**-1.8**
BILL				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.7						
RSSD	**Black Hills**	**100.26**	**45**	*e*Pdif	Pdif	01 29 33.0	+0.3
SONM	**Songino Array**	**103.49**	**318**	PP	PP	01 33 56.0	-7.3
	comp=Z,0.4nm,1.0s,baz=127,slow=4.3,SNR=2.4						
YKA	**Yellowknife Ar**	**105.60**	**25**	PKKPbc	PKKPbc	01 45 31.5	-3.4
	comp=Z,0.2nm,0.5s,baz=44,slow=3.2,SNR=4.1						
MKAR	**Makanchi Array**	**118.11**	**310**⇑	*i*PKIKP	PKPdf	01 34 30.2	-2.6
MKAR	**Makanchi Array**	**118.11**	**310**	PKP	PKPdf	01 34 30.3	-2.5
	comp=Z,4.7nm,1.0s,baz=64,slow=2.8,SNR=16						
ZALV	**Zalesovo Beam**	**118.38**	**318**	PKP	PKPdf	01 34 30.6	-2.5
	comp=Z,2.1nm,0.9s,baz=207,slow=1.0,SNR=6.8						
ZAL	**Zalesovo**	**118.39**	**318**	PKIKP	PKPdf	01 34 30.6	-2.5
NVS	**Novosibirsk**	**119.48**	**319**	*e*PKIKP	PKPdf	01 34 32.8	-2.4
KURK	**Kurchatov**	**121.39**	**314**	*e*PKPdf	PKPdf	01 34 36.8	-2.3
KURK	**Kurchatov**	**121.39**	**314**⇑	*i*PKIKP	PKPdf	01 34 36.9	-2.1
TKM2	**Tokmak 2**	**121.72**	**304**	*e*PKPdf	PKPdf	01 34 38.5	-1.4
TKM2	**Tokmak 2**	**121.72**	**304**	P	PKPdf	01 34 38.7	-1.2
	SNR=6.1						
KZA	**Kyzart**	**121.77**	**303**	P	PKPdf	01 34 39.7	-0.3
	SNR=10.0						
KBK	**Karagaybulak**	**122.12**	**304**	P	PKPdf	01 34 40.0	-0.7
	SNR=5.9						
UCH	**Uchtor**	**122.33**	**303**	*e*PKPdf	PKPdf	01 34 40.8	-0.3
UCH	**Uchtor**	**122.33**	**303**	P	PKPdf	01 34 41.2	+0.1
	SNR=17						
CHMS	**Chumysh**	**122.34**	**304**	P	PKPdf	01 34 39.4	-1.7
	SNR=6.0						
AAK	**Ala-Archa**	**122.44**	**304**	*e*PKPdf	PKPdf	01 34 39.0	-2.4
AAK	**Ala-Archa**	**122.44**	**304**⇑	*i*PKIKP	PKPdf	01 34 39.3	-2.0
AAK	**Ala-Archa**	**122.44**	**304**	P	PKPdf	01 34 40.6	-0.7
	SNR=5.6						
USP	**Ospenovka**	**122.59**	**304**	P	PKPdf	01 34 40.3	-1.3
	SNR=6.5						
AML	**Almayashu**	**122.90**	**303**	*e*PKPdf	PKPdf	01 34 41.6	-0.6
AML	**Almayashu**	**122.90**	**303**	P	PKPdf	01 34 41.8	-0.5
	SNR=16						
EKS2	**Erkin-Say**	**122.97**	**304**	*e*PKPdf	PKPdf	01 34 41.6	-0.7
EKS2	**Erkin-Say**	**122.97**	**304**	P	PKPdf	01 34 41.8	-0.5
	SNR=7.4						
SCHQ	**Schefferville**	**126.30**	**42**	PKP	PKPdf	01 34 47.1	-1.2
	comp=Z,1.3nm,0.8s,baz=217,slow=5.1,SNR=2.3						
BRVK	**Borovoye**	**126.82**	**316**	*e*PKPdf	PKPdf	01 34 48.1	-1.3
ARU	**Arti**	**133.44**	**320**	*e*PKPdf	PKPdf	01 35 00.5	-1.3
ARU	**Arti**	**133.44**	**320**	*i* PKIKP	PKPdf	01 34 59.8	-2.0
ARU						01 37 25.4	
ARU				SS	SS	01 55 02.5	-10
KMBO	**Kilima Mbogo**	**134.08**	**233**	PKP	PKPdf	01 35 05.2	+0.8
	comp=Z,2.4nm,0.9s,baz=62,slow=4.8,SNR=5.7						
ARCES	**ARCESS Array B**	**138.90**	**348**	PKP	PKPdf	01 35 11.3	-0.3
ARCES	**ARCESS Array B**	**138.90**	**348**	PKhKP		01 35 01.4	
	comp=Z,2.8nm,0.9s,baz=91,slow=3.6,SNR=5.0						
ARCES				PKP	PKPdf	01 35 11.3	-0.3
	comp=Z,1.6nm,0.5s,baz=65,slow=1.8,SNR=12						
QRN	**Al-Qurain**	**140.50**	**279**	*e*P	PKPdf	01 35 14.2	-1.6
QRN				AMb	AMB	01 35 18.1	
	comp=Z,23nm,0.8s						
RDF	**Al-Radifah**	**140.85**	**279**	*e*P	PKPdf	01 35 14.5	-1.9
RDF				AMb	AMB	01 35 16.3	
	comp=Z,28nm,1.0s						
NAY	**Al-Naaiem**	**141.19**	**280**	*e*P	PKPdf	01 35 14.3	-2.7
NAY				AMb	AMB	01 35 20.0	
	comp=Z,7.0nm,1.0s						
MIB	**Mutribah**	**141.24**	**281**	*e*P	PKPdf	01 35 11.1	-5.9
MIB				AMb	AMB	01 35 20.2	
	comp=Z,19nm,1.1s						
RST	**Umm Al-Ruwaisa**	**141.46**	**280**	*e*P	PKPdf	01 35 14.2	-3.3
RST				AMb	AMB	01 35 20.4	
	comp=Z,24nm,0.9s						
JOF	**Joensuu**	**142.75**	**338**	*e*p	PKPdf	01 35 11.7	-7.0
	comp=Z,5.3nm,0.7s						
JOF	**Joensuu**	**142.75**	**338**	*e*PKHKP		01 35 11.7	
JOF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZEI	**Tsey**	**144.84**	**302**	*e*PKIKP	PKPdf	01 35 20.9	-2.1
KAF	**Kangasniemi**	**144.88**	**341**	*e*p	PKPdf	01 35 16.5	-6.0
	baz=39,slow=3.3						
HAKT	**HAKKARI**	**145.21**	**293**	*i* P	PKPbc	01 35 22.9	-0.7
DYDN	**Diyadin**	**145.22**	**296**	*i* P	PKPbc	01 35 23.2	-0.4
DIGO	**Kars**	**145.42**	**298**	*i* P	PKPdf	01 35 23.6	-0.5
TVAN	**Van**	**145.46**	**294**	*i* P	PKPdf	01 35 24.5	+0.3
FINES	**FINESS Array B**	**145.48**	**340**	PKP	PKPdf	01 35 21.2	-2.3
FINES	**FINESS Array B**	**145.48**	**340**⇑	*i*PKIKP	PKPdf	01 35 21.2	-2.3
FINES	**FINESS Array B**	**145.48**	**340**	PKP	PKPdf	01 35 21.2	-2.3
	comp=Z,41nm,0.7s,baz=66,slow=4.0,SNR=147						
OBN	**Obninsk**	**145.52**	**325**α	*i*PKIKP	PKPdf	01 35 21.9	-1.9
OBN				pmax	pmax		
	comp=Z,73nm,1.0s						
KIV	**Kislovodsk**	**145.56**	**304**⇑	*i*PKP2	PKPab	01 35 22.8	-1.9
MSL	**Mosul**	**145.67**	**290**	*e*x	x	01 35 24.0	
VRSR	**Storozhevoye**	**145.87**	**318***d*	*i*PKP2	PKPab	01 35 23.2	-2.5
VRSR				pmax	pmax		
	comp=N,3.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VORD	**Divnogorie**	**145.91**	**317**	*e*PKP2	PKPab	01 35 22.7	-3.1
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD				pmax	pmax		
	comp=N,7.0nm,1.0s						
VORD				pmax	pmax		
	comp=E,20nm,0.9s						
ERZM	**Erzurum**	**146.99**	**297**	*i* P	PKPdf	01 35 28.4	+1.6
MARD	**Mardin**	**147.54**	**292**	*i* P	PKPdf	01 35 29.6	+1.8
VSU	**Vasula**	**147.56**	**336**	*i* PKP2	PKPab	01 35 27.9	-4.1
KELT	**Kelkit**	**148.58**	**298**	*i* P	PKPbc	01 35 32.9	-0.3
NB2	**NORSAR Subarra**	**149.06**	**352**	PKP	PKPdf	01 35 31.3	+1.8
	comp=Z,22nm,1.1s,baz=12,slow=2.6						
NOA	**NORSAR Array B**	**149.06**	**352**	PKPbc	PKPbc	01 35 31.6	-2.0
	comp=Z,11nm,0.9s,baz=15,slow=4.2,SNR=21						
ANN	**Anapa**	**149.07**	**307**	*i* PKIKP	PKPdf	01 35 32.4	+2.4
ANN				pmax	pmax		
	comp=Z,65nm,0.9s						
MALT	**Malatya**	**149.37**	**294**	*e*PKPbc	PKPbc	01 35 35.3	+0.1
MALT	**Malatya**	**149.37**	**294**⇑	*i*P	PKPbc	01 35 35.1	-0.1
ATAB	**Bozova**	**149.52**	**293**	*i* P	PKPbc	01 35 35.1	-0.5
HFS	**Hagfors**	**149.56**	**349**	PKPbc	PKPbc	01 35 32.8	-2.1
	comp=Z,11nm,0.9s,baz=63,slow=0.6,SNR=3.3						
GZT	**Gaziantep**	**150.10**	**292**	*i* P	PKPdf	01 35 31.9	-0.1
KONO	**Kongsberg**	**150.60**	**352**⇑	*i*PKP2	PKPab	01 35 41.3	-3.0
ANDN	**Andirin**	**151.06**	**293**	*i* P	PKPbc	01 35 38.6	-0.6
AKASG	**Malin Array Be**	**151.65**	**323**	PKP	PKPdf	01 35 31.5	-2.4
	comp=Z,1.7nm,0.9s,baz=47,slow=2.4,SNR=4.4						
AKASG				PKPbc	PKPbc	01 35 37.8	-2.3
	comp=Z,20nm,0.8s,baz=49,slow=2.4,SNR=18						
BHL	**Bhannes**	**151.65**	**285**	*e*P	PKPbc	01 35 40.0	-0.7
AVNT	**Avonos**	**152.12**	**296**	*i* P	PKPbc	01 35 40.5	-1.2
SUW	**Suwalki**	**152.22**	**333**	*e*PKP	PKPbc	01 35 40.1	-1.2
BRTR	**Keskin Array B**	**152.92**	**298**	*i* PKIKP	PKPdf	01 35 36.5	+0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRTR	**Keskin Array B**	**152.92**	**298**	PKP	PKPdf	01 35 34.8	-1.3
	comp=Z,1.1nm,1.0s,baz=29,slow=5.6,SNR=3.6						
BRTR				PKPbc	PKPbc	01 35 42.0	-1.4
	comp=Z,6.7nm,0.8s,baz=136,slow=4.4,SNR=23						
ELDT	**Eldivan**	**152.94**	**300**	*i* P	PKPbc	01 35 42.8	-0.7
ANTO	**Ankara**	**153.53**	**299**	*e*PKPbc	PKPbc	01 35 43.6	-1.1
ANTO	**Ankara**	**153.53**	**299**⇑	*i*P	PKPbc	01 35 43.9	-0.8
ESKT	**Eskisehir**	**155.07**	**299**	*i* P	PKPdf	01 35 47.7	+8.5
BURAR	**Bucovina Array**	**155.58**	**320**	⇓PKIKP	PKPdf	01 35 49.4	+10
BURAR	**Bucovina Array**	**155.58**	**320**⇓	*i*P	PKPdf	01 35 49.3	+10
KWP	**Kalwaria**	**155.58**	**327**	*e*PKP	PKPab	01 36 03.7	-1.9
KWP	**Kalwaria**	**155.58**	**327**⇑	*i*P	PKPab	01 36 03.7	-1.9

BSEG	Bad Segeberg	156.03	348	ePKPab	PKPab	01 36 05.3	-2.1
KOLS	Kolonicke sedl	156.27	326	ePKP	PKPdf	01 35 40.5	0.0
KOLS				e		01 36 05.8	
STHS	Stebnicka Huta	156.41	328	ePKP	PKPab	01 36 07.1	-2.1
UZH	Uzhgorod	156.46	325	e	pPKPdf	01 35 50.8	-1.9
RUE	Ruedersdorf	156.63	342	ePKPab	PKPab	01 36 07.8	-2.2
CRVS	Cervenica-Dubn	156.68	327	ePKP	PKPab	01 36 07.7	-2.6
KECS	Kecovo	157.43	327	ePKP	PKPab	01 36 11.5	-2.1
DRGR		157.44	321	⇓iP	PKPab	01 36 10.6	-3.1
NRDL	Niedersach Rie	157.45	347	ePKPab	PKPab	01 36 11.5	-2.0
UPC	Upice	157.67	336	ePKPab	PKPab	01 36 12.4	-2.2
DPC	Dobruska-Polom	157.69	336	ePKPab	PKPab	01 36 13.1	-1.6
CLL	Collm	157.89	342	i PKP2	PKPab	01 36 13.2	-2.3
CLL				pmax	pmax		
	comp=Z,13nm,0.9s						
CLL	Collm	157.89	342	i PKPab	PKPab	01 36 13.2	-2.3
	comp=Z,13nm,0.9s						
CLL				i pPKPab	pPKPab	01 36 19.0	-8.2
CLL	Collm	157.89	342	ePKPab	PKPab	01 36 13.4	-2.1
BRG	Berggiesshubel	158.02	340	ePKP2	PKPab	01 36 14.1	-1.9
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRG	Berggiesshubel	158.02	340	ePKPab	PKPab	01 36 13.9	-2.1
BRG	Berggiesshubel	158.02	340	eP	PKPab	01 36 14.1	-1.9
	comp=Z,13nm,1.0s						
PSZ	Piszkesteto	158.11	327	⇓iP	PKPab	01 36 14.6	-2.0
PVCC	Panska Ves	158.13	339	ePKPab	PKPab	01 36 14.5	-2.0
VYHS	Vyhne	158.17	329	ePKP	PKPab	01 36 14.6	-2.2
VRAC	Vranov	158.46	334	⇑iP	PKPab	01 36 15.9	-2.1
PRU	Pruhonice	158.61	338	ePKPab	PKPab	01 36 16.1	-2.5
TANN	Tannenbergstha	158.85	342	ePKPab	PKPab	01 36 17.7	-1.9
MOX	Moxa	158.86	343	ePKP	PKPab	01 36 17.7	-2.0
MOX	Moxa	158.86	343	ePKPab	PKPab	01 36 17.1	-2.6
WERD	Werda	158.86	342	ePKPab	PKPab	01 36 17.7	-2.0
TREC	Trest	158.88	335	ePKPab	PKPab	01 36 17.9	-1.9
GUNZ	Gunzen	158.93	342	ePKPab	PKPab	01 36 17.7	-2.3
WERN	Wernitzgruen	158.99	342	ePKPab	PKPab	01 36 18.2	-2.0
NKC	Novy Kostel	159.02	341	ePKPab	PKPab	01 36 18.4	-2.0
VTS	Vitosha	159.46	311	⇑iP	PKPab	01 36 22.4	-0.3
ROTZ	Rotzenmuhle	159.50	341	ePKPab	PKPab	01 36 20.8	-1.7
KHC	Kasperske Hory	159.66	338	ePKPab	PKPab	01 36 21.6	-1.6
GRF	Grafenberg Arr	159.84	343	ePKPab	PKPab	01 36 21.9	-2.0
WET	Wettzell	159.87	339	ePKPab	PKPab	01 36 22.0	-2.1
GEC2	GERESS Array S	159.87	338	ePKPab	PKPab	01 36 21.4	-2.7
GERES	GERESS Array B	159.87	338	PKP	PKPdf	01 35 44.4	-0.5
	comp=Z,0.4nm,0.7s,baz=2.7,slow=5.7,SNR=3.7						
GERES				PKPab	PKPab	01 36 21.1	-3.1
	comp=Z,3.1nm,1.0s,baz=46,slow=3.9,SNR=12						
PKSM	Moragy	159.93	325	⇓P	PKPdf	01 35 43.3	-1.7
PKSM	Moragy	159.93	325	⇓iP	PKPdf	01 35 43.3	-1.7
STU	Stuttgart	161.17	346	ePKPab	PKPab	01 36 28.2	-1.6
PERS	Pernice	161.20	332	i PKPbc	PKPab	01 36 27.4	-2.6
FUR	Furstenfeldbru	161.22	341	ePKPab	PKPab	01 36 28.3	-1.7
BFO	Black Forest	161.77	347	ePKPab	PKPab	01 36 30.4	-2.0
CDF	Champ du Feu	161.88	349	ePKP2	PKPab	01 36 29.0	-3.9
WATA	Walderalm	161.88	339	⇑iP	PKPab	01 36 31.5	-1.4
	comp=Z,8.7nm,1.1s						
WTTA	Wattenberg	161.92	339	⇓iP	PKPab	01 36 31.6	-1.5
	comp=Z,10nm,0.8s						
MOTA	Moosalm	162.01	340	⇑iP	PKPab	01 36 32.1	-1.4
	comp=Z,17nm,1.2s						
SQTA	Sankt Quirin	162.09	340	⇓iP	PKPab	01 36 32.1	-1.8
	comp=Z,16nm,1.1s						
ABTA	Abfaltersbach	162.09	337	⇓iPKPab	PKPab	01 36 31.3	-2.6
	comp=Z,7.0nm,0.9s						
JAVS	Javornik	162.23	332	ePKPbc	PKPab	01 36 32.0	-2.5
DAVA	Damuels	162.40	343	⇓iP	PKPab	01 36 33.4	-1.8
	comp=Z,12nm,0.9s						
HAU	Haudompre	162.41	351	ePKP2	PKPab	01 36 32.4	-2.8
	comp=Z,35nm,1.2s						
TORD	Torodi Ar. Bea	162.55	178	PKP	PKPdf	01 35 48.6	-0.1
	comp=Z,1.0nm,1.1s,baz=206,slow=3.1,SNR=3.5						
TORD				PKPab	PKPab	01 36 37.8	+1.2
	comp=Z,5.6nm,1.1s,baz=170,slow=3.4,SNR=11						
TORD				PP	PP	01 40 21.7	+2.0
	comp=Z,0.6nm,0.7s,baz=140,slow=7.6,SNR=3.1						
SSF	Saint Saulge	163.61	357	ePKP2	PKPab	01 36 37.8	-2.7
	comp=Z,23nm,1.0s						
CABF	La Chapelle	163.81	350	ePKP2	PKPab	01 36 39.0	-2.4
SMF	Signal de Mont	164.01	356	ePKP2	PKPab	01 36 39.5	-2.7
	comp=Z,40nm,1.2s						
LPL	La Plagne	164.77	348	ePKP2	PKPab	01 36 42.8	-2.9
	comp=Z,19nm,1.1s						
LPG	La Plagne	164.79	348	ePKP2	PKPab	01 36 43.0	-2.7
	comp=Z,20nm,1.1s						
ORIF	Oris-en-Rattie	165.50	350	ePKP2	PKPab	01 36 46.5	-2.4
	comp=Z,22nm,1.0s						
SBF	Sospel	166.21	344	ePKP2	PKPab	01 36 49.0	-3.0
	comp=Z,47nm,0.9s						

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*NEIC **05** 01:34:21.2±0.9, 6.84S×129.34E, h35km, mb3.8/1, Error ellipse: s-maj=27.3km s-min=11.1km az=77.0*
*ISCJB **05** 01:34:36.3±2.3, 7.7S±0.1×129.1E±0.1, h231km±26km, mb3.3/3, Error ellipse: s-maj=25.4km s-min=11.1km az=137.3*
*IDC **05** 01:34:38.8±4.9, 7.67S×128.82E, h224km±47km, mb3.1/3, mb1 3.5/6, mb1mx3.3/14, mbtmp3.4/6, Error ellipse: s-maj=52.1km s-min=19.8km az=67.0*
ISC 05 01:34:35.2±2.1, **7.6S**±0.1×**129.1E**±0.1, **h194**km±21km, **n11**, σ**1.15**/14, **mb3.3**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	5.99	244	P	Pn	01 36 03.2	+1.0
	12nm,0.3s,baz=52,slow=5.8,SNR=8.4						
BATI				S	Sn	01 37 09.8	-1.1
	8.2nm,0.3s,baz=54,slow=19,SNR=4.3						
FITZ	Fitzroy Crossi	10.99	198	P	Pn	01 37 07.4	+0.1
	0.9nm,0.3s,baz=290,slow=18,SNR=35						
FITZ				S	Sn	01 39 04.4	-5.3
	1.1nm,0.3s,baz=83,slow=17,SNR=3.2						
WRA	Warramunga Arr	13.29	158	P	Pn	01 37 35.9	-0.5
	2.1nm,0.3s,baz=343,slow=13,SNR=53						
WRA				S	Sn	01 39 57.1	-7.5
	2.8nm,0.3s,baz=337,slow=22,SNR=8.9						
WB2	Warramunga Arr	13.29	158	ePn	Pn	01 37 35.5	-1.0
MBWA	Marble Bar	16.26	213	Pn	Pn	01 38 15.9	+2.9
	7.4nm,1.0s						
ASAR	Alice Springs	16.64	165	P	Pn	01 38 20.2	+2.8
	0.9nm,0.3s,baz=342,slow=9.4,SNR=54						
ASAR				S	S	01 41 20.1	-0.3
	0.8nm,0.3s,baz=347,slow=24,SNR=5.7						
SONM	Songino Array	58.72	342	P	P	01 44 13.1	+0.7
	0.3nm,0.6s,mb3.1,baz=157,slow=6.2,SNR=3.4						
MKAR	Makanchi Array	68.24	327	P	P	01 45 14.6	-0.2
MKAR	Makanchi Array	68.24	327	P	P	01 45 14.6	-0.2
	0.4nm,0.4s,mb3.4,baz=127,slow=6.8,SNR=7.4						
ZALV	Zalesovo Beam	71.72	334	P	P	01 45 34.9	-1.0
	0.5nm,0.5s,mb3.4,baz=131,slow=6.1,SNR=3.6						
TORD	Torodi Ar. Bea	128.06	281	PKP	PKPdf	01 53 19.7	+0.7
	0.3nm,0.6s,baz=57,slow=1.5,SNR=5.0						

IDC 05 02:15:38.7±1.0, **26.62N**×**44.67W**, **h0**km, **mb3.9**/12, **mb1 4.1**/12, **mb1mx3.9**/21, **mbtmp3.9**/12, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.8**/32, **Error ellipse: s-maj=28.0km s-min=21.6km az=165.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	21.57	251	LR	LR	02 26 59.7	
	comp=Z,75nm,18.2s,baz=88,slow=32						
PCRV	Puerto La Cruz	24.97	233	LR	LR	02 28 11.6	
	comp=Z,64nm,20.6s,baz=330,slow=30						
TORD	Torodi Ar. Bea	45.37	98	P	P	02 23 58.4	-0.7
	0.5nm,1.1s,baz=296,slow=7.9,SNR=2.3						
KEST	Kesra	46.60	65	P	P	02 24 07.4	-1.2
	2.3nm,1.2s,baz=274,slow=3.7,SNR=4.5						
LPAZ	La Paz	48.36	211	P	P	02 24 23.2	+0.8
	3.7nm,1.0s,baz=30,slow=9.0,SNR=7.3						
GERES	GERESS Array B	49.86	47	P	P	02 24 33.7	+0.2
	0.8nm,0.9s,baz=262,slow=9.3,SNR=6.0						
PDAR	Pinedale Array	54.46	305	P	P	02 25 08.6	+0.7
	0.8nm,0.7s,baz=94,slow=8.2,SNR=6.5						
YKA	Yellowknife Ar	57.50	329	P	P	02 25 28.1	-1.2
	1.7nm,1.0s,baz=93,slow=7.4,SNR=14						
FINES	FINESS Array B	57.81	32	P	P	02 25 31.8	+0.3
	3.0nm,0.9s,baz=209,slow=3.5,SNR=8.5						
ARCES	ARCESS Array B	58.40	23	P	P	02 25 35.4	-0.2
	3.7nm,0.8s,baz=275,slow=7.1,SNR=4.6						
AKASG	Malin Array Be	59.88	45	P	P	02 25 46.4	+0.3
	0.2nm,0.3s,baz=270,slow=6.8,SNR=5.8						
BRTR	Keskin Array B	64.94	56	P	P	02 26 20.5	+0.3
	1.0nm,1.1s,baz=335,slow=8.2,SNR=3.6						
AKTO	Aktyubinsk	77.47	40	P	P	02 27 37.3	+1.4
	1.2nm,0.8s,baz=296,slow=10.0,SNR=4.3						
ZALV	Zalesovo Beam	88.69	27	P	P	02 28 34.3	+0.5
	0.3nm,0.3s,baz=307,slow=5.2,SNR=3.6						

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*ISCJB **05** 02:26:50.4±0.4, 31.10S±0.02×68.90W±0.05, h120km±5km, mb4.0/4, Error ellipse: s-maj=6.7km s-min=3.7km az=175.5*
*GUC **05** 02:26:50.9±0.8, 31.11S×69.12W, h150km, MD3.9, ML4.4*
*NEIC **05** 02:26:51.4±0.6, 31.04S×68.68W, h111km±6km, mb4.8/2, MD4.2(SJA), Error ellipse: s-maj=16.5km s-min=7.8km az=77.0*
NEIC Felt [III] at San Juan. Also felt by people in high-rise buildings at Mendoza.
*IDC **05** 02:26:51.7±1.2, 31.12S×68.78W, h112km±7km, mb3.7/4, mb1 4.0/5, mb1mx3.6/15, mbtmp3.8/5, Error ellipse: s-maj=38.9km s-min=21.1km az=86.0*
ISC 05 02:26:51.5±0.4, **31.10S**±0.02×**68.89W**±0.05, **h113**km±5km, **n40**, σ**0.82**/58, **mb4.0**/4, **18C-6D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	0.75	132	P	Pn	02 27 10.5	-0.1
	52nm,0.3s,baz=309,slow=7.6,SNR=2526						
CFAA				S	Sn	02 27 25.2	+0.3
	180nm,0.3s,baz=111,slow=22,SNR=77						
MDZ	Mendoza	1.78	179	⇑iP	Pn	02 27 22.7	+0.8
MDZ				i S	Sn	02 27 44.8	-0.2
MDZ				i		02 27 48.0	
CMCH	Combarbala	1.81	267	⇑iP	Pn	02 27 22.2	-0.1
CMCH				i S	Sn	02 27 45.9	+0.2
TLL	Tololo Astrono	1.90	299	⇑iP	Pn	02 27 24.3	+1.0
TLL				i S	Sn	02 27 49.1	+1.6
OVCH	Ovalle	2.05	283	⇑iP	Pn	02 27 25.1	-0.1
OVCH				i S	Sn	02 27 50.2	-0.7
JACH	Jahuel	2.14	222	⇑iP	Pn	02 27 27.2	+0.8
LSCH	La Serena	2.35	300	eP	Pn	02 27 28.9	-0.3
LSCH				i S	Sn	02 27 57.0	-1.0
CHNG	Los Chungos	2.37	250	⇓iP	Pn	02 27 14.4	-15
CHNG				i S	Sn	02 27 42.3	-16
CHNG				AML	AML	02 27 52.0	
	comp=E,4μm,0.6s						
PEL	Peldehue	2.55	216	⇑iP	Pn	02 27 31.7	+0.1
PEL				i S	Sn	02 28 03.0	+0.6
ROCH	El Roble	2.60	223	⇑iP	Pn	02 27 32.0	-0.2
ROCH				i S	Sn	02 28 03.9	+0.3
PACH	Papudo	2.60	236	⇓iP	Pn	02 27 31.3	-1.1
PACH				i S	Sn	02 28 02.5	-1.2
LCO	Las Campanas	2.61	322	⇑iPn	Pn	02 27 32.8	+0.4
LCO				eSn	Sn	02 28 04.4	+0.5
DSCH	Colegio Aleman	2.70	211	⇑iP	Pn	02 27 33.4	-0.2
DSCH				eS	Sn	02 28 06.4	+0.4
DSCH				AML	AML	02 28 09.1	
	comp=N,913nm,0.4s						
FSR	Penalolen	2.75	210	AML	AML	02 28 11.5	
	comp=E,2μm,0.5s						
STL	Santa Lucia	2.76	212	⇑iP	Pn	02 27 34.2	-0.3
STL				i S	Sn	02 28 07.7	+0.2
STL				AML	AML	02 28 12.0	
	comp=N,423nm,0.3s						
PCH	Pirque	2.87	208	⇑iP	Pn	02 27 36.2	+0.4
ANTU	Antumapu	2.87	210	⇑iP	Pn	02 27 36.1	+0.2
ANTU				i S	Sn	02 28 11.4	+1.4
RCDM	Rinconada Maip	2.88	214	⇓iP	Pn	02 27 35.9	-0.2
RCDM				i S	Sn	02 28 11.1	+0.7
VACH	Vallenar	2.99	327	⇑iP	Pn	02 27 37.8	+0.3
VACH				i S	Sn	02 28 12.1	-0.9
TACH	Talagante	3.08	214	⇑iP	Pn	02 27 37.9	-0.7
TACH				i S	Sn	02 28 15.0	0.0
CHCH	Chadas Angostu	3.20	207	i S	Sn	02 28 17.6	-0.1
LCCH	Las Cruces	3.28	223	⇓iP	Pn	02 27 40.0	-1.3
LCCH				i S	Sn	02 28 17.9	-1.8
CACH	El Canelo	3.34	205	⇓iP	Pn	02 27 42.5	+0.4
CACH				i S	Sn	02 28 22.2	+1.1
CICH	Cipreses	3.46	202	⇑iP	Pn	02 27 44.2	+0.5
SFDO	San Fernando	3.94	206	⇑iP	Pn	02 27 48.6	-1.4
SFDO				i S	Sn	02 28 34.6	-0.8
CPCH	Copiapo	3.94	341	⇓iP	Pn	02 27 50.4	+0.3
CPCH				i S	Sn	02 28 35.4	-0.2
TALC	Talca	4.87	207	⇑iP	Pn	02 27 53.2	-9.3
TALC				i S	Sn	02 28 47.1	-11
TRQA	Tornquist	8.98	143	⇑iPn	Pn	02 28 56.7	-1.5
	comp=N,23nm,0.5s						
TRQA				eSn	Sn	02 30 32.6	-4.8
LPAZ	La Paz	14.76	3	ePn	Pn	02 30 15.4	+0.7
	comp=N,18nm,0.8s						
LPAZ	La Paz	14.76	3	P	Pn	02 30 16.8	+2.1
	comp=N,0.9nm,0.3s,baz=170,slow=7.6,SNR=50						
SIV	San Ignacio	16.65	27	P	Pn	02 30 35.5	-2.6
	comp=N,2.4nm,0.3s,baz=210,slow=13,SNR=84						
USHA	Ushuaia	23.73	179	P	P	02 31 54.0	+1.1
	comp=N,13nm,0.9s,mb4.3,baz=289,slow=7.4,SNR=6.4						
SNAA	Sanae	53.29	159	P	P	02 35 58.2	-0.1
	comp=N,1.0nm,0.5s,mb4.1,baz=265,slow=12,SNR=5.6						
TXAR	Lajitas Array	68.61	328	P	P	02 37 43.3	+1.0
	comp=N,0.3nm,0.6s,mb3.3,baz=153,slow=8.5,SNR=3.6						
TXAR				pP	pP	02 38 17.9	+7.6
	comp=N,0.4nm,0.7s,baz=128,slow=8.1,SNR=3.3						
TORD	Torodi Ar. Bea	80.70	69	P	P	02 38 52.3	-0.2
TORD				pP	pP	02 39 23.7	+2.4
TORD	Torodi Ar. Bea	80.70	69	P	P	02 38 52.3	-0.2
	comp=N,3.4nm,0.9s,mb4.2,baz=278,slow=6.5,SNR=32						
TORD				pP	pP	02 39 23.7	+2.4
	comp=N,0.5nm,0.5s,baz=282,slow=7.3,SNR=2.2						
WRA	Warramunga Arr	124.56	207	PKP	PKPdf	02 45 37.5	-0.6
	comp=N,0.5nm,0.4s,baz=158,slow=1.7,SNR=13						
ZALV	Zalesovo Beam	150.36	32	PKPbc	PKPbc	02 46 29.2	+0.2
	comp=N,1.8nm,0.4s,baz=309,slow=3.2,SNR=13						
ZALV				pPKPbc	pPKPbc	02 47 01.9	+2.4
	comp=N,1.2nm,0.5s,baz=303,slow=2.9,SNR=3.7						
MKAR	Makanchi Array	152.85	47	PKPbc	PKPbc	02 46 35.1	+0.2
MKAR				PKPab	PKPab	02 46 46.5	0.0
MKAR	Makanchi Array	152.85	47	PKPbc	PKPbc	02 46 35.1	+0.2
	comp=N,0.5nm,0.6s,baz=276,slow=2.6,SNR=6.1						
MKAR				PKPab	PKPab	02 46 46.5	0.0
	comp=N,1.1nm,0.6s,baz=299,slow=4.3,SNR=9.1						

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*NEIC **05** 02:36:36.7, 35.18S×178.76E, h270km, MG4.0(WEL), After WEL.*
WEL 05 02:36:36.4±0.7, **35.08S**×**178.85E**, **h244**km±10km, **ML4.1**/12, **Error ellipse: s-maj=19.1km s-min=9.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.51	190	P	Pn	02 37 23.5	+0.3
MXZ				S	S	02 38 00.3	0.0
MXZ	Matakaoa Point	2.51	190	ePN	Pn	02 37 22.8	-0.4
MXZ				SN	S	02 38 00.1	-0.2
PUZ	Puketiti	3.02	189	eP	Pn	02 37 29.7	+1.1
PUZ	Puketiti	3.02	189	PN	Pn	02 37 29.4	+0.8
PUZ				SN	S	02 38 09.9	-0.1
MWZ	Matawai	3.41	198	eP	Pn	02 37 34.1	+1.1
MWZ				S	S	02 38 19.6	+1.7
MWZ	Matawai	3.41	198	ePN	Pn	02 37 33.7	+0.7
MWZ				SN	S	02 38 18.8	+0.9
URZ	Urewera	3.46	203	eP	Pn	02 37 33.5	-0.1
URZ	Urewera	3.46	203	PN	Pn	02 37 33.4	-0.1
URZ				SN	S	02 38 18.8	-0.1
KNZ	Kokohu	4.04	193	P	Pn	02 37 40.2	0.0
KNZ	Kokohu	4.04	193	PN	Pn	02 37 40.2	-0.1
BKZ	Black Stump Fm	4.49	204	eP	Pn	02 37 45.1	-0.5
BKZ	Black Stump Fm	4.49	204	PN	Pn	02 37 44.8	-0.8
PXZ	Pawanui	5.18	197	PN	Pn	02 37 52.3	-1.8
PXZ				SN	S	02 38 52.1	-4.1
TSZ	Takapari Road	5.47	204	P	Pn	02 37 55.8	-1.8
TSZ	Takapari Road	5.47	204	ePN	Pn	02 37 55.5	-2.1
BFZ	Birch Farm	5.95	199	SN	S	02 39 10.7	-2.8
MRZ	Mangatainoka R	6.14	204	P	Pn	02 38 03.4	-2.6
MRZ	Mangatainoka R	6.14	204	PN	Pn	02 38 03.0	-2.9
KIW	Kapiti Island	6.55	207	P	Pn	02 38 08.2	-3.0
KIW	Kapiti Island	6.55	207	ePN	Pn	02 38 08.1	-3.1
MTW	Mount Morrison	6.61	202	ePN	Pn	02 38 09.1	-2.9
MSWZ	Moikau Station	6.93	203	P	Pn	02 38 12.8	-3.1
MSWZ	Moikau Station	6.93	203	ePN	Pn	02 38 12.7	-3.2
TCW	Tory Channel	7.10	209	P	Pn	02 38 14.2	-3.9
TCW	Tory Channel	7.10	209	ePN	Pn	02 38 14.0	-4.0
TCW				SN	S	02 39 32.1	-7.6
KHZ	Kahutara	8.41	208	eP	Pn	02 38 30.4	-4.3
KHZ	Kahutara	8.41	208	PN	Pn	02 38 30.1	-4.6
DSZ	Denniston Nort	8.65	218	eP	Pn	02 38 33.9	-3.8
DSZ	Denniston Nort	8.65	218	PN	Pn	02 38 33.8	-3.9
MQZ	McQueen's Vall	9.85	207	SN	S	02 40 32.4	-11
WVZ	Waitaha Valley	10.17	216	ePN	Pn	02 38 50.9	-6.1

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*IDC **05** 02:41:59.3±0.9, 45.96N×154.78E, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/23, mbtmp3.7/11, ML3.8/1, Error ellipse: s-maj=27.2km s-min=20.9km az=168.0*
*NEIC **05** 02:42:00.9±0.8, 46.00N×154.72E, h10km, mb4.4/2, Error ellipse: s-maj=17.5km s-min=16.4km az=93.0*
*MOS **05** 02:42:03.4±0.9, 46.12N×154.46E, h40km, mb4.1/7, Error ellipse: s-maj=20.7km s-min=12.8km az=81.3*
*JMA **05** 02:42:04.2±0.7, 46.73N×154.05E, h30km, M4.7*
*ISCJB **05** 02:42:05.5±1.8, 45.8N±0.1×154.2E±0.1, h71km±18km, mb3.8/12, Error ellipse: s-maj=25.0km s-min=11.8km az=155.9*
ISC 05 02:42:05.0±1.3, **45.9N**±0.1×**154.3E**±0.1, **h41**km±13km, **n45**, σ**1.60**/50, **mb3.9**/12, **1C-1D**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.60	264	ePN	Pn	02 43 12.6	+0.8
KUR				pmax	pmax		
	comp=Z,100nm,0.5s						
NEM2	Nemuro 2	6.64	251	P	Pn	02 43 40.7	+0.9
NEM2				eS	Sn	02 44 52.3	-1.8
JNK	Nakash	7.23	255	P	Pn	02 43 49.7	+1.7
JNK				eS	Sn	02 45 08.1	-0.7
JAK	Akkeshi	7.49	251	eS	Sn	02 45 12.2	-2.8
JTKR	Abashiri--Toko	7.65	259	P	Pn	02 43 56.1	+2.3
PET	Petropavlovsk	7.67	20	⇓ePN	Pn	02 43 50.7	-3.3
PET				pmax	pmax		
	comp=Z,4.0nm,0.1s						
JAR	Ashorobuto	7.98	255	P	Pn	02 44 00.3	+2.0
JAR				eS	Sn	02 45 27.2	0.0
JOB	Onbets	8.10	252	eS	Sn	02 45 27.5	-2.5
JKK2	Kamakawa 2	8.48	260	P	Pn	02 44 08.1	+3.0
ASAJ	Asahikawa	8.51	262	PN	Pn	02 44 09.4	+3.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	8.51	262	Pn	Pn	02 44 09.3	+3.8
	comp=Z,1.2nm,0.3s,baz=90,slow=17,SNR=3.2						
JCH	Churui	8.54	251	P	Pn	02 44 07.2	+1.3
JCH				eS	Sn	02 45 37.5	-3.3
JNBK	Urakawa-nobuka	9.09	251	eS	Sn	02 45 50.3	-4.1
JANG	Nango	10.87	244	eS	Sn	02 46 32.3	-5.8
JTH	Tanohata	10.91	241	eS	Sn	02 46 30.8	-8.3
JTM	Tenmabayashi	10.93	247	eS	Sn	02 46 33.1	-6.4
OFUJ	Ofunato	11.56	238	P	Pn	02 44 47.0	-0.3
JIO	Ouri	12.16	237	eS	Sn	02 47 02.1	-7.6
MA2	Magadan	13.88	352	ePn	Pn	02 45 16.0	-2.8
	comp=Z,3.4nm,0.4s						
MA2	Magadan	13.88	352	eP	Pn	02 45 16.0	-2.7
MA2				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BILL	Bilibino	23.05	11	eP	P	02 47 03.9	-2.4
	comp=Z,2.7nm,0.5s,mb3.9						
BILL	Bilibino	23.05	11	⇑eP	P	02 47 04.0	-2.3
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
INK	Inuvik	41.92	32	eP	P	02 49 49.9	-1.1
	comp=Z,12nm,0.5s,mb4.8						
MKAR	Makanchi Array	48.10	299	P	P	02 50 42.0	+1.7
MKAR	Makanchi Array	48.10	299	eP	P	02 50 42.3	+2.0
MKAR	Makanchi Array	48.10	299	P	P	02 50 42.0	+1.7
	comp=Z,0.3nm,0.5s,mb3.6,baz=68,slow=8.2,SNR=5.5						
YKA	Yellowknife Ar	51.10	37	P	P	02 51 02.1	-0.9
	comp=Z,0.2nm,0.4s,mb3.4,baz=296,slow=7.3,SNR=3.5						
BRVK	Borovoye	52.10	310	eP	P	02 51 10.8	+0.2
ARU	Arti	56.22	318	eP	P	02 51 41.5	+1.0
ARU						02 53 43.2	
ARU				eS	S	02 59 29.2	+2.4
ARU				SS	SS	03 03 13.6	+0.5
ARCES	ARCESS Array B	58.94	341	P	P	02 52 00.5	+1.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	58.94	341	P	P	02 52 00.5	+1.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=29,slow=9.5,SNR=4.5						
NVAR	Mina Array Bea	62.08	63	P	P	02 52 20.2	-1.1
NVAR	Mina Array Bea	62.08	63	P	P	02 52 20.2	-1.1
	comp=Z,0.4nm,0.7s,mb3.7,baz=315,slow=4.8,SNR=4.9						
PDAR	Pinedale Array	64.56	54	P	P	02 52 34.8	-2.8
	comp=Z,0.7nm,0.8s,mb3.8,baz=308,slow=3.4,SNR=4.8						
FINES	FINESS Array B	65.18	335	eP	P	02 52 46.5	+5.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	65.18	335	P	P	02 52 43.3	+2.0
	comp=Z,1.0nm,0.5s,mb4.2,baz=42,slow=7.1,SNR=9.4						
WRA	Warramunga Arr	67.99	200	P	P	02 53 01.2	+1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	67.99	200	P	P	02 53 01.2	+1.5
	comp=Z,0.5nm,0.8s,mb3.6,baz=17,slow=7.8,SNR=3.1						
NOA	NORSAR Array B	69.31	342	P	P	02 53 06.9	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	69.31	342	P	P	02 53 06.9	-0.6
	comp=Z,0.7nm,0.8s,mb3.6,baz=15,slow=6.7,SNR=3.3						
AKASG	Malin Array Be	72.73	327	P	P	02 53 28.2	-0.3
AKASG	Malin Array Be	72.73	327	eP	P	02 53 34.2	+5.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	72.73	327	P	P	02 53 28.2	-0.3
	comp=Z,0.9nm,0.6s,mb3.9,baz=35,slow=6.1,SNR=2.8						
TXAR	Lajitas Array	77.17	61	P	P	02 53 54.0	-0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	77.17	61	P	P	02 53 54.0	-0.4
	comp=Z,0.9nm,0.6s,mb3.9,baz=303,slow=4.1,SNR=14						

WEL 05 02:51:32.0±0.3, **37.04S**×**176.71E**, **h312**km±4km, **ML3.7**/10, **Error ellipse: s-maj=8.7km s-min=5.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.26	166	PN	Pn	02 52 15.0	+0.2
URZ				SN	S	02 52 49.1	+0.1
MXZ	Matakaoa Point	1.38	113	ePN	Pn	02 52 15.7	+0.2
MXZ				SN	S	02 52 48.9	-1.2
MWZ	Matawai	1.45	154	PN	Pn	02 52 16.2	+0.3
MWZ				SN	S	02 52 51.1	+0.1
KNZ	Kokohu	2.12	159	ePN	Pn	02 52 20.9	+0.3
KNZ				SN	S	02 52 58.6	-0.9
BKZ	Black Stump Fm	2.13	185	ePN	Pn	02 52 21.0	+0.3
BKZ				SN	S	02 52 58.6	-1.1
BKZ				SN	S	02 52 59.2	-0.5
TSZ	Takapari Road	3.08	191	PN	Pn	02 52 28.8	-0.3
TSZ				SN	S	02 53 13.9	-1.1
MRZ	Mangatainoka R	3.73	193	ePN	Pn	02 52 34.6	-1.1
MRZ				SN	S	02 53 25.3	-1.6
TIWZ	Tintock	3.79	190	SN	S	02 53 27.9	-0.3
KIW	Kapiti Island	4.07	200	PN	Pn	02 52 38.6	-0.8
MTW	Mount Morrison	4.22	193	SN	S	02 53 34.6	-2.0
DUWZ	D'Urville Isla	4.34	209	SN	S	02 53 37.7	-1.4
MRW	Makara Radio	4.47	200	SN	S	02 53 39.4	-2.2
TCW	Tory Channel	4.58	204	PN	Pn	02 52 44.3	-0.7
NNZ	Nelson	4.91	211	ePN	Pn	02 52 47.6	-1.2
NNZ				SN	S	02 53 48.4	-2.3
THZ	Tophouse	5.56	211	ePN	Pn	02 52 55.9	-0.4
THZ				SN	S	02 54 01.2	-3.2
KHZ	Kahutara	5.90	203	SN	S	02 54 09.4	-2.2
DSZ	Denniston Nort	6.05	217	SN	S	02 54 09.6	-5.1
MQZ	McQueen's Vall	7.35	204	SN	S	02 54 37.8	-5.4
MQZ				SN	S	02 54 38.4	-4.8

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*ISCJB **05** 02:56:45.2±1.2, 21.8N±0.1×123.4E±0.2, h10km, mb3.5/3, Error ellipse: s-maj=27.1km s-min=15.4km az=147.3*
*IDC **05** 02:56:46.6±4.2, 21.46N×122.93E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/20, mbtmp3.6/3, Error ellipse: s-maj=352.8km s-min=26.8km az=64.0*
*NEIC **05** 02:56:47.1±1.1, 21.76N×123.28E, h10km, mb4.0/1, Error ellipse: s-maj=28.4km s-min=15.7km az=59.0*
ISC 05 02:56:47.0±1.2, **21.8N**±0.1×**123.4E**±0.2, **h10**km, **n7**, σ**0.99**/7, **mb3.5**/3, **Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**2.88**	**325**	*e*Pn	**Pn**	**02 57 31.4**	**-1.5**
YHNB	**Yeheng**	**3.40**	**327**	*e*Pn	**Pn**	**02 57 39.2**	**-0.9**
YHNB				*e*Sn	Sx	02 58 02.3	
TATO	**Taipei**	**3.61**	**331**	*e*Pn	**Pn**	**02 57 43.6**	**+0.7**
TATO				*e*Sn	Sx	02 58 11.3	
MAJO	**Matsushiro**	**19.54**	**38**	P	**Pn**	**03 01 15.8**	**-0.1**
	4.3nm,0.4s						
MKAR	**Makanchi Array**	**41.46**	**317**	P	**P**	**03 04 34.6**	**+0.8**
	0.2nm,0.5s,mb3.0,baz=110,slow=9.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**43.34**	**328**	P	**P**	**03 04 50.6**	**+1.6**
	0.6nm,0.3s,mb3.8,baz=118,slow=8.8,SNR=4.4						
ASAR	**Alice Springs**	**46.34**	**167**	P	**P**	**03 05 12.7**	**-0.5**
	0.6nm,0.5s,mb3.8,baz=345,slow=9.1,SNR=10						

*IDC **05** 03:25:16.1±2.1, 1.11N×97.05E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.8/5, ML2.9/1, Error ellipse: s-maj=52.5km s-min=28.4km az=52.0*
*ISCJB **05** 03:25:19.3±1.7, 1.2N±0.2×97.1E±0.2, h33km, mb3.8/4, Error ellipse: s-maj=32.1km s-min=22.6km az=44.6*
ISC 05 03:25:21.7±1.7**, 1.2N**±0.2×**97.2E**±0.2**, h35km, n6,** σ0s.43/6**, mb3.8**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.34**	**48**	Pn	**Pn**	**03 25 57.7**	**0.0**
	2.4nm,0.3s,baz=242,slow=8.8,SNR=15						
SHL	**Shillong**	**24.75**	**348**	*e*P	**P**	**03 30 39.5**	**-0.6**
WRA	**Warramunga Arr**	**42.05**	**122**	P	**P**	**03 33 10.3**	**-0.1**
	0.6nm,0.6s,mb3.4,baz=300,slow=9.1,SNR=5.1						
SONM	**Songino Array**	**47.12**	**8**	P	**P**	**03 33 50.7**	**+0.4**
	0.8nm,0.7s,mb3.8,baz=191,slow=8.2,SNR=9.8						
MKAR	**Makanchi Array**	**47.23**	**346**	P	**P**	**03 33 51.5**	**+0.2**
	0.8nm,0.5s,mb3.9,baz=164,slow=9.1,SNR=16						
ZALV	**Zalesovo Beam**	**53.54**	**351**	P	**P**	**03 34 38.9**	**+0.1**
	2.3nm,0.7s,mb4.2,baz=183,slow=6.7,SNR=12						

*IDC **05** 04:22:45.5±1.9, 0.55S×98.86E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/20, mbtmp3.8/8, ML3.2/1, Error ellipse: s-maj=81.7km s-min=18.3km az=60.0*
*ISCJB **05** 04:22:49.6±1.6, 0.3S±0.2×99.2E±0.4, h33km, mb3.9/7, Error ellipse: s-maj=65.8km s-min=12.6km az=151.8*
*NEIC **05** 04:22:51.0±1.2, 0.46S×99.00E, h35km, Error ellipse: s-maj=51.2km s-min=11.2km az=62.0*
ISC 05 04:22:52.0±1.7**, 0.3S**±0.3×**99.2E**±0.4**, h35km, n10,** σ0s.74/9**, mb3.9**/7**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.09**	**354**	Pn	**Pn**	**04 23 38.0**	**-0.4**
	2.8nm,0.3s,baz=128,slow=7.7,SNR=15						
WRA	**Warramunga Arr**	**39.52**	**122**	P	**P**	**04 30 18.7**	**-1.0**
	0.4nm,0.4s,mb3.5,baz=306,slow=8.7,SNR=6.0						
WB2	**Warramunga Arr**	**39.53**	**122**	*e*P	**P**	**04 30 19.6**	**-0.2**
ASAR	**Alice Springs**	**40.88**	**127**	P	**P**	**04 30 30.8**	**-0.1**
	0.4nm,0.5s,mb3.3,baz=302,slow=7.8,SNR=6.7						
SONM	**Songino Array**	**48.34**	**6**	P	**P**	**04 31 31.5**	**+1.5**
	2.1nm,0.6s,mb4.3,baz=190,slow=9.6,SNR=20						
MKAR	**Makanchi Array**	**49.19**	**345**	P	**P**	**04 31 36.3**	**-0.3**
	0.4nm,0.5s,mb3.7,baz=144,slow=7.5,SNR=7.4						
STKA	**Stephens Creek**	**50.85**	**132**	P	**P**	**04 31 50.7**	**+1.2**
	0.9nm,0.4s,mb4.1,baz=17,slow=15,SNR=3.2						
ZALV	**Zalesovo Beam**	**55.37**	**350**	P	**P**	**04 32 22.1**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=174,slow=4.5,SNR=4.4						
ARCES	**ARCESS Array B**	**84.62**	**340**	P	**P**	**04 35 21.3**	**-0.2**
	1.9nm,0.9s,mb4.2,baz=104,slow=6.5,SNR=9.0						
TXAR	**Lajitas Array**	**143.79**	**35**	PKP	PKPdf	04 42 22.5	-1.7
	0.2nm,0.5s,baz=189,slow=0.9,SNR=4.9						

*ISCJB **05** 04:22:56.9±0.9, 38.33N±0.05×39.2E±0.1, h10km±15km, Error ellipse: s-maj=13.5km s-min=8.8km az=14.6*
*CSEM **05** 04:22:56.4±0.2, 38.31N×39.13E, h2km, MD2.5, Error ellipse: s-maj=4.8km s-min=3.2km az=111.0*
*ISK **05** 04:22:56.5, 38.30N×39.13E, h5km, MD2.5*
ISC 05 04:22:57.4±0.9**, 38.34N**±0.06×**39.15E**±0.10**, h13**km±14km**, n6,** σ0s.**82**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.20**	**320**	*i* P	**Pg**	**04 23 01.1**	**-0.8**
MALT	**Malatya**	**0.57**	**267**	PG	**Pg**	**04 23 08.0**	**-0.6**
MYA	**Malataya**	**0.57**	**269**	PG	**Pg**	**04 23 08.2**	**-0.4**
MYA				SG	**Sg**	**04 23 17.3**	**+1.1**
PTK	**Pertek**	**0.58**	**19**	*e*PG	**Pg**	**04 23 09.9**	**+1.1**
URFA	**Urfa**	**0.94**	**196**	*e*PG	**Pg**	**04 23 14.6**	**-0.9**
URFA				*e*SG	**Sg**	**04 23 28.5**	**+0.8**
MARD	**Mardin**	**1.65**	**128**	*i* P	**Pn**	**04 23 25.1**	**-0.8**
MARD				*i* S	**Sn**	**04 23 47.5**	**+0.6**

WEL 05 06:02:54.4±0.4**, 38.21S×176.42E, h145**km±3km**, ML3.6**/15**, Error ellipse: s-maj=4.5km s-min=3.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.54**	**96**	SN	Sn	06 03 31.0	-0.3
MWZ	**Matawai**	**0.88**	**99**	PN	Pn	06 03 18.1	+0.5
MWZ				SN	Sn	06 03 35.2	0.0
BKZ	**Black Stump Fm**	**0.96**	**177**	PN	Pn	06 03 18.3	0.0
BKZ				SN	Sn	06 03 36.3	-0.3
TUVZ	**Tukino**	**1.22**	**209**	PN	Pn	06 03 20.8	+0.2
WNVZ	**Wahianoa**	**1.29**	**210**	PN	Pn	06 03 21.5	+0.1
MXZ	**Matakaoa Point**	**1.62**	**67**	PN	Pn	06 03 24.6	-0.2
PXZ	**Pawanui**	**1.85**	**170**	PN	Pn	06 03 27.4	-0.1
PXZ				SN	Sn	06 03 52.4	-0.5
TSZ	**Takapari Road**	**1.89**	**191**	PN	Pn	06 03 27.1	-0.6
TSZ				SN	Sn	06 03 53.3	-0.2
BFZ	**Birch Farm**	**2.48**	**183**	PN	Pn	06 03 33.7	-1.2
MRZ	**Mangatainoka R**	**2.54**	**195**	PN	Pn	06 03 34.1	-1.5
TIWZ	**Tintock**	**2.60**	**189**	PN	Pn	06 03 35.0	-1.4
KIW	**Kapiti Island**	**2.90**	**203**	PN	Pn	06 03 38.0	-2.2
MTW	**Mount Morrison**	**3.03**	**193**	PN	Pn	06 03 39.5	-2.4
CAW	**Cannon Point**	**3.08**	**199**	PN	Pn	06 03 40.3	-2.2
MRW	**Makara Radio**	**3.30**	**203**	PN	Pn	06 03 42.7	-2.6
MSWZ	**Moikau Station**	**3.33**	**195**	PN	Pn	06 03 43.1	-2.6
TCW	**Tory Channel**	**3.43**	**208**	PN	Pn	06 03 44.1	-2.8
NNZ	**Nelson**	**3.82**	**217**	PN	Pn	06 03 49.3	-2.7
QRZ	**Quartz Range**	**3.99**	**228**	PN	Pn	06 03 51.0	-3.3
BSWZ	**Blackbirch Sta**	**4.01**	**208**	PN	Pn	06 03 51.4	-3.1
THZ	**Tophouse**	**4.46**	**216**	PN	Pn	06 03 57.2	-3.3
MQZ	**McQueen's Vall**	**6.19**	**206**	PN	Pn	06 04 18.0	-5.5
MQZ				SN	Sn	06 05 24.4	-8.8

IDC 05 06:11:15.0±3.9**, 19.72S×176.04W, h0km, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.7**/14**, mbtmp3.8**/2**, Error ellipse: s-maj=282.1km s-min=77.5km az=162.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.49**	**256**	P	P	06 19 44.0	-0.2
	0.9nm,0.6s,baz=94,slow=8.3,SNR=13						
ASAR				PcP	PcP	06 21 17.9	-1.0
	0.2nm,0.5s,baz=106,slow=3.5,SNR=4.8						
WRA	**Warramunga Arr**	**46.54**	**261**	P	P	06 19 45.0	+0.4
	0.4nm,0.2s,baz=96,slow=7.6,SNR=7.7						
AKASG	**Malin Array Be**	**143.19**	**333**	PKP	PKPdf	06 30 51.9	+1.0
	1.1nm,0.5s,baz=40,slow=3.9,SNR=9.7						

BJI 05 06:16:26.1, 39.25N×117.91E, h17km, ML3.5, 1C, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJI	**Beijing**	**1.56**	**301**	PG	Pg	06 16 53.2	-2.8
BJI				SG	Sg	06 17 12.8	-3.5
BJI				Smax			
	comp=N,440nm,0.5s						
BJI				Smax			
	comp=E,600nm,0.7s						
DL2	**Dalian**	**2.91**	**96**	P	Pn	06 17 11.3	-0.3
DL2				Smax			
	comp=N,80nm,0.8s						
DL2				Smax			
	comp=E,60nm,0.8s						
TIA	**Tai'an**	**3.10**	**192**	PG	Pg	06 17 22.8	-2.6
TIA				SG	Sg	06 18 02.4	-3.2
TIA				Smax			
	comp=N,86nm,0.4s						
TIA				Smax			
	comp=E,119nm,0.6s						
SNY	**Shenyang**	**5.03**	**57**	⇑PG	Pg	06 17 57.4	-4.9
SNY				SG	Sg	06 18 59.1	-8.3
SNY				Smax			
	comp=N,103nm,0.5s						
SNY				Smax			
	comp=E,64nm,0.5s						
LZH	**Lanzhou**	**11.59**	**259**	*e*P	Pn	06 19 11.3	+0.7
LZH				AP		06 19 16.0	
LZH				XP		06 19 19.0	

*IDC **05** 06:27:15.6±4.1, 35.12N×82.27E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.7/2, MS3.5/1, Ms1 3.5/1, ms1mx2.9/20, Error ellipse: s-maj=71.3km s-min=65.6km az=39.0*
*BJI **05** 06:27:25.5, 35.95N×83.25E, h25km, mb4.2, ML3.6*
ISC 05 06:27:24.5±4.7**, 35.5N**±0.2×**82.4E**±0.4**, h42**km±37km**, n5,** σ1s.**20**/6**, mb3.6**/3**, MS3.3**/1**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**11.27**	**360**	Pn	**Pn**	**06 30 02.6**	**-0.3**
	0.6nm,0.3s,baz=180,slow=12,SNR=20						
MKAR				Sn	**Sn**	**06 32 06.9**	**-0.5**
	0.0nm,0.3s,baz=180,slow=23,SNR=2.3						
ZALV	**Zalesovo Beam**	**18.51**	**4**	P	**Pn**	**06 31 39.0**	**+1.5**
	0.2nm,0.3s,baz=193,slow=12,SNR=3.9						
SONM	**Songino Array**	**21.64**	**48**	P	**P**	**06 32 11.3**	**+0.3**
	0.6nm,0.9s,mb3.0,baz=230,slow=11,SNR=3.3						
SONM				LR	LR	06 40 41.3	
	comp=Z,116nm,19.9s,MS3.3,baz=94,slow=37						
GYA	**Guiyang**	**22.62**	**107**	P	**P**	**06 32 21.3**	**-0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
YKA	**Yellowknife Ar**	**81.38**	**8**	P	**P**	**06 39 35.8**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.7,baz=338,slow=5.2,SNR=12						

*NDI **05** 06:32:50.2±2.2, 33.19N×82.09E, h10km, ML3.6, mb3.8(NEIC)*
*IDC **05** 06:32:51.3±1.0, 32.85N×81.58E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, MS3.4/4, Ms1 3.5/4, ms1mx3.2/29, Error ellipse: s-maj=34.6km s-min=22.2km az=53.0*
*NEIC **05** 06:32:53.8±0.6, 33.05N×81.50E, h10km, mb3.8/2, Error ellipse: s-maj=19.5km s-min=6.7km az=61.0*
*ISCJB **05** 06:32:56.3±0.9, 32.98N±0.05×81.58E±0.05, h48km±12km, mb3.6/9, MS3.5/3, Error ellipse: s-maj=8.6km s-min=6.9km az=0.9*
ISC 05 06:32:58.0±0.7**, 33.03N**±0.05×**81.62E**±0.05**, h45**km±10km**, n29,** σ1s.**04**/30**, mb3.6**/9**, MS3.5**/3**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**3.02**	**216**	*e*P	**Pn**	**06 33 44.9**	**+1.6**
JOSI				*e*S	**Sn**	**06 34 23.8**	**+5.6**
JOSI				AML	AML	06 34 36.1	
	comp=N,466nm,0.8s						
JOSI				AML	AML	06 34 36.4	
	comp=E,311nm,1.1s						
LGTI	**Lohaghat**	**3.75**	**199**	*e*P	**Pn**	**06 33 53.4**	**+0.1**
LGTI				*e*x	x	06 34 53.0	
SDNR	**Sundarnagar**	**4.22**	**250**	*e*P	**Pn**	**06 34 00.0**	**+0.3**
THN	**Thein Dam**	**5.01**	**265**	*e*P	**Pn**	**06 34 10.9**	**+0.4**
GKN	**Gorkha**	**5.64**	**152**	*e*P	**Pn**	**06 34 19.1**	**-0.2**
	comp=E,38nm,0.5s						
KKN	**Kakani**	**6.10**	**148**	*e*P	**Pn**	**06 34 25.3**	**-0.3**
	comp=E,47nm,0.6s						
SONA	**Sohna**	**6.16**	**221**	*e*S	**Sn**	**06 35 36.0**	**+0.5**
KUDL	**Kundal**	**6.57**	**224**	*e*P	**Pn**	**06 34 31.1**	**-1.0**
KUDL				*e*S	**Sn**	**06 35 46.5**	**+0.8**
AGRA	**Agra**	**6.59**	**210**	*e*S	**Sn**	**06 35 44.2**	**-2.0**
AGRA				AML	AML	06 35 51.5	
	comp=E,47nm,0.4s						
AGRA				AML	AML	06 35 52.2	
	comp=N,40nm,0.4s						
JIRN	**Jiri**	**6.65**	**142**	*e*P	**Pn**	**06 34 34.1**	**+1.0**
	comp=N,57nm,0.4s						
TAPN	**Taplejung**	**7.73**	**135**	*e*P	**Pn**	**06 34 47.6**	**-0.4**
	comp=N,77nm,0.5s						
ODAN	**Odare**	**7.93**	**139**	*e*P	**Pn**	**06 34 50.1**	**-0.5**
	comp=N,72nm,0.5s						
LSA	**Lhasa**	**8.80**	**110**	*e*Pn	**Pn**	**06 35 04.8**	**+2.3**
	comp=N,12nm,0.7s						
LSA				*e*Sn	**Sn**	**06 36 45.4**	**+5.0**
UCH	**Uchtor**	**10.77**	**331**	*e*Pn	**Pn**	**06 35 28.1**	**-1.3**
	comp=N,3.6nm,0.8s						
MKAR	**Makanchi Array**	**13.76**	**2**	Pn	**Pn**	**06 36 06.4**	**-3.8**
	comp=N,0.2nm,0.3s,baz=180,slow=11,SNR=14						
MKAR				LR	LR	06 42 28.4	
	comp=N,72nm,18.9s,baz=167,slow=41						
KURK	**Kurchatov**	**17.81**	**354**	*e*P	**Pn**	**06 37 01.9**	**-0.5**
	comp=N,4.6nm,0.8s						
CHTO	**Chiang Mai**	**21.01**	**128**	*e*P	**P**	**06 37 35.9**	**-1.9**
	comp=N,5.6nm,0.9s,mb3.9						
ZAA0	**Zalesovo Array**	**21.04**	**5**	*e*P	**P**	**06 37 38.1**	**+0.3**
ZALV	**Zalesovo Beam**	**21.04**	**5**	P	**P**	**06 37 38.2**	**+0.4**
	comp=N,7.9nm,0.9s,mb4.0,baz=198,slow=11,SNR=17						
ZALV				LR	LR	06 47 22.2	
	comp=N,46nm,19.6s,MS2.9,baz=195,slow=41						
SONM	**Songino Array**	**23.83**	**44**	P	**P**	**06 38 06.9**	**+0.1**
	comp=N,0.7nm,0.9s,mb3.1,baz=238,slow=8.5,SNR=5.1						
AKTK	**Aktyubinsk**	**24.59**	**322**	P	**P**	**06 38 13.5**	**-0.1**
AKTO	**Aktyubinsk**	**24.59**	**322**	P	**P**	**06 38 13.5**	**-0.1**
	comp=N,1.5nm,1.0s,mb3.5,baz=128,slow=6.8,SNR=5.0						
FINES	**FINESS Array B**	**45.24**	**326**	P	**P**	**06 41 11.8**	**+1.2**
	comp=N,0.9nm,0.6s,mb3.8,baz=116,slow=8.7,SNR=4.2						
GERES	**GERESS Array B**	**51.98**	**309**	LR	LR	07 07 07.0	
	comp=N,85nm,18.7s,MS3.8,baz=244,slow=40						
NOA	**NORSAR Array B**	**52.34**	**325**	LR	LR	07 05 37.9	
	comp=N,82nm,18.7s,MS3.8,baz=250,slow=38						
WRA	**Warramunga Arr**	**72.86**	**128**	P	**P**	**06 44 23.2**	**+0.9**
	comp=N,0.9nm,0.9s,mb3.7,baz=323,slow=5.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**74.58**	**276**	P	**P**	**06 44 32.0**	**-0.7**
	comp=N,0.3nm,0.6s,mb3.4,baz=49,slow=5.3,SNR=3.0						
ASAR	**Alice Springs**	**75.25**	**131**	P	**P**	**06 44 34.0**	**-2.2**
	comp=N,0.7nm,0.7s,mb3.7,baz=319,slow=5.0,SNR=4.7						
YKA	**Yellowknife Ar**	**83.92**	**7**	P	**P**	**06 45 24.2**	**+1.5**
	comp=N,0.2nm,0.4s,mb3.6,baz=339,slow=5.2,SNR=4.4						

BJI 05 06:37:30.1, 43.61N×94.03E, h27km, ML3.1, 4C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**6.04**	**132**	P	Pn	06 38 59.2	+1.6
GTA				PG	Pn	06 39 16.6	+19
GTA				S	Sn	06 40 05.0	-0.7
GTA				SG	Sn	06 40 32.7	+27
GTA				Smax			
	comp=N,18nm,0.7s						
GTA				Smax			
	comp=E,13nm,0.7s						
MK31	**Makanchi Array**	**8.88**	**295**	⇑Pn	Pn	06 39 39.5	+3.0
	comp=E,0.4nm,0.3s,baz=102,slow=15,SNR=12						
MK31				⇑Sn	Sn	06 41 17.9	+2.4
	comp=E,1.6nm,0.7s,baz=99,slow=26,SNR=4.7						
MK31				⇑Lg		06 42 07.0	
	comp=E,1.6nm,0.6s,baz=114,slow=30,SNR=3.5						
KURK	**Kurchatov**	**12.65**	**310**	⇑Lg		06 43 58.5	
	comp=E,3.3nm,1.4s						

*IDC **05** 06:54:22.0±0.9, 0.01N×127.54E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/19, mbtmp4.1/10, ML3.5/1, Error ellipse: s-maj=49.1km s-min=16.1km az=68.0*
*ISCJB **05** 06:54:25.2±0.7, 0.0N±0.1×127.8E±0.2, h33km, mb4.6/14, Error ellipse: s-maj=34.1km s-min=8.8km az=156.8*
*NEIC **05** 06:54:26.9±0.6, 0.03S×127.56E, h30km, mb4.8/2, Error ellipse: s-maj=32.0km s-min=9.3km az=69.0*
ISC 05 06:54:27.7±0.7**, 0.0S**±0.1×**127.7E**±0.2**, h35km, n23,** σ0s.**92**/21**, mb4.6**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.10**	**186**	P	**Pn**	**06 58 35.6**	**-0.8**
	0.1nm,0.3s,baz=252,slow=22,SNR=2.6						
WRA	**Warramunga Arr**	**20.85**	**162**	P	**P**	**06 59 06.8**	**+0.1**
	2.2nm,0.6s,baz=340,slow=10,SNR=11						
WB2	**Warramunga Arr**	**20.85**	**162**	*e*P	**P**	**06 59 07.4**	**+0.7**
ASAR	**Alice Springs**	**24.27**	**166**	P	**P**	**06 59 42.0**	**+0.3**
	1.0nm,0.4s,mb3.6,baz=346,slow=13,SNR=26						
ASAR				PcP	PcP	07 03 20.8	-0.7
	0.5nm,0.9s,baz=342,slow=1.9,SNR=4.2						
PSI	**Prapat**	**28.92**	**276**	P	**P**	**07 00 21.3**	**-2.5**
PSI	**Prapat**	**28.92**	**276**	P	**P**	**07 00 21.3**	**-2.5**
	2.8nm,0.5s,mb4.2,baz=104,slow=4.2,SNR=5.5						
STKA	**Stephens Creek**	**34.31**	**159**	P	**P**	**07 01 11.2**	**+0.2**
	0.9nm,0.6s,mb3.9,baz=360,slow=10.0,SNR=2.9						
LSA	**Lhasa**	**45.67**	**314**	*e*P	**P**	**07 02 47.3**	**+2.0**
	8.8nm,0.6s,mb4.9						
TAPN	**Taplejung**	**47.06**	**309**	*e*P	**P**	**07 02 56.9**	**+0.7**
	17nm,0.4s,mb5.3						
ODAN	**Odare**	**47.08**	**308**	*e*P	**P**	**07 02 57.1**	**+0.7**
	28nm,0.7s,mb5.3						
JIRN	**Jiri**	**48.40**	**308**	*e*P	**P**	**07 03 07.5**	**+0.9**
	47nm,0.4s						
KKN	**Kakani**	**49.17**	**308**	*e*P	**P**	**07 03 13.0**	**+0.4**
	25nm,0.4s,mb5.6						
GKN	**Gorkha**	**49.78**	**308**	*e*P	**P**	**07 03 17.5**	**+0.3**
	25nm,0.6s,mb5.4						
SONM	**Songino Array**	**51.13**	**342**	P	**P**	**07 03 26.5**	**-0.6**
	0.8nm,0.6s,mb3.8,baz=153,slow=7.4,SNR=5.4						
MK31	**Makanchi Array**	**61.18**	**326**	*e*P	**P**	**07 04 39.4**	**+0.6**
MKAR	**Makanchi Array**	**61.18**	**326**	P	**P**	**07 04 39.1**	**+0.3**
	2.2nm,0.5s,mb4.5,baz=118,slow=8.7,SNR=41						
ZALV	**Zalesovo Beam**	**64.35**	**333**	P	**P**	**07 04 58.8**	**-1.0**
	0.7nm,0.5s,mb4.0,baz=116,slow=3.4,SNR=5.4						
KURK	**Kurchatov**	**65.41**	**328**	*e*P	**P**	**07 05 06.8**	**0.0**
	7.0nm,0.8s,mb4.7						
AKTK	**Aktyubinsk**	**77.19**	**322**	P	**P**	**07 06 17.2**	**-0.7**
AKTO	**Aktyubinsk**	**77.19**	**322**	P	**P**	**07 06 17.2**	**-0.8**
	1.5nm,0.6s,mb4.1,baz=105,slow=13						
ARCES	**ARCESS Array B**	**94.27**	**340**	P	**P**	**07 07 41.4**	**-1.7**
	5.0nm,1.0s,mb4.9,baz=74,slow=5.4,SNR=6.0						
TORD	**Torodi Ar. Bea**	**124.95**	**286**	PKP	PKPdf	07 13 23.5	-1.7
TORD	**Torodi Ar. Bea**	**124.95**	**286**	PKP	PKPdf	07 13 23.5	-1.7
	0.3nm,0.4s,baz=53,slow=1.6,SNR=9.5						

*ISCJB **05** 07:28:58.7±0.5, 69.53N±0.04×15.8W±0.2, h10km, mb3.9/14, MS3.5/8, Error ellipse: s-maj=8.6km s-min=4.1km az=28.3*
*IDC **05** 07:28:59.3±0.7, 69.68N×15.72W, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.9/24, mbtmp3.9/14, ML3.1/3, MS3.6/10, Ms1 3.6/10, ms1mx3.3/39, Error ellipse: s-maj=22.8km s-min=14.1km az=14.0*
*CSEM **05** 07:28:59.3±0.2, 69.47N×15.06W, h10km, ML3.6, Error ellipse: s-maj=7.9km s-min=2.1km az=126.0*
*NEIC **05** 07:29:00.8±0.4, 69.64N×15.66W, h10km, mb4.1/3, Error ellipse: s-maj=10.0km s-min=7.7km az=175.0*
*REY **05** 07:29:04.8, 69.09N×14.89W, h5km, ML2.9, ML3.6*
*SZGRF **05** 07:29:11.0, 70.30N×10.75W, h33km, mb4.0, Jan Mayen Island region*
ISC 05 07:29:00.4±0.4**, 69.52N**±0.03×**15.9W**±0.1**, h10km, n55,** σ1s.**07**/55**, mb3.9**/14**, MS3.5**/8**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**2.90**	**56**	Pn	**Pn**	**07 29 41.3**	**-5.2**
	17nm,0.3s,baz=293,slow=7.7,SNR=3.5						
JMIC				Sn	**Sn**	**07 30 13.2**	**-8.2**
	13nm,0.3s,baz=152,slow=17,SNR=3.8						
IGRI	**Grimsey**	**3.10**	**196**	P	**Pn**	**07 29 50.1**	**+0.8**
IGRI				S	**Sn**	**07 30 24.9**	**-1.4**
ILEI	**Leirhofn**	**3.14**	**185**	P	**Pn**	**07 29 49.3**	**-0.5**
IGIL	**Gilhagi**	**3.47**	**183**	P	**Pn**	**07 29 53.7**	**-0.6**
IHED	**Heoinshofoi**	**3.50**	**190**	P	**Pn**	**07 29 55.1**	**+0.3**
IHED				S	**Sn**	**07 30 34.9**	**-1.3**
ISIG	**Siglufjorour**	**3.60**	**200**	P	**Pn**	**07 29 57.5**	**+1.4**
ISIG				S	**Sn**	**07 30 37.9**	**-0.6**
IGRA	**Granastaoir**	**3.68**	**191**	P	**Pn**	**07 29 57.8**	**+0.6**
IGRA				S	**Sn**	**07 30 40.1**	**-0.5**
IHLA	**Hella**	**3.72**	**196**	P	**Pn**	**07 29 59.2**	**+1.4**
IHLA				S	**Sn**	**07 30 40.7**	**-0.9**
IKVO	**Krokottuvotn**	**3.85**	**186**	P	**Pn**	**07 30 00.0**	**+0.5**
IGRS	**Grimsstaoir**	**3.90**	**182**	P	**Pn**	**07 30 00.0**	**-0.3**
IREN	**Reynihlio**	**3.91**	**186**	P	**Pn**	**07 30 00.9**	**+0.4**
ISVA	**Svartarkot**	**4.24**	**188**	P	**Pn**	**07 30 05.7**	**+0.8**
IGLU	**Glumsstadir**	**4.57**	**176**	P	**Pn**	**07 30 08.9**	**-0.6**
BORG	**Borgarnes**	**5.25**	**206**	Pn	**Pn**	**07 30 22.3**	**+3.6**
	3.7nm,0.3s,baz=24,slow=14,SNR=14						
DAG	**Danmarks Havn**	**7.33**	**355**	*i* P	**Pn**	**07 30 44.0**	**-3.3**
SPB4	**Spitsbergen Ar**	**12.23**	**31**	*e*Pn	**Pn**	**07 31 53.5**	**-0.8**
SPB4	**Spitsbergen Ar**	**12.23**	**31**	*e*Pn	**Pn**	**07 31 53.5**	**-0.8**
SFJD	**Kangerlussuaq**	**13.00**	**275**	Sn	**Sn**	**07 34 28.2**	**-1.2**
	0.4nm,0.3s,baz=354,slow=14,SNR=2.2						
NOA	**NORSAR Array B**	**14.03**	**114**	LR	LR	07 36 33.5	
	comp=Z,145nm,19.8s,baz=330,slow=32						
ARCES	**ARCESS Array B**	**14.28**	**70**	Pn	**Pn**	**07 32 23.5**	**+1.2**
ARCES	**ARCESS Array B**	**14.28**	**70**	Pn	**Pn**	**07 32 23.5**	**+1.2**
	0.1nm,0.3s,baz=332,slow=15,SNR=2.9						
EKA	**Eskdalemuir Ar**	**15.35**	**152**	Pn	**Pn**	**07 32 44.1**	**+7.3**
	baz=332,slow=9.9,SNR=4.0						
HFS	**Hagfors**	**15.52**	**113**	Pn	**Pn**	**07 32 38.7**	**-0.2**
	0.1nm,0.3s,baz=328,slow=14,SNR=3.8						
HFS				LR	LR	07 37 15.0	
	comp=Z,204nm,20.4s,baz=250,slow=32						
KAF	**Kangasniemi**	**18.43**	**93**	*e*p	**Pn**	**07 33 13.9**	**-1.6**
	baz=314,slow=11						
FINES	**FINESS Array B**	**18.80**	**95**	P	**Pn**	**07 33 17.8**	**-2.3**
FINES	**FINESS Array B**	**18.80**	**95**	P	**Pn**	**07 33 17.8**	**-2.3**
	0.1nm,0.3s,baz=336,slow=13,SNR=13						
JOF	**Joensuu**	**19.66**	**86**	*e*p	**Pn**	**07 33 26.9**	**-3.5**
	9.1nm,0.8s						
CLL	**Collm**	**22.77**	**128**	*i* P	**P**	**07 34 04.5**	**+2.0**
	comp=Z,16nm,1.2s,mb4.3						
GRA1	**Grafenberg Arr**	**23.76**	**133**	*e*P	**P**	**07 34 14.0**	**+1.4**
	comp=Z,5.0nm,1.0s,mb3.9						
GRF	**Grafenberg Arr**	**23.76**	**133**	*e*P	**P**	**07 34 14.0**	**+1.4**
	comp=Z,5.0nm,1.0s,mb3.9						
GERES	**GERESS Array B**	**25.19**	**130**	P	**P**	**07 34 26.8**	**+1.1**
	comp=Z,4.1nm,0.9s,mb3.9,baz=333,slow=8.1,SNR=16						
GERES				LR	LR	07 44 11.0	
	comp=Z,92nm,19.1s,MS3.3,baz=260,slow=36						
VRAC	**Vranov**	**25.58**	**126**	LR	LR	07 44 23.7	
	comp=Z,165nm,19.0s,MS3.6,baz=163,slow=36						
DAVOX	**Davos/Dischmat**	**26.13**	**137**	LR	LR	07 45 29.3	
	comp=Z,124nm,20.7s,MS3.4,baz=148,slow=38						
SCHQ	**Schefferville**	**26.91**	**263**	P	**P**	**07 34 42.1**	**+0.9**
	comp=Z,1.4nm,0.9s,mb3.5,baz=54,slow=11,SNR=3.6						
SCHQ				LR	LR	07 44 05.2	
	comp=Z,99nm,19.5s,MS3.4,baz=331,slow=34						
AKASG	**Malin Array Be**	**28.32**	**108**	P	**P**	**07 34 52.6**	**-1.2**
	comp=Z,2.5nm,0.8s,mb3.9,baz=331,slow=9.5,SNR=6.1						
INK	**Inuvik**	**36.08**	**326**	LR	LR	07 53 31.0	
	comp=Z,87nm,18.1s,MS3.6,baz=174,slow=41						
YKA	**Yellowknife Ar**	**36.47**	**309**	P	**P**	**07 36 04.1**	**-0.8**
YKA	**Yellowknife Ar**	**36.47**	**309**	P	**P**	**07 36 04.1**	**-0.8**
	comp=Z,0.9nm,0.8s,mb3.8,baz=35,slow=7.8,SNR=13						
YKA				LR	LR	07 50 37.2	
	comp=Z,45nm,18.9s,MS3.3,baz=220,slow=36						
AKTK	**Aktyubinsk**	**38.55**	**80**	P	**P**	**07 36 22.2**	**-0.5**
AKTK	**Aktyubinsk**	**38.55**	**80**	P	**P**	**07 36 22.2**	**-0.5**
AKTO	**Aktyubinsk**	**38.55**	**80**	P	**P**	**07 36 22.2**	**-0.5**
	comp=Z,2.9nm,1.0s,mb4.0,baz=310,slow=7.6,SNR=6.0						
AKTO				LR	LR	07 51 03.7	
	comp=Z,55nm,19.2s,MS3.4,baz=18,slow=34						
BRTR	**Keskin Array B**	**39.46**	**113**	P	**P**	**07 36 31.3**	**+0.9**
	comp=Z,1.5nm,1.0s,mb3.7,baz=2.5,slow=8.7,SNR=3.8						
KURK	**Kurchatov**	**45.17**	**63**	*e*P	**P**	**07 37 17.0**	**+0.3**
	comp=Z,3.4nm,0.9s,mb4.2						
KURK	**Kurchatov**	**45.17**	**63**	*e*P	**P**	**07 37 17.0**	**+0.3**
MK31	**Makanchi Array**	**49.78**	**63**	*e*P	**P**	**07 37 52.1**	**-0.5**
MK31	**Makanchi Array**	**49.78**	**63**	*e*P	**P**	**07 37 52.1**	**-0.5**
MKAR	**Makanchi Array**	**49.78**	**63**	P	**P**	**07 37 52.4**	**-0.2**
MKAR	**Makanchi Array**	**49.78**	**63**	P	**P**	**07 37 52.4**	**-0.2**
	comp=Z,2.2nm,0.9s,mb4.2,baz=342,slow=5.7,SNR=13						
PDAR	**Pinedale Array**	**51.93**	**291**	P	**P**	**07 38 09.0**	**+0.2**
	comp=Z,0.7nm,0.6s,mb3.8,baz=40,slow=5.4,SNR=7.5						
SONM	**Songino Array**	**55.59**	**44**	P	**P**	**07 38 36.3**	**+0.7**
	comp=Z,0.3nm,0.8s,mb3.4,baz=341,slow=3.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**57.43**	**160**	P	**P**	**07 38 50.3**	**+1.4**
	comp=Z,1.8nm,1.0s,mb4.0,baz=335,slow=4.5,SNR=7.1						
TXAR	**Lajitas Array**	**62.09**	**279**	P	**P**	**07 39 22.5**	**+1.5**
TXAR	**Lajitas Array**	**62.09**	**279**	P	**P**	**07 39 22.5**	**+1.5**
	comp=Z,0.4nm,0.7s,mb3.6,baz=64,slow=2.9,SNR=4.5						
TXAR				LR	LR	08 06 12.6	
	comp=Z,115nm,19.1s,MS4.1,baz=0.0,slow=36						
WRA	**Warramunga Arr**	**127.21**	**36**	PKP	PKPdf	07 48 04.3	-0.2
	comp=Z,0.3nm,0.8s,baz=332,slow=2.5,SNR=4.5						
ASAR	**Alice Springs**	**130.72**	**38**	PKP	PKPdf	07 48 11.1	+0.1
	comp=Z,0.3nm,0.6s,baz=354,slow=2.0,SNR=7.1						

IDC ***05*** *07:36:52.8±0.9, 14.19N×91.26W, h54km±5km, mb4.0/9, mb1 4.3/13, mb1mx4.0/23, mbtmp4.1/13, MS3.8/18, Ms1 3.8/18, ms1mx3.6/32, Error ellipse: s-maj=27.2km s-min=9.8km az=42.0*

ISCJB ***05*** *07:36:52.8±0.3, 14.08N±0.03×91.45W±0.02, h60km±3km, mb4.3/28, Error ellipse: s-maj=6.4km s-min=2.7km az=29.8*

BJI ***05*** *07:36:53.4, 14.00N×91.40W, h63km, mB5.0, Ms4.6, Msz4.4*

MEX ***05*** *07:36:53.3±1.8, 13.95N×91.41W, h120km±229km, MD5.0*

NEIC ***05*** *07:36:53.5±0.4, 13.96N×91.42W, mb4.4/30, Error ellipse: s-maj=8.5km s-min=5.1km az=201.0*

CASC ***05*** *07:36:54.3±2.8, 13.96N×91.43W, h30km±23km, MD4.5, ML3.9, mb4.4(NEIC)*

ISC 05 07:36:54.6±0.3**, 14.09N**±0.03×**91.44W**±0.02**, h60**km±2km**, h63**km±2.4km**:pP-P, n375,** σ0s**.87**/366**, mb4.3**/28**, MS3.8**/18**, 83C-79D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	**Jato**	**0.30**	**321**	⇑*i*P	**Pn**	**07 37 04.7**	**0.0**
FUG	**Fuego 3**	**0.68**	**58**	⇓*i*P	**Pn**	**07 37 09.2**	**+0.6**
PCG	**Pacaya**	**0.86**	**69**	*e*P	**Pn**	**07 37 11.8**	**+0.9**
RTR	**El Retiro**	**1.75**	**96**	⇑*e*P	x	07 37 58.8	
RTR				*e*S	x	07 38 20.6	
SBLS	**San Blas**	**1.78**	**98**	⇑*e*P	x	07 37 58.4	
SBLS				*e*S	x	07 38 20.9	
SNJE	**San Jose**	**1.80**	**97**	⇑*e*P	x	07 37 59.0	
SNJE				*e*S	x	07 38 22.2	
BOQS	**Boqueron**	**2.13**	**99**	⇑*e*P	x	07 38 03.7	
BOQS				*e*S	x	07 38 29.4	
PICS	**Picacho**	**2.15**	**99**	*e*P	x	07 38 03.6	
PICS				*e*S	x	07 38 29.6	
SNET	**Serv Nac Est T**	**2.18**	**100**	*e*P	x	07 37 27.3	
CCIG	**Comitan**	**2.29**	**343**	*i* P	**Pn**	**07 37 31.4**	**+1.4**
CCIG				*i* S	**Sn**	**07 37 60.0**	**+3.1**
LFU	**La Fuente**	**2.29**	**98**	*e*P	x	07 38 05.5	
LFU				*e*S	x	07 38 35.6	
LCBS	**La Ceiba**	**2.43**	**100**	*e*P	x	07 38 07.5	
LCBS				*e*S	x	07 38 36.3	
SNVI	**San Vicente**	**2.57**	**100**	⇓*e*P	x	07 38 09.9	
SNVI				*e*S	x	07 38 42.1	
SCX	**San Cristobal**	**2.88**	**337**	*i* P	**Pn**	**07 37 38.5**	**+0.5**
SCX				*i* S	**Sn**	**07 38 15.0**	**+3.6**
VSM	**San Miguel**	**3.15**	**102**	*e*P	x	07 38 11.5	
VSM				*e*S	x	07 38 49.6	
CNCH	**Conchagua**	**3.60**	**102**	⇓*e*P	x	07 38 23.3	
CNCH				*e*S	x	07 39 04.8	
TGUH	**Tegucigalpa,Un**	**4.05**	**90**	*e*Pn	**Pn**	**07 37 53.3**	**-0.8**
TGUH				*e*Sn	**Sn**	**07 38 36.0**	**-4.1**
CMIG	**Matias Romero**	**4.46**	**312**	*i* P	**Pn**	**07 37 59.0**	**-0.7**
CMIG				S	**Sn**	**07 38 49.2**	**-1.3**
CMIG				*i* S	**Sn**	**07 38 49.6**	**-0.8**
CMIG	**Matias Romero**	**4.46**	**312**	P	**Pn**	**07 37 58.5**	**-1.3**
	24nm,0.3s,baz=117,slow=9.2,SNR=150						
CMIG				S	**Sn**	**07 38 49.2**	**-1.3**
	67nm,0.3s,baz=74,slow=20,SNR=11						
CMIG				LR	LR	07 40 03.6	
	comp=Z,1µm,21.1s,baz=283,slow=42						
CMIG	**Matias Romero**	**4.46**	**312**	*i* P	**Pn**	**07 37 59.0**	**-0.7**
CMIG				*i* S	**Sn**	**07 38 49.6**	**-0.8**
TEL3	**Telica 3**	**4.72**	**108**	*e*P	**Pn**	**07 38 02.6**	**-0.7**
TELN	**Telica**	**4.72**	**108**	*e*P	**Pn**	**07 38 04.8**	**+1.4**
TELN				*e*S	**Sn**	**07 39 00.3**	**+3.4**
HUIG	**Huatulco**	**4.81**	**291**	*i* P	**Pn**	**07 38 03.6**	**-0.9**
HUIG				*i* S	**Sn**	**07 38 58.0**	**-0.9**
SCIG	**Sabancuy**	**4.86**	**3**	*i* P	**Pn**	**07 38 04.4**	**-0.8**
SCIG				*i* S	**Sn**	**07 38 59.8**	**-0.4**
TUIG	**Tuzandepetl**	**4.86**	**324**	*i* S	**Sn**	**07 38 59.7**	**-0.5**
MOMJ	**Momotombo**	**5.06**	**109**	*e*P	**Pn**	**07 38 07.8**	**-0.1**
COPN	**Copaltepe**	**5.09**	**111**	*e*P	**Pn**	**07 38 07.2**	**-1.2**
XAVN	**Gruta Xavier**	**5.34**	**111**	⇓*e*P	**Pn**	**07 38 11.5**	**-0.4**
TISN	**Laguna Tiscapa**	**5.40**	**110**	*e*P	**Pn**	**07 38 12.8**	**+0.2**
MGAN	**Managua**	**5.42**	**110**	⇑*e*P	**Pn**	**07 38 12.8**	**0.0**
MGAN				*i*		07 39 23.4	
	comp=E,210nm,0.7s						
HUEN		**5.42**	**108**	*e*P	**Pn**	**07 38 11.6**	**-1.3**
TICN	**Ticuantepe**	**5.47**	**111**	⇓*e*P	**Pn**	**07 38 13.9**	**+0.3**
TICN				*e*S	**Sn**	**07 39 16.4**	**+1.1**
APON	**Apoyo**	**5.67**	**112**	⇓*e*P	**Pn**	**07 38 14.8**	**-1.4**
APON				*e*S	**Sn**	**07 39 22.2**	**+2.2**
OXX	**Oaxaca**	**5.90**	**301**	*e*P	**Pn**	**07 38 19.5**	**+0.1**
VHO	**Vista Hermosa**	**5.90**	**301**	*i* P	**Pn**	**07 38 20.1**	**+0.6**
VHO				*i* S	**Sn**	**07 39 24.3**	**-1.4**
TEIG	**Tepich**	**6.81**	**26**	*e*Pn	**Pn**	**07 38 32.9**	**+0.8**
TEIG				*e*		07 38 41.6	
TEIG	**Tepich**	**6.81**	**26**	P	**Pn**	**07 38 32.5**	**+0.5**
	comp=E,123nm,0.3s,baz=216,slow=2.6,SNR=445						
TEIG				S	**Sn**	**07 39 48.8**	**+0.6**
	comp=E,22nm,0.3s,baz=226,slow=23,SNR=5.7						
TPIG	**Tehuac#an**	**7.13**	**308**	*e*P	**Pn**	**07 38 34.9**	**-1.5**
TPIG				*i* S	**Sn**	**07 39 52.8**	**-3.2**
UTMO	**Huajuapan**	**7.16**	**302**	*i* P	**Pn**	**07 38 36.3**	**-0.5**
UTMO				*i* S	**Sn**	**07 39 54.4**	**-2.3**
JTS	**JuntasAbangare**	**7.38**	**120**	*e*Pn	**Pn**	**07 38 39.8**	**+0.1**
JTS				*e*Sn	**Sn**	**07 40 02.9**	**+0.8**
JTS	**JuntasAbangare**	**7.38**	**120**	P	**Pn**	**07 38 38.6**	**-1.1**
	comp=E,3.1nm,0.3s,baz=315,slow=19,SNR=23						
JTS				S	**Sn**	**07 40 06.3**	**+4.1**
	comp=E,1.3nm,0.3s,baz=292,slow=22,SNR=2.7						
JCR	**Jicaral**	**7.49**	**124**	*e*P	**Pn**	**07 38 41.5**	**+0.3**
PRS1	**Puriscal**	**8.08**	**120**	*e*P	**Pn**	**07 38 50.3**	**+0.9**
LAJ	**Bijagual**	**8.30**	**120**	*e*P	**Pn**	**07 38 49.5**	**-2.8**
LCR2	**La Lucha 2**	**8.46**	**120**	*e*P	**Pn**	**07 38 55.1**	**+0.6**
PPM	**Popocatepetl**	**8.48**	**307**	*i* P	**Pn**	**07 38 56.2**	**+1.3**
PPM				*i* S	**Sn**	**07 40 30.9**	**+1.8**
QCR	**Quepos**	**8.50**	**122**	*e*P	**Pn**	**07 38 55.6**	**+0.5**
URSC	**Urasca**	**8.61**	**119**	*e*P	**Pn**	**07 38 57.2**	**+0.7**
ACX	**Acapulco**	**8.62**	**290**	*e*P	**Pn**	**07 38 54.5**	**-2.3**
MEIG	**Mezcala**	**8.74**	**297**	*i* P	**Pn**	**07 38 58.1**	**-0.2**
MEIG				*e*S	**Sn**	**07 40 32.6**	**-2.9**
PLIG	**Platanillo**	**8.85**	**300**	*i* P	**Pn**	**07 38 59.8**	**0.0**
PLIG				*i* S	**Sn**	**07 40 30.1**	**-7.9**
PLIG	**Platanillo**	**8.85**	**300**	*i* P	**Pn**	**07 38 59.8**	**0.0**
PLIG				*i* S	**Sn**	**07 40 37.7**	**-0.3**
IIO	**Organos**	**8.86**	**309**	*i* P	**Pn**	**07 39 02.3**	**+2.3**
IIO				*i* S	**Sn**	**07 40 40.9**	**+2.5**
CAIG	**El Cayaco**	**9.00**	**290**	*i* P	**Pn**	**07 38 59.6**	**-2.3**
PTVM	**Pico Tres Padr**	**9.16**	**308**	*i* P	**Pn**	**07 39 03.2**	**-0.9**
PTVM				*i* S	**Sn**	**07 40 40.9**	**-4.8**
SZVM	**Salazar**	**9.22**	**305**	*i* P	**Pn**	**07 38 59.9**	**-5.0**
SZVM				*i* S	**Sn**	**07 40 42.5**	**-4.6**
BAR1		**9.30**	**120**	⇑*e*P	**Pn**	**07 39 07.1**	**+1.0**
MOIG	**Morelia**	**10.86**	**302**	*i* P	**Pn**	**07 39 28.6**	**+1.3**
SOR	**Soroa**	**11.79**	**42**	*e*P	**Pn**	**07 39 39.6**	**-0.4**
MMIG	**Aquila**	**12.17**	**292**	*i* P	**Pn**	**07 39 39.4**	**-5.9**
LNIG	**Linares**	**13.14**	**326**	*i* P	**Pn**	**07 39 54.5**	**-4.0**
MGV	**Manicaragua**	**13.50**	**52**	*e*P	**Pn**	**07 40 02.1**	**-1.2**
ZAIG	**Zacatecas**	**13.63**	**311**	*i* P	**Pn**	**07 40 05.4**	**+0.2**
ANIG	**Ahuacatlan**	**14.26**	**301**	*i* P	**Pn**	**07 40 13.1**	**-0.4**
HKT	**Hockley**	**16.30**	**346**	*e*P	**Pn**	**07 40 40.2**	**+0.5**
	comp=E,16nm,1.3s						
DWPF	**Disney**	**16.78**	**32**	*e*P	**Pn**	**07 40 46.8**	**+1.1**
	comp=E,157nm,1.4s						
NATX	**Nacogdoches**	**17.84**	**351**	*e*P	**Pn**	**07 40 59.8**	**+1.1**
	comp=E,30nm,1.0s						
NATX				*e*		07 41 13.6	
JCT	**Junction City**	**18.04**	**336**	*e*Pn	**Pn**	**07 41 00.7**	**-0.5**
LTX	**Lajitas**	**18.93**	**325**	*e*P	**Pn**	**07 41 11.5**	**-0.4**
	comp=E,8.1nm,0.8s						
TXAR	**Lajitas Array**	**18.93**	**325**	P	**Pn**	**07 41 11.4**	**-0.5**
TXAR				PcP	PcP	07 45 33.7	-1.0
TXAR				ScP	ScP	07 49 06.4	+0.9
TXAR	**Lajitas Array**	**18.93**	**325**	P	**Pn**	**07 41 11.4**	**-0.5**
	comp=E,0.2nm,0.3s,baz=154,slow=12,SNR=58						
TXAR				PcP	PcP	07 45 33.7	-1.0
	comp=E,0.1nm,0.3s,baz=176,slow=3.0,SNR=4.0						
TXAR				ScP	ScP	07 49 06.4	+0.9
	comp=E,0.0nm,0.3s,baz=151,slow=2.6,SNR=19						
ROSC	**El Rosal**	**19.19**	**117**	P	**Pn**	**07 41 13.5**	**-1.6**
	comp=E,0.6nm,0.3s,baz=100,slow=19,SNR=14						
LRAL	**Lakeview Retre**	**19.29**	**11**	*e*P	**Pn**	**07 41 15.0**	**-1.2**
	comp=E,63nm,1.1s						
OXF	**Oxford**	**20.42**	**5**	*e*P	**P**	**07 41 29.1**	**+2.3**
	comp=E,73nm,1.2s						
MIAR	**Mount Ida**	**20.46**	**355**	*e*P	**P**	**07 41 27.3**	**0.0**
	comp=E,36nm,1.2s						
GOGA	**Godfrey**	**20.56**	**19**	*e*P	**P**	**07 41 28.4**	**0.0**
	comp=E,36nm,0.9s						
GOGA				*e*		07 41 45.3	
UALR	**University of**	**20.62**	**358**	*e*P	**P**	**07 41 28.6**	**-0.4**
	comp=E,55nm,1.3s						
PLAL	**Pickwick Lake**	**21.03**	**8**	P	**P**	**07 41 31.8**	**-1.6**
	comp=E,15nm,0.8s,mb4.4						
PLAL				*e*		07 41 46.7	
SDV	**Santo Domingo**	**21.03**	**102**	*e*P	**P**	**07 41 29.9**	**-3.8**
	comp=E,11nm,0.8s,mb4.2						
SDV	**Santo Domingo**	**21.03**	**102**	P	**P**	**07 41 29.5**	**-4.2**
	comp=E,6.7nm,0.6s,mb4.2,baz=319,slow=6.2,SNR=16						
SDV				LR	LR	07 50 00.8	
	comp=E,126nm,21.6s,MS3.3,baz=336,slow=38						
GDL2	**Guadalupe Moun**	**21.56**	**329**	*e*P	**P**	**07 41 39.2**	**+0.1**
WMOK	**Wichita Mounta**	**21.61**	**343**	*e*P	**P**	**07 41 39.2**	**-0.4**
	comp=E,5.4nm,0.9s,mb4.0						
WMOK				*e*		07 41 52.3	
WMOK				*e*S	**S**	**07 45 34.5**	**-1.1**
SWET	**Sewanee**	**21.62**	**12**	*e*P	**P**	**07 41 40.5**	**+0.7**
MNTX	**Cornudas Mount**	**21.69**	**326**	*e*P	**P**	**07 41 39.5**	**-1.1**
	comp=E,93nm,2.2s,mb4.8						
CPCT	**Cooper Cave**	**22.17**	**15**	*e*P	**P**	**07 41 44.5**	**-1.1**
TKL	**Tuckaleechee C**	**22.56**	**16**	P	**P**	**07 41 48.4**	**-1.3**
TKL	**Tuckaleechee C**	**22.56**	**16**	P	**P**	**07 41 48.4**	**-1.3**
	comp=E,8.9nm,0.7s,mb4.3,baz=200,slow=11,SNR=12						
TKL				LR	LR	07 51 30.6	
	comp=E,409nm,19.5s,MS3.9,baz=262,slow=39						
SIUC	**Southern Illin**	**23.62**	**4**	*e*P	**P**	**07 41 58.2**	**-2.0**
	comp=E,21nm,0.6s,mb4.7						
SIUC				*e*		07 42 09.9	
BNM	**Barren Site**	**24.25**	**328**	*e*P	**P**	**07 42 06.3**	**+0.2**
CNNC	**Cliffs of the**	**24.35**	**28**	*e*P	**P**	**07 42 05.4**	**-1.6**
LPM	**Los Pinos Moun**	**24.38**	**328**	*e*P	**P**	**07 42 07.5**	**+0.2**
LPM				*e*pP		07 42 19.1	
LENM	**Lemitar**	**24.45**	**328**	*e*P	**P**	**07 42 08.6**	**+0.8**
WCI	**Wyandotte Cave**	**24.48**	**10**	*e*P	**P**	**07 42 05.7**	**-2.4**
	comp=E,15nm,0.8s,mb4.5						
SJG	**San Juan**	**24.62**	**77**	LR	LR	07 51 05.9	
	comp=E,159nm,20.9s,MS3.5,baz=22,slow=35						
ATAH	**Atahualpa**	**24.63**	**147**	LR	LR	07 49 18.1	
	comp=E,76nm,21.9s,MS3.1,baz=333,slow=30						
LAZ	**Ladron**	**24.71**	**328**	*e*P	**P**	**07 42 10.8**	**+0.5**
ANMO	**Albuquerque**	**24.80**	**330**	*e*P	**P**	**07 42 10.7**	**-0.4**
	comp=E,1.9nm,0.6s,mb3.8						
ANMO	**Albuquerque**	**24.80**	**330**	P	**P**	**07 42 10.8**	**-0.3**
	comp=E,2.5nm,0.7s,mb3.8,baz=149,slow=11,SNR=16						
ANMO				ScP	ScP	07 49 20.8	+0.5
	comp=E,4.3nm,1.1s,baz=157,slow=5.9,SNR=6.1						
TUC	**Tucson**	**25.32**	**319**	*e*P	**P**	**07 42 16.2**	**+0.4**
116A	**Eloy**	**26.08**	**318**	⇑P	**P**	**07 42 22.0**	**-0.7**
	baz=26						
PCRV	**Puerto La Cruz**	**26.48**	**95**	LR	LR	07 53 44.4	
	comp=E,89nm,21.5s,MS3.3,baz=123,slow=38						
115A	**Sonoran Desert**	**26.50**	**318**	⇓P	**P**	**07 42 26.4**	**-0.1**
	baz=27						
Z14A	**Wintersburg**	**27.39**	**318**	⇑P	**P**	**07 42 34.4**	**-0.1**
	baz=28						
MVCO	**Mesa Verde**	**27.60**	**330**	*e*P	**P**	**07 42 36.6**	**+0.3**
MVCO	**Mesa Verde**	**27.60**	**330**	⇑P	**P**	**07 42 36.0**	**-0.3**
	baz=28						
X15A	**Humboldt**	**27.67**	**321**	⇑P	**P**	**07 42 38.2**	**+1.1**
	baz=28						
Y14A	**Wickenburg**	**27.79**	**319**	⇓P	**P**	**07 42 38.6**	**+0.5**
	baz=28						
WUAZ	**Wupatki**	**27.87**	**323**	*e*P	**P**	**07 42 39.5**	**+0.8**
	comp=E,43nm,2.0s,mb4.7						
WUAZ				*e*pP	pP	07 42 55.5	+2.0
WUAZ				*e*ScP	ScP	07 49 31.3	+2.1
WUAZ	**Wupatki**	**27.87**	**323**	⇑P	**P**	**07 42 38.4**	**-0.3**
	baz=28						
X14A	**Yava**	**28.07**	**320**	⇓P	**P**	**07 42 40.1**	**-0.4**
	baz=28						
Y13A	**Salome**	**28.25**	**318**	⇑P	**P**	**07 42 42.6**	**+0.5**
	baz=28						
PV01	**Paradox Valley**	**28.36**	**331**	*e*P	**P**	**07 42 44.1**	**+1.0**
GLA	**Glamis**	**28.45**	**316**	⇑P	**P**	**07 42 44.1**	**+0.1**
	baz=29						
Y12C	**Blythe**	**28.66**	**317**	⇑P	**P**	**07 42 45.7**	**-0.1**
	baz=29						
W14A	**Seligman**	**28.68**	**321**	⇓P	**P**	**07 42 46.2**	**+0.2**
	baz=29						
X13A	**Yucca**	**28.74**	**319**	⇑P	**P**	**07 42 46.4**	**-0.1**
	baz=29						
PDMCI	**Parker Dam,Lak**	**28.75**	**318**	⇓P	**P**	**07 42 46.8**	**+0.2**
	baz=29						
PV10	**Paradox Valley**	**28.78**	**330**	*e*P	**P**	**07 42 45.9**	**-0.9**
SWSC	**Sam W. Stewart**	**29.05**	**314**	⇓P	**P**	**07 42 49.1**	**-0.2**
	baz=29						
W13A	**Hualapai Mount**	**29.10**	**320**	⇓P	**P**	**07 42 49.9**	**+0.2**
	baz=29						
DVTC	**Desert V Tower**	**29.10**	**314**	P	**P**	**07 42 50.6**	**+0.8**
	baz=29,SNR=5.9						
BC3	**Big Chuckw Mtn**	**29.23**	**316**	P	**P**	**07 42 51.1**	**+0.3**
	baz=29,SNR=10.0						
IRM	**Iron Mountain**	**29.32**	**317**	⇓P	**P**	**07 42 52.4**	**+0.7**
	baz=29						
MONP	**Monument Peak**	**29.45**	**314**	⇑P	**P**	**07 42 52.7**	**-0.2**
	baz=30						
T15A	**Red Dirt Ranch**	**29.50**	**324**	⇑P	**P**	**07 42 53.8**	**+0.6**
	baz=30						
U14A	**Mt Trumbull**	**29.55**	**323**	⇑P	**P**	**07 42 54.5**	**+0.9**
	baz=30						
BELC	**Belle Mtn.**	**29.80**	**316**	⇓P	**P**	**07 42 55.7**	**-0.2**
	baz=30						
PFO	**Pinyon Flat Ob**	**29.88**	**315**	⇓P	**P**	**07 42 57.4**	**+0.8**
	baz=30						
T14A	**Hurricane**	**29.93**	**324**	P	**P**	**07 42 58.1**	**+1.0**
	baz=30,SNR=6.0						
109C	**Camp Elliot, M**	**29.94**	**313**	⇓P	**P**	**07 42 57.8**	**+0.7**
	baz=30						
U13A	**Pakoon Wash**	**30.01**	**322**	⇑P	**P**	**07 42 57.7**	**-0.1**
	baz=30						
GMRC	**Granite Mounta**	**30.03**	**318**	⇑P	**P**	**07 42 58.4**	**+0.5**
	baz=30						
SRU	**San Rafael**	**30.08**	**330**	*e*P	**P**	**07 42 58.5**	**+0.2**
SRU				*e*ScP	ScP	07 49 38.0	+1.8
V12A	**Nelson**	**30.10**	**320**	P	**P**	**07 42 59.1**	**+0.6**
	baz=30,SNR=13						
T13A	**Saint George**	**30.38**	**323**	⇓P	**P**	**07 43 01.0**	**-0.1**
	baz=30						
MSU	**Marysvale**	**30.47**	**327**	*e*P	**P**	**07 43 02.3**	**+0.5**
S14A	**Cedar City**	**30.47**	**325**	⇑P	**P**	**07 43 02.1**	**+0.3**
	baz=31						
HEC	**Hector,Ludlow**	**30.50**	**317**	⇓P	**P**	**07 43 02.9**	**+0.8**
	baz=31						
V11A	**Goodsprings**	**30.54**	**319**	⇑P	**P**	**07 43 02.9**	**+0.5**
	baz=31						
BBRC	**Big Bear Sol-O**	**30.57**	**316**	⇓P	**P**	**07 43 02.8**	**+0.1**
	baz=31						
TUQ	**Turquoise Mtn.**	**30.60**	**318**	⇑P	**P**	**07 43 02.2**	**-0.8**
	baz=31						
ARUT	**Antelope Range**	**30.64**	**324**	*e*P	**P**	**07 43 04.4**	**+1.1**
ARUT				*e*pP	pP	07 43 20.7	+2.6
S13A	**Holt Ranch, En**	**30.74**	**324**	P	**P**	**07 43 05.7**	**+1.5**
	baz=31,SNR=18						
R14A	**James Farms, M**	**30.77**	**326**	⇑P	**P**	**07 43 05.6**	**+1.2**
	baz=31						
BFSC	**Mount Baldy St**	**31.06**	**315**	⇑P	**P**	**07 43 06.8**	**-0.2**
	baz=31						
GSC	**Goldstone**	**31.10**	**317**	⇑P	**P**	**07 43 07.5**	**+0.1**
	baz=31						
T11A	**Corn Creek, Al**	**31.31**	**322**	⇑P	**P**	**07 43 10.0**	**+0.8**
	baz=31						
MPU	**Maple Canyon**	**31.32**	**329**	*e*P	**P**	**07 43 09.7**	**+0.4**
MPU				*e*ScP	ScP	07 49 42.2	+2.0
S12A	**Delamar Landin**	**31.33**	**323**	⇓P	**P**	**07 43 09.6**	**+0.2**
	baz=32						
DAU	**Daniels Canyon**	**31.44**	**330**	*e*P	**P**	**07 43 11.1**	**+0.8**
U10A	**Ash Meadows, A**	**31.47**	**319**	⇑P	**P**	**07 43 11.4**	**+0.8**
	baz=32						
EDW2	**Edwards Air Fo**	**31.65**	**316**	⇓P	**P**	**07 43 12.6**	**+0.4**
	baz=32						
R12A	**Pony Springs,**	**31.68**	**324**	⇓P	**P**	**07 43 13.9**	**+1.5**
	baz=32,SNR=8.4						
TPNV	**Topopah Spring**	**31.75**	**320**	*e*P	**P**	**07 43 14.3**	**+1.2**
	comp=E,6.4nm,1.0s,mb4.4						
TPNV	**Topopah Spring**	**31.75**	**320**	P	**P**	**07 43 14.4**	**+1.3**
	baz=32,SNR=5.9						
LRMC	**Laurel Mountai**	**31.79**	**317**	⇓P	**P**	**07 43 12.6**	**-0.8**
	baz=32						
FURC	**Furnace Creek,**	**31.84**	**319**	⇑P	**P**	**07 43 14.6**	**+0.8**
	baz=32						
MPMC	**Manual Prospec**	**32.00**	**318**	P	**P**	**07 43 15.8**	**+0.6**
	baz=32,SNR=6.9						
DUG	**Dugway**	**32.05**	**328**	*e*P	**P**	**07 43 16.2**	**+0.6**
	comp=E,6.7nm,1.4s,mb4.3						
DUG	**Dugway**	**32.05**	**328**	⇓P	**P**	**07 43 16.5**	**+0.9**
	baz=32						
R11A	**Troy Canyon, C**	**32.26**	**323**	⇑P	**P**	**07 43 18.7**	**+1.1**
	baz=32						
Q12A	**Willow Creek R**	**32.30**	**325**	⇑P	**P**	**07 43 18.4**	**+0.5**
	baz=32						
BSC	**Santa Cruz Isl**	**32.31**	**313**	⇓P	**P**	**07 43 18.4**	**+0.3**
	baz=32						
ARVC	**Arvin**	**32.36**	**315**	⇑P	**P**	**07 43 18.5**	**+0.1**
	baz=32						
ISA	**Isabella**	**32.41**	**316**	⇑P	**P**	**07 43 19.0**	**+0.1**
	baz=32						
GRAC	**Grapevine Rang**	**32.48**	**319**	P	**P**	**07 43 20.7**	**+1.2**
	baz=33,SNR=6.2						
HWUT	**Hardware Ranch**	**32.52**	**331**	*e*P	**P**	**07 43 19.5**	**-0.2**
	comp=E,3.8nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**32.57**	**335**	P	**P**	**07 43 19.0**	**-1.2**
	comp=E,0.4nm,0.7s,mb3.5,baz=136,slow=7.8,SNR=4.7						
PDAR				PcP	PcP	07 46 02.7	-2.8
	comp=E,0.5nm,0.8s,baz=126,slow=4.6,SNR=3.4						
PDAR				ScP	ScP	07 49 43.9	-0.6
	comp=E,1.5nm,1.0s,baz=134,slow=4.3,SNR=7.4						
S10A	**Tonopah Range,**	**32.58**	**321**	P	**P**	**07 43 21.5**	**+1.2**
	baz=33,SNR=6.1						
O13A	**Hicks Ranch, I**	**32.61**	**327**	⇑P	**P**	**07 43 20.8**	**+0.3**
	baz=33						
Q11A	**Duckwater**	**32.63**	**324**	P	**P**	**07 43 21.5**	**+0.7**
	baz=33,SNR=6.9						
P12A	**McGill**	**32.64**	**325**	⇓P	**P**	**07 43 21.7**	**+0.8**
	baz=33						
R10A	**Warm Springs**	**32.64**	**322**	⇑P	**P**	**07 43 21.4**	**+0.5**
	baz=33						
SPUT	**South Promonto**	**32.71**	**330**	*e*P	**P**	**07 43 21.9**	**+0.5**
N14A	**Grayback Hills**	**32.73**	**329**	P	**P**	**07 43 22.1**	**+0.6**
	baz=33,SNR=10						
M15A	**Larsen Ranch,**	**32.82**	**330**	P	**P**	**07 43 22.4**	**0.0**
	baz=33,SNR=5.6						
S09A	**Goldfield**	**32.84**	**321**	⇑P	**P**	**07 43 23.4**	**+0.7**
	baz=33						
Q10A	**Clear Creek Ra**	**33.05**	**323**	⇑P	**P**	**07 43 25.6**	**+1.1**
	baz=33,SNR=9.9						
R09A	**Tonopah**	**33.08**	**321**	⇑P	**P**	**07 43 25.1**	**+0.5**
	baz=33						
O12A	**Currie**	**33.11**	**326**	⇓P	**P**	**07 43 25.5**	**+0.5**
	baz=33						
P11A	**Circle Ranch,**	**33.17**	**324**	⇓P	**P**	**07 43 26.3**	**+0.8**
	baz=33						
HVU	**Hansel Valley**	**33.22**	**330**	*e*P	**P**	**07 43 26.3**	**+0.4**
N13A	**Wendover, West**	**33.25**	**328**	⇑P	**P**	**07 43 27.3**	**+1.2**
	baz=33						
RCTC	**Rector, Farmer**	**33.29**	**317**	P	**P**	**07 43 27.4**	**+0.8**
	baz=33,SNR=5.0						
M14A	**Sheep Mountain**	**33.29**	**329**	P	**P**	**07 43 26.7**	**+0.2**
	baz=33,SNR=24						
S08C	**White Mtn Res**	**33.30**	**319**	P	**P**	**07 43 27.5**	**+0.9**
	baz=33,SNR=5.7						
HELL	**Mitchell Peak,**	**33.36**	**317**	P	**P**	**07 43 27.7**	**+0.5**
	baz=34,SNR=6.5						
O11A	**Cowboy Ranch,**	**33.52**	**325**	⇑P	**P**	**07 43 29.6**	**+1.1**
	baz=34,SNR=9.0						
M13A	**Montello**	**33.60**	**328**	P	**P**	**07 43 29.4**	**+0.2**
	baz=34,SNR=14						
REDW	**Red Top Meadow**	**33.60**	**334**	*e*P	**P**	**07 43 28.8**	**-0.4**
	comp=E,11nm,1.0s,mb4.7						
P10A	**Eureka**	**33.62**	**324**	⇓P	**P**	**07 43 30.2**	**+0.8**
	baz=34						
N12A	**Clover Valley,**	**33.69**	**327**	⇑P	**P**	**07 43 30.8**	**+0.8**
	baz=34						
TPAW	**Teton Pass**	**33.75**	**334**	*e*P	**P**	**07 43 30.9**	**+0.5**
TPAW				*e*ScP	ScP	07 49 50.4	+1.9
MLAC	**Mammoth Lakes**	**33.80**	**319**	⇑P	**P**	**07 43 31.6**	**+0.7**
	baz=34						
KCC	**Kaiser Creek**	**33.92**	**318**	⇓P	**P**	**07 43 31.5**	**-0.6**
	baz=34						
NVAR	**Mina Array Bea**	**33.95**	**321**	P	**P**	**07 43 32.1**	**-0.1**
NVAR				pP	pP	07 43 45.4	-1.7
NVAR				PcP	PcP	07 46 09.0	-0.4
NVAR				ScP	ScP	07 49 49.8	+0.5
NVAR	**Mina Array Bea**	**33.95**	**321**	P	**P**	**07 43 32.1**	**-0.1**
	comp=E,3.8nm,0.7s,mb4.5,baz=129,slow=9.5,SNR=42						
NVAR				pP	pP	07 43 45.4	-1.7
	comp=E,14nm,0.8s,baz=122,slow=8.9,SNR=12						
NVAR				PcP	PcP	07 46 09.0	-0.4
	comp=E,1.6nm,0.7s,baz=118,slow=4.1,SNR=5.5						
NVAR				ScP	ScP	07 49 49.8	+0.5
	comp=E,2.2nm,0.9s,baz=127,slow=4.6,SNR=10						
PKD	**Parkfield**	**33.97**	**315**	⇑P	**P**	**07 43 32.5**	**0.0**
	baz=34						
Q08A	**Gabbs**	**33.99**	**321**	⇓P	**P**	**07 43 33.0**	**+0.4**
	baz=34						
T06C	**Millerton Lake**	**34.00**	**317**	⇓P	**P**	**07 43 31.5**	**-1.2**
	baz=34						
K14A	**Jones Ranch, D**	**34.00**	**331**	P	**P**	**07 43 32.5**	**-0.2**
	baz=34,SNR=9.9						
M12A	**Wells**	**34.03**	**328**	P	**P**	**07 43 33.1**	**+0.3**
	baz=34,SNR=11						
L13A	**Double Diamond**	**34.03**	**329**	P	**P**	**07 43 32.9**	**0.0**
	baz=34,SNR=6.2						
N11A	**Elko Archery C**	**34.03**	**326**	⇑P	**P**	**07 43 33.8**	**+0.8**
	baz=34						
V04C	**Ramage Ranch,**	**34.03**	**314**	⇑P	**P**	**07 43 33.6**	**+0.6**
	baz=34						
IMW	**Indian Meadow**	**34.07**	**334**	*e*P	**P**	**07 43 32.9**	**-0.3**
	comp=E,3.3nm,0.8s,mb4.3						
O10A	**Cortez Mining,**	**34.09**	**325**	⇓P	**P**	**07 43 34.6**	**+1.1**
	baz=34						
R07C	**Lee Vining**	**34.20**	**319**	⇓P	**P**	**07 43 34.9**	**+0.4**
	baz=34						
U04C	**Hernandez Rese**	**34.36**	**316**	⇑P	**P**	**07 43 35.8**	**0.0**
	baz=34						
O09A	**Fish Creek Ran**	**34.40**	**324**	⇑P	**P**	**07 43 36.6**	**+0.5**
	baz=34,SNR=5.4						
V03C	**Hunter Liggett**	**34.49**	**315**	⇓P	**P**	**07 43 37.6**	**+0.6**
	baz=35						
M11A	**Holland Ranch,**	**34.50**	**327**	P	**P**	**07 43 37.7**	**+0.7**
	baz=35,SNR=13						
K13A	**Stover Farm, H**	**34.52**	**330**	⇓P	**P**	**07 43 36.1**	**-1.0**
	baz=35						
S05C	**Merced**	**34.60**	**317**	⇑P	**P**	**07 43 38.2**	**+0.3**
	baz=35						
L12A	**House Creek Ra**	**34.61**	**328**	⇓P	**P**	**07 43 37.8**	**-0.1**
	baz=35						
WAKR	**Walker**	**34.70**	**320**	*e*P	**P**	**07 43 40.0**	**+1.2**
WAKR				*e*pP	pP	07 43 55.8	+2.2
R06C	**Coleville**	**34.72**	**320**	⇓P	**P**	**07 43 39.0**	**+0.1**
	baz=35						
HAST	**UC Hastings Re**	**34.90**	**315**	⇑P	**P**	**07 43 39.6**	**-1.0**
	baz=35						
K12A	**Draper Farm, C**	**34.91**	**329**	P	**P**	**07 43 40.8**	**+0.2**
	baz=35,SNR=6.4						
M10A	**I.L. Ranch, Tu**	**34.96**	**326**	P	**P**	**07 43 41.9**	**+0.9**
	baz=35,SNR=9.6						
CMB	**Columbia Colle**	**35.03**	**318**	*e*P	**P**	**07 43 41.4**	**-0.2**
	comp=E,3.6nm,1.3s,mb4.1						
CMB				*e*pP	pP	07 43 57.4	+0.9
N09A	**Rock Creek Ran**	**35.05**	**324**	⇑P	**P**	**07 43 43.1**	**+1.4**
	baz=35						
PACP	**Pacheco Peak**	**35.05**	**316**	⇑P	**P**	**07 43 41.5**	**-0.3**
	baz=35						
J13A	**Cove Ranch, Pi**	**35.13**	**331**	P	**P**	**07 43 42.2**	**-0.2**
	baz=35,SNR=5.9						
R05C	**Kirkwood Meado**	**35.22**	**319**	P	**P**	**07 43 44.5**	**+1.3**
	baz=35,SNR=5.6						
L10A	**Juniper Basin**	**35.31**	**327**	P	**P**	**07 43 45.0**	**+1.0**
	baz=35,SNR=7.2						
S04C	**Ingram Canyon,**	**35.35**	**317**	⇑P	**P**	**07 43 43.7**	**-0.6**
	baz=36						
HLID	**Hailey**	**35.36**	**331**	*e*P	**P**	**07 43 44.9**	**+0.5**
	comp=E,8.6nm,1.3s,mb4.5						
HLID				*e*ScP	ScP	07 49 56.4	+2.1
HLID	**Hailey**	**35.36**	**331**	P	**P**	**07 43 45.1**	**+0.7**
	baz=36,SNR=6.0						
M09A	**Marrel Ranch,**	**35.39**	**325**	⇓P	**P**	**07 43 45.1**	**+0.5**
	baz=36						
J12A	**Stokes Ranch,**	**35.46**	**330**	⇓P	**P**	**07 43 44.8**	**-0.4**
	baz=36						
I13A	**Wildhorse Cree**	**35.49**	**331**	P	**P**	**07 43 46.5**	**+1.0**
	baz=36,SNR=7.7						
R04C	**Big Horse Ranc**	**35.51**	**318**	⇑P	**P**	**07 43 46.0**	**+0.3**
	baz=36						
K11A	**Parker Ranch,**	**35.58**	**328**	⇑P	**P**	**07 43 45.8**	**-0.4**
	baz=36						
LAVA	**Lava Cap Winer**	**35.67**	**319**	⇑P	**P**	**07 43 47.4**	**+0.3**
	baz=36						
G15A	**Dillon**	**35.75**	**334**	⇓P	**P**	**07 43 47.7**	**0.0**
	baz=36						
BOZ	**Bozeman (W)**	**35.79**	**336**	⇓P	**P**	**07 43 48.9**	**+0.9**
	baz=36						
MFID	**Camas Ranch**	**35.94**	**329**	P	**P**	**07 43 49.4**	**0.0**
	baz=36,SNR=7.7						
O06A	**Flanigan**	**35.95**	**322**	⇓P	**P**	**07 43 49.5**	**+0.1**

baz=36,SNR=8.4
K10A **MacKenzie Ranc** 36.02 327 ⇓P P 07 43 49.6 -0.4
baz=36
H13A **Challis** 36.05 332 P P 07 43 50.5 +0.2
baz=36,SNR=15
BEKR **Beckwourth** 36.09 321 P P 07 43 51.5 +0.8
baz=36,SNR=5.5
G14A **Jackson** 36.23 333 ⇑P P 07 43 52.0 +0.3
baz=36
LRM **Limekiln Ridge** 36.26 335 eP P 07 43 51.1 -1.0
F15A **Butte** 36.30 335 ⇑P P 07 43 52.6 +0.3
baz=36
N06A **Buffalo Meadow** 36.32 322 ⇑P P 07 43 52.4 -0.2
baz=36
H12A **Diamond D Ranc** 36.32 331 P P 07 43 52.9 +0.4
baz=36,SNR=14
L08A **Fields** 36.40 325 P P 07 43 54.1 +0.8
baz=36,SNR=7.9
K09A **Rome** 36.41 327 P P 07 43 53.8 +0.4
baz=36,SNR=16
G13A **Cobalt** 36.45 332 ⇓P P 07 43 53.3 -0.4
baz=37
SUTB **Sutter Butte** 36.61 319 ⇑P P 07 43 55.1 0.0
baz=37
ORV **Oroville** 36.61 320 ⇓P P 07 43 55.5 +0.3
baz=37
WVOR **Wild Horse Val** 36.73 326 eP P 07 43 56.1 +0.1
comp=E,6.0nm,1.1s,mb4.3
ELFS **Eagle Lake Fie** 36.77 322 P P 07 43 57.3 +0.9
baz=37,SNR=8.9
O04C **Chester** 36.81 321 ⇓P P 07 43 56.5 -0.3
baz=37
E15A **Deer Lodge** 36.83 335 ⇑P P 07 43 55.9 -0.9
baz=37
MNRC **McLaughlin Nat** 36.84 318 ⇓P P 07 43 57.3 +0.3
baz=37
L07A **Adell** 36.84 324 ⇑P P 07 43 57.2 +0.1
baz=37,SNR=7.7
K08A **Mann Creek Ran** 36.84 326 P P 07 43 57.5 +0.4
baz=37,SNR=9.8
J09A **Fry Pan Ranch,** 36.88 327 P P 07 43 57.6 +0.3
baz=37,SNR=18
I10A **Payette** 36.91 329 P P 07 43 57.7 +0.1
baz=37,SNR=5.7
H11A **Donnelly** 36.98 330 P P 07 43 57.6 -0.6
baz=37,SNR=11
F13A **Darby** 37.04 333 P P 07 43 57.9 -0.8
baz=37,SNR=6.4
E14A **Clinton** 37.17 335 ⇑P P 07 43 59.7 -0.1
baz=37
K07A **Rock Creek Ran** 37.23 325 P P 07 44 01.4 +1.1
baz=37,SNR=11
H10A **Noah's Angus R** 37.25 330 ⇓P P 07 44 00.1 -0.4
baz=37
J08A **Circle Bar Ran** 37.26 327 P P 07 44 00.6 0.0
baz=37,SNR=16
D15A **Lincoln** 37.28 336 ⇑P P 07 44 00.4 -0.3
baz=37
I09A **Lost Marbles R** 37.31 328 P P 07 44 00.7 -0.3
baz=37,SNR=14
MOD **Modoc** 37.32 324 eP P 07 44 01.9 +0.8
MOD **Modoc** 37.32 324 ⇓P P 07 44 02.4 +1.3
baz=37
F12A **Elk City** 37.42 332 P P 07 44 01.4 -0.6
baz=38,SNR=17
GASB **Alder Springs** 37.44 319 ⇓P P 07 44 03.1 +0.9
baz=38
M05C **Lookout** 37.47 322 ⇑P P 07 44 03.1 +0.7
baz=38
E13A **Victor** 37.49 334 P P 07 44 01.5 -0.9
baz=38,SNR=8.0
D14A **Greenough** 37.71 335 ⇓P P 07 44 04.9 +0.6
baz=38
L05A **Lakeview** 37.72 323 ⇓P P 07 44 04.8 +0.4
baz=38
BMO **Blue Mountains** 37.72 330 eP P 07 44 03.3 -1.1
J07A **Hines** 37.72 326 ⇓P P 07 44 04.3 -0.2
baz=38
P01C **Double 8 Ranch** 37.74 318 ⇑P P 07 44 05.6 +0.9
baz=38
H09A **Durkee** 37.76 329 P P 07 44 04.0 -0.8
baz=38,SNR=6.0
K06A **Valley Falls** 37.86 325 ⇓P P 07 44 06.1 +0.4
baz=38
LPAZ **La Paz** 37.97 142 LR LR 07 58 04.0
comp=E,60nm,21.3s,MS3.4,baz=278,slow=34
J06A **Christmas Vall** 38.10 325 ⇓P P 07 44 07.8 +0.1
baz=38
D13A **Huson** 38.12 334 P P 07 44 07.0 -0.7
baz=38,SNR=6.6
M04C **Macdoel** 38.14 322 ⇓P P 07 44 07.5 -0.6
baz=38
H08A **Prairie City** 38.17 328 P P 07 44 08.3 +0.1
baz=38,SNR=8.8
I07A **Izee** 38.30 327 ⇑P P 07 44 08.0 -1.4
baz=38
E11A **Bogner Ranch,** 38.31 332 P P 07 44 07.9 -1.5
baz=38,SNR=7.7
O01C **Eel River Cons** 38.42 319 ⇑P P 07 44 10.7 +0.2
baz=38
D12A **Red Ives Fores** 38.46 334 ⇓P P 07 44 09.4 -1.3
baz=39
F10A **Beach Ranch, E** 38.50 331 P P 07 44 09.9 -1.0
baz=39,SNR=17
I06A **Prineville** 38.59 326 ⇑P P 07 44 11.3 -0.5
baz=39
C13A **Hot Springs** 38.62 335 ⇑P P 07 44 11.3 -0.7
baz=39
YBH **Yreka Blue Hor** 38.63 322 ⇓P P 07 44 11.6 -0.6
baz=39
H07A **Lands Inn, Kim** 38.68 327 ⇓P P 07 44 12.0 -0.5
baz=39
F08A **Pendleton** 39.12 329 ⇓P P 07 44 15.1 -1.1
baz=39
B13A **Whitefish** 39.13 336 ⇓P P 07 44 16.2 -0.1
baz=39
J04A **Umpqua Nationa** 39.20 324 ⇓P P 07 44 16.6 -0.3
baz=39
I05A **Bend** 39.31 326 ⇓P P 07 44 17.8 +0.1
baz=39
D10A **Wagner Farm, O** 39.32 332 ⇓P P 07 44 16.2 -1.7
baz=40
E09A **Wood Farm, Sta** 39.33 331 ⇓P P 07 44 16.5 -1.4
baz=40
B12A **Libby** 39.67 335 ⇑P P 07 44 20.3 -0.4
baz=40
G06A **Carlson Farm,** 39.68 327 ⇑P P 07 44 20.3 -0.5
baz=40
I04A **Tendick Farm,** 39.71 324 ⇓P P 07 44 21.5 +0.3
baz=40
D09A **Jones Farm, Ri** 39.80 331 P P 07 44 21.1 -0.8
baz=40,SNR=6.3
B11A **Sandpoint** 39.97 334 P P 07 44 22.7 -0.5
baz=40,SNR=6.6
D08A **Wollman Farm,** 40.09 331 ⇓P P 07 44 23.1 -1.1
baz=40
F06A **Goldendale** 40.11 328 P P 07 44 25.5 +1.1
baz=40,SNR=5.5
J02A **Umpqua** 40.12 323 ⇑P P 07 44 24.5 0.0
baz=40
H04A **Detroit Lake** 40.15 326 P P 07 44 25.2 +0.4
baz=40,SNR=6.9
NEW **Newport** 40.16 333 eP P 07 44 24.8 0.0
comp=E,1.9nm,0.7s,mb3.9
E07A **Sunnyside** 40.19 329 ⇓P P 07 44 24.5 -0.5
baz=40
HOOD **Mount Hood Mea** 40.27 327 eP P 07 44 26.7 +1.0
HOOD epP pP 07 44 42.6 +1.6
I03A **Eugene** 40.31 324 ⇓P P 07 44 26.1 0.0
baz=40
C09A **Chrisman Ranch** 40.33 332 P P 07 44 25.4 -0.7
baz=40,SNR=6.1
A11A **Hall Mountain,** 40.37 335 P P 07 44 26.9 +0.3
baz=40,SNR=5.5
F05A **White Salmon** 40.54 327 ⇑P P 07 44 28.0 +0.1
baz=41
C08A **Higginbotham F** 40.67 331 P P 07 44 28.8 -0.2
baz=41,SNR=10.0
B09A **Rice** 40.73 333 P P 07 44 28.8 -0.8
baz=41,SNR=6.4
E06A **Yakima** 40.74 329 P P 07 44 29.9 +0.3
baz=41,SNR=6.2
H03A **Soap Creek Ran** 40.76 325 ⇑P P 07 44 29.5 -0.3
baz=41
C07A **Waterville** 41.08 330 ⇓P P 07 44 31.9 -0.5
baz=41
D06A **Cle Elum** 41.12 329 ⇓P P 07 44 33.1 +0.4
baz=41
E05A **Randle** 41.15 328 ⇓P P 07 44 33.3 +0.4
baz=41
G03A **Yamhill** 41.15 326 ⇑P P 07 44 33.6 +0.6
baz=41
B08A **Colville Reser** 41.22 332 ⇓P P 07 44 32.7 -0.8
baz=41
LON **Longmire** 41.30 328 eP P 07 44 33.8 -0.4
A09A **Danville** 41.34 333 P P 07 44 33.7 -0.8
baz=42,SNR=5.9
A08A **Turner Farm, O** 41.63 332 ⇓P P 07 44 35.4 -1.4
baz=42
C06A **Tall Timber Ra** 41.65 330 ⇑P P 07 44 36.5 -0.5
baz=42
E04A **Onalaska** 41.67 327 ⇓P P 07 44 36.3 -0.9
baz=42
D05A **Enumclaw** 41.69 329 ⇑P P 07 44 36.2 -1.2
baz=42
A07A **Ashnola River,** 42.20 332 P P 07 44 41.5 -0.1
baz=42,SNR=7.2
B06A **Marblemount** 42.34 330 ⇑P P 07 44 42.2 -0.5
baz=42
SIV **San Ignacio** 42.36 134 P P 07 44 40.7 -2.5
comp=E,2.7nm,0.7s,mb4.0,baz=303,slow=8.8,SNR=15
SIV pP pP 07 44 55.8 -2.6
comp=E,5.6nm,1.1s,baz=318,slow=7.9,SNR=7.4
GNW **Green Mountain** 42.36 328 eP P 07 44 42.0 -0.9
B05A **Bryant** 42.47 330 ⇓P P 07 44 41.9 -1.8
C04A **Brinnon** 42.53 329 ⇑P P 07 44 43.1 -1.2
baz=43
NLWA **Neilton Lookou** 42.78 328 eP P 07 44 46.5 +0.3
A05A **Maple Falls** 42.96 330 ⇑P P 07 44 46.9 -0.9
baz=43
B04A **Port Angeles** 43.03 329 ⇓P P 07 44 47.7 -0.6
baz=43
A04A **Legoe Bay, Lum** 43.07 330 ⇑P P 07 44 47.4 -1.2
baz=43
FCC **Fort Churchill** 44.64 358 eP P 07 44 58.0 -3.0
comp=E,4.9nm,0.9s,mb4.3
SCHQ **Schefferville** 44.96 20 P P 07 44 59.7 -3.9
SCHQ **Schefferville** 44.96 20 P P 07 44 59.7 -3.9
comp=E,9.2nm,0.9s,mb4.6,baz=214,slow=7.0,SNR=26
SCHQ LR LR 08 04 45.1
comp=E,355nm,19.2s,MS4.3,baz=222,slow=37
BBB **Bella Bella** 47.95 330 LR LR 08 05 55.9
comp=E,93nm,21.1s,MS3.7,baz=141,slow=36
YKA **Yellowknife Ar** 51.07 346 P P 07 45 48.4 -2.3
YKA pP pP 07 46 03.5 -2.8
YKA ScP ScP 07 50 54.5 -2.6
YKA **Yellowknife Ar** 51.07 346 P P 07 45 48.3 -2.3
comp=E,2.0nm,0.8s,mb4.1,baz=146,slow=7.6,SNR=28
YKA pP pP 07 46 03.5 -2.8
comp=E,2.8nm,0.7s,baz=148,slow=7.5,SNR=14
YKA ScP ScP 07 50 54.5 -2.6
comp=E,0.2nm,0.4s,baz=150,slow=4.5,SNR=4.6
YKA LR LR 08 09 04.7
comp=E,38nm,21.0s,MS3.4,baz=145,slow=38
YKW3 **Yellowknife Ar** 51.13 346 eP P 07 45 48.9 -2.2
DLBC **Dease Lake** 52.80 336 eP P 07 46 03.2 -0.4
DLBC **Dease Lake** 52.80 336 P P 07 46 03.6 0.0
baz=149,slow=6.1
TAOE **Nuku Hiva Isla** 53.43 248 eLR LR 08 01 17.5
comp=E,481nm,28.3s
RKT **Rikitea** 56.41 230 eLR LR 08 02 45.4
comp=E,275nm,29.0s
MCK **McKinley** 63.35 335 eP P 07 47 16.3 -1.0
comp=E,9.9nm,1.3s,mb4.8
COLA **College** 63.39 337 eP P 07 47 15.5 -2.1
comp=E,3.9nm,0.8s,mb4.6
PPT **Papeete** 65.41 243 eLR LR 08 06 54.2
comp=E,240nm,25.8s
PPT **Papeete** 65.41 243 LR LR 08 07 10.3
comp=E,11nm,20.8s,MS3.0,baz=46,slow=28
TNA **Tin City** 71.68 335 eP P 07 48 08.9 -0.9
comp=E,4.4nm,1.1s,mb4.3
RAR **Rarotonga** 75.68 243 LR LR 08 13 12.5
comp=E,52nm,18.9s,MS3.9,baz=303,slow=29
NOA **NORSAR Array B** 83.81 29 LR LR 08 29 28.4
comp=E,110nm,19.8s,MS4.2,baz=265,slow=38
AFI **Afiamalu** 84.24 254 LR LR 08 18 18.5
comp=E,67nm,20.8s,MS4.0,baz=94,slow=29
ARCES **ARCESS Array B** 85.89 18 P P 07 49 23.7 -3.9
comp=E,2.5nm,0.8s,mb4.5,baz=42,slow=3.8,SNR=3.7
GERES **GERESS Array B** 89.19 40 LR LR 08 30 38.9
comp=E,129nm,18.4s,MS4.4,baz=275,slow=36
TORD **Tordi Ar. Bea** 89.83 77 LR LR 08 22 47.6
comp=E,98nm,20.6s,MS4.2,baz=320,slow=31
FINES **FINESS Array B** 90.19 25 LR LR 08 31 18.6
comp=E,140nm,18.8s,MS4.4,baz=332,slow=36
MLR **Muntele Rosu** 98.17 39 LR LR 08 36 34.2
comp=E,89nm,19.1s,MS4.3,baz=132,slow=37
MKAR **Makanchi Array** 119.14 5 PKP PKPdf 07 55 33.8 -3.2
comp=E,0.3nm,0.6s,baz=266,slow=3.4,SNR=4.0
WMQ **Urumqi** 122.37 1 ⇑PKP PKPdf 07 55 46.1 +2.8
WMQ XPKP 07 56 10.1
WMQ PP PP 07 57 27.1 +8.7
WMQ PP PP
comp=Z,123nm,5.0s
WMQ LR LR
comp=N,35nm,17.8s,MS4.3
WMQ LR LR
comp=E,56nm,19.0s,MS4.3
WMQ LR LR
comp=Z,51nm,15.5s,MS4.3
LZH **Lanzhou** 128.05 344 eP PKPdf 07 55 54.5 +0.1
LZH pP 07 56 12.0
LZH sP 07 56 21.0
CD2 **Chengdu** 132.94 342 ePKP PKPdf 07 56 01.5 -2.3
CD2 PP PP 07 58 30.3 +2.0
CD2 PKS 07 59 36.2
CD2 SKKS SKKSac 08 05 11.2 -9.3
CD2 SS SS 08 16 02.2 -2.8
CD2 PP PP
comp=Z,60nm,10.0s
WRA **Warramunga Arr** 135.94 256 PKP PKPdf 07 56 07.9 -1.8
comp=Z,1.3nm,0.8s,baz=88,slow=2.3,SNR=11
GYA **Guiyang** 136.02 336 ePDIF Pdif 07 53 11.0 -2.3
GYA PKP PKPdf 07 56 07.0 -2.7
GYA XPKP 07 56 33.6
GYA PP PP 07 58 50.8 +2.8
GYA PP PP
comp=Z,80nm,7.6s
ASAR **Alice Springs** 136.20 250 PKP PKPdf 07 56 08.2 -1.8
comp=Z,0.9nm,0.8s,baz=99,slow=1.7,SNR=8.0
KMI **Kunming** 138.65 340 PKP PKPdf 07 56 12.3 -2.3

*ISCJB **05** 07:37:16.2±0.9, 2667N×004×1025E±0.2, h10km, mb3.5/4, Error ellipse: s-maj=27.9km s-min=5.3km az=1.0*
*IDC **05** 07:37:16.5±1.5, 2663N×10229E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=82.9km s-min=22.9km az=66.0*
*BJI **05** 07:37:18.9, 2651N×10188E, h10km, ML3.3*

ISC 05 07:37:17.7±2.0, 2662N×004×1023E±03, h7km±13km, n6, σ0830/10, mb3.5/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.55**	**163**			PG	**Pg**	**07 37 47.9**	**+0.4**
KMI						SG	**Sg**	**07 38 07.5**	**-0.2**
KMI						Smax			
	comp=N,428nm,0.5s								
KMI						Smax			
	comp=E,489nm,0.8s								
CD2	**Chengdu**	**4.47**	**17**	P		**Pn**		**07 38 31.4**	**+5.5**
CD2						PG	**Pg**	**07 38 43.0**	**-0.4**
CD2						S	**Sn**	**07 39 25.7**	**+7.5**
CD2						SG	**Sg**	**07 39 41.6**	**+0.2**
CD2						Smax			
	comp=N,40nm,0.8s								
CD2						Smax			
	comp=E,50nm,1.2s								
SONM	**Songino Array**	**21.43**	**8**	P		**P**		**07 42 06.4**	**+0.3**
	comp=E,1.0nm,0.6s,mb3.3,baz=192,slow=13,SNR=7.5								
MKAR	**Makanchi Array**	**25.59**	**327**	P		**P**		**07 42 47.2**	**-0.1**
	comp=E,0.5nm,0.6s,mb3.2,baz=148,slow=10,SNR=5.6								
WRA	**Warramunga Arr**	**55.78**	**143**	P		**P**		**07 46 55.0**	**-0.4**
	comp=E,1.1nm,0.8s,mb4.0,baz=333,slow=8.2,SNR=10								
ASAR	**Alice Springs**	**58.61**	**146**	P		**P**		**07 47 15.8**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.6,baz=327,slow=6.7,SNR=5.9								

GUC 05 07:48:16.3±1.0, 2849S×7099W, h49km±9km, MD4.2, ML4.0, 4C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.22**	**112**	⇑*i*P		Pn		07 48 24.9	+0.3
VACH				*i*	S	Sn		07 48 31.2	+0.7
VACH					AML	AML		07 48 31.3	
	comp=N,60μm,0.1s								
CPCH	**Copiapo**	**1.26**	**26**	⇑*i*P		Pn		07 48 38.0	+0.5
CPCH				*i*	S	Sn		07 48 54.4	+1.1
CPCH					AML	AML		07 48 58.7	
	comp=E,24μm,0.1s								
CDCH	**Caldera**	**1.42**	**6**	*e*P		Pn		07 48 39.6	-0.1
CDCH				*i*	S	Sn		07 48 58.9	+1.6
CDCH					AML	AML		07 49 03.4	
	comp=N,930nm,0.5s								
LSCH	**La Serena**	**1.43**	**189**	⇓*i*P		Pn		07 48 40.2	+0.4
LSCH				*i*	S	Sn		07 48 58.6	+1.2
LSCH					AML	AML		07 49 01.9	
	comp=E,607nm,0.3s								
TLL	**Tololo Astrono**	**1.68**	**175**	⇑*i*P		Pn		07 48 44.7	+1.5
TLL				*i*	S	Sn		07 49 06.0	+2.5
TLL					AML	AML		07 49 08.0	
	comp=N,1μm,0.4s								
OVCH	**Ovalle**	**2.12**	**185**	*e*P		Pn		07 48 49.4	+0.2
OVCH				*e*S		Sn		07 49 14.9	+0.6
OVCH					AML	AML		07 49 18.5	
	comp=N,1μm,0.2s								
CMCH	**Combarbala**	**2.67**	**180**	⇑*i*P		Pn		07 48 56.9	+0.1
CMCH				*e*S		Sn		07 49 28.7	+0.8
CMCH					AML	AML		07 49 52.4	
	comp=E,2μm,0.6s								

CASC 05 07:52:36.5±3.5, 1121N×8720W, h22km±35km, MD3.8, ML3.1, 6C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**1.13**	**32**	⇓*i*P		Pn		07 52 56.9	-0.2
TICN	**Ticuantepe**	**1.25**	**49**	⇓*e*P		Pn		07 52 58.7	0.0
XAVN	**Gruta Xavier**	**1.27**	**43**	⇑*e*P		Pn		07 52 58.4	-0.5
TISN	**Laguna Tiscapa**	**1.30**	**45**	⇓*e*P		Pn		07 52 58.8	-0.6
APON	**Apoyo**	**1.32**	**58**	⇓*e*P		Pn		07 52 58.7	-0.9
APON				*e*S		Sn		07 53 18.0	+1.5
MGAN	**Managua**	**1.32**	**45**	⇑*e*P		Pn		07 52 59.0	-0.6
MGAN				*e*S		Sn		07 53 19.6	+3.1
MGAN				*i*				07 53 22.4	
	comp=N,337nm,0.8s								
SSNN	**San Juan del S**	**1.33**	**87**	⇑*e*P		Pn		07 52 58.7	-1.0
SSNN				*e*S		Sn		07 53 15.8	-1.0
MOMJ	**Momotombo**	**1.35**	**29**	*e*P		Pn		07 53 00.0	-0.1
CNGN	**Cerro Negro**	**1.37**	**21**	*e*P		Pn		07 52 59.1	-1.3
TEL3	**Telica 3**	**1.40**	**14**	⇑*e*P		Pn		07 53 00.9	+0.2
HUEN		**1.51**	**42**	⇑*e*P		Pn		07 53 01.6	-0.7
CONN	**Concepcion**	**1.59**	**77**	⇓*e*P		Pn		07 53 01.9	-1.3
CUI		**2.06**	**105**	⇑*e*P		Pn		07 53 08.8	-1.1
LCBS	**La Ceiba**	**2.98**	**325**	*e*P		x		07 53 59.8	
LCBS				*e*S		x		07 54 33.4	
LAJ	**Bijagual**	**3.31**	**114**	*e*P		Pn		07 53 24.4	-2.7
LCR2	**La Lucha 2**	**3.47**	**115**	*e*P		Pn		07 53 29.8	+0.5
LCR2				*e*S		Sn		07 54 09.7	0.0
URSC	**Urasca**	**3.63**	**112**	*e*P		Pn		07 53 33.1	+1.6
BAR1		**4.30**	**117**	*e*P		Pn		07 53 41.7	+1.1

IDC 05 07:59:47.5±2.1, 658S×12897E, h0km, mb3.9/1, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, ML4.0/2, Error ellipse: s-maj=148.4km s-min=30.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.27**	**159**	Pn		Pn		08 03 10.5	-0.5
	1.0nm,0.3s,baz=341,slow=13,SNR=33								
WRA				Sn		Sn		08 05 37.1	-13
	1.2nm,0.3s,baz=334,slow=22,SNR=10								
WB2	**Warramunga Arr**	**14.28**	**159**	*e*P		Pn		08 03 11.0	0.0
WB2				*e*S		Sn		08 05 36.7	-14
ASAR	**Alice Springs**	**17.64**	**165**	P		Pn		08 03 55.2	+0.4
	0.2nm,0.3s,baz=350,slow=11,SNR=14								
MKAR	**Makanchi Array**	**67.32**	**327**	P		P		08 10 44.4	+0.1
	0.7nm,0.5s,baz=119,slow=7.8,SNR=13								

CASC 05 08:00:39.8±1.6, 1130N×8707W, h20km±11km, MD3.8, ML2.9, 2C-2D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.99**	**28**	⇓*e*P		Pb		08 00 58.1	-0.2
COPN				*e*S		Sb		08 01 11.9	+1.0
TICN	**Ticuantepe**	**1.09**	**48**	*e*P		Pb		08 00 59.4	-0.7
TICN				*e*S		Sb		08 01 15.3	+1.4
XAVN	**Gruta Xavier**	**1.11**	**41**	⇑*e*P		Pn		08 00 59.6	-0.7
XAVN				*e*S		Sb		08 01 14.9	+0.5
XAVN				*i*				08 01 15.7	
	comp=Z,349nm,0.2s								
TISN	**Laguna Tiscapa**	**1.14**	**43**	*e*P		Pn		08 00 60.0	-0.8
TISN				*e*S		Sb		08 01 15.3	-0.1
APON	**Apoyo**	**1.15**	**58**	*e*P		Pn		08 01 00.6	-0.3
APON				*e*S		Sb		08 01 16.4	+0.7
MGAN	**Managua**	**1.16**	**44**	⇑*e*P		Pn		08 01 00.2	-0.8
MGAN				*e*S		Sb		08 01 15.9	0.0
MGAN				*i*				08 01 18.4	
	comp=E,237nm,0.2s								
SSNN	**San Juan del S**	**1.19**	**90**	⇓*e*P		Pn		08 00 59.6	-1.8
SSNN				*e*S		Sb		08 01 17.6	+0.8
MOMJ	**Momotombo**	**1.22**	**25**	*e*P		Pn		08 01 01.1	-0.6
MOMJ				*e*S		Sb		08 01 17.2	-0.3
TEL3	**Telica 3**	**1.28**	**10**	*e*P		Pn		08 01 02.0	-0.6
HUEN		**1.35**	**40**	*e*P		Pn		08 01 02.7	-0.9
CUI		**1.96**	**109**	*e*P		Pn		08 01 12.6	+0.6
CUI				*e*S		Sn		08 01 37.2	+1.2
PRS1	**Puriscal**	**3.01**	**116**	*e*P		Pn		08 01 27.2	+0.8
LAJ	**Bijagual**	**3.23**	**116**	*e*P		Pn		08 01 26.6	-2.8
LCR2	**La Lucha 2**	**3.39**	**117**	*e*P		Pn		08 01 30.8	-0.8
URSC	**Urasca**	**3.54**	**114**	*e*P		Pn		08 01 34.1	+0.3
BAR1		**4.22**	**119**	*e*P		Pn		08 01 42.8	-0.3

*IDC **05** 08:03:25.2±6.4, 3087S×17936W, h215km±53km, mb3.5/4, mb1 3.6/5, mb1mx3.4/14, mbtmp3.5/5, Error ellipse: s-maj=48.6km s-min=23.1km az=41.0*
*NEIC **05** 08:03:40.7±2.4, 3240S×179.12W, h399km±25km, Error ellipse: s-maj=43.0km s-min=32.0km az=137.0*

ISC 05 08:03:38.3±1.3, 320S±01×1796W±03, h352km±18km, n28, σ1913/39, mb3.4/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.82**	**196**	*e*P		**Pn**		**08 05 09.2**	**+2.2**
MXZ	**Matakaoa Point**	**5.82**	**196**	*e*PN		**Pn**		**08 05 09.2**	**+2.2**
PUZ	**Puketiti**	**6.32**	**195**	*e*P		**Pn**		**08 05 12.6**	**-0.1**
PUZ	**Puketiti**	**6.32**	**195**	*e*PN		**Pn**		**08 05 12.6**	**-0.1**
PUZ					SN	**S**		**08 06 29.8**	**+0.4**
MWZ	**Matawai**	**6.75**	**199**	*e*PN		**Pn**		**08 05 14.5**	**-3.2**
MWZ				*e*SN		**S**		**08 06 38.2**	**-0.3**
URZ	**Urewera**	**6.81**	**202**	P		**Pn**		**08 05 17.3**	**-1.0**
	0.8nm,0.3s,baz=36,slow=8.7,SNR=3.1								
URZ				S		**S**		**08 06 40.7**	**+1.0**
	4.1nm,0.3s,baz=90,slow=20,SNR=21								
URZ	**Urewera**	**6.81**	**202**	*e*PN		**Pn**		**08 05 17.3**	**-1.0**
URZ					SN	**S**		**08 06 40.5**	**+0.8**
BKZ	**Black Stump Fm**	**7.84**	**203**	*e*PN		**Pn**		**08 05 30.4**	**0.0**
BKZ					SN	**S**		**08 07 03.7**	**+1.9**
PXZ	**Pawanui**	**8.52**	**199**	*e*PN		**Pn**		**08 05 39.2**	**+0.7**
PXZ					SN	**S**		**08 07 16.3**	**-0.3**
BFZ	**Birch Farm**	**9.30**	**200**	*e*P		**Pn**		**08 05 48.6**	**+0.9**
BFZ					S	**S**		**08 07 33.7**	**+0.1**
BFZ	**Birch Farm**	**9.30**	**200**		SN	**S**		**08 07 33.4**	**-0.3**
BFZ					SN	**S**		**08 07 33.7**	**+0.1**
MRZ	**Mangatainoka R**	**9.49**	**203**	*e*P		**Pn**		**08 05 46.1**	**-3.8**
MRZ					S	**S**		**08 07 35.4**	**-2.4**
MRZ	**Mangatainoka R**	**9.49**	**203**	*e*PN		**Pn**		**08 05 46.1**	**-3.9**
MRZ					SN	**S**		**08 07 35.4**	**-2.4**
CAW	**Cannon Point**	**10.06**	**204**	*e*PN		**Pn**		**08 05 52.8**	**-4.0**
TCW	**Tory Channel**	**10.43**	**206**	SN		**S**		**08 07 57.8**	**-0.8**
THZ	**Tophouse**	**11.45**	**209**	*e*P		**Pn**		**08 06 11.8**	**-1.4**
THZ					S	**S**		**08 08 21.1**	**+0.2**
THZ	**Tophouse**	**11.45**	**209**	*e*PN		**Pn**		**08 06 11.8**	**-1.4**
THZ					SN	**S**		**08 08 21.1**	**+0.2**
KHZ	**Kahutara**	**11.75**	**206**	*e*P		**Pn**		**08 06 16.0**	**-0.9**
KHZ	**Kahutara**	**11.75**	**206**	*e*PN		**Pn**		**08 06 16.0**	**-0.8**
KHZ					SN	**S**		**08 08 28.9**	**+1.3**

DSZ	**Denniston Nort**	**11.91**	**213**	*e*PN	**Pn**	**08 06 17.9**	**-0.9**
DSZ				SN	**S**	**08 08 30.5**	**-0.7**
MQZ	**McQueen's Vall**	**13.19**	**205**	SN	**S**	**08 08 57.9**	**+0.5**
STKA	**Stephens Creek**	**32.80**	**260**	P	**P**	**08 09 43.2**	**+3.3**
	1.6nm,0.5s,mb3.5,baz=104,slow=8.9,SNR=4.4						
ASAR	**Alice Springs**	**41.67**	**269**	P	**P**	**08 10 54.4**	**+0.6**
	0.4nm,0.4s,mb3.0,baz=101,slow=7.7,SNR=8.3						
WRA	**Warramunga Arr**	**42.80**	**275**	P	**P**	**08 11 02.7**	**-0.2**
	1.3nm,0.3s,mb3.5,baz=111,slow=8.1,SNR=18						
QSPA	**South Pole Qui**	**58.13**	**180**	P	**P**	**08 13 03.6**	**+8.0**
	1.1nm,0.5s,mb3.4,baz=356,slow=3.5,SNR=9.5						
KAF	**Kangasniemi**	**145.54**	**339**	*e*p	PKPdf	08 22 32.1	-2.0
	3.5nm,0.6s						
FINES	**FINESS Array B**	**146.12**	**338**	PKPbc	PKPbc	08 22 35.7	-1.0
FINES	**FINESS Array B**	**146.12**	**338**	PKPbc	PKPbc	08 22 35.7	-1.0
	1.6nm,0.4s,baz=50,slow=3.5,SNR=30						

*IDC **05** 08:05:26.6±1.2, 1194N×8643W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.9/19, mbtmp3.8/9, ML3.7/2, MS3.4/7, Ms1 3.4/7, ms1mx3.1/29, Error ellipse: s-maj=44.6km s-min=21.8km az=49.0*
*CASC **05** 08:05:27.3±2.7, 1120N×8726W, h20^{km}±12^{km}, MD4.4, ML3.8, mb4.3(NEIC)*
*ISCJB **05** 08:05:28.2±0.8, 11.16N±004×8724W±005, h40^{km}±7^{km}, mb4.1/19, MS3.4/4, Error ellipse: s-maj=9.3km s-min=6.2km az=147.1*
*NEIC **05** 08:05:31.1±0.9, 1150N×8688W, mb4.3/11, Error ellipse: s-maj=20.5km s-min=11.7km az=216.0*
ISC 05 08:05:32.1±0.7**, 1141N**±006×**8693W**±007**, h55**^{km}±6^{km}**, h40**^{km}±1.2^{km}**:pP-P, n70, σ1^{s}00**/70**, mb4.1**/19**, MS3.4**/4**, 7C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.83**	**23**	⇓*e*P	**Pn**	**08 05 48.2**	**+0.4**
COPN				*e*S	**Sn**	**08 06 05.9**	**+6.6**
TICN	**Ticuantepe**	**0.93**	**48**	*e*P	**Pn**	**08 05 49.6**	**+0.6**
TICN				*e*S	**Sn**	**08 06 08.3**	**+6.9**
XAVN	**Gruta Xavier**	**0.94**	**39**	⇑*e*P	**Pn**	**08 05 49.7**	**+0.5**
TISN	**Laguna Tiscapa**	**0.97**	**42**	⇓*e*P	**Pn**	**08 05 50.2**	**+0.5**
APON	**Apoyo**	**0.99**	**59**	⇑*e*P	**Pn**	**08 05 49.7**	**-0.1**
APON				*e*S	**Sn**	**08 06 09.6**	**+6.8**
MGAN	**Managua**	**0.99**	**42**	⇑*e*P	**Pn**	**08 05 50.3**	**+0.4**
MGAN				*e*S	**Sn**	**08 06 10.5**	**+7.5**
MOMJ	**Momotombo**	**1.06**	**21**	⇑*e*P	**Pn**	**08 05 51.2**	**+0.4**
CNGN	**Cerro Negro**	**1.11**	**12**	⇑*e*P	**Pn**	**08 05 50.5**	**-0.9**
CNGN				*e*S	**Sn**	**08 06 11.9**	**+6.2**
CNGN				*i*		08 06 23.1	
	comp=E,3µm,0.3s						
TEL3	**Telica 3**	**1.16**	**4**	*e*P	**Pn**	**08 05 52.3**	**+0.2**
HUEN		**1.19**	**39**	*e*P	**Pn**	**08 05 52.9**	**+0.5**
HUEN				⇑*e*P		08 05 53.4	
TELN	**Telica**	**1.19**	**5**	*e*P	**Pn**	**08 05 52.8**	**+0.3**
CRIN	**San Cristobal**	**1.29**	**355**	⇓*e*P	**Pn**	**08 05 53.3**	**-0.5**
MADN	**Villa Maderas**	**1.37**	**90**	*e*P	**Pn**	**08 05 54.3**	**-0.6**
BOAB	**BOACO BROADBAN**	**1.61**	**50**	*e*S	**Sn**	**08 06 25.5**	**+7.5**
JTS	**JuntasAbangare**	**2.24**	**120**	*e*Pn	**Pn**	**08 06 06.4**	**-0.4**
JTS	**JuntasAbangare**	**2.24**	**120**	Pn	**Pn**	**08 06 03.5**	**-3.2**
	comp=E,20nm,0.3s,baz=306,slow=12,SNR=53						
JTS				Sn	**Sn**	**08 06 29.1**	**-4.2**
	comp=E,43nm,0.3s,baz=112,slow=20,SNR=10						
JTS				LR	LR	08 07 12.5	
	comp=E,690nm,18.9s,baz=299,slow=48						
JCR	**Jicaral**	**2.37**	**131**	*e*P	**Pn**	**08 06 08.9**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.65**	**353**	*e*Pn	**Pn**	**08 06 11.8**	**-0.7**
CGA2	**Cerro Gallo 2**	**2.79**	**120**	*e*P	**Pn**	**08 06 14.4**	**0.0**
PRS1	**Puriscal**	**2.94**	**119**	*e*P	**Pn**	**08 06 17.1**	**+0.7**
LAJ	**Bijagual**	**3.16**	**119**	⇑*e*P	**Pn**	**08 06 14.5**	**-4.9**
SNET	**Serv Nac Est T**	**3.19**	**315**	*e*P	x	08 06 16.4	
SNET				*e*S	x	08 06 54.4	
LCR2	**La Lucha 2**	**3.32**	**120**	*e*P	**Pn**	**08 06 21.1**	**-0.5**
URSC	**Urasca**	**3.47**	**116**	*e*P	**Pn**	**08 06 23.9**	**+0.3**
RTR	**El Retiro**	**3.62**	**313**	*e*P	x	08 06 59.0	
RTR				*e*S	x	08 07 40.3	
BAR1		**4.16**	**121**	*e*P	**Pn**	**08 06 32.6**	**-0.5**
TEIG	**Tepich**	**8.86**	**352**	LR	LR	08 11 33.7	
	comp=E,169nm,18.2s,baz=164,slow=44						
CMIG	**Matias Romero**	**9.55**	**307**	Pn	**Pn**	**08 07 45.8**	**-1.3**
	comp=E,0.8nm,0.3s,baz=126,slow=4.9,SNR=20						
CMIG				Sn	**Sn**	**08 09 32.2**	**-0.8**
	comp=E,0.1nm,0.3s,baz=142,slow=19,SNR=2.6						
ROSC	**El Rosal**	**14.07**	**117**	Pn	**Pn**	**08 08 54.7**	**+6.1**
	comp=E,0.5nm,0.3s,baz=273,slow=19,SNR=5.9						
ROSC				LR	LR	08 14 29.2	
	comp=E,108nm,20.4s,baz=216,slow=39						
SDV	**Santo Domingo**	**16.24**	**97**	Pn	**Pn**	**08 09 20.9**	**+4.1**
	comp=E,0.2nm,0.3s,baz=292,slow=11,SNR=3.5						
ATAH	**Atahualpa**	**20.16**	**155**	LR	LR	08 17 21.6	
	comp=E,84nm,18.1s,MS3.1,baz=255,slow=35						
LRAL	**Lakeview Retre**	**21.52**	**360**	*e*P	**P**	**08 10 17.3**	**+0.7**
	comp=E,5.1nm,0.5s,mb4.2						
OXF	**Oxford**	**23.11**	**355**	*e*P	**P**	**08 10 31.3**	**-2.1**
	comp=E,28nm,1.3s,mb4.5						
LTX	**Lajitas**	**23.70**	**321**	*e*P	**P**	**08 10 39.1**	**+0.2**
	comp=E,7.4nm,0.8s,mb4.2						
TXAR	**Lajitas Array**	**23.70**	**321**	P	**P**	**08 10 39.2**	**+0.2**
TXAR				PcP	PcP	08 14 25.1	+3.1
TXAR	**Lajitas Array**	**23.70**	**321**	P	**P**	**08 10 39.2**	**+0.2**
	comp=E,2.7nm,0.9s,mb3.7,baz=136,slow=10,SNR=18						
TXAR				PcP	PcP	08 14 25.1	+3.1
	comp=E,1.7nm,1.0s,baz=152,slow=5.7,SNR=5.7						
SWET	**Sewanee**	**23.72**	**2**	*e*P	**P**	**08 10 38.7**	**-0.3**
MIAR	**Mount Ida**	**23.81**	**346**	*e*P	**P**	**08 10 40.9**	**+0.9**
	comp=E,6.2nm,0.8s,mb4.1						
CPCT	**Cooper Cave**	**24.03**	**5**	*e*P	**P**	**08 10 42.4**	**+0.4**
TKL	**Tuckaleechee C**	**24.31**	**6**	P	**P**	**08 10 45.1**	**+0.6**
	comp=E,4.7nm,0.6s,mb4.1,baz=191,slow=12,SNR=8.6						
LPIG	**La Paz**	**25.54**	**303**	LR	LR	08 23 03.2	
	comp=E,69nm,19.5s,MS3.2,baz=28,slow=41						
WMOK	**Wichita Mounta**	**25.61**	**337**	*e*P	**P**	**08 10 57.2**	**+0.9**
	comp=E,14nm,1.3s,mb4.3						
MNTX	**Cornudas Mount**	**26.42**	**323**	*e*P	**P**	**08 11 09.8**	**+6.2**
ACSO	**Alum Creek Sta**	**28.92**	**6**	*e*P	**P**	**08 11 25.6**	**-0.3**
ANMO	**Albuquerque**	**29.40**	**326**	P	**P**	**08 11 30.6**	**+0.3**
	comp=E,0.8nm,0.8s,mb3.5,baz=135,slow=1.4,SNR=3.6						
SDCO	**Great Sand Dun**	**31.06**	**331**	*e*P	**P**	**08 11 45.8**	**+0.9**
	comp=E,3.1nm,0.8s,mb4.2						
SDCO				*e*pP	pP	08 11 57.1	-1.8
LPAZ	**La Paz**	**33.22**	**146**	LR	LR	08 26 26.4	
	comp=E,59nm,19.4s,MS3.3,baz=245,slow=38						
ECSD	**EROS,Sioux Fal**	**33.28**	**347**	*e*P	**P**	**08 12 03.1**	**-1.2**
PV10	**Paradox Valley**	**33.33**	**327**	*e*P	**P**	**08 12 04.9**	**+0.1**
SRU	**San Rafael**	**34.66**	**327**	*e*P	**P**	**08 12 17.9**	**+1.5**
PDAR	**Pinedale Array**	**36.92**	**332**	P	**P**	**08 12 35.4**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.6,baz=120,slow=12,SNR=7.8						
PDAR				PcP	PcP	08 14 57.9	+1.8
	comp=E,0.4nm,0.7s,baz=134,slow=5.2,SNR=3.6						
HWUT	**Hardware Ranch**	**37.02**	**329**	*e*P	**P**	**08 12 37.0**	**+0.5**
	comp=E,5.6nm,0.8s,mb4.5						
HWUT				*e*pP	pP	08 12 47.8	-2.9
AGMN	**Agassiz Refuge**	**37.52**	**350**	*e*P	**P**	**08 12 39.2**	**-1.4**
AHID	**Auburn Hatcher**	**37.65**	**330**	*e*P	**P**	**08 12 36.6**	**-5.3**
REDW	**Red Top Meadow**	**37.99**	**331**	*e*P	**P**	**08 12 45.1**	**+0.5**
	comp=E,8.4nm,0.8s,mb4.5						
REDW				*e*pP	pP	08 12 56.0	-2.8
TPAW	**Teton Pass**	**38.13**	**331**	*e*P	**P**	**08 12 47.7**	**+1.9**
MOOW	**Moose Ponds**	**38.23**	**332**	*e*P	**P**	**08 12 47.6**	**+0.9**
NVAR	**Mina Array Bea**	**38.82**	**319**	P	**P**	**08 12 53.6**	**+1.9**
	comp=E,0.3nm,0.5s,mb3.3,baz=135,slow=9.0,SNR=3.7						
NVAR				PcP	PcP	08 15 05.0	+2.9
	comp=E,0.9nm,0.8s,baz=126,slow=4.7,SNR=7.6						
ULM	**Lac du Bonnet**	**39.42**	**351**	P	**P**	**08 12 54.4**	**-2.1**
	comp=E,4.9nm,0.9s,mb4.2,baz=156,slow=8.8,SNR=8.8						
HLID	**Hailey**	**39.89**	**328**	*e*P	**P**	**08 13 00.4**	**-0.1**
	comp=E,1.8nm,0.9s,mb3.8						
MCMT	**McKenzie Canyo**	**40.04**	**331**	*e*P	**P**	**08 13 03.6**	**+1.8**
MCMT				*e*pP	pP	08 13 13.8	-2.2
EGMT	**Eagleton**	**41.20**	**337**	*e*P	**P**	**08 13 11.7**	**+0.3**
	comp=E,8.1nm,0.6s,mb4.5						
SCHQ	**Schefferville**	**46.13**	**16**	P	**P**	**08 13 47.7**	**-3.1**
SCHQ	**Schefferville**	**46.13**	**16**	P	**P**	**08 13 47.7**	**-3.1**
	comp=E,1.1nm,0.4s,mb4.1,baz=212,slow=6.8,SNR=14						
FCC	**Fort Churchill**	**47.56**	**355**	*e*P	**P**	**08 13 59.8**	**-2.1**
	comp=E,1.1nm,0.4s,mb4.2						
YKA	**Yellowknife Ar**	**54.74**	**345**	P	**P**	**08 14 53.9**	**-1.7**
YKA	**Yellowknife Ar**	**54.74**	**345**	P	**P**	**08 14 53.9**	**-1.7**
	comp=E,1.0nm,0.8s,mb3.9,baz=138,slow=7.7,SNR=18						
RES	**Resolute Bay**	**63.41**	**358**	*e*P	**P**	**08 15 48.5**	**-7.0**
MDT	**Midelt**	**77.50**	**59**	LR	LR	08 45 57.1	
	comp=E,77nm,18.5s,MS4.0,baz=109,slow=32						
GRFO	**Grafenberg**	**86.61**	**40**	*e*P	**P**	**08 18 06.5**	**-3.1**
	comp=E,39nm,0.8s						

GUC 05 08:05:58.4±0.7**, 3170S**×**7209W, h29**^{km}±5^{km}**, MD3.8, ML3.3, 1C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.54**	**111**	⇑*i*P	Pb	08 05 55.0	-14
CHNG				*i* S	Sb	08 06 03.1	-14
CHNG				AML	AML	08 06 04.0	
	comp=E,1µm,0.6s						
PACH	**Papudo**	**1.00**	**147**	⇓*i*P	Pn	08 06 16.7	+0.2
PACH				*i* S	Sn	08 06 30.0	+0.3
CMCH	**Combarbala**	**1.07**	**61**	*e*P	Pn	08 06 17.1	-0.3
CMCH				*e*S	Sn	08 06 32.1	+0.9
CMCH				AML	AML	08 06 34.1	
	comp=N,3µm,0.6s						
PEL	**Peldehue**	**1.87**	**141**	*e*P	Pn	08 06 29.8	+1.4
PEL				*i* S	Sn	08 06 54.1	+3.1
PEL				AML	AML	08 07 03.5	
	comp=N,807nm,0.6s						
TLL	**Tololo Astrono**	**1.88**	**36**	AML	AML	08 07 04.7	
	comp=N,311nm,0.5s						
RCDM	**Rinconada Maip**	**2.09**	**149**	*e*P	Pn	08 06 32.9	+1.5
RCDM				*i* S	Sn	08 06 58.5	+2.0
RCDM				AML	AML	08 07 03.2	
	comp=E,209nm,0.4s						
FCH	**Farellones**	**2.23**	**137**	⇓*i*P	Pn	08 06 35.5	+2.2
ANTU	**Antumapu**	**2.23**	**147**	*e*P	Pn	08 06 35.3	+1.9
ANTU				*i* S	Sn	08 07 02.7	+2.6
ANTU				AML	AML	08 07 12.5	
	comp=E,264nm,0.7s						

*ISK **05** 08:23:40.9, 3664N×2693E, h129^{km}, MD3.4*
*HLW **05** 08:24:38.6, 3656N×27.10E, h33^{km}, Mb4.3*
*CSEM **05** 08:24:38.5±0.1, 3657N×2703E, h139^{km}±1^{km}, MD3.1, Error ellipse: s-maj=2.1km s-min=1.7km az=89.0*
*ISCJB **05** 08:24:38.8±0.2, 3654N±003×2689E±003, h144^{km}±3^{km}, mb3.7/7, Error ellipse: s-maj=4.4km s-min=3.6km az=167.5*
*NEIC **05** 08:24:39.4, 3660N×2688E, h137^{km}, mb4.3/3, After ATH.*
*ATH **05** 08:24:39.4, 3660N×2688E, h137^{km}±4^{km}*
*IDC **05** 08:24:39.0±0.8, 3658N×2690E, h126^{km}±13^{km}, mb3.5/7, mb1 3.5/15, mb1mx3.4/28, mbtmp3.5/15, Error ellipse: s-maj=14.8km s-min=10.0km az=174.0*
*DDA **05** 08:24:50.9, 3755N×2766E, h5^{km}, Md3.1*
ISC 05 08:24:39.8±0.2**, 3654N**±003×**2689E**±003**, h140**^{km}±3^{km}**, n72, σ0^{s}91**/91**, mb3.7**/7**, 2C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.58**	**71**	PG	**Pn**	**08 25 00.4**	**+0.1**
DAT				SG	**Sn**	**08 25 14.5**	**-1.5**
BODT	**Bodrum**	**0.62**	**32**	PG	**Pn**	**08 25 00.5**	**-0.1**
BDRM	**Kayabasi**	**0.69**	**40**	*i* P	**Pn**	**08 25 00.5**	**-0.5**
BDRM				*i* S	**Sn**	**08 25 16.4**	**-0.9**
KARP	**Karpathos**	**1.01**	**167**	⇓*i*P	**Pn**	**08 25 04.5**	**+0.9**
KARP				*e*S	**Sn**	**08 25 21.7**	**-0.1**
MLSB	**Milas**	**1.04**	**43**	*e*PG	**Pn**	**08 25 03.9**	**+0.1**
ARG	**Arkhangelos**	**1.05**	**107**	⇓*i*P	**Pn**	**08 25 05.0**	**+1.1**
ARG				*e*S	**Sn**	**08 25 22.6**	**+0.3**
SANT	**Santorini**	**1.17**	**262**	*e*Pn	**Pn**	**08 25 05.4**	**+0.4**
SANT				*e*Sn	**Sn**	**08 25 24.2**	**-0.1**
SANT	**Santorini**	**1.17**	**262**	*e*Pn	**Pn**	**08 25 05.4**	**+0.4**
SANT				*e*Sn	**Sn**	**08 25 24.2**	**-0.1**
SMG	**Samos**	**1.17**	**358**	*e*P	**Pn**	**08 25 04.5**	**-0.6**
YER	**Yerkesik**	**1.27**	**61**	*e*PN	**Pn**	**08 25 06.5**	**+0.5**
YER				*e*SN	**Sn**	**08 25 24.6**	**-1.5**
NPS	**Neapolis**	**1.64**	**220**	⇑*i*P	**Pn**	**08 25 10.9**	**+0.8**
NPS				*e*S	**Sn**	**08 25 33.0**	**-0.2**
FETY	**Fethiye**	**1.77**	**86**	*e*PN	**Pn**	**08 25 12.0**	**+0.5**
URLA	**Izmir**	**1.84**	**353**	*i* P	**Pn**	**08 25 12.0**	**-0.3**
URLA				*i* S	**Sn**	**08 25 27.1**	**-10**
BLCB	**Balcova**	**1.85**	**4**	*e*PN	**Pn**	**08 25 11.9**	**-0.5**
XRY	**Khrisi**	**1.92**	**211**	*e*P	**Pn**	**08 25 13.5**	**+0.2**
IDI	**Anoyia**	**2.05**	**233**	P	**Pn**	**08 25 15.4**	**+0.6**
	34nm,0.3s,baz=51,slow=10.0,SNR=323						
IDI				S	**Sn**	**08 25 40.5**	**-1.2**
	109nm,0.3s,baz=128,slow=23,SNR=39						
KSL	**Kastellorizon**	**2.21**	**99**	*e*P	**Pn**	**08 25 17.0**	**+0.3**
GOLH	**Golhisar**	**2.25**	**71**	*i* P	**Pn**	**08 25 18.2**	**+1.0**
GOLH				*i* S	**Sn**	**08 25 46.7**	**+0.6**
KULA	**Kula-Manisa**	**2.42**	**35**	*e*PN	**Pn**	**08 25 19.5**	**+0.1**
ELL	**Elmali**	**2.44**	**84**	*e*PN	**Pn**	**08 25 20.5**	**+1.0**
VAM	**Vamos**	**2.46**	**243**	⇑*i*P	**Pn**	**08 25 21.0**	**+1.2**
PRK	**Paraskevi**	**2.75**	**350**	*e*P	**Pn**	**08 25 23.2**	**-0.2**
KHL	**Karahalli**	**2.75**	**49**	*e*PN	**Pn**	**08 25 23.7**	**+0.2**
GVD	**Gavdhos**	**2.84**	**234**	*e*Pn	**Pn**	**08 25 26.5**	**+1.8**
GVD				*e*Sn	**Sn**	**08 25 59.7**	**+0.4**
GVD	**Gavdhos**	**2.84**	**234**	*e*Pn	**Pn**	**08 25 26.5**	**+1.8**
GVD				*e*Sn	**Sn**	**08 25 59.7**	**+0.4**
BCK	**Bucak**	**3.10**	**72**	*e*PN	**Pn**	**08 25 29.0**	**+1.1**
KYTH	**Kithira**	**3.12**	**266**	*e*P	**Pn**	**08 25 29.0**	**+0.8**
VLI	**Veliai**	**3.19**	**274**	*e*P	**Pn**	**08 25 29.5**	**+0.4**
SHUT	**Suhut-Afyon**	**3.54**	**54**	*e*PN	**Pn**	**08 25 34.3**	**+0.7**
ITM	**Ithomi**	**4.03**	**281**	*e*P	**Pn**	**08 25 41.6**	**+1.5**
LTBQ	**Tobruq**	**5.10**	**210**	*i* P	**Pn**	**08 25 55.7**	**+1.4**
	SNR=23						
LTBQ				*e*S	**Sn**	**08 26 44.2**	**-8.2**
	113nm,0.4s,SNR=23						
SLUM		**5.22**	**196**	P	**Pn**	**08 25 56.5**	**+0.5**
VLS	**Valsamata**	**5.28**	**290**	*e*P	**Pn**	**08 25 56.8**	**+0.1**
ANTO	**Ankara**	**5.71**	**53**	*e*Pn	**Pn**	**08 26 04.0**	**+1.5**
	12nm,0.7s						
ANTO	**Ankara**	**5.71**	**53**	*e*Pn	**Pn**	**08 26 04.0**	**+1.5**
	12nm,0.7s						
BR131	**Keskin Array S**	**6.20**	**57**	*e*Pn	**Pn**	**08 26 09.5**	**+0.6**
	9.4nm,0.8s						
BR131	**Keskin Array S**	**6.20**	**57**	*e*Pn	**Pn**	**08 26 09.5**	**+0.6**
	9.4nm,0.8s						
BRTR	**Keskin Array B**	**6.20**	**57**	P	**Pn**	**08 26 09.7**	**+0.8**
	0.8nm,0.3s,baz=227,slow=12,SNR=27						
FYM	**Al Fayyum**	**7.66**	**152**	P	**Pn**	**08 26 27.3**	**-1.4**
MMAI	**Mount Meron Ar**	**7.83**	**114**	P	**Pn**	**08 26 30.1**	**-0.8**
	4.9nm,0.3s,baz=307,slow=12,SNR=12						
MMAI				S	**Sn**	**08 27 55.7**	**-2.4**
	12nm,0.3s,baz=310,slow=24,SNR=10						
HHAG	**Hagoal**	**7.88**	**145**	P	**Pn**	**08 26 30.5**	**-1.1**
LJBD	**Adjabya**	**7.91**	**227**	*i* P	**Pn**	**08 26 31.5**	**-0.4**
	SNR=22						
GLL	**Jalalah**	**8.03**	**148**	P	**Pn**	**08 26 32.5**	**-1.1**
SUZ		**8.33**	**142**	P	**Pn**	**08 26 36.8**	**-0.7**
TIP	**Timpagrande**	**8.44**	**291**	*e*Pn	**Pn**	**08 26 37.2**	**-1.7**
	4.3nm,0.3s						
TIP				*e*Sn	**Sn**	**08 28 01.5**	**-11**
ZNM		**8.73**	**143**	P	**Pn**	**08 26 43.0**	**0.0**
HNKL	**Nakhl**	**8.87**	**136**	P	**Pn**	**08 26 43.8**	**-1.0**
HNKL				S	**Sn**	**08 28 16.0**	**-7.0**
MLR	**Muntele Rosu**	**8.97**	**356**	P	**Pn**	**08 26 46.8**	**+0.7**
	0.1nm,0.3s,baz=182,slow=5.1,SNR=5.1						
ASF	**Jabal al Asfar**	**9.35**	**115**	P	**Pn**	**08 26 52.8**	**+1.6**
	0.5nm,0.3s,baz=4.4,slow=13,SNR=3.6						
ASF				S	**Sn**	**08 28 35.1**	**+0.5**
	0.6nm,0.3s,baz=6.3,slow=18,SNR=4.5						
HFRF	**Wahat Farafira**	**9.44**	**172**	P	**Pn**	**08 26 52.8**	**+0.4**
HAVL	**Avola**	**9.46**	**276**	Pn	**Pn**	**08 26 50.8**	**-1.8**
	104nm,0.2s						
SSY	**Sortino**	**9.50**	**277**	Pn	**Pn**	**08 26 52.1**	**-1.0**
	57nm,0.3s						
EIL	**Elat**	**9.62**	**133**	P	**Pn**	**08 26 53.5**	**-1.3**
	1.1nm,0.3s,baz=323,slow=6.2,SNR=9.9						
EIL				S	**Sn**	**08 28 35.9**	**-5.4**
	3.8nm,0.3s,baz=6.7,slow=17,SNR=8.4						
GRB	**Gharib**	**9.63**	**147**	P	**Pn**	**08 26 54.5**	**-0.5**
HMDC	**Modica**	**9.73**	**276**	Pn	**Pn**	**08 26 54.7**	**-1.6**
	79nm,0.2s						
HVZN	**Vizzini**	**9.78**	**277**	Pn	**Pn**	**08 26 56.1**	**-0.8**
	115nm,0.7s						
ASUT		**9.94**	**155**	P	**Pn**	**08 26 58.6**	**-0.4**
ASUT		**9.94**	**155**	P	**Pn**	**08 26 58.6**	**-0.5**
	16µm,0.4s						
HKAT	**Jabal Katrina**	**9.98**	**141**	P	**Pn**	**08 26 59.6**	**-0.2**
SHRM		**10.57**	**143**	P	**Pn**	**08 27 08.0**	**+0.4**
AKASG	**Malin Array Be**	**14.26**	**6**	P	**Pn**	**08 27 54.5**	**-0.6**
	1.0nm,0.3s,baz=196,slow=11,SNR=6.4						
AKASG	**Malin Array Be**	**14.26**	**6**	P	**Pn**	**08 27 54.5**	**-0.6**
GERES	**GERESS Array B**	**15.63**	**326**	P	**Pn**	**08 28 12.6**	**+0.3**
	0.1nm,0.3s,baz=133,slow=13,SNR=6.0						
FINES	**FINESS Array B**	**24.93**	**359**	P	**P**	**08 29 48.3**	**-1.3**
	0.5nm,0.3s,mb3.5,baz=152,slow=12,SNR=7.0						
HFS	**Hagfors**	**25.09**	**344**	P	**P**	**08 29 51.0**	**-0.1**
	2.1nm,0.4s,mb4.1,baz=144,slow=11,SNR=20						
NOA	**NORSAR Array B**	**26.46**	**343**	P	**P**	**08 30 04.3**	**+0.9**
	1.0nm,0.9s,mb3.5,baz=158,slow=8.8,SNR=2.8						
NOA	**NORSAR Array B**	**26.46**	**343**	P	**P**	**08 30 04.3**	**+0.9**
TORD	**Torodi Ar. Bea**	**32.45**	**231**	P	**P**	**08 30 58.7**	**+1.9**
	1.1nm,0.4s,mb4.0,baz=32,slow=8.8,SNR=21						
ARCES	**ARCESS Array B**	**33.06**	**359**	P	**P**	**08 31 00.2**	**-1.3**
	2.8nm,1.0s,mb4.0,baz=171,slow=9.0,SNR=5.6						
ARCES	**ARCESS Array B**	**33.06**	**359**	P	**P**	**08 31 00.2**	**-1.4**
MKAR	**Makanchi Array**	**41.85**	**58**	P	**P**	**08 32 16.6**	**+0.8**
	0.7nm,0.5s,mb3.5,baz=278,slow=6.5,SNR=12						
ZALV	**Zalesovo Beam**	**43.04**	**47**	P	**P**	**08 32 25.3**	**+0.1**
	0.8nm,0.5s,mb3.6,baz=260,slow=8.2,SNR=4.3						

*IDC **05** 08:36:24.9±8.0, 2796S×6904W, h88^{km}±62^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.5/15, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=59.2km s-min=41.9km az=10.0*
*GUC **05** 08:36:26.6±0.8, 2758S×69.15W, h112^{km}±19^{km}, MD3.7, ML4.1*
*ISCJB **05** 08:36:27.5±1.4, 2761S±005×692W±02, h111^{km}±15^{km}, mb3.8/3, Error ellipse: s-maj=30.3km s-min=7.6km az=4.7*
ISC 05 08:36:28.3±1.3**, 2760S**±005×**692W**±02**, h104**^{km}±14^{km}**, n16, σ0^{s}97**/16**, mb3.8**/3**, 2C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**1.09**	**283**	⇓*i*P	**Pn**	**08 36 49.2**	**-0.6**
CPCH				*i* S	**Sn**	**08 37 06.3**	**+0.1**
CDCH	**Caldera**	**1.57**	**289**	⇑*i*P	**Pn**	**08 36 55.1**	**-0.5**
CDCH				*i* S	**Sn**	**08 37 15.8**	**-0.6**
CDCH				AML	AML	08 37 16.6	
	comp=E,3µm,0.3s						
VACH	**Vallenar**	**1.71**	**235**	⇓*i*P	**Pn**	**08 36 57.7**	**+0.4**
VACH				*i* S	**Sn**	**08 37 20.8**	**+1.4**
VACH				AML	AML	08 37 21.6	
	comp=N,6µm,0.1s						
TLL	**Tololo Astrono**	**2.93**	**209**	*e*P	**Pn**	**08 37 13.4**	**+0.3**
TLL				*i* S	**Sn**	**08 37 48.9**	**+1.1**
TLL				AML	AML	08 37 56.5	
	comp=E,471nm,0.5s						
LSCH	**La Serena**	**2.94**	**218**	⇑*i*P	**Pn**	**08 37 12.5**	**-0.7**
LSCH				*i* S	**Sn**	**08 37 47.6**	**-0.3**
LSCH				AML	AML	08 37 54.8	
	comp=E,119nm,0.3s						
CPN1	**Cerro Paranal**	**3.17**	**339**	⇓*i*P	**Pn**	**08 37 15.8**	**-0.5**
CPN1				AML	AML	08 37 54.9	
	comp=E,273nm,0.2s						
OVCH	**Ovalle**	**3.49**	**210**	*i* S	**Sn**	**08 37 59.9**	**-1.1**
OVCH				AML	AML	08 38 05.6	
	comp=N,506nm,0.5s						
CMCH	**Combarbala**	**3.90**	**204**	AMb	AMB	08 34 30.1	
	comp=Z,242nm,0.0s						
LPAZ	**La Paz**	**11.30**	**5**	P	**Pn**	**08 39 08.9**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=210,slow=9.7,SNR=3.0						
PDAR	**Pinedale Array**	**79.29**	**331**	P	**P**	**08 48 21.6**	**-0.4**
	comp=Z,0.5nm,0.8s,mb3.4,baz=146,slow=6.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**79.67**	**69**	P	**P**	**08 48 23.2**	**-1.5**
	comp=Z,2.1nm,0.5s,mb4.2,baz=259,slow=5.2,SNR=24						
YKA	**Yellowknife Ar**	**96.84**	**341**	P	**P**	**08 49 48.3**	**+1.5**
	comp=Z,0.2nm,0.4s,mb3.9,baz=95,slow=6.5,SNR=5.2						
ASAR	**Alice Springs**	**124.38**	**206**	PKP	PKPdf	08 55 13.5	-2.2
	comp=Z,0.4nm,0.5s,baz=123,slow=2.0,SNR=6.5						
WRA	**Warramunga Arr**	**127.55**	**208**	PKP	PKPdf	08 55 19.8	-2.0
	comp=Z,0.7nm,0.6s,baz=162,slow=1.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**147.47**	**29**	PKPbc	PKPbc	08 55 58.8	-1.0
	comp=Z,4.0nm,0.5s,baz=312,slow=4.0,SNR=13						
MKAR	**Makanchi Array**	**150.51**	**42**	PKPbc	PKPbc	08 56 06.2	-1.4
	comp=Z,3.2nm,0.6s,baz=309,slow=2.3,SNR=39						

*IDC **05** 08:45:53.6±1.8, 1201N×8578W, h110^{km}±35^{km}, mb3.4/5, mb1 3.6/6, mb1mx3.4/17, mbtmp3.4/6, Error ellipse: s-maj=51.6km s-min=17.9km az=36.0*
*ISCJB **05** 08:45:55.8±0.5, 1145N±009×864W±0.1, h133^{km}±6^{km}, mb3.5/5, Error ellipse: s-maj=22.5km s-min=3.7km az=138.9*
*CASC **05** 08:45:57.4±1.9, 1145N×8631W, h119^{km}±7^{km}, MD3.7, ML3.6*
ISC 05 08:45:56.6±0.5**, 1145N**±009×**864W**±01**, h129**^{km}±7^{km}**, n33, σ0^{s}84**/49**, mb3.5**/5**, 16C-2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.54**	**8**	*e*P	**Pn**	**08 46 16.5**	**+0.7**
SSNN	**San Juan del S**	**0.54**	**107**	⇑*i*P	**Pn**	**08 46 16.4**	**+0.6**
SSNN				*e*S	**Sn**	**08 46 30.2**	**-0.2**
SSNN				*i*		08 46 32.7	
	comp=Z,2µm,0.3s						
APON	**Apoyo**	**0.56**	**33**	⇑*e*P	**Pn**	**08 46 15.6**	**-0.4**
TICN	**Ticuantepe**	**0.60**	**14**	⇑*i*P	**Pn**	**08 46 16.2**	**0.0**
TISN	**Laguna Tiscapa**	**0.70**	**9**	⇓*i*P	**Pn**	**08 46 16.8**	**-0.1**
XAVN	**Gruta Xavier**	**0.70**	**4**	⇑*i*P	**Pn**	**08 46 16.9**	**0.0**
MGAN	**Managua**	**0.70**	**11**	⇑*i*P	**Pn**	**08 46 16.7**	**-0.2**
MGAN				*e*S	**Sn**	**08 46 31.9**	**-0.5**
MGAN				*i*		08 46 32.5	
	comp=N,619nm,0.4s						
CONN	**Concepcion**	**0.75**	**81**	⇑*i*P	**Pn**	**08 46 16.9**	**-0.3**
COPN	**Copaltepe**	**0.76**	**344**	⇓*i*P	**Pn**	**08 46 17.5**	**+0.1**
MADN	**Villa Maderas**	**0.83**	**93**	⇑*i*P	**Pn**	**08 46 17.8**	**-0.1**
HUEN		**0.91**	**13**	⇑*i*P	**Pn**	**08 46 18.1**	**-0.5**
HUEN				*e*S	**Sn**	**08 46 35.8**	**+0.5**
MOMJ	**Momotombo**	**0.96**	**351**	⇑*i*P	**Pn**	**08 46 18.9**	**-0.2**
MOMJ				*e*S	**Sn**	**08 46 35.1**	**-1.2**
TEL3	**Telica 3**	**1.21**	**338**	⇑*e*P	**Pn**	**08 46 22.0**	**+0.5**
TEL3				*e*S	**Sn**	**08 46 41.4**	**+1.0**
TELN	**Telica**	**1.23**	**339**	⇑*e*P	**Pn**	**08 46 22.0**	**+0.3**
TELN				*e*S	**Sn**	**08 46 41.4**	**+0.6**
LIM1	**Limonal**	**1.33**	**124**	⇑*e*P	**Pn**	**08 46 22.6**	**-0.2**
LIM1				*i* S	**Sn**	**08 46 42.0**	**-0.7**
CUI		**1.42**	**123**	⇑*e*P	**Pn**	**08 46 23.6**	**-0.2**
CUI				*e*S	**Sn**	**08 46 45.0**	**+0.7**
2RIO	**Dos Rios de Up**	**1.45**	**129**	⇑*e*P	**Pn**	**08 46 19.8**	**-4.4**
2RIO				*e*S	**Sn**	**08 46 37.6**	**-7.4**
JTS	**JuntasAbangare**	**1.81**	**129**	P	**Pn**	**08 46 27.3**	**-1.0**
	comp=N,16nm,0.3s,baz=314,slow=19,SNR=74						
JTS				S	**Sn**	**08 46 49.6**	**-3.0**
	comp=N,41nm,0.3s,baz=317,slow=20,SNR=13						
JCR	**Jicaral**	**2.02**	**142**	*e*P	**Pn**	**08 46 31.8**	**+0.9**
JCR				*e*S	**Sn**	**08 46 56.7**	**-0.3**
CGA2	**Cerro Gallo 2**	**2.36**	**127**	*e*P	**Pn**	**08 46 35.9**	**+0.9**
CGA2				*e*S	**Sn**	**08 47 03.4**	**-1.1**
PRS1	**Puriscal**	**2.50**	**125**	*e*P	**Pn**	**08 46 38.4**	**+1.6**
PRS1				*e*S	**Sn**	**08 47 07.6**	**-0.1**
LAJ	**Bijagual**	**2.72**	**125**	*e*P	**Pn**	**08 46 37.3**	**-2.4**
LCR2	**La Lucha 2**	**2.89**	**126**	⇑*e*P	**Pn**	**08 46 42.0**	**+0.2**
LCR2				*e*S	**Sn**	**08 47 16.9**	**+0.3**
QCR	**Quepos**	**2.96**	**133**	*e*P	**Pn**	**08 46 44.6**	**+1.8**
URSC	**Urasca**	**3.02**	**122**	⇑*e*P	**Pn**	**08 46 43.4**	**-0.1**
URSC				*e*S	**Sn**	**08 47 21.8**	**+2.2**
BAR1		**3.73**	**126**	*e*P	**Pn**	**08 46 53.0**	**+0.1**
BAR1				*e*S	**Sn**	**08 47 35.8**	**-0.6**
CMIG	**Matias Romero**	**9.97**	**305**	P	**Pn**	**08 48 17.3**	**+0.7**
	comp=N,0.4nm,0.3s,baz=135,slow=12,SNR=15						
CMIG				S	**Sn**	**08 50 05.9**	**-0.8**
	comp=N,0.2nm,0.3s,baz=139,slow=20,SNR=4.7						
TXAR	**Lajitas Array**	**24.01**	**320**	P	**P**	**08 50 58.6**	**-0.9**
	comp=N,1.9nm,0.5s,mb3.9,baz=144,slow=9.9,SNR=30						
NVAR	**Mina Array Bea**	**39.14**	**319**	P	**P**	**08 53 11.6**	**-0.1**
	comp=N,0.7nm,0.7s,mb3.4,baz=115,slow=8.2,SNR=7.0						
ULM	**Lac du Bonnet**	**39.47**	**350**	P	**P**	**08 53 09.3**	**-4.9**
	comp=N,0.8nm,0.5s,mb3.6,baz=169,slow=12,SNR=3.0						
SCHQ	**Schefferville**	**45.94**	**16**	P	**P**	**08 54 00.4**	**-6.0**
	comp=N,1.1nm,0.5s,mb3.8,baz=225,slow=7.8,SNR=13						
YKA	**Yellowknife Ar**	**54.85**	**344**	P	**P**	**08 55 07.5**	**-5.7**
	comp=N,0.1nm,0.4s,mb2.9,baz=144,slow=7.5,SNR=3.8						
WRA	**Warramunga Arr**	**139.99**	**253**	PKP	PKPdf	09 05 09.3	-1.3
	comp=N,0.9nm,0.8s,baz=90,slow=2.5,SNR=3.4						

IGQ 05 08:54:33.1, 107S×**7835W, h11**^{km}±1^{km}**, Mb4.0, Ms3.8, 22C-7D, Error ellipse: s-maj=1.5km s-min=0.7km az=9.2, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PISA	**Pisayambo**	**0.04**	**282**	⇑P	Pg	08 54 36.0	+0.8
RUN5	**Runtun**	**0.35**	**193**	⇑P	Pg	08 54 40.6	+0.4
TAMB	**Tambo**	**0.37**	**357**	⇑P	Pg	08 54 41.3	+0.8
JUIV	**Juive**	**0.37**	**198**	⇓P	Pg	08 54 40.8	+0.3
JUIV	**Juive**	**0.37**	**198**	⇓S	Sg	08 54 45.8	+0.2
ULBA	**Ulba**	**0.39**	**189**	⇑P	Pg	08 54 40.9	+0.1
RETU	**Refugio**	**0.39**	**195**	⇓P	Pg	08 54 41.5	+0.5
RETU	**Refugio**	**0.39**	**195**	⇓S	Sg	08 54 47.4	+1.2
BILB	**Tungurahua vol**	**0.40**	**202**	⇓P	Pg	08 54 41.4	+0.4

BILB	**Tungurahua vol**	**0.40**	**202**	⇓S	Sg	08 54 47.6	+1.2
CAMI	**Rancho Maria**	**0.42**	**338**	⇑P	Pg	08 54 42.4	+1.0
VC1	**Cotopaxi 1**	**0.43**	**352**	⇑P	Pg	08 54 42.5	+0.9
PATA	**Patacocha**	**0.44**	**191**	⇑P	Pg	08 54 42.2	+0.4
ARRY	**Arrayan**	**0.45**	**194**	⇑P	Pg	08 54 41.9	-0.1
IGUA	**Igualata**	**0.51**	**215**	P	Pg	08 54 44.0	+0.9
IGUA	**Igualata**	**0.51**	**215**	S	Sg	08 54 51.0	+1.1
ANTI	**Antisana**	**0.64**	**17**	⇑P	Pg	08 54 45.7	+0.1
JUA2	**San Juan 2**	**0.89**	**343**	⇑P	Pg	08 54 50.7	+0.5
JUA2	**San Juan 2**	**0.89**	**343**	⇑S	Sg	08 55 03.6	+1.8
GGP	**Refugio Guagua**	**0.92**	**344**	⇑P	Pg	08 54 51.3	+0.4
GGP	**Refugio Guagua**	**0.92**	**344**	⇑S	Sg	08 55 03.4	+0.5
TERV	**Terraza Guagua**	**0.92**	**344**	⇑P	Pg	08 54 51.5	+0.5
TERV	**Terraza Guagua**	**0.92**	**344**	⇑S	Sg	08 55 04.1	+1.1
PINO	**Pino**	**0.94**	**344**	⇑P	Pg	08 54 51.7	+0.4
YANA	**Yana**	**0.97**	**347**	⇑P	Pg	08 54 52.0	+0.1
YANA	**Yana**	**0.97**	**347**	⇑S	Sg	08 55 05.0	+0.5
CAYR	**Refugio Cayamb**	**1.13**	**18**	P	Pb	08 54 55.1	+0.4
CAYR	**Refugio Cayamb**	**1.13**	**18**	S	Sb	08 55 10.2	+0.8
CAYA	**Cayambe**	**1.19**	**17**	P	Pb	08 54 55.8	+0.2
CAYA	**Cayambe**	**1.19**	**17**	S	Sb	08 55 12.0	+1.0
LAV3	**Lava3-Reventad**	**1.20**	**37**	⇑P	Pn	08 54 56.6	+0.7
LAV3	**Lava3-Reventad**	**1.20**	**37**	⇑S	Sb	08 55 12.4	+1.0
CONE	**Cono NE Rev Vo**	**1.22**	**35**	⇑P	Pn	08 54 57.0	+0.9
CONE	**Cono NE Rev Vo**	**1.22**	**35**	⇑S	Sb	08 55 13.1	+1.2
COTA	**Cotacachi**	**1.39**	**0**	P	Pn	08 55 00.1	+1.6
MAG1	**Magdalena**	**1.73**	**305**	P	Pn	08 55 06.3	+3.0
MAG1	**Magdalena**	**1.73**	**305**	S	Sn	08 55 30.7	+5.3
MAG1				⇓P		15 52 21.7	

*BJI **05** 08:58:00.2, 930S×10780E, h10km, mB5.1, mb4.7*
*IDC **05** 08:58:02.1±1.6, 900S×10822E, h0km, mb4.2/7, mb1 4.2/7, mb1mx4.0/19, mbtmp4.2/7, MS3.8/1, Ms1 3.8/1, ms1mx3.1/31, Error ellipse: s-maj=92.9km s-min=18.0km az=52.0*
*NEIC **05** 08:58:02.2±0.4, 931S×10781E, h10km, mb4.8/11, Error ellipse: s-maj=14.5km s-min=9.4km az=50.0*
*ISCJB **05** 08:58:03.9±3.0, 94S±02×1079E±02, h37km±32km, mb4.5/19, Error ellipse: s-maj=37.5km s-min=12.9km az=138.4*
ISC 05 08:58:06.1±2.5**, 94S**±01×**1078E**±02**, h41**km±28km**, n31,** σ**0^{s}88**/24**, mb4.5**/19**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**2.34**	**243**	*e*Pn	**Pn**	**08 58 41.3**	**-0.8**
PSI	**Prapat**	**15.02**	**324**	Pn	**Pn**	**09 01 37.0**	**+1.3**
	0.3nm,0.3s,baz=130,slow=5.3,SNR=3.7						
WRA	**Warramunga Arr**	**27.69**	**115**	P	**P**	**09 03 50.6**	**-0.1**
	1.6nm,0.8s,mb3.7,baz=287,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**28.69**	**123**	P	**P**	**09 03 59.5**	**-0.1**
	1.3nm,0.9s,mb3.7,baz=299,slow=9.1,SNR=6.3						
ASAR				PcP	PcP	09 07 11.5	+2.0
	0.4nm,0.7s,baz=276,slow=1.4,SNR=5.2						
STKA	**Stephens Creek**	**38.47**	**130**	P	**P**	**09 05 25.4**	**+1.1**
	2.3nm,0.7s,mb4.0,baz=309,slow=12,SNR=3.7						
ODAN	**Odare**	**41.15**	**332**	*e*P	**P**	**09 05 46.3**	**-0.3**
	17nm,0.9s,mb4.7						
TAPN	**Taplejung**	**41.42**	**333**	*e*P	**P**	**09 05 49.0**	**+0.2**
	21nm,0.9s,mb4.8						
JIRN	**Jiri**	**42.39**	**331**	*e*P	**P**	**09 05 57.0**	**+0.3**
	23nm,0.8s,mb4.9						
KKN	**Kakani**	**42.94**	**330**	*e*P	**P**	**09 06 01.4**	**+0.2**
	28nm,0.8s,mb5.0						
GKN	**Gorkha**	**43.43**	**330**	*e*P	**P**	**09 06 04.0**	**-1.2**
	12nm,0.5s,mb4.8						
LZH	**Lanzhou**	**45.42**	**356**	*e*P	**P**	**09 06 20.0**	**-1.0**
LZH				AP	pP	09 06 25.4	-7.1
LZH				XP	sP	09 06 28.1	-9.2
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.7						
LZH	**Lanzhou**	**45.42**	**356**	*e*P	**P**	**09 06 20.0**	**-1.0**
	comp=Z,17nm,1.3s,mb4.7						
LZH				pP	pP	09 06 25.4	-7.1
LZH				sP	sP	09 06 28.1	-9.2
GTA	**Gaotai**	**49.15**	**352**	*e*P	**P**	**09 06 50.5**	**+0.6**
GTA				AP	pP	09 06 56.8	-4.8
GTA				XP	sP	09 07 00.0	-6.4
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6						
CBIJ	**Chichi jima**	**49.31**	**42**	LR	LR	09 26 53.3	
	comp=Z,101nm,18.5s,baz=161,slow=36						
SONM	**Songino Array**	**57.03**	**359**	P	**P**	**09 07 47.5**	**-0.3**
	comp=Z,2.5nm,0.7s,mb4.4,baz=175,slow=8.1,SNR=29						
ULN	**Ulaanbaatar**	**57.05**	**359**	*e*P	**P**	**09 07 47.4**	**-0.5**
	comp=Z,4.1nm,0.7s,mb4.6						
TKM2	**Tokmak 2**	**59.80**	**333**	*e*P	**P**	**09 08 07.1**	**-0.2**
	comp=Z,4.6nm,0.6s,mb4.7						
MKAR	**Makanchi Array**	**60.42**	**340**	P	**P**	**09 08 11.3**	**-0.1**
MKAR	**Makanchi Array**	**60.42**	**340**	P	**P**	**09 08 11.3**	**-0.1**
	comp=Z,7.3nm,0.6s,mb4.9,baz=144,slow=7.7,SNR=107						
EKS2	**Erkin-Say**	**60.43**	**332**	*e*P	**P**	**09 08 11.6**	**0.0**
	comp=Z,3.0nm,0.7s,mb4.4						
KURK	**Kurchatov**	**65.03**	**340**	*e*P	**P**	**09 08 42.1**	**+0.1**
	comp=Z,5.5nm,0.8s,mb4.6						
ZALV	**Zalesovo Beam**	**66.06**	**345**	P	**P**	**09 08 47.5**	**-1.2**
	comp=Z,1.8nm,0.6s,mb4.3,baz=133,slow=5.1,SNR=7.9						
AKTK	**Aktyubinsk**	**73.60**	**329**	P	**P**	**09 09 37.0**	**+1.9**
AKTO	**Aktyubinsk**	**73.60**	**329**	P	**P**	**09 09 37.0**	**+1.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=126,slow=9.0,SNR=5.5						
TIXI	**Tiksi**	**82.12**	**7**	*e*P	**P**	**09 10 20.4**	**-1.6**
	comp=Z,3.0nm,0.4s,mb4.6						
YKA	**Yellowknife Ar**	**118.85**	**21**	PKP	PKPdf	09 16 50.9	+1.1
	comp=Z,0.1nm,0.3s,baz=313,slow=5.7,SNR=3.8						
NVAR	**Mina Array Bea**	**129.66**	**47**	PKP	PKPdf	09 17 13.7	+2.4
	comp=Z,0.1nm,0.3s,baz=224,slow=3.8,SNR=3.3						
TXAR	**Lajitas Array**	**144.52**	**52**	PKP	PKPdf	09 17 38.8	-0.1
TXAR	**Lajitas Array**	**144.52**	**52**	PKP	PKPdf	09 17 38.8	-0.1
	comp=Z,0.2nm,0.7s,baz=300,slow=1.8,SNR=3.1						
WMOK	**Wichita Mounta**	**145.00**	**40**	*e*PKPdf	PKPdf	09 17 39.6	+0.1
JCT	**Junction City**	**146.84**	**47**	*e*PKPdf	PKPdf	09 17 45.8	+3.0

IDC 05 09:14:23.1±1.2**, 463N**×**12213E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, Error ellipse: s-maj=149.2km s-min=21.2km az=66.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.21**	**154**	P	P	09 20 07.8	-1.1
	0.4nm,0.3s,baz=333,slow=10.0,SNR=6.0						
ASAR	**Alice Springs**	**30.38**	**158**	P	P	09 20 38.2	+1.2
	0.3nm,0.4s,baz=338,slow=7.0,SNR=7.0						
SONM	**Songino Array**	**45.12**	**345**	P	P	09 22 41.7	+0.5
	0.2nm,0.4s,baz=162,slow=6.1,SNR=3.0						
MKAR	**Makanchi Array**	**54.26**	**327**	P	P	09 23 50.5	-0.4
	0.3nm,0.3s,baz=116,slow=7.6,SNR=8.4						

IDC 05 09:33:16.4±3.0**, 339S**×**13283E, h0**km**, mb3.2**/2**, mb1 3.8**/4**, mb1mx3.6**/15**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=135.6km s-min=27.4km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**16.23**	**205**	Pn	Pn	09 37 05.9	-0.1
	0.2nm,0.3s,baz=32,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**16.52**	**175**	Pn	Pn	09 37 09.5	-0.2
	0.2nm,0.3s,baz=355,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**20.19**	**177**	P	P	09 37 53.0	+0.2
	1.1nm,0.7s,baz=359,slow=10,SNR=12						
MKAR	**Makanchi Array**	**66.84**	**325**	P	P	09 44 10.2	+0.1
	0.1nm,0.6s,baz=116,slow=6.6,SNR=2.7						

*ISK **05** 09:38:36.7, 3975N×24.19E, h14km, MD3.8*
*SOF **05** 09:39:35.9, 3981N×24.16E, h10km, MD3.5*
*ISCJB **05** 09:39:36.3±0.4, 3976N±002×24.17E±002, h8km±4km, Error ellipse: s-maj=3.3km s-min=2.6km az=38.2*
*ATH **05** 09:39:37.6, 3979N×2406E, h76km±9km, ML3.8*
*THE **05** 09:39:38.6, 3975N×24.16E, h17km, ML4.2*
*CSEM **05** 09:39:38.3±0.0, 3977N×24.16E, h30km, ML4.2, Error ellipse: s-maj=1.2km s-min=0.9km az=60.0*
*NEIC **05** 09:39:38.6, 3975N×24.16E, h18km, ML4.2(THE), ML3.8(ATH), After THE.*
*BEO **05** 09:39:41.3±0.8, 4065N×2567E, h70km±4km, ML4.1/4*
*DDA **05** 09:39:43.3, 3958N×2465E, h9km, Md3.4*
ISC 05 09:39:37.6±0.4**, 3974N**±002×**2417E**±002**, h11**km±3km**, n107,** σ**1^{s}01**/131**, 17C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.42**	**296**	*e*Pg	**Pg**	**09 39 46.6**	**+0.8**
PAIG				*e*Sg	**Sg**	**09 39 53.5**	**+2.1**
OUR	**Ouranopolis**	**0.61**	**346**	*e*Pg	**Pg**	**09 39 49.9**	**+0.6**
LOS	**Limnos**	**0.73**	**75**	*e*Pg	**Pg**	**09 39 52.0**	**+0.4**
LIA	**Limnos Island**	**0.80**	**79**	*e*P	**Pg**	**09 39 56.4**	**+3.4**
PLG	**Polygyros**	**0.84**	**319**	*e*Pg	**Pg**	**09 39 53.3**	**-0.5**
XOR	**Xorichti**	**0.84**	**244**	*e*Pg	**Pg**	**09 39 54.1**	**+0.3**
NEO	**Neokhori**	**0.85**	**239**	⇑*i*P	**Pg**	**09 39 54.3**	**+0.3**
HORT	**Hortiatis**	**1.18**	**316**	*e*Pg	**Pg**	**09 39 59.5**	**-0.8**
HORT				*e*Sg	**Sg**	**09 40 15.3**	**-0.4**
SOH	**Sokhos**	**1.24**	**330**	*e*Pg	**Pg**	**09 40 00.5**	**-1.0**
SOH				*e*Sg	**Sg**	**09 40 17.0**	**-0.6**
THE	**Thessaloniki**	**1.28**	**314**	*e*Pg	**Pg**	**09 40 00.9**	**-1.3**
THE				*e*Sg	**Sg**	**09 40 17.6**	**-1.2**
LIT	**Litokhoron**	**1.34**	**286**	*e*Pg	**Pg**	**09 40 01.9**	**-1.4**
GADA	**Gvkgeada**	**1.40**	**71**	PN	**Pn**	**09 40 02.1**	**-0.9**
GADA				SN	**Sn**	**09 40 20.6**	**-0.9**
LKR	**Lokris**	**1.42**	**220**	*e*P	**Pn**	**09 40 02.6**	**-0.7**
BOZC	**Bozcaada**	**1.46**	**86**	*i* P	**Pn**	**09 40 03.1**	**-0.7**
BOZC				*i* S	**Sn**	**09 40 24.2**	**+1.4**
AGG	**Agios Georgios**	**1.60**	**244**	*e*Pg	**Pn**	**09 40 05.3**	**-0.4**
AGG	**Agios Georgios**	**1.60**	**244**	*e*Pg	**Pn**	**09 40 05.3**	**-0.4**
NVR	**Nevrokopi**	**1.62**	**352**	⇑*i*P	**Pn**	**09 40 05.5**	**-0.5**
NVR	**Nevrokopi**	**1.62**	**352**	⇑*e*P	**Pn**	**09 40 05.5**	**-0.5**
EZN	**Ezine**	**1.66**	**87**	*e*PN	**Pn**	**09 40 06.1**	**-0.5**
PRK	**Paraskevi**	**1.70**	**106**	*e*P	**Pn**	**09 40 07.0**	**-0.1**
PTL	**Penteli**	**1.71**	**188**	*e*P	**Pn**	**09 40 06.5**	**-0.8**
KNT	**Kendrikon**	**1.72**	**326**	*e*Pb	**Pn**	**09 40 07.4**	**0.0**
RDO	**Rodhopi**	**1.75**	**36**	*e*P	**Pn**	**09 40 06.6**	**-1.2**
ATH	**Athens Observa**	**1.80**	**191**	*e*P	**Pn**	**09 40 08.5**	**-0.1**
ENEZ	**Enez**	**1.81**	**56**	*e*PN	**Pn**	**09 40 07.8**	**-0.9**
ENEZ				*e*SN	**Sn**	**09 40 31.5**	**-0.1**
ALN	**Alexandroupoli**	**1.84**	**51**	*e*Pb	**Pn**	**09 40 07.9**	**-1.2**
MMB	**Musomiste**	**1.87**	**350**	*i* P	**Pn**	**09 40 08.2**	**-1.3**
KZN	**Kozani**	**1.93**	**288**	*e*P	**Pn**	**09 40 08.3**	**-1.9**
KVR	**Kavouri**	**1.94**	**189**	*e*P	**Pn**	**09 40 10.0**	**-0.4**
LTK	**Loutraki**	**1.96**	**209**	*e*Pb	**Pn**	**09 40 10.3**	**-0.4**
RZN	**Rozhen**	**1.99**	**12**	*i* P	**Pn**	**09 40 10.5**	**-0.6**
VAY	**Valandovo**	**1.99**	**323**	*i* Pn	**Pn**	**09 40 11.3**	**+0.2**
VAY				*i* Sn	**Sg**	**09 40 42.2**	**+0.6**
VAY	**Valandovo**	**1.99**	**323**	*i* Pn	**Pn**	**09 40 11.3**	**+0.2**
VAY				*i* Sn	**Sg**	**09 40 42.1**	**+0.5**
AYVA	**Ayvalik**	**2.00**	**102**	*i* P	**Pn**	**09 40 10.9**	**-0.3**
AYVA				*i* S	**Sg**	**09 40 42.3**	**+0.5**
CHOS	**Chios island**	**2.00**	**132**	*e*Pn	**Pn**	**09 40 11.4**	**+0.2**
CHOS	**Chios island**	**2.00**	**132**	*e*Pn	**Pn**	**09 40 11.4**	**+0.2**
EVR	**Evrytania**	**2.01**	**246**	*e*P	**Pn**	**09 40 11.9**	**+0.5**
NAIG	**Nisos Aigina**	**2.05**	**195**	*e*P	**Pn**	**09 40 11.5**	**-0.5**
LPK	**Lapseki**	**2.08**	**72**	*e*PN	**Pn**	**09 40 12.1**	**-0.3**
KDZ	**Kurdzhali**	**2.13**	**26**	*i* P	**Pn**	**09 40 11.8**	**-1.2**
KKB	**Krupnik**	**2.27**	**339**	*i* P	**Pn**	**09 40 13.4**	**-1.6**
SELA	**Sela**	**2.30**	**231**	*e*Pn	**Pn**	**09 40 15.6**	**+0.2**
URLA	**Izmir**	**2.34**	**125**	*i* P	**Pn**	**09 40 16.1**	**+0.2**
URLA				*i* S	**Sg**	**09 40 53.4**	**+0.6**
DID	**Didima**	**2.35**	**198**	*e*Pn	**Pn**	**09 40 15.6**	**-0.5**
FNA	**Florina**	**2.38**	**297**	*e*Pn	**Pn**	**09 40 15.9**	**-0.5**
PLD	**Plovdiv**	**2.39**	**10**	*e*Pn	**Pn**	**09 40 16.9**	**+0.3**
STIP	**Stip**	**2.46**	**323**	*e*Pn	**Pg**	**09 40 23.9**	**-0.9**
RKY	**Sarkoy-Tekirda**	**2.49**	**67**	*e*PN	**Pn**	**09 40 17.9**	**-0.1**
BIA	**Bitola**	**2.52**	**301**	*e*Pn	**Pn**	**09 40 22.0**	**+3.6**
MFT	**Murefte**	**2.60**	**65**	*e*PN	**Pn**	**09 40 18.7**	**-0.8**
BLCB	**Balcova**	**2.62**	**120**	*e*PN	**Pn**	**09 40 19.6**	**-0.1**
BLCB	**Balcova**	**2.62**	**120**	*e*Pn	**Pn**	**09 40 20.0**	**+0.3**
KRUS	**Krusevo**	**2.75**	**307**	*i* Pn	**Pn**	**09 40 23.2**	**+1.6**
KRUS	**Krusevo**	**2.75**	**307**	*i* Pn	**Pn**	**09 40 23.1**	**+1.5**
VLX	**Vlachokerasia**	**2.75**	**211**	*e*Pn	**Pn**	**09 40 21.9**	**+0.3**
KDAG	**Bornova**	**2.76**	**118**	*i* P	**Pn**	**09 40 22.1**	**+0.4**
KDAG				*i* S	**Sn**	**09 40 58.9**	**+4.0**
MRMT	**Marmara Adasi**	**2.76**	**71**	*e*PN	**Pn**	**09 40 21.9**	**+0.2**
PGB	**Panagyurishte**	**2.80**	**360**	*i* P	**Pn**	**09 40 24.8**	**+2.5**
BALB	**Balikesir**	**2.87**	**91**	*e*PN	**Pn**	**09 40 22.4**	**-0.7**
EDRB	**Edirne**	**2.87**	**42**	*e*PN	**Pn**	**09 40 22.9**	**-0.3**
APE	**Apeiranthos**	**2.88**	**158**	*e*Pn	**Pn**	**09 40 23.1**	**-0.2**
APE	**Apeiranthos**	**2.88**	**158**	*e*P	**Pn**	**09 40 23.3**	**0.0**
APE	**Apeiranthos**	**2.88**	**158**	⇓*i*P	**Pn**	**09 40 23.5**	**+0.2**
EDC	**Edincik**	**2.90**	**77**	*e*PN	**Pn**	**09 40 23.7**	**+0.1**
SMG	**Samos**	**2.91**	**133**	*e*P	**Pn**	**09 40 24.4**	**+0.6**
VTS	**Vitosha**	**2.94**	**346**	*e*Pn	**Pn**	**09 40 25.1**	**+1.0**
VTS	**Vitosha**	**2.94**	**346**	*i* P	**Pn**	**09 40 25.0**	**+0.9**
VTS	**Vitosha**	**2.94**	**346**	⇓*i*P	**Pn**	**09 40 25.1**	**+1.0**
AKS	**Akhisar**	**2.96**	**106**	*e*PN	**Pn**	**09 40 25.2**	**+0.8**
SKO	**Skopje**	**3.04**	**318**	*e*Pn	**Pn**	**09 40 29.4**	**+3.9**
SKO				*i* Sn	**Sg**	**09 41 18.5**	**+3.4**
ITM	**Ithomi**	**3.11**	**215**	*e*P	**Pn**	**09 40 27.7**	**+1.2**
VLI	**Veliai**	**3.17**	**198**	*e*P	**Pn**	**09 40 26.9**	**-0.5**
VLS	**Valsamata**	**3.20**	**242**	*e*P	**Pn**	**09 40 26.5**	**-1.2**
KCT	**Karacabey**	**3.26**	**79**	*e*PN	**Pn**	**09 40 29.0**	**+0.5**
DST	**Dursunbey**	**3.44**	**91**	*e*PN	**Pn**	**09 40 31.3**	**+0.2**
BARS	**Barje**	**3.54**	**331**	*e*Pn	**Pn**	**09 40 33.4**	**+0.9**
BARS				*e*Sn	**Sn**	**09 41 10.0**	**-4.3**
BARS				*e*Sg	**Sg**	**09 41 35.0**	**+3.6**
PVL	**Pavlikeni**	**3.58**	**14**	*i* P	**Pn**	**09 40 32.0**	**-0.9**
KULA	**Kula-Manisa**	**3.70**	**108**	*e*PN	**Pn**	**09 40 34.8**	**+0.1**
YLV	**Yalova**	**4.07**	**77**	*e*PN	**Pn**	**09 40 40.8**	**+1.1**
IZI	**Iznik**	**4.11**	**80**	*e*PN	**Pn**	**09 40 40.0**	**-0.3**
GDZ	**Gediz**	**4.17**	**97**	*i* P	**Pn**	**09 40 42.9**	**+1.9**
GDZ				*i* S	**Sg**	**09 41 48.6**	**-2.7**
HRT	**Hereke**	**4.34**	**74**	*e*PN	**Pn**	**09 40 44.1**	**+0.7**
SJES	**Sjenica**	**4.74**	**319**	*e*Pn	**Pn**	**09 40 53.6**	**+4.7**
SJES				*e*Sg	**Sg**	**09 42 22.3**	**+13**
GRUS	**Gruza**	**4.88**	**329**	*e*Pn	**Pn**	**09 40 50.7**	**-0.1**
GRUS				*e*Sg	**Sg**	**09 42 16.8**	**+2.6**
DJES	**Djerdap**	**5.04**	**347**	*e*Sg	**Sb**	**09 42 08.0**	**+1.9**
SVIS	**Svilajnac**	**5.05**	**335**	*e*Pn	**Pn**	**09 40 52.9**	**-0.3**
SVIS				*e*Sn	**Sn**	**09 41 41.3**	**-10**
SVIS				*e*Sn	**Sn**	**09 41 41.5**	**-10**
SVIS				*e*Sg	**Sg**	**09 42 17.0**	**-2.7**
ESKT	**Eskisehir**	**5.16**	**90**	*e*PN	**Pn**	**09 40 55.6**	**+0.9**
DIVS	**Divcibare**	**5.35**	**326**	*e*Pn	**Pn**	**09 40 57.8**	**+0.5**
DIVS	**Divcibare**	**5.35**	**326**	*e*Pn	**Pn**	**09 40 57.7**	**+0.4**
DIVS				*e*Sg	**Sg**	**09 42 33.7**	**+4.4**
BBLS	**Bajina Basta -**	**5.44**	**321**	*e*Pn	**Pn**	**09 41 00.6**	**+2.1**
BBLS				*e*Sn	**Sn**	**09 41 58.1**	**-3.0**
BBLS				*e*Sg	**Sg**	**09 42 40.3**	**+8.1**
TIRR	**Tirgusor**	**5.67**	**32**	⇑*i*P	**Pn**	**09 41 01.8**	**+0.1**
VOIR		**5.73**	**6**	⇑P	**Pn**	**09 41 03.4**	**+0.9**
VOIR		**5.73**	**6**	⇑*i*P	**Pn**	**09 41 03.4**	**+1.0**
GZR	**Gura Zlata**	**5.74**	**350**	⇑P	**Pn**	**09 41 02.7**	**+0.1**
GZR	**Gura Zlata**	**5.74**	**350**	⇑*i*P	**Pn**	**09 41 02.7**	**+0.1**
TIP	**Timpagrande**	**5.76**	**267**	*e*Pn	**Pn**	**09 41 04.0**	**+1.0**
MLR	**Muntele Rosu**	**5.89**	**12**	⇑P	**Pn**	**09 41 05.6**	**+0.9**
MLR	**Muntele Rosu**	**5.89**	**12**	⇑*i*P	**Pn**	**09 41 05.6**	**+0.9**
VRI	**Vrincioaia**	**6.40**	**16**	⇑P	**Pn**	**09 41 12.2**	**+0.5**
VRI	**Vrincioaia**	**6.40**	**16**	⇑*i*P	**Pn**	**09 41 12.3**	**+0.6**
VRI	**Vrincioaia**	**6.40**	**16**	⇑P	**Pn**	**09 41 12.2**	**+0.5**
PKSM	**Moragy**	**7.63**	**330**	⇑P	**Pn**	**09 41 28.8**	**+0.2**
PKSM	**Moragy**	**7.63**	**330**	⇑*i*P	**Pn**	**09 41 28.8**	**+0.3**
BURAR	**Bucovina Array**	**7.90**	**5**	⇑P	**Pn**	**09 41 31.4**	**-0.9**
BURAR	**Bucovina Array**	**7.90**	**5**	⇑*i*P	**Pn**	**09 41 31.4**	**-0.9**
PERS	**Pernice**	**9.54**	**319**	*e*Pn	**Pn**	**09 41 57.8**	**+3.0**
JAVS	**Javornik**	**9.63**	**313**	*e*Pn	**Pn**	**09 42 01.8**	**+5.8**

*IDC **05** 09:49:18.9±1.0, 073S×13343E, h0km, mb4.2/8, mb1 4.4/11, mb1mx4.3/20, mbtmp4.4/11, ML4.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/28, Error ellipse: s-maj=44.5km s-min=15.3km az=78.0*
*ISCJB **05** 09:49:22.7±4.0, 086S±008×1334E±02, h38km±35km, mb4.3/12, Error ellipse: s-maj=32.1km s-min=10.1km az=164.3*
*NEIC **05** 09:49:24.2±0.5, 081S×13338E, h35km, mb4.5/5, Error ellipse: s-maj=22.4km s-min=7.4km az=76.0*
ISC 05 09:49:23.0±3.6**, 082S**±008×**1335E**±02**, h25**km±25km**, n22,** σ**0^{s}80**/24**, mb4.3**/12**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**13.48**	**226**	Pn	**Pn**	**09 52 33.4**	**+0.6**
	7.3nm,0.3s,baz=50,slow=7.9,SNR=6.1						
FITZ	**Fitzroy Crossi**	**18.81**	**204**	*e*P	**Pn**	**09 53 40.0**	**-1.4**
	9.1nm,0.3s						
FITZ				*e*S	**Sn**	**09 56 55.3**	**-16**
FITZ	**Fitzroy Crossi**	**18.81**	**204**	P	**Pn**	**09 53 41.4**	**0.0**
	2.0nm,0.3s,baz=44,slow=11,SNR=22						
FITZ				S	**Sn**	**09 56 57.1**	**-14**
	0.5nm,0.3s,baz=121,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**19.02**	**177**	P	**Pn**	**09 53 42.7**	**-1.3**
	1.6nm,0.3s,baz=358,slow=12,SNR=46						
WRA				S	**Sn**	**09 57 07.5**	**-9.0**
	0.3nm,0.3s,baz=357,slow=23,SNR=6.1						
WB2	**Warramunga Arr**	**19.02**	**177**	*e*P	**Pn**	**09 53 42.9**	**-1.1**
WB2				*e*S	**Sn**	**09 57 10.5**	**-6.0**
ASAR	**Alice Springs**	**22.71**	**179**	P	**P**	**09 54 22.9**	**-0.1**
	13nm,0.7s,mb4.5,baz=0.8,slow=11,SNR=44						
ASAR				S	**S**	**09 58 29.8**	**-0.7**
	1.6nm,0.9s,baz=358,slow=24,SNR=4.4						
CTA	**Charters Tower**	**22.88**	**148**	P	**P**	**09 54 26.3**	**+1.5**
CTA	**Charters Tower**	**22.88**	**148**	P	**P**	**09 54 26.3**	**+1.5**
	3.2nm,0.7s,mb3.9,baz=325,slow=11,SNR=4.0						
MBWA	**Marble Bar**	**24.25**	**213**	*e*P	**P**	**09 54 39.2**	**+1.1**
	25nm,1.3s,mb4.5						
STKA	**Stephens Creek**	**31.83**	**167**	P	**P**	**09 55 46.3**	**+0.4**
	1.6nm,0.4s,mb4.2,baz=342,slow=13,SNR=3.6						
NWAO	**Narrogin (SRO)**	**35.40**	**204**	P	**P**	**09 56 17.2**	**+0.3**
NWAO	**Narrogin (SRO)**	**35.40**	**204**	P	**P**	**09 56 17.2**	**+0.3**
	5.4nm,0.9s,mb4.5,baz=34,slow=11,SNR=3.8						
MJAR	**Matsushiro Arr**	**37.43**	**6**	LR	LR	10 11 26.7	
	comp=Z,54nm,19.2s,baz=75,slow=36						
SONM	**Songino Array**	**53.88**	**338**	P	**P**	**09 58 43.8**	**-0.2**
	0.8nm,0.8s,mb3.7,baz=149,slow=4.1,SNR=5.8						
SONM				PcP	PcP	09 59 49.3	-0.1
	0.7nm,0.8s,baz=157,slow=4.4,SNR=3.2						
MKAR	**Makanchi Array**	**65.13**	**324**	P	**P**	**10 00 01.6**	**-0.1**
	6.3nm,0.6s,mb4.8,baz=115,slow=8.1,SNR=64						
TKM2	**Tokmak 2**	**67.59**	**318**	*e*P	**P**	**10 00 17.6**	**0.0**
	3.4nm,0.7s,mb4.5						
ZALV	**Zalesovo Beam**	**67.72**	**331**	P	**P**	**10 00 16.7**	**-1.4**
	0.7nm,0.6s,mb3.9,baz=115,slow=6.8,SNR=4.9						
UCH	**Uchtor**	**68.06**	**317**	*e*P	**P**	**10 00 20.8**	**+0.3**
	2.9nm,0.8s,mb4.4						
AML	**Almayashu**	**68.58**	**316**	*e*P	**P**	**10 00 24.2**	**+0.4**
	5.4nm,0.8s,mb4.5						
VNDA	**Vanda**	**78.16**	**174**	P	**P**	**10 01 20.1**	**+0.5**
	1.3nm,1.0s,mb3.8,baz=334,slow=7.4,SNR=2.6						
TORD	**Torodi Ar. Bea**	**130.68**	**287**	PKP	PKPdf	10 08 32.0	-0.8
TORD	**Torodi Ar. Bea**	**130.68**	**287**	PKP	PKPdf	10 08 32.0	-0.8
	0.3nm,0.6s,baz=26,slow=1.3,SNR=2.7						

*CSEM **05** 10:10:36.2, 3965N×2041E, h48km, MD3.0/3, After ATH*
ATH 05 10:10:36.2, 3965N×**2041E, h48**km**, MD3.0**/3**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.34**	**89**	*e*P	Pn	10 10 45.9	+0.4
JAN				*e*S	Sn	10 10 52.9	+0.8
KEK	**Kerkira**	**0.48**	**278**	*e*P	Pn	10 10 47.7	+0.7
VLS	**Valsamata**	**1.48**	**174**	*e*P	Pn	10 11 01.9	+1.6

IDC 05 10:53:17.9±2.3**, 599S**×**12981E, h0**km**, mb3.3**/1**, mb1 3.6**/3**, mb1mx3.5**/14**, mbtmp3.4**/3**, ML3.4**/2**, Error ellipse: s-maj=148.6km s-min=30.6km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.55**	**163**	Pn	Pn	10 56 43.5	-1.7
	0.2nm,0.3s,baz=345,slow=14,SNR=12						
WRA				Sn	Sn	10 59 14.9	-12
	0.5nm,0.3s,baz=346,slow=20,SNR=9.6						
ASAR	**Alice Springs**	**18.01**	**168**	P	Pn	10 57 30.8	+1.0
	0.1nm,0.3s,baz=350,slow=11,SNR=10						
MKAR	**Makanchi Array**	**67.28**	**327**	P	P	11 04 14.6	+0.1
	0.2nm,0.5s,baz=122,slow=8.7,SNR=4.1						

*NEIC **05** 11:47:24.7, 1628N×9828W, h5km, MD3.9(MEX), After MEX.*
MEX 05 11:47:24.4±0.7**, 1629N**×**9829W, h1**km±6km**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**56**	*i* P	Pg	11 47 27.9	-0.1
PNIG				*i* S	Sg	11 47 30.9	+0.3
UTMO	**Huajuapan**	**1.61**	**17**	*i* P	Pn	11 47 49.9	-4.0
UTMO				*i* S	Sn	11 48 10.7	-4.6
ACX	**Acapulco**	**1.66**	**291**	*i* P	Pn	11 47 51.5	-3.2
VHO	**Vista Hermosa**	**1.69**	**62**	*i* P	Pn	11 47 51.3	-3.7
VHO				*i* S	Sn	11 48 13.2	-4.0
OXX	**Oaxaca**	**1.70**	**62**	*e*P	Pn	11 47 47.5	-7.7
OXX	**Oaxaca**	**1.70**	**62**	*e*P	Pn	11 47 50.0	-5.2
MEIG	**Mezcala**	**2.07**	**322**	*i* P	Pn	11 47 58.9	-1.3
MEIG				*i* S	Sn	11 48 21.0	-5.7
TPIG	**Tehuac#an**	**2.30**	**23**	*e*P	Pn	11 48 00.7	-2.8
TPIG				*i* S	Sn	11 48 29.0	-3.4
PLIG	**Platanillo**	**2.39**	**331**	*i* P	Pn	11 48 02.1	-2.6
PLIG				*i* S	Sn	11 48 30.9	-3.8
PPM	**Popocatepetl**	**2.79**	**353**	*i* P	Pn	11 48 08.5	-1.6
PPM				*i* S	Sn	11 48 41.1	-3.2
IIO	**Organos**	**3.31**	**353**	*i* P	Pn	11 48 18.2	+0.8
IIO				*i* S	Sn	11 48 54.7	-2.7
PTVM	**Pico Tres Padr**	**3.38**	**347**	*i* S	Sn	11 48 55.9	-3.2

IDC 05 12:02:19.1±1.9**, 075N**×**12554E, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/17**, mbtmp3.7**/3**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.0**/37**, Error ellipse: s-maj=184.8km s-min=24.1km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.30**	**158**	P	P	12 07 16.5	-1.8
	1.6nm,0.5s,baz=336,slow=11,SNR=18						
ASAR	**Alice Springs**	**25.59**	**162**	P	P	12 07 51.6	+1.4
	0.7nm,0.3s,baz=333,slow=7.3,SNR=26						
DZM	**Mont Dzumac**	**45.88**	**122**	LR	LR	12 28 00.5	
	comp=Z,138nm,18.2s,baz=216,slow=34						
MKAR	**Makanchi Array**	**59.35**	**327**	P	P	12 12 23.0	-0.1
	0.4nm,0.5s,baz=120,slow=8.2,SNR=8.5						

*NEIC **05** 12:06:44.8, 1675N×9983W, h10km, MD4.0(MEX), After MEX.*
MEX 05 12:06:44.9±0.8**, 1676N**×**9983W, h10**km±3km**, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.14**	**321**	*i* P	Pg	12 06 47.0	-1.1
ACX				*i* S	Sg	12 06 50.5	+0.2
CAIG	**El Cayaco**	**0.51**	**304**	*i* P	Pg	12 06 53.9	-1.0
CAIG				*i* S	Sg	12 07 01.5	-0.1
MEIG	**Mezcala**	**1.18**	**10**	*i* P	Pb	12 07 03.7	-3.7
MEIG				*i* S	Sb	12 07 18.8	-3.9
PLIG	**Platanillo**	**1.65**	**11**	*i* P	Pn	12 07 11.0	-3.1
PLIG				*i* S	Sn	12 07 29.9	-5.4
PNIG	**Pinotepa**	**1.67**	**102**	*i* P	Pn	12 07 11.9	-2.3
PNIG				*i* S	Sn	12 07 31.3	-4.4
ZIIG	**Zihuatanejo**	**1.78**	**299**	*i* P	Pn	12 07 13.4	-2.3
ZIIG				*i* S	Sn	12 07 33.9	-4.6
UTMO	**Huajuapan**	**2.21**	**61**	*e*P	Pn	12 07 17.4	-4.3
UTMO				*i* S	Sn	12 07 48.8	-0.1
YAIG	**Yautepec**	**2.21**	**19**	*i* P	Pn	12 07 19.0	-2.8
YAIG				*i* S	Sn	12 07 44.5	-4.6
PPM	**Popocatepetl**	**2.56**	**26**	*e*P	Pn	12 07 24.6	-1.9
PPM				*i* S	Sn	12 07 54.8	-3.0
SZVM	**Salazar**	**2.59**	**9**	*i* P	Pn	12 07 22.4	-4.5
SZVM				*i* S	Sn	12 07 54.1	-4.3
TPIG	**Tehuac#an**	**2.87**	**55**	*i* P	Pn	12 07 26.7	-4.1
TPIG				*i* S	Sn	12 08 02.1	-3.4
PTVM	**Pico Tres Padr**	**2.90**	**13**	*i* P	Pn	12 07 27.2	-4.0
PTVM				*i* S	Sn	12 08 01.6	-4.6
VHO	**Vista Hermosa**	**2.98**	**84**	*i* P	Pn	12 07 31.1	-1.1
VHO				*i* S	Sn	12 08 04.1	-3.9
OXX	**Oaxaca**	**2.99**	**83**	*e*P	Pn	12 07 38.5	+6.1
OXX	**Oaxaca**	**2.99**	**83**	*e*P	Pn	12 07 31.5	-0.9
IIO	**Organos**	**3.01**	**20**	*e*P	Pn	12 07 31.6	-1.0
IIO				*i* S	Sn	12 08 07.0	-1.8
MOIG	**Morelia**	**3.18**	**336**	*i* P	Pn	12 07 38.6	+3.5
MOIG				*i* S	Sn	12 08 08.7	-4.3
MMIG	**Aquila**	**3.69**	**295**	*e*P	Pn	12 07 41.2	-0.8
MMIG				*i* S	Sn	12 08 23.8	-1.8

GUC 05 12:13:18.9±0.4**, 3068S**×**7192W, h32**km±3km**, MD3.9, ML3.1, 3C-3D, Near coast of central Chile**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OVCH	Ovalle	0.62	84⇓	*i*P	Pb	12 13 30.9	-0.4
OVCH				*i* S	Sb	12 13 39.9	+0.1
OVCH				AML	AML	12 13 43.0	
	comp=N,2μm,0.3s						
CMCH	Combarbala	0.93	122⇑	*i*P	Pn	12 13 35.9	+0.2
CMCH				*i* S	Sn	12 13 48.8	+0.8
CMCH				AML	AML	12 13 50.9	
	comp=N,4μm,0.5s						
LSCH	La Serena	0.96	37⇑	*i*P	Pn	12 13 36.1	0.0
LSCH				*i* S	Sn	12 13 49.1	+0.4
LSCH				AML	AML	12 13 52.2	
	comp=N,354nm,0.6s						
TLL	Tololo Astrono	1.09	62⇓	*i*P	Pn	12 13 38.7	+0.8
TLL				AML	AML	12 13 58.6	
	comp=N,911nm,0.4s						
CHNG	Los Chungos	1.25	164⇓	*i*P	Pn	12 13 27.5	-13
CHNG				*i* S	Sn	12 13 43.8	-12
CHNG				AML	AML	12 13 47.6	
	comp=E,451nm,0.5s						
VACH	Vallenar	2.32	26⇑	*i*P	Pn	12 13 56.0	+1.1
VACH				*i* S	Sn	12 14 24.9	+2.5

*ISCJB **05** 12:20:45.3±0.9, 21.1S±0.1×179.08W±0.09, h628km±14km, mb3.8/18, Error ellipse: s-maj=18.6km s-min=9.9km az=145.8*
*NEIC **05** 12:20:46.4±1.0, 21.10S×179.01W, h630km±12km, mb4.2/4, Error ellipse: s-maj=15.9km s-min=9.8km az=146.0*
*IDC **05** 12:20:47.4±1.4, 21.03S×179.14W, h633km±16km, mb3.3/15, mb1 3.5/17, mb1mx3.4/21, mbtmp3.3/17, Error ellipse: s-maj=16.9km s-min=9.9km az=156.0*
ISC 05 12:20:45.4±0.9**, 21.1S**±0.1×**179.05W**±0.09**, h609**km±13km**, n45, σ0.92**/28**, mb3.8**/18**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.94	45	P	P	12 23 04.6	+0.9
	1.3nm,0.3s,baz=156,slow=21,SNR=3.3						
AFI				S	S	12 24 55.5	-1.8
	1.5nm,0.3s,baz=93,slow=21,SNR=5.2						
DZM	Mont Dzumac	13.54	263	P	P	12 23 40.2	+0.6
	0.4nm,0.3s,baz=66,slow=18,SNR=6.7						
URZ	Urewera	17.45	190	P	P	12 24 13.6	-1.8
	0.6nm,0.3s,baz=310,slow=7.9,SNR=4.8						
CTA	Charters Tower	32.46	265	*e*P	P	12 26 28.7	+1.0
	4.1nm,0.6s,mb4.2						
CTA	Charters Tower	32.46	265	P	P	12 26 28.4	+0.7
	5.5nm,0.6s,mb4.4,baz=86,slow=12,SNR=7.6						
PMG	Port Moresby	34.52	284	P	P	12 26 46.3	+1.3
	27nm,1.0s,mb4.8,baz=208,slow=2.6,SNR=3.9						
STKA	Stephens Creek	36.66	245	P	P	12 27 03.0	+0.7
	7.7nm,1.2s,mb4.1,baz=86,slow=10,SNR=4.9						
ASAR	Alice Springs	43.44	257	P	P	12 27 56.8	+0.4
	12nm,0.8s,mb4.5,baz=98,slow=7.6,SNR=136						
ASAR				PcP	PcP	12 29 30.1	-0.5
	2.0nm,0.7s,baz=103,slow=3.7,SNR=10						
ASAR				ScP	ScP	12 32 24.1	-0.6
	1.2nm,0.8s,baz=99,slow=4.8,SNR=7.2						
ASAR				S	S	12 33 39.4	-2.6
	2.7nm,0.8s,baz=92,slow=15,SNR=19						
WB2	Warramunga Arr	43.55	263	*e*P	P	12 27 56.6	-0.6
WRA	Warramunga Arr	43.56	263	P	P	12 27 57.1	-0.2
	9.4nm,0.8s,mb4.4,baz=97,slow=7.5,SNR=201						
WRA				S	S	12 33 40.1	-3.7
	0.9nm,0.8s,baz=102,slow=16,SNR=4.6						
FITZ	Fitzroy Crossi	51.98	263	P	P	12 29 00.4	+0.4
	1.9nm,0.4s,mb3.8,baz=87,slow=22,SNR=14						
MBWA	Marble Bar	56.78	258	*e*P	P	12 29 32.9	-0.5
	13nm,0.6s,mb4.3						
KLBR	Kellerberrin	56.93	245	*e*P	P	12 29 33.8	-0.5
	12nm,0.7s,mb4.2						
NWAO	Narrogin (SRO)	57.24	244	P	P	12 29 36.0	-0.4
	7.7nm,0.9s,mb3.9,baz=132,slow=7.1,SNR=3.5						
VNDA	Vanda	57.26	185	P	P	12 29 36.2	+0.5
VNDA	Vanda	57.26	185	P	P	12 29 36.2	+0.5
	1.0nm,1.1s,mb3.0,baz=57,slow=8.8,SNR=3.0						
MUN	Mundaring	58.20	245	*e*P	P	12 29 42.9	+0.1
QSPA	South Pole Qui	69.00	180	P	P	12 30 51.3	+0.7
	1.4nm,0.9s,mb3.4,baz=307,slow=4.7,SNR=8.3						
MJAR	Matsushiro Arr	70.09	324	P	P	12 30 57.9	+0.2
	3.9nm,0.8s,mb3.9,baz=157,slow=5.8,SNR=7.2						
NVAR	Mina Array Bea	82.11	44	P	P	12 32 04.7	+1.2
	0.2nm,0.5s,mb2.9,baz=186,slow=12,SNR=5.0						
PSI	Prapat	83.57	275	P	P	12 32 10.2	-1.2
	6.9nm,1.0s,mb4.2,baz=318,slow=12,SNR=3.3						
MA2	Magadan	84.07	345	*e*P	P	12 32 12.0	-0.7
	1.2nm,0.6s,mb3.6						
TXAR	Lajitas Array	88.18	58	P	P	12 32 34.4	+1.4
	0.3nm,0.8s,mb3.1,baz=235,slow=4.4,SNR=4.0						
PDAR	Pinedale Array	90.04	44	P	P	12 32 41.0	-0.3
	0.3nm,0.7s,mb3.2,baz=207,slow=1.8,SNR=3.2						
SONM	Songino Array	95.54	319	P	P	12 33 05.7	-0.5
	0.1nm,0.4s,mb3.4,baz=90,slow=5.8,SNR=2.2						
MKAR	Makanchi Array	110.87	313	PKiKP	PKiKP	12 38 07.5	-2.7
	0.2nm,0.6s,baz=240,slow=4.9,SNR=4.2						
ARCES	ARCESS Array B	129.29	349	PKP	PKPdf	12 38 44.4	-0.5
	1.6nm,0.6s,baz=5.4,slow=2.6,SNR=8.5						
AKASG	Malin Array Be	143.02	330	PKP	PKPdf	12 39 07.5	-3.1
	11nm,0.6s,baz=42,slow=4.2,SNR=39						
AKBB	Malin Array Si	143.02	330	*e*PKPdf	PKPdf	12 39 07.4	-3.3
MALT	Malatya	143.49	306	*e*PKPdf	PKPdf	12 39 10.6	-1.3
EKA	Eskdalemuir Ar	145.65	4	PKPbc	PKPbc	12 39 16.0	-0.7
	4.0nm,0.8s,baz=2.2,slow=3.1,SNR=5.6						
ASF	Jabal al Asfar	146.16	297	PKPbc	PKPbc	12 39 18.5	-0.4
	3.4nm,0.8s,baz=16,slow=7.4,SNR=2.9						
BRTR	Keskin Array B	146.48	311	PKPbc	PKPbc	12 39 19.0	-0.6
	2.2nm,0.6s,baz=121,slow=4.4,SNR=9.4						
MMAI	Mount Meron Ar	147.23	299	PKPbc	PKPbc	12 39 21.2	-0.5
	4.2nm,0.6s,baz=68,slow=5.5,SNR=4.7						
KOLS	Kolonicke sedl	147.39	334	*e*PKP	PKPbc	12 39 21.8	+0.2
STHS	Stebnicka Huta	147.43	335	*e*PKP	PKPdf	12 39 18.2	0.0
CRVS	Cervenica-Dubn	147.75	334	*e*PKP	PKPbc	12 39 23.8	+1.2
MLR	Muntele Rosu	148.15	326	PKPbc	PKPbc	12 39 23.5	-0.2
	1.6nm,0.5s,baz=5.6,slow=8.0,SNR=5.7						
EIL	Elat	148.20	293	PKPbc	PKPbc	12 39 23.6	-0.7
	3.3nm,0.6s,baz=288,slow=2.8,SNR=3.7						
CLL	Collm	148.38	346⇓	*i*PKPbc	PKPbc	12 39 23.5	-0.5
	comp=Z,8.0nm,0.8s						
CLL				*i* PKPab	PKPab	12 39 29.0	-0.7
	comp=Z,4.0nm,0.6s						
KECS	Kecovo	148.48	335	*e*PKP	PKPbc	12 39 24.3	-0.1
VYHS	Vyhne	149.10	337	*e*PKP	PKPbc	12 39 24.8	-1.1
KHC	Kasperske Hory	150.24	343	*e*PKPbc	PKPbc	12 39 28.0	-0.5
GERES	GERESS Array B	150.47	343	PKPbc	PKPbc	12 39 28.9	-0.2
	comp=Z,2.8nm,0.8s,baz=48,slow=2.0,SNR=12						
DAVOX	Davos/Dischmat	153.34	346	PKPbc	PKPbc	12 39 34.7	-0.8
	comp=Z,3.9nm,0.7s,baz=159,slow=23,SNR=4.4						

IDC 05 12:31:07.5±3.4**, 6.37S**×**128.21E, h394**km±36km**, mb2.7**/1**, mb1 2.9**/4**, mb1mx2.7**/15**, mbtmp2.7**/4**, Error ellipse: s-maj=48.9km s-min=16.4km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	5.90	229	P	Pn	12 32 39.3	+0.5
	28nm,0.3s,baz=61,slow=2.3,SNR=31						
BATI				S	S	12 33 52.3	-0.9
	2.2nm,0.3s,baz=43,slow=22,SNR=3.7						
FITZ	Fitzroy Crossi	11.93	192	P	Pn	12 33 47.7	-0.2
	0.2nm,0.3s,baz=96,slow=21,SNR=3.8						
WRA	Warramunga Arr	14.75	157	P	P	12 34 17.5	0.0
	0.2nm,0.3s,baz=338,slow=11,SNR=20						
WRA				S	S	12 36 52.9	-1.9
	0.1nm,0.3s,baz=331,slow=20,SNR=5.3						
ASAR	Alice Springs	18.05	163	P	P	12 34 53.5	+0.7
	0.2nm,0.3s,baz=346,slow=11,SNR=15						
ASAR				S	S	12 37 59.9	+0.6
	0.1nm,0.3s,baz=348,slow=24,SNR=4.7						
MKAR	Makanchi Array	66.73	328	P	P	12 41 17.5	-0.1
	0.2nm,0.5s,baz=120,slow=7.2,SNR=3.7						

MAN 05 12:44:09, 18.12N×**120.38E, h51**km**, mb4.0, ML2.7, MS2.4, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.56	145	*e*P	Pn	12 44 24.2	+3.1
ABRA				*e*S	Sn	12 44 33.8	+4.0
APYP	Conner	0.86	107	*e*P	Pn	12 44 26.7	+1.8
APYP				*e*S	Sn	12 44 37.6	+1.0
CVP	Callao Caves	1.44	106⇓	*e*P	Pn	12 44 34.3	+1.7
CVP				*e*S	Sn	12 44 51.9	+1.5
CAUP	Cauayan	1.81	130	*e*P	Pn	12 44 39.5	+1.8

*CSEM **05** 12:50:38.8±0.1, 38.40N×39.27E, h5km, MD3.3, Error ellipse: s-maj=1.7km s-min=1.1km az=171.0*
*ISK **05** 12:50:38.8, 38.41N×39.26E, h8km, MD3.0*
*NEIC **05** 12:50:39.0, 38.42N×39.26E, h8km, MD3.2(ISK), After ISK.*
*ISCJB **05** 12:50:39.0±0.6, 38.39N±0.03×39.31E±0.03, h2km±6km, Error ellipse: s-maj=5.2km s-min=4.2km az=9.6*
*DDA **05** 12:50:39.8, 38.36N×39.33E, h5km, Md3.3*
ISC 05 12:50:39.9±0.6**, 38.39N**±0.03×**39.30E**±0.03**, h9**km±5km**, n28, σ1.08**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	293	*i* P	Pg	12 50 44.8	-0.6
ELZG				*i* S	Sg	12 50 50.9	+1.9
MALT	Malatya	0.69	264	PG	Pg	12 50 51.6	-1.7
MALT				SG	Sg	12 51 01.7	-0.6
MALT	Malatya	0.69	264	Pg	Pg	12 50 51.8	-1.5
MALT				Sg	Sg	12 51 01.8	-0.5
MALT	Malatya	0.69	264	Pg	Pg	12 50 51.8	-1.5
MALT				Sg	Sg	12 51 01.8	-0.5
MYA	Malataya	0.69	265	PG	Pg	12 50 52.1	-1.2
MYA	Malataya	0.69	265	Pg	Pg	12 50 52.4	-0.8
MYA				Sg	Sg	12 51 02.4	+0.2
MYA	Malataya	0.69	265	Pg	Pg	12 50 52.4	-0.9
MYA				Sg	Sg	12 51 02.4	+0.1
DIY	Diyarbakir	0.88	124	PG	Pg	12 50 56.8	-0.1
DIY				SG	Sg	12 51 09.8	+1.5
DIY	Diyarbakir	0.88	124	Pg	Pg	12 50 57.3	+0.5
URFA	Urfa	1.02	202	PG	Pg	12 50 59.3	-0.2
URFA				SG	Sg	12 51 13.7	+0.9
URFA	Urfa	1.02	202	Pg	Pg	12 50 59.0	-0.6
URFA				Sg	Sg	12 51 14.0	+1.2
URFA	Urfa	1.02	202	Pg	Pg	12 50 59.0	-0.5
URFA				*e*Sg	Sg	12 51 13.7	+0.9
BINT	Bingol	1.05	62	PG	Pg	12 51 00.0	-0.1
ATAB	Bozova	1.22	221	*i* P	Pb	12 51 02.7	-0.4
ATAB				*i* S	Sb	12 51 20.2	+1.3
EZC	Erzincan	1.41	16	PN	Pn	12 51 04.2	-1.6
EZC	Erzincan	1.41	16	Pn	Pn	12 51 04.3	-1.6
BNGL	BINGOL	1.55	68	*i* P	Pn	12 51 06.5	-1.3
BNGL				*i* S	Sn	12 51 31.6	+3.6
MARD	Mardin	1.59	132	*i* P	Pn	12 51 07.9	-0.3
MARD				*i* S	Sn	12 51 28.9	0.0
GZT	Gaziantep	1.72	234	*i* P	Pn	12 51 09.4	-0.6
GZT				*i* S	Sn	12 51 37.5	+5.4
BTMT	Batman	1.73	96	PN	Pn	12 51 08.8	-1.4
KELT	Kelkit	1.76	359	*i* P	Pn	12 51 12.7	+2.2
KELT				*i* S	Sn	12 51 36.0	+3.0
GAZ	Gaziantep	2.05	234	*e*PN	Pn	12 51 14.6	0.0
GUMT	Gumushane	2.07	4	*e*PN	Pn	12 51 14.6	-0.3
GUMT	Gumushane	2.07	4	Pn	Pn	12 51 14.7	-0.2
EZM	Erzurum	2.20	46	*e*PN	Pn	12 51 16.9	+0.2
EZM	Erzurum	2.20	46	Pn	Pn	12 51 16.4	-0.3
SVSK	Karacayir	2.35	311	*e*PN	Pn	12 51 18.7	0.0
SVSK	Karacayir	2.35	311	Pn	Pn	12 51 19.2	+0.5

*NIED **05** 13:06:00, 42.90N×146.70E, h20km, Mw3.9 Best double couple: $M_0$8.82000×10^14 NP1:ϕ_s138.00000°, δ20.00000°, λ-3.00000°. NP2:ϕ_s231.00000°, δ89.00000°, λ-110.00000°.*
*JMA **05** 13:06:45.3±0.2, 42.92N×146.75E, h51km±3km, M4.0*
JMA Felt I J1.
*ISCJB **05** 13:06:46.2±1.0, 42.97N±0.06×146.72E±0.07, h47km±8km, mb3.9/14, Error ellipse: s-maj=10.9km s-min=6.6km az=139.0*
*MOS **05** 13:06:47.2±1.6, 42.97N×146.65E, h52km, mb4.4/5, Error ellipse: s-maj=15.0km s-min=10.5km az=99.5*
*IDC **05** 13:06:50.9±2.7, 42.94N×146.59E, h74km±24km, mb3.6/14, mb1 3.7/16, mb1mx3.7/24, mbtmp3.6/16, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=18.7km s-min=17.2km az=73.0*
ISC 05 13:06:47.8±1.0**, 43.01N**±0.06×**146.68E**±0.07**, h41**km±8km**, n43, σ0.79**/51**, mb3.9**/14**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.77	297	P	Pn	13 07 01.3	-0.8
NEM2				*e*S	Sn	13 07 13.0	+0.4
YUK	Yuzh-Kuril'sk	1.18	330⇑	*i*PN	Pn	13 07 07.3	-0.5
YUK				*i* S	Sn	13 07 23.5	+0.9
YUK				pmax	pmax		
	comp=E,280nm,0.5s						
YUK				pmax	pmax		
	comp=Z,740nm,0.5s						
YUK				smax			
	comp=N,4μm,0.5s						
YUK				smax			
	comp=E,4μm,0.5s						
YUK				smax			
	comp=N,10μm,2.0s						
YUK				smax			
	comp=E,8μm,2.0s						
JAK	Akkeshi	1.46	270	P	Pn	13 07 10.4	-1.1
JAK				*e*S	Sn	13 07 29.0	-0.4
JRA	Rausu	1.46	310	P	Pn	13 07 11.1	-0.5
JNK	Nakash	1.54	292	P	Pn	13 07 11.8	-0.9
JNK				*e*S	Sn	13 07 31.1	-0.4
JAR	Ashorobuto	2.15	279	P	Pn	13 07 20.3	-0.7
JAR				*e*S	Sn	13 07 47.0	+0.5
JTKR	Abashiri--Toko	2.23	296	P	Pn	13 07 22.4	+0.2
KUR	Kuril'sk	2.38	21	*e*PN	Pn	13 07 24.4	+0.2
KUR				*e*S	Sn	13 07 51.4	-0.7
KUR				pmax	pmax		
	comp=N,140nm,0.9s						
KUR				pmax	pmax		
	comp=E,140nm,0.9s						
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax			
	comp=N,360nm,0.5s						
KUR				smax			
	comp=E,150nm,0.5s						
JCH	Churui	2.47	262	*e*S	Sn	13 07 53.8	-0.7
JMP	Maruseppu	2.61	293	P	Pn	13 07 27.8	+0.4
ERM	Erimo	2.79	250	*i* PN	Pn	13 07 30.5	+0.7
JNBK	Urakawa-nobuka	2.99	257	P	Pn	13 07 32.1	-0.5
JFR	Furan	3.00	274	P	Pn	13 07 32.8	+0.1
ASAJ	Asahikawa	3.17	292	PN	Pn	13 07 36.4	+1.4
ASAJ				S	Sn	13 08 14.9	+3.4
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,11nm,0.3s						
ASAJ	Asahikawa	3.17	292	P	Pn	13 07 36.4	+1.4
	comp=N,4.7nm,0.3s,baz=139,slow=23,SNR=15						
ASAJ				S	Sn	13 08 14.8	+3.3
	comp=N,10nm,0.3s,baz=249,slow=28,SNR=4.1						
YSS	Yuzh-Sakhalins	4.82	326	*e*PN	Pn	13 08 03.0	+5.2
MJAR	Matsushiro Arr	9.18	228	P	Pn	13 08 59.5	+1.9
	comp=N,0.3nm,0.3s,baz=246,slow=18,SNR=2.8						
ULN	Ulaanbaatar	28.00	294	*e*P	P	13 12 33.9	-0.6
SONM	Songino Array	28.45	294	P	P	13 12 38.9	+0.4
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,65nm,18.7s						
SONM	Songino Array	28.45	294	P	P	13 12 38.9	+0.5
	comp=Z,4.3nm,0.6s,mb4.2,baz=89,slow=8.6,SNR=36						
SONM				LR	LR	13 23 57.2	
	comp=Z,65nm,18.7s,baz=232,slow=36						
ZALV	Zalesovo Beam	41.17	308	P	P	13 14 28.6	+0.7
	comp=Z,0.6nm,0.4s,mb3.6,baz=74,slow=8.4,SNR=3.4						
ZAL	Zalesovo	41.19	308	P	P	13 14 28.6	+0.6
MKAR	Makanchi Array	44.63	298	*e*P	P	13 14 55.8	-0.1
MKAR	Makanchi Array	44.63	298	P	P	13 14 55.8	-0.1
	comp=Z,2.7nm,0.6s,mb4.3,baz=82,slow=9.2,SNR=41						
INK	Inuvik	47.21	30	P	P	13 15 16.8	+0.8
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	47.21	30	P	P	13 15 16.8	+0.8
	comp=Z,2.4nm,0.7s,mb4.3,baz=305,slow=6.2,SNR=7.3						
YKA	Yellowknife Ar	56.60	33	*e*P	P	13 16 30.0	+4.1
YKA	Yellowknife Ar	56.60	33	P	P	13 16 26.7	+0.8
	comp=Z,0.5nm,0.8s,mb3.6,baz=304,slow=6.8,SNR=5.4						
ARCES	ARCESS Array B	59.82	340	P	P	13 16 48.1	-0.2
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	59.82	340	P	P	13 16 48.1	-0.2
	comp=Z,3.5nm,0.9s,mb4.4,baz=56,slow=6.5,SNR=5.8						
WRA	Warramunga Arr	63.66	193	*e*P	P	13 17 15.1	+0.4
WRA	Warramunga Arr	63.66	193	P	P	13 17 12.8	-1.9
	comp=Z,0.5nm,0.9s,mb3.5,baz=9.9,slow=6.8,SNR=6.2						
FINES	FINESS Array B	65.38	333	*e*P	P	13 17 25.1	-0.3
FINES	FINESS Array B	65.38	333	P	P	13 17 24.3	-1.1
	comp=Z,1.7nm,0.5s,mb4.3,baz=46,slow=7.7,SNR=12						
ASAR	Alice Springs	67.38	193	P	P	13 17 38.5	-0.2
	comp=Z,0.3nm,0.7s,mb3.4,baz=8.8,slow=5.6,SNR=4.5						
NVAR	Mina Array Bea	68.26	57	P	P	13 17 45.3	+1.1
	comp=Z,0.3nm,0.4s,mb3.6,baz=286,slow=9.0,SNR=6.5						
NB2	NORSAR Subarra	70.17	339	P	P	13 17 55.2	-0.4
	comp=Z,2.3nm,0.6s,mb4.3,baz=32,slow=6.5						
NOA	NORSAR Array B	70.17	339	P	P	13 17 54.8	-0.8
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	70.17	339	P	P	13 17 54.8	-0.8
	comp=Z,0.7nm,0.7s,mb3.7,baz=35,slow=6.4,SNR=3.4						
PDAR	Pinedale Array	70.65	49	P	P	13 17 59.1	+0.3
	comp=Z,0.3nm,0.5s,mb3.4,baz=88,slow=0.8,SNR=3.5						
AKASG	Malin Array Be	71.97	324	P	P	13 18 05.9	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	71.97	324	P	P	13 18 05.9	-0.8
	comp=Z,1.2nm,0.5s,mb4.1,baz=340,slow=36,SNR=3.5						
TXAR	Lajitas Array	83.34	56	P	P	13 19 10.0	-0.5
	comp=Z,0.1nm,0.4s,mb3.2,baz=259,slow=4.4,SNR=2.9						

*NEIC **05** 13:21:14.4±3.6, 20.61S×178.50W, h406km±35km, mb4.5/8, Error ellipse: s-maj=20.1km s-min=16.3km az=209.0*
*ISCJB **05** 13:21:25.6±1.1, 20.87S±0.10×178.73W±0.09, h562km±15km, mb4.2/19, Error ellipse: s-maj=17.1km s-min=9.5km az=143.0*
*IDC **05** 13:21:30.2±1.7, 20.86S×178.87W, h598km±18km, mb3.7/15, mb1 3.9/16, mb1mx3.8/20, mbtmp3.7/16, Error ellipse: s-maj=17.6km s-min=12.4km az=159.0*
ISC 05 13:21:29.7±2.0**, 20.9S**±0.1×**178.9W**±0.1**, h593**km±24km**, n72, σ0.62**/33**, mb4.2**/19**, 12C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.66	45	S	S	13 25 26.7	-9.4
	1.9nm,0.3s,baz=101,slow=20,SNR=3.8						
DZM	Mont Dzumac	13.74	262	P	P	13 24 25.6	-0.4
	1.6nm,0.3s,baz=84,slow=21,SNR=9.4						
URZ	Urewera	17.69	190	P	P	13 24 58.8	-3.7
	3.0nm,0.3s,baz=312,slow=1.4,SNR=17						
URZ				S	S	13 27 45.8	-10
	0.3nm,0.3s,baz=332,slow=20,SNR=4.2						
RPZ	Rata Peaks	24.30	198	P	P	13 26 01.8	+0.1
	3.4nm,0.5s,mb4.2,baz=349,slow=11,SNR=4.2						
ARMA	Armidale	28.19	244	*e*P	P	13 26 37.0	+0.9
CTA	Charters Tower	32.66	265	*e*P	P	13 27 14.6	+0.1
	17nm,0.5s,mb4.9						
CTA	Charters Tower	32.66	265	P	P	13 27 14.9	+0.4
	21nm,0.5s,mb5.0,baz=96,slow=11,SNR=49						
CTAO	Charters Tower	32.66	265	*e*P	P	13 27 14.6	+0.1
	18nm,0.7s,mb4.8						
PMG	Port Moresby	34.64	284	*e*P	P	13 27 31.6	+0.4
	44nm,0.8s,mb5.1						
PMG	Port Moresby	34.64	284	P	P	13 27 32.0	+0.8
	48nm,0.8s,mb5.2,baz=92,slow=6.6,SNR=17						
COEN	Coen	36.80	274	*e*P	P	13 27 49.6	+0.6
STKA	Stephens Creek	36.91	244⇓	*i*P	P	13 27 49.9	+0.3
	5.4nm,0.4s,mb4.4						
STKA	Stephens Creek	36.91	244	P	P	13 27 50.0	+0.4
	6.8nm,0.5s,mb4.5,baz=92,slow=9.8,SNR=29						
ASAR	Alice Springs	43.66	257	P	P	13 28 43.4	0.0
	16nm,0.7s,mb4.7,baz=96,slow=7.8,SNR=216						
ASAR				PcP	PcP	13 30 17.3	+0.2
	2.7nm,0.6s,baz=99,slow=4.4,SNR=9.7						
ASAR				ScP	ScP	13 33 16.9	+4.0
	0.9nm,0.6s,baz=99,slow=4.6,SNR=7.3						
ASAR				S	S	13 34 31.1	-0.2
	0.8nm,0.8s,baz=94,slow=16,SNR=4.5						
WB2	Warramunga Arr	43.74	263	*e*P	P	13 28 43.5	-0.6
WRA	Warramunga Arr	43.76	263	P	P	13 28 43.6	-0.6
	5.8nm,0.3s,mb4.6,baz=96,slow=7.8,SNR=341						
FITZ	Fitzroy Crossi	52.18	263	P	P	13 29 47.3	+0.5
	5.1nm,0.8s,mb3.9,baz=295,slow=23,SNR=17						
BATI	Kupang	56.13	272	P	P	13 30 14.9	+0.3
	27nm,0.7s,mb4.6,baz=90,slow=1.0,SNR=3.6						
MBWA	Marble Bar	56.99	258	*e*P	P	13 30 19.8	-0.5
	14nm,0.5s,mb4.4						
VNDA	Vanda	57.49	185	P	P	13 30 23.4	+0.7
	1.3nm,0.5s,mb3.4,baz=355,slow=7.2,SNR=11						
NWAO	Narrogin (SRO)	57.49	244	P	P	13 30 22.5	-1.0
NWAO	Narrogin (SRO)	57.49	244	P	P	13 30 22.5	-1.0
	7.7nm,0.9s,mb3.9,baz=225,slow=8.6,SNR=3.2						
QSPA	South Pole Qui	69.21	180	*e*P	P	13 31 37.6	+0.2
	6.3nm,1.0s,mb4.0						
MJAR	Matsushiro Arr	70.02	324	P	P	13 31 43.1	+0.3
	2.2nm,0.6s,mb3.8,baz=148,slow=5.5,SNR=5.0						
NVAR	Mina Array Bea	81.83	44	P	P	13 32 48.7	+0.9
	1.7nm,0.6s,mb3.8,baz=214,slow=6.0,SNR=20						
MCK	McKinley	87.49	13	*e*P	P	13 33 14.0	-0.6
	7.0nm,0.7s,mb4.5						
TXAR	Lajitas Array	87.92	58	P	P	13 33 17.9	+0.3
	0.9nm,0.8s,mb3.6,baz=233,slow=4.9,SNR=10.0						
COLA	College	88.73	13	*e*P	P	13 33 19.4	-1.0
	8.5nm,0.8s,mb4.6						
PDAR	Pinedale Array	89.77	44	P	P	13 33 26.2	+0.4
	1.9nm,0.7s,mb4.1,baz=215,slow=3.6,SNR=20						
YKA	Yellowknife Ar	97.17	25	P	P	13 33 58.3	-0.7
YKA	Yellowknife Ar	97.17	25	P	P	13 33 58.3	-0.7
	0.2nm,0.6s,mb3.5,baz=244,slow=4.5,SNR=4.6						
ARU	Arti	125.03	325	*e*PKPdf	PKPdf	13 39 22.9	-0.1
ARCES	ARCESS Array B	129.12	349	PKP	PKPdf	13 39 29.6	-0.8
	2.5nm,0.6s,baz=356,slow=1.5,SNR=16						
FINES	FINESS Array B	135.88	343	PKP	PKPdf	13 39 43.5	+0.1
	1.0nm,0.5s,baz=101,slow=2.9,SNR=5.9						
FINES				SKP		13 42 22.6	
	1.0nm,0.8s,baz=26,slow=4.9,SNR=4.4						
NB2	NORSAR Subarra	139.23	353	PKP	PKPdf	13 39 41.0	-8.5
	comp=Z,0.8nm,0.5s,baz=11,slow=3.0						
NOA	NORSAR Array B	139.23	353	PKP	PKPdf	13 39 41.0	-8.5
NOA				PKP	PKPdf	13 39 49.7	+0.2
NOA	NORSAR Array B	139.23	353	PKhKP		13 39 41.0	
	comp=Z,1.0nm,0.6s,baz=15,slow=4.6,SNR=3.8						
NOA				PKP	PKPdf	13 39 49.7	+0.2
	comp=Z,1.3nm,0.8s,baz=94,slow=5.2,SNR=3.1						
AKASG	Malin Array Be	142.93	330	PKP	PKPdf	13 39 53.5	-2.9
	comp=Z,9.7nm,0.4s,baz=43,slow=4.2,SNR=45						
MALT	Malatya	143.50	307	*e*PKPbc	PKPdf	13 39 57.7	-0.1
MALT	Malatya	143.50	307⇑	*i*P	PKPdf	13 39 58.1	+0.3
BRTR	Keskin Array B	146.48	311	PKPbc	PKPbc	13 40 05.3	-0.1
	comp=Z,3.7nm,0.6s,baz=118,slow=4.7,SNR=14						
KWP	Kalwaria	146.56	334	⇓P	PKPdf	13 40 05.1	+2.4
KWP	Kalwaria	146.56	334⇓	*i*P	PKPdf	13 40 05.1	+2.4
BURAR	Bucovina Array	146.97	330⇑	*i*P	PKPbc	13 40 07.2	+0.7
KOLS	Kolonicke sedl	147.28	334	*e*PKP	PKPbc	13 40 07.6	+0.4
STHS	Stebnicka Huta	147.31	335	*e*PKP	PKPbc	13 40 07.6	+0.3
VRI	Vrincioaia	147.42	326	⇑P	PKPbc	13 40 08.2	+0.5
VRI	Vrincioaia	147.42	326⇑	*i*P	PKPbc	13 40 08.2	+0.5
CRVS	Cervenica-Dubn	147.64	335	*e*PKP	PKPbc	13 40 11.3	+3.1
MLR	Muntele Rosu	148.08	326	⇓P	PKPbc	13 40 09.6	+0.2
MLR	Muntele Rosu	148.08	326⇓	*i*P	PKPbc	13 40 09.6	+0.2
DPC	Dobruska-Polom	148.22	341	*e*PKP	PKPbc	13 40 10.4	+0.8
DPC				*e*x	x	13 40 15.8	
CLL	Collm	148.22	346⇓	*i*P	PKPbc	13 40 09.6	+0.1
CLL				*i*		13 40 14.9	
CLL	Collm	148.22	346⇓	*i*PKPbc	PKPbc	13 40 09.6	+0.1
	comp=Z,12nm,1.0s						
CLL				*i* PKPab	PKPab	13 40 14.9	+0.1
	comp=Z,7.0nm,0.7s						
KECS	Kecovo	148.36	335	*e*PKP	PKPbc	13 40 10.1	+0.1
KECS				*e*		13 40 16.0	
KECS	Kecovo	148.36	335	*e*PKP	PKPbc	13 40 10.1	+0.1
KECS				*e*		13 40 15.9	
BRG	Berggiesshubel	148.40	344	*e*P	PKPbc	13 40 10.5	+0.5
	comp=Z,3.5nm,0.6s						
PVCC	Panska Ves	148.55	343	*e*PKP	PKPbc	13 40 10.7	+0.3
VOIR		148.58	327	⇑P	PKPbc	13 40 11.3	+0.7
VOIR		148.58	327⇑	*i*P	PKPbc	13 40 11.3	+0.7
DRGR		148.74	331	⇑P	PKPbc	13 40 11.1	+0.2
DRGR		148.74	331⇑	*i*P	PKPbc	13 40 11.1	+0.1
VYHS	Vyhne	148.98	337	*e*PKP	PKPbc	13 40 11.5	0.0
VYHS				*e*		13 40 18.7	
PRU	Pruhonice	149.05	343	*e*PKP	PKPbc	13 40 12.0	+0.4
MODS	Modra-Piesok	149.63	338	*e*PKP	PKPbc	13 40 13.8	+0.7
MODS				*e*		13 40 22.0	
GZR	Gura Zlata	149.74	329	⇑P	PKPbc	13 40 13.2	-0.2
GZR	Gura Zlata	149.74	329⇑	*i*P	PKPbc	13 40 13.2	-0.2
KHC	Kasperske Hory	150.09	344	*e*PKP	PKPbc	13 40 14.3	+0.2
KHC				*e*x	x	13 40 23.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	150.32	343	PKPbc	PKPbc	13 40 13.9	-0.8
	comp=Z,2.7nm,0.6s,baz=29,slow=3.0,SNR=16						
PKSM	Moragy	150.94	335	⇑P	PKPbc	13 40 16.2	+0.1
PKSM	Moragy	150.94	335	⇑iP	PKPbc	13 40 16.2	+0.1
TORD	Torodi Ar. Bea	172.32	184	PKP	PKPdf	13 40 30.4	-1.7
	comp=Z,0.7nm,0.8s,baz=245,slow=0.6,SNR=3.7						

IDC 05 13:32:45.1±3.1**, 1648S×6937W, h175**km±12km**, mb3.6**/2**, mb1 3.6**/3**, mb1mx3.2**/17**, mbtmp3.4**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/17**, Error ellipse: s-maj=86.3km s-min=33.7km az=17.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	1.20	81	P	Pn	13 33 15.0	+1.1
	3.1nm,0.3s,baz=254,slow=8.7,SNR=32						
LPAZ				S	Sn	13 33 37.0	+1.0
	0.6nm,0.3s,baz=2.7,slow=14,SNR=4.1						
SIV	San Ignacio	7.98	88	P	Pn	13 34 39.0	+0.8
	1.0nm,0.3s,baz=267,slow=13,SNR=15						
PCRV	Puerto La Cruz	26.89	10	LR	LR	13 50 23.5	
	comp=Z,38nm,19.1s,baz=220,slow=39						
TORD	Torodi Ar. Bea	76.14	72	P	P	13 44 14.2	0.0
	0.8nm,0.3s,baz=252,slow=4.7,SNR=16						
YKA	Yellowknife Ar	86.33	341	P	P	13 45 06.8	-0.1
	0.5nm,0.7s,baz=135,slow=4.8,SNR=11						

MAN 05 13:50:23, 1548N×12212E, h20km**, mb3.7, ML2.5, MS2.0, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	Baler	0.58	297	eP	Pb	13 50 36.0	+1.4
BALP				eS	Sb	13 50 46.6	+4.2
POLP	Polilio Island	0.77	193	eP	Pb	13 50 34.3	-3.4
POLP				eS	Sb	13 50 42.6	-5.0
PCPH	Palayan	0.99	275	⇑iP	Pb	13 50 41.1	-0.3
PCPH				eS	Sb	13 50 55.9	+1.9
LUBP	Lubang	2.51	226	eP	Pn	13 51 05.4	+2.7
APYP	Conner	2.51	341	eP	Pn	13 51 04.1	+1.3
PVCP	Virac	2.72	133	eP	Pn	13 51 06.5	+1.0
OTRP	Odiongan	3.10	182	eP	Pn	13 51 12.3	+1.5

*IDC **05** 13:59:41.9±0.6, 3527N×8958E, h0km, mb4.1/13, mb1 4.3/16, mb1mx4.2/24, mbtmp4.2/16, ML3.7/3, MS3.9/12, Ms1 4.0/12, ms1mx3.8/31, Error ellipse: s-maj=25.6km s-min=14.5km az=48.0*

*ISCJB **05** 13:59:42.4±1.4, 3539N±003×8952E±003, h9km±9km, mb4.4/33, MS4.0/16, Error ellipse: s-maj=4.7km s-min=4.5km az=175.7*

*BJI **05** 13:59:43.8, 3555N×8960E, h11km, mB4.8, mb4.5, Ms4.5, Msz4.2*

*NEIC **05** 13:59:45.0±0.3, 3544N×8944E, h10km, mb4.5/20, MS4.0/1, Error ellipse: s-maj=7.6km s-min=6.3km az=81.0*

*MOS **05** 13:59:46.1±1.4, 3544N×8948E, h33km, mb4.6/25, Error ellipse: s-maj=9.2km s-min=6.0km az=93.7*

ISC 05 13:59:44.6±1.6**, 3540N**±003×**8948E**±004**, h9**km±10km**, n127, σ1§19**/134**, mb4.4**/33**, MS4.0**/16**, 3C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	5.86	166	ePn	Pn	14 01 15.8	+4.1
	86nm,1.0s						
LSA				e		14 01 26.8	
LSA	Lhasa	5.86	166	eP	Pn	14 01 15.8	+4.1
LSA				pmax	pmax		
	comp=Z,86nm,1.0s						
TAPN	Taplejung	8.17	191	eP	Pn	14 01 43.8	+0.4
	comp=Z,49nm,1.0s						
JIRN	Jiri	8.21	201	eP	Pn	14 01 45.0	+1.0
	comp=Z,45nm,0.8s						
KKN	Kakani	8.39	206	eP	Pn	14 01 46.5	+0.1
	comp=Z,24nm,0.7s						
KKN	Kakani	8.39	206	eP	Pn	14 01 46.5	+0.1
KKN				pmax	pmax		
	comp=Z,24nm,0.7s						
GKN	Gorkha	8.45	211	eP	Pn	14 01 48.3	+1.1
	comp=Z,28nm,0.8s						
WMQ	Urumqi	8.52	351	⇓iP	Pn	14 01 48.7	+0.6
WMQ				AP		14 01 51.5	
WMQ				XP		14 01 55.2	
WMQ				S	Sn	14 03 24.7	+0.4
WMQ				XS		14 03 30.2	
WMQ				AMB	AMB		
	comp=Z,24nm,0.9s						
WMQ				AMB	AMB		
	comp=Z,227nm,4.5s						
WMQ				LR	LR		
	comp=N,646nm,18.0s						
WMQ				LR	LR		
	comp=E,2μm,21.0s						
WMQ				LR	LR		
	comp=Z,881nm,14.0s						
ODAN	Odare	8.70	192	eP	Pn	14 01 50.6	-0.1
	comp=Z,47nm,0.7s						
GTA	Gaotai	9.14	61	P	Pn	14 01 56.3	-0.4
GTA				AP		14 02 00.2	
GTA				XP		14 02 02.5	
GTA				S	Sn	14 03 39.2	-0.5
GTA				XS		14 03 44.9	
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s						
GTA				AMB	AMB		
	comp=Z,143nm,4.6s						
GTA				LR	LR		
	comp=N,3μm,11.4s						
GTA				LR	LR		
	comp=E,1μm,11.8s						
GTA				LR	LR		
	comp=Z,2μm,15.2s						
SHL	Shillong	10.02	167	eP	Pn	14 02 08.0	-0.8
SHL				ex	x	14 05 00.0	
KSH	Kashi	11.49	295	P	Pn	14 02 31.6	+2.8
KSH				eAP		14 02 34.8	
KSH				eXP		14 02 37.9	
KSH				PP		14 02 41.2	
KSH				eS	Sn	14 04 41.4	+4.1
KSH				XS		14 04 47.1	
KSH				SS		14 04 56.1	
KSH				LR	LR		
	comp=E,2μm,4.3s						
KSH				LR	LR		
	comp=Z,2μm,6.8s						
LZH	Lanzhou	11.70	82	eP	Pn	14 02 32.5	+0.8
LZH				AP		14 02 40.9	
LZH				PP		14 02 42.2	
LZH				XP		14 02 44.0	
LZH				eS	Sn	14 04 42.2	-0.2
LZH				XS		14 04 53.0	
LZH				SS		14 04 57.2	
LZH				AMB	AMB		
	comp=Z,52nm,1.4s						
LZH				AMB	AMB		
	comp=Z,270nm,5.0s						
LZH				LR	LR		
	comp=N,2μm,9.3s						
LZH				LR	LR		
	comp=Z,2μm,10.9s						
LZH	Lanzhou	11.70	82	eP	Pn	14 02 32.5	+0.8
	comp=Z,52nm,1.4s						
LZH				pP		14 02 40.9	
LZH				PP		14 02 42.2	
LZH				sP		14 02 44.0	
LZH				eS	Sn	14 04 42.2	-0.2
LZH				sS		14 04 53.0	
LZH				SS		14 04 57.2	
LZH	Lanzhou	11.70	82	eP	Pn	14 02 32.5	+0.8
LZH				eS	Sn	14 04 42.2	-0.2
LZH				pmax	pmax		
	comp=Z,52nm,1.4s						
NDI	New Delhi	12.37	241	eP	Pn	14 02 41.3	+0.4
NDI				AMb	AMB	14 02 46.2	
	comp=Z,7.4nm,0.1s						
MKAR	Makanchi Array	12.60	337	Pn	Pn	14 02 43.1	-0.8
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=15						
CD2	Chengdu	12.78	107	⇑iP	Pn	14 02 47.4	+1.0
CD2				AP		14 02 50.7	
CD2				XP		14 02 53.9	
CD2				PP		14 02 58.0	
CD2				S	Sn	14 05 10.8	+2.0
CD2				XS		14 05 16.2	
CD2				SS		14 05 25.7	
CD2				AMB	AMB		
	comp=Z,10.0nm,1.3s						
CD2				AMB	AMB		
	comp=Z,20nm,3.8s						
CD2				LR	LR		
	comp=N,1μm,12.0s						
CD2				LR	LR		
	comp=E,870nm,9.5s						
CD2				LR	LR		
	comp=Z,730nm,8.4s						
AAK	Ala-Archa	13.69	306	ePn	Pn	14 03 00.1	+1.2
	comp=Z,58nm,1.5s						
AAK	Ala-Archa	13.69	306	eP	Pn	14 03 00.2	+1.3
AAK				pmax	pmax		
	comp=Z,58nm,1.5s						
KMI	Kunming	15.36	128	P	Pn	14 03 25.2	+3.7
KMI				S	Sn	14 06 17.6	+5.8
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s						
KMI				LR	LR		
	comp=N,934nm,15.5s						
KMI				LR	LR		
	comp=E,880nm,12.0s						
KMI				LR	LR		
	comp=Z,406nm,10.1s						
KMI	Kunming	15.36	128	P	Pn	14 03 25.2	+3.7
	comp=Z,6.0nm,1.0s						
KMI				S	Sn	14 06 17.6	+5.8
XAN	Xi'an	16.05	89	P	Pn	14 03 34.8	+4.3
XAN				AP	pP	14 03 36.9	+0.5
XAN				S	Sn	14 06 33.4	+4.8
XAN				AMB	AMB		
	comp=Z,15nm,1.8s						
XAN				LR	LR		
	comp=N,697nm,21.0s						
XAN				LR	LR		
	comp=E,697nm,21.7s						
XAN				LR	LR		
	comp=Z,552nm,18.1s						
KBL	Kabul	16.77	273	eP	Pn	14 03 38.6	-1.2
NGP	Nagpur	16.89	216	ex	Pn	14 03 36.3	-5.1
NGP				AMb	AMB	14 03 39.7	
	comp=Z,21nm,2.6s						
KURK	Kurchatov	17.21	336	eP	Pn	14 03 42.9	-2.2
	comp=Z,19nm,1.0s						
KURK	Kurchatov	17.21	336	iP	Pn	14 03 42.7	-2.4
SONM	Songino Array	17.68	40	P	Pn	14 03 51.2	+0.3
	comp=Z,0.4nm,0.3s,baz=224,slow=11,SNR=41						
ZAK	Zakamensk	18.02	30	⇓iP	Pn	14 03 54.4	-0.8
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ULN	Ulaanbaatar	18.05	41	eP	Pn	14 03 56.3	+0.8
	comp=Z,20nm,0.8s						
ULN	Ulaanbaatar	18.05	41	eP	Pn	14 03 56.3	+0.8
ULN				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC	Hu-ho-hao-te	18.19	66	eP	Pn	14 03 56.4	-0.9
HHC				AP	pP	14 03 59.9	-0.1
HHC				XP	sP	14 04 03.2	+2.1
HHC				PP		14 04 11.1	
HHC				S	Sn	14 07 14.4	-6.0
HHC				XS	sS	14 07 19.8	-10
HHC				SS		14 07 37.6	
HHC				PCP	PcP	14 08 32.0	+1.7
HHC				AMB	AMB		
	comp=Z,13nm,1.2s						
HHC				AMB	AMB		
	comp=Z,247nm,4.3s						
HHC				LR	LR		
	comp=N,2μm,13.4s						
HHC				LR	LR		
	comp=E,780nm,12.5s						
HHC				LR	LR		
	comp=Z,1μm,13.4s						
MOY	Mondy	18.24	23	eP	Pn	14 03 58.8	+1.0
MOY				pmax	pmax		
	comp=Z,51nm,1.6s						
AKL	Akola	18.29	220	eP	Pn	14 03 59.2	+0.5
AKL				AMb	AMB	14 04 00.8	
	comp=Z,18nm,1.2s						
VIS	Vishakhapatnam	18.44	199	iP	Pn	14 04 00.3	-0.3
VIS				ex	x	14 04 04.9	
	comp=Z,45nm,1.3s						
VIS				ix	x	14 10 52.4	
ZAL	Zalesovo	18.82	351	P	Pn	14 04 05.0	+0.1
ZALV	Zalesovo Beam	18.83	351	P	Pn	14 04 05.0	0.0
	comp=Z,0.2nm,0.3s,baz=169,slow=11,SNR=53						
ZALV				LR	LR	14 11 37.1	
	comp=Z,372nm,19.6s,baz=174,slow=38						
CM31	Chiang Mai Arr	18.85	151	eP	Pn	14 04 03.3	-2.3
	comp=Z,4.4nm,0.8s						
TLY	Talaya	19.18	28	eP	Pn	14 04 10.0	+0.7
	comp=Z,19nm,1.2s						
TLY	Talaya	19.18	28	eP	Pn	14 04 10.4	+1.1
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
TLY				MLR	MLR		
	comp=Z,333nm,12.0s						
IRK	Irkutsk	19.86	28	eP	Pn	14 04 17.4	-0.1
IRK				pmax	pmax		
	comp=Z,72nm,1.7s						
NVS	Novosibirsk	19.91	349	eP	Pn	14 04 15.4	-2.6
NVS				pmax	pmax		
	comp=N,20nm,1.1s						
NVS				pmax	pmax		
	comp=Z,21nm,1.1s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.0s						
HYB	Hyderabad	20.38	211	eP	P	14 04 22.0	+0.2
HYB	Hyderabad	20.38	211	iP	P	14 04 22.0	+0.2
BJT	Baijiatuau	21.58	70	eP	P	14 04 34.4	-0.1
	comp=E,21nm,0.9s,mb4.6						
BJT	Baijiatuau	21.58	70	eP	P	14 04 34.4	-0.1
BJT				pmax	pmax		
	comp=Z,21nm,0.9s						
BJI	Beijing	21.58	70	P	P	14 04 34.6	0.0
BJI				S	S	14 08 33.9	+0.1
BJI				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.5						
BJI				LR	LR		
	comp=N,2μm,12.6s,MS4.7						
BJI				LR	LR		
	comp=E,667nm,10.9s,MS4.7						
BJI				LR	LR		
	comp=Z,631nm,20.4s						
POO	Poona	21.78	224	eP	P	14 04 35.0	-1.8
BOM	Bombay	22.09	226	⇑ex	x	14 03 50.8	
BOM				ex	x	14 11 11.7	
BRVK	Borovoye	22.25	328	eP	P	14 04 42.4	+0.7
	comp=Z,27nm,1.0s,mb4.6						
BRVK	Borovoye	22.25	328	eP	P	14 04 42.4	+0.8
BRVK				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
GOA	Goa	24.29	219	eP	P	14 05 01.3	-1.0
GOA				AMb	AMB	14 05 14.0	
	comp=Z,49nm,1.5s,mb4.7						
QIZ	Qiongzhong	24.29	127	P	P	14 05 02.6	+0.2
QIZ				XP	sP	14 05 08.0	+1.9
QIZ				S	S	14 09 23.6	+2.0
QIZ				XS	sS	14 09 29.1	+3.3
QIZ				LR	LR		
	comp=N,612nm,14.4s,MS4.4						
QIZ				LR	LR		
	comp=E,606nm,15.3s,MS4.4						
QIZ				LR	LR		
	comp=Z,470nm,10.3s,MS4.3						
MNGI	Mangalore	25.99	214	eP	P	14 05 15.6	-2.2
SSE	Sheshan	26.80	90	P	P	14 05 26.4	+1.3
SSE				XP	sP	14 05 30.8	+2.0
SSE				S	S	14 10 01.1	-0.3
SSE				XS	sS	14 10 06.6	+1.0
SSE				AMB	AMB		
	comp=Z,19nm,0.9s,mb4.6						
SSE				AMB	AMB		
	comp=Z,312nm,5.1s						
SSE				LR	LR		
	comp=N,297nm,14.7s,MS4.0						
SSE				LR	LR		
	comp=E,133nm,14.7s,MS4.0						
SSE				LR	LR		
	comp=Z,124nm,14.6s,MS3.6						
SSE	Sheshan	26.80	90	P	P	14 05 26.4	+1.3
	comp=Z,19nm,0.9s,mb4.6						
SSE				sP	sP	14 05 30.8	+2.0
SSE				S	S	14 10 01.1	-0.3
SSE				sS	sS	14 10 06.6	+1.0
SSE				LR	LR		
	comp=Z,120nm,14.6s,MS3.6						
AKTK	Aktyubinsk	27.25	313	P	P	14 05 29.4	+0.5
AKTK				LR	LR	14 17 33.8	
AKTO	Aktyubinsk	27.25	313	P	P	14 05 29.4	+0.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
AKTO				MLR	MLR		
	comp=Z,149nm,18.3s,MS3.6						
AKTO	Aktyubinsk	27.25	313	P	P	14 05 29.4	+0.5
	comp=Z,0.8nm,0.5s,mb3.5,baz=117,slow=11,SNR=3.6						
AKTO				LR	LR	14 17 33.8	
	comp=Z,149nm,18.3s,MS3.6,baz=122,slow=39						
KOD	Kodaikanal	27.34	206	eP	P	14 05 29.8	-0.3
KOD				AMb	AMB	14 05 46.5	
	comp=Z,30nm,2.0s,mb4.5						
BOD	Bodaibo	27.75	28	eP	P	14 05 32.8	-0.6
BOD				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.3						
KSRS	Korea Array	30.86	75	LR	LR	14 18 30.0	
	comp=Z,176nm,18.2s,MS3.8,baz=106,slow=37						
YAK	Yakutsk	36.60	31	iP	P	14 06 50.4	-0.4
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
KKM	Kota Kinabalu	38.20	134	eP	P	14 07 05.4	+0.6
MJAR	Matsushiro Arr	39.12	74	LR	LR	14 24 20.0	
	comp=Z,212nm,18.3s,MS4.0,baz=240,slow=38						
OBN	Obninsk	40.97	316	P	P	14 07 31.0	+3.6
OBN				e		14 16 35.2	
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.2						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.8						
ASAJ	Asahikawa	41.13	61	LR	LR	14 25 42.7	
	comp=Z,379nm,19.2s,MS4.3,baz=318,slow=38						
TIXI	Tiksi	41.67	18	eP	P	14 07 31.7	-1.3
	comp=Z,9.2nm,1.0s,mb4.4						
TIXI	Tiksi	41.67	18	iP	P	14 07 32.7	-0.3
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
BRTR	Keskin Array B	43.87	293	P	P	14 07 51.2	-0.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	43.87	293	P	P	14 07 51.2	-0.1
	comp=Z,1.0nm,0.8s,mb3.6,baz=74,slow=9.1,SNR=5.1						
JOF	Joensuu	44.77	326	ep	P	14 07 55.2	-2.9
	comp=Z,9.4nm,0.9s,mb4.6						
AKASG	Malin Array Be	45.34	309	P	P	14 08 03.1	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	45.34	309	P	P	14 08 03.1	+0.2
	comp=Z,1.4nm,0.7s,mb3.9,baz=79,slow=6.2,SNR=7.4						
MA2	Magadan	45.88	38	eP	P	14 08 06.5	-0.5
	comp=Z,5.9nm,1.1s,mb4.4						
MA2	Magadan	45.88	38	iP	P	14 08 06.0	-1.0
MA2				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
MA2				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.0						
KAF	Kangasniemi	46.97	325	ep	P	14 08 12.9	-2.7
	comp=Z,3.0nm,0.6s,mb4.4,baz=94,slow=7.6						
KAF	Kangasniemi	46.97	325	eP	P	14 08 12.9	-2.7
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
FINES	FINESS Array B	47.03	324	P	P	14 08 15.7	-0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	47.03	324	P	P	14 08 15.7	-0.4
	comp=Z,2.2nm,0.9s,mb4.1,baz=97,slow=9.8,SNR=6.4						
ARCES	ARCESS Array B	48.24	335	P	P	14 08 25.0	-0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	48.24	335	P	P	14 08 25.0	-0.4
	comp=Z,4.3nm,0.9s,mb4.5,baz=90,slow=7.3,SNR=7.4						
BILL	Bilibino	52.80	27	eP	P	14 09 00.0	+0.2
	comp=Z,4.0nm,0.7s,mb4.5						
BILL	Bilibino	52.80	27	⇑iP	P	14 08 53.1	-6.7
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NB2	NORSAR Subarra	54.22	324	P	P	14 09 09.1	-1.2
	comp=Z,3.0nm,0.9s,mb4.2,baz=82,slow=7.4						
NB2	NORSAR Subarra	54.22	324	P	P	14 09 09.1	-1.2
NB2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
NOA	NORSAR Array B	54.22	324	P	P	14 09 09.4	-0.9
	comp=Z,1.3nm,0.6s,mb4.0,baz=81,slow=7.2,SNR=4.5						
NOA				LR	LR	14 31 46.9	
	comp=Z,128nm,18.4s,MS4.0,baz=35,slow=35						
BRG	Berggiesshubel	54.87	311	P	P	14 09 17.4	+2.2
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BRG	Berggiesshubel	54.87	311	e(P)	P	14 09 17.4	+2.2
	comp=Z,6.7nm,1.0s,mb4.6						
CLL	Collm	55.33	312	e(P)	P	14 09 21.0	+2.5
CLL				LmH		14 30 00.0	
	comp=N,400nm,20.0s						
CLL				LmH		14 30 00.0	
	comp=E,200nm,21.3s						
CLL				LmV		14 32 00.0	
	comp=Z,200nm,19.5s						
GERES	GERESS Array B	55.56	309	P	P	14 09 20.5	+0.3
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES				MLR	MLR		
	comp=Z,147nm,18.2s						
GERES	GERESS Array B	55.56	309	P	P	14 09 20.5	+0.3
	comp=Z,1.7nm,0.8s,mb4.2,baz=75,slow=5.7,SNR=8.1						
GERES				LR	LR	14 37 08.5	
	comp=Z,147nm,18.2s,MS4.1,baz=270,slow=40						
GIVF	Givet	60.64	313	eP	P	14 09 58.4	+2.6
	comp=Z,19nm,0.8s,mb5.0						
GIVF	Givet	60.64	313	eP	P	14 09 58.4	+2.6
	comp=Z,9.6nm,0.8s,mb5.0						
GIVF	Givet	60.64	313	eP	P	14 09 58.4	+2.6
GIVF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.0						
KMBO	Kilima Mbogo	60.72	245	P	P	14 09 57.0	+0.2
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KMBO				MLR	MLR		
	comp=Z,81nm,19.0s						
KMBO	Kilima Mbogo	60.72	245	P	P	14 09 57.0	+0.1
	comp=Z,1.0nm,0.2s,mb4.5,baz=44,slow=14,SNR=5.3						
KMBO				LR	LR	14 35 43.2	
	comp=Z,81nm,19.0s,MS3.9,baz=88,slow=36						
LPG	La Plagne	61.14	307	eP	P	14 10 02.0	+2.8
	comp=Z,19nm,1.0s,mb4.9						
LPG	La Plagne	61.14	307	eP	P	14 10 02.0	+2.8
	comp=Z,9.4nm,1.0s,mb4.9						
LPG	La Plagne	61.14	307	eP	P	14 10 02.0	+2.8
LPG				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
LPL	La Plagne	61.14	307	eP	P	14 10 01.9	+2.6
CABF	La Chapelle	61.14	309	eP	P	14 09 59.2	-0.1
SSF	Saint Saulge	62.60	310	eP	P	14 10 10.1	+1.0
	comp=Z,2.8nm,0.5s,mb4.4						
SSF	Saint Saulge	62.60	310	eP	P	14 10 10.1	+1.0
	comp=Z,1.4nm,0.5s,mb4.3						
SSF	Saint Saulge	62.60	310	eP	P	14 10 10.1	+1.0
SSF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
GRR	Gorron	64.74	313	eP	P	14 10 24.0	+0.8
	comp=Z,15nm,0.6s,mb4.9						
GRR	Gorron	64.74	313	eP	P	14 10 24.0	+0.8
	comp=Z,7.4nm,0.6s,mb4.9						
GRR	Gorron	64.74	313	eP	P	14 10 24.0	+0.8
GRR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
WRA	Warramunga Arr	69.56	135	P	P	14 10 51.2	-2.8
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRA	Warramunga Arr	69.56	135	P	P	14 10 51.2	-2.8
	comp=Z,3.4nm,0.8s,mb4.3,baz=327,slow=6.2,SNR=16						
COLA	College	70.53	22	eP	P	14 10 59.0	-0.5
	comp=Z,4.7nm,1.0s,mb4.4						
COLA	College	70.53	22	iP	P	14 10 59.2	-0.2
ESDC	Sonseca Array	70.80	305	LR	LR	14 44 32.7	
	comp=Z,104nm,19.2s,MS4.1,baz=10.0,slow=38						
INK	Inuvik	71.74	15	eP	P	14 11 05.7	-1.0
	comp=Z,146nm,0.9s						
ASAR	Alice Springs	72.26	138	P	P	14 11 09.0	-1.4
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	72.26	138	P	P	14 11 08.9	-1.4
	comp=Z,2.2nm,0.8s,mb4.1,baz=327,slow=6.6,SNR=19						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**77.07**	**126**	*e*P	**P**	**14 11 39.0**	**+0.6**
	comp=Z,6.0nm,0.9s,mb4.5						
CTA	**Charters Tower**	**77.07**	**126**	P	**P**	**14 11 36.6**	**-1.8**
CTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTA	**Charters Tower**	**77.07**	**126**	P	**P**	**14 11 36.6**	**-1.7**
	comp=Z,6.9nm,0.9s,mb4.6,baz=297,slow=4.4,SNR=5.2						
CTAO	**Charters Tower**	**77.07**	**126**	*e*P	**P**	**14 11 38.8**	**+0.4**
	comp=Z,10nm,1.0s,mb4.7						
CTAO	**Charters Tower**	**77.07**	**126**	*e*P	**P**	**14 11 38.8**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
YKA	**Yellowknife Ar**	**80.53**	**11**	P	**P**	**14 11 55.6**	**-1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,24nm,18.3s						
YKA	**Yellowknife Ar**	**80.53**	**11**	P	**P**	**14 11 55.6**	**-1.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=335,slow=5.2,SNR=16						
YKA				LR	LR	14 49 30.9	
	comp=Z,24nm,18.3s,MS3.6,baz=335,slow=37						
TORD	**Torodi Ar. Bea**	**80.73**	**280**	P	**P**	**14 11 56.3**	**-2.4**
	comp=Z,3.2nm,0.9s,mb4.3,baz=48,slow=4.6,SNR=16						
TORD				LR	LR	14 52 44.6	
	comp=Z,82nm,18.2s,MS4.1,baz=345,slow=39						
ULM	**Lac du Bonnet**	**94.59**	**3**	LR	LR	15 02 31.6	
	comp=Z,75nm,18.2s,MS4.2,baz=19,slow=40						
LPAZ	**La Paz**	**152.39**	**308**	PKIKP	PKPbc	14 19 42.1	+0.5
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LPAZ	**La Paz**	**152.39**	**308**	PKPbc	PKPbc	14 19 42.1	+0.5
	comp=Z,0.9nm,0.8s,baz=350,slow=13,SNR=3.9						

*ISCJB **05** 14:22:04.6±1.6,2404S±007×17996E±009,h479^{km}±23^{km}, mb4.2/10,Error ellipse: s-maj=14.8km s-min=9.1km az=34.6*
*IDC **05** 14:22:06.3±1.7,2409S×17997E,h490^{km}±19^{km},mb3.7/10, mb1 3.8/12,mb1mx3.6/18,mbtmp3.6/12,Error ellipse: s-maj=21.8km s-min=14.2km az=151.0*
*NEIC **05** 14:22:06.9±1.2,2414S×17994W,h502^{km}±16^{km},mb4.8/3, Error ellipse: s-maj=15.3km s-min=11.9km az=152.0*
ISC 05 14:22:04.6±1.3,**2408S**±007×**17996W**±010,**h468**^{km}±19^{km}, **n22,**σ**0^{s}88**/23,**mb4.2**/10,**1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.67**	**276**	P	**P**	**14 24 55.6**	**+5.0**
	1.1nm,0.3s,baz=115,slow=20,SNR=9.2						
AFI	**Afiamalu**	**12.73**	**39**	P	**P**	**14 24 52.4**	**+1.1**
AFI				S	**S**	**14 27 07.0**	**-1.8**
AFI	**Afiamalu**	**12.73**	**39**	P	**P**	**14 24 52.1**	**+0.8**
	1.2nm,0.3s,baz=346,slow=23,SNR=3.3						
AFI				S	**S**	**14 27 07.0**	**-1.8**
	1.0nm,0.3s,baz=50,slow=23,SNR=2.9						
URZ	**Urewera**	**14.35**	**189**	P	**P**	**14 25 08.8**	**+0.5**
	1.1nm,0.3s,baz=2.1,slow=9.7,SNR=9.5						
URZ				S	**S**	**14 27 39.1**	**-0.9**
	0.6nm,0.3s,baz=71,slow=24,SNR=8.7						
RPZ	**Rata Peaks**	**20.93**	**198**	P	**P**	**14 26 14.4**	**+1.2**
	8.7nm,1.1s,baz=320,slow=11,SNR=2.8						
HNR	**Honiara**	**24.08**	**304**	P	**P**	**14 26 43.3**	**+1.4**
	35nm,0.4s,mb5.1,baz=108,slow=19,SNR=4.4						
EIDS	**Eidsvold**	**26.31**	**261**	*e*P	**P**	**14 27 02.1**	**+0.5**
CTA	**Charters Tower**	**31.51**	**271**	⇓*i*P	**P**	**14 27 47.6**	**+0.6**
	18nm,0.3s,mb5.0						
CTAO	**Charters Tower**	**31.51**	**271**	*e*P	**P**	**14 27 47.3**	**+0.2**
	18nm,0.5s,mb4.8						
PMG	**Port Moresby**	**34.59**	**289**	P	**P**	**14 28 13.4**	**+0.2**
	10nm,0.7s,mb4.4,baz=103,slow=12,SNR=5.3						
STKA	**Stephens Creek**	**34.69**	**248**	*e*P	**P**	**14 28 13.6**	**-0.3**
	3.1nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**34.69**	**248**	P	**P**	**14 28 13.9**	**0.0**
	3.4nm,0.5s,mb4.0,baz=94,slow=11,SNR=19						
ASAR	**Alice Springs**	**42.04**	**261**	P	**P**	**14 29 13.4**	**-0.7**
	3.3nm,0.5s,mb4.0,baz=95,slow=7.0,SNR=21						
ASAR				ScP	ScP	14 34 00.7	-3.3
	1.0nm,0.9s,baz=92,slow=3.4,SNR=4.2						
WB2	**Warramunga Arr**	**42.42**	**266**	*e*	**P**	**14 29 16.0**	**-1.1**
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**14 29 16.2**	**-1.0**
	9.5nm,0.5s,mb4.5,baz=98,slow=8.3,SNR=24						
WRA				ScP	ScP	14 34 01.9	-3.7
	2.3nm,0.9s,baz=96,slow=4.1,SNR=8.6						
FITZ	**Fitzroy Crossi**	**50.85**	**266**	P	**P**	**14 30 20.6**	**-0.7**
	7.6nm,0.6s,mb4.2,baz=121,slow=9.9,SNR=8.8						
QSPA	**South Pole Qui**	**66.00**	**180**	*e*P	**P**	**14 32 02.9**	**-0.2**
NVAR	**Mina Array Bea**	**84.86**	**44**	P	**P**	**14 33 49.2**	**+0.2**
	0.6nm,0.7s,mb3.3,baz=210,slow=6.7,SNR=5.6						
TXAR	**Lajitas Array**	**90.50**	**58**	P	**P**	**14 34 17.1**	**+1.3**
	1.5nm,0.7s,mb3.9,baz=211,slow=6.7,SNR=18						
PDAR	**Pinedale Array**	**92.80**	**44**	P	**P**	**14 34 25.8**	**-0.2**
	0.4nm,0.8s,mb3.5,baz=165,slow=3.7,SNR=4.2						
ARCES	**ARCESS Array B**	**132.07**	**348**	PKP	PKPdf	14 40 21.9	-1.5
	1.5nm,0.7s,baz=55,slow=4.6,SNR=3.6						
CLL	**Collm**	**151.04**	**343**	*e*PKPbc	PKPbc	14 41 03.0	-0.5

*IDC **05** 14:22:34.5±0.9,334N×12556E,h0^{km},mb4.3/7,mb1 4.5/7, mb1mx4.2/17,mbtmp4.3/7,MS3.8/1,Ms1 3.8/1, ms1mx3.1/27,Error ellipse: s-maj=76.2km s-min=15.6km az=74.0*
*ISCJB **05** 14:22:44.5±4.9,34N±01×1258E±03,h105^{km}±48^{km}, mb4.4/9,Error ellipse: s-maj=49.4km s-min=11.8km az=159.0*
*NEIC **05** 14:22:44.2±4.4,338N×12591E,h84^{km}±41^{km},mb4.9/4, Error ellipse: s-maj=52.5km s-min=8.8km az=68.0*
ISC 05 14:22:45.5±4.1,**33N**±01×**1258E**±03,**h95**^{km}±40^{km},**n16,** σ**0^{s}70**/15,**mb4.4**/9,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**9.94**	**286**	*e*P	**Pn**	**14 25 05.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**21.30**	**180**	*e*P	**P**	**14 27 23.9**	**-0.7**
	18nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**21.30**	**180**	P	**P**	**14 27 23.9**	**-0.7**
	9.7nm,0.8s,mb4.2,baz=340,slow=6.5,SNR=8.5						
WRA	**Warramunga Arr**	**24.60**	**160**	P	**P**	**14 27 56.8**	**-0.2**
	27nm,0.8s,mb4.7,baz=339,slow=11,SNR=76						
WB2	**Warramunga Arr**	**24.60**	**160**	*e*P	**P**	**14 27 56.3**	**-0.7**
ASAR	**Alice Springs**	**27.97**	**164**	P	**P**	**14 28 27.4**	**+0.1**
	2.1nm,0.6s,mb3.9,baz=344,slow=7.9,SNR=60						
FORT	**Forrest**	**33.99**	**177**	*e*P	**P**	**14 29 20.7**	**+0.5**
	16nm,0.5s,mb5.1						
KSRS	**Korea Array**	**34.01**	**3**	P	**P**	**14 29 20.7**	**+0.4**
	1.6nm,0.6s,mb4.0,baz=180,slow=10,SNR=6.9						
STKA	**Stephens Creek**	**38.09**	**158**	*e*P	**P**	**14 29 55.9**	**+0.7**
	6.9nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**38.09**	**158**	P	**P**	**14 29 56.4**	**+1.2**
	8.8nm,0.7s,mb4.7,baz=331,slow=9.5,SNR=14						
SONM	**Songino Array**	**47.39**	**342**	P	**P**	**14 31 08.6**	**-1.4**
	0.2nm,0.4s,baz=148,slow=8.5,SNR=2.4						
MK31	**Makanchi Array**	**57.36**	**326**	*e*P	**P**	**14 32 23.6**	**-0.3**
MKAR	**Makanchi Array**	**57.36**	**326**	P	**P**	**14 32 23.6**	**-0.3**
	0.5nm,0.4s,mb3.9,baz=125,slow=6.8,SNR=11						
YAK	**Yakutsk**	**58.63**	**2**	*e*P	**P**	**14 32 32.5**	**0.0**
	16nm,0.8s,mb5.1						
ZALV	**Zalesovo Beam**	**60.53**	**334**	LR	LR	15 00 57.8	
	comp=Z,74nm,19.0s,baz=119,slow=38						
ARCES	**ARCESS Array B**	**90.50**	**340**	P	**P**	**14 35 37.7**	**+1.3**
	1.7nm,0.8s,mb4.3,baz=87,slow=5.8,SNR=3.8						

*CRAAG **05** 14:25:52.9,3658N×717E,Ml3.5*
*CSEM **05** 14:25:53.2±0.1,3656N×715E,h10^{km},ML3.5,Error ellipse: s-maj=4.0km s-min=2.1km az=176.0*
*ISCJB **05** 14:25:54.3±0.7,3658N±009×713E±005,h17^{km}±12^{km}, Error ellipse: s-maj=14.9km s-min=7.0km az=175.8*
*TUN **05** 14:26:06.8,3661N×836E,h10^{km},MD2.7*
ISC 05 14:25:54.2±0.7,**3657N**±009×**713E**±005,**h15**^{km}±6^{km},**n14,** σ**0^{s}56**/14,**Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAH	**Djebel Manchou**	**0.24**	**78**	P	**Pg**	**14 25 59.0**	**-0.6**
CGMA	**Guelma**	**0.26**	**118**	P	**Pg**	**14 26 00.0**	**+0.1**
CAEH	**’Ain El Ouahch**	**0.30**	**313**	P	**Pg**	**14 26 01.0**	**+0.4**
CKFL	**Kef-Lekhel**	**0.37**	**242**	P	**Pg**	**14 26 02.0**	**+0.2**
ABSA	**Djebel Ababsia**	**0.41**	**136**	P	**Pg**	**14 26 02.5**	**-0.1**
CASM	**Ain Smara**	**0.60**	**239**	P	**Pg**	**14 26 06.0**	**-0.1**
CTEI	**Djebel Teioual**	**0.77**	**229**	P	**Pb**	**14 26 10.0**	**+0.6**
GHAT	**Ghardimaou**	**0.95**	**94**	*i* P	**Pb**	**14 26 12.3**	**-0.1**
DFRA	**Djebel Bou Aff**	**1.01**	**269**	P	**Pb**	**14 26 13.0**	**-0.3**
CMER	**Merouana**	**1.38**	**227**	P	**Pn**	**14 26 18.0**	**-0.8**
CKHR	**Kef el Ahmar**	**1.42**	**247**	P	**Pn**	**14 26 14.0**	**-5.4**
SET	**Setif**	**1.44**	**256**	P	**Pn**	**14 26 15.5**	**-4.2**
BLIT	**Baltah**	**1.48**	**84**	*i* P	**Pn**	**14 26 19.8**	**-0.4**
KRIT	**Krib**	**1.59**	**98**	*i* P	**Pn**	**14 26 23.0**	**+1.2**

*NIED **05** 14:34:00,2460N×12180E,h14^{km},Mw4.7 Best double couple: $M_0$1.08000×10^{16} NP1:ϕ_s172.00000°,δ34.00000°, λ142.00000°. NP2:ϕ_s295.00000°,δ70.00000°,λ62.00000°.*
*ISCJB **05** 14:34:39.3±0.4,2419N±006×12188E±003,h10^{km}, mb3.9/16,MS4.1/5,Error ellipse: s-maj=9.1km s-min=3.3km az=8.7*
*JMA **05** 14:34:40.6±0.2,2456N×12178E,h50^{km}±4^{km},M4.9*
*NEIC **05** 14:34:40.3±0.6,2417N×12186E,h10^{km},mb4.2/5,Error ellipse: s-maj=16.6km s-min=9.3km az=62.0*
*BJI **05** 14:34:47.2,2484N×12146E,h10^{km},mB4.7,mb4.3,ML4.3, Ms4.6,Msz4.5*
*IDC **05** 14:34:48.9±6.3,2430N×12195E,h80^{km}±58^{km},mb3.6/10, mb1 3.8/11,mb1mx3.7/21,mbtmp3.7/11,ML3.8/1,MS3.9/7, Ms1 3.9/7,ms1mx3.5/31,Error ellipse: s-maj=39.4km s-min=20.7km az=62.0*
ISC 05 14:34:40.3±0.8,**2423N**±005×**12191E**±003,**h8**^{km}±5^{km},**n48,** σ**1^{s}00**/52,**mb3.9**/16,**MS4.1**/5,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.29**	**259**	*e*Pn	**Pg**	**14 34 44.2**	**-1.8**
YHNB	**Yeheng**	**0.65**	**312**	*e*P	**Pg**	**14 34 52.4**	**-0.5**
TATO	**Taipei**	**0.83**	**333**	*e*P	**Pg**	**14 34 56.1**	**-0.3**
YOJ	**Yonaguni jima**	**1.03**	**77**	P	**Pg**	**14 35 00.3**	**+0.1**
YOJ				*e*S	**Sg**	**14 35 14.8**	**+1.2**
IRIF	**Iriomote-Funau**	**1.67**	**86**	P	**Pn**	**14 35 09.6**	**-0.3**
HATJ	**Hateruma jima**	**1.74**	**95**	P	**Pn**	**14 35 11.6**	**+0.7**
HATJ				*e*S	**Sn**	**14 35 34.0**	**+0.7**
JKRS	**Kuro-shima**	**1.92**	**89**	P	**Pn**	**14 35 14.0**	**+0.7**
JKRS				*e*S	**Sn**	**14 35 37.2**	**-0.5**
JIJ	**Ishigaki jima**	**2.04**	**86**	P	**Pn**	**14 35 15.1**	**0.0**
JIJ				*e*S	**Sn**	**14 35 40.9**	**+0.1**
JTJ	**Tarama**	**2.58**	**80**	P	**Pn**	**14 35 22.2**	**-0.2**
JTJ				*e*S	**Sn**	**14 35 52.9**	**-1.1**
QZH	**Quanzhou**	**3.10**	**284**	P	**Pn**	**14 35 30.7**	**+1.1**
QZH				S	**Sn**	**14 36 07.7**	**+0.8**
QZH				Smax			
	comp=N,730nm,0.8s						
QZH				Smax			
	comp=E,800nm,1.2s						
QZH				LR	LR		
	comp=N,6μm,4.5s						
QZH				LR	LR		
	comp=E,10μm,7.8s						
QZH				LR	LR		
	comp=Z,18μm,10.8s						
JMJ	**Miyako jima 2**	**3.14**	**79**	*e*S	**Sn**	**14 36 07.6**	**-0.2**
SSE	**Sheshan**	**6.87**	**355**	P	**Pn**	**14 36 23.3**	**+1.9**
SSE				AMB	AMB		
	comp=Z,62nm,0.7s						
SSE				AMB	AMB		
	comp=Z,182nm,4.4s						
SSE				LR	LR		
	comp=N,638nm,9.5s						
SSE				LR	LR		
	comp=E,3μm,9.5s						
SSE				LR	LR		
	comp=Z,2μm,8.8s						
SSE	**Sheshan**	**6.87**	**355**	P	**Pn**	**14 36 23.3**	**+1.9**
	comp=Z,62nm,0.7s						
SSE				S	**Sn**	**14 37 49.4**	**+10**
NJ2	**Nanjing**	**8.25**	**342**	*e*P	**Pn**	**14 36 39.2**	**-1.1**
NJ2				AP		14 36 42.3	
NJ2				XP		14 36 45.4	
NJ2				S	**Sn**	**14 38 12.0**	**-1.7**
NJ2				XS		14 38 17.0	
NJ2				AMB	AMB		
	comp=Z,160nm,1.0s						
NJ2				Smax			
	comp=N,440nm,0.9s						
NJ2				Smax			
	comp=E,280nm,1.1s						
NJ2				LR	LR		
	comp=N,2μm,14.5s						
NJ2				LR	LR		
	comp=E,2μm,12.1s						
NJ2				LR	LR		
	comp=Z,3μm,12.1s						
JNU	**Nakatsue**	**11.85**	**40**	LR	LR	14 42 33.2	
	comp=Z,626nm,19.3s,baz=204,slow=40						
QIZ	**Qiongzhong**	**12.35**	**248**	*e*P	**Pn**	**14 37 41.0**	**+4.4**
KSRS	**Korea Array**	**14.15**	**20**	P	**Pn**	**14 38 06.0**	**+4.9**
	comp=Z,0.5nm,0.3s,baz=198,slow=12,SNR=10						
KSRS				LR	LR	14 44 03.6	
	comp=Z,478nm,20.1s,baz=202,slow=40						
XAN	**Xi’an**	**14.96**	**314**	P	**Pn**	**14 38 07.6**	**-4.6**
XAN				AP	pP	14 38 17.0	-3.0
XAN				AMB	AMB		
	comp=Z,149nm,7.8s						
XAN				LR	LR		
	comp=N,971nm,9.7s						
XAN				LR	LR		
	comp=E,2μm,11.3s						
XAN				LR	LR		
	comp=Z,2μm,11.0s						
MJAR	**Matsushiro Arr**	**18.63**	**45**	LR	LR	14 47 01.4	
	comp=Z,108nm,19.7s,baz=235,slow=40						
HHC	**Hu-ho-hao-te**	**18.70**	**335**	*e*P	**Pn**	**14 39 03.5**	**+4.0**
HHC				SS		14 42 44.5	
HHC				AMB	AMB		
	comp=Z,14nm,1.2s						
HHC				AMB	AMB		
	comp=Z,204nm,5.7s						
HHC				LR	LR		
	comp=N,968nm,10.9s						
HHC				LR	LR		
	comp=E,379nm,11.9s						
HHC				LR	LR		
	comp=Z,653nm,10.9s						
KKM	**Kota Kinabalu**	**18.89**	**198**	P	**Pn**	**14 39 05.8**	**+3.9**
LZH	**Lanzhou**	**19.55**	**311**	*e*P	**Pn**	**14 39 11.4**	**+1.7**
LZH				AP	pP	14 39 19.2	+8.5
LZH				XP	sP	14 39 23.1	+11
LZH				AMB	AMB		
	comp=Z,53nm,1.5s						
LZH				AMB	AMB		
	comp=Z,220nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,11.5s						
LZH				LR	LR		
	comp=Z,2μm,11.6s						
LZH	**Lanzhou**	**19.55**	**311**	*e*P	**Pn**	**14 39 11.4**	**+1.7**
	comp=Z,53nm,1.5s						
LZH				pP	pP	14 39 19.2	+8.5
LZH				sP	sP	14 39 23.1	+11
LZH				*e*S	**Sn**	**14 43 06.5**	**+17**
CN2	**Changchun**	**19.74**	**8**	*e*P	**Pn**	**14 39 12.2**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CHTO	**Chiang Mai**	**22.02**	**260**	*e*P	**P**	**14 39 39.3**	**+3.9**
	comp=Z,13nm,1.3s,mb4.2						
GTA	**Gaotai**	**24.02**	**314**	*e*P	**P**	**14 39 57.0**	**+1.3**
GTA				AP		14 40 04.4	
GTA				XP	sP	14 40 07.8	+8.8
GTA				AMB	AMB		
	comp=Z,7.0nm,1.7s,mb3.8						
GTA				AMB	AMB		
	comp=Z,156nm,4.9s						
GTA				LR	LR		
	comp=N,454nm,12.2s,MS4.6						
GTA				LR	LR		
	comp=E,1μm,11.0s,MS4.6						
GTA				LR	LR		
	comp=Z,1μm,10.6s,MS4.7						
GUMO	**Guam**	**24.13**	**112**	LR	LR	14 48 30.5	
	comp=Z,286nm,19.8s,MS3.8,baz=264,slow=34						
ULN	**Ulaanbaatar**	**26.38**	**337**	*e*P	**P**	**14 40 16.8**	**-0.2**
	comp=Z,3.5nm,0.8s,mb3.9						
SONM	**Songino Array**	**26.59**	**336**	P	**P**	**14 40 18.9**	**0.0**
	comp=Z,2.9nm,1.0s,mb3.8,baz=154,slow=8.0,SNR=17						
WMQ	**Urumqi**	**34.10**	**313**	*e*P	**P**	**14 41 26.0**	**+0.5**
MK31	**Makanchi Array**	**38.77**	**316**	*e*P	**P**	**14 42 04.6**	**-0.6**
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**14 42 05.2**	**-0.1**
	comp=Z,1.1nm,0.5s,mb3.9,baz=99,slow=10,SNR=27						
ZALV	**Zalesovo Beam**	**40.57**	**327**	P	**P**	**14 42 19.0**	**-1.1**
	comp=Z,2.4nm,0.8s,mb3.9,baz=111,slow=8.1,SNR=13						
TKM2	**Tokmak 2**	**42.26**	**308**	*e*P	**P**	**14 42 35.6**	**+1.4**
	comp=Z,3.2nm,0.8s,mb4.0						
UCH	**Uchtor**	**42.92**	**307**	*e*P	**P**	**14 42 41.5**	**+1.9**
	comp=Z,9.3nm,1.4s,mb4.3						
WRA	**Warramunga Arr**	**45.54**	**164**	P	**P**	**14 42 58.6**	**-2.1**
	comp=Z,2.0nm,1.0s,mb4.0,baz=345,slow=8.8,SNR=11						
WB2	**Warramunga Arr**	**45.55**	**164**	*e*P	**P**	**14 43 00.3**	**-0.4**
ASAR	**Alice Springs**	**49.01**	**165**	P	**P**	**14 43 28.0**	**+0.3**
	comp=Z,1.0nm,0.9s,mb3.9,baz=338,slow=7.0,SNR=10.0						
CTA	**Charters Tower**	**50.03**	**150**	LR	LR	15 02 39.3	
	comp=Z,265nm,19.6s,MS4.2,baz=40,slow=33						
AKTK	**Aktyubinsk**	**55.20**	**316**	P	**P**	**14 44 13.3**	**-0.3**
AKTO	**Aktyubinsk**	**55.20**	**316**	P	**P**	**14 44 13.3**	**-0.3**
	comp=Z,2.0nm,1.0s,mb4.1,baz=104,slow=7.5,SNR=7.5						
DZM	**Mont Dzumac**	**63.18**	**133**	LR	LR	15 10 23.9	
	comp=Z,153nm,18.1s,MS4.2,baz=220,slow=34						
FINES	**FINESS Array B**	**71.74**	**330**	P	**P**	**14 46 02.9**	**+0.1**
	comp=Z,1.1nm,0.8s,mb3.9,baz=63,slow=6.4,SNR=3.9						
AKASG	**Malin Array Be**	**73.28**	**318**	P	**P**	**14 46 10.5**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=63,slow=6.3,SNR=3.8						
BRTR	**Keskin Array B**	**73.68**	**307**	P	**P**	**14 46 15.5**	**+0.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=46,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**82.67**	**23**	P	**P**	**14 47 02.6**	**-1.5**
YKA				LR	LR	15 27 14.0	
YKA	**Yellowknife Ar**	**82.67**	**23**	P	**P**	**14 47 02.6**	**-1.5**
	comp=Z,2.5nm,0.6s,mb4.4,baz=313,slow=4.9,SNR=41						
YKA				LR	LR	15 27 14.0	
	comp=Z,29nm,18.9s,MS3.7,baz=130,slow=38						
GERES	**GERESS Array B**	**83.23**	**321**	P	**P**	**14 47 07.0**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.6,baz=251,slow=2.4,SNR=4.3						

*CSEM **05** 14:41:24.5±0.1,4047N×3292E,h5^{km},MD2.8,Error ellipse: s-maj=1.5km s-min=1.4km az=45.0*
*ISK **05** 14:41:24.7,4047N×3292E,h5^{km},MD3.0*
*ISCJB **05** 14:41:25.4±0.6,4045N±003×3289E±005,h10^{km},Error ellipse: s-maj=5.7km s-min=4.4km az=38.0*
*DDA **05** 14:41:28.1,4046N×3303E,h10^{km},Md2.8*
ISC 05 14:41:25.5±0.7,**4045N**±003×**3289E**±005,**h3**^{km}±7^{km},**n12,** σ**0^{s}89**/19,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.41**	**84**	*i* P	**Pg**	**14 41 33.4**	**+0.1**
ELDT				*i* S	**Sg**	**14 41 39.0**	**+0.4**
LOD	**Lodumlu**	**0.57**	**190**	PG	**Pg**	**14 41 37.1**	**+0.7**
LOD				SG	**Sg**	**14 41 45.0**	**+1.3**
CANT	**Cankiri**	**0.57**	**74**	PG	**Pg**	**14 41 35.9**	**-0.6**
CANT				SG	**Sg**	**14 41 43.9**	**-0.1**
SAFT	**Safranbolu**	**0.80**	**349**	PG	**Pg**	**14 41 40.2**	**-0.7**
TOS	**Tosya**	**1.04**	**55**	PG	**Pg**	**14 41 44.4**	**-1.0**
BALT	**Daday**	**1.15**	**19**	*i* P	**Pg**	**14 41 47.3**	**-0.1**
BALT				*i* S	**Sg**	**14 42 03.2**	**+1.0**
CDAG	**Cicekdag**	**1.40**	**126**	*i* P	**Pn**	**14 41 51.2**	**-0.6**
CDAG				*i* S	**Sg**	**14 42 09.8**	**-0.8**
BOYT	**Boyabat**	**1.81**	**57**	*i* P	**Pn**	**14 41 59.1**	**+1.7**
BOYT				*i* S	**Sn**	**14 42 21.3**	**+0.6**
GULT	**Gulveren**	**1.81**	**270**	*e*PN	**Pn**	**14 41 57.8**	**+0.3**
ESKT	**Eskisehir**	**1.82**	**240**	*i* P	**Pn**	**14 41 55.3**	**-2.4**
ESKT				*i* S	**Sn**	**14 42 27.0**	**+5.8**
SEYT	**Eskypehyr**	**1.82**	**240**	*i* P	**Pn**	**14 41 55.3**	**-2.3**
YOZ	**Yozgat**	**2.03**	**113**	*e*PN	**Pn**	**14 42 00.2**	**-0.3**

GUC 05 14:47:14.4±0.6,**2828S**×**7129W**,**h29**^{km}±5^{km},**MD3.9, ML3.7,2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.55**	**122**	⇓*i*P	Pb	14 47 25.4	-0.3
VACH				*i* S	Sb	14 47 33.3	0.0
VACH				AML	AML	14 47 33.5	
	comp=E,15μm,0.1s						
CPCH	**Copiapo**	**1.24**	**42**	⇑*i*P	Pn	14 47 36.4	+0.6
CPCH				*i* S	Sn	14 47 52.7	+1.1
CPCH				AML	AML	14 47 55.0	
	comp=E,12μm,0.1s						
CDCH	**Caldera**	**1.27**	**19**	*e*P	Pn	14 47 36.4	+0.1
CDCH				*i* S	Sn	14 47 53.0	+0.7
CDCH				AML	AML	14 47 57.9	
	comp=N,698nm,0.4s						
LSCH	**La Serena**	**1.62**	**179**	⇓*i*P	Pn	14 47 41.9	+0.8
LSCH				*i* S	Sn	14 48 03.2	+2.2
LSCH				AML	AML	14 48 06.9	
	comp=E,470nm,0.3s						
TLL	**Tololo Astrono**	**1.93**	**167**	⇑*i*P	Pn	14 47 46.7	+1.5
TLL				*i* S	Sn	14 48 12.4	+3.9
TLL				AML	AML	14 48 16.7	
	comp=N,2μm,0.5s						
OVCH	**Ovalle**	**2.32**	**178**	*i* P	Pn	14 47 51.8	+1.1
OVCH				AML	AML	14 48 31.4	
	comp=N,910nm,0.5s						

*IDC **05** 14:50:29.7±1.9,3306N×9049E,h0^{km},mb3.6/4,mb1 3.8/6, mb1mx3.6/22,mbtmp3.6/6,MS3.7/2,Ms1 3.7/2, ms1mx3.1/37,Error ellipse: s-maj=78.6km s-min=23.6km az=72.0*
*ISCJB **05** 14:50:34.6±1.5,3322N±008×904E±02,h54^{km}±20^{km}, mb3.6/4,Error ellipse: s-maj=33.6km s-min=11.7km az=165.5*
*BJI **05** 14:50:35.2,3319N×9052E,h55^{km},mb4.4,ML3.9*
*NEIC **05** 14:50:36.6±1.3,3321N×9024E,h56^{km}±18^{km},mb3.7/1, Error ellipse: s-maj=28.1km s-min=10.1km az=75.0*
ISC 05 14:50:36.1±1.2,**3325N**±007×**904E**±02,**h48**^{km}±17^{km},**n13,** σ**0^{s}89**/13,**mb3.6**/4,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.59**	**169**	P	**Pn**	**14 51 30.8**	**+1.5**
LSA				Smax			
	comp=N,130nm,0.9s						
LSA				Smax			
	comp=E,250nm,1.1s						
LSA	**Lhasa**	**3.59**	**169**	*e*Pn	**Pn**	**14 51 30.5**	**+1.2**
LSA				*e*Sn	**Sn**	**14 52 21.0**	**+10**
SHL	**Shillong**	**7.76**	**170**	*e*P	**Pn**	**14 52 25.5**	**-1.0**
SHL				*e*S	Sx	14 54 30.5	
MK31	**Makanchi Array**	**14.87**	**338**	*e*P	**Pn**	**14 54 02.5**	**-0.6**
MKAR	**Makanchi Array**	**14.87**	**338**	Pn	**Pn**	**14 54 02.5**	**-0.6**
	baz=150,slow=14,SNR=8.0						
SONM	**Songino Array**	**18.93**	**35**	P	**Pn**	**14 54 53.9**	**+0.1**
	baz=213,slow=12,SNR=6.0						
SONM				LR	LR	15 03 16.6	
	comp=E,165nm,21.8s,baz=288,slow=40						
ULN	**Ulaanbaatar**	**19.27**	**36**	*e*P	**Pn**	**14 54 57.5**	**-0.3**
	comp=E,6.9nm,1.4s						
ZALV	**Zalesovo Beam**	**21.07**	**351**	P	**P**	**14 55 18.0**	**+2.0**
	comp=E,2.7nm,0.9s,mb3.5,baz=165,slow=12,SNR=7.9						
WRA	**Warramunga Arr**	**67.50**	**135**	P	**P**	**15 01 26.6**	**-0.6**
	comp=E,0.8nm,0.9s,mb3.8,baz=326,slow=7.4,SNR=4.7						
ASAR	**Alice Springs**	**70.16**	**138**	P	**P**	**15 01 43.6**	**-0.1**
	comp=E,0.7nm,0.9s,mb3.6,baz=324,slow=6.5,SNR=5.8						
TORD	**Torodi Ar. Bea**	**81.84**	**280**	LR	LR	15 40 12.6	
	comp=E,58nm,19.2s,baz=195,slow=36						
YKA	**Yellowknife Ar**	**82.50**	**11**	P	**P**	**15 02 53.3**	**+0.2**
YKA	**Yellowknife Ar**	**82.50**	**11**	P	**P**	**15 02 53.3**	**+0.2**
	comp=E,0.4nm,0.7s,mb3.5,baz=327,slow=4.9,SNR=6.7						

*NEIC **05** 15:00:58.9±1.1,8.16S×12288E,h184^{km}±12^{km},mb4.4/3, Error ellipse: s-maj=12.2km s-min=6.0km az=58.0*
*ISCJB **05** 15:00:59.6±0.8,821S±007×12284E±009,h211^{km}±8^{km}, mb4.1/10,Error ellipse: s-maj=16.5km s-min=7.6km az=146.4*
*IDC **05** 15:00:60.0±0.9,8.10S×12284E,h197^{km}±8^{km},mb3.8/8, mb1 4.0/12,mb1mx3.9/20,mbtmp3.9/12,Error ellipse: s-maj=24.6km s-min=9.7km az=61.0*
ISC 05 15:01:00.5±0.8,**816S**±008×**1229E**±01,**h202**^{km}±8^{km},**n26,** σ**0^{s}87**/35,**mb4.1**/10,**1D,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**2.18**	**159**	P	**Pn**	**15 01 41.9**	**+0.9**
	129nm,0.3s,baz=336,slow=2.3,SNR=133						
BATI				S	**Sn**	**15 02 13.1**	**+0.4**
	211nm,0.3s,baz=102,slow=3.4,SNR=11						
FITZ	**Fitzroy Crossi**	**10.24**	**165**	*e*P	**Pn**	**15 03 21.9**	**-0.9**
	73nm,0.6s						
FITZ				*e*S	**Sn**	**15 05 11.7**	**-5.6**
FITZ	**Fitzroy Crossi**	**10.24**	**165**	*e*Pn	**Pn**	**15 03 20.8**	**-2.0**
FITZ				*e*S	**Sn**	**15 05 11.7**	**-5.6**
FITZ	**Fitzroy Crossi**	**10.24**	**165**	P	**Pn**	**15 03 21.9**	**-1.0**
	3.4nm,0.3s,baz=5.2,slow=12,SNR=59						

FITZ				S	Sn	15 05 10.3	-7.0
	4.9nm,0.3s,baz=116,slow=12,SNR=8.3						
MBWA	Marble Bar	13.27	193	Pn	Pn	15 03 59.8	-1.5
MBWA				eS	S	15 06 19.4	-10
KKM	Kota Kinabalu	15.59	335	eP	Pn	15 04 30.9	+1.0
KSM	Kuching	15.76	307	eP	Pn	15 04 30.8	-1.1
WRA	Warramunga Arr	16.14	138	P	P	15 04 35.3	-0.6
	2.7nm,0.3s,baz=316,slow=12,SNR=151						
WRA				S	S	15 07 30.2	-4.8
	2.3nm,0.3s,baz=308,slow=24,SNR=6.8						
WB2	Warramunga Arr	16.15	138	⇓iP	P	15 04 35.3	-0.7
WB2				eS	S	15 07 25.5	-10
ASAR	Alice Springs	18.70	147	P	P	15 05 04.5	+0.7
ASAR				S	S	15 08 29.0	+3.0
ASAR	Alice Springs	18.70	147	P	P	15 05 04.5	+0.7
	4.8nm,0.3s,baz=330,slow=13,SNR=141						
ASAR				S	S	15 08 29.0	+3.0
	0.2nm,0.3s,baz=332,slow=26,SNR=6.9						
COEN	Coen	20.74	108	eP	P	15 05 24.9	-0.9
FORT	Forrest	23.02	168	eP	P	15 05 48.5	+0.7
	22nm,0.5s,mb4.9						
PMG	Port Moresby	24.05	95	P	P	15 05 56.8	-0.6
	11nm,0.6s,mb4.7,baz=350,slow=6.1,SNR=5.3						
MUN	Mundaring	24.49	194	eP	P	15 06 01.6	+0.4
NWAO	Narrogin (SRO)	25.19	191	P	P	15 06 07.2	-0.2
	7.2nm,0.4s,mb4.6,baz=27,slow=8.7,SNR=22						
STKA	Stephens Creek	29.33	146	eP	P	15 06 44.9	+0.4
	3.5nm,0.5s,mb4.2						
STKA	Stephens Creek	29.33	146	P	P	15 06 45.1	+0.7
	7.7nm,0.7s,mb4.4,baz=332,slow=8.6,SNR=21						
RPZ	Rata Peaks	54.85	139	P	P	15 10 10.1	+0.2
	baz=191,slow=5.2						
SONM	Songino Array	57.63	347	P	P	15 10 29.2	-0.2
	0.3nm,0.5s,mb3.2,baz=163,slow=6.9,SNR=4.6						
MKAR	Makanchi Array	65.53	331	P	P	15 11 22.4	+0.1
	2.4nm,0.6s,mb4.0,baz=135,slow=6.3,SNR=30						
AML	Almayashu	67.22	322	eP	P	15 11 34.4	+1.3
	1.9nm,0.6s,mb3.9						
ZALV	Zalesovo Beam	69.69	337	P	P	15 11 47.3	-0.7
	0.6nm,0.4s,mb3.5,baz=147,slow=5.0,SNR=3.4						
VNDA	Vanda	72.24	172	P	P	15 12 03.9	+0.8
	0.8nm,0.4s,mb3.7,baz=314,slow=7.3,SNR=9.4						
AKTK	Aktyubinsk	80.75	324	P	P	15 12 51.2	-0.1
AKTO	Aktyubinsk	80.75	324	P	P	15 12 51.2	-0.1
	1.3nm,0.6s,mb3.8,baz=100,slow=7.9,SNR=8.1						

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*MOS **05** 15:10:55.0±0.6, 2339N×14221E, h56km, mb5.0/4, Error ellipse: s-maj=26.1km s-min=9.6km az=100.8*
*ISCJB **05** 15:10:57.4±0.4, 2341N±004×1425E±0.1, h80km, mb4.7/24, Error ellipse: s-maj=14.3km s-min=6.2km az=178.5*
*IDC **05** 15:10:59.6±0.7, 2343N×14235E, h82km±6km, mb3.9/15, mb1 4.0/18, mb1mx3.9/27, mbtmp4.0/18, Error ellipse: s-maj=21.2km s-min=8.8km az=90.0*
*NEIC **05** 15:10:59.5±0.4, 2345N×14259E, mb5.0/9, Error ellipse: s-maj=15.0km s-min=7.8km az=83.0*
ISC 05 15:10:59.5±0.4**, 2343N**±004×**1426E**±01**, h82**km**, h82**km±3.8km**:pP-P, n49,** σ1.21s/47**, mb4.7**/24**, 2D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.66	355	P	Pn	15 11 53.9	0.0
	134nm,0.3s,baz=260,slow=17,SNR=51						
CBIJ				S	Sn	15 12 34.3	-1.6
	131nm,0.3s,baz=101,slow=23,SNR=12						
MJAR	Matsushiro Arr	13.59	345	P	Pn	15 14 06.4	-2.4
	1.9nm,0.3s,baz=154,slow=9.8,SNR=13						
MAJO	Matsushiro	13.60	345	eP	Pn	15 14 05.8	-2.9
MAT	Matsushiro	13.60	345	P	Pn	15 14 04.8	-4.0
KSRS	Korea Array	18.79	321	P	Pn	15 15 13.2	-0.5
	0.7nm,0.3s,baz=132,slow=12,SNR=35						
ASAJ	Asahikawa	20.63	0	P	P	15 15 34.2	+1.9
	9.0nm,0.9s,baz=195,slow=28,SNR=5.1						
SONM	Songino Array	37.64	319	P	P	15 18 05.0	-1.5
	0.6nm,0.6s,baz=121,slow=7.8,SNR=5.0						
YAK	Yakutsk	39.57	351	P	P	15 18 22.5	+0.1
	23nm,0.8s,mb5.0						
YAK	Yakutsk	39.57	351	eP	P	15 18 22.2	-0.2
YAK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
YAK				pmax	pmax		
	comp=N,8.0nm,1.2s						
CTA	Charters Tower	43.41	175	eP	P	15 18 54.1	-0.1
	comp=N,4.1nm,0.6s,mb4.3						
CTA	Charters Tower	43.41	175	eP	P	15 18 54.1	-0.1
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTA	Charters Tower	43.41	175	P	P	15 18 53.9	-0.3
	comp=Z,6.1nm,0.6s,mb4.5,baz=358,slow=11,SNR=8.5						
CTAO	Charters Tower	43.41	175	eP	P	15 18 54.2	0.0
WB2	Warramunga Arr	43.85	191	eP	P	15 18 56.6	-1.2
WRA	Warramunga Arr	43.85	191	P	P	15 18 57.5	-0.3
	comp=Z,12nm,0.4s,mb5.0,baz=7.2,slow=7.8,SNR=229						
FITZ	Fitzroy Crossi	44.46	203	eP	P	15 19 02.8	+0.1
	comp=Z,22nm,1.6s,mb4.6						
FITZ	Fitzroy Crossi	44.46	203	P	P	15 19 01.5	-1.3
	comp=Z,3.1nm,0.4s,mb4.4,baz=103,slow=22,SNR=14						
BILL	Bilibino	46.95	12	P	P	15 19 24.0	+2.3
BILL				e	pP	15 19 40.8	-0.8
ASAR	Alice Springs	47.56	191	P	P	15 19 26.4	-0.7
	comp=Z,2.5nm,0.6s,mb4.2,baz=15,slow=11,SNR=34						
TAPN	Taplejung	49.38	287	eP	P	15 19 42.7	+1.6
	comp=Z,21nm,0.7s,mb5.2						
ODAN	Odare	49.73	286	eP	P	15 19 45.4	+1.6
	comp=Z,48nm,0.8s,mb5.5						
JIRN	Jiri	50.67	287	eP	P	15 19 52.9	+2.1
	comp=Z,52nm,0.6s,mb5.7						
KKN	Kakani	51.44	288	eP	P	15 19 58.0	+1.4
	comp=Z,3.8nm,0.2s,mb5.1						
KKN	Kakani	51.44	288	eP	P	15 19 58.0	+1.4
KKN				pmax	pmax		
	comp=Z,4.0nm,0.2s,mb5.1						
GKN	Gorkha	51.97	288	eP	P	15 20 01.8	+1.2
	comp=Z,21nm,0.8s,mb5.2						
ZALV	Zalesovo Beam	52.50	321	P	P	15 20 03.2	-0.8
	comp=Z,1.1nm,0.5s,mb4.2,baz=124,slow=7.8,SNR=5.7						
ZAL	Zalesovo	52.51	321	P	P	15 20 03.2	-0.9
MKAR	Makanchi Array	53.11	312	P	P	15 20 08.8	+0.1
	comp=Z,2.1nm,0.5s,mb4.5,baz=88,slow=9.3,SNR=26						
STKA	Stephens Creek	55.00	181	eP	P	15 20 21.2	-1.3
	comp=Z,5.2nm,0.4s,mb4.9						
STKA	Stephens Creek	55.00	181	eP	P	15 20 21.8	-0.7
STKA	Stephens Creek	55.00	181	P	P	15 20 22.0	-0.5
	comp=Z,7.9nm,0.6s,mb5.0,baz=346,slow=6.4,SNR=32						
FORT	Forrest	55.67	195	⇓iP	P	15 20 27.1	-0.2
	comp=Z,30nm,0.5s,mb5.6						
KURK	Kurchatov	55.82	316	eP	P	15 20 27.7	-0.5
	comp=Z,2.3nm,0.4s,mb4.6						
KURK	Kurchatov	55.82	316	eP	P	15 20 27.7	-0.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
KDAK	Kodiak Island	57.12	35	P	P	15 20 38.2	+0.9
	comp=Z,13nm,1.0s,mb4.9,baz=318,slow=18,SNR=2.0						
UCH	Uchtor	58.68	306	eP	P	15 20 50.4	+1.9
	comp=Z,1.8nm,0.6s,mb4.3						
KLBR	Kellerberrin	59.64	205	⇓iP	P	15 20 54.6	-0.6
	comp=Z,10nm,0.7s,mb5.0						
NWAO	Narrogin (SRO)	61.03	204	P	P	15 21 03.0	-1.6
	comp=Z,3.6nm,0.6s,mb4.6,baz=76,slow=8.8,SNR=4.7						
BRVK	Borovoye	61.05	319	eP	P	15 21 04.1	-0.5
KBL	Kabul	64.00	298	eP	P	15 21 25.8	+1.2
INK	Inuvik	66.22	24	P	P	15 21 39.3	+1.0
	comp=Z,2.1nm,0.9s,mb4.0,baz=42,slow=9.4,SNR=4.2						
YKA	Yellowknife Ar	75.20	28	P	P	15 22 33.2	+0.3
	comp=Z,0.2nm,0.5s,baz=294,slow=6.0,SNR=3.6						
YKA				pP	pP	15 22 56.1	+1.8
	comp=Z,0.8nm,0.6s,baz=291,slow=5.7,SNR=5.5						
ARCES	ARCESS Array B	77.10	341	P	P	15 22 43.5	0.0
	comp=Z,2.1nm,0.7s,mb4.0,baz=51,slow=9.6,SNR=4.7						
ARCES				pP	pP	15 23 05.0	-0.1
	comp=Z,8.8nm,1.0s,baz=51,slow=9.6,SNR=2.2						
JOF	Joensuu	78.51	334	ep	P	15 22 50.1	-1.4
	comp=Z,3.5nm,0.6s,mb4.4						
FINES	FINESS Array B	81.37	334	P	P	15 23 06.6	-0.4
	comp=Z,0.9nm,0.5s,mb3.9,baz=78,slow=4.8,SNR=14						
FINES				pP	pP	15 23 28.6	-0.1
	comp=Z,1.1nm,0.5s,baz=57,slow=7.0,SNR=2.9						
NVAR	Mina Array Bea	82.52	51	P	P	15 23 14.7	+1.2
	comp=Z,0.8nm,0.7s,mb3.7,baz=278,slow=3.8,SNR=4.4						
VNA2	Neumayer--Watz	129.41	192	e	PKPdf	15 29 58.6	+0.8
	baz=336,slow=0.2						
VNA2				e		15 30 04.6	
VNA2				e		15 30 56.7	
VNA2				e		15 31 15.8	
VNA1	Neumayer--Stat	129.80	192	e	PKPdf	15 29 58.4	-0.2
VNA1				e		15 30 49.9	
VNA1				e		15 31 09.7	
LPAZ	La Paz	150.32	82	PKPbc	PKPbc	15 30 43.0	+0.9
	comp=Z,3.5nm,0.6s,baz=305,slow=2.1,SNR=13						

IDC 05 15:11:49.7±1.9**, 766N**×**12676E, h0**km**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=175.1km s-min=27.5km az=70.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.43	165	P	P	15 17 46.2	0.0
	0.7nm,0.4s,baz=345,slow=10,SNR=8.8						
ASAR	Alice Springs	31.91	168	P	P	15 18 17.2	+0.2
	0.2nm,0.5s,baz=350,slow=7.2,SNR=5.3						
ZALV	Zalesovo Beam	57.14	332	P	P	15 21 38.0	0.0
	1.2nm,0.6s,baz=116,slow=6.5,SNR=4.6						

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*IDC **05** 15:19:13.1±1.4, 104S×12755E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.5/16, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=135.6km s-min=21.9km az=70.0*
*NEIC **05** 15:19:15.2±0.7, 134S×12692E, h10km, Error ellipse: s-maj=38.7km s-min=11.2km az=65.0*
*ISCJB **05** 15:19:16.4±0.8, 13S±02×1270E±03, h33km, mb3.8/4, Error ellipse: s-maj=49.1km s-min=14.2km az=154.4*
ISC 05 15:19:18.6±0.8**, 14S**±02×**1269E**±03**, h35**km**, n8,** σ0.93s/8**, mb3.8**/4**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.79	159	P	Pn	15 23 46.1	-1.5
	0.1nm,0.3s,baz=340,slow=12,SNR=4.6						
COEN	Coen	20.35	128	eP	P	15 23 52.1	0.0
ASAR	Alice Springs	23.13	163	P	P	15 24 23.4	+1.6
	1.1nm,0.7s,mb3.4,baz=347,slow=11,SNR=12						
SONM	Songino Array	52.22	343	P	P	15 28 25.1	-0.9
SONM	Songino Array	52.22	343	P	P	15 28 25.1	-0.9
	0.1nm,0.4s,mb3.1,baz=148,slow=8.5,SNR=2.0						
MKAR	Makanchi Array	61.90	327	P	P	15 29 34.4	-0.1
	0.8nm,0.7s,mb3.9,baz=121,slow=8.2,SNR=8.8						
MA2	Magadan	63.65	13	eP	P	15 29 46.5	+0.6
	5.1nm,0.9s,mb4.5						
KURK	Kurchatov	66.18	329	eP	P	15 30 03.0	+0.4

IDC 05 15:24:43.0±1.4**, 134S**×**12697E, h0**km**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, ML3.9**/1**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.9**/35**, Error ellipse: s-maj=151.0km s-min=21.9km az=69.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.84	159	P	Pn	15 29 15.3	-1.8
	0.3nm,0.3s,baz=343,slow=12,SNR=22						
ASAR	Alice Springs	23.19	164	P	P	15 29 51.9	+0.4
	1.0nm,0.4s,baz=346,slow=11,SNR=23						
CBIJ	Chichi jima	31.85	26	LR	LR	15 41 13.3	
	comp=Z,167nm,20.9s,baz=164,slow=31						
SONM	Songino Array	52.16	343	P	P	15 33 56.7	+1.5
	0.3nm,0.6s,baz=135,slow=7.6,SNR=4.1						
MKAR	Makanchi Array	61.87	327	P	P	15 35 03.1	-1.0
	0.8nm,0.5s,baz=128,slow=7.9,SNR=7.5						

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*IDC **05** 15:25:33.3±0.9, 122S×127.17E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.0/19, mbtmp4.1/8, Error ellipse: s-maj=49.0km s-min=16.2km az=60.0*
*NEIC **05** 15:25:34.8±0.4, 122S×127.12E, h10km, mb4.5/2, Error ellipse: s-maj=20.2km s-min=7.4km az=58.0*
*ISCJB **05** 15:25:36.1±0.5, 12S±0.1×1272E±02, h33km, mb4.2/10, Error ellipse: s-maj=26.4km s-min=9.6km az=148.0*
ISC 05 15:25:38.4±0.5**, 13S**±01×**1271E**±02**, h35**km**, n18,** σ0.97s/18**, mb4.2**/10**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.83	160	P	Pn	15 30 06.0	-2.0
	0.4nm,0.3s,baz=340,slow=11,SNR=8.0						
COEN	Coen	20.27	129	eP	P	15 30 11.8	+0.7
ASAR	Alice Springs	23.19	164	P	P	15 30 42.7	+0.4
	3.3nm,0.7s,mb3.9,baz=345,slow=10,SNR=15						
CTA	Charters Tower	26.44	136	P	P	15 31 11.5	-0.7
CTA	Charters Tower	26.44	136	P	P	15 31 11.5	-0.7
	3.9nm,0.9s,mb3.9,baz=3.7,slow=18,SNR=2.2						
PSI	Prapat	28.46	278	P	P	15 31 30.4	-0.1
	4.6nm,0.8s,mb4.2,baz=342,slow=20,SNR=5.2						
STKA	Stephens Creek	33.35	157	eP	P	15 32 15.2	+1.9
	3.9nm,0.8s,mb4.4						
STKA	Stephens Creek	33.35	157	eP	P	15 32 15.1	+1.9
STKA	Stephens Creek	33.35	157	P	P	15 32 14.7	+1.4
	4.6nm,0.8s,mb4.5,baz=321,slow=11,SNR=7.1						
CHTO	Chiang Mai	34.14	307	P	P	15 32 19.7	-0.7
GTA	Gaotai	47.62	331	eP	P	15 34 13.1	+2.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.6						
ULN	Ulaanbaatar	52.00	343	eP	P	15 34 43.7	-0.5
SONM	Songino Array	52.16	342	P	P	15 34 44.7	-0.7
	comp=Z,1.3nm,0.9s,mb3.9,baz=152,slow=9.6,SNR=4.8						
MK31	Makanchi Array	61.91	327	eP	P	15 35 54.7	+0.2
MKAR	Makanchi Array	61.91	327	P	P	15 35 54.8	+0.3
	comp=Z,1.6nm,0.6s,mb4.3,baz=122,slow=8.0,SNR=10						
MA2	Magadan	63.48	13	eP	P	15 36 04.0	-0.6
	comp=Z,2.0nm,0.7s,mb4.4						
ZALV	Zalesovo Beam	65.23	334	P	P	15 36 16.9	+0.7
	comp=Z,0.6nm,0.6s,mb3.8,baz=130,slow=4.6,SNR=4.0						
KURK	Kurchatov	66.18	329	eP	P	15 36 21.6	-0.8
	comp=Z,3.9nm,0.8s,mb4.5						

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*NIED **05** 15:26:00, 47.10N×152.90E, h32km, Mw4.0 Best double couple: Mo1.03000×10^15 NP1:φs217.00000°, δ63.00000°, λ178.00000°. NP2:φs308.00000°, δ88.00000°, λ27.00000°.*
*ISCJB **05** 15:26:45.8±1.1, 4689N±009×1529E±0.1, h63km±10km, mb4.0/15, Error ellipse: s-maj=17.6km s-min=8.9km az=138.1*
*MOS **05** 15:26:46.9±1.2, 4698N×15287E, h71km, mb4.4/9, Error ellipse: s-maj=17.0km s-min=11.4km az=72.9*
*IDC **05** 15:26:51.2±3.8, 4693N×15273E, h94km±35km, mb3.6/14, mb1 3.8/16, mb1mx3.7/24, mbtmp3.6/16, MS3.4/5, Ms1 3.4/5, ms1mx3.1/41, Error ellipse: s-maj=19.3km s-min=16.6km az=113.0*
*NEIC **05** 15:26:51.4±1.9, 4698N×15274E, h95km±17km, mb4.1/2, Error ellipse: s-maj=16.0km s-min=11.4km az=110.0*
*BJI **05** 15:26:55.4, 4700N×15270E, h94km, mB4.8, mb4.4*
ISC 05 15:26:47.9±1.0**, 4693N**±008×**1529E**±01**, h63**km±9km**, n60,** σ1.23s/60**, mb4.0**/15**, 1C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.86	246	ePN	Pn	15 27 43.5	-1.2
KUR				eS	Sn	15 28 27.8	-1.0
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,380nm,0.6s						
KUR				smax			
	comp=E,180nm,0.6s						
SKR	Severo-Kuril's	4.33	29	ePN	Pn	15 27 50.5	-0.6
SKR				eS	Sn	15 28 36.9	-3.4
SKR				pmax	pmax		
	comp=N,60nm,0.8s						
SKR				pmax	pmax		
	comp=E,50nm,0.8s						
SKR				pmax	pmax		
	comp=Z,70nm,0.8s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,100nm,0.5s						
NEM2	Nemuro 2	6.16	237	P	Pn	15 28 13.7	-2.5
NEM2				eS	Sn	15 29 20.7	-4.5
JRA	Rausu	6.21	244	P	Pn	15 28 17.4	+0.6
JNK	Nakash	6.64	243	P	Pn	15 28 22.1	-0.7
YSS	Yuzh-Sakhalins	6.92	274	eP	Pn	15 28 28.4	+1.9
YSS	Yuzh-Sakhalins	6.92	274	PN	Pn	15 28 29.0	+2.5
JTKR	Abashiri--Toko	6.95	248	P	Pn	15 28 27.5	+0.5
JAK	Akkeshi	7.00	239	P	Pn	15 28 25.0	-2.6
PET	Petropavlovsk	7.15	29	⇑ePN	Pn	15 28 36.9	+7.2
PET				pmax	pmax		
	comp=Z,44nm,0.4s						
JMP	Maruseppu	7.29	250	P	Pn	15 28 33.3	+1.7
JAR	Ashorobuto	7.38	244	P	Pn	15 28 32.7	-0.2
ASAJ	Asahikawa	7.74	252	P	Pn	15 28 39.6	+2.0
	comp=Z,1.2nm,0.3s,baz=85,slow=14,SNR=11						
ASAJ				LR	LR	15 32 07.1	
	comp=Z,68nm,18.8s,baz=98,slow=41						
JKK2	Kamakawa 2	7.74	250	P	Pn	15 28 38.9	+1.1
JWK2	Keihoku	7.79	262	P	Pn	15 28 43.1	+4.7
JCH	Churui	8.01	241	P	Pn	15 28 39.7	-1.8
JFR	Furan	8.18	246	P	Pn	15 28 45.3	+1.5
JANG	Nango	10.50	236	eS	Sn	15 30 58.9	-13
MJAR	Matsushiro Arr	15.05	232	P	Pn	15 30 19.8	+3.1
MJAR	Matsushiro Arr	15.05	232	P	Pn	15 30 19.8	+3.1
	comp=Z,0.4nm,0.3s,baz=39,slow=9.1,SNR=5.8						
YAK	Yakutsk	20.08	327	P	P	15 31 17.0	+1.2
KSRS	Korea Array	20.68	252	P	P	15 31 23.4	+0.9
	comp=Z,1.8nm,0.8s,baz=62,slow=8.1,SNR=7.0						
JNU	Nakatsue	21.66	238	LR	LR	15 41 33.1	
	comp=Z,76nm,18.6s,baz=167,slow=41						
BILL	Bilibino	22.26	13	P	P	15 31 38.9	-0.2
BILL	Bilibino	22.26	13	P	P	15 31 38.9	-0.2
ZALV	Zalesovo Beam	42.37	306	P	P	15 34 33.0	-2.5
ZALV				LR	LR	15 53 32.9	
ZALV	Zalesovo Beam	42.37	306	P	P	15 34 33.0	-2.5
	comp=Z,0.4nm,0.4s,mb3.4,baz=89,slow=5.6,SNR=3.7						
ZALV				LR	LR	15 53 32.9	
	comp=Z,33nm,20.1s,baz=48,slow=38						
ZAL	Zalesovo	42.38	306	P	P	15 34 33.0	-2.6
MKAR	Makanchi Array	46.70	297	LR	LR	15 54 52.1	
	comp=Z,46nm,18.5s,baz=261,slow=36						
YKA	Yellowknife Ar	50.89	37	P	P	15 35 42.5	+0.6
YKA				PcP	PcP	15 36 57.5	-0.1
YKA	Yellowknife Ar	50.89	37	P	P	15 35 42.5	+0.6
YKA						15 36 57.5	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	50.89	37	P	P	15 35 42.5	+0.6
	comp=Z,1.0nm,0.8s,mb3.8,baz=299,slow=7.1,SNR=9.8						
YKA				PcP	PcP	15 36 57.5	-0.1
	comp=Z,0.1nm,0.4s,baz=290,slow=2.9,SNR=4.9						
ARCES	ARCESS Array B	57.63	341	P	P	15 36 31.1	+0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	57.63	341	P	P	15 36 31.1	+0.4
	comp=Z,2.8nm,0.8s,mb4.3,baz=19,slow=8.6,SNR=2.7						
NVAR	Mina Array Bea	62.51	62	P	P	15 37 04.9	+0.2
	comp=Z,0.4nm,0.5s,mb3.8,baz=297,slow=5.1,SNR=4.3						
BATI	Kupang	62.56	213	LR	LR	15 59 38.0	
	comp=Z,136nm,21.7s,baz=123,slow=32						
FINES	FINESS Array B	63.81	335	P	P	15 37 12.3	-0.6
FINES	FINESS Array B	63.81	335	P	P	15 37 12.3	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	63.81	335	P	P	15 37 12.3	-0.6
	comp=Z,2.0nm,0.5s,mb4.5,baz=38,slow=6.7,SNR=17						
BW06	Boulder Array	64.78	54	eP	P	15 37 20.3	+0.7
	comp=Z,1.3nm,0.8s,mb4.0						
PDAR	Pinedale Array	64.78	54	P	P	15 37 20.4	+0.8
	comp=Z,1.0nm,0.8s,mb3.9,baz=271,slow=2.3,SNR=8.8						
NB2	NORSAR Subarra	68.00	341	P	P	15 37 39.4	-0.4
	comp=Z,4.4nm,0.7s,mb4.6,baz=29,slow=6.5						
NOA	NORSAR Array B	68.00	341	P	P	15 37 39.7	-0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	68.00	341	P	P	15 37 39.7	-0.1
	comp=Z,2.5nm,0.6s,mb4.4,baz=28,slow=6.3,SNR=8.9						
WRA	Warramunga Arr	68.62	199	P	P	15 37 43.2	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	Warramunga Arr	68.62	199	P	P	15 37 43.2	-0.9
	comp=Z,0.7nm,1.1s,mb3.5,baz=13,slow=3.3,SNR=3.4						
AKASG	Malin Array Be	71.30	326	P	P	15 37 59.6	-0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	Malin Array Be	71.30	326	P	P	15 37 59.6	-0.7
	comp=Z,3.0nm,0.4s,mb4.6,baz=34,slow=6.3,SNR=10.0						
ASAR	Alice Springs	72.32	198	P	P	15 38 06.9	+0.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	72.32	198	P	P	15 38 06.8	+0.3
	comp=Z,0.7nm,0.8s,mb3.6,baz=12,slow=6.0,SNR=10						
CLL	Collm	76.23	335	⇓iP	P	15 38 28.8	-0.3
	comp=Z,5.0nm,0.9s,mb4.4						
CLL	Collm	76.23	335	⇓iP	P	15 38 28.8	-0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
CLL	Collm	76.23	335	⇓iP	P	15 38 28.8	-0.3
	comp=Z,5.0nm,0.9s,mb4.4						
TXAR	Lajitas Array	77.56	60	P	P	15 38 37.2	+0.3
TXAR	Lajitas Array	77.56	60	P	P	15 38 37.2	+0.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	77.56	60	P	P	15 38 37.2	+0.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=303,slow=4.2,SNR=8.4						
BRTR	Keskin Array B	78.14	317	P	P	15 38 40.8	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	78.14	317	P	P	15 38 40.8	+0.8
	comp=Z,1.4nm,0.8s,mb3.9,baz=51,slow=6.5,SNR=5.2						
GERES	GERESS Array B	78.22	334	P	P	15 38 40.1	-0.2
GERES	GERESS Array B	78.22	334	P	P	15 38 40.1	-0.1
	comp=Z,0.3nm,0.5s,mb3.5,baz=21,slow=6.3,SNR=4.3						

MAN 05 15:34:36, 789N×**12202E, h60**km**, mb4.4, ML3.3, MS3.1, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZMPH	Zamboanga City	0.93	177	⇑iP	Pn	15 34 55.1	+2.0
ZMPH				i S	Sn	15 35 08.3	+2.5
PAGZ	Pagadian	1.35	92	eP	Pn	15 35 00.5	+1.8
PAGZ				eS	Sn	15 35 17.7	+2.0
DCPH	Dipolog City	1.49	62	⇑eP	Pn	15 35 01.4	+0.9
DCPH				eS	Sn	15 35 21.2	+2.2
GUIM	Jordan	2.78	12	eP	Pn	15 35 20.0	+1.9
GUIM				eS	Sn	15 35 50.4	-0.1
CUYO	Cuyo Island	3.11	341	eP	Pn	15 35 24.4	+1.8
ENPP	El Nido	4.18	322	eP	Pn	15 35 38.7	+1.4
OTRP	Odiongan	4.45	360	eP	Pn	15 35 44.5	+3.5

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*NIED **05** 16:13:00, 24.40N×121.80E, h8km, Mw4.7 Best double couple: Mo1.40000×10^16 NP1:φs157.00000°, δ8.00000°, λ151.00000°. NP2:φs276.00000°, δ86.00000°, λ83.00000°.*
*ISCJB **05** 16:13:41.4±1.5, 24.11N±005×121.80E±003, h3km±9km, mb4.0/19, MS3.7/8, Error ellipse: s-maj=7.8km s-min=4.4km az=7.1*
*BJI **05** 16:13:43.2, 24.11N×121.97E, h15km, mB4.7, mb4.2, ML4.2, Ms4.4, Msz4.3*
*NEIC **05** 16:13:44.2±0.6, 2423N×12188E, h10km, mb4.3/5, Error ellipse: s-maj=13.8km s-min=9.3km az=58.0*
*JMA **05** 16:13:44.4±0.2, 2444N×12177E, h40km, M4.6*
*MOS **05** 16:13:45.1±1.2, 2433N×12224E, h33km, mb4.5/5, Error ellipse: s-maj=31.5km s-min=9.7km az=121.2*
*IDC **05** 16:13:52.3±6.3, 2424N×12191E, h75km±59km, mb3.6/11, mb1 3.7/12, mb1mx3.7/22, mbtmp3.6/12, ML3.4/1, MS3.6/8, Ms1 3.7/8, ms1mx3.4/27, Error ellipse: s-maj=39.7km s-min=13.7km az=65.0*
ISC 05 16:13:43.5±0.9**, 2412N**±005×**12189E**±003**, h5**km±6km**, n52,** σ1.19s/58**, mb4.0**/19**, MS3.7**/8**, 1C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.27	280	ePn	Pg	16 13 48.6	-0.2
YHNB	Yeheng	0.72	319	ePn	Pn	16 13 56.6	-3.7
TATO	Taipei	0.92	337	ePn	Pn	16 14 00.5	-2.6
YOJ	Yonaguni jima	1.08	72	P	Pg	16 14 04.3	+0.1
YOJ				eS	Sg	16 14 18.7	+0.5
IRIF	Iriomote-Funau	1.69	83	P	Pn	16 14 13.7	-0.1
IRIF				eS	Sn	16 14 36.0	+0.2
HATJ	Hateruma jima	1.75	92	P	Pn	16 14 15.4	+0.8
HATJ				eS	Sn	16 14 38.2	+0.9
JKRS	Kuro-shima	1.94	86	P	Pn	16 14 17.9	+0.7
JKRS				eS	Sn	16 14 41.4	-0.5
JIJ	Ishigaki jima	2.07	83	P	Pn	16 14 18.8	-0.2
JTJ	Tarama	2.62	78	P	Pn	16 14 27.0	+0.5
QZH	Quanzhou	3.11	286	P	Pn	16 14 34.9	+1.7
QZH				S	Sn	16 15 12.5	+1.7
QZH				Smax			
	comp=N,890nm,1.0s						
QZH				Smax			

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,710nm,1.1s						
QZH				LR	LR		
	comp=N,4µm,9.0s						
QZH				LR	LR		
	comp=E,6µm,11.4s						
QZH				LR	LR		
	comp=Z,7µm,10.7s						
NJ2	**Nanjing**	**8.34**	**342**	*e*P	**Pn**	**16 15 45.0**	**-0.1**
NJ2				AP		16 15 48.1	
NJ2				XP		16 15 51.0	
NJ2				S	**Sn**	**16 17 21.5**	**+1.9**
NJ2				XS		16 17 26.5	
NJ2				Smax			
	comp=N,330nm,0.9s						
NJ2				Smax			
	comp=E,180nm,1.1s						
NJ2				LR	LR		
	comp=N,1µm,17.5s						
NJ2				LR	LR		
	comp=E,2µm,12.1s						
NJ2				LR	LR		
	comp=Z,2µm,12.1s						
JNU	**Nakatsue**	**11.94**	**39**	LR	LR	16 21 14.5	
	comp=Z,240nm,18.2s,baz=22,slow=37						
QIZ	**Qiongzhong**	**12.30**	**248**	P	**Pn**	**16 16 37.6**	**-1.8**
QIZ				S	**Sn**	**16 18 57.9**	**+1.0**
QIZ				AMB	AMB		
	comp=Z,27nm,1.9s						
QIZ				LR	LR		
	comp=N,698nm,15.1s						
QIZ				LR	LR		
	comp=E,444nm,15.9s						
QIZ				LR	LR		
	comp=Z,506nm,13.5s						
KSRS	**Korea Array**	**14.26**	**20**	P	**Pn**	**16 17 10.2**	**+4.2**
	comp=Z,0.2nm,0.3s,baz=204,slow=13,SNR=5.6						
KSRS				LR	LR	16 23 15.0	
	comp=Z,231nm,18.8s,baz=190,slow=40						
BJI	**Beijing**	**16.58**	**344**	P	**Pn**	**16 17 41.2**	**+4.4**
BJI				S	**Sn**	**16 20 42.7**	**+1.5**
BJI				AMB	AMB		
	comp=Z,8.0nm,0.9s						
BJI				LR	LR		
	comp=N,330nm,12.7s						
BJI				LR	LR		
	comp=E,828nm,17.4s						
CD2	**Chengdu**	**17.43**	**297**	*e*P	**Pn**	**16 17 51.1**	**+3.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
SNY	**Shenyang**	**17.71**	**4**	*e*P	**Pn**	**16 17 54.2**	**+3.3**
SNY				AMB	AMB		
	comp=Z,387nm,4.8s						
SNY				LR	LR		
	comp=N,580nm,6.0s						
SNY				LR	LR		
	comp=E,2µm,17.7s						
SNY				LR	LR		
	comp=Z,890nm,11.4s						
LZH	**Lanzhou**	**19.61**	**312**	*e*P	**Pn**	**16 18 16.5**	**+2.5**
LZH				AP	pP	16 18 20.3	+6.2
LZH				XP	sP	16 18 22.6	+7.9
LZH				AMB	AMB		
	comp=Z,19nm,1.3s						
LZH				AMB	AMB		
	comp=Z,118nm,5.1s						
LZH				LR	LR		
	comp=N,574nm,13.5s						
LZH				LR	LR		
	comp=Z,865nm,15.0s						
LZH	**Lanzhou**	**19.61**	**312**	*e*P	**Pn**	**16 18 16.5**	**+2.5**
	comp=Z,19nm,1.3s						
LZH				pP	pP	16 18 20.3	+6.2
LZH				sP	sP	16 18 22.6	+7.9
LZH				PP		16 18 39.6	
LZH				*e*S	**Sn**	**16 22 05.0**	**+11**
LZH				sS	sS	16 22 13.4	+17
LZH				*e*SS		16 22 37.5	
CN2	**Changchun**	**19.84**	**8**	*e*P	**Pn**	**16 18 16.1**	**-0.6**
GTA	**Gaotai**	**24.08**	**314**	*e*P	**P**	**16 19 00.3**	**+0.4**
GTA				AP		16 19 03.8	
GTA				XP	sP	16 19 06.8	+4.8
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb3.8						
GTA				AMB	AMB		
	comp=Z,123nm,4.9s						
GTA				LR	LR		
	comp=N,294nm,11.0s,MS4.3						
GTA				LR	LR		
	comp=E,494nm,11.4s,MS4.3						
GTA				LR	LR		
	comp=Z,644nm,11.4s,MS4.3						
GUMO	**Guam**	**24.10**	**112**	LR	LR	16 26 44.5	
	comp=Z,189nm,21.8s,MS3.5,baz=94,slow=32						
ULN	**Ulaanbaatar**	**26.46**	**337**	*e*P	**P**	**16 19 21.4**	**-0.1**
	comp=Z,12nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**26.46**	**337**	⇓*e*P	**P**	**16 19 20.4**	**-1.0**
SONM	**Songino Array**	**26.68**	**336**	P	**P**	**16 19 23.3**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.0,baz=150,slow=10,SNR=35						
SONM				LR	LR	16 31 01.6	
	comp=Z,107nm,19.4s,MS3.4,baz=146,slow=39						
LSA	**Lhasa**	**27.92**	**288**	P	**P**	**16 19 38.3**	**+3.6**
	comp=Z,2.5nm,0.8s,mb3.9						
ZAK	**Zakamensk**	**29.93**	**336**	*e*P	**P**	**16 19 49.2**	**-3.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
TLY	**Talaya**	**30.87**	**338**	*e*P	**P**	**16 20 00.4**	**-0.2**
TLY				*e*SS	SS	16 26 38.7	-38
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TLY				MLR	MLR		
	comp=Z,123nm,13.0s,MS3.8						
MKAR	**Makanchi Array**	**38.83**	**316**	*i* P	**P**	**16 21 09.5**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**38.83**	**316**	P	**P**	**16 21 09.4**	**+0.1**
	comp=Z,1.3nm,0.5s,mb3.9,baz=102,slow=9.9,SNR=26						
MKAR				LR	LR	16 37 38.5	
	comp=Z,31nm,18.1s,MS3.2,baz=348,slow=37						
ZALV	**Zalesovo Beam**	**40.65**	**327**	P	**P**	**16 21 23.3**	**-1.1**
ZALV				LR	LR	16 40 12.3	
ZALV	**Zalesovo Beam**	**40.65**	**327**	P	**P**	**16 21 23.3**	**-1.1**
	comp=Z,0.9nm,0.5s,mb3.7,baz=115,slow=7.0,SNR=8.1						
ZALV				LR	LR	16 40 12.3	
	comp=Z,49nm,19.9s,MS3.4,baz=77,slow=39						
ZAL	**Zalesovo**	**40.65**	**327**	P	**P**	**16 21 23.3**	**-1.1**
KURK	**Kurchatov**	**42.55**	**320**	⇑*e*P	**P**	**16 21 38.7**	**-1.4**
AAK	**Ala-Archa**	**43.05**	**307**	*i* P	**P**	**16 21 43.6**	**-0.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
AML	**Almayashu**	**43.56**	**306**	*e*P	**P**	**16 21 49.7**	**+1.3**
	comp=Z,4.8nm,1.0s,mb4.2						
WRA	**Warramunga Arr**	**45.45**	**163**	P	**P**	**16 22 02.8**	**-0.8**
	comp=Z,1.1nm,0.5s,mb3.9,baz=345,slow=8.7,SNR=10						
TIXI	**Tiksi**	**47.72**	**3**	*e*P	**P**	**16 22 18.6**	**-2.3**
	comp=Z,8.2nm,1.1s,mb4.7						
TIXI	**Tiksi**	**47.72**	**3**	*i* P	**P**	**16 22 18.7**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
BRVK	**Borovoye**	**48.20**	**321**	*i* P	**P**	**16 22 23.7**	**-1.1**
ASAR	**Alice Springs**	**48.92**	**165**	P	**P**	**16 22 31.7**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=353,slow=8.8,SNR=9.1						
AKTK	**Aktyubinsk**	**55.27**	**316**	P	**P**	**16 23 17.2**	**-0.4**
AKTO	**Aktyubinsk**	**55.27**	**316**	P	**P**	**16 23 17.2**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.1,baz=103,slow=12,SNR=3.5						
ARU	**Arti**	**55.54**	**323**	*d i*P	**P**	**16 23 18.6**	**-1.0**
ARU				*e*		16 24 15.0	
ARU						16 25 21.6	
ARU				*e*S	**S**	**16 31 04.3**	**-1.1**
ARU				SS	SS	16 34 48.8	-1.1
ARU				pmax	pmax		
	comp=Z,19nm,5.0s						
STKA	**Stephens Creek**	**58.79**	**160**	P	**P**	**16 23 45.1**	**+2.3**
	comp=Z,1.5nm,0.6s,mb4.2,baz=0.0,slow=7.1,SNR=2.3						
FINES	**FINESS Array B**	**71.82**	**330**	P	**P**	**16 25 06.6**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.0,baz=80,slow=11,SNR=4.7						
AKASG	**Malin Array Be**	**73.34**	**318**	P	**P**	**16 25 15.4**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=56,slow=4.6,SNR=3.9						
BRTR	**Keskin Array B**	**73.72**	**307**	P	**P**	**16 25 18.9**	**+0.2**
	comp=Z,2.6nm,1.1s,mb4.1,baz=90,slow=5.6,SNR=5.1						
NOA	**NORSAR Array B**	**78.58**	**332**	LR	LR	17 01 25.9	
	comp=Z,67nm,18.1s,MS4.0,baz=105,slow=36						
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**16 26 06.9**	**-1.5**
YKA	**Yellowknife Ar**	**82.78**	**23**	P	**P**	**16 26 06.9**	**-1.5**
	comp=Z,1.5nm,0.7s,mb4.1,baz=314,slow=4.9,SNR=23						
GERES	**GERESS Array B**	**83.30**	**321**	LR	LR	17 05 49.3	
	comp=Z,126nm,18.8s,MS4.3,baz=282,slow=38						

*ISCJB **05** 16:24:19.9±0.4,5147N±002×691E±003,h0^{km},Error ellipse: s-maj=3.0km s-min=2.5km az=166.8*
*NEIC **05** 16:24:20.0±1.8,5163N×672E,h1^{km}±15^{km},ML3.3(LDG), ML2.5(STR),Error ellipse: s-maj=16.0km s-min=6.5km az=190.0*
*BUG **05** 16:24:21.4,5156N×690E,h1^{km},ML2.0*
*CSEM **05** 16:24:21.4±0.1,5161N×684E,h1^{km},ML3.3/12,Error ellipse: s-maj=1.5km s-min=1.3km az=108.0*
*LDG **05** 16:24:21.8±0.1,5160N×682E,h1^{km},Md3.3/1,Ml3.3/14, Error ellipse: s-maj=2.0km s-min=1.6km az=24.0, Suspected Mining induced.*
*BNS **05** 16:24:22.3±0.9,5157N×684E,h1^{km},ML2.6*
*BGR **05** 16:24:23.4±0.7,5146N×685E,h1^{km},ML2.7/2,Error ellipse: s-maj=7.8km s-min=4.4km az=140.0*
*STR **05** 16:24:27.6±0.8,5126N×730E,h5^{km},Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 05 16:24:20.9±0.3**,5153N**±002×**684E**±003**,h0**^{km}**,n79, σ1^{s}24**/144**,1C-2D,Germany**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.17**	**266**	Pg	**Pg**	**16 24 25.8**	**+1.7**
BRHE				Sg	**Sg**	**16 24 29.6**	**+3.3**
BUG	**Bochum--Univer**	**0.28**	**108**	⇑*e*Pg	**Pg**	**16 24 27.3**	**+1.1**
BUG				Sg	**Sg**	**16 24 31.7**	**+1.8**
BUG	**Bochum--Univer**	**0.28**	**108**	*e*Pg	**Pg**	**16 24 27.4**	**+1.2**
WTSB	**Winterswijk**	**0.44**	**357**	⇓*i*Pg	**Pg**	**16 24 29.3**	**0.0**
	106nm,0.3s						
WTSB				*e*Sg	**Sg**	**16 24 35.1**	**+0.1**
BNS	**Bensberg**	**0.60**	**160**	*e*Pg	**Pg**	**16 24 34.9**	**+2.5**
HOBG	**Hohbusch**	**0.63**	**150**	*e*Pg	**Pg**	**16 24 34.5**	**+1.7**
STB	**Steinbach**	**0.94**	**180**	*e*Pg	**Pg**	**16 24 40.7**	**+2.0**
STB				*e*Sg	**Sg**	**16 24 54.4**	**+3.6**
	132nm,0.2s						
KLL	**Kalltalsperre**	**0.94**	**201**	*e*Pg	**Pg**	**16 24 40.8**	**+1.9**
DREG	**Dreilaegerbach**	**0.95**	**204**	*e*Pg	**Pg**	**16 24 40.9**	**+1.9**
HGN	**Heimansgroeve**	**0.96**	**217**	*e*Pn	**Pn**	**16 24 40.5**	**-1.0**
HGN	**Heimansgroeve**	**0.96**	**217**	⇓*i*Pg	**Pg**	**16 24 41.0**	**+1.8**
	32nm,0.2s						
HGN				*e*Sg	**Sg**	**16 24 54.3**	**+2.8**
	3.4nm,0.2s						
BEBN	**Eben Emael**	**1.04**	**225**	P	**Pg**	**16 24 40.6**	**-0.1**
MEM	**Membach**	**1.06**	**210**	P	**Pg**	**16 24 42.4**	**+1.3**
HILG	**Hillesheim**	**1.24**	**185**	*e*Pg	**Pg**	**16 24 46.1**	**+1.4**
BGG	**Burgeitz**	**1.36**	**166**	*e*Pg	**Pg**	**16 24 47.5**	**+0.6**
BCLA	**Clavier**	**1.48**	**222**	P	**Pn**	**16 24 48.5**	**-0.2**
BCLA	**Clavier**	**1.48**	**222**	P	**Pn**	**16 24 48.4**	**-0.2**
TNS	**Taunus Mts**	**1.66**	**141**	*e*Pn	**Pn**	**16 24 51.9**	**+0.8**
	SNR=6.6						
TNS				*e*Sg	**Sg**	**16 25 13.6**	**-0.4**
	SNR=3.0						
ABH	**Alteburg**	**1.71**	**165**	Pn	**Pn**	**16 24 51.7**	**-0.1**
ABH				Pg	**Pg**	**16 24 54.6**	**+1.0**
ABH				Sg	**Sg**	**16 25 13.6**	**-2.1**
ABH	**Alteburg**	**1.71**	**165**	Pg	**Pg**	**16 24 54.6**	**+1.0**
RUP	**Ruppelstein**	**1.83**	**176**	Pn	**Pn**	**16 24 54.3**	**+0.7**
RUP				Sg	**Sg**	**16 25 18.8**	**-0.9**
SNF	**Seneffe**	**1.91**	**239**	P	**Pn**	**16 24 53.9**	**-0.8**
SNF	**Seneffe**	**1.91**	**239**	P	**Pn**	**16 24 53.8**	**-0.8**
WLF	**Walferdange**	**1.92**	**194**	*e*Pg	**Pg**	**16 24 58.2**	**+0.6**
	SNR=5.1						
WLF				*e*Sg	**Sg**	**16 25 22.2**	**-0.2**
	SNR=3.9						
WLF	**Walferdange**	**1.92**	**194**	*e*Pn	**Pn**	**16 24 57.8**	**+3.1**
WLF				*e*Sn	**Sn**	**16 25 21.4**	**+1.9**
WLF	**Walferdange**	**1.92**	**194**	P	**Pn**	**16 24 57.9**	**+3.2**
WLF	**Walferdange**	**1.92**	**194**	*e*Pn	**Pn**	**16 24 57.8**	**+3.1**
WLF				*e*Sn	**Sn**	**16 25 21.4**	**+1.9**
GIVF	**Givet**	**1.92**	**223**	*e*Pg	**Pg**	**16 24 58.3**	**+0.7**
GIVF				*e*S	**Sn**	**16 25 22.4**	**+2.9**
GIVF				*e*Sg	**Sg**	**16 25 23.6**	**+1.2**
	70nm,0.3s						
GIVF	**Givet**	**1.92**	**223**	*e*Pn	**Pn**	**16 24 54.8**	**+0.1**
GIVF				*e*Pg	**Pg**	**16 24 58.3**	**+0.7**
GIVF				*e*S	**Sn**	**16 25 22.4**	**+2.9**
GIVF				*e*Sg	**Sg**	**16 25 23.6**	**+1.2**
GIVF	**Givet**	**1.92**	**223**	*e*Pg	**Pg**	**16 24 58.3**	**+0.7**
GIVF				*e*S	**Sn**	**16 25 22.4**	**+2.9**
GIVF				*e*Sg	**Sg**	**16 25 23.6**	**+1.2**
	35nm,0.3s						
DOU	**Dourbes**	**2.02**	**226**	P	**Pn**	**16 24 56.3**	**+0.1**
DOU	**Dourbes**	**2.02**	**226**	P	**Pn**	**16 24 56.2**	**+0.1**
UBBA	**Unterbreizbach**	**2.11**	**108**	*e*Sg	**Sg**	**16 25 27.0**	**-1.7**
	SNR=3.2						
BAIF	**Baives**	**2.23**	**230**	*e*Pg	**Pg**	**16 25 04.1**	**+0.6**
BAIF				*e*Sg	**Sg**	**16 25 32.0**	**-0.3**
	28nm,0.3s						
BAIF	**Baives**	**2.23**	**230**	*e*Pn	**Pn**	**16 24 58.4**	**-0.6**
BAIF				*e*Pg	**Pg**	**16 25 04.1**	**+0.6**
BAIF				*e*Sg	**Sg**	**16 25 32.0**	**-0.3**
BAIF	**Baives**	**2.23**	**230**	*e*Pg	**Pg**	**16 25 04.1**	**+0.6**
BAIF				*e*Sg	**Sg**	**16 25 32.0**	**-0.3**
	14nm,0.3s						
TOD	**Tromm**	**2.29**	**146**	Pn	**Pn**	**16 25 00.2**	**+0.3**
TOD				Sg	**Sg**	**16 25 29.9**	**-4.6**
RFYF	**Reffroy**	**3.03**	**197**	*e*P	**Pn**	**16 25 12.8**	**+2.8**
RFYF				*e*Sg	**Sg**	**16 25 58.9**	**+0.7**
	22nm,0.2s						
RFYF	**Reffroy**	**3.03**	**197**	*e*P	**Pn**	**16 25 12.8**	**+2.8**
RFYF				*e*Sg	**Sg**	**16 25 58.9**	**+0.7**
	11nm,0.2s						
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pg	**Pg**	**16 25 21.1**	**+0.2**
CDF				*e*Sg	**Sg**	**16 26 02.2**	**+0.8**
	16nm,0.5s						
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pn	**Pn**	**16 25 11.7**	**+0.3**
CDF				*e*Pg	**Pg**	**16 25 21.1**	**+0.2**
CDF				*e*Sg	**Sg**	**16 26 02.2**	**+0.8**
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pg	**Pg**	**16 25 21.1**	**+0.2**
CDF				*e*Sg	**Sg**	**16 26 02.2**	**+0.8**
	7.8nm,0.5s						
MOX	**Moxa**	**3.14**	**105**	*e*Pn	**Pn**	**16 25 12.6**	**+1.1**
	SNR=2.4						
MOX				*e*Sg	**Sg**	**16 25 60.0**	**-1.6**
	SNR=2.2						
MOX	**Moxa**	**3.14**	**105**	*e*Pn	**Pn**	**16 25 12.5**	**+1.0**
MOX				*e*Sg	**Sg**	**16 26 02.5**	**+0.9**
GRF	**Grafenberg Arr**	**3.34**	**122**	*e*Sg	**Sg**	**16 26 07.7**	**-0.4**
	SNR=2.0						
BFO	**Black Forest**	**3.34**	**163**	*e*Pn	**Pn**	**16 25 14.8**	**+0.5**
	SNR=2.5						
BFO				*e*Sn	**Sn**	**16 25 51.8**	**-2.9**
	SNR=2.7						
BFO	**Black Forest**	**3.34**	**163**	*e*Pn	**Pn**	**16 25 14.8**	**+0.5**
BFO				*e*Sn	**Sn**	**16 25 51.8**	**-2.9**
SFTF	**Sexfontaines**	**3.52**	**200**	*e*Pg	**Pg**	**16 25 28.7**	**+0.3**
SFTF				*e*Sg	**Sg**	**16 26 14.7**	**+0.7**
	14nm,0.2s						
SFTF	**Sexfontaines**	**3.52**	**200**	*e*Pn	**Pn**	**16 25 16.6**	**-0.2**
SFTF				*e*Pg	**Pg**	**16 25 28.7**	**+0.3**
SFTF				*e*Sg	**Sg**	**16 26 14.7**	**+0.7**
SFTF	**Sexfontaines**	**3.52**	**200**	*e*Pg	**Pg**	**16 25 28.7**	**+0.3**
SFTF				*e*Sg	**Sg**	**16 26 14.7**	**+0.7**
	6.8nm,0.2s						
HAU	**Haudompre**	**3.54**	**185**	*e*Pn	**Pn**	**16 25 16.8**	**-0.2**
HAU				*e*Sg	**Sg**	**16 26 14.6**	**+0.1**
	14nm,0.3s						
HAU	**Haudompre**	**3.54**	**185**	*e*Pn	**Pn**	**16 25 16.8**	**-0.2**
HAU				*e*Sg	**Sg**	**16 26 14.6**	**+0.1**
	6.8nm,0.3s						
WERD	**Werda**	**3.62**	**105**	*e*Pn	**Pn**	**16 25 18.2**	**+0.1**
	SNR=2.0						
WERD				*e*Sn	**Sn**	**16 25 59.7**	**-1.7**
	SNR=1.6						
GUNZ	**Gunzen**	**3.66**	**106**	*e*Pn	**Pn**	**16 25 18.8**	**+0.1**
	SNR=1.5						
GUNZ				*e*Sn	**Sn**	**16 26 00.2**	**-2.3**
	SNR=1.9						
HINF	**Hinteralfeld**	**3.71**	**180**	*e*Pn	**Pn**	**16 25 19.3**	**-0.1**
HINF				*e*Sg	**Sg**	**16 26 20.0**	**-0.2**
	17nm,0.6s						
HINF	**Hinteralfeld**	**3.71**	**180**	*e*Pn	**Pn**	**16 25 19.3**	**-0.1**
HINF				*e*Sg	**Sg**	**16 26 20.0**	**-0.2**
	8.4nm,0.6s						
TANN	**Tannenbergstha**	**3.72**	**105**	*e*Pn	**Pn**	**16 25 20.5**	**+0.9**
	SNR=2.7						
TANN				*e*Sn	**Sn**	**16 26 02.5**	**-1.6**
	SNR=1.5						
CLL	**Collm**	**3.86**	**91**	*e*Sg	**Sg**	**16 26 25.0**	**+0.1**
	comp=Z,13nm,1.1s						
BRG	**Berggiesshubel**	**4.51**	**96**	SG	**Sg**	**16 26 45.9**	**+0.2**
	comp=Z,5.2nm,0.9s						
LOR	**Lormes**	**4.69**	**206**	*e*Pn	**Pn**	**16 25 32.6**	**-0.2**
	baz=30						
LOR				*e*Sn	**Sn**	**16 26 24.7**	**-3.1**
LOR				*e*Sg	**Sg**	**16 26 51.0**	**-0.4**
	comp=Z,12nm,0.4s,baz=22						
LOR	**Lormes**	**4.69**	**206**	*e*Pn	**Pn**	**16 25 32.6**	**-0.2**
LOR				*e*Sn	**Sn**	**16 26 24.7**	**-3.1**
LOR				*e*Sg	**Sg**	**16 26 51.0**	**-0.4**
	comp=Z,5.8nm,0.4s						
CABF	**La Chapelle**	**4.95**	**186**	*e*Pn	**Pn**	**16 25 36.6**	**+0.3**
SSF	**Saint Saulge**	**4.97**	**207**	*e*Pn	**Pn**	**16 25 36.1**	**-0.6**
SSF				*e*Sn	**Sn**	**16 26 31.8**	**-3.1**
SSF				*e*Sg	**Sg**	**16 27 00.0**	**-0.6**
	comp=Z,12nm,0.4s						
SSF	**Saint Saulge**	**4.97**	**207**	*e*Pn	**Pn**	**16 25 36.1**	**-0.6**
SSF				*e*Sn	**Sn**	**16 26 31.8**	**-3.1**
SSF				*e*Sg	**Sg**	**16 27 00.0**	**-0.6**
	comp=Z,5.9nm,0.4s						
HYF	**Humbligny**	**5.07**	**214**	*e*Sn	**Sn**	**16 26 33.8**	**-3.4**
HYF				*e*Sg	**Sg**	**16 27 02.8**	**-0.8**
AVF	**Avril sur Loir**	**5.26**	**207**	*e*Pn	**Pn**	**16 25 40.0**	**-0.7**
AVF				*e*Sg	**Sg**	**16 27 08.4**	**-1.5**
	comp=Z,4.7nm,0.4s						
AVF	**Avril sur Loir**	**5.26**	**207**	*e*Pn	**Pn**	**16 25 40.0**	**-0.7**
AVF				*e*Sg	**Sg**	**16 27 08.4**	**-1.5**
	comp=Z,2.3nm,0.4s						
SMF	**Signal de Mont**	**5.27**	**203**	*e*Pn	**Pn**	**16 25 40.1**	**-0.7**
SMF				*e*Sg	**Sg**	**16 27 07.9**	**-2.1**
	comp=Z,8.6nm,0.4s						
SMF	**Signal de Mont**	**5.27**	**203**	*e*Pn	**Pn**	**16 25 40.1**	**-0.7**
SMF				*e*Sg	**Sg**	**16 27 07.9**	**-2.1**
	comp=Z,4.3nm,0.4s						
LDF	**La Druitiere**	**5.36**	**239**	*e*Pn	**Pn**	**16 25 41.5**	**-0.5**
LDF				*e*Sn	**Sn**	**16 26 39.9**	**-4.5**
FLN	**La Foliniere**	**5.46**	**242**	*e*Pn	**Pn**	**16 25 42.7**	**-0.7**
	baz=59						
FLN				*e*Sn	**Sn**	**16 26 42.6**	**-4.3**
BGF	**Bois d'Agland**	**5.62**	**209**	*e*Pn	**Pn**	**16 25 44.8**	**-0.9**
BGF				*e*Sn	**Sn**	**16 26 46.9**	**-4.0**
BGF				*e*Sg	**Sg**	**16 27 18.7**	**-2.7**
	comp=Z,25nm,0.5s						
BGF	**Bois d'Agland**	**5.62**	**209**	*e*Pn	**Pn**	**16 25 44.8**	**-0.9**
BGF				*e*Sn	**Sn**	**16 26 46.9**	**-4.0**
BGF				*e*Sg	**Sg**	**16 27 18.7**	**-2.7**
	comp=Z,13nm,0.5s						
GRR	**Gorron**	**5.88**	**241**	*e*Pn	**Pn**	**16 25 48.2**	**-0.9**
GRR				*e*Sn	**Sn**	**16 26 51.5**	**-5.7**
TCF	**Toulx Ste Croi**	**6.07**	**212**	*e*Pn	**Pn**	**16 25 50.9**	**-0.8**
SGMF	**Saint Gilles**	**6.90**	**245**	*e*Pn	**Pn**	**16 26 01.4**	**-1.7**
ROSF	**Rostrenen**	**7.27**	**248**	*e*Pn	**Pn**	**16 26 06.1**	**-2.1**
CAF	**Calviac**	**7.33**	**208**	*e*Pn	**Pn**	**16 26 07.9**	**-1.2**
QUIF	**Quistinic**	**7.42**	**245**	*e*Pn	**Pn**	**16 26 08.5**	**-1.8**

*NIED **05** 16:43:00,2450N×12180E,h17^{km},Mw4.5 Best double couple: M$_0$5.50000×10^{15} NP1:φ$_s$141.00000°,δ10.00000°, λ136.00000°. NP2:φ$_s$274.00000°,δ83.00000°,λ82.00000°.*
*NEIC **05** 16:43:38.9±2.4,2418N×12185E,h7^{km}±13^{km}, MG3.9(JMA),Error ellipse: s-maj=27.3km s-min=13.5km az=85.0*
*BJI **05** 16:43:38.8,2420N×12190E,h7^{km},mb4.3,ML4.0,Ms4.1, Msz3.9*
*JMA **05** 16:43:39.3±0.1,2449N×12177E,h28^{km}±3^{km},M3.9*
*ISCJB **05** 16:43:40.0±1.3,2424N±007×12183E±004,h22^{km}±9^{km}, mb3.7/7,Error ellipse: s-maj=12.6km s-min=4.7km az=15.7*
*IDC **05** 16:43:52.4±6.5,2416N×12172E,h126^{km}±62^{km},mb3.4/7, mb1 3.5/8,mb1mx3.4/21,mbtmp3.4/8,MS3.4/2,Ms1 3.4/2, ms1mx3.0/19,Error ellipse: s-maj=41.9km s-min=16.0km az=68.0*
ISC 05 16:43:38.9±0.9**,2419N**±006×**12187E**±003**,h4**^{km}±5^{km}**,n22, σ0^{s}91**/29**,mb3.7**/7**,Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.25**	**268**	*e*Pn	**Pg**	**16 43 43.4**	**-0.5**
YHNB	**Yeheng**	**0.66**	**317**	*e*Pn	**Pg**	**16 43 51.5**	**-0.1**
TATO	**Taipei**	**0.86**	**336**	*e*P	**Pg**	**16 43 55.5**	**0.0**
YOJ	**Yonaguni jima**	**1.08**	**75**	P	**Pg**	**16 43 59.5**	**-0.1**
YOJ				*e*S	**Sg**	**16 44 14.1**	**+0.5**
IRIF	**Iriomote-Funau**	**1.71**	**85**	P	**Pn**	**16 44 09.2**	**-0.2**
IRIF				*e*S	**Sn**	**16 44 31.9**	**+0.2**
HATJ	**Hateruma jima**	**1.77**	**94**	P	**Pn**	**16 44 11.1**	**+0.7**
HATJ				*e*S	**Sn**	**16 44 33.8**	**+0.5**
JKRS	**Kuro-shima**	**1.95**	**88**	P	**Pn**	**16 44 13.5**	**+0.6**
JKRS				*e*S	**Sn**	**16 44 38.0**	**+0.2**
JIJ	**Ishigaki jima**	**2.08**	**85**	P	**Pn**	**16 44 14.7**	**+0.1**
JIJ				*e*S	**Sn**	**16 44 41.2**	**+0.2**
JTJ	**Tarama**	**2.62**	**79**	P	**Pn**	**16 44 22.0**	**0.0**
JTJ				*e*S	**Sn**	**16 44 53.3**	**-1.0**
QZH	**Quanzhou**	**3.08**	**285**	P	**Pn**	**16 44 29.9**	**+1.6**
QZH				S	**Sn**	**16 45 06.7**	**+1.1**
QZH				Smax			
	comp=N,740nm,0.8s						
QZH				Smax			
	comp=E,540nm,1.0s						
NJ2	**Nanjing**	**8.28**	**342**	*e*P	**Pn**	**16 45 38.5**	**-1.2**
NJ2				AP		16 45 41.6	
NJ2				XP		16 45 44.5	
NJ2				S	**Sn**	**16 47 14.4**	**+0.7**
NJ2				XS		16 47 19.6	
NJ2				AMB	AMB		
	comp=Z,140nm,1.0s						
NJ2				LR	LR		
	comp=N,1µm,11.2s						
NJ2				LR	LR		
	comp=E,2µm,12.4s						
NJ2				LR	LR		
	comp=Z,2µm,12.2s						
KSRS	**Korea Array**	**14.21**	**20**	P	**Pn**	**16 47 08.6**	**+7.7**
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=6.4						
KSRS				LR	LR	16 54 13.2	
	comp=Z,99nm,18.0s,baz=175,slow=44						
ASAJ	**Asahikawa**	**26.13**	**35**	LR	LR	17 01 24.6	
	comp=Z,132nm,19.0s,baz=78,slow=40						
SONM	**Songino Array**	**26.61**	**336**	P	**P**	**16 49 19.8**	**+1.5**
	comp=Z,1.3nm,0.8s,mb3.5,baz=155,slow=9.1,SNR=7.7						
MK31	**Makanchi Array**	**38.77**	**316**	*e*P	**P**	**16 51 04.3**	**-0.2**
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**16 51 04.3**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.7,baz=102,slow=9.5,SNR=9.9						
ZALV	**Zalesovo Beam**	**40.59**	**327**	P	**P**	**16 51 18.2**	**-1.3**
	comp=Z,1.3nm,0.6s,mb3.8,baz=109,slow=8.2,SNR=7.7						
WRA	**Warramunga Arr**	**45.51**	**163**	P	**P**	**16 51 58.0**	**-1.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=345,slow=8.8,SNR=7.0						
ASAR	**Alice Springs**	**48.98**	**165**	P	**P**	**16 52 28.1**	**+1.5**
	comp=Z,0.5nm,0.7s,mb3.7,baz=351,slow=5.7,SNR=6.1						
FINES	**FINESS Array B**	**71.76**	**330**	P	**P**	**16 55 00.0**	**-2.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=328,slow=6.8,SNR=2.4						
YKA	**Yellowknife Ar**	**82.73**	**23**	P	**P**	**16 56 02.4**	**-1.3**
YKA	**Yellowknife Ar**	**82.73**	**23**	P	**P**	**16 56 02.4**	**-1.3**
	comp=Z,0.5nm,0.6s,mb3.7,baz=315,slow=4.8,SNR=12						

*ISCJB **05** 16:48:53.4±0.2,5489N±002×10948E±003,h10^{km}, mb3.6/7,Error ellipse: s-maj=3.5km s-min=1.9km az=137.4*
*IDC **05** 16:48:53.9±0.9,5500N×10935E,h0^{km},mb3.5/6, mb1 3.8/9,mb1mx3.6/24,mbtmp3.7/9,ML3.6/3,Error ellipse: s-maj=26.2km s-min=18.7km az=85.0*
*MOS **05** 16:48:54.7±1.2,5501N×10926E,h11^{km},mb4.5/5,Error ellipse: s-maj=10.9km s-min=6.0km az=66.6*
*NEIC **05** 16:48:55.3±0.5,5504N×10942E,h10^{km},mb4.0/3,Error ellipse: s-maj=8.9km s-min=8.4km az=224.0*
*BYKL **05** 16:48:56.1±0.2,5498N×10931E,h9^{km}±13^{km}*
ISC 05 16:48:55.5±0.2**,5493N**±002×**10943E**±003**,h10**^{km}**,n87, σ1^{s}46**/152**,mb3.6**/7**,9C-5D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.85**	**4**	*e*PG	**Pg**	**16 49 11.6**	**-0.3**
NIZ				*e*		16 49 22.4	
NIZ				pmax	pmax		
	comp=Z,362nm,0.3s						
NIZ				smax			
	comp=N,2µm,0.9s						
NIZ	**Nizh Angarsk**	**0.85**	**4**	⇑*i*Pg	**Pg**	**16 49 11.6**	**-0.3**
NIZ				Pmax		16 49 15.1	
	comp=N,295nm,0.3s						
NIZ				*i* Sg	**Sg**	**16 49 22.5**	**-0.5**
NIZ				Smax		16 49 22.8	
	comp=N,2µm,0.6s						

YLYR **Ulyunkhan** **1.00 92**⇑*i*PG **Pg** **16 49 15.5 +0.8**
YLYR *e* 16 49 29.3
YLYR pmax pmax
comp=Z,1µm,0.2s
YLYR smax
comp=N,7µm,0.5s
YLYR Ulyunkhan 1.00 92⇑*i*Pg **Pg 16 49 15.5 +0.8**
YLYR Pmax 16 49 15.9
comp=N,1µm,0.5s
YLYR *i* Sg **Sg 16 49 29.4 +1.7**
YLYR *e*Sb **Sb 16 49 33.0 +4.9**
YLYR max 16 49 33.5
comp=N,7µm,0.5s
SYVR Suvo 1.31 165 *e*PG **Pg 16 49 21.6 +0.9**
SYVR *e* 16 49 40.4
SYVR pmax pmax
comp=Z,819nm,0.4s
SYVR smax
comp=N,9µm,0.5s
SYVR Suvo 1.31 165⇑*i*Pg **Pg 16 49 21.7 +1.0**
SYVR Pmax 16 49 22.0
comp=N,850nm,0.4s
SYVR *e*Sg **Sg 16 49 40.5 +2.8**
SYVR Smax 16 49 43.5
comp=N,9µm,0.6s
KMO Kumora 1.39 46 *e*PG **Pg 16 49 21.4 -0.9**
KMO *e* 16 49 40.7
KMO pmax pmax
comp=Z,471nm,0.3s
KMO smax
comp=N,2µm,1.0s
KMO Kumora 1.39 46⇑*i*Pg **Pg 16 49 21.4 -0.9**
KMO Pmax 16 49 22.7
comp=N,476nm,0.4s
KMO *e* 16 49 25.7
KMO *e*Sg **Sg 16 49 40.1 -0.2**
KMO Smax 16 49 41.8
comp=N,2µm,1.1s
OGRR Ongureny 1.68 221⇓*i*PN **Pg 16 49 26.3 -1.3**
OGRR *e* 16 49 48.9
OGRR pmax pmax
comp=Z,653nm,1.0s
OGRR smax
comp=E,3µm,0.2s
OGRR Ongureny 1.68 221⇓*i*Pg **Pg 16 49 26.3 -1.3**
OGRR Pmax 16 49 27.6
comp=E,418nm,0.3s
OGRR *i* Sg **Sg 16 49 49.5 +0.1**
OGRR Smax 16 49 51.3
comp=E,3µm,0.2s
MXMB Maximikha 1.71 194 *e*Pn **Pn 16 49 27.2 +1.8**
MXMB *e*Pg **Pg 16 49 28.5 +0.1**
MXMB Pmax 16 49 29.8
comp=E,369nm,0.6s
MXMB *e*Sn **Sn 16 49 51.1 +3.8**
MXMB *e*Sg **Sg 16 49 52.4 +1.8**
MXMB Smax 16 49 53.4
comp=E,7µm,0.7s
YOA Uoyan 1.78 46⇓*i*PN **Pn 16 49 28.5 +2.2**
YOA *e* 16 49 53.6
YOA pmax pmax
comp=Z,308nm,0.2s
YOA smax
comp=N,4µm,0.5s
YOA Uoyan 1.78 46⇓*i*Pg **Pg 16 49 28.4 -1.2**
YOA *e* 16 49 34.2
YOA max 16 49 36.1
comp=N,608nm,0.8s
YOA *e*Sg **Sg 16 49 53.0 +0.4**
YOA Smax 16 50 02.4
comp=N,4µm,0.6s
UKT Uakit 2.47 75 *e*PN **Pn 16 49 36.7 +0.9**
UKT *e* 16 49 40.6
UKT *e*S **Sn 16 50 07.9 +2.0**
UKT *e* 16 50 13.6
UKT pmax pmax
comp=Z,352nm,0.2s
UKT smax
comp=N,1µm,0.4s
UKT Uakit 2.47 75 *e*Pn **Pn 16 49 38.1 +2.3**
UKT *i* Pg **Pg 16 49 40.7 -2.1**
UKT Pmax 16 49 48.8
comp=N,415nm,1.0s
UKT *i* Sg **Sg 16 50 13.6 -1.2**
UKT Smax 16 50 14.4
comp=N,1µm,0.9s
SVKR Severomuysk 2.63 61 *e*PN **Pn 16 49 40.9 +2.9**
SVKR *e* 16 49 44.5
SVKR *e* 16 50 16.9
SVKR pmax pmax
comp=Z,328nm,0.3s
SVKR smax
comp=N,3µm,0.6s
SVKR Severomuysk 2.63 61 *e*Pn **Pn 16 49 40.6 +2.6**
SVKR *e*Pg **Pg 16 49 44.4 -1.5**
SVKR Pmax 16 49 45.1
comp=N,274nm,0.4s
SVKR *i* Sg **Sg 16 50 19.2 -0.8**
SVKR Smax 16 50 26.1
comp=N,3µm,0.6s
ZRHB Zarechye 2.74 211 *e*Pn **Pn 16 49 41.1 +1.7**
ZRHB *e*Pg **Pg 16 49 45.7 -2.2**
ZRHB Pmax 16 50 04.9
comp=N,206nm,0.3s
ZRHB *i* Sg **Sg 16 50 21.7 -1.6**
ZRHB Smax 16 50 30.1
comp=N,2µm,0.6s
TRG Tyrgan 2.84 221 *e*PN **Pn 16 49 42.3 +1.5**
TRG *e* 16 49 47.5
TRG *e*S **Sn 16 50 16.3 +1.3**
TRG *e* 16 50 23.7
TRG pmax pmax
comp=Z,102nm,0.3s
TRG smax
comp=N,896nm,0.2s
TRG Tyrgan 2.84 221 *e*Pn **Pn 16 49 42.2 +1.4**
TRG *e*Pg **Pg 16 49 47.7 -2.1**
TRG Pmax 16 49 50.2
comp=N,101nm,0.4s
TRG *e*Sn **Sn 16 50 14.7 -0.3**
TRG *e*Sg **Sg 16 50 24.1 -2.5**
TRG Smax 16 50 28.3
comp=N,907nm,0.4s
TRTB Turuntaevo 2.91 202⇓*i*Pn **Pn 16 49 43.9 +2.1**
TRTB *e*Pg **Pg 16 49 48.7 -2.5**
TRTB Pmax 16 49 49.9
comp=N,85nm,0.3s
TRTB *e*Sn **Sn 16 50 18.4 +1.7**
TRTB *e*Sg **Sg 16 50 25.6 -3.2**
TRTB Smax 16 50 29.2
comp=N,682nm,0.7s
FFNB Fofonovo 3.30 210 *e*Pn **Pn 16 49 48.5 +1.4**
FFNB *e*Pg **Pg 16 49 54.2 -4.4**
FFNB Pmax 16 49 57.1
comp=N,200nm,0.3s
FFNB *e*Sn **Sn 16 50 26.4 +0.1**
FFNB *e*Sg **Sg 16 50 37.9 -3.4**
FFNB Smax 16 50 46.4
comp=N,2µm,0.5s
STDB Stepnoy Dvoret 3.31 215 *e*Pn **Pn 16 49 49.6 +2.3**
STDB *e*Pg **Pg 16 49 54.7 -4.2**
STDB *e* 16 49 57.9
STDB max 16 50 08.9
comp=N,236nm,0.8s
STDB *e*Sg **Sg 16 50 40.0 -1.8**
STDB Smax 16 50 44.5
comp=N,2µm,0.9s
KAB Kabansk 3.33 211 *e*PN **Pg 16 49 58.2 -1.0**
KAB Kabansk 3.33 211 *e*Sg **Sg 16 50 38.2 -4.0**
KAB Smax 16 50 59.5
comp=N,2µm,1.0s
CIT Chita 3.81 138 *e*PN **Pg 16 50 06.2 -2.3**
CIT *e* 16 50 57.4
CIT pmax pmax
comp=Z,354nm,0.7s
CIT smax
comp=N,554nm,0.7s
CIT Chita 3.81 138 *e*Pn **Pn 16 49 55.4 +1.2**
CIT ⇑*i*Pg **Pg 16 50 06.2 -2.3**
CIT Pmax 16 50 06.8
comp=N,355nm,0.5s
CIT *e*Sn **Sn 16 50 39.4 +0.4**
CIT *e*Sg **Sg 16 50 56.7 -1.1**
BOD Bodaibo 3.86 39 *e*PN **Pn 16 49 55.0 +0.2**
BOD *e* 16 50 04.2
BOD *e*S **Sn 16 50 38.2 -1.9**
BOD Bodaibo 3.86 39 *e*Pn **Pn 16 49 55.7 +0.9**
BOD *e*Pg **Pg 16 50 04.1 -5.2**
BOD Pmax 16 50 11.0
comp=N,74nm,0.9s
BOD *e*Sn **Sn 16 50 38.6 -1.5**
BOD *i* Sg **Sg 16 50 55.0 -4.2**
BOD Smax 16 51 03.3
comp=N,319nm,1.0s
NLYR Nelyaty 3.88 64 *e*Pn **Pn 16 49 56.6 +1.5**
NLYR *e*Pg **Pg 16 50 05.9 -3.9**
NLYR *e* 16 50 14.0
NLYR *e*Sg **Sg 16 50 57.6 -2.4**
IRK Irkutsk 4.08 231 *e*PN **Pg 16 50 10.1 -3.6**
IRK *e* 16 51 01.7
IRK pmax pmax
comp=Z,162nm,0.3s
IRK smax
comp=N,2µm,0.7s
IRK Irkutsk 4.08 231 *e*Pn **Pn 16 49 58.9 +1.0**
IRK *e*Pg **Pg 16 50 07.8 -5.9**
IRK Pmax 16 50 14.5
comp=N,213nm,0.8s
IRK *e*Sn **Sn 16 50 45.4 -0.3**
IRK *e*Sg **Sg 16 51 01.5 -5.1**
IRK Smax 16 51 14.3
comp=N,2µm,0.7s
LSTR Listvyanka 4.12 224 *e*Pn **Pn 16 49 59.4 +1.0**
LSTR *e*Pg **Pg 16 50 08.8 -5.6**
LSTR Pmax 16 50 23.0
comp=N,71nm,0.8s
LSTR *e*Sn **Sn 16 50 46.2 -0.4**
LSTR *e*Sg **Sg 16 51 02.6 -5.1**
LSTR Smax 16 51 04.5
comp=N,586nm,1.4s
TLY Talaya 4.76 229 *e*Pn **Pn 16 50 07.2 0.0**
TLY *e*Pg **Pg 16 50 22.6 -4.0**
TLY *e*S **Sb 16 51 18.9 +2.8**
TLY Talaya 4.76 229 *e*PN **Pn 16 50 08.0 +0.8**
TLY *e* 16 50 20.6
TLY *e*S **Sn 16 51 00.9 -1.4**
TLY Talaya 4.76 229 *e*Pn **Pn 16 50 07.3 +0.1**
TLY *e*Pg **Pg 16 50 20.3 -6.2**
TLY Pmax 16 50 32.1
comp=N,73nm,0.9s
TLY *e*Sn **Sn 16 51 00.8 -1.5**
TLY *e*Sg **Sg 16 51 21.0 -7.1**
TLY Smax 16 51 30.9
comp=N,598nm,0.9s
ARS Arshan 5.16 237 *e*PN **Pn 16 50 13.5 +0.8**
ARS *e* 16 50 29.4
ARS Arshan 5.16 237 *e*Pn **Pn 16 50 13.4 +0.7**
ARS *e*Pg **Pg 16 50 28.6 -5.7**
ARS Pmax 16 50 40.0
comp=N,141nm,0.5s
ARS *e*Sn **Sn 16 51 11.5 -0.7**
ARS *e*Sg **Sg 16 51 34.5 -6.5**
ARS *e* 16 51 40.0
ARS max 16 51 41.6
comp=N,2µm,0.6s
CRS Chara 5.35 65 *e*PN **Pn 16 50 18.3 +3.0**
CRS *e* 16 50 32.4
CRS *e* 16 51 42.5
CRS pmax pmax
comp=Z,95nm,0.8s
CRS smax
comp=N,596nm,1.8s
CRS Chara 5.35 65 *e*Pn **Pn 16 50 17.8 +2.5**
CRS *e*Pg **Pg 16 50 32.2 -5.7**
CRS Pmax 16 50 43.0
comp=N,94nm,0.8s
CRS *e*Sg **Sg 16 51 42.8 -4.3**
CRS Smax 16 51 50.7
comp=N,598nm,1.9s
KPC Khapcheranga 5.53 160 *e*PN **Pn 16 50 19.5 +1.6**
KPC *e* 16 50 36.1
KPC *e* 16 51 49.8
KPC pmax pmax
comp=Z,58nm,1.0s
KPC smax
comp=E,411nm,1.2s
KPC Khapcheranga 5.53 160 *e*Pn **Pn 16 50 19.4 +1.5**
KPC *e*Pg **Pg 16 50 36.7 -4.7**
KPC Pmax 16 50 39.8
comp=E,60nm,0.9s
KPC *e*Sn **Sn 16 51 19.4 -2.1**
KPC *e*Sg **Sg 16 51 49.9 -3.1**
KPC Smax 16 52 01.1
comp=E,411nm,1.2s
ZAK Zakamensk 5.89 222 *e*PN **Pn 16 50 24.2 +1.4**
ZAK *e* 16 50 44.6
ZAK *e* 16 51 58.0
ZAK pmax pmax
comp=Z,13nm,0.3s
ZAK smax
comp=E,188nm,1.0s
ZAK Zakamensk 5.89 222 max 16 50 08.6
comp=E,17nm,0.5s
ZAK *e*Pn **Pn 16 50 24.1 +1.3**
ZAK *e* 16 50 43.9
ZAK *e*Sg **Sg 16 51 57.5 -7.0**
ZAK Smax 16 52 03.8
comp=E,189nm,1.3s
MOY Mondy 6.02 241⇑*i*PN **Pn 16 50 26.7 +2.2**
MOY *e* 16 50 44.8
MOY *e*S **Sn 16 51 33.3 -0.1**
MOY *e* 16 52 01.5
MOY pmax pmax
comp=Z,32nm,0.5s
MOY smax
comp=N,452nm,0.9s
MOY Mondy 6.02 241⇑*i*Pn **Pn 16 50 26.7 +2.2**
MOY max 16 50 31.7
comp=N,38nm,0.9s
MOY *e*Sn **Sn 16 51 33.3 -0.1**
MOY *e*Sg **Sg 16 52 00.7 -7.9**
MOY Smax 16 52 05.2
comp=N,515nm,1.8s
TUP Tupik 6.13 90 *e*PN **Pn 16 50 26.8 +0.8**
TUP *e* 16 50 45.9
TUP *e*S **Sn 16 51 36.1 +0.1**
TUP *e* 16 52 05.4
TUP pmax pmax
comp=Z,95nm,0.7s
TUP smax
comp=N,368nm,1.2s
TUP Tupik 6.13 90 *e*Pn **Pn 16 50 26.8 +0.8**
TUP *e*Pg **Pg 16 50 47.2 -5.5**
TUP Pmax 16 50 48.4
comp=N,42nm,0.8s
TUP *i* Sg **Sg 16 52 08.4 -3.6**
TUP Smax 16 52 16.1
comp=N,376nm,1.3s
ORL Orlik 6.19 251 *e*PN **Pn 16 50 28.6 +1.7**
ORL *e*S **Sg 16 52 07.6 -6.5**
ORL smax
comp=N,729nm,0.7s
ORL Orlik 6.19 251⇑*i*Pn **Pn 16 50 28.6 +1.7**
ORL max 16 50 38.0
comp=N,39nm,1.2s
ORL *e* 16 51 37.8
ORL *i* Sg **Sg 16 52 07.5 -6.6**
ORL Smax 16 52 08.9
comp=N,731nm,0.6s
KHNR Khani 6.26 67 *e*Sg **Sg 16 52 10.4 -5.8**
ULN Ulaanbaatar 7.23 193 *e*Pn **Pn 16 50 43.8 +2.7**
SONM Songino Array 7.35 196 PN **Pn 16 50 45.3 +2.5**
SONM 16 52 11.0
SONM 16 52 46.1
SONM pmax pmax
comp=Z,2.0nm,0.3s
SONM smax
comp=N,2.0nm,0.3s
SONM Songino Array 7.35 196 Pn **Pn 16 50 45.3 +2.5**
comp=N,1.7nm,0.3s,baz=2.9,slow=14,SNR=56
SONM Sn **Sn 16 52 11.0 +4.8**
comp=N,2.3nm,0.3s,baz=9.5,slow=25,SNR=4.7
SONM Lg 16 52 46.1
comp=N,9.7nm,0.3s,baz=20,slow=27,SNR=9.2
TDJR Todzha 8.31 258 *e* rx 16 52 33.9
TDJR *e*Sg Sx 16 53 11.6
HIA Hailar 8.51 128 *e*Pn **Pn 16 50 58.4 -0.2**
HIA *e*Sn **Sn 16 52 30.2 -4.3**
HIA Hailar 8.51 128 *i* PN **Pn 16 50 58.4 -0.2**
KRAR Krasnoyarsk 9.47 283 *e*P **Pn 16 51 13.4 +1.6**
ARDR Aradan 9.77 263 *e* rx 16 53 21.2
ARDR *e*Sg Sx 16 53 55.1
YAK Yakutsk 12.72 48 *e*P **Pn 16 51 48.4 -7.8**
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK MLR MLR
comp=Z,76nm,11.0s
ZALV Zalesovo Beam 14.34 276 Pn **Pn 16 52 18.4 +0.1**
comp=Z,0.1nm,0.3s,baz=97,slow=9.0,SNR=2.3
ZALV Lg 16 56 20.7
comp=Z,0.2nm,0.3s,baz=87,slow=26,SNR=4.1
ZAL Zalesovo 14.35 276 P **Pn 16 52 18.4 -0.1**
NVS Novosibirsk 15.05 280 *e*P **Pn 16 52 34.2 +6.2**
TIXI Tiksi 18.75 19 *e*P **Pn 16 53 13.3 -1.1**
comp=Z,3.1nm,0.4s
TIXI Tiksi 18.75 19 *i* P **Pn 16 53 13.4 -1.1**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
MK31 Makanchi Array 18.87 256 *e*P **Pn 16 53 15.2 -1.0**
MKAR Makanchi Array 18.87 256 *i* P **Pn 16 53 15.8 -0.4**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 18.87 256 P **Pn 16 53 15.8 -0.3**
comp=Z,0.3nm,0.3s,baz=64,slow=9.6,SNR=14
MKAR Lg 16 58 57.7
comp=Z,0.0nm,0.3s,baz=54,slow=25,SNR=6.8
KURK Kurchatov 19.00 270 *e*P **Pn 16 53 16.6 -1.1**
comp=Z,6.1nm,0.6s
KURK Kurchatov 19.00 270 *i* P **Pn 16 53 17.1 -0.7**
BRVK Borovoye 22.89 282 *e*P **P 16 53 59.6 +0.7**
comp=Z,5.5nm,0.6s,mb4.2
BRVK Borovoye 22.89 282 *e*P **P 16 53 59.6 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
TKM2 Tokmak 2 25.00 255 *e*P **P 16 54 18.3 -0.9**
FINES FINESS Array B 41.56 314 P **P 16 56 41.9 -0.8**
FINES FINESS Array B 41.56 314 *i* P **P 16 56 41.9 -0.8**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 41.56 314 P **P 16 56 41.9 -0.8**
comp=Z,0.8nm,0.5s,mb3.6,baz=75,slow=10,SNR=3.3
AKASG Malin Array Be 46.16 300 P **P 16 57 17.6 -2.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 46.16 300 P **P 16 57 17.6 -2.2**
comp=Z,0.9nm,0.5s,mb4.0,baz=249,slow=29,SNR=4.6
YKA Yellowknife Ar 57.96 22 P **P 16 58 47.2 -0.2**
YKA Yellowknife Ar 57.96 22 P **P 16 58 47.2 -0.2**
comp=Z,0.1nm,0.4s,mb3.2,baz=307,slow=9.9,SNR=3.7
WRA Warramunga Arr 77.55 156 P **P 17 00 51.8 +0.6**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 77.55 156 P **P 17 00 51.8 +0.5**
comp=Z,0.5nm,0.8s,mb3.5,baz=347,slow=6.1,SNR=3.6
ASAR Alice Springs 81.04 157 P **P 17 01 10.6 +0.4**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 81.04 157 P **P 17 01 10.6 +0.4**
comp=Z,0.5nm,0.9s,mb3.4,baz=351,slow=5.2,SNR=4.0
TORD Torodi Ar. Bea 89.24 292 P **P 17 01 51.6 -0.1**
comp=Z,0.2nm,0.5s,mb3.7,baz=34,slow=4.9,SNR=3.3
VNA2 Neumayer--Watz 148.96 215 *e*PKPdf PKPdf 17 08 37.4 -0.4
VNA2 *e* 17 08 42.8
VNA2 *e* 17 08 45.5
VNA2 *e* 17 08 53.7
VNA2 *e* 17 08 58.7
VNA3 Neumayer Olymp 149.71 214 *e*PKPdf PKPdf 17 08 39.6 +0.6
VNA3 *e* 17 08 44.3
VNA3 *e* 17 08 47.7
VNA3 *e* 17 08 55.2
VNA3 *e* 17 09 00.2

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*IDC **05** 16:54:14.4±0.8, 22.74S×175.90W, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.2/17, mbtmp4.2/9, MS3.8/3, Ms1 3.8/3, ms1mx3.2/21, Error ellipse: s-maj=39.1km s-min=18.1km az=149.0*

*NEIC **05** 16:54:14.9±5.3, 22.78S×175.94W, h4km±33km, mb4.6/2, Error ellipse: s-maj=23.7km s-min=10.9km az=135.0*

*ISCJB **05** 16:54:17.4±0.6, 22.7S±0.1×176.0W±0.1, h33km, mb4.1/7, MS3.8/3, Error ellipse: s-maj=21.3km s-min=12.0km az=39.7*

ISC 05 16:54:19.4±0.6**, 22.7S**±0.1×**176.0W**±0.1**, h35km, n35, σ0.94/20, mb4.1/7, MS3.8/3, 2D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.64**	**25**	*e*Pn	**Pn**	**16 56 34.7**	**-0.9**
AFI				*e*Sn	**Sn**	**16 58 12.6**	**-10**
AFI	**Afiamalu**	**9.64**	**25**	Pn	**Pn**	**16 56 33.1**	**-2.5**
	1.7nm,0.3s,baz=227,slow=17,SNR=5.2						
AFI				Sn	**Sn**	**16 58 12.3**	**-10**
	8.2nm,0.3s,baz=246,slow=21,SNR=6.6						
RAR	**Rarotonga**	**15.09**	**87**	Pn	**Pn**	**16 57 43.6**	**-6.4**
	3.8nm,0.3s,baz=264,slow=12,SNR=4.5						
URZ	**Urewera**	**16.57**	**199**	Pn	**Pn**	**16 58 08.2**	**-0.8**
	1.2nm,0.3s,baz=45,slow=4.7,SNR=10						
URZ				Sn	**Sn**	**17 00 55.6**	**-16**
	1.3nm,0.3s,baz=147,slow=15,SNR=8.1						
PAE	**Paea**	**25.24**	**83**	*e*T		17 25 13.6	
	43nm,0.4s						
PPT	**Papeete**	**25.27**	**83**	*e*LR	LR	17 05 46.4	
	188nm,27.2s						
PPT	**Papeete**	**25.27**	**83**	*e*T		17 25 15.5	
	8.5nm,0.3s						
PPT	**Papeete**	**25.27**	**83**	LR	LR	17 07 29.9	
	comp=Z,71nm,18.2s,MS3.2,baz=233,slow=32						
CTA	**Charters Tower**	**35.22**	**267**	*e*P	**P**	**17 01 12.3**	**+1.7**
	4.0nm,0.8s,mb4.4						
CTA	**Charters Tower**	**35.22**	**267**	P	**P**	**17 01 12.3**	**+1.7**
	3.5nm,0.5s,mb4.6,baz=102,slow=9.5,SNR=11						
CTAO	**Charters Tower**	**35.22**	**267**	*e*P	**P**	**17 01 12.2**	**+1.6**
	23nm,1.4s,mb4.9						
RKT	**Rikitea**	**37.65**	**99**	*e*T		17 41 04.2	
	3.2nm,0.4s						
STKA	**Stephens Creek**	**38.60**	**247**	*e*P	**P**	**17 01 37.4**	**-1.9**
STKA				LR	LR	17 16 47.0	
STKA	**Stephens Creek**	**38.60**	**247**	P	**P**	**17 01 40.2**	**+0.9**
	1.1nm,0.5s,mb3.8,baz=156,slow=19,SNR=5.5						
STKA				LR	LR	17 16 47.0	
	comp=Z,78nm,18.9s,MS3.5,baz=23,slow=35						
ASAR	**Alice Springs**	**45.90**	**259**	P	**P**	**17 02 38.7**	**-0.1**
	1.6nm,0.8s,mb4.0,baz=104,slow=6.8,SNR=28						
ASAR				PcP	PcP	17 04 16.0	+0.4
	0.6nm,0.7s,baz=122,slow=3.6,SNR=4.2						
WB2	**Warramunga Arr**	**46.20**	**264**	*e*P	**P**	**17 02 40.4**	**-0.8**
WRA	**Warramunga Arr**	**46.22**	**264**	P	**P**	**17 02 41.2**	**-0.2**
	3.4nm,0.6s,mb4.5,baz=103,slow=8.1,SNR=41						
MAW	**Mawson**	**80.10**	**199**	LR	LR	17 37 11.7	
	comp=Z,262nm,19.9s,MS4.6,baz=68,slow=32						
NVAR	**Mina Array Bea**	**81.37**	**42**	P	**P**	**17 06 33.4**	**+0.9**
	1.3nm,0.7s,mb3.9,baz=214,slow=7.8,SNR=11						
VNA3	**Neumayer Olymp**	**85.78**	**176**	*e*PKPdf	**P**	**17 06 54.5**	**-0.2**
VNA3				*e*		17 07 00.2	
VNA3				*e*	pP	17 07 06.5	+0.7
VNA3				*e*		17 07 09.1	
VNA2	**Neumayer--Watz**	**86.25**	**176**	*e*PKPdf	**P**	**17 06 57.4**	**+0.4**
	baz=233,slow=3.0						
VNA2				*e*		17 07 02.8	
VNA2				*e*	pP	17 07 09.6	+1.5
VNA2				*e*		17 07 12.0	
TXAR	**Lajitas Array**	**86.68**	**56**	P	**P**	**17 07 00.1**	**+0.4**
	1.3nm,0.9s,mb4.2,baz=221,slow=9.3,SNR=8.7						
YKA	**Yellowknife Ar**	**97.75**	**24**	P	**P**	**17 07 51.0**	**+0.7**
	0.2nm,0.7s,mb3.8,baz=250,slow=4.2,SNR=4.3						
ARCES	**ARCESS Array B**	**131.45**	**350**	PKP	PKPdf	17 13 28.6	+1.3
	2.7nm,0.7s,baz=345,slow=3.8,SNR=5.6						
AKASG	**Malin Array Be**	**145.89**	**331**	PKPbc	PKPbc	17 13 55.0	+0.2
	4.2nm,0.5s,baz=40,slow=4.0,SNR=28						
BRTR	**Keskin Array B**	**149.75**	**311**	PKPbc	PKPbc	17 14 06.2	+0.5
	2.6nm,0.8s,baz=116,slow=4.5,SNR=9.6						
BRTR				PKPab	PKPab	17 14 10.7	-0.4
	1.9nm,0.9s,baz=32,slow=5.4,SNR=3.7						
STHS	**Stebnicka Huta**	**150.12**	**337**	*e*PKP	PKPbc	17 14 07.7	+1.4
STHS				*e*		17 14 17.3	
CRVS	**Cervenica-Dubn**	**150.47**	**336**	*e*PKP	PKPbc	17 14 08.4	+1.3
CLL	**Collm**	**150.65**	**349**	⇓*i*P	PKPbc	17 14 08.6	+1.1
CLL	**Collm**	**150.65**	**349**	⇓*i*PKPbc	PKPbc	17 14 08.6	+1.1
	comp=Z,14nm,1.0s						
BRG	**Berggiesshubel**	**150.88**	**347**	*e*P	PKPbc	17 14 09.1	+1.0
	comp=Z,8.0nm,0.9s						
KECS	**Kecovo**	**151.17**	**337**	*e*PKP	PKPbc	17 14 10.0	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VYHS	Vyhne	151.73	339	*e*PKP	PKPbc	17 14 09.7	-0.4
GERES	GERESS Array B	152.84	346	PKPbc	PKPbc	17 14 13.5	+0.9
	comp=Z,0.9nm,0.8s,baz=281,slow=0.7,SNR=6.6						
TORD	Torodi Ar. Bea	170.20	166	PKPab	PKPab	17 15 39.8	-0.1
	comp=Z,1.0nm,0.8s,baz=181,slow=3.4,SNR=5.1						

*MOS **05** 17:02:30.3±0.3, 4091N×14772E, h33^{km}, mb4.3/4, Error ellipse: s-maj=53.7km s-min=25.8km az=114.0*
*IDC **05** 17:02:38.0±4.7, 4260N×147.18E, h0^{km}, mb4.0/3, mb1 3.9/4, mb1mx3.5/22, mbtmp4.0/4, Error ellipse: s-maj=132.9km s-min=48.7km az=4.0*
*NEIC **05** 17:02:44.7±4.6, 4329N×14665E, h10^{km}, mb4.2/1, Error ellipse: s-maj=88.9km s-min=20.5km az=125.0*
*JMA **05** 17:02:45.3±0.2, 4292N×14676E, h51^{km}±3^{km}, M3.7*
ISC 05 17:02:47.1±1.7, **430N**±01×**1467E**±01, **h39**^{km}±13^{km}, **n20**, σ**0**^{s}**57**/26, **mb4.0**/4, **Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.82	299	P	Pn	17 03 01.4	-0.7
NEM2				*e*S	Sn	17 03 13.4	+0.5
JAK	Akkeshi	1.49	272	P	Pn	17 03 10.5	-0.8
JAK				*e*S	Sn	17 03 29.5	+0.1
JRA	Rausu	1.51	310	P	Pn	17 03 11.3	-0.3
JNK	Nakash	1.59	293	P	Pn	17 03 11.9	-0.7
JNK				*e*S	Sn	17 03 31.5	-0.4
JAR	Ashorobuto	2.19	280	P	Pn	17 03 20.5	-0.4
JAR				*e*S	Sn	17 03 46.8	+0.1
JTKR	Abashiri--Toko	2.28	297	P	Pn	17 03 22.6	+0.5
JCH	Churui	2.50	263	P	Pn	17 03 24.8	-0.4
JCH				*e*S	Sn	17 03 54.0	-0.4
JMP	Maruseppu	2.66	294	P	Pn	17 03 27.9	+0.6
ERM	Erimo	2.80	251	*e*Pn	Pn	17 03 30.4	+1.1
JNBK	Urakawa-nobuka	3.01	258	P	Pn	17 03 32.0	-0.2
ASAJ	Asahikawa	3.21	292	Pn	Pn	17 03 36.5	+1.5
	2.7nm,0.3s,baz=102,slow=19,SNR=16						
ASAJ				Sn	Sn	17 04 20.2	+8.3
	2.5nm,0.3s,baz=331,slow=19,SNR=4.8						
ULN	Ulaanbaatar	28.05	294	*e*P	P	17 08 34.2	-0.3
SONM	Songino Array	28.49	294	P	P	17 08 38.8	+0.4
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	28.49	294	P	P	17 08 38.8	+0.4
	comp=Z,2.0nm,0.7s,mb3.9,baz=88,slow=8.5,SNR=20						
MKAR	Makanchi Array	44.67	298	P	P	17 10 56.2	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	44.67	298	P	P	17 10 56.1	+0.3
	comp=Z,1.4nm,0.6s,mb4.0,baz=82,slow=9.3,SNR=13						
KURK	Kurchatov	45.71	305	*e*P	P	17 11 03.6	-0.4
	comp=Z,1.2nm,0.4s,mb4.2						
KURK	Kurchatov	45.71	305	*e*P	P	17 11 03.6	-0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
FINES	FINESS Array B	65.43	333	P	P	17 13 25.2	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	65.43	333	P	P	17 13 25.1	-0.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=46,slow=8.1,SNR=6.4						

*ISK **05** 17:25:06.5, 3762N×2664E, h19^{km}, MD3.1*
*CSEM **05** 17:25:07.5±0.2, 3764N×2673E, h20^{km}, MD2.9, Error ellipse: s-maj=6.7km s-min=2.1km az=73.0*
*ISCJB **05** 17:25:08.9±0.7, 3762N±003×2678E±007, h17^{km}±6^{km}, Error ellipse: s-maj=10.2km s-min=4.7km az=164.6*
*DDA **05** 17:25:08.8, 3763N×2680E, h27^{km}, Md2.9*
*ATH **05** 17:25:08.9, 3761N×2675E, h2^{km}, MD3.3/3*
ISC 05 17:25:08.6±0.7, **3762N**±003×**2677E**±007, **h15**^{km}±4^{km}, **n16**, σ**0**^{s}**83**/22, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.10	30	*e*PG	Pg	17 25 11.3	-0.6
SMG				*e*SG	Sg	17 25 13.3	-0.7
BODT	Bodrum	0.70	143	PG	Pg	17 25 22.2	-0.2
BODT				SG	Sg	17 25 33.1	+1.4
URLA	Izmir	0.75	349	*i* P	Pg	17 25 22.8	-0.4
URLA				*i* S	Sg	17 25 34.4	+1.3
BDRM	Kayabasi	0.77	136	*i* P	Pg	17 25 23.2	-0.4
BDRM				*i* S	Sg	17 25 34.3	+0.5
BLCB	Balcova	0.79	15	*i* PG	Pg	17 25 23.2	-0.8
BLCB				*i* SG	Sg	17 25 35.0	+0.6
MLSB	Milas	0.86	112	PG	Pg	17 25 25.9	+0.6
IZM	Izmir	0.86	26	PG	Pg	17 25 24.6	-0.8
KDAG	Bornova	0.87	26	*i* P	Pb	17 25 24.6	-0.8
KDAG				*i* S	Sb	17 25 38.0	+1.2
DAT	Datca	1.10	144	PN	Pn	17 25 28.0	-1.5
APE	Apeiranthos	1.14	241	*e*PB	Pb	17 25 30.2	+0.3
YER	Yerkesik	1.30	112	*e*PN	Pn	17 25 32.4	+0.2
AKS	Akhisar	1.50	33	*e*PN	Pn	17 25 33.5	-1.4
PRK	Paraskevi	1.67	346	*e*PB	Pb	17 25 40.4	+1.4
KULA	Kula-Manisa	1.73	59	*e*PN	Pn	17 25 37.9	-0.3
DENT	Denizli	1.80	85	*e*PN	Pn	17 25 39.3	+0.2
FETY	Fethiye	2.09	117	*e*PN	Pn	17 25 43.1	0.0

*BJI **05** 18:06:18.0, 5890N×13430W, h10^{km}, mb4.4, Ms4.3, Msz4.2*
*ISCJB **05** 18:06:22.6±0.2, 5899N±003×13445W±006, h10^{km}, mb4.0/14, MS3.3/2, Error ellipse: s-maj=5.3km s-min=2.4km az=144.9*
*IDC **05** 18:06:22.8±0.8, 5883N×13451W, h0^{km}, mb3.9/9, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, ML3.8/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/37, Error ellipse: s-maj=13.9km s-min=10.0km az=46.0*
*PGC **05** 18:06:23.0±1.3, 5881N×13445W, h1^{km}, ML4.3/5, 55km Ese of Haines, Ak Southeastern Alaska*
*NEIC **05** 18:06:23.6, 5887N×13435W, h10^{km}, mb4.0/11, ML4.0(PMR), ML3.8(AEIC), MW4.3(PGC), MW3.8(SLM), After PGC.*
ISC 05 18:06:24.6±0.2, **5896N**±002×**13447W**±006, **h10**^{km}, **n195**, σ**1**^{s}**03**/200, **mb4.0**/14, **MS3.3**/2, **53C-55D, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKAG	Skagway	0.67	319	*e*P	Pg	18 06 36.3	-1.3
WHY	Whitehorse	1.72	353	P	Pn	18 06 54.5	0.0
WHY				S	Sn	18 07 20.4	+3.9
WHY	Whitehorse	1.72	353	Trac			
WHY	Whitehorse	1.72	353	Pn	Pn	18 06 54.7	+0.1
WHY				Sg	Sg	18 07 20.7	+0.9
SIT	Sitka	1.96	194	*e*P	Pn	18 06 54.6	-3.2
DLBC	Dease Lake	2.38	101	P	Pn	18 07 00.9	-2.7
DLBC				S	Sn	18 07 31.4	-1.3
DLBC	Dease Lake	2.38	101	Pn	Pn	18 07 03.6	0.0
DLBC				Lg		18 07 35.9	
DLBC	Dease Lake	2.38	101	Trac			
DLBC	Dease Lake	2.38	101	Pn	Pn	18 07 01.1	-2.5
DLBC				Pg	Pg	18 07 04.1	-6.0
DLBC				Sg	Sg	18 07 34.9	-6.0
HYT	Haines Junctio	2.42	322	Trac			
HYT	Haines Junctio	2.42	322	Pn	Pn	18 07 05.1	+1.0
HYT				Sg	Sg	18 07 41.1	-1.1
PNL	Peninsula	2.62	288	P	Pn	18 07 06.3	-0.7
PNL				S	Sn	18 07 40.3	+1.5
WRAK	Wrangell Islan	2.79	155	P	Pn	18 07 04.9	-4.4
CRAG	Craig	3.57	168	*e*P	Pn	18 07 23.1	+3.1
NDB	Naden	5.09	170	Trac			
NDB	Naden	5.09	170	Pn	Pn	18 07 37.9	-2.9
RUBB	Prince Rupert	5.19	152	Trac			
RUBB	Prince Rupert	5.19	152	Pn	Pn	18 07 38.5	-3.8
RUBB				Pg	Pg	18 07 52.6	-11
RUBB				Sn	Sn	18 08 36.0	-6.1
BCA3	Beaver Creek A	5.44	322	P	Pn	18 07 46.5	+0.8
DAWY	Dawson	5.64	337	P	Pn	18 07 48.8	+0.4
DAWY	Dawson	5.64	337	Pn	Pn	18 07 48.8	+0.4
DAWY				Pg	Pg	18 08 07.0	-5.5
DAWY				Sg	Sg	18 09 20.9	-4.5
VIB	Van Inlet	5.82	168	Pn	Pn	18 07 47.1	-3.7
DIB	Dawson Inlet,	5.88	168	Pn	Pn	18 07 47.8	-3.8
FNBB	Fort Nelson	5.94	86	Pn	Pn	18 07 51.0	-1.5
DOT	Dot Lake	6.59	320	P	Pn	18 08 02.4	+1.0
EGAK	Eagle	6.64	334	P	Pn	18 08 03.1	+1.0
FSB	Fort Saint Jam	7.16	124	Pn	Pn	18 08 08.1	-1.2
BMBC	Bull Mountain	7.26	108	Pn	Pn	18 08 10.4	-0.2
BBB	Bella Bella	7.68	149	Pn	Pn	18 08 14.7	-1.7
	0.8nm,0.3s,baz=342,slow=16,SNR=3.7						
BBB				Lg		18 10 19.6	
	1.5nm,0.3s,baz=79,slow=21,SNR=3.6						
BBB				LR	LR	18 10 41.4	
	comp=Z,98nm,18.6s,baz=316,slow=34						
KTH	Kantishna Hill	9.15	307	P	Pn	18 08 36.4	-0.2
INK	Inuvik	9.40	2	*e*Pn	Pn	18 08 40.3	+0.5
	322nm,0.6s						
INK	Inuvik	9.40	2	Pn	Pn	18 08 40.8	+0.9
	2.6nm,0.3s,baz=170,slow=8.9,SNR=36						
INK				Sn	Sn	18 10 26.4	+1.0
	0.1nm,0.3s,baz=233,slow=18,SNR=3.3						
INK				Lg		18 11 17.9	
	baz=120,slow=28,SNR=2.4						
INK	Inuvik	9.40	2	Pn	Pn	18 08 40.5	+0.7
KDAK	Kodiak Island	9.59	271	Pn	Pn	18 08 41.5	-0.9
	0.6nm,0.3s,baz=118,slow=15,SNR=6.8						
BM3	Burnt Mountain	9.63	336	P	Pn	18 08 43.0	0.0
YKA	Yellowknife Ar	10.34	62	Pn	Pn	18 08 51.3	-1.4
YKA				Lg		18 11 46.9	
YKA	Yellowknife Ar	10.34	62	Pn	Pn	18 08 51.3	-1.4
	0.5nm,0.3s,baz=260,slow=13,SNR=30						
YKA				Lg		18 11 46.9	
	0.1nm,0.3s,baz=252,slow=30,SNR=5.0						
YKW3	Yellowknife Ar	10.35	61	Pn	Pn	18 08 51.5	-1.4
A07A	Ashnola River,	12.90	134	⇑P	Pn	18 09 27.6	-0.2
	baz=13						
B05A	Bryant	12.96	140	⇓P	Pn	18 09 28.6	0.0
	baz=13						
EDM	Edmonton	13.09	107	*e*P	Pn	18 09 30.2	-0.1
A08A	Turner Farm, O	13.40	132	⇑P	Pn	18 09 35.5	+0.9
	baz=13						
A09A	Danville	13.65	130	⇓P	Pn	18 09 37.9	-0.1
	baz=14						
C07A	Waterville	14.15	137	⇑P	Pn	18 09 47.1	+2.2
	baz=14						
B09A	Rice	14.27	131	⇑P	Pn	18 09 48.0	+1.6
	baz=14						
D06A	Cle Elum	14.31	139	⇓P	Pn	18 09 49.1	+2.1
	baz=14						
A11A	Hall Mountain,	14.57	125	⇓P	Pn	18 09 52.6	+2.0
	baz=14						
E06A	Yakima	14.84	141	⇑P	Pn	18 09 57.3	+3.1
	baz=15						
B11A	Sandpoint	14.97	127	⇓P	Pn	18 09 59.5	+3.4
	baz=15						
D08A	Wollman Farm,	15.10	135	⇓P	Pn	18 09 59.7	+1.9
	baz=15						
E07A	Sunnyside	15.20	138	⇑P	Pn	18 10 00.9	+1.8
	baz=15						
A13A	Flathead Natio	15.43	122	⇓P	Pn	18 10 05.0	+2.9
	baz=15						
E08A	Dider Farm, El	15.54	137	⇓P	Pn	18 10 05.7	+2.2
	baz=15						
D10A	Wagner Farm, O	15.72	132	P	Pn	18 10 10.2	+4.3
	baz=16,SNR=8.2						
B13A	Whitefish	15.83	123	⇓P	Pn	18 10 10.5	+3.2
	baz=16						
H03A	Soap Creek Ran	15.85	150	⇓P	Pn	18 10 11.0	+3.4
	baz=16						
G06A	Carlson Farm,	16.11	142	⇑P	Pn	18 10 11.3	+0.4
	baz=16						
H04A	Detroit Lake	16.14	147	⇓P	Pn	18 10 12.7	+1.4
	baz=16						
F08A	Pendleton	16.23	137	⇓P	Pn	18 10 13.7	+1.2
	baz=16						
E10A	Myers Farm, Un	16.26	133	⇑P	Pn	18 10 14.1	+1.3
	baz=16						
D12A	Red Ives Fores	16.49	128	⇑P	Pn	18 10 15.0	-0.8
	baz=16						
C14A	Swan Lake	16.60	123	⇓P	Pn	18 10 17.3	0.0
	baz=16						
G08A	Pilot Rock	16.61	139	⇑P	Pn	18 10 17.8	+0.5
	baz=16,SNR=7.7						
F10A	Beach Ranch, E	16.64	134	⇓P	Pn	18 10 20.0	+2.3
	baz=16,SNR=7.2						
H06A	Lindquist Farm	16.65	143	⇓P	Pn	18 10 18.9	+1.1
	baz=16						
E11A	Bogner Ranch,	16.71	131	P	Pn	18 10 18.6	0.0
	baz=17,SNR=7.2						
D13A	Huson	16.83	126	⇓P	Pn	18 10 20.7	+0.7
	baz=17						
I04A	Tendick Farm,	16.90	149	⇓P	Pn	18 10 19.6	-1.4
	baz=17						
H07A	Lands Inn, Kim	17.02	141	P	Pn	18 10 23.6	+1.0
	baz=17,SNR=9.1						
G09A	Cove	17.03	136	⇓P	Pn	18 10 23.2	+0.5
	baz=17						
J03A	Ideyld Park	17.15	150	⇓P	Pn	18 10 23.7	-0.4
	baz=17						
D14A	Greenough	17.24	124	⇑P	Pn	18 10 24.9	-0.3
	baz=17						
H08A	Prairie City	17.39	139	⇑P	Pn	18 10 26.5	-0.6
	baz=17						
CHMT	Chamberlain Mo	17.48	124	*e*P	Pn	18 10 28.6	+0.4
J04A	Umpqua Nationa	17.50	149	⇓P	Pn	18 10 28.1	-0.4
	baz=17						
I07A	Izee	17.50	142	⇓P	Pn	18 10 28.9	+0.4
	baz=17						
F12A	Elk City	17.58	130	⇑P	Pn	18 10 30.5	+1.0
	baz=17,SNR=5.5						
D15A	Lincoln	17.70	123	⇓P	Pn	18 10 30.6	-0.3
	baz=18						
J05A	Fort Rock	17.70	147	P	Pn	18 10 31.6	+0.7
	baz=18,SNR=13						
E14A	Clinton	17.77	126	⇑P	Pn	18 10 32.5	+0.7
	baz=18						
F13A	Darby	17.93	128	P	Pn	18 10 35.2	+1.5
	baz=18,SNR=6.0						
H10A	Noah's Angus R	18.00	135	⇑P	Pn	18 10 35.9	+1.2
	baz=18						
J06A	Christmas Vall	18.05	144	⇓P	Pn	18 10 35.0	-0.3
	baz=18						
E15A	Deer Lodge	18.12	124	⇑P	Pn	18 10 36.5	+0.4
	baz=18						
L02A	Cave Junction	18.14	153	⇑P	Pn	18 10 35.6	-0.8
	baz=18						
FFC	Flin Flon	18.16	89	*e*P	Pn	18 10 34.4	-2.1
	20nm,0.9s						
EGMT	Eagleton	18.21	116	*e*P	Pn	18 10 36.0	-1.2
	17nm,1.1s						
EGMT	Eagleton	18.21	116	P	Pn	18 10 36.3	-0.9
	baz=18,SNR=7.7						
K05A	Summer Lake	18.31	147	⇑P	Pn	18 10 38.2	-0.3
	baz=18						
M01C	Crescent City	18.32	155	⇑P	Pn	18 10 38.5	-0.1
	baz=18						
K06A	Valley Falls	18.43	145	⇑P	Pn	18 10 39.6	-0.3
	baz=18						
G13A	Cobalt	18.54	130	P	Pn	18 10 41.2	0.0
	baz=18,SNR=7.0						
F15A	Butte	18.65	125	⇑P	Pn	18 10 43.1	+0.5
	baz=18						
G14A	Jackson	18.73	128	⇓P	Pn	18 10 44.3	+0.7
	baz=19						
J09A	Fry Pan Ranch,	18.73	139	⇓P	Pn	18 10 43.8	+0.2
	baz=19						
H12A	Diamond D Ranc	18.75	132	⇓P	Pn	18 10 44.1	+0.3
	baz=19						
YBH	Yreka Blue Hor	18.76	152	*e*P	Pn	18 10 44.8	+0.9
	14nm,1.4s						
YBH	Yreka Blue Hor	18.76	152	P	Pn	18 10 45.5	+1.6
	baz=19,SNR=8.3						
M04C	Macdoel	18.93	150	⇑P	Pn	18 10 44.8	-1.2
	baz=19						
L05A	Lakeview	18.95	147	⇓P	Pn	18 10 45.1	-1.2
	baz=19						
H13A	Challis	18.97	131	⇑P	Pn	18 10 46.9	+0.4
	baz=19,SNR=8.5						
G15A	Dillon	19.19	126	⇑P	Pn	18 10 48.7	-0.5
	baz=19						
MOD	Modoc	19.24	146	*e*P	Pn	18 10 48.7	-1.0
	6.4nm,1.1s						
MOD	Modoc	19.24	146	⇑P	Pn	18 10 49.0	-0.8
	baz=19						
K09A	Rome	19.32	140	⇑P	Pn	18 10 50.2	-0.4
	baz=19						
MCMT	McKenzie Canyo	19.32	128	*e*P	Pn	18 10 48.7	-2.0
MFID	Camas Ranch	19.35	135	⇑P	Pn	18 10 51.0	0.0
	baz=19						
L07A	Adell	19.42	144	⇑P	Pn	18 10 50.6	-1.3
	baz=19						
M05C	Lookout	19.51	149	⇓P	Pn	18 10 52.2	-0.7
	baz=19						
K10A	MacKenzie Ranc	19.54	138	⇓P	Pn	18 10 53.0	-0.3
	baz=19						
I13A	Wildhorse Cree	19.57	131	⇑P	Pn	18 10 53.4	-0.2
	baz=19						
L08A	Fields	19.57	142	⇓P	Pn	18 10 53.3	-0.4
	baz=19						
HLID	Hailey	19.75	132	P	Pn	18 10 54.4	-1.4
	5.2nm,1.0s						
HLID	Hailey	19.75	132	⇑P	Pn	18 10 55.4	-0.4
	baz=20						
J12A	Stokes Ranch,	19.76	134	⇑P	Pn	18 10 54.8	-1.1
	baz=20						
K11A	Parker Ranch,	19.84	137	⇓P	Pn	18 10 55.6	-1.2
	baz=20						
M06C	Likely Place G	19.84	147	⇓P	Pn	18 10 55.5	-1.4
	baz=20						
WDC	Whiskeytown Da	19.89	152	*e*P	Pn	18 10 56.0	-1.5
	7.1nm,1.0s						
WDC	Whiskeytown Da	19.89	152	⇓P	Pn	18 10 56.0	-1.5
	baz=20,SNR=5.6						
GCMT	Greycliff	19.92	121	*e*P	Pn	18 10 56.9	-0.9
J13A	Cove Ranch, Pi	19.98	132	⇓P	Pn	18 10 56.9	-1.7
	baz=20						
M07A	Soldier Meadow	20.04	145	⇓P	P	18 10 57.8	+0.2
	baz=20						
O02C	Red Bluff	20.21	153	⇓P	P	18 10 59.9	+0.5
	baz=20						
M08A	Happy Creek Ra	20.23	143	⇓P	P	18 11 00.2	+0.6
	baz=20						
L10A	Juniper Basin	20.29	138	P	P	18 11 01.1	+0.8
	baz=20,SNR=5.8						
ELFS	Eagle Lake Fie	20.31	149	⇑P	P	18 11 00.3	-0.2
	baz=20						
K12A	Draper Farm, C	20.36	135	P	P	18 11 01.9	+0.9
	baz=20,SNR=5.3						
N06A	Buffalo Meadow	20.44	147	P	P	18 11 02.7	+0.9
	baz=20,SNR=10						
O04C	Chester	20.50	150	P	P	18 11 03.4	+0.9
	baz=20,SNR=6.6						
M09A	Marrel Ranch,	20.55	141	⇑P	P	18 11 03.0	-0.1
	baz=20						
N07B	Gerlach	20.66	145	⇓P	P	18 11 05.6	+1.3
	baz=20						
GASB	Alder Springs	20.73	154	⇑P	P	18 11 04.7	-0.2
	baz=21						
L12A	House Creek Ra	20.75	136	⇑P	P	18 11 04.8	-0.4
	baz=21						
M10A	I.L. Ranch, Tu	20.76	139	⇑P	P	18 11 05.0	-0.4
	baz=21						
IMW	Indian Meadow	20.87	126	*e*P	P	18 11 07.7	+1.2
	24nm,1.2s						
N08A	GE Springer Mi	20.92	143	P	P	18 11 07.7	+0.7
	baz=21,SNR=5.2						
O06A	Flanigan	20.98	147	⇑P	P	18 11 07.3	-0.5
	baz=21						
N09A	Rock Creek Ran	21.04	142	⇓P	P	18 11 08.3	-0.1
	baz=21						
K14A	Jones Ranch, D	21.09	132	⇑P	P	18 11 07.9	-1.0
	baz=21						
M11A	Holland Ranch,	21.10	138	⇓P	P	18 11 08.6	-0.4
	baz=21						
ORV	Oroville	21.11	151	⇑P	P	18 11 08.3	-0.9
	baz=21						
L13A	Double Diamond	21.19	134	⇑P	P	18 11 10.3	+0.4
	baz=21						
TPAW	Teton Pass	21.20	127	*e*P	P	18 11 10.7	+0.7
	16nm,1.0s,mb4.3						
LOHW	Long Hollow	21.24	126	*e*P	P	18 11 10.8	+0.3
	5.3nm,1.0s,mb3.8						
O07A	Toulon	21.26	145	⇑P	P	18 11 10.6	-0.1
	baz=21,SNR=7.1						
HOPS	Hopland	21.28	155	⇑P	P	18 11 10.4	-0.6
	baz=21						
REDW	Red Top Meadow	21.34	127	*e*P	P	18 11 13.0	+1.4
	17nm,1.2s,mb4.3						
M12A	Wells	21.42	136	⇓P	P	18 11 11.4	-1.1
	baz=21						
RES	Resolute Bay	21.46	28	*e*P	P	18 11 11.5	-1.1
	195nm,0.8s,mb5.5						
MNRC	McLaughlin Nat	21.53	154	⇓P	P	18 11 12.7	-0.9
	baz=21						
P05C	Yuba Gap, Truc	21.58	150	⇑P	P	18 11 12.9	-1.2
	baz=21						
O09A	Fish Creek Ran	21.77	142	⇓P	P	18 11 16.1	-0.1
	baz=22						
N12A	Clover Valley,	21.88	137	P	P	18 11 18.7	+1.4
	baz=22,SNR=5.8						
M14A	Sheep Mountain	21.92	134	⇑P	P	18 11 17.5	-0.3
	baz=22						
CVS	Carmenet Viney	22.03	154	⇑P	P	18 11 19.2	+0.2
	baz=22						
LAVA	Lava Cap Winer	22.06	150	⇑P	P	18 11 19.5	+0.2
	baz=22						
M15A	Larsen Ranch,	22.30	132	⇓P	P	18 11 21.5	-0.3
	baz=22						
PDAR	Pinedale Array	22.37	125	P	P	18 11 23.2	+0.6
	1.8nm,1.0s,mb3.5,baz=325,slow=9.6,SNR=9.6						
O12A	Currie	22.50	138	P	P	18 11 24.9	+1.0
	baz=22,SNR=7.0						
P10A	Eureka	22.50	141	⇑P	P	18 11 24.0	0.0
	baz=22						
N14A	Grayback Hills	22.55	134	⇓P	P	18 11 23.1	-1.4
	baz=22						
Q08A	Gabbs	22.74	145	⇑P	P	18 11 25.8	-0.8
	baz=23						
NVAR	Mina Array Bea	23.03	146	P	P	18 11 29.4	-0.2
	6.6nm,1.1s,mb4.0,baz=334,slow=6.5,SNR=21						
Q10A	Clear Creek Ra	23.25	142	⇓P	P	18 11 32.2	+0.3
	baz=23						
DUG	Dugway	23.26	134	⇑P	P	18 11 31.7	-0.3
	baz=23						
BNLO	Ben Lomond (Sa	23.26	154	⇓P	P	18 11 31.6	-0.5
	baz=23						
Q11A	Duckwater	23.47	141	⇓P	P	18 11 33.5	-0.7
	baz=23						
ULM	Lac du Bonnet	23.69	95	LR	LR	18 21 19.3	
	comp=Z,96nm,19.2s,MS3.3,baz=344,slow=38						
R10A	Warm Springs	23.77	142	⇓P	P	18 11 36.1	-0.9
	baz=24						
KCC	Kaiser Creek	23.78	149	⇓P	P	18 11 36.5	-0.6
	baz=24						
S08C	White Mtn Res	23.93	147	⇓P	P	18 11 39.4	+0.8
	baz=24,SNR=5.7						
R11A	Troy Canyon, C	23.94	141	⇓P	P	18 11 38.1	-0.6
	baz=24						
S10A	Tonopah Range,	24.01	143	⇓P	P	18 11 37.6	-1.6
	baz=24,SNR=5.8						
S12A	Delamar Landin	24.85	141	P	P	18 11 49.1	+2.1
	baz=25,SNR=6.3						
MSU	Marysvale	24.97	135	*e*P	P	18 11 47.9	-0.2
TPNV	Topopah Spring	25.01	144	P	P	18 11 48.8	+0.3
	baz=25,SNR=6.0						
S13A	Holt Ranch, En	25.21	139	⇑P	P	18 11 50.7	+0.5
	baz=25						
MPMC	Manual Prospec	25.47	147	⇓P	P	18 11 53.8	+1.2
	baz=25						
LRMC	Laurel Mountai	25.96	147	⇓P	P	18 11 57.1	+0.1
	baz=26						
U14A	Mt Trumbull	26.49	139	⇑P	P	18 12 01.6	-0.2
	baz=26						
TUQ	Turquoise Mtn.	26.51	144	⇑P	P	18 12 01.8	-0.2
	baz=26						
V12A	Nelson	26.57	142	⇑P	P	18 12 01.7	-0.9
	baz=26						
PV01	Paradox Valley	26.68	130	*e*P	P	18 12 02.7	-0.8
SCHQ	Schefferville	35.74	66	P	P	18 13 22.8	-0.3
	3.5nm,1.0s,mb4.2,baz=314,slow=9.1,SNR=3.9						
TXAR	Lajitas Array	36.34	131	P	P	18 13 28.8	+0.4
	1.2nm,1.1s,mb3.8,baz=328,slow=4.4,SNR=6.8						
TIXI	Tiksi	37.61	329	*e*P	P	18 13 39.3	+0.5
	2.0nm,0.8s,mb3.9						
KSRS	Korea Array	62.40	297	LR	LR	18 43 15.0	
	comp=Z,21nm,21.4s,MS3.3,baz=145,slow=35						
SONM	Songino Array	62.48	318	P	P	18 16 48.1	+0.4
	0.5nm,0.6s,mb3.8,baz=18,slow=6.8,SNR=5.5						
ZALV	Zalesovo Beam	63.08	335	P	P	18 16 51.6	+0.1
	0.6nm,0.5s,mb4.0,baz=1.9,slow=6.9,SNR=4.0						
AKASG	Malin Array Be	69.89	11	P	P	18 17 34.7	-0.4
AKASG	Malin Array Be	69.89	11	P	P	18 17 34.7	-0.4
	0.8nm,0.5s,mb3.9,baz=352,slow=5.9,SNR=7.8						
MKAR	Makanchi Array	70.36	334	P	P	18 17 37.8	-0.2
	0.4nm,0.6s,mb3.5,baz=49,slow=5.1,SNR=4.4						
ESDC	Sonseca Array	73.50	38	P	P	18 17 57.0	0.0
	2.1nm,0.8s,mb4.1,baz=346,slow=6.7,SNR=7.4						
LZH	Lanzhou	73.68	314	*e*P	P	18 17 55.6	-2.6
LZH				AP	pP	18 17 59.0	-2.4
LZH				XP	sP	18 18 01.0	-1.6
GYA	Guiyang	81.10	307	P	P	18 18 36.4	-3.5

GUC 05 18:24:47.4±0.9, **3267S**×**7166W**, **h29**^{km}±4^{km}, **MD3.7**,

ML2.9, 5C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.23**	**56**	⇓iP	Pb	18 24 54.1	+0.3
PACH				iS	Sb	18 24 58.8	+0.6
IHA	**Instituto Hidr**	**0.36**	**177**	⇓iP	Pb	18 24 55.5	-0.1
IHA				iS	Sb	18 25 01.1	-0.1
CHNG	**Los Chungos**	**0.79**	**10**	⇑iP	Pn	18 24 47.7	-15
CHNG				iS	Sb	18 24 58.2	-15
CHNG				AML	AML	18 24 59.8	
	comp=E,351nm,0.3s						
LCCH	**Las Cruces**	**0.81**	**175**	eP	Pn	18 25 02.1	-0.8
PEL	**Peldehue**	**0.95**	**120**	⇑iP	Pn	18 25 04.7	0.0
PEL				iS	Sn	18 25 18.0	+0.7
PEL				AML	AML	18 25 18.8	
	comp=E,2µm,0.2s						
RCDM	**Rinconada Maip**	**1.09**	**139**	eP	Pn	18 25 06.6	-0.1
RCDM				iS	Sn	18 25 21.2	+0.3
RCDM				AML	AML	18 25 23.5	
	comp=E,747nm,0.2s						
TACH	**Talagante**	**1.16**	**149**	⇓iP	Pn	18 25 08.0	+0.4
CLCH	**Cerro Calan**	**1.19**	**128**	AML	AML	18 25 30.4	
	comp=E,473nm,0.6s						
ANTU	**Antumapu**	**1.25**	**136**	⇓iP	Pn	18 25 09.6	+0.7
ANTU				iS	Sn	18 25 25.9	+1.2
ANTU				AML	AML	18 25 29.3	
	comp=N,441nm,0.3s						
LNV	**Longovilo**	**1.30**	**171**	⇑iP	Pn	18 25 09.4	-0.3
LNV				iS	Sn	18 25 26.7	+0.6
FCH	**Farellones**	**1.33**	**120**	⇓iP	Pn	18 25 10.5	+0.5
FCH				iS	Sn	18 25 28.5	+1.8
FCH				AML	AML	18 25 28.8	
	comp=E,472nm,0.2s						
PCH	**Pirque**	**1.35**	**135**	⇓iP	Pn	18 25 11.0	+0.7
PCH				iS	Sn	18 25 28.8	+1.4
CHCH	**Chadas Angostu**	**1.52**	**146**	⇓iP	Pn	18 25 14.0	+1.4
CHCH				iS	Sn	18 25 33.4	+2.0
CACH	**El Canelo**	**1.70**	**149**	⇑iP	Pn	18 25 17.0	+1.9
CACH				iS	Sn	18 25 39.9	+4.1
CICH	**Cipreses**	**1.95**	**148**	⇑iP	Pn	18 25 20.3	+1.8
CICH				iS	Sn	18 25 46.5	+4.5
SFDO	**San Fernando**	**2.02**	**165**	⇓iP	Pn	18 25 20.8	+1.3

*ISCJB **05** 18:49:15.7±1.2, 8.20N±0.09×75.13W±0.06, h56km±13km, mb4.0/13, Error ellipse: s-maj=15.4km s-min=10.3km az=4.6*
*NEIC **05** 18:49:17.4±0.9, 8.09N×75.13W, h62km±10km, mb4.3/3, Error ellipse: s-maj=12.8km s-min=8.9km az=46.0*
*IDC **05** 18:49:18.4±2.5, 8.11N×75.04W, h71km±24km, mb3.6/11, mb1 3.9/13, mb1mx3.7/20, mbtmp3.7/13, MS3.1/1, Ms1 3.1/1, ms1mx2.3/37, Error ellipse: s-maj=18.5km s-min=15.0km az=74.0*
ISC 05 18:49:17.6±1.1**, 8.14N**±0.09×**75.12W**±0.06**, h60km**±12km**, n25, σ0.95**/25**, mb4.0**/13**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.35**	**166**	ePn	**Pn**	**18 50 08.5**	**+0.9**
ROSC				eSn	**Sn**	**18 50 58.5**	**+12**
ROSC				Lg		18 50 59.0	
ROSC	**El Rosal**	**3.35**	**166**	P	**Pn**	**18 50 09.4**	**+1.8**
	2.2nm,0.3s,baz=97,slow=15,SNR=3.8						
ROSC				Lg		18 50 59.0	
	16nm,0.3s,baz=253,slow=23,SNR=8.3						
SDV	**Santo Domingo**	**4.50**	**80**	P	**Pn**	**18 50 23.2**	**0.0**
SDV				S	**Sn**	**18 51 14.3**	**-0.1**
SDV	**Santo Domingo**	**4.50**	**80**	P	**Pn**	**18 50 23.2**	**0.0**
	23nm,0.3s,baz=285,slow=9.7,SNR=97						
SDV				S	**Sn**	**18 51 14.3**	**-0.1**
	74nm,0.3s,baz=5.6,slow=20,SNR=12						
BCIP	**Isla Barro Col**	**4.77**	**283**	eP	**Pn**	**18 50 25.6**	**-1.4**
CMIG	**Matias Romero**	**21.22**	**297**	LR	LR	19 02 14.4	
	comp=Z,53nm,21.0s,baz=194,slow=36						
LPAZ	**La Paz**	**25.24**	**164**	eP	**P**	**18 54 38.3**	**+0.1**
	2.8nm,0.6s,mb4.0						
LPAZ	**La Paz**	**25.24**	**164**	P	**P**	**18 54 38.4**	**+0.3**
	3.5nm,0.8s,mb4.0,baz=331,slow=14,SNR=7.0						
SIV	**San Ignacio**	**27.72**	**150**	P	**P**	**18 54 58.5**	**-2.1**
	1.8nm,0.7s,mb3.8,baz=333,slow=12,SNR=11						
PLAL	**Pickwick Lake**	**29.24**	**338**	eP	**P**	**18 55 15.6**	**+1.6**
	26nm,0.9s,mb5.0						
TXAR	**Lajitas Array**	**34.11**	**312**	P	**P**	**18 55 57.1**	**+0.4**
	0.9nm,0.8s,mb3.8,baz=126,slow=9.2,SNR=7.5						
ULM	**Lac du Bonnet**	**45.40**	**341**	P	**P**	**18 57 28.9**	**-1.2**
	0.9nm,0.4s,mb3.9,baz=149,slow=8.1,SNR=3.1						
BW06	**Boulder Array**	**45.86**	**325**	P	**P**	**18 57 33.7**	**-0.2**
	4.0nm,1.3s,mb4.2						
PDAR	**Pinedale Array**	**45.86**	**325**	P	**P**	**18 57 34.5**	**+0.6**
	0.6nm,0.7s,mb3.7,baz=128,slow=11,SNR=4.4						
SCHQ	**Schefferville**	**47.03**	**7**	P	**P**	**18 57 43.0**	**+0.1**
	0.7nm,0.7s,mb3.7,baz=243,slow=8.1,SNR=5.2						
NVAR	**Mina Array Bea**	**49.15**	**315**	P	**P**	**18 58 00.9**	**+1.4**
	0.4nm,0.5s,mb3.7,baz=116,slow=6.3,SNR=4.1						
YKA	**Yellowknife Ar**	**61.36**	**340**	P	**P**	**18 59 26.1**	**-0.9**
YKA				pP	pP	18 59 40.2	-2.8
YKA	**Yellowknife Ar**	**61.36**	**340**	P	**P**	**18 59 26.1**	**-0.9**
	1.5nm,0.7s,mb4.2,baz=131,slow=7.1,SNR=29						
YKA				pP	pP	18 59 40.2	-2.8
	1.1nm,0.7s,baz=131,slow=7.1,SNR=6.5						
TORD	**Torodi Ar. Bea**	**75.42**	**79**	P	**P**	**19 00 55.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**75.42**	**79**	P	**P**	**19 00 55.5**	**-0.2**
	0.4nm,0.5s,mb3.6,baz=284,slow=7.1,SNR=5.1						
ARCES	**ARCESS Array B**	**86.13**	**20**	P	**P**	**19 01 51.2**	**-0.6**
ARCES	**ARCESS Array B**	**86.13**	**20**	P	**P**	**19 01 51.2**	**-0.6**
	2.2nm,0.8s,mb4.4,baz=304,slow=2.8,SNR=7.4						
FINES	**FINESS Array B**	**88.23**	**28**	P	**P**	**19 02 02.7**	**+0.6**
	0.8nm,0.6s,mb4.1,baz=282,slow=8.0,SNR=2.4						
ASAR	**Alice Springs**	**148.20**	**238**	PKPbc	PKPbc	19 08 56.9	-0.8
	0.7nm,0.6s,baz=117,slow=3.6,SNR=14						
WRA	**Warramunga Arr**	**149.17**	**245**	PKPbc	PKPbc	19 08 59.6	-0.7
	1.0nm,0.7s,baz=104,slow=2.8,SNR=14						

*ISCJB **05** 18:59:56.0±0.4, 35.12N±0.02×4.05W±0.03, h22km±4km, Error ellipse: s-maj=4.0km s-min=2.7km az=26.5*
*CSEM **05** 18:59:55.5±0.2, 35.07N×3.83W, h15km, ML3.5/5, Error ellipse: s-maj=4.4km s-min=3.2km az=122.0*
*MDD **05** 18:59:56.8±0.3, 35.06N×3.95W, h10km±3km, mbLg2.5/24, Error ellipse: s-maj=3.4km s-min=2.7km az=87.0, PRXIMO*
*CNRM **05** 18:59:57.9, 35.00N×3.90W, h9km, MD3.7*
*SFS **05** 18:59:57.0, 35.19N×4.01W, h0km, ML2.4*
*NEIC **05** 18:59:57.2, 35.19N×4.01W, h0km, MN2.5(MDD), After MDD.*
*INMG **05** 18:59:58.3±1.1, 35.05N×3.99W, h31km, ML2.6, Error ellipse: s-maj=4.5km s-min=2.8km az=173.0*
ISC 05 18:59:57.0±0.4**, 35.11N**±0.02×**3.99W**±0.02**, h21km**±4km**, n88, σ1.26**/158**, 2C, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPAL	**Palemas**	**0.13**	**20**	P	**Pb**	**19 00 00.0**	**-1.3**
MPAL				S	**Sb**	**19 00 04.0**	**-0.2**
MPAL	**Palemas**	**0.13**	**20**	iP	**Pb**	**19 00 00.0**	**-1.3**
TOU	**Touzarine**	**0.24**	**126**	P	**Pb**	**19 00 00.0**	**-2.8**
TOU				S	**Sb**	**19 00 03.0**	**-3.8**
TOU	**Touzarine**	**0.24**	**126**	iP	**Pb**	**19 00 00.0**	**-2.8**
MELI	**Melilla**	**0.89**	**78**	⇑P	**Pb**	**19 00 15.3**	**+1.7**
MELI				S	**Sb**	**19 00 25.0**	**0.0**
MELI	**Melilla**	**0.89**	**78**	iP	**Pb**	**19 00 15.3**	**+1.6**
MELI				eS	**Sb**	**19 00 25.0**	**-0.1**
TZK	**Tazeka**	**1.03**	**189**	P	**Pb**	**19 00 15.0**	**-1.0**
TZK				S	**Sb**	**19 00 27.0**	**-2.1**
TZK	**Tazeka**	**1.03**	**189**	iP	**Pb**	**19 00 15.0**	**-1.0**
ZAI	**Zaio**	**1.03**	**97**	iP	**Pb**	**19 00 15.0**	**-1.1**
ZAI				iS	**Sb**	**19 00 28.0**	**-1.2**
EALB	**Alboran**	**1.14**	**43**	P	**Pn**	**19 00 17.3**	**-0.4**
	49nm,0.3s,SNR=15						
EALB				S	**Sb**	**19 00 31.7**	**-0.7**
	94nm,0.2s,SNR=8.4						
EALB	**Alboran**	**1.14**	**43**	P	**Pn**	**19 00 17.3**	**-0.4**
	49nm,0.3s,SNR=15						
EALB				S	**Sb**	**19 00 31.7**	**-0.7**
	94nm,0.2s,SNR=8.4						
DKH	**Dar Kharkhour**	**1.18**	**289**	iP	**Pn**	**19 00 20.0**	**+1.7**
DKH				iS	**Sb**	**19 00 36.0**	**+2.5**
TGT	**Taghat**	**1.35**	**221**	iP	**Pn**	**19 00 21.0**	**+0.4**
TGT				iS	**Sn**	**19 00 38.0**	**0.0**
MDAL	**Dalia**	**1.45**	**304**	iP	**Pn**	**19 00 25.0**	**+3.1**
MDAL				iS	**Sn**	**19 00 45.0**	**+4.7**
RSA	**Sarsar**	**1.52**	**262**	iP	**Pn**	**19 00 25.0**	**+2.0**
RSA				iS	**Sn**	**19 00 44.0**	**+1.9**
EMIJ	**Mijas**	**1.59**	**337**	P	**Pn**	**19 00 22.2**	**-1.6**
EMIJ				S	**Sn**	**19 00 43.2**	**-0.5**
EMIJ	**Mijas**	**1.59**	**337**	P	**Pn**	**19 00 23.9**	**+0.1**
	6.5nm,0.2s,SNR=14						
EMIJ				S	**Sn**	**19 00 43.7**	**0.0**
	51nm,0.3s						
TSY	**Tnine Yamani**	**1.64**	**280**	iP	**Pn**	**19 00 28.0**	**+3.4**
TSY				iS	**Sn**	**19 00 48.0**	**+3.0**
EMAL	**Malaga-Limoner**	**1.69**	**348**	⇑P	**Pn**	**19 00 24.1**	**-1.1**
EMAL				S	**Sn**	**19 00 44.2**	**-2.1**
EMAL	**Malaga-Limoner**	**1.69**	**348**	iP	**Pn**	**19 00 24.1**	**-1.2**
EMAL				eS	**Sn**	**19 00 44.2**	**-2.1**
EGUA	**Guajares**	**1.76**	**11**	P	**Pn**	**19 00 25.1**	**-1.1**
	2.3nm,0.2s,SNR=7.9						
EGUA				S	**Sn**	**19 00 47.5**	**-0.5**
	12nm,0.3s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.80**	**319**	P	**Pn**	**19 00 27.3**	**+0.6**
	4.9nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**19 00 49.9**	**+0.9**
	18nm,0.4s,SNR=7.9						
ERON	**Agron**	**1.91**	**5**	P	**Pn**	**19 00 30.0**	**+1.6**
	4.8nm,0.2s,SNR=12						
ERON				S	**Sn**	**19 00 51.4**	**-0.4**
	9.7nm,0.3s,SNR=6.3						
MIF	**Mishlifen**	**1.98**	**211**	P	**Pn**	**19 00 30.0**	**+0.8**
MIF				S	**Sn**	**19 00 52.0**	**-1.4**
MIF	**Mishlifen**	**1.98**	**211**	iP	**Pn**	**19 00 30.0**	**+0.8**
EBER	**Berja**	**2.00**	**26**	P	**Pn**	**19 00 28.1**	**-1.4**
	7.7nm,0.4s,SNR=7.9						
EBER				S	**Sn**	**19 00 55.1**	**+1.2**
	32nm,0.3s,SNR=7.9						
EBER	**Berja**	**2.00**	**26**	P	**Pn**	**19 00 28.1**	**-1.4**
	7.7nm,0.4s,SNR=7.9						
EBER				S	**Sn**	**19 00 55.1**	**+1.2**
	32nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.04**	**356**	P	**Pn**	**19 00 31.1**	**+1.0**
	5.4nm,0.3s,SNR=7.9						
ELOJ				S	**Sn**	**19 00 55.7**	**+0.8**
	11nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**2.14**	**12**	P	**Pn**	**19 00 32.6**	**+1.1**
	4.8nm,0.3s,SNR=16						
EQUE				S	**Sn**	**19 00 58.3**	**+0.9**
	20nm,0.5s,SNR=9.2						
ECOG	**Cogollos-Vega**	**2.19**	**9**	P	**Pn**	**19 00 33.2**	**+1.0**
	4.8nm,0.3s,SNR=7.9						
ECOG				S	**Sn**	**19 00 58.8**	**+0.1**
	7.6nm,0.3s,SNR=7.9						
CZD	**Col de Zad**	**2.24**	**203**	P	**Pn**	**19 00 33.0**	**+0.1**
CZD				S	**Sn**	**19 00 59.0**	**-0.9**
CZD	**Col de Zad**	**2.24**	**203**	iP	**Pn**	**19 00 33.0**	**+0.1**
ESPR	**Espera**	**2.32**	**320**	P	**Pn**	**19 00 34.8**	**+0.9**
ESPR				S	**Sn**	**19 01 05.1**	**+3.3**
ESPR	**Espera**	**2.32**	**320**	P	**Pn**	**19 00 34.8**	**+0.9**
	8.1nm,0.3s,SNR=9.3						
ESPR				S	**Sn**	**19 01 01.9**	**+0.1**
	14nm,0.3s,SNR=4.8						
ESPR	**Espera**	**2.32**	**320**	P	**Pn**	**19 00 34.8**	**+0.9**
	8.1nm,0.3s,SNR=9.3						
ESPR				S	**Sn**	**19 01 05.1**	**+3.3**
	14nm,0.3s,SNR=4.8						
ENIJ	**Nijar**	**2.36**	**37**	P	**Pn**	**19 00 36.0**	**+1.6**
	SNR=7.9						
ENIJ				S	**Sn**	**19 01 02.3**	**-0.4**
	8.9nm,0.3s,SNR=5.7						
ELUQ	**Luque**	**2.46**	**355**	P	**Pn**	**19 00 38.2**	**+2.3**
	SNR=7.9						
ELUQ				S	**Sn**	**19 01 04.3**	**-1.0**
	26nm,0.6s,SNR=7.9						
EQES	**Quesada**	**2.79**	**15**	P	**Pn**	**19 00 41.8**	**+1.4**
	2.2nm,0.2s,SNR=14						
EQES				S	**Sn**	**19 01 14.7**	**+1.2**
	49nm,0.5s						
EQES	**Quesada**	**2.79**	**15**	P	**Pn**	**19 00 41.8**	**+1.4**
	2.2nm,0.2s,SNR=14						
EQES				S	**Sn**	**19 01 14.7**	**+1.2**
	49nm,0.5s						
KIB	**El Ksiba**	**3.04**	**215**	S	**Sn**	**19 01 18.0**	**-1.7**
KIB	**El Ksiba**	**3.04**	**215**	iP	**Pn**	**19 00 46.0**	**+2.1**
EBAN	**Banos Encina**	**3.06**	**3**	P	**Pn**	**19 00 44.8**	**+0.8**
	2.2nm,0.4s,SNR=7.9						
EBAN				S	**Sn**	**19 01 20.8**	**+0.8**
	8.3nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**3.09**	**351**	P	**Pn**	**19 00 44.9**	**+0.4**
	8.7nm,0.4s,SNR=7.9						
EADA				S	**Sn**	**19 01 22.0**	**+1.2**
	5.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**3.09**	**351**	P	**Pn**	**19 00 44.9**	**+0.4**
	8.7nm,0.4s,SNR=7.9						
EADA				S	**Sn**	**19 01 22.0**	**+1.2**
	5.1nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.42**	**322**	P	**Pn**	**19 00 49.0**	**-0.1**
	2.2nm,0.2s,SNR=16						
EMIN				S	**Sn**	**19 01 27.7**	**-1.4**
	3.0nm,0.2s						
EMIN	**Mina Concepcio**	**3.42**	**322**	P	**Pn**	**19 00 49.0**	**-0.1**
	2.2nm,0.2s,SNR=16						
EMUR	**La Murta**	**3.52**	**38**	P	**Pn**	**19 00 50.8**	**+0.4**
	0.8nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**19 01 30.0**	**-1.4**
	2.8nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.52**	**38**	P	**Pn**	**19 00 50.8**	**+0.4**
	0.8nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**19 01 30.0**	**-1.4**
	2.8nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**3.72**	**312**	P	**Pn**	**19 00 52.7**	**-0.4**
	6.4nm,0.3s,SNR=12						
EGRO				S	**Sn**	**19 01 34.4**	**-1.8**
	5.3nm,0.3s						
EGRO	**El Granado**	**3.72**	**312**	P	**Pn**	**19 00 52.7**	**-0.4**
	6.4nm,0.3s,SNR=12						
PVAQ	**Vaqueiros**	**3.78**	**308**	ePn	**Pn**	**19 00 53.9**	**-0.1**
PVAQ				eSn	**Sn**	**19 01 35.8**	**-2.1**
PVAQ				A		19 01 39.9	
	14nm,0.4s						
PVAQ	**Vaqueiros**	**3.78**	**308**	ePn	**Pn**	**19 00 53.9**	**-0.1**
PVAQ				eSn	**Sn**	**19 01 35.8**	**-2.1**
	14nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.83**	**305**	ePn	**Pn**	**19 00 54.8**	**+0.1**
PBDV				eSn	**Sn**	**19 01 38.2**	**-0.9**
PBDV				A		19 01 49.5	
	11nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.83**	**305**	ePn	**Pn**	**19 00 54.8**	**+0.1**
PBDV				eSn	**Sn**	**19 01 38.2**	**-0.9**
	11nm,0.5s						
PBAR	**Barrancos**	**3.92**	**322**	ePn	**Pn**	**19 00 55.8**	**-0.1**
PBAR				eSn	**Sn**	**19 01 42.0**	**+0.7**
PBAR				A		19 01 55.1	
	9.3nm,0.5s						
PBAR	**Barrancos**	**3.92**	**322**	ePn	**Pn**	**19 00 55.8**	**-0.1**
PBAR				eSn	**Sn**	**19 01 42.0**	**+0.7**
	9.3nm,0.5s						
ETOB	**Tobarra**	**4.04**	**28**	P	**Pn**	**19 00 59.1**	**+1.6**
	1.5nm,0.2s,SNR=14						
ETOB				S	**Sn**	**19 01 43.9**	**-0.3**
	2.2nm,0.5s						
ETOB	**Tobarra**	**4.04**	**28**	P	**Pn**	**19 00 59.1**	**+1.6**
	1.5nm,0.2s,SNR=14						
ETOB				S	**Sn**	**19 01 43.9**	**-0.3**
	2.2nm,0.5s						
PBEJ	**Beja**	**4.27**	**314**	ePn	**Pn**	**19 01 02.1**	**+1.4**
PBEJ				eSn	**Sn**	**19 01 48.6**	**-1.2**
PBEJ				A		19 01 52.4	
	6.3nm,0.3s						
PBEJ	**Beja**	**4.27**	**314**	ePn	**Pn**	**19 01 02.1**	**+1.4**
PBEJ				eSn	**Sn**	**19 01 48.6**	**-1.2**
	6.3nm,0.3s						
MORF	**Marmelete**	**4.36**	**302**	ePn	**Pn**	**19 01 02.6**	**+0.7**
MORF				A		19 01 55.0	
	4.9nm,0.2s						
MORF	**Marmelete**	**4.36**	**302**	P	**Pn**	**19 01 02.2**	**+0.3**
MORF				Pn	**Pn**	**19 01 02.6**	**+0.7**
MORF				S	**Sn**	**19 01 49.4**	**-2.7**
MORF	**Marmelete**	**4.36**	**302**	ePn	**Pn**	**19 01 02.6**	**+0.7**
	4.9nm,0.2s						
EBAD	**Badajoz**	**4.37**	**327**	P	**Pn**	**19 01 02.1**	**0.0**
	6.5nm,0.4s,SNR=12						
EBAD				S	**Sn**	**19 01 50.5**	**-1.9**
	12nm,0.4s						
EBAD	**Badajoz**	**4.37**	**327**	P	**Pn**	**19 01 02.1**	**0.0**
	6.5nm,0.4s,SNR=12						
PFVI	**Vila Bisbo**	**4.40**	**299**	ePn	**Pn**	**19 01 03.1**	**+0.5**
PFVI				eSn	**Sn**	**19 01 51.6**	**-1.6**
ESDC	**Sonseca Array**	**4.56**	**0**	P	**Pn**	**19 01 05.9**	**+1.2**
	1.7nm,0.3s,baz=178,slow=12,SNR=12						
ESDC	**Sonseca Array**	**4.56**	**0**	P	**Pn**	**19 01 05.9**	**+1.2**
	1.7nm,0.3s,SNR=12						
EVO	**Evora**	**4.70**	**318**	ePn	**Pn**	**19 01 07.0**	**+0.4**
EVO				eSn	**Sn**	**19 01 59.2**	**-1.3**
EVO				A		19 02 02.5	
	5.5nm,0.1s						
EVO	**Evora**	**4.70**	**318**	ePn	**Pn**	**19 01 07.0**	**+0.4**
EVO				eSn	**Sn**	**19 01 59.2**	**-1.3**
	5.5nm,0.1s						
PESTR	**Estremoz**	**4.73**	**324**	ePn	**Pn**	**19 01 07.7**	**+0.7**
PESTR				eSn	**Sn**	**19 02 00.0**	**-1.2**
PESTR				A		19 02 03.1	
	9.1nm,0.6s						
PESTR	**Estremoz**	**4.73**	**324**	ePn	**Pn**	**19 01 07.7**	**+0.7**
PESTR				eSn	**Sn**	**19 02 00.0**	**-1.2**
	9.1nm,0.6s						
MOE	**Montemor**	**4.88**	**316**	eSn	**Sn**	**19 02 03.9**	**-1.1**
OUK	**Oukaimeden**	**5.07**	**221**	eP	**Pn**	**19 01 12.0**	**+0.3**
PCBR	**Castelo Branco**	**5.48**	**331**	ePn	**Pn**	**19 01 18.1**	**+0.8**
PCBR				eSn	**Sn**	**19 02 17.5**	**-2.1**
PCBR				A		19 02 22.1	
	4.2nm,0.4s						
PCBR	**Castelo Branco**	**5.48**	**331**	Pn	**Pn**	**19 01 18.1**	**+0.8**
PCBR				Sn	**Sn**	**19 02 17.5**	**-2.1**
	2.1nm,0.4s						
GUD	**Guadarrama**	**5.53**	**359**	P	**Pn**	**19 01 18.7**	**+0.7**
	2.5nm,0.4s,SNR=7.9						
GUD				S	**Sn**	**19 02 16.3**	**-4.6**
	1.7nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**5.79**	**46**	P	**Pn**	**19 01 21.8**	**+0.2**
	1.3nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**19 02 24.3**	**-3.1**
	1.7nm,0.3s,SNR=4.0						
EIBI	**Ibiza**	**5.79**	**46**	P	**Pn**	**19 01 21.8**	**+0.2**
	1.3nm,0.2s,SNR=7.9						
ETOR	**Torete**	**5.91**	**14**	P	**Pn**	**19 01 24.4**	**+1.3**
	3.6nm,0.3s,SNR=7.9						
ETOR				S	**Sn**	**19 02 26.8**	**-3.4**
	4.9nm,0.3s,SNR=4.0						
MVO	**Moncorvo**	**6.50**	**339**	ePn	**Pn**	**19 01 32.4**	**+1.0**
MVO				eSn	**Sn**	**19 02 43.2**	**-1.7**
MVO				A		19 02 45.9	
	7.5nm,0.5s						
MVO	**Moncorvo**	**6.50**	**339**	Pn	**Pn**	**19 01 32.4**	**+1.0**
MVO				Sn	**Sn**	**19 02 43.2**	**-1.7**
	3.8nm,0.5s						
PVRL	**Vila Real**	**6.82**	**336**	ePn	**Pn**	**19 01 36.6**	**+0.9**
PBRG	**Braganca**	**7.03**	**343**	ePn	**Pn**	**19 01 39.5**	**+0.9**
PBRG				eSn	**Sn**	**19 02 56.5**	**-1.3**
PBRG				A		19 02 57.0	
	5.1nm,0.5s						
PBRG	**Braganca**	**7.03**	**343**	Pn	**Pn**	**19 01 39.5**	**+0.9**
PBRG				Sn	**Sn**	**19 02 56.5**	**-1.3**
	2.6nm,0.5s						
ECAL	**Calabor**	**7.15**	**343**	P	**Pn**	**19 01 41.3**	**+1.0**
	11nm,0.5s,SNR=7.1						
ECAL				S	**Sn**	**19 02 58.6**	**-2.3**
	1.6nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**7.15**	**343**	P	**Pn**	**19 01 41.3**	**+1.0**
	11nm,0.5s,SNR=7.1						
ELOB	**Lobios**	**7.46**	**336**	P	**Pn**	**19 01 43.9**	**-0.6**
	1.2nm,0.4s,SNR=7.9						
ELOB				S	**Sn**	**19 03 04.6**	**-4.0**
	2.7nm,0.3s,SNR=7.9						

*IDC **05** 19:03:59.7±2.4, 43.55N×105.41W, h0km, mb4.3/1, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML3.6/3, Error ellipse: s-maj=56.4km s-min=7.9km az=151.0*
*ISCJB **05** 19:04:00.0±0.5, 43.77N±0.03×105.23W±0.06, h0km, mb4.4/1, Error ellipse: s-maj=6.0km s-min=4.9km az=23.5*
*NEIC **05** 19:04:01.6±0.3, 43.72N×105.23W, h0km, ML3.2, Error ellipse: s-maj=4.9km s-min=3.9km az=136.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISC 05 19:04:01.5±0.4**, 43.77N**±0.03×**105.22W**±0.05**, h0km, n38, σ0.96**/44**, mb4.4**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**67**	ePg	**Pg**	**19 04 20.5**	**+1.3**
PHWY	**Pilot Hill**	**2.47**	**184**	ePn	**Pn**	**19 04 42.1**	**-0.8**
PHWY				eS	**Sn**	**19 05 15.9**	**+2.1**
RWWY	**Rawlins**	**2.54**	**216**	ePn	**Pn**	**19 04 44.0**	**0.0**
RWWY				eS	**Sn**	**19 05 17.2**	**+1.6**
LAO	**LASA Array**	**3.01**	**347**	ePn	**Pn**	**19 04 50.4**	**+0.1**
RLMT	**Red Lodge**	**3.20**	**296**	ePn	**Pn**	**19 04 53.1**	**+0.1**
PDAR	**Pinedale Array**	**3.32**	**254**	Pn	**Pn**	**19 04 54.2**	**-0.5**
	7.1nm,0.3s,baz=70,slow=15,SNR=104						
PDAR				Lg		19 05 36.9	
	12nm,0.3s,baz=76,slow=18,SNR=9.2						
BW06	**Boulder Array**	**3.33**	**254**	ePn	**Pn**	**19 04 53.9**	**-0.8**
GCMT	**Greycliff**	**3.76**	**304**	ePn	**Pn**	**19 05 01.2**	**+0.5**
LKWY	**Lake**	**3.81**	**284**	ePn	**Pn**	**19 05 02.3**	**+0.8**
LOHW	**Long Hollow**	**3.91**	**270**	ePn	**Pn**	**19 05 04.3**	**+1.6**
ISCO	**Idaho Springs**	**3.98**	**184**	ePn	**Pn**	**19 05 03.8**	**+0.1**
MOOW	**Moose Ponds**	**4.00**	**272**	ePn	**Pn**	**19 05 04.6**	**+0.5**
YNR	**Norris Junctio**	**4.04**	**285**	ePg	**Pg**	**19 05 13.6**	**-5.3**
YFT	**Old Faithful**	**4.10**	**282**	ePg	**Pg**	**19 05 15.6**	**-4.5**
REDW	**Red Top Meadow**	**4.12**	**266**	ePn	**Pn**	**19 05 05.7**	**+0.1**
IMW	**Indian Meadow**	**4.14**	**274**	ePn	**Pn**	**19 05 05.3**	**-0.6**
TPAW	**Teton Pass**	**4.17**	**268**	ePn	**Pn**	**19 05 06.0**	**-0.3**
YMR	**Madison River**	**4.23**	**284**	ePn	**Pn**	**19 05 08.2**	**+1.1**
AHID	**Auburn Hatcher**	**4.41**	**259**	ePn	**Pn**	**19 05 08.4**	**-1.3**
QLMT	**Earthquake Lak**	**4.58**	**286**	ePn	**Pn**	**19 05 12.5**	**+0.5**
QLMT				ePg	**Pg**	**19 05 23.2**	**-6.1**
DGMT	**Dagmar**	**4.76**	**8**	ePn	**Pn**	**19 05 16.0**	**+1.6**
BOZ	**Bozeman (W)**	**4.94**	**295**	ePn	**Pn**	**19 05 15.9**	**-1.0**
HWUT	**Hardware Ranch**	**5.15**	**247**	ePn	**Pn**	**19 05 18.7**	**-1.1**
EGMT	**Eagleton**	**5.31**	**325**	ePn	**Pn**	**19 05 21.6**	**-0.4**
	12nm,0.4s						
MCMT	**McKenzie Canyo**	**5.58**	**284**	ePn	**Pn**	**19 05 26.3**	**+0.7**
DAU	**Daniels Canyon**	**5.61**	**235**	ePn	**Pn**	**19 05 26.6**	**+0.6**
SPUT	**South Promonto**	**5.88**	**248**	ePn	**Pn**	**19 05 29.6**	**-0.2**
PV10	**Paradox Valley**	**6.11**	**209**	ePn	**Pn**	**19 05 33.0**	**0.0**
PV10				ePg	**Pg**	**19 05 56.3**	**-2.3**
SRU	**San Rafael**	**6.13**	**222**	ePn	**Pn**	**19 05 31.1**	**-2.1**
	7.8nm,0.3s						
PV01	**Paradox Valley**	**6.17**	**205**	ePn	**Pn**	**19 05 33.7**	**-0.1**
ECSD	**EROS,Sioux Fal**	**6.23**	**87**	ePn	**Pn**	**19 05 35.3**	**+0.6**
	4.2nm,0.3s						
TMUT	**Trail Mountain**	**6.34**	**227**	ePn	**Pn**	**19 05 35.8**	**-0.3**
BGU	**Big Grassy Mou**	**6.45**	**247**	ePn	**Pn**	**19 05 37.8**	**+0.2**
MSO	**Missoula**	**6.87**	**299**	ePn	**Pn**	**19 05 44.0**	**+0.6**
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**19 06 13.3**	**-0.5**
ULM				Pg	Pn	19 06 44.9	+31
ULM				Sn	**Sn**	**19 07 55.0**	**-1.8**
ULM				Lg		19 08 46.7	
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**19 06 13.3**	**-0.5**
	3.0nm,0.3s,baz=234,slow=11,SNR=25						
ULM				Pg	Pn	19 06 44.9	+31
	0.3nm,0.3s,baz=234,slow=17,SNR=2.0						
ULM				Sn	**Sn**	**19 07 55.0**	**-1.8**
	0.3nm,0.3s,baz=138,slow=10,SNR=4.1						
ULM				Lg		19 08 46.7	
	0.3nm,0.3s,baz=165,slow=19,SNR=1.9						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**Pn**	**19 08 31.7**	**+0.2**
	0.1nm,0.3s,baz=154,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**61.38**	**18**	P	**P**	**19 14 17.6**	**-1.0**
	2.4nm,0.8s,mb4.4,baz=331,slow=9.2,SNR=3.8						

IDC 05 19:11:16.6±1.6**, 2.83N**×**126.29E, h0km, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/18**, mbtmp3.9**/5**, Error ellipse: s-maj=99.0km s-min=22.3km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.80**	**182**	P	P	19 15 58.8	-0.9
	5.3nm,1.0s,baz=4.1,slow=14,SNR=4.9						
WRA	**Warramunga Arr**	**23.97**	**161**	P	P	19 16 33.0	+0.1
	1.2nm,0.4s,baz=342,slow=10,SNR=46						
ASAR	**Alice Springs**	**27.36**	**165**	P	P	19 17 03.4	-0.3
	0.4nm,0.4s,baz=340,slow=7.1,SNR=30						
STKA	**Stephens Creek**	**37.45**	**158**	P	P	19 18 32.5	+0.7
	1.0nm,0.4s,baz=350,slow=7.2,SNR=6.5						
MKAR	**Makanchi Array**	**58.05**	**326**	P	P	19 21 11.6	+0.1
	0.6nm,0.5s,baz=127,slow=7.9,SNR=7.7						

IDC 05 19:24:21.2±18.0**, 20.01S**×**174.81W, h0km, mb4.4**/5**, mb1 4.5**/5**, mb1mx4.1**/17**, mbtmp4.4**/5**, Error ellipse: s-maj=333.4km s-min=134.9km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.52	263	P	P	19 31 30.2	+1.5
	3.2nm,0.4s,baz=93,slow=12,SNR=7.9						
STKA	Stephens Creek	40.70	244	P	P	19 32 03.0	-0.7
	3.7nm,0.6s,baz=74,slow=7.8,SNR=12						
ASAR	Alice Springs	47.55	256	P	P	19 32 58.0	-0.7
	3.4nm,0.6s,baz=100,slow=8.1,SNR=48						
WRA	Warramunga Arr	47.64	261	P	P	19 32 59.0	-0.5
	1.5nm,0.3s,baz=95,slow=7.8,SNR=50						
FITZ	Fitzroy Crossi	56.06	261	P	P	19 34 03.0	+0.5
	2.4nm,0.6s,baz=90,slow=12,SNR=5.7						

IDC 05 19:25:35.6±3.7**,4943S**×**12610E,h0**km**,mb3.8**/3**, mb1 4.1**/4**,mb1mx3.9**/12**,mbtmp4.0**/4**,Error ellipse: s-maj=73.2km s-min=58.9km az=60.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	17.76	335	P	Pn	19 29 45.3	+1.1
	0.6nm,0.3s,baz=145,slow=12,SNR=5.7						
STKA	Stephens Creek	21.04	39	P	P	19 30 21.1	+0.2
	3.0nm,0.9s,baz=207,slow=11,SNR=3.0						
ASAR	Alice Springs	26.43	16	P	P	19 31 12.7	-1.3
	2.6nm,0.8s,baz=194,slow=8.5,SNR=11						
WRA	Warramunga Arr	30.15	16	P	P	19 31 46.8	-0.3
	1.0nm,1.0s,baz=192,slow=8.4,SNR=3.4						
YKA	Yellowknife Ar	145.00	45	PKPbc	PKPdf	19 45 13.5	+0.1
	1.1nm,0.9s,baz=270,slow=3.5,SNR=8.0						

*ISCJB **05** 19:30:54.7±0.6,4933S±007×1276E±03,h10km,mb4.2/5, MS3.8/5,Error ellipse: s-maj=27.5km s-min=10.5km az=2.9*
*IDC **05** 19:30:55.3±1.0,4933S×12756E,h0km,mb4.3/6, mb1 4.4/7,mb1mx4.2/14,mbtmp4.3/7,ML2.1/1,MS3.8/6, Ms1 3.8/6,ms1mx3.5/28,Error ellipse: s-maj=54.1km s-min=16.4km az=96.0*
*NEIC **05** 19:30:56.7±0.6,4933S×12750E,h10km,Error ellipse: s-maj=25.7km s-min=11.0km az=90.0*
ISC 05 19:30:56.8±0.6**,4933S**±007×**1276E**±03**,h10**km**,n18,** σ**0^{s}76**/13**,mb4.2**/5**,MS3.8**/5**,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	18.10	331	eP	Pn	19 35 09.1	+0.9
NWAO				LR	LR	19 39 50.6	
NWAO	Narrogin (SRO)	18.10	331	P	Pn	19 35 10.0	+1.7
	0.3nm,0.3s,baz=160,slow=14,SNR=4.2						
NWAO				LR	LR	19 39 50.6	
	comp=Z,125nm,20.6s,baz=303,slow=30						
STKA	Stephens Creek	20.37	36	eP	P	19 35 34.5	+1.1
STKA				LR	LR	19 42 17.1	
STKA	Stephens Creek	20.37	36	P	P	19 35 34.7	+1.2
	2.9nm,0.6s,baz=195,slow=11,SNR=6.6						
STKA				LR	LR	19 42 17.0	
	comp=Z,353nm,18.6s,MS3.8,baz=204,slow=34						
ASAR	Alice Springs	26.09	13	P	P	19 36 30.2	-0.4
	6.8nm,0.4s,mb4.5,baz=188,slow=9.0,SNR=118						
MBWA	Marble Bar	28.79	345	eP	P	19 36 53.7	-1.1
WRA	Warramunga Arr	29.82	13	P	P	19 37 02.9	-1.0
	2.1nm,0.9s,mb3.9,baz=192,slow=9.0,SNR=7.3						
VNDA	Vanda	31.16	166	eP	P	19 37 15.1	-0.2
VNDA				LR	LR	19 49 13.0	
VNDA	Vanda	31.16	166	P	P	19 37 15.4	+0.2
	4.5nm,0.9s,mb4.3,baz=317,slow=8.3,SNR=13						
VNDA				LR	LR	19 49 13.0	
	comp=Z,78nm,19.0s,MS3.4,baz=327,slow=35						
CTA	Charters Tower	32.79	34	LR	LR	19 50 32.3	
	comp=Z,128nm,18.8s,MS3.6,baz=212,slow=36						
MAW	Mawson	36.32	216	LR	LR	19 50 42.0	
	comp=Z,193nm,18.2s,MS3.9,baz=248,slow=33						
QSPA	South Pole Qui	40.80	180	P	P	19 38 38.0	+0.4
	3.9nm,0.7s,mb4.2,baz=347,slow=3.3,SNR=15						
SNAA	Sanae	54.32	197	P	P	19 40 22.3	-0.4
	3.4nm,0.9s,mb4.3,baz=144,slow=8.8,SNR=7.5						
VNA2	Neumayer--Watz	55.79	196	e	P	19 40 33.7	+0.4
	baz=141,slow=7.1						
VNA2				e		19 40 40.8	
VNA2				e		19 40 42.2	
VNA2				e		19 40 44.7	
VNA3	Neumayer Olymp	55.93	195	e	P	19 40 34.2	-0.1
VNA3				e		19 40 40.8	
VNA3				e		19 40 42.4	
VNA3				e		19 40 45.4	
LSZ	Lusaka	84.53	253	LR	LR	20 15 11.9	
	comp=Z,121nm,19.3s,MS4.3,baz=176,slow=31						
YKA	Yellowknife Ar	144.26	45	PKP	PKPdf	19 50 32.7	+1.1
YKA	Yellowknife Ar	144.26	45	PKP	PKPdf	19 50 32.7	+1.1
	0.3nm,0.5s,baz=269,slow=3.7,SNR=7.6						

IDC 05 19:30:59.5±5.9**,761S**×**12919E,h70**km±50km**,mb1 3.5**/4**, mb1mx3.2**/16**,mbtmp3.4**/4**,ML3.4**/4**,Error ellipse: s-maj=56.6km s-min=32.8km az=38.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	6.04	244	P	Pn	19 32 26.9	+0.6
	5.8nm,0.3s,baz=133,slow=6.8,SNR=9.7						
FITZ	Fitzroy Crossi	10.99	198	P	Pn	19 33 33.7	-0.3
	0.2nm,0.3s,baz=265,slow=16,SNR=11						
FITZ				S	Sn	19 35 35.0	-0.2
	0.3nm,0.3s,baz=224,slow=11,SNR=4.7						
WRA	Warramunga Arr	13.24	158	P	Pn	19 34 06.0	+1.4
	0.2nm,0.3s,baz=339,slow=14,SNR=4.5						
WRA				S	Sn	19 36 30.0	-0.1
	0.7nm,0.3s,baz=333,slow=24,SNR=18						
ASAR	Alice Springs	16.60	165	P	Pn	19 34 48.4	+0.6
	0.0nm,0.3s,baz=341,slow=11,SNR=4.5						
TORD	Torodi Ar. Bea	128.13	281	PKP	PKPdf	19 49 58.0	-0.8
	0.4nm,0.9s,baz=101,slow=0.7,SNR=4.1						

*ISCJB **05** 19:45:31.5±0.5,4000N±003×2530E±003,h6km±4km, Error ellipse: s-maj=5.2km s-min=3.9km az=171.6*
*CSEM **05** 19:45:31.9±0.1,3999N×2536E,h12km,MD3.2,Error ellipse: s-maj=2.7km s-min=1.8km az=175.0*
*THE **05** 19:45:31.3,3993N×2544E,h8km,ML3.4*
*ATH **05** 19:45:31.6,4001N×2532E,h31km,MD3.2/5*
*NEIC **05** 19:45:31.6,4001N×2532E,h31km,MD3.2(ATH),After ATH.*
*ISK **05** 19:45:32.0,4004N×2538E,h2km,MD3.0*
*DDA **05** 19:45:36.5,4004N×2569E,h10km,Md3.1*
ISC 05 19:45:31.9±0.5**,3998N**±003×**2529E**±003**,h9**km±4km**,n25,** σ**0^{s}92**/33**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.12	225	ePB	Sg	19 45 37.7	+1.2
LOS	Limnos	0.17	253	ePg	Pg	19 45 36.3	+0.9
GADA	Gvkgeada	0.51	66	PG	Pg	19 45 41.5	-0.3
GADA				SG	Sg	19 45 48.1	-0.3
BOZC	Bozcaada	0.60	103	i P	Pg	19 45 43.1	-0.4
BOZC				i S	Sg	19 45 51.6	+0.2
ENEZ	Enez	1.00	41	PG	Pg	19 45 50.3	-0.8
ENEZ				SG	Sg	19 46 04.0	-0.1
PRK	Paraskevi	1.05	134	ePN	Pn	19 45 52.2	-0.6
PRK				eSN	Sn	19 46 06.4	-1.3
OUR	Ouranopolis	1.06	290	ePg	Pg	19 45 52.7	+0.4
ALN	Alexandroupoli	1.08	32	ePg	Pg	19 45 51.8	-0.8
ALN				eSg	Sg	19 46 06.6	0.0
RDO	Rodhopi	1.18	9	ePN	Pn	19 45 53.1	-1.4
LPK	Lapseki	1.19	70	ePN	Pn	19 45 53.9	-0.8
AYVA	Ayvalik	1.27	122	i P	Pn	19 45 55.5	-0.3
AYVA				i S	Sb	19 46 12.6	+0.1
AOS	Alonnisos	1.36	234	ePg	Pg	19 45 56.2	-1.7
PLG	Polygyros	1.47	286	ePN	Pn	19 45 57.6	-0.9
RKY	Sarkoy-Tekirda	1.60	63	ePN	Pn	19 46 00.6	+0.2
SART	Tekirdag	1.61	63	i P	Pn	19 45 59.6	-0.9
SART				i S	Sn	19 46 22.1	+0.9
SOH	Sokhos	1.70	300	ePb	Pb	19 46 02.1	-1.2
SOH				eSb	Sb	19 46 26.6	+1.8
MFT	Murefte	1.72	62	ePN	Pn	19 46 02.5	+0.5
NVR	Nevrokopi	1.75	322	ePB	Pn	19 46 01.6	-0.8
MRMT	Marmara Adasi	1.87	70	ePN	Pn	19 46 04.7	+0.7
BALB	Balikesir	2.02	99	ePN	Pn	19 46 07.6	+1.5
BNT	Bandirma	2.05	79	ePN	Pn	19 46 07.7	+1.2
EDRB	Edirne	2.16	30	ePN	Pn	19 46 09.6	+1.5
KNT	Kendrikon	2.17	304	ePn	Pn	19 46 07.9	-0.3
YLV	Yalova	3.18	78	ePN	Pn	19 46 23.5	+1.5
IZI	Iznik	3.22	82	ePN	Pn	19 46 23.2	+0.5

IDC 05 20:05:27.6±29.0**,2130S**×**17458W,h0**km**,mb4.0**/4**, mb1 4.1**/4**,mb1mx3.8**/16**,mbtmp4.0**/4**,MS3.9**/1**,Ms1 3.9**/1**, ms1mx3.0**/26**,Error ellipse: s-maj=534.7km s-min=152.4km az=76.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.60	265	P	P	20 12 36.5	+0.7
	3.4nm,0.9s,baz=97,slow=17,SNR=5.1						
PMG	Port Moresby	38.64	282	LR	LR	20 26 20.2	
	comp=Z,167nm,18.3s,baz=256,slow=32						
STKA	Stephens Creek	40.34	246	P	P	20 13 06.3	-0.9
	0.6nm,0.3s,baz=77,slow=10,SNR=5.5						
ASAR	Alice Springs	47.45	257	P	P	20 14 04.2	-0.2
	1.6nm,0.7s,baz=88,slow=8.3,SNR=16						
WRA	Warramunga Arr	47.66	262	P	P	20 14 06.2	+0.1
	0.6nm,0.3s,baz=96,slow=8.3,SNR=6.3						

IDC 05 20:07:58.1±9.1**,415N**×**12558E,h156**km±92km**,mb3.5**/7**, mb1 3.6**/7**,mb1mx3.4**/19**,mbtmp3.5**/7**,Error ellipse: s-maj=64.9km s-min=15.8km az=74.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.11	180	P	P	20 12 42.1	+1.0
	3.9nm,0.3s,baz=3.6,slow=10,SNR=30						
WRA	Warramunga Arr	25.44	161	P	P	20 13 11.1	-0.5
	3.4nm,0.4s,baz=340,slow=10,SNR=66						
ASAR	Alice Springs	28.82	164	P	P	20 13 41.5	-0.1
	0.7nm,0.4s,baz=342,slow=7.2,SNR=27						
KSRS	Korea Array	33.21	3	P	P	20 14 20.9	+0.7
	2.0nm,1.0s,baz=182,slow=9.5,SNR=4.1						
STKA	Stephens Creek	38.94	158	P	P	20 15 08.7	-0.1
	2.1nm,0.4s,baz=336,slow=6.1,SNR=9.4						
SONM	Songino Array	46.54	342	P	P	20 16 09.4	-0.5
	0.2nm,0.5s,baz=165,slow=7.1,SNR=3.5						
SONM				PcP	PcP	20 17 42.3	+0.7
	0.6nm,0.8s,baz=154,slow=4.9,SNR=4.9						
MKAR	Makanchi Array	56.56	326	P	P	20 17 24.0	-0.3
	0.2nm,0.4s,baz=107,slow=7.8,SNR=5.7						

*ISCJB **05** 20:16:10.0±0.2,4420N±002×1024E±002,h13km±2km, mb3.5/1,Error ellipse: s-maj=3.0km s-min=1.9km az=167.2*
*ROM **05** 20:16:10.5±0.2,4420N×1029E,h10km±1km,Md3.1/25, Ml3.3/23,Error ellipse: s-maj=2.4km s-min=1.9km az=36.0*
*GEN **05** 20:16:10.6,4423N×1030E,h8km,ML3.0*
*NEIC **05** 20:16:10.5,4420N×1029E,h10km,ML3.6(LDG), ML3.3(ROM),ML3.2(STR),After ROM.*
*CSEM **05** 20:16:10.4±0.1,44.15N×1033E,h12km,ML3.6/23,Error ellipse: s-maj=2.7km s-min=2.1km az=7.0*
*LDG **05** 20:16:12.9±0.1,44.19N×1025E,h10km,Md3.4/1,Ml3.6/23, Error ellipse: s-maj=3.9km s-min=2.7km az=172.0*
*IDC **05** 20:16:12.5±3.1,4432N×1066E,h0km,mb3.3/1,mb1 3.5/4, mb1mx3.3/20,mbtmp3.4/4,ML3.3/3,Error ellipse: s-maj=42.3km s-min=28.9km az=88.0*
*PRU **05** 20:16:13.7,4444N×1047E,h0km*
*STR **05** 20:16:14.1±0.4,4375N×994E,h10km,Ml3.2,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 05 20:16:10.6±0.2**,4419N**±002×**1021E**±002**,h9**km±2km**,n144,** σ**1^{s}24**/234**,mb3.5**/1**,21C-11D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLC	Villacollemand	0.13	101	eP	Pg	20 16 12.6	-0.9
VLC				⇑iPg	Pg	20 16 13.1	-0.4
VLC				Sg	Sg	20 16 15.1	-0.4
VLC	Villacollemand	0.13	101	⇑iPg	Pg	20 16 13.1	-0.4
VLC				Sg	Sg	20 16 15.1	-0.4
	19µm,0.4s						
VLC	Villacollemand	0.13	101	eP	Pg	20 16 12.6	-0.9
VLC	Villacollemand	0.13	101	⇑iPg	Pg	20 16 13.1	-0.4
VLC				Sg	Sg	20 16 15.1	-0.4
	19µm,0.4s						
ERBM	Eremo	0.27	31	⇑iPg	Pg	20 16 15.2	-0.9
ERBM				Sg	Sg	20 16 18.7	-1.1
BDI	Bagni Di Lucca	0.30	114	⇑iPg	Pg	20 16 15.9	-0.7
BDI				Sg	Sg	20 16 20.1	-0.5
	4µm,0.3s						
GSCL	Gusciola	0.32	58	⇑iPg	Pg	20 16 15.7	-1.1
CODM		0.33	308	P	Pg	20 16 16.4	-0.8
MAIM		0.34	144	⇑iPg	Pg	20 16 17.1	-0.1
MAIM				Sg	Sg	20 16 22.3	+0.6
	5µm,0.3s						
PZZT	Monte Pizzetto	0.47	96	Pg	Pg	20 16 18.7	-1.0
PZZT				Sg	Sg	20 16 25.2	-0.7
	2µm,0.3s						
SC2M	Scurtabr	0.54	294	Pg	Pg	20 16 21.7	+0.7
SC2M				Sg	Sg	20 16 30.6	+2.6
	2µm,0.5s						
ZCCA	Zocca	0.57	73	⇑iPg	Pg	20 16 21.8	+0.1
	108nm,0.4s						
FNVD	Fontana Vidola	0.65	91	⇑iPg	Pg	20 16 22.3	-0.9
	2µm,0.8s						
CRMI	Carmignano	0.67	126	Pg	Pg	20 16 22.9	-0.7
	358nm,0.6s						
NOVE	Novellara	0.71	30	Pg	Pg	20 16 24.4	+0.1
	2µm,0.5s						
GROG	Isola di Gorgo	0.79	197	⇑iPg	Pg	20 16 26.7	+0.8
GROG				Sg	Sg	20 16 39.8	+3.6
	947nm,0.5s						
BOB	Bobbio (Coli)	0.80	317	Pg	Pg	20 16 26.4	+0.4
	1µm,0.7s						
SEI	Scarperia	0.83	99	Pg	Pg	20 16 25.6	-1.0
	1µm,0.3s						
RAVA	Ravarino	0.86	48	Pg	Pg	20 16 28.5	+1.3
	3µm,1.0s						
GENL	Genova Univers	0.92	284	P	Pg	20 16 28.1	-0.2
GENL				S	Sg	20 16 40.1	-0.2
VMG	Vicchio	0.98	103	Pg	Pg	20 16 28.3	-1.2
SBPO	S.Benedetto Po	1.00	30	Pg	Pg	20 16 30.8	+0.9
	6µm,0.6s						
FIU	Minerbio Fiu	1.02	63	Pg	Pg	20 16 31.9	+1.7
	2µm,0.8s						
CSNT	Castellina Chi	1.06	132	Pg	Pg	20 16 30.5	-0.4
CSNT				Sg	Sg	20 16 45.3	+0.7
	470nm,0.7s						
GRFL	Gerfalco	1.18	152	Pg	Pg	20 16 33.1	0.0
	304nm,1.2s						
PCP	Pian Castagno	1.25	287	Pg	Pg	20 16 33.9	-0.7
PCP				Sg	Sg	20 16 50.7	-0.1
	171nm,0.3s						
PCP	Pian Castagno	1.25	287	P	Pn	20 16 33.7	-0.4
PCP				S	Sb	20 16 49.5	-0.9
QLNO	Quiliano	1.35	277	Pg	Pg	20 16 35.8	-0.7
	223nm,0.6s						
CRE	Caprese Michel	1.38	114	Pg	Pn	20 16 34.5	-1.4
	79nm,0.3s						
FIN	Finale Ligure	1.44	272	Pg	Pg	20 16 36.5	-1.8
SALO	Salr	1.45	9	Pg	Pg	20 16 37.7	-0.7
	1µm,0.6s						
RORO		1.55	268	P	Pn	20 16 37.4	-0.8
ARCI	Arcidosso	1.62	145	Pg	Pn	20 16 39.2	0.0
MAGA	Magasa	1.62	10	Pg	Pg	20 16 40.1	-1.5
	2µm,0.5s						
MDI	Monti di Nese	1.63	348	Pg	Pg	20 16 39.9	-2.0
	235nm,0.5s						
MONE	Monesi	1.77	267	P	Pn	20 16 41.5	+0.2
NEGI	Negi	1.84	260	P	Pn	20 16 41.3	-1.0
MAON	Monte Argentar	1.88	159	Pg	Pn	20 16 42.4	-0.4
MABI	Malga Bissina	1.88	6	Pg	Pn	20 16 43.0	+0.2
	42nm,0.4s						
SAOF	Saorge	1.93	265	P	Pn	20 16 43.8	+0.4
SAOF				S	Sn	20 17 07.5	-0.2
SAOF	Saorge	1.93	265	Pg	Pn	20 16 41.1	-2.3
VAI	Varese	1.97	329	Pg	Pg	20 16 45.3	-3.1
	57nm,0.4s						
ENR	Entracque	2.01	272	P	Pn	20 16 44.5	-0.1
AUTN	L'Aution	2.02	266	P	Pn	20 16 45.3	+0.6
AUTN				S	Sn	20 17 10.8	+0.8
SBF	Sospel	2.03	262	ePn	Pn	20 16 44.8	-0.1
	SNR=1.0						
SBF				eSn	Sn	20 17 09.4	-0.9
	SNR=1.0						
SBF				eSg	Sg	20 17 18.4	+2.6
	200nm,0.4s,SNR=1.0						
SBF	Sospel	2.03	262	ePn	Pn	20 16 44.8	-0.1
	SNR=1.0						
SBF				eSn	Sn	20 17 09.4	-0.9
	SNR=1.0						
SBF				eSg	Sg	20 17 18.4	+2.6
	100nm,0.4s,SNR=1.0						
STV	Sta Anna Valdi	2.08	273	Pg	Pn	20 16 46.0	+0.5
STV	Sta Anna Valdi	2.08	273	P	Pn	20 16 45.8	+0.3
LUCF	Luceram	2.09	263	P	Pn	20 16 46.1	+0.4
CTI	Castel Tesino	2.12	28	Pg	Pn	20 16 45.8	-0.3
	57nm,0.3s						
TOUF	Mont Tournerai	2.14	266	P	Pn	20 16 47.3	+0.9
TOUF				S	Sn	20 17 14.5	+1.4
ORO	Oropa	2.15	313	Pg	Pb	20 16 48.3	-1.2
	109nm,0.3s						
ORX	Oropa	2.15	313	Pg	Pb	20 16 48.4	-1.2
DOI	San Damiano	2.15	280	Pg	Pn	20 16 47.0	+0.4
	56nm,0.3s						
TRAV		2.20	308	P	Pn	20 16 46.9	-0.3
MVIF	Mont Vial	2.23	264	P	Pn	20 16 48.8	+1.2
MVIF				S	Sn	20 17 14.7	-0.4
PZZ	Prazzo	2.26	279	Pg	Pn	20 16 48.0	0.0
RSP	Reno Superiore	2.32	296	P	Pn	20 16 47.8	-1.1
TUE	Stuetta	2.37	345	Pg	Pn	20 16 50.8	+1.3
	67nm,0.5s						
APPI	Appiano	2.40	17	Pg	Pn	20 16 50.1	+0.1
FUORN	Ofenpass-Fuorn	2.44	1	Pg	Pn	20 16 52.2	+1.8
CALN	Calern	2.44	261	P	Pn	20 16 51.2	+0.7
SURF	Saint Ours	2.46	278	P	Pn	20 16 50.9	+0.1
MBDF	Montbardon	2.52	284	ePn	Pn	20 16 52.1	+0.4
	SNR=1.0						
MBDF				eSn	Sn	20 17 21.9	-0.6
	70nm,0.4s						
MBDF	Montbardon	2.52	284	ePn	Pn	20 16 52.1	+0.4
	SNR=1.0						
MBDF				eSn	Sn	20 17 21.9	-0.6
	35nm,0.4s						
DAVOX	Davos/Dischmat	2.61	355	Pn	Pn	20 16 54.8	+2.0
	4.3nm,0.3s,baz=183,slow=9.5,SNR=33						
DAVOX				Sn	Sn	20 17 27.9	+3.4
	10nm,0.3s,baz=154,slow=22,SNR=7.0						
DAVOX	Davos/Dischmat	2.61	355	Pg	Pn	20 16 54.6	+1.8
FRF	La Foret Royal	2.65	258	ePn	Pn	20 16 53.6	+0.2
	SNR=1.0						
FRF				eSn	Sn	20 17 24.9	-0.8
	74nm,0.2s,SNR=1.0						
FRF	La Foret Royal	2.65	258	ePn	Pn	20 16 53.6	+0.2
	SNR=1.0						
FRF				eSn	Sn	20 17 24.9	-0.8
	37nm,0.2s,SNR=1.0						
BNI	Bardonecchia	2.67	290	eP	Pn	20 16 56.3	+2.6
LPG	La Plagne	2.79	299	ePn	Pn	20 16 57.1	+1.8
	SNR=1.0						
LPG				eSn	Sn	20 17 29.7	+0.6
	41nm,0.5s						
LPG	La Plagne	2.79	299	ePn	Pn	20 16 57.1	+1.8
	SNR=1.0						
LPG				eSn	Sn	20 17 29.7	+0.6
	21nm,0.5s						
LPL	La Plagne	2.81	299	ePn	Pn	20 16 57.4	+1.8
	SNR=1.0						
LPL				eSn	Sn	20 17 30.3	+0.7
	34nm,0.4s,SNR=1.0						
LPL	La Plagne	2.81	299	ePn	Pn	20 16 57.4	+1.8
	SNR=1.0						
LPL				eSn	Sn	20 17 30.3	+0.7
	17nm,0.4s,SNR=1.0						
LMR	La Mourre	2.82	254	ePn	Pn	20 16 54.3	-1.4
	SNR=1.0						
LMR				eSn	Sn	20 17 27.8	-1.9
	41nm,0.2s,SNR=1.0						
LMR	La Mourre	2.82	254	ePn	Pn	20 16 54.3	-1.4
	SNR=1.0						
LMR				eSn	Sn	20 17 27.8	-1.9
	20nm,0.2s,SNR=1.0						
FETA	Feichten	2.86	7	⇑iPn	Pn	20 16 57.8	+1.5
SEST	Monte Rota	2.93	28	Pg	Pn	20 16 58.0	+0.8
	125nm,0.6s						
SKDS	Skadanscina	3.03	62	i Pn	Pn	20 16 57.2	-1.3
SKDS				i Sn	Sn	20 17 32.1	-2.8
ABTA	Abfaltersbach	3.03	31	⇑ePn	Pn	20 16 59.1	+0.5
	SNR=20						
ABTA				⇑iSn	Sn	20 17 36.2	+1.3
DAVA	Damuels	3.11	356	⇓iPn	Pn	20 17 02.0	+2.3
	SNR=20						
DAVA				⇑iSn	Sn	20 17 41.0	+4.0
DAVA	Damuels	3.11	356	Pn	Pn	20 17 02.0	+2.3
	19nm,5.0s						
DAVA				Sn	Sn	20 17 41.0	+4.0
SQTA	Sankt Quirin	3.12	13	⇑iPn	Pn	20 17 01.2	+1.4
	SNR=56						
SQTA				⇓iSn	Sn	20 17 39.9	+2.9
SQTA	Sankt Quirin	3.12	13	Pn	Pn	20 17 01.2	+1.4
	56nm,1.0s						
SQTA				Sn	Sn	20 17 39.9	+2.8
ORIF	Oris-en-Rattie	3.18	285	ePn	Pn	20 17 02.9	+2.2
	SNR=1.0						
ORIF				eSn	Sn	20 17 38.1	-0.7
	60nm,0.5s,SNR=1.0						
ORIF	Oris-en-Rattie	3.18	285	ePn	Pn	20 17 02.9	+2.2
	SNR=1.0						
ORIF				eSn	Sn	20 17 38.1	-0.7
	30nm,0.5s,SNR=1.0						
VOY	Vojsko	3.19	53	ePn	Pn	20 16 59.6	-1.3
VOY				eSn	Sn	20 17 36.3	-2.7
VOY				e		20 17 36.9	
JAVS	Javornik	3.22	57	i Pn	Pn	20 17 00.1	-1.1
JAVS				i Sn	Sn	20 17 38.1	-1.5
CADS	Cadrg	3.22	49	i Pn	Pn	20 17 00.4	-0.8
CADS				i Sn	Sn	20 17 40.3	+0.6
MOTA	Moosalm	3.22	11	⇓iPn	Pn	20 17 03.0	+1.7
	SNR=64						
MOTA				⇑iSn	Sn	20 17 43.1	+3.5
MOTA	Moosalm	3.22	11	Pn	Pn	20 17 03.0	+1.8
	63nm,7.0s						
MOTA				Sn	Sn	20 17 43.1	+3.4
WTTA	Wattenberg	3.24	17	⇑iPn	Pn	20 17 03.2	+1.7
WTTA				i Sn	Sn	20 17 42.4	+2.3
WTTA	Wattenberg	3.24	17	Pn	Pn	20 17 03.2	+1.8
	27nm,5.0s						
WTTA				Sn	Sn	20 17 42.3	+2.3
WATA	Walderalm	3.29	16	⇓iPn	Pn	20 17 03.5	+1.3
WATA				⇓iSn	Sn	20 17 44.0	+2.5
RETA	Reutte	3.33	6	⇓iPn	Pn	20 17 04.7	+2.0
SMRF	Simiane la Rot	3.35	268	ePn	Pn	20 17 04.6	+1.6
	SNR=1.0						
SMRF				eSn	Sn	20 17 42.0	-0.8
	SNR=1.0						
SMRF				eSg	Sg	20 17 57.9	-0.2
	36nm,0.4s,SNR=1.0						
SMRF	Simiane la Rot	3.35	268	ePn	Pn	20 17 04.6	+1.6
	SNR=1.0						
SMRF				eSn	Sn	20 17 42.0	-0.8
	SNR=1.0						
SMRF				eSg	Sg	20 17 57.9	-0.2
	18nm,0.4s,SNR=1.0						
GRN	Grenoble	3.36	290	P	Pn	20 17 06.4	+3.3
LJU	Ljubljana	3.58	57	i Pn	Pn	20 17 08.3	+2.2
LJU				i Sn	Sn	20 17 47.9	-0.4
KBA	Koelnbreinsper	3.63	36	⇑iPn	Pn	20 17 07.8	+0.9
CABF	La Chapelle	3.79	311	ePn	Pn	20 17 11.0	+2.0
	SNR=1.0						
CABF				eSn	Sn	20 17 52.5	-1.1
	25nm,0.6s,SNR=1.0						
CABF	La Chapelle	3.79	311	ePn	Pn	20 17 11.0	+2.0
	SNR=1.0						
CABF				eSn	Sn	20 17 52.5	-1.1
	12nm,0.6s,SNR=1.0						
OBKA	Obir	3.84	51	⇓iPn	Pn	20 17 09.7	-0.1
OBKA				⇑iSn	Sn	20 17 54.7	-0.2
VIVF	Saint-Julien-l	4.02	282	ePn	Pn	20 17 12.9	+0.7
	SNR=1.0						
VIVF				eSn	Sn	20 17 58.2	-1.2
	14nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	4.02	282	ePn	Pn	20 17 12.9	+0.7
	SNR=1.0						
VIVF				eSn	Sn	20 17 58.2	-1.2
	7.1nm,0.4s,SNR=1.0						
HINF	Hinteralfeld	4.32	328	ePn	Pn	20 17 16.7	+0.3
	SNR=1.0						
HINF				eSn	Sn	20 18 05.2	-1.6
	41nm,0.4s,SNR=1.0						
HINF	Hinteralfeld	4.32	328	ePn	Pn	20 17 16.7	+0.3
	SNR=1.0						
HINF				eSn	Sn	20 18 05.2	-1.6
	21nm,0.4s,SNR=1.0						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFO	**Black Forest**	**4.35**	**343**	*e*Pn	**Pn**	**20 17 16.8**	**+0.1**
BFO				*e*Sn	**Sn**	**20 18 06.6**	**-0.8**
MOA	**Molln**	**4.63**	**36**	⇑*i*Pn	**Pn**	**20 17 21.1**	**+0.5**
MOA				*i* Sn	**Sn**	**20 18 15.7**	**+1.4**
MOA	**Molln**	**4.63**	**36**	⇑*i*Pn	**Pn**	**20 17 21.1**	**+0.5**
	SNR=22						
MOA				⇓*i*Sn	**Sn**	**20 18 15.7**	**+1.4**
MOA	**Molln**	**4.63**	**36**	Pn	**Pn**	**20 17 21.1**	**+0.6**
	21nm,6.0s						
MOA				Sn	**Sn**	**20 18 15.7**	**+1.4**
HAU	**Haudompre**	**4.67**	**326**	*e*Pn	**Pn**	**20 17 22.4**	**+1.2**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 18 13.3**	**-2.1**
	63nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**4.67**	**326**	*e*Pn	**Pn**	**20 17 22.4**	**+1.2**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**20 18 13.3**	**-2.1**
	32nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.69**	**335**	*e*Pn	**Pn**	**20 17 21.9**	**+0.4**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**20 18 13.9**	**-2.0**
	24nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**4.69**	**335**	*e*Pn	**Pn**	**20 17 21.9**	**+0.4**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**20 18 13.9**	**-2.0**
	12nm,0.4s,SNR=1.0						
ARSA	**Arzberg**	**4.82**	**49**	⇓*i*Pn	**Pn**	**20 17 22.6**	**-0.6**
	SNR=6.7						
ARSA	**Arzberg**	**4.82**	**49**	Pn	**Pn**	**20 17 22.6**	**-0.6**
	6.0nm,7.0s						
SMF	**Signal de Mont**	**5.12**	**301**	*e*Pn	**Pn**	**20 17 28.6**	**+1.3**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**20 18 24.4**	**-2.0**
	68nm,0.6s,SNR=1.0						
SMF	**Signal de Mont**	**5.12**	**301**	*e*Pn	**Pn**	**20 17 28.6**	**+1.3**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**20 18 24.4**	**-2.0**
	34nm,0.6s,SNR=1.0						
GEC2	**GERESS Array S**	**5.25**	**26**	*e*Pn	**Pn**	**20 17 28.4**	**-0.6**
GEC2				*e*Sn	**Sn**	**20 18 27.1**	**-2.5**
GERES	**GERESS Array B**	**5.25**	**26**	Pn	**Pn**	**20 17 28.4**	**-0.7**
	2.7nm,0.3s,baz=203,slow=13,SNR=42						
GERES				Sn	**Sn**	**20 18 26.7**	**-2.8**
	2.2nm,0.3s,baz=207,slow=24,SNR=7.6						
SFTF	**Sexfontaines**	**5.39**	**320**	*e*Pn	**Pn**	**20 17 31.9**	**+0.9**
	baz=137						
SFTF				*e*Sn	**Sn**	**20 18 30.6**	**-2.6**
	4.4nm,0.3s						
SFTF	**Sexfontaines**	**5.39**	**320**	*e*Pn	**Pn**	**20 17 31.9**	**+0.9**
SFTF				*e*Sn	**Sn**	**20 18 30.6**	**-2.6**
	2.2nm,0.3s						
LOR	**Lormes**	**5.41**	**307**	*e*Pn	**Pn**	**20 17 32.7**	**+1.4**
	baz=128,SNR=1.0						
LOR				*e*Sn	**Sn**	**20 18 31.2**	**-2.5**
	13nm,0.3s,SNR=1.0						
CONA	**Conrad Observa**	**5.43**	**44**	⇓*i*Pn	**Pn**	**20 17 31.7**	**+0.2**
CONA				⇓*i*Sn	**Sn**	**20 18 34.1**	**+0.1**
KHC	**Kasperske Hory**	**5.46**	**24**	*e*PN	**Pn**	**20 17 31.5**	**-0.5**
KHC				*e*SN	**Sn**	**20 18 31.1**	**-3.8**
KHC				*e*SG	**Sg**	**20 18 57.9**	**-8.0**
AVF	**Avril sur Loir**	**5.48**	**301**	*e*Pn	**Pn**	**20 17 34.1**	**+1.8**
AVF				*e*Sn	**Sn**	**20 18 33.1**	**-2.3**
	14nm,0.5s						
SSF	**Saint Saulge**	**5.51**	**304**	*e*Pn	**Pn**	**20 17 34.0**	**+1.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**20 18 33.7**	**-2.5**
	7.3nm,0.3s						
RFYF	**Reffroy**	**5.52**	**325**	*e*P	**Pn**	**20 17 37.1**	**+4.3**
BGF	**Bois d'Agland**	**5.71**	**297**	*e*Pn	**Pn**	**20 17 36.8**	**+1.4**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**20 18 38.4**	**-2.5**
	27nm,0.4s,SNR=1.0						
MTLF	**Montolieu**	**5.85**	**264**	*e*Pn	**Pn**	**20 17 38.2**	**+0.8**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**20 18 42.0**	**-2.5**
	9.0nm,0.4s						
MTLF	**Montolieu**	**5.85**	**264**	*e*Pn	**Pn**	**20 17 38.2**	**+0.8**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**20 18 42.0**	**-2.5**
	4.5nm,0.4s						
CAF	**Calviac**	**5.87**	**280**	*e*Pn	**Pn**	**20 17 38.7**	**+1.1**
TCF	**Toulx Ste Croi**	**6.03**	**293**	*e*Pn	**Pn**	**20 17 41.1**	**+1.3**
TCF				*e*Sn	**Sn**	**20 18 46.2**	**-2.7**
	13nm,0.5s,SNR=1.0						
NKC	**Novy Kostel**	**6.24**	**13**	*e*SN	**Sn**	**20 18 49.1**	**-4.9**
RJF	**Les Rejaudoux**	**6.29**	**283**	*e*P	**Pn**	**20 17 48.9**	**+5.4**
PRU	**Pruhonice**	**6.51**	**25**	*e*PN	**Pn**	**20 17 45.2**	**-1.2**
PRU				*e*SN	**Sn**	**20 18 56.0**	**-4.8**
PRU				*e*SG	**Sg**	**20 19 30.9**	**-8.6**
PVCC	**Panska Ves**	**7.00**	**23**	*e*PN	**Pn**	**20 17 52.3**	**-0.8**
BRG	**Berggiesshubel**	**7.15**	**19**	PN	**Pn**	**20 17 55.2**	**0.0**
BRG				*e*		20 19 13.3	
BRG	**Berggiesshubel**	**7.15**	**19**	SG	**Sg**	**20 19 48.0**	**-12**
	7.3nm,1.2s						
CLL	**Collm**	**7.37**	**14**	*e*Pn	**Pn**	**20 17 58.0**	**-0.2**
CLL				*e*Sn	**Sn**	**20 19 09.0**	**-13**
CLL				*e*Sb	**Sb**	**20 19 35.0**	**-11**
CLL				*e*Sg	**Sg**	**20 20 08.0**	**+1.0**
DPC	**Dobruska-Polom**	**7.43**	**32**	*e*SG	**Sg**	**20 20 01.2**	**-7.8**
FINES	**FINESS Array B**	**19.67**	**23**	P	**Pn**	**20 20 40.8**	**0.0**
	0.1nm,0.3s,baz=207,slow=8.7,SNR=6.2						
MKAR	**Makanchi Array**	**48.95**	**60**	P	**P**	**20 24 57.8**	**+0.9**
	0.2nm,0.4s,mb3.5,baz=282,slow=6.8,SNR=4.1						

MAN 05 20:31:25, 1258N×12353E, h1^{km}, mb3.6, ML2.3, MS1.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.24**	**157**	⇑*i*P	Pg	20 31 30.5	+0.9
MMPH				*i* S	Sg	20 31 34.2	+1.5
CNP	**Catarman**	**1.11**	**94**	*e*P	Pg	20 31 47.9	+1.6
PVCP	**Virac**	**1.18**	**31**	*e*P	Pg	20 31 48.3	+0.7
OTRP	**Odiongan**	**1.49**	**262**	*e*P	Pn	20 31 53.8	+0.9
GUIM	**Jordan**	**2.15**	**205**	*e*P	Pn	20 32 03.0	+1.0

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*DDA **05** 20:56:02.3, 3999N×4202E, h11^{km}, Md2.9*

CSEM 05 20:55:58.7±0.1**, 3994N×4177E, h60^{km}, MD2.9, Error ellipse: s-maj=6.4km s-min=2.8km az=178.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.31**	**264**	*i* P	Pn	20 56 11.9	+3.1
ERZM				*i* S	Sn	20 56 19.9	+3.6
EZM	**Erzurum**	**0.31**	**264**	PG	Pn	20 56 11.8	+3.0
EZM				SG	Sn	20 56 20.2	+3.9
TUTA	**Tutak**	**0.97**	**123**	*i* P	Pn	20 56 17.7	+1.4
TUTA				*i* S	Sn	20 56 31.3	+2.0
DIGO	**Kars**	**1.32**	**68**	*i* P	Pn	20 56 22.1	+1.2
DIGO				*i* S	Sn	20 56 40.2	+2.6
DIGO	**Kars**	**1.32**	**68**	*i* P	Pn	20 56 22.1	+1.1
DIGO				*i* S	Sn	20 56 40.2	+2.6

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*ISCJB **05** 20:56:28.3±0.8, 3289N±007×1401E±01, h146^{km}±6^{km}, mb3.2/2, Error ellipse: s-maj=20.8km s-min=10.3km az=15.0*

*IDC **05** 20:56:29.9±2.0, 3284N×14005E, h136^{km}±12^{km}, mb3.0/2, mb1 3.1/3, mb1mx2.8/21, mbtmp2.8/3, Error ellipse: s-maj=121.5km s-min=35.8km az=81.0*

*JMA **05** 20:56:30.5±0.2, 3300N×14013E, h138^{km}±2^{km}, M3.1*

ISC 05 20:56:29.7±0.8**, 3292N**±007×**1402E**±01**, h143^{km}**±6^{km}**, n14, σ0^{s}50**/19**, mb3.2**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.34**	**304**	P	**Pn**	**20 56 49.7**	**+0.3**
JHJ2				S	**Sn**	**20 57 04.1**	**-0.4**
JHJ	**Hachijo jima 2**	**0.36**	**303**	P	**Pn**	**20 56 50.0**	**+0.4**
	66nm,0.3s,baz=72,slow=21,SNR=26						
JHJ				S	**Sn**	**20 57 04.3**	**-0.3**
	72nm,0.3s,baz=65,slow=23,SNR=7.5						
BSO1	**Boso 1**	**1.86**	**22**	P	**Pn**	**20 57 02.7**	**0.0**
BSO1				*e*S	**Sn**	**20 57 28.3**	**+0.2**
JIM2	**Oshima 3**	**1.89**	**342**	P	**Pn**	**20 57 03.1**	**+0.1**
BSO2	**Boso 2**	**1.89**	**15**	*e*S	**Sn**	**20 57 29.3**	**+0.6**
BSO3	**Boso 3**	**1.90**	**9**	P	**Pn**	**20 57 03.7**	**+0.6**
BSO3				*e*S	**Sn**	**20 57 28.3**	**-0.6**
BSO4	**Boso 4**	**2.07**	**4**	P	**Pn**	**20 57 05.4**	**+0.3**
JOD2	**Odawara 2**	**2.49**	**340**	P	**Pn**	**20 57 10.7**	**+0.4**
JOD2				*e*S	**Sn**	**20 57 42.3**	**+0.6**
JHU	**Hanno**	**3.01**	**346**	P	**Pn**	**20 57 16.6**	**-0.2**
JAG	**Ashikaga**	**3.54**	**351**	P	**Pn**	**20 57 22.7**	**-1.0**
JHO	**Hitachi**	**3.69**	**5**	P	**Pn**	**20 57 24.4**	**-1.3**
MJAR	**Matsushiro Arr**	**3.95**	**337**	P	**Pn**	**20 57 29.1**	**+0.1**
	0.3nm,0.3s,baz=141,slow=16,SNR=2.8						
WRA	**Warramunga Arr**	**52.86**	**187**	P	**P**	**21 05 31.0**	**+0.3**
	0.2nm,0.4s,mb3.2,baz=1.8,slow=7.6,SNR=9.3						
ASAR	**Alice Springs**	**56.59**	**187**	P	**P**	**21 05 57.4**	**-0.2**
	0.2nm,0.4s,mb3.3,baz=4.3,slow=6.6,SNR=6.5						

IDC 05 21:34:05.1±2.1**, 118N×12628E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=175.8km s-min=27.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.43**	**160**	P	P	21 39 04.5	-1.1
	0.6nm,0.5s,baz=338,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.78**	**164**	P	P	21 39 39.0	+1.2
	0.2nm,0.4s,baz=346,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**59.40**	**326**	P	P	21 44 09.4	0.0
	0.2nm,0.4s,baz=123,slow=7.8,SNR=3.6						

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*ISCJB **05** 22:20:55.3±1.9, 487N±01×1548E±02, h69^{km}±17^{km}, mb3.4/8, Error ellipse: s-maj=32.1km s-min=11.7km az=135.9*

*MOS **05** 22:20:55.7±1.2, 4877N×15467E, h76^{km}, mb3.9/1, Error ellipse: s-maj=44.6km s-min=20.7km az=67.1*

*IDC **05** 22:20:59.9±4.9, 4864N×15462E, h97^{km}±45^{km}, mb3.2/8, mb1 3.5/9, mb1mx3.3/22, mbtmp3.3/9, Error ellipse: s-maj=30.4km s-min=20.2km az=132.0*

ISC 05 22:20:56.7±1.6**, 488N**±01×**1548E**±02**, h65^{km}**±15^{km}**, n13, σ0^{s}90**/14**, mb3.4**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.11**	**24**	*e*PN	**Pn**	**22 21 29.2**	**-0.5**
SKR				*e*S	**Sn**	**22 21 54.5**	**-0.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,590nm,0.2s						
SKR				smax			
	comp=E,340nm,0.4s						
ASAJ	**Asahikawa**	**9.59**	**246**	PN	**Pn**	**22 23 13.4**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.59**	**246**	P	**Pn**	**22 23 13.4**	**+1.5**
	comp=Z,1.2nm,0.3s,baz=95,slow=22,SNR=6.6						
KSRS	**Korea Array**	**22.50**	**250**	P	**P**	**22 25 50.2**	**-0.4**
	comp=Z,5.1nm,1.1s,mb3.8,baz=45,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**47.02**	**296**	P	**P**	**22 29 20.4**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.2,baz=47,slow=6.3,SNR=3.2						
YKA	**Yellowknife Ar**	**48.65**	**38**	P	**P**	**22 29 33.9**	**+0.3**
YKA	**Yellowknife Ar**	**48.65**	**38**	P	**P**	**22 29 33.9**	**+0.4**
	comp=Z,0.2nm,0.5s,mb3.3,baz=297,slow=7.2,SNR=4.4						
PDAR	**Pinedale Array**	**62.68**	**56**	P	**P**	**22 31 15.6**	**+1.2**
	comp=Z,0.5nm,0.8s,mb3.5,baz=336,slow=3.3,SNR=4.8						
FINES	**FINESS Array B**	**62.69**	**335**	P	**P**	**22 31 14.8**	**+0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**62.69**	**335**	P	**P**	**22 31 14.8**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=49,slow=9.5,SNR=2.9						
WRA	**Warramunga Arr**	**70.78**	**200**	P	**P**	**22 32 04.7**	**-1.3**
	comp=Z,0.4nm,0.8s,mb3.3,baz=16,slow=6.1,SNR=4.1						
ASAR	**Alice Springs**	**74.47**	**200**	P	**P**	**22 32 26.8**	**-1.0**
	comp=Z,0.3nm,0.8s,mb3.1,baz=14,slow=5.5,SNR=4.1						
TXAR	**Lajitas Array**	**75.55**	**62**	P	**P**	**22 32 35.1**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.2,baz=296,slow=4.6,SNR=5.0						

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*ISCJB **05** 22:30:19.0±0.2, 3591N±002×2407E±002, h64^{km}±3^{km}, mb3.9/26, Error ellipse: s-maj=3.7km s-min=2.3km az=141.2*

*PDG **05** 22:30:18.9±0.3, 3570N×2261E, h11^{km}±11^{km}, ML4.3/10, Error ellipse: s-maj=385.3km s-min=179.3km az=90.0*

*HLW **05** 22:30:19.5, 3601N×2449E, h33^{km}, Mb3.9*

*CSEM **05** 22:30:19.8±0.1, 3593N×24.11E, h66^{km}, mb3.9/18, Error ellipse: s-maj=1.8km s-min=1.3km az=43.0*

*MOS **05** 22:30:19.2±1.1, 3593N×2394E, h59^{km}, mb4.1/13, Error ellipse: s-maj=7.1km s-min=3.5km az=99.7*

*NEIC **05** 22:30:19.0, 3596N×2409E, h33^{km}, mb3.9/13, ML4.6(THE), ML3.8(ATH), After ATH.*

*IDC **05** 22:30:19.4±1.1, 3592N×24.13E, h44^{km}±16^{km}, mb3.8/13, mb1 3.9/20, mb1mx3.8/29, mbtmp3.8/20, ML4.0/7, Error ellipse: s-maj=15.6km s-min=12.5km az=19.0*

*ATH **05** 22:30:19.0, 3596N×2409E, h33^{km}±5^{km}, MD3.9/19, ML3.8*

*THE **05** 22:30:21.7, 36.18N×2409E, h3^{km}, ML4.4*

ISC 05 22:30:20.2±0.2**, 3588N**±002×**2408E**±002**, h55^{km}**±3^{km}**, n253, σ1^{s}25**/326**, mb3.9**/26**, 29C-9D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	**Vamos**	**0.48**	**169**	*e*PN	**Pn**	**22 30 31.8**	**+0.3**
VAM				*e*SN	**Sn**	**22 30 39.5**	**-0.2**
IDI	**Anoyia**	**0.89**	**132**	P	**Pn**	**22 30 36.7**	**+0.2**
	156nm,0.3s,baz=317,slow=14,SNR=539						
IDI				S	**Sn**	**22 30 47.7**	**-0.7**
	631nm,0.3s,baz=83,slow=18,SNR=25						
KYTH	**Kithira**	**0.94**	**296**	*e*PB	**Pn**	**22 30 36.0**	**-1.1**
GVD	**Gavdhos**	**1.04**	**180**	*e*Pn	**Pn**	**22 30 40.5**	**+1.9**
GVD				Sn	**Sn**	**22 30 55.0**	**+2.9**
GVD	**Gavdhos**	**1.04**	**180**	*e*Pn	**Pn**	**22 30 40.5**	**+2.0**
GVD				Sn	**Sn**	**22 30 55.0**	**+2.9**
SANT	**Santorini**	**1.22**	**66**	*e*Pn	**Pn**	**22 30 41.9**	**+1.0**
SANT				*e*Sn	**Sn**	**22 30 54.9**	**-1.4**
SANT	**Santorini**	**1.22**	**66**	*e*Pn	**Pn**	**22 30 41.8**	**+0.9**
SANT				*e*Sn	**Sn**	**22 30 54.9**	**-1.4**
VLI	**Veliai**	**1.25**	**312**	*e*PN	**Pn**	**22 30 40.7**	**-0.6**
LAST	**Lasithi**	**1.35**	**122**	P	**Pn**	**22 30 43.7**	**+1.1**
NPS	**Neapolis**	**1.39**	**116**	*e*PB	**Pn**	**22 30 43.9**	**+0.7**
NPS				*e*SN	**Sn**	**22 31 02.6**	**+2.1**
APE	**Apeiranthos**	**1.66**	**44**	*e*PN	**Pn**	**22 30 47.2**	**+0.3**
APE				*e*SN	**Sn**	**22 31 06.9**	**-0.3**
DID	**Didima**	**1.76**	**338**	*e*Pg	**Pn**	**22 30 48.2**	**-0.1**
DID				*e*Sg	**Sn**	**22 31 08.8**	**-0.8**
NAIG	**Nisos Aigina**	**1.93**	**346**	*e*PN	**Pn**	**22 30 50.0**	**-0.6**
NAIG				*e*SN	**Sn**	**22 31 13.0**	**-0.8**
VLX	**Vlachokerasia**	**2.02**	**318**	*e*Pb	**Pn**	**22 30 52.1**	**+0.3**
ATH	**Athens Observa**	**2.11**	**352**	*e*PN	**Pn**	**22 30 52.8**	**-0.2**
PYL	**PYLOS**	**2.14**	**299**	*e*Pn	**Pn**	**22 30 55.9**	**+2.4**
PYL				*e*Sn	**Sn**	**22 31 22.4**	**+3.5**
ITM	**Ithomi**	**2.17**	**307**	*e*PB	**Pn**	**22 30 55.4**	**+1.6**
PTL	**Penteli**	**2.17**	**355**	*e*PN	**Pn**	**22 30 53.5**	**-0.4**
PTL				*e*SN	**Sn**	**22 31 18.0**	**-1.6**
LTK	**Loutraki**	**2.32**	**338**	*e*Pn	**Pn**	**22 30 56.2**	**+0.3**
LTK				*e*Sn	**Sn**	**22 31 23.8**	**+0.6**
KARP	**Karpathos**	**2.53**	**97**	*e*PN	**Pn**	**22 30 59.7**	**+1.0**
KARP				*e*SN	**Sn**	**22 31 29.3**	**+1.0**
SMG	**Samos**	**2.87**	**50**	*e*PN	**Pn**	**22 31 03.9**	**+0.5**
LKR	**Lokris**	**2.90**	**343**	*e*PN	**Pn**	**22 31 04.0**	**+0.2**
CHOS	**Chios island**	**2.96**	**32**	*e*Pn	**Pn**	**22 31 05.3**	**+0.7**
CHOS				*e*Sn	**Sn**	**22 31 39.2**	**+0.4**
CHOS	**Chios island**	**2.96**	**32**	*e*Pn	**Pn**	**22 31 05.3**	**+0.7**
CHOS				*e*Sn	**Sn**	**22 31 39.2**	**+0.4**
SELA	**Sela**	**2.96**	**324**	*e*Pn	**Pn**	**22 31 05.4**	**+0.7**
SELA				*e*Sn	**Sn**	**22 31 39.6**	**+0.7**
RLS	**Riolos of Patr**	**3.02**	**317**	*e*PN	**Pn**	**22 31 07.3**	**+1.9**
AOS	**Alonnisos**	**3.29**	**357**	P	**Pn**	**22 31 09.5**	**+0.4**
AOS	**Alonnisos**	**3.29**	**357**	P	**Pn**	**22 31 09.5**	**+0.4**
ARG	**Arkhangelos**	**3.29**	**83**	*e*PN	**Pn**	**22 31 11.2**	**+2.0**
AGG	**Agios Georgios**	**3.43**	**337**	*e*Pn	**Pn**	**22 31 11.9**	**+0.8**
AGG				*e*Sn	**Sn**	**22 31 50.5**	**0.0**
AGG	**Agios Georgios**	**3.43**	**337**	P	**Pn**	**22 31 12.0**	**+0.9**
AGG				S	**Sn**	**22 31 50.2**	**-0.3**
KFL	**Anninata**	**3.45**	**311**	*e*Pn	**Pn**	**22 31 12.3**	**+0.9**
NEO	**Neokhori**	**3.49**	**349**	*e*PN	**Pn**	**22 31 12.5**	**+0.6**
EVR	**Evrytania**	**3.53**	**330**	*e*PN	**Pn**	**22 31 13.8**	**+1.4**
XOR	**Xorichti**	**3.55**	**349**	P	**Pn**	**22 31 13.3**	**+0.5**
XOR	**Xorichti**	**3.55**	**349**	*e*Pn	**Pn**	**22 31 13.2**	**+0.5**
VLS	**Valsamata**	**3.62**	**310**	*e*PN	**Pn**	**22 31 13.6**	**0.0**
PRK	**Paraskevi**	**3.78**	**27**	*e*PN	**Pn**	**22 31 16.3**	**+0.4**
LTBQ	**Tobruq**	**3.82**	**182**	*i* P	**Pn**	**22 31 18.4**	**+2.0**
	SNR=76						
LTBQ				*e*S	**Sn**	**22 31 56.7**	**-3.3**
	93nm,0.3s,SNR=76						
LKD	**Levkas**	**3.93**	**317**	P	**Pn**	**22 31 19.4**	**+1.5**
LKD				S	**Sn**	**22 32 02.5**	**-0.3**
LKD	**Levkas**	**3.93**	**317**	*e*Pn	**Pn**	**22 31 19.6**	**+1.7**
LKD				*e*Sn	**Sn**	**22 32 04.8**	**+2.0**
THL	**Klokotos Trika**	**4.03**	**337**	*e*PN	**Pn**	**22 31 19.6**	**+0.4**
PAIG	**Paliouri**	**4.05**	**356**	*e*Pn	**Pn**	**22 31 19.6**	**-0.1**
PAIG				*e*Sn	**Sn**	**22 32 05.1**	**-0.7**
PAIG	**Paliouri**	**4.05**	**356**	P	**Pn**	**22 31 19.7**	**+0.1**
PAIG				S	**Sn**	**22 32 05.4**	**-0.3**
PAIG	**Paliouri**	**4.05**	**356**	*e*Pn	**Pn**	**22 31 19.5**	**-0.1**
PAIG				*e*Sn	**Sn**	**22 32 05.1**	**-0.7**
LIA	**Limnos Island**	**4.10**	**12**	P	**Pn**	**22 31 24.2**	**+3.9**
LIT	**Litokhoron**	**4.40**	**344**	*e*Pn	**Pn**	**22 31 25.1**	**+0.8**
LIT				*e*Sn	**Sn**	**22 32 14.4**	**+0.2**
LIT	**Litokhoron**	**4.40**	**344**	P	**Pn**	**22 31 25.2**	**+0.9**
LIT				S	**Sn**	**22 32 14.1**	**-0.1**
OUR	**Ouranopolis**	**4.45**	**359**	*e*Pn	**Pn**	**22 31 25.3**	**+0.3**
OUR	**Ouranopolis**	**4.45**	**359**	P	**Pn**	**22 31 25.5**	**+0.5**
MEV	**Metsovon**	**4.50**	**331**	P	**Pn**	**22 31 27.5**	**+1.7**
MEV	**Metsovon**	**4.50**	**331**	*e*Pn	**Pn**	**22 31 27.0**	**+1.2**
PLG	**Polygyros**	**4.51**	**354**	*e*PN	**Pn**	**22 31 26.3**	**+0.4**
JAN	**Janina**	**4.56**	**327**	*e*PN	**Pn**	**22 31 28.3**	**+1.8**
IGT	**Igoumenitsa**	**4.70**	**322**	*e*Pn	**Pn**	**22 31 29.7**	**+1.2**
IGT				*e*Sn	**Sn**	**22 32 23.0**	**+1.2**
IGT	**Igoumenitsa**	**4.70**	**322**	P	**Pn**	**22 31 28.9**	**+0.4**
IGT				S	**Sn**	**22 32 21.5**	**-0.3**
IGT	**Igoumenitsa**	**4.70**	**322**	*e*Pn	**Pn**	**22 31 29.7**	**+1.2**
IGT				S	**Sn**	**22 32 21.5**	**-0.3**
IGT				*e*Sn	**Sn**	**22 32 23.0**	**+1.2**
HORT	**Hortiatis**	**4.77**	**351**	P	**Pn**	**22 31 30.6**	**+1.1**
HORT				S	**Sn**	**22 32 23.5**	**+0.1**
HORT	**Hortiatis**	**4.77**	**351**	*e*Pn	**Pn**	**22 31 30.5**	**+1.0**
HORT				*e*Sn	**Sn**	**22 32 23.2**	**-0.2**
SOH	**Sokhos**	**4.97**	**354**	*e*Pn	**Pn**	**22 31 33.3**	**+1.2**
SOH	**Sokhos**	**4.97**	**354**	P	**Pn**	**22 31 33.1**	**+1.0**
LSK	**Leskovik**	**5.07**	**328**	*i* PN	**Pn**	**22 31 35.7**	**+2.1**
LSK				*i* SN	**Sn**	**22 32 29.5**	**-1.3**
KEK	**Kerkira**	**5.11**	**320**	*e*PN	**Pn**	**22 31 34.1**	**0.0**
SRN	**Sarande**	**5.13**	**322**	*i* PN	**Pn**	**22 31 34.9**	**+0.5**
SRN				*i* SN	**Sn**	**22 32 29.5**	**-2.8**
GRG	**Griva**	**5.24**	**346**	*e*Pn	**Pn**	**22 31 37.1**	**+1.2**
GRG	**Griva**	**5.24**	**346**	P	**Pn**	**22 31 36.6**	**+0.8**
FNA	**Florina**	**5.34**	**337**	*e*Pn	**Pn**	**22 31 38.3**	**+1.1**
FNA				*e*Sn	**Sn**	**22 32 38.0**	**+0.7**
FNA	**Florina**	**5.34**	**337**	P	**Pn**	**22 31 38.1**	**+0.9**
FNA				S	**Sn**	**22 32 38.3**	**+1.0**
KNT	**Kendrikon**	**5.36**	**350**	*e*Pn	**Pn**	**22 31 38.9**	**+1.5**
KNT	**Kendrikon**	**5.36**	**350**	P	**Pn**	**22 31 39.1**	**+1.7**
KBN	**Korca**	**5.40**	**332**	*i* PN	**Pn**	**22 31 45.4**	**+7.4**
KBN				*i* SN	**Sn**	**22 32 40.5**	**+1.7**
NVR	**Nevrokopi**	**5.46**	**358**	*e*PN	**Pn**	**22 31 39.8**	**+0.9**
ISP	**Isparta**	**5.51**	**67**	*i* P	**Pn**	**22 31 43.5**	**+3.9**
VAY	**Valandovo**	**5.56**	**348**	*i* Pn	**Pn**	**22 31 41.0**	**+0.7**
VAY				*i* Sn	**Sn**	**22 32 41.3**	**-1.5**
VAY	**Valandovo**	**5.56**	**348**	*i* Pn	**Pn**	**22 31 40.9**	**+0.6**
VAY				*i* Sn	**Sn**	**22 32 41.3**	**-1.5**
BIA	**Bitola**	**5.57**	**338**	*i* Pn	**Pn**	**22 31 42.8**	**+2.4**
BIA				*i* Sn	**Sn**	**22 32 42.6**	**-0.3**
BIA	**Bitola**	**5.57**	**338**	*i* Pn	**Pn**	**22 31 42.8**	**+2.4**
BIA				*i* Sn	**Sn**	**22 32 42.6**	**-0.4**
MMB	**Musomiste**	**5.71**	**357**	*i* P	**Pn**	**22 31 44.0**	**+1.7**
RZN	**Rozhen**	**5.82**	**5**	*i* P	**Pn**	**22 31 45.5**	**+1.7**
OHR	**Ohrid**	**5.82**	**335**	*i* Sn	**Sn**	**22 32 47.7**	**-1.5**
KDZ	**Kurdzhali**	**5.86**	**10**	*i* P	**Pn**	**22 31 45.0**	**+0.7**
KRUS	**Krusevo**	**5.91**	**339**	*i* Pn	**Pn**	**22 31 47.3**	**+2.2**
KRUS				*i* Sn	**Sn**	**22 32 51.0**	**-0.4**
LJBD	**Adjabya**	**5.92**	**214**	⇓*i*P	**Pn**	**22 31 45.1**	**-0.2**
	SNR=76						
STIP	**Stip**	**5.99**	**346**	*i* Pn	**Pn**	**22 31 48.4**	**+2.2**
KKB	**Krupnik**	**6.03**	**353**	*i* P	**Pn**	**22 31 48.0**	**+1.3**
TIR	**Tirane**	**6.38**	**330**	*i* PN	**Pn**	**22 31 51.6**	**+0.1**
TIR				*i* SN	**Sn**	**22 33 02.0**	**-0.9**
PHP	**Peshkopia**	**6.46**	**335**	*i* PN	**Pn**	**22 31 53.2**	**+0.7**
PHP				*i* SN	**Sn**	**22 33 02.0**	**-2.8**
LCI	**Lecce**	**6.47**	**315**	P	**Pn**	**22 31 52.1**	**-0.7**
LCI				pmax	pmax		
	comp=Z,56nm,0.4s						
LCI	**Lecce**	**6.47**	**315**	Pn	**Pn**	**22 31 52.1**	**-0.7**
	comp=Z,56nm,0.4s						
TIP	**Timpagrande**	**6.69**	**302**	*e*Pn	**Pn**	**22 31 54.9**	**-0.8**
TIP				*e*Sn	**Sn**	**22 33 07.7**	**-2.7**
TIP	**Timpagrande**	**6.69**	**302**	*e*Pn	**Pn**	**22 31 54.8**	**-0.9**
TIP				*e*Sn	**Sn**	**22 33 07.7**	**-2.8**
VTS	**Vitosha**	**6.74**	**354**	⇑P	**Pn**	**22 31 58.5**	**+2.1**
VTS	**Vitosha**	**6.74**	**354**	*i* P	**Pn**	**22 31 59.0**	**+2.6**
VTS	**Vitosha**	**6.74**	**354**	⇑*i*P	**Pn**	**22 31 58.5**	**+2.1**
GRI	**Girifalco**	**6.77**	**298**	Pn	**Pn**	**22 31 56.0**	**-0.9**
SOI	**Samo**	**6.79**	**291**	P	**Pn**	**22 31 55.3**	**-1.8**
SOI				pmax	pmax		
	comp=Z,18nm,0.4s						
SOI	**Samo**	**6.79**	**291**	Pn	**Pn**	**22 31 55.3**	**-1.8**
	comp=Z,18nm,0.4s						
PUK	**Puka**	**6.96**	**333**	*i* PN	**Pn**	**22 31 59.4**	**-0.1**
PUK				*i* SN	**Sn**	**22 33 15.7**	**-1.6**
MTTG	**Motta San Giov**	**7.04**	**290**	Pn	**Pn**	**22 31 59.2**	**-1.4**
	comp=Z,22nm,0.6s						
ULC	**Ulcinj**	**7.15**	**330**	⇑*i*Pn	**Pn**	**22 32 00.7**	**-1.3**
ULC				*e*Sn	**Sn**	**22 33 16.7**	**-5.0**
PE1	**Pezze di Greco**	**7.18**	**315**	*e*Pn	**Pn**	**22 32 01.5**	**-0.9**
HAVL	**Avola**	**7.30**	**281**	Pn	**Pn**	**22 32 01.3**	**-2.8**
	comp=Z,31nm,0.2s						
ORI	**Oriolo Calabro**	**7.33**	**307**	P	**Pn**	**22 32 04.9**	**+0.4**
ORI				pmax	pmax		
	comp=Z,1μm,4.1s						
ORI	**Oriolo Calabro**	**7.33**	**307**	Pn	**Pn**	**22 32 04.9**	**+0.4**
	comp=Z,1μm,4.1s						
PVL	**Pavlikeni**	**7.39**	**7**	*i* P	**Pn**	**22 32 05.9**	**+0.6**
PVY	**Plav**	**7.42**	**336**	⇑*i*Pn	**Pn**	**22 32 06.3**	**+0.5**
PVY				*e*Sn	**Sn**	**22 33 25.7**	**-2.8**
PDG	**Podgorica**	**7.54**	**332**	⇑*i*Pn	**Pn**	**22 32 05.8**	**-1.5**
TTG	**Podgorica**	**7.54**	**332**	⇑*i*Pn	**Pn**	**22 32 05.8**	**-1.5**
TTG				*e*Sn	**Sn**	**22 33 26.2**	**-5.1**
BUM	**Brajici-Budva**	**7.57**	**329**	⇑*i*Pn	**Pn**	**22 32 06.6**	**-1.2**
BUM				*e*Sn	**Sn**	**22 33 25.8**	**-6.4**
CSS	**Prodhromos**	**7.61**	**94**	*e*Pn	**Pn**	**22 32 07.8**	**-0.6**
CSS				*e*Sn	**Sn**	**22 33 25.8**	**-7.3**
SG1	**Sgolgore (BA)**	**7.64**	**313**	*e*Pn	**Pn**	**22 32 06.9**	**-1.8**
BEY	**Berane**	**7.70**	**336**	⇑*i*Pn	**Pn**	**22 32 09.6**	**+0.1**
BEY				*e*Sn	**Sn**	**22 33 31.8**	**-3.4**
IVA	**Berane**	**7.70**	**336**	⇑*i*Pn	**Pn**	**22 32 09.6**	**+0.1**
IVA				*e*Sn	**Sn**	**22 33 31.8**	**-3.4**
HCY	**Herceg Novi**	**7.86**	**328**	⇑*i*Pn	**Pn**	**22 32 09.4**	**-2.4**
HCY				*e*Sn	**Sn**	**22 33 32.6**	**-6.6**
VAE	**Valguarnera**	**7.93**	**284**	P	**Pn**	**22 32 13.0**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=342,slow=13,SNR=4.8						
VAE				S	**Sn**	**22 33 37.6**	**-3.4**
	comp=Z,1.8nm,0.3s,baz=265,slow=4.8,SNR=3.6						
MGR	**Morigerati**	**7.96**	**305**	Pn	**Pn**	**22 32 12.0**	**-1.1**
	comp=Z,60nm,0.4s						
NKY	**Niksic**	**7.96**	**332**	⇑*i*Pn	**Pn**	**22 32 11.5**	**-1.7**
NKY				*e*Sn	**Sn**	**22 33 37.0**	**-4.8**
CDT	**Castel del Mon**	**8.03**	**313**	*e*Pn	**Pn**	**22 32 12.0**	**-2.0**
BRY	**Bratogost**	**8.22**	**330**	⇑*i*Pn	**Pn**	**22 32 15.1**	**-1.5**
BRY				*e*Sn	**Sn**	**22 33 41.6**	**-6.4**
PLE	**Pljevlja**	**8.27**	**336**	*e*Pn	**Pn**	**22 32 17.2**	**-0.2**
PLE				*e*Sn	**Sn**	**22 33 44.6**	**-4.7**
HNAT	**Natroun**	**8.31**	**137**	P	**Pn**	**22 32 17.2**	**-0.7**
UPM	**Unac-Piva**	**8.33**	**333**	⇑*i*Pn	**Pn**	**22 32 17.2**	**-1.0**
UPM				*e*Sn	**Sn**	**22 33 45.9**	**-4.9**
SGO	**Sicignano**	**8.34**	**307**	P	**Pn**	**22 32 18.2**	**-0.1**
SGO				pmax	pmax		
	comp=Z,12nm,0.5s						
SGO	**Sicignano**	**8.34**	**307**	Pn	**Pn**	**22 32 18.2**	**-0.1**
	comp=Z,12nm,0.5s						
BRTR	**Keskin Array B**	**8.48**	**60**	P	**Pn**	**22 32 24.9**	**+4.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	**Keskin Array B**	**8.48**	**60**	P	**Pn**	**22 32 24.9**	**+4.6**
	comp=Z,1.1nm,0.3s,baz=245,slow=14,SNR=57						
MS1	**Monte Sant'Ang**	**8.61**	**315**	*e*Pn	**Pn**	**22 32 21.6**	**-0.4**
HSAF	**As Saff**	**8.86**	**133**	P	**Pn**	**22 32 24.5**	**-1.0**
HHAG	**Hagoal**	**8.96**	**129**	⇓P	**Pn**	**22 32 25.1**	**-1.7**
GLL	**Jalalah**	**8.98**	**132**	⇑*i*P	**Pn**	**22 32 25.7**	**-1.5**
TIRR	**Tirgusor**	**9.19**	**20**	⇑P	**Pn**	**22 32 30.6**	**+0.7**
TIRR	**Tirgusor**	**9.19**	**20**	⇑*i*P	**Pn**	**22 32 30.6**	**+0.7**
AMAG	**Maghara**	**9.25**	**122**	⇑*e*P	**Pn**	**22 32 28.4**	**-2.4**
HFRF	**Wahat Farafira**	**9.42**	**156**	P	**Pn**	**22 32 33.1**	**-0.1**
SUZ		**9.51**	**127**	P	**Pn**	**22 32 32.3**	**-2.1**
GZR	**Gura Zlata**	**9.55**	**354**	⇑P	**Pn**	**22 32 36.1**	**+1.2**
GZR	**Gura Zlata**	**9.55**	**354**	⇑*i*P	**Pn**	**22 32 36.2**	**+1.3**
VOIR		**9.57**	**4**	⇓*i*P	**Pn**	**22 32 36.4**	**+1.2**
MLR	**Muntele Rosu**	**9.70**	**8**	⇓P	**Pn**	**22 32 39.0**	**+2.0**
MLR	**Muntele Rosu**	**9.70**	**8**	⇓P	**Pn**	**22 32 39.0**	**+2.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MLR	Muntele Rosu	9.70	8	P	Pn	22 32 37.6	+0.6
	comp=Z,0.4nm,0.3s,baz=221,slow=8.0,SNR=11						
MLR	Muntele Rosu	9.70	8	⇓iP	Pn	22 32 39.0	+2.0
ZAF		9.71	130	P	Pn	22 32 35.5	-1.6
MMAI	Mount Meron Ar	9.78	104	P	Pn	22 32 35.9	-2.1
	comp=Z,3.7nm,0.3s,baz=314,slow=11,SNR=28						
MMAI				S	Sn	22 34 20.4	-5.9
	comp=Z,7.3nm,0.3s,baz=314,slow=26,SNR=8.4						
ZNM		9.85	129	⇓eP	Pn	22 32 37.4	-1.6
BZS	Buzias	9.90	350	⇑iP	Pn	22 32 40.1	+0.4
PLOR	Plostina	10.15	10	⇑iP	Pn	22 32 45.4	+2.4
VRI	Vrincioaia	10.18	11	⇑P	Pn	22 32 44.3	+0.9
VRI	Vrincioaia	10.18	11	⇑iP	Pn	22 32 44.3	+0.9
HNKL	Nakhl	10.22	123	P	Pn	22 32 42.1	-2.0
HNKL				S	Sn	22 34 27.1	-10
AQU	L'Aquila	10.51	311	ePn	Pn	22 32 49.8	+1.8
AQU				eSn	Sn	22 34 40.5	-3.7
AQU	L'Aquila	10.51	311	ePn	Pn	22 32 49.8	+1.8
AQU				eSn	Sn	22 34 40.5	-3.7
GRB	Gharib	10.58	133	⇑eP	Pn	22 32 48.1	-0.9
EIL	Elat	11.04	121	P	Pn	22 32 53.9	-1.4
EIL				S	Sn	22 34 49.7	-7.6
EIL	Elat	11.04	121	P	Pn	22 32 53.9	-1.4
	comp=Z,1.7nm,0.3s,baz=307,slow=7.3,SNR=37						
EIL				S	Sn	22 34 49.7	-7.6
	comp=Z,1.9nm,0.3s,baz=126,slow=22,SNR=6.1						
HKAT	Jabal Katrina	11.14	128	P	Pn	22 32 55.3	-1.4
ASF	Jabal al Asfar	11.26	106	P	Pn	22 32 57.3	-1.0
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=5.0						
ASF				S	Sn	22 34 57.4	-5.1
	comp=Z,0.3nm,0.3s,baz=13,slow=19,SNR=2.5						
SHRM		11.67	130	P	Pn	22 33 02.7	-1.2
BOJS	Bojanci	11.71	328	i Pn	Pn	22 33 02.2	-2.1
BOJS				eSn	Sn	22 35 04.1	-9.4
MALT	Malatya	11.71	74	Pn	Pn	22 33 02.3	-2.2
BURAR	Bucovina Array	11.76	4	⇑P	Pn	22 33 07.7	+2.7
BURAR	Bucovina Array	11.76	4	⇑iP	Pn	22 33 07.7	+2.7
CRES	Cresnjev	11.88	329	i Pn	Pn	22 33 05.0	-1.6
CRES				i Sn	Sn	22 35 07.3	-10
OBKA	Obir	12.81	329	⇓iPn	Pn	22 33 17.2	-2.1
OBKA				⇑iSn	Sn	22 35 32.6	-7.6
ANN	Anapa	13.52	45	eP	Pn	22 33 20.4	-8.6
ANN				pmax	pmax		
	comp=Z,53nm,1.2s						
STHS	Stebnicka Huta	13.69	352	ePN	Pn	22 33 39.4	+8.1
OJC	Ojcow	14.67	349	eP	Pn	22 33 48.1	+3.8
MORC	Moravsky Berou	14.69	343	ePn	Pn	22 33 44.2	-0.3
MORC				eSn	Sn	22 36 23.3	-2.5
MORC	Moravsky Berou	14.69	343	ePn	Pn	22 33 44.2	-0.3
MORC				eSn	Sn	22 36 23.3	-2.5
GERES	GERESS Array B	15.04	333	P	Pn	22 33 50.0	+0.9
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=7.6						
AKASG	Malin Array Be	15.27	12	P	Pn	22 33 51.0	-1.1
	comp=Z,0.4nm,0.3s,baz=204,slow=10,SNR=4.0						
KHC	Kasperske Hory	15.32	333	i P	Pn	22 33 49.8	-2.9
RUE	Ruedersdorf	18.13	339	Pn	Pn	22 34 26.5	-1.4
RUE	Ruedersdorf	18.13	339	Pn	Pn	22 34 26.5	-1.4
EBIE	Bielsa	19.70	297	P	Pn	22 34 47.4	+0.6
	comp=Z,1.1nm,0.3s						
EBIE	Bielsa	19.70	297	P	Pn	22 34 47.3	+0.6
	comp=Z,1.1nm,0.3s						
VRHR	Novokhopersk	19.75	34	eP	Pn	22 34 45.8	-1.4
VRHR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ESAC	San Caprasio	19.97	294	P	Pn	22 34 49.5	-0.4
	comp=Z,6.0nm,0.3s						
ESAC	San Caprasio	19.97	294	P	Pn	22 34 49.5	-0.4
	comp=Z,6.0nm,0.3s						
BSD	Bornholm Skovb	20.25	345	i P	P	22 34 48.8	-1.8
BSD				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BSD	Bornholm Skovb	20.25	345	i P	P	22 34 48.8	-1.8
	comp=Z,2.0nm,0.3s						
ETOR	Torete	21.05	291	P	P	22 35 00.1	+0.6
	comp=Z,3.3nm,0.4s,mb4.0						
ETOR	Torete	21.05	291	P	P	22 35 00.1	+0.6
ETOR				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
ETOR	Torete	21.05	291	P	P	22 35 00.1	+0.6
	comp=Z,3.3nm,0.4s,mb4.0						
OBN	Obninsk	21.07	20	⇓eP	P	22 34 58.9	-0.6
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.8						
OBN	Obninsk	21.07	20	eP	P	22 34 58.9	-0.6
	comp=Z,5.0nm,0.9s,mb3.8						
EVIA	Vianos	21.31	285	P	P	22 35 05.9	+3.6
	comp=Z,2.1nm,0.4s,mb3.8						
EVIA	Vianos	21.31	285	P	P	22 35 05.9	+3.6
EVIA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.8						
EVIA	Vianos	21.31	285	P	P	22 35 05.9	+3.6
	comp=Z,2.1nm,0.4s,mb3.8						
EBER	Berja	21.72	281	P	P	22 35 07.5	+0.9
	comp=Z,1.5nm,0.4s,mb3.8						
EQES	Quesada	21.79	283	P	P	22 35 08.0	+0.5
	comp=Z,0.7nm,0.3s,mb3.6						
EQES	Quesada	21.79	283	P	P	22 35 07.9	+0.5
	comp=Z,0.7nm,0.3s,mb3.6						
ESDC	Sonseca Array	22.45	288	P	P	22 35 17.0	+2.6
	comp=Z,2.3nm,0.4s,mb4.0						
ESDC	Sonseca Array	22.45	288	P	P	22 35 14.1	-0.3
	comp=Z,1.8nm,0.5s,mb3.8,baz=82,slow=9.3,SNR=17						
ESDC	Sonseca Array	22.45	288	P	P	22 35 17.0	+2.6
	comp=Z,2.3nm,0.4s,mb4.0						
ESLA	Sonseca Array	22.45	288	eP	P	22 35 14.2	-0.2
ESLA	Sonseca Array	22.45	288	eP	P	22 35 14.2	-0.2
GUD	Guadarrama	22.63	291	P	P	22 35 16.6	+0.3
	comp=Z,1.8nm,0.4s,mb3.9						
GUD	Guadarrama	22.63	291	P	P	22 35 16.6	+0.3
GUD				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
GUD	Guadarrama	22.63	291	P	P	22 35 16.6	+0.3
	comp=Z,1.8nm,0.4s,mb3.9						
EMIJ	Mijas	23.26	280	P	P	22 35 24.1	+1.2
	comp=Z,2.2nm,0.4s,mb3.9						
EMIJ	Mijas	23.26	280	P	P	22 35 24.0	+1.1
	comp=Z,2.2nm,0.4s,mb3.9						
MDT	Midelt	23.85	271	P	P	22 35 29.5	+1.1
	comp=Z,2.7nm,0.7s,mb3.8,baz=63,slow=12,SNR=6.4						
EMIN	Mina Concepcio	24.64	284	P	P	22 35 36.4	+0.9
	comp=Z,0.9nm,0.4s,mb3.6						
EMIN	Mina Concepcio	24.64	284	P	P	22 35 36.3	+0.8
	comp=Z,0.9nm,0.4s,mb3.6						
EBAD	Badajoz	24.84	286	P	P	22 35 38.0	+0.7
	comp=Z,1.1nm,0.4s,mb3.7						
EBAD	Badajoz	24.84	286	P	P	22 35 38.0	+0.7
	comp=Z,1.1nm,0.4s,mb3.7						
HFS	Hagfors	25.18	348	P	P	22 35 40.3	+0.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	Hagfors	25.18	348	P	P	22 35 40.3	+0.1
	comp=Z,1.6nm,0.6s,mb3.7,baz=157,slow=10,SNR=14						
MTE	Manteigas	25.20	290	P	P	22 35 41.5	+0.9
MTE	Manteigas	25.20	290	P	P	22 35 41.5	+0.9
FINES	FINESS Array B	25.62	2	P	P	22 35 43.1	-1.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	25.62	2	P	P	22 35 43.1	-0.9
	comp=Z,1.1nm,0.3s,mb3.8,baz=164,slow=10,SNR=22						
KAF	Kangasniemi	26.29	2	ep	P	22 35 48.6	-1.6
	comp=Z,1.3nm,0.3s,mb3.9						
KAF	Kangasniemi	26.29	2	eP	P	22 35 48.6	-1.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
NOA	NORSAR Array B	26.48	346	P	P	22 35 51.4	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	26.48	346	P	P	22 35 51.4	-0.5
	comp=Z,0.7nm,0.7s,mb3.3,baz=202,slow=16,SNR=3.3						
JOF	Joensuu	27.43	7	ep	P	22 35 57.9	-2.5
	comp=Z,2.8nm,0.6s,mb4.0						
AKTK	Aktyubinsk	28.42	49	P	P	22 36 08.6	-0.8
AKTK	Aktyubinsk	28.42	49	P	P	22 36 08.6	-0.8
AKTO	Aktyubinsk	28.42	49	P	P	22 36 08.6	-0.8
	comp=Z,0.4nm,0.3s,mb3.5,baz=221,slow=5.1,SNR=4.2						
TORD	Torodi Ar. Bea	30.30	227	P	P	22 36 27.2	+0.8
TORD	Torodi Ar. Bea	30.30	227	P	P	22 36 27.2	+0.8
	comp=Z,0.7nm,0.6s,mb3.6,baz=36,slow=9.5,SNR=17						
ARU	Arti	31.01	38	eP	P	22 36 33.1	+0.9
ARU	Arti	31.01	38	eP	P	22 36 33.1	+0.9
ARCES	ARCESS Array B	33.72	1	P	P	22 36 54.6	-1.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	33.72	1	P	P	22 36 54.6	-1.2
	comp=Z,1.9nm,0.6s,mb4.2,baz=171,slow=8.6,SNR=16						
BRVK	Borovoye	36.44	47	eP	P	22 37 19.2	-0.2
KMBO	Kilima Mbogo	38.81	159	P	P	22 37 41.2	+1.4
KMBO	Kilima Mbogo	38.81	159	P	P	22 37 41.2	+1.4
AAK	Ala-Archa	39.13	64	eP	P	22 37 42.2	-0.1
AAK	Ala-Archa	39.13	64	⇑eP	P	22 37 43.4	+1.2
AAK				pmax	pmax		
	comp=Z,7.0nm,2.4s,mb4.0						
AAK	Ala-Archa	39.13	64	eP	P	22 37 42.2	0.0
KURK	Kurchatov	41.41	52	eP	P	22 38 01.1	+0.1
	comp=Z,2.8nm,0.6s,mb4.1						
KURK	Kurchatov	41.41	52	⇑eP	P	22 38 01.2	+0.2
KURK	Kurchatov	41.41	52	eP	P	22 38 01.1	+0.1
	comp=Z,2.8nm,0.6s,mb4.1						
MKAR	Makanchi Array	44.12	57	P	P	22 38 23.5	+0.6
	comp=Z,1.6nm,0.4s,mb4.2,baz=271,slow=7.9,SNR=55						
MKAR	Makanchi Array	44.12	57	eP	P	22 38 23.5	+0.6
ZAL	Zalesovo	45.13	47	P	P	22 38 30.9	0.0
ZALV	Zalesovo Beam	45.15	47	P	P	22 38 30.9	-0.1
	comp=Z,3.3nm,0.4s,mb4.5,baz=273,slow=8.8,SNR=18						
TLY	Talaya	56.76	47	P	P	22 40 00.5	+2.2
TLY	Talaya	56.76	47	P	P	22 40 00.4	+2.2
PALK	Pallekele	58.89	105	eP	P	22 40 14.6	+0.9
PALK	Pallekele	58.89	105	eP	P	22 40 14.6	+0.9
SONM	Songino Array	59.71	51	P	P	22 40 19.7	+0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	Songino Array	59.71	51	P	P	22 40 19.7	+0.8
	comp=Z,0.7nm,0.6s,mb3.9,baz=284,slow=6.9,SNR=1.8						
SCHQ	Schefferville	62.07	319	P	P	22 40 35.7	+0.9
	comp=Z,1.1nm,0.4s,mb4.4,baz=74,slow=8.9,SNR=11						
ENH	Enshi	69.58	67	P	P	22 41 23.9	+0.4
ENH	Enshi	69.58	67	P	P	22 41 24.0	+0.5
BILL	Bilibino	72.58	14	eP	P	22 41 41.6	+0.5
BILL	Bilibino	72.58	14	eP	P	22 41 41.6	+0.5
YKA	Yellowknife Ar	76.49	342	P	P	22 42 04.0	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	76.49	342	P	P	22 42 04.0	+0.2
	comp=Z,0.6nm,0.4s,mb3.9,baz=30,slow=5.2,SNR=9.5						

IDC 05 23:00:33.9±23.0, 1263S×16734E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=727.4km s-min=51.5km az=123.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ASAR	Alice Springs	33.53	246	P	P	23 07 15.6	0.0
	0.3nm,0.7s,baz=72,slow=9.8,SNR=4.2						
SONM	Songino Array	80.86	323	P	P	23 12 50.1	+0.3
	0.2nm,0.3s,baz=137,slow=5.7,SNR=8.3						
MKAR	Makanchi Array	95.74	317	P	P	23 14 01.8	-0.1
	0.6nm,0.6s,baz=93,slow=5.7,SNR=7.9						

CSEM 05 23:09:11.9±0.1, 44.16N×1943E, h15km, ML2.7, Error ellipse: s-maj=2.8km s-min=2.2km az=18.0
ISCJB 05 23:09:12.3±0.5, 44.13N±003×1940E±004, h22km±7km, Error ellipse: s-maj=5.6km s-min=4.9km az=157.4
BEO 05 23:09:13.1±0.4, 44.11N×1950E, h7km±3km, ML2.9/8
NEIC 05 23:09:13.0±1.7, 4421N×1951E, h10km, ML2.7(BUC), Error ellipse: s-maj=26.4km s-min=7.1km az=173.0
ISC 05 23:09:12.5±0.5, 4414N±003×1947E±004, h16km±5km, n35, σ0s85/57, 13C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BBLS	Bajina Basta -	0.27	189	⇑iPg	Pg	23 09 18.5	+0.2
BBLS				eSg	Sg	23 09 22.2	-0.1
BBLS	Bajina Basta -	0.27	189	Pg	Pg	23 09 18.4	+0.1
BBLS				Sg	Sg	23 09 22.3	0.0
DIVS	Divcibare	0.38	95	⇑iPg	Pg	23 09 19.7	-0.5
DIVS				eSg	Sg	23 09 25.3	-0.1
DIVS	Divcibare	0.38	95	Pg	Pg	23 09 20.0	-0.2
DIVS				Sg	Sg	23 09 25.5	+0.1
SJES	Sjenica	0.93	158	⇑iPg	Pg	23 09 29.3	-1.3
SJES				eSg	Sg	23 09 41.7	-1.1
SJES	Sjenica	0.93	158	Pg	Pg	23 09 29.5	-1.1
SJES				Sg	Sg	23 09 44.0	+1.2
GRUS	Gruza	0.93	105	i Pg	Pg	23 09 30.1	-0.5
GRUS				eSg	Sg	23 09 44.1	+1.3
GRUS	Gruza	0.93	105	Pg	Pg	23 09 30.2	-0.4
GRUS				Sg	Sg	23 09 44.6	+1.8
BEO	Belgrade	0.98	45	i Pg	Pg	23 09 31.4	-0.2
BEO				eSg	Sg	23 09 44.4	-0.1
BEO	Belgrade	0.98	45	Pg	Pg	23 09 31.1	-0.5
BEO				Sg	Sg	23 09 44.4	-0.1
FGSL	Fruska Gora	1.05	13	i Pg	Pg	23 09 32.6	-0.2
FGSL				eSg	Sg	23 09 46.7	+0.1
FGSL	Fruska Gora	1.05	13	Pg	Pg	23 09 32.6	-0.2
FGSL				Sg	Sg	23 09 46.7	+0.1
SVIS	Svilajnac	1.27	82	ePg	Pg	23 09 35.3	-1.7
SVIS				eSg	Sg	23 09 53.4	-0.2
SVIS	Svilajnac	1.27	82	Pg	Pg	23 09 37.5	+0.5
SVIS				Sg	Sg	23 09 54.5	+0.9
RHK3	Tenkes	1.96	334	⇓ePn	Pn	23 09 44.9	-0.1
RHK3				eSn	Sn	23 10 14.4	+5.2
BZS	Buzias	2.13	45	⇑P	Pn	23 09 47.2	-0.1
BZS	Buzias	2.13	45	⇑iP	Pn	23 09 47.2	-0.2
BZS	Buzias	2.13	45	S	Sn	23 10 20.4	+6.9
PKSM	Moragy	2.16	345	⇑ePn	Pn	23 09 47.5	-0.3
BARS	Barje	2.16	127	ePn	Pn	23 09 48.7	+0.9
BARS				eSg	Sg	23 10 19.0	-3.0
GZR	Gura Zlata	2.67	61	⇑iP	Pn	23 09 55.2	+0.4
GZR	Gura Zlata	2.67	61	⇑P	Pn	23 09 55.2	+0.4
GZR				S	Sn	23 10 33.3	+6.4
PKS7	Kunszentmiklos	2.92	356	⇑eP	Pn	23 09 58.5	+0.2
GOLS	Golise	3.31	306	i Pn	Pn	23 10 04.0	+0.5
GOLS				i Sn	Sn	23 10 42.3	-0.3
PKSG		3.34	347	ePn	Pn	23 10 04.4	+0.3
DRGR		3.50	40	⇑P	Pn	23 10 07.2	+0.9
DRGR		3.50	40	⇑iP	Pn	23 10 07.2	+0.9
DRGR		3.50	40	⇑P	Pn	23 10 07.2	+0.9
DRGR				S	Sn	23 10 45.8	-1.5
PENC	Penc	3.66	358	⇑ePn	Pn	23 10 08.7	+0.3
VISS	Visnje	3.69	299	i Pn	Pn	23 10 10.0	+1.3
VISS				i Sn	Sn	23 10 50.6	-1.3
PSZ	Piszkesteto	3.80	4	⇓P	Pn	23 10 10.0	-0.3
PSZ	Piszkesteto	3.80	4	⇓iP	Pn	23 10 10.0	-0.3
CEY	Cerknica	3.92	296	i Pn	Pn	23 10 13.3	+1.2
CEY				i Sn	Sn	23 10 57.1	-0.6
JAVS	Javornik	4.22	297	i Pn	Pn	23 10 17.4	+1.3
JAVS				i Sn	Sn	23 11 03.8	-1.1
MODS	Modra-Piesok	4.50	341	ePN	Pn	23 10 20.8	+0.8
MODS				e		23 11 11.5	

ISCJB 05 23:09:14.8±1.0, 429S±004×14353E±005, h92km±9km, mb4.8/56, Error ellipse: s-maj=8.3km s-min=5.9km az=174.3
MOS 05 23:09:16.8±0.9, 428S×14346E, h106km, mb4.9/14, Error ellipse: s-maj=13.1km s-min=6.3km az=103.0
BJI 05 23:09:17.0, 456S×14392E, h144km, mB5.2, mb5.1
GCMT 05 23:09:18.8±0.2, 440S×14342E, h117km±1km, MW5.1/82, Moment Tensor Solution. s52,c68; s82,c136; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr5.05±.17; Mθθ-5.50±.20; Mφφ0.45±.22; Mrθ2.88±.14; Mθφ-1.20±.20; Mφr0.85±.16; Best double couple: M0 6.17200×10¹⁶ NP1:φs262.00000°,δ31.00000°,λ96.00000°. NP2: φs76.00000°,δ60.00000°,λ87.00000°. Principal axes: T 5.8370, Plg75.0000°, Azm337.0000°; N 0.6750, Plg3.0000°, Azm78.0000°; P -6.5060, Plg15.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 05 23:09:18.8±0.9, 431S×14351E, h117km±8km, mb4.9/23 Error ellipse: s-maj=6.5km s-min=4.8km az=70.0
IDC 05 23:09:19.8±0.4, 439S×14345E, h125km±3km, mb4.6/19, mb1 4.7/22, mb1mx4.7/23, mbtmp4.6/22, MS4.0/13, Ms1 4.0/13, ms1mx3.9/19, Error ellipse: s-maj=12.8km s-min=7.7km az=92.0
ISC 05 23:09:18.5±0.8, 436S±003×14352E±005, h112km±8km, h123km±3.0km:pP-P, n206, σ1s04/164, mb4.8/55, 12C-9D, New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PMG	Port Moresby	6.18	144	ePn	Pn	23 10 47.6	+0.2
PMG	Port Moresby	6.18	144	⇑eP	Pn	23 10 47.4	+0.1
PMG	Port Moresby	6.18	144	P	Pn	23 10 47.6	+0.2
	18nm,0.3s,baz=8.5,slow=4.2,SNR=49						
PMG				S	Sn	23 11 54.5	-2.1
	26nm,0.3s,baz=137,slow=19,SNR=3.3						
COEN	Coen	9.54	182	ePn	Pn	23 11 34.7	+1.7
	58nm,0.6s						
COEN				eSn	Sn	23 13 13.7	-4.7
CTA	Charters Tower	15.86	171	eP	Pn	23 12 56.1	+0.6
	22nm,0.6s						
CTA	Charters Tower	15.86	171	eP	Pn	23 12 56.1	+0.6
CTA				pmax	pmax		
	comp=Z,22nm,0.6s						
CTA	Charters Tower	15.86	171	P	Pn	23 12 56.8	+1.2
	comp=Z,3.1nm,0.3s,baz=359,slow=11,SNR=43						
CTA				LR	LR	23 19 00.5	
	comp=Z,668nm,21.4s,baz=17,slow=37						
CTAO	Charters Tower	15.86	171	ePn	Pn	23 12 57.1	+1.6
WB2	Warramunga Arr	17.88	209	⇓iP	Pn	23 13 19.3	-0.9
WB2				eS	S	23 16 32.9	-6.1
WB2	Warramunga Arr	17.88	209	ePn	Pn	23 13 19.5	-0.7
WB2				eS	S	23 16 38.3	-0.7
WRA	Warramunga Arr	17.89	209	P	Pn	23 13 19.5	-0.8
WRA				S	S	23 16 38.2	-1.0
WRA	Warramunga Arr	17.89	209	P	Pn	23 13 19.5	-0.8
	comp=Z,17nm,0.3s,baz=34,slow=11,SNR=136						
WRA				S	S	23 16 38.2	-1.0
	comp=Z,1.1nm,0.3s,baz=25,slow=22,SNR=4.8						
WRA				LR	LR	23 20 21.2	
	comp=Z,359nm,18.3s,baz=40,slow=37						
BATI	Kupang	20.53	252	P	P	23 13 49.5	+1.3
	comp=Z,152nm,0.6s,baz=103,slow=2.3,SNR=15						
BATI				S	S	23 17 36.1	+4.2
	comp=Z,31nm,0.8s,baz=81,slow=19,SNR=3.4						
ASAR	Alice Springs	21.32	205	P	P	23 13 56.6	0.0
	comp=Z,34nm,0.7s,mb4.8,baz=32,slow=10,SNR=207						
ASAR				S	S	23 17 45.0	-2.1
	comp=Z,3.6nm,0.7s,baz=29,slow=22,SNR=3.8						
EIDS	Eidsvold	22.11	162	eP	P	23 14 05.5	+0.5
	comp=Z,26nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	22.19	231	eP	P	23 14 04.2	-1.7
	comp=Z,92nm,0.8s,mb5.2						
FITZ				eS	S	23 18 03.0	+0.1
FITZ	Fitzroy Crossi	22.19	231	P	P	23 14 04.7	-1.2
	comp=Z,46nm,0.7s,mb4.9,baz=48,slow=8.1,SNR=59						
FITZ				LR	LR	23 23 16.8	
	comp=Z,268nm,18.9s,baz=46,slow=38						
ARMA	Armidale	27.02	164	eP	P	23 14 53.1	+2.8
STKA	Stephens Creek	27.43	184	eP	P	23 14 53.9	0.0
	comp=Z,26nm,0.6s,mb4.9						
STKA	Stephens Creek	27.43	184	P	P	23 14 54.2	+0.4
	comp=Z,24nm,0.6s,mb4.9,baz=352,slow=8.5,SNR=78						
STKA				LR	LR	23 26 30.6	
	comp=Z,566nm,19.4s,baz=137,slow=38						
DZM	Mont Dzumac	28.34	130	P	P	23 15 02.4	+0.2
	comp=Z,12nm,0.6s,mb4.6,baz=259,slow=16,SNR=8.5						
MBWA	Marble Bar	28.51	232	eP	P	23 15 03.6	0.0
	comp=Z,23nm,0.8s,mb4.9						
KKM	Kota Kinabalu	29.16	291	eP	P	23 15 08.6	-1.0
FORT	Forrest	30.05	207	⇓iP	P	23 15 17.2	+0.1
	comp=Z,64nm,0.5s,mb5.5						
TOO	Toolangi	33.10	177	eP	P	23 15 45.4	+1.6
	comp=Z,6.9nm,0.7s,mb4.6						
TOO	Toolangi	33.10	177	eP	P	23 15 45.4	+1.6
TOO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
KSM	Kuching	33.69	279	eP	P	23 15 48.5	-0.8
NACB	Ninganchiao	35.50	324	eP	P	23 16 01.9	-2.8
YHNB	Yeheng	36.01	324	eP	P	23 16 11.1	+2.1
KLBR	Kellerberrin	36.32	219	⇑iP	P	23 16 11.2	-0.5
	comp=Z,21nm,0.6s,mb5.2						
KLBR				e		23 18 34.0	
NWAO	Narrogin (SRO)	37.56	218	eP	P	23 16 22.5	+0.4
MUN	Mundaring	37.56	220	⇑iP	P	23 16 22.0	-0.1
TAU	Tasmania Unive	38.53	176	eP	P	23 16 31.3	+1.2
JNU	Nakatsue	39.16	343	P	P	23 16 35.4	0.0
	comp=Z,16nm,0.7s,mb5.0,baz=174,slow=13,SNR=12						
QIZ	Qiongzhong	40.49	306	P	P	23 16 46.6	-0.1
QIZ				AP	pP	23 17 21.7	+10
QIZ				S	S	23 22 49.3	+1.8
QIZ				SS	SS	23 25 51.0	-0.6
QIZ				AMB	AMB		
	comp=Z,17nm,1.9s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,245nm,4.7s						
MJAR	Matsushiro Arr	40.99	353	P	P	23 16 49.6	-0.9
MJAR				*PP	pP	23 17 19.4	+3.4
MJAR	Matsushiro Arr	40.99	353	P	P	23 16 49.6	-1.0
	comp=Z,5.3nm,0.6s,mb4.6,baz=177,slow=7.5,SNR=15						
MJAR				pP	pP	23 17 19.4	+3.4
	comp=Z,3.9nm,0.8s,baz=178,slow=8.2,SNR=3.3						
MJAR				sP	sP	23 17 33.2	+4.5
	comp=Z,8.8nm,0.9s,baz=164,slow=7.3,SNR=4.9						
MJAR				LR	LR	23 33 00.3	
	comp=Z,154nm,18.3s,baz=175,slow=35						
MAJO	Matsushiro	40.99	353	eP	P	23 16 49.7	-0.9
	comp=Z,8.1nm,0.7s,mb4.7						
MAJO	Matsushiro	40.99	353	eP	P	23 16 49.7	-0.9
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
NJ2	Nanjing	43.15	329	eP	P	23 17 08.0	-0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
KULM	Kulim	43.88	282	eP	P	23 17 13.0	-1.3
KSRS	Korea Array	44.06	342	P	P	23 17 16.0	+0.6
	comp=Z,13nm,0.6s,mb4.8,baz=161,slow=8.7,SNR=40						
KSRS				pP	pP	23 17 44.9	+3.7
	comp=Z,8.2nm,0.8s,baz=164,slow=8.7,SNR=3.8						
KSRS				sP	sP	23 17 58.0	+4.2
	comp=Z,29nm,1.1s,baz=161,slow=9.6,SNR=6.4						
KSRS				LR	LR	23 34 22.0	
	comp=Z,115nm,19.4s,baz=67,slow=34						
WHN	Wuhan	44.52	323	P	P	23 17 20.5	+1.3
PSI	Prapat	45.13	278	P	P	23 17 23.1	-1.2
PSI				pP	pP	23 17 50.6	+0.4
PSI				sP	sP	23 18 03.7	+0.9
PSI	Prapat	45.13	278	P	P	23 17 23.1	-1.2
	comp=Z,13nm,0.8s,mb4.7,baz=138,slow=2.8,SNR=21						
PSI				pP	pP	23 17 50.6	+0.4
	comp=Z,14nm,0.8s,baz=101,slow=3.5,SNR=4.9						
PSI				sP	sP	23 18 03.7	+0.9
	comp=Z,50nm,0.9s,baz=162,slow=4.6,SNR=10						
URZ	Urewera	45.53	142	P	P	23 17 28.1	+1.0
	comp=Z,7.6nm,0.6s,mb4.6,baz=290,slow=7.3,SNR=7.2						
RPZ	Rata Peaks	46.12	152	P	P	23 17 31.9	+0.3
	comp=Z,5.6nm,0.5s,mb4.6,baz=0.0,slow=11,SNR=3.4						
COCO	West Island	46.79	257	P	P	23 17 35.9	-1.4
GYA	Guiyang	47.02	313	P	P	23 17 40.0	+1.1
GYA				PCP	PcP	23 19 11.2	+1.7
GYA				PP	PP	23 19 31.4	+0.7
GYA				PCS	PcS	23 23 05.6	+0.8
GYA				S	S	23 24 22.9	+0.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,460nm,18.7s						
GYA				LR	LR		
	comp=E,510nm,17.9s						
GYA				LR	LR		
	comp=Z,470nm,18.6s						
KMI	Kunming	49.27	309	P	P	23 17 57.9	+1.7
KMI				AP	pP	23 18 25.0	+2.5
KMI				S	S	23 24 52.7	-1.4
KMI				SS	SS	23 28 19.4	-7.8
KMI				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.9						
KMI				AMB	AMB		
	comp=Z,210nm,4.4s						
KMI				LR	LR		
	comp=N,292nm,7.7s						
KMI				LR	LR		
	comp=E,113nm,11.8s						
KMI				LR	LR		
	comp=Z,311nm,21.0s						
KMI	Kunming	49.27	309	P	P	23 17 57.9	+1.7
	comp=Z,15nm,0.9s,mb4.9						
KMI				pP	pP	23 18 25.0	+2.5
KMI				sP	sP	23 18 37.4	+2.4
KMI				S	S	23 24 52.7	-1.4
KMI				sS	sS	23 25 39.9	+0.6

KMI SS SS 23 28 19.4 -7.8
KMI LR LR
comp=Z,310nm,21.0s
KMI Kunming 49.27 309 P **P** **23 17 57.9 +1.7**
KMI *PP pP 23 18 25.0 +2.5
KMI *SP sP 23 18 37.4 +2.4
KMI S **S** **23 24 52.7 -1.4**
KMI *SS sS 23 25 39.9 +0.6
KMI SS SS 23 28 19.4 -7.8
KMI pmax pmax
comp=Z,15nm,0.9s,mb4.9
KMI MLR MLR
comp=Z,310nm,21.0s
SNY Shenyang 49.43 340 ⇑P **P** **23 17 57.7 +0.6**
SNY AMB AMB
comp=Z,48nm,2.2s,mb5.0
XAN Xi'an 50.25 322 P **P** **23 18 03.3 -0.2**
XAN AMB AMB
comp=Z,28nm,1.6s,mb4.9
MDJ Mudanjiang 50.33 347 P **P** **23 18 05.0 +1.1**
MDJ PCP PcP 23 19 17.6 -3.4
MDJ PCS PcS 23 23 18.2 0.0
MDJ S **S** **23 25 10.4 +2.1**
MDJ AMB AMB
comp=Z,9.0nm,1.3s,mb4.5
MDJ AMB AMB
comp=Z,488nm,4.8s
MDJ LR LR
comp=N,137nm,27.6s
MDJ LR LR
comp=E,63nm,26.7s
MDJ LR LR
comp=Z,192nm,31.8s
CN2 Changchun 50.63 343 *eP* **P** **23 18 06.5 +0.3**
CN2 *eAP pP 23 18 37.6 +5.0
CN2 *eS* **S** **23 25 13.0 +0.5**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.3
BJT Baijiatuau 50.82 333 *eP* **P** **23 18 07.7 0.0**
comp=Z,61nm,0.6s,mb5.8
BJT *e* 23 18 48.7
BJT Baijiatuau 50.82 333 *eP* **P** **23 18 07.7 0.0**
BJT *e* 23 18 48.7
BJT pmax pmax
comp=Z,61nm,0.6s
BJI Beijing 50.83 333 P **P** **23 18 07.9 +0.1**
BJI S **S** **23 25 17.6 +2.2**
BJI AMB AMB
comp=Z,110nm,0.8s,mb5.9
BJI Beijing 50.83 333 P **P** **23 18 07.9 +0.1**
comp=Z,0.1nm,0.7s,mb3.0
BJI pP pP 23 18 30.4 -3.8
BJI sP sP 23 18 48.8 +2.2
BJI S **S** **23 25 17.6 +2.2**
CD2 Chengdu 51.67 316 ⇓*iP* **P** **23 18 14.7 +0.5**
CD2 PP PP 23 20 14.7 +1.7
CD2 S **S** **23 25 26.5 -0.7**
CD2 SS SS 23 29 02.5 -2.7
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.5
CD2 AMB AMB
comp=Z,40nm,8.2s
HABR Khabarovsk 53.13 353 *eP* **P** **23 18 21.9 -2.8**
HABR *eS* **S** **23 25 44.8 -1.7**
HABR *e* 23 29 25.5
HHC Hu-ho-hao-te 53.66 330 *eP* **P** **23 18 29.2 +0.5**
HHC PCP PcP 23 19 33.7 +0.1
HHC PP PP 23 20 33.3 +2.6
HHC SCP ScP 23 23 19.7 -1.7
HHC PCS PcS 23 23 34.0 +1.2
HHC S **S** **23 25 53.1 -0.9**
HHC SCS ScS 23 28 03.9 -3.3
HHC SS SS 23 29 35.5 -0.8
HHC AMB AMB
comp=Z,33nm,0.6s,mb5.5
HHC AMB AMB
comp=Z,150nm,4.8s
KLR Kul'dur 54.35 351 *eP* **P** **23 18 30.0 -3.5**
LZH Lanzhou 54.74 321 ⇑P **P** **23 18 37.6 +1.0**
LZH PCP PcP 23 19 37.5 -0.4
LZH PP PP 23 20 43.0 +2.5
LZH *eS* **S** **23 26 10.0 +1.4**
LZH SS SS 23 29 51.0 -2.5
LZH AMB AMB
comp=Z,56nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,150nm,4.0s
LZH Lanzhou 54.74 321 ⇑P **P** **23 18 37.6 +1.0**
comp=Z,56nm,1.5s,mb5.4
LZH pP pP 23 19 02.8 -0.5
LZH sP sP 23 19 17.5 +1.8
LZH PcP PcP 23 19 37.5 -0.4
LZH PP PP 23 20 43.0 +2.5
LZH *eS* **S** **23 26 10.0 +1.4**
LZH sS sS 23 26 51.0 -3.6
LZH SS SS 23 29 51.0 -2.5
LZH Lanzhou 54.74 321 ⇑P **P** **23 18 37.6 +1.0**
LZH *PP pP 23 19 02.8 -0.5
LZH *SP sP 23 19 17.5 +1.8
LZH 23 19 37.5
LZH 23 20 43.0
LZH *eS **S** **23 26 10.0 +1.4**
LZH *SS sS 23 26 51.0 -3.6
LZH SS SS 23 29 51.0 -2.5
LZH pmax pmax
comp=Z,56nm,1.5s,mb5.4
HIA Hailar 57.27 342 *eP* **P** **23 18 54.5 +0.2**
comp=Z,8.9nm,0.6s,mb5.0
HIA PcP PcP 23 19 48.0 +0.6
HIA Hailar 57.27 342 ⇓*eP* **P** **23 18 54.8 +0.4**
SHL Shillong 58.23 304 *eP* **P** **23 19 02.5 +0.9**
GTA Gaotai 59.29 321 P **P** **23 19 09.8 +1.2**
GTA PCP PcP 23 19 56.7 +1.0
GTA PP PP 23 21 24.2 +3.3
GTA S **S** **23 27 08.4 0.0**
GTA SS SS 23 31 06.4 +1.4
GTA AMB AMB
comp=Z,22nm,0.8s,mb5.2
GTA AMB AMB
comp=Z,220nm,5.7s
GTA LR LR
comp=N,147nm,14.5s
GTA LR LR
comp=E,116nm,13.7s
GTA LR LR
comp=Z,176nm,13.3s
LSA Lhasa 60.50 308 P **P** **23 19 18.1 +1.0**
LSA Lhasa 60.50 308 *eP* **P** **23 19 18.4 +1.4**
comp=Z,29nm,1.1s,mb5.2
LSA Lhasa 60.50 308 *eP* **P** **23 19 18.5 +1.4**
LSA pmax pmax
comp=Z,29nm,1.1s,mb5.2
ULN Ulaanbaatar 61.05 333 *eP* **P** **23 19 21.1 +0.7**
comp=Z,25nm,1.1s,mb5.2
ULN *ePcP PcP 23 20 02.7 +0.2
ULN Ulaanbaatar 61.05 333 *eP* **P** **23 19 21.1 +0.7**
ULN *e* 23 20 02.7
ULN pmax pmax
comp=Z,25nm,1.1s,mb5.2
SONM Songino Array 61.33 332 P **P** **23 19 22.9 +0.6**
SONM *PP pP 23 19 53.7 +4.1
SONM *SP sP 23 20 05.4 +3.6
SONM Songino Array 61.33 332 P **P** **23 19 22.9 +0.6**
comp=Z,3.9nm,0.6s,mb4.6,baz=158,slow=7.2,SNR=46
SONM pP pP 23 19 53.7 +4.1
comp=Z,3.2nm,0.9s,baz=140,slow=7.5,SNR=3.8
SONM sP sP 23 20 05.4 +3.6
comp=Z,8.9nm,1.1s,baz=147,slow=8.5,SNR=5.8
SONM LR LR 23 43 46.6
comp=Z,119nm,18.6s,baz=10,slow=34
CIT Chita 61.68 339 *eP* **P** **23 19 25.5 +0.9**
CIT *e* 23 20 04.2
PALK Pallekele 63.74 280 *eP* **P** **23 19 38.8 -0.3**
PALK *e* pP 23 20 06.2 -0.4
MA2 Magadan 64.00 4 *eP* **P** **23 19 38.9 -0.9**
MA2 Magadan 64.00 4 *eP* **P** **23 19 39.5 -0.3**
MA2 *e* 23 20 12.3
MA2 *e* 23 20 21.1
MA2 *e* 23 27 59.5
MA2 pmax pmax
comp=Z,20nm,0.8s,mb5.0
ZAK Zakamensk 64.58 333 ⇓*iP* **P** **23 19 41.5 -2.3**
ZAK *e* pP 23 20 12.5 +1.2
ZAK *e* 23 20 23.9
ZAK pmax pmax
comp=Z,12nm,0.8s,mb4.8
TLY Talaya 65.33 334 *eP* **P** **23 19 49.3 +0.6**
CASY Casey 65.95 194 P **P** **23 19 54.5 +2.1**
BOD Bodaibo 66.39 343 *eP* **P** **23 19 54.4 -0.9**
BOD *e* pP 23 20 22.8 -0.1
BOD pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BOD pmax pmax
comp=Z,19nm,2.1s,mb4.6
MOY Mondy 66.51 333 *eP* **P** **23 19 57.1 +0.9**
MOY pmax pmax
comp=Z,29nm,1.9s,mb4.8
PPT Papeete 66.68 107 LR LR 23 44 51.2
comp=Z,83nm,19.7s,baz=45,slow=32
YAK Yakutsk 67.06 353 *eP* **P** **23 19 58.8 -0.7**
YAK Yakutsk 67.06 353 *eP* **P** **23 19 59.5 +0.1**
YAK *e* 23 20 32.3
YAK pmax pmax
comp=Z,12nm,0.7s,mb4.8
YAK pmax pmax
comp=N,13nm,1.4s
HYB Hyderabad 67.65 291 *eP* **P** **23 20 04.0 -0.1**
HYB Hyderabad 67.65 291 *i P* **P** **23 20 04.0 -0.1**
HYB *epP pP 23 20 33.0 +1.2
WMQ Urumqi 69.31 320 ⇑*iP* **P** **23 20 13.7 -0.2**
WMQ PCP PcP 23 20 36.5 -0.3
WMQ PP PP 23 22 50.2 +1.6
WMQ S S 23 29 09.2 -2.5
WMQ AMB AMB
comp=Z,17nm,1.1s,mb4.8
WMQ AMB AMB
comp=Z,885nm,3.0s
WMQ LR LR
comp=N,93nm,21.3s
WMQ LR LR
comp=E,75nm,20.2s
WMQ LR LR
comp=Z,44nm,24.6s
NDI New Delhi 71.58 302 *eP* **P** **23 20 25.0 -3.0**
VNDA Vanda 73.76 176 P **P** **23 20 40.3 +0.3**
comp=Z,3.5nm,0.7s,mb4.2,baz=320,slow=6.5,SNR=14
BILL Bilibino 73.98 9⇓*eP* **P** **23 20 41.4 0.0**
BILL pmax pmax
comp=Z,11nm,2.0s,mb4.2
MK31 Makanchi Array 74.05 321 *eP* **P** **23 20 42.2 -0.1**
MKAR Makanchi Array 74.05 321 P **P** **23 20 42.4 +0.1**
comp=Z,6.7nm,0.6s,mb4.5,baz=102,slow=7.5,SNR=97
MKAR pP pP 23 21 13.9 +3.5
comp=Z,10nm,0.9s,baz=106,slow=6.6,SNR=5.6
MKAR sP sP 23 21 25.4 +3.0
comp=Z,10nm,0.7s,baz=99,slow=7.5,SNR=5.7
SBA Scott Base 74.46 175 *eP* **P** **23 20 45.2 +1.1**
ZAA0 Zalesovo Array 75.80 329 *eP* **P** **23 20 51.2 -1.0**
ZALV Zalesovo Beam 75.80 329 P **P** **23 20 51.2 -1.0**
comp=Z,14nm,0.6s,mb4.8,baz=112,slow=5.7,SNR=82
ZALV pP pP 23 21 24.0 +3.5
comp=Z,5.1nm,0.9s,baz=104,slow=6.3,SNR=2.0
ZALV sP sP 23 21 36.0 +3.6
comp=Z,8.1nm,0.7s,baz=104,slow=5.8,SNR=3.5
ZALV LR LR 23 52 26.5
comp=Z,57nm,19.4s,baz=220,slow=34
ZAL Zalesovo 75.81 329 P **P** **23 20 51.2 -1.0**
TIXI Tiksi 76.47 355 *eP* **P** **23 20 54.3 -1.4**
comp=Z,9.2nm,0.6s,mb4.7
TIXI Tiksi 76.47 355⇓*eP* **P** **23 20 55.6 0.0**
TIXI pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
KZA Kyzart 77.03 315 P **P** **23 21 00.8 +1.4**
SNR=19
NVS Novosibirsk 77.04 329 *i P* **P** **23 20 58.7 -0.4**
NVS pmax pmax
comp=N,5.0nm,0.6s
NVS pmax pmax
comp=E,7.0nm,0.6s
NVS pmax pmax
comp=Z,14nm,0.6s,mb4.9
TKM2 Tokmak 2 77.06 316 P **P** **23 20 59.9 +0.4**
SNR=14
UCH Uchtor 77.60 315 P **P** **23 21 03.8 +1.2**
SNR=8.6
CHMS Chumysh 77.67 316 P **P** **23 21 02.8 -0.1**
SNR=5.4
AAK Ala-Archa 77.74 315 *eP* **P** **23 21 02.6 -0.7**
comp=Z,3.5nm,0.7s,mb4.2
AAK Ala-Archa 77.74 315 *eP* **P** **23 21 02.7 -0.6**
AAK pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
AAK Ala-Archa 77.74 315 P **P** **23 21 03.8 +0.4**
SNR=6.4
KURK Kurchatov 77.84 324 *eP* **P** **23 21 03.2 -0.5**
comp=Z,51nm,1.8s,mb5.0
KURK Kurchatov 77.84 324⇑*eP* **P** **23 21 03.5 -0.2**
USP Ospenovka 77.93 316 P **P** **23 21 04.6 +0.2**
SNR=19
AML Almayashu 78.15 314 P **P** **23 21 06.7 +1.1**
SNR=6.6
EKS2 Erkin-Say 78.25 315 P **P** **23 21 06.7 +0.6**
SNR=9.8
KBL Kabul 79.77 306 *eP* **P** **23 21 13.6 -1.1**
KDAK Kodiak Island 80.14 29 P **P** **23 21 16.3 +0.2**
comp=Z,18nm,0.8s,mb5.0,baz=231,slow=5.7,SNR=6.6
TTA Tatalina 80.93 24 *eP* **P** **23 21 20.1 0.0**
comp=Z,9.0nm,0.9s,mb4.6
TTA Tatalina 80.93 24 *eP* **P** **23 21 20.2 0.0**
TTA pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
SLKM Skilak Lake 82.36 27 *eP* **P** **23 21 26.2 -1.6**
MAW Mawson 82.42 202 P **P** **23 21 28.3 +0.3**
MAW *PP pP 23 21 58.3 +1.6
MAW Mawson 82.42 202 P **P** **23 21 28.3 +0.3**
comp=Z,12nm,0.7s,mb4.8,baz=49,slow=4.8,SNR=12
MAW pP pP 23 21 58.3 +1.7
comp=Z,15nm,1.1s,baz=37,slow=5.7,SNR=3.4
MAW LR LR 23 55 12.4
comp=Z,154nm,19.4s,baz=79,slow=33
PMR Palmer 83.26 26 *eP* **P** **23 21 31.5 -0.9**
comp=Z,27nm,1.1s,mb5.0
PMR Palmer 83.26 26 *eP* **P** **23 21 31.5 -0.9**
PMR pmax pmax
comp=Z,27nm,1.1s,mb5.0
IMA2 Indian Mountai 83.28 21 *eP* **P** **23 21 31.6 -0.8**
BRVK Borovoye 83.49 324 *eP* **P** **23 21 33.6 -0.2**
MCK McKinley 84.16 24 *eP* **P** **23 21 36.2 -0.7**
comp=Z,38nm,1.1s,mb5.1
MCK McKinley 84.16 24 *eP* **P** **23 21 36.2 -0.7**
MCK pmax pmax
comp=Z,38nm,1.1s,mb5.1
COLA College 85.02 24 *eP* **P** **23 21 39.6 -1.6**
comp=Z,9.2nm,0.8s,mb4.8
COLA College 85.02 24 *eP* **P** **23 21 39.6 -1.6**
COLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
QSPA South Pole Qui 85.59 180 *eP* **P** **23 21 44.2 +0.3**
QSPA Southpole Qui 85.59 180 LR LR 23 59 52.5
comp=Z,341nm,19.2s,baz=52,slow=35
EGAK Eagle 87.71 25 *eP* **P** **23 21 54.5 +0.2**
ARU Arti 90.81 326 *eP* **P** **23 22 07.1 -2.0**
ARU Arti 90.81 326 *eP* **P** **23 22 07.1 -2.0**
SYO Syowa Base 90.92 200⇓*eP* **P** **23 22 08.0 -1.4**
SYO Syowa Base 90.92 200⇓*eX* 23 22 15.6
INK Inuvik 91.41 22 LR LR 00 02 04.0
comp=Z,82nm,18.1s,baz=296,slow=35
OHCM Honcut 96.60 51 *eP* **P** **23 22 32.8 -3.3**
MOD Modoc 97.49 48 *eP* **P** **23 22 40.2 +0.1**
NVAR Mina Array Bea 99.10 52 P **P** **23 22 48.0 +0.7**
comp=Z,0.4nm,0.3s,mb4.5,baz=266,slow=5.4,SNR=6.1
YKA Yellowknife Ar 99.33 27 P Pdif 23 22 46.7 -1.3
YKA Yellowknife Ar 99.33 27 P Pdif 23 22 46.7 -1.3
comp=Z,0.8nm,0.7s,baz=280,slow=4.8,SNR=15
YKA PKiKP PKiKP 23 27 16.3 -0.6
comp=Z,0.9nm,0.6s,baz=282,slow=1.5,SNR=16
YKA PKKPbc PKKPbc 23 39 10.6 -3.4
comp=Z,0.7nm,0.6s,baz=96,slow=2.8,SNR=15
YKA LR LR 00 09 35.2
comp=Z,46nm,18.3s,baz=120,slow=36
HRY Holter Researc 103.20 43 *ePdif* Pdif 23 23 08.5 +3.3
ARCES ARCESS Array B 103.62 341 Pdiff Pdif 23 23 04.3 -2.8
comp=Z,4.7nm,1.0s,baz=50,slow=6.5,SNR=4.6
ARCES PKiKP PKiKP 23 27 23.5 -1.0
comp=Z,2.4nm,0.8s,baz=64,slow=2.8,SNR=5.7
BW06 Boulder Array 105.36 47 *ePKiKP* PKiKP 23 27 28.5 0.0
PDAR Pinedale Array 105.36 47 Pdiff Pdif 23 23 15.6 +0.8
comp=Z,0.3nm,0.5s,baz=255,slow=4.8,SNR=3.4
PDAR PKiKP PKiKP 23 27 28.5 0.0
comp=Z,0.6nm,0.7s,baz=231,slow=1.0,SNR=4.9
FINES FINESS Array B 106.68 334 Pdiff Pdif 23 23 18.7 -2.0
comp=Z,0.6nm,0.6s,baz=99,slow=4.8,SNR=3.6
FINES PKiKP PKiKP 23 27 29.4 -0.9
comp=Z,2.6nm,1.1s,baz=48,slow=2.8,SNR=3.9
SDCO Great Sand Dun 109.21 52 *ePKiKP* PKiKP 23 27 36.5 +0.7
LTX Lajitas 111.99 60 *ePKiKP* PKiKP 23 27 42.1 +0.8
TXAR Lajitas Array 111.99 60 PKiKP PKiKP 23 27 40.6 -0.7
comp=Z,0.8nm,0.7s,baz=295,slow=0.8,SNR=13
TXAR PKKPbc PKKPbc 23 38 33.7 -0.4
comp=Z,0.3nm,0.7s,baz=122,slow=5.8,SNR=4.4
TXAR PKKPab PKKPab 23 38 43.3 +0.6
comp=Z,1.3nm,0.7s,baz=119,slow=6.9,SNR=16
MLR Muntele Rosu 112.23 318⇑*iP* PKiKP 23 27 40.7 -0.6
BOSA Boshof 112.28 237 PKiKP PKiKP 23 27 41.9 -0.1
comp=Z,2.0nm,0.8s,baz=102,slow=8.9,SNR=4.2
ULM Lac du Bonnet 112.57 37 PKiKP PKiKP 23 27 40.4 -1.4
comp=Z,4.0nm,0.4s,baz=247,slow=1.8,SNR=18
ECSD EROS,Sioux Fal 114.33 44 *ePKiKP* PKiKP 23 27 44.5 -0.8
SANT Santorini 115.04 308 *ePKiKP* PKiKP 23 27 47.7 +0.8
BZS Buzias 115.07 319⇑*iP* PKiKP 23 27 46.1 -0.6
WMOK Wichita Mounta 115.12 54 *ePKPdf* PKiKP 23 27 46.2 -1.0
JCT Junction City 115.12 58 *ePKPdf* PKiKP 23 27 46.9 -0.4
CLL Collm 117.74 327 *ePKPdf* PKPdf 23 27 51.0 -0.7
GERES GERESS Array B 118.59 325 PKP PKPdf 23 27 52.9 -0.5
comp=Z,1.3nm,0.7s,baz=75,slow=1.5,SNR=14
MIAR Mount Ida 119.33 53 *ePKPdf* PKPdf 23 27 54.7 -0.6
TIP Timpagrande 120.76 314 *ePKPdf* PKPdf 23 27 57.7 -0.2
CMIG Matias Romero 121.44 73 PKP PKPdf 23 27 57.8 -2.0
comp=Z,5.3nm,0.6s,baz=336,slow=4.9,SNR=7.2
GIVF Givet 122.70 330 *ePKIKP* PKPdf 23 28 01.0 -0.3
HINF Hinteralfeld 123.00 327 *ePKIKP* PKPdf 23 28 01.3 -0.6
comp=Z,5.5nm,0.6s
BAIF Baives 123.03 330 *ePKIKP* PKPdf 23 28 01.6 -0.3
HAU Haudompre 123.17 327 *ePKIKP* PKPdf 23 28 01.7 -0.5
comp=Z,8.1nm,0.7s
PLAL Pickwick Lake 123.49 50 *ePKPdf* PKPdf 23 28 01.7 -1.6
MEZF Maizieres J'vi 123.56 328 *ePKIKP* PKPdf 23 28 02.8 -0.2
comp=Z,18nm,0.7s
SCHQ Schefferville 124.02 21 PKP PKPdf 23 28 02.7 -0.9
comp=Z,4.4nm,0.7s,baz=16,slow=5.4,SNR=12
CABF La Chapelle 124.13 326 *ePKIKP* PKPdf 23 28 04.2 +0.1
comp=Z,22nm,0.9s
LPG La Plagne 124.38 324 *ePKIKP* PKPdf 23 28 04.7 +0.1
comp=Z,8.4nm,0.8s
LPL La Plagne 124.38 324 *ePKIKP* PKPdf 23 28 04.7 +0.1
comp=Z,8.5nm,0.8s
MBDF Montbardon 124.80 324 *ePKIKP* PKPdf 23 28 04.9 -0.6
LOR Lormes 124.96 327 *ePKIKP* PKPdf 23 28 05.5 -0.2
LRAL Lakeview Retre 125.00 52 *ePKPdf* PKPdf 23 28 05.2 -1.0
SADO Sadowa 125.12 36 PKP PKPdf 23 28 05.2 -0.9
baz=341,slow=4.9
ORIF Oris-en-Rattie 125.22 324 *ePKIKP* PKPdf 23 28 06.0 -0.3
comp=Z,16nm,0.9s
SSF Saint Saulge 125.27 327 *ePKIKP* PKPdf 23 28 06.1 -0.2
FRF La Foret Royal 125.52 322 *ePKIKP* PKPdf 23 28 06.5 -0.4
comp=Z,12nm,0.8s
LMR La Mourre 125.72 322 *ePKIKP* PKPdf 23 28 06.9 -0.4
comp=Z,4.9nm,0.7s
SMRF Simiane la Rot 125.93 323 *ePKIKP* PKPdf 23 28 08.6 +0.9
comp=Z,8.7nm,0.7s
FLN La Foliniere 126.19 331 *ePKIKP* PKPdf 23 28 07.5 -0.5
TCF Toulx Ste Croi 126.45 327 *ePKIKP* PKPdf 23 28 08.6 0.0
TKL Tuckaleechee C 126.48 48 PKP PKPdf 23 28 08.5 -0.5
TKL Tuckaleechee C 126.48 48 PKP PKPdf 23 28 08.5 -0.5
comp=Z,10.0nm,0.6s,baz=153,slow=2.8,SNR=17
GRR Gorron 126.63 331 *ePKIKP* PKPdf 23 28 08.6 -0.3
comp=Z,9.5nm,0.4s
TEIG Tepich 127.23 68 PKP PKPdf 23 28 11.2 +0.3
comp=Z,12nm,0.8s,baz=289,slow=7.1,SNR=6.0
SGMF Saint Gilles 127.53 332 *ePKIKP* PKPdf 23 28 10.3 -0.3
KEST Kesra 127.54 313 PKP PKPdf 23 28 10.4 -0.6
comp=Z,1.1nm,0.6s,baz=236,slow=2.1,SNR=6.5
JSC Jenkinsville 128.93 49 *ePKPdf* PKPdf 23 28 13.4 -0.3
JTS JuntasAbangare 131.60 80 *ePKPdf* PKPdf 23 28 18.9 -0.4
TOA0 Torodi Ar. Sit 141.32 286 PKPdf PKPdf 23 28 30.5 -6.7
TORD Torodi Ar. Bea 141.32 286 PKhKP 23 28 30.1
comp=Z,2.1nm,0.6s,baz=77,slow=4.3,SNR=26
TORD PKP PKPdf 23 28 34.5 -2.8
comp=Z,4.7nm,0.6s,baz=85,slow=2.5,SNR=23
ROSC El Rosal 142.27 88 PKhKP 23 28 35.6
comp=Z,13nm,0.7s,baz=280,slow=22,SNR=7.1
LPAZ La Paz 142.57 124 PKP PKPdf 23 28 37.6 -1.9
comp=Z,6.3nm,0.7s,baz=246,slow=3.0,SNR=22
SDV Santo Domingo 145.79 81 *ePKPdf* PKPdf 23 28 44.9 -0.3
SJG San Juan 147.92 62 PKPdf PKPdf 23 28 48.4 -0.1
KIC Kosan Boka 148.34 275 *ePKP1* PKPbc 23 28 52.8 -0.2
comp=Z,182nm,0.6s
MTP Monte Pirata 148.46 62 PKPdf PKPdf 23 28 49.6 +0.1
TIC Toumodi 148.61 276 *ePKP1* PKPbc 23 28 52.9 -0.8
comp=Z,36nm,0.6s
LIC Lamto 148.63 275⇑*iPKIKP* PKPdf 23 28 53.5 +3.6
comp=Z,150nm,0.7s
LIC Lamto 148.63 275 *ePKP1* PKPbc 23 28 53.5 -0.2
comp=Z,251nm,0.7s

ISK ***05*** *23:52:38.8,38.34N×39.21E,h5km,MD2.8*
ISCJB ***05*** *23:52:39.9±0.7,38.34N±004.×3925E±003,h1km±8km, Error ellipse: s-maj=6.5km s-min=4.6km az=1.6*
CSEM ***05*** *23:52:39.5±0.3,3851N×3900E,h40km,MD3.1,Error ellipse: s-maj=13.7km s-min=6.2km az=150.0*
DDA ***05*** *23:52:40.1,3848N×3928E,h11km,Md3.1*
ISC 05 23:52:40.6±0.5,3836N±004×3924E±004,h9km±6km,n11, σ0°81/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.24**	**305**	*i* P	**Pg**	**23 52 45.1**	**-0.4**
ELZG				*i* S	**Sg**	**23 52 49.5**	**+0.6**
PTK	**Pertek**	**0.55**	**13**	PG	**Pg**	**23 52 51.0**	**-0.2**
PTK				SG	**Sg**	**23 52 59.0**	**+1.4**
MALT	**Malatya**	**0.64**	**266**	PG	**Pg**	**23 52 51.2**	**-1.7**
MYA	**Malatya**	**0.64**	**268**	PG	**Pg**	**23 52 51.9**	**-1.0**
MYA				SG	**Sg**	**23 53 01.7**	**+0.4**
DIY	**Diyarbakir**	**0.91**	**120**	*e*PG	**Pg**	**23 52 57.3**	**-0.7**
DIY				*e*SG	**Sg**	**23 53 10.8**	**+1.1**
URFA	**Urfa**	**0.97**	**200**	*e*PG	**Pg**	**23 52 58.7**	**-0.5**
BINT	**Bingol**	**1.11**	**62**	*e*PN	**Pn**	**23 53 02.1**	**-0.2**
ATAB	**Bozova**	**1.16**	**220**	*i* P	**Pb**	**23 53 03.1**	**+0.4**
ATAB				*i* S	**Sg**	**23 53 18.9**	**+1.1**
MARD	**Mardin**	**1.60**	**130**	*i* P	**Pn**	**23 53 08.8**	**-0.3**
MARD				*i* S	**Sn**	**23 53 30.1**	**+0.2**
GZT	**Gaziantep**	**1.66**	**233**	*i* P	**Pn**	**23 53 09.5**	**-0.4**
GZT				*i* S	**Sn**	**23 53 32.4**	**+1.1**
BTMT	**Batman**	**1.78**	**95**	*e*PN	**Pn**	**23 53 10.7**	**-0.8**

NIED ***05*** *23:55:00,24.10N×123.60E,h38km,Mw4.4 Best double couple: M0=4.92000×10^15 NP1:ϕs=17.00000°,δ37.00000°, λ158.00000°. NP2:ϕs=125.00000°,δ77.00000°,λ55.00000°.*
ISCJB ***05*** *23:55:47.2±0.4,24.12N±005×123.61E±003,h55km±2km, mb4.5/43,MS3.9/7,Error ellipse: s-maj=7.9km s-min=3.8km az=174.3*
JMA ***05*** *23:55:47.9±0.2,24.10N×123.59E,h41km±2km,M4.6*
JMA Felt II J1.
IDC ***05*** *23:55:48.8±3.6,24.19N×123.56E,h53km±33km,mb4.2/15, mb1 4.3/18,mb1mx4.2/24,mbtmp4.2/18,ML3.8/3,MS3.8/10, Ms1 3.8/10,ms1mx3.5/35,Error ellipse: s-maj=22.0km s-min=14.0km az=68.0*
NEIC ***05*** *23:55:49.0±0.8,24.16N×123.59E,h54km±7km,mb4.6/21, MW4.4(NIED),Error ellipse: s-maj=7.8km s-min=6.2km az=169.0*
NEIC Recorded [2 JMA] on Iriomote-jima and [1 JMA] on Ishigaki-shima and Yonaguni-jima.
MOS ***05*** *23:55:48.0±1.1,24.20N×123.55E,h61km,mb4.9/15,Error ellipse: s-maj=12.0km s-min=6.9km az=106.1*
ISC 05 23:55:48.2±0.4,2412N±005×12360E±003,h47km±2km, n115,σ1ϑ04/124,mb4.5/43,MS3.9/7,2C-2D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.20**	**108**	P	**Pn**	**23 55 55.1**	**-1.1**
HATJ				*e*S	**Sn**	**23 56 00.5**	**-1.4**
IRIF	**Iriomote-Funau**	**0.25**	**29**	P	**Pn**	**23 55 55.6**	**-1.0**
IRIF				*e*S	**Sn**	**23 56 01.5**	**-1.0**
JKRS	**Kuro-shima**	**0.40**	**72**	P	**Pn**	**23 55 57.5**	**-0.5**
JKRS				*e*S	**Sn**	**23 56 05.2**	**+0.2**
JIJ	**Ishigaki jima**	**0.56**	**64**	P	**Pn**	**23 55 59.3**	**-0.7**
JIJ				*e*S	**Sn**	**23 56 07.9**	**-0.5**

YOJ	Yonaguni jima	0.63	303	P	Pn	23 56 00.9	-0.1
YOJ				eS	Sn	23 56 10.8	+0.6
JTJ	Tarama	1.13	62	P	Pn	23 56 07.9	+0.2
JTJ				eS	Sn	23 56 23.3	+1.2
JMJ	Miyako jima 2	1.69	66	P	Pn	23 56 16.7	+1.4
JMJ				eS	Sn	23 56 37.3	+1.5
JOGS	Gusukube	1.77	68	P	Pn	23 56 17.7	+1.3
NACB	Ninganchiao	1.83	272	ePn	Pn	23 56 16.2	-0.9
NACB				eSn	Sn	23 56 41.6	+2.4
YHNB	Yeheng	2.10	286	ePn	Pn	23 56 21.6	+0.7
YHNB				eSn	Sn	23 56 46.2	+0.4
TATO	Taipei	2.10	294	ePn	Pn	23 56 21.8	+0.9
TATO				eSn	Sn	23 56 45.6	-0.2
JKE	Kume jima 2	3.63	52	P	Pn	23 56 42.4	+0.5
JKE				eS	Sn	23 57 24.8	+1.3
JOW	Kunigami	5.02	56	P	Pn	23 57 01.1	+0.2
JOW	Kunigami	5.02	56	P	Pn	23 57 00.8	-0.1
	8.8nm,0.3s,baz=147,slow=17,SNR=5.3						
JOW				S	Sn	23 57 59.1	+1.5
	9.1nm,0.3s,baz=137,slow=19,SNR=2.4						
JTK	Tokunoshima	6.05	52	P	Pn	23 57 13.7	-1.4
JAM	Amami Oshima	6.88	50	P	Pn	23 57 24.2	-2.3
JNU	Nakatsue	11.01	34	LR	LR	00 02 29.9	
	comp=Z,318nm,21.0s,baz=46,slow=37						
KSRS	Korea Array	13.80	15	P	Pn	23 59 02.0	+0.9
	0.2nm,0.3s,baz=193,slow=12,SNR=12						
KSRS				LR	LR	00 04 56.3	
	comp=Z,184nm,19.1s,baz=182,slow=40						
BJT	Baijiatuau	17.05	340	ePn	Pn	23 59 44.9	+1.8
MAJO	Matsushiro	17.65	42	ePn	Pn	23 59 52.6	+2.0
MJAR	Matsushiro Arr	17.65	42	P	Pn	23 59 50.1	-0.5
	0.4nm,0.3s,baz=224,slow=8.8,SNR=6.8						
MJAR				LR	LR	00 06 44.6	
	comp=Z,278nm,20.5s,baz=220,slow=37						
MDJ	Mudanjiang	21.03	12	P	P	00 00 30.9	+3.0
ERM	Erimo	24.14	38	iP	P	00 00 59.4	-0.3
HIA	Hailar	25.28	354	eP	P	00 01 08.9	-1.2
ASAJ	Asahikawa	25.29	33	P	P	00 01 09.3	-0.8
	9.7nm,0.8s,mb4.4,baz=243,slow=16,SNR=3.2						
ASAJ				LR	LR	00 10 48.3	
	comp=Z,179nm,20.6s,MS3.6,baz=208,slow=36						
ULN	Ulaanbaatar	27.10	335	eP	P	00 01 25.9	-0.6
	1.8nm,0.5s,mb3.9						
ULN	Ulaanbaatar	27.10	335	eP	P	00 01 25.9	-0.6
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
SONM	Songino Array	27.33	334	P	P	00 01 27.9	-0.6
SONM				LR	LR	00 13 39.4	
SONM	Songino Array	27.33	334	P	P	00 01 27.9	-0.6
	comp=Z,2.0nm,0.6s,mb3.8,baz=158,slow=9.0,SNR=15						
SONM				LR	LR	00 13 39.4	
	comp=Z,119nm,18.1s,MS3.5,baz=147,slow=39						
LSA	Lhasa	29.40	288	eP	P	00 01 49.4	+2.2
	comp=Z,4.6nm,0.5s,mb4.5						
LSA	Lhasa	29.40	288	eP	P	00 01 49.4	+2.2
LSA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
TLY	Talaya	31.49	336	P	P	00 02 05.5	+0.1
TAPN	Taplejung	32.42	283	eP	P	00 02 15.5	+1.7
	comp=Z,9.7nm,0.8s,mb4.7						
ODAN	Odare	32.73	283	eP	P	00 02 18.8	+2.2
	comp=Z,13nm,0.9s,mb4.9						
JIRN	Jiri	33.75	284	eP	P	00 02 27.2	+1.7
	comp=Z,8.9nm,0.7s,mb4.8						
BOD	Bodaibo	34.37	351	eP	P	00 02 28.1	-2.3
BOD				pmax	pmax		
	comp=Z,5.0nm,2.0s,mb4.1						
KKN	Kakani	34.55	284	eP	P	00 02 33.7	+1.3
	comp=Z,4.5nm,0.5s,mb4.7						
KKN	Kakani	34.55	284	eP	P	00 02 33.7	+1.3
KKN				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
GKN	Gorkha	35.11	285	eP	P	00 02 37.8	+0.6
	comp=Z,5.4nm,0.4s,mb4.8						
PET	Petropavlovsk	39.14	33	P	P	00 03 10.9	-0.2
MKAR	Makanchi Array	39.93	315	P	P	00 03 17.4	-0.3
MKAR				PcP	PcP	00 05 22.0	-0.4
MKAR				LR	LR	00 21 25.7	
MKAR	Makanchi Array	39.93	315	P	P	00 03 17.4	-0.3
MKAR						00 05 22.0	
MKAR	Makanchi Array	39.93	315	P	P	00 03 17.4	-0.3
	comp=Z,6.4nm,0.7s,mb4.5,baz=101,slow=10,SNR=81						
MKAR				PcP	PcP	00 05 22.0	-0.4
	comp=Z,0.9nm,0.6s,baz=86,slow=5.3,SNR=5.1						
MKAR				LR	LR	00 21 25.7	
	comp=Z,57nm,20.3s,MS3.4,baz=210,slow=39						
ZAA0	Zalesovo Array	41.51	326	eP	P	00 03 28.9	-1.8
ZALV	Zalesovo Beam	41.51	326	P	P	00 03 29.1	-1.6
ZALV				PcP	PcP	00 05 25.7	-1.7
ZALV				LR	LR	00 22 12.0	
ZALV	Zalesovo Beam	41.51	326	P	P	00 03 29.1	-1.6
	comp=Z,8.3nm,0.5s,mb4.6,baz=118,slow=8.6,SNR=54						
ZALV				PcP	PcP	00 05 25.7	-1.7
	comp=Z,0.6nm,0.5s,baz=109,slow=4.3,SNR=4.1						
ZALV				LR	LR	00 22 12.0	
	comp=Z,60nm,18.2s,MS3.5,baz=244,slow=38						
ZAL	Zalesovo	41.52	326	P	P	00 03 29.1	-1.6
ZAL						00 05 25.7	
FITZ	Fitzroy Crossi	42.01	177	LR	LR	00 21 43.1	
	comp=Z,413nm,18.2s,MS4.3,baz=6.6,slow=37						
TKM2	Tokmak 2	43.55	308	eP	P	00 03 47.9	+0.5
	comp=Z,6.1nm,0.6s,mb4.5						
TKM2	Tokmak 2	43.55	308	eP	P	00 03 47.9	+0.6
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
KURK	Kurchatov	43.57	319	eP	P	00 03 46.2	-1.1
	comp=Z,11nm,0.9s,mb4.6						
KURK	Kurchatov	43.57	319	eP	P	00 03 46.2	-1.2
KURK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
UCH	Uchtor	44.23	306	eP	P	00 03 52.9	+0.1
	comp=Z,2.5nm,0.9s,mb3.9						
AAK	Ala-Archa	44.30	307	eP	P	00 03 53.6	+0.2
	comp=Z,0.8nm,0.5s,mb3.7						
AAK	Ala-Archa	44.30	307	eP	P	00 03 53.6	+0.2
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
AML	Almayashu	44.82	306	eP	P	00 03 58.1	+0.6
EKS2	Erkin-Say	44.83	307	eP	P	00 03 58.0	+0.3
	comp=Z,1.5nm,0.7s,mb3.9						
WRA	Warramunga Arr	45.03	166	P	P	00 03 59.5	+0.2
	comp=Z,2.5nm,0.8s,mb4.1,baz=348,slow=8.5,SNR=8.2						
WB2	Warramunga Arr	45.03	166	eP	P	00 03 59.8	+0.4
MBWA	Marble Bar	45.16	185	P	P	00 03 59.6	-0.7
TIXI	Tiksi	47.65	2	eP	P	00 04 17.4	-2.0
TIXI	Tiksi	47.65	2	⇑eP	P	00 04 17.1	-2.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ASAR	Alice Springs	48.54	167	P	P	00 04 27.4	+0.7
	comp=Z,0.6nm,0.4s,mb4.0,baz=350,slow=6.9,SNR=11						
BRVK	Borovoye	49.20	320	eP	P	00 04 30.8	-0.8
SVE	Sverdlovsk	55.40	323	P	P	00 05 17.1	-0.4
ARU	Arti	56.49	323	eP	P	00 05 24.4	-0.8
	comp=Z,9.9nm,1.0s,mb4.8						
ARU	Arti	56.49	323	d iP	P	00 05 24.3	-0.9
ARU				e		00 07 27.0	
ARU				PPP		00 08 46.0	
ARU				eS	S	00 13 09.0	-4.0
ARU				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.8						
GAMB	Gambell	57.49	28	eP	P	00 05 33.1	+0.9
STKA	Stephens Creek	58.28	162	P	P	00 05 38.7	+0.6
	comp=Z,2.6nm,0.7s,mb4.4,baz=324,slow=7.5,SNR=4.6						
STKA				LR	LR	00 32 00.3	
	comp=Z,299nm,18.1s,MS4.5,baz=122,slow=37						
DZM	Mont Dzumac	61.99	134	LR	LR	00 27 57.4	
	comp=Z,168nm,20.5s,MS4.2,baz=179,slow=31						
TTA	Tatalina	64.46	30	eP	P	00 06 20.2	+0.7
	comp=Z,8.0nm,0.9s,mb4.8						
TTA	Tatalina	64.46	30	eP	P	00 06 20.2	+0.7
TTA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
KDAK	Kodiak Island	66.68	35	P	P	00 06 33.7	-0.2
	comp=Z,14nm,1.0s,mb5.0,baz=171,slow=18,SNR=4.6						
MIB	Mutribah	67.07	294	eP	P	00 06 36.8	-0.2
MIB				AMb	AMB	00 06 37.6	
	comp=Z,12nm,0.5s,mb5.2						
RDF	Al-Radifah	67.13	293	eP	P	00 06 37.1	-0.2
RDF				AMb	AMB	00 06 38.1	
	comp=Z,19nm,0.6s,mb5.3						
NAY	Al-Naaiem	67.30	293	eP	P	00 06 38.1	-0.3
NAY				AMb	AMB	00 06 38.7	
	comp=Z,8.4nm,0.7s,mb4.9						
KIV	Kislovodsk	67.34	309	eP	P	00 06 38.7	+0.3
KIV	Kislovodsk	67.34	309	eP	P	00 06 38.3	-0.1
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
MCK	McKinley	67.55	29	eP	P	00 06 39.8	+0.4
PMR	Palmer	67.81	31	eP	P	00 06 40.8	-0.2
	comp=Z,8.1nm,0.8s,mb4.8						
PMR	Palmer	67.81	31	eP	P	00 06 40.8	-0.2
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
COLA	College	67.83	27	eP	P	00 06 41.0	-0.2
COLA	College	67.83	27	eP	P	00 06 42.2	+1.1
SOC	Sochi	69.52	310	eP	P	00 06 50.6	-1.4
SOC				eS	S	00 15 54.8	-1.5
SOC				eSS	SS	00 20 19.3	-4.8
SOC				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
JOF	Joensuu	69.84	331	ep	P	00 06 51.3	-2.3
	comp=Z,3.3nm,0.5s,mb4.5						
KEV	Kevo	69.85	338	ep	P	00 06 50.9	-2.7
	comp=Z,6.3nm,0.7s,mb4.7						
KEV	Kevo	69.85	338	eP	P	00 06 50.9	-2.7
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ARCES	ARCESS Array B	70.42	338	P	P	00 06 56.6	-0.4
	comp=Z,4.1nm,0.8s,mb4.4,baz=54,slow=6.2,SNR=5.8						
EGAK	Eagle	70.65	27	eP	P	00 06 59.1	+0.6
DAWY	Dawson	71.59	27	eP	P	00 07 05.3	+1.1
KAF	Kangasniemi	72.30	331	ep	P	00 07 04.8	-3.7
	comp=Z,1.8nm,0.5s,mb4.3,baz=70,slow=5.6						
KAF	Kangasniemi	72.30	331	eP	P	00 07 04.8	-3.7
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
INK	Inuvik	72.45	22	eP	P	00 07 09.6	+0.2
FINES	FINESS Array B	72.61	330	P	P	00 07 10.0	-0.4
	comp=Z,3.4nm,0.6s,mb4.4,baz=69,slow=5.8,SNR=30						
AKASG	Malin Array Be	74.38	319	P	P	00 07 19.9	-1.0
	comp=Z,2.4nm,0.5s,mb4.3,baz=59,slow=6.0,SNR=14						
BRTR	Keskin Array B	74.98	307	P	P	00 07 25.1	+0.5
	comp=Z,3.4nm,0.7s,mb4.4,baz=96,slow=5.6,SNR=16						
BURAR	Bucovina Array	77.93	317	⇑iP	P	00 07 41.4	+0.2
MLR	Muntele Rosu	78.27	315	⇓iP	P	00 07 43.8	+0.6
RES	Resolute Bay	78.37	10	eP	P	00 07 43.1	0.0
	comp=Z,305nm,1.2s						
KWP	Kalwaria	78.67	319	eP	P	00 07 44.3	-1.0
	comp=Z,12nm,0.9s,mb4.8						
KWP	Kalwaria	78.67	319	eP	P	00 07 44.3	-1.0
KWP				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
NB2	NORSAR Subarra	79.30	333	P	P	00 07 47.8	-0.7
	comp=Z,6.1nm,0.5s,mb4.8,baz=52,slow=5.9						
NB2	NORSAR Subarra	79.30	333	P	P	00 07 47.8	-0.7
NB2				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
NOA	NORSAR Array B	79.30	333	P	P	00 07 47.8	-0.7
	comp=Z,6.6nm,0.7s,mb4.7,baz=58,slow=5.5,SNR=23						
OJC	Ojcow	80.13	321	eP	P	00 07 53.3	+0.1
YKA	Yellowknife Ar	82.17	23	P	P	00 08 03.9	+0.1
YKA	Yellowknife Ar	82.17	23	P	P	00 08 03.9	+0.1
	comp=Z,5.0nm,0.7s,mb4.5,baz=309,slow=5.0,SNR=65						
BRG	Berggiesshubel	83.13	323	eP	P	00 08 10.6	+1.6
BRG				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
BRG	Berggiesshubel	83.13	323	eP	P	00 08 10.6	+1.6
	comp=Z,4.5nm,1.1s,mb4.4						
CLL	Collm	83.42	324	eP	P	00 08 10.0	-0.5
	comp=Z,4.0nm,0.9s,mb4.5						
CLL	Collm	83.42	324	eP	P	00 08 10.0	-0.5
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
GERES	GERESS Array B	84.28	321	P	P	00 08 14.8	-0.2
	comp=Z,2.5nm,0.7s,mb4.5,baz=59,slow=4.9,SNR=24						
ORIF	Oris-en-Rattie	90.92	321	eP	P	00 08 46.8	-0.2
FCC	Fort Churchill	91.72	19	eP	P	00 08 49.9	-0.6
SDV	Santo Domingo	144.38	25	ePKPdf	PKPdf	00 15 18.5	-1.6

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*BJI **06** 00:09:02.2, 156S×12730E, h33km, mB5.5, mb5.2, Ms4.7, Msz4.4*

*ISCJB **06** 00:09:05.2±1.1, 106S±003×12698E±004, h24km±7km, mb5.2/92, MS4.2/25, Error ellipse: s-maj=6.6km s-min=4.4km az=142.5*

*MOS **06** 00:09:06.6±1.0, 098S×12695E, h33km, mb5.5/25, Error ellipse: s-maj=13.8km s-min=6.2km az=117.6*

*IDC **06** 00:09:07.3±2.1, 1.13S×12705E, h28km±13km, mb4.8/20, mb1 4.9/21, mb1mx4.8/24, mbtmp4.8/21, ML4.4/1, MS4.2/10, Ms1 4.2/10, ms1mx3.9/25, Error ellipse: s-maj=22.0km s-min=8.5km az=74.0*

*GCMT **06** 00:09:08.3±0.3, 101S×12709E, h12km, MW5.0/66, Moment Tensor Solution. s26,c32; s66,c104; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.74±.11; $M_{\theta\theta}$2.07±.09; $M_{\phi\phi}$-1.33±.11; $M_{r\theta}$0.30±.28; $M_{\theta\phi}$2.26±.09; $M_{\phi r}$-2.57±.30; Best double couple: $M_0$3.82800×10^{16} NP1:ϕ_s282.00000°,δ53.00000°,λ-16.00000°. NP2: ϕ_s22.00000°,δ77.00000°,λ-142.00000°. Principal axes: T 3.4420, Plg15.0000°, Azm147.0000°; N 0.7730, Plg50.0000°, Azm38.0000°; P -4.2140, Plg36.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **06** 00:09:08.3±2.6, 106S×12691E, h32km±18km, mb5.3/28 Error ellipse: s-maj=8.7km s-min=4.7km az=57.0*

ISC 06 00:09:08.9±0.6, **109S**±003×**12697E**±004, **h37**km±5km, **h26**km±2.6km**:pP-P, n331, σ1**s**12**/334, **mb5.2**/92, **MS4.2**/25, **21C-19D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	2.86	155	P	Pn	00 09 52.0	0.0
	4μm,0.9s						
PCI	Palu	7.13	271	P	Pn	00 10 49.4	-1.4
	815nm,0.9s						
KAPI	Kappang	8.19	241	Pn	Pn	00 11 05.5	+0.1
	2μm,0.8s,SNR=35						
BAKI	Biak	9.14	91	P	Pn	00 11 21.6	+3.2
	445nm,1.4s						
BATI	Kupang	9.63	200	Pn	Pn	00 11 30.3	+5.1
	2.8nm,0.3s,baz=56,slow=11,SNR=5.0						
MYLDM	Lahad Datu	10.50	306	⇓P	Pn	00 11 39.4	+2.3
TSM	Tawau	10.54	301	⇓P	Pn	00 11 36.2	-1.5
SDKM	Sandakan	11.83	305	⇑P	Pn	00 11 56.8	+1.5
KKM	Kota Kinabalu	12.86	304	ePn	Pn	00 12 09.1	-0.3
KKM	Kota Kinabalu	12.86	304	⇑P	Pn	00 12 09.4	0.0
KDM	Kudat	12.87	308	⇓P	Pn	00 12 13.0	+3.6
BTM	Bintulu	14.52	287	⇑P	Pn	00 12 31.2	-0.8
SBUM	Sibu	15.16	283	⇓P	Pn	00 12 41.4	+0.9
KSM	Kuching	16.85	279	ePn	Pn	00 13 00.6	-1.6
KSM	Kuching	16.85	279	⇓P	Pn	00 13 00.9	-1.3
FITZ	Fitzroy Crossi	16.96	184	⇑iP	Pn	00 13 02.2	-1.2
	50nm,0.8s						
FITZ	Fitzroy Crossi	16.96	184	eP	Pn	00 13 03.3	-0.1
	54nm,0.7s						
FITZ	Fitzroy Crossi	16.96	184	Pn	Pn	00 13 02.3	-1.1
	1.1nm,0.3s,baz=26,slow=11,SNR=28						
BJII	Banjamegara	18.29	250	P	Pn	00 13 21.4	+1.5
	495nm,1.8s						
TPI	Tanjungpandan	19.37	265	P	Pn	00 13 30.1	-3.0
	286nm,1.1s						
WRA	Warramunga Arr	20.08	159	P	P	00 13 38.0	-1.3
	56nm,0.7s,baz=336,slow=11,SNR=70						
WRA				S	S	00 17 18.9	-4.1
	2.1nm,0.8s,baz=341,slow=20,SNR=5.0						
WB2	Warramunga Arr	20.08	159	⇑iP	P	00 13 37.6	-1.8
LEM	Lembang	20.12	253	P	P	00 13 39.7	-0.2
	232nm,1.4s						
COEN	Coen	20.51	129	eP	P	00 13 44.1	+0.1
	4.2nm,0.8s						
COEN				S	S	00 17 26.9	-4.8
MBWA	Marble Bar	21.16	199	eP	P	00 13 52.6	+1.6
	76nm,0.9s,mb5.0						
SBJI	Serang	21.38	256	P	P	00 13 54.6	+1.1
	416nm,1.2s,mb5.6						
PMG	Port Moresby	21.72	113	eP	P	00 13 59.8	+2.7
PMG	Port Moresby	21.72	113	⇑eP	P	00 13 59.2	+2.0
PMG	Port Moresby	21.72	113	P	P	00 14 00.2	+3.0
	109nm,0.8s,mb5.3,baz=306,slow=4.3,SNR=23						
GUMO	Guam	22.97	50	LR	LR	00 21 52.7	
	comp=Z,394nm,19.5s,MS3.9,baz=250,slow=33						
MYKOM	Kota Tinggi	23.29	277	⇑P	P	00 14 14.3	+0.4
ASAR	Alice Springs	23.43	164	P	P	00 14 13.5	-1.6
ASAR				S	S	00 18 26.0	+0.4
ASAR	Alice Springs	23.43	164	P	P	00 14 13.4	-1.6
	92nm,0.8s,mb5.3,baz=344,slow=10,SNR=512						
ASAR				S	S	00 18 26.0	+0.4
	8.8nm,0.9s,baz=347,slow=23,SNR=7.2						
ASAR				ScP	ScP	00 21 38.1	+2.1
	1.4nm,0.8s,baz=0.4,slow=1.7,SNR=4.2						
KGM	Kluang	23.85	277	⇑P	P	00 14 19.5	+0.5
KSI	Kapahiang	24.48	264	P	P	00 14 25.7	+0.8
	521nm,0.8s,mb6.0						
KTGM	Kuala Trenggan	24.64	285	⇑P	P	00 14 26.9	+0.6
NACB	Ninganchiao	25.65	349	eP	P	00 14 35.4	+0.1
FRIM	Kepong	25.69	280	⇓P	P	00 14 36.5	+0.7
QIZ	Qiongzhong	26.13	321	P	P	00 14 40.0	+0.3
QIZ				S	S	00 19 10.9	+1.9
QIZ				LR	LR		
	comp=N,492nm,17.0s						
QIZ				LR	LR		
	comp=Z,458nm,15.4s,MS4.1						
YHNB	Yeheng	26.17	348	eP	P	00 14 39.9	-0.1
IPM	Ipoh	26.50	282	⇓P	P	00 14 43.3	+0.1
PPI	Padang Panjang	26.58	271	P	P	00 14 43.8	-0.1
	comp=Z,134nm,1.1s,mb5.4						
CTA	Charters Tower	26.69	136	eP	P	00 14 45.5	+0.7
	comp=Z,54nm,1.0s,mb5.0						
CTA	Charters Tower	26.69	136	eP	P	00 14 45.5	+0.7
CTA				pmax	pmax		
	comp=Z,55nm,1.0s						
CTA	Charters Tower	26.69	136	P	P	00 14 46.0	+1.2
	comp=Z,81nm,1.0s,mb5.2,baz=318,slow=12,SNR=25						
CTAO	Charters Tower	26.69	136	eP	P	00 14 46.2	+1.5
KULM	Kulim	27.04	284	eP	P	00 14 47.3	-0.7
KULM	Kulim	27.04	284	⇓P	P	00 14 48.1	0.0
QZH	Quanzhou	27.12	343	⇑iP	P	00 14 51.3	+2.7
QZH				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.2						
JOW	Kunigami	27.79	3	P	P	00 14 55.0	+0.5
	comp=Z,102nm,1.0s,mb5.4,baz=150,slow=6.5,SNR=4.6						
PSI	Prapat	28.30	278	P	P	00 14 59.1	-0.2
	comp=Z,75nm,0.8s,mb5.3,baz=114,slow=4.3,SNR=64						
KKTK	Khon Kaen	29.46	307	P	P	00 15 08.5	-1.0
FORT	Forrest	29.55	178	eP	P	00 15 09.4	-0.7
	comp=Z,37nm,0.6s,mb5.3						
SSE	Sheshan	32.48	351	eP	P	00 15 37.0	+1.1
SSE				AP	pP	00 15 45.9	-0.6
SSE				XP	sP	00 15 50.1	-0.9
SSE				S	S	00 20 54.8	+6.4
SSE				XS	sS	00 21 07.7	+1.8
SSE				SCS	ScS	00 26 00.3	-2.7
SSE				AMB	AMB		
	comp=Z,64nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,389nm,5.0s						
SSE				LR	LR		
	comp=Z,165nm,27.7s,MS3.6						
SSE	Sheshan	32.48	351	eP	P	00 15 37.0	+1.1
SSE				pP	pP	00 15 45.9	-0.6
SSE				sP	sP	00 15 50.1	-0.9
SSE				PP	PP	00 16 53.3	+3.4
SSE				S	S	00 20 54.8	+6.4
SSE				sS	sS	00 21 07.7	+1.8
SSE				ScS	ScS	00 26 00.3	-2.7
NWAO	Narrogin (SRO)	32.97	195	eP	P	00 15 41.6	+1.3
NWAO	Narrogin (SRO)	32.97	195	P	P	00 15 41.3	+1.0
	comp=Z,4.1nm,0.8s,mb4.4,baz=33,slow=5.3,SNR=4.0						
STKA	Stephens Creek	33.59	157	⇑iP	P	00 15 45.9	+0.2
	comp=Z,61nm,0.8s,mb5.6						
STKA	Stephens Creek	33.59	157	P	P	00 15 46.6	+0.9
	comp=Z,65nm,0.7s,mb5.7,baz=328,slow=8.7,SNR=104						
GYA	Guiyang	33.67	326	P	P	00 15 48.6	+2.1
GYA				AP	pP	00 15 56.9	-0.1
GYA				XP	sP	00 16 00.4	-1.1
GYA				PP	PP	00 17 02.0	-1.2
GYA				PCP	PcP	00 18 28.2	+2.2
GYA				S	S	00 21 09.0	+1.9
GYA				XS	sS	00 21 23.0	-1.6
GYA				SCP	ScP	00 22 09.8	+1.9
GYA				SCS	ScS	00 26 09.6	+0.2
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,140nm,4.9s						
GYA				LR	LR		
	comp=N,570nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=E,480nm,17.4s,MS4.5						
GYA				LR	LR		
	comp=Z,590nm,16.6s,MS4.4						
WHN	Wuhan	33.67	340	⇓P	P	00 15 48.2	+1.8
WHN				AMB	AMB		
	comp=Z,131nm,1.1s,mb5.8						
HNR	Honiara	33.84	105	P	P	00 15 48.4	+0.2
NJ2	Nanjing	33.84	348	eP	P	00 15 47.6	-0.3
NJ2				AP	pP	00 15 59.0	+0.5
NJ2				XP	sP	00 16 00.7	-2.2
NJ2				PP	PP	00 16 59.7	-5.3
NJ2				S	S	00 21 07.5	-2.1
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,240nm,11.0s						
NJ2				LR	LR		
	comp=N,630nm,25.1s						
NJ2				LR	LR		
	comp=E,460nm,19.5s						
NJ2				LR	LR		
	comp=Z,420nm,24.6s,MS4.1						
CHG	Chiang Mai	33.91	307	PG	P	00 15 47.9	-0.7
	comp=Z,28nm,1.0s,mb5.2						
CHTO	Chiang Mai	33.91	307	eP	P	00 15 47.7	-0.9
	comp=Z,9.0nm,0.8s,mb4.8						
CHTO				ePcP	PcP	00 18 27.8	+1.0
CHTO	Chiang Mai	33.91	307	eP	P	00 15 47.7	-0.9
CHTO				e		00 18 27.8	
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
CHTO	Chiang Mai	33.91	307	P	P	00 15 48.6	0.0
	SNR=5.3						
JNU	Nakatsue	34.23	6	LR	LR	00 28 43.0	
	comp=Z,248nm,20.3s,MS3.9,baz=175,slow=34						
KMI	Kunming	35.06	320	P	P	00 16 00.9	+2.4
KMI				S	S	00 21 30.6	+2.0
KMI				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
KMI				LR	LR		
	comp=Z,215nm,21.7s,MS3.9						
JHJ	Hachijo jima 2	36.11	18	LR	LR	00 30 24.8	
	comp=Z,574nm,18.1s,MS4.4,baz=85,slow=35						
ARMA	Armidale	37.40	144	eP	P	00 16 20.1	+1.6
KSRS	Korea Array	38.36	1	P	P	00 16 26.6	+0.1
	comp=Z,16nm,0.8s,mb4.8,baz=179,slow=9.8,SNR=28						
KSRS				LR	LR	00 29 32.7	
	comp=Z,154nm,21.6s,MS3.8,baz=175,slow=32						
CD2	Chengdu	38.73	327	eP	P	00 16 30.2	+0.6
CD2				AP	pP	00 16 38.0	-2.3
CD2				XP	sP	00 16 41.3	-3.5
CD2				PP	PP	00 18 03.1	+4.3
CD2				PCP	PcP	00 18 41.6	+0.6
CD2				S	S	00 22 25.9	+1.6
CD2				SCS	ScS	00 26 36.3	-0.9
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,220nm,12.0s,MS4.4						
CD2				LR	LR		
	comp=E,260nm,12.0s,MS4.4						
CD2				LR	LR		
	comp=Z,190nm,10.8s,MS4.2						
XAN	Xi'an	38.84	336	P	P	00 16 30.5	0.0
XAN				AP	pP	00 16 36.7	-4.5
XAN				AMB	AMB		
	comp=Z,54nm,1.4s,mb5.1						
MJAR	Matsushiro Arr	38.87	14	P	P	00 16 28.6	-2.1
	comp=Z,4.5nm,0.5s,mb4.5,baz=185,slow=9.1,SNR=12						
MJAR				ScP	ScP	00 22 27.6	+0.8
	comp=Z,4.3nm,1.0s,baz=208,slow=5.3,SNR=5.1						
MAJO	Matsushiro	38.87	14	eP	P	00 16 30.7	-0.1
MAT	Matsushiro	38.87	14	P	P	00 16 28.8	-1.9

CNB **Canberra Magne** 39.93 151 *e*P P **00 16 42.3 +2.7**
comp=Z,201nm,1.9s,mb5.5
TOO **Toolangi** 40.12 157⇑ *i*P P **00 16 43.3 +2.2**
comp=Z,24nm,0.7s,mb5.0
TOO **Toolangi** 40.12 157⇑ *i*P P **00 16 43.3 +2.2**
TOO pmax pmax
comp=Z,24nm,0.7s,mb5.0
BJT **Baijiatuau** 42.09 348 *e*P P **00 16 56.9 -0.4**
comp=Z,94nm,1.2s,mb5.3
BJT **Baijiatuau** 42.09 348 *e*P P **00 16 56.9 -0.4**
BJT pmax pmax
comp=Z,95nm,1.2s
BJI **Beijing** 42.10 348 P P **00 16 56.8 -0.6**
BJI AP pP 00 17 02.2 -6.0
BJI PP PP 00 18 35.5 +0.1
BJI PCP PcP 00 18 48.9 -2.7
BJI S **S** **00 23 19.2 +4.7**
BJI AMB AMB
comp=Z,41nm,1.0s,mb5.0
BJI LR LR
comp=N,235nm,26.4s
BJI LR LR
comp=E,252nm,20.4s
BJI LR LR
comp=Z,169nm,29.1s,MS3.8
BJI **Beijing** 42.10 348 P P **00 16 56.8 -0.6**
BJI pP pP 00 17 02.2 -6.0
BJI sP sP 00 17 05.1 -7.5
BJI PP PP 00 18 35.5 +0.1
BJI PcP PcP 00 18 48.9 -2.7
BJI S **S** **00 23 19.2 +4.7**
BJI SS SS 00 26 30.5 +7.4
LZH **Lanzhou** 42.80 332 ⇓P P **00 17 04.2 +1.1**
LZH AP pP 00 17 13.6 -0.3
LZH XP sP 00 17 18.1 -0.3
LZH PP PP 00 18 46.5 +3.5
LZH *e*S **S** **00 23 27.2 +2.3**
LZH SS SS 00 26 32.0 -4.9
LZH AMB AMB
comp=Z,16nm,1.4s,mb4.6
LZH AMB AMB
comp=Z,120nm,5.0s
LZH LR LR
comp=E,485nm,15.0s
LZH LR LR
comp=Z,759nm,15.5s,MS4.7
LZH **Lanzhou** 42.80 332 ⇓P P **00 17 04.2 +1.1**
LZH pP pP 00 17 13.6 -0.3
LZH sP sP 00 17 18.1 -0.3
LZH PP PP 00 18 46.5 +3.5
LZH PcP PcP 00 18 57.5 +3.5
LZH ScP ScP 00 22 44.9 +2.6
LZH *e*S **S** **00 23 27.2 +2.3**
LZH sS sS 00 23 40.2 -2.5
LZH SS SS 00 26 32.0 -4.9
LZH **Lanzhou** 42.80 332 ⇓P P **00 17 04.2 +1.1**
LZH *PP pP 00 17 13.6 -0.3
LZH *SP sP 00 17 18.1 -0.3
LZH 00 18 46.5
LZH 00 18 57.5
LZH *e*S **S** **00 23 27.2 +2.3**
LZH *SS sS 00 23 40.2 -2.5
LZH SS SS 00 26 32.0 -4.9
SHL **Shillong** 43.04 310 *e*P P **00 17 05.5 +0.2**
DZM **Mont Dzumac** 43.70 121 P P **00 17 09.5 -1.2**
comp=Z,6.8nm,0.8s,mb4.4,baz=313,slow=19,SNR=3.0
HHC **Hu-ho-hao-te** 44.03 343 *e*P P **00 17 13.2 +0.2**
HHC AP pP 00 17 20.6 -3.2
HHC XP sP 00 17 23.7 -4.6
HHC PP PP 00 18 57.4 +1.3
HHC SCP ScP 00 22 47.4 +0.2
HHC PCS PcS 00 22 51.0 -0.1
HHC S **S** **00 23 43.1 +0.3**
HHC SCS ScS 00 27 06.7 -2.2
HHC AMB AMB
comp=Z,16nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,283nm,4.2s
HHC LR LR
comp=N,235nm,14.3s,MS4.4
HHC LR LR
comp=E,232nm,13.1s,MS4.4
HHC LR LR
comp=Z,267nm,25.0s
VLA **Vladivostok** 44.23 5 P P **00 17 08.0 -6.6**
VLA pmax pmax
comp=Z,65nm,0.6s,mb5.5
CN2 **Changchun** 44.71 358 *e*P P **00 17 17.9 -0.5**
CN2 *e*XP sP 00 17 30.0 -3.6
CN2 *e*S **S** **00 23 52.3 -0.2**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,12.0s,MS5.2
CN2 LR LR
comp=E,1μm,12.0s,MS5.2
CN2 LR LR
comp=Z,1μm,13.0s,MS5.0
TAU **Tasmania Unive** 45.45 159 *e*P P **00 17 25.2 +0.9**
MDJ **Mudanjiang** 45.56 3 P P **00 17 25.1 0.0**
MDJ AP pP 00 17 31.3 -4.7
MDJ XP sP 00 17 33.9 -6.5
MDJ PP PP 00 19 11.6 -0.8
MDJ PCS PcS 00 22 58.1 +0.9
MDJ S **S** **00 24 06.1 +1.3**
MDJ AMB AMB
comp=Z,53nm,1.2s,mb5.3
MDJ AMB AMB
comp=Z,795nm,5.2s
MDJ LR LR
comp=N,78nm,25.4s
MDJ LR LR
comp=E,174nm,39.6s
MDJ LR LR
comp=Z,152nm,26.9s,MS3.8
MDJ **Mudanjiang** 45.56 3 *e*P P **00 17 25.3 +0.2**
comp=Z,52nm,1.0s,mb5.4
LSA **Lhasa** 45.89 315 P P **00 17 29.2 +1.2**
LSA AMB AMB
comp=Z,20nm,0.7s,mb5.2
LSA **Lhasa** 45.89 315 *e*P P **00 17 29.4 +1.5**
comp=Z,22nm,0.8s,mb5.1
LSA **Lhasa** 45.89 315 *e*P P **00 17 29.5 +1.5**
LSA pmax pmax
comp=Z,22nm,0.8s,mb5.1
PALK **Pallekele** 46.90 281 *e*P P **00 17 36.0 -0.1**
ASAJ **Asahikawa** 47.12 15 P P **00 17 36.7 -0.7**
comp=Z,8.5nm,0.4s,mb5.0,baz=223,slow=6.3,SNR=8.0
ASAJ LR LR 00 38 11.1
comp=Z,284nm,18.1s,MS4.3,baz=37,slow=37
TAPN **Taplejung** 47.16 310 *e*P P **00 17 38.1 +0.1**
comp=Z,64nm,1.0s,mb5.5
ODAN **Odare** 47.16 309 *e*P P **00 17 38.2 +0.2**
comp=Z,73nm,0.9s,mb5.6
GTA **Gaotai** 47.37 331 ⇓P P **00 17 40.5 +1.1**
GTA AP pP 00 17 45.1 -5.2
GTA PCP PcP 00 19 11.5 +1.7
GTA PP PP 00 19 31.4 +0.5
GTA PCS PcS 00 23 05.1 +0.1
GTA S **S** **00 24 33.0 +2.1**
GTA SCS ScS 00 27 31.2 +0.7
GTA SS SS 00 27 54.1 -4.9
GTA AMB AMB
comp=Z,30nm,1.3s,mb5.1
GTA AMB AMB
comp=Z,302nm,6.1s
GTA LR LR
comp=N,177nm,18.2s,MS4.2
GTA LR LR
comp=E,128nm,17.5s,MS4.2
GTA LR LR
comp=Z,199nm,18.6s,MS4.1
JIRN **Jiri** 48.48 309 *e*P P **00 17 48.5 +0.2**
comp=Z,118nm,1.0s,mb5.9
KKN **Kakani** 49.25 309 *e*P P **00 17 54.0 -0.1**
comp=Z,117nm,1.0s,mb5.9
KKN **Kakani** 49.25 309 *e*P P **00 17 54.0 -0.1**
KKN pmax pmax
comp=Z,117nm,1.0s,mb5.9
YSS **Yuzh-Sakhalins** 49.81 14 *e*P P **00 17 57.5 -0.6**
GKN **Gorkha** 49.85 309 *e*P P **00 17 58.8 +0.1**
comp=Z,159nm,1.0s,mb6.0

KLR **Kul'dur** 50.29 4 *e*P P **00 17 57.7 -3.9**
HIA **Hailar** 50.54 354 *e*P P **00 18 03.3 -0.3**
HIA **Hailar** 50.54 354⇑ *i*P P **00 18 03.4 -0.1**
HYB **Hyderabad** 51.10 293 *e*P P **00 18 08.5 +0.2**
comp=Z,190nm,1.0s,mb6.0
HYB *e* 00 18 15.0
HYB **Hyderabad** 51.10 293 *e*P P **00 18 08.5 +0.2**
HYB *e* 00 18 15.0
HYB pmax pmax
comp=Z,190nm,1.0s,mb6.0
HYB **Hyderabad** 51.10 293 *i* P P **00 18 08.5 +0.2**
comp=Z,190nm,1.0s,mb6.0
HYB *e* 00 18 15.0
HYB *e* 00 18 28.0
ULN **Ulaanbaatar** 51.76 343 *e*P P **00 18 13.1 +0.4**
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
ULN **Ulaanbaatar** 51.76 343 P P **00 18 13.5 +0.8**
SNR=14
SONM **Songino Array** 51.92 342 P P **00 18 14.1 +0.2**
SONM ScP ScP 00 23 22.5 +2.1
SONM LR LR 00 41 12.1
SONM **Songino Array** 51.92 342 P P **00 18 14.1 +0.2**
comp=Z,13nm,0.8s,mb4.9,baz=148,slow=8.7,SNR=87
SONM ScP ScP 00 23 22.5 +2.1
comp=Z,2.3nm,0.8s,baz=156,slow=3.8,SNR=7.9
SONM LR LR 00 41 12.1
comp=Z,143nm,18.6s,MS4.0,baz=299,slow=37
AKL **Akola** 53.44 297⇓ *i*P P **00 18 25.8 +0.2**
AKL *ex* x 00 18 27.4
comp=Z,120nm,1.1s
AKL *i* x x 00 19 43.0
LGTI **Lohaghat** 53.94 308 *e*P P **00 18 27.2 -2.0**
CIT **Chita** 54.12 350 *e*P P **00 18 29.8 -0.2**
CIT *e* 00 18 36.8
CIT pmax pmax
comp=Z,69nm,1.8s,mb5.3
AGRA **Agra** 54.89 305 *e*P P **00 18 35.5 -0.6**
AGRA AMb AMB 00 18 36.1
comp=Z,105nm,0.4s,mb6.2
JOSI **Joshimath** 54.96 309 *e*P P **00 18 37.2 +0.7**
KAD **Karad** 55.10 292 *i* P P **00 18 36.0 -1.8**
ZAK **Zakamensk** 55.13 342 *e*P P **00 18 34.2 -3.2**
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
POO **Poona** 55.71 293⇓ *i*P P **00 18 41.0 -1.2**
comp=Z,90nm,1.0s,mb5.8
BISR **Bishrakh** 55.82 306 *e*P P **00 18 40.6 -2.2**
BISR AMb AMB 00 18 43.5
comp=Z,2.1nm,0.8s,mb4.2
SONA **Sohna** 55.98 306 *e*P P **00 18 43.5 -0.5**
SONA AMb AMB 00 18 45.1
comp=Z,151nm,1.0s,mb6.0
AYAN **Aya Nagar** 56.04 306 *ex* x 00 18 49.8
NDI **New Delhi** 56.04 306 *e*P P **00 18 42.0 -2.4**
TLY **Talaya** 56.16 343 *e*P P **00 18 45.1 +0.3**
TLY **Talaya** 56.16 343 *e*P P **00 18 45.4 +0.6**
TLY pmax pmax
comp=Z,34nm,1.1s,mb5.3
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
TLY **Talaya** 56.16 343 P P **00 18 45.9 +1.1**
SNR=14
KUDL **Kundal** 56.43 305 *e*P P **00 18 46.3 -0.9**
KUDL AMb AMB 00 18 48.2
comp=Z,131nm,1.2s,mb5.8
IRK **Irkutsk** 56.48 343 *e*P P **00 18 47.0 0.0**
IRK pmax pmax
comp=Z,48nm,2.3s,mb5.1
WMQ **Urumqi** 56.82 327⇓ *i*P P **00 18 50.4 +0.7**
WMQ AP pP 00 18 57.8 -3.0
WMQ XP sP 00 19 01.5 -3.6
WMQ PCP PcP 00 19 45.9 +0.8
WMQ PP PP 00 20 58.3 +2.0
WMQ SCP ScP 00 23 42.4 +0.4
WMQ S **S** **00 26 40.1 -0.3**
WMQ SCS ScS 00 28 34.4 -1.7
WMQ AMB AMB
comp=Z,49nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,289nm,4.0s
WMQ LR LR
comp=N,287nm,28.8s
WMQ LR LR
comp=E,117nm,22.3s
WMQ LR LR
comp=Z,165nm,25.0s,MS4.0
RTK **Rohtak** 56.83 306 *ex* x 00 18 43.7
RTK AMb AMB 00 18 45.4
comp=Z,108nm,1.1s,mb5.8
KKR **Kurukshetra** 56.86 307 *e*P P **00 18 47.2 -3.0**
KKR AMb AMB 00 18 48.4
comp=Z,108nm,0.1s
KHET **Khetri** 56.96 305 *e*P P **00 18 50.6 -0.4**
KHET AMb AMB 00 18 51.9
comp=Z,93nm,1.1s,mb5.7
MOY **Mondy** 56.97 341 *e*P P **00 18 51.6 +1.0**
MOY pmax pmax
comp=Z,54nm,1.4s,mb5.4
AJM **Ajmer** 57.36 303 *e*P P **00 18 53.0 -0.8**
SDNR **Sundarnagar** 57.37 309 *e*P P **00 18 55.1 +1.3**
THN **Thein Dam** 58.73 309 *e*P P **00 19 02.6 -0.7**
RAO **Raoul Island** 59.41 124 *e*P P **00 19 08.1 0.0**
BOD **Bodaibo** 59.64 352 *e*P P **00 19 07.7 -1.3**
BOD pmax pmax
comp=Z,22nm,1.1s,mb5.1
KSH **Kashi** 61.65 317 *e*P P **00 19 25.0 +1.8**
KSH *e*AP pP 00 19 32.7 -1.7
KSH *e*XP sP 00 19 35.2 -3.5
KSH SCP ScP 00 24 04.1 +0.6
KSH *e*PCS PcS 00 24 06.8 -0.6
KSH *e*S **S** **00 27 41.6 -1.5**
KSH *e*SCS ScS 00 29 11.9 -0.2
KSH *e*SS SS 00 31 45.3 +0.1
KSH AMB AMB
comp=Z,575nm,3.1s
MK31 **Makanchi Array** 61.66 327 *e*P P **00 19 23.2 +0.1**
MKAR **Makanchi Array** 61.66 327 P P **00 19 23.1 0.0**
MKAR ScP ScP 00 24 04.9 +1.6
MKAR ⇑*e* 00 48 42.9
MKAR LR LR 00 49 58.3
MKAR **Makanchi Array** 61.66 327 P P **00 19 23.1 0.0**
comp=Z,14nm,0.7s,mb5.2,baz=119,slow=8.9,SNR=50
MKAR ScP ScP 00 24 04.9 +1.6
comp=Z,2.9nm,0.8s,baz=122,slow=4.7,SNR=6.6
MKAR PKP2bc 00 48 42.9
comp=Z,0.6nm,1.0s,baz=0.0,slow=1.4,SNR=4.6
MKAR LR LR 00 49 58.3
comp=Z,109nm,19.4s,MS4.0,baz=119,slow=40
YAK **Yakutsk** 62.99 1 *e*P P **00 19 31.4 -0.3**
YAK **Yakutsk** 62.99 1 *e*P P **00 19 31.3 -0.3**
YAK *e*S S **00 28 00.0 +0.9**
YAK pmax pmax
comp=N,24nm,1.1s
YAK pmax pmax
comp=Z,76nm,1.1s,mb5.7
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK smax
comp=E,66nm,4.4s
MA2 **Magadan** 63.30 13 *e*P P **00 19 34.8 +1.1**
comp=E,27nm,0.9s,mb5.4
MA2 **Magadan** 63.30 13 *e*P P **00 19 34.6 +0.9**
MA2 pmax pmax
comp=Z,40nm,0.9s,mb5.5

MA2 pmax pmax
comp=N,40nm,1.1s
KZA **Kyzart** 63.35 319 P P **00 19 35.8 +1.4**
SNR=24
TKM2 **Tokmak 2** 63.53 320 *e*P P **00 19 36.2 +0.5**
comp=N,23nm,1.0s,mb5.2
TKM2 **Tokmak 2** 63.53 320 *e*P P **00 19 36.2 +0.6**
TKM2 pmax pmax
comp=Z,23nm,1.0s,mb5.2
TKM2 **Tokmak 2** 63.53 320 P P **00 19 36.4 +0.8**
SNR=14
KBK **Karagaybulak** 63.82 320 P P **00 19 41.3 +3.8**
SNR=18
UCH **Uchtor** 63.90 319 P P **00 19 39.6 +1.5**
SNR=21
AAK **Ala-Archa** 64.11 319 P P **00 19 39.1 -0.3**
comp=Z,121nm,1.1s,mb5.8,SNR=21
AAK **Ala-Archa** 64.11 319 *e*P P **00 19 39.4 0.0**
AAK **Ala-Archa** 64.11 319⇑ *e*P P **00 19 39.7 +0.3**
AAK pmax pmax
comp=Z,39nm,1.5s,mb5.2
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 39.2 -0.2**
SNR=18
AAK **Ala-Archa** 64.11 319 P P **00 19 40.8 +1.3**
SNR=20
AML **Almayashu** 64.40 319 *e*P P **00 19 42.4 +1.0**
comp=Z,50nm,1.2s,mb5.4
AML **Almayashu** 64.40 319 P P **00 19 42.6 +1.3**
SNR=29
USP **Ospenovka** 64.40 320 P P **00 19 41.9 +0.6**
SNR=29
EKS2 **Erkin-Say** 64.59 319 *e*P P **00 19 43.2 +0.6**
comp=Z,42nm,1.2s,mb5.3
EKS2 **Erkin-Say** 64.59 319 P P **00 19 43.6 +1.0**
SNR=23
KBL **Kabul** 64.68 309 *e*P P **00 19 43.8 +0.5**
ZAA0 **Zalesovo Array** 64.98 334 *e*P P **00 19 43.8 -1.0**
ZALV **Zalesovo Beam** 64.98 334 P P **00 19 43.9 -1.0**
comp=Z,17nm,1.1s,mb5.0,baz=121,slow=5.5,SNR=27
ZAL **Zalesovo** 64.98 334 P P **00 19 43.9 -1.0**
KURK **Kurchatov** 65.93 329 P P **00 19 50.6 -0.5**
comp=Z,215nm,1.1s,mb6.1,SNR=26
KURK **Kurchatov** 65.93 329 *e*P P **00 19 50.6 -0.5**
comp=Z,36nm,0.9s,mb5.4
KURK **Kurchatov** 65.93 329 *e*P P **00 19 50.6 -0.5**
KURK pmax pmax
comp=Z,36nm,0.9s,mb5.4
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
KURK **Kurchatov** 65.93 329 P P **00 19 51.2 +0.1**
SNR=15
NVS **Novosibirsk** 66.27 334 *i* P P **00 19 51.7 -1.5**
NVS *e*S S 00 28 40.0 +0.3
NVS pmax pmax
comp=N,27nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
NVS pmax pmax
comp=Z,31nm,1.4s,mb5.2
NVS smax
comp=N,18nm,1.6s
NVS smax
comp=E,19nm,1.4s
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
WBK **Wadi Bani Khal** 70.19 294 P P **00 20 19.3 +0.8**
SNR=8.7
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
JMDO **Jabal Madar** 70.94 294 P P **00 20 23.6 +0.6**
SNR=18
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
SMDO **Samad** 71.10 295 P P **00 20 24.6 +0.6**
SNR=9.2
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BIDO **Bidbid** 71.11 295 P P **00 20 24.7 +0.7**
SNR=12
BRVK **Borovoye** 71.55 328 P P **00 20 25.8 -0.3**
comp=E,136nm,1.0s,mb5.8,SNR=7.8
BRVK **Borovoye** 71.55 328 *e*P P **00 20 25.3 -0.8**
BRVK **Borovoye** 71.55 328 P P **00 20 26.0 -0.1**
SNR=9.2
BRVK **Borovoye** 71.55 328 P P **00 20 26.0 -0.1**
SNR=9.2
BRVK **Borovoye** 71.55 328 P P **00 20 26.0 -0.1**
SNR=9.2
BSY **Bisya** 71.83 294 P P **00 20 29.1 +0.7**
SNR=18
BSY **Bisya** 71.83 294 P P **00 20 29.1 +0.7**
SNR=18
BSY **Bisya** 71.83 294 P P **00 20 29.1 +0.7**
SNR=18
BSY **Bisya** 71.83 294 P P **00 20 29.1 +0.7**
SNR=18
BSY **Bisya** 71.83 294 P P **00 20 29.1 +0.7**
SNR=18
HOQ **Hoqain** 71.86 295 P P **00 20 29.2 +0.7**
SNR=13
HOQ **Hoqain** 71.86 295 P P **00 20 29.2 +0.7**
SNR=13
HOQ **Hoqain** 71.86 295 P P **00 20 29.2 +0.7**
SNR=13
HOQ **Hoqain** 71.86 295 P P **00 20 29.2 +0.7**
SNR=13
HOQ **Hoqain** 71.86 295 P P **00 20 29.2 +0.7**
SNR=13
ARQ **Araqi** 72.53 295 P P **00 20 33.1 +0.6**
SNR=19
ARQ **Araqi** 72.53 295 P P **00 20 33.1 +0.6**
SNR=19

ARQ Araqi 72.53 295 P P 00 20 33.1 +0.6
SNR=19
ARQ Araqi 72.53 295 P P 00 20 33.1 +0.6
SNR=19
TIXI Tiksi 72.62 1 eP P 00 20 31.2 -1.0
comp=E,31nm,0.6s,mb5.4
TIXI Tiksi 72.62 1 eP P 00 20 31.5 -0.7
TIXI pmax pmax
comp=Z,24nm,0.5s,mb5.4
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
HATD Hatta, Dubai 73.12 296 P P 00 20 36.0 -0.1
SNR=15
BANOM Banah 73.15 297 P P 00 20 37.3 +1.1
SNR=6.2
BANOM Banah 73.15 297 P P 00 20 37.3 +1.1
SNR=6.2
BANOM Banah 73.15 297 P P 00 20 37.3 +1.1
SNR=6.2
BANOM Banah 73.15 297 P P 00 20 37.3 +1.1
SNR=6.2
ASHO Ashiyiah 73.16 296 P P 00 20 36.8 +0.5
SNR=12
ASHO Ashiyiah 73.16 296 P P 00 20 36.8 +0.5
SNR=12
ASHO Ashiyiah 73.16 296 P P 00 20 36.8 +0.5
SNR=12
ASHO Ashiyiah 73.16 296 P P 00 20 36.8 +0.5
SNR=12
ASHO Ashiyiah 73.16 296 P P 00 20 36.8 +0.5
SNR=12
ABKT Ailbek 74.11 310 P P 00 20 42.0 +0.4
comp=Z,77nm,1.0s,mb5.6,SNR=8.6
BILL Bilibino 74.13 14 eP P 00 20 37.2 -3.8
BILL pmax pmax
comp=Z,2.0nm,1.4s
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.2
WHFO Wadi Hawf 74.37 289 P P 00 20 43.2 -0.3
SNR=5.7
WHFO Wadi Hawf 74.37 289 P P 00 20 43.2 -0.3
SNR=5.7
WHFO Wadi Hawf 74.37 289 P P 00 20 43.2 -0.3
SNR=5.7
AKTK Aktyubinsk 77.58 322 P P 00 21 00.5 -0.7
AKTO Aktyubinsk 77.58 322 P P 00 21 00.5 -0.7
comp=Z,9.8nm,0.9s,mb4.7,baz=110,slow=5.9,SNR=32
SVE Sverdlovsk 78.18 329 eP P 00 21 03.5 -0.8
SVE pmax pmax
comp=Z,23nm,1.1s,mb5.0
VNDA Vanda 78.65 173 eP P 00 21 07.0 +0.4
comp=Z,4.1nm,0.8s,mb4.4
VNDA LR LR 00 56 02.5
VNDA Vanda 78.65 173 eP P 00 21 07.0 +0.4
VNDA pmax pmax
comp=Z,4.0nm,0.8s
VNDA Vanda 78.65 173 P P 00 21 07.7 +1.1
comp=Z,3.4nm,0.8s,mb4.3,baz=324,slow=5.3,SNR=8.2
VNDA LR LR 00 56 02.5
comp=Z,204nm,18.4s,MS4.5,baz=330,slow=36
GAMB Gambell 78.69 23 eP P 00 21 07.7 +0.7
ARU Arti 79.12 328 eP P 00 21 07.7 -1.8
comp=Z,8.4nm,0.8s,mb4.7
ARU Arti 79.12 328 d iP P 00 21 07.8 -1.7
ARU e pP 00 21 16.8 -4.2
ARU e 00 24 06.4
ARU ePPP 00 25 54.3
ARU S S 00 31 04.3 -1.9
ARU SS SS 00 36 09.1 -3.7
ARU pmax pmax
comp=Z,20nm,1.7s,mb4.8
SBA Scott Base 79.56 172 P P 00 21 12.0 +0.4
QRN Al-Qurain 80.92 299 eP P 00 21 19.0 -0.9
QRN AMb AMB 00 21 20.8
comp=Z,34nm,0.8s,mb5.3
UMR Umm Al-Rimmam 81.19 300 eP P 00 21 20.6 -0.7
UMR AMb AMB 00 21 24.4
comp=Z,36nm,1.4s,mb5.1
RDF Al-Radifah 81.27 299 eP P 00 21 20.7 -1.0
RDF AML AML 00 21 26.4
comp=Z,31nm,0.9s
MIB Mutribah 81.54 300 eP P 00 21 21.8 -1.3
MIB AMb AMB 00 21 27.8
comp=Z,56nm,0.8s,mb5.6
NAY Al-Naaiem 81.57 300 eP P 00 21 22.5 -0.8
NAY AMb AMB 00 21 27.9
comp=Z,29nm,0.9s,mb5.2
PPT Papeete 83.43 107 eLR LR 00 48 07.2
comp=Z,230nm,31.2s
TTA Tatalina 85.07 27 eP P 00 21 49.2 +8.7
ZEI Tsey 85.64 313 eP P 00 21 43.3 -0.6
ZEI e*PP pP 00 21 52.3 -3.2
ZEI e 00 25 06.5
ZEI pmax pmax
comp=Z,15nm,0.9s,mb5.2
KIV Kislovodsk 86.62 314 eP P 00 21 48.6 -0.1
KIV Kislovodsk 86.62 314 eP P 00 21 48.0 -0.7
KIV pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
IMA2 Indian Mountai 86.67 24 eP P 00 21 56.6 +8.2
VRHR Novokhopersk 87.91 321 eP P 00 21 53.2 -1.5
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,5.0nm,0.5s
SYO Syowa Base 88.05 201 ⇑eP P 00 21 54.0 -1.0
SYO Syowa Base 88.05 201 ⇑ePcP PcP 00 21 56.2 -0.6
MCK McKinley 88.35 26 eP P 00 21 58.5 +2.0
comp=E,33nm,1.7s,mb5.3
MCK McKinley 88.35 26 eP P 00 21 58.5 +2.0
MCK pmax pmax
comp=Z,33nm,1.7s,mb5.3
QSPA South Pole Qui 88.85 180 eP P 00 21 59.6 +1.0
comp=Z,8.9nm,0.8s,mb5.2
QSPA South Pole Qui 88.85 180 P P 00 21 59.7 +1.0
comp=Z,2.8nm,0.8s,mb4.7,baz=324,slow=1.3,SNR=8.4
MALT Malatya 89.52 308 eP P 00 22 02.7 0.0
comp=Z,3.3nm,0.8s,mb4.7
MALT Malatya 89.52 308 eP P 00 22 02.7 +0.1
MALT pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
KMBO Kilima Mbogo 89.69 269 P P 00 22 04.7 +0.7
KMBO Kilima Mbogo 89.69 269 ⇑eP P 00 22 05.5 +1.5
KMBO Kilima Mbogo 89.69 269 P P 00 22 04.7 +0.7
comp=Z,5.1nm,0.9s,mb4.8,baz=51,slow=8.3,SNR=13
ANN Anapa 90.43 315 eP P 00 22 04.3 -2.4
ANN e*PP pP 00 22 14.5 -3.9
ANN eS S 00 32 32.7 -26
ANN eSS SS 00 38 58.4 -1.6
ANN pmax pmax
comp=Z,42nm,1.1s,mb5.7
OBN Obninsk 91.11 325 ⇑eP P 00 22 08.1 -1.6
OBN eS S 00 32 36.6 -28
OBN pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
OBN MLR MLR
comp=Z,100nm,13.0s,MS4.4
DAWY Dawson 92.57 26 eP P 00 22 16.8 +0.6
BRTR Keskin Array B 93.26 310 P P 00 22 18.8 -1.2
comp=Z,1.2nm,0.8s,mb4.4,baz=122,slow=5.4,SNR=5.8
BRTR PP PP 00 26 00.9 -3.0
comp=Z,1.8nm,0.9s,baz=69,slow=11,SNR=3.8
INK Inuvik 94.53 22 eP P 00 22 22.6 -2.5
comp=Z,321nm,1.3s
ARCES ARCESS Array B 95.02 340 P P 00 22 26.9 -0.5
comp=Z,5.7nm,0.9s,mb5.0,baz=67,slow=6.9,SNR=3.1
AKASG Malin Array Be 95.75 321 P P 00 22 28.0 -3.1
comp=Z,0.3nm,0.4s,mb4.1,baz=85,slow=4.2,SNR=2.7
FINES FINESS Array B 96.16 332 P P 00 22 30.2 -2.5
comp=Z,1.2nm,0.8s,mb4.4,baz=86,slow=5.7,SNR=3.0
FINES LR LR 01 07 51.0
comp=Z,113nm,20.1s,MS4.3,baz=335,slow=37
TIRR Tirgusor 96.87 314 ⇓iP P 00 22 34.8 -1.6
RKT Rikitea 96.99 113 eLR LR 00 54 11.7
comp=Z,162nm,24.2s
MLR Muntele Rosu 98.50 316 P P 00 22 42.0 -1.7
comp=Z,2.3nm,0.9s,mb4.7,baz=45,slow=1.4,SNR=4.5
MLR Muntele Rosu 98.50 316 ⇓iP P 00 22 41.8 -1.9
BURAR Bucovina Array 98.72 318 ⇑iP P 00 22 44.5 -0.1
BOSA Boshof 99.76 241 LR LR 01 04 52.8
comp=Z,222nm,19.0s,MS4.7,baz=118,slow=34
YKA Yellowknife Ar 103.75 25 Pdiff Pdif 00 23 12.1 +5.3
comp=Z,0.2nm,0.4s,baz=291,slow=4.9,SNR=4.7
PDAR Pinedale Array 114.76 43 PKP PKiKP 00 27 47.8 +2.0
comp=Z,0.2nm,0.5s,baz=282,slow=1.6,SNR=2.3
TXAR Lajitas Array 124.26 55 PKP PKPdf 00 28 05.2 +0.7
comp=Z,0.2nm,0.7s,baz=262,slow=5.4,SNR=2.7
TOA0 Torodi Ar. Sit 124.52 285 ePKPdf PKPdf 00 28 05.1 -0.2
TOA0 ePP PP 00 29 52.0 0.0
TORD Torodi Ar. Bea 124.52 285 PKP PKPdf 00 28 05.0 -0.3
TORD PP PP 00 29 51.6 -0.4
TORD Torodi Ar. Bea 124.52 285 PKP PKPdf 00 28 05.0 -0.3
comp=Z,2.4nm,0.8s,baz=64,slow=1.5,SNR=14
TORD PP PP 00 29 51.6 -0.4
comp=Z,4.2nm,1.1s,baz=66,slow=5.9,SNR=6.3
SCHQ Schefferville 125.25 10 PKP PKPdf 00 28 06.2 +0.6
comp=Z,1.1nm,0.7s,baz=342,slow=3.2,SNR=3.3
HDIL Hopedale 128.79 35 PKPdf PKPdf 00 28 13.8 +1.0
LCO Las Campanas 145.62 152 ePKPdf PKPdf 00 28 46.0 +1.9
JTS JuntasAbangare 146.98 73 ePKP PKPdf 00 28 49.3 +2.5
NNA Nana 153.02 119 PKPdf PKPdf 00 28 56.5 +0.3

*DDA **06** 00:10:25.1, 3862N×3941E, h18km, Md2.8*
*ISK **06** 00:10:26.6, 3847N×3926E, h5km, MD2.6*
*ISCJB **06** 00:10:27.0±0.7, 3841N±004×3932E±005, h10km, Error ellipse: s-maj=5.6km s-min=5.2km az=174.2*
*CSEM **06** 00:10:27.0±0.3, 3847N×3927E, h8km, MD2.6, Error ellipse: s-maj=7.7km s-min=3.7km az=121.0*
ISC 06 00:10:27.5±0.7, 3842N±004×3933E±005, h10km, n7, σ1§00/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.28	285	iP	Pg	00 10 33.0	-0.2
ELZG				iS	Sg	00 10 37.8	+0.7
PTK	Pertek	0.47	5	PG	Pg	00 10 35.9	-0.8
PTK				SG	Sg	00 10 43.8	+0.8
MALT	Malatya	0.72	262	ePG	Pg	00 10 40.4	-1.0
MALT				eSG	Sg	00 10 51.3	+0.4
MYA	Malataya	0.72	263	ePG	Pg	00 10 40.3	-1.1
URFA	Urfa	1.06	203	ePG	Pg	00 10 48.6	+0.7
MARD	Mardin	1.59	134	iP	Pn	00 10 54.5	-1.2
MARD				iS	Sn	00 11 17.0	+0.7
GZT	Gaziantep	1.76	233	iP	Pg	00 11 03.8	+2.6
GZT				iS	Sg	00 11 23.3	-0.7

IDC 06 00:29:33.9±2.2, 012N×12714E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/16, mbtmp3.3/3, Error ellipse: s-maj=192.9km s-min=25.9km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.15	161	P	P	00 34 19.0	-1.7
	0.3nm,0.4s,baz=339,slow=11,SNR=5.3						
ASAR	Alice Springs	24.54	165	P	P	00 34 56.6	+1.2
	0.5nm,0.3s,baz=342,slow=11,SNR=12						
MKAR	Makanchi Array	60.75	326	P	P	00 39 47.4	0.0
	0.1nm,0.4s,baz=117,slow=7.7,SNR=6.7						

IDC 06 00:56:57.9±4.2, 438S×12546E, h424km±54km, mb3.2/5, mb1 3.3/7, mb1mx3.2/18, mbtmp3.2/7, Error ellipse: s-maj=86.4km s-min=18.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.63	179	P	P	00 59 55.0	+0.1
	0.9nm,0.3s,baz=18,slow=11,SNR=28						
WRA	Warramunga Arr	17.72	152	P	P	01 00 37.8	-0.9
	1.1nm,0.3s,baz=326,slow=10,SNR=15						
ASAR	Alice Springs	20.83	158	P	P	01 01 09.2	+0.7
	2.7nm,0.4s,baz=343,slow=8.6,SNR=55						
STKA	Stephens Creek	31.26	153	P	P	01 02 40.9	-0.1
	2.7nm,0.5s,baz=337,slow=9.5,SNR=8.2						
SONM	Songino Array	54.63	344	P	P	01 05 45.7	+0.8
	0.3nm,0.5s,baz=146,slow=8.3,SNR=3.4						
MKAR	Makanchi Array	63.61	328	P	P	01 06 46.0	+0.4
	0.6nm,0.5s,baz=123,slow=8.3,SNR=13						
ZALV	Zalesovo Beam	67.29	335	P	P	01 07 07.8	-0.9
	0.5nm,0.4s,baz=123,slow=5.3,SNR=3.3						
TORD	Torodi Ar. Bea	123.85	283	PKP	PKPdf	01 15 07.2	-0.4
	0.9nm,1.2s,baz=111,slow=2.0,SNR=2.6						

JMA 06 01:13:35.3±0.1, 3850N×14214E, h29km±2km, M3.5, 1C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.62	266	⇑P	Pb	01 13 47.4	-0.3
JIO				S	Sb	01 13 55.3	-0.8
OFUJ	Ofunato	0.69	328	⇓P	Pb	01 13 48.3	-0.5
OFUJ				eS	Sb	01 13 57.4	-0.5
JMK	Ichinoseki	0.85	302	⇓P	Pn	01 13 50.9	-0.4
JMK				S	Sb	01 14 01.8	-0.7
JOU	Okura	1.17	264	P	Pn	01 13 56.0	+0.4
JOU				eS	Sn	01 14 10.9	+0.3
JOM	Ohasama	1.18	326	⇓P	Pn	01 13 55.9	+0.1
JOM				eS	Sn	01 14 10.8	0.0
JMM	Marumori	1.24	240	P	Pn	01 13 55.9	-0.7
JMM				eS	Sn	01 14 11.5	-0.8
JYK	Kaneyama	1.46	287	S	Sn	01 14 18.7	+1.0

*NEIC **06** 01:35:39.6, 2755S×7102W, h18km, ML3.6(GUC), After GUC.*
GUC 06 01:35:39.6±0.6, 2755S×7102W, h18km±6km, ML3.6, 4C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.50	20	⇓iP	Pg	01 35 49.3	-0.4
CDCH				iS	Sg	01 35 56.5	0.0
CPCH	Copiapo	0.62	73	⇑iP	Pb	01 35 51.3	-0.6
CPCH				iS	Sb	01 36 00.2	-0.1
CPCH	Copiapo	0.62	73	⇑iP	Pb	01 35 51.3	-0.6
CPCH				iS	Sb	01 36 00.2	-0.1
CPCH				AML	AML	01 36 01.0	
	comp=E,15μm,0.1s						
VACH	Vallenar	1.05	167	⇑iP	Pb	01 35 58.4	-0.8
VACH				iS	Sb	01 36 11.9	-0.7
VACH	Vallenar	1.05	167	⇑iP	Pb	01 35 58.4	-0.8
VACH				iS	Sb	01 36 11.9	-0.7
VACH				AML	AML	01 36 16.1	
	comp=N,2μm,0.3s						
LCO	Las Campanas	1.49	169	ePn	Pn	01 36 05.4	+0.1
LCO				eSn	Sn	01 36 24.2	-0.1
TLL	Tololo Astrono	2.62	176	iP	Pn	01 36 22.1	+1.2
TLL				iS	Sn	01 36 55.6	+3.3
TLL	Tololo Astrono	2.62	176	iP	Pn	01 36 22.1	+1.2
TLL				iS	Sn	01 36 55.6	+3.3
TLL				AML	AML	01 37 06.7	
	comp=N,205nm,0.5s						

*CSEM **06** 01:48:00.7±0.1, 3739N×3252E, h10km, Mw3.4, Error ellipse: s-maj=2.1km s-min=1.4km az=46.0*
*ISCJB **06** 01:48:01.3±0.9, 3738N±003×3254E±003, h11km±7km, Error ellipse: s-maj=4.7km s-min=4.2km az=36.3*
*ISK **06** 01:48:01.2, 3742N×3254E, h10km, MD3.5*
*NIC **06** 01:48:02.7±0.3, 3745N×3261E, h41km, mb4.1, ML3.7, MW3.4*
*DDA **06** 01:48:04.7, 3757N×3257E, h21km, Md3.5*
*NSSC **06** 01:48:06.6, 3713N×3280E, h15km±214km*
ISC 06 01:48:01.2±0.9, 3736N±002×3254E±004, h4km±7km, n47, σ0§96/63, 1C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	Konya--Tatoy	0.60	347	PG	Pg	01 48 12.0	-0.8
KONT				SG	Sg	01 48 20.4	-0.3
IKL	Isikli	1.45	140	PN	Pn	01 48 27.9	-0.2
BCK	Bucak	1.55	274	PN	Pn	01 48 29.4	-0.2
ANTB	Antalya	1.57	254	PN	Pn	01 48 30.4	+0.6
KIZT	Kizilcal	1.61	341	PN	Pn	01 48 29.2	-1.1
MERS	Mersin	1.66	107	PN	Pn	01 48 31.6	+0.6
ISP	Isparta	1.68	287	PN	Pn	01 48 31.4	+0.1
NIG	Nigde	1.81	65	ePN	Pn	01 48 32.8	-0.2
SHUT	Suhut-Afyon	1.97	308	ePN	Pn	01 48 34.5	-0.8
KARA	Karaisali	2.01	92	ePN	Pn	01 48 35.8	0.0
ELL	Elmali	2.19	255	ePN	Pn	01 48 39.3	+1.0
ALFC	Alevga	2.20	179	P	Pn	01 48 38.2	-0.2
	22nm,0.2s						
ALFC				S	Sn	01 49 06.4	+0.4
MAMC	Mammari	2.25	166	P	Pn	01 48 39.2	+0.1
AVNT	Avonos	2.32	51	iP	Pn	01 48 39.4	-0.6
AVNT				iS	Sn	01 49 09.7	+0.8
AKMC	Akamas	2.33	184	⇑iP	Pn	01 48 39.9	-0.3
GOLH	Golhisar	2.38	268	iP	Pn	01 48 43.6	+2.8
GOLH				iS	Sg	01 49 20.7	+3.2
KRTS	Karatas	2.40	108	ePN	Pn	01 48 41.5	+0.3
CSS	Prodhromos	2.48	165	P	Pn	01 48 41.9	-0.3
CSS				S	Sn	01 49 11.9	-0.9
CSS	Prodhromos	2.48	165	ePn	Pn	01 48 43.9	+1.7
CSS				S	Sn	01 49 11.9	-0.9
ANTO	Ankara	2.52	5	ePN	Pn	01 48 43.0	+0.2
ESKT	Eskisehir	2.53	329	iP	Pn	01 48 42.8	-0.3
ESKT				iS	Sg	01 49 18.4	-4.2
ESKT	Eskisehir	2.53	329	ePn	Pn	01 48 42.3	-0.7
SEYT	Eskypehyr	2.53	329	iP	Pn	01 48 42.8	-0.2
LOD	Lodumlu	2.53	4	ePN	Pn	01 48 42.8	-0.2
CEYT	Ceyhan	2.59	97	ePN	Pn	01 48 44.8	+1.0
SZAC	Souni-Zanaja	2.61	174	P	Pn	01 48 47.5	+3.4
	13nm,0.5s						
SZAC				S	Sg	01 49 23.4	-1.7
KOZT	Kozan	2.62	86	ePN	Pn	01 48 44.8	+0.6
PHNC	Paralimni	2.64	152	P	Pn	01 48 44.1	-0.4
CDAG	Cicekdag	2.68	32	iP	Pn	01 48 45.0	0.0
CDAG				iS	Sg	01 49 22.9	-4.5
GDZ	Gediz	2.96	307	iP	Pn	01 48 48.9	0.0
GDZ				iS	Sb	01 49 29.2	-1.8
BNN	Bunyan	3.01	59	ePN	Pn	01 48 50.3	+0.8
ARNB	Al Arnab	3.14	117	⇑P	Pn	01 48 51.3	-0.1
ARNB				⇓S	Sn	01 49 27.3	-2.0
ARNB	Al Arnab	3.14	117	⇑iP	Pn	01 48 51.3	-0.1
ARNB				⇓iS	Sn	01 49 27.3	-2.0
HTY	Hatay	3.15	112	ePN	Pn	01 48 53.2	+1.8
YOZ	Yozgat	3.16	43	ePN	Pn	01 48 51.9	+0.3
CORM	Corum	3.26	30	ePN	Pn	01 48 53.1	+0.1
DRWC	Darouich	3.39	101	⇑P	Pn	01 48 55.5	+0.8
DRWC	Darouich	3.39	101	⇑iP	Pn	01 48 55.5	+0.7
GPA	Golpazari	3.41	330	ePN	Pn	01 48 55.2	+0.2
BTCH	Batrach	3.42	111	⇑P	Pn	01 48 56.0	+0.8
BTCH				⇑S	Sn	01 49 33.3	-2.7
BTCH	Batrach	3.42	111	⇑iP	Pn	01 48 56.0	+0.8
BTCH				⇑iS	Sn	01 49 33.3	-2.8
GULT	Gulveren	3.45	333	ePN	Pn	01 48 55.0	-0.7
SLNF	Slenfeh	3.45	120	⇑P	Pn	01 48 55.7	+0.1
SLNF				⇑S	Sn	01 49 33.9	-3.1
SLNF	Slenfeh	3.45	120	⇑iP	Pn	01 48 55.7	0.0
SLNF				⇑iS	Sn	01 49 33.9	-3.1
GAZ	Gaziantep	3.73	91	ePN	Pn	01 49 00.6	+1.1
ADVT	Abdulvahap	3.77	325	ePN	Pn	01 49 00.1	+0.1
IZI	Iznik	3.82	322	ePN	Pn	01 49 00.7	0.0

*ISCJB **06** 02:00:05.2±1.7, 4207N±008×1423E±0.1, h8km±9km, mb3.5/7, Error ellipse: s-maj=13.4km s-min=12.9km az=158.8*
*IDC **06** 02:00:05.8±1.9, 42.12N×142.16E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/23, mbtmp3.6/8, Error ellipse: s-maj=42.0km s-min=28.5km az=156.0*
*JMA **06** 02:00:10.7±0.1, 4230N×14258E, h7km±2km, M3.1 JMA Felt III J1.*
*NEIC **06** 02:00:10.8, 4231N×14258E, h7km, MG3.1(JMA), After JMA.*
ISC 06 02:00:06.5±1.7, 4213N±007×1423E±01, h4km±11km, n14, σ0§95/16, mb3.5/7, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.39	67	P	Pg	02 00 13.6	-0.4
JNBK				eS	Sg	02 00 17.6	-1.4
JBT2	Biratori 2	0.65	6	P	Pg	02 00 19.9	+0.8
ERM	Erimo	0.67	100	ePn	Pg	02 00 20.7	+1.4
JEM	Erimo	0.67	99	P	Pg	02 00 20.6	+1.2
JCH	Churui	0.94	59	P	Pg	02 00 23.2	-1.4
ASAJ	Asahikawa	2.00	7	Pn	Pn	02 00 41.9	+0.7
	5.5nm,0.3s,baz=218,slow=14,SNR=22						
ASAJ				Sn	Sn	02 01 07.9	+1.3
	3.7nm,0.3s,baz=156,slow=20,SNR=7.6						
ZALV	Zalesovo Beam	39.14	308	P	P	02 07 33.7	-1.3
ZALV	Zalesovo Beam	39.14	308	P	P	02 07 33.7	-1.3
	0.3nm,0.3s,mb3.5,baz=76,slow=6.7,SNR=2.4						
MKAR	Makanchi Array	42.16	298	P	P	02 07 59.9	-0.1
	0.2nm,0.5s,mb3.0,baz=76,slow=8.4,SNR=3.4						
YKA	Yellowknife Ar	59.10	32	P	P	02 10 07.4	-0.3
	0.4nm,0.8s,mb3.5,baz=305,slow=6.4,SNR=5.6						
FINES	FINESS Array B	64.64	332	P	P	02 10 44.0	-1.0
	0.5nm,0.5s,mb3.8,baz=53,slow=9.8,SNR=4.6						
HFS	Hagfors	69.73	335	P	P	02 11 16.9	-0.4
	1.3nm,0.7s,mb4.0,baz=36,slow=6.2,SNR=5.2						
NOA	NORSAR Array B	69.76	337	P	P	02 11 17.4	0.0
	0.3nm,0.5s,mb3.5,baz=39,slow=6.3,SNR=2.3						
TXAR	Lajitas Array	86.51	53	P	P	02 12 51.6	+0.8
	0.2nm,0.7s,mb3.5,baz=324,slow=4.2,SNR=3.6						

IDC 06 02:23:46.2±1.7, 188N×12663E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/16, mbtmp3.8/4, Error ellipse: s-maj=172.6km s-min=23.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.97	161	P	P	02 28 52.5	0.0
	2.5nm,0.7s,baz=339,slow=10.0,SNR=13						
ASAR	Alice Springs	26.36	165	P	P	02 29 24.2	-0.1
	0.6nm,0.3s,baz=348,slow=13,SNR=10						
ASAR				PcP	PcP	02 32 50.4	0.0
	0.5nm,0.5s,baz=350,slow=2.6,SNR=7.1						
STKA	Stephens Creek	36.46	158	P	P	02 30 52.7	-0.3
	3.4nm,0.9s,baz=326,slow=3.6,SNR=4.4						
MKAR	Makanchi Array	59.01	326	P	P	02 33 48.0	+0.2
	0.2nm,0.4s,baz=114,slow=9.7,SNR=2.2						

*NIED **06** 02:36:00, 3300N×13950E, h101km, Mw5.4 Best double couple: M0 1.55000×10^17 NP1: φs 257.00000°, δ53.00000°, λ-174.00000°. NP2: φs 164.00000°, δ85.00000°, λ-37.00000°.*
*ISCJB **06** 02:36:05.9±0.5, 3288N±006×13941E±007, h201km±4km, mb3.3/11, Error ellipse: s-maj=10.2km s-min=8.7km az=146.0*
*IDC **06** 02:36:06.6±0.6, 3282N×139.19E, h194km±4km, mb3.3/11, mb1 3.5/13, mb1mx3.4/23, mbtmp3.3/13, Error ellipse: s-maj=21.6km s-min=12.3km az=73.0*
*JMA **06** 02:36:06.8±0.2, 3298N×13951E, h201km±2km, M3.7*
*NEIC **06** 02:36:06.9, 3298N×13951E, h201km, MG3.7(JMA), After JMA.*
ISC 06 02:36:07.0±0.6, 3291N±006×13940E±007, h197km±4km, n32, σ0§80/42, mb3.3/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.39	56	P	Pn	02 36 33.5	+0.2
	91nm,0.3s,baz=69,slow=23,SNR=12						
JHJ				S	Sn	02 36 55.2	+1.5
	94nm,0.3s,baz=271,slow=24,SNR=8.1						
JHJ2	Mitsune	0.40	59	P	Pn	02 36 33.6	+0.2
JIZS	Izushimoda	1.86	347	P	Pn	02 36 44.1	+0.3
JIZS				S	Sn	02 37 10.5	-2.1
TK04	Tokai 4	1.95	320	P	Pn	02 36 45.2	+0.5
TK04				eS	Sn	02 37 15.5	+1.4
BSO3	Boso 3	2.10	26	P	Pn	02 36 45.8	-0.5
BSO3				S	Sn	02 37 16.8	-0.3
BSO1	Boso 1	2.18	37	P	Pn	02 36 46.5	-0.7
BSO1				S	Sn	02 37 17.8	-0.7
JOD2	Odawara 2	2.37	354	P	Pn	02 36 49.3	+0.1
SHZ3	Shizuoka 3	2.37	336	P	Pn	02 36 49.6	+0.4
SHZ3				S	Sn	02 37 23.0	+0.7
JYN	Shimob	2.68	345	P	Pn	02 36 53.5	+0.8
JIE	Ise	2.69	304	P	Pn	02 36 52.9	+0.1
JRY	Ryogami san	3.13	353	P	Pn	02 36 58.2	+0.2
JRY				S	Sn	02 37 37.7	-0.3
JWZ	Kozaga	3.15	282	P	Pn	02 36 57.9	-0.4
JAG	Ashikaga	3.51	1	P	Pn	02 37 01.2	-1.4

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JGM	Miyama	3.56	322	P	Pn	02 37 03.8	+0.6
MJAR	Matsushiro Arr	3.76	345	P	Pn	02 37 05.5	-0.1
	4.2nm,0.3s,baz=123,slow=13,SNR=29						
MJAR				S	Sn	02 37 50.9	-0.8
	0.4nm,0.3s,baz=114,slow=28,SNR=2.6						
MAJO	Matsushiro	3.76	345	ePn	Pn	02 37 05.4	-0.2
MAJO				Sn	Sn	02 37 45.3	-6.4
MAT	Matsushiro	3.76	345	P	Pn	02 37 05.6	0.0
MAT				eS	Sn	02 37 52.0	+0.3
CBIJ	Chichi jima	6.27	157	P	Pn	02 37 33.6	-4.2
	5.2nm,0.3s,baz=336,slow=21,SNR=10						
CBIJ				S	Sn	02 38 40.9	-8.8
	8.6nm,0.3s,baz=304,slow=23,SNR=2.8						
KSRS	Korea Array	10.43	299	P	Pn	02 38 30.7	-1.1
	0.2nm,0.3s,baz=117,slow=14,SNR=5.4						
MKAR	Makanchi Array	45.03	305	P	P	02 44 02.7	-0.2
	0.1nm,0.2s,mb2.7,baz=95,slow=7.2,SNR=2.6						
WRA	Warramunga Arr	52.77	186	P	P	02 45 00.5	-1.4
	0.3nm,0.4s,mb3.0,baz=1.7,slow=7.5,SNR=7.1						
ASAR	Alice Springs	56.50	186	P	P	02 45 27.5	-1.1
	0.2nm,0.4s,mb3.0,baz=21,slow=11,SNR=6.0						
YKA	Yellowknife Ar	68.21	29	P	P	02 46 46.7	+0.9
	0.3nm,0.4s,mb3.2,baz=300,slow=6.3,SNR=4.7						
FINES	FINESS Array B	71.69	332	P	P	02 47 07.5	+0.5
	1.8nm,1.0s,mb3.7,baz=44,slow=4.4,SNR=3.5						
HFS	Hagfors	77.15	335	P	P	02 47 38.5	0.0
	2.0nm,0.8s,mb3.8,baz=84,slow=4.6,SNR=4.6						
NOA	NORSAR Array B	77.34	337	P	P	02 47 39.1	-0.4
	0.9nm,0.8s,mb3.5,baz=43,slow=5.4,SNR=3.5						
NVAR	Mina Array Bea	78.81	51	P	P	02 47 49.6	+1.5
	0.3nm,0.5s,mb3.1,baz=299,slow=3.4,SNR=4.3						
PDAR	Pinedale Array	81.76	44	P	P	02 48 04.0	+0.3
	0.3nm,0.8s,mb3.0,baz=255,slow=4.5,SNR=3.5						
CLL	Collm	83.83	329	eP	P	02 48 14.0	-0.2
GERES	GERESS Array B	85.32	327	P	P	02 48 21.5	-0.2
	0.2nm,0.5s,mb3.1,baz=349,slow=2.9,SNR=3.7						
TXAR	Lajitas Array	93.97	51	P	P	02 49 04.6	+1.9
	0.5nm,0.6s,mb3.7,baz=302,slow=3.2,SNR=9.8						
TORD	Torodi Ar. Bea	118.94	311	PKP	PKPdf	02 54 32.5	-0.2
	0.4nm,0.9s,baz=20,slow=0.8,SNR=3.0						

*ISCJB **06** 03:02:19.5±1.1, 37.15N±005×2095E±006, h3^{km}, Error ellipse: s-maj=9.1km s-min=4.6km az=36.5*
*CSEM **06** 03:02:21.4±0.5, 37.17N×2100E, h1^{km}±2^{km}, ML3.3, Error ellipse: s-maj=9.8km s-min=3.4km az=37.0*
*ATH **06** 03:02:21.0, 3730N×2103E, h7^{km}, MD3.4/3*
*NEIC **06** 03:02:21.0, 3730N×2103E, h7^{km}, MD3.4(ATH), After ATH.*
*THE **06** 03:02:22.5, 3722N×2105E, h3^{km}, ML3.3*
ISC 06 03:02:20.2±1.3, **3713N**±006×**2096E**±006, **h8**^{km}±7^{km}, **n15**, σ**1**^{s}**10**/22, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PYL	PYLOS	0.67	110	ePg	Pg	03 02 34.9	+1.9
ITM	Ithomi	0.77	86	ePB	Pb	03 02 34.3	-1.6
ITM				eSB	Sb	03 02 45.7	-0.9
KFL	Anninata	0.99	352	ePg	Pg	03 02 38.9	-0.3
RLS	Riolos of Patr	1.01	23	ePB	Pb	03 02 36.3	-3.7
VLS	Valsamata	1.09	344	ePN	Pn	03 02 39.4	-2.4
VLX	Vlachokerasia	1.16	77	ePg	Pg	03 02 42.5	+0.1
VLX				eSg	Sg	03 02 58.5	+1.1
SELA	Sela	1.36	32	ePg	Pg	03 02 45.4	-1.0
SELA				eSg	Sg	03 03 04.3	+0.2
SELA	Sela	1.36	32	ePg	Pg	03 02 45.3	-1.1
LKD	Levkas	1.60	351	ePg	Pg	03 02 50.4	-0.4
LKD				eSg	Sg	03 03 11.8	+0.2
VLI	Veliai	1.64	104	ePG	Pg	03 02 51.5	0.0
LTK	Loutraki	1.83	60	ePb	Pb	03 02 52.7	-1.2
LTK				eSb	Sb	03 03 16.8	-0.1
DID	Didima	1.85	78	ePb	Pb	03 02 54.3	0.0
DID				eSb	Sb	03 03 17.9	+0.3
EVR	Evrytania	1.91	20	ePN	Pn	03 02 54.1	+1.1
LKR	Lokris	2.22	46	ePN	Pn	03 02 58.0	+0.7
IGT	Igoumenitsa	2.45	349	ePn	Pn	03 03 01.9	+1.4
IGT				eSn	Sn	03 03 33.7	+3.0

IDC 06 03:20:19.6±2.1, **177S**×**12970E**, **h0**^{km}, **mb3.9**/2, **mb1 4.1**/4, **mb1mx3.8**/17, **mbtmp3.9**/4, **ML3.9**/2, **Error ellipse: s-maj=108.9km s-min=24.4km az=73.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.71	194	Pn	Pn	03 24 13.0	-2.2
	0.3nm,0.3s,baz=11,slow=16,SNR=3.5						
WRA	Warramunga Arr	18.62	166	P	Pn	03 24 38.7	-0.3
	0.4nm,0.3s,baz=347,slow=11,SNR=5.8						
ASAR	Alice Springs	22.14	170	P	P	03 25 16.9	-0.1
	9.2nm,0.4s,baz=347,slow=11,SNR=77						
MKAR	Makanchi Array	63.74	326	P	P	03 30 53.7	+0.5
	0.2nm,0.5s,baz=127,slow=7.6,SNR=3.1						

MAN 06 03:21:54, 1123N×12577E, h8^{km}**, mb3.7, ML2.4, MS2.0, Samar**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BESP	Borongan	0.49	318	eP	Pg	03 22 04.7	+1.1
PLP	Palo	0.78	265	iP	Pg	03 22 09.6	+0.6
PLP				eS	Sg	03 22 20.9	+1.7
SCPH	Surigao	1.47	191	eP	Pn	03 22 20.9	+0.1
SCPH				eS	Sn	03 22 41.0	+0.9

*IDC **06** 03:23:08.5±2.4, 188S×9890E, h0^{km}, mb3.7/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, ML3.1/1, MS3.8/3, Ms1 3.8/3, ms1mx3.4/42, Error ellipse: s-maj=90.2km s-min=19.6km az=61.0*
*ISCJB **06** 03:23:09.9±1.2, 18S±01×1000E±01, h33^{km}, mb4.0/8, MS3.6/3, Error ellipse: s-maj=21.4km s-min=14.4km az=144.9*
*NEIC **06** 03:23:15.1±0.8, 097S×10004E, h20^{km}, mb4.7/3, Error ellipse: s-maj=27.4km s-min=13.4km az=52.0*
ISC 06 03:23:12.4±1.2, **18S**±01×**1000E**±01, **h35**^{km}, **n24**, σ**1**^{s}**27**/22, **mb4.0**/8, **MS3.6**/3, **5C-3D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PSI	Prapat	4.68	347	Pn	Pn	03 24 19.9	-0.7
	1.0nm,0.3s,baz=139,slow=12,SNR=4.2						
PSI				Sn	Sn	03 25 14.1	+0.4
	12nm,0.3s,baz=238,slow=23,SNR=4.8						
KGM	Kluang	5.03	41	⇓P	Pn	03 24 17.7	-7.7
MYKOM	Kota Tinggi	5.25	47	⇑P	Pn	03 24 21.1	-7.2
FRIM	Kepong	5.25	18	⇑P	Pn	03 24 19.7	-8.7
IPM	Ipoh	6.31	9	⇓P	Pn	03 24 35.9	-7.1
KULM	Kulim	7.06	5	⇑iPn	Pn	03 24 45.2	-8.1
KULM				eSn	Sn	03 26 17.2	+4.8
KULM	Kulim	7.06	5	⇓P	Pn	03 24 45.9	-7.4
KTGM	Kuala Trenggan	7.73	24	⇑P	Pn	03 24 54.6	-8.0
TSM	Tawau	18.86	71	⇑P	Pn	03 27 30.4	-0.1
PALK	Pallekele	21.25	295	P	P	03 27 56.3	+0.6
	11nm,1.0s,mb4.2						
BATI	Kupang	24.96	111	LR	LR	03 42 18.4	
	comp=Z,171nm,18.1s,MS3.6,baz=298,slow=44						
FITZ	Fitzroy Crossi	29.94	124	LR	LR	03 42 32.6	
	comp=Z,99nm,19.5s,MS3.5,baz=304,slow=38						
ODAN	Odare	30.96	338	eP	P	03 29 28.7	+2.3
TAPN	Taplejung	31.29	339	eP	P	03 29 30.2	+1.0
	15nm,1.0s,mb4.8						
JIRN	Jiri	32.15	337	eP	P	03 29 36.4	-0.4
	14nm,0.7s,mb4.9						
KKN	Kakani	32.63	335	eP	P	03 29 39.2	-1.8
GKN	Gorkha	33.09	335	eP	P	03 29 42.1	-2.9
NWAO	Narrogin (SRO)	34.95	154	LR	LR	03 44 23.6	
	comp=Z,194nm,18.4s,MS3.9,baz=209,slow=36						
WRA	Warramunga Arr	38.11	121	P	P	03 30 35.9	+7.7
	0.9nm,1.0s,mb3.5,baz=297,slow=12,SNR=3.0						
ASAR	Alice Springs	39.38	126	P	P	03 30 47.5	+8.6
	0.8nm,0.7s,mb3.5,baz=303,slow=7.6,SNR=7.4						
SONM	Songino Array	49.73	6	P	P	03 32 03.5	+2.4
	0.4nm,0.8s,mb3.5,baz=178,slow=7.2,SNR=3.8						
MKAR	Makanchi Array	50.82	344	P	P	03 32 09.1	-0.2
	1.1nm,0.8s,mb3.9,baz=149,slow=8.2,SNR=8.7						
ZALV	Zalesovo Beam	56.96	349	P	P	03 32 53.7	-0.4
	1.1nm,0.8s,mb4.0,baz=146,slow=3.2,SNR=4.6						
TXAR	Lajitas Array	144.54	37	PKPbc	PKPdf	03 42 50.4	+4.5
	0.1nm,0.3s,baz=154,slow=32,SNR=3.0						

*ISCJB **06** 03:33:28.9±1.5, 3205N±004×11743W±007, h10^{km}±14^{km}, Error ellipse: s-maj=10.8km s-min=5.0km az=148.1*
*ECX **06** 03:33:29.6±0.4, 3204N×11748W, h8^{km}, MD2.9, ML2.8*
ISC 06 03:33:29.1±1.0, **3207N**±004×**11743W**±005, **h9**^{km}±5^{km}, **n19**, σ**0**^{s}**91**/31, **15C-10D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ENX	Ensenada	0.68	106	⇑eP	Pg	03 33 42.2	+0.1
ENX				eS	Sg	03 33 51.9	+1.0
ENX				e		03 33 52.6	
	comp=N,266nm,0.2s						
PBX	Punta Banda	0.68	118	⇑eP	Pg	03 33 42.2	-0.1
PBX				eS	Sg	03 33 51.9	+0.8
CBX	Cerro Bola	0.69	69	⇑eP	Pg	03 33 42.6	+0.1
CBX				eS	Sg	03 33 51.6	+0.1
CBX				⇓e		03 33 53.9	
	comp=N,974nm,0.2s						
CBX				⇓e		03 33 55.7	
	comp=E,861nm,0.3s						
ECNX	Esteban Cantu	0.82	120	⇑eP	Pg	03 33 44.3	-0.5
ECNX				eP		03 33 42.2	
ECNX				eS	Sg	03 33 52.0	-3.5
ECNX				eS	Sg	03 33 55.6	+0.1
109C	Camp Elliot, M	0.86	18	⇑P	Pg	03 33 45.4	-0.3
	baz=0.7,SNR=51						
109C				⇑S	Sg	03 33 56.6	-0.4
	baz=0.7						
BAR	Barrett	0.89	46	eP	Pg	03 33 45.9	-0.3
MONP	Monument Peak	1.18	46	P	Pb	03 33 50.6	-1.1
	baz=1.0,SNR=111						
MONP				⇓S	Sb	03 34 05.8	-1.3
	baz=1.0						
DVTC	Desert V Tower	1.27	62	⇑P	Pn	03 33 52.5	-0.5
	baz=1.1,SNR=8.5						
DVTC				⇓S	Sb	03 34 08.4	-1.1
	baz=1.1						
YUH	Yuha Desert	1.40	65	⇓eP	Pn	03 33 55.0	+0.2
MURC	Murrieta	1.54	7	P	Pn	03 33 56.5	-0.2
	baz=1.4,SNR=14						
MURC				⇑S	Sn	03 34 15.9	-1.0
	baz=1.4						
CIS	Catalina Islan	1.57	329	⇓P	Pn	03 33 57.7	+0.6
	baz=1.6						
SWSC	Sam W. Stewart	1.63	57	⇑Pb	Pb	03 33 58.8	-0.6
	baz=1.5,SNR=23						
SWSC				⇑Sb	Sb	03 34 19.4	-0.6
	baz=1.5						
PFO	Pinyon Flat Ob	1.74	28	⇓P	Pn	03 33 59.4	-0.1
	baz=1.6,SNR=20						
PFO				⇑S	Sn	03 34 21.1	-0.7
	baz=1.6						
BELC	Belle Mtn.	2.27	32	⇑Pb	Pb	03 34 09.8	-0.4
	baz=2.1						
BELC				⇓Sb	Sb	03 34 39.2	+0.8
	baz=2.1						
BC3	Big Chuckw Mtn	2.30	46	⇓S	Sn	03 34 35.7	+0.2
	baz=2.2						
GLA	Glamis	2.41	65	⇑S	Sn	03 34 38.8	+0.6
	baz=2.3						
EDW2	Edwards Air Fo	2.84	351	⇑Sb	Sb	03 34 57.6	+2.7
	baz=2.8						
Y12C	Blythe	2.96	55	⇓Sb	Sb	03 35 00.5	+2.1
	baz=2.8						
GMRC	Granite Mounta	3.08	28	⇑Sb	Sb	03 35 04.4	+2.6
	baz=3.0						

*ATH **06** 03:34:41.8, 37.15N×2859E, h18^{km}±1^{km}, MD4.1/14, ML4.4*
*CSEM **06** 03:34:42.5±0.0, 3720N×2854E, h2^{km}, mb4.0/6, Error ellipse: s-maj=1.1km s-min=0.9km az=168.0*
*ISCJB **06** 03:34:42.7±0.5, 37.10N±002×2857E±002, h9^{km}±3^{km}, mb3.8/13, MS3.1/2, Error ellipse: s-maj=2.7km s-min=2.5km az=177.3*
*MOS **06** 03:34:43.1±0.8, 37.17N×2857E, h13^{km}, mb4.1/9, Error ellipse: s-maj=7.5km s-min=5.8km az=110.7*
*DDA **06** 03:34:43.7, 37.17N×2853E, h4^{km}, Md3.9*
*NEIC **06** 03:34:43.0, 3722N×2849E, h6^{km}, mb4.1/6, ML4.1(ISK), ML3.8(ATH), After ISK.*
*ISK **06** 03:34:43.4, 3722N×2850E, h6^{km}, MD3.8*
*THE **06** 03:34:44.4, 37.19N×2870E, h3^{km}, ML4.8*
*IDC **06** 03:34:47.8±1.8, 3702N×2864E, h39^{km}±19^{km}, mb3.6/8, mb1 3.8/17, mb1mx3.7/29, mbtmp3.7/17, ML3.7/8, MS3.3/2, Ms1 3.3/2, ms1mx2.6/34, Error ellipse: s-maj=15.2km s-min=13.3km az=161.0*
*HLW **06** 03:34:50.4, 3681N×2881E, h33^{km}, Mb4.0*
ISC 06 03:34:43.8±0.5, **3710N**±002×**2855E**±002, **h5**^{km}±3^{km}, **n205**, σ**1**^{s}**13**/235, **mb3.8**/13, **MS3.1**/2, **16C-14D, Turkey**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
YER	Yerkesik	0.22	280	iPG	Pg	03 34 48.0	0.0
YER				iSG	Sg	03 34 51.3	+0.5
FETY	Fethiye	0.63	137	PG	Pg	03 34 57.2	+1.4
FETY				SG	Sg	03 35 09.0	+5.0
MLSB	Milas	0.65	288	PG	Pg	03 34 55.8	-0.4
DENT	Denizli	0.76	30	PG	Pg	03 34 56.6	-1.7
GOLH	Golhisar	0.82	80	iP	Pg	03 34 59.4	-0.1
GOLH				iS	Sg	03 35 12.6	+2.5
DAT	Datca	0.86	245	PG	Pg	03 35 00.0	-0.3
BDRM	Kayabasi	0.89	268	iP	Pg	03 35 00.1	-0.7
BDRM				iS	Sg	03 35 11.9	-0.3
ARG	Arkhangelos	0.94	201	⇑iPN	Pn	03 35 01.4	-2.3
ARG				eSN	Sn	03 35 14.9	-2.7
BODT	Bodrum	0.99	268	PG	Pg	03 35 02.0	-0.8
ELL	Elmali	1.14	107	PN	Pn	03 35 07.2	+0.8
NISR	Nisiros	1.24	247	ePN	Pn	03 35 06.5	-1.2
KSL	Kastellorizon	1.26	138	ePN	Pn	03 35 06.0	-2.0
KULA	Kula-Manisa	1.42	4	PN	Pn	03 35 08.7	-1.5
KHL	Karahalli	1.45	32	PN	Pn	03 35 09.5	-1.1
SMG	Samos	1.49	295	⇑iPN	Pn	03 35 09.7	-1.6
SMG				eSN	Sn	03 35 31.4	+0.3
IZM	Izmir	1.65	322	PN	Pn	03 35 12.2	-1.2
KDAG	Bornova	1.65	322	iP	Pn	03 35 11.8	-1.6
KDAG				iS	Sn	03 35 32.7	-2.3
BCK	Bucak	1.67	77	PN	Pn	03 35 14.6	+1.0
ANTB	Antalya	1.70	96	PN	Pn	03 35 15.3	+1.3
ISP	Isparta	1.73	64	PN	Pn	03 35 14.1	-0.4
ISP	Isparta	1.73	64	ePg	Pn	03 35 12.8	-1.7
ISP	Isparta	1.73	64	ePn	Pn	03 35 14.1	-0.4
BLCB	Balcova	1.75	318	PN	Pn	03 35 13.0	-1.8
BLCB	Balcova	1.75	318	P	Pn	03 35 15.0	+0.1
BLCB				P		03 35 16.1	
BLCB				S	Sg	03 35 44.3	+4.2
BLCB				S	Sg	03 35 46.7	+6.6
BLCB	Balcova	1.75	318	ePb	Pb	03 35 15.0	-1.4
BLCB				eSb	Sb	03 35 39.9	+1.1
BLCB	Balcova	1.75	318	P	Pn	03 35 16.1	+1.3
AKS	Akhisar	1.87	342	PN	Pn	03 35 14.9	-1.5
KARP	Karpathos	1.91	216	⇓iPN	Pn	03 35 17.1	+0.1
KARP				eSN	Sn	03 35 41.9	+0.5
KARP	Karpathos	1.91	216	⇓ePn	Pn	03 35 17.1	+0.1
KARP				eSn	Sn	03 35 41.9	+0.5
URLA	Izmir	2.00	310	iP	Pb	03 35 20.4	-0.1
URLA				iS	Sg	03 35 48.4	+0.5
SHUT	Suhut-Afyon	2.15	47	PN	Pn	03 35 20.2	-0.1
CHOS	Chios island	2.36	304	ePn	Pn	03 35 24.1	+0.9
CHOS				eSn	Sn	03 35 54.8	+2.4
CHOS	Chios island	2.36	304	ePn	Pn	03 35 24.0	+0.9
CHOS				eSn	Sn	03 35 54.8	+2.3
APE	Apeiranthos	2.41	270	P	Pn	03 35 25.3	+1.4
APE				P		03 35 27.4	
APE				S	Sg	03 36 01.9	+0.6
APE				S	Sg	03 36 07.3	+6.0
APE	Apeiranthos	2.41	270	iP	Pn	03 35 23.1	-0.8
APE	Apeiranthos	2.41	270	ePN	Pn	03 35 23.1	-0.8
APE	Apeiranthos	2.41	270	⇑iP	Pn	03 35 22.9	-1.0
APE	Apeiranthos	2.41	270	P	Pn	03 35 25.3	+1.4
DST	Dursunbey	2.50	1	PN	Pn	03 35 24.5	-0.6
SANT	Santorini	2.59	255	P	Pn	03 35 28.7	+2.4
SANT	Santorini	2.59	255	ePn	Pn	03 35 28.8	+2.5
BALB	Balikesir	2.59	348	PN	Pn	03 35 25.1	-1.2
ZKR	Zakros	2.74	224	P	Pn	03 35 27.3	-1.1
ZKR				P		03 35 28.6	
ZKR	Zakros	2.74	224	ePn	Pn	03 35 30.7	+2.3
PRK	Paraskevi	2.80	321	⇓iPN	Pn	03 35 28.0	-1.2
NPS	Neapolis	3.00	233	⇓iPN	Pn	03 35 31.7	-0.3
NPS				eSN	Sn	03 36 07.8	-0.5
ESKT	Eskisehir	3.02	36	PN	Pn	03 35 32.4	+0.2
KONT	Konya--Tatoy	3.15	73	ePN	Pn	03 35 35.6	+1.6
LAST	Lasithi	3.15	233	P	Pn	03 35 33.6	-0.4
LAST				P		03 35 34.5	
LAST				S	Sn	03 36 14.8	+2.9
LAST				S	Sg	03 36 21.2	-3.7
LAST	Lasithi	3.15	233	ePn	Pn	03 35 35.7	+1.7
KIZT	Kizilcal	3.18	55	ePN	Pn	03 35 34.7	+0.3
EZN	Ezine	3.23	328	ePN	Pn	03 35 33.6	-1.6
EDC	Edincik	3.29	351	ePN	Pn	03 35 34.6	-1.3
BNT	Bandirma	3.29	352	ePN	Pn	03 35 35.0	-0.9
IZI	Iznik	3.31	12	ePN	Pn	03 35 36.3	0.0
GEMT	Gemlik	3.37	8	ePN	Pn	03 35 36.5	-0.5
ADVT	Abdulvahap	3.46	15	ePN	Pn	03 35 38.1	-0.1
IDI	Anoyia	3.47	240	Pn	Pn	03 35 38.9	+0.5
IDI				P		03 35 44.2	
IDI				Sn	Sn	03 36 19.4	-0.4
IDI	Anoyia	3.47	240	Pn	Pn	03 35 38.9	+0.5
	4.7nm,0.3s,baz=62,slow=14,SNR=48						
IDI				Sn	Sn	03 36 19.4	-0.4
	30nm,0.3s,baz=76,slow=17,SNR=11						
GPA	Golpazari	3.47	23	ePN	Pn	03 35 38.8	+0.4
LPK	Lapseki	3.56	337	ePN	Pn	03 35 38.3	-1.3
MRMT	Marmara Adasi	3.58	348	ePN	Pn	03 35 39.9	0.0
GULT	Gulveren	3.67	24	ePN	Pn	03 35 41.0	-0.1
SIVA	Sivas	3.67	237	P	Pn	03 35 41.4	+0.1
SIVA				P		03 35 42.5	
SIVA	Sivas	3.67	237	ePn	Pn	03 35 43.7	+2.5
SIVA	Sivas	3.67	237	P	Pn	03 35 42.5	+1.3
SIVA	Sivas	3.67	237	ePn	Pn	03 35 43.7	+2.5
AKMC	Akamas	3.69	123	P	Pn	03 35 42.5	+1.0
GADA	Gvkgeada	3.72	327	ePN	Pn	03 35 40.9	-1.0
RKY	Sarkoy-Tekirda	3.74	344	ePN	Pn	03 35 41.1	-1.0
ALFC	Alevga	3.81	119	P	Pn	03 35 44.9	+1.8
	2.5nm,0.2s						
PTL	Penteli	3.84	286	ePN	Pn	03 35 42.5	-1.0
LIA	Limnos Island	3.84	318	⇓iPN	Pn	03 35 44.0	+0.4
LIA	Limnos Island	3.84	318	⇓ePn	Pn	03 35 44.0	+0.4
KVR	Kavouri	3.87	282	ePN	Pn	03 35 43.5	-0.5
VAM	Vamos	3.90	246	⇓iPb	Pb	03 35 47.2	-5.8
VAM				eSn	Sn	03 36 31.1	+0.6
VAM	Vamos	3.90	246	⇓iPN	Pn	03 35 46.1	+1.8
VAM				eSN	Sn	03 36 31.1	+0.6
LOS	Limnos	3.93	317	P	Pn	03 35 44.5	-0.2
LOS				P		03 35 46.8	
LOS	Limnos	3.93	317	ePn	Pn	03 35 45.4	+0.8
LOS	Limnos	3.93	317	P	Pn	03 35 44.5	-0.2
LOS	Limnos	3.93	317	ePn	Pn	03 35 45.4	+0.7
ATH	Athens Observa	3.94	284	ePN	Pn	03 35 43.8	-1.1
NAIG	Nisos Aigina	4.08	281	ePN	Pn	03 35 46.0	-0.8
ENEZ	Enez	4.08	334	ePN	Pn	03 35 46.1	-0.8
KARN	Karanos	4.11	247	ePn	Pn	03 35 49.8	+2.6
SZAC	Souni-Zanaja	4.22	122	P	Pn	03 35 50.5	+1.7
	3.6nm,0.5s						
GVD	Gavdhos	4.26	239	P	Pn	03 35 51.3	+1.9
GVD				S	Sb	03 36 49.8	-1.2
GVD	Gavdhos	4.26	239	ePn	Pn	03 35 51.7	+2.3
ALN	Alexandroupoli	4.26	334	P	Pn	03 35 47.0	-2.4
ALN				P		03 35 48.7	
ALN	Alexandroupoli	4.26	334	ePn	Pn	03 35 48.5	-0.9
ALN	Alexandroupoli	4.26	334	P	Pn	03 35 48.7	-0.6
ANTO	Ankara	4.33	49	⇑P	Pn	03 35 50.5	+0.2
ANTO	Ankara	4.33	49	⇑iP	Pn	03 35 50.5	+0.3
CSS	Prodhromos	4.42	117	ePn	Pn	03 35 51.8	+0.2
CSS	Prodhromos	4.42	117	ePn	Pn	03 35 51.8	+0.3
VLI	Veliai	4.51	267	ePN	Pn	03 35 53.2	+0.4
LTK	Loutraki	4.53	283	ePn	Pn	03 35 54.0	+1.0
RDO	Rodhopi	4.67	331	ePN	Pn	03 35 54.1	-0.8
NEO	Neokhori	4.74	299	ePN	Pn	03 35 55.9	0.0
BR131	Keskin Array S	4.78	55	ePn	Pn	03 35 57.2	+0.8
BR131	Keskin Array S	4.78	55	ePn	Pn	03 35 57.2	+0.8
BRTR	Keskin Array B	4.78	55	iP	Pn	03 35 57.4	+1.0
BRTR				pmax	pmax		
	comp=Z,11nm,0.4s						
BRTR	Keskin Array B	4.78	55	Pn	Pn	03 35 57.4	+1.0
	comp=Z,6.2nm,0.3s,baz=245,slow=16,SNR=243						
BRTR				Sn	Sn	03 36 54.1	+1.9
	comp=Z,0.6nm,0.3s,baz=222,slow=23,SNR=7.0						
OUR	Ouranopolis	4.82	314	P	Pn	03 35 56.5	-0.4
KDZ	Kurdzhali	5.15	333	iP	Pn	03 36 02.0	+0.5
ITM	Ithomi	5.29	273	ePN	Pn	03 36 04.9	+1.4
SELA	Sela	5.41	285	ePn	Pn	03 36 06.5	+1.5
RZN	Rozhen	5.46	328	iP	Pn	03 36 05.7	-0.1
HORT	Hortiatis	5.50	311	P	Pn	03 36 07.5	+1.1
HORT				P		03 36 08.4	
HORT	Hortiatis	5.50	311	ePn	Pn	03 36 06.7	+0.3
HORT	Hortiatis	5.50	311	P	Pn	03 36 07.5	+1.1
NVR	Nevrokopi	5.59	321	⇓iPN	Pn	03 36 07.2	-0.4
NVR	Nevrokopi	5.59	321	⇓ePn	Pn	03 36 07.2	-0.4
EVR	Evrytania	5.62	291	⇑iPN	Pn	03 36 07.8	-0.2
THL	Klokotos Trika	5.70	298	ePN	Pn	03 36 09.6	+0.6
MMB	Musomiste	5.84	322	iP	Pn	03 36 10.0	-0.9
KNT	Kendrikon	5.98	314	P	Pn	03 36 13.2	+0.3
KNT				P		03 36 14.3	
KNT	Kendrikon	5.98	314	ePn	Pn	03 36 13.1	+0.2
GRG	Griva	6.14	311	P	Pn	03 36 15.9	+0.7
GRG				P		03 36 17.6	
GRG	Griva	6.14	311	ePn	Pn	03 36 15.9	+0.8
GRG	Griva	6.14	311	P	Pn	03 36 17.6	+2.4
KKB	Krupnik	6.37	320	eP	Pn	03 36 21.1	+2.9
PVL	Pavlikeni	6.59	339	eP	Pn	03 36 22.0	+0.8
FNA	Florina	6.69	306	P	Pn	03 36 24.8	+2.1
FNA				P		03 36 25.1	
FNA	Florina	6.69	306	ePn	Pn	03 36 24.2	+1.5
VTS	Vitosha	6.85	325	eP	Pn	03 36 29.0	+4.1
MMAI	Mount Meron Ar	6.94	124	Pn	Pn	03 36 25.9	-0.2
	comp=Z,5.7nm,0.3s,baz=306,slow=12,SNR=24						
MMAI				Sn	Sn	03 37 43.5	-1.9
	comp=Z,2.8nm,0.3s,baz=321,slow=30,SNR=3.1						
TIRR	Tirgusor	7.35	359	⇓P	Pn	03 36 31.9	+0.2
TIRR	Tirgusor	7.35	359	⇓iP	Pn	03 36 31.9	+0.2
AMAG	Maghara	7.51	148	⇑P	Pn	03 36 32.9	-1.1
HNAT	Natroun	7.64	166	⇑P	Pn	03 36 35.4	-0.4
HNAT				S	Sn	03 37 51.9	-11
HHAG	Hagoal	7.72	156	P	Pn	03 36 36.8	0.0
HSAF	As Saff	7.87	161	⇑P	Pn	03 36 38.6	-0.3
GLL	Jalalah	7.95	160	⇑P	Pn	03 36 39.7	-0.3
SUZ		8.07	152	P	Pn	03 36 41.1	-0.6
SUZ				S	Sn	03 38 02.8	-11
HBNS	Bani Suwayf	8.43	164	⇑P	Pn	03 36 46.1	-0.4
HNKL	Nakhl	8.46	146	⇑P	Pn	03 36 46.8	-0.3
ZNM		8.51	154	P	Pn	03 36 47.0	-0.6
MLR	Muntele Rosu	8.61	348	⇓P	Pn	03 36 49.2	+0.2
MLR	Muntele Rosu	8.61	348	Pn	Pn	03 36 50.4	+1.4
MLR	Muntele Rosu	8.61	348	⇓iP	Pn	03 36 49.2	+0.2
VRI	Vrincioaia	8.87	352	⇑P	Pn	03 36 52.6	+0.1
VRI	Vrincioaia	8.87	352	⇑iP	Pn	03 36 52.6	+0.1
EIL	Elat	9.14	142	Pn	Pn	03 36 56.1	-0.2
	comp=Z,1.3nm,0.3s,baz=353,slow=12,SNR=14						
EIL				Sn	Sn	03 38 35.6	-3.9
	comp=Z,1.0nm,0.3s,baz=95,slow=14,SNR=2.9						
GZR	Gura Zlata	9.36	334	⇑P	Pn	03 37 00.4	+1.2
GZR	Gura Zlata	9.36	334	⇑iP	Pn	03 37 00.4	+1.2
GRB	Gharib	9.50	157	P	Pn	03 37 01.2	-0.1
TIP	Timpagrande	9.52	286	ePn	Pn	03 37 02.8	+1.3
	comp=Z,17nm,0.8s						
DIVS	Divcibare	9.55	320	Pn	Pn	03 37 01.8	0.0
HKAT	Jabal Katrina	9.70	150	P	Pn	03 37 03.4	-0.5
SOC	Sochi	10.70	49	eP	Pn	03 37 17.6	0.0
SOC				e		03 39 19.8	
SOC				pmax	pmax		
	comp=Z,30nm,1.1s						
SOC				MLR	MLR		
	comp=Z,162nm,12.0s						
SOC	Sochi	10.70	49	eP	Pn	03 37 17.6	0.0
	comp=Z,30nm,1.1s						
SOC				eS	Sn	03 39 19.8	+2.1
	comp=Z,162nm,12.0s						
VAE	Valguarnera	11.27	276	Pn	Pn	03 37 27.0	+1.5
	comp=Z,0.5nm,0.3s,baz=300,slow=7.5,SNR=3.2						
KIV	Kislovodsk	12.74	53	eP	Pn	03 37 45.1	-0.4
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,43nm,11.0s						
KIV	Kislovodsk	12.74	53	eP	Pn	03 37 45.1	-0.4
	comp=Z,43nm,11.0s						
BOJS	Bojanci	13.04	314	eP	Pn	03 37 55.5	+5.8
VISS	Visnje	13.45	315	iP	Pn	03 38 03.2	+8.0
AKASG	Malin Array Be	13.61	2	Pn	Pn	03 37 60.0	+2.7
AKASG	Malin Array Be	13.61	2	P	Pn	03 38 00.0	+2.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKASG	Malin Array Be	13.61	2	Pn	Pn	03 37 60.0	+2.7
	comp=Z,0.5nm,0.3s,baz=183,slow=12,SNR=5.6						
JAVS	Javornik	13.95	314	eP	Pn	03 38 07.8	+5.8
KEST	Kesra	15.52	271	Pn	Pn	03 38 26.5	+3.1
	comp=Z,0.0nm,0.3s,baz=159,slow=2.8,SNR=2.7						
GERES	GERESS Array B	15.96	322	Pn	Pn	03 38 33.6	+4.6
	comp=Z,0.1nm,0.3s,baz=128,slow=10,SNR=10						
KHC	Kasperske Hory	16.21	323	eP	Pn	03 38 34.7	+2.5
SBF	Sospel	17.40	299	eP	Pn	03 38 46.6	-0.6
	comp=Z,44nm,1.0s						
SBF	Sospel	17.40	299	eP	Pn	03 38 46.6	-0.6
SBF				pmax	pmax		
	comp=Z,22nm,1.0s						
SBF	Sospel	17.40	299	eP	Pn	03 38 46.6	-0.6
	comp=Z,22nm,1.0s						
MBDF	Montbardon	18.11	302	eP	Pn	03 38 56.5	+0.6
	comp=Z,13nm,0.9s						
MBDF	Montbardon	18.11	302	eP	Pn	03 38 56.5	+0.6
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MBDF	Montbardon	18.11	302	eP	Pn	03 38 56.5	+0.6
	comp=Z,6.3nm,0.9s						
LPG	La Plagne	18.36	304	eP	Pn	03 38 59.6	+0.5
	comp=Z,15nm,1.0s						
LPG	La Plagne	18.36	304	eP	Pn	03 38 59.6	+0.5
LPG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPG	La Plagne	18.36	304	eP	Pn	03 38 59.6	+0.5
	comp=Z,7.6nm,1.0s						
LPL	La Plagne	18.38	304	eP	Pn	03 38 59.9	+0.6
OBN	Obninsk	18.83	14	eP	Pn	03 39 08.4	+3.7
OBN				pmax	pmax		
	comp=Z,11nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s						
SMF	Signal de Mont	20.65	305	eP	P	03 39 23.6	-0.6
	comp=Z,60nm,1.2s						
SMF	Signal de Mont	20.65	305	eP	P	03 39 23.6	-0.6
SMF				pmax	pmax		
	comp=Z,30nm,1.2s						
SMF	Signal de Mont	20.65	305	eP	P	03 39 23.6	-0.6
	comp=Z,30nm,1.2s						
LOR	Lormes	20.85	307	eP	P	03 39 25.9	-0.4
SSF	Saint Saulge	21.00	306	eP	P	03 39 30.0	+2.0
	comp=Z,15nm,0.9s,mb4.0						
SSF	Saint Saulge	21.00	306	eP	P	03 39 30.0	+2.0
SSF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
SSF	Saint Saulge	21.00	306	eP	P	03 39 30.0	+2.0
	comp=Z,7.7nm,0.9s,mb4.0						
AVF	Avril sur Loir	21.02	305	eP	P	03 39 27.6	-0.5
	comp=Z,18nm,0.9s,mb4.1						
AVF	Avril sur Loir	21.02	305	eP	P	03 39 27.6	-0.5
AVF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
AVF	Avril sur Loir	21.02	305	eP	P	03 39 27.6	-0.5
	comp=Z,8.9nm,0.9s,mb4.1						
BGF	Bois d'Agland	21.28	304	eP	P	03 39 30.8	-0.1
FINES	FINESS Array B	24.42	357	P	P	03 40 02.3	-0.6
FINES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FINES	FINESS Array B	24.42	357	P	P	03 40 02.3	-0.6
	comp=Z,5.6nm,0.8s,mb4.0,baz=152,slow=13,SNR=11						
AKTK	Aktyubinsk	24.92	48	P	P	03 40 06.7	-0.9
AKTK	Aktyubinsk	24.92	48	P	P	03 40 06.7	-0.9
	comp=Z,1.0nm,0.4s,mb3.7						
AKTO	Aktyubinsk	24.92	48	P	P	03 40 06.7	-0.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
AKTO	Aktyubinsk	24.92	48	P	P	03 40 06.7	-0.9
	comp=Z,0.7nm,0.4s,mb3.5,baz=247,slow=12,SNR=6.2						
HFS	Hagfors	24.94	342	P	P	03 40 06.6	-1.0
HFS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS				MLR	MLR		
	comp=Z,69nm,20.8s						
HFS	Hagfors	24.94	342	P	P	03 40 06.6	-1.0
	comp=Z,2.4nm,0.8s,mb3.8,baz=149,slow=12,SNR=2.6						
HFS				LR	LR	03 50 10.4	
	comp=Z,69nm,20.8s,MS3.1,baz=65,slow=37						
KAF	Kangasniemi	25.08	358	ep	P	03 40 08.8	-0.1
	comp=Z,0.9nm,0.4s,mb3.6						
ESDC	Sonseca Array	25.54	286	P	P	03 40 15.3	+1.9
	comp=Z,0.6nm,0.8s,mb3.2,baz=67,slow=3.6,SNR=2.9						
JOF	Joensuu	25.90	3	ep	P	03 40 15.0	-1.4
	comp=Z,2.3nm,0.8s,mb3.8						
JOF	Joensuu	25.90	3	eP	P	03 40 15.0	-1.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
NOA	NORSAR Array B	26.35	341	LR	LR	03 51 21.6	
	comp=Z,57nm,18.3s,MS3.1,baz=40,slow=38						
ARCES	ARCESS Array B	32.54	358	P	P	03 41 15.9	+0.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	32.54	358	P	P	03 41 15.9	+0.6
	comp=Z,2.7nm,0.8s,mb4.2,baz=5.0,slow=22,SNR=4.9						
TORD	Torodi Ar. Bea	33.84	232	P	P	03 41 25.9	-1.3
	comp=Z,1.0nm,0.5s,mb4.0,baz=32,slow=8.7,SNR=23						
MKAR	Makanchi Array	40.42	59	iP	P	03 42 21.3	-1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	40.42	59	P	P	03 42 21.4	-1.4
	comp=Z,0.7nm,0.8s,mb3.5,baz=289,slow=5.3,SNR=7.3						
SONM	Songino Array	56.13	52	P	P	03 44 23.7	-0.4
	comp=Z,0.3nm,0.6s,mb3.5,baz=296,slow=7.3,SNR=3.3						

SZGRF ***06*** *03:49:28.9, 121S×103.17E, h19km, mb6.2, MS6.1, Southern Sumatera, Indonesia*

IDC ***06*** *03:49:35.6±0.3, 052S×100.63E, h0km, mb5.1/29, mb1 5.2/29, mb1mx5.2/29, mbtmp5.1/29, MS6.1/32, Ms1 6.1/32, ms1mx6.1/36, Error ellipse: s-maj=13.9km s-min=8.6km az=49.0*

BJI ***06*** *03:49:36.7, 061S×100.03E, h19km, mB5.9, mb5.4, Ms6.7, Msz6.4*

CRAAG ***06*** *03:49:38.1, 039S×100.43E, Mw6.3*

ISCJB ***06*** *03:49:38.0±0.1, 051S±002×100.48E±002, h21km, mb5.8/185, MS6.3/243, Error ellipse: s-maj=3.5km s-min=2.9km az=32.3*

NEIC ***06*** *03:49:38.9±0.1, 049S×100.50E, h19km, mb5.9/103, ME7.0, MS6.4/181, MW6.3, Error ellipse: s-maj=6.9km s-min=4.3km az=45.0 Broadband fault plane solution: P waves. NP1:φs160.00000°,δ85.00000°,λ-175.00000°. NP2:φs70.00000°,δ85.00000°,λ-5.00000°. Principal axes: T Plg0.0000°, Azm115.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm25.0000°; Moment Tensor Solution. s21 Moment tensor: Scale 10^{18} Nm; M_{rr}0.27; $M_{\theta\theta}$-3.08; $M_{\phi\phi}$2.81; $M_{r\theta}$-0.97; $M_{\theta\phi}$2.10; $M_{\phi r}$0.01; Best double couple: $M_0$3.70000×10^{18} NP1:φs153.00000°, δ78.00000°,λ-175.00000°. NP2:φs62.00000°,δ85.00000°, λ-13.00000°. Principal axes: T 3.5100, Plg5.0000°, Azm108.0000°; N 0.4500, Plg76.0000°, Azm221.0000°; P -3.9500, Plg12.0000°, Azm17.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least 67 people killed, 826 injured and 43,719 houses damaged or destroyed [VIII] in the Bukittinggi-Payakumbuh-Solok area. Felt [V] at Padang, [IV] at Pekanbaru and [III] at Duri, Jambi and in Kepulauan Riau. Felt at Dumai and Padangsidempuan. Also felt [IV] at Johor Bahru; [III] at Kuala Lumpur, Petaling Jaya, Sekudai, Shah Alam and Subang Jaya; [II] at Klang, Malaysia. Felt at Bandar, Baru, Batu Pahat, Bukit Baru, Jenjarum, Kajang, Kampung Sungai Tinggi, Melaka, Parit Raja, Pasir Gudang, Pontian Kecil, Salak and Seremban, Malaysia. Felt [III] in Singapore.

GCMT ***06*** *03:49:38.9±0.1, 065S×100.53E, h21km, MW6.4/108, Moment Tensor Solution. s108,c240; s105,c435; Duration: 4.0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.55±.03; $M_{\theta\theta}$-4.36±.03; $M_{\phi\phi}$4.91±.03; $M_{r\theta}$-0.53±.05; $M_{\theta\phi}$2.65±.03; $M_{\phi r}$-0.10±.06; Best double couple: $M_0$5.37000×10^{18} NP1:φs150.00000°,δ84.00000°, λ-177.00000°. NP2:φs60.00000°,δ87.00000°,λ-6.00000°. Principal axes: T 5.6230, Plg2.0000°, Azm105.0000°; N -0.5030, Plg84.0000°, Azm214.0000°; P -5.1160, Plg6.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***06*** *03:49:39.2±1.2, 051S×100.47E, h33km, mb6.0/81, MS6.2/85 Error ellipse: s-maj=13.3km s-min=7.0km az=111.9*

ISC 06 03:49:40.0±0.1**, 053S**±002×**100.47E**±002**, h22**km±1.1km**:pP-P, n1310,** σ1.28/887**, mb5.8**/185**, MS6.3**/243**, 129C-155D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	Padang Panjang	0.10	316	P	Pb	03 49 40.6	-3.7
	0.0nm,0.0s						
PSI	Prapat	3.65	335	Pn	Pn	03 50 35.5	+0.4
PSI				Pg	Pn	03 50 41.8	+6.7
PSI				Sn	Sn	03 51 07.6	-10
PSI				Lg		03 51 33.8	
PSI				LR	LR	03 52 06.9	
PSI	Prapat	3.65	335	Pn	Pn	03 50 35.5	+0.4
	21nm,0.3s,baz=148,slow=12,SNR=32						
PSI				Pg	Pn	03 50 41.8	+6.7
	58nm,0.3s,baz=168,slow=13,SNR=62						
PSI				Sn	Sn	03 51 07.6	-10
	104nm,0.3s,baz=166,slow=11,SNR=5.6						
PSI				Lg		03 51 33.8	
	155nm,0.3s,baz=263,slow=18,SNR=1.9						
PSI				LR	LR	03 52 06.9	
	comp=Z,267µm,20.2s,baz=141,slow=42						
KSI	Kapahiang	3.76	146	P	Pn	03 50 37.6	+0.9
	0.0nm,0.0s						
KGM	Kluang	3.81	48	⇑P	Pn	03 50 37.9	+0.5
FRIM	Kepong	3.92	17	⇓P	Pn	03 50 40.0	+1.2
MYKOM	Kota Tinggi	4.09	56	⇓P	Pn	03 50 41.7	+0.4
MYKOM	Kota Tinggi	4.09	56	⇓S	Sn	03 51 43.7	+15
IPM	Ipoh	5.00	6	⇑P	Pn	03 50 56.4	+2.7
KULM	Kulim	5.78	2	ePn	Pn	03 51 01.7	-2.8
KULM				eSn	Sn	03 52 10.1	0.0
KULM	Kulim	5.78	2	⇑P	Pn	03 51 06.4	+1.9
KTGM	Kuala Trenggan	6.40	25	⇑P	Pn	03 51 14.9	+2.0
SNG	Songkhla	7.65	1	P	Pn	03 51 31.0	+0.8
	2µm,1.1s						
SBJI	Serang	7.93	135	P	Pn	03 51 38.0	+4.1
PKT	Phuket	8.85	345	P	Pn	03 51 49.0	+2.4
LEM	Lembang	9.49	131	P	Pn	03 51 58.0	+2.6
	0.0nm,0.0s						
JCJI	Jatiwangi	9.78	127	P	Pn	03 52 04.4	+5.0
KSM	Kuching	10.04	79	ePn	Pn	03 52 01.4	-1.6
KSM				eSn	Sn	03 53 56.0	+1.0
KSM	Kuching	10.04	79	⇑P	Pn	03 52 02.5	-0.4
BJII	Banjamegara	11.43	126	P	Pn	03 52 22.1	+0.1
	0.0nm,0.0s						
SBUM	Sibu	12.12	76	⇓P	Pn	03 52 33.0	+1.6
COCO	West Island	12.13	197	ePn	Pn	03 52 31.0	-0.6
BTM	Bintulu	13.14	74	⇑P	Pn	03 52 44.7	-0.8
PBA	Port Blair	14.33	328	eP	Pn	03 53 02.0	+0.4
PBA				ex	x	03 54 02.2	
	comp=Z,436nm,1.7s						
PBA				ex	x	03 56 55.1	
NST	Nakhon Sawan	16.10	359	⇑P	Pn	03 53 26.8	+1.8
	comp=Z,150nm,1.0s						
NBBI	Negara	16.11	119	P	Pn	03 53 28.0	+2.8
UBT	Ubonrachathani	16.30	16	P	Pn	03 53 30.5	+2.8
	comp=Z,486nm,0.8s						
KKTK	Khon Kaen	16.92	8	⇓P	Pn	03 53 38.0	+2.6
	comp=Z,988nm,1.0s						
KKM	Kota Kinabalu	17.02	67	ePn	Pn	03 53 37.7	+0.9
KKM	Kota Kinabalu	17.02	67	⇑P	Pn	03 53 38.9	+2.1
TARAI	Tarakan	17.52	77	P	Pn	03 53 48.5	+5.5
	comp=Z,571nm,1.0s						
BDT	Bhumibol Dam	17.72	355	P	Pn	03 53 47.0	+1.6
	comp=Z,44nm,1.1s						
SDKM	Sandakan	17.79	70	⇓P	Pn	03 53 48.6	+2.2
KDM	Kudat	17.93	65	⇓P	Pn	03 53 50.5	+2.5
TSM	Tawau	18.04	74	⇑P	Pn	03 53 50.2	+0.8
MYLDM	Lahad Datu	18.88	72	⇑P	Pn	03 54 00.5	+0.8
CHG	Chiang Mai	19.28	356	⇓P	Pn	03 54 04.2	-0.2
	comp=Z,150nm,1.3s						
CHTO	Chiang Mai	19.28	356	eP	Pn	03 54 04.4	+0.1
	comp=Z,120nm,1.0s						
CHTO	Chiang Mai	19.28	356	eP	Pn	03 54 04.4	0.0
CHTO				pmax	pmax		
	comp=Z,120nm,1.0s						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
CHTO	Chiang Mai	19.28	356	P	Pn	03 54 04.6	+0.2
	SNR=51						
PCI	Palu	19.37	91	P	Pn	03 54 05.2	-0.4
	comp=Z,806nm,2.4s						
PPR	Puerto Princes	20.86	60	⇓iP	P	03 54 24.2	+3.6
PALK	Pallekele	21.18	292	ePn	P	03 54 26.1	+2.0
	comp=Z,319nm,1.0s,mb5.6						
PALK				LR	LR		
	comp=Z,106µm,19.0s,MS6.2						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
PALK	Pallekele	21.18	292	P	P	03 54 27.0	+3.0
	SNR=65						
QIZ	Qiongzhong	21.51	25	P	P	03 54 28.3	+0.8
QIZ				AP		03 54 32.5	
QIZ				PP		03 54 53.7	
QIZ				S	S	03 58 30.6	+5.6
QIZ				SS		03 59 06.1	
QIZ				AMB	AMB		
	comp=Z,223nm,1.6s,mb5.3						
QIZ				AMB	AMB		
	comp=Z,10µm,12.9s						
QIZ				LR	LR		
	comp=E,123µm,15.0s						
QIZ				LR	LR		
	comp=Z,65µm,15.0s,MS6.2						
QIZ	Qiongzhong	21.51	25	eP	P	03 54 29.3	+1.8
	comp=Z,2µm,1.7s,mb6.2						
QIZ				LR	LR		
	comp=Z,66µm,20.0s,MS6.0						
MDRS	Chennai	24.17	305	eP	P	03 54 54.8	-0.1
MDRS				AMb	AMB	03 55 12.0	
	comp=Z,292nm,1.0s,mb5.7						
PAGZ	Pagadian	24.32	70	eP	P	03 54 58.8	+2.6
VIS	Vishakhapatnam	24.77	318	eP	P	03 55 00.8	+0.6
VIS				AMb	AMB	03 55 12.5	
	comp=Z,326nm,1.4s,mb5.7						
VIS				iS	S	03 59 24.2	+2.7
TGY	Tagaytay City	24.94	54	eP	P	03 55 09.9	+8.1
BATI	Kupang	24.99	113	P	P	03 55 02.1	-0.2
	comp=Z,157nm,0.8s,mb5.6,baz=346,slow=0.9,SNR=7.5						
BATI				S	S	03 59 16.5	-8.7
	comp=Z,56nm,0.9s,baz=70,slow=8.0,SNR=2.6						
BATI				LR	LR	04 06 47.9	
	comp=Z,254µm,20.9s,MS6.7,baz=58,slow=42						
TRD	Trivandrum	25.09	291	eP	P	03 55 02.9	-0.3
RCP	Roxas	25.18	61	eP	P	03 55 08.6	+4.5
KOD	Kodaikanal	25.25	296	eP	P	03 55 06.8	+2.0
KOD				AMb	AMB	03 55 14.5	
	comp=Z,345nm,1.4s,mb5.7						
TBP	Tagbilaran	25.41	66	eP	P	03 55 09.4	+3.3
LQP	Lukban	25.44	54	eP	P	03 55 14.1	+7.8
KMI	Kunming	25.59	5	P	P	03 55 08.0	+0.3
KMI				AP	pP	03 55 12.8	-1.6
KMI				XP	sP	03 55 16.3	-0.9
KMI				PP		03 55 48.5	
KMI				S	S	03 59 33.4	-1.1
KMI				XS	sS	03 59 43.0	-2.7
KMI				PCS	PcS	04 02 18.2	-1.1
KMI				AMB	AMB		
	comp=Z,4µm,12.3s						
KMI				LR	LR		
	comp=N,88µm,13.9s,MS6.6						
KMI				LR	LR		
	comp=E,105µm,13.3s,MS6.6						
KMI				LR	LR		
	comp=Z,61µm,14.4s,MS6.3						
KMI	Kunming	25.59	5	P	P	03 55 08.0	+0.3
KMI				pP	pP	03 55 12.8	-1.6
KMI				sP	sP	03 55 16.3	-0.9
KMI				PP		03 55 48.5	
KMI				S	S	03 59 33.4	-1.1
KMI				sS	sS	03 59 43.0	-2.7
KMI				SSS		04 00 54.7	
KMI				PcS	PcS	04 02 18.2	-1.1
CGP	Cagayan de Oro	25.74	69	eP	P	03 55 12.9	+3.7
LLP	Lapu-Lapu	25.74	65	eP	P	03 55 11.7	+2.5
AGT	Agartala	25.86	340	ex	x	03 56 48.0	
IMP	Imphal	25.94	346	eP	P	03 55 10.0	-0.8
IMP				eS	S	03 59 41.0	+0.9
BCPH	Baguio City Da	26.00	49	⇑iP	P	03 55 17.1	+5.6
DAV	Davao City (W)	26.17	73	PFAKE		03 55 20.0	+7.0
DAV				LR	LR		
	comp=Z,48µm,20.0s,MS6.0						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
DAV	Davao City (W)	26.17	73	P	P	03 55 19.7	+6.7
	SNR=11						
HKC	Hong Kong Obse	26.33	30	⇓iP	P	03 55 22.0	+7.6
OCLP	Ormoc	26.61	64	eP	P	03 55 14.1	-3.0
SHL	Shillong	27.23	343	iP	P	03 55 21.0	-1.5
SHL				AMb	AMB	03 55 41.0	
	comp=Z,2µm,1.1s,mb6.7						
SHL				iS	S	04 00 00.0	-0.4
GYA	Guiyang	27.49	12	⇑iP	P	03 55 25.6	+0.9
GYA				AP	pP	03 55 34.8	+3.3
GYA				XP	sP	03 55 38.9	+4.6
GYA				PP		03 56 16.7	
GYA				PCP	PcP	03 58 45.4	+2.5
GYA				S	S	04 00 04.0	-0.4
GYA				XS	sS	04 00 20.9	+5.3
GYA				SS		04 01 25.4	
GYA				SCP	ScP	04 02 22.8	+0.4
GYA				SCS	ScS	04 06 12.9	-1.2
GYA				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,5µm,12.3s						
GYA				LR	LR		
	comp=N,80µm,19.4s						
GYA				LR	LR		
	comp=E,97µm,12.9s						
GYA				LR	LR		
	comp=Z,75µm,18.2s,MS6.3						
MBWA	Marble Bar	27.83	139	eP	P	03 55 26.4	-1.5
	comp=Z,115nm,0.9s,mb5.5						
MBWA				LR	LR		
	comp=Z,76µm,20.0s,MS6.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
MBWA	Marble Bar	27.83	139	P	P	03 55 27.0	-0.9
	SNR=9.3						
HYB	Hyderabad	27.99	311	eP	P	03 55 35.5	+6.1
	comp=Z,50nm,1.0s,mb5.1						
HYB				eS	S	04 00 20.0	+7.4
HYB	Hyderabad	27.99	311	eP	P	03 55 35.5	+6.1
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.1						
HYB	Hyderabad	27.99	311	iP	P	03 55 29.5	+0.1
	comp=Z,50nm,1.0s,mb5.1						
HYB				epP	pP	03 55 35.5	-0.6
HYB				ePP		03 56 10.0	
HYB				eS	S	04 00 14.0	+1.4
HYB				LR	LR	04 04 42.0	
	comp=Z,86nm,24.0s						
BOK	Bokaro	28.02	331	eP	P	03 55 30.4	+0.9
BOK				AMb	AMB	03 55 41.2	
	comp=Z,331nm,1.1s,mb5.9						
MNGI	Mangalore	28.74	299	eP	P	03 55 38.3	+2.2
MNGI				AMb	AMB	03 55 45.5	
	comp=Z,162nm,1.2s,mb5.6						
MNGI				ix	x	04 00 38.1	
BLSP	Bilaspur	28.75	323	eP	P	03 55 37.1	+1.0
BLSP				AMb	AMB	03 55 44.1	
	comp=Z,209nm,1.3s,mb5.7						
ODAN	Odare	30.00	336	eP	P	03 55 47.4	+0.3
	comp=Z,222nm,0.8s,mb5.9						
NGP	Nagpur	30.04	317	eP	P	03 55 46.2	-1.3
NGP				ex	x	03 55 57.1	
	comp=Z,323nm,1.6s						
NGP				eS	S	04 00 44.3	-0.4
FITZ	Fitzroy Crossi	30.28	127	eP	P	03 55 45.6	-4.1
	comp=Z,48nm,0.8s,mb5.3						
FITZ	Fitzroy Crossi	30.28	127	eP	P	03 55 45.7	-4.0
	comp=Z,51nm,0.8s,mb5.3						
FITZ	Fitzroy Crossi	30.28	127	P	P	03 55 46.4	-3.3
	comp=Z,22nm,0.8s,mb5.0,baz=267,slow=6.7,SNR=15						
FITZ				S	S	04 00 47.8	-0.8
	comp=Z,5.7nm,0.9s,baz=228,slow=12,SNR=1.5						
TAPN	Taplejung	30.31	337	eP	P	03 55 50.3	+0.5
	comp=Z,464nm,1.0s,mb6.2						
GOA	Goa	30.76	302	eP	P	03 55 55.7	+1.7
QZH	Quanzhou	30.81	33	⇑iP	P	03 55 57.7	+3.4
QZH				PP	PP	03 57 00.4	-3.7
QZH				S	S	04 01 00.1	+3.4
QZH				AMB	AMB		
	comp=Z,170nm,0.9s,mb5.9						
QZH				LR	LR		
	comp=N,69µm,14.0s,MS6.9						
QZH				LR	LR		
	comp=E,170µm,15.6s,MS6.9						
QZH				LR	LR		
	comp=Z,109µm,18.1s,MS6.5						
JBP	Jabalpur	30.85	321	⇓iP	P	03 55 55.9	+1.3
JBP				eS	S	04 00 56.9	-0.4
AKL	Akola	31.17	314	⇑iP	P	03 55 58.1	+0.6
AKL				ex	x	03 56 11.1	
	comp=Z,248nm,1.5s						
AKL				iS	S	04 01 03.5	+1.0
JIRN	Jiri	31.20	335	eP	P	03 55 58.2	+0.5
	comp=Z,1µm,1.4s,mb6.5						
LSA	Lhasa	31.34	344	P	P	03 55 58.5	-0.4
LSA				AP	pP	03 56 06.7	+1.0
LSA				XP	sP	03 56 10.0	+1.5
LSA				PCP	PcP	03 58 47.0	-5.7
LSA				S	S	04 01 05.9	+0.9
LSA				SCP	ScP	04 02 28.5	-6.1
LSA				PCS	PcS	04 02 31.8	-5.2
LSA				SCS	ScS	04 06 26.5	-5.7
LSA				LR	LR		
	comp=N,24µm,18.2s						
LSA				LR	LR		

Code	Station	Dist Az	Phase	ISC	Time	Res
	comp=E,47μm,26.8s					
LSA			LR	LR		
	comp=Z,39μm,21.1s,MS6.0					
LSA	**Lhasa**	**31.34 344**	*e*P	**P**	**03 55 59.2**	**+0.3**
	comp=Z,196nm,1.3s,mb5.8					
LSA			*e*PcP	PcP	03 59 01.6	+8.9
LSA			*e*S	**S**	**04 01 09.2**	**+4.3**
LSA			*e*ScP	ScP	04 02 38.8	+4.1
LSA			LR	LR		
	comp=Z,43μm,22.0s,MS6.1					
LSA	**Lhasa**	**31.34 344**	*e*P	**P**	**03 55 59.2**	**+0.3**
LSA			*e*S	**S**	**04 01 09.2**	**+4.2**
LSA			pmax	pmax		
	comp=Z,196nm,1.3s,mb5.8					
LSA			MLR	MLR		
	comp=Z,43μm,22.0s,MS6.1					
KAD	**Karad**	**31.37 306**	*e*P	**P**	**03 55 58.9**	**-0.5**
KAD			AMb	AMB	03 56 13.0	
	comp=Z,111nm,1.2s,mb5.5					
CD2	**Chengdu**	**31.42 5**⇑	*i*P	**P**	**03 55 58.0**	**-1.6**
CD2			AP	pP	03 56 07.6	+1.2
CD2			XP	sP	03 56 11.2	+2.0
CD2			PCP	PcP	03 58 49.7	-3.2
CD2			S	**S**	**04 01 03.2**	**-2.9**
CD2			SS	SS	04 02 53.3	-28
CD2			AMB	AMB		
	comp=Z,1μm,8.4s					
CD2			LR	LR		
	comp=N,47μm,15.6s,MS6.4					
CD2			LR	LR		
	comp=E,49μm,16.8s,MS6.4					
CD2			LR	LR		
	comp=Z,46μm,19.2s,MS6.2					
KKN	**Kakani**	**31.71 334**	*e*P	**P**	**03 56 02.3**	**+0.1**
	comp=Z,325nm,0.8s,mb6.2					
KKN	**Kakani**	**31.71 334**	*e*P	**P**	**03 56 02.3**	**+0.1**
KKN			pmax	pmax		
	comp=Z,325nm,0.8s,mb6.2					
NACB	**Ninganchiao**	**31.99 38**	*e*P	**P**	**03 56 06.9**	**+2.2**
GKN	**Gorkha**	**32.18 333**	*e*P	**P**	**03 56 06.5**	**+0.2**
	comp=Z,721nm,1.2s,mb6.4					
YHNB	**Yeheng**	**32.22 38**	*e*P	**P**	**03 56 08.0**	**+1.3**
POO	**Poona**	**32.29 307**	*e*P	**P**	**03 56 06.6**	**-0.8**
POO			AMb	AMB	03 56 20.7	
	comp=Z,137nm,2.1s,mb5.4					
POO			*i* PCP	PcP	03 58 54.0	-1.5
POO			*e*PCS	PcS	04 02 38.0	-2.6
TATO	**Taipei**	**32.51 37**	*e*P	**P**	**03 56 09.2**	**-0.1**
	comp=Z,243nm,1.1s,mb6.0					
TATO			LR	LR		
	comp=Z,38μm,22.0s,MS6.0					
BHPL	**Bhopal**	**32.56 318**	*e*P	**P**	**03 56 10.7**	**+0.9**
BHPL			AMb	AMB	03 56 21.4	
	comp=Z,258nm,2.2s,mb5.8					
BOM	**Bombay**	**33.31 307**	*i* P	**P**	**03 56 17.1**	**+0.7**
BOM			*e*x	x	03 56 29.9	
	comp=Z,228nm,2.1s					
BOM			*e*x	x	04 01 07.4	
WHN	**Wuhan**	**33.60 22**	P	**P**	**03 56 18.6**	**-0.1**
WHN			S	**S**	**04 01 39.5**	**-0.7**
WHN			AMB	AMB		
	comp=Z,5μm,11.6s					
WHN			LR	LR		
	comp=Z,207μm,17.6s,MS6.9					
MUN	**Mundaring**	**34.64 156**	*e*P	**P**	**03 56 27.2**	**-0.5**
MUN			*e*S	**S**	**04 01 55.7**	**-0.4**
KLBR	**Kellerberrin**	**34.96 154**	*e*P	**P**	**03 56 30.7**	**+0.2**
	comp=Z,152nm,1.2s,mb5.8					
XAN	**Xi'an**	**35.29 12**	P	**P**	**03 56 31.8**	**-1.5**
XAN			AP	pP	03 56 39.1	-1.0
XAN			S	**S**	**04 02 05.7**	**-0.4**
XAN			AMB	AMB		
	comp=Z,2μm,13.9s					
XAN			LR	LR		
	comp=N,38μm,18.0s,MS6.6					
XAN			LR	LR		
	comp=E,79μm,16.3s,MS6.6					
XAN			LR	LR		
	comp=Z,74μm,16.7s,MS6.5					
LGTI	**Lohaghat**	**35.52 329**	*e*P	**P**	**03 56 34.0**	**-1.3**
LGTI			*e*x	x	03 57 40.8	
PTH	**Pithoragarh**	**35.61 329**	*e*P	**P**	**03 56 38.2**	**+2.1**
PTH			*e*x	x	04 00 59.4	
NWAO	**Narrogin (SRO)**	**35.89 156**	*e*P	**P**	**03 56 39.6**	**+1.2**
	comp=Z,394nm,1.7s,mb6.1					
NWAO			LR	LR		
	comp=Z,133μm,21.0s,MS6.7					
NWAO	**Narrogin (SRO)**	**35.89 156**	*e*P	**P**	**03 56 40.3**	**+1.9**
NWAO			pmax	pmax		
	comp=Z,390nm,1.7s					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 40.9**	**+2.4**
	SNR=14					
NWAO	**Narrogin (SRO)**	**35.89 156**	P	**P**	**03 56 38.0**	**-0.4**
	comp=Z,59nm,1.0s,mb5.5,baz=320,slow=9.1,SNR=19					
NWAO			S	**S**	**04 02 09.5**	**-5.8**
	comp=Z,12nm,1.0s,baz=69,slow=4.7,SNR=1.9					
NWAO			LR	LR	04 09 36.5	
	comp=Z,176μm,21.7s,MS6.8,baz=328,slow=34					
LZH	**Lanzhou**	**36.56 5**	*e*P	**P**	**03 56 43.9**	**-0.3**
LZH			AP	pP	03 56 50.5	-0.5
LZH			XP	sP	03 56 54.2	+0.4
LZH			PP	PP	03 58 09.0	+1.3
LZH			S	**S**	**04 02 26.9**	**+1.4**
LZH			XS	sS	04 02 37.1	+0.3
LZH			AMB	AMB		
	comp=Z,207nm,1.8s,mb5.7					
LZH			AMB	AMB		
	comp=Z,1μm,6.4s					
LZH			LR	LR		
	comp=E,54μm,14.4s					
LZH			LR	LR		
	comp=Z,57μm,17.1s,MS6.4					
LZH	**Lanzhou**	**36.56 5**	*e*P	**P**	**03 56 43.9**	**-0.3**
LZH			pP	pP	03 56 50.5	-0.5
LZH			sP	sP	03 56 54.2	+0.4
LZH			PP	PP	03 58 09.0	+1.3
LZH			S	**S**	**04 02 26.9**	**+1.4**
LZH			sS	sS	04 02 37.1	+0.3
NDI	**New Delhi**	**36.59 324**	*e*P	**P**	**03 56 44.1**	**-0.4**
NDI			AMb	AMB	03 56 46.5	
	comp=Z,188nm,0.9s,mb5.9					
NDI			*e*S	**S**	**04 02 27.5**	**+1.3**
AJM	**Ajmer**	**36.61 319**	*e*P	**P**	**03 56 46.1**	**+1.4**
AJM			AMb	AMB	03 56 56.2	
	comp=Z,199nm,1.7s,mb5.7					
NJ2	**Nanjing**	**36.78 27**	*e*P	**P**	**03 56 46.6**	**+0.5**
NJ2			AP	pP	03 56 53.1	+0.2
NJ2			PP	PP	03 58 12.2	+2.1
NJ2			S	**S**	**04 02 27.5**	**-1.5**
NJ2			AMB	AMB		
	comp=Z,300nm,6.4s					
NJ2			LR	LR		
	comp=N,79μm,16.3s,MS6.8					
NJ2			LR	LR		
	comp=E,126μm,18.0s,MS6.8					
NJ2			LR	LR		
	comp=Z,124μm,16.1s,MS6.8					
SSE	**Sheshan**	**37.10 30**	*e*P	**P**	**03 56 47.4**	**-1.4**
SSE			AP	pP	03 56 56.5	+0.8
SSE			PCP	PcP	03 59 07.8	-1.3
SSE			S	**S**	**04 02 30.0**	**-3.8**
SSE			XS	sS	04 02 46.3	+1.2
SSE			SCS	ScS	04 07 02.2	-0.4
SSE			AMB	AMB		
	comp=Z,427nm,4.6s					
SSE			LR	LR		
	comp=N,44μm,14.8s,MS6.6					
SSE			LR	LR		
	comp=E,55μm,14.9s,MS6.6					
SSE			LR	LR		
	comp=Z,40μm,18.0s,MS6.2					
SSE	**Sheshan**	**37.10 30**	*e*P	**P**	**03 56 47.4**	**-1.4**
SSE			pP	pP	03 56 56.5	+0.8
SSE			PcP	PcP	03 59 07.8	-1.3
SSE			S	**S**	**04 02 30.0**	**-3.8**
SSE			sS	sS	04 02 46.3	+1.2
SSE			ScS	ScS	04 07 02.2	-0.4
DDI	**Dehra Dun**	**37.37 327**	*e*P	**P**	**03 56 51.0**	**-0.1**
BHJ	**Bhuj**	**38.16 310**	*e*P	**P**	**03 56 56.9**	**-1.0**
BHJ			AMb	AMB	03 57 10.8	
	comp=Z,336nm,0.4s,mb6.5					
BHJ			*e*S	**S**	**04 02 49.9**	**-0.3**
WRA	**Warramunga Arr**	**38.36 122**	P	**P**	**03 56 57.2**	**-2.5**
	comp=Z,85nm,0.8s,mb5.5,baz=298,slow=9.4,SNR=53					
WRA			PcP	PcP	03 59 15.5	+2.2
	comp=Z,5.8nm,0.7s,baz=314,slow=2.2,SNR=3.0					
WRA			S	S	04 02 32.5	-21
	comp=Z,1.4nm,0.8s,baz=287,slow=17,SNR=3.4					
WRA			LR	LR	04 16 16.2	
	comp=Z,46μm,18.5s,MS6.3,baz=290,slow=42					
WB2	**Warramunga Arr**	**38.37 122**	*e*P	**P**	**03 56 55.7**	**-4.0**
WB2			*e*		03 58 38.4	
SDNR	**Sundarnagar**	**38.87 327**	*e*P	**P**	**03 57 04.0**	**+0.3**
SDNR			*e*S	**S**	**04 03 02.1**	**+1.4**
TIY	**Taiyuan**	**39.62 15**	P	**P**	**03 57 13.6**	**+3.6**
TIY			PP	PP	03 58 48.3	+7.0
TIY			S	**S**	**04 03 11.3**	**-0.6**
TIY			AMB	AMB		
	comp=Z,2μm,12.0s					
TIY			LR	LR		
	comp=N,65μm,14.0s					
TIY			LR	LR		
	comp=E,40μm,9.4s					
TIY			LR	LR		
	comp=Z,49μm,13.2s,MS6.5					
TIA	**Tai'an**	**39.70 21**	*e*P	**P**	**03 57 10.1**	**-0.5**
TIA			LR	LR		
	comp=E,25μm,12.0s					
GTA	**Gaotai**	**39.75 359**	*e*P	**P**	**03 57 09.6**	**-1.4**
GTA			AP	pP	03 57 19.5	+1.6
GTA			XP	sP	03 57 23.3	+2.7
GTA			PP	PP	03 58 45.1	+2.5
GTA			PCP	PcP	03 59 17.1	-0.1
GTA			SCP	ScP	04 03 02.2	-2.7
GTA			PCS	PcS	04 03 05.7	-1.5
GTA			S	**S**	**04 03 10.1**	**-3.6**
GTA			XS	sS	04 03 26.1	+1.1
GTA			SS	SS	04 05 59.0	-11
GTA			SCS	ScS	04 07 13.0	-4.5
GTA			AMB	AMB		
	comp=Z,508nm,8.8s					
GTA			LR	LR		
	comp=N,41μm,18.3s,MS6.5					
GTA			LR	LR		
	comp=E,47μm,17.5s,MS6.5					
GTA			LR	LR		
	comp=Z,49μm,19.0s,MS6.4					
ASAR	**Alice Springs**	**39.76 128**	P	**P**	**03 57 08.5**	**-2.8**
ASAR					03 59 20.0	
ASAR			S	**S**	**04 03 06.1**	**-8.2**
ASAR			pmax	pmax		
	comp=Z,74nm,0.7s					
ASAR			smax			
	comp=N,4.0nm,0.9s					
ASAR	**Alice Springs**	**39.76 128**	P	**P**	**03 57 08.5**	**-2.8**
	comp=N,74nm,0.7s,mb5.5,baz=303,slow=7.7,SNR=87					
ASAR			PcP	PcP	03 59 19.9	+2.4
	comp=N,17nm,0.9s,baz=310,slow=2.7,SNR=3.1					
ASAR			S	**S**	**04 03 06.1**	**-8.2**
	comp=N,4.1nm,0.9s,baz=297,slow=13,SNR=4.1					
FORT	**Forrest**	**39.88 142**⇑	*i*P	**P**	**03 57 11.1**	**-1.1**
	comp=N,310nm,1.0s,mb6.0					
FORT			*e*S	**S**	**04 03 14.2**	**-1.7**
THN	**Thein Dam**	**40.26 327**	*e*P	**P**	**03 57 14.7**	**-0.7**
BJT	**Baijiatuau**	**42.83 18**	*e*P	**P**	**03 57 36.1**	**-0.2**
	comp=N,75nm,1.1s,mb5.3					
BJT			LR	LR		
	comp=Z,62μm,19.0s,MS6.5					
BJT	**Baijiatuau**	**42.83 18**	*e*P	**P**	**03 57 36.1**	**-0.2**
BJT			pmax	pmax		
	comp=Z,75nm,1.1s					
BJT			MLR	MLR		
	comp=Z,62μm,19.0s					
BJI	**Beijing**	**42.85 18**	P	**P**	**03 57 35.9**	**-0.5**
BJI			XP	sP	03 57 44.1	-2.0
BJI			PP	PP	03 59 22.5	+6.3
BJI			SCP	ScP	04 03 11.3	-5.9
BJI			S	**S**	**04 04 10.4**	**+11**
BJI			AMB	AMB		
	comp=Z,3μm,10.6s					
BJI			LR	LR		
	comp=N,43μm,18.8s,MS6.8					
BJI			LR	LR		
	comp=E,102μm,19.5s,MS6.8					
BJI			LR	LR		
	comp=Z,48μm,23.2s,MS6.3					
BJI	**Beijing**	**42.85 18**	P	**P**	**03 57 35.9**	**-0.5**
BJI			sP	sP	03 57 44.1	-2.0
BJI			PP	PP	03 59 22.5	+6.3
BJI			ScP	ScP	04 03 11.3	-5.9
BJI			S	**S**	**04 04 10.4**	**+11**
BJI			SS	SS	04 07 27.9	+16
COEN	**Coen**	**44.31 109**	*e*P	**P**	**03 57 46.6**	**-2.0**
	comp=Z,14nm,0.9s					
INCN	**Inchon**	**44.90 30**	PFAKE		03 58 00.0	+7.1
INCN			LR	LR		
	comp=Z,22μm,21.0s,MS6.1					
KSRS	**Korea Array**	**45.52 31**	P	**P**	**03 57 56.8**	**-1.2**
	comp=Z,50nm,0.9s,mb5.4,baz=223,slow=8.0,SNR=25					
KSRS			LR	LR	04 18 27.4	
	comp=Z,20μm,18.2s,MS6.1,baz=46,slow=38					
WMQ	**Urumqi**	**45.60 347**⇑	*i*P	**P**	**03 57 58.4**	**-0.1**
WMQ			AP	pP	03 58 08.4	+3.0
WMQ			XP	sP	03 58 12.5	+4.3
WMQ			PCP	PcP	03 59 36.9	+0.3
WMQ			PP	PP	03 59 45.9	+0.4
WMQ			SCP	ScP	04 03 25.9	-2.5
WMQ			PCS	PcS	04 03 29.9	-0.7
WMQ			S	**S**	**04 04 37.9**	**-1.8**
WMQ			XS	sS	04 04 54.4	+3.2
WMQ			SCS	ScS	04 07 49.4	-4.1
WMQ			SS	SS	04 07 53.4	-11
WMQ			AMB	AMB		
	comp=Z,88nm,1.1s,mb5.6					
WMQ			AMB	AMB		
	comp=Z,703nm,7.8s					
WMQ			LR	LR		
	comp=N,22μm,23.2s					
WMQ			LR	LR		
	comp=E,45μm,28.6s					
WMQ			LR	LR		
	comp=Z,18μm,21.5s,MS6.0					
KSH	**Kashi**	**45.72 333**	*e*P	**P**	**03 57 58.3**	**-1.2**
KSH			AP	pP	03 58 04.4	-2.1
KSH			XP	sP	03 58 07.7	-1.5
KSH			*e*PP	PP	03 59 45.1	-1.8
KSH			*e*SCP	ScP	04 03 28.3	-0.7
KSH			*e*PCS	PcS	04 03 30.8	-0.5
KSH			S	**S**	**04 04 37.5**	**-4.1**
KSH			XS	sS	04 04 47.7	-5.3
KSH			*e*SCS	ScS	04 07 51.2	-3.3
KSH			SS	SS	04 07 52.6	-14
KSH			LR	LR		
	comp=N,28μm,10.4s,MS6.6					
KSH			LR	LR		
	comp=E,28μm,12.8s,MS6.6					
KSH			LR	LR		
	comp=Z,205μm,27.4s					
GUMO	**Guam**	**46.17 71**	PFAKE		03 58 10.0	+6.6
GUMO			LR	LR		
	comp=Z,14μm,20.0s,MS5.9					
GUMO	**Guam**	**46.17 71**	LR	LR	04 18 50.1	
	comp=Z,14μm,20.7s,MS5.9,baz=247,slow=38					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
WBK	**Wadi Bani Khal**	**46.48 302**	P	**P**	**03 58 07.3**	**+1.5**
	SNR=60					
SNY	**Shenyang**	**47.05 24**	⇑P	**P**	**03 58 16.3**	**+6.4**
SNY			AP	pP	03 58 23.2	+6.3
SNY			XP	sP	03 58 27.5	+7.9
SNY			PP	PP	04 00 06.8	+5.9
SNY			S	**S**	**04 05 07.6**	**+7.0**
SNY			AMB	AMB		
	comp=Z,2μm,8.9s					
SNY			LR	LR		
	comp=N,52μm,19.4s,MS6.6					
SNY			LR	LR		
	comp=E,41μm,17.5s,MS6.6					
SNY			LR	LR		
	comp=Z,40μm,20.6s,MS6.4					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
JMDO	**Jabal Madar**	**47.12 302**	P	**P**	**03 58 11.8**	**+1.1**
	SNR=36					
PMG	**Port Moresby**	**47.29 102**	*e*P	**P**	**03 58 13.4**	**+1.2**
PMG			LR	LR		
	comp=Z,34μm,19.0s,MS6.3					
PMG	**Port Moresby**	**47.29 102**	P	**P**	**03 58 12.4**	**+0.2**
	comp=Z,52nm,0.7s,mb5.6,baz=240,slow=3.0,SNR=8.5					
PMG			S	**S**	**04 04 50.4**	**-14**
	comp=Z,7.3nm,0.8s,baz=157,slow=10,SNR=1.8					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
SMDO	**Samad**	**47.44 302**	P	**P**	**03 58 14.6**	**+1.4**
	SNR=45					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
BIDO	**Bidbid**	**47.56 303**	P	**P**	**03 58 15.6**	**+1.5**
	SNR=41					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
SHAO	**Shalim**	**47.79 295**	P	**P**	**03 58 20.6**	**+4.6**
	SNR=9.0					
ULHL	**Ulahol**	**47.86 336**	P	**P**	**03 58 16.6**	**+0.5**
	SNR=11					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
BSY	**Bisya**	**48.03 302**	P	**P**	**03 58 19.3**	**+1.4**
	SNR=43					
KZA	**Kyzart**	**48.13 335**	P	**P**	**03 58 19.6**	**+1.4**
	SNR=37					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
HOQ	**Hoqain**	**48.27 303**	P	**P**	**03 58 21.1**	**+1.5**
	SNR=44					
AAA	**Alma-Ata**	**48.44 337**	*e*P	**P**	**03 58 27.0**	**+6.4**
AAA			*e*S	**S**	**04 05 21.8**	**+1.7**
AAA			pmax	pmax		
	comp=Z,2μm,4.0s					
AAA			smax			
	comp=E,13μm,13.0s					
AAA			MLR	MLR		
	comp=Z,19μm,20.0s,MS6.1					
SONM	**Songino Array**	**48.44 5**	P	**P**	**03 58 19.6**	**-0.9**
SONM					03 59 47.6	
SONM			pmax	pmax		
	comp=Z,10.0nm,1.0s					
SONM			pmax	pmax		
	comp=Z,14nm,0.7s					
SONM			pmax	pmax		
	comp=N,4.0nm,0.8s					
SONM	**Songino Array**	**48.44 5**	P	**P**	**03 58 19.6**	**-1.0**
	comp=N,10nm,0.9s,baz=183,slow=5.7,SNR=26					
SONM			PcP	PcP	03 59 47.6	+1.0
	comp=N,14nm,0.7s,baz=189,slow=7.6,SNR=2.4					
SONM			ScP	ScP	04 03 42.4	+2.1
	comp=N,4.0nm,0.8s,baz=166,slow=3.0,SNR=4.8					
SONM			S	**S**	**04 05 05.8**	**-14**
	comp=N,0.7nm,0.9s,baz=172,slow=1.0,SNR=1.6					
ULN	**Ulaanbaatar**	**48.54 6**⇑	*e*P	**P**	**03 58 19.9**	**-1.4**
ULN			LR	LR		
	comp=Z,44μm,19.0s,MS6.5					
UCH	**Uchtor**	**48.57 334**⇓	*e*P	**P**	**03 58 22.3**	**+0.7**
	comp=Z,124nm,1.0s,mb5.9					
UCH			LR	LR		
	comp=Z,21μm,20.0s,MS6.1					
UCH	**Uchtor**	**48.57 334**	P	**P**	**03 58 22.6**	**+0.9**
	SNR=60					
TKM2	**Tokmak 2**	**48.68 336**	*e*P	**P**	**03 58 22.9**	**+0.5**
	comp=Z,296nm,1.1s,mb6.2					
TKM2			LR	LR		
	comp=Z,26μm,21.0s,MS6.2					
TKM2	**Tokmak 2**	**48.68 336**	*e*P	**P**	**03 58 22.9**	**+0.4**
TKM2			pmax	pmax		
	comp=Z,296nm,1.1s,mb6.2					
TKM2			MLR	MLR		
	comp=Z,26μm,21.0s,MS6.2					
TKM2	**Tokmak 2**	**48.68 336**	P	**P**	**03 58 22.9**	**+0.4**
	SNR=75					

KBK **Karagaybulak** 48.73 335 P P 03 58 24.5 +1.6
SNR=64
CTA **Charters Tower** 48.81 116 ⇑*i*P P 03 58 23.0 -0.9
comp=Z,33nm,0.9s,mb5.4
CTA **Charters Tower** 48.81 116 P P 03 58 22.9 -1.0
comp=Z,43nm,1.0s,mb5.4,baz=298,slow=9.0,SNR=16
CTA S **S** 04 05 14.2 -12
comp=Z,1.0nm,0.2s,baz=14,slow=16,SNR=1.7
CTAO **Charters Tower** 48.81 116 *e*P P 03 58 23.1 -0.9
CTAO LR LR
comp=Z,42µm,22.0s,MS6.4
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
ARQ **Araqi** 48.84 302 P P 03 58 25.3 +1.3
SNR=17
AML **Almayashu** 48.85 334 *e*P P 03 58 24.4 +0.6
comp=Z,387nm,1.3s,mb6.3
AML LR LR
comp=Z,22µm,20.0s,MS6.1
AML **Almayashu** 48.85 334 P P 03 58 24.7 +0.9
SNR=49
AAK **Ala-Archa** 48.91 335 *e*P P 03 58 23.1 -1.1
AAK LR LR
comp=Z,25µm,21.0s,MS6.2
AAK **Ala-Archa** 48.91 335 *d i*P P 03 58 23.5 -0.7
AAK pmax pmax
comp=Z,325nm,2.0s,mb6.0
AAK **Ala-Archa** 48.91 335 P P 03 58 24.1 -0.1
SNR=112
AAK **Ala-Archa** 48.91 335 P P 03 58 24.1 -0.1
SNR=112
AAK **Ala-Archa** 48.91 335 P P 03 58 24.1 -0.1
SNR=112
AAK **Ala-Archa** 48.91 335 P P 03 58 24.1 -0.1
SNR=112
AAK **Ala-Archa** 48.91 335 P P 03 58 25.5 +1.2
SNR=20
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
RBK **Rabkut** 48.93 294 P P 03 58 26.2 +1.4
SNR=25
FRU **Bishkek** 49.02 335 ⇓*i*P P 03 58 25.0 -0.1
FRU *i* pP 03 58 30.0 -2.1
FRU *e* 04 05 30.0
FRU pmax pmax
comp=Z,140nm,1.5s,mb5.8
FRU MLR MLR
comp=Z,31µm,24.0s,MS6.2
CHMS **Chumysh** 49.10 335 P P 03 58 26.1 +0.5
SNR=21
EKS2 **Erkin-Say** 49.24 334 *e*P P 03 58 27.3 +0.5
comp=Z,260nm,1.0s,mb6.2
EKS2 LR LR
comp=Z,22µm,20.0s,MS6.2
EKS2 **Erkin-Say** 49.24 334 P P 03 58 27.5 +0.7
SNR=97
USP **Ospenovka** 49.42 335 P P 03 58 28.1 -0.1
SNR=78
WHFO **Wadi Hawf** 49.44 294 P P 03 58 29.6 +0.8
SNR=21
WHFO **Wadi Hawf** 49.44 294 P P 03 58 29.6 +0.8
SNR=21
WHFO **Wadi Hawf** 49.44 294 P P 03 58 29.6 +0.8
SNR=21
WHFO **Wadi Hawf** 49.44 294 P P 03 58 29.6 +0.8
SNR=21
WHFO **Wadi Hawf** 49.44 294 P P 03 58 29.6 +0.8
SNR=21
CN2 **Changchun** 49.46 24 ⇑P P 03 58 27.9 -0.5
CN2 *e*XP sP 03 58 40.0 +1.8
CN2 *e*S **S** 04 05 32.0 -2.5
CN2 AMB AMB
comp=Z,30nm,0.9s,mb5.3
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,48µm,17.0s,MS6.8
CN2 LR LR
comp=E,57µm,17.0s,MS6.8
CN2 LR LR
comp=Z,32µm,18.0s,MS6.4
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
ABTO **Aybut** 49.72 293 P P 03 58 32.4 +1.6
SNR=21
MK31 **Makanchi Array** 49.75 344 *i*P P 03 58 29.5 -1.1
MKAR **Makanchi Array** 49.75 344 P P 03 58 29.6 -1.0
MKAR S **S** 04 05 35.5 -3.0
MKAR pmax pmax
comp=Z,29nm,0.8s
MKAR smax
comp=N,1.0nm,0.8s
MKAR MLR MLR
comp=Z,13µm,21.9s
MKAR **Makanchi Array** 49.75 344 P P 03 58 29.6 -1.0
comp=Z,29nm,0.8s,mb5.4,baz=148,slow=7.2,SNR=179
MKAR S **S** 04 05 35.5 -3.0
comp=Z,1.0nm,0.8s,baz=284,slow=17,SNR=2.1
MKAR LR LR 04 21 53.1
comp=Z,13µm,21.9s,MS5.9,baz=157,slow=39
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
HATD **Hatta, Dubai** 49.75 304 P P 03 58 32.3 +1.3
SNR=36
ASHO **Ashiyiah** 49.76 303 P P 03 58 32.1 +1.1
SNR=23
ASHO **Ashiyiah** 49.76 303 P P 03 58 32.1 +1.1
SNR=23
ASHO **Ashiyiah** 49.76 303 P P 03 58 32.1 +1.1
SNR=23
ASHO **Ashiyiah** 49.76 303 P P 03 58 32.1 +1.1
SNR=23
ASHO **Ashiyiah** 49.76 303 P P 03 58 32.1 +1.1
SNR=23
STKA **Stephens Creek** 49.79 133 ⇓*i*P P 03 58 29.3 -1.9
comp=Z,70nm,1.1s,mb5.6
STKA **Stephens Creek** 49.79 133 P P 03 58 29.4 -1.8
comp=Z,64nm,0.9s,mb5.6,baz=308,slow=7.6,SNR=54
STKA S **S** 04 05 30.1 -9.5
comp=Z,2.6nm,0.8s,baz=206,slow=21,SNR=1.6
STKA LR LR 04 21 27.1
comp=Z,27µm,19.0s,MS6.3,baz=293,slow=38
ZAK **Zakamensk** 50.77 2 *e*P P 03 58 38.7 +0.4
ZAK *e* 03 59 59.4
ZAK pmax pmax
comp=Z,7.0nm,1.1s
MAJO **Matsushiro** 50.85 39 *e*P P 03 58 41.5 +2.4
comp=Z,40nm,1.1s,mb5.3
MAJO LR LR
comp=Z,22µm,20.0s,MS6.2
MAJO **Matsushiro** 50.85 39 *e*P P 03 58 41.5 +2.4
MAJO pmax pmax
comp=Z,40nm,1.1s,mb5.3
MAJO MLR MLR
comp=Z,22µm,20.0s,MS6.2
MAT **Matsushiro** 50.85 39 P P 03 58 38.1 -1.0
MAT S **S** 04 05 48.0 -6.2
MJAR **Matsushiro Arr** 50.85 39 P P 03 58 38.3 -0.8
MJAR pmax pmax
comp=Z,28nm,1.0s
MJAR **Matsushiro Arr** 50.85 39 P P 03 58 38.3 -0.9
comp=Z,28nm,1.0s,mb5.1,baz=219,slow=7.8,SNR=9.6
KK31 **Karatay Array** 51.07 332 *i*P P 03 58 40.3 -0.4
KK31 pmax pmax
comp=Z,211nm,1.3s,mb5.9
VLA **Vladivostok** 51.79 29 P P 03 58 42.0 -4.0
VLA *e*S **S** 04 06 12.4 +5.5
VLA MLR MLR
comp=Z,25µm,16.7s,MS6.3
MDJ **Mudanjiang** 51.87 26 P P 03 58 47.5 +0.9
MDJ SCP ScP 04 03 57.4 +2.4
MDJ PCS PcS 04 03 58.7 +1.5
MDJ S **S** 04 06 11.7 +3.7
MDJ ŚCS ScS 04 08 38.9 +3.4
MDJ AMB AMB
comp=Z,321nm,4.6s
MDJ LR LR
comp=N,39µm,27.8s,MS6.5
MDJ LR LR
comp=E,49µm,30.6s,MS6.5
MDJ LR LR
comp=Z,48µm,16.3s
MDJ **Mudanjiang** 51.87 26 PFAKE 03 59 00.0 +13
MDJ LR LR
comp=Z,46µm,19.0s,MS6.5
MOY **Mondy** 52.00 0 *e*P P 03 58 52.3 +4.8
TLY **Talaya** 52.09 3 *e*P P 03 58 50.5 +2.4
comp=Z,23nm,1.1s,mb5.0
TLY LR LR
comp=Z,31µm,21.0s,MS6.3
TLY **Talaya** 52.09 3 *i*P P 03 58 46.2 -1.9
TLY **Talaya** 52.09 3 P P 03 58 50.8 +2.7
SNR=5.5
TLY **Talaya** 52.09 3 P P 03 58 50.8 +2.7
SNR=5.5
TLY **Talaya** 52.09 3 P P 03 58 50.8 +2.7
SNR=5.5
TLY **Talaya** 52.09 3 P P 03 58 50.8 +2.7
SNR=5.5
TLY **Talaya** 52.09 3 P P 03 58 50.8 +2.7
SNR=5.5
HIA **Hailar** 52.31 16 P P 03 58 48.1 -1.6
comp=Z,8.9nm,0.8s
HIA LR LR
comp=Z,49µm,20.0s,MS6.5
HIA **Hailar** 52.31 16 P P 03 58 48.1 -1.7
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA MLR MLR
comp=Z,49µm,20.0s
CIT **Chita** 53.51 10 *e*P P 03 59 05.1 +6.5
KURK **Kurchatov** 54.34 343 *e*P P 03 59 03.5 -1.2
comp=Z,88nm,0.9s,mb5.7
KURK LR LR
comp=Z,27µm,21.0s,MS6.3
KURK **Kurchatov** 54.34 343 ⇑*i*P P 03 59 03.5 -1.2
KURK **Kurchatov** 54.34 343 P P 03 59 03.4 -1.3
SNR=36
KURK **Kurchatov** 54.34 343 P P 03 59 03.4 -1.3
SNR=36
KURK **Kurchatov** 54.34 343 P P 03 59 03.4 -1.3
SNR=36
KURK **Kurchatov** 54.34 343 P P 03 59 03.4 -1.3
SNR=36
EIDS **Eidsvold** 54.70 121 *e*P P 03 59 06.2 -1.6
comp=Z,12nm,0.7s,mb5.0
OPO **Ambohidratompo** 55.24 248 P P 03 59 12.5 +0.7
comp=Z,7.8nm,1.0s,baz=64,slow=9.2
OPO S **S** 04 06 59.6 +4.9
comp=Z,1.2nm,0.8s,baz=247,slow=11,SNR=1.8
ZAL **Zalesovo** 55.81 349 P P 03 59 13.6 -1.7
ZAL S **S** 04 07 06.0 +5.0
ZALV **Zalesovo Beam** 55.82 349 P P 03 59 13.6 -1.7
ZALV S **S** 04 07 06.0 +4.9
ZALV LR LR 04 27 21.2
ZALV ⇑*e* 04 29 26.2
ZALV **Zalesovo Beam** 55.82 349 P P 03 59 13.6 -1.7
comp=Z,40nm,0.8s,mb5.5,baz=170,slow=5.9,SNR=117
ZALV S **S** 04 07 06.0 +4.9
comp=Z,2.6nm,0.9s,baz=144,slow=13,SNR=3.8
ZALV LR LR 04 27 21.2
comp=Z,13µm,18.8s,MS6.0,baz=352,slow=41
ZALV PKP2bc 04 29 26.2
comp=Z,0.7nm,0.3s,baz=305,slow=5.2,SNR=4.3
KLR **Kul'dur** 56.41 24 *e*P P 03 59 15.8 -3.8
KLR *e* pP 03 59 23.5 -3.2
KLR *e*S S 04 07 01.5 -7.6
KLR *e*SS SS 04 10 53.0 -3.5
LBOS 56.51 287 *e*P P 03 59 22.9 +1.9
NVS **Novosibirsk** 56.97 348 *e*P P 03 59 21.2 -2.3
NVS *e*S **S** 04 07 06.8 -10
NVS pmax pmax
comp=N,93nm,1.6s
NVS pmax pmax
comp=Z,96nm,1.6s,mb5.6
NVS pmax pmax
comp=E,51nm,1.3s
NVS smax
comp=N,27nm,1.7s
NVS smax
comp=E,85nm,2.0s
ERM **Erimo** 57.21 37 PFAKE 03 59 40.0 +15
ERM LR LR
comp=Z,17µm,20.0s,MS6.1
HABR **Khabarovsk** 57.25 27 *e*P P 03 59 22.3 -3.3
HABR *e* 04 00 16.6
HABR *e*S **S** 04 07 14.0 -6.2
HABR *e* 04 07 30.3
HABR *e* 04 11 03.8
DHBB **Dhamar BB** 57.45 288 *e*P P 03 59 28.7 +1.1
RDF **Al-Radifah** 58.39 305 *e*P P 03 59 33.2 -0.8
RDF AMb AMB 03 59 45.8
comp=Z,213nm,0.9s,mb6.2
ATD **Arta Tunnel** 58.46 284 P P 03 59 39.2 +4.4
ATD S **S** 04 07 44.1 +6.8
ATD **Arta Tunnel** 58.46 284 P P 03 59 39.2 +4.5
comp=Z,12nm,0.7s,mb5.0,baz=216,slow=19,SNR=5.0
ATD S **S** 04 07 44.1 +6.8
comp=Z,3.2nm,0.4s,baz=271,slow=23,SNR=1.6
UMR **Umm Al-Rimmam** 58.47 306 *e*P P 03 59 33.8 -0.8
UMR AMb AMB 03 59 42.6
comp=Z,180nm,0.8s,mb6.1
NAY **Al-Naaiem** 58.75 305 *e*P P 03 59 35.4 -1.1
MIB **Mutribah** 58.87 306 *e*P P 03 59 37.1 -0.3
MIB AMb AMB 03 59 45.5
comp=Z,247nm,0.6s,mb6.4
BRVK **Borovoye** 59.04 339 *e*P P 03 59 36.6 -1.5
BRVK LR LR
comp=Z,27µm,20.0s,MS6.4
BRVK **Borovoye** 59.04 339 P P 03 59 36.7 -1.3
SNR=28
BRVK **Borovoye** 59.04 339 P P 03 59 36.7 -1.3
SNR=28
BRVK **Borovoye** 59.04 339 P P 03 59 36.7 -1.3
SNR=28
BRVK **Borovoye** 59.04 339 P P 03 59 36.7 -1.3
SNR=28
BOD **Bodaibo** 59.17 8 *e*P P 03 59 36.3 -2.5
BOD *e* 03 59 45.2
BOD pmax pmax
comp=Z,6.0nm,1.0s
TAU **Tasmania Unive** 59.43 141 *e*P P 03 59 42.9 +1.9
comp=Z,174nm,1.4s,mb5.9
TAU LR LR
comp=Z,41µm,19.0s,MS6.6
TAU **Tasmania Unive** 59.43 141 *e*P P 03 59 42.9 +1.9
TAU pmax pmax
comp=Z,173nm,1.4s,mb5.9
TAU MLR MLR
comp=Z,41µm,19.0s,MS6.6
HNR **Honiara** 59.84 101 P P 03 59 45.9 +1.6
HNR S **S** 04 07 54.6 -0.5
HNR pmax pmax
comp=Z,207nm,0.7s,mb6.3
HNR smax
comp=N,64nm,0.4s
HNR **Honiara** 59.84 101 P P 03 59 45.9 +1.6
comp=N,207nm,0.7s,mb6.2,baz=142,slow=3.1,SNR=5.1
HNR S **S** 04 07 54.6 -0.6
comp=N,64nm,0.4s,baz=176,slow=1.4,SNR=2.1
YSS **Yuzh-Sakhalins** 59.99 32 *e*P P 03 59 45.2 +0.5
YSS LR LR
comp=Z,15µm,20.0s,MS6.1
YSS **Yuzh-Sakhalins** 59.99 32 ⇓*i*P P 03 59 44.5 -0.3
YSS pmax pmax
comp=Z,147nm,1.1s,mb5.9
YSS MLR MLR
comp=Z,18µm,19.0s,MS6.2
CLNS **Chul'man** 60.48 15 *e*P P 03 59 52.6 +4.7
CLNS pmax pmax
comp=Z,22nm,0.8s,mb5.2
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=E,15nm,0.9s
AB31 **Akbulak array** 60.58 331 *i*P P 03 59 47.5 -1.3
DESE **Dese** 61.54 283 *e*P P 04 00 04.7 +8.8
DESE S **S** 04 08 28.6 +12
FURI **Furi** 62.24 280 *i*P P 04 00 09.9 +9.3
FURI *e*S **S** 04 08 39.8 +14
AKTK **Aktyubinsk** 62.30 331 P P 03 59 59.1 -1.2
AKTK S **S** 04 08 30.9 +5.6
AKTK P'P'ab 04 29 17.2
AKTK LR LR 04 31 08.4
AKTO **Aktyubinsk** 62.30 331 P P 03 59 59.1 -1.2
comp=E,37nm,0.9s,mb5.5,baz=128,slow=7.6,SNR=92
AKTO S **S** 04 08 30.9 +5.6
comp=E,2.0nm,0.9s,baz=18,slow=22,SNR=4.4
AKTO PKP2ab 04 29 17.2
comp=E,2.4nm,1.0s,baz=335,slow=3.3,SNR=9.5
AKTO LR LR 04 31 08.4
comp=E,11µm,20.2s,MS6.0,baz=329,slow=40
KMBO **Kilima Mbogo** 63.21 269 *e*P P 04 00 08.1 +0.9
KMBO LR LR
comp=Z,18µm,20.0s,MS6.2
KMBO **Kilima Mbogo** 63.21 269 P P 04 00 09.7 +2.6
SNR=15
KMBO **Kilima Mbogo** 63.21 269 P P 04 00 09.7 +2.6
SNR=15
KMBO **Kilima Mbogo** 63.21 269 P P 04 00 09.7 +2.6
SNR=15
KMBO **Kilima Mbogo** 63.21 269 P P 04 00 09.4 +2.3
comp=Z,10nm,0.8s,mb5.0,baz=46,slow=8.3,SNR=12
KMBO S **S** 04 08 39.6 +1.6
comp=Z,0.3nm,0.2s,baz=33,slow=23,SNR=2.0
KMBO LR LR 04 23 29.8
comp=Z,21µm,21.6s,MS6.3,baz=88,slow=32
MAK **Makhachkala** 64.15 319 *e*P P 04 00 13.4 +0.6
MAK *i* 04 00 47.9
MAK *e* 04 02 37.3
MAK *e*S **S** 04 08 51.2 +2.5
MAK *i* 04 09 57.7
MAK pmax pmax
comp=Z,274nm,1.6s,mb6.0
MSL **Mosul** 64.52 311 *ex* x 04 00 12.5
MSL *ex* x 04 02 36.5
MSL *ex* x 04 08 47.0
MSL *ex* x 04 09 03.0
DGRG **David-gareji** 64.90 317 P P 04 00 19.5 +1.8
DGRG S **S** 04 09 09.7 +12
DYDN **Diyadin** 65.30 315 *i*P P 04 00 29.1 +8.7
MTA **Mtatsminda** 65.40 317 P P 04 00 20.4 -0.6
MTA S S 04 09 07.0 +2.9
TBLG **Delisi** 65.45 317 P P 04 00 20.9 -0.4
TBLG S S 04 09 09.4 +4.6
SVE **Sverdlovsk** 65.51 337 ⇓*e*P P 04 00 20.9 -0.4
SVE *e*S S 04 09 13.3 +8.4
SVE pmax pmax
comp=Z,225nm,1.1s,mb6.1
SVE smax
comp=N,2µm,14.4s
SVE smax
comp=E,4µm,13.8s
SVE MLR MLR
comp=Z,42µm,26.0s,MS6.5
DIGO **Kars** 65.86 315 *i*P P 04 00 29.5 +5.5
CASY **Casey** 66.00 176 *e*P P 04 00 24.9 +0.6
comp=Z,280nm,1.4s,mb6.1
CASY LR LR
comp=Z,29µm,20.0s,MS6.5
ARU **Arti** 66.05 336 *e*P P 04 00 23.5 -1.4
comp=Z,171nm,1.1s,mb6.0
ARU LR LR
comp=Z,32µm,22.0s,MS6.5
ARU **Arti** 66.05 336 *d i*P P 04 00 23.3 -1.6
ARU *e* 04 00 51.4
ARU *e* 04 02 46.7
ARU *e*PPP 04 04 25.0
ARU *e*S S 04 09 06.9 -4.7
ARU *e*SS SS 04 13 21.1 -6.2
ARU pmax pmax
comp=Z,84nm,1.7s,mb5.5
ARU MLR MLR
comp=Z,43µm,25.0s,MS6.6
YAK **Yakutsk** 66.21 15 *e*P P 04 00 25.6 -0.2
comp=Z,64nm,0.8s,mb5.7
YAK LR LR
comp=Z,24µm,19.0s,MS6.4
YAK **Yakutsk** 66.21 15 *e*P P 04 00 31.3 +5.6
YAK *i* *PP pP 04 00 42.4 +9.4
YAK *e* 04 01 00.6
YAK *e* 04 02 58.5
YAK *e*PPP 04 04 26.2
YAK *e*S S 04 09 12.1 -1.1
YAK *e**SS sS 04 09 30.3 +5.2
YAK *e*SS SS 04 13 26.2 -3.3
YAK pmax pmax
comp=Z,40nm,0.8s,mb5.5
YAK pmax pmax
comp=N,18nm,1.7s
YAK pmax pmax
comp=E,13nm,1.4s
YAK smax
comp=N,2µm,18.1s
YAK smax
comp=Z,2µm,28.6s
YAK smax
comp=E,1µm,16.6s
ZEI **Tsey** 66.45 318 *e*P P 04 00 27.7 0.0
ZEI *e* 04 00 38.3
ZEI *e* 04 00 55.7
ZEI pmax pmax
comp=Z,75nm,0.8s,mb5.8
MARD **Mardin** 66.62 311 *i*P P 04 00 29.1 +0.2
ONI **Oni** 66.68 318 P P 04 00 30.1 +0.9
ONI S S 04 09 30.1 +10
ERZM **Erzurum** 67.10 314 *i*P P 04 00 34.1 +2.3
ARTV **Artvin** 67.17 316 *i*P P 04 00 32.4 0.0
KIV **Kislovodsk** 67.74 319 *e*P P 04 00 35.3 -0.6
comp=Z,151nm,1.0s,mb6.0
KIV LR LR
comp=Z,11µm,22.0s,MS6.0
KIV **Kislovodsk** 67.74 319 *e*P P 04 00 35.5 -0.4
KIV *e* 04 00 59.1
KIV *e*S S 04 09 29.3 -3.2
KIV *e*SS SS 04 13 52.9 -1.2
KIV pmax pmax
comp=Z,295nm,5.3s
KIV pmax pmax
comp=Z,105nm,1.1s,mb5.8
KIV MLR MLR
comp=Z,8µm,19.0s,MS6.0
KIV **Kislovodsk** 67.74 319 P P 04 00 36.2 +0.3
SNR=18
KIV **Kislovodsk** 67.74 319 P P 04 00 36.2 +0.3
SNR=18
KIV **Kislovodsk** 67.74 319 P P 04 00 36.2 +0.3
SNR=18
ASF **Jabal al Asfar** 68.12 305 P P 04 00 39.8 +1.3
ASF S S 04 09 24.9 -13
ASF pmax pmax
comp=Z,11nm,0.8s
ASF smax
comp=N,1.0nm,0.3s
ASF MLR MLR
comp=Z,8µm,21.5s
ASF **Jabal al Asfar** 68.12 305 P P 04 00 39.8 +1.3
comp=Z,11nm,0.8s,mb5.0,baz=326,slow=9.0,SNR=9.7
ASF S S 04 09 24.9 -13
comp=Z,0.8nm,0.3s,baz=212,slow=13,SNR=1.9
ASF LR LR 04 30 15.8
comp=Z,8µm,21.5s,MS5.9,baz=327,slow=36
ELZG **Elazig** 68.35 312 *i*P P 04 00 40.7 +0.9
ATAB **Bozova** 68.54 311 *i*P P 04 00 40.1 -0.9
MALT **Malatya** 68.70 312 *e*P P 04 00 42.4 +0.4

comp=Z,98nm,1.0s,mb5.7
MALT Malatya 68.70 312 ⇓P **P 04 00 43.0 +1.0**
MALT Malatya 68.70 312 ⇑*i*P **P 04 00 43.1 +1.1**
SOKR Solikamsk 68.88 338*d i*P **P 04 00 48.9 +6.2**
SOKR S S 04 09 43.7 -1.7
SOKR pmax pmax
comp=Z,110nm,1.1s,mb5.7
SOKR MLR MLR
comp=Z,45µm,26.0s,MS6.6
GZT Gaziantep 69.06 311 *i* P **P 04 00 45.1 +0.8**
MRKH Merkhyat 69.10 287 *e*P **P 04 00 46.5 +1.6**
MRKH AMb AMB 04 00 56.9
comp=Z,127nm,1.9s,mb5.5
EIL Elat 69.13 302 P **P 04 00 45.0 +0.1**
comp=Z,41nm,0.8s,mb5.4,baz=118,slow=5.7,SNR=13
EIL LR LR 04 31 02.0
comp=Z,38µm,20.6s,MS6.6,baz=96,slow=36
SKR Severo-Kuril's 69.40 34 *e*P **P 04 00 38.6 -7.5**
SKR *e* 04 00 53.4
SKR *e*PPP 04 05 02.0
SKR *e*S S 04 10 03.0 +11
SKR *e* 04 10 32.0
SKR pmax pmax
comp=Z,220nm,1.0s,mb6.0
SKR smax
comp=E,5µm,14.0s
SKR MLR MLR
comp=N,9µm,16.0s,MS6.3
SKR MLR MLR
comp=E,9µm,16.0s,MS6.3
SKR MLR MLR
comp=Z,16µm,16.0s,MS6.4
MMAI Mount Meron Ar 69.56 306 P **P 04 00 47.8 +0.3**
comp=Z,20nm,0.6s,mb5.2,baz=95,slow=8.0,SNR=11
MMAI LR LR 04 34 53.2
comp=Z,14µm,18.8s,MS6.2,baz=105,slow=39
BHL Bhannes 69.58 307 *e*P **P 04 00 57.0 +9.4**
SOC Sochi 69.59 317 *e*P **P 04 00 47.0 -0.4**
SOC Sochi 69.59 317*c i*P **P 04 00 47.0 -0.4**
SOC *e**PP pP 04 00 57.0 +2.4
SOC *e**SP sP 04 01 00.9 +3.6
SOC *e* 04 01 09.8
SOC *e*S S 04 09 51.4 -3.0
SOC *e* 04 10 43.9
SOC *e*SS SS 04 14 19.4 -3.1
SOC pmax pmax
comp=Z,104nm,0.6s,mb5.9
GRSN GIRESUNGRSN 69.67 314 *i* P **P 04 00 45.4 -2.6**
ANDN Andirin 70.05 310 *i* P **P 04 00 51.1 +0.7**
VRHR Novokhopersk 71.39 325 *e*P **P 04 00 56.7 -1.5**
VRHR *e**PP pP 04 01 02.3 -3.2
VRHR *e*S S 04 10 12.5 -2.6
VRHR pmax pmax
comp=Z,80nm,0.7s,mb5.8
VRHR pmax pmax
comp=N,30nm,1.4s
VRHR pmax pmax
comp=E,60nm,0.9s
VRHR smax
comp=N,1µm,3.1s
VRHR smax
comp=Z,270nm,2.8s
VRHR smax
comp=E,1µm,4.3s
VRHR MLR MLR
comp=Z,7µm,15.0s,MS6.0
VRHR MLR MLR
comp=N,11µm,19.0s,MS6.2
VRHR MLR MLR
comp=E,8µm,21.0s,MS6.2
MA2 Magadan 71.51 24 *e*P **P 04 00 58.1 -0.7**
comp=E,141nm,1.6s,mb5.6
MA2 LR LR
comp=Z,25µm,21.0s,MS6.5
MA2 Magadan 71.51 24 *e*P **P 04 00 57.6 -1.2**
MA2 *e*S S 04 10 10.7 -5.4
MA2 pmax pmax
comp=Z,100nm,1.6s,mb5.5
MA2 MLR MLR
comp=Z,21µm,18.3s,MS6.4
AVNT Avonos 71.52 311 *i* P **P 04 01 00.0 +0.7**
ANN Anapa 71.55 318 *e*P **P 04 00 51.5 -7.9**
ANN *e**PP pP 04 01 00.7 -5.9
ANN *e* 04 01 13.5
ANN *e**SS sS 04 10 19.2 -10
ANN pmax pmax
comp=Z,60nm,1.3s,mb5.4
DRV Dumont d'Urvil 71.61 164 P **P 04 01 02.0 +2.8**
DRV S S 04 10 18.0 +0.9
DRV SS SS 04 14 56.0 +3.4
DRV L 04 19 00.0
CSS Prodhromos 71.70 307 *e*P **P 04 01 03.2 +2.7**
comp=Z,178nm,1.3s,mb5.8
MAW Mawson 71.82 194 *e*P **P 04 01 04.6 +4.1**
comp=Z,32nm,0.9s,mb5.2
MAW *e*S S 04 10 05.6 -14
MAW Mawson 71.82 194 P **P 04 01 03.9 +3.4**
MAW S S 04 10 23.5 +4.0
MAW pmax pmax
comp=Z,44nm,1.0s
MAW smax
comp=N,4.0nm,1.0s
MAW Mawson 71.82 194 P **P 04 01 03.9 +3.4**
comp=N,44nm,1.0s,mb5.3,baz=17,slow=6.4,SNR=15
MAW S S 04 10 23.5 +4.0
comp=N,4.4nm,1.0s,baz=142,slow=16,SNR=1.9
MAW LR LR 04 27 08.0
comp=N,14µm,20.4s,MS6.2,baz=37,slow=31
PET Petropavlovsk 71.87 33 PFAKE 04 01 10.0 +8.9
PET LR LR
comp=Z,12µm,20.0s,MS6.2
PET Petropavlovsk 71.87 33 *e*P **P 04 01 04.3 +3.2**
PET *e*S S 04 10 21.8 +1.2
PET *e*PPS 04 11 02.4
PET pmax pmax
comp=Z,1µm,6.8s
PET pmax pmax
comp=Z,43nm,1.0s,mb5.3
PET pmax pmax
comp=Z,2µm,5.7s
PET smax
comp=E,2µm,9.2s
PET MLR MLR
comp=Z,15µm,19.0s,MS6.3
PET MLR MLR
comp=Z,15µm,16.0s
CDAG Cicekdag 72.11 312 *i* P **P 04 01 06.2 +3.3**
BOYT Boyabat 72.23 314 *i* P **P 04 01 04.2 +0.6**
VORD Divnogorie 72.67 325 *e*P **P 04 01 04.6 -1.3**
VORD pmax pmax
comp=Z,80nm,1.4s,mb5.5
VORD pmax pmax
comp=N,30nm,1.0s
VORD pmax pmax
comp=E,70nm,1.6s
VORD MLR MLR
comp=Z,10µm,19.0s,MS6.1
VORD MLR MLR
comp=N,10µm,21.0s,MS6.2
VORD MLR MLR
comp=E,12µm,26.0s,MS6.2
BR131 Keskin Array S 72.68 312 PFAKE 04 01 20.0 +14
BR131 LR LR
comp=Z,1µm,19.0s,MS5.2
BRTR Keskin Array B 72.68 312 P **P 04 01 05.4 -0.9**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
BRTR MLR MLR
comp=Z,5µm,19.5s
BRTR Keskin Array B 72.68 312 P **P 04 01 05.3 -0.9**
comp=Z,7.0nm,0.6s,baz=120,slow=7.0,SNR=33
BRTR LR LR 04 36 49.4
comp=Z,5µm,19.5s,MS5.8,baz=333,slow=39
LSZ Lusaka 72.77 254 *e*P **P 04 01 08.5 +1.2**
comp=Z,92nm,1.4s,mb5.5
LSZ LR LR
comp=Z,12µm,19.0s,MS6.2
LSZ Lusaka 72.77 254 *e*P **P 04 01 08.5 +1.3**
LSZ pmax pmax
comp=Z,92nm,1.4s,mb5.5
LSZ MLR MLR
comp=Z,12µm,19.0s,MS6.2
LSZ Lusaka 72.77 254 P **P 04 01 13.9 +6.6**
SNR=14
LSZ Lusaka 72.77 254 P **P 04 01 13.9 +6.6**
SNR=14

VRSR Storozhevoye 72.83 325 *e*P **P 04 01 05.1 -1.8**
VRSR *e**PP pP 04 01 16.0 +1.8
VRSR *e**SP sP 04 01 20.4 +3.5
VRSR *e*S S 04 10 27.9 -3.8
VRSR *e*SS SS 04 15 11.4 -0.6
VRSR pmax pmax
comp=Z,10.0nm,1.1s
VRSR pmax pmax
comp=N,20nm,3.5s
VRSR pmax pmax
comp=E,10.0nm,1.0s
VRSR smax
comp=N,200nm,4.2s
VRSR smax
comp=Z,100nm,4.4s
VRSR smax
comp=E,280nm,4.0s
VRSR MLR MLR
comp=E,2µm,24.0s,MS5.5
VRSR MLR MLR
comp=Z,2µm,24.0s,MS5.4
VRSR MLR MLR
comp=N,2µm,26.0s,MS5.5
MATP Matopo 72.93 249 S S 04 10 35.0 +1.0
comp=N,3.5nm,1.1s,baz=106,slow=8.2,SNR=3.1
VOR Voronezh 73.03 325 *e*P **P 04 01 06.0 -2.1**
VOR *e*S S 04 10 30.0 -3.9
VOR pmax pmax
comp=Z,200nm,1.0s,mb6.0
ELDT Eldivan 73.05 313 *i* P **P 04 01 09.3 +1.0**
ANTO Ankara 73.35 312 *e*P **P 04 01 09.2 -1.0**
comp=Z,88nm,1.1s,mb5.6
ANTO LR LR
comp=Z,12µm,22.0s,MS6.1
ANTO Ankara 73.35 312 ⇓P **P 04 01 10.4 +0.2**
ANTO Ankara 73.35 312 P **P 04 01 16.0 +5.8**
SNR=11
ANTO Ankara 73.35 312 P **P 04 01 16.0 +5.8**
SNR=11
ANTO Ankara 73.35 312 ⇑*i*P **P 04 01 09.9 -0.3**
BALT Daday 73.36 314 *i* P **P 04 01 10.1 -0.2**
SIM Simferopol' 73.83 317 *e*P **P 04 01 12.1 -0.8**
SIM Simferopol' 73.83 317*c e*P **P 04 01 12.8 -0.1**
SIM *e*PPP 04 05 44.0
SIM *e*S S 04 10 43.0 -0.3
SIM pmax pmax
comp=Z,129nm,0.8s,mb5.9
TIXI Tiksi 74.34 9 *e*P **P 04 01 12.3 -3.0**
comp=Z,231nm,1.9s,mb5.8
TIXI LR LR
comp=Z,41µm,21.0s,MS6.7
TIXI Tiksi 74.34 9 *e*P **P 04 01 12.1 -3.2**
TIXI *e*S S 04 10 45.7 -2.3
TIXI *e*SS SS 04 15 30.5 -3.7
TIXI *e*SSS 04 18 45.7
TIXI pmax pmax
comp=Z,82nm,2.1s,mb5.3
APZ The Paps 74.39 139 PN **P 04 01 18.1 +1.9**
comp=Z,77nm,0.7s,mb5.7
ISP Isparta 74.59 310 *e*P **P 04 01 16.7 -0.8**
comp=Z,279nm,1.8s,mb5.9
ISP Isparta 74.59 310 *e*P **P 04 01 16.7 -0.8**
ISP pmax pmax
comp=Z,279nm,1.8s,mb5.9
ISP Isparta 74.59 310 ⇓*i*P **P 04 01 19.6 +2.1**
ESKT Eskisehir 74.71 311 *i* P **P 04 01 17.3 -0.9**
HENT Hendek 74.99 313 *i* P **P 04 01 21.1 +1.3**
MOS Moscow 75.49 329 *e*P **P 04 01 21.5 -0.8**
MOS *e* 04 01 35.6
MOS *e* 04 04 12.5
MOS *e*S S 04 10 56.3 -5.0
MOS *e* 04 11 31.8
MOS *e*SS SS 04 15 43.5 -8.7
MOS pmax pmax
comp=Z,161nm,0.8s,mb6.0
MOS pmax pmax
comp=Z,200nm,1.0s,mb6.0
MOS MLR MLR
comp=E,15µm,22.0s
MOS MLR MLR
comp=Z,18µm,22.0s,MS6.3
GDZ Gediz 75.65 311 *i* P **P 04 01 23.3 -0.3**
OBN Obninsk 75.80 328 *e*P **P 04 01 23.3 -0.8**
comp=Z,788nm,1.4s,mb6.5
OBN LR LR
comp=Z,16µm,19.0s,MS6.3
OBN Obninsk 75.80 328*d i*P **P 04 01 23.1 -1.0**
OBN *e**PP pP 04 01 34.3 +2.9
OBN *e**SP sP 04 01 39.1 +5.0
OBN *e* 04 04 16.2
OBN *e*S S 04 11 02.7 -2.1
OBN *e*SS SS 04 15 52.1 -4.9
OBN pmax pmax
comp=Z,160nm,1.5s,mb5.7
OBN MLR MLR
comp=Z,16µm,19.0s,MS6.3
LBTB Lobatse 76.07 244 PFAKE 04 01 40.0 +14
LBTB LR LR
comp=Z,9µm,19.0s,MS6.1
BOSA Boshof 76.77 241 P **P 04 01 30.4 +0.2**
BOSA LR LR
comp=Z,6µm,19.0s,MS6.0
BOSA Boshof 76.77 241 P **P 04 01 30.4 +0.2**
comp=Z,29nm,0.7s,mb5.3,baz=92,slow=6.7,SNR=21
KDAG Bornova 77.20 310 *i* P **P 04 01 32.6 +0.1**
PSN Preselentsi 77.61 315 *i* P **P 04 01 40.0 +5.4**
TIRR Tirgusor 77.63 316 P **P 04 01 34.2 -0.4**
TIRR Tirgusor 77.63 316 ⇓P **P 04 01 34.3 -0.3**
TIRR Tirgusor 77.63 316 ⇑*i*P **P 04 01 34.5 -0.1**
SNZO South Karori 77.84 132 PFAKE 04 01 50.0 +14
SNZO LR LR
comp=Z,46µm,20.0s,MS6.8
KIS Kishinev 77.94 318 *e*P **P 04 01 35.0 -1.4**
KIS *e* pP 04 01 40.0 -3.7
KIS *e*S S 04 11 23.0 -5.6
KIS *e* 04 11 46.0
KIS *e*PS 04 11 58.0
KIS *e*SS SS 04 16 28.0 -1.8
KIS *e*SSS 04 19 46.0
KIS smax
comp=N,6µm,12.0s
KIS smax
comp=E,1µm,11.0s
KIS Kishinev 77.94 318 *e*PcP PcP 04 01 48.0 +1.9
KIS Kishinev 77.94 318 *e*PP PP 04 04 46.0 +13
BOZC Bozcaada 78.40 311 *i* P **P 04 01 40.6 +1.5**
IDI Anoyia 78.55 306 S S 04 11 30.5 -5.0
comp=E,9.8nm,0.9s,baz=274,slow=14,SNR=1.9
IDI LR LR 04 39 31.0
comp=E,10µm,21.6s,MS6.1,baz=82,slow=38
TRWZ Traveller 78.59 132 PN **P 04 01 42.0 +1.9**
AKASG Malin Array Be 78.61 322 P **P 04 01 38.8 -1.2**
AKASG S S 04 11 38.2 +2.6
AKASG pmax pmax
comp=Z,13nm,0.9s
AKASG smax
comp=N,1.0nm,0.7s
AKASG Malin Array Be 78.61 322 P **P 04 01 38.8 -1.2**
comp=N,13nm,0.9s,mb4.9,baz=87,slow=4.8,SNR=36
AKASG S S 04 11 38.2 +2.6
comp=N,0.7nm,0.7s,baz=91,slow=9.9,SNR=7.5
AKASG LR LR 04 44 36.6
comp=N,8µm,18.4s,MS6.1,baz=105,slow=42
FUNA Funafuti 78.78 99 PFAKE 04 01 50.0 +8.3
FUNA LR LR
comp=Z,11µm,20.0s,MS6.2
TMCR Tamitsa 78.78 337 *e*P **P 04 01 39.6 -1.0**
TMCR pmax pmax
comp=Z,96nm,0.8s,mb5.8
VRI Vrincioaia 79.10 317 P **P 04 01 43.2 +0.5**
VRI Vrincioaia 79.10 317 ⇓P **P 04 01 43.3 +0.5**
VRI Vrincioaia 79.10 317 ⇓*i*P **P 04 01 43.5 +0.7**
GVD Gavdhos 79.13 306 *e*P **P 04 01 44.7 +1.5**
comp=Z,110nm,1.0s,mb5.7
PLOR Plostina 79.15 317 P **P 04 01 43.6 +0.6**
DIM Dimitrovgrad 79.19 313 *i* P **P 04 01 48.6 +5.2**
KDZ Kurdzhali 79.20 313 *i* P **P 04 01 47.4 +4.0**
BUCI Bucharest 79.27 315 P **P 04 01 44.9 +1.1**
SYO Syowa Base 79.40 199 ⇓*e*P **P 04 01 46.6 +2.7**
SYO Syowa Base 79.40 199 ⇓*e*P **P 04 01 50.2 +6.3**
MLR Muntele Rosu 79.56 316 P **P 04 01 45.6 +0.4**
MLR Muntele Rosu 79.56 316 P **P 04 01 44.4 -0.9**
MLR S S 04 11 46.8 +0.9
MLR pmax pmax

comp=Z,39nm,1.0s
MLR smax
comp=N,1.0nm,0.8s
MLR Muntele Rosu 79.56 316 P **P 04 01 44.4 -0.9**
comp=N,39nm,0.9s,mb5.3,baz=130,slow=2.9,SNR=42
MLR S S 04 11 46.8 +0.9
comp=N,1.1nm,0.8s,baz=153,slow=15,SNR=3.1
MLR LR LR 04 44 52.0
comp=N,10µm,19.6s,MS6.2,baz=334,slow=42
MLR Muntele Rosu 79.56 316 ⇑*i*P **P 04 01 46.0 +0.7**
ZIMR 79.61 315 P **P 04 01 45.9 +0.3**
ZIMR 79.61 315 ⇓P **P 04 01 45.5 -0.1**
ZIMR 79.61 315 ⇑*i*P **P 04 01 45.2 -0.4**
RZN Rozhen 79.73 312 P **P 04 01 51.1 +4.8**
PLD Plovdiv 79.81 313 *i* P **P 04 01 52.3 +5.6**
VOIR 80.17 316 P **P 04 01 50.1 +1.6**
VOIR 80.17 316 ⇓P **P 04 01 49.6 +1.0**
VOIR 80.17 316 ⇑*i*P **P 04 01 48.2 -0.4**
MNK Minsk 80.40 326 *e*P **P 04 01 47.0 -2.6**
MNK *e*S S 04 11 56.0 +1.6
MNK *e*PS 04 12 46.0
MNK MLR MLR
comp=N,16µm,20.0s
MNK MLR MLR
comp=E,21µm,26.0s
MNK MLR MLR
comp=Z,34µm,26.0s
BURAR Bucovina Array 80.47 318 P **P 04 01 50.9 +0.7**
BURAR Bucovina Array 80.47 318 ⇓*i*P **P 04 01 51.3 +1.1**
SMY Shemya 80.56 36 PFAKE 04 02 00.0 +10
SMY LR LR
comp=Z,10µm,22.0s,MS6.1
SOH Sokhos 80.60 311 P **P 04 01 50.6 -0.4**
THE Thessaloniki 80.86 311 P **P 04 01 57.6 +5.2**
KKB Krupnik 80.96 312 *i* P **P 04 01 56.7 +3.8**
SUR Sutherland 80.98 237 PFAKE 04 02 00.0 +6.8
SUR LR LR
comp=Z,9µm,20.0s,MS6.1
VTS Vitosha 80.98 313 P **P 04 01 52.9 -0.2**
VTS Vitosha 80.98 313 *i* P **P 04 01 57.9 +4.9**
VTS Vitosha 80.98 313 ⇓*i*P **P 04 01 53.0 0.0**
JOF Joensuu 81.10 334 *e*p **P 04 01 50.6 -2.6**
comp=Z,25nm,0.9s,mb5.1
JOF Joensuu 81.10 334 *e*P **P 04 01 50.6 -2.6**
JOF pmax pmax
comp=Z,25nm,0.9s,mb5.1
LIT Litokhoron 81.14 311 P **P 04 01 53.1 -0.8**
IDID Didziasalis 81.22 326 *e*P **P 04 01 53.7 -0.3**
IDID AMb AMB 04 02 05.3
comp=Z,2µm,1.1s,mb7.0
VAY Valandovo 81.26 312 *i* P **P 04 01 58.4 +3.9**
IIGN Ignalina 81.51 326 *e*P **P 04 01 55.3 -0.2**
LVZ Lovozero 81.57 340 PFAKE 04 02 10.0 +14
LVZ LR LR
comp=Z,22µm,21.0s,MS6.5
IZAR Zarasai 81.59 327 *e*P **P 04 01 55.6 -0.3**
IZAR AMb AMB 04 02 06.2
comp=Z,1µm,1.9s,mb6.5
STIP Stip 81.60 312 *e*P **P 04 01 59.4 +3.1**
BILL Bilibino 81.62 20 *e*P **P 04 01 56.0 +0.1**
comp=Z,14nm,1.1s
BILL LR LR
comp=Z,21µm,19.0s,MS6.5
BILL Bilibino 81.62 20*d i*P **P 04 01 55.8 -0.1**
BILL *e**PP pP 04 02 04.4 +1.2
BILL *e**SP sP 04 02 10.1 +4.2
BILL *e* 04 05 02.4
BILL *e*S S 04 12 03.2 -3.4
BILL *e*SS SS 04 17 20.1 -3.8
BILL pmax pmax
comp=Z,10.0nm,1.1s
BILL pmax pmax
comp=Z,300nm,5.4s
BILL MLR MLR
comp=Z,19µm,17.0s,MS6.5
LVV L'vov 81.66 320 *e*P **P 04 02 01.4 +4.9**
LVV *i* 04 02 11.0
LVV *i*S S 04 12 14.8 +7.1
LVV *e*PS 04 13 07.2
GZR Gura Zlata 81.73 316 P **P 04 01 57.1 +0.1**
GZR Gura Zlata 81.73 316 ⇑P **P 04 01 58.4 +1.5**
GZR Gura Zlata 81.73 316 ⇑*i*P **P 04 01 58.9 +2.0**
APA Apatity 81.89 339 ⇑*i*P **P 04 01 56.4 -0.9**
APA *i* 04 02 08.0
APA *i*S S 04 12 15.0 +5.7
APA *e*SS SS 04 17 27.0 -0.9
APA pmax pmax
comp=Z,42nm,1.1s,mb5.3
VSU Vasula 81.98 329 ⇑*e*P **P 04 01 57.6 -0.3**
VSU Vasula 81.98 329 ⇑*e*P **P 04 01 57.5 -0.4**
DRGR 82.00 317 P **P 04 01 59.0 +0.7**
DRGR 82.00 317 ⇓P **P 04 01 58.8 +0.5**
DRGR 82.00 317 ⇑*i*P **P 04 01 59.0 +0.7**
BIA Bitola 82.15 311 *i* P **P 04 02 00.3 +1.1**
SKO Skopje 82.19 312 *i* P **P 04 02 04.0 +4.6**
KRUS Krusevo 82.25 312 *i* P **P 04 01 58.7 -1.0**
RAO Raoul Island 82.42 119 PFAKE 04 02 10.0 +9.1
RAO LR LR
comp=Z,22µm,22.0s,MS6.5
RAO Raoul Island 82.42 119 LR LR 04 37 33.8
comp=Z,22µm,21.9s,MS6.5,baz=91,slow=35
KWP Kalwaria 82.48 320 *e*P **P 04 02 00.4 -0.4**
KWP *e*PcP PcP 04 02 05.7 -0.2
KWP *e*PP PP 04 05 16.5 +6.4
KWP *e*S S 04 12 24.4 +8.3
KWP LMZ 04 37 42.0
comp=Z,11µm,28.9s
KWP Kalwaria 82.48 320 *e*P **P 04 02 00.4 -0.3**
KWP *e*PcP PcP 04 02 05.7 -0.1
KWP *e*PP PP 04 05 16.5 +6.5
KWP *e*S S 04 12 24.4 +8.3
KWP Kalwaria 82.48 320 *e*P **P 04 02 00.4 -0.3**
KWP *e* pP 04 02 05.7 -2.4
KWP *e* 04 05 16.5
KWP MLR MLR
comp=Z,11µm,28.9s,MS6.0
KWP Kalwaria 82.48 320 ⇑*i*P **P 04 02 00.4 -0.3**
OHR Ohrid 82.56 311 *i* P **P 04 02 05.3 +4.0**
BZS Buzias 82.58 316 P **P 04 02 01.5 +0.2**
BZS Buzias 82.58 316 ⇓*i*P **P 04 02 01.1 -0.2**
UZH Uzhgorod 82.58 319 *e*P **P 04 02 01.8 +0.5**
UZH *e* 04 02 11.0
UZH *i* 04 02 15.6
UZH *e* 04 05 15.4
UZH *e*S S 04 12 16.6 -0.6
UZH *i* PS 04 13 09.0
UZH *i* SS SS 04 17 35.0 -4.0
KOLS Kolonicke sedl 82.64 319 *e*P **P 04 02 02.2 +0.6**
KOLS *e* 04 02 13.1
KOLS Kolonicke sedl 82.64 319 *e*P **P 04 02 02.2 +0.6**
KOLS *e*pP pP 04 02 13.1 +4.1
KOLS *e*S S 04 12 26.8 +9.0
SUW Suwalki 82.96 325 *e*P **P 04 02 02.5 -0.7**
SUW *e*PcP PcP 04 02 07.8 -0.1
SUW *e*PP PP 04 05 18.1 +4.2
SUW *e*S S 04 12 18.5 -2.3
SUW *e*ScS ScS 04 12 25.9 -9.4
SUW LMZ 04 38 39.5
comp=Z,19µm,27.9s
SUW Suwalki 82.96 325 *e*P **P 04 02 02.5 -0.7**
SUW *e*PcP PcP 04 02 07.8 -0.1
SUW *e*PP PP 04 05 18.1 +4.2
SUW *e*S S 04 12 18.5 -2.4
SUW *e*ScS ScS 04 12 25.9 -9.3
SUW Suwalki 82.96 325 *e*P **P 04 02 02.5 -0.7**
SUW *e* pP 04 02 07.8 -2.7
SUW *e* 04 05 18.1
SUW *e*S S 04 12 18.5 -2.4
SUW MLR MLR
comp=Z,19µm,27.9s,MS6.3
FINES FINESS Array B 83.03 332 P **P 04 02 02.9 -0.4**
FINES S S 04 12 39.5 +18
FINES LR LR 04 43 24.9
FINES FINESS Array B 83.03 332 P **P 04 02 02.9 -0.4**
comp=Z,15nm,0.9s,mb5.0,baz=98,slow=7.9,SNR=32
FINES S S 04 12 39.5 +18
comp=Z,2.9nm,0.9s,baz=354,slow=15,SNR=4.2
FINES LR LR 04 43 24.9
comp=Z,5µm,18.7s,MS5.9,baz=281,slow=39
KAF Kangasniemi 83.09 333 *e*p **P 04 02 02.1 -1.6**
comp=Z,37nm,0.8s,mb5.5,baz=99,slow=4.7
KAF Kangasniemi 83.09 333 *e*P **P 04 02 02.1 -1.6**
KAF pmax pmax

comp=Z,37nm,0.8s,mb5.5
TSUM Tsumeb 83.10 251 *e*P **P** **04 02 06.2 +1.6**
comp=Z,81nm,1.0s,mb5.7
TSUM LR LR
comp=Z,7µm,20.0s,MS6.1
TSUM Tsumeb 83.10 251 S S 04 12 32.8 +9.1
comp=Z,0.8nm,0.4s,baz=175,slow=12,SNR=1.8
CRVS Cervenica-Dubn 83.17 319 *e*P **P** **04 02 04.6 +0.3**
CRVS *e* 04 02 14.2
CRVS *e*S S 04 12 32.2 +9.1
CRVS Cervenica-Dubn 83.17 319 *e*P **P** **04 02 04.6 +0.3**
CRVS *e* 04 02 14.2
CRVS Cervenica-Dubn 83.17 319 *e*P **P** **04 02 04.6 +0.3**
CRVS *e*pP pP 04 02 14.1 +2.4
CRVS *e*S S 04 12 32.2 +9.1
PVY Plav 83.35 313 ⇓*i*P **P** **04 02 03.9 -1.5**
STHS Stebnicka Huta 83.38 320 *i* P **P** **04 02 06.2 +0.8**
comp=Z,53nm,0.9s,mb5.6
STHS *e* pP 04 02 13.1 +0.3
STHS *e*S S 04 12 30.0 +4.7
STHS Stebnicka Huta 83.38 320 *i* P **P** **04 02 06.2 +0.8**
STHS *e* pP 04 02 13.1 +0.3
STHS *e*S S 04 12 30.0 +4.7
STHS pmax pmax
comp=Z,53nm,0.9s,mb5.6
IVA Berane 83.44 313 ⇑*i*P **P** **04 02 04.2 -1.7**
VNDA Vanda 83.51 169 P **P** **04 02 04.0 -1.5**
VNDA S S 04 12 27.5 +1.8
VNDA LR LR 04 34 09.7
VNDA Vanda 83.51 169 P **P** **04 02 04.0 -1.5**
comp=Z,23nm,0.7s,mb5.4,baz=302,slow=5.1,SNR=56
VNDA S S 04 12 27.5 +1.8
comp=Z,0.4nm,0.7s,baz=58,slow=23,SNR=2.4
VNDA LR LR 04 34 09.7
comp=Z,19µm,21.9s,MS6.4,baz=312,slow=32
KECS Kecovo 83.75 319 *e*P **P** **04 02 07.1 -0.2**
comp=Z,37nm,1.0s,mb5.5
KECS *e* pP 04 02 13.1 -1.6
KECS *e*PP PP 04 05 26.6 +6.1
KECS *e*S S 04 12 33.4 +4.4
KECS Kecovo 83.75 319 *e*P **P** **04 02 07.1 -0.2**
KECS *e* pP 04 02 13.1 -1.6
KECS *e* 04 05 26.6
KECS *e*S S 04 12 33.4 +4.4
KECS pmax pmax
comp=Z,37nm,1.0s,mb5.5
ULC Ulcinj 83.81 312 ⇓*i*P **P** **04 02 05.8 -2.0**
TTG Podgorica 83.85 313 ⇑*i*P **P** **04 02 06.0 -2.0**
PLE Pljevlja 83.86 314 ⇑*i*P **P** **04 02 06.4 -1.6**
WAR Warsaw 83.95 323 *e*P **P** **04 02 14.3 +6.0**
WAR LMZ 04 38 22.4
comp=Z,10µm,31.7s
NIE Niedzica 83.99 320 *e*P **P** **04 02 09.3 +0.8**
NIE *e*PcP PcP 04 02 14.0 +1.5
PSZ Piszkesteto 84.06 318 *e*P **P** **04 02 08.5 -0.5**
comp=Z,56nm,1.0s,mb5.7
PSZ *e*PP PP 04 05 25.6 +2.5
PSZ Piszkesteto 84.06 318 *e*P **P** **04 02 08.5 -0.5**
PSZ *e* 04 05 25.6
PSZ pmax pmax
comp=Z,56nm,1.0s,mb5.7
PSZ Piszkesteto 84.06 318 ⇓*e*P **P** **04 02 09.1 +0.1**
PSZ Piszkesteto 84.06 318 ⇓*i*P **P** **04 02 09.0 0.0**
NKY Niksic 84.09 313 ⇑*i*P **P** **04 02 07.1 -2.1**
BUM Brajici-Budva 84.11 312 ⇓*i*P **P** **04 02 07.8 -1.5**
UPM Unac-Piva 84.19 313 ⇓*i*P **P** **04 02 08.7 -1.0**
HCY Herceg Novi 84.42 313 ⇓*i*P **P** **04 02 09.6 -1.3**
OJC Ojcow 84.42 320 *e*P **P** **04 02 10.6 -0.1**
OJC *e*PcP PcP 04 02 13.9 -0.5
OJC *e*S S 04 12 43.4 +7.7
OJC *e*SS SS 04 18 07.6 +1.4
OJC L 04 48 52.5
comp=Z,9.3nm,22.4s
BRY Bratogost 84.43 313 ⇑*i*P **P** **04 02 09.9 -1.0**
BUD Budapest 84.59 318 ⇑*e*PcP PcP 04 02 17.0 +1.8
SBA Scott Base 84.60 169 *e*P **P** **04 02 12.9 +1.8**
comp=Z,169nm,1.5s,mb6.0
SBA LR LR
comp=Z,18µm,22.0s,MS6.4
SBA Scott Base 84.60 169 *e*P **P** **04 02 12.9 +1.8**
SBA pmax pmax
comp=Z,169nm,1.5s,mb6.0
SBA MLR MLR
comp=Z,18µm,22.0s,MS6.4
PKSM Moragy 84.71 316 P **P** **04 02 12.3 0.0**
PKSM Moragy 84.71 316 ⇓P **P** **04 02 12.2 -0.1**
PKSM Moragy 84.71 316 ⇑*i*P **P** **04 02 12.1 -0.2**
KEV Kevo 84.81 340 *ep* **P** **04 02 09.1 -3.2**
comp=Z,21nm,1.0s,mb5.2
KEV Kevo 84.81 340 *e*P **P** **04 02 10.9 -1.4**
comp=Z,36nm,0.9s,mb5.5
KEV Kevo 84.81 340 *e*P **P** **04 02 10.9 -1.4**
KEV pmax pmax
comp=Z,36nm,0.9s,mb5.5
VYHS Vyhne 84.83 319 *e*P **P** **04 02 13.0 +0.1**
comp=Z,79nm,1.5s,mb5.6
VYHS *e* pP 04 02 18.0 -2.3
VYHS *e*PP PP 04 05 37.4 +8.0
VYHS *e*S S 04 12 41.2 +1.3
VYHS LR LR
comp=Z,5µm,34.3s,MS5.7
VYHS Vyhne 84.83 319 *e*P **P** **04 02 13.0 +0.1**
VYHS *e* pP 04 02 18.0 -2.3
VYHS *e*S S 04 12 41.2 +1.3
VYHS pmax pmax
comp=Z,79nm,1.5s,mb5.6
VYHS MLR MLR
comp=Z,5µm,34.3s,MS5.7
VYHS Vyhne 84.83 319 *e*P **P** **04 02 13.0 +0.1**
VYHS *e*pP pP 04 02 18.0 -2.3
VYHS *e*PP PP 04 05 37.4 +8.0
VYHS *e*S S 04 12 41.2 +1.3
KOLL Kolacno 85.13 319 *e*P **P** **04 02 13.9 -0.4**
KOLL *e* pP 04 02 20.1 -1.6
KOLL Kolacno 85.13 319 *e*P **P** **04 02 13.9 -0.4**
KOLL *e*pP pP 04 02 20.1 -1.6
KOLL *e*PP PP 04 05 40.6 +8.8
ARCES ARCESS Array B 85.25 340 P **P** **04 02 12.6 -1.9**
ARCES pmax pmax
comp=Z,23nm,0.9s
ARCES MLR MLR
comp=Z,22µm,20.5s
ARCES ARCESS Array B 85.25 340 P **P** **04 02 12.6 -1.9**
comp=Z,23nm,0.9s,mb5.3,baz=110,slow=6.6,SNR=24
ARCES LR LR 04 43 43.8
comp=Z,22µm,20.5s,MS6.5,baz=113,slow=38
ARE0 ARCESS Array S 85.25 340 *e*P **P** **04 02 12.3 -2.2**
RAC Raciborz 85.43 320 *e*P **P** **04 02 15.9 +0.1**
RAC MLR MLR
comp=E,12µm,26.8s
OKC Ostrava-Krasne 85.44 320 *e*P **P** **04 02 16.0 +0.2**
OKC *e* pP 04 02 21.8 -1.4
OKC *e*SKS 04 12 56.6
OKC Ostrava-Krasne 85.44 320 *e*P **P** **04 02 16.0 +0.2**
OKC *e* pP 04 02 21.8 -1.4
OKC MLR MLR
comp=Z,6µm,18.4s,MS6.0
OKC Ostrava-Krasne 85.44 320 *e*P **P** **04 02 16.0 +0.2**
OKC *e*pP pP 04 02 21.8 -1.4
OKC *ex* x 04 12 56.6
OKC AMS AMS 04 49 00.0
comp=Z,6µm,18.4s
TIP Timpagrande 85.44 309 *e*P **P** **04 02 16.5 +0.3**
JAVC Velka Javorina 85.64 319 P **P** **04 02 17.8 +0.9**
MORC Moravsky Berou 85.82 320 *e*P **P** **04 02 17.5 -0.2**
comp=Z,93nm,1.1s,mb5.9
MORC Moravsky Berou 85.82 320 ⇑P **P** **04 02 18.4 +0.7**
MORC Moravsky Berou 85.82 320 ⇓*i*P **P** **04 02 18.3 +0.6**
MODS Modra-Piesok 85.86 318 *e*P **P** **04 02 18.4 +0.4**
comp=Z,61nm,1.4s,mb5.6
MODS *e* pP 04 02 23.4 -2.0
MODS *e*S S 04 12 59.1 +9.1
MODS Modra-Piesok 85.86 318 *e*P **P** **04 02 18.4 +0.4**
MODS *e* pP 04 02 23.4 -2.0
MODS pmax pmax
comp=Z,61nm,1.4s,mb5.6
ZST Bratislava 85.95 318 *i* P **P** **04 02 18.4 -0.1**
comp=Z,81nm,1.3s,mb5.8
ZST *e* pP 04 02 23.6 -2.3
ZST *e*PP PP 04 05 47.0 +8.5
ZST *e*S S 04 12 50.4 -0.6
ZST LR LR
comp=Z,6µm,19.5s,MS6.0
ZST Bratislava 85.95 318 *i* P **P** **04 02 18.4 -0.1**
ZST *e*pP pP 04 02 23.6 -2.3
ZST *e*PP PP 04 05 47.0 +8.5
ZST *e*S S 04 12 50.4 -0.6
ZST pmax pmax
comp=Z,81nm,1.3s,mb5.8
ZST MLR MLR
comp=Z,6µm,19.5s,MS6.0
ZST Bratislava 85.95 318 *i* P **P** **04 02 18.4 -0.1**
ZST *e*pP pP 04 02 23.6 -2.3
ZST *e*PP PP 04 05 47.0 +8.5
ZST *e*S S 04 12 50.4 -0.6
ADK Adak 85.99 38 PFAKE 04 02 30.0 +11
ADK LR LR
comp=Z,7µm,20.0s,MS6.0
SCLL Scilla 86.19 308 P **P** **04 02 23.4 +3.5**
comp=Z,38nm,0.8s,mb5.7
FGMS Monte Sant'Ang 86.24 312 P **P** **04 02 19.8 -0.2**
comp=Z,93nm,1.1s,mb5.9
SOP Sopron 86.27 318 ⇓*e*PcP PcP 04 02 24.6 +2.0
GKP Gorka Klasztor 86.36 323 *e*P **P** **04 02 20.3 -0.1**
GKP *e*SKSac SKSac 04 12 56.7 +11
GKP *e*S S 04 13 06.5 +12
GKP LMZ 04 39 32.4
comp=Z,12µm,28.5s
GKP Gorka Klasztor 86.36 323 *e*P **P** **04 02 20.3 0.0**
GKP *e*SKSac SKSac 04 12 56.7 +11
GKP *e*S S 04 13 06.5 +12
GKP LR LR
comp=Z,12µm,28.5s,MS6.1
GKP Gorka Klasztor 86.36 323 *e*P **P** **04 02 20.3 0.0**
GKP *e* 04 12 56.7
GKP MLR MLR
comp=Z,12µm,28.5s,MS6.1
KOGS Kog 86.38 316 P **P** **04 02 21.2 +0.6**
VRAC Vranov 86.39 319 P **P** **04 02 26.0 +5.4**
VRAC Vranov 86.39 319 S S 04 12 54.2 -1.0
comp=Z,0.9nm,0.4s,baz=80,slow=11,SNR=1.9
VRAC LR LR 04 47 04.6
comp=Z,6µm,19.8s,MS6.0,baz=321,slow=40
VRAC Vranov 86.39 319 ⇓*i*P **P** **04 02 26.3 +5.7**
MGR Morigerati 86.44 310 *i* Pu **P** **04 02 25.8 +4.8**
KRUC Moravsky 86.50 319 P **P** **04 02 20.9 -0.2**
DPC Dobruska-Polom 86.65 320 *e*P **P** **04 02 22.3 +0.4**
DPC *e*pP pP 04 02 27.7 -1.6
DPC *e*S S 04 12 57.7 0.0
DPC AMS AMS 04 53 00.0
comp=Z,6µm,17.4s
KSP Ksiaz 86.71 321 *e*P **P** **04 02 22.6 +0.5**
KSP *e*PcP PcP 04 02 28.0 +3.5
KSP *e*SKSac SKSac 04 13 03.4 +16
KSP *e*S S 04 13 09.1 +11
KSP LMZ 04 40 60.0
comp=Z,13µm,26.7s
KSP Ksiaz 86.71 321 *e*P **P** **04 02 21.9 -0.2**
KSP *e**PP pP 04 02 27.4 -2.1
KSP *e*S S 04 13 01.0 +2.7
KSP MLR MLR
comp=Z,21nm,22.2s,MS6.5
CONA Conrad Observa 86.76 318 ⇑*i*P **P** **04 02 21.7 -0.8**
comp=Z,48nm,1.4s,mb5.5,SNR=11
HMDC Modica 86.86 307 *i* Pu **P** **04 02 28.9 +5.7**
UPC Upice 86.86 320 *e*P **P** **04 02 23.6 +0.7**
UPC *e*pP pP 04 02 28.9 -1.4
ARSA Arzberg 86.94 317 *i* P **P** **04 02 23.5 +0.1**
comp=Z,83nm,1.2s,mb5.8,SNR=25
BOJS Bojanci 87.01 315 *i* P **P** **04 02 23.8 +0.1**
BOJS *i* PcP PcP 04 02 27.6 +1.8
BOJS *i* pP 04 02 31.7 +0.6
TREC Trest 87.11 319 *e*P **P** **04 02 24.2 +0.1**
TREC *e*pP pP 04 02 29.4 -2.1
TREC *e*S S 04 13 06.2 +4.0
TREC AMS AMS 04 50 10.0
comp=Z,7µm,18.9s
PERS Pernice 87.18 317 *i* P **P** **04 02 24.7 +0.2**
PERS *i* PcP PcP 04 02 29.9 +3.3
VAE Valguarnera 87.18 307 S S 04 13 05.9 +2.5
comp=Z,5.2nm,0.9s,baz=15,slow=23,SNR=1.4
VAE LR LR 04 45 01.3
comp=Z,5µm,20.7s,MS5.9,baz=360,slow=38
NVLJ Novalja 87.22 314 P **P** **04 02 20.6 -4.2**
CSLB Castelbuono 87.48 308 P **P** **04 02 30.3 +4.1**
comp=Z,14nm,0.1s,mb6.2
MIDA Miranda 87.51 312 P **P** **04 02 27.0 +0.8**
TRO Tromso 87.54 340 *e*P **P** **04 02 25.6 -0.1**
TRO *e* 04 13 06.6
TRO LR LR
comp=Z,14µm,20.7s,MS6.4
LJU Ljubljana 87.55 316 *i* P **P** **04 02 26.7 +0.4**
LJU *i* 04 02 35.8
LJU *e*S S 04 13 06.1 -0.4
LJU *e*SS SS 04 18 57.0 +4.7
LJU Ljubljana 87.55 316 *i* P **P** **04 02 26.7 +0.4**
LJU *i* PcP PcP 04 02 32.0 +3.7
LJU *i* 04 02 35.8
LJU *e*S S 04 13 06.0 -0.5
LJU *e*SP 04 14 48.0
LJU *e*SS SS 04 18 57.0 +4.7
OBKA Obir 87.56 316 ⇑*i*P **P** **04 02 25.9 -0.5**
comp=Z,69nm,1.2s,mb5.8,SNR=11
AFI Afiamalu 87.70 104 PFAKE 04 02 40.0 +12
AFI LR LR
comp=Z,10µm,21.0s,MS6.2
PRU Pruhonice 87.77 320 *e*P **P** **04 02 27.5 +0.2**
PRU *e*pP pP 04 02 32.7 -2.0
PRU *e*S S 04 13 08.5 0.0
PRU AMS AMS 04 47 50.0
comp=Z,7µm,23.7s
PVCC Panska Ves 87.78 320 *e*P **P** **04 02 27.6 +0.3**
PVCC *e*pP pP 04 02 33.6 -1.2
PVCC *e*S S 04 13 11.3 +2.7
PVCC AMS AMS 04 48 00.0
comp=Z,11µm,21.1s
MOA Molln 87.83 318 ⇓*i*P **P** **04 02 27.4 -0.2**
comp=Z,66nm,1.3s,mb5.7
PRA Prague 87.84 320 P **P** **04 02 28.0 +0.4**
PRA pP pP 04 02 33.0 -2.0
JAVS Javornik 87.86 316 *i* P **P** **04 02 27.4 -0.4**
BSD Bornholm Skovb 87.87 325 *e*P **P** **04 02 31.5 +3.9**
comp=Z,128nm,1.1s,mb6.1
BSD *i* S S 04 13 10.3 +1.0
BSD Bornholm Skovb 87.87 325 *e*P **P** **04 02 31.5 +3.9**
BSD *i* S S 04 13 10.3 +1.0
BSD pmax pmax
comp=Z,128nm,1.1s,mb6.1
BSD Bornholm Skovb 87.87 325 *i* P **P** **04 02 31.5 +3.9**
comp=Z,128nm,1.1s,mb6.1
BSD *i* S S 04 13 10.3 +1.0
comp=Z,7µm,22.0s
BSD
comp=Z,6µm,19.0s
VOY Vojsko 87.99 316 *e*P **P** **04 02 28.0 -0.4**
VOY *e*PcP PcP 04 02 33.6 +3.4
VOY *e* 04 03 12.0
VENT Ventotene 88.10 311 P **P** **04 02 34.2 +5.2**
CLTB Caltabellotta 88.13 307 P **P** **04 02 35.0 +5.7**
comp=Z,210nm,1.5s,mb6.2
AQU L'Aquila 88.17 312 *e*P **P** **04 02 29.7 +0.3**
comp=Z,192nm,1.0s,mb6.3
AQU L'Aquila 88.17 312 *e*P **P** **04 02 29.7 +0.3**
AQU pmax pmax
comp=Z,192nm,1.0s,mb6.3
AQU L'Aquila 88.17 312 ⇑*i*P **P** **04 02 30.3 +0.9**
BRG Berggiesshubel 88.20 321 *i* P **P** **04 02 29.6 +0.2**
comp=Z,15nm,1.0s,mb5.2
BRG *i* pP 04 02 35.0 -1.7
BRG *i* 04 02 39.4
BRG S S 04 13 14.0 +1.4
BRG PS 04 14 11.0
BRG SS SS 04 19 11.0 +9.4
BRG LR LR
comp=Z,5µm,20.0s,MS5.9
BRG Berggiesshubel 88.20 321 *i* P **P** **04 02 29.6 +0.3**
BRG *i* 04 02 39.4
BRG S S 04 13 14.0 +1.4
BRG PS 04 14 11.0
BRG pmax pmax
comp=Z,15nm,1.0s,mb5.2
BRG MLR MLR
comp=Z,5µm,20.0s,MS5.9
BRG Berggiesshubel 88.20 321 *e*P **P** **04 02 29.5 +0.2**
comp=Z,319nm,1.5s,mb6.3
BRG *e*pP pP 04 02 35.1 -1.6
BRG *e*S S 04 13 23.2 +11
BRG Berggiesshubel 88.20 321 *i* P **P** **04 02 29.6 +0.2**
comp=Z,26nm,1.0s,mb5.4
BRG *i* pP 04 02 35.0 -1.7
comp=Z,97nm,1.1s
BRG *i* 04 02 39.4
comp=Z,319nm,1.5s
GEC2 GERESS Array S 88.26 319 *e*P **P** **04 02 29.9 +0.3**
GEC2 pmax pmax
comp=Z,230nm,1.4s,mb6.2
GEC2 GERESS Array S 88.26 319 *e*P **P** **04 02 29.9 +0.3**
comp=Z,230nm,1.4s,mb6.2
GEC2 *e*S S 04 13 24.0 +11
GERES GERESS Array B 88.26 319 P **P** **04 02 29.8 +0.2**
comp=Z,11nm,1.0s,mb5.0,baz=96,slow=4.0,SNR=30
GERES LR LR 04 47 12.3
comp=Z,5µm,20.9s,MS5.9,baz=333,slow=39
KHC Kasperske Hory 88.35 319 *e*P **P** **04 02 29.8 -0.2**
KHC *e*pP pP 04 02 35.4 -2.1
KHC *e*S S 04 13 13.8 -0.2
KHC AMS AMS 04 51 10.0
comp=Z,7µm,16.2s
CING Cingoli 88.37 313 P **P** **04 02 36.1 +5.8**
RUE Ruedersdorf 88.39 322 *e*P **P** **04 02 30.5 +0.3**
comp=Z,603nm,1.3s,mb6.7
RUE Ruedersdorf 88.39 322 *e*P **P** **04 02 30.7 +0.6**
comp=Z,619nm,1.2s,mb6.7
RUE *e*S S 04 13 24.1 +10
KBA Koelnbreinsper 88.42 317 ⇓*i*P **P** **04 02 28.1 -2.3**
comp=Z,60nm,1.2s,mb5.7,SNR=6.8
KBA Koelnbreinsper 88.42 317 ⇓*i*P **P** **04 02 28.1 -2.3**
comp=Z,60nm,1.2s,mb5.7
KBA Koelnbreinsper 88.42 317 ⇓*i*P **P** **04 02 28.1 -2.3**
KBA pmax pmax
comp=Z,60nm,1.2s,mb5.7
FBE Freiberg 88.58 321 *e*P **P** **04 02 31.4 +0.3**
comp=Z,369nm,1.5s,mb6.5
MTCE Montecelio 88.65 312 P **P** **04 02 36.7 +5.1**
MNS Montasola 88.71 312 P **P** **04 02 35.7 +3.8**
ASS Assisi 88.75 313 P **P** **04 02 37.1 +5.0**
RGN Rugen 88.76 324 *e*S S 04 12 29.3 +12
FVI Forni Avoltri 88.78 316 P **P** **04 02 35.6 +3.5**
WET Wettzell 88.81 319 *e*P **P** **04 02 32.4 +0.2**
WET pmax pmax
comp=Z,177nm,1.5s,mb6.2
WET Wettzell 88.81 319 *e*P **P** **04 02 32.4 +0.2**
comp=Z,177nm,1.5s,mb6.2
WET *e*S S 04 13 29.8 +11
CLL Collm 88.81 321 *i* P **P** **04 02 32.5 +0.3**
CLL *i* pP pP 04 02 37.4 -2.2
CLL *e* 04 02 42.0
CLL *e*S S 04 13 17.0 -1.3
CLL LR LR
comp=Z,8µm,22.4s,MS6.1
CLL Collm 88.81 321 *i* P **P** **04 02 32.5 +0.3**
CLL ⇑*i*pP pP 04 02 37.4 -2.2
comp=Z,88nm,1.3s
CLL *e*(sP) sP 04 02 42.0 -0.3
comp=Z,148nm,1.2s
CLL *ex* x 04 02 50.0
CLL *ex* x 04 03 10.0
CLL *e*PP PP 04 05 58.0 -3.4
CLL *e*SKSac SKSac 04 12 54.0 -6.4
CLL *e*S S 04 13 17.0 -1.3
comp=N,5µm,30.9s
CLL *e*S S 04 13 17.0 -1.3
comp=E,1µm,34.4s
CLL *e*PS 04 14 24.0
CLL *e*PPS 04 14 45.0
CLL *e*SS SS 04 19 30.0 +20
CLL *e*SSS 04 22 36.0
CLL *ex* x 04 25 00.0
CLL *e*SSSS 04 25 48.0
CLL Collm 88.81 321 *e*P **P** **04 02 32.6 +0.4**
comp=Z,149nm,1.2s,mb6.2
CLL *e*pP pP 04 02 37.3 -2.3
CLL *e*PP PP 04 05 58.2 -3.2
CLL *e*SKSac SKSac 04 13 02.0 +1.6
CLL *e*S S 04 13 21.1 +2.8
CLL *e*SP 04 14 19.7
CLL *e*PPS 04 14 47.0
CLL *e*SS SS 04 19 17.6 +7.1
CLL *e*SSS 04 22 46.6
CLL *e*SSSS 04 25 59.4
CLL *e*LR LR 04 34 39.1
HFS Hagfors 88.84 330 P **P** **04 02 32.1 0.0**
comp=Z,8.4nm,1.0s,mb5.0,baz=7.6,slow=4.5,SNR=8.6
HFS LR LR 04 47 49.5
comp=Z,11µm,20.7s,MS6.2,baz=90,slow=39
ABTA Abfaltersbach 88.97 317 ⇑*i*P **P** **04 02 32.8 -0.2**
comp=Z,49nm,1.3s,mb5.7,SNR=8.6
MAIT Maitri 89.08 199 *e*P **P** **04 02 35.9 +2.8**
TANN Tannenbergstha 89.12 320 *e*P **P** **04 02 33.8 +0.1**
comp=Z,118nm,1.4s,mb6.0
TANN *e*pP pP 04 02 39.3 -1.8
TANN *e*S S 04 13 32.8 +12
NKC Novy Kostel 89.13 320 *e*P **P** **04 02 34.5 +0.8**
NKC *e*SKS 04 13 18.8
NKC Novy Kostel 89.13 320 *e*P **P** **04 02 34.5 +0.8**
NKC *e*S S 04 13 18.8 -2.5
NKC AMS AMS 04 48 50.0
comp=Z,9µm,22.5s
WERN Wernitzgruen 89.18 320 *e*P **P** **04 02 34.4 +0.5**
comp=Z,90nm,1.2s,mb6.0
TOLF Tolfa 89.21 312 P **P** **04 02 39.2 +5.0**
GUNZ Gunzen 89.21 320 *e*P **P** **04 02 34.5 +0.5**
comp=Z,159nm,1.4s,mb6.2
WERD Werda 89.22 320 *e*P **P** **04 02 34.3 +0.2**
comp=Z,179nm,1.5s,mb6.2
WERD *e*pP pP 04 02 39.8 -1.8
ROTZ Rotzenmuhle 89.27 320 *e*P **P** **04 02 34.4 0.0**
comp=Z,199nm,1.5s,mb6.2
ROTZ *e*S S 04 13 34.7 +12
SPB4 Spitsbergen Ar 89.30 348 *e*P **P** **04 02 31.9 -2.0**
MANZ Manzenberg 89.34 320 *e*P **P** **04 02 35.3 +0.6**
comp=Z,243nm,1.3s,mb6.4
MANZ *e*S S 04 13 35.4 +12
QSPA South Pole Qui 89.42 180 PFAKE 04 02 50.0 +16
QSPA LR LR
comp=Z,18µm,19.0s,MS6.5
QSPA South Pole Qui 89.42 180 LR LR 04 37 14.4
comp=Z,19µm,21.7s,MS6.5,baz=323,slow=32
GAMB Gambell 89.51 26 *e*P **P** **04 02 32.6 -2.5**
CTI Castel Tesino 89.55 316 P **P** **04 02 37.8 +2.0**
WTTA Wattenberg 89.58 317 ⇓*i*P **P** **04 02 35.6 -0.3**
comp=Z,126nm,1.4s,mb6.1,SNR=12
WTTA Wattenberg 89.58 317 ⇓*i*P **P** **04 02 35.6 -0.3**
WTTA pmax pmax
comp=Z,126nm,1.4s,mb6.0
MOX Moxa 89.67 320 *e*P **P** **04 02 36.7 +0.5**
comp=Z,181nm,1.5s,mb6.2
MOX *e* pP 04 02 42.3 -1.4
MOX
comp=Z,7µm,21.0s
MOX Moxa 89.67 320 *e*P **P** **04 02 36.7 +0.5**
MOX *e* pP 04 02 42.3 -1.4
MOX pmax pmax
comp=Z,181nm,1.5s,mb6.2
MOX MLR MLR
comp=Z,7µm,21.0s,MS6.1
MOX Moxa 89.67 320 *e*P **P** **04 02 36.4 +0.2**
comp=Z,137nm,1.3s,mb6.1
MOX *e*S S 04 13 37.3 +11
NSS Namsos 89.82 334 *e*P **P** **04 02 40.6 +4.0**
NSS *e* 04 13 32.9
NSS LR LR
comp=Z,14µm,22.5s,MS6.3
NSS Namsos 89.82 334 *e*P **P** **04 02 39.2 +2.6**
NSS *e*SKSc 04 13 27.8
NSS AMS AMS 04 46 07.6
comp=Z,14µm,22.5s,MS6.3
FUR Furstenfeldbru 89.85 318 *e*S S 04 13 36.8 +8.7
SQTA Sankt Quirin 89.88 317 *i* P **P** **04 02 37.2 -0.1**
comp=Z,535nm,2.6s,mb6.4,SNR=8.7
SQTA Sankt Quirin 89.88 317 *i* PcP PcP 04 02 37.2 -1.4
comp=Z,535nm,2.6s,SNR=8.7
SQTA Sankt Quirin 89.88 317 *i* P **P** **04 02 37.2 -0.1**
SQTA pmax pmax
comp=Z,535nm,2.6s,mb6.4
FNVD Fontana Vidola 89.89 314 *i* Pu **P** **04 02 43.8 +6.4**
GRA1 Grafenberg Arr 89.91 320 *e*P **P** **04 02 38.0 +0.7**
comp=Z,224nm,1.3s,mb6.3
GRA1 *e*S S 04 13 40.5 +12
GRA1 LR LR

comp=Z,7µm,19.4s,MS6.1
GRF Grafenberg Arr 89.91 320 eP P **04 02 38.0 +0.7**
GRF pmax pmax
comp=Z,224nm,1.3s,mb6.3
GRF MLR MLR
comp=Z,7µm,19.4s,MS6.1
GRF Grafenberg Arr 89.91 320 eP P **04 02 38.0 +0.7**
GRF pmax pmax
comp=Z,224nm,1.3s,mb6.3
GRF MLR MLR
comp=Z,7µm,19.4s,MS6.1
GRF Grafenberg Arr 89.91 320 eP P **04 02 38.0 +0.7**
comp=Z,224nm,1.3s,mb6.3
GRF eS S 04 13 40.5 +12
GRF eL 04 48 11.7
comp=Z,7µm,19.4s
GRFO Grafenberg 89.91 320 eP P **04 02 38.3 +1.0**
comp=Z,143nm,1.1s,mb6.2
GRFO LR LR
comp=Z,7µm,19.0s,MS6.1
GRFO Grafenberg 89.91 320 eP P **04 02 38.3 +1.0**
GRFO pmax pmax
comp=Z,143nm,1.1s,mb6.2
GRFO MLR MLR
comp=Z,7µm,19.0s,MS6.1
MOTA Moosalm 89.95 317 ⇓ iP P **04 02 37.0 -0.6**
comp=Z,109nm,1.2s,mb6.0,SNR=18
MOTA Moosalm 89.95 317 ⇓ iP P **04 02 37.0 -0.6**
MOTA pmax pmax
comp=Z,109nm,1.2s,mb6.1
NB2 NORSAR Subarra 90.09 331 P P **04 02 36.9 -1.0**
comp=Z,47nm,1.4s,mb5.6,baz=91,slow=4.8
NB2 NORSAR Subarra 90.09 331 P P **04 02 36.9 -1.0**
NB2 pmax pmax
comp=Z,47nm,1.4s,mb5.6
NOA NORSAR Array B 90.09 331 P P **04 02 37.3 -0.7**
NOA PP PP 04 06 14.0 +2.8
NOA LR LR 04 50 52.9
NOA NORSAR Array B 90.09 331 P P **04 02 37.3 -0.6**
NOA 04 06 14.0
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA pmax pmax
comp=Z,3.0nm,0.9s
NOA NORSAR Array B 90.09 331 P P **04 02 37.3 -0.7**
comp=Z,1.2nm,0.8s,baz=135,slow=18,SNR=2.8
NOA PP PP 04 06 14.0 +2.8
comp=Z,3.0nm,0.9s,baz=96,slow=7.7,SNR=4.1
NOA LR LR 04 50 52.9
comp=Z,9µm,20.0s,MS6.2,baz=85,slow=41
RETA Reutte 90.18 317 ⇑ iP P **04 02 35.1 -3.6**
comp=Z,83nm,1.2s,mb5.9,SNR=9.2
FETA Feichten 90.20 317 ⇑ iP P **04 02 36.8 -2.0**
comp=Z,64nm,1.4s,mb5.8,SNR=9.3
KBS Kingsbay 90.23 349 e P **04 02 41.0 +2.7**
KBS eSKS 04 13 08.0
KBS eSS SS 04 19 32.9 +3.1
KBS AMS AMS 04 47 39.4
comp=Z,14µm,20.6s,MS6.4
NAO01 NORSAR Array S 90.25 331 PFAKE 04 02 50.0 +11
NAO01 LR LR
comp=Z,10µm,20.0s,MS6.3
MABI Malga Bissina 90.34 316 P P **04 02 44.0 +4.5**
VLC Villacollemand 90.42 314 eP P **04 02 41.7 +1.8**
comp=Z,66nm,1.1s,mb5.9
BRMO Bormio 90.44 316 P P **04 02 45.9 +6.0**
CLZ Clausthal 90.47 322 eP P **04 02 40.0 +0.1**
CLZ e*PP pP 04 02 45.2 -2.1
CLZ pmax pmax
comp=Z,131nm,1.3s,mb6.1
CLZ Clausthal 90.47 322 eP P **04 02 40.0 +0.1**
comp=Z,131nm,1.3s,mb6.1
CLZ epP pP 04 02 45.2 -2.1
CLZ eS S 04 13 44.1 +10
BSEG Bad Segeberg 90.51 324 eP P **04 02 39.9 -0.2**
comp=Z,104nm,1.2s,mb6.0
BSEG eS S 04 13 44.9 +11
UBBA Unterbreizbach 90.70 321 eP P **04 02 40.7 -0.3**
comp=Z,117nm,1.7s,mb5.9
UBBA eS S 04 13 45.1 +9.2
DAVA Damuels 90.78 317 ⇓ iP P **04 02 41.6 +0.1**
comp=Z,133nm,1.4s,mb6.1,SNR=11
DAVA Damuels 90.78 317 ⇓ iPcP PcP 04 02 41.6 -1.0
comp=Z,133nm,1.4s,SNR=11
KONO Kongsberg 90.89 329 e pP 04 02 49.4 +0.2
KONO Kongsberg 90.89 329 eP P **04 02 49.7 +8.0**
KONO MLR MLR
comp=Z,9µm,20.0s,MS6.2
TNA Tin City 91.15 25 PFAKE 04 02 50.0 +7.2
TNA LR LR
comp=Z,9µm,20.0s,MS6.2
MUD Monsted U'grnd 91.15 326 i P P **04 02 48.9 +5.9**
comp=Z,91nm,1.6s,mb5.8
MUD eS S 04 13 34.9 -4.9
MUD i 04 13 53.8
MUD i 04 15 35.4
MUD i 04 26 56.8
MUD Monsted U'grnd 91.15 326 i P P **04 02 48.9 +5.9**
MUD eS S 04 13 34.9 -4.9
MUD i 04 15 35.4
MUD pmax pmax
comp=Z,91nm,1.6s,mb5.8
MUD Monsted U'grnd 91.15 326 i P P **04 02 48.9 +5.9**
comp=Z,91nm,1.6s,mb5.8
MUD eS S 04 13 34.9 -4.9
MUD i 04 13 53.8
MUD i 04 15 35.4
MUD i 04 26 56.8
MUD
comp=Z,9µm,19.0s
VSL Villasalto 91.17 309 eP P **04 02 44.3 +0.8**
comp=Z,94nm,1.0s,mb6.1
KEST Kesra 91.22 306 P P **04 02 44.4 +0.6**
comp=Z,24nm,0.9s,mb5.5,baz=141,slow=2.3,SNR=20
KEST S S 04 13 38.9 -2.3
comp=Z,1.0nm,0.9s,baz=26,slow=21,SNR=2.1
KEST LR LR 04 44 31.1
comp=Z,5µm,21.1s,MS6.0,baz=38,slow=36
STU Stuttgart 91.23 319 eP P **04 02 43.0 -0.5**
STU eS S 04 13 51.2 +10
GUT Gutenstein 91.29 318 P P **04 02 44.4 +0.6**
TOD Tromm 91.48 319 eP P **04 02 49.9 +5.2**
SPAK Spaichingen-Ko 91.51 318 P P **04 02 47.8 +2.9**
TNS Taunus Mts 91.70 320 eP P **04 02 45.2 -0.5**
TNS e*PP pP 04 02 51.3 -1.8
TNS pmax pmax
comp=Z,120nm,1.2s,mb6.1
TNS Taunus Mts 91.70 320 eP P **04 02 45.2 -0.5**
comp=Z,120nm,1.2s,mb6.1
TNS epP pP 04 02 51.3 -1.8
TNS eS S 04 13 55.8 +11
BFO Black Forest 91.81 318 eP P **04 02 46.0 -0.2**
comp=Z,57nm,1.3s,mb5.7
BFO LR LR
comp=Z,7µm,22.0s,MS6.0
BFO Black Forest 91.81 318 eP P **04 02 46.1 -0.1**
BFO pmax pmax
comp=Z,57nm,1.3s,mb5.7
BFO MLR MLR
comp=Z,7µm,22.0s,MS6.0
BFO Black Forest 91.81 318 eS S 04 13 56.5 +10
HLG Helgoland 91.94 324 eS S 04 13 59.1 +12
FELD Feldberg im Sc 92.04 318 eP P **04 02 52.3 +5.0**
LANF Langenberg 92.15 319 eP P **04 02 53.6 +5.8**
UNV Unalaska Valle 92.22 36 PFAKE 04 03 00.0 +12
UNV LR LR
comp=Z,20µm,22.0s,MS6.5
IMI Imperia 92.22 314 P P **04 02 53.6 +5.4**
ABH Alteburg 92.29 320 eP P **04 02 54.0 +5.6**
BUG Bochum--Univer 92.41 321 eS S 04 14 02.4 +11
SAOF Saorge 92.46 314 eP pP 04 02 58.2 +1.4
BLS5 Blasjo 92.50 329 eP P **04 02 53.1 +4.0**
BLS5 Blasjo 92.50 329 eP P **04 02 53.0 +3.9**
CDF Champ du Feu 92.51 318 eP P **04 02 47.5 -2.0**
comp=Z,197nm,1.7s,mb6.0
CDF Champ du Feu 92.51 318 eP P **04 02 47.5 -2.0**
comp=Z,99nm,1.7s,mb6.0
CDF Champ du Feu 92.51 318 eP P **04 02 47.5 -2.0**
CDF pmax pmax
comp=Z,99nm,1.7s,mb6.0
SBF Sospel 92.55 314 eP P **04 02 47.9 -1.9**
comp=Z,115nm,1.0s,mb5.9
SBF Sospel 92.55 314 eP P **04 02 47.9 -1.9**
comp=Z,58nm,1.0s,mb6.0
SBF Sospel 92.55 314 eP P **04 02 47.9 -1.9**
SBF pmax pmax
comp=Z,58nm,1.0s,mb6.0
ECH Echery 92.60 318 eP P **04 02 54.7 +4.8**
RUP Ruppelstein 92.61 320 eP P **04 02 55.3 +5.4**
MOF Molkenrain 92.63 318 eP P **04 02 54.0 +4.0**
TOUF Mont Tournerai 92.68 314 eP P **04 02 55.6 +5.2**
ABSA Djebel Ababsia 92.72 306 P pP 04 02 57.5 -0.7
MVIF Mont Vial 92.76 314 eP P **04 02 56.6 +5.9**
CMAH Djebel Manchou 92.76 306 P pP 04 02 58.0 -0.3
CGMA Guelma 92.77 306 P pP 04 02 58.0 -0.4
HINF Hinteralfeld 92.82 318 eP P **04 02 48.5 -2.4**
CALN Calern 92.95 314 eP P **04 02 57.5 +5.9**
LPG La Plagne 92.98 315 eP P **04 02 50.2 -1.5**
comp=Z,77nm,1.1s,mb5.8
LPG La Plagne 92.98 315 eP P **04 02 50.2 -1.5**
comp=Z,38nm,1.1s,mb5.7
LPG La Plagne 92.98 315 eP P **04 02 50.2 -1.5**
LPG pmax pmax
comp=Z,38nm,1.1s,mb5.7
LPL La Plagne 93.00 315 eP P **04 02 50.2 -1.6**
comp=Z,116nm,1.1s,mb5.9
LPL La Plagne 93.00 315 eP P **04 02 50.2 -1.6**
comp=Z,58nm,1.1s,mb5.9
LPL La Plagne 93.00 315 eP P **04 02 50.2 -1.6**
LPL pmax pmax
comp=Z,58nm,1.1s,mb5.9
MBDF Montbardon 93.00 315 eP P **04 02 49.4 -2.4**
BER Bergen 93.00 330 eSKSc 04 13 58.9
BER AMS AMS 04 53 08.9
comp=Z,10µm,22.0s,MS6.2
BNI Bardonecchia 93.05 315 eP P **04 02 56.2 +4.2**
comp=Z,41nm,1.3s,mb5.7
BNI Bardonecchia 93.05 315 eP P **04 02 56.2 +4.2**
BNI pmax pmax
comp=Z,41nm,1.3s,mb5.7
FRF La Foret Royal 93.13 313 eP P **04 02 50.8 -1.7**
comp=Z,169nm,1.4s,mb6.0
FRF La Foret Royal 93.13 313 eP P **04 02 50.8 -1.7**
comp=Z,85nm,1.4s,mb6.0
FRF La Foret Royal 93.13 313 eP P **04 02 50.8 -1.7**
FRF pmax pmax
comp=Z,85nm,1.4s,mb6.0
HAU Haudompre 93.15 318 eP P **04 02 50.4 -2.0**
comp=Z,118nm,1.1s,mb5.9
HAU eMLR MLR
HAU Haudompre 93.15 318 eP P **04 02 50.4 -2.0**
comp=Z,59nm,1.1s,mb5.9
HAU LR LR
comp=Z,11µm,22.5s,MS6.2
HAU Haudompre 93.15 318 eP P **04 02 50.4 -2.0**
HAU pmax pmax
comp=Z,59nm,1.1s,mb5.9
HAU MLR MLR
comp=Z,11µm,22.5s,MS6.2
WLF Walferdange 93.20 320 P P **04 02 57.3 +4.7**
CAEH 'Ain El Ouahch 93.21 307 P pP 04 03 04.0 +3.6
MEM Membach 93.24 320 P P **04 02 59.9 +7.1**
LMR La Mourre 93.24 313 eP P **04 02 51.1 -1.9**
comp=Z,138nm,1.5s,mb5.8
LMR La Mourre 93.24 313 eP P **04 02 51.1 -1.9**
comp=Z,69nm,1.5s,mb5.9
LMR La Mourre 93.24 313 eP P **04 02 51.1 -1.9**
LMR pmax pmax
comp=Z,69nm,1.5s,mb5.9
CKFL Kef-Lekhel 93.33 306 P pP 04 03 04.0 +3.0
THEF They Montfort 93.38 318 eP P **04 02 56.8 +3.3**
CASM Ain Smara 93.52 306 P pP 04 03 04.0 +2.1
ORIF Oris-en-Rattie 93.62 315 eP P **04 02 53.0 -1.7**
comp=Z,107nm,1.4s,mb5.8
ORIF eMLR MLR
comp=Z,10µm,22.2s,MS5.9
ORIF Oris-en-Rattie 93.62 315 eP P **04 02 53.0 -1.7**
comp=Z,54nm,1.4s,mb5.8
ORIF Oris-en-Rattie 93.62 315 eP P **04 02 53.0 -1.7**
ORIF pmax pmax
comp=Z,54nm,1.4s,mb5.8
SNAA Sanae 93.68 198 ⇑ eP P **04 02 58.7 +4.3**
BCLA Clavier 93.70 320 P P **04 03 00.0 +5.1**
comp=Z,38nm,3.0s
SMRF Simiane la Rot 93.89 314 eP P **04 02 54.7 -1.2**
comp=Z,250nm,1.9s,mb6.0
SMRF Simiane la Rot 93.89 314 eP P **04 02 54.7 -1.2**
comp=Z,250nm,1.9s,mb6.3
MEZF Maizieres J'vi 93.99 318 eP P **04 02 54.5 -1.8**
DFRA Djebel Bou Aff 94.00 306 P pP 04 03 07.5 +3.4
GIVF Givet 94.03 320 eP P **04 02 54.5 -1.9**
DOU Dourbes 94.18 320 P P **04 03 06.2 +9.1**
BAIF Baives 94.43 320 eP P **04 02 56.6 -1.7**
comp=Z,89nm,1.3s,mb5.8
BAIF Baives 94.43 320 eP P **04 02 56.6 -1.7**
comp=Z,45nm,1.3s,mb5.7
BAIF Baives 94.43 320 eP P **04 02 56.6 -1.7**
BAIF pmax pmax
comp=Z,45nm,1.3s,mb5.7
VIVF Saint-Julien-l 94.48 315 eP P **04 02 56.7 -1.9**
comp=Z,106nm,1.5s,mb5.7
VIVF Saint-Julien-l 94.48 315 eP P **04 02 56.7 -1.9**
comp=Z,53nm,1.5s,mb5.8
VIVF Saint-Julien-l 94.48 315 eP P **04 02 56.7 -1.9**
VIVF pmax pmax
comp=Z,53nm,1.5s,mb5.8
LOR Lormes 94.88 317 eP P **04 02 58.3 -2.1**
comp=Z,100nm,1.3s,mb5.8
LOR eMLR MLR
comp=Z,5µm,21.2s,MS5.7
LOR Lormes 94.88 317 eP P **04 02 58.3 -2.1**
comp=Z,50nm,1.3s,mb5.8
LOR LR LR
comp=Z,5µm,21.3s,MS6.0
LOR Lormes 94.88 317 eP P **04 02 58.3 -2.1**
LOR pmax pmax
comp=Z,50nm,1.3s,mb5.8
LOR MLR MLR
comp=Z,5µm,21.3s,MS6.0
SMF Signal de Mont 94.94 317 eP P **04 02 58.6 -2.1**
comp=Z,147nm,1.4s,mb5.9
SMF Signal de Mont 94.94 317 eP P **04 02 58.6 -2.1**
comp=Z,74nm,1.4s,mb5.9
SMF Signal de Mont 94.94 317 eP P **04 02 58.6 -2.1**
SMF pmax pmax
comp=Z,74nm,1.4s,mb5.9
SSF Saint Saulge 95.14 317 eP P **04 02 59.8 -1.8**
comp=Z,71nm,1.4s,mb5.6
SSF Saint Saulge 95.14 317 eP P **04 02 59.8 -1.8**
comp=Z,36nm,1.4s,mb5.6
SSF Saint Saulge 95.14 317 eP P **04 02 59.8 -1.8**
SSF pmax pmax
comp=Z,36nm,1.4s,mb5.6
PLDF La Plantade 95.14 316 eP P **04 03 05.9 +4.3**
AVF Avril sur Loir 95.26 317 eP P **04 03 00.2 -2.0**
comp=Z,92nm,1.4s,mb5.7
AVF Avril sur Loir 95.26 317 eP P **04 03 00.2 -2.0**
comp=Z,46nm,1.4s,mb5.7
AVF Avril sur Loir 95.26 317 eP P **04 03 00.2 -2.0**
AVF pmax pmax
comp=Z,46nm,1.4s,mb5.7
VNA2 Neumayer--Watz 95.29 198 eP P **04 03 08.1 +6.3**
baz=73,slow=3.8
VNA2 e 04 03 11.5
VNA2 e pP 04 03 14.9 +5.7
VNA2 e 04 03 18.1
VNA2 e 04 03 22.4
VNA2 e 04 03 25.3
BGF Bois d'Agland 95.63 317 eP P **04 03 02.0 -1.8**
comp=Z,148nm,1.5s,mb5.9
BGF Bois d'Agland 95.63 317 eP P **04 03 02.0 -1.8**
comp=Z,74nm,1.5s,mb5.9
BGF Bois d'Agland 95.63 317 eP P **04 03 02.0 -1.8**
BGF pmax pmax
comp=Z,74nm,1.5s,mb5.9
VNA1 Neumayer--Stat 95.65 198 eP P **04 03 09.0 +5.6**
VNA1 e 04 03 11.3
VNA1 e pP 04 03 15.5 +4.6
VNA1 e 04 03 18.4
VNA1 e 04 03 23.0
HYF Humbligny 95.70 317 eP P **04 03 02.6 -1.6**
VNA3 Neumayer Olymp 95.89 198 eP P **04 03 10.5 +6.0**
VNA3 e 04 03 12.8
VNA3 e pP 04 03 17.8 +5.8
VNA3 e 04 03 21.7
VNA3 e 04 03 23.8
VNA3 e 04 03 26.1
VNA3 e 04 03 28.8
TCF Toulx Ste Croi 96.09 316 eP P **04 03 04.0 -2.0**
comp=Z,64nm,1.5s,mb5.5
TCF Toulx Ste Croi 96.09 316 eP P **04 03 04.0 -2.0**
comp=Z,32nm,1.5s,mb5.5
TCF Toulx Ste Croi 96.09 316 eP P **04 03 04.0 -2.0**
TCF pmax pmax
comp=Z,32nm,1.5s,mb5.5
CAF Calviac 96.33 315 eP P **04 03 05.6 -1.5**
JMIC Jan Mayen 96.62 342 AMS AMS 04 49 22.4
comp=Z,8µm,22.3s,MS6.2
JMIC Jan Mayen 96.62 342 LR LR 04 54 07.0
comp=Z,9µm,21.1s,MS6.2,baz=89,slow=40
IMA2 Indian Mountai 96.88 23 eP P **04 03 08.4 -0.6**
DAG Danmarks Havn 96.95 348 ⇓ eP P **04 03 06.3 -2.9**
DAG e 04 07 06.0
DAG pmax pmax
comp=Z,3.0nm,0.6s,mb4.9
DAG MLR MLR
comp=Z,23µm,23.0s,MS6.6
DAG Danmarks Havn 96.95 348 ⇓ iP P **04 03 06.3 -2.9**
comp=Z,2.7nm,0.6s
DAG e 04 07 06.0
DAG
comp=Z,23µm,23.0s
ESK Eskdalemuir 98.20 326 PFAKE 04 03 30.0 +15
ESK LR LR
comp=Z,12µm,22.0s,MS6.3
TORD Torodi Ar. Bea 98.66 283 P P **04 03 18.6 +0.4**
TORD PP PP 04 07 20.0 +0.6
TORD Torodi Ar. Bea 98.66 283 P P **04 03 18.6 +0.4**
comp=Z,4.9nm,0.9s,mb5.0,baz=84,slow=3.6,SNR=9.0
TORD PP PP 04 07 20.0 +0.6
comp=Z,1.4nm,0.8s,baz=125,slow=9.0,SNR=3.9
TORD PKiKP PKiKP 04 07 47.5 -2.5
comp=Z,1.0nm,0.7s,baz=83,slow=3.6,SNR=3.0
TORD LR LR 04 47 24.0
comp=Z,8µm,21.2s,MS6.2,baz=105,slow=35
SJPF Ste Jean 98.89 313 eP P **04 03 15.9 -2.8**
KDAK Kodiak Island 99.43 31 PFAKE 04 03 30.0 +9.3
KDAK LR LR
comp=Z,4µm,21.0s,MS5.9
MCK McKinley 99.48 25 eP P **04 03 17.9 -2.9**
comp=Z,20nm,1.1s,mb5.6
MCK LR LR
comp=Z,9µm,20.0s,MS6.2
MCK McKinley 99.48 25 eP P **04 03 17.9 -2.9**
MCK pmax pmax
comp=Z,20nm,1.1s,mb5.6
MCK MLR MLR
comp=Z,9µm,20.0s,MS6.2
COLA College 99.56 24 PFAKE 04 03 30.0 +8.9
COLA LR LR
comp=Z,13µm,19.0s,MS6.5
COLA College 99.56 24 i P P **04 03 19.2 -1.9**
PMR Palmer 100.06 27 PFAKE 04 03 30.0 +6.4
PMR LR LR
comp=Z,11µm,20.0s,MS6.3
KIP Kipapa 100.92 68 PFAKE 04 03 40.0 +13
KIP LR LR
comp=Z,7µm,22.0s,MS6.1
ESDC Sonseca Array 101.43 310 PP PP 04 07 40.5 +0.8
comp=Z,1.4nm,0.8s,baz=48,slow=6.3,SNR=3.6
ESLA Sonseca Array 101.43 310 PFAKE 04 03 40.0 +10
ESLA LR LR
comp=Z,22µm,20.0s,MS6.7
PAB San Pablo 101.74 310 PFAKE 04 03 40.0 +9.0
PAB LR LR
comp=Z,5µm,20.0s,MS6.1
EGAK Eagle 102.23 23 PFAKE 04 03 40.0 +6.8
EGAK LR LR
comp=Z,18µm,20.0s,MS6.6
MDT Midelt 102.94 303 PP PP 04 07 53.5 +2.2
comp=Z,6.7nm,1.1s,baz=96,slow=11,SNR=6.5
INK Inuvik 103.13 18 ePdif Pdif 04 03 35.6 -1.6
comp=Z,219nm,1.0s
INK Inuvik 103.13 18 eP Pdif 04 03 35.6 -1.6
INK pmax pmax
comp=Z,219nm,1.0s
POHA Pohakuloa 103.35 70 PFAKE 04 03 50.0 +12
POHA LR LR
comp=Z,7µm,22.0s,MS6.1
MVO Moncorvo 103.47 312 eSKS 04 14 39.5
MVO eSS 04 23 37.5
MVO Moncorvo 103.47 312 eLQ 04 34 13.6
MVO eLR LR 04 40 46.1
comp=Z,5µm,22.7s
BORG Borgarnes 103.55 338 PFAKE 04 03 50.0 +11
BORG LR LR
comp=Z,12µm,21.0s,MS6.4
MTE Manteigas 104.00 312 eSKS 04 15 03.5
MTE eSS 04 23 41.7
MTE Manteigas 104.00 312 eLQ 04 34 51.4
MTE eLR LR 04 40 42.8
comp=Z,4µm,19.9s
PBAR Barrancos 104.04 309 eSKS 04 15 10.8
PBAR eSS SS 04 23 05.0 +18
PBAR Barrancos 104.04 309 eLR LR 04 41 05.5
comp=Z,6µm,19.4s
PESTR Estremoz 104.34 310 eSKS 04 15 11.6
PESTR eSS 04 23 45.5
PESTR Estremoz 104.34 310 eLR LR 04 41 44.8
comp=Z,5µm,21.6s
PVAQ Vaqueiros 104.72 309 eSKS 04 15 14.0
PVAQ eSS SS 04 22 56.9 +1.1
PVAQ Vaqueiros 104.72 309 eLR LR 04 41 04.8
comp=Z,7µm,22.1s
PBDV Barranco-do-Ve 104.91 308 eSKS 04 15 14.5
PBDV eSS 04 23 37.0
PBDV Barranco-do-Ve 104.91 308 eLQ 04 36 48.3
PBDV eLR LR 04 41 12.2
comp=Z,6µm,21.1s
MORF Marmelete 105.46 309 eSS 04 23 47.0
MORF Marmelete 105.46 309 eLR LR 04 42 41.4
comp=Z,6µm,20.5s
PMAFR Mafra 105.61 310 eSKS SKSdf 04 15 18.1 +5.5
PMAFR eSS 04 24 02.3
PMAFR Mafra 105.61 310 eLQ 04 34 47.8
PMAFR eLR LR 04 40 44.2
comp=Z,5µm,19.6s
PFVI Vila Bisbo 105.64 308 eSKS SKSdf 04 15 17.1 +4.4
PFVI eSS SS 04 23 46.5 +38
PFVI Vila Bisbo 105.64 308 eLQ 04 37 07.6
PFVI eLR LR 04 41 31.5
comp=Z,5µm,23.3s
TRIS Tristan da Cun 107.71 231 PFAKE 04 08 20.0 +14
TRIS LR LR
comp=Z,4µm,20.0s,MS6.0
TBI Tubuai 108.17 115 eLQ 04 35 06.3
comp=Z,23µm,39.0s
TBI Tubuai 108.17 115 ePP PP 04 08 17.8 -12
comp=Z,585nm,30.2s
TBI Tubuai 108.17 115 eSKSac SKSac 04 14 33.3 -6.3
comp=Z,1µm,27.2s
TBI eLR LR 04 40 22.3
comp=Z,34µm,24.2s
TBI Tubuai 108.17 115 ePP PP 04 08 17.8 -12
TBI eSKSac SKSac 04 14 33.3 -6.3
TBI eLQ 04 35 06.3
SIT Sitka 108.35 28 PFAKE 04 08 20.0 +14
SIT LR LR
comp=Z,15µm,21.0s,MS6.5
PPT Papeete 108.84 109 eLQ 04 35 31.1
comp=Z,14µm,28.2s
PPT Papeete 108.84 109 ePP PP 04 08 30.7 -4.6
comp=Z,774nm,28.2s
PPT Papeete 108.84 109 eSKSac SKSac 04 14 35.5 -7.2
comp=Z,1µm,25.8s
PPT eSS SS 04 23 49.6 -3.3
comp=Z,5µm,30.8s
PPT eLR LR 04 40 40.3
comp=Z,23µm,23.8s
PPT Papeete 108.84 109 ePP PP 04 08 30.7 -4.6
PPT eSKSac SKSac 04 14 35.5 -7.2
PPT eSS SS 04 23 49.6 -3.3
PPT eLQ 04 35 31.1
WRAK Wrangell Islan 110.09 28 PFAKE 04 08 20.0 +10
WRAK LR LR
comp=Z,10µm,21.0s,MS6.4
SFJD Kangerlussuaq 110.64 348 PFAKE 04 08 20.0 +10
SFJD LR LR
comp=Z,13µm,19.0s,MS6.5
SFJD Kangerlussuaq 110.64 348 i P PP 04 08 47.6 +1.2
SFJD i 04 24 15.8
SFJD
comp=Z,11µm,18.0s
YKA Yellowknife Ar 112.84 17 Pdif Pdif 04 04 21.9 +1.6

YKA PKPdf PKiKP 04 08 13.8 -0.9
YKA PP PP 04 09 02.0 -0.2
YKA PKKPbc PKKPbc 04 19 04.3 -0.5
YKA Yellowknife Ar 112.84 17 *i* PKIKP PKiKP 04 08 13.8 -1.0
YKA 04 09 02.0
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 112.84 17 Pdiff Pdif 04 04 21.9 +1.6
comp=Z,0.2nm,0.8s,baz=333,slow=5.1,SNR=3.1
YKA PKiKP PKiKP 04 08 13.8 -0.9
comp=Z,2.3nm,0.9s,baz=317,slow=2.1,SNR=7.0
YKA PP PP 04 09 02.0 -0.2
comp=Z,1.2nm,0.8s,baz=302,slow=1.9,SNR=5.3
YKA PKKPbc PKKPbc 04 19 04.3 -0.5
comp=Z,1.2nm,0.6s,baz=135,slow=3.1,SNR=17
PMSA Palmer Station 113.87 187 PFAKE 04 08 30.0 +13
PMSA LR LR
comp=Z,10μm,20.0s,MS6.4
ASCN Ascension 114.50 261 PFAKE 04 08 30.0 +11
ASCN LR LR
comp=Z,5μm,21.0s,MS6.1
TAOE Nuku Hiva Isla 118.92 100 *e*LQ 04 39 38.4
comp=Z,21μm,40.2s
TAOE Nuku Hiva Isla 118.92 100 *e*PP PP 04 09 42.3 -4.7
comp=Z,1μm,27.2s
TAOE Nuku Hiva Isla 118.92 100 *e*PS PS 04 19 29.4 -5.8
comp=Z,8μm,26.2s
TAOE Nuku Hiva Isla 118.92 100 *e*SS SS 04 25 57.2 -9.2
comp=Z,12μm,32.2s
TAOE *e*LR LR 04 44 38.2
comp=Z,38μm,24.9s
NLWA Neilton Lookou 119.52 33 PFAKE 04 08 40.0 +12
NLWA LR LR
comp=Z,8μm,19.0s,MS6.3
B05A Bryant 119.93 31 ⇓P PKPdf 04 08 35.3 +6.5
baz=120,SNR=8.4
E03A Lebam 120.19 34 ⇓P PKPdf 04 08 35.7 +6.3
baz=120,SNR=6.2
A07A Ashnola River, 120.30 30 ⇑P PKPdf 04 08 35.5 +5.9
baz=120,SNR=8.8
EDM Edmonton 120.46 23 *e*PKPdf PKPdf 04 08 28.6 -1.1
C05A Tolt Reservoir 120.50 32 ⇑P PKPdf 04 08 36.0 +6.1
baz=120,SNR=5.8
FCC Fort Churchill 120.81 9 *e*PKPdf PKPdf 04 08 28.7 -1.5
B07A Winthrop 120.82 30 ⇓P PKPdf 04 08 36.4 +5.9
baz=121,SNR=7.5
A08A Turner Farm, O 120.91 29 ⇓P PKPdf 04 08 36.7 +6.0
baz=121,SNR=6.8
E05A Randle 121.17 33 P PKPdf 04 08 37.5 +6.3
baz=121,SNR=5.4
F04A Amboy 121.19 34 ⇓P PKPdf 04 08 37.4 +6.1
baz=121,SNR=8.3
A09A Danville 121.23 29 ⇑P PKPdf 04 08 37.4 +6.1
baz=121,SNR=6.8
RKT Rikitea 121.24 118 *e*LQ 04 40 40.3
comp=Z,20μm,37.2s
RKT Rikitea 121.24 118 *e*PP PP 04 09 50.5 -12
comp=Z,463nm,30.2s
RKT Rikitea 121.24 118 *e*PS PS 04 19 48.3 -7.3
comp=Z,2μm,29.8s
RKT Rikitea 121.24 118 *e*SS SS 04 26 29.6 -6.0
RKT comp=Z,7μm,35.5s
*e*LR LR 04 46 27.8
comp=Z,25μm,28.2s
B08A Colville Reser 121.28 30 ⇑P PKPdf 04 08 37.2 +5.8
baz=121,SNR=9.0
C07A Waterville 121.35 31 ⇓P PKPdf 04 08 37.6 +6.1
baz=121,SNR=9.7
H03A Soap Creek Ran 121.45 35 ⇓P PKPdf 04 08 38.3 +6.4
baz=121,SNR=7.6
COR Corvallis 121.49 35 PFAKE 04 08 40.0 +8.1
COR LR LR
comp=Z,5μm,19.0s,MS6.2
G04A Mulino 121.60 34 P PKPdf 04 08 38.5 +6.4
baz=121,SNR=5.5
E06A Yakima 121.60 32 ⇓P PKPdf 04 08 38.2 +6.1
baz=121,SNR=7.2
D07A Quincy 121.72 31 P PKPdf 04 08 38.5 +6.2
baz=122,SNR=6.9
A10A Northport 121.72 28 ⇓P PKPdf 04 08 38.4 +6.2
baz=122,SNR=6.8
C08A Higginbotham F 121.81 30 P PKPdf 04 08 38.4 +6.0
baz=122,SNR=7.4
EPH Ephrata 121.81 31 P PKPdf 04 08 38.4 +5.9
B09A Rice 121.82 29 ⇓P PKPdf 04 08 38.7 +6.2
baz=122,SNR=12
I03A Eugene 121.86 36 ⇑P PKPdf 04 08 39.0 +6.3
baz=122,SNR=6.7
H04A Detroit Lake 122.08 35 ⇓P PKPdf 04 08 39.1 +6.1
baz=122,SNR=7.3
BROR Big Rock Looko 122.17 35 P PKPdf 04 08 39.3 +6.1
C09A Chrisman Ranch 122.18 30 ⇑P PKPdf 04 08 39.3 +6.1
baz=122,SNR=5.5
E07A Sunnyside 122.19 32 ⇑P PKPdf 04 08 39.3 +6.1
baz=122,SNR=6.0
F06A Goldendale 122.20 33 ⇑P PKPdf 04 08 39.0 +5.7
baz=122,SNR=8.2
A11A Hall Mountain, 122.31 28 ⇑P PKPdf 04 08 39.6 +6.3
baz=122,SNR=9.8
D08A Wollman Farm, 122.35 31 ⇑P PKPdf 04 08 39.8 +6.3
baz=122,SNR=9.1
GBL Gable Mountain 122.37 32 P PKPdf 04 08 40.9 +7.3
J03A Ideyld Park 122.40 36 ⇑P PKPdf 04 08 40.4 +6.7
baz=122,SNR=8.4
NEW Newport 122.43 29 *e*PKPdf PKPdf 04 08 32.9 -0.7
NEW LR LR
comp=Z,9μm,20.0s,MS6.4
HAWA Hanford 122.47 32 *e*PKPdf PKPdf 04 08 33.5 -0.3
HAWA LR LR
comp=Z,7μm,20.0s,MS6.3
I04A Tendick Farm, 122.48 36 P PKPdf 04 08 39.9 +6.1
baz=122,SNR=11
F07A Phinny Hill Vi 122.58 32 ⇓P PKPdf 04 08 40.8 +6.8
baz=122,SNR=5.7
G06A Carlson Farm, 122.61 33 ⇓P PKPdf 04 08 40.6 +6.5
baz=122,SNR=9.2
H05A Madras 122.64 34 P PKPdf 04 08 41.0 +6.8
baz=122,SNR=5.9
E08A Dider Farm, El 122.65 31 ⇓P PKPdf 04 08 40.7 +6.6
baz=122,SNR=8.9
A12A Yaak River Ran 122.65 27 ⇑P PKPdf 04 08 40.5 +6.4
baz=122,SNR=9.5
D09A Jones Farm, Ri 122.66 31 ⇓P PKPdf 04 08 40.1 +6.0
baz=122,SNR=11
B11A Sandpoint 122.67 28 ⇓P PKPdf 04 08 40.3 +6.2
baz=122,SNR=6.8
L02A Cave Junction 122.71 38 ⇓P PKPdf 04 08 41.0 +6.7
baz=123,SNR=7.4
FFC Flin Flon 122.93 15 *e*PKPdf PKPdf 04 08 32.4 -2.0
FFC LR LR
comp=Z,9μm,22.0s,MS6.4
J04A Umpqua Nationa 122.98 36 ⇓P PKPdf 04 08 41.5 +6.6
baz=123,SNR=14
KTRM Thompson Ridge 122.99 38 P PKPdf 04 08 42.0 +7.1
H06A Lindquist Farm 123.09 34 ⇓P PKPdf 04 08 41.4 +6.4
baz=123,SNR=12
E09A Wood Farm, Sta 123.11 31 ⇓P PKPdf 04 08 41.1 +6.1
baz=123,SNR=8.0
G07A Ruggs Ranch, H 123.12 33 ⇓P PKPdf 04 08 41.3 +6.2
baz=123,SNR=5.5
D10A Wagner Farm, O 123.19 30 ⇓P PKPdf 04 08 41.1 +6.0
baz=123,SNR=11
J05A Fort Rock 123.47 36 ⇑P PKPdf 04 08 42.6 +6.8
baz=123,SNR=12
G08A Pilot Rock 123.49 33 P PKPdf 04 08 42.3 +6.6
baz=123,SNR=8.8
YBH Yreka Blue Hor 123.50 38 *e*PKPdf PKPdf 04 08 41.1 +5.2
YBH LR LR
comp=Z,6μm,22.0s,MS6.2
YBH Yreka Blue Hor 123.50 38 P PKPdf 04 08 42.2 +6.4
baz=123,SNR=7.5
B13A Whitefish 123.60 27 ⇓P PKPdf 04 08 41.8 +5.9
baz=123,SNR=13
N02C Big Bar 123.64 39 ⇑P PKPdf 04 08 42.7 +6.5
baz=124,SNR=5.6
I06A Prineville 123.65 34 ⇓P PKPdf 04 08 43.1 +7.0
baz=124,SNR=9.0
E10A Myers Farm, Un 123.66 30 ⇓P PKPdf 04 08 42.2 +6.2
baz=124,SNR=7.7
L04A Klamath Falls 123.74 37 ⇓P PKPdf 04 08 42.8 +6.5
baz=124,SNR=8.8
F09A S2 Ranch, Elgi 123.77 32 ⇓P PKPdf 04 08 42.4 +6.1
baz=124,SNR=11
F10A Beach Ranch, E 123.94 31 ⇓P PKPdf 04 08 42.8 +6.2
baz=124,SNR=12
I07A Izee 123.96 34 ⇑P PKPdf 04 08 43.1 +6.4
baz=124,SNR=12
M04C Macdoel 124.00 37 ⇓P PKPdf 04 08 43.4 +6.6
baz=124,SNR=12
K05A Summer Lake 124.00 36 ⇑P PKPdf 04 08 43.6 +6.8
baz=124,SNR=12
C13A Hot Springs 124.06 28 P PKPdf 04 08 43.5 +6.8
baz=124,SNR=7.2
KIPM Iron Peak 124.08 40 *e*PKPdf PKPdf 04 08 37.6 +0.5
KCPM Cahto Peak 124.09 40 *e*PKPdf PKPdf 04 08 41.4 +4.3
J06A Christmas Vall 124.11 35 ⇓P PKPdf 04 08 43.8 +6.8
baz=124,SNR=9.5
H08A Prairie City 124.14 33 ⇑P PKPdf 04 08 43.7 +6.6
baz=124,SNR=8.3
E11A Bogner Ranch, 124.20 30 ⇑P PKPdf 04 08 42.8 +5.7
baz=124,SNR=9.7
WDC Whiskeytown Da 124.26 39 *e*PKPdf PKPdf 04 08 35.9 -1.5
WDC LR LR
comp=Z,7μm,20.0s,MS6.3
WDC Whiskeytown Da 124.26 39 P PKPdf 04 08 43.5 +6.1
baz=124,SNR=8.7
O02C Red Bluff 124.33 39 ⇑P PKPdf 04 08 44.3 +6.8
baz=124,SNR=12
K06A Valley Falls 124.33 36 ⇓P PKPdf 04 08 43.9 +6.4
baz=124,SNR=9.9
P01C Double 8 Ranch 124.36 40 P PKPdf 04 08 44.4 +6.8
baz=124,SNR=11
L05A Lakeview 124.45 37 ⇑P PKPdf 04 08 44.6 +6.9
baz=124,SNR=8.8
J07A Hines 124.52 34 ⇑P PKPdf 04 08 44.7 +6.9
baz=124,SNR=9.0
D13A Huson 124.53 28 P PKPdf 04 08 44.4 +6.7
baz=124,SNR=7.0
F11A Grangeville 124.55 30 ⇓P PKPdf 04 08 43.1 +5.3
baz=124,SNR=9.0
I08A Drewsey 124.59 34 ⇓P PKPdf 04 08 44.6 +6.7
baz=124,SNR=12
BMO Blue Mountains 124.66 32 *e*PKPdf PKPdf 04 08 39.5 +1.5
BMO LR LR
comp=Z,7μm,20.0s,MS6.3
GASB Alder Springs 124.66 40 ⇑P PKPdf 04 08 45.1 +6.9
baz=124,SNR=13
HATC Hat Creek Radi 124.79 38 P PKPdf 04 08 45.2 +6.8
baz=125,SNR=8.1
HOPS Hopland 124.79 41 *e*PKPdf PKPdf 04 08 37.3 -1.1
HOPS LR LR
comp=Z,6μm,20.0s,MS6.2
HOPS Hopland 124.79 41 ⇓P PKPdf 04 08 45.3 +6.8
baz=125,SNR=6.7
MOD Modoc 124.85 36 *e*PKPdf PKPdf 04 08 38.1 -0.3
MOD LR LR
comp=Z,8μm,21.0s,MS6.3
MOD Modoc 124.85 36 ⇑P PKPdf 04 08 44.9 +6.5
baz=125,SNR=13
SCHQ Schefferville 124.88 351 PKP PKPdf 04 08 37.0 -1.1
SCHQ LR LR
comp=Z,11μm,19.0s,MS6.5
SCHQ Schefferville 124.88 351 PKP PKPdf 04 08 37.0 -1.1
comp=Z,5.8nm,0.8s,baz=24,slow=4.7,SNR=5.9
PTCN Pitcairn Islan 124.91 121 PFAKE 04 08 50.0 +11
PTCN LR LR
comp=Z,15μm,21.0s,MS6.7
EFI East Falkland 124.91 196 PFAKE 04 08 50.0 +12
EFI LR LR
comp=Z,9μm,19.0s,MS6.5
MSO Missoula 124.97 28 *e*PKPdf PKPdf 04 08 37.2 -1.4
MSO LR LR
comp=Z,6μm,19.0s,MS6.3
K07A Rock Creek Ran 124.98 35 ⇑P PKPdf 04 08 45.7 +7.0
baz=125,SNR=13
D14A Greenough 124.99 28 ⇓P PKPdf 04 08 44.7 +6.1
baz=125,SNR=9.2
J08A Circle Bar Ran 125.00 34 ⇑P PKPdf 04 08 45.4 +6.7
baz=125,SNR=14
I09A Lost Marbles R 125.00 33 P PKPdf 04 08 45.2 +6.5
baz=125,SNR=6.5
F12A Elk City 125.09 30 ⇑P PKPdf 04 08 45.1 +6.3
baz=125,SNR=8.9
H10A Noah's Angus R 125.13 32 ⇓P PKPdf 04 08 44.6 +5.7
baz=125,SNR=14
E13A Victor 125.13 29 ⇓P PKPdf 04 08 44.6 +5.8
baz=125,SNR=14
M06C Likely Place G 125.17 37 ⇓P PKPdf 04 08 45.5 +6.4
baz=125,SNR=8.5
CHMT Chamberlain Mo 125.23 28 *e*PKPdf PKPdf 04 08 37.8 -1.2
MNRC McLaughlin Nat 125.27 41 ⇑P PKPdf 04 08 46.4 +7.0
baz=125,SNR=16
O04C Chester 125.31 38 ⇓P PKPdf 04 08 46.0 +6.6
baz=125,SNR=11
L07A Adell 125.35 36 ⇓P PKPdf 04 08 46.7 +7.2
baz=125,SNR=10
NSHM Saint Helena R 125.36 41 *e*PKPdf PKPdf 04 08 38.9 -0.6
ELFS Eagle Lake Fie 125.36 38 ⇑P PKPdf 04 08 46.3 +6.9
baz=125,SNR=8.5
MCCM Marconi Confer 125.38 42 PFAKE 04 08 50.0 +10
MCCM LR LR
comp=Z,5μm,20.0s,MS6.2
K08A Mann Creek Ran 125.39 35 P PKPdf 04 08 46.7 +7.2
baz=125,SNR=12
J09A Fry Pan Ranch, 125.41 34 ⇓P PKPdf 04 08 46.3 +6.8
baz=125,SNR=13
H11A Donnelly 125.44 31 ⇓P PKPdf 04 08 46.0 +6.5
baz=125,SNR=12
D15A Lincoln 125.47 27 ⇑P PKPdf 04 08 45.5 +6.0
baz=125,SNR=10
E14A Clinton 125.48 28 ⇑P PKPdf 04 08 45.6 +6.0
baz=125,SNR=11
ORV Oroville 125.50 39 P PKPdf 04 08 45.9 +6.1
baz=125,SNR=8.0
WVOR Wild Horse Val 125.50 35 *e*PKPdf PKPdf 04 08 39.3 -0.4
WVOR LR LR
comp=Z,6μm,21.0s,MS6.3
F13A Darby 125.53 29 ⇓P PKPdf 04 08 46.4 +6.7
baz=125,SNR=8.2
CVS Carmenet Viney 125.55 41 ⇓P PKPdf 04 08 46.5 +6.5
baz=125,SNR=11
OHCM Honcut 125.63 40 *e*PKPdf PKPdf 04 08 39.5 -0.5
L08A Fields 125.82 35 ⇓P PKPdf 04 08 47.5 +7.2
baz=126,SNR=13
N06A Buffalo Meadow 125.83 37 ⇓P PKPdf 04 08 47.1 +6.8
baz=126,SNR=13
M07A Soldier Meadow 125.84 36 P PKPdf 04 08 47.6 +7.2
baz=126,SNR=11
K09A Rome 125.84 34 ⇑P PKPdf 04 08 47.4 +7.1
baz=126,SNR=15
E15A Deer Lodge 125.88 28 ⇓P PKPdf 04 08 46.1 +5.8
baz=126,SNR=6.5
J10A Berg Farm, Mel 125.89 33 ⇓P PKPdf 04 08 47.0 +6.6
baz=126,SNR=8.1
EGMT Eagleton 125.93 25 *e*PKPdf PKPdf 04 08 39.8 -0.6
EGMT LR LR
comp=Z,9μm,20.0s,MS6.5
EGMT Eagleton 125.93 25 ⇓P PKPdf 04 08 46.8 +6.5
baz=126,SNR=9.1
G13A Cobalt 126.07 30 ⇓P PKPdf 04 08 47.7 +6.9
baz=126,SNR=8.6
H12A Diamond D Ranc 126.14 31 P PKPdf 04 08 47.5 +6.6
baz=126,SNR=12
O06A Flanigan 126.18 38 ⇓P PKPdf 04 08 47.8 +6.7
baz=126,SNR=10
P05C Yuba Gap, Truc 126.20 39 P PKPdf 04 08 47.9 +6.8
baz=126,SNR=9.6
M08A Happy Creek Ra 126.27 36 ⇑P PKPdf 04 08 48.3 +7.1
baz=126,SNR=11
K10A MacKenzie Ranc 126.27 34 ⇓P PKPdf 04 08 48.0 +6.9
L09A Wilkinson Ranc 126.31 35 ⇓P PKPdf 04 08 48.6 +7.3
baz=126,SNR=10
N07B Gerlach 126.33 37 ⇑P PKPdf 04 08 48.4 +7.1
baz=126,SNR=7.3
G14A Jackson 126.35 29 ⇑P PKPdf 04 08 47.8 +6.6
baz=126,SNR=8.7
F15A Butte 126.38 28 P PKPdf 04 08 48.7 +7.4
baz=126,SNR=6.5
MFID Camas Ranch 126.41 32 ⇑P PKPdf 04 08 48.2 +6.8
baz=126,SNR=12
H13A Challis 126.44 30 ⇑P PKPdf 04 08 47.6 +6.2
baz=126,SNR=17
LAVA Lava Cap Winer 126.44 40 P PKPdf 04 08 48.1 +6.5
baz=126,SNR=11
DLMT Dillon 126.68 29 *e*PKPdf PKPdf 04 08 41.1 -0.8
PAHR Pah Rah Range 126.73 38 *e*PKPdf PKPdf 04 08 41.9 -0.2
K11A Parker Ranch, 126.73 33 ⇓P PKPdf 04 08 48.8 +6.8
baz=127,SNR=8.7
WCN Washoe City 126.74 39 P PKPdf 04 08 49.3 +7.1
baz=127,SNR=8.8
S04C Ingram Canyon, 126.76 41 ⇓P PKPdf 04 08 49.1 +6.8
baz=127,SNR=5.9
O07A Toulon 126.77 37 P PKPdf 04 08 49.2 +7.0
baz=127,SNR=10
M09A Marrel Ranch, 126.82 35 ⇑P PKPdf 04 08 49.5 +7.2
baz=127,SNR=7.8
N08A GE Springer Mi 126.83 36 P PKPdf 04 08 49.7 +7.4
baz=127,SNR=12
G15A Dillon 126.87 29 ⇑P PKPdf 04 08 49.0 +6.8
baz=127,SNR=8.1
R05C Kirkwood Meado 126.89 39 P PKPdf 04 08 49.5 +7.0
baz=127,SNR=13
J12A Stokes Ranch, 126.91 32 ⇓P PKPdf 04 08 49.4 +7.1
baz=127,SNR=11
BOZ Bozeman (W) 126.92 28 *e*PKPdf PKPdf 04 08 42.1 -0.2
BOZ LR LR
comp=Z,10μm,21.0s,MS6.5
BOZ Bozeman (W) 126.92 28 ⇓P PKPdf 04 08 49.1 +6.8
baz=127,SNR=11
MCMT McKenzie Canyo 126.95 29 *e*PKPdf PKPdf 04 08 42.9 +0.5
MCMT *e* 04 08 49.1
L10A Juniper Basin 126.95 34 ⇑P PKPdf 04 08 49.9 +7.4
baz=127,SNR=12
I13A Wildhorse Cree 126.96 31 ⇓P PKPdf 04 08 49.4 +7.0
baz=127,SNR=9.1
HLID Hailey 127.06 31 *e*PKPdf PKPdf 04 08 42.9 +0.3
HLID LR LR
comp=Z,10μm,22.0s,MS6.4
HLID Hailey 127.06 31 ⇑P PKPdf 04 08 49.8 +7.2
baz=127,SNR=11
PACP Pacheco Peak 127.06 42 ⇓P PKPdf 04 08 49.9 +7.1
baz=127,SNR=8.6
CMB Columbia Colle 127.08 40 *e*PKPdf PKPdf 04 08 40.9 -2.0
CMB LR LR
comp=Z,6μm,21.0s,MS6.2
CMB Columbia Colle 127.08 40 ⇓P PKPdf 04 08 49.3 +6.5
baz=127,SNR=9.7
SAO San Andreas Ge 127.09 42 PFAKE 04 08 50.0 +7.1
SAO LR LR
comp=Z,5μm,20.0s,MS6.2
N09A Rock Creek Ran 127.14 36 ⇓P PKPdf 04 08 49.9 +7.0
baz=127,SNR=8.3
HAST UC Hastings Re 127.22 43 ⇑P PKPdf 04 08 50.0 +6.8
baz=127,SNR=5.5
M10A I.L. Ranch, Tu 127.28 35 ⇓P PKPdf 04 08 50.4 +7.3
baz=127,SNR=5.1
J13A Cove Ranch, Pi 127.30 31 ⇑P PKPdf 04 08 50.2 +7.1
baz=127,SNR=12
R06C Coleville 127.39 39 ⇑P PKPdf 04 08 50.8 +7.4
baz=127,SNR=9.9
K12A Draper Farm, C 127.44 33 P PKPdf 04 08 50.4 +7.0
baz=127,SNR=10.0
S06C San Francisco 127.51 40 ⇓P PKPdf 04 08 50.3 +6.7
baz=127,SNR=14
BMN Battle Mountai 127.59 36 *e*PKPdf PKPdf 04 08 43.4 -0.4
BMN LR LR
comp=Z,6μm,20.0s,MS6.3
QLMT Earthquake Lak 127.63 28 *e*PKPdf PKPdf 04 08 44.2 +0.5
DGMT Dagmar 127.71 21 PFAKE 04 08 50.0 +6.3
DGMT LR LR
comp=Z,14μm,20.0s,MS6.7
GCMT Greycliff 127.71 26 *e*PKPdf PKPdf 04 08 43.0 -0.8
L12A House Creek Ra 127.71 33 ⇑P PKPdf 04 08 51.1 +7.2
baz=128,SNR=12
U04C Hernandez Rese 127.75 42 ⇑P PKPdf 04 08 51.4 +7.2
baz=128,SNR=6.2
M11A Holland Ranch, 127.76 34 ⇓P PKPdf 04 08 51.7 +7.6
baz=128,SNR=9.1
O09A Fish Creek Ran 127.77 36 P PKPdf 04 08 51.3 +7.2
baz=128,SNR=5.6
K13A Stover Farm, H 127.87 32 ⇑P PKPdf 04 08 51.5 +7.3
baz=128,SNR=11
YMR Madison River 127.97 28 *e*PKPdf PKPdf 04 08 45.0 +0.7
YMR LR LR
comp=Z,11μm,20.0s,MS6.5
YNR Norris Junctio 128.07 28 *e*PKPdf PKPdf 04 08 50.3 +5.8
O10A Cortez Mining, 128.10 36 ⇑P PKPdf 04 08 52.0 +7.2
baz=128,SNR=7.1
T06C Millerton Lake 128.11 41 P PKPdf 04 08 51.6 +6.8
baz=128,SNR=11
Q08A Gabbs 128.14 38 ⇑P PKPdf 04 08 51.5 +6.7
baz=128,SNR=8.2
PKD Parkfield 128.15 43 ⇑P PKPdf 04 08 51.7 +6.8
baz=128,SNR=6.2
NVAR Mina Array Bea 128.17 39 PKhKP 04 08 38.2
comp=Z,1.8nm,0.9s,baz=292,slow=1.1,SNR=3.9
NVAR PKP PKPdf 04 08 45.5 +0.5
comp=Z,2.3nm,1.0s,baz=270,slow=0.6,SNR=8.2
YFT Old Faithful 128.19 28 *e*PKPdf PKPdf 04 08 46.1 +1.3
YFT *e* 04 08 53.5
M12A Wells 128.26 34 ⇓P PKPdf 04 08 52.3 +7.3
baz=128,SNR=12
LKWY Lake 128.31 28 *e*PKPdf PKPdf 04 08 46.8 +1.8
LKWY *e* 04 08 53.3
LKWY *e*SKPdf SKPdf 04 12 18.1 -1.1
LKWY LR LR
comp=Z,18μm,20.0s,MS6.8
LKWY Lake 128.31 28 *e*PKIKP PKPdf 04 08 46.8 +1.8
LKWY *e* 04 08 53.3
LKWY MLR MLR
comp=Z,18μm,20.0s,MS6.8
L13A Double Diamond 128.33 32 ⇑P PKPdf 04 08 52.6 +7.4
baz=128,SNR=11
RLMT Red Lodge 128.41 27 *e*PKPdf PKPdf 04 08 44.3 -0.8
RLMT LR LR
comp=Z,12μm,20.0s,MS6.6
K14A Jones Ranch, D 128.42 32 ⇓P PKPdf 04 08 52.4 +7.1
baz=128,SNR=12
LAO LASA Array 128.44 23 *e*PKPdf PKPdf 04 08 45.6 +0.5
LAO LR LR
comp=Z,9μm,21.0s,MS6.4
ELK Elko 128.53 35 *e*PKPdf PKPdf 04 08 48.9 +3.3
ELK LR LR
comp=Z,9μm,22.0s,MS6.4
ULM Lac du Bonnet 128.54 13 *e*P PKPdf 04 08 43.3 -1.9
ULM Lac du Bonnet 128.54 13 PKP PKPdf 04 08 44.3 -1.0
comp=Z,24nm,0.8s,baz=348,slow=2.7,SNR=11
P10A Eureka 128.55 36 ⇓P PKPdf 04 08 52.7 +7.1
baz=128,SNR=7.4
N12A Clover Valley, 128.57 34 ⇓P PKPdf 04 08 52.9 +7.3
baz=128,SNR=13
MTUM Tungsten Hills 128.65 40 *e*PKPdf PKPdf 04 08 45.7 -0.1
MTUM *e* 04 08 53.0
MTUM *e*SKPdf SKPdf 04 12 20.6 +0.5
O11A Cowboy Ranch, 128.69 35 ⇓P PKPdf 04 08 53.3 +7.4
baz=128,SNR=11
M13A Montello 128.71 33 ⇓P PKPdf 04 08 53.0 +7.2
baz=128,SNR=12
HELL Mitchell Peak, 128.74 41 ⇑P PKPdf 04 08 52.6 +6.5
baz=129,SNR=10
MOOW Moose Ponds 128.76 29 *e*PKPdf PKPdf 04 08 45.9 0.0
S08C White Mtn Res 128.81 40 ⇑P PKPdf 04 08 53.9 +7.7
baz=129,SNR=14
TPAW Teton Pass 128.85 29 *e*PKPdf PKPdf 04 08 43.4 -2.7
LOHW Long Hollow 128.93 29 *e*PKPdf PKPdf 04 08 46.3 +0.1
LOHW *e* 04 08 51.8
REDW Red Top Meadow 129.00 29 *e*PKPdf PKPdf 04 08 46.7 +0.3
REDW *e* 04 08 53.5
M14A Sheep Mountain 129.06 33 ⇓P PKPdf 04 08 53.7 +7.1
baz=129,SNR=13
TPH Tonopah 129.06 38 PFAKE 04 09 00.0 +13
TPH LR LR
comp=Z,5μm,20.0s,MS6.2
Q10A Clear Creek Ra 129.10 37 ⇓P PKPdf 04 08 53.9 +7.2
baz=129,SNR=7.8
O12A Currie 129.13 35 ⇓P PKPdf 04 08 53.9 +7.2
baz=129,SNR=12
HVU Hansel Valley 129.17 32 *e*PKPdf PKPdf 04 08 46.6 -0.1
PKM Peak Mountain 129.22 43 ⇑P PKPdf 04 08 54.4 +7.4
baz=129,SNR=5.9
S09A Goldfield 129.28 39 ⇓P PKPdf 04 08 54.4 +7.3
baz=129,SNR=11
AHID Auburn Hatcher 129.32 30 PFAKE 04 09 00.0 +13
AHID LR LR
comp=Z,9μm,20.0s,MS6.5
Q11A Duckwater 129.53 37 ⇑P PKPdf 04 08 54.8 +7.2
baz=129,SNR=11
S10A Tonopah Range, 129.54 38 ⇓P PKPdf 04 08 54.7 +7.1
baz=129,SNR=12
P12A McGill 129.56 36 ⇓P PKPdf 04 08 54.8 +7.3
baz=129,SNR=13
M15A Larsen Ranch, 129.57 32 ⇑P PKPdf 04 08 54.1 +6.6
baz=129,SNR=9.3
N14A Grayback Hills 129.60 33 ⇑P PKPdf 04 08 54.6 +7.0
baz=129,SNR=13
GRAC Grapevine Rang 129.62 40 ⇑P PKPdf 04 08 55.0 +7.3
baz=130,SNR=5.8
BGU Big Grassy Mou 129.63 33 *e*PKPdf PKPdf 04 08 46.9 -0.7
BGU *e* 04 08 54.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
O13A	Hicks Ranch, I	129.65	34	⇓P	PKPdf	04 08 54.8	+7.1
	baz=130,SNR=7.3						
SPUT	South Promonto	129.68	32	ePKPdf	PKPdf	04 08 50.7	+3.0
ISA	Isabella	129.69	42	⇑P	PKPdf	04 08 54.7	+6.8
	baz=130,SNR=6.8						
ARVC	Arvin	129.76	42	⇓P	PKPdf	04 08 55.0	+7.0
	baz=130,SNR=5.3						
R11A	Troy Canyon, C	129.89	37	⇑P	PKPdf	04 08 55.4	+7.2
	baz=130,SNR=8.2						
TRCR	Troy Canyon	129.89	37	ePKPdf	PKPdf	04 08 49.5	+1.3
TRCR				e		04 08 56.1	
TRCR				e		04 12 11.7	
Q12A	Willow Creek R	129.89	36	⇓P	PKPdf	04 08 55.3	+7.1
	baz=130,SNR=5.9						
DAC	Darwin (Calif)	129.91	40	ePKPdf	PKPdf	04 08 48.8	+0.5
DAC				e		04 08 53.2	
DAC				LR	LR		
	comp=Z,5μm,19.0s,MS6.3						
HWUT	Hardware Ranch	129.93	31	ePKPdf	PKPdf	04 08 47.9	-0.3
HWUT				e		04 08 53.0	
HWUT				LR	LR		
	comp=Z,10μm,20.0s,MS6.5						
N15A	Stansbury Isla	129.93	33	P	PKPdf	04 08 54.9	+6.7
	baz=130,SNR=6.4						
BW06	Boulder Array	130.07	29	PFAKE		04 09 00.0	+12
BW06				LR	LR		
	comp=Z,11μm,20.0s,MS6.5						
PDAR	Pinedale Array	130.07	29	PKP	PKPdf	04 08 49.2	+0.8
	comp=Z,7.3nm,1.0s,baz=83,slow=1.3,SNR=7.8						
PDAR				SKP		04 12 24.1	
	comp=Z,2.0nm,1.0s,baz=249,slow=2.9,SNR=4.6						
MPMC	Manual Prospec	130.11	41	⇑P	PKPdf	04 08 56.0	+7.4
	baz=130,SNR=11						
S11A	Rachel	130.24	38	⇓P	PKPdf	04 08 56.2	+7.3
	baz=130,SNR=7.4						
DUG	Dugway	130.26	33	ePKPdf	PKPdf	04 08 49.4	+0.5
DUG				e		04 08 56.4	
DUG				e		04 12 19.2	
DUG				LR	LR		
	comp=Z,10μm,22.0s,MS6.5						
DUG	Dugway	130.26	33	ePKIKP	PKPdf	04 08 49.4	+0.6
DUG				e		04 08 56.4	
DUG				MLR	MLR		
	comp=Z,10μm,22.0s,MS6.5						
DUG	Dugway	130.26	33	⇑P	PKPdf	04 08 56.1	+7.3
	baz=130,SNR=12						
FURC	Furnace Creek,	130.27	40	⇓P	PKPdf	04 08 56.4	+7.4
	baz=130,SNR=6.5						
AGMN	Agassiz Refuge	130.36	14	ePKPdf	PKPdf	04 08 46.7	-2.1
AGMN				LR	LR		
	comp=Z,16μm,19.0s,MS6.7						
TPNV	Topopah Spring	130.36	39	ePKPdf	PKPdf	04 08 46.0	-3.1
TPNV				LR	LR		
	comp=Z,7μm,20.0s,MS6.3						
TPNV	Topopah Spring	130.36	39	⇑P	PKPdf	04 08 56.2	+7.1
	baz=130,SNR=5.6						
EDW2	Edwards Air Fo	130.47	42	⇓P	PKPdf	04 08 56.6	+7.2
	baz=130,SNR=9.2						
CTU	Camp Tracy	130.48	32	ePKPdf	PKPdf	04 08 51.0	+1.7
U10A	Ash Meadows, A	130.64	40	⇓P	PKPdf	04 08 57.6	+7.9
	baz=130,SNR=7.5						
JLU	Jordanelle	130.71	32	ePKPdf	PKPdf	04 08 47.7	-2.0
JLU				e		04 08 56.5	
S12A	Delamar Landin	130.81	37	⇓P	PKPdf	04 08 57.9	+7.9
	baz=131,SNR=7.6						
T11A	Corn Creek, Al	130.82	38	⇑P	PKPdf	04 08 57.6	+7.6
	baz=131,SNR=13						
NLU	North Lily Min	130.83	33	ePKPdf	PKPdf	04 08 48.4	-1.5
SHOC	Shoshone	130.99	40	⇓P	PKPdf	04 08 57.7	+7.3
	baz=131,SNR=5.7						
GSC	Goldstone	131.01	41	⇓P	PKPdf	04 08 57.8	+7.4
	baz=131,SNR=6.8						
MPU	Maple Canyon	131.03	33	ePKPdf	PKPdf	04 08 48.8	-1.5
MPU				LR	LR		
	comp=Z,8μm,20.0s,MS6.4						
S13A	Holt Ranch, En	131.43	37	⇓P	PKPdf	04 08 58.6	+7.4
	baz=131,SNR=10						
RSSD	Black Hills	131.43	23	PFAKE		04 09 00.0	+9.1
RSSD				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
ARUT	Antelope Range	131.54	36	ePKPdf	PKPdf	04 08 51.2	-0.1
ARUT				eSKPbc	SKPbc	04 12 14.1	-1.4
V11A	Goodsprings	131.57	40	⇑P	PKPdf	04 08 58.9	+7.4
	baz=131,SNR=5.2						
HEC	Hector,Ludlow	131.60	41	⇑P	PKPdf	04 08 59.0	+7.5
	baz=131,SNR=5.2						
EYMN	Ely	131.64	11	ePKPdf	PKPdf	04 08 51.8	+0.6
EYMN				LR	LR		
	comp=Z,16μm,21.0s,MS6.7						
S14A	Cedar City	131.72	36	⇑P	PKPdf	04 08 59.4	+7.7
	baz=132,SNR=9.3						
CCUT	Cedar City	131.74	36	ePKPdf	PKPdf	04 08 51.4	-0.3
CCUT				e		04 08 60.0	
CCUT				eSKPbc	SKPbc	04 12 16.2	0.0
MVU	Marysvale	131.76	35	PFAKE		04 09 00.0	+8.2
MVU				LR	LR		
	comp=Z,8μm,22.0s,MS6.4						
T13A	Saint George	131.76	37	⇓P	PKPdf	04 08 59.6	+7.8
	baz=132,SNR=5.7						
TMUT	Trail Mountain	131.77	33	ePKPdf	PKPdf	04 08 53.5	+1.7
MSU	Marysvale	131.78	35	ePKPdf	PKPdf	04 08 46.6	-5.1
V12A	Nelson	132.01	39	⇑P	PKPdf	04 09 00.1	+7.8
	baz=132,SNR=9.7						
RWWY	Rawlins	132.01	28	ePKPdf	PKPdf	04 08 52.5	+0.4
GMRC	Granite Mounta	132.07	41	⇑P	PKPdf	04 09 00.2	+7.8
	baz=132,SNR=8.4						
U13A	Pakoon Wash	132.12	38	⇓P	PKPdf	04 09 00.4	+7.9
	baz=132,SNR=5.7						
T14A	Hurricane	132.23	37	⇑P	PKPdf	04 09 00.6	+7.9
	baz=132,SNR=7.5						
PFO	Pinyon Flat Ob	132.24	43	PKPdf	PKPdf	04 08 52.5	-0.3
PFO				e		04 08 59.6	
PFO				eSKPdf	SKPdf	04 12 27.0	+0.1
PFO				LR	LR		
	comp=Z,6μm,19.0s,MS6.3						
PFO	Pinyon Flat Ob	132.24	43	PKIKP	PKPdf	04 08 52.5	-0.3
PFO				e		04 08 59.6	
PFO				MLR	MLR		
	comp=Z,6μm,19.0s,MS6.3						
PFO	Pinyon Flat Ob	132.24	43	⇑P	PKPdf	04 09 00.7	+7.9
	baz=132,SNR=6.5						
SRU	San Rafael	132.27	33	ePKPdf	PKPdf	04 08 54.2	+1.5
SRU				eSKPbc	SKPbc	04 12 16.4	-1.7
BELC	Belle Mtn.	132.31	42	⇓P	PKPdf	04 09 00.5	+7.5
	baz=132,SNR=10						
U14A	Mt Trumbull	132.60	37	⇓P	PKPdf	04 09 01.1	+7.7
	baz=132,SNR=8.1						
MONP	Monument Peak	132.68	43	⇓P	PKPdf	04 09 01.3	+7.7
	baz=132,SNR=6.0						
T15A	Red Dirt Ranch	132.68	36	⇑P	PKPdf	04 09 01.4	+7.8
	baz=132,SNR=5.6						
IRM	Iron Mountain	132.78	41	⇑P	PKPdf	04 09 01.6	+7.8
	baz=133,SNR=5.2						
BC3	Big Chuckw Mtn	132.88	42	⇓P	PKPdf	04 09 01.9	+7.8
	baz=133,SNR=6.1						
W13A	Hualapai Mount	133.01	39	⇓P	PKPdf	04 09 02.2	+8.0
	baz=133,SNR=8.0						
PHWY	Pilot Hill	133.13	27	ePKPdf	PKPdf	04 08 56.2	+2.0
X13A	Yucca	133.37	40	P	PKPdf	04 09 02.2	+7.3
	baz=133,SNR=6.8						
W14A	Seligman	133.44	39	P	PKPdf	04 09 02.9	+7.8
	baz=133,SNR=8.2						
GLA	Glamis	133.66	42	⇓P	PKPdf	04 09 02.8	+7.3
	baz=134,SNR=8.3						
COWI	Conover	133.84	9	ePKPdf	PKPdf	04 08 56.2	+0.7
COWI				eSKPab		04 12 26.1	
COWI				LR	LR		
	comp=Z,12μm,22.0s,MS6.6						
W15A	Williams	133.97	38	⇓P	PKPdf	04 09 03.6	+7.6
	baz=134,SNR=5.2						
ISCO	Idaho Springs	134.25	28	ePKPdf	PKPdf	04 08 54.0	-2.4
ISCO				LR	LR		
	comp=Z,8μm,22.0s,MS6.4						
WUAZ	Wupatki	134.29	37	PFAKE		04 09 10.0	+13
WUAZ				LR	LR		
	comp=Z,6μm,20.0s,MS6.3						
Y14A	Wickenburg	134.31	40	⇑P	PKPdf	04 09 03.7	+7.0
	baz=134,SNR=7.2						
ECSD	EROS,Sioux Fal	134.36	17	ePKPdf	PKPdf	04 08 54.1	-2.4
X15A	Humboldt	134.44	39	⇑P	PKPdf	04 09 03.7	+6.8
	baz=134,SNR=8.0						
PKME	Peaks-Kenny Pk	134.54	350	PFAKE		04 09 10.0	+13
PKME				LR	LR		
	comp=Z,9μm,21.0s,MS6.5						
MVCO	Mesa Verde	134.75	33	PFAKE		04 09 10.0	+13
MVCO				LR	LR		
	comp=Z,8μm,21.0s,MS6.4						
MVCO	Mesa Verde	134.75	33	⇓P	PKPdf	04 09 04.5	+7.1
	baz=135,SNR=6.3						
GLMI	Grayling	135.66	5	ePKPdf	PKPdf	04 09 02.9	+4.0
GLMI				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
LONY	Lake Ozonia	135.88	355	PFAKE		04 09 10.0	+11
LONY				LR	LR		
	comp=Z,9μm,20.0s,MS6.5						
SDCO	Great Sand Dun	135.91	30	ePKPdf	PKPdf	04 08 57.0	-2.5
SDCO				LR	LR		
	comp=Z,16μm,21.0s,MS6.7						
LBNH	Lisbon	135.95	352	PFAKE		04 09 10.0	+11
LBNH				LR	LR		
	comp=Z,7μm,20.0s,MS6.4						
RCBR	Riachuelo	135.98	261	PFAKE		04 09 10.0	+10
RCBR				LR	LR		
	comp=Z,6μm,19.0s,MS6.3						
NCB	Newcomb	136.49	354	ePKPdf	PKPdf	04 09 00.3	-0.1
NCB				LR	LR		
	comp=Z,10μm,20.0s,MS6.5						
JFWS	Jewell Farm	136.72	11	ePKPdf	PKPdf	04 08 55.2	-5.7
JFWS				eSKPbc	SKPbc	04 12 30.2	-2.2
JFWS				LR	LR		
	comp=Z,19μm,22.0s,MS6.8						
TUC	Tucson	136.78	40	ePKPdf	PKPdf	04 09 01.9	+0.5
TUC				e		04 09 08.2	
TUC				LR	LR		
	comp=Z,6μm,20.0s,MS6.3						
ANMO	Albuquerque	137.53	33	PFAKE		04 09 10.0	+7.3
ANMO				LR	LR		
	comp=Z,14μm,22.0s,MS6.7						
HRV	Harvard--Oak R	137.60	351	PFAKE		04 09 10.0	+7.5
HRV				LR	LR		
	comp=Z,8μm,22.0s,MS6.4						
CBKS	Cedar Bluff	137.63	24	PFAKE		04 09 10.0	+7.3
CBKS				LR	LR		
	comp=Z,11μm,20.0s,MS6.6						
WES	Weston	137.68	351	PFAKE		04 09 10.0	+7.3
WES				LR	LR		
	comp=Z,5μm,20.0s,MS6.2						
LENM	Lemitar	137.81	35	ePKPdf	PKPdf	04 09 04.0	+0.8
LENM				eSKPbc	SKPbc	04 12 35.0	-0.9
PLCA	Paso Flores	138.13	190	PFAKE		04 09 20.0	+16
PLCA				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
AAM	Ann Arbor	138.25	5	PFAKE		04 09 10.0	+6.2
AAM				LR	LR		
	comp=Z,15μm,22.0s,MS6.7						
TRQA	Tornquist	138.33	201	ePKPdf	PKPdf	04 08 57.0	-7.0
TRQA				ePP	PP	04 11 51.7	-0.6
TRQA				eSKPdf	SKPdf	04 12 37.0	-0.8
TRQA				eSKPab		04 12 45.5	
TRQA				LR	LR		
	comp=Z,6μm,20.0s,MS6.3						
BINY	Binghamton	138.39	356	ePKPdf	PKPdf	04 09 04.3	+0.3
BINY				LR	LR		
	comp=Z,9μm,19.0s,MS6.5						
KSU1	Kansas State U	138.55	20	ePKPdf	PKPdf	04 08 59.9	-4.5
KSU1				e		04 09 09.6	
KSU1				LR	LR		
	comp=Z,12μm,22.0s,MS6.6						
ERPA	Erie	138.60	1	ePKPdf	PKPdf	04 09 04.2	-0.2
ERPA				LR	LR		
	comp=Z,12μm,21.0s,MS6.6						
HDIL	Hopedale	139.18	11	PFAKE		04 09 20.0	+14
HDIL				LR	LR		
	comp=Z,14μm,22.0s,MS6.7						
SSPA	Standing Stone	140.05	358	ePKPdf	PKPdf	04 09 06.4	-0.7
SSPA				LR	LR		
	comp=Z,10μm,22.0s,MS6.5						
AMTX	Amarillo	140.05	29	PFAKE		04 09 20.0	+13
AMTX				LR	LR		
	comp=Z,13μm,22.0s,MS6.6						
RPN	Rapa Nui	140.28	136	PFAKE		04 09 20.0	+12
RPN				LR	LR		
	comp=Z,9μm,20.0s,MS6.5						
ACSO	Alum Creek Sta	140.36	4	ePKPdf	PKPdf	04 09 06.3	-1.3
ACSO				LR	LR		
	comp=Z,16μm,22.0s,MS6.7						
MNTX	Cornudas Mount	140.52	36	ePKPdf	PKPdf	04 09 06.7	-1.5
MNTX				eSKPdf	SKPdf	04 12 42.6	+0.7
MNTX				LR	LR		
	comp=Z,12μm,21.0s,MS6.6						
BLO	Bloomington	141.01	9	ePKPdf	PKPdf	04 09 05.2	-3.7
MCWV	Mont Chateau	141.05	0	PFAKE		04 09 20.0	+11
MCWV				LR	LR		
	comp=Z,12μm,21.0s,MS6.6						
FVM	French Village	141.40	14	ePKPdf	PKPdf	04 09 05.9	-3.7
WMOK	Wichita Mounta	141.51	26	ePKPdf	PKPdf	04 09 03.8	-6.2
WMOK				LR	LR		
	comp=Z,11μm,22.0s,MS6.6						
SIUC	Southern Illin	141.93	12	ePKPdf	PKPdf	04 09 09.2	-1.4
WCI	Wyandotte Cave	141.97	9	ePKPdf	PKPdf	04 09 08.1	-2.6
WCI				LR	LR		
	comp=Z,10μm,22.0s,MS6.5						
USIN	University of	142.00	10	ePKPdf	PKPdf	04 09 07.7	-3.0
CBN	Corbin	142.45	357	ePKPdf	PKPdf	04 09 16.3	+4.8
CBN				LR	LR		
	comp=Z,7μm,20.0s,MS6.4						
PARMO	Parma	142.82	14	ePKPdf	PKPdf	04 09 11.3	-0.9
URVA	University of	143.09	357	ePKPdf	PKPdf	04 09 12.4	-0.2
LTX	Lajitas	143.25	37	ePKPdf	PKPdf	04 09 09.0	-4.2
LTX				eSKPbc	SKPbc	04 12 50.6	+0.2
LTX				LR	LR		
	comp=Z,12μm,21.0s,MS6.6						
TXAR	Lajitas Array	143.25	37	PKIKP	PKPdf	04 09 09.9	-3.3
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TXAR	Lajitas Array	143.25	37	PKP	PKPdf	04 09 09.9	-3.2
	comp=Z,4.4nm,0.8s,baz=284,slow=1.3,SNR=21						
GLAT	Glass	143.30	13	ePKPdf	PKPdf	04 09 08.3	-4.7
GNAR	Gosnell	143.42	14	PKP	PKPdf	04 09 15.7	+2.5
ELN	Prospectdale	143.46	2	ePKPdf	PKPdf	04 09 12.2	-1.2
BLA	Blacksburg	143.49	1	ePKPdf	PKPdf	04 09 10.1	-3.3
BLA				LR	LR		
	comp=Z,11μm,19.0s,MS6.6						
HBAR	Harrisburg	143.64	15	ePKPdf	PKPdf	04 09 13.3	-0.4
MIAR	Mount Ida	143.70	20	ePKPdf	PKPdf	04 09 09.4	-4.4
MIAR				eSKPdf	SKPdf	04 12 47.0	-0.2
MIAR				LR	LR		
	comp=Z,12μm,20.0s,MS6.7						
UALR	University of	143.89	18	ePKPdf	PKPdf	04 09 09.7	-4.4
TZTN	Tazewell	143.97	5	ePKPdf	PKPdf	04 09 10.5	-3.7
TZTN				eSKPdf	SKPdf	04 12 45.8	-1.7
TZTN				LR	LR		
	comp=Z,14μm,20.0s,MS6.7						
JCT	Junction City	144.53	31	ePKPdf	PKPdf	04 09 13.0	-2.4
JCT				LR	LR		
	comp=Z,8μm,21.0s,MS6.5						
PLAL	Pickwick Lake	144.81	12	ePKPdf	PKPdf	04 09 12.1	-3.6
PLAL				LR	LR		
	comp=Z,12μm,19.0s,MS6.7						
CPCT	Cooper Cave	144.95	7	ePKPdf	PKPdf	04 09 13.1	-2.9
CPCT				eSKPdf	SKPdf	04 12 44.0	-5.1
OXF	Oxford	144.95	14	ePKPdf	PKPdf	04 09 13.2	-2.8
OXF				LR	LR		
	comp=Z,10μm,21.0s,MS6.5						
SWET	Sewanee	144.98	9	ePKPdf	PKPdf	04 09 12.8	-3.2
FCH	Farellones	145.22	194	eP	PKPbc	04 09 17.7	+1.6
MDZ	Mendoza	145.27	196	eP	PKPbc	04 09 21.1	+4.8
BBSR	BB Station	145.37	338	ePKPdf	PKPdf	04 09 13.2	-3.6
BBSR				LR	LR		
	comp=Z,6μm,20.0s,MS6.3						
CNNC	Cliffs of the	145.43	358	ePKPbc	PKPbc	04 09 15.7	-1.0
CNNC				LR	LR		
	comp=Z,12μm,21.0s,MS6.7						
NATX	Nacogdoches	145.80	23	ePKPdf	PKPdf	04 09 16.8	-0.8
NATX				LR	LR		
	comp=Z,10μm,20.0s,MS6.6						
LHS	Liberty Hill	146.21	2	ePKPdf	PKPdf	04 09 17.6	-0.5
JSC	Jenkinsville	146.38	3	ePKPdf	PKPdf	04 09 18.0	-0.5
HKT	Hockley	146.88	26	ePKPdf	PKPdf	04 09 18.8	-0.6
HKT				LR	LR		
	comp=Z,22μm,22.0s,MS6.9						
LRAL	Lakeview Retre	146.91	12	ePKPdf	PKPdf	04 09 18.7	-0.7
LRAL				LR	LR		
	comp=Z,13μm,21.0s,MS6.7						
GOGA	Godfrey	147.08	6	ePKPdf	PKPdf	04 09 20.3	+0.6
GOGA				LR	LR		
	comp=Z,13μm,20.0s,MS6.7						
COW	Cow Castle Cre	147.30	2	ePKPdf	PKPdf	04 09 20.0	0.0
CMCH	Combarbala	147.45	194	eP	PKPbc	04 09 23.5	+0.7
NHSC	New Hope	147.59	1	ePKPdf	PKPdf	04 09 21.4	+0.9
NHSC				LR	LR		
	comp=Z,9μm,21.0s,MS6.5						
KVTX	Kingsville	147.88	32	ePKPdf	PKPbc	04 09 24.0	-0.1
KVTX				LR	LR		
	comp=Z,10μm,22.0s,MS6.5						
TLL	Tololo Astrono	148.36	195	⇑eP	PKPbc	04 09 26.0	+0.7
ZAIG	Zacatecas	148.53	44	iP	PKPab	04 09 29.7	+0.4
CJM	Chamela	148.69	51	iP	PKPdf	04 09 19.7	-3.0
BRAL	Brewton	148.85	13	ePKPdf	PKPdf	04 09 18.0	-4.6
BRAL				LR	LR		
	comp=Z,13μm,22.0s,MS6.7						
LCO	Las Campanas	149.44	195	ePKPbc	PKPbc	04 09 28.7	+0.6
LCO				eSKPbc	SKPbc	04 13 06.4	+2.1
LCO				LR	LR		
	comp=Z,8μm,20.0s,MS6.5						
SFJM	Santa Fe	149.64	48	eP	PKPbc	04 09 29.0	+0.2
DWPF	Disney	152.51	4	ePKPbc	PKPbc	04 09 35.0	-0.3
DWPF				LR	LR		
	comp=Z,8μm,21.0s,MS6.5						
IIO	Organos	153.31	44	iP	pPKPdf	04 09 41.7	+4.3
SIV	San Ignacio	155.47	227	PKP	PKPdf	04 09 33.5	+0.7
	comp=Z,5.5nm,1.0s,baz=168,slow=4.1						
SIV				PP	PP	04 13 39.4	+5.1
	comp=Z,2.1nm,1.0s,baz=44,slow=22,SNR=2.0						
BBGH	Gun Hill	156.57	303	PFAKE		04 09 40.0	+5.7
BBGH				LR	LR		
	comp=Z,10μm,21.0s,MS6.6						
CMIG	Matias Romero	157.66	42	PKP	PKPdf	04 09 38.2	+2.5
	comp=Z,10nm,1.0s						
CMIG				PP	PP	04 13 38.6	-7.5
	comp=Z,2.3nm,0.7s,baz=53,slow=11,SNR=6.8						
CPD	Cerro la Pandu	158.05	323	ePKPdf	PKPdf	04 09 33.5	-2.6
SJG	San Juan	158.13	324	PFAKE		04 09 50.0	+14
SJG				LR	LR		
	comp=Z,7μm,20.0s,MS6.5						
SJG	San Juan	158.13	324	PP	PP	04 13 49.0	+0.5
	comp=Z,8.5nm,0.9s,baz=345,slow=5.7,SNR=2.9						
TEIG	Tepich	158.63	23	PFAKE		04 09 50.0	+13
TEIG				LR	LR		
	comp=Z,10μm,22.0s,MS6.6						
LPAZ	La Paz	159.85	213	PKP	PKPdf	04 09 39.6	+1.4
LPAZ				PKPab	PKPab	04 10 21.9	+4.7
LPAZ				PP	PP	04 14 10.9	+13
LPAZ				LR	LR		
	comp=Z,4μm,21.0s,MS6.3						
LPAZ	La Paz	159.85	213	PKP	PKPdf	04 09 39.6	+1.4
	comp=Z,12nm,1.1s,baz=44,slow=1.7,SNR=15						
LPAZ				PKPab	PKPab	04 10 21.9	+4.7
	comp=Z,8.5nm,0.8s,baz=114,slow=4.2,SNR=6.3						
LPAZ				PP	PP	04 14 10.9	+13
	comp=Z,2.1nm,0.9s,baz=144,slow=5.0,SNR=2.6						
SDDR	Presa de Saban	159.95	337	PFAKE		04 09 50.0	+12
SDDR				LR	LR		
	comp=Z,7μm,20.0s,MS6.5						
ARE	Arequipa	161.35	205	eP	pPKPdf	04 09 48.0	+0.4
TGUH	Tegucigalpa,Un	164.53	29	ePKPdf	PKPdf	04 09 42.1	-0.9
TGUH				LR	LR		
	comp=Z,5μm,20.0s						
NNA	Nana	167.28	192	ePKPdf	PKPdf	04 09 45.0	-0.2
NNA				PKP	PKPdf	04 09 45.6	+0.3
NNA				LR	LR		
	comp=Z,5μm,19.0s						
NNA	Nana	167.28	192	PKP	PKPdf	04 09 45.6	+0.3
	comp=Z,4.6nm,0.7s,baz=172,slow=20,SNR=2.5						
SDV	Santo Domingo	167.85	313	PKP	PKPdf	04 09 48.2	+2.5
SDV				PKPab	PKPab	04 10 55.8	+3.3
SDV				PP	PP	04 14 45.0	+4.5
SDV				LR	LR		
	comp=Z,4μm,20.0s						
SDV	Santo Domingo	167.85	313	PKP	PKPdf	04 09 48.2	+2.5
	comp=Z,6.1nm,0.9s,baz=241,slow=1.8,SNR=8.7						
SDV				PKPab	PKPab	04 10 55.8	+3.3
	comp=Z,5.5nm,0.8s,baz=338,slow=5.1,SNR=3.7						
SDV				PP	PP	04 14 45.0	+4.5
	comp=Z,6.6nm,0.9s,baz=140,slow=2.3,SNR=3.9						
JTS	JuntasAbangare	168.91	29	PFAKE		04 10 00.0	+14
JTS				LR	LR		
	comp=Z,8μm,21.0s						
PAYG	Puerto Ayora	169.18	96	PFAKE		04 10 00.0	+13
PAYG				LR	LR		
	comp=Z,7μm,22.0s						
ATAH	Atahualpa	172.44	189	PKP	PKPdf	04 09 51.8	+3.4
	comp=Z,5.1nm,1.0s,baz=124,slow=22,SNR=4.1						
ATAH				PKPab	PKPab	04 11 16.7	+4.1
	comp=Z,30nm,1.0s,baz=76,slow=3.5,SNR=4.7						
ATAH				PP	PP	04 15 06.4	+4.3
	comp=Z,3.9nm,0.9s,baz=62,slow=19,SNR=2.0						
ROSC	El Rosal	173.25	310	PKP	PKPdf	04 09 48.6	-0.1
	comp=Z,12nm,1.1s,baz=96,slow=23,SNR=2.9						
ROSC				PP	PP	04 15 10.1	+2.4
	comp=Z,3.6nm,0.7s,baz=93,slow=21,SNR=3.6						
OTAV	Otavalo	178.88	255	ePKPdf	PKPdf	04 09 49.1	-0.9
OTAV				LR	LR		
	comp=Z,8μm,22.0s						

*ISCJB **06** 04:07:41.4±0.6, 2978S±007×12435E±004, h10km, Error ellipse: s-maj=9.7km s-min=5.4km az=170.0*

*IDC **06** 04:07:41.8±2.3, 2994S×12443E, h0km, mb1 3.9/4, mb1mx3.6/14, mbtmp3.7/4, ML3.5/4, Error ellipse: s-maj=48.7km s-min=17.8km az=152.0*

*AUST **06** 04:07:46.5, 2993S×12434E, h0km, ML3.9*

*NEIC **06** 04:07:46.0, 2993S×12434E, h1km, ML3.9(AUST), After AUST.*

ISC 06 04:07:43.5±0.6**, 2990S**±006×**12431E**±004**, h10km, n17,** σ1§57/33**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBL	**Kambalda**	**2.55**	**234**	eP	**Pn**	**04 08 28.6**	**+3.6**
KMBL				eS	**Sn**	**04 08 57.7**	**+1.6**
	1μm,0.3s						
FORT	**Forrest**	**3.35**	**106**	eP	**Pn**	**04 08 38.1**	**+2.1**
FORT				e		04 08 46.5	
FORT				eS	**Sn**	**04 09 15.6**	**-0.3**
	195nm,0.5s						
KLBR	**Kellerberrin**	**5.89**	**252**	eP	**Pn**	**04 09 11.4**	**+0.6**
KLBR				eS	**Sn**	**04 10 15.5**	**-2.9**
	75nm,0.2s						
KLBR	**Kellerberrin**	**5.89**	**252**	eP	**Pn**	**04 09 11.4**	**+0.6**
	75nm,0.2s						
KLBR				eS	**Sn**	**04 10 15.5**	**-2.9**
MEEK	**Meekatharra**	**5.98**	**302**	eP	**Pn**	**04 09 15.7**	**+3.6**
MEEK				eS	**Sn**	**04 10 21.0**	**+0.3**
BLDU	**Ballidu**	**6.62**	**262**	eP	**Pn**	**04 09 20.9**	**+0.1**
BLDU				eS	**Sn**	**04 10 32.3**	**-4.0**
	22nm,0.3s						
BLDU	**Ballidu**	**6.62**	**262**	eP	**Pn**	**04 09 20.9**	**+0.1**
	22nm,0.3s						
BLDU				eS	**Sn**	**04 10 32.3**	**-4.0**
NWAO	**Narrogin (SRO)**	**6.76**	**242**	Pn	**Pn**	**04 09 24.9**	**+2.2**
NWAO				Sn	**Sn**	**04 10 36.2**	**-3.6**
NWAO				Lg		04 11 15.7	
NWAO	**Narrogin (SRO)**	**6.76**	**242**	Pn	**Pn**	**04 09 24.9**	**+2.2**
	0.8nm,0.3s,baz=90,slow=11,SNR=9.9						
NWAO				Sn	**Sn**	**04 10 36.2**	**-3.6**
	14nm,0.3s,baz=187,slow=20,SNR=12						
NWAO				Lg		04 11 15.7	
	37nm,0.3s,baz=159,slow=22,SNR=16						
MORW	**Morawa**	**7.26**	**275**	eP	**Pn**	**04 09 30.6**	**+1.0**
MORW				eS	**Sn**	**04 10 47.2**	**-4.9**
	76nm,0.4s						
MORW	**Morawa**	**7.26**	**275**	eP	**Pn**	**04 09 30.6**	**+1.0**
	76nm,0.4s						
MORW				eS	**Sn**	**04 10 47.2**	**-4.9**
RKGY	**Rocky Gully**	**7.79**	**231**	eP	**Pn**	**04 09 39.2**	**+2.4**
RKGY				eS	**Sn**	**04 11 02.7**	**-2.3**
	42nm,0.2s						
RKGY	**Rocky Gully**	**7.79**	**231**	eP	**Pn**	**04 09 39.2**	**+2.4**
	42nm,0.2s						
RKGY				eS	**Sn**	**04 11 02.7**	**-2.3**
ASAR	**Alice Springs**	**10.58**	**56**	Pn	**Pn**	**04 10 14.9**	**-0.3**
	0.4nm,0.3s,baz=231,slow=11,SNR=13						
ASAR				Sn	**Sn**	**04 12 05.1**	**-8.7**
	1.7nm,0.3s,baz=235,slow=23,SNR=9.4						
ASAR				Lg		04 13 15.0	
	2.8nm,0.3s,baz=231,slow=27,SNR=4.9						
WRA	**Warramunga Arr**	**13.45**	**45**	Pn	**Pn**	**04 10 53.5**	**-0.9**
	0.3nm,0.3s,baz=221,slow=12,SNR=17						
WRA				Sn	**Sn**	**04 13 15.1**	**-8.9**
	0.9nm,0.3s,baz=225,slow=24,SNR=5.6						
WRA				Lg		04 14 46.0	
	0.9nm,0.3s,baz=223,slow=30,SNR=4.8						
WB2	**Warramunga Arr**	**13.45**	**45**	eP	**Pn**	**04 10 53.9**	**-0.6**
WB2				eS	**Sn**	**04 13 14.8**	**-9.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	**Stephens Creek**	**14.97**	**102**	Pn	**Pn**	**04 11 11.5**	**-3.7**
	0.7nm,0.3s,baz=280,slow=11,SNR=9.3						
STKA				Lg		04 15 32.6	
	1.1nm,0.3s,baz=198,slow=19,SNR=3.4						

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*IDC **06** 04:28:32.7±1.6, 076S×10045E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.9/21, mbtmp3.9/8, Error ellipse: s-maj=80.8km s-min=15.7km az=56.0*

*NEIC **06** 04:28:35.8±1.1, 074S×10049E, h20^{km}, Error ellipse: s-maj=61.4km s-min=13.6km az=53.0*

*ISCJB **06** 04:28:36.3±1.4, 06S±03×1006E±04, h33^{km}, mb4.0/8, Error ellipse: s-maj=71.5km s-min=16.3km az=141.5*

ISC 06 04:28:38.2±1.4**, 07S**±03×**1005E**±04**, h35**^{km}**, n12, σ0^{s}45**/11**, mb4.0**/8**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.83**	**335**	Pg	**Pn**	**04 29 43.2**	**+8.5**
PSI				Lg		04 30 31.8	
PSI	**Prapat**	**3.83**	**335**	Pg	**Pn**	**04 29 43.2**	**+8.5**
	4.0nm,0.3s,baz=134,slow=12,SNR=5.1						
PSI				Lg		04 30 31.8	
	6.3nm,0.3s,baz=228,slow=14,SNR=5.1						
WRA	**Warramunga Arr**	**38.22**	**122**	P	**P**	**04 35 55.0**	**0.0**
	0.6nm,0.5s,mb3.6,baz=300,slow=9.3,SNR=5.1						
ASAR	**Alice Springs**	**39.61**	**128**	P	**P**	**04 36 06.5**	**-0.1**
	1.0nm,0.8s,mb3.6,baz=302,slow=7.7,SNR=9.1						
SONM	**Songino Array**	**48.62**	**5**	P	**P**	**04 37 19.0**	**+0.6**
	0.4nm,0.7s,mb3.5,baz=182,slow=9.2,SNR=3.3						
MKAR	**Makanchi Array**	**49.94**	**344**	P	**P**	**04 37 28.1**	**-0.4**
	0.6nm,0.3s,mb4.1,baz=150,slow=8.5,SNR=7.6						
ZALV	**Zalesovo Beam**	**56.01**	**349**	P	**P**	**04 38 12.4**	**-0.7**
	1.7nm,0.7s,mb4.2,baz=164,slow=5.9,SNR=7.3						
AKTK	**Aktyubinsk**	**62.48**	**331**	P	**P**	**04 38 57.8**	**-0.2**
AKTO	**Aktyubinsk**	**62.48**	**331**	P	**P**	**04 38 57.8**	**-0.2**
	1.5nm,0.8s,mb4.2,baz=125,slow=7.0,SNR=4.2						
FINES	**FINESS Array B**	**83.22**	**332**	P	**P**	**04 41 01.5**	**+0.8**
	2.4nm,1.1s,mb4.1,baz=124,slow=3.4,SNR=5.3						
ARCES	**ARCESS Array B**	**85.44**	**340**	P	**P**	**04 41 12.2**	**+0.4**
	2.2nm,0.9s,mb4.3,baz=74,slow=5.2,SNR=19						
TXAR	**Lajitas Array**	**143.37**	**37**	PKP	PKPdf	04 48 08.5	-1.2
	0.3nm,0.6s,baz=150,slow=0.4,SNR=4.0						

IDC 06 04:44:49.6±1.5**, 095S×12750E, h0**^{km}**, mb3.1**/4**, mb1 3.3**/4**, mb1mx3.3**/16**, mbtmp3.2**/4**, Error ellipse: s-maj=159.2km s-min=23.2km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.03**	**161**	P	P	04 49 24.8	+0.5
	0.3nm,0.7s,baz=345,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**23.42**	**165**	P	P	04 50 00.3	-0.3
	0.3nm,0.5s,baz=347,slow=11,SNR=5.0						
SONM	**Songino Array**	**51.95**	**342**	P	P	04 54 01.1	+0.8
	0.2nm,0.5s,baz=142,slow=7.3,SNR=2.7						
MKAR	**Makanchi Array**	**61.84**	**326**	P	P	04 55 09.8	-0.7
	0.2nm,0.4s,baz=125,slow=8.0,SNR=4.2						

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*BJI **06** 05:49:22.5, 099S×100.16E, h35^{km}, mB5.9, mb5.4, Ms6.8, Msz6.5*

*IDC **06** 05:49:22.9±0.3, 039S×10073E, h0^{km}, mb5.5/27, mb1 5.5/27, mb1mx5.5/27, mbtmp5.5/27, MS6.1/21, Ms1 6.1/21, ms1mx6.0/26, Error ellipse: s-maj=13.4km s-min=7.7km az=53.0*

*NEIC **06** 05:49:25.4±0.1, 049S×10053E, h11^{km}, mb5.9/114, ME6.6, MS6.3/185, MW6.1, Error ellipse: s-maj=5.3km s-min=3.3km az=46.0 Broadband fault plane solution: P waves. NP1:ϕ_s150.00000°, δ60.00000°, λ-175.00000°. NP2:ϕ_s57.00000°, δ86.00000°, λ-30.00000°. Principal axes: T Plg17.0000°, Azm108.0000°; N Plg0.0000°, Azm0.0000°; P Plg24.0000°, Azm10.0000°; Moment Tensor Solution. s7 Moment tensor: Scale 10^{18} Nm; M_{rr}0.11; $M_{\theta\theta}$-1.11; $M_{\phi\phi}$1.00; $M_{r\theta}$-0.68; $M_{\theta\phi}$1.18; $M_{\phi r}$-0.32; Best double couple: $M_0$1.80000×10^{18} NP1:ϕ_s158.00000°, δ65.00000°, λ176.00000°. NP2:ϕ_s250.00000°, δ87.00000°, λ25.00000°. Principal axes: T 1.7400, Plg20.0000°, Azm117.0000°; N 0.0300, Plg64.0000°, Azm257.0000°; P -1.7700, Plg15.0000°, Azm21.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Casualties and damage are included with the event at 03:49 UTC. Felt [VI] at Padang, [IV] at Duri, [III] at Pekanbaru and [II] at Medan. Felt at Padangpanjang and Selatpanjang. Also felt [III] at Kuala Lumpur, Petaling Jaya, Shah Alam and Subang Jaya, Malaysia. Felt at Air Keruh, Banting, Batu Pahat, Johor Bahru, Klang, Muar, Port Dickson, Sekudai and Sungai Besar, Malaysia. Felt [III] in Singapore.

*ISCJB **06** 05:49:26.8±0.1, 048S±002×10047E±002, h28^{km}, mb5.9/222, MS6.3/238 Error ellipse: s-maj=3.4km s-min=2.8km az=13.3*

*GCMT **06** 05:49:26.9±0.1, 051S×10047E, h22^{km}, MW6.3/106, Moment Tensor Solution. s105,c220; s106,c410; Duration: 3^{s}4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.07±.02; $M_{\theta\theta}$-2.88±.02; $M_{\phi\phi}$2.95±.03; $M_{r\theta}$-0.48±.04; $M_{\theta\phi}$1.57±.02; $M_{\phi r}$-0.35±.04; Best double couple: $M_0$3.36400×10^{18} NP1:ϕ_s149.00000°, δ80.00000°, λ179.00000°. NP2:ϕ_s239.00000°, δ89.00000°, λ10.00000°. Principal axes: T 3.4070, Plg8.0000°, Azm105.0000°; N -0.0890, Plg80.0000°, Azm242.0000°; P -3.3210, Plg7.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **06** 05:49:26.4±1.3, 046S×10053E, h33^{km}, mb6.1/96, MS6.2/81 Error ellipse: s-maj=10.0km s-min=5.2km az=114.5*

*SZGRF **06** 05:49:27.4, 097S×10057E, h33^{km}, mb6.2, MS6.1, Southern Sumatera, Indonesia*

*CRAAG **06** 05:49:28.7, 050S×10055E, Mw6.1*

ISC 06 05:49:28.7±0.1**, 050S**±002×**10047E**±002**, h30**^{km}**, h30**^{km}±1.2^{km}**:pP-P, n1472, σ1^{s}06**/1008**, mb5.9**/222**, MS6.3**/238**, 178C-208D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.09**	**300**	P	**Pb**	**05 49 25.7**	**-8.3**
	0.0nm,0.0s						
PSI	**Prapat**	**3.63**	**335**	Pn	**Pn**	**05 50 22.9**	**0.0**
PSI				Pg	**Pn**	**05 50 29.0**	**+6.1**
PSI				Lg		05 51 18.7	
PSI				LR	LR	05 51 49.3	
PSI	**Prapat**	**3.63**	**335**	Pn	**Pn**	**05 50 22.9**	**0.0**
	6.6nm,0.3s,baz=148,slow=12,SNR=168						
PSI				Pg	**Pn**	**05 50 29.0**	**+6.1**
	59nm,0.3s,baz=159,slow=13,SNR=71						
PSI				Lg		05 51 18.7	
	452nm,0.3s,baz=247,slow=21,SNR=7.0						
PSI				LR	LR	05 51 49.3	
	comp=Z,384µm,21.9s,baz=147,slow=41						
KSI	**Kapahiang**	**3.78**	**146**	P	**Pn**	**05 50 25.5**	**+0.5**
	0.0nm,0.0s						
KGM	**Kluang**	**3.79**	**49**	⇑P	**Pn**	**05 50 25.3**	**+0.2**
FRIM	**Kepong**	**3.89**	**17**	⇑P	**Pn**	**05 50 27.3**	**+0.8**
MYKOM	**Kota Tinggi**	**4.07**	**56**	⇓P	**Pn**	**05 50 29.4**	**+0.4**
TSI	**Tuntungan**	**4.41**	**334**	P	**Pn**	**05 50 35.5**	**+1.9**
IPM	**Ipoh**	**4.98**	**6**	P	**Pn**	**05 50 42.1**	**+0.6**
IPM	**Ipoh**	**4.98**	**6**	⇓P	**Pn**	**05 50 43.5**	**+2.0**
KULM	**Kulim**	**5.75**	**2**	⇓iPn	**Pn**	**05 50 52.9**	**+0.7**
KULM	**Kulim**	**5.75**	**2**	⇓P	**Pn**	**05 50 53.3**	**+1.2**
KLI	**Kotabumi**	**6.16**	**135**	P	**Pn**	**05 50 59.6**	**+1.9**
KTGM	**Kuala Trenggan**	**6.37**	**25**	⇓P	**Pn**	**05 51 02.0**	**+1.4**
SNG	**Songkhla**	**7.63**	**1**	P	**Pn**	**05 51 18.0**	**+0.1**
	2µm,1.1s						
BSI	**Banda Aceh**	**7.89**	**319**	P	**Pn**	**05 51 21.2**	**-0.3**
	0.0nm,0.0s						
SBJI	**Serang**	**7.94**	**135**	P	**Pn**	**05 51 22.5**	**+0.4**
PKT	**Phuket**	**8.82**	**345**	P	**Pn**	**05 51 37.0**	**+2.7**
LEM	**Lembang**	**9.50**	**132**	P	**Pn**	**05 51 44.6**	**+1.0**
	0.0nm,0.0s						
KSM	**Kuching**	**10.03**	**79**	ePn	**Pn**	**05 51 48.4**	**-2.4**
KSM	**Kuching**	**10.03**	**79**	⇑P	**Pn**	**05 51 50.0**	**-0.8**
BJII	**Banjamegara**	**11.44**	**127**	P	**Pn**	**05 52 11.4**	**+1.2**
	0.0nm,0.0s						
SBUM	**Sibu**	**12.10**	**76**	⇑P	**Pn**	**05 52 22.9**	**+3.7**
COCO	**West Island**	**12.16**	**197**	ePn	**Pn**	**05 52 18.2**	**-1.8**
BTM	**Bintulu**	**13.13**	**74**	⇓P	**Pn**	**05 52 35.7**	**+2.4**
PBA	**Port Blair**	**14.31**	**328**	eP	**Pn**	**05 52 46.4**	**-3.0**
PBA				ex	x	05 55 41.0	
KMMI	**Kalianget**	**14.95**	**116**	P	**Pn**	**05 52 57.6**	**-0.4**
NST	**Nakhon Sawan**	**16.07**	**359**	⇑P	**Pn**	**05 53 13.2**	**+0.5**
	225nm,1.1s						
NBBI	**Negara**	**16.11**	**119**	P	**Pn**	**05 53 13.0**	**-0.2**
UBT	**Ubonrachathani**	**16.28**	**16**	⇓P	**Pn**	**05 53 18.0**	**+2.7**
	2µm,1.0s						
KKTK	**Khon Kaen**	**16.89**	**8**	⇓P	**Pn**	**05 53 25.0**	**+2.0**
	74nm,63.0s						
KKM	**Kota Kinabalu**	**17.01**	**67**	⇑iP	**Pn**	**05 53 25.2**	**+0.7**
KKM	**Kota Kinabalu**	**17.01**	**67**	⇑P	**Pn**	**05 53 25.7**	**+1.2**
BDT	**Bhumibol Dam**	**17.69**	**355**	P	**Pn**	**05 53 33.0**	**0.0**
	2.4nm,55.0s						
SDKM	**Sandakan**	**17.78**	**70**	⇑P	**Pn**	**05 53 35.8**	**+1.7**
KDM	**Kudat**	**17.91**	**65**	⇑P	**Pn**	**05 53 36.9**	**+1.2**
TSM	**Tawau**	**18.02**	**75**	⇑P	**Pn**	**05 53 38.3**	**+1.1**
MYLDM	**Lahad Datu**	**18.87**	**72**	⇑P	**Pn**	**05 53 49.2**	**+1.8**
CHTO	**Chiang Mai**	**19.25**	**356**	eP	**Pn**	**05 53 49.7**	**-2.3**
	560nm,1.5s						
CHTO	**Chiang Mai**	**19.25**	**356**	eP	**Pn**	**05 53 49.7**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,560nm,1.5s						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
CHTO	**Chiang Mai**	**19.25**	**356**	P	**Pn**	**05 53 51.2**	**-0.8**
	SNR=95						
PCI	**Palu**	**19.36**	**91**	P	**Pn**	**05 53 54.4**	**+1.0**
	comp=Z,824nm,1.7s						
BATP	**Bataraza**	**19.58**	**61**	eP	**Pn**	**05 53 55.4**	**-0.6**
PPR	**Puerto Princes**	**20.84**	**60**	⇓iP	**P**	**05 54 12.0**	**+3.7**
PALK	**Pallekele**	**21.18**	**292**	ePn	**P**	**05 54 14.2**	**+2.3**
	comp=Z,736nm,1.1s,mb5.9						
PALK				LR	LR		
	comp=Z,54µm,21.0s,MS5.9						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
PALK	**Pallekele**	**21.18**	**292**	P	**P**	**05 54 14.7**	**+2.8**
	SNR=65						
QIZ	**Qiongzhong**	**21.48**	**25**	P	**P**	**05 54 16.3**	**+1.3**
QIZ				XP	sP	05 54 28.1	+1.1
QIZ				PP		05 54 36.6	
QIZ				S	**S**	**05 58 13.6**	**+1.8**
QIZ				AMB	AMB		
	comp=Z,602nm,1.6s,mb5.7						
QIZ				AMB	AMB		
	comp=Z,4µm,5.5s						
QIZ				LR	LR		
	comp=E,179µm,14.2s						
QIZ				LR	LR		
	comp=Z,104µm,12.8s,MS6.4						
QIZ	**Qiongzhong**	**21.48**	**25**	eP	**P**	**05 54 17.2**	**+2.2**
	comp=Z,2µm,1.5s,mb6.1						
QIZ				LR	LR		
	comp=Z,55µm,20.0s,MS6.0						
ENPP	**El Nido**	**22.14**	**58**	eP	**P**	**05 54 25.6**	**+3.5**
BUSP	**Coron**	**23.19**	**57**	eP	**P**	**05 54 36.5**	**+3.1**
CUYO	**Cuyo Island**	**23.33**	**61**	eP	**P**	**05 54 36.5**	**+1.7**
LUBP	**Lubang**	**24.16**	**53**	eP	**P**	**05 54 43.4**	**+0.9**
MDRS	**Chennai**	**24.17**	**305**	eP	**P**	**05 54 44.7**	**+2.1**
MDRS				AMb	AMB	05 54 51.3	
	comp=Z,1µm,1.9s,mb5.9						
GUIM	**Jordan**	**24.61**	**63**	eP	**P**	**05 54 50.6**	**+4.0**
VIS	**Vishakhapatnam**	**24.75**	**318**	iP	**P**	**05 54 49.4**	**+1.6**
VIS				ex	x	05 54 55.5	
	comp=Z,858nm,1.6s						
VIS				iS	**S**	**05 59 11.7**	**+3.4**
OTRP	**Odiongan**	**24.91**	**58**	eP	**P**	**05 54 51.1**	**+1.8**
TGY	**Tagaytay City**	**24.92**	**54**	eP	**P**	**05 54 53.1**	**+3.7**
BATI	**Kupang**	**24.99**	**113**	P	**P**	**05 54 47.2**	**-2.9**
	comp=Z,65nm,0.8s,mb5.2,baz=324,slow=9.3,SNR=4.3						
BATI				LR	LR	06 06 37.2	
	comp=Z,125µm,21.3s,MS6.4,baz=304,slow=42						
TRD	**Trivandrum**	**25.09**	**291**	eP	**P**	**05 54 52.3**	**+1.3**
TRD				AMb	AMB	05 55 00.7	
	comp=Z,365nm,1.3s,mb5.8						
SCZP	**Santa Cruz**	**25.10**	**49**	eP	**P**	**05 54 52.2**	**+1.1**
KOD	**Kodaikanal**	**25.25**	**296**	eP	**P**	**05 54 55.1**	**+2.7**
KOD				AMb	AMB	05 55 01.3	
	comp=Z,935nm,3.5s						
BOAC	**Boac**	**25.32**	**56**	eP	**P**	**05 54 56.0**	**+3.0**
TBP	**Tagbilaran**	**25.39**	**66**	eP	**P**	**05 54 53.7**	**0.0**
LQP	**Lukban**	**25.41**	**54**	eP	**P**	**05 54 54.4**	**+0.5**
KMI	**Kunming**	**25.57**	**5**	P	**P**	**05 54 55.6**	**+0.4**
KMI				AP	pP	05 55 00.0	-3.9
KMI				PP		05 55 35.8	
KMI				S	**S**	**05 59 23.5**	**+2.3**
KMI				SS		06 00 27.2	
KMI				AMB	AMB		
	comp=Z,136nm,1.2s,mb5.3						
KMI				AMB	AMB		
	comp=Z,1µm,5.4s						
KMI				LR	LR		
	comp=N,101µm,11.4s,MS6.7						
KMI				LR	LR		
	comp=E,71µm,11.4s,MS6.7						
KMI				LR	LR		
	comp=Z,129µm,11.4s,MS6.7						
KMI	**Kunming**	**25.57**	**5**	P	**P**	**05 54 55.6**	**+0.4**
	comp=Z,136nm,1.2s,mb5.3						
KMI				pP	pP	05 55 00.0	-3.9
KMI				PP		05 55 35.8	
KMI				S	**S**	**05 59 23.5**	**+2.3**
KMI				sS	sS	05 59 30.8	-4.8
KMI				SS		06 00 27.2	
KMI				SSS		06 00 48.5	
KMI				LR	LR		
	comp=Z,129µm,11.4s,MS6.7						
LLP	**Lapu-Lapu**	**25.72**	**65**	eP	**P**	**05 54 55.3**	**-1.4**
CGP	**Cagayan de Oro**	**25.72**	**69**	⇑iP	**P**	**05 54 56.4**	**-0.3**
AGT	**Agartala**	**25.84**	**340**	ex	x	05 56 42.0	
IMP	**Imphal**	**25.92**	**346**	iP	**P**	**05 54 58.0**	**-0.4**
IMP				eS	**S**	**05 59 29.0**	**+2.2**
BCPH	**Baguio City Da**	**25.98**	**49**	⇓eP	**P**	**05 54 59.8**	**+0.8**
POLP	**Polilio Island**	**26.07**	**54**	eP	**P**	**05 55 03.5**	**+3.6**
DAV	**Davao City (W)**	**26.15**	**73**	PFAKE		05 55 10.0	+9.4
DAV				LR	LR		
	comp=Z,30µm,19.0s,MS5.8						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
DAV	**Davao City (W)**	**26.15**	**73**	P	**P**	**05 55 03.0**	**+2.4**
	SNR=11						
HKC	**Hong Kong Obse**	**26.31**	**30**	P	**P**	**05 55 06.0**	**+4.1**
BALP	**Baler**	**26.36**	**51**	eP	**P**	**05 55 07.9**	**+5.4**
MSLP	**Maasin**	**26.46**	**66**	eP	**P**	**05 55 00.7**	**-2.7**
GZH	**Guangzhou**	**26.58**	**27**	P	**P**	**05 55 09.8**	**+5.4**
GZH				AMB	AMB		
	comp=Z,161nm,1.4s,mb5.4						
GZH				LR	LR		
	comp=N,36µm,22.4s,MS6.2						
GZH				LR	LR		
	comp=E,75µm,21.1s,MS6.2						
GZH				LR	LR		
	comp=Z,111µm,17.7s,MS6.5						
MATI	**Mati**	**26.77**	**74**	eP	**P**	**05 55 07.5**	**+1.3**
ABRA	**Dolores**	**26.87**	**47**	eP	**P**	**05 55 13.6**	**+6.6**
SHL	**Shillong**	**27.21**	**343**	iP	**P**	**05 55 08.5**	**-1.5**
	comp=Z,55nm,0.9s,mb5.1						
SHL				ix	x	05 59 45.5	
CAUP	**Cauayan**	**27.26**	**50**	eP	**P**	**05 55 11.3**	**+0.7**
GYA	**Guiyang**	**27.46**	**12**	⇑iP	**P**	**05 55 11.9**	**-0.3**
GYA				AP	pP	05 55 21.0	0.0
GYA				XP	sP	05 55 25.2	+0.6
GYA				PP		05 56 03.5	
GYA				PCP	PcP	05 58 32.3	+1.8
GYA				S	**S**	**05 59 51.4**	**+0.3**
GYA				XS	sS	06 00 07.7	+2.2
GYA				SS		06 01 12.0	
GYA				SCS	ScS	06 05 59.8	-1.0
GYA				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.3						
GYA				LR	LR		
	comp=N,79µm,17.4s,MS6.7						
GYA				LR	LR		
	comp=E,147µm,13.8s,MS6.7						
GYA				LR	LR		
	comp=Z,62µm,18.6s,MS6.2						
MBWA	**Marble Bar**	**27.84**	**139**	eP	**P**	**05 55 13.8**	**-1.9**
MBWA				LR	LR		
	comp=Z,33µm,20.0s,MS5.9						
HYB	**Hyderabad**	**27.98**	**311**	⇑eP	**P**	**05 55 18.0**	**+1.0**
	comp=Z,180nm,1.0s,mb5.7						
HYB				eS	**S**	**06 00 02.0**	**+2.5**
HYB	**Hyderabad**	**27.98**	**311**	⇑eP	**P**	**05 55 18.0**	**+1.0**
HYB				eS	**S**	**06 00 02.0**	**+2.5**
HYB				pmax	pmax		
	comp=Z,180nm,1.0s,mb5.7						
HYB	**Hyderabad**	**27.98**	**311**	⇑iP	**P**	**05 55 18.0**	**+1.0**
	comp=Z,180nm,1.0s,mb5.7						
HYB				e		05 55 21.0	
HYB				ePP	PP	05 56 09.0	-12
HYB				eS	**S**	**06 00 02.0**	**+2.5**
HYB				LR	LR	06 04 34.0	
	comp=Z,48nm,20.0s						
BOK	**Bokaro**	**28.00**	**331**	eP	**P**	**05 55 18.0**	**+0.9**
BOK				AMb	AMB	05 55 20.1	
	comp=Z,787nm,0.9s,mb6.4						
MNGI	**Mangalore**	**28.73**	**299**	iP	**P**	**05 55 26.3**	**+2.5**
MNGI				AMb	AMB	05 55 30.8	
	comp=Z,446nm,2.1s,mb5.8						
MNGI				iS	**S**	**06 00 17.1**	**+5.6**
BLSP	**Bilaspur**	**28.74**	**323**	eP	**P**	**05 55 23.7**	**0.0**
ODAN	**Odare**	**29.98**	**336**	⇓iP	**P**	**05 55 34.8**	**+0.1**
	comp=Z,720nm,1.0s,mb6.3						
NGP	**Nagpur**	**30.02**	**317**	eP	**P**	**05 55 33.6**	**-1.6**
NGP				ex	x	05 55 35.6	
	comp=Z,558nm,1.2s						
NGP				ex	x	06 00 27.5	
FITZ	**Fitzroy Crossi**	**30.29**	**127**	eP	**P**	**05 55 33.3**	**-4.2**
	comp=Z,62nm,0.8s,mb5.4						
FITZ				eS	**S**	**06 00 24.0**	**-12**
TAPN	**Taplejung**	**30.29**	**337**	⇓iP	**P**	**05 55 38.0**	**+0.6**
	comp=Z,1µm,1.0s,mb6.6						
GOA	**Goa**	**30.75**	**302**	eP	**P**	**05 55 40.9**	**-0.8**
GOA				AMb	AMB	05 55 44.8	
	comp=Z,333nm,1.6s,mb5.9						
QZH	**Quanzhou**	**30.78**	**33**	⇑iP	**P**	**05 55 45.3**	**+3.5**
QZH				S	**S**	**06 00 46.4**	**+3.0**
QZH				AMB	AMB		
	comp=Z,220nm,1.0s,mb5.9						
QZH				LR	LR		
	comp=N,75µm,16.0s,MS6.8						
QZH				LR	LR		
	comp=E,157µm,14.3s,MS6.8						
QZH				LR	LR		
	comp=Z,96µm,12.9s,MS6.6						
JBP	**Jabalpur**	**30.83**	**321**	⇓iP	**P**	**05 55 43.5**	**+1.2**
JBP				eS	**S**	**06 00 47.4**	**+3.2**
AKL	**Akola**	**31.16**	**314**	eP	**P**	**05 55 46.3**	**+1.1**
AKL				ex	x	05 55 51.6	
	comp=Z,529nm,1.2s						
AKL				iS	**S**	**06 00 49.3**	**-0.1**
JIRN	**Jiri**	**31.18**	**335**	⇓iP	**P**	**05 55 45.8**	**+0.5**
	comp=Z,1µm,1.1s,mb6.7						
LSA	**Lhasa**	**31.32**	**344**	P	**P**	**05 55 46.6**	**+0.1**
LSA				AP	pP	05 55 55.2	-0.1
LSA				XP	sP	05 55 58.4	-0.5
LSA				PCP	PcP	05 58 35.5	-4.7
LSA				S	**S**	**06 00 52.2**	**+0.5**
LSA				XS	sS	06 01 10.5	+4.3
LSA				SCP	ScP	06 02 17.3	-4.0
LSA				PCS	PcS	06 02 20.5	-4.1
LSA				SCS	ScS	06 06 15.1	-3.8
LSA				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.6						
LSA				LR	LR		
	comp=E,35µm,20.8s						
LSA				LR	LR		
	comp=Z,44µm,20.8s,MS6.1						
LSA	**Lhasa**	**31.32**	**344**	eP	**P**	**05 55 46.6**	**+0.1**
	comp=Z,131nm,1.0s,mb5.7						
LSA				e	pP	05 55 56.2	+1.0
LSA				ePcP	PcP	05 58 41.1	+0.9
LSA				eS	**S**	**06 00 52.8**	**+1.1**
LSA				LR	LR		
	comp=Z,38µm,21.0s,MS6.0						
LSA	**Lhasa**	**31.32**	**344**	eP	**P**	**05 55 46.6**	**+0.1**
LSA				e	pP	05 55 56.3	+1.0
LSA				e		05 58 41.1	
LSA				eS	**S**	**06 00 52.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,131nm,1.0s,mb5.7						
LSA				MLR	MLR		
	comp=Z,38µm,21.0s,MS6.0						
KAD	**Karad**	**31.36**	**306**	eP	**P**	**05 55 47.5**	**+0.5**
KAD				eP		05 55 48.0	
KAD				AMb	AMB	05 55 52.8	
	comp=Z,273nm,1.5s,mb5.8						
CD2	**Chengdu**	**31.39**	**5**	⇑iP	**P**	**05 55 45.8**	**-1.3**
CD2				AP	pP	05 55 55.1	-0.8
CD2				XP	sP	05 55 59.3	-0.2
CD2				PP	PP	05 56 49.3	-9.1
CD2				PCP	PcP	05 58 37.5	-2.9
CD2				S	**S**	**06 00 51.0**	**-1.8**
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.0						
CD2				AMB	AMB		
	comp=Z,580nm,12.0s						
CD2				LR	LR		
	comp=N,56µm,13.2s,MS6.7						
CD2				LR	LR		
	comp=E,76µm,12.0s,MS6.7						
CD2				LR	LR		
	comp=Z,78µm,10.8s,MS6.6						
KKN	**Kakani**	**31.69**	**334**	⇓iP	**P**	**05 55 49.8**	**+0.1**
	comp=Z,1µm,1.0s,mb6.6						
KKN	**Kakani**	**31.69**	**334**	⇓iP	**P**	**05 55 49.8**	**+0.1**
KKN				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.6						
ENH	**Enshi**	**31.78**	**15**	PFAKE		05 56 00.0	+9.5
ENH				LR	LR		
	comp=Z,3.0nm,21.0s						
NACB	**Ninganchiao**	**31.96**	**38**	eP	**P**	**05 55 53.9**	**+1.7**
	comp=Z,198nm,1.1s,mb5.9						
GKN	**Gorkha**	**32.16**	**333**	⇓iP	**P**	**05 55 53.9**	**0.0**
	comp=Z,1µm,1.1s,mb6.7						
YHNB	**Yeheng**	**32.19**	**38**	eP	**P**	**05 55 55.4**	**+1.2**
	comp=Z,658nm,1.6s,mb6.2						
POO	**Poona**	**32.28**	**307**	⇓iP	**P**	**05 55 55.0**	**-0.1**
	comp=Z,472nm,1.3s,mb6.2						

POO *e*P 05 55 55.3
POO AMb AMB 05 56 00.7
comp=Z,240nm,1.2s,mb5.9
POO *e*PCS PcS 06 02 26.0 -2.2
TATO Taipei 32.48 37 PFAKE 05 56 10.0 +13
TATO LR LR
comp=Z,26µm,21.0s,MS5.9
BHPL Bhopal 32.55 318 *e*P **P** **05 55 57.5 +0.2**
BHPL AMb AMB 05 55 59.9
comp=Z,359nm,1.2s,mb6.2
TLE Tual 32.61 100 P **P** **05 56 04.1 +6.1**
comp=Z,1µm,1.2s,mb6.7
DANN Dangsing 32.86 332 ⇓*i*P **P** **05 56 00.5 +0.5**
WHN Wuhan 33.58 22 P **P** **05 56 06.9 +0.7**
WHN AP pP 05 56 15.6 +0.5
WHN XP sP 05 56 20.1 +1.4
WHN PP PP 05 57 20.1 -2.5
WHN AMB AMB
comp=Z,59nm,0.8s,mb5.6
WHN AMB AMB
comp=Z,3µm,8.2s
WHN LR LR
comp=Z,170µm,12.6s,MS7.0
MUN Mundaring 34.66 156 *e*P **P** **05 56 15.5 -0.1**
MUN *i* S **S** **06 01 46.2 +2.7**
KLBR Kellerberrin 34.98 154 ⇑*i*P **P** **05 56 17.3 -1.1**
comp=Z,73nm,1.0s,mb5.6
XAN Xi'an 35.26 12 P **P** **05 56 19.0 -1.8**
XAN PP PP 05 57 45.1 +3.9
XAN S **S** **06 01 47.4 -5.3**
XAN AMB AMB
comp=Z,52nm,1.1s,mb5.4
XAN LR LR
comp=N,14µm,14.4s,MS6.7
XAN LR LR
comp=E,93µm,16.6s,MS6.7
XAN LR LR
comp=Z,75µm,15.3s,MS6.6
LGTI Lohaghat 35.50 329 *e*P **P** **05 56 21.2 -1.7**
LGTI *ex* x 05 57 42.8
PTH Pithoragarh 35.59 329 *e*P **P** **05 56 24.9 +1.2**
NWAO Narrogin (SRO) 35.91 156 *e*P **P** **05 56 25.7 -0.7**
comp=Z,107nm,1.0s,mb5.7
NWAO LR LR
comp=Z,73µm,22.0s,MS6.4
NWAO Narrogin (SRO) 35.91 156 P **P** **05 56 23.9 -2.4**
NWAO S **S** **06 02 03.6 +0.9**
NWAO pmax pmax
comp=Z,24nm,0.9s
NWAO smax
comp=N,7.0nm,0.9s
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P pP 05 56 34.4 -0.8
SNR=9.9
NWAO Narrogin (SRO) 35.91 156 P **P** **05 56 23.9 -2.4**
comp=N,24nm,0.9s,mb5.1,baz=320,slow=11,SNR=8.6
NWAO S **S** **06 02 03.6 +0.9**
comp=N,6.5nm,0.9s,baz=210,slow=20,SNR=3.3
LZH Lanzhou 36.54 5 ⇓P **P** **05 56 30.4 -1.3**
LZH AP pP 05 56 38.6 -1.9
LZH XP sP 05 56 42.1 -2.1
LZH PP PP 05 57 56.1 +0.9
LZH S **S** **06 02 10.2 -2.0**
LZH XS sS 06 02 27.2 +0.4
LZH SS SS 06 04 39.7 -13
LZH AMB AMB
comp=Z,243nm,1.6s,mb5.8
LZH AMB AMB
comp=Z,752nm,4.7s
LZH LR LR
comp=E,56µm,12.8s
LZH LR LR
comp=Z,76µm,18.0s
LZH Lanzhou 36.54 5 ⇓P **P** **05 56 30.4 -1.3**
comp=Z,243nm,1.6s,mb5.8
LZH pP pP 05 56 38.6 -1.9
LZH sP sP 05 56 42.1 -2.1
LZH PP PP 05 57 56.1 +0.9
LZH S **S** **06 02 10.2 -2.0**
LZH sS sS 06 02 27.2 +0.4
LZH SS SS 06 04 39.7 -13
LZH LR LR
comp=Z,76µm,18.0s,MS6.5
LZH Lanzhou 36.54 5 ⇓P **P** **05 56 30.4 -1.3**
LZH *SP sP 05 56 42.1 -2.1
LZH 05 57 56.1
LZH S **S** **06 02 10.2 -2.0**
LZH *SS sS 06 02 27.2 +0.4
LZH SS SS 06 04 39.7 -13
NDI New Delhi 36.58 324 *e*P **P** **05 56 31.8 -0.4**
NDI *ex* x 06 02 10.0
AJM Ajmer 36.60 319 *e*P **P** **05 56 32.0 -0.3**
AJM *e*P 05 56 32.5
AJM AMb AMB 05 56 39.8
comp=Z,391nm,1.9s,mb5.9
NJ2 Nanjing 36.75 27 *e*P **P** **05 56 34.2 +0.6**
NJ2 AP pP 05 56 44.6 +2.2
NJ2 XP sP 05 56 47.2 +1.1
NJ2 PP PP 05 57 57.2 -0.5
NJ2 S **S** **06 02 19.0 +3.4**
NJ2 XS sS 06 02 34.5 +4.3
NJ2 AMB AMB
comp=Z,40nm,0.8s,mb5.3
NJ2 AMB AMB
comp=Z,880nm,5.7s
NJ2 LR LR
comp=N,101µm,17.8s,MS6.8
NJ2 LR LR
comp=E,124µm,18.2s,MS6.8
NJ2 LR LR
comp=Z,124µm,18.2s,MS6.7
SSE Sheshan 37.07 30 *e*P **P** **05 56 35.3 -1.0**
SSE XP sP 05 56 48.2 -0.6
SSE PP PP 05 58 02.5 +1.3
SSE PCP PcP 05 58 55.7 -0.9
SSE S **S** **06 02 20.0 -0.5**
SSE XS sS 06 02 36.1 +1.0
SSE AMB AMB
comp=Z,84nm,0.9s,mb5.6
SSE AMB AMB
comp=Z,835nm,10.8s
SSE LR LR
comp=N,18µm,15.8s,MS6.5
SSE LR LR
comp=E,60µm,15.7s,MS6.5
SSE LR LR
comp=Z,52µm,11.6s,MS6.6
SSE Sheshan 37.07 30 *e*P **P** **05 56 35.3 -1.0**
comp=Z,84nm,0.9s,mb5.6
SSE sP sP 05 56 48.2 -0.6
SSE PP PP 05 58 02.5 +1.3
SSE PcP PcP 05 58 55.7 -0.9
SSE S **S** **06 02 20.0 -0.5**
SSE sS sS 06 02 36.1 +1.0
SSE ScS ScS 06 06 51.9 +2.7
SSE LR LR
comp=Z,52µm,11.6s,MS6.6
DDI Dehra Dun 37.35 327 *e*P **P** **05 56 38.8 +0.1**
BHJ Bhuj 38.15 310 ⇓*e*P **P** **05 56 44.2 -1.3**
BHJ *e*P 05 56 47.3
BHJ AMb AMB 05 56 52.5
comp=Z,449nm,1.2s,mb6.1
BHJ *e*S **S** **06 02 40.3 +3.2**
BHJ *ex* x 06 13 01.8
WRA Warramunga Arr 38.36 122 P **P** **05 56 43.7 -3.7**
WRA S **S** **06 02 30.8 -10**
WRA pmax pmax
comp=Z,45nm,0.9s
WRA smax
comp=N,8.0nm,1.1s
WRA MLR MLR
comp=Z,21µm,18.8s
WRA Warramunga Arr 38.36 122 P **P** **05 56 43.7 -3.7**
comp=Z,45nm,0.9s,mb5.2,baz=303,slow=8.9,SNR=72
WRA S **S** **06 02 30.8 -10**
comp=Z,8.4nm,1.1s,baz=286,slow=18,SNR=2.6
WRA LR LR 06 16 06.4
comp=Z,21µm,18.8s,MS6.0,baz=290,slow=42
WB2 Warramunga Arr 38.37 122 ⇑*i*P **P** **05 56 43.5 -4.0**
WB2 *e*S S 06 02 19.0 -22
SDNR Sundarnagar 38.85 327 *ex* x 05 56 57.0
SDNR *e*S **S** **06 02 49.6 +2.1**
TIY Taiyuan 39.60 15 P **P** **05 56 59.2 +1.7**
TIY PP PP 05 58 29.3 +0.5
TIY S **S** **06 02 59.6 +1.1**
TIY AMB AMB
comp=Z,924nm,6.5s
TIY LR LR
comp=N,83µm,15.3s,MS6.8
TIY LR LR
comp=E,58µm,11.7s,MS6.8
TIY LR LR
comp=Z,64µm,13.9s,MS6.6
TIA Tai'an 39.67 21 *e*P **P** **05 56 57.8 -0.3**
TIA S **S** **06 02 59.6 -0.1**
TIA LR LR
comp=N,17µm,12.0s,MS6.5
TIA LR LR
comp=E,35µm,11.0s,MS6.5
GTA Gaotai 39.72 359 *e*P **P** **05 56 57.0 -1.5**
GTA AP pP 05 57 05.9 -1.5
GTA XP sP 05 57 10.0 -1.0
GTA PP PP 05 58 33.2 +3.1
GTA PCP PcP 05 59 03.4 -1.3
GTA SCP ScP 06 02 48.8 -2.8
GTA PCS PcS 06 02 52.3 -2.4
GTA S **S** **06 02 59.1 -1.2**
GTA XS sS 06 03 15.4 +0.3
GTA SCS ScS 06 06 59.9 -4.3
GTA AMB AMB
comp=Z,25nm,1.3s,mb4.8
GTA AMB AMB
comp=Z,2µm,7.6s
GTA LR LR
comp=N,34µm,18.2s,MS6.4
GTA LR LR
comp=E,47µm,19.8s,MS6.4
GTA LR LR
comp=Z,49µm,19.0s,MS6.4
ASAR Alice Springs 39.77 128 P **P** **05 56 55.8 -3.3**
ASAR 05 59 04.8
ASAR S **S** **06 02 51.6 -10**
ASAR 06 07 04.1
ASAR pmax pmax
comp=Z,60nm,0.9s
ASAR smax
comp=N,10.0nm,1.1s
ASAR Alice Springs 39.77 128 P **P** **05 56 55.8 -3.3**
comp=N,60nm,0.9s,mb5.3,baz=300,slow=7.6,SNR=125
ASAR PcP PcP 05 59 04.8 -0.4
comp=N,16nm,0.8s,baz=299,slow=3.4,SNR=6.4
ASAR S **S** **06 02 51.5 -10**
comp=N,10nm,1.1s,baz=287,slow=17,SNR=6.0
ASAR ScS ScS 06 07 04.0 -1.0
comp=N,0.9nm,1.0s,baz=300,slow=7.3,SNR=4.4
ASAR PKPPKP 06 29 07.2
comp=N,0.9nm,0.8s,baz=147,slow=2.2,SNR=4.8
FORT Forrest 39.90 142 ⇑*i*P **P** **05 56 58.8 -1.3**
comp=N,536nm,0.8s,mb6.3
DLH Dalhousie 40.19 327 *e*P **P** **05 57 02.0 -0.5**
THN Thein Dam 40.25 327 *e*P **P** **05 57 02.2 -0.8**
BTO Baotou 41.83 11 *e*P **P** **05 57 15.7 -0.1**
BTO S **S** **06 03 33.5 +1.9**
HHC Hu-ho-hao-te 42.37 13 *e*P **P** **05 57 19.1 -1.2**
HHC AP pP 05 57 29.1 -0.2
HHC XP sP 05 57 33.0 +0.1
HHC PP PP 05 59 04.6 +5.7
HHC PCP PcP 05 59 11.9 -1.4
HHC SCP ScP 06 02 57.7 -4.4
HHC PCS PcS 06 03 02.5 -2.6
HHC S **S** **06 03 39.4 -0.3**
HHC XS sS 06 03 56.0 +1.5
HHC SS SS 06 06 42.8 -6.6
HHC SCS ScS 06 07 15.8 -4.3
HHC AMB AMB
comp=Z,27nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,1µm,5.1s
HHC LR LR
comp=N,54µm,19.0s,MS6.9
HHC LR LR
comp=E,131µm,16.6s,MS6.9
HHC LR LR
comp=Z,48µm,15.5s,MS6.5
BJT Baijiatuau 42.80 18 *e*P **P** **05 57 23.4 -0.4**
comp=Z,143nm,1.1s,mb5.6
BJT LR LR
comp=Z,54µm,19.0s,MS6.5
BJT Baijiatuau 42.80 18 *e*P **P** **05 57 23.4 -0.3**
BJT pmax pmax
comp=Z,143nm,1.1s
BJT MLR MLR
comp=Z,54µm,19.0s
BJI Beijing 42.82 18 P **P** **05 57 23.7 -0.2**
BJI XP sP 05 57 32.9 -3.6
BJI PP PP 05 59 05.3 +1.6
BJI PCP PcP 05 59 11.1 -3.7
BJI SCP ScP 06 02 59.3 -4.6
BJI S **S** **06 03 51.3 +5.0**
BJI AMB AMB
comp=Z,121nm,1.1s,mb5.5
BJI LR LR
comp=N,40µm,18.5s,MS6.7
BJI LR LR
comp=E,90µm,19.1s,MS6.7
BJI LR LR
comp=Z,37µm,20.9s,MS6.3
BJI Beijing 42.82 18 P **P** **05 57 23.7 -0.2**
comp=Z,121nm,1.1s,mb5.5
BJI sP sP 05 57 32.9 -3.6
BJI PP PP 05 59 05.3 +1.6
BJI PcP PcP 05 59 11.1 -3.7
BJI ScP ScP 06 02 59.3 -4.6
BJI S **S** **06 03 51.3 +5.0**
BJI SS SS 06 07 09.7 +11
BJI LR LR
comp=Z,37µm,20.9s,MS6.3
DL2 Dalian 43.76 24 P **P** **05 57 31.9 +0.3**
DL2 PP PP 05 59 21.1 +7.3
DL2 S **S** **06 04 01.3 +1.1**
DL2 AMB AMB
comp=Z,70nm,1.0s,mb5.3
DL2 AMB AMB
comp=Z,560nm,5.7s
DL2 LR LR
comp=N,13µm,18.2s,MS6.2
DL2 LR LR
comp=E,24µm,16.0s,MS6.2
DL2 LR LR
comp=Z,20µm,14.3s,MS6.2
COEN Coen 44.31 110 *e*P **P** **05 57 34.4 -2.0**
comp=Z,15nm,1.1s
COEN *e*PP PP 05 59 22.3 +2.2
INCN Inchon 44.87 30 P **P** **05 57 38.3 -2.1**
comp=Z,51nm,0.8s,mb5.4
INCN LR LR
comp=Z,20µm,19.0s,MS6.1
KSRS Korea Array 45.50 31 P **P** **05 57 43.8 -1.6**
comp=Z,60nm,0.8s,mb5.5,baz=223,slow=8.5,SNR=33
KSRS PcP PcP 05 59 24.7 +0.7
comp=Z,13nm,0.8s,baz=224,slow=3.0,SNR=3.8
WMQ Urumqi 45.58 347 ⇑*i*P **P** **05 57 45.5 -0.5**
WMQ AP pP 05 57 55.5 +0.5
WMQ XP sP 05 57 59.6 +1.0
WMQ PCP PcP 05 59 24.0 -0.2
WMQ PP PP 05 59 33.0 -0.1
WMQ S **S** **06 04 25.0 -1.4**
WMQ SS SS 06 07 40.5 -10
WMQ AMB AMB
comp=Z,293nm,1.1s,mb6.1
WMQ AMB AMB
comp=Z,2µm,3.5s
WMQ LR LR
comp=N,24µm,21.2s,MS6.3
WMQ LR LR
comp=E,29µm,23.0s,MS6.3
WMQ LR LR
comp=Z,20µm,19.5s,MS6.1
KBL Kabul 45.62 323 *e*P **P** **05 57 46.0 -0.4**
comp=Z,79nm,0.7s,mb5.8
KBL *e* pP 05 57 53.9 -1.5
KSH Kashi 45.70 333 *i* P **P** **05 57 47.5 +0.5**
KSH *e*AP pP 05 57 53.3 -2.8
KSH XP sP 05 57 56.5 -3.2
KSH *e*PCP PcP 05 59 26.4 +1.7
KSH PP PP 05 59 34.5 0.0
KSH S **S** **06 04 26.7 -1.6**
KSH SS SS 06 07 43.0 -10
KSH AMB AMB
comp=Z,6µm,3.3s
KSH LR LR
comp=N,26µm,13.5s,MS6.9
KSH LR LR
comp=E,103µm,17.9s,MS6.9
KSH LR LR
comp=Z,75µm,26.4s
GUMO Guam 46.15 71 PFAKE 05 58 00.0 +9.0
GUMO LR LR
comp=Z,8µm,19.0s,MS5.7
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
WBK Wadi Bani Khal 46.47 302 P **P** **05 57 54.9 +1.5**
SNR=123
SNY Shenyang 47.03 24 ⇑P **P** **05 57 56.7 -0.7**
SNY AP pP 05 58 03.9 -2.6
SNY XP sP 05 58 06.6 -3.5
SNY PP PP 05 59 45.1 -3.3
SNY S **S** **06 04 48.9 +1.7**
SNY SS SS 06 08 08.5 -6.1
SNY AMB AMB
comp=Z,48nm,1.3s,mb5.3
SNY AMB AMB
comp=Z,987nm,5.0s
SNY LR LR
comp=N,26µm,12.9s,MS6.7
SNY LR LR
comp=E,56µm,13.7s,MS6.7
SNY LR LR
comp=Z,31µm,20.4s
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
JMDO Jabal Madar 47.11 302 P **P** **05 57 59.2 +0.8**
SNR=109
PMG Port Moresby 47.29 102 *e*P **P** **05 57 58.9 -1.0**
comp=Z,118nm,1.2s,mb5.7
PMG LR LR
comp=Z,13µm,20.0s,MS5.9
PMG Port Moresby 47.29 102 *e*P **P** **05 57 58.9 -1.0**
PMG pmax pmax
comp=Z,118nm,1.2s
PMG MLR MLR
comp=Z,13µm,20.0s
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
SMDO Samad 47.43 302 P **P** **05 58 01.6 +0.7**
SNR=71
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
BIDO Bidbid 47.55 303 P **P** **05 58 03.0 +1.2**
SNR=78
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
SHAO Shalim 47.78 295 P **P** **05 58 05.4 +1.7**
SNR=31
ULHL Ulahol 47.84 336 P **P** **05 58 03.9 +0.2**
SNR=59
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
BSY Bisya 48.03 302 P **P** **05 58 06.6 +1.1**
SNR=122
KZA Kyzart 48.11 335 P **P** **05 58 06.5 +0.7**
SNR=296
HOQ Hoqain 48.26 303 P **P** **05 58 08.6 +1.3**

SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
HOQ Hoqain 48.26 303 P P 05 58 08.6 +1.3
SNR=76
AAA Alma-Ata 48.41 337 *e*P P 05 58 08.5 +0.4
AAA *e*S S 06 05 11.0 +4.1
AAA pmax pmax
comp=Z,5µm,5.0s
AAA smax
comp=E,11µm,8.5s
AAA MLR MLR
comp=Z,17µm,15.5s,MS6.1
SONM Songino Array 48.42 5 P P 05 58 06.5 -1.5
SONM 05 59 32.5
SONM pmax pmax
comp=Z,28nm,1.0s
SONM Songino Array 48.42 5 P P 05 58 06.5 -1.5
comp=Z,28nm,1.0s,mb5.2,baz=188,slow=7.2,SNR=53
SONM PcP PcP 05 59 32.5 -1.6
comp=Z,31nm,0.9s,baz=172,slow=3.6,SNR=2.2
SONM ScP ScP 06 03 26.4 -0.5
comp=Z,11nm,1.0s,baz=208,slow=4.0,SNR=4.5
SONM PKPPKP 06 28 52.7
comp=Z,2.5nm,1.3s,baz=319,slow=1.0,SNR=5.5
UCH Uchtor 48.55 334 PFAKE 05 58 20.0 +11
UCH LR LR
comp=Z,22µm,20.0s,MS6.1
UCH Uchtor 48.55 334 P P 05 58 10.0 +0.8
SNR=238
TKM2 Tokmak 2 48.66 336⇓ *i*P P 05 58 10.1 +0.1
TKM2 LR LR
comp=Z,24µm,21.0s,MS6.2
TKM2 Tokmak 2 48.66 336 P P 05 58 10.1 +0.1
SNR=421
KBK Karagaybulak 48.72 335 P P 05 58 11.1 +0.7
SNR=123
CTA Charters Tower 48.82 116 *e*P P 05 58 09.0 -2.6
comp=Z,50nm,1.1s,mb5.5
CTA *e*S S 06 05 00.4 -13
CTA Charters Tower 48.82 116 *e*P P 05 58 09.0 -2.6
CTA pmax pmax
comp=Z,50nm,1.1s
CTAO Charters Tower 48.82 116 *e*P P 05 58 10.4 -1.3
comp=Z,121nm,1.2s,mb5.8
CTAO LR LR
comp=Z,21µm,21.0s,MS6.1
CTAO Charters Tower 48.82 116 *e*P P 05 58 10.4 -1.2
CTAO pmax pmax
comp=Z,121nm,1.2s,mb5.8
CTAO MLR MLR
comp=Z,21µm,21.0s,MS6.1
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
ARQ Araqi 48.83 302 P P 05 58 12.3 +0.6
SNR=40
AML Almayashu 48.83 334⇓ *i*P P 05 58 12.1 +0.8
AML LR LR
comp=Z,22µm,19.0s,MS6.2
AML Almayashu 48.83 334 P P 05 58 12.7 +1.3
SNR=12
AAK Ala-Archa 48.89 335 *e*P P 05 58 11.2 -0.6
AAK LR LR
comp=Z,31µm,22.0s,MS6.3
AAK Ala-Archa 48.89 335*d i*P P 05 58 11.4 -0.4
AAK pmax pmax
comp=Z,284nm,1.5s,mb6.1
AAK MLR MLR
comp=Z,24µm,19.0s,MS6.2
AAK Ala-Archa 48.89 335 P P 05 58 11.7 -0.1
SNR=129
AAK Ala-Archa 48.89 335 P P 05 58 11.7 -0.1
SNR=129
AAK Ala-Archa 48.89 335 P P 05 58 11.7 -0.1
SNR=129
AAK Ala-Archa 48.89 335 P P 05 58 11.7 -0.1
SNR=129
AAK Ala-Archa 48.89 335 P P 05 58 11.7 -0.1
SNR=129
AAK Ala-Archa 48.89 335 P P 05 58 12.2 +0.4
SNR=108
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
RBK Rabkut 48.93 294 P P 05 58 13.8 +1.3
SNR=59
FRU Bishkek 49.00 335⇓ *i*P P 05 58 12.5 -0.1
FRU *e* 06 05 20.0
FRU pmax pmax
comp=Z,648nm,1.5s,mb6.4
FRU MLR MLR
comp=Z,34µm,23.0s,MS6.3
CHMS Chumysh 49.08 335 P P 05 58 13.2 -0.1
SNR=88
EKS2 Erkin-Say 49.22 334⇓ *i*P P 05 58 15.0 +0.7
EKS2 LR LR
comp=Z,31µm,22.0s,MS6.3
EKS2 Erkin-Say 49.22 334 P P 05 58 14.8 +0.5
SNR=440
USP Ospenovka 49.40 335 P P 05 58 15.6 -0.2
SNR=393
CN2 Changchun 49.43 24⇓ P P 05 58 14.6 -1.3
CN2 *e*XP sP 05 58 26.6 -2.0
CN2 *e*S S 06 05 18.8 -2.4
CN2 *e*SS SS 06 08 47.0 -6.4
CN2 AMB AMB
comp=Z,40nm,1.0s,mb5.4
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,33µm,14.0s,MS6.8
CN2 LR LR
comp=E,54µm,14.0s,MS6.8
CN2 LR LR
comp=Z,28µm,17.0s,MS6.3
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
WHFO Wadi Hawf 49.44 294 P P 05 58 16.7 +0.3
SNR=50
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
ABTO Aybut 49.72 293 P P 05 58 19.5 +1.0
SNR=56
MK31 Makanchi Array 49.73 344 *i*P P 05 58 16.8 -1.3
MKAR Makanchi Array 49.73 344 *i*P P 05 58 16.7 -1.4
MKAR pmax pmax
comp=Z,124nm,0.9s
MKAR Makanchi Array 49.73 344 P P 05 58 16.8 -1.3
comp=Z,124nm,0.9s,mb5.9,baz=148,slow=7.6,SNR=313
MKAR S S 06 05 23.4 -1.7
comp=Z,8.7nm,1.2s,baz=174,slow=13,SNR=3.8
MKAR LR LR 06 24 59.6
comp=Z,13µm,18.9s,MS6.0,baz=159,slow=43
MKAR PKPPKP 06 28 55.5
comp=Z,1.5nm,1.1s,baz=282,slow=2.4,SNR=3.7
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
HATD Hatta, Dubai 49.74 304 P P 05 58 19.9 +1.2
SNR=54
ASHO Ashiyiah 49.75 303 P P 05 58 19.8 +1.1
SNR=41
ASHO Ashiyiah 49.75 303 P P 05 58 19.8 +1.1
SNR=41
ASHO Ashiyiah 49.75 303 P P 05 58 19.8 +1.1
SNR=41
ASHO Ashiyiah 49.75 303 P P 05 58 19.8 +1.1
SNR=41
ASHO Ashiyiah 49.75 303 P P 05 58 19.8 +1.1
SNR=41
STKA Stephens Creek 49.80 133 *e*P P 05 58 16.2 -2.8
comp=Z,74nm,0.8s,mb5.8
STKA *e*P 05 58 16.6
STKA *e*S S 06 05 13.6 -13
STKA Stephens Creek 49.80 133 P P 05 58 16.4 -2.5
comp=Z,53nm,0.9s,mb5.6,baz=308,slow=7.9,SNR=45
BANOM Banah 50.05 305 P P 05 58 26.0 +5.0
SNR=9.3
BANOM Banah 50.05 305 P P 05 58 26.0 +5.0
SNR=9.3
BANOM Banah 50.05 305 P P 05 58 26.0 +5.0
SNR=9.3
BANOM Banah 50.05 305 P P 05 58 26.0 +5.0
SNR=9.3
BANOM Banah 50.05 305 P P 05 58 26.0 +5.0
SNR=9.3
ZAK Zakamensk 50.75 2 *e*P P 05 58 24.0 -1.8
ZAK pmax pmax
comp=Z,15nm,1.5s
MAJO Matsushiro 50.82 39 *e*P P 05 58 27.1 +0.5
comp=Z,439nm,2.4s,mb6.0
MAJO LR LR
comp=Z,16µm,20.0s,MS6.0
MAJO Matsushiro 50.82 39 *e*P P 05 58 27.1 +0.5
MAJO pmax pmax
comp=Z,439nm,2.4s,mb6.0
MAJO MLR MLR
comp=Z,16µm,20.0s,MS6.0
MAT Matsushiro 50.82 39 P P 05 58 26.0 -0.6
MAT S S 06 05 40.0 -0.8
MJAR Matsushiro Arr 50.82 39 P P 05 58 24.9 -1.7
MJAR pmax pmax
comp=Z,17nm,0.9s
MJAR Matsushiro Arr 50.82 39 P P 05 58 24.9 -1.8
comp=Z,17nm,0.9s,mb5.0,baz=223,slow=7.6,SNR=16
KK31 Karatay Array 51.05 332 *i*P P 05 58 27.5 -0.7
KK31 pmax pmax
comp=Z,695nm,1.6s,mb6.3
VLA Vladivostok 51.76 29 P P 05 58 32.0 -1.5
VLA MLR MLR
comp=Z,23µm,12.8s,MS6.4
MDJ Mudanjiang 51.84 26 P P 05 58 34.5 +0.4
MDJ AP pP 05 58 43.5 +0.3
MDJ XP sP 05 58 47.3 +0.5
MDJ PP PP 06 00 32.5 +0.3
MDJ SCP ScP 06 03 41.3 -0.4
MDJ PCS PcS 06 03 45.1 +0.4
MDJ S S 06 05 55.7 +1.1
MDJ XS sS 06 06 11.3 +1.6
MDJ SCS ScS 06 08 22.2 0.0
MDJ SS SS 06 09 35.7 +4.0
MDJ AMB AMB
comp=Z,23nm,1.2s,mb5.0
MDJ AMB AMB
comp=Z,802nm,6.2s
MDJ LR LR
comp=N,32µm,15.9s,MS6.6
MDJ LR LR
comp=E,30µm,16.6s,MS6.6
MDJ LR LR
comp=Z,37µm,17.2s,MS6.5
MDJ Mudanjiang 51.84 26 *e*P P 05 58 33.6 -0.5
comp=Z,28nm,0.8s,mb5.2
MDJ LR LR
comp=Z,32µm,20.0s,MS6.3
MOY Mondy 51.98 0 *e*P P 05 58 39.4 +4.4
TLY Talaya 52.06 3 *e*P P 05 58 34.8 -0.8
TLY LR LR
comp=Z,42µm,19.0s,MS6.5
TLY Talaya 52.06 3 *e*P P 05 58 35.5 -0.1
TLY *e* 06 00 36.3
TLY *e*S S 06 05 54.9 -2.4
TLY pmax pmax
comp=Z,111nm,1.9s,mb5.5
TLY MLR MLR
comp=Z,32µm,15.0s,MS6.5
TLY Talaya 52.06 3 P P 05 58 35.1 -0.4
SNR=19
TLY Talaya 52.06 3 P P 05 58 35.1 -0.4
SNR=19
TLY Talaya 52.06 3 P P 05 58 35.1 -0.4
SNR=19
TLY Talaya 52.06 3 P P 05 58 35.1 -0.4
SNR=19
TLY Talaya 52.06 3 P P 05 58 35.1 -0.4
SNR=19
HIA Hailar 52.28 16 *i*P P 05 58 35.5 -1.8
HIA LR LR
comp=Z,48µm,20.0s,MS6.5
IRK Irkutsk 52.65 3 *e*P P 05 58 40.8 +0.9
IRK *e* 05 59 42.4
IRK *e* 06 06 21.8
IRK *e* 06 08 25.7
IRK pmax pmax
comp=Z,66nm,2.4s,mb5.1
CIT Chita 53.48 10 *e*P P 05 58 45.0 -1.1
CIT *e* 05 59 54.6
CIT *e* 06 00 54.4
CIT *e* 06 06 12.6
CIT *e* 06 08 31.5
KURK Kurchatov 54.32 343 *e*P P 05 58 50.6 -1.6
comp=Z,228nm,0.9s,mb6.1
KURK LR LR
comp=Z,25µm,19.0s,MS6.3
KURK Kurchatov 54.32 343*d i*P P 05 58 51.0 -1.2
KURK Kurchatov 54.32 343 P P 05 58 51.2 -1.0
SNR=88
KURK Kurchatov 54.32 343 P P 05 58 51.2 -1.0
SNR=88
KURK Kurchatov 54.32 343 P P 05 58 51.2 -1.0
SNR=88
KURK Kurchatov 54.32 343 P P 05 58 51.2 -1.0
SNR=88
EIDS Eidsvold 54.70 121 *e*P P 05 58 54.5 -1.0
comp=Z,26nm,1.2s,mb5.1
ZAL Zalesovo 55.79 349 P P 05 59 00.8 -2.0
ZAL S S 06 06 45.7 -2.0
ZAA0 Zalesovo Array 55.80 349⇓ *i*P P 05 59 00.7 -2.1
ZALV Zalesovo Beam 55.80 349 P P 05 59 00.8 -2.1
ZALV S S 06 06 45.6 -2.1
ZALV LR LR 06 25 47.8
ZALV P'P' 06 28 58.5
ZALV Zalesovo Beam 55.80 349 P P 05 59 00.8 -2.1
comp=Z,128nm,0.9s,mb5.9,baz=169,slow=5.5,SNR=260
ZALV S S 06 06 45.6 -2.1
comp=Z,6.1nm,1.0s,baz=148,slow=14,SNR=5.3
ZALV LR LR 06 25 47.8
comp=Z,11µm,19.2s,MS6.0,baz=176,slow=39
ZALV PKPPKP 06 28 58.5
comp=Z,3.4nm,1.1s,baz=273,slow=2.8,SNR=4.7
KLR Kul'dur 56.38 24 *e*P P 05 59 03.2 -3.9
KLR *e*S S 06 06 45.5 -10
LBOS 56.51 287 *e*P P 05 59 10.7 +2.0
LBOS AMb AMB 05 59 11.6
comp=Z,265nm,1.0s,mb6.2
NVS Novosibirsk 56.95 348 *i*P P 05 59 08.4 -2.6
NVS *i*S S 06 07 00.4 -2.7
NVS pmax pmax
comp=Z,89nm,1.5s,mb5.6
NVS pmax pmax
comp=N,28nm,0.7s
NVS pmax pmax
comp=E,17nm,0.8s
NVS smax
comp=N,273nm,2.3s
NVS smax
comp=E,63nm,1.8s
ERM Erimo 57.18 37 PFAKE 05 59 20.0 +7.1
ERM LR LR
comp=Z,17µm,19.0s,MS6.2
HABR Khabarovsk 57.22 27 *e*P P 05 59 09.6 -3.5
HABR *e* 06 00 07.2
HABR *e* 06 01 15.9
HABR *e*S S 06 07 01.5 -5.3
HABR *e* 06 07 19.0
HABR *e* 06 08 58.0
DHBB Dhamar BB 57.45 288 *e*P P 05 59 17.3 +2.0
DHBB AMb AMB 05 59 18.3
comp=Z,400nm,0.9s,mb6.4
TRBA At Turbah 57.49 286 *e*P P 05 59 17.7 +2.1
TRBA AMb AMB 05 59 18.0
comp=Z,50nm,0.6s,mb5.7
QRN Al-Qurain 58.01 305 *e*P P 05 59 18.7 -0.4
QRN AMb AMB 05 59 24.1
comp=Z,420nm,0.8s,mb6.5
QRN Al-Qurain 58.01 305 *e*P P 05 59 18.8 -0.3
QRN AMb AMB 05 59 23.6
comp=Z,410nm,0.8s,mb6.5
KBD Kabd 58.35 305 *e*P P 05 59 21.1 -0.3
KBD AMb AMB 05 59 26.6
comp=Z,1µm,0.9s,mb6.9
KBD Kabd 58.35 305 *e*P P 05 59 21.0 -0.4
KBD AMb AMB 05 59 26.2
comp=Z,1µm,1.0s,mb6.8
RDF Al-Radifah 58.38 305 *e*P P 05 59 21.2 -0.4
RDF AMb AMB 05 59 26.8
comp=Z,439nm,0.9s,mb6.5
RDF Al-Radifah 58.38 305 *e*P P 05 59 21.4 -0.3
RDF AMb AMB 05 59 29.5
comp=Z,664nm,0.9s,mb6.7
UMR Umm Al-Rimmam 58.46 306 *e*P P 05 59 21.7 -0.5
UMR AMb AMB 05 59 27.3
comp=Z,466nm,0.8s,mb6.6
UMR Umm Al-Rimmam 58.46 306 *e*P P 05 59 21.8 -0.4
UMR AMb AMB 05 59 27.4
comp=Z,517nm,0.8s,mb6.6
NAY Al-Naaiem 58.74 305 *e*P P 05 59 23.5 -0.7
NAY AMb AMB 05 59 29.1
comp=Z,240nm,0.8s,mb6.2
NAY Al-Naaiem 58.74 305 *e*P P 05 59 23.8 -0.4
NAY AMb AMB 05 59 31.8
comp=Z,244nm,0.9s,mb6.2
MIB Mutribah 58.86 306 *e*P P 05 59 24.7 -0.3
MIB AMb AMB 05 59 30.2
comp=Z,638nm,0.8s,mb6.7
MIB Mutribah 58.86 306 *e*P P 05 59 24.8 -0.2
MIB AMb AMB 05 59 30.2
comp=Z,618nm,0.8s,mb6.7
BRVK Borovoye 59.02 339 *e*P P 05 59 23.6 -2.0
BRVK LR LR
comp=Z,23µm,19.0s,MS6.3
BRVK Borovoye 59.02 339 P P 05 59 24.2 -1.4
SNR=54
BRVK Borovoye 59.02 339 P P 05 59 24.2 -1.4
SNR=54
BRVK Borovoye 59.02 339 P P 05 59 24.2 -1.4
SNR=54
BRVK Borovoye 59.02 339 P P 05 59 24.2 -1.4
SNR=54
RST Umm Al-Ruwaisa 59.03 305 *e*P P 05 59 25.4 -0.8
RST AMb AMB 05 59 30.9
comp=Z,343nm,0.7s,mb6.5
BOD Bodaibo 59.14 8 *e*P P 05 59 24.6 -1.7
BOD pmax pmax
comp=Z,72nm,1.8s,mb5.4
TAU Tasmania Unive 59.44 142 *e*P P 05 59 28.8 0.0
comp=Z,128nm,1.2s,mb5.8
TAU LR LR
comp=Z,19µm,19.0s,MS6.2
TAU Tasmania Unive 59.44 142 *e*P P 05 59 28.8 +0.1
TAU pmax pmax
comp=Z,128nm,1.2s,mb5.8
TAU MLR MLR
comp=Z,19µm,19.0s,MS6.2
HNR Honiara 59.83 101 PFAKE 05 59 40.0 +8.1
HNR LR LR
comp=Z,9µm,21.0s,MS5.9
YSS Yuzh-Sakhalins 59.97 32 *e*P P 05 59 32.3 0.0
comp=Z,150nm,0.9s,mb6.0
YSS LR LR
comp=Z,15µm,20.0s,MS6.1
YSS Yuzh-Sakhalins 59.97 32⇑ *i*P P 05 59 32.0 -0.3
YSS *e* 06 01 51.0
YSS *e*S S 06 07 38.0 -4.7
YSS *e*PS 06 07 52.0
YSS pmax pmax
comp=Z,160nm,0.9s,mb6.0
YSS MLR MLR
comp=N,16µm,16.0s,MS6.4
YSS MLR MLR
comp=E,14µm,16.0s,MS6.4
YSS MLR MLR
comp=Z,11µm,16.0s,MS6.1
CLNS Chul'man 60.45 15 *e*P P 05 59 38.4 +3.0
CLNS *e* 06 00 24.9
CLNS *e* 06 01 46.7
CLNS *e*S S 06 07 49.1 +0.6
CLNS pmax pmax
comp=N,15nm,0.8s
CLNS pmax pmax
comp=Z,35nm,0.8s,mb5.4
CLNS pmax pmax
comp=E,17nm,0.9s
CLNS smax
comp=N,378nm,12.6s
CLNS smax
comp=Z,925nm,13.5s
CLNS smax
comp=E,900nm,14.9s
CLNS MLR MLR
comp=Z,35µm,13.0s,MS6.7
CLNS MLR MLR
comp=N,10µm,12.0s,MS6.6
CLNS MLR MLR
comp=E,30µm,16.0s,MS6.6
AB31 Akbulak array 60.57 331 *i*P P 05 59 35.2 -1.1
FURI Furi 62.25 280 *e*P P 05 59 50.3 +1.9
FURI *e*S S 06 08 23.7 +11
AKTO Aktyubinsk 62.28 331 LR LR 06 33 38.9
comp=E,16µm,18.7s,MS6.2,baz=344,slow=43
KMBO Kilima Mbogo 63.22 269 *e*P P 05 59 55.7 +0.9
KMBO LR LR
comp=Z,12µm,21.0s,MS6.0
KMBO Kilima Mbogo 63.22 269 *i*P P 05 59 56.5 +1.6
KMBO pmax pmax
comp=Z,26nm,1.0s
KMBO Kilima Mbogo 63.22 269 P P 05 59 56.8 +2.0
SNR=36
KMBO Kilima Mbogo 63.22 269 P P 05 59 56.8 +2.0
SNR=36
KMBO Kilima Mbogo 63.22 269 P P 05 59 56.8 +2.0
SNR=36
KMBO Kilima Mbogo 63.22 269 P P 05 59 55.5 +0.6
comp=Z,26nm,1.0s,mb5.3,baz=54,slow=8.8,SNR=30
KMBO S S 06 08 32.4 +7.3
comp=Z,1.0nm,0.2s,baz=59,slow=19,SNR=3.2
KMBO LR LR 06 26 00.1
comp=Z,11µm,19.0s,MS6.1,baz=87,slow=35
MAK Makhachkala 64.14 319 *e*P P 05 59 58.3 -2.1
MAK *e* 06 00 36.6
MAK *i* 06 02 26.5
MAK *e*S S 06 08 32.5 -3.0
MAK *e* 06 09 51.5
MAK *e*SS SS 06 12 45.8 +0.7
MAK pmax pmax

comp=Z,355nm,1.2s,mb6.3
CUKT Cukurca 64.47 312 *e*P **P** **06 00 02.4 -0.3**
HKR Hakkari 64.50 313 *e*P **P** **06 00 02.7 -0.1**
DGRG David-gareji 64.89 317 P **P** **06 00 06.1 +0.8**
DGRG S **S** **06 08 44.3 -0.6**
VANB Van 65.14 314 *e*P **P** **06 00 09.0 +2.0**
MTA Mtatsminda 65.39 317 P **P** **06 00 08.7 +0.2**
MTA S S 06 08 48.2 -2.8
SIRT Sirnak 65.43 312 *e*P **P** **06 00 10.4 +1.5**
TBLG Delisi 65.44 317 P **P** **06 00 09.1 +0.2**
SVE Sverdlovsk 65.49 337‖ *e*P **P** **06 00 08.5 -0.4**
SVE *e* 06 02 31.1
SVE *e*S S 06 08 55.8 +4.2
SVE *e*SS SS 06 12 59.9 -5.7
SVE MLR MLR
comp=Z,39μm,25.0s,MS6.5
AGRB Hanur-Agry 65.80 314 *e*P **P** **06 00 10.9 -0.3**
DIGO Kars 65.85 315 *i* P **P** **06 00 11.9 +0.4**
TUTA Tutak 65.86 314 *i* P **P** **06 00 13.1 +1.4**
CASY Casey 66.03 176 PFAKE 06 00 20.0 +7.8
CASY LR LR
comp=Z,13μm,20.0s,MS6.2
ARU Arti 66.03 336 *e*P **P** **06 00 10.6 -1.8**
comp=Z,207nm,1.0s,mb6.1
ARU LR LR
comp=Z,40μm,22.0s,MS6.6
ARU Arti 66.03 336*d* *i*P **P** **06 00 11.0 -1.4**
ARU 06 00 42.9
ARU *e* 06 02 33.2
ARU *e*S S 06 08 53.4 -4.9
ARU *e* 06 10 04.3
ARU *e*SS SS 06 13 07.1 -7.0
ARU pmax pmax
comp=Z,315nm,1.7s,mb6.1
ARU MLR MLR
comp=Z,45μm,24.0s,MS6.6
KARS Kars 66.13 315 *e*P **P** **06 00 14.4 +1.1**
YAK Yakutsk 66.18 15 *e*P **P** **06 00 11.8 -1.4**
comp=Z,133nm,1.2s,mb5.8
YAK LR LR
comp=Z,17μm,21.0s,MS6.2
YAK Yakutsk 66.18 15 *e*P **P** **06 00 15.1 +1.9**
YAK *e**PP pP 06 00 24.2 +1.6
YAK *e* 06 00 47.4
YAK *e* 06 02 37.3
YAK *e*PPP 06 04 09.8
YAK *e*S S 06 08 56.5 -3.4
YAK *e**SS sS 06 09 12.1 -3.2
YAK *i* 06 10 01.1
YAK *i* SS SS 06 13 16.1 -0.1
YAK pmax pmax
comp=Z,39nm,0.7s,mb5.5
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=E,14nm,1.5s
YAK smax
comp=E,566nm,6.0s
YAK smax
comp=N,300nm,5.3s
YAK MLR MLR
comp=Z,29μm,16.0s,MS6.6
YAK MLR MLR
comp=N,25μm,15.0s,MS6.7
YAK MLR MLR
comp=E,19μm,14.0s,MS6.7
BTMT Batman 66.38 313 *e*P **P** **06 00 14.7 -0.3**
ZEI Tsey 66.44 318 *e*P **P** **06 00 15.9 +0.6**
ZEI *e**PP pP 06 00 25.2 +0.5
ZEI *e* 06 00 45.3
ZEI *e* 06 02 40.6
ZEI *e*S S 06 09 05.3 +1.6
ZEI pmax pmax
comp=Z,144nm,1.0s,mb6.0
ZEI smax
comp=N,168nm,2.6s
MARD Mardin 66.61 311 *i* P **P** **06 00 17.0 +0.5**
ONI Oni 66.66 318 P **P** **06 00 17.3 +0.6**
ONI S S 06 09 01.9 -4.6
ERZM Erzurum 67.08 314 *i* P **P** **06 00 20.6 +1.1**
EZM Erzurum 67.09 314 *e*P **P** **06 00 20.5 +1.0**
ARTV Artvin 67.16 316‖ *i*P **P** **06 00 20.2 +0.3**
ARTV Artvin 67.16 316‖ *i*P **P** **06 00 23.2 +3.2**
DIV Diyarbakir 67.22 312 *e*P **P** **06 00 20.5 +0.2**
BINT Bingol 67.36 313 *e*P **P** **06 00 20.1 -1.1**
BCA Borcka 67.47 316 *e*P **P** **06 00 20.8 -1.1**
KIV Kislovodsk 67.73 319 *e*P **P** **06 00 23.3 -0.1**
KIV LR LR
comp=Z,9μm,21.0s,MS6.0
KIV Kislovodsk 67.73 319*d* *i*P **P** **06 00 23.4 -0.1**
KIV *e* 06 00 52.4
KIV *e*S S 06 09 15.7 -3.6
KIV *e*SS SS 06 13 39.8 -1.1
KIV pmax pmax
comp=Z,62nm,4.8s
KIV pmax pmax
comp=Z,254nm,1.0s,mb6.2
KIV MLR MLR
comp=Z,7μm,19.0s,MS5.9
KIV Kislovodsk 67.73 319 P **P** **06 00 23.8 +0.4**
SNR=52
KIV Kislovodsk 67.73 319 P **P** **06 00 23.8 +0.4**
SNR=52
KIV Kislovodsk 67.73 319 P **P** **06 00 23.8 +0.4**
SNR=52
ASF Jabal al Asfar 68.11 305 P **P** **06 00 26.8 +0.7**
ASF S S 06 09 28.4 +4.1
ASF pmax pmax
comp=Z,77nm,1.1s
ASF smax
comp=N,4.0nm,1.1s
ASF MLR MLR
comp=Z,11μm,18.7s
ASF Jabal al Asfar 68.11 305 P **P** **06 00 26.8 +0.7**
comp=Z,77nm,1.1s,mb5.7,baz=356,slow=2.2,SNR=21
ASF S S 06 09 28.4 +4.1
comp=Z,3.9nm,1.1s,baz=323,slow=20,SNR=2.4
ASF LR LR 06 33 45.6
comp=Z,11μm,18.7s,MS6.1,baz=321,slow=39
URFA Urfa 68.12 311 *e*P **P** **06 00 26.5 +0.4**
EZC Erzincan 68.15 314 *e*P **P** **06 00 28.9 +2.7**
PTK Pertek 68.17 313 *e*P **P** **06 00 26.5 +0.2**
ELZG Elazig 68.34 312 *i* P **P** **06 00 28.1 +0.7**
ATAB Bozova 68.53 311 *i* P **P** **06 00 29.6 +1.0**
MACK Trabzon 68.59 315 *i* P **P** **06 00 31.2 +2.3**
KTUT Trabzon 68.61 315 *e*P **P** **06 00 29.3 +0.3**
GUMT Gumushane 68.63 314 *e*P **P** **06 00 29.5 +0.3**
MALT Malatya 68.69 312 *e*P **P** **06 00 29.8 +0.2**
MALT Malatya 68.69 312 *e*P **P** **06 00 30.1 +0.5**
MALT Malatya 68.69 312‖ *i*P **P** **06 00 30.3 +0.7**
MYA Malatya 68.70 312 *e*P **P** **06 00 30.4 +0.7**
SOKR Solikamsk 68.86 338*d* *i*P **P** **06 00 29.2 -1.0**
SOKR S S 06 09 31.5 -0.6
SOKR pmax pmax
comp=Z,140nm,1.0s,mb5.8
SOKR MLR MLR
comp=Z,43μm,24.0s,MS6.6
GZT Gaziantep 69.05 311 *i* P **P** **06 00 32.4 +0.6**
MRKH Merkhyat 69.10 287 *e*P **P** **06 00 32.6 +0.1**
MRKH AMb AMB 06 00 39.6
comp=Z,180nm,1.4s,mb5.8
EIL Elat 69.13 302 P **P** **06 00 32.9 +0.4**
comp=Z,141nm,0.8s,mb5.9,baz=101,slow=1.3,SNR=29
EIL S S 06 09 41.5 +5.1
comp=Z,1.6nm,0.5s,baz=156,slow=20,SNR=2.7
EIL LR LR 06 30 10.5
comp=Z,26μm,20.9s,MS6.4,baz=100,slow=35
GAZ Gaziantep 69.26 310 *e*P **P** **06 00 33.6 +0.4**
ESPY Espiye-Giresun 69.33 314 *e*P **P** **06 00 32.6 -0.9**
RCY Rachaya 69.33 306 *e*P **P** **06 00 34.4 +0.7**
SKR Severo-Kuril's 69.37 34 *e*P **P** **06 00 37.1 +3.5**
SKR *e* 06 00 55.0
SKR *e*S S 06 09 39.0 +0.5
SKR *e* 06 10 15.0
SKR *e*SSS 06 17 08.0
SKR pmax pmax
comp=Z,160nm,0.9s,mb6.0
SKR pmax pmax
comp=Z,2μm,8.0s
SKR pmax pmax
comp=E,4μm,18.0s
SKR MLR MLR
comp=N,10μm,18.0s,MS6.2
SKR MLR MLR
comp=E,5μm,18.0s,MS6.2
SKR MLR MLR
comp=Z,10μm,18.0s,MS6.1
MMAI Mount Meron Ar 69.55 306 P **P** **06 00 35.4 +0.3**
comp=Z,57nm,0.7s,mb5.6,baz=99,slow=9.5,SNR=20
MMAI S S 06 09 46.1 +4.8
comp=Z,5.0nm,0.8s,baz=315,slow=55,SNR=2.5
MMAI LR LR 06 34 45.1
comp=Z,11μm,20.1s,MS6.1,baz=100,slow=39
BHL Bhannes 69.57 307 *e*P **P** **06 00 36.2 +1.0**
SOC Sochi 69.57 317 *i* P **P** **06 00 34.5 -0.5**
SOC Sochi 69.57 317*d* *i*P **P** **06 00 34.2 -0.8**
SOC *e**PP pP 06 00 44.9 +0.5
SOC *e**SP sP 06 00 47.8 -0.1
SOC *e* 06 00 56.9
SOC *e* 06 03 07.1
SOC *e*PPP 06 04 53.9
SOC *e*S S 06 09 39.1 -2.1
SOC *e* 06 10 32.4
SOC *e*SS SS 06 14 10.2 +0.8
SOC pmax pmax
comp=Z,235nm,0.8s,mb6.2
GRSN GIRESUNGRSN 69.66 314 *i* P **P** **06 00 35.5 -0.1**
HTY Hatay 69.78 309 *e*P **P** **06 00 36.9 +0.4**
ANDN Andirin 70.04 310 *i* P **P** **06 00 40.5 +2.5**
SVSK Karacayir 70.25 313 *e*P **P** **06 00 38.8 -0.5**
CEYT Ceyhan 70.33 310 *e*P **P** **06 00 36.9 -2.9**
KOZT Kozan 70.41 310 *e*P **P** **06 00 40.2 0.0**
TOKT Tokat 70.71 313 *e*P **P** **06 00 41.1 -0.9**
BNN Bunyan 70.78 312 *e*P **P** **06 00 37.8 -4.7**
MERS Mersin 71.24 309 *e*P **P** **06 00 45.4 +0.1**
KVT Kavak 71.30 314 *e*P **P** **06 00 41.1 -4.4**
VRHR Novokhopersk 71.37 325 *e*P **P** **06 00 44.6 -1.2**
VRHR *e*S S 06 09 57.8 -4.0
VRHR pmax pmax
comp=Z,730nm,1.0s,mb6.6
VRHR pmax pmax
comp=N,460nm,1.5s
VRHR pmax pmax
comp=E,790nm,1.3s
VRHR smax
comp=N,2μm,1.8s
VRHR smax
comp=Z,430nm,2.1s
VRHR smax
comp=E,3μm,2.5s
VRHR MLR MLR
comp=E,7μm,22.0s,MS6.2
VRHR MLR MLR
comp=Z,11μm,22.0s,MS6.1
VRHR MLR MLR
comp=N,12μm,23.0s,MS6.2
MA2 Magadan 71.48 24 *e*P **P** **06 00 45.5 -0.8**
MA2 LR LR
comp=Z,16μm,19.0s,MS6.3
MA2 Magadan 71.48 24 *e*P **P** **06 00 45.6 -0.6**
MA2 *e*S S 06 09 58.8 -4.0
MA2 *e*SS SS 06 14 41.6 +3.6
MA2 pmax pmax
comp=N,20nm,0.8s
MA2 pmax pmax
comp=Z,80nm,0.8s,mb5.7
AVNT Avonos 71.50 311 *i* P **P** **06 00 46.3 -0.6**
ANN Anapa 71.54 318 *e*P **P** **06 00 45.3 -1.6**
ANN Anapa 71.54 318 *e*P **P** **06 00 44.1 -2.8**
ANN *e**PP pP 06 00 54.0 -2.4
ANN *e* 06 01 03.6
ANN *e* 06 03 22.2
ANN *e*S S 06 09 59.6 -4.4
ANN *e*SS SS 06 14 39.1 -0.5
ANN pmax pmax
comp=Z,113nm,1.7s,mb5.5
ANN pmax pmax
comp=Z,1μm,6.0s
DRV Dumont d'Urvil 71.63 165 S S 06 10 05.0 +0.8
DRV SS SS 06 14 36.0 -4.0
DRV L 06 19 00.0
CSS Prodhromos 71.70 307 *e*P **P** **06 00 47.9 -0.2**
comp=Z,264nm,1.1s,mb6.1
MAW Mawson 71.84 194 *e*P **P** **06 00 49.7 +1.4**
comp=Z,44nm,1.1s,mb5.3
MAW *e*S S 06 10 14.5 +7.8
MAW Mawson 71.84 194 P **P** **06 00 47.2 -1.1**
comp=Z,30nm,1.1s,mb5.2,baz=11,slow=5.2,SNR=2.9
MAW LR LR 06 26 15.8
comp=Z,9μm,20.9s,MS6.0,baz=35,slow=31
PET Petropavlovsk 71.85 33 *e*P **P** **06 00 50.8 +2.2**
comp=Z,86nm,0.9s,mb5.7
PET LR LR
comp=Z,12μm,19.0s,MS6.2
PET Petropavlovsk 71.85 33 *e*P **P** **06 00 50.5 +1.9**
PET *e*S S 06 10 08.6 +1.4
PET *e*SS SS 06 14 43.1 -0.8
PET *e*SSS 06 17 56.1
PET pmax pmax
comp=Z,900nm,6.7s
PET pmax pmax
comp=Z,114nm,1.0s,mb5.8
PET pmax pmax
comp=Z,1μm,6.0s
PET smax
comp=E,2μm,6.5s
PET MLR MLR
comp=Z,13μm,17.0s,MS6.3
PET MLR MLR
comp=Z,11μm,16.0s
PET smax
comp=N,55nm,0.6s
CORM Corum 72.06 313 *e*P **P** **06 00 50.5 +0.3**
CTKT Corum 72.08 313 *i* P **P** **06 00 50.2 -0.1**
CDAG Cicekdag 72.10 312 *i* P **P** **06 00 50.5 0.0**
BOYT Boyabat 72.22 314 *i* P **P** **06 00 51.3 +0.2**
BR131 Keskin Array S 72.67 312 *e*P **P** **06 00 52.6 -1.3**
comp=N,49nm,0.8s,mb5.5
BRTR Keskin Array B 72.67 312 *i* P **P** **06 00 52.7 -1.1**
BRTR pmax pmax
comp=Z,28nm,0.7s
BRTR Keskin Array B 72.67 312 P **P** **06 00 52.8 -1.1**
comp=Z,28nm,0.7s,mb5.3,baz=127,slow=6.4,SNR=80
BRTR LR LR 06 38 38.4
comp=Z,6μm,19.6s,MS5.8,baz=97,slow=41
TOS Tosya 72.75 313 *e*P **P** **06 00 53.8 -0.5**
LSZ Lusaka 72.79 254 *e*P **P** **06 00 56.0 +1.1**
comp=Z,149nm,1.5s,mb5.7
LSZ LR LR
comp=Z,8μm,19.0s,MS6.0
LSZ Lusaka 72.79 254 *e*P **P** **06 00 56.0 +1.0**
LSZ pmax pmax
comp=Z,149nm,1.5s,mb5.7
LSZ MLR MLR
comp=Z,8μm,19.0s,MS6.0
LSZ Lusaka 72.79 254 P **P** **06 00 57.5 +2.5**
SNR=17
LSZ Lusaka 72.79 254 P **P** **06 00 57.5 +2.5**
SNR=17
VRSR Storozhevoye 72.82 325*d* *i*P **P** **06 00 53.0 -1.4**
VRSR *e**PP pP 06 01 02.7 -1.2
VRSR *e*S S 06 10 15.1 -3.3
VRSR pmax pmax
comp=N,50nm,1.1s
VRSR pmax pmax
comp=Z,120nm,1.1s,mb5.7
VRSR pmax pmax
comp=E,80nm,1.3s
VRSR smax
comp=N,40nm,1.2s
VRSR smax
comp=Z,4.0nm,1.2s
VRSR smax
comp=E,40nm,1.7s
VRSR MLR MLR
comp=E,2μm,24.0s,MS5.5
VRSR MLR MLR
comp=Z,2μm,24.0s,MS5.3
VRSR MLR MLR
comp=N,2μm,22.0s,MS5.5
VOR Voronezh 73.02 325‖ *i*P **P** **06 00 54.0 -1.6**
VOR pmax pmax
comp=Z,1μm,1.2s,mb6.7
ELDT Eldivan 73.03 313 *i* P **P** **06 00 53.9 -2.1**
ANTO Ankara 73.34 312 ‖P **P** **06 00 57.3 -0.5**
ANTO Ankara 73.34 312 P **P** **06 00 57.4 -0.4**
ANTO pmax pmax
comp=Z,240nm,1.4s,mb5.9
ANTO Ankara 73.34 312 P **P** **06 00 57.7 -0.1**
SNR=21
ANTO Ankara 73.34 312‖ *i*P **P** **06 00 57.3 -0.5**
BALT Daday 73.35 314‖ *i*P **P** **06 00 58.0 +0.2**
SIM Simferopol' 73.82 317*de*P **P** **06 00 59.6 -0.9**
SIM pmax pmax
comp=Z,168nm,1.3s,mb5.8
SIM MLR MLR
comp=Z,11μm,23.0s,MS6.1
TIXI Tiksi 74.31 9 *e*P **P** **06 01 00.3 -2.6**
TIXI LR LR
comp=Z,27μm,20.0s,MS6.5
TIXI Tiksi 74.31 9*d* *i*P **P** **06 01 00.1 -2.7**
TIXI *e*S S 06 10 29.4 -5.2
TIXI *e* 06 11 05.1
TIXI pmax pmax
comp=Z,86nm,1.6s,mb5.4
TIXI MLR MLR
comp=Z,25μm,16.0s,MS6.6
TIXI MLR MLR
comp=N,23μm,19.0s,MS6.6
TIXI MLR MLR
comp=E,16μm,15.0s,MS6.6
ISP Isparta 74.58 310 *e*P **P** **06 01 04.7 -0.4**
comp=E,197nm,1.2s,mb5.9
ISP Isparta 74.58 310 *e*P **P** **06 01 04.7 -0.4**
ISP pmax pmax
comp=Z,197nm,1.2s,mb5.9
ISP Isparta 74.58 310‖ *i*P **P** **06 01 03.7 -1.4**
ESKT Eskisehir 74.70 311 *i* P **P** **06 01 05.2 -0.6**
HENT Hendek 74.98 313 *i* P **P** **06 01 06.0 -1.4**
GOLH Golhisar 75.18 309 *i* P **P** **06 01 07.9 -0.7**
MOS Moscow 75.47 329K *i*P **P** **06 01 09.4 -0.4**
MOS *e* 06 03 59.0
MOS *i*S S 06 10 45.4 -2.6
MOS *e* 06 11 23.4
MOS *e*SS SS 06 15 37.4 -1.6
MOS pmax pmax
comp=Z,1μm,1.4s,mb6.6
MOS pmax pmax
comp=Z,691nm,1.2s,mb6.5
MOS smax
comp=N,2μm,3.0s
GDZ Gediz 75.64 311 *i* P **P** **06 01 10.3 -0.9**
OBN Obninsk 75.78 328 *e*P **P** **06 01 11.0 -0.6**
OBN LR LR
comp=Z,15μm,21.0s,MS6.3
OBN Obninsk 75.78 328*d* *i*P **P** **06 01 11.0 -0.6**
OBN *e* 06 01 22.5
OBN *e*S S 06 10 50.1 -1.4
OBN *e*SS SS 06 15 40.7 -3.1
OBN pmax pmax
comp=Z,897nm,1.3s,mb6.5
OBN MLR MLR
comp=Z,16μm,22.0s,MS6.3
LBTB Lobatse 76.09 244 *e*P **P** **06 01 14.7 +0.6**
LBTB LR LR
comp=Z,6μm,19.0s,MS5.9
ARG Arkhangelos 76.11 307 *e*P **P** **06 01 14.5 +0.6**
KARP Karpathos 76.75 307 *e*P **P** **06 01 17.0 -0.6**
BOSA Boshof 76.79 241 P **P** **06 01 18.8 +0.8**
BOSA LR LR
comp=Z,4μm,19.0s,MS5.8
BOSA Boshof 76.79 241 P **P** **06 01 18.8 +0.8**
comp=Z,38nm,0.8s,mb5.4,baz=91,slow=6.4,SNR=19
BDRM Kayabasi 76.81 308 *i* P **P** **06 01 18.0 +0.2**
KDAG Bornova 77.20 310 *i* P **P** **06 01 20.1 +0.1**
SMG Samos 77.40 309 *e*P **P** **06 01 21.0 -0.2**
PSN Preselentsi 77.60 315 *i* P **P** **06 01 22.5 +0.3**
TIRR Tirgusor 77.61 316 P **P** **06 01 22.2 -0.1**
SART Tekirdag 77.70 312 *i* P **P** **06 01 22.1 -0.7**
URLA Izmir 77.71 309 *i* P **P** **06 01 24.2 +1.3**
AYVA Ayvalik 77.81 310 *i* P **P** **06 01 22.7 -0.7**
SNZO South Karori 77.85 132 PFAKE 06 01 30.0 +6.4
SNZO LR LR
comp=Z,17μm,20.0s,MS6.4
KIS Kishinev 77.93 318‖ *i*P **P** **06 01 22.0 -1.9**
KIS *e* pP 06 01 31.0 -2.5
KIS *e*PPP 06 06 04.0
KIS *e*S S 06 11 09.0 -6.3
KIS *i* 06 11 27.0
KIS *e*SS SS 06 16 13.0 -3.7
KIS pmax pmax
comp=Z,3μm,3.5s
KIS pmax pmax
comp=Z,2μm,5.0s
KIS pmax pmax
comp=Z,2μm,5.5s
KIS smax
comp=N,3μm,12.0s
KIS smax
comp=E,2μm,10.0s
KIS Kishinev 77.93 318 *i* P **P** **06 01 22.0 -1.9**
comp=E,2μm,5.5s
KIS Kishinev 77.93 318 *e*PcP PcP 06 01 31.0 -2.7
KIS Kishinev 77.93 318 *e*PP PP 06 04 13.0 -7.1
KIS Kishinev 77.93 318 *e*PPP 06 06 04.0
KIS *e*S S 06 11 09.0 -6.3
comp=E,3μm,12.0s
KIS *i* ScS ScS 06 11 27.0 -14
NPS Neapolis 77.95 306 *e*P **P** **06 01 24.0 -0.3**
PRK Paraskevi 78.12 310 *e*P **P** **06 01 24.5 -0.6**
SANT Santorini 78.25 307 *e*P **P** **06 01 25.2 -0.8**
BOZC Bozcaada 78.39 311 *i* P **P** **06 01 25.8 -0.9**
JMB Yambol 78.50 313 P **P** **06 01 27.2 0.0**
JMB Yambol 78.50 313 P **P** **06 01 27.6 +0.4**
AKASG Malin Array Be 78.60 322 P **P** **06 01 26.4 -1.1**
AKASG PP PP 06 04 23.8 -1.8
AKASG S S 06 11 18.7 -3.7
AKASG LR LR 06 42 07.2
AKASG Malin Array Be 78.60 322 P **P** **06 01 26.4 -1.1**
AKASG 06 04 23.8
AKASG S S 06 11 18.7 -3.6
AKASG pmax pmax
comp=Z,90nm,1.0s
AKASG smax
comp=N,1.0nm,0.6s
AKASG Malin Array Be 78.60 322 P **P** **06 01 26.4 -1.1**
comp=N,90nm,1.0s,mb5.7,baz=91,slow=4.5,SNR=186
AKASG PP PP 06 04 23.8 -1.8
comp=N,5.4nm,0.8s,baz=77,slow=8.1,SNR=4.4
AKASG S S 06 11 18.7 -3.6
comp=N,0.5nm,0.6s,baz=106,slow=11,SNR=6.0
AKASG LR LR 06 42 07.3
comp=N,8μm,18.4s,MS6.1,baz=105,slow=40
AKBB Malin Array Si 78.60 322‖ *e*P **P** **06 01 26.2 -1.4**
TMCR Tamitsa 78.76 337 *e*P **P** **06 01 27.3 -0.8**
TMCR pmax pmax
comp=Z,198nm,1.1s,mb6.0
FUNA Funafuti 78.77 99 PFAKE 06 01 40.0 +11
FUNA LR LR
comp=Z,14μm,19.0s,MS6.3
RDO Rodhopi 79.01 312 *e*P **P** **06 01 29.0 -1.0**
LIA Limnos Island 79.06 311 *e*P **P** **06 01 32.5 +2.2**
VRI Vrincioaia 79.08 317 P **P** **06 01 30.7 +0.4**
VRI Vrincioaia 79.08 317‖ *i*P **P** **06 01 30.9 +0.6**
VAM Vamos 79.12 306 *e*P **P** **06 01 31.0 +0.3**
SZH Strazhica 79.12 314 P **P** **06 01 30.5 -0.1**
GVD Gavdhos 79.13 306 *e*P **P** **06 01 30.6 -0.2**
comp=Z,256nm,1.1s,mb6.1
PLOR Plostina 79.14 317 P **P** **06 01 31.0 +0.4**
BUC1 Bucharest 79.26 315 P **P** **06 01 31.8 +0.5**
SYO Syowa Base 79.43 199‖ *e*P **P** **06 01 32.6 +0.9**
MLR Muntele Rosu 79.55 316 P **P** **06 01 33.1 +0.2**
MLR Muntele Rosu 79.55 316 P **P** **06 01 33.2 +0.3**
comp=Z,213nm,1.2s,mb6.0,baz=96,slow=1.7,SNR=92
MLR PP PP 06 04 36.3 +2.6
comp=Z,42nm,1.0s,baz=84,slow=6.6,SNR=3.4
MLR LR LR 06 44 12.6
comp=Z,12μm,20.6s,MS6.2,baz=331,slow=41
MLR Muntele Rosu 79.55 316‖ *i*P **P** **06 01 33.2 +0.4**
ZIMR 79.60 315 P **P** **06 01 33.5 +0.4**
RZN Rozhen 79.72 312 *i* P **P** **06 01 33.3 -0.6**
PLD Plovdiv 79.80 313 *i* P **P** **06 01 34.2 -0.1**
ATH Athens Observa 79.88 309 *e*P **P** **06 01 33.0 -1.8**
VOIR 80.15 316 P **P** **06 01 35.7 -0.5**
VOIR 80.15 316‖ *i*P **P** **06 01 35.5 -0.6**
PGB Panagyurishte 80.27 313 *i* P **P** **06 01 35.6 -1.2**
NVR Nevrokopi 80.29 312 *e*P **P** **06 01 36.0 -1.0**
VLI Veliai 80.31 307 *e*P **P** **06 01 36.0 -1.2**
MNK Minsk 80.39 326‖ *i*P **P** **06 01 35.0 -2.2**
MNK *e* 06 04 34.0
MNK *e*PPP 06 06 32.0

MNK *i* S S 06 11 37.0 -4.1
MNK pmax pmax
comp=E,880nm,1.0s
MNK pmax pmax
comp=Z,1µm,1.0s,mb6.7
MNK smax
comp=N,1µm,1.8s
MNK smax
comp=E,990nm,1.5s
MMB Musomiste 80.43 312 *i* P **P 06 01 36.6 -1.1**
PLG Polygyros 80.45 311 *eP* **P 06 01 37.0 -0.9**
BURAR Bucovina Array 80.46 318 P **P 06 01 38.3 +0.5**
BURAR Bucovina Array 80.46 318⇓ *iP* **P 06 01 39.2 +1.5**
NEO Neokhori 80.46 310 *eP* **P 06 01 36.0 -1.9**
SMY Shemya 80.53 36 PFAKE 06 01 50.0 +12
SMY LR LR
comp=Z,7µm,22.0s,MS6.0
LKR Lokris 80.54 309 *eP* **P 06 01 37.0 -1.4**
PUL Pulkovo 80.55 331⇑ *iP* **P 06 01 38.3 +0.4**
KKB Krupnik 80.95 312 *i P* **P 06 01 39.9 -0.6**
VTS Vitosha 80.97 313 P **P 06 01 40.6 0.0**
VTS Vitosha 80.97 313 *i P* **P 06 01 41.3 +0.7**
VTS Vitosha 80.97 313⇓ *iP* **P 06 01 40.3 -0.3**
SUR Sutherland 81.00 237 *eP* **P 06 01 43.6 +2.6**
comp=Z,706nm,1.5s,mb6.4
SUR LR LR
comp=Z,13µm,20.0s,MS6.3
JOF Joensuu 81.08 334 *ep* **P 06 01 38.8 -1.9**
comp=Z,103nm,0.9s,mb5.8
JOF Joensuu 81.08 334 *eP* **P 06 01 38.8 -1.9**
JOF pmax pmax
comp=Z,103nm,0.9s,mb5.8
ITM Ithomi 81.18 308 *eP* **P 06 01 41.0 -0.8**
VAY Valandovo 81.25 312 *i P* **P 06 01 40.6 -1.5**
THL Klokotos Trika 81.42 310 *eP* **P 06 01 41.0 -2.1**
EVR Evrytania 81.50 309 *eP* **P 06 01 43.0 -0.5**
LVZ Lovozero 81.55 340 P **P 06 01 42.7 -0.4**
comp=Z,367nm,1.1s,mb6.2,SNR=5.4
LVZ Lovozero 81.55 340 *i* P **P 06 01 42.9 -0.2**
LVZ LR LR
comp=Z,27µm,22.0s,MS6.6
LVZ Lovozero 81.55 340 *i P* **P 06 01 42.8 -0.3**
LVZ pmax pmax
comp=Z,76nm,1.2s,mb5.5
LVZ MLR MLR
comp=Z,29µm,23.0s,MS6.6
STIP Stip 81.59 312 *i P* **P 06 01 42.4 -1.5**
BILL Bilibino 81.60 20⇑ *iP* **P 06 01 42.6 -0.8**
BILL Bilibino 81.60 20⇓ *eP* **P 06 01 42.3 -1.1**
BILL *e* 06 04 43.6
BILL *eS* S 06 11 53.1 -0.1
BILL *eSS* SS 06 17 07.3 -3.3
BILL pmax pmax
comp=Z,66nm,2.8s,mb5.1
BILL MLR MLR
comp=Z,20µm,16.0s,MS6.6
LVV L'vov 81.65 320⇑ *iP* **P 06 01 43.4 -0.6**
LVV *i* 06 01 49.2
LVV *i* S S 06 11 53.8 -0.7
RLS Riolos of Patr 81.65 308 *eP* **P 06 01 44.0 -0.3**
KZN Kozani 81.71 311 *eP* **P 06 01 44.0 -0.6**
GZR Gura Zlata 81.72 316 P **P 06 01 44.7 +0.2**
GZR Gura Zlata 81.72 316⇑ *iP* **P 06 01 44.4 -0.1**
APA Apatity 81.86 339⇓ *iP* **P 06 01 43.3 -1.5**
APA *i* S S 06 11 51.0 -5.0
APA *i* SS SS 06 17 12.0 -2.6
APA pmax pmax
comp=Z,73nm,1.0s,mb5.6
VSU Vasula 81.97 329*d iP* **P 06 01 45.0 -0.5**
BIA Bitola 82.14 311 *i P* **P 06 01 44.5 -2.3**
SKO Skopje 82.18 312 *i P* **P 06 01 46.2 -0.8**
KRUS Krusevo 82.24 312 *i P* **P 06 01 46.4 -1.0**
JAN Janina 82.33 310 *eP* **P 06 01 47.5 -0.3**
VLS Valsamata 82.35 308 *eP* **P 06 01 47.0 -1.0**
RAO Raoul Island 82.43 119 PFAKE 06 02 00.0 +11
RAO LR LR
comp=Z,11µm,19.0s,MS6.2
KWP Kalwaria 82.46 320 *eP* **P 06 01 48.4 +0.1**
KWP *eS* S 06 12 03.9 +1.0
KWP LMZ 06 37 22.5
comp=Z,9µm,29.3s
KWP Kalwaria 82.46 320⇓ *eP* **P 06 01 48.4 +0.1**
KWP *eS* S 06 12 03.9 +1.1
KWP Kalwaria 82.46 320⇑ *iP* **P 06 01 48.3 0.0**
OHR Ohrid 82.55 311 *i P* **P 06 01 47.1 -1.8**
BZS Buzias 82.56 316 P **P 06 01 49.1 +0.2**
BZS Buzias 82.56 316⇓ *iP* **P 06 01 48.8 -0.1**
UZH Uzhgorod 82.57 319*d iP* **P 06 01 48.8 -0.1**
UZH *e* pP 06 01 57.8 -0.7
UZH *i* 06 02 06.2
UZH *e* 06 04 56.2
UZH *i* S S 06 12 03.2 -0.8
UZH *i* PS 06 13 02.0
KOLS Kolonicke sedl 82.63 319 *eP* **P 06 01 49.8 +0.6**
KOLS *eS* S 06 12 06.3 +1.7
SUW Suwalki 82.95 325 *eP* **P 06 01 50.2 -0.5**
SUW *eS* S 06 12 05.8 -1.8
SUW LMZ 06 38 20.3
comp=Z,15µm,27.9s
SUW Suwalki 82.95 325⇓ *eP* **P 06 01 50.2 -0.5**
SUW *eS* S 06 12 05.8 -1.8
SUW Suwalki 82.95 325⇓ *eP* **P 06 01 50.2 -0.5**
SUW *eS* S 06 12 05.8 -1.8
SUW MLR MLR
comp=Z,15µm,27.9s,MS6.2
FIA1 FINESS Array S 83.01 332 *eP* **P 06 01 50.0 -0.9**
FIA1 PP PP 06 05 02.6 +0.7
FINES FINESS Array B 83.01 332 P **P 06 01 49.8 -1.1**
comp=Z,17nm,0.6s,mb5.3,baz=104,slow=8.0,SNR=65
FINES PKKPbc PKKPbc 06 20 13.1 -2.7
comp=Z,1.1nm,0.8s,baz=325,slow=3.0,SNR=4.5
FINES LR LR 06 43 58.6
comp=Z,6µm,21.0s,MS6.0,baz=281,slow=39
KAF Kangasniemi 83.07 333 *ep* **P 06 01 49.6 -1.6**
comp=Z,71nm,0.9s,mb5.7,baz=98,slow=4.7
KAF Kangasniemi 83.07 333 *eP* **P 06 01 49.6 -1.6**
KAF pmax pmax
comp=Z,71nm,0.9s,mb5.7
TSUM Tsumeb 83.12 251 *eP* **P 06 01 53.5 +1.2**
comp=Z,127nm,1.3s,mb5.8
TSUM LR LR
comp=Z,6µm,20.0s,MS6.0
KEK Kerkira 83.14 310 *eP* **P 06 01 51.5 -0.5**
CRVS Cervenica-Dubn 83.15 319 *eP* **P 06 01 52.2 +0.3**
CRVS *eS* S 06 12 11.3 +1.4
PVY Plav 83.34 313⇑ *iP* **P 06 01 52.5 -0.5**
STHS Stebnicka Huta 83.37 320 *i P* **P 06 01 53.4 +0.4**
comp=Z,104nm,1.1s,mb5.8
STHS *eS* S 06 12 14.3 +2.2
STHS Stebnicka Huta 83.37 320 *i P* **P 06 01 53.4 +0.4**
STHS *eS* S 06 12 14.3 +2.2
STHS pmax pmax
comp=Z,104nm,1.1s,mb5.8
IVA Berane 83.43 313 *eP* **P 06 01 53.1 -0.4**
VNDA Vanda 83.53 169 *eP* **P 06 01 52.9 -0.4**
comp=Z,32nm,1.1s,mb5.4
VNDA S S 06 12 08.1 -4.7
VNDA LR LR 06 39 10.5
VNDA Vanda 83.53 169 *eP* **P 06 01 52.9 -0.4**
VNDA S S 06 12 08.1 -4.7
VNDA pmax pmax
comp=Z,32nm,1.1s
VNDA Vanda 83.53 169 P **P 06 01 51.9 -1.5**
comp=Z,6.3nm,0.6s,mb4.9,baz=297,slow=5.4,SNR=20
VNDA S S 06 12 08.1 -4.7
comp=Z,1.2nm,1.0s,baz=336,slow=20,SNR=2.0
VNDA LR LR 06 39 10.5
comp=Z,9µm,18.2s,MS6.2,baz=314,slow=36
KECS Kecovo 83.73 319 *i P* **P 06 01 54.9 0.0**
comp=Z,58nm,1.1s,mb5.6
KECS *eS* S 06 12 17.0 +1.2
KECS Kecovo 83.73 319 *i P* **P 06 01 54.9 0.0**
KECS *eS* S 06 12 17.0 +1.2
KECS pmax pmax
comp=Z,58nm,1.1s,mb5.6
ULC Ulcinj 83.80 312⇑ *iP* **P 06 01 54.9 -0.5**
TTG Podgorica 83.84 313⇑ *iP* **P 06 01 54.7 -0.9**
PLE Pljevlja 83.85 314⇑ *iP* **P 06 01 56.1 +0.5**
BBLS Bajina Basta - 83.90 314 P **P 06 01 56.8 +1.0**
WAR Warsaw 83.93 323 *eP* **P 06 01 57.1 +1.3**
WAR LMZ 06 38 19.7
comp=Z,8µm,28.6s
NIE Niedzica 83.97 320 *eP* **P 06 01 56.5 +0.4**
NIE *e* pP 06 02 04.3 -1.4
NIE *ePP* PP 06 05 04.2 -5.8
NIE Niedzica 83.97 320⇓ *eP* **P 06 01 56.5 +0.4**
NIE *e* pP 06 02 04.3 -1.4
NIE *e* 06 05 04.2
PSZ Piszkesteto 84.05 318 *eP* **P 06 01 56.3 -0.2**
PSZ Piszkesteto 84.05 318⇓ *ePcP* PcP 06 01 56.7 -3.7
PSZ Piszkesteto 84.05 318⇑ *iP* **P 06 01 56.6 +0.1**
NKY Niksic 84.08 313⇑ *iP* **P 06 01 56.2 -0.6**
BUM Brajici-Budva 84.10 312⇑ *iP* **P 06 01 56.3 -0.6**
UPM Unac-Piva 84.18 313⇑ *iP* **P 06 01 56.5 -0.8**
HCY Herceg Novi 84.41 313⇑ *iP* **P 06 01 57.7 -0.8**
OJC Ojcow 84.41 320 *eP* **P 06 01 58.3 0.0**
OJC *ePcP* PcP 06 02 02.0 +0.1
OJC *epP* pP 06 02 06.9 -1.0
OJC *ePP* PP 06 05 13.4 -0.2
OJC *eS* S 06 12 22.2 -0.3
OJC *eSS* SS 06 17 53.7 +0.6
OJC L 06 48 58.3
comp=Z,8.5nm,21.2s
BRY Bratogost 84.42 313⇑ *iP* **P 06 01 57.8 -0.7**
BUD Budapest 84.58 318⇑ *ePcP* PcP 06 02 03.3 +0.6
SBA Scott Base 84.62 169 *eP* **P 06 01 59.6 +0.8**
comp=Z,35nm,0.9s,mb5.5
SBA LR LR
comp=Z,7µm,21.0s,MS6.0
SBA Scott Base 84.62 169 *eP* **P 06 01 59.6 +0.7**
SBA pmax pmax
comp=Z,35nm,0.9s,mb5.5
SBA MLR MLR
comp=Z,7µm,21.0s,MS6.0
PKSM Moragy 84.70 316 P **P 06 01 59.7 -0.2**
PKSM Moragy 84.70 316⇓ *iP* **P 06 01 59.6 -0.3**
LIKS Likavka 84.71 319 *eP* **P 06 01 59.9 +0.1**
KEV Kevo 84.78 340 *ep* **P 06 01 57.0 -2.8**
comp=Z,44nm,0.9s,mb5.6
KEV Kevo 84.78 340 P **P 06 01 58.4 -1.4**
KEV pmax pmax
comp=Z,78nm,1.1s,mb5.8
VYHS Vyhne 84.82 319 *i P* **P 06 02 00.3 -0.1**
comp=Z,88nm,1.4s,mb5.7
VYHS *ePP* PP 06 05 16.8 -0.2
VYHS *eS* S 06 12 25.6 -1.1
VYHS LR LR
comp=Z,4µm,40.7s,MS5.5
VYHS Vyhne 84.82 319 *i P* **P 06 02 00.3 -0.1**
VYHS *e* 06 05 16.8
VYHS *eS* S 06 12 25.6 -1.1
VYHS pmax pmax
comp=Z,88nm,1.4s,mb5.7
VYHS MLR MLR
comp=Z,4µm,40.7s,MS5.5
VYHS Vyhne 84.82 319 *i P* **P 06 02 00.3 -0.1**
VYHS *ePP* PP 06 05 16.8 -0.2
VYHS *eS* S 06 12 25.6 -1.1
STON Ston 85.03 313 P **P 06 01 58.4 -3.3**
KOLL Kolacno 85.12 319 *i P* **P 06 02 01.7 -0.2**
ARCES ARCESS Array B 85.23 340 P **P 06 02 01.1 -0.9**
ARCES pmax pmax
comp=Z,120nm,1.2s
ARCES MLR MLR
comp=Z,24µm,20.5s
ARCES ARCESS Array B 85.23 340 P **P 06 02 01.1 -0.9**
comp=Z,120nm,1.2s,mb5.9,baz=115,slow=3.4,SNR=47
ARCES LR LR 06 43 25.1
comp=Z,24µm,20.5s,MS6.6,baz=113,slow=38
ARE0 ARCESS Array S 85.23 340 *eP* **P 06 02 00.7 -1.4**
RAC Raciborz 85.42 320 *eP* **P 06 02 03.7 +0.3**
RAC MLR MLR
comp=N,18µm,24.0s
OKC Ostrava-Krasne 85.42 320⇓ *iP* **P 06 02 03.7 +0.3**
OKC *eSKS* 06 12 29.5
OKC Ostrava-Krasne 85.42 320⇓ *iP* **P 06 02 03.7 +0.3**
OKC *e* 06 12 29.5
OKC MLR MLR
comp=E,6µm,16.7s
OKC MLR MLR
comp=Z,6µm,18.3s,MS6.0
OKC Ostrava-Krasne 85.42 320⇓ *iP* **P 06 02 03.7 +0.3**
OKC *eSKS* 06 12 29.5
OKC AMS AMS 06 48 30.0
comp=Z,6µm,18.3s
TIP Timpagrande 85.43 309 *eP* **P 06 02 03.8 +0.1**
comp=Z,106nm,1.2s,mb5.8
TIP *ePP* PP 06 05 21.9 -0.3
SMOL Smolenice 85.75 319 *eP* **P 06 02 05.1 0.0**
MORC Moravsky Berou 85.81 320 P **P 06 02 05.6 +0.3**
MORC Moravsky Berou 85.81 320 *eP* **P 06 02 05.5 +0.2**
MORC pmax pmax
comp=Z,130nm,1.2s,mb6.0
MORC Moravsky Berou 85.81 320⇓ *iP* **P 06 02 05.6 +0.3**
MODS Modra-Piesok 85.84 318 *eP* **P 06 02 05.2 -0.3**
comp=Z,105nm,1.5s,mb5.8
MODS *ePP* PP 06 05 24.5 -0.7
MODS *eS* S 06 12 38.8 +2.0
MODS Modra-Piesok 85.84 318 *eP* **P 06 02 05.2 -0.3**
MODS *e* 06 05 24.5
MODS *eS* S 06 12 38.8 +2.0
MODS pmax pmax
comp=Z,105nm,1.5s,mb5.8
KTK1 Kautokeino 85.90 339 *eP* **P 06 02 05.1 -0.3**
comp=Z,115nm,1.3s,mb6.0
KTK1 Kautokeino 85.90 339 *eP* **P 06 02 05.1 -0.3**
KTK1 AMb AMB 06 02 06.7
comp=Z,115nm,1.3s,mb6.0
ZST Bratislava 85.94 318 *eP* **P 06 02 06.2 +0.2**
comp=Z,96nm,1.1s,mb5.9
ZST *eS* S 06 12 35.4 -2.3
ZST LR LR
comp=Z,5µm,19.8s,MS5.9
ZST Bratislava 85.94 318 *eP* **P 06 02 06.2 +0.2**
ZST *eS* S 06 12 35.4 -2.3
ZST pmax pmax
comp=Z,96nm,1.1s,mb5.9
ZST MLR MLR
comp=Z,5µm,19.8s,MS5.9
ZST Bratislava 85.94 318 *eP* **P 06 02 06.2 +0.2**
ZST *eS* S 06 12 35.4 -2.3
ADK Adak 85.96 38 PFAKE 06 02 20.0 +14
ADK LR LR
comp=Z,5µm,21.0s,MS5.8
SISC Sisak 86.21 315 P **P 06 02 09.6 +2.2**
SOP Sopron 86.26 318⇑ *ePcP* PcP 06 02 11.6 +1.5
GKP Gorka Klasztor 86.34 323 *eP* **P 06 02 07.8 -0.1**
GKP *eS* S 06 12 41.6 +0.1
GKP LMZ 06 39 29.4
comp=Z,9µm,30.0s
VRAC Vranov 86.38 319 P **P 06 02 08.6 +0.4**
VRAC Vranov 86.38 319 PP PP 06 05 29.1 -0.5
comp=Z,8.3nm,0.8s,baz=85,slow=8.0,SNR=4.4
VRAC Vranov 86.38 319⇑ *iP* **P 06 02 08.2 +0.1**
KRUC Moravsky 86.48 319 P **P 06 02 08.7 0.0**
DPC Dobruska-Polom 86.64 320⇓ *iP* **P 06 02 10.2 +0.8**
DPC *eS* S 06 12 45.2 +0.7
DPC AMS AMS 06 46 50.0
comp=Z,8µm,19.2s
KSP Ksiaz 86.70 321 *eP* **P 06 02 10.3 +0.6**
KSP *eS* S 06 12 37.3 -7.7
KSP LMZ 06 40 55.8
comp=Z,10µm,29.2s
KSP Ksiaz 86.70 321 *eP* **P 06 02 09.7 0.0**
KSP *epP* pP 06 02 14.1 -5.2
KSP *eSKS* 06 12 34.5
KSP LR LR
comp=Z,25µm,20.7s,MS6.6
CONA Conrad Observa 86.75 318 *i P* **P 06 02 09.7 -0.3**
comp=Z,66nm,1.4s,mb5.7,SNR=22
UPC Upice 86.85 320⇓ *iP* **P 06 02 11.0 +0.6**
ARSA Arzberg 86.93 317⇑ *iP* **P 06 02 11.0 +0.1**
comp=Z,148nm,1.2s,mb6.1,SNR=32
BOJS Bojanci 87.00 315 *i P* **P 06 02 11.4 +0.2**
BOJS *i* PcP PcP 06 02 15.4 +2.0
BOJS *eS* S 06 12 38.6 -10
TREC Trest 87.10 319⇓ *eP* **P 06 02 12.0 +0.3**
TREC *eSKS* 06 12 39.0
TREC AMS AMS 06 46 30.0
comp=Z,7µm,18.0s
PERS Pernice 87.16 317 *i P* **P 06 02 12.3 +0.2**
PERS *i* PcP PcP 06 02 16.1 +1.9
NVLJ Novalja 87.21 314 P **P 06 02 11.0 -1.3**
TRO Tromso 87.52 340 *eP* **P 06 02 11.2 -2.1**
comp=Z,105nm,1.7s,mb5.8
TRO LR LR
comp=Z,17µm,20.2s,MS6.5
TRO Tromso 87.52 340 *eP* **P 06 02 11.0 -2.2**
TRO *eP* 06 02 11.2
TRO AMb AMB 06 02 19.2
comp=Z,104nm,1.9s,mb5.7
TRO AMb AMB 06 02 19.2
comp=Z,105nm,1.7s,mb5.8
TRO *eSKS* 06 12 48.0
TRO AMS AMS 06 44 55.1
comp=Z,17µm,20.2s,MS6.5
TRO Tromso 87.52 340 *eP* **P 06 02 11.2 -2.1**
TRO pmax pmax
comp=Z,105nm,1.7s,mb5.8
TRO MLR MLR
comp=Z,17µm,20.2s,MS6.5
LJU Ljubljana 87.54 316 *i P* **P 06 02 14.3 +0.5**
LJU *i* PcP PcP 06 02 18.4 +2.6
LJU *eS* S 06 12 41.7 -12
OBKA Obir 87.55 316⇓ *iP* **P 06 02 14.0 +0.1**
comp=Z,82nm,1.2s,mb5.8,SNR=18
AFI Afiamalu 87.69 104 PFAKE 06 02 20.0 +4.7
AFI LR LR
comp=Z,5µm,20.0s,MS6.0
PRU Pruhonice 87.76 320⇓ *iP* **P 06 02 15.1 +0.3**
PRU *eSKS* 06 12 44.0
PRU AMS AMS 06 47 40.0
comp=Z,8µm,22.0s
PVCC Panska Ves 87.77 320⇓ *iP* **P 06 02 15.5 +0.6**
PVCC *eS* S 06 12 57.4 +2.0
PVCC AMS AMS 06 47 40.0
comp=Z,12µm,17.5s
MOA Molln 87.81 318 *i P* **P 06 02 14.9 -0.2**
comp=Z,96nm,1.3s,mb5.9,SNR=12
PRA Prague 87.83 320⇓ *iP* **P 06 02 16.0 +0.8**
JAVS Javornik 87.85 316 *i P* **P 06 02 15.0 -0.4**
JAVS *i* PcP PcP 06 02 19.1 +1.9
BSD Bornholm Skovb 87.86 325⇓ *iP* **P 06 02 14.7 -0.5**
comp=Z,231nm,1.2s,mb6.3
BSD *i* S S 06 12 52.1 -3.9
BSD Bornholm Skovb 87.86 325⇓ *iP* **P 06 02 14.7 -0.5**
BSD *i* S S 06 12 52.1 -3.9
BSD pmax pmax
comp=Z,231nm,1.2s,mb6.3
BSD Bornholm Skovb 87.86 325⇓ *iP* **P 06 02 14.7 -0.5**
comp=Z,231nm,1.2s,mb6.3
BSD *i* S S 06 12 52.1 -3.9
BSD
comp=Z,7µm,21.0s
BSD
comp=Z,5µm,18.0s
VOY Vojsko 87.98 316 *eP* **P 06 02 15.3 -0.7**
VOY *e* 06 02 42.6
BJO Bjornoya 88.15 345 AMS AMS 06 43 44.6
comp=Z,9µm,22.1s,MS6.2
AQU L'Aquila 88.17 312 P **P 06 02 17.4 +0.5**
AQU L'Aquila 88.17 312 P **P 06 02 17.3 +0.4**
AQU pmax pmax
comp=Z,210nm,1.1s,mb6.3
AQU L'Aquila 88.17 312⇓ *iP* **P 06 02 17.4 +0.5**
MYKA Terra Mystica 88.18 316⇓ *iP* **P 06 02 17.0 +0.1**
comp=Z,297nm,1.5s,mb6.3
BRG Berggiesshubel 88.19 321⇓ *iP* **P 06 02 17.5 +0.6**
comp=Z,131nm,1.2s,mb6.0
BRG *e* 06 02 21.2
BRG *e* 06 05 46.7
BRG S S 06 12 45.0 -14
BRG LR LR
comp=Z,7µm,19.7s,MS6.1
BRG Berggiesshubel 88.19 321⇓ *iP* **P 06 02 17.5 +0.6**
BRG *e* 06 05 46.7
BRG S S 06 12 45.0 -14
BRG pmax pmax
comp=Z,2.0nm,1.2s
BRG MLR MLR
comp=Z,38µm,19.7s,MS6.8
BRG MLR MLR
comp=N,7µm,18.5s,MS6.1
BRG MLR MLR
comp=E,2µm,18.5s,MS6.1
BRG Berggiesshubel 88.19 321 *eP* **P 06 02 17.3 +0.4**
comp=Z,218nm,1.2s,mb6.3
BRG *eS* S 06 13 03.2 +3.9
BRG Berggiesshubel 88.19 321⇓ *iP* **P 06 02 17.5 +0.6**
comp=Z,219nm,1.2s,mb6.2
BRG *e* 06 02 21.2
comp=Z,372nm,1.5s
BRG *e* 06 05 46.7
comp=Z,63nm,1.4s
BRG S S 06 12 45.0 -14
BRG
comp=Z,11µm,19.7s
BRG
comp=N,3µm,18.5s
BRG
comp=E,8µm,18.5s
GEC2 GERESS Array S 88.24 319 *eP* **P 06 02 17.6 +0.4**
GEC2 *eS* S 06 13 03.3 +3.4
GEC2 pmax pmax
comp=Z,195nm,1.3s,mb6.2
GEC2 GERESS Array S 88.24 319 *eP* **P 06 02 17.6 +0.4**
comp=Z,195nm,1.3s,mb6.2
GEC2 *eS* S 06 13 03.3 +3.4
GERES GERESS Array B 88.24 319 P **P 06 02 17.5 +0.3**
comp=Z,86nm,1.1s,mb5.9,baz=97,slow=3.2,SNR=134
GERES LR LR 06 47 54.7
comp=Z,5µm,20.6s,MS5.9,baz=77,slow=40
KHC Kasperske Hory 88.34 319⇓ *iP* **P 06 02 17.7 +0.1**
KHC *epP* pP 06 02 21.5 -5.8
KHC *ex* x 06 02 38.0
KHC *eSKS* 06 12 49.0
KHC AMS AMS 06 48 10.0
comp=Z,7µm,20.3s
RUE Ruedersdorf 88.37 322 *eP* **P 06 02 18.0 +0.3**
comp=Z,630nm,1.2s,mb6.7
RUE *eS* S 06 13 01.9 +0.9
KBA Koelnbreinsper 88.40 317⇑ *iP* **P 06 02 17.2 -0.8**
comp=Z,100nm,1.2s,mb5.9,SNR=16
KBA Koelnbreinsper 88.40 317⇑ *iP* **P 06 02 17.2 -0.8**
KBA pmax pmax
comp=Z,100nm,1.2s,mb5.9
FBE Freiberg 88.56 321 *eP* **P 06 02 19.1 +0.5**
comp=Z,255nm,1.3s,mb6.4
RGN Rugen 88.75 324 *eP* **P 06 02 20.1 +0.7**
comp=Z,498nm,1.4s,mb6.7
RGN Rugen 88.75 324 *eP* **P 06 02 19.9 +0.5**
comp=Z,410nm,1.4s,mb6.6
WET Wettzell 88.80 319 *eP* **P 06 02 20.2 +0.4**
WET *eS* S 06 13 08.0 +2.9
WET pmax pmax
comp=Z,146nm,1.2s,mb6.2
WET Wettzell 88.80 319 *eP* **P 06 02 20.2 +0.4**
comp=Z,146nm,1.2s,mb6.2
WET *eS* S 06 13 08.0 +2.9
CLL Collm 88.80 321⇓ *iP* **P 06 02 19.9 +0.2**
comp=Z,143nm,1.2s,mb6.2
CLL *i* 06 02 24.3
CLL *i* 06 02 26.1
CLL *eS* S 06 13 01.0 -4.1
CLL LR LR
comp=Z,6µm,22.5s,MS6.0
CLL Collm 88.80 321⇓ *iP* **P 06 02 19.9 +0.2**
CLL *i* 06 02 26.1
CLL *eS* S 06 13 01.0 -4.1
CLL pmax pmax
comp=Z,143nm,1.2s,mb6.2
CLL MLR MLR
comp=Z,6µm,22.5s,MS6.0
CLL Collm 88.80 321⇓ *iP* **P 06 02 19.9 +0.2**
comp=Z,143nm,1.2s,mb6.2
CLL *i* pP pP 06 02 24.3 -5.1
CLL *i* sP sP 06 02 26.1 -6.8
CLL *i* x x 06 02 31.4
CLL *eS* S 06 13 01.0 -4.1
CLL *ePS* 06 14 06.0
CLL *eSS* SS 06 19 12.0 +15
CLL *eSSS* 06 22 33.0
CLL *ex* x 06 24 30.0
CLL *eSSSS* 06 25 36.0
CLL Collm 88.80 321 *eP* **P 06 02 19.9 +0.2**
comp=Z,303nm,1.7s,mb6.3
CLL *ePP* PP 06 05 51.4 +2.4
CLL *eS* S 06 13 05.5 +0.4
CLL *ePS* 06 14 11.4
CLL *eSS* SS 06 19 01.9 +4.6
CLL *eSSS* 06 22 34.5
CLL *eSSSS* 06 25 42.5

CLL eLR LR 06 34 35.0
HFS Hagfors 88.82 330 P **P** **06 02 18.7 -0.9**
HFS pmax pmax
comp=Z,47nm,1.1s
HFS Hagfors 88.82 330 P **P** **06 02 18.7 -0.9**
comp=Z,47nm,1.1s,mb5.7,baz=95,slow=3.1,SNR=22
HFA0 Hagfors New Ar 88.83 330 P **P** **06 02 19.1 -0.5**
MOR8 Moi Rana 88.84 336⇓ *i*P **P** **06 02 18.2 -1.4**
comp=Z,150nm,1.6s,mb6.1
MOR8 Moi Rana 88.84 336⇓ *i*P **P** **06 02 18.2 -1.4**
MOR8 AMb AMB 06 02 26.6
comp=Z,150nm,1.6s,mb6.1
ABTA Abfaltersbach 88.96 317 *i* P **P** **06 02 20.1 -0.5**
comp=Z,64nm,1.3s,mb5.8,SNR=19
BERN Bernov 89.07 320⇓P **P** **06 02 29.5 +8.5**
TANN Tannenbergstha 89.11 320 *e*P **P** **06 02 21.6 +0.4**
comp=Z,101nm,1.3s,mb6.0
MAIT Maitri 89.11 199 *e*P **P** **06 02 23.4 +2.6**
NKC Novy Kostel 89.11 320⇓ *i*P **P** **06 02 21.8 +0.6**
NKC eSKS 06 12 50.9
NKC Novy Kostel 89.11 320⇓ *i*P **P** **06 02 21.8 +0.6**
NKC eSKS 06 12 50.9
NKC AMS AMS 06 48 20.0
comp=Z,12μm,18.9s
WERN Wernitzgruen 89.16 320 *e*P **P** **06 02 21.9 +0.4**
comp=Z,76nm,1.1s,mb5.9
GUNZ Gunzen 89.19 320 *e*P **P** **06 02 22.1 +0.5**
comp=Z,139nm,1.2s,mb6.2
WERD Werda 89.21 320 *e*P **P** **06 02 21.9 +0.2**
comp=Z,126nm,1.2s,mb6.1
ROTZ Rotzenmuhle 89.25 320 *e*P **P** **06 02 22.6 +0.7**
comp=Z,126nm,1.3s,mb6.1
ROTZ eS S 06 13 13.5 +4.1
COP Copenhagen 89.30 326 *e*P **P** **06 02 22.3 +0.3**
comp=Z,71nm,0.9s,mb6.0
COP *i* S S 06 13 03.3 -6.3
COP *i* 06 27 46.4
COP LR LR
comp=Z,6μm,20.0s,MS6.0
COP Copenhagen 89.30 326 *e*P **P** **06 02 22.3 +0.3**
COP *i* S S 06 13 03.3 -6.3
COP pmax pmax
comp=Z,71nm,0.9s,mb6.0
COP MLR MLR
comp=Z,6μm,20.0s,MS6.0
COP Copenhagen 89.30 326 *i* P **P** **06 02 22.3 +0.3**
comp=Z,71nm,0.9s,mb6.0
COP *i* S S 06 13 03.3 -6.3
COP *i* 06 27 46.4
COP
comp=Z,6μm,20.0s
MANZ Manzenberg 89.33 320 *e*P **P** **06 02 23.0 +0.8**
comp=Z,204nm,1.2s,mb6.3
MANZ eS S 06 13 14.5 +4.4
QSPA South Pole Qui 89.45 180 PFAKE 06 02 30.0 +7.8
QSPA LR LR
comp=Z,8μm,21.0s,MS6.1
GAMB Gambell 89.48 26 *e*P **P** **06 02 22.4 -0.2**
WTTA Wattenberg 89.57 317 *i* P **P** **06 02 23.2 -0.2**
comp=Z,129nm,1.2s,mb6.2,SNR=16
WTTA Wattenberg 89.57 317 *i* P **P** **06 02 23.2 -0.3**
WTTA pmax pmax
comp=Z,129nm,1.2s,mb6.1
WATA Walderalm 89.61 317⇓ *i*P **P** **06 02 23.2 -0.5**
comp=Z,92nm,1.2s,mb6.0,SNR=12
WATA Walderalm 89.61 317⇓ *i*P **P** **06 02 23.2 -0.5**
WATA pmax pmax
comp=Z,92nm,1.2s,mb6.0
MOX Moxa 89.66 320 *e*P **P** **06 02 24.1 +0.3**
comp=Z,249nm,1.6s,mb6.3
MOX
comp=Z,7μm,20.0s
MOX Moxa 89.66 320 *e*P **P** **06 02 24.1 +0.3**
MOX pmax pmax
comp=Z,249nm,1.6s,mb6.3
MOX MLR MLR
comp=Z,7μm,20.0s,MS6.1
NSS Namsos 89.80 334 *e*P **P** **06 02 23.0 -1.1**
comp=Z,122nm,1.9s,mb5.9
NSS LR LR
comp=Z,13μm,17.5s,MS6.4
NSS Namsos 89.80 334 *e*P **P** **06 02 22.7 -1.4**
NSS *e*P 06 02 23.0
NSS AMb AMB 06 02 30.7
comp=Z,122nm,1.9s,mb5.9
NSS eSKS 06 13 11.2
NSS eSS SS 06 19 14.7 +3.5
NSS AMS AMS 06 47 06.3
comp=Z,13μm,17.5s,MS6.4
FUR Furstenfeldbru 89.83 318 *e*P **P** **06 02 24.4 -0.2**
FUR pmax pmax
comp=Z,83nm,1.1s,mb6.0
FUR Furstenfeldbru 89.83 318 *e*P **P** **06 02 24.4 -0.2**
comp=Z,83nm,1.1s,mb6.0
SQTA Sankt Quirin 89.86 317⇓ *i*P **P** **06 02 24.6 -0.2**
comp=Z,95nm,1.2s,mb6.0,SNR=24
SQTA Sankt Quirin 89.86 317⇓ *i*P **P** **06 02 24.6 -0.2**
SQTA pmax pmax
comp=Z,95nm,1.2s,mb6.0
GRA1 Grafenberg Arr 89.89 320 *e*P **P** **06 02 25.6 +0.7**
comp=Z,165nm,1.2s,mb6.2
GRA1 *e*PP PP 06 05 54.1 -3.6
GRA1 eS S 06 13 18.3 +2.9
GRA1 LR LR
comp=Z,7μm,20.1s,MS6.1
GRF Grafenberg Arr 89.89 320 *e*P **P** **06 02 25.6 +0.7**
GRF *e* 06 05 54.1
GRF eS S 06 13 18.3 +2.9
GRF pmax pmax
comp=Z,165nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,7μm,20.1s,MS6.1
GRF Grafenberg Arr 89.89 320 *e*P **P** **06 02 25.6 +0.7**
GRF *e* 06 05 54.1
GRF eS S 06 13 18.3 +2.9
GRF pmax pmax
comp=Z,165nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,7μm,20.1s,MS6.1
GRF Grafenberg Arr 89.89 320 *e*P **P** **06 02 25.6 +0.7**
comp=Z,165nm,1.2s,mb6.2
GRF *e*PP PP 06 05 54.1 -3.6
GRF eS S 06 13 18.3 +2.9
GRF eL 06 49 32.5
comp=Z,7μm,20.1s
GRFO Grafenberg 89.89 320 *e*P **P** **06 02 25.0 +0.1**
comp=Z,170nm,1.0s,mb6.3
GRFO LR LR
comp=Z,7μm,19.0s,MS6.1
GRFO Grafenberg 89.89 320 *e*P **P** **06 02 25.0 +0.1**
GRFO pmax pmax
comp=Z,170nm,1.0s,mb6.3
GRFO MLR MLR
comp=Z,7μm,19.0s,MS6.1
GRFO Grafenberg 89.89 320 eS S 06 13 18.5 +3.1
MOTA Moosalm 89.94 317 *i* P **P** **06 02 24.8 -0.4**
comp=Z,128nm,1.1s,mb6.2,SNR=20
MOTA Moosalm 89.94 317 *i* P **P** **06 02 24.8 -0.4**
MOTA pmax pmax
comp=Z,128nm,1.1s,mb6.2
NB2 NORSAR Subarra 90.07 331 P **P** **06 02 24.3 -1.2**
comp=Z,178nm,2.0s,mb6.0,baz=91,slow=5.1
NOA NORSAR Array B 90.07 331 P **P** **06 02 24.7 -0.8**
NOA 06 05 54.6
NOA pmax pmax
comp=Z,10.0nm,1.1s
NOA NORSAR Array B 90.07 331 P **P** **06 02 24.7 -0.8**
comp=Z,10nm,1.1s,mb5.1,baz=92,slow=4.6,SNR=9.0
NOA PP PP 06 05 54.6 -4.2
comp=Z,12nm,1.0s,baz=85,slow=8.4,SNR=3.8
NOA PKKPbc PKKPbc 06 19 50.0 -8.7
comp=Z,1.0nm,0.8s,baz=283,slow=4.4,SNR=3.3
NOA LR LR 06 50 34.1
comp=Z,8μm,18.9s,MS6.2,baz=80,slow=41
RETA Reutte 90.17 317 *i* P **P** **06 02 26.2 -0.1**
comp=Z,137nm,1.2s,mb6.2,SNR=12
FETA Feichten 90.19 317 *i* PcP PcP 06 02 26.5 -1.0
comp=Z,109nm,1.1s,SNR=31
KBS Kingsbay 90.20 349 *e*P **P** **06 02 23.8 -2.0**
KBS eSS SS 06 19 18.6 +2.1
KBS AMS AMS 06 47 21.7
comp=Z,10μm,19.6s,MS6.2
NAO01 NORSAR Array S 90.23 331 PFAKE 06 02 40.0 +14
NAO01 LR LR
comp=Z,6μm,22.0s,MS6.0
VLC Villacollemand 90.41 314 *e*P **P** **06 02 26.3 -1.1**
comp=Z,70nm,1.1s,mb5.9
VLC *e* pP 06 02 36.1 -1.0
CLZ Clausthal 90.45 322 *e*P **P** **06 02 28.0 +0.5**
CLZ eS S 06 13 21.6 +1.1
CLZ pmax pmax
comp=Z,157nm,1.3s,mb6.2
CLZ Clausthal 90.45 322 *e*P **P** **06 02 28.0 +0.5**
comp=Z,157nm,1.3s,mb6.2
CLZ eS S 06 13 21.6 +1.1
BSEG Bad Segeberg 90.49 324 *e*P **P** **06 02 27.9 +0.3**
comp=Z,100nm,1.2s,mb6.0
BSEG eS S 06 13 24.0 +3.3
HDH Heidenheim-Cha 90.55 318 P **P** **06 02 28.1 +0.1**
UBBA Unterbreizbach 90.69 321 *e*P **P** **06 02 28.9 +0.3**
comp=Z,238nm,1.8s,mb6.2
UBBA eS S 06 13 23.2 +0.6
DAVA Damuels 90.77 317 *i* P **P** **06 02 29.4 +0.4**
comp=Z,232nm,1.1s,mb6.4,SNR=34
DAVA Damuels 90.77 317 *i* PcP PcP 06 02 29.4 -0.7
comp=Z,232nm,1.1s,SNR=34
KONO Kongsberg 90.87 329 *i* P **P** **06 02 29.8 +0.6**
KONO Kongsberg 90.87 329 *e*P **P** **06 02 30.3 +1.0**
KONO Kongsberg 90.87 329 *e*P **P** **06 02 28.4 -0.8**
SIND Sindeldorf 90.94 319 P **P** **06 02 30.2 +0.4**
BUCH Bad Urach 91.12 318 P **P** **06 02 31.2 +0.6**
TNA Tin City 91.12 25 *e*P **P** **06 02 32.0 +1.7**
TNA LR LR
comp=Z,9μm,21.0s,MS6.2
MUD Monsted U'grnd 91.14 326 *i* P **P** **06 02 31.8 +1.3**
comp=Z,101nm,1.4s,mb6.0
MUD *i* S S 06 13 38.9 +12
MUD *i* 06 26 39.8
MUD Monsted U'grnd 91.14 326 *i* P **P** **06 02 31.8 +1.3**
comp=Z,101nm,1.4s,mb6.0
MUD *i* S S 06 13 38.9 +12
MUD *i* 06 26 39.8
MUD
comp=Z,6μm,19.0s
VSL Villasalto 91.16 309 *e*P **P** **06 02 30.9 -0.1**
comp=Z,85nm,1.0s,mb6.0
VSL *e*PP PP 06 06 00.5 -7.6
KEST Kesra 91.21 306 P **P** **06 02 31.9 +0.5**
comp=Z,54nm,1.1s,mb5.8,baz=332,slow=0.5,SNR=39
KEST LR LR 06 44 12.5
comp=Z,4μm,21.7s,MS5.8,baz=32,slow=36
STU Stuttgart 91.22 319 *e*P **P** **06 02 31.2 +0.1**
comp=Z,222nm,1.5s,mb6.3
GUT Gutenstein 91.28 318 P **P** **06 02 31.6 +0.2**
CORF Corte 91.31 312 *e*P **P** **06 02 31.9 +0.2**
LLS Linth-Limmern 91.37 317⇓P **P** **06 02 32.1 +0.3**
SISB Singen-Schiene 91.39 317 P **P** **06 02 32.4 +0.5**
WILA Wila 91.43 317⇑P **P** **06 02 32.8 +0.7**
TOD Tromm 91.47 319 *e*P **P** **06 02 33.0 +0.8**
LBG Lerchenberg 91.49 318 P **P** **06 02 33.1 +0.8**
SPAK Spaichingen-Ko 91.50 318 P **P** **06 02 33.2 +0.8**
SWS Schriesheim-Wi 91.53 319 P **P** **06 02 33.4 +0.9**
MUO Muotathal 91.62 317⇓P **P** **06 02 33.6 +0.6**
TNS Taunus Mts 91.68 320 *e*P **P** **06 02 33.6 +0.4**
TNS pmax pmax
comp=Z,323nm,1.8s,mb6.3
TNS Taunus Mts 91.68 320 *e*P **P** **06 02 33.6 +0.4**
comp=Z,323nm,1.8s,mb6.3
SLE Schleitheim 91.70 318⇑P **P** **06 02 33.9 +0.5**
BFO Black Forest 91.80 318 *e*P **P** **06 02 33.5 -0.3**
BFO pmax pmax
comp=Z,115nm,1.5s,mb6.0
BFO Black Forest 91.80 318 *e*P **P** **06 02 33.5 -0.3**
comp=Z,115nm,1.5s,mb6.0
SULZ Cheisacher 91.97 317⇓P **P** **06 02 34.6 0.0**
FELD Feldberg im Sc 92.03 318 *e*P **P** **06 02 35.1 +0.2**
KIZ Kirchzarten 92.09 318 P **P** **06 02 35.5 +0.4**
MMK Mattmark 92.11 316⇑P **P** **06 02 36.1 +0.8**
LANF Langenberg 92.13 319 *e*P **P** **06 02 36.4 +1.1**
UNV Unalaska Valle 92.19 36 PFAKE 06 02 50.0 +15
UNV LR LR
comp=Z,13μm,20.0s,MS6.4
ABH Alteburg 92.27 320 *e*P **P** **06 02 36.9 +1.0**
LKBD Leukerbad 92.33 316⇓P **P** **06 02 36.8 +0.5**
BBS Basel-Blauen 92.38 317 P **P** **06 02 40.9 +4.4**
BUG Bochum--Univer 92.39 321 *e*P **P** **06 02 36.5 0.0**
comp=Z,238nm,2.0s,mb6.2
WLS Welschbruch 92.45 318 P **P** **06 02 36.6 -0.2**
SAOF Saorge 92.45 314 *e*P **P** **06 02 37.5 +0.6**
BLS5 Blasjo 92.48 329 *e*P **P** **06 02 38.1 +1.4**
comp=Z,47nm,1.7s,mb5.5
BLS5 Blasjo 92.48 329 *e*P **P** **06 02 38.1 +1.4**
BLS5 AMb AMB 06 02 42.3
comp=Z,47nm,1.7s,mb5.5
DIX Grande Dixence 92.49 316⇓P **P** **06 02 38.0 +1.0**
CDF Champ du Feu 92.50 318 *e*P **P** **06 02 36.6 -0.4**
comp=Z,124nm,1.2s,mb5.9
CDF Champ du Feu 92.50 318 *e*P **P** **06 02 36.6 -0.4**
comp=Z,62nm,1.2s,mb5.9
CDF Champ du Feu 92.50 318 *e*P **P** **06 02 36.6 -0.4**
CDF pmax pmax
comp=Z,62nm,1.2s,mb5.9
SBF Sospel 92.54 314 *e*P **P** **06 02 37.1 -0.2**
comp=Z,213nm,1.2s,mb6.2
SBF Sospel 92.54 314 *e*P **P** **06 02 37.1 -0.2**
comp=Z,107nm,1.2s,mb6.2
SBF Sospel 92.54 314 *e*P **P** **06 02 37.1 -0.2**
SBF pmax pmax
comp=Z,107nm,1.2s,mb6.2
AUTN L'Aution 92.54 314 *e*P **P** **06 02 38.6 +1.3**
ECH Echery 92.59 318 *e*P **P** **06 02 37.9 +0.5**
RUP Ruppelstein 92.59 320 *e*P **P** **06 02 37.9 +0.5**
LUCF Luceram 92.61 314 *e*P **P** **06 02 38.1 +0.5**
MOF Molkenrain 92.62 318 *e*P **P** **06 02 38.1 +0.5**
TOUF Mont Tournerai 92.67 314 *e*P **P** **06 02 38.8 +0.9**
ABSA Djebel Ababsia 92.71 306 P **P** **06 02 41.0 +2.7**
MVIF Mont Vial 92.75 314 *e*P **P** **06 02 39.2 +0.9**
CMAH Djebel Manchou 92.75 306 P **P** **06 02 40.0 +1.5**
CGMA Guelma 92.77 306 P **P** **06 02 45.0 +6.5**
HINF Hinteralfeld 92.81 318 *e*P **P** **06 02 37.5 -1.0**
LOMF Lomont 92.84 317 *e*P **P** **06 02 38.8 +0.2**
CALN Calern 92.94 314 *e*P **P** **06 02 40.0 +0.8**
SURF Saint Ours 92.97 314 *e*P **P** **06 02 40.2 +0.9**
LPG La Plagne 92.97 315 *e*P **P** **06 02 39.3 0.0**
comp=Z,113nm,1.1s,mb5.9
LPG La Plagne 92.97 315 *e*P **P** **06 02 39.3 0.0**
comp=Z,57nm,1.1s,mb5.9
LPG La Plagne 92.97 315 *e*P **P** **06 02 39.3 0.0**
LPG pmax pmax
comp=Z,57nm,1.1s,mb5.9
BER Bergen 92.98 330 AMS AMS 06 52 30.3
comp=Z,9μm,16.1s,MS6.3
LPL La Plagne 92.98 315 *e*P **P** **06 02 39.3 0.0**
comp=Z,118nm,1.0s,mb6.0
LPL La Plagne 92.98 315 *e*P **P** **06 02 39.3 0.0**
comp=Z,59nm,1.0s,mb6.0
LPL La Plagne 92.98 315 *e*P **P** **06 02 39.3 0.0**
LPL pmax pmax
comp=Z,59nm,1.0s,mb6.0
MBDF Montbardon 92.99 315 *e*P **P** **06 02 38.7 -0.7**
comp=Z,142nm,1.4s,mb5.9
MBDF Montbardon 92.99 315 *e*P **P** **06 02 38.7 -0.7**
comp=Z,71nm,1.4s,mb5.9
MBDF Montbardon 92.99 315 *e*P **P** **06 02 38.7 -0.7**
MBDF pmax pmax
comp=Z,71nm,1.4s,mb5.9
BNI Bardonecchia 93.04 315 *e*P **P** **06 02 40.0 +0.4**
comp=Z,57nm,1.2s,mb5.9
BNI *e*PP PP 06 06 20.1 -2.6
BNI Bardonecchia 93.04 315 *e*P **P** **06 02 40.0 +0.4**
BNI *e* 06 06 20.1
BNI pmax pmax
comp=Z,57nm,1.2s,mb5.9
BNI Bardonecchia 93.04 315 P **P** **06 02 41.9 +2.3**
BNI pmax pmax
comp=Z,57nm,1.2s,mb5.9
FRF La Foret Royal 93.12 313 *e*P **P** **06 02 39.8 -0.2**
comp=Z,269nm,1.5s,mb6.2
FRF La Foret Royal 93.12 313 *e*P **P** **06 02 39.8 -0.2**
comp=Z,134nm,1.5s,mb6.2
FRF La Foret Royal 93.12 313 *e*P **P** **06 02 39.8 -0.2**
FRF pmax pmax
comp=Z,134nm,1.5s,mb6.2
HAU Haudompre 93.14 318 *e*P **P** **06 02 39.5 -0.5**
comp=Z,137nm,1.1s,mb6.0
HAU *e*MLR MLR
comp=Z,10μm,21.2s,MS6.0
HAU Haudompre 93.14 318 *e*P **P** **06 02 39.5 -0.5**
comp=Z,69nm,1.1s,mb6.0
HAU LR LR
comp=Z,10μm,21.3s,MS6.2
HAU Haudompre 93.14 318 *e*P **P** **06 02 39.5 -0.5**
HAU pmax pmax
comp=Z,69nm,1.1s,mb6.0
HAU MLR MLR
comp=Z,10μm,21.3s,MS6.2
WLF Walferdange 93.19 320 P **P** **06 02 41.2 +1.1**
comp=Z,48nm,2.0s,mb5.6
WLF Walferdange 93.19 320 *e*P **P** **06 02 40.6 +0.4**
comp=Z,58nm,1.3s,mb5.8
CAEH 'Ain El Ouahch 93.21 307 P **P** **06 02 47.0 +6.4**
MEM Membach 93.23 320 P **P** **06 02 39.7 -0.6**
comp=Z,21nm,1.7s,mb5.3
LMR La Mourre 93.23 313 *e*P **P** **06 02 40.1 -0.4**
comp=Z,120nm,1.5s,mb5.8
LMR La Mourre 93.23 313 *e*P **P** **06 02 40.1 -0.4**
comp=Z,60nm,1.5s,mb5.8
LMR La Mourre 93.23 313 *e*P **P** **06 02 40.1 -0.4**
LMR pmax pmax
comp=Z,60nm,1.5s,mb5.8
CKFL Kef-Lekhel 93.32 306 P **P** **06 02 46.0 +4.9**
THEF They Montfort 93.37 318 *e*P **P** **06 02 40.7 -0.3**
CABF La Chapelle 93.38 316 *e*P **P** **06 02 41.1 -0.1**
comp=Z,180nm,1.2s,mb6.1
CABF La Chapelle 93.38 316 *e*P **P** **06 02 41.1 -0.1**
comp=Z,90nm,1.2s,mb6.1
CABF La Chapelle 93.38 316 *e*P **P** **06 02 41.1 -0.1**
CABF pmax pmax
comp=Z,90nm,1.2s,mb6.1
GDM Grand'Maison 93.43 315 *e*P **P** **06 02 42.0 +0.6**
CASM Ain Smara 93.51 306 P **P** **06 02 43.5 +1.5**
TAVF Tavernes 93.55 313 *e*P **P** **06 02 43.3 +1.3**
ORIF Oris-en-Rattie 93.61 315 *e*P **P** **06 02 42.1 -0.2**
comp=Z,169nm,1.6s,mb5.9
ORIF *e*MLR MLR
comp=Z,10μm,22.0s,MS5.9
ORIF Oris-en-Rattie 93.61 315 *e*P **P** **06 02 42.1 -0.2**
comp=Z,84nm,1.5s,mb6.0
ORIF Oris-en-Rattie 93.61 315 *e*P **P** **06 02 42.1 -0.2**
ORIF pmax pmax
comp=Z,84nm,1.5s,mb6.0
BCLA Clavier 93.69 320 P **P** **06 02 42.9 +0.4**
comp=Z,50nm,2.5s,mb5.5
GRN Grenoble 93.69 315 *e*P **P** **06 02 43.6 +1.0**
SNAA Sanae 93.70 198 *i* P **P** **06 02 44.2 +2.1**
SMRF Simiane la Rot 93.88 314 *e*P **P** **06 02 43.9 +0.4**
comp=Z,126nm,1.5s,mb5.8
SMRF Simiane la Rot 93.88 314 *e*P **P** **06 02 43.9 +0.4**
comp=Z,126nm,1.5s,mb6.1
MEZF Maizieres J'vi 93.98 318 *e*P **P** **06 02 43.5 -0.3**
DFRA Djebel Bou Aff 94.00 306 P **P** **06 02 48.0 +3.8**
GIVF Givet 94.02 320 *e*P **P** **06 02 43.7 -0.3**
GELF Grande-Etoile 94.02 313 *e*P **P** **06 02 44.6 +0.4**
DOU Dourbes 94.16 320 P **P** **06 02 43.9 -0.8**
SNF Seneffe 94.33 320 P **P** **06 02 45.7 +0.3**
comp=Z,24nm,1.4s,mb5.4
SET Setif 94.40 306 P **P** **06 02 50.0 +3.9**
BAIF Baives 94.42 320 *e*P **P** **06 02 45.6 -0.2**
comp=Z,81nm,1.1s,mb5.8
BAIF Baives 94.42 320 *e*P **P** **06 02 45.6 -0.2**
comp=Z,40nm,1.1s,mb5.8
BAIF Baives 94.42 320 *e*P **P** **06 02 45.6 -0.2**
BAIF pmax pmax
comp=Z,40nm,1.1s,mb5.8
VIVF Saint-Julien-l 94.47 315 *e*P **P** **06 02 45.7 -0.5**
comp=Z,21nm,0.8s,mb5.3
VIVF Saint-Julien-l 94.47 315 *e*P **P** **06 02 45.7 -0.5**
comp=Z,11nm,0.8s,mb5.3
VIVF Saint-Julien-l 94.47 315 *e*P **P** **06 02 45.7 -0.5**
VIVF pmax pmax
comp=Z,11nm,0.8s,mb5.3
LOR Lormes 94.86 317 *e*P **P** **06 02 47.5 -0.4**
comp=Z,73nm,1.0s,mb5.8
LOR *e*MLR MLR
comp=Z,6μm,21.0s,MS5.8
LOR Lormes 94.86 317 *e*P **P** **06 02 47.5 -0.4**
comp=Z,37nm,1.0s,mb5.8
LOR LR LR
comp=Z,6μm,21.0s,MS6.1
LOR Lormes 94.86 317 *e*P **P** **06 02 47.5 -0.4**
LOR pmax pmax
comp=Z,37nm,1.0s,mb5.8
LOR MLR MLR
comp=Z,6μm,21.0s,MS6.1
SMF Signal de Mont 94.93 317 *e*P **P** **06 02 47.6 -0.6**
comp=Z,97nm,1.0s,mb5.9
SMF Signal de Mont 94.93 317 *e*P **P** **06 02 47.6 -0.6**
comp=Z,49nm,1.0s,mb5.9
SMF Signal de Mont 94.93 317 *e*P **P** **06 02 47.6 -0.6**
SMF pmax pmax
comp=Z,49nm,1.0s,mb5.9
SSF Saint Saulge 95.12 317 *e*P **P** **06 02 48.7 -0.4**
comp=Z,101nm,1.4s,mb5.7
SSF Saint Saulge 95.12 317 *e*P **P** **06 02 48.7 -0.4**
comp=Z,50nm,1.4s,mb5.8
SSF Saint Saulge 95.12 317 *e*P **P** **06 02 48.7 -0.4**
SSF pmax pmax
comp=Z,50nm,1.4s,mb5.8
AVF Avril sur Loir 95.25 317 *e*P **P** **06 02 49.2 -0.5**
comp=Z,86nm,1.2s,mb5.8
AVF Avril sur Loir 95.25 317 *e*P **P** **06 02 49.2 -0.5**
comp=Z,43nm,1.2s,mb5.8
AVF Avril sur Loir 95.25 317 *e*P **P** **06 02 49.2 -0.5**
AVF pmax pmax
comp=Z,43nm,1.2s,mb5.8
VNA2 Neumayer--Watz 95.32 198 *e*P **P** **06 02 53.7 +4.2**
baz=75,slow=1.0
VNA2 *e* 06 02 57.3
VNA2 *e* pP 06 03 02.6 +3.4
VNA2 *e* 06 03 06.4
VNA2 *e* 06 03 11.6
VNA2 *e* 06 03 16.3
VNA2 *e* 06 03 21.6
VNA2 *e* 06 03 26.8
VNA2 *e* 06 03 33.1
LBL Lubilhac 95.45 315 *e*P **P** **06 02 51.2 +0.5**
AGO Saint Agoulin 95.47 316 *e*P **P** **06 02 52.0 +1.3**
BGF Bois d'Agland 95.62 317 *e*P **P** **06 02 51.2 -0.2**
comp=Z,97nm,1.2s,mb5.8
BGF Bois d'Agland 95.62 317 *e*P **P** **06 02 51.2 -0.2**
comp=Z,48nm,1.3s,mb5.8
BGF Bois d'Agland 95.62 317 *e*P **P** **06 02 51.2 -0.2**
BGF pmax pmax
comp=Z,48nm,1.3s,mb5.8
VNA1 Neumayer--Stat 95.67 198 *e*P **P** **06 02 54.8 +3.7**
VNA1 *e* 06 02 59.1
VNA1 *e* pP 06 03 04.7 +3.9
VNA1 *e* 06 03 08.0
VNA1 *e* 06 03 13.2
VNA1 *e* 06 03 18.6
VNA1 *e* 06 03 22.6
VNA1 *e* 06 03 28.8
VNA1 *e* 06 03 32.0
VNA1 *e* 06 03 35.4
HYF Humbligny 95.69 317 *e*P **P** **06 02 51.8 +0.1**
VNA3 Neumayer Olymp 95.92 198 *e*P **P** **06 02 56.4 +4.1**
VNA3 *e* 06 03 00.9
VNA3 *e* pP 06 03 06.0 +4.0
VNA3 *e* 06 03 08.8
VNA3 *e* 06 03 13.8
VNA3 *e* 06 03 19.8
VNA3 *e* 06 03 24.1
VNA3 *e* 06 03 30.0
VNA3 *e* 06 03 36.8
TCF Toulx Ste Croi 96.08 316 *e*P **P** **06 02 53.1 -0.4**
comp=Z,234nm,1.9s,mb6.0
TCF Toulx Ste Croi 96.08 316 *e*P **P** **06 02 53.1 -0.4**
comp=Z,117nm,1.9s,mb6.0
TCF Toulx Ste Croi 96.08 316 *e*P **P** **06 02 53.1 -0.4**
TCF pmax pmax
comp=Z,117nm,1.9s,mb6.0
CAF Calviac 96.32 315 *e*P **P** **06 02 54.6 0.0**
comp=Z,65nm,1.2s,mb5.6
CAF Calviac 96.32 315 *e*P **P** **06 02 54.6 0.0**
comp=Z,32nm,1.2s,mb5.6
CAF Calviac 96.32 315 *e*P **P** **06 02 54.6 0.0**
CAF pmax pmax
comp=Z,32nm,1.2s,mb5.6
MTLF Montolieu 96.36 313 *e*P **P** **06 02 54.5 -0.3**
comp=Z,109nm,1.5s,mb5.8
MTLF Montolieu 96.36 313 *e*P **P** **06 02 54.5 -0.3**
comp=Z,54nm,1.5s,mb5.8
MTLF Montolieu 96.36 313 *e*P **P** **06 02 54.5 -0.3**
MTLF pmax pmax
comp=Z,54nm,1.5s,mb5.8
TTA Tatalina 96.58 27 P **P** **06 02 54.8 -0.6**

comp=Z,83nm,1.6s,mb5.9
TTA Tatalina 96.58 27 P **P** **06 02 54.8 -0.6**
TTA pmax pmax
comp=Z,83nm,1.6s,mb5.9
JMIC Jan Mayen 96.59 342 AMS AMS 06 49 03.3
comp=Z,7µm,19.3s,MS6.2
IMA2 Indian Mountai 96.85 23 *e*P **P** **06 02 55.0 -1.6**
DAG Danmarks Havn 96.92 348⇑ *e*P **P** **06 02 54.2 -2.5**
DAG pmax pmax
comp=Z,13nm,0.9s,mb5.4
DAG MLR MLR
comp=Z,19µm,22.0s,MS6.5
DAG Danmarks Havn 96.92 348⇑ *i*P **P** **06 02 54.2 -2.5**
comp=Z,13nm,0.9s,mb5.4
DAG
comp=Z,19µm,22.0s
LFF La Frestale 97.25 315 *e*P **P** **06 02 57.6 -1.2**
LDF La Druitiere 97.39 319 *e*P **P** **06 02 58.6 -0.8**
FLN La Foliniere 97.60 319 *e*P **P** **06 02 59.7 -0.6**
FLN *e*MLR MLR
comp=Z,10µm,20.5s,MS6.0
FLN La Foliniere 97.60 319 *e*P **P** **06 02 59.7 -0.6**
FLN MLR MLR
comp=Z,10µm,20.5s,MS6.3
ALE Alert 97.71 358 P **P** **06 02 58.4 -1.8**
comp=Z,74nm,1.0s,mb6.2,SNR=6.4
GRR Gorron 97.90 319 *e*P **P** **06 03 00.9 -0.8**
comp=Z,163nm,1.4s,mb6.1
GRR Gorron 97.90 319 *e*P **P** **06 03 00.9 -0.8**
comp=Z,82nm,1.4s,mb6.1
GRR Gorron 97.90 319 *e*P **P** **06 03 00.9 -0.8**
GRR pmax pmax
comp=Z,82nm,1.4s,mb6.1
EKA Eskdalemuir Ar 98.15 326 P **P** **06 03 02.0 -0.7**
EKA 06 07 03.4
EKA pmax pmax
comp=Z,9.0nm,1.0s
EKA Eskdalemuir Ar 98.15 326 P **P** **06 03 02.0 -0.7**
comp=Z,8.8nm,1.0s,mb5.3,baz=68,slow=6.3,SNR=5.0
EKA PP PP 06 07 03.4 +1.4
comp=Z,10.0nm,1.0s,baz=80,slow=6.9,SNR=3.5
ESK Eskdalemuir 98.18 326 PFAKE 06 03 10.0 +7.2
ESK LR LR
comp=Z,11µm,21.0s,MS6.3
TOA0 Torodi Ar. Sit 98.66 283 *e*P **P** **06 03 05.5 -0.4**
TORD Torodi Ar. Bea 98.66 283 P **P** **06 03 05.2 -0.7**
comp=Z,6.7nm,1.0s,mb5.1,baz=83,slow=4.2,SNR=21
TORD PP PP 06 07 08.7 +1.5
comp=Z,5.9nm,1.1s,baz=109,slow=6.6,SNR=5.4
TORD LR LR 06 46 54.0
comp=Z,7µm,20.2s,MS6.2,baz=90,slow=35
SJPF Ste Jean 98.88 313 *e*P **P** **06 03 05.4 -0.8**
comp=Z,65nm,1.4s,mb5.7
SJPF Ste Jean 98.88 313 *e*P **P** **06 03 05.4 -0.8**
comp=Z,32nm,1.4s,mb5.7
SJPF Ste Jean 98.88 313 *e*P **P** **06 03 05.4 -0.8**
SJPF pmax pmax
comp=Z,32nm,1.4s,mb5.7
KDAK Kodiak Island 99.41 31 PFAKE 06 03 20.0 +12
KDAK LR LR
comp=Z,4µm,20.0s,MS5.9
MCK McKinley 99.45 25 *e*P **P** **06 03 06.7 -1.6**
comp=Z,35nm,1.1s,mb5.8
MCK LR LR
comp=Z,7µm,19.0s,MS6.2
MCK McKinley 99.45 25 *e*P **P** **06 03 06.7 -1.6**
MCK pmax pmax
comp=Z,35nm,1.1s,mb5.8
MCK MLR MLR
comp=Z,7µm,19.0s,MS6.2
MCK McKinley 99.45 25 P **P** **06 03 07.1 -1.2**
MCK pmax pmax
comp=Z,17nm,1.0s,mb5.5
COLA College 99.53 24 P **P** **06 03 09.6 +1.0**
comp=Z,4.4nm,0.8s,mb4.9
COLA LR LR
comp=Z,11µm,19.0s,MS6.4
COLA College 99.53 24 *i*P **P** **06 03 09.3 +0.7**
PMR Palmer 100.04 27 PFAKE 06 03 20.0 +8.9
PMR LR LR
comp=Z,12µm,21.0s,MS6.4
KIP Kipapa 100.90 68 PFAKE 06 03 30.0 +15
KIP LR LR
comp=Z,5µm,21.0s,MS6.0
ESDC Sonseca Array 101.42 310 P Pdif 06 03 17.8 +0.6
comp=Z,0.9nm,0.7s,baz=62,slow=3.7,SNR=3.8
ESDC PP PP 06 07 20.0 -7.4
comp=Z,1.4nm,0.7s,baz=74,slow=6.2,SNR=3.4
ESLA Sonseca Array 101.42 310 PFAKE 06 03 30.0 +13
ESLA LR LR
comp=Z,28µm,21.0s,MS6.8
PAB San Pablo 101.73 310 PFAKE 06 03 30.0 +11
PAB LR LR
comp=Z,5µm,21.0s,MS6.0
EGAK Eagle 102.21 23 PFAKE 06 03 30.0 +9.3
EGAK LR LR
comp=Z,16µm,20.0s,MS6.5
POHA Pohakuloa 103.34 70 PFAKE 06 03 40.0 +14
POHA LR LR
comp=Z,5µm,20.0s,MS6.0
MVO Moncorvo 103.46 312 *e*SS 06 23 21.1
MVO Moncorvo 103.46 312 *e*LQ 06 33 45.5
MVO *e*LR LR 06 40 18.9
comp=Z,4µm,22.2s
BORG Borgarnes 103.53 338 PFAKE 06 03 40.0 +13
BORG LR LR
comp=Z,13µm,19.0s,MS6.5
MTE Manteigas 103.99 312 *e*SS 06 23 14.7
MTE Manteigas 103.99 312 *e*LQ 06 34 44.2
MTE *e*LR LR 06 40 23.0
comp=Z,4µm,19.8s
PBAR Barrancos 104.03 309 *e*SS 06 23 06.2
PBAR Barrancos 104.03 309 *e*LR LR 06 41 11.4
comp=Z,5µm,24.0s
PESTR Estremoz 104.33 310 *e*SS 06 23 10.6
PESTR *e*LQ 06 33 09.2
PESTR *e*LR LR 06 41 31.2
PVAQ Vaqueiros 104.71 309 *e*SS 06 23 15.9
PVAQ Vaqueiros 104.71 309 *e*LR LR 06 41 36.0
comp=Z,5µm,21.8s
PBDV Barranco-do-Ve 104.90 308 *e*SS 06 23 19.4
PBDV Barranco-do-Ve 104.90 308 *e*LR LR 06 40 53.8
comp=Z,5µm,22.6s
MORF Marmelete 105.45 309 *e*SS 06 23 22.5
MORF Marmelete 105.45 309 *e*LR LR 06 41 51.6
comp=Z,5µm,22.1s
PMAFR Mafra 105.60 310 *e*LQ 06 34 21.3
PMAFR *e*LR LR 06 40 33.5
comp=Z,4µm,19.6s
PFVI Vila Bisbo 105.63 308 *e*SS SS 06 23 11.9 +17
PFVI Vila Bisbo 105.63 308 *e*LQ 06 35 25.7
PFVI *e*LR LR 06 41 19.8
comp=Z,4µm,22.3s
TRIS Tristan da Cun 107.73 231 PFAKE 06 08 00.0 +6.5
TRIS LR LR
comp=Z,2µm,20.0s,MS5.7
TBI Tubuai 108.17 115 *e*LQ 06 35 14.1
comp=Z,14µm,39.0s
TBI *e*LR LR 06 39 52.7
comp=Z,17µm,24.0s
SIT Sitka 108.32 28 PFAKE 06 08 00.0 +6.0
SIT LR LR
comp=Z,12µm,20.0s,MS6.5
PPT Papeete 108.84 109 *e*SS SS 06 23 44.2 +4.3
comp=Z,3µm,30.2s
PPT *e*LQ 06 35 30.3
comp=Z,18µm,37.8s
PPT *e*LR LR 06 40 07.8
comp=Z,12µm,24.2s
WRAK Wrangell Islan 110.06 28 PFAKE 06 08 10.0 +13
WRAK LR LR
comp=Z,9µm,21.0s,MS6.3
SFJD Kangerlussuaq 110.61 348 PFAKE 06 08 10.0 +12
SFJD LR LR
comp=Z,9µm,22.0s,MS6.3
YKA Yellowknife Ar 112.81 17 Pdif Pdif 06 04 05.6 -2.3
YKA PKPdf PKiKP 06 08 02.3 0.0
YKA PKKPbc PKKPbc 06 18 50.7 -1.8
YKA SKKPbc 06 22 34.2
YKA SKKP 06 22 55.5
YKA Yellowknife Ar 112.81 17 *i* PKiKP PKiKP 06 08 02.3 0.0
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 112.81 17 Pdiff Pdif 06 04 05.6 -2.3
comp=Z,0.2nm,0.7s,baz=322,slow=4.9,SNR=3.5
YKA PKiKP PKiKP 06 08 02.3 0.0
comp=Z,1.3nm,0.9s,baz=320,slow=2.1,SNR=10
YKA PKKPbc PKKPbc 06 18 50.7 -1.8
comp=Z,4.4nm,0.9s,baz=141,slow=3.1,SNR=16
YKA SKKPbc 06 22 34.2
comp=Z,0.2nm,0.4s,baz=144,slow=3.4,SNR=3.7
YKA SKKP 06 22 55.5
comp=Z,0.4nm,0.3s,baz=137,slow=3.6,SNR=3.6
PMSA Palmer Station 113.90 187 PFAKE
PMSA LR LR
comp=Z,5µm,21.0s,MS6.1
ASCN Ascension 114.51 261 PFAKE
ASCN LR LR
comp=Z,5µm,22.0s,MS6.0
TAOE Nuku Hiva Isla 118.91 100 *e*PS PS 06 19 18.2 -4.7
comp=Z,6µm,25.5s
TAOE Nuku Hiva Isla 118.91 100 *e*SS SS 06 25 50.9 -2.4
comp=Z,11µm,36.0s
TAOE *e*LR LR 06 44 43.3
comp=Z,15µm,36.2s
A05A Maple Falls 119.45 31⇑P PKPdf 06 08 15.0 -0.5
baz=119
NLWA Neilton Lookou 119.49 33 PFAKE 06 08 30.0 +14
NLWA LR LR
comp=Z,7µm,21.0s,MS6.2
C04A Brinnon 119.78 32⇓P PKPdf 06 08 15.9 -0.2
baz=120
B05A Bryant 119.90 31⇓P PKPdf 06 08 15.9 -0.4
baz=120,SNR=5.8
B06A Marblemount 120.06 31⇓P PKPdf 06 08 16.6 -0.1
baz=120
A07A Ashnola River, 120.28 30⇓P PKPdf 06 08 16.9 -0.2
baz=120,SNR=6.8
EDM Edmonton 120.43 23 *e*PKPdf PKPdf 06 08 15.9 -1.3
C05A Tolt Reservoir 120.47 32⇓P PKPdf 06 08 17.0 -0.4
baz=120
D05A Enumclaw 120.63 32⇓P PKPdf 06 08 17.3 -0.4
baz=120
FCC Fort Churchill 120.78 9 *e*PKPdf PKPdf 06 08 15.5 -2.2
B07A Winthrop 120.79 30⇑P PKPdf 06 08 18.2 +0.2
baz=121
A08A Turner Farm, O 120.89 29⇓P PKPdf 06 08 18.3 +0.1
baz=121
E05A Randle 121.14 33⇓P PKPdf 06 08 18.4 -0.4
baz=121
F04A Amboy 121.17 34⇓P PKPdf 06 08 18.6 -0.3
baz=121
A09A Danville 121.21 29⇓P PKPdf 06 08 18.4 -0.4
baz=121
D06A Cle Elum 121.23 32⇓P PKPdf 06 08 18.7 -0.2
baz=121
RKT Rikitea 121.25 118 *e*LQ 06 40 47.1
comp=Z,12µm,37.5s
RKT Rikitea 121.25 118 *e*PS PS 06 19 47.5 +4.1
comp=Z,1µm,28.2s
RKT Rikitea 121.25 118 *e*SS SS 06 26 29.2 +6.6
comp=Z,4µm,36.8s
RKT *e*LR LR 06 45 54.7
comp=Z,14µm,28.5s
B08A Colville Reser 121.25 30⇑P PKPdf 06 08 18.9 -0.1
baz=121
C07A Waterville 121.32 31⇓P PKPdf 06 08 19.0 -0.1
baz=121,SNR=8.3
H03A Soap Creek Ran 121.42 35⇓P PKPdf 06 08 19.3 -0.1
baz=121,SNR=5.2
COR Corvallis 121.47 35 PFAKE 06 08 30.0 +11
COR LR LR
comp=Z,3µm,20.0s,MS6.0
I02A Mapleton 121.50 36⇑P PKPdf 06 08 19.2 -0.3
baz=121
G04A Mulino 121.57 34⇓P PKPdf 06 08 19.8 +0.2
baz=121
E06A Yakima 121.57 32⇓P PKPdf 06 08 19.7 +0.1
baz=121
D07A Quincy 121.69 31⇑P PKPdf 06 08 20.0 +0.2
baz=122
A10A Northport 121.70 28⇑P PKPdf 06 08 19.8 0.0
baz=122
F05A White Salmon 121.73 33⇓P PKPdf 06 08 19.9 0.0
baz=122
C08A Higginbotham F 121.78 30⇑P PKPdf 06 08 20.2 +0.2
baz=122,SNR=7.4
B09A Rice 121.80 29⇓P PKPdf 06 08 20.0 0.0
baz=122,SNR=14
I03A Eugene 121.84 36⇓P PKPdf 06 08 20.3 +0.1
baz=122
J02A Umpqua 122.01 37⇑P PKPdf 06 08 20.8 +0.2
baz=122
H04A Detroit Lake 122.05 35 P PKPdf 06 08 21.0 +0.4
baz=122,SNR=6.3
C09A Chrisman Ranch 122.15 30⇓P PKPdf 06 08 20.9 +0.2
baz=122
E07A Sunnyside 122.16 32 P PKPdf 06 08 20.4 -0.3
baz=122,SNR=6.8
F06A Goldendale 122.17 33⇓P PKPdf 06 08 20.6 -0.2
baz=122,SNR=7.7
G05A Wamic 122.20 34⇑P PKPdf 06 08 21.0 +0.2
baz=122
A11A Hall Mountain, 122.28 28 P PKPdf 06 08 21.0 +0.1
baz=122,SNR=9.6
D08A Wollman Farm, 122.32 31 P PKPdf 06 08 21.1 +0.1
baz=122,SNR=12
J03A Ideyld Park 122.37 36⇑P PKPdf 06 08 21.6 +0.3
baz=122,SNR=6.8
NEW Newport 122.40 29 *e*PKPdf PKPdf 06 08 20.3 -0.8
NEW *e*SKPdf SKPdf 06 11 49.6 -5.0
NEW LR LR
comp=Z,8µm,20.0s,MS6.4
HAWA Hanford 122.44 32 *e*PKPdf PKPdf 06 08 20.2 -1.1
HAWA LR LR
comp=Z,6µm,19.0s,MS6.3
I04A Tendick Farm, 122.45 36⇓P PKPdf 06 08 21.3 -0.1
baz=122,SNR=10
M01C Crescent City 122.53 38⇓P PKPdf 06 08 21.3 -0.3
baz=122
F07A Phinny Hill Vi 122.55 32⇓P PKPdf 06 08 21.8 +0.3
baz=122
G06A Carlson Farm, 122.58 33⇓P PKPdf 06 08 21.7 +0.1
baz=122,SNR=6.3
H05A Madras 122.62 34⇑P PKPdf 06 08 22.2 +0.5
baz=122
E08A Dider Farm, El 122.62 31⇓P PKPdf 06 08 21.5 -0.2
baz=122,SNR=13
A12A Yaak River Ran 122.63 27⇑P PKPdf 06 08 21.6 0.0
baz=122,SNR=8.4
D09A Jones Farm, Ri 122.63 31⇓P PKPdf 06 08 21.5 -0.1
baz=122,SNR=9.8
B11A Sandpoint 122.64 28⇑P PKPdf 06 08 21.7 +0.1
baz=122
L02A Cave Junction 122.68 38⇓P PKPdf 06 08 22.1 +0.2
baz=122,SNR=6.3
I05A Bend 122.89 35⇑P PKPdf 06 08 22.4 +0.2
baz=123,SNR=5.7
FFC Flin Flon 122.90 15 *e*PKPdf PKPdf 06 08 20.0 -1.9
FFC LR LR
comp=Z,6µm,20.0s,MS6.3
J04A Umpqua Nationa 122.95 36⇓P PKPdf 06 08 22.7 +0.3
baz=123,SNR=11
H06A Lindquist Farm 123.06 34 P PKPdf 06 08 22.6 +0.1
baz=123,SNR=14
E09A Wood Farm, Sta 123.08 31⇓P PKPdf 06 08 22.8 +0.3
baz=123,SNR=7.0
G07A Ruggs Ranch, H 123.09 33⇑P PKPdf 06 08 22.4 -0.2
baz=123
JCC Jacoby Creek 123.16 39⇑P PKPdf 06 08 22.7 -0.1
baz=123
D10A Wagner Farm, O 123.16 30⇑P PKPdf 06 08 22.6 0.0
baz=123,SNR=14
A13A Flathead Natio 123.19 27⇑P PKPdf 06 08 22.5 -0.1
baz=123
F08A Pendleton 123.23 32⇑P PKPdf 06 08 23.0 +0.2
baz=123
J05A Fort Rock 123.44 36⇓P PKPdf 06 08 23.5 +0.2
baz=123,SNR=15
G08A Pilot Rock 123.46 33 P PKPdf 06 08 23.2 0.0
baz=123,SNR=11
YBH Yreka Blue Hor 123.47 38 *e*PKPdf PKPdf 06 08 24.5 +1.1
YBH LR LR
comp=Z,6µm,20.0s,MS6.2
YBH Yreka Blue Hor 123.47 38⇑P PKPdf 06 08 23.7 +0.3
baz=123,SNR=8.1
B13A Whitefish 123.58 27 P PKPdf 06 08 23.3 -0.1
baz=123,SNR=20
M02C Callahan 123.58 38⇑P PKPdf 06 08 23.9 +0.2
baz=123
H07A Lands Inn, Kim 123.58 33⇑P PKPdf 06 08 23.8 +0.2
baz=123
N02C Big Bar 123.61 39⇑P PKPdf 06 08 23.9 +0.2
baz=124
I06A Prineville 123.62 34⇑P PKPdf 06 08 23.8 +0.2
baz=124,SNR=9.3
E10A Myers Farm, Un 123.63 30 P PKPdf 06 08 23.6 0.0
baz=124,SNR=8.5
L04A Klamath Falls 123.71 37⇑P PKPdf 06 08 24.1 +0.3
baz=124,SNR=8.8
F09A S2 Ranch, Elgi 123.74 32⇓P PKPdf 06 08 23.9 +0.1
baz=124,SNR=11
F10A Beach Ranch, E 123.92 31⇑P PKPdf 06 08 24.4 +0.3
baz=124,SNR=22
I07A Izee 123.94 34⇑P PKPdf 06 08 24.7 +0.4
baz=124,SNR=9.2
M04C Macdoel 123.97 37 P PKPdf 06 08 24.6 +0.3
baz=124,SNR=17
K05A Summer Lake 123.98 36⇑P PKPdf 06 08 24.5 +0.2
baz=124,SNR=11
C13A Hot Springs 124.03 28⇑P PKPdf 06 08 24.1 -0.2
baz=124,SNR=6.6
KIPM Iron Peak 124.06 40 *e*PKPdf PKPdf 06 08 23.1 -1.5
KCPM Cahto Peak 124.06 40 *e*PKPdf PKPdf 06 08 24.2 -0.4
J06A Christmas Vall 124.09 35⇓P PKPdf 06 08 24.5 -0.1
baz=124,SNR=14
M03C McCloud 124.09 38⇓P PKPdf 06 08 25.1 +0.5
baz=124,SNR=10
D12A Red Ives Fores 124.11 29⇑P PKPdf 06 08 24.9 +0.4
baz=124
H08A Prairie City 124.11 33⇑P PKPdf 06 08 24.8 +0.2
baz=124,SNR=14
E11A Bogner Ranch, 124.17 30⇓P PKPdf 06 08 24.5 -0.1
baz=124,SNR=12
WDC Whiskeytown Da 124.23 39 *e*PKPdf PKPdf 06 08 22.8 -2.1
WDC LR LR
comp=Z,4µm,20.0s,MS6.1
WDC Whiskeytown Da 124.23 39 P PKPdf 06 08 25.0 +0.1
baz=124,SNR=6.5
O02C Red Bluff 124.30 39⇑P PKPdf 06 08 25.1 +0.1
baz=124,SNR=18
K06A Valley Falls 124.31 36⇑P PKPdf 06 08 25.1 +0.2
baz=124,SNR=11
P01C Double 8 Ranch 124.34 40⇓P PKPdf 06 08 25.3 +0.2
baz=124,SNR=8.1
C14A Swan Lake 124.35 27⇓P PKPdf 06 08 25.0 +0.1
baz=124
L05A Lakeview 124.42 37⇓P PKPdf 06 08 25.2 0.0
baz=124,SNR=12
J07A Hines 124.49 34⇓P PKPdf 06 08 25.4 +0.1
baz=124,SNR=15
D13A Huson 124.50 28⇓P PKPdf 06 08 24.7 -0.5
baz=124
F11A Grangeville 124.52 30⇓P PKPdf 06 08 25.4 +0.1
baz=124,SNR=10.0
H09A Durkee 124.56 32⇓P PKPdf 06 08 25.6 +0.2
baz=124
I08A Drewsey 124.56 34⇑P PKPdf 06 08 25.7 +0.3
baz=124,SNR=15
BMO Blue Mountains 124.63 32 PFAKE 06 08 40.0 +14
BMO LR LR
comp=Z,6µm,19.0s,MS6.3
GASB Alder Springs 124.64 40⇓P PKPdf 06 08 26.0 +0.3
baz=124,SNR=19
M05C Lookout 124.64 37 P PKPdf 06 08 25.7 0.0
baz=124,SNR=12
HATC Hat Creek Radi 124.77 38⇑P PKPdf 06 08 26.1 +0.2
baz=125,SNR=9.1
HOPS Hopland 124.77 41 *e*PKPdf PKPdf 06 08 26.5 +0.5
HOPS *e*SKPdf SKPdf 06 11 57.7 -1.8
HOPS LR LR
comp=Z,5µm,21.0s,MS6.1
HOPS Hopland 124.77 41⇓P PKPdf 06 08 26.1 +0.2
baz=125,SNR=7.7
MOD Modoc 124.82 36 *e*PKPdf PKPdf 06 08 25.2 -0.8
MOD LR LR
comp=Z,6µm,21.0s,MS6.2
MOD Modoc 124.82 36⇓P PKPdf 06 08 26.2 +0.2
baz=125,SNR=20
SCHQ Schefferville 124.86 351 PKP PKPdf 06 08 25.0 -0.6
SCHQ LR LR
comp=Z,2µm,20.0s,MS5.8
SCHQ Schefferville 124.86 351 PKP PKPdf 06 08 25.0 -0.6
comp=Z,17nm,0.9s,baz=40,slow=3.2,SNR=15
O03C Acorn Hollow, 124.88 39⇑P PKPdf 06 08 26.8 +0.6
baz=125
PTCN Pitcairn Islan 124.91 121 PFAKE 06 08 40.0 +13
PTCN LR LR
comp=Z,9µm,21.0s,MS6.4
EFI East Falkland 124.94 196 PFAKE 06 08 40.0 +14
EFI LR LR
comp=Z,4µm,19.0s,MS6.1
MSO Missoula 124.94 28 *e*PKPdf PKPdf 06 08 24.2 -1.8
MSO LR LR
comp=Z,5µm,21.0s,MS6.1
K07A Rock Creek Ran 124.96 35⇓P PKPdf 06 08 26.5 +0.3
baz=125,SNR=20
D14A Greenough 124.96 28⇓P PKPdf 06 08 26.0 -0.1
baz=125,SNR=14
J08A Circle Bar Ran 124.97 34⇓P PKPdf 06 08 26.2 -0.1
baz=125,SNR=28
I09A Lost Marbles R 124.98 33⇑P PKPdf 06 08 26.3 +0.1
baz=125
F12A Elk City 125.07 30⇓P PKPdf 06 08 26.6 +0.2
baz=125
H10A Noah's Angus R 125.10 32⇑P PKPdf 06 08 26.6 +0.2
baz=125,SNR=12
E13A Victor 125.10 29⇓P PKPdf 06 08 26.3 -0.1
baz=125,SNR=28
M06C Likely Place G 125.14 37 P PKPdf 06 08 27.4 +0.8
baz=125,SNR=7.5
CHMT Chamberlain Mo 125.20 28 *e*PKPdf PKPdf 06 08 25.5 -1.0
CHMT *e*SKPdf SKPdf 06 11 49.5 -11
MNRC McLaughlin Nat 125.24 41⇓P PKPdf 06 08 27.6 +0.7
baz=125,SNR=28
O04C Chester 125.29 38⇑P PKPdf 06 08 27.2 +0.3
baz=125,SNR=13
L07A Adell 125.32 36⇓P PKPdf 06 08 27.6 +0.7
baz=125,SNR=8.6
NSHM Saint Helena R 125.33 41 *e*PKPdf PKPdf 06 08 27.5 +0.4
NSHM *e*SKPdf SKPdf 06 12 00.3 -0.3
ELFS Eagle Lake Fie 125.33 38⇑P PKPdf 06 08 27.3 +0.3
baz=125,SNR=16
MCCM Marconi Confer 125.36 42 PFAKE 06 08 40.0 +13
MCCM LR LR
comp=Z,4µm,20.0s,MS6.0
K08A Mann Creek Ran 125.37 35⇑P PKPdf 06 08 27.3 +0.3
baz=125,SNR=17
J09A Fry Pan Ranch, 125.38 34⇑P PKPdf 06 08 27.2 +0.2
baz=125,SNR=24
H11A Donnelly 125.41 31⇑P PKPdf 06 08 27.2 +0.2
baz=125,SNR=14
I10A Payette 125.41 32⇓P PKPdf 06 08 27.7 +0.6
baz=125
D15A Lincoln 125.45 27 P PKPdf 06 08 27.6 +0.5
baz=125,SNR=24
E14A Clinton 125.45 28⇑P PKPdf 06 08 27.3 +0.2
baz=125,SNR=18
WVOR Wild Horse Val 125.47 35 *e*PKPdf PKPdf 06 08 27.3 +0.1
WVOR LR LR
comp=Z,5µm,21.0s,MS6.2
ORV Oroville 125.47 39⇓P PKPdf 06 08 27.5 +0.2
baz=125
F13A Darby 125.50 29⇑P PKPdf 06 08 27.5 +0.3
baz=125,SNR=12
FARB Farallon Islan 125.51 42⇑P PKPdf 06 08 27.4 0.0
baz=125
CVS Carmenet Viney 125.52 41⇓P PKPdf 06 08 27.6 +0.1
baz=125,SNR=8.3
O05C Quincy 125.60 39⇓P PKPdf 06 08 27.7 +0.2
baz=126,SNR=9.4
OHCM Honcut 125.60 40 *e*PKPdf PKPdf 06 08 26.9 -0.7
OHCM *e*SKPdf SKPdf 06 12 01.1 0.0
Q03C Winters 125.66 41⇑P PKPdf 06 08 28.1 +0.4
baz=126
L08A Fields 125.79 35⇑P PKPdf 06 08 28.4 +0.6
baz=126,SNR=23
N06A Buffalo Meadow 125.80 37⇑P PKPdf 06 08 28.2 +0.3
baz=126,SNR=23
M07A Soldier Meadow 125.81 36⇑P PKPdf 06 08 28.5 +0.6
baz=126,SNR=21
K09A Rome 125.82 34⇑P PKPdf 06 08 28.2 +0.4
baz=126,SNR=31
E15A Deer Lodge 125.85 28 P PKPdf 06 08 28.0 +0.2
baz=126,SNR=8.6
J10A Berg Farm, Mel 125.87 33⇑P PKPdf 06 08 28.3 +0.4
baz=126,SNR=6.2
EGMT Eagleton 125.91 25 *e*PKPdf PKPdf 06 08 27.2 -0.6
EGMT LR LR
comp=Z,9µm,21.0s,MS6.4
EGMT Eagleton 125.91 25⇑P PKPdf 06 08 28.0 +0.2

baz=126,SNR=21
F14A Wisdom 125.95 29 P PKPdf 06 08 28.5 +0.5
baz=126,SNR=20
G13A Cobalt 126.05 30 ⇓P PKPdf 06 08 28.4 +0.2
baz=126
H12A Diamond D Ranc 126.11 31 ⇑P PKPdf 06 08 28.4 +0.1
baz=126,SNR=12
O06A Flanigan 126.16 38 P PKPdf 06 08 28.7 +0.1
baz=126,SNR=16
P05C Yuba Gap, Truc 126.18 39 ⇑P PKPdf 06 08 28.8 +0.1
baz=126,SNR=8.6
M08A Happy Creek Ra 126.24 36 ⇓P PKPdf 06 08 29.3 +0.5
baz=126,SNR=16
K10A MacKenzie Ranc 126.24 34 ⇑P PKPdf 06 08 29.6 +0.9
baz=126,SNR=24
L09A Wilkinson Ranc 126.29 35 ⇓P PKPdf 06 08 29.4 +0.6
baz=126,SNR=8.7
N07B Gerlach 126.30 37 ⇑P PKPdf 06 08 29.3 +0.4
baz=126,SNR=17
G14A Jackson 126.32 29 ⇓P PKPdf 06 08 29.6 +0.9
baz=126,SNR=25
F15A Butte 126.35 28 ⇑P PKPdf 06 08 29.5 +0.7
baz=126
MFID Camas Ranch 126.38 32 P PKPdf 06 08 29.8 +0.9
baz=126,SNR=15
H13A Challis 126.41 30 ⇓P PKPdf 06 08 29.3 +0.4
baz=126,SNR=23
LAVA Lava Cap Winer 126.41 40 P PKPdf 06 08 29.6 +0.5
baz=126,SNR=11
DLMT Dillon 126.65 29 *e*PKPdf PKPdf 06 08 29.0 -0.3
K11A Parker Ranch, 126.71 33 P PKPdf 06 08 30.1 +0.6
baz=126,SNR=8.7
WCN Washoe City 126.71 39 ⇑P PKPdf 06 08 30.3 +0.6
baz=127,SNR=10
S04C Ingram Canyon, 126.73 41 ⇓P PKPdf 06 08 30.2 +0.4
baz=127
O07A Toulon 126.74 37 ⇓P PKPdf 06 08 30.5 +0.7
baz=127,SNR=10
M09A Marrel Ranch, 126.79 35 ⇓P PKPdf 06 08 30.4 +0.6
baz=127
N08A GE Springer Mi 126.80 36 ⇑P PKPdf 06 08 30.6 +0.7
baz=127
G15A Dillon 126.85 29 P PKPdf 06 08 30.5 +0.7
baz=127,SNR=39
R05C Kirkwood Meado 126.86 39 P PKPdf 06 08 31.0 +1.0
baz=127,SNR=12
J12A Stokes Ranch, 126.89 32 ⇓P PKPdf 06 08 30.7 +0.8
baz=127,SNR=12
BOZ Bozeman (W) 126.90 28 *e*PKPdf PKPdf 06 08 29.6 -0.3
BOZ *e*SKPdf SKPdf 06 12 03.4 +0.1
BOZ LR LR
comp=Z,6µm,20.0s,MS6.3
BOZ Bozeman (W) 126.90 28 ⇓P PKPdf 06 08 30.6 +0.8
baz=127
MCMT McKenzie Canyo 126.92 29 *e*PKPdf PKPdf 06 08 30.0 +0.1
L10A Juniper Basin 126.92 34 P PKPdf 06 08 30.8 +0.8
baz=127,SNR=22
I13A Wildhorse Cree 126.94 31 ⇑P PKPdf 06 08 30.7 +0.7
baz=127,SNR=21
HLID Hailey 127.03 31 *e*PKPdf PKPdf 06 08 30.9 +0.7
HLID LR LR
comp=Z,10µm,22.0s,MS6.4
HLID Hailey 127.03 31 P PKPdf 06 08 31.1 +1.0
baz=127,SNR=16
PACP Pacheco Peak 127.03 42 ⇓P PKPdf 06 08 31.1 +0.8
baz=127,SNR=11
CMB Columbia Colle 127.05 40 PFAKE 06 08 40.0 +10
CMB LR LR
comp=Z,4µm,21.0s,MS6.1
CMB Columbia Colle 127.05 40 ⇓P PKPdf 06 08 30.9 +0.6
baz=127,SNR=8.1
SAO San Andreas Ge 127.06 42 PFAKE 06 08 40.0 +10
SAO LR LR
comp=Z,3µm,19.0s,MS6.0
N09A Rock Creek Ran 127.11 36 ⇓P PKPdf 06 08 31.5 +1.1
baz=127
HAST UC Hastings Re 127.19 43 ⇓P PKPdf 06 08 31.4 +0.7
baz=127
M10A I.L. Ranch, Tu 127.25 35 ⇓P PKPdf 06 08 31.6 +1.0
baz=127
J13A Cove Ranch, Pi 127.27 31 P PKPdf 06 08 31.2 +0.6
baz=127,SNR=25
R06C Coleville 127.37 39 ⇑P PKPdf 06 08 31.6 +0.7
baz=127,SNR=16
K12A Draper Farm, C 127.41 33 P PKPdf 06 08 31.8 +0.8
baz=127,SNR=9.7
S05C Merced 127.48 41 ⇑P PKPdf 06 08 31.9 +0.6
baz=127,SNR=9.1
S06C San Francisco 127.49 40 P PKPdf 06 08 31.9 +0.7
baz=127,SNR=17
T05C Eagle Field, D 127.51 42 ⇓P PKPdf 06 08 32.3 +1.0
baz=127
P08A Dixie Valley 127.51 37 ⇓P PKPdf 06 08 32.0 +0.8
baz=127
BMN Battle Mountai 127.56 36 PFAKE 06 08 40.0 +8.7
BMN LR LR
comp=Z,5µm,20.0s,MS6.2
QLMT Earthquake Lak 127.60 28 *e*PKPdf PKPdf 06 08 31.4 +0.2
QLMT *e*SKPdf SKPdf 06 12 04.1 -0.5
V03C Hunter Liggett 127.61 43 ⇓P PKPdf 06 08 32.2 +0.7
baz=128
DGMT Dagmar 127.68 21 *e*PKPdf PKPdf 06 08 30.8 -0.4
DGMT LR LR
comp=Z,14µm,20.0s,MS6.6
GCMT Greycliff 127.68 26 *e*PKPdf PKPdf 06 08 30.7 -0.6
L12A House Creek Ra 127.68 33 ⇑P PKPdf 06 08 32.3 +0.9
baz=128,SNR=18
U04C Hernandez Rese 127.73 42 ⇓P PKPdf 06 08 32.5 +0.7
baz=128
M11A Holland Ranch, 127.73 34 ⇓P PKPdf 06 08 32.6 +1.0
baz=128,SNR=11
O09A Fish Creek Ran 127.75 36 ⇑P PKPdf 06 08 32.5 +0.8
baz=128,SNR=6.1
K13A Stover Farm, H 127.84 32 ⇑P PKPdf 06 08 33.4 +1.7
baz=128,SNR=11
R07C Lee Vining 127.88 40 ⇑P PKPdf 06 08 33.4 +1.5
baz=128
YMR Madison River 127.94 28 *e*PKPdf PKPdf 06 08 32.4 +0.5
YMR *e*SKPdf SKPdf 06 12 07.5 +2.2
YMR LR LR
comp=Z,9µm,22.0s,MS6.4
YNR Norris Junctio 128.04 28 *e*PKPdf PKPdf 06 08 33.7 +1.6
V04C Ramage Ranch, 128.07 43 ⇓P PKPdf 06 08 33.9 +1.5
baz=128
O10A Cortez Mining, 128.07 36 ⇑P PKPdf 06 08 33.5 +1.3
baz=128,SNR=11
T06C Millerton Lake 128.08 41 ⇑P PKPdf 06 08 33.7 +1.3
baz=128,SNR=17
Q08A Gabbs 128.11 38 ⇓P PKPdf 06 08 33.6 +1.2
baz=128,SNR=8.9
PKD Parkfield 128.12 43 ⇑P PKPdf 06 08 33.7 +1.2
baz=128
NVAR Mina Array Bea 128.14 39 PKP PKPdf 06 08 33.6 +1.2
comp=Z,5.5nm,0.8s,baz=263,slow=0.6,SNR=25
NVAR SKPbc 06 11 49.9
comp=Z,2.6nm,0.8s,baz=297,slow=1.7,SNR=3.9
KCC Kaiser Creek 128.15 40 ⇑P PKPdf 06 08 33.6 +1.1
baz=128
P09A Austin 128.17 37 ⇑P PKPdf 06 08 33.7 +1.3
baz=128
YFT Old Faithful 128.17 28 *e*PKPdf PKPdf 06 08 33.4 +1.0
N11A Elko Archery C 128.17 35 ⇑P PKPdf 06 08 33.6 +1.2
baz=128
M12A Wells 128.23 34 P PKPdf 06 08 34.0 +1.4
baz=128,SNR=26
MLAC Mammoth Lakes 128.28 40 ⇑P PKPdf 06 08 34.2 +1.4
baz=128
LKWY Lake 128.28 28 *e*PKPdf PKPdf 06 08 34.5 +1.9
LKWY LR LR
comp=Z,16µm,20.0s,MS6.7
L13A Double Diamond 128.30 32 P PKPdf 06 08 34.0 +1.4
baz=128,SNR=14
R08A Mina 128.32 39 ⇓P PKPdf 06 08 34.2 +1.5
baz=128
RLMT Red Lodge 128.38 27 *e*PKPdf PKPdf 06 08 33.0 +0.3
RLMT LR LR
comp=Z,10µm,19.0s,MS6.5
K14A Jones Ranch, D 128.39 31 ⇑P PKPdf 06 08 34.4 +1.6
baz=128,SNR=18
LAO LASA Array 128.41 23 *e*PKPdf PKPdf 06 08 32.6 -0.1
LAO *e*SKPdf SKPdf 06 11 59.0 -7.1
LAO LR LR
comp=Z,8µm,19.0s,MS6.4
ELK Elko 128.50 35 PFAKE 06 08 40.0 +6.9
ELK LR LR
comp=Z,8µm,21.0s,MS6.4
PTRM Twissleman Ran 128.50 43 *e*PKPdf PKPdf 06 08 34.6 +1.3

ULM Lac du Bonnet 128.51 13 PKP PKPdf 06 08 30.6 -2.2
comp=Z,11nm,1.0s,baz=331,slow=2.9,SNR=15
ULM SKKPbc 06 21 37.3
comp=Z,3.3nm,1.1s,baz=270,slow=5.1,SNR=3.8
P10A Eureka 128.53 36 ⇑P PKPdf 06 08 34.5 +1.4
baz=128,SNR=6.1
N12A Clover Valley, 128.54 34 P PKPdf 06 08 34.4 +1.3
baz=128,SNR=16
Q09A Carvers 128.59 38 ⇑P PKPdf 06 08 35.0 +1.7
baz=128
MTUM Tungsten Hills 128.62 40 *e*PKPdf PKPdf 06 08 34.1 +0.7
DCID1 Drake Creek 128.64 29 *e*PKPdf PKPdf 06 08 33.3 0.0
O11A Cowboy Ranch, 128.67 35 ⇑P PKPdf 06 08 34.9 +1.5
baz=128,SNR=13
M13A Montello 128.69 33 ⇓P PKPdf 06 08 35.0 +1.6
baz=128
HELL Mitchell Peak, 128.72 41 P PKPdf 06 08 35.3 +1.7
baz=129,SNR=13
RCTC Rector, Farmer 128.79 41 ⇓P PKPdf 06 08 34.9 +1.2
baz=129
S08C White Mtn Res 128.79 40 ⇓P PKPdf 06 08 34.9 +1.2
baz=129,SNR=8.5
TPAW Teton Pass 128.83 29 *e*PKPdf PKPdf 06 08 34.7 +1.1
SMMC Simmler 128.84 43 ⇓P PKPdf 06 08 35.2 +1.4
baz=129
LOHW Long Hollow 128.91 29 *e*PKPdf PKPdf 06 08 34.6 +0.8
REDW Red Top Meadow 128.97 29 *e*PKPdf PKPdf 06 08 34.0 +0.1
P11A Circle Ranch, 128.99 36 ⇑P PKPdf 06 08 35.5 +1.5
baz=129
N13A Wendover, West 129.01 34 ⇓P PKPdf 06 08 35.2 +1.2
baz=129
R09A Tonopah 129.03 38 ⇑P PKPdf 06 08 36.0 +1.9
baz=129,SNR=5.6
M14A Sheep Mountain 129.03 33 ⇓P PKPdf 06 08 35.7 +1.6
baz=129,SNR=17
TPH Tonopah 129.03 38 PFAKE 06 08 40.0 +5.8
TPH LR LR
comp=Z,5µm,19.0s,MS6.2
Q10A Clear Creek Ra 129.07 37 P PKPdf 06 08 35.9 +1.6
baz=129,SNR=8.7
O12A Currie 129.10 35 ⇓P PKPdf 06 08 36.2 +2.0
baz=129,SNR=13
HVU Hansel Valley 129.14 32 *e*PKPdf PKPdf 06 08 32.9 -1.3
HVU *e*SKPdf SKPdf 06 12 02.0 -5.7
PKM Peak Mountain 129.19 43 ⇑P PKPdf 06 08 36.3 +1.7
baz=129,SNR=6.6
S09A Goldfield 129.25 39 P PKPdf 06 08 36.4 +1.8
baz=129,SNR=12
AHID Auburn Hatcher 129.29 30 PFAKE 06 08 40.0 +5.5
AHID LR LR
comp=Z,7µm,20.0s,MS6.3
R10A Warm Springs 129.47 38 ⇑P PKPdf 06 08 36.5 +1.5
baz=129
Q11A Duckwater 129.50 37 ⇑P PKPdf 06 08 36.6 +1.6
baz=129,SNR=17
S10A Tonopah Range, 129.52 38 ⇑P PKPdf 06 08 36.4 +1.3
baz=129,SNR=13
P12A McGill 129.53 36 ⇑P PKPdf 06 08 36.4 +1.3
baz=129,SNR=17
M15A Larsen Ranch, 129.54 32 P PKPdf 06 08 36.6 +1.6
baz=129,SNR=7.9
N14A Grayback Hills 129.57 33 ⇑P PKPdf 06 08 36.1 +1.0
baz=129,SNR=31
GRAC Grapevine Rang 129.60 40 ⇑P PKPdf 06 08 36.4 +1.2
baz=129
BGU Big Grassy Mou 129.60 33 *e*PKPdf PKPdf 06 08 35.0 -0.2
BGU *e*SKPdf SKPdf 06 11 53.2 -15
O13A Hicks Ranch, I 129.62 34 ⇑P PKPdf 06 08 36.7 +1.5
baz=130
SPUT South Promonto 129.65 32 *e*PKPdf PKPdf 06 08 35.0 -0.2
SPUT *e*SKPdf SKPdf 06 11 54.7 -14
ISA Isabella 129.67 42 P PKPdf 06 08 36.6 +1.2
baz=130,SNR=7.5
ARVC Arvin 129.74 42 ⇓P PKPdf 06 08 36.6 +1.0
baz=130
R11A Troy Canyon, C 129.86 37 P PKPdf 06 08 37.1 +1.4
baz=130,SNR=42
TRCR Troy Canyon 129.86 37 *e*PKPdf PKPdf 06 08 37.7 +1.9
Q12A Willow Creek R 129.87 36 ⇓P PKPdf 06 08 37.0 +1.3
baz=130
DAC Darwin (Calif) 129.89 40 PFAKE 06 08 50.0 +14
DAC LR LR
comp=Z,4µm,19.0s,MS6.1
HWUT Hardware Ranch 129.90 31 *e*PKPdf PKPdf 06 08 36.4 +0.7
HWUT *e*SKPdf SKPdf 06 11 55.7 -13
HWUT LR LR
comp=Z,11µm,21.0s,MS6.5
N15A Stansbury Isla 129.91 33 ⇑P PKPdf 06 08 37.1 +1.4
baz=130
BW06 Boulder Array 130.04 29 PFAKE 06 08 50.0 +14
BW06 LR LR
comp=Z,9µm,19.0s,MS6.5
PDAR Pinedale Array 130.04 29 PKhKP 06 08 25.5
comp=Z,0.5nm,0.8s,baz=318,slow=2.0,SNR=4.9
PDAR PKP PKPdf 06 08 35.0 -0.9
comp=Z,10nm,1.1s,baz=180,slow=0.6,SNR=21
PDAR SKPbc 06 11 55.1
comp=Z,7.3nm,1.1s,baz=317,slow=1.4,SNR=6.2
MPMC Manual Prospec 130.08 41 P PKPdf 06 08 37.8 +1.5
baz=130,SNR=12
BLG Laguna Peak 130.14 44 ⇓P PKPdf 06 08 37.8 +1.4
baz=130
S11A Rachel 130.21 38 ⇓P PKPdf 06 08 38.3 +1.9
baz=130,SNR=6.4
DUG Dugway 130.23 33 *e*PKPdf PKPdf 06 08 37.0 +0.6
DUG LR LR
comp=Z,8µm,21.0s,MS6.4
DUG Dugway 130.23 33 ⇑P PKPdf 06 08 37.7 +1.3
baz=130
FURC Furnace Creek, 130.24 40 ⇑P PKPdf 06 08 38.5 +1.9
baz=130,SNR=6.3
NOQ North Oquirrh 130.29 32 *e*PKPdf PKPdf 06 08 37.0 +0.5
NOQ *e*SKPab 06 11 56.3
LRMC Laurel Mountai 130.29 41 ⇑P PKPdf 06 08 38.5 +1.8
baz=130
AGMN Agassiz Refuge 130.33 14 PFAKE 06 08 50.0 +14
AGMN LR LR
comp=Z,12µm,20.0s,MS6.6
TPNV Topopah Spring 130.34 39 *e*PKPdf PKPdf 06 08 32.9 -3.8
TPNV LR LR
comp=Z,6µm,21.0s,MS6.3
TPNV Topopah Spring 130.34 39 ⇑P PKPdf 06 08 38.5 +1.8
baz=130
EDW2 Edwards Air Fo 130.44 42 ⇑P PKPdf 06 08 39.2 +2.2
baz=130
R12A Pony Springs, 130.46 36 ⇑P PKPdf 06 08 39.0 +2.1
baz=130
U10A Ash Meadows, A 130.61 40 ⇑P PKPdf 06 08 39.5 +2.3
baz=130
JLU Jordanelle 130.68 32 *e*PKPdf PKPdf 06 08 37.8 +0.6
S12A Delamar Landin 130.79 37 ⇓P PKPdf 06 08 39.7 +2.2
baz=131,SNR=9.3
T11A Corn Creek, Al 130.79 38 ⇑P PKPdf 06 08 39.7 +2.2
baz=131,SNR=13
NLU North Lily Min 130.80 33 *e*PKPdf PKPdf 06 08 37.3 -0.2
DAU Daniels Canyon 130.92 32 *e*PKPdf PKPdf 06 08 38.2 +0.5
CIS Catalina Islan 130.99 44 ⇑P PKPdf 06 08 40.2 +2.2
baz=131
MPU Maple Canyon 131.00 33 *e*PKPdf PKPdf 06 08 38.7 +0.9
MPU *e*SKPbc 06 11 59.2 -1.1
MPU LR LR
comp=Z,8µm,21.0s,MS6.4
U11A Corn Creek 131.21 39 ⇑P PKPdf 06 08 40.7 +2.4
baz=131
S13A Holt Ranch, En 131.40 37 ⇓P PKPdf 06 08 41.1 +2.4
baz=131,SNR=17
RSSD Black Hills 131.40 23 PFAKE 06 08 50.0 +12
RSSD LR LR
comp=Z,942nm,20.0s,MS5.5
TUQ Turquoise Mtn. 131.47 40 ⇑P PKPdf 06 08 41.0 +2.1
baz=131
ARUT Antelope Range 131.51 36 *e*PKPdf PKPdf 06 08 40.0 +1.1
ARUT *e*SKPdf SKPdf 06 12 11.1 -1.1
V11A Goodsprings 131.54 40 ⇑P PKPdf 06 08 41.2 +2.2
baz=131
HEC Hector,Ludlow 131.57 41 ⇓P PKPdf 06 08 41.5 +2.4
baz=131
EYMN Ely 131.61 11 *e*PKPdf PKPdf 06 08 38.6 -0.1
EYMN LR LR
comp=Z,14µm,22.0s,MS6.6
S14A Cedar City 131.69 36 ⇑P PKPdf 06 08 40.9 +1.7
baz=132,SNR=8.7
CCUT Cedar City 131.72 36 *e*PKPdf PKPdf 06 08 40.6 +1.4
U12A Valley of Fire 131.73 38 ⇑P PKPdf 06 08 41.2 +1.9
baz=132,SNR=6.4
MVU Marysvale 131.74 35 PFAKE 06 08 50.0 +11

MVU LR LR
comp=Z,7µm,22.0s,MS6.3
T13A Saint George 131.74 37 ⇑P PKPdf 06 08 42.0 +2.6
baz=132
TMUT Trail Mountain 131.74 33 *e*PKPdf PKPdf 06 08 40.5 +1.2
TMUT *e*SKPbc SKPbc 06 12 02.3 -0.7
MSU Marysvale 131.75 35 PKPdf PKPdf 06 08 40.2 +0.9
MSU *e*SKPdf SKPdf 06 12 02.4 -10
V12A Nelson 131.98 39 ⇓P PKPdf 06 08 42.5 +2.7
baz=132,SNR=9.5
RWWY Rawlins 131.99 28 *e*PKPdf PKPdf 06 08 42.1 +2.5
GMRC Granite Mounta 132.04 41 ⇓P PKPdf 06 08 43.0 +3.0
baz=132
U13A Pakoon Wash 132.09 38 ⇑P PKPdf 06 08 42.6 +2.6
baz=132,SNR=5.5
109C Camp Elliot, M 132.18 44 ⇑P PKPdf 06 08 42.7 +2.4
baz=132
T14A Hurricane 132.21 37 ⇑P PKPdf 06 08 42.8 +2.6
baz=132,SNR=5.3
PFO Pinyon Flat Ob 132.21 43 ⇑P PKPdf 06 08 42.7 +2.4
baz=132
SRU San Rafael 132.25 33 *e*PKPdf PKPdf 06 08 41.5 +1.3
SRU *e*SKPdf SKPdf 06 12 12.7 -0.8
BELC Belle Mtn. 132.29 42 ⇓P PKPdf 06 08 42.9 +2.4
baz=132
U14A Mt Trumbull 132.57 37 ⇑P PKPdf 06 08 43.7 +2.8
baz=132,SNR=8.0
T15A Red Dirt Ranch 132.65 36 ⇓P PKPdf 06 08 43.9 +2.8
baz=132,SNR=6.5
MONP Monument Peak 132.65 43 ⇑P PKPdf 06 08 43.9 +2.7
baz=132
NEE2 Needles Airpor 132.73 40 ⇑P PKPdf 06 08 43.3 +2.1
baz=133
IRM Iron Mountain 132.75 41 ⇑P PKPdf 06 08 43.9 +2.5
baz=133
BC3 Big Chuckw Mtn 132.86 42 ⇓P PKPdf 06 08 44.2 +2.6
baz=133
W13A Hualapai Mount 132.99 39 ⇓P PKPdf 06 08 44.5 +2.8
baz=133,SNR=6.4
DVTC Desert V Tower 133.01 43 ⇓P PKPdf 06 08 44.3 +2.5
baz=133
SWSC Sam W. Stewart 133.05 43 ⇓P PKPdf 06 08 44.3 +2.4
baz=133
PHWY Pilot Hill 133.10 27 *e*PKPdf PKPdf 06 08 43.3 +1.6
PDMCI Parker Dam,Lak 133.33 40 ⇑P PKPdf 06 08 44.7 +2.3
baz=133
X13A Yucca 133.34 40 ⇑P PKPdf 06 08 45.0 +2.5
baz=133,SNR=7.8
Y12C Blythe 133.42 41 ⇑P PKPdf 06 08 45.7 +3.1
baz=133
W14A Seligman 133.42 39 ⇓P PKPdf 06 08 45.4 +2.9
baz=133,SNR=9.9
PV10 Paradox Valley 133.58 32 *e*PKPdf PKPdf 06 08 44.9 +2.1
GLA Glamis 133.64 42 ⇓P PKPdf 06 08 45.6 +2.6
baz=134,SNR=6.5
COWI Conover 133.81 9 *e*PKPdf PKPdf 06 08 44.7 +1.8
COWI LR LR
comp=Z,14µm,21.0s,MS6.7
Y13A Salome 133.83 41 ⇑P PKPdf 06 08 46.2 +2.8
baz=134
W15A Williams 133.95 38 ⇑P PKPdf 06 08 46.4 +2.9
baz=134
PV01 Paradox Valley 134.01 32 *e*PKPdf PKPdf 06 08 45.8 +2.2
PV01 *e*SKPdf SKPdf 06 12 09.4 -7.4
X14A Yava 134.02 39 ⇑P PKPdf 06 08 46.3 +2.6
baz=134
ISCO Idaho Springs 134.22 28 PFAKE 06 08 50.0 +6.1
ISCO LR LR
comp=Z,6µm,19.0s,MS6.3
WUAZ Wupatki 134.26 37 *e*PKPdf PKPdf 06 08 44.7 +0.6
WUAZ LR LR
comp=Z,5µm,21.0s,MS6.2
WUAZ Wupatki 134.26 37 ⇑P PKPdf 06 08 46.4 +2.3
baz=134
Y14A Wickenburg 134.29 40 ⇑P PKPdf 06 08 46.8 +2.6
baz=134
ECSD EROS,Sioux Fal 134.33 17 PFAKE 06 08 50.0 +6.0
ECSD LR LR
comp=Z,8µm,21.0s,MS6.4
X15A Humboldt 134.42 39 ⇓P PKPdf 06 08 47.1 +2.6
baz=134
PKME Peaks-Kenny Pk 134.52 350 PFAKE 06 08 50.0 +5.7
PKME LR LR
comp=Z,8µm,20.0s,MS6.4
Z14A Wintersburg 134.69 40 ⇑P PKPdf 06 08 47.3 +2.3
baz=134
MVCO Mesa Verde 134.72 33 *e*PKPdf PKPdf 06 08 44.3 -0.6
MVCO *e*SKPdf SKPdf 06 12 12.2 -5.9
MVCO LR LR
comp=Z,8µm,20.0s,MS6.4
MVCO Mesa Verde 134.72 33 ⇑P PKPdf 06 08 47.2 +2.2
baz=135
115A Sonoran Desert 135.57 41 ⇑P PKPdf 06 08 48.9 +2.2
baz=136
GLMI Grayling 135.64 5 *e*PKPdf PKPdf 06 08 47.1 +0.7
GLMI LR LR
comp=Z,2µm,21.0s,MS5.8
LONY Lake Ozonia 135.85 355 PFAKE 06 09 00.0 +13
LONY LR LR
comp=Z,10µm,22.0s,MS6.5
SDCO Great Sand Dun 135.88 30 PFAKE 06 09 00.0 +13
SDCO LR LR
comp=Z,11µm,22.0s,MS6.5
LBNH Lisbon 135.93 352 PFAKE 06 09 00.0 +13
LBNH LR LR
comp=Z,7µm,20.0s,MS6.4
RCBR Riachuelo 136.00 261 PFAKE 06 09 00.0 +12
RCBR LR LR
comp=Z,5µm,19.0s,MS6.2
116A Eloy 136.00 40 ⇑P PKPdf 06 08 49.9 +2.4
baz=136
NCB Newcomb 136.46 354 PFAKE 06 09 00.0 +12
NCB LR LR
comp=Z,11µm,19.0s,MS6.6
JFWS Jewell Farm 136.69 11 PFAKE 06 09 00.0 +12
JFWS LR LR
comp=Z,6µm,22.0s,MS6.3
TUC Tucson 136.76 40 *e*PKPdf PKPdf 06 08 47.3 -1.6
TUC LR LR
comp=Z,5µm,22.0s,MS6.2
ANMO Albuquerque 137.50 33 *e*PKPdf PKPdf 06 08 41.9 -8.3
ANMO LR LR
comp=Z,10µm,21.0s,MS6.5
LAZ Ladron 137.52 35 *e*PKPdf PKPdf 06 08 45.9 -4.3
HRV Harvard--Oak R 137.57 351 PFAKE 06 09 00.0 +10
HRV LR LR
comp=Z,6µm,22.0s,MS6.3
CBKS Cedar Bluff 137.61 24 PFAKE 06 09 00.0 +10
CBKS LR LR
comp=Z,11µm,20.0s,MS6.6
WES Weston 137.66 351 PFAKE 06 09 00.0 +10
WES LR LR
comp=Z,5µm,21.0s,MS6.2
LENM Lemitar 137.79 35 *e*PKPdf PKPdf 06 08 52.0 +1.2
LPM Los Pinos Moun 137.87 34 *e*PKPdf PKPdf 06 08 51.0 +0.1
BNM Barren Site 138.00 34 *e*PKPdf PKPdf 06 08 46.0 -5.1
PLCA Paso Flores 138.16 190 *e*PKPdf PKPdf 06 08 47.4 -3.8
PLCA LR LR
comp=Z,4µm,20.0s,MS6.1
TRQA Tornquist 138.36 201 PFAKE 06 09 00.0 +8.3
TRQA LR LR
comp=Z,4µm,20.0s,MS6.1
BINY Binghamton 138.37 356 *e*PKPdf PKPdf 06 08 51.6 +0.1
BINY LR LR
comp=Z,9µm,21.0s,MS6.5
KSU1 Kansas State U 138.52 20 *e*PKPdf PKPdf 06 08 52.2 +0.3
KSU1 LR LR
comp=Z,10µm,20.0s,MS6.6
ERPA Erie 138.57 1 *e*PKPdf PKPdf 06 08 49.3 -2.6
ERPA *e*SKPdf SKPdf 06 12 21.8 -3.2
ERPA LR LR
comp=Z,9µm,21.0s,MS6.5
HDIL Hopedale 139.16 11 PFAKE 06 09 00.0 +7.0
HDIL LR LR
comp=Z,9µm,19.0s,MS6.5
SSPA Standing Stone 140.03 358 *e*PKPdf PKPdf 06 08 51.8 -2.8
SSPA LR LR
comp=Z,7µm,21.0s,MS6.4
AMTX Amarillo 140.03 29 PFAKE 06 09 00.0 +5.2
AMTX LR LR
comp=Z,12µm,22.0s,MS6.6
RPN Rapa Nui 140.30 136 PFAKE 06 09 10.0 +14
RPN LR LR
comp=Z,4µm,20.0s,MS6.2
ACSO Alum Creek Sta 140.33 4 *e*PKPdf PKPdf 06 08 49.9 -5.3
ACSO LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,11μm,22.0s,MS6.6						
MNTX	Cornudas Mount	140.50	36	ePKPdf	PKPdf	06 08 50.4	-5.3
MNTX				LR	LR		
	comp=Z,10μm,20.0s,MS6.5						
MVL	Millersville	140.58	356	ePKPdf	PKPdf	06 08 53.9	-1.8
MVL				eSKPdf	SKPdf	06 12 24.9	-3.6
BLO	Bloomington	140.99	9	ePKPdf	PKPdf	06 08 52.5	-4.0
BLO				eSKPdf	SKPdf	06 12 29.1	-0.1
MCWV	Mont Chateau	141.03	0	PFAKE		06 09 10.0	+14
MCWV				LR	LR		
	comp=Z,11μm,22.0s,MS6.6						
FVM	French Village	141.37	14	ePKPdf	PKPdf	06 08 50.0	-7.1
WMOK	Wichita Mounta	141.48	26	ePKPdf	PKPdf	06 08 50.2	-7.3
WMOK				eSKPdf	SKPdf	06 12 31.5	+1.3
WMOK				LR	LR		
	comp=Z,8μm,19.0s,MS6.5						
SIUC	Southern Illin	141.91	12	ePKPdf	PKPdf	06 08 55.4	-2.7
WCI	Wyandotte Cave	141.94	9	ePKPdf	PKPdf	06 08 52.2	-6.0
WCI				eSKPdf	SKPdf	06 12 31.3	+0.4
WCI				LR	LR		
	comp=Z,9μm,22.0s,MS6.5						
CBN	Corbin	142.43	357	PFAKE		06 09 10.0	+11
CBN				LR	LR		
	comp=Z,7μm,21.0s,MS6.4						
PARMO	Parma	142.79	14	ePKPdf	PKPdf	06 08 56.8	-3.0
LTX	Lajitas	143.23	37	ePKPdf	PKPdf	06 08 57.3	-3.4
LTX				eSKPbc	SKPbc	06 12 37.2	0.0
LTX				LR	LR		
	comp=Z,11μm,21.0s,MS6.6						
TXAR	Lajitas Array	143.23	37	PKP	PKPdf	06 08 57.2	-3.5
TXAR				SKPbc	SKPbc	06 12 37.2	0.0
TXAR	Lajitas Array	143.23	37	PKIKP	PKPdf	06 08 57.2	-3.5
TXAR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TXAR				pmax	pmax		
	comp=N,4.0nm,0.8s						
TXAR	Lajitas Array	143.23	37	PKP	PKPdf	06 08 57.2	-3.5
	comp=N,10nm,0.7s,baz=283,slow=1.3,SNR=47						
TXAR				SKPbc	SKPbc	06 12 37.2	0.0
	comp=N,3.7nm,0.8s,baz=232,slow=1.4,SNR=4.6						
UTMT	University of	143.30	13	ePKPdf	PKPdf	06 08 59.4	-1.2
GNAR	Gosnell	143.39	14	ePKPdf	PKPdf	06 08 59.4	-1.4
GNAR				eSKPdf	SKPdf	06 12 31.0	-2.4
BLA	Blacksburg	143.46	1	PFAKE		06 09 10.0	+9.1
BLA				LR	LR		
	comp=Z,10μm,22.0s,MS6.5						
HALT	Halls	143.61	13	PKPdf	PKPdf	06 09 01.2	0.0
HBAR	Harrisburg	143.62	15	ePKPdf	PKPdf	06 09 00.7	-0.5
MIAR	Mount Ida	143.67	20	ePKPdf	PKPdf	06 08 57.5	-3.8
MIAR				eSKPdf	SKPdf	06 12 33.2	-0.7
MIAR				LR	LR		
	comp=Z,9μm,19.0s,MS6.5						
WVT	Waverly	143.72	11	PFAKE		06 09 10.0	+8.6
WVT				LR	LR		
	comp=Z,8.0nm,22.0s						
UALR	University of	143.86	18	ePKPdf	PKPdf	06 08 58.5	-3.1
TZTN	Tazewell	143.94	6	ePKPdf	PKPdf	06 08 53.7	-8.0
TZTN				LR	LR		
	comp=Z,14μm,21.0s,MS6.7						
JCT	Junction City	144.50	31	ePKPdf	PKPdf	06 09 00.4	-2.5
JCT				eSKPdf	SKPdf	06 12 35.6	+0.3
JCT				LR	LR		
	comp=Z,11μm,21.0s,MS6.6						
PLAL	Pickwick Lake	144.78	12	ePKPdf	PKPdf	06 08 59.9	-3.4
PLAL				eSKPbc	SKPbc	06 12 39.0	-1.7
PLAL				LR	LR		
	comp=Z,9μm,19.0s,MS6.5						
CPCT	Cooper Cave	144.92	7	ePKPdf	PKPdf	06 09 00.9	-2.6
OXF	Oxford	144.93	14	ePKPdf	PKPdf	06 09 00.9	-2.6
OXF				eSKPdf	SKPdf	06 12 35.6	-0.3
OXF				LR	LR		
	comp=Z,7μm,20.0s,MS6.4						
SWET	Sewanee	144.95	9	ePKPdf	PKPdf	06 09 00.6	-2.9
SWET				eSKPdf	SKPdf	06 12 36.9	+0.9
FCH	Farellones	145.25	194⇑	eP	PKPbc	06 09 00.2	-3.6
MDZ	Mendoza	145.30	196	eP	PKPbc	06 09 06.2	+2.2
BBSR	BB Station	145.35	338	ePKPdf	PKPdf	06 09 02.9	-1.4
BBSR				LR	LR		
	comp=Z,5μm,19.0s,MS6.3						
CNNC	Cliffs of the	145.41	358	ePKPdf	PKPdf	06 09 03.2	-1.1
CNNC				LR	LR		
	comp=Z,10μm,21.0s,MS6.5						
PEL	Peldehue	145.51	193⇑	eP	PKPdf	06 09 05.5	+0.9
NATX	Nacogdoches	145.77	23	ePKPdf	PKPdf	06 09 02.8	-2.2
NATX				LR	LR		
	comp=Z,11μm,20.0s,MS6.6						
LHS	Liberty Hill	146.18	2	ePKPdf	PKPdf	06 09 05.1	-0.5
CFAA	Coronel Fontan	146.32	198	PKPbc	PKPbc	06 09 07.0	-0.1
	comp=Z,11nm,0.9s,baz=157,slow=4.0,SNR=67						
JSC	Jenkinsville	146.36	3	ePKPdf	PKPdf	06 09 05.7	-0.3
HKT	Hockley	146.85	26	ePKPdf	PKPdf	06 09 06.5	-0.4
HKT				eSKPbc	SKPbc	06 12 44.9	-0.6
HKT				LR	LR		
	comp=Z,10μm,20.0s,MS6.6						
LRAL	Lakeview Retre	146.88	12	ePKPdf	PKPdf	06 09 06.6	-0.3
LRAL				LR	LR		
	comp=Z,12μm,21.0s,MS6.7						
GOGA	Godfrey	147.06	6	ePKPdf	PKPdf	06 09 07.5	+0.4
GOGA				LR	LR		
	comp=Z,12μm,20.0s,MS6.7						
COW	Cow Castle Cre	147.28	2	ePKPab	PKPab	06 09 10.4	-1.1
CMCH	Combarbala	147.48	194	eP	PKPbc	06 09 11.1	+0.7
NHSC	New Hope	147.56	1	ePKPbc	PKPbc	06 09 09.8	-0.8
NHSC				LR	LR		
	comp=Z,10μm,20.0s,MS6.6						
KVTX	Kingsville	147.85	32	ePKPab	PKPab	06 09 12.2	-1.8
KVTX				LR	LR		
	comp=Z,8μm,20.0s,MS6.5						
TLL	Tololo Astrono	148.39	195	eP	PKPbc	06 09 14.6	+1.7
TLL	Tololo Astrono	148.39	195	eP	PKPbc	06 09 14.4	+1.5
ZAIG	Zacatecas	148.50	44	i P	PKPbc	06 09 13.5	+0.1
BRAL	Brewton	148.83	13	ePKPdf	PKPdf	06 09 10.6	+0.5
BRAL				ePKPab	PKPab	06 09 17.8	0.0
BRAL				LR	LR		
	comp=Z,9μm,21.0s,MS6.5						
LCO	Las Campanas	149.47	195	ePKPbc	PKPbc	06 09 13.8	-1.9
LCO				ePKPab	PKPab	06 09 19.2	-1.2
LCO				LR	LR		
	comp=Z,5μm,21.0s,MS6.2						
SFJM	Santa Fe	149.62	48	eP	PKPdf	06 09 13.5	+1.8
DWPF	Disney	152.49	4	ePKPbc	PKPbc	06 09 21.5	-1.3
DWPF				LR	LR		
	comp=Z,7μm,20.0s,MS6.5						
IIO	Organos	153.28	44	i P	PKPdf	06 09 20.2	+2.9
SIV	San Ignacio	155.50	227	PKP	PKPdf	06 09 21.1	+0.7
	comp=Z,12nm,1.2s,baz=179,slow=2.7						
BBGH	Gun Hill	156.56	303	PFAKE		06 09 30.0	+8.1
BBGH				LR	LR		
	comp=Z,7μm,20.0s,MS6.5						
CPD	Cerro la Pandu	158.03	323	ePKPdf	PKPdf	06 09 23.4	-0.3
SJG	San Juan	158.11	324	PFAKE		06 09 30.0	+6.2
SJG				LR	LR		
	comp=Z,5μm,21.0s,MS6.3						
TEIG	Tepich	158.61	23	PFAKE		06 09 30.0	+5.7
TEIG				LR	LR		
	comp=Z,6μm,20.0s,MS6.4						
LPAZ	La Paz	159.88	213	PKP	PKPdf	06 09 27.7	+1.8
LPAZ				LR	LR		
	comp=Z,4μm,21.0s,MS6.2						
LPAZ	La Paz	159.88	213	PKP	PKPdf	06 09 27.7	+1.8
	comp=Z,12nm,1.1s,baz=50,slow=4.2,SNR=26						
SDDR	Presa de Saban	159.93	337	PFAKE		06 09 40.0	+14
SDDR				LR	LR		
	comp=Z,7μm,21.0s,MS6.5						
ARE	Arequipa	161.37	205	eP	PKPdf	06 09 29.0	+1.5
TGUH	Tegucigalpa,Un	164.50	29	ePKPdf	PKPdf	06 09 29.2	-1.3
TGUH				LR	LR		
	comp=Z,5μm,22.0s						
NNA	Nana	167.31	192	PKP	PKPdf	06 09 33.2	+0.3
NNA				LR	LR		
	comp=Z,6μm,21.0s						
NNA	Nana	167.31	192	PKP	PKPdf	06 09 33.2	+0.4
	comp=Z,8.0nm,0.7s,baz=9.4,slow=2.4,SNR=4.2						
SDV	Santo Domingo	167.84	314	ePKPdf	PKPdf	06 09 32.8	-0.5
SDV				ePKPab	PKPab	06 10 38.6	-1.5
SDV				LR	LR		
	comp=Z,2μm,20.0s						
JTS	JuntasAbangare	168.88	29	PFAKE		06 09 40.0	+6.0
JTS				LR	LR		
	comp=Z,6μm,22.0s						
PAYG	Puerto Ayora	169.18	96	PFAKE		06 09 40.0	+5.8
PAYG				LR	LR		
	comp=Z,4μm,19.0s						
ATAH	Atahualpa	172.46	189	PKP	PKPdf	06 09 37.1	+1.2
	comp=Z,18nm,1.2s,baz=14,slow=22,SNR=8.1						
ROSC	El Rosal	173.24	310	PKP	PKPdf	06 09 37.0	+0.8
	comp=Z,30nm,1.1s,baz=330,slow=2.5,SNR=21						
ROSC				PP	PP	06 14 54.1	-1.2
	comp=Z,16nm,1.1s,baz=90,slow=20,SNR=3.6						
OTAV	Otavalo	178.89	256	PFAKE		06 09 50.0	+12
OTAV				LR	LR		
	comp=Z,4μm,20.0s						

*NEIC **06** 05:51:22.1, 1569N×9534W, h16km, mb4.5/1, MD4.0(MEX), After MEX.*
MEX 06 05:51:22.1±0.5**, 1569N×9534W, h16**km±9km**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.74	276	i P	Pg	05 51 34.0	-2.6
HUIG				i S	Sg	05 51 42.8	-3.7
CMIG	Matias Romero	1.46	17	i P	Pn	05 51 44.3	-3.5
CMIG				i S	Sn	05 52 01.1	-5.5
OXX	Oaxaca	1.92	316	eP	Pn	05 51 53.0	-1.1
VHO	Vista Hermosa	1.92	316	i P	Pn	05 51 50.7	-3.4
VHO				i S	Sn	05 52 13.7	-4.2
UTMO	Huajuapan	3.18	312	eP	Pn	05 52 09.5	-1.9
UTMO				i S	Sn	05 52 44.7	-4.3
TPIG	Tehuac#an	3.33	325	i S	Sn	05 52 49.5	-3.3
PPM	Popocatepetl	4.59	317	i P	Pn	05 52 28.1	-2.8
PPM				i S	Sn	05 53 21.8	-2.3
TEIG	Tepich	8.09	55	ePn	Pn	05 53 17.1	-1.9
	2.4nm,0.3s						
TEIG				eSn	Sn	05 54 45.4	-4.8
BRAL	Brewton	17.03	25	ePn	Pn	05 55 18.8	-0.8
	54nm,1.5s						

*KISR **06** 05:53:54.3±1.1, 3134N×4993E, h34km±101km, ML2.7*
*ISCJB **06** 05:53:56.0±0.8, 3135N±004×4992E±007, h10km, Error ellipse: s-maj=8.6km s-min=5.5km az=16.4*
*CSEM **06** 05:53:56.9±0.3, 3134N×4999E, h25km, ML2.7, Error ellipse: s-maj=8.4km s-min=4.8km az=119.0*
*THR **06** 05:53:59.6±0.4, 3160N×5003E, h25km, ML2.9*
ISC 06 05:53:57.0±0.8**, 3135N**±004×**4994E**±007**, h10**km**, n14, σ0§66**/25**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.23	308	ePg	Pg	05 54 21.0	+0.4
SHGR				eSg	Sg	05 54 36.3	-0.3
SHGR				AML	AML	05 54 39.9	
	comp=E,284nm,0.4s						
SHGR				AML	AML	05 54 39.9	
	comp=N,242nm,0.2s						
SHGR	Shooshtar-Gavs	1.23	308	ePg	Pg	05 54 21.0	+0.4
	SNR=94						
SHGR				eSg	Sg	05 54 36.3	-0.3
	SNR=94						
UMR	Umm Al-Rimmam	2.63	228	eP	Pn	05 54 39.1	-0.3
MIB	Mutribah	2.73	236	eP	Pn	05 54 39.8	-1.0
MIB				eS	Sn	05 55 14.6	+0.8
MIB				AML	AML	05 55 18.7	
	comp=Z,21nm,0.3s						
MIB	Mutribah	2.73	236	eP	Pn	05 54 39.8	-1.0
MIB				eS	Sn	05 55 14.6	+0.8
NASN	Na'in	2.83	59	ePn	Pn	05 54 43.1	+0.9
KBD	Kabd	2.91	222	eP	Pn	05 54 43.3	-0.1
KBD				eS	Sn	05 55 19.6	+1.1
KBD				AML	AML	05 55 20.6	
	comp=Z,50nm,0.2s						
KBD	Kabd	2.91	222	eP	Pn	05 54 43.3	-0.1
KBD				eS	Sn	05 55 19.6	+1.2
	comp=Z,50nm,0.2s						
QRN	Al-Qurain	3.14	215	eP	Pn	05 54 45.3	-1.2
QRN				eS	Sn	05 55 23.8	-0.2
QRN				AML	AML	05 55 25.9	
	comp=Z,17nm,0.2s						
NAY	Al-Naaiem	3.14	229	eP	Pn	05 54 45.6	-0.8
NAY				eS	Sn	05 55 24.4	+0.4
NAY				AML	AML	05 55 27.0	
	comp=Z,6.8nm,0.3s						
NAY	Al-Naaiem	3.14	229	eP	Pn	05 54 45.7	-0.8
NAY				eS	Sn	05 55 24.4	+0.4
	comp=Z,6.8nm,0.3s						
RDF	Al-Radifah	3.19	221	eP	Pn	05 54 46.7	-0.4
RDF				eS	Sn	05 55 25.6	+0.4
RDF				AML	AML	05 55 26.8	
	comp=Z,14nm,0.3s						
RDF	Al-Radifah	3.19	221	eP	Pn	05 54 46.7	-0.4
RDF				eS	Sn	05 55 25.5	+0.4
	comp=Z,14nm,0.3s						
ASAO	Ashtian	3.19	1	ePn	Pn	05 54 47.3	+0.1
ASAO				AML	AML	05 55 40.9	
	comp=N,30nm,1.0s						

NNC 06 06:11:36.6±1.5**, 4882N×6856E, h0km, mb4.2, mpv2.5, 2C-1D, Error ellipse: s-maj=14.9km s-min=10.2km az=176.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AB31	Akbulak array	5.68	278	Pn	Pn	06 13 01.9	-0.3
	0.1nm,0.2s,baz=97,slow=7.2,SNR=3.0						
AB31				⇓Lg		06 14 37.1	
	3.8nm,0.8s						
KK31	Karatay Array	5.87	166	⇑Pn	Pn	06 13 08.3	+3.5
	0.1nm,0.2s,baz=357,slow=12,SNR=2.8						
KK31				Sn	Sn	06 14 19.4	+6.6
	2.4nm,0.8s,baz=341,slow=23,SNR=10						
MK31	Makanchi Array	9.46	97	Pn	Pn	06 13 56.7	+2.7
	14nm,2.7s,baz=278,slow=12,SNR=4.6						
MK31				⇑Lg		06 16 33.2	
	2.1nm,0.8s,baz=336,slow=20,SNR=5.0						

*ISCJB **06** 06:18:09.9±0.9, 04S±02×1006E±02, h33km, mb3.9/8, Error ellipse: s-maj=38.8km s-min=10.8km az=148.2*
*NEIC **06** 06:18:09.3±1.0, 050S×10045E, h20km, Error ellipse: s-maj=41.6km s-min=10.8km az=63.0*
*IDC **06** 06:18:11.7±1.1, 036S×10065E, h29km±4km, mb3.7/8, mb1 3.9/8, mb1mx3.7/21, mbtmp3.7/8, Error ellipse: s-maj=61.8km s-min=11.3km az=54.0*
ISC 06 06:18:10.5±2.8**, 04S**±02×**1006E**±02**, h25**km±18km**, h32**km±1.3km**:pP-P, n14, σ0§74**/13**, mb3.9**/8**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.61	333	Pg	Pb	06 19 13.8	+0.2
	1.2nm,0.3s,baz=140,slow=14,SNR=3.8						
PSI				Lg		06 20 01.2	
	9.2nm,0.3s,baz=311,slow=22,SNR=5.0						
KULM	Kulim	5.70	1	ePn	Pn	06 19 33.2	-0.4
WRA	Warramunga Arr	38.33	122	P	P	06 25 29.9	+0.3
	1.8nm,0.9s,mb3.8,baz=301,slow=9.1,SNR=9.6						
WRA				pP	pP	06 25 39.3	+2.3
	2.4nm,0.8s,baz=301,slow=9.1,SNR=9.6						
WRA				PcP	PcP	06 27 44.1	+0.8
	0.5nm,0.5s,baz=315,slow=2.6,SNR=6.2						
WRA				pPcP		06 27 54.4	
	0.5nm,0.9s,baz=305,slow=2.7,SNR=6.3						
ASAR	Alice Springs	39.74	128	P	P	06 25 41.6	+0.2
	1.7nm,0.8s,mb3.8,baz=303,slow=7.2,SNR=15						
ASAR				pP	pP	06 25 49.4	+0.6
	2.4nm,0.7s,baz=300,slow=7.8,SNR=8.8						
ASAR				PcP	PcP	06 27 49.2	+1.6
	1.2nm,0.7s,baz=304,slow=2.6,SNR=8.5						
ASAR				pPcP		06 27 59.5	
	1.4nm,0.7s,baz=307,slow=2.6,SNR=9.5						
SONM	Songino Array	48.35	5	P	P	06 26 50.6	+0.5
	0.2nm,0.4s,mb3.5,baz=189,slow=9.7,SNR=2.4						
MKAR	Makanchi Array	49.70	344	P	P	06 27 00.5	+0.1
MKAR				pP	pP	06 27 10.1	+2.1
MKAR	Makanchi Array	49.70	344	P	P	06 27 00.5	+0.1
	0.6nm,0.5s,mb3.9,baz=151,slow=8.0,SNR=9.5						
MKAR				pP	pP	06 27 10.1	+2.1
	1.0nm,0.7s,baz=151,slow=7.1,SNR=7.2						
STKA	Stephens Creek	49.78	133	P	P	06 27 00.5	-0.8
STKA	Stephens Creek	49.78	133	P	P	06 27 00.5	-0.8
	1.6nm,0.6s,mb4.2,baz=313,slow=3.4,SNR=2.5						
ZALV	Zalesovo Beam	55.76	349	P	P	06 27 45.6	+0.6
	1.1nm,0.6s,mb4.0,baz=178,slow=7.6,SNR=6.5						
AKTK	Aktyubinsk	62.27	331	P	P	06 28 29.2	-1.1
AKTO	Aktyubinsk	62.27	331	P	P	06 28 29.2	-1.1
	1.2nm,0.7s,mb4.1,baz=101,slow=4.4,SNR=3.8						
GERES	GERESS Array B	88.25	319	P	P	06 31 01.2	+1.4
	0.2nm,0.2s,mb4.0,baz=139,slow=9.1,SNR=2.7						
GERES				pP	pP	06 31 10.8	+3.0
	0.6nm,0.8s,baz=180,slow=1.2,SNR=2.1						
TXAR	Lajitas Array	143.13	37	PKP	PKPdf	06 37 42.4	-0.7
	0.2nm,0.6s,baz=242,slow=1.9,SNR=3.4						
TXAR				pPKP	pPKPdf	06 37 52.3	+0.9
	0.3nm,0.6s,baz=166,slow=0.9,SNR=4.3						

BJI 06 07:00:06.0, 3926N×9810E, h10km, ML3.5, Gansu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA	Gaotai	1.34	83	PG	Pg	07 00 30.7	-1.0
GTA				SG	Sg	07 00 49.8	+0.7
GTA				Smax			
	comp=N,818nm,0.5s						
GTA				Smax			
	comp=E,572nm,0.5s						

IDC 06 07:02:10.3±2.3**, 004S×10143E, h0km, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.5**/21**, mbtmp3.6**/4**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx3.6**/34**, Error ellipse: s-maj=154.3km s-min=16.1km az=46.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.78	318	Pg	Pg	07 03 15.9	-6.9
	0.8nm,0.3s,baz=138,slow=14,SNR=3.6						
PSI				Lg		07 04 08.2	
	2.8nm,0.3s,baz=122,slow=19,SNR=3.3						
PSI				LR	LR	07 04 09.3	
	comp=Z,1μm,22.0s,baz=265,slow=32						
WRA	Warramunga Arr	37.81	124	P	P	07 09 28.3	-0.5
	0.6nm,0.7s,baz=302,slow=9.2,SNR=5.0						
ASAR	Alice Springs	39.30	129	P	P	07 09 41.4	0.0
	0.7nm,0.8s,baz=303,slow=8.0,SNR=6.1						
MKAR	Makanchi Array	49.57	343	P	P	07 11 02.9	-0.2
	0.2nm,0.3s,baz=145,slow=8.4,SNR=6.0						
AKTO	Aktyubinsk	62.36	330	P	P	07 12 35.8	+1.1
	1.1nm,0.9s,baz=76,slow=8.3,SNR=3.8						

*SSNC **06** 07:03:06.7, 2203N×7102W, h20km, MD4.2, ML3.3*
*ISCJB **06** 07:03:09.4±1.0, 200N±02×7091W±007, h66km±49km, Error ellipse: s-maj=36.5km s-min=5.6km az=15.2*
*RSPR **06** 07:03:11.8, 2002N×7086W, h66km±35km, MD4.5/12, MD4.5/12*
*NEIC **06** 07:03:11.8, 2002N×7086W, h66km, MD4.5(RSPR), After RSPR.*
ISC 06 07:03:09.7±2.0**, 1996N**±007×**7091W**±004**, h19**km±14km**, n16, σ1§13**/25**, 10C-2D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.03	201⇓	eP	Pb	07 03 27.8	-1.2
SDDR				eS	Sb	07 03 42.4	+0.2
STDO	Santo Domingo	1.76	148⇑	eP	Pn	07 03 39.6	+0.5
STDO				eS	Sn	07 04 01.4	+0.3
MASC	Masc	3.13	275	eP	Pn	07 03 59.5	+1.4
	baz=90						
MASC				eS	Sn	07 04 39.2	+4.2
	comp=N,2.3nm,0.4s						
MASC				e			
	comp=E,2.5nm,0.3s						
AGPR	Aguadilla, PR	3.88	112⇑	eP	Pn	07 04 08.3	0.0
AGPR				eS	Sn	07 04 51.9	-1.5
LSP	Las Mesas	4.02	115⇑	eP	Pn	07 04 11.7	+1.4
LSP				eS	Sn	07 04 57.8	+0.9
CRPR	Cabo Rojo, PR	4.08	118⇓	eP	Pn	07 04 12.1	+0.9
CRPR				eS	Sn	07 04 56.7	-1.7
AOPR	Arecibo Observ	4.24	112⇑	eP	Pn	07 04 15.1	+1.9
CELP	Cerrillos	4.50	114⇑	eP	Pn	07 04 18.1	+1.2
RCC	Rio Carpintero	4.51	271	eP	Pn	07 04 15.1	-1.8
	baz=117						
RCC				eS	Sn	07 05 09.3	+0.4
	comp=N,15nm,0.5s						
RCC				e			
	comp=E,15nm,0.7s						
ICM	Isla Caja Muer	4.63	116	eS	Sn	07 05 12.4	+0.5
CBYP	Canovanas	5.06	109⇑	eP	Pn	07 04 23.9	-0.7
CPD	Cerro la Pandu	5.09	111⇑	eP	Pn	07 04 25.2	+0.2
HUMP	Col San Antoni	5.11	110⇑	eP	Pn	07 04 25.1	-0.2
MTP	Monte Pirata	5.39	109⇑	eP	Pn	07 04 28.2	-0.9
LMGC	Las Mercedes	5.74	272	eP	Pn	07 04 30.6	-3.3
LMGC				eS	Sn	07 05 33.5	-5.7
	comp=N,29nm,1.1s						
LMGC				e			
	comp=E,29nm,1.8s						
TBVI	Tortola	6.14	103⇑	eP	Pn	07 04 38.0	-1.4
TBVI				eS	Sn	07 05 43.4	-5.7

*ISCJB **06** 07:05:00.2±0.6, 3605N±003×2415E±003, h6km±7km, Error ellipse: s-maj=4.7km s-min=4.4km az=5.7*
*ATH **06** 07:05:01.3, 3591N×2406E, h44km±3km, MD3.4/8*
*CSEM **06** 07:05:02.3±0.1, 3603N×2406E, h30km, MD3.4, Error ellipse: s-maj=2.1km s-min=1.7km az=67.0*
*THE **06** 07:05:02.0, 3602N×2410E, h9km, ML3.8*
*NEIC **06** 07:05:02.0, 3599N×2413E, h10km, MD3.4(ATH), After ATH.*
ISC 06 07:05:00.8±0.5**, 3606N**±003×**2411E**±004**, h8**km±7km**, n23, σ1§01**/34**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	Vamos	0.65	174	eP	Pg	07 05 13.8	+0.5
VAM				eS	Sg	07 05 21.5	-0.3
KARN	Karanos	0.67	194	ePg	Pg	07 05 14.0	+0.3
KARN				eSg	Sg	07 05 23.4	+1.0
KYTH	Kithira	0.90	285	eP	Pg	07 05 18.5	+0.4
IDI	Anoyia	0.99	140	P	Pg	07 05 19.4	-0.5
SANT	Santorini	1.13	73	ePg	Pg	07 05 23.3	+0.8
SANT				eSg	Sg	07 05 38.5	+1.3
SANT	Santorini	1.13	73	ePg	Pg	07 05 23.9	+1.4
SANT	Santorini	1.13	73	ePg	Pg	07 05 23.3	+0.8
SANT				eSg	Sg	07 05 38.5	+1.2
VLI	Veliai	1.16	305	eP	Pb	07 05 22.6	-0.4
SIVA	Sivas	1.18	151	ePg	Pg	07 05 22.9	-0.6
GVD	Gavdhos	1.21	181	ePg	Pg	07 05 23.5	-0.6
GVD				eSg	Sg	07 05 41.0	+1.2
LAST	Lasithi	1.43	128	ePg	Pg	07 05 26.1	-2.0
LAST				eSg	Sg	07 05 46.1	-0.5
LAST	Lasithi	1.43	128	ePg	Pg	07 05 26.1	-2.1
LAST				eSg	Sg	07 05 46.1	-0.6
NPS	Neapolis	1.46	122	eP	Pn	07 05 25.9	-1.5
NPS				eS	Sn	07 05 43.0	-3.6
APE	Apeiranthos	1.52	48	ePg	Pg	07 05 29.4	-0.6
APE				eSg	Sg	07 05 49.2	-0.6
APE	Apeiranthos	1.52	48	eP	Pn	07 05 29.3	+1.0
DID	Didima	1.61	334	ePb	Pb	07 05 29.9	-0.8
DID				eSb	Sb	07 05 51.3	+0.1
NAIG	Nisos Aigina	1.77	344	eP	Pn	07 05 32.8	+1.1
VLX	Vlachokerasia	1.91	314	ePb	Pb	07 05 34.2	-1.7
VLX				eSb	Sb	07 05 58.9	-1.1
ZKR	Zakros	1.96	118	P	Pn	07 05 35.4	+1.2
ITM	Ithomi	2.09	303	eP	Pn	07 05 36.5	+0.5
LTK	Loutraki	2.17	335	ePn	Pn	07 05 38.4	+1.2
KARP	Karpathos	2.53	101	eP	Pn	07 05 41.7	-0.4
SMG	Samos	2.74	52	P	Pn	07 05 47.0	+2.0

*NEIC **06** 07:32:15.0, 1537N×9509W, h14km, MD4.1(MEX), After MEX.*
MEX 06 07:32:15.0±1.0**, 1537N×9509W, h14**km±22km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.06	292	i P	Pb	07 32 31.7	-3.4
HUIG				i S	Sb	07 32 44.0	-4.9
CMIG	Matias Romero	1.72	7	i P	Pn	07 32 41.1	-3.5
CMIG				i S	Sn	07 33 01.2	-5.2
VHO	Vista Hermosa	2.32	317	i P	Pn	07 32 51.5	-1.2
VHO				i S	Sn	07 33 18.4	-2.7
SCX	San Cristobal	2.72	60	eP	Pn	07 32 57.0	-1.3
CCIG	Comitan	2.98	72	i P	Pn	07 33 00.6	-1.3
CCIG				i S	Sn	07 33 34.5	-3.0
UTMO	Huajuapan	3.57	314	i P	Pn	07 33 08.9	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PPM	**Popocatepetl**	**5.00**	**318**	*i* S	Sn	07 34 25.7	-1.5

*BJI **06** 07:39:10.4, 15.53S×174.07W, h255km, mB5.1, mb4.7*
*ISCJB **06** 07:39:14.7±0.7, 15.73S±0.06×175.03W±0.04, h269km±6km, mb4.8/66, Error ellipse: s-maj=10.4km s-min=4.9km az=155.3*
*MOS **06** 07:39:15.5±1.0, 15.64S×175.02W, h273km, mb4.9/24, Error ellipse: s-maj=11.4km s-min=7.9km az=143.6*
*IDC **06** 07:39:16.5±0.6, 15.74S×175.04W, h279km±6km, mb4.2/12, mb1 4.4/14, mb1mx4.4/17, mbtmp4.2/14, Error ellipse: s-maj=16.7km s-min=8.6km az=147.0*
*NEIC **06** 07:39:16.2±0.5, 15.68S×175.05W, h272km±5km, mb4.9/46, Error ellipse: s-maj=6.0km s-min=3.0km az=152.0*
ISC 06 07:39:15.5±0.7**, 15.70S**±0.06×**175.05W**±0.04**, h263**km±6km**, h259**km±4.2km**: pP-P, n554,** σ0s48/479**, mb4.8**/66**, 132C-116D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.63**	**61**	P	**Pn**	**07 40 16.2**	**+0.5**
	330nm,0.3s,baz=43,slow=2.0,SNR=328						
AFI				S	**S**	**07 41 02.2**	**-1.3**
	115nm,0.3s,baz=45,slow=20,SNR=2.6						
FUNA	**Funafuti**	**9.08**	**321**	⇓*i*Pn	**Pn**	**07 41 23.3**	**+0.7**
	230nm,0.8s						
DZM	**Mont Dzumac**	**18.62**	**247**	P	**P**	**07 43 14.1**	**0.0**
	baz=75,slow=20,SNR=3.1						
URZ	**Urewera**	**23.52**	**196**	P	**P**	**07 44 01.0**	**-1.2**
	11nm,0.5s,mb4.5,baz=23,slow=4.0,SNR=15						
PAE	**Paea**	**24.47**	**98**	*e*P	**P**	**07 44 11.1**	**0.0**
	50nm,0.9s,mb4.8						
PAE	**Paea**	**24.47**	**98**	*e*P	**P**	**07 44 11.1**	**0.0**
PAE				pmax	pmax		
	comp=Z,50nm,0.9s,mb4.8						
PPT	**Papeete**	**24.47**	**98**	*e*P	**P**	**07 44 11.3**	**+0.2**
	comp=Z,65nm,1.2s,mb4.8						
PPT	**Papeete**	**24.47**	**98**	*e*P	**P**	**07 44 11.3**	**+0.2**
PPT				pmax	pmax		
	comp=Z,65nm,1.2s						
TVO	**Taravao**	**24.78**	**98**	*e*P	**P**	**07 44 14.1**	**+0.2**
	comp=Z,122nm,1.3s,mb5.2						
TVO	**Taravao**	**24.78**	**98**	*e*P	**P**	**07 44 14.1**	**+0.2**
TVO				pmax	pmax		
	comp=Z,122nm,1.3s,mb5.2						
PMOR	**Pomariorio Ree**	**26.19**	**92**	*e*P	**P**	**07 44 27.2**	**+0.7**
	comp=Z,186nm,1.1s,mb5.4						
VAH	**Vaihoa**	**26.42**	**93**	*e*P	**P**	**07 44 29.1**	**+0.5**
	comp=Z,127nm,0.9s,mb5.3						
ARMA	**Armidale**	**33.83**	**238**	*e*P	**P**	**07 45 33.9**	**+0.4**
CTA	**Charters Tower**	**37.03**	**257**	*e*P	**P**	**07 46 00.7**	**0.0**
	comp=Z,14nm,0.8s,mb4.5						
CTA	**Charters Tower**	**37.03**	**257**	*e*P	**P**	**07 46 00.7**	**0.0**
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**37.03**	**257**	*e*P	**P**	**07 46 00.9**	**+0.1**
	comp=Z,24nm,0.9s,mb4.6						
CTAO	**Charters Tower**	**37.03**	**257**	*e*P	**P**	**07 46 00.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.6						
CNB	**Canberra Magne**	**37.32**	**232**	*e*P	**P**	**07 46 03.5**	**+0.5**
	comp=Z,32nm,0.9s,mb4.8						
PMG	**Port Moresby**	**37.38**	**275**	*e*P	**P**	**07 46 04.2**	**+0.5**
	comp=Z,84nm,1.0s,mb5.1						
PMG	**Port Moresby**	**37.38**	**275**	⇑*e*P	**P**	**07 46 05.2**	**+1.5**
COEN	**Coen**	**40.38**	**267**	⇓*e*P	**P**	**07 46 29.1**	**+0.5**
	comp=Z,48nm,0.8s,mb4.9						
KIP	**Kipapa**	**40.50**	**25**	*e*P	**P**	**07 46 29.2**	**-0.1**
TOO	**Toolangi**	**41.05**	**230**	*e*P	**P**	**07 46 34.3**	**+0.6**
	comp=Z,32nm,1.1s,mb4.5						
TOO	**Toolangi**	**41.05**	**230**	*e*P	**P**	**07 46 34.3**	**+0.6**
TOO				pmax	pmax		
	comp=Z,32nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**42.52**	**240**	*e*P	**P**	**07 46 46.1**	**+0.5**
	comp=Z,21nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**42.52**	**240**	P	**P**	**07 46 45.8**	**+0.1**
	comp=Z,20nm,0.7s,mb4.4,baz=68,slow=7.2,SNR=22						
WB2	**Warramunga Arr**	**48.22**	**257**	*e*P	**P**	**07 47 29.3**	**-1.1**
WB2				⇑*i*P		07 47 29.9	
WRA	**Warramunga Arr**	**48.23**	**257**	P	**P**	**07 47 29.5**	**-1.0**
	comp=Z,53nm,1.0s,mb4.8,baz=91,slow=7.2,SNR=246						
WRA				S	**S**	**07 54 03.8**	**-5.9**
	comp=Z,0.6nm,1.0s,baz=103,slow=17,SNR=3.4						
ASAR	**Alice Springs**	**48.51**	**252**	P	**P**	**07 47 32.4**	**-0.1**
	comp=Z,254nm,0.8s,mb5.6,baz=85,slow=8.4,SNR=1315						
ASAR				S	**S**	**07 54 09.4**	**-4.1**
	comp=Z,2.1nm,1.1s,baz=83,slow=15,SNR=6.1						
FORT	**Forrest**	**53.87**	**243**	*e*P	**P**	**07 48 11.1**	**-1.0**
	comp=Z,88nm,0.7s,mb5.2						
MBWA	**Marble Bar**	**61.76**	**254**	*e*P	**P**	**07 49 06.7**	**-0.2**
	comp=Z,49nm,1.3s,mb5.0						
KLBR	**Kellerberrin**	**62.70**	**242**	*e*P	**P**	**07 49 12.5**	**-0.5**
	comp=Z,34nm,1.3s,mb4.8						
VNDA	**Vanda**	**62.92**	**186**	P	**P**	**07 49 12.5**	**-1.2**
	comp=Z,3.6nm,0.9s,mb4.0,baz=338,slow=7.5,SNR=5.5						
MUN	**Mundaring**	**64.00**	**242**	*e*P	**P**	**07 49 21.3**	**-0.2**
MJAR	**Matsushiro Arr**	**68.15**	**321**	P	**P**	**07 49 46.0**	**-1.6**
MJAR	**Matsushiro Arr**	**68.15**	**321**	P	**P**	**07 49 46.0**	**-1.6**
	comp=Z,9.3nm,1.1s,mb4.5,baz=151,slow=5.9,SNR=8.3						
SNCC	**San Nicolas Is**	**71.93**	**47**	⇑P	**P**	**07 50 10.6**	**+0.1**
	baz=72						
FARB	**Farallon Islan**	**72.17**	**41**	⇓P	**P**	**07 50 12.0**	**+0.1**
	baz=72						
BSC	**Santa Cruz Isl**	**72.26**	**46**	⇑P	**P**	**07 50 12.9**	**+0.4**
	baz=72						
V03C	**Hunter Liggett**	**72.33**	**43**	⇑P	**P**	**07 50 13.3**	**+0.5**
	baz=72						
HAST	**UC Hastings Re**	**72.33**	**43**	⇑P	**P**	**07 50 13.3**	**+0.4**
	baz=72,SNR=11						
V04C	**Ramage Ranch,**	**72.35**	**44**	⇑P	**P**	**07 50 13.6**	**+0.7**
	baz=72						
BNLO	**Ben Lomond (Sa**	**72.36**	**42**	⇑P	**P**	**07 50 13.0**	**0.0**
	baz=72						
SBC	**Santa Barbara**	**72.45**	**45**	⇑P	**P**	**07 50 13.9**	**+0.3**
	baz=73						
SCI	**San Clemente I**	**72.47**	**47**	⇑P	**P**	**07 50 14.0**	**+0.2**
	baz=73						
JRSC	**Jasper Ridge**	**72.48**	**42**	⇑P	**P**	**07 50 13.9**	**+0.2**
	baz=73						
MCCM	**Marconi Confer**	**72.52**	**41**	⇓P	**P**	**07 50 14.1**	**+0.2**
	baz=73						
PKM	**Peak Mountain**	**72.64**	**45**	⇑P	**P**	**07 50 15.1**	**+0.4**
	baz=73,SNR=6.8						
PKD	**Parkfield**	**72.74**	**44**	⇓P	**P**	**07 50 15.5**	**+0.2**
	baz=73,SNR=5.4						
SMMC	**Simmler**	**72.75**	**45**	⇑P	**P**	**07 50 15.9**	**+0.6**
	baz=73						
PTRM	**Twissleman Ran**	**72.80**	**44**	*e*P	**P**	**07 50 14.8**	**-0.9**
CIS	**Catalina Islan**	**72.80**	**47**	⇓P	**P**	**07 50 15.5**	**-0.2**
	baz=73						
U04C	**Hernandez Rese**	**72.82**	**43**	⇑P	**P**	**07 50 16.3**	**+0.6**
	baz=73,SNR=14						
PACP	**Pacheco Peak**	**72.86**	**43**	⇑P	**P**	**07 50 16.2**	**+0.2**
	baz=73,SNR=22						
CVS	**Carmenet Viney**	**72.90**	**41**	⇑P	**P**	**07 50 16.0**	**-0.2**
	baz=73,SNR=5.1						
HOPS	**Hopland**	**72.91**	**40**	*e*P	**P**	**07 50 15.8**	**-0.4**
	comp=Z,40nm,1.0s,mb5.0						
HOPS	**Hopland**	**72.91**	**40**	P	**P**	**07 50 16.6**	**+0.4**
	baz=73,SNR=14						
NSHM	**Saint Helena R**	**72.91**	**41**	*e*P	**P**	**07 50 15.7**	**-0.5**
WENL	**Wente Brothers**	**72.92**	**42**	⇓P	**P**	**07 50 16.5**	**+0.2**
	baz=73						
YSS	**Yuzh-Sakhalins**	**72.97**	**331**	*e*P	**P**	**07 50 15.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	**72.97**	**331**	*i* P	**P**	**07 50 16.1**	**-0.3**
YSS				pmax	pmax		
	comp=Z,54nm,1.6s,mb4.9						
P01C	**Double 8 Ranch**	**73.04**	**39**	P	**P**	**07 50 17.2**	**+0.3**
	baz=73,SNR=14						
BDM	**Black Diamond**	**73.04**	**41**	⇑P	**P**	**07 50 17.3**	**+0.3**
	baz=73						
V05C	**Boulder Hill,**	**73.12**	**44**	⇑P	**P**	**07 50 18.0**	**+0.5**
	baz=73						
S04C	**Ingram Canyon,**	**73.12**	**42**	⇑P	**P**	**07 50 17.9**	**+0.3**
	baz=73,SNR=20						
O01C	**Eel River Cons**	**73.16**	**39**	⇓P	**P**	**07 50 18.2**	**+0.6**
	baz=73,SNR=7.0						
KIPM	**Iron Peak**	**73.16**	**39**	*e*P	**P**	**07 50 17.5**	**-0.2**
T05C	**Eagle Field, D**	**73.20**	**43**	⇑P	**P**	**07 50 18.7**	**+0.8**
	baz=73,SNR=5.5						
MNRC	**McLaughlin Nat**	**73.23**	**40**	⇑P	**P**	**07 50 18.7**	**+0.6**
	baz=73,SNR=31						
OSI	**Osito Adit**	**73.23**	**46**	⇓P	**P**	**07 50 18.8**	**+0.6**
	baz=73						
U05C	**Westside ANR,**	**73.24**	**44**	⇑P	**P**	**07 50 18.3**	**+0.1**
	baz=73						
Q03C	**Winters**	**73.35**	**41**	⇑P	**P**	**07 50 19.7**	**+0.9**
	baz=74						
ARVC	**Arvin**	**73.44**	**45**	⇓P	**P**	**07 50 19.3**	**-0.1**
	baz=74,SNR=6.4						
109C	**Camp Elliot, M**	**73.45**	**48**	⇓P	**P**	**07 50 19.6**	**+0.1**
	baz=74						
GASB	**Alder Springs**	**73.53**	**40**	P	**P**	**07 50 20.9**	**+1.1**
	baz=74,SNR=25						
KHMM	**Horse Mountain**	**73.67**	**38**	*e*P	**P**	**07 50 20.3**	**-0.3**
S05C	**Merced**	**73.68**	**43**	⇓P	**P**	**07 50 20.4**	**-0.4**
	baz=74						
MURC	**Murrieta**	**73.75**	**47**	⇑P	**P**	**07 50 21.0**	**-0.3**
	baz=74,SNR=9.8						
BFSC	**Mount Baldy St**	**73.77**	**47**	⇑P	**P**	**07 50 21.0**	**-0.3**
	baz=74,SNR=14						
O02C	**Red Bluff**	**73.80**	**39**	⇑P	**P**	**07 50 21.9**	**+0.6**
	baz=74,SNR=24						
R04C	**Big Horse Ranc**	**73.81**	**42**	⇓P	**P**	**07 50 20.9**	**-0.6**
	baz=74						
RCTC	**Rector, Farmer**	**73.82**	**44**	⇓P	**P**	**07 50 21.6**	**0.0**
	baz=74						
SUTB	**Sutter Butte**	**73.85**	**40**	⇑P	**P**	**07 50 21.3**	**-0.4**
	baz=74						
Q04C	**Lincoln**	**73.88**	**41**	⇑P	**P**	**07 50 21.5**	**-0.3**
	baz=74						
EDW2	**Edwards Air Fo**	**73.88**	**46**	⇓P	**P**	**07 50 22.2**	**+0.3**
	baz=74,SNR=35						
N02C	**Big Bar**	**73.89**	**38**	⇓P	**P**	**07 50 21.9**	**+0.1**
	baz=74,SNR=9.7						
T06C	**Millerton Lake**	**73.90**	**43**	P	**P**	**07 50 21.9**	**-0.1**
	baz=74,SNR=23						
MONP	**Monument Peak**	**73.94**	**48**	⇓P	**P**	**07 50 22.4**	**+0.1**
	baz=74,SNR=39						
KRMB	**Red Mountain**	**73.96**	**37**	*e*P	**P**	**07 50 22.3**	**0.0**
ISA	**Isabella**	**73.98**	**45**	⇓P	**P**	**07 50 22.4**	**-0.1**
	baz=74,SNR=22						
CMB	**Columbia Colle**	**74.04**	**42**	*e*P	**P**	**07 50 22.4**	**-0.4**
	comp=Z,23nm,0.9s,mb4.8						
CMB	**Columbia Colle**	**74.04**	**42**	*e*P	**P**	**07 50 22.4**	**-0.4**
CMB				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
CMB	**Columbia Colle**	**74.04**	**42**	⇑P	**P**	**07 50 22.7**	**-0.1**
	baz=74,SNR=20						
M01C	**Crescent City**	**74.04**	**37**	⇑P	**P**	**07 50 23.5**	**+0.7**
	baz=74						
DVTC	**Desert V Tower**	**74.05**	**49**	⇓P	**P**	**07 50 23.2**	**+0.2**
	baz=74,SNR=14						
OHCM	**Honcut**	**74.10**	**40**	*e*P	**P**	**07 50 23.2**	**+0.1**
O03C	**Acorn Hollow,**	**74.16**	**40**	⇓P	**P**	**07 50 23.3**	**-0.1**
	baz=74						
HELL	**Mitchell Peak,**	**74.17**	**44**	P	**P**	**07 50 23.4**	**-0.1**
	baz=74,SNR=24						
WDC	**Whiskeytown Da**	**74.20**	**39**	*e*P	**P**	**07 50 22.5**	**-1.1**
	comp=Z,29nm,1.3s,mb4.8						
WDC	**Whiskeytown Da**	**74.20**	**39**	*e*P	**P**	**07 50 22.5**	**-1.1**
WDC				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.8						
WDC	**Whiskeytown Da**	**74.20**	**39**	⇓P	**P**	**07 50 23.6**	**0.0**
	baz=74,SNR=20						
ORV	**Oroville**	**74.22**	**40**	⇑P	**P**	**07 50 23.5**	**-0.3**
	baz=74,SNR=13						
LAVA	**Lava Cap Winer**	**74.23**	**41**	P	**P**	**07 50 23.9**	**0.0**
	baz=74,SNR=7.8						
PFO	**Pinyon Flat Ob**	**74.29**	**48**	*e*P	**P**	**07 50 24.1**	**-0.3**
	comp=Z,18nm,1.0s,mb4.7						
PFO	**Pinyon Flat Ob**	**74.29**	**48**	*e*P	**P**	**07 50 24.1**	**-0.2**
PFO				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
PFO	**Pinyon Flat Ob**	**74.29**	**48**	⇓P	**P**	**07 50 24.4**	**+0.1**
	baz=74,SNR=16						
S06C	**San Francisco**	**74.30**	**42**	⇓P	**P**	**07 50 23.9**	**-0.4**
	baz=74,SNR=12						
KCC	**Kaiser Creek**	**74.33**	**43**	⇑P	**P**	**07 50 24.5**	**0.0**
	baz=74,SNR=8.4						
QSPA	**South Pole Qui**	**74.35**	**180**	*e*P	**P**	**07 50 25.1**	**+1.1**
LRMC	**Laurel Mountai**	**74.41**	**46**	P	**P**	**07 50 25.3**	**+0.3**
	baz=74,SNR=12						
SWSC	**Sam W. Stewart**	**74.42**	**49**	⇓P	**P**	**07 50 24.9**	**-0.2**
	baz=74,SNR=12						
M02C	**Callahan**	**74.50**	**38**	⇓P	**P**	**07 50 26.0**	**+0.6**
	baz=75						
L02A	**Cave Junction**	**74.54**	**37**	⇓P	**P**	**07 50 25.9**	**+0.4**
	baz=75,SNR=5.7						
RRX	**Edison Barstow**	**74.57**	**46**	⇓P	**P**	**07 50 25.8**	**-0.1**
	baz=75						
R05C	**Kirkwood Meado**	**74.62**	**42**	P	**P**	**07 50 26.4**	**+0.3**
	baz=75,SNR=24						
P05C	**Yuba Gap, Truc**	**74.63**	**41**	P	**P**	**07 50 26.5**	**+0.3**
	baz=75,SNR=9.0						
CWC	**Cottonwood Cre**	**74.67**	**45**	⇓P	**P**	**07 50 26.8**	**+0.3**
	baz=75						
YBH	**Yreka Blue Hor**	**74.80**	**38**	*e*P	**P**	**07 50 26.8**	**-0.2**
YBH	**Yreka Blue Hor**	**74.80**	**38**	⇑P	**P**	**07 50 27.6**	**+0.5**
	baz=75,SNR=40						
BELC	**Belle Mtn.**	**74.82**	**48**	P	**P**	**07 50 27.7**	**+0.4**
	baz=75,SNR=34						
MLAC	**Mammoth Lakes**	**74.82**	**43**	⇑P	**P**	**07 50 27.7**	**+0.4**
	baz=75,SNR=12						
O05C	**Quincy**	**74.82**	**40**	⇓P	**P**	**07 50 27.3**	**0.0**
	baz=75						
MTUM	**Tungsten Hills**	**74.85**	**43**	*e*P	**P**	**07 50 27.2**	**-0.2**
MPMC	**Manual Prospec**	**74.86**	**45**	P	**P**	**07 50 28.0**	**+0.5**
	baz=75,SNR=40						
M03C	**McCloud**	**74.87**	**39**	P	**P**	**07 50 27.8**	**+0.3**
	baz=75,SNR=15						
TIN	**Tinemaha**	**74.91**	**44**	⇑P	**P**	**07 50 28.2**	**+0.5**
	baz=75,SNR=6.2						
DAC	**Darwin (Calif)**	**74.91**	**45**	*e*P	**P**	**07 50 27.8**	**0.0**
WAKR	**Walker**	**74.92**	**42**	*e*P	**P**	**07 50 27.7**	**-0.1**
GSC	**Goldstone**	**74.93**	**46**	⇓P	**P**	**07 50 27.8**	**-0.2**
	baz=75,SNR=15						
O04C	**Chester**	**74.93**	**40**	⇑P	**P**	**07 50 28.1**	**+0.2**
	baz=75,SNR=14						
R07C	**Lee Vining**	**74.94**	**43**	⇓P	**P**	**07 50 28.4**	**+0.4**
	baz=75,SNR=22						
HATC	**Hat Creek Radi**	**75.00**	**39**	⇓P	**P**	**07 50 28.6**	**+0.4**
	baz=75,SNR=14						
HEC	**Hector,Ludlow**	**75.01**	**47**	P	**P**	**07 50 28.6**	**+0.1**
	baz=75,SNR=21						
BC3	**Big Chuckw Mtn**	**75.03**	**48**	⇑P	**P**	**07 50 28.7**	**+0.1**
	baz=75,SNR=18						
WCN	**Washoe City**	**75.17**	**41**	P	**P**	**07 50 29.6**	**+0.4**
	baz=75,SNR=38						
GLA	**Glamis**	**75.18**	**49**	P	**P**	**07 50 29.9**	**+0.5**
	baz=75,SNR=23						
S08C	**White Mtn Res**	**75.19**	**44**	P	**P**	**07 50 30.1**	**+0.7**
	baz=75,SNR=25						
KSRS	**Korea Array**	**75.27**	**316**	P	**P**	**07 50 30.7**	**+0.9**
	comp=Z,4.7nm,0.9s,mb4.1,baz=129,slow=7.4,SNR=8.4						
P06A	**Stead Airport,**	**75.30**	**41**	⇑P	**P**	**07 50 30.4**	**+0.4**
	baz=75,SNR=6.4						
J02A	**Umpqua**	**75.31**	**36**	⇑P	**P**	**07 50 30.4**	**+0.5**
	baz=76						
ELFS	**Eagle Lake Fie**	**75.33**	**40**	⇑P	**P**	**07 50 30.3**	**+0.2**
	baz=76,SNR=13						
M04C	**Macdoel**	**75.35**	**38**	⇓P	**P**	**07 50 30.4**	**+0.2**
	baz=76,SNR=15						
BUOR	**Burton Butte**	**75.41**	**38**	P	**P**	**07 50 31.2**	**+0.7**
GRAC	**Grapevine Rang**	**75.45**	**44**	⇑P	**P**	**07 50 31.2**	**+0.4**
	baz=76,SNR=14						
GMRC	**Granite Mounta**	**75.46**	**47**	⇑P	**P**	**07 50 31.0**	**+0.1**
	baz=76,SNR=21						
IRM	**Iron Mountain**	**75.50**	**48**	P	**P**	**07 50 31.7**	**+0.4**
	baz=76,SNR=25						
M05C	**Lookout**	**75.51**	**39**	P	**P**	**07 50 31.4**	**+0.3**
	baz=76,SNR=23						
FURC	**Furnace Creek,**	**75.51**	**45**	P	**P**	**07 50 31.3**	**0.0**
	baz=76,SNR=13						
L04A	**Klamath Falls**	**75.55**	**38**	⇑P	**P**	**07 50 31.5**	**+0.1**
	baz=76,SNR=6.2						
I02A	**Mapleton**	**75.57**	**36**	⇑P	**P**	**07 50 31.8**	**+0.4**
	baz=76						
SHOC	**Shoshone**	**75.61**	**46**	⇓P	**P**	**07 50 31.6**	**-0.2**
	baz=76,SNR=12						
TUQ	**Turquoise Mtn.**	**75.61**	**46**	⇑P	**P**	**07 50 31.8**	**0.0**
	baz=76,SNR=17						
NVAR	**Mina Array Bea**	**75.61**	**43**	P	**P**	**07 50 32.1**	**+0.3**
	comp=Z,21nm,0.8s,mb4.8,baz=217,slow=7.4,SNR=176						
NVAR				pP	pP	07 51 37.8	+4.8
	comp=Z,3.3nm,1.1s,baz=220,slow=6.8,SNR=2.2						
O06A	**Flanigan**	**75.62**	**41**	P	**P**	**07 50 32.0**	**+0.2**
	baz=76,SNR=32						
KSM	**Kuching**	**75.64**	**276**	*e*P	**P**	**07 50 32.6**	**+0.1**
J03A	**Ideyld Park**	**75.66**	**36**	⇑P	**P**	**07 50 32.2**	**+0.3**
	baz=76						
R08A	**Mina**	**75.70**	**43**	⇓P	**P**	**07 50 32.3**	**0.0**
	baz=76,SNR=9.6						
Y12C	**Blythe**	**75.75**	**48**	⇑P	**P**	**07 50 32.8**	**+0.2**
	baz=76,SNR=14						
M06C	**Likely Place G**	**75.83**	**39**	P	**P**	**07 50 33.5**	**+0.6**
	baz=76,SNR=17						
U10A	**Ash Meadows, A**	**75.85**	**45**	⇓P	**P**	**07 50 33.3**	**+0.1**
	baz=76,SNR=13						
I03A	**Eugene**	**75.86**	**36**	⇑P	**P**	**07 50 33.2**	**+0.2**
	baz=76						
P07A	**Fallon**	**75.86**	**41**	⇓P	**P**	**07 50 33.4**	**+0.3**
	baz=76						
S09A	**Goldfield**	**75.94**	**44**	⇓P	**P**	**07 50 33.4**	**-0.2**
	baz=76,SNR=12						
N06A	**Buffalo Meadow**	**75.95**	**40**	P	**P**	**07 50 33.9**	**+0.3**
	baz=76,SNR=19						
J04A	**Umpqua Nationa**	**76.07**	**37**	⇓P	**P**	**07 50 34.5**	**+0.3**
	baz=76,SNR=13						
Q08A	**Gabbs**	**76.10**	**42**	P	**P**	**07 50 34.6**	**+0.2**
	baz=76,SNR=19						
L05A	**Lakeview**	**76.11**	**38**	⇓P	**P**	**07 50 35.0**	**+0.5**
	baz=76,SNR=12						
TPH	**Tonopah**	**76.13**	**43**	*e*P	**P**	**07 50 34.5**	**-0.2**
	comp=Z,22nm,0.9s,mb4.8						
TPH	**Tonopah**	**76.13**	**43**	*e*P	**P**	**07 50 34.5**	**-0.2**
TPH				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
V11A	**Goodsprings**	**76.17**	**46**	⇑P	**P**	**07 50 35.3**	**+0.4**
	baz=76						
TPNV	**Topopah Spring**	**76.18**	**45**	*e*P	**P**	**07 50 34.7**	**-0.3**
	comp=Z,19nm,0.8s,mb4.8						
TPNV	**Topopah Spring**	**76.18**	**45**	*e*P	**P**	**07 50 34.7**	**-0.3**
TPNV				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
TPNV	**Topopah Spring**	**76.18**	**45**	⇓P	**P**	**07 50 35.2**	**+0.2**
	baz=76						
NEE2	**Needles Airpor**	**76.19**	**48**	⇑P	**P**	**07 50 35.4**	**+0.3**
	baz=76						
O07A	**Toulon**	**76.22**	**41**	P	**P**	**07 50 35.5**	**+0.3**
	baz=76,SNR=29						
I04A	**Tendick Farm,**	**76.24**	**36**	⇓P	**P**	**07 50 35.0**	**-0.2**
	baz=76,SNR=5.8						
Y13A	**Salome**	**76.28**	**49**	⇑P	**P**	**07 50 36.1**	**+0.5**
	baz=76,SNR=27						
W12A	**Cal Nev Ari**	**76.28**	**47**	⇓P	**P**	**07 50 36.1**	**+0.4**
	baz=76						
H03A	**Soap Creek Ran**	**76.29**	**35**	⇑P	**P**	**07 50 35.7**	**+0.2**
	baz=76						
PDMCI	**Parker Dam,Lak**	**76.30**	**48**	⇑P	**P**	**07 50 35.7**	**0.0**
	baz=76,SNR=17						
R09A	**Tonopah**	**76.32**	**43**	P	**P**	**07 50 35.9**	**+0.1**
	baz=76,SNR=15						
MOD	**Modoc**	**76.34**	**39**	*e*P	**P**	**07 50 35.7**	**-0.1**
MOD	**Modoc**	**76.34**	**39**	⇑P	**P**	**07 50 35.4**	**-0.4**
	baz=76,SNR=24						
P08A	**Dixie Valley**	**76.46**	**42**	⇓P	**P**	**07 50 36.9**	**+0.4**
	baz=77,SNR=7.0						
S10A	**Tonopah Range,**	**76.47**	**44**	⇓P	**P**	**07 50 36.7**	**+0.1**
	baz=77,SNR=17						
K05A	**Summer Lake**	**76.47**	**38**	P	**P**	**07 50 36.9**	**+0.4**
	baz=77,SNR=18						
U11A	**Corn Creek**	**76.50**	**46**	⇑P	**P**	**07 50 37.1**	**+0.3**
	baz=77,SNR=5.0						
BROR	**Big Rock Looko**	**76.51**	**36**	P	**P**	**07 50 36.7**	**+0.1**
N07B	**Gerlach**	**76.51**	**40**	P	**P**	**07 50 37.0**	**+0.2**
	baz=77,SNR=17						
V12A	**Nelson**	**76.51**	**47**	P	**P**	**07 50 37.4**	**+0.5**
	baz=77,SNR=16						
Q09A	**Carvers**	**76.57**	**43**	⇓P	**P**	**07 50 37.1**	**-0.1**
	baz=77						
J05A	**Fort Rock**	**76.61**	**37**	P	**P**	**07 50 37.8**	**+0.6**
	baz=77,SNR=23						
X13A	**Yucca**	**76.66**	**48**	P	**P**	**07 50 38.1**	**+0.4**
	baz=77,SNR=26						
SHPR	**Sheep Range**	**76.70**	**46**	*e*P	**P**	**07 50 37.5**	**-0.4**
G03A	**Yamhill**	**76.70**	**35**	⇑P	**P**	**07 50 38.4**	**+0.7**
	baz=77						
Z14A	**Wintersburg**	**76.70**	**49**	P	**P**	**07 50 38.7**	**+0.7**
	baz=77,SNR=14						
R10A	**Warm Springs**	**76.86**	**44**	⇑P	**P**	**07 50 39.2**	**+0.5**
	baz=77,SNR=21						
W13A	**Hualapai Mount**	**76.88**	**48**	P	**P**	**07 50 39.5**	**+0.6**
	baz=77,SNR=27						
K06A	**Valley Falls**	**76.90**	**38**	P	**P**	**07 50 39.2**	**+0.3**
	baz=77,SNR=17						
115A	**Sonoran Desert**	**76.91**	**50**	P	**P**	**07 50 39.7**	**+0.5**
	baz=77,SNR=8.5						
H04A	**Detroit Lake**	**76.91**	**36**	⇓P	**P**	**07 50 38.5**	**-0.4**
	baz=77,SNR=9.4						
Y14A	**Wickenburg**	**76.94**	**49**	P	**P**	**07 50 39.7**	**+0.4**
	baz=77,SNR=41						
P09A	**Austin**	**76.99**	**42**	⇓P	**P**	**07 50 39.4**	**-0.1**
	baz=77,SNR=6.1						
L07A	**Adell**	**76.99**	**39**	P	**P**	**07 50 40.0**	**+0.5**
	baz=77,SNR=14						
N08A	**GE Springer Mi**	**77.03**	**41**	⇓P	**P**	**07 50 39.6**	**-0.1**
	baz=77,SNR=18						
T11A	**Corn Creek, Al**	**77.04**	**45**	⇑P	**P**	**07 50 39.8**	**0.0**
	baz=77,SNR=32						
G04A	**Mulino**	**77.07**	**35**	⇑P	**P**	**07 50 40.3**	**+0.5**
	baz=77						
Q10A	**Clear Creek Ra**	**77.08**	**43**	⇓P	**P**	**07 50 40.2**	**+0.2**
	baz=77,SNR=9.8						
U12A	**Valley of Fire**	**77.09**	**46**	⇓P	**P**	**07 50 40.4**	**+0.3**
	baz=77,SNR=18						
T12A	**Moapa**	**77.12**	**46**	⇓P	**P**	**07 50 40.6**	**+0.4**
	baz=77						
I05A	**Bend**	**77.12**	**37**	P	**P**	**07 50 40.7**	**+0.7**
	baz=77,SNR=6.3						
J06A	**Christmas Vall**	**77.22**	**38**	⇓P	**P**	**07 50 40.5**	**-0.2**
	baz=77,SNR=12						
116A	**Eloy**	**77.24**	**51**	⇓P	**P**	**07 50 41.3**	**+0.3**
	baz=77,SNR=8.8						
M08A	**Happy Creek Ra**	**77.26**	**40**	⇑P	**P**	**07 50 41.3**	**+0.4**
	baz=77,SNR=8.6						
X14A	**Yava**	**77.28**	**48**	⇑P	**P**	**07 50 41.6**	**+0.4**
	baz=77,SNR=29						
O09A	**Fish Creek Ran**	**77.30**	**42**	P	**P**	**07 50 41.3**	**+0.2**
	baz=77,SNR=12						
E03A	**Lebam**	**77.32**	**34**	⇑P	**P**	**07 50 41.1**	**0.0**
	baz=78						
R11A	**Troy Canyon, C**	**77.37**	**44**	P	**P**	**07 50 41.7**	**+0.1**
	baz=78,SNR=15						
TRCR	**Troy Canyon**	**77.37**	**44**	*e*P	**P**	**07 50 41.0**	**-0.6**
TRCR				*e*pP	pP	07 51 40.4	-2.7
BMN	**Battle Mountai**	**77.42**	**41**	*e*P	**P**	**07 50 41.6**	**-0.2**
	comp=Z,22nm,0.8s,mb4.9						
BMN	**Battle Mountai**	**77.42**	**41**	*e*P	**P**	**07 50 41.6**	**-0.2**
BMN				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
H05A	**Madras**	**77.43**	**36**	⇑P	**P**	**07 50 41.8**	**0.0**
	baz=78						
K07A	**Rock Creek Ran**	**77.44**	**39**	P	**P**	**07 50 42.2**	**+0.3**
	baz=78,SNR=15						
N09A	**Rock Creek Ran**	**77.46**	**41**	⇓P	**P**	**07 50 42.2**	**+0.2**
	baz=78,SNR=8.2						
P10A	**Eureka**	**77.47**	**42**	⇓P	**P**	**07 50 42.2**	**+0.1**
	baz=78						
S12A	**Delamar Landin**	**77.48**	**45**	⇓P	**P**	**07 50 43.0**	**+0.8**
	baz=78,SNR=25						
U13A	**Pakoon Wash**	**77.48**	**46**	P	**P**	**07 50 42.9**	**+0.7**
	baz=78,SNR=55						
W14A	**Seligman**	**77.50**	**48**	⇑P	**P**	**07 50 43.1**	**+0.7**
	baz=78,SNR=42						
F04A	**Amboy**	**77.56**	**35**	⇓P	**P**	**07 50 43.0**	**+0.5**
	baz=78						
Q11A	**Duckwater**	**77.58**	**43**	⇓P	**P**	**07 50 42.8**	**0.0**
	baz=78,SNR=28						
I06A	**Prineville**	**77.60**	**37**	P	**P**	**07 50 43.3**	**+0.6**
	baz=78,SNR=8.9						
HOOD	**Mount Hood Mea**	**77.60**	**35**	*e*P	**P**	**07 50 42.4**	**-0.4**
WVOR	**Wild Horse Val**	**77.66**	**39**	*e*P	**P**	**07 50 43.2**	**+0.1**
	comp=Z,18nm,0.9s,mb4.8						
WVOR	**Wild Horse Val**	**77.66**	**39**	*e*P	**P**	**07 50 43.2**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
L08A	**Fields**	**77.70**	**39**	P	**P**	**07 50 43.6**	**+0.3**
	baz=78,SNR=28						
G05A	**Wamic**	**77.74**	**36**	P	**P**	**07 50 43.8**	**+0.3**
	baz=78,SNR=5.8						
HABR	**Khabarovsk**	**77.75**	**329**	*e*P	**P**	**07 50 42.4**	**-1.1**
HABR				*e*		07 50 49.6	
HABR				*e*		07 53 38.7	
HABR				*e*S	S	08 00 12.6	-0.9
HABR				*e*		08 00 37.0	
X15A	**Humboldt**	**77.76**	**49**	⇓P	**P**	**07 50 44.3**	**+0.5**
	baz=78,SNR=49						
CROR	**Criterion Ridg**	**77.77**	**36**	P	**P**	**07 50 43.7**	**0.0**
J07A	**Hines**	**77.79**	**38**	⇑P	**P**	**07 50 43.8**	**0.0**
	baz=78,SNR=7.0						

O10A **Cortez Mining,** 77.80 42 ⇓P P 07 50 44.2 +0.2
baz=78
E04A **Onalaska** 77.81 34 ⇓P P 07 50 44.2 +0.4
baz=78
TUC **Tucson** 77.81 51 *eP* P 07 50 44.3 +0.1
comp=Z,19nm,0.9s,mb4.8
TUC **Tucson** 77.81 51 *eP* P 07 50 44.3 +0.1
TUC pmax pmax
comp=Z,19nm,0.9s,mb4.8
M09A **Marrel Ranch,** 77.82 41 P P 07 50 44.7 +0.7
baz=78,SNR=10
T13A **Saint George** 77.82 46 P P 07 50 44.7 +0.6
baz=78,SNR=19
P11A **Circle Ranch,** 77.89 43 ⇓P P 07 50 44.4 -0.1
baz=78,SNR=5.8
K08A **Mann Creek Ran** 77.92 39 P P 07 50 45.0 +0.5
baz=78,SNR=16
H06A **Lindquist Farm** 78.00 36 P P 07 50 44.9 0.0
baz=78,SNR=16
R12A **Pony Springs,** 78.01 44 P P 07 50 45.6 +0.5
baz=78,SNR=21
L09A **Wilkinson Ranc** 78.02 40 ⇓P P 07 50 45.1 0.0
baz=78,SNR=8.4
U14A **Mt Trumbull** 78.03 47 ⇓P P 07 50 45.7 +0.4
baz=78,SNR=43
N10A **Dunphy** 78.03 42 ⇓P P 07 50 45.5 +0.4
baz=78
F05A **White Salmon** 78.06 35 ⇓P P 07 50 45.2 0.0
baz=78
W15A **Williams** 78.07 48 ⇓P P 07 50 46.2 +0.7
baz=78,SNR=6.7
D04A **Dobbs Creek Ra** 78.08 33 ⇓P P 07 50 45.7 +0.4
baz=78
I07A **Izee** 78.09 37 P P 07 50 45.5 +0.1
baz=78,SNR=14
G06A **Carlson Farm,** 78.12 36 ⇑P P 07 50 45.5 -0.1
baz=78,SNR=6.0
S13A **Holt Ranch, En** 78.14 45 ⇑P P 07 50 46.1 +0.2
baz=78,SNR=8.6
Q12A **Willow Creek R** 78.23 44 ⇓P P 07 50 46.2 -0.1
baz=78,SNR=15
O11A **Cowboy Ranch,** 78.26 42 ⇓P P 07 50 46.5 0.0
baz=78,SNR=22
J08A **Circle Bar Ran** 78.28 38 P P 07 50 46.7 +0.2
baz=78,SNR=14
HDW **Hoodsport** 78.29 33 P P 07 50 47.0 +0.6
MDJ **Mudanjiang** 78.30 323 P P 07 50 47.4 +0.8
MDJ AMB AMB
comp=Z,10.0nm,2.0s,mb4.2
MDJ AMB AMB
comp=Z,459nm,4.1s
E05A **Randle** 78.30 34 ⇑P P 07 50 46.3 -0.3
baz=78,SNR=7.0
B04A **Port Angeles** 78.32 32 ⇓P P 07 50 46.8 +0.2
baz=78
H07A **Lands Inn, Kim** 78.35 37 ⇑P P 07 50 46.7 -0.2
baz=78
GNW **Green Mountain** 78.36 33 *eP* P 07 50 46.6 -0.2
F06A **Goldendale** 78.36 35 ⇑P P 07 50 46.7 -0.2
baz=78
K09A **Rome** 78.36 39 P P 07 50 47.0 0.0
baz=78,SNR=33
C04A **Brinnon** 78.38 33 ⇓P P 07 50 46.6 -0.3
baz=78
P12A **McGill** 78.41 43 ⇑P P 07 50 47.2 -0.1
baz=78,SNR=8.8
T14A **Hurricane** 78.42 46 ⇓P P 07 50 47.5 +0.2
baz=78,SNR=5.4
M10A **I.L. Ranch, Tu** 78.45 41 ⇓P P 07 50 47.5 +0.1
baz=79,SNR=19
CCUT **Cedar City** 78.47 46 *eP* P 07 50 48.1 +0.5
ARUT **Antelope Range** 78.53 45 *eP* P 07 50 47.7 -0.3
I08A **Drewsey** 78.54 38 P P 07 50 47.8 -0.1
baz=79,SNR=11
D05A **Enumclaw** 78.57 34 ⇑P P 07 50 48.0 0.0
baz=79,SNR=7.2
N11A **Elko Archery C** 78.58 42 ⇓P P 07 50 47.7 -0.5
baz=79
G07A **Ruggs Ranch, H** 78.69 36 ⇓P P 07 50 48.2 -0.4
baz=79,SNR=7.6
S14A **Cedar City** 78.70 45 ⇑P P 07 50 49.1 +0.2
baz=79,SNR=8.6
J09A **Fry Pan Ranch,** 78.71 39 ⇑P P 07 50 48.7 -0.1
baz=79,SNR=20
E06A **Yakima** 78.72 35 ⇑P P 07 50 48.6 -0.2
baz=79,SNR=6.3
L10A **Juniper Basin** 78.79 40 ⇓P P 07 50 49.1 -0.2
baz=79,SNR=24
H08A **Prairie City** 78.83 37 ⇑P P 07 50 49.4 -0.1
baz=79,SNR=6.7
ELK **Elko** 78.86 42 *eP* P 07 50 50.2 +0.5
comp=Z,17nm,0.9s,mb4.8
ELK **Elko** 78.86 42 *eP* P 07 50 50.2 +0.5
ELK pmax pmax
comp=Z,17nm,0.9s
M11A **Holland Ranch,** 78.87 41 ⇓P P 07 50 50.0 +0.3
baz=79,SNR=7.5
WUAZ **Wupatki** 78.87 48 *eP* P 07 50 49.5 -0.4
comp=Z,24nm,1.0s,mb4.9
WUAZ **Wupatki** 78.87 48 ⇑P P 07 50 50.5 +0.6
baz=79
T15A **Red Dirt Ranch** 78.88 46 P P 07 50 50.5 +0.6
baz=79,SNR=32
F07A **Phinny Hill Vi** 78.92 36 ⇑P P 07 50 50.0 +0.1
baz=79
O12A **Currie** 78.93 43 ⇑P P 07 50 49.8 -0.3
baz=79,SNR=12
K10A **MacKenzie Ranc** 78.93 40 P P 07 50 50.3 +0.3
baz=79,SNR=28
C05A **Tolt Reservoir** 79.04 34 P P 07 50 50.3 -0.2
baz=79,SNR=6.8
N12A **Clover Valley,** 79.04 42 ⇑P P 07 50 50.6 -0.1
baz=79,SNR=14
R14A **James Farms, M** 79.07 45 ⇑P P 07 50 50.9 0.0
baz=79
NJ2 **Nanjing** 79.08 308 *eP* P 07 50 52.7 +1.6
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb4.8
G08A **Pilot Rock** 79.11 37 P P 07 50 50.9 -0.1
baz=79,SNR=20
A04A **Legoe Bay, Lum** 79.15 32 ⇓P P 07 50 51.3 +0.2
baz=79
EBG **Ellensburg** 79.17 35 P P 07 50 51.4 +0.2
B05A **Bryant** 79.18 33 P P 07 50 51.2 0.0
baz=79,SNR=5.2
D06A **Cle Elum** 79.19 34 ⇑P P 07 50 51.2 -0.1
baz=79
GAMB **Gambell** 79.26 2 *eP* P 07 50 51.7 +0.3
E07A **Sunnyside** 79.35 35 P P 07 50 52.3 +0.1
baz=80,SNR=14
J10A **Berg Farm, Mel** 79.35 39 P P 07 50 52.5 +0.2
baz=80,SNR=6.6
O13A **Hicks Ranch, I** 79.36 43 ⇑P P 07 50 52.7 +0.3
baz=80,SNR=9.5
M12A **Wells** 79.42 42 ⇑P P 07 50 52.7 -0.1
baz=80,SNR=17
HAWA **Hanford** 79.43 35 *eP* P 07 50 52.6 0.0
K11A **Parker Ranch,** 79.44 40 P P 07 50 53.0 +0.2
baz=80,SNR=15
H2OWA **Water** 79.50 36 P P 07 50 53.2 +0.2
H09A **Durkee** 79.51 38 ⇑P P 07 50 52.9 -0.2
baz=80,SNR=7.9
F08A **Pendleton** 79.51 36 P P 07 50 52.8 -0.3
baz=80,SNR=7.9
N13A **Wendover, West** 79.59 42 ⇓P P 07 50 53.7 +0.1
baz=80,SNR=15
C06A **Tall Timber Ra** 79.61 34 ⇓P P 07 50 52.9 -0.7
baz=80
A05A **Maple Falls** 79.64 32 ⇑P P 07 50 53.4 -0.3
baz=80
B06A **Marblemount** 79.66 33 ⇑P P 07 50 53.5 -0.3
baz=80
D07A **Quincy** 79.66 35 ⇓P P 07 50 53.5 -0.4
baz=80
I10A **Payette** 79.69 39 ⇑P P 07 50 54.2 +0.1
baz=80
L12A **House Creek Ra** 79.74 41 ⇓P P 07 50 54.6 +0.2
baz=80,SNR=6.2
E08A **Dider Farm, El** 79.75 36 ⇓P P 07 50 54.3 0.0
baz=80,SNR=7.7
MSU **Marysvale** 79.75 45 *eP* P 07 50 54.5 -0.1
TTA **Tatalina** 79.78 9 *eP* P 07 50 54.4 +0.3
BMO **Blue Mountains** 79.82 38 *eP* P 07 50 54.5 -0.3
M13A **Montello** 79.87 42 ⇓P P 07 50 55.1 -0.1
baz=80,SNR=12
C07A **Waterville** 79.91 34 ⇑P P 07 50 54.6 -0.6
baz=80,SNR=7.7
MFID **Camas Ranch** 79.92 39 ⇑P P 07 50 55.2 -0.1
baz=80,SNR=6.3
F09A **S2 Ranch, Elgi** 79.96 37 ⇓P P 07 50 55.2 -0.3
baz=80,SNR=8.8
WTV **Waterville** 79.97 34 P P 07 50 55.3 -0.3
MA2 **Magadan** 79.98 343 *eP* P 07 50 53.7 -1.5
comp=Z,11nm,1.1s,mb4.5
MA2 **Magadan** 79.98 343 *eP* P 07 50 54.0 -1.3
MA2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
H10A **Noah's Angus R** 80.01 38 ⇓P P 07 50 55.1 -0.6
baz=80,SNR=36
A06A **Chilliwack** 80.02 32 ⇓P P 07 50 55.2 -0.5
baz=80
K12A **Draper Farm, C** 80.07 41 ⇑P P 07 50 55.8 -0.4
baz=80,SNR=12
DUG **Dugway** 80.16 43 *eP* P 07 50 56.5 -0.3
DUG **Dugway** 80.16 43 ⇑P P 07 50 56.3 -0.4
baz=80
D08A **Wollman Farm,** 80.16 35 P P 07 50 56.4 -0.1
baz=80,SNR=12
N14A **Grayback Hills** 80.25 43 ⇑P P 07 50 56.8 -0.3
baz=80
J12A **Stokes Ranch,** 80.28 40 ⇑P P 07 50 57.2 0.0
baz=80,SNR=13
E09A **Wood Farm, Sta** 80.28 36 P P 07 50 56.8 -0.4
baz=80,SNR=7.8
CN2 **Changchun** 80.30 321 *eP* P 07 50 57.5 +0.1
CN2 *eA*P pP 07 51 58.0 -1.4
CN2 *eS* S 08 00 41.0 +0.5
CN2 AMB AMB
comp=Z,20nm,0.9s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
B07A **Winthrop** 80.34 34 ⇓P P 07 50 57.3 -0.2
baz=80,SNR=7.8
L13A **Double Diamond** 80.39 41 ⇑P P 07 50 57.7 -0.2
baz=80,SNR=14
M14A **Sheep Mountain** 80.47 42 P P 07 50 58.5 +0.2
baz=81,SNR=36
OD2 **Odessa Site #2** 80.47 35 P P 07 50 58.1 -0.1
F10A **Beach Ranch, E** 80.50 37 ⇑P P 07 50 57.7 -0.7
baz=81,SNR=19
D09A **Jones Farm, Ri** 80.50 35 ⇑P P 07 50 58.0 -0.3
baz=81
H11A **Donnelly** 80.51 38 P P 07 50 58.2 -0.2
baz=81,SNR=20
C08A **Higginbotham F** 80.52 35 P P 07 50 58.4 0.0
baz=81,SNR=3.3
NLU **North Lily Min** 80.53 44 *eP* P 07 50 58.5 -0.1
A07A **Ashnola River,** 80.56 33 ⇓P P 07 50 58.2 -0.3
baz=81,SNR=5.8
K13A **Stover Farm, H** 80.59 41 ⇑P P 07 50 59.0 0.0
baz=81,SNR=14
B08A **Colville Reser** 80.70 34 ⇑P P 07 50 58.6 -0.8
baz=81
N15A **Stansbury Isla** 80.70 43 ⇓P P 07 50 59.0 -0.5
baz=81,SNR=9.1
G11A **Walters Elk Ra** 80.74 38 ⇓P P 07 50 59.1 -0.5
baz=81
TMUT **Trail Mountain** 80.80 45 *eP* P 07 51 00.7 +0.6
E10A **Myers Farm, Un** 80.85 36 ⇑P P 07 51 00.0 -0.2
baz=81
HLID **Hailey** 80.87 40 ⇑P P 07 51 00.3 0.0
baz=81,SNR=26
J13A **Cove Ranch, Pi** 80.93 40 P P 07 51 01.1 +0.5
baz=81,SNR=25
C09A **Brisman Ranch** 80.95 35 ⇑P P 07 51 00.1 -0.6
baz=81
SPUT **South Promonto** 80.96 43 *eP* P 07 51 00.5 -0.4
HVU **Hansel Valley** 80.98 42 *eP* P 07 51 00.7 -0.4
M15A **Larsen Ranch,** 81.04 42 P P 07 51 01.2 -0.1
baz=81,SNR=18
F11A **Grangeville** 81.07 37 ⇓P P 07 50 59.8 -1.6
baz=81,SNR=8.3
D10A **Wagner Farm, O** 81.08 36 ⇓P P 07 51 00.6 -0.9
baz=81,SNR=6.7
A08A **Turner Farm, O** 81.09 33 ⇓P P 07 51 00.8 -0.6
baz=81,SNR=12
CTU **Camp Tracy** 81.11 43 *eP* P 07 51 01.5 -0.2
K14A **Jones Ranch, D** 81.11 41 ⇑P P 07 51 01.2 -0.5
baz=81,SNR=15
H12A **Diamond D Ranc** 81.12 39 ⇓P P 07 51 01.1 -0.6
baz=81,SNR=13
SRU **San Rafael** 81.17 45 *eP* P 07 51 02.4 +0.3
comp=Z,28nm,1.3s,mb4.8
SRU **San Rafael** 81.17 45 *eP* P 07 51 02.4 +0.3
SRU pmax pmax
comp=Z,29nm,1.3s,mb4.8
TNA **Tin City** 81.19 3 *eP* P 07 51 01.4 -0.1
I13A **Wildhorse Cree** 81.23 40 ⇑P P 07 51 02.2 -0.1
baz=81,SNR=13
JLU **Jordanelle** 81.27 44 *eP* P 07 51 03.0 +0.5
E11A **Bogner Ranch,** 81.30 37 P P 07 51 01.6 -1.0
baz=81,SNR=6.6
DAU **Daniels Canyon** 81.30 44 *eP* P 07 51 02.1 -0.7
B09A **Rice** 81.38 34 ⇑P P 07 51 02.8 -0.1
baz=82
A09A **Danville** 81.47 34 ⇑P P 07 51 02.8 -0.6
baz=82,SNR=7.3
H13A **Challis** 81.49 39 P P 07 51 03.6 0.0
baz=82,SNR=18
LENM **Lemitar** 81.49 51 *eP* P 07 51 03.0 -0.8
Y22C **IRIS PASSCAL I** 81.49 51 ⇓P P 07 51 04.4 +0.5
baz=82
F12A **Elk City** 81.53 38 P P 07 51 03.5 -0.3
baz=82,SNR=31
MNTX **Cornudas Mount** 81.68 54 *eP* P 07 51 04.3 -0.6
comp=Z,35nm,1.5s,mb4.9
HWUT **Hardware Ranch** 81.68 43 *eP* P 07 51 04.0 -0.7
MVCO **Mesa Verde** 81.71 48 ⇑P P 07 51 04.6 -0.3
baz=82
MCK **McKinley** 81.72 11 *eP* P 07 51 03.6 -0.7
G13A **Cobalt** 81.78 39 P P 07 51 05.0 -0.2
baz=82,SNR=12
LPM **Los Pinos Moun** 81.81 51 *eP* P 07 51 05.1 -0.4
PV10 **Paradox Valley** 81.86 46 *eP* P 07 51 06.1 +0.4
A10A **Northport** 82.02 34 ⇓P P 07 51 05.6 -0.7
baz=82,SNR=5.8
PV01 **Paradox Valley** 82.08 47 *eP* P 07 51 06.8 -0.1
F13A **Darby** 82.09 38 ⇑P P 07 51 06.0 -0.8
baz=82,SNR=17
LTX **Lajitas** 82.10 57 *eP* P 07 51 06.4 -0.8
comp=Z,26nm,1.3s,mb4.8
LTX **Lajitas** 82.10 57 *eP* P 07 51 06.4 -0.7
LTX pmax pmax
comp=Z,25nm,1.3s,mb4.8
TXAR **Lajitas Array** 82.10 57 P P 07 51 07.4 +0.2
comp=Z,7.0nm,1.0s,mb4.3,baz=212,slow=4.4,SNR=55
TXAR PP PP 07 54 16.1 -3.3
comp=Z,1.2nm,1.1s,baz=207,slow=5.3,SNR=4.7
D12A **Red Ives Fores** 82.17 37 ⇑P P 07 51 06.9 -0.2
baz=82
ANMO **Albuquerque** 82.21 51 *eP* P 07 51 07.0 -0.6
comp=Z,23nm,1.1s,mb4.8
ANMO **Albuquerque** 82.21 51 *c iP* P 07 51 08.0 +0.4
G14A **Jackson** 82.33 39 ⇓P P 07 51 07.6 -0.3
baz=82,SNR=17
B11A **Sandpoint** 82.36 35 ⇑P P 07 51 07.6 -0.5
baz=82
MCMT **McKenzie Canyo** 82.48 39 *eP* P 07 51 09.2 +0.4
E13A **Victor** 82.52 38 P P 07 51 08.2 -0.7
baz=83,SNR=16
AHID **Auburn Hatcher** 82.55 42 *eP* P 07 51 08.4 -0.8
comp=Z,27nm,1.3s,mb4.9
A11A **Hall Mountain,** 82.66 35 P P 07 51 09.6 0.0
baz=83,SNR=5.6
F14A **Wisdom** 82.68 38 ⇓P P 07 51 09.3 -0.4
baz=83,SNR=20
D13A **Huson** 82.71 37 P P 07 51 09.2 -0.6
baz=83,SNR=18
B12A **Libby** 82.81 35 ⇑P P 07 51 10.1 -0.3
baz=83
MSO **Missoula** 82.87 37 *eP* P 07 51 10.3 -0.4
G15A **Dillon** 82.88 39 P P 07 51 10.9 +0.2
baz=83,SNR=33
DCID1 **Drake Creek** 82.90 41 *eP* P 07 51 10.4 -0.5
DLMT **Dillon** 82.91 39 *eP* P 07 51 10.5 -0.5
comp=Z,22nm,0.9s,mb5.0
E14A **Clinton** 82.92 38 P P 07 51 10.8 -0.2
baz=83,SNR=22
BSMT **Bassoo Peak** 82.93 36 *eP* P 07 51 10.8 -0.2
COLA **College** 82.96 11 *eP* P 07 51 09.5 -1.2
comp=Z,13nm,0.8s,mb4.8
COLA *eP*P pP 07 52 13.5 +0.4
COLA **College** 82.96 11 *d iP* P 07 51 09.7 -1.0
C13A **Hot Springs** 82.96 36 ⇑P P 07 51 10.4 -0.7
baz=83,SNR=7.7
TPAW **Teton Pass** 83.00 41 *eP* P 07 51 10.8 -0.6
REDW **Red Top Meadow** 83.00 41 *eP* P 07 51 10.9 -0.6
A12A **Yaak River Ran** 83.03 35 ⇑P P 07 51 11.0 -0.5
baz=83
IMA2 **Indian Mountai** 83.08 9 *eP* P 07 51 10.9 -0.4
IMA2 *eP*P pP 07 52 09.5 -4.3
IMW **Indian Meadow** 83.21 41 *eP* P 07 51 11.8 -0.6
F15A **Butte** 83.22 39 ⇓P P 07 51 12.0 -0.5
baz=83,SNR=7.9
LRM **Limekiln Ridge** 83.23 39 *eP* P 07 51 12.1 -0.5
MOOW **Moose Ponds** 83.26 41 *eP* P 07 51 12.4 -0.3
D14A **Greenough** 83.26 37 ⇑P P 07 51 11.6 -1.0
baz=83,SNR=8.1
LOHW **Long Hollow** 83.28 41 *eP* P 07 51 12.2 -0.6
comp=Z,16nm,1.0s,mb4.8
CHMT **Chamberlain Mo** 83.32 37 *eP* P 07 51 12.7 -0.3
QLMT **Earthquake Lak** 83.36 40 *eP* P 07 51 13.0 -0.2
B13A **Whitefish** 83.39 36 ⇓P P 07 51 12.4 -0.9
baz=84,SNR=5.8
E15A **Deer Lodge** 83.43 38 ⇓P P 07 51 12.9 -0.7
baz=84,SNR=13
C14A **Swan Lake** 83.48 37 ⇓P P 07 51 13.1 -0.6
baz=84
YFT **Old Faithful** 83.54 40 *eP* P 07 51 13.8 -0.4
BW06 **Boulder Array** 83.55 42 *eP* P 07 51 13.8 -0.5
comp=Z,15nm,0.8s,mb4.9
PDAR **Pinedale Array** 83.55 42 P P 07 51 13.7 -0.6
comp=Z,16nm,0.8s,mb4.9,baz=211,slow=3.1,SNR=55
PDAR pP pP 07 52 21.7 +5.0
comp=Z,0.8nm,0.9s,baz=230,slow=7.0,SNR=1.0
YMR **Madison River** 83.57 40 *eP* P 07 51 14.4 +0.1
comp=Z,44nm,1.3s,mb5.1
BOZ **Bozeman (W)** 83.64 39 *eP* P 07 51 14.5 -0.2
comp=Z,14nm,1.0s,mb4.7
BOZ **Bozeman (W)** 83.64 39 *eP* P 07 51 14.5 -0.2
BOZ pmax pmax
comp=Z,14nm,1.0s,mb4.8
BOZ **Bozeman (W)** 83.64 39 ⇑P P 07 51 14.5 -0.1
baz=84
A13A **Flathead Natio** 83.72 35 P P 07 51 14.7 -0.3
baz=84,SNR=6.2
YNR **Norris Junctio** 83.77 40 *eP* P 07 51 18.0 +2.7
D15A **Lincoln** 83.81 38 P P 07 51 15.1 -0.4
baz=84,SNR=18
LKWY **Lake** 83.87 41 *eP* P 07 51 16.7 +0.9
comp=Z,21nm,1.1s,mb4.9
LKWY **Lake** 83.87 41 *eP* P 07 51 16.7 +0.9
LKWY pmax pmax
comp=Z,21nm,1.1s,mb4.9
SDCO **Great Sand Dun** 84.09 48 *eP* P 07 51 16.3 -0.8
DAWY **Dawson** 84.11 15 *eP* P 07 51 16.6 0.0
EGAK **Eagle** 84.28 14 *eP* P 07 51 17.2 -0.2
BJT **Baijiatuau** 84.52 314 *eP* P 07 51 19.7 +0.4
comp=Z,28nm,1.1s,mb5.0
BJT **Baijiatuau** 84.52 314 *eP* P 07 51 19.7 +0.5
BJT pmax pmax
comp=Z,28nm,1.1s
BJI **Beijing** 84.53 314 P P 07 51 19.3 +0.1
BJI PP PP 07 54 37.8 -1.2
BJI S S 08 01 26.9 +3.5
BJI AMB AMB
comp=Z,28nm,1.2s,mb5.0
BJI AMB AMB
comp=Z,310nm,3.2s
BJI LR LR
comp=N,403nm,22.7s
BJI LR LR
comp=E,464nm,20.2s
BJI LR LR
comp=Z,714nm,28.3s
BILL **Bilibino** 84.60 353 *eP* P 07 51 18.0 -1.0
comp=Z,5.0nm,0.8s,mb4.4
BILL **Bilibino** 84.60 353 ⇑*eP* P 07 51 18.3 -0.7
BILL *eS* S 08 01 15.5 -7.5
BILL pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
RWWY **Rawlins** 84.61 44 *eP* P 07 51 19.3 -0.3
comp=Z,23nm,1.1s,mb4.9
RLMT **Red Lodge** 84.84 40 *eP* P 07 51 21.3 +0.6
ISCO **Idaho Springs** 84.88 46 *eP* P 07 51 20.6 -0.4
comp=Z,34nm,2.0s,mb4.8
ISCO **Idaho Springs** 84.88 46 *eP* P 07 51 20.6 -0.4
ISCO pmax pmax
comp=Z,34nm,2.0s,mb4.8
JCT **Junction City** 85.64 57 *eP* P 07 51 24.6 -0.4
comp=Z,6.1nm,0.8s,mb4.5
JCT **Junction City** 85.64 57 *eP* P 07 51 24.6 -0.4
JCT pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
AMTX **Amarillo** 85.78 52 *eP* P 07 51 25.0 -0.5
EGMT **Eagleton** 85.93 38 *eP* P 07 51 25.3 -0.6
EGMT **Eagleton** 85.93 38 ⇓P P 07 51 25.5 -0.4
baz=86
EDM **Edmonton** 86.57 32 *eP* P 07 51 27.9 -1.0
GYA **Guiyang** 86.79 298 ⇑*iP* P 07 51 31.9 +1.3
GYA AP pP 07 52 32.8 -0.8
GYA XP sP 07 52 58.4 -2.7
GYA PP PP 07 55 01.2 +3.7
GYA SKS 08 01 31.8
GYA S S 08 01 46.4 +0.4
GYA XS sS 08 03 32.8 -4.0
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.9
GYA AMB AMB
comp=Z,110nm,5.9s
PSI **Prapat** 86.93 274 P P 07 51 31.6 -0.1
comp=Z,5.0nm,0.9s,mb4.4,baz=166,slow=2.5,SNR=8.7
LAO **LASA Array** 87.45 40 *eP* P 07 51 32.9 -0.5
comp=Z,19nm,0.9s,mb4.9
HHC **Hu-ho-hao-te** 88.07 313 *eP* P 07 51 37.1 +0.7
HHC AP pP 07 52 38.5 -1.1
HHC XP sP 07 53 04.8 -2.3
HHC PP PP 07 55 10.3 +2.9
HHC SKS 08 01 39.4
HHC S S 08 01 57.1 -0.4
HHC XS sS 08 03 45.5 -3.2
HHC SS SS 08 07 56.8 +3.8
HHC AMB AMB
comp=Z,24nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,213nm,4.9s
DGMT **Dagmar** 89.45 39 *eP* P 07 51 42.7 +0.1
KMI **Kunming** 89.73 296 P P 07 51 45.8 +1.3
KMI AMB AMB
comp=Z,20nm,1.1s,mb4.9
CD2 **Chengdu** 90.62 302 *eP* P 07 51 49.2 +0.7
CD2 AP pP 07 52 50.4 -1.5
CD2 XP sP 07 53 17.0 -2.3
CD2 PP PP 07 55 30.9 +3.0
CD2 SKS 08 01 54.4
CD2 S S 08 02 20.6 -0.9
CD2 XS sS 08 04 09.6 -3.7
CD2 SS SS 08 08 33.2 +3.0
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.6
YKA **Yellowknife Ar** 91.00 24 P P 07 51 48.0 -1.5
YKA pP pP 07 52 55.4 +2.4
YKA **Yellowknife Ar** 91.00 24 P P 07 51 48.0 -1.5
comp=Z,1.4nm,0.8s,mb3.9,baz=238,slow=4.3,SNR=24
YKA pP pP 07 52 55.4 +2.4
comp=Z,0.3nm,0.7s,baz=234,slow=5.0,SNR=1.9
CIT **Chita** 91.24 324 *eP* P 07 51 51.3 +0.4
LZH **Lanzhou** 92.13 307 ⇑P P 07 51 56.7 +1.3
LZH AP pP 07 52 59.5 +0.7
LZH XP sP 07 53 24.5 -1.7
LZH PP PP 07 55 44.0 +4.4
LZH SKS 08 02 02.3
LZH *eS* S 08 02 32.2 -2.6
LZH AMB AMB
comp=Z,32nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,77nm,4.0s
LZH **Lanzhou** 92.13 307 ⇑P P 07 51 56.7 +1.3
LZH *PP pP 07 52 59.5 +0.7
LZH 07 55 44.0
LZH 08 02 02.3
LZH *eS* S 08 02 32.2 -2.6
LZH *SS sS 08 04 19.2 -7.8
LZH SS SS 08 08 49.4 -2.2
ULN **Ulaanbaatar** 93.60 319 *i P* P 07 52 02.1 +0.2
SONM **Songino Array** 94.01 319 P P 07 52 02.6 -1.1
comp=Z,1.0nm,0.7s,mb3.9,baz=134,slow=4.7,SNR=7.7
TIXI **Tiksi** 94.87 345 *i* P P 07 52 06.5 -0.6
MKAR **Makanchi Array** 109.91 315 *i* PKIKP PKiKP 07 57 19.2 +3.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MKAR	**Makanchi Array**	**109.91**	**315**	PKiKP	PKiKP	07 57 13.2	-2.3
	comp=Z,0.1nm,0.4s,baz=48,slow=2.1,SNR=2.5						
MKAR				PP	PP	07 57 47.8	-4.9
	comp=Z,0.7nm,1.0s,baz=88,slow=8.6,SNR=3.7						
MKAR				PKKP	PKKPbc	08 08 31.6	+11
	comp=Z,0.2nm,0.3s,baz=264,slow=2.4,SNR=4.3						
ARCES	**ARCESS Array B**	**124.67**	**351**	PKP	PKPdf	07 57 41.6	-1.5
	comp=Z,4.0nm,0.8s,baz=45,slow=2.7,SNR=8.6						
JOF	**Joensuu**	**129.35**	**345**	*e*pkp	PKPdf	07 57 50.9	-1.4
FINES	**FINESS Array B**	**131.88**	**347**	PKP	PKPdf	07 57 56.9	-0.2
	comp=Z,1.3nm,0.9s,baz=345,slow=4.3,SNR=3.4						
STHS	**Stebnicka Huta**	**143.84**	**342**	*e*PKP	PKPdf	07 58 18.1	-1.3
CLL	**Collm**	**143.90**	**351**	*i* P	PKPdf	07 58 20.6	+1.2
CLL				*i*		07 58 23.3	
CLL	**Collm**	**143.90**	**351**	*i* (PKPdf)	PKPdf	07 58 20.6	+1.2
CLL				*i* PKiKP	PKiKP	07 58 23.3	+0.3
KMBO	**Kilima Mbogo**	**143.97**	**245**	*e*PKPdf	PKPdf	07 58 20.2	-0.5
KMBO	**Kilima Mbogo**	**143.97**	**245**	PKP	PKPdf	07 58 19.6	-1.2
	comp=Z,6.4nm,0.7s,baz=65,slow=7.4,SNR=15						
BURAR	**Bucovina Array**	**144.03**	**336**	⇑P	PKPdf	07 58 18.7	-1.1
BURAR	**Bucovina Array**	**144.03**	**336**	⇑*i*P	PKPdf	07 58 18.7	-1.1
UPC	**Upice**	**144.15**	**348**	*e*PKP	PKPdf	07 58 18.1	-1.8
UPC				*e*x	x	07 58 24.0	
CRVS	**Cervenica-Dubn**	**144.23**	**341**	*e*PKP	PKPdf	07 58 11.9	-8.2
DPC	**Dobruska-Polom**	**144.23**	**348**	*e*PKP	PKPdf	07 58 18.1	-1.9
DPC				*e*x	x	07 58 23.5	
PVCC	**Panska Ves**	**144.40**	**349**	*e*PKP	PKPdf	07 58 24.4	+4.1
MORC	**Moravsky Berou**	**144.50**	**346**	*e*PKPab	PKPdf	07 58 19.3	-1.2
MORC				*e*pPKPdf	pPKPdf	07 59 24.6	-2.7
MORC	**Moravsky Berou**	**144.50**	**346**	⇑*i*P	PKPdf	07 58 19.2	-1.3
PLOR	**Plostina**	**144.87**	**333**	⇓*i*P	PKPdf	07 58 20.3	-1.0
KECS	**Kecovo**	**144.90**	**342**	*i* PKP	PKPdf	07 58 20.1	-1.2
PRU	**Pruhonice**	**144.93**	**349**	*e*PKP	PKPdf	07 58 20.6	-0.6
PRU				*e*x	x	07 58 26.1	
UCC	**Uccle**	**144.99**	**1**	PKP	PKPdf	07 58 23.0	+1.7
TIRR	**Tirgusor**	**145.13**	**330**	⇑*i*P	PKPdf	07 58 21.5	-0.3
VRAC	**Vranov**	**145.16**	**347**	⇓P	PKPdf	07 58 22.4	+0.8
VRAC	**Vranov**	**145.16**	**347**	PKPbc	PKPbc	07 58 21.3	-0.6
	comp=Z,2.8nm,0.4s,baz=348,slow=4.8,SNR=2.8						
VRAC	**Vranov**	**145.16**	**347**	⇓*i*P	PKPdf	07 58 22.4	+0.7
SNF	**Seneffe**	**145.28**	**1**	PKP	PKPdf	07 58 22.1	+0.3
VYHS	**Vyhne**	**145.36**	**344**	*i* PKP	PKPdf	07 58 21.5	-0.5
VYHS				*e*		07 59 34.1	
VYHS	**Vyhne**	**145.36**	**344**	*i* PKP	PKPdf	07 58 21.5	-0.5
VYHS				*e*		07 59 34.0	
BCLA	**Clavier**	**145.37**	**360**	PKP	PKPdf	07 58 22.7	+0.7
BCLA				APKP		07 58 28.2	
BRTR	**Keskin Array B**	**145.37**	**319**	PKPbc	PKPbc	07 58 22.1	-0.7
	comp=Z,4.2nm,0.6s,baz=73,slow=3.3,SNR=18						
BRTR				pPKPbc		07 59 32.4	
	comp=Z,2.7nm,0.9s,baz=116,slow=2.9,SNR=3.4						
MLR	**Muntele Rosu**	**145.46**	**334**	⇑P	PKPdf	07 58 22.6	+0.3
MLR	**Muntele Rosu**	**145.46**	**334**	⇑*i*P	PKPdf	07 58 22.6	+0.3
DRGR		**145.65**	**338**	⇑P	PKPdf	07 58 23.1	+0.5
DRGR		**145.65**	**338**	⇑*i*P	PKPdf	07 58 23.1	+0.5
GIVF	**Givet**	**145.69**	**0**	*e*PKP1	PKPbc	07 58 22.4	-1.0
DOU	**Dourbes**	**145.69**	**0**	APKP		07 58 26.0	
GRA1	**Grafenberg Arr**	**145.72**	**353**	*e*PKPbc	PKPbc	07 58 23.9	+0.4
GRF	**Grafenberg Arr**	**145.72**	**353**	*e*PKPbc	PKPbc	07 58 23.9	+0.4
BAIF	**Baives**	**145.72**	**1**	*e*PKP1	PKPbc	07 58 22.7	-0.8
MODS	**Modra-Piesok**	**145.88**	**345**	*e*PKP	PKPdf	07 58 25.4	+2.5
MODS				*e*		07 59 34.0	
VOIR		**145.88**	**334**	⇓P	PKPdf	07 58 24.9	+1.9
VOIR		**145.88**	**334**	⇓*i*P	PKPdf	07 58 24.9	+1.9
KHC	**Kasperske Hory**	**145.92**	**350**	*e*PKP	PKPdf	07 58 24.1	+1.1
KHC				*e*x	x	07 58 29.8	
WLF	**Walferdange**	**146.11**	**359**	PKP	PKPdf	07 58 25.1	+1.8
GERES	**GERESS Array B**	**146.18**	**350**	PKPbc	PKPbc	07 58 24.0	-0.9
	comp=Z,1.8nm,0.6s,baz=22,slow=3.3,SNR=14						
FLN	**La Foliniere**	**146.73**	**7**	*e*PKP1	PKPbc	07 58 24.9	-1.6
	comp=Z,73nm,1.0s						
GZR	**Gura Zlata**	**146.81**	**337**	⇓P	PKPbc	07 58 29.0	+2.2
GZR	**Gura Zlata**	**146.81**	**337**	⇓*i*P	PKPbc	07 58 29.0	+2.2
LDF	**La Druitiere**	**146.93**	**6**	*e*PKP1	PKPbc	07 58 25.6	-1.4
SGMF	**Saint Gilles**	**146.95**	**9**	*e*PKP1	PKPbc	07 58 25.6	-1.5
	comp=Z,30nm,0.7s						
BZS	**Buzias**	**147.05**	**338**	⇓*i*P	PKPdf	07 58 23.2	-1.8
GRR	**Gorron**	**147.05**	**7**	*e*PKP1	PKPbc	07 58 26.0	-1.4
CDF	**Champ du Feu**	**147.32**	**357**	*e*PKP1	PKPbc	07 58 27.3	-0.8
	comp=Z,27nm,0.9s						
WTTA	**Wattenberg**	**148.04**	**351**	⇓*i*P	PKPdf	07 58 25.3	-1.2
	comp=Z,11nm,1.2s						
DAVA	**Damuels**	**148.24**	**354**	⇑*i*P	PKPbc	07 58 30.5	-0.1
	comp=Z,19nm,1.3s						
DAVA	**Damuels**	**148.24**	**354**	⇑*i*P	PKPbc	07 58 30.5	-0.1
LOR	**Lormes**	**148.51**	**1**	*e*PKP1	PKPbc	07 58 30.4	-0.8
	comp=Z,12nm,0.8s						
DAVOS	**Davos**	**148.69**	**354**	PKP2	PKPab	07 58 31.9	-4.3
SSF	**Saint Saulge**	**148.71**	**2**	*e*PKP1	PKPbc	07 58 31.1	-0.6
	comp=Z,24nm,0.9s						
DAVOX	**Davos/Dischmat**	**148.74**	**353**	PKPbc	PKPbc	07 58 31.9	0.0
	comp=Z,7.9nm,0.8s,baz=303,slow=3.6,SNR=6.9						
JAVS	**Javornik**	**148.94**	**348**	*i* PKPdf	PKPdf	07 58 31.6	+3.5
VTS	**Vitosha**	**148.96**	**333**	⇑P	PKPdf	07 58 26.6	-1.6
VTS	**Vitosha**	**148.96**	**333**	⇑*i*P	PKPdf	07 58 26.6	-1.6
AVF	**Avril sur Loir**	**148.97**	**2**	*e*PKP1	PKPbc	07 58 31.4	-1.0
BOJS	**Bojanci**	**149.05**	**346**	*i* PKPdf	PKPbc	07 58 34.7	+2.0
BOJS				*i*		07 58 40.4	
CABF	**La Chapelle**	**149.16**	**358**	*e*PKP1	PKPbc	07 58 32.7	-0.2
	comp=Z,79nm,1.1s						
BGF	**Bois d'Agland**	**149.18**	**3**	*e*PKP1	PKPbc	07 58 32.0	-1.0
TCF	**Toulx Ste Croi**	**149.42**	**4**	*e*PKP1	PKPbc	07 58 32.5	-1.0
LPL	**La Plagne**	**150.24**	**357**	*e*PKP1	PKPbc	07 58 35.6	+0.1
LPG	**La Plagne**	**150.25**	**357**	*e*PKP1	PKPbc	07 58 35.9	+0.3
	comp=Z,13nm,0.9s						
ORIF	**Oris-en-Rattie**	**150.86**	**359**	*e*PKP1	PKPbc	07 58 36.8	-0.2
	comp=Z,6.5nm,0.7s						
VIVF	**Saint-Julien-l**	**150.93**	**0**	*e*PKP1	PKPbc	07 58 36.7	-0.5
MBDF	**Montbardon**	**151.02**	**357**	*e*PKP1	PKPbc	07 58 37.7	+0.3
ETSF	**Etsaut**	**152.48**	**9**	*e*PKP1	PKPbc	07 58 41.6	+0.8
ESDC	**Sonseca Array**	**154.87**	**16**	PKPab	PKPab	07 59 01.4	-0.9
	comp=Z,0.3nm,0.3s,baz=357,slow=3.4,SNR=5.5						
TORD	**Torodi Ar. Bea**	**175.95**	**128**	PKP	PKPdf	07 58 54.0	-1.1
TORD				PKPab	PKPab	08 00 35.4	-0.3
TORD	**Torodi Ar. Bea**	**175.95**	**128**	PKP	PKPdf	07 58 54.0	-1.1
	comp=Z,2.7nm,1.1s,baz=338,slow=2.1,SNR=6.9						
TORD				PKPab	PKPab	08 00 35.4	-0.3
	comp=Z,1.5nm,0.7s,baz=254,slow=4.6,SNR=7.5						

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*IDC **06** 07:39:24.3±0.9, 4381N×8587E, h0km, mb3.7/8, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, ML3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx3.0/44, Error ellipse: s-maj=34.9km s-min=15.0km az=47.0*

*NNC **06** 07:39:26.1±1.7, 44.18N×8623E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=15.7km s-min=10.4km az=124.0*

*BJI **06** 07:39:27.9, 4388N×8595E, h17km, mb4.1, ML3.9*

*ISCJB **06** 07:39:30.5±0.7, 4402N±005×8595E±006, h55km±8km, mb3.8/8, Error ellipse: s-maj=9.4km s-min=6.0km az=41.4*

*NEIC **06** 07:39:32.8±1.2, 44.13N×8592E, h49km±9km, Error ellipse: s-maj=16.0km s-min=9.8km az=159.0*

ISC 06 07:39:32.0±0.6**, 4403N**±004×**8603E**±006**, h54**km±7km**, n36,** σ1§**20**/43**, mb3.8**/8**, 7C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.22**	**99**	⇓*i*PG	**Pn**	**07 39 52.7**	**0.0**
WMQ				SG	**Sn**	**07 40 10.5**	**+2.5**
WMQ				Smax			
	comp=N,2μm,0.3s						
WMQ				Smax			
	comp=E,3μm,0.5s						
MK31	**Makanchi Array**	**3.82**	**318**	⇑Pn	**Pn**	**07 40 28.5**	**+0.3**
	comp=E,1.3nm,0.2s,baz=144,slow=14,SNR=140						
MK31				⇑Pg	**Pn**	**07 40 36.0**	**+7.9**
	comp=E,10nm,0.2s,baz=129,slow=15,SNR=29						
MK31				⇓Lg		07 41 24.3	
	comp=E,74nm,0.5s,baz=126,slow=29,SNR=4.5						
MK31	**Makanchi Array**	**3.82**	**318**	*e*Pn	**Pn**	**07 40 28.7**	**+0.5**
MK31				*e*Sn	**Sn**	**07 41 32.1**	**+20**
MKAR	**Makanchi Array**	**3.82**	**318**	Pn	**Pn**	**07 40 27.9**	**-0.3**
MKAR				Lg		07 41 25.9	
MKAR				LR	LR	07 41 59.1	
MKAR	**Makanchi Array**	**3.82**	**318**	Pn	**Pn**	**07 40 27.9**	**-0.3**
	comp=E,3.5nm,0.3s,baz=132,slow=14,SNR=61						
MKAR				Lg		07 41 25.9	
	comp=E,42nm,0.3s,baz=128,slow=31,SNR=6.6						
MKAR				LR	LR	07 41 59.1	
	comp=E,607nm,19.1s,baz=282,slow=40						
TKM2	**Tokmak 2**	**7.67**	**265**	⇑Pn	**Pn**	**07 41 20.8**	**-0.2**
	comp=E,0.7nm,0.6s						
TKM2				⇑Lg		07 43 33.8	
	comp=E,7.9nm,1.1s						
TKM2	**Tokmak 2**	**7.67**	**265**	*e*Pn	**Pn**	**07 41 21.3**	**+0.3**
	comp=E,12nm,0.7s						
KURK	**Kurchatov**	**8.37**	**326**	⇓Pn	**Pn**	**07 41 29.3**	**-1.2**
	comp=E,0.8nm,0.3s						
KURK				⇑Lg		07 43 52.4	
	comp=E,42nm,0.6s						
KURK	**Kurchatov**	**8.37**	**326**	*e*Pn	**Pn**	**07 41 28.8**	**-1.7**
	comp=E,6.1nm,0.3s						
KURK				*e*Sn	**Sn**	**07 43 05.2**	**+1.8**
UCH	**Uchtor**	**8.61**	**262**	*e*Pn	**Pn**	**07 41 33.9**	**0.0**
	comp=E,5.1nm,0.6s						
UCH				*e*Sn	**Sn**	**07 43 05.0**	**-4.6**
ZALV	**Zalesovo Beam**	**9.96**	**356**	Pn	**Pn**	**07 41 51.0**	**-1.3**
	comp=E,4.6nm,0.3s,baz=184,slow=13,SNR=53						
ZALV				Sn	**Sn**	**07 43 40.2**	**-2.2**
	comp=E,6.4nm,0.3s,baz=156,slow=25,SNR=12						
GTA	**Gaotai**	**11.29**	**109**	*e*P	**Pn**	**07 42 08.8**	**-1.7**
GTA				AP		07 42 17.7	
GTA				XP		07 42 21.9	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s						
KK31	**Karatay Array**	**11.30**	**271**	Pn	**Pn**	**07 42 13.3**	**+2.7**
	comp=Z,0.6nm,0.4s,baz=69,slow=13,SNR=9.1						
KK31				⇑Sn	**Sn**	**07 44 25.9**	**+11**
	comp=Z,1.4nm,0.6s,baz=7.1,slow=15,SNR=3.0						
KK31				⇓Lg		07 45 23.7	
	comp=Z,3.9nm,0.6s,baz=75,slow=27,SNR=4.5						
SONM	**Songino Array**	**14.67**	**68**	Pn	**Pn**	**07 42 57.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=252,slow=14,SNR=12						
SONM				Lg		07 47 09.5	
	comp=Z,0.0nm,0.3s,baz=263,slow=24,SNR=4.2						
LZH	**Lanzhou**	**15.76**	**114**	*e*P	**Pn**	**07 43 10.0**	**-0.3**
LZH				AP	pP	07 43 15.0	-10
LZH				XP	sP	07 43 19.5	-12
LZH				AMB	AMB		
	comp=Z,15nm,1.0s						
GKN	**Gorkha**	**16.03**	**184**	*e*P	**Pn**	**07 43 15.2**	**+1.4**
KKN	**Kakani**	**16.21**	**182**	*e*P	**Pn**	**07 43 16.8**	**+0.6**
JIRN	**Jiri**	**16.33**	**179**	*e*P	**Pn**	**07 43 17.8**	**+0.1**
	comp=Z,9.7nm,0.4s						
TAPN	**Taplejung**	**16.70**	**175**	*e*P	**Pn**	**07 43 20.4**	**-1.8**
	comp=Z,6.5nm,0.4s						
ODAN	**Odare**	**17.17**	**176**	*e*P	**Pn**	**07 43 25.2**	**-2.8**
	comp=Z,12nm,0.6s						
AB31	**Akbulak array**	**18.61**	**295**	⇑P	**Pn**	**07 43 45.7**	**+0.2**
	comp=Z,7.0nm,1.8s,baz=89,slow=9.8,SNR=7.7						
AKTK	**Aktyubinsk**	**20.00**	**299**	P	**P**	**07 43 58.5**	**-1.4**
AKTO	**Aktyubinsk**	**20.00**	**299**	P	**P**	**07 43 58.5**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=123,slow=16,SNR=2.3						
JOF	**Joensuu**	**36.25**	**321**	*e*p	**P**	**07 46 29.6**	**+0.1**
KAF	**Kangasniemi**	**38.53**	**319**	*e*p	**P**	**07 46 48.6**	**-0.2**
FINES	**FINESS Array B**	**38.65**	**318**	P	**P**	**07 46 50.0**	**+0.2**
	comp=Z,0.4nm,0.3s,mb3.6,baz=72,slow=8.2,SNR=5.7						
KEV	**Kevo**	**38.88**	**332**	*e*p	**P**	**07 46 58.6**	**+7.0**
ARCES	**ARCESS Array B**	**39.36**	**331**	P	**P**	**07 46 56.4**	**+0.7**
	comp=Z,2.6nm,0.8s,mb4.0,baz=86,slow=6.9,SNR=6.3						
NB2	**NORSAR Subarra**	**45.81**	**319**	P	**P**	**07 47 48.4**	**+0.4**
	comp=Z,2.1nm,0.5s,mb4.3,baz=74,slow=7.9						
NOA	**NORSAR Array B**	**45.81**	**319**	P	**P**	**07 47 48.6**	**+0.6**
	comp=Z,2.4nm,0.6s,mb4.3,baz=75,slow=7.9,SNR=9.8						
LPG	**La Plagne**	**54.08**	**301**	*e*P	**P**	**07 48 52.4**	**+1.5**
LPL	**La Plagne**	**54.08**	**301**	*e*P	**P**	**07 48 52.4**	**+1.5**
	comp=Z,4.0nm,0.4s,mb4.4						
YKA	**Yellowknife Ar**	**72.55**	**10**	P	**P**	**07 50 53.6**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.8,baz=340,slow=6.0,SNR=9.7						
TORD	**Torodi Ar. Bea**	**76.94**	**276**	P	**P**	**07 51 18.4**	**-0.6**
	comp=Z,0.1nm,0.4s,mb3.1,baz=44,slow=6.0,SNR=4.8						
WRA	**Warramunga Arr**	**77.50**	**134**	P	**P**	**07 51 20.9**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=337,slow=6.1,SNR=5.2						
ASAR	**Alice Springs**	**80.38**	**136**	P	**P**	**07 51 37.1**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=330,slow=5.4,SNR=4.5						

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*ISCJB **06** 07:50:46.2±0.3, 3529N±002×11.14W±003, h10km, mb3.5/2, Error ellipse: s-maj=3.2km s-min=2.5km az=30.1*

*IDC **06** 07:50:46.4±3.0, 3521N×1130W, h0km, mb3.6/2, mb1 4.3/4, mb1mx3.6/23, mbtmp4.1/4, ML5.2/2, Error ellipse: s-maj=63.1km s-min=30.5km az=100.0*

*NEIC **06** 07:50:47.3±0.4, 3531N×1141W, h10km, MN4.0(MDD), Error ellipse: s-maj=5.0km s-min=3.7km az=104.0*

*SFS **06** 07:50:49.0, 3535N×1140W, h15km, ML3.9*

*MDD **06** 07:50:49.8±1.0, 3532N×1142W, h22km±11km, mbLg4.0/31, Error ellipse: s-maj=7.6km s-min=5.4km az=95.0, PRXIMO*

*IGIL **06** 07:50:49.6, 3538N×1145W, h8km, ML4.0*

*LDG **06** 07:50:50.9±0.1, 3534N×1146W, h20km, Ml4.2/3, Error ellipse: s-maj=3.5km s-min=1.8km az=127.0*

*INMG **06** 07:50:51.6±1.6, 3536N×1145W, h25km±9km, MD3.2, ML3.7, Error ellipse: s-maj=5.1km s-min=3.3km az=58.0*

*CNRM **06** 07:50:51.0, 3522N×1131W, h30km, MD3.9*

*CSEM **06** 07:50:52.1±0.3, 35.15N×1075W, h10km, ML4.6/6, Error ellipse: s-maj=6.1km s-min=3.7km az=81.0*

ISC 06 07:50:48.9±0.3**, 3529N**±002×**1112W**±003**, h10**km**, n178,** σ1§**35**/335**, mb3.5**/2**, 11C-3D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.61**	**45**	*i* Pn	**Pn**	**07 51 32.4**	**+1.3**
PFVI				*e*Sn	**Sn**	**07 52 02.2**	**-0.6**
PFVI				A		07 52 03.7	
	210nm,0.4s						
PFVI	**Vila Bisbo**	**2.61**	**45**	⇑Pn	**Pn**	**07 51 32.4**	**+1.3**
PFVI				Sn	**Sn**	**07 52 02.2**	**-0.6**
	105nm,0.4s						
MORF	**Marmelete**	**2.83**	**44**	*i* Pn	**Pn**	**07 51 35.5**	**+1.4**
MORF				*e*Sn	**Sn**	**07 52 08.2**	**-0.1**
MORF				A		07 52 15.6	
	229nm,0.1s						
MORF	**Marmelete**	**2.83**	**44**	P	**Pn**	**07 51 35.4**	**+1.3**
MORF				⇑Pn	**Pn**	**07 51 35.5**	**+1.4**
MORF				Sn	**Sn**	**07 52 08.2**	**-0.1**
	229nm,0.1s						
MORF				S	**Sn**	**07 52 08.2**	**-0.1**
PTEO	**Sao Teotonio**	**2.96**	**40**	*e*Pn	**Pn**	**07 51 36.9**	**+0.9**
PTEO				*e*Sn	**Sn**	**07 52 10.8**	**-0.8**
PTEO				A		07 52 14.8	
	115nm,0.2s						
PTEO	**Sao Teotonio**	**2.96**	**40**	*e*Pn	**Pn**	**07 51 36.9**	**+0.9**
PTEO				*e*Sn	**Sn**	**07 52 10.8**	**-0.8**
	115nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.23**	**52**	*i* Pn	**Pn**	**07 51 41.3**	**+1.7**
PBDV				*e*Sn	**Sn**	**07 52 18.4**	**+0.3**
PBDV				A		07 52 22.9	
	60nm,0.1s						
PBDV	**Barranco-do-Ve**	**3.23**	**52**	⇑Pn	**Pn**	**07 51 41.3**	**+1.7**
PBDV				Sn	**Sn**	**07 52 18.4**	**+0.3**
	30nm,0.1s						
PVAQ	**Vaqueiros**	**3.46**	**51**	*i* Pn	**Pn**	**07 51 44.4**	**+1.6**
PVAQ				*e*Sn	**Sn**	**07 52 23.6**	**-0.2**
PVAQ				A		07 52 26.6	
	100nm,0.3s						
PVAQ	**Vaqueiros**	**3.46**	**51**	⇑Pn	**Pn**	**07 51 44.4**	**+1.6**
PVAQ				Sn	**Sn**	**07 52 23.6**	**-0.2**
	50nm,0.3s						
AVE	**Averroes**	**3.65**	**122**	P	**Pn**	**07 51 46.5**	**+1.0**
AVE				S	**Sn**	**07 52 28.0**	**-0.6**
EGRO	**El Granado**	**3.69**	**52**	⇑P	**Pn**	**07 51 47.4**	**+1.5**
	54nm,0.2s,SNR=18						
EGRO				S	**Sn**	**07 52 29.1**	**-0.3**
	140nm,0.2s,SNR=5.9						
EGRO	**El Granado**	**3.69**	**52**	P	**Pn**	**07 51 47.4**	**+1.5**
	54nm,0.2s,SNR=18						
EGRO				S	**Sn**	**07 52 29.1**	**-0.3**
	140nm,0.2s,SNR=5.9						
LIS	**Lisbon**	**3.76**	**24**	*e*P	**Pn**	**07 51 46.7**	**-0.2**
LIS				*e*S	**Sn**	**07 52 28.5**	**-2.8**
LIS				*e*S	**Sn**	**07 52 28.6**	**-2.7**
LIS				AML	AML	07 52 33.7	
	comp=E,629nm,0.5s						
LIS	**Lisbon**	**3.76**	**24**	*e*P	**Pn**	**07 51 46.7**	**-0.3**
LIS				*e*S	**Sn**	**07 52 28.5**	**-2.8**
LIS	**Lisbon**	**3.76**	**24**	P	**Pn**	**07 51 46.7**	**-0.3**
LIS				P		07 51 47.7	
LIS				S	**Sn**	**07 52 28.5**	**-2.8**
LIS				S	**Sn**	**07 52 28.5**	**-2.8**
PBEJ	**Beja**	**3.78**	**43**	*e*Pn	**Pn**	**07 51 47.9**	**+0.7**
PBEJ				*e*Sn	**Sn**	**07 52 30.3**	**-1.4**
PBEJ				A		07 52 34.4	
	comp=E,89nm,0.2s						
PBEJ	**Beja**	**3.78**	**43**	*e*Pn	**Pn**	**07 51 47.9**	**+0.7**
PBEJ				*e*Sn	**Sn**	**07 52 30.3**	**-1.4**
	comp=E,89nm,0.2s						
MOE	**Montemor**	**3.91**	**34**	*e*Pn	**Pn**	**07 51 49.7**	**+0.7**
MOE				*e*Sn	**Sn**	**07 52 33.5**	**-1.5**
PMAFR	**Mafra**	**3.94**	**21**	*e*Pn	**Pn**	**07 51 49.0**	**-0.4**
PMAFR				*e*Sn	**Sn**	**07 52 31.6**	**-4.0**
PMAFR				A		07 52 36.5	
	comp=E,301nm,0.1s						
PMAFR	**Mafra**	**3.94**	**21**	Pn	**Pn**	**07 51 49.0**	**-0.4**
PMAFR				Sn	**Sn**	**07 52 31.6**	**-4.0**
	comp=E,150nm,0.1s						
EVO	**Evora**	**4.08**	**37**	*e*Pn	**Pn**	**07 51 51.8**	**+0.5**
EVO				*e*Sn	**Sn**	**07 52 37.1**	**-2.0**
EVO				A		07 52 41.2	
	comp=E,110nm,0.1s						
EVO	**Evora**	**4.08**	**37**	*e*Pn	**Pn**	**07 51 51.8**	**+0.5**
EVO				*e*Sn	**Sn**	**07 52 37.1**	**-2.0**
	comp=E,110nm,0.1s						
SFS	**San Fernando**	**4.16**	**72**	*e*Pn	**Pn**	**07 51 49.0**	**-3.4**
SFS	**San Fernando**	**4.16**	**72**	*e*Pn	**Pn**	**07 51 49.0**	**-3.4**
CIA	**Chichaoua**	**4.21**	**151**	*i* P	**Pn**	**07 51 53.0**	**-0.1**
CIA				*i* S	**Sn**	**07 52 38.0**	**-4.3**
TSY	**Tnine Yamani**	**4.21**	**87**	*i* P	**Pn**	**07 51 55.0**	**+1.9**
TSY				*e*S	**Sn**	**07 52 43.0**	**+0.7**
CNIL	**Conil**	**4.25**	**74**	P	**Pn**	**07 51 56.4**	**+2.7**
CNIL				S	**Sn**	**07 52 43.5**	**+0.2**
CNIL	**Conil**	**4.25**	**74**	*e*P	**Pn**	**07 51 56.4**	**+2.7**
CNIL				*e*S	**Sn**	**07 52 43.5**	**+0.2**
EMIN	**Mina Concepcio**	**4.35**	**54**	⇑P	**Pn**	**07 51 56.3**	**+1.2**
	comp=E,32nm,0.3s,SNR=18						
EMIN				S	**Sn**	**07 52 45.3**	**-0.5**
	comp=E,63nm,0.3s,SNR=5.7						
EMIN	**Mina Concepcio**	**4.35**	**54**	P	**Pn**	**07 51 56.3**	**+1.3**
	comp=E,32nm,0.3s,SNR=18						
EMIN				S	**Sn**	**07 52 45.3**	**-0.4**
	comp=E,63nm,0.3s,SNR=5.7						
ALMR	**Almeirim**	**4.36**	**27**	*e*P	**Pn**	**07 51 55.2**	**+0.1**
ALMR				*e*S	**Sn**	**07 52 42.4**	**-3.5**
ALMR				*e*S	**Sn**	**07 52 42.4**	**-3.5**
ALMR				AML	AML	07 52 47.6	
	comp=E,422nm,0.2s						
ALMR	**Almeirim**	**4.36**	**27**	*e*P	**Pn**	**07 51 55.2**	**+0.1**
ALMR				*e*S	**Sn**	**07 52 42.4**	**-3.5**
ALMR	**Almeirim**	**4.36**	**27**	P	**Pn**	**07 51 55.2**	**+0.1**
ALMR				P		07 51 55.2	
ALMR				S	**Sn**	**07 52 42.4**	**-3.5**
ALMR				S	**Sn**	**07 52 42.4**	**-3.5**
RSA	**Sarsar**	**4.36**	**94**	*i* P	**Pn**	**07 51 56.0**	**+0.9**
RSA				*i* S	**Sn**	**07 52 46.0**	**0.0**
PBAR	**Barrancos**	**4.36**	**48**	*e*Pn	**Pn**	**07 51 56.1**	**+0.9**
PBAR				*e*Sn	**Sn**	**07 52 45.0**	**-1.0**
PBAR				A		07 52 49.6	
	comp=E,67nm,0.2s						
PBAR	**Barrancos**	**4.36**	**48**	Pn	**Pn**	**07 51 56.1**	**+0.9**
PBAR				Sn	**Sn**	**07 52 45.0**	**-1.0**
	comp=E,34nm,0.2s						
GIBL	**Gibalbin**	**4.44**	**68**	⇑P	**Pn**	**07 51 58.9**	**+2.6**
GIBL				S	**Sn**	**07 52 47.0**	**-1.1**
GIBL	**Gibalbin**	**4.44**	**68**	*i* P	**Pn**	**07 51 58.9**	**+2.6**
GIBL				*e*S	**Sn**	**07 52 47.0**	**-1.1**
MOMI	**Momias**	**4.50**	**75**	⇑P	**Pn**	**07 52 00.7**	**+3.5**
MOMI	**Momias**	**4.50**	**75**	*i* P	**Pn**	**07 52 00.7**	**+3.5**
ESPR	**Espera**	**4.54**	**68**	⇑P	**Pn**	**07 51 59.4**	**+1.8**
	comp=E,135nm,0.3s,SNR=18						
ESPR				S	**Sn**	**07 52 50.6**	**+0.1**
	comp=E,214nm,0.2s						
ESPR	**Espera**	**4.54**	**68**	P	**Pn**	**07 51 59.4**	**+1.7**
	comp=E,135nm,0.3s,SNR=18						
ESPR				S	**Sn**	**07 52 50.6**	**+0.1**
	comp=E,214nm,0.2s						
PESTR	**Estremoz**	**4.55**	**37**	*e*Pn	**Pn**	**07 51 57.9**	**+0.1**
PESTR				*e*Sn	**Sn**	**07 52 48.0**	**-2.6**
PESTR				A		07 52 50.4	
	comp=E,54nm,0.4s						
PESTR	**Estremoz**	**4.55**	**37**	*e*Pn	**Pn**	**07 51 57.9**	**+0.1**
PESTR				*e*Sn	**Sn**	**07 52 48.0**	**-2.6**
	comp=E,54nm,0.4s						
DKH	**Dar Kharkhour**	**4.71**	**86**	*i* P	**Pn**	**07 52 02.5**	**+2.6**
DKH				*i* S	**Sn**	**07 52 53.0**	**-1.6**
EJIF	**Jimena Fronter**	**4.73**	**74**	P	**Pn**	**07 52 02.0**	**+1.7**
	comp=E,51nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**07 52 56.0**	**+0.9**
	comp=E,19nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**4.77**	**42**	⇓P	**Pn**	**07 52 01.1**	**+0.4**
EBAD				S	**Sn**	**07 52 54.3**	**-1.7**
EBAD	**Badajoz**	**4.77**	**42**	⇓P	**Pn**	**07 52 01.2**	**+0.4**
	comp=E,17nm,0.4s,SNR=18						
EBAD				S	**Sn**	**07 52 54.3**	**-1.7**
	comp=E,102nm,0.2s,SNR=10						
EBAD	**Badajoz**	**4.77**	**42**	P	**Pn**	**07 52 01.2**	**+0.4**
	comp=E,17nm,0.4s,SNR=18						
EBAD				S	**Sn**	**07 52 54.3**	**-1.7**
	comp=E,102nm,0.2s,SNR=10						
PMPS	**Porto Santo**	**4.87**	**244**	*e*Pn	**Pn**	**07 51 53.8**	**-8.4**
PMPS				*e*Sn	**Sn**	**07 52 38.4**	**-20**
PMPS				A		07 52 45.7	
	comp=E,111nm,0.3s						
LIJA	**Lijar**	**4.90**	**69**	⇓P	**Pn**	**07 52 04.6**	**+2.0**
LIJA				S	**Sn**	**07 52 58.8**	**-0.5**
LIJA	**Lijar**	**4.90**	**69**	*i* P	**Pn**	**07 52 04.6**	**+2.0**
LIJA				*e*S	**Sn**	**07 52 58.8**	**-0.5**
REAL	**Reales**	**4.94**	**74**	P	**Pn**	**07 52 05.2**	**+2.0**
REAL				S	**Sn**	**07 53 01.9**	**+1.5**
REAL	**Reales**	**4.94**	**74**	*e*P	**Pn**	**07 52 05.2**	**+2.0**
REAL				*e*S	**Sn**	**07 53 01.9**	**+1.5**
TZC	**Tazercounte**	**4.97**	**128**	*i* P	**Pn**	**07 52 04.0**	**+0.4**
TZC				*e*S	**Sn**	**07 52 58.0**	**-3.1**
KIB	**El Ksiba**	**5.01**	**121**	*i* P	**Pn**	**07 52 04.5**	**+0.3**
KIB				*i* S	**Sn**	**07 52 59.0**	**-3.2**
TGT	**Taghat**	**5.14**	**102**	*i* P	**Pn**	**07 52 07.0**	**+1.1**
TGT				*i* S	**Sn**	**07 53 03.0**	**-2.3**
MIF	**Mishlifen**	**5.22**	**109**	*i* P	**Pn**	**07 52 09.0**	**+2.0**
MIF				*i* S	**Sn**	**07 53 07.0**	**-0.3**
EMIJ	**Mijas**	**5.30**	**74**	⇑P	**Pn**	**07 52 09.4**	**+1.2**
	comp=E,16nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**07 53 09.3**	**0.0**
	comp=E,28nm,0.2s						
PCBR	**Castelo Branco**	**5.38**	**31**	*e*Pn	**Pn**	**07 52 09.6**	**+0.4**
PCBR				*e*Sn	**Sn**	**07 53 06.7**	**-4.5**
PCBR				A		07 53 12.3	
	comp=E,32nm,0.4s						
PCBR	**Castelo Branco**	**5.38**	**31**	Pn	**Pn**	**07 52 09.6**	**+0.4**
PCBR				Sn	**Sn**	**07 53 06.7**	**-4.5**
	comp=E,16nm,0.4s						
TIO	**Tiouine**	**5.42**	**142**	P	**Pn**	**07 52 09.0**	**-0.8**
TIO				S	**Sn**	**07 53 07.0**	**-5.3**
PMAR	**Madeira**	**5.45**	**244**	*e*Pn	**Pn**	**07 52 01.2**	**-9.0**
PMAR				*e*Sn	**Sn**	**07 52 53.5**	**-20**
PMAR				A		07 53 01.1	
	comp=E,201nm,0.3s						
CZD	**Col de Zad**	**5.52**	**112**	*i* P	**Pn**	**07 52 12.5**	**+1.4**
CZD				*i* S	**Sn**	**07 53 11.0**	**-3.6**
EMAL	**Malaga-Limoner**	**5.61**	**73**	P	**Pn**	**07 52 14.4**	**+2.0**
EMAL				S	**Sn**	**07 53 17.4**	**+0.4**
EMAL	**Malaga-Limoner**	**5.61**	**73**	P	**Pn**	**07 52 14.4**	**+2.0**
EMAL				P		07 52 14.4	
	comp=E,11nm,0.3s,SNR=7.9						
EMAL				S	**Sn**	**07 53 16.3**	**-0.6**
EMAL				S	**Sn**	**07 53 17.4**	**+0.4**
	comp=E,11nm,0.4s,SNR=7.9						
EMAL	**Malaga-Limoner**	**5.61**	**73**	P	**Pn**	**07 52 14.4**	**+2.0**
	comp=E,11nm,0.3s,SNR=7.9						
EMAL				S	**Sn**	**07 53 17.4**	**+0.4**
	comp=E,11nm,0.4s,SNR=7.9						
MTE	**Manteigas**	**5.83**	**28**	*e*Pn	**Pn**	**07 52 15.5**	**+0.1**
MTE				*e*Sn	**Sn**	**07 53 17.5**	**-4.7**
MTE				A		07 53 22.4	
	comp=E,53nm,0.3s						
MTE	**Manteigas**	**5.83**	**28**	*e*Pn	**Pn**	**07 52 15.3**	**-0.1**
MTE				*e*Sn	**Sn**	**07 53 16.8**	**-5.4**
MTE	**Manteigas**	**5.83**	**28**	Pn	**Pn**	**07 52 15.5**	**+0.1**
MTE				Sn	**Sn**	**07 53 17.5**	**-4.7**
	comp=E,26nm,0.3s						
MTE	**Manteigas**	**5.83**	**28**	*e*Pn	**Pn**	**07 52 15.3**	**-0.1**
MTE				*e*Sn	**Sn**	**07 53 16.8**	**-5.4**
TZK	**Tazeka**	**5.83**	**100**	*i* P	**Pn**	**07 52 16.0**	**+0.5**
TZK				*i* S	**Sn**	**07 53 21.0**	**-1.4**
ELOJ	**Sierra Loja**	**5.92**	**70**	P	**Pn**	**07 52 19.1**	**+2.4**
	comp=E,14nm,0.2s,SNR=7.9						
ELOJ				S	**Sn**	**07 53 24.0**	**-0.7**
	comp=E,14nm,0.2s,SNR=7.9						
MDT	**Midelt**	**5.94**	**113**	Pn	**Pn**	**07 52 17.9**	**+1.0**
	comp=E,15nm,0.3s,baz=306,slow=13,SNR=260						
MDT				Sn	**Sn**	**07 53 21.3**	**-3.6**
	comp=E,14nm,0.3s,baz=16,slow=22,SNR=12						

ELUQ Luque 5.97 66 P **Pn** 07 52 19.0 +1.7
comp=E,24nm,0.2s,SNR=10
ELUQ S **Sn** 07 53 25.4 -0.3
comp=E,28nm,0.2s
PVIS Viseu 5.98 24 *e*Pn **Pn** 07 52 17.0 -0.5
PVIS *e*Sn **Sn** 07 53 20.7 -5.3
PVIS A 07 53 23.6
comp=E,43nm,0.2s
PVIS Viseu 5.98 24 Pn **Pn** 07 52 17.0 -0.5
PVIS Sn **Sn** 07 53 20.7 -5.3
comp=E,22nm,0.2s
EADA Adamuz 5.98 59 ⇑P **Pn** 07 52 18.9 +1.4
comp=E,42nm,0.2s,SNR=18
EADA S **Sn** 07 53 24.5 -1.6
comp=E,44nm,0.1s,SNR=7.9
EADA Adamuz 5.98 59 P **Pn** 07 52 18.9 +1.4
comp=E,42nm,0.2s,SNR=18
EADA S **Sn** 07 53 24.5 -1.6
comp=E,44nm,0.1s,SNR=7.9
ERON Agron 6.16 72 P **Pn** 07 52 22.7 +2.8
comp=E,13nm,0.3s,SNR=16
ERON S **Sn** 07 53 30.0 -0.4
comp=E,15nm,0.2s
PTO Porto 6.16 18 *e*Sn **Sn** 07 53 24.4 -6.0
ECOG Cogollos-Vega 6.41 70 P **Pn** 07 52 25.8 +2.4
comp=E,70nm,0.4s,SNR=7.9
ECOG S **Sn** 07 53 35.8 -0.8
comp=E,25nm,0.3s,SNR=7.9
EFAM Famara 6.48 199 P **Pn** 07 52 23.0 -1.3
comp=E,12nm,0.2s,SNR=7.9
EFAM S **Sn** 07 53 24.3 -14
comp=E,32nm,0.4s,SNR=5.4
EFAM Famara 6.48 199 P **Pn** 07 52 23.0 -1.3
comp=E,12nm,0.2s,SNR=7.9
EFAM S **Sn** 07 53 24.3 -14
comp=E,32nm,0.4s,SNR=5.4
EQUE Quentar 6.49 71 P **Pn** 07 52 26.7 +2.3
comp=E,19nm,0.3s,SNR=18
EQUE S **Sn** 07 53 37.8 -0.8
comp=E,24nm,0.4s,SNR=6.3
ZFT Errachidia 6.51 118 *i* P **Pn** 07 52 26.0 +1.3
ZFT *i* S **Sn** 07 53 38.0 -1.0
EBAN Banos Encina 6.55 62 P **Pn** 07 52 26.5 +1.3
comp=E,53nm,0.2s,SNR=34
EBAN S **Sn** 07 53 38.2 -1.7
comp=E,32nm,0.3s,SNR=6.9
EALB Alboran 6.61 82 P **Pn** 07 52 27.6 +1.4
comp=E,7.0nm,0.2s,SNR=12
EALB S **Sn** 07 53 38.4 -3.2
comp=E,18nm,0.2s,SNR=6.5
EALB Alboran 6.61 82 P **Pn** 07 52 27.5 +1.3
comp=E,7.0nm,0.2s,SNR=12
EALB S **Sn** 07 53 38.4 -3.2
comp=E,18nm,0.2s,SNR=6.5
MVO Moncorvo 6.69 28 *e*Pn **Pn** 07 52 27.0 -0.1
MVO *e*Sn **Sn** 07 53 39.1 -4.2
MVO A 07 53 53.7
comp=E,72nm,0.5s
MVO Moncorvo 6.69 28 Pn **Pn** 07 52 27.0 -0.1
MVO Sn **Sn** 07 53 39.1 -4.2
comp=E,36nm,0.5s
PCAB Cabril 6.85 20 *e*Pn **Pn** 07 52 28.5 -0.9
PCAB *e*Sn **Sn** 07 53 40.5 -6.8
PCAB A 07 53 43.6
comp=E,20nm,0.2s
PCAB Cabril 6.85 20 Pn **Pn** 07 52 28.5 -0.9
PCAB Sn **Sn** 07 53 40.5 -6.8
comp=E,10nm,0.2s
EBER Berja 6.85 74 P **Pn** 07 52 31.7 +2.3
comp=E,8.8nm,0.2s,SNR=7.9
EBER S **Sn** 07 53 46.6 -0.8
comp=E,22nm,0.5s,SNR=7.9
EBER Berja 6.85 74 P **Pn** 07 52 31.7 +2.3
comp=E,8.8nm,0.2s,SNR=7.9
EBER S **Sn** 07 53 46.6 -0.8
comp=E,22nm,0.5s,SNR=7.9
PAB San Pablo 6.86 50 *e*Pn **Pn** 07 52 30.1 +0.6
comp=E,11nm,0.3s
PAB *e*Sn **Sn** 07 53 45.7 -1.8
PAB San Pablo 6.86 50 *e*Pn **Pn** 07 52 30.1 +0.6
comp=E,11nm,0.3s
PAB *e*Sn **Sn** 07 53 45.7 -1.8
EQES Quesada 6.94 67 P **Pn** 07 52 32.2 +1.5
comp=E,30nm,0.3s,SNR=36
EQES S **Sn** 07 53 47.9 -1.8
comp=E,25nm,0.2s,SNR=4.7
EQES Quesada 6.94 67 P **Pn** 07 52 32.2 +1.5
comp=E,30nm,0.3s,SNR=36
EQES S **Sn** 07 53 47.9 -1.8
comp=E,25nm,0.2s,SNR=4.7
ELOB Lobios 6.99 19 P **Pn** 07 52 30.4 -0.8
comp=E,14nm,0.5s,SNR=13
ELOB S **Sn** 07 53 44.8 -5.9
comp=E,55nm,0.4s,SNR=11
ELOB Lobios 6.99 19 P **Pn** 07 52 30.4 -0.8
comp=E,14nm,0.5s,SNR=13
ELOB S **Sn** 07 53 44.8 -5.9
comp=E,55nm,0.4s,SNR=11
CFUE Fuerteventura 7.05 201 P **Pn** 07 52 30.6 -1.5
comp=E,6.3nm,0.2s,SNR=7.9
CFUE S **Sn** 07 53 36.6 -16
comp=E,50nm,0.2s,SNR=7.9
EZAM Zamans 7.10 15 P **Pn** 07 52 31.6 -1.2
comp=E,6.9nm,0.2s,SNR=7.9
EZAM S **Sn** 07 53 46.3 -7.3
comp=E,64nm,0.4s,SNR=7.9
ESDC Sonseca Array 7.17 50 Pn **Pn** 07 52 34.2 +0.4
comp=E,23nm,0.3s,baz=238,slow=13,SNR=61
ESDC Sn **Sn** 07 53 53.2 -2.1
comp=E,10nm,0.3s,baz=237,slow=24,SNR=8.9
ESDC Sonseca Array 7.17 50 P **Pn** 07 52 34.1 +0.3
comp=E,73nm,0.3s,baz=235,slow=13,SNR=107
ESDC S **Sn** 07 53 53.1 -2.3
comp=E,39nm,0.5s,baz=240,slow=24,SNR=18
ESDC Sonseca Array 7.17 50 P **Pn** 07 52 34.1 +0.3
comp=E,73nm,0.3s,SNR=107
ESDC S **Sn** 07 53 53.1 -2.2
comp=E,39nm,0.5s,SNR=18
ESLA Sonseca Array 7.17 50 *e*Pn **Pn** 07 52 34.8 +0.9
comp=E,1.9nm,0.3s
ESLA *e*Sn **Sn** 07 53 53.3 -2.0
ESLA Sonseca Array 7.17 50 *e*Pn **Pn** 07 52 34.8 +1.0
comp=E,1.9nm,0.3s
ESLA *e*Sn **Sn** 07 53 53.3 -2.0
CFTV Fuerteventura 7.31 201 P **Pn** 07 52 33.4 -2.3
comp=E,1.2nm,0.2s,SNR=7.9
CFTV S **Sn** 07 53 42.8 -16
comp=E,6.3nm,0.3s,SNR=7.9
PBRG Braganca 7.35 26 *e*Pn **Pn** 07 52 35.5 -0.7
PBRG *e*Sn **Sn** 07 53 53.3 -6.3
PBRG A 07 53 56.7
comp=E,20nm,0.3s
PBRG Braganca 7.35 26 Pn **Pn** 07 52 35.5 -0.7
PBRG Sn **Sn** 07 53 53.3 -6.3
comp=E,10nm,0.3s
ENIJ Nijar 7.40 74 P **Pn** 07 52 38.0 +1.1
comp=E,8.2nm,0.3s,SNR=4.8
ENIJ S **Sn** 07 53 59.1 -1.9
comp=E,5.9nm,0.3s
ECAL Calabor 7.47 26 P **Pn** 07 52 37.6 -0.3
ECAL S **Sn** 07 53 56.9 -5.7
ECAL Calabor 7.47 26 P **Pn** 07 52 37.6 -0.3
comp=E,8.3nm,0.3s,SNR=8.7
ECAL S **Sn** 07 53 56.9 -5.7
comp=E,154nm,0.6s,SNR=230
ECAL Calabor 7.47 26 P **Pn** 07 52 37.6 -0.3
comp=E,8.3nm,0.3s,SNR=8.7
ECAL S **Sn** 07 53 56.9 -5.7
comp=E,154nm,0.6s,SNR=230
EVIA Vianos 7.66 62 P **Pn** 07 52 41.4 +0.9
comp=E,19nm,0.2s,SNR=12
EVIA S **Sn** 07 54 05.6 -1.7
comp=E,12nm,0.3s,SNR=6.3
GUD Guadarrama 7.66 44 P **Pn** 07 52 41.4 +0.8
comp=E,17nm,0.3s,SNR=7.9
GUD S **Sn** 07 54 03.7 -3.7
comp=E,22nm,0.3s,SNR=7.9
ERUA La Rua 7.74 22 P **Pn** 07 52 41.1 -0.4
comp=E,10nm,0.1s,SNR=7.9
ERUA S **Sn** 07 54 02.4 -6.7
comp=E,25nm,0.5s,SNR=5.6
EMAZ Mazaricos 7.82 12 P **Pn** 07 52 41.8 -1.0
comp=E,16nm,0.2s,SNR=10
EMAZ S **Sn** 07 54 02.8 -8.5
comp=E,39nm,0.2s
EMAZ Mazaricos 7.82 12 P **Pn** 07 52 41.8 -0.9
comp=E,16nm,0.2s,SNR=10
EMAZ S **Sn** 07 54 02.8 -8.5
comp=E,39nm,0.2s
STS Santiago 7.84 14 P **Pn** 07 52 42.0 -1.0
comp=E,11nm,0.1s,SNR=7.9
STS S **Sn** 07 54 04.4 -7.3
comp=E,5.4nm,0.2s,SNR=7.9
EBAJ Bajamar 8.06 215 P **Pn** 07 52 42.8 -3.3
comp=E,5.5nm,0.2s,SNR=4.0
EBAJ S **Sn** 07 53 57.1 -20
comp=E,14nm,0.2s,SNR=7.9
EBAJ Bajamar 8.06 215 P **Pn** 07 52 42.8 -3.3
comp=E,5.5nm,0.2s,SNR=4.0
EBAJ S **Sn** 07 53 57.1 -20
comp=E,14nm,0.2s,SNR=7.9
EOSO Osorio 8.13 209 P **Pn** 07 52 44.2 -2.8
comp=E,3.5nm,0.2s,SNR=7.9
EOSO S **Sn** 07 53 59.9 -19
comp=E,25nm,0.3s,SNR=7.9
EMUR La Murta 8.34 69 P **Pn** 07 52 51.1 +1.2
comp=E,20nm,0.6s,SNR=4.6
EMUR S **Sn** 07 54 21.0 -3.1
comp=E,10nm,0.3s,SNR=7.9
EMUR La Murta 8.34 69 P **Pn** 07 52 51.1 +1.2
comp=E,20nm,0.6s,SNR=4.6
EMUR S **Sn** 07 54 21.0 -3.1
comp=E,10nm,0.3s,SNR=7.9
ETOB Tobarra 8.36 64 P **Pn** 07 52 50.8 +0.7
comp=E,13nm,0.2s,SNR=7.9
ETOB S **Sn** 07 54 21.2 -3.3
comp=E,16nm,0.2s,SNR=7.9
ETOB Tobarra 8.36 64 P **Pn** 07 52 50.8 +0.7
comp=E,13nm,0.2s,SNR=7.9
ETOB S **Sn** 07 54 21.2 -3.2
comp=E,16nm,0.2s,SNR=7.9
CICO Icod de los Vi 8.41 216 P **Pn** 07 52 48.4 -2.4
comp=E,0.8nm,0.3s,SNR=7.9
CICO S **Sn** 07 54 05.1 -21
comp=E,1.2nm,0.2s,SNR=7.9
CRAJ Montana Rajada 8.42 215 P **Pn** 07 52 48.9 -2.0
comp=E,9.8nm,0.2s,SNR=7.9
CRAJ S **Sn** 07 54 09.7 -16
comp=E,68nm,0.2s,SNR=7.9
CCAN Las Canadas 8.46 215 P **Pn** 07 52 49.9 -1.5
comp=E,1.5nm,0.2s,SNR=7.9
CCAN S **Sn** 07 54 10.2 -17
comp=E,4.4nm,0.5s,SNR=7.9
CART Cartagena 8.47 71 *e*Pn **Pn** 07 52 52.1 +0.5
CART Cartagena 8.47 71 *e*Pn **Pn** 07 52 52.1 +0.5
EPON Pontenova 8.59 20 P **Pn** 07 52 52.7 -0.6
comp=E,5.3nm,0.2s,SNR=8.0
EPON S **Sn** 07 54 23.3 -6.8
comp=E,15nm,0.3s
EPON Pontenova 8.59 20 P **Pn** 07 52 52.7 -0.6
comp=E,5.3nm,0.2s,SNR=8.0
EPON S **Sn** 07 54 23.3 -6.9
comp=E,15nm,0.3s
EGOM La Gomera 8.80 218 P **Pn** 07 52 53.2 -3.0
comp=E,3.1nm,0.2s,SNR=7.9
EGOM S **Sn** 07 54 15.3 -20
comp=E,12nm,0.3s,SNR=6.1
ETOR Torete 9.03 50 P **Pn** 07 53 00.4 +1.2
comp=E,58nm,0.3s,SNR=62
ETOR S **Sn** 07 54 36.9 -4.0
comp=E,60nm,0.3s
ETOR Torete 9.03 50 P **Pn** 07 53 00.4 +1.2
comp=E,58nm,0.3s,SNR=62
ETOR S **Sn** 07 54 36.8 -4.1
comp=E,60nm,0.3s
ECHE Chera 9.14 59 P **Pn** 07 53 02.5 +1.7
comp=E,7.8nm,0.3s,SNR=7.9
ECHE S **Sn** 07 54 40.2 -3.4
comp=E,4.2nm,0.4s,SNR=7.9
EARI Arriondas 9.21 28 P **Pn** 07 53 02.7 +0.9
comp=E,1.1nm,0.2s,SNR=7.9
EARI S **Sn** 07 54 39.3 -6.1
comp=E,9.7nm,0.5s,SNR=7.9
EARI Arriondas 9.21 28 P **Pn** 07 53 02.7 +0.9
comp=E,1.1nm,0.2s,SNR=7.9
EARI S **Sn** 07 54 39.3 -6.1
comp=E,9.7nm,0.5s,SNR=7.9
EBEN Beniarda 9.35 65 P **Pn** 07 53 04.8 +1.1
comp=E,6.5nm,0.3s,SNR=7.9
EBEN S **Sn** 07 54 45.4 -3.6
comp=E,8.2nm,0.4s,SNR=7.9
EBEN Beniarda 9.35 65 P **Pn** 07 53 04.8 +1.1
comp=E,6.5nm,0.3s,SNR=7.9
EBEN S **Sn** 07 54 45.4 -3.5
comp=E,8.2nm,0.4s,SNR=7.9
EMOS Mosqueruela 9.82 56 P **Pn** 07 53 12.2 +2.0
comp=E,14nm,0.5s,SNR=14
EMOS S **Sn** 07 54 56.4 -4.1
comp=E,8.4nm,0.2s,SNR=7.9
EMOS Mosqueruela 9.82 56 P **Pn** 07 53 12.2 +2.1
comp=E,14nm,0.5s,SNR=14
EMOS S **Sn** 07 54 56.4 -4.0
comp=E,8.4nm,0.2s,SNR=7.9
ECRI Cripan 9.91 40 P **Pn** 07 53 12.8 +1.4
comp=E,2.9nm,0.2s,SNR=7.9
ELAN Lanestosa 9.91 35 P **Pn** 07 53 11.4 +0.1
comp=E,0.9nm,0.3s,SNR=7.9
ELAN S **Sn** 07 54 56.4 -6.2
comp=E,3.1nm,0.5s,SNR=7.9
ESAC San Caprasio 10.52 49 P **Pn** 07 53 21.1 +1.4
comp=E,9.2nm,0.2s,SNR=4.0
ESAC S **Sn** 07 55 16.5 -1.1
comp=E,48nm,0.5s,SNR=7.9
ESAC San Caprasio 10.52 49 P **Pn** 07 53 21.1 +1.4
ESAC S **Sn** 07 55 16.5 -1.1
EIBI Ibiza 10.62 66 P **Pn** 07 53 22.7 +1.7
comp=E,0.1nm,0.1s,SNR=7.9
EIBI S **Sn** 07 55 14.7 -5.3
comp=E,4.1nm,0.2s,SNR=7.9
EIBI Ibiza 10.62 66 P **Pn** 07 53 22.8 +1.7
ERTA Horta de San J 10.64 55 P **Pn** 07 53 23.0 +1.6
comp=E,1.5nm,0.2s
ERTA Horta de San J 10.64 55 P **Pn** 07 53 23.0 +1.6
comp=E,1.5nm,0.2s
IUSE Utxeti 10.65 41 P **Pn** 07 53 22.6 +1.1
comp=E,2.0nm,0.2s,SNR=7.9
IPRE Itoiz 10.66 42 P **Pn** 07 53 22.6 +0.9
comp=E,0.7nm,0.1s,SNR=7.9
ELIZ Elizondo 10.81 41 S **Sn** 07 55 18.0 -6.7
comp=E,8.0nm,0.3s,SNR=8.0
SJPF Ste Jean 10.94 42 *e*Pn **Pn** 07 53 26.1 +0.6
SJPF *e*Sn **Sn** 07 55 21.4 -6.5
comp=E,7.5nm,0.4s
SJPF Ste Jean 10.94 42 *e*Pn **Pn** 07 53 26.1 +0.6
SJPF *e*Sn **Sn** 07 55 21.4 -6.5
comp=E,3.8nm,0.4s
ETSF Etsaut 11.17 44 *e*Pn **Pn** 07 53 29.3 +0.7
ETSF *e*Sn **Sn** 07 55 28.2 -5.3
comp=E,7.5nm,0.4s
ETSF Etsaut 11.17 44 *e*Pn **Pn** 07 53 29.3 +0.7
ETSF *e*Sn **Sn** 07 55 28.2 -5.3
comp=E,3.8nm,0.4s
EPOB Poblet 11.32 54 P **Pn** 07 53 31.1 +0.3
comp=E,0.9nm,0.2s
EPOB Poblet 11.32 54 P **Pn** 07 53 31.0 +0.3
comp=E,0.9nm,0.2s
EBIE Bielsa 11.45 46 P **Pn** 07 53 33.5 +1.1
comp=E,4.1nm,0.4s,SNR=13
EBIE S **Sn** 07 55 33.7 -6.6
comp=E,8.2nm,0.4s,SNR=7.9
EBIE Bielsa 11.45 46 P **Pn** 07 53 33.5 +1.1
comp=E,4.1nm,0.4s
EPF Esparros 11.77 46 *e*Pn **Pn** 07 53 37.3 +0.5
EPF *e*Sn **Sn** 07 55 42.3 -5.9
comp=E,6.8nm,0.3s
EPF Esparros 11.77 46 Pn **Pn** 07 53 37.3 +0.5
EPF Sn **Sn** 07 55 42.3 -5.9
comp=E,3.4nm,0.3s
EMIR Miracle 11.89 52 P **Pn** 07 53 39.8 +1.4
comp=E,1.4nm,0.1s,SNR=7.9
EMIR S **Sn** 07 55 45.3 -5.8
comp=E,2.1nm,0.3s,SNR=7.9
ETOS Mallorca 11.93 64 P **Pn** 07 53 40.0 +1.0
comp=E,0.3nm,0.1s
ETOS Mallorca 11.93 64 P **Pn** 07 53 40.0 +1.1
comp=E,0.3nm,0.1s
MTLF Montolieu 13.07 48 *e*Pn **Pn** 07 53 54.7 +0.1
LFF La Frestale 13.22 40 *e*Pn **Pn** 07 53 56.5 -0.1
CAF Calviac 13.92 42 *e*Pn **Pn** 07 54 06.1 -0.1
QUIF Quistinic 13.93 23 *e*Pn **Pn** 07 54 05.1 -1.2
ROSF Rostrenen 14.27 22 *e*Pn **Pn** 07 54 09.5 -1.4
GERES GERESS Array B 22.74 46 P **P** 07 55 51.9 +1.0
comp=E,1.0nm,0.6s,mb3.4,baz=236,slow=9.5,SNR=7.3
TORD Torodi Ar. Bea 24.90 149 P **P** 07 56 10.8 -1.2
comp=E,1.9nm,0.9s,mb3.6,baz=330,slow=9.6,SNR=11
ASAR Alice Springs 147.58 79 PKPbc PKPbc 08 10 33.2 -0.5
comp=E,0.4nm,0.6s,baz=300,slow=3.5,SNR=4.4

IDC 06 07:59:19.9±2.4, 920S×12013E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML3.5/2, Error ellipse: s-maj=173.9km s-min=25.1km az=54.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.40**	**129**	P	Pn	08 03 23.8	-0.4
	0.2nm,0.3s,baz=301,slow=14,SNR=9.2						
ASAR	**Alice Springs**	**19.51**	**139**	P	Pn	08 03 49.2	-0.7
	0.2nm,0.3s,baz=325,slow=13,SNR=12						
SONM	**Songino Array**	**58.07**	**349**	P	P	08 09 15.1	+0.3
	0.6nm,0.9s,baz=163,slow=8.3,SNR=3.8						
MKAR	**Makanchi Array**	**65.14**	**332**	P	P	08 10 02.6	0.0
	0.4nm,0.4s,baz=144,slow=7.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**69.62**	**339**	P	P	08 10 30.9	+0.1
	1.5nm,0.5s,baz=149,slow=4.5,SNR=6.2						

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*IDC **06** 08:04:56.0±2.1, 47.19N×153.06E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/24, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=58.0km s-min=26.3km az=172.0*
*NEIC **06** 08:04:57.2±0.9, 47.12N×153.02E, h10km, mb4.2/1, Error ellipse: s-maj=26.0km s-min=12.6km az=146.0*
*ISCJB **06** 08:05:01.6±1.7, 469N±02×1529E±02, h68km±14km, mb3.7/7, Error ellipse: s-maj=39.3km s-min=13.9km az=143.0*
*MOS **06** 08:05:02.1±0.7, 4689N×15285E, h75km, mb4.3/5, Error ellipse: s-maj=27.5km s-min=16.5km az=66.9*

ISC 06 08:05:03.6±1.6, 469N±02×1530E±02, h70km±13km, n19, σ0§45/19, mb3.7/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.37**	**27**	*e*PN	**Pn**	**08 06 07.1**	**-0.2**
ASAJ	**Asahikawa**	**7.78**	**253**	PN	**Pn**	**08 06 55.0**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.78**	**253**	Pn	**Pn**	**08 06 55.0**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=82,slow=15,SNR=3.2						
ERM	**Erimo**	**8.52**	**239**	*e*Pn	**Pn**	**08 07 03.3**	**-0.8**
MKAR	**Makanchi Array**	**46.80**	**297**	P	**P**	**08 13 25.8**	**-0.1**
	comp=Z,0.2nm,0.2s,mb3.4,baz=65,slow=7.3,SNR=4.1						
YKA	**Yellowknife Ar**	**50.91**	**37**	P	**P**	**08 13 57.4**	**+0.4**
YKA	**Yellowknife Ar**	**50.91**	**37**	P	**P**	**08 13 57.4**	**+0.4**
	comp=Z,0.2nm,0.4s,mb3.5,baz=300,slow=7.3,SNR=3.6						
FINES	**FINESS Array B**	**63.91**	**335**	P	**P**	**08 15 28.6**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.91**	**335**	P	**P**	**08 15 28.6**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.7,baz=39,slow=6.9,SNR=7.7						
NB2	**NORSAR Subarra**	**68.10**	**341**	P	**P**	**08 15 55.2**	**-0.1**
	comp=Z,1.0nm,0.6s,mb3.8,baz=28,slow=6.2						
NB2	**NORSAR Subarra**	**68.10**	**341**	P	**P**	**08 15 55.2**	**-0.1**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
NOA	**NORSAR Array B**	**68.10**	**341**	P	**P**	**08 15 55.6**	**+0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**68.10**	**341**	P	**P**	**08 15 55.6**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.0,baz=27,slow=6.4,SNR=4.3						
HFS	**Hagfors**	**68.33**	**339**	P	**P**	**08 15 56.8**	**0.0**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HFS	**Hagfors**	**68.33**	**339**	P	**P**	**08 15 56.8**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.1,baz=46,slow=6.4,SNR=11						
AKASG	**Malin Array Be**	**71.41**	**326**	P	**P**	**08 16 15.2**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.41**	**326**	P	**P**	**08 16 15.2**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.9,baz=34,slow=6.1,SNR=2.3						
TXAR	**Lajitas Array**	**77.53**	**60**	P	**P**	**08 16 51.8**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.4,baz=298,slow=4.9,SNR=10.0						
ELN	**Prospectdale**	**83.46**	**40**	*e*P	**P**	**08 17 23.3**	**0.0**

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*IDC **06** 08:13:36.6±1.0, 0.39S×10085E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/22, mbtmp4.1/11, ML2.8/1, MS3.9/3, Ms1 3.9/3, ms1mx3.7/29, Error ellipse: s-maj=60.9km s-min=15.0km az=52.0*
*NEIC **06** 08:13:39.5±0.6, 0.45S×10078E, h20km, mb4.6/8, Error ellipse: s-maj=28.3km s-min=11.1km az=53.0*
*ISCJB **06** 08:13:40.8±2.1, 0.4S±0.1×1008E±02, h46km±17km, mb4.3/16, MS4.3/2, Error ellipse: s-maj=32.8km s-min=12.5km az=139.7*

ISC 06 08:13:42.3±1.9, 04S±01×1008E±02, h40km±16km, n26, σ1§18/22, mb4.3/16, MS4.3/2, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.67**	**330**	Pn	**Pn**	**08 14 35.5**	**-1.1**
PSI				LR	LR	08 15 54.0	
PSI	**Prapat**	**3.67**	**330**	Pn	**Pn**	**08 14 35.5**	**-1.1**
	0.8nm,0.3s,baz=179,slow=24,SNR=8.3						
PSI				LR	LR	08 15 54.0	
	comp=Z,343nm,19.3s,baz=320,slow=38						
KULM	**Kulim**	**5.64**	**359**	*e*Pn	**Pn**	**08 15 04.8**	**+1.2**
KULM				*e*Sg	Sn	08 16 44.8	+38
PALK	**Pallekele**	**21.43**	**291**	*e*P	**P**	**08 18 27.8**	**+0.7**
	8.8nm,0.8s,mb4.1						
BATI	**Kupang**	**24.76**	**114**	LR	LR	08 31 35.4	
	comp=Z,560nm,18.1s,MS4.1,baz=280,slow=44						
MBWA	**Marble Bar**	**27.72**	**139**	*e*P	**P**	**08 19 27.7**	**+0.7**
	28nm,1.4s,mb4.7						
WRA	**Warramunga Arr**	**38.16**	**123**	P	**P**	**08 20 57.1**	**-1.0**
	2.6nm,0.6s,mb4.2,baz=302,slow=9.0,SNR=17						
ASAR	**Alice Springs**	**39.59**	**128**	P	**P**	**08 21 09.3**	**-0.7**
	3.0nm,0.6s,mb4.2,baz=307,slow=8.2,SNR=30						
ASAR				PcP	PcP	08 23 16.6	-0.3
	1.0nm,0.9s,baz=309,slow=2.5,SNR=4.0						
SONM	**Songino Array**	**48.28**	**5**	P	**P**	**08 22 21.2**	**+1.8**
	1.3nm,0.9s,mb4.0,baz=197,slow=7.3,SNR=2.8						
TKM2	**Tokmak 2**	**48.69**	**335**	*e*P	**P**	**08 22 21.4**	**-1.2**
	3.4nm,0.8s,mb4.4						
AML	**Almayashu**	**48.87**	**333**	*e*P	**P**	**08 22 24.5**	**+0.5**
	4.7nm,0.7s,mb4.6						
EKS2	**Erkin-Say**	**49.26**	**334**	*e*P	**P**	**08 22 27.1**	**+0.2**
	5.7nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**49.65**	**133**	*e*P	**P**	**08 22 30.5**	**+0.3**
	5.0nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**49.65**	**133**	P	**P**	**08 22 30.9**	**+0.7**
	5.2nm,0.8s,mb4.6,baz=338,slow=6.4,SNR=8.9						
MKAR	**Makanchi Array**	**49.71**	**343**	P	**P**	**08 22 29.8**	**-0.5**
	0.8nm,0.6s,mb4.0,baz=154,slow=6.5,SNR=7.9						
ZALV	**Zalesovo Beam**	**55.75**	**349**	P	**P**	**08 23 13.2**	**-1.5**
	2.5nm,0.9s,mb4.2,baz=165,slow=6.2,SNR=5.1						
ASAJ	**Asahikawa**	**57.85**	**35**	LR	LR	08 48 02.4	
	comp=Z,287nm,18.7s,MS4.4,baz=2.4,slow=36						
AKTK	**Aktyubinsk**	**62.34**	**331**	P	**P**	**08 23 59.3**	**-1.3**
AKTO	**Aktyubinsk**	**62.34**	**331**	P	**P**	**08 23 59.3**	**-1.3**
	1.5nm,0.7s,mb4.3,baz=117,slow=6.4,SNR=6.6						
BRTR	**Keskin Array B**	**72.83**	**312**	P	**P**	**08 25 07.7**	**+0.6**
	0.9nm,0.6s,mb3.9,baz=133,slow=5.4,SNR=3.6						
FINES	**FINESS Array B**	**83.06**	**332**	P	**P**	**08 26 05.8**	**+2.5**
	0.9nm,0.6s,mb4.0,baz=95,slow=8.5,SNR=4.1						
BRG	**Berggiesshubel**	**88.30**	**321**	*e*(P)	**P**	**08 26 34.5**	**+5.0**
	4.0nm,1.0s,mb4.6						
GERES	**GERESS Array B**	**88.36**	**319**	P	**P**	**08 26 32.1**	**+2.2**
	0.8nm,0.7s,mb4.1,baz=90,slow=7.3,SNR=6.2						
BFO	**Black Forest**	**91.92**	**318**	*e*P	**P**	**08 26 45.5**	**-1.1**
	9.3nm,0.4s						
TXAR	**Lajitas Array**	**142.96**	**37**	PKP	PKPdf	08 33 13.4	+1.1
	0.6nm,0.7s,baz=275,slow=1.1,SNR=8.7						
JCT	**Junction City**	**144.25**	**31**	*e*PKPdf	PKPdf	08 33 12.9	-1.7

KRSC 06 08:30:58.6±0.3, 5557N×16189E, h62km±61km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZLN	**Zelenaya**	**0.76**	**307**	*i* P	Pn	08 31 15.2	+1.6
ZLN				*i* S	Sn	08 31 27.7	+3.0
KBTR	**Krutoberegovo**	**0.83**	**39**	*i* P	Pn	08 31 14.5	0.0
KBTR				*i* S	Sn	08 31 25.8	-0.4
KMNR	**Kamenistaya**	**0.95**	**282**	*e*P	Pn	08 31 18.0	+1.9
KMNR				*i* S	Sn	08 31 31.7	+2.7
KRSR	**Krestovskiy**	**0.99**	**312**	*i* P	Pn	08 31 17.5	+1.0
KRSR				*i* S	Sn	08 31 30.9	+1.1
KLY	**Klyuchi**	**1.02**	**317**	*i* P	Pn	08 31 16.8	-0.1
KLY				*i* S	Sn	08 31 29.8	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KPT	**Kopyto**	**1.02**	**294**	*e*P	Pn	08 31 18.5	+1.5
KPT				*i* S	Sn	08 31 32.5	+1.9
TUMR	**Tumrok**	**1.03**	**255**	*i* P	Pn	08 31 19.0	+1.9
TUMR				*i* S	Sn	08 31 34.1	+3.2
SRKR	**Sorokina**	**1.16**	**340**	*e*P	Pn	08 31 20.2	+1.5
SRKR				*i* S	Sn	08 31 36.1	+2.3
KOZ	**Kozyrevsk**	**1.24**	**294**	*e*P	Pn	08 31 21.8	+2.0
KOZ				*i* S	Sn	08 31 38.6	+3.0
SRDR	**Sredinnyy**	**1.43**	**302**	*e*P	Pn	08 31 23.8	+1.4
SRDR				*i* S	Sn	08 31 42.6	+2.3
KII	**Karymskiy**	**2.09**	**224**	*e*P	Pn	08 31 33.0	+1.8
KII				*i* S	Sn	08 31 57.5	+1.4
SPN	**Mys Shipunski**	**2.71**	**205**	P	Pn	08 31 39.9	+0.3
SPN				*i* S	Sn	08 32 11.0	-0.2
NLC	**Nalytchevo**	**2.83**	**213**	*e*P	Pn	08 31 43.0	+1.7
NLC				*i* S	Sn	08 32 14.3	+0.2
AVH	**Avacha**	**2.95**	**220**	*e*P	Pn	08 31 45.6	+2.6
AVH				*i* S	Sn	08 32 20.1	+2.9
GNL	**Ganaly**	**2.97**	**232**	P	Pn	08 31 45.7	+2.5
GNL				*i* S	Sn	08 32 20.2	+2.7
PET	**Petropavlovsk**	**3.18**	**218**	P	Pn	08 31 48.3	+2.2
PET				*i* S	Sn	08 32 24.8	+2.1
RUS	**Russkaya**	**3.72**	**214**	P	Pn	08 31 56.3	+2.8
GRL	**Gorelyy**	**3.77**	**218**	P	Pn	08 31 56.9	+2.8

*IDC **06** 08:40:55.8±3.0, 4699N×15382E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/23, mbtmp3.7/8, Error ellipse: s-maj=82.5km s-min=24.6km az=174.0*
*NEIC **06** 08:40:56.9±1.1, 4690N×15385E, h10km, mb4.3/1, Error ellipse: s-maj=23.2km s-min=14.9km az=170.0*
*MOS **06** 08:41:04.7±0.7, 4729N×15363E, h73km, mb4.2/5, Error ellipse: s-maj=34.3km s-min=15.1km az=88.4*
*ISCJB **06** 08:41:11.4±1.6, 478N±02×1537E±02, h112km±13km, mb3.5/8, Error ellipse: s-maj=31.7km s-min=14.6km az=140.8*
ISC 06 08:41:12.6±1.6, **478N**±02×**1537E**±02, **h107**km±12km, **n18**, σ**0.94**/18, **mb3.5**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.32**	**27**	*e*PN	**Pn**	**08 42 02.0**	**-0.6**
KUR	**Kuril'sk**	**4.78**	**240**	*e*PN	**Pn**	**08 42 23.0**	**+0.7**
MA2	**Magadan**	**11.97**	**353**	*e*Pn	**Pn**	**08 43 59.4**	**+0.1**
SONM	**Songino Array**	**31.41**	**288**	P	**P**	**08 47 21.7**	**-1.5**
	0.3nm,0.6s,mb3.2,baz=69,slow=8.4,SNR=2.5						
INK	**Inuvik**	**40.57**	**33**	P	**P**	**08 48 42.1**	**+1.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**40.57**	**33**	P	**P**	**08 48 42.0**	**+1.1**
	comp=Z,0.5nm,0.6s,mb3.5,baz=294,slow=5.2,SNR=2.5						
MKAR	**Makanchi Array**	**46.86**	**297**	P	**P**	**08 49 30.9**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.3,baz=68,slow=7.2,SNR=5.7						
YKA	**Yellowknife Ar**	**49.86**	**37**	P	**P**	**08 49 54.6**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=296,slow=7.1,SNR=4.1						
FINES	**FINESS Array B**	**63.31**	**335**	P	**P**	**08 51 30.6**	**+1.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**63.31**	**335**	P	**P**	**08 51 30.6**	**+1.0**
	comp=Z,0.5nm,0.3s,mb3.9,baz=61,slow=11,SNR=6.1						
NB2	**NORSAR Subarra**	**67.41**	**341**	P	**P**	**08 51 57.5**	**+1.5**
	comp=Z,1.3nm,0.6s,mb3.9,baz=26,slow=6.5						
NB2	**NORSAR Subarra**	**67.41**	**341**	P	**P**	**08 51 57.5**	**+1.5**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
NOA	**NORSAR Array B**	**67.41**	**341**	P	**P**	**08 51 57.3**	**+1.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**67.41**	**341**	P	**P**	**08 51 57.3**	**+1.3**
	comp=Z,2.1nm,0.7s,mb4.1,baz=27,slow=6.3,SNR=5.1						
AKASG	**Malin Array Be**	**70.94**	**326**	P	**P**	**08 52 17.6**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.94**	**326**	P	**P**	**08 52 17.6**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.8,baz=35,slow=5.6,SNR=7.2						
TXAR	**Lajitas Array**	**76.63**	**61**	P	**P**	**08 52 50.2**	**-1.3**
TXAR	**Lajitas Array**	**76.63**	**61**	P	**P**	**08 52 50.2**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.3,baz=295,slow=4.6,SNR=6.1						

*CSEM **06** 08:49:10.5±0.2, 3944N×4064E, h2km, MD3.0, Error ellipse: s-maj=5.7km s-min=2.6km az=86.0*
*ISK **06** 08:49:10.5, 3945N×4069E, h3km, MD3.0*
*ISCJB **06** 08:49:11.3±0.8, 3944N±003×4069E±005, h1km±8km, Error ellipse: s-maj=7.1km s-min=4.5km az=22.3*
*DDA **06** 08:49:12.6, 3949N×4069E, h8km, Md3.5*
ISC 06 08:49:12.2±0.7, **3942N**±003×**4074E**±005, **h7**km±7km, **n15**, σ**1.01**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.58**	**200**	*i* PG	**Pg**	**08 49 22.5**	**-0.8**
BINT				*i* SG	**Sg**	**08 49 31.6**	**+0.8**
EZM	**Erzurum**	**0.68**	**44**	*i* PG	**Pg**	**08 49 24.9**	**-0.4**
EZM				*i* SG	**Sg**	**08 49 34.8**	**+0.7**
ERZM	**Erzurum**	**0.68**	**45**	*i* P	**Pg**	**08 49 25.0**	**-0.3**
ERZM				*i* S	**Sg**	**08 49 34.8**	**+0.6**
EZC	**Erzincan**	**0.79**	**295**	PG	**Pg**	**08 49 31.4**	**+4.1**
BTMT	**Batman**	**1.36**	**154**	PN	**Pn**	**08 49 37.4**	**-0.1**
KELT	**Kelkit**	**1.36**	**303**	*i* P	**Pn**	**08 49 35.9**	**-1.6**
KELT				*i* S	**Sb**	**08 49 57.3**	**+1.9**
GUMT	**Gumushane**	**1.42**	**317**	PN	**Pn**	**08 49 37.5**	**-0.9**
GUMT				SN	**Sn**	**08 49 56.9**	**-0.4**
DIY	**Diyarbakir**	**1.57**	**195**	*e*PN	**Pn**	**08 49 40.9**	**+0.4**
ELZG	**Elazig**	**1.65**	**237**	*i* P	**Pn**	**08 49 40.7**	**-0.8**
ELZG				*i* S	**Sg**	**08 50 11.0**	**+5.8**
AGRB	**Hanur-Agry**	**1.75**	**84**	*e*PN	**Pn**	**08 49 42.6**	**-0.2**
PZAR	**Pazar-Rize**	**1.76**	**4**	*e*PN	**Pn**	**08 49 42.8**	**-0.2**
MARD	**Mardin**	**2.10**	**179**	*i* P	**Pn**	**08 49 49.6**	**+1.9**
MARD				*i* S	**Sg**	**08 50 19.3**	**-0.4**
BCA	**Borcka**	**2.13**	**18**	*e*PN	**Pn**	**08 49 47.2**	**-0.9**
TVAN	**Van**	**2.26**	**112**	*i* P	**Pn**	**08 49 52.2**	**+2.3**
TVAN				*i* S	**Sg**	**08 50 28.9**	**+4.2**
HAKT	**HAKKARI**	**2.98**	**128**	*i* P	**Pn**	**08 49 53.6**	**-6.2**
HAKT				*i* S	**Sg**	**08 50 46.7**	**-1.1**

*IDC **06** 08:49:45.5±0.7, 091S×10026E, h0km, mb4.4/14, mb1 4.5/15, mb1mx4.4/23, mbtmp4.4/15, ML3.3/1, MS4.3/12, Ms1 4.3/12, ms1mx4.1/29, Error ellipse: s-maj=32.8km s-min=14.1km az=52.0*
*NEIC **06** 08:49:50.4±0.3, 054S×10071E, h20km, mb4.9/18, Error ellipse: s-maj=13.7km s-min=6.9km az=52.0*
*ISCJB **06** 08:49:51.8±1.7, 037S±006×10052E±005, h31km±11km, mb4.7/41, MS4.4/17, Error ellipse: s-maj=10.8km s-min=8.2km az=16.8*
*BJI **06** 08:49:52.2, 041S×100.18E, h25km, mB5.4, mb4.5, Ms4.9, Msz4.7*
*MOS **06** 08:49:53.0±1.2, 020S×10059E, h33km, mb5.2/16, Error ellipse: s-maj=21.9km s-min=6.7km az=116.2*
ISC 06 08:49:53.9±1.6, **040S**±006×**10049E**±005, **h34**km±11km, **n151**, σ**1.14**/137, **mb4.7**/41, **MS4.4**/17, **13C-17D**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**3.37**	**300**	P	**Pn**	**08 50 44.3**	**+0.1**
PSI	**Prapat**	**3.54**	**334**	Pn	**Pn**	**08 50 46.1**	**-0.5**
	2.2nm,0.3s,baz=160,slow=14,SNR=20						
KGM	**Kluang**	**3.71**	**50**	⇓P	**Pn**	**08 50 48.4**	**-0.4**
FRIM	**Kepong**	**3.79**	**17**	⇓P	**Pn**	**08 50 49.7**	**-0.2**
KSI	**Kapahiang**	**3.85**	**147**	P	**Pn**	**08 50 50.4**	**-0.5**
	750nm,1.1s						
MYKOM	**Kota Tinggi**	**4.00**	**57**	⇑P	**Pn**	**08 50 52.3**	**-0.6**
TSI	**Tuntungan**	**4.33**	**334**	P	**Pn**	**08 51 01.7**	**+4.3**
	1μm,1.1s						
IPM	**Ipoh**	**4.88**	**6**	P	**Pn**	**08 51 05.4**	**+0.5**
KULM	**Kulim**	**5.65**	**2**	*e*Pn	**Pn**	**08 51 15.8**	**+0.2**
KULM				*e*Sn	**Sn**	**08 52 13.8**	**-5.7**
KULM	**Kulim**	**5.65**	**2**	⇑P	**Pn**	**08 51 15.9**	**+0.2**
KTGM	**Kuala Trenggan**	**6.27**	**25**	⇓P	**Pn**	**08 51 24.7**	**+0.5**
SNG	**Songkhla**	**7.53**	**1**	P	**Pn**	**08 51 41.0**	**-0.4**
	780nm,1.0s						
BSI	**Banda Aceh**	**7.82**	**319**	P	**Pn**	**08 51 45.8**	**+0.3**
	62nm,1.0s						
KSM	**Kuching**	**9.99**	**79**	⇓P	**Pn**	**08 52 14.1**	**-1.1**
BJII	**Banjamegara**	**11.48**	**127**	P	**Pn**	**08 52 44.8**	**+9.1**
	86nm,2.2s						
SBUM	**Sibu**	**12.06**	**76**	⇓P	**Pn**	**08 52 43.9**	**+0.3**
KKM	**Kota Kinabalu**	**16.95**	**68**	P	**Pn**	**08 53 53.9**	**+5.2**
KKM	**Kota Kinabalu**	**16.95**	**68**	⇑P	**Pn**	**08 53 50.1**	**+1.4**
SDKM	**Sandakan**	**17.73**	**70**	⇓P	**Pn**	**08 54 00.9**	**+2.6**
MYLDM	**Lahad Datu**	**18.82**	**73**	⇓P	**Pn**	**08 54 15.6**	**+3.9**
CHG	**Chiang Mai**	**19.15**	**356**	⇑P	pP	08 54 25.9	+2.5
	27nm,1.1s						
CHTO	**Chiang Mai**	**19.15**	**356**	*e*P	**Pn**	**08 54 14.1**	**-1.5**
	24nm,1.3s						
CHTO				*e*pPn		08 54 26.2	
CHTO	**Chiang Mai**	**19.15**	**356**	*e*P	**Pn**	**08 54 14.1**	**-1.5**
CHTO				pmax	pmax		
	comp=Z,24nm,1.3s						
PALK	**Pallekele**	**21.16**	**291**	*e*P	**P**	**08 54 37.6**	**+1.1**
	comp=Z,67nm,1.5s,mb4.8						
QIZ	**Qiongzhong**	**21.38**	**25**	P	**P**	**08 54 37.6**	**-1.1**
QIZ				S	**S**	**08 58 34.7**	**+0.3**
QIZ				LR	LR		
	comp=E,1μm,13.9s						
QIZ				LR	LR		
	comp=Z,957nm,12.0s,MS4.4						
BATI	**Kupang**	**25.02**	**114**	LR	LR	09 06 57.5	
	comp=Z,2μm,19.1s,MS4.6,baz=305,slow=41						
GYA	**Guiyang**	**27.36**	**12**	P	**P**	**08 55 39.2**	**+3.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.2						
MBWA	**Marble Bar**	**27.90**	**139**	*e*P	**P**	**08 55 37.9**	**-3.1**
	comp=Z,7.0nm,0.9s,mb4.3						
ODAN	**Odare**	**29.89**	**336**	*e*P	**P**	**08 55 58.3**	**-0.3**
TAPN	**Taplejung**	**30.20**	**337**	*e*P	**P**	**08 56 02.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**30.33**	**127**	LR	LR	09 08 11.9	
	comp=Z,316nm,18.4s,MS4.0,baz=43,slow=37						
JIRN	**Jiri**	**31.10**	**335**	*e*P	**P**	**08 56 07.0**	**-2.3**
LSA	**Lhasa**	**31.23**	**344**	P	**P**	**08 56 12.0**	**+1.6**
LSA	**Lhasa**	**31.23**	**344**	*e*P	**P**	**08 56 10.7**	**+0.3**
	comp=Z,3.9nm,0.5s,mb4.5						
LSA	**Lhasa**	**31.23**	**344**	*e*P	**P**	**08 56 10.7**	**+0.3**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
KKN	**Kakani**	**31.61**	**334**	*e*P	**P**	**08 56 13.1**	**-0.6**
	comp=Z,28nm,0.8s,mb5.1						
KKN	**Kakani**	**31.61**	**334**	*e*P	**P**	**08 56 13.1**	**-0.6**
KKN				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.1						
GKN	**Gorkha**	**32.08**	**333**	*e*P	**P**	**08 56 17.4**	**-0.5**
	comp=Z,109nm,1.5s,mb5.5						
XAN	**Xi'an**	**35.16**	**12**	P	**P**	**08 56 45.9**	**+1.3**
XAN				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.4						
NWAO	**Narrogin (SRO)**	**35.99**	**156**	LR	LR	09 10 18.4	
	comp=Z,617nm,19.1s,MS4.4,baz=331,slow=35						
NJ2	**Nanjing**	**36.65**	**27**	*e*P	**P**	**08 56 58.9**	**+1.4**
NJ2				AP	pP	08 57 12.9	+5.6
NJ2				PP	PP	08 58 22.5	+1.1
NJ2				S	**S**	**09 02 36.0**	**-2.5**
NJ2				XS	sS	09 03 01.0	+6.3
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,440nm,6.2s						
NJ2				LR	LR		
	comp=N,2μm,18.2s,MS5.0						
NJ2				LR	LR		
	comp=E,1μm,16.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,1μm,16.4s,MS4.8						
WRA	**Warramunga Arr**	**38.40**	**122**	P	**P**	**08 57 07.6**	**-4.9**
WRA	**Warramunga Arr**	**38.40**	**122**	P	**P**	**08 57 07.2**	**-5.3**
	comp=Z,4.1nm,0.8s,mb4.2,baz=302,slow=9.1,SNR=21						
WRA				PcP	PcP	08 59 22.6	-3.1
	comp=Z,0.8nm,0.7s,baz=312,slow=2.4,SNR=3.2						
WRA				LR	LR	09 16 26.3	
	comp=Z,318nm,18.9s,MS4.2,baz=200,slow=42						
WB2	**Warramunga Arr**	**38.41**	**122**	*e*P	**P**	**08 57 07.5**	**-5.1**
GTA	**Gaotai**	**39.62**	**359**	*e*P	**P**	**08 57 28.4**	**+6.0**
GTA				AP	pP	08 57 37.0	+4.7
GTA				XP	sP	08 57 40.9	+4.6
GTA				S	**S**	**09 03 32.7**	**+9.4**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.1						
GTA				AMB	AMB		
	comp=Z,272nm,8.4s						
GTA				LR	LR		
	comp=N,706nm,15.2s,MS4.8						
GTA				LR	LR		
	comp=E,723nm,13.7s,MS4.8						
GTA				LR	LR		
	comp=Z,963nm,14.5s,MS4.8						
ASAR	**Alice Springs**	**39.82**	**128**	P	**P**	**08 57 19.3**	**-4.9**
	comp=Z,4.5nm,0.8s,mb4.2,baz=306,slow=7.4,SNR=33						
ASAR				PcP	PcP	08 59 27.6	-2.4
	comp=Z,2.0nm,0.7s,baz=308,slow=2.6,SNR=10						
BJI	**Beijing**	**42.72**	**18**	P	**P**	**08 57 51.9**	**+4.1**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
BJI				LR	LR		
	comp=N,401nm,22.4s,MS4.7						
BJI				LR	LR		
	comp=E,898nm,18.4s,MS4.7						
BJI				LR	LR		
	comp=Z,395nm,21.6s,MS4.3						
JNU	**Nakatsue**	**43.94**	**38**	P	**P**	**08 57 59.2**	**+1.4**
	comp=Z,42nm,1.1s,mb5.1,baz=169,slow=10,SNR=5.3						
KSRS	**Korea Array**	**45.40**	**31**	P	**P**	**08 58 10.4**	**+1.0**
	comp=Z,7.4nm,1.0s,mb4.5,baz=218,slow=9.4,SNR=9.8						
KSRS				LR	LR	09 19 58.1	
	comp=Z,154nm,18.4s,MS4.0,baz=210,slow=40						
WMQ	**Urumqi**	**45.49**	**347**	*e*P	**P**	**08 58 10.2**	**+0.2**
SONM	**Songino Array**	**48.31**	**5**	P	**P**	**08 58 34.1**	**+2.1**
SONM						08 59 59.2	
SONM	**Songino Array**	**48.31**	**5**	P	**P**	**08 58 34.1**	**+2.1**
	comp=Z,2.2nm,0.9s,mb4.2,baz=187,slow=9.4,SNR=9.4						
SONM				PcP	PcP	08 59 59.2	+0.8
	comp=Z,2.8nm,0.9s,baz=185,slow=3.9,SNR=6.4						
SONM				ScP	ScP	09 03 50.1	-0.6
	comp=Z,1.6nm,1.1s,baz=186,slow=3.0,SNR=4.9						
SONM				LR	LR	09 22 58.6	
	comp=Z,229nm,19.6s,MS4.2,baz=183,slow=41						
AAK	**Ala-Archa**	**48.81**	**335**	*e*P	**P**	**08 58 35.6**	**-0.3**
AAK	**Ala-Archa**	**48.81**	**335**	*i* P	**P**	**08 58 36.4**	**+0.5**
AAK				pmax	pmax		
	comp=Z,33nm,2.4s,mb4.9						
AAK				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.2						
FRU	**Bishkek**	**48.92**	**335**	*e*P	**P**	**08 58 37.0**	**+0.3**
EKS2	**Erkin-Say**	**49.14**	**334**	*e*P	**P**	**08 58 38.0**	**-0.4**
	comp=Z,13nm,0.8s,mb5.0						
MK31	**Makanchi Array**	**49.64**	**344**	*e*P	**P**	**08 58 41.5**	**-0.6**
MKAR	**Makanchi Array**	**49.64**	**344**	P	**P**	**08 58 43.2**	**+1.1**
MKAR	**Makanchi Array**	**49.64**	**344**	P	**P**	**08 58 40.3**	**-1.8**
	comp=Z,2.1nm,0.5s,mb4.4,baz=149,slow=8.1,SNR=12						
MKAR				LR	LR	09 22 20.4	
	comp=Z,213nm,21.6s,MS4.1,baz=161,slow=39						
STKA	**Stephens Creek**	**49.86**	**133**	*e*P	**P**	**08 58 38.9**	**-5.2**
	comp=Z,3.5nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**49.86**	**133**	P	**P**	**08 58 38.9**	**-5.2**
	comp=Z,2.9nm,0.7s,mb4.4,baz=306,slow=12,SNR=7.1						
KURK	**Kurchatov**	**54.23**	**343**	*e*P	**P**	**08 59 15.8**	**-0.5**
	comp=Z,14nm,1.1s,mb4.8						
KURK	**Kurchatov**	**54.23**	**343**	*i* P	**P**	**08 59 17.1**	**+0.8**
ZAL	**Zalesovo**	**55.69**	**349**	P	**P**	**08 59 24.8**	**-2.0**
ZALV	**Zalesovo Beam**	**55.70**	**349**	P	**P**	**08 59 24.8**	**-2.0**
	comp=Z,6.6nm,0.7s,mb4.8,baz=165,slow=6.2,SNR=10						
KLR	**Kul'dur**	**56.28**	**24**	*e*P	**P**	**08 59 30.4**	**-0.7**
KLR				MLR	MLR		
	comp=Z,4μm,13.0s						
BRVK	**Borovoye**	**58.93**	**339**	*e*P	**P**	**08 59 49.5**	**-0.2**
	comp=Z,8.2nm,1.1s,mb4.7						
BRVK	**Borovoye**	**58.93**	**339**	*e*P	**P**	**08 59 49.5**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
AKTK	**Aktyubinsk**	**62.20**	**331**	P	**P**	**09 00 10.6**	**-1.4**
AKTO	**Aktyubinsk**	**62.20**	**331**	P	**P**	**09 00 10.6**	**-1.4**
	comp=Z,11nm,1.0s,mb4.9,baz=116,slow=6.7,SNR=18						
SVE	**Sverdlovsk**	**65.40**	**337**	*e*P	**P**	**09 00 34.0**	**+1.0**
SVE				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
ARU	**Arti**	**65.95**	**336**	*e*P	**P**	**09 00 35.5**	**-1.0**
ARU	**Arti**	**65.95**	**336***c*	*i*P	**P**	**09 00 38.1**	**+1.6**
ARU				*e*		09 03 06.6	
ARU				PPP		09 04 35.0	
ARU				S	S	09 09 26.0	+4.4
ARU				pmax	pmax		
	comp=Z,24nm,1.7s,mb5.0						
ZEI	**Tsey**	**66.38**	**318**	*e*P	**P**	**09 00 38.9**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
KIV	**Kislovodsk**	**67.67**	**319**	P	**P**	**09 00 49.0**	**+1.2**
MA2	**Magadan**	**71.38**	**24**	P	**P**	**09 01 10.9**	**+0.6**
MAW	**Mawson**	**71.94**	**194**	LR	LR	09 25 34.4	
	comp=Z,266nm,19.1s,MS4.5,baz=69,slow=30						
BRTR	**Keskin Array B**	**72.62**	**312**	P	**P**	**09 01 17.6**	**-0.6**
BRTR	**Keskin Array B**	**72.62**	**312**	*i* P	**P**	**09 01 17.7**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	**72.62**	**312**	P	**P**	**09 01 16.3**	**-1.9**
	comp=Z,2.8nm,0.9s,mb4.2,baz=108,slow=6.6,SNR=7.3						
TIXI	**Tiksi**	**74.21**	**9**	P	**P**	**09 01 25.6**	**-1.3**
MOS	**Moscow**	**75.39**	**329**	*e*P	**P**	**09 01 34.4**	**+0.3**
MOS				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.5						
OBN	**Obninsk**	**75.71**	**328**⇓	*e*P	**P**	**09 01 35.7**	**-0.2**
OBN				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.5						
TIRR	**Tirgusor**	**77.56**	**316**	⇑P	**P**	**09 01 47.2**	**+0.7**
TIRR	**Tirgusor**	**77.56**	**316**	⇑*i*P	**P**	**09 01 47.2**	**+0.6**
AKASG	**Malin Array Be**	**78.53**	**322**	P	**P**	**09 01 51.0**	**-0.8**
AKASG	**Malin Array Be**	**78.53**	**322**	P	**P**	**09 01 50.9**	**-0.9**
	comp=Z,0.5nm,0.2s,mb4.1,baz=90,slow=4.5,SNR=16						
VRI	**Vrincioaia**	**79.02**	**317**	⇓P	**P**	**09 01 55.2**	**+0.6**
VRI	**Vrincioaia**	**79.02**	**317**	⇓*i*P	**P**	**09 01 55.2**	**+0.5**
MLR	**Muntele Rosu**	**79.48**	**316**	⇑P	**P**	**09 01 57.7**	**+0.5**
MLR	**Muntele Rosu**	**79.48**	**316**	⇑*i*P	**P**	**09 01 57.7**	**+0.5**
BURAR	**Bucovina Array**	**80.39**	**318**	⇓P	**P**	**09 02 03.4**	**+1.4**
BURAR	**Bucovina Array**	**80.39**	**318**	⇓*i*P	**P**	**09 02 03.4**	**+1.3**
JOF	**Joensuu**	**81.00**	**334**	*e*p	**P**	**09 02 01.3**	**-3.6**
BILL	**Bilibino**	**81.50**	**20**	*e*P	**P**	**09 02 07.5**	**0.0**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
DRGR		**81.93**	**317**	⇓P	**P**	**09 02 10.9**	**+0.6**
DRGR		**81.93**	**317**	⇓*i*P	**P**	**09 02 10.9**	**+0.6**
BZS	**Buzias**	**82.50**	**316**	⇑P	**P**	**09 02 13.4**	**+0.1**
BZS	**Buzias**	**82.50**	**316**	⇑*i*P	**P**	**09 02 13.4**	**+0.1**
KOLS	**Kolonicke sedl**	**82.56**	**319**	*i* P	**P**	**09 02 13.3**	**-0.2**
SUW	**Suwalki**	**82.87**	**325**	*e*P	**P**	**09 02 15.3**	**+0.2**
FINES	**FINESS Array B**	**82.93**	**332**	P	**P**	**09 02 13.5**	**-1.7**
FINES	**FINESS Array B**	**82.93**	**332**	*i* P	**P**	**09 02 13.6**	**-1.6**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**82.93**	**332**	P	**P**	**09 02 13.3**	**-1.9**
	comp=Z,2.0nm,0.7s,mb4.3,baz=104,slow=6.1,SNR=5.8						
KAF	**Kangasniemi**	**82.99**	**333**	*e*p	**P**	**09 02 11.9**	**-3.5**
	baz=100,slow=4.7						
CRVS	**Cervenica-Dubn**	**83.09**	**319**	*i* P	**P**	**09 02 18.8**	**+2.6**
STHS	**Stebnicka Huta**	**83.31**	**320**	*e*P	**P**	**09 02 18.7**	**+1.3**
	comp=Z,5.4nm,0.9s,mb4.6						
STHS	**Stebnicka Huta**	**83.31**	**320**	*e*P	**P**	**09 02 18.7**	**+1.3**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
VNDA	**Vanda**	**83.62**	**169**	LR	LR	09 33 33.0	
	comp=Z,301nm,18.4s,MS4.7,baz=308,slow=32						
KECS	**Kecovo**	**83.67**	**319**	*e*P	**P**	**09 02 19.3**	**+0.1**
	comp=Z,85nm,3.9s						
KECS	**Kecovo**	**83.67**	**319**	*e*P	**P**	**09 02 19.3**	**+0.1**
KECS				pmax	pmax		
	comp=Z,85nm,3.9s						
VYHS	**Vyhne**	**84.76**	**319**	*e*P	**P**	**09 02 23.0**	**-1.8**
	comp=Z,7.4nm,1.5s,mb4.6						
VYHS	**Vyhne**	**84.76**	**319**	*e*P	**P**	**09 02 23.0**	**-1.8**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.6						
ARCES	**ARCESS Array B**	**85.15**	**340**	P	**P**	**09 02 23.9**	**-2.4**
	comp=Z,2.4nm,0.8s,mb4.4,baz=116,slow=4.2,SNR=6.5						
ARCES				LR	LR	09 43 35.1	
	comp=Z,292nm,18.4s,MS4.7,baz=212,slow=38						
SMOL	**Smolenice**	**85.69**	**319**	*e*P	**P**	**09 02 28.7**	**-0.7**
MORC	**Moravsky Berou**	**85.74**	**320**	⇑P	**P**	**09 02 30.1**	**+0.5**
MORC	**Moravsky Berou**	**85.74**	**320**	⇑*i*P	**P**	**09 02 30.1**	**+0.4**
MODS	**Modra-Piesok**	**85.78**	**318**	*e*P	**P**	**09 02 28.9**	**-1.0**
	comp=Z,14nm,1.6s,mb4.9						
MODS	**Modra-Piesok**	**85.78**	**318**	*e*P	**P**	**09 02 28.9**	**-1.0**
MODS				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.9						
ZST	**Bratislava**	**85.88**	**318**	*e*P	**P**	**09 02 30.7**	**+0.3**
	comp=Z,19nm,1.4s,mb5.1						
ZST	**Bratislava**	**85.88**	**318**	*e*P	**P**	**09 02 30.7**	**+0.3**
ZST				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.1						
DPC	**Dobruska-Polom**	**86.57**	**320**	*e*P	**P**	**09 02 34.7**	**+0.9**
UPC	**Upice**	**86.78**	**320**	*e*P	**P**	**09 02 36.7**	**+1.9**
PRU	**Pruhonice**	**87.69**	**320**	*e*P	**P**	**09 02 40.1**	**+0.9**
PVCC	**Panska Ves**	**87.70**	**320**	*e*P	**P**	**09 02 40.7**	**+1.5**
BRG	**Berggiesshubel**	**88.12**	**321**	*i* P	**P**	**09 02 42.0**	**+0.8**
	comp=Z,9.5nm,1.3s,mb4.9						
BRG				*e*		09 02 47.5	
BRG	**Berggiesshubel**	**88.12**	**321**	*i* P	**P**	**09 02 42.0**	**+0.8**
BRG				*e*		09 02 47.5	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
BRG	**Berggiesshubel**	**88.12**	**321**	*i* P	**P**	**09 02 42.0**	**+0.8**
BRG				*e*		09 02 47.5	
	comp=Z,16nm,1.3s						
GERES	**GERESS Array B**	**88.18**	**319**	P	**P**	**09 02 40.8**	**-0.7**
	comp=Z,2.1nm,0.8s,mb4.4,baz=108,slow=4.3,SNR=18						
KHC	**Kasperske Hory**	**88.27**	**319**	*i* P	**P**	**09 02 44.7**	**+2.7**
KHC	**Kasperske Hory**	**88.27**	**319**	*e*P	**P**	**09 02 44.5**	**+2.5**
RUE	**Ruedersdorf**	**88.30**	**322**	*e*P	**P**	**09 02 42.4**	**+0.3**
RUE				*e*PcP	PcP	09 02 44.0	+0.3
CLL	**Collm**	**88.73**	**321**	⇓*i*P	**P**	**09 02 43.6**	**-0.5**
	comp=Z,16nm,1.3s,mb5.2						
CLL	**Collm**	**88.73**	**321**	⇓*i*P	**P**	**09 02 43.6**	**-0.5**
CLL				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.2						
CLL	**Collm**	**88.73**	**321**	⇓*i*P	**P**	**09 02 43.6**	**-0.5**
	comp=Z,16nm,1.3s,mb5.2						
GRA1	**Grafenberg Arr**	**89.83**	**320**	*e*P	**P**	**09 02 47.8**	**-1.5**
	comp=Z,19nm,1.4s,mb5.2						
GRF	**Grafenberg Arr**	**89.83**	**320**	*e*P	**P**	**09 02 47.8**	**-1.5**
GRF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.2						
GRF	**Grafenberg Arr**	**89.83**	**320**	*e*P	**P**	**09 02 47.8**	**-1.5**
GRF				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.2						
GRF	**Grafenberg Arr**	**89.83**	**320**	*e*P	**P**	**09 02 47.8**	**-1.5**
	comp=Z,19nm,1.4s,mb5.2						
NOA	**NORSAR Array B**	**90.00**	**331**	LR	LR	09 45 02.9	
	comp=Z,107nm,19.6s,MS4.3,baz=60,slow=37						
KEST	**Kesra**	**91.16**	**306**	LR	LR	09 44 33.6	
	comp=Z,89nm,20.2s,MS4.2,baz=226,slow=36						
HAWA	**Hanford**	**122.34**	**32**	*e*Pdif	Pdif	09 05 16.5	+1.6
NVAR	**Mina Array Bea**	**128.06**	**39**	PKP	PKPdf	09 08 56.3	-0.6
	comp=Z,1.4nm,1.1s,baz=328,slow=0.2,SNR=6.0						
PDAR	**Pinedale Array**	**129.95**	**29**	PKP	PKPdf	09 08 59.0	-1.4
	comp=Z,0.3nm,0.6s,baz=304,slow=0.7,SNR=2.3						
FFD	**Franklin Falls**	**136.55**	**352**	*e*PKPdf	PKPdf	09 09 12.4	-0.5
FFD				*e*pPKPdf	pPKPdf	09 09 35.0	+11
TXAR	**Lajitas Array**	**143.14**	**37**	PKhKP		09 09 19.9	
	comp=Z,0.8nm,0.7s,baz=312,slow=0.5,SNR=10.0						
MIAR	**Mount Ida**	**143.57**	**20**	*e*PKPdf	PKPdf	09 09 22.8	-3.0
JCT	**Junction City**	**144.41**	**31**	*e*PKPdf	PKPdf	09 09 27.1	-0.3
OXF	**Oxford**	**144.82**	**14**	*e*PKPdf	PKPdf	09 09 28.0	0.0
LHS	**Liberty Hill**	**146.08**	**2**	*e*PKPdf	PKPdf	09 09 31.0	+0.9
LCO	**Las Campanas**	**149.57**	**195**	*e*PKPdf	PKPdf	09 09 35.6	-0.4
LCO				*e*PKPbc	PKPbc	09 09 40.3	-0.3
LCO				*e*PKPab	PKPab	09 09 44.1	-1.4

IDC 06 08:54:27.3±6.9, **288S**×**10063E**, **h0**km, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.5**/20, **mbtmp3.5**/4, **Error ellipse: s-maj=337.2km s-min=23.0km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.01**	**120**	P	P	09 01 38.6	-0.4
	0.2nm,0.3s,baz=299,slow=8.7,SNR=5.5						
ASAR	**Alice Springs**	**38.23**	**126**	P	P	09 01 49.2	-0.1
	0.3nm,0.5s,baz=300,slow=7.4,SNR=7.0						
MKAR	**Makanchi Array**	**52.04**	**344**	P	P	09 03 39.3	+0.6
	0.4nm,0.5s,baz=138,slow=9.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**58.14**	**349**	P	P	09 04 22.1	-0.5
	0.6nm,0.4s,baz=167,slow=7.1,SNR=3.0						
TXAR	**Lajitas Array**	**145.00**	**39**	PKPbc	PKPbc	09 14 06.2	-0.4
	0.2nm,0.5s,baz=236,slow=0.5,SNR=8.4						

IDC 06 09:06:49.9±6.4, **037N**×**10197E**, **h0**km, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/20, **mbtmp3.5**/3, **MS4.1**/1, **Ms1 4.1**/1, **ms1mx3.4**/22, **Error ellipse: s-maj=373.6km s-min=28.7km az=54.0, Northern Sumatera**

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

WRA	**Warramunga Arr**	**37.60**	**124**	P	P	09 14 06.8	+0.2
	1.3nm,1.1s,baz=303,slow=8.9,SNR=4.6						
ASAR	**Alice Springs**	**39.15**	**130**	P	P	09 14 19.4	-0.3
	0.5nm,0.8s,baz=317,slow=6.4,SNR=3.2						
MKAR	**Makanchi Array**	**49.33**	**342**	P	P	09 15 40.9	0.0
	0.4nm,0.5s,baz=142,slow=8.2,SNR=5.0						
ASAJ	**Asahikawa**	**56.56**	**34**	LR	LR	09 39 05.8	
	comp=Z,167nm,20.0s,baz=128,slow=34						

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*ISCJB **06** 09:11:58.8±0.9, 41.17N±0.09×23.8E±0.1, h22^{km}±13^{km}, Error ellipse: s-maj=19.7km s-min=8.8km az=43.7*
*CSEM **06** 09:11:58.9±0.1, 41.14N×23.87E, h18^{km}±1^{km}, ML2.8, Error ellipse: s-maj=3.6km s-min=2.4km az=125.0*
*ATH **06** 09:11:58.1, 41.19N×23.87E, h27^{km}, MD3.1/3*
*THE **06** 09:12:00.1, 41.12N×23.80E, h11^{km}, ML2.8*
ISC 06 09:11:58.9±0.8, **41.16N**±0.09×**23.8E**±0.1, **h21**^{km}±13^{km}, **n7**, σ**0^{s}38**/9, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.18**	**256**	*e*Pg	**Pb**	**09 12 03.6**	**-0.2**
NVR	**Nevrokopi**	**0.19**	**8**	*e*PB	**Pb**	**09 12 03.7**	**-0.3**
NVR				*e*SB	**Sb**	**09 12 07.5**	**0.0**
SOH	**Sokhos**	**0.49**	**227**	*e*Pg	**Pb**	**09 12 08.6**	**-0.3**
SOH				*e*Sg	**Sb**	**09 12 15.6**	**0.0**
KNT	**Kendrikon**	**0.70**	**270**	*e*Pg	**Pb**	**09 12 13.1**	**+0.7**
OUR	**Ouranopolis**	**0.83**	**172**	*e*Pg	**Pb**	**09 12 15.2**	**+0.5**
PLG	**Polygyros**	**0.84**	**200**	*e*PN	**Pn**	**09 12 14.8**	**-0.6**
RDO	**Rodhopi**	**1.29**	**90**	*e*PN	**Pn**	**09 12 21.8**	**+0.2**

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*ISCJB **06** 09:16:14.0±0.9, 17.34N±0.04×101.68W±0.03, h24^{km}±6^{km}, mb3.5/3, Error ellipse: s-maj=7.6km s-min=4.5km az=23.9*
*IDC **06** 09:16:13.3±5.0, 17.40N×101.51W, h0^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.7/18, mbtmp3.4/5, ML2.8/2, Error ellipse: s-maj=99.7km s-min=23.4km az=20.0*
*MEX **06** 09:16:15.2±0.8, 17.34N×101.70W, h5^{km}±6^{km}, MD4.5*
*NEIC **06** 09:16:15.1, 17.33N×101.70W, h5^{km}, MD4.5(MEX), After MEX.*
ISC 06 09:16:14.5±1.0, **17.33N**±0.04×**101.65W**±0.04, **h15**^{km}±4^{km}, **n33**, σ**1^{s}44**/58, **mb3.5**/3, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.32**	**32**	*i* P	**Pg**	**09 16 21.6**	**+0.3**
ZIIG				*i* S	**Sg**	**09 16 26.7**	**+1.0**
CAIG	**El Cayaco**	**1.35**	**102**	*i* P	**Pn**	**09 16 37.9**	**-0.9**
CAIG				*i* S	**Sn**	**09 16 55.7**	**-0.8**
ACX	**Acapulco**	**1.72**	**105**	*i* P	**Pn**	**09 16 42.0**	**-1.9**
ACX				*i* S	**Sn**	**09 17 07.5**	**+1.9**
ACX	**Acapulco**	**1.72**	**105**	*i* P	**Pn**	**09 16 42.0**	**-1.9**
ACX				*i* S	**Sn**	**09 17 05.0**	**-0.6**
MMIG	**Aquila**	**1.88**	**301**	*i* P	**Pn**	**09 16 44.2**	**-2.0**
MMIG				*i* S	**Sn**	**09 17 05.8**	**-3.8**
MEIG	**Mezcala**	**2.02**	**73**	*i* P	**Pn**	**09 16 47.7**	**-0.3**
MEIG				*i* S	**Sn**	**09 17 10.4**	**-2.7**
PLIG	**Platanillo**	**2.30**	**62**	*i* P	**Pn**	**09 16 51.3**	**-0.6**
PLIG				*i* S	**Sn**	**09 17 18.4**	**-1.6**
MOIG	**Morelia**	**2.37**	**10**	*i* P	**Pn**	**09 16 52.2**	**-0.7**
MOIG				*i* S	**Sn**	**09 17 20.9**	**-0.9**
YAIG	**Yautepec**	**2.88**	**58**	*i* P	**Pn**	**09 17 01.0**	**+1.0**
YAIG				*i* S	**Sn**	**09 17 35.2**	**+0.7**
SZVM	**Salazar**	**2.92**	**47**	*i* P	**Pn**	**09 17 02.3**	**+1.8**
SZVM				*i* S	**Sn**	**09 17 34.2**	**-1.2**
UNM	**Universidad Na**	**3.07**	**49**	*e*P	**Pn**	**09 17 02.9**	**+0.3**
UNM				*i* S	**Sn**	**09 17 40.1**	**+1.0**
UNM				*i* S	**Sg**	**09 17 52.0**	**-1.3**
UNM	**Universidad Na**	**3.07**	**49**	*e*P	**Pn**	**09 17 02.9**	**+0.3**
UNM				*i* S	**Sn**	**09 17 40.1**	**+1.0**
PBVM	**Pinon**	**3.21**	**49**	*e*P	**Pn**	**09 17 02.7**	**-1.7**
PBVM				*i* S	**Sn**	**09 17 43.2**	**+0.8**
PTVM	**Pico Tres Padr**	**3.29**	**47**	*i* P	**Pn**	**09 17 08.5**	**+3.0**
PTVM				*i* S	**Sn**	**09 17 40.5**	**-4.0**
PPM	**Popocatepetl**	**3.35**	**59**	*i* P	**Pn**	**09 17 09.4**	**+3.1**
PPM	**Popocatepetl**	**3.35**	**59**	*e*P	**Pn**	**09 17 06.7**	**+0.3**
PPM				*i* P		09 17 09.4	
PNIG	**Pinotepa**	**3.50**	**105**	*i* P	**Pn**	**09 17 06.4**	**-2.0**
PNIG				*i* S	**Sn**	**09 17 52.2**	**+2.7**
IIO	**Organos**	**3.57**	**51**	*i* P	**Pn**	**09 17 07.9**	**-1.5**
IIO				*i* S	**Sn**	**09 17 49.8**	**-1.5**
UTMO	**Huajuapan**	**3.70**	**82**	*e*P	**Pn**	**09 17 09.3**	**-1.9**
UTMO				*i* S	**Sn**	**09 17 56.7**	**+2.2**
TPIG	**Tehuac#an**	**4.22**	**75**	*e*P	**Pn**	**09 17 19.3**	**+1.0**
TPIG				*i* S	**Sn**	**09 18 08.7**	**+1.3**
ANIG	**Ahuacatlan**	**4.59**	**324**	*i* P	**Pn**	**09 17 26.3**	**+2.9**
VHO	**Vista Hermosa**	**4.70**	**92**	*i* P	**Pn**	**09 17 25.4**	**+0.4**
VHO				*i* S	**Sn**	**09 18 22.3**	**+3.0**
OXX	**Oaxaca**	**4.71**	**92**	*e*P	**Pn**	**09 17 33.5**	**+8.4**
ZAIG	**Zacatecas**	**5.48**	**351**	*e*P	**Pn**	**09 17 36.1**	**+0.5**
ZAIG				*i* S	**Sn**	**09 18 38.8**	**+0.4**
CMIG	**Matias Romero**	**6.47**	**91**	*i* P	**Pn**	**09 17 50.2**	**+1.0**
CMIG				Sn	**Sn**	**09 18 56.5**	**-6.3**
CMIG				*i* S	**Sn**	**09 19 02.3**	**-0.5**
CMIG				Lg		09 19 34.6	
CMIG	**Matias Romero**	**6.47**	**91**	Pn	**Pn**	**09 17 49.0**	**-0.2**
	0.2nm,0.3s,baz=82,slow=4.4,SNR=5.3						
CMIG				Sn	**Sn**	**09 18 56.5**	**-6.3**
	0.4nm,0.3s,baz=305,slow=16,SNR=2.6						
CMIG				Lg		09 19 34.6	
	3.7nm,0.3s,baz=24,slow=11,SNR=7.6						
CMIG	**Matias Romero**	**6.47**	**91**	*i* P	**Pn**	**09 17 50.2**	**+1.0**
CMIG				*i* S	**Sn**	**09 19 02.3**	**-0.5**
TXAR	**Lajitas Array**	**12.09**	**352**	Pn	**Pn**	**09 19 10.3**	**+4.0**
	0.0nm,0.3s,baz=173,slow=16,SNR=3.2						
ARUT	**Antelope Range**	**22.86**	**335**	*e*P	**P**	**09 21 20.3**	**+3.0**
NVAR	**Mina Array Bea**	**25.58**	**329**	P	**P**	**09 21 45.6**	**+2.6**
	1.2nm,0.8s,mb3.5,baz=147,slow=13,SNR=8.1						
PDAR	**Pinedale Array**	**26.23**	**347**	P	**P**	**09 21 49.0**	**+0.1**
	0.9nm,0.8s,mb3.3,baz=165,slow=12,SNR=7.5						
YKA	**Yellowknife Ar**	**46.02**	**352**	P	**P**	**09 24 36.7**	**-0.4**
YKA	**Yellowknife Ar**	**46.02**	**352**	P	**P**	**09 24 36.7**	**-0.4**
	0.6nm,0.8s,mb3.5,baz=160,slow=7.3,SNR=7.7						

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*IDC **06** 09:27:24.1±1.2, 41.81S×172.75E, h0^{km}, mb3.7/2, mb1 3.9/3, mb1mx3.8/10, mbtmp3.7/3, Error ellipse: s-maj=47.2km s-min=26.6km az=163.0*
*ISCJB **06** 09:27:27.4±0.7, 41.40S±0.02×172.27E±0.04, h11^{km}±5^{km}, mb4.2/4, MS4.2/2, Error ellipse: s-maj=5.5km s-min=3.3km az=32.7*
*BJI **06** 09:27:27.7, 41.40S×172.40E, h5^{km}, mB5.4, mb5.0, Ms4.7, Msz4.3*
*NEIC **06** 09:27:28.7, 41.38S×172.37E, h5^{km}, ML4.7(WEL), After WEL.*
NEIC Felt from Greymouth to Nelson.
*WEL **06** 09:27:28.5±0.1, 41.37S×172.36E, h5^{km}, ML4.7/64, Error ellipse: s-maj=1.4km s-min=0.9km az=90.0*
WEL Felt from Nelson to Canterbury, maximum reported intensity MM 5.
ISC 06 09:27:28.0±0.7, **41.42S**±0.02×**172.32E**±0.04, **h5**^{km}±5^{km}, **n132**, σ**0^{s}83**/128, **mb4.2**/4, **MS4.2**/2, **5C-5D, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.51**	**230**	P	**Pg**	**09 27 39.5**	**+1.7**
DSZ	**Denniston Nort**	**0.51**	**230**	⇓PG	**Pg**	**09 27 39.5**	**+1.7**
THZ	**Tophouse**	**0.56**	**129**	P	**Pg**	**09 27 39.3**	**+0.6**
THZ	**Tophouse**	**0.56**	**129**	⇓PG	**Pg**	**09 27 39.3**	**+0.7**
THZ				SG	**Sg**	**09 27 46.5**	**+0.7**
QRZ	**Quartz Range**	**0.61**	**15**	P	**Pg**	**09 27 39.8**	**+0.2**
QRZ	**Quartz Range**	**0.61**	**15**	⇑PG	**Pg**	**09 27 39.8**	**+0.2**
QRZ				SG	**Sg**	**09 27 47.4**	**-0.1**
NNZ	**Nelson**	**0.82**	**76**	P	**Pg**	**09 27 43.1**	**-0.6**
NNZ	**Nelson**	**0.82**	**76**	P*	**Pb**	**09 27 43.0**	**-1.7**
BSWZ	**Blackbirch Sta**	**1.20**	**105**	P	**Pg**	**09 27 51.0**	**0.0**
BSWZ	**Blackbirch Sta**	**1.20**	**105**	⇓P*	**Pb**	**09 27 51.0**	**-0.2**
TUWZ	**Tuamarina**	**1.22**	**91**	⇓P*	**Pb**	**09 27 50.0**	**-1.4**
KHZ	**Kahutara**	**1.35**	**138**	P	**Pn**	**09 27 54.8**	**+1.3**
KHZ	**Kahutara**	**1.35**	**138**	⇑PN	**Pn**	**09 27 54.8**	**+1.3**
DUWZ	**D'Urville Isla**	**1.35**	**64**	⇓P*	**Pb**	**09 27 52.2**	**-1.5**
LTZ	**Lake Taylor**	**1.37**	**182**	P	**Pn**	**09 27 54.1**	**+0.4**
LTZ	**Lake Taylor**	**1.37**	**182**	⇑PN	**Pn**	**09 27 54.1**	**+0.5**
CMWZ	**Cape Campbell**	**1.46**	**104**	P	**Pn**	**09 27 56.4**	**+1.5**
CMWZ	**Cape Campbell**	**1.46**	**104**	PN	**Pn**	**09 27 56.2**	**+1.3**
TCW	**Tory Channel**	**1.48**	**83**	P	**Pn**	**09 27 54.5**	**-0.8**
TCW	**Tory Channel**	**1.48**	**83**	PN	**Pn**	**09 27 54.4**	**-0.8**
SNZO	**South Karori**	**1.79**	**87**	P	**Pn**	**09 28 00.2**	**+0.6**
SNZO	**South Karori**	**1.79**	**87**	PN	**Pn**	**09 27 60.0**	**+0.4**
MRW	**Makara Radio**	**1.80**	**85**	P	**Pn**	**09 28 00.1**	**+0.5**
MRW	**Makara Radio**	**1.80**	**85**	PN	**Pn**	**09 28 00.1**	**+0.5**
WEL	**Wellington**	**1.84**	**87**	P	**Pn**	**09 28 01.0**	**+0.8**
WEL	**Wellington**	**1.84**	**87**	PN	**Pn**	**09 28 01.2**	**+1.0**
BHW	**Baring Head**	**1.92**	**91**	P	**Pn**	**09 28 01.9**	**+0.7**
BHW	**Baring Head**	**1.92**	**91**	PN	**Pn**	**09 28 01.8**	**+0.6**
KIW	**Kapiti Island**	**2.03**	**75**	P	**Pn**	**09 28 03.7**	**+0.9**
KIW	**Kapiti Island**	**2.03**	**75**	PN	**Pn**	**09 28 03.5**	**+0.7**
WVZ	**Waitaha Valley**	**2.04**	**215**	P	**Pn**	**09 28 02.8**	**-0.1**
WVZ	**Waitaha Valley**	**2.04**	**215**	PN	**Pn**	**09 28 02.6**	**-0.2**
CAW	**Cannon Point**	**2.09**	**82**	P	**Pn**	**09 28 04.4**	**+0.8**
CAW	**Cannon Point**	**2.09**	**82**	⇑PN	**Pn**	**09 28 04.4**	**+0.8**
CRLZ	**Canterbury Las**	**2.17**	**174**	P	**Pn**	**09 28 04.4**	**-0.3**
CRLZ	**Canterbury Las**	**2.17**	**174**	PN	**Pn**	**09 28 04.4**	**-0.3**
MSWZ	**Moikau Station**	**2.20**	**91**	P	**Pn**	**09 28 05.1**	**0.0**
MSWZ	**Moikau Station**	**2.20**	**91**	⇑PN	**Pn**	**09 28 05.1**	**0.0**
MQZ	**McQueen's Vall**	**2.30**	**174**	P	**Pn**	**09 28 06.0**	**-0.5**
MQZ	**McQueen's Vall**	**2.30**	**174**	PN	**Pn**	**09 28 05.9**	**-0.6**
PAWZ	**Paruwai Farm**	**2.33**	**90**	P	**Pn**	**09 28 06.6**	**-0.4**
PAWZ	**Paruwai Farm**	**2.33**	**90**	PN	**Pn**	**09 28 06.6**	**-0.3**
MTW	**Mount Morrison**	**2.41**	**85**	PN	**Pn**	**09 28 07.7**	**-0.3**
NWEZ	**Newall Road**	**2.44**	**29**	P	**Pn**	**09 28 08.3**	**-0.2**
NWEZ	**Newall Road**	**2.44**	**29**	*e*PN	**Pn**	**09 28 08.1**	**-0.3**
RPZ	**Rata Peaks**	**2.48**	**202**	*e*P	**Pn**	**09 28 09.8**	**+0.8**
RPZ	**Rata Peaks**	**2.48**	**202**	PN	**Pn**	**09 28 09.5**	**+0.5**
TRWZ	**Traveller**	**2.53**	**91**	PN	**Pn**	**09 28 09.1**	**-0.6**
NEZ	**North Egmont**	**2.54**	**33**	P	**Pn**	**09 28 10.4**	**+0.7**
NEZ	**North Egmont**	**2.54**	**33**	*e*PN	**Pn**	**09 28 09.9**	**+0.2**
PKE	**Pukeiti**	**2.56**	**30**	P	**Pn**	**09 28 10.1**	**+0.1**
PKE	**Pukeiti**	**2.56**	**30**	PN	**Pn**	**09 28 10.0**	**0.0**
MRZ	**Mangatainoka R**	**2.58**	**74**	P	**Pn**	**09 28 10.3**	**0.0**
MRZ	**Mangatainoka R**	**2.58**	**74**	PN	**Pn**	**09 28 10.3**	**0.0**
WAZ	**Wanganui**	**2.62**	**52**	P	**Pn**	**09 28 11.9**	**+1.0**
WAZ	**Wanganui**	**2.62**	**52**	PN	**Pn**	**09 28 11.9**	**+1.0**
RAEZ	**Rainy Point**	**2.65**	**37**	P	**Pn**	**09 28 11.6**	**+0.3**
RAEZ	**Rainy Point**	**2.65**	**37**	PN	**Pn**	**09 28 11.5**	**+0.2**
TIWZ	**Tintock**	**2.77**	**78**	PN	**Pn**	**09 28 12.4**	**-0.5**
FOZ	**Fox Glacier**	**2.90**	**221**	P	**Pn**	**09 28 13.1**	**-1.6**
FOZ	**Fox Glacier**	**2.90**	**221**	PN	**Pn**	**09 28 13.0**	**-1.7**
VRZ	**Vera Road**	**2.95**	**40**	P	**Pn**	**09 28 15.4**	**0.0**
VRZ	**Vera Road**	**2.95**	**40**	PN	**Pn**	**09 28 15.3**	**-0.1**
BFZ	**Birch Farm**	**3.06**	**77**	P	**Pn**	**09 28 15.7**	**-1.2**
BFZ	**Birch Farm**	**3.06**	**77**	PN	**Pn**	**09 28 15.8**	**-1.0**
TSZ	**Takapari Road**	**3.08**	**65**	PN	**Pn**	**09 28 17.5**	**+0.3**
PKVZ	**Pokaka**	**3.14**	**48**	PN	**Pn**	**09 28 18.5**	**+0.5**
MTVZ	**Mangateitei**	**3.14**	**51**	*e*PN	**Pn**	**09 28 18.7**	**+0.6**
TRVZ	**Turoa**	**3.25**	**50**	PN	**Pn**	**09 28 20.2**	**+0.7**
WNVZ	**Wahianoa**	**3.26**	**51**	P	**Pn**	**09 28 20.4**	**+0.8**
WNVZ	**Wahianoa**	**3.26**	**51**	*e*PN	**Pn**	**09 28 20.2**	**+0.5**
FWVZ	**Far West T-bar**	**3.28**	**50**	P	**Pn**	**09 28 20.6**	**+0.7**
FWVZ	**Far West T-bar**	**3.28**	**50**	*e*PN	**Pn**	**09 28 20.4**	**+0.4**
MOVZ	**Moawhango**	**3.30**	**54**	P	**Pn**	**09 28 20.9**	**+0.7**
MOVZ	**Moawhango**	**3.30**	**54**	*e*PN	**Pn**	**09 28 20.4**	**+0.2**
WPVZ	**Whakapapa**	**3.31**	**49**	P	**Pn**	**09 28 20.8**	**+0.4**
WPVZ	**Whakapapa**	**3.31**	**49**	*e*PN	**Pn**	**09 28 20.7**	**+0.3**
TWVZ	**Taurewa**	**3.34**	**47**	P	**Pn**	**09 28 21.1**	**+0.3**
TWVZ	**Taurewa**	**3.34**	**47**	PN	**Pn**	**09 28 21.0**	**+0.2**
LBZ	**Lake Benmore**	**3.36**	**207**	*e*P	**Pn**	**09 28 21.2**	**+0.1**
LBZ	**Lake Benmore**	**3.36**	**207**	*e*PN	**Pn**	**09 28 20.7**	**-0.4**
NGZ	**Ngauruhoe**	**3.36**	**49**	P	**Pn**	**09 28 21.8**	**+0.7**
NGZ	**Ngauruhoe**	**3.36**	**49**	PN	**Pn**	**09 28 21.7**	**+0.6**
WTVZ	**West Tongariro**	**3.39**	**48**	P	**Pn**	**09 28 22.1**	**+0.6**
WTVZ	**West Tongariro**	**3.39**	**48**	*e*PN	**Pn**	**09 28 21.6**	**+0.1**
OTVZ	**Oturere**	**3.40**	**50**	*e*PN	**Pn**	**09 28 22.7**	**+1.0**
KRVZ	**Karewarewa**	**3.44**	**49**	*e*PN	**Pn**	**09 28 22.1**	**0.0**
HIZ	**Hauiti**	**3.49**	**35**	P	**Pn**	**09 28 22.1**	**-0.8**
HIZ	**Hauiti**	**3.49**	**35**	PN	**Pn**	**09 28 22.0**	**-0.9**
KATZ	**Kakaramea**	**3.55**	**48**	P	**Pn**	**09 28 24.1**	**+0.4**
KATZ	**Kakaramea**	**3.55**	**48**	*e*PN	**Pn**	**09 28 23.8**	**+0.1**
RATZ	**Rangitukua**	**3.67**	**47**	P	**Pn**	**09 28 26.5**	**+1.2**
RATZ	**Rangitukua**	**3.67**	**47**	*e*PN	**Pn**	**09 28 25.5**	**+0.2**
JCZ	**Jackson Bay**	**3.73**	**223**	P	**Pn**	**09 28 26.3**	**+0.1**
JCZ	**Jackson Bay**	**3.73**	**223**	*e*PN	**Pn**	**09 28 25.3**	**-0.9**
WATZ	**Wairara**	**3.76**	**45**	P	**Pn**	**09 28 27.4**	**+0.8**
WATZ	**Wairara**	**3.76**	**45**	*e*PN	**Pn**	**09 28 26.2**	**-0.4**
ODZ	**Otahua Downs**	**3.83**	**198**	P	**Pn**	**09 28 27.3**	**-0.2**
ODZ	**Otahua Downs**	**3.83**	**198**	PN	**Pn**	**09 28 27.2**	**-0.3**
BKZ	**Black Stump Fm**	**3.90**	**56**	*e*PN	**Pn**	**09 28 28.0**	**-0.5**
WKZ	**Wanaka**	**4.18**	**214**	*e*P	**Pn**	**09 28 31.5**	**-0.9**
WKZ	**Wanaka**	**4.18**	**214**	*e*PN	**Pn**	**09 28 31.0**	**-1.3**
EAZ	**Earnscleugh**	**4.40**	**209**	*e*P	**Pn**	**09 28 34.6**	**-0.8**
EAZ	**Earnscleugh**	**4.40**	**209**	*e*PN	**Pn**	**09 28 33.9**	**-1.5**
TOZ	**Tahuroa Road**	**4.42**	**35**	P	**Pn**	**09 28 35.0**	**-0.7**
WTAZ	**Waiatarua**	**4.80**	**22**	P	**Pn**	**09 28 41.0**	**+0.1**
WTAZ	**Waiatarua**	**4.80**	**22**	*e*PN	**Pn**	**09 28 40.9**	**-0.1**
URZ	**Urewera**	**4.85**	**51**	Pn	**Pn**	**09 28 39.5**	**-2.1**
	baz=250,slow=9.1						
URZ				Sn	**Sn**	**09 29 37.4**	**-0.7**
	1.1nm,0.3s,baz=266,slow=13,SNR=2.0						
TUZ	**Tuapeka**	**4.94**	**202**	*e*P	**Pn**	**09 28 42.2**	**-0.6**
TUZ	**Tuapeka**	**4.94**	**202**	*e*PN	**Pn**	**09 28 41.8**	**-1.0**
MLZ	**Mavora Lakes**	**4.96**	**216**	*e*P	**Pn**	**09 28 43.5**	**+0.5**
MLZ	**Mavora Lakes**	**4.96**	**216**	PN	**Pn**	**09 28 43.4**	**+0.4**
MWZ	**Matawai**	**5.05**	**54**	P	**Pn**	**09 28 42.1**	**-2.2**
MWZ	**Matawai**	**5.05**	**54**	*e*PN	**Pn**	**09 28 41.9**	**-2.4**
WHZ	**Wether Hill Ro**	**5.49**	**214**	*e*P	**Pn**	**09 28 49.8**	**-0.5**
WHZ	**Wether Hill Ro**	**5.49**	**214**	*e*PN	**Pn**	**09 28 49.6**	**-0.7**
SYZ	**Scrubby Hill**	**5.61**	**203**	*e*PN	**Pn**	**09 28 50.7**	**-1.3**
WCZ	**Waipu Caves**	**5.69**	**17**	*e*P	**Pn**	**09 28 52.4**	**-0.7**
WCZ	**Waipu Caves**	**5.69**	**17**	PN	**Pn**	**09 28 52.3**	**-0.8**
OUZ	**Omahuta**	**6.27**	**10**	*e*P	**Pn**	**09 29 01.1**	**+0.1**
OUZ	**Omahuta**	**6.27**	**10**	*e*PN	**Pn**	**09 29 00.5**	**-0.5**
ASAR	**Alice Springs**	**36.55**	**287**	P	**P**	**09 34 34.7**	**+0.1**
	0.5nm,0.5s,mb3.6,baz=128,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**38.64**	**292**	P	**P**	**09 34 53.5**	**+1.2**
	1.0nm,0.8s,mb3.6,baz=134,slow=6.9,SNR=13						
QSPA	**South Pole Qui**	**48.71**	**180**	*e*P	**P**	**09 36 14.1**	**+1.4**
	6.8nm,0.8s,mb4.7						
KMI	**Kunming**	**92.32**	**302**	P	**P**	**09 40 40.9**	**+1.7**
KMI				AP	pP	09 40 45.5	+4.6
KMI				XP	sP	09 40 47.3	+5.8
KMI				AMB	AMB		
	comp=Z,8.0nm,1.5s,mb4.8						
KMI				LR	LR		
	comp=Z,75nm,18.4s,MS4.2						
WMQ	**Urumqi**	**113.81**	**308**	PKP	PKiKP	09 46 04.1	-3.1
WMQ				PP	PP	09 47 02.2	+1.3
WMQ				PP	PP		
	comp=Z,104nm,6.2s						
WMQ				LR	LR		
	comp=N,28nm,15.0s,MS4.3						
WMQ				LR	LR		
	comp=E,64nm,19.0s,MS4.3						
WMQ				LR	LR		
	comp=Z,49nm,16.5s,MS4.2						
YKA	**Yellowknife Ar**	**118.81**	**30**	PKP	PKPdf	09 46 12.4	-3.8
	comp=Z,0.2nm,0.6s,baz=265,slow=1.5,SNR=4.0						
ARCES	**ARCESS Array B**	**146.96**	**339**	PKPbc	PKPbc	09 47 07.8	-2.5
	comp=Z,3.3nm,0.7s,baz=68,slow=5.1,SNR=8.1						
JOF	**Joensuu**	**148.60**	**326**	*e*p	PKPdf	09 47 11.2	0.0
	comp=Z,3.5nm,0.6s						
BRTR	**Keskin Array B**	**148.78**	**281**	PKPbc	PKPbc	09 47 13.4	-2.7
	comp=Z,0.5nm,0.5s,baz=49,slow=4.0,SNR=2.7						
TORD	**Torodi Ar. Bea**	**150.67**	**199**	PKPbc	PKPbc	09 47 18.1	-3.3
	comp=Z,1.1nm,0.8s,baz=155,slow=3.2,SNR=8.9						
FINES	**FINESS Array B**	**151.46**	**326**	PKPbc	PKPbc	09 47 19.6	-2.2
	comp=Z,1.4nm,0.6s,baz=86,slow=2.2,SNR=6.3						

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*IDC **06** 09:33:58.1±0.9, 1.29N×96.89E, h0^{km}, mb4.3/12, mb1 4.4/13, mb1mx4.2/23, mbtmp4.3/13, Error ellipse: s-maj=31.6km s-min=15.8km az=50.0*
*MOS **06** 09:34:01.6±0.8, 1.37N×97.02E, h33^{km}, mb4.7/5, Error ellipse: s-maj=19.3km s-min=7.7km az=95.0*
*BJI **06** 09:34:01.4, 1.64N×97.35E, h16^{km}, mB5.2, mb4.8, Ms5.0, Msz4.5*
*ISCJB **06** 09:34:03.5±2.1, 1.42N±0.09×97.1E±0.1, h48^{km}±16^{km}, mb4.5/33, MS4.1/1, Error ellipse: s-maj=21.5km s-min=9.6km az=140.9*
*NEIC **06** 09:34:03.1±0.5, 1.40N×97.06E, mb4.8/12, Error ellipse: s-maj=13.4km s-min=8.1km az=46.0*
ISC 06 09:34:04.5±1.9, **1.41N**±0.09×**97.1E**±0.1, **h38**^{km}±14^{km}, **h29**^{km}±2.0^{km}**:pP-P**, **n74**, σ**0^{s}96**/74, **mb4.5**/33, **MS4.1**/1, **2C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.26**	**52**	Pn	**Pn**	**09 34 39.4**	**-0.1**
	5.6nm,0.3s,baz=234,slow=5.5,SNR=53						
TSI	**Tuntungan**	**2.52**	**35**	P	**Pn**	**09 34 43.8**	**+0.7**
	697nm,1.0s						
BSI	**Banda Aceh**	**4.45**	**336**	P	**Pn**	**09 35 15.4**	**+5.8**
	55nm,0.8s						
KULM	**Kulim**	**5.22**	**42**	*e*Pn	**Pn**	**09 35 20.0**	**-0.1**
CHTO	**Chiang Mai**	**17.39**	**6**	*e*Pn	**Pn**	**09 38 02.2**	**-2.2**
	5.4nm,0.8s						
CHTO	**Chiang Mai**	**17.39**	**6**	*e*P	**Pn**	**09 38 02.2**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KKM	**Kota Kinabalu**	**19.59**	**76**	*e*P	**Pn**	**09 38 30.6**	**-0.6**
KMI	**Kunming**	**24.19**	**12**	P	**P**	**09 39 17.8**	**+0.3**
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
SHL	**Shillong**	**24.54**	**349**	*i* P	**P**	**09 39 20.0**	**-0.7**
ODAN	**Odare**	**26.98**	**341**	*e*P	**P**	**09 39 43.8**	**+1.0**
	comp=Z,66nm,1.1s,mb5.1						
TAPN	**Taplejung**	**27.33**	**342**	*e*P	**P**	**09 39 47.3**	**+1.4**
	comp=Z,87nm,1.0s,mb5.2						
JIRN	**Jiri**	**28.13**	**339**	*e*P	**P**	**09 39 53.9**	**+0.9**
	comp=Z,41nm,0.9s,mb5.1						
KKN	**Kakani**	**28.58**	**338**	*e*P	**P**	**09 39 57.6**	**+0.5**
GKN	**Gorkha**	**29.02**	**337**	*e*P	**P**	**09 40 01.8**	**+0.8**
	comp=Z,23nm,0.6s,mb5.0						
MBWA	**Marble Bar**	**31.50**	**137**	*e*P	**P**	**09 40 24.3**	**+1.3**
	comp=Z,72nm,1.8s,mb5.2						
WHN	**Wuhan**	**33.26**	**28**	*e*P	**P**	**09 40 35.0**	**-3.3**
LZH	**Lanzhou**	**35.06**	**9**	*e*P	**P**	**09 40 54.1**	**+0.2**
LZH				AP	pP	09 41 03.0	-1.7
LZH				XP	sP	09 41 07.1	-2.2
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,113nm,4.3s						
GTA	**Gaotai**	**37.90**	**3**	*e*P	**P**	**09 41 18.3**	**+0.3**
GTA				AP	pP	09 41 25.5	-3.4
GTA				XP	sP	09 41 29.4	-4.1
GTA				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.2						
HHC	**Hu-ho-hao-te**	**41.38**	**17**	*e*P	**P**	**09 41 48.6**	**+1.6**
HHC				AP	pP	09 41 56.1	-1.8
HHC				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,180nm,5.0s						
BJT	**Baijiatuau**	**42.15**	**22**	*e*P	**P**	**09 41 53.5**	**+0.2**
	comp=Z,16nm,0.6s,mb4.8						
BJT				*e*sP	sP	09 42 05.7	-3.1
BJT	**Baijiatuau**	**42.15**	**22**	*e*P	**P**	**09 41 53.5**	**+0.2**
BJT				*e**SP	sP	09 42 05.7	-3.2
BJT				pmax	pmax		
	comp=Z,16nm,0.6s						
BJI	**Beijing**	**42.17**	**22**	P	**P**	**09 41 54.1**	**+0.6**
BJI				AMB	AMB		
	comp=Z,23nm,0.8s,mb4.9						
WRA	**Warramunga Arr**	**42.20**	**122**	P	**P**	**09 41 53.9**	**-0.2**
WRA	**Warramunga Arr**	**42.20**	**122**	P	**P**	**09 41 53.7**	**-0.3**
	comp=Z,2.2nm,0.6s,mb4.0,baz=302,slow=8.9,SNR=28						
WB2	**Warramunga Arr**	**42.22**	**122**	*e*P	**P**	**09 41 53.6**	**-0.5**
WMQ	**Urumqi**	**43.06**	**350**	P	**P**	**09 42 02.2**	**+1.6**
ASAR	**Alice Springs**	**43.58**	**127**	P	**P**	**09 42 05.2**	**+0.1**
	comp=Z,2.5nm,0.9s,mb3.9,baz=301,slow=7.5,SNR=16						
UCH	**Uchtor**	**45.43**	**336**	*e*P	**P**	**09 42 19.8**	**+0.1**
	comp=Z,3.8nm,0.8s,mb4.3						
UCH				*e*sP	sP	09 42 33.0	-2.2
TKM2	**Tokmak 2**	**45.60**	**338**	*e*P	**P**	**09 42 19.8**	**-1.1**
TKM2				*e*pP	pP	09 42 27.8	-4.3
TKM2				*e*sP	sP	09 42 34.3	-2.3
AML	**Almayashu**	**45.68**	**336**	*e*P	**P**	**09 42 22.6**	**+1.0**
	comp=Z,7.4nm,1.0s,mb4.6						
KSRS	**Korea Array**	**45.72**	**35**	P	**P**	**09 42 22.1**	**+0.1**
	comp=Z,11nm,0.9s,mb4.8,baz=221,slow=9.3,SNR=18						
SONM	**Songino Array**	**46.94**	**9**	P	**P**	**09 42 32.0**	**+0.6**
	comp=Z,8.1nm,0.8s,mb4.7,baz=191,slow=8.5,SNR=56						
SONM				PcP	PcP	09 44 04.1	+0.6
	comp=Z,1.1nm,0.8s,baz=183,slow=3.9,SNR=3.0						
MK31	**Makanchi Array**	**47.02**	**346**	P	**P**	**09 42 32.3**	**+0.2**
MKAR	**Makanchi Array**	**47.02**	**346**	P	**P**	**09 42 32.5**	**+0.4**
MKAR	**Makanchi Array**	**47.02**	**346**	P	**P**	**09 42 32.5**	**+0.4**
	comp=Z,4.7nm,0.5s,mb4.7,baz=160,slow=8.5,SNR=53						
ULN	**Ulaanbaatar**	**47.07**	**9**	*e*P	**P**	**09 42 31.2**	**-1.2**
	comp=Z,7.8nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**47.07**	**9**	*c i*P	**P**	**09 42 33.1**	**+0.7**
KK31	**Karatay Array**	**47.84**	**334**	P	**P**	**09 42 39.4**	**+0.9**
ZAK	**Zakamensk**	**49.07**	**5**	*e*P	**P**	**09 42 48.2**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
TLY	**Talaya**	**50.39**	**5**	*e*P	**P**	**09 42 55.7**	**-2.2**
TLY				*e*pP	pP	09 43 04.8	-4.3
TLY	**Talaya**	**50.39**	**5**	*i* P	**P**	**09 42 59.7**	**+1.8**
KURK	**Kurchatov**	**51.57**	**345**	*e*P	**P**	**09 43 04.8**	**-2.0**
KURK	**Kurchatov**	**51.57**	**345**	*i* P	**P**	**09 43 06.8**	**+0.1**
CIT	**Chita**	**52.28**	**13**	*e*P	**P**	**09 43 11.4**	**-0.6**
ZAL	**Zalesovo**	**53.33**	**351**	P	**P**	**09 43 20.0**	**+0.3**
ZALV	**Zalesovo Beam**	**53.34**	**351**	P	**P**	**09 43 20.0**	**+0.2**
ZALV	**Zalesovo Beam**	**53.34**	**351**	P	**P**	**09 43 20.0**	**+0.2**
	comp=Z,8.7nm,0.6s,mb4.9,baz=182,slow=6.3,SNR=43						
STKA	**Stephens Creek**	**53.55**	**132**	*e*P	**P**	**09 43 22.8**	**+1.1**
	comp=Z,2.9nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**53.55**	**132**	P	**P**	**09 43 22.6**	**+0.8**
	comp=Z,3.6nm,0.7s,mb4.4,baz=313,slow=8.1,SNR=7.3						
NVS	**Novosibirsk**	**54.46**	**350**	*i* P	**P**	**09 43 26.1**	**-1.8**
KLR	**Kul'dur**	**56.10**	**27**	*e*P	**P**	**09 43 37.0**	**-2.9**
AB31	**Akbulak array**	**57.30**	**332**	P	**P**	**09 43 47.8**	**-0.6**
BOD	**Bodaibo**	**57.82**	**11**	*e*P	**P**	**09 43 52.1**	**+0.2**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
AKTK	**Aktyubinsk**	**59.01**	**332**	P	**P**	**09 43 59.4**	**-1.0**
AKTO	**Aktyubinsk**	**59.01**	**332**	P	**P**	**09 43 59.4**	**-1.0**
	comp=Z,2.1nm,0.8s,mb4.2,baz=114,slow=10,SNR=6.2						
YSS	**Yuzh-Sakhalins**	**60.22**	**34**	P	**P**	**09 44 09.5**	**+0.8**
ARU	**Arti**	**62.96**	**337**	*e*P	**P**	**09 44 26.2**	**-0.8**
ARU	**Arti**	**62.96**	**337**	*d i*P	**P**	**09 44 26.7**	**-0.4**
ARU						09 46 43.6	
ARU				S	**S**	**09 52 56.1**	**+1.7**
ARU				SS	SS	09 57 04.4	+4.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
YAK	**Yakutsk**	**65.24**	**16**	P	**P**	**09 44 41.9**	**0.0**
BRTR	**Keskin Array B**	**68.92**	**312**	*i* P	**P**	**09 45 14.3**	**+8.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MA2	**Magadan**	**71.17**	**26**	*e*P	**P**	**09 45 17.4**	**-1.8**
	comp=Z,6.5nm,0.8s,mb4.6						
MA2	**Magadan**	**71.17**	**26**	*e*P	**P**	**09 45 19.2**	**+0.1**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
OBN	**Obninsk**	**72.40**	**328**	*e*P	**P**	**09 45 26.9**	**+0.3**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TIXI	**Tiksi**	**72.99**	**10**	*e*P	**P**	**09 45 28.3**	**-1.5**
	comp=Z,2.7nm,0.7s,mb4.3						
TIXI				*e*pP	pP	09 45 38.6	-2.9
TIXI	**Tiksi**	**72.99**	**10**	⇓*e*P	**P**	**09 45 29.3**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
AKASG	**Malin Array Be**	**75.05**	**322**	P	**P**	**09 45 40.7**	**-1.6**
AKASG	**Malin Array Be**	**75.05**	**322**	P	**P**	**09 45 40.7**	**-1.6**
	comp=Z,0.2nm,0.3s,mb3.5,baz=92,slow=4.6,SNR=6.0						
APA	**Apatity**	**78.91**	**339**	⇑*i*P	**P**	**09 45 57.6**	**-6.0**
APA				*i*		09 46 16.7	
APA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
FINES	**FINESS Array B**	**79.78**	**332**	P	**P**	**09 46 08.3**	**-0.2**
FINES	**FINESS Array B**	**79.78**	**332**	P	**P**	**09 46 08.2**	**-0.2**
	comp=Z,1.9nm,0.8s,mb4.1,baz=107,slow=6.6,SNR=5.7						
ARCES	**ARCESS Array B**	**82.31**	**340**	P	**P**	**09 46 21.7**	**-0.2**
ARCES	**ARCESS Array B**	**82.31**	**340**	P	**P**	**09 46 21.7**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.2,baz=93,slow=4.9,SNR=10						
GERES	**GERESS Array B**	**84.61**	**319**	P	**P**	**09 46 33.1**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.8,baz=72,slow=4.3,SNR=5.0						
TXAR	**Lajitas Array**	**143.53**	**31**	PKP	PKPdf	09 53 33.3	-2.5
	comp=Z,0.5nm,0.8s,baz=72,slow=0.6,SNR=8.3						

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*ISCJB **06** 09:34:46.5±0.3, 44.54N±0.02×7.00E±0.03, h11^{km}±2^{km}, Error ellipse: s-maj=3.6km s-min=2.2km az=146.2*
*GEN **06** 09:34:47.2, 44.53N×7.00E, h7^{km}, ML2.0*
*CSEM **06** 09:34:47.3±0.1, 44.55N×7.04E, h10^{km}, ML2.9/9, Error ellipse: s-maj=1.3km s-min=0.8km az=63.0*
*STR **06** 09:34:47.4±0.2, 44.53N×7.01E, h5^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*LDG **06** 09:34:47.6±0.1, 4454N×702E, h2km, Md2.7/1, Ml2.9/8, Error ellipse: s-maj=1.3km s-min=0.7km az=71.0*
*ROM **06** 09:34:47.1±0.2, 4454N×705E, h10km±1km, Md2.3/8, Ml2.1/5, Error ellipse: s-maj=3.6km s-min=1.7km az=58.0*
*NEIC **06** 09:34:47.6, 4454N×702E, h2km, ML2.9(LDG), ML2.4(STR), After LDG.*
ISC 06 09:34:47.1±0.3, **4454N**±002×**703E**±003, **h12**km±3km, **n43**, σ**0^{s}52**/79, **Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PZZ	**Prazzo**	**0.07**	**125**	Pg	**Pg**	**09 34 49.5**	**0.0**
PZZ				Sg	**Sg**	**09 34 51.0**	**-0.2**
DOI	**San Damiano**	**0.16**	**104**	Pg	**Pg**	**09 34 51.0**	**+0.2**
DOI				Sg	**Sg**	**09 34 53.2**	**-0.2**
	396nm,0.1s						
SURF	**Saint Ours**	**0.16**	**248**	Pg	**Pg**	**09 34 51.1**	**+0.3**
SURF				Sg	**Sg**	**09 34 52.9**	**-0.5**
MBDF	**Montbardon**	**0.26**	**315**	*e*Pg	**Pg**	**09 34 52.9**	**+0.5**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**09 34 56.1**	**+0.1**
	279nm,0.2s						
MBDF	**Montbardon**	**0.26**	**315**	*e*Pg	**Pg**	**09 34 52.9**	**+0.5**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**09 34 56.1**	**+0.1**
	139nm,0.2s						
OG22	**Abries**	**0.28**	**349**	Pg	**Pg**	**09 34 53.4**	**+0.5**
OG22				Sg	**Sg**	**09 34 57.6**	**+0.8**
STV	**Sta Anna Valdi**	**0.37**	**144**	Pg	**Pg**	**09 34 54.4**	**0.0**
STV				Sg	**Sg**	**09 34 59.4**	**0.0**
	140nm,0.2s						
ENR	**Entracque**	**0.43**	**138**	P	**Pg**	**09 34 55.5**	**0.0**
TOUF	**Mont Tournerai**	**0.55**	**163**	Pg	**Pg**	**09 34 58.2**	**+0.3**
TOUF				Sg	**Sg**	**09 35 04.4**	**-0.8**
BNI	**Bardonecchia**	**0.56**	**334**	Pg	**Pg**	**09 34 58.5**	**+0.4**
	53nm,0.7s						
AUTN	**L'Aution**	**0.62**	**152**	Pg	**Pg**	**09 34 59.6**	**+0.5**
AUTN				Sg	**Sg**	**09 35 07.3**	**0.0**
RSP	**Reno Superiore**	**0.63**	**15**	Pg	**Pg**	**09 34 59.7**	**+0.3**
	99nm,0.1s						
MVIF	**Mont Vial**	**0.65**	**172**	Pg	**Pg**	**09 35 00.1**	**+0.3**
SAOF	**Saorge**	**0.68**	**145**	Pg	**Pg**	**09 35 00.4**	**+0.2**
SAOF				Sg	**Sg**	**09 35 09.1**	**+0.1**
LUCF	**Luceram**	**0.69**	**160**	Pg	**Pg**	**09 35 00.7**	**+0.2**
MONE	**Monesi**	**0.70**	**131**	P	**Pg**	**09 35 00.5**	**-0.2**
MONE				S	**Sg**	**09 35 09.7**	**-0.1**
SBF	**Sospel**	**0.74**	**156**	*e*Pg	**Pg**	**09 35 01.8**	**+0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**09 35 12.1**	**+0.9**
	42nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.74**	**156**	*e*Pg	**Pg**	**09 35 01.8**	**+0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**09 35 12.1**	**+0.9**
	21nm,0.2s,SNR=1.0						
CALN	**Calern**	**0.80**	**187**	Pg	**Pg**	**09 35 02.6**	**+0.1**
NEGI	**Negi**	**0.85**	**145**	P	**Pg**	**09 35 03.3**	**-0.2**
NEGI				S	**Sg**	**09 35 14.2**	**-0.4**
RORO		**0.86**	**120**	P	**Pg**	**09 35 03.7**	**-0.1**
RORO				S	**Sg**	**09 35 14.7**	**-0.3**
IMI	**Imperia**	**0.89**	**135**	Pg	**Pg**	**09 35 04.1**	**-0.1**
IMI				Sg	**Sg**	**09 35 16.1**	**+0.3**
ORIF	**Oris-en-Rattie**	**0.90**	**295**	*e*Pg	**Pg**	**09 35 04.9**	**+0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**09 35 15.9**	**-0.2**
	25nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**0.90**	**295**	*e*Pg	**Pg**	**09 35 04.9**	**+0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**09 35 15.9**	**-0.2**
	12nm,0.2s,SNR=1.0						
FIN	**Finale Ligure**	**0.91**	**111**	Pg	**Pg**	**09 35 04.2**	**-0.5**
FIN				Sg	**Sg**	**09 35 16.6**	**0.0**
LPG	**La Plagne**	**0.97**	**349**	*e*Pg	**Pg**	**09 35 05.4**	**-0.5**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**09 35 18.7**	**+0.1**
LPG				*e*Sn	**Sn**	**09 35 20.5**	**+0.1**
	60nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**0.97**	**349**	*e*Pg	**Pg**	**09 35 05.4**	**-0.5**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**09 35 18.7**	**+0.1**
LPG				*e*Sn	**Sn**	**09 35 20.5**	**+0.1**
	30nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**0.99**	**348**	*e*Pg	**Pg**	**09 35 05.9**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**09 35 19.2**	**0.0**
	50nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**0.99**	**348**	*e*Pg	**Pg**	**09 35 05.9**	**-0.4**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**09 35 19.2**	**0.0**
	25nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**1.02**	**196**	*e*Pn	**Pn**	**09 35 06.9**	**-0.4**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**09 35 19.8**	**-0.2**
	74nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**1.02**	**196**	*e*Pn	**Pn**	**09 35 06.9**	**-0.4**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**09 35 19.8**	**-0.2**
	37nm,0.3s,SNR=1.0						
PCP	**Pian Castagno**	**1.09**	**90**	P	**Pb**	**09 35 07.5**	**-0.4**
TRAV		**1.10**	**28**	P	**Pb**	**09 35 07.4**	**-0.6**
SMRF	**Simiane la Rot**	**1.19**	**242**	*e*Pg	**Pg**	**09 35 11.4**	**+1.5**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**09 35 25.3**	**0.0**
	37nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.19**	**242**	*e*Pg	**Pg**	**09 35 11.4**	**+1.5**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**09 35 25.3**	**0.0**
	18nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**1.27**	**197**	*e*Pg	**Pg**	**09 35 11.4**	**0.0**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**09 35 27.4**	**-0.4**
	17nm,0.2s						
VIVF	**Saint-Julien-l**	**1.71**	**281**	*e*Pn	**Pn**	**09 35 16.0**	**-0.7**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**09 35 41.2**	**-0.8**
	4.1nm,0.3s						
VIVF	**Saint-Julien-l**	**1.71**	**281**	*e*Pn	**Pn**	**09 35 16.0**	**-0.7**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**09 35 41.2**	**-0.8**
	2.0nm,0.3s						
CABF	**La Chapelle**	**2.17**	**343**	*e*Pg	**Pg**	**09 35 27.7**	**-1.0**
CABF				*e*Sg	**Sg**	**09 35 55.7**	**-1.1**
	11nm,0.4s						
CABF	**La Chapelle**	**2.17**	**343**	*e*P	**Pn**	**09 35 25.1**	**+2.0**
CABF				*e*Pg	**Pg**	**09 35 27.7**	**-1.0**
CABF				*e*Sg	**Sg**	**09 35 55.7**	**-1.1**
CABF	**La Chapelle**	**2.17**	**343**	*e*Pg	**Pg**	**09 35 27.7**	**-1.0**
CABF				*e*Sg	**Sg**	**09 35 55.7**	**-1.1**
	5.3nm,0.4s						
BGF	**Bois d'Agland**	**3.56**	**306**	*e*Pn	**Pn**	**09 35 41.7**	**-0.5**
	SNR=1.0						
CDF	**Champ du Feu**	**3.87**	**2**	*e*Pn	**Pn**	**09 35 47.0**	**+0.5**
	SNR=1.0						

IDC 06 09:44:15.3±1.9, **629S**×**13149E**, **h0**km, **mb3.8**/3, **mb1 4.0**/6, **mb1mx3.9**/13, **mbtmp3.9**/6, **ML3.9**/3, **Error ellipse: s-maj=103.1km s-min=24.6km az=82.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.05**	**205**	Pn	Pn	09 47 22.2	0.0
	0.4nm,0.3s,baz=30,slow=16,SNR=9.8						
FITZ				Sn	Sn	09 49 37.2	-11
	0.5nm,0.3s,baz=311,slow=20,SNR=7.8						
WRA	**Warramunga Arr**	**13.85**	**169**	Pn	Pn	09 47 32.5	-0.6
	0.7nm,0.3s,baz=352,slow=13,SNR=35						
WRA				Sn	Sn	09 49 59.1	-8.6
	1.2nm,0.3s,baz=342,slow=24,SNR=8.3						
WB2	**Warramunga Arr**	**13.85**	**169**	*e*P	Pn	09 47 34.3	+1.2
WB2				*e*S	Sn	09 49 58.1	-10
ASAR	**Alice Springs**	**17.43**	**173**	P	Pn	09 48 20.9	+0.8
	0.7nm,0.3s,baz=357,slow=14,SNR=36						
ASAR				S	Sn	09 51 26.3	-8.6
	0.4nm,0.3s,baz=354,slow=27,SNR=6.2						
SONM	**Songino Array**	**58.26**	**340**	P	P	09 54 12.8	+1.2
	0.3nm,0.6s,baz=160,slow=5.1,SNR=2.5						
MKAR	**Makanchi Array**	**68.45**	**326**	P	P	09 55 19.3	+0.1
	0.7nm,0.5s,baz=128,slow=7.3,SNR=12						
ZALV	**Zalesovo Beam**	**71.61**	**333**	P	P	09 55 37.6	-0.9
	0.6nm,0.4s,baz=123,slow=5.3,SNR=3.2						

IDC 06 09:55:52.9±5.5, **051N**×**10212E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/19, **mbtmp3.6**/4, **Error ellipse: s-maj=310.6km s-min=24.3km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.54**	**125**	P	P	10 03 09.5	+0.4
	0.5nm,0.7s,baz=304,slow=8.8,SNR=3.8						
ASAR	**Alice Springs**	**39.12**	**130**	P	P	10 03 21.8	-0.5
	0.4nm,0.8s,baz=296,slow=7.8,SNR=4.7						
MKAR	**Makanchi Array**	**49.26**	**342**	P	P	10 04 43.3	+0.1
	0.8nm,0.6s,baz=146,slow=8.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**55.15**	**348**	P	P	10 05 26.8	-0.2
	0.5nm,0.4s,baz=160,slow=4.6,SNR=3.6						

IDC 06 10:00:48.8±3.7, **186S**×**15004E**, **h0**km, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.7**/14, **mbtmp3.8**/3, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.8**/24, **Error ellipse: s-maj=130.1km s-min=29.9km az=103.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**18.49**	**191**	LR	LR	10 11 19.8	
	comp=Z,106nm,20.1s,baz=229,slow=34						
WB2	**Warramunga Arr**	**23.63**	**219**	*e*P	P	10 06 02.1	+0.1
WRA	**Warramunga Arr**	**23.64**	**219**	P	P	10 06 01.6	-0.5
	3.1nm,0.6s,baz=43,slow=10,SNR=44						
ASAR	**Alice Springs**	**26.73**	**215**	P	P	10 06 31.0	+0.8
	2.0nm,0.8s,baz=46,slow=8.2,SNR=12						
MKAR	**Makanchi Array**	**76.32**	**319**	P	P	10 12 40.8	+1.1
	0.1nm,0.2s,baz=105,slow=4.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**146.73**	**291**	PKPbc	PKPbc	10 20 31.0	-2.9
	0.9nm,0.8s,baz=66,slow=3.0,SNR=5.0						

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*IDC **06** 10:08:50.2±0.8, 048S×10075E, h0km, mb4.0/10, mb1 4.1/10, mb1mx4.0/22, mbtmp4.0/10, MS3.6/4, Ms1 3.6/4, ms1mx3.3/24, Error ellipse: s-maj=49.4km s-min=16.1km az=56.0*
*NEIC **06** 10:08:53.6±0.7, 054S×10081E, h20km, mb4.4/4, Error ellipse: s-maj=35.3km s-min=11.7km az=59.0*
*ISCJB **06** 10:08:56.3±2.2, 03S±02×1009E±02, h56km±18km, mb4.2/14, MS3.6/3, Error ellipse: s-maj=43.2km s-min=13.8km az=144.0*
ISC 06 10:08:57.3±2.2, **04S**±02×**1009E**±02, **h48**km±18km, **n21**, σ**0^{s}94**/20, **mb4.2**/14, **MS3.6**/3, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.75**	**329**	Pn	**Pn**	**10 09 52.9**	**+0.3**
	0.8nm,0.3s,baz=125,slow=16,SNR=3.7						
PSI				Sn	**Sn**	**10 10 43.9**	**+8.4**
	9.1nm,0.3s,baz=237,slow=12,SNR=5.7						
PSI				LR	LR	10 11 35.4	
	comp=Z,513nm,18.5s,baz=316,slow=45						
KULM	**Kulim**	**5.68**	**358**	*e*Pn	**Pn**	**10 10 18.4**	**-0.7**
KULM				*e*Pg	**Pn**	**10 10 39.1**	**+20**
KULM				*e*Sg	Sn	10 11 50.7	+28
BATI	**Kupang**	**24.66**	**114**	LR	LR	10 24 50.1	
	comp=Z,290nm,20.6s,MS3.8,baz=305,slow=39						
WRA	**Warramunga Arr**	**38.07**	**123**	P	**P**	**10 16 11.1**	**-0.4**
	2.0nm,0.8s,mb3.9,baz=298,slow=10,SNR=10						
WRA				PcP	PcP	10 18 26.5	+0.4
	0.5nm,0.6s,baz=313,slow=2.7,SNR=5.6						
WRA				LR	LR	10 33 05.6	
	comp=Z,65nm,19.7s,MS3.4,baz=335,slow=38						
ASAR	**Alice Springs**	**39.50**	**128**	P	**P**	**10 16 23.1**	**-0.4**
	2.5nm,0.9s,mb4.0,baz=308,slow=7.9,SNR=15						
ASAR				PcP	PcP	10 18 31.1	+0.6
	0.7nm,0.8s,baz=325,slow=3.8,SNR=4.4						
JNU	**Nakatsue**	**43.72**	**37**	LR	LR	10 36 12.7	
	comp=Z,60nm,21.0s,MS3.5,baz=320,slow=38						
SONM	**Songino Array**	**48.30**	**5**	P	**P**	**10 17 34.6**	**+0.9**
	0.4nm,0.6s,mb3.6,baz=203,slow=11,SNR=3.0						
UCH	**Uchtor**	**48.66**	**334**	*e*P	**P**	**10 17 37.4**	**+0.9**
	3.8nm,1.1s,mb4.3						
TKM2	**Tokmak 2**	**48.76**	**335**	*e*P	**P**	**10 17 37.3**	**0.0**
	5.0nm,0.9s,mb4.5						
AML	**Almayashu**	**48.94**	**333**	*e*P	**P**	**10 17 39.1**	**+0.3**
	3.4nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**49.33**	**334**	*e*P	**P**	**10 17 40.9**	**-0.8**
	2.9nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**49.56**	**133**	P	**P**	**10 17 44.7**	**+1.0**
	3.6nm,0.9s,mb4.4,baz=352,slow=9.9,SNR=3.9						
MK31	**Makanchi Array**	**49.77**	**343**	*e*P	**P**	**10 17 47.8**	**+2.9**
MKAR	**Makanchi Array**	**49.77**	**343**	P	**P**	**10 17 43.6**	**-1.3**
	0.4nm,0.4s,mb3.8,baz=149,slow=8.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**55.80**	**349**	P	**P**	**10 18 29.5**	**+0.2**
	1.2nm,0.6s,mb4.1,baz=169,slow=6.2,SNR=6.3						
AKTK	**Aktyubinsk**	**62.41**	**331**	P	**P**	**10 19 13.8**	**-1.3**
AKTO	**Aktyubinsk**	**62.41**	**331**	P	**P**	**10 19 13.8**	**-1.3**
	1.4nm,0.9s,mb4.1,baz=107,slow=10,SNR=4.0						
BRTR	**Keskin Array B**	**72.92**	**312**	P	**P**	**10 20 23.0**	**+1.4**
	1.2nm,0.8s,mb3.9,baz=98,slow=7.6,SNR=4.2						
FINES	**FINESS Array B**	**83.13**	**332**	P	**P**	**10 21 17.4**	**-0.4**
	4.5nm,1.2s,mb4.4,baz=114,slow=6.7,SNR=3.6						
QSPA	**South Pole Qui**	**89.53**	**180**	P	**P**	**10 21 48.6**	**-0.3**
	1.0nm,0.7s,mb4.2,baz=275,slow=2.2,SNR=3.4						
TXAR	**Lajitas Array**	**142.93**	**37**	PKhKP		10 28 23.6	
	0.1nm,0.5s,baz=235,slow=3.2,SNR=3.0						

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*NEIC **06** 10:29:30.0, 1702N×10028W, h10km, MD4.0(MEX), After MEX.*
MEX 06 10:29:30.2±0.6, **1701N**×**10026W**, **h8**km±3km, **MD4.0**, **Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.03**	**348**	*i* P	Pg	10 29 31.0	-0.9
CAIG				*i* S	Sg	10 29 32.0	-1.0
ACX	**Acapulco**	**0.36**	**114**	*i* P	Pg	10 29 37.0	-0.3
ACX				*i* S	Sg	10 29 43.0	+1.0
MEIG	**Mezcala**	**1.09**	**34**	*i* P	Pg	10 29 47.9	-3.3
MEIG				*i* S	Sg	10 30 01.4	-4.0
PLIG	**Platanillo**	**1.55**	**28**	*i* P	Pn	10 29 56.7	-1.4
PLIG				*i* S	Sn	10 30 13.9	-4.4
PLIG	**Platanillo**	**1.55**	**28**	*i* P	Pn	10 29 56.7	-1.3
PLIG				*i* S	Sn	10 30 13.9	-4.4
UTMO	**Huajuapan**	**2.48**	**71**	*i* P	Pn	10 30 07.1	-3.8
UTMO				*i* S	Sn	10 30 37.4	-3.9
PPM	**Popocatepetl**	**2.57**	**37**	*e*P	Pn	10 30 08.5	-3.5
PPM				*i* S	Sn	10 30 38.8	-4.6
PBVM	**Pinon**	**2.66**	**25**	*i* S	Sn	10 30 38.8	-7.0
PTVM	**Pico Tres Padr**	**2.79**	**23**	*i* P	Pn	10 30 13.8	-1.3
PTVM				*i* S	Sn	10 30 46.5	-2.4
MOIG	**Morelia**	**2.79**	**342**	*i* P	Pn	10 30 12.9	-2.3
MOIG				*i* S	Sn	10 30 45.9	-3.1
IIO	**Organos**	**2.95**	**29**	*i* P	Pn	10 30 15.4	-2.0
IIO				*i* S	Sn	10 30 51.2	-1.8
VHO	**Vista Hermosa**	**3.37**	**89**	*i* P	Pn	10 30 21.4	-1.8
VHO				*i* S	Sn	10 31 00.1	-3.3

IDC 06 10:47:12.8±1.8, **180N**×**12635E**, **h0**km, **mb4.0**/4, **mb1 4.2**/4, **mb1mx3.8**/15, **mbtmp4.0**/4, **Error ellipse: s-maj=169.9km s-min=23.0km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**160**	P	P	10 52 18.8	-0.5
	3.5nm,0.5s,baz=339,slow=11,SNR=36						
ASAR	**Alice Springs**	**26.36**	**164**	P	P	10 52 50.8	0.0
	1.8nm,0.4s,baz=348,slow=13,SNR=26						
STKA	**Stephens Creek**	**36.48**	**158**	P	P	10 54 20.5	+0.6
	3.2nm,1.0s,baz=334,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	10 57 13.8	0.0
	0.2nm,0.3s,baz=123,slow=8.6,SNR=3.3						

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*NEIC **06** 11:15:47.6, 19.18N×6728W, h6km, MD3.2(RSPR), After RSPR.*
RSPR 06 11:15:47.6, 1918N×**6728W**, **h5**km±3km, **MD3.2**/10, **7C-2D**, **Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.73**	**168**	⇑*e*P	Pg	11 16 01.1	-0.5
AGPR				*e*S	Sg	11 16 11.7	+0.5
AOPR	**Arecibo Observ**	**0.97**	**149**	⇑*e*P	Pg	11 16 05.2	-1.0
AOPR				*e*S	Sg	11 16 17.4	-1.4
LSP	**Las Mesas**	**1.02**	**170**	⇓*e*P	Pg	11 16 05.6	-1.6
LSP				*e*S	Sg	11 16 19.8	-0.7
CRPR	**Cabo Rojo, PR**	**1.18**	**172**	⇑*e*P	Pg	11 16 07.2	-3.1
CRPR				*e*S	Sg	11 16 22.6	-3.1
GBPR	**Guanica, Bosqu**	**1.26**	**163**	*e*S	Sg	11 16 24.9	-3.3
GBPR	**Guanica, Bosqu**	**1.26**	**163**	⇑*e*P	Pg	11 16 08.2	-3.6
CELP	**Cerrillos**	**1.29**	**149**	⇑*e*P	Pn	11 16 08.9	-3.3
CELP				*e*S	Sg	11 16 26.4	-2.6
OBIP	**Obispado Ponce**	**1.30**	**151**	⇑*e*P	Pn	11 16 09.1	-3.4
OBIP				*e*S	Sg	11 16 26.0	-3.5
ICM	**Isla Caja Muer**	**1.47**	**151**	⇓*e*P	Pn	11 16 12.2	-2.5
ICM				*e*S	Sn	11 16 30.4	-4.0
SJG	**San Juan**	**1.51**	**135**	*e*Pn	Pn	11 16 15.6	+0.3
SJG				*e*Sn	Sn	11 16 34.5	-0.8
MTP	**Monte Pirata**	**1.96**	**123**	⇑*e*P	Pn	11 16 18.1	-3.4
SDDR	**Presa de Saban**	**3.80**	**268**	*e*Pn	Pn	11 16 45.0	-1.8
SDDR				*e*S	Sn	11 17 41.1	+9.3

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*ISCJB **06** 11:36:18.1±0.7, 3950N±003×2059E±008, h10km, Error ellipse: s-maj=9.0km s-min=4.8km az=11.2*
*ATH **06** 11:36:18.0, 3950N×2056E, h18km±7km, MD3.2/5*
*NEIC **06** 11:36:18.0, 3950N×2056E, h18km, MD3.2(ATH), After ATH.*
*CSEM **06** 11:36:18.6±0.3, 3956N×2060E, h20km, MD3.2, Error ellipse: s-maj=9.6km s-min=6.7km az=2.0*
ISC 06 11:36:18.8±0.7, **3950N**±004×**2056E**±006, **h15**km±8km, **n10**, σ**1^{s}02**/17, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.28**	**54**	*e*PB	**Pg**	**11 36 23.5**	**-1.3**
JAN				*e*SB	**Sg**	**11 36 28.3**	**-0.5**
KEK	**Kerkira**	**0.63**	**291**	*e*PN	**Pg**	**11 36 30.5**	**-0.6**
KEK				*e*SN	**Sg**	**11 36 38.8**	**-0.6**
THL	**Klokotos Trika**	**1.13**	**86**	*e*PN	**Pn**	**11 36 39.8**	**-0.2**
EVR	**Evrytania**	**1.13**	**120**	*e*PN	**Pn**	**11 36 39.1**	**-1.0**
VLS	**Valsamata**	**1.32**	**179**	*e*PN	**Pn**	**11 36 42.7**	**+0.1**
VLS				*e*SN	**Sg**	**11 37 02.3**	**+1.0**
OHR	**Ohrid**	**1.62**	**6**	*e*Pn	**Pg**	**11 36 52.7**	**+2.7**
OHR				*i* Sn	**Sg**	**11 37 15.9**	**+4.8**
BIA	**Bitola**	**1.63**	**21**	*e*Pn	**Pg**	**11 36 52.1**	**+1.9**
BIA				*e*Sn	**Sg**	**11 37 16.7**	**+5.3**
BIA	**Bitola**	**1.63**	**21**	*e*Pn	**Pg**	**11 36 52.0**	**+1.8**
KRUS	**Krusevo**	**1.94**	**16**	*i* Pn	**Pg**	**11 36 55.9**	**-0.3**
KRUS				*i* Sn	**Sg**	**11 37 21.4**	**0.0**
KRUS	**Krusevo**	**1.94**	**16**	*i* Pn	**Pg**	**11 36 55.8**	**-0.4**
KRUS				*i* Sn	**Sg**	**11 37 21.4**	**0.0**

IDC 06 11:38:42.3±8.0, **032S**×**13300E**, **h0**km, **mb3.2**/2, **mb1 3.4**/3, **mb1mx3.3**/15, **mbtmp3.2**/3, **ML3.3**/1, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.8**/13, **Error ellipse: s-maj=494.6km s-min=26.4km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.54**	**176**	P	Pn	11 43 10.1	-2.8
	0.1nm,0.3s,baz=355,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**23.22**	**178**	P	P	11 43 52.4	+1.1
	0.5nm,0.9s,baz=2.6,slow=10,SNR=3.4						
ASAJ	**Asahikawa**	**45.06**	**10**	LR	LR	12 03 58.4	
	comp=Z,50nm,20.7s,baz=22,slow=34						
MKAR	**Makanchi Array**	**64.47**	**324**	P	P	11 49 20.8	+0.1
	0.2nm,0.2s,baz=101,slow=7.5,SNR=3.4						

MAN 06 11:40:13, 915N×**12634E, h27**km**, mb4.0, ML2.8, MS2.5, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.96**	**179**	⇑*i* P	Pn	11 40 29.9	-0.8
BIPH				*i* S	Sb	11 40 42.5	-0.8
SCPH	**Surigao**	**1.05**	**307**	*e*P	Pn	11 40 31.1	-0.8
SCPH				*e*S	Sn	11 40 45.9	+0.2

IDC 06 11:58:47.8±4.2, **2339S**×**17999W**, **h490**km±34km, **mb3.4**/5, **mb1 3.7**/6, **mb1mx3.3**/15, **mbtmp3.4**/6, **Error ellipse: s-maj=110.0km s-min=16.3km az=157.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.22**	**41**	P	P	12 01 28.7	-0.2
	1.3nm,0.3s,baz=308,slow=17,SNR=3.9						
AFI				S	S	12 03 43.7	+2.0
	2.9nm,0.3s,baz=101,slow=23,SNR=4.7						
CTA	**Charters Tower**	**31.49**	**269**	P	P	12 04 30.0	+1.3
	7.9nm,0.4s,baz=92,slow=9.3,SNR=27						
ASAR	**Alice Springs**	**42.13**	**260**	P	P	12 05 55.9	-0.7
	1.2nm,0.5s,baz=99,slow=7.1,SNR=27						
WRA	**Warramunga Arr**	**42.46**	**266**	P	P	12 05 58.6	-0.5
	2.9nm,0.4s,baz=97,slow=8.3,SNR=122						
WRA				ScP	ScP	12 10 45.0	+0.1
	0.2nm,0.8s,baz=93,slow=3.8,SNR=4.6						
TXAR	**Lajitas Array**	**90.15**	**58**	P	P	12 10 55.6	+0.2
	0.4nm,0.7s,baz=214,slow=6.1,SNR=7.2						
PDAR	**Pinedale Array**	**92.32**	**44**	P	P	12 11 05.1	0.0
	0.3nm,0.7s,baz=259,slow=0.9,SNR=3.5						

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*IDC **06** 12:01:43.5±6.7, 36.18N×7084E, h150km±60km, mb3.7/9, mb1 3.9/11, mb1mx3.7/22, mbtmp3.8/11, MS3.6/1, Ms1 3.6/1, ms1mx2.7/39, Error ellipse: s-maj=30.9km s-min=15.8km az=22.0*
*MOS **06** 12:01:43.8±1.0, 3633N×7070E, h164km, mb4.3/14, Error ellipse: s-maj=13.0km s-min=6.7km az=93.9*
*ISCJB **06** 12:01:46.8±0.4, 3646N±002×7099E±005, h195km±5km, mb3.9/17, Error ellipse: s-maj=6.4km s-min=3.5km az=163.2*
*NEIC **06** 12:01:47.3±0.7, 3647N×7090E, h180km±7km, mb4.6/12, Error ellipse: s-maj=9.0km s-min=6.0km az=63.0*
*BJI **06** 12:01:47.5, 3661N×7087E, h176km, mb4.1*
*NNC **06** 12:01:57.0±5.4, 3736N×7070E, h214km±62km, mb3.1, mpv4.0, Error ellipse: s-maj=51.4km s-min=30.4km az=20.0*
ISC 06 12:01:47.7±0.4, **3647N**±002×**7096E**±005, **h186**km±5km, **n95**, σ**1^{s}17**/126, **mb4.0**/17, **9C-5D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.47**	**220**	*e*Pn	**Pn**	**12 02 31.0**	**+0.6**
KBL				*e*Sn	**Sn**	**12 02 50.1**	**-13**
CEP	**Cherat**	**2.75**	**163**	⇓P	**Pn**	**12 02 35.9**	**+2.3**
CHCP	**Chirah Chowk**	**3.38**	**145**	⇓P	**Pn**	**12 02 43.7**	**+2.5**
THW	**Thamme Wali**	**3.72**	**170**	⇑P	**Pn**	**12 02 47.5**	**+2.1**
SBDP	**Sheikh Budin**	**4.16**	**182**	⇑P	**Pn**	**12 02 51.1**	**+0.1**
DRP	**Derazinda**	**4.75**	**188**	P	**Pn**	**12 03 00.2**	**+1.7**
DRP				S	**Sn**	**12 03 53.0**	**-1.1**
JMU	**Jammu**	**4.96**	**138**	*e*S	**Sn**	**12 03 55.5**	**-3.4**
KSH	**Kashi**	**5.00**	**51**	P	**Pn**	**12 03 03.5**	**+1.9**
KSH				S	**Sn**	**12 04 00.1**	**+0.3**
KSH				Smax			
	comp=N,676nm,0.4s						
KSH				Smax			
	comp=E,824nm,0.6s						
THN	**Thein Dam**	**5.63**	**134**	*e*P	**Pn**	**12 03 10.0**	**+0.2**
THN				*e*S	**Sn**	**12 04 13.2**	**-1.3**
DLH	**Dalhousie**	**5.70**	**132**	*e*P	**Pn**	**12 03 12.0**	**+1.3**
DLH				*e*x	x	12 04 17.0	
AML	**Almayashu**	**6.04**	**20**	*e*Pn	**Pn**	**12 03 14.7**	**-0.4**
AML				*e*Sn	**Sn**	**12 04 15.6**	**-8.6**
AML	**Almayashu**	**6.04**	**20**	P	**Pn**	**12 03 14.9**	**-0.2**
	SNR=151						
UCH	**Uchtor**	**6.38**	**25**	*e*Pn	**Pn**	**12 03 19.5**	**-0.1**
UCH				*e*Sn	**Sn**	**12 04 28.6**	**-3.6**
UCH	**Uchtor**	**6.38**	**25**	P	**Pn**	**12 03 19.3**	**-0.2**
	SNR=43						
KZA	**Kyzart**	**6.52**	**29**	P	**Pn**	**12 03 23.8**	**+2.4**
	SNR=14						
EKS2	**Erkin-Say**	**6.56**	**19**	*e*Pn	**Pn**	**12 03 21.2**	**-0.7**
EKS2				*e*Sn	**Sn**	**12 04 31.7**	**-4.7**
EKS2	**Erkin-Say**	**6.56**	**19**	P	**Pn**	**12 03 21.6**	**-0.3**
	SNR=16						
KK31	**Karatay Array**	**6.64**	**357**	⇓P	**Pn**	**12 03 21.9**	**-1.0**
	comp=E,35nm,0.5s,baz=191,slow=13,SNR=397						
KK31				⇑S	**Sn**	**12 04 28.5**	**-10**
	comp=E,177nm,0.7s,baz=180,slow=14,SNR=20						
KK31	**Karatay Array**	**6.64**	**357**	*i* PN	**Pn**	**12 03 21.8**	**-1.1**
KK31				pmax	pmax		
	comp=Z,21nm,0.2s						
AAK	**Ala-Archa**	**6.74**	**23**	*e*Pn	**Pn**	**12 03 22.9**	**-1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AAK				*e*Sn	**Sn**	**12 04 36.9**	**-3.7**
AAK	**Ala-Archa**	**6.74**	**23**	*d i*PN	**Pn**	**12 03 23.0**	**-1.2**
AAK	**Ala-Archa**	**6.74**	**23**	P	**Pn**	**12 03 24.2**	**0.0**
	SNR=27						
KBK	**Karagaybulak**	**6.91**	**25**	P	**Pn**	**12 03 27.1**	**+0.7**
	SNR=8.2						
SDNR	**Sundarnagar**	**7.03**	**133**	*e*P	**Pn**	**12 03 27.5**	**-0.7**
SDNR				*e*S	**Sn**	**12 04 43.5**	**-4.3**
CHMS	**Chumysh**	**7.15**	**23**	P	**Pn**	**12 03 29.4**	**-0.3**
	SNR=12						
USP	**Ospenovka**	**7.32**	**21**	P	**Pn**	**12 03 31.0**	**-0.8**
	SNR=15						
TKM2	**Tokmak 2**	**7.37**	**28**	⇑P	**Pn**	**12 03 32.3**	**-0.3**
	comp=Z,2.4nm,0.8s						
TKM2				⇓S	**Sn**	**12 04 50.9**	**-4.7**
	comp=Z,4.0nm,0.8s						
TKM2	**Tokmak 2**	**7.37**	**28**	*e*PN	**Pn**	**12 03 32.3**	**-0.2**
TKM2	**Tokmak 2**	**7.37**	**28**	P	**Pn**	**12 03 32.5**	**-0.1**
	SNR=27						
DDI	**Dehra Dun**	**8.53**	**134**	*e*S	**Sn**	**12 05 16.5**	**-6.9**
NDI	**New Delhi**	**9.38**	**144**	*e*P	**Pn**	**12 03 59.0**	**-0.1**
NDI				AMb	AMB	12 03 59.7	
	comp=Z,18nm,0.3s						
NDI				*e*S	**Sn**	**12 05 37.5**	**-6.4**
AJM	**Ajmer**	**10.44**	**161**	*e*P	**Pn**	**12 04 12.0**	**-0.8**
AJM				*e*S	**Sn**	**12 06 02.0**	**-7.1**
LGTI	**Lohaghat**	**10.48**	**129**	*e*P	**Pn**	**12 04 12.3**	**-1.0**
LGTI				*e*S	**Sn**	**12 05 59.6**	**-10**
MK31	**Makanchi Array**	**13.34**	**36**	*e*Pn	**Pn**	**12 04 49.7**	**0.0**
MK31	**Makanchi Array**	**13.34**	**36**	*i* P	**Pn**	**12 04 49.7**	**0.0**
MKAR	**Makanchi Array**	**13.34**	**36**	P	**Pn**	**12 04 48.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=18						
MKAR				S	**Sn**	**12 07 18.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=230,slow=20,SNR=2.7						
GKN	**Gorkha**	**14.32**	**122**	*e*P	**Pn**	**12 05 02.1**	**0.0**
	comp=Z,73nm,0.5s						
GKN				*e*S	**Sn**	**12 07 30.5**	**-11**
KKN	**Kakani**	**14.89**	**121**	*e*P	**Pn**	**12 05 08.9**	**-0.2**
	comp=Z,142nm,1.0s						
KKN				*e*S	**Sn**	**12 07 44.9**	**-11**
KKN	**Kakani**	**14.89**	**121**	*e*P	**Pn**	**12 05 08.9**	**-0.2**
KKN				*e*S	**Sn**	**12 07 44.9**	**-11**
KKN				pmax	pmax		
	comp=Z,142nm,1.0s						
AB31	**Akbulak array**	**15.10**	**331**	⇑P	**Pn**	**12 05 09.5**	**-2.0**
	comp=Z,8.7nm,0.7s,baz=146,slow=12,SNR=116						
AB31				⇑S	**S**	**12 07 45.1**	**-14**
	comp=Z,8.4nm,0.6s,baz=156,slow=23,SNR=8.1						
KURK	**Kurchatov**	**15.28**	**19**	⇑P	**Pn**	**12 05 14.1**	**+0.5**
	comp=Z,5.5nm,1.1s						
KURK	**Kurchatov**	**15.28**	**19**	*e*P	**Pn**	**12 05 14.4**	**+0.8**
	comp=Z,9.1nm,0.9s						
KURK	**Kurchatov**	**15.28**	**19**	*e*P	**Pn**	**12 05 14.4**	**+0.8**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
JIRN	**Jiri**	**15.60**	**120**	*e*P	**Pn**	**12 05 18.7**	**+0.9**
	comp=Z,104nm,0.6s						
JIRN				*e*S	**S**	**12 08 01.1**	**-10**
AKL	**Akola**	**16.57**	**160**	*e*P	**Pn**	**12 05 32.2**	**+2.6**
AKL				*e*x	**S**	**12 08 26.1**	**-6.6**
BRVK	**Borovoye**	**16.60**	**359**	*e*P	**Pn**	**12 05 29.4**	**-0.1**
	comp=Z,15nm,0.9s						
BRVK	**Borovoye**	**16.60**	**359**	*e*P	**Pn**	**12 05 29.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,15nm,0.9s						
AKTK	**Aktyubinsk**	**16.79**	**330**	P	**Pn**	**12 05 31.7**	**-0.2**
AKTK				S	**S**	**12 08 29.8**	**-6.8**
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**Pn**	**12 05 31.7**	**-0.2**
AKTO				S	**S**	**12 08 29.8**	**-6.8**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.79**	**330**	P	**Pn**	**12 05 31.7**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=144,slow=11,SNR=86						
AKTO				S	**S**	**12 08 29.8**	**-6.8**
	comp=Z,0.1nm,0.3s,baz=62,slow=22,SNR=3.0						
NGP	**Nagpur**	**16.82**	**153**	*e*x	**Pn**	**12 05 31.4**	**-1.1**
NGP				AMb	AMB	12 05 32.1	
	comp=Z,12nm,0.5s						
NGP				*e*x	**S**	**12 08 29.5**	**-8.1**
TAPN	**Taplejung**	**16.86**	**118**	*e*P	**Pn**	**12 05 33.9**	**+0.9**
	comp=Z,31nm,0.6s						
TAPN				*e*S	**S**	**12 08 29.1**	**-9.3**
ODAN	**Odare**	**16.93**	**120**	*e*P	**Pn**	**12 05 34.8**	**+0.9**
	comp=Z,56nm,0.7s						
ODAN				*e*S	**S**	**12 08 31.4**	**-8.5**
LSA	**Lhasa**	**18.20**	**106**	P	**P**	**12 05 49.2**	**+2.6**
LSA	**Lhasa**	**18.20**	**106**	*e*P	**P**	**12 05 50.2**	**+3.6**
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**18.20**	**106**	*e*P	**P**	**12 05 50.2**	**+3.6**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HYB	**Hyderabad**	**20.13**	**158**	*e*P	**P**	**12 06 06.5**	**-1.0**
HYB	**Hyderabad**	**20.13**	**158**	*i* P	**P**	**12 06 06.5**	**-1.0**
HYB				*e*S	**S**	**12 09 48.5**	**+5.2**
NVS	**Novosibirsk**	**20.23**	**21**	*i* P	**P**	**12 06 08.6**	**+0.4**
NVS				*e*		12 06 55.5	
NVS				*e*S	**S**	**12 09 42.9**	**-1.6**
NVS				pmax	pmax		
	comp=Z,24nm,1.2s						
NVS				pmax	pmax		
	comp=N,16nm,1.3s						
NVS				smax			
	comp=N,15nm,1.6s						
NVS				smax			
	comp=E,7.0nm,0.9s						
SHL	**Shillong**	**20.93**	**115**	*e*x	**P**	**12 06 13.7**	**-2.2**
SHL				AMb	AMB	12 06 24.6	
	comp=Z,186nm,0.8s						
SVE	**Sverdlovsk**	**21.52**	**344**	P	**P**	**12 06 22.4**	**+0.6**
ARU	**Arti**	**21.65**	**341**	*e*P	**P**	**12 06 23.3**	**+0.1**
	comp=Z,26nm,1.4s,mb4.5						
ARU	**Arti**	**21.65**	**341**	*c i*P	**P**	**12 06 23.8**	**+0.6**
ARU				*e*		12 06 54.3	
ARU				*e*S	**S**	**12 10 16.5**	**+6.4**
ARU				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.4						
GOF	**Gofitskoye**	**22.74**	**301**	*e*P	**P**	**12 06 29.2**	**-4.4**
GTA	**Gaotai**	**22.91**	**74**	*e*P	**P**	**12 06 39.3**	**+4.0**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s,mb3.6						
SONM	**Songino Array**	**28.39**	**55**	P	**P**	**12 07 26.2**	**+1.8**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**28.39**	**55**	P	**P**	**12 07 26.2**	**+1.8**
	comp=Z,0.5nm,0.7s,mb3.4,baz=266,slow=9.0,SNR=4.3						
OBN	**Obninsk**	**29.94**	**319**	*e*P	**P**	**12 07 35.6**	**-2.5**
OBN				*e*		12 08 38.9	
OBN				*e*S	**S**	**12 12 26.5**	**+5.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
AKASG	**Malin Array Be**	**32.94**	**309**	P	**P**	**12 08 05.0**	**+0.6**
AKASG	**Malin Array Be**	**32.94**	**309**	*i* P	**P**	**12 08 05.0**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**32.94**	**309**	P	**P**	**12 08 05.0**	**+0.6**
	comp=Z,2.2nm,0.5s,mb4.2,baz=80,slow=7.4,SNR=10						
JOF	**Joensuu**	**35.88**	**330**	*e*p	**P**	**12 08 29.2**	**-0.2**
	comp=Z,7.3nm,0.5s,mb4.6						
JOF	**Joensuu**	**35.88**	**330**	*e*P	**P**	**12 08 29.2**	**-0.2**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**37.49**	**326**	*i* P	**P**	**12 08 44.0**	**+0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**37.49**	**326**	P	**P**	**12 08 44.0**	**+1.0**
	comp=Z,3.4nm,0.7s,mb4.1,baz=111,slow=10,SNR=14						
FINES				LR	LR	12 26 41.8	
	comp=Z,82nm,19.8s,baz=16,slow=40						
KAF	**Kangasniemi**	**37.63**	**327**	*e*p	**P**	**12 08 43.3**	**-0.9**
	comp=Z,2.7nm,0.6s,mb4.0,baz=110,slow=8.2						
KAF	**Kangasniemi**	**37.63**	**327**	*e*P	**P**	**12 08 43.3**	**-0.9**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
KEV	**Kevo**	**40.82**	**338**	*e*p	**P**	**12 09 10.8**	**+0.3**
ARCES	**ARCESS Array B**	**41.16**	**338**	P	**P**	**12 09 14.7**	**+1.4**
ARCES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARCES	**ARCESS Array B**	**41.16**	**338**	P	**P**	**12 09 14.7**	**+1.4**
	comp=Z,8.5nm,0.8s,mb4.4,baz=114,slow=8.0,SNR=25						
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**12 09 39.7**	**+0.4**
	comp=Z,3.8nm,0.6s,mb4.2,baz=96,slow=7.9						
NB2	**NORSAR Subarra**	**44.39**	**323**	P	**P**	**12 09 39.7**	**+0.4**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**12 09 39.8**	**+0.5**
NOA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**12 09 39.8**	**+0.5**
	comp=Z,6.1nm,0.7s,mb4.3,baz=96,slow=7.8,SNR=17						
TIXI	**Tiksi**	**45.82**	**22**	⇑*e*P	**P**	**12 09 51.5**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
KMBO	**Kilima Mbogo**	**48.78**	**228**	*i* P	**P**	**12 10 06.8**	**-7.2**
BILL	**Bilibino**	**58.66**	**26**	*e*P	**P**	**12 11 26.9**	**+2.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**12 12 10.9**	**-1.5**
	comp=Z,0.6nm,0.6s,mb3.6,baz=28,slow=5.1,SNR=3.9						
LBTB	**Lobatse**	**74.63**	**222**	*e*P	**P**	**12 13 04.8**	**-1.7**
	comp=Z,8.5nm,1.0s,mb4.3						
LBTB	**Lobatse**	**74.63**	**222**	*e*P	**P**	**12 13 04.8**	**-1.7**
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
YKA	**Yellowknife Ar**	**81.28**	**3**	P	**P**	**12 13 43.3**	**+0.7**
	comp=Z,0.5nm,0.4s,mb3.5,baz=351,slow=5.4,SNR=20						
WRA	**Warramunga Arr**	**82.00**	**122**	*i* P	**P**	**12 13 46.7**	**-0.3**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**82.00**	**122**	P	**P**	**12 13 46.7**	**-0.3**
	comp=Z,2.0nm,0.8s,mb3.8,baz=322,slow=4.7,SNR=15						
ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**12 13 58.4**	**-0.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**84.26**	**125**	P	**P**	**12 13 58.4**	**-0.2**
	comp=Z,1.9nm,0.7s,mb4.0,baz=310,slow=4.9,SNR=32						

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*GII **06** 12:17:06.9±0.0, 2983N×3629E, h0^{km}*
*SGS **06** 12:17:53.6, 30.12N×3634E, h7^{km}*
*CSEM **06** 12:17:55.9±0.7, 2979N×36.17E, h2^{km}, ML2.8, Error ellipse: s-maj=12.3km s-min=8.5km az=136.0, Mining explosion.*
ISC 06 12:17:54.2±1.3**, 2983N**±005×**3636E**±007**, h0^{km}, n12, σ0^{s}65**/17**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.16**	**280**	Pg	**Pg**	**12 18 15.4**	**-1.0**
HRFI				Sg	**Sg**	**12 18 31.1**	**-0.4**
EIL	**Elat**	**1.23**	**263**	Pg	**Pg**	**12 18 17.8**	**0.0**
EIL				Sg	**Sg**	**12 18 33.9**	**+0.1**
HQLS		**1.24**	**245**	P	**Pg**	**12 18 17.4**	**-0.6**
HQLS		**1.24**	**245**	P	**Pg**	**12 18 17.4**	**-0.6**
HQLS				S	**Sg**	**12 18 35.1**	**+0.9**
ZFRI	**Zfri**	**1.25**	**306**	Pg	**Pg**	**12 18 17.3**	**-0.8**
PRNI	**Paran**	**1.28**	**294**	Pg	**Pg**	**12 18 18.2**	**-0.5**
PRNI				Sg	**Sg**	**12 18 36.1**	**+0.8**
PRNI	**Paran**	**1.28**	**294**	Pg	**Pg**	**12 18 18.2**	**-0.5**
PRNI				Sg	**Sg**	**12 18 36.1**	**+0.8**
JLOS		**1.33**	**215**	P	**Pg**	**12 18 20.0**	**+0.4**
MZDA	**Masada**	**1.70**	**330**	Pn	**Pn**	**12 18 25.6**	**+0.5**
MZDA	**Masada**	**1.70**	**330**	Pn	**Pn**	**12 18 25.6**	**+0.5**
DSI	**Dead Sea**	**1.93**	**334**	Pn	**Pn**	**12 18 29.2**	**+1.0**
RSHS		**2.05**	**222**	P	**Pn**	**12 18 29.4**	**-0.4**

IDC 06 12:27:24.4±8.7**, 2176N×14285E, h212^{km}**±85^{km}**, mb3.0**/7**, mb1 3.2**/7**, mb1mx3.2**/20**, mbtmp3.0**/7**, Error ellipse: s-maj=39.9km s-min=15.1km az=85.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.28**	**324**	P	P	12 31 44.5	+0.6
	1.0nm,0.6s,baz=146,slow=9.1,SNR=4.8						
SONM	**Songino Array**	**39.09**	**321**	P	P	12 34 30.2	-0.8
	0.5nm,0.5s,baz=138,slow=7.5,SNR=5.9						
WRA	**Warramunga Arr**	**42.28**	**192**	P	P	12 34 56.7	-0.6
	0.3nm,0.5s,baz=14,slow=9.5,SNR=3.5						
ASAR	**Alice Springs**	**45.99**	**191**	P	P	12 35 27.0	+0.4
	0.4nm,0.6s,baz=17,slow=9.6,SNR=8.7						
MKAR	**Makanchi Array**	**54.42**	**313**	P	P	12 36 30.3	+0.6
	0.2nm,0.2s,baz=93,slow=8.7,SNR=3.4						
YKA	**Yellowknife Ar**	**76.54**	**28**	P	P	12 38 50.5	-0.5
	0.3nm,0.5s,baz=294,slow=5.8,SNR=6.4						
NVAR	**Mina Array Bea**	**83.35**	**51**	P	P	12 39 29.0	+1.1
	0.4nm,0.7s,baz=302,slow=5.2,SNR=3.0						

MAN 06 12:32:32, 950N×12570E, h10^{km}, mb3.6, ML2.3, MS1.8, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.35**	**323**	*e*P	Pg	12 32 40.2	+1.3
SCPH				*e*S	Sg	12 32 50.1	+6.5

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*IDC **06** 12:37:08.9±6.7, 3739N×7372E, h0^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.5/22, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=185.5km s-min=59.8km az=26.0*
*ISCJB **06** 12:37:23.3±1.2, 3829N±007×735E±02, h76^{km}±16^{km}, mb3.8/4, Error ellipse: s-maj=24.3km s-min=7.8km az=157.4*
*NNC **06** 12:37:32.6±5.2, 3924N×7339E, h0^{km}, mb3.4, mpv2.7, Error ellipse: s-maj=51.6km s-min=27.8km az=169.0*
ISC 06 12:37:24.1±0.8**, 3823N**±004×**735E**±02**, h74^{km}**±14^{km}**, n21, σ0^{s}82**/25**, mb3.8**/4**, 5C, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.90**	**2**	P	**Pn**	**12 38 21.4**	**-0.2**
	SNR=84						
UCH	**Uchtor**	**4.07**	**11**	P	**Pn**	**12 38 24.3**	**+0.3**
	SNR=33						
KZA	**Kyzart**	**4.08**	**19**	P	**Pn**	**12 38 24.0**	**0.0**
	SNR=11						
EKS2	**Erkin-Say**	**4.43**	**3**	P	**Pn**	**12 38 28.9**	**+0.1**
	SNR=49						
AAK	**Ala-Archa**	**4.47**	**10**	P	**Pn**	**12 38 29.5**	**+0.2**
	SNR=9.0						
ULHL	**Ulahol**	**4.54**	**27**	P	**Pn**	**12 38 29.9**	**-0.3**
	SNR=25						
TKM2	**Tokmak 2**	**4.96**	**18**	⇑P	**Pn**	**12 38 35.8**	**-0.2**
	0.1nm,0.6s						
TKM2				⇑S	**Sn**	**12 39 26.3**	**-5.7**
	0.4nm,0.5s						
KK31	**Karatay Array**	**5.37**	**336**	⇑P	**Pn**	**12 38 41.1**	**-0.5**
	6.3nm,0.4s,baz=136,slow=13,SNR=75						
KK31				⇑S	**Sn**	**12 39 34.2**	**-7.8**
	6.1nm,0.4s,baz=144,slow=25						
DLH	**Dalhousie**	**6.03**	**160**	*e*P	**Pn**	**12 39 04.0**	**+13**
DLH				*e*S	**Sn**	**12 40 10.0**	**+12**
THN	**Thein Dam**	**6.06**	**162**	*e*x	x	12 39 00.0	
THN				*e*S	**Sn**	**12 40 07.4**	**+8.3**
JOSI	**Joshimath**	**9.15**	**145**	*e*P	Px	12 39 53.4	
JOSI				*e*x	**Sn**	**12 41 21.0**	**+6.3**
JOSI				AML	AML	12 41 22.8	
	comp=E,205nm,0.9s						
JOSI				AML	AML	12 41 25.7	
	comp=N,126nm,0.6s						
NDI	**New Delhi**	**10.02**	**161**	*e*S	**Sn**	**12 41 38.0**	**+2.2**
KHET	**Khetri**	**10.31**	**168**	*e*S	**Sn**	**12 41 40.7**	**-2.4**
KHET				AML	AML	12 41 48.3	
	comp=E,21nm,0.3s						
KHET				AML	AML	12 41 48.5	
	comp=N,21nm,0.4s						
KUDL	**Kundal**	**10.37**	**165**	*e*P	**Pn**	**12 39 59.9**	**+10**
KUDL				*e*S	**Sn**	**12 41 43.7**	**-0.7**
KUDL				AML	AML	12 41 50.5	
	comp=E,12nm,0.2s						
KUDL				AML	AML	12 41 51.6	
	comp=N,9.4nm,0.9s						
SONA	**Sohna**	**10.40**	**162**	*e*S	**Sn**	**12 41 44.7**	**-0.5**
SONA				AML	AML	12 41 54.9	
	comp=E,19nm,0.2s						
SONA				AML	AML	12 41 54.9	
	comp=N,16nm,0.3s						
AB31	**Akbulak array**	**14.71**	**323**	⇑P	**Pn**	**12 40 49.5**	**+1.4**
	comp=N,0.9nm,0.4s,baz=127,slow=14,SNR=13						
AKTO	**Aktyubinsk**	**16.43**	**323**	Pn	**Pn**	**12 41 09.1**	**-0.7**
	comp=N,0.6nm,0.3s,baz=130,slow=9.1,SNR=7.4						
FINES	**FINESS Array B**	**37.20**	**324**	P	**P**	**12 44 27.9**	**+0.1**
	comp=N,2.4nm,1.1s,mb4.0,baz=122,slow=12,SNR=5.3						
ARCES	**ARCESS Array B**	**40.33**	**336**	P	**P**	**12 44 53.8**	**-0.1**
	comp=N,2.1nm,0.8s,mb4.0,baz=110,slow=8.7,SNR=9.0						
HFS	**Hagfors**	**42.96**	**321**	P	**P**	**12 45 15.5**	**0.0**
	comp=N,0.9nm,0.4s,mb3.9,baz=96,slow=11,SNR=5.4						
YKA	**Yellowknife Ar**	**79.41**	**4**	P	**P**	**12 49 21.5**	**-0.2**
	comp=N,0.2nm,0.3s,mb3.4,baz=348,slow=5.7,SNR=4.6						

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*ISCJB **06** 12:37:49.3±0.7, 266N±01×446W±02, h10^{km}, mb3.9/9, MS3.4/4, Error ellipse: s-maj=22.9km s-min=17.2km az=39.3*
*IDC **06** 12:37:49.6±0.9, 2651N×4460W, h0^{km}, mb3.9/9, mb1 4.2/9, mb1mx3.9/22, mbtmp3.9/9, MS3.5/4, Ms1 3.5/4, ms1mx3.0/38, Error ellipse: s-maj=26.5km s-min=21.3km az=132.0*
*NEIC **06** 12:37:51.1±0.5, 2649N×4458W, h10^{km}, Error ellipse: s-maj=17.6km s-min=13.1km az=129.0*
ISC 06 12:37:51.4±0.7**, 265N**±01×**446W**±02**, h10^{km}, n12, σ0^{s}60**/9**, mb3.9**/9**, MS3.4**/4**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.62**	**252**	LR	LR	12 49 12.2	
	comp=Z,55nm,19.9s,MS3.0,baz=164,slow=32						
TKL	**Tuckaleechee C**	**34.60**	**295**	LR	LR	12 55 42.0	
	comp=Z,97nm,19.5s,MS3.5,baz=229,slow=31						
SIV	**San Ignacio**	**45.19**	**203**	P	**P**	**12 46 07.8**	**-0.8**
	0.3nm,0.4s,mb3.5,baz=310,slow=2.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**45.27**	**98**	P	**P**	**12 46 09.1**	**-0.4**
	0.4nm,0.4s,mb3.6,baz=126,slow=36,SNR=4.3						
TORD				LR	LR	13 04 26.2	
	comp=Z,77nm,18.7s,MS3.7,baz=300,slow=35						
LPAZ	**La Paz**	**48.31**	**211**	P	**P**	**12 46 34.0**	**+0.9**
	3.3nm,1.1s,mb4.3,baz=19,slow=9.7,SNR=5.8						
PDAR	**Pinedale Array**	**54.59**	**305**	P	**P**	**12 47 20.4**	**+0.4**
	0.6nm,0.7s,mb3.7,baz=79,slow=7.7,SNR=5.6						
YKA	**Yellowknife Ar**	**57.64**	**329**	P	**P**	**12 47 40.5**	**-0.9**
	0.8nm,1.0s,mb3.7,baz=89,slow=7.3,SNR=8.9						
FINES	**FINESS Array B**	**57.86**	**32**	P	**P**	**12 47 43.1**	**+0.1**
	2.8nm,0.8s,mb4.3,baz=262,slow=2.8,SNR=5.9						
MLR	**Muntele Rosu**	**58.28**	**51**	P	**P**	**12 47 45.9**	**-0.3**
	1.7nm,0.7s,mb4.2,baz=167,slow=15,SNR=3.5						
ARCES	**ARCESS Array B**	**58.47**	**23**	P	**P**	**12 47 47.4**	**+0.2**
	2.4nm,0.7s,mb4.3,baz=270,slow=7.8,SNR=5.6						
BRTR	**Keskin Array B**	**64.93**	**56**	P	**P**	**12 48 31.9**	**+0.7**
	0.8nm,0.7s,mb3.9,baz=312,slow=7.4,SNR=4.1						
INK	**Inuvik**	**65.27**	**336**	LR	LR	13 16 20.3	
	comp=Z,32nm,19.1s,MS3.5,baz=148,slow=35						

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*IDC **06** 12:41:54.5±1.1, 797S×10667E, h0^{km}, mb4.2/10, mb1 4.4/10, mb1mx4.2/20, mbtmp4.3/10, MS3.6/1, Ms1 3.6/1, ms1mx2.8/31, Error ellipse: s-maj=65.6km s-min=15.9km az=45.0*
*NEIC **06** 12:41:56.1±0.6, 799S×10666E, h10^{km}, mb4.6/8, Error ellipse: s-maj=38.2km s-min=6.9km az=46.0*
*ISCJB **06** 12:41:58.2±0.8, 78S±02×1069E±02, h33^{km}, mb4.4/15, Error ellipse: s-maj=46.0km s-min=9.4km az=135.9*
*MOS **06** 12:41:58.6±1.1, 775S×10693E, h33^{km}, mb4.9/5, Error ellipse: s-maj=37.0km s-min=11.8km az=118.8*
ISC 06 12:42:00.1±0.8**, 80S**±02×**1067E**±02**, h35^{km}, n37, σ0^{s}67**/33**, mb4.4**/15**, 1D, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.96**	**121**	*e*P	**P**	**12 46 40.2**	**-0.1**
	17nm,1.0s						
FITZ	**Fitzroy Crossi**	**20.96**	**121**	P	**P**	**12 46 39.9**	**-0.3**
	7.9nm,0.9s,baz=259,slow=22,SNR=5.1						
NWAO	**Narrogin (SRO)**	**26.67**	**160**	LR	LR	12 58 43.0	
	comp=Z,114nm,18.8s,baz=297,slow=38						
WRA	**Warramunga Arr**	**29.25**	**117**	P	**P**	**12 47 59.0**	**0.0**
	6.7nm,1.0s,mb4.3,baz=288,slow=11,SNR=13						
WB2	**Warramunga Arr**	**29.26**	**117**	*e*P	**P**	**12 47 58.7**	**-0.4**
WB2	**Warramunga Arr**	**29.26**	**117**	*e*P	**P**	**12 47 59.6**	**+0.5**
ASAR	**Alice Springs**	**30.35**	**124**	P	**P**	**12 48 08.7**	**-0.1**
	2.2nm,0.8s,mb3.9,baz=301,slow=7.6,SNR=15						
STKA	**Stephens Creek**	**40.19**	**131**	*e*P	**P**	**12 49 33.8**	**+0.6**
	5.6nm,0.8s,mb4.3						
STKA	**Stephens Creek**	**40.19**	**131**	P	**P**	**12 49 33.2**	**0.0**
	3.7nm,0.8s,mb4.2,baz=322,slow=4.7,SNR=4.7						
LSA	**Lhasa**	**40.34**	**339**	*e*P	**P**	**12 49 36.2**	**+1.7**
	5.3nm,1.0s,mb4.2						
LSA	**Lhasa**	**40.34**	**339**	*e*P	**P**	**12 49 36.2**	**+1.8**
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
SONM	**Songino Array**	**55.56**	**360**	P	**P**	**12 51 32.1**	**+0.3**
	comp=Z,1.3nm,0.9s,mb4.0,baz=178,slow=7.9,SNR=7.0						
SONM				PcP	PcP	12 52 32.1	+0.7
	comp=Z,1.7nm,0.8s,baz=178,slow=3.7,SNR=7.5						
TKM2	**Tokmak 2**	**58.04**	**333**	*e*P	**P**	**12 51 49.0**	**-0.6**
	comp=Z,3.5nm,0.5s,mb4.7						
TKM2	**Tokmak 2**	**58.04**	**333**	*e*P	**P**	**12 51 49.0**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
ZAK	**Zakamensk**	**58.18**	**357**	*e*P	**P**	**12 51 50.5**	**+0.1**
AAK	**Ala-Archa**	**58.31**	**332**	P	**P**	**12 51 51.1**	**-0.4**
EKS2	**Erkin-Say**	**58.67**	**332**	*e*P	**P**	**12 51 54.3**	**+0.4**
	comp=Z,4.5nm,0.8s,mb4.5						
MK31	**Makanchi Array**	**58.70**	**341**	*e*P	**P**	**12 51 52.6**	**-1.5**
MKAR	**Makanchi Array**	**58.70**	**341**	P	**P**	**12 51 53.4**	**-0.7**
MKAR	**Makanchi Array**	**58.70**	**341**	P	**P**	**12 51 52.8**	**-1.3**
	comp=Z,4.4nm,0.8s,mb4.5,baz=143,slow=7.7,SNR=37						
KURK	**Kurchatov**	**63.32**	**340**	*e*P	**P**	**12 52 25.7**	**+0.3**
	comp=Z,14nm,0.9s,mb5.1						
KURK	**Kurchatov**	**63.32**	**340**	*e*P	**P**	**12 52 25.7**	**+0.3**
KURK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
BRVK	**Borovoye**	**68.22**	**337**	*e*P	**P**	**12 52 57.3**	**+0.4**
	comp=Z,8.8nm,0.8s,mb4.8						
BRVK	**Borovoye**	**68.22**	**337**	*e*P	**P**	**12 52 57.3**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
AB31	**Akbulak array**	**70.11**	**329**	P	**P**	**12 53 08.5**	**-0.2**
AKTK	**Aktyubinsk**	**71.82**	**330**	P	**P**	**12 53 18.9**	**-0.1**
AKTO	**Aktyubinsk**	**71.82**	**330**	P	**P**	**12 53 18.9**	**-0.1**
	comp=Z,1.6nm,0.6s,mb4.1,baz=103,slow=6.6,SNR=5.3						
SVE	**Sverdlovsk**	**74.78**	**336**	P	**P**	**12 53 36.9**	**+0.5**
ARU	**Arti**	**75.38**	**335**	*e*P	**P**	**12 53 38.9**	**-1.0**
	comp=Z,6.5nm,0.8s,mb4.6						
ARU	**Arti**	**75.38**	**335**	*d i*P	**P**	**12 53 40.4**	**+0.5**
ARU						12 53 56.0	
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7						
BRTR	**Keskin Array B**	**82.28**	**312**	P	**P**	**12 54 17.5**	**-0.6**
	comp=Z,2.7nm,0.8s,mb4.2,baz=108,slow=9.2,SNR=8.9						
AKASG	**Malin Array Be**	**88.29**	**322**	*i* P	**P**	**12 54 48.5**	**+0.6**
AKASG	**Malin Array Be**	**88.29**	**322**	P	**P**	**12 54 47.7**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.9,baz=93,slow=4.2,SNR=5.6						
MLR	**Muntele Rosu**	**89.22**	**316**	P	**P**	**12 54 53.5**	**+1.1**
	comp=Z,2.5nm,0.6s,mb4.7,baz=67,slow=3.1,SNR=5.3						
YKA	**Yellowknife Ar**	**117.85**	**20**	PKP	PKPdf	13 00 42.1	-0.4
	comp=Z,0.2nm,0.7s,baz=312,slow=2.3,SNR=3.2						
TXAR	**Lajitas Array**	**144.39**	**49**	PKP	PKPdf	13 01 33.1	-0.2
	comp=Z,1.3nm,0.9s,baz=324,slow=2.0,SNR=9.9						
MIAR	**Mount Ida**	**147.61**	**32**	*e*PKPbc	PKPbc	13 01 41.3	0.0

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*IDC **06** 12:53:00.8±0.6, 072S×10028E, h0^{km}, mb4.5/18, mb1 4.5/18, mb1mx4.4/26, mbtmp4.5/18, MS4.2/10, Ms1 4.2/10, ms1mx3.9/31, Error ellipse: s-maj=26.8km s-min=12.3km az=49.0*
*NEIC **06** 12:53:06.9±0.4, 040S×10091E, h20^{km}, mb5.1/32, Error ellipse: s-maj=18.4km s-min=8.8km az=54.0*
*GCMT **06** 12:53:06.9±0.5, 052S×10055E, h30^{km}±1^{km}, MW5.0/59, Moment Tensor Solution. s16,c18; s59,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.22±.21; $M_{\theta\theta}$-3.02±.14; $M_{\phi\phi}$3.25±.18; $M_{r\theta}$-0.41±.19; $M_{\theta\phi}$1.67±.14; $M_{\phi r}$-0.74±.25; Best double couple: $M_0$3.64200×10^{16} NP1:ϕ_s148.00000°, δ79.00000°, λ175.00000°. NP2: ϕ_s239.00000°, δ85.00000°, λ11.00000°. Principal axes: T 3.8310, Plg11.0000°, Azm104.0000°; N -0.3720, Plg78.0000°, Azm264.0000°; P -3.4530, Plg4.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **06** 12:53:07.8, 040S×10090E, h20^{km}, mB5.0, mb4.7, Ms4.8, Msz4.5*
*MOS **06** 12:53:07.1±2.0, 022S×101.14E, h33^{km}, mb5.2/32, MS4.1/5, Error ellipse: s-maj=19.1km s-min=5.8km az=120.3*
*ISCJB **06** 12:53:08.4±0.7, 035S±005×10051E±005, h33^{km}±6^{km}, mb4.8/74, MS4.3/26, Error ellipse: s-maj=8.6km s-min=7.6km az=163.0*
*SZGRF **06** 12:53:12.7, 049S×10020E, h33^{km}, mb5.1, Southern*

Sumatera, Indonesia

ISC 06 12:53:10.2±1.2, 040S±005×10056E±005, h34km±8km, h33km±1.3km:pP-P, n195, σ1.49/202, mb4.8/74, MS4.3/26, 11C-14D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.57	333	Pn	Pn	12 54 04.7	+1.4
PSI				Sn	Sn	12 54 58.0	+14
PSI	Prapat	3.57	333	Pn	Pn	12 54 04.7	+1.4
	9.0nm,0.3s,baz=108,slow=14,SNR=16						
PSI				Sn	Sn	12 54 58.0	+14
	baz=154,slow=10,SNR=2.4						
KSI	Kapahiang	3.82	148	P	Pn	12 54 07.0	+0.4
	2μm,1.8s						
TSI	Tuntungan	4.35	333	P	Pn	12 54 16.8	+2.8
	2μm,0.8s						
IPM	Ipoh	4.87	5	P	Pn	12 54 21.0	0.0
KULM	Kulim	5.65	1	*e*Pn	Pn	12 54 31.4	-0.3
KULM				*e*Pg	Pn	12 54 52.1	+20
KULM				*e*Sg	Sn	12 56 07.8	+32
SNG	Songkhla	7.52	0	P	Pn	12 54 57.5	0.0
	1μm,1.0s						
BSI	Banda Aceh	7.87	318	P	Pn	12 55 02.2	-0.1
	89nm,0.7s						
SBJI	Serang	7.95	136	P	Pn	12 55 06.4	+3.0
	384nm,1.6s						
BJII	Banjamegara	11.43	127	P	Pn	12 55 59.5	+8.3
	88nm,2.0s						
KKTK	Khon Kaen	16.77	8	P	Pn	12 57 05.0	+2.4
KKM	Kota Kinabalu	16.89	67	*e*Pn	Pn	12 57 04.7	+0.6
BDT	Bhumibol Dam	17.59	355	P	Pn	12 57 14.0	+1.2
CHG	Chiang Mai	19.16	355	⇑P	Pn	12 57 32.9	+1.1
CHTO	Chiang Mai	19.16	355	*e*P	Pn	12 57 30.3	-1.5
	10.0nm,0.9s						
CHTO	Chiang Mai	19.16	355	*e*P	Pn	12 57 30.3	-1.5
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PCI	Palu	19.28	92	P	Pn	12 57 34.7	+1.3
	comp=Z,102nm,1.6s						
PALK	Pallekele	21.22	291	*e*P	P	12 57 53.9	+0.6
	comp=Z,24nm,0.9s,mb4.5						
QIZ	Qiongzhong	21.35	25	P	P	12 57 55.1	+0.5
QIZ				S	S	13 01 48.0	-1.9
QIZ				XS	sS	13 02 00.8	-3.6
QIZ				LR	LR		
	comp=E,1μm,12.7s						
QIZ				LR	LR		
	comp=Z,811nm,12.3s,MS4.3						
MDRS	Chennai	24.18	304	*e*x	x	12 59 33.5	
MDRS				*e*x	x	13 02 55.5	
BATI	Kupang	24.96	114	LR	LR	13 10 14.6	
	comp=Z,2μm,20.3s,MS4.5,baz=308,slow=41						
KMI	Kunming	25.46	5	P	P	12 58 40.7	+5.6
KMI				AMB	AMB		
	comp=Z,18nm,0.9s,mb4.6						
SHL	Shillong	27.14	343	*e*P	P	12 58 48.0	-2.3
SHL				*e*S	S	13 03 45.0	+18
GYA	Guiyang	27.34	12	P	P	12 58 54.1	+2.0
GYA				AP	pP	12 59 03.4	+1.5
GYA				XP	sP	12 59 07.2	+1.1
GYA				PP		12 59 42.2	
GYA				PCP	PcP	13 02 13.8	+2.8
GYA				S	S	13 03 30.9	+1.2
GYA				XS	sS	13 03 45.6	-0.4
GYA				SS		13 04 48.0	
GYA				SCP	ScP	13 05 50.6	+1.5
GYA				SCS	ScS	13 09 40.7	0.0
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,470nm,16.6s,MS4.3						
GYA				LR	LR		
	comp=E,480nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=Z,490nm,16.8s,MS4.2						
MBWA	Marble Bar	27.86	139	*e*P	P	12 58 55.5	-1.4
HYB	Hyderabad	27.98	310	*e*P	P	12 58 57.5	-0.4
HYB	Hyderabad	27.98	310	*i*P	P	12 58 57.5	-0.4
ODAN	Odare	29.92	336	*e*P	P	12 59 13.8	-1.2
	comp=Z,50nm,0.8s,mb5.3						
TAPN	Taplejung	30.23	337	*e*P	P	12 59 16.7	-1.1
	comp=Z,77nm,0.9s,mb5.4						
FITZ	Fitzroy Crossi	30.28	127	P	P	12 59 12.7	-5.7
	comp=Z,3.0nm,0.8s,mb4.1,baz=196,slow=14,SNR=2.3						
JIRN	Jiri	31.12	335	*e*P	P	12 59 24.6	-1.1
	comp=Z,70nm,0.9s,mb5.5						
LSA	Lhasa	31.25	344	P	P	12 59 26.2	-0.5
LSA	Lhasa	31.25	344	*e*P	P	12 59 26.7	0.0
	comp=Z,15nm,1.0s,mb4.8						
LSA	Lhasa	31.25	344	*e*P	P	12 59 26.7	0.0
LSA				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
CD2	Chengdu	31.28	5	*e*P	P	12 59 30.1	+3.1
CD2				AP	pP	12 59 39.2	+2.3
CD2				XP	sP	12 59 43.7	+2.6
CD2				S	S	13 04 34.0	+2.4
CD2				XS	sS	13 04 50.0	+2.1
CD2				SS	SS	13 06 22.5	-24
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,800nm,10.8s						
CD2				LR	LR		
	comp=E,720nm,18.0s						
CD2				LR	LR		
	comp=Z,860nm,13.2s,MS4.6						
KKN	Kakani	31.63	334	*e*P	P	12 59 28.8	-1.4
	comp=Z,53nm,0.8s,mb5.4						
KKN	Kakani	31.63	334	*e*P	P	12 59 28.8	-1.4
KKN				pmax	pmax		
	comp=Z,53nm,0.8s,mb5.4						
GKN	Gorkha	32.10	333	*e*P	P	12 59 32.9	-1.4
XAN	Xi'an	35.14	12	P	P	12 59 59.5	-1.2
XAN				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
NWAO	Narrogin (SRO)	35.97	156	P	P	13 00 03.4	-4.4
	comp=Z,2.1nm,0.8s,mb4.1,baz=27,slow=14,SNR=1.6						
LZH	Lanzhou	36.42	4	*e*P	P	13 00 15.1	+3.5
LZH				AP	pP	13 00 23.1	+1.5
LZH				XP	sP	13 00 27.9	+2.1
LZH				PP	PP	13 01 39.2	+4.2
LZH				*e*S	S	13 05 52.5	+1.5
LZH				SS	SS	13 08 19.0	-12
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,120nm,5.7s						
LZH				LR	LR		
	comp=E,945nm,15.9s						
LZH				LR	LR		
	comp=Z,1μm,16.2s,MS4.8						
LZH	Lanzhou	36.42	4	*e*P	P	13 00 15.1	+3.5
LZH				pP	pP	13 00 23.1	+1.5
LZH				sP	sP	13 00 27.9	+2.1
LZH				PP	PP	13 01 39.2	+4.2
LZH				*e*S	S	13 05 52.5	+1.5
LZH				sS	sS	13 06 12.0	+4.5
LZH				SS	SS	13 08 19.0	-12
LZH	Lanzhou	36.42	4	*e*P	P	13 00 15.1	+3.5
LZH				*PP	pP	13 00 23.1	+1.5
LZH				*SP	sP	13 00 27.9	+2.1
LZH						13 01 39.2	
LZH				*e*S	S	13 05 52.5	+1.5
LZH				*SS	sS	13 06 12.0	+4.5
NDI	New Delhi	36.54	324	*e*x	x	13 00 10.0	
NJ2	Nanjing	36.62	27	*e*P	P	13 00 15.2	+1.8
NJ2				AP	pP	13 00 26.2	+2.8
NJ2				XP	sP	13 00 29.2	+1.7
NJ2				PP	PP	13 01 41.7	+4.5
NJ2				S	S	13 05 55.5	+1.4
NJ2				XS	sS	13 06 12.0	+1.3
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,120nm,11.0s						
NJ2				LR	LR		
	comp=N,860nm,13.7s						
NJ2				LR	LR		
	comp=E,1μm,24.2s						
NJ2				LR	LR		
	comp=Z,1μm,14.6s,MS4.8						
WRA	Warramunga Arr	38.35	123	*i*P	P	13 00 23.6	-4.6
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WRA	Warramunga Arr	38.35	123	P	P	13 00 23.6	-4.6
	comp=Z,7.8nm,0.8s,mb4.5,baz=302,slow=9.1,SNR=20						
WRA				PcP	PcP	13 02 39.3	-2.3
	comp=Z,1.0nm,0.6s,baz=314,slow=2.4,SNR=5.3						
WRA				LR	LR	13 17 06.9	
	comp=Z,240nm,19.7s,MS4.0,baz=285,slow=38						
WB2	Warramunga Arr	38.36	123	*e*P	P	13 00 23.6	-4.7
GTA	Gaotai	39.62	359	P	P	13 00 39.6	+1.1
GTA				AP	pP	13 00 47.9	-0.7
GTA				XP	sP	13 00 51.8	-0.9
GTA				PP	PP	13 02 16.1	+6.1
GTA				PCP	PcP	13 02 46.2	+1.0
GTA				SCP	ScP	13 06 30.7	-0.9
GTA				PCS	PcS	13 06 34.7	-0.4
GTA				S	S	13 06 41.0	+1.7
GTA				XS	sS	13 06 57.8	+1.9
GTA				SS	SS	13 09 31.8	-3.6
GTA				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.2						
GTA				AMB	AMB		
	comp=Z,96nm,6.1s						
GTA				LR	LR		
	comp=N,516nm,15.6s,MS4.6						
GTA				LR	LR		
	comp=E,510nm,16.0s,MS4.6						
GTA				LR	LR		
	comp=Z,544nm,14.5s,MS4.5						
ASAR	Alice Springs	39.77	128	P	P	13 00 35.4	-4.6
	comp=Z,3.6nm,0.6s,mb4.3,baz=301,slow=7.4,SNR=62						
ASAR				PcP	PcP	13 02 43.1	-2.9
	comp=Z,2.2nm,0.8s,baz=301,slow=3.1,SNR=6.9						
ASAR				ScP	ScP	13 06 34.5	+2.0
	comp=Z,0.4nm,0.7s,baz=305,slow=4.2,SNR=4.4						
HHC	Hu-ho-hao-te	42.25	12	*e*P	P	13 01 00.4	+0.2
HHC				AP	pP	13 01 10.1	-0.2
HHC				XP	sP	13 01 13.9	-0.6
HHC				PP	PP	13 02 41.1	+2.5
HHC				PCP	PcP	13 02 54.2	+0.4
HHC				SCP	ScP	13 06 40.2	-1.8
HHC				S	S	13 07 17.1	-1.4
HHC				XS	sS	13 07 34.9	-0.3
HHC				SS	SS	13 10 20.2	-7.5
HHC				SCS	ScS	13 10 57.1	-2.7
HHC				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.4						
HHC				AMB	AMB		
	comp=Z,166nm,5.4s						
HHC				LR	LR		
	comp=N,617nm,14.3s,MS4.7						
HHC				LR	LR		
	comp=E,390nm,13.1s,MS4.7						
HHC				LR	LR		
	comp=Z,496nm,15.5s,MS4.5						
BJI	Beijing	42.70	18	P	P	13 01 03.2	-0.6
BJI				PP	PP	13 02 44.6	+1.3
BJI				SCP	ScP	13 06 46.2	+2.4
BJI				S	S	13 07 24.9	-0.1
BJI				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.1						
BJI				LR	LR		
	comp=N,486nm,16.4s,MS4.7						
BJI				LR	LR		
	comp=E,652nm,18.8s,MS4.7						
BJI				LR	LR		
	comp=Z,301nm,20.1s,MS4.2						
JNU	Nakatsue	43.89	38	P	P	13 01 12.4	-1.1
	comp=Z,31nm,1.0s,mb5.0,baz=148,slow=14,SNR=7.4						
JNU				LR	LR	13 20 59.3	
	comp=Z,196nm,19.1s,MS4.0,baz=35,slow=38						
KSRS	Korea Array	45.36	31	P	P	13 01 24.7	-0.6
	comp=Z,7.6nm,0.9s,mb4.5,baz=224,slow=8.3,SNR=9.3						
KSRS				LR	LR	13 24 22.2	
	comp=Z,154nm,18.2s,MS4.0,baz=50,slow=41						
WMQ	Urumqi	45.50	347	⇓*i*P	P	13 01 25.0	-1.2
WMQ				AP	pP	13 01 35.0	-1.4
WMQ				XP	sP	13 01 39.1	-1.4
WMQ				PCP	PcP	13 03 04.5	-0.2
WMQ				PP	PP	13 03 11.8	-1.4
WMQ				SCP	ScP	13 06 53.2	-1.9
WMQ				S	S	13 08 03.2	-2.5
WMQ				XS	sS	13 08 19.5	-3.0
WMQ				SCS	ScS	13 11 16.5	-3.6
WMQ				AMB	AMB		
	comp=Z,19nm,0.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,106nm,3.2s						
WMQ				LR	LR		
	comp=N,203nm,20.0s,MS4.2						
WMQ				LR	LR		
	comp=E,153nm,20.9s,MS4.2						
WMQ				LR	LR		
	comp=Z,153nm,18.8s,MS4.0						
KZA	Kyzart	48.05	335	P	P	13 01 45.7	-0.6
	SNR=11						
SONM	Songino Array	48.30	5	P	P	13 01 46.5	-1.6
SONM						13 03 12.3	
SONM	Songino Array	48.30	5	P	P	13 01 46.5	-1.6
	comp=Z,1.0nm,0.5s,mb4.1,baz=187,slow=10.0,SNR=8.7						
SONM				PcP	PcP	13 03 12.3	-2.2
	comp=Z,2.6nm,0.9s,baz=188,slow=5.8,SNR=2.5						
SONM				ScP	ScP	13 07 06.2	-0.6
	comp=Z,1.0nm,1.0s,baz=173,slow=2.2,SNR=4.2						
ULN	Ulaanbaatar	48.40	6	*i*P	P	13 01 49.7	+0.9
UCH	Uchtor	48.49	334	P	P	13 01 49.2	-0.5
	SNR=22						
TKM2	Tokmak 2	48.60	336	*e*P	P	13 01 49.4	-1.1
	comp=Z,29nm,0.7s,mb5.4						
TKM2	Tokmak 2	48.60	336	*e*P	P	13 01 49.4	-1.1
TKM2				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.4						
TKM2	Tokmak 2	48.60	336	P	P	13 01 49.6	-0.9
	SNR=19						
KBK	Karagaybulak	48.66	335	P	P	13 01 50.6	-0.3
	SNR=26						
AML	Almayashu	48.78	333	P	P	13 01 51.4	-0.5
	SNR=22						
AAK	Ala-Archa	48.83	334	*e*P	P	13 01 50.5	-1.8
	comp=Z,25nm,1.4s,mb5.0						
AAK	Ala-Archa	48.83	334	⇑*e*P	P	13 01 50.4	-1.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.9						
AAK	Ala-Archa	48.83	334	P	P	13 01 52.0	-0.2
	SNR=6.8						
FRU	Bishkek	48.94	335	*e*P	P	13 01 53.0	-0.1
EKS2	Erkin-Say	49.17	334	P	P	13 01 54.0	-0.8
	SNR=25						
CN2	Changchun	49.30	24	*e*P	P	13 01 59.2	+3.4
USP	Ospenovka	49.34	335	P	P	13 01 54.9	-1.3
	SNR=21						
MK31	Makanchi Array	49.65	344	*e*P	P	13 01 56.0	-2.5
MK31	Makanchi Array	49.65	344	*i*P	P	13 01 55.9	-2.5
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MKAR	Makanchi Array	49.65	344	⇑*e*P	P	13 01 55.7	-2.7
MKAR	Makanchi Array	49.65	344	P	P	13 01 55.8	-2.6
	comp=Z,4.4nm,0.6s,mb4.6,baz=152,slow=8.0,SNR=20						
MKAR				LR	LR	13 25 36.0	
	comp=Z,170nm,21.4s,MS4.0,baz=161,slow=39						
STKA	Stephens Creek	49.81	133	*e*P	P	13 01 57.7	-2.2
	comp=Z,6.5nm,0.7s,mb4.8						
STKA	Stephens Creek	49.81	133	P	P	13 01 54.2	-5.7
	comp=Z,2.6nm,0.7s,mb4.4,baz=305,slow=11,SNR=3.3						
KK31	Karatay Array	51.00	332	*i*P	P	13 02 06.8	-1.9
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
MDJ	Mudanjiang	51.71	26	P	P	13 02 12.8	-1.2
MDJ				AP	pP	13 02 21.8	-2.5
MDJ				XP	sP	13 02 25.8	-2.6
MDJ				PP	PP	13 04 10.3	-1.6
MDJ				SCP	ScP	13 07 20.9	-0.6
MDJ				PCS	PcS	13 07 24.4	-0.6
MDJ				S	S	13 09 31.8	-1.5
MDJ				XS	sS	13 09 47.5	-2.8
MDJ				SS	SS	13 13 09.6	-0.6
MDJ				AMB	AMB		
	comp=Z,11nm,2.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,186nm,4.8s						
MDJ				LR	LR		
	comp=N,164nm,33.8s,MS4.1						
MDJ				LR	LR		
	comp=E,278nm,32.1s,MS4.1						
MDJ				LR	LR		
	comp=Z,205nm,19.4s						
KURK	Kurchatov	54.24	343	*e*P	P	13 02 30.6	-1.9
	comp=Z,8.3nm,0.8s,mb4.7						
KURK	Kurchatov	54.24	343	⇑*e*P	P	13 02 30.8	-1.7
KLR	Kul'dur	56.25	24	*e*P	P	13 02 41.9	-5.2
KLR				MLR	MLR		
	comp=N,500nm,13.5s						
KLR				MLR	MLR		
	comp=Z,2μm,13.5s,MS5.4						
NVS	Novosibirsk	56.87	348	*e*P	P	13 02 47.5	-3.8
NVS				*e*		13 11 02.5	
BRVK	Borovoye	58.95	339	*e*P	P	13 03 01.7	-4.3
	comp=Z,8.7nm,0.9s,mb4.8						
BRVK	Borovoye	58.95	339	*e*P	P	13 03 01.7	-4.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
HNR	Honiara	59.77	101	LR	LR	13 29 15.2	
	comp=Z,300nm,18.8s,MS4.5,baz=359,slow=36						
YSS	Yuzh-Sakhalins	59.83	32	⇑*e*P	P	13 03 14.2	+2.0
YSS				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
AKTK	Aktyubinsk	62.23	331	P	P	13 03 25.6	-2.8
AKTO	Aktyubinsk	62.23	331	P	P	13 03 25.6	-2.8
	comp=Z,10nm,1.1s,mb4.9,baz=130,slow=7.5,SNR=12						
KMBO	Kilima Mbogo	63.30	269	LR	LR	13 27 39.4	
	comp=Z,178nm,18.7s,MS4.3,baz=94,slow=33						
SVE	Sverdlovsk	65.43	337	⇑*e*P	P	13 03 47.3	-2.0
SVE				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
ARU	Arti	65.97	336	*e*P	P	13 03 51.0	-1.9
	comp=Z,38nm,1.4s,mb5.2						
ARU	Arti	65.97	336	*c i*P	P	13 03 50.5	-2.4
ARU						13 06 14.6	
ARU				S	S	13 12 40.6	+2.6
ARU				pmax	pmax		
	comp=Z,35nm,1.7s,mb5.1						
ZEI	Tsey	66.42	318	*e*P	P	13 03 56.0	0.0
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KIV	Kislovodsk	67.71	319	*e*P	P	13 04 06.0	+1.8
	comp=Z,19nm,0.9s,mb5.1						
KIV	Kislovodsk	67.71	319	*e*P	P	13 04 02.5	-1.7
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=Z,87nm,20.0s,MS4.0						
ASF	Jabal al Asfar	68.12	305	P	P	13 04 01.3	-5.7
	comp=Z,0.7nm,0.3s,mb4.1,baz=327,slow=22,SNR=2.2						
MALT	Malatya	68.69	312	*e*P	P	13 04 10.8	+0.3
	comp=Z,14nm,1.0s,mb4.9						
MALT	Malatya	68.69	312	*e*P	P	13 04 10.8	+0.3
MALT				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MALT	Malatya	68.69	312	⇓*i*P	P	13 04 12.2	+1.7
MMAI	Mount Meron Ar	69.56	306	LR	LR	13 32 22.3	
	comp=Z,81nm,20.6s,MS4.0,baz=270,slow=34						
VRHR	Novokhopersk	71.33	325	*e*P	P	13 04 24.0	-2.4
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.3s,mb5.2						
VRHR				pmax	pmax		
	comp=N,7.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,3.0nm,0.2s						
MAW	Mawson	71.97	194	LR	LR	13 27 51.6	
	comp=E,200nm,20.3s,MS4.4,baz=256,slow=29						
BRTR	Keskin Array B	72.67	312	*i*P	P	13 04 34.2	-0.5
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	Keskin Array B	72.67	312	P	P	13 04 30.9	-3.8
	comp=Z,3.5nm,0.8s,mb4.4,baz=118,slow=7.1,SNR=12						
BR131	Keskin Array S	72.67	312	*e*P	P	13 04 35.6	+0.9
	comp=Z,4.5nm,0.8s,mb4.5						
VRSR	Storozhevoye	72.78	325	*e*P	P	13 04 32.5	-2.6
VRSR				pmax	pmax		
	comp=N,2.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
VRSR				pmax	pmax		
	comp=E,3.0nm,1.3s						
ANTO	Ankara	73.33	312	*e*P	P	13 04 37.2	-1.4
	comp=E,13nm,0.9s,mb4.9						
ANTO	Ankara	73.33	312	*e*P	P	13 04 37.2	-1.4
ANTO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
TIXI	Tiksi	74.19	9	*i*P	P	13 04 41.9	-1.1
TIXI				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.6						
MOS	Moscow	75.42	329	*e*P	P	13 04 50.1	-0.3
MOS				pmax	pmax		
	comp=Z,94nm,1.1s,mb5.6						
OBN	Obninsk	75.74	328	*e*P	P	13 04 50.7	-1.5
	comp=Z,37nm,0.8s,mb5.4						
OBN	Obninsk	75.74	328	⇓*e*P	P	13 04 50.5	-1.7
OBN				*e*	pP	13 05 00.8	-2.2
OBN				*e*S	S	13 14 29.5	-2.0
OBN				*e*SS	SS	13 19 23.0	-0.7
OBN				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
TIRR	Tirgusor	77.60	316	⇓P	P	13 05 03.6	+0.6
TIRR	Tirgusor	77.60	316	⇓*i*P	P	13 05 03.6	+0.6
IDI	Anoyia	78.55	306	P	P	13 05 03.1	-5.4
	comp=Z,7.8nm,0.9s,mb4.6,baz=258,slow=13,SNR=2.4						
IDI				LR	LR	13 44 35.0	
	comp=Z,143nm,18.8s,MS4.3,baz=80,slow=39						
AKASG	Malin Array Be	78.57	322	P	P	13 05 03.9	-4.3
	comp=Z,3.5nm,0.8s,mb4.4,baz=88,slow=4.6,SNR=9.7						
KIEV	Kiev	78.58	322	*e*P	P	13 05 05.4	-2.9
	comp=Z,17nm,1.3s,mb4.8						
KIEV	Kiev	78.58	322	*e*P	P	13 05 05.4	-2.9
KIEV				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
RDO	Rodhopi	79.01	312	P	P	13 05 10.4	-0.5
VRI	Vrincioaia	79.07	317	⇓P	P	13 05 12.3	+1.2
VRI	Vrincioaia	79.07	317	⇓*i*P	P	13 05 12.3	+1.2
MLR	Muntele Rosu	79.53	316	⇑P	P	13 05 15.6	+2.0
MLR	Muntele Rosu	79.53	316	⇑*i*P	P	13 05 15.6	+2.0
BURAR	Bucovina Array	80.44	318	⇓P	P	13 05 20.5	+2.0
BURAR	Bucovina Array	80.44	318	⇓*i*P	P	13 05 20.5	+2.0
VTS	Vitosha	80.96	313	P	P	13 05 22.2	+0.8
JOF	Joensuu	81.02	334	*e*p	P	13 05 17.8	-3.5
	comp=Z,5.3nm,0.8s,mb4.5						
JOF	Joensuu	81.02	334	*e*P	P	13 05 17.8	-3.5
JOF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DRGR		81.97	317	P	P	13 05 27.8	+1.1
KOLS	Kolonicke sedl	82.61	319	*i*P	P	13 05 29.7	-0.2
KOLS				P		13 05 34.3	
SUW	Suwalki	82.91	325	P	P	13 05 32.7	+1.3
FINES	FINESS Array B	82.96	332	*i*P	P	13 05 29.2	-2.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	82.96	332	P	P	13 05 29.2	-2.3
	comp=Z,1.8nm,0.6s,mb4.3,baz=106,slow=6.8,SNR=9.8						
KAF	Kangasniemi	83.02	333	*e*p	P	13 05 29.2	-2.6
	comp=Z,4.8nm,0.6s,mb4.7,baz=99,slow=4.7						
KAF	Kangasniemi	83.02	333	*e*P	P	13 05 29.2	-2.6
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
CRVS	Cervenica-Dubn	83.13	319	*i*P	P	13 05 33.9	+1.3
CRVS				*e*PP	PP	13 08 44.0	0.0
STHS	Stebnicka Huta	83.35	320	*e*P	P	13 05 33.3	-0.4
	comp=Z,6.0nm,0.8s,mb4.7						
STHS	Stebnicka Huta	83.35	320	*e*P	P	13 05 33.3	-0.4
STHS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KECS	Kecovo	83.71	319	*e*P	P	13 05 34.7	-0.9
	comp=Z,5.0nm,1.2s,mb4.5						
KECS	Kecovo	83.71	319	*e*P	P	13 05 34.7	-0.9
KECS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
PSZ	Piszkesteto	84.03	318	P	P	13 05 37.9	+0.6
PKSM	Moragy	84.68	316	⇓*i*P	P	13 05 43.6	+3.0
VYHS	Vyhne	84.80	319	*e*P	P	13 05 41.5	+0.3
	comp=Z,6.7nm,1.4s,mb4.6						
VYHS	Vyhne	84.80	319	*e*P	P	13 05 41.5	+0.3
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.6						
ARCES	ARCESS Array B	85.17	340	P	P	13 05 39.4	-3.2

	comp=Z,4.6nm,0.9s,mb4.6,baz=82,slow=2.6,SNR=5.4						
OKC	**Ostrava-Krasne**	**85.40**	**320**	*e*P	**P**	**13 05 46.1**	**+2.0**
JAVC	**Velka Javorina**	**85.61**	**319**	P	**P**	**13 05 47.8**	**+2.6**
MORC	**Moravsky Berou**	**85.78**	**320**	*e*P	**P**	**13 05 45.7**	**-0.4**
	comp=Z,10.0nm,1.1s,mb5.0						
MORC	**Moravsky Berou**	**85.78**	**320**	*e*P	**P**	**13 05 45.7**	**-0.3**
MORC				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
MORC	**Moravsky Berou**	**85.78**	**320**	⇓*i*P	**P**	**13 05 47.7**	**+1.7**
MODS	**Modra-Piesok**	**85.82**	**318**	*e*P	**P**	**13 05 47.7**	**+1.4**
	comp=Z,41nm,2.0s,mb5.3						
MODS	**Modra-Piesok**	**85.82**	**318**	*e*P	**P**	**13 05 47.7**	**+1.4**
MODS				pmax	pmax		
	comp=Z,41nm,2.0s,mb5.3						
MODS	**Modra-Piesok**	**85.82**	**318**	*e*P	**P**	**13 05 47.6**	**+1.3**
ZST	**Bratislava**	**85.92**	**318**	*e*P	**P**	**13 05 45.4**	**-1.4**
	comp=Z,11nm,1.1s,mb5.0						
ZST	**Bratislava**	**85.92**	**318**	*e*P	**P**	**13 05 45.4**	**-1.4**
ZST				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
DPC	**Dobruska-Polom**	**86.61**	**320**	*e*P	**P**	**13 05 51.5**	**+1.4**
KSP	**Ksiaz**	**86.67**	**321**	*e*P	**P**	**13 05 51.7**	**+1.3**
ARSA	**Arzberg**	**86.91**	**317**	P	**P**	**13 05 52.4**	**+0.7**
BOJS	**Bojanci**	**86.98**	**315**	*i* P	**P**	**13 05 53.0**	**+1.0**
PERS	**Pernice**	**87.15**	**317**	*e*P	**P**	**13 05 58.3**	**+5.4**
VISS	**Visnje**	**87.29**	**316**	*e*P	**P**	**13 05 54.5**	**+0.9**
PRU	**Pruhonice**	**87.73**	**320**	*e*P	**P**	**13 05 57.2**	**+1.6**
PVCC	**Panska Ves**	**87.75**	**320**	P	**P**	**13 05 58.3**	**+2.7**
BRG	**Berggiesshubel**	**88.16**	**321**	P	**P**	**13 05 59.5**	**+1.9**
BRG	**Berggiesshubel**	**88.16**	**321**	*e*P	**P**	**13 05 59.0**	**+1.4**
	comp=Z,23nm,1.3s,mb5.2						
GEC2	**GERESS Array S**	**88.22**	**319**	*e*P	**P**	**13 05 52.0**	**-5.9**
RUE	**Ruedersdorf**	**88.34**	**322**	*e*P	**P**	**13 05 57.8**	**-0.6**
	comp=Z,148nm,1.6s,mb6.0						
KBA	**Koelnbreinsper**	**88.38**	**317**	⇑*i*P	**P**	**13 05 57.8**	**-0.9**
	comp=Z,5.3nm,1.0s,mb4.7						
KBA	**Koelnbreinsper**	**88.38**	**317**	⇑*i*P	**P**	**13 05 57.8**	**-0.9**
KBA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
FBE	**Freiberg**	**88.54**	**321**	*e*P	**P**	**13 06 00.7**	**+1.4**
	comp=Z,23nm,1.1s,mb5.4						
HFS	**Hagfors**	**88.77**	**330**	P	**P**	**13 06 00.5**	**+0.2**
	comp=Z,3.1nm,0.9s,mb4.6,baz=117,slow=5.0,SNR=4.0						
CLL	**Collm**	**88.77**	**321**	⇓*i*P	**P**	**13 06 02.0**	**+1.5**
	comp=Z,22nm,1.3s,mb5.3						
CLL	**Collm**	**88.77**	**321**	⇓*i*P	**P**	**13 06 02.0**	**+1.5**
CLL				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.3						
CLL	**Collm**	**88.77**	**321**	⇓*i*P	**P**	**13 06 02.0**	**+1.5**
	comp=Z,22nm,1.3s,mb5.3						
CLL	**Collm**	**88.77**	**321**	*e*P	**P**	**13 06 01.4**	**+0.9**
	comp=Z,22nm,1.2s,mb5.4						
TANN	**Tannenbergstha**	**89.09**	**320**	*e*P	**P**	**13 06 02.2**	**+0.3**
	comp=Z,18nm,1.4s,mb5.2						
NKC	**Novy Kostel**	**89.09**	**320**	P	**P**	**13 06 06.2**	**+4.2**
GUNZ	**Gunzen**	**89.17**	**320**	*e*P	**P**	**13 06 04.3**	**+2.0**
	comp=Z,10.0nm,1.0s,mb5.1						
ROTZ	**Rotzenmuhle**	**89.23**	**320**	*e*P	**P**	**13 06 04.2**	**+1.6**
	comp=Z,28nm,1.5s,mb5.4						
MANZ	**Manzenberg**	**89.30**	**320**	*e*P	**P**	**13 06 04.8**	**+1.8**
	comp=Z,24nm,1.2s,mb5.4						
NEUB	**Neuenburg**	**89.54**	**321**	*e*P	**P**	**13 06 06.0**	**+1.9**
	comp=Z,21nm,1.1s,mb5.4						
MOX	**Moxa**	**89.63**	**320**	*e*P	**P**	**13 06 07.2**	**+2.7**
	comp=Z,21nm,1.5s,mb5.2						
MOX	**Moxa**	**89.63**	**320**	*e*P	**P**	**13 06 07.2**	**+2.7**
MOX				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.2						
MOX	**Moxa**	**89.63**	**320**	*e*P	**P**	**13 06 06.3**	**+1.8**
	comp=Z,20nm,1.4s,mb5.2						
GRA1	**Grafenberg Arr**	**89.87**	**320**	*e*P	**P**	**13 06 07.9**	**+2.3**
	comp=Z,27nm,1.3s,mb5.4						
GRF	**Grafenberg Arr**	**89.87**	**320**	*e*P	**P**	**13 06 07.9**	**+2.3**
GRF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.4						
GRF	**Grafenberg Arr**	**89.87**	**320**	*e*P	**P**	**13 06 07.9**	**+2.3**
GRF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.4						
GRF	**Grafenberg Arr**	**89.87**	**320**	*e*P	**P**	**13 06 07.9**	**+2.3**
	comp=Z,27nm,1.3s,mb5.4						
DAVA	**Damuels**	**90.75**	**317**	P	**P**	**13 06 12.0**	**+2.2**
DAVOX	**Davos/Dischmat**	**90.75**	**317**	P	**P**	**13 06 08.0**	**-1.8**
	comp=Z,7.1nm,0.7s,mb5.1,baz=126,slow=16,SNR=5.9						
KEST	**Kesra**	**91.22**	**306**	P	**P**	**13 06 09.2**	**-3.0**
	comp=Z,1.1nm,0.7s,mb4.3,baz=327,slow=9.4,SNR=2.7						
EGMT	**Eagleton**	**125.77**	**25**	*e*PKPdf	PKPdf	13 12 08.6	+0.2
GOGA	**Godfrey**	**146.94**	**6**	*e*PKPdf	PKPdf	13 12 50.0	+2.2

*IDC **06** 13:05:06.1±0.5, 2.17N×76.35W, h0km, mb4.3/19, mb1 4.5/26, mb1mx4.5/31, mbtmp4.4/26, ML3.9/7, MS4.2/17, Ms1 4.2/17, ms1mx4.0/32, Error ellipse: s-maj=16.2km s-min=10.5km az=77.0*

*ISCJB **06** 13:05:08.4±1.9, 2.13N±0.04×76.45W±0.04, h27km±14km, mb4.8/81, MS4.5/18, Error ellipse: s-maj=6.7km s-min=6.0km az=140.4*

*MOS **06** 13:05:10.6±1.0, 2.30N×76.53W, h33km, mb5.1/23, Error ellipse: s-maj=15.0km s-min=6.7km az=115.1*

*NEIC **06** 13:05:12.1±0.8, 2.08N×76.50W, h43km±7km, mb5.0/64, MS5.0/1, Error ellipse: s-maj=7.2km s-min=5.1km az=56.0*

NEIC At least 7 people injured in Cauca and 2 in Sotara. One building destroyed and 7 damaged in Purace; one building destroyed and 17 damaged in Sierra Cauca; six buildings destroyed and 38 damaged in Sotara; one building damaged in Timbio. Felt at Cali and Popayan.

*GCMT **06** 13:05:12.1±0.3, 2.21N×76.57W, h12km, MW5.2/68, Moment Tensor Solution. s35,c48; s68,c105; Duration: 1.0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.95±.19; $M_{\theta\theta}$2.46±.14; $M_{\phi\phi}$-3.41±.22; $M_{r\theta}$-0.88±.42; $M_{\theta\phi}$4.72±.12; $M_{\phi r}$5.32±.48; Best double couple: $M_0$7.45400×10^{16} NP1:ϕ_s102.00000°,δ47.00000°,λ1.00000°. NP2: ϕ_s11.00000°,δ89.00000°,λ137.00000°. Principal axes: T 6.1520, Plg30.0000°, Azm317.0000°; N 2.6090, Plg47.0000°, Azm190.0000°; P -8.7550, Plg28.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **06** 13:05:13.1, 2.10N×76.50W, h43km, mB5.3, Ms5.4, Msz4.9*

ISC 06 13:05:12.0±0.8**, 2.09N**±0.04×**76.45W**±0.04**, h41**km±7km**, n380,** σ**0.69**/343**, mb4.8**/81**, MS4.5**/18**, 93C-73D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.47**	**38**	Pn	**Pn**	**13 05 59.6**	**-4.0**
	6.2nm,0.3s,baz=131,slow=7.0,SNR=6.2						
ROSC				Lg		13 06 52.3	
	80nm,0.3s,baz=127,slow=18,SNR=5.0						
ROSC				LR	LR	13 06 59.6	
	comp=Z,2μm,21.5s,baz=203,slow=34						
BCIP	**Isla Barro Col**	**7.79**	**335**	*e*Pn	**Pn**	**13 07 02.4**	**-0.6**
BCIP				*e*Sn	**Sn**	**13 08 30.8**	**+0.8**
SDV	**Santo Domingo**	**8.89**	**40**	*e*Pn	**Pn**	**13 07 18.4**	**+0.3**
SDV	**Santo Domingo**	**8.89**	**40**	Pn	**Pn**	**13 07 12.8**	**-5.3**
	0.9nm,0.3s,baz=211,slow=8.0,SNR=6.4						
SDV				Sn	**Sn**	**13 08 56.9**	**-0.1**
	5.7nm,0.3s,baz=76,slow=17,SNR=10						
SDV				LR	LR	13 11 08.3	
	comp=Z,3μm,19.3s,baz=58,slow=41						
ATAH	**Atahualpa**	**9.24**	**192**	Pn	**Pn**	**13 07 22.8**	**0.0**
	0.8nm,0.3s,baz=34,slow=3.8,SNR=6.2						
ATAH				Sn	**Sn**	**13 09 11.9**	**+6.5**
	5.4nm,0.3s,baz=176,slow=17,SNR=3.6						
ATAH				LR	LR	13 11 27.8	
	comp=Z,5μm,19.0s,baz=282,slow=40						
JTS	**JuntasAbangare**	**11.73**	**314**	*e*Pn	**Pn**	**13 07 57.8**	**+0.9**
JTS	**JuntasAbangare**	**11.73**	**314**	Pn	**Pn**	**13 07 55.5**	**-1.5**
	0.6nm,0.3s,baz=301,slow=18,SNR=3.0						
JTS				LR	LR	13 12 48.7	
	comp=Z,833nm,20.3s,baz=139,slow=39						
NNA	**Nana**	**13.99**	**182**	*e*Pn	**Pn**	**13 08 27.3**	**-0.5**
NNA	**Nana**	**13.99**	**182**	Pn	**Pn**	**13 08 27.2**	**-0.6**
	1.3nm,0.3s,baz=336,slow=8.4,SNR=10.0						
NNA				Sn	**Sn**	**13 10 55.9**	**-6.0**
	1.0nm,0.3s,baz=306,slow=14,SNR=2.6						
NNA				Lg		13 12 30.0	
	0.7nm,0.3s,baz=320,slow=20,SNR=1.5						
PCRV	**Puerto La Cruz**	**14.22**	**55**	Pn	**Pn**	**13 08 27.6**	**-3.4**
	1.4nm,0.3s,baz=201,slow=9.5,SNR=7.0						
PCRV				Lg		13 12 31.6	
	1.5nm,0.3s,baz=287,slow=19,SNR=2.3						
PCRV				LR	LR	13 14 40.1	
	comp=Z,1μm,20.0s,baz=62,slow=41						
TGUH	**Tegucigalpa,Un**	**15.99**	**319**	*e*P	**Pn**	**13 08 58.0**	**+3.8**
	163nm,1.2s						
SDDR	**Presa de Saban**	**17.53**	**16**	*e*P	**Pn**	**13 09 18.1**	**+4.5**
	83nm,1.0s						
MPR	**Mayaguez**	**18.44**	**29**	*e*Pn	**Pn**	**13 09 31.6**	**+6.9**
SJG	**San Juan**	**18.86**	**32**	*e*P	**Pn**	**13 09 29.0**	**-0.7**
	145nm,1.4s						
SJG	**San Juan**	**18.86**	**32**	*e*P	**Pn**	**13 09 29.0**	**-0.7**
SJG				pmax	pmax		
	comp=Z,145nm,1.4s						
SJG	**San Juan**	**18.86**	**32**	P	**Pn**	**13 09 26.8**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=330,slow=23,SNR=6.0						
SJG				S	**S**	**13 13 03.1**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=312,slow=21,SNR=2.2						
SJG				LR	LR	13 17 34.3	
	comp=Z,1μm,19.3s,baz=197,slow=40						
CPD	**Cerro la Pandu**	**18.92**	**32**	*e*P	**Pn**	**13 09 30.0**	**-0.5**
	comp=Z,77nm,1.1s						
CPD	**Cerro la Pandu**	**18.92**	**32**	*e*P	**Pn**	**13 09 30.0**	**-0.5**
CPD				pmax	pmax		
	comp=Z,77nm,1.1s						
HUMP	**Col San Antoni**	**19.04**	**32**	*e*P	**Pn**	**13 09 31.9**	**0.0**
ARE	**Arequipa**	**19.07**	**165**	*e*P	**Pn**	**13 09 35.0**	**+2.7**
CBYP	**Canovanas**	**19.15**	**32**	*e*Pn	**Pn**	**13 09 34.6**	**+1.4**
MTP	**Monte Pirata**	**19.17**	**33**	*e*P	**Pn**	**13 09 34.5**	**+1.1**
LPAZ	**La Paz**	**20.03**	**156**	P	**P**	**13 09 40.3**	**-1.3**
	comp=Z,7.0nm,1.1s,baz=347,slow=12,SNR=13						
LPAZ				Lg		13 15 41.0	
	comp=Z,7.4nm,0.8s,baz=253,slow=23,SNR=2.9						
TEIG	**Tepich**	**21.41**	**328**	LR	LR	13 19 37.7	
	comp=Z,1μm,19.1s,MS4.3,baz=116,slow=41						
CMIG	**Matias Romero**	**23.46**	**311**	P	**P**	**13 10 19.6**	**+1.3**
	comp=Z,5.3nm,1.0s,mb3.9,baz=149,slow=10,SNR=2.9						
SIV	**San Ignacio**	**23.54**	**140**	P	**P**	**13 10 16.9**	**-2.0**
	comp=Z,5.9nm,0.8s,mb4.1,baz=321,slow=9.0,SNR=18						
GOGA	**Godfrey**	**31.84**	**349**	*e*P	**P**	**13 11 32.8**	**-0.4**
	comp=Z,13nm,0.8s,mb4.8						
GOGA	**Godfrey**	**31.84**	**349**	*e*P	**P**	**13 11 32.8**	**-0.4**
GOGA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
LRAL	**Lakeview Retre**	**32.33**	**343**	*e*P	**P**	**13 11 36.7**	**-0.7**
	comp=Z,31nm,1.2s,mb5.0						
CPCT	**Cooper Cave**	**34.03**	**348**	*e*P	**P**	**13 11 52.7**	**+0.5**
SWET	**Sewanee**	**34.12**	**346**	*e*P	**P**	**13 11 52.9**	**-0.1**
NATX	**Nacogdoches**	**34.14**	**332**	*e*P	**P**	**13 11 53.0**	**-0.3**
	comp=Z,91nm,1.1s,mb5.6						
CFAA	**Coronel Fontan**	**34.41**	**168**	P	**P**	**13 11 57.1**	**+1.5**
	comp=Z,0.8nm,0.8s,mb3.7,baz=340,slow=7.0,SNR=6.8						
CFAA				S	**S**	**13 17 26.8**	**+6.0**
	comp=Z,0.2nm,0.4s,baz=95,slow=3.7,SNR=2.3						
PLAL	**Pickwick Lake**	**34.47**	**343**	*e*P	**P**	**13 11 55.0**	**-1.0**
	comp=Z,19nm,1.1s,mb4.9						
TZTN	**Tazewell**	**34.91**	**350**	*e*P	**P**	**13 12 00.2**	**+0.4**
	comp=Z,46nm,1.3s,mb5.2						
ELN	**Prospectdale**	**35.19**	**354**	*e*P	**P**	**13 12 02.8**	**+0.6**
UALR	**University of**	**35.73**	**337**	*e*P	**P**	**13 12 06.1**	**-0.8**
	comp=Z,7.6nm,0.6s,mb4.8						
JCT	**Junction City**	**35.87**	**324**	*e*P	**P**	**13 12 06.8**	**-1.4**
	comp=Z,31nm,1.3s,mb5.1						
JCT				*e*		13 12 43.1	
JCT	**Junction City**	**35.87**	**324**	*e*P	**P**	**13 12 06.8**	**-1.4**
JCT				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.1						
USIN	**University of**	**37.16**	**345**	*e*P	**P**	**13 12 17.0**	**-2.1**
	comp=Z,98nm,1.2s,mb5.5						
SIUC	**Southern Illin**	**37.34**	**343**	*e*P	**P**	**13 12 19.4**	**-1.2**
	comp=Z,33nm,0.9s,mb5.2						
TXAR	**Lajitas Array**	**37.47**	**319**	P	**P**	**13 12 22.2**	**+0.3**
TXAR				PcP	PcP	13 14 41.8	+2.0
TXAR	**Lajitas Array**	**37.47**	**319**	P	**P**	**13 12 22.2**	**+0.3**
	comp=Z,4.4nm,0.8s,mb4.3,baz=143,slow=8.4,SNR=40						
TXAR				PcP	PcP	13 14 41.8	+2.0
	comp=Z,0.5nm,0.4s,baz=157,slow=4.9,SNR=7.1						
LTX	**Lajitas**	**37.47**	**319**	*e*P	**P**	**13 12 21.6**	**-0.3**
	comp=Z,13nm,1.1s,mb4.7						
MCWV	**Mont Chateau**	**37.52**	**356**	*e*P	**P**	**13 12 26.4**	**+4.3**
	comp=Z,47nm,1.3s,mb5.1						
MVL	**Millersville**	**37.73**	**0**	*e*P	**P**	**13 12 28.0**	**+4.1**
FVM	**French Village**	**37.95**	**342**	*e*P	**P**	**13 12 23.9**	**-1.9**
	comp=Z,75nm,1.6s,mb5.2						
BLO	**Bloomington**	**38.03**	**347**	*e*P	**P**	**13 12 28.6**	**+2.1**
	comp=Z,32nm,0.9s,mb5.0						
ACSO	**Alum Creek Sta**	**38.42**	**352**	*e*P	**P**	**13 12 31.3**	**+1.6**
	comp=Z,80nm,1.7s,mb5.2						
WMOK	**Wichita Mounta**	**38.57**	**330**	*e*P	**P**	**13 12 29.6**	**-1.4**
	comp=Z,19nm,1.2s,mb4.7						
ALLY	**Alegheny Colle**	**39.52**	**356**	*e*P	**P**	**13 12 39.8**	**+0.9**
	comp=Z,28nm,0.6s,mb5.2						
BINY	**Binghamton**	**39.93**	**1**	*e*P	**P**	**13 12 43.6**	**+1.3**
ERPA	**Erie**	**39.98**	**356**	*e*P	**P**	**13 12 43.1**	**+0.4**
	comp=Z,45nm,1.0s,mb5.2						
MNTX	**Cornudas Mount**	**40.14**	**320**	*e*P	**P**	**13 12 43.9**	**-0.3**
	comp=Z,61nm,1.4s,mb5.1						
AMTX	**Amarillo**	**40.20**	**327**	*e*P	**P**	**13 12 43.3**	**-1.3**
	comp=Z,10.0nm,0.5s,mb4.8						
CBKS	**Cedar Bluff**	**42.29**	**333**	*e*P	**P**	**13 13 01.1**	**-0.6**
	comp=Z,66nm,1.6s,mb5.0						
CBKS	**Cedar Bluff**	**42.29**	**333**	*e*P	**P**	**13 13 01.1**	**-0.6**
CBKS				pmax	pmax		
	comp=Z,66nm,1.6s,mb5.0						
BNM	**Barren Site**	**42.55**	**322**	*e*P	**P**	**13 13 04.2**	**+0.3**
FRNY	**Flat Rock**	**42.64**	**3**	*e*P	**P**	**13 13 05.9**	**+1.4**
LPM	**Los Pinos Moun**	**42.66**	**322**	*e*P	**P**	**13 13 05.5**	**+0.7**
LENM	**Lemitar**	**42.77**	**322**	*e*P	**P**	**13 13 06.6**	**+0.9**
PLCA	**Paso Flores**	**42.96**	**173**	*e*P	**P**	**13 13 08.8**	**+1.8**
	comp=Z,8.4nm,0.8s,mb4.5						
PLCA	**Paso Flores**	**42.96**	**173**	*e*P	**P**	**13 13 08.9**	**+1.8**
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANMO	**Albuquerque**	**42.98**	**323**	*e*P	**P**	**13 13 08.0**	**+0.5**
	comp=Z,43nm,0.9s,mb5.2						
ANMO	**Albuquerque**	**42.98**	**323**	*c i*P	**P**	**13 13 08.0**	**+0.6**
LAZ	**Ladron**	**43.03**	**322**	*e*P	**P**	**13 13 08.4**	**+0.5**
TUC	**Tucson**	**44.10**	**317**	*e*P	**P**	**13 13 16.4**	**-0.1**
	comp=Z,23nm,1.3s,mb4.8						
TUC	**Tucson**	**44.10**	**317**	*e*P	**P**	**13 13 16.4**	**-0.1**
TUC				pmax	pmax		
	comp=Z,23nm,1.3s,mb4.8						
SDCO	**Great Sand Dun**	**44.39**	**327**	*e*P	**P**	**13 13 19.6**	**+0.9**
	comp=Z,48nm,1.1s,mb5.1						
116A	**Eloy**	**44.88**	**316**	⇓P	**P**	**13 13 22.8**	**+0.1**
	baz=45,SNR=7.3						
ECSD	**EROS,Sioux Fal**	**45.17**	**339**	*e*P	**P**	**13 13 22.2**	**-2.6**
	comp=Z,14nm,1.1s,mb4.7						
COWI	**Conover**	**45.22**	**348**	*e*P	**P**	**13 13 24.6**	**-0.5**
	comp=Z,48nm,1.2s,mb5.2						
115A	**Sonoran Desert**	**45.32**	**316**	⇑P	**P**	**13 13 26.5**	**+0.3**
	baz=45,SNR=5.8						
MVCO	**Mesa Verde**	**45.73**	**324**	*e*P	**P**	**13 13 29.9**	**+0.6**
	comp=Z,32nm,1.4s,mb5.0						
MVCO	**Mesa Verde**	**45.73**	**324**	⇓P	**P**	**13 13 29.4**	**+0.1**
	baz=46,SNR=7.5						
ISCO	**Idaho Springs**	**45.94**	**329**	*e*P	**P**	**13 13 31.2**	**+0.3**
	comp=Z,41nm,1.7s,mb5.1						
ISCO	**Idaho Springs**	**45.94**	**329**	*e*P	**P**	**13 13 31.2**	**+0.2**
ISCO				pmax	pmax		
	comp=Z,41nm,1.7s,mb5.1						
Z14A	**Wintersburg**	**46.20**	**316**	⇓P	**P**	**13 13 33.2**	**+0.1**
	baz=46,SNR=5.7						
X15A	**Humboldt**	**46.36**	**318**	⇑P	**P**	**13 13 34.8**	**+0.4**
	baz=46,SNR=14						
PV01	**Paradox Valley**	**46.39**	**325**	*e*P	**P**	**13 13 34.9**	**+0.4**
WUAZ	**Wupatki**	**46.42**	**320**	*e*P	**P**	**13 13 35.7**	**+0.9**
	comp=Z,26nm,1.1s,mb5.1						
WUAZ	**Wupatki**	**46.42**	**320**	⇑P	**P**	**13 13 35.0**	**+0.1**
	baz=46,SNR=13						
Y14A	**Wickenburg**	**46.56**	**317**	⇑P	**P**	**13 13 36.1**	**+0.1**
	baz=47,SNR=8.2						
X14A	**Yava**	**46.79**	**318**	⇓P	**P**	**13 13 38.0**	**+0.2**
	baz=47,SNR=9.7						
W15A	**Williams**	**46.79**	**319**	⇑P	**P**	**13 13 38.3**	**+0.5**
	baz=47,SNR=9.0						
PV10	**Paradox Valley**	**46.83**	**325**	*e*P	**P**	**13 13 37.7**	**-0.3**
PHWY	**Pilot Hill**	**46.97**	**330**	*e*P	**P**	**13 13 38.9**	**-0.2**
Y13A	**Salome**	**47.06**	**316**	⇑P	**P**	**13 13 40.2**	**+0.3**
	baz=47						
GLA	**Glamis**	**47.34**	**315**	⇓P	**P**	**13 13 42.3**	**+0.3**
	baz=47,SNR=5.0						
W14A	**Seligman**	**47.35**	**318**	⇑P	**P**	**13 13 42.6**	**+0.4**
	baz=47,SNR=8.2						
EYMN	**Ely**	**47.49**	**346**	*e*P	**P**	**13 13 40.5**	**-2.4**
	comp=Z,20nm,1.1s,mb5.0						
X13A	**Yucca**	**47.50**	**317**	⇑P	**P**	**13 13 43.3**	**+0.1**
	baz=48						
Y12C	**Blythe**	**47.50**	**316**	⇑P	**P**	**13 13 43.2**	**-0.1**
	baz=48						
PDMCI	**Parker Dam,Lak**	**47.54**	**317**	⇑P	**P**	**13 13 43.7**	**+0.1**
	baz=48						
W13A	**Hualapai Mount**	**47.82**	**318**	P	**P**	**13 13 46.5**	**+0.8**
	baz=48,SNR=8.9						
SWSC	**Sam W. Stewart**	**47.97**	**314**	⇓P	**P**	**13 13 47.1**	**+0.2**
	baz=48						
T15A	**Red Dirt Ranch**	**47.98**	**321**	⇓P	**P**	**13 13 47.3**	**+0.4**
	baz=48						
BC3	**Big Chuckw Mtn**	**48.10**	**315**	⇑P	**P**	**13 13 48.4**	**+0.4**
	baz=48,SNR=5.9						
U14A	**Mt Trumbull**	**48.13**	**320**	⇑P	**P**	**13 13 48.4**	**+0.3**
	baz=48						
RWWY	**Rawlins**	**48.15**	**329**	*e*P	**P**	**13 13 48.6**	**+0.5**
	comp=Z,29nm,1.1s,mb5.2						
IRM	**Iron Mountain**	**48.16**	**316**	⇓P	**P**	**13 13 48.5**	**0.0**
	baz=48,SNR=12						
SRU	**San Rafael**	**48.18**	**324**	*e*P	**P**	**13 13 48.6**	**+0.1**
	comp=Z,18nm,1.1s,mb5.0						
SRU	**San Rafael**	**48.18**	**324**	*e*P	**P**	**13 13 48.6**	**+0.1**
SRU				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
T14A	**Hurricane**	**48.45**	**320**	⇑P	**P**	**13 13 51.1**	**+0.5**
	baz=48						
U13A	**Pakoon Wash**	**48.64**	**319**	⇑P	**P**	**13 13 52.1**	**+0.1**
	baz=49,SNR=8.5						
BELC	**Belle Mtn.**	**48.67**	**315**	⇑P	**P**	**13 13 52.5**	**+0.1**
	baz=49,SNR=9.5						
MSU	**Marysvale**	**48.78**	**322**	*e*P	**P**	**13 13 53.9**	**+0.8**
PFO	**Pinyon Flat Ob**	**48.79**	**315**	*e*P	**P**	**13 13 53.5**	**+0.3**
	comp=Z,25nm,1.8s,mb4.9						
PFO	**Pinyon Flat Ob**	**48.79**	**315**	*e*P	**P**	**13 13 53.5**	**+0.2**
PFO				pmax	pmax		
	comp=Z,25nm,1.8s,mb4.9						
PFO	**Pinyon Flat Ob**	**48.79**	**315**	⇑P	**P**	**13 13 53.5**	**+0.2**
	baz=49						
V12A	**Nelson**	**48.83**	**318**	⇑P	**P**	**13 13 53.6**	**+0.1**
	baz=49,SNR=11						
GMRC	**Granite Mounta**	**48.85**	**316**	⇓P	**P**	**13 13 53.8**	**+0.1**
	baz=49,SNR=6.2						
S14A	**Cedar City**	**48.93**	**321**	⇓P	**P**	**13 13 54.5**	**+0.3**
	baz=49						
T13A	**Saint George**	**48.95**	**320**	⇓P	**P**	**13 13 55.0**	**+0.5**
	baz=49						
AGMN	**Agassiz Refuge**	**48.98**	**343**	*e*P	**P**	**13 13 52.8**	**-1.7**
	comp=Z,17nm,1.1s,mb5.0						
U12A	**Valley of Fire**	**49.02**	**319**	⇓P	**P**	**13 13 55.2**	**+0.2**
	baz=49						
ARUT	**Antelope Range**	**49.12**	**321**	*e*P	**P**	**13 13 55.8**	**+0.1**
R14A	**James Farms, M**	**49.16**	**322**	⇑P	**P**	**13 13 56.3**	**+0.2**
	baz=49						
S13A	**Holt Ranch, En**	**49.26**	**320**	⇓P	**P**	**13 13 57.5**	**+0.8**
	baz=49,SNR=16						
V11A	**Goodsprings**	**49.28**	**318**	⇑P	**P**	**13 13 57.4**	**+0.4**
	baz=49						
T12A	**Moapa**	**49.31**	**319**	⇑P	**P**	**13 13 57.4**	**+0.2**
	baz=49						
HEC	**Hector,Ludlow**	**49.34**	**316**	⇓P	**P**	**13 13 57.8**	**+0.3**
	baz=49,SNR=6.4						
TUQ	**Turquoise Mtn.**	**49.39**	**317**	⇓P	**P**	**13 13 57.9**	**0.0**
	baz=50						
MPU	**Maple Canyon**	**49.42**	**324**	*e*P	**P**	**13 13 57.8**	**-0.2**
	comp=Z,52nm,2.0s,mb5.2						
BBRC	**Big Bear Sol-O**	**49.46**	**315**	⇑P	**P**	**13 13 59.0**	**+0.6**
	baz=50						
DAU	**Daniels Canyon**	**49.46**	**325**	*e*P	**P**	**13 13 59.0**	**+0.7**
SHPR	**Sheep Range**	**49.47**	**318**	*e*P	**P**	**13 13 59.4**	**+0.9**
JLU	**Jordanelle**	**49.70**	**325**	*e*P	**P**	**13 14 00.6**	**+0.5**
S12A	**Delamar Landin**	**49.91**	**320**	⇓P	**P**	**13 14 02.0**	**+0.3**
	baz=50						
GSC	**Goldstone**	**49.93**	**316**	⇑P	**P**	**13 14 02.2**	**+0.3**
	baz=50						
T11A	**Corn Creek, Al**	**49.93**	**319**	⇓P	**P**	**13 14 02.2**	**+0.3**
	baz=50						
BFSC	**Mount Baldy St**	**49.97**	**315**	⇑P	**P**	**13 14 02.3**	**0.0**
	baz=50						
BW06	**Boulder Array**	**50.14**	**328**	*e*P	**P**	**13 14 02.3**	**-1.0**
PDAR	**Pinedale Array**	**50.14**	**328**	P	**P**	**13 14 02.3**	**-1.1**
PDAR				LR	LR	13 41 43.9	
PDAR	**Pinedale Array**	**50.14**	**328**	P	**P**	**13 14 02.3**	**-1.1**
	comp=Z,3.8nm,0.7s,mb4.5,baz=128,slow=8.9,SNR=24						
PDAR				LR	LR	13 41 43.9	
	comp=Z,119nm,18.1s,MS3.9,baz=126,slow=44						
R12A	**Pony Springs,**	**50.18**	**321**	⇓P	**P**	**13 14 04.0**	**+0.3**
	baz=50,SNR=9.6						
U10A	**Ash Meadows, A**	**50.21**	**318**	⇑P	**P**	**13 14 04.6**	**+0.6**
	baz=50						
DUG	**Dugway**	**50.23**	**324**	*e*P	**P**	**13 14 04.2**	**+0.1**
	comp=Z,8.1nm,1.2s,mb4.6						
DUG	**Dugway**	**50.23**	**324**	*e*P	**P**	**13 14 04.2**	**+0.1**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
DUG	**Dugway**	**50.23**	**324**	⇓P	**P**	**13 14 04.1**	**0.0**
	baz=50,SNR=6.4						
HWUT	**Hardware Ranch**	**50.43**	**326**	*e*P	**P**	**13 14 05.2**	**-0.5**
	comp=Z,28nm,1.6s,mb5.0						
TPNV	**Topopah Spring**	**50.45**	**318**	*e*P	**P**	**13 14 06.3**	**+0.5**
	comp=Z,14nm,1.4s,mb4.8						
TPNV	**Topopah Spring**	**50.45**	**318**	*e*P	**P**	**13 14 06.4**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.8						
TPNV	**Topopah Spring**	**50.45**	**318**	⇓P	**P**	**13 14 06.2**	**+0.3**
	baz=50,SNR=5.2						
N15A	**Stansbury Isla**	**50.50**	**325**	⇓P	**P**	**13 14 06.3**	**+0.1**
	baz=51						
S11A	**Rachel**	**50.51**	**319**	⇓P	**P**	**13 14 06.8**	**+0.5**
	baz=51						
EDW2	**Edwards Air Fo**	**50.53**	**315**	⇓P	**P**	**13 14 06.7**	**+0.1**
	baz=51,SNR=6.1						
FURC	**Furnace Creek,**	**50.59**	**317**	⇓P	**P**	**13 14 07.0**	**0.0**
	baz=51,SNR=6.7						
SPUT	**South Promonto**	**50.73**	**325**	*e*P	**P**	**13 14 08.0**	**+0.1**
Q12A	**Willow Creek R**	**50.74**	**321**	⇑P	**P**	**13 14 08.0**	**0.0**
	baz=51						
ULM	**Lac du Bonnet**	**50.74**	**344**	P	**P**	**13 14 05.5**	**-2.3**
	comp=Z,7.8nm,0.8s,mb4.7,baz=162,slow=6.5,SNR=9.9						
ULM				LR	LR	13 37 27.4	
	comp=Z,262nm,18.7s,MS4.3,baz=107,slow=38						
MPMC	**Manual Prospec**	**50.80**	**317**	⇓P	**P**	**13 14 08.3**	**-0.2**
	baz=51						
R11A	**Troy Canyon, C**	**50.81**	**320**	⇓P	**P**	**13 14 09.0**	**+0.4**
	baz=51,SNR=8.1						
M15A	**Larsen Ranch,**	**50.83**	**325**	⇓P	**P**	**13 14 08.9**	**+0.3**
	baz=51,SNR=8.4						
N14A	**Grayback Hills**	**50.86**	**324**	⇓P	**P**	**13 14 08.7**	**-0.2**
	baz=51,SNR=6.2						
O13A	**Hicks Ranch, I**	**50.88**	**323**	⇓P	**P**	**13 14 09.4**	**+0.4**
	baz=51						
AHID	**Auburn Hatcher**	**50.95**	**327**	*e*P	**P**	**13 14 09.0**	**-0.5**
	comp=Z,7.3nm,0.4s,mb5.0						
P12A	**McGill**	**51.05**	**322**	⇓P	**P**	**13 14 10.8**	**+0.5**
	baz=51						
Q11A	**Duckwater**	**51.14**	**321**	⇓P	**P**	**13 14 11.0**	**0.0**
	baz=51,SNR=6.2						
S10A	**Tonopah Range,**	**51.22**	**319**	P	**P**	**13 14 12.4**	**+0.7**
	baz=51,SNR=12						
GRAC	**Grapevine Rang**	**51.22**	**318**	⇓P	**P**	**13 14 11.9**	**+0.3**
	baz=51						
REDW	**Red Top Meadow**	**51.23**	**328**	*e*P	**P**	**13 14 11.8**	**+0.1**
	comp=Z,30nm,0.9s,mb5.2						
R10A	**Warm Springs**	**51.24**	**320**	⇑P	**P**	**13 14 12.7**	**+0.9**
	baz=51,SNR=6.2						
ARVC	**Arvin**	**51.25**	**315**	⇓P	**P**	**13 14 12.3**	**+0.4**
	baz=51						
LOHW	**Long Hollow**	**51.27**	**328**	*e*P	**P**	**13 14 11.2**	**-0.8**
	comp=Z,27nm,1.2s,mb5.0						
TPAW	**Teton Pass**	**51.37**	**328**	*e*P	**P**	**13 14 12.8**	**+0.1**
	comp=Z,10.0nm,0.7s,mb4.8						
M14A	**Sheep Mountain**	**51.37**	**325**	P	**P**	**13 14 12.3**	**-0.4**
	baz=52,SNR=8.2						
O12A	**Currie**	**51.43**	**323**	⇑P	**P**	**13 14 13.4**	**+0.2**
	baz=52,SNR=6.1						
MOOW	**Moose Ponds**	**51.44**	**329**	*e*P	**P**	**13 14 12.6**	**-0.6**
	comp=Z,15nm,1.0s,mb4.9						
N13A	**Wendover, West**	**51.47**	**324**	⇑P	**P**	**13 14 13.6**	**+0.2**
	baz=52						
S09A	**Goldfield**	**51.52**	**319**	⇓P	**P**	**13 14 14.0**	**+0.1**
	baz=52						
Q10A	**Clear Creek Ra**	**51.60**	**320**	⇑P	**P**	**13 14 14.7**	**+0.1**
	baz=52,SNR=5.9						
P11A	**Circle Ranch,**	**51.62**	**321**	⇑P	**P**	**13 14 14.8**	**+0.2**
	baz=52						
IMW	**Indian Meadow**	**51.65**	**329**	*e*P	**P**	**13 14 14.3**	**-0.4**
	comp=Z,17nm,0.6s,mb5.1						
RLMT	**Red Lodge**	**51.67**	**331**	*e*P	**P**	**13 14 13.8**	**-1.1**
	comp=Z,13nm,1.0s,mb4.8						
R09A	**Tonopah**	**51.71**	**319**	⇓P	**P**	**13 14 15.5**	**+0.2**
	baz=52,SNR=8.2						
M13A	**Montello**	**51.76**	**324**	⇑P	**P**	**13 14 16.2**	**+0.6**
	baz=52,SNR=6.0						
LKWY	**Lake**	**51.84**	**329**	*e*P	**P**	**13 14 16.7**	**+0.6**

comp=Z,23nm,1.6s,mb4.8
LKWY Lake 51.84 329 *e*P **P 13 14 16.7 +0.6**
LKWY pmax pmax
comp=Z,23nm,1.6s,mb4.9
O11A Cowboy Ranch, 51.90 322 ⇓P **P 13 14 16.7 0.0**
baz=52
K14A Jones Ranch, D 51.95 326 ⇓P **P 13 14 17.3 +0.3**
baz=52
YFT Old Faithful 51.98 329 *e*P **P 13 14 17.8 +0.6**
S08C White Mtn Res 52.03 318 ⇓P **P 13 14 17.8 +0.1**
baz=52,SNR=8.6
L13A Double Diamond 52.09 325 ⇑P **P 13 14 18.4 +0.3**
baz=52
P10A Eureka 52.10 321 ⇓P **P 13 14 18.8 +0.6**
baz=52
Q09A Carvers 52.11 320 ⇓P **P 13 14 18.7 +0.4**
baz=52
SMMC Simmler 52.17 314 ⇑P **P 13 14 18.8 0.0**
baz=52
HELL Mitchell Peak, 52.18 316 ⇓P **P 13 14 18.7 -0.1**
baz=52,SNR=8.6
YMR Madison River 52.20 329 *e*P **P 13 14 19.0 +0.2**
comp=Z,11nm,0.6s,mb5.0
M12A Wells 52.23 324 ⇑P **P 13 14 19.4 +0.3**
baz=52
GCMT Greycliff 52.35 331 *e*P **P 13 14 19.6 -0.3**
R08A Mina 52.45 319 ⇓P **P 13 14 21.1 +0.3**
baz=52
P09A Austin 52.49 321 ⇑P **P 13 14 21.2 +0.1**
baz=53
O10A Cortez Mining, 52.52 322 ⇑P **P 13 14 21.4 +0.1**
baz=53,SNR=7.3
QLMT Earthquake Lak 52.55 329 *e*P **P 13 14 22.0 +0.6**
Q08A Gabbs 52.61 319 ⇓P **P 13 14 22.0 0.0**
baz=53,SNR=7.1
NVAR Mina Array Bea 52.62 319 P **P 13 14 22.7 +0.7**
comp=Z,2.9nm,0.7s,mb4.3,baz=124,slow=7.3,SNR=21
L12A House Creek Ra 52.75 324 ⇓P **P 13 14 22.5 -0.4**
baz=53,SNR=5.2
M11A Holland Ranch, 52.77 323 ⇑P **P 13 14 22.6 -0.4**
baz=53
O09A Fish Creek Ran 52.88 321 ⇑P **P 13 14 24.1 +0.2**
baz=53,SNR=12
R07C Lee Vining 52.93 318 ⇑P **P 13 14 24.5 +0.1**
baz=53,SNR=5.8
K12A Draper Farm, C 52.99 325 ⇑P **P 13 14 24.7 0.0**
baz=53
BMN Battle Mountai 53.05 321 *e*P **P 13 14 24.9 -0.2**
comp=Z,19nm,1.2s,mb4.9
BMN Battle Mountai 53.05 321 *e*P **P 13 14 24.9 -0.3**
BMN pmax pmax
comp=Z,19nm,1.2s,mb4.9
J13A Cove Ranch, Pi 53.06 326 ⇓P **P 13 14 24.9 -0.3**
baz=53
SCHQ Schefferville 53.16 7 P **P 13 14 25.9 +0.2**
comp=Z,4.9nm,0.7s,mb4.6,baz=189,slow=5.4,SNR=7.0
SCHQ LR LR 13 37 00.4
comp=Z,146nm,20.4s,MS4.0,baz=124,slow=36
BOZ Bozeman (W) 53.21 330 *e*P **P 13 14 25.7 -0.6**
comp=Z,18nm,1.1s,mb4.9
BOZ Bozeman (W) 53.21 330 *e*P **P 13 14 25.7 -0.6**
BOZ pmax pmax
comp=Z,18nm,1.1s,mb4.9
BOZ Bozeman (W) 53.21 330 ⇑P **P 13 14 26.1 -0.2**
baz=53
M10A I.L. Ranch, Tu 53.27 323 ⇓P **P 13 14 26.3 -0.5**
baz=53
MCMT McKenzie Canyo 53.28 328 *e*P **P 13 14 27.1 +0.3**
HLID Hailey 53.30 326 *e*P **P 13 14 26.5 -0.4**
comp=Z,7.6nm,1.1s,mb4.5
HLID Hailey 53.30 326 ⇑P **P 13 14 26.7 -0.2**
baz=53
G15A Dillon 53.32 329 P **P 13 14 27.5 +0.4**
baz=53,SNR=6.9
I13A Wildhorse Cree 53.36 327 P **P 13 14 28.0 +0.6**
baz=54,SNR=8.6
S06C San Francisco 53.36 317 ⇓P **P 13 14 27.5 -0.1**
baz=53
WAKR Walker 53.41 318 *e*P **P 13 14 29.1 +1.2**
S05C Merced 53.42 317 ⇑P **P 13 14 27.8 -0.1**
baz=54
N09A Rock Creek Ran 53.48 322 ⇓P **P 13 14 27.8 -0.6**
baz=54
J12A Stokes Ranch, 53.48 325 ⇑P **P 13 14 28.0 -0.3**
baz=54
L10A Juniper Basin 53.56 323 ⇑P **P 13 14 28.5 -0.4**
baz=54
K11A Parker Ranch, 53.72 324 ⇑P **P 13 14 29.8 -0.3**
baz=54,SNR=6.7
LRM Limekiln Ridge 53.75 329 *e*P **P 13 14 30.4 +0.2**
F15A Butte 53.79 329 ⇑P **P 13 14 30.2 -0.3**
baz=54,SNR=10
HAST UC Hastings Re 53.80 315 ⇑P **P 13 14 30.1 -0.7**
baz=54
H13A Challis 53.86 327 ⇓P **P 13 14 31.1 +0.1**
baz=54,SNR=6.2
G14A Jackson 53.88 328 P **P 13 14 31.3 +0.1**
baz=54,SNR=9.3
PACP Pacheco Peak 53.91 316 ⇑P **P 13 14 31.4 -0.2**
baz=54
O07A Toulon 53.94 320 ⇑P **P 13 14 31.3 -0.4**
baz=54
R05C Kirkwood Meado 53.94 318 ⇑P **P 13 14 31.3 -0.5**
baz=54
MFID Camas Ranch 54.00 325 ⇓P **P 13 14 31.8 -0.4**
baz=54,SNR=6.5
EGMT Eagleton 54.02 333 *e*P **P 13 14 31.3 -0.8**
comp=Z,19nm,0.9s,mb5.0
EGMT Eagleton 54.02 333 ⇑P **P 13 14 32.0 -0.1**
baz=54
H12A Diamond D Ranc 54.18 327 ⇓P **P 13 14 32.7 -0.6**
baz=54,SNR=9.1
G13A Cobalt 54.19 328 ⇑P **P 13 14 33.2 -0.3**
baz=54
F14A Wisdom 54.22 329 P **P 13 14 33.5 -0.2**
baz=54,SNR=9.2
K10A MacKenzie Ranc 54.22 324 ⇓P **P 13 14 33.5 -0.2**
baz=54
L09A Wilkinson Ranc 54.24 323 ⇑P **P 13 14 33.6 -0.3**
baz=54
E15A Deer Lodge 54.26 330 P **P 13 14 34.0 +0.1**
baz=54,SNR=7.2
R04C Big Horse Ranc 54.29 317 ⇑P **P 13 14 33.9 -0.4**
baz=54
N07B Gerlach 54.34 321 ⇓P **P 13 14 34.5 -0.1**
baz=54
M08A Happy Creek Ra 54.35 322 ⇑P **P 13 14 34.4 -0.2**
baz=54
O06A Flanigan 54.55 320 ⇓P **P 13 14 35.9 -0.3**
baz=55
D15A Lincoln 54.63 330 ⇑P **P 13 14 36.4 -0.2**
baz=55
K09A Rome 54.68 323 ⇑P **P 13 14 37.0 -0.1**
baz=55,SNR=15
E14A Clinton 54.69 329 ⇓P **P 13 14 36.7 -0.4**
baz=55
F13A Darby 54.70 328 P **P 13 14 37.1 0.0**
baz=55,SNR=6.7
L08A Fields 54.75 323 ⇑P **P 13 14 37.1 -0.5**
baz=55,SNR=9.3
N06A Buffalo Meadow 54.87 320 ⇑P **P 13 14 38.8 +0.3**
baz=55
H11A Donnelly 54.91 326 ⇑P **P 13 14 38.4 -0.3**
baz=55
E13A Victor 55.06 329 ⇓P **P 13 14 39.5 -0.2**
baz=55
WVOR Wild Horse Val 55.07 323 *e*P **P 13 14 39.4 -0.5**
comp=Z,29nm,1.3s,mb5.2
WVOR Wild Horse Val 55.07 323 *e*P **P 13 14 39.4 -0.5**
WVOR pmax pmax
comp=Z,29nm,1.3s,mb5.2
J09A Fry Pan Ranch, 55.08 324 P **P 13 14 39.6 -0.3**
baz=55,SNR=15
K08A Mann Creek Ran 55.15 323 ⇑P **P 13 14 40.4 -0.1**
baz=55,SNR=7.5
F12A Elk City 55.17 328 P **P 13 14 40.2 -0.4**
baz=55,SNR=12
MSO Missoula 55.19 329 *e*P **P 13 14 40.6 -0.1**
H10A Noah's Angus R 55.25 326 ⇑P **P 13 14 41.2 0.0**
baz=55
L07A Adell 55.27 322 P **P 13 14 41.4 +0.1**
baz=55,SNR=6.0
ORV Oroville 55.33 318 ⇓P **P 13 14 41.5 -0.3**
baz=55
ELFS Eagle Lake Fie 55.38 320 ⇑P **P 13 14 42.2 +0.1**
baz=56,SNR=7.1
I09A Lost Marbles R 55.44 325 ⇑P **P 13 14 42.9 +0.3**
baz=56,SNR=5.6

O04C Chester 55.45 319 ⇑P **P 13 14 42.5 -0.2**
baz=56
J08A Circle Bar Ran 55.51 324 ⇓P **P 13 14 43.0 0.0**
baz=56
M06C Likely Place G 55.53 321 ⇓P **P 13 14 42.9 -0.3**
baz=56
K07A Rock Creek Ran 55.59 323 ⇑P **P 13 14 43.6 0.0**
baz=56
MNRC McLaughlin Nat 55.62 317 ⇓P **P 13 14 44.0 0.0**
baz=56
D13A Huson 55.63 329 ⇑P **P 13 14 44.1 +0.2**
baz=56
F11A Grangeville 55.74 327 ⇓P **P 13 14 44.5 -0.1**
baz=56
I08A Drewsey 55.89 324 ⇑P **P 13 14 45.8 +0.1**
baz=56
J07A Hines 56.02 323 ⇓P **P 13 14 46.4 -0.3**
baz=56
M05C Lookout 56.04 320 P **P 13 14 46.9 +0.1**
baz=56,SNR=6.8
E11A Bogner Ranch, 56.06 328 ⇑P **P 13 14 47.0 0.0**
baz=56
C13A Hot Springs 56.08 330 ⇓P **P 13 14 47.3 +0.2**
baz=56
HOPS Hopland 56.11 317 ⇓P **P 13 14 47.0 -0.5**
baz=56
GASB Alder Springs 56.19 318 ⇑P **P 13 14 47.9 -0.1**
baz=56
K06A Valley Falls 56.26 322 ⇑P **P 13 14 48.5 0.0**
baz=56
BSMT Bassoo Peak 56.30 330 *e*P **P 13 14 49.8 +1.2**
FFC Flin Flon 56.45 343 P **P 13 14 48.8 -0.7**
comp=Z,67nm,1.2s,mb5.5,SNR=6.4
FFC Flin Flon 56.45 343 *e*P **P 13 14 47.4 -2.1**
comp=Z,12nm,1.0s,mb4.9
FFC Flin Flon 56.45 343 *e*P **P 13 14 47.4 -2.1**
FFC pmax pmax
comp=Z,12nm,1.0s,mb4.9
P01C Double 8 Ranch 56.52 317 ⇑P **P 13 14 50.3 0.0**
baz=57
F09A S2 Ranch, Elgi 56.59 326 P **P 13 14 50.7 0.0**
baz=57,SNR=9.6
M03C McCloud 56.62 320 ⇑P **P 13 14 50.6 -0.4**
baz=57
M04C Macdoel 56.70 320 ⇑P **P 13 14 51.6 0.0**
baz=57
A13A Flathead Natio 56.85 331 ⇑P **P 13 14 52.4 -0.1**
baz=57
I06A Prineville 56.88 323 ⇑P **P 13 14 52.6 -0.2**
baz=57
G08A Pilot Rock 56.93 325 P **P 13 14 53.2 +0.1**
baz=57,SNR=10
D10A Wagner Farm, O 57.08 328 ⇑P **P 13 14 53.3 -0.8**
baz=57
B12A Libby 57.12 330 ⇑P **P 13 14 54.4 0.0**
baz=57
F08A Pendleton 57.12 326 ⇓P **P 13 14 54.2 -0.4**
baz=57
J05A Fort Rock 57.13 322 P **P 13 14 55.0 +0.4**
baz=57,SNR=6.5
E09A Wood Farm, Sta 57.21 327 ⇓P **P 13 14 55.0 -0.1**
baz=57
YBH Yreka Blue Hor 57.23 320 ⇓P **P 13 14 53.6 -1.7**
baz=57
G07A Ruggs Ranch, H 57.32 325 ⇑P **P 13 14 56.1 +0.2**
baz=57
H06A Lindquist Farm 57.40 324 ⇑P **P 13 14 56.2 -0.3**
baz=58
A12A Yaak River Ran 57.46 330 ⇑P **P 13 14 57.0 +0.2**
baz=58
D09A Jones Farm, Ri 57.63 327 ⇑P **P 13 14 58.4 +0.3**
baz=58
J04A Umpqua Nationa 57.64 322 ⇓P **P 13 14 58.3 +0.1**
baz=58
A11A Hall Mountain, 57.83 330 ⇑P **P 13 14 59.2 -0.1**
baz=58
G06A Carlson Farm, 57.86 324 ⇑P **P 13 14 59.6 -0.1**
baz=58
FCC Fort Churchill 58.18 349 *e*P **P 13 14 59.9 -1.8**
comp=Z,12nm,0.8s,mb5.0
FCC Fort Churchill 58.18 349 *e*P **P 13 14 59.9 -1.8**
FCC pmax pmax
comp=Z,11nm,0.8s,mb4.9
F06A Goldendale 58.24 325 ⇑P **P 13 15 02.0 -0.4**
baz=58
G05A Wamic 58.26 324 ⇑P **P 13 15 02.4 -0.1**
baz=58
B09A Rice 58.39 329 ⇓P **P 13 15 03.0 -0.3**
baz=58
H04A Detroit Lake 58.47 323 ⇑P **P 13 15 03.7 -0.3**
baz=58
B08A Colville Reser 58.98 328 ⇓P **P 13 15 07.8 +0.4**
baz=59
A08A Turner Farm, O 59.31 329 ⇓P **P 13 15 09.8 +0.1**
baz=59
EDM Edmonton 59.37 335 *e*P **P 13 15 08.3 -1.7**
A07A Ashnola River, 59.95 328 ⇓P **P 13 15 13.9 -0.2**
baz=60
YKA Yellowknife Ar 66.61 342 P **P 13 15 56.5 -1.5**
YKA LR LR 13 46 54.3
YKA Yellowknife Ar 66.61 342 P **P 13 15 56.5 -1.5**
comp=Z,2.5nm,0.6s,mb4.5,baz=135,slow=5.9,SNR=49
YKA LR LR 13 46 54.3
comp=Z,178nm,18.4s,MS4.3,baz=160,slow=38
SFJD Kangerlussuaq 67.24 11 LR LR 13 41 36.3
comp=Z,389nm,19.9s,MS4.6,baz=187,slow=33
PMSA Palmer Station 67.32 174 LR LR 13 43 14.7
comp=Z,152nm,19.4s,MS4.2,baz=286,slow=34
LIC Lamto 71.31 84 *e*P **P 13 16 27.8 -0.4**
comp=Z,30nm,1.0s,mb5.2
TIC Toumodi 71.32 84 *e*P **P 13 16 31.0 +2.8**
comp=Z,8.6nm,0.9s,mb4.7
KIC Kosan Boka 71.60 84 *e*P **P 13 16 29.0 -0.9**
comp=Z,106nm,1.2s,mb5.7
MDT Midelt 73.63 57 P **P 13 16 42.5 +0.8**
comp=Z,4.2nm,0.9s,mb4.4,baz=272,slow=7.0,SNR=5.1
MDT LR LR 13 44 13.8
comp=Z,178nm,19.4s,MS4.4,baz=334,slow=32
ESDC Sonseca Array 75.22 50 P **P 13 16 50.8 0.0**
comp=Z,1.1nm,0.7s,mb3.9,baz=258,slow=6.7,SNR=5.2
INK Inuvik 76.37 341 *e*P **P 13 16 56.4 -0.3**
comp=Z,512nm,1.1s
INK Inuvik 76.37 341 P **P 13 16 56.0 -0.7**
comp=Z,9.5nm,1.1s,mb4.7,baz=136,slow=9.9,SNR=9.3
DAWY Dawson 76.56 336 *e*P **P 13 16 58.1 +0.2**
EGAK Eagle 77.54 337 *e*P **P 13 17 03.4 0.0**
comp=Z,19nm,0.9s,mb5.0
TORD Torodi Ar. Bea 77.99 77 P **P 13 17 05.5 -1.4**
comp=Z,1.1nm,0.5s,mb4.0,baz=282,slow=5.5,SNR=6.8
EKA Eskdalemuir Ar 78.82 34 P **P 13 17 11.3 +0.7**
comp=Z,2.1nm,0.7s,mb4.2,baz=256,slow=3.4,SNR=4.4
COLA College 80.28 336 *e*P **P 13 17 16.4 -1.9**
comp=Z,8.8nm,1.0s,mb4.6
COLA College 80.28 336 *i* P **P 13 17 18.7 +0.4**
MCK McKinley 80.43 335 *e*P **P 13 17 18.6 -0.6**
comp=Z,8.9nm,1.0s,mb4.7
MCK McKinley 80.43 335 *e*P **P 13 17 18.6 -0.6**
MCK pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
KEST Kesra 85.38 54 P **P 13 17 44.9 -0.6**
comp=Z,1.2nm,0.7s,mb4.2,baz=299,slow=6.0,SNR=3.2
DAVOX Davos/Dischmat 85.97 43 P **P 13 17 47.6 -0.5**
comp=Z,5.8nm,0.7s,mb4.9
DAVA Damuels 85.98 43⇑ *i*P **P 13 17 49.0 +0.8**
comp=Z,16nm,1.3s,mb5.1
DAVA Damuels 85.98 43⇑ *i*P **P 13 17 49.0 +0.8**
comp=Z,16nm,1.3s,mb5.1
FETA Feichten 86.56 43⇑ *i*PcP PcP 13 17 52.6 -0.8
comp=Z,7.7nm,1.0s
NB2 NORSAR Subarra 87.05 29 P **P 13 17 53.7 +0.6**
comp=Z,4.1nm,0.9s,mb4.7,baz=273,slow=5.1
NB2 NORSAR Subarra 87.05 29 P **P 13 17 53.7 +0.6**
NB2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
NOA NORSAR Array B 87.05 29 P **P 13 17 53.9 +0.8**
NOA LR LR 13 53 03.7
NOA NORSAR Array B 87.05 29 P **P 13 17 53.9 +0.8**
comp=Z,2.3nm,0.8s,mb4.4,baz=270,slow=4.9,SNR=4.4
NOA LR LR 13 53 03.7
comp=Z,89nm,18.5s,MS4.2,baz=295,slow=33
CLL Collm 88.04 39 epP pP 13 18 12.0 +1.4
GERES GERESS Array B 88.54 41 P **P 13 18 01.7 +1.2**
comp=Z,0.7nm,0.6s,mb4.2,baz=260,slow=5.2,SNR=5.1
BRG Berggiesshubel 88.64 39 *e*P pP 13 18 11.3 -2.1
BRG pmax pmax
comp=Z,8.0nm,1.4s,mb4.9
BRG Berggiesshubel 88.64 39 *e*(P) pP 13 18 11.3 -2.1
comp=Z,10.0nm,1.4s

TNA Tin City 88.72 335 *e*P **P 13 18 02.1 +1.1**
comp=Z,8.2nm,0.9s,mb5.1
AFI Afiamalu 95.66 256 LR LR 13 49 52.2
comp=Z,116nm,20.3s,MS4.3,baz=10.0,slow=28
AKASG Malin Array Be 98.27 38 LR LR 14 01 51.9
comp=Z,84nm,18.2s,MS4.3,baz=315,slow=35
SYO Syowa Base 101.06 161⇑ *e*pPKiKP 13 23 35.0
MK31 Makanchi Array 127.85 18 *e*PKPdf PKPdf 13 24 13.2 -0.3
MKAR Makanchi Array 127.85 18 PKP PKPdf 13 24 13.5 0.0
comp=Z,1.1nm,0.8s,baz=329,slow=2.1,SNR=6.8
EKS2 Erkin-Say 127.98 28 *e*PKPdf PKPdf 13 24 14.7 +0.8
MDJ Mudanjiang 128.02 337 PKP PKPdf 13 24 12.6 -1.3
AAK Ala-Archa 128.33 27 *e*PKPdf PKPdf 13 24 15.7 +1.2
UCH Uchtor 128.66 27 *e*PKPdf PKPdf 13 24 15.8 +0.6
SONM Songino Array 130.22 357 PKP PKPdf 13 24 18.1 +0.1
comp=Z,0.6nm,0.9s,baz=122,slow=1.6,SNR=3.8
CN2 Changchun 130.27 339 *e*PKP PKPdf 13 24 18.9 +0.7
CN2 XPKP 13 24 36.0
CN2 *e*PP PP 13 26 36.1 +5.4
CN2 *e*SS SS 13 43 56.0 +2.2
CN2 PP PP
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,400nm,22.0s,MS5.2
CN2 LR LR
comp=E,300nm,22.0s,MS5.2
CN2 LR LR
comp=Z,500nm,23.0s,MS5.2
WMQ Urumqi 132.13 15 *e*PKP PKPdf 13 24 20.3 -1.4
WMQ LR LR
comp=N,107nm,40.8s,MS4.5
WMQ LR LR
comp=E,185nm,38.6s,MS4.5
WMQ LR LR
comp=Z,95nm,36.0s,MS4.2
KSRS Korea Array 134.62 333 PKP PKPdf 13 24 27.2 +0.6
comp=Z,2.0nm,0.8s,baz=10,slow=1.4,SNR=5.0
HHC Hu-ho-hao-te 136.64 351 *e*PKP PKPdf 13 24 25.8 -4.5
HHC PP PP 13 27 13.1 +2.0
HHC PKS 13 28 00.6
HHC SKS SKSdf 13 31 30.0 -8.2
HHC PP PP
comp=Z,163nm,5.5s
HHC LR LR
comp=N,239nm,15.5s,MS5.1
HHC LR LR
comp=E,122nm,15.5s,MS5.1
HHC LR LR
comp=Z,157nm,19.0s,MS4.8
LZH Lanzhou 142.02 360 *e*PKP PKPdf 13 24 40.7 +0.5
LZH APKP 13 24 51.7
LZH XPKP 13 24 56.6
LZH PP PP 13 27 49.0 +4.8
LZH SKKS SKKSac 13 34 35.0 -0.8
LZH PP PP
comp=Z,160nm,4.8s
LZH LR LR
comp=E,183nm,19.9s
LZH LR LR
comp=Z,278nm,20.5s,MS5.0
LZH Lanzhou 142.02 360 *e*PKP PKPdf 13 24 40.7 +0.5
LZH pPKP pPKPdf 13 24 51.7 -1.4
LZH sPKP 13 24 56.6
LZH PP PP 13 27 49.0 +4.8
LZH SKKS SKKSac 13 34 35.0 -0.8
LZH SS SS 13 46 10.2 -3.4
LZH LR LR
comp=Z,280nm,20.5s,MS5.0
LZH Lanzhou 142.02 360 *e*PKIKP PKPdf 13 24 40.7 +0.5
LZH 13 24 51.7
LZH 13 27 49.0
LZH SS SS 13 46 10.2 -3.4
LZH MLR MLR
comp=Z,280nm,20.5s,MS5.0
NJ2 Nanjing 143.07 338 *e*PKP PKPdf 13 24 41.2 -1.0
ASAR Alice Springs 143.62 231 PKhKP 13 24 40.4
comp=Z,2.2nm,0.8s,baz=120,slow=3.4,SNR=18
GKN Gorkha 144.99 30 *e*P PKPdf 13 24 44.9 -0.8
comp=Z,59nm,1.1s
WB2 Warramunga Arr 145.06 237 *e*P PKPbc 13 24 46.4 +1.0
WRA Warramunga Arr 145.07 237 PKPbc PKPbc 13 24 45.6 +0.1
comp=Z,4.1nm,1.0s,baz=118,slow=2.6,SNR=15
KKN Kakani 145.48 29 *e*P PKPdf 13 24 46.1 -0.4
comp=Z,86nm,1.2s
WHN Wuhan 145.95 343 ⇓PKP PKPdf 13 24 48.1 +0.8
JIRN Jiri 146.03 28 *e*P PKPdf 13 24 47.5 0.0
LSA Lhasa 146.24 20 PKP PKPbc 13 24 51.0 +2.2
LSA Lhasa 146.24 20 *e*PKP2 PKPab 13 24 50.6 +1.1
TAPN Taplejung 146.99 26 *e*P PKPdf 13 24 47.7 -1.4
comp=Z,53nm,1.0s
CD2 Chengdu 147.18 360 *e*PKP PKPdf 13 24 48.6 -0.7
CD2 APKP 13 24 59.5
CD2 XPKP 13 25 02.8
CD2 PP PP 13 28 19.0 +4.0
CD2 SKS SKSdf 13 31 51.5 -3.7
CD2 SKKS SKKSac 13 35 03.9 -1.4
CD2 SS SS 13 47 14.0 +1.2
CD2 PP PP
comp=Z,90nm,10.2s
CD2 LR LR
comp=E,110nm,19.2s
CD2 LR LR
comp=Z,80nm,16.8s,MS4.6
ODAN Odare 147.27 27 *e*P PKPdf 13 24 48.2 -1.4
comp=Z,82nm,1.4s
KLBR Kellerberrin 147.74 203 *e*P PKPbc 13 24 53.6 +0.6
comp=Z,17nm,0.9s
MUN Mundaring 147.97 201 *e*P PKPbc 13 24 54.2 +0.6
GYA Guiyang 151.46 354 *i* PKP PKPdf 13 24 54.7 -1.6
GYA APKP 13 25 08.1
GYA PKP2 PKPab 13 25 11.3 +0.7
GYA XPKP 13 25 14.2
GYA PKS 13 28 28.0
GYA PP PP 13 28 43.2 +3.3
GYA SKS SKSdf 13 31 56.0 -5.0
GYA SKKS SKKSac 13 35 26.5 -2.7
GYA SS SS 13 48 01.2 +0.6
GYA PP PP
comp=Z,120nm,8.0s
GYA LR LR
comp=N,270nm,20.6s,MS5.3
GYA LR LR
comp=E,380nm,21.0s,MS5.3
GYA LR LR
comp=Z,290nm,20.8s,MS5.1
KMI Kunming 152.94 2 PKP PKPdf 13 24 59.2 +0.7
KMI APKP 13 25 12.2
KMI XPKP 13 25 17.4
KMI PP PP 13 28 53.3 +5.0
KMI SS SS 13 48 19.1 +2.3
KMI PP PP
comp=Z,120nm,4.5s
KMI LR LR
comp=N,179nm,12.4s,MS5.2
KMI LR LR
comp=E,148nm,13.1s,MS5.2
KMI LR LR
comp=Z,178nm,31.5s
KMI Kunming 152.94 2 PKIKP PKPdf 13 24 59.2 +0.7
KMI 13 25 12.2
KMI 13 25 17.4
KMI 13 28 53.3
KMI SS SS 13 48 19.1 +2.3
KMI SSS 13 54 04.0
KMI MLR MLR
comp=Z,180nm,31.5s,MS4.7
FITZ Fitzroy Crossi 153.11 232 PKPbc PKPbc 13 25 06.5 +0.2
comp=Z,2.4nm,0.7s,baz=240,slow=3.3,SNR=3.9

JMA ***06*** *13:08:26.6±0.7, 44.96N×149.01E, h30km, M3.9*
MOS ***06*** *13:08:26.4±2.3, 45.43N×148.85E, h33km, mb4.4/1, Error ellipse: s-maj=15.0km s-min=6.7km az=115.1*
ISC 06 13:08:28.1±1.3, 44.89N±008×148.9E±01, h35km, n20,
σ1§48/29, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.83**	**295**	⇓*i*PN	**Pn**	**Pn**	**13 08 41.5**	**-1.8**
KUR				*i* S	**Sn**	**Sn**	**13 08 52.6**	**-1.7**
KUR				pmax	pmax			
	comp=Z,80nm,0.5s							
KUR				smax				
	comp=N,2μm,0.5s							

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR				smax			
	comp=E,2µm,0.5s						
YUK	Yuzh-Kuril'sk	2.36	250	PN	Pn	13 09 07.3	+3.0
YUK				eS	Sn	13 09 35.5	+3.5
YUK				smax			
	comp=N,460nm,0.3s						
YUK				smax			
	comp=E,250nm,0.5s						
NEM2	Nemuro 2	2.76	238	P	Pn	13 09 08.3	-1.5
NEM2				eS	Sn	13 09 38.4	-3.4
JRA	Rausu	2.89	252	P	Pn	13 09 12.7	+1.1
JNK	Nakash	3.30	248	P	Pn	13 09 17.9	+0.7
JNK				eS	Sn	13 09 56.3	+1.2
JAK	Akkeshi	3.60	240	P	Pn	13 09 20.7	-0.6
JAK				eS	Sn	13 10 00.7	-1.8
JTKR	Abashiri--Toko	3.71	257	P	Pn	13 09 25.1	+2.2
JAR	Ashorobuto	4.04	249	P	Pn	13 09 29.0	+1.5
JAR				eS	Sn	13 10 15.8	+2.2
JOB	Onbets	4.18	243	P	Pn	13 09 29.7	+0.3
JOB				eS	Sn	13 10 16.5	-0.5
JCH	Churui	4.63	243	P	Pn	13 09 35.6	+0.1
JCH				eS	Sn	13 10 27.8	-0.2
ERM	Erimo	5.09	238	i PN	Pn	13 09 43.9	+2.0
JNBK	Urakawa-nobuka	5.19	242	P	Pn	13 09 43.0	-0.2
JBT2	Biratori 2	5.20	248	P	Pn	13 09 44.4	+1.1
JNB	Noboribetsu	6.21	250	P	Pn	13 09 58.1	+0.8
JNB				eS	Sn	13 11 07.6	+0.6
JKB	Kayabe	6.49	245	P	Pn	13 10 01.1	+0.1
JKB				eS	Sn	13 11 11.6	-2.2
JYM2	Yakumo 2	6.81	249	P	Pn	13 10 06.2	+0.7
JANG	Nango	7.09	233	P	Pn	13 10 06.9	-2.4
JANG				eS	Sx	13 11 21.4	
JTH	Tanohata	7.20	229	eS	Sx	13 11 23.0	
OFUJ	Ofunato	7.93	225	P	Pn	13 10 18.9	-2.0
JIO	Ouri	8.57	224	P	Pn	13 10 26.9	-2.7
JIO				eS	Sx	13 11 56.2	

IDC 06 13:10:12.5±3.8**, 089S**×**10027E, h108**^{km}±27^{km}**, mb3.1**/4**, mb1 3.3**/5**, mb1mx3.2**/20**, mbtmp3.1**/5**, Error ellipse: s-maj=105.1km s-min=18.5km az=59.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.90	340	P	Pn	13 11 07.7	-2.8
	3.2nm,0.3s,baz=99,slow=6.4,SNR=12						
PSI				S	Sn	13 11 54.7	-0.7
	4.0nm,0.3s,baz=95,slow=17,SNR=4.1						
WRA	Warramunga Arr	38.34	122	P	P	13 17 22.6	-0.5
	0.2nm,0.3s,baz=300,slow=9.1,SNR=8.6						
ASAR	Alice Springs	39.70	127	P	P	13 17 34.6	+0.1
	0.8nm,0.7s,baz=300,slow=7.8,SNR=12						
ASAR				PcP	PcP	13 19 40.2	+1.0
	0.4nm,0.5s,baz=313,slow=2.7,SNR=9.4						
SONM	Songino Array	48.82	5	P	P	13 18 47.0	+0.3
	0.2nm,0.6s,baz=185,slow=11,SNR=2.8						
MKAR	Makanchi Array	50.04	344	P	P	13 18 54.6	-1.4
	0.2nm,0.4s,baz=155,slow=7.6,SNR=4.1						

*ISCJB **06** 13:17:41.1±0.5, 523N±0.1×3002W±009, h10^{km}, mb3.9/22, MS3.8/11, Error ellipse: s-maj=15.8km s-min=8.3km az=2.5*
*IDC **06** 13:17:41.2±0.7, 5221N×3006W, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx4.0/27, mbtmp3.9/19, ML4.3/1, MS3.8/12, Ms1 3.9/12, ms1mx3.5/37, Error ellipse: s-maj=24.0km s-min=12.2km az=7.0*
*NEIC **06** 13:17:42.7±0.4, 5225N×3001W, h10^{km}, mb4.5/4, Error ellipse: s-maj=14.0km s-min=7.3km az=183.0*
*CSEM **06** 13:17:43.6±0.1, 5221N×30.14W, h33^{km}, mb4.4/4, Error ellipse: s-maj=7.7km s-min=3.6km az=13.0*
ISC 06 13:17:43.0±0.5**, 523N**±01×**3000W**±009**, h10**^{km}**, n51,** σ**0^{s}96**/41**, mb3.9**/22**, MS3.8**/11**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	16.11	68	Pn	Pn	13 21 27.9	-1.4
	0.7nm,0.3s,baz=268,slow=9.6,SNR=11						
SFJD	Kangerlussuaq	17.92	333	LR	LR	13 27 21.6	
	comp=Z,354nm,20.9s,baz=288,slow=32						
SCHQ	Schefferville	21.87	291	P	P	13 22 34.5	-1.1
	7.8nm,0.7s,mb4.2,baz=86,slow=8.3,SNR=15						
ESDC	Sonseca Array	21.91	115	P	P	13 22 36.4	+0.3
	1.1nm,0.6s,mb3.5,baz=312,slow=8.9,SNR=5.9						
NB2	NORSAR Subarra	23.91	52	P	P	13 22 56.7	+0.1
	comp=Z,2.0nm,0.7s,mb3.7,baz=268,slow=11						
NOA	NORSAR Array B	23.91	52	P	P	13 22 57.3	+0.7
	comp=Z,1.1nm,0.6s,mb3.5,baz=270,slow=9.3,SNR=3.4						
NOA				LR	LR	13 31 20.2	
	comp=Z,108nm,19.6s,MS3.3,baz=305,slow=34						
HFS	Hagfors	25.12	55	P	P	13 23 08.8	+1.1
	comp=Z,1.6nm,0.7s,mb3.7,baz=243,slow=9.5,SNR=3.4						
HFS				LR	LR	13 31 24.4	
	comp=Z,262nm,21.4s,MS3.7,baz=256,slow=33						
DAVOX	Davos/Dischmat	26.21	86	LR	LR	13 32 52.5	
	comp=Z,173nm,18.9s,MS3.6,baz=279,slow=35						
MDT	Midelt	26.75	127	P	P	13 23 22.5	-0.1
	comp=Z,1.4nm,0.7s,mb3.6,baz=226,slow=8.9,SNR=3.6						
GERES	GERESS Array B	27.66	80	LR	LR	13 33 44.2	
	comp=Z,215nm,20.3s,MS3.7,baz=98,slow=35						
VRAC	Vranov	29.21	77	LR	LR	13 34 07.4	
	comp=Z,148nm,18.6s,MS3.6,baz=177,slow=34						
FINES	FINESS Array B	31.05	51	P	P	13 24 00.8	+0.2
	comp=Z,0.9nm,0.5s,mb3.9,baz=273,slow=8.0,SNR=9.1						
FINES				LR	LR	13 35 02.2	
	comp=Z,176nm,20.4s,MS3.7,baz=151,slow=33						
KAF	Kangasniemi	31.07	49	ep	P	13 23 59.4	-1.3
JOF	Joensuu	33.23	47	ep	P	13 24 18.7	-1.0
	comp=Z,1.6nm,0.4s,mb4.3						
AKASG	Malin Array Be	36.02	68	P	P	13 24 43.2	-0.7
	comp=Z,0.4nm,0.4s,mb3.7,baz=296,slow=8.7,SNR=4.7						
MLR	Muntele Rosu	36.60	78	LR	LR	13 41 19.8	
	comp=Z,211nm,18.8s,MS4.0,baz=39,slow=39						
ULM	Lac du Bonnet	39.99	294	P	P	13 25 16.4	-1.0
ULM	Lac du Bonnet	39.99	294	P	P	13 25 16.4	-1.0
	comp=Z,1.5nm,0.6s,mb3.9,baz=41,slow=5.2,SNR=3.1						
YKA	Yellowknife Ar	43.48	318	P	P	13 25 45.9	0.0
YKA				PcP	PcP	13 27 33.0	-0.6
YKA	Yellowknife Ar	43.48	318	P	P	13 25 45.8	0.0
	comp=Z,1.4nm,0.8s,mb3.7,baz=61,slow=8.4,SNR=11						
YKA				PcP	PcP	13 27 33.0	-0.6
	comp=Z,0.5nm,0.6s,baz=60,slow=3.7,SNR=7.0						
YKA	Yellowknife Ar	43.48	318	P	P	13 25 45.8	-0.1
YKA	Yellowknife Ar	43.48	318	PcP	PcP	13 27 33.0	-0.6
BRTR	Keskin Array B	44.55	80	P	P	13 25 55.5	+0.7
	comp=Z,0.6nm,0.6s,mb3.6,baz=290,slow=6.9,SNR=3.5						
TORD	Torodi Ar. Bea	46.56	135	P	P	13 26 09.1	-1.8
	comp=Z,0.8nm,0.7s,mb3.8,baz=336,slow=7.6,SNR=4.2						
INK	Inuvik	47.24	331	eP	P	13 26 20.9	+5.3
	comp=Z,502nm,0.4s						
INK	Inuvik	47.24	331	eP	P	13 26 20.9	+5.4
	comp=Z,502nm,0.4s						
ARU	Arti	48.35	48	eP	P	13 26 24.6	+0.3
	comp=Z,8.5nm,0.8s,mb4.8						
ARU	Arti	48.35	48	eP	P	13 26 24.6	+0.3
	comp=Z,8.5nm,0.8s,mb4.8						
PCRV	Puerto La Cruz	50.49	226	LR	LR	13 42 21.2	
	comp=Z,154nm,20.3s,MS4.0,baz=193,slow=29						
AKTK	Aktyubinsk	51.67	55	P	P	13 26 50.0	+0.4
AKTK				LR	LR	13 48 37.0	
AKTK	Aktyubinsk	51.67	55	P	P	13 26 50.0	+0.4
AKTO	Aktyubinsk	51.67	55	P	P	13 26 50.0	+0.4
	comp=Z,1.4nm,0.5s,mb4.1,baz=314,slow=9.6,SNR=5.6						
AKTO				LR	LR	13 48 37.0	
	comp=Z,118nm,18.6s,MS4.0,baz=324,slow=36						
PDAR	Pinedale Array	51.99	293	P	P	13 26 50.5	-1.6
	comp=Z,1.1nm,0.6s,mb4.0,baz=67,slow=5.0,SNR=11						
PDAR	Pinedale Array	51.99	293	P	P	13 26 50.5	-1.6
HWUT	Hardware Ranch	53.88	293	eP	P	13 27 05.6	-0.5
	comp=Z,3.9nm,0.7s,mb4.5						
HWUT	Hardware Ranch	53.88	293	eP	P	13 27 05.6	-0.5
	comp=Z,3.9nm,0.7s,mb4.5						
PV10	Paradox Valley	54.58	289	eP	P	13 27 12.4	+1.2
PV10	Paradox Valley	54.58	289	eP	P	13 27 12.4	+1.2
TXAR	Lajitas Array	57.63	277	P	P	13 27 33.7	+0.6
TXAR	Lajitas Array	57.63	277	P	P	13 27 33.7	+0.6
	comp=Z,0.6nm,0.8s,mb3.7,baz=49,slow=7.9,SNR=6.8						
ROSC	El Rosal	59.71	234	LR	LR	13 49 45.5	
	comp=Z,99nm,18.9s,MS4.0,baz=240,slow=32						
NVAR	Mina Array Bea	59.83	295	P	P	13 27 50.4	+2.1
	comp=Z,0.6nm,0.9s,mb3.6,baz=46,slow=5.2,SNR=3.2						
EKS2	Erkin-Say	64.86	52	eP	P	13 28 22.3	+0.3
	comp=Z,3.3nm,1.0s,mb4.3						
EKS2	Erkin-Say	64.86	52	eP	P	13 28 22.3	+0.3
	comp=Z,3.3nm,1.0s,mb4.3						
MKAR	Makanchi Array	65.60	44	P	P	13 28 26.9	+0.3
MKAR				LR	LR	13 56 30.9	
MKAR	Makanchi Array	65.60	44	P	P	13 28 26.9	+0.3
	comp=Z,0.8nm,0.7s,mb3.9,baz=320,slow=5.8,SNR=8.1						
MKAR				LR	LR	13 56 30.9	
	comp=Z,111nm,18.4s,MS4.1,baz=219,slow=36						
SONM	Songino Array	73.55	29	P	P	13 29 16.7	+1.1
	comp=Z,0.7nm,0.9s,mb3.6,baz=306,slow=6.4,SNR=4.1						
BOSA	Boshof	93.90	134	P	P	13 31 01.6	+1.3
	comp=Z,1.3nm,0.4s,mb4.7,baz=135,slow=8.0,SNR=4.1						
BOSA	Boshof	93.90	134	P	P	13 31 01.6	+1.2
WRA	Warramunga Arr	145.50	27	PKPbc	PKPbc	13 37 20.8	-0.4
	comp=Z,1.0nm,0.6s,baz=343,slow=3.6,SNR=13						
ASAR	Alice Springs	148.89	29	PKPbc	PKPbc	13 37 29.6	-1.1
	comp=Z,0.4nm,0.5s,baz=351,slow=2.2,SNR=7.0						

*IPEC **06** 13:26:41.6±0.3, 5149N×1628E, h0^{km}, ML2.5/3, Error ellipse: s-maj=1.9km s-min=1.5km az=39.0*
*ISCJB **06** 13:26:41.4±0.6, 5137N±003×1616E±003, h0^{km}, Error ellipse: s-maj=4.4km s-min=2.6km az=17.6*
*CSEM **06** 13:26:43.3±0.2, 5143N×16.12E, h1^{km}±1^{km}, ML3.2/6, Error ellipse: s-maj=3.6km s-min=1.8km az=24.0*
*WAR **06** 13:26:43.5, 5145N×16.17E, ML2.6, Mining Induced*
*VIE **06** 13:26:43.7±0.6, 5132N×16.13E, h0^{km}, mb2.1/2, ML2.8/4, Error ellipse: s-maj=4.0km s-min=3.7km az=171.0, Suspected Mining induced.*
*NEIC **06** 13:26:43.6, 5142N×16.16E, h1^{km}, ML2.8(SZGRF), After SZGRF.*
*PRU **06** 13:26:44.7, 5135N×16.12E, h0^{km}*
ISC 06 13:26:42.6±0.6**, 5143N**±003×**1615E**±003**, h0**^{km}**, n26,** σ**0^{s}96**/53**, 3C-3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.59	171	ePg	Pg	13 26 54.5	+0.6
KSP				eSg	Sg	13 27 02.8	+1.3
KSP	Ksiaz	0.59	171	⇓iPg	Pg	13 26 54.6	+0.7
KSP				eSg	Sg	13 27 02.6	+1.1
KSP	Ksiaz	0.59	171	⇓iPg	Pg	13 26 54.6	+0.7
KSP				eSg	Sg	13 27 01.8	+0.3
UPC	Upice	0.92	185	ePG	Pg	13 27 00.6	+0.3
DPC	Dobruska-Polom	1.08	174	ePG	Pg	13 27 03.5	+0.2
DPC				eSG	Sg	13 27 17.3	0.0
	39nm,0.5s						
PVCC	Panska Ves	1.34	229	ePG	Pg	13 27 08.8	+0.4
PVCC				eSG	Sg	13 27 26.4	+0.6
	142nm,0.4s						
BRG	Berggiesshubel	1.50	249	Pg	Pg	13 27 11.5	+0.2
BRG	Berggiesshubel	1.50	249	PN	Pn	13 27 10.7	0.0
BRG				PG	Pg	13 27 11.5	+0.2
BRG				SG	Sg	13 27 31.7	+1.1
	62nm,0.6s						
PRU	Pruhonice	1.77	216	ePN	Pn	13 27 14.1	-0.3
PRU				ePG	Pg	13 27 15.7	-0.7
PRU				eSG	Sg	13 27 38.8	-0.5
	32nm,0.4s						
MORC	Moravsky Berou	1.87	151	ePn	Pn	13 27 14.7	-1.2
MORC				eSn	Sn	13 27 42.4	+2.2
MORC	Moravsky Berou	1.87	151	ePn	Pn	13 27 15.3	-0.6
MORC				eSg	Sg	13 27 41.1	-1.7
	22nm,0.5s						
MORC				eSn	Sn	13 27 42.4	+2.2
CLL	Collm	1.98	268	i Pg	Pg	13 27 20.1	-0.4
CLL				eSg	Sg	13 27 47.0	+0.9
	comp=Z,24nm,0.6s						
OKC	Ostrava-Krasne	2.04	141	ePG	Pg	13 27 20.5	-1.1
OKC				eSG	Sg	13 27 46.2	-1.8
VRAC	Vranov	2.14	172	ePn	Pn	13 27 19.6	+0.1
VRAC				eSg	Sg	13 27 50.5	-0.8
	comp=Z,44nm,0.9s						
KRUC	Moravsky	2.37	176	ePn	Pn	13 27 22.9	+0.2
KRUC				eSg	Sg	13 27 58.0	-0.8
	comp=Z,22nm,0.9s						
OJC	Ojcow	2.61	116	ePg	Pg	13 27 32.9	+0.3
OJC				eSg	Sg	13 28 07.8	+1.4
NKC	Novy Kostel	2.63	244	ePN	Pn	13 27 25.8	-0.5
NKC				eSG	Sg	13 28 06.8	-0.4
	comp=Z,38nm,0.3s						
KHC	Kasperske Hory	2.83	217	ePN	Pn	13 27 29.4	+0.4
KHC				ePG	Pg	13 27 35.2	-1.6
KHC				eSN	Sn	13 28 03.2	-0.5
KHC				eSG	Sg	13 28 12.1	-1.3
	comp=Z,11nm,0.4s						
MOX	Moxa	2.97	256	ePG	Pg	13 27 39.4	-0.1
MOX				eSG	Sg	13 28 19.2	+1.3
MODS	Modra-Piesok	3.14	166	eSG	Sg	13 28 23.0	-0.5
ZST	Bratislava	3.29	169	eSG	Sg	13 28 27.5	-0.8
VYHS	Vyhne	3.41	148	ePG	Pg	13 27 47.9	0.0
VYHS				eSG	Sg	13 28 32.1	0.0
CONA	Conrad Observa	3.51	183	⇑iPn	Pn	13 27 37.9	-0.5
CONA				⇓iSg	Sg	13 28 36.5	+1.3
	comp=Z,22nm,0.7s						
BSD	Bornholm Skovb	3.77	349	i P	Pn	13 27 40.0	-1.9
BSD				eS	Sn	13 28 21.5	-5.4
MOA	Molln	3.78	200	⇑iPn	Pn	13 27 42.0	-0.1
MOA				⇑iSg	Sg	13 28 45.9	+1.8
	comp=Z,24nm,0.8s						
STHS	Stebnicka Huta	3.83	120	ePG	Pg	13 27 57.2	+1.3
STHS				eSG	Sg	13 28 47.5	+2.0

*ISCJB **06** 13:30:27.0±0.7, 2854S±003×7131W±0.10, h48^{km}±8^{km}, mb3.9/9, Error ellipse: s-maj=14.7km s-min=5.4km az=5.5*
*NEIC **06** 13:30:27.4, 2857S×7125W, h47^{km}, mb4.1/3, After GUC.*
NEIC Felt [III] at Freirina, Huasco and Vallenar; [II] at Alto del Carmen.
*IDC **06** 13:30:27.6±0.7, 2849S×7125W, h42^{km}±5^{km}, mb3.7/6, mb1 3.9/9, mb1mx3.8/17, mbtmp3.6/9, ML3.5/3, Error ellipse: s-maj=31.4km s-min=12.7km az=56.0*
*GUC **06** 13:30:27.4±0.8, 2857S×7125W, h47^{km}±4^{km}, ML4.6*
ISC 06 13:30:27.6±0.8**, 2853S**±003×**7133W**±008**, h36**^{km}±10^{km}**, n33,** σ**0^{s}90**/39**, mb3.9**/9**, 4C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.51	95	eP	Pn	13 30 38.1	-0.3
VACH				i S	Sn	13 30 45.7	-0.2
LCO	Las Campanas	0.73	131	ePg	Pn	13 30 41.3	-0.2
LCO				eSn	Sn	13 30 50.8	-0.7
LCO				eSg	Sn	13 30 51.0	-0.4
LSCH	La Serena	1.38	177	eP	Pn	13 30 50.1	-0.2
LSCH				i S	Sn	13 31 07.0	-0.3
CPCH	Copiapo	1.46	37	⇑iP	Pn	13 30 51.7	+0.3
CPCH				i S	Sn	13 31 10.1	+0.8
CPCH	Copiapo	1.46	37	⇑iP	Pn	13 30 51.7	+0.3
CPCH				i S	Sn	13 31 10.1	+0.8
CPCH				AML	AML	13 31 14.1	
	comp=E,36µm,0.1s						
CDCH	Caldera	1.52	17	eP	Pn	13 30 51.5	-0.8
TLL	Tololo Astrono	1.69	164	⇓iP	Pn	13 30 55.2	+0.4
TLL				i S	Sn	13 31 16.1	+0.9
TLL	Tololo Astrono	1.69	164	⇓iP	Pn	13 30 55.2	+0.4
TLL				i S	Sn	13 31 16.1	+0.9
TLL				AML	AML	13 31 28.1	
	comp=N,3µm,0.5s						
OVCH	Ovalle	2.07	177	eP	Pn	13 30 59.6	-0.3
CMCH	Combarbala	2.65	174	⇑iP	Pn	13 31 07.4	-0.5
CMCH				i S	Sn	13 31 37.6	-1.1
CMCH	Combarbala	2.65	174	⇑iP	Pn	13 31 07.4	-0.5
CMCH				i S	Sn	13 31 37.6	-1.1
CMCH				AML	AML	13 31 57.9	
	comp=N,6µm,0.8s						
CFAA	Coronel Fontan	4.07	140	P	Pn	13 31 29.1	+1.7
	comp=N,3.0nm,0.3s,baz=316,slow=11,SNR=75						
CFAA				S	Sn	13 32 14.3	+0.4
	comp=N,5.1nm,0.3s,baz=244,slow=23,SNR=7.0						
TRQA	Tornquist	12.30	143	ePn	Pn	13 33 21.3	+1.1
	comp=N,6.0nm,0.6s						
LPAZ	La Paz	12.54	14	P	Pn	13 33 23.6	0.0
	comp=N,0.1nm,0.3s,baz=295,slow=15,SNR=2.1						
SIV	San Ignacio	15.67	39	P	Pn	13 34 02.9	-3.0
	comp=N,0.1nm,0.3s,baz=229,slow=22,SNR=2.1						
TXAR	Lajitas Array	65.32	329	P	P	13 41 06.8	+0.7
TXAR	Lajitas Array	65.32	329	P	P	13 41 06.8	+0.7
	comp=N,0.6nm,0.6s,mb3.8,baz=151,slow=8.5,SNR=9.1						
SDCO	Great Sand Dun	73.29	332	eP	P	13 41 56.3	+1.0
	comp=N,1.1nm,0.7s,mb3.9						
HWUT	Hardware Ranch	79.08	330	eP	P	13 42 28.4	+0.4
	comp=N,4.4nm,0.6s,mb4.6						
PDAR	Pinedale Array	79.19	332	P	P	13 42 28.8	+0.1
	comp=N,0.8nm,0.5s,mb3.9,baz=131,slow=7.3,SNR=8.2						
NVAR	Mina Array Bea	79.78	324	P	P	13 42 31.1	-0.8
	comp=N,0.2nm,0.7s,mb3.2,baz=185,slow=6.0,SNR=3.0						
ULM	Lac du Bonnet	81.40	344	P	P	13 42 38.8	-1.5
	comp=N,2.8nm,0.9s,mb4.2,baz=116,slow=3.1,SNR=5.6						
TORD	Torodi Ar. Bea	81.79	70	P	P	13 42 42.0	-1.3
TORD				pP	pP	13 42 54.1	-0.3
TORD				sP	sP	13 42 60.0	+1.5
TORD	Torodi Ar. Bea	81.79	70	P	P	13 42 42.0	-1.3
	comp=N,1.1nm,0.6s,mb4.0,baz=275,slow=4.5,SNR=10						
TORD				pP	pP	13 42 54.1	-0.3
	comp=N,1.3nm,0.6s,baz=255,slow=4.7,SNR=6.8						
TORD				sP	sP	13 42 60.0	+1.5
	comp=N,1.8nm,0.5s,baz=268,slow=4.8,SNR=7.2						
HLID	Hailey	81.90	330	eP	P	13 42 44.6	+1.4
	comp=N,1.7nm,0.9s,mb4.0						
MCMT	McKenzie Canyo	82.24	332	eP	P	13 42 46.0	+1.1
YKA	Yellowknife Ar	97.09	341	P	P	13 43 54.4	-0.9
YKA	Yellowknife Ar	97.09	341	P	P	13 43 54.4	-0.9
	comp=N,0.4nm,0.7s,mb3.9,baz=140,slow=4.3,SNR=7.8						
ASAR	Alice Springs	122.69	208	PKP	PKPdf	13 49 18.6	-1.6
	comp=N,0.5nm,0.8s,baz=130,slow=1.8,SNR=9.4						
ASAR				pPKP	pPKPdf	13 49 32.5	+0.7
	comp=N,0.3nm,0.7s,baz=128,slow=1.6,SNR=2.5						
WRA	Warramunga Arr	125.80	210	PKP	PKPdf	13 49 24.3	-1.9
	comp=N,0.4nm,0.6s,baz=156,slow=1.7,SNR=16						
WRA				pPKP	pPKPdf	13 49 38.2	+0.4
	comp=N,1.0nm,0.6s,baz=160,slow=1.7,SNR=5.3						
AAK	Ala-Archa	149.08	54	ePKPbc	PKPbc	13 50 10.9	-1.1
UCH	Uchtor	149.20	55	ePKPbc	PKPbc	13 50 12.8	+0.6
MKAR	Makanchi Array	152.48	41	PKPbc	PKPbc	13 50 18.9	-0.9
	comp=N,1.9nm,0.6s,baz=321,slow=1.9,SNR=19						
MKAR				pPKPbc	pPKPbc	13 50 32.6	+1.2
	comp=N,1.4nm,0.6s,baz=300,slow=1.9,SNR=5.5						

IDC 06 14:11:25.4±1.5**, 1051S**×**12388E, h0**^{km}**, mb3.8**/1**, mb1 3.6**/4**, mb1mx3.5**/14**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=107.6km s-min=17.1km az=58.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	0.37	324	Pn	Pg	14 11 37.6	+5.2
	325nm,0.3s,baz=165,slow=12,SNR=296						
FITZ	Fitzroy Crossi	7.74	167	Pn	Pn	14 13 19.9	+0.6
	0.2nm,0.3s,baz=353,slow=12,SNR=19						
FITZ				Sn	Sn	14 14 44.1	-3.7
	0.8nm,0.3s,baz=182,slow=7.8,SNR=10						
WRA	Warramunga Arr	13.77	134	Pn	Pn	14 14 40.0	-2.0
	0.1nm,0.3s,baz=306,slow=14,SNR=10						
WRA				Sn	Sn	14 17 06.9	-8.9
	0.3nm,0.3s,baz=316,slow=23,SNR=5.7						
ASAR	Alice Springs	16.20	145	Pn	Pn	14 15 13.5	-1.1
	0.1nm,0.3s,baz=320,slow=12,SNR=10						
ASAR				Sn	Sn	14 18 07.4	-7.6
	0.1nm,0.3s,baz=318,slow=21,SNR=5.3						
MKAR	Makanchi Array	68.06	331	P	P	14 22 28.3	+1.6
	0.6nm,0.6s,baz=141,slow=5.7,SNR=4.9						

IDC 06 14:23:14.7±1.4**, 2167S**×**6903E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/20**, mbtmp3.7**/4**, Error ellipse: s-maj=69.4km s-min=27.8km az=24.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	59.43	105	P	P	14 33 19.6	0.0
	0.8nm,0.8s,baz=262,slow=6.3,SNR=11						
WRA	Warramunga Arr	60.66	101	P	P	14 33 28.2	+0.1
	0.7nm,0.8s,baz=260,slow=5.8,SNR=6.4						
MKAR	Makanchi Array	69.18	10	P	P	14 34 23.1	+0.1
	0.6nm,0.6s,baz=191,slow=6.4,SNR=3.8						
TORD	Torodi Ar. Bea	74.56	291	P	P	14 34 56.0	+0.1
	0.3nm,0.7s,baz=90,slow=6.5,SNR=2.5						

*ISCJB **06** 14:33:22.8±0.8, 510N±02×1782W±02, h10^{km}, mb3.5/6, Error ellipse: s-maj=32.8km s-min=12.6km az=148.2*
*IDC **06** 14:33:22.8±1.0, 5096N×17824W, h0^{km}, mb3.5/6, mb1 3.8/6, mb1mx3.6/22, mbtmp3.5/6, Error ellipse: s-maj=48.1km s-min=22.0km az=157.0*
*NEIC **06** 14:33:24.2±0.8, 51.10N×17820W, h10^{km}, ML3.5(AEIC), Error ellipse: s-maj=35.5km s-min=13.2km az=151.0*
ISC 06 14:33:24.4±0.8**, 511N**±02×**1782W**±02**, h10**^{km}**, n10,** σ**0^{s}99**/10**, mb3.6**/6**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	Adak	1.25	50	P	Pn	14 33 47.8	-0.1
ATKA	Atka Island	2.75	64	P	Pn	14 34 09.4	+1.0
KDAK	Kodiak Island	16.28	56	Pn	Pn	14 37 10.0	-2.9
	0.4nm,0.3s,baz=270,slow=9.1,SNR=4.8						
DAWY	Dawson	24.07	43	eP	P	14 38 38.7	-0.8
YKA	Yellowknife Ar	35.17	46	P	P	14 40 17.6	-0.3
	0.4nm,0.9s,mb3.3,baz=275,slow=8.6,SNR=3.5						
PDAR	Pinedale Array	46.05	72	P	P	14 41 49.1	+1.2
	2.4nm,0.9s,mb4.1,baz=296,slow=5.1,SNR=14						
SONM	Songino Array	47.11	297	P	P	14 41 57.3	+1.1
	0.4nm,0.8s,mb3.4,baz=66,slow=7.7,SNR=3.6						
TXAR	Lajitas Array	58.34	81	P	P	14 43 20.1	+0.6
	0.2nm,0.5s,mb3.4,baz=296,slow=6.9,SNR=3.8						
WRA	Warramunga Arr	82.06	224	P	P	14 45 43.8	-0.9
	0.2nm,0.4s,mb3.4,baz=28,slow=5.7,SNR=6.1						
ASAR	Alice Springs	85.52	223	P	P	14 46 02.0	-0.3
	0.4nm,0.9s,mb3.7,baz=32,slow=5.8,SNR=2.9						

*CSEM **06** 14:38:34.7±0.4, 2950N×5150E, h20^{km}, ML3.1, Error ellipse: s-maj=11.7km s-min=4.1km az=39.0*
*KISR **06** 14:38:35.1±1.0, 2986N×5133E, h34^{km}±99^{km}, ML3.1*
ISC 06 14:38:35.0±1.9**, 296N**±02×**515E**±01**, h10**^{km}**, n15,** σ**0^{s}79**/27**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMR	Umm Al-Rimmam	3.27	270	eP	Pn	14 39 26.5	+0.3
UMR				eS	Sn	14 40 05.4	+0.2
UMR				AML	AML	14 40 05.4	
	comp=Z,31nm,0.3s						
UMR	Umm Al-Rimmam	3.27	270	eP	Pn	14 39 26.5	+0.2
UMR				eS	Sn	14 40 05.4	+0.2
	comp=Z,31nm,0.3s						
KBD	Kabd	3.32	264	eP	Pn	14 39 27.1	+0.1
KBD				eS	Sn	14 40 06.8	+0.3
KBD				AML	AML	14 40 08.0	
	comp=Z,100nm,0.2s						
KBD	Kabd	3.32	264	eP	Pn	14 39 27.1	+0.1
KBD				eS	Sn	14 40 06.8	+0.3
RDF	Al-Radifah	3.49	260	eP	Pn	14 39 29.9	+0.7
RDF				eS	Sn	14 40 11.6	+1.0
RDF				AML	AML	14 40 13.0	
	comp=Z,40nm,0.4s						
RDF	Al-Radifah	3.49	260	eP	Pn	14 39 29.9	+0.6
RDF				eS	Sn	14 40 11.6	+1.0
	comp=Z,40nm,0.4s						
MIB	Mutribah	3.60	274	eP	Pn	14 39 30.9	0.0
MIB				eS	Sn	14 40 12.0	-1.4
MIB				AML	AML	14 40 14.4	
	comp=Z,33nm,0.4s						
MIB	Mutribah	3.60	274	eP	Pn	14 39 30.9	+0.1
MIB				eS	Sn	14 40 12.0	-1.4
NAY	Al-Naaiem	3.70	266	eP	Pn	14 39 32.8	+0.6
NAY				eS	Sn	14 40 16.3	+0.4
NAY				AML	AML	14 40 17.0	
	comp=Z,15nm,0.5s						
NAY	Al-Naaiem	3.70	266	eP	Pn	14 39 32.8	+0.6
NAY				eS	Sn	14 40 16.3	+0.4
RST	Umm Al-Ruwaisa	3.90	270	eP	Pn	14 39 35.6	+0.7
RST				eS	Sn	14 40 19.8	-0.9
RST				AML	AML	14 40 21.3	
	comp=Z,26nm,0.4s						
RST	Umm Al-Ruwaisa	3.90	270	eP	Pn	14 39 35.6	+0.7
RST				eS	Sn	14 40 19.8	-0.9
	comp=Z,26nm,0.4s						
BTHS		5.55	186	P	Pn	14 39 57.6	0.0
ASYS		6.60	253	P	Pn	14 40 09.8	-2.3
HRDDS		6.88	196	P	Pn	14 40 15.6	-0.2

MAN 06 14:41:32,776N×12565E,h9km,mb4.6,ML3.5,MS3.5,3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.59	281	eP	Pg	14 41 44.6	+1.2
BIPH	Bislig	0.82	59⇑	eP	Pg	14 41 47.3	-0.6
BIPH				eS	Sg	14 42 00.9	+2.3
KCP	Kidapawan	0.93	216⇑	iP	Pg	14 41 50.5	+0.6
KCP				iS	Sg	14 42 04.8	+2.8
CGP	Cagayan de Oro	1.17	306⇑	iP	Pb	14 41 53.2	-1.2
	2140μm,105s						
CGP				iS	Sb	14 42 08.7	-0.9
BUTP	Butuan	1.20	359	eP	Pb	14 41 56.6	+1.7
SCPH	Surigao	2.01	356	eP	Pn	14 42 07.2	+1.1
PAGZ	Pagadian	2.25	272	eP	Pn	14 42 12.0	+2.7
MSLP	Maasin	2.48	342	eP	Pn	14 42 17.8	+5.2

IDC 06 14:44:57.6±7.6,459S×15172E,h133km±52km,mb3.3/3, mb1 3.4/4,mb1mx3.2/15,mbtmp3.3/4,Error ellipse: s-maj=105.1km s-min=54.0km az=125.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.59	223	P	Pn	14 46 33.8	+1.7
	0.4nm,0.3s,baz=17,slow=17,SNR=2.8						
PMG				S	Sn	14 47 46.8	+0.9
	1.5nm,0.3s,baz=339,slow=20,SNR=7.3						
WRA	Warramunga Arr	22.79	227	P	P	14 49 48.8	-0.3
	0.6nm,0.3s,baz=52,slow=9.7,SNR=12						
ASAR	Alice Springs	25.59	221	P	P	14 50 14.3	-0.2
	0.3nm,0.8s,baz=48,slow=8.4,SNR=5.3						
FITZ	Fitzroy Crossi	28.82	240	P	P	14 50 43.4	-0.1
	6.5nm,1.1s,baz=48,slow=16,SNR=3.8						
TORD	Torodi Ar. Bea	149.22	288	PKPbc	PKPbc	15 04 31.2	-0.4
	0.1nm,0.3s,baz=90,slow=1.3,SNR=4.1						

CSEM 06 14:45:21.3±0.5,6545N×104W,h4km±4km,ML2.6,Error ellipse: s-maj=3.7km s-min=3.1km az=57.0
IDC 06 14:45:22.9±1.1,6576N×022W,h0km,mb3.4/5,mb1 3.6/9, mb1mx3.4/23,mbtmp3.4/9,ML3.1/5,Error ellipse: s-maj=24.3km s-min=15.9km az=34.0
ISCJB 06 14:45:22.7±0.6,6547N±003×004W±0.10,h10km,mb3.4/5, Error ellipse: s-maj=6.0km s-min=4.2km az=178.4
NEIC 06 14:45:24.1±0.5,6555N×054W,h10km,Error ellipse: s-maj=8.0km s-min=5.5km az=83.0
NAO 06 14:45:26.4±6.2,6575N×052E,ML2.7
BER 06 14:45:26.6±3.9,6555N×043W,h10km,MD3.0,ML2.6, ML2.7(NAO)
ISC 06 14:45:25.1±0.6,6547N±003×01W±01,h10km,n50, σ1s44/77,mb3.4/5,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOL	Molde	4.44	128	eP	Pn	14 46 34.0	+1.6
MOL				eS	Sn	14 47 23.3	-0.8
SUE	Sulen	4.94	152	eP	Pn	14 46 39.8	+0.5
SUE				eS	Sn	14 47 34.8	-1.6
SUE	Sulen	4.94	152	eP	Pn	14 46 39.8	+0.5
SUE				eS	Sn	14 47 34.8	-1.6
SUE				AML	AML	14 47 37.1	
	comp=Z,16nm,0.2s						
HYA	Hoyanger	5.16	144	eP	Pn	14 46 44.9	+2.6
HYA				eS	Sn	14 47 42.0	+0.2
HYA	Hoyanger	5.16	144	eP	Pn	14 46 44.9	+2.6
HYA				eS	Sn	14 47 42.0	+0.2
HYA				AML	AML	14 47 47.8	
	comp=Z,22nm,0.3s						
NSS	Namsos	5.20	95	eP	Pn	14 46 43.9	+1.1
NSS				eS	Sn	14 47 41.2	-1.4
NSS	Namsos	5.20	95	eP	Pn	14 46 43.9	+1.1
NSS				eS	Sn	14 47 41.2	-1.4
NSS				AML	AML	14 47 45.8	
	comp=Z,9.9nm,0.3s						
DOMB	Dombas	5.32	126	eS	Sn	14 47 46.3	+0.6
DOMB				AML	AML	14 47 53.0	
	comp=Z,15nm,0.4s						
STOK	Stokkvaagen	5.43	75	eP	Pn	14 46 47.0	+1.0
STOK				eS	Sn	14 47 45.5	-2.9
STOK	Stokkvaagen	5.43	75	eP	Pn	14 46 47.0	+1.0
STOK				eS	Sn	14 47 45.5	-2.9
STOK				AML	AML	14 47 48.7	
	comp=Z,15nm,0.3s						
ASK	Askoy	5.55	152	eP	Pn	14 46 48.1	+0.5
ASK				eS	Sn	14 47 50.1	-1.4
ASK	Askoy	5.55	152	eP	Pn	14 46 48.1	+0.5
ASK				eS	Sn	14 47 50.1	-1.4
ASK				AML	AML	14 47 53.5	
	comp=Z,12nm,0.5s						
BER	Bergen	5.67	152	eS	Sn	14 47 52.7	-1.7
EGD	Espegrend	5.75	153	eP	Pn	14 46 51.1	+0.6
LOF	Lofoten	6.00	58	eP	Pb	14 47 14.9	+5.3
LOF				eS	Sb	14 48 18.5	-2.9
LOF				AML	AML	14 48 26.1	
	comp=Z,12nm,0.7s						
MOR8	Moi Rana	6.00	77	eP	Pn	14 46 57.2	+3.4
MOR8				e		14 46 57.4	
MOR8				eS	Sn	14 48 03.8	+1.3
MOR8	Moi Rana	6.00	77	eP	Pn	14 46 57.2	+3.4
MOR8				e		14 46 57.4	
	baz=278,slow=14						
MOR8				eS	Sn	14 48 03.8	+1.3
MOR8				AML	AML	14 48 07.6	
	comp=Z,18nm,0.5s						
JMIC	Jan Mayen	6.36	334	Pn	Pn	14 46 54.4	-4.4
	comp=Z,18nm,0.3s,baz=149,slow=7.5,SNR=1.9						
JMIC	Jan Mayen	6.36	334	Pn	Pn	14 46 54.3	-4.4
ODD1	Odda	6.37	148	eP	Pn	14 46 59.4	+0.4
ODD1				eS	Sn	14 48 08.7	-2.9
ODD1	Odda	6.37	148	eP	Pn	14 46 59.4	+0.4
ODD1				eS	Sn	14 48 08.7	-2.9
ODD1				AML	AML	14 48 13.1	
	comp=Z,13nm,0.3s						
NB2	NORSAR Subarra	6.76	126	Pn	Pn	14 47 05.4	+1.2
	baz=310,slow=14						
NB2				Sn	Sn	14 48 22.3	+1.2
	baz=305,slow=28						
NOA	NORSAR Array B	6.76	126	Pn	Pn	14 47 05.8	+1.6
NOA				Sn	Sn	14 48 21.0	-0.1
NOA	NORSAR Array B	6.76	126	Pn	Pn	14 47 05.8	+1.6
	comp=Z,0.4nm,0.3s,baz=309,slow=12,SNR=2.9						
NOA				Sn	Sn	14 48 21.0	-0.1
	comp=Z,1.3nm,0.3s,baz=345,slow=20,SNR=4.9						
BLS5	Blasjo	6.78	151	eP	Pn	14 47 06.5	+1.9
BLS5				eS	Sn	14 48 19.3	-2.4
BLS5	Blasjo	6.78	151	eP	Pn	14 47 06.5	+1.9
BLS5				eS	Sn	14 48 19.3	-2.4
BLS5				AML	AML	14 48 27.7	
	comp=Z,9.2nm,0.6s						
NAO01	NORSAR Array S	6.79	128	P	Pn	14 47 08.7	+4.0
NAO01				S	Sn	14 48 06.0	-16
NAO01	NORSAR Array S	6.79	128	P	Pn	14 47 08.7	+4.0
HFS	Hagfors	8.26	124	Pn	Pn	14 47 26.4	+1.5
	baz=320,slow=12						
HFS				Sn	Sn	14 48 53.8	-4.3
	baz=304,slow=22						
HFS	Hagfors	8.26	124	Pn	Pn	14 47 25.8	+1.0
	comp=Z,0.1nm,0.3s,baz=209,slow=15,SNR=3.0						
HFS				Sn	Sn	14 48 58.5	+0.4
	comp=Z,0.8nm,0.3s,baz=318,slow=24,SNR=9.1						
TRO	Tromso	8.36	52	eP	Pn	14 47 25.6	-0.5
KTK1	Kautokeino	9.67	58	eP	Pn	14 47 45.3	+1.3
EKA	Eskdalemuir Ar	10.29	190	Pn	Pn	14 47 52.0	-0.6
	comp=Z,1.5nm,0.3s,baz=358,slow=13,SNR=23						
ESK	Eskdalemuir	10.31	190	eP	Pn	14 47 52.2	-0.6
ARA0	ARCESS Array S	10.56	56	Pn	Pn	14 47 55.5	-0.6
	baz=250,slow=14						
ARA0	ARCESS Array S	10.56	56	Pn	Pn	14 47 55.5	-0.7
	SNR=50						
ARCES	ARCESS Array B	10.56	56	Pn	Pn	14 47 55.0	-1.1
	comp=Z,0.2nm,0.3s,baz=248,slow=13,SNR=9.2						
ARCES				Sn	Sn	14 49 50.8	-3.5
	comp=Z,0.2nm,0.3s,baz=259,slow=23,SNR=2.6						
ARCES	ARCESS Array B	10.56	56	Pn	Pn	14 47 55.0	-1.2
ARCES				Sn	Sn	14 49 50.8	-3.5
FIA0	FINESS Array S	12.32	97	Pn	Pn	14 48 21.7	+1.4
	baz=302,slow=14						
FINES	FINESS Array B	12.32	97	Pn	Pn	14 48 21.7	+1.4
	comp=Z,0.1nm,0.3s,baz=284,slow=12,SNR=3.0						
FINES				Sn	Sn	14 50 32.8	-4.6
	comp=Z,0.1nm,0.3s,baz=305,slow=23,SNR=2.9						
SPA0	Spitsbergen Ar	13.65	14	Pn	Pn	14 48 37.4	-1.1
	baz=180,slow=16						
KBS	Kingsbay	13.95	10	eP	Pn	14 48 43.3	+0.9
KBS	Kingsbay	13.95	10	eP	Pn	14 48 43.3	+0.8
AKASG	Malin Array Be	21.12	120	P	P	14 50 11.8	+2.1
	comp=Z,0.6nm,0.5s,mb3.2,baz=330,slow=11,SNR=3.7						
YKA	Yellowknife Ar	43.59	322	P	P	14 53 26.2	-2.5
YKA	Yellowknife Ar	43.59	322	P	P	14 53 26.2	-2.5
	comp=Z,0.1nm,0.5s,mb2.8,baz=36,slow=8.3,SNR=4.4						
MKAR	Makanchi Array	45.70	72	P	P	14 53 46.1	+0.3
	comp=Z,0.2nm,0.3s,mb3.6,baz=355,slow=7.2,SNR=1.9						
TORD	Torodi Ar. Bea	52.28	178	P	P	14 54 37.5	+1.0
TORD	Torodi Ar. Bea	52.28	178	P	P	14 54 37.5	+1.0
	comp=Z,0.9nm,0.9s,mb3.7,baz=350,slow=6.7,SNR=4.3						
PDAR	Pinedale Array	59.19	306	P	P	14 55 23.1	-2.7
	comp=Z,0.3nm,0.6s,mb3.5,baz=27,slow=6.1,SNR=2.5						

ISCJB 06 14:48:08.9±0.2,4768N±001×700E±002,h10km±3km, Error ellipse: s-maj=2.5km s-min=2.2km az=166.9
CSEM 06 14:48:10.8±0.0,4775N×708E,h12km,ML2.6/14,Error ellipse: s-maj=0.9km s-min=0.8km az=177.0
STR 06 14:48:10.9±0.4,4777N×709E,h10km,Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
LDG 06 14:48:10.9±0.1,4774N×707E,h10km,Md2.7/3,Ml2.7/16, Error ellipse: s-maj=1.1km s-min=1.0km az=40.0
NEIC 06 14:48:10.9,4774N×707E,h10km,ML2.7(LDG), ML2.4(STR),After LDG.
BGR 06 14:48:11.1±0.6,4776N×709E,h10km,ML2.4,Error ellipse: s-maj=5.6km s-min=4.4km az=60.0
ZUR 06 14:48:11.0,4769N×717E,h-5km±2km,ML2.1/7
ISC 06 14:48:10.1±0.2,4772N±002×703E±002,h16km±3km,n60, σ0s72/124,4D,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOF	Molkenrain	0.15	27	Pg	Pg	14 48 13.4	-0.6
MOF				Sg	Sg	14 48 15.3	-1.3
HINF	Hinteralfeld	0.15	308	ePg	Pg	14 48 14.1	0.0
HINF				eSg	Sg	14 48 16.4	-0.4
	193nm,0.2s						
HINF	Hinteralfeld	0.15	308	ePg	Pg	14 48 14.1	0.0
HINF				eSg	Sg	14 48 16.4	-0.4
	97nm,0.2s						
BOURR	Bourrignon	0.35	158	ePg	Pg	14 48 18.0	+0.6
BOURR	Bourrignon	0.35	158⇓	iP	Pg	14 48 18.0	+0.7
	165nm,2.0s						
LOMF	Lomont	0.40	201	Pg	Pg	14 48 19.2	+1.1
ECH	Echery	0.50	10	Pg	Pg	14 48 20.0	0.0
ECH				Sg	Sg	14 48 26.6	-0.2
HAU	Haudompre	0.54	302	ePg	Pg	14 48 21.4	+0.6
HAU				eSg	Sg	14 48 28.6	+0.6
HAU				eSn	Sg	14 48 32.3	+4.3
	50nm,0.3s						
HAU	Haudompre	0.54	302	ePg	Pg	14 48 21.4	+0.6
HAU				eSg	Sg	14 48 28.6	+0.6
HAU				eSn	Sg	14 48 32.3	+4.3
	25nm,0.3s						
BALST	Balsthal	0.59	131⇓	iPg	Pg	14 48 22.0	+0.3
	125nm,0.2s						
FELD	Feldberg im Sc	0.67	76	Pg	Pg	14 48 23.8	+0.6
CDF	Champ du Feu	0.71	13	ePg	Pg	14 48 23.8	-0.1
CDF				eSg	Sg	14 48 33.1	-0.2
CDF				eSn	Sg	14 48 35.5	+2.2
	23nm,0.3s						
CDF	Champ du Feu	0.71	13	ePg	Pg	14 48 23.8	-0.1
CDF				eSg	Sg	14 48 33.1	-0.2
CDF				eSn	Sg	14 48 35.5	+2.2
	12nm,0.3s						
SULZ	Cheisacher	0.75	105	ePg	Pg	14 48 24.8	+0.1
SULZ	Cheisacher	0.75	105	eP	Pg	14 48 24.8	+0.1
	308nm,0.4s						
THEF	They Montfort	0.87	306	Pg	Pg	14 48 28.2	+1.3
THEF				Sg	Sg	14 48 39.5	+1.2
SLE	Schleitheim	0.98	87	ePg	Pg	14 48 29.0	-0.2
SLE				eSg	Sg	14 48 41.6	-0.4
SLE	Schleitheim	0.98	87	eP	Pb	14 48 28.9	+0.1
	205nm,0.6s						
FLACH	Flaach	1.05	98⇓	iP	Pb	14 48 30.7	+0.9
	163nm,0.2s						
BFO	Black Forest	1.06	55	ePg	Pg	14 48 29.9	-0.7
BFO				eSg	Sg	14 48 44.2	-0.3
BFO	Black Forest	1.06	55	eP	Pb	14 48 29.5	-0.6
BFO				ePg	Pg	14 48 29.9	-0.7
BFO				eSg	Sg	14 48 44.2	-0.2
ZUR	Degenried	1.11	108	ePg	Pg	14 48 31.9	+0.5
ZUR				eSg	Sg	14 48 46.3	+0.5
TRULL	Truellikon	1.11	93⇓	iP	Pb	14 48 31.8	+0.8
	89nm,0.4s						
WIMIS	Wimmis	1.13	159	eP	Pb	14 48 32.9	+1.7
	36nm,0.4s						
CABF	La Chapelle	1.28	211	ePg	Pg	14 48 35.8	+1.0
CABF				eSn	Sn	14 48 50.6	+0.4
CABF				eSg	Sg	14 48 52.4	+0.8
	8.2nm,0.2s						
CABF	La Chapelle	1.28	211	ePg	Pg	14 48 35.8	+1.0
CABF				eSn	Sn	14 48 50.6	+0.4
CABF				eSg	Sg	14 48 52.4	+0.8
	4.1nm,0.2s						
WILA	Wila	1.30	103	eSg	Sg	14 48 52.6	+0.4
RFYF	Reffroy	1.38	312	ePg	Pg	14 48 37.0	+0.3
	baz=126						
RFYF				eSg	Sg	14 48 55.3	+0.6
	34nm,0.2s						
RFYF	Reffroy	1.38	312	ePg	Pg	14 48 37.0	+0.3
RFYF				eSg	Sg	14 48 55.3	+0.6
	17nm,0.2s						
SFTF	Sexfontaines	1.43	291	ePg	Pg	14 48 37.8	+0.3
	baz=114						
SFTF				eSn	Sn	14 48 53.6	-0.1
SFTF				eSg	Sg	14 48 57.0	+1.0
	25nm,0.2s						
SFTF	Sexfontaines	1.43	291	ePn	Pn	14 48 35.5	+0.2
SFTF				ePg	Pg	14 48 37.8	+0.3
SFTF				eSn	Sn	14 48 53.6	-0.1
SFTF				eSg	Sg	14 48 57.0	+1.0
SFTF	Sexfontaines	1.43	291	ePg	Pg	14 48 37.8	+0.3
SFTF				eSn	Sn	14 48 53.6	-0.1
SFTF				eSg	Sg	14 48 57.0	+1.0
	12nm,0.2s						
MEZF	Maizieres J'vi	1.54	301	ePg	Pg	14 48 39.7	0.0
MEZF				eSg	Sg	14 49 00.0	+0.3
	25nm,0.4s						
MEZF	Maizieres J'vi	1.54	301	ePn	Pn	14 48 36.5	-0.4
MEZF				ePg	Pg	14 48 39.7	0.0
MEZF				eSg	Sg	14 49 00.0	+0.3
MEZF	Maizieres J'vi	1.54	301	ePg	Pg	14 48 39.7	0.0
MEZF				eSg	Sg	14 49 00.0	+0.3
	13nm,0.4s						
STU	Stuttgart	1.79	53	eSg	Sg	14 49 05.6	-1.9
WLF	Walferdange	2.03	344	eSg	Sg	14 49 15.2	-0.2
LOR	Lormes	2.20	259	ePg	Pg	14 48 52.6	+0.3
	baz=86						
LOR				eSg	Sg	14 49 20.8	0.0
	15nm,0.2s						
LOR	Lormes	2.20	259	ePn	Pn	14 48 46.4	+0.5
LOR				ePg	Pg	14 48 52.6	+0.3
LOR				eSg	Sg	14 49 20.8	0.0
LOR	Lormes	2.20	259	ePg	Pg	14 48 52.6	+0.3
LOR				eSg	Sg	14 49 20.8	0.0
	7.6nm,0.2s						
LPG	La Plagne	2.23	185	ePg	Pg	14 48 52.8	-0.1
LPG				eSg	Sg	14 49 21.5	-0.3
	2.2nm,0.3s						
LPG	La Plagne	2.23	185	ePg	Pg	14 48 52.8	-0.1
LPG				eSg	Sg	14 49 21.5	-0.3
	1.1nm,0.3s						
SMF	Signal de Mont	2.43	245	ePg	Pg	14 48 57.0	+0.4
SMF				eSn	Sn	14 49 17.1	-1.4
SMF				eSg	Sg	14 49 28.3	+0.2
	9.9nm,0.4s						
SMF	Signal de Mont	2.43	245	ePn	Pn	14 48 49.4	+0.3
SMF				ePg	Pg	14 48 57.0	+0.4
SMF				eSn	Sn	14 49 17.1	-1.4
SMF				eSg	Sg	14 49 28.3	+0.2
SMF	Signal de Mont	2.43	245	ePg	Pg	14 48 57.0	+0.4
SMF				eSn	Sn	14 49 17.1	-1.4
SMF				eSg	Sg	14 49 28.3	+0.2
	4.9nm,0.4s						
SSF	Saint Saulge	2.49	256	ePg	Pg	14 48 57.8	+0.1
SSF				eSg	Sg	14 49 29.0	-0.9
	4.5nm,0.3s						
SSF	Saint Saulge	2.49	256	ePn	Pn	14 48 50.0	+0.1
SSF				ePg	Pg	14 48 57.8	+0.1
SSF				eSg	Sg	14 49 29.0	-0.9
SSF	Saint Saulge	2.49	256	ePg	Pg	14 48 57.8	+0.1
SSF				eSg	Sg	14 49 29.0	-0.9
	2.2nm,0.3s						
AVF	Avril sur Loir	2.67	251	ePg	Pg	14 49 00.8	-0.5
AVF				eSn	Sn	14 49 23.6	-0.9
AVF				eSg	Sg	14 49 36.0	0.0
	1.6nm,0.2s						
AVF	Avril sur Loir	2.67	251	ePg	Pg	14 49 00.8	-0.5
AVF				eSn	Sn	14 49 23.6	-0.9
AVF				eSg	Sg	14 49 36.0	0.0
	0.8nm,0.2s						
ORIF	Oris-en-Rattie	2.92	196	ePg	Pg	14 49 05.1	-0.8
ORIF				eSg	Sg	14 49 43.6	-0.1
	3.5nm,0.3s						
ORIF	Oris-en-Rattie	2.92	196	ePg	Pg	14 49 05.1	-0.8
ORIF				eSg	Sg	14 49 43.6	-0.1
	1.8nm,0.3s						
BAIF	Baives	2.99	322	eSg	Sg	14 49 44.5	-1.6
	4.2nm,0.3s						
BAIF	Baives	2.99	322	eSg	Sg	14 49 44.5	-1.6
	2.1nm,0.3s						
MBDF	Montbardon	3.00	184	ePg	Pg	14 49 06.8	-0.8
MBDF				eSg	Sg	14 49 45.6	-0.8
	1.4nm,0.3s						
MBDF	Montbardon	3.00	184	ePg	Pg	14 49 06.8	-0.8
MBDF				eSg	Sg	14 49 45.6	-0.8
	0.7nm,0.3s						
BGF	Bois d'Agland	3.09	249	ePg	Pg	14 49 08.8	-0.4
BGF				eSg	Sg	14 49 48.6	-0.6
	3.6nm,0.2s						
BGF	Bois d'Agland	3.09	249	ePg	Pg	14 49 08.8	-0.4
BGF				eSg	Sg	14 49 48.6	-0.6
	1.8nm,0.2s						
VIVF	Saint-Julien-l	3.30	211	ePg	Pg	14 49 12.2	-1.1
VIVF				eSg	Sg	14 49 54.8	-1.2
	4.5nm,0.3s						
VIVF	Saint-Julien-l	3.30	211	ePg	Pg	14 49 12.2	-1.1
VIVF				eSg	Sg	14 49 54.8	-1.2
	2.2nm,0.3s						

CSEM 06 14:52:12.1,3795N×5523E,h15km,ML3.5,After THR
THR 06 14:52:12.0±0.4,3795N×5523E,h15km±7km,ML3.5, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	0.74	113	ePg	Pg	14 52 26.2	-0.2
MRVT				eSg	Sg	14 52 36.6	+0.5
MRVT				AML	AML	14 52 40.3	
	comp=N,10μm,0.5s						
MRVT	Maraveh tapeh	0.74	113	ePg	Pg	14 52 26.2	-0.2
	SNR=91						
MRVT				eSg	Sg	14 52 36.6	+0.5
	comp=N,10μm,0.5s,SNR=91						
DAMV	Damavand	3.49	230	ePn	Pn	14 53 08.0	+2.2
DAMV				eSg	Sg	14 54 00.8	-3.3
DAMV				AML	AML	14 54 06.3	
	comp=E,54nm,0.8s						
DAMV				AML	AML	14 54 09.0	
	comp=N,35nm,0.3s						
DAMV	Damavand	3.49	230	ePn	Pn	14 53 08.0	+2.2
	SNR=52						
DAMV				eSg	Sg	14 54 00.8	-3.3
	comp=N,35nm,0.3s,SNR=90						
CHTH	Charan	3.87	239	ePn	Pn	14 53 13.4	+2.5

IDC 06 14:58:43.4±1.2,108N×10297E,h0km,mb3.7/4,mb1 3.8/5, mb1mx3.5/19,mbtmp3.7/5,ML3.4/1,Error ellipse: s-maj=64.3km s-min=19.4km az=42.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.39	293	Pn	Pn	14 59 51.9	+0.5
	2.0nm,0.3s,baz=147,slow=17,SNR=8.1						
PSI				Sn	Sn	15 00 43.7	+0.4
	2.0nm,0.3s,baz=246,slow=20,SNR=3.8						
WRA	Warramunga Arr	37.18	126	P	P	15 05 58.0	+1.5
	0.6nm,0.7s,baz=304,slow=9.1,SNR=4.0						
ASAR	Alice Springs	38.84	131	P	P	15 06 10.4	-0.1
	0.5nm,0.7s,baz=302,slow=7.1,SNR=6.2						
MKAR	Makanchi Array	48.98	341	P	P	15 07 31.4	-0.3
	0.7nm,0.5s,baz=150,slow=8.0,SNR=13						
STKA	Stephens Creek	49.10	135	P	P	15 07 31.4	-1.5
	1.0nm,0.7s,baz=304,slow=15,SNR=2.3						

NEIC 06 15:22:17.7±0.5,045S×10101E,h20km,mb4.5/2,Error ellipse: s-maj=22.8km s-min=10.5km az=58.0
ISCJB 06 15:22:24.3±1.6,03S±0.1×10102E±0.10,h90km±13km, mb3.9/14,Error ellipse: s-maj=21.4km s-min=11.8km az=40.5
IDC 06 15:22:24.3±3.5,045S×10109E,h71km±32km,mb3.6/10, mb1 3.7/11,mb1mx3.6/19,mbtmp3.6/11,ML3.0/1,MS3.3/3, Ms1 3.3/3,ms1mx3.1/23,Error ellipse: s-maj=25.0km s-min=16.2km az=45.0
ISC 06 15:22:24.9±1.5,04S±01×1010E±01,h80km±12km,n33, σ1s15/32,mb3.9/14,1C-7D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGM	Kluang	3.29	44	⇓P	Pn	15 23 15.0	+0.8
MYKOM	Kota Tinggi	3.54	53	⇓P	Pn	15 23 19.7	+2.1
FRIM	Kepong	3.62	10	⇓P	Pn	15 23 17.9	-0.9
PSI	Prapat	3.78	326	P	Pn	15 23 21.4	+0.6
	1.0nm,0.3s,baz=143,slow=16,SNR=3.8						
PSI				S	Sn	15 24 14.2	+10
	4.4nm,0.3s,baz=206,slow=21,SNR=4.5						
PSI				LR	LR	15 25 02.8	
	comp=Z,404nm,19.9s,baz=139,slow=42						
IPM	Ipoh	4.81	0	⇑P	Pn	15 23 34.3	-0.6
KULM	Kulim	5.63	356	ePn	Pn	15 23 43.7	-2.3
KULM	Kulim	5.63	356	⇓P	Pn	15 23 44.3	-1.8
KTGM	Kuala Trenggan	6.03	20	⇓P	Pn	15 23 52.2	+0.6
KSM	Kuching	9.46	79	⇓P	Pn	15 24 44.5	+6.1
SBUM	Sibu	11.54	76	⇓P	Pn	15 25 14.5	+7.8
ODAN	Odare	30.08	335	eP	P	15 28 30.2	+3.4
TAPN	Taplejung	30.38	336	eP	P	15 28 29.1	-0.3
	10.0nm,1.0s,mb4.4						
JIRN	Jiri	31.29	334	eP	P	15 28 37.3	-0.2
KKN	Kakani	31.81	333	eP	P	15 28 41.8	-0.2
GKN	Gorkha	32.29	332	eP	P	15 28 45.5	-0.7
NWAO	Narrogin (SRO)	35.81	156	LR	LR	15 43 41.7	
	comp=Z,96nm,20.9s,baz=245,slow=36						
WRA	Warramunga Arr	37.98	123	P	P	15 29 34.7	-0.5
	1.2nm,0.7s,mb3.9,baz=301,slow=9.1,SNR=13						
WRA				PcP	PcP	15 31 50.1	+0.5
	0.2nm,0.7s,baz=342,slow=2.7,SNR=4.3						
WB2	Warramunga Arr	37.98	123	eP	P	15 29 35.2	-0.1
ASAR	Alice Springs	39.42	128	P	P	15 29 46.2	-1.1
	1.1nm,0.6s,mb3.9,baz=299,slow=6.9,SNR=27						
ASAR				PcP	PcP	15 31 57.5	+3.4
	0.4nm,0.7s,baz=310,slow=2.6,SNR=5.1						
KSRS	Korea Array	45.10	31	P	P	15 30 33.5	+0.3
	1.0nm,0.8s,mb3.6,baz=188,slow=8.9,SNR=3.2						
KSRS				LR	LR	15 48 32.6	
	comp=Z,18nm,21.4s,baz=210,slow=35						
SONM	Songino Array	48.23	5	P	P	15 30 57.8	+0.4
	0.3nm,0.7s,mb3.2,baz=188,slow=7.3,SNR=2.7						
EKS2	Erkin-Say	49.34	334	eP	P	15 31 05.9	-0.1
	2.6nm,0.7s,mb4.3						
STKA	Stephens Creek	49.49	133	P	P	15 31 04.5	-2.9
	1.5nm,0.8s,mb4.0,baz=313,slow=9.8,SNR=2.1						
MK31	Makanchi Array	49.75	343	eP	P	15 31 07.7	-1.4
MKAR	Makanchi Array	49.75	343	P	P	15 31 07.4	-1.7
	1.0nm,0.4s,mb4.1,baz=147,slow=7.2,SNR=12						
BRTR	Keskin Array B	72.99	312	P	P	15 33 45.5	-0.6
	1.3nm,0.7s,mb3.9,baz=112,slow=5.4,SNR=5.4						
MATP	Matopo	73.51	249	P	P	15 33 50.2	+0.7
MATP	Matopo	73.51	249	P	P	15 33 50.2	+0.7
	3.3nm,1.0s,mb4.0,baz=108,slow=6.7,SNR=6.3						
BOSA	Boshof	77.34	241	P	P	15 34 12.4	+1.0
	2.5nm,1.0s,mb3.9,baz=225,slow=4.3,SNR=3.5						
AKASG	Malin Array Be	78.83	322	P	P	15 34 20.4	+1.3
	0.7nm,0.6s,mb3.7,baz=88,slow=5.2,SNR=3.7						
FINES	FINESS Array B	83.15	332	P	P	15 34 44.3	+2.5
	0.6nm,0.5s,mb3.6,baz=129,slow=5.2,SNR=5.1						
ARCES	ARCESS Array B	85.29	340	P	P	15 34 54.0	+1.5
	2.3nm,0.8s,mb4.2,baz=90,slow=4.9,SNR=5.4						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	142.79	37	PKP	PKPdf	15 41 50.9	+1.1
	0.3nm,0.5s,baz=290,slow=0.4,SNR=4.5						

*ISCJB **06** 15:22:24.2±0.5,217S±0.1×690E±0.1,h10^{km},mb4.2/13, Error ellipse: s-maj=16.9km s-min=15.3km az=27.2*
*IDC **06** 15:22:24.4±0.6,2171S×6898E,h0^{km},mb4.2/12, mb1 4.3/12,mb1mx4.1/24,mbtmp4.2/12,Error ellipse: s-maj=21.3km s-min=16.8km az=28.0*
*NEIC **06** 15:22:26.1±0.3,2173S×6897E,h10^{km},mb4.3/1,Error ellipse: s-maj=11.3km s-min=10.3km az=207.0*
ISC 06 15:22:26.2±0.5**,217S**±01×**690E**±01**,h10**^{km}**,n19,**σ**0**^{s}**34**/17**, mb4.2**/13**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATP	Matopo	37.72	264	P	P	15 29 41.7	-0.6
MATP	Matopo	37.72	264	P	P	15 29 41.7	-0.6
	1.1nm,0.6s,mb3.7,baz=197,slow=6.7,SNR=3.9						
LBTB	Lobatse	39.84	257	eP	P	15 30 00.3	+0.4
LBTB	Lobatse	39.84	257	P	P	15 30 00.2	+0.2
	6.2nm,1.0s,mb4.3,baz=162,slow=2.6,SNR=4.2						
MAW	Mawson	46.04	183	P	P	15 30 50.0	+0.3
	1.9nm,0.6s,mb4.2,baz=344,slow=13,SNR=5.2						
FITZ	Fitzroy Crossi	53.15	97	P	P	15 31 44.4	-0.3
	10nm,1.0s,mb4.7,baz=233,slow=6.4,SNR=5.7						
ASAR	Alice Springs	59.46	105	P	P	15 32 29.3	-0.3
	2.3nm,0.8s,mb4.3,baz=262,slow=6.3,SNR=27						
ASAR				PcP	PcP	15 33 16.9	-0.4
	1.8nm,1.2s,baz=264,slow=3.5,SNR=4.3						
WRA	Warramunga Arr	60.70	101	P	P	15 32 38.3	+0.2
	2.6nm,0.7s,mb4.5,baz=255,slow=6.4,SNR=22						
WRA				PcP	PcP	15 33 22.0	-0.3
	0.9nm,0.8s,baz=260,slow=2.4,SNR=5.2						
EKS2	Erkin-Say	64.21	4	eP	P	15 33 01.4	+0.4
	1.7nm,0.8s,mb4.1						
QSPA	South Pole Qui	68.39	180	P	P	15 33 27.6	+0.1
	3.1nm,0.8s,mb4.4,baz=260,slow=2.7,SNR=14						
MK31	Makanchi Array	69.24	10	eP	P	15 33 33.0	-0.1
MKAR	Makanchi Array	69.24	10	P	P	15 33 33.0	-0.1
MKAR	Makanchi Array	69.24	10	P	P	15 33 33.0	-0.1
	2.0nm,0.7s,mb4.2,baz=198,slow=5.9,SNR=17						
BRTR	Keskin Array B	69.46	332	P	P	15 33 35.0	+0.4
	1.1nm,0.7s,mb3.9,baz=143,slow=5.0,SNR=6.7						
TORD	Torodi Ar. Bea	74.53	291	P	P	15 34 05.4	-0.2
	1.0nm,0.7s,mb3.9,baz=97,slow=5.9,SNR=7.5						
AKASG	Malin Array Be	80.17	336	P	P	15 34 35.9	-0.5
	0.1nm,0.3s,mb3.2,baz=142,slow=4.7,SNR=3.8						
ARCES	ARCESS Array B	96.15	346	P	P	15 35 54.1	+0.5
	3.5nm,1.0s,mb4.7,baz=140,slow=4.5,SNR=3.7						
YKA	Yellowknife Ar	139.18	3	PKP	PKPdf	15 41 53.9	+1.1
YKA	Yellowknife Ar	139.18	3	PKhKP		15 41 49.2	
	0.1nm,0.4s,baz=343,slow=1.9,SNR=3.2						
YKA				PKP	PKPdf	15 41 53.9	+1.1
	0.2nm,0.3s,baz=41,slow=2.0,SNR=5.2						

IDC 06 15:26:50.0±1.5**,2189S**×**6902E,h0**^{km}**,mb3.4**/4**,mb1 3.6**/4**, mb1mx3.4**/20**,mbtmp3.4**/4**,MS3.6**/3**,Ms1 3.6**/3**, ms1mx3.4**/19**,Error ellipse: s-maj=67.2km s-min=29.7km az=23.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	39.83	257	LR	LR	15 49 16.3	
	comp=Z,197nm,18.7s,baz=262,slow=34						
ASAR	Alice Springs	59.38	105	P	P	15 36 54.8	+0.3
	0.5nm,0.7s,baz=263,slow=6.7,SNR=4.5						
WRA	Warramunga Arr	60.63	101	P	P	15 37 03.0	-0.1
	0.3nm,0.8s,baz=254,slow=7.3,SNR=3.7						
WRA				LR	LR	16 00 04.4	
	comp=Z,38nm,18.9s,baz=35,slow=33						
ASF	Jabal al Asfar	61.92	329	LR	LR	15 59 22.1	
	comp=Z,20nm,18.5s,slow=32						
MKAR	Makanchi Array	69.40	10	P	P	15 37 59.5	0.0
	0.3nm,0.4s,baz=200,slow=6.0,SNR=4.8						
TORD	Torodi Ar. Bea	74.63	291	P	P	15 38 31.8	+0.1
	0.2nm,0.5s,baz=105,slow=4.2,SNR=3.2						

*ISCJB **06** 15:28:04.3±0.8,215S±02×692E±02,h10^{km},mb3.9/9, MS4.1/3,Error ellipse: s-maj=27.9km s-min=18.4km az=37.9*
*IDC **06** 15:28:04.6±0.8,2155S×6903E,h0^{km},mb4.0/8,mb1 4.1/8, mb1mx4.0/20,mbtmp4.0/8,MS4.1/3,Ms1 4.1/3, ms1mx3.5/23,Error ellipse: s-maj=34.0km s-min=19.8km az=39.0*
*NEIC **06** 15:28:06.0±0.8,2150S×69.12E,h10^{km},Error ellipse: s-maj=29.5km s-min=19.8km az=217.0*
ISC 06 15:28:06.4±0.8**,215S**±02×**691E**±02**,h10**^{km}**,n15,**σ**0**^{s}**98**/12**, mb3.9**/9**,MS4.1**/3**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	37.07	299	P	P	15 35 18.5	+1.5
	0.9nm,0.5s,mb3.8,baz=80,slow=12,SNR=3.9						
LSZ	Lusaka	39.23	272	LR	LR	15 50 27.5	
	comp=Z,132nm,20.5s,MS3.8,baz=157,slow=34						
ASAR	Alice Springs	59.40	105	P	P	15 38 09.9	+0.5
	1.5nm,0.8s,mb4.1,baz=259,slow=6.1,SNR=12						
ASAR				PcP	PcP	15 38 58.2	+0.9
	0.9nm,0.9s,baz=258,slow=3.4,SNR=3.2						
WRA	Warramunga Arr	60.62	101	P	P	15 38 18.4	+0.5
	2.1nm,0.8s,mb4.3,baz=256,slow=6.3,SNR=8.2						
QSPA	South Pole Qui	68.59	180	P	P	15 39 08.5	-0.5
	5.4nm,1.0s,mb4.5,baz=285,slow=3.5,SNR=7.9						
MK31	Makanchi Array	69.03	10	eP	P	15 39 13.0	+0.9
MKAR	Makanchi Array	69.03	10	P	P	15 39 11.9	-0.1
	1.0nm,0.6s,mb3.9,baz=196,slow=5.6,SNR=8.3						
BRTR	Keskin Array B	69.35	331	P	P	15 39 14.2	+0.1
	1.3nm,0.9s,mb3.9,baz=72,slow=7.9,SNR=4.6						
TORD	Torodi Ar. Bea	74.57	291	P	P	15 39 45.5	-0.6
TORD	Torodi Ar. Bea	74.57	291	P	P	15 39 45.5	-0.6
	0.8nm,0.7s,mb3.8,baz=126,slow=5.6,SNR=4.2						
SONM	Songino Array	76.73	25	P	P	15 39 54.7	-3.0
	0.4nm,0.5s,mb3.6,baz=82,slow=8.5,SNR=5.3						
SONM				LR	LR	16 12 25.6	
	comp=Z,86nm,21.7s,MS4.0,baz=190,slow=35						
AKASG	Malin Array Be	80.05	336	P	P	15 40 14.8	-1.2
AKASG	Malin Array Be	80.05	336	P	P	15 40 14.8	-1.2
	0.3nm,0.4s,mb3.5,baz=142,slow=4.6,SNR=5.3						
MJAR	Matsushiro Arr	87.07	49	LR	LR	16 18 36.7	
	comp=Z,185nm,18.3s,MS4.5,baz=50,slow=35						
ULM	Lac du Bonnet	148.98	341	PKPbc	PKPbc	15 47 53.2	-1.2
	1.2nm,0.9s,baz=63,slow=2.3,SNR=3.1						

*BJI **06** 15:32:02.9,2154N×101.18E,h30^{km},ML3.9*
*ISCJB **06** 15:32:07.9±0.6,2208N±004×10137E±005,h10^{km}, mb3.8/3,Error ellipse: s-maj=6.6km s-min=5.9km az=35.0*
*IDC **06** 15:32:10.5±11.0,2224N×10093E,h0^{km},mb3.8/3, mb1 3.9/3,mb1mx3.5/20,mbtmp3.8/3,MS4.1/1,Ms1 4.1/1, ms1mx3.0/28,Error ellipse: s-maj=224.2km s-min=79.5km az=155.0*
*PLV **06** 15:33:32.5±56.0,1991N×10322E,h10^{km}±455^{km},MD3.2, ML3.3*
ISC 06 15:32:10.3±0.8**,2202N**±004×**10145E**±005**,h12**^{km}±7^{km}**, n13,**σ**1**^{s}**08**/20**,mb3.8**/3**,2D,Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCVN	Lai Chau	1.58	89	ePN	Pn	15 32 38.4	+0.2
LCVN				ePG	Pg	15 32 41.0	+0.3
LCVN				eSG	Sg	15 33 00.9	-0.4
DBV	Dienbien	1.59	113	AMP		15 32 12.6	
	comp=Z,1μm,0.7s						
DBV				ePN	Pn	15 32 38.9	+0.5
DBV				ePG	Pg	15 32 41.9	+0.9
DBV				eSG	Sg	15 32 59.2	-2.5
SLVN	Son La	2.38	106	ePN	Pn	15 32 50.1	+0.8
SLVN				ePG	Pg	15 32 56.8	+0.8
SLVN				eSG	Sg	15 33 20.9	-6.1
SLVN				AMP		15 33 41.0	
	comp=Z,136nm,0.8s						
CHRT	Chiangrai	2.65	216	⇓PN	Pn	15 32 56.0	+3.1
CHRT	Chiangrai	2.65	216	PG	Pg	15 33 00.0	-1.1
CHRT				SG	Sg	15 33 30.5	-5.0
KMI	Kunming	3.30	21	PG	Pg	15 33 12.9	-0.8
KMI				SG	Sg	15 33 57.6	+1.1
KMI				Smax			
	comp=N,63nm,1.3s						
KMI				Smax			
	comp=E,79nm,1.2s						
CHG	Chiang Mai	3.96	217	⇓P	Pg	15 33 27.2	+0.9
	comp=E,23nm,0.6s						
BDT	Bhumibol Dam	5.28	206	P	Pn	15 33 36.0	+6.9
CD2	Chengdu	9.09	13	eP	Pn	15 34 20.3	-1.0
SONM	Songino Array	26.06	8	P	P	15 37 44.4	+0.9
	comp=E,1.6nm,1.3s,mb3.4,baz=201,slow=11,SNR=4.0						
MKAR	Makanchi Array	29.18	332	P	P	15 38 10.0	-1.5
	comp=E,0.8nm,0.7s,mb3.6,baz=142,slow=7.3,SNR=5.7						
AKTO	Aktyubinsk	44.15	321	LR	LR	15 59 17.8	
	comp=E,247nm,19.7s,slow=37						
FINES	FINESS Array B	63.92	329	P	P	15 42 42.2	-0.7
	comp=E,5.1nm,1.3s,mb4.4,baz=94,slow=8.4,SNR=3.5						

IDC 06 15:49:58.6±7.1**,2183S**×**6850E,h0**^{km}**,mb3.6**/3**,mb1 3.8**/3**, mb1mx3.4**/20**,mbtmp3.6**/3**,MS3.7**/2**,Ms1 3.7**/2**, ms1mx3.1**/36**,Error ellipse: s-maj=211.8km s-min=41.7km az=52.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBTB	Lobatse	39.38	257	LR	LR	16 10 41.6	
	comp=Z,123nm,18.1s,baz=243,slow=32						
BOSA	Boshof	39.54	251	LR	LR	16 10 51.5	
	comp=Z,106nm,21.9s,baz=256,slow=32						
BATI	Kupang	54.02	87	P	P	15 59 25.0	0.0
	44nm,0.8s						
ASAR	Alice Springs	59.86	105	P	P	16 00 07.1	+0.7
	0.8nm,0.8s,baz=257,slow=6.5,SNR=10						
WRA	Warramunga Arr	61.11	101	P	P	16 00 14.2	-0.8
	0.4nm,0.6s,baz=255,slow=7.1,SNR=4.7						
MKAR	Makanchi Array	69.43	10	P	P	16 01 08.4	+0.1
	0.3nm,0.7s,baz=186,slow=6.1,SNR=4.2						

IDC 06 16:01:40.2±161.0**,1159S**×**17106E,h0**^{km}**,mb3.8**/3**, mb1 4.0**/3**,mb1mx3.7**/14**,mbtmp3.8**/3**,Error ellipse: s-maj=2766.0km s-min=129.3km az=62.0,Low Confidence Location,Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.32	202	eP	Pn	16 04 19.2	-4.1
DZM				eS	Sn	16 05 39.1	-51
STKA	Stephens Creek	33.83	229	eP	P	16 08 24.3	0.0
	2.1nm,0.4s						
STKA	Stephens Creek	33.83	229	P	P	16 08 24.1	-0.3
	2.8nm,0.5s,baz=49,slow=10,SNR=17						
WRA	Warramunga Arr	36.24	252	P	P	16 08 44.0	-1.3
	0.9nm,1.0s,baz=84,slow=7.7,SNR=6.7						
ASAR	Alice Springs	37.28	246	P	P	16 08 55.3	+1.2
	0.6nm,0.5s,baz=79,slow=9.0,SNR=15						

*NEIC **06** 16:02:14.0±0.6,047S×10067E,h20^{km},mb4.2/1,Error ellipse: s-maj=28.8km s-min=12.7km az=50.0*
*ISCJB **06** 16:02:25.5±1.7,05S±02×1008E±02,h138^{km}±15^{km}, mb3.6/10,Error ellipse: s-maj=39.6km s-min=14.1km az=138.4*
*IDC **06** 16:02:27.7±1.9,045S×10085E,h142^{km}±17^{km},mb3.5/9, mb1 3.6/10,mb1mx3.4/21,mbtmp3.4/10,MS3.3/1, Ms1 3.3/1,ms1mx2.9/28,Error ellipse: s-maj=31.6km s-min=13.0km az=49.0*
ISC 06 16:02:26.4±1.7**,05S**±02×**1008E**±02**,h131**^{km}±15^{km}**,n16,** σ**1**^{s}**16**/15**,mb3.6**/10**,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.77	330	P	Pn	16 03 21.6	-1.6
	2.0nm,0.3s,baz=152,slow=15,SNR=10.0						
PSI				S	Sn	16 04 08.4	+1.3
	3.2nm,0.3s,baz=75,slow=18,SNR=2.6						
PSI				LR	LR	16 04 59.2	
	comp=Z,359nm,19.0s,baz=174,slow=41						
KULM	Kulim	5.72	358	ePn	Pn	16 03 40.9	-8.4
WRA	Warramunga Arr	38.08	123	P	P	16 09 32.2	-0.4
	1.0nm,0.6s,mb3.6,baz=303,slow=8.9,SNR=7.9						
WB2	Warramunga Arr	38.09	123	eP	P	16 09 32.6	-0.1
ASAR	Alice Springs	39.51	128	P	P	16 09 43.6	-0.8
	1.0nm,0.6s,mb3.6,baz=301,slow=7.6,SNR=18						
SONM	Songino Array	48.35	5	P	P	16 10 56.6	+1.9
	0.5nm,0.9s,mb3.1,baz=182,slow=6.6,SNR=3.5						
STKA	Stephens Creek	49.56	133	eP	P	16 11 06.3	+2.0
STKA	Stephens Creek	49.56	133	P	P	16 11 06.2	+2.0
	2.9nm,1.0s,mb3.9,baz=291,slow=8.6,SNR=4.0						
MKAR	Makanchi Array	49.80	343	P	P	16 11 04.4	-1.4
	0.7nm,0.5s,mb3.5,baz=147,slow=7.8,SNR=13						
BRVK	Borovoye	59.12	339	P	P	16 12 12.2	-0.8
	1.0nm,0.6s,mb3.8						
BRTR	Keskin Array B	72.92	312	P	P	16 13 40.8	-0.7
	0.7nm,0.7s,mb3.5,baz=117,slow=5.3,SNR=3.6						
MATP	Matopo	73.29	249	P	P	16 13 45.0	+0.9
	1.8nm,0.7s,mb3.9,baz=76,slow=2.0,SNR=4.4						
AKASG	Malin Array Be	78.79	322	P	P	16 14 13.9	-0.8
	0.2nm,0.2s,mb3.3,baz=89,slow=4.9,SNR=4.5						
ARCES	ARCESS Array B	85.33	340	P	P	16 14 49.3	+0.9
	2.6nm,0.9s,mb4.0,baz=108,slow=5.8,SNR=3.7						
TXAR	Lajitas Array	142.99	37	PKP	PKPdf	16 21 45.3	-0.1
	0.3nm,0.7s,baz=230,slow=1.1,SNR=4.3						
CFAA	Coronel Fontan	146.46	197	PKPbc	PKPbc	16 21 54.4	+1.5
	0.3nm,0.9s,baz=153,slow=4.5,SNR=3.6						

*NIED **06** 16:05:00,4640N×15330E,h20^{km},Mw4.2 Best double couple: M$_0$2.51000×10^{15} NP1:φ$_s$330.00000°,δ13.00000°, λ-14.00000°. NP2:φ$_s$73.00000°,δ87.00000°, λ-103.00000°.*
*ISCJB **06** 16:05:06.0±1.5,46.16N±006×15324E±007,h10^{km}±9^{km}, mb4.4/49,MS3.8/6,Error ellipse: s-maj=12.7km s-min=4.8km az=144.3*
*IDC **06** 16:05:06.2±0.7,46.16N×153.17E,h0^{km},mb4.1/19, mb1 4.3/19,mb1mx4.2/24,mbtmp4.1/19,Error ellipse: s-maj=19.7km s-min=15.3km az=163.0*
*NEIC **06** 16:05:06.5±5.0,4626N×15328E,h1^{km}±30^{km},mb4.7/22, Error ellipse: s-maj=13.9km s-min=10.1km az=147.0*
*BJI **06** 16:05:07.0,4648N×15327E,h16^{km},mB4.9,mb4.5,Ms4.6, Msz4.2*
*JMA **06** 16:05:08.3±0.7,4642N×15329E,h30^{km},M4.4*
*MOS **06** 16:05:09.7±1.3,4620N×15325E,h37^{km},mb4.5/27,Error ellipse: s-maj=9.3km s-min=6.3km az=108.2*
ISC 06 16:05:09.8±1.3**,4616N**±006×**15324E**±007**,h23**^{km}±9^{km}**, n163,**σ**1**^{s}**22**/176**,mb4.4**/49**,MS3.8**/6**,15C-9D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.88	258	⇑iPN	Pn	16 06 08.5	+0.5
KUR				iS	Sn	16 06 55.0	+2.2
KUR				pmax	pmax		
	comp=N,180nm,0.3s						
KUR				pmax	pmax		
	comp=E,140nm,0.3s						
KUR				pmax	pmax		
	comp=Z,610nm,0.3s						
KUR				smax			
	comp=N,140nm,0.9s						
KUR				smax			
	comp=E,430nm,0.9s						
SKR	Severo-Kuril's	4.91	22	ePN	Pn	16 06 21.7	-0.5
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
NEM2	Nemuro 2	6.03	245	P	Pn	16 06 36.7	-0.8
NEM2				eS	Sn	16 07 41.5	-4.2
JRA	Rausu	6.17	252	P	Pn	16 06 40.7	+1.3
JNK	Nakash	6.58	250	P	Pn	16 06 45.7	+0.6
JNK				eS	Sn	16 07 58.6	-0.8
JAK	Akkeshi	6.87	246	P	Pn	16 06 47.8	-1.3
JAK				eS	Sn	16 08 01.6	-5.0
YSS	Yuzh-Sakhalins	7.27	280	P	Pn	16 06 55.4	+0.8
	comp=Z,16nm,0.8s						
YSS	Yuzh-Sakhalins	7.27	280	⇑iPN	Pn	16 06 59.0	+4.4
YSS				eS	Sn	16 08 22.5	+6.1
YSS				smax			
	comp=E,30nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
JMP	Maruseppu	7.32	256	P	Pn	16 06 57.4	+2.2
JAR	Ashorobuto	7.33	250	P	Pn	16 06 55.8	+0.4
JAR				eS	Sn	16 08 16.8	-1.0
JOB	Onbets	7.47	247	P	Pn	16 06 57.3	0.0
JOB				eS	Sn	16 08 18.0	-3.2
PET	Petropavlovsk	7.71	25	ePN	Pn	16 07 00.8	+0.2
PET				MLR	MLR		
	comp=Z,300nm,14.0s						
JKK2	Kamakawa 2	7.78	257	P	Pn	16 07 03.4	+1.8
ASAJ	Asahikawa	7.80	259	P	Pn	16 07 04.0	+2.2
ASAJ	Asahikawa	7.80	259	PN	Pn	16 07 03.7	+1.9
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	7.80	259	Pn	Pn	16 07 03.6	+1.8
	comp=Z,1.9nm,0.3s,baz=46,slow=3.2,SNR=14						
JCH	Churui	7.91	247	P	Pn	16 07 02.7	-0.7
JCH				eS	Sn	16 08 27.6	-4.6
JWK2	Keihoku	7.98	268	P	Pn	16 07 10.2	+5.9
JFR	Furan	8.16	252	P	Pn	16 07 06.7	-0.1
JAB	Ashibetsu	8.27	255	P	Pn	16 07 10.6	+2.3
ERM	Erimo	8.36	244	eP	Pn	16 07 09.3	-0.2
JNBK	Urakawa-nobuka	8.47	246	P	Pn	16 07 09.7	-1.4
JNBK				eS	Sn	16 08 39.4	-6.5
JBT2	Biratori 2	8.48	250	P	Pn	16 07 11.2	0.0
JNB	Noboribetsu	9.49	251	P	Pn	16 07 24.8	-0.3
JNB				eS	Sn	16 09 07.7	-3.3
JKB	Kayabe	9.78	248	P	Pn	16 07 27.6	-1.3
JKB				eS	Sn	16 09 10.3	-7.6
JYM2	Yakumo 2	10.10	251	P	Pn	16 07 33.0	-0.3
JANG	Nango	10.32	240	P	Pn	16 07 32.8	-3.6
JANG				eS	Sn	16 09 20.6	-11
JTM	Tenmabayashi	10.35	243	P	Pn	16 07 34.4	-2.3
JTM				eS	Sn	16 09 22.7	-9.2
JTH	Tanohata	10.39	237	eS	Sn	16 09 21.5	-11
OFUJ	Ofunato	11.07	234	P	Pn	16 07 43.5	-3.2
OFUJ				eS	Sn	16 09 38.3	-11
JIO	Ouri	11.69	233	eS	Sn	16 09 52.7	-12
HABR	Khabarovsk	12.56	287	ePN	Pn	16 08 06.5	-0.5
MA2	Magadan	13.52	355	ePN	Pn	16 08 21.3	+1.3
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLR	Kul'dur	14.79	290	eP	Pn	16 08 38.8	+1.5
MAT	Matsushiro	14.80	235	P	Pn	16 08 44.7	+7.1
MJAR	Matsushiro Arr	14.80	235	Pn	Pn	16 08 44.9	+7.3
	comp=Z,0.4nm,0.3s,baz=39,slow=8.1,SNR=11						
VLA	Vladivostok	15.49	266	iP	Pn	16 08 46.6	-0.1
MDJ	Mudanjiang	16.68	273	eP	Pn	16 09 01.5	-0.4
	comp=Z,26nm,1.1s						
CN2	Changchun	19.76	273	eP	Pn	16 09 39.2	-0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	20.71	254	P	P	16 09 48.1	-0.3
	comp=Z,3.8nm,0.7s,baz=58,slow=11,SNR=10						
YAK	Yakutsk	20.86	328	eP	P	16 09 48.9	-1.0
	comp=Z,11nm,0.6s						
YAK	Yakutsk	20.86	328	d iP	P	16 09 48.9	-1.0
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.3						
BILL	Bilibino	22.95	13	eP	P	16 10 09.4	-2.6
	comp=Z,6.7nm,1.0s,mb4.0						
BILL	Bilibino	22.95	13	⇓eP	P	16 10 10.3	-1.7
BILL				e		16 10 34.4	
BILL				pmax	pmax		
	comp=Z,12nm,2.0s,mb4.0						
BILL				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.3						
BOD	Bodaibo	26.43	310	eP	P	16 10 41.4	-3.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
BJI	Beijing	27.57	271	P	P	16 10 56.6	+1.7
BJI				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
TIXI	Tiksi	28.06	344	iP	P	16 10 59.4	+0.4
TIXI				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.5						
NJ2	Nanjing	29.91	254	eP	P	16 11 17.2	+1.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
HHC	Hu-ho-hao-te	30.43	275	eP	P	16 11 21.2	+0.9
HHC				AP	pP	16 11 28.7	+1.6
HHC				XP	sP	16 11 31.9	+2.0
HHC				AMB	AMB		
	comp=Z,22nm,0.6s,mb5.1						
HHC				AMB	AMB		
	comp=Z,74nm,4.2s						
HHC				LR	LR		
	comp=N,178nm,12.9s,MS4.0						
HHC				LR	LR		
	comp=E,145nm,11.9s,MS4.0						
HHC				LR	LR		
	comp=Z,167nm,13.2s,MS3.9						
ULN	Ulaanbaatar	31.18	290	eP	P	16 11 26.1	-0.8
	comp=Z,5.3nm,1.0s,mb4.3						
ULN	Ulaanbaatar	31.18	290	iP	P	16 11 26.6	-0.3
SONM	Songino Array	31.62	290	P	P	16 11 30.5	-0.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	31.62	290	P	P	16 11 30.5	-0.2
	comp=Z,0.7nm,0.4s,mb3.8,baz=79,slow=7.5,SNR=12						
TLY	Talaya	32.53	298	⇑eP	P	16 11 38.4	-0.3
ZAK	Zakamensk	33.01	296	eP	P	16 11 41.3	-1.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
WHN	Wuhan	33.87	256	eP	P	16 11 52.9	+2.2
COLA	College	36.55	38	⇓eP	P	16 12 10.5	-2.8
LZH	Lanzhou	38.00	273	eP	P	16 12 27.5	+1.6
LZH				AMB	AMB		
	comp=Z,28nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,129nm,4.0s						
GTA	Gaotai	39.15	280	eP	P	16 12 36.4	+0.8
GTA				AP	pP	16 12 43.0	+0.5
GTA				XP	sP	16 12 46.3	+1.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,108nm,4.6s						
GTA				LR	LR		
	comp=N,255nm,15.6s,MS4.6						
GTA				LR	LR		
	comp=E,568nm,14.4s,MS4.6						
GTA				LR	LR		
	comp=Z,309nm,16.4s,MS4.2						
GYA	Guiyang	41.68	258	⇓iP	P	16 12 57.7	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
INK	Inuvik	42.10	32	P	P	16 12 59.8	+0.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	Inuvik	42.10	32	P	P	16 12 59.8	+0.2
	comp=Z,2.1nm,0.6s,mb3.9,baz=266,slow=7.0,SNR=6.4						
MK31	Makanchi Array	47.29	298	iP	P	16 13 40.1	-1.1
MK31				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MKAR	Makanchi Array	47.29	298	P	P	16 13 40.6	-0.6
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	47.29	298	P	P	16 13 40.5	-0.7
	comp=Z,5.4nm,0.8s,mb4.5,baz=66,slow=7.8,SNR=42						
KURK	Kurchatov	47.77	304	eP	P	16 13 42.2	-2.6
	comp=Z,9.7nm,0.8s,mb4.9						
KURK	Kurchatov	47.77	304	d iP	P	16 13 43.5	-1.3
LSA	Lhasa	50.40	274	P	P	16 14 07.4	+2.1
BRVK	Borovoye	51.34	310	P	P	16 14 10.7	-1.4
	comp=Z,2.6nm,0.6s,mb4.3						
BRVK	Borovoye	51.34	310	P	P	16 14 10.7	-1.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
YKA	Yellowknife Ar	51.34	36	P	P	16 14 11.7	-0.2
YKA	Yellowknife Ar	51.34	36	iP	P	16 14 11.6	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	51.34	36	P	P	16 14 11.7	-0.2
	comp=Z,1.2nm,0.8s,mb3.9,baz=297,slow=7.1,SNR=14						
SHL	Shillong	52.45	269	eP	P	16 14 22.0	+1.3
AAK	Ala-Archa	54.18	297	eP	P	16 14 32.1	-1.1
	comp=Z,4.0nm,0.8s,mb4.4						
AAK	Ala-Archa	54.18	297	d iP	P	16 14 32.7	-0.5
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
AAK				MLR	MLR		
	comp=Z,100nm,12.0s,MS4.1						
TAPN	Taplejung	54.22	274	eP	P	16 14 34.8	+1.1
EKS2	Erkin-Say	54.61	297	eP	P	16 14 36.3	0.0
	comp=Z,5.0nm,0.8s,mb4.6						
ODAN	Odare	54.75	273	eP	P	16 14 39.2	+1.6

	comp=Z,6.0nm,0.5s,mb4.9						
JIRN	Jiri	55.08	275	eP	P	16 14 41.5	+1.6
	comp=Z,30nm,0.9s,mb5.3						
ARU	Arti	55.51	318	d iP	P	16 14 41.3	-1.3
ARU				S	S	16 22 26.2	+0.1
ARU				SS	SS	16 26 06.8	-3.6
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
KKN	Kakani	55.63	276	eP	P	16 14 45.3	+1.4
	comp=Z,19nm,0.8s,mb5.2						
KKN	Kakani	55.63	276	eP	P	16 14 45.3	+1.4
KKN				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
GKN	Gorkha	55.94	276	eP	P	16 14 47.4	+1.3
	comp=Z,32nm,0.9s,mb5.4						
KK31	Karatay Array	56.36	299	iP	P	16 14 48.4	-0.5
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KEV	Kevo	57.93	341	ep	P	16 14 58.6	-1.0
	comp=Z,4.8nm,0.9s,mb4.5						
KEV	Kevo	57.93	341	eP	P	16 14 58.6	-1.0
KEV				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ARCES	ARCESS Array B	58.44	341	P	P	16 15 02.6	-0.5
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	58.44	341	P	P	16 15 02.6	-0.6
	comp=Z,4.1nm,0.9s,mb4.4,baz=28,slow=8.3,SNR=6.0						
AKTK	Aktyubinsk	59.19	312	P	P	16 15 08.6	-0.1
AKTO	Aktyubinsk	59.19	312	P	P	16 15 08.6	0.0
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
AKTO	Aktyubinsk	59.19	312	P	P	16 15 08.6	-0.1
	comp=Z,2.3nm,0.9s,mb4.2,baz=59,slow=4.3,SNR=5.3						
JOF	Joensuu	61.90	334	ep	P	16 15 25.5	-1.4
	comp=Z,0.8nm,0.4s,mb4.2						
JOF	Joensuu	61.90	334	eP	P	16 15 25.5	-1.4
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
NVAR	Mina Array Bea	62.63	62	P	P	16 15 33.9	+1.6
	comp=Z,1.3nm,0.8s,mb4.1,baz=301,slow=4.0,SNR=11						
KAF	Kangasniemi	64.01	335	ep	P	16 15 39.6	-1.4
	comp=Z,3.6nm,0.6s,mb4.6,baz=36,slow=6.2						
KAF	Kangasniemi	64.01	335	eP	P	16 15 39.6	-1.4
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
FINES	FINESS Array B	64.61	335	iP	P	16 15 44.2	-0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	64.61	335	P	P	16 15 44.2	-0.7
	comp=Z,2.6nm,0.5s,mb4.5,baz=45,slow=7.0,SNR=14						
PDAR	Pinedale Array	65.02	54	P	P	16 15 49.5	+1.6
	comp=Z,1.1nm,0.8s,mb4.0,baz=281,slow=1.8,SNR=8.6						
ULM	Lac du Bonnet	66.91	41	P	P	16 15 58.2	-1.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=306,slow=7.8,SNR=3.8						
WRA	Warramunga Arr	67.98	199	P	P	16 16 05.9	-1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	67.98	199	P	P	16 16 05.9	-1.0
	comp=Z,0.5nm,0.9s,mb3.5,baz=19,slow=7.2,SNR=3.0						
NB2	NORSAR Subarra	68.81	341	P	P	16 16 11.1	-0.6
	comp=Z,1.6nm,0.8s,mb4.0,baz=28,slow=6.5						
NB2	NORSAR Subarra	68.81	341	P	P	16 16 11.1	-0.6
NB2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
NOA	NORSAR Array B	68.81	341	P	P	16 16 11.2	-0.5
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	68.81	341	P	P	16 16 11.2	-0.5
	comp=Z,2.6nm,0.8s,mb4.2,baz=28,slow=6.3,SNR=7.0						
ASAR	Alice Springs	71.68	199	P	P	16 16 29.8	+0.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ASAR	Alice Springs	71.68	199	P	P	16 16 29.8	+0.2
	comp=Z,1.1nm,1.1s,mb3.7,baz=17,slow=6.5,SNR=7.3						
AKASG	Malin Array Be	72.08	326	P	P	16 16 31.2	-0.7
AKASG	Malin Array Be	72.08	326	iP	P	16 16 31.2	-0.7
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AKASG	Malin Array Be	72.08	326	P	P	16 16 31.2	-0.7
	comp=Z,5.9nm,0.7s,mb4.6,baz=33,slow=6.2,SNR=25						
KIEV	Kiev	72.10	326	eP	P	16 16 30.9	-1.0
	comp=Z,9.6nm,0.8s,mb4.8						
KIEV	Kiev	72.10	326	eP	P	16 16 30.9	-1.0
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
STHS	Stebnicka Huta	76.07	330	eP	P	16 16 55.8	+0.7
	comp=Z,2.6nm,0.8s,mb4.2						
STHS	Stebnicka Huta	76.07	330	eP	P	16 16 55.8	+0.7
STHS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BURAR	Bucovina Array	76.13	327	⇑P	P	16 16 55.8	+0.2
BURAR	Bucovina Array	76.13	327	⇑iP	P	16 16 55.8	+0.3
MSL	Mosul	76.69	309	ex	x	16 22 48.5	
MSL				ex	x	16 23 33.5	
UPC	Upice	76.85	334	eP	P	16 17 00.5	+1.0
DPC	Dobruska-Polom	76.89	333	eP	P	16 17 00.4	+0.6
MORC	Moravsky Berou	77.00	332	⇑P	P	16 17 00.9	+0.5
MORC	Moravsky Berou	77.00	332	⇑iP	P	16 17 00.9	+0.5
CLL	Collm	77.04	336	iP	P	16 17 00.7	+0.1
CLL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
CLL	Collm	77.04	336	iP	P	16 17 00.7	+0.1
	comp=Z,8.0nm,1.1s,mb4.6						
KECS	Kecovo	77.13	330	eP	P	16 16 58.7	-2.4
MLR	Muntele Rosu	77.60	325	⇑P	P	16 17 05.5	+1.6
MLR	Muntele Rosu	77.60	325	⇑iP	P	16 17 05.5	+1.7
VYHS	Vyhne	77.68	331	iP	P	16 17 05.0	+0.7
	comp=Z,2.7nm,1.2s,mb4.0						
VYHS	Vyhne	77.68	331	iP	P	16 17 05.0	+0.7
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
TXAR	Lajitas Array	77.70	61	P	P	16 17 04.2	-0.5
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR	Lajitas Array	77.70	61	P	P	16 17 04.2	-0.5
	comp=Z,2.3nm,0.8s,mb4.2,baz=294,slow=3.3,SNR=17						
PRU	Pruhonice	77.75	334	eP	P	16 17 05.4	+0.8
DRGR		77.76	328	⇑P	P	16 17 06.2	+1.5
DRGR		77.76	328	⇑iP	P	16 17 06.2	+1.5
VOIR		78.00	326	⇑P	P	16 17 07.7	+1.6
VOIR		78.00	326	⇑iP	P	16 17 07.7	+1.6
MODS	Modra-Piesok	78.31	332	eP	P	16 17 09.2	+1.5
KHC	Kasperske Hory	78.81	334	eP	P	16 17 11.4	+0.9
BRTR	Keskin Array B	78.88	317	P	P	16 17 11.9	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	78.88	317	P	P	16 17 11.9	+0.8
	comp=Z,0.6nm,0.7s,mb3.6,baz=30,slow=12,SNR=3.3						
GERES	GERESS Array B	79.02	334	P	P	16 17 12.0	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	79.02	334	P	P	16 17 12.0	+0.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=25,slow=4.4,SNR=6.0						
BZS	Buzias	79.16	328	⇑P	P	16 17 14.2	+1.7
BZS	Buzias	79.16	328	⇑iP	P	16 17 14.2	+1.7
GIVF	Givet	80.28	340	eP	P	16 17 17.4	-1.1
VTS	Vitosha	81.10	325	⇓P	P	16 17 25.6	+2.5
VTS	Vitosha	81.10	325	⇓iP	P	16 17 25.5	+2.5
CDF	Champ du Feu	81.23	338	eP	P	16 17 22.4	-1.2
LOR	Lormes	83.16	340	eP	P	16 17 32.5	-1.2
SSF	Saint Saulge	83.44	340	eP	P	16 17 34.0	-1.1
	comp=Z,30nm,1.1s,mb4.9						
SSF	Saint Saulge	83.44	340	eP	P	16 17 34.0	-1.1
	comp=Z,15nm,1.1s,mb4.9						
SSF	Saint Saulge	83.44	340	eP	P	16 17 34.0	-1.1
SSF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
LPL	La Plagne	84.05	337	eP	P	16 17 37.3	-1.0
LPG	La Plagne	84.06	337	eP	P	16 17 37.1	-1.3
	comp=Z,17nm,1.1s,mb4.8						
LPG	La Plagne	84.06	337	eP	P	16 17 37.1	-1.3
	comp=Z,8.6nm,1.1s,mb4.8						
LPG	La Plagne	84.06	337	eP	P	16 17 37.1	-1.3
LPG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
ORIF	Oris-en-Rattie	84.83	337	eP	P	16 17 41.0	-1.3
SBF	Sospel	85.38	336	eP	P	16 17 43.7	-1.3
	comp=Z,44nm,1.0s,mb5.2						
SBF	Sospel	85.38	336	eP	P	16 17 43.7	-1.3
	comp=Z,22nm,1.0s,mb5.2						
SBF	Sospel	85.38	336	eP	P	16 17 43.7	-1.3
SBF				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.2						
EIL	Elat	86.14	310	P	P	16 17 50.5	+1.4
	comp=Z,4.3nm,0.9s,mb4.7,baz=40,slow=7.9,SNR=3.6						
CFAA	Coronel Fontan	145.01	80	PKPbc	PKPbc	16 24 44.9	+0.5
	comp=Z,0.2nm,0.5s,baz=260,slow=6.1,SNR=5.6						

ISCJB ***06*** *16:20:52.8±2.8, 179S±08×1755W±06, h33km, mb4.4/6, Error ellipse: s-maj=137.4km s-min=27.8km az=146.5*
IDC ***06*** *16:21:10.1±24.0, 1808S×17560W, h176km±222km, mb3.9/5, mb1 4.1/5, mb1mx3.7/15, mbtmp3.9/5, Error ellipse: s-maj=151.6km s-min=61.9km az=153.0*
ISC 06 16:20:54.2±2.8**, 181S**±08×**1754W**±06**, h35**km**, n10,** σ**0**s**49**/8**, mb4.5**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.29	260	eP	P	16 27 55.6	+1.0
	6.9nm,1.1s,mb4.5						
STKA	Stephens Creek	41.12	242	P	P	16 28 35.2	+0.3
	1.7nm,0.5s,mb3.9,baz=85,slow=7.0,SNR=7.5						
WB2	Warramunga Arr	47.45	259	eP	P	16 29 25.3	-0.5
WRA	Warramunga Arr	47.46	259	P	P	16 29 25.7	-0.2
	2.0nm,0.5s,mb4.3,baz=95,slow=8.1,SNR=25						
ASAR	Alice Springs	47.55	254	P	P	16 29 26.3	-0.2
	22nm,0.6s,mb5.4,baz=90,slow=8.5,SNR=485						
FITZ	Fitzroy Crossi	55.87	260	eP	P	16 30 28.2	-0.5
	64nm,1.9s,mb5.3						
FITZ	Fitzroy Crossi	55.87	260	P	P	16 30 28.3	-0.5
	4.1nm,0.7s,mb4.5,baz=97,slow=8.4,SNR=8.7						
YKA	Yellowknife Ar	93.27	24	P	P	16 34 04.8	+0.1
	0.1nm,0.3s,mb3.7,baz=246,slow=5.4,SNR=3.7						
BRTR	Keskin Array B	146.91	317	PKPbc	PKPbc	16 40 31.4	-1.8
	1.2nm,0.8s,baz=50,slow=2.3,SNR=4.3						
GERES	GERESS Array B	148.42	349	PKPbc	PKPbc	16 40 35.0	-1.9
	0.4nm,0.5s,baz=28,slow=2.3,SNR=4.8						

BJI ***06*** *16:23:51.9, 060S×10070E, h30km, mb4.4*
NEIC ***06*** *16:23:52.9±0.5, 055S×10074E, h20km, mb4.9/12, Error ellipse: s-maj=21.3km s-min=9.4km az=58.0*
MOS ***06*** *16:23:53.0±1.0, 047S×10081E, h33km, mb4.6/11, Error ellipse: s-maj=33.3km s-min=10.5km az=115.6*
ISCJB ***06*** *16:23:57.7±1.1, 042S±007×10072E±007, h65km±9km, mb4.4/32, Error ellipse: s-maj=14.3km s-min=8.5km az=138.3*
IDC ***06*** *16:23:57.2±3.6, 044S×10084E, h52km±31km, mb3.9/13, mb1 4.0/14, mb1mx3.9/21, mbtmp3.9/14, ML3.4/1, MS4.0/10, Ms1 3.9/10, ms1mx3.7/27, Error ellipse: s-maj=28.1km s-min=13.9km az=49.0*
ISC 06 16:23:59.1±1.1**, 044S**±007×**10068E**±008**, h61**km±9km**, n87,** σ**1**s**21**/77**, mb4.5**/32**, 11C-9D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KGM	Kluang	3.59	47	⇓P	Pn	16 24 51.2	-1.2
PSI	Prapat	3.66	331	P	Pn	16 24 52.9	-0.4
PSI	Prapat	3.66	331	P	Pn	16 24 52.9	-0.4
	2.9nm,0.3s,baz=122,slow=11,SNR=8.2						
KSI	Kapahiang	3.73	149	P	Pn	16 24 54.0	-0.2
	976nm,0.9s						
FRIM	Kepong	3.77	15	⇑P	Pn	16 24 54.3	-0.5
MYKOM	Kota Tinggi	3.87	55	⇓P	Pn	16 24 54.8	-1.3
IPM	Ipoh	4.89	4	⇓P	Pn	16 25 10.5	+0.3
KULM	Kulim	5.69	360	eP	Pn	16 25 19.5	-1.5
KULM				eS	Sn	16 26 37.9	+13
KULM	Kulim	5.69	360	⇓P	Pn	16 25 20.6	-0.5
KTGM	Kuala Trenggan	6.23	23	⇓P	Pn	16 25 28.9	+0.3
KSM	Kuching	9.82	79	⇓P	Pn	16 26 19.5	+1.9
SBUM	Sibu	11.89	76	⇓P	Pn	16 26 47.5	+1.5
BTM	Bintulu	12.92	74	⇑P	Pn	16 27 00.2	+0.2
KKM	Kota Kinabalu	16.80	67	⇓P	Pn	16 27 52.6	+2.2
SDKM	Sandakan	17.57	70	⇓P	Pn	16 28 05.4	+5.5
KDM	Kudat	17.70	65	⇑P	Pn	16 28 05.1	+3.6
TSM	Tawau	17.81	75	⇑P	Pn	16 28 06.7	+3.7
MYLDM	Lahad Datu	18.66	72	⇑P	Pn	16 28 18.3	+5.1
PCI	Palu	19.17	91	P	Pn	16 28 25.0	+5.7
	35nm,1.5s						
QIZ	Qiongzhong	21.34	24	eP	P	16 28 37.7	-3.5
BATI	Kupang	24.84	114	LR	LR	16 41 01.3	
	comp=Z,270nm,20.4s,baz=306,slow=42						
SHL	Shillong	27.21	342	eP	P	16 29 37.0	-0.3
ODAN	Odare	30.00	336	eP	P	16 30 05.2	+3.1
FITZ	Fitzroy Crossi	30.17	127	LR	LR	16 43 22.5	
	comp=Z,123nm,18.4s,baz=317,slow=39						
TAPN	Taplejung	30.31	337	eP	P	16 30 05.1	+0.3
	29nm,1.0s,mb5.0						
JIRN	Jiri	31.21	335	eP	P	16 30 13.1	+0.4
	30nm,1.0s,mb5.1						
KKN	Kakani	31.72	333	eP	P	16 30 17.1	-0.1
	28nm,0.9s,mb5.1						
KKN	Kakani	31.72	333	eP	P	16 30 17.1	-0.1
KKN				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.1						
GKN	Gorkha	32.19	333	eP	P	16 30 21.0	-0.4
	comp=Z,20nm,0.9s,mb4.9						
WRA	Warramunga Arr	38.23	123	iP	P	16 31 10.8	-2.6
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	38.23	123	P	P	16 31 10.9	-2.5
	comp=Z,4.3nm,0.8s,mb4.2,baz=302,slow=8.9,SNR=32						
WRA				PcP	PcP	16 33 26.0	-0.9
	comp=Z,0.5nm,0.6s,baz=310,slow=2.7,SNR=3.8						
ASAR	Alice Springs	39.65	128	P	P	16 31 22.6	-2.7
	comp=Z,2.8nm,0.7s,mb4.1,baz=306,slow=8.2,SNR=14						
ASAR				PcP	PcP	16 33 30.9	-0.4
	comp=Z,0.8nm,0.5s,baz=314,slow=2.7,SNR=5.6						
KSRS	Korea Array	45.34	31	P	P	16 32 09.7	-1.5
	comp=Z,1.9nm,0.7s,mb4.1,baz=224,slow=8.5,SNR=8.9						
KSRS				LR	LR	16 51 37.7	
	comp=Z,74nm,19.2s,baz=14,slow=37						
WMQ	Urumqi	45.56	347	eP	P	16 32 12.0	-0.9
SONM	Songino Array	48.33	5	P	P	16 32 33.4	-1.0
SONM				PcP	PcP	16 34 00.0	-0.3
SONM	Songino Array	48.33	5	P	P	16 32 33.4	-1.0
	comp=Z,1.0nm,0.8s,mb3.9,baz=189,slow=9.8,SNR=5.2						
SONM				PcP	PcP	16 34 00.0	-0.3
	comp=Z,1.8nm,0.8s,baz=195,slow=4.2,SNR=5.0						
CBIJ	Chichi jima	48.38	52	LR	LR	16 51 43.1	
	comp=Z,114nm,21.1s,baz=353,slow=34						
UCH	Uchtor	48.58	334	eP	P	16 32 37.0	+0.5
	comp=Z,12nm,1.3s,mb4.8						
TKM2	Tokmak 2	48.69	336	eP	P	16 32 37.2	0.0
	comp=Z,16nm,1.2s,mb4.9						
TKM2	Tokmak 2	48.69	336	eP	P	16 32 37.2	0.0
TKM2				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
AML	Almayashu	48.87	333	eP	P	16 32 38.7	+0.1
	comp=Z,23nm,1.3s,mb5.0						
AAK	Ala-Archa	48.92	334	iP	P	16 32 39.2	+0.2
AAK				pmax	pmax		
	comp=Z,8.0nm,2.6s,mb4.3						
FRU	Bishkek	49.03	335	eP	P	16 32 42.0	+2.2
EKS2	Erkin-Say	49.25	334	eP	P	16 32 42.3	+0.8
	comp=Z,12nm,1.0s,mb4.9						
STKA	Stephens Creek	49.70	133	eP	P	16 32 43.4	-1.8
STKA	Stephens Creek	49.70	133	P	P	16 32 43.0	-2.2
	comp=Z,2.1nm,0.5s,mb4.5,baz=301,slow=9.1,SNR=6.6						
MK31	Makanchi Array	49.72	343	iP	P	16 32 43.9	-1.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
MKAR	Makanchi Array	49.72	343	P	P	16 32 43.9	-1.2
	comp=Z,1.7nm,0.4s,mb4.4,baz=151,slow=7.5,SNR=20						
KK31	Karatay Array	51.09	332	iP	P	16 32 55.5	0.0
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
KURK	Kurchatov	54.31	343	eP	P	16 33 18.3	-0.8
	comp=Z,5.3nm,1.1s,mb4.4						
KURK	Kurchatov	54.31	343	eP	P	16 33 18.6	-0.5
BRVK	Borovoye	59.03	339	eP	P	16 33 51.4	-1.2
	comp=Z,1.9nm,0.5s,mb4.4						
BRVK	Borovoye	59.03	339	eP	P	16 33 51.4	-1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
KMBO	Kilima Mbogo	63.42	269	LR	LR	16 58 50.4	
	comp=Z,61nm,18.6s,baz=92,slow=33						
SVE	Sverdlovsk	65.51	337	P	P	16 34 40.7	+4.9
ARU	Arti	66.06	336	eP	P	16 34 39.2	-0.1
ARU				S	S	16 43 26.3	+3.6
ARU				SS	SS	16 47 41.6	+2.4
YAK	Yakutsk	66.07	14	iP	P	16 34 38.7	-0.6
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KIV	Kislovodsk	67.81	319	eP	P	16 34 51.2	+0.4
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
MAW	Mawson	71.96	194	LR	LR	17 00 01.0	
	comp=Z,131nm,20.1s,baz=246,slow=30						
BRTR	Keskin Array B	72.78	312	⇑eP	P	16 35 19.7	-1.5
BRTR	Keskin Array B	72.78	312	P	P	16 35 19.8	-1.5
	comp=Z,1.2nm,0.8s,mb3.9,baz=123,slow=5.3,SNR=4.1						
MATP	Matopo	73.16	249	P	P	16 35 24.2	+0.3
MATP	Matopo	73.16	249	P	P	16 35 24.2	+0.3
	comp=Z,8.6nm,1.0s,mb4.6,baz=81,slow=7.0,SNR=6.1						
TIXI	Tiksi	74.22	9	iP	P	16 35 30.2	+1.2
OBN	Obninsk	75.83	328	⇑eP	P	16 35 40.0	+1.4
OBN				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s						
LBTB	Lobatse	76.30	244	LR	LR	17 05 42.4	
	comp=Z,122nm,18.1s,baz=277,slow=33						
BOSA	Boshof	77.00	241	LR	LR	17 02 29.0	
	comp=Z,111nm,21.5s,baz=115,slow=30						
AKASG	Malin Array Be	78.67	322	iP	P	16 35 57.2	+2.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	78.67	322	P	P	16 35 53.8	-0.8
	comp=Z,1.3nm,0.7s,mb4.0,baz=88,slow=4.8,SNR=7.6						
VRI	Vrincioaia	79.17	317	⇑iP	P	16 35 58.6	+1.1
MLR	Muntele Rosu	79.64	316	⇑iP	P	16 36 01.3	+1.3
JOF	Joensuu	81.11	334	ep	P	16 36 05.5	-2.0
	comp=Z,4.4nm,0.9s,mb4.4						
SUR	Sutherland	81.20	237	LR	LR	17 04 42.1	
	comp=Z,178nm,19.6s,baz=43,slow=30						
BZS	Buzias	82.66	316	⇑iP	P	16 36 17.9	+1.9
FINES	FINESS Array B	83.05	332	P	P	16 36 17.0	-0.8
	comp=Z,0.9nm,0.6s,mb4.0,baz=123,slow=7.0,SNR=6.7						
KAF	Kangasniemi	83.11	333	ep	P	16 36 17.0	-1.0
	comp=Z,2.3nm,0.6s,mb4.4,baz=101,slow=4.7						
KAF	Kangasniemi	83.11	333	eP	P	16 36 17.0	-1.0
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
PKSM	Moragy	84.79	316	⇑iP	P	16 36 27.9	+1.0
ARCES	ARCESS Array B	85.24	340	P	P	16 36 27.6	-1.1
	comp=Z,1.9nm,0.7s,mb4.3,baz=93,slow=5.8,SNR=8.5						
BRG	Berggiesshubel	88.27	321	eP	P	16 36 46.0	+2.2
BRG				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.8						
BRG	Berggiesshubel	88.27	321	eP	P	16 36 46.0	+2.1
	comp=Z,13nm,1.2s,mb5.0						
GERES	GERESS Array B	88.33	319	P	P	16 36 44.6	+0.4
	comp=Z,1.5nm,0.8s,mb4.3,baz=83,slow=3.1,SNR=8.4						
CLL	Collm	88.88	321	eP	P	16 36 46.0	-0.7
KEST	Kesra	91.33	306	P	P	16 37 00.1	+1.6
	comp=Z,1.4nm,1.0s,mb4.2,baz=247,slow=7.7,SNR=2.1						
SNAA	Sanae	93.83	198	LR	LR	17 12 27.9	
	comp=Z,92nm,19.1s,baz=201,slow=31						
NVAR	Mina Array Bea	127.97	39	PKP	PKPdf	16 42 58.9	+0.4
	comp=Z,0.2nm,0.4s,baz=204,slow=2.0,SNR=1.0						
TXAR	Lajitas Array	143.06	37	PKP	PKPdf	16 43 23.4	-3.4
	comp=Z,0.6nm,0.6s,baz=341,slow=0.6,SNR=5.9						

NIED ***06*** *16:30:00, 2380N×12340E, h20km, Mw4.3 Best double couple: M₀3.42000×10*^{15} *NP1:φs265.00000°, δ24.00000°, λ120.00000°. NP2:φs53.00000°, δ69.00000°, λ77.00000°.*
IDC ***06*** *16:30:54.0±0.7, 2396N×12339E, h0km, mb4.3/15, mb1 4.5/15, mb1mx4.4/21, mbtmp4.3/15, MS3.5/2, Ms1 3.5/2, ms1mx3.0/28, Error ellipse: s-maj=39.0km s-min=15.2km az=65.0*
BJI ***06*** *16:30:55.0, 2380N×12370E, h28km, mB4.6, mb4.4, ML4.2, Ms4.3, Msz4.0*
NEIC ***06*** *16:30:56.9±5.0, 2402N×12353E, h19km±30km, mb4.5/8, MW4.3(NIED), Error ellipse: s-maj=13.1km s-min=9.3km az=67.0*
MOS ***06*** *16:30:57.2±0.9, 2403N×12354E, h33km, mb4.6/7, Error ellipse: s-maj=22.3km s-min=9.8km az=116.7*
ISCJB ***06*** *16:30:58.7±0.6, 2392N±005×12339E±003, h44km±4km, mb4.3/29, MS3.7/2, Error ellipse: s-maj=9.0km s-min=5.0km az=3.4*
JMA ***06*** *16:30:58.0±0.2, 2384N×12338E, h29km±2km, M4.4*
ISC 06 16:30:58.8±0.8**, 2388N**±005×**12340E**±003**, h30**km±4km**, n66,** σ**1**s**01**/75**, mb4.3**/29**, MS3.7**/2**, 7C, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.41	65	P	Pb	16 31 07.2	-0.7
HATJ				S	Sb	16 31 13.8	-0.3
IRIF	Iriomote-Funau	0.55	34	P	Pb	16 31 09.3	-0.7
IRIF				S	Sb	16 31 17.9	+0.3
JKRS	Kuro-shima	0.66	58	P	Pb	16 31 11.6	-0.4
JKRS				S	Sb	16 31 21.4	+0.5
YOJ	Yonaguni jima	0.68	329	P	Pb	16 31 11.6	-0.6
YOJ				S	Sb	16 31 21.3	+0.1
JIJ	Ishigaki jima	0.83	55	P	Pn	16 31 13.8	-0.8
JIJ				S	Sb	16 31 25.0	-0.7
JTJ	Tarama	1.41	57	P	Pn	16 31 22.6	+0.1
JTJ				eS	Sn	16 31 41.2	+1.0
NACB	Ninganchiao	1.67	280	ePn	Pn	16 31 25.4	-0.7
JMJ	Miyako jima 2	1.96	61	P	Pn	16 31 31.5	+1.4
JMJ				S	Sn	16 31 55.4	+1.6
YHNB	Yeheng	2.00	293	ePn	Pn	16 31 31.5	+0.8
JOGS	Gusukube	2.03	64	P	Pn	16 31 32.5	+1.4
TATO	Taipei	2.05	302	ePn	Pn	16 31 32.1	+0.8
JKE	Kume jima 2	3.92	51	P	Pn	16 31 56.1	-0.9
QZH	Quanzhou	4.50	285	P	Pn	16 32 06.9	+1.8
QZH				S	Sn	16 32 54.5	-2.0
QZH				Smax			
	comp=N,170nm,0.9s						
QZH				Smax			
	comp=E,220nm,1.1s						
NJ2	Nanjing	9.07	335	eP	Pn	16 33 08.7	+0.9
NJ2				AP		16 33 16.4	
NJ2				XP		16 33 21.0	
NJ2				S	Sn	16 34 50.0	+1.1
NJ2				XS		16 35 01.0	
NJ2				PCP	PcP	16 39 31.1	+1.3
NJ2				AMB	AMB		
	comp=Z,130nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,170nm,9.0s						
NJ2				LR	LR		
	comp=N,880nm,14.2s						
NJ2				LR	LR		
	comp=E,740nm,9.4s						
NJ2				LR	LR		
	comp=Z,730nm,9.4s						
WHN	Wuhan	10.43	311	P	Pn	16 33 28.5	+2.1
KSRS	Korea Array	14.07	15	Pn	Pn	16 34 17.1	+1.0
	comp=Z,0.0nm,0.3s,baz=192,slow=12,SNR=3.5						
KSRS				LR	LR	16 39 31.4	
	comp=Z,129nm,19.4s,baz=34,slow=37						
GYA	Guiyang	15.36	283	⇑iP	Pn	16 34 40.8	+7.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	19.62	332	eP	Pn	16 35 26.8	+0.5
HHC				AP	pP	16 35 35.0	+2.3
HHC				XP	sP	16 35 38.1	+1.6
HHC				AMB	AMB		
	comp=Z,12nm,0.6s						
HHC				AMB	AMB		
	comp=Z,265nm,4.6s						
HHC				LR	LR		
	comp=N,390nm,13.1s						
HHC				LR	LR		
	comp=E,435nm,11.9s						
HHC				LR	LR		
	comp=Z,345nm,16.6s						
LZH	Lanzhou	20.80	310	eP	P	16 35 42.4	+4.6
LZH				AP		16 35 47.1	
LZH				XP	sP	16 35 52.5	+3.0
LZH				AMB	AMB		
	comp=Z,26nm,1.2s						
LZH				AMB	AMB		
	comp=Z,109nm,4.0s						
GUMO	Guam	22.74	113	LR	LR	16 42 42.7	
	comp=Z,178nm,21.4s,MS3.5,baz=20,slow=31						
GTA	Gaotai	25.24	313	eP	P	16 36 23.0	+0.7
GTA				AP	pP	16 36 30.2	-0.6
GTA				XP	sP	16 36 33.3	-1.2
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb3.9						
ULN	Ulaanbaatar	27.24	336	P	P	16 36 37.9	-2.3
ULN	Ulaanbaatar	27.24	336	⇑eP	P	16 36 39.1	-1.1
SONM	Songino Array	27.47	335	P	P	16 36 40.7	-1.5
	comp=Z,2.2nm,0.9s,mb3.7,baz=146,slow=8.7,SNR=9.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LSA	Lhasa	29.30	288	P	P	16 37 00.6	+1.8
	comp=Z,2.0nm,0.5s,mb4.1						
LSA	Lhasa	29.30	288	P	P	16 37 00.6	+1.8
LSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
TAPN	Taplejung	32.30	284	eP	P	16 37 25.6	+0.4
	comp=Z,7.2nm,0.5s,mb4.8						
ODAN	Odare	32.60	283	eP	P	16 37 28.6	+0.7
	comp=Z,7.0nm,0.6s,mb4.8						
JIRN	Jiri	33.63	284	eP	P	16 37 37.0	+0.1
KKN	Kakani	34.44	285	eP	P	16 37 44.2	+0.3
GKN	Gorkha	34.99	285	eP	P	16 37 49.0	+0.3
	comp=Z,4.4nm,0.5s,mb4.7						
YAK	Yakutsk	38.37	5	eP	P	16 38 15.0	-2.0
MKAR	Makanchi Array	39.97	315	P	P	16 38 30.0	-0.6
	comp=Z,1.0nm,0.4s,mb3.9,baz=99,slow=9.8,SNR=16						
KURK	Kurchatov	43.63	320	eP	P	16 38 58.9	-1.6
	comp=Z,10nm,1.3s,mb4.4						
KURK	Kurchatov	43.63	320⇑	eP	P	16 38 59.5	-0.9
UCH	Uchtor	44.22	307	eP	P	16 39 06.8	+1.4
	comp=Z,3.2nm,1.1s,mb4.0						
WRA	Warramunga Arr	44.84	165	i P	P	16 39 10.6	+0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	44.84	165	P	P	16 39 10.1	-0.4
	comp=Z,1.5nm,0.7s,mb3.9,baz=347,slow=8.8,SNR=12						
TIXI	Tiksi	47.90	2	eP	P	16 39 31.7	-2.1
	comp=Z,2.0nm,0.4s,mb4.5						
TIXI	Tiksi	47.90	2⇑	eP	P	16 39 32.0	-1.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.9						
KBL	Kabul	48.12	296	eP	P	16 39 37.1	+1.0
ASAR	Alice Springs	48.35	167	P	P	16 39 38.1	+0.2
	comp=Z,0.7nm,0.6s,mb3.9,baz=351,slow=15,SNR=15						
BILL	Bilibino	51.29	19	eP	P	16 39 58.2	-1.6
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
ARU	Arti	56.56	323c	iP	P	16 40 37.6	-0.9
ARU						16 42 39.3	
ARU				S	S	16 48 27.0	-1.1
ARU				SS	SS	16 52 10.8	-4.7
ARU				pmax	pmax		
	comp=Z,14nm,1.7s,mb4.7						
STKA	Stephens Creek	58.11	162	P	P	16 40 50.2	+0.6
	comp=Z,2.0nm,0.7s,mb4.2,baz=329,slow=5.6,SNR=7.1						
KIV	Kislovodsk	67.34	309⇑	eP	P	16 41 51.6	+0.4
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
OBN	Obninsk	68.98	322	eP	P	16 42 01.5	+0.3
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
JOF	Joensuu	69.96	331	ep	P	16 42 04.4	-2.7
	comp=Z,1.9nm,0.4s,mb4.4						
ARCES	ARCESS Array B	70.57	338	P	P	16 42 10.2	-0.6
	comp=Z,6.0nm,1.0s,mb4.5,baz=66,slow=5.9,SNR=4.0						
ANN	Anapa	70.82	311	eP	P	16 42 05.5	-7.2
ANN				e*PP	pP	16 42 14.0	-8.0
ANN				e		16 42 26.0	
ANN				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
MALT	Malatya	71.84	304	eP	P	16 42 20.3	+1.3
KAF	Kangasniemi	72.41	331	ep	P	16 42 17.0	-5.0
FINES	FINESS Array B	72.72	330	i P	P	16 42 23.2	-0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	FINESS Array B	72.72	330	P	P	16 42 23.2	-0.6
	comp=Z,3.1nm,0.8s,mb4.3,baz=75,slow=5.8,SNR=10						
INK	Inuvik	72.74	22	eP	P	16 42 23.3	-0.5
	comp=Z,42nm,0.6s						
AKASG	Malin Array Be	74.43	319	P	P	16 42 33.0	-1.1
	comp=Z,2.7nm,0.7s,mb4.3,baz=59,slow=5.9,SNR=12						
ASF	Jabal al Asfar	74.89	299	P	P	16 42 36.4	-0.7
	comp=Z,2.2nm,0.5s,mb4.3,baz=27,slow=6.8,SNR=3.8						
BRTR	Keskin Array B	74.97	307	P	P	16 42 38.0	+0.5
	comp=Z,4.6nm,0.7s,mb4.5,baz=94,slow=6.3,SNR=18						
MLR	Muntele Rosu	78.31	315	P	P	16 42 56.6	+0.4
	comp=Z,3.4nm,0.5s,mb4.5,baz=90,slow=6.5,SNR=8.8						
NB2	NORSAR Subarra	79.43	333	P	P	16 43 01.1	-0.9
	comp=Z,1.7nm,0.5s,mb4.2,baz=54,slow=5.9						
NB2	NORSAR Subarra	79.43	333	P	P	16 43 01.1	-0.9
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
NOA	NORSAR Array B	79.43	333	P	P	16 43 01.3	-0.7
	comp=Z,2.0nm,0.5s,mb4.3,baz=55,slow=5.6,SNR=7.9						
YKA	Yellowknife Ar	82.45	23⇑	eP	P	16 43 17.8	-0.3
YKA	Yellowknife Ar	82.45	23	P	P	16 43 17.9	-0.2
	comp=Z,1.3nm,0.6s,mb4.1,baz=303,slow=5.3,SNR=26						
GERES	GERESS Array B	84.35	321	P	P	16 43 27.8	-0.3
	comp=Z,1.6nm,0.7s,mb4.3,baz=46,slow=5.8,SNR=11						
NVAR	Mina Array Bea	95.26	44	P	P	16 44 20.1	0.0
	comp=Z,0.5nm,0.3s,mb4.4,baz=316,slow=3.8,SNR=5.2						

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*TEH **06** 16:39:05.2, 32.18N×50.19E, h5km, ML3.6*
*CSEM **06** 16:39:43.7±0.4, 32.23N×50.35E, h0km±2km, ML3.6, Error ellipse: s-maj=3.5km s-min=1.7km az=110.0*
*NEIC **06** 16:39:44.5, 32.12N×50.47E, h14km, ML3.5(THR), After THR.*
*THR **06** 16:39:44.5±0.5, 32.12N×50.47E, h14km±3km, ML3.5*
*ISCJB **06** 16:39:48.2±0.4, 32.24N±0.03×50.25E±0.03, h41km±7km, mb3.7/9, Error ellipse: s-maj=6.0km s-min=3.5km az=43.6*
*IDC **06** 16:39:51.5±4.3, 32.43N×49.99E, h53km±40km, mb3.3/6, mb1 3.5/8, mb1mx3.4/21, mbtmp3.5/8, ML4.0/2, Error ellipse: s-maj=46.0km s-min=22.7km az=163.0*
ISC 06 16:39:49.1±0.3**, 32.20N**±0.03×**50.23E**±0.04**, h39**km±7km**, n58, σ1ˢ20**/77**, mb3.7**/9**, 1C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.21	266	ePg	Pn	16 40 10.6	+1.0
SHGR				AML	AML	16 40 37.3	
	comp=E,528nm,0.7s						
SHGR	Shooshtar-Gavs	1.21	266	ePg	Pn	16 40 10.0	+0.4
IKLH	Kalahroud	1.59	45	ePn	Pn	16 40 09.8	-5.0
IGAR	Garneh	1.67	88	ePn	Pn	16 40 09.8	-6.1
IGAR				eSn	Sn	16 40 35.3	-0.7
IGAR				e		16 40 37.6	
	comp=Z,9μm,0.2s						
IZEF	Zefreh	1.91	68	eSn	Sn	16 40 42.8	+0.9
IZEF				e		16 40 49.7	
	comp=Z,2μm,0.2s						
NASN	Na'in	2.26	74	ePg	Pn	16 40 22.6	-1.4
NASN	Na'in	2.26	74	ePg	Pn	16 40 22.0	-2.0
ASAO	Ashtian	2.35	356	ePn	Pn	16 40 26.2	+1.0
ASAO				eSg	Sn	16 41 01.4	+8.6
ASAO				AML	AML	16 41 04.5	
	comp=N,230nm,0.9s						
ASAO				AML	AML	16 41 11.0	
	comp=E,163nm,0.8s						
ASAO	Ashtian	2.35	356	ePn	Pn	16 40 26.0	+0.8
ASAO				eSg	Sn	16 41 01.0	+8.2
GHVR	GHOM	2.44	21	ePn	Pn	16 40 26.1	-0.4
GHVR				AML	AML	16 41 07.3	
	comp=N,2μm,0.6s						
GHVR	GHOM	2.44	21	ePn	Pn	16 40 26.1	-0.4
	SNR=52						
ISFB	Sefidab	2.73	38	ePn	Pn	16 40 29.5	-0.9
ISFB				eSn	Sn	16 41 02.4	+0.2
ISFB				e		16 41 14.1	
	comp=Z,2μm,0.3s						
ISFB	Sefidab	2.73	38	ePn	Pn	16 40 29.5	-0.9
ISFB				eSn	Sn	16 41 02.4	+0.2
ISAD	Sadrabad	2.95	95	ePn	Pn	16 40 35.7	+2.3
ISAD				eSn	Sn	16 41 08.1	+0.5
ISAD				e		16 41 24.5	
	comp=N,1μm,0.3s						
IRAZ	Razeghan	3.21	356	ePn	Pn	16 40 36.8	-0.2
IRAZ				e		16 40 43.0	
	comp=Z,1μm,0.2s						
IRAZ				eLg		16 41 24.7	
UMR	Umm Al-Rimmam	3.41	220	eP	Pn	16 40 40.6	+0.8
UMR				eS	Sn	16 41 24.5	+5.5
MIB	Mutribah	3.44	227	eP	Pn	16 40 41.0	+0.8
MIB				eS	Sn	16 41 25.3	+5.5
MIB	Mutribah	3.44	227	eP	Pn	16 40 41.0	+0.7
MIB				eS	Sn	16 41 25.3	+5.5
IMHD	Mahdasht	3.50	6	ePn	Pn	16 40 40.2	-0.8
IMHD				e		16 40 52.1	
	comp=Z,866nm,0.2s						
IMHD				eSn	Sn	16 41 21.9	+0.8
ICHK	Chekchek	3.54	88	e	Pn	16 40 52.8	+11
	comp=Z,671nm,0.3s						
ICHK				eSn	Sn	16 41 22.4	+0.2
IVIS	Veys	3.66	310	ePn	Pn	16 40 42.2	-1.0
IDMV	Damavand	3.69	24	ePn	Pn	16 40 43.4	-0.2
IDMV				e		16 40 58.5	
	comp=Z,584nm,0.2s						
DAMV	Damavand	3.72	22	ePn	Pn	16 40 43.7	-0.3
DAMV				AML	AML	16 41 53.2	
	comp=E,56nm,0.4s						
DAMV				AML	AML	16 42 01.0	
	comp=N,38nm,0.8s						
DAMV	Damavand	3.72	22	ePn	Pn	16 40 43.0	-1.0
KBD	Kabd	3.72	217	eP	Pn	16 40 44.4	+0.3
KBD				eS	Sn	16 41 31.3	+4.6
ISRV	Sarvestan	3.75	138	ePn	Pn	16 40 43.6	-0.8
IAFJ	Afjeh	3.85	18	ePn	Pn	16 40 45.9	+0.1
IAFJ				e		16 40 59.7	
	comp=Z,706nm,0.1s						
RST	Umm Al-Ruwaisa	3.87	227	eP	Pn	16 40 46.8	+0.8
ILAS	Lasjerd	3.91	35	ePn	Pn	16 40 50.3	+3.7
ILAS				eSn	Sn	16 41 30.8	-0.4
ILAS				e		16 42 01.9	
	comp=Z,453nm,0.2s						
NAY	Al-Naaiem	3.91	222	eP	Pn	16 40 46.9	+0.3
NAY				eS	Sn	16 41 37.0	+5.8
NAY	Al-Naaiem	3.91	222	eP	Pn	16 40 46.9	+0.3
NAY				eS	Sn	16 41 37.0	+5.8
QRN	Al-Qurain	3.98	211	eP	Pn	16 40 48.0	+0.4
QRN				eS	Sn	16 41 37.5	+4.4
RDF	Al-Radifah	4.00	216	eP	Pn	16 40 48.6	+0.7
RDF				eS	Sn	16 41 38.9	+5.4
RDF	Al-Radifah	4.00	216	eP	Pn	16 40 48.6	+0.7
RDF				eS	Sn	16 41 38.8	+5.3
IFIR	Firoozkooh	4.02	31	ePn	Pn	16 40 47.9	-0.3
IFIR				e		16 41 05.6	
	comp=Z,277nm,0.2s						
IFIR				eSn	Sn	16 41 33.8	-0.3
ISHM	Shahmirzad	4.41	34	ePn	Pn	16 40 56.0	+2.5
ISHM				e		16 41 28.8	
	comp=Z,616nm,0.2s						
KFJS		4.46	207	P	Pn	16 40 54.2	0.0
KFJS		4.46	207	P	Pn	16 40 54.2	-0.1
BOQSS		6.35	187	P	Pn	16 41 17.5	-2.8
ASYS		6.93	229	P	Pn	16 41 26.7	-1.5
BTHS		8.14	176	P	Pn	16 41 42.9	-1.9
HRDDS		9.26	184	P	Pn	16 41 56.9	-3.3
ASF	Jabal al Asfar	11.30	273	P	Pn	16 42 27.7	-0.3
	comp=Z,2.2nm,0.3s,baz=69,slow=8.6,SNR=11						
MMAI	Mount Meron Ar	12.53	278	P	Pn	16 42 43.3	-1.6
	comp=Z,0.4nm,0.3s,baz=84,slow=15,SNR=3.1						
BRTR	Keskin Array B	15.38	304	P	Pn	16 43 26.9	+3.7
	comp=Z,0.1nm,0.3s,baz=133,slow=13,SNR=5.2						
IDI	Anoyia	21.28	285	P	P	16 44 35.8	+3.6
	comp=Z,8.9nm,0.8s,mb4.2,baz=79,slow=5.2,SNR=3.9						
MLR	Muntele Rosu	23.00	312	P	P	16 44 52.5	+2.1
	comp=Z,2.4nm,0.6s,mb3.8,baz=124,slow=4.7,SNR=4.8						
MLR	Muntele Rosu	23.00	312⇑	iP	P	16 44 54.5	+4.1
GZR	Gura Zlata	24.99	310⇓	iP	P	16 45 09.9	+0.9
DRGR		25.59	313⇓	iP	P	16 45 16.9	+2.4
MKAR	Makanchi Array	28.48	50	P	P	16 45 41.4	+0.9
	comp=Z,0.2nm,0.2s,mb3.3,baz=260,slow=8.1,SNR=1.9						
JOF	Joensuu	33.01	344	ep	P	16 46 17.3	-2.9
	comp=Z,0.4nm,0.4s,mb3.7						
FINES	FINESS Array B	33.20	339	P	P	16 46 20.4	-1.5
	comp=Z,1.1nm,0.6s,mb4.0,baz=154,slow=9.8,SNR=5.8						
KAF	Kangasniemi	33.65	340	ep	P	16 46 22.7	-3.1
NOA	NORSAR Array B	38.38	330	P	P	16 47 05.0	-1.3
	comp=Z,0.5nm,0.6s,mb3.4,baz=122,slow=8.4,SNR=2.5						
SONM	Songino Array	44.77	53	P	P	16 48 00.3	+1.5
	comp=Z,0.3nm,0.8s,mb3.2,baz=280,slow=8.6,SNR=3.2						
TORD	Torodi Ar. Bea	48.19	258	P	P	16 48 25.7	-0.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=49,slow=8.8,SNR=7.3						
YKA	Yellowknife Ar	84.85	353	P	P	16 52 18.1	-1.2
	comp=Z,0.2nm,0.5s,mb3.5,baz=10,slow=5.2,SNR=5.0						

IDC 06 16:47:32.5±1.2**, 22.41S**×**67.82E, h0**km**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.6**/20**, mbtmp3.9**/4**, Error ellipse: s-maj=47.1km s-min=27.7km az=177.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	38.76	252	P	P	16 54 58.9	+0.1
	3.1nm,0.5s,baz=354,slow=9.2,SNR=8.2						
ASAR	Alice Springs	60.31	105	P	P	16 57 43.5	+0.1
	0.7nm,0.9s,baz=254,slow=6.4,SNR=6.4						
WRA	Warramunga Arr	61.61	101	P	P	16 57 52.3	0.0
	1.3nm,1.1s,baz=254,slow=8.0,SNR=4.6						
MKAR	Makanchi Array	70.11	11	P	P	16 58 46.4	+0.1
	0.2nm,0.3s,baz=189,slow=5.6,SNR=4.8						

IDC 06 16:49:12.3±4.0**, 8.80S**×**114.48E, h0**km**, mb3.0**/3**, mb1 3.4**/4**, mb1mx3.3**/17**, mbtmp3.3**/4**, ML3.2**/1**, Error ellipse: s-maj=266.5km s-min=24.1km az=48.0, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.24	132	Pn	Pn	16 52 33.5	-2.0
	0.1nm,0.3s,baz=287,slow=14,SNR=2.3						
FITZ				Sn	Sn	16 55 04.0	-10
	0.1nm,0.3s,baz=0.0,slow=20,SNR=2.9						
WRA	Warramunga Arr	22.16	122	P	P	16 54 10.0	-0.1
	0.4nm,0.7s,baz=299,slow=12,SNR=4.7						
ASAR	Alice Springs	23.74	131	P	P	16 54 27.2	+0.7
	0.2nm,0.4s,baz=304,slow=9.1,SNR=6.7						
MKAR	Makanchi Array	62.34	336	P	P	16 59 36.6	0.0
	0.1nm,0.2s,baz=140,slow=5.5,SNR=2.8						

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*ISCJB **06** 17:01:10.6±0.3, 24.22S±0.03×69.21W±0.05, h82km, mb4.3/25, Error ellipse: s-maj=6.1km s-min=4.7km az=176.3*
*GUC **06** 17:01:11.3±0.5, 24.32S×69.31W, h70km, ML4.8*
*IDC **06** 17:01:12.4±0.5, 24.13S×69.21W, h81km±3km, mb4.1/12, mb1 4.2/14, mb1mx4.2/17, mbtmp4.0/14, Error ellipse: s-maj=18.8km s-min=11.3km az=78.0*
*NEIC **06** 17:01:12.2±0.3, 24.27S×69.22W, mb4.6/13, Error ellipse: s-maj=10.3km s-min=5.7km az=90.0*
*BJI **06** 17:01:15.7, 24.30S×69.20W, h82km, Ms4.9, Msz4.7*
ISC 06 17:01:12.6±0.3**, 24.23S**±0.03×**69.32W**±0.05**, h84**km±1.5km**:pP-P, n64, σ1ˢ20**/58**, mb4.3**/25**, 3C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.07	248⇑	iP	Pn	17 01 32.5	-0.2
CPN1				i S	Sn	17 01 47.9	+0.1
CPN1				AML	AML	17 01 52.9	
	comp=E,25μm,0.4s						
ANCH	Antofagasta	1.14	298⇑	iP	Pn	17 01 32.7	-0.9
ANCH				i S	Sn	17 01 48.6	-0.7
CEN1	Los Morros	1.17	316⇓	iP	Pn	17 01 32.7	-1.2
CEN1				i S	Sn	17 01 48.5	-1.4
CEN1				AML	AML	17 01 52.2	
	comp=E,24μm,0.5s						
CDCH	Caldera	3.14	205	eP	Pn	17 01 57.3	-2.6
CDCH				i S	Sn	17 02 33.1	-3.3
CDCH	Caldera	3.14	205	eP	Pn	17 01 57.3	-2.6
CDCH				i S	Sn	17 02 33.1	-3.3
CDCH				AML	AML	17 02 47.2	
	comp=E,4μm,0.5s						
CPCH	Copiapo	3.25	196	eP	Pn	17 02 00.0	-1.4
VACH	Vallenar	4.51	196	i P	Pn	17 02 17.9	-0.6
LCO	Las Campanas	4.92	194	ePn	Pn	17 02 22.3	-1.8
LCO				eSn	Sn	17 03 27.3	+7.6
CFAA	Coronel Fontan	7.41	173	P	Pn	17 02 57.7	-0.3
CFAA				S	Sn	17 04 22.8	+2.3
CFAA	Coronel Fontan	7.41	173	P	Pn	17 02 57.7	-0.3
	comp=E,0.6nm,0.3s,baz=352,slow=9.9,SNR=5.4						
CFAA				S	Sn	17 04 22.8	+2.3
	comp=E,0.8nm,0.3s,baz=313,slow=19,SNR=4.1						
LPAZ	La Paz	7.98	8	ePn	Pn	17 03 05.6	-0.3
	comp=E,23nm,0.6s						
LPAZ	La Paz	7.98	8	P	Pn	17 03 05.8	-0.1
	comp=E,2.1nm,0.3s,baz=204,slow=9.8,SNR=35						
SIV	San Ignacio	11.27	45	P	Pn	17 03 48.2	-2.6
	comp=E,47nm,0.3s,baz=231,slow=12,SNR=162						
SIV				S	Sn	17 05 51.1	-3.8
	comp=E,2.2nm,0.3s,baz=180,slow=20,SNR=3.3						
NNA	Nana	14.12	328	P	Pn	17 04 31.7	+2.9
NNA	Nana	14.12	328	P	Pn	17 04 31.7	+2.9
	comp=E,0.8nm,0.3s,baz=184,slow=10,SNR=4.3						
OTAV	Otavalo	25.89	339	eP	P	17 06 37.9	+1.1
	comp=E,4.8nm,0.9s,mb3.9						
VNA2	Neumayer--Watz	58.22	160	e	P	17 10 58.4	+0.7
	baz=296,slow=8.2						
VNA2				e		17 11 07.1	
SNAA	Sanae	59.84	160	P	P	17 11 08.7	-0.2
	comp=E,2.1nm,0.7s,mb4.3,baz=277,slow=5.7,SNR=7.8						
SWET	Sewanee	61.18	344	eP	P	17 11 16.9	-1.5
JCT	Junction City	61.76	330	eP	P	17 11 22.2	-0.2
	comp=E,14nm,0.8s,mb5.0						
TXAR	Lajitas Array	62.66	326	P	P	17 11 28.5	0.0
	comp=E,2.5nm,0.8s,mb4.2,baz=146,slow=8.1,SNR=17						
MIAR	Mount Ida	62.83	338	eP	P	17 11 28.5	-1.0
	comp=E,5.3nm,0.8s,mb4.5						
FVM	French Village	64.99	342	eP	P	17 11 42.5	-1.1
	comp=E,20nm,0.9s,mb4.9						
QSPA	South Pole Qui	65.97	180	eP	P	17 11 50.6	+1.2
	comp=E,19nm,0.6s,mb5.1						
CBKS	Cedar Bluff	68.88	335	eP	P	17 12 08.3	+0.1
	comp=E,9.1nm,0.8s,mb4.7						
WUAZ	Wupatki	71.52	325	eP	P	17 12 25.9	+1.5
	comp=E,8.0nm,0.9s,mb4.5						
SYO	Syowa Base	74.09	159⇑	eP	P	17 12 38.0	-1.2
CCUT	Cedar City	74.11	325	eP	P	17 12 41.7	+2.0
VNDA	Vanda	74.11	190	P	P	17 12 40.9	+1.6
	comp=E,2.4nm,0.8s,mb4.0,baz=117,slow=4.5,SNR=3.2						
MSU	Marysvale	74.22	326	eP	P	17 12 41.7	+1.3
TPNV	Topopah Spring	75.22	323	eP	P	17 12 47.8	+1.7
	comp=E,5.9nm,0.9s,mb4.3						
DAC	Darwin (Calif)	75.49	321	eP	P	17 12 48.8	+1.0
	comp=E,3.6nm,1.0s,mb4.1						
DUG	Dugway	75.82	327	eP	P	17 12 50.5	+1.0
	comp=E,2.2nm,0.8s,mb3.9						
PDAR	Pinedale Array	76.29	331	P	P	17 12 52.4	+0.3
	comp=E,1.1nm,0.7s,mb3.7,baz=124,slow=7.9,SNR=7.2						
HWUT	Hardware Ranch	76.30	329	eP	P	17 12 52.6	+0.4
	comp=E,4.1nm,0.6s,mb4.3						
NVAR	Mina Array Bea	77.42	323	P	P	17 12 59.5	+1.0
	comp=E,1.6nm,0.8s,mb3.8,baz=144,slow=7.2,SNR=8.9						
NVAR				pP	pP	17 13 20.1	-0.5
	comp=E,0.5nm,0.6s,baz=142,slow=4.6,SNR=2.9						
NVAR				sP	sP	17 13 28.6	-1.1
	comp=E,0.4nm,0.7s,baz=138,slow=7.3,SNR=1.9						
ULM	Lac du Bonnet	77.80	343	P	P	17 12 59.7	-0.7
ULM				pP	pP	17 13 21.1	-1.4
ULM				sP	sP	17 13 30.5	-1.1
ULM	Lac du Bonnet	77.80	343	P	P	17 12 59.7	-0.7
	comp=E,3.8nm,0.7s,mb4.2,baz=147,slow=5.7,SNR=9.5						
ULM				pP	pP	17 13 21.1	-1.4
	comp=E,1.7nm,0.6s,baz=131,slow=6.7,SNR=3.1						
ULM				sP	sP	17 13 30.5	-1.1
	comp=E,1.5nm,0.5s,baz=170,slow=5.7,SNR=2.3						
YMR	Madison River	78.42	331	eP	P	17 13 05.7	+1.8
	comp=E,3.2nm,0.5s,mb4.3						
TOA0	Torodi Ar. Sit	78.63	70	eP	P	17 13 04.7	-1.1
TORD	Torodi Ar. Bea	78.63	70	P	P	17 13 04.9	-0.9
	comp=E,6.6nm,0.5s,mb4.7,baz=261,slow=5.1,SNR=93						
TORD				pP	pP	17 13 27.1	-0.8
	comp=E,13nm,0.5s,baz=255,slow=5.2,SNR=25						
TORD				sP	sP	17 13 35.8	-1.2
	comp=E,6.0nm,0.7s,baz=254,slow=6.0,SNR=4.0						
SCHQ	Schefferville	78.77	1	P	P	17 13 04.8	-0.8
SCHQ				pP	pP	17 13 27.0	-0.7
SCHQ	Schefferville	78.77	1	P	P	17 13 04.8	-0.8
	comp=E,3.2nm,0.8s,mb4.2,baz=180,slow=13,SNR=4.7						
SCHQ				pP	pP	17 13 27.0	-0.7
	comp=E,4.1nm,0.9s,baz=204,slow=10.0,SNR=1.4						
HLID	Hailey	79.15	328	eP	P	17 13 09.1	+1.1
	comp=E,10nm,1.1s,mb4.6						
MCMT	McKenzie Canyo	79.38	330	eP	P	17 13 10.6	+1.4
MAW	Mawson	81.83	163	P	P	17 13 22.5	+0.4
	comp=E,5.8nm,0.8s,mb4.5,baz=213,slow=7.5,SNR=6.7						
MAW				pP	pP	17 13 46.2	+1.8
	comp=E,1.5nm,0.7s,baz=233,slow=10,SNR=1.4						
BOSA	Boshof	82.50	118	P	P	17 13 26.1	-0.3
	comp=E,3.6nm,0.9s,mb4.2,baz=243,slow=4.5,SNR=4.9						
BOSA				pP	pP	17 13 48.3	-0.4
	comp=E,3.5nm,0.8s,baz=270,slow=4.0,SNR=2.7						
ESDC	Sonseca Array	88.03	45	P	P	17 13 54.0	+0.5
	comp=E,1.1nm,0.7s,mb4.0,baz=205,slow=4.5,SNR=3.4						
YKA	Yellowknife Ar	93.63	341	P	P	17 14 18.2	-0.7
	comp=E,2.6nm,0.7s,mb4.7,baz=136,slow=4.4,SNR=42						
YKA				pP	pP	17 14 40.3	-1.2
	comp=E,0.7nm,0.6s,baz=140,slow=4.7,SNR=3.8						
YKA				sP	sP	17 14 48.9	-1.7
	comp=E,1.0nm,0.6s,baz=137,slow=4.4,SNR=4.8						
ASAR	Alice Springs	127.33	207	pPKP	pPKPdf	17 20 30.5	-1.2
	comp=E,0.6nm,0.6s,baz=135,slow=2.2,SNR=3.0						
WRA	Warramunga Arr	130.41	210	PKP	PKPdf	17 20 14.2	0.0
	comp=E,2.2nm,0.8s,baz=151,slow=1.7,SNR=15						
WRA				pPKP	pPKPdf	17 20 37.2	-0.5
	comp=E,0.5nm,0.5s,baz=158,slow=1.8,SNR=2.5						
AML	Almayashu	144.60	51	ePKP	PKPdf	17 20 39.5	+0.1
AML	Almayashu	144.60	51	P	PKPdf	17 20 39.8	+0.3
	SNR=6.3						
AAK	Ala-Archa	145.00	49	ePKP	PKPdf	17 20 39.5	-0.6
AAK	Ala-Archa	145.00	49	P	PKPdf	17 20 40.8	+0.7
	SNR=11						
UCH	Uchtor	145.15	50	ePKP	PKPdf	17 20 41.4	+1.1
UCH	Uchtor	145.15	50	P	PKPbc	17 20 41.6	+1.5
	SNR=16						
KBK	Karagaybulak	145.31	49	P	PKPbc	17 20 41.9	+1.3
	SNR=6.9						
TKM2	Tokmak 2	145.66	48	ePKPbc	PKPbc	17 20 42.4	+0.7
TKM2	Tokmak 2	145.66	48	P	PKPdf	17 20 42.0	+0.7
	SNR=6.6						
MK31	Makanchi Array	148.03	38	ePKPdf	PKPdf	17 20 45.2	+0.2
MK31				ePKPbc	PKPbc	17 20 48.2	-0.1
MKAR	Makanchi Array	148.03	38	PKPbc	PKPbc	17 20 48.1	-0.2
	comp=E,6.8nm,0.9s,baz=315,slow=2.4,SNR=32						
MKAR				pPKPbc	pPKPbc	17 21 10.2	-1.4
	comp=E,5.5nm,0.9s,baz=310,slow=3.2,SNR=7.1						
WMQ	Urumqi	152.86	38	ePKP	PKPdf	17 20 51.3	-1.4
SONM	Songino Array	156.20	7	PKP	PKPdf	17 20 57.8	+0.6
	comp=E,0.3nm,0.8s,baz=340,slow=1.8,SNR=4.0						
SONM				pPKP	pPKPdf	17 21 20.0	-0.8
	comp=E,0.5nm,0.7s,baz=5.7,slow=2.9,SNR=3.3						
SONM				PKPab	PKPab	17 21 25.5	+0.2
	comp=E,1.3nm,0.8s,baz=327,slow=3.3,SNR=9.4						
SONM				pPKPab	pPKPab	17 21 47.8	-0.2
	comp=E,1.1nm,0.8s,baz=330,slow=4.6,SNR=4.5						

IDC 06 17:14:55.0±5.2**, 5.88S**×**150.74E, h88**km±43km**, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.4**/14**, mbtmp3.8**/4**, Error ellipse: s-maj=76.2km s-min=22.5km az=158.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.99	225	P	Pn	17 16 08.4	+1.0
	2.1nm,0.3s,baz=51,slow=10,SNR=12						
PMG				S	Sn	17 17 04.0	+0.1
	3.1nm,0.3s,baz=265,slow=14,SNR=6.6						
HNR	Honiara	9.78	112	P	Pn	17 17 12.6	-0.2
	11nm,0.3s,baz=299,slow=10,SNR=6.6						
WB2	Warramunga Arr	21.20	227	eP	P	17 19 33.3	-0.2
WRA	Warramunga Arr	21.20	227	P	P	17 19 33.6	0.0
	1.5nm,0.5s,baz=53,slow=10,SNR=25						
ASAR	Alice Springs	23.99	221	P	P	17 20 01.9	+0.4
	2.1nm,0.6s,baz=57,slow=9.6,SNR=53						
TORD	Torodi Ar. Bea	148.65	286	PKPbc	PKPbc	17 34 32.2	-0.8
	1.3nm,0.7s,baz=66,slow=3.4,SNR=7.0						

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*ISK **06** 17:21:39.5, 38.44N×39.29E, h5km, MD3.4*
*ISCJB **06** 17:21:40.6±0.3, 38.42N±0.02×39.32E±0.03, h5km, Error ellipse: s-maj=3.7km s-min=2.6km az=153.2*
*CSEM **06** 17:21:40.4±0.1, 38.43N×39.26E, h5km, MD3.4, Error ellipse: s-maj=2.0km s-min=1.4km az=159.0*
*DDA **06** 17:21:41.4, 38.37N×39.33E, h8km, Md3.5*
ISC 06 17:21:40.9±0.5**, 38.42N**±0.03×**39.36E**±0.03**, h0**km±5km**, n28, σ1ˢ23**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.30	285	i P	Pg	17 21 46.2	-0.5
ELZG				i S	Sg	17 21 49.3	-1.3
PTK	Pertek	0.47	4	i PG	Pg	17 21 49.0	-1.0
PTK				i SG	Sg	17 21 57.3	+1.2
MYA	Malataya	0.74	263	PG	Pg	17 21 53.2	-1.8
MYA				SG	Sg	17 22 04.9	+0.4
MALT	Malatya	0.74	262	PG	Pg	17 21 53.5	-1.5
MALT				SG	Sg	17 22 05.0	+0.5
DIY	Diyarbakir	0.86	127	PG	Pg	17 21 57.3	-0.1
BINT	Bingol	1.00	62	PG	Pg	17 21 59.8	-0.2
URFA	Urfa	1.06	204	PG	Pg	17 22 01.2	-0.1
ATAB	Bozova	1.27	222	i P	Pg	17 22 04.5	-0.6

ATAB				*i*S	**Sg**	**17 22 22.9**	**+1.3**
EZC	**Erzincan**	**1.38**	**15**	PN	**Pn**	**17 22 05.6**	**-1.7**
MARD	**Mardin**	**1.58**	**134**	*i*P	**Pn**	**17 22 08.0**	**-2.0**
MARD				*i*S	**Sn**	**17 22 30.1**	**-1.1**
BTMT	**Batman**	**1.69**	**97**	PN	**Pn**	**17 22 10.5**	**-1.2**
KELT	**Kelkit**	**1.73**	**357**	*i*P	**Pn**	**17 22 12.0**	**-0.2**
KELT				*i*S	**Sg**	**17 22 36.9**	**+0.5**
GZT	**Gaziantep**	**1.77**	**234**	*i*P	**Pn**	**17 22 11.5**	**-1.2**
GZT				*i*S	**Sg**	**17 22 39.6**	**+1.8**
GUMT	**Gumushane**	**2.04**	**3**	*e*PN	**Pn**	**17 22 16.2**	**-0.2**
GAZ	**Gaziantep**	**2.10**	**234**	*e*PN	**Pn**	**17 22 16.8**	**-0.5**
EZM	**Erzurum**	**2.15**	**46**	*e*PN	**Pn**	**17 22 18.4**	**+0.4**
ERZM	**Erzurum**	**2.16**	**46**	*i*P	**Pn**	**17 22 19.8**	**+1.7**
ERZM				*i*S	**Sn**	**17 22 47.2**	**+1.7**
SVSK	**Karacayir**	**2.37**	**310**	*e*PN	**Pn**	**17 22 20.5**	**-0.4**
ANDN	**Andirin**	**2.52**	**252**	*i*P	**Pn**	**17 22 21.6**	**-1.5**
ANDN				*i*S	**Sg**	**17 23 03.7**	**+1.8**
SIRT	**Sirnak**	**2.60**	**110**	*e*PN	**Pn**	**17 22 25.7**	**+1.5**
BNN	**Bunyan**	**2.78**	**280**	*e*PN	**Pn**	**17 22 26.2**	**-0.4**
KOZT	**Kozan**	**2.94**	**253**	*e*PN	**Pn**	**17 22 28.3**	**-0.5**
AGRB	**Hanur-Agry**	**3.06**	**67**	*e*PN	**Pn**	**17 22 32.2**	**+1.7**
COBT	**Iskenderun**	**3.11**	**233**	*i*P	**Pn**	**17 22 34.6**	**+3.4**
COBT				*i*S	**Sg**	**17 23 23.8**	**+3.0**
HTY	**Hatay**	**3.44**	**229**	*e*PN	**Pn**	**17 22 35.7**	**0.0**
HAKT	**HAKKARI**	**3.54**	**103**	*i*P	**Pn**	**17 22 36.2**	**-0.9**
HAKT				*i*S	**Sg**	**17 23 33.6**	**-1.1**
CUKT	**Cukurca**	**3.56**	**108**	*e*PN	**Pn**	**17 22 39.2**	**+1.8**
HKR	**Hakkari**	**3.56**	**102**	*e*PN	**Pn**	**17 22 39.5**	**+2.1**

*IDC **06** 17:37:18.4±0.8, 0.67S×100.48E, h0^{km}, mb3.9/11, mb1 4.1/11, mb1mx4.0/19, mbtmp3.9/11, MS3.7/3, Ms1 3.7/3, ms1mx3.3/25, Error ellipse: s-maj=42.4km s-min=15.9km az=51.0*

*ISCJB **06** 17:37:20.9±0.6, 0.63S±0.07×100.38E±0.07, h33^{km}, mb4.1/17, MS3.7/3, Error ellipse: s-maj=10.7km s-min=8.7km az=38.8*

*NEIC **06** 17:37:21.3±0.6, 0.58S×100.60E, h20^{km}, mb4.3/5, Error ellipse: s-maj=29.5km s-min=9.9km az=54.0*

ISC 06 17:37:23.1±0.6**, 0.66S**±0.07×**100.43E**±0.07**, h35**^{km}**, n37, σ1^{s}23**/34**, mb4.1**/17**, MS3.7**/3**, 6C-6D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.75**	**336**	Pn	**Pn**	**17 38 22.0**	**+3.4**
	2.6nm,0.3s,baz=140,slow=12,SNR=8.3						
KGM	**Kluang**	**3.92**	**47**	⇓P	**Pn**	**17 38 20.2**	**-0.7**
FRIM	**Kepong**	**4.05**	**17**	⇓P	**Pn**	**17 38 21.4**	**-1.3**
MYKOM	**Kota Tinggi**	**4.20**	**55**	⇑P	**Pn**	**17 38 24.2**	**-0.5**
IPM	**Ipoh**	**5.14**	**7**	⇓P	**Pn**	**17 38 37.5**	**-0.1**
KULM	**Kulim**	**5.91**	**2**	*e*Pn	**Pn**	**17 38 46.9**	**-1.4**
KULM				*e*S	Sx	17 40 21.6	
KULM	**Kulim**	**5.91**	**2**	⇑P	**Pn**	**17 38 47.1**	**-1.2**
KTGM	**Kuala Trenggan**	**6.53**	**24**	⇓P	**Pn**	**17 38 56.4**	**-0.4**
SBUM	**Sibu**	**12.18**	**75**	⇓P	**Pn**	**17 40 18.6**	**+4.2**
BTM	**Bintulu**	**13.21**	**73**	⇓P	**Pn**	**17 40 30.9**	**+2.4**
KKM	**Kota Kinabalu**	**17.11**	**67**	⇑P	**Pn**	**17 41 24.2**	**+4.4**
SDKM	**Sandakan**	**17.87**	**69**	⇑P	**Pn**	**17 41 33.9**	**+4.7**
KDM	**Kudat**	**18.01**	**65**	⇑P	**Pn**	**17 41 33.6**	**+2.7**
MYLDM	**Lahad Datu**	**18.96**	**72**	⇑P	**Pn**	**17 41 46.8**	**+4.4**
BATI	**Kupang**	**24.97**	**113**	LR	LR	17 53 52.2	
	comp=Z,226nm,20.7s,MS3.7,baz=320,slow=40						
WRA	**Warramunga Arr**	**38.32**	**122**	P	**P**	**17 44 40.1**	**-0.7**
	1.3nm,0.6s,mb3.8,baz=303,slow=8.9,SNR=12						
WRA				PcP	PcP	17 46 56.6	+2.2
	0.3nm,0.5s,baz=314,slow=2.7,SNR=5.4						
WB2	**Warramunga Arr**	**38.33**	**122**	*e*P	**P**	**17 44 39.8**	**-1.1**
ASAR	**Alice Springs**	**39.71**	**128**	P	**P**	**17 44 51.9**	**-0.5**
	1.7nm,0.8s,mb3.8,baz=300,slow=7.6,SNR=25						
ASAR				PcP	PcP	17 47 00.0	+1.3
	0.6nm,0.6s,baz=293,slow=2.7,SNR=5.8						
KSRS	**Korea Array**	**45.65**	**31**	P	**P**	**17 45 40.5**	**+0.1**
	1.3nm,0.8s,mb3.9,baz=226,slow=8.0,SNR=3.1						
KSRS				LR	LR	18 04 10.6	
	comp=Z,24nm,20.7s,MS3.1,baz=225,slow=35						
KBL	**Kabul**	**45.72**	**323**	P	**P**	**17 45 42.5**	**+1.6**
	1.8nm,0.5s,mb4.3						
SONM	**Songino Array**	**48.58**	**5**	P	**P**	**17 46 03.9**	**+0.9**
	1.0nm,0.8s,mb3.9,baz=188,slow=9.7,SNR=4.9						
SONM				PcP	PcP	17 47 30.3	+1.9
	0.9nm,0.8s,baz=187,slow=3.9,SNR=3.2						
TKM2	**Tokmak 2**	**48.79**	**336**	P	**P**	**17 46 05.0**	**+0.2**
	2.9nm,0.8s,mb4.4						
AAK	**Ala-Archa**	**49.01**	**335**	*e*P	**P**	**17 46 07.2**	**+0.7**
	1.6nm,0.8s,mb4.1						
EKS2	**Erkin-Say**	**49.34**	**334**	*e*P	**P**	**17 46 09.6**	**+0.6**
	3.0nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**49.73**	**133**	P	**P**	**17 46 11.0**	**-1.2**
	1.6nm,0.8s,mb4.1,baz=291,slow=8.3,SNR=4.9						
MK31	**Makanchi Array**	**49.87**	**344**	*e*P	**P**	**17 46 11.5**	**-1.4**
MKAR	**Makanchi Array**	**49.87**	**344**	P	**P**	**17 46 11.7**	**-1.2**
	0.7nm,0.5s,mb4.0,baz=155,slow=8.8,SNR=18						
KURK	**Kurchatov**	**54.45**	**343**	P	**P**	**17 46 46.1**	**-0.9**
	3.3nm,1.0s,mb4.2						
AKTK	**Aktyubinsk**	**62.40**	**331**	P	**P**	**17 47 40.9**	**-1.5**
AKTO	**Aktyubinsk**	**62.40**	**331**	P	**P**	**17 47 40.9**	**-1.5**
	1.0nm,0.4s,mb4.3,baz=125,slow=6.1,SNR=5.6						
BRTR	**Keskin Array B**	**72.74**	**312**	P	**P**	**17 48 48.6**	**+0.7**
	0.9nm,0.7s,mb3.8,baz=129,slow=7.0,SNR=5.1						
AKASG	**Malin Array Be**	**78.69**	**322**	P	**P**	**17 49 21.8**	**0.0**
	0.3nm,0.4s,mb3.6,baz=89,slow=4.6,SNR=6.8						
FINES	**FINESS Array B**	**83.13**	**332**	P	**P**	**17 49 46.1**	**+0.8**
	0.8nm,0.3s,mb4.2,baz=64,slow=6.3,SNR=8.4						
ARCES	**ARCESS Array B**	**85.37**	**340**	P	**P**	**17 49 58.3**	**+1.9**
	9.9nm,1.2s,mb4.8,baz=3.8,slow=3.6,SNR=4.8						
GERES	**GERESS Array B**	**88.33**	**319**	P	**P**	**17 50 13.7**	**+2.4**
	0.6nm,0.7s,mb4.0,baz=61,slow=4.6,SNR=4.3						
GERES				LR	LR	18 32 20.8	
	comp=Z,99nm,19.8s,MS4.2,baz=2.0,slow=37						
NVAR	**Mina Array Bea**	**128.29**	**39**	PKP	PKPdf	17 56 28.8	+2.4
	0.2nm,0.6s,baz=316,slow=3.8,SNR=2.9						
TXAR	**Lajitas Array**	**143.38**	**37**	PKP	PKPdf	17 56 55.5	+0.9
	0.4nm,0.5s,baz=90,slow=2.7,SNR=5.6						

*NIED **06** 18:45:00, 31.70N×141.50E, h35^{km}, Mw4.1 Best double couple: $M_0$1.78000×10^{15} NP1:ϕ_s258.00000°, δ47.00000°, λ-129.00000°. NP2:ϕ_s127.00000°, δ55.00000°, λ-56.00000°.*

*IDC **06** 18:45:49.0±0.7, 31.12N×141.53E, h0^{km}, mb4.0/12, mb1 4.2/15, mb1mx4.1/22, mbtmp4.1/15, ML3.7/3, MS3.2/4, Ms1 3.2/4, ms1mx2.9/31, Error ellipse: s-maj=29.9km s-min=14.7km az=76.0*

*ISCJB **06** 18:45:51.9±1.7, 31.07N±0.05×141.4E±0.1, h31^{km}±12^{km}, mb4.3/25, Error ellipse: s-maj=17.1km s-min=5.5km az=160.6*

*MOS **06** 18:45:52.4±0.6, 31.04N×141.33E, h33^{km}, mb4.4/17, Error ellipse: s-maj=28.6km s-min=9.3km az=120.6*

*NEIC **06** 18:45:54.5±1.2, 31.07N×141.41E, h36^{km}±9^{km}, mb4.6/12, MW4.1(NIED), Error ellipse: s-maj=10.6km s-min=8.0km az=72.0*

*JMA **06** 18:45:55.8±0.6, 31.66N×141.52E, h0^{km}, M3.7*

ISC 06 18:45:54.1±1.8**, 31.10N**±0.04×**141.5E**±0.1**, h33**^{km}±13^{km}**, n70, σ0^{s}94**/76**, mb4.3**/25**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.45**	**325**	P	**Pn**	**18 46 31.8**	**+0.1**
JHJ2				*e*S	**Sn**	**18 46 59.4**	**-1.1**
JHJ	**Hachijo jima 2**	**2.48**	**325**	Pn	**Pn**	**18 46 31.1**	**-0.9**
	11nm,0.3s,baz=68,slow=19,SNR=2.3						
JHJ				Sn	**Sn**	**18 46 59.6**	**-1.4**
	53nm,0.3s,baz=73,slow=19,SNR=3.7						
BSO1	**Boso 1**	**3.57**	**353**	P	**Pn**	**18 46 46.4**	**-0.6**
BSO3	**Boso 3**	**3.78**	**348**	P	**Pn**	**18 46 50.4**	**+0.5**
CBIJ	**Chichi jima**	**4.04**	**171**	Pn	**Pn**	**18 46 52.5**	**-1.0**
	17nm,0.3s,baz=282,slow=23,SNR=8.4						
CBIJ				Sn	**Sn**	**18 47 38.0**	**-1.7**
	23nm,0.3s,baz=288,slow=20,SNR=4.4						
JOD2	**Odawara 2**	**4.61**	**335**	P	**Pn**	**18 47 03.3**	**+2.0**
JYN	**Shimob**	**5.03**	**331**	P	**Pn**	**18 47 09.3**	**+2.2**
JHU	**Hanno**	**5.08**	**339**	P	**Pn**	**18 47 07.8**	**0.0**
JHU				*e*S	**Sn**	**18 48 01.7**	**-3.6**
JRY	**Ryogami san**	**5.35**	**337**	P	**Pn**	**18 47 12.1**	**+0.5**
JRY				*e*S	**Sn**	**18 48 10.9**	**-1.1**
JHO	**Hitachi**	**5.55**	**352**	P	**Pn**	**18 47 11.9**	**-2.3**
JHO				*e*S	**Sn**	**18 48 10.9**	**-5.9**
JAG	**Ashikaga**	**5.57**	**343**	P	**Pn**	**18 47 14.3**	**-0.2**
JAG				*e*S	**Sn**	**18 48 15.4**	**-2.0**
MJAR	**Matsushiro Arr**	**6.07**	**334**	P	**Pn**	**18 47 22.2**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	**6.07**	**334**	Pn	**Pn**	**18 47 22.2**	**+0.8**
	comp=Z,2.9nm,0.3s,baz=159,slow=11,SNR=18						
MAJO	**Matsushiro**	**6.07**	**334**	*e*Pn	**Pn**	**18 47 21.3**	**-0.1**
	comp=Z,12nm,0.4s						
MAJO	**Matsushiro**	**6.07**	**334**	*e*P	**Pn**	**18 47 21.3**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,12nm,0.4s						
MAT	**Matsushiro**	**6.07**	**334**	P	**Pn**	**18 47 22.6**	**+1.2**
MAT				S	**Sn**	**18 48 31.2**	**+1.5**
JNU	**Nakatsue**	**9.22**	**285**	LR	LR	18 51 41.5	
	comp=Z,236nm,18.1s,baz=43,slow=38						
JOW	**Kunigami**	**12.32**	**253**	LR	LR	18 52 39.9	
	comp=Z,86nm,20.4s,baz=96,slow=33						
KSRS	**Korea Array**	**12.88**	**303**	Pn	**Pn**	**18 49 01.2**	**+6.6**
	comp=Z,0.1nm,0.3s,baz=108,slow=14,SNR=3.2						
KSRS				LR	LR	18 53 29.3	
	comp=Z,73nm,18.7s,baz=160,slow=36						
ASAJ	**Asahikawa**	**13.02**	**4**	Pn	**Pn**	**18 48 53.4**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=216,slow=14,SNR=4.1						
ULN	**Ulaanbaatar**	**31.08**	**312**	*e*P	**P**	**18 52 09.5**	**+0.5**
	comp=Z,5.3nm,1.1s,mb4.3						
ULN	**Ulaanbaatar**	**31.08**	**312**	*e*P	**P**	**18 52 09.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
SONM	**Songino Array**	**31.49**	**312**	P	**P**	**18 52 13.3**	**+0.8**
SONM				LR	LR	19 04 32.6	
SONM	**Songino Array**	**31.49**	**312**	P	**P**	**18 52 13.3**	**+0.7**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,36nm,20.2s						
SONM	**Songino Array**	**31.49**	**312**	P	**P**	**18 52 13.3**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.0,baz=118,slow=9.4,SNR=15						
SONM				LR	LR	19 04 32.6	
	comp=Z,36nm,20.2s,baz=104,slow=36						
ZAK	**Zakamensk**	**34.27**	**315**	*e*P	**P**	**18 52 37.5**	**+0.7**
TAPN	**Taplejung**	**46.70**	**280**	*e*P	**P**	**18 54 19.7**	**-0.1**
	comp=Z,27nm,1.7s,mb4.9						
NVS	**Novosibirsk**	**47.13**	**318**	*e*P	**P**	**18 54 22.5**	**-0.2**
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
ODAN	**Odare**	**47.13**	**279**	*e*P	**P**	**18 54 22.7**	**-0.5**
MK31	**Makanchi Array**	**47.52**	**307**	*e*P	**P**	**18 54 26.2**	**+0.3**
MKAR	**Makanchi Array**	**47.52**	**307**	P	**P**	**18 54 26.3**	**+0.3**
MKAR	**Makanchi Array**	**47.52**	**307**	P	**P**	**18 54 26.3**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.52**	**307**	P	**P**	**18 54 26.3**	**+0.3**
	comp=Z,0.8nm,0.4s,mb4.1,baz=85,slow=9.9,SNR=11						
JIRN	**Jiri**	**47.89**	**281**	*e*P	**P**	**18 54 29.3**	**+0.2**
	comp=Z,4.5nm,0.3s,mb5.0						
KKN	**Kakani**	**48.62**	**281**	*e*P	**P**	**18 54 34.3**	**-0.4**
	comp=Z,11nm,0.9s,mb4.9						
KKN	**Kakani**	**48.62**	**281**	*e*P	**P**	**18 54 34.3**	**-0.4**
KKN				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
GKN	**Gorkha**	**49.09**	**282**	*e*P	**P**	**18 54 37.7**	**-0.6**
	comp=Z,4.8nm,0.6s,mb4.7						
KURK	**Kurchatov**	**49.80**	**312**	*e*P	**P**	**18 54 43.0**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.6						
KURK	**Kurchatov**	**49.80**	**312**	*e*P	**P**	**18 54 43.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**51.21**	**189**	P	**P**	**18 54 54.1**	**-0.2**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**51.21**	**189**	P	**P**	**18 54 54.1**	**-0.2**
	comp=Z,3.4nm,0.6s,mb4.5,baz=6.1,slow=7.6,SNR=108						
TKM2	**Tokmak 2**	**52.69**	**303**	*e*P	**P**	**18 55 06.5**	**+1.3**
	comp=Z,1.3nm,0.5s,mb4.1						
TKM2	**Tokmak 2**	**52.69**	**303**	*e*P	**P**	**18 55 06.5**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AML	**Almayashu**	**54.22**	**302**	*e*P	**P**	**18 55 17.8**	**+1.4**
	comp=Z,2.4nm,0.5s,mb4.4						
BRVK	**Borovoye**	**54.78**	**316**	*e*P	**P**	**18 55 20.3**	**-0.1**
	comp=Z,4.0nm,1.0s,mb4.4						
BRVK	**Borovoye**	**54.78**	**316**	*e*P	**P**	**18 55 20.3**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
ASAR	**Alice Springs**	**54.94**	**188**	P	**P**	**18 55 21.7**	**0.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	**Alice Springs**	**54.94**	**188**	P	**P**	**18 55 21.6**	**-0.1**
	comp=Z,1.4nm,0.3s,mb4.4,baz=0.6,slow=5.2,SNR=100						
ARU	**Arti**	**60.91**	**321**	*e*P	**P**	**18 56 02.5**	**-0.8**
	comp=Z,5.6nm,0.6s,mb4.9						
ARU	**Arti**	**60.91**	**321**	*e*P	**P**	**18 56 03.2**	**-0.1**
STKA	**Stephens Creek**	**62.64**	**180**	P	**P**	**18 56 15.5**	**+0.4**
	comp=Z,2.7nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**62.64**	**180**	P	**P**	**18 56 15.6**	**+0.5**
	comp=Z,2.0nm,0.8s,mb4.3,baz=63,slow=10.0,SNR=4.3						
ARCES	**ARCESS Array B**	**69.57**	**340**	P	**P**	**18 56 59.6**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**69.57**	**340**	P	**P**	**18 56 59.6**	**+0.4**
	comp=Z,2.9nm,0.9s,mb4.2,baz=45,slow=12,SNR=3.0						
JOF	**Joensuu**	**71.24**	**333**	*e*p	**P**	**18 57 09.5**	**0.0**
	comp=Z,0.9nm,0.4s,mb4.0						
JOF	**Joensuu**	**71.24**	**333**	*e*P	**P**	**18 57 09.5**	**0.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
KAF	**Kangasniemi**	**73.62**	**334**	*e*p	**P**	**18 57 23.8**	**+0.1**
	comp=Z,0.7nm,0.4s,mb3.9						
KAF	**Kangasniemi**	**73.62**	**334**	*e*P	**P**	**18 57 23.8**	**+0.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**74.10**	**333**	P	**P**	**18 57 26.4**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**74.10**	**333**	P	**P**	**18 57 26.4**	**-0.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=72,slow=6.2,SNR=6.8						
NVAR	**Mina Array Bea**	**78.54**	**52**	P	**P**	**18 57 52.4**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.5,baz=267,slow=4.5,SNR=3.3						
AKASG	**Malin Array Be**	**79.04**	**323**	P	**P**	**18 57 54.5**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**79.04**	**323**	P	**P**	**18 57 54.5**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=47,slow=5.7,SNR=13						
NOA	**NORSAR Array B**	**79.68**	**338**	P	**P**	**18 57 58.6**	**+0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**79.68**	**338**	P	**P**	**18 57 58.6**	**+0.7**
	comp=Z,0.7nm,0.6s,mb3.8,baz=42,slow=5.4,SNR=3.1						
BRTR	**Keskin Array B**	**82.85**	**312**	P	**P**	**18 58 15.0**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**82.85**	**312**	P	**P**	**18 58 14.9**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.9,baz=66,slow=3.2,SNR=4.5						
TXAR	**Lajitas Array**	**93.68**	**53**	P	**P**	**18 59 08.5**	**+1.0**
TXAR	**Lajitas Array**	**93.68**	**53**	P	**P**	**18 59 08.5**	**+1.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**93.68**	**53**	P	**P**	**18 59 08.5**	**+1.0**
	comp=Z,0.9nm,0.8s,mb4.2,baz=297,slow=3.7,SNR=6.6						

*ISCJB **06** 18:59:35.3±1.0, 21.98N±0.05×142.85E±0.08, h245^{km}±8^{km}, mb4.2/40, Error ellipse: s-maj=11.8km s-min=7.5km az=11.6*

*NEIC **06** 18:59:36.4±1.6, 22.03N×142.81E, h240^{km}±15^{km}, mb4.3/25, Error ellipse: s-maj=8.5km s-min=5.9km az=109.0*

*IDC **06** 18:59:38.6±1.6, 21.95N×142.77E, h258^{km}±14^{km}, mb3.8/15, mb1 3.8/17, mb1mx3.8/24, mbtmp3.7/17, Error ellipse: s-maj=18.0km s-min=9.1km az=89.0*

*JMA **06** 18:59:40.1±0.2, 22.36N×142.91E, h264^{km}, M4.2*

ISC 06 18:59:36.6±1.0**, 22.00N**±0.06×**142.86E**±0.08**, h242**^{km}±8^{km}**, n66, σ0^{s}99**/69**, mb4.2**/40**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.65**	**352**	P	**Pn**	**19 00 48.5**	**+0.7**
JHHJ				*e*S	**S**	**19 01 41.7**	**-2.8**
CBIJ	**Chichi jima**	**5.11**	**353**	P	**Pn**	**19 00 54.0**	**+0.5**
CBIJ				*e*S	**S**	**19 01 51.8**	**-2.9**
CBIJ	**Chichi jima**	**5.11**	**353**	P	**Pn**	**19 00 53.5**	**+0.1**
	25nm,0.3s,baz=265,slow=19,SNR=10						
CBIJ				S	**S**	**19 01 51.0**	**-3.7**
	47nm,0.3s,baz=259,slow=22,SNR=9.5						
JIE	**Ise**	**13.48**	**338**	P	**Pn**	**19 02 39.6**	**+1.0**
JOD2	**Odawara 2**	**13.62**	**347**	P	**Pn**	**19 02 39.8**	**-0.5**
JRY	**Ryogami san**	**14.39**	**347**	P	**Pn**	**19 02 49.5**	**-0.1**
MJAR	**Matsushiro Arr**	**15.04**	**345**	P	**Pn**	**19 02 57.1**	**-0.4**
	2.6nm,0.3s,baz=158,slow=10,SNR=24						
MJAR				S	**S**	**19 05 39.8**	**-3.8**
	0.3nm,0.3s,baz=160,slow=15,SNR=4.7						
MAJO	**Matsushiro**	**15.04**	**345**	*e*Pn	**Pn**	**19 02 57.4**	**-0.2**
	21nm,0.8s						
MAT	**Matsushiro**	**15.04**	**345**	P	**Pn**	**19 02 57.8**	**+0.2**
MAT				S	**S**	**19 05 37.0**	**-6.6**
MAT	**Matsushiro**	**15.04**	**345**	P	**Pn**	**19 02 58.0**	**+0.4**
JKE	**Kume jima 2**	**15.29**	**290**	P	**Pn**	**19 03 02.9**	**+2.3**
JNU	**Nakatsue**	**15.33**	**319**	P	**Pn**	**19 03 02.8**	**+1.7**
	1.2nm,0.3s,baz=106,slow=11,SNR=10						
JMK	**Ichinoseki**	**16.95**	**356**	P	**P**	**19 03 20.4**	**+2.2**
NACB	**Ninganchiao**	**19.68**	**280**	*e*P	**P**	**19 03 46.5**	**-1.3**
YHNB	**Yeheng**	**19.90**	**282**	*e*P	**P**	**19 03 49.1**	**-1.1**
KSRS	**Korea Array**	**20.09**	**323**	P	**P**	**19 03 53.7**	**+1.7**
	9.2nm,0.5s,baz=143,slow=8.9,SNR=36						
ASAJ	**Asahikawa**	**22.06**	**360**	P	**P**	**19 04 13.3**	**+1.7**
	13nm,0.6s,mb4.6,baz=170,slow=13,SNR=13						
KKM	**Kota Kinabalu**	**30.24**	**242**	*e*P	**P**	**19 05 25.6**	**+0.4**
KSM	**Kuching**	**37.67**	**242**	P	**P**	**19 06 27.6**	**-1.4**
MA2	**Magadan**	**37.96**	**7**	*e*P	**P**	**19 06 28.6**	**-2.2**
	7.7nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**38.54**	**321**	*e*P	**P**	**19 06 36.2**	**+0.3**
	3.6nm,0.6s,mb4.1						
SONM	**Songino Array**	**38.91**	**320**	P	**P**	**19 06 39.3**	**+0.3**
	2.8nm,0.5s,mb4.0,baz=135,slow=8.4,SNR=31						
SONM				ScP	ScP	19 12 07.5	-1.9
	0.2nm,0.4s,baz=140,slow=3.7,SNR=4.3						
YAK	**Yakutsk**	**41.02**	**351**	*e*P	**P**	**19 06 54.9**	**-1.0**
	18nm,1.0s,mb4.4						
WB2	**Warramunga Arr**	**42.51**	**192**	*e*P	**P**	**19 07 08.5**	**0.0**
WRA	**Warramunga Arr**	**42.51**	**192**	P	**P**	**19 07 08.8**	**+0.3**
	3.0nm,0.7s,mb3.8,baz=6.5,slow=8.2,SNR=69						
WRA				ScP	ScP	19 12 23.7	-0.2
	0.5nm,0.7s,baz=7.1,slow=4.6,SNR=4.6						
WRA				S	**S**	**19 13 10.5**	**-1.7**
	0.9nm,1.0s,baz=8.5,slow=14,SNR=3.8						
KULM	**Kulim**	**44.06**	**254**	*e*P	**P**	**19 07 22.1**	**+1.0**
ASAR	**Alice Springs**	**46.22**	**191**	P	**P**	**19 07 37.6**	**-0.2**
	1.3nm,0.6s,mb3.5,baz=16,slow=11,SNR=32						
ASAR				ScP	ScP	19 12 39.2	+0.1
	0.4nm,0.8s,baz=18,slow=3.1,SNR=4.6						
ASAR				S	**S**	**19 14 03.5**	**-2.0**
	0.9nm,0.8s,baz=21,slow=20,SNR=5.5						
MBWA	**Marble Bar**	**48.47**	**209**	P	**P**	**19 07 55.1**	**0.0**
	32nm,1.4s,mb4.5						
UNV	**Unalaska Valle**	**49.55**	**37**	*e*P	**P**	**19 08 03.5**	**+0.6**
	46nm,1.1s,mb4.7						
TAPN	**Taplejung**	**50.06**	**288**	*e*P	**P**	**19 08 08.2**	**+1.0**
	5.3nm,0.3s,mb4.3						
ODAN	**Odare**	**50.41**	**287**	*e*P	**P**	**19 08 09.7**	**-0.1**
	3.7nm,0.3s,mb4.2						
JIRN	**Jiri**	**51.37**	**288**	*e*P	**P**	**19 08 17.3**	**+0.4**
	17nm,0.6s,mb4.6						
KKN	**Kakani**	**52.15**	**289**	*e*P	**P**	**19 08 22.8**	**+0.1**
	4.5nm,0.3s,mb4.4						
GKN	**Gorkha**	**52.69**	**289**	*e*P	**P**	**19 08 26.0**	**-0.6**
	4.6nm,0.3s,mb4.4						
STKA	**Stephens Creek**	**53.58**	**181**	P	**P**	**19 08 33.0**	**+0.1**
	0.6nm,0.3s,mb3.6,baz=78,slow=6.7,SNR=5.1						
MK31	**Makanchi Array**	**54.27**	**313**	*e*P	**P**	**19 08 37.5**	**-0.2**
MKAR	**Makanchi Array**	**54.27**	**313**	P	**P**	**19 08 38.0**	**+0.2**
	2.4nm,0.5s,mb4.0,baz=94,slow=8.3,SNR=29						
MKAR				ScP	ScP	19 13 11.5	-2.0
	0.2nm,0.2s,baz=81,slow=5.7,SNR=3.3						
KURK	**Kurchatov**	**57.05**	**317**	*e*P	**P**	**19 08 56.7**	**-0.7**
	4.4nm,0.6s,mb4.3						
KDAK	**Kodiak Island**	**58.13**	**35**	P	**P**	**19 09 05.8**	**+1.0**
	8.3nm,0.8s,mb4.4,baz=123,slow=21,SNR=6.6						
TKM2	**Tokmak 2**	**58.92**	**308**	*e*P	**P**	**19 09 10.2**	**-0.3**
	2.6nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**59.74**	**307**	*e*P	**P**	**19 09 14.4**	**-1.7**
	2.0nm,0.8s,mb3.8						
UCH	**Uchtor**	**59.75**	**307**	*e*P	**P**	**19 09 17.3**	**+1.1**
	4.5nm,0.7s,mb4.2						
NWAO	**Narrogin (SRO)**	**59.85**	**205**	*e*P	**P**	**19 09 16.7**	**-0.1**
	14nm,1.3s,mb4.4						
EKS2	**Erkin-Say**	**60.27**	**307**	*e*P	**P**	**19 09 19.5**	**-0.2**
	1.4nm,0.6s,mb3.8						
AML	**Almayashu**	**60.37**	**307**	*e*P	**P**	**19 09 21.1**	**+0.8**
	2.8nm,0.5s,mb4.2						
MCK	**McKinley**	**60.87**	**28**	*e*P	**P**	**19 09 23.5**	**+0.2**
	8.5nm,1.0s,mb4.3						
BRVK	**Borovoye**	**62.31**	**319**	*e*P	**P**	**19 09 34.1**	**+0.9**
	9.0nm,0.5s,mb4.7						
INK	**Inuvik**	**67.42**	**24**	P	**P**	**19 10 05.6**	**-0.1**
	55nm,0.7s,mb5.3						
ARU	**Arti**	**68.84**	**324**	*e*P	**P**	**19 10 14.4**	**-0.3**
	10nm,0.4s,mb4.8						
YKA	**Yellowknife Ar**	**76.33**	**28**	P	**P**	**19 10 58.9**	**+0.2**
	1.9nm,0.6s,mb3.9,baz=293,slow=5.7,SNR=32						
RES	**Resolute Bay**	**76.85**	**13**	*e*P	**P**	**19 11 00.9**	**-0.5**
KEV	**Kevo**	**77.98**	**341**	*e*p	**P**	**19 11 06.6**	**-1.1**
	3.1nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**78.54**	**341**	P	**P**	**19 11 11.2**	**+0.4**
	2.2nm,0.4s,mb4.1,baz=72,slow=8.4,SNR=13						
JOF	**Joensuu**	**79.91**	**334**	*e*p	**P**	**19 11 17.0**	**-1.3**
	2.3nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**82.32**	**335**	*e*p	**P**	**19 11 30.0**	**-1.0**
	2.3nm,0.4s,mb4.2,baz=56,slow=4.8						
FINES	**FINESS Array B**	**82.78**	**334**	P	**P**	**19 11 32.4**	**-1.0**
	4.7nm,0.3s,mb4.6,baz=68,slow=4.8,SNR=39						
NVAR	**Mina Array Bea**	**83.19**	**51**	P	**P**	**19 11 37.5**	**+1.6**
	1.4nm,0.6s,mb3.9,baz=287,slow=3.6,SNR=11						
FFC	**Flin Flon**	**85.73**	**32**	*e*P	**P**	**19 11 48.3**	**0.0**
	3.8nm,0.9s,mb4.1						
FCC	**Fort Churchill**	**86.90**	**26**	*e*P	**P**	**19 11 53.1**	**-0.8**
	5.2nm,1.1s,mb4.2						
AKASG	**Malin Array Be**	**87.08**	**324**	P	**P**	**19 11 55.9**	**+0.9**
	1.1nm,0.4s,mb4.0,baz=52,slow=5.0,SNR=14						
NOA	**NORSAR Array B**	**88.56**	**339**	P	**P**	**19 12 01.8**	**+0.1**
	1.1nm,0.9s,mb3.7,baz=57,slow=7.0,SNR=3.0						
BRTR	**Keskin Array B**	**89.92**	**313**	P	**P**	**19 12 09.2**	**+0.7**
	0.9nm,0.6s,mb3.8,baz=53,slow=3.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**128.32**	**309**	PKP	PKPdf	19 18 14.1	-1.1
TORD	**Torodi Ar. Bea**	**128.32**	**309**	PKP	PKPdf	19 18 14.1	-1.1
	0.3nm,0.5s,baz=31,slow=1.3,SNR=8.8						
LPAZ	**La Paz**	**150.21**	**84**	PKPbc	PKPbc	19 19 01.0	+1.3
LPAZ	**La Paz**	**150.21**	**84**	PKPbc	PKPbc	19 19 01.0	+1.3
	1.0nm,0.6s,baz=12,slow=16,SNR=4.3						

IDC 06 19:05:16.9±20.0**, 13.29S**×**66.48E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/20**, mbtmp3.5**/3**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx3.2**/25**, Error ellipse: s-maj=665.2km s-min=38.0km az=61.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**35.95**	**66**	LR	LR	19 23 12.0	
	comp=Z,79nm,20.5s,baz=6.7,slow=30						
MKAR	**Makanchi Array**	**61.47**	**12**	P	P	19 15 35.2	-0.1
	0.2nm,0.2s,baz=206,slow=6.3,SNR=2.9						
MKAR				LR	LR	19 40 44.2	
	comp=Z,41nm,19.6s,baz=326,slow=35						
ASAR	**Alice Springs**	**64.28**	**110**	P	P	19 15 54.7	+0.1
	0.2nm,0.6s,baz=277,slow=6.6,SNR=6.4						
WRA	**Warramunga Arr**	**65.00**	**106**	P	P	19 15 59.5	+0.2
	0.7nm,0.8s,baz=264,slow=7.7,SNR=5.2						
SONM	**Songino Array**	**70.47**	**27**	LR	LR	19 44 04.0	
	comp=Z,55nm,18.3s,baz=174,slow=33						

IDC 06 19:43:15.9±1.5**, 7.52N**×**76.29W, h0**^{km}**, mb3.4**/1**, mb1 3.7**/3**, mb1mx3.4**/18**, mbtmp3.6**/3**, ML2.7**/2**, MS2.9**/2**, Ms1 2.9**/2**, ms1mx2.4**/24**, Error ellipse: s-maj=37.6km s-min=25.2km az=43.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.29**	**144**	Pn	Pn	19 44 10.9	+2.2
	20nm,0.3s,baz=289,slow=4.6,SNR=30						
ROSC				Sn	Sn	19 44 49.5	+1.0
	12nm,0.3s,baz=260,slow=22,SNR=6.9						
ROSC				LR	LR	19 45 35.2	
	comp=Z,161nm,19.0s,baz=180,slow=42						
SDV	**Santo Domingo**	**5.76**	**76**	Pn	Pn	19 44 42.8	+0.1
	0.2nm,0.3s,baz=233,slow=9.9,SNR=1.8						
SDV				Sn	Sn	19 45 48.7	-0.9
	1.9nm,0.3s,baz=228,slow=24,SNR=4.0						
LPAZ	**La Paz**	**25.00**	**161**	LR	LR	19 58 01.1	
	comp=Z,27nm,21.3s,baz=69,slow=35						
YKA	**Yellowknife Ar**	**61.55**	**341**	P	P	19 53 35.1	+0.6
	0.3nm,0.7s,baz=132,slow=7.0,SNR=7.1						
ASAR	**Alice Springs**	**146.90**	**238**	PKPbc	PKPbc	20 02 59.3	-1.8
	0.3nm,0.6s,baz=113,slow=4.3,SNR=5.6						

IDC 06 19:45:29.9±2.8, 064S×10068E, h126km±22km, mb3.3/5, mb1 3.4/6, mb1mx3.2/20, mbtmp3.3/6, MS3.4/1, Ms1 3.4/1, ms1mx3.0/11, Error ellipse: s-maj=88.6km s-min=16.8km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.84	333	P	Pn	19 46 25.0	-2.6
	6.0nm,0.3s,baz=141,slow=8.2,SNR=16						
PSI				S	Sn	19 47 11.4	-0.8
	5.2nm,0.3s,baz=233,slow=20,SNR=3.8						
PSI				LR	LR	19 48 00.2	
	comp=Z,471nm,18.4s,baz=131,slow=40						
WRA	Warramunga Arr	38.11	122	P	P	19 52 36.6	-0.3
	0.6nm,0.8s,baz=298,slow=11,SNR=6.0						
ASAR	Alice Springs	39.52	128	P	P	19 52 48.9	+0.3
	1.0nm,0.7s,baz=304,slow=7.8,SNR=9.1						
SONM	Songino Array	48.53	5	P	P	19 54 01.0	+0.9
	0.3nm,0.6s,baz=203,slow=7.8,SNR=3.4						
MKAR	Makanchi Array	49.92	344	P	P	19 54 08.8	-1.8
	0.6nm,0.6s,baz=146,slow=7.7,SNR=6.9						
FINES	FINESS Array B	83.23	332	P	P	19 57 43.0	+1.1
	1.6nm,1.0s,baz=106,slow=4.2,SNR=3.9						

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*ISCJB **06** 19:57:51.9±0.5, 4363N±004×10493W±007, h0km, Error ellipse: s-maj=6.9km s-min=5.7km az=168.1*
*IDC **06** 19:57:52.4±2.1, 4343N×105.18W, h0km, mb4.4/1, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, ML3.0/3, MS3.5/2, Ms1 3.5/2, ms1mx2.6/30, Error ellipse: s-maj=44.9km s-min=9.6km az=153.0*
*NEIC **06** 19:57:55.1±0.5, 4361N×105.16W, h0km, ML3.3, Error ellipse: s-maj=7.1km s-min=5.7km az=99.0, Suspected Mining explosion.*
NEIC 80 km [50 miles] SSE of Gillette.
ISC 06 19:57:54.6±0.5, 4363N±004×10506W±007, h0km, n45, σ1s27/43, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.89	56	ePg	Pg	19 58 13.8	+2.2
PHWY	Pilot Hill	2.34	187	ePn	Pn	19 58 34.1	-0.2
RWWY	Rawlins	2.50	220	ePn	Pn	19 58 37.0	+0.4
LAO	LASA Array	3.17	345	ePn	Pn	19 58 45.4	-0.2
RLMT	Red Lodge	3.37	298	ePn	Pn	19 58 47.8	-0.6
BW06	Boulder Array	3.40	257	ePn	Pn	19 58 47.3	-1.5
PDAR	Pinedale Array	3.40	257	Pn	Pn	19 58 48.3	-0.5
PDAR				Lg		19 59 34.7	
PDAR	Pinedale Array	3.40	257	Pn	Pn	19 58 48.3	-0.5
	3.2nm,0.3s,baz=79,slow=18,SNR=78						
PDAR				Lg		19 59 34.7	
	17nm,0.3s,baz=80,slow=32,SNR=13						
ISCO	Idaho Springs	3.85	186	ePn	Pn	19 58 56.3	+1.3
LKWY	Lake	3.96	286	ePn	Pn	19 58 58.8	+2.3
LOHW	Long Hollow	4.03	272	ePn	Pn	19 58 58.8	+1.4
MOOW	Moose Ponds	4.12	274	ePn	Pn	19 58 58.8	-0.1
YNR	Norris Junctio	4.19	287	ePn	Pn	19 58 59.5	-0.1
REDW	Red Top Meadow	4.22	268	ePn	Pn	19 59 01.2	+1.1
YFT	Old Faithful	4.25	283	ePn	Pn	19 59 01.4	+1.0
IMW	Indian Meadow	4.27	276	ePn	Pn	19 59 00.8	0.0
TPAW	Teton Pass	4.28	270	ePn	Pn	19 59 00.7	-0.3
YMR	Madison River	4.38	286	ePn	Pn	19 59 03.8	+1.5
AHID	Auburn Hatcher	4.50	261	ePn	Pn	19 59 03.1	-0.9
SMCO	Snowmass	4.67	199	ePn	Pn	19 59 11.6	+5.2
QLMT	Earthquake Lak	4.73	287	ePn	Pn	19 59 09.5	+2.3
DGMT	Dagmar	4.88	7	ePn	Pn	19 59 09.6	+0.4
BOZ	Bozeman (W)	5.11	296	ePn	Pn	19 59 10.9	-1.4
	4.6nm,0.5s						
HWUT	Hardware Ranch	5.21	249	ePn	Pn	19 59 11.4	-2.3
	8.6nm,0.5s						
EGMT	Eagleton	5.49	325	ePn	Pn	19 59 17.2	-0.2
	11nm,0.5s						
JLU	Jordanelle	5.63	240	Pn	Pn	19 59 14.7	-4.8
DLMT	Dillon	5.66	290	ePn	Pn	19 59 23.8	+3.8
	6.8nm,0.6s						
MCMT	McKenzie Canyo	5.72	285	ePn	Pn	19 59 22.7	+1.9
SDCO	Great Sand Dun	5.88	183	ePn	Pn	19 59 23.5	+0.5
	2.0nm,0.5s						
HVU	Hansel Valley	5.98	255	ePn	Pn	19 59 20.0	-4.3
	5.2nm,0.4s						
PV10	Paradox Valley	6.05	211	ePn	Pn	19 59 27.1	+1.9
SRU	San Rafael	6.10	224	ePn	Pn	19 59 24.5	-1.5
	8.5nm,0.5s						
ECSD	EROS,Sioux Fal	6.13	86	ePn	Pn	19 59 22.1	-4.2
	3.9nm,0.5s						
CBKS	Cedar Bluff	6.26	138	Pn	Pb	19 59 39.8	-4.6
TMUT	Trail Mountain	6.33	229	ePn	Pn	19 59 28.6	-0.5
CHMT	Chamberlain Mo	6.65	302	ePn	Pn	19 59 32.6	-0.8
HLID	Hailey	6.79	273	ePn	Pn	19 59 35.7	+0.3
	2.3nm,0.5s						
MVCO	Mesa Verde	6.92	203	ePn	Pn	19 59 41.5	+4.2
	4.7nm,0.4s						
MSU	Marysvale	7.42	229	ePn	Pn	19 59 43.2	-0.8
MVU	Marysvale	7.44	229	Pn	Pn	19 59 42.7	-1.7
	235nm,1.1s						
ULM	Lac du Bonnet	9.12	40	Pn	Pn	20 00 05.0	-2.4
	0.1nm,0.3s,baz=226,slow=14,SNR=2.4						
ULM				Lg		20 02 42.3	
	0.4nm,0.3s,baz=4.9,slow=16,SNR=3.2						
BBB	Bella Bella	17.61	307	LR	LR	20 09 23.8	
	comp=Z,100nm,21.3s,baz=69,slow=39						
YKA	Yellowknife Ar	19.71	347	P	Pn	20 02 24.4	-2.3
	0.1nm,0.3s,baz=157,slow=12,SNR=3.1						
TEIG	Tepich	27.23	144	LR	LR	20 14 36.3	
	comp=Z,142nm,19.8s,baz=75,slow=37						
ARCES	ARCESS Array B	61.48	18	P	P	20 08 12.4	0.0
	5.0nm,1.1s,baz=338,slow=7.0,SNR=3.3						

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*ISCJB **06** 20:01:58.2±0.7, 3077N±008×138.1E±0.1, h490km±6km, mb3.7/21, Error ellipse: s-maj=15.5km s-min=10.0km az=41.1*
*IDC **06** 20:01:58.9±1.4, 3071N×13798E, h474km±14km, mb2.9/8, mb1 3.1/12, mb1mx3.0/24, mbtmp3.0/12, Error ellipse: s-maj=30.8km s-min=12.9km az=81.0*
*NEIC **06** 20:01:58.9±0.7, 3073N×13799E, h479km±6km, mb3.9/12, Error ellipse: s-maj=11.3km s-min=9.6km az=105.0*
*JMA **06** 20:01:59.6±0.4, 3089N×138.16E, h491km, M3.8*
ISC 06 20:01:59.7±0.7, 3086N±008×1381E±01, h488km±6km, n51, σ0s99/56, mb3.7/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	Kozaga	3.36	323	P	P	20 03 12.4	+0.2
JKN2	Miekihoku	3.72	336	P	P	20 03 15.6	+0.7
JIE	Ise	3.73	342	P	P	20 03 16.0	+1.1
JWY	Kouya	3.98	328	P	P	20 03 17.9	+0.9
BSO3	Boso 3	4.42	26	eS	S	20 04 26.0	-0.8
JAO	Obara	4.46	351	P	P	20 03 22.7	+1.7
JOD2	Odawara 2	4.47	10	P	P	20 03 21.4	+0.3
BSO1	Boso 1	4.49	32	eS	S	20 04 27.2	-0.7
JNY	Yasuok	4.50	357	P	P	20 03 22.9	+1.6
BSO4	Boso 4	4.52	24	eS	S	20 04 29.4	+0.9
JHU	Hanno	5.08	11	eS	S	20 04 35.2	-2.4
JRY	Ryogami san	5.19	7	P	P	20 03 28.3	+0.7
JRY				eS	S	20 04 39.6	+0.1
JYT	Yasato	5.63	17	eS	S	20 04 44.1	-3.0
JAG	Ashikaga	5.67	11	P	P	20 03 31.7	-0.4
MJAR	Matsushiro Arr	5.67	1	P	P	20 03 32.1	0.0
	1.9nm,0.3s,baz=182,slow=8.7,SNR=22						
MJAR				S	S	20 04 47.5	-0.4
	0.1nm,0.3s,baz=289,slow=38,SNR=3.3						
MAJO	Matsushiro	5.67	1	ePn	P	20 03 31.9	-0.2
	12nm,0.3s						
MAT	Matsushiro	5.67	1	P	P	20 03 32.1	-0.1
MAT				S	S	20 04 48.5	+0.6
MAT	Matsushiro	5.67	1	P	P	20 03 32.3	+0.1
JHO	Hitachi	6.09	19	P	P	20 03 36.2	0.0
JHO				eS	S	20 04 53.7	-1.6
JNU	Nakatsue	6.56	292	P	P	20 03 39.9	-1.1
	0.5nm,0.3s,baz=219,slow=28,SNR=4.5						
JFK	Kawauchi	6.88	19	P	P	20 03 45.0	+0.9
JFK				eS	S	20 05 07.4	-2.3
JMK	Ichinoseki	8.47	17	P	P	20 04 02.6	+2.1
JMK				eS	S	20 05 39.6	-0.2
KSRS	Korea Array	10.71	311	P	P	20 04 24.1	-0.2
	0.4nm,0.3s,baz=124,slow=10.0,SNR=5.6						
ASAJ	Asahikawa	13.70	14	P	P	20 04 59.2	+3.1
	2.8nm,0.3s,baz=237,slow=26,SNR=16						
NACB	Ninganchiao	16.10	250	P	P	20 05 15.1	-6.6
SONM	Songino Array	29.55	314	P	P	20 07 24.0	+0.4
	0.2nm,0.4s,mb2.9,baz=134,slow=8.4,SNR=4.1						
MA2	Magadan	29.96	13	P	P	20 07 21.4	-5.6
BILL	Bilibino	40.70	16	P	P	20 08 56.9	+0.4
	3.4nm,0.8s,mb3.8						
TAPN	Taplejung	43.90	279	eP	P	20 09 21.6	-0.7
	4.3nm,0.4s,mb4.2						
ODAN	Odare	44.31	278	eP	P	20 09 24.7	-0.8
	8.5nm,0.6s,mb4.3						
JIRN	Jiri	45.10	280	eP	P	20 09 31.5	-0.1
	22nm,0.4s,mb5.0						
MKAR	Makanchi Array	45.37	307	P	P	20 09 33.2	-0.1
MKAR	Makanchi Array	45.37	307	P	P	20 09 33.2	-0.1
	1.0nm,0.5s,mb3.5,baz=92,slow=9.3,SNR=13						
KKN	Kakani	45.83	280	eP	P	20 09 36.6	-0.6
	5.9nm,0.4s,mb4.3						
GKN	Gorkha	46.31	281	eP	P	20 09 39.4	-1.4
	5.2nm,0.4s,mb4.3						
KURK	Kurchatov	47.83	312	eP	P	20 09 51.1	-0.9
	1.6nm,0.8s,mb3.4						
TKM2	Tokmak 2	50.38	302	eP	P	20 10 10.2	-0.9
	1.3nm,0.4s,mb3.6						
WRA	Warramunga Arr	50.63	185	P	P	20 10 12.1	-1.0
	0.5nm,0.5s,mb3.1,baz=0.6,slow=7.9,SNR=18						
AAK	Ala-Archa	51.23	302	eP	P	20 10 16.3	-0.9
	1.4nm,0.5s,mb3.5						
UCH	Uchtor	51.28	301	eP	P	20 10 18.2	+0.6
	1.8nm,0.8s,mb3.5						
AML	Almayashu	51.89	301	eP	P	20 10 22.8	+0.7
	2.5nm,0.4s,mb3.9						
BRVK	Borovoye	52.94	316	P	P	20 10 29.7	+0.3
	1.9nm,0.9s,mb3.4						
ASAR	Alice Springs	54.36	185	P	P	20 10 39.0	-0.8
	0.4nm,0.7s,mb2.9,baz=20,slow=12,SNR=4.1						
KBL	Kabul	57.22	293	eP	P	20 10 59.1	-0.5
ARCES	ARCESS Array B	68.82	340	P	P	20 12 15.6	+1.7
	0.9nm,0.5s,mb3.6,baz=64,slow=8.8,SNR=13						
JOF	Joensuu	70.13	332	ep	P	20 12 22.2	+0.3
	1.4nm,0.4s,mb3.8						
FINES	FINESS Array B	73.00	332	P	P	20 12 39.5	+0.8
	0.6nm,0.3s,mb3.5,baz=73,slow=5.7,SNR=12						
AKASG	Malin Array Be	77.49	322	P	P	20 13 04.3	+0.3
	0.5nm,0.3s,mb3.5,baz=50,slow=5.3,SNR=3.2						
NOA	NORSAR Array B	78.79	337	P	P	20 13 11.8	+0.9
	2.5nm,1.1s,mb3.6,baz=27,slow=11,SNR=2.2						
TORD	Torodi Ar. Bea	119.45	310	PKP	PKPdf	20 19 54.0	+0.2
	0.2nm,0.6s,baz=37,slow=1.0,SNR=6.1						

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*ISCJB **06** 20:04:22.8±0.2, 4772N±001×701E±002, h9km±2km, Error ellipse: s-maj=2.1km s-min=1.7km az=159.7*
*ZUR **06** 20:04:24.5, 4773N×7.10E, h1km±2km, ML2.2/11*
*STR **06** 20:04:24.3±0.2, 4774N×709E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **06** 20:04:24.7±0.0, 4774N×709E, h12km, ML2.7/16, Error ellipse: s-maj=0.9km s-min=0.9km az=73.0*
*LDG **06** 20:04:24.8±0.0, 4774N×707E, h10km, Md2.9/3, Ml2.7/18, Error ellipse: s-maj=0.9km s-min=0.8km az=84.0*
*BGR **06** 20:04:24.8±0.5, 4777N×706E, h10km, ML2.5/5, Error ellipse: s-maj=5.6km s-min=4.4km az=178.0*
*NEIC **06** 20:04:24.3, 4774N×709E, h10km, ML2.7(LDG), ML2.5(STR), ML2.5(SZGRF), ML2.2(ZUR), After STR.*
*LEDBW **06** 20:04:24.8±0.2, 47740N±0009×7090E±0009, h6km±3km, ML2.4, Error ellipse: s-maj=4.0km s-min=2.0km az=113.0*
ISC 06 20:04:23.9±0.2, 4774N±001×704E±002, h16km±2km, n102, σ0s79/206, 6C-6D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOF	Molkenrain	0.13	28	⇑iP*	Pg	20 04 27.4	-0.3
MOF				S*	Sg	20 04 29.6	-0.6
MOF	Molkenrain	0.13	28	⇑iPg	Pg	20 04 27.4	-0.3
MOF				Sg	Sg	20 04 29.6	-0.6
MOF	Molkenrain	0.13	28	Pg	Pg	20 04 27.3	-0.4
MOF				Sg	Sg	20 04 29.3	-0.9
HINF	Hinteralfeld	0.15	302	ePg	Pg	20 04 28.0	+0.1
	SNR=1.0						
HINF				eSg	Sg	20 04 30.3	-0.3
	239nm,0.2s						
HINF	Hinteralfeld	0.15	302	ePg	Pg	20 04 28.0	+0.1
	SNR=1.0						
HINF				eSg	Sg	20 04 30.3	-0.3
	120nm,0.2s						
BOURR	Bourrignon	0.37	159	ePg	Pg	20 04 31.9	+0.5
BOURR	Bourrignon	0.37	159	⇓iPg	Pg	20 04 31.9	+0.5
	245nm,1.4s						
LOMF	Lomont	0.41	201	P*	Pg	20 04 33.1	+0.8
LOMF				S*	Sg	20 04 39.1	+1.2
LOMF	Lomont	0.41	201	Pg	Pg	20 04 33.0	+0.7
LOMF				Sg	Sg	20 04 38.6	+0.7
BBS	Basel-Blauen	0.42	130	⇓iP*	Pg	20 04 32.6	+0.2
BBS				PmP		20 04 33.4	
BBS	Basel-Blauen	0.42	130	Px	Px	20 04 33.4	
ECH	Echery	0.49	9	P*	Pb	20 04 34.1	0.0
ECH				S*	Sb	20 04 40.6	-0.4
ECH	Echery	0.49	9	Pg	Pg	20 04 33.8	+0.2
ECH				Sg	Sg	20 04 40.3	+0.1
HAU	Haudompre	0.54	300	ePg	Pg	20 04 35.3	+0.7
	SNR=1.0						
HAU				eSg	Sg	20 04 42.5	+0.7
	SNR=1.0						
HAU				eSn	Sg	20 04 46.2	+4.4
	72nm,0.3s						
HAU	Haudompre	0.54	300	ePg	Pg	20 04 35.3	+0.7
	SNR=1.0						
HAU				eSg	Sg	20 04 42.5	+0.7
	SNR=1.0						
HAU				eSn	Sg	20 04 46.2	+4.4
	36nm,0.3s						
BALST	Balsthal	0.60	132	⇓iPg	Pg	20 04 35.9	+0.2
	165nm,0.3s						
KIZ	Kirchzarten	0.63	69	⇑iP*	Pg	20 04 36.0	-0.3
KIZ				PmP		20 04 36.8	
KIZ				S*	Sg	20 04 44.5	-0.1
KIZ	Kirchzarten	0.63	69	⇑iPg	Pg	20 04 36.0	-0.3
KIZ				Sg	Sg	20 04 44.5	-0.1
KIZ	Kirchzarten	0.63	69	Px	Px	20 04 36.8	
FELD	Feldberg im Sc	0.66	77	P*	Pb	20 04 36.7	-0.4
FELD	Feldberg im Sc	0.66	77	Pg	Pg	20 04 36.7	-0.2
FELD				Sg	Sg	20 04 45.9	+0.2
CDF	Champ du Feu	0.69	13	ePn	Pn	20 04 39.2	+0.1
CDF				eSg	Sg	20 04 47.0	+0.3
	SNR=1.0						
CDF				eSn	Sg	20 04 49.4	+2.7
	32nm,0.3s						
CDF	Champ du Feu	0.69	13	ePg	Pg	20 04 37.7	+0.2
CDF				ePn	Pn	20 04 39.2	+0.1
CDF				eSg	Sg	20 04 47.0	+0.3
CDF				eSn	Sg	20 04 49.4	+2.7
CDF	Champ du Feu	0.69	13	ePn	Pn	20 04 39.2	+0.1
CDF				eSg	Sg	20 04 47.0	+0.3
	SNR=1.0						
CDF				eSn	Sg	20 04 49.4	+2.7
	16nm,0.3s						
SULZ	Cheisacher	0.75	106	ePg	Pg	20 04 38.4	-0.2
SULZ	Cheisacher	0.75	106	⇑iP	Pg	20 04 38.4	-0.2
	420nm,0.4s						
THEF	They Montfort	0.86	305	P*	Pb	20 04 41.8	+1.3
THEF				PmP		20 04 42.3	
THEF				S*	Sb	20 04 54.0	+2.2
THEF	They Montfort	0.86	305	Pg	Pg	20 04 41.9	+1.2
THEF				Sg	Sg	20 04 53.9	+1.9
BRANT	Les Verrieres	0.89	206	eP	Pb	20 04 42.0	+1.1
	140nm,0.4s						
TORNY	Torny/Romont	0.96	183	⇓iP	Pb	20 04 43.3	+1.1
	210nm,0.2s						
SLE	Schleitheim	0.98	88	ePg	Pg	20 04 42.7	-0.2
SLE	Schleitheim	0.98	88	⇓iP	Pb	20 04 42.8	+0.3
	281nm,0.5s						
FLACH	Flaach	1.04	98	eP	Pb	20 04 44.5	+0.9
	196nm,0.2s						
BFO	Black Forest	1.05	55	ePg	Pg	20 04 43.8	-0.4
	SNR=11						
BFO				eSg	Sg	20 04 57.6	-0.4
	SNR=4.7						
BFO	Black Forest	1.05	55	ePg	Pg	20 04 43.7	-0.5
BFO				eSg	Sg	20 04 58.1	+0.2
ZUR	Degenried	1.11	109	ePg	Pg	20 04 45.7	+0.4
ZUR				eSg	Sg	20 05 00.2	+0.5
WIMIS	Wimmis	1.14	159	eP	Pn	20 04 46.7	+1.5
	49nm,0.5s						
SPAK	Spaichingen-Ko	1.23	72	P	Pn	20 04 46.5	+0.1
HASLI	Hasliberg/Brie	1.24	142	⇑iP	Pn	20 04 47.8	+1.3
	80nm,0.5s						
CABF	La Chapelle	1.30	210	ePg	Pg	20 04 49.5	+0.5
	SNR=1.0						
CABF				eSn	Sn	20 05 04.4	0.0
	SNR=1.0						
CABF				eSg	Sg	20 05 06.3	+0.4
	40nm,0.7s,SNR=1.0						
CABF	La Chapelle	1.30	210	ePn	Pn	20 04 48.2	+0.8
CABF				ePg	Pg	20 04 49.5	+0.5
CABF				eSn	Sn	20 05 04.4	0.0
CABF				eSg	Sg	20 05 06.3	+0.4
CABF	La Chapelle	1.30	210	ePg	Pg	20 04 49.5	+0.5
	SNR=1.0						
CABF				eSn	Sn	20 05 04.4	0.0
	SNR=1.0						
CABF				eSg	Sg	20 05 06.3	+0.4
	20nm,0.7s,SNR=1.0						
SISB	Singen-Schiene	1.30	91	Pg	Pg	20 04 48.9	0.0
SISB				S	Sb	20 05 03.9	-0.5
WILA	Wila	1.30	104	eSg	Sg	20 05 06.3	+0.3
RFYF	Reffroy	1.38	311	ePg	Pg	20 04 50.7	+0.3
	baz=132						
RFYF				eSg	Sg	20 05 09.3	+0.9
	42nm,0.3s,baz=132						
RFYF	Reffroy	1.38	311	ePg	Pg	20 04 50.7	+0.3
RFYF				eSg	Sg	20 05 09.3	+0.9
	21nm,0.3s						
AIGLE	Aigle	1.40	182	⇑iP	Pn	20 04 50.8	+2.1
	85nm,0.8s						
LKBD2	Leukerbad 2	1.42	163	⇑iP	Pn	20 04 51.2	+2.1
SFTF	Sexfontaines	1.43	290	ePn	Pn	20 04 49.5	+0.4
	baz=117						
SFTF	Sexfontaines	1.43	290	ePg	Pg	20 04 51.6	+0.3
	baz=114						
SFTF				eSn	Sn	20 05 07.5	0.0
SFTF				eSg	Sg	20 05 10.8	+0.9
	31nm,0.2s						
SFTF	Sexfontaines	1.43	290	ePn	Pn	20 04 49.5	+0.4
SFTF				ePg	Pg	20 04 51.6	+0.3
SFTF				eSn	Sn	20 05 07.5	0.0
SFTF				eSg	Sg	20 05 10.8	+0.9
SFTF	Sexfontaines	1.43	290	ePg	Pg	20 04 51.6	+0.3
SFTF				eSn	Sn	20 05 07.5	0.0
SFTF				eSg	Sg	20 05 10.8	+0.9
	16nm,0.2s						
GUT	Gutenstein	1.44	76	P	Pn	20 04 48.9	-0.3
GUT				Sg	Sg	20 05 10.1	-0.1
LBG	Lerchenberg	1.50	51	P	Pn	20 04 50.0	-0.1
LBG				Sg	Sg	20 05 11.9	-0.2
MEZF	Maizieres J'vi	1.54	301	ePn	Pn	20 04 50.5	-0.1
	baz=126						
MEZF	Maizieres J'vi	1.54	301	ePg	Pg	20 04 53.7	+0.2
MEZF				eSn	Sn	20 05 10.1	-0.1
	baz=122,SNR=1.0						
MEZF				eSg	Sg	20 05 13.8	+0.3
	32nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	1.54	301	ePn	Pn	20 04 50.5	-0.1
MEZF				ePg	Pg	20 04 53.7	+0.2
MEZF				eSn	Sn	20 05 10.1	-0.1
MEZF				eSg	Sg	20 05 13.8	+0.3
MEZF	Maizieres J'vi	1.54	301	ePg	Pg	20 04 53.7	+0.2
MEZF				eSn	Sn	20 05 10.1	-0.1
	SNR=1.0						
MEZF				eSg	Sg	20 05 13.8	+0.3
	16nm,0.4s,SNR=1.0						
DIX	Grande Dixence	1.68	171	⇓iP	Pn	20 04 54.4	+1.9
	31nm,0.3s						
BUCH	Bad Urach	1.71	64	P	Pn	20 04 52.6	-0.4
BUCH				Sg	Sg	20 05 19.1	+0.3
WLF	Walferdange	2.02	343	eSg	Sg	20 05 28.3	-0.5
	SNR=4.1						
UBR	Ueberruh	2.07	90	Sg	Sg	20 05 30.6	+0.1
LOR	Lormes	2.21	259	ePn	Pn	20 05 00.5	+0.7
	baz=87						
LOR	Lormes	2.21	259	ePg	Pg	20 05 06.4	+0.2
	baz=86,SNR=1.0						
LOR				eSn	Sn	20 05 25.7	-1.1
	baz=82,SNR=1.0						
LOR				eSg	Sg	20 05 34.7	-0.2
	17nm,0.2s,SNR=1.0						
LOR	Lormes	2.21	259	ePn	Pn	20 05 00.5	+0.7
LOR				ePg	Pg	20 05 06.4	+0.2
LOR				eSn	Sn	20 05 25.7	-1.1
LOR				eSg	Sg	20 05 34.7	-0.2
LOR	Lormes	2.21	259	ePg	Pg	20 05 06.4	+0.2
	SNR=1.0						
LOR				eSn	Sn	20 05 25.7	-1.1
	SNR=1.0						
LOR				eSg	Sg	20 05 34.7	-0.2
	8.7nm,0.2s,SNR=1.0						
LPL	La Plagne	2.23	186	ePg	Pg	20 05 06.3	-0.4
LPL				eSg	Sg	20 05 35.0	-0.6
	3.0nm,0.4s						
LPL	La Plagne	2.23	186	ePg	Pg	20 05 06.3	-0.4
LPL				eSg	Sg	20 05 35.0	-0.6
	1.5nm,0.4s						
LPG	La Plagne	2.25	185	ePg	Pg	20 05 06.7	-0.3
LPG				eSg	Sg	20 05 35.4	-0.8
	4.5nm,0.3s						
LPG	La Plagne	2.25	185	ePg	Pg	20 05 06.7	-0.3
LPG				eSg	Sg	20 05 35.4	-0.8
	2.2nm,0.3s						
SIND	Sindeldorf	2.35	46	Pg	Pg	20 05 09.7	+0.7
SIND				Sg	Sg	20 05 39.1	-0.2
SMF	Signal de Mont	2.44	245	ePg	Pg	20 05 10.9	+0.2
SMF				eSn	Sn	20 05 31.1	-1.4
SMF				eSg	Sg	20 05 42.0	-0.3
	7.0nm,0.2s						
SMF	Signal de Mont	2.44	245	ePn	Pn	20 05 03.2	+0.2
SMF				ePg	Pg	20 05 10.9	+0.2
SMF				eSn	Sn	20 05 31.1	-1.4
SMF				eSg	Sg	20 05 42.0	-0.3
SMF	Signal de Mont	2.44	245	ePg	Pg	20 05 10.9	+0.2
SMF				eSn	Sn	20 05 31.1	-1.4
SMF				eSg	Sg	20 05 42.0	-0.3
	3.5nm,0.2s						
SSF	Saint Saulge	2.50	256	ePg	Pg	20 05 11.7	0.0
	SNR=1.0						
SSF				eSn	Sn	20 05 32.7	-1.1
SSF				eSg	Sg	20 05 43.2	-0.9
	6.2nm,0.2s,SNR=1.0						
SSF	Saint Saulge	2.50	256	ePn	Pn	20 05 04.2	+0.4
SSF				ePg	Pg	20 05 11.7	0.0
SSF				eSn	Sn	20 05 32.7	-1.1
SSF				eSg	Sg	20 05 43.2	-0.9
SSF	Saint Saulge	2.50	256	ePg	Pg	20 05 11.7	0.0
	SNR=1.0						
SSF				eSn	Sn	20 05 32.7	-1.1
SSF				eSg	Sg	20 05 43.2	-0.9
	3.1nm,0.2s,SNR=1.0						
TNS	Taunus Mts	2.66	20	eSg	Sg	20 05 47.2	-2.0
	SNR=1.9						
AVF	Avril sur Loir	2.68	251	ePg	Pg	20 05 14.6	-0.7
	SNR=1.0						
AVF				eSn	Sn	20 05 37.6	-0.9
	SNR=1.0						
AVF				eSg	Sg	20 05 49.9	-0.2
	2.8nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.68	251	ePn	Pn	20 05 06.4	0.0
AVF				ePg	Pg	20 05 14.6	-0.7
AVF				eSn	Sn	20 05 37.6	-0.9
AVF				eSg	Sg	20 05 49.9	-0.2
AVF	Avril sur Loir	2.68	251	ePg	Pg	20 05 14.6	-0.7
	SNR=1.0						
AVF				eSn	Sn	20 05 37.6	-0.9
	SNR=1.0						
AVF				eSg	Sg	20 05 49.9	-0.2
	1.4nm,0.2s,SNR=1.0						
GIVF	Givet	2.78	329	ePg	Pg	20 05 16.5	-0.7
GIVF				eSg	Sg	20 05 52.8	-0.5
	5.4nm,0.3s						
GIVF	Givet	2.78	329	ePn	Pn	20 05 07.6	-0.1
GIVF				ePg	Pg	20 05 16.5	-0.7
GIVF				eSg	Sg	20 05 52.8	-0.5
GIVF	Givet	2.78	329	ePg	Pg	20 05 16.5	-0.7
GIVF				eSg	Sg	20 05 52.8	-0.5
	2.7nm,0.3s						
FUR	Furstenfeldbru	2.88	80	eSg	Sg	20 05 56.1	-0.2
	SNR=2.0						
ORIF	Oris-en-Rattie	2.93	196	ePg	Pg	20 05 19.1	-1.0
ORIF				eSg	Sg	20 05 57.3	-0.7
	3.3nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	2.93	196	ePg	Pg	20 05 19.1	-1.0
ORIF				eSg	Sg	20 05 57.3	-0.7
	1.6nm,0.3s,SNR=1.0						

BAIF	Baives	2.98	322	ePg	Pg	20 05 20.3	-0.8
BAIF				eSg	Sg	20 05 58.5	-1.2
	1.7nm,0.2s						
BAIF	Baives	2.98	322	ePn	Pn	20 05 10.6	+0.1
BAIF				ePg	Pg	20 05 20.3	-0.8
BAIF				eSg	Sg	20 05 58.5	-1.2
BAIF	Baives	2.98	322	ePg	Pg	20 05 20.3	-0.8
BAIF				eSg	Sg	20 05 58.5	-1.2
	0.9nm,0.2s						
MBDF	Montbardon	3.02	184	ePg	Pg	20 05 20.6	-1.1
	SNR=1.0						
MBDF				eSg	Sg	20 05 59.5	-1.3
	0.7nm,0.3s						
MBDF	Montbardon	3.02	184	ePg	Pg	20 05 20.6	-1.1
	SNR=1.0						
MBDF				eSg	Sg	20 05 59.5	-1.3
	0.3nm,0.3s						
HYF	Humbligny	3.02	263	eSg	Sg	20 06 00.6	-0.3
BGF	Bois d'Agland	3.10	249	ePg	Pg	20 05 22.7	-0.5
BGF				eSg	Sg	20 06 02.4	-0.9
	12nm,0.4s						
BGF	Bois d'Agland	3.10	249	ePn	Pn	20 05 12.2	+0.2
BGF				ePg	Pg	20 05 22.7	-0.5
BGF				eSg	Sg	20 06 02.4	-0.9
BGF	Bois d'Agland	3.10	249	ePg	Pg	20 05 22.7	-0.5
BGF				eSg	Sg	20 06 02.4	-0.9
	5.8nm,0.4s						
VIVF	Saint-Julien-l	3.32	211	ePg	Pg	20 05 26.1	-1.3
VIVF				eSg	Sg	20 06 08.8	-1.6
	3.3nm,0.2s						
VIVF	Saint-Julien-l	3.32	211	ePg	Pg	20 05 26.1	-1.3
VIVF				eSg	Sg	20 06 08.8	-1.6
	1.6nm,0.2s						
GUNZ	Gunzen	4.36	51	eSn	Sn	20 06 18.6	-1.2
	SNR=1.1						
WERD	Werda	4.40	50	eSn	Sn	20 06 19.9	-0.8
	SNR=1.4						
CAF	Calviac	4.45	233	ePn	Pn	20 05 30.4	-0.2
TANN	Tannenbergstha	4.46	51	eSn	Sn	20 06 20.9	-1.3
	SNR=1.4						

IDC 06 20:10:42.5±1.9, 356S×12841E, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.6/16, mbtmp3.8/3, ML3.8/1, Error ellipse: s-maj=132.9km s-min=26.3km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.27	161	P	Pn	20 14 45.7	+0.4
	0.4nm,0.3s,baz=340,slow=12,SNR=38						
ASAR	Alice Springs	20.68	166	P	P	20 15 24.1	0.0
	2.2nm,0.4s,baz=347,slow=11,SNR=49						
MKAR	Makanchi Array	64.50	327	P	P	20 21 21.2	+0.1
	0.3nm,0.3s,baz=116,slow=7.8,SNR=12						

*IDC **06** 20:14:47.7±0.8, 075S×10043E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx4.0/19, mbtmp4.0/11, Error ellipse: s-maj=42.9km s-min=16.1km az=51.0*
*NEIC **06** 20:14:50.3±0.5, 067S×10066E, h20^{km}, mb4.6/17, Error ellipse: s-maj=21.7km s-min=8.8km az=56.0*
*ISCJB **06** 20:14:53.0±2.5, 06S±0.1×1006E±0.1, h48^{km}±19^{km}, mb4.3/29, Error ellipse: s-maj=27.8km s-min=11.7km az=43.8*
ISC 06 20:14:53.7±2.0, 07S±01×1006E±01, h41^{km}±16^{km}, n51, σ1^{s}11/51, mb4.3/29, 5C-10D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KGM	Kluang	3.82	46	⇓P	Pn	20 15 50.9	+0.8
PSI	Prapat	3.84	334	Pn	Pn	20 15 54.6	+4.2
	6.0nm,0.3s,baz=155,slow=14,SNR=15						
PSI				Sn	Sn	20 16 46.6	+12
	20nm,0.3s,baz=218,slow=17,SNR=5.3						
FRIM	Kepong	4.03	15	⇑P	Pn	20 15 52.1	-0.8
MYKOM	Kota Tinggi	4.08	53	⇓P	Pn	20 15 54.5	+0.9
IPM	Ipoh	5.15	5	⇓P	Pn	20 16 08.4	+0.1
KULM	Kulim	5.93	1	ePn	Pn	20 16 18.0	-1.1
KULM				e		20 16 35.2	
KULM	Kulim	5.93	1	⇑P	Pn	20 16 18.0	-1.1
KTGM	Kuala Trenggan	6.49	23	⇓P	Pn	20 16 26.9	+0.1
KSM	Kuching	9.95	78	⇑P	Pn	20 17 20.3	+6.1
KKM	Kota Kinabalu	16.97	67	⇓P	Pn	20 18 56.1	+7.9
SDKM	Sandakan	17.73	69	⇓P	Pn	20 19 04.2	+6.5
KDM	Kudat	17.88	65	⇓P	Pn	20 19 04.5	+5.1
TSM	Tawau	17.96	74	⇑P	Pn	20 19 05.8	+5.3
PALK	Pallekele	21.36	292	eP	P	20 19 39.2	+1.5
	5.6nm,0.7s,mb4.0						
ODAN	Odare	30.19	336	eP	P	20 20 59.8	-0.5
	9.7nm,0.7s,mb4.7						
TAPN	Taplejung	30.50	337	eP	P	20 21 03.3	+0.3
	15nm,0.8s,mb4.9						
JIRN	Jiri	31.39	335	eP	P	20 21 11.1	+0.2
	16nm,0.9s,mb4.9						
KKN	Kakani	31.90	334	eP	P	20 21 15.2	-0.1
	7.6nm,0.4s,mb4.8						
GKN	Gorkha	32.37	333	eP	P	20 21 19.3	-0.2
	8.5nm,0.4s,mb4.9						
NWAO	Narrogin (SRO)	35.69	156	P	P	20 21 45.5	-2.7
	17nm,1.4s,mb4.8						
WRA	Warramunga Arr	38.17	122	P	P	20 22 09.1	-0.3
	2.3nm,0.8s,mb4.0,baz=301,slow=9.0,SNR=13						
WRA				PcP	PcP	20 24 24.9	+1.2
	0.4nm,0.7s,baz=303,slow=2.6,SNR=3.8						
ASAR	Alice Springs	39.57	128	P	P	20 22 22.0	+0.8
	3.2nm,0.8s,mb4.1,baz=302,slow=7.8,SNR=26						
ASAR				PcP	PcP	20 24 29.4	+1.4
	0.5nm,0.6s,baz=310,slow=2.9,SNR=4.6						
KSRS	Korea Array	45.59	31	P	P	20 23 11.1	+1.2
	2.5nm,0.9s,mb4.2,baz=221,slow=8.8,SNR=6.4						
KBL	Kabul	45.83	323	eP	P	20 23 12.1	+0.3
	2.7nm,0.6s,mb4.3						
SONM	Songino Array	48.59	5	P	P	20 23 33.1	+0.1
	0.9nm,0.7s,mb3.9,baz=186,slow=9.4,SNR=6.5						
SONM				PcP	PcP	20 25 00.6	+2.4
	1.0nm,0.8s,baz=174,slow=3.7,SNR=3.0						
SONM				ScP	ScP	20 28 51.4	+1.5
	0.6nm,0.9s,baz=192,slow=4.3,SNR=4.3						
UCH	Uchtor	48.76	334	eP	P	20 23 35.0	+0.5
	4.4nm,0.8s,mb4.5						
TKM2	Tokmak 2	48.87	336	eP	P	20 23 35.9	+0.6
	4.8nm,0.8s,mb4.6						
AML	Almayashu	49.05	334	eP	P	20 23 37.5	+0.9
	3.5nm,0.6s,mb4.6						
AAK	Ala-Archa	49.10	335	eP	P	20 23 36.5	-0.5
	3.6nm,1.0s,mb4.4						
AAK				ePP	PP	20 25 29.2	-1.9
EKS2	Erkin-Say	49.44	334	eP	P	20 23 38.9	-0.7
	4.9nm,0.7s,mb4.7						
STKA	Stephens Creek	49.59	133	P	P	20 23 40.7	-0.4
STKA	Stephens Creek	49.59	133	P	P	20 23 40.7	-0.4
	2.3nm,0.8s,mb4.3,baz=302,slow=7.5,SNR=5.7						
MK31	Makanchi Array	49.93	344	eP	P	20 23 41.3	-2.0
MKAR	Makanchi Array	49.93	344	P	P	20 23 42.2	-1.1
MKAR	Makanchi Array	49.93	344	P	P	20 23 42.2	-1.1
	1.3nm,0.7s,mb4.1,baz=157,slow=8.3,SNR=14						
KURK	Kurchatov	54.52	343	eP	P	20 24 15.5	-1.8
	3.1nm,1.0s,mb4.3						
BRVK	Borovoye	59.23	339	P	P	20 24 48.4	-2.2
	3.7nm,1.0s,mb4.4						
ARU	Arti	66.25	336	P	P	20 25 39.7	+2.4
	4.4nm,1.0s,mb4.4						
MALT	Malatya	68.90	312	P	P	20 25 47.6	-6.9
BRTR	Keskin Array B	72.88	312	P	P	20 26 18.4	-0.2
	1.3nm,0.7s,mb3.9,baz=118,slow=5.8,SNR=5.1						
TIRR	Tirgusor	77.82	316	⇓iP	P	20 26 51.4	+4.5
AKASG	Malin Array Be	78.81	322	P	P	20 26 51.6	-0.6
	0.2nm,0.3s,mb3.5,baz=92,slow=4.4,SNR=4.9						
MLR	Muntele Rosu	79.76	316	⇑iP	P	20 26 58.4	+0.9
BURAR	Bucovina Array	80.67	318	⇓iP	P	20 27 07.1	+4.7
JOF	Joensuu	81.29	334	ep	P	20 27 01.8	-3.6
	0.7nm,0.5s,mb3.9						
FINES	FINESS Array B	83.23	332	P	P	20 27 15.5	0.0
	0.8nm,0.5s,mb4.0,baz=96,slow=5.5,SNR=8.5						
KAF	Kangasniemi	83.29	333	ep	P	20 27 14.1	-1.7
	1.7nm,0.5s,mb4.3,baz=100,slow=4.8						
PKSM	Moragy	84.91	316	⇓iP	P	20 27 26.4	+2.0
ARCES	ARCESS Array B	85.44	340	P	P	20 27 28.4	+1.8
	3.7nm,1.0s,mb4.5,baz=90,slow=4.9,SNR=4.5						
GERES	GERESS Array B	88.45	319	P	P	20 27 42.7	+1.0
	0.6nm,0.6s,mb4.0,baz=108,slow=4.3,SNR=5.2						
TXAR	Lajitas Array	143.30	37	PKP	PKPdf	20 34 22.8	-1.5
	0.3nm,0.6s,baz=258,slow=0.4,SNR=4.7						

*NEIC **06** 20:30:21.5, 1858N×6924W, h90^{km}, MD3.8(RSPR), After RSPR.*
RSPR 06 20:30:21.5, 1858N×6924W, h90^{km}±2^{km}, MD3.8/8, 7C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.98	282	⇓eP	Pn	20 30 53.4	-0.1
SDDR				eS	Sn	20 31 17.4	-0.4
AGPR	Aguadilla, PR	2.03	93	⇑eP	Pn	20 30 54.9	+0.8
AGPR				eS	Sn	20 31 19.1	+0.2
LSP	Las Mesas	2.09	101	⇑eP	Pn	20 30 54.9	0.0
LSP				eS	Sn	20 31 20.2	-0.2
CRPR	Cabo Rojo, PR	2.10	105	⇑eP	Pn	20 30 54.5	-0.7
CRPR				eS	Sn	20 31 20.6	-0.2
AOPR	Arecibo Observ	2.37	95	⇑eP	Pn	20 30 58.8	+0.1
AOPR				eS	Sn	20 31 27.6	+0.4
CELP	Cerrillos	2.58	101	⇑eP	Pn	20 31 01.5	+0.1
CELP				eS	Sn	20 31 32.2	+0.2
CPD	Cerro la Pandu	3.21	99	eS	Sn	20 31 46.6	-0.6
CBYP	Canovanas	3.23	95	⇑eP	Pn	20 31 10.6	+0.4
CBYP				eS	Sn	20 31 47.1	-0.6
MTP	Monte Pirata	3.54	97	⇑eP	Pn	20 31 13.9	-0.4
MTP				eS	Sn	20 31 55.1	0.0

*VIE **06** 20:42:14.8±0.4, 4345N×1535E, h10^{km}, mb2.8/2, ML2.9/6, Error ellipse: s-maj=5.4km s-min=3.3km az=101.0*
*CSEM **06** 20:42:14.0±0.2, 4357N×1537E, h8^{km}, ML2.9/6, Error ellipse: s-maj=6.1km s-min=1.2km az=50.0*
*ISCJB **06** 20:42:15.0±1.6, 436N±0.1×154E±02, h6^{km}±9^{km}, Error ellipse: s-maj=26.9km s-min=6.9km az=143.1*
ISC 06 20:42:14.9±1.7, 4356N±010×154E±02, h1^{km}±10^{km}, n10, σ0^{s}84/18, 4C-3D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	1.07	341	ePg	Pg	20 42 34.0	-1.4
NVLJ				Sg	Sg	20 42 50.1	+1.0
NVLJ	Novalja	1.07	341	ePg	Pg	20 42 33.9	-1.4
NVLJ				Sg	Sg	20 42 50.1	+0.9
STON	Ston	1.84	111	ePn	Pn	20 42 47.4	-0.2
STON				Sn	Sn	20 43 11.7	+0.3
STON	Ston	1.84	111	ePn	Pn	20 42 47.3	-0.3
STON				Sn	Sn	20 43 11.7	+0.2
VOY	Vojsko	2.69	338	ePn	Pn	20 42 59.2	0.0
VOY				eSn	Sn	20 43 31.2	-1.1
OBKA	Obir	3.01	349	⇑iPn	Pn	20 43 04.2	+0.6
OBKA				⇑iSn	Sn	20 43 42.1	+1.9
ABTA	Abfaltersbach	3.77	329	⇑iPn	Pn	20 43 14.4	+0.3
MOA	Molln	4.36	350	⇓iPn	Pn	20 43 22.4	+0.2
MOA				⇑iSn	Sn	20 44 13.0	-0.6
CONA	Conrad Observa	4.39	4	⇓iPn	Pn	20 43 22.7	+0.2
CONA				⇓iSn	Sn	20 44 13.3	-0.9
CONA	Conrad Observa	4.39	4	Pn	Pn	20 43 22.7	+0.2

*BJI **06** 20:49:54.5, 920S×12060E, h15^{km}, mb4.6*
*MOS **06** 20:49:57.1±0.8, 907S×12063E, h33^{km}, mb4.8/6, Error ellipse: s-maj=26.0km s-min=10.2km az=110.4*
*NEIC **06** 20:50:01.6±1.5, 920S×12059E, h58^{km}±15^{km}, mb4.6/14, Error ellipse: s-maj=14.2km s-min=8.3km az=64.0*
*IDC **06** 20:50:03.5±4.0, 923S×12050E, h74^{km}±39^{km}, mb4.2/6, mb1 4.4/10, mb1mx4.1/18, mbtmp4.3/10, ML4.6/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/23, Error ellipse: s-maj=34.6km s-min=16.8km az=77.0*
*ISCJB **06** 20:50:07.9±1.2, 9.19S±006×1209E±0.1, h139^{km}±12^{km}, mb4.3/24, Error ellipse: s-maj=17.7km s-min=7.1km az=154.9*
ISC 06 20:50:05.7±1.3, 932S±005×12060E±010, h99^{km}±13^{km}, n58, σ1^{s}26/63, mb4.5/24, 2C-2D, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	3.14	107	P	Pn	20 50 54.4	+1.0
	70nm,0.3s,baz=342,slow=2.1,SNR=61						
BATI				S	Sn	20 51 30.7	+0.6
	101nm,0.3s,baz=295,slow=10,SNR=14						
BATI				LR	LR	20 52 42.2	
	comp=Z,439nm,18.4s,baz=56,slow=49						
FITZ	Fitzroy Crossi	10.01	151	eP	Pn	20 52 23.6	-2.9
	44nm,0.6s						
FITZ				eS	Sn	20 54 07.6	-9.3
FITZ	Fitzroy Crossi	10.01	151	P	Pn	20 52 25.1	-1.4
	3.0nm,0.3s,baz=345,slow=9.9,SNR=51						
FITZ				S	Sn	20 54 07.8	-9.1
	9.7nm,0.3s,baz=187,slow=16,SNR=12						
MBWA	Marble Bar	11.80	184	ePn	Pn	20 52 48.5	-2.3
	20nm,0.4s						
MBWA				eSn	Sn	20 54 47.8	-13
KSM	Kuching	14.84	316	ePn	Pn	20 53 36.1	+5.6
KKM	Kota Kinabalu	15.88	344	ePn	Pn	20 53 45.2	+1.6
WRA	Warramunga Arr	16.96	130	P	Pn	20 53 56.2	-0.7
	2.7nm,0.3s,baz=306,slow=14,SNR=131						
WRA				S	S	20 56 49.6	-20
	3.2nm,0.3s,baz=284,slow=20,SNR=7.7						
WB2	Warramunga Arr	16.97	130	eP	Pn	20 53 54.8	-2.2
WB2				eS	S	20 56 48.9	-20
ASAR	Alice Springs	19.11	140	P	P	20 54 21.8	+0.9
	1.1nm,0.3s,baz=321,slow=11,SNR=58						
ASAR				S	S	20 57 45.3	-7.1
	0.7nm,0.3s,baz=313,slow=22,SNR=13						
KLBR	Kellerberrin	22.32	186	eP	P	20 54 55.5	+0.3
	25nm,0.6s,mb4.7						
KLBR				eS	S	20 58 52.9	-0.9
FORT	Forrest	22.45	163	eP	P	20 54 57.6	+1.0
	19nm,0.7s,mb4.5						
MUN	Mundaring	22.91	190	eP	P	20 55 01.2	-0.1
MUN				eS	S	20 59 09.0	+5.5
NWAO	Narrogin (SRO)	23.70	187	P	P	20 55 09.2	+0.8
NWAO				e		20 55 25.9	
NWAO				LR	LR	21 03 33.1	
NWAO	Narrogin (SRO)	23.70	187	P	P	20 55 09.2	+0.8
NWAO				e		20 55 25.9	
NWAO	Narrogin (SRO)	23.70	187	P	P	20 55 09.2	+0.8
	35nm,0.8s,mb4.7,baz=17,slow=11,SNR=21						
NWAO				LR	LR	21 03 33.1	
	comp=Z,80nm,18.7s,baz=180,slow=34						
KULM	Kulim	24.62	305	P	P	20 55 14.2	-2.8
CTA	Charters Tower	26.98	116	LR	LR	21 06 02.5	
	comp=Z,93nm,20.3s,baz=134,slow=35						
STKA	Stephens Creek	29.71	142	eP	P	20 56 03.7	+1.2
	5.9nm,0.4s,mb4.6						
STKA	Stephens Creek	29.71	142	P	P	20 56 03.7	+1.2
STKA				LR	LR	21 08 15.2	
STKA	Stephens Creek	29.71	142	P	P	20 56 03.7	+1.2
	8.7nm,0.5s,mb4.7,baz=314,slow=9.2,SNR=31						
STKA				LR	LR	21 08 15.2	
	comp=Z,66nm,18.4s,baz=204,slow=37						
WHN	Wuhan	40.09	352	eP	P	20 57 33.7	+2.1
NJ2	Nanjing	41.17	358	eP	P	20 57 38.1	-2.4
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
LSA	Lhasa	48.05	325	P	P	20 58 36.2	+1.0
ODAN	Odare	48.29	319	eP	P	20 58 35.6	-1.5
	comp=Z,6.9nm,0.8s,mb4.5						
TAPN	Taplejung	48.42	320	eP	P	20 58 39.6	+1.5
	comp=Z,8.8nm,0.7s,mb4.7						
BJI	Beijing	49.28	356	P	P	20 58 42.8	-1.6
BJI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
KKN	Kakani	50.30	318	eP	P	20 58 53.6	+1.2
	comp=Z,4.9nm,0.6s,mb4.6						
KKN	Kakani	50.30	318	eP	P	20 58 53.6	+1.2
KKN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
GKN	Gorkha	50.86	318	eP	P	20 58 57.7	+1.1
	comp=Z,5.4nm,0.5s,mb4.9						
GTA	Gaotai	52.19	340	eP	P	20 59 07.7	+1.4
GTA				AP	pP	20 59 12.3	-18
GTA				XP	sP	20 59 14.8	-26
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
ULN	Ulaanbaatar	58.19	349	i P	P	20 59 48.9	-0.3
SONM	Songino Array	58.28	349	P	P	20 59 49.1	-0.8
	comp=Z,1.3nm,0.5s,mb4.2,baz=166,slow=7.8,SNR=21						
ZAK	Zakamensk	61.34	347	eP	P	21 00 08.7	-2.1
TLY	Talaya	62.49	348	eP	P	21 00 18.1	-0.4
	comp=Z,3.3nm,1.0s,mb4.3						
TLY	Talaya	62.49	348	i P	P	21 00 18.5	0.0
MK31	Makanchi Array	65.47	332	eP	P	21 00 38.2	+0.1
MKAR	Makanchi Array	65.47	332	⇑eP	P	21 00 38.5	+0.4
MKAR	Makanchi Array	65.47	332	P	P	21 00 38.3	+0.2
	comp=Z,2.8nm,0.6s,mb4.3,baz=149,slow=7.5,SNR=40						
AAK	Ala-Archa	66.65	325	eP	P	21 00 45.9	+0.1
	comp=Z,1.5nm,0.7s,mb3.9						
AAK	Ala-Archa	66.65	325	⇑eP	P	21 00 46.0	+0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BOD	Bodaibo	67.12	356	eP	P	21 00 42.4	-6.0
KURK	Kurchatov	69.99	333	eP	P	21 01 06.0	-0.5
	comp=Z,10.0nm,1.3s,mb4.5						
KURK	Kurchatov	69.99	333	⇓eP	P	21 01 06.3	-0.1
NVS	Novosibirsk	71.19	338	eP	P	21 01 12.4	-1.2
NVS				pmax	pmax		
	comp=E,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.6						
NVS				pmax	pmax		
	comp=N,9.0nm,1.5s						
VNDA	Vanda	71.43	171	P	P	21 01 16.9	+2.0
	comp=N,2.4nm,0.8s,mb4.1,baz=103,slow=5.9,SNR=6.8						
MA2	Magadan	72.80	16	P	P	21 01 22.8	-0.3
	comp=N,5.2nm,0.7s,mb4.5						
MA2	Magadan	72.80	16	P	P	21 01 22.8	-0.3
MA2				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BRVK	Borovoye	75.40	331	eP	P	21 01 38.5	+0.1
	comp=Z,1.0nm,0.6s,mb3.7						
BRVK	Borovoye	75.40	331	eP	P	21 01 38.5	+0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
AKTK	Aktyubinsk	80.39	325	P	P	21 02 06.1	-0.1
AKTO	Aktyubinsk	80.39	325	P	P	21 02 06.1	-0.1
	comp=Z,1.7nm,0.7s,mb4.0,baz=106,slow=6.5,SNR=4.9						
QSPA	South Pole Qui	80.67	180	eP	P	21 02 09.0	+1.8
	comp=Z,3.7nm,0.6s,mb4.4						
TIXI	Tiksi	80.98	3	eP	P	21 02 07.0	-1.8
	comp=Z,8.0nm,0.9s,mb4.5						
TIXI	Tiksi	80.98	3	⇓eP	P	21 02 06.7	-2.1
TIXI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
LSZ	Lusaka	89.89	255	P	P	21 02 54.5	+0.1
	comp=Z,5.5nm,1.2s,mb4.6						
LSZ	Lusaka	89.89	255	P	P	21 02 54.5	+0.2
LSZ				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
TORD	Torodi Ar. Bea	120.08	280	PKP	PKPdf	21 08 46.5	+0.6
TORD	Torodi Ar. Bea	120.08	280	PKP	PKPdf	21 08 46.5	+0.6
	comp=Z,0.7nm,1.0s,baz=56,slow=1.4,SNR=6.3						

IDC 06 20:58:49.0±3.3, 621S×14950E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=106.4km s-min=35.6km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.93	216	Pn	Pn	20 59 52.8	+2.1
	11nm,0.3s,baz=30,slow=7.9,SNR=25						
PMG				Sn	Sn	21 00 37.0	-0.5
	8.9nm,0.3s,baz=58,slow=18,SNR=11						
WRA	Warramunga Arr	20.08	226	P	P	21 03 23.9	-0.4
	0.6nm,0.3s,baz=52,slow=11,SNR=7.0						
ASAR	Alice Springs	22.94	219	P	P	21 03 55.0	+0.1
	0.2nm,0.3s,baz=57,slow=9.3,SNR=4.6						
FITZ	Fitzroy Crossi	26.11	241	P	P	21 04 24.4	-0.4
	2.8nm,0.7s,baz=0.0,slow=13,SNR=4.5						
TORD	Torodi Ar. Bea	147.55	285	PKPbc	PKPbc	21 18 35.7	-0.6
	0.3nm,0.6s,baz=67,slow=2.5,SNR=9.4						

IDC 06 21:19:16.8±1.9, 065N×12507E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.3/16, mbtmp3.2/3, Error ellipse: s-maj=193.8km s-min=24.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.39	157	P	P	21 24 16.3	-0.6
	0.5nm,0.7s,baz=335,slow=11,SNR=8.2						
ASAR	Alice Springs	25.65	161	P	P	21 24 48.9	+0.5
	0.6nm,0.6s,baz=335,slow=6.9,SNR=8.7						
MKAR	Makanchi Array	59.18	327	P	P	21 29 19.6	+0.1
	0.1nm,0.3s,baz=117,slow=8.2,SNR=2.7						

*CSEM **06** 21:20:55.0±0.1, 37.15N×2852E, h2^{km}, MD3.0, Error ellipse: s-maj=2.0km s-min=1.3km az=3.0*
*ISK **06** 21:20:55.8, 37.16N×2853E, h8^{km}, MD3.0*
*ISCJB **06** 21:20:56.2±0.6, 37.15N±005×2854E±004, h7^{km}±9^{km}, Error ellipse: s-maj=7.8km s-min=4.8km az=18.2*
*DDA **06** 21:20:56.5, 3689N×2854E, h9^{km}, Md3.1*
ISC 06 21:20:56.9±0.5, 3712N±005×2852E±004, h12^{km}±7^{km}, n13, σ0^{s}98/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.19	275	i PG	Pg	21 21 00.6	-0.4
YER				i SG	Sg	21 21 03.9	0.0
MLSB	Milas	0.61	287	PG	Pg	21 21 08.2	-0.7
MLSB				SG	Sg	21 21 16.5	-0.5
FETY	Fethiye	0.67	137	PG	Pg	21 21 09.2	-0.6
FETY				SG	Sg	21 21 19.5	+1.0
DENT	Denizli	0.76	33	PG	Pg	21 21 10.1	-1.4
GOLH	Golhisar	0.84	82	i P	Pg	21 21 12.7	-0.5
GOLH				i S	Sg	21 21 27.2	+2.9
DAT	Datca	0.85	243	PG	Pg	21 21 12.9	-0.3
BDRM	Kayabasi	0.86	267	i P	Pg	21 21 12.9	-0.6
BDRM				i S	Sg	21 21 27.1	+2.5
BODT	Bodrum	0.96	267	PG	Pg	21 21 14.8	-0.7
KULA	Kula-Manisa	1.40	5	ePN	Pn	21 21 21.4	-0.7
IZM	Izmir	1.62	322	ePN	Pn	21 21 25.1	0.0
KDAG	Bornova	1.62	323	i P	Pg	21 21 28.0	0.0
KDAG				i S	Sg	21 21 50.6	+1.7
BLCB	Balcova	1.72	318	ePN	Pn	21 21 27.5	+0.9
AKS	Akhisar	1.84	343	ePN	Pn	21 21 28.2	0.0

*MOS **06** 21:30:03.7±0.8, 1497S×7401W, h33^{km}, mb5.6/72, Error ellipse: s-maj=9.2km s-min=5.6km az=90.5*
*BJI **06** 21:30:08.6, 15.10S×7400W, h73^{km}, mB5.3, Ms5.5, Msz5.2*
*ISCJB **06** 21:30:10.5±0.2, 1506S±004×7402W±003, h93^{km}, mb5.2/190, Error ellipse: s-maj=6.1km s-min=3.3km az=32.7*
*GCMT **06** 21:30:11.6±0.3, 15.11S×7409W, h108^{km}±2^{km}, MW5.2/71, Moment Tensor Solution. s51,c63; s71,c100; Duration: 0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.61±.01; $M_{\theta\theta}$-0.19±.02; $M_{\phi\phi}$0.80±.02; $M_{r\theta}$0.05±.01; $M_{\theta\phi}$-0.07±.02; $M_{\phi r}$0.07±.02; Best double couple: $M_0$0.71900×10^{17} NP1:ϕ_s349.00000°, δ43.00000°, λ-100.00000°. NP2: ϕ_s182.00000°, δ48.00000°, λ-81.00000°. Principal axes: T 0.8150, Plg3.0000°, Azm266.0000°; N -0.1930, Plg7.0000°, Azm356.0000°; P -0.6220, Plg83.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **06** 21:30:11.7±0.1, 1509S×7400W, mb5.3/153 Error ellipse: s-maj=5.3km s-min=3.1km az=46.0*
NEIC Felt [III] at Ica, Nazca and Palpa.
*IDC **06** 21:30:11.8±0.4, 1508S×7392W, h93^{km}±3^{km}, mb4.8/27, mb1 5.0/29, mb1mx5.0/30, mbtmp4.8/29, MS4.0/11, Ms1 4.0/11, ms1mx3.8/21, Error ellipse: s-maj=16.4km s-min=8.6km az=69.0*
ISC 06 21:30:12.4±0.2, 1508S±004×7390W±003, h94^{km}, h94^{km}±.4^{km}:pP-P, n777, σ0^{s}70/667, mb5.2/188, 104C-169D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.70	121	⇑iP	Pn	21 30 53.5	-0.5
ARE				i S	Sn	21 31 16.9	-9.0
NNA	Nana	4.20	317	Pn	Pn	21 31 11.0	-3.2
	14μm,0.5s,SNR=87						
NNA	Nana	4.20	317	⇑ePn	Pn	21 31 10.3	-3.9
NNA				eSn	Sn	21 31 57.0	-5.2
NNA	Nana	4.20	317	P	Pn	21 31 13.6	-0.6
	110nm,0.3s,baz=158,slow=16,SNR=66						
NNA				S	Sn	21 32 05.0	+2.8
	1μm,0.3s,baz=50,slow=22,SNR=12						
LPAZ	La Paz	5.69	103	P	Pn	21 31 36.6	+2.2
	28nm,0.3s,baz=300,slow=9.2,SNR=451						
ATAH	Atahualpa	9.16	331	P	Pn	21 32 24.6	+2.9

6.0nm,0.3s,baz=196,slow=5.4,SNR=35
ATAH S Sn 21 34 11.1 +8.0
5.3nm,0.3s,baz=163,slow=1.0,SNR=3.5
SIV San Ignacio 12.40 96 P Pn 21 33 02.4 -3.1
12nm,0.3s,baz=280,slow=11,SNR=367
SIV LR LR 21 38 43.5
comp=Z,2µm,19.9s,baz=280,slow=41
LCO Las Campanas 14.18 168 *e*Pn Pn 21 33 27.7 -1.1
52nm,0.8s
LCO *e* 21 33 33.8
LCO *e*Sn Sn 21 35 51.4 -14
OTAV Otavalo 15.87 343 *e*Pn Pn 21 33 51.2 +0.8
49nm,0.9s
CFAA Coronel Fontan 17.25 164 P Pn 21 34 06.3 -1.0
CFAA LR LR 21 39 58.1
CFAA Coronel Fontan 17.25 164 P Pn 21 34 06.3 -1.0
0.2nm,0.3s,baz=334,slow=11,SNR=31
CFAA LR LR 21 39 58.1
comp=Z,25nm,20.4s,baz=354,slow=34
ROSC El Rosal 19.81 359 *e*P Pn 21 34 38.7 +0.8
ROSC El Rosal 19.81 359 P Pn 21 34 38.8 +0.8
baz=261,slow=19,SNR=5.0
ROSC LR LR 21 43 44.7
comp=Z,402nm,20.8s,baz=186,slow=41
PAYG Puerto Ayora 21.61 310 P P 21 34 55.1 +0.2
40nm,1.0s,mb4.7
SDV Santo Domingo 24.03 8⇓*i*P P 21 35 18.7 0.0
48nm,0.9s,mb4.8
SDV Santo Domingo 24.03 8 P P 21 35 19.2 +0.5
42nm,0.8s,mb4.8,baz=200,slow=8.9,SNR=55
SDV LR LR 21 45 34.1
comp=Z,432nm,20.2s,baz=349,slow=38
TRQA Tornquist 25.20 157 *e*P P 21 35 27.7 -1.5
44nm,1.3s,mb4.7
TRQA *e*PcP PcP 21 39 00.4 -0.2
PLCA Paso Flores 25.73 174⇓*i*P P 21 35 32.8 -1.2
59nm,1.0s,mb5.0
PLCA *ep*P pP 21 35 53.8 -1.2
PLCA *es*P sP 21 36 03.8 -2.3
PLCA *e*PcP PcP 21 39 01.9 +0.2
PLCA Paso Flores 25.73 174⇓*i*P P 21 35 32.8 -1.1
PLCA *e* 21 39 01.9
PLCA pmax pmax
comp=Z,59nm,1.0s
PCRV Puerto La Cruz 26.72 21 P P 21 35 43.3 +0.2
comp=Z,12nm,0.8s,mb4.5,baz=329,slow=5.9,SNR=3.7
PCRV LR LR 21 47 25.5
comp=Z,469nm,19.3s,baz=34,slow=39
JTS JuntasAbangare 27.48 336 *e*P P 21 35 47.7 -2.2
comp=Z,17nm,0.9s,mb4.6
JTS JuntasAbangare 27.48 336 *e*P P 21 35 47.7 -2.2
JTS pmax pmax
comp=Z,17nm,0.9s
JTS JuntasAbangare 27.48 336 P P 21 35 49.7 -0.2
comp=Z,8.9nm,0.7s,mb4.4,baz=288,slow=6.0,SNR=5.0
TGUH Tegucigalpa,Un 31.83 335 *e*P P 21 36 28.9 +0.6
comp=Z,55nm,0.9s,mb5.3
CPD Cerro la Pandu 33.83 14 *e*P P 21 36 44.0 -1.8
comp=Z,41nm,0.6s,mb5.4
CPD Cerro la Pandu 33.83 14 *e*P P 21 36 44.0 -1.8
CPD pmax pmax
comp=Z,41nm,0.6s,mb5.4
SJG San Juan 33.85 13 *e*P P 21 36 44.6 -1.4
comp=Z,72nm,0.8s,mb5.5
SJG San Juan 33.85 13 *e*P P 21 36 44.6 -1.4
SJG pmax pmax
comp=Z,72nm,0.8s
SJG San Juan 33.85 13 P P 21 36 45.0 -1.0
comp=Z,66nm,0.7s,mb5.6,baz=182,slow=4.9,SNR=16
SDDR Presa de Saban 33.94 4 *e*P P 21 36 46.2 -0.6
comp=Z,7.9nm,0.6s,mb4.7
TEIG Tepich 37.82 338⇓*e*P P 21 37 19.3 -0.6
comp=Z,67nm,0.9s,mb5.5
TEIG *es*P sP 21 37 50.5 -2.0
TEIG Tepich 37.82 338 P P 21 37 19.5 -0.3
comp=Z,55nm,0.9s,mb5.4,baz=160,slow=8.1,SNR=17
TEIG PcP PcP 21 39 34.1 -0.7
comp=Z,14nm,0.7s,baz=354,slow=3.2,SNR=3.7
CMIG Matias Romero 38.08 326 P P 21 37 22.4 +0.2
comp=Z,25nm,0.8s,mb5.1,baz=122,slow=6.8,SNR=26
CMIG PcP PcP 21 39 35.1 -0.5
comp=Z,4.8nm,0.7s,baz=202,slow=4.4,SNR=4.6
USHA Ushuaia 39.90 175 P P 21 37 36.5 -0.3
comp=Z,21nm,0.8s,mb5.1,baz=305,slow=2.6,SNR=7.1
USHA sP sP 21 38 08.2 -1.5
comp=Z,50nm,0.8s,baz=333,slow=7.8,SNR=9.2
BRAL Brewton 47.54 345⇓*i*P P 21 38 38.6 +0.3
comp=Z,228nm,1.3s,mb5.8
NHSC New Hope 48.28 353 *e*P P 21 38 44.3 +0.3
comp=Z,423nm,1.7s,mb6.0
KVTX Kingsville 48.34 331⇓*i*P P 21 38 45.1 +0.5
comp=Z,118nm,0.9s,mb5.7
COW Cow Castle Cre 48.62 352 *e*P P 21 38 45.5 -1.1
GOGA Godfrey 49.07 349⇓*i*P P 21 38 48.8 -1.2
comp=Z,114nm,1.5s,mb5.6
GOGA Godfrey 49.07 349⇓*i*P P 21 38 48.8 -1.3
GOGA pmax pmax
comp=Z,114nm,1.5s,mb5.6
LRAL Lakeview Retre 49.45 345 *e*P P 21 38 51.6 -1.3
comp=Z,58nm,0.9s,mb5.5
HKT Hockley 49.51 335⇓*e*P P 21 38 52.7 -0.8
comp=Z,38nm,1.3s,mb5.2
HKT Hockley 49.51 335⇓*e*P P 21 38 52.7 -0.8
HKT pmax pmax
comp=Z,38nm,1.3s,mb5.2
LHS Liberty Hill 49.71 353 *e*P P 21 38 54.0 -0.9
PMSA Palmer Station 50.10 175 P P 21 38 57.8 +0.3
comp=Z,51nm,0.8s,mb5.5
NATX Nacogdoches 50.65 337 *e*P P 21 39 01.6 -0.5
comp=Z,85nm,1.1s,mb5.7
CPCT Cooper Cave 51.25 349⇓*i*P P 21 39 04.9 -1.5
SWET Sewanee 51.30 347⇓*i*P P 21 39 05.4 -1.5
SWET *e*PP PP 21 40 54.5 -10
TKL Tuckaleechee C 51.32 350 P P 21 39 06.0 -1.0
comp=Z,27nm,0.9s,mb5.3,baz=149,slow=9.3,SNR=12
OXF Oxford 51.47 344 *e*P P 21 39 05.9 -2.3
comp=Z,115nm,1.1s,mb5.8
OXF Oxford 51.47 344 *e*P P 21 39 05.9 -2.3
OXF pmax pmax
comp=Z,115nm,1.1s,mb5.8
JCT Junction City 51.70 331⇓*i*P P 21 39 09.1 -0.9
comp=Z,38nm,1.0s,mb5.4
JCT *e*PcP PcP 21 40 21.2 -1.0
JCT Junction City 51.70 331⇓*i*P P 21 39 09.1 -0.9
JCT *e* 21 40 21.2
JCT pmax pmax
comp=Z,38nm,1.0s,mb5.4
TZTN Tazewell 52.14 350⇓*i*P P 21 39 11.9 -1.2
comp=Z,106nm,1.5s,mb5.7
BLA Blacksburg 52.37 353⇓*i*P P 21 39 14.2 -0.6
comp=Z,52nm,0.9s,mb5.6
BLA Blacksburg 52.37 353⇓*i*P P 21 39 14.2 -0.6
BLA pmax pmax
comp=Z,52nm,0.9s,mb5.6
UALR University of 52.58 341⇓*i*P P 21 39 15.2 -1.2
comp=Z,85nm,0.9s,mb5.8
LTX Lajitas 52.68 327⇓*i*P P 21 39 16.6 -0.6
comp=Z,34nm,0.8s,mb5.4
LTX *ep*P pP 21 39 38.5 -1.8
LTX Lajitas 52.68 327⇓*i*P P 21 39 16.6 -0.7
LTX pmax pmax
comp=Z,34nm,0.8s,mb5.4
TXAR Lajitas Array 52.68 327 P P 21 39 16.7 -0.5
comp=Z,28nm,0.8s,mb5.3,baz=147,slow=8.8,SNR=274
TXAR pP pP 21 39 39.5 -0.8
comp=Z,9.0nm,0.7s,baz=155,slow=7.2,SNR=7.8
TXAR sP sP 21 39 49.9 -0.9
comp=Z,6.1nm,0.6s,baz=152,slow=7.9,SNR=4.5
MIAR Mount Ida 52.77 340⇓*i*P P 21 39 16.8 -1.0
comp=Z,66nm,0.8s,mb5.7
MIAR *e*PcP PcP 21 40 25.2 -1.0
MIAR Mount Ida 52.77 340⇓*i*P P 21 39 16.8 -1.0
MIAR *e* 21 40 25.2
MIAR pmax pmax
comp=Z,66nm,0.8s,mb5.7
PARMO **Parma 53.59 344** *e*P P 21 39 22.4 -1.4
SDMD Soldier's Deli 54.27 357 *e*P P 21 39 28.4 -0.3
comp=Z,80nm,0.8s,mb5.8
SDMD *ep*P pP 21 39 52.8 +1.0
SDMD *e*PcP PcP 21 40 31.5 -0.3
WCI Wyandotte Cave 54.28 348⇓*i*P P 21 39 27.1 -1.7
comp=Z,161nm,0.8s,mb6.1
WCI *es*P sP 21 40 00.2 -2.2
WCI Wyandotte Cave 54.28 348⇓*i*P P 21 39 27.1 -1.7
WCI pmax pmax
comp=Z,161nm,0.8s,mb6.1
USIN University of 54.32 347⇓*i*P P 21 39 27.3 -1.7
comp=Z,227nm,0.7s,mb6.3
SIUC Southern Illin 54.45 345 *e*P P 21 39 28.6 -1.4
comp=Z,158nm,0.7s,mb6.2
SIUC *ep*P pP 21 39 52.0 -1.2
SIUC *es*P sP 21 40 01.4 -2.2
MVL Millersville 54.84 358⇓*i*P P 21 39 32.8 0.0
comp=Z,92nm,1.2s,mb5.7
MVL *ep*P pP 21 39 56.6 +0.8
WMOK Wichita Mounta 54.89 335 *e*P P 21 39 31.9 -1.3
comp=Z,26nm,0.8s,mb5.3
WMOK *e* 21 40 19.8
WMOK *e*PcP PcP 21 40 33.7 -0.5
WMOK Wichita Mounta 54.89 335 *e*P P 21 39 31.9 -1.4
WMOK *e* 21 40 33.7
WMOK pmax pmax
comp=Z,26nm,0.8s,mb5.3
FVM French Village 55.01 344 *e*P P 21 39 32.5 -1.6
comp=Z,109nm,1.2s,mb5.8
FVM *ep*P pP 21 39 56.5 -0.7
FVM *e*PcP PcP 21 40 34.0 -0.6
FVM French Village 55.01 344 *e*P P 21 39 32.5 -1.6
FVM *e* 21 40 34.0
FVM pmax pmax
comp=Z,109nm,1.2s,mb5.8
MNTX Cornudas Mount 55.45 327 *e*P P 21 39 35.9 -1.5
comp=Z,53nm,1.0s,mb5.5
MNTX *e*PcP PcP 21 40 33.5 -3.0
SSPA Standing Stone 55.55 356⇓*i*P P 21 39 37.6 -0.3
comp=Z,84nm,1.4s,mb5.6
SSPA *ep*P pP 21 40 00.5 -0.6
ACSO Alum Creek Sta 55.67 352 *e*P P 21 39 37.3 -1.4
comp=Z,79nm,0.9s,mb5.8
ACSO *es*P sP 21 40 10.4 -2.0
BINY Binghamton 57.02 358⇓*i*P P 21 39 48.4 +0.1
comp=Z,111nm,1.2s,mb5.8
BINY *ep*P pP 21 40 11.6 0.0
HDIL Hopedale 57.16 346⇓*i*P P 21 39 47.0 -2.4
comp=Z,59nm,0.7s,mb5.7
HDIL pP pP 21 40 10.2 -2.5
HDIL *es*P sP 21 40 20.8 -2.3
AAM Ann Arbor 57.79 351 *e*P P 21 39 52.1 -1.6
comp=Z,23nm,0.4s,mb5.6
AAM Ann Arbor 57.79 351 *e*P P 21 39 52.1 -1.6
AAM pmax pmax
comp=Z,23nm,0.4s,mb5.6
RKT Rikitea 57.92 252 *e*LR LR 21 57 05.8
comp=Z,338nm,30.5s
RKT Rikitea 57.92 252 *e*T 22 41 15.2
comp=Z,6.4nm,0.3s
KSU1 Kansas State U 57.92 339 *e*P P 21 39 53.1 -1.6
comp=Z,21nm,0.8s,mb5.2
KSU1 *ep*P pP 21 40 16.8 -1.2
BNM Barren Site 58.03 328 *e*P P 21 39 55.0 -0.6
BNM *ep*P pP 21 40 19.5 +0.6
BNM *es*P sP 21 40 28.8 -0.5
BNM *e*PcP PcP 21 40 46.2 -0.3
LPM Los Pinos Moun 58.16 328 *e*P P 21 39 55.8 -0.6
FFD Franklin Falls 58.29 2 *e*P P 21 39 52.5 -4.7
comp=Z,72nm,0.7s,mb5.8
LAZ Ladron 58.49 328 *e*P P 21 39 58.8 0.0
ANMO Albuquerque 58.57 329 *e*P P 21 39 58.7 -0.7
comp=Z,37nm,0.8s,mb5.5
ANMO *e*PcP PcP 21 40 48.2 -0.5
ANMO Albuquerque 58.57 329 *d*P P 21 39 59.0 -0.3
ANMO Albuquerque 58.57 329 P P 21 39 59.3 -0.1
comp=Z,34nm,0.7s,mb5.5,baz=140,slow=7.6,SNR=64
CBKS Cedar Bluff 58.81 337 *e*P P 21 40 00.4 -0.5
comp=Z,62nm,0.9s,mb5.6
CBKS Cedar Bluff 58.81 337 *e*P P 21 40 00.4 -0.5
CBKS pmax pmax
comp=Z,62nm,0.9s,mb5.6
TUC Tucson 58.88 324 *e*P P 21 40 01.0 -0.5
comp=Z,22nm,0.9s,mb5.2
TUC *ep*P pP 21 40 23.3 -1.6
TUC Tucson 58.88 324 *e*P P 21 40 01.0 -0.5
TUC pmax pmax
comp=Z,22nm,0.9s,mb5.2
116A Eloy 59.60 323 P P 21 40 06.5 0.0
baz=60,SNR=9.0
SADO Sadowa 59.75 356 P P 21 40 06.2 -1.0
MSNY Massena 59.79 359 *e*P P 21 40 07.2 -0.3
MSNY *ep*P pP 21 40 31.3 +0.3
115A Sonoran Desert 60.00 323⇑P P 21 40 09.3 +0.1
baz=60,SNR=15
SDCO Great Sand Dun 60.35 331⇓*i*P P 21 40 11.3 -0.2
comp=Z,109nm,0.8s,mb5.9
SDCO *ep*P pP 21 40 34.9 -0.2
X15A Humboldt 61.30 324⇓P P 21 40 18.3 +0.3
baz=62,SNR=28
Y14A Wickenburg 61.34 323 P P 21 40 18.4 +0.1
baz=62,SNR=40
MVCO Mesa Verde 61.37 329⇓*i*P P 21 40 17.9 -0.4
comp=Z,44nm,1.0s,mb5.5
MVCO Mesa Verde 61.37 329⇓P P 21 40 18.1 -0.3
baz=62,SNR=21
WUAZ Wupatki 61.58 326⇓*i*P P 21 40 19.9 0.0
comp=Z,88nm,1.0s,mb5.7
WUAZ Wupatki 61.58 326 P P 21 40 20.2 +0.3
baz=62,SNR=49
X14A Yava 61.66 324⇓P P 21 40 20.6 +0.2
baz=62,SNR=50
Y13A Salome 61.73 323⇑P P 21 40 21.0 +0.1
baz=62
GLA Glamis 61.79 321⇑P P 21 40 21.3 -0.1
baz=62,SNR=7.7
W15A Williams 61.82 325⇑P P 21 40 22.1 +0.6
baz=62,SNR=15
ISCO Idaho Springs 62.08 333⇓*e*P P 21 40 22.5 -0.6
comp=Z,30nm,1.1s,mb5.2
ISCO *e*PcP PcP 21 41 00.7 -1.9
ISCO Idaho Springs 62.08 333⇓*e*P P 21 40 22.5 -0.6
ISCO *e* 21 41 00.7
ISCO pmax pmax
comp=Z,30nm,1.1s,mb5.2
Y12C Blythe 62.10 322⇓P P 21 40 23.5 +0.1
baz=62,SNR=10
ECSD EROS,Sioux Fal 62.10 342⇓*i*P P 21 40 21.6 -1.6
comp=Z,67nm,1.3s,mb5.5
ECSD *ep*P pP 21 40 44.8 -2.0
ECSD *es*P sP 21 40 55.5 -1.7
PV01 Paradox Valley 62.12 330 *e*P P 21 40 23.4 -0.1
PV01 *ep*P pP 21 40 47.6 +0.5
SMCO Snowmass 62.19 331⇓*i*P P 21 40 19.0 -4.9
comp=Z,38nm,0.8s,mb5.5
SMCO *ep*P pP 21 40 43.0 -4.5
X13A Yucca 62.29 323 P P 21 40 24.6 0.0
baz=62,SNR=17
DVTC Desert V Tower 62.30 320 P P 21 40 25.2 +0.4
baz=62,SNR=12
SWSC Sam W. Stewart 62.30 321⇑P P 21 40 24.8 0.0
baz=62
W14A Seligman 62.30 324⇓P P 21 40 25.0 +0.3
baz=62,SNR=21
COWI Conover 62.43 348 *e*P P 21 40 23.9 -1.4
comp=Z,26nm,1.2s,mb5.1
COWI *ep*P pP 21 40 47.6 -1.3
COWI *es*P sP 21 40 58.5 -0.8
COWI *e*PcP PcP 21 41 02.6 -1.2
PV10 Paradox Valley 62.54 329 *e*P P 21 40 25.5 -0.7
BC3 Big Chuckw Mtn 62.59 321 P P 21 40 26.9 +0.3
baz=63,SNR=24
MONP Monument Peak 62.65 320⇓P P 21 40 27.3 +0.2
baz=63,SNR=18
W13A Hualapai Mount 62.68 324 P P 21 40 27.8 +0.5
baz=63,SNR=13
IRM Iron Mountain 62.76 322 P P 21 40 27.7 0.0
baz=63,SNR=46
NEE2 Needles Airpor 62.87 323⇓P P 21 40 28.4 -0.1
baz=63
109C Camp Elliot, M 63.08 320⇑P P 21 40 29.9 -0.1
baz=63
BELC Belle Mtn. 63.15 321 P P 21 40 30.8 +0.5
baz=63,SNR=12
PFO Pinyon Flat Ob 63.16 321 P P 21 40 30.0 -0.5
comp=Z,240nm,0.9s,mb6.1,SNR=16
PFO Pinyon Flat Ob 63.16 321⇓*i*P P 21 40 30.6 +0.1
comp=Z,54nm,1.1s,mb5.4
PFO *ep*P pP 21 40 53.3 -0.8
PFO Pinyon Flat Ob 63.16 321⇓*i*P P 21 40 30.6 +0.1
PFO pmax pmax
comp=Z,53nm,1.1s,mb5.4
PFO Pinyon Flat Ob 63.16 321 P P 21 40 31.0 +0.5
comp=Z,34nm,0.9s,mb5.3,baz=128,slow=5.3,SNR=31
PFO pP pP 21 40 54.3 +0.1
comp=Z,16nm,1.0s,baz=126,slow=4.9,SNR=4.1
PFO Pinyon Flat Ob 63.26 321⇑P P 21 40 30.9 +0.4
baz=63,SNR=25
U14A Mt Trumbull 63.23 325⇑P P 21 40 31.5 +0.7
baz=64,SNR=43
T15A Red Dirt Ranch 63.24 326⇓P P 21 40 31.6 +0.7
baz=64,SNR=29
PHWY Pilot Hill 63.24 334 *e*P P 21 40 30.4 -0.4
PHWY *es*P sP 21 41 04.1 -0.7
PHWY *e*PcP PcP 21 41 07.0 -0.3
W12A Cal Nev Ari 63.39 323⇑P P 21 40 31.8 -0.1
baz=64
GMRC Granite Mounta 63.49 322 P P 21 40 33.0 +0.4
baz=64,SNR=14
MURC Murrieta 63.62 320⇓P P 21 40 33.7 +0.3
baz=64
T14A Hurricane 63.65 326⇓P P 21 40 34.1 +0.6
baz=64,SNR=9.5
U13A Pakoon Wash 63.67 325 P P 21 40 34.3 +0.6
baz=64,SNR=18
V12A Nelson 63.68 323 P P 21 40 34.0 +0.1
baz=64,SNR=22
SRU San Rafael 63.85 329⇓*i*P P 21 40 34.3 -0.5
comp=Z,46nm,1.0s,mb5.3
SRU *ep*P pP 21 40 58.1 -0.5
SRU San Rafael 63.85 329⇓*i*P P 21 40 34.3 -0.5
SRU pmax pmax
comp=Z,46nm,1.0s,mb5.3
BBRC Big Bear Sol-O 63.89 321⇑P P 21 40 35.7 +0.4
baz=64
HEC Hector,Ludlow 63.92 322 P P 21 40 36.0 +0.5
baz=64,SNR=9.7
U12A Valley of Fire 64.00 324⇑P P 21 40 36.2 +0.3
baz=64
SCI San Clemente I 64.05 319 P P 21 40 36.6 +0.3
baz=64,SNR=5.5
T13A Saint George 64.07 325⇓P P 21 40 36.9 +0.5
baz=64,SNR=8.4
V11A Goodsprings 64.09 323⇓P P 21 40 36.8 +0.3
baz=64,SNR=5.3
TUQ Turquoise Mtn. 64.10 323 P P 21 40 36.9 +0.3
baz=64,SNR=10.0
CCUT Cedar City 64.16 326⇓*e*P P 21 40 37.4 +0.5
CCUT *ep*P pP 21 41 00.8 +0.2
CCUT *e* 21 41 11.5
S14A Cedar City 64.21 326⇓P P 21 40 37.6 +0.4
baz=64
MSU Marysvale 64.24 327 *e*P P 21 40 37.7 +0.3
MSU *ep*P pP 21 41 01.4 +0.2
MSU *e* 21 41 11.5
RWWY Rawlins 64.32 333 *e*P P 21 40 37.4 -0.5
comp=Z,84nm,1.4s,mb5.4
RWWY *e* 21 41 10.9
BFSC Mount Baldy St 64.33 321⇓P P 21 40 38.3 +0.2
baz=64
TMUT Trail Mountain 64.33 329 *e*P P 21 40 37.2 -0.8
ARUT Antelope Range 64.37 326 *e*P P 21 40 39.0 +0.7
ARUT *ep*P pP 21 41 03.0 +0.9
S13A Holt Ranch, En 64.45 326 P P 21 40 39.9 +1.0
baz=65,SNR=53
R14A James Farms, M 64.52 327⇑P P 21 40 39.9 +0.6
baz=65
GSC Goldstone 64.53 322 P P 21 40 39.8 +0.4
baz=65,SNR=13
SHOC Shoshone 64.63 323⇑P P 21 40 40.3 +0.3
baz=65,SNR=5.3
EYMN Ely 64.68 347⇓*e*P P 21 40 38.3 -1.8
comp=Z,40nm,1.2s,mb5.1
EYMN *e* 21 41 14.9
SNCC San Nicolas Is 64.84 319⇓P P 21 40 41.2 -0.3
baz=65
EDW2 Edwards Air Fo 64.96 321 P P 21 40 42.1 0.0
baz=65,SNR=19
T11A Corn Creek, Al 64.96 324⇓P P 21 40 42.6 +0.5
baz=65,SNR=59
S12A Delamar Landin 65.02 325⇓P P 21 40 43.0 +0.5
baz=65
U10A Ash Meadows, A 65.02 323⇑P P 21 40 43.0 +0.4
baz=65,SNR=5.1
MPU Maple Canyon 65.09 329 *e*P P 21 40 42.6 -0.4
comp=Z,38nm,1.1s,mb5.1
BLG Laguna Peak 65.11 320⇓P P 21 40 43.2 0.0
baz=65
LRMC Laurel Mountai 65.18 322⇑P P 21 40 43.7 +0.1
baz=65,SNR=7.7
DAU Daniels Canyon 65.20 329 *e*P P 21 40 44.0 +0.3
DAU *ep*P pP 21 41 07.9 +0.4
OSI Osito Adit 65.23 320⇑P P 21 40 44.0 0.0
baz=65
NLU North Lily Min 65.27 328⇓*e*P P 21 40 44.1 +0.1
NLU *ep*P pP 21 41 08.2 +0.3
NLU *e*PcP PcP 21 41 14.1 -1.5
NLU *es*P sP 21 41 18.3 +0.1
TPNV Topopah Spring 65.34 324⇓*i*P P 21 40 44.9 +0.2
comp=Z,39nm,0.9s,mb5.2
TPNV Topopah Spring 65.34 324⇓*i*P P 21 40 44.9 +0.3
TPNV pmax pmax
comp=Z,39nm,0.9s,mb5.2
TPNV Topopah Spring 65.34 324⇑P P 21 40 45.3 +0.7
baz=66
FURC Furnace Creek, 65.36 323⇑P P 21 40 45.0 +0.2
baz=66,SNR=16
BSC Santa Cruz Isl 65.39 319⇑P P 21 40 45.1 +0.1
baz=66
R12A Pony Springs, 65.40 326 P P 21 40 45.9 +1.0
baz=66,SNR=67
JLU Jordanelle 65.44 329⇓*i*P P 21 40 45.0 -0.2
JLU pP pP 21 41 09.4 +0.3
MPMC Manual Prospec 65.45 322 P P 21 40 45.5 +0.1
baz=66,SNR=20
S11A Rachel 65.54 324⇑P P 21 40 46.8 +0.9
baz=66,SNR=12
ARVC Arvin 65.64 321⇑P P 21 40 46.8 +0.2
baz=66
CTU Camp Tracy 65.66 329 *e*P P 21 40 45.8 -0.8
comp=Z,19nm,0.8s,mb5.0
DAC Darwin (Calif) 65.66 322⇓*e*P P 21 40 46.2 -0.5
comp=Z,23nm,1.0s,mb5.0
DAC *e*PcP PcP 21 41 16.6 -0.9
DAC Darwin (Calif) 65.66 322⇓*e*P P 21 40 46.3 -0.4
DAC *e* 21 41 16.6
DAC pmax pmax
comp=Z,23nm,1.0s,mb5.0
ISA Isabella 65.77 321 P P 21 40 47.9 +0.4
baz=66,SNR=27
DUG Dugway 65.82 328⇓*i*P P 21 40 47.9 +0.2
comp=Z,85nm,1.0s,mb5.5
DUG *ep*P pP 21 41 10.7 -0.8
DUG *es*P sP 21 41 20.4 -1.4
DUG Dugway 65.82 328⇓*i*P P 21 40 47.9 +0.3
DUG *e**SP sP 21 41 20.4 -1.4
DUG pmax pmax
comp=Z,85nm,1.0s,mb5.5
DUG Dugway 65.82 328⇑P P 21 40 48.1 +0.4
baz=66
R11A Troy Canyon, C 65.95 325 P P 21 40 49.3 +0.8
baz=66,SNR=45
TRCR Troy Canyon 65.95 325⇓*e*P P 21 40 48.8 +0.3
TRCR *ep*P pP 21 41 12.2 -0.1
TRCR *es*P sP 21 41 22.7 -0.1
GRAC Grapevine Rang 66.02 323⇑P P 21 40 49.4 +0.4
baz=66
Q12A Willow Creek R 66.03 326 P P 21 40 49.5 +0.5
baz=66,SNR=30
AGMN Agassiz Refuge 66.06 344 *e*P P 21 40 47.7 -1.2
comp=Z,23nm,0.7s,mb5.1
AGMN *ep*P pP 21 41 12.0 -0.9
CWC Cottonwood Cre 66.06 322 P P 21 40 49.8 +0.5
baz=66,SNR=13
PKM Peak Mountain 66.10 320 P P 21 40 50.0 +0.5
baz=66,SNR=17
N15A Stansbury Isla 66.19 329⇑P P 21 40 49.7 -0.4
baz=66
S10A Tonopah Range, 66.22 324 P P 21 40 50.9 +0.6
baz=66,SNR=42
PDAR Pinedale Array 66.23 332 P P 21 40 49.5 -0.6
comp=Z,2.8nm,0.6s,mb4.3,baz=141,slow=5.7,SNR=26
PDAR pP pP 21 41 15.2 +1.1
comp=Z,2.8nm,0.6s,baz=149,slow=5.4,SNR=4.3
HWUT Hardware Ranch 66.27 330⇓*e*P P 21 40 49.5 -1.0
comp=Z,33nm,1.0s,mb5.1
R10A Warm Springs 66.31 325 P P 21 40 52.0 +1.2
baz=66,SNR=25
Q11A Duckwater 66.34 325 P P 21 40 51.7 +0.7
baz=67,SNR=55
O13A Hicks Ranch, I 66.38 327 P P 21 40 51.9 +0.7
baz=67,SNR=14

P12A **McGill** 66.39 326 ⇓P P 21 40 51.7 +0.5
baz=67,SNR=39
S09A **Goldfield** 66.44 324 P P 21 40 52.1 +0.5
baz=67,SNR=16
SPUT **South Promonto** 66.47 329 ⇓*iP* P 21 40 51.3 -0.5
SPUT *epP* pP 21 41 15.4 -0.2
BGU **Big Grassy Mou** 66.47 329 *eP* P 21 40 51.3 -0.5
SMMC **Simmler** 66.48 320 ⇑P P 21 40 52.4 +0.4
baz=67
N14A **Grayback Hills** 66.50 328 P P 21 40 52.0 0.0
baz=67,SNR=21
TIN **Tinemaha** 66.56 322 ⇑P P 21 40 53.0 +0.6
baz=67,SNR=5.8
M15A **Larsen Ranch,** 66.59 329 P P 21 40 52.1 -0.4
baz=67,SNR=21
TPH **Tonopah** 66.68 324 *eP* P 21 40 53.4 +0.2
comp=Z,55nm,1.3s,mb5.2
TPH **Tonopah** 66.68 324 *eP* P 21 40 53.4 +0.2
TPH pmax pmax
comp=Z,55nm,1.3s,mb5.2
R09A **Tonopah** 66.71 324 P P 21 40 53.7 +0.4
baz=67,SNR=24
Q10A **Clear Creek Ra** 66.74 325 ⇑P P 21 40 54.2 +0.7
baz=67,SNR=26
V05C **Boulder Hill,** 66.78 321 ⇓P P 21 40 53.9 +0.1
baz=67
HELL **Mitchell Peak,** 66.78 322 ⇓P P 21 40 53.8 0.0
baz=67,SNR=26
S08C **White Mtn Res** 66.83 323 P P 21 40 54.9 +0.7
baz=67,SNR=30
O12A **Currie** 66.87 327 P P 21 40 54.9 +0.5
baz=67,SNR=74
P11A **Circle Ranch,** 66.90 326 ⇑P P 21 40 55.0 +0.5
baz=67,SNR=5.8
AHID **Auburn Hatcher** 66.94 331 *eP* P 21 40 53.8 -0.9
comp=Z,53nm,1.5s,mb5.2
AHID *epP* pP 21 41 17.5 -1.2
MTUM **Tungsten Hills** 66.96 323 *eP* P 21 40 55.0 0.0
MTUM *epP* pP 21 41 18.2 -0.7
HVU **Hansel Valley** 66.99 329 ⇓*eP* P 21 40 54.3 -0.7
comp=Z,30nm,0.9s,mb5.1
HVU **Hansel Valley** 66.99 329 ⇓*eP* P 21 40 54.3 -0.8
HVU pmax pmax
comp=Z,30nm,0.9s,mb5.1
N13A **Wendover, West** 67.02 328 ⇑P P 21 40 55.1 -0.2
baz=67
M14A **Sheep Mountain** 67.06 329 P P 21 40 55.3 -0.2
baz=67,SNR=50
Q09A **Carvers** 67.18 324 ⇓P P 21 40 57.0 +0.6
baz=67
PKD **Parkfield** 67.22 320 ⇑P P 21 40 56.6 -0.1
baz=67,SNR=7.8
V04C **Ramage Ranch,** 67.23 320 ⇑P P 21 40 57.2 +0.5
baz=67
O11A **Cowboy Ranch,** 67.26 326 ⇓P P 21 40 57.0 +0.2
baz=68,SNR=24
REDW **Red Top Meadow** 67.28 332 *eP* P 21 40 55.7 -1.2
comp=Z,38nm,1.3s,mb5.1
REDW *esP* sP 21 41 30.1 -1.1
MLAC **Mammoth Lakes** 67.31 323 ⇓P P 21 40 57.6 +0.4
baz=68
P10A **Eureka** 67.33 326 P P 21 40 58.1 +0.8
baz=68,SNR=13
M13A **Montello** 67.37 328 ⇓P P 21 40 57.3 -0.2
baz=68,SNR=5.3
KCC **Kaiser Creek** 67.39 322 ⇓P P 21 40 57.2 -0.5
baz=68,SNR=9.3
T06C **Millerton Lake** 67.41 322 ⇑P P 21 40 57.8 -0.1
baz=68
TPAW **Teton Pass** 67.43 332 *eP* P 21 40 57.3 -0.5
comp=Z,41nm,1.5s,mb5.0
N12A **Clover Valley,** 67.45 327 P P 21 40 57.9 -0.1
baz=68,SNR=7.6
ELK **Elko** 67.48 327 *eP* P 21 40 57.6 -0.6
comp=Z,19nm,1.1s,mb4.8
ELK **Elko** 67.48 327 *eP* P 21 40 57.6 -0.6
ELK pmax pmax
comp=Z,19nm,1.1s
NVAR **Mina Array Bea** 67.54 324 P P 21 40 58.9 +0.3
NVAR pP pP 21 41 22.9 +0.4
NVAR **Mina Array Bea** 67.54 324 P P 21 40 58.9 +0.3
comp=Z,7.9nm,0.8s,mb4.6
NVAR pP pP 21 41 22.9 +0.4
comp=Z,4.5nm,0.8s,baz=119,slow=5.6,SNR=3.8
Q08A **Gabbs** 67.62 324 ⇓P P 21 40 58.9 -0.2
baz=68
VNA3 **Neumayer Olymp** 67.64 162 *eP* P 21 40 58.8 0.0
VNA3 21 41 01.8
VNA3 *e* 21 41 08.1
VNA3 *e* pP 21 41 22.7 0.0
VNA3 *e* 21 41 34.0
U04C **Hernandez Rese** 67.64 320 ⇓P P 21 40 59.5 +0.1
baz=68,SNR=18
P09A **Austin** 67.66 325 ⇓P P 21 40 59.6 +0.3
baz=68
V03C **Hunter Liggett** 67.70 320 ⇓P P 21 41 00.3 +0.6
baz=68,SNR=9.5
IMW **Indian Meadow** 67.74 332 ⇓*iP* P 21 40 59.3 -0.4
comp=Z,48nm,1.4s,mb5.1
IMW *eP*cP PcP 21 41 25.3 -0.6
IMW *esP* sP 21 41 33.2 -0.8
R07C **Lee Vining** 67.74 323 ⇓P P 21 41 00.5 +0.6
baz=68,SNR=9.6
K14A **Jones Ranch, D** 67.76 330 P P 21 40 59.5 -0.4
baz=68,SNR=12
N11A **Elko Archery C** 67.79 327 ⇑P P 21 41 00.2 0.0
baz=68
M12A **Wells** 67.80 328 P P 21 40 59.8 -0.4
baz=68,SNR=14
L13A **Double Diamond** 67.80 329 P P 21 41 00.3 +0.1
baz=68,SNR=26
O10A **Cortez Mining,** 67.83 326 ⇓P P 21 41 00.6 +0.2
baz=68,SNR=17
ULM **Lac du Bonnet** 67.86 345 P P 21 40 59.0 -1.3
comp=Z,18nm,0.5s,mb5.1,baz=155,slow=5.8,SNR=71
ULM pP pP 21 41 22.9 -1.4
comp=Z,11nm,0.8s,baz=214,slow=4.4,SNR=4.4
VNA1 **Neumayer--Stat** 67.88 161 *eP* P 21 41 01.1 +0.8
VNA1 *e* 21 41 04.0
VNA1 *e* 21 41 10.0
VNA1 *e* pP 21 41 24.5 +0.2
VNA1 *e* 21 41 36.0
T05C **Eagle Field, D** 67.92 321 ⇑P P 21 41 01.4 +0.3
baz=68
RLMT **Red Lodge** 67.97 334 ⇓*eP* P 21 41 00.6 -0.5
comp=Z,7.9nm,0.6s,mb4.7
RLMT *epP* pP 21 41 23.4 -1.7
RLMT *esP* sP 21 41 34.2 -1.2
S05C **Merced** 68.01 321 ⇑P P 21 41 01.6 0.0
baz=68,SNR=11
LKWY **Lake** 68.02 333 *eP* P 21 41 01.9 +0.4
comp=Z,61nm,1.8s,mb5.1
LKWY *epP* pP 21 41 25.8 +0.4
LKWY *esP* sP 21 41 36.3 +0.5
LKWY **Lake** 68.02 333 *eP* P 21 41 01.9 +0.4
LKWY *e**PP pP 21 41 25.8 +0.3
LKWY pmax pmax
comp=Z,61nm,1.8s,mb5.1
S06C **San Francisco** 68.07 322 P P 21 41 02.3 +0.3
baz=68,SNR=32
O09A **Fish Creek Ran** 68.12 326 ⇓P P 21 41 02.2 0.0
baz=68,SNR=6.6
N10A **Dunphy** 68.13 326 ⇑P P 21 41 02.3 0.0
baz=68
HAST **UC Hastings Re** 68.14 320 P P 21 41 02.7 +0.3
baz=68,SNR=8.3
VNA2 **Neumayer--Watz** 68.24 161 *eP* P 21 41 02.1 -0.4
VNA2 *e* 21 41 04.9
VNA2 *e* 21 41 11.6
VNA2 *e* pP 21 41 26.1 -0.4
VNA2 *e* 21 41 38.9
M11A **Holland Ranch,** 68.26 327 P P 21 41 03.4 +0.3
baz=68,SNR=24
P08A **Dixie Valley** 68.28 325 ⇑P P 21 41 03.4 +0.2
baz=68,SNR=6.9
K13A **Stover Farm, H** 68.28 329 ⇓P P 21 41 03.2 0.0
baz=68
SAO **San Andreas Ge** 68.31 320 *eP* P 21 41 02.3 -1.2
comp=Z,16nm,1.1s,mb4.8
SAO **San Andreas Ge** 68.31 320 *eP* P 21 41 02.3 -1.2
SAO pmax pmax
comp=Z,16nm,1.1s,mb4.8
PACP **Pacheco Peak** 68.37 321 ⇑P P 21 41 04.1 +0.3
baz=69,SNR=9.9
L12A **House Creek Ra** 68.38 328 P P 21 41 04.1 +0.3
baz=69,SNR=24

CMB **Columbia Colle** 68.49 322 *eP* P 21 41 04.5 -0.1
comp=Z,18nm,1.2s,mb4.8
CMB *epP* pP 21 41 27.6 -1.0
CMB **Columbia Colle** 68.49 322 *eP* P 21 41 04.5 -0.1
CMB *e**PP pP 21 41 27.6 -1.0
CMB pmax pmax
comp=Z,18nm,1.2s,mb4.8
CMB **Columbia Colle** 68.49 322 P P 21 41 04.9 +0.3
baz=69,SNR=9.2
P07A **Fallon** 68.63 324 ⇑P P 21 41 05.6 +0.2
baz=69
K12A **Draper Farm, C** 68.68 329 ⇓P P 21 41 06.1 +0.4
baz=69,SNR=44
QLMT **Earthquake Lak** 68.68 332 *eP* P 21 41 06.2 +0.6
R05C **Kirkwood Meado** 68.75 323 ⇑P P 21 41 06.8 +0.6
baz=69,SNR=24
DGMT **Dagmar** 68.77 339 *eP* P 21 41 05.7 -0.4
comp=Z,32nm,0.7s,mb5.3
DGMT *epP* pP 21 41 29.6 -0.5
DGMT *esP* sP 21 41 39.1 -1.3
J13A **Cove Ranch, Pi** 68.88 330 P P 21 41 07.1 +0.2
baz=69,SNR=16
WCN **Washoe City** 68.96 323 ⇑P P 21 41 08.0 +0.5
baz=69,SNR=6.3
R04C **Big Horse Ranc** 68.97 322 ⇓P P 21 41 07.8 +0.3
baz=69
BNLO **Ben Lomond (Sa** 68.99 320 ⇑P P 21 41 08.0 +0.3
baz=69
PAHR **Pah Rah Range** 69.02 324 ⇓*eP* P 21 41 08.2 +0.3
comp=Z,55nm,1.0s,mb5.3
PAHR *e* pP 21 41 30.5 -1.4
O07A **Toulon** 69.04 325 P P 21 41 08.1 +0.1
baz=69,SNR=20
WENL **Wente Brothers** 69.05 321 ⇑P P 21 41 08.6 +0.5
baz=69
N08A **GE Springer Mi** 69.06 325 ⇑P P 21 41 08.4 +0.4
baz=69
L10A **Juniper Basin** 69.08 327 P P 21 41 08.5 +0.4
baz=69,SNR=31
HLID **Hailey** 69.12 330 *eP* P 21 41 08.3 -0.1
comp=Z,17nm,1.0s,mb4.8
HLID *esP* sP 21 41 31.5 -11
HLID **Hailey** 69.12 330 P P 21 41 08.8 +0.4
baz=69,SNR=17
LAVA **Lava Cap Winer** 69.17 322 ⇑P P 21 41 08.8 0.0
baz=69,SNR=6.4
JRSC **Jasper Ridge** 69.20 320 ⇓P P 21 41 09.1 0.0
baz=69
J12A **Stokes Ranch,** 69.23 329 P P 21 41 09.2 +0.2
baz=70,SNR=13
I13A **Wildhorse Cree** 69.24 330 P P 21 41 09.7 +0.6
baz=70,SNR=27
BDM **Black Diamond** 69.33 321 ⇓P P 21 41 10.4 +0.6
baz=70
MCMT **McKenzie Canyo** 69.33 331 *eP* P 21 41 09.7 +0.1
MCMT *e* pP 21 41 32.4 -1.3
K11A **Parker Ranch,** 69.35 328 P P 21 41 10.1 +0.2
baz=70,SNR=13
BOZ **Bowman (W)** 69.41 333 ⇑P P 21 41 10.1 +0.1
baz=70
G15A **Dillon** 69.42 332 ⇑P P 21 41 10.1 -0.1
baz=70,SNR=6.6
P05C **Yuba Gap, Truc** 69.46 323 ⇓P P 21 41 11.0 +0.5
baz=70,SNR=13
N07B **Gerlach** 69.52 325 ⇑P P 21 41 10.7 -0.2
baz=70
O06A **Flanigan** 69.58 324 ⇑P P 21 41 11.5 +0.2
baz=70
Q04C **Lincoln** 69.61 322 ⇑P P 21 41 12.1 +0.6
baz=70
M08A **Happy Creek Ra** 69.65 326 ⇓P P 21 41 11.5 -0.2
baz=70
L09A **Wilkinson Ranc** 69.67 327 ⇑P P 21 41 11.8 +0.1
baz=70
MFID **Camas Ranch** 69.71 329 ⇓P P 21 41 12.3 +0.2
baz=70,SNR=32
K10A **MacKenzie Ranc** 69.79 328 P P 21 41 12.8 +0.3
baz=70,SNR=17
H13A **Challis** 69.79 330 P P 21 41 12.8 +0.3
baz=70,SNR=13
Q03C **Winters** 69.85 322 ⇓P P 21 41 13.7 +0.7
baz=70
SNAA **Sanae** 69.86 161 *d iP* P 21 41 12.7 +0.2
SNAA **Sanae** 69.86 161 P P 21 41 12.4 -0.1
comp=Z,27nm,0.7s,mb5.2,baz=282,slow=5.8,SNR=102
SNAA PcP PcP 21 41 35.1 +0.7
comp=Z,6.7nm,0.8s,baz=248,slow=6.8,SNR=4.2
FARB **Farallon Islan** 69.86 320 ⇓P P 21 41 13.1 0.0
baz=70
SCHQ **Schefferville** 69.89 4 P P 21 41 12.4 -0.5
comp=Z,11nm,0.8s,mb4.7,baz=167,slow=5.1,SNR=16
SCHQ LR LR 22 10 23.6
comp=Z,117nm,18.9s,baz=97,slow=34
G14A **Jackson** 69.93 331 P P 21 41 13.4 +0.1
baz=70,SNR=5.9
CVS **Carmenet Viney** 69.94 321 ⇓P P 21 41 13.2 -0.3
baz=70,SNR=7.3
F15A **Butte** 69.94 332 P P 21 41 13.3 0.0
baz=70,SNR=6.4
N06A **Buffalo Meadow** 69.98 324 P P 21 41 14.0 +0.3
baz=70,SNR=34
OHCM **Honcut** 69.99 322 *eP* P 21 41 13.8 0.0
OHCM *e* pP 21 41 35.2 -2.7
OHCM *esP* sP 21 41 46.2 -2.0
H12A **Diamond D Ranc** 70.07 330 P P 21 41 14.5 +0.4
baz=70,SNR=13
MCCM **Marconi Confer** 70.07 321 ⇓P P 21 41 14.3 0.0
baz=70
O05C **Quincy** 70.07 323 ⇓P P 21 41 14.4 +0.1
baz=70
NSHM **Saint Helena R** 70.14 321 *eP* P 21 41 15.1 +0.4
NSHM *epP* pP 21 41 39.1 +0.2
NSHM *esP* sP 21 41 48.5 -0.6
ORV **Oroville** 70.14 323 P P 21 41 15.2 +0.5
baz=70,SNR=35
L08A **Fields** 70.15 326 P P 21 41 14.8 0.0
baz=70,SNR=8.4
G13A **Cobalt** 70.17 331 P P 21 41 14.8 0.0
baz=70,SNR=18
K09A **Rome** 70.18 327 P P 21 41 15.0 +0.1
baz=70,SNR=24
J10A **Berg Farm, Mel** 70.20 328 ⇑P P 21 41 14.6 -0.4
baz=70
MNRC **McLaughlin Nat** 70.27 322 ⇑P P 21 41 15.8 +0.2
baz=70,SNR=6.3
F14A **Wisdom** 70.32 332 ⇓P P 21 41 15.7 0.0
baz=70,SNR=8.2
ELFS **Eagle Lake Fie** 70.40 324 ⇓P P 21 41 16.6 +0.4
baz=71,SNR=18
O04C **Chester** 70.41 323 P P 21 41 16.6 +0.3
baz=71,SNR=9.4
E15A **Deer Lodge** 70.45 333 ⇑P P 21 41 16.3 -0.2
baz=71
EGMT **Eagleton** 70.49 335 *eP* P 21 41 15.7 -0.9
comp=Z,18nm,0.9s,mb4.9
EGMT PcP PcP 21 41 36.1 -1.3
EGMT *epP* pP 21 41 39.9 -0.9
EGMT **Eagleton** 70.49 335 ⇑P P 21 41 16.2 -0.4
baz=71
L07A **Adell** 70.57 326 ⇑P P 21 41 17.4 +0.1
baz=71
K08A **Mann Creek Ran** 70.60 327 P P 21 41 17.3 -0.2
baz=71,SNR=5.8
M06C **Likely Place G** 70.65 324 ⇓P P 21 41 17.9 +0.1
baz=71,SNR=8.6
J09A **Fry Pan Ranch,** 70.65 328 ⇓P P 21 41 17.9 +0.2
baz=71,SNR=14
HOPS **Hopland** 70.72 321 ⇓P P 21 41 18.7 +0.4
baz=71
F13A **Darby** 70.74 331 P P 21 41 18.3 0.0
baz=71,SNR=16
E14A **Clinton** 70.83 332 ⇓P P 21 41 19.1 +0.3
baz=71,SNR=9.0
D15A **Lincoln** 70.88 333 ⇓P P 21 41 19.2 +0.2
baz=71
GASB **Alder Springs** 70.93 322 ⇑P P 21 41 20.3 +0.8
baz=71,SNR=15
HATC **Hat Creek Radi** 70.95 324 ⇓P P 21 41 19.6 0.0
baz=71,SNR=6.2
K07A **Rock Creek Ran** 70.98 326 ⇓P P 21 41 19.8 0.0
baz=71
MOD **Modoc** 71.02 325 ⇑*iP* P 21 41 20.1 +0.1
comp=Z,75nm,1.6s,mb5.3
MOD **Modoc** 71.02 325 ⇓P P 21 41 19.8 -0.2
baz=71,SNR=17
H10A **Noah's Angus R** 71.02 329 ⇓P P 21 41 19.7 -0.3
baz=71

J08A **Circle Bar Ran** 71.03 327 ⇓P P 21 41 19.9 -0.1
baz=71
I09A **Lost Marbles R** 71.08 328 ⇑P P 21 41 20.4 0.0
baz=71
CHMT **Chamberlain Mo** 71.10 333 *eP* P 21 41 20.1 -0.3
CHMT *epP* pP 21 41 44.2 -0.4
M05C **Lookout** 71.12 324 ⇑P P 21 41 20.6 -0.1
baz=71,SNR=5.6
TBI **Tubuai** 71.14 250 *eS* S 21 50 31.2 +0.3
comp=Z,186nm,28.5s
TBI *eLR* LR 22 03 11.9
comp=Z,274nm,29.8s
F12A **Elk City** 71.15 331 P P 21 41 20.7 0.0
baz=71,SNR=12
P01C **Double 8 Ranch** 71.18 322 ⇓P P 21 41 21.4 +0.3
baz=71,SNR=11
O02C **Red Bluff** 71.30 322 ⇑P P 21 41 21.2 -0.6
baz=72
D14A **Greenough** 71.34 333 ⇓P P 21 41 21.8 -0.1
baz=72
L05A **Lakeview** 71.41 325 ⇓P P 21 41 22.7 +0.4
baz=72,SNR=7.4
WDC **Whiskeytown Da** 71.42 323 ⇑P P 21 41 20.8 -1.7
baz=72,SNR=5.3
LIC **Lamto** 71.44 78 ⇑*iP* P 21 41 21.5 -1.7
comp=Z,46nm,0.9s,mb5.0
LIC *eMLR* MLR
comp=Z,164nm,20.2s
LIC **Lamto** 71.44 78 *eP* P 21 41 21.0 -2.2
comp=Z,66nm,0.9s,mb5.5
LIC **Lamto** 71.44 78 ⇑*iP* P 21 41 21.5 -1.7
comp=Z,23nm,0.9s,mb5.0
LIC LR LR
comp=Z,80nm,20.3s
I08A **Drewsey** 71.46 328 ⇑P P 21 41 22.7 0.0
baz=72,SNR=6.9
J07A **Hines** 71.48 327 ⇓P P 21 41 22.9 +0.1
baz=72
BMO **Blue Mountains** 71.49 329 ⇓*eP* P 21 41 22.0 -0.8
comp=Z,8.4nm,0.8s,mb4.6
BMO *epP* pP 21 41 45.1 -1.9
BMO *esP* sP 21 41 55.5 -1.7
BMO **Blue Mountains** 71.49 329 ⇓*eP* P 21 41 22.0 -0.8
BMO pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
H09A **Durkee** 71.53 329 ⇓P P 21 41 22.9 -0.2
baz=72
TIC **Toumodi** 71.58 78 *eP* P 21 41 24.4 +0.4
comp=Z,22nm,0.7s,mb5.1
K06A **Valley Falls** 71.59 326 ⇑P P 21 41 23.8 +0.3
baz=72,SNR=18
M03C **McCloud** 71.62 324 ⇑P P 21 41 23.0 -0.7
baz=72
F11A **Grangeville** 71.67 330 ⇓P P 21 41 23.4 -0.4
baz=72,SNR=14
KIC **Kosan Boka** 71.75 78 *eP* P 21 41 24.4 -0.7
comp=Z,223nm,0.7s,mb6.1
D13A **Huson** 71.78 332 ⇓P P 21 41 24.5 0.0
baz=72,SNR=6.1
M04C **Macdoel** 71.80 324 ⇑P P 21 41 24.6 -0.1
baz=72,SNR=8.4
J06A **Christmas Vall** 71.84 326 P P 21 41 25.3 +0.3
baz=72,SNR=26
O01C **Eel River Cons** 71.89 322 ⇓P P 21 41 25.9 +0.6
baz=72
K05A **Summer Lake** 71.89 325 ⇓P P 21 41 26.0 +0.7
baz=72,SNR=7.2
LHEM **Herd Peak** 71.91 324 P P 21 41 25.4 0.0
H08A **Prairie City** 71.94 328 P P 21 41 25.9 +0.4
baz=72,SNR=15
G09A **Cove** 72.03 329 P P 21 41 26.3 +0.3
baz=72,SNR=18
E11A **Bogner Ranch,** 72.04 331 ⇓P P 21 41 25.6 -0.5
baz=72,SNR=7.8
I07A **Izee** 72.07 327 P P 21 41 26.3 0.0
baz=72,SNR=8.1
L04A **Klamath Falls** 72.08 325 ⇓P P 21 41 26.5 +0.1
baz=72
PPT **Papeete** 72.21 256 *eS* S 21 50 41.9 -1.5
comp=Z,158nm,26.5s
PPT *eLR* LR 22 03 33.7
comp=Z,274nm,28.0s
F10A **Beach Ranch, E** 72.25 330 P P 21 41 27.6 +0.3
baz=72,SNR=12
YBH **Yreka Blue Hor** 72.26 324 ⇓P P 21 41 26.4 -1.1
baz=72
C13A **Hot Springs** 72.27 332 P P 21 41 27.7 +0.4
baz=72,SNR=8.5
K04A **Chilquin** 72.28 325 ⇑P P 21 41 27.7 +0.1
baz=72
I06A **Prineville** 72.35 327 P P 21 41 28.7 +0.8
baz=73,SNR=13
F09A **S2 Ranch, Elgi** 72.40 329 ⇓P P 21 41 28.2 0.0
baz=73,SNR=9.1
JCC **Jacoby Creek** 72.44 322 ⇑P P 21 41 29.0 +0.4
baz=73
J05A **Fort Rock** 72.45 326 ⇓P P 21 41 28.9 +0.3
baz=73,SNR=7.3
E10A **Myers Farm, Un** 72.56 330 ⇑P P 21 41 29.4 +0.2
baz=73
G08A **Pilot Rock** 72.63 328 P P 21 41 29.8 +0.2
baz=73,SNR=11
B13A **Whitefish** 72.74 333 ⇑P P 21 41 30.3 +0.1
baz=73
F08A **Pendleton** 72.89 329 ⇑P P 21 41 30.8 -0.3
baz=73
J04A **Umpqua Nationa** 72.90 325 ⇑P P 21 41 31.2 0.0
baz=73
VIPM **Ingram Point** 72.94 327 P P 21 41 32.0 +0.6
H06A **Lindquist Farm** 72.95 327 ⇑P P 21 41 31.9 +0.4
baz=73,SNR=20
G07A **Ruggs Ranch, H** 72.97 328 ⇓P P 21 41 32.4 +0.8
baz=73,SNR=8.6
L02A **Cave Junction** 73.04 324 ⇓P P 21 41 32.2 +0.1
baz=73
D10A **Wagner Farm, O** 73.05 331 P P 21 41 31.8 -0.3
baz=73,SNR=7.1
I05A **Bend** 73.06 326 ⇓P P 21 41 32.1 0.0
baz=73
E09A **Wood Farm, Sta** 73.08 330 P P 21 41 32.3 +0.1
baz=73,SNR=5.1
B12A **Libby** 73.31 332 ⇓P P 21 41 33.8 +0.2
baz=74
I04A **Tendick Farm,** 73.43 326 ⇑P P 21 41 34.8 +0.5
baz=74
G06A **Carlson Farm,** 73.45 328 ⇑P P 21 41 35.1 +0.7
baz=74,SNR=5.8
FFC **Flin Flon** 73.51 343 P P 21 41 33.2 -1.3
comp=Z,101nm,1.1s,mb5.5,SNR=7.9
FFC **Flin Flon** 73.51 343 *eP* P 21 41 33.2 -1.3
comp=Z,13nm,1.0s,mb4.6
FFC **Flin Flon** 73.51 343 *eP* P 21 41 33.2 -1.3
FFC pmax pmax
comp=Z,13nm,1.0s,mb4.6
F07A **Phinny Hill Vi** 73.54 328 ⇓P P 21 41 35.4 +0.5
baz=74
D09A **Jones Farm, Ri** 73.55 330 ⇓P P 21 41 34.9 -0.1
baz=74,SNR=7.9
B11A **Sandpoint** 73.64 332 ⇓P P 21 41 35.5 0.0
baz=74
HAWA **Hanford** 73.68 329 *eP* P 21 41 35.9 +0.1
comp=Z,7.1nm,0.6s,mb4.6
HAWA *epP* pP 21 42 00.1 0.0
HAWA *esP* sP 21 42 09.9 -0.4
A12A **Yaak River Ran** 73.68 333 P P 21 41 36.2 +0.5
baz=74,SNR=8.6
BROR **Big Rock Looko** 73.76 326 P P 21 41 35.9 -0.4
J02A **Umpqua** 73.80 325 P P 21 41 37.3 +0.8
baz=74,SNR=5.5
D08A **Wollman Farm,** 73.84 330 ⇑P P 21 41 36.8 +0.1
baz=74
NEW **Newport** 73.86 332 P P 21 41 36.0 -0.7
comp=Z,5.4nm,0.8s,mb4.3
NEW *epP* pP 21 41 59.9 -1.2
NEW **Newport** 73.86 332 P P 21 41 36.0 -0.7
NEW pmax pmax
comp=Z,5.0nm,0.8s
F06A **Goldendale** 73.88 328 ⇓P P 21 41 37.2 +0.3
baz=74
H04A **Detroit Lake** 73.89 326 ⇑P P 21 41 36.9 -0.1
baz=74
OD2 **Odessa Site #2** 73.98 330 P P 21 41 37.7 +0.3
A11A **Hall Mountain,** 74.02 332 ⇓P P 21 41 37.8 +0.2
baz=74
I03A **Eugene** 74.02 325 ⇓P P 21 41 38.0 +0.2
baz=74
C09A **Chrisman Ranch** 74.06 331 ⇓P P 21 41 38.1 +0.2
baz=74

F05A White Salmon 74.31 328 ⇓P P 21 41 39.7 +0.3
baz=74
G04A Mulino 74.39 327 ⇓P P 21 41 40.1 +0.2
baz=75
C08A Higginbotham F 74.42 330 ⇑P P 21 41 40.1 +0.1
baz=75
MAIT Maitri 74.44 160 *e*P P 21 41 39.2 -0.7
B09A Rice 74.44 331 ⇑P P 21 41 40.4 +0.2
baz=75
D07A Quincy 74.45 329 ⇓P P 21 41 40.5 +0.3
baz=75
H03A Soap Creek Ran 74.49 326 ⇓P P 21 41 40.7 +0.2
baz=75
E06A Yakima 74.51 328 ⇑P P 21 41 40.9 +0.3
baz=75
EBG Ellensburg 74.56 329 P P 21 41 41.8 +0.9
C07A Waterville 74.84 330 P P 21 41 42.6 +0.2
baz=75,SNR=9.9
F04A Amboy 74.84 327 P P 21 41 42.7 +0.2
baz=75,SNR=6.2
D06A Cle Elum 74.89 329 ⇑P P 21 41 43.1 +0.4
baz=75
G03A Yamhill 74.89 326 ⇑P P 21 41 42.7 -0.1
baz=75
E05A Randle 74.92 328 ⇑P P 21 41 43.3 +0.3
baz=75
B08A Colville Reser 74.96 331 ⇑P P 21 41 43.1 0.0
baz=75
A09A Danville 75.04 331 ⇑P P 21 41 43.4 -0.2
baz=75
A08A Turner Farm, O 75.35 331 P P 21 41 45.5 +0.2
baz=76,SNR=7.6
GSM Grass Mountain 75.37 328 P P 21 41 45.3 -0.2
B07A Winthrop 75.40 330 P P 21 41 45.5 -0.1
baz=76,SNR=5.3
FCC Fort Churchill 75.41 349 *e*P P 21 41 44.6 -0.9
comp=Z,60nm,1.1s,mb5.2
FCC *e*pP pP 21 42 08.5 -1.4
FCC *e*sP sP 21 42 18.3 -1.8
FCC Fort Churchill 75.41 349 *e*P P 21 41 44.6 -0.9
FCC pmax pmax
comp=Z,60nm,1.1s,mb5.2
D05A Enumclaw 75.46 328 ⇑P P 21 41 46.0 0.0
baz=76
C05A Tolt Reservoir 75.65 329 ⇓P P 21 41 46.9 -0.2
baz=76
A07A Ashnola River, 75.94 331 ⇑P P 21 41 48.8 +0.1
baz=76,SNR=8.6
EDM Edmonton 76.00 337 ⇓*i*P P 21 41 47.8 -1.1
EDM *e*pP pP 21 42 12.0 -1.4
EDM *e*sP sP 21 42 21.8 -1.8
B06A Marblemount 76.11 330 ⇑P P 21 41 49.7 0.0
baz=76
B05A Bryant 76.23 329 ⇑P P 21 41 50.4 0.0
baz=76
C04A Brinnon 76.31 328 ⇑P P 21 41 51.0 +0.1
baz=76
D03A Wishkah Elem. 76.33 327 ⇓P P 21 41 51.2 +0.2
baz=76
CMW Cultus Mountai 76.35 329 P P 21 41 50.8 -0.3
NLWA Neilton Lookou 76.56 328 *e*P P 21 41 52.8 +0.5
comp=Z,28nm,0.8s,mb5.0
NLWA *e*sP sP 21 42 16.9 -10
TORD Torodi Ar. Bea 79.88 73 P P 21 42 11.1 -0.3
TORD pP pP 21 42 35.5 -0.4
TORD PKKPbc PKKPbc 22 00 55.3 -1.2
TORD LR LR 22 16 04.6
TORD Torodi Ar. Bea 79.88 73 P P 21 42 11.1 -0.2
comp=Z,56nm,0.7s,mb5.5,baz=264,slow=5.3,SNR=573
TORD pP pP 21 42 35.6 -0.4
comp=Z,6.8nm,0.6s,baz=262,slow=5.0,SNR=1.9
TORD PKKPbc PKKPbc 22 00 55.3 -1.2
comp=Z,0.6nm,0.7s,baz=3.3,slow=1.1,SNR=5.1
TORD LR LR 22 16 04.6
comp=Z,102nm,19.2s,baz=215,slow=34
MORF Marmelete 80.42 47 *e*P P 21 42 15.4 +1.7
comp=Z,85nm,1.6s,mb5.3
PTEO Sao Teotonio 80.47 47 *e*P P 21 42 15.9 +1.9
PBDV Barranco-do-Ve 80.90 48 *e*P P 21 42 17.9 +1.6
PVAQ Vaqueiros 81.12 48 *e*P P 21 42 18.8 +1.3
PBEJ Beja 81.30 47 *e*P P 21 42 19.8 +1.4
comp=Z,25nm,1.1s,mb5.0
EGRO El Granado 81.35 47 P P 21 42 19.9 +1.3
comp=Z,224nm,2.5s,mb5.5
EVO Evora 81.42 46 *e*P P 21 42 20.3 +1.3
BBB Bella Bella 81.71 330 P P 21 42 20.5 +0.3
comp=Z,7.3nm,0.5s,mb4.8,baz=108,slow=5.3,SNR=4.0
PBAR Barrancos 81.95 47 *e*P P 21 42 23.1 +1.3
comp=Z,25nm,1.6s,mb4.8
EMIN Mina Concepcio 82.03 48 P P 21 42 22.4 +0.2
comp=Z,590nm,3.8s
PTO Porto 82.21 44 *e*P P 21 42 24.2 +1.1
comp=Z,213nm,1.8s,mb5.7
EBAD Badajoz 82.22 47 P P 21 42 22.9 -0.3
comp=Z,886nm,4.9s
ESPR Espera 82.23 49 P P 21 42 25.1 +1.7
comp=Z,513nm,3.7s
VNDA Vanda 82.30 190 P P 21 42 23.2 +0.2
comp=Z,11nm,0.8s,mb4.7,baz=134,slow=3.6,SNR=12
VNDA pP pP 21 42 47.1 -0.6
comp=Z,8.3nm,0.9s,baz=135,slow=3.9,SNR=3.6
VNDA sP sP 21 42 56.9 -1.1
comp=Z,7.1nm,0.8s,baz=93,slow=3.3,SNR=3.1
VNDA LR LR 22 13 50.4
comp=Z,112nm,19.0s,baz=136,slow=32
PCBR Castelo Branco 82.38 45 *e*P P 21 42 25.2 +1.2
comp=Z,64nm,1.3s,mb5.3
PVIS Viseu 82.49 44 *e*P P 21 42 25.9 +1.3
comp=Z,87nm,2.0s,mb5.2
MTE Manteigas 82.59 45 *e*P P 21 42 25.6 +0.5
comp=Z,67nm,1.2s,mb5.3
EZAM Zamans 82.62 43 P P 21 42 26.0 +0.8
comp=Z,48nm,0.8s,mb5.4
EZAM Zamans 82.62 43 P P 21 42 26.0 +0.8
EZAM pmax pmax
comp=Z,48nm,0.8s,mb5.4
PCAB Cabril 82.86 44 *e*P P 21 42 27.4 +0.9
comp=Z,64nm,0.8s,mb5.5
PVRL Vila Real 82.87 44 *e*P P 21 42 27.4 +0.9
comp=Z,61nm,1.5s,mb5.2
EMIJ Mijas 82.89 49 P P 21 42 27.4 +0.6
comp=Z,116nm,2.5s,mb5.3
ELOB Lobios 82.91 43 P P 21 42 27.3 +0.6
comp=Z,658nm,2.5s,mb6.0
MVO Moncorvo 83.28 44 *e*P P 21 42 29.7 +1.0
comp=Z,69nm,1.9s,mb5.2
ELOJ Sierra Loja 83.58 49 P P 21 42 31.7 +1.3
comp=Z,38nm,0.7s,mb5.3
ELOJ Sierra Loja 83.58 49 P P 21 42 31.7 +1.4
ELOJ pmax pmax
comp=Z,38nm,0.7s,mb5.3
SFJD Kangerlussuaq 83.62 9 P P 21 42 29.0 -0.8
comp=Z,12nm,0.9s,mb4.7,baz=154,slow=6.0,SNR=4.5
YKA Yellowknife Ar 83.62 342 P P 21 42 28.9 -1.0
YKA pP pP 21 42 53.7 -1.0
YKA LR LR 22 21 46.3
YKA Yellowknife Ar 83.62 342 P P 21 42 28.9 -1.0
comp=Z,24nm,0.8s,mb5.1,baz=136,slow=5.3,SNR=365
YKA pP pP 21 42 53.7 -1.0
comp=Z,8.1nm,0.8s,baz=136,slow=5.2,SNR=4.9
YKA LR LR 22 21 46.3
comp=Z,42nm,19.2s,baz=160,slow=37
ELUQ Luque 83.67 49 P P 21 42 32.4 +1.7
comp=Z,66nm,1.0s,mb5.4
ELUQ Luque 83.67 49 P P 21 42 32.4 +1.7
ELUQ pmax pmax
comp=Z,66nm,1.0s,mb5.4
EADA Adamuz 83.70 48 P P 21 42 31.8 +0.9
comp=Z,69nm,1.1s,mb5.4
ERUA La Rua 83.75 43 P P 21 42 32.0 +0.9
comp=Z,84nm,1.2s,mb5.4
ERUA La Rua 83.75 43 P P 21 42 32.0 +0.9
ERUA pmax pmax
comp=Z,84nm,1.2s,mb5.5
PBRG Braganca 83.76 44 *e*P P 21 42 32.1 +1.0
comp=Z,94nm,1.4s,mb5.4
ERON Agron 83.78 49 P P 21 42 32.7 +1.3
comp=Z,17nm,0.6s,mb5.0
ECAL Calabor 83.82 44 P P 21 42 32.4 +1.0
comp=Z,172nm,1.2s,mb5.8
SYO Syowa Base 84.12 161 ⇑*i*P P 21 42 30.5 -2.0
SYO Syowa Base 84.12 161 ⇓*e*pP pP 21 42 53.8 -3.6
EPON Pontenova 84.17 42 P P 21 42 33.7 +0.5
comp=Z,1.7nm,0.4s,mb4.2
EBAN Banos Encina 84.26 48 P P 21 42 35.1 +1.3
comp=Z,40nm,0.7s,mb5.4
EBAN Banos Encina 84.26 48 P P 21 42 35.1 +1.3
EBAN pmax pmax
comp=Z,40nm,0.7s,mb5.4
EBER Berja 84.41 50 P P 21 42 34.4 -0.1
comp=Z,3.4nm,0.4s,mb4.5
PAB San Pablo 84.43 47 ⇓*e*P P 21 42 35.3 +0.8
comp=Z,67nm,1.0s,mb5.4
PAB *e*pP pP 21 42 59.4 0.0
PAB San Pablo 84.43 47 ⇓*e*P P 21 42 35.3 +0.7
PAB pmax pmax
comp=Z,67nm,1.0s,mb5.4
EQES Quesada 84.63 49 P P 21 42 36.1 +0.4
comp=Z,140nm,1.8s,mb5.6
ESDC Sonseca Array 84.75 47 P P 21 42 37.1 +0.9
comp=Z,16nm,0.7s,mb5.0
ESDC Sonseca Array 84.75 47 P P 21 42 37.1 +0.9
comp=Z,23nm,0.8s,mb5.2,baz=255,slow=5.4,SNR=62
ESDC LR LR 22 18 24.1
comp=Z,82nm,21.3s,baz=295,slow=34
GUD Guadarrama 85.02 46 P P 21 42 38.6 +1.1
comp=Z,8.2nm,0.6s,mb4.8
GUD Guadarrama 85.02 46 P P 21 42 38.6 +1.1
GUD pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
EVIA Vianos 85.38 48 P P 21 42 40.0 +0.6
comp=Z,13nm,0.7s,mb5.0
EVIA Vianos 85.38 48 P P 21 42 40.0 +0.7
EVIA pmax pmax
comp=Z,13nm,0.7s,mb5.0
EARI Arriondas 85.43 43 P P 21 42 40.1 +0.6
comp=Z,2.4nm,0.5s,mb4.4
EMUR La Murta 85.98 49 P P 21 42 42.0 -0.3
comp=Z,1.9nm,0.4s,mb4.4
ETOB Tobarra 86.07 48 P P 21 42 43.6 +0.9
comp=Z,4.5nm,0.5s,mb4.7
DLBC Dease Lake 86.37 334 *e*P P 21 42 43.7 0.0
DLBC *e*pP pP 21 43 08.0 -0.6
DLBC *e*sP sP 21 43 18.3 -0.4
DLBC Dease Lake 86.37 334 P P 21 42 44.1 +0.4
TSUM Tsumeb 86.51 109 *e*P P 21 42 45.5 +0.1
comp=Z,18nm,0.8s,mb5.0
TSUM *e*pP pP 21 43 10.6 +0.2
ETOR Torete 86.55 46 P P 21 42 46.4 +1.3
comp=Z,45nm,0.7s,mb5.5
ETOR Torete 86.55 46 P P 21 42 46.4 +1.3
ETOR pmax pmax
comp=Z,45nm,0.7s,mb5.5
ECHE Chera 86.85 48 P P 21 42 47.3 +0.8
comp=Z,11nm,0.6s,mb5.0
ECHE Chera 86.85 48 P P 21 42 47.3 +0.8
ECHE pmax pmax
comp=Z,11nm,0.6s,mb5.0
ECRI Cripan 86.95 44 P P 21 42 48.0 +1.0
comp=Z,10nm,0.6s,mb4.9
ECRI Cripan 86.95 44 P P 21 42 48.0 +1.0
ECRI pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
EMOS Mosqueruela 87.49 47 P P 21 42 50.8 +1.2
comp=Z,3.0nm,0.5s,mb4.5
ESAC San Caprasio 88.00 46 P P 21 42 52.5 +0.5
comp=Z,10nm,0.4s,mb5.2
SJPF Ste Jean 88.02 44 *e*P P 21 42 51.7 -0.3
comp=Z,64nm,1.1s,mb5.3
SJPF Ste Jean 88.02 44 *e*P P 21 42 51.7 -0.3
comp=Z,32nm,1.0s,mb5.3
SJPF Ste Jean 88.02 44 *e*P P 21 42 51.7 -0.3
SJPF pmax pmax
comp=Z,32nm,1.0s,mb5.3
ERTA Horta de San J 88.28 47 P P 21 42 53.8 +0.4
comp=Z,3.5nm,0.4s,mb4.7
ETSF Etsaut 88.38 45 *e*P P 21 42 53.6 -0.2
comp=Z,13nm,0.7s,mb4.7
ETSF Etsaut 88.38 45 *e*P P 21 42 53.6 -0.2
comp=Z,6.3nm,0.7s,mb4.8
ETSF Etsaut 88.38 45 *e*P P 21 42 53.6 -0.2
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ROSF Rostrenen 88.78 39 *e*P P 21 42 54.7 -0.8
EBIE Bielsa 88.78 45 P P 21 42 56.4 +0.7
comp=Z,3.0nm,0.6s,mb4.5
EPF Esparros 89.05 45 *e*P P 21 42 56.6 -0.3
comp=Z,12nm,0.7s,mb4.7
EPF Esparros 89.05 45 *e*P P 21 42 56.6 -0.3
comp=Z,5.8nm,0.7s,mb4.7
EPF Esparros 89.05 45 *e*P P 21 42 56.6 -0.3
EPF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
EMIR Miracle 89.46 46 P P 21 43 00.5 +1.6
comp=Z,9.8nm,0.6s,mb5.0
LFF La Frestale 90.01 43 *e*P P 21 43 00.5 -0.9
comp=Z,76nm,0.9s,mb5.5
LFF La Frestale 90.01 43 *e*P P 21 43 00.5 -0.9
comp=Z,38nm,0.9s,mb5.5
LFF La Frestale 90.01 43 *e*P P 21 43 00.5 -0.9
LFF pmax pmax
comp=Z,38nm,0.9s,mb5.5
GRR Gorron 90.28 40 *e*P P 21 43 01.3 -1.2
comp=Z,42nm,0.8s,mb5.3
GRR Gorron 90.28 40 *e*P P 21 43 01.3 -1.2
comp=Z,21nm,0.8s,mb5.3
GRR Gorron 90.28 40 *e*P P 21 43 01.3 -1.2
GRR pmax pmax
comp=Z,21nm,0.8s,mb5.3
MTLF Montolieu 90.44 45 *e*P P 21 43 02.4 -1.0
comp=Z,41nm,1.2s,mb5.1
MTLF Montolieu 90.44 45 *e*P P 21 43 02.4 -1.0
comp=Z,21nm,1.2s,mb5.1
MTLF Montolieu 90.44 45 *e*P P 21 43 02.4 -1.0
MTLF pmax pmax
comp=Z,21nm,1.2s,mb5.1
RES Resolute Bay 90.55 355 *e*P P 21 43 02.7 -0.5
comp=Z,476nm,1.3s,mb6.5
RES *e*pP pP 21 43 27.1 -1.2
FLN La Foliniere 90.65 39 *e*P P 21 43 03.3 -1.0
comp=Z,145nm,1.4s,mb5.6
FLN *e*MLR MLR
comp=Z,167nm,17.6s
FLN La Foliniere 90.65 39 *e*P P 21 43 03.3 -1.0
comp=Z,72nm,1.4s,mb5.6
FLN LR LR
comp=Z,170nm,17.6s
FLN La Foliniere 90.65 39 *e*P P 21 43 03.3 -1.0
FLN pmax pmax
comp=Z,72nm,1.4s,mb5.6
FLN MLR MLR
comp=Z,170nm,17.6s
RJF Les Rejaudoux 90.66 43 *e*P P 21 43 03.2 -1.2
comp=Z,48nm,0.9s,mb5.3
RJF *e*MLR MLR
comp=Z,202nm,22.2s
RJF Les Rejaudoux 90.66 43 *e*P P 21 43 03.2 -1.2
comp=Z,24nm,0.9s,mb5.3
RJF LR LR
comp=Z,200nm,22.3s
RJF Les Rejaudoux 90.66 43 *e*P P 21 43 03.2 -1.2
RJF pmax pmax
comp=Z,24nm,0.9s,mb5.3
RJF MLR MLR
comp=Z,200nm,22.3s
BOSA Boshof 90.69 120 P P 21 43 04.6 -0.5
BOSA LR LR 22 17 48.3
BOSA Boshof 90.69 120 P P 21 43 04.6 -0.5
comp=Z,17nm,1.2s,mb5.0,baz=282,slow=4.4,SNR=4.0
BOSA LR LR 22 17 48.3
comp=Z,116nm,19.4s,baz=249,slow=32
LDF La Druitiere 90.81 40 *e*P P 21 43 03.9 -1.1
comp=Z,63nm,1.0s,mb5.4
LDF La Druitiere 90.81 40 *e*P P 21 43 03.9 -1.1
comp=Z,32nm,1.0s,mb5.4
LDF La Druitiere 90.81 40 *e*P P 21 43 03.9 -1.1
LDF pmax pmax
comp=Z,32nm,1.0s,mb5.4
CAF Calviac 90.89 44 *e*P P 21 43 04.5 -1.0
comp=Z,33nm,0.8s,mb5.2
CAF Calviac 90.89 44 *e*P P 21 43 04.5 -1.0
comp=Z,16nm,0.8s,mb5.2
CAF Calviac 90.89 44 *e*P P 21 43 04.5 -1.0
CAF pmax pmax
comp=Z,17nm,0.8s,mb5.2
TCF Toulx Ste Croi 91.46 42 *e*P P 21 43 06.8 -1.3
comp=Z,19nm,0.8s,mb4.9
TCF Toulx Ste Croi 91.46 42 *e*P P 21 43 06.8 -1.3
comp=Z,9.3nm,0.8s,mb5.0
TCF Toulx Ste Croi 91.46 42 *e*P P 21 43 06.8 -1.3
TCF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
ESK Eskdalemuir 91.69 33 P P 21 43 08.6 -0.4
comp=Z,18nm,0.9s,mb5.3
ESK Eskdalemuir 91.69 33 P P 21 43 08.6 -0.3
ESK pmax pmax
comp=Z,18nm,0.9s,mb5.3
MAW Mawson 91.78 165 P P 21 43 08.9 -0.4
comp=Z,14nm,0.6s,mb5.3,baz=212,slow=4.9,SNR=40
MAW pP pP 21 43 33.1 -1.3
comp=Z,13nm,1.0s,baz=260,slow=5.9,SNR=4.7
MAW sP sP 21 43 43.9 -0.5
comp=Z,7.6nm,0.9s,baz=200,slow=8.0,SNR=2.5
BGF Bois d'Agland 91.96 42 *e*P P 21 43 09.3 -1.1
comp=Z,61nm,1.0s,mb5.5
BGF Bois d'Agland 91.96 42 *e*P P 21 43 09.3 -1.1
comp=Z,30nm,1.0s,mb5.5
BGF Bois d'Agland 91.96 42 *e*P P 21 43 09.3 -1.1
BGF pmax pmax
comp=Z,31nm,1.0s,mb5.5
HYF Humbligny 92.07 42 *e*P P 21 43 10.0 -0.9
AVF Avril sur Loir 92.37 42 *e*P P 21 43 10.8 -1.5
SSF Saint Saulge 92.56 42 *e*P P 21 43 11.5 -1.6
VIVF Saint-Julien-l 92.61 44 *e*P P 21 43 12.9 -0.5
SMF Signal de Mont 92.64 42 *e*P P 21 43 12.4 -1.1
comp=Z,9.6nm,0.6s,mb5.0
SMF Signal de Mont 92.64 42 *e*P P 21 43 12.4 -1.1
comp=Z,4.8nm,0.6s,mb5.0
SMF Signal de Mont 92.64 42 *e*P P 21 43 12.4 -1.1
SMF pmax pmax
comp=Z,5.0nm,0.6s,mb5.0
LOR Lormes 92.85 42 *e*P P 21 43 13.0 -1.5
comp=Z,5.4nm,0.7s,mb4.7
LOR Lormes 92.85 42 *e*P P 21 43 13.0 -1.5
comp=Z,2.7nm,0.7s,mb4.7
LOR Lormes 92.85 42 *e*P P 21 43 13.0 -1.5
LOR pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
DAWY Dawson 93.21 336 *e*P P 21 43 14.4 -1.3
DAWY *e*pP pP 21 43 39.1 -1.8
DAWY *e*sP sP 21 43 49.0 -1.9
KEST Kesra 93.32 54 P P 21 43 17.1 +0.1
comp=Z,1.9nm,0.9s,mb4.4,baz=287,slow=5.1,SNR=5.6
INK Inuvik 93.34 341 ⇓*e*P P 21 43 15.1 -1.2
comp=Z,718nm,1.1s
INK *e*pP pP 21 43 38.8 -2.6
INK *e*sP sP 21 43 49.1 -2.3
INK Inuvik 93.34 341 P P 21 43 15.4 -0.8
comp=Z,18nm,1.0s,mb5.4,baz=112,slow=4.7,SNR=47
INK pP pP 21 43 40.2 -1.2
comp=Z,3.9nm,0.7s,baz=172,slow=6.3,SNR=3.9
LMR La Mourre 93.40 46 *e*P P 21 43 16.5 -0.6
comp=Z,13nm,0.8s,mb5.0
LMR La Mourre 93.40 46 *e*P P 21 43 16.5 -0.6
comp=Z,6.6nm,0.8s,mb5.0
LMR La Mourre 93.40 46 *e*P P 21 43 16.5 -0.6
LMR pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
ORIF Oris-en-Rattie 93.45 44 *e*P P 21 43 17.2 -0.1
comp=Z,27nm,0.6s,mb5.4
ORIF *e*MLR MLR
comp=Z,177nm,20.0s
ORIF Oris-en-Rattie 93.45 44 *e*P P 21 43 17.2 -0.1
comp=Z,14nm,0.6s,mb5.5
ORIF Oris-en-Rattie 93.45 44 *e*P P 21 43 17.2 -0.1
ORIF pmax pmax
comp=Z,14nm,0.6s,mb5.5
FRF La Foret Royal 93.56 46 *e*P P 21 43 17.1 -0.8
comp=Z,24nm,0.9s,mb5.2
FRF La Foret Royal 93.56 46 *e*P P 21 43 17.1 -0.8
comp=Z,12nm,0.9s,mb5.2
FRF La Foret Royal 93.56 46 *e*P P 21 43 17.1 -0.8
FRF pmax pmax
comp=Z,12nm,0.9s,mb5.2
BAIF Baives 93.97 39 *e*P P 21 43 18.5 -1.1
comp=Z,17nm,0.8s,mb5.1
BAIF Baives 93.97 39 *e*P P 21 43 18.5 -1.1
comp=Z,8.3nm,0.8s,mb5.1
BAIF Baives 93.97 39 *e*P P 21 43 18.5 -1.1
BAIF pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
MBDF Montbardon 93.99 45 *e*P P 21 43 19.5 -0.3
comp=Z,13nm,0.9s,mb5.0
MBDF Montbardon 93.99 45 *e*P P 21 43 19.5 -0.3
comp=Z,6.4nm,0.9s,mb5.0
MBDF Montbardon 93.99 45 *e*P P 21 43 19.5 -0.3
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
MEZF Maizieres J'vi 94.01 41 *e*P P 21 43 18.8 -1.0
comp=Z,9.8nm,0.6s,mb5.0
MEZF Maizieres J'vi 94.01 41 *e*P P 21 43 18.8 -1.0
comp=Z,9.8nm,0.6s,mb5.3
CABF La Chapelle 94.10 43 *e*P P 21 43 19.4 -0.8
comp=Z,24nm,0.9s,mb5.2
CABF La Chapelle 94.10 43 *e*P P 21 43 19.4 -0.8
comp=Z,12nm,0.9s,mb5.2
CABF La Chapelle 94.10 43 *e*P P 21 43 19.4 -0.8
CABF pmax pmax
comp=Z,12nm,0.9s,mb5.2
SBF Sospel 94.20 46 *e*P P 21 43 20.0 -0.8
comp=Z,30nm,0.8s,mb5.4
SBF Sospel 94.20 46 *e*P P 21 43 20.0 -0.8
comp=Z,15nm,0.8s,mb5.4
SBF Sospel 94.20 46 *e*P P 21 43 20.0 -0.8
SBF pmax pmax
comp=Z,15nm,0.8s,mb5.4
LPL La Plagne 94.20 44 *e*P P 21 43 20.8 +0.1
comp=Z,24nm,0.8s,mb5.3
LPL La Plagne 94.20 44 *e*P P 21 43 20.8 +0.1
comp=Z,12nm,0.8s,mb5.3
LPL La Plagne 94.20 44 *e*P P 21 43 20.8 +0.1
LPL pmax pmax
comp=Z,12nm,0.8s,mb5.3
LPG La Plagne 94.21 44 *e*P P 21 43 21.0 +0.2
comp=Z,20nm,0.7s,mb5.2
LPG La Plagne 94.21 44 *e*P P 21 43 21.0 +0.2
comp=Z,9.9nm,0.7s,mb5.2
LPG La Plagne 94.21 44 *e*P P 21 43 21.0 +0.2
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
EGAK Eagle 94.22 337 *e*P P 21 43 19.2 -1.2
comp=Z,19nm,1.1s,mb5.3
DOU Dourbes 94.22 39 P P 21 43 20.9 +0.1
GIVF Givet 94.36 39 *e*P P 21 43 20.6 -0.8
comp=Z,57nm,0.9s,mb5.6
GIVF Givet 94.36 39 *e*P P 21 43 20.6 -0.8
comp=Z,28nm,0.9s,mb5.6
GIVF Givet 94.36 39 *e*P P 21 43 20.6 -0.8
GIVF pmax pmax
comp=Z,29nm,0.9s,mb5.6
BCLA Clavier 94.75 39 P P 21 43 23.1 0.0
comp=Z,23nm,2.3s,mb5.2
HINF Hinteralfeld 94.95 42 *e*P P 21 43 22.7 -1.4
comp=Z,4.7nm,0.6s,mb4.8
HINF Hinteralfeld 94.95 42 *e*P P 21 43 22.7 -1.4
comp=Z,2.3nm,0.6s,mb4.8
HINF Hinteralfeld 94.95 42 *e*P P 21 43 22.7 -1.4
HINF pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
WLF Walferdange 95.05 40 P P 21 43 24.5 -0.1
comp=Z,18nm,1.7s,mb5.2
WLF Walferdange 95.05 40 *e*Pdiff P 21 43 24.9 +0.4
MEM Membach 95.24 39 P P 21 43 25.4 0.0
CDF Champ du Feu 95.39 41 *e*P P 21 43 25.0 -1.1
comp=Z,12nm,0.8s,mb5.1
CDF Champ du Feu 95.39 41 *e*P P 21 43 25.0 -1.1
comp=Z,6.0nm,0.8s,mb5.1
CDF Champ du Feu 95.39 41 *e*P P 21 43 25.0 -1.1
CDF pmax pmax
comp=Z,6.0nm,0.8s,mb5.1
BUG Bochum--Univer 96.24 38 *e*Pdiff P 21 43 30.3 +0.4
TNS Taunus Mts 96.63 40 *e*Pdiff P 21 43 31.8 +0.1
STU Stuttgart 96.72 41 *e*Pdiff P 21 43 31.8 -0.3
IBBN Ibbenburen 96.77 38 *e*Pdiff P 21 43 32.3 0.0
DAVA Damuels 96.78 43 ⇑*i*P P 21 43 32.9 +0.4
comp=Z,12nm,0.8s,mb5.3
DAVA Damuels 96.78 43 ⇑*i*PcP PcP 21 43 32.9 +0.4
comp=Z,12nm,0.8s
COLA College 96.88 336 *e*P P 21 43 30.9 -1.6
comp=Z,12nm,1.1s,mb5.2
COLA College 96.88 336 *i*P P 21 43 31.4 -1.1
MCK McKinley 96.92 334 *e*P P 21 43 31.4 -1.3
comp=Z,4.8nm,0.8s,mb5.0
MCK McKinley 96.92 334 *e*P P 21 43 31.4 -1.3
MCK pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
FETA Feichten 97.28 43 ⇑*i*P P 21 43 34.4 -0.3
comp=Z,7.4nm,0.9s,mb5.1
LSZ Lusaka 97.33 108 P P 21 43 36.6 +0.9
RETA Reutte 97.41 43 ⇓*i*P P 21 43 35.3 0.0

comp=Z,7.3nm,0.7s,mb5.2
MOTA Moosalm 97.60 43 ⇓ *i*P P **21 43 36.2 +0.1**
comp=Z,9.0nm,1.0s,mb5.3
MOTA Moosalm 97.60 43 ⇓ *i*P P **21 43 36.2 0.0**
MOTA pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
SQTA Sankt Quirin 97.64 43 ⇓ *i*P P **21 43 36.5 +0.2**
comp=Z,24nm,1.3s,mb5.6
SQTA Sankt Quirin 97.64 43 ⇓ *i*PcP PcP 21 43 36.5 +0.2
comp=Z,24nm,1.3s
SQTA Sankt Quirin 97.64 43 ⇓ *i*P P **21 43 36.5 +0.2**
SQTA pmax pmax
comp=Z,24nm,1.3s,mb5.6
FUR Furstenfeldbru 97.91 42 *e*Pdiff P **21 43 37.9 +0.4**
WTTA Wattenberg 97.94 43 ⇓ *i*P P **21 43 38.2 +0.5**
comp=Z,17nm,0.9s,mb5.6
WTTA Wattenberg 97.94 43 ⇓ *i*PcP PcP 21 43 38.2 +0.5
comp=Z,17nm,0.9s
WTTA Wattenberg 97.94 43 ⇓ *i*P P **21 43 38.2 +0.5**
WTTA pmax pmax
comp=Z,17nm,0.9s,mb5.6
CLZ Clausthal 98.22 39 *e*Pdiff P **21 43 39.6 +0.8**
GRA1 Grafenberg Arr 98.23 41 *e*Pdif P **21 43 39.3 +0.4**
GRF Grafenberg Arr 98.23 41 *e*Pdiff P **21 43 39.3 +0.4**
ABTA Abfaltersbach 98.40 44 ⇑ *i*Pdiff P **21 43 40.1 +0.4**
comp=Z,13nm,1.1s,mb5.4
BSEG Bad Segeberg 98.68 37 *e*Pdiff P **21 43 40.9 +0.1**
MANZ Manzenberg 98.86 41 *e*Pdiff P **21 43 42.3 +0.6**
ROTZ Rotzenmuhle 98.87 41 *e*Pdiff P **21 43 42.3 +0.5**
KBA Koelnbreinsper 99.03 44 ⇓ *i*P P **21 43 42.3 -0.2**
comp=Z,5.5nm,0.6s,mb5.3
KBA Koelnbreinsper 99.03 44 ⇓ *i*P P **21 43 42.3 -0.3**
KBA pmax pmax
comp=Z,6.0nm,0.6s,mb5.3
WERD Werda 99.08 40 *e*Pdiff P **21 43 43.4 +0.7**
WERN Wernitzgruen 99.09 40 *e*Pdiff P **21 43 43.5 +0.7**
NKC Novy Kostel 99.13 40 *e*PDIF P **21 43 43.7 +0.8**
WET Wettzell 99.17 42 *e*Pdiff P **21 43 43.3 +0.2**
TANN Tannenbergstha 99.17 40 *e*Pdiff P **21 43 43.8 +0.7**
JAVS Javornik 99.27 45 *i*P P **21 43 43.8 +0.1**
KHC Kasperske Hory 99.61 42 *i*P Pdif 21 43 45.6 +0.5
KHC Kasperske Hory 99.61 42 *e*PDIF Pdif 21 43 45.1 0.0
KHC *ex* x 21 44 09.5
GERES GERESS Array B 99.63 42 P Pdif 21 43 45.4 +0.2
comp=Z,3.0nm,0.7s,baz=261,slow=3.2,SNR=21
CLL Collm 99.70 39 *i*P Pdif 21 43 45.8 +0.3
CLL Collm 99.70 39 *e*Pdiff Pdif 21 43 45.9 +0.4
VISS Visnje 99.78 45 *e*P Pdif 21 43 45.1 -0.7
MOA Molln 99.80 43 ⇓ *i*P Pdif 21 43 46.0 0.0
comp=Z,6.4nm,0.6s
FBE Freiberg 99.83 40 *e*Pdiff Pdif 21 43 46.7 +0.6
BOJS Bojanci 100.00 46 *i*P Pdif 21 43 48.0 +1.2
BRG Berggiesshubel 100.19 40 *i*P Pdif 21 43 48.2 +0.5
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 100.19 40 *e*Pdiff Pdif 21 43 48.2 +0.5
BRG Berggiesshubel 100.19 40 *i*P Pdif 21 43 48.2 +0.5
comp=Z,8.9nm,1.0s
PRU Pruhonice 100.40 41 *e*PDIF Pdif 21 43 49.3 +0.7
NOA NORSAR Array B 100.70 30 P Pdif 21 43 49.0 -1.0
comp=Z,1.6nm,0.9s,baz=256,slow=4.9,SNR=3.2
UPC Upice 101.42 41 *e*PDIF Pdif 21 43 54.2 +1.0
DPC Dobruska-Polom 101.59 41 *e*PDIF Pdif 21 43 55.1 +1.2
DPC *ex* x 21 44 20.2
ARCES ARCESS Array B 107.31 21 PKKPbc PKKPbc 21 59 41.9 -4.2
comp=Z,6.9nm,1.1s,baz=72,slow=4.0,SNR=8.9
FINES FINESS Array B 107.89 30 PKKPbc PKKPbc 21 59 40.8 -3.3
comp=Z,1.7nm,0.6s,baz=103,slow=4.8,SNR=15
AKASG Malin Array Be 109.81 41 PKiKP PKiKP 21 48 31.2 -1.1
comp=Z,0.4nm,0.5s,baz=264,slow=2.9,SNR=6.0
BRTR Keskin Array B 112.89 53 ⇑ *i*PKIKP PKiKP 21 48 38.4 -0.2
BRTR Keskin Array B 112.89 53 PKiKP PKiKP 21 48 38.4 -0.2
comp=Z,2.0nm,0.9s,baz=90,slow=1.2,SNR=6.9
OBN Obninsk 113.93 36 *i*PKP PKiKP 21 48 40.1 +0.1
OBN Obninsk 113.93 36 *i*PKIKP PKiKP 21 48 40.0 0.0
OBN pmax pmax
comp=Z,8.0nm,1.4s
BILL Bilibino 114.85 339 *e*PKIKP PKiKP 21 48 41.1 -0.3
BILL *e* 21 49 40.1
BILL pmax pmax
comp=Z,3.0nm,1.0s
ANN Anapa 115.58 47 *i*PKIKP PKPdf 21 48 46.9 +3.4
ANN *e* 21 55 33.3
ANN pmax pmax
comp=Z,47nm,1.5s
SOC Sochi 117.31 49 *i*PKIKP PKPdf 21 48 52.2 +5.3
SOC *e* 21 50 08.8
KIV Kislovodsk 119.41 48 *i*PKP PKPdf 21 48 50.7 -0.2
KIV Kislovodsk 119.41 48 *e*PKIKP PKPdf 21 48 50.6 -0.3
KIV pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 121.83 352 ⇑ *i*PKP PKPdf 21 48 53.8 -1.0
TIXI Tiksi 121.83 352 ⇑ *i*PKIKP PKPdf 21 48 53.7 -1.1
STKA Stephens Creek 122.23 216 *e*P PKPdf 21 48 55.8 -1.0
comp=Z,6.7nm,0.6s
STKA Stephens Creek 122.23 216 PKP PKPdf 21 48 55.9 -1.0
comp=Z,8.7nm,0.7s,baz=109,slow=1.7,SNR=17
RST Umm Al-Ruwaisa 123.99 64 *e*P PKPdf 21 49 00.4 +0.2
RST AMb AMB 21 49 00.9
comp=Z,36nm,0.8s
NAY Al-Naaiem 124.21 65 *e*P PKPdf 21 49 00.7 +0.1
NAY AMb AMB 21 49 01.2
comp=Z,11nm,0.9s
MIB Mutribah 124.28 64 *e*P PKPdf 21 49 01.1 +0.3
MIB AMb AMB 21 49 01.6
comp=Z,28nm,0.9s
RDF Al-Radifah 124.49 65 *e*P PKPdf 21 49 01.0 -0.2
RDF AMb AMB 21 49 03.1
comp=Z,37nm,1.1s
MA2 Magadan 124.90 334 *i*PKIKP PKPdf 21 49 00.4 -0.6
MA2 pmax pmax
comp=Z,10.0nm,0.8s
ARU Arti 125.26 30 ⇑ *e*PKP PKPdf 21 49 02.0 +0.2
ARU Arti 125.26 30 *i*PKIKP PKPdf 21 49 01.6 -0.2
ARU 21 50 48.3
ARU 21 55 58.4
ARU SS SS 22 07 41.0 -1.4
SVE Sverdlovsk 126.04 29 PKIKP PKPdf 21 49 03.6 +0.3
FORT Forrest 129.75 205 *e*P PKPdf 21 49 09.8 -1.5
comp=Z,20nm,0.7s
KLBR Kellerberrin 132.27 193 *e*P PKPdf 21 49 15.1 -0.9
comp=Z,7.6nm,0.6s
BRVK Borovoye 132.76 29 *i*PKP PKPdf 21 49 16.9 +0.8
ASAR Alice Springs 132.87 216 PKHKP 21 49 00.1
ASAR 21 49 16.0
ASAR Alice Springs 132.87 216 PKhKP 21 49 00.1
comp=Z,0.4nm,0.6s,baz=135,slow=2.7,SNR=6.4
ASAR PKP PKPdf 21 49 16.0 -1.3
comp=Z,8.1nm,0.6s,baz=130,slow=1.5,SNR=5.1
ASAR pPKP pPKPdf 21 49 41.9 -1.6
comp=Z,3.1nm,0.8s,baz=142,slow=2.4,SNR=3.5
WB2 Warramunga Arr 135.47 219 *e*P PKPdf 21 49 21.3 -1.0
WB2 *e*S SKPdf 21 52 51.4 +2.4
WRA Warramunga Arr 135.48 219 PKHKP 21 49 10.0
WRA 21 49 21.4
WRA Warramunga Arr 135.48 219 PKhKP 21 49 10.0
comp=Z,0.6nm,0.6s,baz=128,slow=3.1,SNR=11
WRA PKP PKPdf 21 49 21.4 -0.9
comp=Z,22nm,0.9s,baz=134,slow=1.8,SNR=64
WRA pPKP pPKPdf 21 49 46.7 -1.8
comp=Z,4.3nm,0.7s,baz=143,slow=1.9,SNR=3.5
YSS Yuzh-Sakhalins 135.99 324 *e*PKIKP PKPdf 21 49 22.0 -0.4
NVS Novosibirsk 136.53 19 *e*PKIKP PKPdf 21 49 22.3 -0.8
NVS *e* 21 52 12.0
NVS pmax pmax
comp=Z,24nm,1.5s
NVS pmax pmax
comp=E,10.0nm,1.7s
BOD Bodaibo 136.92 354 *e*PKHKP 21 49 07.6
KURK Kurchatov 138.10 26 *e*PKPpre 21 49 23.7
KURK *e*PKPdf PKPdf 21 49 26.1 -0.1
HABR Khabarovsk 139.07 331 *e*P Pdif 21 46 38.1 -2.4
HABR *e* 21 49 27.9
HABR *e* 21 52 18.8
HABR *e* 21 55 20.9
EKS2 Erkin-Say 140.96 39 *e*PKPpre 21 49 25.2
EKS2 *e*PKPdf PKPdf 21 49 33.0 +1.4
FRU Bishkek 141.36 38 *e*PKIKP PKPdf 21 49 33.2 +0.8
AAK Ala-Archa 141.41 38 *e*PKPpre 21 49 25.7
AAK *e*PKPdf PKPdf 21 49 33.9 +1.5
AAK Ala-Archa 141.41 38 *i*PKIKP PKPdf 21 49 34.7 +2.2
UCH Uchtor 141.65 39 *e*PKPdf PKPdf 21 49 28.3 -4.6
FITZ Fitzroy Crossi 141.82 211 *e*P PKPdf 21 49 26.8 -7.1
comp=E,17nm,0.6s

TKM2 Tokmak 2 141.89 37 *e*PKPpre 21 49 28.2
TKM2 *e*PKPdf PKPdf 21 49 34.0 +0.7
MK31 Makanchi Array 142.66 27 *e*PKPdf PKPdf 21 49 29.7 -4.8
MKAR Makanchi Array 142.66 27 ⇑ *i*PKIKP PKPdf 21 49 42.2 +7.6
MKAR Makanchi Array 142.66 27 PKhKP 21 49 29.9
comp=E,4.7nm,0.6s,baz=323,slow=4.0,SNR=50
CIT Chita 142.67 352 *e*PKHKP 21 49 29.7
MOY Mondy 143.27 5 *e*PKIKP PKPdf 21 49 32.9 -2.6
MOY pmax pmax
comp=Z,31nm,2.2s
TLY Talaya 143.43 3 *e*PKIKP PKPdf 21 49 33.1 -2.7
TLY *e* 22 12 08.5
TLY pmax pmax
comp=Z,12nm,1.0s
KSH Kashi 144.11 41 PKP PKPdf 21 49 36.3 -1.0
KSH PKP2 PKPdf 21 49 37.6 +0.3
KSH *e*PKS 21 53 11.7
KSH *e*SKS SKSdf 21 56 34.1 -4.3
KSH SKKS SKKSac 21 59 31.9 -4.5
KSH SS SS 22 11 37.5 +8.0
KSH PP PP
comp=Z,329nm,4.7s
KSH LR LR
comp=E,359nm,4.2s
KSH LR LR
comp=Z,757nm,4.9s
MJAR Matsushiro Arr 144.31 313 PKP PKPdf 21 49 34.8 -3.0
comp=Z,8.6nm,0.6s,baz=92,slow=2.6,SNR=25
MAJO Matsushiro 144.31 313 *e*PKPdf PKPdf 21 49 34.1 -3.7
MAT Matsushiro 144.31 313 PKP PKPdf 21 49 34.5 -3.3
MDJ Mudanjiang 144.46 331 PKP PKPdf 21 49 34.7 -3.1
MDJ SKS SKSdf 21 56 37.2 -1.5
MDJ LR LR
comp=N,247nm,26.8s
MDJ LR LR
comp=E,69nm,19.7s
MDJ LR LR
comp=Z,124nm,23.2s
ZAK Zakamensk 144.71 3 *e*PKIKP PKPdf 21 49 36.8 -1.2
ZAK pmax pmax
comp=Z,40nm,1.1s
CN2 Changchun 146.96 334 *e*PKP PKPdf 21 49 40.8 -1.3
CN2 *e*PP PP 21 53 10.8 +2.3
CN2 *e*SS SS 22 12 05.5 +4.7
CN2 PP PP
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,300nm,21.0s
CN2 LR LR
comp=E,500nm,21.0s
CN2 LR LR
comp=Z,600nm,22.0s
ULN Ulaanbaatar 147.30 359 *e*PKPdf PKPdf 21 49 42.4 -0.2
ULN *e*PKPbc PKPbc 21 49 45.3 +0.4
ULN *e*pPKPdf pPKPdf 21 50 11.2 +2.5
ULN Ulaanbaatar 147.30 359 *i*PKP2 PKPab 21 49 47.9 +1.0
WMQ Urumqi 147.33 25 PKP PKPdf 21 49 43.0 +0.3
WMQ PKP2 PKPab 21 49 49.5 +2.3
WMQ PP PP 21 53 11.5 +0.8
WMQ PP PP
comp=Z,207nm,5.8s
WMQ LR LR
comp=N,417nm,24.5s
WMQ LR LR
comp=E,160nm,18.6s
WMQ LR LR
comp=Z,151nm,22.6s
SONM Songino Array 147.34 360 PKPbc PKPbc 21 49 43.2 -1.9
comp=Z,27nm,0.6s,baz=328,slow=1.4,SNR=153
SONM pPKPbc pPKPbc 21 50 10.3 -0.7
comp=Z,4.6nm,0.6s,baz=335,slow=2.2,SNR=2.6
THN Thein Dam 147.42 53 *e*P PKPdf 21 49 42.7 -0.5
AJM Ajmer 148.56 64 *e*P PKPdf 21 49 45.0 -0.3
POO Poona 148.96 79 *e*P PKPdf 21 49 46.0 -0.1
KHET Khetri 149.10 60 *e*P PKPdf 21 49 46.2 +0.1
RTK Rohtak 149.29 58 *ex* x 21 49 52.7
KAD Karad 149.29 81 *i*P PKPdf 21 49 46.6 -0.1
SNY Shenyang 149.36 334 ⇓ PKP PKPbc 21 49 49.7 -0.8
AYAN Aya Nagar 150.06 59 *e*P PKPdf 21 49 46.9 -0.7
AYAN AMb AMB 21 49 51.7
comp=Z,190nm,0.6s
NDI New Delhi 150.07 58 *e*P PKPbc 21 49 51.5 -1.2
SONA Sohna 150.11 59 *e*P PKPdf 21 49 47.5 -0.2
KSRS Korea Array 150.48 323 PKP PKPdf 21 49 48.1 +0.1
comp=Z,13nm,0.9s,baz=33,slow=1.5,SNR=26
KSRS PKPbc PKPbc 21 49 53.1 -0.3
comp=Z,64nm,0.8s,baz=0.6,slow=1.8,SNR=68
AGRA Agra 151.16 61 *e*P PKPdf 21 49 49.3 -0.1
AGRA AMb AMB 21 49 55.7
comp=Z,87nm,0.8s
JOSI Joshimath 151.19 53 *e*P PKPdf 21 49 50.6 +1.3
HYB Hyderabad 153.46 81 *e*P PKPdf 21 49 52.5 -0.5
HYB *e* 21 50 00.0
HYB *e* 21 50 14.0
HYB Hyderabad 153.46 81 *e*PKIKP PKPdf 21 49 52.5 -0.5
HYB *e* 21 50 00.0
HYB Hyderabad 153.46 81 *i*PKP PKPdf 21 49 52.5 -0.5
HYB *e* 21 50 00.0
HYB *e*PKPAB PKPab 21 50 14.0 +0.7
BJI Beijing 153.62 342 PKP PKPdf 21 49 52.3 -0.3
BJI SS SS 22 13 17.4 +3.1
BJI LR LR
comp=N,587nm,23.5s
BJI LR LR
comp=E,155nm,19.2s
BJI LR LR
comp=Z,151nm,32.9s
HHC Hu-ho-hao-te 153.88 351 *e*PKP PKPdf 21 49 53.5 +0.6
HHC PKP2 PKPab 21 50 16.7 +2.4
HHC PKS 21 53 26.5
HHC PP PP 21 53 51.9 +4.0
HHC SKS SKSdf 21 56 48.8 -2.6
HHC SKKS SKKSac 22 00 29.2 -1.1
HHC PP PP
comp=Z,88nm,5.2s
HHC LR LR
comp=N,517nm,20.2s
HHC LR LR
comp=E,134nm,13.1s
HHC LR LR
comp=Z,249nm,14.3s
GTA Gaotai 155.14 12 *e*PKP PKPdf 21 49 55.2 +0.5
GTA APKP 21 50 14.0
GTA PKP2 PKPab 21 50 22.8 +3.2
GTA PKS 21 53 27.4
GTA SKS SKSdf 21 56 53.6 +0.8
GTA PP PP
comp=Z,96nm,5.7s
GTA LR LR
comp=N,376nm,19.0s
GTA LR LR
comp=E,234nm,18.2s
GTA LR LR
comp=Z,271nm,17.5s
GKN Gorkha 156.30 54 *e*P PKPdf 21 49 56.2 -0.4
comp=Z,26nm,1.1s
KKN Kakani 156.90 53 *e*P PKPdf 21 49 57.2 -0.2
LZH Lanzhou 158.98 5 *e*PKP PKPdf 21 50 00.7 +1.0
LZH PKP2 PKPab 21 50 39.0 +2.7
LZH PP PP 21 54 20.8 +4.7
LZH SKKS SKKSac 22 00 56.0 -1.4
LZH SS SS 22 14 13.0 +1.5
LZH PP PP
comp=Z,190nm,6.9s
TAPN Taplejung 158.99 51 *e*P PKPdf 21 49 59.9 -0.1
comp=Z,15nm,0.7s
ODAN Odare 158.99 53 *e*P PKPdf 21 49 59.4 -0.6
comp=Z,22nm,0.8s
NJ2 Nanjing 159.49 328 *e*PKP PKPdf 21 50 04.1 +3.7
LSA Lhasa 159.96 41 PKP PKPdf 21 50 02.2 +1.2
WHN Wuhan 162.84 335 PKP PKPdf 21 50 03.9 -0.1
WHN PKP2 PKPab 21 50 51.6 -1.7
CD2 Chengdu 164.09 7 *e*PKP PKPdf 21 50 05.6 +0.4
CD2 APKP 21 50 21.0
CD2 XPKP 21 50 30.1
CD2 PKP2 PKPab 21 51 00.7 +1.9
CD2 PP PP 21 54 47.8 +4.4
CD2 SKS SKSdf 21 57 00.2 -1.2
CD2 SKKS SKKSac 22 01 26.7 +2.8
CD2 SS SS 22 15 08.7 +3.8
CD2 PP PP
comp=Z,180nm,10.8s
CD2 LR LR
comp=N,210nm,20.4s
CD2 LR LR
comp=E,290nm,20.4s
CD2 LR LR
comp=Z,140nm,20.4s
GYA Guiyang 168.66 357 *i*PKP PKPdf 21 50 09.2 +0.3
GYA APKP 21 50 27.4
GYA XPKP 21 50 34.2
GYA PKP2 PKPab 21 51 19.8 +0.8
GYA PKS 21 53 39.2
GYA PP PP 21 55 09.8 +2.9
GYA SKS SKSdf 21 57 03.2 -1.1
GYA SKKS SKKSac 22 01 48.6 +1.8
GYA PP PP
comp=Z,160nm,8.6s
GYA LR LR
comp=N,670nm,24.6s
GYA LR LR
comp=E,880nm,25.0s
GYA LR LR
comp=Z,590nm,23.8s
KMI Kunming 169.52 17 PKP PKPdf 21 50 08.9 -0.5
KMI APKP 21 50 25.6
KMI XPKP 21 50 33.3
KMI PKP2 PKPab 21 51 21.8 -1.0
KMI PP PP 21 55 12.1 +0.7
KMI SS SS 22 16 01.2 +1.2
KMI PP PP
comp=Z,178nm,5.7s
KMI LR LR
comp=N,288nm,18.3s
KMI LR LR
comp=E,271nm,20.1s
KMI LR LR
comp=Z,252nm,21.9s

CSEM ***06*** *22:18:31.9±0.1, 3835N×3926E, h2km, MD3.4, Error ellipse: s-maj=2.2km s-min=1.6km az=170.0*
ISK ***06*** *22:18:31.4, 3836N×3928E, h5km, MD3.4*
ISCJB ***06*** *22:18:32.6±0.4, 3834N±003×3931E±003, h5km, Error ellipse: s-maj=3.8km s-min=3.5km az=156.9*
DDA ***06*** *22:18:33.2, 3833N×3929E, h5km, Md3.4*
ISC 06 22:18:33.1±0.7, 3833N±003×3932E±004, h4km±7km, n21, σ1°03/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.31**	**302**	*i* P		**Pg 22 18 38.2**	**-0.9**
ELZG				*i* S		**Sg 22 18 43.4**	**+0.1**
PTK	**Pertek**	**0.56**	**5**	*i* PG		**Pg 22 18 42.7**	**-1.2**
PTK				*i* SG		**Sg 22 18 51.6**	**+0.4**
MALT	**Malatya**	**0.70**	**269**	*i* PG		**Pg 22 18 45.3**	**-1.3**
MALT				*i* SG		**Sg 22 18 56.2**	**+0.4**
MYA	**Malataya**	**0.71**	**270**	*i* PG		**Pg 22 18 45.4**	**-1.2**
DIY	**Diyarbakir**	**0.83**	**121**	PG		**Pg 22 18 48.8**	**-0.3**
URFA	**Urfa**	**0.97**	**204**	PG		**Pg 22 18 51.2**	**-0.5**
BINT	**Bingol**	**1.06**	**59**	PN		**Pn 22 18 53.1**	**-1.7**
ATAB	**Bozova**	**1.18**	**224**	*i* P		**Pg 22 18 55.3**	**-0.5**
ATAB				*i* S		**Sg 22 19 12.7**	**+1.6**
EZC	**Erzincan**	**1.47**	**15**	PN		**Pn 22 18 59.6**	**-0.7**
MARD	**Mardin**	**1.54**	**131**	*i* P		**Pn 22 19 00.6**	**-0.7**
MARD				*i* S		**Sn 22 19 21.3**	**-0.4**
GZT	**Gaziantep**	**1.70**	**236**	*i* P		**Pn 22 19 02.8**	**-0.7**
GZT				*i* S		**Sg 22 19 29.5**	**+1.8**
BTMT	**Batman**	**1.71**	**94**	PN		**Pn 22 19 02.6**	**-1.1**
KELT	**Kelkit**	**1.82**	**358**	*i* P		**Pn 22 19 05.8**	**+0.7**
KELT				*i* S		**Sg 22 19 33.4**	**+2.0**
KELT	**Kelkit**	**1.82**	**358**	*i* P		**Pn 22 19 05.8**	**+0.7**
GAZ	**Gaziantep**	**2.04**	**236**	PN		**Pn 22 19 08.0**	**-0.1**
EZM	**Erzurum**	**2.23**	**45**	*e*PN		**Pn 22 19 11.5**	**+0.7**
SVSK	**Karacayir**	**2.40**	**312**	*e*PN		**Pn 22 19 12.9**	**-0.3**
SIRT	**Sirnak**	**2.60**	**108**	*e*PN		**Pn 22 19 17.3**	**+1.4**
BNN	**Bunyan**	**2.77**	**282**	*e*PN		**Pn 22 19 18.0**	**-0.3**
AGRB	**Hanur-Agry**	**3.12**	**65**	*e*PN		**Pn 22 19 24.4**	**+1.4**
CUKT	**Cukurca**	**3.56**	**106**	*e*PN		**Pn 22 19 31.0**	**+1.9**

IDC ***06*** *22:21:28.3±5.0, 1960N×109.14W, h0km, mb3.2/3, mb1 3.8/6, mb1mx3.7/18, mbtmp3.5/6, ML3.3/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/14, Error ellipse: s-maj=84.0km s-min=42.1km az=32.0*
NEIC ***06*** *22:21:29.8±1.3, 1958N×109.09W, h10km, mb4.1/2, Error ellipse: s-maj=24.1km s-min=10.2km az=60.0*
ISCJB ***06*** *22:21:34.4±3.6, 198N±02×1089W±02, h54km±28km, mb3.6/3, Error ellipse: s-maj=37.7km s-min=12.6km az=141.7*
ISC 06 22:21:36.9±2.7, 198N±01×1089W±02, h61km±19km, n19, σ0°73/17, mb3.6/3, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**4.51**	**343**	LR	LR	22 24 15.2	
	comp=Z,264nm,20.9s,baz=176,slow=36						
LTX	**Lajitas**	**10.63**	**25**	*e*Pn	**Pn**	**22 24 05.4**	**-1.0**
TXAR	**Lajitas Array**	**10.63**	**25**	Pn	**Pn**	**22 24 06.7**	**+0.2**
	0.1nm,0.3s,baz=198,slow=15,SNR=16						
TUC	**Tucson**	**12.60**	**353**	*e*Pn	**Pn**	**22 24 33.2**	**-0.1**
	5.2nm,1.1s						
CMIG	**Matias Romero**	**13.54**	**99**	Pn	**Pn**	**22 24 46.1**	**-0.1**
	0.5nm,0.3s,baz=259,slow=10,SNR=3.5						
CMIG				LR	LR	22 29 28.7	
	comp=Z,103nm,21.7s,baz=320,slow=35						
BNM	**Barren Site**	**14.46**	**7**	*e*Pn	**Pn**	**22 24 59.0**	**+0.8**
ANMO	**Albuquerque**	**15.27**	**8**	*e*Pn	**Pn**	**22 25 08.9**	**+0.2**
	5.5nm,1.3s						
ANMO	**Albuquerque**	**15.27**	**8**	Pn	**Pn**	**22 25 10.0**	**+1.3**
	0.0nm,0.3s,baz=292,slow=15,SNR=1.9						
NATX	**Nacogdoches**	**17.48**	**44**	*e*P	**Pn**	**22 25 36.1**	**-0.4**
	71nm,0.4s						
TEIG	**Tepich**	**19.36**	**85**	LR	LR	22 32 53.8	
	comp=Z,93nm,21.4s,baz=336,slow=35						
NVAR	**Mina Array Bea**	**20.31**	**339**	P	**P**	**22 26 08.6**	**+0.7**
	2.1nm,1.1s,baz=158,slow=12,SNR=8.7						
PDAR	**Pinedale Array**	**22.93**	**359**	P	**P**	**22 26 35.3**	**-0.4**
	0.5nm,0.8s,mb3.0,baz=169,slow=8.9,SNR=4.2						
JTS	**JuntasAbangare**	**24.92**	**109**	*e*P	**P**	**22 26 55.4**	**+0.9**
	12nm,0.9s,mb4.4						
PAYG	**Puerto Ayora**	**27.30**	**136**	P	**P**	**22 27 15.1**	**-0.9**
BRNJ	**Basking Ridge**	**35.91**	**47**	P	**P**	**22 28 32.0**	**+0.7**
SDV	**Santo Domingo**	**38.51**	**101**	P	**P**	**22 28 54.7**	**+1.1**
FCC	**Fort Churchill**	**40.40**	**12**	*e*P	**P**	**22 29 07.8**	**-0.9**
MTP	**Monte Pirata**	**40.93**	**85**	P	**P**	**22 29 13.0**	**-0.7**
YKA	**Yellowknife Ar**	**42.87**	**356**	P	**P**	**22 29 28.1**	**-0.7**
	0.6nm,1.0s,mb3.3,baz=172,slow=8.1,SNR=5.8						

DDA ***06*** *22:23:43.8, 3864N×3941E, h12km, Md2.9*
ISK ***06*** *22:23:44.8, 3839N×3929E, h5km, MD2.9*
ISCJB ***06*** *22:23:45.6±0.7, 3836N±004×3934E±004, h5km±8km, Error ellipse: s-maj=7.2km s-min=5.4km az=163.7*
CSEM ***06*** *22:23:45.3±0.1, 3841N×3927E, h2km, MD2.9, Error ellipse: s-maj=2.8km s-min=1.8km az=123.0*
ISC 06 22:23:46.1±0.7, 3837N±004×3933E±004, h9km±7km, n12, σ0°80/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.30**	**295**	*i* P		**Pg 22 23 50.9**	**-1.2**
ELZG				*i* S		**Sg 22 23 57.2**	**+1.0**
PTK	**Pertek**	**0.53**	**5**	PG		**Pg 22 23 55.8**	**-0.5**
PTK				SG		**Sg 22 24 04.1**	**+0.9**
MALT	**Malatya**	**0.71**	**266**	PG		**Pg 22 23 58.9**	**-1.0**
MALT				SG		**Sg 22 24 09.9**	**+0.7**
MYA	**Malataya**	**0.72**	**267**	PG		**Pg 22 23 58.8**	**-1.1**
DIY	**Diyarbakir**	**0.85**	**124**	PG		**Pg 22 24 02.4**	**0.0**
URFA	**Urfa**	**1.01**	**204**	*e*PG		**Pg 22 24 06.2**	**+0.7**
ATAB	**Bozova**	**1.22**	**223**	*i* P		**Pb 22 24 09.3**	**0.0**
ATAB				*i* S		**Sb 22 24 26.4**	**+1.3**
EZC	**Erzincan**	**1.43**	**15**	*e*PN		**Pn 22 24 12.5**	**+0.2**
MARD	**Mardin**	**1.55**	**132**	*i* P		**Pn 22 24 13.5**	**-0.5**
MARD				*i* S		**Sn 22 24 34.6**	**+0.3**
BTMT	**Batman**	**1.71**	**95**	*e*PN		**Pn 22 24 15.9**	**-0.1**
GZT	**Gaziantep**	**1.73**	**235**	*i* P		**Pn 22 24 16.1**	**-0.2**
GZT				*i* S		**Sn 22 24 37.2**	**-1.3**
GAZ	**Gaziantep**	**2.06**	**235**	*e*PN		**Pn 22 24 22.0**	**+1.0**

TEH ***06*** *22:30:47.9, 3349N×4893E, h16km, ML4.8*
BJI ***06*** *22:31:59.2, 3363N×4798E, h16km, mB5.2, mb4.6, Ms4.6, Msz4.3*

*SZGRF **06** 22:32:01.6, 3257N×4899E, h33km, mb4.7, Western Iran*
*ISCJB **06** 22:32:01.7±0.6, 3339N±002×4883E±002, h2km±4km, mb4.5/93, MS4.1/32, Error ellipse: s-maj=3.7km s-min=2.5km az=19.2*
*IDC **06** 22:32:02.6±0.7, 3346N×4894E, h0km, mb4.2/17, mb1 4.4/23, mb1mx4.3/26, mbtmp4.2/23, ML3.8/5, MS4.1/21, Ms1 4.1/21, ms1mx4.0/30, Error ellipse: s-maj=17.8km s-min=13.6km az=175.0*
*CSEM **06** 22:32:03.8, 3356N×4888E, h10km, mb4.7*
*THR **06** 22:32:05.1±0.4, 3356N×4898E, h14km±3km, ML4.6*
*MOS **06** 22:32:06.5±2.4, 3351N×4887E, h23km, mb4.8/38, MS4.0/8, Error ellipse: s-maj=6.7km s-min=3.3km az=128.4*
*NEIC **06** 22:32:06.8, 3349N×4893E, h16km, mb4.7/57, MN4.8(TEH), After TEH.*
NEIC Thirty-five people injured and buildings damaged at Dorud.
*SGS **06** 22:32:06.1, 3360N×4859E, h15km*
ISC 06 22:32:05.9±0.7, **3341N**±002×**4887E**±002, **h17**km±4km, **h17**km±2.2km**:pP-P, n454,** σ1§**34**/472, **mb4.5**/93, **MS4.1**/32, **27C-21D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	1.29	182	ePg	Pg	22 32 31.9	+1.0
SHGR				AML	AML	22 32 58.4	
	comp=E,12µm,0.5s						
SHGR				AML	AML	22 33 04.7	
	comp=N,12µm,1.1s						
IKOM	Komasi	1.36	305	ePn	Pn	22 32 27.9	-2.2
IKOM				e		22 33 08.8	
	comp=Z,83µm,0.3s						
ASAO	Ashtian	1.49	40	ePg	Pg	22 32 29.4	-5.2
ASAO				AML	AML	22 32 54.0	
	comp=E,7µm,0.7s						
ASAO				AML	AML	22 33 00.6	
	comp=N,8µm,1.3s						
IVIS	Veys	2.01	304	ePn	Pn	22 32 40.2	+1.2
IVIS				e		22 32 52.1	
	comp=Z,26µm,0.2s						
IVIS				eSn	Sn	22 33 05.0	+1.3
SNGE	Sanandaj	2.10	324	ePg	Pg	22 32 42.3	-3.9
IGHG	Ghaleghazi	2.12	296	Pn	Pn	22 32 41.9	+1.4
IGHG	Ghaleghazi	2.12	296	ePn	Pn	22 32 42.0	+1.5
IGHG				e		22 33 31.6	
	comp=Z,48µm,0.3s						
IRAZ	Razeghan	2.18	24	ePn	Pn	22 32 39.1	-2.2
IRAZ				e		22 33 27.5	
	comp=Z,50µm,0.4s						
ILIN	Laeen	2.18	314	ePn	Pn	22 32 42.3	+0.9
ILIN				e		22 33 27.4	
	comp=Z,23µm,0.4s						
IKLH	Kalahroud	2.27	91	Pn	Pn	22 32 40.8	-1.8
IKLH	Kalahroud	2.27	91	⇓ePn	Pn	22 32 40.9	-1.7
IKLH				e		22 33 16.9	
	comp=Z,59µm,0.2s						
IMHD	Mahdasht	2.72	33	Pn	Pn	22 32 48.8	+0.1
IMHD	Mahdasht	2.72	33	ePn	Pn	22 32 48.9	+0.2
IMHD				e		22 33 24.6	
	comp=Z,28µm,0.4s						
ISFB	Sefidab	2.96	70	Pn	Pn	22 32 51.7	-0.3
ISFB	Sefidab	2.96	70	⇓ePn	Pn	22 32 51.8	-0.2
ISFB				e		22 33 49.1	
	comp=Z,20µm,0.3s						
THKV	Tehran--Karaj	3.00	33	ePn	Pn	22 32 51.9	-0.7
CHTH	Charan	3.12	36	ePn	Pn	22 32 53.7	-0.5
NASN	Na'in	3.37	99	ePn	Pn	22 32 58.7	+1.1
IAFJ	Afjeh	3.39	43	ePn	Pn	22 32 58.1	+0.2
IAFJ				e		22 33 51.6	
	comp=Z,27µm,0.3s						
DAMV	Damavand	3.39	48	ePn	Pn	22 32 57.6	-0.3
DAMV				AML	AML	22 33 56.4	
	comp=N,847nm,0.3s						
BHD	Baghdad	3.76	269	ex	x	22 33 02.5	
BHD				ex	x	22 33 19.0	
BHD				i x	x	22 33 47.0	
BHD				i x	x	22 33 57.0	
BHD				i x	x	22 34 05.0	
MIB	Mutribah	3.82	200	eP	Pn	22 33 07.1	+3.2
MIB				eS	Sn	22 33 54.3	+6.0
MIB				AML	AML	22 33 57.0	
	comp=Z,376nm,0.5s						
MIB	Mutribah	3.82	200	eP	Pn	22 33 07.1	+3.2
MIB				eS	Sn	22 33 54.3	+5.9
	comp=Z,376nm,0.5s						
IFIR	Firoozkooh	3.91	54	Pn	Pn	22 33 04.4	-0.7
IFIR	Firoozkooh	3.91	54	ePn	Pn	22 33 04.5	-0.6
IFIR				e		22 34 02.8	
	comp=Z,6µm,0.2s						
ILAS	Lasjerd	3.92	59	e	Sg	22 34 18.6	+6.9
	comp=Z,17µm,0.4s						
IPRN	Paran-Amol	3.96	44	Pn	Pn	22 33 07.3	+1.4
IPRN	Paran-Amol	3.96	44	ePn	Pn	22 33 07.4	+1.5
IPRN				e		22 34 23.4	
	comp=Z,15µm,0.4s						
RST	Umm Al-Ruwaisa	4.21	203	eP	Pn	22 33 12.3	+3.1
RST				eS	Sn	22 34 03.5	+5.6
RST				AML	AML	22 34 07.7	
	comp=Z,378nm,0.6s						
RST	Umm Al-Ruwaisa	4.21	203	eP	Pn	22 33 12.3	+3.1
RST				eS	Sn	22 34 03.5	+5.6
	comp=Z,378nm,0.6s						
ISAD	Sadrabad	4.33	109	Pn	Pn	22 33 12.4	+1.5
ISAD	Sadrabad	4.33	109	ePn	Pn	22 33 12.5	+1.6
ISAD				e		22 34 37.8	
	comp=N,11µm,0.4s						
KBD	Kabd	4.33	194	eP	Pn	22 33 13.7	+2.7
KBD				eS	Sn	22 34 06.8	+5.8
KBD				AML	AML	22 34 08.4	
	comp=Z,518nm,0.4s						
KBD	Kabd	4.33	194	eP	Pn	22 33 13.7	+2.7
KBD				eS	Sn	22 34 06.8	+5.7
	comp=Z,518nm,0.4s						
ISHM	Shahmirzad	4.37	56	e	Sg	22 34 25.9	-0.2
	comp=Z,22µm,0.6s						
NAY	Al-Naaiem	4.37	199	eP	Pn	22 33 14.5	+3.0
NAY				eS	Sn	22 34 07.8	+5.8
NAY				AML	AML	22 34 09.7	
	comp=Z,162nm,0.6s						
NAY	Al-Naaiem	4.37	199	eP	Pn	22 33 14.5	+3.0
NAY				eS	Sn	22 34 07.8	+5.9
	comp=Z,162nm,0.6s						
RDF	Al-Radifah	4.61	195	eP	Pn	22 33 17.6	+2.9
RDF				eS	Sn	22 34 13.6	+5.9
RDF				AML	AML	22 34 17.6	
	comp=Z,428nm,0.4s						
RDF	Al-Radifah	4.61	195	eP	Pn	22 33 17.6	+2.9
RDF				eS	Sn	22 34 13.6	+5.8
IANJ	Anjiloo	4.65	62	e	Sg	22 34 39.0	+3.8
	comp=Z,10µm,0.4s						
QRN	Al-Qurain	4.72	190	eP	Pn	22 33 18.9	+2.6
QRN				eS	Sn	22 34 15.4	+4.9
QRN				AML	AML	22 34 16.7	
	comp=Z,223nm,0.4s						
IGLO	Galoogah	4.78	51	Pn	Pn	22 33 22.6	+5.5
IGLO	Galoogah	4.78	51	ePn	Pn	22 33 22.7	+5.6
IGLO				e		22 35 19.3	
	comp=Z,14µm,0.5s						
ICHK	Chekchek	4.81	102	ePn	Pn	22 33 17.3	-0.1
ICHK				e		22 34 40.7	
	comp=Z,14µm,0.4s						
SHI	Shiraz	4.88	139	ePn	Pn	22 33 20.9	+2.5
SHI				e		22 35 11.3	
	comp=Z,7µm,0.4s						
IMEH	Mehriz	5.26	111	Pn	Pn	22 33 23.3	-0.4
IMEH	Mehriz	5.26	111	ePn	Pn	22 33 23.4	-0.3
IMEH				e		22 35 00.8	
	comp=Z,5µm,0.5s						
KFJS		5.26	189	P	Pn	22 33 24.7	+1.0
ISRV	Sarvestan	5.41	137	ePn	Pn	22 33 27.1	+1.3
ISRV				e		22 35 34.2	
	comp=N,34µm,0.7s						
GRMI	Germi	5.45	352	ePn	Pn	22 33 26.2	0.0
IMOK	Mook	5.46	142	Pn	Pn	22 33 29.1	+2.7
IMOK	Mook	5.46	142	ePn	Pn	22 33 29.2	+2.8
IMOK				e		22 35 25.3	
	comp=Z,13µm,0.7s						
MSL	Mosul	5.55	303	ex	x	22 33 28.0	
MSL				ex	x	22 34 36.0	
MSL				i x	x	22 35 09.0	
CUKT	Cukurca	5.76	313	eP	Pn	22 33 30.3	-0.1
HKR	Hakkari	5.90	316	eP	Pn	22 33 33.1	+0.7
HAKT	HAKKARI	5.90	316	i P	Pn	22 33 33.4	+0.9
HAKT				i S	Sg	22 35 15.8	+0.5
IBAF	Bafgh	5.95	106	ePn	Pn	22 33 32.9	-0.2
IBAF				e		22 35 24.7	
	comp=Z,4µm,0.6s						
SIRT	Sirnak	6.65	310	eP	Pn	22 33 37.9	-4.8
TVAN	Van	6.76	321	i P	Pn	22 33 48.1	+3.9
VANB	Van	6.82	321	eP	Pn	22 33 46.0	+0.9
ASYS		7.06	215	P	Pn	22 33 48.1	-0.3
DYDN	Diyadin	7.41	327	i P	Pb	22 34 18.1	+4.2
BOQSS		7.53	176	P	Pn	22 33 55.7	+0.9
BTMT	Batman	7.66	311	eP	Pn	22 33 55.9	-0.7
MARD	Mardin	7.67	303	i P	Pn	22 33 55.5	-1.2
MARD				i S	Sn	22 35 24.3	+1.2
ITEG		8.30	91	ePn	Pn	22 34 04.8	-0.7
SLWS		8.72	169	P	Pn	22 34 11.5	+0.3
ERZM	Erzurum	8.85	319	i P	Pn	22 34 08.5	-4.4
EZM	Erzurum	8.85	319	eP	Pn	22 34 08.5	-4.5
IBND		8.89	130	ePn	Pn	22 34 13.4	-0.2
PTK	Pertek	9.41	308	eP	Pn	22 34 17.7	-2.9
ELZG	Elazig	9.48	305	i P	Pn	22 34 20.1	-1.5
BTHS		9.49	169	P	Pn	22 34 20.0	-1.7
MAK	Makhachkala	9.60	354	eP	Pn	22 34 27.9	+4.7
MAK				eS	Sn	22 36 20.0	+9.4
MAK				MLR	MLR		
	comp=Z,950nm,15.0s						
MALT	Malatya	9.78	303	eP	Pn	22 34 25.5	-0.2
MALT	Malatya	9.78	303	ePn	Pn	22 34 25.9	+0.2
	comp=Z,20nm,1.0s						
MALT				eSn	Sn	22 36 22.9	+7.8
MALT	Malatya	9.78	303	eP	Pn	22 34 25.9	+0.2
MALT				e		22 36 22.9	
MALT				pmax	pmax		
	comp=Z,21nm,1.0s						
MALT	Malatya	9.78	303	ePn	Pn	22 34 25.9	+0.2
	comp=Z,20nm,1.0s						
BANOM	Banah	9.87	137	⇑P	Pn	22 34 25.4	-1.6
	SNR=46						
GZT	Gaziantep	10.03	296	i P	Pn	22 34 28.7	-0.4
ZEI	Tsey	10.13	339	eP	Pn	22 34 37.7	+7.2
ASF	Jabal al Asfar	10.15	266	Pn	Pn	22 34 30.3	-0.5
	comp=Z,2.0nm,0.3s,baz=321,slow=8.8,SNR=15						
ASF				LR	LR	22 39 18.5	
	comp=Z,739nm,22.0s,baz=176,slow=43						
KELT	Kelkit	10.23	314	i P	Pn	22 34 38.3	+6.5
GAZ	Gaziantep	10.24	295	eP	Pn	22 34 30.7	-1.2
NAZ	Nazwa, Dubai	10.27	143	P	Pn	22 34 31.5	-1.0
	SNR=23						
ASUD	Al Ashush, Dub	10.41	145	P	Pn	22 34 34.3	-0.1
	SNR=101						
FAQ	Al Faqa, Dubai	10.44	144	P	Pn	22 34 33.9	-0.9
	SNR=16						
HRDDS		10.45	177	P	Pn	22 34 33.5	-1.4
HATD	Hatta, Dubai	10.65	142	⇑P	Pn	22 34 37.6	0.0
	SNR=30						
HATD	Hatta, Dubai	10.65	142	P	Pn	22 34 35.9	-1.7
	SNR=69						
ASHO	Ashiyiah	10.73	142	⇓P	Pn	22 34 36.7	-2.0
	SNR=79						
ASHO	Ashiyiah	10.73	142	P	Pn	22 34 36.4	-2.3
	SNR=79						
ANDN	Andirin	11.02	296	i P	Pn	22 34 41.7	-1.0
MMAI	Mount Meron Ar	11.28	272	Pn	Pn	22 34 46.0	-0.3
	comp=Z,0.6nm,0.3s,baz=81,slow=17,SNR=4.8						
MMAI				LR	LR	22 40 06.8	
	comp=Z,855nm,20.9s,baz=85,slow=43						
KIV	Kislovodsk	11.58	337	ePn	Pn	22 34 58.4	+8.1
KIV	Kislovodsk	11.58	337	eP	Pn	22 34 55.8	+5.5
KIV				eS	Sn	22 37 07.3	+8.2
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,179nm,11.0s						
ARQ	Araqi	12.08	144	⇓P	Pn	22 34 55.7	-1.6
	SNR=15						
HOQ	Hoqain	12.28	141	⇑P	Pn	22 34 57.9	-2.0
	SNR=24						
HOQ	Hoqain	12.28	141	P	Pn	22 34 57.9	-2.1
	SNR=24						
SOC	Sochi	12.42	328	eP	Pn	22 35 03.7	+1.9
SOC				e		22 37 23.9	
SOC				pmax	pmax		
	comp=Z,17nm,0.7s						
SOC				MLR	MLR		
	comp=Z,935nm,13.0s						
EIL	Elat	12.44	256	Pn	Pn	22 35 01.1	-1.0
	comp=Z,1.4nm,0.3s,baz=32,slow=9.5,SNR=8.7						
EIL				LR	LR	22 41 01.7	
	comp=Z,1µm,18.2s,baz=80,slow=43						
BIDO	Bidbid	12.77	138	⇓P	Pn	22 35 03.2	-3.6
	SNR=17						
BSY	Bisya	12.91	143	⇑P	Pn	22 35 06.3	-2.3
	SNR=22						
BSYO	Bisya	12.95	143	P	Pn	22 35 06.3	-2.8
	SNR=22						
CSS	Prodhromos	12.96	281	ePn	Pn	22 35 11.4	+2.2
CSS	Prodhromos	12.96	281	ePn	Pn	22 35 11.4	+2.2
SMDO	Samad	13.10	140	⇑P	Pn	22 35 08.6	-2.5
	SNR=30						
CDAG	Cicekdag	13.20	302	i P	Pn	22 35 13.0	+0.6
CTKT	Corum	13.35	307	i P	Pn	22 35 17.8	+3.4
JMDO	Jabal Madar	13.69	141	P	Pn	22 35 16.4	-2.8
	SNR=18						
BR131	Keskin Array S	13.76	302	Pn	Pn	22 35 22.6	+2.5
	comp=Z,2.9nm,0.4s						
BR131	Keskin Array S	13.76	302	Pn	Pn	22 35 22.5	+2.4
	comp=Z,2.9nm,0.4s						
BRTR	Keskin Array B	13.76	302	Pn	Pn	22 35 21.3	+1.2
	comp=Z,0.1nm,0.3s,baz=115,slow=13,SNR=21						
BRTR				LR	LR	22 41 27.5	
	comp=Z,652nm,20.4s,baz=328,slow=41						
WBK	Wadi Bani Khal	13.97	138	⇑P	Pn	22 35 19.7	-3.3
	SNR=11						
ELDT	Eldivan	14.22	304	i P	Pn	22 35 29.9	+3.5
ANTO	Ankara	14.42	301	ePn	Pn	22 35 33.0	+3.9
	comp=Z,8.8nm,0.7s						
ANTO				eSn	Sn	22 38 17.6	+9.1
ANTO	Ankara	14.42	301	eP	Pn	22 35 33.0	+4.0
ANTO				e		22 38 17.6	
ANTO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ANTO	Ankara	14.42	301	ePn	Pn	22 35 33.0	+4.0
	comp=Z,8.8nm,0.7s						
BALT	Daday	14.71	308	i P	Pn	22 35 34.5	+1.4
ISP	Isparta	15.57	292	i P	Pn	22 35 50.2	+5.8
SHAO	Shalim	16.48	157	P	Pn	22 35 53.6	-2.7
	SNR=16						
GDZ	Gediz	16.62	295	i P	Pn	22 35 59.0	+1.0
GDZ	Gediz	16.62	295	i P	Pn	22 35 59.0	+1.0
KBL	Kabul	16.78	81	ePn	Pn	22 35 59.9	-0.1
KBL	Kabul	16.78	81	ePn	Pn	22 35 59.9	-0.1
BTOK	Tokmak	17.88	297	i P	Pn	22 36 14.1	+0.5
AKTK	Aktyubinsk	18.30	19	P	Pn	22 36 17.9	-0.9
AKTK	Aktyubinsk	18.30	19	P	Pn	22 36 17.9	-0.9
AKTO	Aktyubinsk	18.30	19	P	Pn	22 36 17.9	-0.9
	comp=Z,0.2nm,0.3s,baz=217,slow=14,SNR=3.2						
VRHR	Novokhopersk	18.45	345	eP	Pn	22 36 22.3	+1.7
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=N,20nm,0.7s						
MUKL	Al Mukalla	18.85	179	eP	Pn	22 36 25.8	+0.2
VRSR	Storozhevoye	19.15	341	eP	Pn	22 36 29.1	+0.1
VRSR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.9s						
VRSR	Storozhevoye	19.15	341	eP	Pn	22 36 29.1	+0.1
	comp=E,1.0nm,0.8s						
DHBB	Dhamar BB	19.19	193	eP	Pn	22 36 30.0	+0.3
TIRR	Tirgusor	19.31	311	⇓P	Pn	22 36 30.1	-0.9
TIRR	Tirgusor	19.31	311	⇓iP	Pn	22 36 30.1	-0.9
SANT	Santorini	19.42	285	eP	Pn	22 36 32.7	+0.3
	comp=E,1µm,0.5s						
SANT	Santorini	19.42	285	eP	Pn	22 36 32.7	+0.3
	comp=E,1µm,0.5s						
ALN	Alexandroupoli	19.63	299	ePg	Pn	22 36 35.3	+0.4
ALN				eSg	pP	22 36 45.0	+6.6
LBOS		19.72	190	⇑eP	Pn	22 36 36.0	-0.2
LBOS				AMb	AMB	22 36 37.1	
	comp=Z,81nm,1.2s						
IDI	Anoyia	19.88	282	P	Pn	22 36 36.4	-1.4
	comp=Z,3.5nm,0.3s,baz=84,slow=10,SNR=35						
KDZ	Kurdzhali	20.29	301	i P	P	22 36 40.9	+0.2
DIM	Dimitrovgrad	20.32	302	i P	P	22 36 40.6	-0.4
KIS	Kishinev	20.39	318	eP	P	22 36 40.0	-1.6
KIS				i		22 36 50.0	
KIS				i		22 37 05.0	
KIS				i		22 37 11.0	
KIS	Kishinev	20.39	318	eUNK		22 36 40.0	
SZH	Strazhica	20.45	305	i P	P	22 36 42.1	-0.3
GVD	Gavdhos	20.55	281	eP	P	22 36 45.0	+1.5
	comp=Z,40nm,0.8s						
GVD				eS	S	22 40 35.6	+2.8
GVD	Gavdhos	20.55	281	eP	P	22 36 45.0	+1.4
	comp=Z,40nm,0.8s						
RZN	Rozhen	20.81	300	i P	P	22 36 46.4	+0.1
VRI	Vrincioaia	21.03	313	⇓P	P	22 36 48.3	-0.3
VRI	Vrincioaia	21.03	313	⇓iP	P	22 36 48.3	-0.3
PLOR	Plostina	21.07	313	⇓iP	P	22 36 49.4	+0.4
PAIG	Paliouri	21.19	295	ePg	P	22 36 49.2	-1.2
MLR	Muntele Rosu	21.34	311	P	P	22 36 53.6	+1.6
MLR	Muntele Rosu	21.34	311	P	P	22 36 52.3	+0.3
	comp=Z,9.6nm,1.0s,mb4.1,baz=164,slow=6.6,SNR=15						
MLR				ScP	ScP	22 44 32.5	+0.7
	comp=Z,1.8nm,0.9s,baz=126,slow=19,SNR=3.2						
MLR	Muntele Rosu	21.34	311	⇑iP	P	22 36 53.3	+1.3
MLR	Muntele Rosu	21.34	311	P	P	22 36 53.6	+1.6
PGB	Panagyurishte	21.44	302	i P	P	22 36 53.2	+0.1
SRS	Serrai	21.49	298	ePg	P	22 36 51.5	-2.1
SRS				eSg		22 37 10.2	
MMB	Musomiste	21.50	300	i P	P	22 36 53.8	+0.1
SOH	Sokhos	21.60	297	ePb	P	22 36 52.2	-2.6
EKS2	Erkin-Say	21.63	57	eP	P	22 36 55.8	+0.8
	comp=Z,14nm,1.1s,mb4.3						
EKS2				eS	S	22 40 54.6	+0.8
EKS2	Erkin-Say	21.63	57	eP	P	22 36 55.8	+0.7
	comp=Z,14nm,1.1s,mb4.3						
VOIR		21.88	310	P	P	22 36 59.7	+1.9
VOIR		21.88	310	⇑iP	P	22 36 58.7	+0.9
KNT	Kendrikon	22.01	298	ePn	P	22 36 58.2	-1.0
UCH	Uchtor	22.03	59	eP	P	22 37 00.5	+1.1
	comp=Z,9.9nm,1.0s,mb4.2						
UCH				ePcP	PcP	22 40 50.7	-6.5
UCH	Uchtor	22.03	59	eP	P	22 37 00.4	+1.0
	comp=Z,9.9nm,1.0s,mb4.2						
AAK	Ala-Archa	22.12	58	eP	P	22 37 05.4	+5.0
VTS	Vitosha	22.13	302	P	P	22 37 01.2	+0.7
VTS	Vitosha	22.13	302	i P	P	22 37 00.0	-0.5
VTS	Vitosha	22.13	302	⇓iP	P	22 37 00.5	0.0
VTS	Vitosha	22.13	302	P	P	22 37 01.2	+0.7
VAY	Valandovo	22.28	298	eP	P	22 37 01.1	-1.1
VAY	Valandovo	22.28	298	eP	P	22 37 01.0	-1.1
GRG	Griva	22.34	297	ePn	P	22 37 02.0	-0.7
ATD	Arta Tunnel	22.46	196	LR	LR	22 46 23.4	
	comp=Z,449nm,18.2s,MS3.9,baz=220,slow=38						
AKASG	Malin Array Be	22.50	326	P	P	22 37 02.0	-2.2
	comp=Z,8.2nm,0.7s,mb4.3,baz=134,slow=9.4,SNR=28						
AKASG				ScP	ScP	22 44 33.1	-1.5
	comp=Z,0.3nm,0.4s,baz=102,slow=2.2,SNR=4.4						
AKBB	Malin Array Si	22.50	326	eP	P	22 37 01.3	-2.9
AKBB	Malin Array Si	22.50	326	eP	P	22 37 01.3	-3.0
THN	Thein Dam	22.54	85	ex	x	22 37 05.3	
KSH	Kashi	22.59	67	eP	P	22 37 07.6	+2.2
KSH				eAP		22 37 10.8	
KSH				eXP	sP	22 37 13.9	+1.2
KSH				PP		22 37 35.8	
KSH				S	S	22 41 09.0	-3.7
KSH				eSCP	ScP	22 44 36.5	+1.4
KSH				AMB	AMB		
	comp=Z,25nm,0.2s,mb5.3						
KSH				AMB	AMB		
	comp=Z,1µm,4.9s						
KSH				LR	LR		
	comp=N,5µm,11.6s						
KSH				LR	LR		
	comp=E,2µm,5.7s						
KSH				LR	LR		
	comp=Z,3µm,7.4s						
STIP	Stip	22.65	299	eP	P	22 37 06.0	0.0
STIP	Stip	22.65	299	eP	P	22 37 05.9	-0.1
BURAR	Bucovina Array	22.79	316	⇑iP	P	22 37 09.3	+1.9
TKM2	Tokmak 2	22.98	58	eP	P	22 37 12.5	+2.9
	comp=Z,14nm,1.1s,mb4.3						
TKM2				ePcP	PcP	22 41 00.8	+1.8
TKM2	Tokmak 2	22.98	58	eP	P	22 37 12.5	+3.0
TKM2				e		22 41 00.9	
TKM2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
FNA	Florina	23.07	297	ePn	P	22 37 12.2	+1.7
BIA	Bitola	23.15	297	eP	P	22 37 10.5	-0.8
SKO	Skopje	23.25	300	eP	P	22 37 13.6	+1.2
SKO	Skopje	23.25	300	eP	P	22 37 13.5	+1.1
KRUS	Krusevo	23.27	298	eP	P	22 37 14.3	+1.8
GZR	Gura Zlata	23.34	309	⇓P	P	22 37 12.0	-1.2
GZR				P		22 37 16.2	
GZR	Gura Zlata	23.34	309	⇓iP	P	22 37 12.0	-1.2
OBN	Obninsk	23.35	342	P	P	22 37 15.8	+2.5
OBN	Obninsk	23.35	342	⇑eP	P	22 37 14.9	+1.6
OBN				e		22 37 26.4	
OBN				pmax	pmax		
	comp=Z,97nm,1.9s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.8						
OHR	Ohrid	23.55	297	eP	P	22 37 14.4	-1.1
MOS	Moscow	23.66	344	eP	P	22 37 15.4	-0.9
MOS				e		22 37 46.4	
MOS				pmax	pmax		
	comp=Z,72nm,1.6s,mb4.8						
MOS	Moscow	23.66	344	eP	P	22 37 15.4	-0.9
	comp=Z,72nm,1.6s,mb4.8						
DRGR		23.93	312	P	P	22 37 20.2	+1.4
DRGR		23.93	312	⇓iP	P	22 37 19.6	+0.8
ARU	Arti	23.98	13	eP	P	22 37 20.9	+1.7
	comp=Z,32nm,1.3s,mb4.6						
ARU	Arti	23.98	13c	iP	P	22 37 20.6	+1.4
ARU				e		22 37 48.6	
ARU				ePPP		22 37 58.6	
ARU				S	S	22 41 37.3	+2.3
ARU				SS		22 42 18.0	
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.2						
BZS	Buzias	24.18	308	⇓P	P	22 37 21.9	+0.8
BZS	Buzias	24.18	308	⇓iP	P	22 37 21.9	+0.8
LVV	L'vov	24.60	319	eP	P	22 37 25.9	+1.0
NDI	New Delhi	24.71	93	eP	P	22 37 26.0	-0.1
SVE	Sverdlovsk	24.78	16	⇑eP	P	22 37 26.5	0.0
SVE				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.5						
SVE				MLR	MLR		
	comp=Z,519nm,14.0s,MS4.2						
SVE	Sverdlovsk	24.78	16	eP	P	22 37 26.5	0.0
	comp=Z,519nm,14.0s						
DIVS	Divcibare	24.80	304	P	P	22 37 26.0	-0.8
BRVK	Borovoye	24.91	32	eP	P	22 37 29.6	+1.8
UZH	Uzhgorod	24.99	315d	iP	P	22 37 31.6	+3.1
UZH				i		22 37 42.8	
UZH				i		22 38 22.4	
KOLS	Kolonicke sedl	25.15	316	eP	P	22 37 30.5	+0.6
KWP	Kalwaria	25.24	318	eP	P	22 37 30.6	-0.2
	comp=Z,13nm,0.8s,mb4.5						
KWP				ePcP	PcP	22 41 05.3	+1.6
KWP				eScP	ScP	22 44 43.0	+0.9
KWP	Kalwaria	25.24	318	eP	P	22 37 30.6	-0.1
KWP				e		22 41 05.3	
KWP				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.5						
KWP	Kalwaria	25.24	318	eP	P	22 37 30.5	-0.2
	comp=Z,13nm,0.8s,mb4.5						
CRVS	Cervenica-Dubn	25.61	315	eP	P	22 37 38.1	+4.0
MNK	Minsk	25.77	331	eP	P	22 37 34.0	-1.5
STHS	Stebnicka Huta	25.97	316	eP	P	22 37 40.1	+2.7
	comp=Z,2.7nm,0.9s,mb3.8						
STHS	Stebnicka Huta	25.97	316	eP	P	22 37 40.1	+2.7
STHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
KECS	Kecovo	26.00	314	eP	P	22 37 42.7	+5.0
	comp=Z,4.9nm,0.8s,mb4.1						
KECS	Kecovo	26.00	314	eP	P	22 37 42.7	+5.0
KECS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
PSZ	Piszkesteto	26.14	312	eP	P	22 37 40.7	+1.8
	comp=Z,16nm,1.1s,mb4.5						
PSZ	Piszkesteto	26.14	312	eP	P	22 37 40.7	+1.8
PSZ				pmax	pmax		

comp=Z,16nm,1.1s,mb4.5
PSZ Piszkesteto 26.14 312 *e*P **P 22 37 40.1 +1.2**
PSZ Piszkesteto 26.14 312⇓ *i*P **P 22 37 39.0 +0.1**
FURI Furi 26.14 203 *e*P **P 22 37 49.3 +10**
PKSM Moragy 26.33 308 P **P 22 37 41.9 +1.2**
PKSM Moragy 26.33 308⇑ *i*P **P 22 37 40.7 0.0**
PKSM Moragy 26.33 308⇑ *e*P **P 22 37 41.5 +0.8**
TIP Timpagrande 26.43 292 *e*P **P 22 37 44.9 +3.3**
NIE Niedzica 26.51 316 *e*P **P 22 37 46.7 +4.4**
BUD Budapest 26.52 311⇓ *e*P **P 22 37 42.7 +0.4**
VYHS Vyhne 27.01 313 *i* P **P 22 37 47.3 +0.5**
comp=Z,50nm,3.2s
VYHS Vyhne 27.01 313 *i* P **P 22 37 47.3 +0.5**
VYHS pmax pmax
comp=Z,50nm,3.2s
OJC Ojcow 27.17 317 *e*P **P 22 37 46.6 -1.6**
KOLL Kolacno 27.31 313 *i* P **P 22 37 52.9 +3.4**
SUW Suwalki 27.47 326 *e*P **P 22 37 50.7 -0.1**
KURK Kurchatov 27.79 43⇑ Lg 22 35 49.8
comp=Z,1.0nm,0.4s
KURK Kurchatov 27.79 43 *e*P **P 22 37 55.9 +2.1**
comp=Z,11nm,1.1s,mb4.4
KURK Kurchatov 27.79 43 *i* P **P 22 37 55.4 +1.7**
MODS Modra-Piesok 27.93 312 *e*P **P 22 37 58.1 +3.1**
comp=Z,6.0nm,1.3s,mb4.1
MODS Modra-Piesok 27.93 312 *e*P **P 22 37 58.1 +3.1**
MODS pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
ZST Bratislava 27.98 311 *e*P **P 22 38 01.9 +6.4**
ZST *e*P 22 38 02.7
SOP Sopron 28.15 310 *e*P **P 22 37 57.7 +0.7**
MORC Moravsky Berou 28.30 315 *e*P **P 22 37 59.1 +0.8**
comp=Z,2.5nm,0.6s,mb4.0
MORC Moravsky Berou 28.30 315⇓ *i*P **P 22 37 59.4 +1.1**
MORC Moravsky Berou 28.30 315 *e*P **P 22 37 59.1 +0.8**
comp=Z,2.5nm,0.6s,mb4.0
MKAR Makanchi Array 28.62 52 P **P 22 38 01.2 0.0**
MKAR LR LR 22 50 00.6
MKAR Makanchi Array 28.62 52 *i* P **P 22 38 01.3 +0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 28.62 52 P **P 22 38 01.2 0.0**
comp=Z,1.5nm,0.6s,mb3.9,baz=248,slow=8.6,SNR=12
MKAR LR LR 22 50 00.6
comp=Z,237nm,18.8s,MS3.8,baz=252,slow=38
CONA Conrad Observa 28.68 310⇑ *e*P **P 22 38 01.6 -0.1**
comp=Z,12nm,1.2s,mb4.5
VRAC Vranov 28.69 313 LR LR 22 51 11.6
comp=Z,434nm,18.4s,MS4.1,baz=114,slow=40
AQU L'Aquila 29.21 298 *e*P **P 22 38 07.9 +1.4**
AQU L'Aquila 29.21 298 *e*P **P 22 38 07.9 +1.4**
DPC Dobruska-Polom 29.25 315 *e*P **P 22 38 07.9 +1.2**
MOA Molln 29.68 309⇑ *e*P **P 22 38 10.1 -0.5**
comp=Z,8.8nm,0.9s,mb4.5
KBA Koelnbreinsper 30.08 308 *e*P **P 22 38 13.7 -0.4**
comp=Z,16nm,0.8s,mb4.8,SNR=14
KBA Koelnbreinsper 30.08 308 *e*P **P 22 38 13.8 -0.3**
KBA pmax pmax
comp=Z,16nm,0.8s,mb4.8
KBA Koelnbreinsper 30.08 308 P **P 22 38 13.7 -0.4**
comp=Z,16nm,0.8s,mb4.8,SNR=14
GERES GERESS Array B 30.33 311 P **P 22 38 15.3 -1.0**
comp=Z,0.8nm,0.4s,mb3.8,baz=115,slow=9.0,SNR=6.7
GERES LR LR 22 52 02.6
comp=Z,266nm,19.7s,MS3.9,baz=312,slow=40
KHC Kasperske Hory 30.49 312⇓ *e*P **P 22 38 21.5 +3.8**
KHC Kasperske Hory 30.49 312 *e*P **P 22 38 17.2 -0.6**
ABTA Abfaltersbach 30.56 307⇑ *i*P **P 22 38 18.1 -0.3**
comp=Z,8.3nm,0.8s,mb4.6,SNR=10
BRG Berggiesshubel 30.85 315 P **P 22 38 27.0 +6.1**
BRG pmax pmax
comp=Z,7.0nm,1.3s,mb4.3
BRG Berggiesshubel 30.85 315 *e*(P) **P 22 38 27.0 +6.1**
comp=Z,12nm,1.3s,mb4.5
HYB Hyderabad 31.04 114 *e*P **P 22 38 21.5 -1.4**
HYB Hyderabad 31.04 114 *i* P **P 22 38 21.5 -1.4**
GKN Gorkha 31.12 90 *e*P **P 22 38 24.1 +0.5**
comp=Z,16nm,0.6s,mb5.0
WTTA Wattenberg 31.25 307⇑ *i*P **P 22 38 23.8 -0.7**
comp=Z,29nm,1.3s,mb5.0
WTTA Wattenberg 31.25 307⇑ *i*P **P 22 38 23.8 -0.7**
WTTA pmax pmax
comp=Z,29nm,1.3s,mb5.0
SQTA Sankt Quirin 31.53 307 *i* P **P 22 38 25.7 -1.2**
comp=Z,5.1nm,0.7s,mb4.5,SNR=15
SQTA Sankt Quirin 31.53 307 *i* P **P 22 38 25.7 -1.2**
SQTA pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
NKC Novy Kostel 31.53 313 *e*P **P 22 38 26.1 -0.8**
JOF Joensuu 31.54 345 *e*p **P 22 38 24.6 -2.2**
comp=Z,8.3nm,0.8s,mb4.6
CLL Collm 31.56 315 *e*P **P 22 38 27.0 -0.1**
MOTA Moosalm 31.63 307⇑ *i*P **P 22 38 26.5 -1.2**
comp=Z,9.0nm,0.9s,mb4.6,SNR=7.2
MOTA Moosalm 31.63 307⇑ *i*P **P 22 38 26.5 -1.3**
MOTA pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
FINES FINESS Array B 31.66 339 P **P 22 38 28.1 +0.2**
comp=Z,1.0nm,0.4s,mb4.0,baz=144,slow=10,SNR=12
FINES LR LR 22 52 49.7
comp=Z,300nm,18.1s,MS4.0,baz=142,slow=39
KKN Kakani 31.73 90 *e*P **P 22 38 29.5 +0.6**
comp=Z,27nm,0.7s,mb5.2
KKN Kakani 31.73 90 *e*P **P 22 38 29.5 +0.6**
KKN pmax pmax
comp=Z,27nm,0.7s,mb5.2
FETA Feichten 31.81 307⇓ *i*P **P 22 38 28.4 -1.0**
comp=Z,21nm,0.8s,mb5.0,SNR=24
WMQ Urumqi 31.81 59⇑ *i*P **P 22 38 30.0 +0.5**
WMQ AP pP 22 38 34.5 -0.3
WMQ XP sP 22 38 37.0 0.0
WMQ PP PP 22 39 35.0 -6.3
WMQ S **S 22 43 38.0 -0.9**
WMQ AMB AMB
comp=Z,4.0nm,0.5s,mb4.5
WMQ AMB AMB
comp=Z,45nm,8.0s
WMQ LR LR
comp=N,416nm,23.8s,MS4.1
WMQ LR LR
comp=E,160nm,19.0s,MS4.1
WMQ LR LR
comp=Z,151nm,23.8s,MS3.6
GRA1 Grafenberg Arr 32.13 312 *e*P **P 22 38 31.3 -0.8**
comp=Z,15nm,1.4s,mb4.6
GRF Grafenberg Arr 32.13 312 *e*P **P 22 38 31.3 -0.8**
GRF pmax pmax
comp=Z,15nm,1.4s,mb4.6
GRF Grafenberg Arr 32.13 312 *e*P **P 22 38 31.3 -0.8**
GRF pmax pmax
comp=Z,15nm,1.4s,mb4.6
GRF Grafenberg Arr 32.13 312 *e*P **P 22 38 31.3 -0.8**
comp=Z,15nm,1.4s,mb4.6
KAF Kangasniemi 32.13 340 *e*p **P 22 38 31.4 -0.6**
comp=Z,1.0nm,0.3s,mb4.1,baz=140,slow=9.1
KAF Kangasniemi 32.13 340 *e*P **P 22 38 31.4 -0.6**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.1
VSL Villasalto 32.15 292 *e*P **P 22 38 34.1 +1.6**
comp=Z,10nm,0.6s,mb4.8
VSL Villasalto 32.15 292 *e*P **P 22 38 34.1 +1.6**
comp=Z,10nm,0.6s,mb4.8
NVS Novosibirsk 32.18 38 *e*P **P 22 38 33.5 +1.0**
NVS *e* 22 49 02.0
NVS pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
NVS pmax pmax
comp=N,15nm,2.0s
NVS Novosibirsk 32.18 38 *e*P **P 22 38 33.5 +1.0**
comp=N,15nm,2.0s,mb4.5
NVS *e*ScS ScS 22 49 02.0 -0.3
DAVA Damuels 32.43 307⇑ *i*P **P 22 38 33.3 -1.5**
comp=N,35nm,0.9s,mb5.2,SNR=11
KEST Kesra 32.48 285 P **P 22 38 36.7 +1.3**
comp=N,1.5nm,0.9s,mb3.8,baz=307,slow=2.1,SNR=5.1
JIRN Jiri 32.54 90 *e*P **P 22 38 36.4 +0.4**
comp=N,13nm,0.5s,mb5.2
SBF Sospel 33.69 300 *e*P **P 22 38 44.8 -1.1**
comp=N,70nm,0.9s,mb5.3
SBF Sospel 33.69 300 *e*P **P 22 38 44.8 -1.1**
SBF pmax pmax
comp=Z,35nm,0.9s,mb5.3
SBF Sospel 33.69 300 *e*P **P 22 38 44.8 -1.1**
comp=Z,35nm,0.9s,mb5.3
ODAN Odare 33.81 91 *e*P **P 22 38 51.2 +4.1**
comp=Z,10.0nm,0.7s,mb4.8
TAPN Taplejung 33.91 90 *e*P **P 22 38 47.8 -0.2**
comp=Z,36nm,0.9s,mb5.3
MBDF Montbardon 34.23 302 *e*P **P 22 38 49.2 -1.4**
comp=Z,28nm,0.7s,mb5.0
MBDF Montbardon 34.23 302 *e*P **P 22 38 49.2 -1.4**
MBDF pmax pmax
comp=Z,14nm,0.7s,mb5.0
MBDF Montbardon 34.23 302 *e*P **P 22 38 49.2 -1.4**
comp=Z,14nm,0.7s,mb5.0
FRF La Foret Royal 34.24 300 *e*P **P 22 38 49.2 -1.5**
LPG La Plagne 34.31 303 *e*P **P 22 38 50.4 -0.9**
comp=Z,45nm,0.9s,mb5.1
LPG La Plagne 34.31 303 *e*P **P 22 38 50.4 -0.9**
LPG pmax pmax
comp=Z,22nm,0.9s,mb5.1
LPG La Plagne 34.31 303 *e*P **P 22 38 50.4 -0.9**
comp=Z,22nm,0.9s,mb5.1
BNI Bardonecchia 34.32 302 *e*P **P 22 38 50.7 -0.6**
BNI Bardonecchia 34.32 302 *e*P **P 22 38 50.7 -0.7**
LPL La Plagne 34.33 303 *e*P **P 22 38 50.8 -0.6**
comp=Z,49nm,0.9s,mb5.1
LPL La Plagne 34.33 303 *e*P **P 22 38 50.8 -0.6**
LPL pmax pmax
comp=Z,24nm,0.9s,mb5.1
LPL La Plagne 34.33 303 *e*P **P 22 38 50.8 -0.6**
comp=Z,24nm,0.9s,mb5.1
LMR La Mourre 34.34 299 *e*P **P 22 38 49.5 -2.0**
CDF Champ du Feu 34.36 308 *e*P **P 22 38 50.4 -1.3**
HINF Hinteralfeld 34.54 307 *e*P **P 22 38 51.8 -1.4**
ORIF Oris-en-Rattie 34.88 302 *e*P **P 22 38 55.0 -1.1**
comp=Z,27nm,1.1s,mb4.8
ORIF *e*MLR MLR
comp=Z,486nm,20.5s,MS3.9
ORIF Oris-en-Rattie 34.88 302 *e*P **P 22 38 55.0 -1.1**
ORIF pmax pmax
comp=Z,14nm,1.1s,mb4.8
ORIF Oris-en-Rattie 34.88 302 *e*P **P 22 38 55.0 -1.1**
comp=Z,14nm,1.1s,mb4.8
CABF La Chapelle 34.89 305 *e*P **P 22 38 54.9 -1.4**
comp=Z,33nm,0.7s,mb5.1
CABF La Chapelle 34.89 305 *e*P **P 22 38 54.9 -1.4**
CABF pmax pmax
comp=Z,17nm,0.7s,mb5.1
CABF La Chapelle 34.89 305 *e*P **P 22 38 54.9 -1.4**
comp=Z,17nm,0.7s,mb5.1
HAU Haudompre 34.91 308 *e*P **P 22 38 55.2 -1.2**
HAU *e*MLR MLR
comp=Z,275nm,19.5s,MS3.7
HAU Haudompre 34.91 308 *e*P **P 22 38 55.2 -1.2**
HAU MLR MLR
comp=Z,270nm,19.5s,MS4.0
SMRF Simiane la Rot 35.04 300 *e*P **P 22 38 56.3 -1.3**
APA Apatity 35.37 350⇑ *e*P **P 22 39 05.0 +4.9**
VIVF Saint-Julien-I 35.73 302 *e*P **P 22 39 01.9 -1.6**
MEZF Maizieres J'vi 35.84 308 *e*P **P 22 39 02.7 -1.7**
LSA Lhasa 36.05 84 P **P 22 39 08.1 +1.7**
LSA AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
KMBO Kilima Mbogo 36.05 200 LR LR 22 53 11.2
comp=Z,265nm,21.0s,MS4.0,baz=124,slow=35
GIVF Givet 36.25 311 *e*P **P 22 39 06.4 -1.5**
SMF Signal de Mont 36.44 305 *e*P **P 22 39 07.6 -1.9**
comp=Z,85nm,1.2s,mb5.2
SMF Signal de Mont 36.44 305 *e*P **P 22 39 07.6 -1.9**
SMF pmax pmax
comp=Z,42nm,1.2s,mb5.2
SMF Signal de Mont 36.44 305 *e*P **P 22 39 07.6 -1.9**
comp=Z,42nm,1.2s,mb5.2
LOR Lormes 36.48 306 *e*P **P 22 39 08.2 -1.7**
comp=Z,39nm,1.2s,mb4.9
LOR *e*MLR MLR
comp=Z,321nm,21.8s,MS3.8
LOR Lormes 36.48 306 *e*P **P 22 39 08.2 -1.7**
comp=Z,20nm,1.3s,mb4.9
LOR LR LR
comp=Z,320nm,21.8s,MS4.1
LOR Lormes 36.48 306 *e*P **P 22 39 08.2 -1.7**
LOR pmax pmax
comp=Z,20nm,1.3s,mb4.9
LOR MLR MLR
comp=Z,320nm,21.8s,MS4.1
SSF Saint Saulge 36.70 306 *e*P **P 22 39 10.5 -1.3**
comp=Z,42nm,1.2s,mb4.8
SSF Saint Saulge 36.70 306 *e*P **P 22 39 10.5 -1.3**
SSF pmax pmax
comp=Z,21nm,1.3s,mb4.8
SSF Saint Saulge 36.70 306 *e*P **P 22 39 10.5 -1.3**
comp=Z,21nm,1.2s,mb4.8
NB2 NORSAR Subarra 36.77 330 P **P 22 39 10.3 -1.9**
comp=Z,6.4nm,1.0s,mb4.4,baz=122,slow=7.9
NB2 NORSAR Subarra 36.77 330 P **P 22 39 10.3 -1.9**
NB2 pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
NOA NORSAR Array B 36.77 330 P **P 22 39 10.7 -1.5**
comp=Z,2.6nm,0.9s,mb4.1,baz=122,slow=8.5,SNR=4.4
NOA LR LR 22 55 13.6
comp=Z,345nm,20.7s,MS4.1,baz=120,slow=38
KONO Kongsberg 36.78 328 P **P 22 39 13.5 +1.3**
KONO Kongsberg 36.78 328 P **P 22 39 13.5 +1.2**
AVF Avril sur Loir 36.78 305 *e*P **P 22 39 10.7 -1.8**
comp=Z,41nm,1.1s,mb4.9
AVF Avril sur Loir 36.78 305 *e*P **P 22 39 10.7 -1.8**
AVF pmax pmax
comp=Z,21nm,1.1s,mb4.9
AVF Avril sur Loir 36.78 305 *e*P **P 22 39 10.7 -1.8**
comp=Z,21nm,1.1s,mb4.9
NAO01 NORSAR Array S 36.81 330 P **P 22 39 13.3 +0.8**
NAO01 NORSAR Array S 36.81 330 P **P 22 39 13.3 +0.8**
BGF Bois d'Agland 37.11 305 *e*P **P 22 39 13.1 -2.2**
TCF Toulx Ste Croi 37.53 304 *e*P **P 22 39 17.2 -1.7**
SHL Shillong 38.04 90 *ex* P **P 22 39 23.0 -0.4**
ARCES ARCESS Array B 38.46 347 P **P 22 39 24.9 -1.4**
comp=Z,2.1nm,0.7s,mb4.0,baz=154,slow=6.6,SNR=6.4
ARCES LR LR 22 56 37.4
comp=Z,235nm,19.4s,MS4.0,baz=244,slow=38
EPF Esparros 38.85 299 *e*P **P 22 39 28.2 -1.8**
LDF La Druitiere 39.27 308 *e*P **P 22 39 31.5 -1.9**
FLN La Foliniere 39.52 308 *e*P **P 22 39 33.7 -1.8**
FLN *e*MLR MLR
comp=Z,419nm,22.0s,MS3.9
FLN La Foliniere 39.52 308 *e*P **P 22 39 33.7 -1.8**
FLN MLR MLR
comp=Z,420nm,22.0s,MS4.2
EMOS Mosqueruela 39.65 295 P **P 22 39 38.1 +1.4**
comp=Z,20nm,0.7s,mb5.0
EMOS Mosqueruela 39.65 295 P **P 22 39 38.1 +1.4**
comp=Z,20nm,0.7s,mb5.0
GRR Gorron 39.74 307 *e*P **P 22 39 35.7 -1.6**
comp=Z,128nm,1.4s,mb5.2
GRR Gorron 39.74 307 *e*P **P 22 39 35.7 -1.6**
GRR pmax pmax
comp=Z,64nm,1.4s,mb5.2
GRR Gorron 39.74 307 *e*P **P 22 39 35.7 -1.6**
comp=Z,64nm,1.4s,mb5.2
ECHE Chera 40.12 294 P **P 22 39 42.7 +2.2**
comp=Z,8.4nm,0.8s,mb4.5
ECHE Chera 40.12 294 P **P 22 39 42.7 +2.1**
ECHE pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
ECHE Chera 40.12 294 P **P 22 39 42.7 +2.1**
comp=Z,8.0nm,0.8s,mb4.5
ETOB Tobarra 40.69 292 P **P 22 39 46.4 +1.0**
comp=Z,5.6nm,1.2s,mb4.1
ETOR Torete 40.80 296 P **P 22 39 46.8 +0.6**
comp=Z,4.1nm,0.5s,mb4.3
ETOR Torete 40.80 296 P **P 22 39 46.8 +0.6**
ETOR pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
ETOR Torete 40.80 296 P **P 22 39 46.8 +0.6**
comp=Z,4.0nm,0.5s,mb4.3
SGMF Saint Gilles 40.87 307 *e*P **P 22 39 44.5 -2.2**
GTA Gaotai 40.99 67 *e*P **P 22 39 49.8 +1.9**
GTA AP pP 22 39 56.5 +3.2
GTA XP sP 22 39 59.1 +3.6
GTA AMB AMB
comp=Z,5.0nm,1.3s,mb4.0
GTA AMB AMB
comp=Z,186nm,4.9s
GTA LR LR
comp=N,376nm,19.4s,MS4.3
GTA LR LR
comp=E,234nm,17.9s,MS4.3
GTA LR LR
comp=Z,438nm,20.2s,MS4.3
QUIF Quistinic 41.27 306 *e*P **P 22 39 47.6 -2.4**
ROSF Rostrenen 41.35 307 *e*P **P 22 39 49.0 -1.6**
EVIA Vianos 41.43 292 P **P 22 39 48.6 -2.8**
comp=Z,6.2nm,0.6s,mb4.4
EVIA Vianos 41.43 292 P **P 22 39 48.6 -2.9**
EVIA pmax pmax
comp=Z,6.0nm,0.6s,mb4.4
EQES Quesada 42.01 291 P **P 22 39 56.5 +0.3**
comp=Z,13nm,0.8s,mb4.6
EQES Quesada 42.01 291 P **P 22 39 56.5 +0.3**
comp=Z,13nm,0.8s,mb4.6
ESDC Sonseca Array 42.39 294 P **P 22 39 58.4 -0.9**
ESDC P pP 22 40 02.0 -2.7
ESDC LR LR 22 58 38.6
ESDC Sonseca Array 42.39 294 P **P 22 39 58.4 -0.9**
comp=Z,2.2nm,0.7s,mb3.9,baz=75,slow=8.1,SNR=6.8
ESDC LR LR 22 58 38.6
comp=Z,156nm,18.8s,MS3.9,baz=330,slow=38
ESLA Sonseca Array 42.39 294 *e*P **P 22 40 01.3 +2.0**
ESLA Sonseca Array 42.39 294 *e*P **P 22 40 01.3 +2.0**
GUD Guadarrama 42.40 296 P **P 22 40 01.1 +1.8**
comp=Z,5.5nm,0.8s,mb4.2
GUD Guadarrama 42.40 296 P **P 22 40 01.1 +1.7**
GUD pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
GUD Guadarrama 42.40 296 P **P 22 40 01.1 +1.7**
comp=Z,6.0nm,0.8s,mb4.3
ECOG Cogollos-Vega 42.50 291 P **P 22 39 59.9 -0.3**
ECOG pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
ECOG Cogollos-Vega 42.50 291 P **P 22 39 59.9 -0.3**
comp=Z,5.0nm,0.6s,mb4.3
EBAN Banos Encina 42.51 292 P **P 22 40 02.1 +1.9**
comp=Z,8.1nm,0.6s,mb4.6
EBAN Banos Encina 42.51 292 P **P 22 40 02.1 +1.9**
EBAN pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
EBAN Banos Encina 42.51 292 P **P 22 40 02.1 +1.9**
comp=Z,8.0nm,0.6s,mb4.6
EGUA Guajares 42.58 290 P **P 22 40 00.8 -0.1**
comp=Z,2.7nm,0.8s,mb4.0
EGUA Guajares 42.58 290 P **P 22 40 00.8 -0.1**
EGUA pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
EGUA Guajares 42.58 290 P **P 22 40 00.8 -0.1**
comp=Z,3.0nm,0.8s,mb4.1
ZAK Zakamensk 42.90 50 *e*P **P 22 40 04.8 +1.6**
ZAK *e* 22 41 52.9
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.6
ZAK Zakamensk 42.90 50 *e*P **P 22 40 04.8 +1.6**
comp=Z,2.0nm,1.4s,mb3.6
ZAK Zakamensk 42.90 50 *e*PcP PcP 22 41 52.9 -0.9
ELOJ Sierra Loja 42.98 291 P **P 22 40 05.6 +1.5**
comp=Z,3.1nm,0.7s,mb4.2
ELOJ Sierra Loja 42.98 291 P **P 22 40 05.6 +1.5**
ELOJ pmax pmax
comp=Z,3.0nm,0.7s,mb4.1
ELOJ Sierra Loja 42.98 291 P **P 22 40 05.6 +1.5**
comp=Z,3.0nm,0.7s,mb4.1
ELUQ Luque 42.99 291 P **P 22 40 06.3 +2.1**
comp=Z,1.9nm,0.7s,mb3.9
ELUQ Luque 42.99 291 P **P 22 40 06.3 +2.1**
ELUQ pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
ELUQ Luque 42.99 291 P **P 22 40 06.3 +2.1**
comp=Z,2.0nm,0.7s,mb4.0
EADA Adamuz 43.12 292 P **P 22 40 06.8 +1.6**
comp=Z,7.8nm,0.9s,mb4.4
EADA Adamuz 43.12 292 P **P 22 40 06.8 +1.6**
comp=Z,7.8nm,0.9s,mb4.4
EMIJ Mijas 43.59 290 P **P 22 40 09.6 +0.6**
comp=Z,12nm,0.8s,mb4.7
EMIJ Mijas 43.59 290 P **P 22 40 09.6 +0.6**
comp=Z,12nm,0.8s,mb4.7
LZH Lanzhou 44.75 70 *e*P **P 22 40 20.3 +1.9**
LZH AP pP 22 40 24.0 +0.2
LZH XP sP 22 40 28.0 +2.0
LZH PP PP 22 42 05.3 +2.5
LZH *e*S **S 22 46 54.0 -0.5**
LZH AMB AMB
comp=Z,31nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,170nm,5.1s
LZH LR LR
comp=N,512nm,13.6s
LZH LR LR
comp=Z,830nm,14.5s,MS4.8
LZH Lanzhou 44.75 70 *e*P **P 22 40 20.3 +1.9**
LZH pP pP 22 40 24.0 +0.2
LZH sP sP 22 40 28.0 +2.0
LZH PP PP 22 42 05.3 +2.5
LZH *e*S **S 22 46 54.0 -0.5**
LZH sS sS 22 47 04.0 +0.5
LZH SS SS 22 50 06.0 -9.1
LZH Lanzhou 44.75 70 *e*P **P 22 40 20.3 +1.9**
LZH *e*S **S 22 46 54.0 -0.5**
EMIN Mina Concepcio 44.82 292 P **P 22 40 20.6 +1.7**
comp=Z,7.4nm,0.9s,mb4.5
EMIN Mina Concepcio 44.82 292 P **P 22 40 20.6 +1.7**
comp=Z,7.4nm,0.9s,mb4.5
SONM Songino Array 44.97 54 P **P 22 40 19.4 -0.5**
SONM PcP PcP 22 42 00.6 -0.4
SONM LR LR 23 02 37.0
SONM Songino Array 44.97 54 P **P 22 40 19.4 -0.5**
SONM 22 42 00.6
SONM Songino Array 44.97 54 P **P 22 40 19.4 -0.5**
comp=Z,0.7nm,0.5s,mb3.7,baz=280,slow=8.6,SNR=9.9
SONM PcP PcP 22 42 00.6 -0.4
comp=Z,0.9nm,0.6s,baz=264,slow=3.0,SNR=4.2
SONM LR LR 23 02 37.0
comp=Z,155nm,18.4s,MS4.0,baz=297,slow=41
MTE Manteigas 44.99 296 P **P 22 40 21.2 +1.0**
MTE Manteigas 44.99 296 P **P 22 40 21.2 +1.0**
ULN Ulaanbaatar 45.41 53 *e*P **P 22 40 22.9 -0.5**
ULN Ulaanbaatar 45.41 53 *i* P **P 22 40 23.3 -0.1**
ULN Ulaanbaatar 45.41 53 *e*P **P 22 40 22.9 -0.5**
CD2 Chengdu 46.09 77 *e*P **P 22 40 30.3 +1.3**
CD2 AP pP 22 40 34.6 +0.1
CD2 XP sP 22 40 37.2 +0.5
CD2 S **S 22 47 14.0 +0.1**
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,200nm,16.8s,MS4.3
CD2 LR LR
comp=E,220nm,16.8s,MS4.3
CD2 LR LR
comp=Z,130nm,13.2s,MS4.0
KMI Kunming 47.28 85 P **P 22 40 39.4 +1.0**
KMI AP pP 22 40 48.7 +4.8
KMI XP sP 22 40 52.0 +5.9
KMI PP PP 22 42 30.2 +0.7
KMI S **S 22 47 33.4 +2.3**
KMI AMB AMB
comp=Z,6.0nm,1.2s,mb4.4
KMI AMB AMB
comp=Z,160nm,4.2s
KMI LR LR
comp=N,202nm,16.5s,MS4.3
KMI LR LR
comp=E,148nm,13.9s,MS4.3
KMI LR LR
comp=Z,169nm,21.5s
TORD Torodi Ar. Bea 47.33 256 P **P 22 40 39.3 +0.4**
comp=Z,4.7nm,0.7s,mb4.5,baz=53,slow=7.5,SNR=22
TORD LR LR 23 03 19.9
comp=Z,183nm,18.1s,MS4.1,baz=60,slow=40
XAN Xi'an 49.30 72 P **P 22 40 55.0 +1.0**
XAN AMB AMB
comp=Z,12nm,1.3s,mb4.8
CIT Chita 49.32 47 *e*P **P 22 40 55.4 +1.6**
BOD Bodaibo 49.38 40 *e*P **P 22 40 53.1 -1.0**
HHC Hu-ho-hao-te 49.60 62 *e*P **P 22 40 56.8 +0.7**
HHC AP pP 22 41 01.5 -0.2
HHC XP sP 22 41 03.6 -0.2
HHC PCP PcP 22 42 19.2 +1.7
HHC SCP ScP 22 46 12.2 0.0
HHC PCS PcS 22 46 14.6 +0.4
HHC S **S 22 48 01.6 -2.0**
HHC SCS ScS 22 50 44.6 -2.5
HHC AMB AMB
comp=Z,8.0nm,1.0s,mb4.7
HHC AMB AMB
comp=Z,115nm,6.1s

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HHC				LR	LR		
	comp=N,193nm,11.9s,MS4.5						
HHC				LR	LR		
	comp=E,294nm,16.6s,MS4.5						
HHC				LR	LR		
	comp=Z,239nm,15.5s,MS4.3						
LSZ	Lusaka	52.28	206	eP	P	22 41 18.3	+1.9
	comp=Z,2.4nm,0.7s,mb4.2						
LSZ	Lusaka	52.28	206	eP	P	22 41 18.3	+1.9
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
LSZ	Lusaka	52.28	206	eP	P	22 41 18.3	+1.9
	comp=Z,2.0nm,0.7s,mb4.2						
TIXI	Tiksi	55.54	22	eP	P	22 41 40.8	+1.1
TIXI	Tiksi	55.54	22	i P	P	22 41 40.7	+1.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.3						
TIXI	Tiksi	55.54	22	i P	P	22 41 40.7	+1.0
	comp=Z,300nm,21.0s						
LIC	Lamto	56.70	254	eP	P	22 41 48.4	-0.3
	comp=Z,43nm,1.2s,mb5.1						
LIC				eMLR	MLR		
	comp=Z,519nm,17.8s,MS4.4						
LIC	Lamto	56.70	254	eP	P	22 41 48.4	-0.3
	comp=Z,22nm,1.2s,mb5.1						
LIC				LR	LR		
	comp=Z,260nm,17.8s,MS4.4						
LIC	Lamto	56.70	254	eP	P	22 41 48.4	-0.3
	comp=Z,22nm,1.2s,mb5.1						
NJ2	Nanjing	57.83	71	eP	P	22 41 59.4	+2.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
TSUM	Tsumeb	60.23	214	eP	P	22 42 16.6	+3.4
MDJ	Mudanjiang	61.33	53	P	P	22 42 20.0	-0.4
MDJ				AP	pP	22 42 23.2	-2.9
MDJ				PP	PP	22 44 33.6	-1.6
MDJ				SCP	ScP	22 47 04.6	+1.1
MDJ				PCS	PcS	22 47 05.8	+0.4
MDJ				S	S	22 50 38.8	-1.2
MDJ				AMB	AMB		
	comp=Z,4.0nm,1.6s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,80nm,3.8s						
MDJ				LR	LR		
	comp=N,247nm,26.1s,MS4.3						
MDJ				LR	LR		
	comp=E,69nm,23.8s,MS4.3						
MDJ				LR	LR		
	comp=Z,124nm,22.0s,MS4.0						
KSRS	Korea Array	62.73	62	P	P	22 42 27.6	-2.4
	comp=Z,2.3nm,0.6s,mb4.5,baz=282,slow=8.4,SNR=5.5						
KSRS				LR	LR	23 12 36.6	
	comp=Z,154nm,18.6s,MS4.2,baz=109,slow=39						
BOSA	Boshof	65.62	203	P	P	22 42 49.3	+0.5
	comp=Z,6.3nm,0.6s,mb4.8,baz=14,slow=8.2,SNR=25						
BOSA				LR	LR	23 12 14.6	
	comp=Z,230nm,18.6s,MS4.4,baz=28,slow=37						
BILL	Bilibino	68.72	21	i P	P	22 43 10.3	+2.2
BILL				e		22 43 33.4	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
BILL				MLR	MLR		
	comp=Z,8μm,24.0s						
BILL	Bilibino	68.72	21	i P	P	22 43 10.3	+2.2
	comp=Z,5.0nm,0.8s,mb4.5						
YSS	Yuzh-Sakhalins	68.88	47	eP	P	22 43 09.9	+0.4
MJAR	Matsushiro Arr	70.58	59	LR	LR	23 16 44.3	
	comp=Z,121nm,18.5s,MS4.2,baz=205,slow=38						
SCHQ	Schefferville	76.28	328	P	P	22 43 52.3	-1.1
	comp=Z,3.9nm,1.0s,mb4.3,baz=72,slow=20,SNR=3.2						
IMA2	Indian Mountai	79.33	9	eP	P	22 44 11.1	+1.0
IMA2	Indian Mountai	79.33	9	eP	P	22 44 11.1	+1.0
YKA	Yellowknife Ar	83.51	352	P	P	22 44 32.2	-0.2
YKA				LR	LR	23 23 59.2	
YKA	Yellowknife Ar	83.51	352	P	P	22 44 32.2	-0.1
	comp=Z,0.6nm,0.7s,mb3.9,baz=9.6,slow=5.7,SNR=5.0						
YKA				LR	LR	23 23 59.2	
	comp=Z,69nm,18.9s,MS4.0,baz=185,slow=37						
ULM	Lac du Bonnet	91.05	338	LR	LR	23 32 03.4	
	comp=Z,91nm,19.0s,MS4.2,baz=46,slow=40						
BBB	Bella Bella	94.73	358	LR	LR	23 38 32.7	
	comp=Z,306nm,18.8s,MS4.8,baz=300,slow=42						
WRA	Warramunga Arr	97.11	109	P	P	22 45 36.3	-1.1
	comp=Z,0.9nm,0.5s,mb4.5,baz=319,slow=4.1,SNR=7.1						
ASAR	Alice Springs	98.77	112	P	P	22 45 43.9	-0.9
	comp=Z,0.6nm,0.5s,mb4.4,baz=306,slow=4.9,SNR=10						
ASAR	Alice Springs	98.77	112	P	P	22 45 43.8	-1.0

*NEIC **06** 22:36:41.6, 17.15N×101.47W, h6km, MD3.8(MEX), After MEX.*

MEX 06 22:36:41.6±1.2**, 17.15N×101.47W, h6**km±16km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.45	0	i P	Pg	22 36 50.1	-0.2
ZIIG				i S	Sg	22 36 56.1	-0.1
CAIG	El Cayaco	1.15	95	i P	Pg	22 36 59.6	-4.1
CAIG				i S	Sg	22 37 14.5	-4.1
ACX	Acapulco	1.51	101	i P	Pn	22 37 06.1	-3.1
ACX				i S	Sn	22 37 26.5	-2.6
MEIG	Mezcala	1.92	66	i P	Pn	22 37 12.5	-2.3
MEIG				i S	Sn	22 37 35.1	-4.2
MMIG	Aquila	2.12	302	i P	Pn	22 37 16.4	-1.1
MMIG				i S	Sn	22 37 39.1	-5.0
PLIG	Platanillo	2.24	56	i P	Pn	22 37 18.1	-1.1
PLIG				i S	Sn	22 37 44.3	-2.8
PTVM	Pico Tres Padr	3.30	42	i P	Pn	22 37 36.1	+2.4
PTVM				i S	Sn	22 38 16.2	+2.9
PPM	Popocatepetl	3.30	54	i P	Pn	22 37 36.5	+2.6
PPM				i S	Sn	22 38 08.2	-5.2
IIO	Organos	3.56	47	i P	Pn	22 37 35.0	-2.4
IIO				i S	Sn	22 38 17.0	-2.8
UTMO	Huajuapan	3.56	79	i P	Pn	22 37 34.6	-2.7
UTMO				i S	Sn	22 38 15.5	-4.2
SFJM	Santa Fe	3.63	336	i P	Pn	22 37 46.7	+8.3
SFJM				i S	Sn	22 38 31.4	+10

MEX 06 22:37:26.0±0.6**, 16.97N×95.91W, h54**km±16km**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.80	277	i P	Pn	22 37 38.7	-2.4
VHO				i S	Sn	22 37 50.7	-1.4
CMIG	Matias Romero	0.99	83	i P	Pn	22 37 42.1	-1.6
CMIG				i S	Sn	22 37 54.8	-1.9
HUIG	Huatulco	1.21	189	i P	Pn	22 37 45.6	-1.1
HUIG				i S	Sn	22 37 59.8	-2.3
UTMO	Huajuapan	2.00	295	i P	Pn	22 37 55.5	-1.8
UTMO				eS	Sn	22 38 18.7	-2.6

*TIR **06** 22:44:33.0±1.8, 40.73N×19.57E, h6km±999km, ML3.6*
*CSEM **06** 22:44:38.6±0.2, 39.39N×20.56E, h1km±1km, ML3.4, Error ellipse: s-maj=3.1km s-min=2.0km az=57.0*
*ISCJB **06** 22:44:38.1±0.5, 39.39N±0.02×20.61E±0.03, h3km±5km, Error ellipse: s-maj=4.3km s-min=3.0km az=167.8*
*ATH **06** 22:44:38.3, 39.40N×20.62E, h14km±3km, MD3.4/10*
*NEIC **06** 22:44:38.3, 39.40N×20.62E, h14km, MD3.4(ATH), After ATH.*
*THE **06** 22:44:38.6, 39.37N×20.53E, h3km, ML3.4*

ISC 06 22:44:38.7±0.4**, 39.39N**±0.02×**20.56E**±0.03**, h8**km±4km**, n27, σ1ˢ05**/43**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.23	308	ePg	Pg	22 44 42.7	-0.5
IGT				eSg	Sg	22 44 46.6	+0.3
JAN	Janina	0.34	40	ePG	Pg	22 44 44.1	-1.3
JAN				eSB	Sg	22 44 49.0	-1.0
SRN	Sarande	0.65	318	i PG	Pg	22 44 50.9	-0.4
SRN				i SG	Sg	22 45 03.4	+3.6
KEK	Kerkira	0.67	299	ePB	Pb	22 44 51.4	-1.2
KEK				eSB	Sb	22 45 02.5	+0.4
LKD	Levkas	0.69	174	ePg	Pg	22 44 50.5	-1.3
LKD				eSg	Sg	22 45 00.8	0.0
LSK	Leskovik	0.76	2	i PG	Pg	22 44 53.6	+0.4
LSK				i SG	Sg	22 45 07.2	+4.1
EVR	Evrytania	1.08	116	ePN	Pn	22 44 58.8	-1.2
THL	Klokotos Trika	1.14	81	ePN	Pn	22 44 59.1	-1.7
VLS	Valsamata	1.21	179	ePN	Pn	22 45 00.9	-1.0
VLS				eSB	Sb	22 45 18.8	+1.2
KBN	Korca	1.24	8	i SG	Pg	22 45 04.5	+2.0
KFL	Anninata	1.29	172	ePg	Pg	22 45 02.9	-0.5
KFL				eSg	Sg	22 45 21.5	+1.3
KZN	Kozani	1.30	45	ePB	Pb	22 45 02.9	-0.5
AGG	Agios Georgios	1.42	105	ePg	Pn	22 45 03.9	-0.8
AGG				eSg	Sg	22 45 25.2	+0.9
AGG	Agios Georgios	1.42	105	ePg	Pn	22 45 03.9	-0.8
AGG				eSg	Sg	22 45 25.2	+0.9
RLS	Riolos of Patr	1.51	152	ePB	Pb	22 45 07.0	+0.2
RLS				eSB	Sb	22 45 26.9	+0.8
FNA	Florina	1.52	24	ePg	Pg	22 45 06.9	-1.0
FNA				eSg	Sg	22 45 28.0	+0.3
SELA	Sela	1.52	137	ePg	Pg	22 45 06.5	-1.3
SELA				eSg	Sg	22 45 28.3	+0.7
LIT	Litokhoron	1.65	64	ePb	Pb	22 45 07.6	-1.6
LIT				eSb	Sg	22 45 31.9	+0.4
BIA	Bitola	1.73	19	ePn	Pg	22 45 11.9	+0.2
BIA				eSn	Sg	22 45 37.4	+3.3
LKR	Lokris	2.04	111	ePN	Pn	22 45 14.0	+0.8
KRUS	Krusevo	2.04	15	i Pn	Pb	22 45 16.0	+0.1
KRUS				eSn	Sg	22 45 47.2	+2.9
NEO	Neokhori	2.06	92	ePN	Pn	22 45 14.0	+0.4
GRG	Griva	2.10	41	ePn	Pb	22 45 16.1	-0.9
ITM	Ithomi	2.46	154	ePB	Pn	22 45 19.7	+0.8
KNT	Kendrikon	2.51	45	ePn	Pn	22 45 21.2	+1.5
KNT	Kendrikon	2.51	45	ePn	Pn	22 45 21.2	+1.5
DID	Didima	2.82	131	ePn	Pn	22 45 24.5	+0.6

*ISCJB **07** 00:01:24.3±0.5, 02.4S±0.09×18.67W±0.08, h10km, mb4.1/16, MS3.7/17, Error ellipse: s-maj=14.9km s-min=8.9km az=142.2*
*IDC **07** 00:01:24.4±1.4, 03.2S×18.58W, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.0/22, mbtmp4.0/10, ML5.2/1, MS3.7/18, Ms1 3.7/18, ms1mx3.6/36, Error ellipse: s-maj=53.2km s-min=22.2km az=144.0*
*NEIC **07** 00:01:25.8±0.4, 03.4S×18.66W, h10km, mb4.2/6, Error ellipse: s-maj=12.7km s-min=7.9km az=144.0*

ISC 07 00:01:26.2±0.5**, 02.7S**±0.09×**18.69W**±0.08**, h10**km**, n57, σ0ˢ89**/43**, mb4.1**/16**, MS3.7**/17**, 8C-7D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBTS	Babate	14.99	8	Pn	Pn	00 04 56.0	-2.3
	9.5nm,0.3s,baz=249,slow=0.6,SNR=26						
BBTS				Sn	Sn	00 07 26.9	-18
	1.9nm,0.3s,baz=131,slow=20,SNR=5.1						
BBTS				LR	LR	00 10 00.9	
	comp=Z,220nm,18.7s,baz=213,slow=34						
RCBR	Riachuelo	18.05	252	eP	Pn	00 05 37.1	-0.2
	3.4nm,0.4s						
TORD	Torodi Ar. Bea	24.20	56	P	P	00 06 42.0	-1.2
	16nm,0.8s,mb4.5,baz=238,slow=10,SNR=68						
TORD				LR	LR	00 14 25.1	
	comp=Z,108nm,21.2s,MS3.3,baz=240,slow=32						
MDT	Midelt	35.48	21	P	P	00 08 24.0	+0.9
	2.7nm,0.9s,mb4.2,baz=179,slow=3.5,SNR=4.3						
MDT				LR	LR	00 22 01.3	
	comp=Z,119nm,19.6s,MS3.7,baz=329,slow=35						
ESDC	Sonseca Array	41.97	17	P	P	00 09 18.2	+0.8
	1.1nm,0.7s,mb3.6,baz=208,slow=8.0,SNR=4.5						
ESDC				LR	LR	00 28 05.2	
	comp=Z,112nm,18.8s,MS3.8,baz=350,slow=38						
ESLA	Sonseca Array	41.97	17	eP	P	00 09 17.9	+0.5
	1.8nm,1.0s,mb3.7						
KEST	Kesra	44.32	33	LR	LR	00 29 51.9	
	comp=Z,79nm,18.9s,MS3.7,baz=199,slow=38						
SIV	San Ignacio	44.63	247	P	P	00 09 40.5	+1.2
	0.5nm,0.7s,mb3.5,baz=96,slow=10.0,SNR=5.7						
PCRV	Puerto La Cruz	46.87	284	LR	LR	00 26 28.4	
	comp=Z,48nm,21.2s,MS3.4,baz=205,slow=32						
VAE	Valguarnera	48.42	36	LR	LR	00 31 06.9	
	comp=Z,173nm,18.9s,MS4.1,baz=128,slow=37						
LSZ	Lusaka	48.62	110	eP	P	00 10 08.5	-2.1
	1.2nm,0.7s,mb4.0						
SUR	Sutherland	49.05	135	P	P	00 10 12.9	-0.8
BOSA	Boshof	50.56	128	LR	LR	00 27 32.7	
	comp=Z,85nm,20.8s,MS3.7,baz=42,slow=31						
LPAZ	La Paz	51.27	249	LR	LR	00 32 42.6	
	comp=Z,43nm,18.5s,MS3.5,baz=73,slow=37						
SDV	Santo Domingo	52.53	281	P	P	00 10 40.8	+0.5
SDV	Santo Domingo	52.53	281	LR	LR	00 29 06.9	
	comp=Z,29nm,20.8s,MS3.3,baz=23,slow=32						
IDI	Anoyia	53.84	44	LR	LR	00 37 36.1	
	comp=Z,33nm,18.2s,MS3.4,baz=356,slow=40						
KMBO	Kilima Mbogo	55.94	91	LR	LR	00 31 36.3	
	comp=Z,67nm,18.3s,MS3.8,baz=89,slow=32						
GERES	GERESS Array B	56.34	25	P	P	00 11 07.1	-0.2
	1.5nm,0.8s,mb4.1,baz=211,slow=7.5,SNR=12						
GERES				PP	PP	00 13 09.3	-3.5
	4.0nm,1.0s,baz=212,slow=9.4,SNR=11						
VTS	Vitosha	56.87	36	⇓P	P	00 11 12.1	+0.9
VTS	Vitosha	56.87	36	⇓iP	P	00 11 12.1	+0.9
BZS	Buzias	57.86	32	⇑P	P	00 11 18.9	+0.8
BZS	Buzias	57.86	32	⇑iP	P	00 11 19.0	+0.8
VYHS	Vyhne	58.39	28	i P	P	00 11 22.0	+0.2
	3.6nm,1.0s,mb4.4						
NNA	Nana	58.86	256	eP	P	00 11 25.5	-0.2
	2.3nm,0.3s,mb4.7						
EIL	Elat	59.09	55	LR	LR	00 39 37.2	
	comp=Z,48nm,18.8s,MS3.6,baz=300,slow=39						
DRGR		59.20	32	⇑P	P	00 11 27.9	+0.4
DRGR		59.20	32	⇑iP	P	00 11 27.9	+0.4
VOIR		59.64	34	⇑P	P	00 11 31.1	+0.5
VOIR		59.64	34	⇑iP	P	00 11 31.1	+0.5
CRVS	Cervenica-Dubn	59.94	29	eP	P	00 11 33.1	+0.6
TRPA	Tarpa	59.97	31	⇓iP	P	00 11 33.6	+0.8
MLR	Muntele Rosu	60.18	35	LR	LR	00 37 01.9	
	comp=Z,114nm,20.1s,MS4.0,baz=139,slow=36						
MLR	Muntele Rosu	60.18	35	⇓iP	P	00 11 34.4	+0.1
MMAI	Mount Meron Ar	60.64	51	LR	LR	00 39 33.5	
	comp=Z,43nm,18.3s,MS3.6,baz=330,slow=38						
PLOR	Plostina	60.79	35	⇓iP	P	00 11 38.1	-0.3
BURAR	Bucovina Array	61.05	32	⇑P	P	00 11 41.2	+1.1
BURAR	Bucovina Array	61.05	32	⇑iP	P	00 11 41.3	+1.2
BRTR	Keskin Array B	62.07	44	P	P	00 11 47.2	0.0
	2.9nm,0.8s,mb4.4,baz=236,slow=6.6,SNR=16						
MALT	Malatya	64.90	47	⇓P	P	00 12 06.6	+0.6
MALT	Malatya	64.90	47	⇓iP	P	00 12 06.6	+0.7
BRNJ	Basking Ridge	64.94	316	P	P	00 12 04.5	-1.7
KIEV	Kiev	64.99	31	eP	P	00 12 05.8	-0.4
	10nm,1.3s,mb4.7						
AKASG	Malin Array Be	65.00	31	P	P	00 12 06.0	-0.4
AKASG	Malin Array Be	65.00	31	P	P	00 12 06.0	-0.4
	2.6nm,0.6s,mb4.4,baz=234,slow=7.4,SNR=16						
NOA	NORSAR Array B	65.30	15	P	P	00 12 08.7	+0.6
	2.4nm,1.0s,mb4.2,baz=205,slow=6.3,SNR=2.9						
SCHQ	Schefferville	67.53	332	P	P	00 12 22.8	+0.3
FINES	FINESS Array B	70.30	21	LR	LR	00 44 18.2	
	comp=Z,67nm,18.8s,MS3.9,baz=334,slow=37						
JOF	Joensuu	73.14	21	ep	P	00 12 56.6	-0.1
	0.6nm,0.4s,mb3.9						
TXAR	Lajitas Array	85.75	299	P	P	00 14 05.3	-0.8
	0.2nm,0.7s,mb3.5,baz=93,slow=5.7,SNR=3.2						
RES	Resolute Bay	86.63	345	P	P	00 14 07.3	-2.2
QSPA	South Pole Qui	89.80	180	P	P	00 14 25.5	+1.0
RPN	Rapa Nui	90.46	243	eP	P	00 14 28.9	+0.2
	85nm,1.0s						
PDAR	Pinedale Array	90.82	313	LR	LR	00 50 17.3	
	comp=Z,51nm,18.6s,MS4.0,baz=266,slow=32						
YKA	Yellowknife Ar	92.98	332	P	P	00 14 39.1	-0.5
	0.2nm,0.3s,mb4.0,baz=87,slow=5.1,SNR=3.6						
MKAR	Makanchi Array	97.71	43	LR	LR	00 59 51.1	
	comp=Z,53nm,19.8s,MS4.0,baz=355,slow=36						
ASAR	Alice Springs	144.30	134	PKP	PKPdf	00 21 01.9	-1.6
	0.7nm,0.7s,baz=215,slow=3.7,SNR=5.8						

IDC 07 00:14:53.8±4.4**, 17.40S**×**176.08W, h0**km**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.9**/14**, mbtmp4.3**/3**, Error ellipse: s-maj=203.8km s-min=41.3km az=139.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.82	241	P	P	00 22 37.4	+0.1
	1.8nm,0.5s,baz=67,slow=11,SNR=7.0						
WRA	Warramunga Arr	46.91	259	P	P	00 23 26.2	-0.3
	0.9nm,0.4s,baz=98,slow=7.7,SNR=4.1						
ASAR	Alice Springs	47.07	254	P	P	00 23 27.6	0.0
	5.1nm,0.5s,baz=90,slow=8.1,SNR=71						
BRTR	Keskin Array B	145.97	317	PKPbc	PKPbc	00 34 34.7	-1.0
	0.9nm,0.9s,baz=85,slow=3.2,SNR=5.2						
GERES	GERESS Array B	147.64	348	PKPbc	PKPbc	00 34 39.9	-0.3
	0.2nm,0.6s,baz=4.8,slow=2.4,SNR=4.1						

*CSEM **07** 00:17:31.9±0.1, 38.06N×38.76E, h2km, MD3.7, Error ellipse: s-maj=1.9km s-min=1.3km az=169.0*
*ISK **07** 00:17:31.6, 38.06N×38.77E, h5km, ML4.0*
*ISCJB **07** 00:17:32.9±0.2, 38.03N±0.02×38.80E±0.02, h10km, mb3.7/3, Error ellipse: s-maj=2.9km s-min=2.5km az=136.5*
*DDA **07** 00:17:32.7, 38.06N×38.75E, h6km, Md3.7*
*NEIC **07** 00:17:34.5, 38.05N×38.76E, h5km, ML3.9(ISK), After ISK.*
*GRAL **07** 00:17:34.2±0.6, 38.19N×38.73E, h15km±31km, MD4.4*
*IDC **07** 00:17:35.4±1.3, 38.02N×38.78E, h0km, mb3.7/3, mb1 3.6/6, mb1mx3.5/20, mbtmp3.6/6, ML3.4/3, MS2.9/4, Ms1 2.9/4, ms1mx2.7/34, Error ellipse: s-maj=24.3km s-min=15.9km az=111.0*

ISC 07 00:17:34.0±0.2**, 38.03N**±0.02×**38.80E**±0.03**, h10**km**, n102, σ1ˢ40**/122**, mb3.7**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MALT	Malatya	0.41	314	i PG	Pg	00 17 39.5	-2.5
MALT				i SG	Sg	00 17 45.6	-1.8
MALT	Malatya	0.41	314	Pg	Pg	00 17 39.5	-2.5
MALT				Sg	Sg	00 17 45.5	-1.9
MYA	Malataya	0.42	315	i PG	Pg	00 17 39.7	-2.5
MYA	Malataya	0.42	315	Pg	Pg	00 17 39.7	-2.5
ELZG	Elazig	0.49	17	i P	Pg	00 17 40.9	-2.7
ELZG				i S	Sg	00 17 48.4	-1.7
URFA	Urfa	0.59	178	PG	Pg	00 17 44.1	-1.4
URFA				SG	Sg	00 17 54.1	+0.9
URFA	Urfa	0.59	178	Pg	Pg	00 17 44.2	-1.3
URFA				Sg	Sg	00 17 53.2	0.0
URFA	Urfa	0.59	178	Pg	Pg	00 17 44.2	-1.3
URFA				eSg	Sg	00 17 54.1	+0.9
ATAB	Bozova	0.69	216	i P	Pg	00 17 45.8	-1.5
ATAB				i S	Sg	00 17 55.5	-0.9
PTK	Pertek	0.98	28	PG	Pg	00 17 50.5	-2.4
PTK	Pertek	0.98	28	Pg	Pg	00 17 51.2	-1.7
PTK	Pertek	0.98	28	Pg	Pg	00 17 51.2	-1.7
DIY	Diyarbakir	1.14	96	PN	Pn	00 17 54.1	-1.9
DIY	Diyarbakir	1.14	96	Pn	Pn	00 17 54.2	-1.8
DIY	Diyarbakir	1.14	96	Pn	Pn	00 17 54.2	-1.8
GZT	Gaziantep	1.19	236	i P	Pb	00 17 54.8	-1.8
GAZ	Gaziantep	1.52	236	PN	Pn	00 17 59.9	-1.4
GAZ	Gaziantep	1.52	236	Pn	Pn	00 18 00.6	-0.8
GAZ	Gaziantep	1.52	236	Pn	Pn	00 18 00.6	-0.7
BINT	Bingol	1.57	57	PN	Pn	00 18 01.2	-0.8
BINT	Bingol	1.57	57	Pn	Pn	00 18 01.6	-0.4
MARD	Mardin	1.73	114	i P	Pn	00 18 02.8	-1.3
MARD				i S	Sn	00 18 27.9	+1.7
EZC	Erzincan	1.89	25	PN	Pn	00 18 04.6	-1.7
EZC	Erzincan	1.89	25	Pn	Pn	00 18 05.0	-1.3
ANDN	Andirin	1.99	258	i P	Pn	00 18 05.7	-2.1
ANDN				i S	Sn	00 18 35.5	+2.7
BTMT	Batman	2.13	85	PN	Pn	00 18 07.9	-1.7
SVSK	Karacayir	2.35	324	PN	Pn	00 18 12.9	+0.2
KOZT	Kozan	2.42	258	PN	Pn	00 18 14.1	+0.5
BNN	Bunyan	2.46	290	PN	Pn	00 18 14.3	+0.1
BNN	Bunyan	2.46	290	Pn	Pn	00 18 14.4	+0.2
GUMT	Gumushane	2.48	12	PN	Pn	00 18 14.8	+0.3
GUMT	Gumushane	2.48	12	Pn	Pn	00 18 14.8	+0.3
COBT	Iskenderun	2.53	234	i P	Pn	00 18 12.5	-2.7
CEYT	Ceyhan	2.63	248	ePN	Pn	00 18 16.8	+0.3
CEYT	Ceyhan	2.63	248	Pn	Pn	00 18 16.9	+0.3
EZM	Erzurum	2.74	46	ePN	Pn	00 18 18.7	+0.7
EZM	Erzurum	2.74	46	Pn	Pn	00 18 18.8	+0.8
ERZM	Erzurum	2.74	46	i P	Pn	00 18 18.1	0.0
ERZM	Erzurum	2.74	46	i P	Pn	00 18 18.0	0.0
HTY	Hatay	2.86	229	ePN	Pn	00 18 19.8	+0.2
HTY	Hatay	2.86	229	Pn	Pn	00 18 19.9	+0.2
TOKT	Tokat	2.88	323	ePN	Pn	00 18 19.5	-0.5
TOKT	Tokat	2.88	323	Pn	Pn	00 18 19.6	-0.4
TOKT	Tokat	2.88	323	Pn	Pn	00 18 19.6	-0.4
ESPY	Espiye-Giresun	2.88	359	ePN	Pn	00 18 19.9	-0.1
SIRT	Sirnak	2.93	99	ePN	Pn	00 18 21.7	+1.0
KTUT	Trabzon	3.05	14	ePN	Pn	00 18 22.8	+0.6
KARA	Karaisali	3.07	257	ePN	Pn	00 18 23.3	+0.7
KRTS	Karatas	3.09	243	ePN	Pn	00 18 23.8	+0.9
YOZ	Yozgat	3.16	302	ePN	Pn	00 18 23.8	+0.1
YOZ	Yozgat	3.16	302	Pn	Pn	00 18 23.8	+0.1
AVNT	Avonos	3.19	285	i P	Pn	00 18 23.7	-0.5
NIG	Nigde	3.31	273	ePN	Pn	00 18 26.2	+0.4
NIG	Nigde	3.31	273	Pn	Pn	00 18 26.3	+0.5
NIG	Nigde	3.31	273	Pn	Pn	00 18 26.3	+0.5
MERS	Mersin	3.59	252	ePN	Pn	00 18 30.7	+0.9
AGRB	Hanur-Agry	3.62	64	ePN	Pn	00 18 31.7	+1.6
VANT	Van	3.64	82	ePN	Pn	00 18 30.7	+0.3
VANT	Van	3.64	82	Pn	Pn	00 18 30.8	+0.4
VANB	Van	3.66	80	ePN	Pn	00 18 32.2	+1.6
VANB	Van	3.66	80	Pn	Pn	00 18 32.2	+1.6
KVT	Kavak	3.71	326	ePN	Pn	00 18 31.7	+0.3
KVT	Kavak	3.71	326	Pn	Pn	00 18 31.8	+0.3
KVT	Kavak	3.71	326	Pn	Pn	00 18 31.8	+0.4
CDAG	Cicekdag	3.81	296	i P	Pn	00 18 31.8	-0.9
MSL	Mosul	3.84	116	ex	x	00 18 45.0	
MSL				i x	x	00 19 37.0	
CORM	Corum	3.89	305	ePN	Pn	00 18 34.7	+0.9
CUKT	Cukurca	3.90	100	ePN	Pn	00 18 35.2	+1.3
HAKT	HAKKARI	3.92	95	i P	Pn	00 18 34.6	+0.4
HKR	Hakkari	3.94	95	ePN	Pn	00 18 34.8	+0.3
HKR	Hakkari	3.94	95	Pn	Pn	00 18 34.8	+0.3
KARS	Kars	4.21	51	ePN	Pn	00 18 39.1	+0.8
KARS	Kars	4.21	51	Pn	Pn	00 18 39.2	+0.9
KARS	Kars	4.21	51	Pn	Pn	00 18 39.2	+0.9
FKH	Fakeheh	4.25	208	ePn	Pn	00 18 38.8	0.0
FKH				Sn	Sn	00 19 27.4	-1.2
BR131	Keskin Array S	4.37	294	ePn	Pn	00 18 43.1	+2.8
BR131				eSn	Sn	00 19 34.3	+3.0
BR131	Keskin Array S	4.37	294	ePn	Pn	00 18 43.2	+2.8
BR131				eSn	Sn	00 19 34.3	+3.0
BRTR	Keskin Array B	4.37	294	Pn	Pn	00 18 41.0	+0.6
	0.9nm,0.3s,baz=142,slow=6.2,SNR=40						
BRTR				Pg	Pb	00 18 52.9	+2.1
	2.1nm,0.3s,baz=118,slow=18,SNR=39						
BRTR	Keskin Array B	4.37	294	Pg	Pb	00 18 52.9	+2.1
HWQ	Hawqa	4.40	212	ePn	Pn	00 18 40.8	-0.1
HWQ				Sn	Sn	00 19 30.5	-1.6
DIKM	Dikmen	4.53	324	ePN	Pn	00 18 43.6	+1.0
TOS	Tosya	4.76	311	ePN	Pn	00 18 47.4	+1.6
TOS	Tosya	4.76	311	Pn	Pn	00 18 47.6	+1.9
BHL	Bhannes	4.84	213	ePn	Pn	00 18 47.5	+0.5
BHL				Sn	Sn	00 19 41.2	-1.9
ANTO	Ankara	5.03	293	ePn	Pn	00 18 52.5	+3.0
ANTO				ePg	Pg	00 19 06.9	-3.4
ANTO				eSn	Sn	00 19 51.5	+3.9
ANTO				Sg	Sg	00 20 20.3	+4.9
ANTO	Ankara	5.03	293	ePn	Pn	00 18 52.5	+3.0
ANTO	Ankara	5.03	293	ePg	Pg	00 19 06.9	-3.4
RCY	Rachaya	5.14	209	ePn	Pn	00 18 51.9	+0.8
RCY				Sn	Sn	00 19 48.6	-1.9
CSS	Prodhromos	5.36	237	ePn	Pn	00 18 54.8	+0.7
	9.2nm,0.6s						
CSS				eSn	Sn	00 19 58.9	+3.0
CSS	Prodhromos	5.36	237	ePn	Pn	00 18 54.8	+0.7
	9.2nm,0.6s						
CSS				eSn	Sn	00 19 58.9	+3.0
MMAI	Mount Meron Ar	5.72	210	Pn	Pn	00 19 01.0	+2.0
	6.2nm,0.3s,baz=53,slow=14,SNR=32						
MMAI				Pg	Pg	00 19 25.3	+1.7
	8.4nm,0.3s,baz=45,slow=14,SNR=7.2						
MMAI				Lg		00 20 36.6	
	7.5nm,0.3s,baz=23,slow=24,SNR=4.1						
MMAI				LR	LR	00 21 20.8	
	comp=Z,104nm,18.3s,baz=40,slow=40						
ASF	Jabal al Asfar	6.05	195	Pn	Pn	00 19 05.8	+2.2
	0.4nm,0.3s,baz=296,slow=2.5,SNR=6.8						
ASF				Pg	Pg	00 19 27.0	-2.9
	1.5nm,0.3s,baz=261,slow=20,SNR=14						
ASF				Lg		00 20 47.2	
	3.4nm,0.3s,baz=234,slow=18,SNR=3.9						
ASF				LR	LR	00 21 41.0	
	comp=Z,70nm,21.7s,baz=111,slow=41						
BHD	Baghdad	6.57	135	ex	x	00 19 10.0	
BHD				ex	x	00 20 27.0	
BHD				ex	x	00 21 08.0	

EIL	Elat	8.93	202	Lg		00 22 21.0	
	0.3nm,0.3s,baz=22,slow=19,SNR=2.4						
EIL				LR	LR	00 23 35.7	
	comp=Z,86nm,18.1s,baz=284,slow=40						
IDI	Anoyia	11.50	260	Pn	Pn	00 20 17.4	-0.9
	0.4nm,0.3s,baz=86,slow=13,SNR=5.2						
IDI				LR	LR	00 25 46.1	
	comp=Z,53nm,19.2s,baz=323,slow=43						
MLR	Muntele Rosu	12.14	312	Pn	Pn	00 20 28.2	+1.3
	0.0nm,0.3s,baz=112,slow=18,SNR=2.3						
AKTK	Aktyubinsk	18.46	42	P	Pn	00 21 48.5	-1.4
AKTK	Aktyubinsk	18.46	42	P	Pn	00 21 48.5	-1.3
AKTO	Aktyubinsk	18.46	42	P	Pn	00 21 48.5	-1.4
	0.1nm,0.3s,baz=240,slow=17,SNR=4.5						
KEST	Kesra	23.63	273	P	P	00 22 48.8	+3.4
	1.5nm,0.8s,mb3.5,baz=48,slow=4.1,SNR=4.6						
FINES	FINESS Array B	24.75	345	P	P	00 23 00.0	+4.7
	1.0nm,0.7s,mb3.5,baz=140,slow=11,SNR=4.7						
MKAR	Makanchi Array	32.92	60	P	P	00 24 10.6	+2.2
	2.0nm,0.8s,mb4.1,baz=271,slow=7.2,SNR=11						

CSEM 07 00:54:37.5±0.1, 3805N×3877E, h2^{km}, MD3.4, Error ellipse: s-maj=2.2km s-min=1.7km az=72.0
ISCJB 07 00:54:38.6±0.4, 3804N±003×3877E±004, h5^{km}, Error ellipse: s-maj=4.2km s-min=3.5km az=23.9
ISK 07 00:54:38.2, 3805N×3875E, h5^{km}, MD3.4
DDA 07 00:54:39.2, 3808N×3880E, h22^{km}, Md3.1
ISC 07 00:54:39.1±0.6, 3805N±003×3876E±004, h5^{km}±6^{km}, n21, σ0^{s}92/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.38	315	PG	Pg	00 54 46.0	-0.4
MALT				SG	Sg	00 54 51.5	+0.2
MYA	Malataya	0.39	317	PG	Pg	00 54 46.3	-0.3
ELZG	Elazig	0.48	21	*i* P	Pg	00 54 47.9	-0.6
ELZG				*i* S	Sg	00 54 56.2	+1.5
ELZG	Elazig	0.48	21	*i* P	Pg	00 54 47.8	-0.6
ELZG				*i* S	Sg	00 54 56.2	+1.4
URFA	Urfa	0.60	176	PG	Pg	00 54 50.3	-0.4
URFA				SG	Sg	00 54 58.9	+0.3
ATAB	Bozova	0.68	213	*i* P	Pg	00 54 52.2	0.0
ATAB				*i* S	Sg	00 55 01.2	+0.1
PTK	Pertek	0.98	30	PG	Pg	00 54 57.0	-0.9
DIY	Diyarbakir	1.17	97	PN	Pn	00 55 00.7	-1.4
GZT	Gaziantep	1.17	234	*i* P	Pg	00 55 01.1	-0.5
GZT				*i* S	Sg	00 55 18.5	+1.7
GAZ	Gaziantep	1.51	235	PN	Pn	00 55 07.0	+0.2
BINT	Bingol	1.59	58	PN	Pn	00 55 07.7	-0.2
MARD	Mardin	1.76	114	*i* P	Pn	00 55 08.4	-1.8
MARD				*i* S	Sn	00 55 34.1	+1.1
ANDN	Andirin	1.97	257	*i* P	Pn	00 55 11.6	-1.5
ANDN				*i* S	Sn	00 55 42.7	+4.5
BTMT	Batman	2.16	85	PN	Pn	00 55 14.6	-1.1
SVSK	Karacayir	2.32	324	*e*PN	Pn	00 55 18.6	+0.7
KOZT	Kozan	2.39	257	*e*PN	Pn	00 55 18.2	-0.7
BNN	Bunyan	2.43	290	*e*PN	Pn	00 55 19.6	+0.2
GUMT	Gumushane	2.48	13	*e*PN	Pn	00 55 20.4	+0.3
EZM	Erzurum	2.75	47	*e*PN	Pn	00 55 24.6	+0.8
SIRT	Sirnak	2.96	99	*e*PN	Pn	00 55 27.6	+0.8
CUKT	Cukurca	3.93	100	*e*PN	Pn	00 55 41.9	+1.9

IDC 07 01:00:01.3±8.9, 603S×15012E, h60^{km}±67^{km}, mb3.0/2, mb1 3.4/3, mb1mx3.1/13, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=159.9km s-min=56.9km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.45	221	P	Pn	01 01 06.8	+0.4
	2.4nm,0.3s,baz=36,slow=8.7,SNR=4.3						
PMG				S	Sn	01 01 57.7	+0.8
	7.2nm,0.3s,baz=88,slow=20,SNR=9.0						
WRA	Warramunga Arr	20.65	227	P	P	01 04 36.9	+0.8
	1.0nm,0.6s,baz=51,slow=10,SNR=4.8						
ASAR	Alice Springs	23.47	220	P	P	01 05 05.0	-0.7
	0.3nm,0.3s,baz=53,slow=9.3,SNR=8.1						
TORD	Torodi Ar. Bea	148.10	285	PKPbc	PKPbc	01 19 40.8	-0.6
	0.7nm,0.6s,baz=104,slow=2.5,SNR=9.8						

ISCJB 07 01:02:49.9±0.4, 177S±0.1×17858W±009, h600^{km}, mb4.0/14, Error ellipse: s-maj=19.2km s-min=9.2km az=157.0
IDC 07 01:02:52.2±4.3, 1758S×17858W, h610^{km}±51^{km}, mb3.2/8, mb1 3.5/8, mb1mx3.3/16, mbtmp3.2/8, Error ellipse: s-maj=71.5km s-min=23.4km az=156.0
NEIC 07 01:02:53.8±2.1, 1772S×17862W, h635^{km}±25^{km}, mb4.2/9, Error ellipse: s-maj=14.3km s-min=10.1km az=135.0
ISC 07 01:02:51.1±0.4, 177S±01×17854W±009, h600^{km}, n34, σ0^{s}54/27, mb4.0/14, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	22.46	289	P	P	01 07 06.8	-0.3
CTA	Charters Tower	33.36	260	P	P	01 08 41.4	-0.1
	1.6nm,0.3s,mb4.1,baz=125,slow=11,SNR=4.1						
CTAO	Charters Tower	33.36	260	*e*P	P	01 08 41.2	-0.2
	2.8nm,0.6s,mb4.1						
PMG	Port Moresby	34.31	279	*e*P	P	01 08 50.2	+0.7
	5.3nm,0.3s,mb4.7						
STKA	Stephens Creek	38.61	241	*e*P	P	01 09 24.8	+0.3
	6.4nm,1.0s,mb4.1						
STKA	Stephens Creek	38.61	241	P	P	01 09 25.5	+1.0
	3.6nm,0.5s,mb4.2,baz=82,slow=7.7,SNR=16						
WB2	Warramunga Arr	44.53	259	*e*P	P	01 10 11.1	-0.1
WRA	Warramunga Arr	44.55	259	P	P	01 10 11.6	+0.3
	2.2nm,0.4s,mb4.0,baz=94,slow=7.2,SNR=20						
WRA				PcP	PcP	01 11 40.7	-0.3
	0.4nm,0.3s,baz=92,slow=3.6,SNR=3.2						
ASAR	Alice Springs	44.72	254	P	P	01 10 13.1	+0.5
	1.2nm,0.3s,mb3.9,baz=85,slow=8.7,SNR=8.9						
ASAR				PcP	PcP	01 11 41.1	-0.5
	1.2nm,0.6s,baz=102,slow=3.9,SNR=7.1						
FORT	Forrest	49.97	244	*e*P	P	01 10 50.9	-0.8
	6.9nm,0.5s,mb4.3						
FITZ	Fitzroy Crossi	52.94	260	P	P	01 11 13.6	+0.4
	2.6nm,0.9s,mb3.6,baz=90,slow=12,SNR=4.3						
MBWA	Marble Bar	58.00	256	*e*P	P	01 11 47.8	-0.3
	6.7nm,0.8s,mb3.8						
KLBR	Kellerberrin	58.80	243	*e*P	P	01 11 52.4	-0.9
	20nm,1.1s,mb4.2						
NWAO	Narrogin (SRO)	59.19	242	*e*P	P	01 11 56.0	+0.1
	23nm,1.5s,mb4.1						
QSPA	South Pole Qui	72.32	180	*e*P	P	01 13 16.0	-0.5
	2.9nm,0.5s,mb4.1						
CMB	Columbia Colle	77.80	43	P	P	01 13 48.3	+0.6
NVAR	Mina Array Bea	79.38	44	P	P	01 13 55.9	-0.1
	0.3nm,0.6s,baz=224,slow=5.9,SNR=3.4						
PMR	Palmer	82.46	14	P	P	01 14 11.8	+0.5
	31nm,0.8s,mb4.9						
PMSA	Palmer Station	84.02	157	P	P	01 14 19.0	-0.1
PV10	Paradox Valley	85.69	48	P	P	01 14 27.5	-0.2
PV01	Paradox Valley	85.91	48	*e*P	P	01 14 28.4	-0.3
TXAR	Lajitas Array	86.00	58	P	P	01 14 30.1	+0.7
	0.6nm,0.7s,mb3.3,baz=211,slow=6.5,SNR=8.0						
PDAR	Pinedale Array	87.31	43	P	P	01 14 34.8	-0.4
	0.3nm,0.6s,mb3.2,baz=199,slow=1.9,SNR=3.4						
WALA	Waterton Lakes	87.67	37	*e*P	P	01 14 36.8	+0.1
PLCA	Paso Flores	91.54	134	P	P	01 14 56.0	+1.0
INK	Inuvik	91.75	15	*e*P	P	01 14 54.0	-1.1
	16nm,0.5s						
TEIG	Tepich	96.20	71	*e*P	P	01 15 16.3	-0.3
MKAR	Makanchi Array	108.93	314	PKiKP	PKiKP	01 20 11.2	-2.0
	0.3nm,0.5s,baz=107,slow=0.8,SNR=9.3						
BURAR	Bucovina Array	144.40	332	⇑*i*P	PKPdf	01 21 20.7	+0.8
BRTR	Keskin Array B	144.57	315	PKP	PKPdf	01 21 20.4	-0.1
	1.0nm,0.6s,baz=57,slow=4.1,SNR=6.4						
MLR	Muntele Rosu	145.62	329	PKPbc	PKPbc	01 21 22.5	-1.2
	0.8nm,0.5s,baz=278,slow=7.8,SNR=5.3						
MMAI	Mount Meron Ar	145.95	303	PKPbc	PKPbc	01 21 25.1	+0.1
	1.4nm,0.4s,baz=72,slow=6.4,SNR=7.2						
GERES	GERESS Array B	147.41	345	PKPbc	PKPbc	01 21 28.2	-0.2
	1.4nm,0.6s,baz=19,slow=3.2,SNR=11						
DAVOX	Davos/Dischmat	150.21	348	PKPbc	PKPbc	01 21 35.2	0.0
	2.1nm,0.6s,baz=29,slow=10,SNR=4.2						

CSEM 07 01:09:23.7±0.2, 3806N×3876E, h1^{km}±1^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=2.2km az=103.0
ISK 07 01:09:23.9, 3808N×3875E, h5^{km}, MD3.2
ISCJB 07 01:09:24.7±0.6, 3807N±003×3879E±004, h2^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.6km az=26.1
DDA 07 01:09:25.6, 3808N×3878E, h11^{km}, Md3.0
ISC 07 01:09:25.3±0.6, 3807N±003×3878E±005, h5^{km}±7^{km}, n15, σ0^{s}75/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.37	311	PG	Pg	01 09 31.9	-0.6
MALT				SG	Sg	01 09 37.4	+0.1
MYA	Malataya	0.38	313	PG	Pg	01 09 32.4	-0.3
ELZG	Elazig	0.46	20	*i* P	Pg	01 09 34.0	-0.1
ELZG				*i* S	Sg	01 09 40.8	+0.7
URFA	Urfa	0.63	177	PG	Pg	01 09 36.8	-0.5
URFA				SG	Sg	01 09 47.8	+2.4
ATAB	Bozova	0.71	213	*i* P	Pg	01 09 38.2	-0.7
ATAB				*i* S	Sg	01 09 47.3	-0.8
PTK	Pertek	0.95	30	PG	Pg	01 09 43.9	+0.3
DIY	Diyarbakir	1.16	98	PN	Pn	01 09 47.2	-0.9
GZT	Gaziantep	1.20	234	*i* P	Pg	01 09 47.5	-0.8
GZT				*i* S	Sg	01 10 05.1	+1.3
GAZ	Gaziantep	1.53	235	*e*PN	Pn	01 09 52.9	-0.5
BINT	Bingol	1.56	58	*e*PN	Pn	01 09 53.8	0.0
MARD	Mardin	1.75	115	*i* P	Pn	01 09 56.3	-0.1
MARD				*i* S	Sn	01 10 19.6	+0.4
BTMT	Batman	2.14	86	*e*PN	Pn	01 10 01.1	-0.6
SVSK	Karacayir	2.31	324	*e*PN	Pn	01 10 05.0	+0.9
KOZT	Kozan	2.41	257	*e*PN	Pn	01 10 06.1	+0.6
BNN	Bunyan	2.43	290	*e*PN	Pn	01 10 05.7	0.0

ISCJB 07 01:14:06.6±3.7, 652N±008×9453E±006, h15^{km}±27^{km}, mb4.1/26, MS3.6/2, Error ellipse: s-maj=14.9km s-min=7.6km az=32.4
NEIC 07 01:14:10.7±0.4, 655N×9452E, h30^{km}, mb4.3/9, Error ellipse: s-maj=12.6km s-min=6.8km az=219.0
IDC 07 01:14:11.4±4.3, 697N×9437E, h52^{km}±40^{km}, mb3.7/16, mb1 3.8/17, mb1mx3.7/25, mbtmp3.7/17, ML3.4/1, MS3.3/3, Ms1 3.4/3, ms1mx3.2/29, Error ellipse: s-maj=25.6km s-min=14.3km az=52.0
ISC 07 01:14:08.0±4.3, 652N±008×9454E±006, h8^{km}±27^{km}, n48, σ1^{s}05/48, mb4.1/26, MS3.6/2, 1C-2D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	5.72	130	P	Pn	01 15 41.8	+8.6
	1.0nm,0.3s,baz=332,slow=18,SNR=6.7						
PSI				LR	LR	01 18 34.1	
	comp=Z,88nm,20.2s,baz=298,slow=42						
KULM	Kulim	6.20	101	*e*Pn	Pn	01 15 40.0	+0.3
KULM				*e*Sn	Sn	01 16 50.3	-0.6
PALK	Pallekele	13.76	274	*e*Pn	Pn	01 17 23.3	-0.2
	3.3nm,0.5s						
KSM	Kuching	16.50	107	*e*Pn	Pn	01 17 58.6	-1.4
KKM	Kota Kinabalu	21.55	90	*e*P	P	01 18 57.5	-0.4
LSA	Lhasa	23.28	353	*e*P	P	01 19 17.3	+1.1
	7.4nm,0.6s,mb4.3						
MBWA	Marble Bar	36.99	139	P	P	01 21 18.5	+0.4
UCH	Uchtor	39.74	337	*e*P	P	01 21 41.3	+0.3
	1.6nm,0.7s,mb3.9						
TKM2	Tokmak 2	39.92	338	*e*P	P	01 21 42.1	-0.5
AML	Almayashu	39.99	336	*e*P	P	01 21 44.0	+0.9
	5.6nm,0.6s,mb4.5						
AML				*e*PP	PP	01 23 15.6	+0.5
AAK	Ala-Archa	40.10	337	*e*P	P	01 21 43.8	-0.2
EKS2	Erkin-Say	40.40	336	*e*P	P	01 21 46.5	0.0
MKAR	Makanchi Array	41.49	347	P	P	01 21 49.7	-5.7
MKAR				LR	LR	01 40 06.7	
MKAR	Makanchi Array	41.49	347	P	P	01 21 49.7	-5.7
	1.0nm,0.6s,mb3.6,baz=163,slow=8.5,SNR=9.3						
MKAR				LR	LR	01 40 06.7	
	comp=Z,37nm,20.9s,MS3.2,baz=262,slow=38						
SONM	Songino Array	42.39	12	P	P	01 21 57.8	-4.9
	0.5nm,0.9s,mb3.2,baz=196,slow=7.0,SNR=3.6						
ULN	Ulaanbaatar	42.56	12	*e*P	P	01 22 04.3	+0.2
	0.9nm,0.5s,mb3.8						
NWAO	Narrogin (SRO)	44.77	153	P	P	01 22 23.3	+1.1
TLY	Talaya	45.64	8	P	P	01 22 28.6	-0.2
KURK	Kurchatov	46.01	346	*e*P	P	01 22 32.6	+0.9
	3.4nm,0.8s,mb4.3						
WRA	Warramunga Arr	47.16	125	P	P	01 22 41.4	+0.1
	0.9nm,0.4s,mb4.1,baz=300,slow=9.8,SNR=13						
WB2	Warramunga Arr	47.17	125	P	P	01 22 41.9	+0.6
ASAR	Alice Springs	48.75	129	P	P	01 22 54.0	+0.5
	1.0nm,0.5s,mb4.1,baz=304,slow=7.8,SNR=6.9						
ASAR				PcP	PcP	01 24 18.0	-0.6
	0.6nm,0.7s,baz=309,slow=4.4,SNR=2.4						
BRVK	Borovoye	50.45	341	*e*P	P	01 23 04.5	-1.5
	2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	50.87	342	P	P	01 23 08.8	-0.4
AKTK	Aktyubinsk	53.32	332	P	P	01 23 23.1	-4.4
AKTO	Aktyubinsk	53.32	332	P	P	01 23 23.1	-4.4
	1.0nm,0.5s,mb4.0,baz=137,slow=10,SNR=2.9						
ARU	Arti	57.28	337	*e*P	P	01 23 53.9	-2.0
	2.8nm,0.7s,mb4.4						
KMBO	Kilima Mbogo	57.68	265	*e*P	P	01 23 59.6	+0.1
	2.2nm,0.8s,mb4.2						
KMBO	Kilima Mbogo	57.68	265	P	P	01 23 58.0	-1.5
	1.8nm,0.7s,mb4.2,baz=62,slow=9.7,SNR=6.4						
STKA	Stephens Creek	58.89	133	P	P	01 24 08.4	+0.8
	1.3nm,0.6s,mb4.2,baz=324,slow=6.6,SNR=5.1						
BRTR	Keskin Array B	63.61	311	P	P	01 24 32.8	-6.8
	0.5nm,0.8s,mb3.6,baz=126,slow=4.6,SNR=3.0						
OBN	Obninsk	66.73	328	P	P	01 24 59.0	-0.5
TAU	Tasmania Unive	68.59	141	*e*P	P	01 25 11.8	+0.4
	72nm,1.6s,mb5.3						
IDI	Anoyia	69.66	305	P	P	01 25 11.9	-6.5
	4.4nm,0.8s,mb4.5,baz=58,slow=9.5,SNR=3.5						
PLOR	Plostina	70.00	316	⇓*i*P	P	01 25 22.5	+2.3
MLR	Muntele Rosu	70.41	316	P	P	01 25 18.4	-4.3
	1.0nm,0.9s,mb3.7,baz=132,slow=17,SNR=2.2						
MLR	Muntele Rosu	70.41	316	⇑*i*P	P	01 25 24.6	+1.9
BURAR	Bucovina Array	71.31	318	⇓*i*P	P	01 25 30.2	+2.1
JOF	Joensuu	72.23	335	*e*p	P	01 25 33.3	-0.1
	0.3nm,0.4s,mb3.6						
FINES	FINESS Array B	74.09	332	P	P	01 25 38.9	-5.5
	1.3nm,0.8s,mb3.9,baz=99,slow=6.0,SNR=6.4						
KAF	Kangasniemi	74.17	333	*e*p	P	01 25 38.9	-5.9
	1.9nm,0.7s,mb4.1						
BOSA	Boshof	75.21	238	P	P	01 25 49.5	-2.0
	2.1nm,0.7s,mb4.2,baz=149,slow=3.7,SNR=5.5						
ARCES	ARCESS Array B	76.67	340	P	P	01 25 54.2	-4.9
ARCES	ARCESS Array B	76.67	340	P	P	01 25 54.2	-4.9
	5.3nm,1.2s,mb4.4,baz=102,slow=7.5,SNR=2.6						
GERES	GERESS Array B	79.09	318	P	P	01 26 08.7	-4.3
	0.3nm,0.6s,mb3.4,baz=122,slow=3.6,SNR=2.9						
HFS	Hagfors	79.82	330	P	P	01 26 11.4	-5.2
	2.3nm,0.9s,mb4.1,baz=114,slow=5.4,SNR=6.7						
NOA	NORSAR Array B	81.10	331	LR	LR	02 08 14.1	
	comp=Z,57nm,18.1s,MS4.0,baz=205,slow=40						
TORD	Torodi Ar. Bea	91.29	283	P	P	01 27 11.7	-3.2
	0.5nm,0.9s,mb3.8,baz=72,slow=4.7,SNR=3.2						

IDC 07 01:24:34.0±1.3, 702N×9486E, h0^{km}, mb3.6/6, mb1 3.6/6, mb1mx3.5/21, mbtmp3.6/6, Error ellipse: s-maj=56.4km s-min=25.3km az=56.0
ISCJB 07 01:24:36.0±0.5, 682N±009×9474E±007, h33^{km}, mb3.8/8, Error ellipse: s-maj=15.2km s-min=7.8km az=31.1
NEIC 07 01:24:37.5±0.5, 687N×9479E, h30^{km}, mb4.4/2, Error ellipse: s-maj=16.7km s-min=9.9km az=46.0
ISC 07 01:24:38.4±0.5, 682N±009×9471E±007, h35^{km}, n15, σ1^{s}05/16, mb3.8/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.10	104	*e*Pn	Pn	01 26 04.2	-1.9
KULM				*e*Sn	Sn	01 27 15.9	+1.2
PALK	Pallekele	13.91	273	Pn	Pn	01 27 53.3	+0.1
COCO	West Island	19.00	174	P	Pn	01 28 58.3	+0.1
MKAR	Makanchi Array	41.23	347	P	P	01 32 18.6	-1.3
	0.4nm,0.8s,mb3.1,baz=160,slow=8.1,SNR=3.4						
SONM	Songino Array	42.06	12	P	P	01 32 26.1	-0.6
	0.3nm,0.9s,mb2.9,baz=206,slow=6.3,SNR=3.2						
NWAO	Narrogin (SRO)	44.96	153	*e*P	P	01 32 47.8	-2.4
	12nm,1.2s,mb4.6						
KURK	Kurchatov	45.76	346	*e*P	P	01 32 56.4	0.0
	1.2nm,0.5s,mb4.1						
WB2	Warramunga Arr	47.20	125	P	P	01 33 08.1	0.0
AKTK	Aktyubinsk	53.14	331	P	P	01 33 53.6	+1.1
AKTO	Aktyubinsk	53.14	331	P	P	01 33 53.6	+1.1
	0.7nm,0.4s,mb3.9,baz=72,slow=6.4,SNR=3.0						
STKA	Stephens Creek	58.97	134	P	P	01 34 35.8	+1.2
	1.0nm,0.6s,mb4.0,baz=321,slow=6.5,SNR=3.0						
BRTR	Keskin Array B	63.54	311	P	P	01 35 06.5	+1.1
	0.4nm,0.5s,mb3.7,baz=89,slow=11,SNR=3.5						
TAU	Tasmania Unive	68.72	141	P	P	01 35 39.2	+0.6
FINES	FINESS Array B	73.90	332	P	P	01 36 09.7	+0.1
	0.6nm,0.8s,mb3.6,baz=134,slow=6.0,SNR=1.3						
GRFO	Grafenberg	80.63	319	P	P	01 36 46.3	-1.2

IDC 07 01:35:20.5±1.3, 105S×12705E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.7/16, mbtmp3.6/5, Error ellipse: s-maj=136.5km s-min=20.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.08	160	P	P	01 39 55.1	-0.7
	0.7nm,0.4s,baz=339,slow=11,SNR=5.0						
ASAR	Alice Springs	23.44	164	P	P	01 40 31.0	-0.7
	1.1nm,0.6s,baz=346,slow=11,SNR=8.7						
STKA	Stephens Creek	33.60	157	P	P	01 42 04.1	+1.5
	1.3nm,0.7s,baz=343,slow=11,SNR=2.6						
SONM	Songino Array	51.91	342	P	P	01 44 31.4	+0.5
	0.4nm,0.8s,baz=153,slow=9.7,SNR=2.2						
MKAR	Makanchi Array	61.67	327	P	P	01 45 40.0	-0.2
	0.3nm,0.3s,baz=119,slow=7.4,SNR=9.0						

ISCJB 07 01:51:47.0±0.6, 6147S±008×1593E±04, h10^{km}, mb4.4/7, MS4.1/4, Error ellipse: s-maj=25.7km s-min=10.2km az=163.8
IDC 07 01:51:47.1±2.3, 6144S×15933E, h0^{km}, mb4.3/4, mb1 4.4/5, mb1mx4.3/10, mbtmp4.3/5, ML3.2/1, MS4.2/6, Ms1 4.1/6, ms1mx3.9/15, Error ellipse: s-maj=146.8km s-min=22.6km az=76.0
GCMT 07 01:51:48.9±0.5, 6117S×16063E, h25^{km}±2^{km}, MW5.0/55, Moment Tensor Solution. s19,c21; s55,c70; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.29; $M_{\theta\theta}$-1.43±.21; $M_{\phi\phi}$1.83±.27; $M_{r\theta}$0.05±.46; $M_{\theta\phi}$3.19±.22; $M_{\phi r}$-1.23±.53; Best double couple: $M_0$3.78100×10^{16} NP1:ϕ_s257.00000°, δ71.00000°, λ0.00000°. NP2: ϕ_s167.00000°, δ90.00000°, λ161.00000°. Principal axes: T 4.0220, Plg13.0000°, Azm120.0000°; N -0.4850, Plg71.0000°, Azm346.0000°; P -3.5400, Plg13.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 07 01:51:48.9±0.5, 6149S×15938E, h10^{km}, mb4.8/2 Error ellipse: s-maj=22.0km s-min=9.1km az=75.0
ISC 07 01:51:48.8±0.6, 6146S±008×1594E±03, h10^{km}, n22, σ1^{s}06/13, mb4.4/7, MS4.1/4, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	16.16	178	Pn	Pn	01 55 34.5	-1.0
	0.1nm,0.3s,baz=354,slow=10,SNR=2.9						
VNDA				LR	LR	02 00 48.2	
	comp=Z,405nm,20.4s,baz=252,slow=33						
RPZ	Rata Peaks	19.08	27	LR	LR	02 02 35.0	
	comp=Z,744nm,18.1s,baz=18,slow=34						
TAU	Tasmania Unive	19.93	333	P	Pn	01 56 20.7	-1.5
CASY	Casey	21.56	236	P	P	01 56 38.5	+0.7
URZ	Urewera	25.71	34	LR	LR	02 06 27.7	
	comp=Z,499nm,18.8s,MS4.1,baz=34,slow=34						
QSPA	South Pole Qui	28.63	180	P	P	01 57 45.6	+0.8
	2.9nm,0.8s,mb4.1,baz=23,slow=4.7,SNR=5.6						
STKA	Stephens Creek	31.78	330	P	P	01 58 15.2	+2.2
	1.4nm,0.9s,mb3.8,baz=148,slow=13,SNR=2.1						
STKA				LR	LR	02 09 03.4	
	comp=Z,551nm,18.5s,MS4.3,baz=335,slow=33						
NWAO	Narrogin (SRO)	39.28	297	LR	LR	02 11 45.3	
	comp=Z,414nm,19.5s,MS4.3,baz=328,slow=30						
ASAR	Alice Springs	41.61	324	P	P	01 59 36.5	-0.3
	4.1nm,0.9s,mb4.0,baz=159,slow=7.8,SNR=15						
ASAR				PcP	PcP	02 01 33.6	0.0
	1.0nm,0.8s,baz=148,slow=3.2,SNR=5.0						
CTA	Charters Tower	42.34	342	P	P	01 59 42.9	+0.1
	11nm,1.1s,mb4.4,baz=179,slow=11,SNR=4.3						
CTAO	Charters Tower	42.34	342	*e*P	P	01 59 43.8	+1.1
	23nm,1.4s,mb4.6						
WRA	Warramunga Arr	45.03	326	P	P	02 00 03.6	-0.7
	5.4nm,0.9s,mb4.4,baz=161,slow=6.9,SNR=12						
WRA				PcP	PcP	02 01 44.4	-0.7
	1.7nm,0.8s,baz=160,slow=3.2,SNR=5.6						
PMSA	Palmer Station	49.98	157	*e*P	P	02 00 41.6	-0.7
	46nm,1.0s,mb5.5						
PMSA	Palmer Station	49.98	157	LR	LR	02 18 57.2	
	comp=Z,140nm,20.8s,MS4.0,baz=237,slow=33						
TBI	Tubuai	51.51	66	*e*LR	LR	02 15 04.2	
	144nm,30.5s						
PMG	Port Moresby	52.73	345	*e*P	P	02 01 02.9	-0.6
	10nm,0.8s,mb4.8						
PPT	Papeete	56.56	63	*e*LR	LR	02 17 26.3	
	223nm,25.2s						
RKT	Rikitea	58.35	80	*e*LR	LR	02 18 21.9	
	234nm,27.0s						
PLCA	Paso Flores	70.42	142	P	P	02 03 02.1	-0.6
PAYG	Puerto Ayora	99.02	108	*e*P	P	02 05 31.4	+1.7
MKAR	Makanchi Array	124.30	306	PKP	PKPdf	02 10 50.9	+4.3
	0.7nm,0.7s,baz=118,slow=2.1,SNR=6.8						
AKASG	Malin Array Be	150.90	271	PKPbc	PKPbc	02 11 40.1	-0.2
	0.7nm,0.6s,baz=91,slow=2.2,SNR=6.8						

IDC 07 01:52:16.7±1.4, 087S×12743E, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.6/15, mbtmp3.6/4, Error ellipse: s-maj=134.7km s-min=21.4km az=69.0
NEIC 07 01:52:17.8±0.8, 075S×12780E, h10^{km}, mb4.3/1, Error ellipse: s-maj=46.9km s-min=9.1km az=63.0
ISCJB 07 01:52:19.1±1.1, 07S±02×1279E±04, h33^{km}, mb4.3/7, Error ellipse: s-maj=65.3km s-min=12.9km az=153.0
ISC 07 01:52:21.5±1.1, 08S±02×1279E±04, h35^{km}, n13, σ0^{s}41/13, mb4.3/7, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.10	162	P	P	01 56 52.3	-0.1
	0.9nm,0.8s,baz=340,slow=12,SNR=3.9						
ASAR	Alice Springs	23.52	166	P	P	01 57 28.9	+0.1
	1.2nm,0.6s,mb3.5,baz=343,slow=9.5,SNR=12						
NWAO	Narrogin (SRO)	33.53	196	P	P	01 59 05.9	+7.9
	30nm,1.4s,mb5.0						
STKA	Stephens Creek	33.57	159	*e*P	P	01 58 53.3	-5.0
TAPN	Taplejung	47.62	309	*e*P	P	02 00 54.7	+0.3
ODAN	Odare	47.64	308	*e*P	P	02 00 54.9	+0.4
	9.0nm,0.6s,mb5.0						
JIRN	Jiri	48.96	309	*e*P	P	02 01 04.9	+0.2
	8.5nm,0.6s,mb5.0						
GKN	Gorkha	50.33	308	*e*P	P	02 01 14.8	-0.4
SONM	Songino Array	51.87	342	P	P	02 01 27.1	+0.7
	0.3nm,0.7s,mb3.3,baz=164,slow=7.2,SNR=2.8						
MKAR	Makanchi Array	61.86	326	P	P	02 02 36.7	-0.5
MKAR	Makanchi Array	61.86	326	P	P	02 02 36.7	-0.5
	0.7nm,0.3s,mb4.2,baz=121,slow=8.2,SNR=12						
KURK	Kurchatov	66.10	328	*e*P	P	02 03 04.4	-0.7
	1.4nm,0.6s,mb4.2						
SBA	Scott Base	79.77	172	P	P	02 04 25.6	0.0

ISCJB 07 02:05:40.0±0.8, 6126S±0.10×1609E±04, h10^{km}, mb4.5/13, MS4.5/8, Error ellipse: s-maj=29.7km s-min=10.7km az=160.7
IDC 07 02:05:40.0±1.0, 6135S×16125E, h0^{km}, mb4.4/7, mb1 4.5/8, mb1mx4.5/11, mbtmp4.3/8, ML3.7/1, MS4.4/10, Ms1 4.4/10, ms1mx4.4/12, Error ellipse: s-maj=46.2km s-min=20.1km az=74.0
GCMT 07 02:05:40.8±0.2, 6120S×16065E, h15^{km}±1^{km}, MW5.2/71, Moment Tensor Solution. s52,c75; s71,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.17±.20; $M_{\theta\theta}$-3.81±.17; $M_{\phi\phi}$4.98±.20; $M_{r\theta}$-1.25±.38; $M_{\theta\phi}$5.56±.19; $M_{\phi r}$-0.81±.36; Best double couple: $M_0$7.23400×10^{16} NP1:ϕ_s161.00000°, δ78.00000°, λ-180.00000°. NP2: ϕ_s71.00000°, δ90.00000°, λ-12.00000°. Principal axes: T 7.8540, Plg8.0000°, Azm116.0000°; N -1.2400, Plg78.0000°, Azm250.0000°; P -6.6140, Plg8.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 07 02:05:40.8±0.4, 6118S×16125E, h10^{km}, mb4.9/8 Error ellipse: s-maj=21.1km s-min=9.2km az=76.0
ISC 07 02:05:41.3±0.7, 6123S±009×1610E±04, h10^{km}, n47,

σ1^{s}04/21, mb4.5/13, MS4.5/8, 4C-4D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	6.83	350	ePn	Pn	02 07 18.2	-3.3
VNDA	Vanda	16.38	179	Pn	Pn	02 09 31.1	+0.2
	0.2nm,0.3s,baz=345,slow=8.5,SNR=6.9						
VNDA				LR	LR	02 14 41.7	
	comp=Z,991nm,20.3s,baz=1.6,slow=33						
RPZ	Rata Peaks	18.53	23	LR	LR	02 16 32.8	
	comp=Z,1μm,19.6s,baz=184,slow=35						
URZ	Urewera	25.09	31	LR	LR	02 20 23.6	
	comp=Z,1μm,18.5s,MS4.5,baz=64,slow=35						
QSPA	South Pole Qui	28.87	180	P	P	02 11 37.7	-1.7
	0.6nm,0.3s,mb3.8,baz=79,slow=2.1,SNR=2.2						
QSPA				LR	LR	02 22 13.9	
	comp=Z,495nm,18.9s,MS4.1,baz=202,slow=35						
STKA	Stephens Creek	31.99	328	LR	LR	02 23 20.7	
	comp=Z,1μm,18.0s,MS4.6,baz=274,slow=33						
FORT	Forrest	37.34	309	eP	P	02 12 51.6	-2.0
	22nm,0.8s,mb5.0						
FORT	Forrest	37.34	309	eP	P	02 12 51.6	-2.0
	4.2nm,0.9s,mb4.3						
MAW	Mawson	38.55	217	P	P	02 13 03.5	+0.1
	6.9nm,1.0s,mb4.4,baz=121,slow=8.6,SNR=4.9						
MAW				LR	LR	02 29 14.5	
	comp=Z,1μm,18.3s,MS4.7,baz=117,slow=37						
ASAR	Alice Springs	41.91	321	P	P	02 13 31.9	+0.1
	13nm,1.0s,mb4.5,baz=159,slow=7.6,SNR=17						
ASAR				PcP	PcP	02 15 29.5	+2.4
	1.3nm,0.7s,baz=148,slow=4.2,SNR=7.8						
CTA	Charters Tower	42.39	339	eP	P	02 13 36.8	+1.2
	17nm,1.1s,mb4.6						
CTAO	Charters Tower	42.39	339	eP	P	02 13 36.3	+0.7
	54nm,1.4s,mb5.0						
WB2	Warramunga Arr	45.29	324	eP	P	02 13 58.6	-0.4
WRA	Warramunga Arr	45.29	324	P	P	02 13 59.0	0.0
	1.5nm,0.8s,mb3.9,baz=196,slow=8.0,SNR=6.4						
WRA				PcP	PcP	02 15 40.7	+2.0
	1.1nm,0.4s,baz=156,slow=3.3,SNR=5.8						
WRA				LR	LR	02 31 38.5	
	comp=Z,184nm,19.2s,MS4.0,baz=115,slow=34						
COEN	Coen	48.94	337	eP	P	02 14 32.0	+4.6
	4.6nm,1.0s,mb4.5						
MBWA	Marble Bar	49.20	306	eP	P	02 14 29.3	-0.1
	19nm,0.9s,mb5.1						
FITZ	Fitzroy Crossi	49.80	314	eP	P	02 14 36.5	+2.5
	18nm,0.9s,mb5.1						
FITZ	Fitzroy Crossi	49.80	314	P	P	02 14 37.4	+3.4
	11nm,0.9s,mb4.9,baz=152,slow=14,SNR=6.6						
TBI	Tubuai	50.69	65	eLR	LR	02 29 03.3	
	513nm,30.0s						
PPT	Papeete	55.75	61	eLR	LR	02 31 19.7	
	834nm,27.8s,baz=214						
PPT	Papeete	55.75	61	LR	LR	02 32 06.8	
	comp=Z,396nm,21.9s,MS4.5,baz=212,slow=28						
RKT	Rikitea	57.53	79	eLQ		02 29 48.8	
	427nm,29.5s						
RKT				eLR	LR	02 32 17.1	
	386nm,26.0s						
PLCA	Paso Flores	70.11	141	eP	P	02 16 53.0	-0.3
	6.6nm,1.1s,mb4.5						
KULM	Kulim	80.90	299	eP	P	02 17 56.2	+0.7
BOSA	Boshof	83.56	218	P	P	02 18 09.3	-0.1
BOSA				LR	LR	02 50 21.7	
BOSA	Boshof	83.56	218	P	P	02 18 09.3	-0.1
	3.3nm,0.9s,mb4.5,baz=186,slow=9.2,SNR=2.5						
BOSA				LR	LR	02 50 21.7	
	comp=Z,280nm,19.4s,MS4.7,baz=158,slow=32						
LPAZ	La Paz	93.44	133	P	P	02 18 57.6	+0.7
	0.6nm,0.6s,mb4.2,baz=239,slow=12,SNR=2.4						
LPAZ				LR	LR	02 51 25.6	
	comp=Z,151nm,19.2s,MS4.5,baz=240,slow=29						
LSZ	Lusaka	95.07	225	eP	P	02 19 05.4	+1.1
	15nm,1.6s,mb5.2						
GRGR	Grenville	122.05	129	ePKPdf	PKPdf	02 24 37.9	+2.1
UCH	Uchtor	124.34	296	⇓ePKPdf	PKPdf	02 24 39.9	+0.6
MKAR	Makanchi Array	124.81	305	PKP	PKPdf	02 24 41.1	+1.1
	0.3nm,0.6s,baz=150,slow=3.2,SNR=3.7						
YAK	Yakutsk	125.23	343	ePKPdf	PKPdf	02 24 40.8	+0.4
PDAR	Pinedale Array	126.05	66	PKP	PKPdf	02 24 42.1	-0.5
	0.2nm,0.5s,baz=204,slow=1.6,SNR=3.2						
TORD	Torodi Ar. Bea	129.70	207	PKP	PKPdf	02 24 49.5	-0.9
	0.5nm,0.9s,baz=163,slow=1.5,SNR=2.5						
YKA	Yellowknife Ar	138.86	45	PKhKP		02 25 00.8	
	0.5nm,0.9s,baz=227,slow=2.8,SNR=3.6						
SANT	Santorini	142.70	249	ePKPdf	PKPdf	02 25 08.6	-5.3
FCC	Fort Churchill	144.27	60	ePKPdf	PKPdf	02 25 13.5	-2.3
TIRR	Tirgusor	147.71	261	⇓iP	PKPab	02 25 31.2	+3.8
TIP	Timpagrande	148.86	241	ePKPdf	PKPdf	02 25 23.9	-0.4
VRI	Vrincioaia	149.56	261	⇓iP	PKPab	02 25 36.7	+1.9
MLR	Muntele Rosu	149.65	260	⇑iP	PKPbc	02 25 34.2	+4.2
RES	Resolute Bay	151.04	32	ePKPab	PKPab	02 25 38.8	-1.4
BURAR	Bucovina Array	151.53	262	⇑iP	PKPab	02 25 40.1	-2.9
AKASG	Malin Array Be	151.70	270	PKPbc	PKPbc	02 25 35.2	+0.6
	0.5nm,0.5s,baz=98,slow=2.1,SNR=3.7						
BZS	Buzias	151.79	255	⇑iP	PKPbc	02 25 40.0	+5.0
DRGR		152.14	258	⇓iP	PKPbc	02 25 39.3	+3.5
PKSM	Moragy	153.62	253	⇑iP	PKPbc	02 25 41.3	+2.3

*ISCJB **07** 02:44:16.6±0.8, 194S±02×1785W±0.1, h600km, mb3.5/10, Error ellipse: s-maj=27.5km s-min=15.1km az=156.1*
*IDC **07** 02:44:18.1±5.9, 1933S×17852W, h604km±70km, mb3.0/8, mb1 3.3/8, mb1mx3.2/13, mbtmp3.0/8, Error ellipse: s-maj=31.9km s-min=28.2km az=175.0*
*NEIC **07** 02:44:21.0±4.1, 1941S×17853W, h642km±48km, mb3.9/2, Error ellipse: s-maj=27.0km s-min=23.7km az=176.0*
ISC 07 02:44:18.0±0.8**, 194S**±02×**1785W**±01**, h600**km**, n19, σ0^{s}82**/13**, mb3.5**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAO	Charters Tower	33.18	263	eP	P	02 50 07.2	+0.4
	1.5nm,0.4s,mb4.0						
COEN	Coen	37.09	272	eP	P	02 50 40.1	+0.9
	2.0nm,0.8s,mb3.7						
STKA	Stephens Creek	37.89	243	P	P	02 50 44.2	-1.3
STKA	Stephens Creek	37.89	243	P	P	02 50 44.2	-1.3
	0.7nm,0.6s,mb3.4,baz=102,slow=14,SNR=3.7						
WRA	Warramunga Arr	44.33	261	P	P	02 51 35.6	-0.8
	1.0nm,0.5s,mb3.6,baz=97,slow=8.1,SNR=8.3						
ASAR	Alice Springs	44.36	256	P	P	02 51 36.0	-0.7
	3.5nm,0.8s,mb4.0,baz=90,slow=8.5,SNR=35						
VNDA	Vanda	58.98	185	P	P	02 53 21.9	+1.4
VNDA	Vanda	58.98	185	P	P	02 53 21.9	+1.4
	3.5nm,1.0s,mb3.5,baz=38,slow=4.4,SNR=3.7						
KKM	Kota Kinabalu	69.06	285	eP	P	02 54 25.6	+0.2
MJAR	Matsushiro Arr	69.06	324	P	P	02 54 25.9	+1.0
	1.2nm,0.5s,mb3.6,baz=152,slow=5.9,SNR=3.5						
NVAR	Mina Array Bea	80.52	44	P	P	02 55 28.7	-0.1
	0.2nm,0.5s,mb2.8,baz=224,slow=5.4,SNR=4.0						
TXAR	Lajitas Array	86.83	58	P	P	02 55 59.5	-0.5
	0.3nm,0.6s,mb3.2,baz=242,slow=2.7,SNR=4.6						
PDAR	Pinedale Array	88.45	43	P	P	02 56 06.8	-0.5
	0.6nm,0.9s,mb3.3,baz=224,slow=3.9,SNR=3.9						
MKAR	Makanchi Array	110.12	314	PKiKP	PKiKP	03 01 40.4	-1.9
	0.2nm,0.2s,baz=77,slow=0.9,SNR=3.0						
ARCES	ARCESS Array B	127.75	350	PKP	PKPdf	03 02 14.2	-1.2
	1.8nm,0.9s,baz=11,slow=0.9,SNR=4.5						
AKASG	Malin Array Be	141.83	331	PKhKP		03 02 37.2	
	0.9nm,0.4s,baz=42,slow=4.2,SNR=7.0						
BRTR	Keskin Array B	145.77	313	PKPbc	PKPbc	03 02 50.5	-0.7
	0.7nm,0.6s,baz=150,slow=4.9,SNR=5.3						
CLL	Collm	146.88	347	ePKPbc	PKPbc	03 02 53.0	-0.8
CLL				ePKPab	PKPab	03 02 57.0	-0.1
GERES	GERESS Array B	149.02	344	PKPbc	PKPbc	03 02 58.8	-0.4
	0.6nm,0.6s,baz=29,slow=3.0,SNR=7.1						

IDC 07 03:08:40.9±2.0**, 1184S**×**16594E, h0**km**, mb4.1**/4**, mb1 4.2**/5**, mb1mx3.9**/15**, mbtmp4.1**/5**, ML3.7**/1**, Error ellipse: s-maj=56.9km s-min=32.6km az=101.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.19	177	Pn	Pn	03 11 09.2	+0.8
	0.6nm,0.3s,baz=3.1,slow=18,SNR=8.1						
WRA	Warramunga Arr	31.40	251	P	P	03 15 04.1	+0.2
	0.9nm,0.5s,baz=84,slow=8.9,SNR=6.2						
ASAR	Alice Springs	32.61	244	P	P	03 15 14.4	-0.1
	1.1nm,0.6s,baz=71,slow=9.7,SNR=18						
ASAR				PcP	PcP	03 18 00.5	-0.5
	0.4nm,0.5s,baz=60,slow=2.6,SNR=7.5						
SONM	Songino Array	79.41	324	P	P	03 20 49.2	+0.3
	0.7nm,0.5s,baz=138,slow=5.2,SNR=7.1						
MKAR	Makanchi Array	94.23	317	P	P	03 22 01.9	0.0
	2.0nm,0.6s,baz=93,slow=6.3,SNR=35						

*ISCJB **07** 03:09:38.6±0.7, 3838N±005×3928E±004, h0km±9km, Error ellipse: s-maj=7.8km s-min=4.9km az=15.2*
*CSEM **07** 03:09:38.4±0.2, 3838N×3923E, h6km±1km, MD3.0, Error ellipse: s-maj=3.4km s-min=2.6km az=148.0*
*ISK **07** 03:09:38.5, 3837N×3922E, h5km, MD3.0*
*DDA **07** 03:09:39.4, 3851N×3931E, h7km, Md2.9*
ISC 07 03:09:39.4±0.6**, 3839N**±004×**3925E**±005**, h11**km±8km**, n12, σ0^{s}77**/18**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.24	298	⇑iP	Pg	03 09 44.2	-0.1
ELZG				iS	Sg	03 09 48.2	+0.6
PTK	Pertek	0.52	12	PG	Pg	03 09 49.4	0.0
MALT	Malatya	0.65	264	PG	Pg	03 09 51.0	-1.0
MALT				SG	Sg	03 10 00.1	-0.5
MYA	Malataya	0.66	265	PG	Pg	03 09 50.9	-1.2
DIY	Diyarbakir	0.91	122	PG	Pg	03 09 56.3	-0.6
DIY				SG	Sg	03 10 09.5	+0.7
URFA	Urfa	1.00	200	PG	Pg	03 09 58.1	-0.6
BINT	Bingol	1.08	63	ePN	Pn	03 10 01.0	+0.5
ATAB	Bozova	1.19	220	eP	Pg	03 10 02.9	+0.6
ATAB				iS	Sg	03 10 19.0	+1.3
ATAB	Bozova	1.19	220	eP	Pg	03 10 02.8	+0.6
ATAB				iS	Sg	03 10 19.0	+1.3
MARD	Mardin	1.61	131	iP	Pn	03 10 08.6	+0.8
MARD				iS	Sn	03 10 27.4	-1.2
BTMT	Batman	1.77	96	ePN	Pn	03 10 09.6	-0.4
SVSK	Karacayir	2.33	312	ePN	Pn	03 10 18.5	+0.9

PGC 07 03:38:10.0±0.8**, 5556N**×**13535W, h1**km**, ML3.6**/4**, 166km south of Sitka, Ak Off Coast Of Southeastern Alaska, Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDB	Naden	2.13	138	Trac			
NDB	Naden	2.13	138	Pn	Pn	03 38 46.1	-0.5
NDB				Sg	Sg	03 39 15.4	-2.8
DIB	Dawson Inlet,	2.90	143	Trac			
DIB	Dawson Inlet,	2.90	143	Pn	Pn	03 38 56.6	-0.5
RUBB	Prince Rupert	3.19	111	Trac			
RUBB	Prince Rupert	3.19	111	Pn	Pn	03 39 01.3	+0.1
DLBC	Dease Lake	4.10	43	Trac			
DLBC	Dease Lake	4.10	43	Pn	Pn	03 39 12.1	-1.5
DLBC				Sg	Sg	03 40 17.4	-4.1

*IDC **07** 03:42:29.8±0.6, 5237N×16679W, h0km, mb4.7/26, mb1 4.8/26, mb1mx4.8/29, mbtmp4.7/26, MS4.2/18, Ms1 4.2/18, ms1mx3.9/44, Error ellipse: s-maj=19.8km s-min=12.4km az=175.0*
*ISCJB **07** 03:42:29.8±1.2, 5248N±003×16685W±003, h7km±7km, mb4.9/169, MS4.3/36, Error ellipse: s-maj=5.4km s-min=2.8km az=23.5*
*NEIC **07** 03:42:31.9, 5245N×16658W, h18km, mb4.9/103, ML4.3(AEIC), After AEIC.*
*BJI **07** 03:42:31.1, 5283N×16703W, h15km, mB5.2, mb5.1, Ms4.9, Msz4.5*
*SZGRF **07** 03:42:35.6, 5254N×16787W, h40km, mb5.0, Fox Islands, Aleutian Islands, United States*
*MOS **07** 03:42:37.6±0.9, 5313N×16743W, h33km, mb5.3/25, MS4.1/7, Error ellipse: s-maj=18.7km s-min=6.3km az=99.1*
ISC 07 03:42:32.7±1.4**, 5256N**±003×**16684W**±003**, h13**km±8km**, h37**km±.9km**:pP-P, n538, σ0^{s}70**/543**, mb4.9**/169**, MS4.3**/36**, 137C-94D, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	Unalaska Valle	1.31	9	P	Pn	03 42 55.5	-1.2
UNV				S	Sb	03 43 14.4	+0.6
AKLV	Akutan Long Va	1.69	18	P	Pn	03 43 00.9	-1.0
AKLV				S	Sn	03 43 24.5	+1.0
AKUT	Akutan	1.71	21	P	Pn	03 43 01.3	-0.8
FALS	False Pass	3.07	40	ePn	Pn	03 43 16.3	-4.5
ATKA	Atka Island	4.52	268	P	Pn	03 43 41.4	+0.6
ADK	Adak	6.09	268	P	Pn	03 44 03.4	+1.1
ADK	Adak	6.09	268	P	Pn	03 44 03.3	+1.0
KDAK	Kodiak Island	9.68	52	Pn	Pn	03 44 49.8	-1.7
	1.5nm,0.3s,baz=278,slow=9.4,SNR=8.3						
KDAK				Sn	Sn	03 46 30.8	-9.2
	1.2nm,0.3s,baz=266,slow=15,SNR=3.0						
GAMB	Gambell	11.54	349	ePn	Pn	03 45 16.2	-0.6
TTA	Tatalina	11.88	25	ePn	Pn	03 45 25.9	+4.4
	25nm,1.1s						
SLKM	Skilak Lake	12.12	42	ePn	Pn	03 45 22.8	-2.0
TNA	Tin City	13.06	358	ePn	Pn	03 45 40.0	+2.4
MCK	McKinley	14.59	33	ePn	Pn	03 46 02.0	+3.6
	19nm,1.0s						
IMA2	Indian Mountai	15.07	21	ePn	Pn	03 46 06.9	+1.9
COLA	College	15.71	31	ePn	Pn	03 46 12.8	-0.6
	19nm,0.9s						
COLA	College	15.71	31	d iP	Pn	03 46 13.0	-0.3
EGAK	Eagle	17.94	37	ePn	Pn	03 46 40.2	-1.4
DAWY	Dawson	18.28	40	ePn	Pn	03 46 44.8	-0.9
SKAG	Skagway	18.78	56	ePn	Pn	03 46 53.2	+1.4
BILL	Bilibino	20.18	330	eP	P	03 47 06.6	+0.1
	23nm,0.9s						
BILL	Bilibino	20.18	330	⇓eP	P	03 47 06.7	+0.2
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,900nm,12.0s,MS4.3						
PET	Petropavlovsk	20.76	285	eP	P	03 47 13.8	+0.8
	comp=Z,14nm,0.4s						
PET	Petropavlovsk	20.76	285	eP	P	03 47 17.6	+4.6
PET				eS	S	03 51 19.7	+15
PET				pmax	pmax		
	comp=Z,65nm,1.5s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.0						
DLBC	Dease Lake	21.46	59	eP	P	03 47 25.0	+4.6
DLBC	Dease Lake	21.46	59	P	P	03 47 24.7	+4.3
	baz=291,slow=8.7						
INK	Inuvik	22.35	32	eP	P	03 47 26.5	-3.4
INK	Inuvik	22.35	32	P	P	03 47 26.5	-3.4
	comp=Z,24nm,0.8s,mb4.7,baz=236,slow=11,SNR=119						
BBB	Bella Bella	23.46	75	LR	LR	03 54 24.5	
	comp=Z,446nm,19.5s,MS3.9,baz=289,slow=30						
MA2	Magadan	24.33	304	eP	P	03 47 49.3	-0.4
	comp=Z,44nm,0.9s,mb4.9						
MA2	Magadan	24.33	304	c iP	P	03 47 49.8	+0.1
MA2				e		03 48 00.6	
MA2				eS	S	03 52 03.8	-4.5
MA2				eSS		03 53 00.8	
MA2				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.1						
MA2				pmax	pmax		
	comp=E,30nm,0.8s						
MA2				MLR	MLR		
	comp=Z,400nm,16.5s,MS4.0						
YKW3	Yellowknife Ar	28.94	49	eP	P	03 48 31.7	+0.6
YKA	Yellowknife Ar	28.95	49	P	P	03 48 30.6	-0.6
YKA				PcP	PcP	03 51 39.1	-0.5
YKA				LR	LR	04 01 48.6	
YKA	Yellowknife Ar	28.95	49	P	P	03 48 30.6	-0.6
	comp=Z,5.3nm,0.9s,mb4.3,baz=272,slow=7.5,SNR=29						
YKA				PcP	PcP	03 51 39.1	-0.5
	comp=Z,1.2nm,0.6s,baz=282,slow=1.9,SNR=7.3						
YKA				LR	LR	04 01 48.6	
	comp=Z,530nm,18.8s,MS4.2,baz=220,slow=40						
H04A	Detroit Lake	30.13	87	⇑P	P	03 48 41.4	-0.4
	baz=30						
D07A	Quincy	30.24	81	⇑P	P	03 48 42.9	+0.1
	baz=30						
I04A	Tendick Farm,	30.46	89	⇓P	P	03 48 45.2	+0.4
	baz=30						
NEW	Newport	31.46	78	eP	P	03 48 53.7	+0.1
	comp=Z,6.9nm,0.8s,mb4.5						
N02C	Big Bar	31.61	94	⇑P	P	03 48 55.6	+0.7
	baz=32						
EDM	Edmonton	31.65	67	eP	P	03 48 55.0	-0.3
H07A	Lands Inn, Kim	31.78	85	⇑P	P	03 48 56.8	+0.4
	baz=32						
K05A	Summer Lake	31.98	89	⇑P	P	03 48 58.8	+0.6
	baz=32						
I07A	Izee	32.08	86	⇓P	P	03 48 59.5	+0.4
	baz=32						
J06A	Christmas Vall	32.14	88	⇑P	P	03 48 59.9	+0.3
	baz=32						
F09A	S2 Ranch, Elgi	32.21	82	⇓P	P	03 49 00.3	+0.2
	baz=32						
WDC	Whiskeytown Da	32.22	94	⇑P	P	03 49 00.6	+0.3
	baz=32						
E10A	Myers Farm, Un	32.30	81	⇑P	P	03 49 01.1	+0.1
	baz=32						
O02C	Red Bluff	32.31	95	⇓P	P	03 49 01.8	+0.7
	baz=32						
K06A	Valley Falls	32.33	89	⇓P	P	03 49 02.0	+0.8
	baz=32						
H08A	Prairie City	32.36	85	⇓P	P	03 49 01.8	+0.3
	baz=32						
L05A	Lakeview	32.40	90	⇓P	P	03 49 02.5	+0.7
	baz=32						
F10A	Beach Ranch, E	32.49	81	⇑P	P	03 49 03.0	+0.4
	baz=32						
YSS	Yuzh-Sakhalins	32.49	281	eP	P	03 49 02.8	+0.2
	comp=Z,19nm,0.6s,mb5.1						
YSS	Yuzh-Sakhalins	32.49	281	e	P	03 49 02.8	+0.2
M05C	Lookout	32.61	92	⇓P	P	03 49 03.9	+0.2
	baz=32						
GASB	Alder Springs	32.67	95	⇓P	P	03 49 04.9	+0.6
	baz=32						
I08A	Drewsey	32.74	86	⇑P	P	03 49 05.1	+0.2
	baz=33						
A13A	Flathead Natio	32.76	75	⇑P	P	03 49 05.0	0.0
	baz=33						
MOD	Modoc	32.80	90	eP	P	03 49 05.0	-0.4
	comp=Z,22nm,1.4s,mb4.9						
MOD	Modoc	32.80	90	⇑P	P	03 49 05.6	+0.2
	baz=33						
HOPS	Hopland	32.87	97	⇑P	P	03 49 06.1	+0.1
	baz=33						
K07A	Rock Creek Ran	33.00	88	⇓P	P	03 49 07.2	0.0
	baz=33						
BSMT	Bassoo Peak	33.04	77	eP	P	03 49 07.8	+0.3
J08A	Circle Bar Ran	33.10	86	⇑P	P	03 49 08.6	+0.6
	baz=33						
M06C	Likely Place G	33.10	91	⇑P	P	03 49 08.5	+0.5
	baz=33						
I09A	Lost Marbles R	33.22	85	⇓P	P	03 49 09.0	0.0
	baz=33						
C13A	Hot Springs	33.25	77	⇓P	P	03 49 09.3	0.0
	baz=33						
O04C	Chester	33.26	93	⇑P	P	03 49 09.5	+0.1
	baz=33						
L07A	Adell	33.33	89	⇓P	P	03 49 10.1	+0.1
	baz=33						
G11A	Walters Elk Ra	33.36	82	⇓P	P	03 49 10.1	-0.1
	baz=33						
TIXI	Tiksi	33.38	329	eP	P	03 49 09.3	-0.9
	comp=Z,11nm,0.9s,mb4.8						
TIXI				ePcP	PcP	03 51 51.1	-0.1
TIXI	Tiksi	33.38	329	⇑eP	P	03 49 09.2	-0.9
TIXI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,700nm,22.0s,MS4.3						
K08A	Mann Creek Ran	33.44	87	⇑P	P	03 49 11.4	+0.4
	baz=33						
ORV	Oroville	33.47	94	⇑P	P	03 49 11.2	-0.1
	baz=33						
H10A	Noah's Angus R	33.49	83	P	P	03 49 11.3	-0.1
	baz=33,SNR=11						
WVOR	Wild Horse Val	33.52	88	eP	P	03 49 11.9	+0.3
	comp=Z,9.6nm,0.9s,mb4.7						
J09A	Fry Pan Ranch,	33.55	86	⇑P	P	03 49 11.9	0.0
	baz=33						
N06A	Buffalo Meadow	33.77	91	⇑P	P	03 49 14.1	+0.2
	baz=34						
F12A	Elk City	33.79	81	⇓P	P	03 49 14.3	+0.3
	baz=34						
M07A	Soldier Meadow	33.79	90	⇓P	P	03 49 14.2	+0.2
	baz=34						
L08A	Fields	33.84	88	⇑P	P	03 49 14.6	+0.2
	baz=34						
H11A	Donnelly	33.88	83	⇓P	P	03 49 14.7	-0.1
	baz=34						
K09A	Rome	33.93	87	⇑P	P	03 49 15.3	+0.1
	baz=34						
ASAJ	Asahikawa	34.03	276	P	P	03 49 16.1	0.0
	comp=Z,36nm,0.9s,mb5.3,baz=44,slow=8.1,SNR=7.3						
MSO	Missoula	34.04	78	eP	P	03 49 19.0	+2.9
O06A	Flanigan	34.12	92	⇑P	P	03 49 17.0	0.0
	baz=34						
D14A	Greenough	34.17	77	⇓P	P	03 49 17.4	+0.2
	baz=34						
P05C	Yuba Gap, Truc	34.17	94	⇓P	P	03 49 17.1	-0.2
	baz=34						
YAK	Yakutsk	34.22	311	iP	P	03 49 16.3	-1.2
YAK				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
YAK				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.2						
M08A	Happy Creek Ra	34.24	89	⇑P	P	03 49 18.1	+0.1
	baz=34						
N07B	Gerlach	34.27	91	⇑P	P	03 49 18.7	+0.4
	baz=34						
F13A	Darby	34.33	80	⇑P	P	03 49 18.6	-0.1
	baz=34						
L09A	Wilkinson Ranc	34.35	88	⇓P	P	03 49 18.7	-0.1
	baz=34						
K10A	MacKenzie Ranc	34.40	86	⇑P	P	03 49 19.5	+0.2
	baz=34						
CHMT	Chamberlain Mo	34.41	78	eP	P	03 49 18.6	-0.7
E14A	Clinton	34.51	78	⇓P	P	03 49 20.3	+0.1
	baz=34						
H12A	Diamond D Ranc	34.66	82	⇑P	P	03 49 21.4	-0.1
	baz=34						
PAHR	Pah Rah Range	34.67	92	eP	P	03 49 21.8	+0.2
	comp=Z,18nm,1.3s,mb4.8						
MFID	Camas Ranch	34.68	84	⇓P	P	03 49 21.6	-0.1
	baz=34						
WCN	Washoe City	34.69	93	⇑P	P	03 49 22.1	+0.2
	baz=34						
O07A	Toulon	34.70	91	⇓P	P	03 49 21.9	-0.1
	baz=35,SNR=8.0						
G13A	Cobalt	34.74	81	⇓P	P	03 49 22.2	-0.1
	baz=35						
D15A	Lincoln	34.78	77	⇓P	P	03 49 22.2	-0.3
	baz=35						
N08A	GE Springer Mi	34.78	90	⇑P	P	03 49 22.7	0.0
	baz=35,SNR=7.4						
M09A	Marrel Ranch,	34.83	89	⇑P	P	03 49 23.0	0.0
	baz=35						
R05C	Kirkwood Meado	34.87	94	⇓P	P	03 49 23.3	-0.1
	baz=35						
F14A	Wisdom	34.89	79	⇓P	P	03 49 23.4	-0.1
	baz=35						
K11A	Parker Ranch,	34.92	86	⇓P	P	03 49 23.8	+0.1
	baz=35						
H13A	Challis	35.01	82	⇑P	P	03 49 24.3	-0.3
	baz=35						
E15A	Deer Lodge	35.01	78	⇑P	P	03 49 24.2	-0.3
	baz=35						
L10A	Juniper Basin	35.04	87	⇓P	P	03 49 24.4	-0.4
	baz=35						
CMB	Columbia Colle	35.10	96	⇑P	P	03 49 25.0	-0.4
	baz=35						
N09A	Rock Creek Ran	35.12	89	⇑P	P	03 49 25.4	-0.1
	baz=35						
G14A	Jackson	35.13	80	⇓P	P	03 49 25.3	-0.3
	baz=35,SNR=6.1						
J12A	Stokes Ranch,	35.22	84	⇓P	P	03 49 26.2	-0.1
	baz=35						
PACP	Pacheco Peak	35.22	98	⇑P	P	03 49 26.2	-0.3
	baz=35						
M10A	I.L. Ranch, Tu	35.32	88	⇓P	P	03 49 27.4	+0.1
	baz=35						
R06C	Coleville	35.36	94	⇑P	P	03 49 27.9	+0.2
	baz=35						
WAKR	Walker	35.38	94	eP	P	03 49 28.7	+0.8
I13A	Wildhorse Cree	35.45	83	⇑P	P	03 49 28.4	+0.1
	baz=35						
HLID	Hailey	35.46	83	eP	P	03 49 28.6	+0.1
HLID	Hailey	35.46	83	⇓P	P	03 49 28.5	+0.1
	baz=35						
HAST	UC Hastings Re	35.47	99	⇑P	P	03 49 28.5	-0.1
	baz=35						
S06C	San Francisco	35.53	95	⇑P	P	03 49 29.1	0.0
	baz=35,SNR=6.9						

RES **Resolute Bay** 35.53 26 *e*P P 03 49 27.7 -1.1
comp=Z,96nm,0.6s,mb5.9
S05C **Merced** 35.58 96 ⇓P P 03 49 29.5 -0.1
baz=35
J13A **Cove Ranch, Pi** 35.70 83 P P 03 49 30.8 +0.3
baz=36,SNR=7.3
O09A **Fish Creek Ran** 35.73 90 ⇑P P 03 49 31.0 +0.2
baz=36
G15A **Dillon** 35.76 80 ⇓P P 03 49 30.9 -0.1
baz=36
R07C **Lee Vining** 35.88 94 ⇑P P 03 49 32.7 +0.6
baz=36
L12A **House Creek Ra** 35.89 86 ⇑P P 03 49 32.6 +0.5
baz=36
EGMT **Eagleton** 35.93 74 *e*P P 03 49 31.3 -1.1
comp=Z,28nm,0.9s,mb5.2
EGMT **Eagleton** 35.93 74 ⇑P P 03 49 32.5 0.0
baz=36
U04C **Hernandez Rese** 35.95 98 ⇓P P 03 49 32.7 0.0
baz=36
BOZ **Bozeman (W)** 36.02 78 *e*P P 03 49 33.4 +0.1
comp=Z,57nm,2.8s,mb5.0
BOZ **Bozeman (W)** 36.02 78 ⇑P P 03 49 33.3 +0.1
baz=36
O10A **Cortez Mining,** 36.08 89 ⇑P P 03 49 34.2 +0.5
baz=36
Q08A **Gabbs** 36.08 92 ⇑P P 03 49 34.0 +0.2
baz=36
NVAR **Mina Array Bea** 36.12 93 P P 03 49 33.7 -0.4
NVAR PcP PcP 03 52 00.2 +0.5
NVAR ScP ScP 03 55 44.5 -1.0
NVAR **Mina Array Bea** 36.12 93 P P 03 49 33.7 -0.4
comp=Z,3.6nm,0.9s,mb4.3,baz=298,slow=6.8,SNR=20
NVAR PcP PcP 03 52 00.2 +0.5
comp=Z,0.8nm,0.6s,baz=319,slow=2.6,SNR=3.9
NVAR ScP ScP 03 55 44.6 -1.0
comp=Z,1.0nm,1.0s,baz=321,slow=1.2,SNR=3.7
T06C **Millerton Lake** 36.18 96 ⇑P P 03 49 35.0 +0.4
baz=36
KCC **Kaiser Creek** 36.21 96 ⇓P P 03 49 35.2 +0.3
baz=36
HABR **Khabarovsk** 36.32 287 *e*P P 03 49 34.2 -1.5
HABR *e*S S 03 55 15.4 -0.6
HABR *e* 03 59 52.3
PKD **Parkfield** 36.37 98 ⇓P P 03 49 36.7 +0.4
baz=36
M12A **Wells** 36.38 87 ⇓P P 03 49 37.0 +0.7
baz=36
V04C **Ramage Ranch,** 36.38 99 ⇓P P 03 49 36.9 +0.5
baz=36
P10A **Eureka** 36.51 90 ⇓P P 03 49 37.4 0.0
baz=36
L13A **Double Diamond** 36.58 85 ⇓P P 03 49 38.0 0.0
baz=36
N12A **Clover Valley,** 36.63 87 ⇑P P 03 49 38.8 +0.3
baz=36
MTUM **Tungsten Hills** 36.65 95 *e*P P 03 49 39.0 +0.3
O11A **Cowboy Ranch,** 36.69 89 ⇓P P 03 49 39.4 +0.5
baz=36
S08C **White Mtn Res** 36.79 94 ⇓P P 03 49 40.0 +0.1
baz=37,SNR=6.0
HELL **Mitchell Peak,** 36.81 96 P P 03 49 39.9 -0.2
baz=37,SNR=11
M13A **Montello** 36.87 86 ⇑P P 03 49 40.8 +0.4
baz=37
YMR **Madison River** 36.94 79 *e*P P 03 49 41.2 +0.2
comp=Z,13nm,0.8s,mb4.8
P11A **Circle Ranch,** 36.98 90 ⇑P P 03 49 41.7 +0.3
baz=37
R09A **Tonopah** 36.99 93 P P 03 49 41.9 +0.3
baz=37,SNR=7.1
Q10A **Clear Creek Ra** 37.03 91 P P 03 49 42.2 +0.2
baz=37,SNR=9.8
YNR **Norris Junctio** 37.08 79 *e*P P 03 49 42.6 +0.3
O12A **Currie** 37.16 88 ⇑P P 03 49 43.5 +0.5
baz=37
S09A **Goldfield** 37.23 93 ⇑P P 03 49 43.8 +0.3
baz=37
M14A **Sheep Mountain** 37.28 85 ⇓P P 03 49 44.1 +0.1
baz=37
LKWY **Lake** 37.33 79 *e*P P 03 49 45.0 +0.6
comp=Z,7.6nm,0.8s,mb4.6
IMW **Indian Meadow** 37.38 80 *e*P P 03 49 45.5 +0.8
comp=Z,9.3nm,1.0s,mb4.6
R10A **Warm Springs** 37.43 92 ⇑P P 03 49 45.5 +0.2
baz=37
Q11A **Duckwater** 37.48 91 ⇑P P 03 49 45.7 0.0
baz=37
S10A **Tonopah Range,** 37.48 93 P P 03 49 45.8 +0.1
baz=37,SNR=10.0
CWC **Cottonwood Cre** 37.54 96 ⇑P P 03 49 46.2 0.0
baz=37
P12A **McGill** 37.55 89 ⇑P P 03 49 46.2 0.0
baz=37,SNR=6.0
TPAW **Teton Pass** 37.59 81 *e*P P 03 49 47.0 +0.4
GRAC **Grapevine Rang** 37.60 94 ⇑P P 03 49 46.9 +0.1
baz=38
RLMT **Red Lodge** 37.71 78 *e*P P 03 49 47.6 0.0
comp=Z,14nm,0.9s,mb4.7
O13A **Hicks Ranch, I** 37.71 88 ⇑P P 03 49 47.8 +0.2
baz=38
LOHW **Long Hollow** 37.73 81 *e*P P 03 49 47.2 -0.6
comp=Z,4.9nm,0.9s,mb4.2
N14A **Grayback Hills** 37.76 86 ⇓P P 03 49 48.0 -0.1
baz=38
ISA **Isabella** 37.81 97 ⇓P P 03 49 48.0 -0.6
baz=38
R11A **Troy Canyon, C** 37.83 91 P P 03 49 48.8 +0.1
baz=38,SNR=10
KLR **Kul'dur** 37.86 290 *e*P P 03 49 43.3 -5.5
Q12A **Willow Creek R** 37.86 90 ⇓P P 03 49 49.3 +0.3
baz=38
DAC **Darwin (Calif)** 37.94 95 *e*P P 03 49 50.0 +0.3
MPMC **Manual Prospec** 38.15 96 ⇓P P 03 49 51.7 +0.4
baz=38
FURC **Furnace Creek,** 38.26 95 ⇑P P 03 49 52.4 +0.1
baz=38
TPNV **Topopah Spring** 38.32 93 *e*P P 03 49 52.5 -0.4
comp=Z,12nm,0.9s,mb4.6
TPNV **Topopah Spring** 38.32 93 P P 03 49 52.9 +0.1
baz=38,SNR=8.1
DUG **Dugway** 38.38 87 *e*P P 03 49 52.2 -1.1
comp=Z,12nm,1.3s,mb4.5
LRMC **Laurel Mountai** 38.41 96 ⇑P P 03 49 53.6 0.0
baz=38
R12A **Pony Springs,** 38.44 90 ⇓P P 03 49 53.4 -0.4
baz=38
U10A **Ash Meadows, A** 38.62 94 ⇓P P 03 49 55.5 +0.1
baz=38
LAO **LASA Array** 38.68 74 *e*P P 03 49 55.5 -0.2
comp=Z,5.6nm,0.7s,mb4.4
S12A **Delamar Landin** 38.75 91 ⇓P P 03 49 56.3 -0.1
baz=39
T11A **Corn Creek, Al** 38.76 92 P P 03 49 56.5 0.0
baz=39,SNR=7.2
BW06 **Boulder Array** 38.84 81 *e*P P 03 49 56.9 -0.3
comp=Z,14nm,1.2s,mb4.6
PDAR **Pinedale Array** 38.84 81 P P 03 49 56.5 -0.7
comp=Z,3.5nm,0.8s,mb4.1,baz=302,slow=4.8,SNR=26
SHOC **Shoshone** 38.99 95 ⇓P P 03 49 58.4 0.0
baz=39
GSC **Goldstone** 39.06 96 P P 03 49 59.3 +0.2
baz=39,SNR=6.5
DAU **Daniels Canyon** 39.20 85 *e*P P 03 50 00.7 +0.5
BFSC **Mount Baldy St** 39.27 98 ⇓P P 03 50 00.8 0.0
baz=39
S13A **Holt Ranch, En** 39.37 91 ⇓P P 03 50 01.5 -0.2
baz=39
ARUT **Antelope Range** 39.49 90 *e*P P 03 50 06.6 +3.9
TUQ **Turquoise Mtn.** 39.51 95 ⇓P P 03 50 02.4 -0.4
baz=39
V11A **Goodsprings** 39.55 94 ⇑P P 03 50 02.7 -0.4
baz=39
SCI **San Clemente I** 39.60 100 ⇑P P 03 50 03.5 -0.1
baz=40
FCC **Fort Churchill** 39.62 51 *e*P P 03 50 03.1 -0.4
comp=Z,16nm,1.0s,mb4.7
HEC **Hector,Ludlow** 39.67 96 ⇓P P 03 50 04.0 -0.2
baz=40
S14A **Cedar City** 39.68 90 ⇑P P 03 50 04.4 +0.2
baz=40
CCUT **Cedar City** 39.69 90 *e*P P 03 50 04.0 -0.4
T13A **Saint George** 39.70 91 ⇑P P 03 50 04.5 +0.1
baz=40
MSU **Marysvale** 39.81 88 *e*P P 03 50 04.7 -0.5
V12A **Nelson** 39.97 94 P P 03 50 07.0 +0.3
baz=40,SNR=5.0
MURC **Murrieta** 39.98 98 ⇑P P 03 50 06.8 +0.1
baz=40
U13A **Pakoon Wash** 40.06 92 P P 03 50 07.9 +0.5
baz=40,SNR=7.3
GMRC **Granite Mounta** 40.11 96 ⇓P P 03 50 07.8 0.0
baz=40
T14A **Hurricane** 40.18 91 ⇓P P 03 50 08.5 +0.1
baz=40
W12A **Cal Nev Ari** 40.24 94 ⇓P P 03 50 09.0 +0.1
baz=40
PFO **Pinyon Flat Ob** 40.42 98 *e*P P 03 50 09.2 -1.2
comp=Z,18nm,1.6s,mb4.5
PFO **Pinyon Flat Ob** 40.42 98 ⇑P P 03 50 09.9 -0.5
baz=40
BELC **Belle Mtn.** 40.43 97 ⇑P P 03 50 10.2 -0.3
baz=40
SRU **San Rafael** 40.44 86 *e*pP pP 03 50 16.6 +2.1
U14A **Mt Trumbull** 40.54 92 ⇓P P 03 50 11.3 -0.1
baz=40
IRM **Iron Mountain** 40.84 96 ⇑P P 03 50 13.4 -0.5
baz=41
MONP **Monument Peak** 40.94 98 ⇑P P 03 50 14.2 -0.5
baz=41
W13A **Hualapai Mount** 40.98 94 ⇑P P 03 50 14.5 -0.4
baz=41
BC3 **Big Chuckw Mtn** 41.00 97 ⇑P P 03 50 14.3 -0.9
baz=41
VLA **Vladivostok** 41.04 282 *i* P P 03 50 15.9 +0.5
MJAR **Matsushiro Arr** 41.25 270 P P 03 50 17.5 +0.3
MJAR **Matsushiro Arr** 41.25 270 P P 03 50 17.5 +0.3
comp=Z,6.7nm,0.8s,mb4.3,baz=50,slow=7.5,SNR=15
MAJO **Matsushiro** 41.25 270 *e*P P 03 50 17.2 0.0
comp=Z,22nm,0.8s,mb4.8
MAT **Matsushiro** 41.25 270 P P 03 50 17.1 -0.1
SWSC **Sam W. Stewart** 41.28 98 ⇓P P 03 50 16.8 -0.7
baz=41
DVTC **Desert V Tower** 41.30 98 ⇓P P 03 50 16.8 -0.8
baz=41
X13A **Yucca** 41.35 94 ⇓P P 03 50 17.5 -0.5
baz=41
PDMCI **Parker Dam,Lak** 41.36 95 ⇑P P 03 50 17.4 -0.7
baz=41
W14A **Seligman** 41.39 93 ⇓P P 03 50 18.3 -0.1
baz=41
Y12C **Blythe** 41.50 96 ⇓P P 03 50 19.0 -0.2
baz=41
MDJ **Mudanjiang** 41.55 285 P P 03 50 18.2 -1.4
MDJ AP pP 03 50 21.3 -2.3
MDJ PP PP 03 51 55.0 -0.4
MDJ S S 03 56 35.9 +1.1
MDJ SCS ScS 04 00 20.8 -1.7
MDJ AMB AMB
comp=Z,14nm,0.8s,mb4.6
MDJ AMB AMB
comp=Z,116nm,4.3s
MDJ LR LR
comp=Z,100nm,19.2s,MS3.7
MDJ **Mudanjiang** 41.55 285 *e*P P 03 50 18.0 -1.6
comp=Z,5.9nm,0.8s,mb4.3
GLA **Glamis** 41.79 97 ⇑P P 03 50 21.4 -0.3
baz=42
W15A **Williams** 41.91 92 ⇑P P 03 50 22.7 0.0
baz=42
X14A **Yava** 42.01 94 P P 03 50 23.7 +0.2
baz=42,SNR=7.5
WUAZ **Wupatki** 42.23 91 *e*P P 03 50 25.5 +0.2
comp=Z,7.4nm,0.9s,mb4.3
WUAZ **Wupatki** 42.23 91 ⇑P P 03 50 25.0 -0.3
baz=42
PV01 **Paradox Valley** 42.25 86 *e*P P 03 50 25.6 +0.2
Y14A **Wickenburg** 42.30 94 P P 03 50 25.4 -0.4
baz=42,SNR=6.2
X15A **Humboldt** 42.39 93 ⇓P P 03 50 26.3 -0.3
baz=42
SMCO **Snowmass** 42.56 84 *e*P P 03 50 26.0 -1.9
comp=Z,68nm,2.6s,mb4.9
ULM **Lac du Bonnet** 42.69 64 P P 03 50 27.6 -1.2
comp=Z,2.6nm,0.8s,mb4.0,baz=285,slow=8.0,SNR=7.4
ULM PcP PcP 03 52 22.5 +2.1
comp=Z,1.7nm,0.7s,baz=0.0,slow=1.0,SNR=2.4
ULM LR LR 04 09 15.5
comp=Z,268nm,19.4s,MS4.2,baz=271,slow=38
Z14A **Wintersburg** 42.72 95 ⇑P P 03 50 28.9 -0.4
baz=43
BOD **Bodaibo** 43.08 310 ⇓*i*P P 03 50 29.7 -2.1
BOD *e* 03 50 39.6
BOD pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BOD pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
115A **Sonoran Desert** 43.62 95 ⇑P P 03 50 36.2 -0.4
baz=44
AGMN **Agassiz Refuge** 43.74 66 *e*P P 03 50 36.7 -0.6
comp=Z,7.7nm,0.9s,mb4.4
116A **Eloy** 44.03 95 ⇑P P 03 50 39.8 -0.1
baz=44
SDCO **Great Sand Dun** 44.36 84 *e*P P 03 50 42.0 -0.4
comp=Z,7.9nm,1.1s,mb4.4
CN2 **Changchun** 44.45 287 *e*P P 03 50 42.6 -0.5
CN2 *e*XP sP 03 50 49.6 +0.9
CN2 *e*S S 03 57 16.3 -1.1
CN2 AMB AMB
comp=Z,70nm,1.0s,mb5.3
CN2 AMB AMB
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,800nm,16.0s,MS4.8
CN2 LR LR
comp=E,500nm,16.0s,MS4.8
CN2 LR LR
comp=Z,400nm,17.0s,MS4.4
HIA **Hailar** 44.56 297 *e*P P 03 50 43.0 -0.9
comp=Z,6.4nm,0.7s,mb4.6
CBIJ **Chichi jima** 45.45 256 LR LR 04 05 18.7
comp=Z,2μm,21.7s,MS5.0,baz=290,slow=30
LAZ **Ladron** 45.56 89 *e*P P 03 50 51.9 -0.1
ANMO **Albuquerque** 45.61 88 *e*P P 03 50 52.5 +0.1
comp=Z,12nm,1.7s,mb4.6
ANMO *e*pP pP 03 51 03.0 +6.6
ANMO **Albuquerque** 45.61 88⇑*e*P P 03 50 51.9 -0.5
LPM **Los Pinos Moun** 45.93 89 *e*P P 03 50 55.4 +0.5
ECSD **EROS,Sioux Fal** 45.95 72 *e*P P 03 50 53.0 -1.9
comp=Z,5.8nm,0.8s,mb4.6
BNM **Barren Site** 46.04 89 *e*P P 03 50 55.4 -0.4
KSRS **Korea Array** 46.92 278 P P 03 51 03.3 +0.6
comp=Z,8.2nm,0.9s,mb4.7,baz=52,slow=7.3,SNR=15
KSRS PcP PcP 03 52 35.8 +0.7
comp=Z,2.4nm,0.8s,baz=51,slow=5.3,SNR=3.3
KSRS LR LR 04 11 05.8
comp=Z,84nm,18.3s,MS3.7,baz=159,slow=36
MNTX **Cornudas Mount** 48.48 90 *e*P P 03 51 14.2 -0.7
comp=Z,5.1nm,0.9s,mb4.5
GDL2 **Guadalupe Moun** 48.76 89 *e*P P 03 51 20.1 +3.2
DAG **Danmarks Havn** 49.37 9 ⇓*i*P P 03 51 20.0 -1.1
DAG pmax pmax
comp=Z,43nm,1.0s,mb5.4
DAG **Danmarks Havn** 49.37 9 ⇓*i*P P 03 51 20.0 -1.1
comp=Z,43nm,1.0s,mb5.4
WMOK **Wiita Mounta** 50.42 82 *e*P P 03 51 28.2 -1.4
comp=Z,6.9nm,0.8s,mb4.7
LTX **Lajitas** 51.20 91 *e*P P 03 51 34.4 -1.2
comp=Z,18nm,1.1s,mb4.9
TXAR **Lajitas Array** 51.20 91 P P 03 51 34.5 -1.0
comp=Z,4.6nm,0.8s,mb4.5,baz=299,slow=5.4,SNR=51
TLY **Talaya** 51.47 307 *e*P P 03 51 36.8 -0.5
comp=Z,27nm,1.0s,mb5.1
TLY **Talaya** 51.47 307 *e*P P 03 51 37.2 -0.1
TLY *e* 03 53 33.7
TLY pmax pmax
comp=Z,21nm,0.8s,mb5.1
SFJD **Kangerlussuaq** 51.52 27 P P 03 51 37.5 0.0
comp=Z,20nm,0.9s,mb5.0,baz=305,slow=10,SNR=5.7
ULN **Ulaanbaatar** 52.17 302 *e*P P 03 51 42.1 -0.4
comp=Z,22nm,0.9s,mb5.1
ULN **Ulaanbaatar** 52.17 302 *c* *i*P P 03 51 42.1 -0.4
BJI **Beijing** 52.19 289 P P 03 51 41.4 -1.5
BJI AP pP 03 51 44.6 -2.3
BJI PCP PcP 03 52 53.5 -0.8
BJI S S 03 59 05.7 -1.2
BJI SS SS 04 02 42.7 -1.1
BJI AMB AMB
comp=Z,23nm,0.9s,mb5.1
BJI LR LR
comp=N,134nm,19.1s,MS4.2
BJI LR LR
comp=E,149nm,17.8s,MS4.2
BJI LR LR
comp=Z,194nm,21.4s,MS4.1
BJI **Beijing** 52.19 289 P P 03 51 41.4 -1.5
BJI pP pP 03 51 44.6 -2.3
BJI sP sP 03 51 45.9 -2.6
BJI PcP PcP 03 52 53.5 -0.8
BJI S S 03 59 05.7 -1.2
BJI sS sS 03 59 11.1 -2.5
BJI SS SS 04 02 42.7 -1.1
BJT **Baijiatuau** 52.21 289 *e*P P 03 51 43.1 +0.1
comp=Z,24nm,0.9s,mb5.1
ZAK **Zakamensk** 52.47 306 *e*P P 03 51 44.6 -0.2
ZAK *e* 03 52 56.0
ZAK pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
SONM **Songino Array** 52.53 302 P P 03 51 45.2 0.0
comp=Z,14nm,1.0s,mb4.8,baz=75,slow=4.6,SNR=75
SONM PcP PcP 03 52 56.0 +0.6
comp=Z,3.4nm,0.9s,baz=69,slow=1.8,SNR=3.6
SONM ScP ScP 03 56 58.3 +6.2
comp=Z,0.7nm,0.8s,baz=50,slow=2.8,SNR=3.9
JCT **Junction City** 52.74 87 *e*P P 03 51 45.2 -1.9
comp=Z,28nm,1.0s,mb5.2
MOY **Mondy** 52.76 309 *e*P P 03 51 46.8 -0.1
MOY pmax pmax
comp=Z,21nm,1.1s,mb5.0
JOW **Kunigami** 54.05 268 LR LR 04 14 15.0
comp=Z,98nm,18.7s,MS3.9,baz=58,slow=35
SCHQ **Schefferville** 54.23 45 P P 03 51 56.6 -1.0
comp=Z,4.2nm,0.7s,mb4.5,baz=324,slow=9.5,SNR=5.6
SCHQ LR LR 04 16 39.3
comp=Z,239nm,18.4s,MS4.3,baz=340,slow=38
HHC **Hu-ho-hao-te** 54.29 292 *e*P P 03 51 58.7 +0.4
HHC AP pP 03 52 08.7 +6.3
HHC PCP PcP 03 53 03.6 +1.3
HHC PP PP 03 54 01.8 +1.9
HHC SCP ScP 03 56 56.8 -3.1
HHC PCS PcS 03 57 01.4 -0.3
HHC S S 03 59 31.3 -4.1
HHC XS sS 03 59 47.9 +5.7
HHC SCS ScS 04 01 42.1 -5.0
HHC SS SS 04 03 11.3 -5.6
HHC AMB AMB
comp=Z,34nm,1.2s,mb5.2
HHC AMB AMB
comp=Z,153nm,3.7s
HHC LR LR
comp=N,202nm,13.1s,MS4.5
HHC LR LR
comp=E,281nm,16.6s,MS4.5
HHC LR LR
comp=Z,273nm,15.5s,MS4.4
SSE **Sheshan** 55.32 277 *e*P P 03 52 04.9 -0.9
SSE AP pP 03 52 15.1 +5.2
SSE S S 03 59 48.4 -1.0
SSE SCS ScS 04 01 53.5 -1.2
SSE AMB AMB
comp=Z,43nm,0.7s,mb5.6
SSE AMB AMB
comp=Z,118nm,6.0s
SSE LR LR
comp=Z,71nm,18.1s,MS3.8
SSE **Sheshan** 55.32 277 *e*P P 03 52 04.9 -0.9
SSE pP pP 03 52 15.1 +5.2
SSE sP sP 03 52 21.0 +10
SSE S S 03 59 48.4 -1.0
SSE sS sS 04 00 09.3 +13
SSE ScS ScS 04 01 53.5 -1.2
BTO **Baotou** 55.33 293 *e*P P 03 52 06.6 +0.8
OXF **Oxford** 56.19 76 *e*P P 03 52 10.0 -2.0
comp=Z,28nm,0.8s,mb5.3
KEV **Kevo** 57.59 354 *ep* P 03 52 19.6 -1.8
comp=Z,2.8nm,0.5s,mb4.5
KEV **Kevo** 57.59 354 *e*P P 03 52 19.6 -1.8
KEV pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
ARCES **ARCESS Array B** 57.89 355 P P 03 52 22.5 -1.0
ARCES PcP PcP 03 53 14.9 -0.9
ARCES LR LR 04 20 40.8
ARCES **ARCESS Array B** 57.89 355 P P 03 52 22.5 -1.0
comp=Z,20nm,0.9s,mb5.2,baz=3.1,slow=7.9,SNR=32
ARCES PcP PcP 03 53 14.9 -0.9
comp=Z,8.1nm,0.9s,baz=15,slow=5.1,SNR=5.4
ARCES LR LR 04 20 40.8
comp=Z,191nm,18.4s,MS4.2,baz=10,slow=39
NVS **Novosibirsk** 58.29 320 *e*P P 03 52 25.1 -1.5
NVS *e* 03 54 29.3
NVS pmax pmax
comp=Z,19nm,1.2s,mb5.0
NVS pmax pmax
comp=N,7.0nm,1.5s
NVS pmax pmax
comp=E,7.0nm,1.1s
LVZ **Lovozero** 58.80 351 *d* *i*P P 03 52 29.2 -0.7
LVZ pmax pmax
comp=Z,84nm,1.1s,mb5.7
LVZ MLR MLR
comp=Z,300nm,15.0s,MS4.5
APA **Apatity** 59.24 351 *i* P 03 52 35.7 +2.7
APA MLR MLR
comp=Z,1μm,16.0s,MS5.0
WHN **Wuhan** 59.83 282 P P 03 52 37.2 -0.4
XAN **Xi'an** 60.52 288 P P 03 52 41.8 -0.5
XAN AP pP 03 52 50.4 +4.0
XAN AMB AMB
comp=Z,17nm,1.4s,mb5.0
GTA **Gaotai** 61.76 299 ⇑P P 03 52 50.5 -0.2
GTA AP pP 03 53 00.5 +5.7
GTA XP sP 03 53 04.5 +8.1
GTA PP PP 03 55 08.8 +2.6
GTA S S 04 01 11.1 -2.1
GTA SS SS 04 05 14.8 +0.6
GTA AMB AMB
comp=Z,29nm,1.0s,mb5.4
GTA AMB AMB
comp=Z,101nm,8.4s
GTA LR LR
comp=N,240nm,19.4s,MS4.6
GTA LR LR
comp=E,327nm,20.2s,MS4.6
GTA LR LR
comp=Z,373nm,17.1s,MS4.6
LZH **Lanzhou** 61.95 293 *e*P P 03 52 52.5 +0.5
LZH AP pP 03 53 02.9 +6.8
LZH PP PP 03 55 10.3 +2.4
LZH *e*S S 04 01 11.0 -4.6
LZH SS SS 04 05 11.0 -6.3
LZH AMB AMB
comp=Z,80nm,1.3s,mb5.7
LZH AMB AMB
comp=Z,190nm,4.3s
LZH LR LR
comp=N,895nm,15.8s
LZH LR LR
comp=Z,1μm,17.0s,MS5.1
LZH **Lanzhou** 61.95 293 *e*P P 03 52 52.5 +0.5
LZH pP pP 03 53 02.9 +6.8
LZH sP sP 03 53 06.5 +8.8
LZH PP PP 03 55 10.3 +2.4
LZH *e*S S 04 01 11.0 -4.6
LZH sS sS 04 01 30.0 +7.6
LZH SS SS 04 05 11.0 -6.3
TMCR **Tamitsa** 62.02 348 *e*P P 03 52 48.3 -3.7
SOKR **Solikamsk** 62.83 337 *d* *i*P P 03 52 56.0 -1.4
SOKR pmax pmax
comp=Z,30nm,1.0s,mb5.4
KURK **Kurchatov** 63.25 320 *e*P P 03 52 59.4 -1.0
comp=Z,18nm,1.1s,mb5.1
KURK **Kurchatov** 63.25 320⇑*e*P P 03 52 58.6 -1.8
JOF **Joensuu** 63.99 351 *ep* P 03 53 03.7 -1.4
comp=Z,3.6nm,0.4s,mb4.8
JOF **Joensuu** 63.99 351 *e*P P 03 53 03.7 -1.4
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.8
SVE **Sverdlovsk** 64.24 333 ⇓*e*P P 03 53 07.0 +0.2
SVE *e*S S 04 01 59.8 +16
SVE pmax pmax
comp=Z,45nm,1.1s,mb5.4
BRVK **Borovoye** 64.45 326 *e*P P 03 53 07.9 -0.4
comp=Z,18nm,1.1s,mb5.0
WMQ **Urumqi** 64.63 309 ⇑*i*P P 03 53 09.0 -0.6
WMQ AP pP 03 53 19.5 +5.8
WMQ PCP PcP 03 53 42.8 -0.6
WMQ PP PP 03 55 33.1 +1.9
WMQ SCP 03 57 41.5

WMQ S S 04 01 45.2 -3.6
WMQ XS sS 04 02 01.5 +5.9
WMQ SCS ScS 04 02 57.0 -6.5
WMQ AMB AMB
comp=Z,18nm,0.8s,mb5.2
WMQ AMB AMB
comp=Z,197nm,5.2s
WMQ LR LR
comp=N,272nm,20.3s,MS4.5
WMQ LR LR
comp=E,125nm,20.2s,MS4.1
WMQ LR LR
comp=Z,112nm,19.0s,MS4.1
MKAR Makanchi Array 64.79 315 *i* P **P 03 53 09.6 -1.0**
MKAR pmax pmax
comp=Z,8.0nm,0.7s
MKAR Makanchi Array 64.79 315 P **P 03 53 09.6 -1.0**
comp=Z,7.5nm,0.7s,mb4.8,baz=46,slow=5.8,SNR=66
MKAR LR LR 04 22 32.5
comp=Z,155nm,18.7s,MS4.2,baz=37,slow=37
ARU Arti 65.15 334 *eP* **P 03 53 12.1 -0.6**
comp=Z,32nm,1.1s,mb5.3
ARU Arti 65.15 334 *c iP* **P 03 53 12.2 -0.5**
ARU *e* 03 55 30.6
ARU *e*PPP 03 57 06.7
ARU *e*S S 04 01 54.8 0.0
ARU SS SS 04 06 04.8 -1.3
ARU pmax pmax
comp=Z,42nm,1.2s,mb5.3
KAF Kangasniemi 65.21 353 *ep* **P 03 53 11.7 -1.3**
comp=Z,6.5nm,0.4s,mb5.0,baz=4.6,slow=6.2
KAF Kangasniemi 65.21 353 *eP* **P 03 53 11.7 -1.3**
KAF pmax pmax
comp=Z,7.0nm,0.4s,mb5.0
CD2 Chengdu 65.78 290⇑ *iP* **P 03 53 18.1 +0.8**
CD2 AP pP 03 53 22.6 +1.2
CD2 XP sP 03 53 25.2 +2.2
CD2 PP PP 03 55 44.5 +2.8
CD2 S S 04 02 01.4 -1.9
CD2 XS sS 04 02 09.1 -1.1
CD2 SS SS 04 06 16.7 -0.5
CD2 AMB AMB
comp=Z,20nm,1.0s,mb5.1
CD2 AMB AMB
comp=Z,40nm,6.4s
CD2 LR LR
comp=N,640nm,18.0s,MS5.0
CD2 LR LR
comp=E,370nm,16.8s,MS5.0
CD2 LR LR
comp=Z,180nm,15.6s,MS4.4
FIA1 FINESS Array S 65.89 353 *eP* **P 03 53 16.4 -1.0**
FINES FINESS Array B 65.89 353 *eP* **P 03 53 16.8 -0.6**
comp=Z,16nm,0.6s,mb5.2,baz=26,slow=7.6,SNR=86
FINES LR LR 04 26 18.0
comp=Z,135nm,18.3s,MS4.2,baz=152,slow=40
NB2 NORSAR Subarra 66.75 1 P **P 03 53 22.2 -0.8**
comp=Z,4.0nm,0.8s,mb4.5,baz=0.2,slow=6.9
NOA NORSAR Array B 66.75 1 P **P 03 53 22.6 -0.4**
comp=Z,8.5nm,0.9s,mb4.8,baz=1.3,slow=6.5,SNR=17
NOA LR LR 04 27 12.0
comp=Z,106nm,18.1s,MS4.1,baz=260,slow=40
GYA Guiyang 67.40 284 P **P 03 53 28.6 +1.0**
GYA PCP PcP 03 53 56.5 +1.4
GYA PP PP 03 55 58.9 +3.0
GYA SCP 03 57 58.2
GYA S S 04 02 22.4 -0.6
GYA SCS ScS 04 03 23.1 -2.3
GYA SS SS 04 06 43.3 +0.8
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,470nm,18.6s,MS4.9
GYA LR LR
comp=E,480nm,18.0s,MS4.9
GYA LR LR
comp=Z,490nm,19.8s,MS4.7
HFS Hagfors 67.67 360 P **P 03 53 28.1 -0.7**
comp=Z,9.3nm,0.4s,mb5.2,baz=29,slow=3.7,SNR=80
HFS LR LR 04 23 18.2
comp=Z,94nm,18.5s,MS4.0,baz=254,slow=36
KONO Kongsberg 68.11 2⇑ *eP* **P 03 53 31.5 -0.1**
MOS Moscow 70.20 346 *eP* **P 03 53 43.3 -1.3**
MOS *e* 03 56 21.8
AKTO Aktyubinsk 70.61 331 LR LR 04 29 45.6
comp=Z,142nm,18.1s,MS4.3,baz=214,slow=40
KMI Kunming 70.72 286 P **P 03 53 48.4 +0.1**
KMI AMB AMB
comp=Z,15nm,0.8s,mb5.0
TKM2 Tokmak 2 70.75 316 *eP* **P 03 53 48.5 +0.3**
comp=Z,17nm,1.2s,mb4.8
TKM2 Tokmak 2 70.75 316 P **P 03 53 48.7 +0.5**
SNR=10
USP Ospenovka 70.92 317 P **P 03 53 49.5 +0.2**
SNR=12
OBN Obninsk 70.96 346 *eP* **P 03 53 48.0 -1.3**
comp=Z,18nm,0.8s,mb5.1
OBN Obninsk 70.96 346⇓ *eP* **P 03 53 48.6 -0.7**
OBN *e* 03 56 21.7
OBN *e*S S 04 02 47.3 -17
OBN pmax pmax
comp=Z,88nm,1.6s,mb5.4
CHMS Chumysh 71.04 317 P **P 03 53 50.4 +0.4**
SNR=5.4
FRU Bishkek 71.23 317 *eP* **P 03 53 49.0 -2.1**
FRU pmax pmax
comp=Z,40nm,1.8s,mb5.0
KBK Karagaybulak 71.23 317 P **P 03 53 51.8 +0.7**
SNR=8.9
PPT Papeete 71.42 163 *e*LR LR 04 15 35.9
comp=Z,126nm,22.5s
AAK Ala-Archa 71.44 317 *eP* **P 03 53 51.7 -0.8**
comp=Z,14nm,0.8s,mb4.9
AAK Ala-Archa 71.44 317 *c iP* **P 03 53 52.0 -0.4**
AAK pmax pmax
comp=Z,14nm,0.9s,mb4.9
AAK MLR MLR
comp=Z,100nm,18.0s,MS4.1
AAK Ala-Archa 71.44 317 P **P 03 53 53.0 +0.5**
SNR=13
EKA Eskdalemuir Ar 71.63 10 P **P 03 53 53.6 +0.3**
comp=Z,12nm,0.9s,mb4.8,baz=341,slow=4.8,SNR=17
EKS2 Erkin-Say 71.72 317 *eP* **P 03 53 54.4 +0.4**
comp=Z,10nm,0.8s,mb4.8
EKS2 *ep*P pP 03 54 05.1 +6.9
EKS2 Erkin-Say 71.72 317 P **P 03 53 54.8 +0.7**
SNR=12
UCH Uchtor 71.77 317 *eP* **P 03 53 54.7 +0.3**
comp=Z,10.0nm,1.1s,mb4.7
AML Almayashu 72.19 317 *eP* **P 03 53 57.6 +0.7**
comp=Z,18nm,1.1s,mb4.9
AML *ep*P pP 03 54 08.8 +7.7
AML Almayashu 72.19 317 P **P 03 53 58.1 +1.1**
SNR=8.6
MNK Minsk 72.62 351 *eP* **P 03 53 58.0 -1.3**
SUW Suwalki 73.48 354 *eP* **P 03 54 03.9 -0.4**
LSA Lhasa 73.75 298 P **P 03 54 07.6 +1.2**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.0
LSA Lhasa 73.75 298 *eP* **P 03 54 07.5 +1.1**
comp=Z,24nm,0.9s,mb5.1
LSA *ep*P pP 03 54 18.0 +7.5
BSEG Bad Segeberg 73.85 2 *eP* **P 03 54 06.8 +0.2**
comp=Z,18nm,1.0s,mb5.0
VRHR Novokhopersk 73.97 342 *eP* **P 03 54 05.8 -1.5**
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=Z,20nm,0.4s,mb5.4
VRHR pmax pmax
comp=E,9.0nm,0.5s
VRSR Storozhevoye 74.30 343 *eP* **P 03 54 09.0 -0.2**
VRSR pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
VRSR pmax pmax
comp=N,6.0nm,1.0s
VRSR pmax pmax
comp=E,2.0nm,1.0s
NRDL Niedersach Rie 75.29 2 *eP* **P 03 54 14.9 0.0**
comp=Z,25nm,1.2s,mb5.0
RUE Ruedersdorf 75.34 360 *eP* **P 03 54 15.1 -0.1**
comp=Z,28nm,1.0s,mb5.2
IBBN Ibbenburen 75.41 3 *eP* **P 03 54 15.6 0.0**
comp=Z,24nm,0.8s,mb5.2

CLZ Clausthal 75.95 2 *eP* **P 03 54 19.2 +0.5**
comp=Z,37nm,1.3s,mb5.2
AKASG Malin Array Be 76.23 350 *i* P **P 03 54 19.7 -0.6**
AKASG pmax pmax
comp=Z,15nm,0.4s
AKASG Malin Array Be 76.23 350 P **P 03 54 18.8 -1.5**
comp=Z,14nm,0.4s,mb5.2,baz=11,slow=5.6,SNR=54
AKBB Malin Array Si 76.23 350 *eP* **P 03 54 19.5 -0.8**
AKBB *ep*P pP 03 54 30.4 +5.9
KIEV Kiev 76.24 350 *eP* **P 03 54 19.1 -1.2**
comp=Z,34nm,1.0s,mb5.2
KIEV *ep*P pP 03 54 30.7 +6.1
CLL Collm 76.51 0⇑ *iP* **P 03 54 21.5 -0.4**
comp=Z,11nm,1.1s,mb4.7
CLL *i* PcP PcP 03 54 32.4 -1.1
CLL *ep*PcP 03 54 39.0
CLL Collm 76.51 0 *eP* **P 03 54 21.3 -0.6**
comp=Z,11nm,1.1s,mb4.7
FBE Freiberg 76.90 360 *eP* **P 03 54 24.3 +0.2**
comp=Z,27nm,1.3s,mb5.0
BRG Berggiesshubel 76.95 359 *i* P **P 03 54 24.4 0.0**
BRG *e* 03 54 35.8
BRG pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
BRG Berggiesshubel 76.95 359 *eP* **P 03 54 24.3 -0.1**
comp=Z,20nm,1.2s,mb4.9
BRG Berggiesshubel 76.95 359 *i* P **P 03 54 24.4 0.0**
comp=Z,20nm,1.2s,mb4.9
BRG *e* 03 54 35.8
comp=Z,7.7nm,1.1s
UBBA Unterbreizbach 76.97 2 *eP* **P 03 54 25.1 +0.6**
comp=Z,23nm,1.8s,mb4.8
MEM Membach 77.03 5 P **P 03 54 24.8 -0.1**
comp=Z,6.6nm,1.4s,mb4.4
SNF Seneffe 77.04 6 P **P 03 54 23.7 -1.2**
TBI Tubuai 77.09 164 *e*LR LR 04 18 18.3
comp=Z,104nm,26.8s
MOX Moxa 77.17 1 *eP* **P 03 54 25.6 0.0**
comp=Z,35nm,1.7s,mb5.0
MOX *e* 03 54 37.0
BCLA Clavier 77.19 5 P **P 03 54 25.9 +0.1**
comp=Z,14nm,1.9s,mb4.6
UPC Upice 77.29 358 *eP* **P 03 54 26.7 +0.4**
UPC *e*PCP PcP 03 54 37.6 +0.7
PVCC Panska Ves 77.29 359 *eP* **P 03 54 26.1 -0.2**
PVCC *e*PCP PcP 03 54 37.7 +0.8
WERD Werda 77.37 1 *eP* **P 03 54 26.7 -0.1**
comp=Z,9.0nm,1.4s,mb4.5
TANN Tannenbergstha 77.41 0 *eP* **P 03 54 27.1 +0.1**
comp=Z,11nm,1.3s,mb4.6
DPC Dobruska-Polom 77.44 358 *eP* **P 03 54 27.5 +0.4**
DPC *e*PCP PcP 03 54 38.3 +0.8
OJC Ojcow 77.45 356 *eP* **P 03 54 26.6 -0.6**
GUNZ Gunzen 77.46 1 *eP* **P 03 54 26.9 -0.3**
comp=Z,12nm,1.4s,mb4.6
TAPN Taplejung 77.46 299 *eP* **P 03 54 27.5 -0.1**
comp=Z,34nm,0.8s,mb5.3
DOU Dourbes 77.47 6 P **P 03 54 26.9 -0.4**
comp=Z,9.8nm,2.2s,mb4.3
GIVF Givet 77.48 5⇑ *iP* **P 03 54 27.2 -0.2**
comp=Z,26nm,0.8s,mb4.9
GIVF Givet 77.48 5⇑ *iP* **P 03 54 27.2 -0.2**
comp=Z,13nm,0.8s,mb4.9
BAIF Baives 77.48 6⇑ *iP* **P 03 54 27.5 +0.1**
TNS Taunus Mts 77.52 3 *eP* **P 03 54 27.8 +0.2**
comp=Z,12nm,1.2s,mb4.7
WERN Wernitzgruen 77.53 1 *eP* **P 03 54 28.1 +0.4**
comp=Z,16nm,1.1s,mb4.9
NKC Novy Kostel 77.59 0 *eP* **P 03 54 28.0 0.0**
NKC *e*PCP PcP 03 54 39.3 +1.1
LVV L'vov 77.59 353 *eP* **P 03 54 28.1 +0.1**
LVV *e* 03 54 38.3
PRU Pruhonice 77.83 359 *eP* **P 03 54 29.8 +0.5**
PRU *e*PCP PcP 03 54 40.2 +1.0
KWP Kalwaria 77.87 354 *eP* **P 03 54 30.7 +1.1**
OKC Ostrava-Krasne 77.90 357 *eP* **P 03 54 29.9 +0.2**
OKC *e*PCP PcP 03 54 40.9 +1.4
MORC Moravsky Berou 77.98 357 *eP* **P 03 54 30.5 +0.4**
comp=Z,17nm,1.1s,mb4.9
MORC *ep*P pP 03 54 41.7 +7.3
MORC Moravsky Berou 77.98 357⇓ *iP* **P 03 54 30.7 +0.5**
WLF Walferdange 77.98 5 *eP* **P 03 54 30.3 +0.1**
comp=Z,41nm,1.6s,mb5.1
ODAN Odare 78.02 298 *eP* **P 03 54 30.5 -0.3**
JIRN Jiri 78.02 300 *eP* **P 03 54 31.2 +0.4**
comp=Z,158nm,1.3s,mb5.8
ROTZ Rotzenmuhle 78.05 1 *eP* **P 03 54 30.2 -0.4**
comp=Z,18nm,1.4s,mb4.8
GRA1 Grafenberg Arr 78.12 1 *eP* **P 03 54 31.2 +0.3**
comp=Z,33nm,1.3s,mb5.1
GRA1 *ep*P pP 03 54 42.8 +7.6
GRF Grafenberg Arr 78.12 1 *eP* **P 03 54 31.2 +0.3**
comp=Z,33nm,1.3s,mb5.1
GRF *ep*P pP 03 54 42.8 +7.6
GRFO Grafenberg 78.12 1 *eP* **P 03 54 30.9 -0.1**
STHS Stebnicka Huta 78.17 355 *i* P **P 03 54 32.5 +1.2**
comp=Z,16nm,1.0s,mb4.9
STHS Stebnicka Huta 78.17 355 *i* P **P 03 54 32.5 +1.2**
STHS pmax pmax
comp=Z,16nm,1.0s,mb4.9
NIE Niedzica 78.22 355 *eP* **P 03 54 32.5 +1.0**
FLN La Foliniere 78.39 9⇑ *iP* **P 03 54 32.9 +0.4**
KKN Kakani 78.40 301 *eP* **P 03 53 33.0 +0.1**
VRAC Vranov 78.47 358⇓ *iP* **P 03 54 33.6 +0.7**
VRAC Vranov 78.47 358 P **P 03 54 33.3 +0.4**
comp=Z,12nm,1.0s,mb4.8,baz=355,slow=6.2,SNR=9.0
VRAC LR LR 04 28 50.1
comp=Z,71nm,20.1s,MS4.0,baz=196,slow=35
VRAC Vranov 78.47 358 *iP* **P 03 54 33.6 +0.7**
TREC Trest 78.51 358 *eP* **P 03 54 33.0 -0.1**
TREC *e*PCP PcP 03 54 43.5 +1.3
GKN Gorkha 78.56 301 *eP* **P 03 54 33.6 -0.2**
comp=Z,57nm,0.8s,mb5.5
KOLS Kolonicke sedl 78.59 354 *i* P **P 03 54 34.2 +0.6**
LDF La Druitiere 78.60 9 *eP* **P 03 54 33.2 -0.4**
CRVS Cervenica-Dubn 78.67 354 *eP* **P 03 54 34.1 +0.1**
WET Wettzell 78.68 0 *eP* **P 03 54 34.3 +0.3**
comp=Z,12nm,1.5s,mb4.6
KHC Kasperske Hory 78.69 360 *eP* **P 03 54 34.7 +0.6**
KHC *e*PCP PcP 03 54 44.5 +1.5
GRR Gorron 78.73 9 *eP* **P 03 54 35.0 +0.7**
GERES GERESS Array B 78.98 360 P **P 03 54 35.6 -0.1**
comp=Z,3.0nm,0.8s,mb4.3,baz=0.0,slow=4.7,SNR=19
GERES LR LR 04 35 32.1
comp=Z,179nm,18.0s,MS4.5,baz=322,slow=40
STU Stuttgart 79.00 3 *eP* **P 03 54 35.7 -0.1**
comp=Z,13nm,1.0s,mb4.8
KECS Kecovo 79.15 355 *i* P **P 03 54 37.1 +0.5**
comp=Z,11nm,1.4s,mb4.6
KECS Kecovo 79.15 355 *i* P **P 03 54 37.1 +0.5**
KECS pmax pmax
comp=Z,11nm,1.4s,mb4.6
VYHS Vyhne 79.21 356 *i* P **P 03 54 37.7 +0.7**
comp=Z,14nm,1.2s,mb4.8
VYHS Vyhne 79.21 356 *i* P **P 03 54 37.7 +0.7**
VYHS pmax pmax
comp=Z,14nm,1.2s,mb4.8
VYHS Vyhne 79.21 356 *i* P **P 03 54 37.6 +0.6**
SMOL Smolenice 79.25 357 *eP* **P 03 54 38.2 +1.0**
CDF Champ du Feu 79.29 4⇑ *iP* **P 03 54 37.5 +0.1**
comp=Z,14nm,0.9s,mb4.6
CDF Champ du Feu 79.29 4⇑ *iP* **P 03 54 37.5 +0.1**
comp=Z,6.8nm,0.9s,mb4.6
MODS Modra-Piesok 79.39 357 *i* P **P 03 54 39.0 +1.0**
comp=Z,12nm,1.1s,mb4.7
MODS Modra-Piesok 79.39 357 *i* P **P 03 54 39.0 +1.0**
MODS pmax pmax
comp=Z,12nm,1.1s,mb4.7
ZST Bratislava 79.57 357 *i* P **P 03 54 40.0 +1.0**
comp=Z,30nm,1.4s,mb5.0
ZST Bratislava 79.57 357 *i* P **P 03 54 40.0 +1.0**
ZST pmax pmax
comp=Z,30nm,1.4s,mb5.0
HAU Haudompre 79.65 5⇑ *iP* **P 03 54 39.4 0.0**
comp=Z,20nm,1.0s,mb4.7
HAU Haudompre 79.65 5⇑ *iP* **P 03 54 39.4 0.0**
comp=Z,9.8nm,1.0s,mb4.7
BURAR Bucovina Array 79.68 352⇑ *iP* **P 03 54 39.4 -0.2**
PSZ Piszkesteto 79.74 355 *eP* **P 03 54 39.3 -0.6**
comp=Z,23nm,1.4s,mb4.9
PSZ *ep*P pP 03 54 52.0 +7.9
PSZ Piszkesteto 79.74 355⇓ *eP* **P 03 54 41.3 +1.4**
PSZ Piszkesteto 79.74 355⇑ *iP* **P 03 54 42.2 +2.3**
HINF Hinteralfeld 79.86 4⇑ *iP* **P 03 54 40.4 -0.1**
comp=Z,11nm,0.8s,mb4.6

HINF Hinteralfeld 79.86 4⇑ *iP* **P 03 54 40.4 -0.1**
comp=Z,5.6nm,0.8s,mb4.5
CONA Conrad Observa 79.87 358⇑ *ipP* **P 03 54 41.4 +0.8**
comp=Z,19nm,1.2s,mb4.9
LOR Lormes 80.24 6⇑ *iP* **P 03 54 42.5 -0.1**
comp=Z,16nm,0.8s,mb4.7
LOR Lormes 80.24 6⇑ *iP* **P 03 54 42.5 -0.1**
comp=Z,8.1nm,0.8s,mb4.7
RKT Rikitea 80.31 150 *e*LR LR 04 19 50.6
comp=Z,142nm,25.2s
SSF Saint Saulge 80.42 7⇑ *iP* **P 03 54 43.6 0.0**
comp=Z,23nm,0.8s,mb4.8
SSF Saint Saulge 80.42 7⇑ *iP* **P 03 54 43.6 0.0**
comp=Z,11nm,0.8s,mb4.8
MOTA Moosalm 80.46 1⇓ *iP* **P 03 54 44.2 +0.4**
comp=Z,11nm,1.0s,mb4.7
MOTA Moosalm 80.46 1⇓ *ipP* **P 03 54 44.2 +0.4**
comp=Z,11nm,1.0s,mb4.7
WTTA Wattenberg 80.55 1⇑ *iP* **P 03 54 45.1 +0.9**
comp=Z,12nm,0.7s,mb4.9
WTTA Wattenberg 80.55 1⇑ *ipP* **P 03 54 45.1 +0.9**
comp=Z,12nm,0.7s,mb4.9
ARSA Arzberg 80.55 358⇓ *iP* **P 03 54 45.1 +0.8**
comp=Z,23nm,1.4s,mb4.9
ARSA Arzberg 80.55 358⇓ *ipP* **P 03 54 45.1 +0.8**
comp=Z,23nm,1.4s,mb4.9
KIV Kislovodsk 80.56 339 *eP* **P 03 54 45.4 +1.1**
comp=Z,20nm,0.8s,mb5.1
KIV Kislovodsk 80.56 339⇓ *eP* **P 03 54 45.2 +0.8**
KIV *e*SS SS 04 09 52.2 -9.2
KIV pmax pmax
comp=Z,43nm,1.8s,mb5.1
SQTA Sankt Quirin 80.59 1⇑ *iP* **P 03 54 45.0 +0.6**
comp=Z,12nm,0.9s,mb4.8,SNR=11
SQTA Sankt Quirin 80.59 1⇑ *ipP* **P 03 54 45.0 +0.6**
comp=Z,12nm,0.9s,mb4.8,SNR=11
AVF Avril sur Loir 80.68 7⇑ *iP* **P 03 54 44.8 -0.1**
comp=Z,30nm,0.9s,mb4.9
AVF Avril sur Loir 80.68 7⇑ *iP* **P 03 54 44.8 -0.1**
comp=Z,15nm,0.9s,mb4.9
DRGR 80.70 353⇓ *P* **P 03 54 45.1 0.0**
DRGR 80.70 353⇓ *iP* **P 03 54 45.1 +0.1**
KBA Koelnbreinsper 80.75 360 *i* P **P 03 54 46.5 +1.2**
comp=Z,32nm,0.8s,mb5.3,SNR=23
KBA Koelnbreinsper 80.75 360 *i ip* P **P 03 54 46.5 +1.2**
comp=Z,32nm,0.8s,mb5.3,SNR=23
FETA Feichten 80.78 2⇑ *ipP* **P 03 54 46.4 +0.9**
comp=Z,15nm,0.8s,mb5.0
ANN Anapa 80.80 343 *eP* **P 03 54 54.8 +9.1**
ANN pmax pmax
comp=Z,53nm,1.6s,mb5.2
SMF Signal de Mont 80.86 6⇑ *iP* **P 03 54 45.8 -0.1**
comp=Z,45nm,1.0s,mb5.0
SMF Signal de Mont 80.86 6⇑ *iP* **P 03 54 45.8 -0.1**
comp=Z,22nm,1.0s,mb5.0
BGF Bois d'Agland 80.87 7⇑ *iP* **P 03 54 46.0 0.0**
comp=Z,25nm,0.8s,mb4.9
BGF Bois d'Agland 80.87 7⇑ *iP* **P 03 54 46.0 0.0**
comp=Z,12nm,0.8s,mb4.9
DAVOX Davos/Dischmat 81.00 2 LR LR 04 30 59.7
comp=Z,136nm,18.3s,MS4.3,baz=54,slow=36
CABF La Chapelle 81.03 5⇑ *iP* **P 03 54 47.4 +0.6**
comp=Z,44nm,1.1s,mb5.0
CABF La Chapelle 81.03 5⇑ *iP* **P 03 54 47.4 +0.6**
comp=Z,22nm,1.1s,mb5.0
ABTA Abfaltersbach 81.08 0⇑ *iP* **P 03 54 47.4 +0.3**
comp=Z,18nm,1.2s,mb4.9,SNR=8.1
TCF Toulx Ste Croi 81.09 8⇑ *iP* **P 03 54 47.0 -0.2**
PERS Pernice 81.17 359 *i* P **P 03 54 48.1 +0.5**
PERS *i* 03 54 57.5
OBKA Obir 81.31 359⇑ *iP* **P 03 54 48.9 +0.6**
comp=Z,20nm,0.7s,mb5.2,SNR=16
OBKA Obir 81.31 359⇑ *ipP* **P 03 54 48.9 +0.6**
comp=Z,20nm,0.7s,mb5.2,SNR=16
AGO Saint Agoulin 81.40 7 *eP* **P 03 54 49.3 +0.5**
ZEI Tsey 81.41 338 *eP* **P 03 54 49.9 +1.0**
ZEI pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
PLDF La Plantade 81.51 7 *eP* **P 03 54 50.0 +0.6**
SOC Sochi 81.54 341 *eP* **P 03 54 49.2 -0.4**
SOC *e*S S 04 05 02.2 +1.4
SOC *e*SS SS 04 10 11.6 -4.4
SOC *e*SSS 04 13 40.8
MLR Muntele Rosu 81.72 351⇓ *P* **P 03 54 51.7 +1.2**
MLR Muntele Rosu 81.72 351 P **P 03 54 51.4 +0.9**
comp=Z,3.8nm,1.0s,mb4.3,baz=88,slow=1.7,SNR=6.4
MLR LR LR 04 33 03.2
comp=Z,141nm,18.4s,MS4.4,baz=105,slow=37
MLR Muntele Rosu 81.72 351⇓ *iP* **P 03 54 51.7 +1.2**
VOIR 81.86 352⇓ *iP* **P 03 54 50.3 -0.9**
JAVS Javornik 81.93 359 *i* P **P 03 54 51.4 -0.2**
JAVS *i* 03 55 01.8
BZS Buzias 81.94 354⇑ *P* **P 03 54 51.5 -0.2**
BZS Buzias 81.94 354⇑ *iP* **P 03 54 51.5 -0.2**
RJF Les Rejaudoux 82.01 8⇑ *iP* **P 03 54 52.6 +0.6**
comp=Z,24nm,1.1s,mb4.7
RJF Les Rejaudoux 82.01 8⇑ *iP* **P 03 54 52.6 +0.6**
comp=Z,12nm,1.1s,mb4.7
GZR Gura Zlata 82.08 353⇓ *iP* **P 03 54 52.5 +0.1**
LPL La Plagne 82.15 5 *eP* **P 03 54 54.1 +1.3**
LPG La Plagne 82.17 5 *eP* **P 03 54 54.3 +1.4**
LFF La Frestale 82.30 9 *eP* **P 03 54 53.6 0.0**
BOJS Bojanci 82.31 359 *i* P **P 03 54 53.8 +0.2**
BOJS *i* 03 55 03.1
CAF Calviac 82.43 8 *eP* **P 03 54 54.4 +0.1**
comp=Z,49nm,1.2s,mb5.0
CAF Calviac 82.43 8 *eP* **P 03 54 54.4 +0.1**
comp=Z,24nm,1.2s,mb5.0
TIRR Tirgusor 82.48 349⇓ *iP* **P 03 54 54.5 -0.1**
TIRR Tirgusor 82.48 349⇓ *iP* **P 03 54 54.5 0.0**
BNI Bardonecchia 82.61 5 *eP* **P 03 54 56.8 +1.6**
comp=Z,16nm,0.9s,mb5.0
VIVF Saint-Julien-l 82.69 6⇑ *iP* **P 03 54 56.1 +0.5**
ORIF Oris-en-Rattie 82.70 5⇑ *iP* **P 03 54 56.4 +0.7**
comp=Z,13nm,0.6s,mb4.6
ORIF Oris-en-Rattie 82.70 5⇑ *iP* **P 03 54 56.4 +0.7**
comp=Z,3.7nm,0.6s,mb4.6
MBDF Montbardon 82.94 5⇑ *iP* **P 03 54 58.3 +1.4**
comp=Z,19nm,0.7s,mb4.9
MBDF Montbardon 82.94 5⇑ *iP* **P 03 54 58.3 +1.4**
comp=Z,9.4nm,0.7s,mb4.9
SJPF Ste Jean 83.90 11 *eP* **P 03 55 01.7 -0.2**
MTLF Montolieu 84.02 8 *eP* **P 03 55 02.9 +0.4**
comp=Z,17nm,0.9s,mb4.9
MTLF Montolieu 84.02 8 *eP* **P 03 55 02.9 +0.4**
comp=Z,8.7nm,0.9s,mb4.9
EPF Esparros 84.15 9 *eP* **P 03 55 03.1 -0.1**
ETSF Etsaut 84.19 10⇑ *iP* **P 03 55 04.0 +0.6**
BOYT Boyabat 84.53 344 *i* P **P 03 55 06.8 +1.7**
BALT Daday 84.67 345 *i* P **P 03 55 07.0 +1.2**
ERZM Erzurum 84.72 339 *i* P **P 03 55 07.9 +1.8**
CTKT Corum 85.32 344 *i* P **P 03 55 10.8 +1.7**
AQU L'Aquila 85.47 360 *eP* **P 03 55 09.8 0.0**
comp=Z,24nm,0.9s,mb5.3
AQU L'Aquila 85.47 360⇑ *iP* **P 03 55 10.9 +1.1**
ELDT Eldivan 85.68 345 *i* P **P 03 55 12.5 +1.6**
HENT Hendek 85.74 347 *i* P **P 03 55 11.9 +0.7**
ANTO Ankara 86.39 345 *eP* **P 03 55 15.1 +0.7**
comp=Z,25nm,0.9s,mb5.5
ANTO Ankara 86.39 345⇓ *iP* **P 03 55 15.5 +1.1**
BR131 Keskin Array S 86.39 344 *eP* **P 03 55 14.8 +0.4**
comp=Z,15nm,0.8s,mb5.3
BRTR Keskin Array B 86.39 344 *i* P **P 03 55 15.1 +0.7**
BRTR pmax pmax
comp=Z,19nm,0.9s
BRTR Keskin Array B 86.39 344 P **P 03 55 15.2 +0.7**
comp=Z,19nm,0.9s,mb5.3,baz=34,slow=2.5,SNR=68
SDV Santo Domingo 86.77 80 *eP* **P 03 55 16.0 -0.6**
comp=Z,3.9nm,0.9s,mb4.6
MALT Malatya 86.87 340 *eP* **P 03 55 17.4 +0.6**
comp=Z,3.1nm,0.8s,mb4.6
MALT *ep*P pP 03 55 29.4 +8.3
MALT Malatya 86.87 340⇑ *iP* **P 03 55 19.4 +2.6**
ESDC Sonseca Array 86.95 13 P **P 03 55 16.8 -0.4**
comp=Z,1.8nm,0.7s,mb4.4,baz=343,slow=4.7,SNR=8.1
ESKT Eskisehir 87.02 346 *i* P **P 03 55 17.9 +0.4**
BTOK Tokmak 87.16 349 *i* P **P 03 55 18.1 -0.1**
KULM Kulim 87.37 275 *eP* **P 03 55 19.3 -0.3**
KULM *ep*P pP 03 55 30.1 +6.2
GZT Gaziantep 87.97 341 *i* P **P 03 55 22.8 +0.7**
WRA Warramunga Arr 88.35 234 *i* P **P 03 55 26.7 +2.8**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 88.35 234 P **P 03 55 23.0 -0.9**
comp=Z,1.4nm,0.8s,mb4.2,baz=41,slow=5.8,SNR=6.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA				LR	LR	04 28 42.1	
	comp=Z,64nm,20.7s,MS4.0,baz=95,slow=31						
OTAV	Otavalo	88.83	91	eP	P	03 55 26.7	+0.2
	comp=Z,3.8nm,0.9s,mb4.7						
HYB	Hyderabad	90.41	300	eP	P	03 55 33.5	-0.4
HYB	Hyderabad	90.41	300	i P	P	03 55 33.5	-0.4
HYB				e		03 55 44.0	
HYB				e		03 55 53.0	
CSS	Prodhromos	91.09	344	eP	P	03 55 36.6	-0.2
	comp=Z,19nm,0.9s,mb5.4						
ASAR	Alice Springs	91.72	232	P	P	03 55 39.0	-0.6
	comp=Z,1.7nm,0.9s,mb4.4,baz=30,slow=4.7,SNR=13						
KEST	Kesra	92.02	3	P	P	03 55 40.8	-0.2
	comp=Z,1.7nm,1.0s,mb4.3,baz=317,slow=7.9,SNR=4.4						
TORD	Torodi Ar. Bea	113.82	12	PKP	PKiKP	04 01 09.8	-1.4
TORD	Torodi Ar. Bea	113.82	12	PKP	PKiKP	04 01 09.8	-1.4
	comp=Z,0.4nm,0.8s,baz=333,slow=0.9,SNR=7.2						
LBTB	Lobatse	150.93	336	ePKPbc	PKPbc	04 02 24.4	-0.4
BOSA	Boshof	154.45	335	PKPbc	PKPbc	04 02 34.5	+2.0
	comp=Z,2.6nm,0.7s,baz=0.0,slow=1.0,SNR=2.3						
BOSA				PKPab	PKPab	04 02 46.5	-0.3
	comp=Z,5.2nm,0.9s,baz=350,slow=6.1,SNR=4.7						

ISCJB ***07*** *04:31:04.7±3.2, 13.7S±0.4×70.6W±0.2, h43km±42km, mb4.1/20, Error ellipse: s-maj=67.7km s-min=23.1km az=19.6*
IDC ***07*** *04:31:08.5±3.1, 14.38S×70.78W, h87km±31km, mb3.6/7, mb1 3.9/9, mb1mx3.8/17, mbtmp3.7/9, Error ellipse: s-maj=66.0km s-min=25.3km az=25.0*
NEIC ***07*** *04:31:08.5±1.2, 14.23S×70.69W, h82km±13km, mb4.3/13, Error ellipse: s-maj=28.3km s-min=11.1km az=211.0*
ISC 07 04:31:08.1±2.4, **14.0S**±0.3×**70.6W**±0.2, **h64**km±33km, **n28**, σ**0.49**/23, **mb4.1**/20, **Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.34	134	P	Pn	04 31 57.8	0.0
	11nm,0.3s,baz=305,slow=12,SNR=84						
SIV	San Ignacio	9.44	104	P	Pn	04 33 21.4	+0.1
	1.3nm,0.3s,baz=285,slow=12,SNR=59						
HKT	Hockley	49.96	331	eP	P	04 39 55.9	+0.1
	2.9nm,1.1s,mb4.2						
TXAR	Lajitas Array	53.58	324	P	P	04 40 22.6	-0.2
	1.3nm,0.8s,mb3.9,baz=144,slow=8.7,SNR=15						
FVM	French Village	54.91	341	eP	P	04 40 31.8	-0.5
	2.7nm,0.5s,mb4.5						
WMOK	Wichita Mounta	55.32	332	eP	P	04 40 35.3	0.0
	3.6nm,0.8s,mb4.5						
MNTX	Cornudas Mount	56.32	324	eP	P	04 40 41.7	-0.8
	2.6nm,1.0s,mb4.2						
CBKS	Cedar Bluff	59.13	334	eP	P	04 41 02.2	+0.1
	1.7nm,0.4s,mb4.4						
ANMO	Albuquerque	59.35	326	eP	P	04 41 03.5	-0.2
	1.7nm,0.8s,mb4.1						
SDCO	Great Sand Dun	60.97	329	eP	P	04 41 15.5	+0.8
	2.9nm,0.8s,mb4.5						
DUG	Dugway	66.62	326	eP	P	04 41 50.6	-1.2
	3.8nm,1.1s,mb4.3						
PDAR	Pinedale Array	66.80	330	P	P	04 41 53.1	+0.2
	0.5nm,0.9s,mb3.5,baz=131,slow=6.1,SNR=3.8						
HWUT	Hardware Ranch	66.96	328	eP	P	04 41 54.0	0.0
	2.3nm,0.9s,mb4.2						
ULM	Lac du Bonnet	67.67	343	P	P	04 41 57.6	-0.6
	1.2nm,0.8s,mb4.0,baz=152,slow=6.5,SNR=3.6						
LOHW	Long Hollow	67.94	330	eP	P	04 42 00.6	+0.5
	2.2nm,0.8s,mb4.2						
TPAW	Teton Pass	68.02	329	eP	P	04 42 00.9	+0.3
	3.3nm,0.9s,mb4.4						
MOOW	Moose Ponds	68.11	330	eP	P	04 42 01.5	+0.3
	2.4nm,1.0s,mb4.2						
NVAR	Mina Array Bea	68.59	321	P	P	04 42 04.8	+0.5
	0.5nm,0.8s,mb3.5,baz=157,slow=11,SNR=4.0						
HLID	Hailey	69.83	328	eP	P	04 42 12.2	+0.4
	0.9nm,0.8s,mb3.8						
TORD	Torodi Ar. Bea	76.51	73	P	P	04 42 51.2	-0.7
TORD	Torodi Ar. Bea	76.51	73	P	P	04 42 51.2	-0.7
	1.0nm,0.9s,mb3.8,baz=246,slow=3.5,SNR=6.8						
ESDC	Sonseca Array	81.68	46	P	P	04 43 20.4	+0.8
	0.6nm,0.7s,mb3.6,baz=264,slow=4.3,SNR=5.7						
YKA	Yellowknife Ar	83.56	341	P	P	04 43 28.6	-0.2
	1.7nm,0.8s,mb4.2,baz=134,slow=5.3,SNR=30						
MKAR	Makanchi Array	140.17	29	PKP	PKPdf	04 50 28.4	-1.2
	0.2nm,0.2s,baz=357,slow=2.7,SNR=3.7						
MJAR	Matsushiro Arr	145.80	316	PKPbc	PKPbc	04 50 37.8	-2.6
	3.0nm,0.8s,baz=88,slow=2.2,SNR=5.7						
SONM	Songino Array	146.13	4	PKPbc	PKPbc	04 50 39.9	-1.1
	1.1nm,0.8s,baz=287,slow=2.0,SNR=7.1						
ULN	Ulaanbaatar	146.13	3	ePKPbc	PKPbc	04 50 40.8	-0.2
KSRS	Korea Array	151.36	328	PKPbc	PKPbc	04 50 52.0	-3.0
	3.5nm,0.8s,baz=27,slow=1.1,SNR=6.6						

IDC ***07*** *04:31:20.8±1.3, 0.85S×127.52E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.8/15, mbtmp3.8/5, Error ellipse: s-maj=130.0km s-min=20.2km az=69.0*
NEIC ***07*** *04:31:22.6±0.6, 1.17S×126.76E, h10km, mb4.1/3, Error ellipse: s-maj=41.8km s-min=9.3km az=64.0*
ISCJB ***07*** *04:31:23.8±0.8, 1.1S±0.2×126.9E±0.4, h33km, mb3.9/6, Error ellipse: s-maj=58.8km s-min=12.9km az=153.7*
ISC 07 04:31:26.2±0.8, **1.2S**±0.2×**126.8E**±0.4, **h35**km, **n8**, σ**0.46**/8, **mb3.9**/6, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.05	159	P	P	04 35 55.7	-0.8
	1.0nm,0.3s,baz=341,slow=11,SNR=6.8						
COEN	Coen	20.58	129	eP	P	04 36 02.3	0.0
	9.1nm,0.8s						
ASAR	Alice Springs	23.39	163	P	P	04 36 32.0	-0.1
	1.7nm,0.6s,mb3.7,baz=346,slow=11,SNR=24						
STKA	Stephens Creek	33.57	157	P	P	04 38 04.0	+1.0
	2.4nm,0.7s,mb4.2,baz=334,slow=10,SNR=5.3						
ULN	Ulaanbaatar	51.80	343	eP	P	04 40 30.2	-0.3
	1.0nm,0.6s,mb3.9						
SONM	Songino Array	51.96	343	P	P	04 40 31.6	-0.1
	0.5nm,0.7s,mb3.6,baz=151,slow=9.5,SNR=4.3						
MKAR	Makanchi Array	61.64	327	P	P	04 41 40.6	+0.1
	0.7nm,0.7s,mb3.9,baz=123,slow=7.0,SNR=5.6						
KURK	Kurchatov	65.92	329	eP	P	04 42 08.7	+0.1
	1.8nm,0.8s,mb4.2						

JMA 07 04:59:25.1±0.4, **43.91N**×**147.78E**, **h0**km, **M3.5**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.58	250	P	Pn	04 59 54.5	+0.2
NEM2				eS	Sn	05 00 15.6	+0.2
JRA	Rausu	1.92	272	P	Pn	04 59 59.7	+0.7
JRA				eS	Sn	05 00 25.0	+1.1
JNK	Nakash	2.24	263	P	Pn	05 00 04.1	+0.7
JNK				eS	Sn	05 00 32.3	+0.5
JAK	Akkeshi	2.42	249	P	Pn	05 00 06.8	+0.9
JAR	Ashorobuto	2.98	260	P	Pn	05 00 15.2	+1.7
JAR				eS	Sn	05 00 52.9	+3.0
JOB	Onbets	3.05	252	P	Pn	05 00 16.1	+1.6
JOB				eS	Sn	05 00 53.7	+2.1
JCH	Churui	3.48	250	P	Pn	05 00 21.8	+1.4
JCH				eS	Sn	05 01 02.8	+0.6

ISCJB ***07*** *05:03:30.9±0.3, 49.85N±0.02×18.33E±0.02, h0km, Error ellipse: s-maj=3.2km s-min=2.0km az=19.3*
IPEC ***07*** *05:03:31.7±0.2, 49.87N×18.52E, h8km±1km, ML2.1/3, Error ellipse: s-maj=1.9km s-min=1.0km az=169.0*
CSEM ***07*** *05:03:32.0±0.1, 49.89N×18.48E, h1km, ML3.0/6, Error ellipse: s-maj=1.9km s-min=1.3km az=5.0*
VIE ***07*** *05:03:32.8±0.5, 49.70N×18.38E, h0km, mb2.1/4, ML2.4/5, Error ellipse: s-maj=3.9km s-min=2.2km az=83.0 17 km SSE of Ostrava Suspected Mining induced.*
PRU ***07*** *05:03:33.0, 49.86N×18.37E, h0km*
ISC 07 05:03:32.0±0.3, **49.85N**±0.02×**18.39E**±0.02, **h0**km, **n42**, σ**1.19**/74, **4C-10D**, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.16	267	ePG	Pg	05 03 36.7	+1.7
OKC				eSG	Sg	05 03 39.9	+2.9
	417nm,0.4s						
OKC	Ostrava-Krasne	0.16	267	ePg	Pg	05 03 36.5	+1.5
OKC				eSg	Sg	05 03 40.0	+3.0
RAC	Raciborz	0.27	332	ePg	Pg	05 03 38.4	+1.3
RAC				eSg	Sg	05 03 44.0	+3.4
MORC	Moravsky Berou	0.55	263	⇓iP	Pg	05 03 43.4	+0.8
MORC	Moravsky Berou	0.55	263	ePg	Pg	05 03 43.2	+0.6
MORC				eSg	Sg	05 03 51.9	+2.2
	43nm,0.3s						
LIKS	Likavka	0.92	149	ePG	Pg	05 03 51.1	+1.5
LIKS				eSG	Sg	05 04 05.7	+4.1
LIKS	Likavka	0.92	149	ePg	Pg	05 03 51.2	+1.6
LIKS				eSg	Sg	05 04 05.7	+4.1
OJC	Ojcow	0.98	67	ePg	Pg	05 03 49.2	-1.6
OJC				eSg	Sg	05 04 01.7	-1.8
OJC	Ojcow	0.98	67	ePg	Pg	05 03 49.1	-1.7
OJC				eSg	Sg	05 04 01.7	-1.8
JAVC	Velka Javorina	1.09	206	ePn	Pn	05 03 54.5	0.0
KOLL	Kolacno	1.27	180	i PG	Pg	05 03 56.3	0.0
KOLL				eSG	Sg	05 04 14.3	+1.6
VRAC	Vranov	1.29	246	⇑iP	Pg	05 03 56.7	+0.1
VRAC	Vranov	1.29	246	ePn	Pn	05 03 56.6	-0.6
VRAC				eSg	Sg	05 04 14.9	+1.6
	41nm,0.4s						
NIE	Niedzica	1.32	108	ePg	Pg	05 03 56.0	-1.3
NIE				eSg	Sg	05 04 15.1	+0.7
VYHS	Vyhne	1.39	168	i PG	Pg	05 03 57.5	-1.0
VYHS				eSG	Sg	05 04 17.0	+0.6
DPC	Dobruska-Polom	1.42	292	ePG	Pg	05 03 58.9	-0.3
DPC				eSG	Sg	05 04 17.4	-0.3
	29nm,0.3s						
DPC	Dobruska-Polom	1.42	292	ePg	Pg	05 03 58.9	-0.3
DPC				eSg	Sg	05 04 18.4	+0.7
SMOL	Smolenice	1.48	206	ePG	Pg	05 03 59.3	-0.9
SMOL				i SG	Sg	05 04 20.5	+1.2
KRUC	Moravsky	1.52	240	ePn	Pn	05 04 00.4	0.0
KRUC				eSg	Sg	05 04 21.4	+0.6
	13nm,0.2s						
MODS	Modra-Piesok	1.65	207	ePN	Pn	05 04 01.5	-0.6
MODS				eSN	Sn	05 04 23.3	-0.6
UPC	Upice	1.67	294	ePG	Pg	05 04 02.7	-1.2
KSP	Ksiaz	1.67	307	ePn	Pn	05 04 03.0	+0.5
KSP	Ksiaz	1.67	307	ePg	Pg	05 04 04.3	+0.3
KSP				eSg	Sg	05 04 26.5	+0.8
ZST	Bratislava	1.86	208	ePN	Pn	05 04 04.9	-0.1
ZST				eSN	Sn	05 04 27.8	-1.3
STHS	Stebnicka Huta	1.91	102	ePN	Pn	05 04 06.6	+1.0
STHS				eSN	Sn	05 04 31.7	+1.4
KECS	Kecovo	1.94	134	ePN	Pn	05 04 04.9	-1.2
KECS				eSN	Sn	05 04 30.2	-0.9
PSZ	Piszkesteto	2.17	152	⇑iP	Pn	05 04 08.8	-0.5
CRVS	Cervenica-Dubn	2.22	114	ePN	Pn	05 04 12.5	+2.5
CRVS				eSN	Sn	05 04 39.9	+1.9
PRU	Pruhonice	2.49	275	ePG	Pg	05 04 18.1	-1.6
PRU				eSG	Sg	05 04 50.3	-1.7
	23nm,1.0s						
CONA	Conrad Observa	2.54	222	⇓iPn	Pn	05 04 13.8	-0.6
CONA				⇓iSn	Sn	05 04 44.3	-1.7
PVCC	Panska Ves	2.55	287	eSG	Sg	05 04 53.3	-0.5
KOLS	Kolonicke sedl	2.70	108	ePG	Pg	05 04 23.2	-0.4
KOLS				eSG	Sg	05 05 02.7	+4.2
KWP	Kalwaria	2.81	93	⇓iP	Pn	05 04 22.1	+4.0
BRG	Berggiesshubel	3.03	292	PG	Pg	05 04 27.8	-2.2
BRG				SG	Sg	05 05 09.8	+0.6
	9.7nm,0.6s						
KHC	Kasperske Hory	3.22	259	ePN	Pn	05 04 23.3	-0.4
KHC				ePG	Pg	05 04 30.9	-2.7
KHC				eSN	Sn	05 04 59.5	-3.2
KHC				eSG	Sg	05 05 15.2	-0.1
	9.9nm,0.5s						
ARSA	Arzberg	3.22	217	⇑iPn	Pn	05 04 22.7	-1.0
ARSA				⇓iSg	Sg	05 05 16.0	+0.6
	3.2nm,0.5s						
TRPA	Tarpa	3.23	121	⇑iP	Pn	05 04 31.9	+8.1
MOA	Molln	3.38	235	⇓iPn	Pn	05 04 25.4	-0.5
MOA				⇓iSg	Sg	05 05 20.9	+0.5
	7.6nm,0.5s						
CLL	Collm	3.73	295	ePg	Pg	05 04 42.0	-1.5
CLL				eSg	Sg	05 05 33.0	+1.2
	comp=Z,11nm,0.6s						
DRGR		4.20	135	⇓iP	Pn	05 04 36.6	-0.6
BZS	Buzias	4.76	152	⇓iP	Pn	05 04 44.2	-0.7
BURAR	Bucovina Array	5.04	114	⇓iP	Pn	05 04 50.1	+1.4

ISCJB ***07*** *05:09:51.1±1.6, 19.1S±0.1×70.1W±0.1, h87km±19km, mb3.7/2, Error ellipse: s-maj=21.5km s-min=18.4km az=157.9*
IDC ***07*** *05:09:52.6±2.5, 19.05S×70.01W, h82km±20km, mb3.7/2, mb1 3.9/6, mb1mx3.5/18, mbtmp3.8/6, Error ellipse: s-maj=33.0km s-min=27.9km az=34.0*
NEIC ***07*** *05:09:52.5±1.1, 19.07S×70.06W, h81km±12km, Error ellipse: s-maj=16.2km s-min=14.0km az=69.0*
ISC 07 05:09:52.7±1.3, **19.1S**±0.1×**70.1W**±0.1, **h87**km±16km, **n7**, σ**0.49**/7, **mb3.7**/2, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.33	34	P	Pn	05 10 42.4	-0.2
	45nm,0.3s,baz=236,slow=7.1,SNR=822						
SIV	San Ignacio	9.12	72	P	Pn	05 12 01.8	+0.4
	1.5nm,0.3s,baz=271,slow=12,SNR=28						
SIV				S	Sn	05 13 32.6	-10
	0.3nm,0.3s,baz=348,slow=20,SNR=5.0						
NNA	Nana	9.60	316	P	Pn	05 12 07.9	-0.1
	2.8nm,0.3s,baz=140,slow=9.6,SNR=7.3						
CFAA	Coronel Fontan	12.59	173	P	Pn	05 12 48.5	0.0
	0.2nm,0.3s,baz=323,slow=6.7,SNR=6.0						
TORD	Torodi Ar. Bea	77.59	71	P	P	05 21 39.3	-0.5
	1.4nm,0.6s,mb3.9,baz=249,slow=5.6,SNR=22						
YKA	Yellowknife Ar	88.54	341	P	P	05 22 35.6	+0.5
	0.2nm,0.4s,mb3.5,baz=132,slow=4.8,SNR=7.0						
YKA				sP	sP	05 23 08.5	+0.8
	0.2nm,0.3s,baz=131,slow=4.7,SNR=3.0						
SONM	Songino Array	151.16	5	PKPbc	PKPbc	05 29 37.6	+1.9
	1.2nm,0.8s,baz=337,slow=1.4,SNR=6.4						

IDC 07 05:13:34.9±7.0, **6.34S**×**147.60E**, **h97**km±64km, **mb4.0**/2, **mb1 4.0**/4, **mb1mx3.6**/14, **mbtmp3.8**/4, **ML3.6**/2, **Error ellipse: s-maj=81.0km s-min=52.4km az=124.0**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.08	188	P	Pn	05 14 21.5	-0.1
	10.0nm,0.3s,baz=3.4,slow=4.4,SNR=18						
PMG				S	Sn	05 14 58.1	+0.5
	16nm,0.3s,baz=212,slow=20,SNR=14						
WB2	Warramunga Arr	18.67	222	eP	Pn	05 17 45.2	-1.6
WRA	Warramunga Arr	18.67	222	P	Pn	05 17 45.0	-1.9
	0.7nm,0.3s,baz=45,slow=12,SNR=49						
ASAR	Alice Springs	21.68	216	P	P	05 18 18.5	+0.6
	2.9nm,0.5s,baz=50,slow=9.0,SNR=42						
FITZ	Fitzroy Crossi	24.40	239	eP	P	05 18 44.5	+0.1
	13nm,0.5s						
FITZ	Fitzroy Crossi	24.40	239	P	P	05 18 44.8	+0.4
	8.8nm,0.5s,baz=54,slow=7.4,SNR=30						
TORD	Torodi Ar. Bea	145.75	284	PKPbc	PKPbc	05 33 02.5	-1.3
	0.4nm,0.9s,baz=83,slow=3.9,SNR=3.1						

DDA ***07*** *05:24:40.5, 38.81N×39.05E, h10km, Md3.2*
ISK ***07*** *05:24:42.2, 38.46N×39.03E, h2km, MD3.3*
ISCJB ***07*** *05:24:43.2±0.7, 38.42N±0.04×39.10E±0.05, h3km±8km, Error ellipse: s-maj=8.1km s-min=4.6km az=139.3*
CSEM ***07*** *05:24:43.0±0.1, 38.47N×39.01E, h8km, MD3.2, Error ellipse: s-maj=2.8km s-min=1.6km az=136.0*
ISC 07 05:24:43.7±0.6, **38.43N**±0.04×**39.09E**±0.05, **h5**km±6km, **n17**, σ**0.99**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.11	311	i P	Pg	05 24 46.6	+0.7
ELZG				i S	Sg	05 24 48.3	+0.9
PTK	Pertek	0.52	27	PG	Pg	05 24 53.1	-0.6
PTK				SG	Sg	05 25 01.2	+0.7
MYA	Malataya	0.53	259	PG	Pg	05 24 52.7	-1.2
MALT	Malatya	0.53	258	PG	Pg	05 24 52.8	-1.1
MALT				SG	Sg	05 25 00.5	-0.3
URFA	Urfa	1.01	192	PG	Pg	05 25 03.4	+0.4
DIY	Diyarbakir	1.04	120	PN	Pn	05 25 03.6	-1.4
ATAB	Bozova	1.14	213	i P	Pg	05 25 06.3	+0.7
ATAB				i S	Sg	05 25 19.9	-0.5
BINT	Bingol	1.19	67	PN	Pn	05 25 06.2	-0.7
EZC	Erzincan	1.44	23	PN	Pn	05 25 08.6	-1.8
GZT	Gaziantep	1.61	229	i P	Pn	05 25 12.5	-0.3
GZT				i S	Sn	05 25 36.6	+2.7
MARD	Mardin	1.74	129	i P	Pn	05 25 14.7	+0.1
MARD				i S	Sn	05 25 37.7	+0.6
BTMT	Batman	1.90	96	ePN	Pn	05 25 15.8	-1.0
GAZ	Gaziantep	1.94	230	ePN	Pn	05 25 17.3	-0.1
GUMT	Gumushane	2.05	8	ePN	Pn	05 25 18.7	-0.2
SVSK	Karacayir	2.20	313	ePN	Pn	05 25 21.3	+0.4
EZM	Erzurum	2.30	49	ePN	Pn	05 25 23.4	+1.1
SIRT	Sirnak	2.81	108	ePN	Pn	05 25 31.4	+2.2

NIED ***07*** *05:53:00, 43.70N×144.70E, h5km, Mw3.5 Best double couple: M0 1.88000×10^14 NP1:φs 154.00000°, δ64.00000°, λ4.00000°. NP2:φs 63.00000°, δ86.00000°, λ154.00000°.*
JMA 07 05:53:21.6, **43.74N**×**144.74E**, **h0**km, **M3.5**, **2C-3D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNK	Nakash	0.15	186	⇑P	Pg	05 53 24.8	+0.2
JNK				eS	Sg	05 53 27.1	+0.5
JRA	Rausu	0.34	54	⇑P	Pg	05 53 28.4	+0.3
JRA				eS	Sg	05 53 33.3	+0.8
JTKR	Abashiri--Toko	0.64	291	⇓P	Pg	05 53 34.0	+0.1
JAK	Akkeshi	0.74	182	P	Pg	05 53 35.5	-0.3
JAK				S	Sg	05 53 46.4	+0.9
NEM2	Nemuro 2	0.82	117	⇓P	Pg	05 53 36.4	-0.9
JAR	Ashorobuto	0.83	238	⇓P	Pg	05 53 37.8	+0.2
JAR				S	Sg	05 53 49.5	+1.1

ISCJB ***07*** *06:05:39.4±0.9, 4.3N±0.1×126.4E±0.3, h33km, mb4.2/9, Error ellipse: s-maj=51.6km s-min=11.4km az=161.3*
NEIC ***07*** *06:05:41.9±0.8, 4.23N×126.10E, h35km, mb4.4/3, Error ellipse: s-maj=52.7km s-min=10.5km az=74.0*
IDC ***07*** *06:05:49.3±9.1, 4.17N×126.23E, h111km±85km, mb3.7/7, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=74.3km s-min=20.7km az=72.0*
ISC 07 06:05:41.6±0.9, **4.3N**±0.1×**126.4E**±0.3, **h35**km, **n13**, σ**0.85**/12, **mb4.2**/9, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.27	182	eP	P	06 10 36.3	+0.6
	17nm,1.5s,mb4.2						
FITZ	Fitzroy Crossi	22.27	182	P	P	06 10 36.1	+0.4
	1.3nm,0.3s,mb3.8,baz=77,slow=20,SNR=8.5						
WRA	Warramunga Arr	25.34	162	P	P	06 11 05.5	+0.2
	2.4nm,0.4s,mb4.1,baz=340,slow=10,SNR=20						
WB2	Warramunga Arr	25.34	162	eP	P	06 11 06.6	+1.3
ASAR	Alice Springs	28.75	166	P	P	06 11 35.5	-0.5
	0.6nm,0.5s,mb3.5,baz=342,slow=7.3,SNR=9.4						
FORT	Forrest	34.92	177	eP	P	06 12 29.7	-0.3
	5.9nm,0.7s,mb4.6						
NWAO	Narrogin (SRO)	38.02	193	P	P	06 12 55.5	-1.0
	2.3nm,0.4s,mb4.2,baz=43,slow=8.4,SNR=5.6						
SHL	Shillong	39.24	306	eP	P	06 13 08.0	+1.1
SONM	Songino Array	46.64	342	P	P	06 14 07.6	+1.1
	0.3nm,0.5s,mb3.5,baz=156,slow=7.6,SNR=2.8						
MKAR	Makanchi Array	56.88	325	P	P	06 15 22.6	-0.3
	1.7nm,0.3s,mb4.5,baz=121,slow=7.6,SNR=49						
MKAR				PcP	PcP	06 16 17.3	-0.8
	0.3nm,0.4s,baz=119,slow=3.5,SNR=6.4						
BRVK	Borovoye	66.71	327	eP	P	06 16 28.3	-0.7
	2.7nm,0.8s,mb4.3						
ARCES	ARCESS Array B	89.79	340	P	P	06 18 34.8	-1.3
	4.0nm,1.0s,mb4.7,baz=53,slow=4.7,SNR=5.7						
TORD	Torodi Ar. Bea	122.39	288	PKP	PKPdf	06 24 32.2	-1.9
	0.2nm,0.3s,baz=83,slow=2.7,SNR=2.5						

IDC ***07*** *06:15:51.4±0.7, 4.76S×102.99E, h0km, mb4.3/14, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, MS3.0/1, Ms1 3.0/1, ms1mx2.7/31, Error ellipse: s-maj=28.9km s-min=14.0km az=48.0*
ISCJB ***07*** *06:15:54.8±0.6, 4.7S±0.1×103.1E±0.1, h33km, mb4.4/18, Error ellipse: s-maj=23.5km s-min=10.2km az=136.1*
NEIC ***07*** *06:15:56.8±0.3, 4.74S×103.05E, h35km, mb4.6/5, Error ellipse: s-maj=17.6km s-min=6.9km az=225.0*
ISC 07 06:15:56.8±0.6, **4.7S**±0.1×**103.1E**±0.1, **h35**km, **n32**, σ**0.62**/24, **mb4.4**/18, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	8.55	331	LR	LR	06 22 06.8	
	comp=Z,94nm,18.4s,baz=26,slow=44						
FITZ	Fitzroy Crossi	25.76	123	eP	P	06 21 24.6	+0.1
	30nm,1.8s,mb4.5						
FITZ	Fitzroy Crossi	25.76	123	P	P	06 21 24.6	+0.1
	3.2nm,0.4s,mb4.2,baz=346,slow=7.0,SNR=18						
WRA	Warramunga Arr	33.99	119	P	P	06 22 37.3	-0.2
	3.3nm,0.4s,mb4.6,baz=303,slow=9.0,SNR=65						
WRA				PcP	PcP	06 25 14.8	-0.4
	0.6nm,0.4s,baz=299,slow=2.1,SNR=7.0						
WB2	Warramunga Arr	34.00	119	eP	P	06 22 37.3	-0.2
ASAR	Alice Springs	35.18	125	P	P	06 22 48.0	+0.3
	2.0nm,0.3s,mb4.5,baz=301,slow=8.0,SNR=40						
ASAR				PcP	PcP	06 25 18.6	+0.1
	1.1nm,0.5s,baz=307,slow=2.4,SNR=9.6						
CTA	Charters Tower	44.69	114	P	P	06 24 06.8	+0.1
CTA	Charters Tower	44.69	114	P	P	06 24 06.8	+0.1
	6.3nm,0.7s,mb4.6,baz=283,slow=12,SNR=6.2						
STKA	Stephens Creek	45.06	132	eP	P	06 24 10.1	+0.6
	3.3nm,0.6s,mb4.3						
STKA	Stephens Creek	45.06	132	P	P	06 24 09.7	+0.1
	3.3nm,0.5s,mb4.4,baz=304,slow=9.3,SNR=12						
KSRS	Korea Array	47.93	27	P	P	06 24 31.7	-0.2
	1.7nm,0.8s,mb4.1,baz=223,slow=31,SNR=5.4						
SONM	Songino Array	52.43	3	P	P	06 25 07.2	+1.5
	2.9nm,0.6s,mb4.4,baz=184,slow=9.5,SNR=22						
SONM				PcP	PcP	06 26 16.1	-0.1
	0.7nm,0.4s,baz=184,slow=4.0,SNR=8.5						
MJAR	Matsushiro Arr	52.58	36	P	P	06 25 06.7	-0.4
	1.9nm,0.7s,mb4.2,baz=234,slow=7.8,SNR=4.3						
TKM2	Tokmak 2	53.56	335	eP	P	06 25 15.0	+0.8
	8.4nm,0.4s,mb5.0						
EKS2	Erkin-Say	54.14	334	eP	P	06 25 19.2	+0.7
	5.2nm,0.7s,mb4.6						
MKAR	Makanchi Array	54.50	343	P	P	06 25 21.2	+0.2
	3.0nm,0.7s,mb4.4,baz=147,slow=8.0,SNR=24						
AKTO	Aktyubinsk	67.22	331	PcP	PcP	06 27 15.3	+0.1
	1.5nm,0.5s,baz=126,slow=4.0,SNR=5.4						
MATP	Matopo	73.90	250	P	P	06 27 29.4	+0.5
	1.1nm,0.4s,mb4.2,baz=76,slow=4.2,SNR=4.1						
BRTR	Keskin Array B	77.41	312	P	P	06 27 48.5	-0.1
	1.4nm,0.7s,mb4.0,baz=131,slow=6.5,SNR=7.8						
AKASG	Malin Array Be	83.50	322	P	P	06 28 20.2	-0.9
AKASG	Malin Array Be	83.50	322	P	P	06 28 20.2	-0.8
	1.5nm,0.7s,mb4.2,baz=95,slow=4.2,SNR=6.0						
JOF	Joensuu	85.99	334	ep	P	06 28 32.1	-1.2
	0.7nm,0.3s,mb4.4						
FINES	FINESS Array B	87.94	332	P	P	06 28 43.0	+0.2
FINES	FINESS Array B	87.94	332	P	P	06 28 43.0	+0.2
	1.1nm,0.5s,mb4.4,baz=115,slow=5.5,SNR=11						
KAF	Kangasniemi	88.00	333	ep	P	06 28 42.7	-0.3
	1.2nm,0.4s,mb4.5,baz=98,slow=4.3						
ARCES	ARCESS Array B	90.07	340	P	P	06 28 51.6	-1.1
	3.6nm,0.8s,mb4.7,baz=104,slow=5.1,SNR=6.3						
NVAR	Mina Array Bea	129.66	42	PKP	PKPdf	06 35 03.8	+1.1
	0.3nm,0.6s,baz=355,slow=2.5,SNR=3.7						
PDAR	Pinedale Array	132.35	32	PKP	PKPdf	06 35 07.8	+0.2
	0.3nm,0.8s,baz=0.0,slow=3.6,SNR=3.9						
TXAR	Lajitas Array	144.81	43	PKP	PKPdf	06 35 30.3	-0.5
	1.2nm,0.4s,baz=247,slow=0.6,SNR=40						
SIUC	Southern Illin	145.31	17	ePKPbc	PKPbc	06 35 31.1	-0.1
JCT	Junction City	146.53	37	ePKPdf	PKPdf	06 35 34.0	+0.3
JCT				ePKPbc	PKPbc	06 35 35.3	+0.2
TZTN	Tazewell	147.77	10	ePKPdf	PKPdf	06 35 35.9	+0.3
TZTN				ePKPbc	PKPbc	06 35 38.0	-0.5
TZTN				ePKPab	PKPab	06 35 40.7	0.0

ISCJB ***07*** *06:16:34.6±1.6, 46.9N±0.1×153.6E±0.1, h55km±14km, mb3.7/13, Error ellipse: s-maj=22.2km s-min=6.9km az=139.2*
MOS ***07*** *06:16:34.7±1.8, 46.93N×153.49E, h57km, mb4.2/8, Error ellipse: s-maj=24.4km s-min=13.2km az=63.2*
IDC ***07*** *06:16:39.0±4.0, 46.85N×153.59E, h82km±37km, mb3.5/13, mb1 3.7/15, mb1mx3.6/24, mbtmp3.5/15, Error ellipse: s-maj=21.7km s-min=16.7km az=127.0*

ISC 07 06:16:36.8±1.4, 46.9N±0.1×153.7E±0.1, h57km±12km, n27, σ0.99/31, mb3.7/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.08**	**23**	ePN	**Pn**	**06 17 36.9**	**+0.3**
SKR				eS	**Sn**	**06 18 22.0**	**-1.1**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,400nm,1.0s						
SKR				smax			
	comp=E,220nm,1.0s						
KUR	**Kuril'sk**	**4.37**	**249**	PN	**Pn**	**06 17 35.3**	**-5.3**
KUR				eS	**Sn**	**06 18 28.0**	**-2.2**
KUR				smax			
	comp=N,220nm,0.8s						
KUR				smax			
	comp=E,320nm,0.8s						
ASAJ	**Asahikawa**	**8.26**	**254**	PN	**Pn**	**06 18 34.8**	**+1.0**
ASAJ				S	**Sn**	**06 20 07.2**	**+1.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.26**	**254**	P	**Pn**	**06 18 34.8**	**+0.9**
	comp=N,1.0nm,0.3s,baz=82,slow=14,SNR=3.4						
ASAJ				S	**Sn**	**06 20 07.2**	**+1.6**
	comp=N,1.2nm,0.3s,baz=205,slow=32,SNR=2.3						
MJAR	**Matsushiro Arr**	**15.49**	**233**	P	**Pn**	**06 20 12.8**	**+1.3**
	comp=N,0.2nm,0.3s,baz=33,slow=10,SNR=5.6						
KSRS	**Korea Array**	**21.21**	**253**	P	**P**	**06 21 16.9**	**-0.6**
	comp=N,2.8nm,0.8s,mb3.6,baz=66,slow=11,SNR=5.3						
INK	**Inuvik**	**41.29**	**33**	P	**P**	**06 24 17.5**	**+1.5**
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**41.29**	**33**	P	**P**	**06 24 17.4**	**+1.4**
	comp=Z,0.8nm,0.9s,mb3.3,baz=243,slow=8.6,SNR=2.0						
MKAR	**Makanchi Array**	**47.19**	**297**	P	**P**	**06 25 02.4**	**-1.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.19**	**297**	P	**P**	**06 25 02.4**	**-0.9**
	comp=Z,0.5nm,0.4s,mb3.8,baz=76,slow=6.5,SNR=11						
YKA	**Yellowknife Ar**	**50.55**	**37**	P	**P**	**06 25 28.2**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=297,slow=6.8,SNR=3.9						
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**06 26 21.8**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**57.80**	**341**	P	**P**	**06 26 21.8**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.3,baz=27,slow=8.1,SNR=4.1						
NVAR	**Mina Array Bea**	**62.02**	**63**	P	**P**	**06 26 51.1**	**+0.2**
	comp=Z,0.2nm,0.5s,mb3.5,baz=302,slow=5.2,SNR=2.1						
FINES	**FINESS Array B**	**64.03**	**335**	P	**P**	**06 27 04.0**	**+0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**64.03**	**335**	P	**P**	**06 27 04.0**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=46,slow=5.5,SNR=8.7						
PDAR	**Pinedale Array**	**64.33**	**54**	P	**P**	**06 27 06.5**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.6,baz=318,slow=2.0,SNR=4.5						
NB2	**NORSAR Subarra**	**68.17**	**341**	P	**P**	**06 27 31.3**	**+0.9**
	comp=Z,0.2nm,0.7s,mb3.3,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.17**	**341**	P	**P**	**06 27 31.5**	**+1.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**68.17**	**341**	P	**P**	**06 27 31.4**	**+1.0**
	comp=Z,2.5nm,0.9s,mb4.2,baz=28,slow=6.5,SNR=4.3						
WRA	**Warramunga Arr**	**68.81**	**199**	P	**P**	**06 27 33.0**	**-1.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	**Warramunga Arr**	**68.81**	**199**	P	**P**	**06 27 33.0**	**-1.9**
	comp=Z,1.6nm,1.1s,mb3.9,baz=12,slow=7.1,SNR=4.6						
AKASG	**Malin Array Be**	**71.60**	**326**	P	**P**	**06 27 51.3**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.6,baz=35,slow=6.8,SNR=5.0						
ASAR	**Alice Springs**	**72.51**	**199**	P	**P**	**06 27 56.9**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**72.51**	**199**	P	**P**	**06 27 56.9**	**-0.4**
	comp=Z,1.0nm,0.6s,mb4.0,baz=12,slow=5.7,SNR=14						
TXAR	**Lajitas Array**	**77.08**	**61**	P	**P**	**06 28 24.2**	**+0.4**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.08**	**61**	P	**P**	**06 28 24.2**	**+0.4**
	comp=Z,0.8nm,0.6s,mb3.9,baz=300,slow=4.3,SNR=16						

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*NEIC **07** 06:30:16.7±1.1, 46.82N×153.23E, h10km, mb4.2/1, Error ellipse: s-maj=25.9km s-min=12.7km az=133.0*

*BJI **07** 06:30:16.0, 46.85N×152.74E, h5km, mB4.9, mb4.7, Ms4.4, Msz4.1*

*ISCJB **07** 06:30:17.8±1.4, 46.83N±0.08×153.6E±0.1, h36km±11km, mb4.0/26, MS3.3/5, Error ellipse: s-maj=15.9km s-min=8.5km az=140.7*

*MOS **07** 06:30:18.5±1.5, 46.84N×153.46E, h44km, mb4.2/15, Error ellipse: s-maj=13.3km s-min=9.3km az=77.7*

*IDC **07** 06:30:21.7±4.0, 46.77N×153.67E, h57km±37km, mb3.7/17, mb1 3.9/19, mb1mx3.9/24, mbtmp3.7/19, ML3.7/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/34, Error ellipse: s-maj=18.8km s-min=15.1km az=137.0*

ISC 07 06:30:20.2±1.3, 46.84N±0.08×153.6E±0.1, h40km±11km, h6km±5.8km:pP-P, n65, σ1.15/67, mb4.0/26, MS3.3/5, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.18**	**22**	ePN	**Pn**	**06 31 20.0**	**-1.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR	**Kuril'sk**	**4.33**	**250**	ePN	**Pn**	**06 31 23.0**	**-0.4**
KUR				eS	**Sn**	**06 32 14.5**	**+1.9**
KUR				pmax	pmax		
	comp=N,90nm,0.6s						
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				smax			
	comp=N,430nm,0.8s						
KUR				smax			
	comp=E,520nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.46**	**275**	ePN	**Pn**	**06 31 58.9**	**-7.5**
ASAJ	**Asahikawa**	**8.22**	**255**	PN	**Pn**	**06 32 18.9**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.22**	**255**	P	**Pn**	**06 32 18.9**	**+2.0**
	comp=Z,1.5nm,0.3s,baz=93,slow=18,SNR=4.0						
ERM	**Erimo**	**8.91**	**241**	ePN	**Pn**	**06 32 20.8**	**-5.6**
HABR	**Khabarovsk**	**12.64**	**284**	ePN	**Pn**	**06 33 07.8**	**-9.4**
MAJO	**Matsushiro**	**15.42**	**234**	ePn	**Pn**	**06 33 50.1**	**-4.7**
MJAR	**Matsushiro Arr**	**15.42**	**234**	P	**Pn**	**06 33 54.3**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=29,slow=14,SNR=4.6						
YAK	**Yakutsk**	**20.44**	**327**	eP	**P**	**06 34 53.2**	**-0.6**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSRS	**Korea Array**	**21.17**	**253**	P	**P**	**06 35 03.4**	**+1.5**
	comp=Z,5.0nm,0.9s,mb3.9,baz=57,slow=10,SNR=7.7						
JNU	**Nakatsue**	**22.08**	**240**	LR	LR	06 42 47.3	
	comp=Z,41nm,21.9s,MS2.8,baz=324,slow=34						
BILL	**Bilibino**	**22.22**	**13**	P	**P**	**06 35 16.0**	**+3.2**
BILL	**Bilibino**	**22.22**	**13**	⇑eP	**P**	**06 35 14.2**	**+1.4**
BILL				eS	**S**	**06 39 11.3**	**-3.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.4						
BOD	**Bodaibo**	**26.21**	**309**	eP	**P**	**06 35 47.5**	**-3.3**
TIXI	**Tiksi**	**27.48**	**343**	eP	**P**	**06 36 02.3**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.2						
HHC	**Hu-ho-hao-te**	**30.65**	**274**	eP	**P**	**06 36 27.0**	**-3.5**
HHC				AP	pP	06 36 31.2	-10
HHC				XP	sP	06 36 34.1	-12
HHC				S	**S**	**06 41 18.5**	**-12**
HHC				XS	sS	06 41 30.4	-18
HHC				SS	SS	06 42 59.6	-42
HHC				AMB	AMB		
	comp=Z,13nm,0.6s,mb4.9						
HHC				AMB	AMB		
	comp=Z,212nm,5.1s						
ULN	**Ulaanbaatar**	**31.21**	**289**	eP	**P**	**06 36 35.7**	**+0.3**
SONM	**Songino Array**	**31.64**	**289**	P	**P**	**06 36 39.7**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.3,baz=76,slow=6.3,SNR=3.2						
SONM				LR	LR	06 50 34.8	
	comp=Z,57nm,19.6s,MS3.2,baz=189,slow=38						
COLA	**College**	**35.84**	**38**	eP	**P**	**06 37 18.9**	**+3.4**
LZH	**Lanzhou**	**38.24**	**272**	eP	**P**	**06 37 34.6**	**-1.6**
LZH				AP	pP	06 37 38.8	-8.6
LZH				XP	sP	06 37 42.0	-10
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,63nm,4.0s						
INK	**Inuvik**	**41.38**	**33**	P	**P**	**06 38 02.5**	**+0.6**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	**Inuvik**	**41.38**	**33**	P	**P**	**06 38 02.5**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.4,baz=334,slow=4.0,SNR=5.9						
WMQ	**Urumqi**	**45.23**	**291**	⇑P	**P**	**06 38 33.2**	**0.0**
WMQ				AP	pP	06 38 37.7	-6.9
WMQ				XP	sP	06 38 40.2	-9.1
WMQ				PCP	PcP	06 40 15.2	+2.5
WMQ				PP	PP	06 40 19.1	-0.1
WMQ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,175nm,5.0s						
KMI	**Kunming**	**45.61**	**260**	P	**P**	**06 38 35.0**	**-1.5**
KMI				AP	pP	06 38 37.7	-10
KMI				AMB	AMB		
	comp=Z,7.0nm,0.5s,mb4.8						
MKAR	**Makanchi Array**	**47.22**	**298**	iP	**P**	**06 38 48.4**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**47.22**	**298**	P	**P**	**06 38 48.4**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.1,baz=67,slow=6.8,SNR=22						
MKAR				PcP	PcP	06 40 20.1	+0.5
	comp=Z,0.2nm,0.5s,baz=252,slow=1.5,SNR=2.3						
MKAR				LR	LR	07 00 05.8	
	comp=Z,58nm,18.1s,MS3.6,baz=357,slow=38						
YKA	**Yellowknife Ar**	**50.63**	**37**	P	**P**	**06 39 15.0**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=298,slow=7.2,SNR=12						
YKA				PcP	PcP	06 40 31.5	-0.2
	comp=Z,0.1nm,0.4s,baz=303,slow=3.8,SNR=3.7						
AAK	**Ala-Archa**	**54.12**	**297**	eP	**P**	**06 39 39.6**	**-1.3**
	comp=Z,2.3nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**54.12**	**297**	eP	**P**	**06 39 39.6**	**-1.3**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ARU	**Arti**	**55.19**	**318**	eP	**P**	**06 39 44.4**	**-4.0**
ARU	**Arti**	**55.19**	**318**	eP	**P**	**06 39 44.4**	**-4.0**
ARU						06 41 49.1	
ARU				S	**S**	**06 47 23.4**	**-5.0**
ARU				SS	SS	06 51 03.6	-8.6
KEV	**Kevo**	**57.38**	**341**	ep	**P**	**06 39 59.9**	**-3.9**
	comp=Z,0.3nm,0.3s,mb3.8						
ARCES	**ARCESS Array B**	**57.88**	**341**	P	**P**	**06 40 07.4**	**0.0**
ARCES	**ARCESS Array B**	**57.88**	**341**	P	**P**	**06 40 07.2**	**-0.2**
	comp=Z,5.5nm,1.1s,mb4.5,baz=19,slow=8.4,SNR=8.9						
AKTO	**Aktyubinsk**	**58.93**	**312**	LR	LR	07 07 56.2	
	comp=Z,52nm,18.0s,MS3.7,baz=118,slow=38						
JOF	**Joensuu**	**61.41**	**334**	eP	**P**	**06 40 30.3**	**-1.4**
NVAR	**Mina Array Bea**	**62.07**	**63**	P	**P**	**06 40 37.0**	**+0.5**
	comp=Z,0.3nm,0.6s,mb3.6,baz=304,slow=6.4,SNR=3.0						
KAF	**Kangasniemi**	**63.51**	**335**	ep	**P**	**06 40 44.1**	**-1.6**
	comp=Z,1.5nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**63.51**	**335**	eP	**P**	**06 40 44.1**	**-1.6**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**64.11**	**335**	P	**P**	**06 40 49.6**	**-0.1**
FINES	**FINESS Array B**	**64.11**	**335**	iP	**P**	**06 40 49.7**	**0.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	**FINESS Array B**	**64.11**	**335**	P	**P**	**06 40 49.7**	**0.0**
	comp=Z,1.5nm,0.4s,mb4.3,baz=38,slow=7.7,SNR=16						
PDAR	**Pinedale Array**	**64.40**	**54**	P	**P**	**06 40 51.6**	**-0.3**
	comp=Z,1.0nm,0.9s,mb3.9,baz=312,slow=2.7,SNR=7.3						
ULM	**Lac du Bonnet**	**66.22**	**41**	P	**P**	**06 41 03.2**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.9,baz=309,slow=11,SNR=4.1						
NB2	**NORSAR Subarra**	**68.26**	**341**	P	**P**	**06 41 16.5**	**+0.2**
	comp=Z,1.1nm,0.5s,mb4.1,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.26**	**341**	P	**P**	**06 41 16.7**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**68.26**	**341**	P	**P**	**06 41 16.7**	**+0.4**
	comp=Z,1.4nm,0.6s,mb4.2,baz=28,slow=6.4,SNR=7.6						
WRA	**Warramunga Arr**	**68.72**	**199**	P	**P**	**06 41 19.3**	**-0.3**
WRA	**Warramunga Arr**	**68.72**	**199**	P	**P**	**06 41 18.4**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**68.72**	**199**	P	**P**	**06 41 18.4**	**-1.2**
	comp=Z,1.0nm,0.7s,mb3.9,baz=17,slow=6.8,SNR=8.4						
AKASG	**Malin Array Be**	**71.67**	**326**	iP	**P**	**06 41 37.4**	**0.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.67**	**326**	P	**P**	**06 41 36.9**	**-0.5**
	comp=Z,0.7nm,0.4s,mb4.0,baz=34,slow=6.1,SNR=8.4						
ASAR	**Alice Springs**	**72.41**	**199**	P	**P**	**06 41 41.6**	**-0.4**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**72.41**	**199**	P	**P**	**06 41 41.6**	**-0.4**
	comp=Z,1.9nm,0.6s,mb4.2,baz=12,slow=5.9,SNR=22						
BURAR	**Bucovina Array**	**75.71**	**327**	⇑iP	**P**	**06 42 02.4**	**+1.3**
CLL	**Collm**	**76.53**	**336**	eP	**P**	**06 42 07.0**	**+1.3**
TXAR	**Lajitas Array**	**77.13**	**61**	P	**P**	**06 42 09.5**	**0.0**
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR	**Lajitas Array**	**77.13**	**61**	P	**P**	**06 42 09.5**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=302,slow=4.2,SNR=28						
MLR	**Muntele Rosu**	**77.20**	**325**	⇓iP	**P**	**06 42 11.4**	**+1.8**
VOIR		**77.59**	**326**	⇑iP	**P**	**06 42 13.5**	**+1.7**
GERES	**GERESS Array B**	**78.53**	**334**	P	**P**	**06 42 17.7**	**+0.8**
	comp=Z,0.3nm,0.2s,mb3.8,baz=42,slow=6.1,SNR=4.9						
BRTR	**Keskin Array B**	**78.57**	**317**	P	**P**	**06 42 18.6**	**+1.3**
BRTR	**Keskin Array B**	**78.57**	**317**	iP	**P**	**06 42 18.7**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**78.57**	**317**	P	**P**	**06 42 18.4**	**+1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=64,slow=2.9,SNR=5.3						

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*IDC **07** 06:37:30.7±2.4, 20.13S×178.32W, h571km±26km, mb3.2/12, mb1 3.5/12, mb1mx3.5/14, mbtmp3.2/12, Error ellipse: s-maj=23.1km s-min=12.9km az=154.0*

*ISCJB **07** 06:37:32.6±2.1, 20.6S±0.1×178.2W±0.1, h621km±28km, mb3.8/14, Error ellipse: s-maj=16.7km s-min=14.9km az=38.8*

*NEIC **07** 06:37:32.6±0.4, 20.35S×178.26W, h600km, mb4.5/2, Error ellipse: s-maj=17.4km s-min=10.9km az=146.0*

ISC 07 06:37:32.7±2.6, 20.5S±0.1×178.2W±0.1, h607km±32km, n54, σ0.95/25, mb3.8/14, 6C-7D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.41**	**261**	P	**P**	**06 40 36.2**	**+1.0**
	1.4nm,0.3s,baz=64,slow=22,SNR=16						
URZ	**Urewera**	**18.13**	**192**	P	**P**	**06 41 08.1**	**-0.9**
	1.5nm,0.3s,baz=329,slow=4.1,SNR=7.5						
URZ				S	**S**	**06 44 01.8**	**-2.7**
	0.3nm,0.3s,baz=3.6,slow=16,SNR=2.5						
CTA	**Charters Tower**	**33.31**	**264**	eP	**P**	**06 43 22.4**	**+0.1**
	10nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**37.62**	**244**	P	**P**	**06 43 58.2**	**+0.6**
	3.0nm,0.6s,mb4.0,baz=88,slow=7.1,SNR=6.3						
ASAR	**Alice Springs**	**44.34**	**257**	P	**P**	**06 44 51.0**	**+0.2**
	12nm,0.7s,mb4.5,baz=95,slow=7.6,SNR=140						
ASAR				PcP	PcP	06 46 22.8	+1.5
	2.0nm,0.5s,baz=104,slow=3.8,SNR=11						
ASAR				ScP	ScP	06 49 22.2	+5.8
	0.8nm,0.7s,baz=101,slow=5.0,SNR=6.4						
ASAR				S	**S**	**06 50 43.4**	**+1.0**
	0.4nm,0.7s,baz=93,slow=15,SNR=4.5						
WB2	**Warramunga Arr**	**44.41**	**262**	eP	**P**	**06 44 51.0**	**-0.4**
WRA	**Warramunga Arr**	**44.42**	**262**	P	**P**	**06 44 51.1**	**-0.4**
	5.8nm,0.3s,mb4.6,baz=97,slow=7.8,SNR=210						
FORT	**Forrest**	**49.12**	**247**	eP	**P**	**06 45 26.8**	**+0.2**
	6.7nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.85**	**262**	eP	**P**	**06 45 54.0**	**+0.3**
VNDA	**Vanda**	**57.86**	**185**	P	**P**	**06 46 31.5**	**+4.2**
VNDA	**Vanda**	**57.86**	**185**	P	**P**	**06 46 31.5**	**+4.2**
	0.9nm,0.5s,mb3.1,baz=66,slow=9.7,SNR=4.0						
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**06 47 43.7**	**-1.8**
MJAR	**Matsushiro Arr**	**70.13**	**324**	P	**P**	**06 47 43.7**	**-1.8**
	2.8nm,0.7s,mb3.8,baz=160,slow=6.1,SNR=5.1						
KSRS	**Korea Array**	**76.80**	**319**	P	**P**	**06 48 23.1**	**-0.1**
	1.0nm,0.6s,mb3.4,baz=128,slow=5.9,SNR=3.6						
NVAR	**Mina Array Bea**	**81.17**	**43**	P	**P**	**06 48 46.8**	**+0.5**
	1.0nm,0.8s,mb3.3,baz=232,slow=11,SNR=10						
GAMB	**Gambell**	**84.19**	**3**	eP	**P**	**06 48 60.0**	**-0.8**
TXAR	**Lajitas Array**	**87.22**	**57**	P	**P**	**06 49 18.5**	**+2.4**
	0.1nm,0.6s,mb2.8,baz=216,slow=4.5,SNR=3.1						
DLBC	**Dease Lake**	**88.15**	**23**	P	**P**	**06 49 18.9**	**-0.9**
	baz=239,slow=14						
PDAR	**Pinedale Array**	**89.11**	**43**	P	**P**	**06 49 24.9**	**+0.3**
	1.0nm,0.9s,mb3.6,baz=195,slow=3.3,SNR=6.3						
CFAA	**Coronel Fontan**	**95.22**	**126**	P	**P**	**06 49 53.8**	**+0.8**
	0.1nm,0.4s,mb3.3,baz=264,slow=9.2,SNR=3.0						
SONM	**Songino Array**	**95.66**	**319**	P	**P**	**06 49 54.4**	**-0.1**
	0.2nm,0.3s,mb3.8,baz=131,slow=3.4,SNR=3.2						
YKA	**Yellowknife Ar**	**96.62**	**25**	P	**P**	**06 49 57.8**	**-0.6**
YKA	**Yellowknife Ar**	**96.62**	**25**	P	**P**	**06 49 57.8**	**-0.6**
	0.1nm,0.3s,mb3.5,baz=237,slow=4.1,SNR=3.8						
MKAR	**Makanchi Array**	**111.09**	**313**	PKiKP	PKiKP	06 54 58.1	-0.1
	0.4nm,0.5s,baz=94,slow=0.6,SNR=8.6						
ARCES	**ARCESS Array B**	**128.92**	**350**	PKP	PKPdf	06 55 32.1	+0.3
	2.2nm,0.9s,baz=170,slow=0.5,SNR=4.7						
FINES	**FINESS Array B**	**135.76**	**344**	PKP	PKPdf	06 55 45.0	+0.1
FINES	**FINESS Array B**	**135.76**	**344**	PKP	PKPdf	06 55 45.0	+0.1
	1.4nm,1.0s,baz=46,slow=5.5,SNR=4.2						
AKASG	**Malin Array Be**	**142.96**	**331**	PKhKP		06 55 55.3	
	5.9nm,0.5s,baz=43,slow=4.3,SNR=47						
MALT	**Malatya**	**143.81**	**307**	⇓P	PKPdf	06 56 00.6	+0.4
MALT	**Malatya**	**143.81**	**307**	⇓iP	PKPdf	06 56 00.6	+0.5
BR131	**Keskin Array S**	**146.73**	**312**	ePKPbc	PKPbc	06 56 08.3	+0.5
BRTR	**Keskin Array B**	**146.73**	**312**	PKPbc	PKPbc	06 56 08.2	+0.4
	2.9nm,0.6s,baz=124,slow=4.6,SNR=16						
BURAR	**Bucovina Array**	**147.01**	**330**	⇓P	PKPbc	06 56 09.2	+0.9
BURAR	**Bucovina Array**	**147.01**	**330**	⇓iP	PKPbc	06 56 09.2	+0.9
STHS	**Stebnicka Huta**	**147.28**	**336**	ePKP	PKPab	06 56 14.3	+1.4
CLL	**Collm**	**148.06**	**347**	iPKPbc	PKPbc	06 56 11.4	+0.5
	comp=Z,10.0nm,0.8s						
CLL				iPKPab	PKPab	06 56 15.4	-0.6
	comp=Z,9.0nm,1.0s						
DPC	**Dobruska-Polom**	**148.11**	**342**	ePKPbc	PKPbc	06 56 12.5	+1.5
MLR	**Muntele Rosu**	**148.16**	**327**	⇑P	PKPbc	06 56 12.0	+0.7
MLR	**Muntele Rosu**	**148.16**	**327**	⇑iP	PKPbc	06 56 12.0	+0.7
BRG	**Berggiesshubel**	**148.25**	**345**	iP	PKPbc	06 56 12.1	+0.8
	comp=Z,7.2nm,1.0s						
BRG				i		06 56 16.8	
	comp=Z,5.3nm,0.6s						
KECS	**Kecovo**	**148.33**	**336**	ePKP	PKPab	06 56 17.4	+0.2
PVCC	**Panska Ves**	**148.42**	**344**	ePKPbc	PKPbc	06 56 13.2	+1.4
DRGR		**148.76**	**332**	⇑P	PKPbc	06 56 13.4	+0.6
DRGR		**148.76**	**332**	⇑iP	PKPbc	06 56 13.4	+0.6
PRU	**Pruhonice**	**148.92**	**344**	ePKPbc	PKPbc	06 56 14.0	+1.0
VYHS	**Vyhne**	**148.93**	**338**	ePKP	PKPbc	06 56 14.0	+0.9
VYHS				e		06 56 20.0	
MODS	**Modra-Piesok**	**149.56**	**339**	ePKP	PKPbc	06 56 15.8	+1.2
GZR	**Gura Zlata**	**149.78**	**330**	⇑P	PKPbc	06 56 16.5	+1.3
GZR	**Gura Zlata**	**149.78**	**330**	⇑iP	PKPbc	06 56 16.5	+1.2
KHC	**Kasperske Hory**	**149.95**	**344**	ePKPbc	PKPbc	06 56 16.6	+1.1
KHC				ePKPab	PKPab	06 56 24.0	+0.1
BZS	**Buzias**	**150.15**	**331**	⇓iP	PKPbc	06 56 16.5	+0.4
GERES	**GERESS Array B**	**150.19**	**344**	PKPbc	PKPbc	06 56 15.8	-0.3
	comp=Z,1.9nm,0.7s,baz=29,slow=3.0,SNR=13						
PKSM	**Moragy**	**150.91**	**336**	⇓P	PKPbc	06 56 18.2	+0.4
PKSM	**Moragy**	**150.91**	**336**	⇓iP	PKPbc	06 56 18.3	+0.5

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*ISCJB **07** 07:01:43.7±0.3, 40.40S±0.02×175.39E±0.04, h24km±4km, mb4.5/7, Error ellipse: s-maj=5.9km s-min=2.9km az=20.3*

*WEL **07** 07:01:44.0±0.1, 40.38S×175.35E, h15km±1km, ML4.6/61, Error ellipse: s-maj=1.4km s-min=0.6km az=90.0, maximum reported intensity MM 5.*

WEL Felt from King Country to Wellington, and from Taranaki to Hawke''s Bay.

*NEIC **07** 07:01:43.6, 40.41S×175.35E, h7km, ML4.6(WEL), After WEL.*

*IDC **07** 07:01:49.1±2.8, 40.08S×175.46E, h67km±25km, mb4.1/6, mb1 4.2/7, mb1mx4.1/13, mbtmp4.1/7, MS3.0/2, Ms1 3.0/2, ms1mx2.7/18, Error ellipse: s-maj=23.8km s-min=20.7km az=30.0*

ISC 07 07:01:43.5±0.5, 40.39S±0.02×175.38E±0.04, h14km±5km, n132, σ0.94/125, mb4.5/7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRZ	**Mangatainoka R**	**0.31**	**150**	P	**Pg**	**07 01 50.5**	**+0.6**
MRZ	**Mangatainoka R**	**0.31**	**150**	P*	**Pg**	**07 01 50.5**	**+0.6**
MRZ				S*	**Sg**	**07 01 54.9**	**+0.7**
TIWZ	**Tintock**	**0.54**	**135**	P*	**Pb**	**07 01 55.0**	**+0.2**
TSZ	**Takapari Road**	**0.56**	**53**	P	**Pg**	**07 01 54.1**	**-0.3**
TSZ	**Takapari Road**	**0.56**	**53**	P*	**Pb**	**07 01 54.1**	**-0.9**
KIW	**Kapiti Island**	**0.59**	**217**	P*	**Pb**	**07 01 54.6**	**-1.0**
WAZ	**Wanganui**	**0.70**	**334**	P	**Pg**	**07 01 57.2**	**0.0**
WAZ	**Wanganui**	**0.70**	**334**	P*	**Pb**	**07 01 57.1**	**-0.4**
BFZ	**Birch Farm**	**0.72**	**114**	P	**Pg**	**07 01 58.4**	**+0.9**
BFZ	**Birch Farm**	**0.72**	**114**	P*	**Pb**	**07 01 58.4**	**+0.6**
CAW	**Cannon Point**	**0.75**	**198**	P	**Pg**	**07 01 58.0**	**-0.1**
CAW	**Cannon Point**	**0.75**	**198**	P*	**Pb**	**07 01 58.0**	**-0.3**
MTW	**Mount Morrison**	**0.77**	**173**	P*	**Pb**	**07 01 59.2**	**+0.5**
MRW	**Makara Radio**	**0.98**	**211**	P*	**Pb**	**07 02 01.7**	**-0.6**
PAWZ	**Paruwai Farm**	**0.99**	**178**	P	**Pb**	**07 02 02.9**	**+0.5**
PAWZ	**Paruwai Farm**	**0.99**	**178**	P*	**Pb**	**07 02 02.9**	**+0.5**
WEL	**Wellington**	**1.00**	**207**	P	**Pb**	**07 02 02.2**	**-0.5**
WEL	**Wellington**	**1.00**	**207**	P*	**Pb**	**07 02 02.2**	**-0.5**
MTVZ	**Mangateitei**	**1.01**	**4**	P*	**Pb**	**07 02 01.9**	**-0.8**
MOVZ	**Moawhango**	**1.03**	**16**	P	**Pb**	**07 02 01.5**	**-1.5**
MOVZ	**Moawhango**	**1.03**	**16**	P*	**Pb**	**07 02 01.5**	**-1.5**
MSWZ	**Moikau Station**	**1.03**	**185**	P	**Pb**	**07 02 03.6**	**+0.6**
MSWZ	**Moikau Station**	**1.03**	**185**	P*	**Pb**	**07 02 03.6**	**+0.6**
TRWZ	**Traveller**	**1.03**	**167**	P*	**Pb**	**07 02 04.0**	**+0.9**
SNZO	**South Karori**	**1.05**	**209**	P*	**Pb**	**07 02 02.8**	**-0.6**
WNVZ	**Wahianoa**	**1.08**	**9**	P	**Pb**	**07 02 02.9**	**-1.0**
WNVZ	**Wahianoa**	**1.08**	**9**	P*	**Pb**	**07 02 02.9**	**-1.0**
BHW	**Baring Head**	**1.08**	**201**	P	**Pb**	**07 02 03.6**	**-0.4**
BHW	**Baring Head**	**1.08**	**201**	P*	**Pb**	**07 02 03.6**	**-0.5**
TRVZ	**Turoa**	**1.10**	**7**	P*	**Pb**	**07 02 03.4**	**-0.8**
PKVZ	**Pokaka**	**1.10**	**359**	P*	**Pb**	**07 02 03.5**	**-0.8**
DRZ	**Dome Shelter**	**1.12**	**7**	P	**Pb**	**07 02 04.9**	**+0.2**
DRZ	**Dome Shelter**	**1.12**	**7**	P*	**Pb**	**07 02 04.9**	**+0.2**
TUVZ	**Tukino**	**1.14**	**11**	P*	**Pb**	**07 02 04.1**	**-0.9**
FWVZ	**Far West T-bar**	**1.14**	**7**	P	**Pb**	**07 02 04.1**	**-0.9**
FWVZ	**Far West T-bar**	**1.14**	**7**	P*	**Pb**	**07 02 04.1**	**-0.9**
TCW	**Tory Channel**	**1.17**	**225**	P*	**Pb**	**07 02 04.1**	**-1.4**
DUWZ	**D'Urville Isla**	**1.18**	**249**	P*	**Pb**	**07 02 04.7**	**-1.0**
PXZ	**Pawanui**	**1.19**	**73**	P*	**Pb**	**07 02 05.9**	**+0.1**
WPVZ	**Whakapapa**	**1.19**	**6**	P	**Pn**	**07 02 05.1**	**-0.6**
WPVZ	**Whakapapa**	**1.19**	**6**	PN	**Pn**	**07 02 05.1**	**-0.6**
NGZ	**Ngauruhoe**	**1.23**	**8**	PN	**Pn**	**07 02 05.5**	**-0.7**
OTVZ	**Oturere**	**1.25**	**10**	PN	**Pn**	**07 02 05.9**	**-0.5**
WTVZ	**West Tongariro**	**1.29**	**7**	PN	**Pn**	**07 02 06.5**	**-0.5**
KRVZ	**Karewarewa**	**1.31**	**9**	PN	**Pn**	**07 02 06.8**	**-0.5**
TWVZ	**Taurewa**	**1.32**	**2**	P	**Pn**	**07 02 07.0**	**-0.5**
TWVZ	**Taurewa**	**1.32**	**2**	PN	**Pn**	**07 02 07.0**	**-0.5**
RAEZ	**Rainy Point**	**1.34**	**325**	P	**Pn**	**07 02 08.8**	**+1.1**
RAEZ	**Rainy Point**	**1.34**	**325**	PN	**Pn**	**07 02 08.8**	**+1.0**
VRZ	**Vera Road**	**1.35**	**339**	P	**Pn**	**07 02 07.9**	**0.0**
VRZ	**Vera Road**	**1.35**	**339**	PN	**Pn**	**07 02 07.9**	**0.0**
KATZ	**Kakaramea**	**1.44**	**10**	PN	**Pn**	**07 02 09.3**	**+0.2**
DFE	**Dawson Falls**	**1.45**	**317**	P	**Pn**	**07 02 11.2**	**+2.0**
DFE	**Dawson Falls**	**1.45**	**317**	PN	**Pn**	**07 02 11.2**	**+2.0**
RITZ	**Rihia Road**	**1.46**	**15**	P	**Pn**	**07 02 09.6**	**+0.2**
RITZ	**Rihia Road**	**1.46**	**15**	PN	**Pn**	**07 02 09.6**	**+0.2**
NEZ	**North Egmont**	**1.49**	**318**	P	**Pn**	**07 02 11.1**	**+1.2**
NEZ	**North Egmont**	**1.49**	**318**	PN	**Pn**	**07 02 11.1**	**+1.3**
BKZ	**Black Stump Fm**	**1.50**	**35**	P	**Pn**	**07 02 10.3**	**+0.4**
BKZ	**Black Stump Fm**	**1.50**	**35**	PN	**Pn**	**07 02 10.3**	**+0.4**
TUWZ	**Tuamarina**	**1.50**	**226**	PN	**Pn**	**07 02 09.9**	**0.0**
NRZ	**Ngariki Road**	**1.53**	**313**	P	**Pn**	**07 02 11.8**	**+1.4**
NRZ	**Ngariki Road**	**1.53**	**313**	PN	**Pn**	**07 02 11.8**	**+1.4**
RATZ	**Rangitukua**	**1.55**	**11**	P	**Pn**	**07 02 11.6**	**+0.9**
RATZ	**Rangitukua**	**1.55**	**11**	PN	**Pn**	**07 02 11.6**	**+0.9**
HATZ	**Hinemaiaia**	**1.60**	**20**	P	**Pn**	**07 02 11.5**	**+0.2**
HATZ	**Hinemaiaia**	**1.60**	**20**	PN	**Pn**	**07 02 11.5**	**+0.2**
PKE	**Pukeiti**	**1.61**	**318**	P	**Pn**	**07 02 12.8**	**+1.4**
PKE	**Pukeiti**	**1.61**	**318**	PN	**Pn**	**07 02 12.8**	**+1.4**
NWEZ	**Newall Road**	**1.61**	**313**	P	**Pn**	**07 02 13.1**	**+1.6**
NWEZ	**Newall Road**	**1.61**	**313**	PN	**Pn**	**07 02 12.9**	**+1.3**
CMWZ	**Cape Campbell**	**1.61**	**213**	P	**Pn**	**07 02 12.9**	**+1.4**
CMWZ	**Cape Campbell**	**1.61**	**213**	PN	**Pn**	**07 02 12.5**	**+1.0**
WATZ	**Wairara**	**1.70**	**9**	P	**Pn**	**07 02 13.5**	**+0.8**
WATZ	**Wairara**	**1.70**	**9**	PN	**Pn**	**07 02 13.5**	**+0.8**
NNZ	**Nelson**	**1.73**	**241**	PN	**Pn**	**07 02 13.9**	**+0.8**
BSWZ	**Blackbirch Sta**	**1.74**	**220**	P	**Pn**	**07 02 14.2**	**+0.9**
BSWZ	**Blackbirch Sta**	**1.74**	**220**	PN	**Pn**	**07 02 14.2**	**+0.9**
WHTZ	**Whakaora**	**1.78**	**15**	P	**Pn**	**07 02 15.6**	**+1.8**
WHTZ	**Whakaora**	**1.78**	**15**	PN	**Pn**	**07 02 15.6**	**+1.8**
HIZ	**Hauiti**	**1.92**	**348**	PN	**Pn**	**07 02 15.9**	**+0.2**
PATZ	**Paeroa**	**2.12**	**19**	P	**Pn**	**07 02 20.1**	**+1.6**
PATZ	**Paeroa**	**2.12**	**19**	PN	**Pn**	**07 02 19.5**	**+1.0**
QRZ	**Quartz Range**	**2.21**	**258**	eP	**Pn**	**07 02 20.5**	**+0.8**
QRZ	**Quartz Range**	**2.21**	**258**	PN	**Pn**	**07 02 20.5**	**+0.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KNZ	**Kokohu**	**2.24**	**53**	*e*P	**Pn**	**07 02 19.4**	**-0.7**
KNZ	**Kokohu**	**2.24**	**53**	PN	**Pn**	**07 02 19.4**	**-0.7**
THZ	**Tophouse**	**2.32**	**233**	P	**Pn**	**07 02 21.8**	**+0.6**
THZ	**Tophouse**	**2.32**	**233**	PN	**Pn**	**07 02 21.8**	**+0.6**
TAZ	**Tarawera**	**2.33**	**22**	P	**Pn**	**07 02 20.2**	**-1.1**
TAZ	**Tarawera**	**2.33**	**22**	PN	**Pn**	**07 02 19.9**	**-1.4**
KHZ	**Kahutara**	**2.45**	**214**	*e*P	**Pn**	**07 02 22.7**	**-0.3**
KHZ	**Kahutara**	**2.45**	**214**	PN	**Pn**	**07 02 22.7**	**-0.3**
URZ	**Urewera**	**2.52**	**33**	P	**Pn**	**07 02 23.3**	**-0.6**
URZ	**Urewera**	**2.52**	**33**	P	**Pn**	**07 02 23.5**	**-0.4**
	50nm,0.3s,baz=231,slow=7.3,SNR=63						
URZ				S	**Sn**	**07 02 46.5**	**-7.9**
	82nm,0.3s,baz=286,slow=15,SNR=11						
URZ	**Urewera**	**2.52**	**33**	PN	**Pn**	**07 02 23.3**	**-0.7**
MWZ	**Matawai**	**2.65**	**40**	PN	**Pn**	**07 02 25.1**	**-0.6**
TOZ	**Tahuroa Road**	**2.66**	**2**	*e*P	**Pn**	**07 02 26.6**	**+0.7**
DSZ	**Denniston Nort**	**3.02**	**242**	*e*P	**Pn**	**07 02 31.6**	**+0.7**
PUZ	**Puketiti**	**3.22**	**45**	*e*P	**Pn**	**07 02 32.0**	**-1.6**
WTAZ	**Waiatarua**	**3.51**	**349**	P	**Pn**	**07 02 39.5**	**+1.9**
MXZ	**Matakaoa Point**	**3.63**	**40**	*e*P	**Pn**	**07 02 35.4**	**-3.9**
KUZ	**Kuaotunu**	**3.65**	**4**	PN	**Pn**	**07 02 40.9**	**+1.4**
MQZ	**McQueen's Vall**	**3.88**	**211**	*e*P	**Pn**	**07 02 41.0**	**-1.7**
MQZ	**McQueen's Vall**	**3.88**	**211**	*e*PN	**Pn**	**07 02 40.9**	**-1.9**
WCZ	**Waipu Caves**	**4.52**	**349**	P	**Pn**	**07 02 52.1**	**+0.6**
RPZ	**Rata Peaks**	**4.62**	**223**	P	**Pn**	**07 02 53.0**	**+0.1**
	1.8nm,0.3s,baz=65,slow=6.4,SNR=5.1						
RPZ				S	**Sn**	**07 03 43.1**	**-3.3**
	5.1nm,0.3s,baz=312,slow=12,SNR=4.3						
RPZ				LR	LR	07 05 06.4	
	comp=Z,384nm,19.9s,baz=105,slow=40						
LBZ	**Lake Benmore**	**5.54**	**222**	*e*P	**Pn**	**07 03 04.9**	**-0.6**
ODZ	**Otahua Downs**	**5.81**	**215**	P	**Pn**	**07 03 07.2**	**-2.0**
ODZ	**Otahua Downs**	**5.81**	**215**	*e*PN	**Pn**	**07 03 06.8**	**-2.4**
TUZ	**Tuapeka**	**6.97**	**215**	*e*P	**Pn**	**07 03 23.9**	**-1.1**
DZM	**Mont Dzumac**	**19.78**	**335**	P	**Pn**	**07 06 15.5**	**+0.8**
	0.4nm,0.3s,baz=148,slow=13,SNR=4.7						
DZM				LR	LR	07 12 13.6	
	comp=Z,18nm,18.2s,baz=222,slow=32						
STKA	**Stephens Creek**	**28.44**	**277**	P	**P**	**07 07 37.5**	**-0.3**
	1.1nm,0.3s,mb4.0,baz=108,slow=6.8,SNR=3.8						
ASAR	**Alice Springs**	**38.53**	**283**	P	**P**	**07 09 05.0**	**-0.6**
	3.6nm,0.4s,mb4.4,baz=130,slow=7.3,SNR=105						
ASAR				PcP	PcP	07 11 15.3	-2.9
	0.7nm,0.5s,baz=126,slow=3.9,SNR=6.8						
WB2	**Warramunga Arr**	**40.46**	**288**	*e*P	**P**	**07 09 21.1**	**-0.5**
WRA	**Warramunga Arr**	**40.47**	**288**	P	**P**	**07 09 21.2**	**-0.5**
	5.7nm,0.5s,mb4.5,baz=126,slow=8.1,SNR=100						
KLBR	**Kellerberrin**	**46.73**	**262**	*e*P	**P**	**07 10 10.3**	**-1.7**
	121nm,2.0s,mb5.5						
FITZ	**Fitzroy Crossi**	**48.02**	**282**	*e*P	**P**	**07 10 21.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**48.02**	**282**	P	**P**	**07 10 21.6**	**-0.7**
	4.5nm,0.6s,mb4.7,baz=134,slow=6.2,SNR=12						
QSPA	**South Pole Qui**	**49.73**	**180**	P	**P**	**07 10 36.5**	**+1.9**
QSPA	**South Pole Qui**	**49.73**	**180**	P	**P**	**07 10 36.5**	**+1.9**
	2.7nm,0.8s,mb4.3,baz=56,slow=4.4,SNR=14						
MAW	**Mawson**	**61.04**	**204**	P	**P**	**07 11 57.4**	**+1.3**
	2.5nm,0.8s,mb4.4,baz=82,slow=7.1,SNR=3.4						
YKA	**Yellowknife Ar**	**116.78**	**29**	PKP	PKPdf	07 20 24.5	-1.7
	0.9nm,0.6s,baz=260,slow=1.6,SNR=24						
MKAR	**Makanchi Array**	**119.82**	**308**	PKP	PKPdf	07 20 30.3	-2.3
	1.0nm,0.6s,baz=184,slow=1.2,SNR=7.9						
KEV	**Kevo**	**146.25**	**341**	*e*pkp	PKPdf	07 21 21.8	+0.7
	0.6nm,0.4s						
ARCES	**ARCESS Array B**	**146.78**	**341**	PKPbc	PKPbc	07 21 21.8	-2.1
	3.9nm,0.7s,baz=56,slow=1.4,SNR=11						
JOF	**Joensuu**	**148.98**	**329**	*e*pkp	PKPdf	07 21 26.6	+0.8
	6.3nm,0.7s						
BRTR	**Keskin Array B**	**150.86**	**281**	PKPbc	PKPbc	07 21 33.4	-1.9
	3.4nm,1.1s,baz=96,slow=5.0,SNR=9.1						
KAF	**Kangasniemi**	**151.37**	**330**	*e*pkp	PKPdf	07 21 32.3	+2.7
	0.5nm,0.4s,baz=52,slow=2.4						
FINES	**FINESS Array B**	**151.84**	**329**	PKPbc	PKPbc	07 21 34.0	-2.8
	3.9nm,0.8s,baz=96,slow=7.7,SNR=13						
TORD	**Torodi Ar. Bea**	**152.30**	**193**	PKPbc	PKPbc	07 21 38.3	-1.0
	1.3nm,0.4s,baz=156,slow=3.6,SNR=27						
TORD				PKPab	PKPab	07 21 48.6	-0.4
	3.3nm,0.9s,baz=95,slow=3.3,SNR=6.2						
AKASG	**Malin Array Be**	**154.36**	**305**	PKPbc	PKPbc	07 21 40.2	-2.4
	0.2nm,0.2s,baz=53,slow=1.9,SNR=4.5						
AKASG				PKPab	PKPab	07 21 54.0	-2.9
	1.0nm,0.6s,baz=67,slow=4.2,SNR=6.6						

IDC 07 07:47:07.0±2.0**, 145N×12660E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.7**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=171.6km s-min=23.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.58**	**161**	P	P	07 52 07.8	-1.2
	2.6nm,0.5s,baz=339,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.96**	**165**	P	P	07 52 42.5	+1.2
	0.5nm,0.4s,baz=346,slow=12,SNR=8.3						
MKAR	**Makanchi Array**	**59.35**	**326**	P	P	07 57 10.9	0.0
	0.4nm,0.4s,baz=119,slow=7.7,SNR=11						

*BJI **07** 07:57:50.1, 2195N×14356E, h123^{km}, mB5.0, mb4.4*
*IDC **07** 07:57:51.3±9.8, 2199N×14293E, h88^{km}±89^{km}, mb3.9/15, mb1 4.1/15, mb1mx4.0/21, mbtmp3.9/15, MS3.7/13, Ms1 3.7/13, ms1mx3.5/28, Error ellipse: s-maj=27.7km s-min=14.4km az=75.0*
*ISCJB **07** 07:57:54.0±2.9, 2191N±006×14276E±0.10, h126^{km}±26^{km}, mb4.3/29, Error ellipse: s-maj=15.4km s-min=9.9km az=169.9*
*MOS **07** 07:57:54.7±1.2, 2194N×14280E, h137^{km}, mb4.5/10, Error ellipse: s-maj=20.7km s-min=8.1km az=106.4*
*NEIC **07** 07:57:55.6±2.0, 2194N×14281E, h128^{km}±18^{km}, mb4.7/5, Error ellipse: s-maj=10.3km s-min=5.9km az=85.0*
ISC 07 07:57:56.2±2.8**, 2194N**±006×**14285E**±010**, h132**^{km}±25^{km}**, n73, σ0^{s}91**/67**, mb4.1**/29**, 5C-1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.17**	**353**	LR	LR	08 00 39.3	
	comp=Z,264nm,20.0s,baz=171,slow=33						
JOW	**Kunigami**	**14.14**	**293**	LR	LR	08 05 21.8	
	comp=Z,294nm,20.1s,baz=115,slow=32						
MJAR	**Matsushiro Arr**	**15.10**	**346**	P	**Pn**	**08 01 23.1**	**+0.5**
MJAR				LR	LR	08 06 31.3	
MJAR	**Matsushiro Arr**	**15.10**	**346**	P	**Pn**	**08 01 23.1**	**+0.5**
	0.2nm,0.3s,baz=160,slow=14,SNR=2.9						
MJAR				LR	LR	08 06 31.3	
	comp=Z,318nm,18.4s,baz=120,slow=35						
JNU	**Nakatsue**	**15.37**	**319**	LR	LR	08 06 53.9	
	comp=Z,34nm,21.9s,baz=142,slow=35						
KSRS	**Korea Array**	**20.13**	**323**	P	**P**	**08 02 21.9**	**+2.0**
	4.1nm,0.7s,baz=147,slow=8.0,SNR=13						
KSRS				LR	LR	08 09 22.5	
	comp=Z,81nm,18.6s,baz=336,slow=34						
YSS	**Yuzh-Sakhalins**	**24.96**	**360**	P	**P**	**08 03 07.4**	**+0.2**
YSS	**Yuzh-Sakhalins**	**24.96**	**360**	*e*P	**P**	**08 03 07.3**	**+0.1**
YSS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
KLR	**Kul'dur**	**28.62**	**345**	*e*P	**P**	**08 03 35.7**	**-4.3**
PMG	**Port Moresby**	**31.43**	**172**	P	**P**	**08 04 04.1**	**-1.0**
HIA	**Hailar**	**32.85**	**332**	P	**P**	**08 04 15.8**	**-1.4**
ULN	**Ulaanbaatar**	**38.58**	**321**	*e*P	**P**	**08 05 05.6**	**-0.5**
SONM	**Songino Array**	**38.95**	**320**	P	**P**	**08 05 09.1**	**-0.1**
	comp=Z,1.8nm,0.6s,mb3.9,baz=132,slow=7.1,SNR=15						
SONM				LR	LR	08 21 16.0	
	comp=Z,76nm,18.0s,baz=123,slow=36						
GTA	**Gaotai**	**40.48**	**305**	*e*P	**P**	**08 05 23.2**	**+1.2**
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.0						
YAK	**Yakutsk**	**41.08**	**351**	P	**P**	**08 05 25.9**	**-0.7**
BOD	**Bodaibo**	**41.49**	**337**	*e*P	**P**	**08 05 28.1**	**-1.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
CTA	**Charters Tower**	**41.90**	**175**	P	**P**	**08 05 33.1**	**-0.6**
	comp=Z,13nm,1.0s,mb4.5,baz=354,slow=8.0,SNR=7.2						
CTAO	**Charters Tower**	**41.90**	**175**	*e*P	**P**	**08 05 33.7**	**-0.1**
	comp=Z,19nm,1.0s,mb4.7						
CTAO	**Charters Tower**	**41.90**	**175**	*e*P	**P**	**08 05 33.7**	**0.0**
CTAO				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
ZAK	**Zakamensk**	**41.96**	**322** ⇓	*i*P	**P**	**08 05 34.1**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
IRK	**Irkutsk**	**42.33**	**325**	*e*P	**P**	**08 05 28.6**	**-8.3**
IRK				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.1						
TLY	**Talaya**	**42.38**	**324**	*e*P	**P**	**08 05 32.7**	**-4.7**
WRA	**Warramunga Arr**	**42.45**	**192**	P	**P**	**08 05 38.0**	**-0.2**
	comp=Z,3.3nm,0.7s,mb4.1,baz=13,slow=8.6,SNR=29						
WRA				LR	LR	08 24 11.0	
	comp=Z,36nm,19.1s,baz=170,slow=37						
FITZ	**Fitzroy Crossi**	**43.21**	**204**	P	**P**	**08 05 44.5**	**+0.1**
	comp=Z,4.6nm,0.8s,mb4.2,baz=25,slow=14,SNR=3.6						
MOY	**Mondy**	**43.84**	**323**	*e*P	**P**	**08 05 49.4**	**+0.4**
ASAR	**Alice Springs**	**46.16**	**191**	P	**P**	**08 06 07.8**	**+0.1**
	comp=Z,2.0nm,0.6s,mb3.9,baz=15,slow=7.2,SNR=31						
BILL	**Bilibino**	**48.35**	**12**	P	**P**	**08 06 21.7**	**-2.4**
BILL	**Bilibino**	**48.35**	**12** ⇑	*e*P	**P**	**08 06 21.6**	**-2.5**
BILL				*e*S	**S**	**08 13 20.8**	**+6.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
WMQ	**Urumqi**	**50.18**	**309**	*e*P	**P**	**08 06 40.0**	**+1.6**
TIXI	**Tiksi**	**50.38**	**354**	P	**P**	**08 06 39.1**	**-0.3**
TIXI	**Tiksi**	**50.38**	**354** ⇑	*e*P	**P**	**08 06 39.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.6						
STKA	**Stephens Creek**	**53.52**	**181**	P	**P**	**08 07 03.1**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.2,baz=343,slow=11,SNR=9.6						
MK31	**Makanchi Array**	**54.30**	**313**	*e*P	**P**	**08 07 08.7**	**-0.1**
MKAR	**Makanchi Array**	**54.30**	**313**	P	**P**	**08 07 09.9**	**+1.1**
MKAR	**Makanchi Array**	**54.30**	**313** ⇑	*e*P	**P**	**08 07 09.8**	**+1.0**
MKAR	**Makanchi Array**	**54.30**	**313**	P	**P**	**08 07 09.8**	**+1.0**
	comp=Z,1.4nm,0.6s,mb3.9,baz=90,slow=8.7,SNR=14						
MKAR				PcP	PcP	08 08 11.6	+0.4
	comp=Z,1.3nm,0.7s,baz=92,slow=4.7,SNR=4.4						
MKAR				LR	LR	08 29 31.7	
	comp=Z,37nm,18.1s,baz=176,slow=35						
NVS	**Novosibirsk**	**54.92**	**322**	*e*P	**P**	**08 07 11.3**	**-1.8**
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.4						
KURK	**Kurchatov**	**57.09**	**317**	*e*P	**P**	**08 07 28.3**	**-0.3**
	comp=Z,12nm,1.1s,mb4.6						
KURK	**Kurchatov**	**57.09**	**317**	*e*P	**P**	**08 07 28.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**59.77**	**307**	P	**P**	**08 07 47.0**	**-0.4**
BRVK	**Borovoye**	**62.35**	**319**	*e*P	**P**	**08 08 04.6**	**0.0**
KBL	**Kabul**	**64.95**	**299**	*e*P	**P**	**08 08 22.3**	**+0.3**
INK	**Inuvik**	**67.47**	**24**	P	**P**	**08 08 36.4**	**-1.1**
	comp=Z,1.4nm,0.9s,mb3.8,baz=166,slow=7.7,SNR=4.5						
YKA	**Yellowknife Ar**	**76.39**	**28**	P	**P**	**08 09 30.3**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.6,baz=291,slow=5.6,SNR=15						
YKA				LR	LR	08 42 57.4	
	comp=Z,68nm,20.3s,baz=165,slow=36						
PPT	**Papeete**	**76.92**	**115**	LR	LR	08 41 40.4	
	comp=Z,267nm,18.6s,baz=265,slow=34						
ARCES	**ARCESS Array B**	**78.59**	**341**	P	**P**	**08 09 43.5**	**+0.6**
	comp=Z,3.4nm,0.8s,mb4.0,baz=68,slow=9.7,SNR=5.7						
OBN	**Obninsk**	**81.11**	**326** ⇑	*e*P	**P**	**08 09 56.3**	**-0.4**
OBN				*e*S	S	08 20 00.7	+5.4
OBN				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.1						
KIV	**Kislovodsk**	**82.03**	**314** ⇑	*e*P	**P**	**08 10 03.1**	**+1.3**
KIV				*e*S	S	08 20 09.2	+4.0
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**82.83**	**334**	P	**P**	**08 10 04.8**	**-0.7**
FINES	**FINESS Array B**	**82.83**	**334**	P	**P**	**08 10 04.8**	**-0.8**
	comp=Z,1.2nm,0.6s,mb3.8,baz=86,slow=5.9,SNR=5.3						
FINES				LR	LR	08 52 36.3	
	comp=Z,81nm,18.0s,baz=178,slow=40						
NVAR	**Mina Array Bea**	**83.24**	**51**	P	**P**	**08 10 08.9**	**+0.8**
	comp=Z,2.5nm,0.8s,mb4.0,baz=272,slow=3.8,SNR=24						
HLID	**Hailey**	**83.90**	**45**	*e*P	**P**	**08 10 12.0**	**+0.6**
FFC	**Flin Flon**	**85.79**	**32**	*e*P	**P**	**08 10 21.0**	**+0.4**
	comp=Z,9.0nm,0.9s,mb4.5						
FFC	**Flin Flon**	**85.79**	**32**	*e*P	**P**	**08 10 21.0**	**+0.4**
FFC				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
IMW	**Indian Meadow**	**86.03**	**44**	*e*P	**P**	**08 10 22.6**	**+0.5**
DUG	**Dugway**	**86.41**	**48**	*e*P	**P**	**08 10 24.0**	**0.0**
RLMT	**Red Lodge**	**86.54**	**42**	*e*P	**P**	**08 10 26.0**	**+1.5**
HWUT	**Hardware Ranch**	**86.64**	**46**	*e*P	**P**	**08 10 25.2**	**+0.2**
	comp=Z,7.8nm,1.2s,mb4.4						
AKASG	**Malin Array Be**	**87.13**	**324**	P	**P**	**08 10 23.5**	**-3.7**
AKASG	**Malin Array Be**	**87.13**	**324**	*i* P	**P**	**08 10 23.6**	**-3.6**
AKASG	**Malin Array Be**	**87.13**	**324**	P	**P**	**08 10 26.1**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.5,baz=52,slow=4.7,SNR=5.4						
JLU	**Jordanelle**	**87.17**	**47**	*e*P	**P**	**08 10 28.7**	**+1.0**
DAU	**Daniels Canyon**	**87.38**	**47**	*e*P	**P**	**08 10 29.3**	**+0.6**
PDAR	**Pinedale Array**	**87.44**	**45**	P	**P**	**08 10 28.6**	**-0.4**
PDAR				LR	LR	08 47 12.9	
PDAR	**Pinedale Array**	**87.44**	**45**	P	**P**	**08 10 28.6**	**-0.4**
	comp=Z,0.6nm,0.9s,mb3.4,baz=323,slow=2.2,SNR=5.2						
PDAR				LR	LR	08 47 12.9	
	comp=Z,82nm,19.2s,baz=159,slow=34						
BRTR	**Keskin Array B**	**89.95**	**313**	P	**P**	**08 10 39.8**	**-1.0**
BRTR	**Keskin Array B**	**89.95**	**313**	*i* P	**P**	**08 10 39.7**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**89.95**	**313**	P	**P**	**08 10 40.6**	**-0.2**
	comp=Z,2.4nm,0.9s,mb4.1,baz=73,slow=4.1,SNR=9.6						
SMCO	**Snowmass**	**90.88**	**47**	*e*P	**P**	**08 10 41.3**	**-3.8**
SDCO	**Great Sand Dun**	**92.59**	**48**	*e*P	**P**	**08 10 53.7**	**+0.6**
	comp=Z,21nm,2.0s,mb4.9						
TXAR	**Lajitas Array**	**98.17**	**54**	LR	LR	08 49 52.1	
	comp=Z,58nm,20.0s,baz=5.0,slow=32						
LPAZ	**La Paz**	**150.23**	**85**	*e*PKPbc	PKPbc	08 17 34.2	+1.7
LPAZ	**La Paz**	**150.23**	**85**	PKPbc	PKPbc	08 17 34.2	+1.7
	comp=Z,4.8nm,0.7s,baz=292,slow=1.9,SNR=13						

IDC 07 08:21:39.9±5.7**, 5663S×14900E, h0**^{km}**, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.8**/9**, mbtmp3.7**/2**, MS3.7**/2**, Ms1 3.6**/2**, ms1mx3.2**/13**, Error ellipse: s-maj=415.9km s-min=60.9km az=78.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**34.73**	**335**	P	P	08 28 31.6	+0.1
	0.5nm,0.7s,baz=160,slow=8.7,SNR=3.2						
CTA	**Charters Tower**	**36.54**	**356**	LR	LR	08 42 47.6	
	comp=Z,78nm,18.9s,baz=229,slow=35						
WRA	**Warramunga Arr**	**38.23**	**337**	P	P	08 29 01.1	-0.2
	1.5nm,1.0s,baz=166,slow=7.5,SNR=3.4						
MAW	**Mawson**	**38.37**	**218**	LR	LR	08 44 02.7	
	comp=Z,124nm,18.4s,baz=244,slow=35						
FINES	**FINESS Array B**	**151.07**	**304**	PKPbc	PKPbc	08 41 33.0	-0.2
	0.7nm,0.6s,baz=100,slow=5.8,SNR=2.8						

KRSC 07 08:25:56.7±2.4**, 4881N×15698E, h5**^{km}±5^{km}**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALID	**Alaid**	**2.26**	**336**	P	Pn	08 26 35.9	+1.2
RUS	**Russkaya**	**3.76**	**14**	P	Pn	08 26 57.0	+1.8
RUS				*i* S	Sn	08 27 41.0	+1.2
GRL	**Gorelyy**	**3.81**	**10**	*e*P	Pn	08 26 57.8	+1.8
PET	**Petropavlovsk**	**4.35**	**13**	P	Pn	08 27 05.9	+2.5
AVH	**Avacha**	**4.60**	**13**	*e*P	Pn	08 27 09.9	+3.1
SPN	**Mys Shipunski**	**4.70**	**23**	P	Pn	08 27 10.9	+2.7
SPN				*i* S	Sn	08 28 04.6	+1.5
GNL	**Ganaly**	**4.93**	**7**	*e*P	Pn	08 27 13.7	+2.4
KBTR	**Krutoberegovo**	**8.22**	**23**	P	Pn	08 27 58.3	+1.9

IDC 07 09:04:45.2±1.1**, 997S×11852E, h0**^{km}**, mb3.6**/5**, mb1 3.8**/8**, mb1mx3.7**/18**, mbtmp3.7**/8**, ML3.6**/3**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.7**/22**, Error ellipse: s-maj=34.6km s-min=17.9km az=55.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.07**	**93**	Pn	Pn	09 06 01.6	-0.9
	5.0nm,0.3s,baz=297,slow=6.8,SNR=2.5						
BATI				Sn	Sn	09 07 05.8	+4.0
	7.2nm,0.3s,baz=279,slow=19,SNR=4.0						
BATI				LR	LR	09 07 41.4	
	comp=Z,139nm,21.5s,baz=114,slow=35						
FITZ	**Fitzroy Crossi**	**10.63**	**140**	Pn	Pn	09 07 17.6	-1.3
	0.4nm,0.3s,baz=331,slow=10,SNR=6.6						
FITZ				Sn	Sn	09 09 08.6	-10
	0.4nm,0.3s,baz=357,slow=23,SNR=5.9						
WRA	**Warramunga Arr**	**18.20**	**125**	P	Pn	09 08 57.8	-1.6
	0.1nm,0.3s,baz=300,slow=14,SNR=7.5						
WRA				S	Sn	09 12 06.0	-17
	0.1nm,0.3s,baz=306,slow=21,SNR=2.9						
ASAR	**Alice Springs**	**20.03**	**135**	P	P	09 09 20.9	+1.0
	1.7nm,0.6s,baz=321,slow=12,SNR=34						
NWAO	**Narrogin (SRO)**	**22.88**	**183**	P	P	09 09 50.1	-0.3
	3.7nm,0.8s,baz=349,slow=10,SNR=2.4						
CTA	**Charters Tower**	**28.57**	**114**	LR	LR	09 22 03.0	
	comp=Z,69nm,18.9s,baz=230,slow=36						
STKA	**Stephens Creek**	**30.52**	**139**	P	P	09 11 01.4	+1.1
	0.7nm,0.5s,baz=310,slow=7.9,SNR=3.2						
SONM	**Songino Array**	**58.55**	**350**	P	P	09 14 43.9	+0.5
	0.2nm,0.5s,baz=163,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**65.10**	**333**	P	P	09 15 27.4	-0.2
	0.2nm,0.3s,baz=155,slow=5.1,SNR=3.0						

IDC 07 09:30:06.5±1.7**, 1678S×17816W, h0**^{km}**, mb4.0**/6**, mb1 4.3**/6**, mb1mx4.0**/14**, mbtmp4.0**/6**, Error ellipse: s-maj=165.0km s-min=21.6km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.39**	**240**	P	P	09 37 37.5	-0.6
	2.8nm,0.7s,baz=82,slow=7.6,SNR=4.0						
WRA	**Warramunga Arr**	**45.08**	**258**	P	P	09 38 25.0	+0.3
	1.4nm,0.5s,baz=92,slow=7.3,SNR=44						
ASAR	**Alice Springs**	**45.34**	**253**	P	P	09 38 26.7	0.0
	9.6nm,0.6s,baz=88,slow=8.5,SNR=192						
NVAR	**Mina Array Bea**	**78.44**	**44**	P	P	09 42 08.9	-0.4
	0.4nm,0.7s,baz=205,slow=6.5,SNR=4.0						
TXAR	**Lajitas Array**	**85.19**	**58**	P	P	09 42 46.0	+0.9
	0.5nm,0.7s,baz=223,slow=6.1,SNR=6.8						
PDAR	**Pinedale Array**	**86.37**	**43**	P	P	09 42 51.1	+0.4
	0.3nm,0.6s,baz=205,slow=4.0,SNR=2.3						

*IDC **07** 09:37:43.6±2.8, 3454N×13932E, h120^{km}±23^{km}, mb3.1/3, mb1 3.2/4, mb1mx3.0/21, mbtmp3.0/4, Error ellipse: s-maj=56.7km s-min=27.0km az=72.0*
*ISCJB **07** 09:37:44.0±0.5, 3461N±004×13958E±007, h125^{km}, mb3.5/3, Error ellipse: s-maj=8.2km s-min=5.6km az=151.9*
*JMA **07** 09:37:44.0±0.2, 3460N×13963E, h125^{km}±2^{km}, M2.8*
ISC 07 09:37:43.9±0.6**, 3461N**±004×**13960E**±007**, h130**^{km}±4^{km}**, n18, σ0^{s}70**/29**, mb3.3**/3**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIM2	**Oshima 3**	**0.18**	**308**	P	**Pn**	**09 38 01.9**	**+0.2**
JIM2				S	**Sn**	**09 38 14.2**	**-0.9**
NJJJ	**Nii jima 2**	**0.33**	**232**	P	**Pn**	**09 38 02.0**	**-0.2**
TATJ	**Tateyama 2**	**0.48**	**29**	P	**Pn**	**09 38 03.2**	**+0.3**
TATJ				S	**Sn**	**09 38 17.7**	**+0.4**
JIZS	**Izushimoda**	**0.60**	**281**	P	**Pn**	**09 38 03.5**	**-0.1**
JIZS				S	**Sn**	**09 38 17.9**	**-0.6**
BSO3	**Boso 3**	**0.78**	**75**	P	**Pn**	**09 38 04.9**	**+0.1**
BSO3				*e*S	**Sn**	**09 38 21.7**	**+1.0**
JOD2	**Odawara 2**	**0.78**	**327**	P	**Pn**	**09 38 04.7**	**-0.2**
JOD2				S	**Sn**	**09 38 20.1**	**-0.7**
BSO1	**Boso 1**	**1.14**	**87**	P	**Pn**	**09 38 07.8**	**-0.3**
SHZ3	**Shizuoka 3**	**1.23**	**292**	P	**Pn**	**09 38 09.4**	**+0.3**
SHZ3				*e*S	**Sn**	**09 38 29.8**	**+1.6**
JYN	**Shimob**	**1.24**	**316**	P	**Pn**	**09 38 09.6**	**+0.4**
TK04	**Tokai 4**	**1.44**	**262**	P	**Pn**	**09 38 11.8**	**+0.5**
JHJ2	**Mitsune**	**1.50**	**173**	P	**Pn**	**09 38 12.1**	**0.0**
JHJ2				S	**Sn**	**09 38 32.9**	**-0.6**
JRY	**Ryogami san**	**1.52**	**338**	P	**Pn**	**09 38 12.9**	**+0.7**
JRY				S	**Sn**	**09 38 34.3**	**+0.5**
JAG	**Ashikaga**	**1.82**	**356**	P	**Pn**	**09 38 15.6**	**-0.1**
JAG				S	**Sn**	**09 38 38.8**	**-1.2**
MJAR	**Matsushiro Arr**	**2.24**	**330**	P	**Pn**	**09 38 21.1**	**+0.3**
	3.7nm,0.3s,baz=167,slow=12,SNR=29						
MJAR				S	**Sn**	**09 38 46.6**	**-2.5**
	2.4nm,0.3s,baz=145,slow=17,SNR=8.1						
MAT	**Matsushiro**	**2.24**	**330**	P	**Pn**	**09 38 21.2**	**+0.4**
MAT				*e*S	**Sn**	**09 38 49.3**	**+0.2**
MKAR	**Makanchi Array**	**44.20**	**304**	P	**P**	**09 45 39.5**	**-0.4**
	0.3nm,0.2s,mb3.5,baz=81,slow=9.1,SNR=4.7						
WRA	**Warramunga Arr**	**54.48**	**186**	P	**P**	**09 46 57.4**	**-0.7**
	0.2nm,0.7s,mb3.0,baz=0.3,slow=7.6,SNR=4.8						
FINES	**FINESS Array B**	**70.27**	**332**	P	**P**	**09 48 43.2**	**+0.6**
	0.6nm,0.6s,mb3.5,baz=49,slow=6.3,SNR=4.0						

IDC 07 10:01:02.9±2.7**, 2140S×6944W, h0**^{km}**, mb3.6**/2**, mb1 3.7**/4**, mb1mx3.6**/16**, mbtmp3.6**/4**, ML3.5**/2**, Error ellipse: s-maj=62.2km s-min=51.5km az=169.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.23**	**14**	Pn	Pn	10 02 22.7	+0.4
	0.7nm,0.3s,baz=198,slow=9.1,SNR=10						
SIV	**San Ignacio**	**9.58**	**57**	Pn	Pn	10 03 22.5	+0.4
	0.4nm,0.3s,baz=258,slow=9.5,SNR=8.2						
TORD	**Torodi Ar. Bea**	**77.78**	**71**	P	P	10 13 02.4	-0.1
	0.4nm,0.8s,baz=253,slow=4.4,SNR=2.7						
YKA	**Yellowknife Ar**	**90.92**	**341**	P	P	10 14 08.2	+0.1
	0.3nm,0.7s,baz=130,slow=4.5,SNR=6.9						

*ISCJB **07** 10:05:36.0±1.2, 2401S±008×6667W±02, h198^{km}±13^{km}, mb3.3/5, Error ellipse: s-maj=28.7km s-min=12.3km az=178.3*
*IDC **07** 10:05:36.5±1.9, 2398S×6670W, h185^{km}±17^{km}, mb3.2/5, mb1 3.4/8, mb1mx3.4/17, mbtmp3.2/8, Error ellipse: s-maj=27.2km s-min=17.2km az=84.0*
*NEIC **07** 10:05:36.9±0.9, 2403S×6661W, h193^{km}±9^{km}, Error ellipse: s-maj=19.9km s-min=9.9km az=98.0*
ISC 07 10:05:36.7±1.2**, 2398S**±008×**667W**±02**, h189**^{km}±12^{km}**, n15, σ0^{s}81**/16**, mb3.4**/5**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.72**	**190**	P	**Pn**	**10 07 25.9**	**-0.4**
CFAA				S	**Sn**	**10 08 47.1**	**-6.1**
CFAA	**Coronel Fontan**	**7.72**	**190**	P	**Pn**	**10 07 25.9**	**-0.4**
	0.2nm,0.3s,baz=17,slow=13,SNR=15						
CFAA				S	**Sn**	**10 08 47.1**	**-6.1**
	0.4nm,0.3s,baz=146,slow=20,SNR=12						
LPAZ	**La Paz**	**7.78**	**350**	P	**Pn**	**10 07 29.1**	**+1.9**
LPAZ				S	**Sn**	**10 08 53.7**	**-1.1**
LPAZ	**La Paz**	**7.78**	**350**	P	**Pn**	**10 07 29.1**	**+1.9**
	0.6nm,0.3s,baz=165,slow=11,SNR=8.8						
LPAZ				S	**Sn**	**10 08 53.7**	**-1.1**
	0.1nm,0.3s,baz=294,slow=20,SNR=2.2						
SIV	**San Ignacio**	**9.53**	**34**	P	**Pn**	**10 07 50.0**	**-0.1**
	0.9nm,0.3s,baz=217,slow=12,SNR=24						
TXAR	**Lajitas Array**	**63.84**	**324**	P	**P**	**10 15 49.2**	**0.0**
TXAR	**Lajitas Array**	**63.84**	**324**	P	**P**	**10 15 49.2**	**0.0**
	0.1nm,0.4s,mb3.0,baz=110,slow=8.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**76.27**	**69**	P	**P**	**10 17 05.0**	**0.0**
	0.2nm,0.4s,mb3.1,baz=262,slow=5.2,SNR=3.8						
PDAR	**Pinedale Array**	**77.29**	**329**	P	**P**	**10 17 10.9**	**+0.8**
	0.4nm,0.7s,mb3.1,baz=122,slow=9.7,SNR=3.2						
ULM	**Lac du Bonnet**	**78.31**	**341**	P	**P**	**10 17 14.7**	**-0.8**
	1.2nm,0.7s,mb3.7,baz=114,slow=7.5,SNR=4.6						
YKA	**Yellowknife Ar**	**94.21**	**340**	P	**P**	**10 18 33.5**	**-0.1**
YKA	**Yellowknife Ar**	**94.21**	**340**	P	**P**	**10 18 33.5**	**-0.1**
	0.4nm,0.5s,mb3.8,baz=136,slow=4.6,SNR=14						
ASAR	**Alice Springs**	**128.60**	**204**	PKP	PKPdf	10 24 21.3	-0.7
	0.1nm,0.4s,baz=137,slow=1.6,SNR=4.3						
WRA	**Warramunga Arr**	**131.78**	**207**	PKP	PKPdf	10 24 27.7	-0.4
	0.2nm,0.3s,baz=153,slow=2.0,SNR=10						
MKAR	**Makanchi Array**	**146.31**	**40**	PKPbc	PKPbc	10 24 55.7	+0.6
	0.7nm,0.4s,baz=301,slow=3.1,SNR=12						

*ISCJB **07** 10:13:22.1±4.0, 58S±02×1533E±0.1, h78^{km}±34^{km}, mb3.8/6, Error ellipse: s-maj=27.8km s-min=22.1km az=16.3*
*IDC **07** 10:13:23.8±4.8, 577S×15320E, h72^{km}±40^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.7/16, mbtmp3.8/8, ML3.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/22, Error ellipse: s-maj=29.8km s-min=24.1km az=62.0*
*NEIC **07** 10:13:25.2±2.5, 583S×153.15E, h88^{km}±21^{km}, Error ellipse: s-maj=21.6km s-min=16.2km az=222.0*
ISC 07 10:13:25.0±3.3**, 58S**±02×**1532E**±01**, h88**^{km}±27^{km}**, n12, σ0^{s}85**/10**, mb3.8**/6**, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.02**	**239**	P	**Pn**	**10 15 04.0**	**-1.1**
	2.0nm,0.3s,baz=50,slow=3.4,SNR=10						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG				S	Sn	10 16 24.8	+1.4
	2.6nm,0.3s,baz=176,slow=20,SNR=6.0						
PMG				LR	LR	10 16 56.8	
	comp=Z,84nm,21.7s,baz=306,slow=30						
CTA	Charters Tower	15.75	205	LR	LR	10 22 03.8	
	comp=Z,75nm,19.2s,baz=43,slow=33						
DZM	Mont Dzumac	20.61	143	P	P	10 17 57.7	+0.4
	5.3nm,0.8s,baz=27,slow=16,SNR=6.7						
WRA	Warramunga Arr	23.14	231	P	P	10 18 22.8	-1.0
	1.0nm,0.7s,mb3.2,baz=62,slow=9.1,SNR=5.3						
WRA				PcP	PcP	10 22 11.7	+1.8
	0.4nm,0.8s,baz=56,slow=2.3,SNR=6.5						
ASAR	Alice Springs	25.73	224	P	P	10 18 46.6	-0.7
	1.6nm,0.8s,mb3.5,baz=56,slow=8.6,SNR=18						
ASAR				PcP	PcP	10 22 17.9	+2.4
	0.5nm,0.7s,baz=57,slow=3.0,SNR=4.1						
STKA	Stephens Creek	28.14	201	P	P	10 19 09.7	+0.7
	1.8nm,0.8s,mb3.7,baz=68,slow=11,SNR=3.2						
FITZ	Fitzroy Crossi	29.59	243	P	P	10 19 21.3	-0.7
	5.8nm,0.9s,mb4.2,baz=79,slow=10,SNR=5.9						
NWAO	Narrogin (SRO)	43.02	226	LR	LR	10 40 25.5	
	comp=Z,69nm,21.9s,baz=4.9,slow=38						
SONM	Songino Array	67.39	328	P	P	10 24 11.3	+0.4
	0.8nm,0.5s,mb3.9,baz=144,slow=5.7,SNR=11						
MKAR	Makanchi Array	81.36	319	P	P	10 25 32.7	+0.7
MKAR	Makanchi Array	81.36	319	P	P	10 25 32.7	+0.7
	1.8nm,0.7s,mb4.0,baz=98,slow=5.9,SNR=19						
TORD	Torodi Ar. Bea	151.02	287	PKPbc	PKPbc	10 33 08.4	-0.4
	1.9nm,0.8s,baz=56,slow=2.0,SNR=9.2						

*ISCJB **07** 10:31:47.8±0.6, 33.06N±0.06×140.0E±0.1, h149km±4km, mb3.6/7, Error ellipse: s-maj=14.0km s-min=9.8km az=4.4*
*IDC **07** 10:31:48.8±0.6, 33.01N×139.87E, h141km±3km, mb3.5/7, mb1 3.6/8, mb1mx3.4/20, mbtmp3.4/8, Error ellipse: s-maj=28.5km s-min=16.2km az=72.0*
*JMA **07** 10:31:49.6±0.1, 33.18N×140.08E, h142km±1km, M3.7*
*NEIC **07** 10:31:49.6, 33.18N×140.08E, h142km, MG3.7(JMA), After JMA.*
ISC 07 10:31:49.1±0.6**, 33.09N**±0.06×**140.0E**±0.1**, h145**km±4km**, n24,** σ**0^{s}63**/32**, mb3.6**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.19	277	P	Pn	10 32 09.0	+0.3
JHJ2				S	Sn	10 32 24.1	+0.5
JHJ	Hachijo jima 2	0.21	278	P	Pn	10 32 09.1	+0.3
	155nm,0.3s,baz=76,slow=23,SNR=56						
JHJ				S	Sn	10 32 23.1	-0.7
	634nm,0.3s,baz=31,slow=23,SNR=34						
JKO	Kozu shima	1.33	326	P	Pn	10 32 16.6	+0.1
NJJJ	Nii jima 2	1.45	335	P	Pn	10 32 18.0	+0.2
JIM2	Oshima 3	1.70	343	P	Pn	10 32 20.4	-0.1
JIM2				*e*S	Sn	10 32 44.0	-0.5
BSO1	Boso 1	1.75	26	P	Pn	10 32 20.7	-0.3
BSO1				S	Sn	10 32 44.9	-0.5
BSO3	Boso 3	1.75	13	P	Pn	10 32 20.9	-0.1
BSO3				S	Sn	10 32 45.7	+0.1
JIZS	Izushimoda	1.89	330	P	Pn	10 32 22.6	0.0
TK04	Tokai 4	2.22	306	P	Pn	10 32 27.1	+0.6
JOD2	Odawara 2	2.31	340	P	Pn	10 32 27.7	+0.1
JOD2				S	Sn	10 32 57.1	-0.1
SHZ3	Shizuoka 3	2.49	323	P	Pn	10 32 30.3	+0.5
JYN	Shimob	2.70	333	P	Pn	10 32 33.0	+0.6
JYN				*e*S	Sn	10 33 10.7	+4.8
MJAR	Matsushiro Arr	3.76	337	P	Pn	10 32 45.5	-0.5
	2.5nm,0.3s,baz=168,slow=12,SNR=23						
MAJO	Matsushiro	3.76	337	*e*Pn	Pn	10 32 46.4	+0.4
MAT	Matsushiro	3.76	337	P	Pn	10 32 45.4	-0.6
MAT				*e*S	Sn	10 33 17.1	-13
SONM	Songino Array	29.26	310	P	P	10 37 38.0	+0.7
	0.9nm,0.5s,mb3.8,baz=108,slow=7.9,SNR=11						
MKAR	Makanchi Array	45.36	305	P	P	10 39 52.2	-0.5
	3.0nm,0.6s,mb4.1,baz=90,slow=10.0,SNR=35						
WRA	Warramunga Arr	53.01	187	P	P	10 40 50.0	-1.0
	0.5nm,0.3s,mb3.6,baz=5.3,slow=7.9,SNR=21						
ASAR	Alice Springs	56.74	187	P	P	10 41 17.2	-0.6
	0.4nm,0.5s,mb3.5,baz=20,slow=9.8,SNR=7.7						
FINES	FINESS Array B	71.78	332	P	P	10 42 53.7	-1.6
FINES	FINESS Array B	71.78	332	P	P	10 42 53.7	-1.5
	0.5nm,0.5s,mb3.5,baz=70,slow=2.2,SNR=3.8						
NVAR	Mina Array Bea	78.28	52	P	P	10 43 34.5	+1.4
	0.2nm,0.4s,mb3.1,baz=307,slow=5.3,SNR=4.0						
TXAR	Lajitas Array	93.44	52	P	P	10 44 49.5	+1.2
TXAR	Lajitas Array	93.44	52	P	P	10 44 49.5	+1.2
	0.4nm,0.7s,mb3.7,baz=301,slow=3.4,SNR=7.5						

*PRU **07** 10:52:10.1, 50.29N×18.77E, h0km*
*VIE **07** 10:52:13.3±1.6, 49.77N×18.78E, h0km, mb2.2/3, ML2.4/3, Error ellipse: s-maj=9.1km s-min=8.2km az=112.0 38 km E of Ostrava Suspected Mining induced.*
WAR 07 10:52:09.1, 50.25N×18.90E, ML2.6, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.58	92	*e*Pg	Pg	10 52 20.5	+0.3
OJC				*e*Sg	Sg	10 52 28.6	+0.9
OKC	Ostrava-Krasne	0.63	230	*e*PG	Pg	10 52 21.4	+0.2
OKC				*e*SG	Sg	10 52 30.9	+1.5
	130nm,1.9s						
NIE	Niedzica	1.23	132	*e*Pg	Pg	10 52 32.7	0.0
NIE				*e*Sg	Sg	10 52 50.3	+1.6
DPC	Dobruska-Polom	1.66	275	*e*PG	Pg	10 52 38.4	-2.4
DPC				*e*SG	Sg	10 53 00.7	-1.5
	26nm,0.6s						
KOLL	Kolacno	1.70	191	*e*PN	Pn	10 52 42.0	+2.0
KOLL				*e*SN	Sn	10 53 04.8	+2.4
STHS	Stebnicka Huta	1.73	118	*e*PN	Pn	10 52 41.9	+1.5
STHS				*e*SN	Sn	10 53 06.8	+3.7
VYHS	Vyhne	1.75	181	*e*PN	Pn	10 52 40.0	-0.7
VYHS				*e*SN	Sn	10 53 04.1	+0.4
KECS	Kecovo	2.05	149	*e*PN	Pn	10 52 47.4	+2.7
KECS				*e*SN	Sn	10 53 12.7	+1.8
CRVS	Cervenica-Dubn	2.14	128	*e*PN	Pn	10 52 49.5	+3.4
CRVS				*e*SN	Sn	10 53 17.7	+4.4
KOLS	Kolonicke sedl	2.56	120	*e*PN	Pn	10 52 53.6	+1.8
KOLS				*e*PG	Pg	10 52 59.8	+1.7
PRU	Pruhonice	2.82	266	*e*SG	Sg	10 53 37.0	-2.5
	5.7nm,0.4s						
BRG	Berggiesshubel	3.22	283	SG	Sg	10 53 48.1	-4.4
	8.3nm,0.6s						
KHC	Kasperske Hory	3.63	254	*e*SG	Sg	10 54 03.4	-2.2
	10nm,0.8s						
MOA	Molln	3.88	234	⇑*i*Sg	Sg	10 54 09.1	-4.5
	comp=Z,3.5nm,0.6s						
CLL	Collm	3.89	288	*i* Sg	Sg	10 54 13.1	-0.9

*CRAAG **07** 10:53:35.6, 2.04N×97.95E, Mb5.9*
*BJI **07** 10:53:35.3, 1.91N×97.94E, h40km, mB5.9, mb5.4, Ms5.7, Msz5.6*
*MOS **07** 10:53:36.2±1.1, 2.11N×97.99E, h33km, mb6.0/103, MS5.4/73, Error ellipse: s-maj=7.6km s-min=3.6km az=120.8*
*ISCJB **07** 10:53:37.3±0.1, 1.97N±0.02×97.93E±0.02, h46km, mb5.7/251, MS5.5/234, Error ellipse: s-maj=3.5km s-min=2.6km az=10.6*
*NEIC **07** 10:53:37.6±0.1, 1.96N×97.91E, h35km, mb5.7/141, ME5.7, MS5.6/171, MW5.9, Error ellipse: s-maj=4.9km s-min=3.2km az=220.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{17}Nm; M_{rr}7.31; $M_{\theta\theta}$0.20; $M_{\phi\phi}$-7.51; $M_{r\theta}$3.91; $M_{\theta\phi}$2.61; $M_{\phi r}$-2.06; Best double couple: $M_0$9.00000×10^{17} NP1:ϕ_s3.00000°, δ38.00000°, λ124.00000°. NP2:ϕ_s143.00000°, δ59.00000°, λ67.00000°. Principal axes: T 9.0900, Plg67.0000°, Azm8.0000°; N -0.1400, Plg20.0000°, Azm155.0000°; P -8.9400, Plg11.0000°, Azm249.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from MT mechanism.*
NEIC Felt [III] at Gunungsitoli. Felt [IV] at Singkil and [III] at Mandailing, Medan, Sibolga and Tuntungan, Sumatra.
*GCMT **07** 10:53:37.6±0.1, 1.80N×97.74E, h49km, MW5.9/103, Moment Tensor Solution. s103,c222; s100,c292; Duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.60±.01; $M_{\theta\theta}$-0.25±.01; $M_{\phi\phi}$-0.35±.01; $M_{r\theta}$0.51±.01; $M_{\theta\phi}$0.38±.01; $M_{\phi r}$-0.30±.01; Best double couple: $M_0$0.87600×10^{18} NP1:ϕ_s333.00000°, δ26.00000°, λ115.00000°. NP2:ϕ_s126.00000°, δ67.00000°, λ79.00000°. Principal axes: T 0.8500, Plg66.0000°, Azm16.0000°; N 0.0530, Plg11.0000°, Azm131.0000°; P -0.9020, Plg21.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*SZGRF **07** 10:53:42.7, 2.47N×96.76E, h33km, mb5.8, MS5.2, Northern Sumatera, Indonesia*
*IDC **07** 10:53:43.7±0.8, 2.10N×98.22E, h92km±5km, mb5.0/32, mb1 5.0/32, mb1mx5.0/33, mbtmp5.0/32, MS5.3/28, Ms1 5.3/28, ms1mx5.3/35, Error ellipse: s-maj=12.9km s-min=6.3km az=40.0*
ISC 07 10:53:39.2±0.1**, 1.96N**±0.02×**97.91E**±0.02**, h48**km±2.7km**:pP-P, n1425,** σ**1^{s}09**/1017**, mb5.7**/251**, MS5.5**/234**, 219C-142D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	1.31	51	P	Pn	10 54 04.4	+3.3
	baz=225,slow=14						
PSI				S	Sn	10 54 17.6	+0.1
	2μm,0.3s,baz=90,slow=20,SNR=20						
FRIM	Kepong	3.92	71	⇑P	Pn	10 54 39.1	+2.2
IPM	Ipoh	3.99	51	⇓P	Pn	10 54 41.4	+3.6
KULM	Kulim	4.29	40	*e*Pn	Pn	10 54 43.5	+1.5
KULM	Kulim	4.29	40	⇓P	Pn	10 54 44.6	+2.6
BSI	Banda Aceh	4.37	323	P	Pn	10 54 41.6	-1.5
	0.0nm,0.0s						
KGM	Kluang	5.41	89	⇑P	Pn	10 54 59.2	+1.9
SNG	Songkhla	5.84	27	P	Pn	10 55 05.0	+1.7
	2μm,1.0s						
MYKOM	Kota Tinggi	5.94	92	⇓P	Pn	10 55 07.0	+2.4
KTGM	Kuala Trenggan	6.19	57	⇓P	Pn	10 55 10.4	+2.3
KSI	Kapahiang	7.28	140	P	Pn	10 55 24.2	+1.2
	0.0nm,0.0s						
NNT	Nongplab	10.71	10	P	Pn	10 56 13.0	+3.0
PBA	Port Blair	10.91	332	*e*P	Pn	10 56 09.7	-3.1
PBA				*e*x	x	10 58 46.9	
KSM	Kuching	12.40	92	*e*Pn	Pn	10 56 37.6	+4.4
KSM				*e*Sn	Sn	10 59 00.9	+11
KSM	Kuching	12.40	92	⇑P	Pn	10 56 37.6	+4.4
LEM	Lembang	13.04	132	P	Pn	10 56 46.1	+4.2
	0.0nm,0.0s						
NST	Nakhon Sawan	13.80	9	P	Pn	10 56 53.0	+0.8
	100nm,0.7s						
COCO	West Island	14.10	184	*e*Pn	Pn	10 56 54.9	-1.4
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	Pn	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
COCO	West Island	14.10	184	P	Pn	10 56 55.8	-0.5
	SNR=9.2						
SBUM	Sibu	14.31	88	⇓P	Pn	10 57 01.9	+2.8
BJII	Banjamegara	14.96	128	P	Pn	10 57 10.1	+2.4
	0.0nm,0.0s						
KKTK	Khon Kaen	15.08	18	P	Pn	10 57 11.0	+1.7
	2μm,0.5s						
BTM	Bintulu	15.21	85	⇑P	Pn	10 57 14.2	+3.2
CHG	Chiang Mai	16.78	3	⇑P	Pn	10 57 30.6	-0.3
	127nm,0.9s						
CHTO	Chiang Mai	16.78	3	*e*P	Pn	10 57 30.8	-0.1
	120nm,0.9s						
CHTO	Chiang Mai	16.78	3	*e*P	Pn	10 57 30.8	-0.1
CHTO				pmax	pmax		
	comp=Z,120nm,1.0s						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	Pn	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHTO	Chiang Mai	16.78	3	P	Pn	10 57 31.1	+0.2
	SNR=32						
CHRT	Chiangrai	17.89	6	⇓P	Pn	10 57 44.5	-0.2
	comp=Z,53nm,1.0s						
PALK	Pallekele	17.94	288	*e*P	Pn	10 57 48.5	+3.2
	comp=Z,152nm,1.1s						
PALK				*e*S	S	11 00 50.6	-18
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	Pn	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
PALK	Pallekele	17.94	288	P	Pn	10 57 50.4	+5.1
	SNR=39						
KKM	Kota Kinabalu	18.70	77	*e*P	Pn	10 57 55.0	+0.4
KKM	Kota Kinabalu	18.70	77	⇑P	Pn	10 57 56.0	+1.4
KDM	Kudat	19.49	75	⇑P	Pn	10 58 03.6	-0.4
SDKM	Sandakan	19.58	79	⇓P	Pn	10 58 04.7	-0.5
TARAI	Tarakan	19.68	86	P	Pn	10 58 04.7	-1.6
	comp=Z,1μm,1.4s						
TSM	Tawau	20.06	83	⇑P	P	10 58 09.0	+0.3
QIZ	Qiongzhong	20.60	34	P	P	10 58 14.6	+0.2
QIZ				AP		10 58 22.7	
QIZ				XP	sP	10 58 26.6	-5.1
QIZ				S	S	11 02 04.8	+2.6
QIZ				SS		11 02 25.9	
QIZ				AMB	AMB		
	comp=Z,5μm,13.9s						
QIZ				LR	LR		
	comp=N,6μm,22.9s						
QIZ				LR	LR		
	comp=Z,13μm,34.3s						
QIZ	Qiongzhong	20.60	34	*e*P	P	10 58 15.2	+0.8
	comp=Z,157nm,1.1s						
QIZ				LR	LR		
	comp=Z,9μm,21.0s,MS5.1						
MDRS	Chennai	20.68	303	*e*P	P	10 58 16.1	+0.8
MDRS				AMb	AMB	10 58 30.8	
	comp=Z,213nm,2.0s						
MYLDM	Lahad Datu	20.79	81	⇓P	P	10 58 18.6	+2.0
BATP	Bataraza	20.92	70	*e*P	P	10 58 18.5	+0.5
VIS	Vishakhapatnam	21.22	318	*e*P	P	10 58 21.1	0.0
VIS				*e*x	x	10 58 37.7	
	comp=Z,452nm,1.5s						
VIS				*i* S	S	11 02 15.2	+0.7
BWNR	Bhubaneshwar	21.72	328	*e*x	x	10 57 52.0	
TRD	Trivandrum	21.84	288	*e*P	P	10 58 30.5	+2.6
KOD	Kodaikanal	21.91	293	*e*P	P	10 58 32.0	+3.4
KOD				AMb	AMB	10 58 39.3	
	comp=Z,183nm,1.1s,mb5.4						
PPR	Puerto Princes	22.10	69	⇑*i*P	P	10 58 30.6	0.0
PCI	Palu	22.11	97	P	P	10 58 35.3	+4.6
	comp=Z,627nm,1.4s,mb5.8						
AGT	Agartala	22.73	344	*e*x	x	10 58 27.0	
AGT				*e*x	x	10 59 17.0	
IMP	Imphal	23.01	351	*i* P	P	10 58 40.0	-0.1
IMP				*e*x	x	11 02 45.0	
ENPP	El Nido	23.24	66	*e*P	P	10 58 43.1	+0.4
KMI	Kunming	23.49	11	P	P	10 58 43.4	-1.5
KMI				AP		10 58 51.8	
KMI				XP	sP	10 58 55.0	-7.6
KMI				PCP	PcP	11 02 26.3	-3.4
KMI				S	S	11 02 54.9	-0.2
KMI				AMB	AMB		
	comp=Z,113nm,1.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,3μm,9.6s						
KMI				LR	LR		
	comp=N,27μm,16.0s,MS5.8						
KMI				LR	LR		
	comp=E,9μm,15.4s,MS5.8						
KMI				LR	LR		
	comp=Z,30μm,15.6s,MS5.9						
KMI	Kunming	23.49	11	P	P	10 58 43.4	-1.5
KMI				*PP		10 58 51.8	
KMI				*SP	sP	10 58 55.0	-7.6
KMI				PPP		10 59 27.8	
KMI						11 02 26.3	
KMI				S	S	11 02 54.9	-0.2
KMI				SS		11 03 46.4	
SHL	Shillong	24.18	347	*e*x	x	10 58 41.2	
SHL				AMb	AMB	10 58 52.4	
	comp=Z,3μm,1.1s,mb6.6						
SHL				*e*S	S	11 03 05.0	-1.1
BUSP	Coron	24.24	65	*e*P	P	10 58 52.6	+0.7
HYB	Hyderabad	24.45	310	⇑*e*P	P	10 58 55.0	+1.3
	comp=Z,350nm,1.0s,mb5.7						
HYB				*e*S	S	11 03 12.0	+1.3
HYB				*e*LR	LR	11 06 44.0	
HYB	Hyderabad	24.45	310	⇑*e*P	P	10 58 55.0	+1.3
HYB				*e*S	S	11 03 12.0	+1.3
HYB				pmax	pmax		
	comp=Z,350nm,1.0s,mb5.7						
HYB	Hyderabad	24.45	310	⇑*i*P	P	10 58 55.0	+1.3
	comp=Z,350nm,1.0s,mb5.7						
HYB				*e*pP		10 59 03.0	
HYB				*e*sP	sP	10 59 08.0	-3.8
HYB				*e*		10 59 12.0	
HYB				*e*S	S	11 03 10.0	-0.7
HYB				LR	LR	11 06 44.0	
	comp=Z,7.1nm,20.0s						
TURI	Tura	24.56	343	*e*P	P	10 58 55.0	+0.4
TURI				*e*x	x	10 59 44.0	
CUYO	Cuyo Island	24.58	68	*e*P	P	10 58 51.1	-3.9
BOK	Bokaro	24.63	333	*e*P	P	10 58 55.6	+0.3
BOK				AMb	AMB	10 58 58.1	
	comp=Z,735nm,1.1s,mb6.1						
LUBP	Lubang	24.99	61	*e*P	P	10 58 56.4	-2.3
BLSP	Bilaspur	25.24	324	*e*P	P	10 59 01.4	+0.5
BLSP				AMb	AMB	10 59 06.2	
	comp=Z,444nm,2.5s,mb5.6						
MNGI	Mangalore	25.33	297	*e*P	P	10 59 03.1	+1.3
MNGI				*e*x	x	10 59 12.8	
	comp=Z,192nm,1.2s						
MNGI				*i* S	S	11 03 28.9	+4.1
HKC	Hong Kong Obse	25.66	37	⇑*i*P	P	10 59 04.0	-0.7
GYA	Guiyang	25.77	18	⇑*i*P	P	10 59 03.6	-2.0
GYA				AP	pP	10 59 16.6	-1.4
GYA				XP	sP	10 59 20.8	-2.9
GYA				PP		10 59 49.8	
GYA				PCP	PcP	11 02 37.4	+2.8
GYA				S	S	11 03 30.6	-0.9
GYA				XS	sS	11 03 48.6	-3.9
GYA				SS		11 04 40.0	
GYA				SCP	ScP	11 06 13.2	+2.8
GYA				AMB	AMB		
	comp=Z,100nm,1.3s,mb5.2						
GYA				AMB	AMB		
	comp=Z,2μm,10.8s						
GYA				LR	LR		
	comp=N,9μm,18.8s,MS5.5						
GYA				LR	LR		
	comp=E,9μm,19.2s,MS5.5						
GYA				LR	LR		
	comp=Z,10μm,20.0s,MS5.4						
GUIM	Jordan	25.97	70	*e*P	P	10 59 07.6	0.0
OTRP	Odiongan	26.03	65	*e*P	P	10 59 07.7	-0.4
PAGZ	Pagadian	26.03	76	*e*P	P	10 59 09.0	+0.8
RCP	Roxas	26.41	68	⇑*e*P	P	10 59 12.2	+0.7
NGP	Nagpur	26.49	317	*e*P	P	10 59 11.0	-1.2
NGP				*e*x	x	10 59 15.1	
	comp=Z,551nm,1.6s						
NGP				*e*S	S	11 03 42.4	-0.6
BCPH	Baguio City Da	26.52	56	⇓*e*P	P	10 59 08.8	-3.8
ODAN	Odare	26.73	339	*e*P	P	10 59 14.7	+0.4
	comp=Z,235nm,0.6s,mb5.9						
GTK	Gangtok	26.75	341	*e*P	P	10 59 14.4	-0.1
GTK				*e*x	x	11 03 44.0	
POLP	Polilio Island	26.90	61	*e*P	P	10 59 17.7	+1.8
TBP	Tagbilaran	26.91	72	*e*P	P	10 59 16.0	-0.1
BALP	Baler	27.04	58	*e*P	P	10 59 18.8	+1.5
TAPN	Taplejung	27.07	340	*e*P	P	10 59 17.8	+0.5
	comp=Z,541nm,0.8s,mb6.1						
LLP	Lapu-Lapu	27.18	71	*e*P	P	10 59 18.6	+0.1
ABRA	Dolores	27.28	54	*e*P	P	10 59 18.8	-0.6
GOA	Goa	27.29	301	*e*P	P	10 59 22.2	+2.7
GOA				AMb	AMB	10 59 27.4	
	comp=Z,102nm,1.2s,mb5.2						
JBP	Jabalpur	27.32	322	⇑*e*P	P	10 59 20.6	+0.9
JBP				*e*x	x	10 59 24.5	
	comp=Z,220nm,1.7s						
JBP				*e*S	S	11 03 57.2	+1.0
CGP	Cagayan de Oro	27.43	75	⇑*i*P	P	10 59 21.2	+0.4
AKL	Akola	27.61	314	⇓*i*P	P	10 59 23.4	+1.0
AKL				*e*x	x	10 59 43.3	
	comp=Z,402nm,1.4s						
AKL				*i* S	S	11 04 01.2	+0.3
BUKP	Musuan	27.67	77	*e*P	P	10 59 23.4	+0.5
APYP	Conner	27.82	54	*e*P	P	10 59 24.6	+0.3
KAD	Karad	27.86	305	*e*P	P	10 59 25.9	+1.3
KAD				*e*P		10 59 26.9	
KAD				AMb	AMB	10 59 29.7	
	comp=Z,73nm,1.3s,mb5.2						
JIRN	Jiri	27.91	337	*e*P	P	10 59 25.3	+0.5
	comp=Z,957nm,1.3s,mb6.3						
OCLP	Ormoc	27.99	70	*e*P	P	10 59 30.4	+4.7
DAV	Davao City (W)	28.04	79	*e*P	P	10 59 27.9	+1.8
	comp=Z,631nm,1.4s,mb6.0						
DAV				LR	LR		
	comp=Z,6μm,20.0s,MS5.2						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	P	P	10 59 28.4	+2.2
	SNR=11						
DAV	Davao City (W)	28.04	79	*e*P	P	10 59 28.0	+1.8
LSA	Lhasa	28.32	348	*e*P	P	10 59 29.4	+0.9
	comp=Z,104nm,0.6s,mb5.6						
LSA				LR	LR		
	comp=Z,8μm,22.0s,MS5.3						
LSA	Lhasa	28.32	348	*e*P	P	10 59 29.4	+0.9
LSA				pmax	pmax		
	comp=Z,104nm,0.6s,mb5.6						
LSA				MLR	MLR		
	comp=Z,8μm,22.0s,MS5.3						
BATI	Kupang	28.34	116	P	P	10 59 26.4	-2.5
	comp=Z,71nm,0.6s,mb5.5,baz=312,slow=18,SNR=6.0						
KKN	Kakani	28.38	336	*e*P	P	10 59 29.2	+0.1
	comp=Z,384nm,0.9s,mb6.0						
KKN	Kakani	28.38	336	*e*P	P	10 59 29.2	+0.1
KKN				pmax	pmax		
	comp=Z,384nm,0.9s,mb6.0						
PVCP	Virac	28.41	65	*e*P	P	10 59 33.6	+4.1

SGCP	Mt. Cagua	28.67	54	eP	P	10 59 32.0	+0.2
MATI	Mati	28.68	79	eP	P	10 59 31.0	-1.0
POO	Poona	28.77	306⇑	iP	P	10 59 33.0	+0.4
	comp=Z,143nm,1.5s,mb5.5						
POO				eP		10 59 33.0	
POO				AMb	AMB	10 59 35.8	
	comp=Z,52nm,1.0s,mb5.2						
POO				i PP	PP	11 00 25.0	-13
POO				i PPP		11 00 37.5	
POO				i PCP	PcP	11 02 43.0	+1.0
POO				eS	S	11 04 22.0	+3.0
GKN	Gorkha	28.84	335	eP	P	10 59 33.1	0.0
	comp=Z,709nm,1.1s,mb6.3						
BHPL	Bhopal	29.02	318	eP	P	10 59 35.3	+0.5
BHPL				AMb	AMB	10 59 39.6	
	comp=Z,246nm,2.1s,mb5.6						
CD2	Chengdu	29.32	10⇑	iP	P	10 59 37.2	-0.1
CD2				AP	pP	10 59 48.0	-1.9
CD2				XP	sP	10 59 52.3	-3.3
CD2				PP	PP	11 00 31.6	-13
CD2				PCP	PcP	11 02 42.2	-0.9
CD2				S	S	11 04 26.3	-1.1
CD2				XS	sS	11 04 44.2	-4.3
CD2				SS	SS	11 06 03.2	-30
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,710nm,9.8s						
CD2				LR	LR		
	comp=N,10μm,15.6s,MS5.6						
CD2				LR	LR		
	comp=E,8μm,18.0s,MS5.6						
CD2				LR	LR		
	comp=Z,14μm,16.8s,MS5.7						
BOM	Bombay	29.79	306	ex	x	10 59 39.7	
BOM				ex	x	10 59 47.0	
	comp=Z,182nm,1.8s						
BOM				eS	S	11 04 37.0	+1.9
QZH	Quanzhou	30.34	39⇑	iP	P	10 59 49.2	+2.8
QZH				S	S	11 04 41.0	-2.5
QZH				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.4						
QZH				AMB	AMB		
	comp=Z,2μm,5.1s						
QZH				LR	LR		
	comp=N,17μm,13.3s,MS5.8						
QZH				LR	LR		
	comp=E,7μm,17.9s,MS5.8						
QZH				LR	LR		
	comp=Z,20μm,13.6s,MS5.9						
MBWA	Marble Bar	31.37	138	eP	P	10 59 54.5	-1.2
	comp=Z,892nm,2.9s,mb6.1						
MBWA				LR	LR		
	comp=Z,7μm,20.0s,MS5.3						
NACB	Ninganchiao	31.81	44	eP	P	10 59 59.8	+0.3
BHV	Bhavnagar	31.87	310	eP	P	11 00 01.0	+1.0
YHNB	Yeheng	31.98	43	eP	P	11 00 01.9	+1.0
PTH	Pithoragarh	32.19	330	eP	P	11 00 05.1	+2.4
PTH				ex	x	11 04 30.8	
TATO	Taipei	32.26	43	PFAKE		11 00 20.0	+17
TATO				LR	LR		
	comp=Z,7μm,21.0s,MS5.3						
WHN	Wuhan	32.41	27	⇑P	P	11 00 04.5	-0.2
WHN				S	S	11 05 11.8	-4.1
WHN				AMB	AMB		
	comp=Z,2μm,8.4s						
WHN				LR	LR		
	comp=Z,18μm,14.6s,MS5.9						
AJM	Ajmer	33.07	320	eP	P	11 00 10.8	+0.3
AJM				eP		11 00 11.0	
NDI	New Delhi	33.10	325	eP	P	11 00 10.6	-0.1
NDI				AMb	AMB	11 00 14.7	
	comp=Z,372nm,2.4s,mb5.9						
NDI				ex	x	11 05 24.0	
XAN	Xi'an	33.53	17	P	P	11 00 10.7	-3.7
XAN				AP	pP	11 00 20.2	-6.8
XAN				PP	PP	11 01 28.9	-2.1
XAN				S	S	11 05 24.9	-8.2
XAN				AMB	AMB		
	comp=Z,107nm,0.9s,mb5.8						
XAN				AMB	AMB		
	comp=Z,897nm,10.9s						
XAN				LR	LR		
	comp=N,4μm,24.6s						
XAN				LR	LR		
	comp=E,8μm,18.2s						
XAN				LR	LR		
	comp=Z,11μm,21.4s,MS5.5						
FITZ	Fitzroy Crossi	33.81	127	eP	P	11 00 14.4	-2.6
	comp=Z,41nm,0.6s,mb5.5						
FITZ	Fitzroy Crossi	33.81	127	P	P	11 00 14.6	-2.4
	comp=Z,23nm,0.8s,mb5.2,baz=322,slow=10,SNR=45						
FITZ				PcP	PcP	11 02 55.8	+0.3
	comp=Z,5.7nm,0.4s,baz=285,slow=5.2,SNR=6.2						
FITZ				LR	LR	11 14 50.2	
	comp=Z,4μm,21.2s,MS5.1,baz=303,slow=38						
DDI	Dehra Dun	33.91	328	eP	P	11 00 18.5	+0.7
LZH	Lanzhou	34.40	9	eP	P	11 00 22.0	+0.2
LZH				AP	pP	11 00 31.0	-3.5
LZH				XP	sP	11 00 35.4	-4.8
LZH				PP	PP	11 01 39.2	-1.3
LZH				PCP	PcP	11 02 56.8	0.0
LZH				eS	S	11 05 45.5	-1.0
LZH				XS	sS	11 06 03.2	-4.5
LZH				SCP	ScP	11 06 39.0	+0.8
LZH				SS	SS	11 08 00.7	-16
LZH				SCS	ScS	11 10 39.5	-1.3
LZH				AMB	AMB		
	comp=Z,282nm,1.7s,mb5.9						
LZH				AMB	AMB		
	comp=Z,800nm,4.0s						
LZH				LR	LR		
	comp=N,9μm,15.1s						
LZH				LR	LR		
	comp=Z,15μm,17.8s,MS5.8						
LZH	Lanzhou	34.40	9	eP	P	11 00 22.0	+0.2
LZH				pP	pP	11 00 31.0	-3.5
LZH				sP	sP	11 00 35.4	-4.8
LZH				PP	PP	11 01 39.2	-1.3
LZH				PcP	PcP	11 02 56.8	0.0
LZH				eS	S	11 05 45.5	-1.0
LZH				sS	sS	11 06 03.2	-4.5
LZH				ScP	ScP	11 06 39.0	+0.8
LZH				SS	SS	11 08 00.7	-16
LZH				ScS	ScS	11 10 39.5	-1.3
LZH	Lanzhou	34.40	9	eP	P	11 00 22.0	+0.2
LZH				*PP	pP	11 00 31.0	-3.5
LZH				*SP	sP	11 00 35.4	-4.8
LZH						11 01 39.2	
LZH						11 02 56.8	
LZH				eS	S	11 05 45.5	-1.0
LZH				*SS	sS	11 06 03.2	-4.5
LZH				SS	SS	11 08 00.7	-16
LZH						11 10 39.5	
BHJ	Bhuj	34.61	310	eP	P	11 00 24.3	+0.4
BHJ				AMb	AMB	11 00 28.4	
	comp=Z,98nm,1.4s,mb5.5						
SDNR	Sundarnagar	35.41	328	eP	P	11 00 30.5	-0.2
SDNR				ex	x	11 06 00.8	
NJ2	Nanjing	35.85	31	eP	P	11 00 34.2	-0.2
NJ2				AP	pP	11 00 44.3	-2.8
NJ2				XP	sP	11 00 46.9	-5.9
NJ2				PP	PP	11 01 54.4	-2.2
NJ2				S	S	11 06 13.5	+4.6
NJ2				XS	sS	11 06 29.0	-1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,620nm,11.0s						
NJ2				LR	LR		
	comp=N,19μm,22.0s,MS5.9						
NJ2				LR	LR		
	comp=E,14μm,24.2s,MS5.9						
NJ2				LR	LR		
	comp=Z,14μm,24.2s,MS5.7						
SSE	Sheshan	36.38	35	⇑P	P	11 00 39.5	+0.5
SSE				AP	pP	11 00 47.6	-4.1
SSE				XP	sP	11 00 52.0	-5.4
SSE				PCP	PcP	11 03 05.3	+2.5
SSE				S	S	11 06 17.1	-0.1
SSE				XS	sS	11 06 31.6	-6.9
SSE				AMB	AMB		
	comp=Z,41nm,0.6s,mb5.5						
SSE				AMB	AMB		
	comp=Z,884nm,7.9s						
SSE				LR	LR		
	comp=N,7μm,17.2s,MS5.5						
SSE				LR	LR		
	comp=E,3μm,17.1s,MS5.5						
SSE				LR	LR		
	comp=Z,10μm,16.3s,MS5.7						
SSE	Sheshan	36.38	35	⇑P	P	11 00 39.5	+0.5
SSE				pP	pP	11 00 47.6	-4.1
SSE				sP	sP	11 00 52.0	-5.4
SSE				PcP	PcP	11 03 05.3	+2.5
SSE				S	S	11 06 17.1	-0.1
SSE				sS	sS	11 06 31.6	-6.9
SSE				ScS	ScS	11 10 56.7	+4.9
DLH	Dalhousie	36.76	328	eP	P	11 00 40.0	-2.2
DLH				ex	x	11 00 57.0	
THN	Thein Dam	36.80	328	eP	P	11 00 41.1	-1.5
THN				ex	x	11 06 33.9	
GTA	Gaotai	37.31	2	P	P	11 00 46.7	-0.1
GTA				AP	pP	11 00 59.1	-0.4
GTA				XP	sP	11 01 04.4	-0.8
GTA				PP	PP	11 02 15.6	+3.0
GTA				PCP	PcP	11 03 05.7	+0.3
GTA				S	S	11 06 31.4	+0.3
GTA				SCP	ScP	11 06 47.6	-1.2
GTA				PCS	PcS	11 06 52.3	-1.4
GTA				SS	SS	11 09 05.5	-11
GTA				SCS	ScS	11 10 54.3	-2.4
GTA				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.3						
GTA				AMB	AMB		
	comp=Z,2μm,9.9s						
GTA				LR	LR		
	comp=N,3μm,20.6s,MS5.3						
GTA				LR	LR		
	comp=E,4μm,22.8s,MS5.3						
GTA				LR	LR		
	comp=Z,4μm,22.8s,MS5.2						
MUN	Mundaring	37.96	154	eP	P	11 00 54.2	+1.9
TIY	Taiyuan	38.00	19	P	P	11 00 49.9	-2.7
TIY				PP	PP	11 02 22.2	+2.0
TIY				S	S	11 06 36.9	-4.6
TIY				AMB	AMB		
	comp=Z,748nm,7.5s						
TIY				LR	LR		
	comp=N,8μm,15.0s,MS5.7						
TIY				LR	LR		
	comp=E,2μm,13.5s,MS5.7						
TIY				LR	LR		
	comp=Z,8μm,18.0s,MS5.6						
KLBR	Kellerberrin	38.33	152	eP	P	11 00 56.4	+1.0
	comp=Z,253nm,1.2s,mb5.8						
KLBR				eS	S	11 06 47.5	+0.9
TIA	Tai'an	38.44	25	eP	P	11 00 54.8	-1.6
NWAO	Narrogin (SRO)	39.21	154	eP	P	11 01 04.9	+2.0
	comp=Z,216nm,1.2s,mb5.8						
NWAO				LR	LR		
	comp=Z,6μm,22.0s,MS5.4						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 10.2	+7.4
	SNR=20						
NWAO	Narrogin (SRO)	39.21	154	P	P	11 01 03.2	+0.4
	comp=Z,42nm,0.9s,mb5.2,baz=321,slow=9.0,SNR=20						
NWAO				LR	LR	11 15 03.3	
	comp=Z,6μm,21.9s,MS5.4,baz=333,slow=33						
BTO	Baotou	40.00	14	eP	P	11 01 09.0	-0.3
HHC	Hu-ho-hao-te	40.63	16	eP	P	11 01 14.8	+0.3
HHC				AP	pP	11 01 24.4	-3.0
HHC				XP	sP	11 01 28.6	-4.4
HHC				PP	PP	11 02 53.3	+4.4
HHC				PCP	PcP	11 03 17.4	+1.6
HHC				SCP	ScP	11 07 01.0	-0.5
HHC				PCS	PcS	11 07 05.8	-0.6
HHC				S	S	11 07 12.9	-8.1
HHC				XS	sS	11 07 39.1	-3.4
HHC				AMB	AMB		
	comp=Z,67nm,1.5s,mb5.0						
HHC				AMB	AMB		
	comp=Z,2μm,7.7s						
HHC				LR	LR		
	comp=N,10μm,17.8s,MS5.8						
HHC				LR	LR		
	comp=E,5μm,15.5s,MS5.8						
HHC				LR	LR		
	comp=Z,11μm,17.8s,MS5.8						
BJT	Baijiatuau	41.35	21	eP	P	11 01 20.4	0.0
	comp=Z,117nm,0.8s,mb5.6						
BJT				LR	LR		
	comp=Z,4μm,21.0s,MS5.3						
BJT	Baijiatuau	41.35	21	eP	P	11 01 20.4	-0.1
BJT				pmax	pmax		
	comp=Z,117nm,0.8s						
BJT				MLR	MLR		
	comp=Z,4μm,21.0s						
BJI	Beijing	41.37	21	P	P	11 01 20.4	-0.2
BJI				AP	pP	11 01 29.3	-4.2
BJI				XP	sP	11 01 33.2	-5.9
BJI				PP	PP	11 02 56.1	-0.9
BJI				PCP	PcP	11 03 18.0	-0.2
BJI				SCP	ScP	11 07 05.6	+1.1
BJI				S	S	11 07 33.9	+1.9
BJI				AMB	AMB		
	comp=Z,117nm,0.7s,mb5.6						
BJI				AMB	AMB		
	comp=Z,2μm,4.5s						
BJI				LR	LR		
	comp=N,3μm,25.0s,MS5.1						
BJI				LR	LR		
	comp=E,2μm,29.1s,MS5.1						
BJI				LR	LR		
	comp=Z,6μm,31.8s,MS5.2						
BJI	Beijing	41.37	21	P	P	11 01 20.4	-0.2
BJI				pP	pP	11 01 29.3	-4.2
BJI				sP	sP	11 01 33.2	-5.9
BJI				PP	PP	11 02 56.1	-0.9
BJI				PcP	PcP	11 03 18.0	-0.2
BJI				ScP	ScP	11 07 05.6	+1.1
BJI				S	S	11 07 33.9	+1.9
BJI				SS	SS	11 10 38.6	+1.1
WRA	Warramunga Arr	41.84	123	P	P	11 01 22.7	-2.1
WRA						11 03 20.5	
WRA				pmax	pmax		
	comp=Z,86nm,0.7s						
WRA	Warramunga Arr	41.84	123	P	P	11 01 22.7	-2.1
	comp=Z,86nm,0.7s,mb5.5,baz=302,slow=9.0,SNR=247						
WRA				PcP	PcP	11 03 20.5	+0.3
	comp=Z,9.3nm,0.4s,baz=314,slow=2.7,SNR=7.3						
WRA				S	S	11 07 30.9	-8.7
	comp=Z,26nm,1.1s,baz=297,slow=15,SNR=12						
WRA				PKiKP	PKiKP	11 10 24.6	-2.2
	comp=Z,0.6nm,0.8s,baz=300,slow=1.4,SNR=4.7						
WRA				LR	LR	11 20 04.6	
	comp=Z,4μm,20.0s,MS5.3,baz=275,slow=38						
WB2	Warramunga Arr	41.85	123⇑	iP	P	11 01 22.8	-2.1
WB2				eS	S	11 07 30.8	-8.9
KSH	Kashi	42.38	335	P	P	11 01 29.3	+0.4
KSH				AP	pP	11 01 39.7	-2.1
KSH				eXP	sP	11 01 43.7	-3.7
KSH				ePP	PP	11 03 11.5	+3.6
KSH				PCP	PcP	11 03 23.3	+1.7
KSH				S	S	11 07 48.6	+1.6
KSH				eXS	sS	11 08 04.6	-4.0
KSH				SS	SS	11 10 52.3	-5.1
KSH				SCS	ScS	11 11 26.9	+0.2
KSH				AMB	AMB		
	comp=Z,44nm,0.2s,mb5.7						
KSH				LR	LR		
	comp=N,8μm,10.9s						
KSH				LR	LR		
	comp=E,6μm,5.9s						
KSH				LR	LR		
	comp=Z,5μm,6.3s						
WMQ	Urumqi	42.66	349⇑	iP	P	11 01 31.3	+0.2
WMQ				AP	pP	11 01 41.3	-2.7
WMQ				XP	sP	11 01 45.3	-4.3
WMQ				PP	PP	11 03 13.2	+2.4
WMQ				PCP	PcP	11 03 23.8	+1.4
WMQ				SCP	ScP	11 07 10.7	+1.2
WMQ				PCS	PcS	11 07 14.6	+0.2
WMQ				S	S	11 07 51.5	+0.6
WMQ				XS	sS	11 08 07.8	-4.7
WMQ				SS	SS	11 10 56.3	-6.4
WMQ				SCS	ScS	11 11 27.8	-0.4
WMQ				AMB	AMB		
	comp=Z,270nm,1.0s,mb5.9						
WMQ				AMB	AMB		
	comp=Z,2μm,4.2s						
WMQ				LR	LR		
	comp=N,4μm,33.6s						
WMQ				LR	LR		
	comp=E,5μm,27.8s						
WMQ				LR	LR		
	comp=Z,5μm,25.2s						
DL2	Dalian	42.67	28⇑	iP	P	11 01 30.7	-0.6
DL2				PP	PP	11 03 12.9	+1.9
DL2				S	S	11 07 51.3	0.0
DL2				SS	SS	11 10 54.1	-9.1
DL2				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.3						
DL2				AMB	AMB		
	comp=Z,590nm,6.7s						
DL2				LR	LR		
	comp=N,2μm,17.7s,MS5.2						
DL2				LR	LR		
	comp=E,2μm,16.5s,MS5.2						
DL2				LR	LR		
	comp=Z,3μm,18.3s,MS5.2						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
WBK	Wadi Bani Khal	43.00	302	P	P	11 01 36.0	+1.8
	SNR=14						
ASAR	Alice Springs	43.29	128	P	P	11 01 34.6	-1.9
ASAR				PcP	PcP	11 03 24.6	-0.3
ASAR				S	S	11 07 53.7	-7.1
ASAR	Alice Springs	43.29	128	P	P	11 01 34.7	-1.8
ASAR						11 03 24.7	
ASAR				S	S	11 07 53.7	-7.1
ASAR				pmax	pmax		
	comp=Z,17nm,0.5s						
ASAR				smax			
	comp=N,22nm,1.1s						
ASAR	Alice Springs	43.29	128	P	P	11 01 34.6	-1.9
	comp=N,17nm,0.5s,mb5.0,baz=299,slow=8.1,SNR=234						
ASAR				PcP	PcP	11 03 24.6	-0.3
	comp=N,8.7nm,0.6s,baz=311,slow=2.1,SNR=4.7						
ASAR				S	S	11 07 53.7	-7.1
	comp=N,22nm,1.1s,baz=299,slow=14,SNR=18						
ASAR				PKiKP	PKiKP	11 10 26.9	-1.2
	comp=N,0.5nm,0.4s,baz=342,slow=0.8,SNR=5.7						
FORT	Forrest	43.41	141	eP	P	11 01 37.1	-0.2
	comp=N,146nm,0.8s,mb5.8						
FORT				eS	S	11 08 00.0	-2.3
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
JMDO	Jabal Madar	43.65	301	P	P	11 01 41.3	+1.8
	SNR=15						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
SMDO	Samad	43.96	302	P	P	11 01 43.9	+2.0
	SNR=17						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
BIDO	Bidbid	44.07	302	P	P	11 01 44.6	+1.7
	SNR=20						
INCN	Inchon	44.12	33	eP	P	11 01 42.9	-0.1
	comp=N,27nm,0.6s,mb5.2						
INCN				LR	LR		
	comp=Z,6μm,20.0s,MS5.5						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
BSY	Bisya	44.57	301	P	P	11 01 48.2	+1.4
	SNR=32						
ULHL	Ulahol	44.57	337	P	P	11 01 47.5	+1.0
	SNR=7.4						
HOQ	Hoqain	44.79	302	P	P	11 01 50.2	+1.7
	SNR=14						
HOQ	Hoqain	44.79	302	P	P	11 01 50.2	+1.7

SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
HOQ Hoqain 44.79 302 P **P** **11 01 50.2 +1.7**
SNR=14
KSRS Korea Array 44.82 34 P **P** **11 01 46.5 -2.1**
comp=Z,65nm,0.7s,mb5.6,baz=225,slow=7.9,SNR=138
KSRS LR LR 11 21 01.7
comp=Z,4μm,21.8s,MS5.3,baz=228,slow=37
KZA Kyzart 44.82 336 P **P** **11 01 49.4 +1.0**
SNR=74
AAA Alma-Ata 45.18 338 *i* P **P** **11 01 52.2 +0.9**
AAA *i* S **S** **11 08 30.1 +2.4**
AAA pmax pmax
comp=Z,4μm,3.8s
AAA smax
comp=N,3μm,7.1s
AAA MLR MLR
comp=Z,4μm,21.0s,MS5.3
UCH Uchtor 45.25 335 *e*P **P** **11 01 52.5 +0.7**
comp=Z,81nm,0.8s,mb5.6
UCH LR LR
comp=Z,7μm,22.0s,MS5.5
UCH Uchtor 45.25 335 P **P** **11 01 52.9 +1.0**
SNR=105
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
ARQ Araqi 45.37 301 P **P** **11 01 55.0 +1.9**
SNR=10
TKM2 Tokmak 2 45.39 337 *e*P **P** **11 01 52.3 -0.7**
comp=Z,306nm,1.1s,mb6.0
TKM2 LR LR
comp=Z,8μm,21.0s,MS5.6
TKM2 Tokmak 2 45.39 337 *e*P **P** **11 01 52.3 -0.7**
TKM2 pmax pmax
comp=Z,306nm,1.1s,mb6.0
TKM2 MLR MLR
comp=Z,8μm,21.0s,MS5.6
TKM2 Tokmak 2 45.39 337 P **P** **11 01 55.4 +2.4**
SNR=6.2
KBK Karagaybulak 45.43 336 P **P** **11 01 54.6 +1.4**
SNR=45
AML Almayashu 45.51 335 *e*P **P** **11 01 54.7 +0.7**
comp=Z,72nm,0.5s,mb5.9
AML LR LR
comp=Z,4μm,22.0s,MS5.3
AML Almayashu 45.51 335 P **P** **11 01 54.8 +0.8**
SNR=141
AAK Ala-Archa 45.59 336 *e*P **P** **11 01 54.2 -0.4**
comp=Z,285nm,1.4s,mb6.0
AAK LR LR
comp=Z,10μm,22.0s,MS5.7
AAK Ala-Archa 45.59 336 *e*P **P** **11 01 54.3 -0.3**
AAK pmax pmax
comp=Z,376nm,2.3s,mb5.9
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 54.2 -0.4**
SNR=91
AAK Ala-Archa 45.59 336 P **P** **11 01 55.5 +1.0**
SNR=80
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
RBK Rabkut 45.61 293 P **P** **11 01 57.3 +2.2**
SNR=18
FRU Bishkek 45.71 336⇑ *e*P **P** **11 01 55.5 0.0**
FRU *e*S **S** **11 08 36.0 +0.7**
FRU *e* 11 11 47.0
FRU pmax pmax
comp=Z,720nm,2.0s,mb6.3
FRU smax
comp=E,500nm,3.2s
FRU MLR MLR
comp=Z,9μm,22.0s,MS5.7
CHMS Chumysh 45.79 336 P **P** **11 01 56.3 +0.2**
SNR=46
SNY Shenyang 45.91 27 ⇓P **P** **11 01 55.9 -1.2**
SNY AP pP 11 02 06.6 -3.5
SNY XP sP 11 02 09.1 -6.6
SNY S **S** **11 08 33.5 -4.7**
SNY XS sS 11 08 53.3 -6.7
SNY AMB AMB
comp=Z,39nm,0.5s,mb5.6
SNY AMB AMB
comp=Z,1μm,5.6s
SNY LR LR
comp=N,5μm,16.7s
SNY LR LR
comp=Z,9μm,16.2s,MS5.8
EKS2 Erkin-Say 45.91 335 *e*P **P** **11 01 57.8 +0.7**
comp=Z,84nm,0.6s,mb5.8
EKS2 LR LR
comp=Z,6μm,22.0s,MS5.5
EKS2 Erkin-Say 45.91 335 P **P** **11 01 58.1 +1.0**
SNR=120
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
WHFO Wadi Hawf 46.11 293 P **P** **11 01 59.8 +0.7**
SNR=26
USP Ospenovka 46.12 336 P **P** **11 01 59.2 +0.5**
SNR=192
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
HATD Hatta, Dubai 46.26 303 P **P** **11 02 00.1 0.0**
SNR=26
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
ASHO Ashiyiah 46.27 303 P **P** **11 02 01.3 +1.1**
SNR=17
SONM Songino Array 46.28 8 P **P** **11 01 59.8 -0.1**
SONM 11 03 36.0
SONM pmax pmax
comp=Z,62nm,0.7s
SONM MLR MLR
comp=Z,9μm,19.5s
SONM Songino Array 46.28 8 P **P** **11 01 59.8 -0.1**
comp=Z,62nm,0.7s,mb5.7,baz=190,slow=9.1,SNR=238
SONM PcP PcP 11 03 36.0 +1.3
comp=Z,14nm,0.5s,baz=188,slow=4.0,SNR=7.3
SONM LR LR 11 23 36.6
comp=Z,9μm,19.4s,MS5.7,baz=189,slow=39
ULN Ulaanbaatar 46.40 8 *e*P **P** **11 02 00.5 -0.4**
comp=Z,61nm,0.8s,mb5.6
ULN LR LR
comp=Z,6μm,19.0s,MS5.5
ULN Ulaanbaatar 46.40 8 *e*P **P** **11 02 00.5 -0.4**
ULN pmax pmax
comp=Z,61nm,0.8s,mb5.6
ULN MLR MLR
comp=Z,6μm,19.0s,MS5.5
ULN Ulaanbaatar 46.40 8 P **P** **11 02 01.1 +0.2**
SNR=54
ULN Ulaanbaatar 46.40 8 P **P** **11 02 01.1 +0.2**
SNR=54
ULN Ulaanbaatar 46.40 8 P **P** **11 02 01.1 +0.2**
SNR=54
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
ABTO Aybut 46.41 292 P **P** **11 02 02.8 +1.3**
SNR=21
MK31 Makanchi Array 46.68 345 *e*P **P** **11 02 02.7 -0.4**
MK31 Makanchi Array 46.68 345 *i* P **P** **11 02 02.9 -0.2**
MK31 pmax pmax
comp=Z,298nm,0.8s,mb6.3
MKAR Makanchi Array 46.68 345 P **P** **11 02 03.0 -0.1**
MKAR LR LR 11 26 56.9
MKAR Makanchi Array 46.68 345 P **P** **11 02 03.0 -0.1**
comp=Z,159nm,0.7s,mb6.1,baz=160,slow=7.4,SNR=361
MKAR LR LR 11 26 56.9
comp=Z,3μm,19.0s,MS5.2,baz=164,slow=43
COEN Coen 47.56 111 *e*P **P** **11 02 08.4 -2.1**
comp=Z,16nm,0.9s,mb5.1
KK31 Karatay Array 47.70 333 *i* P **P** **11 02 11.3 +0.2**
KK31 pmax pmax
comp=Z,43nm,0.7s,mb5.6
CN2 Changchun 48.31 27 *e*P **P** **11 02 14.8 -1.0**
CN2 *e*XP sP 11 02 28.6 -5.8
CN2 PCP PcP 11 03 40.4 -1.6
CN2 *e*S **S** **11 09 13.3 +0.9**
CN2 SS SS 11 12 38.7 -3.8
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,5μm,16.0s,MS5.7
CN2 LR LR
comp=E,5μm,16.0s,MS5.7
CN2 LR LR
comp=Z,8μm,15.0s,MS5.8
ZAK Zakamensk 48.46 5⇑ *i*P **P** **11 02 16.7 -0.1**
ZAK pmax pmax
comp=Z,54nm,1.6s,mb5.3
MOY Mondy 49.60 3 *e*P **P** **11 02 25.3 -0.2**
MOY pmax pmax
comp=Z,24nm,2.8s,mb4.7
TLY Talaya 49.78 5 *e*P **P** **11 02 26.1 -0.7**
comp=Z,65nm,0.6s,mb5.8
TLY LR LR
comp=Z,14μm,19.0s,MS6.0
TLY Talaya 49.78 5 *c i*P **P** **11 02 26.9 0.0**
TLY *e* 11 03 46.8
TLY *e* 11 04 25.6
TLY *e*S **S** **11 09 34.9 +2.2**
TLY *e*PS 11 09 42.0
TLY *e*SSS 11 14 24.9
TLY pmax pmax
comp=Z,68nm,0.7s,mb5.8
TLY MLR MLR
comp=Z,13μm,19.0s,MS6.0
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
TLY Talaya 49.78 5 P **P** **11 02 27.5 +0.6**
SNR=43
PMG Port Moresby 50.34 104 *e*P **P** **11 02 30.3 -1.5**
comp=Z,43nm,0.7s,mb5.6
PMG LR LR
comp=Z,2μm,22.0s,MS5.0
PMG Port Moresby 50.34 104 P **P** **11 02 29.6 -2.2**
comp=Z,52nm,0.9s,mb5.5,baz=288,slow=6.1,SNR=13
IRK Irkutsk 50.39 5 *e*P **P** **11 02 31.2 -0.3**
IRK *e* pP 11 02 47.9 +3.2
IRK *e*S **S** **11 09 45.1 +3.9**
IRK *e* 11 10 02.1
IRK pmax pmax
comp=Z,343nm,2.0s,mb6.0
MAT Matsushiro 50.65 42 P **P** **11 02 31.9 -1.9**
MAT S **S** **11 09 46.0 +0.6**
MAJO Matsushiro 50.65 42 *e*P **P** **11 02 33.5 -0.3**
comp=Z,16nm,0.6s,mb5.1
MAJO LR LR
comp=Z,3μm,19.0s,MS5.3
MJAR Matsushiro Arr 50.65 42 P **P** **11 02 32.4 -1.4**
MJAR pmax pmax
comp=Z,20nm,0.7s
MJAR MLR MLR
comp=Z,3μm,18.3s
MJAR Matsushiro Arr 50.65 42 P **P** **11 02 32.4 -1.4**
comp=Z,20nm,0.7s,mb5.2,baz=222,slow=6.9,SNR=47
MJAR LR LR 11 27 33.3
comp=Z,3μm,18.3s,MS5.3,baz=235,slow=40
HIA Hailar 50.70 18 *e*P **P** **11 02 32.9 -1.0**
comp=Z,45nm,0.7s,mb5.5
HIA LR LR
comp=Z,7μm,20.0s,MS5.7
HIA Hailar 50.70 18 *e*P **P** **11 02 32.9 -1.0**
HIA pmax pmax
comp=Z,45nm,0.7s
HIA MLR MLR
comp=Z,7μm,20.0s
MDJ Mudanjiang 50.86 29 P **P** **11 02 35.9 +0.7**
MDJ AP pP 11 02 45.1 -3.3
MDJ XP sP 11 02 48.9 -5.0
MDJ PCP PcP 11 03 51.7 +0.4
MDJ PP PP 11 04 32.6 +0.7
MDJ S **S** **11 09 51.7 +3.7**
MDJ XS sS 11 10 07.2 -2.9
MDJ AMB AMB
comp=Z,33nm,0.8s,mb5.3
MDJ AMB AMB
comp=Z,1μm,8.4s
MDJ LR LR
comp=N,5μm,16.2s,MS5.7
MDJ LR LR
comp=E,2μm,14.1s,MS5.7
MDJ LR LR
comp=Z,9μm,15.8s,MS5.9
MDJ Mudanjiang 50.86 29 *e*P **P** **11 02 35.4 +0.2**
comp=Z,28nm,0.8s,mb5.2
MDJ LR LR
comp=Z,5μm,20.0s,MS5.5
VLA Vladivostok 50.95 32 *d i*P **P** **11 02 32.8 -3.1**
VLA pmax pmax
comp=Z,203nm,2.0s,mb5.7
VLA MLR MLR
comp=Z,4μm,14.1s,MS5.5
VAN Vannovskaya 51.11 319 *e*P **P** **11 02 36.9 -0.3**
KURK Kurchatov 51.25 344 *e*P **P** **11 02 37.5 -0.5**
comp=Z,172nm,0.7s,mb6.1
KURK LR LR
comp=Z,5μm,22.0s,MS5.5
KURK Kurchatov 51.25 344 *e*P **P** **11 02 37.3 -0.7**
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
KURK Kurchatov 51.25 344 P **P** **11 02 38.2 +0.2**
SNR=103
CIT Chita 51.58 12 *e*P **P** **11 02 40.8 +0.4**
CIT *e* pP 11 02 56.8 +3.2
CIT *e* 11 03 49.3
CIT pmax pmax
comp=Z,496nm,2.1s,mb6.1
CTA Charters Tower 52.21 117 *e*P **P** **11 02 44.8 -0.9**
comp=Z,42nm,0.9s,mb5.4
CTA *e*S **S** **11 10 04.7 -2.7**
CTA Charters Tower 52.21 117 P **P** **11 02 44.8 -0.9**
CTA S **S** **11 10 01.6 -5.8**
CTA pmax pmax
comp=Z,49nm,0.9s
CTA smax
comp=N,8.0nm,1.0s
CTA MLR MLR
comp=Z,3μm,18.9s
CTA Charters Tower 52.21 117 P **P** **11 02 44.8 -0.9**
comp=Z,49nm,0.9s,mb5.5,baz=291,slow=8.9,SNR=29
CTA S **S** **11 10 01.6 -5.8**
comp=Z,7.9nm,1.0s,baz=50,slow=21,SNR=9.4
CTA LR LR 11 30 08.4
comp=Z,3μm,18.9s,MS5.3,baz=287,slow=42
CTAO Charters Tower 52.21 117 *e*P **P** **11 02 44.8 -1.0**
comp=Z,100nm,1.1s,mb5.7
CTAO LR LR
comp=Z,3μm,19.0s,MS5.3
STKA Stephens Creek 53.34 133 *e*P **P** **11 02 52.8 -1.1**
comp=Z,29nm,0.8s,mb5.3
STKA *e*S **S** **11 10 18.5 -4.0**
STKA Stephens Creek 53.34 133 P **P** **11 02 52.8 -1.1**
comp=Z,20nm,0.5s,mb5.3,baz=307,slow=7.4,SNR=76
STKA S **S** **11 10 17.6 -5.0**
comp=Z,9.0nm,1.1s,baz=103,slow=20,SNR=4.8
STKA LR LR 11 26 15.4
comp=Z,4μm,20.6s,MS5.5,baz=297,slow=37
LBOS 53.36 286 *e*P **P** **11 02 55.9 +1.6**
NVS Novosibirsk 54.05 350⇑ *i*P **P** **11 02 57.4 -1.3**
NVS *e**PP pP 11 03 14.5 +2.5
NVS *e*PPP 11 06 08.5
NVS *e*S **S** **11 10 30.0 -1.4**
NVS pmax pmax
comp=N,104nm,0.9s
NVS pmax pmax
comp=E,72nm,0.9s
NVS pmax pmax
comp=Z,137nm,0.9s,mb5.9
NVS smax
comp=N,67nm,1.9s
NVS smax
comp=E,72nm,1.9s
TRBA At Turbah 54.37 285 *e*P **P** **11 02 58.6 -3.1**
QRN Al-Qurain 54.52 304 *e*P **P** **11 03 02.4 -0.2**
QRN AMb AMB 11 03 10.4
comp=Z,261nm,1.2s,mb6.1
KBD Kabd 54.85 305 *e*P **P** **11 03 05.1 +0.2**
RDF Al-Radifah 54.88 304 *e*P **P** **11 03 05.3 +0.2**
RDF AMb AMB 11 03 15.2
comp=Z,176nm,0.8s,mb6.1
NAY Al-Naaiem 55.24 305 *e*P **P** **11 03 07.5 -0.2**
NAY AMb AMB 11 03 15.0
comp=Z,70nm,0.5s,mb5.9
KLR Kul'dur 55.26 26 *e*P **P** **11 03 03.1 -4.4**
KLR *e*PPP 11 06 28.5
KLR *e*S **S** **11 10 44.5 -3.2**
KLR pmax pmax
comp=N,90nm,2.0s
KLR pmax pmax
comp=E,200nm,2.0s
KLR pmax pmax
comp=Z,530nm,2.0s,mb6.2
KLR pmax pmax
comp=N,900nm,7.5s
KLR pmax pmax
comp=E,800nm,7.5s
KLR pmax pmax
comp=Z,2μm,7.5s
KLR smax
comp=N,1μm,8.5s
KLR smax
comp=E,800nm,8.5s
KLR MLR MLR
comp=N,3μm,14.0s
KLR MLR MLR
comp=Z,13μm,14.0s,MS6.2
MIB Mutribah 55.35 305 *e*P **P** **11 03 08.0 -0.5**
MIB AMb AMB 11 03 13.0
comp=Z,194nm,0.8s,mb6.2
ATD Arta Tunnel 55.41 283 LR LR 11 25 05.0
comp=Z,2μm,18.6s,MS5.2,baz=234,slow=34
BRVK Borovoye 55.84 340 *e*P **P** **11 03 10.5 -1.1**
comp=Z,119nm,0.9s,mb5.9
BRVK LR LR
comp=Z,4μm,20.0s,MS5.5
BRVK Borovoye 55.84 340 P **P** **11 03 11.1 -0.4**
SNR=45
BRVK Borovoye 55.84 340 P **P** **11 03 11.1 -0.4**
SNR=45
BRVK Borovoye 55.84 340 P **P** **11 03 11.1 -0.4**
SNR=45
BRVK Borovoye 55.84 340 P **P** **11 03 11.1 -0.4**
SNR=45
BRVK Borovoye 55.84 340 P **P** **11 03 11.1 -0.4**
SNR=45
HABR Khabarovsk 56.25 29 *e*P **P** **11 03 13.4 -1.2**
HABR *e*S **S** **11 11 02.1 +1.1**
HABR *e* 11 11 21.3
HABR *e* 11 12 58.7
HABR pmax pmax
comp=Z,137nm,1.8s,mb5.7
HABR pmax pmax
comp=Z,920nm,3.4s
ERM Erimo 56.84 39 *e*P **P** **11 03 20.0 +1.1**
comp=Z,55nm,0.7s,mb5.7
ERM LR LR
comp=Z,2μm,20.0s,MS5.2
BOD Bodaibo 57.14 10⇓ *i*P **P** **11 03 20.4 -0.3**
BOD pmax pmax
comp=Z,148nm,1.4s,mb5.8
AB31 Akbulak array 57.18 331 *i* P **P** **11 03 20.5 -0.7**
EIDS Eidsvold 58.16 122 *e*P **P** **11 03 27.5 -1.1**
comp=Z,26nm,0.6s,mb5.4
NRGR Nerungri 58.60 17 *i* P **P** **11 03 31.4 +0.4**
CLNS Chul'man 58.81 17 *e*P **P** **11 03 32.4 0.0**
CLNS *e**PP pP 11 03 38.5 -7.4
CLNS *e* 11 04 25.6

CLNS eS S 11 11 23.8 -10
CLNS e 11 11 44.2
CLNS pmax pmax
comp=N,60nm,0.7s
CLNS pmax pmax
comp=Z,97nm,0.7s,mb5.9
CLNS pmax pmax
comp=E,45nm,0.8s
CLNS smax
comp=N,227nm,11.6s
CLNS smax
comp=Z,495nm,11.6s
CLNS smax
comp=E,510nm,12.8s
CLNS MLR MLR
comp=E,4μm,18.0s,MS5.7
CLNS MLR MLR
comp=Z,8μm,18.0s,MS5.9
CLNS MLR MLR
comp=N,2μm,17.0s,MS5.7
AKTK Aktyubinsk 58.90 331 P **P 11 03 32.1 -1.2**
AKTK S **S 11 11 32.2 -3.4**
AKTO Aktyubinsk 58.90 331 P **P 11 03 32.1 -1.1**
AKTO S **S 11 11 32.3 -3.4**
AKTO pmax pmax
comp=Z,22nm,0.7s,mb5.3
AKTO smax
comp=N,1.0nm,0.7s
AKTO Aktyubinsk 58.90 331 P **P 11 03 32.1 -1.2**
comp=N,22nm,0.7s,mb5.3,baz=119,slow=6.4,SNR=69
AKTO S **S 11 11 32.2 -3.4**
comp=N,1.2nm,0.7s,baz=295,slow=18,SNR=4.0
BHD Baghdad 58.92 308 *ex* x 11 03 32.0
BHD *ex* x 11 03 43.5
BHD *ex* x 11 05 45.0
BHD *ex* x 11 11 33.5
BHD *ex* x 11 11 52.0
BHD *ex* x 11 13 19.0
YSS Yuzh-Sakhalins 59.32 34 *eP* **P 11 03 36.2 0.0**
comp=N,168nm,0.7s,mb6.2
YSS LR LR
comp=Z,3μm,22.0s,MS5.3
YSS Yuzh-Sakhalins 59.32 34 *oeP* **P 11 03 36.0 -0.2**
YSS *e**SP sP 11 03 51.0 -4.2
YSS *e* 11 05 54.0
YSS *eS* **S 11 11 40.0 -1.2**
YSS *eSSS* 11 18 09.0
YSS pmax pmax
comp=Z,500nm,1.2s,mb6.4
YSS pmax pmax
comp=Z,1μm,6.0s
YSS MLR MLR
comp=E,4μm,15.0s
YSS MLR MLR
comp=Z,6μm,15.0s,MS5.8
ARMA Armidale 60.41 127 *eP* **P 11 03 44.3 +0.3**
comp=Z,4.1nm,1.3s,mb4.3
MAK Makhachkala 60.61 320 *eP* **P 11 03 44.2 -1.0**
MAK *e* 11 04 27.5
MAK *i* 11 05 59.5
MAK *ePPP* 11 07 29.5
MAK *i* S **S 11 11 55.1 -2.9**
MAK pmax pmax
comp=Z,215nm,1.4s,mb6.1
MAK MLR MLR
comp=Z,1μm,20.0s,MS5.1
CNB Canberra Magne 60.67 133 *eP* **P 11 03 46.0 +0.3**
comp=Z,60nm,1.2s,mb5.6
KMBO Kilima Mbogo 60.73 268 *eP* **P 11 03 48.2 +1.7**
comp=Z,99nm,1.7s,mb5.7
KMBO *e* pP 11 03 59.3 -0.7
KMBO Kilima Mbogo 60.73 268 *eP* **P 11 03 49.1 +2.6**
KMBO pmax pmax
comp=Z,99nm,1.7s
KMBO Kilima Mbogo 60.73 268 P **P 11 03 49.3 +2.8**
SNR=25
KMBO Kilima Mbogo 60.73 268 P **P 11 03 49.3 +2.8**
SNR=25
KMBO Kilima Mbogo 60.73 268 P **P 11 03 49.3 +2.8**
SNR=25
KMBO Kilima Mbogo 60.73 268 P **P 11 03 49.3 +2.8**
SNR=25
KMBO Kilima Mbogo 60.73 268 P **P 11 03 49.3 +2.8**
SNR=25
KMBO Kilima Mbogo 60.73 268 P **P 11 03 48.0 +1.5**
comp=Z,3.1nm,0.7s,mb4.5,baz=67,slow=8.0,SNR=6.8
KMBO LR LR 11 25 38.7
comp=Z,4μm,20.6s,MS5.6,baz=92,slow=31
MSL Mosul 60.97 311 *ex* x 11 03 46.5
MSL *ex* x 11 04 02.0
MSL *ex* x 11 11 58.0
MSL *ex* x 11 13 34.0
HAKT HAKKARI 60.97 313 *iP* **P 11 03 43.1 -4.6**
DGRG David-gareji 61.35 317 P **P 11 03 50.8 +0.5**
DGRG S **S 11 12 06.1 -1.4**
DYDN Diyadin 61.75 315 *iP* **P 11 03 47.5 -5.4**
MTA Mtatsminda 61.85 317 P **P 11 03 53.4 -0.2**
MTA S **S 11 12 11.1 -2.7**
TBLG Delisi 61.90 317 P **P 11 03 53.9 -0.1**
SVE Sverdlovsk 62.25 338⇓ *eP* **P 11 03 55.4 -0.5**
SVE *eS* **S 11 12 11.2 -7.0**
SVE pmax pmax
comp=Z,252nm,1.5s,mb6.1
SVE MLR MLR
comp=Z,5μm,20.0s,MS5.7
DIGO Kars 62.31 315 *iP* **P 11 03 52.9 -3.7**
TUTA Tutak 62.32 314 *iP* **P 11 03 54.0 -2.7**
ARU Arti 62.77 337 *eP* **P 11 03 58.3 -1.1**
comp=Z,91nm,0.9s,mb5.9
ARU LR LR
comp=Z,4μm,20.0s,MS5.6
ARU Arti 62.77 337*c iP* **P 11 03 58.2 -1.2**
ARU 11 04 35.4
ARU *e* 11 06 16.7
ARU PPP 11 07 44.6
ARU *eS* **S 11 12 27.1 +2.4**
ARU 11 13 46.3
ARU SS SS 11 16 28.2 -2.1
ARU pmax pmax
comp=Z,209nm,1.7s,mb6.0
ARU MLR MLR
comp=Z,4μm,22.0s,MS5.6
HNR Honiara 62.81 102 P **P 11 03 58.9 -1.6**
HNR LR LR
comp=Z,2μm,21.0s,MS5.3
HNR Honiara 62.81 102 P **P 11 03 58.9 -1.6**
comp=Z,48nm,0.5s,mb5.9,baz=168,slow=0.4,SNR=3.8
ZEI Tsey 62.91 318 *eP* **P 11 04 01.1 +0.5**
ZEI *eS* **S 11 12 27.5 +0.5**
ZEI pmax pmax
comp=Z,64nm,1.1s,mb5.7
TAU Tasmania Unive 62.95 141 PFAKE 11 04 10.0 +9.1
TAU LR LR
comp=Z,3μm,20.0s,MS5.5
MARD Mardin 63.06 311 *iP* **P 11 03 58.4 -3.4**
ONI Oni 63.13 318 P **P 11 04 02.7 +0.6**
ONI S **S 11 12 27.0 -2.8**
ERZM Erzurum 63.54 314 *iP* **P 11 04 02.8 -2.1**
ARTV Artvin 63.62 316 *iP* **P 11 03 57.3 -8.1**
KIV Kislovodsk 64.20 319 *eP* **P 11 04 07.5 -1.7**
comp=Z,91nm,1.0s,mb5.8
KIV LR LR
comp=Z,2μm,21.0s,MS5.2
KIV Kislovodsk 64.20 319 *eP* **P 11 04 08.4 -0.7**
KIV *e* 11 06 33.0
KIV *eS* **S 11 12 40.4 -2.7**
KIV *eSS* SS 11 16 50.6 -2.6
KIV pmax pmax
comp=Z,108nm,1.1s,mb5.8
KIV pmax pmax
comp=Z,211nm,3.1s
KIV MLR MLR
comp=Z,1μm,18.0s,MS5.1
KIV Kislovodsk 64.20 319 P **P 11 04 09.0 -0.1**
SNR=28
KIV Kislovodsk 64.20 319 P **P 11 04 09.0 -0.1**
SNR=28
KIV Kislovodsk 64.20 319 P **P 11 04 09.0 -0.1**
SNR=28
KIV Kislovodsk 64.20 319 P **P 11 04 09.0 -0.1**
SNR=28
YAK Yakutsk 64.50 16 *eP* **P 11 04 09.7 -1.0**
comp=Z,215nm,0.6s,mb6.3
YAK LR LR
comp=Z,8μm,20.0s,MS5.9

ASF Jabal al Asfar 64.61 305 P **P 11 04 12.5 +0.4**
ASF pmax pmax
comp=Z,6.0nm,0.5s
ASF Jabal al Asfar 64.61 305 P **P 11 04 12.5 +0.4**
comp=Z,6.4nm,0.5s,mb4.9,baz=330,slow=2.2,SNR=22
ELZG Elazig 64.80 312 *iP* **P 11 04 12.6 -0.5**
KELT Kelkit 65.14 314 *iP* **P 11 04 12.6 -2.7**
MALT Malatya 65.15 312 *eP* **P 11 04 15.9 +0.5**
comp=Z,222nm,1.8s,mb5.9
MALT Malatya 65.15 312 *eP* **P 11 04 15.9 +0.5**
MALT pmax pmax
comp=Z,220nm,1.8s,mb5.9
MALT Malatya 65.15 312⇑ *iP* **P 11 04 15.6 +0.2**
SOKR Solikamsk 65.64 338*c iP* **P 11 04 17.6 -0.5**
SOKR 11 06 46.2
SOKR S S 11 13 03.6 +3.5
SOKR SS SS 11 17 10.3 -4.6
SOKR pmax pmax
comp=Z,100nm,0.9s,mb5.8
SOKR MLR MLR
comp=Z,6μm,21.0s,MS5.8
HWQ Hawqa 65.92 307 *eP* **P 11 04 20.7 +0.2**
SOC Sochi 66.04 317*c iP* **P 11 04 20.6 -0.4**
SOC *e**PP pP 11 04 31.0 -3.7
SOC *e**SP sP 11 04 35.3 -4.8
SOC *e* 11 04 55.0
SOC *e* 11 06 47.1
SOC *ePPP 11 08 16.6
SOC *i* S S 11 13 02.4 -3.2
SOC *e**SS sS 11 13 21.7 -6.7
SOC *e* 11 14 15.8
SOC *eSS SS 11 17 22.1 +0.3
SOC pmax pmax
comp=Z,127nm,1.2s,mb5.8
SOC MLR MLR
comp=Z,2μm,22.0s,MS5.3
BHL Bhannes 66.06 306 *eP* **P 11 04 21.9 +0.5**
GRSN GIRESUNGRSN 66.11 314 *iP* **P 11 04 15.9 -5.7**
COBT Iskenderun 66.27 309 *iP* **P 11 04 19.2 -3.5**
ANDN Andirin 66.50 310 *iP* **P 11 04 22.4 -1.7**
VRHR Novokhopersk 67.90 326 *eP* **P 11 04 32.3 -0.4**
VRHR *eS* S 11 13 23.0 -4.8
VRHR pmax pmax
comp=Z,50nm,0.5s,mb5.8
VRHR pmax pmax
comp=N,70nm,0.9s
VRHR pmax pmax
comp=E,60nm,0.7s
VRHR smax
comp=N,190nm,1.5s
VRHR smax
comp=Z,70nm,1.4s
VRHR smax
comp=E,130nm,1.2s
VRHR MLR MLR
comp=Z,1μm,19.0s,MS5.2
VRHR MLR MLR
comp=N,460nm,20.0s,MS5.2
VRHR MLR MLR
comp=E,1μm,20.0s,MS5.2
AVNT Avonos 67.97 311 *iP* **P 11 04 29.0 -4.4**
ANN Anapa 68.01 318*c iP* **P 11 04 32.4 -1.1**
ANN *e**PP pP 11 04 49.9 +2.7
ANN *e* 11 07 00.5
ANN *eS* S 11 13 25.1 -4.2
ANN *eSS SS 11 17 53.2 +0.9
ANN pmax pmax
comp=Z,469nm,5.5s
ANN MLR MLR
comp=Z,1μm,24.0s,MS5.0
CSS Prodhromos 68.18 307 *eP* **P 11 04 34.8 -0.1**
comp=Z,113nm,1.1s,mb5.8
CTKT Corum 68.53 313 *iP* **P 11 04 32.3 -4.6**
CDAG Cicekdag 68.56 312 *iP* **P 11 04 32.3 -4.8**
BOYT Boyabat 68.68 314 *iP* **P 11 04 31.2 -6.6**
CASY Casey 68.69 175 PFAKE 11 04 50.0 +13
CASY LR LR
comp=Z,4μm,19.0s,MS5.6
SKR Severo-Kuril's 68.82 35 *eP* **P 11 04 37.5 -1.0**
SKR *e* 11 04 43.6
SKR *e* pP 11 04 54.2 +2.0
SKR pmax pmax
comp=Z,800nm,1.5s,mb6.4
BRTR Keskin Array B 69.13 312 P **P 11 04 39.7 -1.0**
BRTR ⇑*e* 11 32 49.3
BRTR LR LR 11 39 26.6
BRTR Keskin Array B 69.13 312 P **P 11 04 39.7 -1.0**
comp=Z,10nm,0.5s,mb5.0,baz=129,slow=6.2,SNR=49
BRTR PKP2bc 11 32 49.3
comp=Z,4.0nm,1.2s,baz=315,slow=0.5,SNR=10.0
BRTR LR LR 11 39 26.6
comp=Z,977nm,20.2s,MS5.0,baz=311,slow=40
VORD Divnogorie 69.18 325 *eP* **P 11 04 38.9 -1.8**
VORD pmax pmax
comp=Z,30nm,1.0s,mb5.2
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
VORD MLR MLR
comp=Z,2μm,20.0s,MS5.4
VORD MLR MLR
comp=N,1μm,22.0s,MS5.3
VORD MLR MLR
comp=E,1μm,17.0s,MS5.3
VRSR Storozhevoye 69.34 325 *eP* **P 11 04 39.6 -2.1**
VRSR *eS* S 11 13 38.8 -6.1
VRSR *eSS SS 11 18 07.6 -5.0
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VRSR pmax pmax
comp=N,4.0nm,0.9s
VRSR pmax pmax
comp=E,5.0nm,0.7s
VRSR smax
comp=N,40nm,3.9s
VRSR smax
comp=Z,40nm,8.5s
VRSR smax
comp=E,20nm,3.3s
VRSR MLR MLR
comp=Z,300nm,21.0s,MS4.5
VRSR MLR MLR
comp=N,110nm,19.0s,MS4.5
VRSR MLR MLR
comp=E,220nm,19.0s,MS4.5
ELDT Eldivan 69.49 313 *iP* **P 11 04 41.0 -1.8**
VOR Voronezh 69.55 325 *eP* **P 11 04 41.0 -2.0**
VOR pmax pmax
comp=Z,400nm,1.1s,mb6.3
ANTO Ankara 69.80 312⇑ P **P 11 04 44.7 -0.1**
ANTO LR LR
comp=Z,789nm,22.0s,MS4.9
ANTO Ankara 69.80 312 P **P 11 04 44.2 -0.6**
SNR=19
ANTO Ankara 69.80 312 P **P 11 04 44.2 -0.6**
SNR=19
ANTO Ankara 69.80 312 P **P 11 04 44.2 -0.6**
SNR=19
ANTO Ankara 69.80 312 P **P 11 04 44.2 -0.6**
SNR=19
ANTO Ankara 69.80 312⇑ *iP* **P 11 04 44.7 -0.1**
BALT Daday 69.81 314 *iP* **P 11 04 42.1 -2.6**
SIM Simferopol' 70.28 317*deP* **P 11 04 47.0 -0.6**
SIM pP 11 05 02.3 +0.9
SIM 11 07 24.1
SIM *eS* S 11 13 53.4 -2.8
SIM pmax pmax
comp=Z,55nm,0.9s,mb5.5
SIM pmax pmax
comp=Z,320nm,10.0s
SIM MLR MLR
comp=Z,1μm,20.0s,MS5.1
MA2 Magadan 70.34 26 *eP* **P 11 04 47.6 -0.1**
comp=Z,170nm,0.7s,mb6.1
MA2 LR LR
comp=Z,3μm,21.0s,MS5.5
MA2 Magadan 70.34 26*c iP* **P 11 04 46.9 -0.8**
MA2 *e* 11 05 10.6
MA2 *eS* S 11 13 55.9 -0.4
MA2 *e* 11 14 33.0
MA2 pmax pmax
comp=Z,200nm,0.6s,mb6.2
MA2 MLR MLR
comp=Z,10μm,17.8s,MS6.1

SGKT Sivrigoynuk 70.52 312 *iP* **P 11 04 46.5 -2.7**
DZM Mont Dzumac 70.94 114 P **P 11 04 51.0 -1.0**
comp=Z,27nm,0.9s,mb5.2,baz=307,slow=6.3,SNR=11
LSZ Lusaka 71.01 253 *eP* **P 11 04 54.7 +2.1**
comp=Z,362nm,2.0s,mb6.0
LSZ LR LR
comp=Z,6μm,19.0s,MS5.9
LSZ Lusaka 71.01 253 P **P 11 04 54.1 +1.5**
SNR=20
LSZ Lusaka 71.01 253 P **P 11 04 54.1 +1.5**
SNR=20
ISP Isparta 71.05 309⇑ *iP* **P 11 04 51.5 -0.9**
ISP Isparta 71.05 309 P **P 11 04 53.2 +0.8**
ESKT Eskisehir 71.16 311 *iP* **P 11 04 49.8 -3.3**
PET Petropavlovsk 71.20 34 *eP* **P 11 04 53.5 +0.4**
comp=Z,155nm,0.6s,mb6.1
PET LR LR
comp=Z,2μm,20.0s,MS5.4
PET Petropavlovsk 71.20 34⇑ *iP* **P 11 04 54.1 +1.0**
PET *e* pP 11 05 10.7 +3.9
PET *eS* S 11 14 08.3 +1.7
PET pmax pmax
comp=Z,2μm,4.5s
PET pmax pmax
comp=Z,242nm,0.6s,mb6.3
PET pmax pmax
comp=Z,1μm,14.6s
PET MLR MLR
comp=Z,2μm,21.0s,MS5.3
PET MLR MLR
comp=Z,2μm,17.0s
HENT Hendek 71.44 313 *iP* **P 11 04 49.8 -4.9**
GOLH Golhisar 71.65 309 *iP* **P 11 04 50.9 -5.2**
MOS Moscow 72.05 329 *eP* **P 11 04 56.0 -2.1**
MOS *i* pP 11 05 12.6 +0.7
MOS *e* 11 07 36.3
MOS *ePPP 11 09 19.4
MOS *eS* S 11 14 11.9 -4.3
MOS pmax pmax
comp=Z,202nm,0.6s,mb6.2
MOS pmax pmax
comp=Z,200nm,0.6s,mb6.2
MOS MLR MLR
comp=Z,5μm,23.0s,MS5.7
MOS MLR MLR
comp=E,4μm,22.0s
GDZ Gediz 72.10 310 *iP* **P 11 04 53.1 -5.7**
TIXI Tiksi 72.32 10 *eP* **P 11 04 58.0 -1.4**
comp=E,72nm,0.6s,mb5.8
TIXI LR LR
comp=Z,5μm,20.0s,MS5.8
TIXI Tiksi 72.32 10*c iP* **P 11 04 57.8 -1.6**
TIXI *e* 11 07 37.5
TIXI *ePPP 11 09 24.7
TIXI *eS* S 11 14 16.5 -2.3
TIXI *i* 11 14 57.4
TIXI *i* SS SS 11 19 01.8 +4.3
TIXI pmax pmax
comp=N,24nm,0.9s
TIXI pmax pmax
comp=Z,106nm,0.9s,mb5.8
TIXI pmax pmax
comp=E,16nm,0.9s
TIXI pmax pmax
comp=Z,733nm,9.4s
TIXI MLR MLR
comp=Z,5μm,16.0s,MS5.9
OBN Obninsk 72.35 328 *eP* **P 11 04 59.3 -0.6**
comp=Z,336nm,1.4s,mb6.1
OBN LR LR
comp=Z,2μm,20.0s,MS5.3
OBN Obninsk 72.35 328⇓ *eP* **P 11 04 59.4 -0.5**
OBN *e**PP pP 11 05 14.8 +1.1
OBN *e* 11 07 42.9
OBN *i* S S 11 14 18.7 -1.0
OBN pmax pmax
comp=Z,309nm,1.5s,mb6.0
OBN MLR MLR
comp=Z,2μm,18.0s,MS5.3
ARG Arkhangelos 72.58 307 *eP* **P 11 04 59.1 -2.6**
KARP Karpathos 73.24 306 *eP* **P 11 05 05.7 +0.1**
BDRM Kayabasi 73.28 308 *iP* **P 11 04 58.5 -7.3**
AKHS Akhisar 73.33 310 *iP* **P 11 05 02.9 -3.2**
BTOK Tokmak 73.34 311 *iP* **P 11 05 02.9 -3.2**
MAW Mawson 73.61 193 *eP* **P 11 05 08.2 +1.1**
comp=Z,10nm,0.4s,mb5.1
MAW Mawson 73.61 193 *eP* **P 11 05 08.2 +1.1**
MAW pmax pmax
comp=Z,10.0nm,0.4s
MAW Mawson 73.61 193 P **P 11 05 08.0 +0.9**
comp=Z,8.7nm,0.7s,mb4.8,baz=16,slow=6.6,SNR=9.3
MAW LR LR 11 31 14.0
comp=Z,4μm,20.6s,MS5.7,baz=24,slow=30
KDAG Bornova 73.66 309 *iP* **P 11 05 04.0 -4.0**
SMG Samos 73.87 309 *eP* **P 11 05 09.5 +0.2**
ZKR Zakros 73.93 306 *eP* **P 11 05 08.8 -0.9**
PSN Preselentsi 74.06 315 *iP* **P 11 05 11.0 +0.8**
TIRR Tirgusor 74.07 316⇓ *iP* **P 11 05 10.3 0.0**
TIRR Tirgusor 74.07 316⇓ *iP* **P 11 05 10.3 0.0**
SART Tekirdag 74.16 312 *iP* **P 11 05 09.5 -1.4**
URLA Izmir 74.17 309 *iP* **P 11 05 06.2 -4.8**
XRY Khrisi 74.32 306 *eP* **P 11 05 11.0 -0.9**
KIS Kishinev 74.40 318*α iP* **P 11 05 10.0 -2.2**
KIS *e* pP 11 05 25.0 -1.0
KIS *e* 11 08 00.0
KIS *ePPP 11 09 48.0
KIS *i* S S 11 14 40.0 -3.2
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.0
KIS pmax pmax
comp=Z,2μm,4.0s
KIS MLR MLR
comp=E,500nm,19.0s
KIS MLR MLR
comp=Z,1μm,19.0s,MS5.2
KIS MLR MLR
comp=Z,2μm,18.0s
KIS Kishinev 74.40 318⇑ *iP* **P 11 05 10.0 -2.2**
comp=Z,400nm,2.0s,mb6.0
KIS Kishinev 74.40 318 *ePcP* PcP 11 05 25.0 -1.6
KIS Kishinev 74.40 318 *ePP* PP 11 08 00.0 +1.1
NPS Neapolis 74.44 306 *eP* **P 11 05 12.7 0.0**
HARR Harsova 74.46 316⇑ *iP* **P 11 05 12.4 -0.1**
HARR Harsova 74.46 316⇑ *iP* **P 11 05 12.4 -0.2**
PRD Provadia 74.51 314 *iP* **P 11 05 13.4 +0.5**
PRK Paraskevi 74.58 310 *eP* **P 11 05 12.9 -0.5**
CHOS Chios island 74.60 309 *eP* **P 11 05 14.0 +0.5**
DRV Dumont d'Urvil 74.68 164 P **P 11 05 06.0 -7.3**
DRV Dumont d'Urvil 74.68 164 PP PP 11 07 59.0 -1.8
DRV S S 11 14 44.0 -1.6
DRV SS SS 11 19 31.0 -2.8
DRV L 11 24 00.0
DRV R 11 28 00.0
SANT Santorini 74.73 307 *eP* **P 11 05 13.8 -0.5**
comp=Z,2μm,0.6s
APE Apeiranthos 74.79 308⇑ *iP* **P 11 05 13.9 -0.7**
BOZC Bozcaada 74.85 311 *iP* **P 11 05 09.5 -5.5**
JMB Yambol 74.95 313 *iP* **P 11 05 15.7 +0.2**
IDI Anoyia 75.03 306 P **P 11 05 15.8 -0.2**
comp=Z,18nm,0.6s,mb5.2,baz=92,slow=7.8,SNR=19
ALN Alexandroupoli 75.05 312 *eP* **P 11 05 13.3 -2.7**
SIVA Sivas 75.06 306 *eP* **P 11 05 15.7 -0.5**
AKASG Malin Array Be 75.09 322 P **P 11 05 14.6 -1.4**
comp=Z,29nm,0.5s,mb5.5,baz=89,slow=5.4,SNR=152
AKASG LR LR 11 44 09.4
comp=Z,1μm,20.4s,MS5.2,baz=95,slow=40
KIEV Kiev 75.10 322 *eP* **P 11 05 14.4 -1.7**
comp=Z,43nm,0.6s,mb5.6
KIEV LR LR
comp=Z,1μm,20.0s,MS5.2
KIEV Kiev 75.10 322 *eP* **P 11 05 14.4 -1.7**
KIEV pmax pmax
comp=Z,43nm,0.6s,mb5.6
KIEV MLR MLR
comp=Z,1μm,20.0s,MS5.2
RDO Rodhopi 75.47 312 *eP* **P 11 05 17.2 -1.3**
TMCR Tamitsa 75.50 337 *eP* **P 11 05 15.3 -2.8**
VRI Vrincioaia 75.55 317 P **P 11 05 18.6 -0.2**
SZH Strazhica 75.58 314 *iP* **P 11 05 18.1 -0.9**
PLOR Plostina 75.60 317⇓ *iP* **P 11 05 19.5 +0.4**
VAM Vamos 75.61 306 *eP* **P 11 05 19.7 +0.3**
GVD Gavdhos 75.62 305 *eP* **P 11 05 18.9 -0.5**
comp=Z,111nm,1.2s,mb5.7
KDZ Kurdzhali 75.65 312 *iP* **P 11 05 19.9 +0.4**

BUC1 **Bucharest** 75.72 315 P P 11 05 21.1 +1.3
BOSA **Boshof** 75.77 240 eP P 11 05 21.5 +1.1
comp=Z,38nm,0.9s,mb5.3
BOSA LR LR 11 33 38.9
BOSA **Boshof** 75.77 240 P P 11 05 22.8 +2.3
comp=Z,7.9nm,0.7s,mb4.8,baz=102,slow=4.1,SNR=11
BOSA LR LR 11 33 38.9
comp=Z,4µm,20.5s,MS5.8,baz=62,slow=32
MLR **Muntele Rosu** 76.01 316 ⇑P P 11 05 21.5 +0.1
MLR **Muntele Rosu** 76.01 316 P P 11 05 21.7 +0.3
MLR pmax pmax
comp=Z,18nm,0.5s
MLR MLR MLR
comp=Z,1µm,21.0s
MLR **Muntele Rosu** 76.01 316 P P 11 05 21.7 +0.3
comp=Z,18nm,0.5s,mb5.3,baz=76,slow=2.6,SNR=52
MLR LR LR 11 42 41.2
comp=Z,1µm,21.0s,MS5.2,baz=90,slow=39
MLR **Muntele Rosu** 76.01 316 ⇑iP P 11 05 21.5 +0.1
RZN **Rozhen** 76.17 312 iP P 11 05 22.8 +0.3
NAIG **Nisos Aigina** 76.50 308 eP P 11 05 22.5 -1.9
VOIR 76.61 316 ⇑P P 11 05 25.6 +0.7
VOIR 76.61 316 ⇑iP P 11 05 25.6 +0.7
KYTH **Kithira** 76.66 307 eP P 11 05 22.0 -3.3
PAIG **Paliouri** 76.67 310 eP P 11 05 23.6 -1.7
PGB **Panagyurishte** 76.72 313 iP P 11 05 25.4 -0.2
NVR **Nevrokopi** 76.75 312 eP P 11 05 25.5 -0.2
VLI **Veliai** 76.80 307 eP P 11 05 24.8 -1.3
MMB **Musomiste** 76.89 312 iP P 11 05 26.3 -0.2
PLG **Polygyros** 76.91 311 eP P 11 05 26.0 -0.7
MNK **Minsk** 76.92 326⇓eP P 11 05 24.0 -2.4
MNK eS S 11 15 04.0 -6.8
MNK pmax pmax
comp=Z,620nm,2.0s,mb6.2
MNK pmax pmax
comp=E,520nm,2.0s
BURAR **Bucovina Array** 76.93 318 ⇑P P 11 05 27.1 +0.5
BURAR **Bucovina Array** 76.93 318⇑iP P 11 05 27.0 +0.4
LKR **Lokris** 77.00 309 eP P 11 05 25.9 -1.3
VLX **Vlachokerasia** 77.32 308 eP P 11 05 27.2 -1.9
KKB **Krupnik** 77.41 312 iP P 11 05 29.3 -0.1
VTS **Vitosha** 77.43 313 ⇑P P 11 05 29.7 +0.2
VTS **Vitosha** 77.43 313 P P 11 05 30.6 +1.1
VTS **Vitosha** 77.43 313 iP P 11 05 29.9 +0.4
VTS **Vitosha** 77.43 313⇑iP P 11 05 29.7 +0.2
KNT **Kendrikon** 77.44 312 eP P 11 05 28.6 -1.1
LIT **Litokhoron** 77.60 311 eP P 11 05 28.8 -1.8
ITM **Ithomi** 77.66 308 eP P 11 05 29.4 -1.5
VAY **Valandovo** 77.71 312 iP P 11 05 29.5 -1.6
JOF **Joensuu** 77.77 335 ep P 11 05 29.4 -1.5
comp=E,14nm,0.4s,mb5.2
JOF **Joensuu** 77.77 335 eP P 11 05 29.4 -1.5
JOF pmax pmax
comp=Z,14nm,0.4s,mb5.2
PYL **PYLOS** 77.77 307 eP P 11 05 29.0 -2.6
SELA **Sela** 77.82 309 eP P 11 05 31.6 -0.2
THL **Klokotos Trika** 77.89 310 eP P 11 05 30.8 -1.4
EVR **Evrytania** 77.96 309 eP P 11 05 31.8 -0.8
STIP **Stip** 78.05 312 iP P 11 05 31.8 -1.2
RLS **Riolos of Patr** 78.12 308 eP P 11 05 33.9 +0.4
LVV **L'vov** 78.13 321 eP P 11 05 32.7 -0.6
GZR **Gura Zlata** 78.18 316 ⇓P P 11 05 33.5 -0.2
GZR **Gura Zlata** 78.18 316 ⇓iP P 11 05 33.5 -0.1
LVZ **Lovozero** 78.37 340 P P 11 05 34.8 +0.6
comp=Z,500nm,0.6s,mb6.6,SNR=17
LVZ **Lovozero** 78.37 340 PFAKE 11 05 50.0 +16
LVZ LR LR
comp=Z,5µm,22.0s,MS5.8
DRGR 78.45 317 ⇑P P 11 05 35.2 +0.1
DRGR 78.45 317 P P 11 05 35.4 +0.3
DRGR 78.45 317⇑iP P 11 05 35.2 +0.1
BIA **Bitola** 78.60 311 iP P 11 05 34.3 -1.8
SKO **Skopje** 78.64 312 iP P 11 05 35.7 -0.5
APA **Apatity** 78.67 339 iP P 11 05 36.0 +0.1
APA i pP 11 05 48.4 -1.4
APA eS S 11 15 26.0 -3.1
APA i 11 15 49.0
APA pmax pmax
comp=Z,140nm,1.4s,mb5.7
APA pmax pmax
comp=Z,1µm,9.0s
APA MLR MLR
comp=Z,4µm,22.0s,MS5.7
KRUS **Krusevo** 78.70 312 iP P 11 05 35.5 -1.1
TRPA **Tarpa** 78.79 319⇓iP P 11 05 37.7 +0.7
VLS **Valsamata** 78.83 308 eP P 11 05 37.0 -0.4
LKD **Levkas** 78.84 309 eP P 11 05 36.1 -1.3
KWP **Kalwaria** 78.94 320 eP P 11 05 38.1 +0.4
KWP eS S 11 15 31.1 -1.7
KWP LMZ 11 46 23.9
comp=Z,2µm,24.0s
KWP **Kalwaria** 78.94 320 eP P 11 05 38.1 +0.4
KWP eS S 11 15 31.1 -1.6
KWP **Kalwaria** 78.94 320⇓iP P 11 05 38.4 +0.7
OHR **Ohrid** 79.00 311 eP P 11 05 37.1 -1.2
BZS **Buzias** 79.02 316 ⇑P P 11 05 38.6 +0.3
BZS **Buzias** 79.02 316⇑iP P 11 05 38.6 +0.3
UZH **Uzhgorod** 79.04 319 eP P 11 05 38.0 -0.3
UZH e 11 05 40.8
UZH e 11 08 41.0
UZH eS S 11 15 33.0 -0.8
UZH MLR MLR
comp=Z,700nm,17.0s,MS5.1
KOLS **Kolonicke sedl** 79.10 319 eP P 11 05 38.9 +0.3
KOLS eS S 11 15 35.0 +0.5
RPZ **Rata Peaks** 79.24 135 P P 11 05 39.2 -0.3
comp=Z,41nm,0.8s,mb5.4,baz=282,slow=3.8,SNR=18
RPZ LR LR 11 43 19.2
comp=Z,2µm,19.2s,MS5.6,baz=289,slow=38
SUW **Suwalki** 79.47 325 eP P 11 05 40.0 -0.5
KEK **Kerkira** 79.60 310 eP P 11 05 41.2 -0.4
CRVS **Cervenica-Dubn** 79.63 319 eP P 11 05 42.9 +1.4
CRVS eS S 11 15 38.2 -1.8
FIA1 **FINESS Array S** 79.66 332 eP P 11 05 37.9 -3.4
FINES **FINESS Array B** 79.66 332 P P 11 05 41.1 -0.3
comp=Z,14nm,0.7s,mb5.0,baz=104,slow=4.7,SNR=22
FINES LR LR 11 46 04.4
comp=Z,3µm,20.9s,MS5.5,baz=255,slow=39
KAF **Kangasniemi** 79.73 333 ep P 11 05 42.1 +0.3
comp=Z,24nm,0.4s,mb5.5
KAF **Kangasniemi** 79.73 333 eP P 11 05 42.1 +0.3
KAF pmax pmax
comp=Z,24nm,0.4s,mb5.5
PVY **Plav** 79.80 313⇑iP P 11 05 42.7 +0.1
STHS **Stebnicka Huta** 79.85 320 eP P 11 05 42.7 0.0
comp=Z,43nm,1.0s,mb5.3
STHS **Stebnicka Huta** 79.85 320 eP P 11 05 42.7 0.0
STHS pmax pmax
comp=Z,43nm,1.0s,mb5.3
IVA **Berane** 79.88 313⇑iP P 11 05 43.8 +0.8
DIVS **Divcibare** 79.96 314 eP P 11 05 43.0 -0.4
SMY **Shemya** 80.09 37 eP P 11 05 44.8 +0.8
comp=Z,128nm,0.8s,mb5.9
SMY LR LR
comp=Z,1µm,22.0s,MS5.2
SUR **Sutherland** 80.17 237 eP P 11 05 48.1 +3.3
comp=Z,93nm,1.1s,mb5.6
SUR LR LR
comp=Z,6µm,20.0s,MS5.9
BILL **Bilibino** 80.20 21⇑iP P 11 05 43.8 -0.4
BILL LR LR
comp=Z,3µm,22.0s,MS5.6
BILL **Bilibino** 80.20 21⇑eP P 11 05 43.8 -0.4
BILL e 11 08 45.1
BILL eS S 11 15 55.6 +10
BILL pmax pmax
comp=Z,60nm,1.7s,mb5.2
BILL MLR MLR
comp=Z,3µm,23.0s,MS5.6
KECS **Kecovo** 80.20 319 eP P 11 05 43.4 -1.2
comp=Z,15nm,1.2s,mb4.8
KECS e 11 06 05.2
KECS eS S 11 15 46.5 +0.4
KECS **Kecovo** 80.20 319 eP P 11 05 43.4 -1.2
KECS eS S 11 15 46.5 +0.4
KECS pmax pmax
comp=Z,15nm,1.2s,mb4.8
ULC **Ulcinj** 80.26 312⇑iP P 11 05 44.3 -0.8
TTG **Podgorica** 80.30 313⇑iP P 11 05 44.2 -1.1
PLE **Pljevlja** 80.30 313⇑iP P 11 05 46.6 +1.3
NIE **Niedzica** 80.45 320 eP P 11 05 47.7 +1.8
PSZ **Piszkesteto** 80.52 318 eP P 11 05 46.0 -0.3
comp=Z,20nm,0.8s,mb5.1
PSZ **Piszkesteto** 80.52 318⇑eP P 11 05 47.4 +1.1
PSZ **Piszkesteto** 80.52 318⇓iP P 11 05 46.9 +0.6
NKY **Niksic** 80.53 313⇑iP P 11 05 45.1 -1.4
BUM **Brajici-Budva** 80.55 312⇑iP P 11 05 46.2 -0.4
UPM **Unac-Piva** 80.64 313⇑iP P 11 05 47.3 +0.2
HCY **Herceg Novi** 80.86 313⇑iP P 11 05 48.2 -0.1
BRY **Bratogost** 80.88 313⇑iP P 11 05 47.4 -1.0
OJC **Ojcow** 80.89 320 eP P 11 05 48.1 -0.2
OJC ePcP PcP 11 05 54.4 -0.3
OJC esP sP 11 06 00.3 -7.3
OJC eSKSac SKSac 11 16 03.3 +0.3
OJC L 11 49 58.4
comp=Z,1.2nm,22.3s
OJC **Ojcow** 80.89 320 eP P 11 05 48.1 -0.2
OJC e 11 05 54.4
OJC e*SP sP 11 06 00.3 -7.3
OJC e 11 16 03.3
SYO **Syowa Base** 80.94 198⇑eP P 11 05 49.8 +1.7
BUD **Budapest** 81.05 318⇑eP P 11 05 50.1 +0.9
PKSM **Moragy** 81.16 316 ⇓P P 11 05 49.9 +0.1
PKSM **Moragy** 81.16 316⇓iP P 11 05 49.9 +0.1
VYHS **Vyhne** 81.29 319 eP P 11 05 49.5 -0.9
comp=Z,25nm,1.2s,mb5.0
VYHS ePP PP 11 09 03.8 +7.3
VYHS eS S 11 15 55.9 -1.6
VYHS **Vyhne** 81.29 319 eP P 11 05 49.5 -0.9
VYHS e 11 09 03.8
VYHS eS S 11 15 55.9 -1.6
VYHS pmax pmax
comp=Z,25nm,1.2s,mb5.0
SNZO **South Karori** 81.39 132 PFAKE 11 06 00.0 +8.9
SNZO LR LR
comp=Z,4µm,22.0s,MS5.7
TSUM **Tsumeb** 81.51 250 eP P 11 05 54.4 +2.2
comp=Z,77nm,1.4s,mb5.4
TSUM LR LR
comp=Z,2µm,22.0s,MS5.5
KOLL **Kolacno** 81.59 319 eP P 11 05 51.8 -0.2
KOLL e 11 06 15.3
KOLL **Kolacno** 81.59 319 eP P 11 05 51.8 -0.2
KOLL esP sP 11 06 15.2 +3.8
KEV **Kevo** 81.62 341 eP P 11 05 50.7 -1.0
comp=Z,19nm,0.8s,mb5.1
KEV LR LR
comp=Z,3µm,21.0s,MS5.7
KEV **Kevo** 81.62 341 P P 11 05 51.6 -0.1
KEV pmax pmax
comp=Z,150nm,1.5s,mb5.7
FUNA **Funafuti** 81.68 99 PFAKE 11 06 00.0 +6.8
FUNA LR LR
comp=Z,8µm,19.0s,MS6.1
OKC **Ostrava-Krasne** 81.90 320 eP P 11 05 54.4 +0.8
OKC epP pP 11 06 07.9 +0.3
OKC eS S 11 16 01.4 -2.3
OKC **Ostrava-Krasne** 81.90 320 eP P 11 05 54.4 +0.8
OKC epP pP 11 06 07.9 +0.3
OKC eS S 11 16 01.4 -2.3
OKC AMS AMS 11 47 10.0
comp=Z,800nm,21.3s
TIP **Timpagrande** 81.90 309 eP P 11 05 54.6 +0.7
comp=Z,157nm,1.5s,mb5.7
ARCES **ARCESS Array B** 82.06 340 P P 11 05 53.7 -0.4
ARCES pmax pmax
comp=Z,11nm,0.4s
ARCES MLR MLR
comp=Z,4µm,21.7s
ARCES **ARCESS Array B** 82.06 340 P P 11 05 53.6 -0.4
comp=Z,11nm,0.4s,mb5.1,baz=95,slow=5.1,SNR=133
ARCES LR LR 11 45 45.7
comp=Z,4µm,21.7s,MS5.8,baz=112,slow=38
TDS **Terranova Siba** 82.26 310 iPu P 11 05 56.9 +1.2
comp=Z,290nm,1.2s,mb6.1
TDS **Terranova Siba** 82.26 310 iP P 11 05 56.9 +1.2
TDS pmax pmax
comp=Z,290nm,1.2s,mb6.1
MORC **Moravsky Berou** 82.28 320 ⇑P P 11 05 56.0 +0.3
MORC **Moravsky Berou** 82.28 320⇑iP P 11 05 56.0 +0.4
MODS **Modra-Piesok** 82.31 318 eP P 11 05 55.7 -0.1
comp=Z,35nm,1.4s,mb5.1
MODS ePP PP 11 09 01.4 -3.5
MODS eS S 11 16 08.1 +0.1
MODS **Modra-Piesok** 82.31 318 eP P 11 05 55.7 -0.1
MODS e 11 09 01.4
MODS eS S 11 16 08.1 +0.1
MODS pmax pmax
comp=Z,35nm,1.4s,mb5.1
SOI **Samo** 82.38 308 iPu P 11 05 57.4 +1.0
ZST **Bratislava** 82.41 318 eP P 11 05 56.0 -0.3
comp=Z,57nm,1.0s,mb5.5
ZST e 11 06 18.9
ZST LR LR
comp=Z,600nm,20.9s,MS4.9
ZST **Bratislava** 82.41 318 eP P 11 05 56.0 -0.3
ZST pmax pmax
comp=Z,57nm,1.0s,mb5.5
ZST MLR MLR
comp=Z,600nm,20.9s,MS4.9
ZST **Bratislava** 82.41 318 eP P 11 05 56.0 -0.3
ZST esP sP 11 06 18.8 +3.1
MTTG **Motta San Giov** 82.66 308 P P 11 05 59.2 +1.3
comp=Z,60nm,0.7s,mb5.7
KTK1 **Kautokeino** 82.71 339 eP P 11 05 57.8 +0.3
comp=Z,115nm,1.7s,mb5.6
KTK1 **Kautokeino** 82.71 339 eP P 11 05 57.8 +0.3
KTK1 AMb AMB 11 06 01.5
comp=Z,115nm,1.7s,mb5.6
SOP **Sopron** 82.73 318⇓eP P 11 05 57.9 -0.1
URZ **Urewera** 82.73 129 P P 11 05 58.0 -0.2
comp=Z,24nm,0.8s,mb5.2,baz=327,slow=1.7,SNR=11
VRAC **Vranov** 82.85 319 P P 11 05 59.6 +1.0
FG4 **Candela** 82.98 311 P P 11 06 00.1 +0.6
comp=Z,120nm,0.8s,mb6.0
FG4 **Candela** 82.98 311 P P 11 06 00.1 +0.6
FG4 pmax pmax
comp=Z,120nm,0.8s,mb6.0
SGO **Sicignano** 83.11 310 P P 11 06 00.0 -0.1
comp=Z,199nm,1.4s,mb6.0
SGO **Sicignano** 83.11 310 P P 11 06 00.0 -0.1
SGO pmax pmax
comp=Z,199nm,1.4s,mb6.0
DPC **Dobruska-Polom** 83.12 320 eP P 11 06 00.1 +0.1
DPC esP sP 11 06 17.6 -1.8
DPC eS S 11 16 17.5 +1.3
DPC AMS AMS 11 50 10.0
comp=Z,1µm,19.7s
KSP **Ksiaz** 83.19 321 eP P 11 06 01.7 +1.4
KSP LMZ 11 48 25.2
comp=Z,2µm,22.6s
KSP **Ksiaz** 83.19 321 eP P 11 06 01.2 +0.9
KSP epP pP 11 06 15.9 +1.6
KSP eS S 11 16 15.0 -1.8
KSP LR LR
comp=Z,3µm,19.7s,MS5.7
KSP **Ksiaz** 83.19 321 eP P 11 06 01.2 +0.9
KSP e*PP pP 11 06 15.9 +1.6
KSP eS S 11 16 15.0 -1.8
CONA **Conrad Observa** 83.22 318⇑iP P 11 05 60.0 -0.6
comp=Z,21nm,1.3s,mb5.0
UPC **Upice** 83.33 320 eP P 11 06 01.1 0.0
CSSN **Cassano Irpino** 83.34 311 P P 11 06 01.2 -0.1
comp=Z,242nm,1.8s,mb5.9
ARSA **Arzberg** 83.39 317⇑iP P 11 06 01.1 -0.4
comp=Z,28nm,1.1s,mb5.2,SNR=12
BOJS **Bojanci** 83.45 315 iP P 11 06 01.6 -0.2
BOJS eS S 11 16 16.2 -3.6
TREC **Trest** 83.57 319 eP P 11 06 02.6 +0.3
TREC eSKS 11 16 20.9
TREC AMS AMS 11 48 00.0
comp=Z,1µm,19.7s
PERS **Pernice** 83.62 317 iP P 11 06 02.4 -0.3
VISS **Visnje** 83.76 316 iP P 11 06 03.8 +0.5
LJU **Ljubljana** 84.00 316 eP P 11 06 02.5 -2.1
PRU **Pruhonice** 84.23 320 eP P 11 06 05.6 -0.1
PRU esP sP 11 06 24.5 -0.6
PRU eSKS 11 16 27.0
PRU AMS AMS 11 49 50.0
comp=Z,1µm,21.8s
INTR **Introdacqua** 84.23 312 iPu P 11 06 05.2 -0.7
PVCC **Panska Ves** 84.25 320 eP P 11 06 06.5 +0.7
PVCC ex x 11 06 27.3
PVCC eS S 11 16 27.4 -0.2
PVCC AMS AMS 11 49 40.0
comp=Z,1µm,19.5s
MOA **Molln** 84.28 318⇓iP P 11 06 05.6 -0.4
comp=Z,26nm,1.1s,mb5.3,SNR=6.4
SDI **San Donato** 84.29 312 P P 11 06 06.0 -0.2
comp=Z,23nm,0.7s,mb5.4
SDI **San Donato** 84.29 312 P P 11 06 06.0 -0.2
SDI pmax pmax
comp=Z,23nm,0.7s,mb5.4
JAVS **Javornik** 84.31 316 iP P 11 06 06.7 +0.5
PRA **Prague** 84.31 320 P P 11 06 06.0 -0.1
TRO **Tromso** 84.33 340 eP P 11 06 04.7 -1.0
comp=Z,123nm,1.6s,mb5.8
TRO LR LR
comp=Z,2µm,18.3s,MS5.6
TRO **Tromso** 84.33 340 eP P 11 06 02.6 -3.1
TRO eP 11 06 04.7
TRO AMb AMB 11 06 07.5
comp=Z,123nm,1.6s,mb5.8
TRO eSKS 11 16 24.5
TRO AMS AMS 11 47 27.2
comp=Z,2µm,18.3s,MS5.6
TRO **Tromso** 84.33 340 eP P 11 06 04.7 -1.1
TRO pmax pmax
comp=Z,123nm,1.6s,mb5.8
TRO MLR MLR
comp=Z,2µm,18.3s,MS5.6
BSD **Bornholm Skovb** 84.38 325⇑iP P 11 06 06.5 +0.2
comp=Z,76nm,1.3s,mb5.7
BSD i pP 11 06 24.8 +4.4
BSD eS S 11 16 30.6 +1.9
BSD **Bornholm Skovb** 84.38 325⇑iP P 11 06 06.5 +0.2
comp=Z,76nm,1.3s,mb5.7
BSD i pP 11 06 24.8 +4.4
BSD eS S 11 16 30.6 +1.9
BSD
comp=Z,730nm,20.0s
VOY **Vojsko** 84.44 316 eP P 11 06 05.8 -1.0
VOY e 11 06 28.0
PTQR **Pietraquaria** 84.61 312 P P 11 06 07.6 -0.2
comp=Z,170nm,1.3s,mb6.0
AQU **L'Aquila** 84.62 312 eP P 11 06 07.3 -0.5
comp=Z,47nm,0.8s,mb5.7
AQU **L'Aquila** 84.62 312⇓iP P 11 06 08.5 +0.7
MYKA **Terra Mystica** 84.64 316⇑iP P 11 06 07.3 -0.5
comp=Z,29nm,0.8s,mb5.5
BRG **Berggiesshubel** 84.67 321 iP P 11 06 08.2 +0.3
comp=Z,84nm,2.0s,mb5.5
BRG e 11 06 28.8
BRG S S 11 16 33.0 +1.3
BRG LR LR
comp=Z,900nm,19.6s,MS5.2
BRG **Berggiesshubel** 84.67 321 iP P 11 06 08.2 +0.3
BRG S S 11 16 33.0 +1.3
BRG pmax pmax
comp=Z,5.0nm,2.0s
BRG MLR MLR
comp=Z,92µm,19.6s
BRG MLR MLR
comp=N,898nm,21.6s
BRG MLR MLR
comp=E,328nm,21.6s
BRG **Berggiesshubel** 84.67 321 eP P 11 06 07.9 0.0
comp=Z,140nm,2.0s,mb5.8
BRG eS S 11 16 29.3 -2.4
BRG **Berggiesshubel** 84.67 321 iP P 11 06 08.2 +0.3
comp=Z,141nm,2.0s,mb5.8
BRG e 11 06 28.8
comp=Z,153nm,2.2s
BRG S S 11 16 33.0 +1.3
BRG
comp=Z,2µm,19.6s
BRG
comp=N,548nm,21.6s
BRG
comp=E,1µm,21.6s
GERES **GERESS Array B** 84.71 319 P P 11 06 08.1 0.0
comp=E,6.4nm,0.4s,mb5.1,baz=107,slow=5.7,SNR=63
GERES LR LR 11 49 21.9
comp=E,724nm,21.3s,MS5.0,baz=89,slow=39
KHC **Kasperske Hory** 84.81 319 eP P 11 06 08.5 -0.1
KHC **Kasperske Hory** 84.81 319 eP P 11 06 08.1 -0.5
KHC epP pP 11 06 19.5 -3.2
KHC esP sP 11 06 26.4 -1.6
KHC eS S 11 16 34.4 +1.2
KHC AMS AMS 11 48 40.0
comp=Z,1µm,20.8s
PTCC **Patocco-Chiusa** 84.83 316 P P 11 06 08.0 -0.8
comp=Z,32nm,0.7s,mb5.6
NRCA **Norcia** 84.85 313 P P 11 06 07.8 -1.2
comp=Z,68nm,1.4s,mb5.6
KBA **Koelnbreinsper** 84.86 317⇑iP P 11 06 08.8 -0.1
comp=Z,23nm,1.2s,mb5.2,SNR=6.7
KBA **Koelnbreinsper** 84.86 317⇑iP P 11 06 08.8 -0.1
KBA pmax pmax
comp=Z,23nm,1.2s,mb5.2
RUE **Ruedersdorf** 84.87 322 eP P 11 06 09.2 +0.4
comp=Z,327nm,1.9s,mb6.1
GMNA **Gemona** 84.90 316 P P 11 06 08.8 -0.3
comp=Z,252nm,1.0s,mb6.3
FBE **Freiberg** 85.05 321 eP P 11 06 09.4 -0.4
comp=Z,179nm,2.0s,mb5.8
BJO **Bjornoya** 85.11 345 AMS AMS 11 45 33.6
comp=Z,3µm,17.5s,MS5.7
FSSB **Fossombrone** 85.13 313 P P 11 06 11.0 +0.7
FVI **Forni Avoltri** 85.23 316 P P 11 06 11.2 +0.4
comp=Z,30nm,0.8s,mb5.5
FVI **Forni Avoltri** 85.23 316 P P 11 06 11.2 +0.4
FVI pmax pmax
comp=Z,30nm,0.8s,mb5.5
WET **Wettzell** 85.27 319 eP P 11 06 10.7 -0.2
WET eS S 11 16 33.7 -4.0
WET pmax pmax
comp=Z,54nm,1.3s,mb5.5
WET **Wettzell** 85.27 319 eP P 11 06 10.7 -0.2
comp=Z,54nm,1.3s,mb5.5
WET eS S 11 16 33.7 -4.0
CLL **Collm** 85.29 321⇑iP P 11 06 11.3 +0.4
comp=Z,70nm,1.7s,mb5.5
CLL i pP 11 06 26.5 +1.5
CLL e 11 06 34.0
CLL eS S 11 16 35.0 -2.8
CLL LR LR
comp=Z,1µm,21.5s,MS5.2
CLL **Collm** 85.29 321⇑iP P 11 06 11.3 +0.4
CLL i pP 11 06 26.5 +1.5
CLL eS S 11 16 35.0 -2.8
CLL pmax pmax
comp=Z,70nm,1.7s,mb5.5
CLL MLR MLR
comp=Z,1µm,21.5s,MS5.2
CLL **Collm** 85.29 321⇑iP P 11 06 11.3 +0.4
comp=Z,70nm,1.7s,mb5.5
CLL ePlp 11 06 14.0
comp=Z,400nm,28.3s
CLL i sP sP 11 06 26.5 -3.9
CLL ex x 11 06 34.0
CLL eS S 11 16 35.0 -2.8
comp=N,1µm,27.8s
CLL eS S 11 16 35.0 -2.8
comp=E,600nm,21.5s
CLL ePS 11 17 43.0
CLL eSS SS 11 22 00.0 -13
CLL ex x 11 23 37.0
CLL eSSS 11 25 51.0
CLL ex x 11 27 06.0
CLL eSSSS 11 28 41.0
CLL LmV 11 49 00.0
comp=Z,1µm,21.5s
CLL **Collm** 85.29 321⇑iP P 11 06 11.2 +0.3
comp=Z,68nm,1.7s,mb5.5
CLL ePP PP 11 09 30.0 +0.9
CLL eS S 11 16 39.5 +1.7
CLL ePS 11 17 51.0
CLL eSS SS 11 22 21.3 +8.4
CLL eSSS 11 25 50.5
CLL eSSSS 11 28 42.3
HFS **Hagfors** 85.42 330 LR LR 11 50 32.9
comp=Z,2µm,18.5s,MS5.5,baz=201,slow=40
ABTA **Abfaltersbach** 85.42 317⇑iP P 11 06 10.2 -1.5
comp=Z,25nm,1.5s,mb5.1
MOR8 **Moi Rana** 85.57 336 eP P 11 06 11.2 -0.8
comp=Z,137nm,1.7s,mb5.9
MOR8 **Moi Rana** 85.57 336 eP P 11 06 11.2 -0.8
MOR8 AMb AMB 11 06 14.7
comp=Z,137nm,1.7s,mb5.9
TANN **Tannenbergstha** 85.59 320 eP P 11 06 11.9 -0.6
comp=Z,58nm,1.8s,mb5.5

TANN eS S 11 16 39.1 -1.7
NKC Novy Kostel 85.59 320 eP **P** **11 06 13.2 +0.7**
NKC epP pP 11 06 36.3 +10
NKC eS S 11 16 40.7 -0.2
NKC Novy Kostel 85.59 320 eP **P** **11 06 13.2 +0.7**
NKC ex x 11 06 36.3
NKC eS S 11 16 40.7 -0.2
NKC AMS AMS 11 49 30.0
comp=Z,1µm,20.5s
WERN Wernitzgruen 85.64 320 eP **P** **11 06 12.2 -0.5**
comp=Z,38nm,1.5s,mb5.4
GUNZ Gunzen 85.67 320 eP **P** **11 06 12.6 -0.3**
comp=Z,21nm,1.2s,mb5.2
WERD Werda 85.69 320 eP **P** **11 06 13.3 +0.3**
comp=Z,136nm,2.4s,mb5.8
CRE Caprese Michel 85.73 313 P **P** **11 06 13.0 -0.3**
comp=Z,28nm,0.9s,mb5.5
CRE Caprese Michel 85.73 313 P **P** **11 06 13.0 -0.3**
CRE pmax pmax
comp=Z,29nm,0.9s,mb5.5
ROTZ Rotzenmuhle 85.73 320 eP **P** **11 06 12.7 -0.5**
comp=Z,38nm,1.2s,mb5.5
ROTZ eS S 11 16 40.5 -1.8
MANZ Manzenberg 85.80 320 eP **P** **11 06 13.8 +0.3**
comp=Z,146nm,1.9s,mb5.9
MANZ eS S 11 16 40.6 -2.3
SFI Santa Sofia 85.81 314 *i* Pu **P** **11 06 15.1 +1.4**
comp=Z,259nm,1.5s,mb6.2
SFI Santa Sofia 85.81 314 *i* P **P** **11 06 15.1 +1.4**
SFI pmax pmax
comp=Z,259nm,1.5s,mb6.2
COP Copenhagen 85.83 326⇑ *i*P **P** **11 06 14.2 +0.6**
COP *i* S S 11 16 43.6 +0.6
COP pmax pmax
comp=Z,30nm,1.0s,mb5.5
COP MLR MLR
comp=Z,660nm,19.0s,MS5.0
COP Copenhagen 85.83 326⇑ *i*P **P** **11 06 14.2 +0.6**
comp=Z,30nm,1.0s,mb5.5
COP *i* 11 06 33.4
COP *i* S S 11 16 43.6 +0.6
COP
comp=Z,660nm,19.0s
CTI Castel Tesino 86.00 316 P **P** **11 06 14.9 +0.3**
VMG Vicchio 86.03 314 *i* Pu **P** **11 06 16.5 +1.7**
comp=Z,210nm,1.5s,mb6.2
WTTA Wattenberg 86.04 317⇑ *i*P **P** **11 06 13.8 -1.0**
comp=Z,42nm,1.1s,mb5.6,SNR=9.1
WTTA Wattenberg 86.04 317⇑ *i*P **P** **11 06 13.8 -1.0**
comp=Z,42nm,1.1s,mb5.6
WTTA Wattenberg 86.04 317⇑ *i*P **P** **11 06 13.8 -1.0**
WTTA pmax pmax
comp=Z,42nm,1.1s,mb5.6
WATA Walderalm 86.08 317⇑ *i*P **P** **11 06 13.7 -1.3**
comp=Z,114nm,1.9s,mb5.8
WATA Walderalm 86.08 317⇑ *i*P **P** **11 06 13.7 -1.3**
WATA pmax pmax
comp=Z,114nm,1.9s,mb5.8
MOX Moxa 86.14 320 eP **P** **11 06 15.6 +0.4**
comp=Z,75nm,1.8s,mb5.6
MOX *e* pP 11 06 31.3 +2.0
MOX
comp=Z,900nm,19.0s
MOX Moxa 86.14 320 eP **P** **11 06 15.6 +0.4**
MOX *e* pP 11 06 31.3 +2.0
MOX pmax pmax
comp=Z,75nm,1.8s,mb5.6
MOX MLR MLR
comp=Z,900nm,19.0s,MS5.2
MOX Moxa 86.14 320 eP **P** **11 06 15.4 +0.2**
comp=Z,97nm,2.0s,mb5.7
MOX eS S 11 16 42.8 -3.4
STOK Stokkvaagen 86.16 336 eP **P** **11 06 16.4 +1.4**
SQTA Sankt Quirin 86.33 317⇑ D 11 06 15.3
comp=Z,15nm,0.9s,SNR=9.8
SQTA Sankt Quirin 86.33 317 D 11 06 15.3
comp=Z,15nm,0.9s,SNR=9.8
FNVD Fontana Vidola 86.34 314 *i* Pu **P** **11 06 17.8 +1.5**
GRA1 Grafenberg Arr 86.37 319 eP **P** **11 06 16.6 +0.3**
comp=Z,191nm,2.1s,mb6.0
GRA1 *e*PP PP 11 09 41.7 +3.8
GRA1 LR LR
comp=Z,1µm,21.6s,MS5.2
GRF Grafenberg Arr 86.37 319 eP **P** **11 06 16.6 +0.3**
GRF *e* 11 09 41.7
GRF pmax pmax
comp=Z,191nm,2.1s,mb6.0
GRF MLR MLR
comp=Z,1µm,21.6s,MS5.2
GRF Grafenberg Arr 86.37 319 eP **P** **11 06 16.6 +0.3**
GRF *e* 11 09 41.7
GRF pmax pmax
comp=Z,191nm,2.1s,mb6.0
GRF MLR MLR
comp=Z,1µm,21.6s,MS5.2
GRF Grafenberg Arr 86.37 319 eP **P** **11 06 16.6 +0.3**
comp=Z,191nm,2.1s,mb6.0
GRF *e*PP PP 11 09 41.7 +3.8
GRF eL 11 50 37.9
comp=Z,1µm,21.6s
GRFO Grafenberg 86.37 319 eP **P** **11 06 16.6 +0.3**
comp=Z,50nm,1.1s,mb5.7
GRFO LR LR
comp=Z,1µm,19.0s,MS5.3
GRFO Grafenberg 86.37 319 P **P** **11 06 16.9 +0.6**
GRFO pmax pmax
comp=Z,49nm,1.1s,mb5.7
MOTA Moosalm 86.40 317⇑ *i*P **P** **11 06 15.4 -1.2**
comp=Z,68nm,1.7s,mb5.6,SNR=6.8
MOTA Moosalm 86.40 317⇑ *i*P **P** **11 06 15.4 -1.2**
MOTA pmax pmax
comp=Z,68nm,1.7s,mb5.6
VNDA Vanda 86.43 169 P **P** **11 06 16.4 +0.3**
comp=Z,5.0nm,0.8s,mb4.8,baz=322,slow=4.3,SNR=5.0
VNDA LR LR 11 42 23.5
comp=Z,3µm,19.7s,MS5.6,baz=305,slow=34
NSS Namsos 86.49 334 eP **P** **11 06 16.4 -0.2**
comp=Z,113nm,1.7s,mb5.8
NSS LR LR
comp=Z,2µm,19.1s,MS5.6
NSS Namsos 86.49 334 eP **P** **11 06 16.4 -0.2**
NSS AMb AMB 11 06 18.6
comp=Z,113nm,1.7s,mb5.8
NSS eSKS 11 16 40.5
NSS AMS AMS 11 51 01.4
comp=Z,2µm,19.1s,MS5.6
RETA Reutte 86.63 317⇑ *i*P **P** **11 06 16.8 -0.9**
comp=Z,44nm,1.1s,mb5.6,SNR=7.8
FETA Feichten 86.65 317⇑ *i*P **P** **11 06 17.2 -0.6**
comp=Z,24nm,1.2s,mb5.3
NB2 NORSAR Subarra 86.69 331 P **P** **11 06 16.9 -0.8**
comp=Z,482nm,2.0s,mb6.4,baz=94,slow=4.8
NOA NORSAR Array B 86.69 331 P **P** **11 06 16.8 -0.9**
NOA 11 09 39.0
NOA pmax pmax
comp=Z,12nm,0.5s
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA MLR MLR
comp=Z,2µm,21.7s
NOA NORSAR Array B 86.69 331 P **P** **11 06 16.8 -0.9**
comp=Z,12nm,0.5s,mb5.4,baz=93,slow=5.9,SNR=75
NOA PP PP 11 09 39.0 -1.2
comp=Z,2.0nm,0.7s,baz=93,slow=7.9,SNR=3.4
NOA LR LR 11 48 19.0
comp=Z,2µm,21.7s,MS5.5,baz=90,slow=38
GSCL Gusciola 86.72 314 P **P** **11 06 19.6 +1.4**
comp=Z,30nm,0.8s,mb5.6
BRMO Bormio 86.89 316 P **P** **11 06 19.1 +0.1**
comp=Z,13nm,0.6s,mb5.3
CLZ Clausthal 86.94 322 eP **P** **11 06 18.9 -0.2**
CLZ pmax pmax
comp=Z,77nm,1.4s,mb5.7
CLZ Clausthal 86.94 322 eP **P** **11 06 18.9 -0.2**
comp=Z,77nm,1.4s,mb5.7
BSEG Bad Segeberg 87.01 324 eP **P** **11 06 19.6 +0.2**
comp=Z,235nm,1.8s,mb6.1
BSEG eS S 11 16 49.2 -5.3
NRDL Niedersach Rie 87.11 322 eP **P** **11 06 20.0 +0.1**
comp=Z,336nm,1.9s,mb6.2
UBBA Unterbreizbach 87.17 321 eP **P** **11 06 20.7 +0.5**
DAVA Damuels 87.23 317⇑ *i*P **P** **11 06 20.5 -0.2**
comp=Z,68nm,1.7s,mb5.6,SNR=9.4
DAVOX Davos/Dischmat 87.23 317 LR LR 11 50 49.6
comp=Z,852nm,21.3s,MS5.1,baz=329,slow=39
KBS Kingsbay 87.31 349 eP **P** **11 06 23.5 +3.1**

KBS eSKS 11 16 46.2
KBS AMS AMS 11 51 05.6
comp=Z,2µm,22.1s,MS5.4
KONO Kongsberg 87.46 329 eP **P** **11 06 20.1 -1.3**
comp=Z,45nm,0.9s,mb5.7
KONO LR LR
comp=Z,3µm,20.0s,MS5.7
KONO Kongsberg 87.46 329 eP **P** **11 06 22.3 +0.8**
KONO Kongsberg 87.46 329 P **P** **11 06 21.5 +0.1**
KONO pmax pmax
comp=Z,45nm,0.9s,mb5.7
SBA Scott Base 87.53 169 PFAKE 11 06 30.0 +8.6
SBA LR LR
comp=Z,2µm,20.0s,MS5.5
MUD Monsted U'grnd 87.68 326⇑ *i*P **P** **11 06 23.8 +1.3**
comp=Z,95nm,1.6s,mb5.8
MUD
comp=Z,1µm,20.0s
STU Stuttgart 87.69 319 eP **P** **11 06 23.2 +0.4**
comp=Z,31nm,1.1s,mb5.5
KEST Kesra 87.70 306 P **P** **11 06 24.2 +1.0**
comp=Z,4.5nm,0.7s,mb4.8,baz=178,slow=0.4,SNR=11
KEST LR LR 11 46 48.8
comp=Z,793nm,20.8s,MS5.1,baz=157,slow=36
DOMB Dombas 87.74 332 eP **P** **11 06 23.7 +1.0**
comp=Z,73nm,1.4s,mb5.7
DOMB Dombas 87.74 332 eP **P** **11 06 23.7 +1.0**
DOMB AMb AMB 11 06 26.2
comp=Z,73nm,1.4s,mb5.7
TOD Tromm 87.94 319 eP **P** **11 06 24.7 +0.8**
TNS Taunus Mts 88.16 320 eP **P** **11 06 26.0 +1.0**
TNS eS S 11 16 59.6 -6.1
TNS pmax pmax
comp=Z,143nm,1.7s,mb5.9
TNS Taunus Mts 88.16 320 eP **P** **11 06 26.0 +1.0**
comp=Z,143nm,1.7s,mb5.9
TNS eS S 11 16 59.6 -6.1
BFO Black Forest 88.27 318 eP **P** **11 06 24.8 -0.8**
comp=Z,11nm,0.8s,mb5.1
BFO LR LR
comp=Z,1µm,21.0s,MS5.3
BFO Black Forest 88.27 318 P **P** **11 06 25.1 -0.4**
BFO pmax pmax
comp=Z,14nm,0.8s,mb5.2
BFO Black Forest 88.27 318 eP **P** **11 06 24.6 -0.9**
comp=Z,20nm,0.9s,mb5.3
GAMB Gambell 88.43 26 eP **P** **11 06 25.1 -0.9**
comp=Z,20nm,0.8s,mb5.4
HLG Helgoland 88.44 324 eS S 11 17 01.7 -6.5
IBBN Ibbenburen 88.56 322 eP **P** **11 06 27.9 +1.1**
comp=Z,315nm,1.8s,mb6.3
LANF Langenberg 88.60 319 eP **P** **11 06 28.0 +0.9**
ABH Alteburg 88.75 320 eP **P** **11 06 29.1 +1.3**
BUG Bochum--Univer 88.88 321 eP **P** **11 06 28.4 0.0**
comp=Z,116nm,1.7s,mb5.9
BUG eS S 11 17 06.1 -6.4
SAOF Saorge 88.91 314 eP **P** **11 06 29.3 +0.6**
CDF Champ du Feu 88.97 318 eP **P** **11 06 28.3 -0.5**
SBF Sospel 89.00 314 eP **P** **11 06 28.8 -0.3**
comp=Z,97nm,1.1s,mb5.7
SBF Sospel 89.00 314 eP **P** **11 06 28.8 -0.3**
comp=Z,48nm,1.1s,mb5.7
SBF Sospel 89.00 314 eP **P** **11 06 28.8 -0.3**
SBF pmax pmax
comp=Z,48nm,1.1s,mb5.7
REVF Revere 89.05 314 eP **P** **11 06 29.3 0.0**
ECH Echery 89.05 318 eP **P** **11 06 29.7 +0.5**
LUCF Luceram 89.06 314 eP **P** **11 06 30.0 +0.6**
BLS5 Blasjo 89.07 329 eP **P** **11 06 32.3 +3.3**
comp=Z,47nm,1.8s,mb5.5
BLS5 Blasjo 89.07 329 eP **P** **11 06 32.3 +3.3**
BLS5 AMb AMB 11 06 33.7
comp=Z,47nm,1.8s,mb5.5
RUP Ruppelstein 89.07 320 eP **P** **11 06 29.9 +0.6**
MOF Molkenrain 89.08 318 eP **P** **11 06 29.7 +0.3**
WTSB Winterswijk 89.16 322 eP **P** **11 06 29.9 +0.3**
comp=Z,111nm,2.0s,mb5.8
ABSA Djebel Ababsia 89.20 306 P **P** **11 06 32.0 +1.8**
MVIF Mont Vial 89.20 314 eP **P** **11 06 31.0 +1.0**
CMAH Djebel Manchou 89.24 306 P **P** **11 06 32.5 +2.1**
CGMA Guelma 89.25 306 P **P** **11 06 32.0 +1.6**
HINF Hinteralfeld 89.27 318 eP **P** **11 06 29.7 -0.6**
comp=Z,81nm,1.4s,mb5.6
HINF Hinteralfeld 89.27 318 eP **P** **11 06 29.7 -0.6**
comp=Z,40nm,1.4s,mb5.6
HINF Hinteralfeld 89.27 318 eP **P** **11 06 29.7 -0.6**
HINF pmax pmax
comp=Z,40nm,1.4s,mb5.6
LOMF Lomont 89.31 317 eP **P** **11 06 31.0 +0.6**
CALN Calern 89.40 314 eP **P** **11 06 30.0 -1.0**
SURF Saint Ours 89.42 314 eP **P** **11 06 32.1 +1.0**
LPG La Plagne 89.43 315 eP **P** **11 06 31.2 +0.1**
comp=Z,250nm,1.5s,mb6.0
LPG La Plagne 89.43 315 eP **P** **11 06 31.2 +0.1**
comp=Z,125nm,1.5s,mb6.0
LPG La Plagne 89.43 315 eP **P** **11 06 31.2 +0.1**
LPG pmax pmax
comp=Z,125nm,1.5s,mb6.0
LPL La Plagne 89.44 315 eP **P** **11 06 31.3 +0.2**
comp=Z,136nm,1.2s,mb5.8
LPL La Plagne 89.44 315 eP **P** **11 06 31.3 +0.2**
comp=Z,68nm,1.2s,mb5.8
LPL La Plagne 89.44 315 eP **P** **11 06 31.3 +0.2**
LPL pmax pmax
comp=Z,68nm,1.2s,mb5.8
MBDF Montbardon 89.44 315 eP **P** **11 06 31.9 +0.7**
BNI Bardonecchia 89.50 315 eP **P** **11 06 29.9 -1.5**
comp=Z,32nm,1.2s,mb5.5
BNI Bardonecchia 89.50 315 P **P** **11 06 30.7 -0.7**
BNI pmax pmax
comp=Z,24nm,0.9s,mb5.5
RSL Roselend 89.51 316 eP **P** **11 06 28.9 -2.5**
FRF La Foret Royal 89.58 313 eP **P** **11 06 31.7 -0.1**
comp=Z,217nm,1.6s,mb5.9
FRF La Foret Royal 89.58 313 eP **P** **11 06 31.7 -0.1**
comp=Z,108nm,1.6s,mb5.9
FRF La Foret Royal 89.58 313 eP **P** **11 06 31.7 -0.1**
FRF pmax pmax
comp=Z,108nm,1.6s,mb5.9
BER Bergen 89.59 330 *e* S 11 17 10.5 -8.2
BER AMS AMS 11 50 22.5
comp=Z,2µm,22.2s,MS5.4
HAU Haudompre 89.61 318 eP **P** **11 06 31.3 -0.5**
comp=Z,154nm,1.4s,mb5.8
HAU eMLR MLR
comp=Z,630nm,17.5s,MS4.8
HAU Haudompre 89.61 318 eP **P** **11 06 31.3 -0.5**
comp=Z,77nm,1.4s,mb5.8
HAU LR LR
comp=Z,630nm,17.5s,MS5.1
HAU Haudompre 89.61 318 eP **P** **11 06 31.3 -0.5**
HAU pmax pmax
comp=Z,77nm,1.4s,mb5.8
HAU MLR MLR
comp=Z,630nm,17.5s,MS5.1
WLF Walferdange 89.66 319 eP **P** **11 06 33.0 +1.0**
comp=Z,69nm,1.3s,mb5.8
WLF Walferdange 89.66 319 P **P** **11 06 33.4 +1.4**
WLF pmax pmax
comp=Z,69nm,1.3s,mb5.8
WLF Walferdange 89.66 319 P **P** **11 06 33.6 +1.5**
comp=Z,75nm,2.3s,mb5.6
WLF Walferdange 89.66 319 eP **P** **11 06 33.3 +1.3**
comp=Z,255nm,2.0s,mb6.2
CAEH 'Ain El Ouahch 89.69 307 P **P** **11 06 33.5 +1.0**
LMR La Mourre 89.69 313 eP **P** **11 06 32.1 -0.2**
comp=Z,262nm,1.9s,mb5.9
LMR La Mourre 89.69 313 eP **P** **11 06 32.1 -0.2**
comp=Z,131nm,1.9s,mb5.9
LMR La Mourre 89.69 313 eP **P** **11 06 32.1 -0.2**
LMR pmax pmax
comp=Z,131nm,1.9s,mb5.9
MEM Membach 89.71 320 P **P** **11 06 32.3 +0.1**
comp=Z,22nm,1.2s,mb5.4
HGN Heimansgroeve 89.75 321 eP **P** **11 06 32.7 +0.3**
comp=Z,56nm,2.0s,mb5.5
HGN ePP PP 11 10 11.3 +6.3
HGN eSKS S 11 17 17.4 -3.2
CKFL Kef-Lekhel 89.81 306 P **P** **11 06 35.5 +2.4**
THEF They Montfort 89.84 318 eP **P** **11 06 31.9 -1.0**
CABF La Chapelle 89.84 316 eP **P** **11 06 33.1 +0.1**
comp=Z,100nm,1.2s,mb5.7
CABF La Chapelle 89.84 316 eP **P** **11 06 33.1 +0.1**
comp=Z,50nm,1.2s,mb5.7
CABF La Chapelle 89.84 316 eP **P** **11 06 33.1 +0.1**
CABF pmax pmax
comp=Z,50nm,1.2s,mb5.7
BEBN Eben Emael 89.91 321 P **P** **11 06 34.0 +0.8**
TNA Tin City 89.96 25 eP **P** **11 06 33.6 +0.5**
comp=Z,28nm,1.2s,mb5.5
TNA LR LR
comp=Z,1µm,19.0s,MS5.4
CASM Ain Smara 90.00 306 P **P** **11 06 35.0 +1.0**
TAVF Tavernes 90.00 313 eP **P** **11 06 36.6 +2.8**
ORIF Oris-en-Rattie 90.07 315 eP **P** **11 06 34.2 +0.1**
comp=Z,235nm,1.6s,mb6.0
ORIF eMLR MLR
comp=Z,1µm,22.2s,MS4.9
ORIF Oris-en-Rattie 90.07 315 eP **P** **11 06 34.2 +0.1**
comp=Z,117nm,1.6s,mb6.0
ORIF Oris-en-Rattie 90.07 315 eP **P** **11 06 34.2 +0.1**
ORIF pmax pmax
comp=Z,117nm,1.6s,mb6.0
CTEI Djebel Teioual 90.08 306 P **P** **11 06 36.5 +2.2**
STOF St-Etienne Org 90.09 314 eP **P** **11 06 35.8 +1.6**
GRN Grenoble 90.15 315 eP **P** **11 06 34.2 -0.2**
BCLA Clavier 90.17 320 P **P** **11 06 35.6 +1.2**
SMRF Simiane la Rot 90.34 314 eP **P** **11 06 35.8 +0.5**
comp=Z,198nm,1.6s,mb5.9
SMRF Simiane la Rot 90.34 314 eP **P** **11 06 35.8 +0.5**
comp=Z,198nm,1.6s,mb6.2
MEZF Maizieres J'vi 90.44 318 eP **P** **11 06 35.6 -0.1**
comp=Z,275nm,1.5s,mb6.1
MEZF Maizieres J'vi 90.44 318 eP **P** **11 06 35.6 -0.1**
comp=Z,275nm,1.5s,mb6.4
DFRA Djebel Bou Aff 90.48 306 P **P** **11 06 38.0 +1.8**
GIVF Givet 90.50 320 eP **P** **11 06 36.0 +0.1**
comp=Z,76nm,1.0s,mb5.7
GIVF Givet 90.50 320 eP **P** **11 06 36.0 +0.1**
comp=Z,38nm,1.0s,mb5.7
GIVF Givet 90.50 320 eP **P** **11 06 36.0 +0.1**
GIVF pmax pmax
comp=Z,38nm,1.0s,mb5.7
CMER Merouana 90.51 305 P **P** **11 06 41.0 +4.7**
MAIT Maitri 90.57 199 eP **P** **11 06 36.6 +0.8**
PRAF Pradon 90.64 314 eP **P** **11 06 37.3 +0.5**
DOU Dourbes 90.64 320 P **P** **11 06 37.2 +0.6**
comp=Z,39nm,2.2s,mb5.3
UCC Uccle 90.75 321 P **P** **11 06 37.7 +0.6**
comp=Z,74nm,2.8s,mb5.5
AFI Afiamalu 90.77 104 P **P** **11 06 37.0 -0.9**
AFI pmax pmax
comp=Z,47nm,1.0s,mb5.8
AFI Afiamalu 90.77 104 P **P** **11 06 37.0 -0.9**
comp=Z,47nm,1.0s,mb5.8,baz=274,slow=9.7,SNR=4.4
CKHR Kef el Ahmar 90.80 306 P **P** **11 06 39.5 +1.8**
SNF Seneffe 90.81 320 P **P** **11 06 37.9 +0.5**
comp=Z,35nm,1.8s,mb5.4
SET Setif 90.88 306 P **P** **11 06 39.0 +0.9**
BAIF Baives 90.89 320 eP **P** **11 06 38.0 +0.2**
comp=Z,144nm,1.1s,mb5.9
BAIF Baives 90.89 320 eP **P** **11 06 38.0 +0.2**
comp=Z,72nm,1.1s,mb5.9
BAIF Baives 90.89 320 eP **P** **11 06 38.0 +0.2**
BAIF pmax pmax
comp=Z,72nm,1.1s,mb5.9
VIVF Saint-Julien-l 90.93 315 eP **P** **11 06 38.0 -0.1**
comp=Z,64nm,1.1s,mb5.6
VIVF Saint-Julien-l 90.93 315 eP **P** **11 06 38.0 -0.1**
comp=Z,32nm,1.1s,mb5.6
VIVF Saint-Julien-l 90.93 315 eP **P** **11 06 38.0 -0.1**
VIVF pmax pmax
comp=Z,32nm,1.1s,mb5.6
LOR Lormes 91.33 317 eP **P** **11 06 39.7 -0.2**
comp=Z,156nm,1.2s,mb5.9
LOR eMLR MLR
comp=Z,674nm,22.8s,MS4.7
LOR Lormes 91.33 317 eP **P** **11 06 39.7 -0.2**
comp=Z,78nm,1.2s,mb5.9
LOR LR LR
comp=Z,670nm,22.8s,MS5.0
LOR Lormes 91.33 317 eP **P** **11 06 39.7 -0.2**
LOR pmax pmax
comp=Z,78nm,1.2s,mb5.9
LOR MLR MLR
comp=Z,670nm,22.8s,MS5.0
SMF Signal de Mont 91.39 317 eP **P** **11 06 39.9 -0.3**
comp=Z,269nm,1.4s,mb6.1
SMF Signal de Mont 91.39 317 eP **P** **11 06 39.9 -0.3**
comp=Z,134nm,1.4s,mb6.1
SMF Signal de Mont 91.39 317 eP **P** **11 06 39.9 -0.3**
SMF pmax pmax
comp=Z,134nm,1.4s,mb6.1
LASF Ste Croix 91.57 314 eP **P** **11 06 41.3 +0.2**
comp=Z,145nm,1.4s,mb5.8
SSF Saint Saulge 91.58 317 eP **P** **11 06 41.1 0.0**
comp=Z,219nm,1.7s,mb5.9
SSF Saint Saulge 91.58 317 eP **P** **11 06 41.1 0.0**
comp=Z,106nm,1.7s,mb5.9
SSF Saint Saulge 91.58 317 eP **P** **11 06 41.1 0.0**
SSF pmax pmax
comp=Z,106nm,1.7s,mb5.9
PLDF La Plantade 91.59 316 eP **P** **11 06 41.9 +0.8**
AVF Avril sur Loir 91.71 317 eP **P** **11 06 41.3 -0.4**
comp=Z,144nm,1.3s,mb5.8
AVF Avril sur Loir 91.71 317 eP **P** **11 06 41.3 -0.4**
comp=Z,72nm,1.3s,mb5.8
AVF Avril sur Loir 91.71 317 eP **P** **11 06 41.3 -0.4**
AVF pmax pmax
comp=Z,72nm,1.3s,mb5.8
UNV Unalaska Valle 91.73 36 PFAKE 11 06 50.0 +8.4
UNV LR LR
comp=Z,6µm,22.0s,MS6.0
QSPA South Pole Qui 91.90 180 eP **P** **11 06 42.1 +0.3**
comp=Z,34nm,1.0s,mb5.6
QSPA LR LR
comp=Z,4µm,20.0s,MS5.9
LBL Lubilhac 91.91 315 eP **P** **11 06 43.3 +0.7**
BGF Bois d'Agland 92.08 317 eP **P** **11 06 43.6 +0.2**
comp=Z,309nm,1.4s,mb6.1
BGF Bois d'Agland 92.08 317 eP **P** **11 06 43.6 +0.2**
comp=Z,155nm,1.4s,mb6.1
BGF Bois d'Agland 92.08 317 eP **P** **11 06 43.6 +0.2**
BGF pmax pmax
comp=Z,155nm,1.4s,mb6.1
AKET Djebel Ketaf 92.12 306 P **P** **11 06 46.4 +2.6**
HYF Humbligny 92.16 317 eP **P** **11 06 44.1 +0.4**
ADJB Djebel Djouab 92.47 306 P **P** **11 06 47.6 +2.2**
TCF Toulx Ste Croi 92.54 316 eP **P** **11 06 45.6 +0.1**
comp=Z,130nm,1.5s,mb5.8
TCF Toulx Ste Croi 92.54 316 eP **P** **11 06 45.6 +0.1**
comp=Z,65nm,1.5s,mb5.8
TCF Toulx Ste Croi 92.54 316 eP **P** **11 06 45.6 +0.1**
TCF pmax pmax
comp=Z,65nm,1.5s,mb5.8
ABA Alger-Bouzarea 92.75 307 P **P** **11 06 43.8 -2.9**
CAF Calviac 92.77 315 eP **P** **11 06 47.1 +0.5**
comp=Z,67nm,1.1s,mb5.7
CAF Calviac 92.77 315 eP **P** **11 06 47.1 +0.5**
comp=Z,33nm,1.1s,mb5.7
CAF Calviac 92.77 315 eP **P** **11 06 47.1 +0.5**
CAF pmax pmax
comp=Z,33nm,1.1s,mb5.7
MTLF Montolieu 92.81 313 eP **P** **11 06 46.9 +0.1**
comp=Z,198nm,1.7s,mb6.0
MTLF Montolieu 92.81 313 eP **P** **11 06 46.9 +0.1**
comp=Z,99nm,1.7s,mb6.0
MTLF Montolieu 92.81 313 eP **P** **11 06 46.9 +0.1**
MTLF pmax pmax
comp=Z,99nm,1.7s,mb6.0
RJF Les Rejaudoux 93.12 315 eP **P** **11 06 48.6 +0.4**
comp=Z,189nm,1.5s,mb6.0
RJF eMLR MLR
comp=Z,697nm,23.0s,MS4.8
RJF Les Rejaudoux 93.12 315 eP **P** **11 06 48.6 +0.4**
comp=Z,95nm,1.5s,mb6.0
RJF LR LR
comp=Z,700nm,23.0s,MS5.0
RJF Les Rejaudoux 93.12 315 eP **P** **11 06 48.6 +0.4**
RJF pmax pmax
comp=Z,95nm,1.5s,mb6.0
RJF MLR MLR
comp=Z,700nm,23.0s,MS5.0
JMIC Jan Mayen 93.47 342 LR LR 11 51 48.1
comp=Z,3µm,21.9s,MS5.6,baz=262,slow=37
LFF La Frestale 93.71 315 eP **P** **11 06 51.2 +0.3**
LDF La Druitiere 93.86 319 eP **P** **11 06 51.3 -0.2**
DAG Danmarks Havn 94.00 348⇑ *i*P **P** **11 06 50.5 -1.1**
DAG pmax pmax
comp=Z,11nm,1.0s,mb5.2
DAG Danmarks Havn 94.00 348⇑ *i*P **P** **11 06 50.5 -1.1**
comp=Z,11nm,1.0s,mb5.2

FLN La Foliniere 94.07 319 *e*P P 11 06 52.0 -0.5
FLN *e*MLR MLR
comp=Z,879nm,21.0s,MS4.9
FLN La Foliniere 94.07 319 *e*P P 11 06 52.0 -0.5
FLN MLR MLR
comp=Z,880nm,21.0s,MS5.2
EPF Esparros 94.21 313 *e*P P 11 06 53.1 -0.2
comp=Z,90nm,1.7s,mb5.6
EPF Esparros 94.21 313 *e*P P 11 06 53.1 -0.2
comp=Z,45nm,1.7s,mb5.6
EPF Esparros 94.21 313 *e*P P 11 06 53.1 -0.2
EPF pmax pmax
comp=Z,45nm,1.7s,mb5.6
GRR Gorron 94.37 319 *e*P P 11 06 54.2 +0.3
comp=Z,220nm,1.7s,mb6.0
GRR Gorron 94.37 319 *e*P P 11 06 54.2 +0.3
comp=Z,110nm,1.7s,mb6.0
GRR Gorron 94.37 319 *e*P P 11 06 54.2 +0.3
GRR pmax pmax
comp=Z,110nm,1.7s,mb6.0
ESK Eskdalemuir 94.72 326 PFAKE 11 07 10.0 +15
ESK LR LR
comp=Z,1µm,19.0s,MS5.3
ETSF Etsaut 94.88 313 *e*P P 11 06 57.1 +0.7
ALE Alert 95.15 357 P P 11 06 56.0 -0.9
comp=Z,43nm,0.7s,mb6.0,SNR=5.2
SJPF Ste Jean 95.34 313 *e*P P 11 06 58.8 +0.4
comp=Z,142nm,1.5s,mb5.9
SJPF Ste Jean 95.34 313 *e*P P 11 06 58.8 +0.4
comp=Z,71nm,1.5s,mb5.9
SJPF Ste Jean 95.34 313 *e*P P 11 06 58.8 +0.4
SJPF pmax pmax
comp=Z,71nm,1.5s,mb5.9
IMA2 Indian Mountai 95.60 23 *e*P P 11 06 58.9 -0.2
TORD Torodi Ar. Bea 95.61 283 P P 11 06 59.8 -0.5
TORD PP PP 11 10 56.6 +4.6
TORD PKKPbc PKKPbc 11 23 49.5 -1.4
TORD LR LR 11 49 07.3
TORD Torodi Ar. Bea 95.61 283 P P 11 06 59.8 -0.5
comp=Z,1.3nm,0.5s,mb4.6,baz=101,slow=5.4,SNR=24
TORD PP PP 11 10 56.6 +4.5
comp=Z,3.4nm,1.1s,baz=110,slow=7.1,SNR=3.6
TORD PKKPbc PKKPbc 11 23 49.5 -1.4
comp=Z,1.2nm,0.4s,baz=304,slow=3.1,SNR=29
TORD LR LR 11 49 07.3
comp=Z,3µm,19.5s,MS5.7,baz=95,slow=35
ROSF Rostrenen 95.97 319 *e*P P 11 07 00.6 -0.6
ESDC Sonseca Array 97.88 310 LR LR 11 54 11.7
comp=Z,862nm,21.4s,MS5.2,baz=205,slow=37
PAB San Pablo 98.19 310 PFAKE 11 07 20.0 +8.5
PAB LR LR
comp=Z,1µm,20.0s,MS5.5
MCK McKinley 98.30 24 PFAKE 11 07 20.0 +8.6
MCK LR LR
comp=Z,1µm,19.0s,MS5.4
COLA College 98.30 23 PFAKE 11 07 20.0 +8.6
COLA LR LR
comp=Z,2µm,19.0s,MS5.5
PMR Palmer 99.01 26 PFAKE 11 07 30.0 +15
PMR LR LR
comp=Z,2µm,19.0s,MS5.5
EGAK Eagle 100.92 22 PFAKE 11 07 30.0 +6.8
EGAK LR LR
comp=Z,2µm,19.0s,MS5.7
POHA Pohakuloa 104.88 69 PFAKE 11 07 50.0 +9.2
POHA LR LR
comp=Z,2µm,20.0s,MS5.6
SFJD Kangerlussuaq 107.68 348 PFAKE 11 12 10.0 +9.4
SFJD LR LR
comp=Z,2µm,21.0s,MS5.7
WRAK Wrangell Islan 109.07 27 PFAKE 11 12 20.0 +16
WRAK LR LR
comp=Z,3µm,19.0s,MS5.8
YKA Yellowknife Ar 111.17 16 Pdif Pdif 11 08 08.9 +0.1
YKA PKPdf PKiKP 11 12 06.3 -1.0
YKA PP PP 11 12 46.0 -0.4
YKA PKKPbc PKKPbc 11 23 04.2 -2.0
YKA Yellowknife Ar 111.17 16 *i* PKIKP PKiKP 11 12 06.3 -1.0
YKA 11 12 46.0
YKA pmax pmax
comp=Z,1.0nm,0.5s
YKA Yellowknife Ar 111.17 16 Pdiff Pdif 11 08 08.9 +0.1
comp=Z,0.2nm,0.5s,baz=328,slow=4.7,SNR=7.5
YKA PKiKP PKiKP 11 12 06.3 -1.0
comp=Z,0.5nm,0.5s,baz=335,slow=0.9,SNR=14
YKA PP PP 11 12 46.0 -0.4
comp=Z,1.7nm,0.6s,baz=332,slow=7.5,SNR=8.7
YKA PKKPbc PKKPbc 11 23 04.2 -2.0
comp=Z,1.0nm,0.9s,baz=147,slow=2.8,SNR=6.0
TBI Tubuai 111.52 114 *e*PP PP 11 12 47.5 -3.2
comp=Z,243nm,28.8s
TBI Tubuai 111.52 114 *e*PS PS 11 22 22.1 -1.6
comp=Z,658nm,32.5s
TBI Tubuai 111.52 114 *e*SS SS 11 28 25.2 +2.6
comp=Z,907nm,31.5s
TBI *e*LR LR 11 45 18.8
comp=Z,3µm,24.5s
PPT Papeete 112.04 108 *e*PP PP 11 12 45.5 -9.1
comp=Z,269nm,27.2s
PPT Papeete 112.04 108 *e*PS PS 11 22 26.0 -2.7
comp=Z,2µm,29.0s
PPT Papeete 112.04 108 *e*LR LR 11 45 31.6
comp=Z,3µm,29.5s
ASCN Ascension 112.33 262 PFAKE 11 12 20.0 +9.1
ASCN LR LR
comp=Z,2µm,22.0s,MS5.6
PMSA Palmer Station 115.97 188 PFAKE 11 12 30.0 +14
PMSA LR LR
comp=Z,4µm,21.0s,MS6.0
A05A Maple Falls 118.60 29 ⇓P PKPdf 11 12 21.5 -0.5
baz=118
NLWA Neilton Lookou 118.78 31 PFAKE 11 12 30.0 +7.7
NLWA LR LR
comp=Z,2µm,20.0s,MS5.7
A06A Chilliwack 118.82 28 ⇓P PKPdf 11 12 21.9 -0.5
baz=119
B05A Bryant 119.09 29 ⇓P PKPdf 11 12 23.0 0.0
baz=119
EDM Edmonton 119.11 21 *e*PKPdf PKPdf 11 12 21.4 -1.4
A07A Ashnola River, 119.37 28 ⇓P PKPdf 11 12 23.5 0.0
baz=119
C05A Tolt Reservoir 119.68 30 ⇓P PKPdf 11 12 23.9 -0.1
baz=120
D05A Enumclaw 119.87 30 ⇑P PKPdf 11 12 24.6 +0.1
baz=120
B07A Winthrop 119.91 28 ⇑P PKPdf 11 12 23.8 -0.6
baz=120
A08A Turner Farm, O 119.95 27 ⇓P PKPdf 11 12 23.8 -0.8
baz=120
FMW Mount Fremont 120.20 30 P PKPdf 11 12 26.0 +0.9
A09A Danville 120.25 27 ⇑P PKPdf 11 12 24.6 -0.5
baz=120
B08A Colville Reser 120.35 28 ⇑P PKPdf 11 12 24.4 -0.9
baz=120
E05A Randle 120.41 31 ⇓P PKPdf 11 12 25.3 -0.2
baz=120
WPW White Pass 120.43 30 P PKPdf 11 12 26.8 +1.2
D06A Cle Elum 120.44 30 ⇑P PKPdf 11 12 25.4 -0.1
baz=120
C07A Waterville 120.48 29 ⇓P PKPdf 11 12 25.2 -0.4
baz=120,SNR=6.2
F04A Amboy 120.49 32 ⇑P PKPdf 11 12 25.4 -0.3
baz=120
A10A Northport 120.71 26 ⇓P PKPdf 11 12 25.5 -0.5
baz=121
E06A Yakima 120.82 30 ⇑P PKPdf 11 12 26.1 -0.2
baz=121
B09A Rice 120.85 27 ⇓P PKPdf 11 12 25.8 -0.5
baz=121,SNR=7.7
D07A Quincy 120.87 29 ⇑P PKPdf 11 12 25.8 -0.6
baz=121
COR Corvallis 120.89 33 PFAKE 11 12 40.0 +14
COR LR LR
comp=Z,1µm,21.0s,MS5.5
C08A Higginbotham F 120.90 28 ⇓P PKPdf 11 12 25.7 -0.7
baz=121
FFC Flin Flon 121.16 13 PFAKE 11 12 40.0 +13
FFC LR LR
comp=Z,2µm,21.0s,MS5.7
C09A Chrisman Ranch 121.25 28 ⇑P PKPdf 11 12 26.9 -0.2
baz=121
A11A Hall Mountain, 121.25 26 ⇓P PKPdf 11 12 26.9 -0.1
baz=121,SNR=7.9
I03A Eugene 121.30 34 ⇓P PKPdf 11 12 27.5 +0.2
baz=121
NEW Newport 121.43 27 *e*PKPdf PKPdf 11 12 27.5 0.0
NEW LR LR
comp=Z,1µm,20.0s,MS5.6
H04A Detroit Lake 121.44 33 ⇑P PKPdf 11 12 27.4 -0.1
baz=121
F06A Goldendale 121.45 31 ⇓P PKPdf 11 12 27.3 -0.2
baz=121
D08A Wollman Farm, 121.47 29 ⇑P PKPdf 11 12 27.1 -0.4
baz=121
J02A Umpqua 121.52 35 ⇑P PKPdf 11 12 27.2 -0.5
baz=121
A12A Yaak River Ran 121.57 25 ⇓P PKPdf 11 12 27.7 0.0
baz=121,SNR=7.7
B11A Sandpoint 121.64 26 ⇓P PKPdf 11 12 28.1 +0.2
baz=122
HAWA Hanford 121.64 30 *e*PKPdf PKPdf 11 12 27.4 -0.4
HAWA LR LR
comp=Z,1µm,20.0s,MS5.6
C10A Spilker Farm, 121.68 27 ⇑P PKPdf 11 12 27.9 0.0
baz=122,SNR=5.0
D09A Jones Farm, Ri 121.76 28 ⇑P PKPdf 11 12 27.8 -0.3
baz=122
F07A Phinny Hill Vi 121.80 30 ⇓P PKPdf 11 12 28.5 +0.3
baz=122
E08A Dider Farm, El 121.81 29 P PKPdf 11 12 28.4 +0.2
baz=122,SNR=10
J03A Ideyld Park 121.86 34 ⇓P PKPdf 11 12 28.4 0.0
baz=122
CROR Criterion Ridg 121.87 32 P PKPdf 11 12 29.8 +1.4
G06A Carlson Farm, 121.89 31 ⇓P PKPdf 11 12 28.0 -0.4
baz=122
I04A Tendick Farm, 121.89 33 ⇑P PKPdf 11 12 28.6 +0.1
baz=122
H05A Madras 121.97 32 ⇑P PKPdf 11 12 28.3 -0.2
baz=122,SNR=8.0
SCHQ Schefferville 122.01 350 PKP PKPdf 11 12 28.6 +0.3
comp=Z,3.8nm,0.5s,baz=35,slow=2.7,SNR=27
A13A Flathead Natio 122.10 25 ⇑P PKPdf 11 12 28.5 -0.2
baz=122
E09A Wood Farm, Sta 122.23 29 ⇑P PKPdf 11 12 28.9 -0.1
baz=122
D10A Wagner Farm, O 122.25 28 P PKPdf 11 12 28.6 -0.4
baz=122,SNR=9.6
I05A Bend 122.27 33 ⇑P PKPdf 11 12 29.0 -0.1
baz=122
G07A Ruggs Ranch, H 122.36 31 ⇓P PKPdf 11 12 28.9 -0.4
baz=122
H06A Lindquist Farm 122.38 31 ⇓P PKPdf 11 12 29.1 -0.3
baz=122
VIPM Ingram Point 122.39 32 P PKPdf 11 12 29.7 +0.4
J04A Umpqua Nationa 122.42 34 ⇓P PKPdf 11 12 29.3 -0.2
baz=122
F08A Pendleton 122.44 30 ⇑P PKPdf 11 12 29.2 -0.2
baz=122
B13A Whitefish 122.51 25 P PKPdf 11 12 29.2 -0.3
baz=122,SNR=15
G08A Pilot Rock 122.70 30 ⇑P PKPdf 11 12 29.3 -0.6
baz=123
E10A Myers Farm, Un 122.75 28 ⇓P PKPdf 11 12 29.5 -0.5
baz=123,SNR=6.1
J05A Fort Rock 122.87 33 ⇓P PKPdf 11 12 30.2 -0.2
baz=123,SNR=7.4
H07A Lands Inn, Kim 122.88 31 ⇓P PKPdf 11 12 30.3 0.0
baz=123,SNR=9.2
F09A S2 Ranch, Elgi 122.93 29 P PKPdf 11 12 30.2 -0.2
baz=123,SNR=8.5
I06A Prineville 122.98 32 ⇓P PKPdf 11 12 30.4 -0.1
baz=123,SNR=5.8
C13A Hot Springs 123.00 26 P PKPdf 11 12 30.0 -0.5
baz=123,SNR=7.0
K04A Chilquin 123.04 34 ⇑P PKPdf 11 12 30.8 +0.1
baz=123
YBH Yreka Blue Hor 123.04 36 PFAKE 11 12 40.0 +9.3
YBH LR LR
comp=Z,895nm,21.0s,MS5.4
YBH Yreka Blue Hor 123.04 36 ⇓P PKPdf 11 12 30.9 +0.2
baz=123
F10A Beach Ranch, E 123.07 29 P PKPdf 11 12 30.5 -0.1
baz=123,SNR=14
D12A Red Ives Fores 123.13 27 ⇓P PKPdf 11 12 30.4 -0.3
baz=123
L04A Klamath Falls 123.23 35 ⇓P PKPdf 11 12 30.5 -0.6
baz=123
N02C Big Bar 123.26 37 ⇑P PKPdf 11 12 30.9 -0.2
baz=123
I07A Izee 123.26 32 ⇓P PKPdf 11 12 30.5 -0.6
baz=123,SNR=7.6
E11A Bogner Ranch, 123.27 28 P PKPdf 11 12 30.0 -1.0
baz=123,SNR=12
C14A Swan Lake 123.28 25 ⇑P PKPdf 11 12 30.9 -0.1
baz=123
H08A Prairie City 123.39 31 ⇑P PKPdf 11 12 30.8 -0.5
baz=123
K05A Summer Lake 123.43 34 ⇓P PKPdf 11 12 31.0 -0.5
baz=123,SNR=7.3
J06A Christmas Vall 123.48 33 ⇑P PKPdf 11 12 30.9 -0.6
baz=123,SNR=8.7
D13A Huson 123.50 26 P PKPdf 11 12 30.4 -1.0
baz=123,SNR=11
M04C Macdoel 123.51 35 ⇑P PKPdf 11 12 31.1 -0.5
baz=123
F11A Grangeville 123.64 28 P PKPdf 11 12 30.8 -0.9
baz=124,SNR=14
M03C McCloud 123.67 36 ⇓P PKPdf 11 12 31.5 -0.5
baz=124,SNR=5.2
K06A Valley Falls 123.73 33 ⇓P PKPdf 11 12 31.7 -0.3
baz=124,SNR=7.5
KIPM Iron Peak 123.77 38 *e*PKPdf PKPdf 11 12 32.3 +0.2
KCPM Cahto Peak 123.78 38 *e*PKPdf PKPdf 11 12 32.9 +0.7
H09A Durkee 123.80 30 ⇓P PKPdf 11 12 32.1 0.0
baz=124
BMO Blue Mountains 123.84 30 PFAKE 11 12 40.0 +7.8
BMO LR LR
comp=Z,1µm,22.0s,MS5.5
J07A Hines 123.85 32 ⇑P PKPdf 11 12 32.0 -0.2
baz=124,SNR=10
WDC Whiskeytown Da 123.86 37 PFAKE 11 12 40.0 +7.7
WDC LR LR
comp=Z,1µm,21.0s,MS5.5
WDC Whiskeytown Da 123.86 37 ⇑P PKPdf 11 12 32.2 -0.1
baz=124
I08A Drewsey 123.87 31 ⇑P PKPdf 11 12 31.9 -0.3
baz=124,SNR=10
L05A Lakeview 123.91 34 ⇓P PKPdf 11 12 32.7 +0.3
baz=124,SNR=5.6
D14A Greenough 123.92 25 ⇑P PKPdf 11 12 31.6 -0.6
baz=124,SNR=11
MSO Missoula 123.93 26 *e*PKPdf PKPdf 11 12 31.3 -1.0
MSO LR LR
comp=Z,2µm,20.0s,MS5.7
G11A Walters Elk Ra 123.94 28 ⇓P PKPdf 11 12 32.2 -0.1
baz=124
O02C Red Bluff 123.97 37 ⇓P PKPdf 11 12 32.2 -0.4
baz=124
P01C Double 8 Ranch 124.06 38 ⇑P PKPdf 11 12 32.4 -0.4
baz=124
LTIM Timbered Crate 124.10 35 P PKPdf 11 12 32.9 +0.2
E13A Victor 124.12 26 P PKPdf 11 12 32.0 -0.6
baz=124,SNR=26
F12A Elk City 124.16 28 ⇓P PKPdf 11 12 32.1 -0.7
baz=124
M05C Lookout 124.18 35 ⇑P PKPdf 11 12 32.7 -0.2
baz=124,SNR=6.8
I09A Lost Marbles R 124.25 31 ⇑P PKPdf 11 12 32.4 -0.6
baz=124
J08A Circle Bar Ran 124.30 32 ⇑P PKPdf 11 12 33.2 +0.1
baz=124,SNR=17
MOD Modoc 124.30 34 *e*PKPdf PKPdf 11 12 33.3 +0.2
MOD LR LR
comp=Z,1µm,21.0s,MS5.5
MOD Modoc 124.30 34 ⇓P PKPdf 11 12 33.0 -0.1
baz=124,SNR=18
H10A Noah's Angus R 124.31 29 P PKPdf 11 12 32.5 -0.6
baz=124,SNR=8.0
GASB Alder Springs 124.33 38 ⇑P PKPdf 11 12 33.4 +0.1
baz=124,SNR=8.8
HATC Hat Creek Radi 124.35 36 ⇓P PKPdf 11 12 32.9 -0.4
baz=124
K07A Rock Creek Ran 124.35 33 ⇓P PKPdf 11 12 32.7 -0.5
baz=124,SNR=16
D15A Lincoln 124.37 25 P PKPdf 11 12 32.8 -0.4
baz=124,SNR=13
LBCM Butte Creek Ri 124.40 36 P PKPdf 11 12 33.5 +0.1
E14A Clinton 124.44 26 P PKPdf 11 12 32.9 -0.4
baz=124,SNR=17
HOPS Hopland 124.52 38 PFAKE 11 12 50.0 +16
HOPS LR LR
comp=Z,1µm,20.0s,MS5.5
HOPS Hopland 124.52 38 ⇓P PKPdf 11 12 33.3 -0.3
baz=124
O03C Acorn Hollow, 124.53 37 ⇓P PKPdf 11 12 33.1 -0.5
baz=124
F13A Darby 124.55 27 P PKPdf 11 12 33.0 -0.5
baz=124,SNR=8.3
H11A Donnelly 124.58 29 P PKPdf 11 12 33.5 -0.1
baz=124,SNR=9.8
I10A Payette 124.64 30 ⇑P PKPdf 11 12 33.7 -0.1
baz=124,SNR=5.7
RKT Rikitea 124.64 117 *e*PP PP 11 14 17.9 -3.7
comp=Z,229nm,28.8s
RKT Rikitea 124.64 117 *e*PS PS 11 24 19.9 -2.2
RKT Rikitea 124.64 117 *e*SS SS 11 31 13.7 +1.1
comp=Z,966nm,29.8s
RKT *e*LR LR 11 51 12.7
comp=Z,1µm,28.0s
M06C Likely Place G 124.67 35 ⇑P PKPdf 11 12 33.3 -0.5
baz=124
EGMT Eagleton 124.68 22 *e*PKPdf PKPdf 11 12 33.1 -0.6
EGMT LR LR
comp=Z,2µm,22.0s,MS5.6
EGMT Eagleton 124.68 22 P PKPdf 11 12 33.5 -0.2
baz=124,SNR=15
J09A Fry Pan Ranch, 124.69 31 ⇑P PKPdf 11 12 33.5 -0.3
baz=125,SNR=11
K08A Mann Creek Ran 124.73 32 ⇑P PKPdf 11 12 33.7 -0.2
baz=125,SNR=12
L07A Adell 124.76 33 ⇓P PKPdf 11 12 33.9 -0.1
baz=125,SNR=9.3
E15A Deer Lodge 124.81 25 ⇑P PKPdf 11 12 33.4 -0.5
baz=125
WVOR Wild Horse Val 124.86 32 *e*PKPdf PKPdf 11 12 34.7 +0.5
WVOR LR LR
comp=Z,1µm,19.0s,MS5.5
O04C Chester 124.89 36 ⇓P PKPdf 11 12 33.9 -0.4
baz=125,SNR=11
ELFS Eagle Lake Fie 124.90 35 ⇑P PKPdf 11 12 34.5 +0.1
baz=125
F14A Wisdom 124.97 26 ⇑P PKPdf 11 12 34.3 0.0
baz=125,SNR=11
MNRC McLaughlin Nat 124.97 38 ⇓P PKPdf 11 12 34.3 -0.2
baz=125,SNR=11
NSHM Saint Helena R 125.09 39 *e*PKPdf PKPdf 11 12 35.1 +0.3
ORV Oroville 125.13 37 P PKPdf 11 12 34.5 -0.3
baz=125,SNR=5.8
G13A Cobalt 125.13 27 ⇓P PKPdf 11 12 34.3 -0.3
baz=125
J10A Berg Farm, Mel 125.13 30 ⇓P PKPdf 11 12 34.7 +0.1
baz=125
MCCM Marconi Confer 125.15 39 PFAKE 11 12 50.0 +15
MCCM LR LR
comp=Z,681nm,21.0s,MS5.3
MCCM Marconi Confer 125.15 39 ⇑P PKPdf 11 12 34.3 -0.6
baz=125
K09A Rome 125.16 32 ⇑P PKPdf 11 12 34.9 +0.2
baz=125,SNR=20
SUTB Sutter Butte 125.16 37 ⇑P PKPdf 11 12 34.8 0.0
baz=125
L08A Fields 125.18 33 ⇑P PKPdf 11 12 35.1 +0.3
baz=125,SNR=18
O05C Quincy 125.22 36 ⇑P PKPdf 11 12 34.7 -0.3
baz=125,SNR=6.1
H12A Diamond D Ranc 125.25 28 P PKPdf 11 12 34.7 -0.2
baz=125,SNR=12
OHCM Honcut 125.28 37 *e*PKPdf PKPdf 11 12 34.6 -0.5
M07A Soldier Meadow 125.28 34 ⇓P PKPdf 11 12 34.8 -0.3
baz=125,SNR=13
CVS Carmenet Viney 125.29 39 ⇓P PKPdf 11 12 34.6 -0.6
baz=125,SNR=13
F15A Butte 125.33 26 ⇑P PKPdf 11 12 34.9 0.0
baz=125
N06A Buffalo Meadow 125.33 35 P PKPdf 11 12 35.3 +0.2
baz=125,SNR=20
FARB Farallon Islan 125.34 40 ⇓P PKPdf 11 12 34.9 -0.3
baz=125
G14A Jackson 125.36 27 P PKPdf 11 12 35.1 +0.1
baz=125,SNR=37
H13A Challis 125.52 28 P PKPdf 11 12 35.4 0.0
baz=125,SNR=20
K10A MacKenzie Ranc 125.55 31 ⇑P PKPdf 11 12 35.5 0.0
baz=125,SNR=13
MFID Camas Ranch 125.61 30 P PKPdf 11 12 36.0 +0.5
baz=126,SNR=13
DLMT Dillon 125.66 26 *e*PKPdf PKPdf 11 12 35.7 0.0
L09A Wilkinson Ranc 125.66 32 ⇑P PKPdf 11 12 36.1 +0.4
baz=126,SNR=17
M08A Happy Creek Ra 125.67 33 ⇑P PKPdf 11 12 35.9 +0.1
baz=126,SNR=12
O06A Flanigan 125.72 35 P PKPdf 11 12 36.4 +0.4
baz=126,SNR=16
N07B Gerlach 125.80 34 ⇑P PKPdf 11 12 36.2 +0.1
baz=126,SNR=14
P05C Yuba Gap, Truc 125.82 37 P PKPdf 11 12 36.4 +0.3
baz=126,SNR=7.8
BOZ Bozeman (W) 125.85 25 *e*PKPdf PKPdf 11 12 35.8 -0.2
BOZ LR LR
comp=Z,1µm,20.0s,MS5.6
BOZ Bozeman (W) 125.85 25 P PKPdf 11 12 36.2 +0.2
baz=126,SNR=19
G15A Dillon 125.86 26 P PKPdf 11 12 36.5 +0.4
baz=126,SNR=15
BDM Black Diamond 125.90 39 ⇑P PKPdf 11 12 36.5 +0.2
baz=126
K11A Parker Ranch, 125.98 31 ⇑P PKPdf 11 12 36.5 +0.2
baz=126
P06A Stead Airport, 126.00 36 ⇑P PKPdf 11 12 36.4 0.0
baz=126
JRSC Jasper Ridge 126.00 39 ⇓P PKPdf 11 12 36.6 0.0
baz=126
I13A Wildhorse Cree 126.07 28 ⇓P PKPdf 11 12 36.6 +0.2
baz=126
LAVA Lava Cap Winer 126.09 37 P PKPdf 11 12 36.8 +0.1
baz=126,SNR=13
J12A Stokes Ranch, 126.10 30 ⇑P PKPdf 11 12 36.7 +0.2
baz=126,SNR=11
WENL Wente Brothers 126.17 39 ⇓P PKPdf 11 12 37.0 +0.2
baz=126
M09A Marrel Ranch, 126.19 33 ⇓P PKPdf 11 12 37.3 +0.5
baz=126,SNR=7.5
HLID Hailey 126.20 29 *e*PKPdf PKPdf 11 12 37.0 +0.3
HLID *e*PP PP 11 14 32.4 +1.8
HLID LR LR
comp=Z,1µm,20.0s,MS5.5
HLID Hailey 126.20 29 ⇑P PKPdf 11 12 37.1 +0.4
baz=126,SNR=16
BNLO Ben Lomond (Sa 126.20 40 ⇑P PKPdf 11 12 37.1 +0.2
baz=126
DGMT Dagmar 126.22 18 *e*PKPdf PKPdf 11 12 36.4 -0.2
DGMT LR LR
comp=Z,1µm,19.0s,MS5.7
L10A Juniper Basin 126.25 31 ⇓P PKPdf 11 12 37.5 +0.7
baz=126,SNR=16
N08A GE Springer Mi 126.27 34 ⇓P PKPdf 11 12 37.2 +0.2
baz=126,SNR=16
O07A Toulon 126.27 35 ⇓P PKPdf 11 12 37.2 +0.2
baz=126,SNR=12
R04C Big Horse Ranc 126.28 38 ⇑P PKPdf 11 12 37.4 +0.3
baz=126
WCN Washoe City 126.33 36 ⇓P PKPdf 11 12 37.3 +0.2
baz=126,SNR=12
J13A Cove Ranch, Pi 126.44 29 P PKPdf 11 12 37.7 +0.5
baz=126,SNR=25
S04C Ingram Canyon, 126.51 39 ⇑P PKPdf 11 12 37.8 +0.3
baz=126,SNR=7.3
EFI East Falkland 126.52 198 PFAKE 11 12 50.0 +13
EFI LR LR
comp=Z,2µm,19.0s,MS5.8
R05C Kirkwood Meado 126.52 37 ⇓P PKPdf 11 12 37.9 +0.5
baz=126,SNR=15
N09A Rock Creek Ran 126.55 33 ⇑P PKPdf 11 12 38.1 +0.6
baz=126,SNR=8.1
M10A I.L. Ranch, Tu 126.61 32 ⇓P PKPdf 11 12 38.1 +0.5
baz=126,SNR=6.2
K12A Draper Farm, C 126.65 30 ⇑P PKPdf 11 12 38.1 +0.5
baz=126,SNR=5.7
ULM Lac du Bonnet 126.66 11 PKP PKPdf 11 12 36.1 -1.2
ULM LR LR
comp=Z,857nm,19.0s,MS5.4
ULM Lac du Bonnet 126.66 11 PKP PKPdf 11 12 36.1 -1.2
comp=Z,7.9nm,0.4s,baz=350,slow=2.1,SNR=47
CMB Columbia Colle 126.76 38 *e*PKPdf PKPdf 11 12 37.9 -0.1
CMB LR LR
comp=Z,797nm,20.0s,MS5.4
CMB Columbia Colle 126.76 38 P PKPdf 11 12 38.5 +0.5
baz=127,SNR=6.8
PACP Pacheco Peak 126.84 39 ⇓P PKPdf 11 12 38.7 +0.5
baz=127,SNR=10
SAO San Andreas Ge 126.89 40 PFAKE 11 12 50.0 +12

SAO LR LR
comp=Z,767nm,19.0s,MS5.4
YMR Madison River 126.92 26 *e*PKPdf PKPdf 11 12 38.7 +0.6
YMR LR LR
comp=Z,2µm,20.0s,MS5.7
L12A House Creek Ra 126.95 30 P PKPdf 11 12 39.2 +1.0
baz=127,SNR=10
YNR Norris Junctio 127.00 25 *e*PKPdf PKPdf 11 12 39.9 +1.7
BMN Battle Mountai 127.01 33 PFAKE 11 12 50.0 +12
BMN LR LR
comp=Z,866nm,20.0s,MS5.4
R06C Coleville 127.01 37 ⇑P PKPdf 11 12 38.7 +0.3
baz=127,SNR=13
K13A Stover Farm, H 127.04 29 ⇑P PKPdf 11 12 38.7 +0.4
baz=127,SNR=8.6
HAST UC Hastings Re 127.05 40 ⇑P PKPdf 11 12 38.7 +0.1
baz=127,SNR=7.5
M11A Holland Ranch, 127.07 32 ⇓P PKPdf 11 12 38.8 +0.4
baz=127,SNR=14
LAO LASA Array 127.10 21 *e*PKPdf PKPdf 11 12 38.7 +0.4
LAO LR LR
comp=Z,2µm,21.0s,MS5.8
YFT Old Faithful 127.14 26 *e*PKPdf PKPdf 11 12 40.8 +2.3
S06C San Francisco 127.19 37 P PKPdf 11 12 39.3 +0.5
baz=127,SNR=19
O09A Fish Creek Ran 127.21 34 ⇓P PKPdf 11 12 39.4 +0.6
baz=127,SNR=7.6
S05C Merced 127.23 38 ⇑P PKPdf 11 12 39.3 +0.4
baz=127
LKWY Lake 127.24 25 *e*PKPdf PKPdf 11 12 40.8 +2.2
LKWY LR LR
comp=Z,2µm,21.0s,MS5.8
RLMT Red Lodge 127.26 24 PFAKE 11 12 50.0 +11
RLMT LR LR
comp=Z,2µm,20.0s,MS5.7
O10A Cortez Mining, 127.50 33 ⇓P PKPdf 11 12 39.5 +0.2
baz=127
L13A Double Diamond 127.53 30 ⇑P PKPdf 11 12 40.1 +0.8
baz=127,SNR=10
M12A Wells 127.53 31 ⇓P PKPdf 11 12 40.0 +0.6
baz=127,SNR=26
R07C Lee Vining 127.54 37 ⇑P PKPdf 11 12 39.9 +0.4
baz=127,SNR=10
N11A Elko Archery C 127.54 32 ⇓P PKPdf 11 12 40.0 +0.6
baz=127,SNR=7.3
U04C Hernandez Rese 127.56 40 ⇑P PKPdf 11 12 39.9 +0.4
baz=128,SNR=6.2
K14A Jones Ranch, D 127.56 29 P PKPdf 11 12 40.0 +0.7
baz=127,SNR=16
P09A Austin 127.66 34 ⇑P PKPdf 11 12 40.1 +0.4
baz=128,SNR=5.5
Q08A Gabbs 127.68 35 P PKPdf 11 12 40.3 +0.6
baz=128,SNR=12
NVAR Mina Array Bea 127.75 36 PKP PKPdf 11 12 39.7 -0.1
comp=Z,4.1nm,0.5s,baz=317,slow=0.9,SNR=32
T06C Milleton Lake 127.83 38 P PKPdf 11 12 40.4 +0.3
baz=128,SNR=16
ELK Elko 127.85 32 *e*PKPdf PKPdf 11 12 40.9 +0.9
ELK LR LR
comp=Z,935nm,21.0s,MS5.5
TPAW Teton Pass 127.86 26 *e*PKPdf PKPdf 11 12 40.6 +0.7
KCC Kaiser Creek 127.87 38 ⇑P PKPdf 11 12 40.4 +0.3
baz=128
N12A Clover Valley, 127.88 32 ⇓P PKPdf 11 12 40.3 +0.3
baz=128,SNR=23
LOHW Long Hollow 127.91 26 *e*PKPdf PKPdf 11 12 40.2 +0.2
LOHW *e*PP PP 11 14 43.1 +1.2
R08A Mina 127.92 36 ⇓P PKPdf 11 12 40.6 +0.4
baz=128
V04C Ramage Ranch, 127.94 40 ⇑P PKPdf 11 12 40.8 +0.5
baz=128
M13A Montello 127.96 30 P PKPdf 11 12 41.0 +0.9
baz=128,SNR=28
MLAC Mammoth Lakes 127.96 37 ⇓P PKPdf 11 12 40.7 +0.4
baz=128
PKD Parkfield 127.97 40 ⇓P PKPdf 11 12 40.7 +0.4
baz=128,SNR=8.3
P10A Eureka 127.99 34 ⇓P PKPdf 11 12 41.0 +0.7
baz=128,SNR=7.4
U05C Westside ANR, 127.99 39 ⇑P PKPdf 11 12 40.7 +0.4
baz=128
REDW Red Top Meadow 128.00 26 *e*PKPdf PKPdf 11 12 40.8 +0.6
O11A Cowboy Ranch, 128.07 33 ⇓P PKPdf 11 12 40.8 +0.4
baz=128,SNR=13
Q09A Carvers 128.13 35 ⇑P PKPdf 11 12 41.0 +0.4
baz=128
M14A Sheep Mountain 128.26 30 ⇑P PKPdf 11 12 41.2 +0.5
baz=128,SNR=19
MTUM Tungsten Hills 128.31 37 *e*PKPdf PKPdf 11 12 41.8 +0.8
N13A Wendover, West 128.31 31 ⇑P PKPdf 11 12 41.4 +0.6
baz=128,SNR=5.3
HVU Hansel Valley 128.34 29 *e*PKPdf PKPdf 11 12 41.2 +0.4
PTRM Twissleman Ran 128.36 40 *e*PKPdf PKPdf 11 12 42.2 +1.1
AHID Auburn Hatcher 128.36 27 PFAKE 11 12 50.0 +9.1
AHID LR LR
comp=Z,2µm,19.0s,MS5.7
P11A Circle Ranch, 128.43 33 ⇑P PKPdf 11 12 41.7 +0.6
baz=128
S08C White Mtn Res 128.45 37 ⇑P PKPdf 11 12 41.6 +0.4
baz=128,SNR=16
O12A Currie 128.46 32 ⇑P PKPdf 11 12 41.6 +0.4
baz=128,SNR=21
HELL Mitchell Peak, 128.46 38 ⇑P PKPdf 11 12 41.4 +0.1
baz=128,SNR=15
AGMN Agassiz Refuge 128.53 12 *e*PKPdf PKPdf 11 12 39.9 -1.1
AGMN LR LR
comp=Z,2µm,21.0s,MS5.8
RCTC Rector, Farmer 128.56 39 ⇓P PKPdf 11 12 41.8 +0.4
baz=126
Q10A Clear Creek Ra 128.58 34 ⇓P PKPdf 11 12 41.8 +0.4
baz=128,SNR=11
R09A Tonopah 128.60 35 ⇓P PKPdf 11 12 41.7 +0.3
baz=128,SNR=9.1
TPH Tonopah 128.62 36 PFAKE 11 12 50.0 +8.5
TPH LR LR
comp=Z,916nm,21.0s,MS5.4
SMMC Simmler 128.71 40 ⇑P PKPdf 11 12 42.1 +0.3
baz=129,SNR=6.9
M15A Larsen Ranch, 128.74 29 ⇓P PKPdf 11 12 41.8 +0.2
baz=129,SNR=7.9
N14A Grayback Hills 128.83 30 P PKPdf 11 12 42.4 +0.5
baz=129,SNR=31
BGU Big Grassy Mou 128.85 30 *e*PKPdf PKPdf 11 12 42.6 +0.7
S09A Goldfield 128.86 36 ⇑P PKPdf 11 12 42.2 +0.2
baz=129,SNR=13
P12A McGill 128.94 33 ⇓P PKPdf 11 12 42.4 +0.3
baz=129,SNR=14
O13A Hicks Ranch, I 128.96 31 ⇓P PKPdf 11 12 42.9 +0.8
baz=129,SNR=12
Q11A Duckwater 128.98 34 P PKPdf 11 12 42.9 +0.7
baz=129,SNR=19
R10A Warm Springs 129.00 35 ⇓P PKPdf 11 12 42.5 +0.3
baz=129,SNR=8.0
BW06 Boulder Array 129.05 26 PFAKE 11 12 50.0 +7.8
BW06 LR LR
comp=Z,1µm,20.0s,MS5.6
HWUT Hardware Ranch 129.05 28 *e*PKPdf PKPdf 11 12 41.9 -0.3
HWUT LR LR
comp=Z,1µm,20.0s,MS5.6
PDAR Pinedale Array 129.05 26 PKhKP 11 12 37.6
comp=Z,3.4nm,1.0s,baz=145,slow=3.3,SNR=5.7
PDAR PKP PKPdf 11 12 41.6 -0.5
comp=Z,2.6nm,0.8s,baz=127,slow=4.0,SNR=5.8
PKM Peak Mountain 129.08 40 ⇓P PKPdf 11 12 42.9 +0.5
baz=129,SNR=7.3
S10A Tonopah Range, 129.09 35 P PKPdf 11 12 43.3 +0.9
baz=129,SNR=22
N15A Stansbury Isla 129.13 30 ⇑P PKPdf 11 12 42.7 +0.3
baz=129,SNR=16
CWC Cottonwood Cre 129.19 38 P PKPdf 11 12 42.7 0.0
baz=129,SNR=11
GRAC Grapevine Rang 129.25 37 ⇑P PKPdf 11 12 43.0 +0.2
baz=129
Q12A Willow Creek R 129.30 33 ⇓P PKPdf 11 12 43.4 +0.7
baz=129,SNR=7.6
TRCR Troy Canyon 129.37 34 *e*PKPdf PKPdf 11 12 44.1 +1.1
R11A Troy Canyon, C 129.37 34 P PKPdf 11 12 43.6 +0.7
baz=129,SNR=53
ISA Isabella 129.45 39 P PKPdf 11 12 43.9 +0.7
baz=129,SNR=7.6
DUG Dugway 129.51 30 *e*PKPdf PKPdf 11 12 44.1 +1.0
DUG LR LR
comp=Z,769nm,20.0s,MS5.4
DUG Dugway 129.51 30 ⇓P PKPdf 11 12 43.7 +0.5
baz=129,SNR=28
NOQ North Oquirrh 129.51 30 *e*PKPdf PKPdf 11 12 43.6 +0.5
ARVC Arvin 129.57 40 ⇓P PKPdf 11 12 43.7 +0.3
baz=130
DAC Darwin (Calif) 129.60 38 *e*PKPdf PKPdf 11 12 44.5 +1.0
DAC LR LR
comp=Z,847nm,20.0s,MS5.4
EYMN Ely 129.62 8 *e*PKPdf PKPdf 11 12 43.5 +0.4
EYMN LR LR
comp=Z,3µm,22.0s,MS6.0
S11A Rachel 129.77 35 ⇓P PKPdf 11 12 44.6 +0.9
baz=130,SNR=12
MPMC Manual Prospec 129.80 38 ⇓P PKPdf 11 12 44.6 +0.7
baz=130,SNR=19
FURC Furnace Creek, 129.91 37 ⇑P PKPdf 11 12 44.5 +0.5
baz=130,SNR=10
R12A Pony Springs, 129.93 33 ⇑P PKPdf 11 12 44.5 +0.5
baz=130,SNR=7.2
TPNV Topopah Spring 129.95 36 *e*PKPdf PKPdf 11 12 44.4 +0.3
TPNV LR LR
comp=Z,1µm,22.0s,MS5.5
TPNV Topopah Spring 129.95 36 ⇓P PKPdf 11 12 44.4 +0.3
baz=130,SNR=8.0
BLG Laguna Peak 130.05 41 ⇑P PKPdf 11 12 45.4 +1.1
baz=130
LRMC Laurel Mountai 130.06 38 ⇑P PKPdf 11 12 45.0 +0.7
baz=130
NLU North Lily Min 130.06 30 *e*PKPdf PKPdf 11 12 45.2 +1.0
RSSD Black Hills 130.09 21 PFAKE 11 13 00.0 +16
RSSD LR LR
comp=Z,742nm,19.0s,MS5.4
DAU Daniels Canyon 130.12 29 *e*PKPdf PKPdf 11 12 45.0 +0.7
MPU Maple Canyon 130.24 30 *e*PKPdf PKPdf 11 12 45.2 +0.7
MPU LR LR
comp=Z,2µm,22.0s,MS5.8
EDW2 Edwards Air Fo 130.26 39 ⇑P PKPdf 11 12 45.4 +0.7
baz=130,SNR=12
U10A Ash Meadows, A 130.26 36 ⇑P PKPdf 11 12 45.5 +0.9
baz=130,SNR=12
S12A Delamar Landin 130.30 34 ⇑P PKPdf 11 12 45.6 +0.9
baz=130,SNR=13
T11A Corn Creek, Al 130.35 35 ⇑P PKPdf 11 12 45.7 +0.9
baz=130,SNR=26
SHOC Shoshone 130.64 37 ⇓P PKPdf 11 12 46.1 +0.7
baz=130,SNR=10
GSC Goldstone 130.72 38 ⇓P PKPdf 11 12 46.3 +0.7
baz=131,SNR=12
U11A Corn Creek 130.82 36 ⇑P PKPdf 11 12 46.8 +1.1
baz=131
S13A Holt Ranch, En 130.87 34 P PKPdf 11 12 46.9 +1.0
baz=131,SNR=26
BFSC Mount Baldy St 130.88 40 ⇓P PKPdf 11 12 46.7 +0.8
baz=131,SNR=5.2
RRX Edison Barstow 130.88 38 ⇓P PKPdf 11 12 46.9 +1.0
baz=131
CIS Catalina Islan 130.92 41 ⇓P PKPdf 11 12 47.1 +1.0
baz=131
RWWY Rawlins 130.94 25 *e*PKPdf PKPdf 11 12 46.2 +0.4
T12A Moapa 131.00 35 ⇑P PKPdf 11 12 47.2 +1.1
baz=131
MVU Marysvale 131.08 31 PFAKE 11 13 00.0 +14
MVU LR LR
comp=Z,797nm,19.0s,MS5.4
MSU Marysvale 131.09 31 *e*PKPdf PKPdf 11 12 48.0 +1.8
MSU *e*PP PP 11 15 05.0 +2.2
MSU *e*SKPbc SKPbc 11 16 07.5 +0.5
MSU Marysvale 131.09 31 *e*PKIKP PKPdf 11 12 48.0 +1.8
MSU *e* 11 15 05.0
S14A Cedar City 131.12 33 ⇑P PKPdf 11 12 47.4 +1.1
baz=131,SNR=14
TUQ Turquoise Mtn. 131.17 37 ⇑P PKPdf 11 12 47.2 +0.8
baz=131,SNR=6.9
V11A Goodsprings 131.19 36 ⇑P PKPdf 11 12 47.3 +0.8
baz=131
T13A Saint George 131.25 34 ⇓P PKPdf 11 12 47.4 +0.8
baz=131,SNR=7.5
U12A Valley of Fire 131.30 35 ⇑P PKPdf 11 12 47.9 +1.2
baz=131
HEC Hector,Ludlow 131.32 38 ⇑P PKPdf 11 12 47.9 +1.2
baz=131
BBRC Big Bear Sol-O 131.33 39 ⇑P PKPdf 11 12 47.4 +0.7
baz=131,SNR=6.9
MURC Murrieta 131.58 40 ⇓P PKPdf 11 12 48.0 +0.8
baz=132,SNR=6.0
V12A Nelson 131.61 36 ⇓P PKPdf 11 12 47.9 +0.7
baz=132,SNR=19
PKME Peaks-Kenny Pk 131.62 348 PFAKE 11 13 00.0 +13
PKME LR LR
comp=Z,2µm,19.0s,MS5.8
U13A Pakoon Wash 131.64 35 ⇓P PKPdf 11 12 48.0 +0.7
baz=132,SNR=5.3
T14A Hurricane 131.68 33 ⇓P PKPdf 11 12 48.4 +1.1
baz=132,SNR=14
COWI Conover 131.74 7 PFAKE 11 13 00.0 +13
COWI LR LR
comp=Z,2µm,21.0s,MS5.7
GMRC Granite Mounta 131.77 38 ⇓P PKPdf 11 12 48.4 +0.8
baz=132,SNR=12
PFO Pinyon Flat Ob 132.05 39 *e*PKPdf PKPdf 11 12 48.8 +0.7
PFO *e*SKPbc SKPbc 11 16 11.0 +0.4
PFO *e*SKPdf SKPdf 11 16 22.5 +2.9
PFO LR LR
comp=Z,865nm,21.0s,MS5.4
PFO Pinyon Flat Ob 132.05 39 SKP 11 16 11.0
comp=Z,1.2nm,0.3s,baz=304,slow=3.6,SNR=6.8
PFO Pinyon Flat Ob 132.05 39 ⇓P PKPdf 11 12 48.6 +0.5
baz=132,SNR=5.6
BELC Belle Mtn. 132.08 39 ⇑P PKPdf 11 12 49.2 +1.0
baz=132,SNR=7.4
U14A Mt Trumbull 132.09 34 ⇑P PKPdf 11 12 48.7 +0.5
baz=132,SNR=14
109C Camp Elliot, M 132.09 41 ⇓P PKPdf 11 12 49.3 +1.0
baz=132
T15A Red Dirt Ranch 132.09 33 ⇑P PKPdf 11 12 48.9 +0.8
baz=132
IRM Iron Mountain 132.50 38 ⇓P PKPdf 11 12 49.4 +0.4
baz=132,SNR=12
MONP Monument Peak 132.53 40 ⇓P PKPdf 11 12 49.4 +0.3
baz=132,SNR=8.3
W13A Hualapai Mount 132.61 36 ⇑P PKPdf 11 12 49.5 +0.4
baz=132,SNR=9.1
BC3 Big Chuckw Mtn 132.65 39 ⇑P PKPdf 11 12 49.9 +0.6
baz=132,SNR=9.2
ECSD EROS,Sioux Fal 132.68 14 *e*PKPdf PKPdf 11 12 49.2 +0.2
ECSD *e*PP PP 11 15 11.1 -1.4
ECSD LR LR
comp=Z,2µm,21.0s,MS5.8
PV10 Paradox Valley 132.78 29 *e*PKPdf PKPdf 11 12 51.3 +1.9
PV10 *e*PP PP 11 15 17.5 +3.9
SWSC Sam W. Stewart 132.90 40 ⇑P PKPdf 11 12 50.1 +0.3
baz=133,SNR=7.4
X13A Yucca 133.00 36 ⇑P PKPdf 11 12 50.3 +0.4
baz=133,SNR=12
W14A Seligman 133.00 35 ⇑P PKPdf 11 12 50.5 +0.6
baz=133,SNR=16
PDMCI Parker Dam,Lak 133.01 37 ⇑P PKPdf 11 12 50.4 +0.5
baz=133
LBNH Lisbon 133.11 350 PFAKE 11 13 00.0 +10
LBNH LR LR
comp=Z,2µm,19.0s,MS5.8
LONY Lake Ozonia 133.14 353 PFAKE 11 13 00.0 +10
LONY LR LR
comp=Z,2µm,21.0s,MS5.7
Y12C Blythe 133.16 38 ⇓P PKPdf 11 12 51.4 +1.1
baz=133
ISCO Idaho Springs 133.18 25 PFAKE 11 13 00.0 +10
ISCO LR LR
comp=Z,1µm,20.0s,MS5.6
PV01 Paradox Valley 133.20 29 *e*PKPdf PKPdf 11 12 50.6 +0.4
PV01 *e*PP PP 11 15 20.4 +4.2
PV01 *e*SKPdf SKPdf 11 16 24.2 +2.6
GLMI Grayling 133.37 2 PFAKE 11 13 00.0 +10
GLMI LR LR
comp=Z,2µm,20.0s,MS5.8
GLA Glamis 133.44 39 ⇓P PKPdf 11 12 51.4 +0.6
baz=133,SNR=10
W15A Williams 133.49 35 ⇓P PKPdf 11 12 51.4 +0.6
baz=133
Y13A Salome 133.54 37 ⇑P PKPdf 11 12 51.4 +0.5
baz=133,SNR=6.5
X14A Yava 133.64 36 ⇓P PKPdf 11 12 51.6 +0.5
baz=134,SNR=5.5
NCB Newcomb 133.73 352 PFAKE 11 13 00.0 +9.0
NCB LR LR
comp=Z,2µm,20.0s,MS5.7
WUAZ Wupatki 133.74 34 *e*PKPdf PKPdf 11 12 52.4 +1.1
WUAZ LR LR
comp=Z,754nm,20.0s,MS5.4
WUAZ Wupatki 133.74 34 ⇓P PKPdf 11 12 52.0 +0.7
baz=134
RCBR Riachuelo 133.77 264 PFAKE 11 13 00.0 +8.1
RCBR LR LR
comp=Z,1µm,19.0s,MS5.6
Y14A Wickenburg 133.94 36 ⇓P PKPdf 11 12 52.3 +0.6
baz=134,SNR=6.9
MVCO Mesa Verde 133.96 30 *e*PKPdf PKPdf 11 12 52.3 +0.7
MVCO LR LR
comp=Z,1µm,19.0s,MS5.7
MVCO Mesa Verde 133.96 30 ⇓P PKPdf 11 12 52.5 +0.9
baz=134,SNR=7.7
X15A Humboldt 134.00 35 ⇓P PKPdf 11 12 52.5 +0.7
baz=134,SNR=5.1
Z14A Wintersburg 134.38 37 ⇑P PKPdf 11 12 54.2 +1.6
baz=134
HRV Harvard--Oak R 134.72 349 PFAKE 11 13 00.0 +7.1
HRV LR LR
comp=Z,2µm,20.0s,MS5.7
JFWS Jewell Farm 134.73 8 *e*PKPdf PKPdf 11 12 53.3 +0.4
JFWS LR LR
comp=Z,2µm,22.0s,MS5.8
WES Weston 134.80 349 PFAKE 11 13 00.0 +6.9
WES LR LR
comp=Z,2µm,22.0s,MS5.7
SDCO Great Sand Dun 134.94 26 PFAKE 11 13 10.0 +17
SDCO LR LR
comp=Z,2µm,20.0s,MS5.8
115A Sonoran Desert 135.27 37 ⇑P PKPdf 11 12 55.7 +1.5
baz=135
116A Eloy 135.68 37 ⇑P PKPdf 11 12 56.5 +1.4
baz=136
BINY Binghamton 135.70 354 *e*PKPdf PKPdf 11 12 55.7 +1.0
BINY LR LR
comp=Z,2µm,21.0s,MS5.7
AAM Ann Arbor 135.92 2 PFAKE 11 13 10.0 +15
AAM LR LR
comp=Z,2µm,21.0s,MS5.8
ERPA Erie 136.08 358 PFAKE 11 13 10.0 +15
ERPA LR LR
comp=Z,2µm,20.0s,MS5.8
CBKS Cedar Bluff 136.29 20 PFAKE 11 13 10.0 +14
CBKS LR LR
comp=Z,2µm,19.0s,MS5.8
TUC Tucson 136.41 36 *e*PKPdf PKPdf 11 12 57.2 +0.9
TUC *e*PP PP 11 15 42.3 +5.5
TUC *e*SKPbc SKPbc 11 16 23.6 -1.4
TUC LR LR
comp=Z,731nm,22.0s,MS5.4
TUC Tucson 136.41 36 *e*PKIKP PKPdf 11 12 57.3 +0.9
TUC *e* 11 15 42.3
TUC MLR MLR
comp=Z,731nm,22.0s,MS5.4
ANMO Albuquerque 136.75 30 PFAKE 11 13 10.0 +13
ANMO LR LR
comp=Z,1µm,19.0s,MS5.6
LAZ Ladron 136.85 31 *e*PKPdf PKPdf 11 12 57.9 +0.7
LAZ *e*PP PP 11 15 42.0 +2.7
KSU1 Kansas State U 137.01 17 *e*PKPdf PKPdf 11 12 57.6 +0.4
KSU1 LR LR
comp=Z,2µm,21.0s,MS5.8
LPM Los Pinos Moun 137.18 30 *e*PKPdf PKPdf 11 12 58.8 +1.1
LPM *e*PP PP 11 15 44.6 +3.3
HDIL Hopedale 137.18 8 PFAKE 11 13 10.0 +12
HDIL LR LR
comp=Z,2µm,21.0s,MS5.8
Y22C IRIS PASSCAL I 137.22 31 ⇓P PKPdf 11 12 58.7 +0.9
baz=137
BNM Barren Site 137.31 31 *e*PKPdf PKPdf 11 12 59.2 +1.2
BNM *e*PP PP 11 15 45.8 +3.6
SSPA Standing Stone 137.43 355 *e*PKPdf PKPdf 11 12 58.7 +0.7
SSPA LR LR
comp=Z,2µm,22.0s,MS5.8
MVL Millersville 137.91 353 *e*PKPdf PKPdf 11 12 59.0 +0.1
ACSO Alum Creek Sta 138.00 1 *e*PKPdf PKPdf 11 12 59.7 +0.7
ACSO LR LR
comp=Z,2µm,19.0s,MS5.8
MCWV Mont Chateau 138.53 357 PFAKE 11 13 10.0 +10
MCWV LR LR
comp=Z,3µm,22.0s,MS6.0
AMTX Amarillo 139.00 25 PFAKE 11 13 10.0 +8.9
AMTX LR LR
comp=Z,2µm,20.0s,MS5.8
CBN Corbin 139.80 354 PFAKE 11 13 10.0 +7.6
CBN LR LR
comp=Z,2µm,21.0s,MS5.8
WCI Wyandotte Cave 139.82 5 *e*PKPdf PKPdf 11 13 02.7 +0.2
WCI LR LR
comp=Z,2µm,20.0s,MS5.9
MNTX Cornudas Mount 139.88 32 *e*PKPpre 11 12 57.7
MNTX *e*PKPdf PKPdf 11 13 03.2 +0.4
MNTX LR LR
comp=Z,1µm,20.0s,MS5.6
SIUC Southern Illin 139.97 9 *e*PKPdf PKPdf 11 13 02.6 -0.2
PLCA Paso Flores 140.02 194 PFAKE 11 13 10.0 +7.3
PLCA LR LR
comp=Z,2µm,21.0s,MS5.8
WMOK Wichita Mounta 140.27 22 *e*PKPpre 11 12 56.0
WMOK *e*PP PP 11 16 01.2 +1.0
WMOK LR LR
comp=Z,1µm,20.0s,MS5.7
ELN Prospectdale 140.99 358 *e*PKPdf PKPdf 11 13 05.5 +0.9
BLA Blacksburg 140.99 358 PFAKE 11 13 20.0 +15
BLA LR LR
comp=Z,2µm,22.0s,MS5.9
TZTN Tazewell 141.67 2 *e*PKPdf PKPdf 11 13 06.0 +0.1
TZTN LR LR
comp=Z,2µm,20.0s,MS5.8
BBSR BB Station 142.09 336 PFAKE 11 13 20.0 +13
BBSR LR LR
comp=Z,1µm,19.0s,MS5.6
MIAR Mount Ida 142.12 16 *e*PKPdf PKPdf 11 13 01.4 -5.3
MIAR LR LR
comp=Z,3µm,22.0s,MS5.9
LTX Lajitas 142.65 32 *e*PKPpre 11 13 05.0
LTX LR LR
comp=Z,2µm,19.0s,MS5.9
TXAR Lajitas Array 142.65 32 PKIKP PKPdf 11 13 04.6 -3.2
TXAR pmax pmax
comp=Z,2.0nm,0.6s
TXAR Lajitas Array 142.65 32 PKP PKPdf 11 13 04.5 -3.3
comp=Z,1.9nm,0.6s,baz=265,slow=0.9,SNR=31
CPCT Cooper Cave 142.71 3 *e*PKPdf PKPdf 11 13 04.5 -3.3
CNNC Cliffs of the 142.78 354 PFAKE 11 13 20.0 +12
CNNC LR LR
comp=Z,2µm,22.0s,MS5.9
PLAL Pickwick Lake 142.82 8 *e*PKPdf PKPdf 11 13 03.6 -4.4
PLAL LR LR
comp=Z,3µm,22.0s,MS5.9
OXF Oxford 143.07 10 *e*PKPdf PKPdf 11 13 04.5 -3.9
OXF LR LR
comp=Z,2µm,22.0s,MS5.9
JCT Junction City 143.58 26 *e*PKPpre 11 13 05.2
JCT *e*PKPdf PKPdf 11 13 09.9 +0.4
JCT LR LR
comp=Z,1µm,20.0s,MS5.7
JSC Jenkinsville 143.94 359 *e*PKPdf PKPdf 11 13 08.5 -1.4
NATX Nacogdoches 144.40 19 *e*PKPdf PKPdf 11 13 09.4 -1.5
NATX LR LR
comp=Z,2µm,20.0s,MS5.9
GOGA Godfrey 144.79 2 *e*PKPdf PKPdf 11 13 09.6 -1.9
GOGA LR LR
comp=Z,2µm,21.0s,MS5.8
LRAL Lakeview Retre 144.88 7 *e*PKPdf PKPdf 11 13 09.8 -1.8
LRAL LR LR
comp=Z,3µm,22.0s,MS6.0
NHSC New Hope 145.07 357 PFAKE 11 13 20.0 +8.6
NHSC LR LR
comp=Z,2µm,22.0s,MS5.8
MAIG Mazatlaan 145.55 42 *i* P PKPdf 11 13 14.6 +1.6
HKT Hockley 145.66 21 *e*PKPdf PKPdf 11 13 12.2 -0.8
HKT *e*PP PP 11 16 32.9 +0.2
HKT LR LR
comp=Z,3µm,21.0s,MS6.0
MDZ Mendoza 146.82 201 *e*P PKPbc 11 13 20.3 +3.6
MDZ *e* 11 13 23.2
BRAL Brewton 146.87 8 PFAKE 11 13 30.0 +15
BRAL LR LR
comp=Z,3µm,21.0s,MS6.0
FCH Farellones 146.90 198 ⇓*i*P PKPdf 11 13 17.0 +1.9
KVTX Kingsville 146.95 26 *e*PKPbc PKPbc 11 13 17.9 +0.7
KVTX LR LR
comp=Z,1µm,20.0s,MS5.7
ZAIG Zacatecas 148.33 38 *i* P PKPbc 11 13 23.2 +2.1
CJM Chamela 148.97 46 *i* P PKPbc 11 13 23.1 +0.3
CMCH Combarbala 149.11 199 *e*P PKPbc 11 13 21.6 -1.2
SFJM Santa Fe 149.68 42 *i* P PKPdf 11 13 20.8 +0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TLL	**Tololo Astrono**	**149.97**	**200**	*e*P	PKPbc	11 13 24.8	-0.3
DWPF	**Disney**	**150.09**	**359**	PFAKE		11 13 30.0	+10
DWPF				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
LCO	**Las Campanas**	**151.00**	**201**	*e*PKPdf	PKPdf	11 13 22.5	+0.7
LCO				*e*PKPbc	PKPbc	11 13 28.2	+0.7
LCO				*e*PKPab	PKPab	11 13 36.7	+1.8
LCO				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
MOIG	**Morelia**	**151.47**	**40**	*i* P	PKPbc	11 13 29.2	+0.4
IIO	**Organos**	**153.06**	**37**	*i* P	PKPdf	11 13 25.6	+0.5
BBGH	**Gun Hill**	**153.07**	**304**	PFAKE		11 13 40.0	+15
BBGH				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
PPM	**Popocatepetl**	**153.52**	**37**	*i* P	PKPdf	11 13 26.3	+0.5
MTP	**Monte Pirata**	**154.26**	**321**	*e*PKPbc	PKPbc	11 13 34.8	-0.2
CPD	**Cerro la Pandu**	**154.53**	**322**	*e*PKPdf	PKPdf	11 13 28.7	+1.5
CPD				*e*PKPbc	PKPbc	11 13 35.4	-0.3
CPD				*e*PKPab	PKPab	11 13 50.1	0.0
SJG	**San Juan**	**154.62**	**322**	PFAKE		11 13 40.0	+13
SJG				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
SDDR	**Presa de Saban**	**156.63**	**333**	*e*PKPab	PKPab	11 13 58.2	-0.8
SDDR				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
TEIG	**Tepich**	**157.13**	**15**	*e*PKPab	PKPab	11 13 58.7	-2.4
TEIG				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
LPAZ	**La Paz**	**160.21**	**223**	PKPdf	PKPdf	11 13 35.2	+0.8
LPAZ	**La Paz**	**160.21**	**223**	PKIKP	PKPdf	11 13 35.4	+1.0
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
LPAZ	**La Paz**	**160.21**	**223**	PKP	PKPdf	11 13 35.4	+1.0
	comp=Z,3.6nm,0.9s,baz=68,slow=2.3,SNR=9.9						
TGUH	**Tegucigalpa,Un**	**163.28**	**18**	*e*PKPdf	PKPdf	11 13 38.1	+0.5
TGUH				*e*PKPab	PKPab	11 14 28.4	+0.5
TGUH				LR	LR		
	comp=Z,1µm,21.0s						
SDV	**Santo Domingo**	**164.30**	**314**	PFAKE		11 13 50.0	+11
SDV				LR	LR		
	comp=Z,707nm,22.0s						
JTS	**JuntasAbangare**	**167.50**	**13**	PFAKE		11 13 50.0	+8.9
JTS				LR	LR		
	comp=Z,2µm,20.0s						
BCIP	**Isla Barro Col**	**168.72**	**349**	PFAKE		11 13 50.0	+8.0
BCIP				LR	LR		
	comp=Z,3µm,20.0s						
NNA	**Nana**	**168.76**	**207**	PFAKE		11 13 50.0	+8.0
NNA				LR	LR		
	comp=Z,2µm,21.0s						
ROSC	**El Rosal**	**169.71**	**311**	PKP	PKPdf	11 13 42.9	+0.2
	comp=Z,4.5nm,0.4s,baz=273,slow=23,SNR=7.7						
OTAV	**Otavalo**	**175.76**	**301**	*e*PKPdf	PKPdf	11 13 44.3	-0.9
OTAV				LR	LR		
	comp=Z,2µm,22.0s						

IDC 07 10:56:17.6±1.6**, 1507S**×**17721W, h0**km**, mb4.1**/4**, mb1 4.5**/5**, mb1mx4.2**/15**, mbtmp4.1**/5**, ML2.3**/1**, MS3.7**/2**, Ms1 3.7**/2**, ms1mx3.2**/26**, Error ellipse: s-maj=116.9km s-min=25.4km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.39**	**78**	Pn	Pn	10 57 38.9	-0.4
	6.1nm,0.3s,baz=43,slow=8.7,SNR=8.7						
AFI				Sn	Sn	10 58 35.9	-6.3
	1.4nm,0.3s,baz=24,slow=20,SNR=2.0						
AFI				LR	LR	10 59 32.0	
	comp=Z,365nm,20.7s,baz=162,slow=36						
DZM	**Mont Dzumac**	**16.98**	**243**	LR	LR	11 05 27.7	
	comp=Z,525nm,20.6s,baz=290,slow=32						
ASAR	**Alice Springs**	**46.72**	**252**	P	P	11 04 48.3	-0.5
	4.8nm,0.7s,baz=76,slow=8.4,SNR=4.7						
NVAR	**Mina Array Bea**	**76.59**	**44**	P	P	11 08 09.8	-0.3
	0.9nm,0.8s,baz=220,slow=8.1,SNR=6.4						
TXAR	**Lajitas Array**	**83.51**	**57**	P	P	11 08 48.9	+1.1
	1.4nm,1.0s,baz=235,slow=4.1,SNR=8.8						
PDAR	**Pinedale Array**	**84.51**	**43**	P	P	11 08 52.6	+0.1
	1.1nm,0.9s,baz=206,slow=3.0,SNR=8.6						
MMAI	**Mount Meron Ar**	**145.46**	**307**	PKPbc	PKPbc	11 15 58.2	0.0
	12nm,0.9s,baz=53,slow=5.6,SNR=7.7						

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*ISCJB **07** 11:07:23.7±1.7, 190S±0.1×1759W±0.1, h214km±20km, mb4.5/12, Error ellipse: s-maj=20.8km s-min=17.0km az=45.0*
*NEIC **07** 11:07:24.9±1.6, 1896S×17580W, h212km±17km, mb4.7/5, Error ellipse: s-maj=18.2km s-min=12.5km az=132.0*
*IDC **07** 11:07:28.3±6.3, 19.13S×17589W, h241km±58km, mb4.3/9, mb1 4.4/10, mb1mx4.0/18, mbtmp4.2/10, Error ellipse: s-maj=26.9km s-min=18.2km az=43.0*
ISC 07 11:07:24.3±1.7**, 190S**±01×**1759W**±01**, h201**km±20km**, n25, σ0ˢ99**/26**, mb4.5**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.40**	**38**	P	**Pn**	**11 08 56.2**	**-0.5**
	16nm,0.3s,baz=147,slow=22,SNR=36						
AFI				S	**Sn**	**11 10 03.3**	**-6.6**
	9.0nm,0.3s,baz=229,slow=20,SNR=6.2						
DZM	**Mont Dzumac**	**16.86**	**257**	P	**P**	**11 11 10.0**	**+2.3**
	2.1nm,0.3s,baz=87,slow=17,SNR=19						
URZ	**Urewera**	**20.14**	**196**	P	**P**	**11 11 42.2**	**-0.8**
	11nm,0.3s,baz=327,slow=3.0,SNR=35						
URZ				S	**S**	**11 15 07.8**	**-10**
	4.9nm,0.4s,baz=82,slow=21,SNR=9.5						
RPZ	**Rata Peaks**	**26.99**	**201**	P	**P**	**11 12 49.8**	**+2.5**
	10.0nm,0.6s,mb4.6,baz=17,slow=19,SNR=8.1						
ARMA	**Armidale**	**31.55**	**243**	*e*P	**P**	**11 13 28.5**	**+0.7**
CNB	**Canberra Magne**	**34.74**	**235**	*e*P	**P**	**11 13 55.3**	**-0.1**
	36nm,1.2s,mb4.8						
CTA	**Charters Tower**	**35.68**	**262**	*e*P	**P**	**11 14 04.0**	**+0.4**
	26nm,0.5s,mb5.0						
CTA	**Charters Tower**	**35.68**	**262**	P	**P**	**11 14 03.9**	**+0.3**
	40nm,0.6s,mb5.1,baz=94,slow=10,SNR=57						
PMG	**Port Moresby**	**37.04**	**280**	P	**P**	**11 14 15.5**	**+0.4**
	22nm,0.8s,mb4.7,baz=89,slow=5.6,SNR=11						
STKA	**Stephens Creek**	**40.27**	**243**	*e*P	**P**	**11 14 41.5**	**-0.3**
	3.5nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**40.27**	**243**	*e*P	**P**	**11 14 42.0**	**+0.2**
	6.9nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**40.27**	**243**	P	**P**	**11 14 41.2**	**-0.6**
	3.7nm,0.4s,mb4.1,baz=80,slow=8.4,SNR=14						
WB2	**Warramunga Arr**	**46.82**	**260**	*e*P	**P**	**11 15 33.3**	**-0.9**
WRA	**Warramunga Arr**	**46.83**	**260**	P	**P**	**11 15 33.6**	**-0.8**
	14nm,0.4s,mb4.6,baz=97,slow=5.6,SNR=402						
WRA				S	**S**	**11 22 01.9**	**-7.7**
	0.4nm,0.8s,baz=96,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**46.85**	**255**	P	**P**	**11 15 33.9**	**-0.6**
	30nm,0.7s,mb4.7,baz=92,slow=8.6,SNR=244						
ASAR				S	**S**	**11 22 03.6**	**-6.1**
	0.7nm,0.8s,baz=92,slow=15,SNR=6.0						
FORT	**Forrest**	**51.75**	**245**	*e*P	**P**	**11 16 09.8**	**-1.6**
	18nm,0.7s,mb4.6						
FITZ	**Fitzroy Crossi**	**55.25**	**261**	*e*P	**P**	**11 16 37.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**55.25**	**261**	P	**P**	**11 16 36.4**	**-0.6**
	4.0nm,0.5s,mb4.2,baz=156,slow=5.3,SNR=12						
VNDA	**Vanda**	**59.58**	**185**	P	**P**	**11 17 06.0**	**-0.4**
	1.7nm,0.6s,mb3.9,baz=56,slow=6.4,SNR=8.2						
MJAR	**Matsushiro Arr**	**70.24**	**322**	P	**P**	**11 18 15.3**	**-0.3**
	5.2nm,0.7s,mb4.3,baz=158,slow=6.0,SNR=12						
QSPA	**South Pole Qui**	**71.06**	**180**	*e*P	**P**	**11 18 19.8**	**-0.1**
	7.9nm,1.1s,mb4.3						
NVAR	**Mina Array Bea**	**78.55**	**43**	P	**P**	**11 19 05.0**	**+1.6**
	0.4nm,0.7s,baz=219,slow=8.1,SNR=2.8						
CLL	**Collm**	**147.01**	**350**	*i* PKPbc	PKPbc	11 26 43.1	0.0
BRTR	**Keskin Array B**	**147.27**	**315**	PKPbc	PKPbc	11 26 43.9	-0.3
	1.6nm,0.9s,baz=38,slow=6.3,SNR=6.5						
GERES	**GERESS Array B**	**149.25**	**348**	PKPbc	PKPbc	11 26 46.5	-2.5
	1.0nm,0.9s,baz=250,slow=4.0,SNR=3.7						

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*IDC **07** 11:37:18.3±3.3, 235S×7632W, h119km±34km, mb3.6/8, mb1 3.8/10, mb1mx3.7/21, mbtmp3.6/10, Error ellipse: s-maj=30.7km s-min=15.7km az=56.0*
*ISCJB **07** 11:37:22.3±1.0, 249S±007×765W±0.1, h178km±11km, mb3.8/11, Error ellipse: s-maj=17.6km s-min=10.4km az=168.7*
*NEIC **07** 11:37:22.5±1.2, 246S×7646W, h160km±12km, mb4.0/5, Error ellipse: s-maj=23.0km s-min=9.9km az=56.0*
ISC 07 11:37:22.9±0.9**, 247S**±006×**765W**±01**, h164**km±11km**, n24, σ0ˢ90**/23**, mb3.8**/11**, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**3.34**	**324**	*e*Pn	**Pn**	**11 38 14.4**	**-0.8**
ATAH	**Atahualpa**	**4.89**	**203**	P	**Pn**	**11 38 35.9**	**+0.7**
	6.5nm,0.3s,baz=20,slow=8.2,SNR=86						
ATAH				S	**Sn**	**11 39 31.2**	**-0.5**
	3.2nm,0.3s,baz=131,slow=16,SNR=11						
NNA	**Nana**	**9.46**	**182**	S	**Sn**	**11 41 11.7**	**-9.2**
	2.1nm,0.3s,baz=285,slow=20,SNR=3.9						
SDV	**Santo Domingo**	**12.69**	**27**	P	**Pn**	**11 40 19.2**	**+1.4**
SDV	**Santo Domingo**	**12.69**	**27**	P	**Pn**	**11 40 19.2**	**+1.4**
	0.8nm,0.3s,baz=236,slow=7.3,SNR=5.4						
LPAZ	**La Paz**	**16.00**	**150**	P	**Pn**	**11 40 59.0**	**0.0**
	0.1nm,0.3s,baz=318,slow=14,SNR=2.4						
SIV	**San Ignacio**	**20.26**	**132**	P	**P**	**11 41 45.4**	**-0.4**
	1.4nm,0.5s,baz=314,slow=13,SNR=11						
TEIG	**Tepich**	**25.36**	**333**	P	**P**	**11 42 35.6**	**+0.6**
	2.6nm,0.3s,mb4.2,baz=146,slow=3.2,SNR=8.3						
TXAR	**Lajitas Array**	**40.97**	**323**	P	**P**	**11 44 49.9**	**+0.1**
TXAR				PcP	PcP	11 46 48.2	+1.3
TXAR	**Lajitas Array**	**40.97**	**323**	P	**P**	**11 44 49.9**	**+0.1**
	0.7nm,0.8s,mb3.4,baz=144,slow=7.8,SNR=9.0						
TXAR				PcP	PcP	11 46 48.2	+1.3
	0.5nm,0.7s,baz=150,slow=5.0,SNR=6.7						
WMOK	**Wichita Mounta**	**42.53**	**332**	*e*P	**P**	**11 45 01.9**	**-0.5**
	2.3nm,0.7s,mb3.9						
SDCO	**Great Sand Dun**	**48.21**	**329**	*e*P	**P**	**11 45 47.7**	**+0.7**
	2.0nm,0.6s,mb3.9						
PV10	**Paradox Valley**	**50.56**	**327**	*e*P	**P**	**11 46 04.5**	**-0.2**
PDAR	**Pinedale Array**	**54.02**	**330**	P	**P**	**11 46 30.1**	**-0.2**
	0.7nm,0.6s,mb3.5,baz=131,slow=10,SNR=6.9						
HWUT	**Hardware Ranch**	**54.22**	**328**	*e*P	**P**	**11 46 31.8**	**+0.2**
	2.9nm,0.6s,mb4.2						
ULM	**Lac du Bonnet**	**55.10**	**345**	P	**P**	**11 46 36.5**	**-1.3**
ULM	**Lac du Bonnet**	**55.10**	**345**	P	**P**	**11 46 36.5**	**-1.3**
	0.8nm,0.5s,mb3.7,baz=147,slow=14,SNR=5.4						
HLID	**Hailey**	**57.09**	**328**	*e*P	**P**	**11 46 52.8**	**+0.7**
	1.1nm,0.6s,mb3.9						
YKA	**Yellowknife Ar**	**70.92**	**342**	P	**P**	**11 48 21.2**	**-0.7**
	0.9nm,0.5s,mb3.8,baz=139,slow=5.8,SNR=25						
TORD	**Torodi Ar. Bea**	**79.05**	**76**	P	**P**	**11 49 07.9**	**-1.7**
	0.5nm,0.5s,mb3.4,baz=286,slow=5.9,SNR=11						
QSPA	**South Pole Qui**	**87.60**	**180**	*e*P	**P**	**11 49 54.8**	**+2.8**
	6.0nm,1.0s,mb4.4						
QSPA	**South Pole Qui**	**87.60**	**180**	P	**P**	**11 49 54.5**	**+2.5**
	4.8nm,0.8s,mb4.4,baz=162,slow=4.8,SNR=12						
MKAR	**Makanchi Array**	**132.14**	**20**	PKP	PKPdf	11 56 18.2	+0.8
	0.2nm,0.3s,baz=304,slow=2.0,SNR=2.7						
WRA	**Warramunga Arr**	**142.44**	**232**	PKhKP		11 56 33.3	
	0.6nm,0.4s,baz=113,slow=2.9,SNR=9.0						

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*IDC **07** 11:44:46.2±0.7, 3204S×17743W, h0km, mb4.3/10, mb1 4.5/12, mb1mx4.4/17, mbtmp4.3/12, ML3.0/2, Error ellipse: s-maj=21.4km s-min=20.1km az=171.0*
*NEIC **07** 11:44:46.7±0.5, 3224S×17736W, h10km, mb4.8/8, Error ellipse: s-maj=16.5km s-min=9.9km az=125.0*
*ISCJB **07** 11:44:48.9±0.6, 3242S±005×1775W±0.1, h33km, mb4.5/14, Error ellipse: s-maj=14.7km s-min=5.4km az=24.2*
ISC 07 11:44:51.1±0.6**, 3239S**±006×**1775W**±01**, h35**km**, n50, σ1ˢ47**/47**, mb4.5**/14**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**6.65**	**210**	*e*P	**Pn**	**11 46 26.2**	**0.0**
PUZ				S	**Sn**	**11 47 43.8**	**+3.1**
PUZ	**Puketiti**	**6.65**	**210**	PN	**Pn**	**11 46 26.0**	**-0.2**
PUZ				SN	**Sn**	**11 47 43.8**	**+3.1**
MWZ	**Matawai**	**7.19**	**213**	P	**Pn**	**11 46 33.8**	**+0.2**
MWZ	**Matawai**	**7.19**	**213**	PN	**Pn**	**11 46 33.4**	**-0.2**
MWZ				SN	**Sn**	**11 47 57.7**	**+3.7**
URZ	**Urewera**	**7.33**	**215**	*e*P	**Pn**	**11 46 35.6**	**+0.1**
URZ	**Urewera**	**7.33**	**215**	Pn	**Pn**	**11 46 34.7**	**-0.9**
	0.9nm,0.3s,baz=314,slow=7.5,SNR=9.1						
URZ	**Urewera**	**7.33**	**215**	PN	**Pn**	**11 46 34.4**	**-1.2**
URZ				SN	**Sn**	**11 48 00.1**	**+2.7**
KNZ	**Kokohu**	**7.69**	**209**	*e*PN	**Pn**	**11 46 39.4**	**-1.2**
BKZ	**Black Stump Fm**	**8.34**	**214**	*e*PN	**Pn**	**11 46 48.6**	**-0.8**
BKZ				SN	**Sn**	**11 48 23.8**	**+1.5**
BFZ	**Birch Farm**	**9.68**	**210**	SN	**Sn**	**11 48 54.7**	**-0.6**
MRZ	**Mangatainoka R**	**9.95**	**212**	*e*P	**Pn**	**11 47 08.9**	**-2.7**
MRZ	**Mangatainoka R**	**9.95**	**212**	*e*PN	**Pn**	**11 47 08.9**	**-2.7**
MRZ				SN	**Sn**	**11 48 58.5**	**-3.4**
TCW	**Tory Channel**	**10.99**	**214**	SN	**Sn**	**11 49 23.6**	**-3.8**
THZ	**Tophouse**	**12.09**	**217**	*e*PN	**Pn**	**11 47 39.6**	**-1.1**
MQZ	**McQueen's Vall**	**13.69**	**212**	SN	**Sn**	**11 50 22.8**	**-11**
RPZ	**Rata Peaks**	**14.45**	**215**	Pn	**Pn**	**11 48 11.2**	**-1.7**
	0.9nm,0.3s,baz=29,slow=10,SNR=3.6						
RPZ				Sn	**Sn**	**11 50 44.4**	**-7.4**
	0.5nm,0.3s,baz=320,slow=3.6,SNR=3.9						
DZM	**Mont Dzumac**	**17.57**	**302**	P	**Pn**	**11 48 50.7**	**-2.6**
	0.1nm,0.3s,baz=158,slow=18,SNR=2.2						
AFI	**Afiamalu**	**19.13**	**17**	*e*P	**Pn**	**11 49 05.4**	**-6.8**
	26nm,0.8s						
AFI	**Afiamalu**	**19.13**	**17**	P	**Pn**	**11 49 06.6**	**-5.6**
	1.4nm,0.3s,baz=233,slow=20,SNR=3.1						
STKA	**Stephens Creek**	**34.49**	**260**	P	**P**	**11 51 38.4**	**+2.5**
	3.8nm,0.6s,mb4.5,baz=92,slow=10,SNR=10.0						
CTA	**Charters Tower**	**34.58**	**282**	P	**P**	**11 51 37.5**	**+0.8**
	9.3nm,0.8s,mb4.7,baz=112,slow=9.8,SNR=9.7						
CTAO	**Charters Tower**	**34.58**	**282**	*e*P	**P**	**11 51 38.0**	**+1.3**
	8.7nm,0.8s,mb4.7						
ASAR	**Alice Springs**	**43.46**	**269**	P	**P**	**11 52 51.4**	**+0.5**
	4.3nm,0.6s,mb4.3,baz=105,slow=8.0,SNR=72						
WB2	**Warramunga Arr**	**44.62**	**274**	*e*P	**P**	**11 53 00.2**	**0.0**
WRA	**Warramunga Arr**	**44.63**	**274**	P	**P**	**11 53 00.1**	**-0.3**
	3.4nm,0.5s,mb4.4,baz=112,slow=8.0,SNR=96						
FORT	**Forrest**	**45.98**	**257**	*e*P	**P**	**11 53 12.2**	**+1.3**
	9.3nm,0.7s,mb4.8						
VNDA	**Vanda**	**46.17**	**186**	P	**P**	**11 53 14.6**	**+2.8**
	3.2nm,1.0s,mb4.2,baz=22,slow=11,SNR=4.1						
FITZ	**Fitzroy Crossi**	**52.80**	**271**	*e*P	**P**	**11 54 03.9**	**+0.7**
	52nm,1.7s,mb5.2						
FITZ	**Fitzroy Crossi**	**52.80**	**271**	P	**P**	**11 54 03.1**	**-0.1**
	4.8nm,0.9s,mb4.4,baz=167,slow=14,SNR=5.0						
KLBR	**Kellerberrin**	**54.13**	**252**	*e*P	**P**	**11 54 13.1**	**+0.3**
	8.5nm,0.6s,mb4.8						
QSPA	**South Pole Qui**	**57.73**	**180**	*e*P	**P**	**11 54 42.0**	**+4.2**
	9.9nm,1.1s,mb4.8						
QSPA	**South Pole Qui**	**57.73**	**180**	P	**P**	**11 54 41.6**	**+3.8**
	4.3nm,0.9s,mb4.5,baz=42,slow=4.2,SNR=15						
VNA3	**Neumayer Olymp**	**76.30**	**176**	*e*	**P**	**11 56 38.1**	**+2.3**
VNA3				*e*		11 56 43.2	
VNA3				*e*	pP	11 56 49.5	+2.8
VNA3				*e*		11 56 55.2	
VNA2	**Neumayer--Watz**	**76.74**	**177**	*e*	**P**	**11 56 41.0**	**+2.7**
	baz=182,slow=3.6						
VNA2				*e*		11 56 46.0	
VNA2				*e*	pP	11 56 52.1	+2.9
VNA2				*e*		11 56 58.6	
KSRS	**Korea Array**	**86.13**	**319**	P	**P**	**11 57 28.9**	**+0.5**
	2.7nm,0.7s,mb4.6,baz=144,slow=5.4,SNR=6.7						
CMB	**Columbia Colle**	**87.96**	**42**	*e*P	**P**	**11 57 36.9**	**-0.3**
	14nm,1.6s,mb5.0						
NVAR	**Mina Array Bea**	**89.41**	**42**	P	**P**	**11 57 44.1**	**+0.1**
	0.8nm,0.8s,mb4.1,baz=202,slow=5.6,SNR=7.8						
TPNV	**Topopah Spring**	**89.60**	**45**	*e*P	**P**	**11 57 42.9**	**-2.1**
	1.9nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**93.10**	**57**	P	**P**	**11 58 00.8**	**-0.6**
TXAR	**Lajitas Array**	**93.10**	**57**	P	**P**	**11 58 00.8**	**-0.6**
	0.3nm,1.0s,mb3.7,baz=251,slow=3.8,SNR=4.1						
ARCES	**ARCESS Array B**	**140.62**	**347**	PKP	PKPdf	12 04 15.2	-0.5
	2.8nm,1.0s,baz=63,slow=3.3,SNR=3.8						
JOF	**Joensuu**	**144.42**	**338**	*e*pkp	PKPdf	12 04 20.4	-2.3
	1.7nm,0.6s						
KAF	**Kangasniemi**	**146.56**	**340**	*e*pkp	PKPdf	12 04 25.1	-1.3
	5.0nm,0.7s,baz=27,slow=3.8						
FINES	**FINESS Array B**	**147.15**	**339**	PKPbc	PKPbc	12 04 28.9	-0.7
FINES	**FINESS Array B**	**147.15**	**339**	PKPbc	PKPbc	12 04 28.9	-0.7
	3.9nm,0.5s,baz=63,slow=4.0,SNR=31						
NB2	**NORSAR Subarra**	**150.78**	**351**	PKP	PKPbc	12 04 38.3	-0.6
	comp=Z,1.5nm,0.8s,baz=13,slow=2.6						
NOA	**NORSAR Array B**	**150.78**	**351**	PKPbc	PKPbc	12 04 38.6	-0.3
	comp=Z,2.2nm,0.7s,baz=14,slow=4.2,SNR=6.1						
AKASG	**Malin Array Be**	**153.12**	**321**	PKP	PKPdf	12 04 37.0	-0.1
	comp=Z,0.2nm,0.2s,baz=85,slow=4.6,SNR=5.5						
AKASG				PKPbc	PKPbc	12 04 43.7	-0.8
	comp=Z,1.1nm,0.6s,baz=86,slow=4.7,SNR=5.0						
AKASG				PKPab	PKPab	12 04 55.3	-0.9
	comp=Z,2.5nm,0.5s,baz=48,slow=4.8,SNR=14						
BRTR	**Keskin Array B**	**153.88**	**295**	PKPbc	PKPbc	12 04 48.9	+2.3
	comp=Z,1.3nm,0.5s,baz=128,slow=4.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**160.83**	**178**	PKPab	PKPab	12 05 31.2	+1.0
	comp=Z,0.9nm,0.5s,baz=170,slow=3.1,SNR=15						

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*ISCJB **07** 11:48:52.6±5.6, 324S±0.1×1776W±02, h8km±36km, mb4.0/6, Error ellipse: s-maj=32.0km s-min=15.4km az=26.4*
*IDC **07** 11:48:52.6±1.0, 3199S×17748W, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.0/14, mbtmp4.0/6, Error ellipse: s-maj=33.4km s-min=26.9km az=15.0*
*NEIC **07** 11:48:53.9±0.9, 3220S×17749W, h10km, Error ellipse: s-maj=25.0km s-min=18.5km az=130.0*
ISC 07 11:48:53.9±6.9**, 323S**±01×**1776W**±02**, h6**km±43km**, n12, σ1ˢ62**/8**, mb4.0**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.38**	**215**	Pn	**Pn**	**11 50 41.4**	**-0.7**
	1.8nm,0.3s,baz=257,slow=2.6,SNR=9.2						
URZ				Sn	**Sn**	**11 52 05.7**	**-0.5**
	3.2nm,0.3s,baz=220,slow=21,SNR=9.7						
STKA	**Stephens Creek**	**34.47**	**260**	P	**P**	**11 55 44.1**	**+1.5**
	1.3nm,0.8s,mb3.9,baz=111,slow=14,SNR=3.7						
CTA	**Charters Tower**	**34.51**	**282**	P	**P**	**11 55 43.4**	**+0.3**
	4.7nm,0.7s,mb4.5,baz=110,slow=8.3,SNR=3.7						
ASAR	**Alice Springs**	**43.42**	**269**	P	**P**	**11 56 57.8**	**+0.1**
	1.5nm,0.6s,mb3.9,baz=105,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**44.58**	**274**	P	**P**	**11 57 06.0**	**-1.0**
	1.4nm,0.5s,mb4.0,baz=112,slow=8.1,SNR=18						
QSPA	**South Pole Qui**	**57.83**	**180**	P	**P**	**11 58 48.0**	**+2.4**
	1.7nm,0.9s,mb4.1,baz=108,slow=6.4,SNR=4.5						
NVAR	**Mina Array Bea**	**89.37**	**42**	P	**P**	**12 01 49.9**	**-1.4**
	0.4nm,0.8s,mb3.8,baz=225,slow=8.9,SNR=3.5						
KAF	**Kangasniemi**	**146.45**	**340**	*e*p	PKPdf	12 08 32.5	-1.2
	2.1nm,0.7s						
FINES	**FINESS Array B**	**147.04**	**339**	PKPbc	PKPbc	12 08 35.4	-1.4
	1.6nm,0.5s,baz=59,slow=3.8,SNR=12						
AKASG	**Malin Array Be**	**153.02**	**321**	PKPbc	PKPbc	12 08 51.0	-0.8
AKASG				PKPab	PKPab	12 09 01.9	-1.3
AKASG	**Malin Array Be**	**153.02**	**321**	PKPbc	PKPbc	12 08 51.0	-0.8
	0.2nm,0.3s,baz=49,slow=2.8,SNR=2.3						
AKASG				PKPab	PKPab	12 09 01.9	-1.3
	0.8nm,0.5s,baz=46,slow=4.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**160.93**	**178**	PKPab	PKPab	12 09 38.3	+0.3
	0.3nm,0.5s,baz=176,slow=3.1,SNR=6.8						

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*BJI **07** 11:52:09.0, 509S×10239E, h22km, mB5.2, mb4.9, Ms5.1, Msz4.8*
*MOS **07** 11:52:12.0±1.1, 494S×10239E, h33km, mb4.9/21, Error ellipse: s-maj=14.9km s-min=7.2km az=110.4*
*ISCJB **07** 11:52:14.9±1.1, 497S±006×10237E±006, h61km±9km, mb4.8/55, Error ellipse: s-maj=12.4km s-min=6.4km az=137.7*
*NEIC **07** 11:52:14.5±0.2, 510S×10229E, mb4.9/24, Error ellipse: s-maj=9.2km s-min=5.6km az=63.0*
NEIC Felt [III] at Bengkulu.
*IDC **07** 11:52:15.9±1.9, 504S×10239E, h54km±16km, mb4.2/21, mb1 4.3/22, mb1mx4.2/28, mbtmp4.2/22, ML3.8/1, MS4.2/1, Ms1 4.2/1, ms1mx3.4/30, Error ellipse: s-maj=13.8km s-min=9.0km az=38.0*
ISC 07 11:52:16.4±1.0**, 499S**±006×**10240E**±006**, h57**km±8km**, h45**km±1.0km**:pP-P, n110, σ0ˢ76**/100**, mb4.8**/55**, MS4.1**/1**, 4C-2D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**1.34**	**8**	P	**Pn**	**11 52 37.5**	**-1.4**
	4µm,0.8s						
KLI	**Kotabumi**	**2.45**	**87**	P	**Pn**	**11 52 54.9**	**+0.9**
	1µm,0.8s						
SBJI	**Serang**	**3.88**	**107**	P	**Pn**	**11 53 18.6**	**+5.0**
	417nm,1.2s						
PPI	**Padang Panjang**	**4.93**	**336**	P	**Pn**	**11 53 28.2**	**+0.3**
	151nm,0.6s						
LEM	**Lembang**	**5.50**	**110**	P	**Pn**	**11 53 40.7**	**+4.9**
	754nm,1.0s						
PSI	**Prapat**	**8.48**	**336**	P	**Pn**	**11 54 15.3**	**-1.3**
PSI	**Prapat**	**8.48**	**336**	P	**Pn**	**11 54 15.3**	**-1.3**
	1.2nm,0.3s,baz=223,slow=16,SNR=6.3						
COCO	**West Island**	**9.02**	**217**	*e*Pn	**Pn**	**11 54 17.6**	**-6.4**
	248nm,0.9s						
COCO				*e*Sn	**Sn**	**11 55 46.0**	**-18**
KULM	**Kulim**	**10.36**	**350**	*e*Pn	**Pn**	**11 54 43.4**	**+1.1**
KKTK	**Khon Kaen**	**21.19**	**1**	P	**P**	**11 56 57.0**	**-0.4**
	741nm,0.5s						
BATI	**Kupang**	**21.70**	**105**	P	**P**	**11 57 03.1**	**+0.3**
	53nm,0.4s,mb5.3,baz=96,slow=6.5,SNR=9.2						
BATI				S	**S**	**12 00 58.8**	**-1.2**
	42nm,0.8s,baz=234,slow=19,SNR=4.1						
CHG	**Chiang Mai**	**23.90**	**352**	⇑P	**P**	**11 57 26.0**	**+1.0**
	18nm,0.8s,mb4.6						
CHTO	**Chiang Mai**	**23.90**	**352**	*e*P	**P**	**11 57 24.3**	**-0.7**
	16nm,0.8s,mb4.5						
CHTO				*e*		11 57 38.0	
CHTO	**Chiang Mai**	**23.90**	**352**	*e*P	**P**	**11 57 24.3**	**-0.7**
CHTO				*e*		11 57 38.0	
CHTO				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**26.19**	**122**	*e*P	**P**	**11 57 46.3**	**+0.4**
	comp=Z,26nm,0.9s,mb4.8						
FITZ				*e*P		11 57 46.7	
FITZ	**Fitzroy Crossi**	**26.19**	**122**	P	**P**	**11 57 45.8**	**-0.1**
	comp=Z,3.3nm,0.7s,mb4.0,baz=272,slow=4.0,SNR=4.9						
NWAO	**Narrogin (SRO)**	**31.05**	**155**	P	**P**	**11 58 27.9**	**-1.1**
	comp=Z,11nm,0.8s,mb4.7,baz=312,slow=7.4,SNR=7.0						
NWAO				LR	LR	12 08 28.0	
	comp=Z,441nm,21.4s,MS4.1,baz=285,slow=31						
GYA	**Guiyang**	**31.53**	**7**	P	**P**	**11 58 32.8**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
SHL	**Shillong**	**32.04**	**342**	*e*P	**P**	**11 58 38.0**	**+0.2**
WRA	**Warramunga Arr**	**34.45**	**118**	*i* P	**P**	**11 59 00.8**	**+1.9**
WRA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	**34.45**	**118**	P	**P**	**11 58 58.7**	**-0.2**
	comp=Z,5.4nm,0.7s,mb4.6,baz=301,slow=11,SNR=20						
WRA				S	**S**	**12 04 23.6**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=299,slow=16,SNR=5.6						
WB2	**Warramunga Arr**	**34.46**	**118**	*e*P	**P**	**11 58 59.1**	**+0.1**
ODAN	**Odare**	**34.83**	**336**	*e*P	**P**	**11 59 02.6**	**+0.5**
	comp=Z,28nm,0.6s,mb5.4						
TAPN	**Taplejung**	**35.14**	**337**	*e*P	**P**	**11 59 05.7**	**+0.9**
	comp=Z,62nm,0.8s,mb5.6						
ASAR	**Alice Springs**	**35.58**	**125**	P	**P**	**11 59 09.2**	**+0.6**
	comp=Z,4.2nm,0.4s,mb4.7,baz=297,slow=8.1,SNR=44						
ASAR				S	**S**	**12 04 41.0**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=298,slow=18,SNR=3.6						
JIRN	**Jiri**	**36.03**	**335**	*e*P	**P**	**11 59 13.2**	**+0.8**
	comp=Z,69nm,0.8s,mb5.6						
LSA	**Lhasa**	**36.14**	**343**	*e*P	**P**	**11 59 14.1**	**+0.8**
	comp=Z,11nm,0.7s,mb4.9						
LSA	**Lhasa**	**36.14**	**343**	*e*P	**P**	**11 59 14.1**	**+0.8**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
KKN	**Kakani**	**36.54**	**334**	*e*P	**P**	**11 59 17.2**	**+0.5**
	comp=Z,38nm,0.6s,mb5.4						
KKN	**Kakani**	**36.54**	**334**	*e*P	**P**	**11 59 17.2**	**+0.5**
KKN				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.4						
GKN	**Gorkha**	**37.01**	**333**	*e*P	**P**	**11 59 21.4**	**+0.7**
	comp=Z,30nm,0.6s,mb5.3						
XAN	**Xi'an**	**39.30**	**9**	P	**P**	**11 59 39.2**	**-0.7**
XAN				AP	pP	11 59 51.7	-2.8
XAN				AMB	AMB		
	comp=Z,15nm,0.5s,mb5.0						
NDI	**New Delhi**	**41.33**	**326**	*e*P	**P**	**11 59 56.0**	**-0.8**
GTA	**Gaotai**	**44.24**	**357**	*e*P	**P**	**12 00 22.0**	**+1.8**
GTA				AP	pP	12 00 25.5	-9.4
GTA				XP	sP	12 00 27.0	-15
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.3						
PMG	**Port Moresby**	**44.60**	**98**	*e*P	**P**	**12 00 22.9**	**-0.6**
	comp=Z,16nm,0.8s,mb4.9						
PMG	**Port Moresby**	**44.60**	**98**	*e*P	**P**	**12 00 22.9**	**-0.6**
PMG				pmax	pmax		
	comp=Z,16nm,0.8s						
CTAO	**Charters Tower**	**45.19**	**113**	*e*P	**P**	**12 00 28.9**	**+0.7**
	comp=Z,11nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**45.19**	**113**	*e*P	**P**	**12 00 28.9**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**45.39**	**131**	*e*P	**P**	**12 00 29.8**	**+0.3**
	comp=Z,8.2nm,0.4s,mb4.9						
STKA	**Stephens Creek**	**45.39**	**131**	P	**P**	**12 00 30.0**	**+0.5**
	comp=Z,7.8nm,0.8s,mb4.6,baz=310,slow=9.0,SNR=18						
JNU	**Nakatsue**	**46.54**	**33**	P	**P**	**12 00 38.7**	**+0.2**

comp=Z,9.5nm,0.7s,mb4.8,baz=152,slow=15,SNR=6.0
KSRS Korea Array 48.46 27 P **P 12 00 53.2 -0.1**
comp=Z,3.3nm,0.6s,mb4.5,baz=232,slow=6.9,SNR=14
WMQ Urumqi 50.37 346 P **P 12 01 08.5 +0.8**
SONM Songino Array 52.72 3 P **P 12 01 26.3 +1.1**
comp=Z,18nm,0.7s,mb5.1,baz=181,slow=8.5,SNR=172
SONM pP 12 01 38.6 -1.7
comp=Z,8.3nm,0.6s,baz=180,slow=9.0,SNR=7.8
ULN Ulaanbaatar 52.79 4 *e*P **P 12 01 26.4 +0.6**
comp=Z,11nm,0.8s,mb4.8
ULN *e*pP pP 12 01 38.3 -2.5
ULN Ulaanbaatar 52.79 4 *e*P **P 12 01 26.4 +0.7**
ULN *e**PP pP 12 01 38.3 -2.5
ULN pmax pmax
comp=Z,11nm,0.8s,mb4.8
CN2 Changchun 52.83 21 *e*P **P 12 01 25.3 -0.8**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MAJO Matsushiro 53.17 36 *e*P **P 12 01 27.5 -1.3**
comp=Z,5.8nm,0.8s,mb4.6
MAJO Matsushiro 53.17 36 *e*P **P 12 01 27.5 -1.3**
MAJO pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MJAR Matsushiro Arr 53.17 36 P **P 12 01 27.6 -1.2**
comp=Z,3.0nm,0.6s,mb4.4,baz=218,slow=7.2,SNR=12
UCH Uchtor 53.40 334 *e*P **P 12 01 30.8 +0.4**
comp=Z,2.4nm,0.5s,mb4.4
TKM2 Tokmak 2 53.52 336 *e*P **P 12 01 31.3 +0.1**
comp=Z,11nm,0.5s,mb5.0
TKM2 Tokmak 2 53.52 336 *e*P **P 12 01 31.3 +0.1**
TKM2 pmax pmax
comp=Z,11nm,0.5s,mb5.0
AML Almayashu 53.68 334 *e*P **P 12 01 32.7 +0.3**
comp=Z,5.5nm,0.6s,mb4.7
AAK Ala-Archa 53.74 335 *e*P **P 12 01 32.9 0.0**
comp=Z,2.9nm,0.7s,mb4.3
AAK Ala-Archa 53.74 335 *e*P **P 12 01 32.9 +0.1**
AAK pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
EKS2 Erkin-Say 54.07 334 *e*P **P 12 01 35.5 +0.3**
comp=Z,14nm,0.8s,mb4.9
MK31 Makanchi Array 54.55 343 *e*P **P 12 01 38.4 -0.2**
MK31 *e*pP pP 12 01 49.9 -3.9
MKAR Makanchi Array 54.55 343 *i* P **P 12 01 38.5 -0.1**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR Makanchi Array 54.55 343 P **P 12 01 38.1 -0.5**
comp=Z,7.2nm,0.7s,mb4.8,baz=152,slow=8.2,SNR=25
ZAK Zakamensk 55.15 1‖ *i*P **P 12 01 43.4 +0.5**
ZAK *e* 12 01 51.4
OPO Ambohidratompo 55.49 251 P **P 12 01 45.8 -0.1**
comp=Z,2.4nm,0.7s,mb4.3,baz=40,slow=4.4,SNR=3.9
MOY Mondy 56.45 359 *e*P **P 12 01 52.4 +0.2**
TLY Talaya 56.46 1 *e*P **P 12 01 51.8 -0.4**
TLY pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
HNR Honiara 57.21 98 P **P 12 01 59.5 +1.2**
comp=Z,34nm,0.3s,mb5.8,baz=269,slow=1.4,SNR=4.9
KURK Kurchatov 59.14 343 *e*P **P 12 02 11.7 +0.6**
comp=Z,16nm,1.4s,mb4.9
KURK *e*pP pP 12 02 23.5 -2.9
KURK Kurchatov 59.14 343 *e*P **P 12 02 10.9 -0.2**
KLR Kul'dur 59.73 22 *e*P **P 12 02 10.9 -4.3**
ASAJ Asahikawa 60.78 32 P **P 12 02 22.6 +0.2**
comp=Z,6.6nm,0.7s,mb4.9,baz=250,slow=7.6,SNR=2.9
NVS Novosibirsk 61.71 348 *e*P **P 12 02 27.2 -1.3**
NVS *e* 12 10 41.3
NVS pmax pmax
comp=N,7.0nm,1.2s
NVS pmax pmax
comp=E,4.0nm,1.2s
NVS pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
YSS Yuzh-Sakhalins 62.80 30 *e*P **P 12 02 32.7 -3.3**
YSS pmax pmax
comp=Z,22nm,1.3s,mb5.1
BOD Bodaibo 63.30 7 *e*P **P 12 02 38.6 -0.5**
BOD pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
BRVK Borovoye 63.87 339 *e*P **P 12 02 42.1 -0.8**
comp=Z,8.4nm,0.6s,mb5.0
BRVK Borovoye 63.87 339 *e*P **P 12 02 42.1 -0.8**
BRVK pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
KMBO Kilima Mbogo 65.14 271 P **P 12 02 52.2 +0.2**
comp=Z,0.5nm,0.3s,mb4.0,baz=44,slow=15,SNR=3.9
AKTK Aktyubinsk 67.11 331 P **P 12 03 04.0 +0.1**
AKTO Aktyubinsk 67.11 331 P **P 12 03 04.0 +0.1**
comp=Z,1.2nm,0.6s,mb4.1,baz=102,slow=12,SNR=4.9
MAW Mawson 68.02 195 P **P 12 03 09.2 -0.2**
comp=Z,3.0nm,0.7s,mb4.4,baz=86,slow=7.5,SNR=4.7
YAK Yakutsk 70.05 13 *e*P **P 12 03 21.3 -0.7**
comp=Z,20nm,0.6s,mb5.2
YAK Yakutsk 70.05 13 *d i*P **P 12 03 21.2 -0.8**
YAK pmax pmax
comp=Z,34nm,0.7s,mb5.4
SVE Sverdlovsk 70.34 337 *e*P **P 12 03 24.5 +0.6**
SVE pmax pmax
comp=Z,16nm,0.9s,mb5.0
ARU Arti 70.89 336 *e*P **P 12 03 28.4 +1.2**
comp=Z,7.3nm,0.6s,mb4.8
ARU Arti 70.89 336 *d i*P **P 12 03 27.7 +0.5**
ARU 12 05 59.8
ARU S S 12 12 38.6 +0.4
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
ZEI Tsey 71.04 318 *e*P **P 12 03 28.1 -0.4**
KIV Kislovodsk 72.36 319‖ *e*P **P 12 03 36.3 0.0**
KIV *e* 12 06 16.0
KIV pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
MATP Matopo 73.19 250 P **P 12 03 40.9 -0.9**
comp=Z,1.7nm,0.4s,mb4.3,baz=138,slow=1.0,SNR=6.8
BRTR Keskin Array B 77.09 312 P **P 12 04 03.4 -0.5**
comp=Z,2.1nm,0.8s,mb4.1,baz=132,slow=7.2,SNR=11
BRTR pP pP 12 04 16.3 -3.5
comp=Z,3.4nm,0.7s,baz=126,slow=6.0,SNR=11
TIXI Tiksi 78.43 8 *e*P **P 12 04 09.3 -1.3**
comp=Z,4.4nm,0.7s,mb4.5
TIXI Tiksi 78.43 8 *i* P **P 12 04 09.0 -1.6**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
VNDA Vanda 78.79 169 P **P 12 04 12.2 -0.4**
comp=Z,2.7nm,0.7s,mb4.3,baz=31,slow=4.4,SNR=7.1
MOS Moscow 80.28 329 *e*P **P 12 04 26.9 +5.9**
MOS pmax pmax
comp=Z,55nm,1.0s,mb5.4
OBN Obninsk 80.58 328‖ *e*P **P 12 04 22.9 +0.3**
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
KIS Kishinev 82.54 319 *e*P **P 12 04 33.0 -0.2**
MLR Muntele Rosu 84.10 317 P **P 12 04 41.9 +0.7**
comp=Z,1.8nm,0.8s,mb4.2,baz=144,slow=5.4,SNR=6.0
QSPA South Pole Qui 84.99 180 *e*P **P 12 04 44.6 -0.5**
comp=Z,3.3nm,0.8s,mb4.5
QSPA South Pole Qui 84.99 180 P **P 12 04 44.1 -1.0**
comp=Z,2.4nm,0.8s,mb4.4,baz=184,slow=0.6,SNR=9.9
ARCES ARCESS Array B 90.08 340 pP pP 12 05 23.8 -2.2
comp=Z,6.1nm,0.8s,baz=92,slow=6.1,SNR=5.3
YKA Yellowknife Ar 116.48 18 PKP PKPdf 12 10 52.4 -1.1
comp=Z,0.2nm,0.8s,baz=317,slow=1.7,SNR=4.0
NVAR Mina Array Bea 130.29 42 PKP PKPdf 12 11 21.9 +1.2
comp=Z,0.2nm,0.5s,baz=275,slow=3.3,SNR=2.5
ULM Lac du Bonnet 132.34 16 PKP PKPdf 12 11 26.1 +1.9
comp=Z,0.4nm,0.5s,baz=73,slow=4.2,SNR=1.8
ULM SKPbc SKPbc 12 14 46.6 +0.4
comp=Z,1.6nm,0.9s,baz=18,slow=4.0,SNR=3.0
PDAR Pinedale Array 132.92 32 PKP PKPdf 12 11 26.6 +1.0
comp=Z,0.4nm,1.0s,baz=270,slow=4.5,SNR=3.0
PDAR SKPbc SKPbc 12 14 52.7 +4.2
comp=Z,0.6nm,0.8s,baz=264,slow=1.5,SNR=4.4
CFAA Coronel Fontan 142.53 193 PKP PKPdf 12 11 42.5 -1.1
comp=Z,0.2nm,0.6s,baz=141,slow=2.3,SNR=4.3
WMOK Wichita Mounta 144.50 31 *e*PKPdf PKPdf 12 11 45.1 -1.9
WMOK *e*pPKPdf pPKPdf 12 12 00.5 -3.3
LTX Lajitas 145.44 43 *e*PKPdf PKPdf 12 11 49.5 +0.7
TXAR Lajitas Array 145.44 43 PKPbc PKPbc 12 11 49.8 +1.0
comp=Z,5.1nm,0.5s,baz=267,slow=0.9,SNR=148
SIUC Southern Illin 145.75 16 *e*PKPdf PKPdf 12 11 51.2 +2.2
SIUC *e*pPKPdf pPKPdf 12 12 04.1 -1.8
WCI Wyandotte Cave 145.98 12 *e*PKPdf PKPdf 12 11 50.4 +1.0
MIAR Mount Ida 147.08 25 *e*PKPbc PKPbc 12 11 55.0 +1.5
JCT Junction City 147.13 37 *e*PKPbc PKPbc 12 11 54.6 +0.8
PLAL Pickwick Lake 148.62 17 *e*PKPbc PKPbc 12 11 57.4 -0.2

MAN 07 11:52:59,1548N×12124E,h1km,mb4.0,ML2.8,MS2.4, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PCPH	**Palayan**	**0.16**	**300**	‖*e*P		Pg	11 53 03.5	+1.4
PCPH				*e*S		Sg	11 53 06.0	+1.9
BALP	**Baler**	**0.41**	**52**	*e*P		Pg	11 53 08.3	+1.3
BALP				*e*S		Sg	11 53 15.1	+2.7
POLP	**Polilio Island**	**1.01**	**138**	*e*P		Pg	11 53 18.9	+0.5
POLP				*e*S		Sg	11 53 36.6	+5.1
CAUP	**Cauayan**	**1.56**	**21**	*e*P		Pn	11 53 27.1	-0.8
CAUP				*e*S		Sn	11 53 49.1	+0.4

*ISCJB **07** 12:02:06.8±1.1,2958N±005×130.1E±0.1,h26km±9km, mb3.5/4,Error ellipse: s-maj=18.6km s-min=4.3km az=23.8*
*JMA **07** 12:02:06.7±0.1,2959N×130.11E,h23km±3km,M3.5*
JMA Felt I J1.
*NEIC **07** 12:02:06.8,2959N×130.11E,h23km,MG3.5(JMA),After JMA.*
*IDC **07** 12:02:10.3±1.9,2960N×129.93E,h40km±22km,mb3.2/4, mb1 3.5/6,mb1mx3.3/22,mbtmp3.4/6,ML3.3/2,Error ellipse: s-maj=42.6km s-min=9.5km az=107.0*

ISC 07 12:02:06.0±1.3,2955N±004×13017E±009,h11km±8km, n15,σ0§88/24,mb3.5/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.39**	**318**	P		**Pg**	**12 02 13.7**	**+0.1**
JNN				*e*S		**Sg**	**12 02 19.0**	**+0.2**
JKC	**Kuchinoerabu**	**0.91**	**1**	P		**Pg**	**12 02 23.1**	**-0.4**
JKC				*e*S		**Sg**	**12 02 35.2**	**-0.1**
JAM	**Amami Oshima**	**1.24**	**204**	P		**Pn**	**12 02 28.0**	**-1.2**
JAM				*e*S		**Sb**	**12 02 44.5**	**-0.9**
JZK	**Kikaishima**	**1.25**	**188**	P		**Pn**	**12 02 30.4**	**+1.1**
JTN	**Tanegashima 3**	**1.30**	**32**	P		**Pn**	**12 02 29.6**	**-0.4**
JTN				*e*S		**Sb**	**12 02 46.6**	**-0.5**
JTSR	**Tashiro 2**	**1.73**	**22**	P		**Pn**	**12 02 36.0**	**0.0**
JTSR				*e*S		**Sn**	**12 02 56.3**	**-1.8**
JTK	**Tokunoshima**	**2.06**	**212**	P		**Pn**	**12 02 39.4**	**-1.1**
JTK				*e*S		**Sn**	**12 03 05.6**	**-0.6**
JIH	**Iheya**	**3.17**	**218**	P		**Pn**	**12 02 56.5**	**+0.7**
JOW	**Kunigami**	**3.19**	**212**	P		**Pn**	**12 02 56.7**	**+0.7**
JOW				*e*S		**Sn**	**12 03 34.5**	**+0.6**
JOW	**Kunigami**	**3.19**	**212**	P		**Pn**	**12 02 57.1**	**+1.1**
	11nm,0.3s,baz=84,slow=15,SNR=21							
JOW				S		**Sn**	**12 03 33.5**	**-0.4**
	5.6nm,0.3s,baz=128,slow=29,SNR=3.3							
JNU	**Nakatsue**	**3.61**	**9**	P		**Pn**	**12 03 03.2**	**+1.5**
	2.4nm,0.3s,baz=186,slow=20,SNR=13							
JNU				S		**Sn**	**12 03 45.5**	**+1.1**
	baz=12,slow=26,SNR=3.2							
SONM	**Songino Array**	**25.86**	**321**	P		**P**	**12 07 36.5**	**-0.9**
	0.3nm,0.4s,mb3.2,baz=143,slow=9.4,SNR=3.7							
WRA	**Warramunga Arr**	**49.37**	**175**	P		**P**	**12 10 55.3**	**-0.1**
	0.5nm,0.6s,mb3.7,baz=354,slow=8.1,SNR=8.8							
ASAR	**Alice Springs**	**53.03**	**176**	P		**P**	**12 11 24.6**	**+1.6**
	0.4nm,0.6s,mb3.5,baz=8.5,slow=13,SNR=9.3							
YKA	**Yellowknife Ar**	**74.80**	**26**	P		**P**	**12 13 46.4**	**+0.6**
	0.4nm,0.8s,mb3.4,baz=306,slow=5.6,SNR=7.5							

IDC 07 12:08:43.6±1.3,1466N×14422E,h0km,mb3.3/5, mb1 3.5/5,mb1mx3.4/18,mbtmp3.3/5,Error ellipse: s-maj=54.7km s-min=22.8km az=90.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.74**	**196**	P		P	12 15 44.1	-0.2
	1.1nm,0.9s,baz=10,slow=9.6,SNR=7.0							
ASAR	**Alice Springs**	**39.41**	**195**	P		P	12 16 15.4	0.0
	0.2nm,0.7s,baz=19,slow=12,SNR=3.0							
SONM	**Songino Array**	**45.50**	**325**	P		P	12 17 04.4	-0.4
	0.1nm,0.4s,baz=108,slow=4.7,SNR=2.9							
MKAR	**Makanchi Array**	**60.29**	**316**	P		P	12 18 55.3	+1.2
	0.2nm,0.2s,baz=91,slow=8.5,SNR=4.2							
YKA	**Yellowknife Ar**	**82.20**	**27**	P		P	12 21 06.0	-0.4
	0.2nm,0.9s,baz=279,slow=4.8,SNR=3.0							

*NIED **07** 12:59:00,40.10N×140.30E,h11km,Mw4.0 Best double couple: M0 1.16000×10^15 NP1:ϕ§5.00000°,δ44.00000°, λ93.00000°. NP2:ϕ§181.00000°,δ47.00000°,λ87.00000°.*
*JMA **07** 12:59:26.4,4009N×140.30E,h16km±1km,M4.2 Broadband fault plane solution: P waves. NP1: ϕ§11.00000°,δ44.00000°,λ104.00000°. NP2: ϕ§172.00000°,δ48.00000°,λ77.00000°. Principal axes: T Plg80.0000°, Azm12.0000°; N Plg10.0000°, Azm181.0000°; P Plg2.0000°, Azm271.0000°;*
JMA Felt IV J1.
*ISCJB **07** 12:59:26.5±0.4,4010N±003×14028E±004,h24km±3km, mb4.1/27 Error ellipse: s-maj=4.7km s-min=4.0km az=30.6*
*MOS **07** 12:59:28.3±1.0,4017N×14006E,h33km,mb4.4/15,Error ellipse: s-maj=15.3km s-min=8.0km az=88.6*
*BJI **07** 12:59:29.8,4007N×140.13E,h53km,mb4.4,Ms4.3, Msz4.0*
*IDC **07** 12:59:30.6±1.9,4009N×14008E,h44km±19km,mb3.8/13, mb1 4.0/16,mb1mx3.9/22,mbtmp3.9/16,ML4.0/3,MS3.0/2, Ms1 3.0/2,ms1mx2.3/33,Error ellipse: s-maj=19.8km s-min=11.7km az=100.0*
*NEIC **07** 12:59:30.9±0.8,4009N×140.11E,h47km±7km,mb4.5/8, MW4.0(NIED),Error ellipse: s-maj=8.1km s-min=6.3km az=111.0*
NEIC Recorded [4 JMA] in Akita and [2 JMA] in Aomori and Iwate Prefectures.

ISC 07 12:59:26.8±0.5,4010N±002×14031E±003,h14km±3km, n72,σ1§09/78,mb4.1/27,2C-1D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JAH	**Hinai**	**0.27**	**70**	P		**Pg**	**12 59 32.4**	**0.0**
JAH				S		**Sg**	**12 59 36.5**	**+0.3**
JOG2	**Oga 2**	**0.44**	**245**	P		**Pg**	**12 59 35.1**	**-0.4**
JOG2				S		**Sg**	**12 59 41.6**	**+0.2**
JIW	**Iwasaki**	**0.55**	**335**	P		**Pg**	**12 59 37.0**	**-0.5**
JIW				S		**Sg**	**12 59 44.7**	**-0.1**
JRG	**Rokugo**	**0.74**	**160**	P		**Pg**	**12 59 40.8**	**-0.4**
JRG				*e*S		**Sg**	**12 59 51.2**	**+0.2**
JTM	**Tenmabayashi**	**0.90**	**40**	P		**Pb**	**12 59 43.4**	**-0.7**
JANG	**Nango**	**0.96**	**73**	P		**Pb**	**12 59 44.3**	**-0.9**
JANG				S		**Sb**	**12 59 57.0**	**-0.8**
JOM	**Ohasama**	**0.98**	**129**	P		**Pb**	**12 59 44.4**	**-1.1**
JOM				S		**Sb**	**12 59 58.0**	**-0.3**
ERM	**Erimo**	**2.88**	**47**	*e*P		**Pn**	**13 00 14.0**	**+1.8**
MAJO	**Matsushiro**	**3.92**	**206**	*e*Pn		**Pn**	**13 00 27.0**	**+0.6**
MAT	**Matsushiro**	**3.92**	**206**	P		**Pn**	**13 00 26.9**	**+0.5**
MAT				S		**Sn**	**13 01 11.8**	**-0.4**
MJAR	**Matsushiro Arr**	**3.92**	**206**	P		**Pn**	**13 00 28.2**	**+1.8**
MJAR				S		**Sn**	**13 01 11.0**	**-1.2**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MJAR				smax				
	comp=N,3.0nm,0.3s							
MJAR	**Matsushiro Arr**	**3.92**	**206**	P		**Pn**	**13 00 28.2**	**+1.8**
	comp=N,1.3nm,0.3s,baz=30,slow=10,SNR=16							
MJAR				S		**Sn**	**13 01 11.0**	**-1.2**
	comp=N,2.8nm,0.3s,baz=40,slow=12,SNR=8.5							
ASAJ	**Asahikawa**	**4.36**	**22**	P		**Pn**	**13 00 35.0**	**+2.5**
ASAJ				pmax	pmax			
	comp=Z,8.0nm,0.3s							
ASAJ	**Asahikawa**	**4.36**	**22**	P		**Pn**	**13 00 35.0**	**+2.5**
	comp=Z,8.0nm,0.3s,baz=222,slow=12,SNR=67							
YSS	**Yuzh-Sakhalins**	**7.08**	**14**	*e*Pn		**Pn**	**13 01 12.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**7.08**	**14**	*e*P		**Pn**	**13 01 11.2**	**+1.3**
HABR	**Khabarovsk**	**9.18**	**338**	*e*P		**Pn**	**13 01 37.1**	**-1.6**
HABR				*e*			13 03 16.4	
KSRS	**Korea Array**	**10.03**	**259**	P		**Pn**	**13 01 53.3**	**+3.0**
	comp=Z,2.3nm,0.3s,baz=70,slow=15,SNR=24							
KSRS				S		**Sn**	**13 03 45.2**	**+2.7**
	comp=Z,1.8nm,0.3s,baz=74,slow=24,SNR=11							
KSRS				LR	LR		13 04 55.2	
	comp=Z,102nm,21.4s,baz=143,slow=33							
JNU	**Nakatsue**	**10.29**	**230**	LR	LR		13 05 53.0	
	comp=Z,81nm,19.2s,baz=164,slow=38							
KLR	**Kul'dur**	**10.97**	**329**	*e*P		**Pn**	**13 02 07.2**	**+4.0**
CBIJ	**Chichi jima**	**13.06**	**173**	P		**Pn**	**13 02 35.4**	**+3.5**
	comp=Z,5.6nm,0.3s,baz=255,slow=20,SNR=2.5							
HIA Hailar 17.22 309 *e*P **Pn 13 03 31.6 +5.0**
NJ2 Nanjing 19.08 252 *e*P **Pn 13 03 50.8 +1.1**
NJ2 AMB AMB
comp=Z,20nm,0.6s
YAK Yakutsk 22.89 347 *e*P **P 13 04 31.1 +1.4**
YAK pmax pmax
comp=Z,4.0nm,0.8s,mb3.9
BOD Bodaibo 24.50 325 *e*P **P 13 04 44.2 -1.1**
BOD pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
SONM Songino Array 25.45 299 P **P 13 04 52.9 -1.1**
comp=Z,0.3nm,0.7s,mb2.9,baz=104,slow=7.1,SNR=3.2
TIXI Tiksi 32.15 353 *e*P **P 13 05 50.0 -3.4**
MKAR Makanchi Array 41.82 299 P **P 13 07 15.4 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 41.82 299 P **P 13 07 15.4 -0.4**
comp=Z,1.2nm,0.7s,mb3.6,baz=84,slow=11,SNR=9.4
KURK Kurchatov 43.41 305 *e*P **P 13 07 27.5 -1.2**
comp=Z,2.0nm,0.8s,mb3.9
KURK Kurchatov 43.41 305 *e*P **P 13 07 27.5 -1.2**
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
IMA2 Indian Mountai 44.52 32 *e*P **P 13 07 38.4 +1.0**
COLA College 46.98 34 *e*P **P 13 07 58.1 +1.2**
comp=Z,3.3nm,0.7s,mb4.4
COLA College 46.98 34 *e*P **P 13 07 58.1 +1.2**
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
TKM2 Tokmak 2 47.47 296 *e*P **P 13 08 01.1 +0.1**
comp=Z,6.4nm,0.8s,mb4.6
TKM2 Tokmak 2 47.47 296 *e*P **P 13 08 01.1 +0.1**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
EKS2 Erkin-Say 48.81 296 *e*P **P 13 08 11.3 -0.1**
comp=Z,3.3nm,0.7s,mb4.5
AML Almayashu 49.06 295 *e*P **P 13 08 11.9 -1.4**
comp=Z,5.4nm,0.9s,mb4.6
SVE Sverdlovsk 52.30 317 *e*P **P 13 08 37.8 +0.3**
SVE pmax pmax
comp=Z,6.0nm,0.4s,mb4.9
ARU Arti 53.52 317 *e*P **P 13 08 46.1 -0.4**
comp=Z,4.6nm,0.8s,mb4.5
ARU Arti 53.52 317 *c i*P **P 13 08 45.4 -1.1**
ARU 13 09 48.7
ARU 13 10 45.1
ARU PPP 13 11 52.1
ARU S **S** **13 16 15.1 -3.5**
ARU SS SS 13 19 54.0 -4.3
ARU pmax pmax
comp=Z,23nm,2.5s,mb4.7
WRA Warramunga Arr 59.99 186 *i* P **P 13 09 30.8 -1.9**
WRA pmax pmax
comp=Z,2.0nm,0.7s
WRA Warramunga Arr 59.99 186 P **P 13 09 31.2 -1.5**
comp=Z,1.6nm,0.7s,mb4.2,baz=2.8,slow=7.5,SNR=27
WRA PcP PcP 13 10 18.6 -0.1
comp=Z,0.9nm,0.7s,baz=359,slow=4.5,SNR=5.2
ARCES ARCESS Array B 60.83 339 P **P 13 09 36.9 -1.1**
ARCES pmax pmax
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 60.83 339 P **P 13 09 36.9 -1.1**
comp=Z,5.9nm,1.1s,mb4.6,baz=30,slow=9.8,SNR=3.8
YKA Yellowknife Ar 61.61 31 P **P 13 09 43.6 +0.3**
comp=Z,1.1nm,0.7s,mb4.1,baz=304,slow=6.5,SNR=24
ASAR Alice Springs 63.71 187 P **P 13 09 57.5 -0.2**
ASAR 13 10 33.9
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 63.71 187 P **P 13 09 57.5 -0.3**
comp=Z,1.6nm,0.8s,mb4.1,baz=7.7,slow=6.1,SNR=13
ASAR PcP PcP 13 10 33.9 +0.2
comp=Z,0.8nm,0.8s,baz=3.6,slow=4.1,SNR=4.7
OBN Obninsk 65.14 322‖ *e*P **P 13 10 05.8 -1.0**
OBN *e* 13 12 25.3
OBN *e*S S 13 18 38.9 -10
OBN pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
FINES FINESS Array B 65.71 331 P **P 13 10 09.3 -1.1**
FINES FINESS Array B 65.71 331 *i* P **P 13 10 09.6 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 65.71 331 P **P 13 10 09.3 -1.1**
comp=Z,1.5nm,0.7s,mb4.1,baz=77,slow=8.4,SNR=4.5
KIV Kislovodsk 68.27 310‖ *e*P **P 13 10 27.1 +0.1**
KIV *e* 13 13 00.9
KIV *e*S S 13 19 20.1 -7.1
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
NOA NORSAR Array B 71.03 336 P **P 13 10 42.2 -1.5**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NOA NORSAR Array B 71.03 336 P **P 13 10 42.2 -1.5**
comp=Z,1.0nm,0.7s,mb3.9,baz=40,slow=6.3,SNR=3.2
AKASG Malin Array Be 71.36 321 P **P 13 10 45.0 -0.9**
AKASG Malin Array Be 71.36 321 *i* P **P 13 10 45.0 -0.9**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.36 321 P **P 13 10 45.0 -0.9**
comp=Z,1.2nm,0.5s,mb4.1,baz=47,slow=6.2,SNR=4.7
STKA Stephens Creek 71.62 179 P **P 13 10 47.6 +0.1**
comp=Z,1.7nm,0.9s,mb4.0,baz=133,slow=10,SNR=4.0
NVAR Mina Array Bea 73.85 53 P **P 13 11 02.5 +1.6**
comp=Z,1.2nm,0.8s,mb3.9,baz=304,slow=4.3,SNR=8.5
TPNV Topopah Spring 76.05 53 *e*P **P 13 11 14.2 +0.5**
comp=Z,4.7nm,1.1s,mb4.3
TPNV Topopah Spring 76.05 53 *e*P **P 13 11 14.2 +0.5**
TPNV pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BW06 Boulder Array 76.14 45 *e*P **P 13 11 14.4 +0.4**
comp=Z,1.3nm,0.8s,mb3.9
PDAR Pinedale Array 76.14 45 P **P 13 11 14.6 +0.5**
comp=Z,1.1nm,0.6s,mb4.0,baz=273,slow=2.0,SNR=12
BRTR Keskin Array B 76.19 310 P **P 13 11 14.5 0.0**
BRTR Keskin Array B 76.19 310 P **P 13 11 14.5 0.0**
comp=Z,0.4nm,0.4s,mb3.7,baz=35,slow=5.3,SNR=3.3
PV10 Paradox Valley 79.40 48 *e*P **P 13 11 34.0 +1.7**
TXAR Lajitas Array 88.92 52 P **P 13 12 21.2 +0.3**
comp=Z,0.3nm,0.7s,mb3.8,baz=306,slow=4.1,SNR=4.8
VNA2 Neumayer--Watz 144.99 198 *e*PKPdf PKPdf 13 19 01.9 -0.3
baz=129,slow=2.3
VNA2 *e* 13 19 05.9
VNA2 *e* 13 19 15.6
VNA2 *e* 13 19 20.0
VNA3 Neumayer Olymp 145.28 197 *e*PKPdf PKPdf 13 19 01.9 -0.8
VNA3 *e* 13 19 05.8
VNA3 *e* 13 19 15.9
VNA3 *e* 13 19 19.7
LPAZ La Paz 145.75 54 *e*PKPbc PKPbc 13 19 06.0 +0.4
LPAZ La Paz 145.75 54 PKPbc PKPbc 13 19 05.4 -0.2
comp=Z,0.7nm,0.4s,baz=346,slow=2.3,SNR=3.6

*IDC **07** 13:29:03.7±1.1,4503N×149.41E,h0km,mb3.4/5, mb1 3.7/5,mb1mx3.5/20,mbtmp3.4/5,Error ellipse: s-maj=44.7km s-min=28.4km az=121.0*
*MOS **07** 13:29:10.5±2.5,4517N×149.85E,h62km,mb4.2/1,Error ellipse: s-maj=56.1km s-min=33.3km az=49.1*
*ISCJB **07** 13:29:11.7±1.9,4461N±0.1×1495E±02,h84km±20km, mb3.2/5,Error ellipse: s-maj=24.7km s-min=19.6km az=142.3*

ISC 07 13:29:12.4±1.7,448N±01×1495E±02,h67km±18km,n23, σ1§11/26,mb3.2/5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**2.73**	**256**	*e*PN		**Pn**	**13 29 54.9**	**+1.1**
YUK				*e*S		**Sn**	**13 30 27.6**	**+1.9**
YUK				smax				
	comp=E,750nm,0.6s							
YUK				smax				
	comp=N,390nm,0.5s							
YUK				smax				
	comp=E,240nm,0.5s							
NEM2	**Nemuro 2**	**3.06**	**244**	P		**Pn**	**13 29 56.9**	**-1.5**
NEM2				*e*S		**Sn**	**13 30 31.9**	**-1.9**
JRA	**Rausu**	**3.27**	**257**	P		**Pn**	**13 30 01.6**	**+0.4**
JNK	**Nakash**	**3.66**	**253**	P		**Pn**	**13 30 06.7**	**+0.3**
JNK				*e*S		**Sn**	**13 30 47.3**	**-1.0**
JAK	**Akkeshi**	**3.91**	**245**	P		**Pn**	**13 30 09.1**	**-0.9**
JTKR	**Abashiri--Toko**	**4.11**	**261**	P		**Pn**	**13 30 13.8**	**+1.2**
JAR	**Ashorobuto**	**4.41**	**253**	P		**Pn**	**13 30 17.8**	**+1.1**
JOB	**Onbets**	**4.52**	**248**	P		**Pn**	**13 30 18.3**	**+0.1**
JCH	**Churui**	**4.96**	**247**	P		**Pn**	**13 30 23.9**	**-0.4**

JNBK	Urakawa-nobuka	5.52	246	P	Pn	13 30 32.1	+0.2
JBT2	Biratori 2	5.56	252	P	Pn	13 30 33.4	+1.0
JNB	Noboribetsu	6.58	253	P	Pn	13 30 47.1	+0.7
JKB	Kayabe	6.83	248	P	Pn	13 30 50.1	+0.3
JANG	Nango	7.36	236	P	Pn	13 30 55.6	-1.5
OFUJ	Ofunato	8.15	229	P	Pn	13 31 07.7	-0.2
OFUJ				eS	Sx	13 32 33.9	
JRG	Rokugo	8.51	234	P	Pn	13 31 12.5	-0.3
JIO	Ouri	8.78	227	P	Pn	13 31 15.6	-0.9
JIO				eS	Sx	13 32 48.3	
MKAR	Makanchi Array	45.64	298	P	P	13 37 23.9	-2.0
	comp=E,0.2nm,0.6s,mb3.0,baz=68,slow=9.5,SNR=2.7						
YKA	Yellowknife Ar	54.01	35	P	P	13 38 28.1	-1.1
YKA	Yellowknife Ar	54.01	35	P	P	13 38 28.1	-1.0
	comp=E,0.3nm,0.7s,mb3.4,baz=300,slow=6.9,SNR=4.2						
WRA	Warramunga Arr	65.86	196	P	P	13 39 52.1	+1.4
	comp=E,0.4nm,0.8s,mb3.3,baz=9.5,slow=7.3,SNR=2.3						
ASAR	Alice Springs	69.57	195	P	P	13 40 16.5	+2.5
	comp=E,0.2nm,0.6s,mb3.1,baz=1.9,slow=7.8,SNR=4.3						
TXAR	Lajitas Array	80.67	58	P	P	13 41 17.9	-0.2
	comp=E,0.2nm,0.5s,mb3.2,baz=299,slow=4.0,SNR=6.5						

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*NEIC **07** 13:38:08.2, 1527N×9251W, h198km, MD4.3(MEX), After MEX.*

MEX 07 13:38:08.2±0.4**, 1527N×9251W, h198**km±46km**, MD4.3, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	1.07	20	i P	Pn	13 38 37.2	-1.0
CCIG				i S	Sn	13 38 59.7	-2.0
SCX	San Cristobal	1.47	355	eP	Pn	13 38 40.5	-1.0
SCX				eS	Sn	13 39 08.9	+1.5
CMIG	Matias Romero	2.92	309	eP	Pn	13 38 55.4	-1.3
CMIG				i S	Sn	13 39 32.8	-1.9
OXX	Oaxaca	4.43	295	eP	Pn	13 39 17.5	+2.2
VHO	Vista Hermosa	4.44	294	i P	Pn	13 39 16.4	+1.0
VHO				i S	Sn	13 40 06.9	-1.4
UTMO	Huajuapan	5.68	297	i P	Pn	13 39 32.0	+0.7
UTMO				i S	Sn	13 40 36.4	-0.6
PPM	Popocatepetl	6.96	304	i S	Sn	13 41 08.9	+1.9

GUC 07 13:44:24.2±1.0**, 2692S×6974W, h102**km±13km**, ML3.7, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	0.70	231	eP	Pn	13 44 42.2	+0.4
CPCH				i S	Sn	13 44 55.4	+0.4
CPCH				AML	AML	13 44 57.1	
	comp=E,13µm,0.1s						
CDCH	Caldera	0.98	261	eP	Pn	13 44 45.2	+0.7
CDCH				i S	Sn	13 44 59.9	0.0
VACH	Vallenar	1.88	208	i P	Pn	13 44 55.9	+0.6
VACH				i S	Sn	13 45 19.8	+0.8
VACH				AML	AML	13 45 23.4	
	comp=E,1µm,0.2s						
TLL	Tololo Astrono	3.37	196	i P	Pn	13 45 16.0	+1.1
TLL				i S	Sn	13 45 55.0	+1.0
TLL				AML	AML	13 45 58.3	
	comp=N,50nm,0.6s						
CEN1	Los Morros	3.54	353	eP	Pn	13 45 15.2	-2.1
CEN1				AML	AML	13 46 08.2	
	comp=E,36nm,0.6s						

IDC 07 13:44:35.1±14.0**, 1486S×16716E, h0**km**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/15**, mbtmp3.7**/4**, ML3.3**/1**, Error ellipse: s-maj=250.7km s-min=40.3km az=65.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.21	185	Pn	Pn	13 46 20.8	-1.0
	0.5nm,0.3s,baz=53,slow=17,SNR=5.9						
DZM				Sn	Sn	13 47 43.6	-0.8
	0.1nm,0.3s,baz=228,slow=16,SNR=1.7						
STKA	Stephens Creek	28.83	230	P	P	13 50 36.8	+1.6
	1.2nm,0.4s,baz=63,slow=7.7,SNR=6.5						
WRA	Warramunga Arr	31.70	256	P	P	13 50 59.2	-1.5
	0.4nm,1.0s,baz=85,slow=9.2,SNR=2.4						
ASAR	Alice Springs	32.53	249	P	P	13 51 08.6	+0.6
	0.6nm,0.6s,baz=78,slow=9.1,SNR=14						

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*BJI **07** 13:45:29.9, 4906N×15628E, h10km, mB5.0, mb4.8, Ms4.6, Msz4.4*
*IDC **07** 13:45:31.6±0.5, 4887N×15605E, h0km, mb4.4/23, mb1 4.5/24, mb1mx4.5/26, mbtmp4.4/24, ML4.2/1, MS4.2/13, Ms1 4.2/13, ms1mx3.7/50, Error ellipse: s-maj=16.9km s-min=12.2km az=138.0*
*ISCJB **07** 13:45:32.8±0.2, 4891N±0.03×15607E±0.04, h14km, mb4.8/120, MS4.2/28, Error ellipse: s-maj=5.3km s-min=2.7km az=141.1*
*NEIC **07** 13:45:33.6±0.2, 4886N×15603E, h10km, mb4.9/69, Error ellipse: s-maj=6.0km s-min=3.8km az=158.0*
*KRSC **07** 13:45:35.2±1.3, 4901N×15733E, h5km±5km, ML5.0*
*MOS **07** 13:45:36.4±1.2, 4892N×15603E, h41km, mb5.0/51, MS4.1/17, Error ellipse: s-maj=8.2km s-min=4.4km az=94.5*
*SZGRF **07** 13:45:41.2, 4921N×15506E, h42km, mb5.1, Kuril Islands, Russia*

ISC 07 13:45:34.9±0.2**, 4894N**±003×**15600E**±004**, h15**km**, h15**km±1.6km**:pP-P, n341, σ0.99**/351**, mb4.8**/120**, MS4.2**/28**, 37C-19D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.75	3	⇑iPN	Pn	13 46 05.4	+0.7
SKR				eS	Sn	13 46 24.0	-2.7
SKR				pmax	pmax		
	comp=N,150nm,0.4s						
SKR				pmax	pmax		
	comp=E,90nm,0.4s						
SKR				pmax	pmax		
	comp=Z,240nm,0.4s						
SKR				smax			
	comp=N,10µm,2.0s						
SKR				smax			
	comp=N,3µm,0.6s						
SKR				smax			
	comp=E,2µm,0.6s						
MIPR	Malaya Ipel'ka	3.38	8	eP	Pn	13 46 28.9	+1.9
RUS	Russkaya	3.85	24	eP	Pn	13 46 33.2	-0.3
RUS				i S	Sn	13 47 16.3	-2.1
GRL	Gorelyy	3.85	19	eP	Pn	13 46 34.6	+1.0
GRL				eS	Sn	13 47 17.1	-1.4
PET	Petropavlovsk	4.42	21	ePn	Pn	13 46 41.5	+0.1
PET				eSn	Sn	13 47 31.2	-1.4
PET	Petropavlovsk	4.42	21	⇑iPN	Pn	13 46 41.5	+0.1
PET				pmax	pmax		
	comp=Z,233nm,0.7s						
PET				MLR	MLR		
	comp=Z,900nm,18.0s						
PET	Petropavlovsk	4.42	21	eP	Pn	13 46 41.8	+0.4
PET				i S	Sn	13 47 31.0	-1.6
AVH	Avacha	4.66	21	eP	Pn	13 46 46.1	+1.4
SDLR	Sedlovina	4.71	22	eP	Pn	13 46 45.7	+0.3
SDLR				eS	Sn	13 47 38.1	-1.6
SPN	Mys Shipunski	4.88	30	P	Pn	13 46 47.2	-0.5
KUR	Kuril'sk	6.67	239	⇓iPN	Pn	13 47 13.3	+1.0
KUR				pmax	pmax		
	comp=N,130nm,0.8s						
KUR				pmax	pmax		
	comp=E,150nm,0.8s						
KUR				pmax	pmax		
	comp=Z,590nm,0.8s						
TUMR	Tumrok	6.85	20	P	Pn	13 47 15.8	+1.1
KMNR	Kamenistaya	7.30	19	P	Pn	13 47 22.3	+1.4
KPT	Kopyto	7.50	19	P	Pn	13 47 23.4	-0.2
KOZ	Kozyrevsk	7.51	17	P	Pn	13 47 25.0	+1.2
KOZR	Kozyr	7.52	17	PN	Pn	13 47 25.0	+1.0
SRDR	Sredinnyy	7.73	16	P	Pn	13 47 27.6	+0.8
KLY	Klyuchi	7.91	19	P	Pn	13 47 29.6	+0.4
SRKR	Sorokina	8.34	20	P	Pn	13 47 35.5	+0.4
KBTR	Krutoberegovo	8.38	27	P	Pn	13 47 34.5	-1.2
YSS	Yuzh-Sakhalins	9.11	262	ePn	Pn	13 47 50.9	+5.2
YSS				eSn	Sn	13 49 31.3	+3.4
YSS	Yuzh-Sakhalins	9.11	262	ePN	Pn	13 47 50.0	+4.3
YSS				MLR	MLR		
	comp=E,800nm,16.0s						
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
UGL	Uglegorsk	9.16	276	ePN	Pn	13 47 53.0	+6.6
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				MLR	MLR		
	comp=N,2µm,15.0s						
UGL				MLR	MLR		
	comp=E,2µm,15.0s						
UGL				MLR	MLR		
	comp=Z,2µm,15.0s						
OKH	Okha	9.40	304	ePN	Pn	13 47 56.2	+6.5
OKH				eS	Sn	13 49 44.0	+9.0
OKH				MLR	MLR		
	comp=Z,1µm,13.0s						
ASAJ	Asahikawa	10.41	247	PN	Pn	13 48 05.4	+1.8
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,809nm,18.6s						
ASAJ	Asahikawa	10.41	247	Pn	Pn	13 48 05.4	+1.8
	comp=Z,4.5nm,0.3s,baz=78,slow=15,SNR=32						
ASAJ				LR	LR	13 51 58.1	
	comp=Z,809nm,18.6s,baz=344,slow=37						
MA2	Magadan	11.08	346	ePn	Pn	13 48 14.2	+1.5
MA2	Magadan	11.08	346	ePN	Pn	13 48 14.6	+1.9
MA2				pmax	pmax		
	comp=Z,30nm,0.9s						
ERM	Erimo	11.36	237	i PN	Pn	13 48 17.5	+1.0
HABR	Khabarovsk	13.84	276	P	Pn	13 48 48.2	-2.2
HABR				e		13 51 22.4	
KLR	Kul'dur	15.88	280	eP	Pn	13 49 18.3	+0.7
KLR				MLR	MLR		
	comp=N,1µm,16.0s						
KLR				MLR	MLR		
	comp=E,600nm,13.0s						
KLR				MLR	MLR		
	comp=Z,4µm,13.0s						
MAJO	Matsushiro	17.95	233	eP	Pn	13 49 42.2	-1.7
	comp=Z,17nm,0.8s						
MAJO	Matsushiro	17.95	233	eP	Pn	13 49 42.2	-1.6
MAJO				pmax	pmax		
	comp=Z,17nm,0.8s						
MAT	Matsushiro	17.95	233	P	Pn	13 49 42.4	-1.4
MAT				eS	Sn	13 53 14.0	+10
MJAR	Matsushiro Arr	17.95	233	P	Pn	13 49 41.3	-2.5
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,288nm,20.6s						
MJAR	Matsushiro Arr	17.95	233	P	Pn	13 49 41.3	-2.6
	comp=Z,0.8nm,0.3s,baz=30,slow=14,SNR=7.0						
MJAR				LR	LR	13 56 41.3	
	comp=Z,288nm,20.6s,baz=65,slow=37						
MDJ	Mudanjiang	18.55	267	P	Pn	13 49 49.4	-1.7
MDJ				AP	pP	13 49 52.6	-2.4
MDJ				S	Sn	13 53 16.6	-1.5
MDJ				XS	sS	13 53 25.9	-2.6
MDJ				AMB	AMB		
	comp=Z,16nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,142nm,5.0s						
MDJ				LR	LR		
	comp=N,436nm,16.9s						
MDJ				LR	LR		
	comp=E,278nm,17.5s						
MDJ				LR	LR		
	comp=Z,455nm,18.1s						
MDJ	Mudanjiang	18.55	267	eP	Pn	13 49 50.4	-0.8
	comp=Z,47nm,1.3s						
YAK	Yakutsk	19.67	322	eP	Pn	13 50 02.8	-1.6
	comp=Z,58nm,0.8s						
YAK	Yakutsk	19.67	322	⇑eP	Pn	13 50 02.1	-2.3
YAK				pmax	pmax		
	comp=Z,45nm,1.1s						
BILL	Bilibino	19.84	11	eP	Pn	13 50 04.2	-2.2
	comp=Z,17nm,0.6s						
BILL	Bilibino	19.84	11	⇑eP	Pn	13 50 04.0	-2.4
BILL				pmax	pmax		
	comp=Z,25nm,1.0s						
BILL				MLR	MLR		
	comp=Z,500nm,15.0s						
CLNS	Chul'man	20.22	305	eP	P	13 50 09.8	+0.8
CLNS				e		13 50 23.2	
CLNS				ePPP		13 50 32.1	
CLNS				eS	S	13 53 53.1	-2.1
CLNS				e		13 54 36.2	
CLNS				pmax	pmax		
	comp=N,12nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,24nm,0.8s						
CLNS				pmax	pmax		
	comp=E,11nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,700nm,11.0s,MS4.3						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,800nm,15.0s,MS4.2						
CN2	Changchun	21.61	268	eP	P	13 50 21.3	-2.9
CN2				eXP	sP	13 50 30.4	+0.2
CN2				eS	S	13 54 13.5	-9.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,16.0s,MS4.0						
CN2				LR	LR		
	comp=E,300nm,16.0s,MS4.0						
CN2				LR	LR		
	comp=Z,500nm,16.0s,MS4.0						
GAMB	Gambell	22.91	38	eP	P	13 50 37.0	-0.8
KSRS	Korea Array	23.33	251	P	P	13 50 42.9	+0.4
	comp=Z,11nm,0.6s,mb4.5,baz=50,slow=9.6,SNR=23						
KSRS				LR	LR	13 59 31.7	
	comp=Z,399nm,18.4s,MS3.9,baz=50,slow=36						
HIA	Hailar	23.60	285	eP	P	13 50 42.8	-2.3
	comp=Z,7.5nm,0.6s,mb4.3						
HIA	Hailar	23.60	285	eP	P	13 50 42.8	-2.3
HIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
JNU	Nakatsue	24.51	239	P	P	13 50 52.6	-0.9
	comp=Z,21nm,1.0s,mb4.6,baz=58,slow=6.9,SNR=5.0						
TNA	Tin City	25.13	35	eP	P	13 51 00.4	+1.5
	comp=Z,32nm,0.9s,mb4.8						
TNA				e		13 51 11.4	
TIXI	Tiksi	25.98	341	eP	P	13 51 04.8	-1.7
	comp=Z,18nm,0.6s,mb4.8						
TIXI	Tiksi	25.98	341	⇑eP	P	13 51 04.7	-1.8
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
BOD	Bodaibo	26.19	306	eP	P	13 51 04.3	-4.2
BOD				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.4						
BJI	Beijing	29.48	268	P	P	13 51 36.7	-1.4
BJI				AP	pP	13 51 39.8	-2.8
BJI				PCP	PcP	13 54 42.8	-0.5
BJI				S	S	13 56 30.4	-1.4
BJI				AMB	AMB		
	comp=Z,6.0nm,0.5s,mb4.6						
BJI				AMB	AMB		
	comp=Z,170nm,5.1s						
BJI				LR	LR		
	comp=N,360nm,17.9s,MS4.2						
BJI				LR	LR		
	comp=E,321nm,18.7s,MS4.2						
BJI				LR	LR		
	comp=Z,185nm,21.9s,MS3.7						
IMA2	Indian Mountai	30.89	38	eP	P	13 51 49.3	-1.1
HHC	Hu-ho-hao-te	32.11	272	eP	P	13 52 01.3	-0.1
HHC				AP	pP	13 52 06.0	+0.2
HHC				XP	sP	13 52 08.8	+1.2
HHC				PP	PP	13 53 07.0	-6.8
HHC				PCP	PcP	13 54 50.4	+0.1
HHC				S	S	13 57 12.0	-1.0
HHC				XS	sS	13 57 19.1	-1.3
HHC				SCP	ScP	13 58 32.8	-0.3
HHC				SS	SS	13 59 02.6	-28
HHC				SCS	ScS	14 02 25.9	-5.9
HHC				AMB	AMB		
	comp=Z,18nm,0.9s,mb4.9						
HHC				AMB	AMB		
	comp=Z,128nm,5.2s						
HHC				LR	LR		
	comp=N,503nm,19.0s,MS4.3						
HHC				LR	LR		
	comp=E,212nm,17.8s,MS4.3						
HHC				LR	LR		
	comp=Z,289nm,17.8s,MS4.0						
SONM	Songino Array	32.49	287	P	P	13 52 04.1	-0.5
SONM						13 54 50.8	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,686nm,18.4s						
SONM	Songino Array	32.49	287	P	P	13 52 04.1	-0.5
	comp=Z,0.8nm,0.5s,mb3.8,baz=68,slow=8.3,SNR=13						
SONM				PcP	PcP	13 54 50.8	-0.4
	comp=Z,1.6nm,0.8s,baz=103,slow=2.2,SNR=6.2						
SONM				LR	LR	14 06 36.1	
	comp=Z,686nm,18.4s,MS4.4,baz=10,slow=39						
NJ2	Nanjing	32.50	253	eP	P	13 52 05.2	+0.3
NJ2				AP	pP	13 52 09.3	0.0
NJ2				XP	sP	13 52 12.9	+1.8
NJ2				PP	PP	13 53 13.4	-4.9
NJ2				S	S	13 57 18.5	-0.8
NJ2				XS	sS	13 57 26.0	-0.6
NJ2				AMB	AMB		
	comp=Z,530nm,7.0s						
NJ2				LR	LR		
	comp=N,1µm,21.3s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,21.5s,MS4.8						
NJ2				LR	LR		
	comp=Z,1µm,22.2s,MS4.5						
MCK	McKinley	32.73	42	eP	P	13 52 07.0	+0.5
	comp=Z,8.8nm,0.9s,mb4.7						
MCK				e		13 52 21.5	
MCK	McKinley	32.73	42	eP	P	13 52 07.0	+0.5
MCK				e		13 52 21.5	
MCK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TLY	Talaya	32.96	295	eP	P	13 52 08.8	+0.1
	comp=Z,7.1nm,1.0s,mb4.5						
TLY				e		13 52 21.4	
TLY	Talaya	32.96	295	eP	P	13 52 08.6	-0.1
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
TLY				MLR	MLR		
	comp=Z,380nm,15.0s,MS4.2						
COLA	College	33.21	40	eP	P	13 52 10.4	-0.4
	comp=Z,6.1nm,0.7s,mb4.6						
COLA	College	33.21	40	eP	P	13 52 10.4	-0.3
COLA				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ZAK	Zakamensk	33.56	293	eP	P	13 52 13.1	-0.9
ZAK				e		13 54 53.8	
EGAK	Eagle	36.08	40	eP	P	13 52 34.5	-0.9
	comp=Z,6.1nm,0.6s,mb4.7						
WHN	Wuhan	36.37	255	⇑P	P	13 52 36.2	-2.1
INK	Inuvik	38.76	34	P	P	13 52 58.5	+0.4
INK						13 55 08.2	
INK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
INK	Inuvik	38.76	34	P	P	13 52 58.5	+0.4
	comp=Z,9.6nm,0.6s,mb4.7,baz=293,slow=6.4,SNR=55						
INK				PcP	PcP	13 55 08.2	-1.1
	comp=Z,2.1nm,0.7s,baz=339,slow=5.3,SNR=3.4						
LZH	Lanzhou	39.77	271	eP	P	13 53 07.4	+0.4
LZH				AP	pP	13 53 10.5	-1.0
LZH				XP	sP	13 53 12.0	-1.3
LZH				PP	PP	13 54 43.0	+4.7
LZH				eS	S	13 59 10.0	-0.4
LZH				SS	SS	14 01 57.0	-9.1
LZH				AMB	AMB		
	comp=Z,24nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=N,478nm,14.8s						
LZH				LR	LR		
	comp=Z,775nm,16.0s,MS4.6						
LZH	Lanzhou	39.77	271	eP	P	13 53 07.4	+0.4
LZH				pP	pP	13 53 10.5	-1.0
LZH				sP	sP	13 53 12.0	-1.3
LZH				PP	PP	13 54 43.0	+4.7
LZH				eS	S	13 59 10.0	-0.4
LZH				sS	sS	13 59 14.4	-3.5
LZH				SS	SS	14 01 57.0	-9.1
LZH	Lanzhou	39.77	271	eP	P	13 53 07.4	+0.4
LZH						13 54 43.0	
LZH				eS	S	13 59 10.0	-0.4
LZH				SS	SS	14 01 57.0	-9.1
GTA	Gaotai	40.56	278	⇑P	P	13 53 13.8	+0.3
GTA				AP	pP	13 53 17.2	-0.9
GTA				XP	sP	13 53 18.7	-1.2
GTA				PP	PP	13 54 50.8	+4.0
GTA				PCP	PcP	13 55 16.8	+1.2
GTA				S	S	13 59 23.0	+0.8
GTA				XS	sS	13 59 28.7	-0.9
GTA				SS	SS	14 02 14.5	-7.3
GTA				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,196nm,4.9s						
GTA				LR	LR		
	comp=N,379nm,15.6s,MS4.5						
GTA				LR	LR		
	comp=E,359nm,16.7s,MS4.5						
GTA				LR	LR		
	comp=Z,519nm,16.0s,MS4.5						
CD2	Chengdu	43.00	265	⇓iP	P	13 53 34.0	+0.4
CD2				AP	pP	13 53 39.2	+1.1
CD2				XP	sP	13 53 42.1	+2.2
CD2				PP	PP	13 55 16.1	+2.8
CD2				S	S	13 59 58.0	-0.4
CD2				XS	sS	14 00 06.1	+0.2
CD2				SS	SS	14 03 04.2	-6.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,120nm,18.0s,MS4.2						
CD2				LR	LR		
	comp=E,250nm,14.4s,MS4.2						
CD2				LR	LR		
	comp=Z,260nm,14.4s,MS4.3						
NVS	Novosibirsk	43.42	307	eP	P	13 53 32.8	-3.9
GYA	Guiyang	44.08	258	⇑iP	P	13 53 42.5	+0.2
GYA				PP	PP	13 55 27.5	+2.5
GYA				PCP	PcP	13 55 29.3	+1.9
GYA				SCP	ScP	13 59 20.0	+1.4
GYA				S	S	14 00 14.9	+0.6
GYA				SS	SS	14 03 24.0	-7.5
GYA				SCS	ScS	14 03 39.8	-0.8
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,6.4s						
GYA				LR	LR		
	comp=N,370nm,18.9s,MS4.6						
GYA				LR	LR		
	comp=E,580nm,18.2s,MS4.6						
GYA				LR	LR		
	comp=Z,460nm,19.6s,MS4.4						
WMQ	Urumqi	45.96	291	⇓iP	P	13 53 57.4	+0.4
WMQ				AP	pP	13 54 01.9	+0.3
WMQ				XP	sP	13 54 04.4	+1.0
WMQ				PCP	PcP	13 55 35.0	+1.4
WMQ				PP	PP	13 55 45.3	+0.7
WMQ				S	S	14 00 40.4	-0.7
WMQ				XS	sS	14 00 48.0	-0.6
WMQ				AMB	AMB		
	comp=Z,11nm,1.1s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,205nm,5.4s						
WMQ				LR	LR		
	comp=N,259nm,18.4s,MS4.2						
WMQ				LR	LR		
	comp=E,58nm,21.8s,MS4.2						
WMQ				LR	LR		
	comp=Z,140nm,16.4s						
BBB	Bella Bella	46.26	56	LR	LR	14 11 35.0	
	comp=Z,202nm,18.6s,MS4.1,baz=270,slow=34						
KMI	Kunming	47.54	260	P	P	13 54 10.2	+0.5
KMI				AMB	AMB		
	comp=Z,22nm,1.1s,mb5.1						
MK31	Makanchi Array	47.67	297	i P	P	13 54 09.6	-0.8

MK31 pmax pmax
comp=Z,14nm,0.9s,mb5.0
MKAR Makanchi Array 47.67 297 P **P** **13 54 09.6 -0.8**
MKAR LR LR 14 15 46.7
MKAR Makanchi Array 47.67 297⇑ *eP* **P** **13 54 09.6 -0.8**
MKAR Makanchi Array 47.67 297 P **P** **13 54 09.6 -0.8**
comp=Z,7.5nm,0.8s,mb4.8,baz=63,slow=8.3,SNR=56
MKAR LR LR 14 15 46.7
comp=Z,448nm,18.6s,MS4.5,baz=56,slow=38
KURK Kurchatov 47.78 303 *eP* **P** **13 54 10.3 -0.9**
comp=Z,13nm,0.7s,mb5.1
KURK Kurchatov 47.78 303 *eP* **P** **13 54 10.3 -0.9**
KURK pmax pmax
comp=Z,13nm,0.7s,mb5.1
YKW3 Yellowknife Ar 47.97 39 *eP* **P** **13 54 12.5 0.0**
YKA Yellowknife Ar 48.01 39 P **P** **13 54 12.4 -0.3**
YKA PcP PcP 13 55 39.6 -0.9
YKA Yellowknife Ar 48.01 39 P **P** **13 54 12.4 -0.4**
YKA 13 55 39.6
YKA pmax pmax
comp=Z,3.0nm,0.8s
YKA Yellowknife Ar 48.01 39 P **P** **13 54 12.4 -0.3**
comp=Z,3.3nm,0.8s,mb4.4,baz=296,slow=7.5,SNR=34
YKA PcP PcP 13 55 39.6 -1.0
comp=Z,0.5nm,0.6s,baz=315,slow=3.1,SNR=4.8
RES Resolute Bay 48.13 20 *eP* **P** **13 54 14.6 +0.9**
BRVK Borovoye 51.01 309 *eP* **P** **13 54 35.4 -0.4**
comp=Z,8.6nm,0.8s,mb4.7
BRVK *e* 13 54 46.9
BRVK Borovoye 51.01 309 *eP* **P** **13 54 35.4 -0.4**
BRVK *e* 13 54 46.9
BRVK pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
LSA Lhasa 52.09 273 P **P** **13 54 46.0 +1.8**
LSA AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
LSA Lhasa 52.09 273 *eP* **P** **13 54 45.8 +1.6**
comp=Z,10nm,0.8s,mb4.8
LSA Lhasa 52.09 273 *eP* **P** **13 54 45.8 +1.6**
LSA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
EDM Edmonton 53.40 48 *eP* **P** **13 54 53.0 -0.6**
EDM *e* 13 55 05.7
SVE Sverdlovsk 53.55 317⇑ *eP* **P** **13 54 54.5 -0.1**
SVE pmax pmax
comp=Z,26nm,1.0s,mb5.1
SHL Shillong 54.36 269 *eP* **P** **13 55 02.0 +1.0**
CHG Chiang Mai 54.50 258 PG **P** **13 55 02.9 +0.9**
CHG SG pP 13 55 13.5 +6.8
CHTO Chiang Mai 54.50 258 *eP* **P** **13 55 02.4 +0.3**
comp=Z,11nm,0.7s,mb5.0
CHTO *e* 13 55 15.2
CHTO Chiang Mai 54.50 258 *eP* **P** **13 55 02.4 +0.4**
CHTO *e* 13 55 15.2
CHTO pmax pmax
comp=Z,11nm,0.7s,mb5.0
AAK Ala-Archa 54.60 296 *eP* **P** **13 55 01.8 -0.7**
comp=Z,6.2nm,1.0s,mb4.6
AAK Ala-Archa 54.60 296 *eP* **P** **13 55 01.8 -0.7**
AAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
ARU Arti 54.71 318 *eP* **P** **13 55 02.5 -0.6**
comp=Z,25nm,0.7s,mb5.3
ARU *e* 13 55 14.2
ARU Arti 54.71 318 *c iP* **P** **13 55 02.0 -1.1**
ARU 13 57 06.6
ARU *eS* **S** **14 02 43.6 +1.1**
ARU SS SS 14 06 26.3 +1.6
ARU pmax pmax
comp=Z,38nm,1.2s,mb5.3
EKS2 Erkin-Say 55.01 297 *eP* **P** **13 55 05.1 -0.3**
comp=Z,3.3nm,0.8s,mb4.4
WALA Waterton Lakes 55.56 53 *eP* **P** **13 55 08.4 -0.9**
comp=Z,2.2nm,0.6s,mb4.4
TAPN Taplejung 55.91 274 *eP* **P** **13 55 12.8 +0.7**
comp=Z,45nm,1.0s,mb5.5
APA Apatity 56.09 337⇑ *eP* **P** **13 55 10.0 -2.8**
APA pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
MOD Modoc 56.34 63 *eP* **P** **13 55 15.5 +0.4**
comp=Z,9.2nm,1.4s,mb4.6
ARCES ARCESS Array B 56.41 341 P **P** **13 55 13.4 -1.7**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES MLR MLR
comp=Z,249nm,20.0s
ARCES ARCESS Array B 56.41 341 P **P** **13 55 13.4 -1.8**
comp=Z,4.4nm,0.8s,mb4.5,baz=35,slow=7.8,SNR=10
ARCES LR LR 14 24 57.2
comp=Z,249nm,20.0s,MS4.3,baz=30,slow=42
ODAN Odare 56.45 274 *eP* **P** **13 55 17.7 +1.7**
comp=Z,38nm,1.1s,mb5.3
JIRN Jiri 56.70 275 *eP* **P** **13 55 18.8 +1.0**
comp=Z,62nm,0.8s,mb5.7
KKN Kakani 57.21 276 *eP* **P** **13 55 22.0 +0.6**
comp=Z,59nm,0.9s,mb5.6
KKN Kakani 57.21 276 *eP* **P** **13 55 22.0 +0.6**
KKN pmax pmax
comp=Z,59nm,0.9s,mb5.6
TMCR Tamitsa 57.29 333 *eP* **P** **13 55 12.5 -8.9**
GKN Gorkha 57.49 276 *eP* **P** **13 55 24.0 +0.7**
comp=Z,23nm,0.6s,mb5.3
HNR Honiara 58.22 175 LR LR 14 15 01.6
comp=Z,183nm,20.4s,MS4.2,baz=357,slow=30
PMG Port Moresby 58.61 190 P **P** **13 55 29.1 -2.1**
comp=Z,4.2nm,0.7s,mb4.6,baz=107,slow=17,SNR=2.4
HLID Hailey 58.69 58 *eP* **P** **13 55 31.5 -0.1**
comp=Z,5.1nm,1.2s,mb4.4
BOZ Bozeman (W) 58.89 55 *eP* **P** **13 55 33.4 +0.5**
comp=Z,26nm,1.9s,mb4.9
BOZ Bozeman (W) 58.89 55 *eP* **P** **13 55 33.4 +0.5**
BOZ pmax pmax
comp=Z,26nm,1.9s,mb4.9
QLMT Earthquake Lak 59.52 56 *eP* **P** **13 55 37.8 +0.4**
NVAR Mina Array Bea 59.72 65 P **P** **13 55 38.1 -0.7**
comp=Z,1.8nm,0.8s,mb4.2,baz=301,slow=5.4,SNR=17
JOF Joensuu 60.22 334 *ep* **P** **13 55 40.1 -1.7**
comp=Z,2.4nm,0.4s,mb4.6
JOF Joensuu 60.22 334 *eP* **P** **13 55 40.1 -1.7**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
IMW Indian Meadow 60.40 56 *eP* **P** **13 55 45.6 +2.2**
RLMT Red Lodge 60.50 54 *eP* **P** **13 55 44.7 +0.7**
MOOW Moose Ponds 60.60 56 *eP* **P** **13 55 35.0 -10**
TPAW Teton Pass 60.66 56 *eP* **P** **13 55 46.8 +1.7**
comp=Z,14nm,1.1s,mb5.0
LOHW Long Hollow 60.77 56 *eP* **P** **13 55 47.0 +1.1**
comp=Z,11nm,1.4s,mb4.8
REDW Red Top Meadow 60.80 57 *eP* **P** **13 55 46.6 +0.6**
comp=Z,12nm,1.3s,mb4.8
HWUT Hardware Ranch 61.56 58 *eP* **P** **13 55 50.8 -0.5**
comp=Z,3.6nm,0.8s,mb4.5
BW06 Boulder Array 61.90 56 *eP* **P** **13 55 53.6 +0.1**
comp=Z,5.0nm,0.9s,mb4.6
PDAR Pinedale Array 61.90 56 P **P** **13 55 53.1 -0.4**
comp=Z,1.5nm,0.7s,mb4.2,baz=301,slow=2.3,SNR=14
TPNV Topopah Spring 61.92 65 *eP* **P** **13 55 52.5 -1.3**
comp=Z,17nm,0.2s,mb5.8
TPNV Topopah Spring 61.92 65 *eP* **P** **13 55 52.5 -1.3**
TPNV pmax pmax
comp=Z,17nm,0.2s,mb5.8
KAF Kangasniemi 62.26 336 *ep* **P** **13 55 53.4 -2.2**
comp=Z,1.1nm,0.4s,mb4.3
KAF Kangasniemi 62.26 336 *eP* **P** **13 55 53.4 -2.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
FIA1 FINESS Array S 62.87 336 *eP* **P** **13 55 58.4 -1.3**
FINES FINESS Array B 62.87 336 P **P** **13 55 58.9 -0.8**
FINES LR LR 14 26 26.1
FINES FINESS Array B 62.87 336 *i* P **P** **13 55 58.9 -0.8**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES FINESS Array B 62.87 336 P **P** **13 55 58.9 -0.8**
comp=Z,3.6nm,0.5s,mb4.8,baz=40,slow=8.1,SNR=42
FINES LR LR 14 26 26.0
comp=Z,206nm,18.7s,MS4.3,baz=342,slow=39
CCUT Cedar City 63.23 63 *eP* **P** **13 56 01.9 -0.6**
ULM Lac du Bonnet 63.60 43 P **P** **13 56 04.0 -0.8**
comp=Z,3.2nm,0.7s,mb4.4,baz=312,slow=7.2,SNR=7.7
SRU San Rafael 63.82 60 *eP* **P** **13 56 06.1 -0.3**
comp=Z,12nm,0.9s,mb4.9
SRU *e* 13 56 18.2
SRU San Rafael 63.82 60 *eP* **P** **13 56 06.1 -0.3**
SRU *e* 13 56 18.2
SRU pmax pmax
comp=Z,12nm,0.9s,mb4.9

OBN Obninsk 64.58 326⇑ *eP* **P** **13 56 08.4 -2.7**
OBN *eS* **S** **14 04 42.9 -6.9**
OBN pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
OBN MLR MLR
comp=Z,100nm,19.0s,MS4.0
PV10 Paradox Valley 65.17 60 P **P** **13 56 14.6 -0.6**
PV10 *e* 13 56 28.8
PV01 Paradox Valley 65.60 60 *eP* **P** **13 56 18.8 +0.7**
ISCO Idaho Springs 66.10 56 *eP* **P** **13 56 21.5 +0.3**
comp=Z,3.8nm,0.8s,mb4.5
ISCO *e* 13 56 33.8
ISCO Idaho Springs 66.10 56 *eP* **P** **13 56 21.5 +0.3**
ISCO *e* 13 56 33.8
ISCO pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
NB2 NORSAR Subarra 66.76 342 P **P** **13 56 24.1 -1.0**
comp=Z,4.4nm,0.8s,mb4.5,baz=27,slow=6.2
NB2 NORSAR Subarra 66.76 342 P **P** **13 56 24.1 -1.0**
NB2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
NOA NORSAR Array B 66.76 342 P **P** **13 56 24.2 -0.9**
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA MLR MLR
comp=Z,189nm,18.2s
NOA NORSAR Array B 66.76 342 P **P** **13 56 24.2 -0.8**
comp=Z,1.2nm,0.6s,mb4.1,baz=26,slow=6.4,SNR=6.7
NOA LR LR 14 30 10.7
comp=Z,189nm,18.1s,MS4.3,baz=20,slow=40
ECSD EROS,Sioux Fal 67.97 48 *eP* **P** **13 56 31.7 -1.4**
ECSD *epP* pP 13 56 44.0 +6.2
HYB Hyderabad 68.87 272 *eP* **P** **13 56 39.0 0.0**
HYB *e* 13 56 52.0
HYB Hyderabad 68.87 272 *i* P **P** **13 56 39.0 0.0**
HYB *e* 13 56 52.0
SCHQ Schefferville 70.52 25 P **P** **13 56 47.7 -1.0**
SCHQ LR LR 14 33 31.6
SCHQ Schefferville 70.52 25 P **P** **13 56 47.7 -1.0**
comp=Z,3.3nm,0.8s,mb4.3,baz=17,slow=13,SNR=7.1
SCHQ LR LR 14 33 31.6
comp=Z,91nm,18.6s,MS4.1,baz=27,slow=41
KIV Kislovodsk 70.64 315⇑ *eP* **P** **13 56 49.8 +0.3**
KIV *e* 13 59 23.6
KIV *eS* S 14 06 00.2 -2.5
KIV pmax pmax
comp=Z,13nm,1.2s,mb4.7
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.1
AKASG Malin Array Be 70.78 327 *i* P **P** **13 56 49.7 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 70.78 327 P **P** **13 56 49.1 -1.1**
comp=Z,3.4nm,0.6s,mb4.5,baz=32,slow=6.2,SNR=10.0
KIEV Kiev 70.79 327 *eP* **P** **13 56 48.9 -1.5**
comp=Z,3.6nm,0.6s,mb4.5
KIEV Kiev 70.79 327 *eP* **P** **13 56 48.9 -1.4**
KIEV pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ZEI Tsey 70.97 314 *eP* **P** **13 56 52.4 +0.8**
ZEI pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
POO Poona 71.16 277 *ex* **P** **13 56 53.5 +0.5**
WB2 Warramunga Arr 71.23 201 *eP* **P** **13 56 52.0 -1.3**
WRA Warramunga Arr 71.24 202 *i* P **P** **13 56 51.9 -1.4**
WRA pmax pmax
comp=Z,4.0nm,0.7s
WRA Warramunga Arr 71.24 202 P **P** **13 56 51.9 -1.4**
comp=Z,4.4nm,0.7s,mb4.5,baz=18,slow=6.4,SNR=30
KAD Karad 71.82 276 *ex* x 13 56 58.0
ARTV Artvin 73.13 314 *i* P **P** **13 57 06.1 +1.6**
BSEG Bad Segeberg 73.48 340 *eP* **P** **13 57 06.9 +0.5**
comp=Z,17nm,1.1s,mb4.9
WMOK Wichita Mounta 73.51 56 *eP* **P** **13 57 06.1 -0.8**
comp=Z,3.1nm,0.8s,mb4.3
WMOK *e* 13 57 19.8
WMOK Wichita Mounta 73.51 56 *eP* **P** **13 57 06.1 -0.8**
WMOK *e* 13 57 19.8
WMOK pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
KWP Kalwaria 73.91 330 *eP* **P** **13 57 09.7 +0.8**
KWP Kalwaria 73.91 330 *iP* **P** **13 57 09.4 +0.5**
OJC Ojcow 74.31 332 *eP* **P** **13 57 11.8 +0.5**
STHS Stebnicka Huta 74.56 331 *eP* **P** **13 57 14.0 +1.2**
comp=Z,13nm,0.7s,mb5.0
STHS Stebnicka Huta 74.56 331 *eP* **P** **13 57 14.0 +1.2**
STHS pmax pmax
comp=Z,13nm,0.7s,mb5.0
KOLS Kolonicke sedl 74.66 330 *eP* **P** **13 57 13.6 +0.3**
TXAR Lajitas Array 74.75 63 P **P** **13 57 12.9 -1.3**
TXAR pmax pmax
comp=Z,1.0nm,0.5s
TXAR Lajitas Array 74.75 63 P **P** **13 57 12.9 -1.3**
comp=Z,1.3nm,0.5s,mb4.1,baz=303,slow=5.2,SNR=39
KSP Ksiaz 74.78 335 *eP* **P** **13 57 14.1 +0.1**
BURAR Bucovina Array 74.80 328 *iP* **P** **13 57 14.1 0.0**
BURAR Bucovina Array 74.80 328 *iP* **P** **13 57 14.1 -0.1**
NIE Niedzica 74.86 332 *eP* **P** **13 57 15.5 +1.0**
NRDL Niedersach Rie 74.86 339 *eP* **P** **13 57 14.9 +0.4**
comp=Z,15nm,0.9s,mb4.9
PALK Pallekele 74.89 264 *eP* **P** **13 57 16.1 +0.9**
comp=Z,15nm,1.0s,mb4.9
PALK *e* 13 57 29.5
UZH Uzhgorod 74.91 330 *eP* **P** **13 57 14.0 -0.8**
UZH *e* 13 57 29.6
ASAR Alice Springs 74.92 201 P **P** **13 57 14.6 -0.4**
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR Alice Springs 74.92 201 P **P** **13 57 14.6 -0.4**
comp=Z,2.2nm,0.8s,mb4.2,baz=9.5,slow=5.5,SNR=30
CRVS Cervenica-Dubn 74.94 331 *eP* **P** **13 57 14.8 -0.2**
HAKT HAKKARI 75.07 310 *iP* **P** **13 57 17.3 +1.3**
OKC Ostrava-Krasne 75.14 333 *eP* **P** **13 57 16.7 +0.6**
UPC Upice 75.16 335 *eP* **P** **13 57 16.7 +0.5**
DPC Dobruska-Polom 75.21 335 *eP* **P** **13 57 17.0 +0.5**
CLL Collm 75.24 337⇑ *iP* **P** **13 57 16.5 -0.2**
comp=Z,26nm,1.0s,mb5.1
CLL *i* 13 57 28.9
CLL Collm 75.24 337⇑ *iP* **P** **13 57 16.5 -0.2**
CLL *i* 13 57 28.9
CLL pmax pmax
comp=Z,26nm,1.0s,mb5.1
CLL Collm 75.24 337⇑ *iP* **P** **13 57 16.5 -0.2**
comp=Z,26nm,1.0s,mb5.1
CLL *i* PcP PcP 13 57 28.9 -1.1
CLL Collm 75.24 337 *eP* **P** **13 57 16.5 -0.2**
comp=Z,26nm,1.0s,mb5.1
TRPA Tarpa 75.27 330 *iP* **P** **13 57 17.5 +0.6**
MORC Moravsky Berou 75.38 334⇑ *P* **P** **13 57 18.1 +0.7**
MORC Moravsky Berou 75.38 334⇑ *iP* **P** **13 57 18.1 +0.6**
BRG Berggiesshubel 75.39 336 *eP* **P** **13 57 17.6 +0.1**
comp=Z,13nm,1.2s,mb4.7
BRG Berggiesshubel 75.39 336 *i* P **P** **13 57 17.6 +0.1**
comp=Z,12nm,1.2s,mb4.7
BRG *e* 13 57 30.5
comp=Z,9.2nm,1.3s
CLZ Clausthal 75.41 339 *eP* **P** **13 57 18.4 +0.8**
CLZ pmax pmax
comp=Z,35nm,1.1s,mb5.2
CLZ Clausthal 75.41 339 *eP* **P** **13 57 18.4 +0.8**
comp=Z,35nm,1.1s,mb5.2
FBE Freiberg 75.50 337 *eP* **P** **13 57 18.5 +0.3**
comp=Z,19nm,1.0s,mb5.0
PVCC Panska Ves 75.54 336 *eP* **P** **13 57 18.7 +0.3**
KECS Kecovo 75.62 331 *eP* **P** **13 57 18.8 -0.1**
comp=Z,6.6nm,1.0s,mb4.5
KECS Kecovo 75.62 331 *eP* **P** **13 57 18.8 -0.1**
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
PRU Pruhonice 76.03 336 *eP* **P** **13 57 21.7 +0.5**
VRAC Vranov 76.07 334 *iP* **P** **13 57 22.3 +0.8**
VRAC Vranov 76.07 334 *P* **P** **13 57 22.5 +1.1**
VRAC Vranov 76.07 334 *iP* **P** **13 57 22.3 +0.9**
VYHS Vyhne 76.13 332 *iP* **P** **13 57 22.4 +0.6**
comp=Z,7.0nm,0.8s,mb4.6
VYHS Vyhne 76.13 332 *i* P **P** **13 57 22.4 +0.6**
VYHS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TANN Tannenbergstha 76.20 337 *eP* **P** **13 57 22.5 +0.3**
comp=Z,21nm,1.6s,mb4.8
MOX Moxa 76.20 338 *eP* **P** **13 57 22.5 +0.3**
MOX *e* 13 57 35.3
MOX Moxa 76.20 338 *eP* **P** **13 57 22.6 +0.4**
comp=Z,14nm,0.8s,mb4.9

WERD Werda 76.21 337 *eP* **P** **13 57 22.5 +0.3**
comp=Z,20nm,1.3s,mb4.9
GUNZ Gunzen 76.28 337 *eP* **P** **13 57 23.1 +0.5**
comp=Z,16nm,0.9s,mb5.0
TIRR Tirgusor 76.31 324 *iP* **P** **13 57 23.2 +0.3**
TIRR Tirgusor 76.31 324 *iP* **P** **13 57 23.2 +0.3**
WERN Wernitzgruen 76.34 337 *eP* **P** **13 57 23.5 +0.6**
comp=Z,17nm,0.7s,mb5.1
MLR Muntele Rosu 76.35 326 *iP* **P** **13 57 24.3 +1.2**
MLR Muntele Rosu 76.35 326 *iP* **P** **13 57 24.3 +1.2**
NKC Novy Kostel 76.37 337 *eP* **P** **13 57 23.8 +0.7**
DRGR 76.37 329⇑ P **P** **13 57 23.5 +0.3**
DRGR 76.37 329⇑ P **P** **13 57 23.5 +0.3**
TREC Trest 76.40 335 *eP* **P** **13 57 23.9 +0.6**
UBBA Unterbreizbach 76.44 339 *eP* **P** **13 57 23.8 +0.3**
comp=Z,8.0nm,0.8s,mb4.7
BUG Bochum--Univer 76.49 340 *eP* **P** **13 57 23.9 +0.1**
comp=Z,18nm,0.7s,mb5.1
MANZ Manzenberg 76.68 337 *eP* **P** **13 57 25.3 +0.4**
comp=Z,16nm,1.2s,mb4.8
MODS Modra-Piesok 76.71 333 *eP* **P** **13 57 25.9 +0.8**
comp=Z,10nm,1.0s,mb4.7
MODS Modra-Piesok 76.71 333 *eP* **P** **13 57 25.9 +0.8**
MODS pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BALT Daday 76.71 319 *i* P **P** **13 57 26.0 +0.8**
VOIR 76.72 327 *iP* **P** **13 57 26.1 +0.9**
VOIR 76.72 327 *iP* **P** **13 57 26.1 +0.9**
CTKT Corum 76.85 318 *i* P **P** **13 57 27.5 +1.5**
ROTZ Rotzenmuhle 76.86 337 *eP* **P** **13 57 25.7 -0.2**
comp=Z,14nm,0.9s,mb4.9
ZST Bratislava 76.92 333 *eP* **P** **13 57 27.4 +1.1**
comp=Z,13nm,0.8s,mb4.9
ZST LR LR
comp=Z,100nm,21.6s,MS4.1
ZST Bratislava 76.92 333 *eP* **P** **13 57 27.4 +1.1**
ZST pmax pmax
comp=Z,13nm,0.8s,mb4.9
ZST MLR MLR
comp=Z,100nm,21.6s,MS4.1
ZST Bratislava 76.92 333 *eP* **P** **13 57 27.4 +1.1**
ZST *epS* 23 20 04.9
MALT Malatya 77.05 314 *iP* **P** **13 57 28.7 +1.5**
MALT Malatya 77.05 314 *iP* **P** **13 57 28.7 +1.5**
DLF Lyons Farm 77.07 349 *eP* pP 13 57 38.7 +6.9
KHC Kasperske Hory 77.08 336 *eP* **P** **13 57 27.9 +0.8**
KHC *e*PCP PcP 13 57 38.0 0.0
DCN Croghan 77.11 350 *eP* pP 13 57 38.9 +6.8
GRA1 Grafenberg Arr 77.18 337 *eP* **P** **13 57 28.3 +0.6**
comp=Z,34nm,1.0s,mb5.2
GRA1 *e*pP pP 13 57 40.4 +7.9
GRF Grafenberg Arr 77.18 337 *eP* **P** **13 57 28.3 +0.6**
GRF *e**PP pP 13 57 40.4 +7.9
GRF pmax pmax
comp=Z,34nm,1.0s,mb5.2
GRF Grafenberg Arr 77.18 337 *eP* **P** **13 57 28.3 +0.6**
GRF *e**PP pP 13 57 40.4 +7.9
GRF pmax pmax
comp=Z,34nm,1.0s,mb5.2
GRF Grafenberg Arr 77.18 337 *eP* **P** **13 57 28.3 +0.6**
comp=Z,34nm,1.0s,mb5.2
GRF *e*pP pP 13 57 40.4 +7.9
GRFO Grafenberg 77.18 337 *eP* **P** **13 57 28.2 +0.5**
comp=Z,30nm,1.1s,mb5.1
GRFO *e* 13 57 40.8
GRFO Grafenberg 77.18 337 *eP* **P** **13 57 28.2 +0.5**
GRFO *e* 13 57 40.8
GRFO pmax pmax
comp=Z,30nm,1.1s,mb5.1
WET Wettzell 77.25 336 *eP* **P** **13 57 28.9 +0.8**
WET pmax pmax
comp=Z,33nm,1.4s,mb5.1
WET Wettzell 77.25 336 *eP* **P** **13 57 28.9 +0.8**
comp=Z,33nm,1.4s,mb5.1
GEC2 GERESS Array S 77.30 336 *eP* **P** **13 57 28.6 +0.2**
GERES GERESS Array B 77.30 336 P **P** **13 57 28.9 +0.5**
GERES pmax pmax
comp=Z,5.0nm,0.7s
GERES GERESS Array B 77.30 336 P **P** **13 57 28.9 +0.5**
comp=Z,5.3nm,0.7s,mb4.6,baz=34,slow=5.5,SNR=31
TNS Taunus Mts 77.36 339 *eP* **P** **13 57 29.2 +0.5**
TNS pmax pmax
comp=Z,18nm,0.7s,mb5.1
TNS Taunus Mts 77.36 339 *eP* **P** **13 57 29.2 +0.5**
comp=Z,18nm,0.7s,mb5.1
CONA Conrad Observa 77.53 334⇑ *ipP* pP 13 57 30.8 -3.7
comp=Z,17nm,0.7s
MEM Membach 77.55 341 P **P** **13 57 28.8 -1.0**
comp=Z,19nm,1.3s,mb4.9
GZR Gura Zlata 77.57 328 P **P** **13 57 30.2 +0.2**
BZS Buzias 77.77 329⇑ P **P** **13 57 31.1 +0.1**
BZS Buzias 77.77 329 P **P** **13 57 31.4 +0.3**
BZS Buzias 77.77 329⇑ *iP* **P** **13 57 31.1 0.0**
MOA Molln 78.05 335⇑ *iP* **P** **13 57 33.2 +0.6**
comp=Z,8.3nm,0.7s,mb4.8
MOA Molln 78.05 335⇑ *ipP* pP 13 57 33.2 -4.2
comp=Z,8.3nm,0.7s
SGKT Sivrigoynuk 78.07 320 *i* P **P** **13 57 34.1 +1.2**
BR131 Keskin Array S 78.09 318 *eP* **P** **13 57 33.7 +0.7**
comp=Z,7.6nm,0.9s,mb4.6
BRTR Keskin Array B 78.09 318 P **P** **13 57 33.6 +0.6**
BRTR pmax pmax
comp=Z,11nm,1.0s
BRTR Keskin Array B 78.09 318 P **P** **13 57 33.5 +0.6**
comp=Z,11nm,1.0s,mb4.7,baz=57,slow=4.6,SNR=33
GZT Gaziantep 78.22 314 *i* P **P** **13 57 34.9 +1.1**
ARSA Arzberg 78.24 334⇓ *iP* **P** **13 57 35.0 +1.3**
comp=Z,12nm,1.0s,mb4.8
ARSA Arzberg 78.24 334⇓ *ipP* pP 13 57 35.0 -3.5
comp=Z,12nm,1.0s
GIVF Givet 78.28 342 *eP* **P** **13 57 32.8 -1.0**
AVNT Avonos 78.32 317 *i* P **P** **13 57 35.0 +0.7**
BAIF Baives 78.44 342 *eP* **P** **13 57 33.8 -0.9**
comp=Z,24nm,0.8s,mb4.9
BAIF Baives 78.44 342 *eP* **P** **13 57 33.8 -0.9**
comp=Z,12nm,0.8s,mb4.9
BAIF Baives 78.44 342 *eP* **P** **13 57 33.8 -0.9**
BAIF pmax pmax
comp=Z,12nm,0.8s,mb4.9
PERS Pernice 78.91 334 *i* P **P** **13 57 37.9 +0.5**
PERS *i* 13 57 49.9
KBA Koelnbreinsper 79.01 335⇑ *iP* **P** **13 57 39.5 +1.5**
comp=Z,32nm,1.0s,mb5.2
KBA Koelnbreinsper 79.01 335⇑ *ipP* pP 13 57 39.5 -3.3
comp=Z,32nm,1.0s
KBA Koelnbreinsper 79.01 335⇑ *iP* **P** **13 57 39.5 +1.6**
KBA pmax pmax
comp=Z,32nm,1.0s,mb5.2
MIB Mutribah 79.14 303 *eP* **P** **13 57 39.2 +0.3**
MIB AMb AMB 13 57 40.3
comp=Z,58nm,0.7s,mb5.6
BFO Black Forest 79.16 339 *eP* **P** **13 57 39.0 +0.3**
BFO pmax pmax
comp=Z,24nm,1.6s,mb4.9
BFO Black Forest 79.16 339 *eP* **P** **13 57 39.0 +0.3**
comp=Z,24nm,1.6s,mb4.9
WTTA Wattenberg 79.31 336⇑ *iP* **P** **13 57 40.8 +1.2**
comp=Z,34nm,1.3s,mb5.1
WTTA Wattenberg 79.31 336⇑ *ipP* pP 13 57 40.8 -3.6
comp=Z,34nm,1.3s
WTTA Wattenberg 79.31 336⇑ *iP* **P** **13 57 40.8 +1.3**
WTTA pmax pmax
comp=Z,34nm,1.3s,mb5.1
CDF Champ du Feu 79.33 339 *eP* **P** **13 57 38.8 -0.8**
comp=Z,28nm,0.9s,mb4.9
CDF Champ du Feu 79.33 339 *eP* **P** **13 57 38.8 -0.8**
comp=Z,14nm,0.9s,mb4.9
CDF Champ du Feu 79.33 339 *eP* **P** **13 57 38.8 -0.8**
CDF pmax pmax
comp=Z,14nm,0.9s,mb4.9
MOTA Moosalm 79.38 337⇑ *iP* **P** **13 57 40.9 +1.0**
comp=Z,21nm,1.1s,mb5.0
MOTA Moosalm 79.38 337⇑ *ipP* pP 13 57 40.9 -3.8
comp=Z,21nm,1.1s
MOTA Moosalm 79.38 337⇑ *iP* **P** **13 57 40.9 +1.0**
MOTA pmax pmax
comp=Z,21nm,1.1s,mb5.0
ABTA Abfaltersbach 79.55 335⇑ *ipP* pP 13 57 42.0 -3.7
comp=Z,13nm,1.1s
RST Umm Al-Ruwaisa 79.56 303 *eP* **P** **13 57 40.9 -0.4**
RST AMb AMB 13 57 42.0
comp=Z,54nm,0.7s,mb5.6
NAY Al-Naaiem 79.62 303 *eP* **P** **13 57 41.6 0.0**
NAY AMb AMB 13 57 43.5
comp=Z,31nm,1.2s,mb5.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QRN	Al-Qurain	79.63	302	eP	P	13 57 41.5	-0.1
QRN				AMb	AMB	13 57 43.2	
	comp=Z,39nm,0.8s,mb5.4						
RDF	Al-Radifah	79.70	302	eP	P	13 57 41.9	-0.1
RDF				AMb	AMB	13 57 43.7	
	comp=Z,44nm,0.7s,mb5.5						
VISS	Visnje	79.75	334	i P	P	13 57 41.9	-0.1
VISS				i		13 57 54.0	
FETA	Feichten	79.77	337⇑	ipP	pP	13 57 43.0	-3.8
	comp=Z,12nm,1.1s						
JAVS	Javornik	79.89	334	i P	P	13 57 42.5	-0.2
JAVS				i		13 57 52.0	
HAU	Haudompre	79.92	340	eP	P	13 57 41.9	-1.0
	comp=Z,19nm,0.9s,mb4.7						
HAU				eMLR	MLR		
	comp=Z,114nm,20.8s,MS3.9						
HAU	Haudompre	79.92	340	eP	P	13 57 41.9	-1.0
	comp=Z,9.3nm,0.9s,mb4.7						
HAU				LR	LR		
	comp=Z,110nm,20.8s,MS4.2						
HAU	Haudompre	79.92	340	eP	P	13 57 41.9	-1.0
HAU				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
HAU				MLR	MLR		
	comp=Z,110nm,20.8s,MS4.2						
HINF	Hinteralfeld	79.99	339	eP	P	13 57 42.1	-1.1
FLN	La Foliniere	80.58	344	eP	P	13 57 45.5	-0.9
	comp=Z,59nm,1.0s,mb5.2						
FLN				eMLR	MLR		
	comp=Z,216nm,18.0s,MS4.2						
FLN	La Foliniere	80.58	344	eP	P	13 57 45.5	-0.9
	comp=Z,29nm,1.0s,mb5.2						
FLN				LR	LR		
	comp=Z,220nm,18.0s,MS4.5						
FLN	La Foliniere	80.58	344	eP	P	13 57 45.5	-0.9
FLN				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
FLN				MLR	MLR		
	comp=Z,220nm,18.0s,MS4.5						
LDF	La Druitiere	80.68	344	eP	P	13 57 46.9	0.0
GRR	Gorron	81.01	345	eP	P	13 57 48.0	-0.7
	comp=Z,53nm,0.8s,mb5.2						
GRR	Gorron	81.01	345	eP	P	13 57 48.0	-0.7
	comp=Z,26nm,0.8s,mb5.2						
GRR	Gorron	81.01	345	eP	P	13 57 48.0	-0.7
GRR				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.2						
LOR	Lormes	81.17	341	eP	P	13 57 48.7	-0.9
	comp=Z,25nm,0.9s,mb4.8						
LOR				eMLR	MLR		
	comp=Z,187nm,21.2s,MS4.1						
LOR	Lormes	81.17	341	eP	P	13 57 48.7	-0.9
	comp=Z,13nm,0.9s,mb4.8						
LOR				LR	LR		
	comp=Z,190nm,21.3s,MS4.4						
LOR	Lormes	81.17	341	eP	P	13 57 48.7	-0.9
LOR				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
LOR				MLR	MLR		
	comp=Z,190nm,21.3s,MS4.4						
SGMF	Saint Gilles	81.43	346	eP	P	13 57 51.1	+0.2
SSF	Saint Saulge	81.44	341	eP	P	13 57 50.1	-0.9
	comp=Z,20nm,0.9s,mb4.7						
SSF	Saint Saulge	81.44	341	eP	P	13 57 50.1	-0.9
	comp=Z,9.9nm,0.9s,mb4.7						
SSF	Saint Saulge	81.44	341	eP	P	13 57 50.1	-0.9
SSF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ROSF	Rostrenen	81.46	346	eP	P	13 57 50.5	-0.6
STKA	Stephens Creek	81.47	192	P	P	13 57 49.6	-1.5
	comp=Z,1.9nm,1.0s,mb4.0,baz=337,slow=15,SNR=2.4						
AVF	Avril sur Loir	81.73	341	eP	P	13 57 51.7	-0.8
	comp=Z,65nm,1.4s,mb5.1						
AVF	Avril sur Loir	81.73	341	eP	P	13 57 51.7	-0.8
	comp=Z,32nm,1.4s,mb5.1						
AVF	Avril sur Loir	81.73	341	eP	P	13 57 51.7	-0.8
AVF				pmax	pmax		
	comp=Z,33nm,1.4s,mb5.1						
LPL	La Plagne	82.18	339	eP	P	13 57 55.0	+0.1
	comp=Z,19nm,0.7s,mb4.8						
LPL	La Plagne	82.18	339	eP	P	13 57 55.0	+0.1
	comp=Z,9.6nm,0.7s,mb4.8						
LPL	La Plagne	82.18	339	eP	P	13 57 55.0	+0.1
LPL				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
LPG	La Plagne	82.19	339	eP	P	13 57 55.4	+0.4
ASF	Jabal al Asfar	82.74	312	P	P	13 57 58.9	+0.8
ASF				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASF				MLR	MLR		
	comp=Z,65nm,19.2s						
ASF	Jabal al Asfar	82.74	312	P	P	13 57 58.9	+0.8
	comp=Z,1.4nm,0.6s,mb4.2,baz=219,slow=4.8,SNR=3.1						
ASF				LR	LR	14 39 19.5	
	comp=Z,65nm,19.2s,MS4.0,baz=351,slow=39						
ESDC	Sonseca Array	90.00	345	LR	LR	14 43 25.9	
	comp=Z,154nm,19.6s,MS4.4,baz=30,slow=39						
KEST	Kesra	90.63	333	P	P	13 58 36.8	+0.2
	comp=Z,1.4nm,0.6s,mb4.5,baz=310,slow=3.0,SNR=4.0						

*IDC **07** 14:25:19.2±0.9, 1.15N×12033E, h0^{km}, mb4.2/6, mb1 4.3/7, mb1mx4.0/19, mbtmp4.2/7, ML3.9/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/30, Error ellipse: s-maj=113.9km s-min=16.4km az=63.0*

*NEIC **07** 14:25:20.9±0.5, 100N×120.13E, h10^{km}, mb4.2/2, Error ellipse: s-maj=47.7km s-min=7.7km az=62.0*

*ISCJB **07** 14:25:23.1±2.6, 08N±02×1197E±04, h44^{km}±26^{km}, mb4.1/7, MS3.7/2, Error ellipse: s-maj=83.8km s-min=11.4km az=152.5*

ISC 07 14:25:25.0±2.1**, 08N**±02×**1197E**±05**, h43**^{km}±22^{km}**, n17, σ0^{s}44**/14**, mb4.1**/7**, MS3.7**/2**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	6.30	327	P	Pn	14 26 55.5	0.0
BATI	Kupang	11.58	160	LR	LR	14 33 16.9	
	comp=Z,402nm,21.9s,baz=207,slow=41						
FITZ	Fitzroy Crossi	19.63	163	P	Pn	14 29 51.6	-0.1
	0.3nm,0.3s,baz=38,slow=18,SNR=5.2						
FITZ				LR	LR	14 38 37.2	
	comp=Z,90nm,20.8s,baz=297,slow=40						
WRA	Warramunga Arr	25.08	146	P	P	14 30 45.6	-0.1
	7.8nm,0.3s,mb4.7,baz=336,slow=9.4,SNR=202						
WB2	Warramunga Arr	25.09	146	eP	P	14 30 45.0	-0.7
ASAR	Alice Springs	27.92	151	P	P	14 31 11.7	+0.4
	4.8nm,0.5s,mb4.3,baz=340,slow=10,SNR=59						
PMG	Port Moresby	29.15	111	LR	LR	14 43 02.7	
	comp=Z,1μm,18.8s,MS4.5,baz=93,slow=37						
KSRS	Korea Array	37.30	11	LR	LR	14 47 57.7	
	comp=Z,22nm,18.6s,MS3.0,baz=140,slow=37						
STKA	Stephens Creek	38.51	149	eP	P	14 32 43.9	+0.6
	4.5nm,0.8s,mb4.2						
STKA	Stephens Creek	38.51	149	P	P	14 32 43.9	+0.6
	5.4nm,0.6s,mb4.5,baz=323,slow=8.0,SNR=22						
ULN	Ulaanbaatar	48.19	349	eP	P	14 34 01.2	+0.1
	1.5nm,0.8s,mb4.1						
SONM	Songino Array	48.30	348	P	P	14 34 01.6	-0.3
	0.7nm,0.8s,mb3.7,baz=170,slow=9.0,SNR=5.6						
MK31	Makanchi Array	56.28	330	eP	P	14 35 01.6	+0.5
MKAR	Makanchi Array	56.28	330	P	P	14 35 01.8	+0.6
MKAR	Makanchi Array	56.28	330	P	P	14 35 01.8	+0.6
	0.5nm,0.4s,mb3.9,baz=129,slow=9.0,SNR=9.0						
AKTK	Aktyubinsk	71.74	324	P	P	14 36 42.1	-0.5
AKTO	Aktyubinsk	71.74	324	P	P	14 36 42.1	-0.5
	1.2nm,0.8s,mb3.9,baz=117,slow=4.5,SNR=4.5						

*IDC **07** 14:37:40.8±0.8, 536S×14173E, h0^{km}, mb4.4/7, mb1 4.5/11, mb1mx4.4/15, mbtmp4.6/11, ML5.0/3, MS3.8/5, Ms1 3.8/5, ms1mx3.4/20, Error ellipse: s-maj=22.1km s-min=16.9km az=96.0*

*NEIC **07** 14:37:41.8±0.5, 549S×14171E, h10^{km}, mb4.9/7, Error ellipse: s-maj=14.1km s-min=8.9km az=66.0*

NEIC Felt [III] at Tanahmerah, Indonesia.

*BJI **07** 14:37:42.0, 519S×14187E, h17^{km}, mB5.0, mb4.9, Ms5.1*

*MOS **07** 14:37:43.5±1.0, 548S×14159E, h33^{km}, mb4.9/9, Error ellipse: s-maj=14.9km s-min=8.9km az=122.2*

*ISCJB **07** 14:37:45.7±1.9, 558S±006×14170E±008, h57^{km}±20^{km}, mb4.8/30, MS3.8/3, Error ellipse: s-maj=14.1km s-min=9.4km az=20.3*

ISC 07 14:37:46.2±2.2**, 55S**±01×**14173E**±008**, h39**^{km}±25^{km}**, h25**^{km}±3.8^{km}**: pP-P, n73, σ0^{s}94**/67**, mb4.8**/30**, MS3.8**/3**, 4C-1D, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.65	126	ePn	Pn	14 39 18.1	-3.4
PMG	Port Moresby	6.65	126d	iP	Pn	14 39 23.7	+2.2
PMG	Port Moresby	6.65	126	Pn	Pn	14 39 17.6	-3.9
	1.6nm,0.3s,baz=246,slow=2.6,SNR=4.8						
COEN	Coen	8.56	171	eP	Pn	14 39 47.2	-0.4
	21nm,0.6s						
CTA	Charters Tower	15.19	164	Pn	Pn	14 41 18.3	+0.3
CTA				Lg		14 45 40.4	
CTA				LR	LR	14 47 14.9	
CTA	Charters Tower	15.19	164	Pn	Pn	14 41 18.3	+0.3
	baz=33,slow=1.0,SNR=2.6						
CTA				Lg		14 45 40.4	
	0.9nm,0.3s,baz=35,slow=22,SNR=4.2						
CTA				LR	LR	14 47 14.9	
	comp=Z,217nm,18.8s,baz=161,slow=38						
WB2	Warramunga Arr	16.08	206	eP	Pn	14 41 25.6	-3.9
WRA	Warramunga Arr	16.09	206	P	Pn	14 41 25.5	-4.1
WRA						14 44 16.5	
WRA	Warramunga Arr	16.09	206	Pn	Pn	14 41 25.5	-4.1
	1.0nm,0.3s,baz=27,slow=13,SNR=58						
WRA				Sn	Sn	14 44 16.5	-11
	2.8nm,0.3s,baz=21,slow=23,SNR=4.2						
WRA				Lg		14 46 14.9	
	4.2nm,0.3s,baz=28,slow=28,SNR=6.4						
WRA				LR	LR	14 48 25.6	
	comp=Z,375nm,20.7s,baz=35,slow=40						
HNR	Honiara	18.48	103	eP	Pn	14 42 00.2	+0.8
HNR	Honiara	18.48	103	P	Pn	14 41 59.5	0.0
	4.8nm,0.3s,baz=265,slow=3.7,SNR=5.7						
BATI	Kupang	18.50	254	P	Pn	14 41 59.8	0.0
	11nm,0.3s,baz=161,slow=3.0,SNR=6.4						
ASAR	Alice Springs	19.60	202	P	Pn	14 42 12.1	-0.7
ASAR				S	S	14 45 41.3	-9.3
ASAR	Alice Springs	19.60	202	P	Pn	14 42 12.1	-0.7
	1.7nm,0.3s,baz=32,slow=9.8,SNR=82						
ASAR				S	S	14 45 41.3	-9.3
	1.4nm,0.3s,baz=18,slow=27,SNR=4.1						
ASAR				Lg		14 48 05.1	
	0.8nm,0.3s,baz=14,slow=28,SNR=4.3						
FITZ	Fitzroy Crossi	20.12	230	eP	P	14 42 17.1	+0.2
	56nm,1.1s						
FITZ	Fitzroy Crossi	20.12	230	P	P	14 42 17.0	+0.1
	8.7nm,0.4s,baz=46,slow=9.8,SNR=39						
FITZ				Lg		14 48 20.2	
	56nm,0.8s,baz=131,slow=3.9,SNR=3.4						
FITZ				LR	LR	14 49 57.0	
	comp=Z,279nm,18.9s,MS3.6,baz=164,slow=36						
EIDS	Eidsvold	21.72	157	eP	P	14 42 37.6	+3.4
	8.6nm,0.8s,mb4.2						
STKA	Stephens Creek	26.27	180	eP	P	14 43 21.7	+3.7
	5.4nm,0.6s,mb4.2						
STKA	Stephens Creek	26.27	180	P	P	14 43 19.9	+2.0
	1.4nm,0.5s,mb3.8,baz=8.3,slow=14,SNR=4.1						
STKA				LR	LR	14 53 58.0	
	comp=Z,192nm,18.5s,MS3.7,baz=194,slow=37						
MBWA	Marble Bar	26.43	232	P	P	14 43 19.3	-0.2
FORT	Forrest	28.27	205	eP	P	14 43 42.6	+6.7
	12nm,0.5s,mb4.8						
NWAO	Narrogin (SRO)	35.60	217	LR	LR	15 00 03.1	
	comp=Z,307nm,18.1s,MS4.1,baz=195,slow=38						
JNU	Nakatsue	39.73	346	P	P	14 45 14.2	-0.9
	4.3nm,0.7s,mb4.3,baz=90,slow=1.0,SNR=3.6						
NJ2	Nanjing	43.21	331	eP	P	14 45 43.8	+0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
PSI	Prapat	43.54	280	P	P	14 45 46.4	-0.3
	comp=Z,9.5nm,0.7s,mb4.7,baz=157,slow=8.0,SNR=9.7						
KSRS	Korea Array	44.60	344	P	P	14 45 54.4	-0.3
	comp=Z,2.2nm,0.7s,mb4.1,baz=160,slow=8.3,SNR=7.3						
CHTO	Chiang Mai	48.57	301	eP	P	14 46 25.5	-0.7
XAN	Xi'an	50.05	324	P	P	14 46 36.9	-0.3
XAN				AP	pP	14 46 44.6	-3.8
XAN				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
CD2	Chengdu	51.23	317⇑	iP	P	14 46 46.6	+0.4
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
CD2				AMB	AMB		
	comp=Z,40nm,5.8s						
YSS	Yuzh-Sakhalins	52.20	1	eP	P	14 46 53.9	+0.8
YSS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
LZH	Lanzhou	54.48	322	eP	P	14 47 11.0	+0.9
LZH				AP	pP	14 47 20.5	-0.9
LZH				XP	sP	14 47 24.1	-1.8
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,89nm,4.2s						
SHL	Shillong	57.37	305	eP	P	14 47 32.0	+1.0
HIA	Hailar	57.78	343	eP	P	14 47 30.7	-2.6
GTA	Gaotai	59.07	323	⇑P	P	14 47 43.7	+1.2
GTA				AP	pP	14 47 50.3	-3.7
GTA				XP	sP	14 47 53.0	-5.4
GTA				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.2						
LSA	Lhasa	59.78	309	P	P	14 47 49.6	+1.9
LSA	Lhasa	59.78	309	eP	P	14 47 49.4	+1.7
	comp=Z,25nm,1.0s,mb5.2						
LSA	Lhasa	59.78	309	eP	P	14 47 49.4	+1.7
LSA				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
ULN	Ulaanbaatar	61.23	334	eP	P	14 47 56.8	-0.4
SONM	Songino Array	61.49	334	P	P	14 47 59.3	+0.3
	comp=Z,2.4nm,0.5s,mb4.5,baz=156,slow=7.6,SNR=23						
TAPN	Taplejung	61.51	305	eP	P	14 48 00.4	+0.9
	comp=Z,32nm,0.5s,mb5.7						
ODAN	Odare	61.58	304	eP	P	14 48 00.7	+0.7
	comp=Z,42nm,0.8s,mb5.6						
JIRN	Jiri	62.88	305	eP	P	14 48 09.7	+1.0
	comp=Z,33nm,0.6s,mb5.6						
KKN	Kakani	63.67	305	eP	P	14 48 14.6	+0.7
	comp=Z,58nm,0.9s,mb5.6						
KKN	Kakani	63.67	305	eP	P	14 48 14.6	+0.7
KKN				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.6						
GKN	Gorkha	64.28	305	eP	P	14 48 18.6	+0.7
	comp=Z,46nm,0.5s,mb5.8						
ZAK	Zakamensk	64.76	334	eP	P	14 48 20.4	-0.2
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
TLY	Talaya	65.56	335	eP	P	14 48 26.0	+0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
HYB	Hyderabad	66.38	292	eP	P	14 48 31.0	-0.7
HYB	Hyderabad	66.38	292	i P	P	14 48 31.0	-0.7
BOD	Bodaibo	66.94	344	eP	P	14 48 33.3	-1.2
BOD				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WMQ	Urumqi	69.03	321	P	P	14 48 48.5	+0.6
MK31	Makanchi Array	73.80	322	eP	P	14 49 16.7	+0.1
MKAR	Makanchi Array	73.80	322	P	P	14 49 16.8	+0.1
MKAR	Makanchi Array	73.80	322	P	P	14 49 16.8	+0.1
	comp=Z,8.1nm,0.8s,mb4.7,baz=111,slow=6.8,SNR=76						
BILL	Bilibino	75.35	9⇑	eP	P	14 49 25.4	+0.2
BILL				e		14 52 17.2	
BILL				eS	S	14 59 00.0	-1.7
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
NVS	Novosibirsk	77.07	330	eP	P	14 49 33.4	-1.8
NVS				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
NVS				pmax	pmax		
	comp=N,8.0nm,1.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.4s						
AAK	Ala-Archa	77.27	316	eP	P	14 49 35.8	-0.8
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.4						
TIXI	Tiksi	77.43	356	eP	P	14 49 36.4	-0.5
AML	Almayashu	77.66	315	eP	P	14 49 39.5	+0.7
	comp=Z,9.8nm,0.8s,mb4.8						
KURK	Kurchatov	77.69	325	eP	P	14 49 38.1	-0.7
	comp=Z,9.7nm,1.0s,mb4.7						
KURK	Kurchatov	77.69	325	eP	P	14 49 37.5	-1.3
BRVK	Borovoye	83.36	325	eP	P	14 50 08.8	-0.3
	comp=Z,14nm,1.0s,mb4.9						
BRVK	Borovoye	83.36	325	eP	P	14 50 08.8	-0.3
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
COLA	College	86.74	24	eP	P	14 50 25.6	-0.2
ARU	Arti	90.74	327c	iP	P	14 50 42.4	-2.5
ARU				e		14 54 17.4	
ARU				eS	S	15 01 07.9	-30
ARU				SS	SS	15 07 36.5	-4.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
TORD	Torodi Ar. Bea	139.88	284	PKP	PKPdf	14 57 09.6	-1.7
TORD	Torodi Ar. Bea	139.88	284	PKP	PKPdf	14 57 09.6	-1.7
	comp=Z,1.7nm,0.8s,baz=67,slow=1.9,SNR=7.5						
KIC	Kosan Boka	146.64	273	ePKP1	PKPbc	14 57 24.3	-0.6
	comp=Z,74nm,1.0s						
DBIC	Dimbokro	146.76	274	PKPbc	PKPbc	14 57 24.6	-0.6
	comp=Z,11nm,0.8s,baz=75,slow=5.1,SNR=14						
TIC	Toumodi	146.92	274	ePKP1	PKPbc	14 57 23.7	-2.0
	comp=Z,8.3nm,0.8s						
LIC	Lamto	146.93	273	ePKP1	PKPbc	14 57 24.8	-0.9
	comp=Z,33nm,0.8s						
SDV	Santo Domingo	147.72	82	PKPbc	PKPbc	14 57 26.7	-1.1
	comp=Z,2.5nm,0.6s,baz=274,slow=13,SNR=3.0						
SJG	San Juan	150.01	63	PKPbc	PKPbc	14 57 31.7	-1.9
	comp=Z,4.8nm,0.2s,baz=293,slow=13,SNR=2.3						
SJG				PKPab	PKPab	14 57 41.0	+1.7
	comp=Z,6.4nm,0.3s,baz=231,slow=22,SNR=3.8						

*ISCJB **07** 14:51:02.3±0.5, 2006S±008×6861W±007, h127^{km}, mb4.4/10, Error ellipse: s-maj=11.6km s-min=8.1km az=32.0*

*NEIC **07** 14:51:04.1±0.4, 2009S×6864W, mb4.6/3, Error ellipse: s-maj=12.7km s-min=9.9km az=74.0*

*IDC **07** 14:51:05.0±0.8, 1993S×6851W, h128^{km}±4^{km}, mb4.3/7, mb1 4.3/9, mb1mx4.1/15, mbtmp4.3/9, Error ellipse: s-maj=26.0km s-min=14.7km az=18.0*

ISC 07 14:51:04.4±0.5**, 2008S**±008×**6859W**±008**, h129**^{km}**, h129**^{km}±.8^{km}**: pP-P, n30, σ0^{s}92**/27**, mb4.3**/10**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.79	7	ePn	Pn	14 52 04.0	+2.6
LPAZ	La Paz	3.79	7	P	Pn	14 52 03.5	+2.1
	47nm,0.3s,baz=203,slow=5.5,SNR=589						
SIV	San Ignacio	8.22	62	P	Pn	14 52 59.7	-1.2
	20nm,0.3s,baz=251,slow=9.4,SNR=300						
SIV				S	Sn	14 54 29.9	-2.3
	baz=351,slow=23,SNR=4.4						
LCO	Las Campanas	9.10	192	ePn	Pn	14 53 06.7	-6.0
	17nm,0.3s						
LCO				Sn	Sn	14 54 44.6	-8.8
NNA	Nana	11.29	314	ePn	Pn	14 53 39.2	-2.9
NNA				S	Sn	14 55 42.9	-3.8
NNA	Nana	11.29	314	P	Pn	14 53 41.4	-0.6
	1.2nm,0.3s,baz=180,slow=13,SNR=2.8						
NNA				S	Sn	14 55 42.9	-3.8
	2.4nm,0.3s,baz=207,slow=18,SNR=3.0						
TRQA	Tornquist	18.81	164	eP	P	14 55 13.9	-0.1
	6.8nm,0.6s						
PLCA	Paso Flores	20.66	184	eP	P	14 55 33.5	-0.4
	18nm,0.8s						
RCBR	Riachuelo	34.76	70	eP	P	14 57 43.5	+0.8
TXAR	Lajitas Array	59.64	324	P	P	15 00 55.2	+0.1
	0.2nm,0.6s,mb3.1,baz=78,slow=8.4,SNR=3.2						
TXAR				pP	pP	15 01 25.6	-0.3
	1.1nm,0.9s,baz=134,slow=6.4,SNR=6.4						
LIC	Lamto	67.70	74	eP	P	15 01 47.9	-0.5
	13nm,0.4s,mb5.1						
TIC	Toumodi	67.89	74	eP	P	15 01 49.9	+0.4
	14nm,0.7s,mb4.8						
KIC	Kosan Boka	68.02	74	eP	P	15 01 50.2	-0.1
	77nm,0.5s						
DBIC	Dimbokro	68.04	74	P	P	15 01 50.5	0.0
	14nm,0.4s,mb5.0,baz=226,slow=6.7,SNR=40						
PDAR	Pinedale Array	73.03	330	P	P	15 02 20.9	+0.8
	0.2nm,0.6s,baz=129,slow=7.1,SNR=2.2						
PDAR				pP	pP	15 02 52.8	+0.8
	0.5nm,0.9s,baz=133,slow=4.0,SNR=2.5						
ULM	Lac du Bonnet	74.06	342	P	P	15 02 25.7	-0.2
ULM				pP	pP	15 02 58.0	0.0
ULM	Lac du Bonnet	74.06	342	P	P	15 02 25.7	-0.2
	1.0nm,0.4s,mb3.9,baz=139,slow=7.7,SNR=5.2						
ULM				pP	pP	15 02 58.0	0.0
	1.7nm,0.7s,baz=175,slow=5.0,SNR=3.0						
NVAR	Mina Array Bea	74.57	322	pP	pP	15 03 03.1	+1.9
	1.5nm,0.8s,baz=146,slow=6.6,SNR=5.6						
SCHQ	Schefferville	74.62	1	P	P	15 02 29.0	-0.1
	5.0nm,0.8s,mb4.2,baz=100,slow=0.4,SNR=4.4						
TORD	Torodi Ar. Bea	76.59	71	P	P	15 02 41.0	-0.2
	10nm,0.5s,mb4.8,baz=254,slow=5.2,SNR=167						
TORD				pP	pP	15 03 12.7	-0.8
	2.2nm,0.6s,baz=252,slow=5.7,SNR=1.3						
BOSA	Boshof	83.85	118	P	P	15 03 20.2	+0.2
	4.3nm,0.5s,mb4.4,baz=270,slow=6.6,SNR=12						
ESDC	Sonseca Array	84.61	44	P	P	15 03 23.9	+0.5
	0.2nm,0.3s,mb3.3,baz=239,slow=7.2,SNR=4.2						
YKA	Yellowknife Ar	89.95	340	P	P	15 03 49.3	+0.7
YKA				pP	pP	15 04 22.1	+0.4
YKA	Yellowknife Ar	89.95	340	P	P	15 03 49.3	+0.7
	2.9nm,0.7s,mb4.3,baz=132,slow=4.5,SNR=60						
YKA				pP	pP	15 04 22.0	+0.4
	5.5nm,0.7s,baz=134,slow=4.7,SNR=21						
ASAR	Alice Springs	131.31	208	PKP	PKPdf	15 10 02.5	+0.4
	0.2nm,0.5s,baz=121,slow=1.7,SNR=3.0						
WRA	Warramunga Arr	134.33	211	PKP	PKPdf	15 10 08.5	+0.6
	0.3nm,0.7s,baz=146,slow=1.6,SNR=4.8						
WRA				pPKP	pPKPdf	15 10 42.2	-0.3
	0.8nm,0.7s,baz=154,slow=1.8,SNR=3.8						
MKAR	Makanchi Array	144.30	35	PKP	PKPdf	15 10 24.6	-0.5
	0.7nm,0.4s,baz=328,slow=4.3,SNR=7.6						
MKAR				pPKP	pPKPdf	15 10 60.0	+0.2
	0.7nm,0.7s,baz=328,slow=4.4,SNR=2.4						
MAT	Matsushiro	151.40	311	P	pPKPbc	15 11 17.5	-0.2
MJAR	Matsushiro Arr	151.40	311	pPKPbc	pPKPbc	15 11 18.0	+0.2
	4.9nm,0.8s,baz=90,slow=1.5,SNR=9.3						
SONM	Songino Array	152.01	7	PKP	PKPdf	15 10 38.3	+0.7
	1.1nm,0.5s,baz=306,slow=1.3,SNR=4.5						
SONM				PKPbc	PKPbc	15 10 45.3	+1.0
	1.1nm,0.5s,baz=313,slow=1.7,SNR=12						
SONM				pPKPbc	pPKPbc	15 11 19.7	+0.9
	1.9nm,0.7s,baz=294,slow=1.3,SNR=6.1						

IDC 07 14:56:28.9±13.0**, 2205N**×**14295E, h155**^{km}±125^{km}**, mb3.0**/7**, mb1 3.3**/7**, mb1mx3.2**/20**, mbtmp3.0**/7**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/11**, Error ellipse: s-maj=52.3km s-min=17.9km az=86.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	11.38	346	LR	LR	15 02 10.5	
	comp=Z,295nm,20.6s,baz=79,slow=30						
KSRS	Korea Array	20.10	323	P	P	15 00 51.1	+0.6
	0.7nm,0.6s,baz=144,slow=9.0,SNR=4.7						
SONM	Songino Array	38.93	320	P	P	15 03 38.9	-0.6
	0.1nm,0.4s,baz=138,slow=6.7,SNR=5.1						
SONM				pP	pP	15 04 19.1	+6.1
	0.2nm,0.5s,baz=133,slow=6.9,SNR=1.9						
WRA	Warramunga Arr	42.57	192	P	P	15 04 09.7	+0.1
	0.7nm,0.7s,baz=14,slow=8.6,SNR=6.7						
ASAR	Alice Springs	46.28	191	P	P	15 04 38.7	-0.3
	0.3nm,0.6s,baz=15,slow=11,SNR=6.4						
MKAR	Makanchi Array	54.30	312	P	P	15 05 39.7	+0.7
	0.2nm,0.2s,baz=86,slow=8.8,SNR=3.0						
YKA	Yellowknife Ar	76.25	28	P	P	15 07 59.4	-0.6
	0.2nm,0.5s,baz=292,slow=5.3,SNR=4.2						
NVAR	Mina Array Bea	83.10	51	P	P	15 08 38.5	+1.1
	0.2nm,0.5s,baz=282,slow=5.4,SNR=4.6						

*NEIC **07** 14:59:18.3, 1947N×70.18W, h7^{km}, MD3.8(RSPR), After RSPR.*

RSPR 07 14:59:18.3, 1947N×**7018W, h7**^{km}±5^{km}**, MD3.8**/4**, MD3.8**/4**, 5C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STDO	Santo Domingo	1.04	167	eS	Sg	14 59 49.9	-2.0
SDDR	Presa de Saban	1.15	245⇑	eP	Pg	14 59 36.2	-4.3
SDDR				eS	Sg	14 59 53.5	-1.9
LSP	Las Mesas	3.20	113⇑	eP	Pn	15 00 07.7	-1.4
LSP				eS	Sn	15 00 43.9	-3.6
CRPR	Cabo Rojo, PR	3.25	116⇑	eP	Pn	15 00 06.9	-2.9
CRPR				eS	Sn	15 00 44.8	-4.0
CELP	Cerrillos	3.68	112⇑	eP	Pn	15 00 13.8	-1.9
CELP				eS	Sn	15 00 56.2	-3.2
MTP	Monte Pirata	4.59	107⇑	eP	Pn	15 00 26.6	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MTP				eS	Sn	15 01 15.7	-6.1

*CSEM **07** 15:00:52.0±0.2, 3631N×2188E, h30km, ML3.6, Error ellipse: s-maj=5.2km s-min=2.1km az=50.0*
*ATH **07** 15:00:52.5, 3637N×2199E, h41km±2km, MD3.8/19, ML3.6*
*NEIC **07** 15:00:52.5, 3637N×2199E, h41km, MD3.8(ATH), After ATH.*
*ISCJB **07** 15:00:53.1±1.0, 3637N±008×2197E±009, h58km±18km, Error ellipse: s-maj=16.9km s-min=5.9km az=45.0*
*THE **07** 15:00:56.6, 3635N×2213E, h3km, ML3.8*
ISC 07 15:00:53.9±1.2, **3634N**±005×**2196E**±008, **h33**km±8km, **n34**, σ**0.83**/42, **2D, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.83	358	⇓iP	Pn	15 01 08.2	-1.1
ITM				eS	Sb	15 01 20.4	-0.5
VLI	Veliai	0.87	64	⇓iP	Pn	15 01 09.3	-0.5
VLI				eS	Sb	15 01 21.2	-0.8
KYTH	Kithira	0.87	94	eP	Pn	15 01 09.5	-0.3
VLX	Vlachokerasia	1.08	18	ePg	Pn	15 01 16.2	+3.5
VLX				eSg	Sn	15 01 31.2	+4.7
VLX	Vlachokerasia	1.08	18	ePg	Pn	15 01 16.2	+3.5
VLX				eSg	Sn	15 01 31.2	+4.7
DID	Didima	1.55	41	ePg	Pn	15 01 22.9	+3.8
DID				eSg	Sn	15 01 44.4	+6.3
RLS	Riolos of Patr	1.76	347	eP	Pn	15 01 22.0	0.0
KARN	Karanos	1.85	120	ePb	Pb	15 01 27.0	0.0
KARN				eSb	Sb	15 01 51.0	+1.3
LTK	Loutraki	1.86	25	ePb	Pb	15 01 28.2	+0.9
NAIG	Nisos Aigina	1.87	40	eP	Pn	15 01 23.5	-0.1
SELA	Sela	1.93	358	ePb	Pb	15 01 30.0	+1.6
VAM	Vamos	2.05	117	eP	Pn	15 01 25.4	-0.6
KVR	Kavouri	2.07	44	eP	Pn	15 01 25.5	-0.8
VLS	Valsamata	2.13	330	eP	Pn	15 01 27.8	+0.6
ATH	Athens Observa	2.15	40	eP	Pn	15 01 26.7	-0.7
PTL	Penteli	2.28	41	eP	Pn	15 01 28.0	-1.2
GVD	Gavdhos	2.29	130	ePn	Pn	15 01 28.6	-0.8
GVD	Gavdhos	2.29	130	ePn	Pb	15 01 33.2	-1.4
GVD	Gavdhos	2.29	130	ePn	Pn	15 01 28.6	-0.8
LKR	Lokris	2.45	19	eP	Pn	15 01 32.0	+0.5
EVR	Evrytania	2.57	357	eP	Pn	15 01 33.7	+0.5
LKD	Levkas	2.58	337	ePn	Pn	15 01 40.2	+6.8
LKD				eSn	Sn	15 02 13.2	+10
AGG	Agios Georgios	2.69	6	ePn	Pb	15 01 40.5	-0.9
SANT	Santorini	2.83	88	ePn	Pn	15 01 36.5	-0.2
SANT	Santorini	2.83	88	ePn	Pn	15 01 36.5	-0.2
APE	Apeiranthos	2.96	75	eP	Pn	15 01 39.2	+0.6
LAST	Lasithi	3.10	111	ePn	Pn	15 01 44.9	+4.4
NPS	Neapolis	3.16	109	eP	Pn	15 01 41.1	-0.2
THL	Klokotos Trika	3.22	1	eP	Pn	15 01 41.9	-0.2
XRY	Khrisi	3.38	115	eP	Pn	15 01 45.5	+1.2
JAN	Janina	3.42	346	eP	Pn	15 01 45.0	+0.1
KEK	Kerkira	3.77	334	eP	Pn	15 01 49.7	0.0
KEK				eS	Sn	15 02 32.4	-0.5
SMG	Samos	4.13	69	eP	Pn	15 01 55.8	+1.1
KARP	Karpathos	4.29	99	eP	Pn	15 01 57.1	+0.2

*ISCJB **07** 15:25:32.5±0.6, 3805S±004×17669E±007, h170km±4km, mb3.9/4, Error ellipse: s-maj=9.7km s-min=6.0km az=7.2*
*IDC **07** 15:25:33.7±0.6, 3820S×17662E, h149km±7km, mb3.7/4, mb1 3.8/5, mb1mx3.6/12, mbtmp3.6/5, Error ellipse: s-maj=24.9km s-min=18.0km az=141.0*
*WEL **07** 15:25:34.8±0.2, 3792S×17663E, h148km±2km, ML4.7/24, Error ellipse: s-maj=1.5km s-min=1.4km az=90.0*
*NEIC **07** 15:25:34.8, 3793S×17663E, h149km, MG4.7(WEL), After WEL.*
ISC 07 15:25:33.8±0.6, **3804S**±004×**17667E**±007, **h160**km±4km, **n137**, σ**1.18**/139, **mb3.9**/4, **1C, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.05	1	P	Pn	15 25 54.8	-0.2
MARZ	Manawahe	0.05	1	PN	Pn	15 25 54.8	-0.2
EDRZ	Edgecumbe	0.09	145	P	Pn	15 25 55.1	+0.1
EDRZ	Edgecumbe	0.09	145	⇑PN	Pn	15 25 54.7	-0.2
OPRZ	Ohinepanea	0.21	334	PN	Pn	15 25 54.4	-0.8
OPRZ				SN	Sn	15 26 09.7	-1.8
TAZ	Tarawera	0.24	213	P	Pn	15 25 55.7	+0.5
TAZ	Tarawera	0.24	213	PN	Pn	15 25 55.7	+0.5
KARZ	Kaharoa	0.34	272	P	Pn	15 25 55.1	-0.4
KARZ	Kaharoa	0.34	272	PN	Pn	15 25 55.1	-0.4
UTU	Utuhina	0.41	249	P	Pn	15 25 56.0	+0.3
UTU	Utuhina	0.41	249	PN	Pn	15 25 56.0	+0.3
URZ	Urewera	0.41	123	P	Pn	15 25 55.7	0.0
URZ	Urewera	0.41	123	P	Pn	15 25 55.7	0.0
	462nm,0.3s,baz=281,slow=3.2,SNR=3917						
URZ				S	Sn	15 26 10.9	-1.7
	88nm,0.3s,baz=352,slow=14,SNR=5.7						
URZ	Urewera	0.41	123	PN	Pn	15 25 55.7	-0.1
TGRZ	Tauranga	0.45	313	P	Pn	15 25 55.0	-0.9
TGRZ				S	Sn	15 26 10.9	-1.9
TGRZ	Tauranga	0.45	313	PN	Pn	15 25 55.0	-0.9
TGRZ				SN	Sn	15 26 10.2	-2.6
TGRZ				SN	Sn	15 26 10.9	-1.9
PATZ	Paeroa	0.48	223	P	Pn	15 25 56.6	+0.6
PATZ	Paeroa	0.48	223	PN	Pn	15 25 56.6	+0.5
WIZ	White Island	0.65	39	P	Pn	15 25 56.4	-0.6
WIZ	White Island	0.65	39	PN	Pn	15 25 56.4	-0.6
MWZ	Matawai	0.74	114	P	Pn	15 25 57.9	+0.4
MWZ	Matawai	0.74	114	PN	Pn	15 25 57.9	+0.5
MYRZ	Mayor Island	0.83	335	PN	Pn	15 25 57.3	-0.9
WHTZ	Whakaora	0.85	221	P	Pn	15 25 59.2	+1.0
WHTZ	Whakaora	0.85	221	PN	Pn	15 25 59.2	+1.0
HATZ	Hinemaiaia	0.97	208	P	Pn	15 25 59.9	+0.8
HATZ	Hinemaiaia	0.97	208	PN	Pn	15 25 59.9	+0.8
TOZ	Tahuroa Road	0.97	288	P	Pn	15 25 58.6	-0.6
TOZ	Tahuroa Road	0.97	288	PN	Pn	15 25 58.6	-0.6
WATZ	Wairara	1.00	227	P	Pn	15 26 00.1	+0.7
WATZ	Wairara	1.00	227	PN	Pn	15 26 00.1	+0.7
RATZ	Rangitukua	1.09	220	P	Pn	15 26 01.0	+0.9
RATZ	Rangitukua	1.09	220	PN	Pn	15 26 01.0	+0.8
BKZ	Black Stump Fm	1.14	187	P	Pn	15 26 01.4	+0.8
BKZ	Black Stump Fm	1.14	187	PN	Pn	15 26 01.4	+0.9
RITZ	Rihia Road	1.14	214	P	Pn	15 26 01.8	+1.3
RITZ	Rihia Road	1.14	214	PN	Pn	15 26 01.8	+1.3
KATZ	Kakaramea	1.21	219	P	Pn	15 26 01.2	0.0
PUZ	Puketiti	1.25	92	P	Pn	15 26 02.1	+0.5
PUZ	Puketiti	1.25	92	PN	Pn	15 26 02.1	+0.6
KNZ	Kokohu	1.26	142	P	Pn	15 26 03.1	+1.5
KNZ	Kokohu	1.26	142	PN	Pn	15 26 03.1	+1.5
KRVZ	Karewarewa	1.33	217	PN	Pn	15 26 03.3	+1.0
WTVZ	West Tongariro	1.37	218	PN	Pn	15 26 03.7	+1.0
MXZ	Matakaoa Point	1.38	71	P	Pn	15 26 03.5	+0.7
MXZ	Matakaoa Point	1.38	71	PN	Pn	15 26 03.5	+0.8
OTVZ	Oturere	1.38	215	PN	Pn	15 26 04.1	+1.3
NGZ	Ngauruhoe	1.42	216	P	Pn	15 26 04.5	+1.4
NGZ	Ngauruhoe	1.42	216	PN	Pn	15 26 04.5	+1.3
TWVZ	Taurewa	1.42	223	P	Pn	15 26 04.0	+0.8
TWVZ	Taurewa	1.42	223	PN	Pn	15 26 04.0	+0.9
WPVZ	Whakapapa	1.47	217	P	Pn	15 26 05.0	+1.4
WPVZ	Whakapapa	1.47	217	PN	Pn	15 26 05.0	+1.3
TUVZ	Tukino	1.47	213	PN	Pn	15 26 05.0	+1.3
KUZ	Kuaotunu	1.49	329	P	Pn	15 26 02.5	-1.5
KUZ	Kuaotunu	1.49	329	PN	Pn	15 26 02.5	-1.5
FWVZ	Far West T-bar	1.50	215	PN	Pn	15 26 05.0	+1.0
HIZ	Hauiti	1.51	251	P	Pn	15 26 04.7	+0.6
HIZ	Hauiti	1.51	251	PN	Pn	15 26 04.7	+0.6
TRVZ	Turoa	1.54	215	PN	Pn	15 26 05.6	+1.3
WNVZ	Wahianoa	1.54	213	P	Pn	15 26 05.6	+1.2
WNVZ	Wahianoa	1.54	213	PN	Pn	15 26 05.6	+1.1
MOVZ	Moawhango	1.55	207	P	Pn	15 26 05.1	+0.6
MOVZ	Moawhango	1.55	207	PN	Pn	15 26 05.1	+0.6
PKVZ	Pokaka	1.63	219	PN	Pn	15 26 06.3	+1.0
PKVZ				SN	Sn	15 26 30.8	+1.2
MTVZ	Mangateitei	1.65	215	PN	Pn	15 26 06.7	+1.2
VRZ	Vera Road	1.85	233	P	Pn	15 26 08.7	+0.9
VRZ	Vera Road	1.85	233	PN	Pn	15 26 08.7	+1.0
WTAZ	Waiatarua	2.00	303	PN	Pn	15 26 08.7	-0.7
PXZ	Pawanui	2.00	176	PN	Pn	15 26 10.7	+1.3
TSZ	Takapari Road	2.10	195	P	Pn	15 26 11.1	+0.6
TSZ	Takapari Road	2.10	195	PN	Pn	15 26 11.1	+0.6
WAZ	Wanganui	2.17	217	P	Pn	15 26 12.3	+1.0
WAZ	Wanganui	2.17	217	PN	Pn	15 26 12.3	+1.0
RAEZ	Rainy Point	2.18	234	P	Pn	15 26 13.1	+1.6
NEZ	North Egmont	2.37	238	P	Pn	15 26 15.6	+1.9
NWEZ	Newall Road	2.52	240	P	Pn	15 26 17.0	+1.5
BFZ	Birch Farm	2.66	187	P	Pn	15 26 17.7	+0.5
BFZ	Birch Farm	2.66	187	PN	Pn	15 26 17.7	+0.5
MRZ	Mangatainoka R	2.76	198	P	Pn	15 26 18.3	-0.1
MRZ	Mangatainoka R	2.76	198	PN	Pn	15 26 18.3	-0.1
WCZ	Waipu Caves	2.80	318	eP	Pn	15 26 18.1	-0.9
WCZ	Waipu Caves	2.80	318	PN	Pn	15 26 18.1	-0.9
TIWZ	Tintock	2.81	192	PN	Pn	15 26 19.4	+0.4
KIW	Kapiti Island	3.14	205	P	Pn	15 26 22.4	-0.7
KIW	Kapiti Island	3.14	205	PN	Pn	15 26 22.4	-0.7
MTW	Mount Morrison	3.25	196	P	Pn	15 26 23.9	-0.6
MTW	Mount Morrison	3.25	196	PN	Pn	15 26 23.9	-0.6
CAW	Cannon Point	3.31	202	P	Pn	15 26 24.6	-0.7
CAW	Cannon Point	3.31	202	PN	Pn	15 26 24.6	-0.7
TRWZ	Traveller	3.44	192	PN	Pn	15 26 26.6	-0.4
PAWZ	Paruwai Farm	3.48	196	P	Pn	15 26 26.8	-0.6
PAWZ	Paruwai Farm	3.48	196	PN	Pn	15 26 26.8	-0.7
DUWZ	D'Urville Isla	3.49	217	PN	Pn	15 26 26.6	-1.1
MRW	Makara Radio	3.54	205	P	Pn	15 26 27.0	-1.2
MRW	Makara Radio	3.54	205	PN	Pn	15 26 27.0	-1.1
MSWZ	Moikau Station	3.55	198	P	Pn	15 26 27.4	-1.0
MSWZ	Moikau Station	3.55	198	PN	Pn	15 26 27.4	-1.0
WEL	Wellington	3.56	204	P	Pn	15 26 27.7	-0.8
WEL	Wellington	3.56	204	PN	Pn	15 26 27.7	-0.9
SNZO	South Karori	3.61	204	P	Pn	15 26 27.8	-1.3
SNZO	South Karori	3.61	204	PN	Pn	15 26 27.8	-1.3
BHW	Baring Head	3.65	202	P	Pn	15 26 28.3	-1.3
BHW	Baring Head	3.65	202	PN	Pn	15 26 28.3	-1.2
TCW	Tory Channel	3.67	210	P	Pn	15 26 28.6	-1.4
TCW	Tory Channel	3.67	210	PN	Pn	15 26 28.6	-1.3
OUZ	Omahuta	3.74	318	eP	Pn	15 26 30.4	-0.5
OUZ	Omahuta	3.74	318	PN	Pn	15 26 30.4	-0.5
TUWZ	Tuamarina	3.99	211	PN	Pn	15 26 32.5	-1.6
NNZ	Nelson	4.07	218	eP	Pn	15 26 33.6	-1.5
NNZ	Nelson	4.07	218	PN	Pn	15 26 33.6	-1.4
QRZ	Quartz Range	4.25	228	eP	Pn	15 26 35.7	-1.7
QRZ	Quartz Range	4.25	228	PN	Pn	15 26 35.7	-1.7
BSWZ	Blackbirch Sta	4.26	209	P	Pn	15 26 36.1	-1.4
BSWZ	Blackbirch Sta	4.26	209	PN	Pn	15 26 36.1	-1.4
THZ	Tophouse	4.72	217	eP	Pn	15 26 41.8	-1.7
KHZ	Kahutara	4.99	208	eP	Pn	15 26 45.2	-1.9
KHZ	Kahutara	4.99	208	PN	Pn	15 26 45.2	-1.9
LTZ	Lake Taylor	5.81	214	eP	Pn	15 26 55.4	-2.5
CRLZ	Canterbury Las	6.33	208	eP	Pn	15 27 02.3	-2.5
CRLZ	Canterbury Las	6.33	208	PN	Pn	15 27 02.3	-2.5
MQZ	McQueen's Vall	6.43	207	eP	Pn	15 27 02.8	-3.3
MQZ	McQueen's Vall	6.43	207	PN	Pn	15 27 02.8	-3.4
RPZ	Rata Peaks	7.09	215	P	Pn	15 27 12.7	-2.2
	0.8nm,0.3s,baz=8.8,slow=16,SNR=13						
RPZ				S	Sn	15 28 28.0	-6.5
	5.2nm,0.3s,baz=333,slow=18,SNR=13						
ODZ	Otahua Downs	8.33	211	eP	Pn	15 27 28.7	-2.7
ODZ	Otahua Downs	8.33	211	PN	Pn	15 27 28.5	-2.8
DZM	Mont Dzumac	18.19	328	P	P	15 29 41.8	+7.5
	0.5nm,0.3s,baz=112,slow=19,SNR=6.1						
STKA	Stephens Creek	29.28	271	P	P	15 31 24.0	+3.0
STKA	Stephens Creek	29.28	271	P	P	15 31 23.4	+2.5
	1.5nm,0.7s,mb3.8,baz=117,slow=12,SNR=4.1						
CTA	Charters Tower	31.84	296	P	P	15 31 45.5	+2.0
	5.7nm,1.0s,mb4.2,baz=137,slow=15,SNR=2.9						
ASAR	Alice Springs	39.07	279	P	P	15 32 46.2	+1.0
	1.4nm,0.5s,mb3.8,baz=124,slow=8.3,SNR=51						
WRA	Warramunga Arr	40.78	284	P	P	15 32 60.0	+0.5
	1.4nm,0.6s,mb3.8,baz=126,slow=6.8,SNR=23						
ARCES	ARCESS Array B	144.85	343	PKP	PKPdf	15 44 50.1	-0.3
	3.7nm,0.6s,baz=45,slow=3.5,SNR=19						
JOF	Joensuu	147.45	331	ep	PKPdf	15 44 55.9	+0.9
	0.4nm,0.4s						
DBIC	Dimbokro	148.75	177	PKPbc	PKPbc	15 45 03.9	+1.2
	7.3nm,1.1s,baz=88,slow=2.4,SNR=4.2						
FINES	FINESS Array B	150.30	332	PKPbc	PKPbc	15 45 04.9	-0.1
	1.5nm,0.7s,baz=131,slow=5.8,SNR=6.4						
FINES				PKPab	PKPab	15 45 11.1	-0.8
	0.4nm,0.4s,baz=40,slow=3.2,SNR=5.4						
TORD	Torodi Ar. Bea	154.81	192	PKPab	PKPab	15 45 33.8	+1.7
	0.9nm,0.6s,baz=168,slow=3.8,SNR=5.5						

*IDC **07** 15:44:42.2±8.3, 2449N×12658E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=218.1km s-min=56.3km az=12.0*
*ISCJB **07** 15:45:09.5±0.5, 2679N±005×12634E±005, h130km, mb3.2/3, Error ellipse: s-maj=9.1km s-min=3.1km az=145.9*
*JMA **07** 15:45:11.4±0.2, 2673N×12637E, h130km±3km, M3.8*
ISC 07 15:45:10.4±0.5, **2674N**±010×**12639E**±008, **h134**km±9km, **n21**, σ**0.96**/38, **mb3.2**/3, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.54	139	P	Pn	15 45 31.1	+1.0
JKE				S	Sn	15 45 45.2	+0.1
JAGN	Aguni-jima	0.78	101	P	Pn	15 45 32.7	+1.0
JAGN				S	Sn	15 45 48.0	+0.1
NAH1	Naha	1.28	114	P	Pn	15 45 37.5	+1.1
NAH1				S	Sn	15 45 55.5	-0.7
JJT2	Tamagusuku 2	1.36	116	P	Pn	15 45 38.7	+1.5
JJT2				S	Sn	15 45 58.3	+0.7
JIH	Iheya	1.44	78	P	Pn	15 45 39.2	+1.1
JIH				S	Sn	15 45 58.6	-0.6
JOW	Kunigami	1.69	86	P	Pn	15 45 41.8	+0.9
JOW				S	Sn	15 46 02.8	-1.4
JMJ	Miyako jima 2	2.15	208	P	Pn	15 45 47.4	+1.0
JMJ				S	Sn	15 46 14.2	+0.1
JOGS	Gusukube	2.16	204	P	Pn	15 45 47.7	+1.2
JOGS				S	Sn	15 46 14.7	+0.5
JTK	Tokunoshima	2.51	65	P	Pn	15 45 51.2	+0.3
JTK				S	Sn	15 46 20.5	-1.5
JTJ	Tarama	2.58	216	P	Pn	15 45 52.5	+0.7
JTJ				S	Sn	15 46 22.7	-0.9
JIJ	Ishigaki jima	3.11	221	P	Pn	15 45 58.5	-0.1
JIJ				S	Sn	15 46 33.2	-2.6
JKRS	Kuro-shima	3.29	221	P	Pn	15 46 01.0	+0.1
JKRS				S	Sn	15 46 38.2	-1.7
JAM	Amami Oshima	3.31	59	P	Pn	15 46 01.0	-0.1
JAM				S	Sn	15 46 38.7	-1.7
IRIF	Iriomote-Funau	3.39	226	P	Pn	15 46 02.2	0.0
IRIF				S	Sn	15 46 40.7	-1.5
HATJ	Hateruma jima	3.54	222	P	Pn	15 46 04.3	0.0
HATJ				S	Sn	15 46 45.7	-0.2
JZK	Kikaishima	3.55	63	P	Pn	15 46 05.3	+1.0
JZK				S	Sn	15 46 45.5	-0.5
YOJ	Yonaguni jima	3.80	234	P	Pn	15 46 08.8	+1.2
JMZ	Minamidaito 2	4.43	101	P	Pn	15 46 15.0	-1.0
JMZ				S	Sn	15 47 02.1	-4.9
SONM	Songino Array	26.25	329	P	P	15 50 37.3	+4.4
	0.3nm,0.5s,mb3.2,baz=140,slow=9.4,SNR=5.7						
MKAR	Makanchi Array	39.97	312	P	P	15 52 31.9	+0.3
	0.3nm,0.3s,mb3.5,baz=94,slow=7.7,SNR=4.4						
YKA	Yellowknife Ar	78.76	24	P	P	15 56 57.2	-0.6
	0.2nm,0.5s,mb3.0,baz=300,slow=5.6,SNR=4.6						

*CSEM **07** 15:52:46.0, 4335N×4723E, h10km, mb3.7, After OBN*
*MOS **07** 15:52:46.2±0.8, 4335N×4723E, h10km, mb3.7/1, Error ellipse: s-maj=18.3km s-min=11.3km az=143.3*
ISC 07 15:52:47.5±2.8, **4325N**±009×**473E**±02, **h13**km±10km, **n12**, σ**0.77**/15, **1C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DBC	Dubki	0.42	236	ePG	Pg	15 52 57.0	+1.3
DBC				i S	Sg	15 53 01.0	-0.3
UNCR	Uncukul	0.66	215	⇑iPG	Pg	15 52 59.0	-1.2
UNCR				pmax	pmax		
	comp=Z,36nm,0.2s						
UNCR	Uncukul	0.66	215	i Pg	Pg	15 52 59.0	-1.2
	comp=Z,36nm,0.2s						
KMKR	Kumukh	1.13	188	PG	Pg	15 53 09.5	+0.2
KMKR				i S	Sb	15 53 23.5	0.0
SNJR	Sundja	1.83	265	ePn	Pn	15 53 18.0	-0.6
KMSR	Komsomolskaya	2.20	274	ePn	Pn	15 53 22.7	-1.0
ARNR	Ardon	2.21	269	ePn	Pn	15 53 23.4	-0.4
LACR	Lac	2.24	260	ePn	Pn	15 53 25.0	+0.7
KORR	Kora	2.37	267	ePn	Pn	15 53 25.8	-0.2
ZEI	Tsey	2.54	260	ePn	Pn	15 53 28.8	+0.4
DIGR	Digorskoe uzhe	2.75	264	ePn	Pn	15 53 31.2	0.0
ONI	Oni	2.91	258	P	Pb	15 53 40.8	+1.7
ONI				S	Pg	15 53 42.7	-0.5

*TIF **07** 15:58:33.0, 4299N×4676E, h25km±1km*
*ISCJB **07** 15:58:33.4±0.7, 4305N±004×4685E±006, h19km±5km, Error ellipse: s-maj=8.5km s-min=5.2km az=150.9*
*CSEM **07** 15:58:33.2, 4293N×4669E, h12km, mb4.4, After OBN*
*MOS **07** 15:58:33.2±1.2, 4293N×4669E, h12km, mb4.4/1, Error ellipse: s-maj=10.3km s-min=6.1km az=30.9*
ISC 07 15:58:34.2±0.5, **4301N**±003×**4667E**±003, **h6**km±3km, **n41**, σ**1.25**/69, **3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DBC	Dubki	0.12	87	i PG	Pg	15 58 37.0	+0.3
DBC				i S	Sg	15 58 41.5	+3.1
DBC				pmax	pmax		
	comp=Z,247nm,0.1s						
DBC	Dubki	0.12	87	i Pg	Pg	15 58 37.0	+0.3
	comp=Z,247nm,0.1s						
DBC				i Sg	Sg	15 58 41.5	+3.1
UNCR	Uncukul	0.31	162	i Pg	Pg	15 58 38.5	-1.8
UNCR				eSg	Sg	15 58 45.0	+0.6
BUJR	Buynaksk	0.38	120	Pg	Pg	15 58 41.0	-0.4
XNZR	Khunzakh	0.47	177	ePG	Pg	15 58 43.0	-0.3
XNZR				eS	Sg	15 58 50.0	+0.6
XNZR				pmax	pmax		
	comp=Z,181nm,0.2s						
XNZR	Khunzakh	0.47	177	ePg	Pg	15 58 43.0	-0.3
	comp=Z,181nm,0.2s						
XNZR				eSg	Sg	15 58 50.0	+0.6
MAK	Makhachkala	0.62	95	ePG	Pg	15 58 53.0	+6.9
MAK				pmax	pmax		
	comp=Z,129nm,0.2s						
MAK	Makhachkala	0.62	95	ePg	Pg	15 58 53.0	+6.9
	comp=Z,129nm,0.2s						
GNBR	Gunib	0.66	161	⇓iPG	Pg	15 58 44.8	-2.1
GNBR				eS	Sg	15 58 55.2	-0.3
GNBR				pmax	pmax		
	comp=Z,76nm,0.2s						
GNBR	Gunib	0.66	161	i Pg	Pg	15 58 44.8	-2.1
	comp=Z,76nm,0.2s						
GNBR				eSg	Sg	15 58 55.2	-0.3
MNSR	Manas	0.83	111	i PG	Pg	15 58 52.8	+2.6
MNSR				pmax	pmax		
	comp=Z,141nm,0.2s						
MNSR	Manas	0.83	111	i Pg	Pg	15 58 52.8	+2.6
	comp=Z,141nm,0.2s						
KMKR	Kumukh	0.94	160	⇓iPG	Pg	15 58 49.5	-2.7
KMKR				i S	Sg	15 59 03.0	-1.3
KMKR				pmax	pmax		
	comp=Z,82nm,0.2s						
KMKR	Kumukh	0.94	160	i Pg	Pg	15 58 49.5	-2.7
	comp=Z,82nm,0.2s						
KMKR				i Sg	Sg	15 59 03.0	-1.3
SNJR	Sundja	1.36	273	i Pg	Pg	15 58 59.5	-0.8
SNJR				i Sg	Sg	15 59 18.8	+0.9
VLKR	Vladikavkaz	1.46	272	i Pg	Pg	15 59 00.9	-1.2
VLKR				i Sg	Sg	15 59 20.8	-0.3
TRKR	Terskaya	1.58	297	i Pn	Pg	15 59 04.6	+0.1
TRKR				i Sg	Sg	15 59 27.5	+2.6
LACR	Lac	1.75	265	i Pn	Pn	15 59 04.8	-0.3
LACR				i Sg	Sn	15 59 27.7	0.0
ARNR	Ardon	1.76	277	ePn	Pn	15 59 05.8	+0.6
ARNR				i Sg	Sg	15 59 29.5	-1.1
KMSR	Komsomolskaya	1.77	282	i Pn	Pn	15 59 06.5	+1.1
KMSR				i Sg	Sg	15 59 30.8	-0.3
DGRG	David-gareji	1.83	212	P	Pg	15 59 08.7	-0.6
DGRG				S	Sg	15 59 34.5	+1.4
PRTR	Priterechnaya	1.89	294	i Pn	Pn	15 59 08.8	+1.8
PRTR				i Sg	Sg	15 59 35.1	+0.3
KORR	Kora	1.91	273	ePn	Pn	15 59 07.6	+0.4
MTA	Mtatsminda	1.92	227	P	Pn	15 59 08.6	+1.3
MTA				S	Sg	15 59 34.9	-0.7
TBLG	Delisi	1.92	229	P	Pn	15 59 08.6	+1.2
TBLG				S	Sb	15 59 34.8	+1.0
ZEI	Tsey	2.05	264	ePn	Pn	15 59 07.3	-1.9
LSNR	Lesken	2.10	278	i Pn	Pn	15 59 11.8	+1.9
LSNR				i Sb	Sb	15 59 39.2	+0.1
GOR	Gori	2.15	242	P	Pn	15 59 11.1	+0.5
GOR				S	Sn	15 59 39.3	+1.7
DIGR	Digorskoe uzhe	2.27	268	i Pn	Pn	15 59 12.3	+0.1
DIGR				i Sn	Sn	15 59 40.9	+0.4
ONI	Oni	2.41	261	P	Pn	15 59 15.3	+1.2
ONI				S	Sn	15 59 46.4	+2.6
KUBR	Kubataba	2.50	289	PN	Pn	15 59 15.0	-0.4
KUBR				S	Sn	15 59 44.4	-1.8
KUBR				pmax	pmax		
	comp=Z,23nm,0.3s						
KUBR	Kubataba	2.50	289	Pn	Pn	15 59 15.0	-0.4
	comp=Z,23nm,0.3s						
KUBR				Sn	Sn	15 59 44.4	-1.8
PYA	Pyatigorsk	2.81	292	PN	Pn	15 59 18.1	-1.6
BEYR	Belyy Ugol+	2.97	291	PN	Pn	15 59 21.3	-0.6
BEYR				pmax	pmax		
	comp=Z,129nm,0.3s						
BEYR	Belyy Ugol+	2.97	291	Pn	Pn	15 59 21.3	-0.6
	comp=Z,129nm,0.3s						
SHAR	Shatzhatmas	3.00	285	PN	Pn	15 59 21.3	-1.0
SHAR				S	Sn	15 59 57.5	-1.1
SHAR				pmax	pmax		
	comp=Z,12nm,0.3s						
SHAR	Shatzhatmas	3.00	285	Pn	Pn	15 59 21.3	-1.0
	comp=Z,12nm,0.3s						
SHAR				Sn	Sn	15 59 57.5	-1.1
KIV0	Kislovodsk Arr	3.04	289	Pn	Pn	15 59 21.8	-1.0
KIV0				Sn	Sn	15 59 57.0	-2.5
KIV	Kislovodsk	3.05	289	⇓ePN	Pn	15 59 20.6	-2.3
KIV				i		15 59 33.7	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIV	Kislovodsk	3.05	289	ePn	Pn	15 59 20.6	-2.3
	comp=Z,3.0nm,0.5s						
KIV	Kislovodsk	3.05	289	i Pg	Pg	15 59 33.7	+1.2

*MAN **07** 16:03:42, 6.12N×12594E, h79km, mb4.8, ML3.7, MS3.7*
*ISCJB **07** 16:03:44.1±0.6, 620N±005×12589E±007, h93km±5km, mb4.3/23, Error ellipse: s-maj=12.5km s-min=7.4km az=161.3*
*IDC **07** 16:03:44.9±6.1, 620N×12568E, h86km±57km, mb4.0/14, mb1 4.0/14, mb1mx3.9/22, mbtmp4.0/14, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=32.9km s-min=11.8km az=84.0*
*NEIC **07** 16:03:45.0±0.9, 622N×12583E, h88km±8km, mb4.7/8, Error ellipse: s-maj=13.1km s-min=6.1km az=73.0*
*BJI **07** 16:03:45.0, 620N×12580E, h88km, mB5.1, mb4.6*
ISC 07 16:03:45.2±0.6, **618N**±005×**12584E**±007, **h87**km±5km, **n46**, σ**0.97**/51, **mb4.3**/23, **1C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	0.92	343	ePn	Pn	16 04 03.2	-0.6
DAV				eSn	Sn	16 04 15.1	-2.6
DAV	Davao City (W)	0.92	343	⇓iP	Pn	16 04 04.0	+0.2
DMPH	Davao City--Mi	0.95	340	⇓iP	Pn	16 04 03.7	-0.5
DMPH				i S	Sn	16 04 18.4	0.0
KCP	Kidapawan	1.11	318	⇓eP	Pn	16 04 05.7	-0.3
KCP				i S	Sn	16 04 22.4	+0.8
CTBH	Cotabato--PC H	1.89	303	⇓eP	Pn	16 04 18.7	+2.8
CTBH				eS	Sn	16 04 37.8	-1.5
BIPH	Bislig	2.05	14	⇓iP	Pn	16 04 17.2	-0.9
BIPH				i S	Sn	16 04 45.6	+2.6
CGP	Cagayan de Oro	2.53	333	⇑eP	Pn	16 04 24.2	-0.2
CGP				i S	Sn	16 04 55.7	+1.4
TBP	Tagbilaran	4.00	331	eP	Pn	16 04 44.4	+0.2
LLP	Lapu-Lapu	4.51	336	⇓iP	Pn	16 04 51.4	+0.3
BATI	Kupang	16.43	188	P	Pn	16 07 35.2	+4.7
	5.9nm,0.3s,baz=270,slow=18,SNR=6.3						
FITZ	Fitzroy Crossi	24.13	180	eP	P	16 08 53.7	+0.6
	22nm,1.9s,mb4.2						
FITZ	Fitzroy Crossi	24.13	180	P	P	16 08 53.8	+0.6
	3.8nm,0.7s,mb3.8,baz=2.5,slow=16,SNR=9.2						
PMG	Port Moresby	26.29	126	P	P	16 09 14.7	+1.9
PMG	Port Moresby	26.29	126	P	P	16 09 14.7	+1.9
	6.3nm,0.8s,mb4.1,baz=331,slow=9.0,SNR=4.3						
COEN	Coen	26.39	139	eP	P	16 09 12.9	-0.7
WRA	Warramunga Arr	27.27	162	P	P	16 09 20.9	-0.6
	1.8nm,0.4s,mb4.0,baz=343,slow=10.0,SNR=34						
WB2	Warramunga Arr	27.28	162	eP	P	16 09 21.2	-0.4
ASAR	Alice Springs	30.69	165	P	P	16 09 51.6	-0.3
	1.0nm,0.5s,mb3.8,baz=339,slow=7.5,SNR=37						
ASAR				PcP	PcP	16 12 47.6	-0.4
	0.8nm,0.6s,baz=323,slow=2.4,SNR=4.7						
KSRS	Korea Array	31.18	3	P	P	16 09 57.1	+1.1
	2.9nm,0.8s,mb4.1,baz=182,slow=9.9,SNR=6.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MJAR	Matsushiro Arr	32.27	19	P	P	16 10 04.0	-1.6
	1.7nm,0.8s,mb3.8,baz=10.0,slow=14,SNR=4.2						
FORT	Forrest	36.81	177	eP	P	16 10 45.2	+0.4
	4.6nm,0.6s,mb4.6						
SHL	Shillong	37.74	304	eP	P	16 10 54.0	+1.1
KLBR	Kellerberrin	38.35	191	eP	P	16 10 58.1	+0.3
	35nm,1.5s,mb5.0						
MUN	Mundaring	39.04	193	eP	P	16 11 03.3	-0.3
NWAO	Narrogin (SRO)	39.74	191	eP	P	16 11 09.9	+0.5
NWAO	Narrogin (SRO)	39.74	191	P	P	16 11 09.8	+0.4
	1.5nm,0.4s,mb4.2,baz=33,slow=20,SNR=6.2						
ASAJ	Asahikawa	40.54	19	P	P	16 11 16.2	+0.3
	5.1nm,0.3s,mb4.8,baz=224,slow=7.9,SNR=18						
GTA	Gaotai	40.55	328	eP	P	16 11 17.2	+1.1
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb3.9						
STKA	Stephens Creek	40.72	159	eP	P	16 11 17.7	+0.2
	comp=Z,4.2nm,0.5s,mb4.5						
STKA	Stephens Creek	40.72	159	P	P	16 11 17.6	+0.2
	comp=Z,6.7nm,0.6s,mb4.7,baz=331,slow=6.8,SNR=15						
TAPN	Taplejung	41.88	305	eP	P	16 11 27.8	+0.6
ODAN	Odare	41.96	304	eP	P	16 11 29.0	+1.2
	comp=Z,12nm,0.8s,mb4.7						
JIRN	Jiri	43.25	304	eP	P	16 11 38.6	+0.4
	comp=Z,6.0nm,0.6s,mb4.5						
ULN	Ulaanbaatar	44.53	342	eP	P	16 11 47.6	-0.5
	comp=Z,2.5nm,0.8s,mb4.0						
GKN	Gorkha	44.65	304	eP	P	16 11 48.1	-1.4
SONM	Songino Array	44.71	341	P	P	16 11 49.0	-0.6
	comp=Z,0.9nm,0.5s,mb3.7,baz=162,slow=7.0,SNR=6.5						
SONM				PcP	PcP	16 13 30.7	+0.2
	comp=Z,0.6nm,0.4s,baz=159,slow=3.6,SNR=5.1						
SONM				LR	LR	16 31 24.6	
	comp=Z,37nm,18.9s,baz=309,slow=37						
MK31	Makanchi Array	55.05	325	eP	P	16 13 07.7	-0.2
MKAR	Makanchi Array	55.05	325	P	P	16 13 06.8	-1.2
	comp=Z,0.8nm,0.5s,mb4.0,baz=132,slow=7.3,SNR=7.8						
YAK	Yakutsk	55.80	2	eP	P	16 13 13.0	0.0
	comp=Z,50nm,0.9s,mb5.5						
TIXI	Tiksi	65.42	1	eP	P	16 14 17.7	-0.6
	comp=Z,4.9nm,0.4s,mb4.7						
BILL	Bilibino	67.43	15	eP	P	16 14 30.7	-0.5
	comp=Z,2.5nm,0.6s,mb4.2						
IMA2	Indian Mountai	80.51	24	eP	P	16 15 48.2	+0.8
ARCES	ARCESS Array B	87.86	340	P	P	16 16 23.8	-0.8
	comp=Z,1.9nm,0.7s,mb4.2,baz=73,slow=5.2,SNR=8.5						
FINES	FINESS Array B	89.27	332	P	P	16 16 29.6	-1.8
	comp=Z,0.6nm,0.5s,mb3.9,baz=49,slow=5.8,SNR=4.4						
YKA	Yellowknife Ar	97.64	24	P	P	16 17 10.1	+0.3
	comp=Z,1.3nm,0.8s,mb4.5,baz=301,slow=4.7,SNR=18						
TORD	Torodi Ar. Bea	121.30	289	PKP	PKPdf	16 22 28.7	-0.6
	comp=Z,0.5nm,0.6s,baz=37,slow=3.8,SNR=5.9						

IDC 07 16:40:27.4±7.7**, 737S×12882E, h128**^{km}±81^{km}**, mb3.2**/1**, mb1 3.6**/5**, mb1mx3.4**/15**, mbtmp3.5**/5**, Error ellipse: s-maj=69.1km s-min=25.9km az=34.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	5.82	241	P	Pn	16 41 53.0	+1.5
	2.9nm,0.3s,baz=289,slow=17,SNR=5.3						
BATI				S	Sn	16 42 57.0	-0.1
	6.5nm,0.3s,baz=65,slow=23,SNR=11						
FITZ	Fitzroy Crossi	11.11	196	P	Pn	16 43 01.5	-1.0
	0.6nm,0.3s,baz=24,slow=22,SNR=17						
WRA	Warramunga Arr	13.60	157	P	Pn	16 43 34.3	-0.8
	0.7nm,0.3s,baz=343,slow=13,SNR=33						
WRA				S	Sn	16 45 57.3	-7.9
	0.6nm,0.3s,baz=333,slow=19,SNR=5.3						
ASAR	Alice Springs	16.92	164	P	Pn	16 44 17.9	+1.3
	0.5nm,0.3s,baz=335,slow=10,SNR=88						
ASAR				S	S	16 47 19.7	-5.5
	0.2nm,0.3s,baz=326,slow=15,SNR=4.8						
MKAR	Makanchi Array	67.89	327	P	P	16 51 12.1	+0.1
	0.3nm,0.4s,baz=124,slow=8.1,SNR=4.7						

ISCJB 07 16:40:53.1±0.3, 3679N±002×12133W±003, h19^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=3.7km az=174.6
NEIC 07 16:40:53.1, 3676N×12127W, h9^{km}, MD2.9(NCEDC), After NCEDC.
ISC 07 16:40:53.0±0.4**, 3678N**±002×**12131W**±003**, h17**^{km}±3^{km}**, n28,** σ**0**^{s}**80**/45**, 21C-8D, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAO	San Andreas Ge	0.11	261	ePg	Pg	16 40 56.8	+0.2
SAO				eSg	Sg	16 40 59.3	+0.3
PACP	Pacheco Peak	0.23	6	P	Pg	16 40 58.4	+0.2
	baz=0.2,SNR=260						
PACP				⇑S	Sg	16 41 02.4	+0.6
	baz=0.2						
HAST	UC Hastings Re	0.44	206	⇑P	Pg	16 41 01.7	-0.1
	baz=0.4,SNR=1000						
HAST				⇓S	Sg	16 41 07.8	0.0
	baz=0.4						
U04C	Hernandez Rese	0.60	134	P	Pg	16 41 04.1	-0.7
	baz=0.6,SNR=148						
S04C	Ingram Canyon,	0.72	359	⇓P	Pb	16 41 08.0	+0.9
	baz=0.7,SNR=281						
V03C	Hunter Liggett	0.76	175	⇓P	Pb	16 41 07.4	-0.3
	baz=0.7,SNR=122						
V03C				⇓S	Sb	16 41 18.4	+0.6
	baz=0.7						
BNLO	Ben Lomond (Sa	0.77	297	⇑P	Pb	16 41 07.8	-0.2
	baz=0.8,SNR=158						
BNLO				⇓S	Sb	16 41 18.9	+0.8
	baz=0.8						
JRSC	Jasper Ridge	0.96	310	⇑P	Pb	16 41 11.3	0.0
	baz=1.0,SNR=125						
S05C	Merced	0.97	54	P	Pb	16 41 10.7	-0.6
	baz=1.0,SNR=42						
S05C				⇑S	Sb	16 41 23.5	-0.3
	baz=1.0						
PKD	Parkfield	1.04	143	⇑P	Pb	16 41 12.0	-0.6
	baz=1.0,SNR=127						
PKD				⇓S	Sb	16 41 26.1	+0.2
	baz=1.0						
V04C	Ramage Ranch,	1.20	162	⇑P	Pn	16 41 14.5	-0.5
	baz=1.2						
V04C				⇓S	Sb	16 41 30.5	+0.1
	baz=1.2						
T06C	Millerton Lake	1.31	80	⇑P	Pn	16 41 15.7	-0.8
	baz=1.3,SNR=55						
T06C				⇑S	Sn	16 41 32.2	-1.2
	baz=1.3						
CMB	Columbia Colle	1.45	30	ePn	Pn	16 41 18.2	-0.2
CMB				eSn	Sn	16 41 36.5	-0.6
CMB	Columbia Colle	1.45	30	⇑P	Pn	16 41 18.0	-0.4
	baz=1.5,SNR=20						
CMB				⇑S	Sn	16 41 36.9	-0.2
	baz=1.5						
R04C	Big Horse Ranc	1.50	11	⇑Pb	Pb	16 41 19.7	-0.7
	baz=1.5						
R04C				⇑S	Sn	16 41 37.6	-0.7
	baz=1.5						
S06C	San Francisco	1.60	46	Pb	Pb	16 41 21.2	-0.9
	baz=1.6,SNR=188						
S06C				⇑S	Sn	16 41 41.1	+0.3
	baz=1.6						
FARB	Farallon Islan	1.63	305	⇓P	Pn	16 41 20.3	-0.6
	baz=1.7						
KCC	Kaiser Creek	1.69	71	⇑Pb	Pb	16 41 22.5	-1.0
	baz=1.7,SNR=21						
KCC				⇑S	Sn	16 41 43.7	+0.9
	baz=1.7						
CVS	Carmenet Viney	1.81	330	⇑P	Pn	16 41 23.1	-0.2
	baz=1.8,SNR=18						
HELL	Mitchell Peak,	1.84	92	P	Pn	16 41 23.8	0.0
	baz=1.8,SNR=41						
MCCM	Marconi Confer	1.84	318	ePn	Pn	16 41 24.0	+0.1
MCCM	Marconi Confer	1.84	318	⇑P	Pn	16 41 23.9	+0.1
	baz=1.9						
NSHM	Saint Helena R	2.02	330	ePn	Pn	16 41 25.9	-0.3
R07C	Lee Vining	2.23	53	⇑Pb	Pb	16 41 32.1	-0.7
	baz=2.2						
R07C				⇑Sb	Sb	16 42 00.9	+0.8
	baz=2.2						
MTUM	Tungsten Hills	2.27	75	ePn	Pn	16 41 31.7	+1.9
MTUM				eS	Sn	16 42 00.2	+2.9
TIN	Tinemaha	2.49	83	⇑Sb	Sb	16 42 08.0	+0.5
	baz=2.5						
DAC	Darwin (Calif)	3.04	98	ePn	Pn	16 41 44.1	+3.9
DAC				eSg	Sg	16 42 26.8	-3.9
TPNV	Topopah Spring	4.07	86	ePn	Pn	16 41 56.5	+2.1

IDC 07 17:51:24.8±0.9**, 1253N×14270E, h0**^{km}**, mb4.0**/8**, mb1 4.2**/8**, mb1mx4.0**/19**, mbtmp4.0**/8**, MS3.7**/1**, Ms1 3.6**/1**, ms1mx2.8**/28**, Error ellipse: s-maj=46.2km s-min=18.9km az=91.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.30	194	P	P	17 58 04.7	+0.3
	5.7nm,0.6s,baz=15,slow=9.5,SNR=72						
ASAR	Alice Springs	36.99	193	P	P	17 58 36.4	+0.2
	1.6nm,0.5s,baz=21,slow=12,SNR=52						
STKA	Stephens Creek	44.17	181	P	P	17 59 34.8	-0.6
	2.5nm,0.6s,baz=5.6,slow=10,SNR=8.9						
STKA				LR	LR	18 20 29.1	
	comp=Z,76nm,18.3s,baz=207,slow=40						
SONM	Songino Array	46.41	327	P	P	17 59 54.4	+1.3
	0.2nm,0.3s,baz=141,slow=5.0,SNR=3.6						
MKAR	Makanchi Array	60.80	317	P	P	18 01 38.5	-0.2
	0.2nm,0.5s,baz=95,slow=7.8,SNR=3.9						
YKA	Yellowknife Ar	84.76	27	P	P	18 04 00.9	+0.2
	0.1nm,0.3s,baz=286,slow=5.1,SNR=4.8						
ARCES	ARCESS Array B	87.43	342	P	P	18 04 12.6	-1.2
	2.1nm,0.8s,baz=64,slow=8.1,SNR=3.1						
NVAR	Mina Array Bea	89.22	51	P	P	18 04 23.7	+0.8
	0.4nm,0.5s,baz=305,slow=3.9,SNR=5.2						

IDC 07 18:02:31.9±22.0**, 1972S×17832W, h651**^{km}±179^{km}**, mb3.1**/5**, mb1 3.2**/6**, mb1mx3.0**/16**, mbtmp3.1**/6**, Error ellipse: s-maj=220.3km s-min=63.6km az=85.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.43	258	P	P	18 05 34.3	+1.4
	0.7nm,0.3s,baz=155,slow=14,SNR=8.1						
CTA	Charters Tower	33.27	263	P	P	18 08 19.2	+0.5
	3.0nm,0.5s,baz=96,slow=10,SNR=6.3						
PMG	Port Moresby	34.88	282	P	P	18 08 32.4	+0.2
	7.5nm,0.8s,baz=63,slow=7.3,SNR=4.5						
STKA	Stephens Creek	37.86	243	eP	P	18 08 57.2	+1.0
	1.1nm,0.6s						
STKA	Stephens Creek	37.86	243	P	P	18 08 56.1	-0.1
	0.8nm,0.3s,baz=87,slow=11,SNR=6.1						
WB2	Warramunga Arr	44.40	261	eP	P	18 09 47.4	-0.3
ASAR	Alice Springs	44.41	256	P	P	18 09 48.0	+0.4
	1.7nm,0.5s,baz=84,slow=8.1,SNR=54						
ASAR				PcP	PcP	18 11 16.5	-0.1
	0.3nm,0.4s,baz=113,slow=3.8,SNR=4.1						
WRA	Warramunga Arr	44.41	261	P	P	18 09 47.4	-0.3
	1.3nm,0.4s,baz=97,slow=7.7,SNR=87						

ISCJB 07 18:15:13.8±0.6, 5152N±003×1608E±003, h0^{km}, Error ellipse: s-maj=4.6km s-min=2.4km az=18.9
IPEC 07 18:15:14.7±0.3, 5159N×16.12E, h2^{km}±1^{km}, ML2.2/3, Error ellipse: s-maj=2.0km s-min=0.8km az=22.0
NEIC 07 18:15:15.5±0.8, 5157N×1605E, h5^{km}, ML2.8(SZGRF), Error ellipse: s-maj=9.2km s-min=6.5km az=50.0
PRU 07 18:15:16.8, 5151N×1603E, h0^{km}
WAR 07 18:15:16.6, 5154N×1603E, ML2.6, Mining Induced
CSEM 07 18:15:16.3±0.1, 5153N×1604E, h1^{km}, ML3.2/6, Error ellipse: s-maj=2.9km s-min=1.2km az=10.0
VIE 07 18:15:17.2±0.6, 5139N×1599E, h0^{km}, mb2.3/4, ML2.8/4, Error ellipse: s-maj=4.0km s-min=3.1km az=15.0 78 km WNW of Wroclaw Suspected Mining induced.
ISC 07 18:15:14.9±0.5**, 5157N**±003×**1605E**±003**, h0**^{km}**, n36,** σ**0**^{s}**92**/69**, 1C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.75	168	ePg	Pg	18 15 29.6	+0.5
KSP				eSg	Sg	18 15 39.3	+0.5
KSP	Ksiaz	0.75	168	⇓iPg	Pg	18 15 29.7	+0.6
KSP				eSg	Sg	18 15 39.2	+0.4
KSP				e		18 15 43.4	
KSP	Ksiaz	0.75	168	ePg	Pg	18 15 29.5	+0.4
KSP				eSg	Sg	18 15 39.2	+0.4
UPC	Upice	1.07	181	ePG	Pg	18 15 35.5	+0.2
DPC	Dobruska-Polom	1.23	172	ePG	Pg	18 15 38.4	-0.1
DPC				eSG	Sg	18 15 53.9	-0.6
	35nm,0.7s						
PVCC	Panska Ves	1.40	222	ePg	Pg	18 15 41.7	0.0
PVCC				eSg	Sg	18 16 00.8	+1.0
BRG	Berggiesshubel	1.50	243	Pg	Pg	18 15 44.0	+0.5
BRG				eSg	Sg	18 16 03.1	+0.2
BRG	Berggiesshubel	1.50	243	PN	Pn	18 15 43.6	+0.7
BRG				PG	Pg	18 15 44.0	+0.5
BRG				SG	Sg	18 16 03.8	+0.9
	32nm,0.4s						
PRU	Pruhonice	1.85	212	ePN	Pn	18 15 47.5	-0.3
PRU				ePG	Pg	18 15 49.4	-0.9
PRU				eSG	Sg	18 16 13.1	-1.2
	22nm,0.3s						
CLL	Collm	1.93	263	i Pn	Pn	18 15 48.3	-0.5
CLL				i Pg	Pg	18 15 51.0	-0.7
CLL				i Sg	Sg	18 16 17.4	+0.7
CLL	Collm	1.93	263	i Pn	Pn	18 15 48.3	-0.5
CLL				i Pg	Pg	18 15 51.0	-0.7
CLL				i x	x	18 15 55.4	
CLL				i Sg	Sg	18 16 17.4	+0.7
	comp=Z,14nm,0.6s						
CLL	Collm	1.93	263	ePn	Pn	18 15 48.4	-0.4
CLL	Collm	1.93	263	i Pg	Pg	18 15 51.0	-0.7
CLL				eSg	Sg	18 16 16.9	+0.2
MORC	Moravsky Berou	2.03	152	eP	Pn	18 15 49.7	-0.6
MORC	Moravsky Berou	2.03	152	ePn	Pn	18 15 50.2	-0.1
MORC				eSg	Sg	18 16 18.2	-1.9
	comp=Z,13nm,0.2s						
OKC	Ostrava-Krasne	2.19	142	ePN	Pn	18 15 54.3	+1.8
OKC				ePG	Pg	18 15 56.8	0.0
OKC				eSG	Sg	18 16 24.0	-1.2
	comp=Z,20nm,0.6s						
VRAC	Vranov	2.29	171	ePn	Pn	18 15 54.2	+0.3
VRAC				eSg	Sg	18 16 27.1	-1.4
	comp=Z,21nm,0.5s						
KRUC	Moravsky	2.52	175	ePn	Pn	18 15 57.3	+0.3
KRUC				eSg	Sg	18 16 34.4	-1.5
	comp=Z,7.1nm,0.3s						
NKC	Novy Kostel	2.64	241	ePN	Pn	18 15 59.2	+0.5
NKC				ePG	Pg	18 16 05.8	+0.3
NKC				eSG	Sg	18 16 41.0	+1.2
	comp=Z,31nm,0.4s						
OJC	Ojcow	2.73	118	ePg	Pg	18 16 07.2	0.0
OJC				eSg	Sg	18 16 43.1	+0.5
KHC	Kasperske Hory	2.91	214	ePN	Pn	18 16 02.0	-0.4
KHC				ePG	Pg	18 16 08.6	-2.0
KHC				eSN	Sn	18 16 38.2	+0.2
KHC				eSG	Sg	18 16 47.0	-1.3
	comp=Z,9.3nm,0.6s						
KHC	Kasperske Hory	2.91	214	ePn	Pn	18 16 02.1	-0.3
KHC	Kasperske Hory	2.91	214	ePg	Pg	18 16 08.6	-2.0
KHC				eSn	Sn	18 16 38.2	+0.2
KHC				eSg	Sg	18 16 46.9	-1.4
MOX	Moxa	2.94	253	ePG	Pg	18 16 11.2	-0.1
MOX				eSG	Sg	18 16 50.7	+1.3
WET	Wettzell	3.17	221	ePn	Pn	18 16 06.4	+0.5
WET	Wettzell	3.17	221	ePn	Pn	18 16 06.1	+0.2
MODS	Modra-Piesok	3.30	166	eSG	Sg	18 17 02.7	+1.9
KOLL	Kolacno	3.36	152	eSG	Sg	18 17 02.4	-0.3
VYHS	Vyhne	3.57	149	eSG	Sg	18 17 11.0	+1.6
GRA1	Grafenberg Arr	3.60	240	ePn	Pn	18 16 12.7	+0.8
GRA1				eSg	Sg	18 17 09.9	-0.7
GRF	Grafenberg Arr	3.60	240	ePn	Pn	18 16 12.7	+0.8
GRF				eSg	Sg	18 17 09.9	-0.7
BSD	Bornholm Skovb	3.61	350	i P	Pn	18 16 11.4	-0.6
BSD				i S	Sn	18 16 52.9	-2.4
CONA	Conrad Observa	3.65	182	⇓iPn	Pn	18 16 12.4	-0.1
MOA	Molln	3.90	198	⇑iPn	Pn	18 16 16.5	+0.5
STHS	Stebnicka Huta	3.96	121	ePG	Pg	18 16 31.0	+0.3
STHS				eSG	Sg	18 17 23.0	+1.1
KECS	Kecovo	4.21	136	eSG	Sg	18 17 30.4	+0.3

NIED 07 18:19:00, 4130N×14040E, h150^{km}, Mw3.9 Best double couple: M$_0$7.44000×10^{14} NP1:ϕ_s210.00000°, δ70.00000°, λ-162.00000°. NP2:ϕ_s113.00000°, δ73.00000°, λ-21.00000°.
IDC 07 18:19:34.0±1.4, 41.17N×14039E, h134^{km}±13^{km}, mb3.4/7, mb1 3.7/9, mb1mx3.4/23, mbtmp3.5/9, Error ellipse: s-maj=20.4km s-min=11.6km az=111.0
ISCJB 07 18:19:35.9±0.3, 4130N±003×14043E±006, h164^{km}±2^{km}, mb3.8/11, Error ellipse: s-maj=7.3km s-min=4.8km az=13.4
MOS 07 18:19:35.7±0.6, 4146N×140.18E, h150^{km}, mb4.3/6, Error ellipse: s-maj=18.3km s-min=12.2km az=71.3
JMA 07 18:19:37.4±0.1, 4129N×14041E, h158^{km}±1^{km}, M3.5
NEIC 07 18:19:37.2±0.7, 4128N×14040E, h162^{km}±7^{km}, mb4.3/4, Error ellipse: s-maj=10.9km s-min=8.9km az=150.0
ISC 07 18:19:37.0±0.3**, 4129N**±003×**14043E**±006**, h160**^{km}±2^{km}**, n47,** σ**0**^{s}**83**/63**, mb3.8**/11**, 1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSR	Shiriuchi	0.23	358	P	Pn	18 19 58.7	+0.2
JSR				S	Sn	18 20 14.6	-0.5
JSI2	Shiura 2	0.24	183	P	Pn	18 19 58.8	+0.2
JSI2				S	Sn	18 20 15.0	+0.1
JOT	Ohata	0.48	79	P	Pn	18 19 59.8	+0.5
JOT				eS	Sn	18 20 17.0	+0.6
JTM	Tenmabayashi	0.70	136	P	Pn	18 20 00.8	+0.2
JTM				S	Sn	18 20 18.3	-0.2
JKB	Kayabe	0.75	37	P	Pn	18 20 01.5	+0.7
JKB				eS	Sn	18 20 19.5	+0.4
JIW	Iwasaki	0.77	205	P	Pn	18 20 01.4	+0.4
JYM2	Yakumo 2	0.82	357	P	Pn	18 20 01.8	+0.5
JYM2				eS	Sn	18 20 19.9	-0.2
JOSM	Okushiri--Mats	1.06	318	P	Pn	18 20 03.2	0.0
JOSM				eS	Sn	18 20 22.3	-1.0
JANG	Nango	1.24	138	P	Pn	18 20 04.5	-0.2
JANG				S	Sn	18 20 25.3	-0.6
JEW	Eniwo	1.72	26	eS	Sn	18 20 35.5	+0.8
JOM	Ohasama	1.94	160	P	Pn	18 20 11.6	-0.4
JOM				S	Sn	18 20 38.0	-0.9
JNBK	Urakawa-nobuka	2.00	60	P	Pn	18 20 13.2	+0.6
JNBK				eS	Sn	18 20 41.3	+1.2
JSK	Shakotan	2.06	1	P	Pn	18 20 13.9	+0.6
ERM	Erimo	2.17	70	eP	Pn	18 20 14.9	+0.3
JYK	Kaneyama	2.37	181	P	Pn	18 20 16.9	-0.2
JYK				eS	Sn	18 20 47.3	-0.7
JMK	Ichinoseki	2.42	165	P	Pn	18 20 16.9	-0.7
ASAJ	Asahikawa	3.24	29	P	Pn	18 20 27.1	-0.6
ASAJ				S	Sn	18 21 05.3	-1.8
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
ASAJ	Asahikawa	3.24	29	P	Pn	18 20 27.1	-0.6
	comp=N,7.1nm,0.3s,baz=233,slow=13,SNR=84						
ASAJ				S	Sn	18 21 05.3	-1.8
	comp=N,6.8nm,0.3s,baz=315,slow=31,SNR=12						
YUK	Yuzh-Kuril'sk	4.85	54	⇑iP	Pn	18 20 49.3	+0.8
YUK				eS	Sn	18 21 43.0	-1.4
YUK				pmax	pmax		
	comp=Z,420nm,0.4s						
YUK				pmax	pmax		
	comp=E,230nm,0.4s						
YUK				smax			
	comp=N,870nm,0.5s						
YUK				smax			
	comp=E,350nm,0.5s						
MAT	Matsushiro	5.05	201	P	Pn	18 20 51.4	+0.2
MAT				eS	Sn	18 21 52.1	+2.9
MJAR	Matsushiro Arr	5.05	201	P	Pn	18 20 51.7	+0.4
MJAR	Matsushiro Arr	5.05	201	P	Pn	18 20 51.7	+0.5
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	5.05	201	P	Pn	18 20 51.7	+0.4
	comp=Z,1.7nm,0.3s,baz=24,slow=11,SNR=17						
YSS	Yuzh-Sakhalins	5.90	16	eP	Pn	18 21 02.3	-0.1
	comp=Z,13nm,0.4s						
YSS	Yuzh-Sakhalins	5.90	16	eP	Pn	18 21 00.0	-2.3
YSS				e		18 22 06.8	
JHJ	Hachijo jima 2	8.18	184	P	Pn	18 21 28.4	-4.2
	comp=Z,14nm,0.3s,baz=102,slow=23,SNR=8.2						
JHJ				S	Sn	18 22 56.5	-7.4
	comp=Z,24nm,0.3s,baz=233,slow=22,SNR=7.6						
MDJ	Mudanjiang	8.61	296	eP	Pn	18 21 39.3	+1.0
	comp=Z,9.6nm,1.0s						
BOD	Bodaibo	23.58	323	eP	P	18 24 30.2	-2.6
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
SONM	Songino Array	24.97	297	P	P	18 24 44.9	-0.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	24.97	297	P	P	18 24 44.9	-0.6
	comp=Z,0.6nm,0.5s,mb3.4,baz=96,slow=8.2,SNR=8.4						
MK31	Makanchi Array	41.33	298	eP	P	18 27 06.3	-0.4
MKAR	Makanchi Array	41.33	298	P	P	18 27 06.7	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	41.33	298	P	P	18 27 06.7	0.0
	comp=Z,1.0nm,0.4s,mb3.8,baz=87,slow=10,SNR=14						
KURK	Kurchatov	42.80	304	eP	P	18 27 17.5	-1.0
	comp=Z,5.6nm,0.6s,mb4.4						
KURK	Kurchatov	42.80	304	eP	P	18 27 17.5	-1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
TKM2	Tokmak 2	47.04	295	eP	P	18 27 53.1	+0.9
INK	Inuvik	50.98	29	P	P	18 28 22.7	+1.0
INK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
INK	Inuvik	50.98	29	P	P	18 28 22.7	+1.0
	comp=Z,2.9nm,0.3s,mb4.3,baz=302,slow=4.9,SNR=5.6						
YKA	Yellowknife Ar	60.53	31	P	P	18 29 30.2	+0.4
YKA				PcP	PcP	18 30 12.7	+0.1
YKA	Yellowknife Ar	60.53	31	P	P	18 29 30.2	+0.4
	comp=Z,0.3nm,0.5s,mb3.4,baz=305,slow=6.3,SNR=10						
YKA				PcP	PcP	18 30 12.7	+0.1
	comp=Z,0.3nm,0.6s,baz=314,slow=3.6,SNR=4.0						
WRA	Warramunga Arr	61.18	187	P	P	18 29 33.9	-0.7
	comp=Z,0.3nm,0.6s,mb3.3,baz=4.0,slow=7.1,SNR=7.2						
JOF	Joensuu	61.86	331	ep	P	18 29 47.1	+8.4
	comp=Z,1.8nm,0.3s,mb4.4						
JOF	Joensuu	61.86	331	eP	P	18 29 47.1	+8.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.4						
KAF	Kangasniemi	64.19	332	ep	P	18 30 02.7	+8.6
	comp=Z,0.7nm,0.3s,mb4.0						
KAF	Kangasniemi	64.19	332	eP	P	18 30 02.7	+8.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
NVAR	Mina Array Bea	73.07	54	P	P	18 30 49.8	+0.4
	comp=Z,0.4nm,0.3s,mb3.6,baz=300,slow=3.6,SNR=4.6						
TXAR	Lajitas Array	88.11	52	P	P	18 32 10.7	+1.1
	comp=Z,0.2nm,0.6s,mb3.1,baz=290,slow=3.5,SNR=4.3						

ISCJB 07 18:59:54.8±0.4, 1429N±004×9133W±004, h106^{km}±4^{km}, mb4.1/12, Error ellipse: s-maj=8.5km s-min=4.0km az=40.0
IDC 07 18:59:56.0±0.8, 1438N×9124W, h97^{km}±7^{km}, mb3.9/13, mb1 4.1/17, mb1mx4.0/25, mbtmp3.9/17, MS3.4/8, Ms1 3.4/8, ms1mx3.1/32, Error ellipse: s-maj=16.3km s-min=8.8km az=49.0
MEX 07 18:59:55.4±0.8, 1428N×9142W, h168^{km}±25^{km}, MD4.7
CASC 07 18:59:55.6±2.4, 1386N×9122W, h0^{km}±7^{km}, MD4.2, mb4.2(NEIC)
NEIC 07 18:59:55.0±0.8, 1423N×9126W, h94^{km}±7^{km}, mb4.2/3, Error ellipse: s-maj=14.8km s-min=7.9km az=210.0
ISC 07 18:59:55.8±0.3**, 1430N**±004×**9135W**±004**, h100**^{km}±4^{km}**, n73,** σ**1**^{s}**12**/65**, mb4.1**/12**, 5C-7D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.28	274	eP	Pn	19 00 09.1	-1.2
FUG	Fuego 3	0.51	73	⇓iP	Pn	19 00 10.8	-0.9
FG6		0.52	60	⇓eP	Pn	19 00 11.4	-0.3
PCG	Pacaya	0.73	82	eP	Pn	19 00 13.1	-0.4
GCG	Guatemala City	0.84	70	⇑eP	Pn	19 00 14.0	-0.5
GCG				eS	Sn	19 00 29.5	+0.8
RBDL	Robledal	1.62	96	⇑eP	x	19 00 29.8	
RBDL				eS	x	19 00 51.1	
RTR	El Retiro	1.70	103	⇓eP	x	19 00 30.7	
RTR				eS	x	19 00 51.7	
SBLS	San Blas	1.74	105	⇓eP	x	19 00 31.0	
SBLS				eS	x	19 00 54.8	
SNJE	San Jose	1.75	104	eP	x	19 00 31.1	
SNJE				eS	x	19 00 52.4	
BOQS	Boqueron	2.08	105	⇓eP	x	19 00 35.7	
BOQS				eS	x	19 01 03.8	
PICS	Picacho	2.11	105	eP	x	19 00 36.5	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PICS				eS	x	19 01 03.3	
CCIG	Comitan	2.12	339	iP	Pn	19 00 32.0	+2.1
CCIG				iS	Sn	19 01 00.1	+4.2
SNET	Serv Nac Est T	2.14	106	eP	x	19 00 28.9	
SNET				eS	x	19 00 56.5	
LFU	La Fuente	2.24	104⇑	eP	x	19 00 37.7	
LFU				eS	x	19 01 04.6	
LBRS	Las Brisas	2.31	104⇑	iP	x	19 00 38.7	
LBRS				eS	x	19 01 07.4	
LFRS	El Faro	2.32	107⇓	eP	x	19 00 38.8	
LFRS				eS	x	19 01 07.6	
LCBS	La Ceiba	2.39	105⇑	eP	x	19 00 39.7	
LCBS				eS	x	19 01 10.0	
SCX	San Cristobal	2.72	333	iP	Pn	19 00 38.1	+0.2
SCX				iS	Sn	19 01 13.6	+3.4
CNCH	Conchagua	3.56	106	eP	x	19 00 55.3	
CNCH				eS	x	19 01 38.3	
TGUH	Tegucigalpa,Un	3.96	93	eP	Pn	19 00 50.0	-4.5
CMIG	Matias Romero	4.39	310	eP	Pn	19 00 58.6	-1.7
CMIG				P		19 01 00.2	
CMIG				iS	Sn	19 01 50.6	+0.1
CMIG				S	Sn	19 01 51.3	+0.9
CMIG				LR	LR	19 02 07.7	
CMIG	Matias Romero	4.39	310	P	Pn	19 01 00.2	-0.2
	11nm,0.3s,baz=125,slow=9.8,SNR=59						
CMIG				S	Sn	19 01 51.3	+0.9
	34nm,0.3s,baz=108,slow=15,SNR=5.1						
CMIG				LR	LR	19 02 07.7	
	comp=Z,96nm,20.8s,baz=39,slow=30						
CMIG	Matias Romero	4.39	310	eP	Pn	19 00 60.0	-0.3
CMIG				iS	Sn	19 01 49.9	-0.5
SCIG	Sabancuy	4.65	2	iP	Pn	19 01 05.0	+1.3
SCIG				iS	Sn	19 01 56.5	-0.1
OXX	Oaxaca	5.87	299	eP	Pn	19 01 22.0	+1.6
VHO	Vista Hermosa	5.87	299	iP	Pn	19 01 20.0	-0.4
VHO				iS	Sn	19 02 24.2	-2.2
TEIG	Tepich	6.59	26	P	Pn	19 01 30.2	+0.1
	39nm,0.3s,baz=176,slow=1.5,SNR=104						
TEIG				S	Sn	19 02 42.3	-1.4
	7.5nm,0.3s,baz=334,slow=22,SNR=3.1						
VCR	Vista de Mar	6.96	126	eP	Pn	19 01 35.0	-0.2
UTMO	Huajuapan	7.13	300	iP	Pn	19 01 36.4	-1.1
UTMO				iS	Sn	19 02 53.4	-3.6
JTS	JuntasAbangare	7.41	122	P	Pn	19 01 40.2	-1.1
	6.7nm,0.3s,baz=311,slow=16,SNR=18						
JTS				S	Sn	19 03 05.7	+1.8
	1.7nm,0.3s,baz=292,slow=23,SNR=2.7						
JTS				LR	LR	19 04 59.4	
	comp=Z,53nm,18.6s,baz=243,slow=41						
JCR	Jicaral	7.53	125	eP	Pn	19 01 43.3	+0.3
CGA2	Cerro Gallo 2	7.96	122	eP	Pn	19 01 50.0	+1.1
PRS1	Puriscal	8.11	121	eP	Pn	19 01 51.7	+0.8
LAJ	Bijagual	8.33	121	eP	Pn	19 01 50.5	-3.3
PPM	Popocatepetl	8.43	305	iP	Pn	19 01 55.2	0.0
PPM				iS	Sn	19 03 25.8	-2.9
LCR2	La Lucha 2	8.49	121	eP	Pn	19 01 55.5	-0.5
QCR	Quepos	8.54	124	eP	Pn	19 01 56.7	+0.1
URSC	Urasca	8.63	120	eP	Pn	19 01 58.2	+0.3
MEIG	Mezcala	8.73	296	iP	Pn	19 02 01.1	+1.9
PLIG	Platanillo	8.82	299	iP	Pn	19 02 02.1	+1.6
BAR1		9.34	122⇓	eP	Pn	19 02 07.9	+0.3
BAR1				eS	Sn	19 03 49.6	-1.1
SOR	Soroa	11.57	42	eP	Pn	19 02 37.5	-0.3
TXAR	Lajitas Array	18.81	325	P	Pn	19 04 08.2	-1.0
	1.1nm,0.3s,baz=143,slow=13,SNR=41						
LTX	Lajitas	18.81	325	eP	Pn	19 04 09.8	+0.6
	4.1nm,0.6s						
LRAL	Lakeview Retre	19.07	11	eP	Pn	19 04 12.6	+0.3
	28nm,1.1s						
MIAR	Mount Ida	20.26	355	eP	P	19 04 23.8	+0.5
	6.3nm,0.5s						
SDV	Santo Domingo	20.99	103	P	P	19 04 31.5	+0.2
SDV	Santo Domingo	20.99	103	P	P	19 04 31.5	+0.2
	5.0nm,0.7s,baz=334,slow=7.1,SNR=7.2						
TKL	Tuckaleechee C	22.33	16	P	P	19 04 46.5	+1.1
TKL				LR	LR	19 13 34.5	
TKL	Tuckaleechee C	22.33	16	P	P	19 04 46.5	+1.1
	19nm,0.6s,mb4.6,baz=184,slow=11,SNR=19						
TKL				LR	LR	19 13 34.5	
	comp=Z,66nm,19.7s,baz=135,slow=37						
ANMO	Albuquerque	24.67	329	P	P	19 05 08.1	+0.8
	1.2nm,0.6s,mb3.5,baz=146,slow=7.3,SNR=3.3						
ATAH	Atahualpa	24.76	148	P	P	19 05 12.0	+3.7
	12nm,0.8s,mb4.3,baz=324,slow=11,SNR=7.0						
ATAH				LR	LR	19 13 32.6	
	comp=Z,54nm,20.4s,baz=203,slow=33						
PFO	Pinyon Flat Ob	29.80	315	LR	LR	19 18 05.4	
	comp=Z,94nm,20.1s,baz=214,slow=36						
PDAR	Pinedale Array	32.42	335	P	P	19 06 17.1	+0.9
	0.5nm,0.5s,mb3.5,baz=149,slow=9.0,SNR=5.1						
PDAR				PcP	PcP	19 09 02.1	+0.8
	0.6nm,0.5s,baz=132,slow=5.4,SNR=10						
NVAR	Mina Array Bea	33.84	320	P	P	19 06 31.1	+2.5
	7.4nm,0.6s,mb4.7,baz=125,slow=9.1,SNR=68						
NVAR				PcP	PcP	19 09 07.8	+2.4
	2.1nm,0.7s,baz=114,slow=4.3,SNR=11						
ULM	Lac du Bonnet	36.04	355	P	P	19 06 46.4	-1.0
ULM				PcP	PcP	19 09 10.9	-0.7
ULM	Lac du Bonnet	36.04	355	P	P	19 06 46.4	-1.0
	3.0nm,0.5s,mb4.5,baz=175,slow=8.8,SNR=11						
ULM				PcP	PcP	19 09 10.9	-0.7
	0.6nm,0.5s,baz=117,slow=4.5,SNR=3.0						
LPAZ	La Paz	38.08	142	LR	LR	19 22 57.3	
	comp=Z,42nm,18.6s,baz=104,slow=36						
SIV	San Ignacio	42.44	134	P	P	19 07 40.7	-0.3
	1.6nm,0.5s,mb4.0,baz=311,slow=9.0,SNR=9.6						
SIV				pP	pP	19 08 02.7	-1.7
	1.7nm,0.6s,baz=303,slow=8.4,SNR=5.3						
SIV				PcP	PcP	19 09 33.0	+0.6
	2.0nm,0.7s,baz=259,slow=2.9,SNR=6.3						
SCHQ	Schefferville	44.73	20	P	P	19 07 57.8	-1.0
	5.6nm,0.5s,mb4.5,baz=227,slow=6.1,SNR=20						
BBB	Bella Bella	47.81	330	LR	LR	19 30 39.9	
	comp=Z,160nm,18.0s,baz=267,slow=39						
YKA	Yellowknife Ar	50.88	346	P	P	19 08 46.3	+0.1
	3.2nm,0.6s,mb4.5,baz=149,slow=7.6,SNR=51						
YKA				pP	pP	19 09 09.1	-1.2
	0.4nm,0.6s,baz=145,slow=7.8,SNR=1.7						
YKA				PcP	PcP	19 10 01.3	-0.1
	1.1nm,0.6s,baz=150,slow=3.9,SNR=12						
PPT	Papeete	65.59	243	LR	LR	19 30 11.1	
	comp=Z,267nm,20.8s,baz=305,slow=28						
NOA	NORSAR Array B	83.58	29	P	P	19 12 12.3	-0.4
NOA	NORSAR Array B	83.58	29	P	P	19 12 12.3	-0.4
	0.2nm,0.5s,mb3.2,baz=285,slow=6.9,SNR=3.2						
ARCES	ARCESS Array B	85.66	18	P	P	19 12 21.6	-1.5
	2.3nm,1.0s,mb4.1,baz=285,slow=1.9,SNR=5.7						
GERES	GERESS Array B	88.97	40	P	P	19 12 37.8	-1.5
	0.2nm,0.4s,mb3.5,baz=276,slow=5.1,SNR=3.6						
SONM	Songino Array	116.15	347	PKP	PKPdf	19 18 27.4	0.0
	0.2nm,0.8s,baz=316,slow=1.3,SNR=5.0						
KSRS	Korea Array	116.66	326	PKP	PKPdf	19 18 28.2	-0.5
	0.5nm,0.6s,baz=345,slow=1.8,SNR=5.0						
MKAR	Makanchi Array	118.93	5	PKP	PKPdf	19 18 31.4	-1.4
	0.4nm,0.4s,baz=340,slow=2.0,SNR=5.6						
WRA	Warramunga Arr	136.08	256	PKP	PKPdf	19 19 07.2	+1.1
	0.9nm,0.6s,baz=89,slow=2.8,SNR=14						
ASAR	Alice Springs	136.36	251	PKP	PKPdf	19 19 08.1	+1.5
ASAR				pPKP	pPKPdf	19 19 34.6	+0.5
ASAR	Alice Springs	136.36	251	PKhKP		19 18 58.5	
	0.4nm,0.9s,baz=101,slow=4.0,SNR=4.4						
ASAR				PKP	PKPdf	19 19 08.1	+1.5
	0.5nm,0.5s,baz=92,slow=2.3,SNR=11						
ASAR				pPKP	pPKPdf	19 19 34.6	+0.5
	0.3nm,0.6s,baz=71,slow=2.9,SNR=2.3						

IDC ***07*** *19:12:03.3±6.3, 23.79N×108.87W, h0km, mb3.2/1, mb1 4.1/3, mb1mx3.8/17, mbtmp3.7/3, ML4.2/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/14, Error ellipse: s-maj=105.2km s-min=21.1km az=152.0*
NEIC ***07*** *19:12:04.3±1.1, 23.52N×108.91W, h10km, mb4.4/21, Error ellipse: s-maj=16.8km s-min=9.3km az=210.0*
ISCJB ***07*** *19:12:06.3±1.2, 23.9N±0.1×108.58W±0.07, h10km, mb4.2/9, MS3.6/4, Error ellipse: s-maj=17.3km s-min=6.4km az=25.4*
MEX ***07*** *19:12:06.5±1.8, 23.85N×108.92W, h4km±28km, MD4.8*
ISC 07 19:12:06.0±1.2**, 23.7N**±0.1×**108.78W**±0.07**, h10**km**, n63,** σ**1.20**/61**, mb4.2**/10**, MS3.6**/4**, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.47	288	Pn	Pn	19 12 28.5	-4.0
LPIG				Lg		19 12 43.0	
LPIG				iS	Sn	19 12 43.4	-8.4
LPIG	La Paz	1.47	288	Pn	Pn	19 12 28.5	-4.0
	136nm,0.3s,baz=69,slow=10,SNR=58						
LPIG				Lg		19 12 43.0	
	266nm,0.3s,baz=200,slow=7.0,SNR=22						
LPIG	La Paz	1.47	288	iP	Pn	19 12 28.5	-4.1
LPIG				iS	Sn	19 12 43.4	-8.4
MAIG	Mazatlaan	2.21	102	iP	Pn	19 12 41.8	-0.9
MAIG				eS	Sn	19 13 12.6	+2.5
ANIG	Ahuacatlan	4.72	123	iS	Sx	19 14 21.8	
SFJM	Santa Fe	6.19	120	eP	Pn	19 13 44.0	+6.6
LTX	Lajitas	7.27	38	eP	Pn	19 13 50.0	-2.3
	32nm,1.0s						
TXAR	Lajitas Array	7.27	38	Pn	Pn	19 13 49.9	-2.4
	0.9nm,0.3s,baz=214,slow=13,SNR=26						
TXAR				Sn	Sx	19 15 09.2	
	0.8nm,0.3s,baz=200,slow=10,SNR=3.6						
TXAR				Lg		19 15 49.8	
	1.1nm,0.3s,baz=215,slow=30,SNR=3.9						
TXAR				LR	LR	19 16 18.6	
	comp=Z,308nm,18.8s,baz=180,slow=35						
MNTX	Cornudas Mount	8.55	20	eP	Pn	19 14 07.1	-2.8
	12nm,0.8s						
LNIG	Linares	8.58	80	eP	Pn	19 14 09.8	-0.5
LNIG				iS	Sn	19 15 46.5	-0.7
TUC	Tucson	8.80	349	eP	Pn	19 14 11.4	-1.8
	5.8nm,1.0s						
BNM	Barren Site	10.62	10	eP	Pn	19 14 37.9	-0.3
LAZ	Ladron	10.80	7	eP	Pn	19 14 41.7	+1.0
ANMO	Albuquerque	11.43	10	Pn	Pn	19 14 50.2	+0.9
	0.1nm,0.3s,baz=142,slow=6.8,SNR=3.8						
ANMO				Lg		19 18 00.6	
	0.2nm,0.3s,baz=274,slow=3.5,SNR=2.3						
PFO	Pinyon Flat Ob	11.98	328	Pn	Pn	19 15 00.7	+3.8
	0.2nm,0.3s,baz=130,slow=16,SNR=6.4						
CCUT	Cedar City	14.39	345	eP	Pn	19 15 32.0	+2.2
PV01	Paradox Valley	14.43	1	eP	Pn	19 15 30.7	+0.5
CMIG	Matias Romero	14.57	114	LR	LR	19 21 26.4	
	comp=Z,473nm,20.2s,baz=238,slow=38						
ARUT	Antelope Range	14.64	345	eP	Pn	19 15 34.0	+0.9
PV10	Paradox Valley	14.67	359	eP	Pn	19 15 32.2	-1.4
DAC	Darwin (Calif)	14.70	331	eP	Pn	19 15 34.8	+0.8
	16nm,1.1s						
TPNV	Topopah Spring	14.73	336	eP	Pn	19 15 36.1	+1.8
	53nm,1.6s						
SMCO	Snowmass	15.55	5	eP	Pn	19 15 46.2	+1.0
	18nm,1.1s						
TMUT	Trail Mountain	15.73	353	eP	Pn	19 15 46.5	-1.1
MTUM	Tungsten Hills	16.03	331	eP	Pn	19 15 56.7	+5.2
MPU	Maple Canyon	16.49	352	P	Pn	19 15 58.3	+1.0
	4.9nm,0.7s						
NVAR	Mina Array Bea	16.82	333	Pn	Pn	19 16 03.7	+2.2
NVAR	Mina Array Bea	16.82	333	Pn	Pn	19 16 03.7	+2.2
	0.1nm,0.3s,baz=156,slow=14,SNR=22						
DAU	Daniels Canyon	16.84	353	eP	Pn	19 16 02.1	+0.4
DUG	Dugway	16.84	349	eP	Pn	19 16 00.6	-1.1
	26nm,1.3s						
JLU	Jordanelle	17.04	353	P	Pn	19 16 03.0	-1.4
BGU	Big Grassy Mou	17.58	349	eP	Pn	19 16 11.6	+0.5
HWUT	Hardware Ranch	18.05	353	eP	Pn	19 16 16.9	+0.1
	20nm,1.3s						
HVU	Hansel Valley	18.38	350	eP	Pn	19 16 21.4	+0.5
	20nm,1.1s						
PDAR	Pinedale Array	19.07	358	P	Pn	19 16 26.1	-3.2
	0.1nm,0.3s,baz=168,slow=11,SNR=33						
TEIG	Tepich	19.32	96	LR	LR	19 26 40.3	
	comp=Z,96nm,18.0s,baz=167,slow=45						
REDW	Red Top Meadow	19.73	356	eP	Pn	19 16 37.0	-0.1
	45nm,1.5s						
TPAW	Teton Pass	19.86	355	eP	Pn	19 16 37.5	-1.2
	28nm,1.3s						
LOHW	Long Hollow	19.96	356	eP	P	19 16 38.2	0.0
	10.0nm,0.9s						
MOOW	Moose Ponds	20.10	356	eP	P	19 16 39.6	-0.1
	29nm,1.5s						
IMW	Indian Meadow	20.27	355	eP	P	19 16 42.1	+0.6
	38nm,1.3s						
WDC	Whiskeytown Da	20.46	329	eP	P	19 16 42.2	-1.5
	4.8nm,1.0s						
YFT	Old Faithful	20.81	356	eP	P	19 16 51.7	+4.3
LKWY	Lake	20.90	357	eP	P	19 16 49.6	+1.2
	19nm,1.0s						
YMR	Madison River	21.04	356	eP	P	19 16 50.8	+0.9
	31nm,1.3s,mb4.5						
YNR	Norris Junctio	21.06	356	eP	P	19 16 56.5	+6.4
QLMT	Earthquake Lak	21.23	355	eP	P	19 16 53.0	+1.0
RLMT	Red Lodge	21.42	359	eP	P	19 16 54.0	0.0
	28nm,1.4s,mb4.4						
GCMT	Greycliff	22.09	358	eP	P	19 17 01.1	-0.1
GCMT				e		19 17 07.7	
BMO	Blue Mountains	22.26	344	eP	P	19 17 02.8	-0.3
	6.0nm,1.0s,mb4.0						
ECSD	EROS,Sioux Fal	22.39	24	P	P	19 17 04.7	+0.4
	13nm,1.2s,mb4.2						
CHMT	Chamberlain Mo	23.48	352	eP	P	19 17 15.7	-0.2
CPCT	Cooper Cave	24.08	55	eP	P	19 17 23.5	+1.9
GOGA	Godfrey	24.21	61	eP	P	19 17 24.1	+1.3
	20nm,1.2s,mb4.4						
EGMT	Eagleton	24.33	358	eP	P	19 17 24.1	+0.3
	59nm,1.5s,mb4.8						
TKL	Tuckaleechee C	24.73	55	LR	LR	19 27 59.4	
	comp=Z,294nm,19.5s,MS3.8,baz=63,slow=39						
NEW	Newport	25.43	347	LR	LR	19 28 34.4	
	comp=Z,152nm,18.4s,MS3.5,baz=171,slow=39						
COWI	Conover	27.44	30	P	P	19 17 50.4	-1.5
	12nm,0.8s,mb4.5						
EYMN	Ely	27.87	25	eP	P	19 17 55.5	-0.2
	26nm,1.4s,mb4.7						
ROSC	El Rosal	38.09	114	LR	LR	19 36 37.3	
	comp=Z,83nm,19.1s,MS3.6,baz=336,slow=39						
YKA	Yellowknife Ar	39.02	356	P	P	19 19 31.6	-0.8
YKA				LR	LR	19 35 46.9	
YKA	Yellowknife Ar	39.02	356	P	P	19 19 31.6	-0.8
	0.2nm,0.4s,mb3.2,baz=174,slow=8.3,SNR=6.2						
YKA				LR	LR	19 35 46.9	
	comp=Z,99nm,19.8s,MS3.6,baz=185,slow=37						
TIXI	Tiksi	77.11	344	P	P	19 23 58.0	-1.1
	1.0nm,0.8s,mb3.8						
TIXI				e		19 24 05.0	

CSEM ***07*** *19:19:40.8±0.2, 40.00N×42.60E, h20km, MD2.7, Error ellipse: s-maj=5.5km s-min=4.5km az=98.0*
ISK ***07*** *19:19:42.4, 40.00N×42.68E, h19km, MD2.7*
ISCJB ***07*** *19:19:43.1±0.9, 39.99N±0.04×42.60E±0.08, h19km, Error ellipse: s-maj=8.4km s-min=5.2km az=6.2*
DDA ***07*** *19:19:44.4, 39.96N×42.63E, h19km, Md2.7*
ISC 07 19:19:40.3±2.3**, 40.01N**±0.05×**42.4E**±0.2**, h26**km±11km**, n6,** σ**0.62**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.63	133	PG	Pb	19 19 52.3	-0.4
AGRB				SG	Sb	19 20 00.5	-0.7
TUTA	Tutak	0.69	152	iP	Pb	19 19 53.7	+0.1
TUTA				iS	Sb	19 20 03.8	+1.1
EZM	Erzurum	0.80	263	PG	Pb	19 20 02.3	+6.8
KARS	Kars	0.81	41	PG	Pb	19 19 55.5	-0.1
KARS				SG	Sb	19 20 07.2	+1.1
DIGO	Kars	0.85	61	iP	Pb	19 19 55.5	-1.0
DIGO				iS	Sb	19 20 07.4	-0.1
DYDN	Diyadin	1.10	115	iP	Pn	19 19 59.9	-0.1
DYDN				iS	Sn	19 20 14.5	+0.2

SZGRF ***07*** *19:19:49.9, 19.44S×177.23W, h33km, Fiji Islands region*
ISCJB ***07*** *19:20:48.4±0.8, 17.83S±0.05×178.15W±0.05, h513km±9km, mb4.7/30, Error ellipse: s-maj=9.4km s-min=6.0km az=141.0*
BJI ***07*** *19:20:48.1, 17.05S×177.88W, h494km, mB5.1, mb5.0*
GCMT ***07*** *19:20:49.9±0.8, 17.76S×178.27W, h548km±4km, MW5.2/31, Moment Tensor Solution. s31,c37; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.01±.50; $M_{\theta\theta}$-1.53±.79; $M_{\phi\phi}$4.54±.62; $M_{r\theta}$2.35±.72; $M_{\theta\phi}$1.71±.71; $M_{\phi r}$-4.72±.72; Best double couple: $M_0$6.83600×10^{16} NP1:ϕ_s227.00000°, δ32.00000°, λ-29.00000°. NP2:ϕ_s343.00000°, δ75.00000°, λ-118.00000°. Principal axes: T 6.8440, Plg25.0000°, Azm94.0000°; N -0.0170, Plg27.0000°, Azm351.0000°; P -6.8280, Plg52.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s.*
NEIC ***07*** *19:20:49.9±0.7, 17.80S×178.13W, h518km±8km, mb5.4/14 Error ellipse: s-maj=8.0km s-min=4.9km az=151.0*
MOS ***07*** *19:20:51.1±2.3, 17.82S×178.12W, h521km, mb4.5/5, Error ellipse: s-maj=13.5km s-min=9.9km az=171.0*
IDC ***07*** *19:20:52.2±0.6, 17.74S×178.19W, h542km±6km, mb4.0/17, mb1 4.2/19, mb1mx4.2/20, mbtmp4.0/19, Error ellipse: s-maj=12.7km s-min=8.2km az=155.0*
ISC 07 19:20:50.5±0.9**, 17.83S**±0.06×**178.14W**±0.05**, h525**km±11km**, h542**km±2.7km**:pP-P, n206,** σ**0.96**/100**, mb4.7**/30**, 15C-32D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.26	58	P	P	19 22 38.3	-1.8
	36nm,0.3s,baz=146,slow=1.3,SNR=23						
AFI				S	S	19 24 04.8	-5.2
	24nm,0.3s,baz=6.7,slow=19,SNR=4.4						
DZM	Mont Dzumac	15.09	251	eP	P	19 24 01.7	+0.4
DZM	Mont Dzumac	15.09	251	P	P	19 24 01.6	+0.3
	3.1nm,0.3s,baz=79,slow=16,SNR=25						
RAR	Rarotonga	17.64	104	P	P	19 24 26.9	+0.6
	4.5nm,0.3s,baz=249,slow=5.5,SNR=15						
WCZ	Waipu Caves	19.23	199	PN	P	19 24 43.9	+3.2
PUZ	Puketiti	20.41	188	PN	P	19 24 50.9	-0.5
URZ	Urewera	20.78	191	P	P	19 24 52.5	-2.2
URZ	Urewera	20.78	191	P	P	19 24 52.6	-2.0
	92nm,0.3s,baz=308,slow=2.8,SNR=139						
URZ				S	S	19 28 10.2	-2.3
	5.5nm,0.7s,baz=210,slow=20,SNR=5.4						
URZ	Urewera	20.78	191	PN	P	19 24 52.3	-2.4
SNZO	South Karori	24.20	193	eP	P	19 25 24.3	-1.0
	120nm,0.8s,mb5.6						
TCW	Tory Channel	24.20	194	P	P	19 25 24.6	-0.7
TCW	Tory Channel	24.20	194	PN	P	19 25 23.6	-1.7
THZ	Tophouse	25.06	196	eP	P	19 25 32.3	-0.6
THZ	Tophouse	25.06	196	PN	P	19 25 32.0	-0.9
DSZ	Denniston Nort	25.35	198	eP	P	19 25 36.3	+0.9
DSZ	Denniston Nort	25.35	198	PN	P	19 25 35.5	0.0
KHZ	Kahutara	25.52	194	eP	P	19 25 36.0	-0.9
KHZ	Kahutara	25.52	194	PN	P	19 25 35.9	-1.0
LTZ	Lake Taylor	26.18	196	P	P	19 25 41.7	-1.1
LTZ	Lake Taylor	26.18	196	PN	P	19 25 41.5	-1.3
WVZ	Waitaha Valley	26.88	198	eP	P	19 25 49.0	+0.1
WVZ	Waitaha Valley	26.88	198	PN	P	19 25 48.4	-0.6
PAE	Paea	27.20	94	eP	P	19 25 52.0	-0.1
	121nm,1.0s,mb5.5						
PAE	Paea	27.20	94	eP	P	19 25 52.0	-0.1
PAE				pmax	pmax		
	comp=Z,121nm,1.0s,mb5.5						
PPT	Papeete	27.21	94	eP	P	19 25 52.3	+0.1
	comp=Z,111nm,1.4s,mb5.3						
PPT	Papeete	27.21	94	P	P	19 25 52.7	+0.5
	comp=Z,58nm,0.3s,mb5.7,baz=169,slow=24,SNR=5.1						
RPZ	Rata Peaks	27.37	197	eP	P	19 25 52.8	-0.5
RPZ	Rata Peaks	27.37	197	P	P	19 25 53.9	+0.7
	comp=Z,27nm,0.6s,mb5.1,baz=225,slow=1.8,SNR=22						
RPZ	Rata Peaks	27.37	197	PN	P	19 25 52.4	-0.9
TBI	Tubuai	27.38	106	eP	P	19 25 55.0	+1.4
	comp=Z,128nm,0.8s,mb5.6						
TVO	Taravao	27.50	94	eP	P	19 25 54.9	+0.2
	comp=Z,116nm,0.8s,mb5.5						
TVO	Taravao	27.50	94	eP	P	19 25 54.9	+0.2
TVO				pmax	pmax		
	comp=Z,116nm,0.8s,mb5.6						
LBZ	Lake Benmore	28.24	198	eP	P	19 26 00.0	-0.8
LBZ	Lake Benmore	28.24	198	PN	P	19 25 59.5	-1.3
JCZ	Jackson Bay	28.40	200	P	P	19 26 02.8	+0.6
JCZ	Jackson Bay	28.40	200	PN	P	19 26 02.8	+0.5
PMOR	Pomariorio Ree	29.14	89	eP	P	19 26 09.1	0.0
	comp=Z,118nm,1.2s,mb5.4						
VAH	Vaihoa	29.35	90	eP	P	19 26 10.6	-0.4
ARMA	Armidale	30.20	240⇓	iP	P	19 26 19.9	+1.8
WHZ	Wether Hill Ro	30.28	199	eP	P	19 26 19.4	+0.9
WHZ	Wether Hill Ro	30.28	199	PN	P	19 26 19.1	+0.5
CNB	Canberra Magne	33.67	232⇓	iP	P	19 26 49.4	+1.7
	comp=Z,70nm,0.5s,mb5.5						
CTA	Charters Tower	33.71	260⇓	iP	P	19 26 48.6	+0.4
	comp=Z,15nm,0.9s,mb4.5						
CTA	Charters Tower	33.71	260⇓	iP	P	19 26 48.6	+0.4
CTA				pmax	pmax		
	comp=Z,15nm,0.9s						
CTA	Charters Tower	33.71	260	P	P	19 26 48.7	+0.5
	comp=Z,17nm,0.6s,mb4.8,baz=89,slow=11,SNR=28						
CTAO	Charters Tower	33.71	260	eP	P	19 26 48.3	+0.1
	comp=Z,49nm,1.1s,mb5.0						
CTAO	Charters Tower	33.71	260	eP	P	19 26 48.3	+0.1
CTAO				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.0						
PMG	Port Moresby	34.69	279d	iP	P	19 26 57.8	+1.3
PMG	Port Moresby	34.69	279	P	P	19 26 58.0	+1.5
	comp=Z,85nm,0.8s,mb5.3,baz=82,slow=6.3,SNR=46						
TAOE	Nuku Hiva Isla	37.97	81	eP	P	19 27 22.7	-0.8
	comp=Z,729nm,1.2s						
STKA	Stephens Creek	38.89	241⇓	iP	P	19 27 32.2	+1.4
	comp=Z,56nm,0.6s,mb5.3						
STKA				eS	S	19 32 50.2	-1.1
STKA	Stephens Creek	38.89	241	P	P	19 27 32.4	+1.6
	comp=Z,77nm,0.6s,mb5.4,baz=91,slow=9.6,SNR=409						
RKT	Rikitea	40.68	105	eP	P	19 27 45.7	+0.4
	comp=Z,95nm,1.1s,mb5.2						
RKT	Rikitea	40.68	105	eP	P	19 27 45.7	+0.4
RKT				pmax	pmax		
	comp=Z,95nm,1.1s,mb5.2						
WB2	Warramunga Arr	44.88	259⇓	iP	P	19 28 18.0	-0.3
WB2				eS	S	19 34 14.1	-3.8
WRA	Warramunga Arr	44.89	259	P	P	19 28 18.1	-0.3
	comp=Z,34nm,0.7s,mb5.0,baz=93,slow=7.0,SNR=499						
WRA				S	S	19 34 15.4	-2.7
	comp=Z,0.7nm,0.7s,baz=91,slow=12,SNR=3.1						
ASAR	Alice Springs	45.05	254	P	P	19 28 20.1	+0.6
	comp=Z,287nm,0.6s,baz=88,slow=8.2,SNR=6634						
ASAR				PcP	PcP	19 29 49.1	-0.2
	comp=Z,6.1nm,0.7s,baz=87,slow=4.4,SNR=4.1						
ASAR				S	S	19 34 18.4	-1.8
	comp=Z,5.1nm,0.9s,baz=92,slow=16,SNR=19						
FORT	Forrest	50.27	245	eP	P	19 28 58.5	-0.1
	comp=Z,102nm,0.6s,mb5.4						
FITZ	Fitzroy Crossi	53.29	260⇓	iP	P	19 29 20.9	+0.4
	comp=Z,14nm,0.3s,mb4.8						
FITZ	Fitzroy Crossi	53.29	260	S	S	19 36 11.1	-1.7
	comp=Z,5.8nm,1.1s,baz=269,slow=10.0,SNR=3.0						
KLBR	Kellerberrin	59.09	243⇓	iP	P	19 30 00.1	-0.3
	comp=Z,61nm,0.6s,mb5.0						
NWAO	Narrogin (SRO)	59.47	242	eP	P	19 30 02.9	0.0
	comp=Z,12nm,0.6s,mb4.3						
NWAO	Narrogin (SRO)	59.47	242	eP	P	19 30 02.9	0.0
NWAO				pmax	pmax		
	comp=Z,12nm,0.6s						
MUN	Mundaring	60.38	243⇑	iP	P	19 30 09.5	+0.5
VNDA	Vanda	60.55	185	P	P	19 30 11.2	+1.9
	comp=Z,8.5nm,0.6s,mb4.3,baz=2.3,slow=7.4,SNR=47						
MJAR	Matsushiro Arr	67.99	323	P	P	19 30 56.2	-1.0
	comp=Z,3.5nm,0.6s,mb4.1,baz=145,slow=5.8,SNR=14						
QSPA	South Pole Qui	72.23	180	eP	P	19 31 23.1	+1.5
KSM	Kuching	72.92	277	eP	P	19 31 27.5	+0.6
KSRS	Korea Array	74.81	318	P	P	19 31 37.3	+0.3
	comp=Z,1.9nm,0.7s,baz=128,slow=7.4,SNR=6.0						
CMB	Columbia Colle	77.61	43	eP	P	19 31 52.2	-0.3
	comp=Z,8.4nm,0.9s,mb4.1						
CMB	Columbia Colle	77.61	43	eP	P	19 31 52.2	-0.3
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
HABR	Khabarovsk	78.07	330	eP	P	19 31 54.8	+0.1
HABR				e		19 32 01.6	
HABR				e		19 35 00.9	
HABR				eS	S	19 41 02.3	-3.3
HABR				e		19 41 20.9	
HABR				e		19 46 21.9	
NJ2	Nanjing	78.08	309	eP	P	19 31 55.9	+0.7
MTUM	Tungsten Hills	78.43	45	eP	P	19 31 57.5	+0.6
NVAR	Mina Array Bea	79.19	44	P	P	19 32 01.4	+0.4
NVAR				pP	pP	19 33 56.7	+3.2
NVAR	Mina Array Bea	79.19	44	P	P	19 32 01.4	+0.4
	comp=Z,6.6nm,0.7s,mb4.1,baz=213,slow=7.4,SNR=44						
NVAR				pP	pP	19 33 56.7	+3.2
	comp=Z,1.5nm,0.8s,baz=220,slow=7.0,SNR=5.7						
TUC	Tucson	81.45	52	eP	P	19 32 13.5	+0.6
	comp=Z,12nm,1.2s,mb4.2						
TUC	Tucson	81.45	52	eP	P	19 32 13.5	+0.6
TUC				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.2						
MAW	Mawson	84.02	200	P	P	19 32 25.4	+0.2
	comp=Z,10nm,0.4s,mb4.7,baz=138,slow=4.3,SNR=30						
NEW	Newport	85.30	36	P	P	19 32 30.4	-1.3
	comp=Z,3.4nm,0.7s,mb4.0,baz=299,slow=4.5,SNR=4.5						
TXAR	Lajitas Array	85.74	58	P	P	19 32 35.4	+1.2
TXAR				pP	pP	19 34 33.9	+4.8

TXAR Lajitas Array 85.74 58 P P 19 32 35.4 +1.2
comp=Z,6.6nm,0.7s,mb4.3,baz=220,slow=6.1,SNR=83
TXAR pP pP 19 34 33.9 +4.8
comp=Z,1.0nm,0.9s,baz=235,slow=4.4,SNR=5.6
ANMO Albuquerque 85.85 51⇓iP P 19 32 34.8 +0.2
BILL Bilibino 86.38 354⇑eP P 19 32 35.2 -1.2
BILL e*PP pP 19 34 34.6 +3.1
BILL eS S 19 42 25.6 -2.1
BILL pmax pmax
comp=Z,1.0nm,1.0s
PDAR Pinedale Array 87.12 43 P P 19 32 40.5 0.0
comp=Z,2.8nm,0.8s,mb3.9,baz=221,slow=3.0,SNR=20
PDAR pP pP 19 34 38.5 +2.6
comp=Z,0.7nm,0.8s,baz=202,slow=1.6,SNR=4.8
SNAA Sanae 90.67 179 eP P 19 32 55.7 -0.8
VNA3 Neumayer Olymp 90.80 176 eP P 19 32 57.7 +0.6
VNA3 e 19 32 59.8
VNA3 e 19 33 04.7
VNA2 Neumayer--Watz 91.25 177 eP P 19 32 59.9 +0.7
VNA2 e 19 33 01.8
VNA2 e 19 33 06.9
VNA1 Neumayer--Stat 91.47 177 eP P 19 33 01.1 +0.9
VNA1 e 19 33 03.7
VNA1 e 19 33 08.9
INK Inuvik 91.74 15 P P 19 33 00.3 -1.0
INK Inuvik 91.74 15 P P 19 33 00.3 -1.0
comp=Z,0.5nm,0.6s,mb3.7,baz=204,slow=6.9,SNR=3.2
SONM Songino Array 93.65 319 P P 19 33 09.6 -1.0
comp=Z,0.5nm,0.6s,mb3.8,baz=135,slow=6.3,SNR=6.3
YKA Yellowknife Ar 94.15 25 P P 19 33 11.4 -1.1
comp=Z,0.9nm,0.7s,mb4.0,baz=245,slow=4.4,SNR=14
YKA pP pP 19 35 12.8 +3.9
comp=Z,0.4nm,0.9s,baz=241,slow=4.5,SNR=2.0
TIXI Tiksi 96.14 345 eP P 19 33 21.6 +0.3
TIXI pmax pmax
comp=Z,1.0nm,1.1s,mb4.0
MKAR Makanchi Array 109.26 314 PKiKP PKiKP 19 38 19.2 -1.5
comp=Z,0.7nm,0.5s,baz=199,slow=0.8,SNR=8.2
KEV Kevo 125.83 349 epkp PKPdf 19 38 50.3 -1.5
ARCES ARCESS Array B 126.28 350 PKP PKPdf 19 38 52.1 -0.6
comp=Z,1.7nm,0.4s,baz=15,slow=1.6,SNR=23
JOF Joensuu 130.56 343 epkp PKPdf 19 38 58.0 -3.0
KAF Kangasniemi 132.55 345 epkp PKPdf 19 39 02.2 -2.6
FINES FINESS Array B 133.18 344 PKP PKPdf 19 39 04.1 -1.9
comp=Z,1.1nm,0.5s,baz=90,slow=1.9,SNR=4.0
FINES SKPbc SKPbc 19 41 43.9 -1.1
comp=Z,0.7nm,0.7s,baz=329,slow=2.4,SNR=4.0
NB2 NORSAR Subarra136.32 353 PKP PKPdf 19 39 12.2 +0.4
comp=Z,0.9nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 136.32 353 PKP PKPdf 19 39 12.7 +0.9
comp=Z,1.0nm,0.6s,baz=19,slow=4.1,SNR=5.3
NOA SKPbc SKPbc 19 41 54.0 -0.8
comp=Z,0.6nm,0.8s,baz=16,slow=4.4,SNR=3.3
KMBO Kilima Mbogo 140.39 245 i PKIKP PKPdf 19 39 25.6 +4.8
AKASG Malin Array Be 140.61 333 PKhKP 19 39 12.4
comp=Z,0.9nm,0.4s,baz=40,slow=3.9,SNR=5.8
AKASG PKP PKPdf 19 39 21.1 +1.1
comp=Z,0.5nm,0.3s,baz=43,slow=3.1,SNR=6.3
MALT Malatya 142.16 310 ⇓P PKPdf 19 39 21.9 -1.2
MALT Malatya 142.16 310⇓iP PKPdf 19 39 21.9 -1.3
LVV L'vov 143.44 336 ePKHKP 19 39 22.1
KWP Kalwaria 144.10 337 ePKP PKPdf 19 39 25.4 -0.8
OJC Ojcow 144.62 340 ePKP PKPdf 19 39 26.7 -0.4
BURAR Bucovina Array 144.66 332 ⇑P PKPdf 19 39 27.9 +0.6
BURAR Bucovina Array 144.66 332⇑iP PKPdf 19 39 27.9 +0.7
NRDL Niedersach Rie 144.80 351 ePKPbc PKPdf 19 39 27.1 -0.2
STHS Stebnicka Huta 144.81 338 i PKP PKPdf 19 39 27.6 +0.2
KOLS Kolonicke sedl 144.83 336 ePKP PKPdf 19 39 27.9 +0.4
BRTR Keskin Array B 144.91 315 PKP PKPdf 19 39 27.4 -0.5
comp=Z,5.3nm,0.5s,baz=130,slow=4.7,SNR=36
BRTR pPKP pPKPdf 19 41 34.0 +2.3
comp=Z,1.4nm,1.0s,baz=108,slow=4.0,SNR=2.9
UZH Uzhgorod 145.07 336c iPKIKP PKPdf 19 39 28.0 +0.1
KSP Ksiaz 145.10 344 ePKP PKPdf 19 39 28.7 +0.8
NIE Niedzica 145.14 339 ePKP PKPdf 19 39 29.2 +1.2
CRVS Cervenica-Dubn 145.16 337 ePKP PKPdf 19 39 28.6 +0.6
VRI Vrincioaia 145.24 329 ⇓P PKPdf 19 39 29.1 +0.8
VRI Vrincioaia 145.24 329⇓iP PKPdf 19 39 29.1 +0.8
PLOR Plostina 145.29 329⇓iP PKPdf 19 39 29.2 +0.8
TIRR Tirgusor 145.34 326⇓iP PKPdf 19 39 28.6 +0.1
TRPA Tarpa 145.38 335⇑iP PKPdf 19 39 28.9 +0.5
CLZ Clausthal 145.40 351 ePKPbc PKPbc 19 39 29.3 -0.2
CLL Collm 145.44 348⇓iPKIKP PKPdf 19 39 29.0 +0.6
CLL pmax pmax
comp=Z,18nm,0.6s
CLL Collm 145.44 348⇓iPKPbc PKPbc 19 39 29.0 -0.7
comp=Z,18nm,0.6s
CLL Collm 145.44 348 ePKPbc PKPbc 19 39 29.1 -0.6
HARR Harsova 145.44 326 ⇓P PKPbc 19 39 29.7 -0.2
HARR Harsova 145.44 326⇓iP PKPbc 19 39 29.7 -0.2
OKC Ostrava-Krasne 145.48 341 ePKP PKPdf 19 39 29.4 +0.8
UPC Upice 145.48 344 ePKP PKPbc 19 39 29.7 -0.1
DPC Dobruska-Polom 145.54 344 ePKP PKPbc 19 39 29.8 -0.2
BRG Berggiesshubel 145.65 346 i PKIKP PKPbc 19 39 29.9 -0.4
BRG pmax pmax
comp=Z,19nm,0.6s
BRG Berggiesshubel 145.65 346 ePKPbc PKPbc 19 39 29.7 -0.6
BRG Berggiesshubel 145.65 346 i PKP PKPbc 19 39 29.9 -0.4
comp=Z,6.8nm,0.6s
FBE Freiberg 145.73 347 ePKPbc PKPbc 19 39 30.3 -0.2
PVCC Panska Ves 145.83 346 ePKP PKPbc 19 39 30.5 -0.3
KECS Kecovo 145.87 338 i PKP PKPbc 19 39 31.0 0.0
MLR Muntele Rosu 145.89 329 ⇓P PKPbc 19 39 30.7 -0.5
MLR Muntele Rosu 145.89 329⇓iP PKPbc 19 39 30.7 -0.5
SNX Sinaia 146.20 329 ⇓P PKPbc 19 39 32.0 0.0
SNX Sinaia 146.20 329⇓iP PKPbc 19 39 32.0 0.0
PRU Pruhonice 146.33 345 ePKP PKPbc 19 39 31.8 -0.4
MOX Moxa 146.34 349 ePKP PKPbc 19 39 31.9 -0.3
MOX Moxa 146.34 349 ePKPbc PKPbc 19 39 31.3 -0.9
VOIR 146.36 330 ⇑P PKPbc 19 39 32.7 +0.2
VOIR 146.36 330⇑iP PKPbc 19 39 32.7 +0.2
DRGR 146.38 334 ⇓P PKPbc 19 39 32.0 -0.4
DRGR 146.38 334⇓iP PKPbc 19 39 32.0 -0.5
TANN Tannenbergstha 146.40 348 ePKPbc PKPbc 19 39 32.1 -0.3
WERD Werda 146.40 348 ePKPbc PKPbc 19 39 32.0 -0.4
VYHS Vyhne 146.43 339 ePKP PKPbc 19 39 32.2 -0.4
GUNZ Gunzen 146.47 348 ePKPbc PKPbc 19 39 32.5 -0.1
KOLL Kolacno 146.50 340 ePKP PKPbc 19 39 32.9 +0.2
WERN Wernitzgruen 146.53 348 ePKPbc PKPbc 19 39 32.3 -0.5
NKC Novy Kostel 146.57 348 ePKP PKPbc 19 39 32.5 -0.4
TREC Trest 146.73 344 ePKP PKPbc 19 39 33.1 -0.2
MANZ Manzenberg 146.88 348 ePKPbc PKPbc 19 39 33.3 -0.4
MODS Modra-Piesok 147.04 341 ePKP PKPbc 19 39 34.5 +0.3
ROTZ Rotzenmuhle 147.06 348 ePKPbc PKPbc 19 39 34.0 -0.2
TNS Taunus Mts 147.25 352 ePKPbc PKPbc 19 39 34.5 -0.2
GRA1 Grafenberg Arr 147.33 349 ePKPbc PKPbc 19 39 34.7 -0.2
GRF Grafenberg Arr 147.33 349 ePKPbc PKPbc 19 39 34.7 -0.2
KHC Kasperske Hory 147.36 346 ePKP PKPbc 19 39 34.8 -0.2
GZR Gura Zlata 147.45 332 ⇑P PKPbc 19 39 34.8 -0.6
GZR Gura Zlata 147.45 332⇑iP PKPbc 19 39 34.8 -0.6
WET Wettzell 147.51 346 ePKPbc PKPbc 19 39 34.8 -0.6
GERES GERESS Array B 147.60 345 PKPbc PKPbc 19 39 35.3 -0.4
comp=Z,6.1nm,0.5s,baz=25,slow=2.9,SNR=69
GIVF Givet 147.72 356 ePKP1 PKPbc 19 39 35.4 -0.5
BZS Buzias 147.78 334 ⇓P PKPbc 19 39 35.4 -0.8
BZS Buzias 147.78 334⇓iP PKPbc 19 39 35.3 -0.9
BAIF Baives 147.79 357 ePKP1 PKPbc 19 39 35.7 -0.4
comp=Z,15nm,0.7s
CONA Conrad Observa 147.87 342⇓iPKPbc PKPbc 19 39 35.9 -0.5
comp=Z,8.7nm,0.6s
PKSM Moragy 148.46 337 ⇑P PKPbc 19 39 36.6 -1.3
PKSM Moragy 148.46 337⇑iP PKPbc 19 39 36.6 -1.3
FLN La Foliniere 149.09 3 ePKP1 PKPbc 19 39 38.5 -0.8
comp=Z,21nm,0.6s
BFO Black Forest 149.12 352 ePKPbc PKPbc 19 39 38.7 -0.7
CDF Champ du Feu 149.18 353 ePKP1 PKPbc 19 39 39.1 -0.5
comp=Z,15nm,0.6s
LDF La Druitiere 149.27 3 ePKP1 PKPbc 19 39 38.8 -1.0
comp=Z,13nm,0.6s
ROSF Rostrenen 149.28 7 ePKP1 PKPbc 19 39 38.6 -1.2
KBA Koelnbreinsper 149.33 345⇑iP PKPbc 19 39 38.4 -1.5
comp=Z,6.0nm,0.5s
GRR Gorron 149.44 4 ePKP1 PKPbc 19 39 39.4 -0.8
comp=Z,34nm,0.8s
SGMF Saint Gilles 149.44 6 ePKP1 PKPbc 19 39 39.2 -1.0
WATA Walderalm 149.50 347⇓iP PKPbc 19 39 39.7 -0.7
comp=Z,7.1nm,0.5s
WTTA Wattenberg 149.56 347⇑iP PKPbc 19 39 40.1 -0.4
comp=Z,18nm,0.5s
MOTA Moosalm 149.60 348⇓iP PKPbc 19 39 40.0 -0.7
comp=Z,4.0nm,0.5s
HAU Haudompre 149.68 354 ePKP1 PKPbc 19 39 40.2 -0.6
comp=Z,11nm,0.6s

SQTA Sankt Quirin 149.69 347⇓iP PKPbc 19 39 40.4 -0.5
comp=Z,9.1nm,0.5s
HINF Hinteralfeld 149.81 353 ePKP1 PKPbc 19 39 40.3 -0.8
comp=Z,8.3nm,0.7s
ABTA Abfaltersbach 149.85 345⇑iPKPbc PKPbc 19 39 40.3 -0.9
comp=Z,11nm,0.6s
LOR Lormes 150.59 357 ePKP1 PKPbc 19 39 42.4 -0.5
comp=Z,13nm,0.5s
HYF Humbligny 150.63 359 ePKP1 PKPbc 19 39 42.8 -0.2
SSF Saint Saulge 150.81 358 ePKP1 PKPbc 19 39 42.9 -0.6
comp=Z,15nm,0.6s
CABF La Chapelle 151.09 354 ePKP1 PKPbc 19 39 44.1 0.0
comp=Z,7.5nm,0.6s
AVF Avril sur Loir 151.09 358 ePKP1 PKPbc 19 39 43.1 -1.0
MFF Saint Martin d 151.26 3 ePKP1 PKPbc 19 39 43.7 -0.8
comp=Z,6.7nm,0.5s
BGF Bois d'Agland 151.34 359 ePKP1 PKPbc 19 39 44.1 -0.6
TCF Toulx Ste Croi 151.62 359 ePKP1 PKPbc 19 39 44.1 -1.2
LPL La Plagne 152.09 353 ePKP1 PKPbc 19 39 46.6 +0.2
LPG La Plagne 152.11 353 ePKP1 PKPbc 19 39 46.6 +0.2
comp=Z,4.3nm,0.6s
ORIF Oris-en-Rattie 152.78 354 ePKP1 PKPbc 19 39 48.0 +0.1
comp=Z,15nm,0.9s
MBDF Montbardon 152.87 352 ePKP1 PKPbc 19 39 47.6 -0.5
comp=Z,5.6nm,0.5s
SMRF Simiane la Rot 153.74 354 ePKP1 PKPbc 19 39 49.8 -0.2
FRF La Foret Royal 154.03 352 ePKP1 PKPbc 19 39 50.4 -0.2
comp=Z,17nm,1.0s
TORD Torodi Ar. Bea 175.34 178 PKP PKPdf 19 39 58.6 -2.3
comp=Z,0.7nm,0.6s,baz=265,slow=0.8,SNR=6.4
TORD PKPab PKPab 19 41 40.5 -0.4
comp=Z,0.9nm,0.7s,baz=206,slow=3.0,SNR=9.0
TORD PP PP 19 45 32.9 +0.4
comp=Z,2.1nm,1.0s,baz=181,slow=5.6,SNR=5.6

IDC 07 19:35:19.0±11.0**,2254N**×**14486E,h0**^{km}**,mb3.3**/4**, mb1 3.4**/4**,mb1mx3.3**/19**,mbtmp3.3**/4**,Error ellipse: s-maj=421.1km s-min=24.8km az=75.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	Songino Array	39.70	319	P	P	19 42 53.1	+0.2
	0.2nm,0.5s,baz=135,slow=6.8,SNR=3.7						
WRA	Warramunga Arr	43.46	194	P	P	19 43 24.2	+0.2
	0.6nm,1.0s,baz=16,slow=9.1,SNR=4.5						
ASAR	Alice Springs	47.15	194	P	P	19 43 53.0	-0.2
	0.2nm,0.7s,baz=17,slow=10.0,SNR=6.0						
MKAR	Makanchi Array	55.28	312	P	P	19 44 54.0	-0.1
	0.2nm,0.2s,baz=98,slow=7.9,SNR=3.0						

IDC 07 20:03:15.7±8.4**,2924S**×**17989W,h226**^{km}±71^{km}**,mb3.4**/3**, mb1 3.7**/4**,mb1mx3.4**/12**,mbtmp3.6**/4**,Error ellipse: s-maj=73.4km s-min=30.4km az=23.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	8.95	189	ePN	Pn	20 05 22.2	+1.3
PUZ				SN	S	20 06 42.2	-20
MWZ	Matawai	9.32	193	PN	Pn	20 05 27.5	+1.7
URZ	Urewera	9.34	195	P	Pn	20 05 26.0	0.0
	3.4nm,0.3s,baz=343,slow=4.4,SNR=40						
URZ				S	S	20 06 52.8	-18
	4.3nm,0.3s,baz=66,slow=23,SNR=28						
URZ	Urewera	9.34	195	PN	Pn	20 05 26.1	+0.2
STKA	Stephens Creek	33.16	256	P	P	20 09 29.9	-1.0
	2.4nm,1.1s,baz=83,slow=8.1,SNR=3.5						
ASAR	Alice Springs	41.53	266	P	P	20 10 40.8	-0.4
	0.7nm,0.5s,baz=106,slow=7.3,SNR=14						
WRA	Warramunga Arr	42.41	272	P	P	20 10 49.1	+0.7
	1.3nm,0.3s,baz=111,slow=8.0,SNR=57						
FINES	FINESS Array B	143.49	339	PKP	PKPdf	20 22 22.0	-0.5
	0.4nm,0.4s,baz=73,slow=4.8,SNR=5.0						
EKA	Eskdalemuir Ar	153.81	4	PKPbc	PKPbc	20 22 46.7	-0.7
	1.5nm,0.9s,baz=337,slow=5.6,SNR=3.5						
TORD	Torodi Ar. Bea	163.92	186	PKPab	PKPab	20 23 46.6	+0.5
	0.3nm,0.6s,baz=193,slow=5.3,SNR=2.9						

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*IDC **07** 20:08:39.1±0.7,3636N×69.15E,h0^{km},mb4.2/17, mb1 4.3/19,mb1mx4.2/26,mbtmp4.2/19,ML3.6/2,MS3.6/4, Ms1 3.6/4,ms1mx3.1/36,Error ellipse: s-maj=19.6km s-min=14.2km az=12.0*
*NEIC **07** 20:08:41.3±0.3,3644N×6909E,h10^{km},mb4.6/21,Error ellipse: s-maj=7.3km s-min=5.2km az=209.0*
*MOS **07** 20:08:43.0±1.0,3653N×69.16E,h33^{km},mb4.6/17,Error ellipse: s-maj=9.1km s-min=6.3km az=95.0*
*ISCJB **07** 20:08:44.1±0.7,3659N±003×69.16E±005,h40^{km}±7^{km}, mb4.3/36,MS3.9/6,Error ellipse: s-maj=7.1km s-min=4.5km az=160.0*
*BJI **07** 20:08:44.0,3684N×6907E,h34^{km},mb4.6,ML4.1*
ISC 07 20:08:47.1±0.6**,3657N**±003×**6918E**±005**,h53**^{km}±6^{km}**, n127,**σ1§**11**/130**,mb4.3**/36**,MS3.9**/6**,11C-6D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	Thamme Wali	4.32	150	P	Pn	20 09 50.7	+0.5
CHCP	Chirah Chowk	4.43	130	P	Pn	20 09 53.7	+1.9
CHCP				S	Sn	20 11 03.0	+21
SBDP	Sheikh Budin	4.47	162	P	Pn	20 09 53.5	+1.2
DRP	Derazinda	4.89	170	P	Pn	20 10 00.3	+2.2
KSH	Kashi	6.11	59	P	Pn	20 10 16.7	+1.9
KSH				Smax			
	comp=N,447nm,1.1s						
KSH				Smax			
	comp=E,278nm,0.8s						
AML	Almayashu	6.56	31	eP	Pn	20 10 20.7	-0.2
AML	Almayashu	6.56	31	P	Pn	20 10 21.0	+0.1
	SNR=87						
KK31	Karatay Array	6.61	8	⇑Pn	Pn	20 10 20.2	-1.3
	comp=E,20nm,0.8s						
KK31				⇓Lg		20 12 08.8	
	comp=E,26nm,0.6s						
THN	Thein Dam	6.79	126	eP	Pn	20 10 24.1	0.0
DLH	Dalhousie	6.89	124	ex	x	20 10 43.0	
DLH				ex	x	20 11 48.0	
UCH	Uchtor	7.00	35	eP	Pn	20 10 27.1	+0.2
	comp=E,20nm,0.3s						
UCH	Uchtor	7.00	35	P	Pn	20 10 27.3	+0.4
	SNR=66						
EKS2	Erkin-Say	7.04	29	eP	Pn	20 10 26.9	-0.6
	comp=E,6.4nm,0.3s						
EKS2	Erkin-Say	7.04	29	P	Pn	20 10 27.3	-0.2
	SNR=8.1						
KZA	Kyzart	7.23	39	P	Pn	20 10 30.4	+0.2
	SNR=25						
AAK	Ala-Archa	7.31	32	eP	Pn	20 10 30.1	-1.1
	comp=E,64nm,0.7s						
AAK	Ala-Archa	7.31	32	eP	Pn	20 10 30.3	-0.9
AAK	Ala-Archa	7.31	32	P	Pn	20 10 31.0	-0.2
	SNR=83						
FRU	Bishkek	7.53	32⇑	iP	Pn	20 10 34.0	-0.2
FRU				eS	Sn	20 11 59.0	+1.0
FRU				pmax	pmax		
	comp=Z,60nm,1.6s						
FRU				smax			
	comp=N,110nm,1.5s						
KBK	Karagaybulak	7.53	34	P	Pn	20 10 34.7	+0.5
	SNR=29						
CHMS	Chumysh	7.72	32	P	Pn	20 10 36.4	-0.4
	SNR=43						
USP	Ospenovka	7.83	30	P	Pn	20 10 37.4	-1.0
	SNR=16						
ULHL	Ulahol	7.87	42	P	Pn	20 10 39.0	+0.1
	SNR=7.8						
TKM2	Tokmak 2	8.04	36	eP	Pn	20 10 39.7	-1.5
	comp=N,62nm,0.5s						
TKM2	Tokmak 2	8.04	36	eP	Pn	20 10 39.7	-1.5
TKM2				pmax	pmax		
	comp=Z,62nm,0.5s						
TKM2	Tokmak 2	8.04	36	P	Pn	20 10 41.0	-0.2
	SNR=13						
SDNR	Sundarnagar	8.20	126	eP	Pn	20 10 45.0	+1.5
KHET	Khetri	10.15	145	eP	Pn	20 11 09.2	-1.0
KHET				AMb	AMB	20 11 15.0	
	comp=Z,4.9nm,0.7s						
KHET				eS	Sn	20 12 56.6	-6.0
NDI	New Delhi	10.37	137	eP	Pn	20 11 12.0	-1.2
NDI				eS	Sn	20 13 00.0	-8.0
JOSI	Joshimath	10.53	122	eP	Pn	20 11 16.1	+0.8
JOSI				ex	x	20 13 06.6	
SONA	Sohna	10.64	139	eP	Pn	20 11 15.2	-1.7
SONA				AMb	AMB	20 11 21.0	
	comp=Z,15nm,0.8s						
SONA				eS	Sn	20 13 07.4	-7.2
AJM	Ajmer	11.08	154	eP	Pn	20 11 23.0	+0.1
AJM				eS	Sn	20 13 21.0	-4.3
AGRA	Agra	11.91	139	eP	Pn	20 11 35.5	+1.2
AGRA				ex	x	20 13 41.5	
MK31	Makanchi Array	14.13	40	eP	Pn	20 12 02.3	-2.0
MKAR	Makanchi Array	14.13	40	Pn	Pn	20 12 01.3	-3.0
	comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=35						
AB31	Akbulak array	14.36	335	Pn	Pn	20 12 01.7	-5.5
	comp=Z,13nm,0.6s,baz=152,slow=12,SNR=196						
AB31				⇓Sn	Sn	20 14 32.8	-12
	comp=Z,2.5nm,0.5s,baz=162,slow=22,SNR=4.6						
GKN	Gorkha	15.60	119	eP	Pn	20 12 19.5	-4.0
	comp=Z,56nm,0.8s						
GKN				eS	S	20 15 07.5	-21
KURK	Kurchatov	15.68	23	eP	Pn	20 12 19.5	-4.9
	comp=Z,11nm,1.0s						
KURK	Kurchatov	15.68	23	eP	Pn	20 12 26.5	+2.1
AKTK	Aktyubinsk	16.03	333	Pn	Pn	20 12 24.6	-4.3
AKTK				LR	LR	20 18 46.2	
AKTO	Aktyubinsk	16.03	333	Pn	Pn	20 12 24.6	-4.3
	comp=Z,0.6nm,0.3s,baz=146,slow=14,SNR=22						
AKTO				LR	LR	20 18 46.2	
	comp=Z,48nm,18.6s,baz=272,slow=38						
KKN	Kakani	16.18	118	eP	Pn	20 12 27.9	-3.0
	comp=Z,47nm,0.7s						
KKN	Kakani	16.18	118	eP	Pn	20 12 27.9	-3.0
KKN				pmax	pmax		
	comp=Z,47nm,0.7s						
BRVK	Borovoye	16.50	2	eP	Pn	20 12 36.3	+1.4
	comp=Z,9.4nm,0.8s						
BRVK	Borovoye	16.50	2	eP	Pn	20 12 36.3	+1.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JIRN	Jiri	16.91	117	eP	Pn	20 12 38.0	-2.0
	comp=Z,32nm,0.5s						
TAPN	Taplejung	18.19	115	eP	Pn	20 12 55.1	-0.7
	comp=Z,52nm,1.0s						
ODAN	Odare	18.24	117	eP	Pn	20 12 54.2	-2.2
	comp=Z,35nm,0.9s						
LSA	Lhasa	19.61	104	P	Pn	20 13 13.6	+0.8
LSA	Lhasa	19.61	104	eP	Pn	20 13 13.0	+0.2
	comp=Z,8.0nm,0.6s						
LSA	Lhasa	19.61	104	eP	Pn	20 13 13.0	+0.2
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ZEI	Tsey	20.39	295	eP	P	20 13 16.0	-3.4
NVS	Novosibirsk	20.67	23	eP	P	20 13 21.3	-1.0
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,11nm,0.7s						
NVS				pmax	pmax		
	comp=N,13nm,0.9s						
HYB	Hyderabad	20.80	154	eP	P	20 13 24.5	+0.5
	comp=N,30nm,0.6s						
HYB	Hyderabad	20.80	154	eP	P	20 13 24.5	+0.5
HYB				pmax	pmax		
	comp=Z,30nm,0.6s						
HYB	Hyderabad	20.80	154	i P	P	20 13 24.5	+0.5
	comp=Z,30nm,0.6s						
HYB				eS	S	20 17 11.0	-2.2
SVE	Sverdlovsk	21.06	347⇓	eP	P	20 13 26.1	-0.4
SVE				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.2						
SVE				MLR	MLR		
	comp=Z,536nm,11.0s,MS4.2						
ARU	Arti	21.12	343	eP	P	20 13 26.4	-0.7
	comp=Z,18nm,1.0s,mb4.3						
ARU	Arti	21.12	343c	iP	P	20 13 29.1	+2.0
ARU				e		20 13 48.3	
ARU				eS	S	20 17 27.7	+8.7
ARU				SS		20 17 53.5	
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
KIV	Kislovodsk	21.46	298	eP	P	20 13 29.1	-1.9
	comp=Z,10nm,0.9s,mb4.2						
KIV	Kislovodsk	21.46	298	eP	P	20 13 29.1	-1.9
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
SHL	Shillong	22.27	113	eP	P	20 13 40.0	+0.3
SHL				ex	x	20 17 44.0	
GTA	Gaotai	24.25	74	eP	P	20 14 00.5	+1.4
GTA				AP		20 14 06.0	
GTA				XP	sP	20 14 08.9	-10
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb3.7						
BRTR	Keskin Array B	28.02	287⇑	eP	P	20 14 33.5	+0.5
BRTR	Keskin Array B	28.02	287	P	P	20 14 33.4	+0.3
	comp=Z,1.2nm,0.9s,mb3.5,baz=94,slow=8.8,SNR=6.8						
ZAK	Zakamensk	28.05	50	eP	P	20 14 33.8	+0.6
ZAK				e		20 15 23.9	
OBN	Obninsk	28.94	320⇑	eP	P	20 14 39.9	-1.1
OBN				e		20 15 32.8	
OBN				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.6						
EIL	Elat	29.38	266	LR	LR	20 29 03.1	
	comp=Z,44nm,18.5s,MS3.1,baz=106,slow=42						
SONM	Songino Array	29.50	56	P	P	20 14 47.9	+1.7
	comp=Z,2.8nm,0.9s,mb4.0,baz=265,slow=8.3,SNR=22						
ULN	Ulaanbaatar	29.95	56	eP	P	20 14 51.3	+1.2
	comp=Z,3.0nm,0.8s,mb4.1						
ULN	Ulaanbaatar	29.95	56⇑	eP	P	20 14 50.7	+0.7
AKASG	Malin Array Be	31.76	309	P	P	20 15 05.5	-0.5
	comp=Z,5.2nm,0.7s,mb4.5,baz=84,slow=7.2,SNR=21						
PLOR	Plostina	32.98	300⇓	iP	P	20 15 18.3	+1.6
MLR	Muntele Rosu	33.47	299⇓	iP	P	20 15 23.1	+2.1
BURAR	Bucovina Array	34.02	303⇑	iP	P	20 15 26.0	+0.2
JOF	Joensuu	35.09	331	ep	P	20 15 34.5	-0.3
	comp=Z,0.4nm,0.3s,mb3.8						
DRGR		35.71	301⇓	iP	P	20 15 41.5	+1.1
BOD	Bodaibo	36.22	40	eP	P	20 15 44.1	-0.5
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
FINES	FINESS Array B	36.62	327	P	P	20 15 48.1	+0.2
	comp=Z,3.3nm,0.8s,mb4.2,baz=116,slow=13,SNR=14						
KAF	Kangasniemi	36.78	328	ep	P	20 15 48.0	-1.3
	comp=Z,2.3nm,0.7s,mb4.1						
KAF	Kangasniemi	36.78	328	eP	P	20 15 48.0	-1.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
HIA	Hailar	38.44	54	eP	P	20 16 03.9	+0.4
ARCES	ARCESS Array B	40.53	338	P	P	20 16 21.0	+0.4
	comp=Z,3.8nm,0.7s,mb4.1,baz=110,slow=7.0,SNR=7.8						
NJ2	Nanjing	40.91	81	eP	P	20 16 23.8	-0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
BRG	Berggiesshubel	41.43	308	i P	P	20 16 29.4	+1.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
BRG	Berggiesshubel	41.43	308	i P	P	20 16 29.4	+1.2
	comp=Z,5.5nm,0.9s,mb4.2						
GERES	GERESS Array B	41.69	305	P	P	20 16 30.6	+0.2
	comp=Z,0.7nm,0.9s,mb3.3,baz=113,slow=3.5,SNR=4.8						
CLL	Collm	42.01	309	eP	P	20 16 33.0	0.0
HFS	Hagfors	42.11	322	P	P	20 16 33.7	+0.1
	comp=Z,13nm,0.7s,mb4.7,baz=98,slow=11,SNR=28						
PSI	Prapat	43.37	134	P	P	20 16 46.1	+1.8
	comp=Z,6.8nm,0.8s,mb4.5,baz=325,slow=8.8,SNR=7.9						
NB2	NORSAR Subarra	43.45	323	P	P	20 16 43.9	-0.6
	comp=Z,13nm,0.9s,mb4.7,baz=98,slow=8.6						
NB2	NORSAR Subarra	43.45	323	P	P	20 16 43.9	-0.6
NB2				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
NOA	NORSAR Array B	43.45	323	P	P	20 16 43.9	-0.5
NOA	NORSAR Array B	43.45	323	P	P	20 16 43.9	-0.5
	comp=Z,7.9nm,0.7s,mb4.6,baz=98,slow=8.1,SNR=39						
KONO	Kongsberg	44.11	321⇑	eP	P	20 16 50.1	+0.3
YAK	Yakutsk	44.76	36⇑	eP	P	20 16 55.4	+0.4
YAK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
KSRS	Korea Array	46.24	70	P	P	20 17 07.3	+0.3
	comp=Z,3.4nm,1.1s,mb4.2,baz=282,slow=5.8,SNR=3.9						
TIXI	Tiksi	46.26	22	eP	P	20 17 07.1	+0.4
	comp=Z,6.3nm,0.9s,mb4.5						
TIXI	Tiksi	46.26	22⇑	eP	P	20 17 06.3	-0.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
MBDF	Montbardon	47.02	300	eP	P	20 17 13.4	+0.4

comp=Z,13nm,1.0s,mb4.5
MBDF Montbardon 47.02 300 *e*P **P 20 17 13.4 +0.4**
comp=Z,6.6nm,1.0s,mb4.5
MBDF Montbardon 47.02 300 *e*P **P 20 17 13.4 +0.4**
MBDF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SMF Signal de Mont 48.60 303 *e*P **P 20 17 24.7 -0.5**
comp=Z,32nm,1.1s,mb5.0
SMF Signal de Mont 48.60 303 *e*P **P 20 17 24.7 -0.5**
comp=Z,16nm,1.1s,mb5.0
SMF Signal de Mont 48.60 303 *e*P **P 20 17 24.7 -0.5**
SMF pmax pmax
comp=Z,16nm,1.1s,mb5.0
AVF Avril sur Loir 48.89 304 *e*P **P 20 17 26.9 -0.6**
comp=Z,54nm,1.2s,mb5.1
AVF Avril sur Loir 48.89 304 *e*P **P 20 17 26.9 -0.6**
comp=Z,27nm,1.2s,mb5.2
AVF Avril sur Loir 48.89 304 *e*P **P 20 17 26.9 -0.6**
AVF pmax pmax
comp=Z,27nm,1.2s,mb5.2
TCF Toulx Ste Croi 49.78 303 *e*P **P 20 17 34.7 +0.5**
comp=Z,11nm,0.8s,mb4.6
TCF Toulx Ste Croi 49.78 303 *e*P **P 20 17 34.7 +0.5**
comp=Z,5.4nm,0.8s,mb4.6
TCF Toulx Ste Croi 49.78 303 *e*P **P 20 17 34.7 +0.5**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
EKA Eskdalemuir Ar 51.22 316 P **P 20 17 45.1 +0.2**
comp=Z,3.8nm,0.9s,mb4.3,baz=91,slow=7.8,SNR=9.2
ESDC Sonseca Array 56.13 297 P **P 20 18 20.9 -0.2**
comp=Z,6.5nm,1.2s,mb4.5,baz=70,slow=7.1,SNR=4.4
BILL Bilibino 59.18 26 *e*P **P 20 18 43.0 +0.9**
comp=Z,10.0nm,1.4s,mb4.7
BILL Bilibino 59.18 26⇑*e*P **P 20 18 43.3 +1.2**
BILL pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
BILL MLR MLR
comp=Z,100nm,17.0s,MS4.0
TORD Torodi Ar. Bea 64.26 268 P **P 20 19 15.6 -1.5**
TORD Torodi Ar. Bea 64.26 268 P **P 20 19 15.6 -1.5**
comp=Z,2.1nm,0.7s,mb4.2,baz=50,slow=5.9,SNR=12
DBIC Dimbokro 73.24 266 P **P 20 20 12.2 -0.8**
comp=Z,6.0nm,1.0s,mb4.5,baz=63,slow=2.3,SNR=2.9
INK Inuvik 74.06 9 P **P 20 20 17.9 +1.0**
comp=Z,3.8nm,0.7s,mb4.4,baz=2.0,slow=7.8,SNR=6.9
YKA Yellowknife Ar 81.23 2 P **P 20 20 57.7 +0.8**
YKA Yellowknife Ar 81.23 2 P **P 20 20 57.7 +0.8**
comp=Z,2.8nm,0.9s,mb4.2,baz=350,slow=5.3,SNR=32
WRA Warramunga Arr 83.28 121 *i* P **P 20 21 06.5 -1.7**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 83.28 121 P **P 20 21 06.1 -2.1**
comp=Z,0.9nm,0.7s,mb3.9,baz=323,slow=4.8,SNR=8.9
ASAR Alice Springs 85.50 124 P **P 20 21 17.8 -1.6**
comp=Z,0.6nm,0.6s,mb4.0,baz=313,slow=4.8,SNR=15
PMG Port Moresby 86.03 105 LR LR 21 02 51.2
comp=Z,189nm,20.2s,MS4.5,baz=68,slow=38
HNR Honiara 96.15 97 LR LR 21 03 04.8
comp=Z,70nm,21.1s,MS4.1,baz=0.8,slow=34
USHA Ushuaia 145.88 224 PKPbc PKPbc 20 28 20.3 +0.4
comp=Z,14nm,1.1s,baz=108,slow=3.2,SNR=3.0

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*IDC **07** 20:13:32.0±0.9, 42.58N×78.50E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/25, mbtmp3.9/14, ML4.1/1, Error ellipse: s-maj=19.7km s-min=12.5km az=144.0*
*NNC **07** 20:13:34.5±2.0, 42.91N×78.49E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=22.7km s-min=6.3km az=163.0*
*NEIC **07** 20:13:34.7±0.5, 42.69N×78.51E, h10km, mb4.0/4, Error ellipse: s-maj=10.8km s-min=7.4km az=168.0*
*MOS **07** 20:13:35.8±1.4, 42.82N×78.56E, h27km, mb4.1/14, Error ellipse: s-maj=11.0km s-min=8.7km az=123.7*
*ISCJB **07** 20:13:36.1±1.0, 42.69N±0.05×78.50E±0.04, h31km±8km, mb4.0/17, Error ellipse: s-maj=8.6km s-min=4.6km az=173.1*
*BJI **07** 20:13:36.6, 42.65N×78.71E, h24km, mB4.6, mb4.3, ML4.1, Ms3.7*
ISC 07 20:13:35.1±1.4, **42.72N**±0.05×**78.43E**±0.04, **h8**km±9km, **n73**, σ**1.38**/79, **mb4.0**/17, **7C-5D, Lake Issyk-Kul region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KNDC Almaty 1.19 295 ⇓P **Pb 20 13 56.0 -1.9**
117nm,0.5s
KNDC ⇑S **Sb 20 14 12.6 -0.7**
975nm,0.7s
AAA Alma-Ata 1.22 297 *i* PG **Pg 20 13 57.5 -1.0**
AAA *i* S **Sb 20 14 14.2 -0.2**
AAA pmax pmax
comp=Z,1.0nm,0.2s
AAA smax
comp=N,5.0nm,0.5s
ULHL Ulahol 1.69 254 P **Pn 20 14 04.1 -0.7**
SNR=138
TKM2 Tokmak 2 2.10 276 ⇓P **Pn 20 14 12.0 +1.5**
comp=N,18nm,0.4s
TKM2 ⇑S **Sn 20 14 39.9 +3.2**
comp=N,55nm,0.5s
TKM2 Tokmak 2 2.10 276 *e*PN **Pn 20 14 11.9 +1.4**
TKM2 Tokmak 2 2.10 276 P **Pn 20 14 12.1 +1.6**
SNR=118
KZA Kyzart 2.44 256 P **Pn 20 14 17.1 +1.8**
SNR=17
KBK Karagaybulak 2.57 270 P **Pn 20 14 18.9 +1.9**
SNR=56
CHMS Chumysh 2.72 277 P **Pn 20 14 22.7 +3.6**
SNR=43
AAK Ala-Archa 2.91 270 *e*P **Pn 20 14 23.2 +1.6**
AAK Ala-Archa 2.91 270 *e*PN **Pn 20 14 25.4 +3.8**
AAK Ala-Archa 2.91 270 P **Pn 20 14 25.7 +4.1**
SNR=21
USP Ospenovka 2.94 282 P **Pb 20 14 27.5 -0.2**
SNR=28
UCH Uchtor 2.94 262 *e*P **Pn 20 14 23.3 +1.2**
UCH Uchtor 2.94 262 P **Pn 20 14 25.7 +3.6**
SNR=14
EKS2 Erkin-Say 3.43 271 *e*P **Pn 20 14 28.8 -0.1**
EKS2 Erkin-Say 3.43 271 P **Pb 20 14 34.3 -1.8**
SNR=8.2
AML Almayashu 3.56 262 *e*P **Pn 20 14 32.4 +1.8**
AML Almayashu 3.56 262 P **Pb 20 14 38.4 +0.1**
SNR=20
KSH Kashi 3.70 211 *e*PG **Pg 20 14 42.9 -3.1**
KSH SG **Sg 20 15 29.5 -4.4**
KSH Smax
comp=N,658nm,0.8s
KSH Smax
comp=E,1μm,0.9s
MKAR Makanchi Array 4.91 33 Pn **Pn 20 14 50.5 +1.3**
comp=E,7.4nm,0.3s,baz=205,slow=14,SNR=68
MKAR Pg Pg 20 15 10.4 +1.3
comp=E,7.9nm,0.3s,baz=214,slow=16,SNR=9.2
MKAR Sn **Sn 20 15 47.9 +1.7**
comp=E,11nm,0.3s,baz=211,slow=23,SNR=7.0
MKAR Lg 20 16 03.8
comp=E,24nm,0.3s,baz=215,slow=29,SNR=14
MK31 Makanchi Array 4.91 33 ⇑Pn **Pn 20 14 50.5 +1.3**
comp=E,10nm,0.3s,baz=216,slow=8.8,SNR=48
MK31 ⇓Sn **Sn 20 15 48.2 +2.1**
comp=E,20nm,0.4s,baz=210,slow=22,SNR=3.9
MK31 ⇓Lg 20 16 02.8
comp=E,35nm,0.4s,baz=215,slow=26,SNR=12
MK31 Makanchi Array 4.91 33 *e*PN **Pn 20 14 50.1 +0.9**
KK31 Karatay Array 5.83 276 ⇑Pg **Pg 20 15 17.9 -8.9**
comp=E,21nm,0.7s
KK31 ⇓Lg 20 16 35.5
comp=E,57nm,0.5s
WMQ Urumqi 6.85 78 P **Pn 20 15 17.0 +1.2**
WMQ S **Sn 20 16 33.4 -0.5**
WMQ SG Sg 20 17 04.0 -11
WMQ Smax
comp=N,54nm,0.8s
WMQ Smax
comp=E,70nm,1.0s
KURK Kurchatov 8.00 1 ⇑Pn **Pn 20 15 35.0 +3.5**
comp=E,1.6nm,0.5s
KURK ⇑Pg Pn 20 16 00.6 +29
comp=E,7.8nm,0.7s
KURK ⇑Lg 20 17 43.9
comp=E,70nm,1.4s
KURK Kurchatov 8.00 1 *e*P **Pn 20 15 30.4 -1.1**
BRVK Borovoye 11.69 335 P **Pn 20 16 20.6 -1.5**
comp=E,5.7nm,0.5s
BRVK Borovoye 11.69 335 P **Pn 20 16 20.6 -1.5**
BRVK pmax pmax
comp=Z,6.0nm,0.5s
GTA Gaotai 16.45 94 *e*P **Pn 20 17 29.2 +3.0**
GTA AP pP 20 17 34.7 +3.5
GTA XP sP 20 17 37.9 +5.7
GTA AMB AMB
comp=Z,6.0nm,1.1s
LSA Lhasa 16.53 138 *e*P **Pn 20 17 27.7 +0.5**
ZAK Zakamensk 18.67 57 *e*P **Pn 20 17 53.3 -0.3**
ZAK pmax pmax
comp=Z,1.0nm,1.0s
ARU Arti 18.72 324 *e*P **Pn 20 17 55.9 +1.7**
comp=Z,4.2nm,0.6s
ARU Arti 18.72 324 *e*P **Pn 20 17 55.9 +1.6**
ARU pmax pmax
comp=Z,4.0nm,0.6s
SONM Songino Array 20.27 66 P **P 20 18 10.8 -0.1**
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 20.27 66 P **P 20 18 10.8 -0.1**
comp=Z,3.4nm,0.7s,baz=256,slow=13,SNR=28
LZH Lanzhou 20.68 100 *e*P **P 20 18 15.5 +0.1**
LZH AP 20 18 26.5
LZH XP sP 20 18 32.0 +13
LZH AMB AMB
comp=Z,16nm,1.0s
LZH AMB AMB
comp=Z,70nm,4.1s
ULN Ulaanbaatar 20.72 66 *e*P **P 20 18 15.1 -0.7**
comp=Z,2.6nm,0.7s
ULN Ulaanbaatar 20.72 66 *e*P **P 20 18 15.1 -0.6**
ULN pmax pmax
comp=Z,3.0nm,0.7s
KIV Kislovodsk 25.91 285 *e*P **P 20 19 08.7 +1.3**
KIV pmax pmax
comp=Z,4.0nm,0.8s,mb4.0
BRTR Keskin Array B 33.53 280 P **P 20 20 15.9 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 33.53 280 P **P 20 20 15.9 +0.8**
comp=Z,0.7nm,0.7s,mb3.7,baz=109,slow=5.7,SNR=4.8
AKASG Malin Array Be 34.12 301 P **P 20 20 19.4 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 34.12 301 P **P 20 20 19.4 -0.7**
comp=Z,1.9nm,0.7s,mb4.1,baz=73,slow=8.3,SNR=4.2
FINES FINESS Array B 35.99 320 *i* P **P 20 20 38.5 +2.4**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 35.99 320 P **P 20 20 35.4 -0.7**
comp=Z,1.6nm,0.8s,mb4.0,baz=102,slow=8.0,SNR=6.1
TIXI Tiksi 37.83 23 *e*P **P 20 20 50.4 -1.2**
comp=Z,3.6nm,0.8s,mb4.2
TIXI Tiksi 37.83 23 *e*P **P 20 20 51.1 -0.5**
TIXI pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
ARCES ARCESS Array B 37.91 333 P **P 20 20 51.4 -0.9**
ARCES pmax pmax
comp=Z,2.0nm,0.6s
ARCES ARCESS Array B 37.91 333 P **P 20 20 51.4 -0.9**
comp=Z,1.9nm,0.6s,mb4.0,baz=62,slow=8.4,SNR=4.7
KWP Kalwaria 38.43 300 P **P 20 20 57.6 +0.7**
comp=Z,7.7nm,0.9s,mb4.4
KWP Kalwaria 38.43 300 P **P 20 20 57.6 +0.7**
KWP pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
VLA Vladivostok 38.59 71 *e*P **P 20 20 57.7 -0.7**
HFS Hagfors 42.05 317 P **P 20 21 25.8 -1.0**
HFS pmax pmax
comp=Z,1.0nm,0.4s
HFS Hagfors 42.05 317 P **P 20 21 25.8 -1.0**
comp=Z,0.8nm,0.4s,mb3.7,baz=64,slow=6.8,SNR=3.6
NB2 NORSAR Subarra 43.17 319 P **P 20 21 34.4 -1.4**
comp=Z,0.7nm,0.4s,mb3.7,baz=84,slow=8.6
NOA NORSAR Array B 43.17 319 P **P 20 21 34.7 -1.1**
NOA NORSAR Array B 43.17 319 P **P 20 21 34.7 -1.1**
NOA pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 43.17 319 P **P 20 21 34.7 -1.1**
comp=Z,0.7nm,0.5s,mb3.7,baz=84,slow=8.1,SNR=4.3
CLL Collm 44.07 305 *i* sP sP 20 21 46.6 -0.1
GERES GERESS Array B 44.34 301 P **P 20 21 45.0 -0.4**
GERES pmax pmax
comp=Z,1.0nm,0.4s
GERES GERESS Array B 44.34 301 P **P 20 21 45.0 -0.4**
comp=Z,0.5nm,0.4s,mb3.6,baz=63,slow=8.8,SNR=6.6
LPG La Plagne 49.95 299 *e*P **P 20 22 33.2 +3.9**
comp=Z,6.3nm,0.6s,mb4.5
LPL La Plagne 49.96 299 *e*P **P 20 22 33.2 +3.9**
MBDF Montbardon 50.26 298 *e*P **P 20 22 35.9 +4.3**
comp=Z,6.5nm,0.7s,mb4.5
TORD Torodi Ar. Bea 71.49 271 P **P 20 24 54.5 -2.0**
comp=Z,3.2nm,0.8s,mb4.3,baz=44,slow=5.4,SNR=16
YKA Yellowknife Ar 74.61 6 P **P 20 25 12.9 -1.3**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 74.61 6 P **P 20 25 12.9 -1.4**
comp=Z,0.8nm,0.7s,mb3.8,baz=347,slow=6.0,SNR=6.8
DBIC Dimbokro 80.59 270 P **P 20 25 46.5 -1.9**
DBIC pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 80.59 270 P **P 20 25 46.5 -2.0**
comp=Z,1.6nm,0.7s,mb4.0,baz=37,slow=10,SNR=3.5
WRA Warramunga Arr 80.83 128 *i* P **P 20 25 47.5 -1.9**
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 80.83 128 P **P 20 25 46.9 -2.5**
comp=Z,0.5nm,0.6s,mb3.6,baz=326,slow=4.4,SNR=5.1
ASAR Alice Springs 83.50 131 P **P 20 26 01.0 -2.4**
comp=Z,0.2nm,0.5s,mb3.4,baz=324,slow=4.7,SNR=4.8

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*NIED **07** 20:14:00, 43.10N×147.00E, h47km, Mw4.2 Best double couple: M0 2.65000×10^15 NP1:φs 270.00000°, δ33.00000°, λ162.00000°. NP2:φs 15.00000°, δ80.00000°, λ58.00000°.*
*MOS **07** 20:14:31.7±0.9, 43.10N×146.99E, h53km, mb4.5/14, Error ellipse: s-maj=12.1km s-min=8.3km az=107.2*
*JMA **07** 20:14:32.9±0.2, 43.11N×146.97E, h55km±3km, M4.4*
JMA Felt I J1.
*ISCJB **07** 20:14:32.5±0.8, 43.05N±0.04×146.95E±0.06, h61km±5km, mb4.3/26, Error ellipse: s-maj=8.3km s-min=5.9km az=33.5*
*IDC **07** 20:14:34.9±0.6, 43.14N×146.87E, h61km±4km, mb3.9/16, mb1 4.0/19, mb1mx3.9/25, mbtmp3.9/19, MS3.4/7, Ms1 3.4/7, ms1mx3.1/43, Error ellipse: s-maj=13.4km s-min=10.7km az=175.0*
*NEIC **07** 20:14:34.1±1.0, 43.08N×146.97E, h56km±8km, mb4.8/7, Error ellipse: s-maj=10.9km s-min=7.6km az=118.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
ISC 07 20:14:33.7±0.8, **43.10N**±0.04×**146.96E**±0.06, **h52**km±6km, **h58**km±3.6km**:pP-P, n95,** σ**0.87**/106, **mb4.3**/26, **MS3.9**/5, **1C-5D, Kuril Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
NEM2 Nemuro 2 0.93 287 P **Pn 20 14 50.1 -0.4**
NEM2 *e*S **Sn 20 15 03.1 +0.2**
YUK Yuzh-Kuril'sk 1.23 320⇓*i*PN **Pn 20 14 54.3 -0.3**
YUK *i* S **Sn 20 15 09.2 -1.0**
YUK pmax pmax
comp=N,810nm,0.3s
YUK pmax pmax
comp=E,620nm,0.3s
YUK pmax pmax
comp=Z,5μm,0.3s
YUK pmax pmax
comp=Z,12μm,1.0s
YUK pmax pmax
comp=N,8μm,0.8s
YUK pmax pmax
comp=E,5μm,0.8s
YUK smax
comp=N,32μm,1.0s
YUK smax
comp=E,41μm,1.0s
YUK smax
comp=N,14μm,0.5s
YUK smax
comp=E,6μm,0.5s
JRA Rausu 1.58 303 P **Pn 20 14 59.1 -0.2**
JRA *e*S **Sn 20 15 18.7 +0.1**
JAK Akkeshi 1.66 267 P **Pn 20 15 00.4 -0.1**
JAK *e*S **Sn 20 15 20.8 +0.1**
JNK Nakash 1.71 287 P **Pn 20 15 00.5 -0.6**
JNK *e*S **Sn 20 15 21.0 -0.7**
KUR Kuril'sk 2.23 17 *e*PN **Pn 20 15 06.0 -2.2**
KUR *i* S **Sn 20 15 28.5 -6.1**
KUR pmax pmax
comp=Z,27nm,0.5s
KUR pmax pmax
comp=N,11nm,0.5s
KUR pmax pmax
comp=E,15nm,0.5s
KUR smax
comp=N,11nm,0.5s
KUR smax
comp=N,114nm,0.5s
KUR smax
comp=E,76nm,0.5s
JOB Onbets 2.30 266 P **Pn 20 15 09.4 +0.2**
JOB *e*S **Sn 20 15 36.4 +0.1**
JAR Ashorobuto 2.34 276 P **Pn 20 15 10.0 +0.3**
JAR *e*S **Sn 20 15 36.9 -0.4**
JTKR Abashiri--Toko 2.39 293 P **Pn 20 15 10.9 +0.6**
JTKR *e*S **Sn 20 15 39.6 +1.2**
JCH Churui 2.69 261 P **Pn 20 15 14.6 +0.1**
JCH *e*S **Sn 20 15 44.6 -1.2**
JMP Maruseppu 2.77 290 P **Pn 20 15 16.5 +0.9**
JEM Erimo 3.01 250 P **Pn 20 15 20.8 +1.9**
ERM Erimo 3.01 250 *e*P **Pn 20 15 20.6 +1.7**
ERM Erimo 3.01 250*d* *i*PN **Pn 20 15 20.8 +1.9**
JKK2 Kamakawa 2 3.16 286 P **Pn 20 15 22.2 +1.2**
JFR Furan 3.20 273 P **Pn 20 15 22.5 +1.0**
JFR *e*S **Sn 20 15 58.8 +0.5**
JNBK Urakawa-nobuka 3.21 257 P **Pn 20 15 22.0 +0.4**
JNBK *e*S **Sn 20 15 57.9 -0.7**
ASAJ Asahikawa 3.33 289 P **Pn 20 15 25.0 +1.7**
ASAJ Asahikawa 3.33 289 PN **Pn 20 15 24.6 +1.3**
ASAJ S **Sn 20 16 01.5 0.0**
ASAJ pmax pmax
comp=Z,26nm,0.3s
ASAJ smax
comp=N,32nm,0.3s
ASAJ Asahikawa 3.33 289 P **Pn 20 15 24.6 +1.3**
comp=N,26nm,0.3s,baz=119,slow=13,SNR=36
ASAJ S **Sn 20 16 01.4 -0.1**
comp=N,32nm,0.3s,baz=124,slow=20,SNR=3.7
ASAJ LR LR 20 16 54.9
comp=N,458nm,21.7s,baz=157,slow=43
JBT2 Biratori 2 3.39 266 P **Pn 20 15 24.2 +0.1**
JAB Ashibetsu 3.48 278 P **Pn 20 15 27.7 +2.3**
YSS Yuzh-Sakhalins 4.88 324 *e*P **Pn 20 15 44.9 +0.5**
YSS Yuzh-Sakhalins 4.88 324 *e*PN **Pn 20 15 43.6 -0.8**
YSS pmax pmax
comp=Z,32nm,1.0s
MJAR Matsushiro Arr 9.39 229 P **Pn 20 16 45.8 -0.5**
comp=Z,1.4nm,0.3s,baz=29,slow=14,SNR=24
MJAR S **Sn 20 18 29.3 -1.1**
comp=Z,0.5nm,0.3s,baz=158,slow=15,SNR=3.5
MJAR LR LR 20 21 17.3
comp=Z,148nm,19.1s,baz=15,slow=43
MAJO Matsushiro 9.39 229 *e*P **Pn 20 16 45.8 -0.4**
comp=Z,15nm,0.7s
MAJO Matsushiro 9.39 229 *e*PN **Pn 20 16 45.8 -0.5**
MAJO pmax pmax
comp=Z,15nm,0.7s
MAT Matsushiro 9.39 229 P **Pn 20 16 45.5 -0.8**
MAT *e*S **Sn 20 18 29.4 -1.0**
KLR Kul'dur 12.19 305 *e*PN **Pn 20 17 33.7 +9.2**
KSRS Korea Array 15.58 255 P **Pn 20 18 07.6 -2.2**
comp=Z,0.1nm,0.3s,baz=62,slow=14,SNR=3.3
KSRS LR LR 20 24 01.3
comp=Z,78nm,18.9s,baz=65,slow=36
JNU Nakatsue 16.08 237 P **Pn 20 18 15.2 -1.0**
JNU LR LR 20 24 37.6
JNU Nakatsue 16.08 237 P **Pn 20 18 15.2 -1.0**
comp=Z,0.2nm,0.3s,baz=318,slow=42,SNR=2.2
JNU LR LR 20 24 37.7
comp=Z,97nm,19.2s,baz=223,slow=38
HIA Hailar 19.77 298 *e*P **Pn 20 18 58.9 -2.2**
BILL Bilibino 27.02 16⇓*e*P **P 20 20 05.6 -4.9**
BILL *e* 20 20 51.8
BILL pmax pmax
comp=Z,5.0nm,1.8s,mb3.7
ULN Ulaanbaatar 28.16 294 *e*P **P 20 20 20.7 -0.1**
SONM Songino Array 28.60 294 P **P 20 20 25.7 +0.9**
SONM 20 23 35.0
SONM pmax pmax
comp=Z,4.0nm,0.7s
SONM MLR MLR
comp=Z,94nm,19.0s
SONM Songino Array 28.60 294 P **P 20 20 25.7 +0.9**
comp=Z,4.0nm,0.7s,mb4.3,baz=87,slow=8.4,SNR=26
SONM PcP PcP 20 23 35.0 +0.3
comp=Z,0.4nm,0.5s,baz=131,slow=2.7,SNR=4.2
SONM LR LR 20 33 16.1
comp=Z,94nm,19.0s,MS3.4,baz=171,slow=39
TIXI Tiksi 29.97 349 *e*P **P 20 20 35.2 -1.5**
TIXI pmax pmax
comp=Z,7.0nm,2.2s,mb4.0
ZAK Zakamensk 30.45 299 *e*P **P 20 20 40.8 -0.3**
IMA2 Indian Mountai 39.30 34 *e*P **P 20 21 57.6 +0.6**
MKAR Makanchi Array 44.77 298 P **P 20 22 42.5 +0.6**
MKAR 20 24 23.6
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR MLR MLR
comp=Z,53nm,19.0s
MKAR Makanchi Array 44.77 298 P **P 20 22 42.5 +0.6**
comp=Z,4.8nm,0.7s,mb4.5,baz=77,slow=9.6,SNR=11
MKAR PcP PcP 20 24 23.6 +0.4
comp=Z,0.3nm,0.3s,baz=96,slow=1.4,SNR=2.4
MKAR LR LR 20 42 14.8
comp=Z,53nm,19.0s,MS3.5,baz=234,slow=37
INK Inuvik 47.04 30 P **P 20 23 00.2 +0.8**
INK Inuvik 47.04 30 P **P 20 23 00.2 +0.7**
INK pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 47.04 30 P **P 20 23 00.2 +0.8**
comp=Z,2.7nm,0.7s,mb4.3,baz=269,slow=13,SNR=7.2
TAPN Taplejung 49.89 272 *e*P **P 20 23 22.9 +0.9**
comp=Z,11nm,1.0s,mb4.9
ODAN Odare 50.41 272 *e*P **P 20 23 27.0 +1.1**
comp=Z,7.3nm,0.8s,mb4.8
JIRN Jiri 50.83 273 *e*P **P 20 23 30.1 +1.0**
comp=Z,16nm,1.0s,mb4.9
KKN Kakani 51.42 274 *e*P **P 20 23 33.8 +0.3**
GKN Gorkha 51.77 275 *e*P **P 20 23 36.7 +0.6**
comp=Z,12nm,0.7s,mb4.9
ARU Arti 54.73 317 *e*P **P 20 23 56.7 -0.7**
ARU 20 26 00.0
ARU PPP 20 27 10.5
ARU S **S 20 31 33.6 -0.1**
ARU SS SS 20 35 19.9 +3.3
YKA Yellowknife Ar 56.42 33 P **P 20 24 09.7 +0.3**
YKA pP pP 20 24 23.8 +0.1
YKA Yellowknife Ar 56.42 33 P **P 20 24 09.7 +0.3**
YKA *PP pP 20 24 23.7 0.0
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA pmax pmax
comp=N,1.0nm,0.7s
YKA Yellowknife Ar 56.42 33 P **P 20 24 09.7 +0.3**
comp=N,0.6nm,0.8s,mb3.7,baz=303,slow=7.2,SNR=4.9
YKA pP pP 20 24 23.7 +0.1
comp=N,1.2nm,0.7s,baz=298,slow=6.7,SNR=7.7
AKTK Aktyubinsk 57.86 311 P **P 20 24 19.8 0.0**
AKTO Aktyubinsk 57.86 311 P **P 20 24 19.8 0.0**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
AKTO Aktyubinsk 57.86 311 P **P 20 24 19.8 0.0**
comp=Z,2.1nm,0.7s,mb4.3,baz=20,slow=13,SNR=4.1
ARCES ARCESS Array B 59.81 340 P **P 20 24 32.6 -0.4**
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 59.81 340 P **P 20 24 32.5 -0.5**
comp=Z,1.5nm,0.8s,mb4.1,baz=39,slow=6.9,SNR=5.5
JOF Joensuu 62.60 332 *e*p **P 20 24 51.2 -0.8**
comp=Z,0.7nm,0.3s,mb4.3
JOF Joensuu 62.60 332 *e*P **P 20 24 51.2 -0.8**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb4.4
WRA Warramunga Arr 63.79 193 P **P 20 25 00.0 -0.3**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 63.79 193 P **P 20 25 00.0 -0.3**
comp=Z,1.4nm,0.8s,mb4.0,baz=9.5,slow=6.8,SNR=12
FINES FINESS Array B 65.39 333 *i* P **P 20 25 09.8 -0.5**
FINES pmax pmax

comp=Z,3.0nm,0.7s
FINES FINESS Array B 65.39 333 P **P 20 25 09.9 -0.4**
comp=Z,2.9nm,0.7s,mb4.4,baz=47,slow=8.4,SNR=10
OBN Obninsk 65.76 324⇓*e*P **P 20 25 12.1 -0.7**
OBN *e* 20 27 36.8
OBN *e*S S 20 33 48.2 -6.8
OBN pmax pmax
comp=Z,13nm,0.9s,mb5.0
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
BOZ Bozeman (W) 67.45 48 *e*P **P 20 25 15.0 -8.7**
comp=Z,1.7nm,0.7s,mb4.2
BOZ Bozeman (W) 67.45 48 *e*P **P 20 25 15.0 -8.7**
BOZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
ASAR Alice Springs 67.51 193 P **P 20 25 24.9 +0.7**
ASAR *PP pP 20 25 43.1 +4.3
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR pmax pmax
comp=N,1.0nm,0.9s
ASAR Alice Springs 67.51 193 P **P 20 25 24.9 +0.7**
comp=N,0.5nm,0.8s,mb3.6,baz=7.8,slow=5.6,SNR=6.4
ASAR pP pP 20 25 43.0 +4.3
comp=N,1.0nm,0.9s,baz=16,slow=4.9,SNR=5.0
NVAR Mina Array Bea 68.04 58 P **P 20 25 28.7 +1.0**
comp=N,0.5nm,0.8s,mb3.6,baz=316,slow=3.8,SNR=3.2
NVAR pP pP 20 25 45.3 +3.1
comp=N,1.3nm,0.6s,baz=298,slow=5.8,SNR=7.5
KIV Kislovodsk 70.10 312 *e*P **P 20 25 41.7 +1.5**
comp=N,5.4nm,0.6s,mb4.7
KIV Kislovodsk 70.10 312⇑*e*P **P 20 25 40.4 +0.2**
KIV pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
KIV MLR MLR
comp=Z,100nm,16.0s,MS4.2
NB2 NORSAR Subarra 70.16 339 P **P 20 25 40.0 -0.3**
comp=Z,3.3nm,0.5s,mb4.5,baz=32,slow=6.5
NB2 NORSAR Subarra 70.16 339 P **P 20 25 40.0 -0.3**
NB2 pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
NOA NORSAR Array B 70.16 339 P **P 20 25 40.2 -0.1**
NOA NORSAR Array B 70.16 339 P **P 20 25 40.2 -0.1**
NOA pmax pmax
comp=Z,4.0nm,0.6s
NOA NORSAR Array B 70.16 339 P **P 20 25 40.2 -0.1**
comp=Z,4.0nm,0.6s,mb4.5,baz=33,slow=6.3,SNR=16
HFS Hagfors 70.24 337 P **P 20 25 40.4 -0.4**
HFS pmax pmax
comp=Z,6.0nm,0.5s
HFS Hagfors 70.24 337 P **P 20 25 40.4 -0.4**
comp=Z,6.4nm,0.5s,mb4.8,baz=49,slow=6.8,SNR=29
PDAR Pinedale Array 70.44 49 pP pP 20 25 59.3 +2.3
comp=Z,0.6nm,0.5s,baz=288,slow=0.7,SNR=3.9
AKASG Malin Array Be 72.03 324 *i* P **P 20 25 51.5 -0.3**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 72.03 324 P **P 20 25 51.5 -0.3**
comp=Z,3.5nm,0.5s,mb4.5,baz=39,slow=5.9,SNR=17
BURAR Bucovina Array 76.08 324⇓*i*P **P 20 26 15.8 +0.3**
CLL Collm 77.83 332 *e*P **P 20 26 25.0 -0.3**
CLL *e*pP pP 20 26 39.0 -1.1
CLL *e*sP sP 20 26 46.0 +0.1
BRTR Keskin Array B 77.90 314 *i* P **P 20 26 26.6 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 77.90 314 P **P 20 26 26.6 +0.7**
comp=Z,1.0nm,0.7s,mb3.9,baz=81,slow=5.6,SNR=6.0
BRTR pP pP 20 26 40.9 +0.2
comp=Z,1.0nm,0.6s,baz=68,slow=3.5,SNR=4.7
KHC Kasperske Hory 79.47 331 *e*P **P 20 26 34.0 -0.3**
KHC *e*pP pP 20 26 49.0 -0.2
GERES GERESS Array B 79.66 331 P **P 20 26 33.8 -1.6**
comp=Z,0.1nm,0.3s,mb3.2,baz=23,slow=7.2,SNR=4.6
MMAI Mount Meron Ar 81.78 308 pP pP 20 27 03.0 +1.1
comp=Z,2.0nm,0.5s,baz=52,slow=5.4,SNR=4.6
TXAR Lajitas Array 83.13 56 P **P 20 26 54.3 +0.3**
comp=Z,0.7nm,0.8s,mb3.8,baz=308,slow=3.9,SNR=6.2
TXAR pP pP 20 27 12.7 +3.7
comp=Z,1.6nm,0.8s,baz=293,slow=4.2,SNR=8.5
TKL Tuckaleechee C 88.99 39 LR LR 21 13 04.2
comp=Z,65nm,18.5s,MS4.1,baz=267,slow=39
TORD Torodi Ar. Bea 115.63 322 PKP PKPdf 20 33 09.4 -1.0
comp=Z,0.3nm,0.5s,baz=20,slow=2.3,SNR=9.4
DBIC Dimbokro 124.25 325 PKIKP PKPdf 20 33 26.7 -0.3
DBIC pmax pmax
comp=Z,1.0nm,0.5s
DBIC Dimbokro 124.25 325 PKP PKPdf 20 33 26.7 -0.3
comp=Z,1.4nm,0.5s,baz=66,slow=2.0,SNR=3.8

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*BJI **07** 20:45:35.8, 586S×12349E, h32km, mB5.2, mb4.7, Ms4.1*
*NEIC **07** 20:45:38.5±5.8, 520S×12358E, h10km±37km, mb5.0/19, Error ellipse: s-maj=14.0km s-min=8.4km az=64.0*
*MOS **07** 20:45:39.7±0.8, 5.14S×12379E, h33km, mb5.0/13, Error ellipse: s-maj=24.2km s-min=9.7km az=113.2*
*ISCJB **07** 20:45:42.9±1.2, 524S±005×12365E±008, h63km±12km, mb4.8/35, Error ellipse: s-maj=13.3km s-min=7.8km az=157.6*
*IDC **07** 20:45:46.8±3.5, 521S×12371E, h79km±33km, mb4.3/12, mb1 4.3/13, mb1mx4.2/21, mbtmp4.3/13, MS4.0/12, Ms1 4.0/12, ms1mx3.8/21, Error ellipse: s-maj=28.3km s-min=15.9km az=72.0*
ISC 07 20:45:44.8±1.0**, 524S**±005×**12363E**±008**, h62**km±10km**, n68,** σ1ˢ**02**/63**, mb4.8**/35**, Banda Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AAI Ambon 4.81 72 P **Pn 20 46 55.1 +0.4**
145nm,1.3s
BATI Kupang 4.94 180 P **Pn 20 46 58.5 +2.1**
36nm,0.3s,baz=337,slow=1.6,SNR=31
BATI LR LR 20 48 37.6
comp=Z,2µm,21.3s,baz=180,slow=34
PCI Palu 5.73 319 P **Pn 20 47 07.0 -0.3**
137nm,1.0s
FITZ Fitzroy Crossi 12.94 171 *e*P **Pn 20 48 43.5 -2.3**
FITZ Fitzroy Crossi 12.94 171 P **Pn 20 48 43.8 -2.0**
0.5nm,0.3s,baz=293,slow=15,SNR=10
FITZ LR LR 20 54 10.4
comp=Z,426nm,19.2s,baz=143,slow=39
WRA Warramunga Arr 17.95 145 P **Pn 20 49 47.5 -2.7**
0.4nm,0.3s,baz=314,slow=13,SNR=22
WRA LR LR 20 57 26.4
comp=Z,627nm,21.3s,baz=315,slow=39
WB2 Warramunga Arr 17.96 145 *e*P **Pn 20 49 47.3 -3.0**
ASAR Alice Springs 20.83 153 P **P 20 50 22.1 +0.8**
45nm,1.2s,baz=323,slow=8.4,SNR=39
COEN Coen 21.12 116 *e*P **P 20 50 25.6 +1.0**
57nm,1.4s,mb4.7
KULM Kulim 25.21 294 *e*P **P 20 51 04.3 -0.7**
PSI Prapat 25.93 287 P **P 20 51 13.6 +2.0**
29nm,0.9s,mb4.8,baz=138,slow=7.1,SNR=9.4
PSI LR LR 21 01 49.3
comp=Z,355nm,20.9s,baz=292,slow=37
KLBR Kellerberrin 26.79 191 *e*P **P 20 51 17.6 -1.5**
41nm,1.3s,mb4.8
NWAO Narrogin (SRO) 28.19 191 P **P 20 51 31.6 +0.1**
11nm,1.1s,mb4.4,baz=119,slow=3.1,SNR=4.2
STKA Stephens Creek 31.40 150 *e*P **P 20 52 00.8 +0.8**
4.1nm,0.7s,mb4.4
STKA Stephens Creek 31.40 150 P **P 20 52 00.4 +0.5**
10nm,1.1s,mb4.6,baz=314,slow=9.4,SNR=5.0
STKA LR LR 21 06 48.6
comp=Z,545nm,18.1s,baz=266,slow=40
XAN Xi'an 41.46 341 P **P 20 53 24.9 -0.7**
XAN AMB AMB
comp=Z,13nm,0.9s,mb4.6
KSRS Korea Array 42.66 5 LR LR 21 09 44.7
comp=Z,67nm,20.7s,baz=322,slow=34
SHL Shillong 43.45 316 *e*P **P 20 53 43.0 +1.1**
MJAR Matsushiro Arr 43.74 17 P **P 20 53 43.0 -1.1**
comp=Z,3.1nm,1.1s,mb3.9,baz=211,slow=6.9,SNR=2.9
BJT Baijiatuau 45.55 352 *e*P **P 20 53 58.1 -0.4**
comp=Z,5.7nm,0.6s,mb4.7
BJT Baijiatuau 45.55 352 *e*P **P 20 53 58.1 -0.3**
BJT pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 46.66 320 P **P 20 54 08.4 +1.0**
LSA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
LSA Lhasa 46.66 320 *e*P **P 20 54 08.1 +0.7**
comp=Z,20nm,0.8s,mb5.1
LSA Lhasa 46.66 320 *e*P **P 20 54 08.1 +0.7**
LSA pmax pmax
comp=Z,20nm,0.8s,mb5.1
HHC Hu-ho-hao-te 47.18 348 *e*P **P 20 54 13.2 +2.0**
HHC AP pP 20 54 19.4 -7.6
HHC XP sP 20 54 24.9 -9.2
HHC AMB AMB
comp=Z,11nm,0.8s,mb4.8
HHC AMB AMB
comp=Z,118nm,3.4s
ODAN Odare 47.40 314 *e*P **P 20 54 12.9 -0.3**
comp=Z,62nm,1.1s,mb5.5
TAPN Taplejung 47.47 315 *e*P **P 20 54 13.6 -0.1**
comp=Z,52nm,0.9s,mb5.5
JIRN Jiri 48.73 314 *e*P **P 20 54 23.1 -0.4**
comp=Z,36nm,0.8s,mb5.4
KKN Kakani 49.46 314 *e*P **P 20 54 28.5 -0.5**
comp=Z,32nm,0.9s,mb5.3
KKN Kakani 49.46 314 *e*P **P 20 54 28.5 -0.5**
KKN pmax pmax
comp=Z,33nm,0.9s,mb5.4
GTA Gaotai 49.57 336 *e*P **P 20 54 29.3 -0.3**
GTA AMB AMB
comp=Z,2.0nm,1.1s,mb4.1
HYB Hyderabad 49.87 298 *e*P **P 20 54 25.5 -6.8**
HYB Hyderabad 49.87 298 *i* P **P 20 54 25.5 -6.8**
MDJ Mudanjiang 49.91 6 P **P 20 54 36.1 +4.0**
MDJ AMB AMB
comp=Z,12nm,0.8s,mb5.0
MDJ AMB AMB
comp=Z,140nm,5.3s
GKN Gorkha 50.05 313 *e*P **P 20 54 32.5 -1.0**
comp=Z,35nm,0.8s,mb5.4
HIA Hailar 54.38 357 P **P 20 55 01.9 -3.4**
comp=Z,9.2nm,0.8s,mb4.8
HIA Hailar 54.38 357 P **P 20 55 01.9 -3.3**
HIA pmax pmax
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 54.85 346 *e*P **P 20 55 09.1 +0.5**
comp=Z,7.8nm,0.9s,mb4.7
ULN Ulaanbaatar 54.85 346 *e*P **P 20 55 09.1 +0.4**
ULN pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
SONM Songino Array 54.98 346 P **P 20 55 10.2 +0.6**
comp=Z,6.9nm,0.9s,mb4.7,baz=163,slow=7.5,SNR=26
SONM LR LR 21 18 15.3
comp=Z,77nm,18.2s,baz=188,slow=35
WMQ Urumqi 58.59 330 *e*P **P 20 55 35.6 +0.3**
TLY Talaya 59.22 346 *e*P **P 20 55 39.0 -0.4**
comp=Z,4.2nm,0.9s,mb4.5
TLY Talaya 59.22 346 *e*P **P 20 55 39.0 -0.4**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
BOD Bodaibo 63.33 354 *e*P **P 20 56 06.8 -0.3**
BOD pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
MK31 Makanchi Array 63.39 330 *e*P **P 20 56 07.6 -0.1**
MKAR Makanchi Array 63.39 330 P **P 20 56 08.7 +0.9**
comp=Z,9.8nm,0.8s,mb5.0,baz=127,slow=7.8,SNR=36
TKM2 Tokmak 2 64.68 323 *e*P **P 20 56 17.4 +1.1**
comp=Z,5.4nm,0.8s,mb4.6
TKM2 Tokmak 2 64.68 323 *e*P **P 20 56 17.4 +1.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KBL Kabul 64.83 312 *e*P **P 20 56 16.8 -0.7**
comp=Z,20nm,0.8s,mb5.2
YAK Yakutsk 67.24 3 *e*P **P 20 56 32.8 +0.5**
comp=Z,19nm,0.7s,mb5.2
YAK Yakutsk 67.24 3 *e*P **P 20 56 32.8 +0.5**
YAK pmax pmax
comp=Z,19nm,0.7s,mb5.2
KURK Kurchatov 67.81 331 *e*P **P 20 56 35.8 -0.4**
comp=Z,20nm,1.0s,mb5.1
KURK Kurchatov 67.81 331 *e*P **P 20 56 35.8 -0.4**
KURK pmax pmax
comp=Z,20nm,1.0s,mb5.1
NVS Novosibirsk 68.61 336 *e*P **P 20 56 39.9 -1.1**
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,9.0nm,1.4s
NVS pmax pmax
comp=Z,12nm,1.4s,mb4.6
BRVK Borovoye 73.35 330 *e*P **P 20 57 10.3 +0.4**
comp=Z,4.9nm,0.9s,mb4.4
BRVK Borovoye 73.35 330 *e*P **P 20 57 10.3 +0.5**
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VNDA Vanda 75.01 172 P **P 20 57 20.8 +1.6**
comp=Z,2.5nm,1.0s,mb4.1,baz=214,slow=8.8,SNR=4.4
VNDA LR LR 21 28 19.0
comp=Z,227nm,19.1s,baz=328,slow=34
OPO Ambohidratompo 75.51 252 P **P 20 57 23.9 +0.8**
comp=Z,3.4nm,1.1s,mb4.2,baz=51,slow=11,SNR=2.2
TIXI Tiksi 76.81 2 *e*P **P 20 57 29.4 -0.1**
comp=Z,12nm,1.4s,mb4.6
TIXI Tiksi 76.81 2 *e*P **P 20 57 29.4 0.0**
TIXI pmax pmax
comp=Z,12nm,1.4s,mb4.6
AKTK Aktyubinsk 78.86 324 P **P 20 57 40.8 -0.4**
AKTK LR LR 21 34 21.3
AKTO Aktyubinsk 78.86 324 P **P 20 57 40.8 -0.4**
comp=Z,7.3nm,0.9s,mb4.6,baz=108,slow=6.2,SNR=16
AKTO LR LR 21 34 21.3
comp=Z,63nm,18.4s,baz=49,slow=37
KMBO Kilima Mbogo 86.29 269 P **P 20 58 20.4 -0.3**
comp=Z,3.5nm,1.0s,mb4.5,baz=226,slow=23,SNR=6.7
KMBO LR LR 21 37 32.6
comp=Z,99nm,18.3s,baz=93,slow=36
MATP Matopo 92.98 249 P **P 20 58 51.4 -0.7**
comp=Z,2.2nm,0.7s,mb4.7,baz=241,slow=12,SNR=3.2
BRTR Keskin Array B 93.30 309 LR LR 21 50 26.4
comp=Z,37nm,18.3s,baz=323,slow=42
AKASG Malin Array Be 96.81 320 LR LR 21 45 34.1
comp=Z,38nm,20.0s,baz=275,slow=37
TORD Torodi Ar. Bea 122.25 282 PKP PKPdf 21 04 33.8 +0.1
comp=Z,0.6nm,0.7s,baz=115,slow=1.5,SNR=4.2
LPAZ La Paz 155.66 152 PKPab PKPab 21 06 02.8 +4.0
comp=Z,2.0nm,0.8s,baz=209,slow=8.1,SNR=5.8

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*NEIC **07** 21:12:10.9, 1771N×10330W, h16km, MD4.0(MEX), After MEX.*
MEX 07 21:12:11.3±1.1**, 1776N**×**10325W, h13**km±25km**, MD4.0, Near coast of Michoacan**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MMIG Aquila 0.53 350 *i* P Pg 21 12 20.1 -1.7
MMIG *i* S Sg 21 12 27.5 -1.4
ZIIG Zihuatanejo 1.71 95 *i* P Pn 21 12 37.6 -3.1
ZIIG *i* S Sn 21 12 58.8 -3.5
CJM Chamela 2.43 316 *i* P Pn 21 12 47.7 -2.9
CJM *i* S Sn 21 13 17.2 -3.0
SFJM Santa Fe 2.72 4 *i* P Pn 21 12 53.4 -1.3
SFJM *i* S Sn 21 13 25.1 -2.3
MOIG Morelia 2.73 45 *i* P Pn 21 12 51.4 -3.3
MOIG *i* S Sn 21 13 21.8 -5.8
CAIG El Cayaco 2.93 104 *i* P Pn 21 12 55.7 -1.9
CAIG *i* S Sn 21 13 27.1 -5.5
SZVM Salazar 3.98 66 *i* P Pn 21 13 10.2 -1.9
SZVM *i* S Sn 21 13 54.3 -4.3
PTVM Pico Tres Padr 4.32 64 *i* S Sn 21 14 07.0 0.0
UTMO Huajuapan 5.19 88 *i* P Pn 21 13 24.2 -4.4
UTMO *i* S Sn 21 14 23.4 -4.8

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*NNC **07** 21:24:47.8±2.1, 4129N×8103E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=21.3km s-min=11.7km az=149.0*
*IDC **07** 21:24:49.1±0.9, 4140N×8042E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/23, mbtmp3.7/9, ML3.7/2, Error ellipse: s-maj=23.4km s-min=17.8km az=85.0*
*BJI **07** 21:24:51.3, 4140N×8058E, h19km, ML3.6*
*ISCJB **07** 21:24:55.3±0.9, 4153N±007×8042E±006, h55km±10km, mb3.5/7, Error ellipse: s-maj=11.2km s-min=7.2km az=166.3*
*NEIC **07** 21:24:56.6±0.7, 4149N×8042E, h53km±8km, mb3.8/1, Error ellipse: s-maj=10.8km s-min=7.5km az=201.0*
ISC 07 21:24:57.0±0.8**, 4150N**±007×**8041E**±006**, h57**km±9km**, n24,** σ0ˢ**82**/32**, mb3.5**/7**, 9C-2D, Southern Xinjiang**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KNDC Almaty 3.07 305 ⇑Pn **Pn 21 25 43.8 +0.7**
68nm,0.6s
KNDC ⇑Sn **Sn 21 26 27.7 +9.1**
301nm,0.7s
TKM2 Tokmak 2 3.85 293 ⇓Pn **Pn 21 25 53.3 -0.3**
2.8nm,0.7s
TKM2 ⇑Sn **Sn 21 26 50.6 +13**
21nm,0.7s
TKM2 Tokmak 2 3.85 293 *e*P **Pn 21 25 53.3 -0.4**
KSH Kashi 3.92 241 *e*PG **Pn 21 26 03.0 +8.3**
KSH S **Sn 21 26 46.4 +7.0**
KSH Smax
comp=N,313nm,0.6s
KSH Smax
comp=E,502nm,0.9s
UCH Uchtor 4.46 281 *e*P **Pn 21 26 01.9 -0.2**
AAK Ala-Archa 4.55 286 *e*P **Pn 21 26 02.4 -0.9**
AML Almayashu 5.06 279 P **Pn 21 26 10.8 +0.5**
comp=E,32nm,0.7s
EKS2 Erkin-Say 5.07 285 *e*P **Pn 21 26 11.3 +0.9**
comp=E,22nm,0.6s
MK31 Makanchi Array 5.46 14 ⇑Pn **Pn 21 26 14.9 -0.9**
comp=E,0.5nm,0.2s,baz=191,slow=14,SNR=88
MK31 ⇑Sn **Sn 21 27 23.3 +6.1**
comp=E,7.1nm,0.5s,baz=119,slow=49,SNR=4.3
MK31 ⇑Lg 21 27 39.4
comp=E,11nm,0.5s,baz=186,slow=22,SNR=4.2
MKAR Makanchi Array 5.46 14 Pn **Pn 21 26 15.0 -0.7**
MKAR Sn **Sn 21 27 17.4 +0.3**
MKAR Lg 21 27 44.6
MKAR Makanchi Array 5.46 14 Pn **Pn 21 26 15.0 -0.7**
comp=E,4.3nm,0.3s,baz=188,slow=12,SNR=46
MKAR Sn **Sn 21 27 17.4 +0.3**
comp=E,2.8nm,0.3s,baz=188,slow=18,SNR=4.2
MKAR Lg 21 27 44.6
comp=E,3.7nm,0.3s,baz=201,slow=29,SNR=3.7
WMQ Urumqi 5.85 64 *e*P **Pn 21 26 21.0 -0.1**
WMQ S **Sn 21 27 29.1 +2.4**
WMQ SG Sn 21 27 56.0 +29
WMQ Smax
comp=N,34nm,0.8s
WMQ Smax
comp=E,51nm,1.0s
KURK Kurchatov 9.30 353 ⇑Pn **Pn 21 27 07.3 -0.9**
comp=E,2.1nm,0.6s
KURK ⇑Sn **Sn 21 28 57.0 +5.8**
comp=E,5.8nm,0.9s
KURK ⇑Lg 21 29 48.1
comp=E,13nm,0.9s
LSA Lhasa 14.65 140 P **Pn 21 28 21.4 +0.4**
comp=E,3.6nm,0.9s
AB31 Akbulak array 16.30 305 ⇓P **Pn 21 28 42.4 +0.4**
comp=E,1.6nm,0.9s,baz=104,slow=12,SNR=5.6
SONM Songino Array 19.48 62 P **Pn 21 29 19.1 -1.7**
comp=E,0.1nm,0.3s,baz=262,slow=11,SNR=11
FINES FINESS Array B 37.87 321 P **P 21 32 08.8 +0.7**
comp=E,0.6nm,0.7s,mb3.4,baz=131,slow=15,SNR=2.5
ARCES ARCESS Array B 39.66 333 P **P 21 32 23.8 +0.9**
comp=E,1.4nm,0.8s,mb3.7,baz=92,slow=6.3,SNR=4.3
NB2 NORSAR Subarra 45.05 320 P **P 21 33 07.0 +0.2**
comp=Z,0.9nm,0.6s,mb3.8,baz=83,slow=7.9
NOA NORSAR Array B 45.05 320 P **P 21 33 07.1 +0.4**
comp=Z,1.2nm,0.7s,mb3.8,baz=84,slow=7.8,SNR=6.5
TORD Torodi Ar. Bea 73.00 273 P **P 21 36 20.0 -0.9**
comp=Z,0.2nm,0.4s,mb3.4,baz=38,slow=5.9,SNR=3.9
YKA Yellowknife Ar 75.65 7 P **P 21 36 35.9 +0.3**
comp=Z,0.3nm,0.5s,mb3.5,baz=340,slow=5.5,SNR=4.9
WRA Warramunga Arr 78.92 129 P **P 21 36 54.3 -0.1**
comp=Z,0.4nm,0.9s,mb3.4,baz=321,slow=6.4,SNR=2.9
ASAR Alice Springs 81.59 132 P **P 21 37 08.3 -0.4**
comp=Z,0.4nm,0.9s,mb3.4,baz=319,slow=5.2,SNR=4.1

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*ISCJB **07** 21:52:08.4±0.8, 52.1S±0.1×165E±04, h10km, mb4.0/6, MS3.6/7, Error ellipse: s-maj=39.2km s-min=13.3km az=9.1*
*IDC **07** 21:52:08.3±0.8, 5219S×1676E, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.9/15, mbtmp4.1/6, MS3.7/8, Ms1 3.7/8, ms1mx3.5/20, Error ellipse: s-maj=47.7km s-min=21.0km az=89.0*
ISC 07 21:52:10.1±0.8**, 5211S**±010×**168E**±04**, h10**km**, n16,** σ1ˢ**28**/8**, mb4.0**/6**, MS3.6**/7**, Southwest of Africa**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
SUR Sutherland 19.93 10 LR LR 22 02 44.7
comp=Z,195nm,19.2s,baz=176,slow=32
SNAA Sanae 21.49 197 P **P 21 56 57.5 -1.1**
3.6nm,0.8s,mb3.7,baz=40,slow=8.9,SNR=12
SNAA LR LR 22 02 46.6
comp=Z,80nm,21.2s,MS3.1,baz=181,slow=30
VNA2 Neumayer--Watz 21.82 201 *e* **P 21 57 03.6 +1.5**
baz=29,slow=10
VNA2 *e* 21 57 06.9
VNA2 *e* 21 57 11.0
VNA2 *e* 21 57 12.9
VNA2 *e* 21 57 23.1
VNA3 Neumayer Olymp 22.57 202 *e* **P 21 57 11.5 +1.4**
VNA3 *e* 21 57 15.0
VNA3 *e* 21 57 19.2
VNA3 *e* 21 57 21.2
VNA3 *e* 21 57 31.3
BOSA Boshof 24.30 18 P **P 21 57 28.8 +1.2**
9.7nm,1.2s,mb4.1,baz=198,slow=14,SNR=2.8
BOSA LR LR 22 05 45.7
comp=Z,151nm,18.7s,MS3.5,baz=204,slow=34
MAW Mawson 26.99 143 LR LR 22 05 21.4
comp=Z,72nm,21.1s,MS3.2,baz=248,slow=29
QSPA South Pole Qui 38.13 180 P **P 21 59 26.7 -1.9**
2.6nm,0.8s,mb4.0,baz=252,slow=7.6,SNR=5.5
VNDA Vanda 48.83 170 LR LR 22 19 36.7
comp=Z,127nm,18.2s,MS4.0,baz=200,slow=34
KMBO Kilima Mbogo 53.61 26 LR LR 22 22 12.1
comp=Z,95nm,18.4s,MS3.9,baz=88,slow=34
DBIC Dimbokro 61.41 335 P **P 22 02 24.7 -1.7**
4.1nm,0.8s,mb4.6,baz=88,slow=4.7,SNR=3.5
DBIC LR LR 22 22 24.9
comp=Z,60nm,19.4s,MS3.8,baz=199,slow=30
TORD Torodi Ar. Bea 66.29 344 P **P 22 02 58.7 +0.3**
1.3nm,0.9s,mb3.9,baz=190,slow=7.0,SNR=5.6
ASAR Alice Springs 86.75 125 P **P 22 04 54.5 +0.1**
0.5nm,0.7s,mb3.9,baz=210,slow=5.3,SNR=6.7
MLR Muntele Rosu 97.53 6 LR LR 22 49 03.3
comp=Z,59nm,18.4s,MS4.1,baz=320,slow=35
SONM Songino Array 125.35 56 PKP PKPdf 22 11 10.1 -0.1
0.2nm,0.8s,baz=211,slow=2.5,SNR=2.9
NVAR Mina Array Bea 146.15 264 PKPbc PKPbc 22 11 51.0 +1.1
2.6nm,0.8s,baz=126,slow=4.7,SNR=16
YKA Yellowknife Ar 152.45 311 PKPbc PKPbc 22 12 04.9 -0.1
0.9nm,0.8s,baz=83,slow=2.5,SNR=12

IDC 07 22:15:41.9±5.9**, 2653N**×**4466W, h0**km**, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.5**/21**, mbtmp3.6**/5**, Error ellipse: s-maj=157.1km s-min=30.5km az=164.0, Northern Mid-Atlantic Ridge**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
TXAR Lajitas Array 51.73 288 P P 22 24 50.8 -0.4
0.2nm,0.8s,baz=80,slow=6.5,SNR=2.2
PDAR Pinedale Array 54.52 305 P P 22 25 12.2 +0.7
0.3nm,0.7s,baz=116,slow=8.1,SNR=2.9
YKA Yellowknife Ar 57.58 329 P P 22 25 33.3 +0.1
0.2nm,0.4s,baz=91,slow=7.9,SNR=6.8
FINES FINESS Array B 57.89 32 P P 22 25 35.8 +0.4
1.2nm,1.0s,baz=286,slow=7.1,SNR=2.1
ARCES ARCESS Array B 58.49 23 P P 22 25 38.9 -0.5
2.7nm,0.9s,baz=278,slow=4.5,SNR=8.5

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*NIED **07** 22:57:00, 2400N×12240E, h32km, Mw5.0 Best double couple: M₀3.52000×10¹⁶ NP1:φs331.00000°, δ37.00000°, λ-179.00000°. NP2:φs240.00000°, δ90.00000°, λ-53.00000°.*
*IDC **07** 22:57:13.6±0.6, 24.15N×12239E, h0km, mb4.5/16, mb1 4.6/18, mb1mx4.6/23, mbtmp4.5/18, ML3.9/2, MS4.6/13, Ms1 4.6/13, ms1mx4.4/34, Error ellipse: s-maj=21.9km s-min=14.5km az=64.0*
*BJI **07** 22:57:15.0, 2400N×12262E, h27km, mB5.0, mb4.5, ML4.6, Ms4.9, Msz4.8*
*MOS **07** 22:57:17.2±1.1, 24.14N×12238E, h33km, mb4.9/31, MS4.8/16, Error ellipse: s-maj=9.7km s-min=5.1km az=116.7*
*JMA **07** 22:57:17.9±0.5, 2404N×12242E, h19km, M5.5*
*ISCJB **07** 22:57:18.7±0.3, 2407N±003×12241E±002, h48km±3km,*

mb4.7/72,MS4.8/28,Error ellipse: s-maj=4.8km s-min=3.0km az=7.4

SZGRF ***07*** *22:57:19.5,2391N×12222E,h33km,mb4.8,MS5.2, Taiwan region*

NEIC ***07*** *22:57:19.9±0.7,2406N×12238E,h42km±6km,mb4.8/42, Error ellipse: s-maj=5.3km s-min=4.3km az=57.0*

GCMT ***07*** *22:57:19.9±0.3,2391N×12234E,h37km±1km, MW5.1/61, Moment Tensor Solution. s34,c45; s61,c102; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.32±.26; Mθθ-4.20±.15; Mφφ0.87±.17; Mrθ2.61±.15; Mφr0.17±.10; Mθr1.49±.16; Best double couple: Mo4.86800×10¹⁶ NP1:ϕs294.00000°,δ32.00000°,λ128.00000°. NP2: ϕs71.00000°,δ65.00000°,λ69.00000°. Principal axes: T 4.7040, Plg63.0000°, Azm307.0000°; N 0.3220, Plg19.0000°, Azm81.0000°; P -5.0320, Plg18.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 22:57:20.0±0.3,2410N±003×12241E±002,h43km±3km, h38km±5.0km:pP-P,n256,σ1§14/279,mb4.7/72,MS4.8/27, 24C-8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.65**	**56**	P	**Pn**	**22 57 31.0**	**-1.9**
YOJ				*e*S	**Sn**	**22 57 39.9**	**-2.3**
NACB	**Ninganchiao**	**0.75**	**276**	*e*P	**Pn**	**22 57 32.5**	**-1.8**
NACB				*e*S	**Sn**	**22 57 44.7**	**+0.2**
YHNB	**Yeheng**	**1.10**	**301**	*e*P	**Pn**	**22 57 38.9**	**-0.1**
YHNB				*e*S	**Sn**	**22 57 53.9**	**+0.8**
TATO	**Taipei**	**1.22**	**316**	*e*Pn	**Pn**	**22 57 41.0**	**+0.5**
TATO				*e*Sn	**Sn**	**22 57 59.7**	**+3.9**
IRIF	**Iriomote-Funau**	**1.22**	**79**	P	**Pn**	**22 57 40.8**	**+0.1**
IRIF				*e*S	**Sn**	**22 57 57.0**	**+1.0**
HATJ	**Hateruma jima**	**1.27**	**92**	P	**Pn**	**22 57 40.1**	**-1.2**
HATJ				*e*S	**Sn**	**22 57 57.0**	**-0.2**
JKRS	**Kuro-shima**	**1.46**	**84**	P	**Pn**	**22 57 43.4**	**-0.5**
JKRS				*e*S	**Sn**	**22 58 03.8**	**+1.9**
JIJ	**Ishigaki jima**	**1.60**	**80**	P	**Pn**	**22 57 44.7**	**-1.1**
JIJ				*e*S	**Sn**	**22 58 04.8**	**-0.5**
JTJ	**Tarama**	**2.15**	**75**	P	**Pn**	**22 57 53.4**	**0.0**
JTJ				*e*S	**Sn**	**22 58 20.7**	**+1.8**
JMJ	**Miyako jima 2**	**2.72**	**74**	P	**Pn**	**22 58 02.0**	**+0.8**
JMJ				*e*S	**Sn**	**22 58 34.8**	**+2.0**
JOGS	**Gusukube**	**2.81**	**76**	P	**Pn**	**22 58 04.2**	**+1.8**
QZH	**Quanzhou**	**3.58**	**284**	⇑*i*P	**Pn**	**22 58 14.1**	**+1.1**
QZH				S	**Sn**	**22 58 53.3**	**-0.8**
QZH				Smax			
	comp=N,1μm,0.9s						
QZH				Smax			
	comp=E,1μm,0.9s						
QZH				LR	LR		
	comp=N,8μm,5.4s						
QZH				LR	LR		
	comp=E,16μm,10.6s						
JKE	**Kume jima 2**	**4.54**	**60**	P	**Pn**	**22 58 26.1**	**-0.1**
JAGN	**Aguni-jima**	**5.02**	**59**	P	**Pn**	**22 58 34.0**	**+1.2**
JIH	**Iheya**	**5.80**	**59**	P	**Pn**	**22 58 42.8**	**-0.8**
JOW	**Kunigami**	**5.96**	**62**	P	**Pn**	**22 58 45.5**	**-0.1**
JOW	**Kunigami**	**5.96**	**62**	Pn	**Pn**	**22 58 44.7**	**-0.9**
	comp=E,7.9nm,0.3s,baz=180,slow=10,SNR=36						
JOW				Sn	**Sn**	**22 59 51.2**	**-1.3**
	baz=316,slow=27,SNR=2.4						
JTK	**Tokunoshima**	**6.94**	**57**	P	**Pn**	**22 58 57.5**	**-1.6**
SSE	**Sheshan**	**7.06**	**351**	P	**Pn**	**22 59 00.9**	**+0.2**
SSE				S	**Sn**	**23 00 19.9**	**+0.3**
SSE				AMB	AMB		
	comp=Z,41nm,4.0s						
SSE				Smax			
	comp=N,91nm,0.8s						
SSE				Smax			
	comp=E,130nm,1.1s						
SSE				LR	LR		
	comp=N,5μm,14.1s						
SSE				LR	LR		
	comp=E,962nm,14.1s						
JAM	**Amami Oshima**	**7.75**	**55**	P	**Pn**	**22 59 08.1**	**-2.2**
JMZ	**Minamidaito 2**	**8.17**	**76**	P	**Pn**	**22 59 11.5**	**-4.6**
JMZ				*e*S	**Sn**	**23 00 37.0**	**-10**
NJ2	**Nanjing**	**8.52**	**339**	*e*P	**Pn**	**22 59 20.0**	**-0.9**
NJ2				S	**Sn**	**23 01 04.5**	**+8.8**
NJ2				XS		23 01 10.0	
NJ2				PCP	PcP	23 05 49.3	+0.7
NJ2				AMB	AMB		
	comp=Z,50nm,0.7s						
NJ2				Smax			
	comp=N,340nm,1.0s						
NJ2				Smax			
	comp=E,230nm,1.1s						
NJ2				LR	LR		
	comp=N,13μm,13.2s						
NJ2				LR	LR		
	comp=E,9μm,13.2s						
NJ2				LR	LR		
	comp=Z,9μm,13.2s						
WHN	**Wuhan**	**9.62**	**314**	*e*P	**Pn**	**22 59 37.4**	**+1.5**
WHN				S	**Sn**	**23 01 21.0**	**-1.7**
WHN				LR	LR		
	comp=Z,12μm,14.7s						
JNU	**Nakatsue**	**11.66**	**38**	LR	LR	23 04 52.7	
	comp=Z,2μm,19.2s,baz=212,slow=40						
TIA	**Tai'an**	**12.91**	**340**	P	**Pn**	**23 00 24.6**	**+3.8**
TIA				S	**Sn**	**23 02 50.0**	**+7.0**
TIA				LR	LR		
	comp=E,2μm,6.0s						
KSRS	**Korea Array**	**14.12**	**18**	Pn	**Pn**	**23 00 38.8**	**+1.4**
	baz=203,slow=13,SNR=3.3						
KSRS				LR	LR	23 06 47.8	
	comp=E,2μm,19.1s,baz=200,slow=41						
GYA	**Guiyang**	**14.44**	**283**	⇑*i*P	**Pn**	**23 00 42.8**	**+1.0**
GYA				AP	pP	23 00 50.5	-7.5
GYA				PP		23 00 54.2	
GYA				S	**Sn**	**23 03 16.9**	**-3.7**
GYA				XS		23 03 34.3	
GYA				PCP	PcP	23 05 57.8	+2.7
GYA				AMB	AMB		
	comp=Z,30nm,0.9s						
GYA				AMB	AMB		
	comp=Z,110nm,4.2s						
GYA				LR	LR		
	comp=N,2μm,10.1s						
GYA				LR	LR		
	comp=E,4μm,10.4s						
GYA				LR	LR		
	comp=Z,4μm,15.0s						
DL2	**Dalian**	**14.78**	**358**	⇑*i*P	**Pn**	**23 00 50.0**	**+3.9**
DL2				AP	pP	23 00 57.5	-4.1
DL2				S	**Sn**	**23 03 35.0**	**+6.4**
DL2				SS		23 03 47.9	
DL2				AMB	AMB		
	comp=Z,20nm,1.3s						
DL2				AMB	AMB		
	comp=Z,160nm,6.7s						
DL2				LR	LR		
	comp=N,2μm,12.6s						
DL2				LR	LR		
	comp=E,530nm,10.4s						
DL2				LR	LR		
	comp=Z,2μm,13.2s						
XAN	**Xi'an**	**15.39**	**313**	P	**Pn**	**23 00 53.9**	**-0.2**
XAN				AP	pP	23 00 59.8	-8.7
XAN				AMB	AMB		
	comp=Z,8.0nm,2.5s						
XAN				AMB	AMB		
	comp=Z,223nm,5.7s						
XAN				LR	LR		
	comp=N,1μm,13.6s						
XAN				LR	LR		
	comp=E,3μm,14.6s						
XAN				LR	LR		
	comp=Z,4μm,17.0s						
TIY	**Taiyuan**	**16.03**	**330**	P	**Pn**	**23 01 03.2**	**+0.8**
TIY				XP	sP	23 01 14.5	-6.6
TIY				AMB	AMB		
	comp=Z,573nm,4.9s						
TIY				LR	LR		
	comp=N,5μm,11.5s						
TIY				LR	LR		
	comp=E,3μm,15.2s						
TIY				LR	LR		
	comp=Z,5μm,14.1s						
BJT	**Baijiatuau**	**16.73**	**343**	*e*Pn	**Pn**	**23 01 13.1**	**+2.0**
	comp=Z,5.2nm,0.5s						
BJT	**Baijiatuau**	**16.73**	**343**	*e*P	**Pn**	**23 01 13.1**	**+2.0**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BJI	**Beijing**	**16.74**	**343**	P	**Pn**	**23 01 12.8**	**+1.5**
BJI				AP	pP	23 01 23.5	0.0
BJI				S	**S**	**23 04 20.2**	**-5.4**
BJI				PCP	PcP	23 05 58.4	+0.2
BJI				AMB	AMB		
	comp=Z,9.0nm,1.4s						
BJI				AMB	AMB		
	comp=Z,673nm,4.6s						
BJI				LR	LR		
	comp=N,3μm,15.6s						
BJI				LR	LR		
	comp=E,2μm,18.9s						
BJI				LR	LR		
	comp=Z,2μm,22.2s						
JHJ	**Hachijo jima 2**	**17.68**	**56**	LR	LR	23 07 11.4	
	comp=Z,618nm,21.3s,baz=131,slow=34						
SNY	**Shenyang**	**17.71**	**3**	⇑P	**Pn**	**23 01 22.6**	**-0.7**
SNY				S	**S**	**23 04 42.6**	**-2.6**
SNY				AMB	AMB		
	comp=Z,21nm,2.3s						
SNY				AMB	AMB		
	comp=Z,950nm,8.6s						
SNY				LR	LR		
	comp=N,2μm,12.9s						
SNY				LR	LR		
	comp=Z,3μm,13.9s						
CD2	**Chengdu**	**17.88**	**296**	⇑*i*P	**Pn**	**23 01 25.4**	**-0.1**
CD2				AP	pP	23 01 34.7	-1.4
CD2				PP		23 01 41.0	
CD2				S	**S**	**23 04 39.7**	**-9.1**
CD2				XS	sS	23 04 54.3	-11
CD2				SS		23 05 03.2	
CD2				AMB	AMB		
	comp=Z,20nm,1.0s						
CD2				AMB	AMB		
	comp=Z,310nm,9.4s						
CD2				LR	LR		
	comp=N,1μm,13.2s						
CD2				LR	LR		
	comp=E,2μm,14.4s						
CD2				LR	LR		
	comp=Z,3μm,14.4s						
KMI	**Kunming**	**17.92**	**277**	P	**Pn**	**23 01 26.2**	**+0.2**
KMI				AP	pP	23 01 34.6	-2.0
KMI				PP		23 01 42.0	
KMI				S	**S**	**23 04 43.1**	**-6.7**
KMI				XS	sS	23 04 56.5	-10
KMI				SS		23 05 06.7	
KMI				AMB	AMB		
	comp=Z,12nm,1.9s						
KMI				AMB	AMB		
	comp=Z,389nm,8.3s						
KMI				LR	LR		
	comp=N,1μm,11.5s						
KMI				LR	LR		
	comp=E,4μm,13.6s						
KMI				LR	LR		
	comp=Z,4μm,13.6s						
KMI	**Kunming**	**17.92**	**277**	P	**Pn**	**23 01 26.2**	**+0.2**
KMI				pP	pP	23 01 34.6	-2.0
KMI				PP		23 01 42.0	
KMI				PPP		23 01 50.5	
KMI				S	**S**	**23 04 43.1**	**-6.7**
KMI				sS	sS	23 04 56.5	-10
KMI				SS		23 05 06.7	
KMI				SSS		23 05 19.8	
CBIJ	**Chichi jima**	**18.08**	**76**	LR	LR	23 07 21.0	
	comp=Z,948nm,19.8s,baz=354,slow=34						
MAT	**Matsushiro**	**18.40**	**44**	P	**Pn**	**23 01 31.3**	**-0.5**
MAT				S	**S**	**23 05 01.0**	**+1.7**
MJAR	**Matsushiro Arr**	**18.40**	**44**	P	**Pn**	**23 01 30.2**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=228,slow=13,SNR=3.1						
KKM	**Kota Kinabalu**	**18.91**	**199**	*e*P	**Pn**	**23 01 37.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**19.02**	**334**	*e*P	**Pn**	**23 01 40.1**	**+0.9**
HHC				AP	pP	23 01 49.4	+0.8
HHC				XP	sP	23 01 56.1	+2.0
HHC				PP		23 01 57.7	
HHC				S	**S**	**23 05 06.8**	**-4.9**
HHC				XS	sS	23 05 21.1	-7.4
HHC				SS		23 05 33.6	
HHC				PCP	PcP	23 06 03.9	+1.9
HHC				PCS	PcS	23 09 39.8	+0.9
HHC				AMB	AMB		
	comp=Z,25nm,1.1s						
HHC				AMB	AMB		
	comp=Z,629nm,3.9s						
HHC				LR	LR		
	comp=N,4μm,13.4s						
HHC				LR	LR		
	comp=E,2μm,16.1s						
HHC				LR	LR		
	comp=Z,5μm,13.4s						
BTO	**Baotou**	**19.47**	**331**	*e*P	**Pn**	**23 01 44.3**	**-0.3**
CN2	**Changchun**	**19.81**	**6**	*e*P	**Pn**	**23 01 47.5**	**-1.1**
CN2				*e*XP	sP	23 02 04.1	+1.3
CN2				*e*S	**S**	**23 05 25.0**	**-2.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,4μm,15.0s						
CN2				LR	LR		
	comp=E,900nm,15.0s						
CN2				LR	LR		
	comp=Z,4μm,14.0s						
LZH	**Lanzhou**	**19.98**	**311**	⇑P	**Pn**	**23 01 50.9**	**+0.2**
LZH				AP	pP	23 01 57.5	-1.7
LZH				XP	sP	23 02 03.8	-0.9
LZH				PP		23 02 10.0	
LZH				S	**S**	**23 05 27.5**	**-3.6**
LZH				XS	sS	23 05 39.0	-9.0
LZH				SS		23 05 56.0	
LZH				AMB	AMB		
	comp=Z,89nm,1.7s						
LZH				AMB	AMB		
	comp=Z,260nm,4.0s						
LZH				LR	LR		
	comp=E,3μm,15.9s						
LZH				LR	LR		
	comp=Z,4μm,16.2s						
LZH	**Lanzhou**	**19.98**	**311**	⇑P	**Pn**	**23 01 50.9**	**+0.2**
LZH				pP	pP	23 01 57.5	-1.7
LZH				sP	sP	23 02 03.8	-0.9
LZH				PP		23 02 10.0	
LZH				S	**S**	**23 05 27.5**	**-3.6**
LZH				sS	sS	23 05 39.0	-9.0
LZH				SS		23 05 56.0	
VLA	**Vladivostok**	**20.52**	**20**	P	**P**	**23 01 56.0**	**+1.5**
VLA				MLR	MLR		
	comp=Z,2μm,15.5s,MS4.5						
MDJ	**Mudanjiang**	**21.29**	**14**	P	**P**	**23 02 03.7**	**+0.9**
MDJ				AP		23 02 13.7	
MDJ				XP	sP	23 02 19.0	+0.2
MDJ				S	**S**	**23 05 59.0**	**+2.2**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,54nm,4.5s						
MDJ				LR	LR		
	comp=N,1μm,19.4s,MS4.7						
MDJ				LR	LR		
	comp=E,2μm,15.4s,MS4.7						
MDJ				LR	LR		
	comp=Z,2μm,14.1s,MS4.7						
MDJ	**Mudanjiang**	**21.29**	**14**	*e*P	**P**	**23 02 05.1**	**+2.3**
	comp=Z,18nm,1.1s,mb4.3						
CHTO	**Chiang Mai**	**22.46**	**261**	*e*P	**P**	**23 02 13.8**	**-1.6**
	comp=Z,18nm,1.1s,mb4.4						
CHTO	**Chiang Mai**	**22.46**	**261**	*e*P	**P**	**23 02 13.8**	**-1.7**
CHTO				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.4						
CM31	**Chiang Mai Arr**	**22.57**	**260**	*e*P	**P**	**23 02 16.7**	**+0.1**
GUMO	**Guam**	**23.65**	**112**	*e*P	**P**	**23 02 28.5**	**+0.9**
	comp=Z,88nm,0.8s,mb5.2						
GUMO	**Guam**	**23.65**	**112**	*e*P	**P**	**23 02 28.5**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,88nm,0.8s,mb5.2						
GTA	**Gaotai**	**24.45**	**314**	P	**P**	**23 02 35.1**	**+0.4**
GTA				AP		23 02 44.6	
GTA				XP	sP	23 02 51.6	+0.2
GTA				PP		23 03 13.1	
GTA				PCP	PcP	23 06 12.2	-0.5
GTA				S	**S**	**23 06 51.4**	**-0.4**
GTA				XS	sS	23 07 11.5	+0.4
GTA				SS		23 07 51.5	
GTA				SCS	ScS	23 13 32.2	-3.4
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.0						
GTA				AMB	AMB		
	comp=Z,323nm,6.1s						
GTA				LR	LR		
	comp=N,753nm,16.4s,MS4.7						
GTA				LR	LR		
	comp=E,2μm,16.4s,MS4.7						
HIA	**Hailar**	**25.21**	**356**	*e*P	**P**	**23 02 42.6**	**+1.1**
	comp=E,14nm,1.0s,mb4.4						
HIA				PcP	PcP	23 06 12.5	-1.7
HIA	**Hailar**	**25.21**	**356**	*e*P	**P**	**23 02 42.6**	**+1.1**
HIA						23 06 12.5	
HIA				pmax	pmax		
	comp=Z,14nm,1.0s						
KSM	**Kuching**	**25.36**	**209**	*e*P	**P**	**23 02 42.2**	**-0.9**
ASAJ	**Asahikawa**	**25.91**	**35**	LR	LR	23 12 49.8	
	comp=Z,1μm,21.5s,MS4.3,baz=347,slow=36						
KLR	**Kul'dur**	**26.14**	**14**	*e*P	**P**	**23 02 48.9**	**-1.0**
KLR				*e*		23 03 34.0	
KLR				*e*S	**S**	**23 07 23.5**	**+5.1**
KLR				MLR	MLR		
	comp=E,1μm,13.0s						
KLR				MLR	MLR		
	comp=Z,10μm,13.0s,MS5.5						
HABR	**Khabarovsk**	**26.30**	**19**	*e*P	**P**	**23 02 49.7**	**-1.7**
HABR				*e*	pP	23 02 59.1	-3.9
HABR				*e*	pP	23 03 03.1	+0.1
HABR				*e*		23 06 11.6	
HABR				*e*S	**S**	**23 07 21.3**	**+0.2**
HABR				*e*		23 07 36.8	
HABR				*e*		23 08 23.7	
HABR				*e*		23 13 43.8	
ULN	**Ulaanbaatar**	**26.68**	**337**	*e*P	**P**	**23 02 54.2**	**-0.6**
	comp=Z,4.9nm,0.6s,mb4.2						
ULN	**Ulaanbaatar**	**26.68**	**337**	*e*P	**P**	**23 02 54.2**	**-0.6**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.2						
SONM	**Songino Array**	**26.90**	**336**	P	**P**	**23 02 56.4**	**-0.4**
SONM						23 06 18.6	
SONM	**Songino Array**	**26.90**	**336**	P	**P**	**23 02 56.4**	**-0.3**
	comp=Z,13nm,0.9s,mb4.5,baz=156,slow=9.1,SNR=80						
SONM				PcP	PcP	23 06 18.6	+0.5
	comp=Z,1.4nm,0.9s,baz=144,slow=5.2,SNR=4.7						
SONM				LR	LR	23 14 49.4	
	comp=Z,3μm,18.6s,MS4.9,baz=174,slow=39						
SHL	**Shillong**	**27.72**	**279**	*e*P	**P**	**23 03 08.0**	**+3.6**
YSS	**Yuzh-Sakhalins**	**28.02**	**30**	*e*P	**P**	**23 03 07.0**	**+0.2**
YSS				*e*S	**S**	**23 07 46.0**	**-2.2**
YSS				MLR	MLR		
	comp=E,1μm,18.0s,MS4.6						
YSS				MLR	MLR		
	comp=Z,1μm,18.0s,MS4.5						
YSS				MLR	MLR		
	comp=N,600nm,14.0s,MS4.6						
LSA	**Lhasa**	**28.38**	**288**	P	**P**	**23 03 12.0**	**+1.7**
LSA	**Lhasa**	**28.38**	**288**	*e*P	**P**	**23 03 11.6**	**+1.4**
	comp=N,6.3nm,0.6s,mb4.4						
LSA	**Lhasa**	**28.38**	**288**	*e*P	**P**	**23 03 11.6**	**+1.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
ZAK	**Zakamensk**	**30.16**	**335**	*e*P	**P**	**23 03 24.6**	**-1.2**
ZAK				*e*		23 06 27.6	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
TLY	**Talaya**	**31.08**	**337**	*e*P	**P**	**23 03 33.3**	**-0.6**
TLY	**Talaya**	**31.08**	**337**	*e*P	**P**	**23 03 33.0**	**-0.9**
TLY				*e*		23 04 51.5	
TLY				*e*S	**S**	**23 08 45.2**	**+9.1**
TLY				*e*SS	SS	23 10 24.4	-26
TLY				*e*SSS		23 10 42.3	
TLY				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
TLY				MLR	MLR		
	comp=Z,2μm,15.0s,MS5.0						
IRK	**Irkutsk**	**31.33**	**338**	*e*P	**P**	**23 03 35.0**	**-1.1**
IRK				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
TAPN	**Taplejung**	**31.37**	**283**	*e*P	**P**	**23 03 38.0**	**+1.2**
	comp=Z,45nm,1.2s,mb5.2						
ODAN	**Odare**	**31.68**	**283**	*e*P	**P**	**23 03 40.4**	**+0.9**
	comp=Z,36nm,1.1s,mb5.1						
MOY	**Mondy**	**32.06**	**335**	*e*P	**P**	**23 03 41.6**	**-0.9**
JIRN	**Jiri**	**32.71**	**284**	*e*P	**P**	**23 03 49.5**	**+1.0**
	comp=Z,13nm,0.7s,mb5.0						
KKN	**Kakani**	**33.51**	**284**	*e*P	**P**	**23 03 55.8**	**+0.3**
GKN	**Gorkha**	**34.07**	**285**	*e*P	**P**	**23 04 00.7**	**+0.3**
	comp=Z,8.2nm,0.4s,mb5.0						
WMQ	**Urumqi**	**34.53**	**313**	⇑*i*P	**P**	**23 04 05.1**	**+1.0**
WMQ				AP	pP	23 04 16.7	+0.8
WMQ				XP	sP	23 04 22.1	+1.0
WMQ				PP	PP	23 05 22.1	-0.8
WMQ				S	**S**	**23 09 29.3**	**-0.6**
WMQ				XS	sS	23 09 50.1	+0.5
WMQ				SCP	ScP	23 10 19.7	-0.4
WMQ				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,180nm,5.2s						
WMQ				LR	LR		
	comp=N,425nm,18.7s,MS4.4						
WMQ				LR	LR		
	comp=E,400nm,14.5s,MS4.4						
WMQ				LR	LR		
	comp=Z,521nm,15.6s,MS4.4						
YAK	**Yakutsk**	**38.24**	**6**	P	**P**	**23 04 34.5**	**-1.0**
YAK	**Yakutsk**	**38.24**	**6**	⇓*e*P	**P**	**23 04 33.1**	**-2.4**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
MKAR	**Makanchi Array**	**39.18**	**316**	P	**P**	**23 04 43.9**	**+0.2**
	comp=Z,8.0nm,0.4s,mb4.8,baz=102,slow=10,SNR=146						
MKAR				LR	LR	23 22 18.8	
	comp=Z,1μm,18.7s,MS4.7,baz=105,slow=38						
PET	**Petropavlovsk**	**39.75**	**34**	*e*P	**P**	**23 04 50.6**	**+2.3**
PET	**Petropavlovsk**	**39.75**	**34**	*e*P	**P**	**23 04 54.7**	**+6.4**
PET				*e*		23 10 55.3	
PET						23 14 19.7	
PET				MLR	MLR		
	comp=Z,600nm,14.0s,MS4.6						
PMG	**Port Moresby**	**41.15**	**141**	*e*P	**P**	**23 05 00.4**	**+0.2**
	comp=Z,47nm,1.0s,mb5.1						
PMG	**Port Moresby**	**41.15**	**141**	⇑*e*P	**P**	**23 05 00.8**	**+0.6**
KSH	**Kashi**	**41.89**	**303**	*e*P	**P**	**23 05 08.4**	**+2.3**
KSH				*e*PP	PP	23 06 50.4	+6.9
KSH				*e*PCP	PcP	23 07 04.1	+2.9
KSH				*e*SCP	ScP	23 10 50.1	+1.9
KSH				*e*PCS	PcS	23 10 54.1	+1.3
KSH				*e*S	**S**	**23 11 23.0**	**+1.7**
KSH				*e*XS	sS	23 11 45.8	+4.6
KSH				*e*SS	SS	23 14 26.9	-1.9
KSH				*e*SCS	ScS	23 15 04.5	-0.8
KSH				AMB	AMB		
	comp=Z,57nm,0.7s,mb5.3						
KSH				LR	LR		
	comp=N,2μm,7.5s						
KSH				LR	LR		
	comp=E,1μm,6.4s						
KSH				LR	LR		
	comp=Z,1μm,6.4s						
FITZ	**Fitzroy Crossi**	**42.06**	**175**	*e*P	**P**	**23 05 06.2**	**-1.4**
	comp=Z,26nm,1.1s,mb4.8						
NVS	**Novosibirsk**	**42.19**	**327**	*e*P	**P**	**23 05 07.0**	**-1.3**
NVS				*e*		23 07 09.3	
NVS				pmax	pmax		
	comp=E,19nm,1.4s						
NVS				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=N,18nm,1.8s						
TKM2	**Tokmak 2**	**42.70**	**308**	*e*P	**P**	**23 05 13.8**	**+1.1**
	comp=N,27nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**42.70**	**308**	*e*P	**P**	**23 05 13.8**	**+1.1**
TKM2				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**42.70**	**308**	P	**P**	**23 05 13.9**	**+1.2**
	SNR=19						
KZA	**Kyzart**	**42.81**	**307**	P	**P**	**23 05 16.0**	**+2.5**
	SNR=7.1						
KURK	**Kurchatov**	**42.88**	**320**	P	**P**	**23 05 13.2**	**-0.8**
	comp=Z,136nm,0.5s,mb5.9,SNR=17						

KURK Kurchatov 42.88 320 *e*P **P** 23 05 13.5 -0.6
comp=Z,28nm,1.1s,mb4.9
KURK *e* pP 23 05 23.3 -2.7
KURK *e*PP PP 23 06 52.5 -1.5
KURK *e*PcP PcP 23 07 03.4 -0.9
KURK Kurchatov 42.88 320 *e*P **P** **23 05 13.5 -0.5**
KURK *e* pP 23 05 23.3 -2.7
KURK *e* 23 06 52.5
KURK *e* 23 07 03.4
KURK pmax pmax
comp=Z,28nm,1.1s,mb4.9
COEN Coen 42.92 150 *e*P **P** **23 05 14.8 +0.1**
comp=Z,40nm,0.9s,mb5.2
COEN *e*PP PP 23 06 55.3 +0.3
KBK Karagaybulak 43.13 307 P **P** **23 05 18.3 +2.2**
SNR=12
CHMS Chumysh 43.33 308 P **P** **23 05 18.8 +1.1**
SNR=9.3
UCH Uchtor 43.37 307 *e*P **P** **23 05 19.9 +1.7**
comp=Z,30nm,1.1s,mb4.9
UCH Uchtor 43.37 307 P **P** **23 05 20.6 +2.5**
SNR=21
FRU Bishkek 43.40 308 *e*P **P** **23 05 19.0 +0.7**
FRU pmax pmax
comp=N,50nm,2.1s
FRU MLR MLR
comp=Z,700nm,17.0s,MS4.6
AAK Ala-Archa 43.45 307 P **P** **23 05 19.8 +1.0**
comp=Z,56nm,1.2s,mb5.2,SNR=5.0
AAK Ala-Archa 43.45 307 *e*P **P** **23 05 18.9 +0.1**
comp=Z,4.6nm,0.7s,mb4.3
AAK *e*PP PP 23 07 00.3 0.0
AAK Ala-Archa 43.45 307 *e*P **P** **23 05 18.9 +0.1**
AAK *e* 23 07 00.3
AAK pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
AAK Ala-Archa 43.45 307 P **P** **23 05 20.0 +1.3**
SNR=6.5
AML Almayashu 43.96 306 *e*P **P** **23 05 24.6 +1.7**
comp=Z,23nm,0.9s,mb4.9
AML Almayashu 43.96 306 P **P** **23 05 25.0 +2.2**
SNR=14
EKS2 Erkin-Say 43.98 307 *e*P **P** **23 05 23.9 +0.9**
comp=Z,8.2nm,0.9s,mb4.5
WRA Warramunga Arr 45.29 164 *i* P **P** **23 05 33.0 -0.6**
WRA pmax pmax
comp=Z,35nm,0.9s
WRA Warramunga Arr 45.29 164 P **P** **23 05 33.1 -0.5**
comp=Z,35nm,0.9s,mb5.2,baz=346,slow=8.5,SNR=99
WB2 Warramunga Arr 45.29 164⇓ *i* P **P** **23 05 33.0 -0.6**
TIXI Tiksi 47.72 3 *e*P **P** **23 05 53.0 +0.9**
TIXI *e*PcP PcP 23 07 21.4 +0.7
TIXI Tiksi 47.72 3 *e*P **P** **23 05 49.9 -2.2**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TIXI MLR MLR
comp=Z,2μm,16.0s,MS5.3
BRVK Borovoye 48.52 321 P **P** **23 05 58.8 +0.3**
comp=Z,95nm,0.4s,SNR=9.8
BRVK Borovoye 48.52 321 *e*P **P** **23 05 58.1 -0.4**
BRVK *e* 23 07 22.9
ASAR Alice Springs 48.77 166 P **P** **23 06 00.9 +0.3**
comp=Z,19nm,0.9s,mb5.1,baz=344,slow=6.4,SNR=90
HNR Honiara 49.54 128 LR LR 23 25 31.2
comp=Z,390nm,19.3s,MS4.4,baz=180,slow=34
CTA Charters Tower 49.68 150 *e*P **P** **23 06 08.6 +0.9**
comp=Z,15nm,1.2s,mb4.9
CTA Charters Tower 49.68 150 *e*P **P** **23 06 08.6 +0.9**
CTA pmax pmax
comp=Z,15nm,1.2s
CTAO Charters Tower 49.68 150 *e*P **P** **23 06 08.5 +0.7**
comp=Z,27nm,1.1s,mb5.2
CTAO Charters Tower 49.68 150 *e*P **P** **23 06 08.5 +0.8**
CTAO pmax pmax
comp=Z,27nm,1.1s,mb5.2
BILL Bilibino 51.39 19 P **P** **23 06 22.8 +2.8**
BILL Bilibino 51.39 19⇓ *e*P **P** **23 06 19.6 -0.4**
BILL *e* 23 08 15.7
BILL *e*S **S** **23 13 36.0 -0.2**
BILL pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
BILL MLR MLR
comp=Z,2μm,20.0s,MS5.1
SVE Sverdlovsk 54.78 324⇑ *e*P **P** **23 06 45.0 -0.2**
SVE *e* 23 07 42.8
SVE *e* 23 16 23.7
SVE pmax pmax
comp=Z,19nm,1.1s,mb5.0
SVE MLR MLR
comp=Z,1μm,17.0s,MS5.1
FORT Forrest 54.83 174 *e*P **P** **23 06 46.2 +0.4**
comp=Z,26nm,0.8s,mb5.3
ARU Arti 55.85 323 P **P** **23 06 52.5 -0.4**
comp=Z,68nm,0.7s,mb5.8,SNR=5.9
ARU Arti 55.85 323 *e*P **P** **23 06 52.2 -0.7**
comp=Z,35nm,1.7s,mb5.1
ARU *e*PcP PcP 23 07 52.1 +0.8
ARU Arti 55.85 323 *c i*P **P** **23 06 52.0 -0.9**
ARU 23 07 48.2
ARU 23 08 55.4
ARU S **S** **23 14 37.9 +0.9**
ARU SS SS 23 18 25.5 +2.7
ARU pmax pmax
comp=Z,12nm,1.0s,mb4.9
NWAO Narrogin (SRO) 56.92 185 *e*P **P** **23 06 59.8 -0.9**
STKA Stephens Creek 58.60 161 *e*P **P** **23 07 12.5 0.0**
comp=Z,28nm,0.6s,mb5.5
STKA Stephens Creek 58.60 161 P **P** **23 07 12.6 +0.1**
comp=Z,13nm,0.8s,mb5.0,baz=335,slow=7.0,SNR=20
ARMA Armidale 61.02 151 *e*P **P** **23 07 28.6 -0.5**
comp=Z,0.6nm,1.0s,mb3.7
DZM Mont Dzumac 62.75 134 LR LR 23 29 42.9
comp=Z,644nm,21.8s,MS4.8,baz=234,slow=31
TTA Tatalina 65.02 30 *e*P **P** **23 07 59.1 +3.7**
ZEI Tsey 65.88 308 *e*P **P** **23 08 00.9 -0.4**
MIB Mutribah 66.09 293 *e*P **P** **23 08 00.5 -2.4**
MIB AMb AMB 23 08 03.5
comp=Z,27nm,1.0s,mb5.2
RDF Al-Radifah 66.14 292 *e*P **P** **23 08 00.6 -2.6**
RDF AMb AMB 23 08 10.8
comp=Z,34nm,1.0s,mb5.3
ONI Oni 66.24 308 P **P** **23 08 05.5 +1.9**
NAY Al-Naaiem 66.31 293 *e*P **P** **23 08 01.9 -2.4**
NAY AMb AMB 23 08 06.9
comp=Z,13nm,0.8s,mb5.0
KIV Kislovodsk 66.52 309 P **P** **23 08 06.0 +0.7**
comp=Z,133nm,1.1s,mb5.9,SNR=8.8
KIV Kislovodsk 66.52 309 *e*P **P** **23 08 06.2 +0.9**
comp=Z,36nm,1.2s,mb5.5
KIV Kislovodsk 66.52 309⇓ *e*P **P** **23 08 05.7 +0.4**
KIV *e* 23 10 27.4
KIV *e*S S 23 16 59.7 +6.7
KIV pmax pmax
comp=Z,21nm,1.1s,mb5.1
KIV MLR MLR
comp=Z,400nm,23.0s,MS4.6
APA Apatity 67.61 335⇑ *e*P **P** **23 08 11.7 -0.1**
APA *i* 23 08 29.7
MCK McKinley 68.09 29 *e*P **P** **23 08 15.3 +0.4**
comp=Z,4.9nm,0.6s,mb4.7
MCK McKinley 68.09 29 *e*P **P** **23 08 15.3 +0.4**
MCK pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
OBN Obninsk 68.26 322⇑ *e*P **P** **23 08 15.2 -1.0**
OBN *e**PP pP 23 08 35.9 +7.1
OBN *e*S S 23 17 17.6 +4.0
OBN pmax pmax
comp=Z,5.0nm,0.5s,mb4.8
OBN MLR MLR
comp=Z,500nm,19.0s,MS4.8
COLA College 68.35 27 *e*P **P** **23 08 17.0 +0.5**
COLA College 68.35 27 *e*P **P** **23 08 19.4 +2.9**
SOC Sochi 68.70 309 *e*P **P** **23 08 18.3 -0.8**
SOC *e**PP pP 23 08 27.8 -4.0
SOC *e* 23 10 47.5
SOC *e*PPP 23 12 33.7
SOC *e*S S 23 17 36.2 +17
SOC *e*SS SS 23 21 46.7 +2.8
SOC pmax pmax
comp=Z,12nm,1.0s,mb4.8
SOC MLR MLR
comp=Z,568nm,19.0s,MS4.8
JOF Joensuu 69.33 331 *ep* **P** **23 08 21.4 -1.3**
comp=Z,1.2nm,0.3s,mb4.3
KEV Kevo 69.47 338 *ep* **P** **23 08 22.1 -1.4**
comp=Z,0.5nm,0.4s,mb3.8
KEV Kevo 69.47 338 *e*P **P** **23 08 22.1 -1.4**
KEV pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
ANN Anapa 70.00 311 *e*P **P** **23 08 25.7 -1.4**
ANN *e*S S 23 17 31.0 -3.4
ANN pmax pmax
comp=Z,52nm,1.4s,mb5.3
ANN MLR MLR
comp=Z,803nm,24.0s,MS4.9
ARCES ARCESS Array B 70.04 338 P **P** **23 08 26.3 -0.7**
comp=Z,4.0nm,0.9s,mb4.3,baz=74,slow=6.7,SNR=6.7
TAU Tasmania Unive 70.51 161 P **P** **23 08 29.4 -0.6**
MALT Malatya 70.98 304⇑ P **P** **23 08 34.6 +1.4**
MALT Malatya 70.98 304⇑ *i*P **P** **23 08 34.6 +1.4**
KAF Kangasniemi 71.78 331 *ep* **P** **23 08 34.7 -2.9**
comp=Z,0.5nm,0.3s,mb3.9
KAF Kangasniemi 71.78 331 *e*P **P** **23 08 34.7 -2.9**
KAF pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
FINES FINESS Array B 72.09 330 P **P** **23 08 38.6 -0.9**
FINES LR LR 23 43 40.6
FINES FINESS Array B 72.09 330 *i* P **P** **23 08 39.0 -0.5**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 72.09 330 P **P** **23 08 38.6 -0.9**
comp=Z,2.2nm,0.7s,mb4.2,baz=56,slow=6.2,SNR=13
FINES LR LR 23 43 40.6
comp=Z,1μm,18.3s,MS5.3,baz=60,slow=39
INK Inuvik 72.88 22 *e*P **P** **23 08 45.5 +1.5**
AKASG Malin Array Be 73.68 319 *i* P **P** **23 08 48.4 -0.7**
AKASG pmax pmax
comp=Z,5.0nm,1.1s
AKASG Malin Array Be 73.68 319 P **P** **23 08 48.2 -0.9**
comp=Z,5.4nm,1.1s,mb4.4,baz=60,slow=5.4,SNR=15
KIEV Kiev 73.69 319 *e*P **P** **23 08 48.3 -0.9**
comp=Z,3.7nm,0.8s,mb4.4
KIEV Kiev 73.69 319 *e*P **P** **23 08 48.3 -0.9**
KIEV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BRTR Keskin Array B 74.13 307 P **P** **23 08 52.2 +0.2**
comp=Z,13nm,1.0s,mb4.8,baz=101,slow=6.4,SNR=51
ANTO Ankara 74.70 307 *e*P **P** **23 08 54.9 -0.4**
comp=Z,9.5nm,1.0s,mb4.7
ANTO Ankara 74.70 307 *e*P **P** **23 08 54.9 -0.4**
ANTO pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
KIS Kishinev 75.12 315 *e*P **P** **23 08 56.0 -1.6**
KIS *e* 23 18 30.0
KIS *e* 23 19 04.0
KIS MLR MLR
comp=Z,500nm,17.0s,MS4.9
KIS MLR MLR
comp=Z,800nm,16.0s
CSS Prodhromos 75.90 302 *e*P **P** **23 09 02.7 +0.5**
comp=Z,14nm,0.8s,mb5.0
VRI Vrincioaia 76.87 314⇓ P **P** **23 09 08.5 +0.9**
VRI Vrincioaia 76.87 314⇓ *i*P **P** **23 09 08.5 +0.9**
ISP Isparta 77.06 306 *e*P **P** **23 09 08.7 0.0**
BURAR Bucovina Array 77.20 316⇑ P **P** **23 09 09.6 +0.2**
BURAR Bucovina Array 77.20 316⇑ *i*P **P** **23 09 09.6 +0.2**
MLR Muntele Rosu 77.52 314⇑ P **P** **23 09 11.0 -0.2**
MLR Muntele Rosu 77.52 314⇑ *i*P **P** **23 09 11.0 -0.2**
KWP Kalwaria 77.98 319 *e*P **P** **23 09 13.3 -0.4**
KWP Kalwaria 77.98 319 *e*P **P** **23 09 13.3 -0.4**
KWP Kalwaria 77.98 319⇑ *i*P **P** **23 09 13.4 -0.3**
DLBC Dease Lake 78.45 31 P **P** **23 09 17.0 +0.9**
RES Resolute Bay 78.57 9 *e*P **P** **23 09 16.2 -0.2**
NB2 NORSAR Subarra 78.82 332 P **P** **23 09 16.6 -1.5**
comp=Z,4.9nm,1.0s,mb4.4,baz=58,slow=5.6
NB2 NORSAR Subarra 78.82 332 P **P** **23 09 16.6 -1.5**
NB2 pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
NOA NORSAR Array B 78.82 332 P **P** **23 09 16.9 -1.3**
comp=Z,2.8nm,0.9s,mb4.2,baz=58,slow=5.5,SNR=7.2
NOA LR LR 23 47 44.7
comp=Z,768nm,18.5s,MS5.1,baz=240,slow=38
STHS Stebnicka Huta 78.94 319 *e*P **P** **23 09 23.5 +4.5**
comp=Z,4.9nm,1.3s,mb4.3
STHS *e* 23 09 50.9
STHS Stebnicka Huta 78.94 319 *e*P **P** **23 09 23.5 +4.5**
STHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.3
STHS Stebnicka Huta 78.94 319 *e*P **P** **23 09 23.5 +4.5**
STHS *e* 23 09 50.9
CRVS Cervenica-Dubn 79.02 319 *e*P **P** **23 09 18.9 -0.5**
OJC Ojcow 79.46 320 *e*P **P** **23 09 22.2 +0.4**
KECS Kecovo 79.78 319 *e*P **P** **23 09 24.6 +1.0**
comp=Z,3.1nm,1.2s,mb4.1
KECS Kecovo 79.78 319 *e*P **P** **23 09 24.6 +1.0**
KECS pmax pmax
comp=Z,3.0nm,1.2s,mb4.1
VTS Vitosha 80.46 312⇓ P **P** **23 09 27.0 -0.3**
VTS Vitosha 80.46 312⇓ *i*P **P** **23 09 27.0 -0.4**
URZ Urewera 80.48 139 LR LR 23 39 10.3
comp=Z,279nm,19.0s,MS4.6,baz=326,slow=31
OKC Ostrava-Krasne 80.59 320 AMS AMS 23 50 50.0
comp=Z,400nm,10.2s
VYHS Vyhne 80.77 319 *e*P **P** **23 09 28.8 -0.1**
comp=Z,11nm,1.6s,mb4.5
VYHS *e* 23 10 00.7
VYHS Vyhne 80.77 319 *e*P **P** **23 09 28.8 -0.1**
VYHS pmax pmax
comp=Z,11nm,1.6s,mb4.5
VYHS Vyhne 80.77 319 *e*P **P** **23 09 28.8 -0.1**
VYHS *e* 23 10 00.7
MORC Moravsky Berou 80.96 321⇑ *i*P **P** **23 09 28.1 -1.8**
KOLL Kolacno 80.99 319 *e*P **P** **23 09 31.1 +1.0**
KOLL *e* 23 10 00.6
SANT Santorini 81.35 306 *e*P **P** **23 09 30.6 -1.6**
SANT *e*PcP PcP 23 09 37.8 -0.5
DPC Dobruska-Polom 81.40 321 *e*P **P** **23 09 33.2 +1.0**
DPC Dobruska-Polom 81.40 321 *e*P **P** **23 09 33.2 +1.0**
DPC AMS AMS 23 49 10.0
comp=Z,600nm,13.4s
UPC Upice 81.51 322 *e*P **P** **23 09 32.1 -0.7**
PKSM Moragy 81.89 317⇑ P **P** **23 09 34.4 -0.5**
PKSM Moragy 81.89 317⇑ *i*P **P** **23 09 34.4 -0.5**
PVCC Panska Ves 82.31 322 *e*S S 23 19 58.0 +8.5
PVCC AMS AMS 23 50 50.0
comp=Z,1μm,20.7s
TREC Trest 82.38 321 *e*S S 23 19 45.8 -4.4
TREC AMS AMS 23 49 50.0
comp=Z,1μm,9.9s
PRU Pruhonice 82.58 322 *e*P **P** **23 09 43.6 +5.2**
PRU *e*S S 23 19 55.1 +2.8
PRU Pruhonice 82.58 322 *e*P **P** **23 09 43.6 +5.2**
PRU *e*S S 23 19 55.1 +2.8
PRU AMS AMS 23 50 00.0
comp=Z,700nm,7.9s
YKA Yellowknife Ar 82.61 23⇑ *e*P **P** **23 09 39.7 +1.4**
YKA Yellowknife Ar 82.61 23 P **P** **23 09 37.6 -0.7**
comp=Z,0.9nm,0.6s,mb4.0,baz=315,slow=4.6,SNR=8.1
CLL Collm 82.80 323 *e*P **P** **23 09 39.0 -0.5**
comp=Z,26nm,2.3s,mb4.8
CLL *e* 23 09 47.0
CLL *i* 23 10 05.5
CLL LR LR
comp=Z,800nm,19.6s,MS5.1
CLL Collm 82.80 323 *e*P **P** **23 09 39.0 -0.5**
CLL *e* 23 09 47.0
CLL pmax pmax
comp=Z,26nm,2.3s,mb4.8
CLL MLR MLR
comp=Z,800nm,19.6s,MS5.1
CLL Collm 82.80 323 *e*P **P** **23 09 39.0 -0.5**
comp=Z,26nm,2.3s,mb4.8
CLL *ex* x 23 09 47.0
CLL *e*(sP) sP 23 09 55.0 -2.4
CLL *i* x x 23 10 05.5
CLL Lm 23 50 00.0
comp=N,400nm,18.5s
CLL Lm 23 50 00.0
comp=E,500nm,18.3s
CLL Lm 23 50 00.0
comp=Z,800nm,19.6s
CONA Conrad Observa 82.80 319⇓ *i*P **P** **23 09 40.3 +0.7**
comp=Z,5.7nm,1.3s,mb4.4
GVD Gavdhos 82.99 305 *e*P **P** **23 09 40.2 -0.6**
comp=Z,1.1nm,0.8s,mb4.9
KHC Kasperske Hory 83.55 321⇑ *e*P **P** **23 09 44.3 +0.8**
KHC Kasperske Hory 83.55 321 *e*P **P** **23 09 40.3 -3.2**
KHC AMS AMS 23 50 40.0
comp=Z,900nm,7.1s
GERES GERESS Array B 83.62 321 P **P** **23 09 43.8 -0.1**
comp=Z,0.8nm,0.5s,mb4.1,baz=64,slow=6.1,SNR=10
NKC Novy Kostel 83.64 323 AMS AMS 23 52 00.0
comp=Z,900nm,12.1s
PERS Pernice 83.86 319 *i* P **P** **23 09 52.2 +7.1**
VISS Visnje 84.43 318 *i* P **P** **23 09 54.5 +6.5**
GRA1 Grafenberg Arr 84.60 323 *e*P **P** **23 09 49.1 +0.3**
comp=Z,8.0nm,1.4s,mb4.7
GRA1 LR LR
comp=Z,900nm,18.1s,MS5.2
GRF Grafenberg Arr 84.60 323 *e*P **P** **23 09 49.1 +0.3**
GRF pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
GRF MLR MLR
comp=Z,900nm,18.1s,MS5.2
GRF Grafenberg Arr 84.60 323 *e*P **P** **23 09 49.1 +0.3**
GRF pmax pmax
comp=Z,8.0nm,1.4s,mb4.7
GRF MLR MLR
comp=Z,900nm,18.1s,MS5.2
GRF Grafenberg Arr 84.60 323 *e*P **P** **23 09 49.1 +0.3**
comp=Z,8.0nm,1.4s,mb4.7
GRF *e*L 23 34 54.2
comp=Z,881nm,18.1s
JAVS Javornik 84.86 318 *i* P **P** **23 09 50.0 -0.1**
KMBO Kilima Mbogo 86.04 267 P **P** **23 09 57.9 +1.2**
comp=Z,2.4nm,1.0s,mb4.4,baz=217,slow=23,SNR=5.8
EKA Eskdalemuir Ar 88.31 332 P **P** **23 10 06.3 -0.5**
comp=Z,1.3nm,0.9s,mb4.2,baz=22,slow=3.9,SNR=3.1
EDM Edmonton 89.13 30 *e*P **P** **23 10 11.3 +0.6**
LPG La Plagne 89.41 321 *e*P **P** **23 10 12.3 +0.1**
comp=Z,20nm,0.8s,mb5.2
LPG La Plagne 89.41 321 *e*P **P** **23 10 12.3 +0.1**
comp=Z,9.9nm,0.8s,mb5.2
LPG La Plagne 89.41 321 *e*P **P** **23 10 12.3 +0.1**
LPG pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
LPL La Plagne 89.41 321 *e*P **P** **23 10 12.2 0.0**
SMF Signal de Mont 90.39 323 *e*P **P** **23 10 16.1 -0.7**
NEW Newport 90.43 35 *e*P **P** **23 10 17.9 +1.0**
comp=Z,13nm,1.0s,mb5.2
NEW Newport 90.43 35 *e*P **P** **23 10 17.9 +1.0**
NEW pmax pmax
comp=Z,13nm,1.0s
NEW Newport 90.43 35 P **P** **23 10 17.3 +0.4**
comp=Z,10nm,0.9s,mb5.1,baz=291,slow=5.6,SNR=10.0
WALA Waterton Lakes 91.58 33 *e*P **P** **23 10 24.0 +1.7**
FCC Fort Churchill 92.08 18 P **P** **23 10 24.5 +0.1**
DLMT Dillon 94.68 35 P **P** **23 10 33.5 -3.0**
comp=Z,424nm,0.6s
HLID Hailey 94.86 38 *e*P **P** **23 10 38.4 +0.9**
NVAR Mina Array Bea 95.73 44 P **P** **23 10 42.8 +1.3**
comp=Z,0.5nm,0.7s,mb4.0,baz=311,slow=4.2,SNR=4.3
LTX Lajitas 110.83 42 *e*PKiKP PKiKP 23 15 49.3 +0.5
SDV Santo Domingo 144.83 23 PKP PKPdf 23 16 52.2 -0.9
comp=Z,8.5nm,0.8s,baz=330,slow=1.5,SNR=8.7
PCRV Puerto La Cruz 145.25 12 PKPbc PKPbc 23 16 53.7 +0.2
comp=Z,5.3nm,0.5s,baz=90,slow=12,SNR=3.3
LPAZ La Paz 167.42 54 PKP PKPdf 23 17 22.6 +0.5
comp=Z,1.8nm,0.9s,baz=34,slow=8.0,SNR=3.6
SIV San Ignacio 171.30 23 PKP PKPdf 23 17 24.5 +0.1
comp=Z,1.9nm,0.9s,baz=113,slow=0.8,SNR=8.3

RSPR 07 22:57:37.0, 1808N×6617W, h15km±4km, 2C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**0.04**	**32**⇑	*e*P		Pg	22 57 40.2	+0.4
SJG				*e*S		Sg	22 57 41.4	-0.1
SJG	**San Juan**	**0.04**	**32**⇑	*e*P		Pg	22 57 39.8	+0.1
HUMP	**Col San Antoni**	**0.31**	**78**	*e*S		Sg	22 57 48.8	+0.8
MTP	**Monte Pirata**	**0.59**	**88**⇓	*e*P		Pg	22 57 47.8	-0.8
MTP	**Monte Pirata**	**0.59**	**88**	*e*S		Sg	22 57 55.4	-1.1

*IDC **07** 23:01:19.1±0.7, 399N×32.09W, h0km, mb4.0/17, mb1 4.1/18, mb1mx4.0/27, mbtmp4.0/18, ML4.9/1, MS4.6/24, Ms1 4.6/24, ms1mx4.5/30, Error ellipse: s-maj=25.4km s-min=13.7km az=155.0*

*SZGRF **07** 23:01:21.2, 342N×31.96W, h33km, mb4.7, Central Mid-Atlantic Ridge*

*BJI **07** 23:01:22.5, 300N×31.80W, h10km, mB5.7, Ms5.4, Msz5.0*

*ISCJB **07** 23:01:22.3±0.3, 300N±005×3182W±004, h10km, mb4.6/34, MS4.8/149, Error ellipse: s-maj=7.5km s-min=5.9km az=150.6*

*GCMT **07** 23:01:24.5±0.2, 3.17N×30.97W, h12km, MW5.5/82, Moment Tensor Solution. s59,c88; s82,c139; Duration: 1s4 Moment tensor: Scale 10^17Nm; Mrr=1.45±.03; Mθθ 0.38±.03; Mφφ 1.07±.03; Mrθ -1.13±.07; Mφθ -0.34±.02; Mφr -1.44±.07; Best double couple: Mo 2.15800×10^17 NP1: φs 23.00000°, δ 23.00000°, λ -133.00000°. NP2: φs 23.00000°, δ 74.00000°, λ -74.00000°. Principal axes: T 1.7480, Plg 27.0000°, Azm 100.0000°; N 0.8170, Plg 16.0000°, Azm 198.0000°; P -2.5680, Plg 58.0000°, Azm 315.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 23:01:24.6±0.3, 302N×31.82W, h10km, mb4.9/22, MS4.8/126 Error ellipse: s-maj=10.4km s-min=7.9km az=175.0*

ISC 07 23:01:24.5±0.3, 305N±005×3181W±004, h10km, n231, σ1s30/105, mb4.6/34, MS4.8/149, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo** 25nm,0.4s	**9.72**	**205**	*e*Pn		**Pn**	**23 03 45.4**	**+1.0**
RCBR				*e*Sn		**Sn**	**23 05 33.4**	**-0.4**
BBTS	**Babate** 3.4nm,0.3s,baz=172,slow=1.3,SNR=12	**18.98**	**52**	P		**Pn**	**23 05 39.9**	**-7.1**
BBTS				LR		LR	23 11 06.0	
comp=Z,3μm,19.6s,baz=44,slow=32								
LIC	**Lamto** 71nm,1.2s,mb5.1	**26.87**	**82**	*e*P		**P**	**23 07 06.6**	**+0.8**
TIC	**Toumodi** 36nm,1.6s,mb4.7	**26.93**	**81**	*e*P		**P**	**23 07 05.9**	**-0.3**
DBIC	**Dimbokro** 13nm,0.9s,mb4.4,baz=247,slow=8.6,SNR=7.7	**27.09**	**81**	P		**P**	**23 07 05.6**	**-2.1**
DBIC				LR		LR	23 15 08.7	
comp=Z,2μm,20.4s,MS4.6,baz=246,slow=30								
KIC	**Kosan Boka** 60nm,1.0s,mb5.1	**27.17**	**82**	*e*P		**P**	**23 07 08.2**	**-0.3**
PCRV	**Puerto La Cruz** comp=Z,341nm,20.9s,MS4.0,baz=90,slow=34	**33.35**	**284**	LR		LR	23 19 57.6	
SIV	**San Ignacio** 4.8nm,1.0s,mb4.4,baz=86,slow=9.3,SNR=15	**34.57**	**236**	P		**P**	**23 08 12.0**	**-1.7**
TOA0	**Torodi Ar. Sit**	**34.60**	**71**	*e*P		**P**	**23 08 09.1**	**-5.0**
TORD	**Torodi Ar. Bea** 2.8nm,0.8s,mb4.2,baz=264,slow=8.5,SNR=18	**34.60**	**71**	P		**P**	**23 08 08.9**	**-5.2**
TORD				LR		LR	23 19 56.5	
comp=Z,2μm,20.4s,MS4.8,baz=240,slow=32								
SJG	**San Juan**	**36.82**	**296**	P		**P**	**23 08 32.8**	**-0.2**
SJG				LR		LR	23 20 28.5	
SJG	**San Juan** 3.4nm,0.3s,mb4.6,baz=329,slow=20,SNR=3.1	**36.82**	**296**	P		**P**	**23 08 23.5**	**-10**
SJG				LR		LR	23 20 28.5	
comp=Z,490nm,18.8s,MS4.3,baz=313,slow=32								
SDV	**Santo Domingo** 3.5nm,0.6s,mb4.3	**39.03**	**280**	*e*P		**P**	**23 08 51.6**	**-0.1**
SDV				LR		LR		
comp=Z,381nm,19.0s,MS4.2								
SDV	**Santo Domingo** comp=Z,0.9nm,0.4s,mb3.9,baz=176,slow=22,SNR=2.8	**39.03**	**280**	P		**P**	**23 08 44.3**	**-7.4**
MDT	**Midelt** comp=Z,4.8nm,1.0s,mb4.2,baz=172,slow=4.1,SNR=2.5	**39.07**	**38**	P		**P**	**23 08 42.9**	**-8.9**
LPAZ	**La Paz** comp=Z,0.9nm,0.7s,baz=24,slow=6.2,SNR=3.6	**40.72**	**241**	P		**P**	**23 09 04.9**	**-0.8**
LPAZ				LR		LR	23 25 18.4	
comp=Z,750nm,21.1s,MS4.5,baz=68,slow=35								
SFS	**San Fernando**	**40.78**	**32**	P		**P**	**23 09 06.2**	**+0.1**
SDDR	**Presa de Saban**	**41.72**	**295**	PFAKE			23 09 30.0	+16
SDDR				LR		LR		
comp=Z,482nm,20.0s,MS4.4								
ROSC	**El Rosal** comp=Z,727nm,18.2s,MS4.6,baz=89,slow=36	**42.45**	**274**	LR		LR	23 26 35.5	
BBSR	**BB Station**	**42.46**	**317**	P		**P**	**23 09 20.7**	**+0.8**
BBSR				LR		LR		
comp=Z,973nm,22.0s,MS4.7								
MTE	**Manteigas** comp=Z,6.7nm,1.0s,mb4.3	**43.17**	**27**	*e*P		**P**	**23 09 27.4**	**+1.9**
PAB	**San Pablo**	**44.06**	**31**	PFAKE			23 09 40.0	+7.4

PAB LR LR
comp=Z,873nm,20.0s,MS4.7
ESDC Sonseca Array 44.35 31 P **P** **23 09 26.5 -8.5**
comp=Z,0.4nm,0.6s,baz=260,slow=7.6,SNR=3.6
ESDC LR LR 23 24 31.4
comp=Z,519nm,18.1s,MS4.5,baz=235,slow=32
ESLA Sonseca Array 44.35 31 P **P** **23 09 35.4 +0.4**
CART Cartagena 44.48 35 P **P** **23 09 37.6 +1.5**
OTAV Otavalo 46.70 267 PFAKE 23 10 10.0 +16
OTAV LR LR
comp=Z,613nm,22.0s,MS4.5
NNA Nana 47.19 251 P **P** **23 09 58.0 +0.2**
NNA LR LR
comp=Z,405nm,20.0s,MS4.4
LGHD Ghdames 47.35 51 *e*S **S** **23 16 56.5 +3.6**
SNR=28
CFAA Coronel Fontan 48.85 222 P **P** **23 10 10.1 -0.3**
comp=Z,0.2nm,0.6s,baz=38,slow=7.5,SNR=3.6
LCO Las Campanas 49.06 227 PFAKE 23 10 20.0 +7.9
LCO LR LR
comp=Z,838nm,19.0s,MS4.8
TRQA Tornquist 49.53 211 PFAKE 23 10 30.0 +15
TRQA LR LR
comp=Z,2µm,21.0s,MS5.1
KEST Kesra 50.02 44 P **P** **23 10 12.2 -7.1**
comp=Z,2.2nm,1.0s,mb4.2,baz=137,slow=0.6,SNR=2.9
KEST LR LR 23 31 10.9
comp=Z,935nm,18.9s,MS4.8,baz=196,slow=36
VSL Villasalto 52.05 40 *e*P **P** **23 10 36.2 +1.7**
comp=Z,18nm,1.0s,mb5.0
WES Weston 52.68 324 PFAKE 23 10 50.0 +11
WES LR LR
comp=Z,845nm,19.0s,MS4.8
HRV Harvard--Oak R 52.90 324 P **P** **23 10 39.1 -1.7**
JTS JuntasAbangare 53.22 281 *e*P **P** **23 10 42.2 -1.4**
comp=Z,17nm,1.0s,mb4.9
JTS LR LR
comp=Z,652nm,20.0s,MS4.7
CNNC Cliffs of the 53.32 313 PFAKE 23 11 00.0 +16
CNNC LR LR
comp=Z,541nm,20.0s,MS4.6
PKME Peaks-Kenny Pk 53.34 328 PFAKE 23 11 00.0 +16
PKME LR LR
comp=Z,731nm,19.0s,MS4.8
TSUM Tsumeb 53.34 117 *e*P **P** **23 10 44.9 +0.5**
TSUM LR LR
comp=Z,848nm,19.0s,MS4.8
CPNY Central Park 53.38 321 *e*P **P** **23 10 44.1 -0.3**
DWPF Disney 53.40 303 PFAKE 23 11 00.0 +15
DWPF LR LR
comp=Z,404nm,20.0s,MS4.5
PAL Palisades 53.47 321 *e*P **P** **23 10 45.0 0.0**
LBNH Lisbon 54.16 325 PFAKE 23 11 00.0 +10
LBNH LR LR
comp=Z,908nm,20.0s,MS4.8
NHSC New Hope 54.16 309 PFAKE 23 11 00.0 +10
NHSC LR LR
comp=Z,863nm,22.0s,MS4.8
CBN Corbin 54.32 316 PFAKE 23 11 00.0 +8.7
CBN LR LR
comp=Z,717nm,21.0s,MS4.7
MVL Millersville 54.51 319 P **P** **23 10 53.3 +0.6**
SDMD Soldier's Deli 54.54 318 *e*P **P** **23 10 55.6 +2.7**
NCB Newcomb 55.33 324 P **P** **23 10 57.4 -1.1**
NCB LR LR
comp=Z,736nm,22.0s,MS4.7
TGUH Tegucigalpa,Un 55.80 285 PFAKE 23 11 10.0 +7.7
TGUH LR LR
comp=Z,426nm,22.0s,MS4.5
SSPA Standing Stone 55.85 319 *e*P **P** **23 11 04.8 +2.5**
SSPA LR LR
comp=Z,515nm,21.0s,MS4.6
LONY Lake Ozonia 55.91 324 PFAKE 23 11 20.0 +17
LONY LR LR
comp=Z,891nm,22.0s,MS4.8
BLA Blacksburg 56.02 314 *e*P **P** **23 11 05.6 +2.0**
comp=Z,14nm,0.9s,mb5.0
BLA LR LR
comp=Z,602nm,20.0s,MS4.7
AQU L'Aquila 56.16 39 P **P** **23 11 05.1 +0.6**
MSNY Massena 56.30 324 *e*P **P** **23 11 05.9 +0.5**
DAVOX Davos/Dischmat 56.57 33 LR LR 23 31 52.5
comp=Z,524nm,21.8s,MS4.6,baz=186,slow=33
MCWV Mont Chateau 56.70 317 PFAKE 23 11 20.0 +12
MCWV LR LR
comp=Z,729nm,20.0s,MS4.8
BFO Black Forest 56.72 31 PFAKE 23 11 20.0 +12
BFO LR LR
comp=Z,2µm,21.0s,MS5.2
GOGA Godfrey 56.83 308 *e*P **P** **23 11 09.9 +0.5**
GOGA LR LR
comp=Z,914nm,21.0s,MS4.8
TIP Timpagrande 56.85 44 *e*P **P** **23 11 07.7 -1.7**
ESK Eskdalemuir 57.01 19 PFAKE 23 11 20.0 +10
ESK LR LR
comp=Z,920nm,19.0s,MS4.9
HOPE Hope Point 57.26 183 PFAKE 23 11 20.0 +8.0
HOPE LR LR
comp=Z,3.0nm,22.0s
TEIG Tepich 57.58 292 *e*P **P** **23 11 20.4 +5.4**
comp=Z,24nm,0.5s,mb5.5
TEIG LR LR
comp=Z,398nm,19.0s,MS4.5
TEIG Tepich 57.58 292 LR LR 23 30 05.5
comp=Z,149nm,21.6s,MS4.1,baz=57,slow=30
ERPA Erie 57.95 319 PFAKE 23 11 30.0 +13
ERPA LR LR
comp=Z,863nm,21.0s,MS4.8
TZTN Tazewell 58.04 312 PFAKE 23 11 30.0 +12
TZTN LR LR
comp=Z,919nm,19.0s,MS4.9
CPCT Cooper Cave 58.37 310 P **P** **23 11 21.3 +1.0**
PAYG Puerto Ayora 58.57 267 *e*P **P** **23 11 22.9 +0.9**
SCHQ Schefferville 58.92 337 P **P** **23 11 14.7 -9.0**
comp=Z,5.7nm,0.9s,mb4.6,baz=286,slow=12,SNR=3.2
SCHQ LR LR 23 31 08.8
comp=Z,317nm,20.1s,MS4.4,baz=142,slow=31
BRAL Brewton 58.95 305 PFAKE 23 11 40.0 +16
BRAL LR LR
comp=Z,708nm,20.0s,MS4.8
GRFO Grafenberg 59.05 31 PFAKE 23 11 40.0 +15
GRFO LR LR
comp=Z,976nm,20.0s,MS4.9
GRA1 Grafenberg Arr 59.05 31 *e*P **P** **23 11 17.4 -7.3**
comp=Z,10.0nm,1.1s,mb4.8
GRF Grafenberg Arr 59.05 31 *e*P **P** **23 11 17.4 -7.3**
comp=Z,10.0nm,1.1s,mb4.8
ACSO Alum Creek Sta 59.12 316 *e*P **P** **23 11 24.4 -1.0**
SWET Sewanee 59.37 310 *e*P **P** **23 11 25.8 -1.5**
LRAL Lakeview Retre 59.50 307 *e*P **P** **23 11 28.2 0.0**
comp=Z,30nm,1.8s,mb5.0
LRAL LR LR
comp=Z,925nm,21.0s,MS4.9
GERES GERESS Array B 59.87 33 LR LR 23 34 38.6
comp=Z,556nm,19.0s,MS4.7,baz=246,slow=34
KHC Kasperske Hory 59.97 33 *e*P **P** **23 11 38.4 +7.4**
KHC *ex* x 23 19 40.3
KHC AMS AMS 23 33 30.0
comp=Z,900nm,20.2s
NKC Novy Kostel 60.01 31 *e*S **S** **23 19 42.2 -1.7**
NKC AMS AMS 23 35 10.0
comp=Z,1µm,22.0s
AAM Ann Arbor 60.46 318 PFAKE 23 11 50.0 +15
AAM LR LR
comp=Z,738nm,21.0s,MS4.8
GVD Gavdhos 60.62 51 P **P** **23 11 39.4 +3.6**
WCI Wyandotte Cave 60.70 313 P **P** **23 11 36.8 +0.6**
WCI LR LR
comp=Z,636nm,20.0s,MS4.8
CLL Collm 60.94 30 *e*S **S** **23 19 49.0 -6.7**
comp=N,500nm,22.7s
CLL *e*S **S** **23 19 49.0 -6.7**
comp=E,600nm,24.9s
PLAL Pickwick Lake 60.96 309 PFAKE 23 11 50.0 +12
PLAL LR LR
comp=Z,676nm,22.0s,MS4.8
PRU Pruhonice 60.97 32 *e*P **P** **23 11 35.4 -2.5**
PRU AMS AMS 23 34 20.0
comp=Z,1µm,23.3s
SUR Sutherland 61.00 130 P **P** **23 11 38.5 +0.2**
SUR LR LR
comp=Z,956nm,21.0s,MS4.9
TREC Trest 61.10 33 AMS AMS 23 34 10.0
comp=Z,1µm,21.1s
WVT Waverly 61.13 310 PFAKE 23 11 50.0 +11
WVT LR LR
comp=Z,7.0nm,20.0s
BRG Berggiesshubel 61.16 31 *e*P **P** **23 11 43.5 +4.3**
comp=Z,16nm,1.5s,mb4.9
BRG *e* 23 20 08.0
PVCC Panska Ves 61.29 32 AMS AMS 23 33 40.0
comp=Z,1µm,20.9s
MODS Modra-Piesok 61.61 35 *e*P **P** **23 11 52.0 +10**
MODS Modra-Piesok 61.61 35 *e* pP 23 11 52.0 +6.5
USIN University of 61.62 312 P **P** **23 11 43.7 +1.2**
VRAC Vranov 61.72 34 LR LR 23 35 19.8
comp=Z,481nm,19.4s,MS4.7,baz=224,slow=33
OXF Oxford 61.86 308 PFAKE 23 12 00.0 +16
OXF LR LR
comp=Z,767nm,20.0s,MS4.9
BORG Borgarnes 62.04 5 LR LR 23 30 29.0
comp=Z,563nm,20.0s,MS4.7,baz=192,slow=29
UPC Upice 62.04 32 *e*P **P** **23 11 35.1 -10**
LSZ Lusaka 62.09 109 *e*P **P** **23 11 48.0 +2.0**
comp=Z,4.1nm,1.0s,mb4.5
LSZ LR LR
comp=Z,336nm,19.0s,MS4.5
DPC Dobruska-Polom 62.12 33 *e*P **P** **23 11 41.4 -4.3**
DPC *ex* x 23 20 17.6
DPC AMS AMS 23 35 30.0
comp=Z,1µm,21.7s
SANT Santorini 62.16 50 P **P** **23 11 46.4 +0.2**
MORC Moravsky Berou 62.49 34 P **P** **23 11 50.7 +2.6**
comp=Z,21nm,1.7s,mb5.0
VYHS Vyhne 62.57 35 *e*P **P** **23 11 47.3 -1.4**
OKC Ostrava-Krasne 62.85 34 *ex* x 23 20 26.1
OKC AMS AMS 23 35 00.0
comp=Z,500nm,19.9s
PSZ Piszkesteto 62.91 36 *e*P **P** **23 11 49.9 -1.0**
comp=Z,10nm,1.0s,mb4.9
BOSA Boshof 63.11 124 LR LR 23 34 23.5
comp=Z,836nm,20.2s,MS4.9,baz=287,slow=31
UALR University of 64.26 307 *e*P **P** **23 11 59.4 -0.8**
STHS Stebnicka Huta 64.41 35 *e*P **P** **23 11 56.8 -4.0**
STHS *e* 23 12 28.7
KONO Kongsberg 64.80 22 PFAKE 23 12 20.0 +17
KONO LR LR
comp=Z,1µm,20.0s,MS5.1
JFWS Jewell Farm 65.18 316 PFAKE 23 12 20.0 +14
JFWS LR LR
comp=Z,612nm,20.0s,MS4.8
MIAR Mount Ida 65.18 307 P **P** **23 12 07.7 +1.5**
MIAR LR LR
comp=Z,688nm,20.0s,MS4.8
KWP Kalwaria 65.35 36 *e*P **P** **23 12 03.7 -3.3**
comp=Z,10.0nm,1.2s,mb4.7
NATX Nacogdoches 65.43 304 PFAKE 23 12 20.0 +12
NATX LR LR
comp=Z,608nm,21.0s,MS4.8
COWI Conover 65.61 320 PFAKE 23 12 20.0 +11
COWI LR LR
comp=Z,729nm,22.0s,MS4.8
HKT Hockley 66.06 301 PFAKE 23 12 20.0 +8.0
HKT LR LR
comp=Z,416nm,22.0s,MS4.6
NB2 NORSAR Subarra 66.33 21 P **P** **23 12 03.0 -10**
comp=Z,15nm,1.4s,mb4.8,baz=229,slow=6.5
NOA NORSAR Array B 66.33 21 P **P** **23 12 02.8 -10**
comp=Z,0.7nm,0.8s,mb3.8,baz=136,slow=16,SNR=2.7
NOA LR LR 23 39 03.8
comp=Z,580nm,18.9s,MS4.8,baz=245,slow=34
KVTX Kingsville 67.44 298 PFAKE 23 12 30.0 +9.2
KVTX LR LR
comp=Z,514nm,19.0s,MS4.8
EYMN Ely 67.79 321 PFAKE 23 12 30.0 +7.4
EYMN LR LR
comp=Z,441nm,21.0s,MS4.7
CSS Prodhromos 67.98 54 P **P** **23 12 23.1 -1.0**
KSU1 Kansas State U 68.66 311 P **P** **23 12 29.2 +1.0**
KSU1 LR LR
comp=Z,629nm,22.0s,MS4.8
ANTO Ankara 68.69 48 PFAKE 23 12 40.0 +12
ANTO LR LR
comp=Z,505nm,20.0s,MS4.8
KMBO Kilima Mbogo 69.16 92 *e*P **P** **23 12 32.3 +0.5**
KMBO LR LR
comp=Z,419nm,20.0s,MS4.7
KMBO Kilima Mbogo 69.16 92 LR LR 23 38 23.3
comp=Z,455nm,19.7s,MS4.7,baz=275,slow=32
BRTR Keskin Array B 69.29 49 P **P** **23 12 26.3 -5.9**
comp=Z,0.4nm,0.7s,baz=262,slow=4.4,SNR=2.9
WMOK Wichita Mounta 69.41 306 *e*P **P** **23 12 33.3 +0.3**
WMOK LR LR
comp=Z,786nm,21.0s,MS4.9
JCT Junction City 69.53 301 P **P** **23 12 31.6 -2.2**
JCT LR LR
comp=Z,351nm,19.0s,MS4.6
KIEV Kiev 69.60 36 PFAKE 23 12 50.0 +16
KIEV LR LR
comp=Z,614nm,22.0s,MS4.8
AKASG Malin Array Be 69.62 36 P **P** **23 12 26.8 -7.2**
AKASG LR LR 23 40 58.8
AKASG Malin Array Be 69.62 36 P **P** **23 12 26.8 -7.2**
comp=Z,1.2nm,0.7s,mb4.0,baz=248,slow=6.7,SNR=9.3
AKASG LR LR 23 40 58.8
comp=Z,402nm,18.4s,MS4.7,baz=285,slow=34
ECSD EROS,Sioux Fal 69.85 316 PFAKE 23 12 50.0 +14
ECSD LR LR
comp=Z,459nm,19.0s,MS4.7
AGMN Agassiz Refuge 70.67 320 PFAKE 23 12 50.0 +10
AGMN LR LR
comp=Z,568nm,21.0s,MS4.8
CBKS Cedar Bluff 70.97 310 PFAKE 23 12 50.0 +7.5
CBKS LR LR
comp=Z,785nm,19.0s,MS5.0
ULM Lac du Bonnet 71.29 322 LR LR 23 37 11.6
comp=Z,389nm,21.4s,MS4.6,baz=240,slow=31
AMTX Amarillo 71.79 306 PFAKE 23 13 00.0 +12
AMTX LR LR
comp=Z,707nm,20.0s,MS4.9
MALT Malatya 72.65 51 *e*P **P** **23 12 54.0 +1.4**
comp=Z,5.9nm,1.1s,mb4.4
LTX Lajitas 72.71 300 P **P** **23 12 56.2 +3.0**
LTX LR LR
comp=Z,410nm,19.0s,MS4.7
TXAR Lajitas Array 72.71 300 P **P** **23 12 44.9 -8.2**
comp=Z,0.6nm,1.0s,baz=138,slow=6.4,SNR=3.0
TXAR LR LR 23 39 31.8
comp=Z,203nm,21.7s,MS4.4,baz=205,slow=32
FCC Fort Churchill 73.31 331 *e*P **P** **23 12 52.7 -3.4**
comp=Z,5.2nm,0.8s,mb4.5
MNTX Kornudas Mount 74.44 302 *e*P **P** **23 13 02.4 -0.9**
comp=Z,47nm,2.4s,mb5.0
MNTX *e*PcP PcP 23 13 19.2 +1.4
MNTX LR LR
comp=Z,317nm,22.0s,MS4.6
RSSD Black Hills 75.16 315 PFAKE 23 13 20.0 +13
RSSD LR LR
comp=Z,465nm,19.0s,MS4.8
OBN Obninsk 75.25 34 PFAKE 23 13 20.0 +13
OBN LR LR
comp=Z,598nm,20.0s,MS4.9
SDCO Great Sand Dun 75.26 308 *e*P **P** **23 13 07.3 -0.6**
comp=Z,3.6nm,1.0s,mb4.3
SDCO *e*PcP PcP 23 13 24.0 +2.7
SDCO LR LR
comp=Z,608nm,19.0s,MS4.9
ISCO Idaho Springs 75.63 310 *e*P **P** **23 13 06.7 -3.3**
comp=Z,14nm,1.4s,mb4.7
ISCO LR LR
comp=Z,845nm,20.0s,MS5.0
ANMO Albuquerque 75.69 305 *e*P **P** **23 13 12.0 +1.6**
ANMO LR LR
comp=Z,663nm,22.0s,MS4.9
DGMT Dagmar 76.08 319 P **P** **23 13 10.1 -2.3**
comp=Z,19nm,0.9s,mb5.0
DGMT LR LR
comp=Z,562nm,20.0s,MS4.9
FFC Flin Flon 76.14 326 PFAKE 23 13 20.0 +7.4
FFC LR LR
comp=Z,1µm,20.0s,MS5.2
ARCES ARCESS Array B 76.17 18 LR LR 23 44 17.0
comp=Z,504nm,18.5s,MS4.9,baz=194,slow=34
LAZ Ladron 76.19 305 *e*P **P** **23 13 13.7 +0.4**
KEV Kevo 76.73 18 PFAKE 23 13 30.0 +14
KEV LR LR
comp=Z,747nm,21.0s,MS5.0
KIV Kislovodsk 76.74 46 *e*P **P** **23 13 17.0 +0.7**
KIV LR LR
comp=Z,448nm,20.0s,MS4.8
LAO LASA Array 77.12 317 PFAKE 23 13 30.0 +12
LAO LR LR
comp=Z,446nm,19.0s,MS4.8
MVCO Mesa Verde 77.57 307 PFAKE 23 13 30.0 +9.0
MVCO LR LR
comp=Z,462nm,21.0s,MS4.8
LVZ Lovozero 78.47 21 PFAKE 23 13 40.0 +15
LVZ LR LR
comp=Z,1µm,21.0s,MS5.1
PDAR Pinedale Array 78.94 313 P **P** **23 13 21.1 -7.4**
comp=Z,0.3nm,0.8s,baz=110,slow=13,SNR=3.1
PDAR LR LR 23 42 48.9
comp=Z,307nm,21.0s,MS4.6,baz=129,slow=32
BW06 Boulder Array 78.95 313 PFAKE 23 13 40.0 +11
BW06 LR LR
comp=Z,399nm,21.0s,MS4.7
KBS Kingsbay 78.97 8 PFAKE 23 13 40.0 +12
KBS LR LR
comp=Z,836nm,19.0s,MS5.1
RLMT Red Lodge 79.00 315 PFAKE 23 13 40.0 +11
RLMT LR LR
comp=Z,573nm,22.0s,MS4.9
TUC Tucson 79.06 302 P **P** **23 13 30.0 +0.6**
comp=Z,26nm,0.6s,mb5.3
TUC LR LR
comp=Z,272nm,19.0s,MS4.6
EGMT Eagleton 79.68 318 PFAKE 23 13 40.0 +7.6
EGMT LR LR
comp=Z,597nm,20.0s,MS4.9
LKWY Lake 79.74 315 PFAKE 23 13 40.0 +7.2
LKWY LR LR
comp=Z,610nm,20.0s,MS4.9
WUAZ Wupatki 79.74 305 PFAKE 23 13 40.0 +6.9
WUAZ LR LR
comp=Z,606nm,21.0s,MS4.9
TMUT Trail Mountain 79.87 309 *e*P **P** **23 13 35.9 +2.2**
AHID Auburn Hatcher 80.08 313 PFAKE 23 13 50.0 +15
AHID LR LR
comp=Z,531nm,22.0s,MS4.8
YMR Madison River 80.15 315 PFAKE 23 13 50.0 +15
YMR LR LR
comp=Z,1µm,20.0s,MS5.2
RES Resolute Bay 80.15 346 *e*P **P** **23 13 31.2 -3.3**
comp=Z,703nm,1.8s
MPU Maple Canyon 80.25 310 PFAKE 23 13 50.0 +14
MPU LR LR
comp=Z,589nm,22.0s,MS4.9
HWUT Hardware Ranch 80.32 312 *e*P **P** **23 13 28.9 -7.1**
comp=Z,3.0nm,0.8s,mb4.3
HWUT LR LR
comp=Z,606nm,21.0s,MS4.9
MSU Marysvale 80.57 308 *e*P **P** **23 13 33.6 -3.9**
NLU North Lily Min 80.59 310 *e*P **P** **23 13 37.9 +0.3**
MVU Marysvale 80.60 308 PFAKE 23 13 50.0 +12
MVU LR LR
comp=Z,492nm,22.0s,MS4.8
BOZ Bozeman (W) 80.71 316 PFAKE 23 13 50.0 +12
BOZ LR LR
comp=Z,305nm,19.0s,MS4.7
DUG Dugway 81.17 310 PFAKE 23 13 50.0 +9.4
DUG LR LR
comp=Z,584nm,22.0s,MS4.9
MSO Missoula 82.40 317 PFAKE 23 14 00.0 +13
MSO LR LR
comp=Z,333nm,19.0s,MS4.7
EDM Edmonton 82.50 323 *e*P **P** **23 13 46.1 -1.2**
EDM *e*PcP PcP 23 13 52.1 -0.3
HLID Hailey 82.55 313 *e*P **P** **23 13 47.7 -0.1**
HLID *e*PcP PcP 23 13 53.2 +0.4
HLID LR LR
comp=Z,796nm,22.0s,MS5.0
ELK Elko 83.04 310 PFAKE 23 14 00.0 +10
ELK LR LR
comp=Z,433nm,21.0s,MS4.8
TPNV Topopah Spring 83.74 307 PFAKE 23 14 10.0 +16
TPNV LR LR
comp=Z,398nm,21.0s,MS4.8
PFO Pinyon Flat Ob 83.87 303 PFAKE 23 14 10.0 +15
PFO LR LR
comp=Z,355nm,22.0s,MS4.7
YKA Yellowknife Ar 83.98 332 P **P** **23 13 45.4 -9.4**
comp=Z,0.2nm,0.4s,mb3.6,baz=92,slow=5.2,SNR=4.1
TPH Tonopah 84.52 308 PFAKE 23 14 10.0 +12
TPH LR LR
comp=Z,528nm,22.0s,MS4.9
BMN Battle Mountai 84.55 310 PFAKE 23 14 10.0 +12
BMN LR LR
comp=Z,440nm,20.0s,MS4.8
NEW Newport 84.62 318 *e*P **P** **23 13 58.8 +0.5**
NEW LR LR
comp=Z,622nm,20.0s,MS5.0
BMO Blue Mountains 84.67 315 PFAKE 23 14 10.0 +11
BMO LR LR
comp=Z,448nm,21.0s,MS4.8
DAC Darwin (Calif) 84.81 306 PFAKE 23 14 10.0 +10
DAC LR LR
comp=Z,467nm,20.0s,MS4.9
WVOR Wild Horse Val 85.62 312 PFAKE 23 14 10.0 +6.5
WVOR LR LR
comp=Z,481nm,20.0s,MS4.9
MOD Modoc 86.86 312 PFAKE 23 14 20.0 +10
MOD LR LR
comp=Z,604nm,22.0s,MS5.0
CMB Columbia Colle 87.02 308 PFAKE 23 14 20.0 +9.5
CMB LR LR
comp=Z,456nm,20.0s,MS4.9
ARU Arti 87.69 34 PFAKE 23 14 20.0 +6.7
ARU LR LR
comp=Z,735nm,20.0s,MS5.1
SAO San Andreas Ge 87.91 307 PFAKE 23 14 30.0 +15
SAO LR LR
comp=Z,317nm,20.0s,MS4.7
WDC Whiskeytown Da 88.60 310 PFAKE 23 14 30.0 +12
WDC LR LR
comp=Z,423nm,19.0s,MS4.9
YBH Yreka Blue Hor 88.67 312 PFAKE 23 14 30.0 +12
YBH LR LR
comp=Z,531nm,22.0s,MS4.9
MCCM Marconi Confer 88.98 308 PFAKE 23 14 30.0 +10
MCCM LR LR
comp=Z,507nm,20.0s,MS4.9
NLWA Neilton Lookou 89.18 317 PFAKE 23 14 30.0 +9.4
NLWA LR LR
comp=Z,471nm,19.0s,MS4.9
DLBC Dease Lake 91.73 329 P **P** **23 14 33.3 +1.1**
QSPA South Pole Qui 93.10 180 PFAKE 23 14 50.0 +12
QSPA LR LR
comp=Z,331nm,19.0s,MS4.8
MAW Mawson 94.59 157 LR LR 23 51 15.7
comp=Z,423nm,18.2s,MS5.0,baz=172,slow=31
BRVK Borovoye 94.83 36 PFAKE 23 15 00.0 +13
BRVK LR LR
comp=Z,489nm,20.0s,MS5.0
COLA College 98.02 337 PFAKE 23 15 10.0 +9.2
COLA LR LR
comp=Z,709nm,19.0s,MS5.2
EKS2 Erkin-Say 99.34 46 PFAKE 23 15 20.0 +13
EKS2 LR LR
comp=Z,468nm,20.0s,MS5.0
AML Almayashu 99.39 47 PFAKE 23 15 20.0 +13
AML LR LR
comp=Z,432nm,21.0s,MS4.9
AAK Ala-Archa 99.86 46 PFAKE 23 15 20.0 +11
AAK LR LR
comp=Z,336nm,21.0s,MS4.8
UCH Uchtor 99.97 46 PFAKE 23 15 20.0 +10
UCH LR LR
comp=Z,418nm,19.0s,MS5.0
KURK Kurchatov 100.42 37 Pdif Pdif 23 15 11.6 -0.1
KURK LR LR
comp=Z,434nm,21.0s,MS4.9
TKM2 Tokmak 2 100.58 45 *e*Pdif Pdif 23 15 13.7 +1.3
TKM2 LR LR
comp=Z,270nm,20.0s,MS4.8
RKT Rikitea 103.30 247 *e*LR LR 23 49 24.1
comp=Z,265nm,24.5s
TIXI Tiksi 104.38 6 PFAKE 23 15 40.0 +11
TIXI LR LR
comp=Z,167nm,19.0s,MS4.6
TNA Tin City 104.56 343 PFAKE 23 15 40.0 +10
TNA LR LR
comp=Z,365nm,20.0s,MS4.9
BILL Bilibino 107.95 353 PFAKE 23 20 00.0 +8.0
BILL LR LR
comp=Z,241nm,20.0s,MS4.8
MDRS Chennai 110.70 75 *ex* x 23 15 28.5
MDRS *ex* x 23 18 03.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALK	Pallekele	111.88	81	PFAKE		23 20 10.0	+9.1
PALK				LR	LR		
	comp=Z,237nm,19.0s,MS4.8						
YAK	Yakutsk	113.57	9	PFAKE		23 20 10.0	+7.2
YAK				LR	LR		
	comp=Z,274nm,19.0s,MS4.9						
TLY	Talaya	113.69	28	PFAKE		23 20 20.0	+17
TLY				LR	LR		
	comp=Z,510nm,20.0s,MS5.1						
LSA	Lhasa	116.53	55	ePKPdf	PKPdf	23 20 08.8	-0.6
LSA				LR	LR		
	comp=Z,381nm,21.0s,MS5.0						
TBI	Tubuai	116.54	246	eSS	SS	23 37 27.5	+4.9
	comp=Z,147nm,37.2s						
TBI				eLR	LR	23 55 35.0	
	comp=Z,277nm,22.5s						
PPT	Papeete	117.36	252	eSS	SS	23 37 37.4	+3.7
	comp=Z,198nm,26.2s						
PPT				eLR	LR	23 55 52.4	
	comp=Z,423nm,31.8s						
MA2	Magadan	117.53	359	PFAKE		23 20 20.0	+10
MA2				LR	LR		
	comp=Z,172nm,20.0s,MS4.7						
ULN	Ulaanbaatar	117.86	30	ePKPdf	PKPdf	23 20 12.6	+1.1
ULN				LR	LR		
	comp=Z,579nm,20.0s,MS5.2						
HIA	Hailar	122.36	22	PFAKE		23 20 30.0	+10
HIA				LR	LR		
	comp=Z,372nm,19.0s,MS5.1						
HHC	Hu-ho-hao-te	125.00	34	ePKP	PKPdf	23 20 18.7	-6.7
HHC				XPKP		23 20 33.3	
HHC				PP	PP	23 22 10.9	-2.3
HHC				PKS		23 23 53.1	
HHC				PP	PP		
	comp=Z,256nm,8.4s						
HHC				LR	LR		
	comp=N,301nm,15.5s,MS5.2						
HHC				LR	LR		
	comp=E,266nm,15.5s,MS5.2						
HHC				LR	LR		
	comp=Z,356nm,17.8s,MS5.1						
RAR	Rarotonga	126.31	246	PFAKE		23 20 40.0	+12
RAR				LR	LR		
	comp=Z,1.0nm,21.0s						
CHTO	Chiang Mai	126.91	64	PFAKE		23 20 40.0	+10
CHTO				LR	LR		
	comp=Z,196nm,22.0s,MS4.7						
KMI	Kunming	127.79	55	PKP	PKPdf	23 20 31.3	+0.1
KMI				XPKP		23 20 36.3	
KMI				PP	PP	23 22 36.0	+3.4
KMI				PP	PP		
	comp=Z,219nm,10.8s						
KMI				LR	LR		
	comp=N,231nm,26.9s						
KMI				LR	LR		
	comp=E,219nm,21.5s						
KMI				LR	LR		
	comp=Z,321nm,23.3s,MS4.9						
BJT	Baijiatuau	128.05	31	PFAKE		23 20 40.0	+8.7
BJT				LR	LR		
	comp=Z,437nm,21.0s,MS5.1						
MDJ	Mudanjiang	129.72	17	PFAKE		23 20 50.0	+16
MDJ				LR	LR		
	comp=Z,351nm,20.0s,MS5.0						
ENH	Enshi	130.37	45	PFAKE		23 20 50.0	+14
ENH				LR	LR		
	comp=Z,5.0nm,21.0s						
INCN	Inchon	134.98	24	PFAKE		23 21 00.0	+16
INCN				LR	LR		
	comp=Z,248nm,21.0s,MS4.9						
NJ2	Nanjing	135.34	36	ePKP	PKPdf	23 20 41.8	-3.5
FUNA	Funafuti	148.69	259	PFAKE		23 21 20.0	+11
FUNA				LR	LR		
	comp=Z,9μm,19.0s						
ASAR	Alice Springs	155.28	147	PKPab	PKPab	23 21 45.2	+1.4
	comp=Z,0.7nm,1.0s,baz=188,slow=3.8,SNR=4.3						
CTAO	Charters Tower	162.96	174	PFAKE		23 21 40.0	+12
CTAO				LR	LR		
	comp=Z,707nm,22.0s						
GUMO	Guam	163.15	11	PFAKE		23 21 40.0	+12
GUMO				LR	LR		
	comp=Z,1μm,19.0s						
PMG	Port Moresby	173.60	171	PFAKE		23 21 50.0	+15
PMG				LR	LR		
	comp=Z,801nm,20.0s						

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*ISCJB **07** 23:08:59.9±0.7, 1953N±003×7786W±005, h10^{km}, Error ellipse: s-maj=7.2km s-min=4.0km az=8.6*
*JSN **07** 23:09:04.5±1.1, 1937N×7790W, h13^{km}±7^{km}, MD4.1*
*SSNC **07** 23:09:04.7, 1936N×7764W, h7^{km}, MD3.1, ML2.6*
ISC 07 23:09:00.2±0.7**, 1948N**±003×**7783W**±005**, h2**^{km}±6^{km}**, n13,** σ**1**^{s}**23**/25**, 3C-5D, Cuba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMGC	Las Mercedes	0.96	53	⇓iPG	Pg	23 09 18.3	-0.4
LMGC				i SG	Sg	23 09 31.3	+0.1
	comp=N,2μm,0.1s						
LMGC				i			
	comp=E,1μm,0.1s						
MBJ	Montego Bay	1.07	182	eP	Pg	23 09 21.7	+0.9
MBJ				eS	Sg	23 09 33.5	-1.2
BBJ	Bamboo Saint A	1.22	154	⇓iP	Pg	23 09 24.9	+1.5
BBJ				i S	Sg	23 09 40.1	+0.9
CVJ	Coleyville	1.28	168	⇑eP	Pg	23 09 25.1	+0.4
CVJ				eS	Sg	23 09 40.6	-0.7
MCJ	Malvern	1.56	175	⇑eP	Pn	23 09 29.4	+0.6
MCJ				eS	Sn	23 09 46.8	-2.8
STH	Stony Hill	1.70	145	⇓eP	Pn	23 09 31.4	+0.6
STH				eS	Sn	23 09 52.0	-1.2
CCCC	Cccc	1.71	2	ePG	Pg	23 09 33.0	0.0
CCCC				eSG	Sg	23 09 59.8	+4.6
	comp=N,2.3nm,0.3s						
CCCC				e			
	comp=E,4.2nm,0.3s						
GWJ	Greenwich	1.74	143	⇑eP	Pn	23 09 32.0	+0.6
PCJ	Portland Cotta	1.84	160	⇓iP	Pn	23 09 34.0	+1.2
PCJ				eS	Sn	23 09 55.8	-1.0
CMJ	Castle Mountai	1.92	134	⇓eP	Pn	23 09 34.8	+0.9
CMJ				eS	Sn	23 09 58.8	+0.2
RCC	Rio Carpintero	2.07	75	ePG	Pg	23 09 37.3	-2.6
RCC				eSG	Sg	23 10 02.0	-4.7
	comp=N,98nm,0.2s						
RCC				e			
	comp=E,145nm,0.2s						
MGV	Manicaragua	3.30	323	ePG	Pg	23 10 04.3	+0.8
MGV				eSG	Sg	23 10 43.5	-2.8
	comp=N,27nm,0.6s						
MGV				e			
	comp=E,32nm,0.5s						
MASC	Masc	3.45	78	ePG	Pb	23 09 59.6	-2.5
MASC				eSG	Sn	23 10 38.3	+1.8
	comp=N,2.3nm,0.1s						
MASC				e			
	comp=E,2.5nm,0.1s						

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*BJI **07** 23:27:14.6, 075S×12774E, h115^{km}, mB5.1, mb5.1*
*ISCJB **07** 23:27:19.7±0.5, 002S±002×12734E±003, h105^{km}±4^{km}, mb5.3/87, Error ellipse: s-maj=5.8km s-min=3.6km az=169.7*
*GCMT **07** 23:27:22.3±0.3, 005N×12721E, h111^{km}±3^{km}, MW5.0/61, Moment Tensor Solution. s28,c32; s61,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.33±.17; $M_{\theta\theta}$3.78±.16; $M_{\phi\phi}$-2.44±.21; $M_{r\theta}$-0.40±.12; $M_{\theta\phi}$-2.77±.23; $M_{\phi r}$-1.70±.15; Best double couple: $M_0$4.65000×10^{16} NP1:ϕ_s70.00000°,δ68.00000°,λ-160.00000°. NP2: ϕ_s332.00000°,δ72.00000°,λ-23.00000°. Principal axes: T 4.8440, Plg2.0000°, Azm21.0000°; N -0.3780, Plg61.0000°, Azm115.0000°; P -4.4560, Plg29.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 23:27:22.3±0.9, 004S×12730E, h115^{km}±8^{km}, mb5.2/27 Error ellipse: s-maj=7.0km s-min=4.2km az=67.0*
NEIC Felt [III] at Labuha and on Ternate.
*MOS **07** 23:27:23.1±1.2, 006N×12725E, h129^{km}, mb5.1/22, Error ellipse: s-maj=12.6km s-min=5.5km az=114.7*
*IDC **07** 23:27:23.2±1.4, 006S×12727E, h121^{km}±11^{km}, mb4.6/17, mb1 4.7/19, mb1mx4.7/20, mbtmp4.7/19, MS3.8/7, Ms1 3.8/7, ms1mx3.6/21, Error ellipse: s-maj=20.5km s-min=7.3km az=73.0*
ISC 07 23:27:21.3±0.4**, 003S**±002×**12733E**±003**, h104**^{km}±3^{km}**, h111**^{km}±2.0^{km}**:pP-P, n382,** σ**1**^{s}**09**/340**, mb5.3**/87**, 26C-33D, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.74	167	P	Pn	23 28 17.9	+0.9
	8μm,0.6s						
MATI	Mati	7.01	351	eP	Pn	23 29 01.7	+0.3
DAV	Davao City (W)	7.26	346	ePn	Pn	23 29 05.0	+0.2
DAV				eSn	Sn	23 30 25.0	-0.7
DAV	Davao City (W)	7.26	346	P	Pn	23 29 05.7	+0.9
	SNR=10.0						
DAV	Davao City (W)	7.26	346	P	Pn	23 29 05.7	+0.9
	SNR=10.0						
DAV	Davao City (W)	7.26	346	Pn	Pn	23 29 05.7	+0.9
	SNR=10.0						
DAV	Davao City (W)	7.26	346	P	Pn	23 29 05.7	+0.9
	SNR=10.0						
DAV	Davao City (W)	7.26	346	P	Pn	23 29 05.7	+0.9
	SNR=10.0						
DAV	Davao City (W)	7.26	346	⇓eP	Pn	23 29 05.5	+0.7
PCI	Palu	7.54	263	P	Pn	23 29 07.2	-1.4
	1μm,0.8s						
CTBH	Cotabato--PC H	7.83	337	⇓eP	Pn	23 29 11.9	-0.6
BUKP	Musuan	8.17	344	eP	Pn	23 29 16.3	-0.8
BIPH	Bislig	8.21	353	⇑eP	Pn	23 29 16.4	-1.4
BIPH				eS	Sn	23 30 48.6	-0.2
KAPI	Kappang	9.05	237	Pn	Pn	23 29 28.2	-0.9
	3μm,0.5s,SNR=28						
BUTP	Butuan	9.10	349	eP	Pn	23 29 30.4	+0.6
SCPH	Surigao	9.91	349	eP	Pn	23 29 40.0	-0.8
SNPH	Sibulan	10.16	336	eP	Pn	23 29 41.0	-3.2
MYLDM	Lahad Datu	10.22	301	⇓P	Pn	23 29 46.4	+1.3
TBP	Tagbilaran	10.25	340	eP	Pn	23 29 43.4	-2.0
TSM	Tawau	10.38	295	⇑P	Pn	23 29 45.7	-1.5
MSLP	Maasin	10.39	346	eP	Pn	23 29 46.7	-0.6
BATI	Kupang	10.75	200	P	Pn	23 29 54.6	+2.3
	20nm,0.3s,baz=55,slow=0.9,SNR=16						
BATI				LR	LR	23 34 33.5	
	comp=Z,331nm,20.1s,baz=156,slow=40						
LLP	Lapu-Lapu	10.81	342	eP	Pn	23 29 51.8	-1.2
OCLP	Ormoc	11.33	346	eP	Pn	23 29 59.2	-0.9
SDKM	Sandakan	11.58	299	⇑P	Pn	23 30 04.6	+1.3
GUIM	Jordan	11.59	336	eP	Pn	23 30 02.7	-0.7
RCP	Roxas	12.38	339	eP	Pn	23 30 13.8	-0.1
CUYO	Cuyo Island	12.49	330	eP	Pn	23 30 19.2	+3.7
KKM	Kota Kinabalu	12.63	299	ePn	Pn	23 30 16.8	-0.5
KKM				eSn	Sn	23 32 35.9	-0.3
KKM	Kota Kinabalu	12.63	299	⇑P	Pn	23 30 17.1	-0.1
BATP	Bataraza	12.92	313	eP	Pn	23 30 26.6	+5.5
OTRP	Odiongan	13.39	337	eP	Pn	23 30 25.9	-1.2
ENPP	El Nido	13.65	325	eP	Pn	23 30 33.0	+2.5
PVCP	Virac	13.89	347	eP	Pn	23 30 34.1	+0.3
BTM	Bintulu	14.60	283	⇓P	Pn	23 30 41.8	-1.1
SBUM	Sibu	15.30	279	⇓P	Pn	23 30 50.7	-1.1
LUBP	Lubang	15.37	333	eP	Pn	23 30 52.2	-0.3
BALP	Baler	16.66	340	eP	Pn	23 31 08.9	+0.3
KRKI	Karangkates	16.89	241	P	Pn	23 31 16.3	+4.9
	428nm,1.0s						
KSM	Kuching	17.09	275	eP	Pn	23 31 13.9	+0.1
KSM	Kuching	17.09	275	⇓P	Pn	23 31 14.8	+1.0
FITZ	Fitzroy Crossi	18.04	185	eP	P	23 31 23.7	-0.7
	70nm,0.7s						
FITZ	Fitzroy Crossi	18.04	185	eP	P	23 31 24.0	-0.3
FITZ				S	S	23 34 42.2	-3.7
FITZ	Fitzroy Crossi	18.04	185	P	P	23 31 23.9	-0.4
	3.1nm,0.3s,baz=20,slow=11,SNR=42						
FITZ				LR	LR	23 38 31.7	
	comp=Z,218nm,22.0s,baz=18,slow=37						
ABRA	Dolores	18.73	340	eP	P	23 31 34.0	+2.0
TPI	Tanjungpandan	19.86	262	P	P	23 31 44.1	-0.2
	360nm,0.9s						
LEM	Lembang	20.79	251	P	P	23 31 56.0	+1.6
	490nm,0.9s						
COEN	Coen	20.92	132	eP	P	23 31 55.5	-0.2
	27nm,0.8s						
WRA	Warramunga Arr	20.95	161	P	P	23 31 56.2	+0.2
WRA				S	S	23 35 42.6	-1.1
WRA				ScP	ScP	23 39 25.9	-1.3
WRA				LR	LR	23 40 36.9	
WRA	Warramunga Arr	20.95	161	P	P	23 31 56.2	+0.2
WRA				S	S	23 35 42.6	-1.1
WRA	Warramunga Arr	20.95	161	P	P	23 31 56.2	+0.2
	128nm,0.8s,baz=341,slow=12,SNR=260						
WRA				S	S	23 35 42.6	-1.1
	17nm,0.8s,baz=337,slow=16,SNR=11						
WRA				ScP	ScP	23 39 25.9	-1.3
	2.7nm,0.6s,baz=324,slow=2.4,SNR=10						
WRA				LR	LR	23 40 36.9	
	comp=Z,354nm,19.8s,baz=350,slow=38						
WB2	Warramunga Arr	20.95	161	eP	P	23 31 56.3	+0.3
PMG	Port Moresby	21.83	116	eP	P	23 32 03.1	-2.3
	17nm,0.6s,mb4.5						
PMG	Port Moresby	21.83	116	eP	P	23 32 03.1	-2.3
PMG				pmax	pmax		
	comp=Z,17nm,0.6s						
PMG	Port Moresby	21.83	116	P	P	23 32 05.7	+0.3
	comp=Z,4.5nm,0.5s,mb4.1,baz=268,slow=6.4,SNR=2.7						
SBJI	Serang	22.01	254	P	P	23 32 08.1	+0.8
	comp=Z,311nm,1.2s,mb5.5						
MBWA	Marble Bar	22.28	199	eP	P	23 32 08.5	-1.5
	comp=Z,37nm,0.7s,mb4.8						
MYKOM	Kota Tinggi	23.55	275	⇓P	P	23 32 23.2	+0.8
KGM	Kluang	24.09	275	⇓P	P	23 32 28.7	+1.3
ASAR	Alice Springs	24.35	165	P	P	23 32 30.1	+0.5
ASAR				S	S	23 36 38.9	-2.7
ASAR				ScP	ScP	23 39 35.0	-1.0
ASAR	Alice Springs	24.35	165	P	P	23 32 30.1	+0.5
ASAR				S	S	23 36 38.9	-2.7
ASAR	Alice Springs	24.35	165	P	P	23 32 30.1	+0.5
	comp=Z,110nm,0.6s,mb5.3,baz=343,slow=9.4,SNR=451						
ASAR				S	S	23 36 38.9	-2.7
	comp=Z,10.0nm,0.8s,baz=350,slow=19,SNR=6.1						
ASAR				ScP	ScP	23 39 35.0	-1.0
	comp=Z,3.9nm,0.5s,baz=344,slow=2.8,SNR=15						
ASAR				P3KPbc		00 05 40.5	
	comp=Z,0.3nm,0.5s,baz=155,slow=3.5,SNR=4.6						
NACB	Ninganchiao	24.69	347	eP	P	23 32 33.6	+0.9
KTGM	Kuala Trenggan	24.74	283	⇓P	P	23 32 34.2	+0.9
KSI	Kapahiang	24.98	261	P	P	23 32 36.3	+0.8
	comp=Z,310nm,0.9s,mb5.7						
YHNB	Yeheng	25.22	347	eP	P	23 32 37.9	+0.4
QIZ	Qiongzhong	25.56	319	P	P	23 32 42.5	+1.9
QIZ				AP	pP	23 33 03.1	-0.4
QIZ				XP	sP	23 33 16.2	+0.5
QIZ				S	S	23 36 59.7	-1.2
QIZ				SS		23 38 19.2	
QIZ				AMB	AMB		
	comp=Z,57nm,1.0s,mb5.0						
QIZ	Qiongzhong	25.56	319	eP	P	23 32 41.2	+0.6
	comp=Z,42nm,0.8s,mb4.9						
FRIM	Kepong	25.90	277	⇓P	P	23 32 44.5	+0.7
QZH	Quanzhou	26.22	342	eP	P	23 32 47.8	+1.2
QZH				S	S	23 37 11.0	-0.2
IPM	Ipoh	26.66	280	⇑P	P	23 32 50.7	+0.1
GZH	Guangzhou	26.70	330	P	P	23 32 54.6	+3.7
JOW	Kunigami	26.72	2	P	P	23 32 52.1	+1.2
	comp=Z,49nm,0.7s,mb5.1,baz=191,slow=10.0,SNR=9.8						
JOW				LR	LR	23 41 35.9	
	comp=Z,119nm,21.6s,baz=262,slow=32						
PPI	Padang Panjang	26.94	269	P	P	23 32 52.8	-0.4
	comp=Z,160nm,1.0s,mb5.5						
KULM	Kulim	27.16	282	eP	P	23 32 55.1	0.0
KULM				ePcP	PcP	23 36 14.2	+0.8
KULM	Kulim	27.16	282	⇓P	P	23 32 55.4	+0.3
CTA	Charters Tower	27.22	138	eP	P	23 33 02.9	+7.3
	comp=Z,4.9nm,0.6s,mb4.2						
CTA	Charters Tower	27.22	138	P	P	23 32 57.6	+2.1
CTA				ScP	ScP	23 39 44.9	+0.5
CTA	Charters Tower	27.22	138	P	P	23 32 57.6	+2.1
	comp=Z,3.4nm,0.8s,baz=322,slow=11,SNR=3.0						
CTA				ScP	ScP	23 39 44.9	+0.5
	comp=Z,5.0nm,0.9s,baz=250,slow=19,SNR=3.0						
CTAO	Charters Tower	27.22	138	eP	P	23 32 57.4	+1.8
	comp=Z,18nm,1.0s,mb4.5						
CTAO	Charters Tower	27.22	138	eP	P	23 32 57.4	+1.8
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
PSI	Prapat	28.53	276	P	P	23 33 09.6	+2.2
PSI				PcP	PcP	23 36 19.1	+2.4
PSI				ScP	ScP	23 39 49.7	+1.0
PSI				LR	LR	23 46 41.8	
PSI	Prapat	28.53	276	P	P	23 33 09.6	+2.2
PSI						23 36 19.1	
PSI	Prapat	28.53	276	P	P	23 33 09.6	+2.2
	comp=Z,78nm,0.8s,mb5.4,baz=104,slow=6.5,SNR=79						
PSI				PcP	PcP	23 36 19.1	+2.4
	comp=Z,11nm,0.7s,baz=39,slow=2.6,SNR=5.0						
PSI				ScP	ScP	23 39 49.7	+1.1
	comp=Z,15nm,0.7s,baz=355,slow=6.6,SNR=14						
PSI				LR	LR	23 46 41.8	
	comp=Z,207nm,18.8s,baz=5.3,slow=41						
KKTK	Khon Kaen	29.13	305	P	P	23 33 13.0	+0.4
	comp=Z,802nm,0.6s,mb6.5						
FORT	Forrest	30.59	179	eP	P	23 33 25.2	-0.1
	comp=Z,76nm,0.5s,mb5.7						
BSI	Banda Aceh	32.45	280	P	P	23 33 40.1	-1.9
	comp=Z,58nm,1.3s,mb5.2						
COCO	West Island	32.59	247	eP	P	23 33 41.8	-1.3
KLBR	Kellerberrin	32.68	195	eP	P	23 33 42.8	-0.8
	comp=Z,33nm,0.8s,mb5.2						
WHN	Wuhan	32.81	339	⇑P	P	23 33 47.3	+2.5
NJ2	Nanjing	32.90	347	eP	P	23 33 47.4	+1.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
GYA	Guiyang	33.01	324	⇑iP	P	23 33 49.0	+2.4
GYA				AP	pP	23 34 14.3	+4.3
GYA				XP	sP	23 34 27.4	+5.3
GYA				PP	PP	23 35 03.5	+0.2
GYA				S	S	23 38 59.0	+1.3
GYA				SCS	ScS	23 44 02.7	-1.0
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,180nm,6.4s						
GYA				LR	LR		
	comp=N,770nm,18.6s						
GYA				LR	LR		
	comp=E,880nm,18.8s						
GYA				LR	LR		
	comp=Z,660nm,19.0s						
MUN	Mundaring	33.48	197	eP	P	23 33 49.8	-0.8
CHG	Chiang Mai	33.57	305	⇓P	P	23 33 51.8	+0.2
	comp=Z,48nm,1.3s,mb5.2						
CHTO	Chiang Mai	33.57	305	eP	P	23 33 51.8	+0.2
	comp=Z,66nm,1.1s,mb5.4						
CHTO	Chiang Mai	33.57	305	eP	P	23 33 51.8	+0.2
CHTO				pmax	pmax		
	comp=Z,66nm,1.1s,mb5.4						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
CHTO	Chiang Mai	33.57	305	P	P	23 33 52.3	+0.7
	SNR=15						
NWAO	Narrogin (SRO)	34.08	195	eP	P	23 33 55.7	-0.2
STKA	Stephens Creek	34.43	158	eP	P	23 33 59.5	+0.6
	comp=Z,11nm,0.4s,mb5.0						
STKA	Stephens Creek	34.43	158	P	P	23 33 59.9	+1.0
	comp=Z,8.2nm,0.6s,mb4.7,baz=331,slow=8.9,SNR=16						
STKA				LR	LR	23 49 06.9	
	comp=Z,306nm,18.9s,baz=222,slow=38						
KMI	Kunming	34.50	318	P	P	23 34 01.6	+2.0
KMI				AP	pP	23 34 26.3	+3.2
KMI				XP	sP	23 34 40.3	+5.2
KMI				S	S	23 39 21.7	+0.9
KMI				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.9						
KMI				AMB	AMB		
	comp=Z,85nm,3.1s						
KMI				LR	LR		
	comp=N,333nm,17.3s						
KMI				LR	LR		
	comp=E,191nm,16.1s						
KMI				LR	LR		
	comp=Z,186nm,13.8s						
KMI	Kunming	34.50	318	P	P	23 34 01.6	+2.0
KMI				pP	pP	23 34 26.3	+3.2
KMI				sP	sP	23 34 40.3	+5.2
KMI				PPP		23 35 39.0	
KMI				S	S	23 39 21.7	+0.9
KMI				sS	sS	23 40 05.0	+3.5
KMI				SS	SS	23 41 42.9	-12
KMI				SSS		23 42 10.4	
KSRS	Korea Array	37.30	1	P	P	23 34 23.6	+0.3
	comp=Z,8.4nm,0.6s,mb4.8,baz=177,slow=9.6,SNR=22						
KSRS				PcP	PcP	23 36 41.1	+0.5
	comp=Z,3.3nm,0.6s,baz=189,slow=3.1,SNR=5.2						
KSRS				ScP	ScP	23 40 16.4	-2.0
	comp=Z,4.1nm,0.8s,baz=184,slow=2.8,SNR=8.7						
MJAR	Matsushiro Arr	37.76	14	P	P	23 34 26.5	-0.7
MJAR				PcP	PcP	23 36 42.7	+0.7
MJAR				ScP	ScP	23 40 18.1	-2.1
MJAR				LR	LR	23 48 34.5	
MJAR	Matsushiro Arr	37.76	14	P	P	23 34 26.5	-0.7
MJAR						23 36 42.7	
MJAR	Matsushiro Arr	37.76	14	P	P	23 34 26.5	-0.7
	comp=Z,9.2nm,0.5s,mb4.9,baz=185,slow=9.2,SNR=30						
MJAR				PcP	PcP	23 36 42.7	+0.7
	comp=Z,3.4nm,0.8s,baz=185,slow=4.0,SNR=4.1						
MJAR				ScP	ScP	23 40 18.1	-2.1
	comp=Z,0.6nm,0.3s,baz=182,slow=4.4,SNR=4.0						
MJAR				LR	LR	23 48 34.5	
	comp=Z,112nm,19.5s,baz=255,slow=34						
MAJO	Matsushiro	37.76	14	eP	P	23 34 26.2	-0.9
MAT	Matsushiro	37.76	14	P	P	23 34 26.4	-0.8
XAN	Xi'an	38.03	335	P	P	23 34 29.9	+0.4
XAN				AMB	AMB		
	comp=Z,71nm,0.6s,mb5.7						
XAN				AMB	AMB		
	comp=Z,62nm,7.7s						
CD2	Chengdu	38.04	326	⇓iP	P	23 34 30.3	+0.6
CD2				AP	pP	23 34 55.5	+2.1
CD2				XP	sP	23 35 08.6	+3.2
CD2				PP	PP	23 36 03.7	+5.0
CD2				PCP	PcP	23 36 44.2	+1.1
CD2				S	S	23 40 13.9	-0.7
CD2				SCS	ScS	23 44 28.7	-2.4
CD2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
CD2				AMB	AMB		
	comp=Z,60nm,5.8s						
CD2				LR	LR		
	comp=N,90nm,13.2s						
CD2				LR	LR		
	comp=Z,130nm,12.0s						
ARMA	Armidale	38.04	145	eP	P	23 34 30.9	+1.2
ARMA	Armidale	38.04	145	eP	P	23 34 32.0	+2.4
	comp=Z,0.3nm,0.6s						
ARMA				S	S	23 40 15.0	+0.4
BJT	Baijiatuau	41.14	347	eP	P	23 34 55.0	-0.1
	comp=Z,16nm,0.6s,mb5.0						
BJT				ePcP	PcP	23 36 51.7	-1.0
BJT	Baijiatuau	41.14	347	eP	P	23 34 55.1	-0.1
BJT				e		23 36 51.7	
BJT				pmax	pmax		
	comp=Z,16nm,0.6s						
BJI	Beijing	41.16	347	P	P	23 34 55.3	0.0
BJI				AP	pP	23 35 18.5	-0.9
BJI				PP	PP	23 36 31.8	-0.6
BJI				S	S	23 40 59.1	-1.8
BJI				SS	SS	23 44 08.1	+0.2
BJI				AMB	AMB		
	comp=Z,27nm,0.7s,mb5.2						
BJI				AMB	AMB		
	comp=Z,153nm,4.1s						
BJI	Beijing	41.16	347	P	P	23 34 55.3	0.0
BJI				pP	pP	23 35 18.5	-0.9
BJI				sP	sP	23 35 30.1	-1.2
BJI				PP	PP	23 36 31.8	-0.6
BJI				S	S	23 40 59.1	-1.8
BJI				SS	SS	23 44 08.1	+0.2
LZH	Lanzhou	42.04	331	eP	P	23 35 04.5	+1.9
LZH				AP	pP	23 35 30.8	+4.0
LZH				XP	sP	23 35 43.6	+5.0
LZH				PP	PP	23 36 47.0	+5.0
LZH				eS	S	23 41 15.0	+0.9
LZH				AMB	AMB		
	comp=Z,95nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,260nm,4.0s						

LZH	**Lanzhou**	**42.04**	**331**	*e*P	**P**	**23 35 04.5**	**+1.9**
LZH				*PP	pP	23 35 30.8	+4.0
LZH						23 36 47.0	
LZH				*e*S	**S**	**23 41 15.0**	**+0.9**
LZH				SS	SS	23 44 21.0	-4.5
SHL	**Shillong**	**42.64**	**309**	*i* P	**P**	**23 35 09.5**	**+1.8**
HHC	**Hu-ho-hao-te**	**43.13**	**342**	*e*P	**P**	**23 35 10.9**	**-0.5**
HHC				AP	pP	23 35 36.3	+0.7
HHC				XP	sP	23 35 49.4	+2.0
HHC				PP	PP	23 36 55.3	+1.6
HHC				PCP	PcP	23 36 58.8	-0.5
HHC				SCP	ScP	23 40 39.0	-2.2
HHC				PCS	PcS	23 40 51.2	-0.6
HHC				S	**S**	**23 41 27.6**	**-2.3**
HHC				SCS	ScS	23 44 56.9	-4.3
HHC				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,144nm,6.5s						
HHC				LR	LR		
	comp=N,161nm,17.8s						
HHC				LR	LR		
	comp=E,173nm,13.1s						
HHC				LR	LR		
	comp=Z,235nm,19.0s						
CN2	**Changchun**	**43.67**	**358**	*e*P	**P**	**23 35 16.0**	**+0.4**
CN2				*e*AP	pP	23 35 41.6	+1.7
CN2				*e*S	**S**	**23 41 37.8**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
MDJ	**Mudanjiang**	**44.49**	**2**	*e*P	**P**	**23 35 20.7**	**-1.5**
MDJ				*e*PcP	PcP	23 37 04.3	+0.4
LSA	**Lhasa**	**45.41**	**314**	P	**P**	**23 35 31.8**	**+2.1**
LSA				AMB	AMB		
	comp=Z,170nm,0.7s,mb5.9						
LSA	**Lhasa**	**45.41**	**314**	*e*P	**P**	**23 35 32.0**	**+2.3**
	comp=Z,118nm,0.7s,mb5.7						
LSA	**Lhasa**	**45.41**	**314**	*e*P	**P**	**23 35 32.0**	**+2.3**
LSA				pmax	pmax		
	comp=Z,118nm,0.7s,mb5.7						
GTA	**Gaotai**	**46.62**	**330**	⇓*i*P	**P**	**23 35 40.4**	**+1.3**
GTA				AP	pP	23 36 06.2	+2.6
GTA				XP	sP	23 36 19.3	+3.9
GTA				PCP	PcP	23 37 12.6	+1.2
GTA				PP	PP	23 37 32.3	+2.1
GTA				SCP	ScP	23 40 55.3	-0.3
GTA				PCS	PcS	23 41 06.9	+0.6
GTA				S	**S**	**23 42 20.3**	**-0.1**
GTA				SCS	ScS	23 45 21.3	-2.3
GTA				AMB	AMB		
	comp=Z,57nm,0.9s,mb5.3						
GTA				AMB	AMB		
	comp=Z,250nm,5.7s						
GTA				LR	LR		
	comp=N,214nm,16.4s						
GTA				LR	LR		
	comp=E,128nm,16.3s						
GTA				LR	LR		
	comp=Z,157nm,16.4s						
TAPN	**Taplejung**	**46.77**	**309**	*e*P	**P**	**23 35 41.6**	**+1.2**
	comp=Z,352nm,0.8s,mb6.1						
ODAN	**Odare**	**46.79**	**308**	*e*P	**P**	**23 35 41.5**	**+0.9**
	comp=Z,411nm,0.7s,mb6.2						
PALK	**Pallekele**	**47.06**	**280**	P	**P**	**23 35 42.6**	**-0.3**
	comp=Z,154nm,0.8s,mb5.8,SNR=5.6						
PALK	**Pallekele**	**47.06**	**280**	*e*P	**P**	**23 35 40.9**	**-2.1**
JIRN	**Jiri**	**48.10**	**308**	*e*P	**P**	**23 35 52.1**	**+1.3**
	comp=Z,566nm,0.7s,mb6.5						
YSS	**Yuzh-Sakhalins**	**48.70**	**14**	*e*P	**P**	**23 35 55.5**	**+0.5**
KKN	**Kakani**	**48.88**	**308**	*e*P	**P**	**23 35 57.5**	**+0.8**
	comp=Z,291nm,0.6s,mb6.4						
KLR	**Kul'dur**	**49.21**	**4**	*e*P	**P**	**23 35 55.8**	**-3.1**
GKN	**Gorkha**	**49.48**	**308**	*e*P	**P**	**23 36 02.1**	**+0.8**
	comp=Z,355nm,0.7s,mb6.4						
HIA	**Hailar**	**49.53**	**353**	*e*P	**P**	**23 36 02.1**	**+0.8**
ULN	**Ulaanbaatar**	**50.85**	**342**	⇑*e*P	**P**	**23 36 11.5**	**+0.2**
HYB	**Hyderabad**	**51.02**	**293**	⇓*e*P	**P**	**23 36 13.5**	**+0.4**
	comp=Z,33nm,1.0s,mb5.3						
HYB	**Hyderabad**	**51.02**	**293**	⇓*e*P	**P**	**23 36 13.5**	**+0.4**
HYB				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.3						
HYB	**Hyderabad**	**51.02**	**293**	⇓*i*P	**P**	**23 36 13.5**	**+0.4**
	comp=Z,330nm,1.0s,mb6.3						
HYB				*e*pP	pP	23 36 40.0	+2.0
HYB				*e*sP	sP	23 36 52.0	+2.3
SONM	**Songino Array**	**51.03**	**342**	P	**P**	**23 36 13.2**	**+0.6**
SONM						23 37 27.3	
SONM	**Songino Array**	**51.03**	**342**	P	**P**	**23 36 13.2**	**+0.6**
	comp=Z,14nm,0.8s,mb5.1,baz=154,slow=8.6,SNR=120						
SONM				PcP	PcP	23 37 27.3	+0.1
	comp=Z,4.7nm,0.8s,baz=166,slow=4.9,SNR=3.9						
SONM				ScP	ScP	23 41 12.8	-1.3
	comp=Z,2.3nm,0.8s,baz=149,slow=4.2,SNR=6.2						
CIT	**Chita**	**53.14**	**349**	*e*P	**P**	**23 36 29.0**	**+0.8**
CIT				*e*	pP	23 36 57.5	+4.2
CIT				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
ZAK	**Zakamensk**	**54.25**	**341**	⇓*e*P	**P**	**23 36 36.4**	**+0.1**
ZAK				*e*		23 37 32.9	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
JOSI	**Joshimath**	**54.58**	**308**	*e*P	**P**	**23 36 39.6**	**+0.5**
AGRA	**Agra**	**54.59**	**304**	*e*P	**P**	**23 36 38.6**	**-0.7**
KAD	**Karad**	**55.05**	**291**	*i* P	**P**	**23 36 41.6**	**-1.1**
TLY	**Talaya**	**55.26**	**342**	*e*P	**P**	**23 36 44.4**	**+0.8**
TLY	**Talaya**	**55.26**	**342**	*e*P	**P**	**23 36 44.6**	**+1.0**
TLY				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
TLY				MLR	MLR		
	comp=Z,459nm,20.0s						
IRK	**Irkutsk**	**55.57**	**343**	*e*P	**P**	**23 36 45.6**	**-0.2**
IRK				*e*		23 37 19.2	
IRK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
POO	**Poona**	**55.63**	**293**	⇓*i*P	**P**	**23 36 45.0**	**-1.9**
	comp=Z,40nm,1.0s,mb5.4						
SONA	**Sohna**	**55.67**	**305**	*e*P	**P**	**23 36 46.4**	**-0.6**
SONA				AMb	AMB	23 36 46.9	
	comp=Z,128nm,0.9s,mb6.0						
AYAN	**Aya Nagar**	**55.72**	**305**	*e*x	x	23 36 51.6	
MOY	**Mondy**	**56.10**	**341**	*e*P	**P**	**23 36 50.6**	**+1.1**
MOY				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
KUDL	**Kundal**	**56.12**	**304**	*e*P	**P**	**23 36 49.0**	**-1.2**
KUDL				AMb	AMB	23 36 50.1	
	comp=Z,89nm,0.5s,mb6.0						
WMQ	**Urumqi**	**56.14**	**326**	⇓*i*P	**P**	**23 36 50.9**	**+0.9**
WMQ				AP	pP	23 37 16.4	+1.1
WMQ				XP	sP	23 37 28.9	+2.0
WMQ				PCP	PcP	23 37 47.9	+1.1
WMQ				PP	PP	23 38 58.9	+2.6
WMQ				SCP	ScP	23 41 34.9	-1.7
WMQ				S	**S**	**23 44 29.1**	**-2.1**
WMQ				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.8						
WMQ				LR	LR		
	comp=N,429nm,26.0s						
WMQ				LR	LR		
	comp=E,353nm,27.5s						
WMQ				LR	LR		
	comp=Z,329nm,22.5s						
KHET	**Khetri**	**56.66**	**304**	*e*P	**P**	**23 36 53.6**	**-0.5**
KHET				AMb	AMB	23 36 54.5	
	comp=Z,56nm,0.7s,mb5.7						
SDNR	**Sundarnagar**	**56.99**	**308**	*e*P	**P**	**23 36 58.2**	**+1.9**
DLH	**Dalhousie**	**58.19**	**309**	*e*P	**P**	**23 37 04.0**	**-0.7**
THN	**Thein Dam**	**58.34**	**309**	*e*P	**P**	**23 37 04.9**	**-0.9**
BOD	**Bodaibo**	**58.64**	**352**	⇑*i*P	**P**	**23 37 07.0**	**-0.3**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
URZ	**Urewera**	**59.43**	**136**	P	**P**	**23 37 13.5**	**+0.3**
	comp=Z,6.6nm,0.4s,mb5.0,baz=274,slow=2.2,SNR=10						
MK31	**Makanchi Array**	**60.98**	**326**	*e*P	**P**	**23 37 24.0**	**+0.5**
MKAR	**Makanchi Array**	**60.98**	**326**	⇑*e*P	**P**	**23 37 24.0**	**+0.5**
MKAR	**Makanchi Array**	**60.98**	**326**	P	**P**	**23 37 24.0**	**+0.4**
	comp=Z,57nm,0.5s,mb5.8,baz=118,slow=8.7,SNR=793						
MKAR				PcP	PcP	23 38 05.6	-0.3
	comp=Z,12nm,0.7s,baz=133,slow=5.3,SNR=4.9						
MKAR				ScP	ScP	23 41 56.3	-1.7
	comp=Z,2.9nm,0.8s,baz=122,slow=4.8,SNR=5.2						
MKAR				S	**S**	**23 45 32.0**	**-1.8**
	comp=Z,0.2nm,0.2s,baz=122,slow=13,SNR=3.0						

KSH	**Kashi**	**61.13**	**316**	*i* P	**P**	**23 37 26.6**	**+1.8**
KSH				*e*AP	pP	23 37 54.3	+3.9
KSH				*e*XP	sP	23 38 06.2	+4.3
KSH				PCP	PcP	23 38 07.8	+1.1
KSH				*e*PP	PP	23 39 44.6	+4.0
KSH				*e*SCP	ScP	23 41 57.7	-1.1
KSH				PCS	PcS	23 42 08.3	-1.2
KSH				*e*S	**S**	**23 45 34.4**	**-1.7**
KSH				*e*SCS	ScS	23 47 03.3	-3.0
KSH				SS	SS	23 49 39.2	+1.3
KSH				LR	LR		
	comp=N,1μm,5.8s						
KSH				LR	LR		
	comp=E,1μm,4.9s						
KSH				LR	LR		
	comp=Z,2μm,6.1s						
YAK	**Yakutsk**	**61.92**	**1**	*e*P	**P**	**23 37 29.9**	**+0.3**
	comp=Z,69nm,0.7s,mb5.8						
YAK	**Yakutsk**	**61.92**	**1**	⇑*e*P	**P**	**23 37 29.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,73nm,0.8s,mb5.8						
MA2	**Magadan**	**62.19**	**13**	*e*P	**P**	**23 37 33.1**	**+1.6**
	comp=Z,17nm,0.8s,mb5.1						
MA2	**Magadan**	**62.19**	**13**	*e*P	**P**	**23 37 32.2**	**+0.8**
MA2				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
MA2				pmax	pmax		
	comp=N,20nm,0.9s						
KZA	**Kyzart**	**62.79**	**319**	P	**P**	**23 37 37.5**	**+1.7**
	SNR=17						
TKM2	**Tokmak 2**	**62.96**	**320**	*e*P	**P**	**23 37 37.5**	**+0.6**
	comp=N,49nm,0.6s,mb5.6						
TKM2	**Tokmak 2**	**62.96**	**320**	*e*P	**P**	**23 37 37.5**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,49nm,0.6s,mb5.6						
TKM2	**Tokmak 2**	**62.96**	**320**	P	**P**	**23 37 37.8**	**+0.9**
	SNR=39						
KBK	**Karagaybulak**	**63.26**	**319**	P	**P**	**23 37 40.0**	**+1.1**
	SNR=18						
UCH	**Uchtor**	**63.35**	**319**	*e*P	**P**	**23 37 40.9**	**+1.4**
	comp=Z,47nm,0.8s,mb5.5						
UCH	**Uchtor**	**63.35**	**319**	P	**P**	**23 37 41.1**	**+1.6**
	SNR=46						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 40.8**	**0.0**
	comp=Z,111nm,0.5s,mb6.0,SNR=14						
AAK	**Ala-Archa**	**63.54**	**319**	*e*P	**P**	**23 37 40.8**	**0.0**
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.3**
	SNR=9.1						
AAK	**Ala-Archa**	**63.54**	**319**	P	**P**	**23 37 41.8**	**+1.1**
	SNR=18						
CHMS	**Chumysh**	**63.54**	**319**	P	**P**	**23 37 41.1**	**+0.4**
	SNR=14						
USP	**Ospenovka**	**63.83**	**320**	P	**P**	**23 37 43.0**	**+0.4**
	SNR=22						
AML	**Almayashu**	**63.85**	**318**	*e*P	**P**	**23 37 44.1**	**+1.4**
	comp=Z,57nm,0.8s,mb5.5						
AML				*e*PcP	PcP	23 38 17.7	0.0
AML	**Almayashu**	**63.85**	**318**	P	**P**	**23 37 44.3**	**+1.5**
	SNR=46						
EKS2	**Erkin-Say**	**64.03**	**319**	*e*P	**P**	**23 37 45.0**	**+1.1**
	comp=Z,43nm,0.8s,mb5.3						
EKS2				*e*PcP	PcP	23 38 19.6	+1.2
EKS2	**Erkin-Say**	**64.03**	**319**	P	**P**	**23 37 45.0**	**+1.1**
	SNR=6.1						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	comp=Z,1μm,0.5s						
KURK	**Kurchatov**	**65.22**	**328**	*e*P	**P**	**23 37 51.6**	**+0.1**
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
KURK	**Kurchatov**	**65.22**	**328**	P	**P**	**23 37 51.8**	**+0.3**
	SNR=29						
NVS	**Novosibirsk**	**65.48**	**334**	⇓*i*P	**P**	**23 37 52.0**	**-1.1**
NVS				*e*S	S	23 46 22.8	-6.7
NVS				pmax	pmax		
	comp=N,25nm,0.8s						
NVS				pmax	pmax		
	comp=E,33nm,0.8s						
NVS				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.4						
NVS				smax			
	comp=N,13nm,1.8s						
NVS				smax			
	comp=E,16nm,1.8s						
KK31	**Karatay Array**	**66.39**	**318**	*i* P	**P**	**23 37 58.2**	**-1.0**
KK31				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.3						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
JMDO	**Jabal Madar**	**70.84**	**294**	P	**P**	**23 38 27.4**	**+0.1**
	SNR=6.8						
BRVK	**Borovoye**	**70.86**	**328**	P	**P**	**23 38 26.0**	**-0.7**
	comp=Z,494nm,0.8s,mb6.4,SNR=47						
BRVK	**Borovoye**	**70.86**	**328**	*e*P	**P**	**23 38 26.6**	**-0.1**
BRVK	**Borovoye**	**70.86**	**328**	P	**P**	**23 38 26.8**	**+0.1**
	SNR=22						
BRVK	**Borovoye**	**70.86**	**328**	P	**P**	**23 38 26.8**	**+0.1**
	SNR=22						
BRVK	**Borovoye**	**70.86**	**328**	P	**P**	**23 38 26.8**	**+0.1**
	SNR=22						
BRVK	**Borovoye**	**70.86**	**328**	P	**P**	**23 38 26.8**	**+0.1**
	SNR=22						
CHKZ	**Chkalovo**	**70.97**	**328**	P	**P**	**23 38 27.4**	**0.0**
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
BIDO	**Bidbid**	**70.99**	**295**	P	**P**	**23 38 28.1**	**-0.1**
	SNR=10						
SMDO	**Samad**	**70.99**	**294**	P	**P**	**23 38 28.2**	**0.0**
	SNR=5.2						
SMDO	**Samad**	**70.99**	**294**	P	**P**	**23 38 28.2**	**0.0**
	SNR=5.2						
SMDO	**Samad**	**70.99**	**294**	P	**P**	**23 38 28.2**	**0.0**
	SNR=5.2						
SMDO	**Samad**	**70.99**	**294**	P	**P**	**23 38 28.2**	**0.0**
	SNR=5.2						
SMDO	**Samad**	**70.99**	**294**	P	**P**	**23 38 28.2**	**0.0**
	SNR=5.2						
TIXI	**Tiksi**	**71.57**	**1**	*e*P	**P**	**23 38 29.0**	**-1.7**
	comp=Z,22nm,0.7s,mb5.1						
TIXI	**Tiksi**	**71.57**	**1**	⇑*e*P	**P**	**23 38 30.0**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
BSY	**Bisya**	**71.72**	**294**	P	**P**	**23 38 32.5**	**-0.1**
	SNR=15						
BSY	**Bisya**	**71.72**	**294**	P	**P**	**23 38 32.5**	**-0.1**
	SNR=15						
BSY	**Bisya**	**71.72**	**294**	P	**P**	**23 38 32.5**	**-0.1**
	SNR=15						
BSY	**Bisya**	**71.72**	**294**	P	**P**	**23 38 32.5**	**-0.1**
	SNR=15						
HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						
HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						

HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						
HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						
HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						
HOQ	**Hoqain**	**71.74**	**295**	P	**P**	**23 38 32.9**	**+0.2**
	SNR=7.2						
ARQ	**Araqi**	**72.42**	**294**	P	**P**	**23 38 36.8**	**+0.1**
	SNR=11						
ARQ	**Araqi**	**72.42**	**294**	P	**P**	**23 38 36.8**	**+0.1**
	SNR=11						
ARQ	**Araqi**	**72.42**	**294**	P	**P**	**23 38 36.8**	**+0.1**
	SNR=11						
ARQ	**Araqi**	**72.42**	**294**	P	**P**	**23 38 36.8**	**+0.1**
	SNR=11						
BILL	**Bilibino**	**73.01**	**14**	P	**P**	**23 38 39.6**	**+0.3**
BILL	**Bilibino**	**73.01**	**14**	⇑*e*P	**P**	**23 38 38.9**	**-0.4**
ABKT	**Ailbek**	**73.72**	**310**	P	**P**	**23 38 44.2**	**+0.1**
	comp=Z,189nm,0.7s,mb5.9,SNR=12						
WHFO	**Wadi Hawf**	**74.38**	**289**	P	**P**	**23 38 47.2**	**-1.1**
	SNR=13						
WHFO	**Wadi Hawf**	**74.38**	**289**	P	**P**	**23 38 47.2**	**-1.1**
	SNR=13						
WHFO	**Wadi Hawf**	**74.38**	**289**	P	**P**	**23 38 47.2**	**-1.1**
	SNR=13						
WHFO	**Wadi Hawf**	**74.38**	**289**	P	**P**	**23 38 47.2**	**-1.1**
	SNR=13						
ABTO	**Aybut**	**74.78**	**288**	P	**P**	**23 38 50.2**	**-0.4**
	SNR=8.4						
ABTO	**Aybut**	**74.78**	**288**	P	**P**	**23 38 50.2**	**-0.4**
	SNR=8.4						
ABTO	**Aybut**	**74.78**	**288**	P	**P**	**23 38 50.2**	**-0.4**
	SNR=8.4						
SVE	**Sverdlovsk**	**77.46**	**329**	⇑*e*P	**P**	**23 39 04.6**	**-0.4**
SVE				*e*		23 42 01.3	
SVE				*e*S	S	23 48 43.7	-3.6
SVE				*e*		23 49 38.5	
SVE				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.4						
ARU	**Arti**	**78.42**	**328**	P	**P**	**23 39 09.0**	**-1.4**
	comp=Z,322nm,0.8s,mb6.1,SNR=27						
ARU	**Arti**	**78.42**	**328**	*e*P	**P**	**23 39 09.3**	**-1.1**
	comp=Z,36nm,0.7s,mb5.2						
ARU	**Arti**	**78.42**	**328**	*d i*P	**P**	**23 39 09.2**	**-1.2**
ARU						23 39 18.0	
ARU				*e*		23 42 07.6	
ARU				*e*S	S	23 48 52.9	-4.7
ARU				SS	SS	23 53 56.5	-6.3
ARU				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.2						
VNDA	**Vanda**	**79.65**	**173**	P	**P**	**23 39 16.6**	**-0.2**
	comp=Z,4.9nm,0.8s,mb4.4,baz=323,slow=6.0,SNR=12						
SOKR	**Solikamsk**	**80.26**	**331**	*e*P	**P**	**23 39 19.9**	**-0.4**
SOKR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
MAW	**Mawson**	**80.47**	**201**	P	**P**	**23 39 21.3**	**+0.1**
	comp=Z,12nm,0.9s,mb4.7,baz=40,slow=5.5,SNR=5.3						
QRN	**Al-Qurain**	**80.73**	**299**	*e*P	**P**	**23 39 22.4**	**-1.2**
QRN				AMb	AMB	23 39 23.5	
	comp=Z,108nm,0.7s,mb5.8						
RDF	**Al-Radifah**	**81.06**	**299**	*e*P	**P**	**23 39 24.0**	**-1.3**
RDF				AMb	AMB	23 39 25.2	
	comp=Z,56nm,0.6s,mb5.6						
MIB	**Mutribah**	**81.33**	**300**	*e*P	**P**	**23 39 25.4**	**-1.3**
MIB				AMb	AMB	23 39 26.8	
	comp=Z,70nm,0.9s,mb5.5						
NAY	**Al-Naaiem**	**81.36**	**299**	*e*P	**P**	**23 39 25.4**	**-1.4**
NAY				AMb	AMB	23 39 26.7	
	comp=Z,49nm,0.7s,mb5.4						
TTA	**Tatalina**	**83.96**	**27**	*e*P	**P**	**23 39 41.2**	**+1.6**
DGRG	**David-gareji**	**83.98**	**312**	P	**P**	**23 39 41.4**	**+1.2**
MTA	**Mtatsminda**	**84.44**	**312**	P	**P**	**23 39 42.7**	**+0.2**
TBLG	**Delisi**	**84.48**	**312**	P	**P**	**23 39 42.9**	**+0.2**
GOR	**Gori**	**84.97**	**312**	P	**P**	**23 39 46.1**	**+1.0**
ZEI	**Tsey**	**85.19**	**313**	*e*P	**P**	**23 39 46.1**	**-0.1**
ZEI				*e*		23 43 06.3	
ZEI				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.6						
ONI	**Oni**	**85.50**	**313**	P	**P**	**23 39 48.8**	**+1.0**
IMA2	**Indian Mountai**	**85.55**	**24**	*e*P	**P**	**23 39 48.1**	**+0.6**
KIV	**Kislovodsk**	**86.15**	**314**	*e*P	**P**	**23 39 50.2**	**-0.8**
	comp=Z,19nm,1.0s,mb5.0						
KIV	**Kislovodsk**	**86.15**	**314**	⇑*e*P	**P**	**23 39 50.7**	**-0.3**
KIV				*e*		23 43 11.6	
KIV				*e*S	S	23 50 18.1	+0.9
KIV				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
SLKM	**Skilak Lake**	**86.29**	**29**	*e*P	**P**	**23 39 51.1**	**-0.1**
VRHR	**Novokhopersk**	**87.31**	**321**	*e*P	**P**	**23 39 54.7**	**-1.7**
VRHR				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.4						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
SOC	**Sochi**	**88.28**	**313**	*i* P	**P**	**23 40 00.6**	**-0.6**
MALT	**Malatya**	**89.15**	**308**	⇓P	**P**	**23 40 05.4**	**-0.1**
MALT	**Malatya**	**89.15**	**308**	⇓*i*P	**P**	**23 40 05.4**	**0.0**
SYO	**Syowa Base**	**89.16**	**201**	⇑*e*P	**P**	**23 40 03.0**	**-1.8**
QSPA	**South Pole Qui**	**89.91**	**180**	*e*P	**P**	**23 40 08.3**	**+0.2**
	comp=E,3.7nm,0.3s,mb5.0						
ANN	**Anapa**	**89.94**	**315**	*e*P	**P**	**23 40 07.1**	**-1.9**
ANN				*e*S	S	23 50 26.9	-26
ANN				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.4						
KMBO	**Kilima Mbogo**	**90.08**	**269**	P	**P**	**23 40 10.8**	**+0.5**
	comp=Z,7.1nm,0.9s,mb4.8,baz=54,slow=6.6,SNR=24						
OBN	**Obninsk**	**90.46**	**325**	*e*P	**P**	**23 40 09.5**	**-1.7**
	comp=Z,31nm,0.6s,mb5.6						
OBN	**Obninsk**	**90.46**	**325**	⇑*e*P	**P**	**23 40 09.4**	**-1.7**
OBN				*e*		23 43 46.6	
OBN				*e*S	S	23 50 41.8	-16
OBN				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.7						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s						
EGAK	**Eagle**	**90.67**	**25**	*e*P	**P**	**23 40 12.0**	**+0.1**
DAWY	**Dawson**	**91.46**	**26**	*e*P	**P**	**23 40 16.4**	**+0.7**
APA	**Apatity**	**91.53**	**337**	⇑*i*P	**P**	**23 40 17.4**	**+1.6**
APA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
JOF	**Joensuu**	**92.77**	**333**	*e*p	**P**	**23 40 19.4**	**-2.3**
	comp=Z,1.6nm,0.4s,mb4.7						
JOF	**Joensuu**	**92.77**	**333**	*e*P	**P**	**23 40 19.4**	**-2.3**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.8						
BRTR	**Keskin Array B**	**92.86**	**310**	P	**P**	**23 40 21.1**	**-1.5**
BRTR				PP	PP	23 44 07.9	+1.6
BRTR	**Keskin Array B**	**92.86**	**310**	P	**P**	**23 40 21.1**	**-1.5**
	comp=Z,3.4nm,0.9s,mb4.7,baz=99,slow=6.4,SNR=16						
BRTR				PP	PP	23 44 07.9	+1.6
	comp=Z,3.2nm,0.9s,baz=99,slow=7.6,SNR=11						
INK	**Inuvik**	**93.41**	**22**	*e*P	**P**	**23 40 24.2**	**-0.4**
KEV	**Kevo**	**93.60**	**340**	*e*p	**P**	**23 40 22.8**	**-2.6**
	comp=Z,0.7nm,0.3s,mb4.5						
KEV	**Kevo**	**93.60**	**340**	*e*P	**P**	**23 40 22.8**	**-2.6**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.6						
ARCES	**ARCESS Array B**	**94.16**	**340**	P	**P**	**23 40 26.4**	**-1.5**
	comp=Z,8.2nm,0.6s,mb5.2,baz=82,slow=6.8,SNR=62						
ARCES				PKiKP	PKiKP	23 45 10.6	-0.8
	comp=Z,1.8nm,0.9s,baz=95,slow=0.8,SNR=5.7						
SPB4	**Spitsbergen Ar**	**94.26**	**349**	*e*P	**P**	**23 40 28.6**	**+0.3**
AKASG	**Malin Array Be**	**95.17**	**321**	*i* P	**P**	**23 40 31.2**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**95.17**	**321**	P	**P**	**23 40 30.7**	**-2.2**
	comp=Z,0.7nm,0.4s,mb4.4,baz=75,slow=4.0,SNR=7.0						
AKASG				PP	PP	23 44 20.1	-3.7
	comp=Z,0.2nm,0.2s,baz=72,slow=7.0,SNR=2.5						
KAF	**Kangasniemi**	**95.18**	**332**	*e*p	**P**	**23 40 29.7**	**-3.1**
	comp=Z,1.9nm,0.4s,mb4.9,baz=76,slow=4.2						
KAF	**Kangasniemi**	**95.18**	**332**	*e*P	**P**	**23 40 29.7**	**-3.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.9						
FINES	**FINESS Array B**	**95.40**	**332**	*i* P	**P**	**23 40 31.8**	**-2.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**95.40**	**332**	P	**P**	**23 40 31.9**	**-1.9**
	comp=Z,2.9nm,0.6s,mb4.9,baz=67,slow=5.0,SNR=28						
FINES				PKiKP	PKiKP	23 45 13.3	-0.3
	comp=Z,0.8nm,0.7s,baz=104,slow=6.1,SNR=4.0						
VRI	**Vrincioaia**	**97.41**	**316**	⇑P	**P**	**23 40 42.7**	**-0.6**
VRI	**Vrincioaia**	**97.41**	**316**	⇑*i*P	**P**	**23 40 42.7**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**97.46**	**316**	⇑*i*P	**P**	**23 40 42.8**	**-0.7**
MLR	**Muntele Rosu**	**98.00**	**316**	⇓P	**P**	**23 40 44.5**	**-1.4**
MLR	**Muntele Rosu**	**98.00**	**316**	⇓*i*P	**P**	**23 40 44.5**	**-1.4**
BURAR	**Bucovina Array**	**98.18**	**318**	⇑P	**P**	**23 40 45.9**	**-0.8**
BURAR	**Bucovina Array**	**98.18**	**318**	⇑*i*P	**P**	**23 40 45.9**	**-0.8**
KWP	**Kalwaria**	**99.47**	**320**	*e*P	Pdif	23 40 52.3	0.0
KWP	**Kalwaria**	**99.47**	**320**	⇓*i*P	Pdif	23 40 51.5	-0.7
UZH	**Uzhgorod**	**99.93**	**319**	*d i*P	Pdif	23 40 54.0	-0.3
DRGR		**100.01**	**318**	⇓P	Pdif	23 40 53.9	-0.7
DRGR		**100.01**	**318**	⇓*i*P	Pdif	23 40 53.9	-0.7
IDI	**Anoyia**	**100.17**	**306**	PP	PP	23 45 03.2	+0.5
	comp=Z,2.5nm,0.8s,baz=102,slow=10,SNR=4.5						
IDI				PKiKP	PKiKP	23 45 23.0	0.0
	comp=Z,2.9nm,0.4s,baz=44,slow=6.0,SNR=16						
IDI				PKKPbc	PKKPbc	23 57 14.8	+0.6
	comp=Z,0.8nm,0.6s,baz=6.9,slow=9.3,SNR=5.4						
VTS	**Vitosha**	**100.40**	**313**	⇑P	Pdif	23 40 55.8	-0.6
VTS	**Vitosha**	**100.40**	**313**	⇑*i*P	Pdif	23 40 55.8	-0.6
BZS	**Buzias**	**100.98**	**317**	⇓P	Pdif	23 40 58.2	-0.7
BZS	**Buzias**	**100.98**	**317**	⇓*i*P	Pdif	23 40 58.2	-0.7
NB2	**NORSAR Subarra**	**102.39**	**333**	P	Pdif	23 41 03.0	-2.2
	comp=Z,2.9nm,0.6s,baz=69,slow=4.8						
NB2	**NORSAR Subarra**	**102.39**	**333**	P	Pdif	23 41 03.0	-2.2
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	**NORSAR Array B**	**102.39**	**333**	P	Pdif	23 41 03.3	-2.0
	comp=Z,2.6nm,0.6s,baz=69,slow=4.5,SNR=14						
NOA				PKiKP	PKiKP	23 45 28.1	+2.0
	comp=Z,1.0nm,0.7s,baz=75,slow=2.1,SNR=4.8						
YKA	**Yellowknife Ar**	**102.64**	**25**	P	Pdif	23 41 06.1	-0.2
YKA	**Yellowknife Ar**	**102.64**	**25**	P	Pdif	23 41 06.1	-0.2
	comp=Z,0.6nm,0.6s,baz=304,slow=4.6,SNR=5.8						
YKA				PKiKP	PKiKP	23 45 26.1	-0.5
	comp=Z,0.3nm,0.6s,baz=308,slow=1.8,SNR=4.8						
YKA				PKKPbc	PKKPbc	23 57 03.7	-4.3
	comp=Z,0.6nm,0.4s,baz=115,slow=2.8,SNR=9.8						
PKSM	**Moragy**	**102.88**	**318**	⇓*i*P	PKiKP	23 45 23.5	-4.0
GERES	**GERESS Array B**	**105.37**	**321**	Pdiff	Pdif	23 41 18.0	-0.5
	comp=Z,0.2nm,0.6s,baz=85,slow=5.6,SNR=3.6						
GERES				PKiKP	PKiKP	23 45 31.9	-0.1
	comp=Z,1.6nm,0.5s,baz=64,slow=1.8,SNR=16						
DAVOX	**Davos/Dischmat**	**108.49**	**320**	PKiKP	PKiKP	23 45 37.4	-0.4
	comp=Z,2.6nm,0.6s,baz=213,slow=4.6,SNR=4.8						
HINF	**Hinteralfeld**	**110.01**	**322**	*e*PKIKP	PKiKP	23 45 39.9	-0.8
	comp=Z,4.7nm,0.5s						
HAU	**Haudompre**	**110.25**	**322**	*e*PKIKP	PKiKP	23 45 40.4	-0.7
CABF	**La Chapelle**	**110.97**	**321**	*e*PKIKP	PKiKP	23 45 42.5	0.0
	comp=Z,14nm,0.7s						
LPG	**La Plagne**	**110.98**	**320**	*e*PKIKP	PKiKP	23 45 42.6	0.0
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**110.99**	**320**	*e*PKIKP	PKiKP	23 45 42.5	-0.1
	comp=Z,10nm,0.6s						
SBF	**Sospel**	**111.15**	**318**	*e*PKIKP	PKiKP	23 45 42.4	-0.6
	comp=Z,14nm,0.7s						
MBDF	**Montbardon**	**111.27**	**319**	*e*PKIKP	PKiKP	23 45 43.0	-0.2
	comp=Z,13nm,0.8s						
ORIF	**Oris-en-Rattie**	**111.78**	**319**	*e*PKIKP	PKiKP	23 45 43.7	-0.4
	comp=Z,12nm,0.9s						
FRF	**La Foret Royal**	**111.79**	**318**	*e*PKIKP	PKiKP	23 45 43.5	-0.7
EKA	**Eskdalemuir Ar**	**111.80**	**332**	PKiKP	PKiKP	23 45 43.9	0.0
	comp=Z,1.0nm,0.6s,baz=32,slow=3.6,SNR=5.4						
LMR	**La Mourre**	**111.97**	**317**	*e*PKIKP	PKiKP	23 45 44.7	+0.2
LOR	**Lormes**	**112.08**	**322**	*e*PKIKP	PKiKP	23 45 44.1	-0.5
SMRF	**Simiane la Rot**	**112.35**	**318**	*e*PKIKP	PKiKP	23 45 45.3	+0.1
SMF	**Signal de Mont**	**112.36**	**322**	*e*PKIKP	PKiKP	23 45 44.5	-0.7
SSF	**Saint Saulge**	**112.39**	**322**	*e*PKIKP	PKiKP	23 45 44.9	-0.3
	comp=Z,7.0nm,0.7s						
KEST	**Kesra**	**112.46**	**309**	PKiKP	PKiKP	23 45 46.2	+0.5
	comp=Z,1.0nm,0.6s,baz=254,slow=14,SNR=8.0						
VIVF	**Saint-Julien-l**	**112.59**	**320**	*e*PKIKP	PKiKP	23 45 45.3	-0.4
	comp=Z,12nm,0.7s						
BGF	**Bois d'Agland**	**113.02**	**322**	*e*PKIKP	PKiKP	23 45 46.3	-0.1
PDAR	**Pinedale Array**	**113.74**	**42**	PKiKP	PKiKP	23 45 48.5	+0.6
	comp=Z,0.3nm,0.6s,baz=142,slow=7.5,SNR=3.7						
PDAR				PKKPbc	PKKPbc	23 56 30.6	-1.7
	comp=Z,1.2nm,0.5s,baz=114,slow=5.6,SNR=12						
MFF	**Saint Martin d**	**114.83**	**323**	*e*PKIKP	PKiKP	23 45 49.4	-0.5
MTLF	**Montolieu**	**114.83**	**319**	*e*PKIKP	PKiKP	23 45 49.5	-0.5
	comp=Z,36nm,1.1s						
SGMF	**Saint Gilles**	**115.40**	**325**	*e*PKIKP	PKPdf	23 45 50.3	-0.7
	comp=Z,12nm,0.7s						
PV10	**Paradox Valley**	**115.82**	**47**	*e*PKPdf	PKPdf	23 45 52.4	+0.3
EPF	**Esparros**	**116.20**	**319**	*e*PKIKP	PKPdf	23 45 52.1	-0.6
PV01	**Paradox Valley**	**116.26**	**47**	PKPdf	PKPdf	23 45 52.9	0.0
ETSF	**Etsaut**	**116.85**	**319**	*e*PKIKP	PKPdf	23 45 54.4	+0.5
ULM	**Lac du Bonnet**	**117.92**	**30**	PKP	PKPdf	23 45 54.4	-1.4
	comp=Z,1.1nm,0.7s,baz=219,slow=3.7,SNR=3.4						
SDCO	**Great Sand Dun**	**118.63**	**46**	*e*PKPdf	PKPdf	23 45 57.6	+0.1
ANMO	**Albuquerque**	**119.05**	**49**	*e*PKPdf	PKPdf	23 45 58.0	-0.4
ANMO	**Albuquerque**	**119.05**	**49**	⇑*i*PKIKP	PKPdf	23 45 59.8	+1.4
ESDC	**Sonseca Array**	**120.64**	**318**	PKP	PKPdf	23 46 01.0	-0.3
	comp=Z,1.2nm,0.8s,baz=37,slow=1.3,SNR=4.5						
TXAR	**Lajitas Array**	**123.35**	**54**	PKP	PKPdf	23 46 07.0	+0.2
	comp=Z,0.7nm,0.8s,baz=320,slow=3.3,SNR=7.7						
TXAR				PKKPbc	PKKPbc	23 55 57.4	+0.2
	comp=Z,0.2nm,0.6s,baz=126,slow=4.4,SNR=4.4						
SCHQ	**Schefferville**	**124.15**	**10**	PKP	PKPdf	23 46 07.3	-0.3
	comp=Z,2.0nm,0.6s,baz=55,slow=19,SNR=6.7						
MDT	**Midelt**	**124.27**	**311**	PKP	PKPdf	23 46 09.0	+0.5
	comp=Z,3.7nm,0.6s,baz=98,slow=2.6,SNR=11						
TOA0	**Torodi Ar. Sit**	**124.59**	**286**	*e*PKPdf	PKPdf	23 46 09.1	-0.5
TORD	**Torodi Ar. Bea**	**124.59**	**286**	PKP	PKPdf	23 46 09.0	-0.5
TORD				PP	PP	23 48 00.2	+2.7
TORD				PKKPbc		23 55 53.2	
TORD	**Torodi Ar. Bea**	**124.59**	**286**	PKP	PKPdf	23 46 09.0	-0.5
	comp=Z,16nm,0.7s,baz=65,slow=1.7,SNR=150						
TORD				PP	PP	23 48 00.2	+2.7
	comp=Z,1.1nm,0.7s,baz=59,slow=3.7,SNR=3.5						
TORD				PKKPbc		23 55 53.2	
	comp=Z,3.4nm,0.7s,baz=281,slow=4.0,SNR=19						
WMOK	**Wichita Mounta**	**124.83**	**46**	*e*PKPdf	PKPdf	23 46 09.0	-0.5
JCT	**Junction City**	**125.98**	**51**	*e*PKPdf	PKPdf	23 46 11.8	0.0
KIC	**Kosan Boka**	**131.76**	**278**	*e*PKIKP	PKPdf	23 46 23.8	+0.5
	comp=Z,42nm,0.8s						
DBIC	**Dimbokro**	**131.84**	**279**	PKP	PKPdf	23 46 23.4	0.0
	comp=Z,7.6nm,0.7s,baz=117,slow=0.9,SNR=10						
TIC	**Toumodi**	**132.01**	**279**	*e*PKIKP	PKPdf	23 46 23.9	+0.1
	comp=Z,1.8nm,0.3s						
LIC	**Lamto**	**132.06**	**278**	*e*PKIKP	PKPdf	23 46 22.1	-1.8
	comp=Z,18nm,0.7s						
LIC	**Lamto**	**132.06**	**278**	*e*PKIKP	PKPdf	23 46 24.2	+0.3
	comp=Z,45nm,1.0s						
BRYW	**Bryant College**	**134.95**	**20**	PKPdf	PKPdf	23 46 26.2	-2.3
MGV	**Manicaragua**	**145.50**	**49**	*e*P	PKPdf	23 46 50.3	+2.2
JTS	**JuntasAbangare**	**146.31**	**71**	*e*PKPdf	PKPdf	23 46 50.2	+0.5
LCO	**Las Campanas**	**146.37**	**151**	*e*PKPdf	PKPdf	23 46 50.6	+1.2
LPAZ	**La Paz**	**157.74**	**137**	*e*PKPdf	PKPdf	23 47 08.1	+1.5
LPAZ				PKP	PKPdf	23 47 08.2	+1.7
LPAZ	**La Paz**	**157.74**	**137**	PKP	PKPdf	23 47 08.2	+1.7
	comp=Z,1.8nm,0.8s,baz=22,slow=3.6,SNR=5.4						

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*CSEM **08** 00:02:16.5±0.2, 38.07N×38.74E, h30km, MD2.6, Error ellipse: s-maj=6.1km s-min=3.9km az=93.0*
*ISK **08** 00:02:17.2, 38.02N×38.61E, h26km, MD2.6*
*ISCJB **08** 00:02:18.5±0.6, 38.07N±0.03×38.79E±0.05, h8km, Error ellipse: s-maj=5.6km s-min=4.4km az=174.7*
*DDA **08** 00:02:19.0, 38.04N×38.91E, h8km, Md2.6*
ISC 08 00:02:18.8±0.6**, 38.07N**±0.03×**38.78E**±0.06**, h7**km±11km**, n11, σ0.76**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.37**	**312**	PG	**Pg**	**00 02 25.1**	**-0.9**
MALT				SG	**Sg**	**00 02 30.4**	**-0.5**
MYA	**Malataya**	**0.38**	**313**	PG	**Pg**	**00 02 26.1**	**-0.1**
ELZG	**Elazig**	**0.46**	**21**	*i* P	**Pg**	**00 02 27.9**	**+0.2**
ELZG				*i* S	**Sg**	**00 02 35.8**	**+2.1**
ELZG	**Elazig**	**0.46**	**21**	*i* P	**Pg**	**00 02 27.8**	**+0.1**
ELZG				*i* S	**Sg**	**00 02 34.7**	**+1.0**
ELZG	**Elazig**	**0.46**	**21**	*i* P	**Pg**	**00 02 27.8**	**+0.1**
ELZG				*i* S	**Sg**	**00 02 35.8**	**+2.0**
URFA	**Urfa**	**0.63**	**177**	PG	**Pg**	**00 02 30.3**	**-0.6**
URFA				SG	**Sg**	**00 02 38.8**	**-0.2**
PTK	**Pertek**	**0.95**	**30**	*e*PG	**Pg**	**00 02 36.3**	**-0.9**
GZT	**Gaziantep**	**1.20**	**234**	*i* P	**Pg**	**00 02 42.6**	**+0.8**
GZT				*i* S	**Sg**	**00 02 58.0**	**+0.7**
GZT	**Gaziantep**	**1.20**	**234**	*i* P	**Pg**	**00 02 42.4**	**+0.6**
GZT				*i* S	**Sg**	**00 02 58.5**	**+1.1**
MARD	**Mardin**	**1.76**	**115**	*i* P	**Pn**	**00 02 49.1**	**-0.6**
MARD				*i* S	**Sn**	**00 03 12.0**	**-0.3**
MARD	**Mardin**	**1.76**	**115**	*i* P	**Pn**	**00 02 50.3**	**+0.6**
MARD				*i* S	**Sn**	**00 03 12.5**	**+0.2**

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*NEIC **08** 00:26:22.4, 37.57S×176.55E, h284km, MG4.2(WEL), After WEL.*
WEL 08 00:26:23.8±0.4**, 37.48S**×**176.49E, h266**km±3km**, ML4.1**/15**, 1C, Error ellipse: s-maj=5.5km s-min=4.9km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAZ	**Tarawera**	**0.75**	**179**	P	Pn	00 27 00.4	+1.1
TAZ	**Tarawera**	**0.75**	**179**	PN	Pn	00 26 59.9	+0.7
PATZ	**Paeroa**	**0.92**	**191**	P	Pn	00 27 00.9	+0.9
PATZ	**Paeroa**	**0.92**	**191**	PN	Pn	00 27 00.6	+0.6
URZ	**Urewera**	**0.92**	**148**	P	Pn	00 26 59.8	-0.2
URZ	**Urewera**	**0.92**	**148**	⇑PN	Pn	00 26 59.8	-0.2
URZ				SN	S	00 27 27.8	-0.8
MWZ	**Matawai**	**1.18**	**136**	PN	Pn	00 27 01.7	+0.3
MWZ				SN	S	00 27 31.5	+0.2
HATZ	**Hinemaiaia**	**1.45**	**192**	P	Pn	00 27 03.1	0.0
HATZ	**Hinemaiaia**	**1.45**	**192**	PN	Pn	00 27 03.1	0.0
MXZ	**Matakaoa Point**	**1.45**	**94**	PN	Pn	00 27 03.4	+0.2
MXZ				SN	S	00 27 33.4	-0.9
RATZ	**Rangitukua**	**1.50**	**202**	P	Pn	00 27 03.9	+0.4
RATZ	**Rangitukua**	**1.50**	**202**	PN	Pn	00 27 03.7	+0.2
PUZ	**Puketiti**	**1.52**	**113**	PN	Pn	00 27 03.9	+0.2
PUZ				SN	S	00 27 35.0	-0.2
KRVZ	**Karewarewa**	**1.75**	**202**	PN	Pn	00 27 05.4	0.0
WTVZ	**West Tongariro**	**1.78**	**203**	P	Pn	00 27 05.6	0.0
WTVZ	**West Tongariro**	**1.78**	**203**	PN	Pn	00 27 05.6	-0.1
TWVZ	**Taurewa**	**1.79**	**207**	P	Pn	00 27 05.8	+0.1
TWVZ	**Taurewa**	**1.79**	**207**	PN	Pn	00 27 05.8	0.0
KNZ	**Kokohu**	**1.80**	**149**	P	Pn	00 27 05.8	0.0
KNZ				S	S	00 27 38.7	-0.4
KNZ	**Kokohu**	**1.80**	**149**	PN	Pn	00 27 05.8	+0.1
KNZ				SN	S	00 27 38.7	-0.4
NGZ	**Ngauruhoe**	**1.83**	**202**	PN	Pn	00 27 06.3	+0.2
WPVZ	**Whakapapa**	**1.88**	**203**	P	Pn	00 27 06.4	0.0
WPVZ	**Whakapapa**	**1.88**	**203**	PN	Pn	00 27 06.4	0.0
TUVZ	**Tukino**	**1.90**	**200**	P	Pn	00 27 06.7	+0.1
TUVZ	**Tukino**	**1.90**	**200**	PN	Pn	00 27 06.7	+0.1
FWVZ	**Far West T-bar**	**1.92**	**202**	PN	Pn	00 27 07.1	+0.3
WNVZ	**Wahianoa**	**1.98**	**201**	P	Pn	00 27 07.2	0.0
WNVZ	**Wahianoa**	**1.98**	**201**	PN	Pn	00 27 07.2	-0.1
MOVZ	**Moawhango**	**2.01**	**197**	PN	Pn	00 27 07.0	-0.6
PKVZ	**Pokaka**	**2.02**	**206**	PN	Pn	00 27 07.3	-0.3
MTVZ	**Mangateitei**	**2.06**	**203**	PN	Pn	00 27 07.8	-0.2
VRZ	**Vera Road**	**2.13**	**219**	P	Pn	00 27 08.8	+0.1
VRZ	**Vera Road**	**2.13**	**219**	PN	Pn	00 27 08.8	+0.1
WAZ	**Wanganui**	**2.56**	**207**	P	Pn	00 27 12.0	-0.7
WAZ	**Wanganui**	**2.56**	**207**	PN	Pn	00 27 12.0	-0.6
PXZ	**Pawanui**	**2.56**	**174**	PN	Pn	00 27 12.2	-0.5
PXZ				SN	S	00 27 51.2	-0.4
NEZ	**North Egmont**	**2.60**	**226**	P	Pn	00 27 14.4	+1.4
PKE	**Pukeiti**	**2.61**	**228**	P	Pn	00 27 13.7	+0.5
PKE	**Pukeiti**	**2.61**	**228**	PN	Pn	00 27 13.7	+0.6
TSZ	**Takapari Road**	**2.61**	**189**	*e*P	Pn	00 27 11.0	-2.1
TSZ	**Takapari Road**	**2.61**	**189**	PN	Pn	00 27 12.1	-1.0
BFZ	**Birch Farm**	**3.20**	**183**	P	Pn	00 27 17.9	-1.4
BFZ	**Birch Farm**	**3.20**	**183**	PN	Pn	00 27 17.9	-1.4
MRZ	**Mangatainoka R**	**3.26**	**192**	P	Pn	00 27 18.0	-1.9
MRZ				S	S	00 28 02.0	-2.5
MRZ	**Mangatainoka R**	**3.26**	**192**	PN	Pn	00 27 18.0	-1.8
MRZ				SN	S	00 28 02.0	-2.5
TIWZ	**Tintock**	**3.33**	**188**	PN	Pn	00 27 19.1	-1.5
KIW	**Kapiti Island**	**3.59**	**200**	P	Pn	00 27 21.5	-2.1
KIW				S	S	00 28 07.8	-3.4
KIW	**Kapiti Island**	**3.59**	**200**	PN	Pn	00 27 21.5	-2.0
KIW				SN	S	00 28 07.8	-3.5
MTW	**Mount Morrison**	**3.75**	**191**	P	Pn	00 27 22.9	-2.5
MTW	**Mount Morrison**	**3.75**	**191**	PN	Pn	00 27 22.9	-2.4
DUWZ	**D'Urville Isla**	**3.87**	**210**	PN	Pn	00 27 24.2	-2.6
TRWZ	**Traveller**	**3.96**	**189**	PN	Pn	00 27 25.7	-2.0
PAWZ	**Paruwai Farm**	**3.98**	**192**	P	Pn	00 27 25.6	-2.4
PAWZ	**Paruwai Farm**	**3.98**	**192**	PN	Pn	00 27 25.6	-2.4
MRW	**Makara Radio**	**3.99**	**200**	P	Pn	00 27 25.6	-2.5
MRW	**Makara Radio**	**3.99**	**200**	PN	Pn	00 27 25.6	-2.5
WEL	**Wellington**	**4.03**	**199**	P	Pn	00 27 26.1	-2.4
WEL	**Wellington**	**4.03**	**199**	PN	Pn	00 27 26.1	-2.4
MSWZ	**Moikau Station**	**4.05**	**193**	P	Pn	00 27 26.1	-2.6
MSWZ	**Moikau Station**	**4.05**	**193**	PN	Pn	00 27 26.1	-2.6
SNZO	**South Karori**	**4.07**	**199**	P	Pn	00 27 26.3	-2.6
SNZO	**South Karori**	**4.07**	**199**	PN	Pn	00 27 26.3	-2.6
TCW	**Tory Channel**	**4.11**	**204**	P	Pn	00 27 26.9	-2.5
TCW	**Tory Channel**	**4.11**	**204**	PN	Pn	00 27 26.9	-2.4
BHW	**Baring Head**	**4.12**	**197**	P	Pn	00 27 26.9	-2.6
BHW	**Baring Head**	**4.12**	**197**	PN	Pn	00 27 26.9	-2.6
TUWZ	**Tuamarina**	**4.41**	**206**	PN	Pn	00 27 30.3	-2.6
NNZ	**Nelson**	**4.45**	**212**	*e*P	Pn	00 27 30.1	-3.2
NNZ	**Nelson**	**4.45**	**212**	PN	Pn	00 27 30.1	-3.3
QRZ	**Quartz Range**	**4.54**	**221**	P	Pn	00 27 30.6	-3.9
QRZ	**Quartz Range**	**4.54**	**221**	PN	Pn	00 27 30.6	-3.9
BSWZ	**Blackbirch Sta**	**4.69**	**205**	P	Pn	00 27 33.8	-2.4
BSWZ	**Blackbirch Sta**	**4.69**	**205**	PN	Pn	00 27 33.8	-2.4
THZ	**Tophouse**	**5.10**	**212**	*e*P	Pn	00 27 37.7	-3.4
THZ	**Tophouse**	**5.10**	**212**	PN	Pn	00 27 37.7	-3.3
KHZ	**Kahutara**	**5.43**	**204**	P	Pn	00 27 42.4	-2.7
KHZ	**Kahutara**	**5.43**	**204**	PN	Pn	00 27 42.4	-2.7
DSZ	**Denniston Nort**	**5.59**	**219**	*e*P	Pn	00 27 42.9	-4.2
DSZ	**Denniston Nort**	**5.59**	**219**	PN	Pn	00 27 42.9	-4.2
LTZ	**Lake Taylor**	**6.21**	**210**	P	Pn	00 27 50.7	-3.9
LTZ	**Lake Taylor**	**6.21**	**210**	PN	Pn	00 27 50.7	-3.9
MQZ	**McQueen's Vall**	**6.87**	**204**	*e*P	Pn	00 27 58.5	-4.4
MQZ	**McQueen's Vall**	**6.87**	**204**	PN	Pn	00 27 58.5	-4.4
WVZ	**Waitaha Valley**	**7.11**	**216**	PN	Pn	00 28 01.4	-4.4
ODZ	**Otahua Downs**	**8.74**	**208**	*e*P	Pn	00 28 23.0	-3.3
ODZ	**Otahua Downs**	**8.74**	**208**	PN	Pn	00 28 23.0	-3.2
JCZ	**Jackson Bay**	**8.82**	**219**	*e*P	Pn	00 28 22.7	-4.5
JCZ	**Jackson Bay**	**8.82**	**219**	PN	Pn	00 28 22.7	-4.5

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*ISCJB **08** 00:26:45.7±0.6, 39.29N±0.03×27.94E±0.07, h7km±9km, Error ellipse: s-maj=8.8km s-min=4.5km az=178.6*
*CSEM **08** 00:26:45.3±0.2, 39.27N×27.91E, h10km, MD2.7, Error ellipse: s-maj=6.6km s-min=3.9km az=86.0*
*ISK **08** 00:26:45.5, 39.28N×27.93E, h5km, MD2.7*
*DDA **08** 00:26:46.8, 39.29N×27.92E, h7km±3km, Md2.5*
ISC 08 00:26:46.1±0.6**, 39.29N**±0.03×**27.92E**±0.06**, h10**km±9km**, n10, σ0.58**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.35**	**355**	*e*PG	**Pg**	**00 26 53.6**	**+0.5**
BALB				*e*SG	**Sg**	**00 26 58.4**	**+0.6**
AKHS	**Akhisar**	**0.42**	**192**	*i* P	**Pg**	**00 26 54.2**	**-0.1**
AKHS				*i* S	**Sg**	**00 27 00.1**	**+0.2**
AKS	**Akhisar**	**0.42**	**192**	*e*PG	**Pg**	**00 26 54.4**	**+0.1**
BTOK	**Tokmak**	**0.48**	**10**	*i* P	**Pg**	**00 26 55.3**	**-0.2**
BTOK				*i* S	**Sg**	**00 27 00.9**	**-1.0**
AYVA	**Ayvalik**	**0.96**	**272**	*i* P	**Pg**	**00 27 04.8**	**+0.3**
AYVA				*i* S	**Sg**	**00 27 17.0**	**+0.1**
AYVA	**Ayvalik**	**0.96**	**272**	*i* P	**Pg**	**00 27 04.8**	**+0.3**
AYVA				*i* S	**Sg**	**00 27 17.0**	**0.0**
KULA	**Kula-Manisa**	**0.96**	**143**	*e*PG	**Pg**	**00 27 04.4**	**-0.3**
KULA				*e*SG	**Sg**	**00 27 17.3**	**+0.1**
KCT	**Karacabey**	**1.03**	**19**	PG	**Pg**	**00 27 05.5**	**-0.5**
BLCB	**Balcova**	**1.13**	**218**	*e*PN	**Pn**	**00 27 06.9**	**-1.1**
IZI	**Iznik**	**1.59**	**48**	*e*PN	**Pn**	**00 27 15.5**	**+1.2**

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*ISCJB **08** 00:30:41.3±0.6, 38.32N±0.04×21.74E±0.04, h3km±6km, Error ellipse: s-maj=6.0km s-min=4.6km az=9.8*
*CSEM **08** 00:30:42.4±0.1, 38.32N×21.76E, h2km, ML3.1, Error ellipse: s-maj=3.3km s-min=2.3km az=4.0*
*THE **08** 00:30:42.3, 38.39N×21.82E, h3km, ML3.1*
*ATH **08** 00:30:42.1, 38.28N×21.77E, h13km±2km, MD3.2/9, ML3.1*
*NEIC **08** 00:30:42.1, 38.28N×21.77E, h13km, ML3.1(ATH), After ATH.*
ISC 08 00:30:42.2±0.5**, 38.33N**±0.03×**21.75E**±0.03**, h7**km±6km**, n16, σ0.95**/23**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SELA	**Sela**	**0.12**	**118**	*e*Pg	**Pg**	**00 30 44.1**	**-0.8**
SELA				*e*Sg	**Sg**	**00 30 47.7**	**+1.0**
RLS	**Riolos of Patr**	**0.36**	**219**	*e*PB	**Pg**	**00 30 48.5**	**-0.6**
RLS				*e*SB	**Sg**	**00 30 54.0**	**+0.2**
EVR	**Evrytania**	**0.58**	**4**	*e*PB	**Pg**	**00 30 54.7**	**+1.3**
KFL	**Anninata**	**0.79**	**254**	*e*Pg	**Pg**	**00 30 58.6**	**+1.2**
VLS	**Valsamata**	**0.93**	**261**	*e*PG	**Pg**	**00 30 59.6**	**-0.4**
LKD	**Levkas**	**0.94**	**294**	*e*Pg	**Pg**	**00 31 00.6**	**+0.4**
LTK	**Loutraki**	**1.01**	**108**	*e*Pg	**Pg**	**00 31 00.4**	**-1.1**
LTK				*e*Sg	**Sg**	**00 31 15.1**	**+0.5**
LKR	**Lokris**	**1.03**	**72**	*e*PG	**Pg**	**00 31 01.0**	**-0.9**
LKR				*e*SB	**Sb**	**00 31 16.5**	**+0.5**
VLX	**Vlachokerasia**	**1.08**	**153**	*e*Pg	**Pg**	**00 31 03.4**	**+0.4**
VLX				*e*Sg	**Sg**	**00 31 18.6**	**+1.6**
ITM	**Ithomi**	**1.16**	**173**	*e*PG	**Pg**	**00 31 02.6**	**-1.8**
ITM				*e*SB	**Sb**	**00 31 19.3**	**-0.5**
DID	**Didima**	**1.44**	**125**	*e*Pg	**Pg**	**00 31 08.7**	**-1.0**
DID				*e*Sg	**Sg**	**00 31 29.1**	**+0.8**
NAIG	**Nisos Aigina**	**1.49**	**112**	*e*PG	**Pn**	**00 31 08.5**	**-0.8**
ATH	**Athens Observa**	**1.59**	**103**	*e*PG	**Pg**	**00 31 10.9**	**-1.8**
VLI	**Veliai**	**1.87**	**149**	*e*PN	**Pn**	**00 31 15.4**	**+0.9**
KEK	**Kerkira**	**2.05**	**313**	*e*PN	**Pb**	**00 31 19.4**	**-0.3**
APE	**Apeiranthos**	**3.25**	**112**	*e*PN	**Pn**	**00 31 34.5**	**+1.0**

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*IDC **08** 00:35:46.7±1.5, 20.74S×174.14W, h0km, mb4.2/6, mb1 4.4/6, mb1mx4.2/14, mbtmp4.2/6, MS4.0/2, Ms1 4.0/2, ms1mx3.4/21, Error ellipse: s-maj=74.5km s-min=24.1km az=147.0*
*ISCJB **08** 00:35:52.6±1.1, 19.8S±0.2×174.8W±0.2, h33km, mb4.3/7, Error ellipse: s-maj=40.2km s-min=8.6km az=41.2*
*NEIC **08** 00:35:53.5±0.9, 20.03S×174.55W, h35km, Error ellipse: s-maj=45.0km s-min=11.7km az=141.0*
ISC 08 00:35:54.1±1.1**, 19.9S**±0.2×**174.6W**±0.2**, h35**km**, n38, σ0.97**/14**, mb4.3**/7**, 3C-4D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.59**	**25**	Pn	**Pn**	**00 37 28.2**	**-0.3**
	10nm,0.3s,baz=294,slow=2.0,SNR=8.2						
AFI				Sn	**Sn**	**00 38 42.1**	**-0.3**
	4.7nm,0.3s,baz=74,slow=19,SNR=2.6						
RAR	**Rarotonga**	**13.97**	**98**	LR	LR	00 42 20.6	
	comp=Z,485nm,20.7s,baz=285,slow=29						
DZM	**Mont Dzumac**	**17.80**	**260**	P	**Pn**	**00 40 04.6**	**+5.5**
	0.5nm,0.3s,baz=83,slow=21,SNR=8.4						
STKA	**Stephens Creek**	**40.88**	**244**	P	**P**	**00 43 31.7**	**-1.2**
STKA	**Stephens Creek**	**40.88**	**244**	P	**P**	**00 43 31.7**	**-1.2**
	2.7nm,0.7s,mb4.0,baz=70,slow=7.7,SNR=6.5						
ASAR	**Alice Springs**	**47.73**	**256**	P	**P**	**00 44 27.1**	**-0.7**
	6.9nm,1.0s,mb4.6,baz=90,slow=8.3,SNR=40						
ASAR				PcP	PcP	00 45 56.9	+0.1
	1.6nm,0.9s,baz=110,slow=4.2,SNR=5.0						
WB2	**Warramunga Arr**	**47.80**	**261**	*e*P	**P**	**00 44 28.7**	**+0.3**
WRA	**Warramunga Arr**	**47.81**	**261**	P	**P**	**00 44 27.8**	**-0.7**
	4.5nm,1.0s,mb4.5,baz=93,slow=7.6,SNR=23						
WRA				LR	LR	01 01 23.6	
	comp=Z,235nm,20.7s,baz=0.0,slow=32						
FITZ	**Fitzroy Crossi**	**56.24**	**261**	*e*P	**P**	**00 45 33.0**	**+1.7**
	22nm,1.5s,mb5.0						
MJAR	**Matsushiro Arr**	**71.69**	**322**	P	**P**	**00 47 15.9**	**+3.5**
	2.3nm,0.6s,mb4.3,baz=157,slow=5.8,SNR=6.2						
MSU	**Marysvale**	**82.47**	**45**	*e*P	**P**	**00 48 14.0**	**+1.1**
PDAR	**Pinedale Array**	**86.41**	**42**	P	**P**	**00 48 32.0**	**-0.9**
	0.8nm,0.9s,mb4.0,baz=245,slow=5.9,SNR=5.9						
YKA	**Yellowknife Ar**	**94.70**	**24**	P	**P**	**00 49 11.5**	**+0.3**
YKA	**Yellowknife Ar**	**94.70**	**24**	P	**P**	**00 49 11.5**	**+0.3**
	0.4nm,0.7s,mb4.0,baz=238,slow=4.2,SNR=8.4						
MKAR	**Makanchi Array**	**113.12**	**313**	PKP	PKiKP	00 54 27.5	-0.2
	0.4nm,0.7s,baz=57,slow=2.9,SNR=7.7						
AKASG	**Malin Array Be**	**143.98**	**334**	PKP	PKPdf	00 55 24.3	-1.4
	3.5nm,0.7s,baz=41,slow=4.2,SNR=20						
MALT	**Malatya**	**146.06**	**310**	*e*PKPdf	PKPbc	00 55 33.0	+2.4
MALT	**Malatya**	**146.06**	**310**	⇓*i*P	PKPbc	00 55 33.6	+3.1
KWP	**Kalwaria**	**147.30**	**339**	⇑*i*P	PKPbc	00 55 35.0	+1.3
STHS	**Stebnicka Huta**	**147.96**	**340**	*e*PKP	PKPbc	00 55 28.3	-7.3
BURAR	**Bucovina Array**	**148.03**	**334**	⇑*i*P	PKPbc	00 55 38.5	+2.7
KOLS	**Kolonicke sedl**	**148.04**	**339**	*e*PKP	PKPdf	00 55 31.2	-1.4
CLL	**Collm**	**148.12**	**351**	*i* PKiKP	PKiKP	00 55 38.7	+1.0
CLL				*i* (sPKPab)		00 55 55.4	
BRG	**Berggiesshubel**	**148.40**	**350**	*e*(P)	PKPbc	00 55 38.4	+1.7
	6.0nm,1.3s						
DPC	**Dobruska-Polom**	**148.43**	**347**	*e*PKPbc	PKPbc	00 55 38.6	+1.8
PVCC	**Panska Ves**	**148.62**	**349**	*e*PKPbc	PKPbc	00 55 38.5	+1.3
TRPA	**Tarpa**	**148.63**	**338**	⇓*i*P	PKPbc	00 55 39.2	+1.8
VRI	**Vrincioaia**	**148.73**	**331**	⇓*i*P	PKPbc	00 55 38.9	+1.2
BRTR	**Keskin Array B**	**148.74**	**315**	PKPbc	PKPbc	00 55 38.9	+0.9
	2.6nm,0.9s,baz=120,slow=4.4,SNR=14						
KECS	**Kecovo**	**149.02**	**340**	*e*PKP	PKPdf	00 55 34.5	+0.3
VYHS	**Vyhne**	**149.51**	**342**	*e*PKP	PKPbc	00 55 40.1	+0.6
KOLL	**Kolacno**	**149.56**	**343**	*e*PKP	PKPbc	00 55 41.0	+1.3
TREC	**Trest**	**149.61**	**347**	*e*PKPbc	PKPbc	00 55 40.4	+0.6
SMOL	**Smolenice**	**149.88**	**344**	*e*PKP	PKPbc	00 55 42.2	+1.8
KHC	**Kasperske Hory**	**150.14**	**349**	*e*PKPbc	PKPbc	00 55 42.4	+1.3
GERES	**GERESS Array B**	**150.39**	**349**	PKP	PKPdf	00 55 35.9	-0.5
	0.8nm,1.1s,baz=303,slow=5.5,SNR=3.8						
GERES				PKPbc	PKPbc	00 55 42.6	+0.9
	1.7nm,0.9s,baz=45,slow=2.1,SNR=11						
BZS	**Buzias**	**151.09**	**336**	⇑*i*P	PKPbc	00 55 44.0	+0.6
PKSM	**Moragy**	**151.62**	**340**	⇓*i*P	PKPbc	00 55 45.7	+1.1

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*IDC **08** 00:42:48.8±0.8, 8.04S×75.62W, h0km, mb4.0/6, mb1 4.1/10, mb1mx4.0/18, mbtmp3.9/10, ML3.8/4, MS3.2/2, Ms1 3.2/2, ms1mx2.8/23, Error ellipse: s-maj=19.1km s-min=13.8km az=40.0*
*ISCJB **08** 00:42:52.5±1.4, 8.13S±0.07×75.58W±0.09, h43km±16km, mb4.1/7, Error ellipse: s-maj=16.2km s-min=10.7km az=160.5*
*NEIC **08** 00:42:54.6±1.1, 8.13S×75.55W, h45km±12km, Error ellipse: s-maj=16.3km s-min=10.6km az=75.0*
ISC 08 00:42:54.5±1.1**, 8.13S**±0.07×**75.60W**±0.09**, h44**km±13km**, n18, σ0.96**/16**, mb4.1**/7**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.99**	**292**	Pn	**Pn**	**00 43 38.5**	**-0.9**
	32nm,0.3s,baz=94,slow=7.8,SNR=40						
ATAH				Lg		00 44 18.6	
	26nm,0.3s,baz=267,slow=14,SNR=17						
NNA	**Nana**	**4.02**	**198**	Pn	**Pn**	**00 43 54.2**	**+0.6**
NNA				Sn	**Sn**	**00 44 39.8**	**+0.3**
NNA				Lg		00 44 58.9	
NNA	**Nana**	**4.02**	**198**	Pn	**Pn**	**00 43 54.2**	**+0.6**
	7.3nm,0.3s,baz=8.6,slow=8.4,SNR=17						
NNA				Sn	**Sn**	**00 44 39.8**	**+0.3**
	11nm,0.3s,baz=234,slow=18,SNR=2.4						
NNA				Lg		00 44 58.9	
	15nm,0.3s,baz=230,slow=15,SNR=4.1						
LPAZ	**La Paz**	**10.91**	**139**	Pn	**Pn**	**00 45 27.9**	**-0.2**
	0.1nm,0.3s,baz=327,slow=17,SNR=2.4						
LPAZ				Lg		00 48 34.7	
	0.2nm,0.3s,baz=150,slow=16,SNR=1.9						
ROSC	**El Rosal**	**12.96**	**6**	Pn	**Pn**	**00 45 57.5**	**+1.3**
	0.5nm,0.3s,baz=253,slow=19,SNR=2.0						
ROSC				Lg		00 49 50.5	
	0.5nm,0.3s,baz=287,slow=19,SNR=3.5						
ROSC				LR	LR	00 51 39.9	
	comp=Z,90nm,21.4s,baz=191,slow=41						
SIV	**San Ignacio**	**16.21**	**120**	Pn	**Pn**	**00 46 37.9**	**-1.4**
	0.7nm,0.3s,baz=300,slow=12,SNR=19						
SIV				Lg		00 51 14.4	
	0.2nm,0.3s,baz=275,slow=12,SNR=4.0						
PCRV	**Puerto La Cruz**	**21.21**	**31**	LR	LR	00 56 28.4	
	comp=Z,104nm,21.7s,baz=274,slow=39						
TXAR	**Lajitas Array**	**46.02**	**325**	P	**P**	**00 51 14.5**	**+0.5**
	0.9nm,0.5s,mb4.0,baz=149,slow=8.5,SNR=23						
PDAR	**Pinedale Array**	**59.36**	**331**	P	**P**	**00 52 52.6**	**+0.3**
	0.4nm,0.9s,mb3.5,baz=142,slow=7.6,SNR=2.7						
ULM	**Lac du Bonnet**	**60.76**	**345**	P	**P**	**00 53 01.1**	**-0.7**
	3.5nm,0.8s,mb4.6,baz=155,slow=4.6,SNR=8.1						
SCHQ	**Schefferville**	**63.16**	**6**	P	**P**	**00 53 15.3**	**-2.4**
	8.0nm,1.2s,mb4.7,baz=198,slow=9.6,SNR=2.5						
DBIC	**Dimbokro**	**72.06**	**80**	P	**P**	**00 54 15.8**	**+1.0**
	2.8nm,0.5s,mb4.5,baz=154,slow=5.1,SNR=9.3						
YKA	**Yellowknife Ar**	**76.54**	**343**	P	**P**	**00 54 39.7**	**-0.1**
YKA	**Yellowknife Ar**	**76.54**	**343**	P	**P**	**00 54 39.7**	**-0.1**
	0.4nm,0.5s,mb3.6,baz=136,slow=5.9,SNR=11						
TORD	**Torodi Ar. Bea**	**79.61**	**75**	P	**P**	**00 54 58.9**	**+1.0**
	0.5nm,0.6s,mb3.6,baz=285,slow=4.7,SNR=6.5						
ASAR	**Alice Springs**	**137.22**	**222**	PKP	PKPdf	01 02 14.3	+0.4
	0.4nm,0.6s,baz=162,slow=1.5,SNR=3.0						
WRA	**Warramunga Arr**	**139.42**	**226**	PKP	PKPdf	01 02 18.3	+0.2
	0.4nm,0.4s,baz=125,slow=1.9,SNR=7.2						
FITZ	**Fitzroy Crossi**	**146.54**	**219**	PKPbc	PKPbc	01 02 32.4	+0.2
	4.0nm,0.9s,baz=130,slow=10,SNR=5.8						

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*BJI **08** 00:47:18.6, 0.39S×127.02E, h71km, mB5.1, mb5.1, Ms4.6, Msz4.2*

ISCJB ***08*** *00:47:21.9±0.9, 0.01S±0.04×126.77E±0.04, h69km±8km, mb5.0/87, Error ellipse: s-maj=7.5km s-min=5.5km az=153.0*

IDC ***08*** *00:47:22.4±1.4, 0.04S×126.69E, h56km±10km, mb4.5/22, mb1 4.6/23, mb1mx4.5/25, mbtmp4.5/23, MS4.0/8, Ms1 4.0/8, ms1mx3.8/21, Error ellipse: s-maj=19.5km s-min=8.7km az=72.0*

GCMT ***08*** *00:47:23.8±0.3, 0.03S×126.93E, h57km±2km, MW5.0/70, Moment Tensor Solution. s33,c40; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.96±.22; $M_{\theta\theta}$-0.82±.14; $M_{\phi\phi}$2.78±.15; $M_{r\theta}$0.35±.11; $M_{\theta\phi}$2.36±.14; $M_{\phi r}$-2.56±.14; Best double couple: $M_0$4.21100×10^{16} NP1:ϕ_s243.00000°,δ41.00000°,λ-28.00000°. NP2: ϕ_s355.00000°,δ72.00000°,λ-127.00000°. Principal axes: T 4.6710, Plg19.0000°, Azm112.0000°; N -0.9200, Plg35.0000°, Azm8.0000°; P -3.7520, Plg49.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***08*** *00:47:23.8±1.1, 0.01S×126.71E, h71km±9km, mb5.2/29 Error ellipse: s-maj=7.0km s-min=4.0km az=62.0*

NEIC Felt [III] at Labuha, Indonesia.

MOS ***08*** *00:47:25.0±1.1, 0.01N×126.71E, h99km, mb5.1/28, Error ellipse: s-maj=12.6km s-min=5.8km az=115.4*

ISC 08 00:47:24.2±0.7**, 0.04S**±0.03×**126.77E**±0.04**, h75**km±7km**, h62**km±1.8km**:pP-P, n274,** σ1.08/265**, mb5.0**/87**, 13C-8D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.90**	**159**	P	**Pn**	**00 48 21.1**	**-0.6**
	599nm,0.6s						
PCI	**Palu**	**6.98**	**263**	P	**Pn**	**00 49 04.5**	**+0.6**
	352nm,1.0s						
TLE	**Tual**	**8.15**	**133**	⇑eP	**Pn**	**00 49 21.0**	**+1.1**
TLE	**Tual**	**8.15**	**133**	⇑eP	**Pn**	**00 49 21.0**	**+1.1**
KAPI	**Kappang**	**8.58**	**235**	Pn	**Pn**	**00 49 25.5**	**-0.1**
	902nm,1.3s,SNR=15						
BATI	**Kupang**	**10.57**	**197**	P	**Pn**	**00 49 57.6**	**+4.8**
	2.7nm,0.3s,baz=51,slow=6.6,SNR=2.9						
KKM	**Kota Kinabalu**	**12.14**	**300**	ePn	**Pn**	**00 50 13.0**	**-1.3**
NBBI	**Negara**	**14.66**	**235**	P	**Pn**	**00 50 51.7**	**+3.9**
	382nm,1.5s						
KRKI	**Karangkates**	**16.39**	**240**	P	**Pn**	**00 51 14.3**	**+4.6**
	282nm,1.1s						
KSM	**Kuching**	**16.52**	**275**	ePn	**Pn**	**00 51 10.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**17.99**	**183**	eP	**Pn**	**00 51 28.5**	**-0.8**
	74nm,1.9s						
FITZ	**Fitzroy Crossi**	**17.99**	**183**	P	**Pn**	**00 51 29.2**	**-0.1**
	1.1nm,0.3s,baz=21,slow=11,SNR=18						
FITZ				LR	LR	00 58 30.0	
	comp=Z,291nm,19.4s,baz=216,slow=37						
TPI	**Tanjungpandan**	**19.30**	**262**	P	**Pn**	**00 51 42.9**	**-2.2**
	86nm,1.5s						
LEM	**Lembang**	**20.26**	**250**	P	**P**	**00 51 54.9**	**+1.1**
	284nm,0.9s						
WRA	**Warramunga Arr**	**21.13**	**160**	P	**P**	**00 52 02.8**	**-0.2**
WRA				S	**S**	**00 55 53.5**	**-0.6**
WRA	**Warramunga Arr**	**21.13**	**160**	P	**P**	**00 52 02.8**	**-0.3**
	16nm,0.4s,mb4.8,baz=339,slow=11,SNR=228						
WRA				S	**S**	**00 55 53.5**	**-0.6**
	2.9nm,0.8s,baz=335,slow=15,SNR=5.7						
WRA				ScP	ScP	00 59 39.2	+2.0
	2.0nm,0.6s,baz=333,slow=2.5,SNR=9.6						
WB2	**Warramunga Arr**	**21.13**	**160**	eP	**P**	**00 52 02.8**	**-0.3**
WB2				eS	**S**	**00 55 54.5**	**+0.4**
COEN	**Coen**	**21.34**	**131**	eP	**P**	**00 52 05.4**	**0.0**
	25nm,0.7s,mb4.7						
COEN				eS	**S**	**00 55 57.5**	**-0.7**
SBJI	**Serang**	**21.47**	**253**	P	**P**	**00 52 08.7**	**+1.9**
	293nm,1.4s,mb5.4						
MBWA	**Marble Bar**	**22.09**	**198**	eP	**P**	**00 52 13.1**	**-0.3**
	23nm,0.6s,mb4.7						
PMG	**Port Moresby**	**22.33**	**115**	P	**P**	**00 52 18.1**	**+2.1**
PMG				eP		00 52 18.3	
PMG	**Port Moresby**	**22.33**	**115**	P	**P**	**00 52 18.1**	**+2.1**
	9.6nm,0.5s,mb4.4,baz=79,slow=2.5,SNR=5.5						
ASAR	**Alice Springs**	**24.49**	**164**	P	**P**	**00 52 37.2**	**+0.7**
	96nm,0.8s,mb5.2,baz=342,slow=9.5,SNR=354						
ASAR				ScP	ScP	00 59 47.4	+1.5
	1.5nm,0.7s,baz=347,slow=2.4,SNR=5.8						
NACB	**Ninganchiao**	**24.58**	**349**	P	**P**	**00 52 37.2**	**-0.1**
YHNB	**Yeheng**	**25.11**	**348**	eP	**P**	**00 52 41.0**	**-1.2**
QIZ	**Qiongzhong**	**25.20**	**320**	P	**P**	**00 52 44.5**	**+1.5**
QIZ				S	**S**	**00 57 00.3**	**-2.8**
QIZ				LR	LR		
	comp=N,291nm,24.8s						
QIZ				LR	LR		
	comp=E,258nm,22.7s						
QIZ	**Qiongzhong**	**25.20**	**320**	eP	**P**	**00 52 43.2**	**+0.2**
	comp=E,28nm,0.8s,mb4.8						
PPI	**Padang Panjang**	**26.37**	**269**	P	**P**	**00 52 52.8**	**-1.0**
	comp=E,57nm,1.6s,mb4.8						
GZH	**Guangzhou**	**26.43**	**331**	P	**P**	**00 52 54.3**	**+0.2**
KULM	**Kulim**	**26.61**	**282**	eP	**P**	**00 52 55.9**	**0.0**
JOW	**Kunigami**	**26.75**	**3**	P	**P**	**00 52 57.8**	**+0.8**
	comp=E,37nm,0.8s,mb5.0,baz=174,slow=10,SNR=6.0						
CTA	**Charters Tower**	**27.59**	**137**	P	**P**	**00 53 06.7**	**+2.1**
	comp=E,3.4nm,0.6s,mb4.1,baz=8.1,slow=7.1,SNR=4.0						
CTAO	**Charters Tower**	**27.59**	**137**	eP	**P**	**00 53 04.0**	**-0.6**
	comp=E,60nm,1.5s,mb4.9						
CTAO				epP	pP	00 53 20.8	-1.3
CTAO	**Charters Tower**	**27.59**	**137**	eP	**P**	**00 53 04.0**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,60nm,1.5s,mb4.9						
PSI	**Prapat**	**27.97**	**276**	P	**P**	**00 53 09.0**	**+0.9**
PSI	**Prapat**	**27.97**	**276**	P	**P**	**00 53 09.0**	**+0.9**
	comp=Z,11nm,0.8s,mb4.4,baz=122,slow=5.5,SNR=3.8						
FORT	**Forrest**	**30.60**	**178**	eP	**P**	**00 53 31.2**	**+0.1**
	comp=Z,41nm,0.6s,mb5.3						
CBIJ	**Chichi jima**	**30.78**	**28**	LR	LR	01 03 49.3	
	comp=Z,216nm,21.0s,baz=237,slow=32						
SSE	**Sheshan**	**31.41**	**351**	P	**P**	**00 53 40.4**	**+2.1**
SSE				AP	pP	00 53 55.3	-0.6
SSE				XP	sP	00 54 01.6	-3.0
SSE				S	**S**	**00 58 43.3**	**+2.7**
SSE				XS	sS	00 59 10.7	-0.2
SSE				AMB	AMB		
	comp=Z,34nm,0.9s,mb5.1						
SSE				AMB	AMB		
	comp=Z,67nm,4.2s						
SSE				LR	LR		
	comp=Z,103nm,17.1s						
SSE	**Sheshan**	**31.41**	**351**	P	**P**	**00 53 40.4**	**+2.1**
SSE				pP	pP	00 53 55.3	-0.6
SSE				sP	sP	00 54 01.6	-3.0
SSE				S	**S**	**00 58 43.3**	**+2.7**
SSE				sS	sS	00 59 10.7	-0.2
KLBR	**Kellerberrin**	**32.52**	**194**	eP	**P**	**00 53 48.1**	**+0.1**
	comp=Z,72nm,1.3s,mb5.3						
GYA	**Guiyang**	**32.69**	**325**	P	**P**	**00 53 52.2**	**+2.6**
GYA				AP	pP	00 54 07.2	-0.1
GYA				XP	sP	00 54 14.0	-2.0
GYA				PP	PP	00 55 03.0	-1.9
GYA				PCP	PcP	00 56 36.6	+2.7
GYA				S	**S**	**00 59 03.8**	**+3.1**
GYA				XS	sS	00 59 29.6	-1.5
GYA				SS	SS	01 01 04.7	-20
GYA				SCS	ScS	01 04 12.8	+1.3
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,160nm,6.4s						
GYA				LR	LR		
	comp=N,670nm,18.8s						
GYA				LR	LR		
	comp=E,680nm,18.9s						
GYA				LR	LR		
	comp=Z,760nm,19.2s						
NJ2	**Nanjing**	**32.78**	**348**	eP	**P**	**00 53 51.4**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
CHTO	**Chiang Mai**	**33.12**	**306**	eP	**P**	**00 53 52.3**	**-1.1**
	comp=Z,26nm,1.4s,mb4.9						
CHTO	**Chiang Mai**	**33.12**	**306**	eP	**P**	**00 53 52.3**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,26nm,1.4s,mb4.9						
CHTO	**Chiang Mai**	**33.12**	**306**	P	**P**	**00 53 53.2**	**-0.2**
	SNR=5.1						
CHTO	**Chiang Mai**	**33.12**	**306**	P	**P**	**00 53 53.2**	**-0.2**
	SNR=5.1						
CHTO	**Chiang Mai**	**33.12**	**306**	P	**P**	**00 53 53.2**	**-0.2**
	SNR=5.1						
CHTO	**Chiang Mai**	**33.12**	**306**	P	**P**	**00 53 53.2**	**-0.2**
	SNR=5.1						
CHTO	**Chiang Mai**	**33.12**	**306**	P	**P**	**00 53 53.2**	**-0.2**
	SNR=5.1						
MUN	**Mundaring**	**33.30**	**196**	eP	**P**	**00 53 54.8**	**0.0**
NWAO	**Narrogin (SRO)**	**33.93**	**194**	P	**P**	**00 54 00.2**	**0.0**
NWAO	**Narrogin (SRO)**	**33.93**	**194**	P	**P**	**00 54 00.2**	**0.0**
	comp=Z,11nm,0.6s,mb4.8,baz=5.1,slow=10,SNR=11						
KMI	**Kunming**	**34.14**	**319**	P	**P**	**00 54 04.9**	**+2.7**
KMI				AP	pP	00 54 19.5	-0.4
KMI				XP	sP	00 54 26.0	-2.6
KMI				PP	PP	00 55 21.8	+0.9
KMI				S	**S**	**00 59 26.4**	**+3.2**
KMI				XS	sS	00 59 53.8	+0.2
KMI				SS	SS	01 01 38.6	-15
KMI				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.6						
KMI				AMB	AMB		
	comp=Z,105nm,4.9s						
KMI				LR	LR		
	comp=N,217nm,19.5s						
KMI				LR	LR		
	comp=E,247nm,22.1s						
KMI				LR	LR		
	comp=Z,232nm,20.8s						
KMI	**Kunming**	**34.14**	**319**	P	**P**	**00 54 04.9**	**+2.7**
KMI				pP	pP	00 54 19.5	-0.4
KMI				sP	sP	00 54 26.0	-2.6
KMI				PP	PP	00 55 21.8	+0.9
KMI				S	**S**	**00 59 26.4**	**+3.2**
KMI				sS	sS	00 59 53.8	+0.2
KMI				SS	SS	01 01 38.6	-15
HNR	**Honiara**	**34.32**	**107**	P	**P**	**00 54 04.5**	**+0.5**
ENH	**Enshi**	**34.33**	**333**	P	**P**	**00 54 03.3**	**-0.5**
STKA	**Stephens Creek**	**34.64**	**157**	⇓iP	**P**	**00 54 07.1**	**+0.7**
	comp=Z,31nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**34.64**	**157**	P	**P**	**00 54 07.1**	**+0.7**
	comp=Z,28nm,0.8s,mb5.1,baz=330,slow=8.2,SNR=47						
STKA				ScP	ScP	01 00 20.2	+2.0
	comp=Z,2.4nm,0.9s,baz=330,slow=14,SNR=3.4						
STKA				LR	LR	01 10 18.3	
	comp=Z,263nm,18.3s,baz=154,slow=40						
KSRS	**Korea Array**	**37.32**	**2**	P	**P**	**00 54 29.7**	**+0.5**
	comp=Z,9.3nm,0.9s,mb4.7,baz=181,slow=10,SNR=21						
CD2	**Chengdu**	**37.74**	**327**	⇑iP	**P**	**00 54 32.6**	**-0.3**
CD2				AP	pP	00 54 47.8	-3.1
CD2				XP	sP	00 54 55.0	-4.5
CD2				PP	PP	00 56 03.3	+2.8
CD2				PCP	PcP	00 56 48.7	+0.1
CD2				S	**S**	**01 00 18.7**	**+0.6**
CD2				SCS	ScS	01 04 37.2	-1.4
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
CD2				AMB	AMB		
	comp=Z,80nm,4.8s						
CD2				LR	LR		
	comp=N,120nm,15.6s						
CD2				LR	LR		
	comp=E,230nm,14.4s						
CD2				LR	LR		
	comp=Z,90nm,12.0s						
XAN	**Xi'an**	**37.80**	**335**	P	**P**	**00 54 32.1**	**-1.3**
XAN				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**37.91**	**15**	P	**P**	**00 54 32.8**	**-1.5**
	comp=Z,2.4nm,0.5s,mb4.3,baz=188,slow=9.3,SNR=8.1						
MJAR				ScP	ScP	01 00 32.6	+2.4
	comp=Z,1.2nm,0.7s,baz=169,slow=5.4,SNR=4.4						
MJAR				LR	LR	01 07 01.1	
	comp=Z,116nm,20.6s,baz=190,slow=31						
MAJO	**Matsushiro**	**37.91**	**15**	eP	**P**	**00 54 33.7**	**-0.5**
MAT	**Matsushiro**	**37.91**	**15**	P	**P**	**00 54 32.3**	**-1.9**
MAT				eS	**S**	**01 00 22.6**	**+2.1**
BJT	**Baijiatuau**	**41.02**	**348**	eP	**P**	**00 55 00.1**	**+0.1**
BJI	**Beijing**	**41.04**	**348**	P	**P**	**00 55 00.1**	**-0.1**
BJI				S	**S**	**01 01 06.3**	**-1.0**
BJI				SS	SS	01 04 12.3	-0.1
BJI				AMB	AMB		
	comp=Z,64nm,0.9s,mb5.5						
BJI				LR	LR		
	comp=N,179nm,10.2s						
BJI				LR	LR		
	comp=E,177nm,9.4s						
BJI				LR	LR		
	comp=Z,167nm,36.3s						
SNY	**Shenyang**	**41.77**	**356**	⇓P	**P**	**00 55 01.9**	**-4.3**
SNY				S	**S**	**01 01 16.0**	**-2.1**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.9						
SNY				LR	LR		
	comp=N,387nm,23.1s						
SNY				LR	LR		
	comp=E,166nm,9.3s						
SNY				LR	LR		
	comp=Z,138nm,13.8s						
LZH	**Lanzhou**	**41.78**	**332**	⇑P	**P**	**00 55 07.0**	**+0.6**
LZH				AP	pP	00 55 22.9	-1.7
LZH				XP	sP	00 55 30.2	-2.9
LZH				PP	PP	00 56 49.3	+4.9
LZH				PCP	PcP	00 57 02.5	+1.1
LZH				SCP	ScP	01 00 47.0	+1.7
LZH				PCS	PcS	01 00 53.2	+0.2
LZH				S	**S**	**01 01 21.7**	**+3.3**
LZH				XS	sS	01 01 47.5	-2.0
LZH				SS	SS	01 04 24.6	-2.5
LZH				SCS	ScS	01 05 02.8	+0.5
LZH				AMB	AMB		
	comp=Z,82nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,265nm,5.1s						
LZH				LR	LR		
	comp=N,1μm,14.5s						
LZH				LR	LR		
	comp=Z,2μm,17.6s						
LZH	**Lanzhou**	**41.78**	**332**	⇑P	**P**	**00 55 07.0**	**+0.6**
LZH				pP	pP	00 55 22.9	-1.7
LZH				sP	sP	00 55 30.2	-2.9
LZH				PP	PP	00 56 49.3	+4.9
LZH				PcP	PcP	00 57 02.5	+1.1
LZH				ScP	ScP	01 00 47.0	+1.7
LZH				PcS	PcS	01 00 53.2	+0.2
LZH				S	**S**	**01 01 21.7**	**+3.3**
LZH				sS	sS	01 01 47.5	-2.0
LZH				SS	SS	01 04 24.6	-2.5
LZH				ScS	ScS	01 05 02.8	+0.5
LZH	**Lanzhou**	**41.78**	**332**	⇑P	**P**	**00 55 07.0**	**+0.6**
LZH				*SP	sP	00 55 30.2	-2.9
LZH						00 56 49.3	
LZH						00 57 02.5	
LZH				S	**S**	**01 01 21.7**	**+3.3**
LZH				SS	SS	01 04 24.6	-2.5
LZH						01 05 02.8	
CN2	**Changchun**	**43.66**	**359**	eP	**P**	**00 55 25.0**	**+3.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
MDJ	**Mudanjiang**	**44.53**	**3**	P	**P**	**00 55 28.8**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,22nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,112nm,6.3s						
MDJ	**Mudanjiang**	**44.53**	**3**	eP	**P**	**00 55 28.6**	**+0.2**
	comp=Z,20nm,0.9s,mb4.8						
LSA	**Lhasa**	**45.01**	**314**	P	**P**	**00 55 32.6**	**+0.1**
LSA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
LSA	**Lhasa**	**45.01**	**314**	eP	**P**	**00 55 33.3**	**+0.8**
	comp=Z,17nm,0.8s,mb4.8						
LSA	**Lhasa**	**45.01**	**314**	eP	**P**	**00 55 33.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
TAPN	**Taplejung**	**46.34**	**309**	eP	**P**	**00 55 41.3**	**-1.7**
	comp=Z,41nm,0.9s,mb5.2						
ODAN	**Odare**	**46.35**	**308**	eP	**P**	**00 55 42.4**	**-0.7**
	comp=Z,45nm,0.8s,mb5.2						
GTA	**Gaotai**	**46.36**	**331**	eP	**P**	**00 55 43.3**	**+0.4**
GTA				AP	pP	00 55 59.0	-2.4
GTA				XP	sP	00 56 06.0	-3.9
GTA				PCP	PcP	00 57 18.4	+1.5
GTA				PP	PP	00 57 32.1	-1.0
GTA				SCP	ScP	01 01 06.4	+2.5
GTA				PCS	PcS	01 01 10.5	-1.1
GTA				S	**S**	**01 02 24.9**	**0.0**
GTA				SCS	ScS	01 05 32.2	+1.1
GTA				SS	SS	01 05 43.0	-8.5
GTA				AMB	AMB		
	comp=Z,31nm,1.0s,mb5.0						
GTA				AMB	AMB		
	comp=Z,204nm,7.2s						
GTA				LR	LR		
	comp=N,95nm,18.2s						
GTA				LR	LR		
	comp=E,152nm,16.0s						
GTA				LR	LR		
	comp=Z,223nm,18.7s						
PALK	**Pallekele**	**46.51**	**280**	eP	**P**	**00 55 44.3**	**-0.2**
JIRN	**Jiri**	**47.67**	**309**	eP	**P**	**00 55 53.0**	**-0.4**
	comp=Z,77nm,1.0s,mb5.5						
KKN	**Kakani**	**48.44**	**308**	eP	**P**	**00 55 58.8**	**-0.5**
YSS	**Yuzh-Sakhalins**	**48.84**	**15**	eP	**P**	**00 56 01.5**	**-0.6**
YSS				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
GKN	**Gorkha**	**49.04**	**308**	eP	**P**	**00 56 02.9**	**-1.0**
	comp=Z,34nm,0.7s,mb5.4						
KLR	**Kul'dur**	**49.26**	**4**	eP	**P**	**00 56 01.8**	**-3.4**
HIA	**Hailar**	**49.48**	**354**	eP	**P**	**00 56 07.0**	**+0.1**
HYB	**Hyderabad**	**50.51**	**293**	eP	**P**	**00 56 14.5**	**-0.7**
HYB	**Hyderabad**	**50.51**	**293**	i P	**P**	**00 56 14.5**	**-0.7**
HYB				e		00 56 25.5	
ULN	**Ulaanbaatar**	**50.70**	**343**	eP	**P**	**00 56 16.5**	**+0.4**
	comp=Z,30nm,0.9s,mb5.3						
ULN	**Ulaanbaatar**	**50.70**	**343**	⇑eP	**P**	**00 56 16.6**	**+0.5**
ULN	**Ulaanbaatar**	**50.70**	**343**	P	**P**	**00 56 17.2**	**+1.1**
	SNR=19						
ULN	**Ulaanbaatar**	**50.70**	**343**	P	**P**	**00 56 17.2**	**+1.1**
	SNR=19						
SONM	**Songino Array**	**50.86**	**342**	P	**P**	**00 56 18.0**	**+0.6**
	comp=Z,29nm,1.0s,mb5.3,baz=165,slow=4.6,SNR=103						
SONM				ScP	ScP	01 01 24.0	+1.2
	comp=Z,0.9nm,0.9s,baz=147,slow=5.4,SNR=3.9						
CIT	**Chita**	**53.05**	**350**	eP	**P**	**00 56 33.2**	**-0.3**
CIT				e		00 57 07.4	
CIT				e		00 57 41.4	
CIT				e		00 58 36.6	
CIT				e		00 59 46.8	
CIT				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.1						
ZAK	**Zakamensk**	**54.08**	**342**	eP	**P**	**00 56 41.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.6**	**+1.1**
	comp=Z,129nm,0.8s,mb6.0,SNR=7.0						
TLY	**Talaya**	**55.10**	**343**	eP	**P**	**00 56 49.1**	**+0.6**
TLY	**Talaya**	**55.10**	**343**	eP	**P**	**00 56 49.3**	**+0.8**
TLY				e		00 58 59.8	
TLY				eS	**S**	**01 04 38.9**	**+13**
TLY				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.2						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.8**	**+1.4**
	SNR=11						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.8**	**+1.4**
	SNR=11						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.8**	**+1.4**
	SNR=11						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.8**	**+1.4**
	SNR=11						
TLY	**Talaya**	**55.10**	**343**	P	**P**	**00 56 49.8**	**+1.4**
	SNR=11						
NDI	**New Delhi**	**55.27**	**306**	eP	**P**	**00 56 46.0**	**-4.1**
IRK	**Irkutsk**	**55.41**	**343**	eP	**P**	**00 56 51.0**	**+0.3**
IRK				e		01 00 13.8	
IRK				pmax	pmax		
	comp=Z,34nm,1.7s,mb5.1						
WMQ	**Urumqi**	**55.84**	**327**	⇓iP	**P**	**00 56 54.8**	**+0.9**
WMQ				AP	pP	00 57 09.3	-3.6
WMQ				PCP	PcP	00 57 52.8	+0.8
WMQ				PP	PP	00 59 01.2	+1.9
WMQ				SCP	ScP	01 01 45.8	+1.1
WMQ				S	**S**	**01 04 36.8**	**+1.2**
WMQ				AMB	AMB		
	comp=Z,91nm,1.2s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,32nm,7.6s						
WMQ				LR	LR		
	comp=N,102nm,22.6s						
WMQ				LR	LR		
	comp=E,117nm,23.2s						
WMQ				LR	LR		
	comp=Z,140nm,25.1s						
MOY	**Mondy**	**55.92**	**341**	eP	**P**	**00 56 54.9**	**+0.6**
MOY				pmax	pmax		
	comp=Z,47nm,1.9s,mb5.2						
DLH	**Dalhousie**	**57.76**	**309**	ex	**P**	**00 57 07.0**	**-0.7**
THN	**Thein Dam**	**57.91**	**309**	ex	**P**	**00 57 07.9**	**-0.9**
BOD	**Bodaibo**	**58.57**	**352**	⇓iP	**P**	**00 57 12.8**	**-0.1**
BOD				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.9						
MK31	**Makanchi Array**	**60.67**	**326**	i P	**P**	**00 57 27.6**	**0.0**
MK31				pmax	pmax		
	comp=Z,21nm,0.4s,mb5.5						
MKAR	**Makanchi Array**	**60.67**	**326**	P	**P**	**00 57 28.0**	**+0.4**
MKAR				ScP	ScP	01 02 08.3	+2.3
MKAR				LR	LR	01 25 41.4	
MKAR	**Makanchi Array**	**60.67**	**326**	⇑eP	**P**	**00 57 28.0**	**+0.4**
MKAR	**Makanchi Array**	**60.67**	**326**	P	**P**	**00 57 28.0**	**+0.4**
	comp=Z,17nm,0.4s,mb5.5,baz=120,slow=7.3,SNR=411						
MKAR				ScP	ScP	01 02 08.3	+2.3
	comp=Z,0.5nm,0.6s,baz=104,slow=5.1,SNR=3.5						
MKAR				LR	LR	01 25 41.4	
	comp=Z,105nm,19.0s,baz=134,slow=38						
KSH	**Kashi**	**60.75**	**317**	i P	**P**	**00 57 30.4**	**+2.1**
KSH				ePCP	PcP	00 58 13.4	+1.8
KSH				PP	PP	00 59 45.3	+2.3
KSH				ePCS	PcS	01 02 13.4	-0.8
KSH				S	**S**	**01 05 46.2**	**+6.4**
YAK	**Yakutsk**	**61.95**	**2**	eP	**P**	**00 57 35.7**	**-0.1**
	comp=Z,17nm,0.4s,mb5.4						
YAK	**Yakutsk**	**61.95**	**2**	d iP	**P**	**00 57 35.4**	**-0.5**
YAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.3						
MA2	**Magadan**	**62.33**	**14**	eP	**P**	**00 57 38.6**	**+0.1**
MA2				e		00 57 49.9	
MA2	**Magadan**	**62.33**	**14**	⇑eP	**P**	**00 57 39.0**	**+0.5**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
KZA	**Kyzart**	**62.43**	**319**	P	**P**	**00 57 41.9**	**+2.4**
	SNR=35						
TKM2	**Tokmak 2**	**62.60**	**320**	eP	**P**	**00 57 41.6**	**+0.9**
	comp=Z,19nm,0.8s,mb5.1						
TKM2	**Tokmak 2**	**62.60**	**320**	i P	**P**	**00 57 39.5**	**-1.1**
TKM2				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.3						
TKM2	**Tokmak 2**	**62.60**	**320**	P	**P**	**00 57 41.8**	**+1.2**
	SNR=22						
KBK	**Karagaybulak**	**62.90**	**319**	P	**P**	**00 57 44.1**	**+1.4**
	SNR=16						
UCH	**Uchtor**	**62.98**	**319**	eP	**P**	**00 57 44.9**	**+1.7**
	comp=Z,898nm,0.9s						
UCH				epP	pP	00 58 00.3	-2.3
UCH	**Uchtor**	**62.98**	**319**	P	**P**	**00 57 45.0**	**+1.8**
	SNR=38						
AAK	**Ala-Archa**	**63.18**	**319**	P	**P**	**00 57 44.4**	**-0.1**
	comp=Z,129nm,1.4s,mb5.7,SNR=6.8						
AAK	**Ala-Archa**	**63.18**	**319**	eP	**P**	**00 57 44.3**	**-0.2**
	comp=Z,52nm,1.4s,mb5.3						
AAK	**Ala-Archa**	**63.18**	**319**	eP	**P**	**00 57 44.3**	**-0.2**
AAK				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.3						
AAK	**Ala-Archa**	**63.18**	**319**	P	**P**	**00 57 45.1**	**+0.6**
	SNR=15						
AAK	**Ala-Archa**	**63.18**	**319**	P	**P**	**00 57 45.1**	**+0.6**
	SNR=15						
AAK	**Ala-Archa**	**63.18**	**319**	P	**P**	**00 57 45.1**	**+0.6**
	SNR=15						
AAK	**Ala-Archa**	**63.18**	**319**	P	**P**	**00 57 45.6**	**+1.1**
	SNR=15						
CHMS	**Chumysh**	**63.19**	**320**	P	**P**	**00 57 45.5**	**+1.0**
	SNR=6.0						
FRU	**Bishkek**	**63.20**	**319**	eP	**P**	**00 57 45.0**	**+0.4**
FRU				pmax	pmax		
	comp=Z,90nm,2.2s,mb5.3						
USP	**Ospenovka**	**63.47**	**320**	P	**P**	**00 57 47.6**	**+1.2**
	SNR=28						
AML	**Almayashu**	**63.48**	**318**	eP	**P**	**00 57 47.8**	**+1.3**
	comp=Z,77nm,1.1s,mb5.5						
AML	**Almayashu**	**63.48**	**318**	P	**P**	**00 57 48.1**	**+1.6**
	SNR=19						
EKS2	**Erkin-Say**	**63.66**	**319**	eP	**P**	**00 57 48.6**	**+0.9**
	comp=Z,52nm,1.2s,mb5.2						
EKS2	**Erkin-Say**	**63.66**	**319**	P	**P**	**00 57 48.3**	**+0.6**
	SNR=19						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**63.87**	**309**	*e*P	**P**	**00 57 49.8**	**+0.7**
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 55.2**	**-0.6**
	comp=Z,447nm,0.6s,SNR=54						
KURK	**Kurchatov**	**64.93**	**328**	*e*P	**P**	**00 57 55.8**	**0.0**
	comp=Z,66nm,0.9s,mb5.5						
KURK	**Kurchatov**	**64.93**	**328**	⇑*e*P	**P**	**00 57 55.7**	**-0.1**
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 56.0**	**+0.2**
	SNR=32						
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 56.0**	**+0.2**
	SNR=32						
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 56.0**	**+0.2**
	SNR=32						
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 56.0**	**+0.2**
	SNR=32						
KURK	**Kurchatov**	**64.93**	**328**	P	**P**	**00 57 56.0**	**+0.2**
	SNR=32						
NVS	**Novosibirsk**	**65.24**	**334**	*e*P	**P**	**00 57 55.5**	**-2.2**
NVS				*e*S	S	01 06 33.8	-1.4
NVS				pmax	pmax		
	comp=N,24nm,1.4s						
NVS				pmax	pmax		
	comp=E,23nm,1.4s						
NVS				pmax	pmax		
	comp=Z,38nm,1.4s,mb5.0						
NVS				smax			
	comp=N,13nm,1.8s						
NVS				smax			
	comp=E,15nm,1.8s						
KK31	**Karatay Array**	**66.02**	**318**	*i* P	**P**	**00 58 02.6**	**-0.4**
KK31				pmax	pmax		
	comp=Z,62nm,1.1s,mb5.3						
WBK	**Wadi Bani Khal**	**69.58**	**294**	P	**P**	**00 58 26.7**	**+1.0**
	SNR=5.2						
WBK	**Wadi Bani Khal**	**69.58**	**294**	P	**P**	**00 58 26.7**	**+1.0**
	SNR=5.2						
WBK	**Wadi Bani Khal**	**69.58**	**294**	P	**P**	**00 58 26.7**	**+1.0**
	SNR=5.2						
WBK	**Wadi Bani Khal**	**69.58**	**294**	P	**P**	**00 58 26.7**	**+1.0**
	SNR=5.2						
WBK	**Wadi Bani Khal**	**69.58**	**294**	P	**P**	**00 58 26.7**	**+1.0**
	SNR=5.2						
JMDO	**Jabal Madar**	**70.33**	**294**	P	**P**	**00 58 31.1**	**+0.7**
	SNR=10						
JMDO	**Jabal Madar**	**70.33**	**294**	P	**P**	**00 58 31.1**	**+0.7**
	SNR=10						
JMDO	**Jabal Madar**	**70.33**	**294**	P	**P**	**00 58 31.1**	**+0.7**
	SNR=10						
JMDO	**Jabal Madar**	**70.33**	**294**	P	**P**	**00 58 31.1**	**+0.7**
	SNR=10						
JMDO	**Jabal Madar**	**70.33**	**294**	P	**P**	**00 58 31.1**	**+0.7**
	SNR=10						
BIDO	**Bidbid**	**70.48**	**295**	P	**P**	**00 58 32.1**	**+0.8**
	SNR=9.7						
BIDO	**Bidbid**	**70.48**	**295**	P	**P**	**00 58 32.1**	**+0.8**
	SNR=9.7						
BIDO	**Bidbid**	**70.48**	**295**	P	**P**	**00 58 32.1**	**+0.8**
	SNR=9.7						
BIDO	**Bidbid**	**70.48**	**295**	P	**P**	**00 58 32.1**	**+0.8**
	SNR=9.7						
BIDO	**Bidbid**	**70.48**	**295**	P	**P**	**00 58 32.1**	**+0.8**
	SNR=9.7						
SMDO	**Samad**	**70.48**	**294**	P	**P**	**00 58 32.0**	**+0.7**
	SNR=5.1						
SMDO	**Samad**	**70.48**	**294**	P	**P**	**00 58 32.0**	**+0.7**
	SNR=5.1						
SMDO	**Samad**	**70.48**	**294**	P	**P**	**00 58 32.0**	**+0.7**
	SNR=5.1						
SMDO	**Samad**	**70.48**	**294**	P	**P**	**00 58 32.0**	**+0.7**
	SNR=5.1						
SMDO	**Samad**	**70.48**	**294**	P	**P**	**00 58 32.0**	**+0.7**
	SNR=5.1						
BRVK	**Borovoye**	**70.56**	**328**	P	**P**	**00 58 31.4**	**+0.2**
	comp=Z,134nm,1.0s,mb5.7,SNR=22						
BRVK	**Borovoye**	**70.56**	**328**	*e*P	**P**	**00 58 30.9**	**-0.2**
	comp=Z,30nm,1.1s,mb5.0						
BRVK	**Borovoye**	**70.56**	**328**	*e*P	**P**	**00 58 30.9**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
BRVK	**Borovoye**	**70.56**	**328**	P	**P**	**00 58 31.4**	**+0.2**
	SNR=17						
BRVK	**Borovoye**	**70.56**	**328**	P	**P**	**00 58 31.4**	**+0.2**
	SNR=17						
BRVK	**Borovoye**	**70.56**	**328**	P	**P**	**00 58 31.4**	**+0.2**
	SNR=17						
BRVK	**Borovoye**	**70.56**	**328**	P	**P**	**00 58 31.4**	**+0.2**
	SNR=17						
BSY	**Bisya**	**71.21**	**294**	P	**P**	**00 58 36.4**	**+0.6**
	SNR=10						
BSY	**Bisya**	**71.21**	**294**	P	**P**	**00 58 36.4**	**+0.6**
	SNR=10						
BSY	**Bisya**	**71.21**	**294**	P	**P**	**00 58 36.4**	**+0.6**
	SNR=10						
BSY	**Bisya**	**71.21**	**294**	P	**P**	**00 58 36.4**	**+0.6**
	SNR=10						
BSY	**Bisya**	**71.21**	**294**	P	**P**	**00 58 36.4**	**+0.6**
	SNR=10						
HOQ	**Hoqain**	**71.23**	**295**	P	**P**	**00 58 36.9**	**+1.1**
	SNR=7.5						
HOQ	**Hoqain**	**71.23**	**295**	P	**P**	**00 58 36.9**	**+1.1**
	SNR=7.5						
HOQ	**Hoqain**	**71.23**	**295**	P	**P**	**00 58 36.9**	**+1.1**
	SNR=7.5						
HOQ	**Hoqain**	**71.23**	**295**	P	**P**	**00 58 36.9**	**+1.1**
	SNR=7.5						
HOQ	**Hoqain**	**71.23**	**295**	P	**P**	**00 58 36.9**	**+1.1**
	SNR=7.5						
TIXI	**Tiksi**	**71.58**	**1**	*e*P	**P**	**00 58 36.0**	**-0.9**
	comp=Z,29nm,1.2s,mb5.0						
TIXI	**Tiksi**	**71.58**	**1**	*e*P	**P**	**00 58 36.0**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
ARQ	**Araqi**	**71.92**	**294**	P	**P**	**00 58 41.0**	**+1.0**
	SNR=6.0						
ARQ	**Araqi**	**71.92**	**294**	P	**P**	**00 58 41.0**	**+1.0**
	SNR=6.0						
ARQ	**Araqi**	**71.92**	**294**	P	**P**	**00 58 41.0**	**+1.0**
	SNR=6.0						
ARQ	**Araqi**	**71.92**	**294**	P	**P**	**00 58 41.0**	**+1.0**
	SNR=6.0						
BILL	**Bilibino**	**73.16**	**14**	*e*P	**P**	**00 58 46.3**	**-0.1**
BILL				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.2						
ABKT	**Ailbek**	**73.29**	**310**	P	**P**	**00 58 48.6**	**+0.8**
	comp=Z,142nm,0.6s,mb6.0,SNR=8.7						
WHFO	**Wadi Hawf**	**73.84**	**289**	P	**P**	**00 58 51.4**	**-0.1**
	SNR=5.1						
WHFO	**Wadi Hawf**	**73.84**	**289**	P	**P**	**00 58 51.4**	**-0.1**
	SNR=5.1						
WHFO	**Wadi Hawf**	**73.84**	**289**	P	**P**	**00 58 51.4**	**-0.1**
	SNR=5.1						
AKTK	**Aktyubinsk**	**76.63**	**322**	P	**P**	**00 59 06.6**	**-0.2**
AKTO	**Aktyubinsk**	**76.63**	**322**	P	**P**	**00 59 06.6**	**-0.2**
	comp=Z,4.8nm,0.5s,mb4.5,baz=110,slow=7.6,SNR=24						
SVE	**Sverdlovsk**	**77.18**	**329**	⇓*i*P	**P**	**00 59 09.6**	**-0.1**
SVE				*e*S	S	01 09 10.8	+18
SVE				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
ARU	**Arti**	**78.13**	**328**	P	**P**	**00 59 14.3**	**-0.7**
	comp=Z,73nm,0.8s,mb5.5,SNR=6.4						
ARU	**Arti**	**78.13**	**328**	*e*P	**P**	**00 59 14.3**	**-0.7**
	comp=Z,17nm,1.2s,mb4.7						
ARU	**Arti**	**78.13**	**328**	⇑*e*P	**P**	**00 59 13.5**	**-1.5**
ARU				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
VNDA	**Vanda**	**79.71**	**173**	P	**P**	**00 59 23.3**	**-0.1**
VNDA				LR	LR	01 32 35.4	
VNDA	**Vanda**	**79.71**	**173**	P	**P**	**00 59 23.3**	**-0.1**
	comp=Z,3.8nm,1.0s,mb4.2,baz=312,slow=3.2,SNR=8.9						
VNDA				LR	LR	01 32 35.4	
	comp=Z,161nm,20.5s,baz=341,slow=34						
OPO	**Ambohidratompo**	**80.11**	**251**	P	**P**	**00 59 27.0**	**+0.3**
	comp=Z,1.7nm,0.5s,mb4.1,baz=94,slow=10,SNR=5.9						
QRN	**Al-Qurain**	**80.24**	**299**	*e*P	**P**	**00 59 26.0**	**-1.2**
QRN				AMb	AMB	00 59 30.4	
	comp=Z,40nm,0.7s,mb5.4						
MAW	**Mawson**	**80.26**	**200**	P	**P**	**00 59 26.6**	**+0.2**
	comp=Z,12nm,0.9s,mb4.7,baz=153,slow=6.8,SNR=3.7						
RDF	**Al-Radifah**	**80.58**	**299**	*e*P	**P**	**00 59 27.6**	**-1.4**
RDF				AMb	AMB	00 59 35.0	
	comp=Z,23nm,0.7s,mb5.1						
MIB	**Mutribah**	**80.84**	**300**	*e*P	**P**	**00 59 29.2**	**-1.2**
MIB				AMb	AMB	00 59 34.4	
	comp=Z,51nm,0.8s,mb5.4						
NAY	**Al-Naaiem**	**80.88**	**300**	*e*P	**P**	**00 59 29.0**	**-1.6**
NAY				AMb	AMB	00 59 34.5	
	comp=Z,14nm,0.8s,mb4.9						
CHGN	**Chignik**	**81.64**	**33**	*e*P	**P**	**00 59 32.0**	**-1.9**
CHGN				*e*pP	pP	00 59 56.4	+2.3
PPT	**Papeete**	**83.94**	**108**	*e*LR	LR	01 26 18.9	
	comp=Z,163nm,24.8s						
PPT	**Papeete**	**83.94**	**108**	LR	LR	01 34 26.4	
	comp=Z,334nm,21.6s,baz=249,slow=34						
TTA	**Tatalina**	**84.22**	**27**	*e*P	**P**	**00 59 48.0**	**+0.8**
	comp=Z,3.6nm,0.6s,mb4.4						
TTA	**Tatalina**	**84.22**	**27**	*e*P	**P**	**00 59 48.0**	**+0.8**
TTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
TBI	**Tubuai**	**84.26**	**113**	*e*LR	LR	01 26 31.4	
	comp=Z,232nm,31.8s						
ZEI	**Tsey**	**84.78**	**313**	*e*P	**P**	**00 59 51.2**	**+0.7**
ZEI				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
KIV	**Kislovodsk**	**85.75**	**314**	*e*P	**P**	**00 59 54.2**	**-1.1**
KIV	**Kislovodsk**	**85.75**	**314**	*e*P	**P**	**00 59 55.3**	**0.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
IMA2	**Indian Mountai**	**85.79**	**24**	P	**P**	**00 59 56.2**	**+1.2**
VRSR	**Storozhevoye**	**88.50**	**321**	*e*P	**P**	**01 00 07.5**	**-0.9**
VRSR				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
VRSR				pmax	pmax		
	comp=N,1.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.9s						
MALT	**Malatya**	**88.72**	**308**	*e*P	**P**	**01 00 09.3**	**-0.4**
MALT	**Malatya**	**88.72**	**308**	⇓*i*P	**P**	**01 00 10.3**	**+0.6**
SYO	**Syowa Base**	**88.95**	**201**	⇑*e*P	**P**	**01 00 09.3**	**-0.9**
TMCR	**Tamitsa**	**89.48**	**334**	*e*P	**P**	**01 00 10.0**	**-2.7**
KMBO	**Kilima Mbogo**	**89.51**	**269**	*e*P	**P**	**01 00 15.1**	**+1.1**
KMBO	**Kilima Mbogo**	**89.51**	**269**	P	**P**	**01 00 14.3**	**+0.3**
	comp=E,1.8nm,1.1s,mb4.1,baz=39,slow=7.0,SNR=6.2						
KMBO				LR	LR	01 36 00.5	
	comp=E,80nm,19.4s,baz=96,slow=33						
QSPA	**South Pole Qui**	**89.90**	**180**	*e*P	**P**	**01 00 15.3**	**+0.9**
	comp=E,42nm,0.6s,mb5.8						
QSPA				*e*		01 00 29.5	
ASF	**Jabal al Asfar**	**89.91**	**302**	P	**P**	**01 00 15.7**	**+0.3**
	comp=E,1.8nm,0.6s,mb4.4,baz=352,slow=3.8,SNR=3.8						
OBN	**Obninsk**	**90.14**	**325**	*e*P	**P**	**01 00 13.4**	**-2.6**
OBN				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.1						
APA	**Apatity**	**91.32**	**337**	⇑*i*P	**P**	**01 00 21.0**	**-0.2**
APA				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
BRTR	**Keskin Array B**	**92.43**	**310**	*i* P	**P**	**01 00 31.5**	**+4.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**92.53**	**333**	*e*p	**P**	**01 00 24.5**	**-2.4**
	comp=Z,7.6nm,1.0s,mb5.0						
JOF	**Joensuu**	**92.53**	**333**	*e*P	**P**	**01 00 24.5**	**-2.4**
JOF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
KEV	**Kevo**	**93.42**	**340**	*e*p	**P**	**01 00 29.6**	**-1.3**
	comp=Z,0.5nm,0.3s,mb4.3						
KEV	**Kevo**	**93.42**	**340**	*e*P	**P**	**01 00 29.6**	**-1.3**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.6						
ARCES	**ARCESS Array B**	**93.97**	**340**	P	**P**	**01 00 32.0**	**-1.5**
	comp=Z,4.6nm,0.5s,mb5.1,baz=80,slow=5.2,SNR=55						
ARCES				PKiKP	PKiKP	01 05 17.9	+0.4
	comp=Z,2.1nm,0.8s,baz=144,slow=1.8,SNR=5.3						
AKASG	**Malin Array Be**	**94.81**	**321**	P	**P**	**01 00 35.9**	**-1.9**
	comp=Z,0.3nm,0.4s,mb4.1,baz=71,slow=4.1,SNR=6.3						
KAF	**Kangasniemi**	**94.93**	**332**	*e*p	**P**	**01 00 35.8**	**-2.2**
	comp=Z,2.3nm,0.6s,mb4.8,baz=77,slow=4.2						
KAF	**Kangasniemi**	**94.93**	**332**	*e*P	**P**	**01 00 35.8**	**-2.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.7						
FINES	**FINESS Array B**	**95.14**	**332**	*i* P	**P**	**01 00 38.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**95.14**	**332**	P	**P**	**01 00 37.2**	**-1.7**
	comp=Z,0.9nm,0.5s,mb4.4,baz=64,slow=4.4,SNR=7.3						
FINES				PKiKP	PKiKP	01 05 20.7	+0.9
	comp=Z,0.6nm,0.6s,baz=116,slow=3.2,SNR=3.4						
MLR	**Muntele Rosu**	**97.61**	**316**	P	**P**	**01 00 48.9**	**-1.7**
	comp=Z,1.9nm,0.7s,mb4.8,baz=50,slow=2.0,SNR=3.9						
BURAR	**Bucovina Array**	**97.81**	**318**	⇓*i*P	**P**	**01 00 51.1**	**-0.3**
NOA	**NORSAR Array B**	**102.15**	**333**	P	Pdif	01 01 08.8	-1.7
NOA	**NORSAR Array B**	**102.15**	**333**	P	Pdif	01 01 08.8	-1.7
	comp=Z,0.6nm,0.6s,baz=68,slow=4.5,SNR=3.6						
YKA	**Yellowknife Ar**	**102.89**	**25**	P	Pdif	01 01 13.7	-0.1
YKA	**Yellowknife Ar**	**102.89**	**25**	P	Pdif	01 01 13.7	-0.1
	comp=Z,0.1nm,0.5s,baz=298,slow=4.7,SNR=4.2						
GERES	**GERESS Array B**	**105.03**	**321**	PKiKP	PKiKP	01 05 38.3	+0.4
	comp=Z,0.6nm,0.6s,baz=107,slow=1.4,SNR=6.1						
MTUM	**Tungsten Hills**	**109.45**	**50**	*e*Pdif	Pdif	01 01 34.3	-8.7
LPG	**La Plagne**	**110.63**	**319**	*e*PP	PP	01 06 23.1	-2.4
	comp=Z,11nm,0.9s						
LPL	**La Plagne**	**110.63**	**319**	*e*PP	PP	01 06 23.2	-2.3
	comp=Z,20nm,1.1s						
PDAR	**Pinedale Array**	**114.12**	**42**	PKKPbc	PKKPbc	01 16 42.4	+4.8
	comp=Z,0.3nm,0.6s,baz=129,slow=4.7,SNR=3.6						
RSSD	**Black Hills**	**117.10**	**39**	*e*PKPdf	PKPdf	01 05 57.1	-3.8
ISCO	**Idaho Springs**	**118.08**	**44**	*e*PKPdf	PKPdf	01 06 03.9	+1.0
MNTX	**Cornudas Mount**	**121.56**	**52**	*e*PKPdf	PKPdf	01 06 10.8	+1.0
LTX	**Lajitas**	**123.81**	**54**	PKPdf	PKPdf	01 06 13.7	-0.5
TXAR	**Lajitas Array**	**123.81**	**54**	PKP	PKPdf	01 06 15.3	+1.0
	comp=Z,0.7nm,1.0s,baz=232,slow=4.4,SNR=5.1						
TORD	**Torodi Ar. Bea**	**124.05**	**286**	PKP	PKPdf	01 06 14.9	-0.1
	comp=Z,3.7nm,0.8s,baz=63,slow=1.6,SNR=32						
TORD				PP	PP	01 07 53.6	-6.4
	comp=Z,1.0nm,1.1s,baz=71,slow=5.5,SNR=3.4						
TORD				SKP		01 09 46.2	
	comp=Z,0.5nm,0.6s,baz=164,slow=1.0,SNR=4.1						
TORD				PKKPbc	PKKPbc	01 16 01.7	+1.3
	comp=Z,0.5nm,0.7s,baz=225,slow=1.7,SNR=5.3						
SCHQ	**Schefferville**	**124.25**	**9**	PKP	PKPdf	01 06 15.0	+0.7
SCHQ	**Schefferville**	**124.25**	**9**	PKP	PKPdf	01 06 15.0	+0.7
	comp=Z,2.6nm,0.8s,baz=56,slow=17,SNR=3.7						
WMOK	**Wichita Mounta**	**125.25**	**46**	*e*PKPdf	PKPdf	01 06 16.6	-0.3
JCT	**Junction City**	**126.43**	**51**	*e*PKPdf	PKPdf	01 06 20.5	+1.2
DBIC	**Dimbokro**	**131.29**	**279**	PKP	PKPdf	01 06 30.0	+1.1
DBIC				SKPbc	SKPbc	01 09 49.8	+2.3
DBIC	**Dimbokro**	**131.29**	**279**	PKP	PKPdf	01 06 30.0	+1.1
	comp=Z,1.7nm,0.5s,baz=252,slow=1.9,SNR=10.0						
DBIC				SKPbc	SKPbc	01 09 49.8	+2.3
	comp=Z,8.3nm,0.6s,baz=120,slow=2.9,SNR=19						
CFAA	**Coronel Fontan**	**145.47**	**157**	PKPbc	PKPbc	01 06 54.8	+0.3
	comp=Z,1.9nm,0.7s,baz=222,slow=2.9,SNR=37						
LCO	**Las Campanas**	**146.64**	**151**	*e*PKPdf	PKPdf	01 06 57.6	+1.2
JTS	**JuntasAbangare**	**146.85**	**71**	*e*PKPdf	PKPdf	01 06 57.6	+0.4
LPAZ	**La Paz**	**158.11**	**139**	*e*PKPdf	PKPdf	01 07 14.9	+1.3
LPAZ	**La Paz**	**158.11**	**139**	PKP	PKPdf	01 07 14.9	+1.4
	comp=Z,1.4nm,1.0s,baz=100,slow=3.4,SNR=3.5						

THE ***08*** *00:47:37.5, 37.16N×20.28E, h3km, ML3.9*
ISCJB ***08*** *00:47:39.9±1.0, 37.24N±0.04×20.49E±0.08, h26km±8km, Error ellipse: s-maj=12.2km s-min=5.0km az=153.4*
ATH ***08*** *00:47:39.5, 37.24N×20.50E, h35km±2km, MD3.5/16*
CSEM ***08*** *00:47:40.7±0.2, 37.21N×20.40E, h40km, MD3.5, Error ellipse: s-maj=4.7km s-min=1.6km az=66.0*
NEIC ***08*** *00:47:41.5±1.3, 37.32N×20.70E, h11km±7km, MD3.5(ATH), Error ellipse: s-maj=11.6km s-min=5.2km az=48.0*
SKO ***08*** *00:47:55.0, 38.30N×21.00E, h16km*
ISC 08 00:47:40.6±1.0, **37.30N**±0.04×**20.61E**±0.08, **h10**km±6km, **n40, σ0.90**/52, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.82**	**10**	*e*Pg	**Pg**	**00 47 57.0**	**+0.7**
KFL	**Anninata**	**0.82**	**10**	*e*Pg	**Pg**	**00 47 57.0**	**+0.7**
VLS	**Valsamata**	**0.87**	**359**	*e*PB	**Pb**	**00 47 57.0**	**-0.9**
VLS				*e*SN	**Sn**	**00 48 10.9**	**-0.9**
PYL	**PYLOS**	**0.99**	**114**	*e*Pg	**Pg**	**00 47 59.8**	**+0.2**
PYL				*e*Sg	**Sg**	**00 48 18.2**	**+5.7**
RLS	**Riolos of Patr**	**1.02**	**42**	*e*PN	**Pn**	**00 48 00.9**	**0.0**
RLS				*e*SN	**Sn**	**00 48 16.3**	**+1.0**
ITM	**Ithomi**	**1.06**	**96**	*e*PN	**Pn**	**00 48 00.4**	**-1.1**
ITM				*e*SN	**Sn**	**00 48 16.0**	**-0.3**
LKD	**Levkas**	**1.40**	**1**	*e*Pg	**Pg**	**00 48 05.9**	**-1.6**
SELA	**Sela**	**1.41**	**46**	*e*Pb	**Pb**	**00 48 07.9**	**+1.0**
SELA				*e*Sb	**Sb**	**00 48 30.4**	**+5.5**
VLX	**Vlachokerasia**	**1.41**	**87**	*e*Pb	**Pb**	**00 48 07.5**	**+0.5**
EVR	**Evrytania**	**1.87**	**30**	*e*Pn	**Pn**	**00 48 12.5**	**-0.1**
EVR				P		00 48 16.1	
EVR				*e*Sn	**Sn**	**00 48 36.1**	**-0.2**
EVR	**Evrytania**	**1.87**	**30**	P	**Pn**	**00 48 16.1**	**+3.5**
EVR				*e*Sn	**Sn**	**00 48 36.1**	**-0.2**
VLI	**Veliai**	**1.95**	**107**	*e*PB	**Pb**	**00 48 14.0**	**-2.2**
LTK	**Loutraki**	**2.00**	**68**	*e*Pn	**Pn**	**00 48 16.1**	**+1.6**
LTK	**Loutraki**	**2.00**	**68**	*e*Pn	**Pn**	**00 48 16.0**	**+1.5**
DID	**Didima**	**2.10**	**84**	*e*Pn	**Pn**	**00 48 17.8**	**+1.9**
KYTH	**Kithira**	**2.20**	**117**	*e*PN	**Pn**	**00 48 17.0**	**-0.2**
IGT	**Igoumenitsa**	**2.24**	**354**	*e*Pn	**Pn**	**00 48 18.9**	**+1.2**
LKR	**Lokris**	**2.32**	**54**	*e*PN	**Pn**	**00 48 18.5**	**-0.3**
NAIG	**Nisos Aigina**	**2.33**	**78**	*e*PN	**Pn**	**00 48 18.5**	**-0.5**
KEK	**Kerkira**	**2.49**	**345**	*e*PN	**Pn**	**00 48 21.0**	**-0.2**
THL	**Klokotos Trika**	**2.51**	**26**	*e*PN	**Pn**	**00 48 21.6**	**+0.1**
THL				*e*SN	**Sn**	**00 48 51.4**	**-0.8**
KVR	**Kavouri**	**2.56**	**77**	*e*PN	**Pn**	**00 48 21.5**	**-0.7**
XOR	**Xorichti**	**2.89**	**44**	*e*Pn	**Pn**	**00 48 28.6**	**+1.8**
XOR	**Xorichti**	**2.89**	**44**	*e*Pn	**Pn**	**00 48 28.5**	**+1.8**
KZN	**Kozani**	**3.13**	**16**	*e*PN	**Pn**	**00 48 29.7**	**-0.3**
KARN	**Karanos**	**3.27**	**124**	*e*PN	**Pn**	**00 48 32.0**	**+0.1**
VAM	**Vamos**	**3.46**	**122**	*e*PN	**Pn**	**00 48 33.7**	**-0.8**
FNA	**Florina**	**3.53**	**9**	*e*Pn	**Pn**	**00 48 35.6**	**+0.2**
FNA				*e*Sn	**Sn**	**00 49 22.0**	**+4.8**
TIP	**Timpagrande**	**3.56**	**303**	P	**Pn**	**00 48 38.8**	**+2.9**
BIA	**Bitola**	**3.75**	**8**	*e*Pn	**Pn**	**00 48 38.3**	**-0.3**
BIA				*e*Sg	**Sn**	**00 49 21.9**	**-0.9**
BIA	**Bitola**	**3.75**	**8**	*e*Pn	**Pn**	**00 48 38.2**	**-0.3**
BIA				*e*Sg	**Sn**	**00 49 21.9**	**-0.9**
PLG	**Polygyros**	**3.78**	**35**	*e*PN	**Pn**	**00 48 39.8**	**+0.9**
GRG	**Griva**	**3.91**	**20**	*e*Pn	**Pn**	**00 48 41.0**	**+0.4**
APE	**Apeiranthos**	**3.94**	**92**	*e*PN	**Pn**	**00 48 41.0**	**-0.1**
KRUS	**Krusevo**	**4.09**	**7**	*e*Pn	**Pn**	**00 48 43.2**	**0.0**
KRUS				*e*Sg	**Sn**	**00 49 31.3**	**+0.2**
KNT	**Kendrikon**	**4.24**	**24**	*e*Pn	**Pn**	**00 48 45.7**	**+0.4**
LAST	**Lasithi**	**4.48**	**117**	P	**Pn**	**00 48 48.7**	**+0.2**
NPS	**Neapolis**	**4.52**	**115**	*e*PN	**Pn**	**00 48 48.7**	**-0.4**
STIP	**Stip**	**4.55**	**15**	*e*Pn	**Pn**	**00 48 48.4**	**-1.1**
ARG	**Arkhangelos**	**6.13**	**98**	*e*PN	**Pn**	**00 49 11.4**	**+0.2**

NEIC ***08*** *00:48:41.6, 37.25N×20.58E, h26km, MD3.8(ATH), After ATH.*
CSEM ***08*** *00:48:41.6, 37.25N×20.58E, h26km, MD3.7/8, After ATH*
ATH 08 00:48:41.6, 37.25N×20.58E, h26km±1km, **MD3.8**/8, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.93**	**0**	*e*PN	Pn	00 48 59.6	+0.7
RLS	**Riolos of Patr**	**1.07**	**41**	*e*PN	Pn	00 49 02.6	+1.7
ITM	**Ithomi**	**1.08**	**93**	*e*PN	Pn	00 49 01.6	+0.6
ITM				*e*SN	Sn	00 49 17.8	+2.7
EVR	**Evrytania**	**1.93**	**30**	*e*PN	Pn	00 49 15.5	+2.8
VLI	**Veliai**	**1.96**	**105**	*e*PB	Pb	00 49 15.6	-1.0
LKR	**Lokris**	**2.37**	**53**	*e*PN	Pn	00 49 20.6	+1.8
LKR				*e*SN	Sn	00 49 49.8	+2.8
THL	**Klokotos Trika**	**2.57**	**26**	*e*PN	Pn	00 49 24.2	+2.7
THL				*e*SN	Sn	00 49 54.3	+2.4
KZN	**Kozani**	**3.19**	**17**	*e*PN	Pn	00 49 33.0	+3.0

CSEM ***08*** *00:59:12.7±0.1, 40.69N×30.40E, h5km, MD3.0, Error ellipse: s-maj=1.9km s-min=1.2km az=1.0*
ISCJB ***08*** *00:59:13.3±0.4, 40.72N±0.03×30.38E±0.03, h5km, Error ellipse: s-maj=4.1km s-min=3.2km az=179.5*
ISK ***08*** *00:59:13.0, 40.70N×30.39E, h6km, MD3.0*
ISC 08 00:59:13.5±0.5, **40.72N**±0.03×**30.39E**±0.03, **h0**km±5km, **n28, σ0.68**/39, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GULT	**Gulveren**	**0.30**	**162**	*i* PG	**Pg**	**00 59 19.3**	**0.0**
HENT	**Hendek**	**0.40**	**75**	*i* P	**Pg**	**00 59 21.3**	**+0.2**
HENT				*i* S	**Sg**	**00 59 27.2**	**+0.9**
GPA	**Golpazari**	**0.44**	**188**	PG	**Pg**	**00 59 21.1**	**-0.7**
GPA				SG	**Sg**	**00 59 28.0**	**+0.5**
HRT	**Hereke**	**0.56**	**281**	PG	**Pg**	**00 59 24.8**	**+0.6**
HRT				SG	**Sg**	**00 59 32.5**	**+1.1**
ADVT	**Abdulvahap**	**0.57**	**240**	PG	**Pg**	**00 59 24.4**	**-0.1**
YLV	**Yalova**	**0.79**	**259**	PG	**Pg**	**00 59 28.2**	**-0.4**
IZI	**Iznik**	**0.80**	**242**	PG	**Pg**	**00 59 29.0**	**+0.2**
BORA	**Eskisehir**	**0.84**	**177**	*i* P	**Pg**	**00 59 29.0**	**-0.6**
BORA				*i* S	**Sg**	**00 59 40.4**	**-0.1**
BORA	**Eskisehir**	**0.84**	**177**	*i* P	**Pg**	**00 59 29.0**	**-0.6**
BORA				*i* S	**Sg**	**00 59 40.3**	**-0.2**
GEMT	**Gemlik**	**0.96**	**253**	PG	**Pg**	**00 59 31.3**	**-0.6**
KDZE	**Karadeniz Ereo**	**0.99**	**53**	*e*PG	**Pg**	**00 59 32.6**	**+0.1**
ISK	**Istanbul-Kandi**	**1.07**	**289**	*e*PG	**Pg**	**00 59 33.8**	**-0.1**
KLYT	**Kilyos**	**1.15**	**298**	*e*PN	**Pn**	**00 59 35.5**	**-1.3**
ESKT	**Eskisehir**	**1.25**	**163**	*i* P	**Pg**	**00 59 37.8**	**+0.3**
ESKT				*i* S	**Sg**	**00 59 53.5**	**-0.1**
ESKT	**Eskisehir**	**1.25**	**163**	*e*Pn	**Pn**	**00 59 37.1**	**-1.1**
SEYT	**Eskypehyr**	**1.25**	**163**	*i* P	**Pg**	**00 59 37.8**	**+0.4**
SEYT				*i* S	**Sg**	**00 59 53.5**	**-0.1**
SGKT	**Sivrigoynuk**	**1.28**	**96**	*i* P	**Pg**	**00 59 37.3**	**-0.7**
SGKT				*i* S	**Sg**	**00 59 55.1**	**+0.6**
CTT	**Catalca**	**1.54**	**287**	*e*PN	**Pn**	**00 59 41.8**	**-0.5**
DST	**Dursunbey**	**1.75**	**231**	*e*PN	**Pn**	**00 59 44.8**	**-0.3**
GDZ	**Gediz**	**1.77**	**204**	*i* P	**Pn**	**00 59 46.5**	**+1.2**
GDZ				*i* S	**Sn**	**01 00 10.5**	**+1.9**
GDZ	**Gediz**	**1.77**	**204**	*i* P	**Pn**	**00 59 46.5**	**+1.1**
GDZ				*i* S	**Sn**	**01 00 10.5**	**+1.9**
SAFT	**Safranbolu**	**1.81**	**73**	*e*PN	**Pn**	**00 59 45.5**	**-0.5**
BNT	**Bandirma**	**1.92**	**260**	*e*PN	**Pn**	**00 59 47.2**	**-0.2**
EDC	**Edincik**	**1.96**	**260**	*e*PN	**Pn**	**00 59 48.0**	**0.0**
KIZT	**Kizilcal**	**2.17**	**148**	*e*PN	**Pn**	**00 59 49.9**	**-0.9**
ELDT	**Eldivan**	**2.32**	**95**	*i* P	**Pn**	**00 59 52.7**	**-0.2**
BALT	**Daday**	**2.40**	**69**	*i* P	**Pn**	**00 59 54.5**	**+0.4**
BALT				*i* S	**Sn**	**01 00 28.1**	**+3.9**
EDRB	**Edirne**	**2.97**	**293**	*e*PN	**Pn**	**01 00 02.2**	**+0.4**

NEIC ***08*** *01:13:27.9, 35.39S×178.73E, h229km, MG4.0(WEL), After WEL.*
WEL 08 01:13:27.6±0.6, **35.45S×178.74E, h242**km±11km, **ML4.1**/12, **Error ellipse: s-maj=18.6km s-min=11.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.13**	**189**	*e*P	Pn	01 14 10.7	+0.1
MXZ				S	S	01 14 42.6	-1.9
MXZ	**Matakaoa Point**	**2.13**	**189**	PN	Pn	01 14 10.7	+0.2
MXZ				SN	S	01 14 42.6	-1.9
PUZ	**Puketiti**	**2.64**	**188**	P	Pn	01 14 15.9	+0.2
PUZ				S	S	01 14 52.4	-1.3
PUZ	**Puketiti**	**2.64**	**188**	PN	Pn	01 14 15.9	+0.3
PUZ				SN	S	01 14 52.4	-1.3
MWZ	**Matawai**	**3.04**	**198**	*e*P	Pn	01 14 20.7	+0.8
MWZ				S	S	01 15 01.3	0.0
MWZ	**Matawai**	**3.04**	**198**	PN	Pn	01 14 20.7	+0.8
MWZ				SN	S	01 15 01.3	0.0
URZ	**Urewera**	**3.09**	**204**	P	Pn	01 14 20.5	0.0
URZ	**Urewera**	**3.09**	**204**	PN	Pn	01 14 20.5	0.0
KNZ	**Kokohu**	**3.66**	**193**	*e*P	Pn	01 14 26.7	-0.3
KNZ	**Kokohu**	**3.66**	**193**	PN	Pn	01 14 26.7	-0.2
BKZ	**Black Stump Fm**	**4.12**	**205**	*e*P	Pn	01 14 32.3	0.0
BKZ	**Black Stump Fm**	**4.12**	**205**	PN	Pn	01 14 31.5	-0.8
WNVZ	**Wahianoa**	**4.60**	**212**	P	Pn	01 14 38.6	+0.4
WNVZ	**Wahianoa**	**4.60**	**212**	PN	Pn	01 14 38.6	+0.4
PXZ	**Pawanui**	**4.81**	**197**	PN	Pn	01 14 40.4	-0.2
TSZ	**Takapari Road**	**5.10**	**205**	P	Pn	01 14 43.3	-0.9
TSZ	**Takapari Road**	**5.10**	**205**	PN	Pn	01 14 43.3	-0.9
BFZ	**Birch Farm**	**5.58**	**200**	*e*P	Pn	01 14 49.0	-1.2
BFZ	**Birch Farm**	**5.58**	**200**	PN	Pn	01 14 49.9	-0.3
MRZ	**Mangatainoka R**	**5.76**	**205**	P	Pn	01 14 51.1	-1.4
MRZ	**Mangatainoka R**	**5.76**	**205**	PN	Pn	01 14 51.1	-1.5
KIW	**Kapiti Island**	**6.18**	**208**	P	Pn	01 14 55.9	-1.9
KIW	**Kapiti Island**	**6.18**	**208**	PN	Pn	01 14 55.9	-1.9
MTW	**Mount Morrison**	**6.24**	**203**	P	Pn	01 14 56.7	-1.7
MTW	**Mount Morrison**	**6.24**	**203**	PN	Pn	01 14 56.7	-1.7
CAW	**Cannon Point**	**6.34**	**206**	P	Pn	01 14 57.8	-1.9
CAW	**Cannon Point**	**6.34**	**206**	PN	Pn	01 14 57.8	-1.9
PAWZ	**Paruwai Farm**	**6.46**	**203**	P	Pn	01 14 59.5	-1.8
PAWZ	**Paruwai Farm**	**6.46**	**203**	PN	Pn	01 14 59.5	-1.8
TCW	**Tory Channel**	**6.73**	**210**	P	Pn	01 15 02.6	-2.1
TCW	**Tory Channel**	**6.73**	**210**	PN	Pn	01 15 02.6	-2.1
THZ	**Tophouse**	**7.78**	**214**	*e*P	Pn	01 15 16.9	-1.0
THZ	**Tophouse**	**7.78**	**214**	PN	Pn	01 15 16.9	-1.0

NIED ***08*** *01:25:00, 41.70N×143.30E, h32km, Mw3.9 Best double couple: M_0 6.88000×10^{14} NP1: ϕ_s 214.00000°, δ26.00000°, λ119.00000°. NP2: ϕ_s 3.00000°, δ67.00000°, λ77.00000°.*

IDC 08 01:25:33.1±0.7, 4166N×14328E, h0^{km}, mb3.9/11, mb1 4.0/14, mb1mx3.9/23, mbtmp3.8/14, ML3.7/3, Error ellipse: s-maj=22.8km s-min=13.7km az=88.0
MOS 08 01:25:36.9±1.0, 4166N×14321E, h41^{km}, mb4.5/6, Error ellipse: s-maj=16.5km s-min=8.1km az=90.3
ISCJB 08 01:25:37.4±0.7, 4162N±005×14326E±007, h45^{km}±5^{km}, mb4.0/15, Error ellipse: s-maj=9.6km s-min=6.2km az=42.5
JMA 08 01:25:38.9±0.1, 4168N×14326E, h29^{km}±1^{km}, M4.0
JMA Felt I J1.
NEIC 08 01:25:39.2±0.8, 4168N×14326E, h42^{km}±7^{km}, mb4.3/4, Error ellipse: s-maj=10.6km s-min=6.9km az=100.0
NEIC Recorded [1 JMA] in south-central Hokkaido.
ISC 08 01:25:39.1±0.6**, 4167N**±005×**14324E**±007**, h39**^{km}±5^{km}**, n46, σ0^{s}90**/53**, mb4.0**/15**, 4C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.35	350	eP	Pn	01 25 46.7	-1.3
ERM				eS	Sn	01 25 53.5	-0.6
JEM	Erimo	0.35	350	⇑P	Pn	01 25 46.7	-1.2
JEM				S	Sn	01 25 52.3	-1.8
JNBK	Urakawa-nobuka	0.71	329	⇓P	Pn	01 25 52.4	-0.3
JNBK				eS	Sn	01 26 02.2	-0.2
JCH	Churui	0.95	5	⇑P	Pn	01 25 56.0	+0.1
JCH				eS	Sn	01 26 08.4	+0.1
JBT2	Biratori 2	1.28	330	⇑P	Pn	01 26 01.5	+0.9
JBT2				eS	Sn	01 26 19.6	+3.1
JOB	Onbets	1.31	19	⇑P	Pn	01 26 01.1	+0.2
JFR	Furan	1.57	342	P	Pn	01 26 06.3	+1.9
ASAJ	Asahikawa	2.49	349	Pn	Pn	01 26 16.6	-0.5
	12nm,0.3s,baz=177,slow=12,SNR=39						
ASAJ				Lg		01 26 53.7	
	9.5nm,0.3s,baz=40,slow=28,SNR=3.6						
YUK	Yuzh-Kuril'sk	3.05	38	P	Pn	01 26 24.3	-0.5
YUK				S	Sn	01 27 00.5	+0.5
YUK				smax			
	comp=N,1μm,0.5s						
YUK				smax			
	comp=E,400nm,0.5s						
KUR	Kuril'sk	4.90	42	P	Pn	01 26 54.0	+3.8
KUR				iS	Sn	01 27 47.0	+1.4
KUR				smax			
	comp=N,110nm,0.5s						
KUR				smax			
	comp=E,160nm,0.5s						
MAJO	Matsushiro	6.44	219	Pn	Pn	01 27 12.6	+1.2
MJAR	Matsushiro Arr	6.44	219	Pn	Pn	01 27 11.0	-0.5
	comp=E,1.0nm,0.3s,baz=28,slow=13,SNR=8.7						
VLA	Vladivostok	8.52	284	eP	Pn	01 27 49.4	+9.5
VLA				pmax	pmax		
	comp=Z,49nm,1.4s						
MDJ	Mudanjiang	10.40	291	ePn	Pn	01 28 07.0	+1.4
KSRS	Korea Array	12.55	255	Pn	Pn	01 28 35.6	+0.7
	comp=Z,0.4nm,0.3s,baz=69,slow=13,SNR=3.5						
INCN	Inchon	13.47	257	ePn	Pn	01 28 48.4	+0.7
MA2	Magadan	18.53	12	P	Pn	01 29 52.8	+0.4
YAK	Yakutsk	21.95	343	eP	P	01 30 30.5	+1.4
	comp=Z,12nm,0.4s,mb4.7						
YAK	Yakutsk	21.95	343	eP	P	01 30 30.5	+1.4
YAK				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.6						
SONM	Songino Array	26.70	296	P	P	01 31 14.3	-0.1
	comp=Z,0.6nm,0.5s,mb3.4,baz=77,slow=7.8,SNR=7.4						
TLY	Talaya	28.63	304	P	P	01 31 31.8	+0.2
ENH	Enshi	29.41	258	P	P	01 31 38.8	0.0
MK31	Makanchi Array	43.01	298	eP	P	01 33 34.4	-0.1
MKAR	Makanchi Array	43.01	298	P	P	01 33 34.4	-0.2
	comp=Z,1.4nm,0.7s,mb3.8,baz=83,slow=8.8,SNR=12						
KURK	Kurchatov	44.32	305	eP	P	01 33 44.3	-0.7
	comp=Z,2.3nm,0.7s,mb4.0						
KURK	Kurchatov	44.32	305	eP	P	01 33 44.3	-0.7
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
BRVK	Borovoye	48.65	310	eP	P	01 34 18.8	-0.1
	comp=Z,1.0nm,0.2s,mb4.5						
BRVK	Borovoye	48.65	310	eP	P	01 34 18.8	-0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.5						
PMG	Port Moresby	50.95	175	P	P	01 34 36.4	-0.3
YKA	Yellowknife Ar	59.11	32	P	P	01 35 34.7	-0.4
YKA	Yellowknife Ar	59.11	32	P	P	01 35 34.7	-0.4
	comp=Z,0.3nm,0.7s,mb3.4,baz=307,slow=6.7,SNR=4.2						
ARCES	ARCESS Array B	60.17	339	P	P	01 35 41.9	-0.4
ARCES	ARCESS Array B	60.17	339	P	P	01 35 41.9	-0.4
	comp=Z,4.2nm,1.1s,mb4.4,baz=40,slow=9.6,SNR=4.2						
CTAO	Charters Tower	61.51	177	P	P	01 35 51.8	-0.1
WRA	Warramunga Arr	61.85	190	P	P	01 35 53.7	-0.4
	comp=Z,0.8nm,0.5s,mb4.1,baz=6.7,slow=6.8,SNR=17						
JOF	Joensuu	62.56	331	ep	P	01 35 56.1	-2.4
	comp=Z,1.4nm,0.4s,mb4.4						
JOF	Joensuu	62.56	331	eP	P	01 35 56.1	-2.4
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
FINES	FINESS Array B	65.39	332	P	P	01 36 16.5	-0.6
FINES	FINESS Array B	65.39	332	P	P	01 36 16.5	-0.6
	comp=Z,1.4nm,0.7s,mb4.1,baz=58,slow=7.7,SNR=10						
ASAR	Alice Springs	65.58	189	P	P	01 36 18.8	+0.2
	comp=Z,0.8nm,0.7s,mb3.9,baz=6.0,slow=6.5,SNR=9.2						
NB2	NORSAR Subarra	70.46	337	P	P	01 36 47.7	-1.3
	comp=Z,2.5nm,0.9s,mb4.1,baz=38,slow=6.2						
NB2	NORSAR Subarra	70.46	337	P	P	01 36 47.7	-1.3
NB2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
NOA	NORSAR Array B	70.46	337	P	P	01 36 48.5	-0.5
	comp=Z,1.4nm,0.8s,mb3.9,baz=37,slow=6.0,SNR=5.0						
AKASG	Malin Array Be	71.50	322	P	P	01 36 54.5	-1.0
	comp=Z,1.2nm,0.4s,mb4.2,baz=44,slow=6.4,SNR=8.6						
PDAR	Pinedale Array	73.44	47	P	P	01 37 08.1	+0.9
	comp=Z,0.6nm,0.7s,mb3.7,baz=258,slow=2.3,SNR=6.1						
TXAR	Lajitas Array	86.20	54	P	P	01 38 16.9	+0.4
	comp=Z,0.2nm,0.6s,mb3.5,baz=287,slow=3.3,SNR=4.7						

ISCJB 08 01:54:49.5±1.2, 3972N±004×3548E±008, h6^{km}, Error ellipse: s-maj=9.5km s-min=5.5km az=170.4
CSEM 08 01:54:50.0±0.2, 3970N×3536E, h14^{km}±1^{km}, MD2.7, Error ellipse: s-maj=7.7km s-min=3.2km az=82.0
DDA 08 01:54:51.4, 3971N×3540E, h6^{km}±1^{km}, Md2.7
ISC 08 01:54:49.8±1.2**, 3972N**±004×**3550E**±009**, h6**^{km}±12^{km}**, n7, σ0^{s}65**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	Yozgat	0.16	241	iPG	Pg	01 54 53.1	+0.2
YOZ				iSG	Sg	01 54 56.0	+0.9
CORM	Corum	0.81	305	PG	Pg	01 55 05.0	-0.4
CDAG	Cicekdag	0.88	264	iP	Pg	01 55 06.0	-0.6
CDAG				iS	Sg	01 55 17.5	-0.4
BNN	Bunyan	0.90	163	ePG	Pg	01 55 06.3	-0.8
CTKT	Corum	1.06	329	eP	Pg	01 55 10.1	+0.1
CTKT				iS	Sg	01 55 24.5	+0.7
AVNT	Avonos	1.06	208	iP	Pg	01 55 09.9	-0.1
AVNT				iS	Sg	01 55 24.2	+0.4
ELDT	Eldivan	1.77	297	iP	Pn	01 55 21.9	+1.0
ELDT				iS	Sg	01 55 45.4	-1.1

IDC 08 01:59:01.9±2.0**, 107N**×**9680E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.4**/21**, mbtmp3.5**/5**, ML2.8**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/29**, Error ellipse: s-maj=54.3km s-min=24.6km az=63.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.73	51	Pn	Pn	01 59 46.8	-0.2
	1.8nm,0.3s,baz=202,slow=5.4,SNR=13						
WRA	Warramunga Arr	42.30	122	P	P	02 06 56.9	-0.7
	0.4nm,0.6s,baz=302,slow=9.0,SNR=5.4						
ASAR	Alice Springs	43.63	127	P	P	02 07 08.9	+0.5
	0.4nm,0.7s,baz=300,slow=8.2,SNR=3.8						
MKAR	Makanchi Array	47.27	346	P	P	02 07 37.2	+0.3
	0.3nm,0.4s,baz=160,slow=8.8,SNR=5.5						
MKAR				LR	LR	02 27 34.6	
	comp=Z,41nm,21.6s,baz=176,slow=36						
SONM	Songino Array	47.32	9	P	P	02 07 36.9	-0.3
	0.6nm,0.7s,baz=189,slow=9.2,SNR=7.2						

ISCJB 08 02:01:40.8±0.6, 3693N±003×2786E±005, h14^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=5.7km az=157.2
CSEM 08 02:01:40.9±0.1, 3695N×2782E, h10^{km}, MD2.8, Error ellipse: s-maj=1.8km s-min=1.6km az=71.0
ATH 08 02:01:40.7, 3694N×2787E, h28^{km}±4^{km}, MD2.7/3
ISK 08 02:01:40.8, 3694N×2782E, h15^{km}, MD2.8
ISC 08 02:01:41.1±0.6**, 3693N**±004×**2786E**±005**, h16**^{km}±4^{km}**, n9, σ0^{s}67**/16**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.30	228	PG	Pg	02 01 47.2	-0.2
DAT				SG	Sg	02 01 52.1	+0.4
BDRM	Kayabasi	0.36	293	iP	Pg	02 01 47.9	-0.6
BDRM				iS	Sg	02 01 53.2	-0.2
MLSB	Milas	0.37	350	PG	Pg	02 01 48.2	-0.5
MLSB				SG	Sg	02 01 54.2	+0.4
YER	Yerkesik	0.40	59	PG	Pg	02 01 49.7	+0.5
BODT	Bodrum	0.46	287	PG	Pg	02 01 49.7	-0.5
BODT				SG	Sg	02 01 56.6	+0.2
ARG	Arkhangelos	0.74	163	ePN	Pn	02 01 55.7	-1.2
ARG				eSN	Sn	02 02 06.7	-1.2
FETY	Fethiye	1.03	106	ePG	Pg	02 02 01.6	+0.6
SMG	Samos	1.12	314	ePN	Pn	02 02 02.4	+0.2
SMG				eSN	Sn	02 02 17.4	+0.1
KARP	Karpathos	1.49	202	ePN	Pn	02 02 08.2	+1.0
KARP				eSN	Sn	02 02 27.4	+1.1

ISCJB 08 02:34:10.1±0.6, 3795S±005×14562E±006, h10^{km}, Error ellipse: s-maj=7.0km s-min=6.5km az=38.1
NEIC 08 02:34:11.0, 3798S×14574E, h14^{km}, ML3.5(AUST), After AUST.
NEIC Felt [V] at Healesville and Melbourne; [IV] at Pakenham.
IDC 08 02:34:11.6±7.6, 3847S×14445E, h0^{km}, mb3.2/1, mb1 3.9/3, mb1mx3.7/10, mbtmp3.7/3, ML4.7/1, Error ellipse: s-maj=289.0km s-min=55.8km az=75.0
AUST 08 02:34:11.8, 3798S×14574E, h14^{km}, ML3.5
ISC 08 02:34:12.1±0.6**, 3793S**±004×**14564E**±006**, h10**^{km}**, n14, σ1^{s}13**/26**, Near southeast coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILA	Mila	2.93	74	eP	Pn	02 34 59.4	+0.7
MILA				eS	Sn	02 35 33.4	-0.6
	148nm,0.3s						
ARPS	Mount Arapiles	3.24	290	eP	Pn	02 35 04.4	+1.4
ARPS				eS	Sn	02 35 46.1	+4.5
	2.4nm,0.2s						
CNB	Canberra Magne	3.97	50	eP	Pn	02 35 13.7	+0.6
CNB				eS	Sn	02 36 00.4	+0.7
	16nm,0.2s						
YNG	Young	4.26	32	eP	Pn	02 35 17.7	+0.7
YNG				eS	Sn	02 36 06.4	-0.3
	15nm,0.3s						
MOO	Moorlands	4.66	166	eP	Pn	02 35 22.8	+0.3
MOO				eS	Sn	02 36 15.3	-1.3
	2μm,1.9s						
CMSA	Cobar Meteorol	6.38	0	eP	Pn	02 35 46.0	-0.1
CMSA				eS	Sn	02 36 55.1	-3.9
	6.4nm,0.2s						
CMSA	Cobar Meteorol	6.38	0	eP	Pn	02 35 46.0	-0.1
	6.4nm,0.2s						
CMSA				eS	Sn	02 36 55.1	-3.9
MGCD	Mangrove Creek	6.49	45	eP	Pn	02 35 53.1	+5.5
MGCD				eS	Sn	02 36 58.1	-3.5
	19nm,0.8s						
STKA	Stephens Creek	6.89	330	eP	Pn	02 35 54.2	+1.1
	19nm,0.3s						
STKA				eS	Sn	02 37 08.6	-3.0
	6.6nm,0.2s						
STKA	Stephens Creek	6.89	330	Pn	Pn	02 35 54.2	+1.1
	7.6nm,0.3s,baz=147,slow=13,SNR=109						
STKA				Sn	Sn	02 37 07.6	-4.0
	2.2nm,0.3s,baz=76,slow=17,SNR=3.2						
STKA				Lg		02 37 54.0	
	3.7nm,0.3s,baz=72,slow=20,SNR=8.8						
BBOO	Buckleboo	9.34	300	eP	Pn	02 36 26.0	-0.7
BBOO				eS	Sn	02 38 07.0	-4.8
	2.4nm,0.4s						
BBOO	Buckleboo	9.34	300	eP	Pn	02 36 26.0	-0.7
	2.4nm,0.4s						
BBOO				eS	Sn	02 38 07.0	-4.8
ASAR	Alice Springs	17.40	321	P	Pn	02 38 13.6	-1.5
	0.1nm,0.3s,baz=148,slow=13,SNR=7.1						
WRA	Warramunga Arr	20.44	328	P	P	02 38 51.4	+1.8
	2.3nm,1.0s,baz=158,slow=8.2,SNR=11						

ISCJB 08 02:41:04.7±1.7, 54S±0.1×1472E±03, h173^{km}±20^{km}, mb3.8/7, Error ellipse: s-maj=43.0km s-min=14.4km az=17.6
IDC 08 02:41:07.3±1.9, 555S×14702E, h177^{km}±17^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.4/14, mbtmp3.4/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/12, Error ellipse: s-maj=32.4km s-min=14.0km az=109.0
NEIC 08 02:41:07.1±2.2, 545S×14709E, h182^{km}±22^{km}, mb3.9/2, Error ellipse: s-maj=41.0km s-min=20.5km az=98.0
ISC 08 02:41:07.0±1.5**, 55S**±01×**1470E**±02**, h173**^{km}±18^{km}**, n12, σ0^{s}96**/13**, mb3.8**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.88	178	P	Pn	02 42 07.0	+0.6
	11nm,0.3s,baz=17,slow=4.8,SNR=30						
PMG				S	Sn	02 42 51.7	-1.1
	5.0nm,0.3s,baz=14,slow=10,SNR=6.1						
COEN	Coen	9.21	204	ePn	Pn	02 43 20.1	+3.8
WRA	Warramunga Arr	18.92	220	P	P	02 45 16.3	+1.6
	0.6nm,0.3s,baz=44,slow=9.8,SNR=14						
WRA				S	S	02 48 39.4	-1.1
	0.1nm,0.3s,baz=36,slow=19,SNR=4.7						
ASAR	Alice Springs	22.03	214	P	P	02 45 48.9	+1.1
	1.8nm,0.6s,mb3.7,baz=50,slow=7.9,SNR=26						
ASAR				S	S	02 49 39.4	+1.0
	1.5nm,0.8s,baz=33,slow=22,SNR=8.6						
FITZ	Fitzroy Crossi	24.34	237	P	P	02 46 08.2	-0.8
	1.7nm,0.5s,mb3.9,baz=51,slow=14,SNR=5.5						
URZ	Urewera	42.55	144	LR	LR	03 03 22.9	
	comp=Z,36nm,21.5s,baz=207,slow=31						
BJT	Baijiatuau	53.46	331	eP	P	02 50 08.7	-0.6
	8.3nm,0.6s,mb4.6						
SONM	Songino Array	63.97	331	P	P	02 51 22.4	+0.7
	0.2nm,0.3s,mb3.4,baz=116,slow=5.0,SNR=4.0						
VNDA	Vanda	72.41	177	P	P	02 52 13.7	0.0
	1.2nm,0.9s,mb3.6,baz=349,slow=5.2,SNR=3.1						
KURK	Kurchatov	80.82	323	eP	P	02 53 01.2	-0.1
	1.3nm,0.8s,mb3.6						
EKS2	Erkin-Say	81.51	314	eP	P	02 53 04.0	-1.2
	4.8nm,1.3s,mb4.0						
TORD	Torodi Ar. Bea	144.97	285	PKPbc	PKPdf	03 00 21.8	-2.7
	0.2nm,0.4s,baz=69,slow=3.6,SNR=8.4						

IDC 08 02:47:01.1±2.1, 888S×114.13E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.7/17, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=130.3km s-min=22.6km az=50.0
ISCJB 08 02:47:02.6±5.0, 87S±03×1143E±04, h21^{km}±38^{km}, mb3.9/7, Error ellipse: s-maj=84.2km s-min=14.5km az=136.7
NEIC 08 02:47:09.1±4.0, 857S×11456E, h57^{km}±37^{km}, mb4.0/3, Error ellipse: s-maj=64.4km s-min=14.5km az=54.0
ISC 08 02:47:09.7±3.3**, 86S**±03×**1146E**±03**, h62**^{km}±33^{km}**, n8, σ0^{s}26**/10**, mb3.9**/7**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.31	133	Pn	Pn	02 50 29.2	0.0
	0.2nm,0.3s,baz=287,slow=17,SNR=6.4						
FITZ				Sn	Sn	02 52 55.7	-11
	0.3nm,0.3s,baz=164,slow=22,SNR=7.6						
WRA	Warramunga Arr	22.19	123	P	P	02 52 00.8	-0.1
	2.2nm,0.6s,mb3.8,baz=296,slow=11,SNR=12						
WRA				S	S	02 56 01.9	-0.1
	0.3nm,0.8s,baz=291,slow=26,SNR=3.2						
ASAR	Alice Springs	23.81	131	P	P	02 52 16.9	-0.1
	1.9nm,0.6s,mb3.7,baz=303,slow=9.3,SNR=32						
FORT	Forrest	25.42	152	eP	P	02 52 31.5	-0.2
	1.4nm,0.9s,mb3.5						
STKA	Stephens Creek	34.15	137	P	P	02 53 49.6	+0.5
	1.2nm,0.4s,mb4.2,baz=318,slow=9.8,SNR=5.4						
MKAR	Makanchi Array	62.17	335	P	P	02 57 24.9	+0.4
	0.1nm,0.3s,mb3.4,baz=152,slow=8.0,SNR=2.8						
TKM2	Tokmak 2	62.35	329	eP	P	02 57 25.7	-0.1
	2.4nm,0.8s,mb4.4						
AAK	Ala-Archa	62.72	328	eP	P	02 57 28.0	-0.3
	1.8nm,1.1s,mb4.1						

NEIC 08 03:22:31.9, 1594N×9451W, h64^{km}, MD4.0(MEX), After MEX.
MEX 08 03:22:29.8±1.7**, 1684N**×**9441W, h156**^{km}±23^{km}**, MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.52	299	iP	Pn	03 22 51.4	-0.5
CMIG				iS	Sn	03 23 06.2	-2.7
CMIG	Matias Romero	0.52	299	iP	Pn	03 22 51.5	-0.5
CMIG				iS	Sn	03 23 06.2	-2.7
SCX	San Cristobal	1.71	93	eP	Pn	03 22 57.0	-5.0
SCX				iS	Sn	03 23 30.5	+3.8
OXX	Oaxaca	2.23	277	iP	Pn	03 23 08.0	+0.1
OXX				iS	Sn	03 23 36.0	-1.3
VHO	Vista Hermosa	2.23	276	iP	Pn	03 23 07.4	-0.7
VHO				iS	Sn	03 23 35.1	-2.4
VHO	Vista Hermosa	2.23	276	iP	Pn	03 23 07.5	-0.5
VHO				iS	Sn	03 23 35.3	-2.2
CCIG	Comitan	2.25	104	iP	Pn	03 23 06.6	-1.6
CCIG				iS	Sn	03 23 33.2	-4.6
CCIG	Comitan	2.25	104	iP	Pn	03 23 06.3	-1.9
CCIG				iS	Sn	03 23 35.8	-2.0
TPIG	Tehuac#an	3.22	300	iP	Pn	03 23 17.4	-2.8
UTMO	Huajuapan	3.39	287	iP	Pn	03 23 20.1	-2.3
PPM	Popocatepetl	4.58	300	eP	Pn	03 23 37.0	-0.8

ISK 08 03:46:04.0, 3907N×4040E, h5^{km}, MD3.2
DDA 08 03:46:04.7, 3908N×4040E, h3^{km}, Md3.3
CSEM 08 03:46:04.7±0.1, 3903N×4039E, h5^{km}, MD3.2, Error ellipse: s-maj=3.0km s-min=2.2km az=10.0
ISCJB 08 03:46:05.7±0.7, 3905N±003×4042E±004, h6^{km}±6^{km}, Error ellipse: s-maj=5.5km s-min=4.7km az=154.8
ISC 08 03:46:05.8±0.6**, 3905N**±003×**4042E**±004**, h4**^{km}±5^{km}**, n24, σ1^{s}17**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	Bingol	0.19	163	iPG	Pg	03 46 09.1	-0.4
BINT				iSG	Sg	03 46 12.6	+0.7
PTK	Pertek	0.82	259	PG	Pg	03 46 20.3	-1.2
PTK				SG	Sg	03 46 32.9	+0.8
EZC	Erzincan	0.84	326	PG	Pg	03 46 25.1	+3.2
EZM	Erzurum	1.12	40	PN	Pn	03 46 26.0	-2.3
ERZM	Erzurum	1.12	40	iP	Pg	03 46 25.9	-1.5
ERZM				iS	Sg	03 46 42.9	+0.9
ERZM	Erzurum	1.12	40	iP	Pg	03 46 25.9	-1.5
ERZM				iS	Sg	03 46 42.8	+0.9
DIY	Diyarbakir	1.17	188	PN	Pn	03 46 28.4	-0.5
BTMT	Batman	1.20	135	PN	Pn	03 46 27.7	-1.6
ELZG	Elazig	1.25	244	iP	Pg	03 46 28.2	-1.7
ELZG				iS	Sg	03 46 46.2	+0.1
ELZG	Elazig	1.25	244	iP	Pg	03 46 27.8	-2.1
ELZG				iS	Sg	03 46 42.9	-3.2
KELT	Kelkit	1.42	321	iP	Pn	03 46 31.8	-0.5
GUMT	Gumushane	1.58	333	PN	Pn	03 46 34.9	+0.3
MYA	Malataya	1.72	246	PN	Pn	03 46 37.0	+0.5
MALT	Malatya	1.73	245	PN	Pn	03 46 35.5	-1.1
MARD	Mardin	1.76	171	iP	Pn	03 46 37.4	+0.3
MARD				iS	Sn	03 46 59.9	+0.1
MARD	Mardin	1.76	171	iP	Pn	03 46 37.4	+0.3
MARD				iS	Sn	03 47 01.0	+1.2
TUTA	Tutak	1.89	79	iP	Pn	03 46 39.5	+0.6
TUTA				iS	Sn	03 47 05.5	+2.4
TUTA	Tutak	1.89	79	iP	Pn	03 46 38.8	0.0
TUTA				iS	Sn	03 47 03.5	+0.4
TUTA	Tutak	1.89	79	iP	Pn	03 46 38.8	-0.1
TUTA				iS	Sn	03 47 03.5	+0.4
URFA	Urfa	2.04	218	ePN	Pn	03 46 41.4	+0.5
AGRB	Hanur-Agry	2.06	75	ePN	Pn	03 46 41.8	+0.6
ESPY	Espiye-Giresun	2.27	326	ePN	Pn	03 46 44.2	+0.1
GRSN	GIRESUNGRSN	2.49	319	iP	Pn	03 46 50.8	+3.7
GRSN				iS	Sn	03 47 22.4	+4.4
GZT	Gaziantep	2.82	234	iP	Pg	03 47 01.9	+2.1
GZT				iS	Sg	03 47 40.6	+4.2

IDC 08 03:46:19.2±1.2, 2133S×174.14W, h0^{km}, mb4.1/9, mb1 4.4/10, mb1mx4.3/16, mbtmp4.1/10, ML3.6/1, MS3.8/9, Ms1 3.8/9, ms1mx3.6/22, Error ellipse: s-maj=55.2km s-min=19.3km az=153.0
NEIC 08 03:46:22.1±10.0, 2126S×17420W, h17^{km}±63^{km}, mb4.5/7, Error ellipse: s-maj=37.2km s-min=16.6km az=149.0
ISCJB 08 03:46:23.1±0.9, 213S±02×1743W±0.1, h33^{km}, mb4.2/16, MS3.8/7, Error ellipse: s-maj=37.5km s-min=11.7km az=153.7
ISC 08 03:46:24.9±0.9**, 213S**±02×**1742W**±01**, h35**^{km}**, n44, σ1^{s}04**/22**, mb4.2**/16**, MS3.8**/7**, 1C-1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.68	18	Pn	Pn	03 48 07.9	-6.5
	12nm,0.3s,baz=125,slow=1.0,SNR=16						
AFI				Sn	Sn	03 49 25.5	-15
	4.7nm,0.3s,baz=37,slow=20,SNR=3.9						
RAR	Rarotonga	13.48	92	Pn	Pn	03 49 24.1	-10
	2.2nm,0.3s,baz=278,slow=7.1,SNR=5.7						
RAR				LR	LR	03 53 13.4	
	comp=Z,138nm,19.4s,baz=293,slow=31						
DZM	Mont Dzumac	17.98	264	P	Pn	03 50 32.5	+0.3
	0.2nm,0.3s,baz=300,slow=20,SNR=2.2						
DZM				LR	LR	03 56 22.2	
	comp=Z,443nm,18.3s,baz=65,slow=33						
TBI	Tubuai	23.00	100	eLR	LR	03 56 42.0	
	450nm,28.8s						
PPT	Papeete	23.54	85	eLR	LR	03 56 51.8	
	541nm,29.0s						
PPT	Papeete	23.54	85	LR	LR	03 57 55.0	
	comp=Z,334nm,20.2s,MS3.8,baz=258,slow=30						
HNR	Honiara	27.49	291	LR	LR	04 01 11.7	
	comp=Z,213nm,21.7s,MS3.7,baz=179,slow=32						
RKT	Rikitea	36.33	100	eLR	LR	04 02 48.5	
	473nm,32.8s						
CTA	Charters Tower	36.92	265	LR	LR	04 07 12.0	
	comp=Z,186nm,18.1s,MS3.9,baz=251,slow=34						
CTAO	Charters Tower	36.92	265	eP	P	03 53 30.4	-0.4
	3.0nm,0.6s,mb4.3						
PMG	Port Moresby	38.95	282	eP	P	03 53 45.5	-2.3
	14nm,1.0s,mb4.7						
PMG	Port Moresby	38.95	282	LR	LR	04 07 15.1	
	comp=Z,130nm,18.5s,MS3.8,baz=269,slow=32						
STKA	Stephens Creek	40.65	246	P	P	03 54 02.0	+0.2
	1.9nm,0.6s,mb3.9,baz=103,slow=12,SNR=4.7						
STKA				LR	LR	04 09 53.3	
	comp=Z,82nm,18.6s,MS3.6,baz=26,slow=35						
COEN	Coen	41.14	273	eP	P	03 54 07.0	+0.9
	5.4nm,1.3s,mb4.0						
ASAR	Alice Springs	47.77	257	P	P	03 54 58.6	-0.4
	6.9nm,0.9s,mb4.7,baz=89,slow=8.3,SNR=56						
WRA	Warramunga Arr	47.98	262	P	P	03 54 59.4	-1.3
	1.5nm,0.7s,mb4.1,baz=96,slow=7.9,SNR=14						
WRA				PcP	PcP	03 56 30.0	+1.4
	1.0nm,0.9s,baz=100,slow=3.3,SNR=3.0						
WRA				LR	LR	04 15 16.1	
	comp=Z,168nm,18.5s,MS4.0,baz=95,slow=36						
FORT	Forrest	52.23	247	eP	P	03 55 33.6	+0.8
	1.6nm,0.8s,mb4.0						
MJAR	Matsushiro Arr	72.95	322	P	P	03 57 50.6	-0.3
	5.3nm,0.8s,mb4.5,baz=155,slow=5.5,SNR=12						
MAJO	Matsushiro	72.96	322	eP	P	03 57 50.9	0.0
	7.8nm,0.7s,mb4.8						
NVAR	Mina Array Bea	79.21	41	P	P	03 58 27.5	+1.1
	1.3nm,0.8s,mb3.9,baz=212,slow=6.5,SNR=7.6						
KSRS	Korea Array	79.82	317	P	P	03 58 31.3	+1.5
	3.7nm,1.0s,mb4.3,baz=147,slow=5.2,SNR=5.4						
KSRS				LR	LR	04 28 15.4	
	comp=Z,33nm,19.2s,MS3.7,baz=184,slow=32						
TXAR	Lajitas Array	84.54	56	P	P	03 58 54.6	-0.1
	0.3nm,0.9s,mb3.4,baz=202,slow=11,SNR=2.5						
MCK	McKinley	87.00	11	eP	P	03 59 06.3	+0.2
	8.9nm,1.1s,mb4.9						
PDAR	Pinedale Array	87.14	42	P	P	03 59 05.7	-1.6
	0.6nm,0.8s,mb3.9,baz=198,slow=4.8,SNR=4.4						
DAWY	Dawson	89.27	15	eP	P	03 59 17.9	+1.1
CHTO	Chiang Mai	93.82	289	eP	P	03 59 40.9	+1.9
	1.9nm,0.5s,mb4.8						
INK	Inuvik	94.12	14	eP	P	03 59 39.2	-0.1
YKA	Yellowknife Ar	95.76	24	P	P	03 59 45.3	-1.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.3nm,0.7s,mb3.8,baz=232,slow=4.2,SNR=5.5						
MKAR	Makanchi Array	114.29	313	PKP	PKiKP	04 04 59.0	-1.8
	0.1nm,0.4s,baz=180,slow=0.7,SNR=2.8						
TKM2	Tokmak 2	118.75	308	ePKPdf	PKPdf	04 05 09.6	+0.2
EKS2	Erkin-Say	120.07	308	ePKPdf	PKPdf	04 05 10.9	-1.1
AKASG	Malin Array Be	145.33	334	PKPbc	PKPbc	04 05 58.5	-0.1
	2.5nm,0.5s,baz=39,slow=4.1,SNR=18						
AKBB	Malin Array Si	145.33	334	ePKPbc	PKPbc	04 05 58.7	0.0
EKA	Eskdalemuir Ar	145.33	9	PKPbc	PKPbc	04 05 58.2	-0.3
	2.5nm,0.8s,baz=332,slow=2.7,SNR=6.1						
KIEV	Kiev	145.34	334	ePKPbc	PKPbc	04 05 58.8	+0.1
MALT	Malatya	147.18	308	ePKPbc	PKPbc	04 06 06.3	+1.7
KWP	Kalwaria	148.67	339	ePKPbc	PKPbc	04 06 09.1	+0.9
KWP	Kalwaria	148.67	339⇑	iP	PKPbc	04 06 09.3	+1.1
BURAR	Bucovina Array	149.38	334⇓	iP	PKPbc	04 06 13.0	+2.9
CLL	Collm	149.49	351	ePKPbc	PKPbc	04 06 11.0	+0.8
	comp=Z,18nm,1.6s						
CLL				i pPKPab	pPKPab	04 06 20.9	-5.5
CLL				i x	x	04 06 27.4	
BRTR	Keskin Array B	149.93	314	PKPbc	PKPbc	04 06 12.9	+1.2
	comp=Z,1.5nm,0.9s,baz=116,slow=4.5,SNR=7.9						
BRTR				PKPab	PKPab	04 06 18.9	+1.5
	comp=Z,1.9nm,0.9s,baz=93,slow=2.5,SNR=8.1						
MLR	Muntele Rosu	150.71	330	PKPbc	PKPbc	04 06 15.0	+1.6
	comp=Z,1.9nm,0.8s,baz=121,slow=10,SNR=3.4						
KHC	Kasperske Hory	151.51	349	ePKPbc	PKPbc	04 06 16.5	+1.4
KHC				ePKPab	PKPab	04 06 26.0	+2.5
GERES	GERESS Array B	151.76	349	PKPbc	PKPbc	04 06 15.5	-0.2
	comp=Z,1.0nm,0.8s,baz=45,slow=0.2,SNR=7.2						
GERES				PKPab	PKPab	04 06 23.0	-1.6
	comp=Z,1.4nm,0.9s,baz=129,slow=1.9,SNR=5.2						

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*ISCJB **08** 03:47:03.3±1.0, 338N±03×374W±01, h10km, mb3.7/9, MS3.7/15, Error ellipse: s-maj=40.2km s-min=15.7km az=8.7*
*IDC **08** 03:47:03.2±1.6, 3380N×3742W, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/23, mbtmp3.5/6, MS3.7/15, Ms1 3.7/15, ms1mx3.6/22, Error ellipse: s-maj=59.5km s-min=25.2km az=16.0*
*CSEM **08** 03:47:04.9, 3388N×3730W, h10km, mb4.2/3, After NEIC*
*NEIC **08** 03:47:04.9±0.9, 3388N×3730W, h10km, mb4.2/3, Error ellipse: s-maj=33.2km s-min=13.0km az=187.0*
ISC 08 03:47:05.1±1.0**, 338N**±03×**374W**±01**, h10km, n26, σ0s52**/15**, mb3.7**/9**, MS3.7**/15**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBTS	Babate	26.81	130	LR	LR	04 00 35.2	
	comp=Z,154nm,20.8s,MS3.5,baz=132,slow=30						
SCHQ	Schefferville	29.42	325	LR	LR	04 04 01.3	
	comp=Z,144nm,18.0s,MS3.6,baz=18,slow=35						
DAVOX	Davos/Dischmat	37.76	56	LR	LR	04 07 28.4	
	comp=Z,132nm,19.9s,MS3.7,baz=7.4,slow=32						
DBIC	Dimbokro	40.41	125	LR	LR	04 09 12.0	
	comp=Z,94nm,19.0s,MS3.7,baz=240,slow=33						
TORD	Torodi Ar. Bea	40.98	111	P	P	03 54 48.0	-0.3
	0.4nm,0.7s,mb3.2,baz=304,slow=8.2,SNR=4.6						
HFS	Hagfors	42.17	35	LR	LR	04 10 16.3	
	comp=Z,80nm,18.6s,MS3.6,baz=68,slow=33						
VRAC	Vranov	42.34	52	LR	LR	04 09 32.1	
	comp=Z,60nm,20.6s,MS3.5,baz=104,slow=32						
ROSC	El Rosal	44.78	238	LR	LR	04 10 45.2	
	comp=Z,61nm,19.3s,MS3.5,baz=19,slow=32						
ULM	Lac du Bonnet	45.27	310	LR	LR	04 13 14.4	
	comp=Z,134nm,19.4s,MS3.9,baz=78,slow=35						
FINES	FINESS Array B	48.38	35	LR	LR	04 13 04.0	
	comp=Z,80nm,18.0s,MS3.8,baz=172,slow=32						
MLR	Muntele Rosu	48.97	56	LR	LR	04 13 24.1	
	comp=Z,86nm,19.3s,MS3.8,baz=308,slow=32						
WMOK	Wichita Mounta	50.04	289	eP	P	03 56 00.0	+0.1
	2.4nm,0.9s,mb4.2						
WMOK	Wichita Mounta	50.04	289	eP	P	03 56 00.0	+0.1
	2.4nm,0.9s,mb4.2						
YKA	Yellowknife Ar	54.85	326	P	P	03 56 33.9	-1.3
	0.3nm,0.7s,mb3.4,baz=85,slow=6.6,SNR=5.2						
YKA				LR	LR	04 18 42.5	
	comp=Z,100nm,18.5s,MS3.9,baz=150,slow=35						
TXAR	Lajitas Array	55.79	285	P	P	03 56 42.3	-0.2
	0.4nm,0.8s,mb3.5,baz=73,slow=10,SNR=3.2						
TXAR				LR	LR	04 19 28.5	
	comp=Z,80nm,19.5s,MS3.8,baz=185,slow=35						
BW06	Boulder Array	55.80	302	eP	P	03 56 42.8	+0.5
	2.4nm,1.2s,mb4.1						
BW06	Boulder Array	55.80	302	eP	P	03 56 42.8	+0.5
	2.4nm,1.2s,mb4.1						
PDAR	Pinedale Array	55.80	302	P	P	03 56 42.3	0.0
PDAR				LR	LR	04 17 45.5	
PDAR	Pinedale Array	55.80	302	P	P	03 56 42.3	0.0
	1.0nm,0.9s,mb3.8,baz=60,slow=11,SNR=6.7						
PDAR				LR	LR	04 17 45.5	
	comp=Z,78nm,20.6s,MS3.8,baz=95,slow=33						
LPAZ	La Paz	57.78	215	LR	LR	04 18 18.3	
	comp=Z,52nm,21.2s,MS3.6,baz=130,slow=32						
DUG	Dugway	58.92	300	eP	P	03 57 05.0	+0.6
	3.4nm,1.4s,mb4.2						
DUG	Dugway	58.92	300	eP	P	03 57 05.0	+0.6
	3.4nm,1.4s,mb4.2						
AKTK	Aktyubinsk	67.95	43	P	P	03 58 04.5	+0.5
AKTK				LR	LR	04 26 42.2	
AKTK	Aktyubinsk	67.95	43	P	P	03 58 04.4	+0.4
AKTK				LR	LR	04 26 42.2	
AKTO	Aktyubinsk	67.95	43	P	P	03 58 04.4	+0.5
	0.8nm,0.8s,mb3.8,baz=263,slow=8.1,SNR=4.3						
AKTO				LR	LR	04 26 42.2	
	comp=Z,89nm,18.4s,MS4.0,baz=22,slow=35						
MKAR	Makanchi Array	83.17	37	P	P	03 59 31.1	-0.3
	0.3nm,0.8s,mb3.4,baz=322,slow=6.4,SNR=3.4						

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*NAO **08** 03:52:11.8, 3484N×2331E, h33km, mb4.1*
*IDC **08** 03:52:20.3±0.8, 3606N×2210E, h0km, mb4.0/11, mb1 3.9/17, mb1mx3.9/28, mbtmp3.9/17, ML3.7/6, Error ellipse: s-maj=17.1km s-min=15.4km az=155.0*
*ATH **08** 03:52:21.9, 3597N×2189E, h18km±3km, MD4.1/25, ML4.0*
*NEIC **08** 03:52:21.9, 3597N×2189E, h18km, mb4.1/3, ML4.4(THE), ML4.0(ATH), After ATH.*
*MOS **08** 03:52:21.4±2.4, 3601N×2187E, h24km, mb4.3/5, Error ellipse: s-maj=7.5km s-min=4.2km az=90.1*
*THE **08** 03:52:21.3, 3586N×2165E, h3km, ML4.7*
*ISCJB **08** 03:52:24.9±0.3, 3600N±002×2184E±003, h60km±4km, mb3.9/15, Error ellipse: s-maj=4.4km s-min=3.5km az=43.0*
*CSEM **08** 03:52:24.4±0.1, 3595N×2185E, h20km, ML4.0, Error ellipse: s-maj=1.7km s-min=1.2km az=57.0*
ISC 08 03:52:26.6±0.3**, 3600N**±002×**2189E**±003**, h53km**±4km**, n156, σ1s15**/183**, mb3.9**/15**, 5C-6D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.90	352	ePg	Pn	03 52 40.9	-2.2
PYL				eSg	Sn	03 52 55.8	+0.6
KYTH	Kithira	0.97	73	ePN	Pn	03 52 40.8	-3.2
VLI	Veliai	1.11	49⇓	iPN	Pn	03 52 43.0	-2.8
VLI				eSN	Sn	03 52 59.4	-0.7
ITM	Ithomi	1.18	1	ePN	Pn	03 52 44.3	-2.5
ITM				eSN	Sn	03 53 01.8	0.0
VLX	Vlachokerasia	1.42	16	ePb	Pn	03 52 50.1	0.0
VLX				eSb	Sn	03 53 12.6	+4.9
KARN	Karanos	1.75	109	ePb	Pn	03 52 54.7	0.0
DID	Didima	1.85	35	ePn	Pn	03 52 57.2	+1.3
DID				eSn	Sn	03 53 24.9	+6.8
DID	Didima	1.85	35	ePn	Pn	03 52 57.2	+1.3
DID				eSn	Sn	03 53 24.9	+6.7
VAM	Vamos	1.97	107⇑	iPN	Pn	03 52 57.3	-0.3
RLS	Riolos of Patr	2.08	351	ePN	Pn	03 52 59.6	+0.5
GVD	Gavdhos	2.14	122	P	Pn	03 53 04.6	+4.7
GVD	Gavdhos	2.14	122	ePn	Pn	03 52 58.6	-1.2
NAIG	Nisos Aigina	2.17	36	ePN	Pn	03 53 00.5	+0.2
LTK	Loutraki	2.19	23	ePn	Pn	03 53 02.1	+1.4
SELA	Sela	2.27	0	ePn	Pn	03 53 02.3	+0.6
KFL	Anninata	2.28	338	ePn	Pn	03 53 00.8	-1.1
KVR	Kavouri	2.37	39	ePB	Pn	03 53 03.5	+0.5
VLS	Valsamata	2.41	335	ePN	Pn	03 53 03.7	+0.2
ATH	Athens Observa	2.45	36	ePN	Pn	03 53 03.5	-0.6
IDI	Anoyia	2.54	105	Pn	Pn	03 53 04.4	-1.0
	4.6nm,0.3s,baz=297,slow=16,SNR=90						
IDI				Sn	Sn	03 53 30.7	-4.4
	14nm,0.3s,baz=102,slow=22,SNR=6.8						
SIVA	Sivas	2.58	112	ePn	Pn	03 53 05.4	-0.4
SIVA	Sivas	2.58	112	P	Pn	03 53 06.2	+0.4
PTL	Penteli	2.58	37	ePB	Pn	03 53 06.0	+0.1
LKR	Lokris	2.79	18	ePN	Pn	03 53 07.8	-0.9
EVR	Evrytania	2.91	359	ePN	Pn	03 53 10.5	+0.1
SANT	Santorini	2.91	82	P	Pn	03 53 17.2	+6.8
AGG	Agios Georgios	3.04	6	ePn	Pn	03 53 12.8	+0.7
AGG	Agios Georgios	3.04	6	P	Pn	03 53 13.1	+1.0
AGG				S	Sn	03 53 54.4	+7.2
AGG	Agios Georgios	3.04	6	P	Pn	03 53 13.1	+1.0
LAST	Lasithi	3.04	105	P	Pn	03 53 18.7	+6.5
LAST				S	Sn	03 54 03.6	+16
LAST	Lasithi	3.04	105	ePn	Pn	03 53 12.8	+0.6
APE	Apeiranthos	3.12	69	ePn	Pn	03 53 14.4	+1.1
APE	Apeiranthos	3.12	69	ePn	Pn	03 53 12.2	-1.1
NPS	Neapolis	3.12	103	ePN	Pn	03 53 13.1	-0.2
NEO	Neokhori	3.47	17	ePN	Pn	03 53 16.9	-1.1
AOS	Alonnisos	3.54	26	P	Pn	03 53 21.7	+2.7
AOS	Alonnisos	3.54	26	P	Pn	03 53 21.7	+2.7
THL	Klokotos Trika	3.56	2	ePN	Pn	03 53 19.7	+0.4
ZKR	Zakros	3.64	103	P	Pn	03 53 26.7	+6.3
ZKR	Zakros	3.64	103	ePn	Pn	03 53 20.5	+0.1
IGT	Igoumenitsa	3.73	341	ePn	Pn	03 53 21.3	-0.4
IGT	Igoumenitsa	3.73	341	P	Pn	03 53 18.5	-3.2
IGT				S	Sn	03 54 04.7	+0.3
IGT	Igoumenitsa	3.73	341	ePn	Pn	03 53 21.3	-0.4
IGT				S	Sn	03 54 04.7	+0.3
MEV	Metsovon	3.81	352	P	Pn	03 53 22.4	-0.4
MEV	Metsovon	3.81	352	P	Pn	03 53 22.4	-0.4
KEK	Kerkira	4.06	337	ePN	Pn	03 53 25.1	-1.0
CHOS	Chios island	4.09	53	ePn	Pn	03 53 28.4	+1.8
LIT	Litokhoron	4.12	6	ePn	Pn	03 53 28.5	+1.5
LIT	Litokhoron	4.12	6	P	Pn	03 53 28.2	+1.2
PAIG	Paliouri	4.17	19	ePn	Pn	03 53 27.3	-0.4
PAIG	Paliouri	4.17	19	P	Pn	03 53 30.6	+3.0
PAIG	Paliouri	4.17	19	P	Pn	03 53 30.5	+2.9
LTBQ	Tobruq	4.28	156	i P	Pn	03 53 30.0	+0.8
	SNR=23						
KZN	Kozani	4.30	359	ePN	Pn	03 53 30.3	+0.9
KARP	Karpathos	4.31	94	ePN	Pn	03 53 29.0	-0.6
SMG	Samos	4.32	65	ePN	Pn	03 53 29.1	-0.6
URLA	Izmir	4.43	57	i P	Pn	03 53 30.2	-1.1
PLG	Polygyros	4.54	15	ePN	Pn	03 53 33.2	+0.5
LIA	Limnos Island	4.68	33	ePN	Pn	03 53 34.2	-0.5
HORT	Hortiatis	4.69	11	P	Pn	03 53 36.5	+1.7
HORT	Hortiatis	4.69	11	ePn	Pn	03 53 35.1	+0.4
PRK	Paraskevi	4.75	46	ePN	Pn	03 53 36.1	+0.4
FNA	Florina	4.79	355	ePn	Pn	03 53 37.1	+0.9
FNA	Florina	4.79	355	P	Pn	03 53 36.1	-0.1
FNA	Florina	4.79	355	ePn	Pn	03 53 37.1	+0.9
KDAG	Bornova	4.92	59	eP	Pn	03 53 45.5	+7.6
SOH	Sokhos	4.95	13	ePn	Pn	03 53 39.1	+0.8
SOH	Sokhos	4.95	13	P	Pn	03 53 40.7	+2.4
GRG	Griva	4.96	4	ePn	Pn	03 53 39.2	+0.7
GRG	Griva	4.96	4	ePn	Pn	03 53 39.2	+0.6
GRG	Griva	4.96	4	P	Pn	03 53 40.2	+1.6
BIA	Bitola	5.03	355	P	Pn	03 53 39.8	+0.3
BIA				S	Sn	03 54 40.5	+4.2
BIA	Bitola	5.03	355	ePn	Pn	03 53 39.6	+0.1
BIA				eSg	Sn	03 54 34.8	-1.4
BIA	Bitola	5.03	355	ePn	Pn	03 53 39.5	0.0
BIA	Bitola	5.03	355	P	Pn	03 53 39.8	+0.3
BIA				S	Sn	03 54 40.5	+4.3
ARG	Arkhangelos	5.05	86	ePN	Pn	03 53 38.8	-1.0
OHR	Ohrid	5.17	351	ePn	Pn	03 53 40.5	-0.9
OHR				eSg	Sn	03 54 39.9	+0.1
KNT	Kendrikon	5.21	8	ePn	Pn	03 53 42.5	+0.5
KNT	Kendrikon	5.21	8	P	Pn	03 53 43.2	+1.2
LCI	Lecce	5.25	327	P	Pn	03 53 41.8	-0.7
LCI				pmax	pmax		
	comp=Z,17nm,0.2s						
LCI	Lecce	5.25	327	Pn	Pn	03 53 41.8	-0.7
	comp=Z,16nm,0.2s						
LJBD	Adjabya	5.27	196	i P	Pn	03 53 43.0	+0.2
	SNR=23						
LJBD				eS	Sn	03 54 43.3	+1.1
	SNR=23						
SRS	Serrai	5.28	14	ePn	Pn	03 53 43.9	+1.0
SRS	Serrai	5.28	14	P	Pn	03 53 45.2	+2.3
VAY	Valandovo	5.34	6	ePn	Pn	03 53 45.7	+2.0
KRUS	Krusevo	5.38	355	ePn	Pn	03 53 44.3	0.0
KRUS				eSg	Sn	03 54 45.0	+0.1
HAVL	Avola	5.53	282	Pn	Pn	03 53 44.7	-1.7
NVR	Nevrokopi	5.56	16	ePN	Pn	03 53 46.7	0.0
PZI	Palazzolo	5.69	283	Pn	Pn	03 53 47.7	-0.8
STIP	Stip	5.69	2	ePn	Pn	03 53 48.5	0.0
SKO	Skopje	5.97	357	ePn	Pn	03 53 52.2	-0.2
VAE	Valguarnera	6.18	286	Pn	Pn	03 53 57.3	+2.0
	comp=Z,3.2nm,0.3s,baz=96,slow=17,SNR=9.1						
VAE				Sn	Sn	03 55 05.2	+0.6
	comp=Z,5.2nm,0.3s,baz=82,slow=3.0,SNR=5.1						
GOLH	Golhisar	6.29	76	i P	Pn	03 53 58.5	+1.7
VTS	Vitosha	6.66	8⇑	iP	Pn	03 54 02.5	+0.7
BARS	Barje	6.81	360	Pn	Pn	03 54 03.0	-0.8
SGO	Sicignano	6.89	313	P	Pn	03 54 06.4	+1.4
SGO				pmax	pmax		
	comp=Z,28nm,0.4s						
SGO	Sicignano	6.89	313	Pn	Pn	03 54 06.4	+1.4
	comp=Z,28nm,0.4s						
FG4	Candela	7.15	318	P	Pn	03 54 09.7	+1.2
FG4				pmax	pmax		
	comp=Z,31nm,0.4s						
FG4	Candela	7.15	318	Pn	Pn	03 54 09.7	+1.2
	comp=Z,31nm,0.4s						
FG5	Orsara di Pugl	7.39	318	P	Pn	03 54 12.6	+0.8
FG5				pmax	pmax		
	comp=Z,35nm,0.5s						
FG5	Orsara di Pugl	7.39	318	Pn	Pn	03 54 12.6	+0.8
	comp=Z,35nm,0.5s						
RGNG	Rignano Grg	7.50	321	Pn	Pn	03 54 12.9	-0.4
FG2	Serracapriola	7.81	320	Pn	Pn	03 54 19.4	+1.8
	comp=Z,30nm,0.3s						
SDI	San Donato	8.49	315	Pn	Pn	03 54 26.5	-0.4
LJFR	Jufra	8.58	218	i P	Pn	03 54 26.5	-1.6
	SNR=22						
MLR	Muntele Rosu	9.96	17	Pn	Pn	03 54 48.9	+1.9
	baz=104,slow=19						
BRTR	Keskin Array B	10.01	65	Pn	Pn	03 54 49.0	+1.5
	comp=Z,0.1nm,0.3s,baz=252,slow=14,SNR=7.8						
KEST	Kesra	10.19	272	Sn	Sn	03 56 41.7	-1.1
	comp=Z,0.0nm,0.3s,baz=161,slow=18,SNR=3.4						
BOJS	Bojanci	10.74	334	i Pn	Pn	03 54 55.2	-2.3
BOJS				i Sn	Sn	03 56 50.7	-5.6
VISS	Visnje	11.14	334	i Pn	Pn	03 55 02.7	-0.4
VISS				i Sn	Sn	03 56 59.6	-6.5
MMAI	Mount Meron Ar	11.54	101	Pn	Pn	03 55 03.0	-5.6
	comp=Z,0.8nm,0.3s,baz=257,slow=13,SNR=3.1						
PERS	Pernice	11.78	337	i Pn	Pn	03 55 09.6	-2.1
PERS				i Sn	Sn	03 57 10.7	-11
OBKA	Obir	11.86	335⇑	iSn	Sn	03 57 17.8	-5.7
OBKA	Obir	11.86	335⇓	iPn	Pn	03 55 11.7	-1.1
OBKA				i Sn	Sn	03 57 17.8	-5.7
OBKA	Obir	11.86	335⇓	iPn	Pn	03 55 11.7	-1.1
OBKA			⇑	iSn	Sn	03 57 24.2	+0.7
KECS	Kecovo	12.52	356	ePN	Pn	03 55 23.8	+2.0
EIL	Elat	12.66	116	Pn	Pn	03 55 20.1	-3.9
	comp=Z,0.3nm,0.3s,baz=230,slow=16,SNR=2.8						
EIL				Sn	Sn	03 57 34.4	-9.0
	comp=Z,0.4nm,0.3s,baz=324,slow=16,SNR=4.1						
VYHS	Vyhne	12.69	351	ePN	Pn	03 55 22.6	-1.5
CRVS	Cervenica-Dubn	12.90	359	e	Pn	03 55 33.5	+6.5
ASF	Jabal al Asfar	13.01	103	Pn	Pn	03 55 24.1	-4.6
	comp=Z,0.1nm,0.3s,baz=260,slow=19,SNR=2.3						
MOA	Molln	13.12	337⇑	iSn	Sn	03 57 46.9	-7.4
MOA	Molln	13.12	337⇓	iPn	Pn	03 55 28.2	-1.8
MOA				i Sn	Sn	03 57 46.9	-7.4
MOA	Molln	13.12	337⇓	iPn	Pn	03 55 28.2	-1.8
MOA			⇓	iSn	Sn	03 57 50.9	-3.4
DAVOX	Davos/Dischmat	14.03	324	Pn	Pn	03 55 45.7	+3.4
	comp=Z,0.1nm,0.3s,baz=337,slow=18,SNR=2.3						
DAVOX				Sn	Sn	03 58 14.0	-2.3
	comp=Z,0.2nm,0.3s,baz=152,slow=23,SNR=3.5						
GERES	GERESS Array B	14.18	337	Pn	Pn	03 55 42.0	-2.4
	comp=Z,0.1nm,0.3s,baz=175,slow=14,SNR=3.5						
GERES				Sn	Sn	03 58 14.0	-6.0
	comp=Z,0.1nm,0.3s,baz=172,slow=28,SNR=3.1						
AKASG	Malin Array Be	15.62	18	P	Pn	03 56 00.2	-2.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	15.62	18	Pn	Pn	03 56 00.2	-2.9
	comp=Z,1.0nm,0.3s,baz=210,slow=10.0,SNR=13						
CLL	Collm	16.58	340	ePP		03 56 25.0	
CLL				e(sPP)		03 56 32.0	
ZEI	Tsey	18.28	62	eP	Pn	03 56 35.8	-0.5
ESDC	Sonseca Array	20.72	288	P	P	03 57 03.3	+0.8
	comp=Z,0.1nm,0.2s,baz=97,slow=9.8,SNR=2.5						
OBN	Obninsk	21.62	23	eP	P	03 57 12.8	+0.8
OBN				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.2						
OBN	Obninsk	21.62	23	eP	P	03 57 12.8	+0.8
	comp=Z,9.0nm,0.8s,mb4.2						
MIB	Mutribah	22.21	99	eP	P	03 57 17.5	-1.1
NAY	Al-Naaiem	22.35	100	eP	P	03 57 19.0	-1.1
HFS	Hagfors	24.72	350	P	P	03 57 42.5	-0.1
	comp=Z,3.4nm,0.6s,mb4.1,baz=153,slow=10.0,SNR=19						
FINES	FINESS Array B	25.60	5	P	P	03 57 50.1	-0.4
	comp=Z,2.0nm,0.6s,mb3.8,baz=172,slow=11,SNR=8.8						
EKA	Eskdalemuir Ar	25.84	326	P	P	03 57 53.2	+0.4
	comp=Z,1.8nm,0.8s,mb3.7,baz=128,slow=9.2,SNR=6.7						
NB2	NORSAR Subarra	25.97	348	P	P	03 57 53.2	-0.7
	comp=Z,1.5nm,0.6s,mb3.7,baz=158,slow=9.3						
NB2	NORSAR Subarra	25.97	348	P	P	03 57 53.2	-0.7
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
NOA	NORSAR Array B	25.97	348	P	P	03 57 54.3	+0.4
	comp=Z,1.5nm,0.7s,mb3.6,baz=156,slow=8.8,SNR=6.9						
KAF	Kangasniemi	26.28	5	ep	P	03 57 57.0	+0.3
	comp=Z,2.4nm,0.6s,mb3.9						
KAF	Kangasniemi	26.28	5	eP	P	03 57 57.0	+0.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
JOF	Joensuu	27.57	9	ep	P	03 58 08.5	+0.2
	comp=Z,2.3nm,0.6s,mb4.0						
JOF	Joensuu	27.57	9	eP	P	03 58 08.5	+0.2
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
TORD	Torodi Ar. Bea	29.12	224	P	P	03 58 24.5	+2.0
TORD	Torodi Ar. Bea	29.12	224	P	P	03 58 24.5	+2.0
	comp=Z,2.2nm,0.6s,mb4.1,baz=32,slow=9.4,SNR=27						
AKTK	Aktyubinsk	29.69	50	P	P	03 58 26.2	-1.0
AKTK	Aktyubinsk	29.69	50	P	P	03 58 26.2	-1.0
AKTO	Aktyubinsk	29.69	50	P	P	03 58 26.2	-1.0
	comp=Z,0.5nm,0.3s,mb3.7,baz=297,slow=6.8,SNR=4.0						
ARCES	ARCESS Array B	33.65	2	P	P	03 59 01.9	+0.1
	comp=Z,1.6nm,0.5s,mb4.2,baz=188,slow=11,SNR=20						
KEV	Kevo	33.93	3	ep	P	03 59 03.5	-0.7
	comp=Z,4.4nm,0.7s,mb4.5						
KEV	Kevo	33.93	3	eP	P	03 59 03.5	-0.7
KEV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
DBIC	Dimbokro	38.11	226	P	P	03 59 42.1	+1.6
	comp=Z,1.1nm,0.4s,mb4.0,baz=339,slow=12,SNR=5.8						
MKAR	Makanchi Array	45.54	57	P	P	04 00 40.2	-0.7
	comp=Z,1.4nm,0.4s,mb4.3,baz=269,slow=7.7,SNR=31						
MKAR				PcP	PcP	04 02 20.3	+1.5
	comp=Z,0.4nm,0.6s,baz=274,slow=4.7,SNR=2.1						
SONM	Songino Array	61.00	50	P	P	04 02 34.2	-0.2
	comp=Z,0.4nm,0.6s,mb3.7,baz=274,slow=7.2,SNR=4.4						
YKA	Yellowknife Ar	75.81	341	P	P	04 04 08.0	+1.4
	comp=Z,0.2nm,0.6s,mb3.2,baz=34,slow=5.8,SNR=3.8						

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*CSEM **08** 04:14:49.8±0.2, 3704N×2932E, h2km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.0km az=36.0*
*ISK **08** 04:14:49.6, 3705N×2932E, h5km, MD3.0*
*ISCJB **08** 04:14:51.0±0.5, 3706N±004×2928E±004, h2km, Error ellipse: s-maj=5.5km s-min=4.6km az=167.5*
*DDA **08** 04:14:52.2, 37.14N×2930E, h7km±3km, Md2.9*
ISC 08 04:14:51.4±0.7**, 3706N**±004×**2928E**±006**, h4km**±10km**, n10, σ0s76**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.29	51	i P	Pg	04 14 56.7	-0.2
GOLH				i S	Sg	04 15 02.0	+1.3
FETY	Fethiye	0.45	201	ePG	Pg	04 14 59.3	-0.8
FETY				eSG	Sg	04 15 06.4	+0.5
ELL	Elmali	0.59	121	ePG	Pg	04 15 01.5	-1.3
ELL				eSG	Sg	04 15 10.9	+0.5
DENT	Denizli	0.72	344	ePG	Pg	04 15 04.1	-1.2
YER	Yerkesik	0.80	276	ePG	Pg	04 15 07.7	+0.9
DAT	Datca	1.40	257	ePN	Pn	04 15 18.4	+0.6
BDRM	Kayabasi	1.47	271	i P	Pn	04 15 17.7	-1.0
BDRM				i S	Sb	04 15 38.5	+0.2
KULA	Kula-Manisa	1.54	342	ePN	Pn	04 15 19.3	-0.3
BODT	Bodrum	1.58	271	ePN	Pn	04 15 20.7	+0.5
URLA	Izmir	2.50	302	i P	Pn	04 15 33.0	+0.2
URLA				eS	Sn	04 15 57.4	-6.3

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*IDC **08** 04:28:08.4±0.6, 21.15S×17437W, h0km, mb4.5/14, mb1 4.7/15, mb1mx4.6/19, mbtmp4.5/15, ML4.3/1, MS3.9/7, Ms1 3.9/7, ms1mx3.6/36, Error ellipse: s-maj=23.7km s-min=15.7km az=136.0*
*ISCJB **08** 04:28:12.4±0.2, 2120S±008×17442W±006, h36km, mb4.7/35, MS4.0/6, Error ellipse: s-maj=12.4km s-min=5.9km az=147.9*
*BJI **08** 04:28:14.0, 2081S×17402W, h45km, mB5.4, mb5.1, Ms5.2, Msz5.0*
*NEIC **08** 04:28:17.6±2.6, 2123S×17443W, h70km±23km, mb4.6/18, Error ellipse: s-maj=11.5km s-min=7.3km az=162.0*
ISC 08 04:28:14.3±0.2**, 2120S**±008×**17440W**±006**, h38km, h38km**±2.3km**:pP-P, n214, σ0s62**/145**, mb4.7**/35**, MS4.0**/6**, 51C-45D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.67	19	ePn	Pn	04 29 55.0	-8.5
AFI				eSn	Sn	04 31 16.5	-13
AFI	Afiamalu	7.67	19	Pn	Pn	04 29 55.5	-8.1
	36nm,0.3s,baz=190,slow=1.6,SNR=22						
AFI				Sn	Sn	04 31 13.5	-16
	18nm,0.3s,baz=153,slow=23,SNR=7.4						
AFI				LR	LR	04 32 27.3	
	comp=Z,460nm,21.8s,baz=329,slow=34						
RAR	Rarotonga	13.64	93	Pn	Pn	04 31 13.9	-11
	14nm,0.3s,baz=266,slow=9.0,SNR=16						
DZM	Mont Dzumac	17.84	264	P	Pn	04 32 22.4	+2.7
	1.4nm,0.3s,baz=71,slow=17,SNR=16						
DZM				S	S	04 35 25.3	-18
	0.3nm,0.3s,baz=84,slow=14,SNR=9.5						
DZM				LR	LR	04 37 50.7	
	comp=Z,362nm,20.3s,baz=84,slow=33						
URZ	Urewera	18.51	201	P	Pn	04 32 28.4	+0.6
	1.0nm,0.3s,baz=337,slow=5.2,SNR=5.4						
URZ				S	S	04 35 41.4	-15
	0.5nm,0.3s,baz=233,slow=20,SNR=4.5						
TBI	Tubuai	23.17	100	eLR	LR	04 38 41.9	
	604nm,29.8s						
PPT	Papeete	23.68	86	eLQ		04 37 46.2	
	896nm,23.8s						
PPT				eLR	LR	04 38 51.9	
	632nm,28.0s						
RPZ	Rata Peaks	25.51	205	P	P	04 33 40.3	+1.1
	10.0nm,0.6s,mb4.5,baz=80,slow=17,SNR=2.7						
RPZ				LR	LR	04 43 26.6	
	comp=Z,464nm,18.8s,MS4.0,baz=199,slow=36						
HNR	Honiara	27.32	291	LR	LR	04 43 05.5	
	comp=Z,206nm,19.6s,MS3.7,baz=178,slow=33						
RKT	Rikitea	36.49	101	eLR	LR	04 44 33.7	
	461nm,32.2s						
CTA	Charters Tower	36.78	265	eP	P	04 35 18.3	-0.3
	6.4nm,0.6s,mb4.6						
CTA	Charters Tower	36.78	265	LR	LR	04 49 09.2	
	comp=Z,155nm,18.2s,MS3.8,baz=88,slow=34						
CTAO	Charters Tower	36.78	265	eP	P	04 35 18.1	-0.5
	7.2nm,0.6s,mb4.7						
PMG	Port Moresby	38.78	282	eP	P	04 35 35.0	-0.6
	15nm,0.9s,mb4.7						
PMG	Port Moresby	38.78	282	P	P	04 35 35.1	-0.5
	10.0nm,0.7s,mb4.6,baz=77,slow=11,SNR=4.3						
PMG				LR	LR	04 49 12.8	
	comp=Z,139nm,20.6s,MS3.8,baz=255,slow=33						
STKA	Stephens Creek	40.54	245	eP	P	04 35 49.7	-0.4
	5.0nm,0.6s,mb4.3						
STKA	Stephens Creek	40.54	245	P	P	04 35 49.5	-0.5
	5.0nm,0.6s,mb4.3,baz=92,slow=9.6,SNR=24						
STKA				LR	LR	04 51 05.2	
	comp=Z,192nm,18.5s,MS4.0,baz=202,slow=34						
COEN	Coen	40.99	273	eP	P	04 35 53.7	-0.2
	3.6nm,0.7s,mb4.1						
ASAR	Alice Springs	47.64	257	P	P	04 36 46.1	-0.9
	17nm,0.7s,mb5.2,baz=101,slow=7.4,SNR=182						
ASAR				PcP	PcP	04 38 17.3	+1.0
	0.9nm,0.5s,baz=111,slow=3.6,SNR=4.4						
WB2	Warramunga Arr	47.83	262	eP	P	04 36 47.6	-1.0
WRA	Warramunga Arr	47.84	262	P	P	04 36 47.2	-1.4
	6.7nm,0.7s,mb4.8,baz=97,slow=8.1,SNR=38						
WRA				PcP	PcP	04 38 18.1	+1.0

2.2nm,0.7s,baz=99,slow=3.3,SNR=3.7
FORT Forrest 52.12 247 *e*P P **04 37 19.9 -1.1**
17nm,0.6s,mb5.2
FITZ Fitzroy Crossi 56.27 262 P P **04 37 50.7 -0.7**
5.0nm,0.9s,mb4.5,baz=130,slow=7.9,SNR=5.6
VNDA Vanda 57.54 186 P P **04 37 58.4 -1.1**
2.7nm,1.0s,mb4.2,baz=8.1,slow=14,SNR=2.0
MBWA Marble Bar 60.99 257 *e*P P **04 38 23.5 -0.7**
20nm,0.7s,mb5.3
MJAR Matsushiro Arr 72.81 322 P P **04 39 38.8 -0.2**
14nm,0.7s,mb5.0,baz=158,slow=5.8,SNR=31
MAJO Matsushiro 72.81 322 *e*P P **04 39 39.1 0.0**
16nm,0.8s,mb5.0
MAT Matsushiro 72.81 322 P P **04 39 38.4 -0.6**
T06C Millerton Lake 77.51 42 ⇓P P **04 40 05.3 -0.8**
baz=78
CMB Columbia Colle 77.74 41 *e*P P **04 40 06.7 -0.7**
5.5nm,1.1s,mb4.4
CMB Columbia Colle 77.74 41 ⇓P P **04 40 06.8 -0.5**
baz=78
HELL Mitchell Peak, 77.74 43 ⇑P P **04 40 06.5 -0.8**
baz=78
MPMC Manual Prospec 78.34 44 ⇓P P **04 40 10.8 0.0**
baz=78
R06C Coleville 78.61 41 ⇑P P **04 40 12.6 +0.4**
baz=79
IRM Iron Mountain 78.77 47 ⇑P P **04 40 13.5 +0.4**
baz=79
S08C White Mtn Res 78.78 42 ⇓P P **04 40 13.2 +0.1**
baz=79
O04C Chester 78.78 39 ⇑P P **04 40 12.8 -0.2**
baz=79
GRAC Grapevine Rang 78.98 43 ⇓P P **04 40 14.3 +0.1**
baz=79
NVAR Mina Array Bea 79.26 42 P P **04 40 15.6 -0.1**
4.2nm,0.8s,mb4.4,baz=212,slow=6.9,SNR=27
O06A Flanigan 79.42 39 ⇓P P **04 40 17.0 +0.4**
baz=80
S09A Goldfield 79.51 43 ⇑P P **04 40 17.2 +0.1**
baz=80
PDMCI Parker Dam,Lak 79.54 47 ⇓P P **04 40 17.2 -0.1**
baz=80
V11A Goodsprings 79.55 45 ⇑P P **04 40 17.6 +0.2**
baz=80
TPNV Topopah Spring 79.67 44 *e*P P **04 40 17.7 -0.3**
3.6nm,0.8s,mb4.3
TPNV Topopah Spring 79.67 44 ⇑P P **04 40 18.2 +0.2**
baz=80
KSRS Korea Array 79.67 317 P P **04 40 18.8 +0.7**
5.0nm,0.9s,mb4.5,baz=139,slow=5.7,SNR=11
N06A Buffalo Meadow 79.79 39 ⇓P P **04 40 18.5 0.0**
baz=80
X13A Yucca 79.92 47 ⇑P P **04 40 19.3 -0.1**
baz=80
O07A Toulon 79.99 40 ⇓P P **04 40 19.4 -0.3**
baz=80
S10A Tonopah Range, 80.03 43 ⇑P P **04 40 19.7 -0.2**
baz=80
Y14A Wickenburg 80.11 48 ⇑P P **04 40 21.2 +0.8**
baz=80
R10A Warm Springs 80.43 43 ⇓P P **04 40 22.6 +0.5**
baz=81
K05A Summer Lake 80.45 37 ⇑P P **04 40 22.1 +0.1**
baz=81
T11A Corn Creek, Al 80.51 44 ⇓P P **04 40 22.7 +0.2**
baz=81
W14A Seligman 80.77 47 ⇓P P **04 40 24.5 +0.6**
baz=81
TUC Tucson 80.80 50 *e*P P **04 40 24.3 +0.1**
0.7nm,0.6s,mb3.8
L07A Adell 80.88 38 ⇓P P **04 40 24.8 +0.5**
baz=81
R11A Troy Canyon, C 80.92 43 ⇑P P **04 40 24.7 0.0**
baz=81
X15A Humboldt 80.95 48 ⇑P P **04 40 25.2 +0.3**
baz=81
S12A Delamar Landin 80.96 44 ⇑P P **04 40 25.6 +0.7**
baz=81
Q11A Duckwater 81.17 42 ⇓P P **04 40 26.3 +0.3**
baz=81
K07A Rock Creek Ran 81.36 38 ⇑P P **04 40 26.9 0.0**
baz=82
U14A Mt Trumbull 81.38 46 ⇑P P **04 40 27.6 +0.4**
baz=82
L08A Fields 81.56 39 ⇓P P **04 40 28.2 +0.2**
baz=82
O11A Cowboy Ranch, 81.93 41 ⇓P P **04 40 30.1 +0.1**
baz=82
H06A Lindquist Farm 82.06 36 ⇓P P **04 40 29.5 -1.1**
baz=82
I07A Izee 82.10 37 ⇓P P **04 40 31.1 +0.3**
baz=82
M10A I.L. Ranch, Tu 82.22 40 ⇑P P **04 40 31.8 +0.4**
baz=82
K09A Rome 82.24 38 ⇑P P **04 40 31.9 +0.3**
baz=82
H07A Lands Inn, Kim 82.39 36 ⇓P P **04 40 32.5 +0.3**
baz=83
F06A Goldendale 82.49 35 ⇑P P **04 40 33.0 +0.2**
baz=83
O12A Currie 82.57 42 ⇑P P **04 40 33.4 +0.1**
baz=83
L10A Juniper Basin 82.60 40 ⇓P P **04 40 33.6 +0.1**
baz=83
LON Longmire 82.60 33 *e*P P **04 40 36.5 +3.2**
G07A Ruggs Ranch, H 82.76 36 ⇑P P **04 40 34.0 -0.2**
baz=83
K10A MacKenzie Ranc 82.78 39 ⇓P P **04 40 34.2 -0.2**
baz=83
NJ2 Nanjing 82.94 308 *e*P P **04 40 36.4 +0.9**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
M12A Wells 83.14 41 ⇑P P **04 40 36.2 -0.1**
baz=83
G08A Pilot Rock 83.16 36 ⇓P P **04 40 36.3 0.0**
baz=83
MSU Marysvale 83.21 44 *e*P P **04 40 37.1 +0.4**
K11A Parker Ranch, 83.27 39 ⇓P P **04 40 37.0 +0.1**
baz=84
H09A Durkee 83.49 37 ⇓P P **04 40 38.4 +0.4**
baz=84
L12A House Creek Ra 83.51 40 ⇓P P **04 40 38.4 +0.3**
baz=84
M13A Montello 83.56 41 ⇓P P **04 40 38.7 +0.2**
baz=84
F08A Pendleton 83.58 36 ⇑P P **04 40 38.6 +0.2**
baz=84
I10A Payette 83.62 38 ⇓P P **04 40 39.1 +0.4**
baz=84
DUG Dugway 83.74 43 ⇑P P **04 40 39.7 +0.3**
baz=84
MFID Camas Ranch 83.78 39 ⇑P P **04 40 39.7 +0.2**
baz=84
BMO Blue Mountains 83.81 37 *e*P P **04 40 39.2 -0.4**
comp=Z,30nm,2.2s,mb5.0
D07A Quincy 83.84 34 ⇓P P **04 40 39.7 0.0**
baz=84
K12A Draper Farm, C 83.86 40 ⇓P P **04 40 40.0 +0.1**
baz=84
E08A Dider Farm, El 83.87 35 ⇑P P **04 40 39.6 -0.3**
baz=84
H10A Noah's Angus R 83.96 37 P P **04 40 40.0 -0.3**
baz=84,SNR=7.4
F09A S2 Ranch, Elgi 84.00 36 ⇑P P **04 40 40.3 -0.3**
baz=84
J12A Stokes Ranch, 84.11 39 P P **04 40 41.1 0.0**
baz=84,SNR=6.0
L13A Double Diamond 84.12 41 ⇑P P **04 40 41.0 -0.3**
baz=84
M14A Sheep Mountain 84.15 41 P P **04 40 41.2 -0.3**
baz=84,SNR=5.3
TMUT Trail Mountain 84.27 44 *e*P P **04 40 42.7 +0.6**
TMUT *e*pP pP 04 40 56.7 +2.9
D08A Wollman Farm, 84.31 34 ⇑P P **04 40 41.9 -0.2**
baz=84
K13A Stover Farm, H 84.36 40 ⇓P P **04 40 42.2 -0.3**
baz=85
MNTX Cormudas Mount 84.44 53 *e*P P **04 40 43.3 +0.1**
comp=Z,0.9nm,0.6s,mb4.1
H11A Donnelly 84.44 38 ⇓P P **04 40 42.5 -0.4**
baz=85,SNR=8.1
F10A Beach Ranch, E 84.54 36 P P **04 40 42.9 -0.5**
baz=85,SNR=8.4
TXAR Lajitas Array 84.62 56 P P **04 40 43.5 -0.6**
comp=Z,0.7nm,0.9s,mb3.8,baz=226,slow=3.3,SNR=4.2
D09A Jones Farm, Ri 84.63 35 ⇓P P **04 40 43.4 -0.4**
baz=85
HVU Hansel Valley 84.66 41 *e*P P **04 40 44.4 +0.4**

M15A Larsen Ranch, 84.68 42 ⇑P P **04 40 43.7 -0.5**
baz=85,SNR=6.9
HLID Hailey 84.69 39 *e*P P **04 40 44.6 +0.4**
HLID Hailey 84.69 39 ⇓P P **04 40 44.1 0.0**
baz=85,SNR=9.5
G11A Walters Elk Ra 84.72 37 ⇓P P **04 40 43.8 -0.5**
baz=85
J13A Cove Ranch, Pi 84.74 39 P P **04 40 44.9 +0.5**
baz=85,SNR=9.1
K14A Jones Ranch, D 84.85 41 ⇑P P **04 40 45.0 0.0**
baz=85
CN2 Changchun 84.94 321 *e*P P **04 40 47.0 +1.6**
CN2 *e*AP pP 04 40 57.5 +0.4
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.9
H12A Diamond D Ranc 85.02 38 P P **04 40 45.7 0.0**
baz=85,SNR=6.9
I13A Wildhorse Cree 85.08 39 ⇓P P **04 40 45.9 -0.1**
baz=85
ANMO Albuquerque 85.24 50 *e*P P **04 40 47.5 +0.3**
A08A Turner Farm, O 85.33 33 ⇑P P **04 40 46.9 -0.4**
baz=86
H13A Challis 85.37 38 P P **04 40 47.7 +0.2**
baz=86,SNR=5.5
F12A Elk City 85.50 37 P P **04 40 47.6 -0.5**
baz=86,SNR=8.4
G13A Cobalt 85.69 38 ⇓P P **04 40 49.0 -0.1**
baz=86
F13A Darby 86.05 37 ⇓P P **04 40 49.8 -1.0**
baz=86
G15A Dillon 86.75 39 ⇓P P **04 40 54.2 -0.2**
baz=87
E14A Clinton 86.89 37 ⇓P P **04 40 54.6 -0.3**
baz=87
MCK McKinley 86.97 11 *e*P P **04 40 54.6 -0.3**
comp=Z,5.6nm,1.0s,mb4.8
VNA3 Neumayer Olymp 87.19 175 *e*P P **04 40 56.1 -0.1**
VNA3 *e* pP 04 41 07.5 -0.4
VNA3 *e* 04 41 10.6
VNA3 *e* 04 41 19.4
VNA3 *e* 04 41 27.0
VNA3 *e* 04 41 31.4
VNA3 *e* 04 41 38.4
BW06 Boulder Array 87.20 42 *e*P P **04 40 55.8 -0.8**
comp=Z,1.4nm,0.7s,mb4.3
PDAR Pinedale Array 87.20 42 P P **04 40 55.7 -0.9**
comp=Z,2.3nm,0.9s,mb4.4,baz=203,slow=3.2,SNR=13
BOZ Bozeman (W) 87.52 39 *e*P P **04 40 58.4 +0.4**
comp=Z,1.3nm,0.8s,mb4.2
BOZ Bozeman (W) 87.52 39 ⇑P P **04 40 58.1 0.0**
baz=88
VNA2 Neumayer--Watz 87.67 176 *e*P P **04 40 59.8 +1.3**
baz=206,slow=1.1
VNA2 *e* pP 04 41 10.0 -0.2
VNA2 *e* pP 04 41 13.2 +3.0
VNA2 *e* 04 41 23.2
VNA2 *e* 04 41 30.5
VNA2 *e* 04 41 37.9
VNA2 *e* 04 41 43.3
A13A Flathead Natio 87.85 35 ⇑P P **04 40 59.7 +0.2**
baz=88
VNA1 Neumayer--Stat 87.88 175 *e*P P **04 40 59.2 -0.3**
VNA1 *e* 04 41 14.8
VNA1 *e* 04 41 24.0
COLA College 88.21 11 *e*P P **04 41 00.2 -0.7**
comp=Z,7.0nm,1.1s,mb4.8
DAWY Dawson 89.25 15 *e*P P **04 41 06.0 +0.2**
GYA Guiyang 89.94 298 P P **04 41 11.6 +1.7**
GYA AP pP 04 41 22.6 +0.9
GYA XP sP 04 41 26.7 +0.7
GYA PP PP 04 44 47.2 +3.8
GYA SKS 04 51 37.5
GYA S S 04 51 59.7 -0.4
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,90nm,4.9s
EDM Edmonton 90.90 32 *e*P P **04 41 12.6 -1.1**
HHC Hu-ho-hao-te 92.27 313 *e*P P **04 41 19.4 -1.0**
HHC AP pP 04 41 30.2 -2.0
HHC PP PP 04 45 03.1 +1.5
HHC SKS 04 51 48.7
HHC S S 04 52 17.7 -3.1
HHC SS SS 04 58 33.0 +0.8
HHC AMB AMB
comp=Z,8.0nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,134nm,5.9s
KMI Kunming 92.68 296 P P **04 41 24.4 +1.7**
KMI AP pP 04 41 33.5 -1.0
KMI XP sP 04 41 38.8 +0.1
KMI AMB AMB
comp=Z,15nm,0.8s,mb5.5
KMI AMB AMB
comp=Z,99nm,4.3s
DGMT Dagmar 93.33 39 *e*P P **04 41 25.4 +0.4**
CHTO Chiang Mai 93.66 289 *e*P P **04 41 28.7 +1.4**
comp=Z,8.1nm,0.8s,mb5.2
INK Inuvik 94.10 14 *e*P P **04 41 27.6 -0.5**
YKA Yellowknife Ar 95.77 24 P P **04 41 35.2 -0.7**
YKA Yellowknife Ar 95.77 24 P P **04 41 35.2 -0.7**
comp=Z,1.4nm,0.9s,mb4.4,baz=236,slow=4.3,SNR=19
LZH Lanzhou 95.89 306 *e*P P **04 41 38.5 +1.4**
LZH AP pP 04 41 50.1 +1.2
LZH XP sP 04 41 54.2 +1.0
LZH AMB AMB
comp=Z,20nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,56nm,8.2s
LZH LR LR
comp=N,276nm,16.7s
LZH LR LR
comp=Z,398nm,19.2s,MS4.9
LZH Lanzhou 95.89 306 *e*P P **04 41 38.5 +1.4**
LZH pP pP 04 41 50.1 +1.2
LZH sP sP 04 41 54.2 +1.0
LZH *e*PP PP 04 45 13.7 -16
SONM Songino Array 98.51 318 P P **04 41 49.1 +0.4**
comp=Z,0.3nm,0.6s,mb4.0,baz=124,slow=4.2,SNR=2.4
MKAR Makanchi Array 114.14 313 PKP PKiKP 04 46 48.0 -1.5
comp=Z,0.3nm,0.5s,baz=121,slow=0.6,SNR=5.6
BRVK Borovoye 121.84 320 *e*PKPdf PKPdf 04 47 03.9 -0.2
ARCES ARCESS Array B 130.18 351 PKP PKPdf 04 47 19.2 -0.3
comp=Z,1.4nm,0.8s,baz=294,slow=1.2,SNR=7.0
FINES FINESS Array B 137.34 346 PKhKP 04 47 23.0
comp=Z,1.0nm,0.8s,baz=100,slow=4.2,SNR=2.5
FINES PKP PKPdf 04 47 34.0 +0.8
comp=Z,2.4nm,0.9s,baz=70,slow=2.2,SNR=4.6
NOA NORSAR Array B 140.00 356 PKP PKPdf 04 47 33.8 -4.3
NOA PKP PKPdf 04 47 38.7 +0.6
NOA NORSAR Array B 140.00 356 PKhKP 04 47 33.8
comp=Z,1.0nm,0.9s,baz=28,slow=2.1,SNR=2.8
NOA PKP PKPdf 04 47 38.7 +0.6
comp=Z,0.7nm,0.8s,baz=349,slow=2.2,SNR=3.2
ERZM Erzurum 144.31 310 *i* P PKPdf 04 47 46.3 -0.1
MUD Monsted U'grnd 144.70 357 ⇑*i*P PKPdf 04 47 45.4 -1.2
comp=Z,18nm,0.8s
AKASG Malin Array Be 145.20 333 PKPbc PKPbc 04 47 46.7 -0.6
comp=Z,11nm,0.6s,baz=40,slow=4.0,SNR=93
KIEV Kiev 145.21 333 *e*PKPbc PKPbc 04 47 46.3 -1.0
ESK Eskdalemuir 145.30 9 *e*PKPbc PKPbc 04 47 47.2 -0.2
BSD Bornholm Skovb 145.42 351 ⇑*i*P PKPbc 04 47 47.2 -0.7
comp=Z,24nm,0.7s
ELZG Elazig 146.54 308 *i* P PKPdf 04 47 52.5 +2.1
MALT Malatya 147.02 308 *e*PKPbc PKPbc 04 47 54.4 +1.2
MALT Malatya 147.02 308 ⇑*i*P PKPdf 04 47 54.8 +3.6
GZT Gaziantep 148.00 307 *i* P PKPdf 04 47 56.2 +3.4
BOYT Boyabat 148.10 316 *i* P PKPbc 04 47 57.1 +1.0
KWP Kalwaria 148.55 339 *e*PKPbc PKPbc 04 47 57.0 +0.1
KWP Kalwaria 148.55 339 ⇑*i*P PKPdf 04 47 56.9 +3.6
OJC Ojcow 148.95 342 *e*PKP PKPbc 04 47 58.4 +0.5
STHS Stebnicka Huta 149.22 340 *e*PKP PKPbc 04 47 59.6 +0.9
STHS *e* 04 48 06.1
BURAR Bucovina Array 149.26 334 ⇓P PKPbc 04 47 59.0 +0.2
BURAR Bucovina Array 149.26 334 ⇓*i*P PKPbc 04 47 59.0 +0.2
KOLS Kolonicke sedl 149.29 338 *e*PKP PKPbc 04 47 59.5 +0.6
KOLS *e* 04 48 05.3
KOLS Kolonicke sedl 149.29 338 *e*PKP PKPbc 04 47 59.5 +0.6
KOLS *e* 04 48 05.2
AVNT Avonos 149.39 311 *i* P PKPbc 04 47 59.7 +0.3
CLL Collm 149.40 351 ⇑*i*PKP PKPbc 04 47 59.2 +0.2
CLL *i* PKP PKPab 04 48 04.3 +0.5
CLL *i* pPKP pPKPdf 04 48 09.6 +2.8
CLL Collm 149.40 351 ⇑*i*PKPbc PKPbc 04 47 59.2 +0.2
comp=Z,14nm,1.3s
CLL *i* PKPab PKPab 04 48 04.3 +0.5
comp=Z,12nm,1.2s
CLL *i* x x 04 48 09.6
NIE Niedzica 149.51 341 *e*PKP PKPbc 04 48 00.7 +1.3
ELDT Eldivan 149.54 315 *i* P PKPbc 04 48 00.8 +1.1
CRVS Cervenica-Dubn 149.59 339 *e*PKP PKPdf 04 47 58.4 +3.4
CRVS *e* 04 48 05.0
UPC Upice 149.63 347 *e*PKPbc PKPbc 04 47 59.6 0.0
BRG Berggiesshubel 149.67 350 *i* PKP PKPbc 04 48 00.1 +0.3
comp=Z,13nm,1.3s
BRG *i* 04 48 03.9
comp=Z,6.7nm,0.9s
DPC Dobruska-Polom 149.71 346 *e*PKPbc PKPbc 04 48 00.7 +0.9
OKC Ostrava-Krasne 149.74 344 *e*PKPbc PKPbc 04 48 00.3 +0.4
OKC *e*PKPab PKPab 04 48 09.0 +3.7
BRTR Keskin Array B 149.78 314 PKPbc PKPbc 04 48 00.7 +0.3
comp=Z,3.8nm,0.8s,baz=122,slow=3.6,SNR=20
BRTR PKPab PKPab 04 48 05.0 -0.8
comp=Z,3.7nm,0.8s,baz=72,slow=4.0,SNR=11
TRPA Tarpa 149.88 337 ⇓*i*P PKPbc 04 48 01.3 +1.0
PVCC Panska Ves 149.89 349 *e*PKPbc PKPbc 04 48 01.1 +0.8
PVCC *e*PKPab PKPab 04 48 10.3 +4.5
MORC Moravsky Berou 149.95 344 *e*PKPbc PKPbc 04 48 01.0 +0.5
MORC Moravsky Berou 149.95 344 ⇓*i*P PKPbc 04 48 01.7 +1.2
ANTO Ankara 150.27 315 *e*PKPbc PKPbc 04 48 02.1 +0.6
ANTO Ankara 150.27 315 ⇑*i*P PKPbc 04 48 02.3 +0.7
KECS Kecovo 150.28 340 *e*PKP PKPbc 04 48 01.8 +0.5
PRU Pruhonice 150.41 348 *e*PKPbc PKPbc 04 48 02.0 +0.4
PRU *e*PKPab PKPab 04 48 12.1 +4.1
MLR Muntele Rosu 150.58 330 ⇑P PKPbc 04 48 03.1 +1.0
MLR Muntele Rosu 150.58 330 ⇑*i*P PKPbc 04 48 03.1 +1.0
VYHS Vyhne 150.78 342 *i* PKP PKPbc 04 48 02.4 -0.1
KOLL Kolacno 150.82 342 *e*PKP PKPbc 04 48 02.7 +0.1
TREC Trest 150.88 347 *e*PKPbc PKPbc 04 48 03.0 +0.3
DRGR 150.93 335 ⇑P PKPbc 04 48 03.8 +0.9
DRGR 150.93 335 ⇑*i*P PKPbc 04 48 03.8 +0.9
VOIR 151.03 331 ⇑P PKPbc 04 48 04.7 +1.5
VOIR 151.03 331 ⇑*i*P PKPbc 04 48 04.7 +1.5
GIVF Givet 151.15 1 *e*PKP1 PKPbc 04 48 03.5 +0.2
comp=Z,35nm,0.9s
BAIF Baives 151.18 2 *e*PKP1 PKPbc 04 48 03.8 +0.4
MODS Modra-Piesok 151.32 344 *e*PKP PKPbc 04 48 05.0 +1.3
KHC Kasperske Hory 151.41 349 *e*PKPbc PKPbc 04 48 03.5 -0.4
KHC *e*PKPab PKPab 04 48 11.7 -0.5
KHC *ex* x 04 48 13.6
GERES GERESS Array B 151.67 349 PKPbc PKPbc 04 48 05.0 +0.5
comp=Z,3.1nm,0.8s,baz=39,slow=2.6,SNR=18
GERES PKPab PKPab 04 48 14.5 +1.2
comp=Z,1.7nm,0.6s,baz=37,slow=3.4,SNR=6.2
GZR Gura Zlata 152.05 334 ⇓P PKPbc 04 48 05.9 +0.4
GZR Gura Zlata 152.05 334 ⇓*i*P PKPbc 04 48 05.9 +0.4
FLN La Foliniere 152.07 9 *e*PKP1 PKPbc 04 48 05.0 -0.4
comp=Z,19nm,0.8s
BZS Buzias 152.33 335 ⇑P PKPbc 04 48 06.3 +0.1
BZS Buzias 152.33 335 ⇑*i*P PKPbc 04 48 06.3 +0.2
GRR Gorron 152.38 9 *e*PKP1 PKPbc 04 48 06.0 -0.2
comp=Z,19nm,0.7s
CDF Champ du Feu 152.82 358 *e*PKP1 PKPbc 04 48 09.4 +2.3
PKSM Moragy 152.87 340 ⇑P PKPbc 04 48 07.8 +0.5
PKSM Moragy 152.87 340 ⇑*i*P PKPbc 04 48 07.8 +0.5
TORD Torodi Ar. Bea 171.16 154 PKPab PKPab 04 49 38.6 -0.3
comp=Z,0.2nm,0.5s,baz=188,slow=3.1,SNR=2.8

IDC 08 04:37:53.4±7.4, 263S×14078E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/11, mbtmp3.6/3, ML3.7/1, Error ellipse: s-maj=298.0km s-min=29.1km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.32**	**200**	P	Pn	04 42 09.4	+0.2
	0.3nm,0.3s,baz=20,slow=13,SNR=12						
ASAR	**Alice Springs**	**21.95**	**197**	P	P	04 42 48.9	+0.1
	0.8nm,0.5s,baz=28,slow=10,SNR=13						
MKAR	**Makanchi Array**	**70.99**	**322**	P	P	04 49 13.1	+0.1
	0.8nm,0.8s,baz=120,slow=7.7,SNR=7.6						
DBIC	**Dimbokro**	**145.52**	**278**	PKPbc	PKPbc	04 57 34.1	-0.8
	1.9nm,0.8s,baz=101,slow=5.2,SNR=4.6						

*ISCJB **08** 04:51:59.9±2.4, 1488N×009.94E×40W±005, h15km±17km, mb3.6/3, Error ellipse: s-maj=15.1km s-min=7.5km az=7.7*
*IDC **08** 04:51:59.2±1.5, 1500N×94.16W, h0km, mb3.6/3, mb1 3.9/6, mb1mx3.7/20, mbtmp3.6/6, ML3.7/2, Error ellipse: s-maj=36.2km s-min=20.7km az=59.0*
*MEX **08** 04:52:01.6±1.1, 1477N×9442W, h12km±51km, MD4.3*
*NEIC **08** 04:52:01.6, 1477N×9442W, h12km, MD4.3(MEX), After MEX.*

ISC 08 04:52:00.1±2.8, 1495N×009×9435W×004, h5km±20km, n13, σ1§20/22, mb3.6/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**2.20**	**346**	*i* P	**Pn**	**04 52 36.8**	**-0.5**
CMIG				*i* S	**Sn**	**04 53 04.6**	**-0.2**
CMIG				Sn	**Sn**	**04 53 05.3**	**+0.4**
CMIG	**Matias Romero**	**2.20**	**346**	Pn	**Pn**	**04 52 36.8**	**-0.5**
	5.8nm,0.3s,baz=162,slow=12,SNR=106						
CMIG				Sn	**Sn**	**04 53 05.3**	**+0.4**
	19nm,0.3s,baz=44,slow=4.6,SNR=16						
CMIG	**Matias Romero**	**2.20**	**346**	*i* P	**Pn**	**04 52 36.8**	**-0.5**
CMIG				*i* S	**Sn**	**04 53 04.6**	**-0.2**
SCX	**San Cristobal**	**2.43**	**43**	*i* P	**Pn**	**04 52 41.6**	**+1.1**
SCX				*i* S	**Sn**	**04 53 11.0**	**+0.5**
CCIG	**Comitan**	**2.51**	**58**	*i* P	**Pn**	**04 52 41.0**	**-0.6**
CCIG				*i* S	**Sn**	**04 53 14.6**	**+2.0**
VHO	**Vista Hermosa**	**3.12**	**313**	*i* P	**Pn**	**04 52 50.3**	**+0.3**
VHO				*e*S	**Sn**	**04 53 26.8**	**-0.9**
UTMO	**Huajuapan**	**4.39**	**311**	*e*P	**Pn**	**04 53 07.0**	**-0.5**
UTMO				*i* S	**Sn**	**04 53 59.1**	**+0.1**
TEIG	**Tepich**	**7.81**	**47**	Pn	**Pn**	**04 53 52.9**	**-1.6**
	2.1nm,0.3s,baz=209,slow=19,SNR=19						
TEIG				Sn	**Sn**	**04 55 21.6**	**-1.8**
	baz=330,slow=20,SNR=2.8						
TXAR	**Lajitas Array**	**16.71**	**331**	Pn	**Pn**	**04 55 57.2**	**+2.2**
	0.0nm,0.3s,baz=145,slow=9.2,SNR=4.9						
NVAR	**Mina Array Bea**	**31.53**	**322**	P	**P**	**04 58 25.2**	**+2.0**
	0.6nm,0.9s,mb3.4,baz=137,slow=8.6,SNR=3.2						
LPAZ	**La Paz**	**40.41**	**139**	P	**P**	**04 59 39.3**	**-0.2**
	1.0nm,0.4s,mb3.9,baz=200,slow=12,SNR=6.9						
YKA	**Yellowknife Ar**	**49.61**	**348**	P	**P**	**05 00 50.5**	**-1.6**
YKA	**Yellowknife Ar**	**49.61**	**348**	P	**P**	**05 00 50.5**	**-1.6**
	0.3nm,0.6s,mb3.5,baz=153,slow=7.3,SNR=7.3						

*DDA **08** 05:01:20.1, 3864N×3938E, h7km±2km, Md3.2*
*ISK **08** 05:01:20.4, 3841N×3923E, h5km, MD3.5*
*ISCJB **08** 05:01:21.3±0.4, 3837N±003×3930E±003, h5km, Error ellipse: s-maj=4.5km s-min=2.9km az=165.0*
*CSEM **08** 05:01:21.5±0.1, 3843N×3922E, h5km, MD3.2, Error ellipse: s-maj=3.0km s-min=1.8km az=168.0*

ISC 08 05:01:22.1±0.5, 3840N±003×3928E±003, h6km±6km, n23, σ1§06/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.25**	**293**	*i* P	**Pg**	**05 01 26.8**	**-0.3**
ELZG				*i* S	**Sg**	**05 01 30.9**	**+0.4**
PTK	**Pertek**	**0.50**	**10**	*i* PG	**Pg**	**05 01 30.4**	**-1.4**
MALT	**Malatya**	**0.68**	**263**	PG	**Pg**	**05 01 33.3**	**-1.9**
MALT				SG	**Sg**	**05 01 44.1**	**+0.1**
MYA	**Malataya**	**0.68**	**264**	PG	**Pg**	**05 01 34.1**	**-1.1**
DIY	**Diyarbakir**	**0.90**	**124**	PG	**Pg**	**05 01 38.6**	**-0.8**
URFA	**Urfa**	**1.02**	**201**	PG	**Pg**	**05 01 41.0**	**-0.8**
BINT	**Bingol**	**1.06**	**63**	PN	**Pn**	**05 01 42.5**	**-1.0**
ATAB	**Bozova**	**1.21**	**220**	*i* P	**Pg**	**05 01 45.5**	**+0.1**
ATAB				*i* S	**Sg**	**05 02 01.8**	**+0.7**
EZC	**Erzincan**	**1.41**	**17**	PN	**Pn**	**05 01 47.7**	**-0.7**
MARD	**Mardin**	**1.60**	**132**	*i* P	**Pn**	**05 01 49.9**	**-1.1**
MARD				*i* S	**Sn**	**05 02 10.7**	**-1.4**
GZT	**Gaziantep**	**1.71**	**233**	*i* P	**Pg**	**05 01 54.8**	**-0.1**
GZT				*i* S	**Sg**	**05 02 18.6**	**+1.4**
BTMT	**Batman**	**1.75**	**96**	PN	**Pn**	**05 01 52.1**	**-0.9**
GAZ	**Gaziantep**	**2.05**	**234**	*e*PN	**Pn**	**05 01 57.7**	**+0.6**
GUMT	**Gumushane**	**2.06**	**4**	PN	**Pn**	**05 01 57.3**	**-0.1**
EZM	**Erzurum**	**2.21**	**46**	*e*PN	**Pn**	**05 02 00.5**	**+1.2**
ERZM	**Erzurum**	**2.21**	**46**	*i* P	**Pn**	**05 02 00.0**	**+0.6**
ERZM				*i* S	**Sg**	**05 02 35.5**	**+2.3**
SIRT	**Sirnak**	**2.65**	**109**	*e*PN	**Pn**	**05 02 07.4**	**+2.0**
BNN	**Bunyan**	**2.73**	**281**	*e*PN	**Pn**	**05 02 06.8**	**+0.3**

KOZT	Kozan	2.88	253	ePN	Pn	05 02 09.1	+0.5
COBT	Iskenderun	3.05	233	i P	Pg	05 02 20.0	-0.7
COBT				i S	Sg	05 03 01.1	+0.9
HAKT	HAKKARI	3.59	102	i P	Pn	05 02 17.2	-1.2
HAKT				i S	Sg	05 03 18.6	+1.0
CUKT	Cukurca	3.61	107	ePN	Pn	05 02 20.7	+2.1
CTKT	Corum	4.12	304	eP	Pn	05 02 29.9	+4.2

*NIED **08** 05:03:00,2990N×14090E,h145^{km},Mw6.1 Best double couple: $M_0$1.73000×10^{18} NP1:ϕ_s91.00000°,δ57.00000°, λ172.00000°. NP2:ϕ_s186.00000°,δ83.00000°,λ34.00000°.*
*BGS **08** 05:03:16.7,2678N×14175E,h140^{km},mb6.2*
*BJI **08** 05:03:25.2,2996N×14087E,h125^{km},mB6.0,mb5.9*
*JMA **08** 05:03:29.3,2987N×14089E,h152^{km},M6.0*
JMA Felt II J1.
*CRAAG **08** 05:03:30.5,3000N×14023E,Mw6.1*
*ISCJB **08** 05:03:31.2±0.1,2992N±002×14024E±001,h138^{km}, mb5.9/345,Error ellipse: s-maj=2.1km s-min=1.8km az=172.7*
*IDC **08** 05:03:31.2±0.5,2983N×14021E,h131^{km}±3^{km},mb5.4/37, mb1 5.5/39,mb1mx5.5/39,mbtmp5.4/39,MS5.1/27, Ms1 5.1/27,ms1mx5.0/40,Error ellipse: s-maj=10.3km s-min=5.5km az=84.0*
*GCMT **08** 05:03:32.3±0.1,2989N×14052E,h135^{km},MW6.1/105, Moment Tensor Solution. s104,c246; s105,c342; Duration: 2^{s}7 Moment tensor: Scale 10^{18}Nm; M_{rr}0.17±.01; $M_{\theta\theta}$-0.65±.01; $M_{\phi\phi}$0.47±.01; $M_{r\theta}$-0.32±.01; $M_{\theta\phi}$-1.30±.01; $M_{\phi r}$-0.80±.01; Best double couple: $M_0$1.64900×10^{18} NP1:ϕ_s193.00000°,δ89.00000°, λ31.00000°. NP2:ϕ_s102.00000°,δ59.00000°,λ179.00000°. Principal axes: T 1.5310, Plg22.0000°, Azm62.0000°; N 0.2340, Plg59.0000°, Azm195.0000°; P -1.7660, Plg21.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MOS **08** 05:03:32.1±1.0,2992N×14023E,h150^{km},mb6.5/109, MS5.4/29 Error ellipse: s-maj=7.1km s-min=3.9km az=107.9*
*NEIC **08** 05:03:32.3±0.6,2991N×14020E,h140^{km}±5^{km},mb5.9/228, ME6.0,MW6.0,MW6.1(NIED),Error ellipse: s-maj=3.1km s-min=2.6km az=179.0,Moment Tensor Solution. s39 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.06; $M_{\theta\theta}$-0.39; $M_{\phi\phi}$0.44; $M_{r\theta}$-0.25; $M_{\theta\phi}$-1.11; $M_{\phi r}$-0.79; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s102.00000°,δ55.00000°, λ-176.00000°. NP2:ϕ_s10.00000°,δ87.00000°, λ-35.00000°. Principal axes: T 1.4100, Plg21.0000°, Azm61.0000°; N 0.0700, Plg55.0000°, Azm185.0000°; P -1.4700, Plg26.0000°, Azm320.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [II] at Tokyo. Also felt at Yokohama. Recorded [2 JMA] in Fukushima, Miyagi, Saitama and Tokyo; [1 JMA] in Chiba, Ibaraki, Kanagawa, Nagano, Tochigi and Yamanashi Prefectures.
*SZGRF **08** 05:03:37.8,2935N×13976E,h200^{km},mb6.4,Southeast of Honshu, Japan*

ISC 08 05:03:32.8±0.1**,2996N**±001×**14022E**±001**,h140**^{km}**, h140**^{km}±1.5^{km}**:pP-P,n1772,**σ**0**^{s}**87**/1767**,mb5.9**/344**, 408C-499D,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	3.17	354	P	Pn	05 04 21.9	0.0
JHJ2				eS	Sn	05 05 00.9	+1.0
JHJ	Hachijo jima 2	3.17	353	P	Pn	05 04 22.0	0.0
	2μm,0.3s,baz=175,slow=11,SNR=355						
JHJ				S	Sn	05 04 59.8	-0.3
	4μm,0.3s,baz=242,slow=18,SNR=9.4						
CBIJ	Chichi jima	3.33	148	⇓P	Pn	05 04 16.9	-7.2
CBIJ				eS	Sn	05 04 54.8	-9.0
CBIJ	Chichi jima	3.33	148	P	Pn	05 04 17.1	-7.0
	7μm,0.3s,baz=45,slow=4.5,SNR=935						
CBIJ				S	Sn	05 04 56.0	-7.8
	6μm,0.3s,baz=253,slow=21,SNR=6.6						
JHHJ	Haha-jima-NKT	3.74	152	⇓P	Pn	05 04 22.5	-6.9
JHHJ				eS	Sn	05 05 04.3	-8.9
JKO	Kozu shima	4.32	348	⇓P	Pn	05 04 38.1	+1.2
JKO				eS	Sn	05 05 31.0	+4.2
TK01	Tokai 1	4.41	330	P	Pn	05 04 40.7	+2.6
TK02	Tokai 2	4.50	333	⇓P	Pn	05 04 41.8	+2.5
NJJJ	Nii jima 2	4.50	350	P	Pn	05 04 40.3	+0.9
TK03	Tokai 3	4.61	336	P	Pn	05 04 43.3	+2.5
BSO1	Boso 1	4.73	8	P	Pn	05 04 39.5	-2.9
JIM2	Oshima 3	4.79	352	P	Pn	05 04 42.8	-0.5
BSO3	Boso 3	4.84	3	⇓P	Pn	05 04 41.8	-2.1
TK04	Tokai 4	4.84	336	⇓P	Pn	05 04 46.6	+2.7
JIZS	Izushimoda	4.88	347	⇓P	Pn	05 04 45.2	+0.8
JSG	Sagara	5.01	340	P	Pn	05 04 48.8	+2.7
BSO4	Boso 4	5.02	1	⇓P	Pn	05 04 44.7	-1.6
JWZ	Kozaga	5.24	314	⇓P	Pn	05 04 52.1	+2.9
HMMJ	Hamamatsu 2	5.32	337	⇓P	Pn	05 04 51.9	+1.6
JIE	Ise	5.33	327	⇓P	Pn	05 04 53.2	+2.8
JAA	Atsumi	5.34	332	P	Pn	05 04 53.1	+2.6
SHZ3	Shizuoka 3	5.37	342	P	Pn	05 04 52.6	+1.7
JOD2	Odawara 2	5.38	350	P	Pn	05 04 51.1	+0.1
JOD2				eS	Sn	05 05 53.8	+1.7
JKN2	Miekihoku	5.42	323	⇓P	Pn	05 04 54.4	+2.7
JYZW	Yoshizawa	5.45	338	P	Pn	05 04 54.0	+2.0
JWM	Minabe	5.67	314	⇓P	Pn	05 04 58.4	+3.4
JYN	Shimob	5.70	346	⇓P	Pn	05 04 56.5	+1.1
TSUJ	Tsu 2	5.73	327	⇓P	Pn	05 04 59.1	+3.4
JNY	Yasuok	5.74	340	⇓P	Pn	05 04 57.8	+1.9
JWY	Kouya	5.78	318	⇓P	Pn	05 05 00.3	+3.8
JAO	Obara	5.85	336	P	Pn	05 04 59.9	+2.5
JHE	Heguri	6.05	322	P	Pn	05 05 03.6	+3.5
JEG	Eigenji	6.09	329	⇓P	Pn	05 05 04.4	+3.8
JGF	Kuroka	6.12	338	⇓P	Pn	05 05 03.2	+2.2
JRY	Ryogami san	6.14	350	⇓P	Pn	05 05 01.2	-0.1
JRY				eS	Sn	05 06 09.8	-0.6
JNT	Takato	6.16	344	P	Pn	05 05 03.2	+1.8
MRT2	Murotomisaki 2	6.21	305	⇓P	Pn	05 05 06.3	+4.2
JAI	Aioi	6.22	309	P	Pn	05 05 06.3	+4.0
JAJ2	Tsuna	6.34	316	⇓P	Pn	05 05 08.1	+4.1
JGM	Miyama	6.44	334	P	Pn	05 05 08.1	+2.8
JAG	Ashikaga	6.48	355	⇓P	Pn	05 05 03.4	-2.4
JMN	Monobe	6.57	307	⇓P	Pn	05 05 11.6	+4.5
JFM	Mihama	6.60	328	⇓P	Pn	05 05 11.0	+3.6
JHO	Hitachi	6.64	2	⇓P	Pn	05 05 04.9	-3.1
JNG	Nsakai	6.67	345	P	Pn	05 05 09.2	+0.8
JWT	Wachi	6.69	324	P	Pn	05 05 12.2	+3.6
JGN	Niukaw	6.71	339	P	Pn	05 05 10.9	+2.1
JGK	Kuni	6.72	349	P	Pn	05 05 10.0	+1.0
JKS	Kasai	6.76	319	⇓P	Pn	05 05 13.5	+3.9
MJAR	Matsushiro Arr	6.78	346	P	Pn	05 05 09.6	-0.2
MJAR				S	Sn	05 06 24.9	-0.8
MJAR	Matsushiro Arr	6.78	346	P	Pn	05 05 09.6	-0.2
	120nm,0.3s,baz=173,slow=11,SNR=436						
MJAR				S	Sn	05 06 24.9	-0.9
	105nm,0.3s,baz=136,slow=15,SNR=4.8						
MJAR				ScP	ScP	05 15 06.8	+0.3
	0.4nm,0.3s,baz=157,slow=1.8,SNR=9.7						
MAJO	Matsushiro	6.78	346	ePn	Pn	05 05 09.0	-0.8
MAT	Matsushiro	6.78	346	P	Pn	05 05 09.8	0.0
MAT				S	Sn	05 06 24.9	-0.9
JKT	Katashina	6.84	353	⇓P	Pn	05 05 08.3	-2.3
JJS	Sakaide	6.91	311	⇓P	Pn	05 05 15.7	+4.1
JKU	Kubokawa	6.96	301	⇓P	Pn	05 05 17.0	+4.8
JTO	Tosashimizu	6.97	296	P	Pn	05 05 16.8	+4.4
JSB	Shiboa	7.00	358	P	Pn	05 05 10.3	-2.4
JTT	Ttatey	7.06	341	P	Pn	05 05 15.3	+1.8
JKG	Kaga	7.09	334	⇓P	Pn	05 05 17.0	+3.0
JKY	Yasaka	7.11	324	⇓P	Pn	05 05 17.8	+3.6
JAD	Aida	7.13	316	⇓P	Pn	05 05 18.1	+3.6
JET	Tanbara	7.19	304	⇓P	Pn	05 05 20.2	+4.9
UWA2	Uwa jima 2	7.25	299	⇓P	Pn	05 05 21.1	+5.0
JKSM	Kasumi	7.31	322	⇓P	Pn	05 05 20.4	+3.5
JJN	Nakama	7.33	347	P	Pn	05 05 16.9	-0.3
JHK	Hiroka	7.34	352	P	Pn	05 05 15.0	-2.3
JNA	Nagahama	7.50	301	P	Pn	05 05 24.8	+5.2
JJH	Hakui	7.52	338	P	Pn	05 05 21.5	+1.8
JJG	Jouge	7.59	310	P	Pn	05 05 25.0	+4.4
JKR	Kurayoshi	7.64	317	P	Pn	05 05 25.2	+3.9
JIZZ	Izumozaki	7.66	351	P	Pn	05 05 21.1	-0.5
JHM	Kurahashi	7.74	305	⇓P	Pn	05 05 27.9	+5.1
JHS	Saijyo	7.83	312	P	Pn	05 05 27.9	+4.0
JNS	Sasagawa	7.88	355	P	Pn	05 05 22.0	-2.5
JMM	Marumori	7.90	3	⇓P	Pn	05 05 21.6	-3.3
JHT	Toyohira	8.10	307	P	Pn	05 05 32.1	+4.6
JKD	Kudamatsu	8.18	302	⇓P	Pn	05 05 34.0	+5.4
JNM	Ikuma	8.20	314	⇓P	Pn	05 05 33.4	+4.6
JSD	Sado	8.22	349	P	Pn	05 05 26.4	-2.7
JGT	Gotsu	8.36	309	P	Pn	05 05 35.4	+4.4
JHIK	Hikimi	8.37	305	P	Pn	05 05 35.9	+4.7
SAI	Saigo	8.49	319	P	Pn	05 05 36.0	+3.2
JNU	Nakatsue	8.57	294	P	Pn	05 05 39.5	+5.6
	45nm,0.3s,baz=78,slow=13,SNR=352						
JNU				S	Sn	05 07 18.7	+10
	baz=180,slow=20,SNR=3.1						
JNU				ScP	ScP	05 15 09.8	+1.5
	0.6nm,0.3s,baz=145,slow=6.4,SNR=3.7						
JFA	Akaike	8.85	297	⇓P	Pn	05 05 42.2	+4.7
JTY	Toyota	8.87	301	⇓P	Pn	05 05 42.9	+5.0
JMZ	Minamidaito 2	8.96	245	P	Pn	05 05 40.7	+1.5
JMK	Ichinoseki	9.01	5	P	Pn	05 05 35.8	-3.9
JMK				eS	Sn	05 07 10.3	-9.2
JSJ	Shimokoshiki	9.19	283	P	Pn	05 05 45.5	+3.3
JAM	Amami Oshima	9.40	263	P	Pn	05 05 49.7	+4.7
JTU	Tsushima	10.23	299	P	Pn	05 06 00.2	+4.2
JOW	Kunigami	10.97	256	P	Pn	05 06 09.0	+3.2
JOW	Kunigami	10.97	256	P	Pn	05 06 09.2	+3.4
	6.0nm,0.3s,baz=94,slow=14,SNR=44						
JOW				ScP	ScP	05 15 12.5	+1.2
	1.4nm,0.3s,baz=111,slow=7.5,SNR=4.9						
JOT	Ohata	11.42	3	P	Pn	05 06 08.2	-3.4
JOT				eS	Sn	05 08 11.5	-6.1
JKB	Kayabe	11.93	3	P	Pn	05 06 13.6	-4.6
JKB				eS	Sn	05 08 20.4	-9.4
ERM	Erimo	12.27	10	Pn	Pn	05 06 18.3	-4.4
	7μm,1.2s,SNR=48						
ERM	Erimo	12.27	10	ePn	Pn	05 06 18.7	-4.0
	2μm,0.9s						
ERM				eSn	Sn	05 08 25.3	-13
ERM	Erimo	12.27	10	eP	Pn	05 06 18.7	-4.0
ERM				pmax	pmax		
	comp=Z,2μm,0.9s						
JNB	Noboribetsu	12.51	3	P	Pn	05 06 21.4	-4.4
JSH	Shimam	12.66	359	P	Pn	05 06 24.3	-3.5
KSRS	Korea Array	12.67	309	P	Pn	05 06 31.9	+3.9
	comp=Z,4.6nm,0.3s,baz=120,slow=13,SNR=160						
KSRS				LR	LR	05 11 03.4	
	comp=Z,6μm,21.6s,baz=129,slow=35						
KSRS				ScP	ScP	05 15 13.8	+0.2
	comp=Z,0.6nm,0.3s,baz=149,slow=1.6,SNR=33						
INCN	Inchon	13.56	307	Pn	Pn	05 06 43.3	+3.8
INCN				S	Sn	05 09 24.3	+15
INCN				ScP	ScP	05 15 15.6	+0.6
INCN				ScS	ScS	05 18 51.5	-0.4
INCN	Inchon	13.56	307	⇓ePn	Pn	05 06 43.2	+3.7
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	Pn	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
INCN	Inchon	13.56	307	P	Pn	05 06 43.6	+4.2
	SNR=37						
ASAJ	Asahikawa	14.26	7	P	Pn	05 06 44.8	-3.4
ASAJ				S	Sn	05 09 14.7	-11
ASAJ				pmax	pmax		
	comp=Z,29nm,0.3s						
ASAJ				smax			
	comp=N,20nm,0.3s						
ASAJ	Asahikawa	14.26	7	P	Pn	05 06 44.8	-3.4
	comp=N,29nm,0.3s,baz=225,slow=15,SNR=146						
ASAJ				S	Sn	05 09 14.7	-11
	comp=N,20nm,0.3s,baz=54,slow=28,SNR=4.9						
ASAJ				ScP	ScP	05 15 15.9	0.0
	comp=N,0.6nm,0.3s,baz=245,slow=7.1,SNR=4.9						
VLA	Vladivostok	14.73	335	⇑iP	Pn	05 06 53.3	-0.9
VLA	Vladivostok	14.73	335	ceP	Pn	05 06 52.2	-2.0
VLA				eS	Sn	05 09 35.7	-1.7
VLA				pmax	pmax		
	comp=Z,2μm,1.1s						
VLA				MLR	MLR		
	comp=Z,5μm,14.5s						
YUK	Yuzh-Kuril'sk	14.75	16	eP	Pn	05 06 53.9	-0.5
YUK	Yuzh-Kuril'sk	14.75	16	eP	Pn	05 06 53.6	-0.8
YUK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YUK				pmax	pmax		
	comp=N,5μm,1.0s						
YUK				pmax	pmax		
	comp=E,3μm,1.0s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				MLR	MLR		
	comp=Z,5μm,12.0s						
KUR	Kuril'sk	16.40	19	eP	Pn	05 07 13.0	-1.7
KUR	Kuril'sk	16.40	19	⇑iP	Pn	05 07 13.2	-1.5
KUR				i S	S	05 10 04.2	-13
KUR				pmax	pmax		
	comp=Z,8μm,4.0s						
KUR				pmax	pmax		
	comp=N,570nm,1.0s						
KUR				pmax	pmax		
	comp=E,570nm,1.0s						
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				smax			
	comp=N,2μm,1.0s						
KUR				smax			
	comp=E,2μm,1.0s						
KUR				smax			
	comp=N,25μm,4.0s						
KUR				smax			
	comp=E,32μm,4.0s						
SSE	Sheshan	16.44	279	P	Pn	05 07 17.8	+2.4
SSE				XP	sP	05 07 56.8	-0.9
SSE				S	S	05 10 15.8	-2.8
SSE				AMB	AMB		
	comp=Z,312nm,0.8s						
SSE				AMB	AMB		
	comp=Z,8μm,12.3s						
SSE				LR	LR		
	comp=N,15μm,16.5s						
SSE				LR	LR		
	comp=E,5μm,16.5s						
SSE				LR	LR		
	comp=Z,6μm,18.0s						
GUMO	Guam	16.85	164	eP	Pn	05 07 18.4	-2.1
	comp=Z,7μm,1.1s						
GUMO	Guam	16.85	164	eP	Pn	05 07 18.4	-2.0
GUMO				pmax	pmax		
	comp=Z,7μm,1.0s						
MDJ	Mudanjiang	16.88	333	P	Pn	05 07 19.8	-0.8
MDJ				S	S	05 10 27.6	-0.7
MDJ				PCP	PcP	05 12 00.2	+1.1
MDJ				SCP	ScP	05 15 21.3	+0.4
MDJ				PCS	PcS	05 15 35.8	+0.8
MDJ				SCS	ScS	05 19 00.5	+0.2
MDJ				AMB	AMB		
	comp=Z,706nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,7μm,7.4s						
MDJ	Mudanjiang	16.88	333	⇓iP	Pn	05 07 19.2	-1.4
	comp=Z,721nm,1.0s						
MDJ				eScP	ScP	05 15 21.4	+0.5
YSS	Yuzh-Sakhalins	17.09	6	eP	Pn	05 07 22.1	-0.9
YSS	Yuzh-Sakhalins	17.09	6	⇑iP	Pn	05 07 22.0	-1.0
YSS				eS	S	05 10 22.0	-11
YSS				pmax	pmax		
	comp=N,2μm,1.0s						
YSS				pmax	pmax		
	comp=E,1μm,1.0s						
YSS				pmax	pmax		
	comp=Z,3μm,1.0s						
YSS				pmax	pmax		
	comp=N,12μm,6.0s						
YSS				pmax	pmax		
	comp=Z,13μm,6.0s						
YSS				pmax	pmax		
	comp=E,4μm,5.0s						
YSS				smax			
	comp=N,30μm,6.0s						
YSS				smax			
	comp=E,26μm,10.0s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=E,4μm,13.0s						
TATO	Taipei	17.34	258	ePn	Pn	05 07 29.3	+3.0
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
TATO	Taipei	17.34	258	P	Pn	05 07 30.2	+3.8
	SNR=20						
YHNB	Yeheng	17.55	257	eP	Pn	05 07 29.8	+1.0
YHNB				eS	S	05 10 44.5	+1.6
NACB	Ninganchiao	17.55	255	eP	Pn	05 07 29.6	+0.7
NACB				eS	S	05 10 46.9	+3.8
DL2	Dalian	17.72	305	i P	Pn	05 07 30.1	-0.6
DL2				eS	S	05 10 46.5	+0.3
DL2				SCP	ScP	05 15 22.9	+0.1
DL2				SCS	ScS	05 19 01.1	-2.0
DL2				AMB	AMB		
	comp=Z,310nm,1.1s						
DL2				AMB	AMB		
	comp=Z,4μm,8.5s						
SNY	Shenyang	17.91	316	⇓P	Pn	05 07 31.0	-2.0
SNY				S	S	05 10 55.7	+5.7
SNY				AMB	AMB		
	comp=Z,91nm,1.1s						
SNY				LR	LR		
	comp=N,5μm,10.5s						
SNY				LR	LR		
	comp=E,5μm,8.1s						
SNY				LR	LR		
	comp=Z,4μm,10.5s						
CN2	Changchun	18.14	324	⇑P	P	05 07 34.1	-0.1
CN2				eS	S	05 10 50.0	-4.6
CN2				PCP	PcP	05 12 02.1	+0.9
CN2				SCP	ScP	05 15 23.0	-0.5
CN2				SCS	ScS	05 19 03.2	-1.0
CN2				AMB	AMB		
	comp=Z,170nm,0.9s						
CN2				AMB	AMB		
	comp=Z,6μm,9.0s						
CN2				LR	LR		
	comp=N,19μm,12.0s						
CN2				LR	LR		
	comp=E,16μm,12.0s						
CN2				LR	LR		
	comp=Z,20μm,15.0s						
NJ2	Nanjing	18.43	282	eP	P	05 07 40.2	+2.7
NJ2				S	S	05 10 58.5	-2.1
NJ2				AMB	AMB		
	comp=Z,2μm,0.7s						
NJ2				AMB	AMB		
	comp=Z,14μm,4.5s						
NJ2				LR	LR		
	comp=N,26μm,16.8s						
NJ2				LR	LR		
	comp=E,17μm,18.6s						
NJ2				LR	LR		
	comp=Z,17μm,18.6s						
HABR	Khabarovsk	18.91	349	⇓iP	P	05 07 43.1	+0.6
HABR				eS	S	05 11 12.7	+2.9
HABR				pmax	pmax		
	comp=Z,5μm,1.1s						
QZH	Quanzhou	19.82	261	i P	P	05 07 57.4	+4.8
QZH				AP		05 08 22.6	
QZH				XP	sP	05 08 39.0	+3.9
QZH				S	S	05 11 32.4	+4.1
QZH				XS	sS	05 12 12.7	+3.0
QZH				AMB	AMB		
	comp=Z,570nm,0.7s						
QZH				AMB	AMB		
	comp=Z,5μm,3.0s						
QZH				LR	LR		
	comp=N,11μm,12.0s						
QZH				LR	LR		
	comp=E,11μm,11.6s						
QZH				LR	LR		
	comp=Z,15μm,15.0s						
KLR	Kul'dur	20.30	344	⇑iP	P	05 07 53.0	-4.5
KLR				eS	S	05 11 31.5	-5.7
KLR				pmax	pmax		
	comp=N,6μm,13.0s						
KLR				pmax	pmax		
	comp=E,3μm,13.0s						
KLR				pmax	pmax		
	comp=Z,12μm,13.0s						
KLR				smax			
	comp=N,18μm,9.5s						
KLR				smax			
	comp=E,9μm,9.5s						
KLR				MLR	MLR		
	comp=E,4μm,12.5s						
KLR				MLR	MLR		
	comp=Z,17μm,12.5s						
TIA	Tai'an	20.31	294	P	P	05 07 58.2	+0.5
TIA				AP		05 08 24.0	
TIA				LR	LR		
	comp=E,2μm,6.0s						
APYP	Conner	21.08	239	eP	P	05 08 06.6	+0.5
CAUP	Cauayan	21.23	237	eP	P	05 08 11.7	+3.9
ABRA	Dolores	21.61	240	eP	P	05 08 12.4	+0.7
PVCP	Virac	22.04	226	⇓eP	P	05 08 17.6	+1.4
PVCP				eS		05 08 46.2	
PVCP	Virac	22.04	226	eP	P	05 08 18.4	+2.2
BJT	Baijiatuau	22.05	304	⇓iP	P	05 08 14.6	-1.6
	comp=E,705nm,1.3s,mb5.9						
BJT				eScP	ScP	05 15 32.3	-0.5
BJT	Baijiatuau	22.05	304	⇓iP	P	05 08 14.6	-1.6
BJT				pmax	pmax		
	comp=Z,705nm,1.3s						
BJI	Beijing	22.06	304	P	P	05 08 15.1	-1.1
BJI				AP		05 08 41.7	
BJI				XP	sP	05 08 58.2	-1.1
BJI				S	S	05 12 09.0	-0.7
BJI				XS	sS	05 12 55.6	+1.2
BJI				SCP	ScP	05 15 33.4	+0.5
BJI				SCS	ScS	05 19 16.6	-1.1
BJI				AMB	AMB		
	comp=Z,112nm,1.2s,mb5.2						
BJI				AMB	AMB		
	comp=Z,5μm,9.2s						
BJI	Beijing	22.06	304	P	P	05 08 15.1	-1.1
BJI				pP		05 08 41.7	
BJI				sP	sP	05 08 58.2	-1.1
BJI				S	S	05 12 09.0	-0.7
BJI				sS	sS	05 12 55.6	+1.2
BJI				ScP	ScP	05 15 33.4	+0.5
BJI				ScS	ScS	05 19 16.6	-1.1
BJI	Beijing	22.06	304	P	P	05 08 15.1	-1.1
BJI				*PP		05 08 41.7	
BJI				*SP	sP	05 08 58.2	-1.1
BJI				S	S	05 12 09.0	-0.7
BJI				*SS	sS	05 12 55.6	+1.2
BJI						05 19 16.6	
BALP	Baler	22.21	235	eP	P	05 08 19.8	+1.8
WHN	Wuhan	22.34	278	⇓P	P	05 08 20.5	+1.1
WHN				AP		05 08 46.6	
WHN				S	S	05 12 12.0	-2.6
WHN				LR	LR		
	comp=Z,13μm,16.6s						
BCPH	Baguio City Da	22.50	237	⇓eP	P	05 08 20.6	-0.4
	comp=Z,4084μm,10.0s						
BCPH				eS	S	05 12 20.6	+3.3
POLP	Polilio Island	22.65	232	eP	pP	05 08 55.3	+6.9
PCPH	Palayan	22.67	235	⇓eP	P	05 08 23.1	+0.5
BOLP	Bolinao	22.99	239	eP	P	05 08 21.8	-3.6
BOAC	Boac	23.62	230	eP	P	05 08 33.1	+1.9
TGY	Tagaytay City	23.78	233	⇑eP	pP	05 09 04.2	+3.6
SKR	Severo-Kuril's	23.89	25	eP	P	05 08 32.0	-1.3
SKR				e		05 08 59.0	
SKR				ePPP		05 09 20.0	
SKR				eS	S	05 12 38.0	-1.2

SKR pmax pmax
comp=Z,2μm,4.0s
SKR pmax pmax
comp=N,140nm,0.8s
SKR pmax pmax
comp=E,140nm,0.8s
SKR pmax pmax
comp=Z,240nm,0.8s,mb5.8
SKR smax
comp=N,4μm,8.0s
SKR smax
comp=E,12μm,8.0s
SKR smax
comp=N,130nm,1.0s
SKR smax
comp=E,180nm,1.0s
SKR MLR MLR
comp=N,4μm,12.0s
SKR MLR MLR
comp=E,5μm,12.0s
SKR MLR MLR
comp=Z,5μm,12.0s
TIY Taiyuan 24.28 296 *i* P **P** **05 08 36.3 -0.7**
TIY S **S** **05 12 44.2 -1.5**
TIY AMB AMB
comp=Z,3μm,5.2s
TIY LR LR
comp=N,11μm,13.1s
TIY LR LR
comp=E,4μm,11.0s
TIY LR LR
comp=Z,3μm,12.4s
OTRP Odiongan 24.32 228 *e*P **P** **05 08 38.7 +1.2**
SCPH Surigao 24.33 217 *e*P **P** **05 08 38.9 +1.2**
MSLP Maasin 24.38 219 *e*P **P** **05 08 39.0 +0.9**
RCP Roxas 24.47 225⇑ *e*P **P** **05 08 39.7 +0.8**
comp=Z,45μm,17.0s
LUBP Lubang 24.52 233 *e*P **P** **05 08 39.9 +0.5**
HKC Hong Kong Obse 24.56 258⇓ *i*P **P** **05 08 44.0 +4.3**
LLP Lapu-Lapu 24.73 221 *e*P **P** **05 08 40.9 -0.5**
comp=Z,168μm,17.0s
HIA Hailar 24.77 327⇓ *i*P **P** **05 08 41.4 0.0**
comp=Z,574nm,0.9s,mb6.1
HIA *e*ScP ScP 05 15 39.9 -0.1
HIA Hailar 24.77 327⇓ *i*P **P** **05 08 41.4 0.0**
HIA pmax pmax
comp=Z,574nm,0.9s
BUTP Butuan 24.95 216 *e*P **P** **05 08 43.5 +0.2**
GZH Guangzhou 24.96 260 P **P** **05 08 39.5 -3.9**
GZH LR LR
comp=N,6μm,15.2s
GZH LR LR
comp=E,6μm,15.9s
GZH LR LR
comp=Z,6μm,15.2s
TBP Tagbilaran 25.30 221 *e*P **P** **05 08 46.0 -0.4**
HHC Hu-ho-hao-te 25.65 303 *e*P **P** **05 08 49.2 -0.2**
HHC AP pP 05 09 17.9 -1.0
HHC XP sP 05 09 30.6 -4.6
HHC PP 05 09 31.8
HHC PCP PcP 05 12 16.3 0.0
HHC S **S** **05 13 04.9 -2.5**
HHC XS sS 05 13 55.4 -4.0
HHC SCP ScP 05 15 41.4 -1.3
HHC PCS PcS 05 15 56.0 -0.9
HHC AMB AMB
comp=Z,223nm,0.7s,mb5.9
HHC AMB AMB
comp=Z,2μm,5.7s
HHC LR LR
comp=N,14μm,15.9s
HHC LR LR
comp=E,6μm,14.9s
HHC LR LR
comp=Z,8μm,11.9s
BUSP Coron 25.78 230 *e*P **P** **05 08 51.5 +0.7**
CGP Cagayan de Oro 25.87 217⇓ *i*P **P** **05 08 51.0 -0.6**
CUYO Cuyo Island 26.10 227 *e*P **P** **05 08 55.1 +1.4**
BUKP Musuan 26.16 216 *e*P **P** **05 08 54.5 +0.3**
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
DAV Davao City (W) 26.60 214 P **P** **05 08 58.6 +0.4**
SNR=7.5
PET Petropavlovsk 26.71 25 *e*P **P** **05 08 57.7 -1.1**
comp=Z,270nm,1.2s,mb5.8
PET Petropavlovsk 26.71 25 *e*P **P** **05 08 58.2 -0.6**
PET *i* *SP sP 05 09 47.1 +2.4
PET *i* S **S** **05 13 23.6 -0.2**
PET *i* *SS sS 05 14 18.3 +2.3
PET pmax pmax
comp=Z,159nm,1.3s,mb5.5
PET MLR MLR
comp=Z,3μm,12.0s
BTO Baotou 26.72 302 *e*P **P** **05 08 59.5 +0.4**
XAN Xi'an 26.80 287 P **P** **05 08 59.4 -0.4**
XAN S **S** **05 13 21.1 -4.4**
XAN AMB AMB
comp=Z,417nm,0.9s,mb6.1
XAN AMB AMB
comp=Z,2μm,13.6s
XAN LR LR
comp=N,8μm,21.1s
XAN LR LR
comp=E,4μm,24.4s
XAN LR LR
comp=Z,5μm,12.6s
ENPP El Nido 26.88 230 *e*P **P** **05 09 01.2 +0.6**
PAGZ Pagadian 27.08 219 *e*P **P** **05 09 02.2 -0.2**
PPR Puerto Princes 28.39 229⇓ *i*P **P** **05 09 14.0 -0.1**
comp=Z,164μm,6.0s
NRGR Nerungri 28.83 342 *i* P **P** **05 09 19.2 +1.6**
NRGR S **S** **05 13 51.8 -5.2**
NRGR smax
comp=E,511nm,1.1s
CLNS Chul'man 28.95 343 *e*P **P** **05 09 20.0 +1.4**
CLNS *e* pP 05 09 52.9 +4.5
CLNS *e*S **S** **05 13 49.2 -10**
CLNS pmax pmax
comp=E,749nm,0.8s
CLNS pmax pmax
comp=Z,3μm,0.8s,mb7.1
CLNS pmax pmax
comp=N,2μm,1.1s
CLNS smax
comp=N,1μm,11.9s
CLNS smax
comp=Z,825nm,11.7s
CLNS smax
comp=E,1μm,10.7s
CLNS MLR MLR
comp=Z,4μm,18.0s
CLNS MLR MLR
comp=N,1μm,13.0s
CLNS MLR MLR
comp=E,2μm,12.0s
CIT Chita 29.56 326 *e*P **P** **05 09 24.5 +0.4**
CIT *e* 05 12 26.8
CIT *e* 05 14 00.6
CIT *e* 05 15 54.2
CIT *e*S ScS 05 19 45.3 -3.8
CIT pmax pmax
comp=Z,580nm,1.1s,mb6.2
QIZ Qiongzhong 29.62 255 P **P** **05 09 27.0 +2.0**
QIZ AP pP 05 09 53.1 -1.8
QIZ XP sP 05 10 09.6 -1.4
QIZ S **S** **05 14 13.3 +3.1**
QIZ XS sS 05 14 58.8 -3.8
QIZ AMB AMB
comp=Z,63nm,1.3s,mb5.2
QIZ AMB AMB
comp=Z,679nm,7.7s
GYA Guiyang 29.71 272⇓ *i*P **P** **05 09 26.4 +0.6**
GYA AP pP 05 09 58.7 +3.0
GYA XP sP 05 10 14.8 +3.0
GYA PP PP 05 10 30.4 -5.1
GYA PCP PcP 05 12 28.7 +2.3
GYA S **S** **05 14 11.0 -0.5**
GYA XS sS 05 15 05.6 +1.6
GYA SCP ScP 05 15 56.8 +1.4
GYA PCS PcS 05 16 10.8 +0.9
GYA SCS ScS 05 19 50.2 -0.5
GYA AMB AMB
comp=Z,280nm,0.9s,mb6.0
GYA AMB AMB
comp=Z,1μm,6.0s
GYA LR LR
comp=N,16μm,18.2s
GYA LR LR
comp=E,7μm,17.8s
GYA LR LR
comp=Z,4μm,15.2s
BATP Bataraza 29.72 229 *e*P **P** **05 09 27.7 +1.8**
MA2 Magadan 30.47 11⇓ *i*P **P** **05 09 31.9 -0.2**
comp=Z,628nm,0.8s,mb6.4
MA2 *e*S **S** **05 14 19.7 -3.0**
MA2 *e*ScP ScP 05 15 56.0 -1.1
MA2 Magadan 30.47 11⇑ *i*P **P** **05 09 32.1 +0.1**
MA2 pmax pmax
comp=Z,621nm,1.0s,mb6.3
LZH Lanzhou 30.98 291⇑ P **P** **05 09 36.5 -0.3**
LZH AP pP 05 10 06.7 -0.1
LZH XP sP 05 10 23.2 +0.3
LZH PP PP 05 10 44.3 -5.1
LZH PCP PcP 05 12 25.0 -4.6
LZH S **S** **05 14 29.6 -1.6**
LZH XS sS 05 15 22.5 -1.2
LZH SCP ScP 05 15 57.5 -1.9
LZH PCS PcS 05 16 12.0 -1.8
LZH SCS ScS 05 19 53.5 -3.1
LZH AMB AMB
comp=Z,547nm,1.3s,mb6.1
LZH AMB AMB
comp=Z,1μm,5.9s
LZH LR LR
comp=N,5μm,12.4s
LZH LR LR
comp=Z,9μm,15.6s
LZH Lanzhou 30.98 291⇑ P **P** **05 09 36.5 -0.3**
LZH pP pP 05 10 06.7 -0.1
LZH sP sP 05 10 23.2 +0.3
LZH PP PP 05 10 44.3 -5.1
LZH PCP PcP 05 12 25.0 -4.6
LZH S **S** **05 14 29.6 -1.6**
LZH sS sS 05 15 22.5 -1.2
LZH ScP ScP 05 15 57.5 -1.9
LZH PcS PcS 05 16 12.0 -1.8
LZH SS SS 05 16 26.3 -23
LZH ScS ScS 05 19 53.5 -3.1
LZH Lanzhou 30.98 291⇑ P **P** **05 09 36.5 -0.3**
LZH *PP pP 05 10 06.7 -0.1
LZH *SP sP 05 10 23.2 +0.3
LZH 05 10 44.3
LZH 05 12 25.0
LZH S **S** **05 14 29.6 -1.6**
LZH *SS sS 05 15 22.5 -1.2
LZH SS SS 05 16 26.3 -23
LZH 05 19 53.5
CD2 Chengdu 31.36 281⇓ *i*P **P** **05 09 41.0 +0.7**
CD2 AP pP 05 10 10.5 +0.2
CD2 XP sP 05 10 26.0 -0.4
CD2 PP PP 05 10 50.9 -2.9
CD2 PCP PcP 05 12 31.2 +0.5
CD2 S **S** **05 14 34.5 -2.8**
CD2 XS sS 05 15 29.6 -0.3
CD2 PCS PcS 05 16 14.5 -0.7
CD2 SCS ScS 05 19 56.0 -2.7
CD2 AMB AMB
comp=Z,400nm,0.7s,mb6.3
CD2 AMB AMB
comp=Z,980nm,8.9s
CD2 LR LR
comp=N,10μm,10.8s
CD2 LR LR
comp=E,6μm,14.4s
CD2 LR LR
comp=Z,5μm,13.8s
SONM Songino Array 31.47 314 P **P** **05 09 41.8 +0.8**
SONM PcP PcP 05 12 30.3 -0.3
SONM ScP ScP 05 16 00.8 +0.1
SONM Songino Array 31.47 314 P **P** **05 09 41.8 +0.8**
SONM 05 12 30.3
SONM Songino Array 31.47 314 P **P** **05 09 41.8 +0.8**
comp=Z,91nm,0.7s,mb5.6,baz=114,slow=8.6,SNR=38
SONM PcP PcP 05 12 30.3 -0.3
comp=Z,22nm,0.6s,baz=123,slow=1.1,SNR=10
SONM ScP ScP 05 16 00.8 +0.1
comp=Z,17nm,0.7s,baz=120,slow=1.6,SNR=14
SONM PKiKP PKiKP 05 19 59.3 -0.3
comp=Z,8.7nm,1.1s,baz=349,slow=2.3,SNR=6.3
SONM LR LR 05 21 39.8
comp=Z,3μm,20.1s,baz=114,slow=34
SONM PKP2ab 05 45 15.2
comp=Z,0.8nm,1.0s,baz=196,slow=2.6,SNR=4.6
KDM Kudat 31.76 228⇑ P **P** **05 09 44.8 +0.9**
MYLDM Lahad Datu 32.05 224⇑ P **P** **05 09 48.6 +2.2**
SDKM Sandakan 32.50 226⇑ P **P** **05 09 51.3 +1.0**
KKM Kota Kinabalu 32.81 228 *e*P **P** **05 09 54.0 +1.0**
KKM Kota Kinabalu 32.81 228⇓ P **P** **05 09 54.6 +1.5**
YAK Yakutsk 32.82 351⇓ *i*P **P** **05 09 52.2 -0.4**
comp=Z,1μm,1.0s,mb6.5
YAK *e*S **S** **05 14 58.8 -0.3**
YAK Yakutsk 32.82 351⇑ *e*P **P** **05 09 52.2 -0.3**
YAK pmax pmax
comp=Z,2μm,1.4s,mb6.5
TSM Tawau 33.13 224⇓ P **P** **05 09 56.8 +1.0**
BOD Bodaibo 33.24 334⇑ *i*P **P** **05 09 56.1 -0.2**
BOD *e* 05 10 44.2
BOD pmax pmax
comp=Z,271nm,1.2s,mb5.8
KMI Kunming 33.48 271 P **P** **05 10 00.5 +1.7**
KMI AP pP 05 10 30.6 +1.7
KMI XP sP 05 10 46.5 +1.5
KMI PP PP 05 11 18.0 +0.7
KMI S **S** **05 15 10.7 +0.5**
KMI XS sS 05 16 02.3 -0.7
KMI AMB AMB
comp=Z,107nm,1.1s,mb5.5
KMI AMB AMB
comp=Z,1μm,7.2s
KMI LR LR
comp=N,9μm,17.1s
KMI LR LR
comp=E,3μm,17.8s
KMI LR LR
comp=Z,5μm,17.1s
KMI Kunming 33.48 271 P **P** **05 10 00.5 +1.7**
KMI pP pP 05 10 30.6 +1.7
KMI sP sP 05 10 46.5 +1.5
KMI PP PP 05 11 18.0 +0.7
KMI S **S** **05 15 10.7 +0.5**
KMI sS sS 05 16 02.3 -0.7
KMI SS SS 05 17 24.1 -16
KMI SSS 05 17 53.0
KMI Kunming 33.48 271 P **P** **05 10 00.5 +1.7**
KMI *PP pP 05 10 30.6 +1.7
KMI *SP sP 05 10 46.5 +1.5
KMI 05 11 18.0
KMI S **S** **05 15 10.7 +0.5**
KMI SS SS 05 17 24.1 -16
KMI SSS 05 17 53.0
SMY Shemya 33.64 38 *e*P **P** **05 10 00.8 +1.0**
comp=Z,655nm,1.3s,mb6.2
SMY Shemya 33.64 38 *e*P **P** **05 10 00.8 +1.0**
SMY pmax pmax
comp=Z,660nm,1.3s,mb6.2
GTA Gaotai 34.30 297 P **P** **05 10 05.1 -0.6**
GTA AP pP 05 10 35.0 -0.9
GTA XP sP 05 10 52.0 0.0
GTA PP PP 05 11 27.3 +1.2
GTA PCP PcP 05 12 40.8 +2.1
GTA S **S** **05 15 19.8 -2.7**
GTA SCP ScP 05 16 11.5 +0.7
GTA XS sS 05 16 14.0 -1.4
GTA PCS PcS 05 16 25.3 +0.2
GTA SCS ScS 05 20 10.4 -3.1
GTA AMB AMB
comp=Z,76nm,1.1s,mb5.3
GTA AMB AMB
comp=Z,1μm,12.2s
GTA LR LR
comp=N,8μm,21.7s
GTA LR LR
comp=E,3μm,16.0s
GTA LR LR
comp=Z,4μm,15.6s
ZAK Zakamensk 34.34 317 *e*P **P** **05 10 05.4 -0.4**
ZAK *e* 05 20 12.5
ZAK pmax pmax
comp=Z,93nm,1.1s,mb5.4
IRK Irkutsk 34.53 320 *e*P **P** **05 10 07.9 +0.4**
IRK *e* pP 05 10 36.2 -1.6
IRK pmax pmax
comp=Z,445nm,1.1s,mb6.0
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.0**
comp=Z,2μm,0.9s,mb6.6,SNR=54
TLY Talaya 34.64 319⇓ *i*P **P** **05 10 08.9 +0.4**
comp=Z,243nm,0.9s,mb5.8
TLY *e*PcP PcP 05 12 40.0 +0.5
TLY *e*ScP ScP 05 16 13.3 +1.6
TLY Talaya 34.64 319*d* *i*P **P** **05 10 09.0 +0.5**
TLY *e* pP 05 10 39.8 +1.0
TLY *e*PPP 05 11 48.9
TLY *e*S **S** **05 15 30.1 +2.6**
TLY *e* 05 16 28.5
TLY pmax pmax
comp=Z,316nm,1.1s,mb5.9
TLY MLR MLR
comp=Z,6μm,17.0s
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
TLY Talaya 34.64 319 P **P** **05 10 09.5 +1.1**
SNR=112
AMKA Amchitka 35.97 42 *e*P **P** **05 10 19.8 0.0**
TLE Tual 36.11 193⇑ *e*P **P** **05 10 20.0 -1.4**
TLE Tual 36.11 193⇑ *e*P **P** **05 10 20.0 -1.4**
MOY Mondy 36.16 318 *e*P **P** **05 10 22.3 +0.9**
MOY pmax pmax
comp=Z,231nm,1.3s,mb5.7
KKTK Khon Kaen 36.79 257 P **P** **05 10 29.0 +1.8**
BTM Bintulu 36.99 229⇑ P **P** **05 10 30.3 +1.3**
CHRT Chiangrai 37.85 264⇓ P **P** **05 10 38.0 +1.8**
SBUM Sibu 38.12 229⇑ P **P** **05 10 39.6 +1.1**
CHG Chiang Mai 39.01 263 PG **P** **05 10 46.6 +0.8**
CHTO Chiang Mai 39.01 263 *e*P **P** **05 10 46.5 +0.8**
comp=Z,637nm,0.8s,mb6.3
CHTO *e*S **S** **05 16 29.5 -4.9**
CHTO Chiang Mai 39.01 263 *e*P **P** **05 10 46.5 +0.7**
CHTO *e*S **S** **05 16 29.5 -4.9**
CHTO pmax pmax
comp=Z,637nm,0.8s,mb6.3
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
CHTO Chiang Mai 39.01 263 P **P** **05 10 47.1 +1.3**
SNR=135
NST Nakhon Sawan 39.38 258 P **P** **05 10 50.7 +1.8**
comp=Z,349nm,0.7s,mb6.1
BDT Bhumibol Dam 39.62 261 P **P** **05 10 52.0 +1.1**
comp=Z,49nm,1.0s,mb5.1
PMG Port Moresby 39.70 169 *e*P **P** **05 10 49.7 -1.7**
comp=Z,62nm,1.1s,mb5.2
PMG *e*ScP ScP 05 16 28.6 -2.6
PMG Port Moresby 39.70 169⇑ *e*P **P** **05 10 48.5 -3.0**
PMG Port Moresby 39.70 169 P **P** **05 10 51.1 -0.4**
comp=Z,28nm,0.8s,mb4.9,baz=332,slow=2.2,SNR=3.2
KSM Kuching 40.12 231 *e*P **P** **05 10 55.2 +0.2**
KSM Kuching 40.12 231 ⇑P **P** **05 10 56.9 +1.8**
BILL Bilibino 41.10 15⇓ *i*P **P** **05 11 02.0 -0.4**
comp=Z,248nm,1.0s,mb5.8
BILL Bilibino 41.10 15*d* *i*P **P** **05 11 02.0 -0.4**
BILL *e**PP pP 05 11 31.0 -2.4
BILL *i* S **S** **05 17 05.1 +0.7**
BILL *i* SS SS 05 20 14.2 +2.0
BILL pmax pmax
comp=Z,356nm,1.2s,mb5.9
IMP Imphal 41.21 274 *e*P **P** **05 11 03.0 -0.9**
IMP *ex* x 05 16 38.0
TIXI Tiksi 42.20 355⇓ *i*P **P** **05 11 10.8 -0.5**
comp=Z,296nm,1.1s,mb5.8
TIXI *e*PP PP 05 12 52.2 +0.5
TIXI Tiksi 42.20 355*d* *i*P **P** **05 11 10.9 -0.5**
TIXI *e* 05 12 51.2
TIXI *e* 05 13 01.9
TIXI *e*S **S** **05 17 17.6 -3.0**
TIXI pmax pmax
comp=Z,296nm,1.1s,mb5.8
TIXI pmax pmax
comp=N,126nm,1.1s
TIXI pmax pmax
comp=E,80nm,1.1s
LSA Lhasa 42.30 282 P **P** **05 11 13.4 +0.7**
LSA PP PP 05 12 51.9 -1.6
LSA AMB AMB
comp=Z,40nm,0.8s,mb5.1
LSA AMB AMB
comp=Z,1μm,8.4s
LSA LR LR
comp=N,6μm,23.1s
LSA LR LR
comp=E,4μm,19.0s
LSA LR LR
comp=Z,5μm,16.3s
LSA Lhasa 42.30 282⇓ *i*P **P** **05 11 14.0 +1.3**
comp=Z,63nm,1.0s,mb5.2
LSA *e*ScP ScP 05 16 43.7 +2.2
LSA Lhasa 42.30 282⇓ *i*P **P** **05 11 14.0 +1.3**
LSA pmax pmax
comp=Z,63nm,1.0s,mb5.2
KTGM Kuala Trenggan 42.67 242⇑ P **P** **05 11 18.0 +2.1**
SHL Shillong 42.75 276 *i* P **P** **05 11 18.0 +1.6**
SHL AMb AMB 05 11 28.6
comp=Z,2μm,0.8s,mb6.7
SHL *e*S **S** **05 17 33.0 +3.2**
BATI Kupang 42.99 204 P **P** **05 11 16.8 -1.6**
comp=Z,193nm,0.6s,mb5.9,baz=152,slow=1.5,SNR=8.7
BATI ScP ScP 05 16 43.3 -1.0
comp=Z,106nm,0.8s,baz=283,slow=6.3,SNR=4.4
HNR Honiara 43.52 151 P **P** **05 11 21.4 -1.2**
comp=Z,83nm,0.4s,mb5.7,baz=276,slow=6.1,SNR=2.9
WMQ Urumqi 43.53 303⇓ P **P** **05 11 22.3 -0.1**
WMQ AP pP 05 11 53.3 -0.5
WMQ XP sP 05 12 09.3 -0.3
WMQ PP PP 05 13 07.4 +1.0
WMQ SCP ScP 05 16 44.8 -1.3
WMQ S **S** **05 17 40.5 -0.2**
WMQ XS sS 05 18 35.8 +0.6
WMQ SS SS 05 21 02.1 +1.6
WMQ SCS ScS 05 21 04.8 -2.4
WMQ AMB AMB
comp=Z,336nm,1.2s,mb5.8
WMQ AMB AMB
comp=Z,666nm,7.9s
WMQ LR LR
comp=N,7μm,26.4s
WMQ LR LR
comp=E,2μm,22.5s
WMQ LR LR
comp=Z,2μm,19.5s
COEN Coen 43.75 176 *e*P **P** **05 11 23.6 -0.8**
comp=Z,53nm,0.9s,mb5.2
COEN *ep*P pP 05 11 54.6 -1.2
AGT Agartala 43.82 274 *e*P **P** **05 11 23.0 -2.0**
AGT *ex* x 05 12 26.0
MYKOM Kota Tinggi 44.45 238⇓ P **P** **05 11 32.0 +1.9**

KULM **Kulim** 44.63 245 *e*P P **05 11 32.6 +1.1**
KULM *e*pP pP 05 12 01.8 -1.2
KULM Kulim 44.63 245 ⇓P P **05 11 33.0 +1.5**
KGM Kluang 44.69 239 ⇑P P **05 11 33.3 +1.3**
IPM Ipoh 44.84 243 ⇓P P **05 11 34.0 +0.8**
UNV Unalaska Valle 44.95 42 *e*P P **05 11 31.7 -1.9**
comp=Z,115nm,0.8s,mb5.6
GTK Gangtok 45.05 280 *ex* x 05 13 15.9
FRIM Kepong 45.16 241 ⇓P P **05 11 34.0 -1.8**
GAMB Gambell 45.36 28 *e*P P **05 11 36.9 +0.3**
comp=Z,75nm,0.9s,mb5.3
GAMB *e*ScP ScP 05 16 52.8 -0.5
AKUT Akutan 45.43 42 *e*P P **05 11 36.4 -0.9**
comp=Z,443nm,1.2s,mb6.0
TAPN Taplejung 45.82 280 *e*P P **05 11 41.4 +0.6**
comp=Z,227nm,0.9s,mb5.8
ODAN Odare 46.23 280 *e*P P **05 11 44.3 +0.2**
comp=Z,268nm,0.6s,mb6.0
JIRN Jiri 47.03 281 *e*P P **05 11 51.0 +0.7**
comp=Z,430nm,0.7s,mb6.2
NVS Novosibirsk 47.25 319 *i* P P **05 11 50.8 -0.7**
NVS *e* 05 13 19.7
NVS *e*S S **05 18 30.8 -3.0**
NVS *e* 05 21 28.5
NVS pmax pmax
comp=N,133nm,1.0s
NVS pmax pmax
comp=E,367nm,1.0s
NVS pmax pmax
comp=Z,457nm,1.0s,mb6.1
NVS smax
comp=N,75nm,1.8s
NVS smax
comp=E,108nm,1.8s
BJII Banjamegara 47.26 223⇑ *i*P P **05 11 59.0 +6.9**
MK31 Makanchi Array 47.34 308 *i* P P **05 11 52.3 -0.1**
MKAR Makanchi Array 47.34 308 P P **05 11 52.2 -0.1**
MKAR PcP PcP 05 13 22.0 +1.0
MKAR ScP ScP 05 17 02.1 +0.2
MKAR ScS ScS 05 21 30.5 -1.2
MKAR LR LR 05 32 32.5
MKAR Makanchi Array 47.34 308 P P **05 11 52.3 -0.1**
MKAR 05 13 22.0
MKAR 05 21 30.5
MKAR Makanchi Array 47.34 308 P P **05 11 52.3 -0.1**
comp=E,232nm,0.8s,mb5.9,baz=90,slow=7.8,SNR=404
MKAR PcP PcP 05 13 22.0 +1.0
comp=E,62nm,0.8s,baz=84,slow=3.8,SNR=5.0
MKAR ScP ScP 05 17 02.1 +0.2
comp=E,31nm,0.7s,baz=78,slow=4.9,SNR=12
MKAR ScS ScS 05 21 30.5 -1.2
comp=E,15nm,1.1s,baz=104,slow=10,SNR=7.9
MKAR LR LR 05 32 32.5
comp=E,3μm,20.4s,baz=94,slow=37
MKAR P4KPbc 05 49 34.2
comp=E,1.3nm,0.6s,baz=87,slow=4.6,SNR=10.0
PSI Prapat 47.52 243 LR LR 05 30 25.3
comp=E,2μm,19.6s,baz=264,slow=34
TNA Tin City 47.56 26 *e*P P **05 11 54.3 +0.5**
comp=E,88nm,0.8s,mb5.4
TNA *e*ScP ScP 05 17 01.6 -0.8
KKN Kakani 47.77 282 *e*P P **05 11 56.9 +0.9**
comp=E,412nm,0.9s,mb6.1
KKN Kakani 47.77 282 *e*P P **05 11 56.9 +0.9**
KKN pmax pmax
comp=Z,412nm,0.9s,mb6.1
GKN Gorkha 48.26 282 *e*P P **05 12 00.1 +0.4**
comp=Z,317nm,0.9s,mb6.0
BOK Bokaro 48.48 276 *e*P P **05 12 02.8 +1.3**
SDPT Sand Point 48.64 41 *e*P P **05 12 00.8 -1.4**
comp=Z,246nm,0.7s,mb6.0
SDPT LR LR
comp=Z,2μm,17.0s
KURK Kurchatov 49.77 313 P P **05 12 10.5 -0.3**
comp=Z,3μm,1.0s,mb6.9
KURK Kurchatov 49.77 313⇓ *e*P P **05 12 10.2 -0.7**
comp=Z,596nm,1.0s,mb6.2
KURK *e*ScP ScP 05 17 12.0 -0.1
KURK *e*S S **05 19 08.0 -1.2**
KURK Kurchatov 49.77 313 *e*P P **05 12 10.2 -0.6**
KURK pmax pmax
comp=Z,600nm,1.0s,mb6.2
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
KURK Kurchatov 49.77 313 P P **05 12 10.6 -0.2**
SNR=178
FITZ Fitzroy Crossi 49.80 198 *e*P P **05 12 10.0 -1.4**
comp=Z,30nm,0.6s,mb5.1
FITZ *e*pP pP 05 12 41.5 -2.0
FITZ *e*SCP ScP 05 17 11.9 -0.7
FITZ Fitzroy Crossi 49.80 198 P P **05 12 10.4 -1.0**
comp=Z,17nm,0.6s,mb4.9,baz=36,slow=11,SNR=22
FITZ ScP ScP 05 17 11.5 -1.1
comp=Z,16nm,0.8s,baz=36,slow=2.3,SNR=3.9
FITZ LR LR 05 30 48.4
comp=Z,1μm,21.5s,baz=16,slow=33
WB2 Warramunga Arr 49.93 187 *e*P P **05 12 09.8 -2.5**
WB2 *e*pP pP 05 12 42.3 -2.2
WB2 *e*SCP ScP 05 17 12.2 -0.9
WB2 *e*S S **05 19 03.7 -8.3**
WRA Warramunga Arr 49.93 187 P P **05 12 10.3 -2.0**
WRA *PP pP 05 12 41.1 -3.4
WRA S S **05 19 06.1 -5.9**
WRA Warramunga Arr 49.93 187 P P **05 12 10.3 -2.1**
comp=Z,12nm,0.2s,mb5.1,baz=6.8,slow=7.8,SNR=400
WRA pP pP 05 12 41.1 -3.4
comp=Z,94nm,0.8s,baz=7.7,slow=8.1,SNR=4.7
WRA ScP ScP 05 17 11.7 -1.4
comp=Z,36nm,0.8s,baz=4.6,slow=4.6,SNR=9.6
WRA S S **05 19 06.1 -5.9**
comp=Z,28nm,1.0s,baz=6.9,slow=13,SNR=7.3
WRA LR LR 05 34 07.4
comp=Z,2μm,19.5s,baz=10.0,slow=37
CTA Charters Tower 50.09 173 *e*P P **05 12 12.4 -1.2**
comp=Z,14nm,0.6s,mb4.8
CTA *e*pP pP 05 12 46.6 +0.9
CTA *e*SCP ScP 05 17 12.2 -1.6
CTA *e*S S **05 19 12.9 -1.3**
CTA Charters Tower 50.09 173 *e*P P **05 12 12.4 -1.2**
CTA *e**PP pP 05 12 46.6 +0.9
CTA *e*S S **05 19 12.9 -1.3**
CTA pmax pmax
comp=Z,14nm,0.6s
CTA Charters Tower 50.09 173 P P **05 12 11.3 -2.3**
comp=Z,24nm,0.8s,mb4.9,baz=355,slow=8.1,SNR=16
CTAO Charters Tower 50.09 173 *e*P P **05 12 11.6 -1.9**
comp=Z,53nm,1.1s,mb5.1
LGTI Lohaghat 51.55 285 *e*P P **05 12 25.3 +0.7**
LGTI *ex* x 05 13 27.8
SVW2 Sparrevohn 51.85 34 *e*P P **05 12 26.9 +0.6**
TTA Tatalina 51.88 31 *e*P P **05 12 26.7 +0.2**
ULHL Ulahol 52.01 302 P P **05 12 28.9 +1.1**
SNR=45
BLSP Bilaspur 52.30 276 *e*P P **05 12 29.2 -1.0**
TKM2 Tokmak 2 52.39 303⇓ *i*P P **05 12 30.8 +0.3**
comp=Z,336nm,1.2s,mb5.8
TKM2 Tokmak 2 52.39 303⇓ *i*P P **05 12 30.8 +0.3**
TKM2 pmax pmax
comp=Z,336nm,1.2s,mb5.8
TKM2 Tokmak 2 52.39 303 P P **05 12 31.1 +0.6**
SNR=122
KSH Kashi 52.66 299 P P **05 12 34.0 +1.4**
KSH *e*PCP PcP 05 13 39.4 -1.3
KSH *e*PP PP 05 14 38.0 +5.0
KSH *e*SCP ScP 05 17 20.4 -4.4
KSH *e*PCS PcS 05 17 36.8 -2.5
KSH *e*S S **05 19 46.8 -2.5**
KSH *e*SCS ScS 05 22 03.9 -4.4
KSH *e*SS SS 05 23 35.2 +5.9
KSH AMB AMB
comp=Z,6μm,5.4s
KSH LR LR
comp=N,21μm,15.7s
KSH LR LR
comp=E,16μm,12.0s
KSH LR LR
comp=Z,6μm,13.4s
KZA Kyzart 52.77 302 P P **05 12 34.8 +1.4**
SNR=25
KBK Karagaybulak 52.90 303 P P **05 12 34.6 +0.3**
SNR=215
VIS Vishakhapatnam 52.98 270 *i* P P **05 12 37.1 +1.9**
VIS *i* S S **05 19 54.3 +0.2**
CHMS Chumysh 52.99 303 P P **05 12 35.5 +0.5**
SNR=95
FRU Bishkek 53.11 303 *e*P P **05 12 35.6 -0.3**
FRU 05 14 36.6
FRU *e*S S **05 19 55.0 -0.4**
FRU pmax pmax
comp=Z,520nm,1.6s,mb6.0
FRU smax
comp=N,1μm,7.0s
USP Ospenovka 53.13 304 P P **05 12 36.5 +0.5**
SNR=29
KDAK Kodiak Island 53.15 38 *e*P P **05 12 34.5 -1.4**
comp=N,272nm,0.9s,mb6.0
KDAK Kodiak Island 53.15 38 P P **05 12 35.0 -0.9**
comp=N,190nm,0.7s,mb5.9,baz=256,slow=3.9,SNR=102
KDAK S S **05 19 56.0 +0.6**
comp=N,62nm,1.2s,baz=334,slow=23,SNR=6.1
AAK Ala-Archa 53.23 303 P P **05 12 35.3 -1.4**
comp=N,1μm,0.8s,mb6.6
AAK Ala-Archa 53.23 303 *e*P P **05 12 35.7 -1.1**
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 36.1 -0.7**
SNR=67
AAK Ala-Archa 53.23 303 P P **05 12 37.8 +1.0**
SNR=5.2
UCH Uchtor 53.28 302⇓ *i*P P **05 12 38.0 +0.9**
comp=N,194nm,1.2s,mb5.7
UCH *e*PcP PcP 05 13 44.2 +1.2
UCH *e*ScP ScP 05 17 27.7 +0.2
UCH Uchtor 53.28 302 P P **05 12 38.3 +1.1**
SNR=267
ASAR Alice Springs 53.66 187 P P **05 12 37.9 -2.1**
ASAR pP pP 05 13 08.5 -4.0
ASAR ScP ScP 05 17 28.6 -0.5
ASAR S S **05 19 59.2 -3.7**
ASAR ⇑*e* 05 43 14.7
ASAR Alice Springs 53.66 187 P P **05 12 37.9 -2.0**
ASAR *PP pP 05 13 08.5 -4.0
ASAR S S **05 19 59.3 -3.6**
ASAR Alice Springs 53.66 187 P P **05 12 37.9 -2.1**
comp=N,8.3nm,0.3s,mb4.9,baz=359,slow=5.0,SNR=102
ASAR pP pP 05 13 08.5 -4.0
comp=N,11nm,0.6s,baz=12,slow=7.2,SNR=2.7
ASAR ScP ScP 05 17 28.6 -0.5
comp=N,9.5nm,0.9s,baz=3.8,slow=4.7,SNR=5.7
ASAR S S **05 19 59.2 -3.7**
comp=N,7.9nm,1.1s,baz=357,slow=10,SNR=6.8
ASAR PKP2bc 05 43 14.7
comp=N,2.2nm,0.9s,baz=171,slow=2.2,SNR=6.2
SDNR Sundarnagar 53.70 289 *ex* x 05 12 50.0
SDNR *ex* x 05 22 12.0
EKS2 Erkin-Say 53.75 303 *e*P P **05 12 40.6 +0.1**
comp=N,136nm,0.9s,mb5.7
EKS2 Erkin-Say 53.75 303 P P **05 12 41.2 +0.6**
SNR=125
JBP Jabalpur 53.78 278⇓ *i*P P **05 12 41.2 +0.2**
JBP *e*S S **05 20 03.7 -1.2**
AML Almayashu 53.90 302⇓ *e*P P **05 12 42.6 +1.0**
comp=N,194nm,1.2s,mb5.7
AML *e*ScP ScP 05 17 30.9 +0.8
AML Almayashu 53.90 302 P P **05 12 42.7 +1.0**
SNR=517
NDI New Delhi 54.31 285 *e*P P **05 12 44.4 -0.5**
NDI AMb AMB 05 12 47.3
comp=Z,272nm,0.9s,mb6.0
NDI *e*S S **05 20 08.0 -3.9**
SLKM Skilak Lake 54.43 35 *e*P P **05 12 44.2 -0.9**
SLKM *e*ScP ScP 05 17 31.0 -1.1
SLKM Skilak Lake 54.43 35 P P **05 12 44.4 -0.8**
THN Thein Dam 54.47 290 *e*P P **05 12 44.5 -1.4**
MBWA Marble Bar 54.51 204 *e*P P **05 12 46.7 +0.5**
comp=Z,205nm,1.2s,mb5.7
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
comp=Z,7μm,0.8s,mb7.4
BRVK Borovoye 54.84 316 *e*P P **05 12 48.2 0.0**
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
BRVK Borovoye 54.84 316 P P **05 12 48.6 +0.4**
SNR=300
PMR Palmer 54.98 33 *e*P P **05 12 48.0 -1.1**
comp=Z,156nm,1.5s,mb5.5
PMR Palmer 54.98 33 *e*P P **05 12 48.0 -1.1**
PMR pmax pmax
comp=Z,156nm,1.5s,mb5.5
MCK McKinley 55.14 31 *e*P P **05 12 49.6 -0.6**
comp=Z,196nm,1.1s,mb5.8
MCK *e*ScP ScP 05 17 33.5 -1.7
MCK McKinley 55.14 31 *e*P P **05 12 49.8 -0.4**
NGP Nagpur 55.33 276⇓ *i*P P **05 12 50.6 -1.6**
NGP *e*S S **05 20 24.1 -1.6**
SML Sawmill 55.37 33 *e*P P **05 12 51.7 -0.2**
COLA College 55.66 29 *e*P P **05 12 53.7 -0.2**
comp=Z,169nm,0.9s,mb5.9
COLA College 55.66 29 *e*P P **05 12 53.7 -0.2**
COLA pmax pmax
comp=Z,169nm,0.9s,mb5.9
KIP Kipapa 55.74 83 *e*P P **05 12 54.9 -0.3**
comp=Z,186nm,1.1s,mb5.8
KIP Kipapa 55.74 83 P P **05 12 55.1 -0.1**
KIP pmax pmax
comp=Z,190nm,1.1s,mb5.8
BHPL Bhopal 55.95 279 *e*P P **05 12 56.6 0.0**
EIDS Eidsvold 55.99 168 *e*P P **05 12 55.0 -1.6**
comp=Z,21nm,0.9s,mb5.0
KK31 Karatay Array 56.03 304 *i* P P **05 12 56.6 -0.3**
EYAK Cordova Ski Ar 56.64 35 *e*P P **05 13 01.0 0.0**
comp=Z,164nm,1.1s,mb5.8
AJM Ajmer 57.18 284 *e*P P **05 13 04.4 -0.9**
HYB Hyderabad 57.24 272 *e*P P **05 13 06.0 +0.1**
comp=Z,80nm,1.0s,mb5.5
HYB *e* pP 05 13 41.0 +2.2
HYB *e*S S **05 20 50.0 -1.1**
HYB Hyderabad 57.24 272 *e*P P **05 13 06.0 +0.1**
HYB *e* pP 05 13 41.0 +2.2
HYB *e*S S **05 20 50.0 -1.1**
HYB pmax pmax
comp=Z,80nm,1.0s,mb5.5
HYB Hyderabad 57.24 272 *i* P P **05 13 06.0 +0.1**
comp=Z,80nm,1.0s,mb5.5
HYB *e*pP pP 05 13 41.0 +2.2
HYB *e*sP sP 05 13 56.0 +1.8
HYB *e*PP PP 05 15 12.0 -2.4
HYB *e*ScP ScP 05 17 44.0 -1.3
HYB *e*S S **05 20 50.0 -1.1**
AKL Akola 57.26 277 *e*P P **05 13 07.1 +1.2**
AKL *ex* x 05 13 08.7
comp=Z,333nm,1.0s
AKL *i* x x 05 20 47.5
MENT Mentasta 57.49 32 *e*P P **05 13 07.6 +0.7**
DZM Mont Dzumac 57.55 151 P P **05 13 07.6 -0.2**
comp=Z,86nm,0.6s,mb5.8,baz=332,slow=4.3,SNR=77
DZM ScP ScP 05 17 46.7 +0.4
comp=Z,18nm,1.0s,baz=350,slow=3.4,SNR=4.2
DZM LR LR 05 33 27.8
comp=Z,971nm,18.9s,baz=354,slow=31
MDRS Chennai 57.67 267 *e*P P **05 13 07.5 -1.4**
EGAK Eagle 58.52 30 *e*P P **05 13 13.3 -0.7**
comp=Z,40nm,0.6s,mb5.4
POHA Pohakuloa 58.53 84 *e*P P **05 13 14.8 0.0**
comp=Z,336nm,1.2s,mb6.0
KBL Kabul 59.23 295⇓ *i*P P **05 13 18.9 -0.6**
comp=Z,69nm,0.8s,mb5.5
DAWY Dawson 59.34 30 *e*P P **05 13 19.4 -0.3**
DAWY *e*ScP ScP 05 17 53.8 0.0
SVE Sverdlovsk 59.91 321⇓ *i*P P **05 13 24.3 +0.6**
SVE *e* 05 15 33.6
SVE *e*S S **05 21 22.3 -2.2**
SVE pmax pmax
comp=Z,1μm,0.9s,mb6.7
PALK Pallekele 60.05 261 P P **05 13 26.7 +1.4**
comp=Z,181nm,1.3s,mb5.7,SNR=7.1
PALK Pallekele 60.05 261⇓ *i*P P **05 13 25.8 +0.5**
comp=Z,74nm,1.1s,mb5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
PALK Pallekele 60.05 261 P P **05 13 27.2 +1.9**
SNR=5.4
POO Poona 60.86 276 *e*P P **05 13 30.8 0.0**
POO AMb AMB 05 13 32.9
comp=Z,269nm,1.0s,mb6.0
POO *i* S S **05 21 36.0 -1.6**
ARMA Armidale 61.01 169 *e*P P **05 13 30.9 -0.5**
ARMA *e*pP pP 05 14 08.8 +4.0
ARMA *e*S S 05 22 11.8 +33
BHV Bhavnagar 61.03 280 *e*P P **05 13 32.0 +0.1**
KAD Karad 61.08 274 *e*P P **05 13 31.5 -0.7**
KAD AMb AMB 05 13 34.1
comp=Z,267nm,0.9s,mb6.1
ARU Arti 61.12 321 P P **05 13 31.8 -0.1**
comp=Z,11μm,0.7s
ARU Arti 61.12 321⇓ *e*P P **05 13 32.0 +0.1**
comp=Z,1μm,0.8s,mb6.9
ARU Arti 61.12 321⇑ *e*P P **05 13 31.8 -0.1**
ARU pmax pmax
comp=Z,1μm,0.8s,mb6.8
INK Inuvik 61.17 25⇓ *e*P P **05 13 31.6 -0.4**
INK Inuvik 61.17 25 LR LR 05 40 50.5
comp=Z,1μm,19.9s,baz=279,slow=36
KOD Kodaikanal 61.39 265 *e*P P **05 13 34.9 +0.4**
SOKR Solikamsk 61.43 325*d* *i*P P **05 13 34.3 +0.3**
SOKR S S **05 21 44.0 +0.3**
SOKR pmax pmax
comp=Z,1μm,0.8s,mb6.7
SOKR MLR MLR
comp=Z,2μm,16.0s
FORT Forrest 61.50 192 *e*P P **05 13 32.7 -2.0**
comp=Z,88nm,0.5s,mb5.8
FORT *e*pP pP 05 14 09.8 +1.8
STKA Stephens Creek 61.51 179 *e*P P **05 13 31.9 -2.8**
comp=Z,29nm,0.6s,mb5.3
STKA *e*pP pP 05 14 07.9 -0.2
STKA *e*S S **05 21 36.2 -8.9**
STKA Stephens Creek 61.51 179 P P **05 13 32.1 -2.6**
comp=Z,37nm,0.7s,mb5.3,baz=337,slow=7.5,SNR=39
STKA LR LR 05 37 16.6
comp=Z,2μm,20.6s,baz=350,slow=33
AB31 Akbulak array 61.88 313⇑ *e*P P **05 13 36.9 -0.2**
SKAG Skagway 61.97 35 *e*P P **05 13 38.3 +0.8**
comp=Z,404nm,1.4s,mb6.1
GOA Goa 62.16 272 *e*P P **05 13 40.3 +0.7**
GOA AMb AMB 05 13 42.3
comp=Z,185nm,0.9s,mb5.9
MNGI Mangalore 62.43 269 *e*P P **05 13 42.2 +0.9**
MNGI *i* S S **05 21 58.4 +0.9**
SIT Sitka 62.49 38 *e*P P **05 13 43.1 +2.0**
BHJ Bhuj 62.57 282 *e*P P **05 13 41.7 -0.4**
TRD Trivandrum 62.66 264 *e*P P **05 13 43.1 +0.2**
AKTK Aktyubinsk 62.79 315 P P **05 13 43.2 0.0**
AKTK S S **05 22 02.5 +1.4**
AKTO Aktyubinsk 62.79 315 P P **05 13 43.2 0.0**
comp=Z,436nm,0.8s,mb6.4,baz=88,slow=7.4,SNR=346
AKTO S S **05 22 02.5 +1.4**
comp=Z,22nm,1.1s,baz=158,slow=19,SNR=5.5
AFI Afiamalu 63.56 126 P P **05 13 48.7 0.0**
comp=Z,44nm,0.8s,mb5.3,baz=352,slow=7.1,SNR=6.5
CRAG Craig 64.08 39 *e*P P **05 13 52.0 +0.4**
comp=Z,192nm,1.3s,mb5.8
KLBR Kellerberrin 64.82 201 *e*P P **05 13 55.0 -1.6**
comp=Z,26nm,0.7s,mb5.2
KLBR *e*pP pP 05 14 35.0 +4.7
DLBC Dease Lake 64.88 36 *e*P P **05 13 57.2 +0.5**
CNB Canberra Magne 65.49 172 *e*P P **05 14 02.5 +1.7**
comp=Z,89nm,1.7s,mb5.3
CNB *e*pP pP 05 14 35.7 +1.1
MUN Mundaring 65.68 202 *e*P P **05 14 00.9 -1.2**
MUN *e*S S 05 23 15.7
NWAO Narrogin (SRO) 66.22 201 *e*P P **05 14 03.8 -1.8**
comp=Z,70nm,1.0s,mb5.5
NWAO Narrogin (SRO) 66.22 201 P P **05 14 04.2 -1.3**
NWAO *PP pP 05 14 36.3 -3.1
NWAO pmax pmax
comp=Z,40nm,0.7s
NWAO pmax pmax
comp=N,83nm,1.0s
NWAO Narrogin (SRO) 66.22 201 P P **05 14 04.2 -1.4**
comp=N,40nm,0.7s,mb5.4,baz=27,slow=5.8,SNR=15
NWAO pP pP 05 14 36.3 -3.1
comp=N,83nm,1.0s,baz=34,slow=9.9,SNR=3.0
ABKT Ailbek 66.52 301 P P **05 14 07.2 -0.4**
comp=N,1μm,0.9s,mb6.7,SNR=20
VAN Vannovskaya 66.52 301 P P **05 14 08.5 +0.9**
VAN S S 05 22 50.2 +3.0
ALE Alert 67.22 3 P P **05 14 12.0 +0.7**
comp=N,684nm,1.1s,mb6.4,SNR=76
KBS Kingsbay 67.45 351⇓ *i*P P **05 14 13.5 +0.7**
comp=N,309nm,1.1s,mb6.0
KBS *e*PP PP 05 16 41.6 -1.1
KBS Kingsbay 67.45 351 *e*P P **05 14 14.0 +1.1**
KBS AMb AMB 05 14 16.9
comp=Z,246nm,0.5s,mb6.3
KBS *e*S S 05 23 00.2 +3.0
KBS Kingsbay 67.45 351 P P **05 14 13.9 +1.1**
KBS pmax pmax
comp=Z,310nm,1.1s,mb6.0
LVZ Lovozero 68.18 337 P P **05 14 17.2 -0.3**
comp=Z,2μm,1.4s,mb6.6,SNR=21
LVZ Lovozero 68.18 337⇑ *e*P P **05 14 16.8 -0.7**
LVZ pmax pmax
comp=Z,348nm,1.3s,mb5.9
TMCR Tamitsa 68.51 333⇓ *i*P P **05 14 20.3 +0.7**
TMCR *e*S S 05 23 11.0 +0.9
TMCR pmax pmax
comp=Z,2μm,1.4s,mb6.7
APA Apatity 68.75 337⇑ *i*P P **05 14 17.0 -4.1**
APA *i**PP pP 05 14 46.6 -8.5
APA *i* S S 05 23 12.0 -0.8
APA *i**SS sS 05 23 59.0 -13
APA pmax pmax
comp=Z,570nm,1.0s,mb6.3
APA pmax pmax
comp=Z,2μm,4.0s
RES Resolute Bay 69.69 13⇓ *i*P P **05 14 26.5 -0.2**
comp=Z,6μm,1.1s,mb7.2
RES *e*S S 05 23 23.0 -0.7
RES Resolute Bay 69.69 13 P P **05 14 26.7 -0.1**
KEV Kevo 69.72 340 *ep* P **05 14 25.9 -1.1**
comp=Z,260nm,0.8s,mb6.0
KEV Kevo 69.72 340 P P **05 14 27.5 +0.5**
KEV pmax pmax
comp=Z,570nm,1.1s,mb6.2
ARCES ARCESS Array B 70.28 340 P P **05 14 31.0 +0.6**
ARCES PP PP 05 17 06.2 -1.0
ARCES LR LR 05 48 29.6
ARCES ARCESS Array B 70.28 340 P P **05 14 31.0 +0.6**
ARCES 05 17 06.2
ARCES ARCESS Array B 70.28 340 P P **05 14 31.0 +0.6**
comp=Z,370nm,0.9s,mb6.1,baz=67,slow=5.1,SNR=248
ARCES PP PP 05 17 06.2 -1.1
comp=Z,77nm,0.9s,baz=56,slow=9.1,SNR=5.8

ARCES LR LR 05 48 29.6
comp=Z,2µm,20.9s,baz=66,slow=38
YKA Yellowknife Ar 70.46 28 P P 05 14 30.9 -0.7
YKA LR LR 05 44 54.2
YKA Yellowknife Ar 70.46 28 P P 05 14 30.9 -0.6
comp=Z,73nm,0.8s,mb5.4,baz=295,slow=6.0,SNR=650
YKA LR LR 05 44 54.2
comp=Z,534nm,20.6s,baz=225,slow=35
C03A Quillayute Air 71.66 45 ⇓P P 05 14 40.3 +1.2
baz=72
C03A ⇑S S 05 23 51.1 +3.9
baz=72
JOF Joensuu 71.76 333 *ep* **P 05 14 38.2 -1.2**
comp=Z,879nm,0.7s,mb6.6
JOF Joensuu 71.76 333 *eP* **P 05 14 38.2 -1.2**
JOF pmax pmax
comp=Z,879nm,0.7s,mb6.6
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
WBK Wadi Bani Khal 71.82 286 P P 05 14 41.1 +0.5
SNR=18
PGC Sidney 72.04 44 *eP* **P 05 14 41.6 +0.3**
comp=Z,524nm,1.1s,mb6.2
TRO Tromso 72.09 342 ⇓*i* P **P 05 14 40.5 -0.8**
comp=Z,328nm,1.7s,mb5.8
TRO *i* 05 23 52.6
TRO LR LR
comp=Z,1µm,20.3s
TRO Tromso 72.09 342 ⇓*i* P **P 05 14 40.5 -0.8**
TRO AMb AMB 05 14 43.3
comp=Z,328nm,1.7s,mb5.8
TRO *e*S S 05 23 52.0 +0.5
TRO *e*SS SS 05 28 33.6 +3.1
TRO AMS AMS 05 47 58.6
comp=Z,998nm,20.3s
TRO Tromso 72.09 342 ⇓*i* P **P 05 14 40.5 -0.8**
TRO *i* 05 23 52.6
TRO pmax pmax
comp=Z,328nm,1.7s,mb5.8
TRO MLR MLR
comp=Z,1µm,20.3s
MAK Makhachkala 72.11 310 *eP* **P 05 14 40.9 -1.0**
MAK *e**PP pP 05 15 13.2 -3.0
MAK *e**SP sP 05 15 30.7 -0.6
MAK *e* 05 17 22.8
MAK *e*PPP 05 19 10.8
MAK *i* S S 05 23 50.4 -2.2
MAK *i* 05 24 30.1
MAK *e**SS sS 05 24 50.6 -1.2
MAK *e*SS SS 05 28 31.4 -0.7
MAK pmax pmax
comp=Z,310nm,0.9s,mb6.0
MAK MLR MLR
comp=Z,4µm,17.0s
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
BIDO Bidbid 72.14 287 P P 05 14 42.9 +0.5
SNR=18
B04A Port Angeles 72.26 44 ⇑P P 05 14 43.3 +0.7
baz=72
B04A ⇑S S 05 23 55.4 +1.3
baz=72
VRHR Novokhopersk 72.31 319 *eP* **P 05 14 42.8 -0.1**
VRHR *e*S S 05 23 53.4 -1.2
VRHR pmax pmax
comp=Z,730nm,0.7s,mb6.5
VRHR pmax pmax
comp=N,160nm,0.9s
VRHR pmax pmax
comp=E,120nm,0.5s
VRHR smax
comp=N,1µm,1.3s
VRHR smax
comp=E,710nm,1.3s
VRHR smax
comp=Z,240nm,2.2s
VRHR MLR MLR
comp=Z,800nm,10.0s
VRHR MLR MLR
comp=N,880nm,15.0s
VRHR MLR MLR
comp=E,910nm,12.0s
NLWA Neilton Lookou 72.32 45 *eP* **P 05 14 43.9 +0.8**
comp=E,559nm,1.4s,mb6.1
NLWA Neilton Lookou 72.32 45 ⇑P P 05 14 43.9 +0.9
baz=72
NLWA ⇑S S 05 23 57.9 +3.1
baz=72
MOS Moscow 72.38 325 *eP* **P 05 14 39.5 -3.8**
MOS *e* 05 14 56.4
MOS *e**PP pP 05 15 16.6 -1.0
MOS *e* 05 17 21.8
MOS *e*PPP 05 19 04.7
MOS *e*S S 05 23 49.8 -5.4
MOS *e* 05 24 31.0
MOS *e**SS sS 05 24 50.5 -4.0
MOS pmax pmax
comp=Z,3µm,1.3s,mb6.8
MOS pmax pmax
comp=Z,2µm,1.1s,mb6.8
MOS MLR MLR
comp=Z,4µm,16.9s
MOS MLR MLR
comp=E,3µm,15.0s
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
SMDO Samad 72.40 287 P P 05 14 44.1 +0.2
SNR=11
A04A Legoe Bay, Lum 72.45 44 ⇓P P 05 14 44.4 +0.5
baz=72
A04A ⇓S S 05 23 58.1 +1.8
baz=72
D03A Wishkah Elem. 72.49 45 ⇓P P 05 14 45.3 +1.2
baz=72
D03A ⇑S S 05 23 59.5 +2.7
baz=72
ON2 Olympics--Nort 72.59 46 P P 05 14 45.9 +1.2
JMDO Jabal Madar 72.65 286 P P 05 14 45.9 +0.5
SNR=13
JMDO Jabal Madar 72.65 286 P P 05 14 45.9 +0.5
SNR=13
JMDO Jabal Madar 72.65 286 P P 05 14 45.9 +0.5
SNR=13
JMDO Jabal Madar 72.65 286 P P 05 14 45.9 +0.5
SNR=13
VDB Vedder Mountai 72.68 43 P P 05 14 45.2 0.0
A05A Maple Falls 72.70 43 ⇑P P 05 14 45.6 +0.2
baz=72
A05A ⇓S S 05 23 59.3 +0.1
baz=72
HDW Hoodsport 72.71 45 P P 05 14 46.4 +1.1
DAG Danmarks Havn 72.72 355 ⇑*i* P **P 05 14 46.2 +1.2**
DAG pmax pmax
comp=Z,205nm,1.2s,mb5.7
DAG Danmarks Havn 72.72 355 ⇑*i* P **P 05 14 46.2 +1.2**
comp=Z,204nm,1.2s,mb5.7
C04A Brinnon 72.73 45 ⇓P P 05 14 46.0 +0.5
baz=72
C04A ⇑S S 05 24 00.9 +1.5
baz=72
HOQ Hoqain 72.78 288 P P 05 14 46.4 +0.2
SNR=34
HOQ Hoqain 72.78 288 P P 05 14 46.4 +0.2
SNR=34
HOQ Hoqain 72.78 288 P P 05 14 46.4 +0.2
SNR=34
HOQ Hoqain 72.78 288 P P 05 14 46.4 +0.2
SNR=34
E03A Lebam 72.87 46 ⇓P P 05 14 46.9 +0.6
baz=73
E03A ⇑S S 05 24 02.7 +1.6
baz=73
MBW Mount Baker 72.91 43 P P 05 14 47.1 +0.6
A06A Chilliwack 73.02 43 ⇓P P 05 14 47.2 +0.1
baz=73
A06A ⇑S S 05 24 03.0 +0.3
baz=73
B05A Bryant 73.02 44 ⇑P P 05 14 47.9 +0.7
baz=73
B05A ⇓S S 05 24 03.9 +1.2
baz=73
D04A Dobbs Creek Ra 73.09 45 ⇑P P 05 14 48.1 +0.5
baz=73
D04A ⇑S S 05 24 06.8 +3.2
baz=73
F03A Seaside 73.13 46 ⇓P P 05 14 48.6 +0.7
baz=73
JCW Jim Creek 73.15 44 P P 05 14 48.6 +0.6
OBN Obninsk 73.20 324 P P 05 14 48.4 +0.3
comp=Z,8µm,1.0s,mb7.4,SNR=72
OBN Obninsk 73.20 324 ⇓*eP* **P 05 14 48.2 +0.1**
comp=Z,1µm,0.9s,mb6.7
OBN *e*S S 05 24 04.8 +0.3
OBN Obninsk 73.20 324 *eP* **P 05 14 48.2 +0.1**
OBN *e* 05 14 59.4
OBN *i* *PP pP 05 15 20.2 -2.3
OBN *e* 05 17 40.7
OBN *i* S S 05 24 03.3 -1.3
OBN *i* SS SS 05 28 51.2 +3.1
OBN pmax pmax
comp=Z,2µm,1.0s,mb6.7
OBN MLR MLR
comp=Z,2µm,16.0s
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
HATD Hatta, Dubai 73.22 289 P P 05 14 49.9 +1.1
SNR=7.9
BSY Bisya 73.24 287 P P 05 14 49.1 +0.2
SNR=35
BSY Bisya 73.24 287 P P 05 14 49.1 +0.2
SNR=35
BSY Bisya 73.24 287 P P 05 14 49.1 +0.2
SNR=35
BSY Bisya 73.24 287 P P 05 14 49.1 +0.2
SNR=35
BSY Bisya 73.24 287 P P 05 14 49.1 +0.2
SNR=35
B06A Marblemount 73.27 43 ⇓P P 05 14 48.8 +0.1
baz=73
B06A ⇑S S 05 24 06.1 +0.5
baz=73
ASHO Ashiyiah 73.34 289 P P 05 14 50.7 +1.2
SNR=6.7
ASHO Ashiyiah 73.34 289 P P 05 14 50.7 +1.2
SNR=6.7
ASHO Ashiyiah 73.34 289 P P 05 14 50.7 +1.2
SNR=6.7
ASHO Ashiyiah 73.34 289 P P 05 14 50.7 +1.2
SNR=6.7
ASHO Ashiyiah 73.34 289 P P 05 14 50.7 +1.2
SNR=6.7
E04A Onalaska 73.37 46 ⇑P P 05 14 50.0 +0.7
baz=73
E04A ⇑S S 05 24 09.1 +2.3
baz=73
VOR Voronezh 73.39 320 ⇓*i* P **P 05 14 48.0 -1.3**
VOR *e*S S 05 24 05.0 -1.8
VOR pmax pmax
comp=Z,2µm,1.2s,mb6.7
C05A Tolt Reservoir 73.52 44 ⇑P P 05 14 50.5 +0.4
baz=73
C05A ⇓S S 05 24 09.9 +1.6
baz=73
ARQ Araqi 73.54 288 P P 05 14 51.2 +0.5
SNR=19
ARQ Araqi 73.54 288 P P 05 14 51.2 +0.5
SNR=19
ARQ Araqi 73.54 288 P P 05 14 51.2 +0.5
SNR=19
ARQ Araqi 73.54 288 P P 05 14 51.2 +0.5
SNR=19
ARQ Araqi 73.54 288 P P 05 14 51.2 +0.5
SNR=19
RVW Rose Valley 73.55 46 P P 05 14 51.3 +0.9
D05A Enumclaw 73.56 45 ⇑P P 05 14 51.4 +1.0
baz=73
D05A ⇓S S 05 24 09.6 +0.7
baz=73
G03A Yamhill 73.58 47 ⇓P P 05 14 51.2 +0.7
baz=73
G03A ⇓S S 05 24 10.6 +1.4
baz=73
VRSR Storozhevoye 73.63 320 *eP* **P 05 14 50.7 0.0**
VRSR *e*S S 05 24 08.3 -1.2
VRSR pmax pmax
comp=Z,300nm,0.9s,mb6.0
VRSR pmax pmax
comp=N,210nm,0.8s
VRSR pmax pmax
comp=E,300nm,0.8s
VRSR smax
comp=N,120nm,1.2s
VRSR smax
comp=Z,20nm,1.3s
VRSR smax
comp=E,100nm,1.0s
A07A Ashnola River, 73.69 43 ⇑P P 05 14 51.5 +0.4
baz=74
A07A ⇑S S 05 24 11.0 +0.7
baz=74
VORD Divnogorie 73.69 320 *eP* **P 05 14 51.1 +0.1**
VORD *e*S S 05 24 09.2 -1.0
VORD pmax pmax
comp=Z,650nm,0.9s,mb6.4
VORD pmax pmax
comp=N,210nm,1.1s
VORD pmax pmax
comp=E,460nm,1.1s
VORD smax
comp=N,640nm,1.0s
VORD smax
comp=Z,30nm,1.0s
VORD smax
comp=E,200nm,0.7s
VORD MLR MLR
comp=Z,2µm,16.0s
VORD MLR MLR
comp=N,1µm,18.0s
VORD MLR MLR
comp=E,2µm,14.0s
PUL Pulkovo 73.80 330 ⇑*eP* **P 05 14 52.3 +0.8**
I02A Mapleton 73.80 48 ⇓P P 05 14 52.4 +0.6
baz=74
I02A ⇑S S 05 24 14.0 +2.3
baz=74
F04A Amboy 73.85 46 ⇑P P 05 14 52.4 +0.3
baz=74
F04A ⇓S S 05 24 13.4 +1.2
baz=74
H03A Soap Creek Ran 73.85 48 ⇑P P 05 14 52.5 +0.4
baz=74
H03A ⇓S S 05 24 13.7 +1.5
baz=74
FMW Mount Fremont 73.87 45 P P 05 14 52.5 +0.4
COR Corvallis 73.89 48 *eP* **P 05 14 53.2 +0.9**
comp=E,368nm,1.3s,mb6.0
COR Corvallis 73.89 48 P P 05 14 54.0 +1.7
COR pmax pmax
comp=Z,370nm,1.3s,mb6.0
C06A Tall Timber Ra 73.89 44 ⇑P P 05 14 52.6 +0.3
baz=74
C06A ⇓S S 05 24 13.1 +0.5
baz=74
K01A Sixes 73.90 50 ⇑P P 05 14 53.0 +0.6
baz=74
WRW Wenatchee Ridg 73.93 44 P P 05 14 52.9 +0.4
E05A Randle 73.98 45 ⇑P P 05 14 52.8 0.0
baz=74
E05A ⇓S S 05 24 14.2 +0.6
baz=74
B07A Winthrop 74.11 43 ⇑P P 05 14 53.8 +0.3
baz=74
B07A ⇑S S 05 24 15.6 +0.6
baz=74
GOF Gofitskoye 74.12 313 ⇓*i* P **P 05 14 46.8 -6.9**
GOF *i* S S 05 24 06.8 -8.5
GOF *e*SS SKSac 05 24 44.4 -3.7
GOF pmax pmax
comp=Z,800nm,1.3s,mb6.3
GOF smax
comp=N,440nm,1.2s
GOF smax
comp=E,90nm,1.2s
G04A Mulino 74.14 47 ⇓P P 05 14 54.3 +0.5
baz=74
G04A ⇓S S 05 24 16.9 +1.5
baz=74
KAF Kangasniemi 74.15 333 *ep* **P 05 14 51.9 -1.6**
comp=E,768nm,0.9s,mb6.4,baz=53,slow=5.4
KAF Kangasniemi 74.15 333 *eP* **P 05 14 51.9 -1.6**
KAF pmax pmax
comp=Z,768nm,0.9s,mb6.4
I03A Eugene 74.17 48 ⇑P P 05 14 54.6 +0.6
baz=74
I03A ⇑S S 05 24 18.1 +2.2
baz=74
DGRG David-gareji 74.19 309 P P 05 14 54.4 +0.3
J02A Umpqua 74.25 49 ⇓P P 05 14 55.1 +0.7
baz=74
J02A ⇑S S 05 24 19.4 +2.7
baz=74
D06A Cle Elum 74.25 44 ⇓P P 05 14 54.8 +0.4
baz=74
D06A ⇑S S 05 24 17.0 +0.4
baz=74
A08A Turner Farm, O 74.38 42 ⇑P P 05 14 55.4 +0.3
baz=74
A08A ⇓S S 05 24 18.7 +0.7
baz=74
TBM Table Mountain 74.41 44 P P 05 14 55.6 +0.3
E06A Yakima 74.47 45 ⇑P P 05 14 56.3 +0.6
baz=74
E06A ⇑S S 05 24 20.1 +1.1
baz=74
MTA Mtatsminda 74.47 309 P P 05 14 55.3 -0.4
F05A White Salmon 74.47 46 ⇑P P 05 14 56.1 +0.4
baz=74
F05A ⇓S S 05 24 20.7 +1.6
baz=74
TBLG Delisi 74.49 309 P P 05 14 56.3 +0.4
C07A Waterville 74.50 44 ⇑P P 05 14 55.8 0.0
baz=74
C07A ⇓S S 05 24 18.8 -0.6
baz=74
LOF Lofoten 74.55 342 *eP* **P 05 14 57.5 +1.8**
comp=Z,114nm,1.2s,mb5.4
LOF Lofoten 74.55 342 *eP* **P 05 14 57.5 +1.8**
LOF AMb AMB 05 15 01.0
comp=Z,114nm,1.2s,mb5.4
EBG Ellensburg 74.55 45 P P 05 14 56.7 +0.6
H04A Detroit Lake 74.56 47 ⇓P P 05 14 56.6 +0.4
baz=74
H04A ⇑S S 05 24 20.9 +0.8
baz=74
M01C Crescent City 74.56 50 ⇓P P 05 14 57.1 +0.8
baz=74
M01C ⇑S S 05 24 21.5 +1.3
baz=74
K02A Glendale 74.57 49 ⇑P P 05 14 56.9 +0.6
baz=74
K02A ⇑S S 05 24 20.7 +0.3
baz=74
ZEI Tsey 74.59 311 *eP* **P 05 14 56.2 -0.2**
ZEI *e*S S 05 24 18.1 -2.4
ZEI pmax pmax
comp=Z,231nm,0.9s,mb5.8
ZEI smax
comp=N,46nm,1.4s
B08A Colville Reser 74.62 43 ⇓P P 05 14 56.6 +0.1
baz=74
B08A ⇓S S 05 24 21.4 +0.7
baz=74
FINES FINESS Array B 74.62 333 P P 05 14 56.5 +0.2
FINES S S 05 24 20.6 +0.3
FINES FINESS Array B 74.62 333 *i* P **P 05 14 56.5 +0.2**
FINES pmax pmax
comp=Z,536nm,0.9s
FINES FINESS Array B 74.62 333 P P 05 14 56.5 +0.2
comp=Z,536nm,0.9s,mb6.2,baz=83,slow=4.9,SNR=534
FINES S S 05 24 20.6 +0.3
comp=Z,27nm,1.1s,baz=67,slow=15,SNR=12
J03A Ideyld Park 74.64 49 ⇓P P 05 14 57.5 +0.8
baz=74
J03A ⇑S S 05 24 23.0 +1.8
baz=74
L02A Cave Junction 74.77 50 ⇓P P 05 14 57.9 +0.4
baz=75
L02A ⇑S S 05 24 24.9 +2.3
baz=75
A09A Danville 74.77 42 ⇑P P 05 14 57.9 +0.5
baz=75
A09A ⇓S S 05 24 22.9 +0.5
baz=75
D07A Quincy 74.78 44 ⇑P P 05 14 57.3 -0.1
baz=75
D07A ⇑S S 05 24 22.3 -0.2
baz=75
GOR Gori 74.80 310 P P 05 14 55.7 -2.0
I04A Tendick Farm, 74.81 48 ⇓P P 05 14 58.0 +0.3
baz=75
I04A ⇓S S 05 24 22.4 -0.6
baz=75
KIV Kislovodsk 74.84 312 P P 05 14 58.0 +0.1
comp=Z,4µm,0.9s,mb7.0,SNR=87
KIV Kislovodsk 74.84 312 ⇓*eP* **P 05 14 58.4 +0.5**
comp=Z,549nm,0.9s,mb6.2
KIV Kislovodsk 74.84 312 *eP* **P 05 14 58.4 +0.5**
KIV pmax pmax
comp=Z,548nm,0.9s,mb6.2
KIV Kislovodsk 74.84 312 P P 05 14 58.7 +0.8
SNR=151
KIV Kislovodsk 74.84 312 P P 05 14 58.7 +0.8
SNR=151
KIV Kislovodsk 74.84 312 P P 05 14 58.7 +0.8
SNR=151
KIV Kislovodsk 74.84 312 P P 05 14 58.7 +0.8
SNR=151
KRMB Red Mountain 74.85 51 *eP* **P 05 14 58.8 +0.8**
G05A Wamic 74.85 46 ⇑P P 05 14 58.4 +0.5
baz=75
G05A ⇓S S 05 24 23.9 +0.5
baz=75
MXC Moxie City 74.87 45 P P 05 14 58.4 +0.4
EPH Ephrata 74.93 44 P P 05 14 58.2 -0.1
F06A Goldendale 74.94 46 ⇑P P 05 14 58.9 +0.5
baz=75
F06A ⇓S S 05 24 25.0 +0.7
baz=75
ONI Oni 74.97 311 P P 05 14 59.7 +1.1
C08A Higginbotham F 75.06 43 ⇑P P 05 14 59.1 +0.1
baz=75
C08A ⇓S S 05 24 25.1 -0.5
baz=75
JCC Jacoby Creek 75.08 51 ⇑P P 05 14 59.8 +0.5
baz=75
JCC ⇓S S 05 24 26.4 +0.3
baz=75
H05A Madras 75.18 47 ⇓P P 05 15 00.0 +0.2
baz=75
H05A ⇑S S 05 24 27.6 +0.6
baz=75
J04A Umpqua Nationa 75.26 48 ⇑P P 05 15 01.0 +0.7
baz=75
J04A ⇓S S 05 24 28.7 +0.7
baz=75

G06A **Carlson Farm, 75.28 46** ⇓P P **05 15 00.8 +0.4**
baz=75
G06A ⇑S S 05 24 28.5 +0.4
baz=75
B09A Rice 75.29 42 ⇓P P **05 15 00.6 +0.3**
baz=75
B09A ⇓S S 05 24 28.3 +0.2
baz=75
A10A Northport 75.36 42 ⇓P P **05 15 01.1 +0.4**
baz=75
A10A ⇑S S 05 24 28.8 -0.1
baz=75
I05A Bend 75.38 47 ⇑P P **05 15 01.3 +0.4**
baz=75
I05A ⇑S S 05 24 30.9 +1.7
baz=75
F07A Phinny Hill Vi 75.41 45 ⇑P P **05 15 01.4 +0.3**
baz=75
F07A ⇑S S 05 24 30.2 +0.7
baz=75
HAWA Hanford 75.42 45 *e*P P **05 15 01.3 +0.1**
comp=Z,60nm,0.6s,mb5.4
OD2 Odessa Site #2 75.45 44 P P **05 15 01.1 -0.2**
WRD Warden 75.46 44 P P **05 15 01.2 -0.1**
D08A Wollman Farm, 75.48 44 ⇑P P **05 15 01.6 +0.2**
baz=75
D08A ⇓S S 05 24 29.7 -0.5
baz=75
C09A Chrisman Ranch 75.51 43 ⇑P P **05 15 01.8 +0.2**
baz=75
C09A ⇓S S 05 24 29.6 -1.0
baz=75
O01C Eel River Cons 75.53 52 ⇑P P **05 15 02.3 +0.4**
baz=75
O01C ⇑S S 05 24 32.1 +1.0
baz=75
YBH Yreka Blue Hor 75.55 50 *e*P P **05 15 02.5 +0.5**
comp=Z,133nm,1.1s,mb5.5
YBH Yreka Blue Hor 75.55 50 *e*P P **05 15 02.5 +0.5**
YBH pmax pmax
comp=Z,133nm,1.1s
YBH Yreka Blue Hor 75.55 50 ⇑P P **05 15 02.5 +0.5**
baz=75
YBH ⇑S S 05 24 31.3 0.0
baz=75
EDM Edmonton 75.56 37 *e*P P **05 15 01.3 -0.5**
EDM Edmonton 75.56 37 P P **05 15 01.5 -0.3**
N02C Big Bar 75.57 51 ⇑P P **05 15 02.2 +0.1**
baz=75
N02C ⇓S S 05 24 33.2 +1.8
baz=75
M02C Callahan 75.61 50 ⇓P P **05 15 02.9 +0.5**
baz=75
M02C ⇓S S 05 24 32.5 +0.6
baz=75
MOR8 Moi Rana 75.65 340 ⇓*i*P P **05 15 01.1 -0.9**
comp=Z,658nm,0.8s,mb6.3
MOR8 Moi Rana 75.65 340 ⇓*i*P P **05 15 01.1 -0.9**
MOR8 AMb AMB 05 15 03.8
comp=Z,658nm,0.8s,mb6.3
MOR8 *e*PP PP 05 17 50.7 -2.2
E08A Dider Farm, El 75.66 44 ⇑P P **05 15 02.6 +0.1**
baz=76
E08A ⇓S S 05 24 32.9 +0.6
baz=76
H06A Lindquist Farm 75.70 47 ⇓P P **05 15 02.9 +0.1**
baz=76
H06A ⇓S S 05 24 32.5 -0.3
baz=76
K04A Chilquin 75.80 49 ⇑P P **05 15 03.8 +0.5**
baz=76
K04A ⇓S S 05 24 34.5 +0.6
baz=76
J05A Fort Rock 75.81 48 ⇓P P **05 15 04.1 +0.7**
baz=76
J05A ⇓S S 05 24 35.5 +1.6
baz=76
D09A Jones Farm, Ri 75.84 44 ⇑P P **05 15 03.5 -0.1**
baz=76
D09A ⇓S S 05 24 34.9 +0.6
baz=76
G07A Ruggs Ranch, H 75.87 46 ⇑P P **05 15 04.1 +0.3**
baz=76
G07A ⇓S S 05 24 35.0 +0.4
baz=76
B10A Chitwood Farm, 75.89 42 ⇑P P **05 15 04.1 +0.4**
baz=76
B10A ⇓S S 05 24 34.8 +0.2
baz=76
L04A Klamath Falls 75.89 49 ⇑P P **05 15 04.2 +0.3**
baz=76
L04A ⇑S S 05 24 35.1 +0.1
baz=76
KCPM Cahto Peak 75.90 52 *e*P P **05 15 04.7 +0.7**
KIPM Iron Peak 75.91 52 *e*P P **05 15 04.5 +0.5**
STOK Stokkvaagen 75.95 341 *e*P P **05 15 03.8 0.0**
comp=Z,376nm,1.5s,mb5.8
STOK Stokkvaagen 75.95 341 *e*P P **05 15 03.8 0.0**
STOK AMb AMB 05 15 08.0
comp=Z,376nm,1.5s,mb5.8
NEW Newport 75.96 42 *e*P P **05 15 04.1 -0.1**
comp=Z,177nm,0.9s,mb5.7
NEW Newport 75.96 42 P P **05 15 04.3 +0.1**
NEW pmax pmax
comp=Z,180nm,1.0s
DIGO Kars 76.00 309 *i*P P **05 15 03.1 -1.5**
A11A Hall Mountain, 76.06 41 ⇓P P **05 15 05.9 +1.1**
baz=76
A11A ⇑S S 05 24 37.4 +0.8
baz=76
C10A Spilker Farm, 76.07 43 ⇓P P **05 15 04.9 +0.1**
baz=76
C10A ⇓S S 05 24 36.2 -0.5
baz=76
KARS Kars 76.10 309 *e*P P **05 15 06.1 +1.0**
M04C Macdoel 76.11 50 ⇑P P **05 15 05.6 +0.5**
baz=76
M04C ⇓S S 05 24 36.3 -1.0
baz=76
I06A Prineville 76.15 47 ⇑P P **05 15 05.7 +0.4**
baz=76
I06A ⇓S S 05 24 36.9 -0.9
baz=76
M03C McCloud 76.16 50 ⇓P P **05 15 05.8 +0.4**
baz=76
M03C ⇓S S 05 24 37.2 -0.7
baz=76
P01C Double 8 Ranch 76.17 52 ⇑P P **05 15 05.8 +0.3**
baz=76
P01C ⇑S S 05 24 39.4 +1.3
baz=76
F08A Pendleton 76.17 45 ⇑P P **05 15 06.0 +0.6**
baz=76
F08A ⇓S S 05 24 38.6 +0.7
baz=76
DYDN Diyadin 76.19 308 *i*P P **05 15 06.3 +0.7**
WDC Whiskeytown Da 76.20 51 ⇑*i*P P **05 15 05.8 +0.2**
comp=Z,141nm,1.2s,mb5.5
WDC Whiskeytown Da 76.20 51 P P **05 15 06.1 +0.4**
WDC pmax pmax
comp=Z,140nm,1.2s,mb5.5
WDC Whiskeytown Da 76.20 51 ⇑P P **05 15 06.0 +0.3**
baz=76
WDC ⇓S S 05 24 37.4 -0.9
baz=76
E09A Wood Farm, Sta 76.21 44 ⇓P P **05 15 05.8 +0.2**
baz=76
E09A ⇓S S 05 24 37.6 -0.7
baz=76
O02C Red Bluff 76.22 52 ⇑P P **05 15 06.5 +0.8**
baz=76
O02C ⇑S S 05 24 39.1 +0.5
baz=76
H07A Lands Inn, Kim 76.26 46 ⇓P P **05 15 06.1 +0.2**
baz=76
H07A ⇑S S 05 24 39.3 +0.5
baz=76
K05A Summer Lake 76.29 49 ⇑P P **05 15 06.9 +0.8**
baz=76
K05A ⇓S S 05 24 39.8 +0.5
baz=76
G08A Pilot Rock 76.30 46 ⇑P P **05 15 06.5 +0.4**
baz=76
G08A ⇑S S 05 24 39.6 +0.3
baz=76
B11A Sandpoint 76.32 42 ⇑P P **05 15 06.7 +0.5**
baz=76
B11A ⇓S S 05 24 39.5 +0.1
baz=76
LASM Arnica Sink 76.37 50 P P **05 15 06.9 +0.3**
D10A Wagner Farm, O 76.47 43 ⇓P P **05 15 06.9 -0.1**
baz=76
D10A ⇓S S 05 24 39.3 -1.7
baz=76
A12A Yaak River Ran 76.48 41 ⇓P P **05 15 07.8 +0.8**
baz=76
A12A ⇓S S 05 24 40.4 -0.8
baz=76
GASB Alder Springs 76.50 52 ⇓P P **05 15 08.1 +0.7**
baz=76
GASB ⇓S S 05 24 41.9 +0.2
baz=76
J06A Christmas Vall 76.52 48 ⇑P P **05 15 07.6 +0.2**
baz=76
J06A ⇓S S 05 24 41.4 -0.3
baz=76
I07A Izee 76.54 47 ⇓P P **05 15 08.0 +0.5**
baz=76
I07A ⇓S S 05 24 42.5 +0.5
baz=76
HOPS Hopland 76.57 53 *e*P P **05 15 07.6 -0.1**
comp=Z,76nm,1.1s,mb5.2
HOPS Hopland 76.57 53 ⇓P P **05 15 07.7 -0.1**
baz=76
HOPS ⇑S S 05 24 43.2 +0.8
baz=76
ARTV Artvin 76.62 310 *i*P P **05 15 08.6 +0.6**
L05A Lakeview 76.65 49 ⇑P P **05 15 08.8 +0.6**
baz=76
L05A ⇑S S 05 24 44.3 +1.1
baz=76
AGRB Hanur-Agry 76.65 308 *e*P P **05 15 08.9 +0.7**
K06A Valley Falls 76.67 48 ⇑P P **05 15 08.7 +0.4**
baz=76
K06A ⇓S S 05 24 43.5 +0.1
baz=76
BCA Borcka 76.70 310 *e*P P **05 15 08.0 -0.4**
F09A S2 Ranch, Elgi 76.74 45 ⇓P P **05 15 09.0 +0.3**
baz=76
F09A ⇓S S 05 24 44.6 +0.5
baz=76
B12A Libby 76.75 42 ⇓P P **05 15 09.4 +0.8**
baz=76
B12A ⇓S S 05 24 43.8 -0.3
baz=76
M05C Lookout 76.77 50 ⇓P P **05 15 09.2 +0.3**
baz=77
M05C ⇓S S 05 24 44.4 -0.2
baz=77
HATC Hat Creek Radi 76.81 50 ⇓P P **05 15 09.8 +0.7**
baz=77
HATC ⇓S S 05 24 45.2 +0.2
baz=77
O03C Acorn Hollow, 76.81 51 ⇑P P **05 15 09.2 +0.1**
baz=77
O03C ⇑S S 05 24 45.5 +0.5
baz=77
VANB Van 76.83 307 *e*P P **05 15 09.0 -0.3**
E10A Myers Farm, Un 76.85 44 ⇓P P **05 15 09.3 +0.1**
baz=77
E10A ⇑S S 05 24 45.8 +0.6
baz=77
H08A Prairie City 76.85 46 ⇓P P **05 15 09.6 +0.4**
baz=77
H08A ⇓S S 05 24 44.9 -0.5
baz=77
TVAN Van 76.85 307 *i*P P **05 15 10.2 +0.8**
TUTA Tutak 76.85 308 *i*P P **05 15 09.6 +0.2**
SOC Sochi 76.92 313 *i*P P **05 15 09.9 +0.2**
SOC Sochi 76.92 313 *d i*P P **05 15 09.6 -0.1**
SOC *e* 05 15 22.5
SOC *e**PP pP 05 15 43.1 -1.3
SOC *e*S S 05 24 43.3 -2.8
SOC *e* 05 25 07.5
SOC *e**SS sS 05 25 37.3 -8.7
SOC pmax pmax
comp=Z,331nm,0.9s,mb6.0
SOC MLR MLR
comp=Z,3μm,20.0s
J07A Hines 77.00 47 ⇓P P **05 15 10.7 +0.6**
baz=77
J07A ⇓S S 05 24 47.6 +0.6
baz=77
F10A Beach Ranch, E 77.03 44 ⇑P P **05 15 10.6 +0.3**
baz=77
F10A ⇓S S 05 24 46.2 -1.0
baz=77
G09A Cove 77.03 45 ⇑P P **05 15 10.6 +0.3**
baz=77
G09A ⇓S S 05 24 48.1 +0.8
baz=77
MNRC McLaughlin Nat 77.06 53 ⇑P P **05 15 11.2 +0.7**
baz=77
MNRC ⇓S S 05 24 48.8 +1.0
baz=77
HKR Hakkari 77.06 306 *e*P P **05 15 10.8 +0.2**
MOD Modoc 77.06 49 ⇓*i*P P **05 15 10.8 +0.3**
comp=Z,125nm,1.1s,mb5.5
MOD Modoc 77.06 49 ⇑P P **05 15 11.3 +0.8**
baz=77
MOD ⇑S S 05 24 47.0 -0.8
baz=77
HAKT HAKKARI 77.09 306 *i*P P **05 15 10.2 -0.6**
MCCM Marconi Confer 77.09 53 ⇓P P **05 15 10.5 -0.3**
baz=77
MCCM ⇓S S 05 24 47.7 -0.5
baz=77
NSHM Saint Helena R 77.11 53 *e*P P **05 15 10.7 -0.1**
A13A Flathead Natio 77.19 41 ⇑P P **05 15 11.5 +0.5**
baz=77
A13A ⇑S S 05 24 48.4 -0.4
baz=77
I08A Drewsey 77.21 47 ⇓P P **05 15 11.8 +0.5**
baz=77
I08A ⇓S S 05 24 50.0 +0.7
baz=77
FARB Farallon Islan 77.22 54 ⇓P P **05 15 11.2 -0.2**
baz=77
FARB ⇑S S 05 24 48.1 -1.4
baz=77
M06C Likely Place G 77.28 50 ⇑P P **05 15 12.2 +0.4**
baz=77
M06C ⇓S S 05 24 50.7 +0.5
baz=77
CVS Carmenet Viney 77.29 53 ⇑P P **05 15 12.1 +0.2**
baz=77
CVS ⇑S S 05 24 50.7 +0.3
baz=77
O04C Chester 77.30 51 ⇓P P **05 15 12.3 +0.4**
baz=77
O04C ⇓S S 05 24 49.2 -1.1
baz=77
CUKT Cukurca 77.31 306 *e*P P **05 15 12.4 +0.5**
SUTB Sutter Butte 77.34 52 ⇑P P **05 15 11.8 -0.3**
baz=77
SUTB ⇑S S 05 24 50.1 -0.8
baz=77
K07A Rock Creek Ran 77.37 48 ⇓P P **05 15 12.6 +0.4**
baz=77
K07A ⇑S S 05 24 50.9 -0.2
baz=77
ORV Oroville 77.38 52 ⇓P P **05 15 11.9 -0.4**
baz=77
ORV ⇑S S 05 24 50.3 -1.0
baz=77
ELFS Eagle Lake Fie 77.40 50 ⇑P P **05 15 13.0 +0.6**
baz=77
ELFS ⇓S S 05 24 51.6 +0.2
baz=77
WALA Waterton Lakes 77.40 40 ⇓*e*P P **05 15 12.5 +0.3**
comp=Z,116nm,0.6s,mb5.7
H09A Durkee 77.41 46 ⇑P P **05 15 13.0 +0.6**
baz=77
H09A ⇑S S 05 24 52.6 +1.3
baz=77
B13A Whitefish 77.44 41 ⇑P P **05 15 13.1 +0.6**
baz=77
B13A ⇑S S 05 24 51.4 -0.2
baz=77
E11A Bogner Ranch, 77.45 44 ⇓P P **05 15 12.7 +0.1**
baz=77
E11A ⇓S S 05 24 51.4 -0.4
baz=77
Q03C Winters 77.47 53 ⇑P P **05 15 13.6 +0.8**
baz=77
Q03C ⇑S S 05 24 53.2 +1.0
baz=77
OHCM Honcut 77.50 52 *e*P P **05 15 12.4 -0.6**
BMO Blue Mountains 77.53 45 *e*P P **05 15 13.0 0.0**
comp=Z,78nm,0.6s,mb5.5
J08A Circle Bar Ran 77.54 47 ⇓P P **05 15 13.6 +0.4**
baz=77
J08A ⇓S S 05 24 52.4 -0.4
baz=77
NSS Namsos 77.55 340 *e*P P **05 15 11.7 -1.1**
NSS *e* 05 24 51.3
NSS LR LR
comp=Z,1μm,19.4s
NSS Namsos 77.55 340 *e*P P **05 15 11.7 -1.1**
NSS AMb AMB 05 15 14.8
comp=Z,359nm,0.0s
NSS *e*S S 05 24 51.1 -1.1
NSS AMS AMS 05 51 17.8
comp=Z,1μm,19.4s
O05C Quincy 77.58 51 ⇓P P **05 15 13.5 0.0**
baz=77
O05C ⇓S S 05 24 51.4 -2.0
baz=77
ERZM Erzurum 77.60 309 *i*P P **05 15 14.7 +1.2**
EZM Erzurum 77.60 309 *e*P P **05 15 14.5 +1.0**
D12A Red Ives Fores 77.61 43 ⇑P P **05 15 13.6 +0.2**
baz=77
D12A ⇑S S 05 24 51.3 -2.1
baz=77
L07A Adell 77.64 49 ⇓P P **05 15 14.5 +0.8**
baz=77
L07A ⇑S S 05 24 53.0 -1.0
baz=77
I09A Lost Marbles R 77.70 46 ⇓P P **05 15 14.3 +0.3**
baz=78
I09A ⇓S S 05 24 54.3 -0.3
baz=78
F11A Grangeville 77.72 44 ⇓P P **05 15 13.9 -0.2**
baz=78
F11A ⇓S S 05 24 53.2 -1.5
baz=78
C13A Hot Springs 77.74 42 ⇓P P **05 15 14.4 +0.3**
baz=78
C13A ⇓S S 05 24 52.7 -2.1
baz=78
SNZO South Karori 77.75 154 *e*P P **05 15 12.1 -2.0**
comp=Z,146nm,0.9s,mb5.6
SNZO *e*pP pP 05 15 49.3 +0.4
ANN Anapa 77.75 315 *i*P P **05 15 13.0 -1.3**
ANN Anapa 77.75 315 *e*P P **05 15 13.2 -1.1**
ANN *e* 05 18 06.7
ANN *e*PPP 05 19 59.0
ANN *e*S S 05 24 52.8 -2.3
ANN *e* 05 25 11.9
ANN pmax pmax
comp=Z,1μm,1.1s,mb6.5
ANN MLR MLR
comp=N,2μm,20.0s
ANN MLR MLR
comp=E,1μm,20.0s
ANN MLR MLR
comp=Z,2μm,20.0s
Q04C Lincoln 77.81 52 ⇑P P **05 15 14.5 -0.2**
baz=78
Q04C ⇓S S 05 24 54.2 -1.7
baz=78
MNK Minsk 77.83 327 ⇓*i*P P **05 15 13.0 -1.5**
MNK *e*S S 05 24 54.0 -1.6
MNK pmax pmax
comp=Z,2μm,1.5s,mb6.6
MNK pmax pmax
comp=N,3μm,1.5s
MNK pmax pmax
comp=E,2μm,1.5s
MNK smax
comp=N,3μm,2.0s
MNK smax
comp=E,4μm,2.0s
K08A Mann Creek Ran 77.84 48 ⇑P P **05 15 15.3 +0.4**
baz=78
K08A ⇓S S 05 24 54.1 -2.0
baz=78
IZAR Zarasai 77.85 328 *e*P P **05 15 14.8 +0.2**
IZAR AMb AMB 05 15 18.2
comp=Z,456nm,1.1s,mb6.0
IDID Didziasalis 77.88 328 *e*P P **05 15 15.0 +0.2**
IDID AMb AMB 05 15 18.3
comp=Z,364nm,1.0s,mb6.0
WVOR Wild Horse Val 77.89 48 *e*P P **05 15 15.2 +0.1**
comp=Z,191nm,1.3s,mb5.6
WVOR Wild Horse Val 77.89 48 P P **05 15 15.5 +0.4**
WVOR pmax pmax
comp=Z,190nm,1.3s,mb5.6
BDM Black Diamond 77.89 53 ⇑P P **05 15 15.1 -0.1**
baz=78
BDM ⇓S S 05 24 55.9 -0.9
baz=78
JRSC Jasper Ridge 77.89 54 ⇑P P **05 15 14.7 -0.5**
baz=78
JRSC ⇑S S 05 24 55.6 -1.2
baz=78
G11A Walters Elk Ra 77.90 44 ⇓P P **05 15 15.0 0.0**
baz=78
G11A ⇑S S 05 24 55.1 -1.5
baz=78
N06A Buffalo Meadow 77.93 50 ⇑P P **05 15 15.5 +0.1**
baz=78
N06A ⇑S S 05 24 54.9 -2.2
baz=78
J09A Fry Pan Ranch, 78.00 47 ⇓P P **05 15 16.2 +0.5**
baz=78
J09A ⇑S S 05 24 57.5 -0.3
baz=78
MIB Mutribah 78.01 297 *e*P P **05 15 15.6 -0.4**
MIB AMb AMB 05 15 17.3
comp=Z,623nm,0.7s,mb6.4
SIRT Sirnak 78.01 306 *e*P P **05 15 16.0 +0.2**
H10A Noah's Angus R 78.01 45 ⇑P P **05 15 15.7 -0.1**
baz=78
H10A ⇑S S 05 24 57.3 -0.6
baz=78
KBD Kabd 78.02 297 *e*P P **05 15 15.4 -0.7**
KBD AMb AMB 05 15 17.5
comp=Z,870nm,0.7s,mb6.5
QRN Al-Qurain 78.05 296 *e*P P **05 15 15.6 -0.6**
QRN AMb AMB 05 15 17.5
comp=Z,383nm,0.7s,mb6.1
M07A Soldier Meadow 78.06 49 ⇑P P **05 15 16.6 +0.6**
baz=78
M07A ⇓S S 05 24 57.5 -1.0
baz=78
BNLO Ben Lomond (Sa 78.07 54 ⇑P P **05 15 16.1 -0.1**
baz=78
BNLO ⇓S S 05 24 56.9 -1.8
baz=78
IIGN Ignalina 78.10 328 *e*P P **05 15 16.1 +0.1**
IIGN AMb AMB 05 15 19.6
comp=Z,320nm,1.1s,mb5.8
RBK Rabkut 78.11 283 P P **05 15 16.6 -0.1**
SNR=16
RBK Rabkut 78.11 283 P P **05 15 16.6 -0.1**
SNR=16
RBK Rabkut 78.11 283 P P **05 15 16.6 -0.1**
SNR=16
RBK Rabkut 78.11 283 P P **05 15 16.6 -0.1**
SNR=16
D13A Huson 78.11 42 ⇑P P **05 15 16.3 +0.1**
baz=78
D13A ⇑S S 05 24 57.2 -1.6
baz=78
P05C Yuba Gap, Truc 78.11 52 ⇑P P **05 15 16.4 0.0**
baz=78
P05C ⇑S S 05 24 58.0 -1.0
baz=78
WENL Wente Brothers 78.12 53 ⇓P P **05 15 16.5 0.0**
baz=78
WENL ⇑S S 05 24 58.1 -1.2
baz=78
MSL Mosul 78.13 305 *ex* x 05 15 15.0
MSL *ex* x 05 24 54.0
KTUT Trabzon 78.15 310 *e*P P **05 15 15.5 -1.0**
MACK Trabzon 78.17 310 *i*P P **05 15 16.3 -0.3**
C14A Swan Lake 78.17 41 ⇓P P **05 15 16.7 +0.1**
baz=78
C14A ⇑S S 05 24 57.9 -1.6
baz=78
L08A Fields 78.20 48 ⇑P P **05 15 17.5 +0.7**

baz=78
L08A ⇑S S 05 24 58.0 -2.0
baz=78
O06A Flanigan 78.22 50 ⇓P **P 05 15 17.2 +0.3**
baz=78
O06A ⇑S S 05 24 59.6 -0.6
baz=78
I10A Payette 78.23 46 ⇓P **P 05 15 17.4 +0.4**
baz=78
RDF Al-Radifah 78.25 297 *eP* **P 05 15 16.7 -0.6**
RDF AMb AMB 05 15 18.7
comp=Z,537nm,0.7s,mb6.3
WHFO Wadi Hawf 78.28 284 P **P 05 15 16.8 -0.8**
SNR=30
WHFO Wadi Hawf 78.28 284 P **P 05 15 16.8 -0.8**
SNR=30
WHFO Wadi Hawf 78.28 284 P **P 05 15 16.8 -0.8**
SNR=30
LAVA Lava Cap Winer 78.28 52 ⇑P **P 05 15 17.1 -0.2**
baz=78
LAVA ⇑S S 05 24 59.9 -1.0
baz=78
F12A Elk City 78.33 44 ⇓P **P 05 15 17.8 +0.4**
baz=78
F12A ⇓S S 05 25 00.3 -0.9
baz=78
BTMT Batman 78.34 307 *eP* **P 05 15 18.8 +1.1**
NAY Al-Naaiem 78.34 297 *eP* **P 05 15 17.2 -0.6**
NAY AMb AMB 05 15 19.2
comp=Z,328nm,0.7s,mb6.1
K09A Rome 78.34 47 ⇑P **P 05 15 17.9 +0.3**
baz=78
K09A ⇑S S 05 25 00.3 -1.2
baz=78
R04C Big Horse Ranc 78.39 53 ⇓P **P 05 15 17.4 -0.5**
baz=78
R04C ⇓S S 05 25 00.2 -1.9
baz=78
H11A Donnelly 78.41 45 ⇑P **P 05 15 17.8 -0.1**
baz=78
H11A ⇑S S 05 25 01.0 -1.1
baz=78
P06A Stead Airport, 78.41 51 ⇑P **P 05 15 18.4 +0.4**
baz=78
P06A ⇓S S 05 25 00.9 -1.3
baz=78
S04C Ingram Canyon, 78.48 53 ⇓P **P 05 15 18.3 -0.2**
baz=78
S04C ⇑S S 05 25 02.9 -0.2
baz=78
N07B Gerlach 78.49 50 ⇑P **P 05 15 18.6 +0.2**
baz=78
N07B ⇓S S 05 25 02.6 -0.4
baz=78
M08A Happy Creek Ra 78.54 49 ⇓P **P 05 15 18.9 +0.2**
baz=78
M08A ⇓S S 05 25 04.2 +0.5
baz=78
MSO Missoula 78.55 42 *eP* **P 05 15 18.1 -0.5**
comp=Z,123nm,1.5s,mb5.3
RPZ Rata Peaks 78.57 158 P **P 05 15 16.5 -1.9**
comp=Z,42nm,0.8s,mb5.1,baz=347,slow=3.3,SNR=14
RPZ LR LR 05 44 00.1
comp=Z,943nm,20.5s,baz=223,slow=31
J10A Berg Farm, Mel 78.58 46 ⇓P **P 05 15 18.8 -0.1**
baz=78
J10A ⇓S S 05 25 03.5 -0.5
baz=78
GUMT Gumushane 78.59 310 *eP* **P 05 15 19.5 +0.5**
E13A Victor 78.61 43 ⇓P **P 05 15 18.3 -0.7**
baz=78
E13A ⇓S S 05 25 04.0 -0.2
baz=78
BHD Baghdad 78.62 302 *ex* x 05 15 17.5
BHD *ex* x 05 25 01.0
D14A Greenough 78.67 42 ⇑P **P 05 15 18.9 -0.4**
baz=78
D14A ⇓S S 05 25 04.0 -0.8
baz=78
WCN Washoe City 78.69 51 ⇑P **P 05 15 19.4 -0.1**
baz=78
WCN ⇑S S 05 25 04.0 -1.2
baz=78
BINT Bingol 78.69 308 *eP* **P 05 15 20.9 +1.3**
EZC Erzincan 78.72 309 *eP* **P 05 15 22.1 +2.3**
L09A Wilkinson Ranc 78.72 48 ⇓P **P 05 15 20.3 +0.6**
baz=78
L09A ⇑S S 05 25 05.2 -0.4
baz=78
PAHR Pah Rah Range 78.74 51 *eP* **P 05 15 19.7 -0.1**
comp=Z,296nm,1.4s,mb5.7
PACP Pacheco Peak 78.75 54 ⇓P **P 05 15 20.0 +0.1**
baz=79
PACP ⇑S S 05 25 05.6 -0.4
baz=79
SAO San Andreas Ge 78.75 54 ⇑*iP* **P 05 15 20.1 +0.2**
comp=Z,110nm,1.3s,mb5.3
SAO San Andreas Ge 78.75 54 P **P 05 15 20.5 +0.6**
SAO pmax pmax
comp=Z,110nm,1.2s,mb5.4
R05C Kirkwood Meado 78.76 52 ⇑P **P 05 15 20.0 0.0**
baz=79
R05C ⇑S S 05 25 06.0 -0.1
baz=79
K10A MacKenzie Ranc 78.85 47 ⇑P **P 05 15 20.9 +0.6**
baz=79
K10A ⇓S S 05 25 06.5 -0.4
baz=79
O07A Toulon 78.85 50 ⇑P **P 05 15 20.6 +0.2**
baz=79
O07A ⇑S S 05 25 06.8 -0.2
baz=79
HAST UC Hastings Re 78.86 54 ⇑P **P 05 15 20.5 0.0**
baz=79
HAST ⇑S S 05 25 05.6 -1.6
baz=79
F13A Darby 78.86 43 ⇑P **P 05 15 19.9 -0.5**
baz=79
F13A ⇓S S 05 25 05.7 -1.2
baz=79
ESPY Espiye-Giresun 78.86 311 *eP* **P 05 15 19.4 -1.1**
CMB Columbia Colle 78.88 53 *eP* **P 05 15 20.2 -0.4**
comp=Z,257nm,1.3s,mb5.7
CMB Columbia Colle 78.88 53 *eP* **P 05 15 20.2 -0.4**
CMB pmax pmax
comp=Z,257nm,1.3s,mb5.7
CMB Columbia Colle 78.88 53 ⇓P **P 05 15 20.7 +0.1**
baz=79
CMB ⇓S S 05 25 06.6 -0.7
baz=79
CHMT Chamberlain Mo 78.91 42 *eP* **P 05 15 20.1 -0.5**
ABTO Aybut 78.94 284 P **P 05 15 20.9 -0.4**
SNR=44
ABTO Aybut 78.94 284 P **P 05 15 20.9 -0.4**
SNR=44
ABTO Aybut 78.94 284 P **P 05 15 20.9 -0.4**
SNR=44
E14A Clinton 79.03 43 ⇑P **P 05 15 21.2 -0.1**
baz=79
E14A ⇓S S 05 25 07.2 -1.4
baz=79
N08A GE Springer Mi 79.04 49 ⇑P **P 05 15 21.8 +0.4**
baz=79
N08A ⇑S S 05 25 08.1 -0.8
baz=79
P07A Fallon 79.15 51 ⇓P **P 05 15 22.5 +0.4**
baz=79
P07A ⇓S S 05 25 09.4 -0.8
baz=79
M09A Marrel Ranch, 79.16 48 S S 05 25 09.4 -0.8
baz=79
GRSN GIRESUNGRSN 79.16 311 *iP* **P 05 15 21.2 -0.9**
MFID Camas Ranch 79.18 46 ⇑P **P 05 15 22.4 +0.3**
baz=79
MFID ⇓S S 05 25 10.8 +0.5
baz=79
H12A Diamond D Ranc 79.19 45 ⇓P **P 05 15 22.4 +0.2**
baz=79
H12A ⇑S S 05 25 10.3 -0.2
baz=79
T05C Eagle Field, D 79.23 54 ⇑P **P 05 15 23.1 +0.5**
baz=79
T05C ⇑S S 05 25 11.9 +0.8
baz=79
S05C Merced 79.25 53 ⇓P **P 05 15 22.5 -0.1**
baz=79
S05C ⇓S S 05 25 09.3 -2.0
baz=79
MARD Mardin 79.26 307 *iP* **P 05 15 22.8 +0.1**
D15A Lincoln 79.26 42 ⇓P **P 05 15 22.4 -0.1**
baz=79
D15A ⇓S S 05 25 09.7 -1.3
baz=79
V03C Hunter Liggett 79.26 55 ⇓P **P 05 15 23.0 +0.2**
baz=79
V03C ⇓S S 05 25 09.9 -1.5
baz=79
O08A Rochester Mine 79.27 50 ⇓P **P 05 15 23.1 +0.4**
baz=79
O08A ⇓S S 05 25 09.7 -1.7
baz=79
R06C Coleville 79.28 52 ⇑P **P 05 15 23.1 +0.3**
baz=79
R06C ⇑S S 05 25 10.3 -1.2
baz=79
G13A Cobalt 79.29 44 ⇓P **P 05 15 22.5 -0.1**
baz=79
G13A ⇓S S 05 25 10.2 -1.2
baz=79
AKASG Malin Array Be 79.30 323 *iP* **P**
AKASG pmax pmax **05 15 22.5 -0.1**
comp=Z,322nm,0.6s
AKASG Malin Array Be 79.30 323 P **P 05 15 22.4 -0.2**
comp=Z,322nm,0.6s,mb6.2,baz=48,slow=5.7,SNR=510
AKASG PKKPbc PKKPbc 05 34 09.6 -2.2
comp=Z,1.0nm,0.6s,baz=258,slow=3.0,SNR=6.4
AKASG LR LR 05 52 36.2
comp=Z,3µm,19.7s,baz=55,slow=37
KIEV Kiev 79.31 323 ⇓*iP* **P 05 15 22.4 -0.3**
comp=Z,575nm,0.7s,mb6.3
KIEV Kiev 79.31 323 ⇓*iP* **P**
KIEV pmax pmax **05 15 22.4 -0.3**
comp=Z,575nm,0.7s,mb6.3
S06C San Francisco 79.32 52 ⇓P **P 05 15 22.7 -0.3**
baz=79
S06C ⇓S S 05 25 10.9 -1.1
baz=79
K11A Parker Ranch, 79.38 47 ⇓P **P 05 15 23.6 +0.4**
baz=79
K11A ⇑S S 05 25 12.5 0.0
baz=79
N09A Rock Creek Ran 79.40 49 ⇑P **P 05 15 23.8 +0.4**
baz=79
N09A ⇑S S 05 25 11.0 -1.7
baz=79
U04C Hernandez Rese 79.42 54 ⇓P **P 05 15 24.0 +0.4**
baz=79
U04C ⇓S S 05 25 12.9 -0.1
baz=79
F14A Wisdom 79.42 43 ⇑P **P 05 15 23.3 -0.1**
baz=79
F14A ⇑S S 05 25 10.9 -1.9
baz=79
PTK Pertek 79.43 309 *eP* **P 05 15 24.5 +0.9**
L10A Juniper Basin 79.46 47 ⇓P **P 05 15 24.3 +0.6**
baz=79
L10A ⇓S S 05 25 12.6 -0.7
baz=79
Q07A Schurz 79.51 51 ⇑P **P 05 15 24.1 +0.1**
baz=79
Q07A ⇓S S 05 25 13.5 -0.5
baz=79
E15A Deer Lodge 79.52 42 ⇑P **P 05 15 23.9 -0.1**
baz=79
E15A ⇓S S 05 25 12.1 -1.8
baz=79
H13A Challis 79.55 44 ⇓P **P 05 15 24.1 -0.1**
baz=79
H13A ⇑S S 05 25 13.8 -0.5
baz=79
P08A Dixie Valley 79.62 50 ⇑P **P 05 15 24.9 +0.3**
baz=79
P08A ⇓S S 05 25 15.6 +0.5
baz=79
G14A Jackson 79.67 44 ⇓P **P 05 15 24.7 0.0**
baz=80
G14A ⇓S S 05 25 14.1 -1.3
baz=80
SIM Simferopol' 79.70 316 *de*P **P 05 15 24.6 -0.3**
SIM 05 15 31.5
SIM *e*S S 05 25 14.3 -1.4
SIM pmax pmax
comp=Z,358nm,0.8s,mb6.0
SIM MLR MLR
comp=Z,1µm,16.0s
M10A I.L. Ranch, Tu 79.70 48 ⇑P **P 05 15 25.6 +0.6**
baz=80
M10A ⇓S S 05 25 16.4 +0.5
baz=80
V04C Ramage Ranch, 79.71 55 ⇓P **P 05 15 25.5 +0.3**
baz=80
V04C ⇓S S 05 25 16.4 +0.2
baz=80
J12A Stokes Ranch, 79.72 46 ⇑P **P 05 15 25.5 +0.5**
baz=80
J12A ⇑S S 05 25 16.2 +0.2
baz=80
R07C Lee Vining 79.77 52 ⇓P **P 05 15 25.8 +0.4**
baz=80
R07C ⇑S S 05 25 17.0 +0.3
baz=80
PKD Parkfield 79.79 54 ⇑P **P 05 15 25.5 -0.1**
baz=80
PKD ⇓S S 05 25 16.2 -0.8
baz=80
BMN Battle Mountai 79.81 49 *eP* **P 05 15 25.5 -0.1**
comp=Z,112nm,1.2s,mb5.4
BMN Battle Mountai 79.81 49 P **P 05 15 26.0 +0.4**
BMN pmax pmax
comp=Z,110nm,1.1s,mb5.4
T06C Millerton Lake 79.85 53 ⇑P **P 05 15 25.5 -0.3**
baz=80
T06C ⇑S S 05 25 15.0 -2.6
baz=80
U05C Westside ANR, 79.89 54 ⇑P **P 05 15 26.7 +0.5**
baz=80
U05C ⇓S S 05 25 17.1 -1.0
baz=80
ELZG Elazig 79.90 309 *iP* **P 05 15 27.4 +1.3**
F15A Butte 79.92 43 ⇑P **P 05 15 26.4 +0.2**
baz=80
F15A ⇓S S 05 25 17.3 -0.7
baz=80
KCC Kaiser Creek 79.96 53 ⇑P **P 05 15 27.0 +0.5**
baz=80
KCC ⇑S S 05 25 17.5 -1.3
baz=80
O09A Fish Creek Ran 79.97 49 ⇑P **P 05 15 27.2 +0.7**
baz=80
O09A ⇑S S 05 25 17.8 -0.9
baz=80
I13A Wildhorse Cree 79.98 45 ⇓P **P 05 15 27.3 +0.8**
baz=80
I13A ⇓S S 05 25 17.9 -0.8
baz=80
HLID Hailey 79.98 45 *eP* **P 05 15 26.8 +0.3**
comp=Z,102nm,1.1s,mb5.4
HLID Hailey 79.98 45 ⇑P **P 05 15 27.0 +0.6**
baz=80
HLID ⇓S S 05 25 17.6 -1.1
baz=80
NVAR Mina Array Bea 80.10 51 P **P 05 15 27.4 +0.2**
NVAR Mina Array Bea 80.10 51 P **P 05 15 27.4 +0.2**
comp=Z,38nm,0.5s,mb5.3,baz=303,slow=4.3,SNR=177
HFS Hagfors 80.12 336 P **P 05 15 26.6 -0.3**
HFS 05 18 30.4
HFS Hagfors 80.12 336 P **P 05 15 26.6 -0.2**
comp=Z,314nm,0.9s,mb5.9,baz=60,slow=5.8,SNR=168
HFS PP PP 05 18 30.4 +0.1
comp=Z,58nm,0.7s,baz=54,slow=6.0,SNR=7.0
HFS PKKPbc PKKPbc 05 34 08.6 -1.7
comp=Z,1.0nm,0.4s,baz=151,slow=3.4,SNR=8.3
DLMT Dillon 80.12 43 *eP* **P 05 15 27.8 +0.6**
comp=Z,240nm,1.1s,mb5.7
Q08A Gabbs 80.14 51 ⇓P **P 05 15 27.7 +0.3**
baz=80
MLAC Mammoth Lakes 80.14 52 ⇑P **P 05 15 28.1 +0.6**
baz=80
MLAC ⇑S S 05 25 20.9 +0.2
baz=80
K12A Draper Farm, C 80.16 46 ⇑P **P 05 15 27.9 +0.4**
baz=80
K12A ⇑S S 05 25 21.7 +1.0
baz=80
PTRM Twissleman Ran 80.17 55 *eP* **P 05 15 27.9 +0.2**
J13A Cove Ranch, Pi 80.22 45 ⇓P **P 05 15 28.1 +0.3**
baz=80
J13A ⇓S S 05 25 22.6 +1.4
baz=80
FFC Flin Flon 80.22 31 P **P 05 15 26.8 -0.7**
comp=Z,653nm,1.2s,mb6.1,SNR=58
FFC Flin Flon 80.22 31 *eP* **P 05 15 27.0 -0.5**
comp=Z,113nm,1.0s,mb5.5
FFC Flin Flon 80.22 31 *eP* **P 05 15 27.0 -0.5**
FFC pmax pmax
comp=Z,113nm,1.0s,mb5.5
M11A Holland Ranch, 80.23 48 ⇑P **P 05 15 28.7 +0.8**
baz=80
M11A ⇓S S 05 25 21.4 0.0
baz=80
MCMT McKenzie Canyo 80.26 44 *eP* **P 05 15 27.6 -0.3**
DOMB Dombas 80.27 339 *eP* **P 05 15 27.9 +0.3**
comp=Z,396nm,1.0s,mb6.0
DOMB Dombas 80.27 339 *eP* **P 05 15 27.9 +0.3**
DOMB AMb AMB 05 15 30.5
comp=Z,396nm,1.0s,mb6.0
DOMB *ep*P pP 05 16 02.1 -0.5
R08A Mina 80.28 51 ⇑P **P 05 15 28.4 +0.2**
baz=80
R08A ⇓S S 05 25 22.3 +0.2
baz=80
V05C Boulder Hill, 80.28 54 ⇑P **P 05 15 28.5 +0.3**
baz=80
V05C ⇑S S 05 25 22.0 -0.2
baz=80
EGMT Eagleton 80.29 40 ⇓*eP* **P 05 15 27.8 -0.2**
comp=Z,169nm,1.1s,mb5.6
EGMT Eagleton 80.29 40 ⇓P **P 05 15 28.0 0.0**
baz=80
EGMT ⇓S S 05 25 19.0 -2.8
baz=80
G15A Dillon 80.29 43 ⇓P **P 05 15 28.0 -0.1**
baz=80
G15A ⇓S S 05 25 21.2 -0.8
baz=80
P09A Austin 80.31 50 ⇓P **P 05 15 28.5 +0.1**
baz=80
P09A ⇓S S 05 25 21.5 -0.9
baz=80
SUW Suwalki 80.32 328 *eP* **P 05 15 28.0 0.0**
SUW *e*S S 05 25 22.2 +0.3
SUW *e*SKS 05 25 27.2
SUW *e*ScS ScS 05 25 37.3 -3.6
SUW Suwalki 80.32 328 *eP* **P 05 15 28.0 0.0**
SUW *e*S S 05 25 22.2 +0.3
SUW *e*SKS 05 25 27.2
SUW *e*ScS ScS 05 25 37.3 -3.7
SUW Suwalki 80.32 328 *eP* **P 05 15 28.0 0.0**
SUW *e*S S 05 25 22.2 +0.3
SUW *e* 05 25 27.2
NB2 NORSAR Subarra 80.32 337 P **P 05 15 28.0 +0.1**
comp=Z,330nm,0.9s,mb6.0,baz=42,slow=5.6
NOA NORSAR Array B 80.32 337 P **P 05 15 28.0 +0.1**
NOA PP PP 05 18 29.7 -2.2
NOA LR LR 05 53 59.0
NOA NORSAR Array B 80.32 337 P **P 05 15 28.0 +0.1**
NOA 05 18 29.7
NOA NORSAR Array B 80.32 337 P **P 05 15 28.0 +0.1**
comp=Z,236nm,1.0s,mb5.8,baz=46,slow=5.1,SNR=322
NOA PP PP 05 18 29.7 -2.2
comp=Z,126nm,1.0s,baz=46,slow=8.6,SNR=17
NOA LR LR 05 53 59.0
comp=Z,2µm,19.8s,baz=40,slow=38
L12A House Creek Ra 80.35 47 ⇑P **P 05 15 29.3 +0.8**
baz=80
L12A ⇑S S 05 25 23.9 +1.2
baz=80
O10A Cortez Mining, 80.36 49 ⇓P **P 05 15 29.0 +0.4**
baz=80
O10A ⇑S S 05 25 22.7 -0.1
baz=80
MYA Malataya 80.37 309 *eP* **P 05 15 29.8 +1.2**
MALT Malatya 80.37 309 *eP* **P 05 15 27.9 -0.8**
MALT Malatya 80.37 309 ⇓*iP* **P 05 15 29.6 +0.9**
comp=Z,88nm,0.9s,mb5.4
MALT Malatya 80.37 309 ⇓*iP* **P 05 15 29.6 +0.9**
MALT pmax pmax
comp=Z,88nm,1.0s,mb5.3
MALT Malatya 80.37 309 ⇑*iP* **P 05 15 29.5 +0.8**
MTUM Tungsten Hills 80.47 52 *eP* **P 05 15 29.1 -0.1**
MTUM *eP*P PP 05 18 32.6 -1.3
SMMC Simmler 80.49 55 ⇑P **P 05 15 29.5 +0.1**
baz=80
SMMC ⇓S S 05 25 24.6 +0.3
baz=80
HELL Mitchell Peak, 80.49 53 ⇑P **P 05 15 29.0 -0.3**
baz=80
HELL ⇑S S 05 25 22.5 -1.9
baz=80
RCTC Rector, Farmer 80.52 54 ⇑P **P 05 15 28.8 -0.7**
baz=80
RCTC ⇑S S 05 25 22.7 -2.0
baz=80
KVT Kavak 80.53 312 *eP* **P 05 15 29.6 +0.1**
BOZ Bozeman (W) 80.54 43 *eP* **P 05 15 29.5 +0.1**
comp=Z,72nm,1.0s,mb5.3
BOZ Bozeman (W) 80.54 43 P **P 05 15 29.7 +0.3**
BOZ pmax pmax
comp=Z,72nm,1.0s,mb5.3
BOZ Bozeman (W) 80.54 43 ⇓P **P 05 15 29.7 +0.3**
baz=80
BOZ ⇑S S 05 25 24.7 +0.2
baz=80
URFA Urfa 80.55 308 *eP* **P 05 15 29.8 +0.2**
N11A Elko Archery C 80.58 48 ⇑P **P 05 15 30.2 +0.4**
baz=80
N11A ⇑S S 05 25 25.5 +0.3
baz=80
TOKT Tokat 80.60 311 *eP* **P 05 15 30.3 +0.5**
Q09A Carvers 80.66 51 ⇓P **P 05 15 30.4 +0.2**
baz=80
Q09A ⇑S S 05 25 25.5 -0.4
baz=80
S08C White Mtn Res 80.66 52 ⇓P **P 05 15 30.8 +0.5**
baz=80
S08C ⇑S S 05 25 26.2 +0.1
baz=80
K13A Stover Farm, H 80.67 46 ⇑P **P 05 15 30.7 +0.6**
baz=80
K13A ⇑S S 05 25 27.5 +1.5
baz=80
P10A Eureka 80.73 50 ⇑P **P 05 15 30.7 +0.2**
baz=80
P10A ⇑S S 05 25 27.2 +0.5
baz=80
DIKM Dikmen 80.73 313 *eP* **P 05 15 30.2 -0.4**
FCC Fort Churchill 80.79 25 *eP* **P 05 15 29.2 -1.2**
comp=Z,56nm,1.3s,mb5.0
FCC Fort Churchill 80.79 25 P **P 05 15 29.3 -1.2**
FCC pmax pmax
comp=Z,56nm,1.2s,mb5.1
M12A Wells 80.80 47 ⇓P **P 05 15 31.7 +0.8**
baz=81
M12A ⇑S S 05 25 28.2 +0.8
baz=81
PKM Peak Mountain 80.82 55 ⇓P **P 05 15 31.6 +0.5**
baz=81
PKM ⇓S S 05 25 28.6 +0.8
baz=81
TIN Tinemaha 80.85 53 ⇓P **P 05 15 31.5 +0.3**
baz=81
TIN ⇑S S 05 25 28.4 +0.3
baz=81
ATAB Bozova 80.89 308 *iP* **P 05 15 32.0 +0.5**
ELK Elko 80.94 48 *eP* **P 05 15 32.1 +0.5**
comp=Z,133nm,1.2s,mb5.4
ELK Elko 80.94 48 P **P 05 15 32.2 +0.5**
ELK pmax pmax
comp=Z,130nm,1.2s
O11A Cowboy Ranch, 80.99 49 ⇓P **P 05 15 32.3 +0.3**
baz=81
O11A ⇑S S 05 25 29.2 -0.2
baz=81
N12A Clover Valley, 81.02 48 ⇓P **P 05 15 32.7 +0.6**
baz=81
N12A ⇓S S 05 25 29.9 +0.3
baz=81
TPH Tonopah 81.02 51 ⇑*iP* **P 05 15 32.4 +0.2**
comp=Z,302nm,1.3s,mb5.8
TPH Tonopah 81.02 51 ⇑*iP* **P 05 15 32.4 +0.3**
TPH pmax pmax
comp=Z,302nm,1.3s,mb5.8

R09A **Tonopah** 81.03 51 ⇓P P 05 15 32.2 0.0
baz=81
R09A ⇓S S 05 25 30.0 +0.1
baz=81
L13A **Double Diamond** 81.06 46 ⇑P P 05 15 33.2 +1.0
baz=81
L13A ⇓S S 05 25 31.1 +1.1
baz=81
BOYT **Boyabat** 81.08 313 *i* P P 05 15 32.4 +0.1
QLMT **Earthquake Lak** 81.11 43 *e*P P 05 15 33.1 +0.7
SBC **Santa Barbara** 81.12 55 ⇓P P 05 15 32.2 -0.5
baz=81
SBC ⇓S S 05 25 30.2 -0.8
baz=81
Q10A **Clear Creek Ra** 81.18 50 ⇓P P 05 15 33.0 +0.1
baz=81
Q10A ⇑S S 05 25 29.9 -1.6
baz=81
S09A **Goldfield** 81.19 52 ⇑P P 05 15 32.8 -0.3
baz=81
S09A ⇑S S 05 25 32.1 +0.5
baz=81
P11A **Circle Ranch,** 81.23 49 ⇓P P 05 15 33.5 +0.3
baz=81
P11A ⇓S S 05 25 31.4 -0.5
baz=81
CWC **Cottonwood Cre** 81.27 53 ⇓P P 05 15 33.2 -0.3
baz=81
CWC ⇑S S 05 25 30.6 -1.8
baz=81
K14A **Jones Ranch, D** 81.29 46 ⇑P P 05 15 34.2 +0.8
baz=81
K14A ⇓S S 05 25 33.9 +1.5
baz=81
OSL **Oslo** 81.30 337 *e*P P 05 15 33.2 +0.1
comp=Z,427nm,1.2s,mb6.0
OSL **Oslo** 81.30 337 *e*P P 05 15 33.2 +0.1
OSL AMb AMB 05 15 35.5
comp=Z,427nm,1.2s,mb6.0
M13A **Montello** 81.31 47 ⇑P P 05 15 33.9 +0.3
baz=81
M13A ⇓S S 05 25 33.3 +0.7
baz=81
BZK **Bozkurt** 81.36 314 *e*P P 05 15 34.5 +0.6
ISA **Isabella** 81.39 54 ⇑P P 05 15 33.3 -0.8
baz=81
ISA ⇑S S 05 25 29.7 -3.9
baz=81
BSC **Santa Cruz Isl** 81.41 56 ⇓P P 05 15 33.7 -0.6
baz=81
ARVC **Arvin** 81.41 54 ⇑P P 05 15 33.7 -0.6
baz=81
ARVC ⇑S S 05 25 32.9 -1.0
baz=81
GZT **Gaziantep** 81.45 308 *i* P P 05 15 35.0 +0.6
GRAC **Grapevine Rang** 81.47 52 ⇓P P 05 15 34.5 0.0
baz=81
GRAC ⇑S S 05 25 33.3 -1.2
baz=81
YMR **Madison River** 81.47 43 *e*P P 05 15 34.8 +0.5
comp=Z,246nm,1.2s,mb5.7
O12A **Currie** 81.51 48 ⇓P P 05 15 35.0 +0.3
baz=81
O12A ⇓S S 05 25 34.7 -0.1
baz=81
S10A **Tonopah Range,** 81.52 51 ⇑P P 05 15 35.0 +0.2
baz=81
S10A ⇑S S 05 25 34.1 -0.8
baz=81
R10A **Warm Springs** 81.53 51 ⇓P P 05 15 35.0 +0.2
baz=81
R10A ⇓S S 05 25 34.2 -0.8
baz=81
N13A **Wendover, West** 81.55 48 ⇑P P 05 15 35.1 +0.2
baz=81
N13A ⇓S S 05 25 34.9 -0.2
baz=81
CTKT **Corum** 81.58 312 *i* P P 05 15 35.3 +0.3
GCMT **Greycliff** 81.60 42 *e*P P 05 15 35.2 +0.2
YNR **Norris Junctio** 81.61 43 ⇑*i*P P 05 15 36.9 +1.8
KIS **Kishinev** 81.64 320 *i*P P 05 15 33.0 -2.2
KIS *e**PP pP 05 16 08.0 -2.3
KIS *e* 05 18 45.0
KIS *e* 05 20 38.0
KIS *i* S S 05 25 34.0 -1.8
KIS pmax pmax
comp=Z,700nm,1.0s,mb6.2
KIS pmax pmax
comp=Z,2μm,4.0s
KIS MLR MLR
comp=Z,2μm,18.0s
KIS MLR MLR
comp=E,2μm,17.0s
KIS MLR MLR
comp=Z,2μm,20.0s
KIS **Kishinev** 81.64 320 ⇓*i*P P 05 15 33.0 -2.2
comp=Z,700nm,1.0s,mb6.2
KIS *e*pP pP 05 16 08.0 -2.3
KIS ⇓*i*S S 05 25 34.0 -1.8
comp=Z,4μm,20.0s
KIS *e*sS sS 05 26 56.0 +20
KIS *e*SS SS 05 31 20.0 +25
KIS LRM 05 53 58.0
comp=Z,2μm,20.0s
Q11A **Duckwater** 81.67 50 ⇑P P 05 15 35.5 0.0
baz=82
Q11A ⇓S S 05 25 35.2 -1.2
baz=82
YFT **Old Faithful** 81.67 43 *e*P P 05 15 37.7 +2.3
DAC **Darwin (Calif)** 81.69 53 ⇑*i*P P 05 15 35.4 -0.2
comp=Z,80nm,1.1s,mb5.3
DAC *e*pP pP 05 16 12.2 +1.5
DAC **Darwin (Calif)** 81.69 53 ⇑*i*P P 05 15 35.4 -0.3
DAC *e**PP pP 05 16 12.3 +1.6
DAC pmax pmax
comp=Z,80nm,1.1s,mb5.3
OSI **Osito Adit** 81.74 55 ⇑P P 05 15 36.3 +0.3
baz=82
OSI ⇑S S 05 25 36.2 -1.1
baz=82
M14A **Sheep Mountain** 81.75 47 ⇑P P 05 15 36.7 +0.8
baz=82
M14A ⇓S S 05 25 37.8 +0.7
baz=82
BLG **Laguna Peak** 81.76 55 ⇑P P 05 15 35.5 -0.6
baz=82
BLG ⇓S S 05 25 36.0 -1.5
baz=82
YOZ **Yozgat** 81.76 311 *e*P P 05 15 36.4 +0.5
GAZ **Gaziantep** 81.79 308 *e*P P 05 15 37.0 +0.8
BNN **Bunyan** 81.83 310 *e*P P 05 15 36.4 0.0
HYA **Hoyanger** 81.83 339 *e*P P 05 15 37.0 +1.1
comp=Z,454nm,1.0s,mb6.1
HYA **Hoyanger** 81.83 339 *e*P P 05 15 37.0 +1.1
HYA AMb AMB 05 15 39.5
comp=Z,454nm,1.0s,mb6.1
P12A **McGill** 81.83 49 ⇓P P 05 15 36.6 +0.2
baz=82
P12A ⇓S S 05 25 37.3 -0.7
baz=82
FOO **Floro** 81.83 340 *e*P P 05 15 35.5 -0.4
comp=Z,192nm,1.0s,mb5.7
FOO **Floro** 81.83 340 *e*P P 05 15 35.5 -0.4
FOO AMb AMB 05 15 37.8
comp=Z,192nm,1.0s,mb5.7
TOS **Tosya** 81.85 313 *e*P P 05 15 37.4 +1.0
SNCC **San Nicolas Is** 81.86 56 ⇓P P 05 15 36.1 -0.5
baz=82
SNCC ⇑S S 05 25 37.2 -1.4
baz=82
LKWY **Lake** 81.86 43 *e*P P 05 15 38.6 +2.1
comp=Z,133nm,1.1s,mb5.5
LKWY **Lake** 81.86 43 *e*P P 05 15 38.6 +2.2
LKWY pmax pmax
comp=Z,133nm,1.1s,mb5.5
MPMC **Manual Prospec** 81.87 53 ⇓P P 05 15 36.6 0.0
baz=82
MPMC ⇑S S 05 25 37.2 -1.4
baz=82
KONO **Kongsberg** 81.89 337 *e*P P 05 15 36.0 -0.3
comp=Z,174nm,1.1s,mb5.6
KONO *e*PP PP 05 18 42.3 -2.5
KONO **Kongsberg** 81.89 337 *e*P P 05 15 37.4 +1.1
KONO *e*S S 05 25 38.5 +0.6
KONO **Kongsberg** 81.89 337 P P 05 15 36.5 +0.2
KONO pmax pmax
comp=Z,170nm,1.1s,mb5.6

IMW **Indian Meadow** 81.92 44 *e*P P 05 15 37.7 +1.0
comp=Z,108nm,1.5s,mb5.3
CORM **Corum** 81.92 312 *e*P P 05 15 36.9 +0.1
DCID1 **Drake Creek** 81.94 44 *e*P P 05 15 37.5 +0.6
HVU **Hansel Valley** 81.96 46 *e*P P 05 15 37.6 +0.6
comp=Z,86nm,0.9s,mb5.4
HVU **Hansel Valley** 81.96 46 P P 05 15 37.7 +0.7
HVU pmax pmax
comp=Z,86nm,0.9s,mb5.4
R11A **Troy Canyon, C** 81.97 50 ⇑P P 05 15 37.2 +0.1
baz=82
R11A ⇓S S 05 25 38.1 -1.5
baz=82
TRCR **Troy Canyon** 81.97 50 *e*P P 05 15 37.3 +0.2
BALT **Daday** 81.98 313 *i* P P 05 15 37.9 +0.8
LRMC **Laurel Mountai** 82.03 54 ⇓P P 05 15 37.4 -0.1
baz=82
LRMC ⇑S S 05 25 38.1 -2.2
baz=82
O13A **Hicks Ranch, I** 82.08 48 ⇑P P 05 15 38.0 +0.3
baz=82
O13A ⇑S S 05 25 41.4 +0.8
baz=82
FURC **Furnace Creek,** 82.09 52 ⇓P P 05 15 37.6 -0.2
baz=82
FURC ⇑S S 05 25 38.4 -2.5
baz=82
Q12A **Willow Creek R** 82.11 49 ⇑P P 05 15 37.9 0.0
baz=82
Q12A ⇓S S 05 25 40.0 -0.9
baz=82
MOOW **Moose Ponds** 82.11 44 *e*P P 05 15 38.3 +0.5
comp=Z,82nm,1.1s,mb5.3
EDW2 **Edwards Air Fo** 82.13 54 ⇑P P 05 15 37.9 -0.1
baz=82
EDW2 ⇑S S 05 25 39.5 -1.8
baz=82
TPAW **Teton Pass** 82.14 44 *e*P P 05 15 38.8 +0.9
comp=Z,9μm,1.3s,mb7.2
N14A **Grayback Hills** 82.20 47 ⇓P P 05 15 38.5 +0.3
baz=82
N14A ⇑S S 05 25 41.8 -0.1
baz=82
DECC **Green Verdugo** 82.21 55 ⇓P P 05 15 38.0 -0.5
baz=82
DECC ⇑S S 05 25 40.8 -1.3
baz=82
RLMT **Red Lodge** 82.21 42 *e*P P 05 15 38.5 +0.2
comp=Z,92nm,0.7s,mb5.5
IAS **Iasi** 82.22 321 P P 05 15 39.8 +1.5
S11A **Rachel** 82.24 51 ⇑P P 05 15 38.5 -0.1
baz=82
S11A ⇑S S 05 25 40.7 -1.6
baz=82
BGU **Big Grassy Mou** 82.26 47 *e*P P 05 15 38.8 +0.2
TPNV **Topopah Spring** 82.26 52 *e*P P 05 15 38.3 -0.3
comp=Z,98nm,0.6s,mb5.6
TPNV **Topopah Spring** 82.26 52 P P 05 15 38.7 0.0
TPNV pmax pmax
comp=Z,97nm,0.6s,mb5.6
TPNV **Topopah Spring** 82.26 52 ⇑P P 05 15 38.6 -0.1
baz=82
TPNV ⇑S S 05 25 41.1 -1.5
baz=82
REDW **Red Top Meadow** 82.27 44 *e*P P 05 15 38.8 +0.3
comp=Z,73nm,1.1s,mb5.2
LOHW **Long Hollow** 82.28 44 *e*P P 05 15 39.0 +0.4
comp=Z,86nm,1.2s,mb5.2
M15A **Larsen Ranch,** 82.34 46 ⇓P P 05 15 39.4 +0.4
baz=82
M15A ⇓S S 05 25 42.8 -0.4
baz=82
PMOR **Pomariorio Ree** 82.36 112 *e*P P 05 15 40.0 +0.6
comp=Z,283nm,1.3s,mb5.8
PMOR *e*pP pP 05 16 11.3 -3.2
comp=Z,91nm,1.1s
CDAG **Cicekdag** 82.38 311 *i* P P 05 15 39.5 +0.3
SPUT **South Promonto** 82.42 47 *e*P P 05 15 39.8 +0.4
WAR **Warsaw** 82.44 327 *e*P P 05 15 40.6 +1.3
comp=Z,2μm,0.9s,mb6.8
WAR *e*S S 05 25 45.9 +2.0
WAR *e*ScS ScS 05 25 53.0 -5.5
WAR LMZ 05 50 51.9
comp=Z,2μm,22.1s
WAR **Warsaw** 82.44 327 *e*P P 05 15 40.6 +1.3
comp=Z,2.2nm,0.9s
WAR *e*S S 05 25 45.8 +1.9
WAR *e*ScS ScS 05 25 53.0 -5.5
WAR LR LR
comp=Z,2μm,22.1s
WAR **Warsaw** 82.44 327 *e*P P 05 15 40.6 +1.3
WAR *e*S S 05 25 45.8 +1.9
AHID **Auburn Hatcher** 82.45 45 *e*P P 05 15 39.8 +0.2
comp=Z,66nm,0.9s,mb5.3
PPT **Papeete** 82.45 115 *e*P P 05 15 39.4 -0.4
comp=Z,82nm,1.3s,mb5.2
PPT **Papeete** 82.45 115 *e*PP PP 05 18 51.1 0.0
comp=Z,301nm,25.5s
PPT **Papeete** 82.45 115 P P 05 15 39.5 -0.4
comp=Z,38nm,0.8s,mb5.1,baz=203,slow=7.7,SNR=3.9
PPT LR LR 05 44 45.8
comp=Z,883nm,20.5s,baz=64,slow=30
U10A **Ash Meadows, A** 82.48 52 ⇓P P 05 15 40.2 +0.4
baz=82
U10A ⇑S S 05 25 44.2 -0.7
baz=82
PAE **Paea** 82.50 115 *e*P P 05 15 39.7 -0.4
comp=Z,152nm,1.2s,mb5.6
PAE **Paea** 82.50 115 *e*P P 05 15 39.7 -0.4
PAE pmax pmax
comp=Z,152nm,1.2s,mb5.6
LVV **L'vov** 82.51 324 ⇑*i*P P 05 15 39.7 0.0
LVV *e* 05 18 48.3
LVV *e*S S 05 25 40.7 -3.9
LVV MLR MLR
comp=Z,1μm,21.0s
LVV MLR MLR
comp=N,1μm,20.0s
LVV MLR MLR
comp=E,1μm,20.0s
FMP **Fort Macarthur** 82.51 55 ⇑P P 05 15 39.6 -0.4
baz=82
FMP ⇓S S 05 25 43.0 -2.2
baz=82
AVNT **Avonos** 82.52 311 *i* P P 05 15 39.9 -0.1
ELDT **Eldivan** 82.52 313 *i* P P 05 15 40.7 +0.7
KOZT **Kozan** 82.56 309 *e*P P 05 15 38.9 -1.4
CIS **Catalina Islan** 82.59 56 ⇓P P 05 15 40.2 -0.2
baz=82
CIS ⇓S S 05 25 44.4 -1.7
baz=82
N15A **Stansbury Isla** 82.61 47 ⇑P P 05 15 40.6 +0.3
baz=82
N15A ⇓S S 05 25 45.7 -0.2
baz=82
R12A **Pony Springs,** 82.64 50 ⇑P P 05 15 40.6 +0.1
baz=82
R12A ⇑S S 05 25 44.7 -1.7
baz=82
ODD1 **Odda** 82.67 338 ⇓*i*P P 05 15 39.7 -0.6
comp=E,352nm,1.2s,mb6.0
ODD1 **Odda** 82.67 338 ⇓*i*P P 05 15 39.7 -0.6
ODD1 AMb AMB 05 15 42.3
comp=Z,352nm,1.2s,mb6.0
ASK **Askoy** 82.67 339 *e*P P 05 15 40.8 +0.5
comp=Z,473nm,1.4s,mb6.0
ASK **Askoy** 82.67 339 *e*P P 05 15 40.8 +0.5
ASK AMb AMB 05 15 43.6
comp=Z,473nm,1.4s,mb6.0
RUND **Rundenannen** 82.67 339 ⇓*i*P P 05 15 42.9 +2.6
comp=Z,401nm,1.1s,mb6.1
RUND **Rundenannen** 82.67 339 ⇓*i*P P 05 15 42.9 +2.6
RUND AMb AMB 05 15 45.6
comp=Z,401nm,1.1s,mb6.1
BFSC **Mount Baldy St** 82.69 55 ⇑P P 05 15 40.4 -0.5
baz=82
BFSC ⇓S S 05 25 44.3 -2.7
baz=82
SCI **San Clemente I** 82.70 56 ⇓S S 05 25 44.4 -2.8
baz=82
BER **Bergen** 82.70 339 *e*P P 05 15 40.9 +0.4
comp=Z,317nm,1.2s,mb5.9
BER *e* 05 25 46.3
BER **Bergen** 82.70 339 *e*P P 05 15 40.5 0.0
BER *e*P 05 15 40.9
BER AMb AMB 05 15 44.1
comp=Z,317nm,1.2s,mb5.9

BER *e*S S 05 25 46.6 +0.4
BER **Bergen** 82.70 339 *e*P P 05 15 40.9 +0.4
BER *e* 05 25 46.3
BER pmax pmax
comp=Z,317nm,1.2s,mb5.9
VAH **Vaihoa** 82.70 112 *e*P P 05 15 41.4 +0.2
comp=Z,186nm,1.2s,mb5.7
GSC **Goldstone** 82.74 53 ⇑P P 05 15 41.3 +0.1
baz=82
GSC ⇑S S 05 25 45.5 -2.0
baz=82
COBT **Iskenderun** 82.78 308 *i* P P 05 15 42.1 +0.7
SHOC **Shoshone** 82.79 53 ⇓P P 05 15 41.1 -0.3
baz=83
SHOC ⇓S S 05 25 46.4 -1.6
baz=83
DUG **Dugway** 82.80 48 *e*P P 05 15 41.6 +0.3
comp=Z,96nm,0.6s,mb5.7
DUG **Dugway** 82.80 48 *e*P P 05 15 41.7 +0.3
DUG pmax pmax
comp=Z,95nm,0.6s,mb5.7
DUG **Dugway** 82.80 48 ⇑P P 05 15 41.6 +0.2
baz=83
DUG ⇓S S 05 25 48.3 +0.3
baz=83
BRTR **Keskin Array B** 82.80 312 P P 05 15 42.3 +0.9
comp=Z,312nm,0.9s,mb6.0,baz=90,slow=2.8,SNR=460
BRTR PKKPbc PKKPbc 05 34 04.6 +1.0
comp=Z,0.7nm,0.6s,baz=197,slow=5.4,SNR=4.2
BRTR LR LR 05 53 13.5
comp=Z,1μm,21.7s,baz=203,slow=36
T11A **Corn Creek, Al** 82.81 51 ⇓P P 05 15 41.3 -0.2
baz=83
T11A ⇓S S 05 25 46.8 -1.4
baz=83
HWUT **Hardware Ranch** 82.81 46 *e*P P 05 15 41.5 0.0
comp=Z,266nm,1.4s,mb5.8
RRX **Edison Barstow** 82.82 54 ⇓P P 05 15 41.3 -0.3
baz=83
RRX ⇓S S 05 25 47.2 -1.2
baz=83
EGD **Espegrend** 82.83 339 *e*P P 05 15 41.6 +0.5
comp=Z,290nm,1.4s,mb5.8
EGD **Espegrend** 82.83 339 *e*P P 05 15 41.6 +0.5
EGD AMb AMB 05 15 44.3
comp=Z,290nm,1.4s,mb5.8
TVO **Taravao** 82.83 115 *e*P P 05 15 41.7 -0.1
comp=Z,269nm,1.3s,mb5.8
TVO **Taravao** 82.83 115 *e*P P 05 15 41.7 -0.1
TVO pmax pmax
comp=Z,269nm,1.3s,mb5.8
S12A **Delamar Landin** 82.86 51 ⇓P P 05 15 42.1 +0.4
baz=83
S12A ⇓S S 05 25 48.6 -0.1
baz=83
CEYT **Ceyhan** 82.87 309 *e*P P 05 15 42.9 +1.1
NOQ **North Oquirrh** 82.99 47 *e*P P 05 15 42.5 +0.1
comp=Z,283nm,1.2s,mb5.9
SFJD **Kangerlussuaq** 83.00 4 P P 05 15 41.8 -0.1
SFJD pmax pmax
comp=Z,79nm,0.9s,mb5.4
SFJD **Kangerlussuaq** 83.00 4 P P 05 15 41.7 -0.2
comp=Z,65nm,0.9s,mb5.3,baz=329,slow=4.9,SNR=15
SFJD **Kangerlussuaq** 83.00 4 *i* P P 05 15 41.6 -0.3
comp=Z,57nm,0.7s,mb5.4
SFJD *i* S S 05 25 50.4 +1.4
SFJD
comp=Z,610nm,21.0s
LAO **LASA Array** 83.02 39 *e*P P 05 15 42.4 0.0
comp=Z,184nm,1.2s,mb5.7
DGMT **Dagmar** 83.03 37 ⇓*e*P P 05 15 41.4 -1.0
comp=Z,183nm,1.2s,mb5.7
NIG **Nigde** 83.04 310 *e*P P 05 15 43.7 +1.0
HTY **Hatay** 83.07 308 *e*P P 05 15 40.1 -2.7
CFR **Carcaliu** 83.08 319 P P 05 15 36.5 -6.3
BLS5 **Blasjo** 83.10 338 ⇓*i*P P 05 15 44.1 +1.5
comp=Z,192nm,1.3s,mb5.7
BLS5 **Blasjo** 83.10 338 ⇓*i*P P 05 15 44.1 +1.5
BLS5 AMb AMB 05 15 48.2
comp=Z,192nm,1.3s,mb5.7
U11A **Corn Creek** 83.13 52 ⇑P P 05 15 43.5 +0.4
baz=83
U11A ⇑S S 05 25 50.9 -0.5
baz=83
BSD **Bornholm Skovb** 83.20 332 ⇓*i*P P 05 15 42.7 -0.4
comp=Z,1μm,1.3s,mb6.5
BSD *i* 05 18 32.2
BSD *i* S S 05 25 49.3 -2.1
BSD **Bornholm Skovb** 83.20 332 ⇓*i*P P 05 15 42.7 -0.4
comp=Z,1μm,1.3s,mb6.5
BSD *i* 05 18 32.2
BSD *i* S S 05 25 49.3 -2.1
BSD
comp=Z,760nm,18.0s
BBRC **Big Bear Sol-O** 83.20 54 ⇑P P 05 15 43.3 -0.3
baz=83
BBRC ⇓S S 05 25 50.0 -2.2
baz=83
CTU **Camp Tracy** 83.20 47 *e*P P 05 15 43.5 +0.1
comp=Z,194nm,1.2s,mb5.7
KARA **Karaisali** 83.20 309 *e*P P 05 15 44.0 +0.5
BURAR **Bucovina Array** 83.24 322 P P 05 15 44.1 +0.6
BURAR **Bucovina Array** 83.24 322 ⇓*i*P P 05 15 44.1 +0.6
ANTO **Ankara** 83.27 312 ⇓*i*P P 05 15 44.4 +0.6
comp=Z,302nm,0.9s,mb6.0
ANTO **Ankara** 83.27 312 P P 05 15 44.5 +0.6
SNR=96
ANTO **Ankara** 83.27 312 P P 05 15 44.5 +0.6
SNR=96
ANTO **Ankara** 83.27 312 P P 05 15 44.5 +0.6
SNR=96
ANTO **Ankara** 83.27 312 ⇓*i*P P 05 15 44.3 +0.5
TUQ **Turquoise Mtn.** 83.28 53 ⇑P P 05 15 44.0 0.0
baz=83
TUQ ⇓S S 05 25 51.4 -1.6
baz=83
KWP **Kalwaria** 83.29 325 *e*P P 05 15 44.6 +0.9
comp=Z,2μm,1.0s,mb6.9
KWP *e*PcP PcP 05 15 47.4 -0.5
KWP *e*SKS 05 25 50.9
KWP *e*S S 05 25 54.2 +1.7
KWP *e*ScS ScS 05 26 04.9 -0.7
KWP LMZ 05 52 45.3
comp=Z,2μm,23.5s
KWP **Kalwaria** 83.29 325 *e*P P 05 15 44.6 +0.9
KWP *e*PcP PcP 05 15 47.4 -0.5
KWP *e*SKS 05 25 50.9
KWP *e*S S 05 25 54.2 +1.6
KWP *e*ScS ScS 05 26 04.9 -0.6
KWP **Kalwaria** 83.29 325 *e*P P 05 15 44.6 +0.9
KWP *e* 05 25 50.9
KWP *e*S S 05 25 54.2 +1.6
KWP **Kalwaria** 83.29 325 ⇓*i*P P 05 15 44.4 +0.7
HEC **Hector,Ludlow** 83.32 54 ⇓P P 05 15 44.1 0.0
baz=83
HEC ⇑S S 05 25 51.6 -1.8
baz=83
TIRR **Tirgusor** 83.34 318 P P 05 15 44.6 +0.5
TIRR **Tirgusor** 83.34 318 ⇑*i*P P 05 15 44.2 +0.1
MURC **Murrieta** 83.35 55 ⇑P P 05 15 44.2 -0.2
baz=83
MURC ⇓S S 05 25 51.7 -2.0
baz=83
SGKT **Sivrigoynuk** 83.35 313 *i* P P 05 15 44.5 +0.3
KRTS **Karatas** 83.35 308 *e*P P 05 15 44.5 +0.2
BW06 **Boulder Array** 83.39 44 *e*P P 05 15 44.4 0.0
comp=Z,64nm,1.1s,mb5.3
PDAR **Pinedale Array** 83.39 44 P P 05 15 44.0 -0.3
comp=Z,39nm,0.9s,mb5.1,baz=280,slow=2.7,SNR=102
PDAR LR LR 05 49 24.7
comp=Z,938nm,18.6s,baz=162,slow=33
NLU **North Lily Min** 83.40 47 *e*P P 05 15 44.6 +0.1
V11A **Goodsprings** 83.41 52 ⇓P P 05 15 44.5 -0.1
baz=83
V11A ⇓S S 05 25 53.0 -1.3
baz=83
T12A **Moapa** 83.42 51 ⇓P P 05 15 44.8 +0.1
baz=83
T12A ⇑S S 05 25 53.0 -1.3
baz=83
JLU **Jordanelle** 83.44 47 *e*P P 05 15 45.0 +0.4
VRI **Vrincioaia** 83.47 320 P P 05 15 45.4 +0.7
VRI **Vrincioaia** 83.47 320 ⇑*i*P P 05 15 45.3 +0.6
HARR **Harsova** 83.49 318 P P 05 15 45.6 +0.8
PLOR **Plostina** 83.53 320 P P 05 15 45.7 +0.7
S13A **Holt Ranch, En** 83.54 50 ⇓P P 05 15 45.5 +0.2

baz=83
S13A ⇓S S 05 25 55.2 -0.3
baz=83
MPU Maple Canyon 83.65 47 *e*P **P 05 15 45.9 +0.1**
comp=Z,218nm,1.1s,mb5.8
KMY Karmoy 83.66 339 ⇓*i*P **P 05 15 45.5 +0.2**
comp=Z,217nm,1.4s,mb5.7
KMY Karmoy 83.66 339 ⇓*i*P **P 05 15 45.5 +0.2**
KMY AMb AMB 05 15 48.3
comp=Z,217nm,1.4s,mb5.7
DAU Daniels Canyon 83.67 47 *e*P **P 05 15 46.3 +0.4**
SNART Snartemo 83.69 337 ⇓*i*P **P 05 15 45.5 -0.1**
SNART AMb AMB 05 15 49.8
comp=Z,434nm,1.4s,mb6.0
U12A Valley of Fire 83.70 52 ⇓P **P 05 15 46.1 +0.1**
baz=84
U12A ⇑S S 05 25 55.7 -1.5
baz=84
R14A James Farms, M 83.70 49 ⇓P **P 05 15 46.1 +0.1**
baz=84
R14A ⇓S S 05 25 55.7 -1.4
baz=84
STAV Stavanger 83.73 338 *e*P **P 05 15 45.7 0.0**
comp=Z,321nm,1.2s,mb5.9
STAV Stavanger 83.73 338 *e*P **P 05 15 45.7 0.0**
STAV AMb AMB 05 15 48.7
comp=Z,321nm,1.2s,mb5.9
MERS Mersin 83.77 309 *e*P **P 05 15 46.3 -0.1**
COP Copenhagen 83.78 333 ⇓*i*P **P 05 15 46.2 +0.1**
COP *i* 05 19 04.6
COP *i* S S 05 25 56.9 -0.3
COP *i* 05 31 21.7
COP pmax pmax
comp=Z,803nm,1.0s,mb6.4
COP MLR MLR
comp=Z,770nm,18.0s
COP Copenhagen 83.78 333 ⇓*i*P **P 05 15 46.2 +0.1**
comp=Z,803nm,1.0s,mb6.4
COP *i* 05 19 04.6
COP *i* S S 05 25 56.9 -0.3
COP *i* 05 31 21.7
COP
comp=Z,760nm,18.0s
109C Camp Elliot, M 83.79 56 ⇓P **P 05 15 46.2 -0.4**
baz=84
109C ⇑S S 05 25 55.2 -2.9
baz=84
T13A Saint George 83.81 51 ⇑P **P 05 15 46.9 +0.2**
baz=84
T13A ⇓S S 05 25 58.4 +0.2
baz=84
GMRC Granite Mounta 83.81 53 ⇓P **P 05 15 46.5 -0.1**
baz=84
GMRC ⇑S S 05 25 56.3 -2.1
baz=84
V12A Nelson 83.87 52 ⇓P **P 05 15 46.9 0.0**
baz=84
V12A ⇑S S 05 25 58.1 -0.7
baz=84
PFO Pinyon Flat Ob 83.87 55 P **P 05 15 46.4 -0.6**
comp=Z,825nm,1.2s,mb6.3,SNR=25
PFO Pinyon Flat Ob 83.87 55 *e*P **P 05 15 46.5 -0.6**
comp=Z,166nm,1.1s,mb5.7
PFO Pinyon Flat Ob 83.87 55 P **P 05 15 46.6 -0.4**
PFO pmax pmax
comp=Z,139nm,1.1s,mb5.6
PFO Pinyon Flat Ob 83.87 55 P **P 05 15 46.6 -0.4**
comp=Z,139nm,1.1s,mb5.6,baz=307,slow=4.4,SNR=86
PFO Pinyon Flat Ob 83.87 55 ⇓P **P 05 15 46.9 -0.1**
baz=84
PFO ⇓S S 05 25 56.6 -2.4
baz=84
CCUT Cedar City 83.89 50 *e*P **P 05 15 47.1 +0.1**
CCUT *e*PP PP 05 19 01.1 -0.7
FKH Fakeheh 83.89 306 *e*P **P 05 15 47.2 +0.1**
S14A Cedar City 83.90 50 ⇑P **P 05 15 46.9 -0.1**
baz=84
S14A ⇑S S 05 25 58.0 -1.1
baz=84
S14A ⇓S S 05 25 59.5 +0.4
baz=84
PSN Preselentsi 83.93 317 *i* P **P 05 15 47.8 +0.7**
HENT Hendek 83.94 314 *i* P **P 05 15 46.5 -0.7**
KOLS Kolonicke sedl 83.96 324 *e*P **P 05 15 47.2 +0.1**
KOLS *e*S S 05 25 55.3 -3.9
BELC Belle Mtn. 83.99 54 ⇑P **P 05 15 47.2 -0.4**
baz=84
BELC ⇓S S 05 25 57.5 -2.6
baz=84
W12A Cal Nev Ari 84.08 53 ⇓P **P 05 15 47.6 -0.4**
baz=84
W12A ⇓S S 05 25 59.8 -1.2
baz=84
U13A Pakoon Wash 84.10 51 ⇓P **P 05 15 48.3 +0.2**
baz=84
U13A ⇓S S 05 25 58.0 -3.1
baz=84
MLR Muntele Rosu 84.14 320 P **P 05 15 48.3 +0.2**
MLR Muntele Rosu 84.14 320 LR LR 05 56 17.9
comp=Z,2µm,18.4s,baz=49,slow=38
MLR Muntele Rosu 84.14 320 ⇓*i*P **P 05 15 48.0 -0.1**
MSU Marysvale 84.14 49 *e*P **P 05 15 48.6 +0.4**
MSU Marysvale 84.14 49 P **P 05 15 48.8 +0.5**
UZH Uzhgorod 84.14 324 *d*P **P 05 15 48.6 +0.5**
UZH *e* 05 18 59.0
UZH *i* S S 05 25 57.5 -3.6
UZH *e* 05 26 50.7
UZH MLR MLR
comp=Z,1µm,18.0s
STHS Stebnicka Huta 84.17 325 *e*P **P 05 15 48.8 +0.6**
comp=Z,203nm,0.8s,mb5.9
STHS Stebnicka Huta 84.17 325 *e*P **P 05 15 48.8 +0.6**
STHS pmax pmax
comp=Z,203nm,0.8s,mb5.9
RGN Rugen 84.25 332 ⇓*e*P **P 05 15 48.7 +0.3**
comp=Z,724nm,0.9s,mb6.4
RGN *e*PP PP 05 19 04.1 -0.1
RGN Rugen 84.25 332 *e*P **P 05 15 48.8 +0.3**
comp=Z,921nm,1.1s,mb6.4
FSV Svinoy 84.25 345 *e*P **P 05 15 49.3 +1.0**
MONP Monument Peak 84.28 55 ⇓P **P 05 15 48.9 -0.2**
baz=84
MONP ⇓S S 05 26 02.6 -0.4
baz=84
TMUT Trail Mountain 84.33 48 *e*P **P 05 15 49.4 +0.2**
TRPA Tarpa 84.33 323 ⇓*i*P **P 05 15 49.5 +0.5**
T14A Hurricane 84.34 50 ⇓P **P 05 15 49.4 +0.1**
baz=84
T14A ⇓S S 05 26 02.4 -1.1
baz=84
OJC Ojcow 84.35 326 *i* P **P 05 15 49.2 +0.1**
OJC *e*pP pP 05 16 23.0 -1.4
OJC *e*SKSac SKSac 05 25 57.6 -2.0
OJC *e*S S 05 26 02.0 -1.1
OJC L 05 57 00.7
comp=Z,2.6nm,18.0s
CRVS Cervenica-Dubn 84.39 324 *e*P **P 05 15 49.1 -0.2**
CRVS *e*S S 05 25 59.6 -3.9
MUD Monsted U'grnd 84.44 335 ⇓*i*P **P 05 15 49.3 -0.1**
comp=Z,573nm,1.1s,mb6.2
MUD *i* S S 05 26 04.0 +0.2
MUD *i* 05 37 07.7
MUD Monsted U'grnd 84.44 335 ⇓*i*P **P 05 15 49.3 -0.1**
MUD *i* S S 05 26 04.0 +0.2
MUD pmax pmax
comp=Z,573nm,1.1s,mb6.2
MUD Monsted U'grnd 84.44 335 ⇓*i*P **P 05 15 49.3 -0.1**
comp=Z,573nm,1.1s,mb6.2
MUD *i* S S 05 26 04.0 +0.2
MUD *i* 05 37 07.7
MUD
comp=Z,1µm,21.0s
IRM Iron Mountain 84.50 54 ⇑P **P 05 15 50.1 -0.1**
baz=84
IRM ⇑S S 05 26 03.5 -1.7
baz=84
BORG Borgarnes 84.51 352 *e*P **P 05 15 50.9 +1.3**
comp=Z,199nm,1.2s,mb5.7
BORG Borgarnes 84.51 352 P **P 05 15 50.5 +0.9**
comp=Z,130nm,1.2s,mb5.5,baz=39,slow=4.8,SNR=7.3
BC3 Big Chuckw Mtn 84.56 54 ⇑P **P 05 15 50.2 -0.3**
baz=84
BC3 ⇓S S 05 26 03.5 -2.3
baz=84
BHL Bhannes 84.59 306 *e*P **P 05 15 50.5 -0.1**
ASF Jabal al Asfar 84.62 304 P **P 05 15 51.1 +0.3**
comp=Z,119nm,0.9s,mb5.6,baz=292,slow=2.0,SNR=128
ASF LR LR 05 57 40.7
comp=Z,612nm,19.4s,baz=277,slow=38
NIE Niedzica 84.62 325 *i* P **P 05 15 51.2 +0.7**
DVTC Desert V Tower 84.63 55 ⇑P **P 05 15 50.5 -0.3**
baz=84
DVTC ⇓S S 05 26 05.0 -1.5
baz=84
U14A Mt Trumbull 84.63 51 ⇑P **P 05 15 50.9 +0.1**
baz=84
U14A ⇓S S 05 26 05.7 -0.7
baz=84
VOIR 84.67 320 P **P 05 15 51.3 +0.5**
VOIR 84.67 320 ⇓*i*P **P 05 15 51.5 +0.7**
PRD Provadia 84.68 317 *i* P **P 05 15 51.6 +0.7**
SWSC Sam W. Stewart 84.69 55 ⇓P **P 05 15 50.5 -0.7**
baz=84
SWSC ⇓S S 05 26 06.3 -0.9
baz=84
RCY Rachaya 84.70 306 *e*P **P 05 15 51.1 -0.1**
ESKT Eskisehir 84.71 313 *i* P **P 05 15 50.8 -0.3**
BORA Eskisehir 84.75 313 *i* P **P 05 15 50.3 -1.0**
BUC1 Bucharest 84.78 319 P **P 05 15 53.2 +1.8**
LRW Lerwick 84.80 342 *e*P **P 05 15 51.8 +0.7**
LRW AMb AMB 05 15 54.9
comp=Z,546nm,1.6s,mb6.0
WAL1 Walls 84.81 342 ⇑*e*P **P 05 15 51.5 +0.3**
T15A Red Dirt Ranch 84.83 50 ⇑P **P 05 15 51.8 0.0**
baz=85
T15A ⇑S S 05 26 06.7 -1.7
baz=85
W13A Hualapai Mount 84.87 52 ⇓P **P 05 15 51.7 -0.3**
baz=85
W13A ⇓S S 05 26 07.2 -1.6
baz=85
SRU San Rafael 84.87 48 *e*P **P 05 15 51.7 -0.3**
comp=Z,173nm,0.7s,mb5.9
SRU San Rafael 84.87 48 P **P 05 15 51.9 0.0**
SRU pmax pmax
comp=Z,170nm,0.7s,mb5.9
DRGR 85.09 322 P **P 05 15 53.0 +0.2**
DRGR 85.09 322 ⇓*i*P **P 05 15 52.9 0.0**
PDMCI Parker Dam,Lak 85.13 53 ⇓P **P 05 15 53.0 -0.3**
baz=85
PDMCI ⇑S S 05 26 09.7 -1.7
baz=85
KECS Kecovo 85.15 325 *e*P **P 05 15 53.2 +0.1**
comp=Z,83nm,0.9s,mb5.5
KECS *e*PP PP 05 19 09.8 -1.9
KECS *e*S S 05 26 05.9 -5.2
KECS Kecovo 85.15 325 *e*P **P 05 15 53.2 +0.1**
KECS *e* 05 19 09.8
KECS *e*S S 05 26 05.9 -5.2
KECS pmax pmax
comp=Z,83nm,0.9s,mb5.5
Y12C Blythe 85.16 54 ⇑P **P 05 15 53.2 -0.3**
baz=85
Y12C ⇓S S 05 26 09.3 -2.5
baz=85
X13A Yucca 85.18 53 ⇓P **P 05 15 53.2 -0.4**
baz=85
X13A ⇑S S 05 26 10.3 -1.6
baz=85
RAC Raciborz 85.21 327 *e*P **P 05 15 54.0 +0.6**
MMAI Mount Meron Ar 85.24 305 P **P 05 15 54.6 +0.7**
comp=Z,227nm,1.0s,mb5.9,baz=46,slow=7.1,SNR=121
MMAI LR LR 06 00 07.1
comp=Z,802nm,20.4s,baz=25,slow=40
GLA Glamis 85.32 54 ⇑P **P 05 15 54.0 -0.3**
baz=85
GLA ⇓S S 05 26 10.4 -3.0
baz=85
W14A Seligman 85.36 52 ⇓P **P 05 15 54.7 +0.3**
baz=85
W14A ⇑S S 05 26 12.1 -1.5
baz=85
OKC Ostrava-Krasne 85.40 327 ⇓*i*P **P 05 15 54.3 0.0**
OKC *e*SKS 05 26 05.5
OKC *e* 05 27 05.5
OKC Ostrava-Krasne 85.40 327 ⇓*i*P **P 05 15 54.3 0.0**
OKC *e*SKS 05 26 05.5
OKC *ex* x 05 27 05.5
OKC AMS AMS 05 56 00.0
comp=Z,2µm,14.3s
RWWY Rawlins 85.43 44 *e*P **P 05 15 54.4 -0.3**
comp=Z,138nm,1.0s,mb5.6
LIKS Likavka 85.46 326 *e*P **P 05 15 55.4 +0.7**
comp=Z,182nm,1.1s,mb5.7
LIKS Likavka 85.46 326 *e*P **P 05 15 55.4 +0.7**
LIKS pmax pmax
comp=Z,182nm,1.1s,mb5.7
SZH Strazhica 85.49 318 *i* P **P 05 15 55.0 +0.1**
RUE Ruedersdorf 85.54 330 *e*P **P 05 15 55.1 +0.1**
comp=Z,370nm,1.0s,mb6.1
RUE Ruedersdorf 85.54 330 *e*P **P 05 15 55.2 +0.2**
comp=Z,459nm,1.1s,mb6.1
KSP Ksiaz 85.58 328 *e*P **P 05 15 55.5 +0.3**
comp=Z,1µm,0.8s,mb6.7
KSP *e*PcP PcP 05 15 57.6 -0.3
KSP *e*SKS 05 26 07.0
KSP *e*S S 05 26 15.6 +0.4
KSP *e*ScS ScS 05 26 19.4 -4.9
KSP *e*sS sS 05 27 12.3 -4.0
KSP LMZ 05 52 51.1
comp=Z,3µm,28.7s
KSP Ksiaz 85.58 328 ⇓*i*P **P 05 15 55.4 +0.2**
KSP *e* 05 19 13.0
KSP *e* 05 26 05.0
KSP *e*S S 05 26 14.2 -1.0
KSP *e*SS SS 05 31 48.0 -4.9
KSP MLR MLR
comp=Z,5µm,18.5s
ZIMR 85.58 319 P **P 05 15 55.3 -0.1**
JMB Yambol 85.60 317 *e*P **P 05 15 55.7 +0.2**
JMB Yambol 85.60 317 *i* P **P 05 15 57.0 +1.5**
Y13A Salome 85.61 53 ⇑P **P 05 15 55.5 -0.2**
baz=85
Y13A ⇓S S 05 26 14.9 -1.2
baz=85
CSS Prodhromos 85.62 308 *e*P **P 05 15 54.3 -1.4**
MORC Moravsky Berou 85.73 327 ⇓*e*P **P 05 15 55.9 -0.1**
comp=Z,210nm,0.9s,mb5.9
MORC Moravsky Berou 85.73 327 P **P 05 15 56.0 0.0**
MORC pmax pmax
comp=Z,210nm,1.0s,mb5.8
MORC Moravsky Berou 85.73 327 ⇓*i*P **P 05 15 55.9 -0.1**
PSZ Piszkesteto 85.82 324 ⇓*e*P **P 05 15 56.5 0.0**
comp=Z,410nm,1.4s,mb6.0
PSZ Piszkesteto 85.82 324 P **P 05 15 56.7 +0.2**
PSZ Piszkesteto 85.82 324 ⇓*i*P **P 05 15 56.6 +0.1**
GDZ Gediz 85.82 313 *i* P **P 05 15 56.0 -0.7**
TBI Tubuai 85.82 120 *e*P **P 05 15 56.8 0.0**
comp=Z,286nm,1.1s,mb5.9
TBI *e*PP PP 05 19 18.3 -0.2
PVL Pavlikeni 85.87 318 *i* P **P 05 15 57.5 +0.7**
ISP Isparta 85.88 312 *e*P **P 05 15 55.9 -1.1**
ISP Isparta 85.88 312 P **P 05 15 57.6 +0.6**
X14A Yava 85.90 52 ⇓P **P 05 15 57.5 +0.4**
baz=86
X14A ⇓S S 05 26 18.2 -0.7
baz=86
BSEG Bad Segeberg 85.90 333 *e*P **P 05 15 56.6 -0.1**
comp=Z,607nm,1.3s,mb6.2
BSEG *e*S S 05 26 17.2 -1.0
DPC Dobruska-Polom 85.91 328 ⇓*i*P **P 05 15 57.3 +0.5**
DPC *e* 05 26 05.2
DPC MLR MLR
comp=Z,2µm,16.2s
DPC Dobruska-Polom 85.91 328 ⇓*i*P **P 05 15 57.3 +0.5**
DPC *e*SKS 05 26 05.2
DPC *ex* x 05 27 07.6
DPC AMS AMS 05 58 10.0
comp=Z,2µm,16.2s
W15A Williams 85.93 52 ⇓P **P 05 15 57.6 +0.4**
baz=86
W15A ⇑S S 05 26 17.7 -1.5
baz=86
UPC Upice 85.94 328 ⇓*i*P **P 05 15 57.1 +0.1**
GZR Gura Zlata 85.94 321 P **P 05 15 57.1 0.0**
VYHS Vyhne 85.97 325 *e*P **P 05 15 57.5 +0.3**
comp=Z,186nm,1.1s,mb5.7
VYHS *e*S S 05 26 10.1 -9.0
VYHS Vyhne 85.97 325 *e*P **P 05 15 57.5 +0.3**
VYHS *e*S S 05 26 10.1 -9.0
VYHS pmax pmax
comp=Z,186nm,1.1s,mb5.7
ULM Lac du Bonnet 85.98 32 P **P 05 15 55.9 -1.3**
ULM LR LR 05 55 32.3
ULM Lac du Bonnet 85.98 32 P **P 05 15 55.9 -1.3**
comp=Z,18nm,0.9s,mb4.8,baz=309,slow=5.6,SNR=26
ULM LR LR 05 55 32.3
comp=Z,586nm,18.2s,baz=132,slow=36
Y14A Wickenburg 86.11 53 ⇑P **P 05 15 57.9 -0.3**
baz=86
Y14A ⇑S S 05 26 20.2 -0.9
baz=86
KOLL Kolacno 86.12 326 *i* P **P 05 15 58.3 +0.4**
KOLL *e*PP PP 05 19 19.5 -0.1
PV10 Paradox Valley 86.24 47 *e*P **P 05 15 59.0 +0.3**
SART Tekirdag 86.31 315 *i* P **P 05 15 58.1 -0.9**
X15A Humboldt 86.34 52 ⇓P **P 05 15 59.6 +0.4**
baz=86
X15A ⇑S S 05 26 22.5 -0.7
baz=86
BTOK Tokmak 86.34 314 *i* P **P 05 15 58.4 -0.8**
WUAZ Wupatki 86.34 51 *e*P **P 05 15 59.2 -0.1**
comp=Z,161nm,1.2s,mb5.6
WUAZ Wupatki 86.34 51 ⇓P **P 05 15 59.5 +0.2**
baz=86
WUAZ ⇑S S 05 26 23.5 +0.2
baz=86
BZS Buzias 86.43 322 P **P 05 15 59.2 -0.3**
BZS Buzias 86.43 322 ⇓*i*P **P 05 15 58.9 -0.6**
DIM Dimitrovgrad 86.47 317 *i* P **P 05 16 00.2 +0.4**
Z14A Wintersburg 86.47 53 ⇓P **P 05 15 59.7 -0.3**
baz=86
Z14A ⇑S S 05 26 23.2 -1.4
baz=86
VRAC Vranov 86.50 327 P **P 05 16 00.0 +0.2**
VRAC Vranov 86.50 327 LR LR 05 57 12.4
comp=Z,3µm,18.4s,baz=56,slow=37
VRAC Vranov 86.50 327 ⇑*i*P **P 05 15 59.7 -0.1**
PVCC Panska Ves 86.58 329 ⇓*i*P **P 05 16 00.5 +0.4**
PVCC *e*SKS 05 26 08.8
PVCC AMS AMS 05 57 30.0
comp=Z,2µm,17.7s
BRG Berggiesshubel 86.62 329 ⇓*i*P **P 05 16 00.0 -0.3**
comp=Z,202nm,1.3s,mb5.8
BRG *i* 05 16 06.4
BRG pP pP 05 16 36.1 +0.4
BRG PP PP 05 19 24.1 +0.7
BRG SP 05 27 19.0
BRG SS SS 05 32 07.0 -1.1
BRG LR LR
comp=Z,2µm,20.5s
BRG Berggiesshubel 86.62 329 *e*P **P 05 16 00.1 -0.2**
comp=Z,338nm,1.3s,mb6.0
BRG Berggiesshubel 86.62 329 ⇓*i*P **P 05 16 00.0 -0.3**
comp=Z,337nm,1.3s,mb6.0
BRG *i* 05 16 06.4
comp=Z,79nm,0.9s
BRG pP pP 05 16 36.1 +0.4
comp=Z,63nm,1.1s
BRG PP PP 05 19 24.1 +0.7
comp=Z,93nm,1.1s
BRG SP 05 27 19.0
BRG SS SS 05 32 07.0 -1.1
BRG
comp=Z,3µm,20.5s
BRG
comp=N,3µm,17.1s
BRG
comp=E,2µm,17.1s
SMOL Smolenice 86.64 326 *i* P **P 05 16 01.0 +0.5**
HLG Helgoland 86.65 334 *e*P **P 05 16 01.0 +0.6**
comp=Z,481nm,1.2s,mb6.2
HLG *e*S S 05 26 24.9 -0.6
PV01 Paradox Valley 86.68 47 *e*P **P 05 16 00.7 -0.2**
PHWY Pilot Hill 86.71 43 *e*P **P 05 16 01.2 +0.2**
CLL Collm 86.72 330 ⇓*i*P **P 05 16 00.2 -0.6**
comp=Z,370nm,1.1s,mb6.1
CLL *i* pP pP 05 16 36.2 0.0
CLL *e*S S 05 26 13.0 -13
CLL LR LR
comp=Z,2µm,19.0s
CLL Collm 86.72 330 ⇓*i*P **P 05 16 00.2 -0.6**
CLL *i* *PP pP 05 16 36.2 0.0
CLL *e*S S 05 26 13.0 -13
CLL pmax pmax
comp=Z,370nm,1.1s,mb6.1
CLL MLR MLR
comp=Z,2µm,19.0s
CLL Collm 86.72 330 ⇓*i*P **P 05 16 00.2 -0.6**
comp=Z,370nm,1.1s,mb6.1
CLL *i* pP pP 05 16 36.2 0.0
CLL *ex* x 05 17 09.0
CLL *ex* x 05 18 57.0
CLL *i* PP PP 05 19 24.3 +0.1
comp=Z,124nm,1.0s
CLL *e*SKSac SKSac 05 26 13.0 -1.4
comp=N,1µm,18.4s
CLL *e*SKSac SKSac 05 26 13.0 -1.4
comp=E,2µm,19.1s
CLL *es*SKSac 05 27 15.0
CLL *e*PPS 05 28 12.0
CLL *es*PPS 05 28 41.0
CLL *ex* x 05 29 06.0
CLL *e*SS SS 05 32 09.0 -0.5
CLL *ex* x 05 33 17.0
CLL *ex* x 05 37 38.0
CLL *e*SSSS 05 39 30.0
CLL LmV 06 00 00.0
comp=Z,2µm,19.0s
CLL Collm 86.72 330 *e*P **P 05 15 59.9 -0.9**
comp=Z,372nm,1.1s,mb6.1
CLL *e*pP pP 05 16 36.1 -0.1
CLL *e*PP PP 05 19 24.3 +0.1
CLL *e*SKSac SKSac 05 26 11.8 -2.6
CLL *e*S S 05 26 24.5 -1.7
CLL *es*S sS 05 27 20.9 -6.6
CLL *e*PS 05 27 49.3
CLL *e*PPS 05 28 13.9
CLL *e*SS SS 05 32 09.1 -0.4
CLL *e*LR LR 05 45 51.1
KDZ Kurdzhali 86.78 317 *i* P **P 05 16 01.5 +0.2**
MODS Modra-Piesok 86.81 326 *e*P **P 05 16 01.7 +0.4**
comp=Z,131nm,1.1s,mb5.7
MODS *e*S S 05 26 12.9 -14
MODS Modra-Piesok 86.81 326 *e*P **P 05 16 01.7 +0.4**
MODS *e*S S 05 26 12.9 -14
MODS pmax pmax
comp=Z,131nm,1.1s,mb5.7
FBE Freiberg 86.84 330 *e*P **P 05 16 01.2 -0.2**
comp=Z,623nm,1.3s,mb6.3
FBE *e*PP PP 05 19 23.8 -1.4
GOLH Golhisar 86.85 312 *i* P **P 05 16 00.2 -1.5**
ALN Alexandroupoli 86.87 316 *e*P **P 05 16 01.5 -0.3**
PLD Plovdiv 86.92 318 *e*P **P 05 16 01.8 -0.2**
PLD Plovdiv 86.92 318 *i* P **P 05 16 02.2 +0.2**
MLA1 Latheron 86.95 342 *e*P **P 05 16 01.9 +0.2**
PGB Panagyurishte 86.96 318 *i* P **P 05 16 02.2 +0.1**
PRA Prague 86.97 328 ⇓P **P 05 16 02.0 0.0**
PRU Pruhonice 86.98 328 ⇓*i*P **P 05 16 01.8 -0.3**
PRU *e* 05 26 12.3
PRU MLR MLR
comp=Z,2µm,13.2s
PRU Pruhonice 86.98 328 ⇓*i*P **P 05 16 01.8 -0.3**
PRU *e*SKS 05 26 12.3
PRU *ex* x 05 27 21.3
PRU AMS AMS 05 58 30.0
comp=Z,2µm,13.2s
AKHS Akhisar 87.00 314 *i* P **P 05 15 59.8 -2.6**
ZST Bratislava 87.02 326 *e*P **P 05 16 02.8 +0.5**
comp=Z,108nm,1.0s,mb5.6
ZST *e*PP PP 05 19 17.9 -8.9
ZST *e*S S 05 26 17.1 -12
ZST Bratislava 87.02 326 *e*P **P 05 16 02.8 +0.5**
ZST *e*S S 05 26 17.1 -12
ZST pmax pmax
comp=Z,108nm,1.0s,mb5.6
TREC Trest 87.03 327 ⇓*i*P **P 05 16 02.2 -0.1**
TREC *e*SKS 05 26 12.6
TREC *ex* x 05 27 26.3
TREC AMS AMS 05 58 00.0
comp=Z,2µm,18.2s
NRDL Niedersach Rie 87.06 332 *e*P **P 05 16 01.9 -0.5**
comp=Z,182nm,1.4s,mb5.7
NRDL *e*PP PP 05 19 26.8 -0.1
NRDL *e*SP 05 27 25.1

SMCO **Snowmass** 87.07 46 *e*P P 05 15 58.7 -4.1
comp=Z,146nm,1.2s,mb5.7
RZN **Rozhen** 87.17 317 *i* P P 05 16 03.3 +0.1
MVCO **Mesa Verde** 87.27 48 *e*P P 05 16 03.8 +0.1
comp=Z,62nm,1.1s,mb5.3
MVCO **Mesa Verde** 87.27 48 ⇑P P 05 16 03.6 -0.2
baz=87
MVCO ⇑S S 05 26 28.0 -4.1
baz=87
115A **Sonoran Desert** 87.34 54 ⇑P P 05 16 04.2 +0.1
baz=87
115A ⇓S S 05 26 31.8 -1.2
baz=87
AGMN **Agassiz Refuge** 87.34 34 *e*P P 05 16 02.3 -1.5
comp=Z,94nm,1.3s,mb5.5
RSC **Scourie** 87.39 343 *e*P P 05 16 04.4 +0.5
LBOS 87.40 284⇑*e*P P 05 16 05.0 +0.3
AYVA **Ayvalik** 87.44 315 *i* P P 05 16 03.1 -1.4
CLZ **Clausthal** 87.44 332 *e*P P 05 16 04.2 0.0
CLZ *e* 05 19 29.1
CLZ pmax pmax
comp=Z,306nm,1.3s,mb6.0
CLZ **Clausthal** 87.44 332 *e*P P 05 16 04.2 0.0
comp=Z,306nm,1.3s,mb6.0
CLZ *e*PP PP 05 19 29.1 -0.9
VTS **Vitosha** 87.48 319 *e*P P 05 16 04.9 +0.2
VTS **Vitosha** 87.48 319⇓*i*P P 05 16 04.7 +0.1
MVH1 **Achvaich** 87.50 342 *e*P P 05 16 04.8 +0.4
BOZC **Bozcaada** 87.51 315 *i* P P 05 16 01.0 -3.9
ISCO **Idaho Springs** 87.54 45 *e*P P 05 16 05.4 +0.5
comp=Z,40nm,1.2s,mb5.1
ISCO **Idaho Springs** 87.54 45 *e*P P 05 16 05.4 +0.4
ISCO pmax pmax
comp=Z,40nm,1.2s,mb5.1
MCD **Coleburn Disti** 87.54 341⇑*e*P P 05 16 04.2 -0.4
PKSM **Moragy** 87.60 324 P P 05 16 04.7 -0.5
PKSM **Moragy** 87.60 324⇑*i*P P 05 16 04.3 -0.8
TANN **Tannenbergstha** 87.60 330 *e*P P 05 16 04.3 -0.7
comp=Z,152nm,1.5s,mb5.6
TANN *e*PP PP 05 19 32.8 +1.5
REB **Eisghbrachaidh** 87.62 342 *e*P P 05 16 05.0 0.0
KDAG **Bornova** 87.62 314 *i* P P 05 16 04.7 -0.7
RTO **Tolsta** 87.63 343 *e*P P 05 16 05.0 -0.1
WERD **Werda** 87.64 330 *e*P P 05 16 04.8 -0.4
comp=Z,160nm,1.3s,mb5.7
WERD *e*PP PP 05 19 33.1 +1.4
GUNZ **Gunzen** 87.70 330 *e*P P 05 16 05.2 -0.3
comp=Z,426nm,1.8s,mb6.0
GUNZ *e*PP PP 05 19 33.1 +1.0
WERN **Wernitzgruen** 87.73 330 *e*P P 05 16 05.7 0.0
comp=Z,317nm,1.3s,mb6.0
WERN *e*PP PP 05 19 34.1 +1.7
NKC **Novy Kostel** 87.74 329⇓*i*P P 05 16 05.5 -0.2
NKC *e*SKS 05 26 17.1
NKC *e* 05 27 31.1
NKC **Novy Kostel** 87.74 329⇓*i*P P 05 16 05.5 -0.2
NKC *e* 05 26 17.1
NKC **Novy Kostel** 87.74 329⇓*i*P P 05 16 05.5 -0.2
NKC *e*SKS 05 26 17.1
NKC *ex* x 05 27 31.1
NKC AMS AMS 06 00 10.0
comp=Z,3μm,13.4s
BLCB **Balcova** 87.78 314 *e*P P 05 16 04.9 -1.3
116A **Eloy** 87.78 53 ⇑P P 05 16 06.2 -0.1
baz=88
116A ⇑S S 05 26 35.8 -1.4
baz=88
MOX **Moxa** 87.80 330 *e*P P 05 16 05.8 -0.2
comp=Z,193nm,1.6s,mb5.7
MOX *e* 05 19 28.8
MOX
comp=Z,8μm,20.0s
MOX **Moxa** 87.80 330 *e*P P 05 16 05.8 -0.2
MOX *e* 05 19 28.8
MOX pmax pmax
comp=Z,193nm,1.6s,mb5.7
MOX MLR MLR
comp=Z,8μm,20.0s
MOX **Moxa** 87.80 330 *e*P P 05 16 05.6 -0.4
comp=Z,198nm,1.5s,mb5.7
CONA **Conrad Observa** 87.81 326 *i* PcP PcP 05 16 06.3 -1.5
SNR=148
MMB **Musomiste** 87.81 318 *i* P P 05 16 05.0 -1.2
MDO **Dochfour** 87.97 342 *e*P P 05 16 06.2 -0.4
KKB **Krupnik** 88.01 318 *i* P P 05 16 06.8 -0.4
KHC **Kasperske Hory** 88.03 328⇑*e*P P 05 16 06.8 -0.3
KHC **Kasperske Hory** 88.03 328⇓*i*P P 05 16 06.8 -0.3
KHC *ex* x 05 16 13.0
KHC *ex* x 05 19 03.5
KHC *e*PP PP 05 19 32.5 -2.3
KHC *e*SKS 05 26 19.8
KHC *ex* x 05 27 23.1
KHC AMS AMS 05 59 30.0
comp=Z,3μm,16.8s
LOS **Limnos** 88.04 316 *e*P P 05 16 06.7 -0.6
MANZ **Manzenberg** 88.07 329 *e*P P 05 16 06.9 -0.4
comp=Z,208nm,1.5s,mb5.7
MANZ *e*SKSac SKSac 05 26 20.5 -2.1
MANZ *e*S S 05 26 38.5 -0.7
URLA **Izmir** 88.07 314 *i* P P 05 16 05.8 -1.7
IBBN **Ibbenburen** 88.14 333 *e*P P 05 16 07.1 -0.5
comp=Z,710nm,1.2s,mb6.4
IBBN *e*PP PP 05 19 35.3 -0.3
RRH **Rhenigidale** 88.16 343 *e*P P 05 16 07.4 -0.1
KAC **Achnashellach** 88.17 342⇑*e*P P 05 16 07.7 +0.1
GERES **GERESS Array B** 88.18 328 P P 05 16 07.3 -0.5
GERES 05 19 38.6
GERES **GERESS Array B** 88.18 328 P P 05 16 07.3 -0.5
comp=Z,118nm,0.7s,mb5.8,baz=43,slow=6.0,SNR=283
GERES PP PP 05 19 38.6 +2.7
comp=Z,24nm,0.8s,baz=54,slow=6.9,SNR=6.1
GERES PKKPbc PKKPbc 05 33 50.4 -1.0
comp=Z,0.8nm,0.7s,baz=220,slow=3.5,SNR=4.6
GERES LR LR 05 54 54.5
comp=Z,2μm,21.7s,baz=47,slow=35
ROTZ **Rotzenmuhle** 88.19 329 *e*P P 05 16 07.8 0.0
comp=Z,208nm,1.2s,mb5.8
SRS **Serrai** 88.19 317 *e*P P 05 16 06.8 -1.2
DIVS **Divcibare** 88.30 321 *e*P P 05 16 08.1 -0.3
BDRM **Kayabasi** 88.31 312 *i* P P 05 16 08.1 -0.6
WET **Wettzell** 88.34 329 *e*P P 05 16 08.2 -0.3
WET *e* 05 19 38.4
WET *e* 05 26 21.8
WET pmax pmax
comp=Z,110nm,1.1s,mb5.6
WET **Wettzell** 88.34 329 *e*P P 05 16 08.2 -0.3
comp=Z,110nm,1.1s,mb5.6
WET *e*PP PP 05 19 38.4 +1.1
WET *e*SKSac SKSac 05 26 21.8 -2.5
WET *e*SP 05 27 40.2
UBBA **Unterbreizbach** 88.36 331 *e*P P 05 16 07.9 -0.7
comp=Z,67nm,1.1s,mb5.4
CHOS **Chios island** 88.39 314 *e*P P 05 16 07.9 -1.1
KPL **Plockton** 88.40 342 *e*P P 05 16 08.8 +0.1
KPL AMb AMB 05 16 13.3
comp=Z,220nm,1.5s,mb5.8
ARSA **Arzberg** 88.44 326 *i* P P 05 16 08.9 -0.2
comp=Z,352nm,1.7s,mb5.9,SNR=52
ARSA **Arzberg** 88.44 326 *i* PcP PcP 05 16 08.9 -1.8
comp=Z,352nm,1.7s,SNR=52
OUR **Ouranopolis** 88.45 317 *e*P P 05 16 07.8 -1.5
KSB **Sheil Bridge** 88.45 342⇑*e*P P 05 16 08.6 -0.4
SOH **Sokhos** 88.52 317 *e*P P 05 16 08.5 -1.1
TUC **Tucson** 88.57 53 *e*P P 05 16 09.6 -0.4
comp=Z,34nm,1.1s,mb5.2
TUC *e*PP PP 05 19 39.1 -0.6
TUC **Tucson** 88.57 53 *e*P P 05 16 09.6 -0.4
TUC *e* 05 19 39.1
TUC pmax pmax
comp=Z,33nm,1.1s,mb5.2
KNT **Kendrikon** 88.57 318 *e*P P 05 16 08.7 -1.1
MOA **Molln** 88.62 327 *i* P P 05 16 09.8 -0.2
comp=Z,325nm,1.4s,mb6.1,SNR=92
MOA **Molln** 88.62 327 *i* PcP PcP 05 16 09.8 -1.7
comp=Z,325nm,1.4s,SNR=92
STIP **Stip** 88.64 319 *e*P P 05 16 07.3 -2.8
VAY **Valandovo** 88.66 318 *e*P P 05 16 08.9 -1.3
VAY **Valandovo** 88.66 318 *e*P P 05 16 07.4 -2.8
TRBA **At Turbah** 88.67 284 *e*P P 05 16 11.9 +1.2
GRA1 **Grafenberg Arr** 88.67 330 *e*P P 05 16 10.2 +0.1
comp=Z,405nm,1.2s,mb6.2
GRA1 *e*sP sP 05 17 20.6 +20
GRA1 *e*PP PP 05 19 39.6 -0.3
GRA1 *e*S S 05 26 44.8 -0.1
GRF **Grafenberg Arr** 88.67 330 *e*P P 05 16 10.2 +0.1
GRF *e* 05 19 39.6
GRF *e*S S 05 26 44.8 -0.1
GRF pmax pmax
comp=Z,405nm,1.2s,mb6.2
GRF **Grafenberg Arr** 88.67 330 *e*P P 05 16 10.2 +0.1
comp=Z,405nm,1.2s,mb6.2
GRF *e*sP sP 05 17 20.6 +20
GRF *e*PP PP 05 19 39.6 -0.3
GRF *e*S S 05 26 44.8 -0.1
GRFO **Grafenberg** 88.68 330 *e*P P 05 16 09.9 -0.2
comp=Z,400nm,1.3s,mb6.2
GRFO **Grafenberg** 88.68 330 P P 05 16 09.9 -0.2
GRFO pmax pmax
comp=Z,390nm,1.3s,mb6.2
PLG **Polygyros** 88.75 317 *e*P P 05 16 09.6 -1.1
PLG **Polygyros** 88.75 317 *e*P P 05 16 10.0 -0.7
WTSB **Winterswijk** 88.78 333 *e*P P 05 16 09.7 -0.9
comp=Z,180nm,1.0s,mb6.0
WTSB *e*PP PP 05 19 40.6 -0.1
HORT **Hortiatis** 88.81 317 *e*P P 05 16 09.5 -1.5
KAR1 **Arisaig** 88.82 342 *e*P P 05 16 11.3 +0.6
SDCO **Great Sand Dun** 88.86 46 *e*P P 05 16 11.4 +0.2
comp=Z,52nm,1.1s,mb5.4
SKO **Skopje** 88.89 319 *e*P P 05 16 11.7 +0.4
SKO **Skopje** 88.89 319 *e*P P 05 16 09.7 -1.6
PAIG **Paliouri** 88.89 317 *e*P P 05 16 10.0 -1.3
GRG **Griva** 88.99 318 *e*P P 05 16 10.2 -1.6
BUG **Bochum--Univer** 89.00 333 *e*P P 05 16 11.2 -0.4
comp=Z,252nm,1.0s,mb6.1
BUG *e*PP PP 05 19 42.7 +0.2
BUG *e*S S 05 26 46.0 -1.9
XSO **Sourhope Farm** 89.04 340⇑*e*P P 05 16 11.8 +0.1
EAB **Aberfoyle** 89.05 341 *e*P P 05 16 11.3 -0.4
PERS **Pernice** 89.07 326 *i* P P 05 16 11.6 -0.5
PERS *i* PcP PcP 05 16 12.7 -0.7
PLE **Pljevlja** 89.13 321⇑*i*P P 05 16 12.9 +0.5
IVA **Berane** 89.16 321⇑*i*P P 05 16 12.3 -0.2
AOS **Alonnisos** 89.24 316 *e*P P 05 16 11.9 -1.1
SISC **Sisak** 89.26 324 P P 05 16 13.8 +0.9
PVY **Plav** 89.30 320⇑*i*P P 05 16 12.1 -1.1
KRUS **Krusevo** 89.39 319 *e*P P 05 16 12.3 -1.4
PGBU **Glenifferbraes** 89.41 341⇑*e*P P 05 16 13.1 -0.4
PGBU AMb AMB 05 16 19.4
comp=Z,240nm,1.1s,mb6.0
OBKA **Obir** 89.44 326⇓*i*P P 05 16 13.2 -0.6
comp=Z,195nm,1.1s,mb5.9,SNR=51
OBKA **Obir** 89.44 326⇓*i*PcP PcP 05 16 13.2 -1.9
comp=Z,195nm,1.1s,SNR=51
EKA **Eskdalemuir Ar** 89.44 340 P P 05 16 13.4 -0.2
EKA 05 19 46.6
EKA **Eskdalemuir Ar** 89.44 340 P P 05 16 13.3 -0.2
comp=Z,35nm,0.9s,mb5.3,baz=30,slow=3.6,SNR=40
EKA PP PP 05 19 46.5 +0.8
comp=Z,47nm,0.9s,baz=32,slow=6.4,SNR=5.5
EKA PKKPbc PKKPbc 05 33 46.6 -1.9
comp=Z,1.0nm,0.6s,baz=242,slow=3.1,SNR=6.8
TNS **Taunus Mts** 89.46 331 *e*P P 05 16 13.3 -0.5
TNS *e* 05 19 48.5
TNS pmax pmax
comp=Z,80nm,1.0s,mb5.6
TNS **Taunus Mts** 89.46 331 *e*P P 05 16 13.3 -0.5
comp=Z,80nm,1.0s,mb5.6
TNS *e*PP PP 05 19 48.5 +2.4
ESK **Eskdalemuir** 89.47 340 P P 05 16 14.0 +0.3
comp=Z,493nm,1.0s,mb6.4,SNR=6.5
ESK **Eskdalemuir** 89.47 340⇑*e*P P 05 16 13.7 0.0
ESK AMb AMB 05 16 19.9
comp=Z,122nm,1.1s,mb5.8
ESK **Eskdalemuir** 89.47 340 *e*P P 05 16 13.4 -0.4
comp=Z,90nm,1.0s,mb5.7
ESK *e*PP PP 05 19 45.2 -0.9
ESK **Eskdalemuir** 89.47 340 *e*P P 05 16 13.4 -0.3
ESK *e* 05 19 45.2
ESK pmax pmax
comp=Z,90nm,1.0s,mb5.7
UPM **Unac-Piva** 89.48 321⇑*i*P P 05 16 14.2 +0.2
LIT **Litokhoron** 89.48 317 *e*P P 05 16 12.6 -1.5
APE **Apeiranthos** 89.53 313 *e*P P 05 16 12.1 -2.3
APE **Apeiranthos** 89.53 313 P P 05 16 12.9 -1.5
APE **Apeiranthos** 89.53 313⇓*i*P P 05 16 12.0 -2.4
XOR **Xorichti** 89.53 316 *e*P P 05 16 12.8 -1.5
NEO **Neokhori** 89.55 316 *e*P P 05 16 13.5 -1.0
XAL **Allendale** 89.56 339⇑*e*P P 05 16 13.4 -0.7
ECK **Cauldkaine Hil** 89.56 340⇑*e*P P 05 16 14.0 -0.2
BIA **Bitola** 89.57 319 *e*P P 05 16 12.7 -1.8
BIA **Bitola** 89.57 319 *e*P P 05 16 12.0 -2.5
KBA **Koelnbreinsper** 89.61 327 *i* P P 05 16 14.0 -0.5
comp=Z,190nm,1.1s,mb5.9,SNR=106
KBA **Koelnbreinsper** 89.61 327 *i* PcP PcP 05 16 14.0 -1.8
comp=Z,190nm,1.1s,SNR=106
KBA **Koelnbreinsper** 89.61 327 *i* P P 05 16 14.0 -0.6
KBA pmax pmax
comp=Z,190nm,1.1s,mb5.9
EYMN **Ely** 89.64 32 *e*P P 05 16 13.3 -1.4
comp=Z,145nm,1.4s,mb5.7
BHH **Howats Hill** 89.67 340 *e*P P 05 16 14.4 -0.3
NKY **Niksic** 89.69 321⇑*i*P P 05 16 14.7 -0.3
FNA **Florina** 89.69 318 *e*P P 05 16 13.4 -1.7
PUK **Puka** 89.71 320 *e*PN P 05 16 15.7 +0.6
BWH **Wardlaw** 89.72 340⇑*e*P P 05 16 14.9 -0.1
KZN **Kozani** 89.77 318 *e*P P 05 16 14.5 -1.0
FUR **Furstenfeldbru** 89.78 329 *e*P P 05 16 15.5 +0.2
FUR *e* 05 26 31.3
FUR pmax pmax
comp=Z,638nm,1.0s,mb6.5
FUR **Furstenfeldbru** 89.78 329 *e*P P 05 16 15.5 +0.2
comp=Z,638nm,1.0s,mb6.5
FUR *e*SKSac SKSac 05 26 31.3 -1.5
LJU **Ljubljana** 89.78 326 *i* P P 05 16 14.5 -0.9
LJU *i* PcP PcP 05 16 15.7 -0.9
LJU *e*S S 05 26 29.3 -26
TOD **Tromm** 89.78 331 *e*P P 05 16 15.2 -0.1
MYKA **Terra Mystica** 89.79 326⇓*i*PcP PcP 05 16 14.3 -2.3
comp=Z,775nm,1.5s
TTG **Podgorica** 89.80 321⇑*i*P P 05 16 15.0 -0.6
BOJS **Bojanci** 89.80 325 *i* P P 05 16 14.9 -0.6
BOJS *i* PcP PcP 05 16 15.1 -0.5
BOJS *e*S S 05 26 29.8 -26
BOJS *e* 05 27 57.0
BOJS *i* 05 28 00.7
OHR **Ohrid** 89.81 319 *e*P P 05 16 13.5 -2.1
OHR **Ohrid** 89.81 319 *e*P P 05 16 12.8 -2.8
LAZ **Ladron** 89.82 50 *e*P P 05 16 15.8 0.0
LAZ *e*PP PP 05 19 49.9 +0.3
BDL **Dobcross Hall** 89.83 340 *e*P P 05 16 15.1 -0.3
BRY **Bratogost** 89.88 321⇑*i*P P 05 16 15.2 -0.7
ANMO **Albuquerque** 89.94 49⇑*i*P P 05 16 16.7 +0.4
comp=Z,46nm,1.0s,mb5.4
ANMO *e*PP PP 05 19 49.5 -1.0
ANMO **Albuquerque** 89.94 49⇑*e*P P 05 16 16.5 +0.1
ANMO **Albuquerque** 89.94 49 P P 05 16 17.3 +1.0
comp=Z,34nm,0.9s,mb5.3,baz=285,slow=3.4,SNR=54
PTL **Penteli** 89.96 315 *e*P P 05 16 12.1 -4.3
SANT **Santorini** 90.00 313 *e*P P 05 16 14.1 -2.6
HGN **Heimansgroeve** 90.06 333 *e*P P 05 16 16.0 -0.6
comp=Z,172nm,1.2s,mb5.8
HGN *e*PP PP 05 19 49.6 -1.3
HGN *e*SKS 05 26 35.6
CKE **Keswick** 90.07 340⇑*e*P P 05 16 16.7 +0.2
LENM **Lemitar** 90.07 50 *e*P P 05 16 16.9 0.0
GCD **Castle Douglas** 90.08 340⇑*e*P P 05 16 16.3 -0.3
BUM **Brajici-Budva** 90.09 321⇑*i*P P 05 16 16.7 -0.2
PTCC **Patocco-Chiusa** 90.09 326 *i* P P 05 16 15.1 -1.7
ABH **Alteburg** 90.10 332 *e*P P 05 16 16.7 -0.1
VOY **Vojsko** 90.10 326⇓*e*P P 05 16 15.4 -1.5
VOY *e* 05 17 09.6
VOY *e* 05 17 27.0
ECSD **EROS,Sioux Fal** 90.11 37 *e*P P 05 16 16.1 -0.9
comp=Z,76nm,1.4s,mb5.4
ULC **Ulcinj** 90.12 320⇑*i*P P 05 16 17.0 -0.1
GMK **Mull of Kintyr** 90.13 341 *e*P P 05 16 17.1 +0.3
BEBN **Eben Emael** 90.14 333 P P 05 16 16.4 -0.5
comp=Z,65nm,1.1s,mb5.5
KBN **Korca** 90.14 318 *e*PN P 05 16 16.8 -0.4
HPK **Haverah Park** 90.14 339⇑*e*P P 05 16 17.1 +0.2
HPK AMb AMB 05 16 20.3
comp=Z,414nm,1.3s,mb6.2
MEM **Membach** 90.15 333 P P 05 16 16.5 -0.5
comp=Z,83nm,1.2s,mb5.5
Y22C **IRIS PASSCAL I** 90.16 50 ⇑P P 05 16 18.1 +0.7
baz=90
Y22C ⇓S S 05 26 52.5 -6.8
baz=90
TIR **Tirane** 90.19 319 *e*PN P 05 16 18.0 +0.6
HCY **Herceg Novi** 90.21 321⇑*i*P P 05 16 16.4 -1.1
LPM **Los Pinos Moun** 90.21 50 *e*P P 05 16 17.5 -0.1
LPM *e*PP PP 05 19 52.2 -0.5
GMNA **Gemona** 90.24 326 P P 05 16 16.5 -1.0
STU **Stuttgart** 90.25 330 *e*P P 05 16 17.3 -0.2
comp=Z,417nm,1.0s,mb6.3
ABTA **Abfaltersbach** 90.25 327⇓*i*P P 05 16 16.2 -1.4
comp=Z,372nm,1.1s,mb6.2,SNR=142
WATA **Walderalm** 90.25 328⇓*i*P P 05 16 17.0 -0.5
comp=Z,132nm,1.0s,mb5.8,SNR=46
WATA **Walderalm** 90.25 328⇓*i*PcP PcP 05 16 17.0 -1.6
comp=Z,132nm,1.0s,SNR=46
WATA **Walderalm** 90.25 328⇓*i*P P 05 16 17.0 -0.6
WATA pmax pmax
comp=Z,132nm,1.0s,mb5.8
AGG **Agios Georgios** 90.27 316 *e*P P 05 16 15.5 -2.3
WTTA **Wattenberg** 90.28 328 *i* P P 05 16 17.2 -0.5
comp=Z,380nm,1.3s,mb6.2,SNR=65
WTTA **Wattenberg** 90.28 328 *i* PcP PcP 05 16 17.2 -1.6
comp=Z,380nm,1.3s,SNR=65
WTTA **Wattenberg** 90.28 328 *i* P P 05 16 17.2 -0.5
WTTA pmax pmax
comp=Z,380nm,1.3s,mb6.2
ZKR **Zakros** 90.28 312 *e*P P 05 16 15.2 -2.8
GAL1 **Galloway** 90.30 341⇑*e*P P 05 16 17.4 -0.2
GAL1 AMb AMB 05 16 24.1
comp=Z,169nm,1.2s,mb5.8
KTD **Kalmit** 90.30 331 *e*P P 05 16 17.8 +0.1
BNM **Barren Site** 90.31 50 *e*P P 05 16 18.0 -0.1
BNM *e*PP PP 05 19 53.9 +0.4
STON **Ston** 90.36 322 P P 05 16 17.5 -0.7
MEV **Metsovon** 90.43 318 *e*P P 05 16 17.4 -1.1
RUP **Ruppelstein** 90.44 332 *e*P P 05 16 18.5 +0.2
MOTA **Moosalm** 90.46 328⇓*i*P P 05 16 17.8 -0.7
comp=Z,198nm,1.0s,mb6.0,SNR=92
MOTA **Moosalm** 90.46 328⇓*i*PcP PcP 05 16 17.8 -1.7
comp=Z,198nm,1.0s,SNR=92
MOTA **Moosalm** 90.46 328⇓*i*P P 05 16 17.9 -0.6
MOTA pmax pmax
comp=Z,198nm,1.0s,mb6.0
SQTA **Sankt Quirin** 90.51 328⇓*i*P P 05 16 18.1 -0.6
comp=Z,152nm,1.0s,mb6.0,SNR=86
SQTA **Sankt Quirin** 90.51 328⇓*i*PcP PcP 05 16 18.1 -1.7
comp=Z,152nm,1.0s,SNR=86
SQTA **Sankt Quirin** 90.51 328⇓*i*P P 05 16 18.1 -0.6
SQTA pmax pmax
comp=Z,153nm,1.0s,mb6.0
RETA **Reutte** 90.51 328 *i* PcP PcP 05 16 18.5 -1.3
comp=Z,507nm,1.3s,SNR=42
LTK **Loutraki** 90.52 315 *e*P P 05 16 16.9 -2.1
BCLA **Clavier** 90.58 333 P P 05 16 18.4 -0.6
comp=Z,88nm,1.3s,mb5.6
NPS **Neapolis** 90.58 312 *e*P P 05 16 18.1 -1.2
UCC **Uccle** 90.65 334 P P 05 16 19.5 +0.2
comp=Z,112nm,1.5s,mb5.7
EVR **Evrytania** 90.65 317 *e*P P 05 16 18.0 -1.6
NVLJ **Novalja** 90.66 324 P P 05 16 17.6 -1.9
LANF **Langenberg** 90.68 331 *e*P P 05 16 19.3 -0.2
DID **Didima** 90.68 315 *e*P P 05 16 16.4 -3.4
KBI1 **Birley Grange** 90.71 338⇑*e*P P 05 16 19.3 -0.3
GIM **North Isle of** 90.73 340⇑*e*P P 05 16 19.4 -0.2
LAST **Lasithi** 90.73 312 *e*P P 05 16 19.2 -0.8
WLF **Walferdange** 90.83 332 *e*P P 05 16 20.0 -0.2
comp=Z,337nm,1.3s,mb6.2
WLF *e*PP PP 05 19 56.7 -0.3
WLF **Walferdange** 90.83 332 *e*P P 05 16 20.0 -0.2
WLF *e* 05 19 56.7
WLF pmax pmax
comp=Z,337nm,1.3s,mb6.2
WLF **Walferdange** 90.83 332 P P 05 16 20.7 +0.5
comp=Z,187nm,1.3s,mb6.0
WLF **Walferdange** 90.83 332 *e*P P 05 16 20.3 +0.1
comp=Z,391nm,1.3s,mb6.3
WLF *e*PP PP 05 19 57.1 +0.1
FETA **Feichten** 90.88 328 *i* PcP PcP 05 16 20.1 -1.3
comp=Z,364nm,1.1s,SNR=170
SNF **Seneffe** 90.91 334 P P 05 16 20.0 -0.6
comp=Z,111nm,1.3s,mb5.7
SPAK **Spaichingen-Ko** 90.93 330 *e*P P 05 16 20.6 -0.1
BFO **Black Forest** 90.96 330 P P 05 16 20.6 -0.2
comp=Z,2μm,0.9s,mb7.1,SNR=88
BFO **Black Forest** 90.96 330 *e*P P 05 16 20.3 -0.5
BFO *e* 05 19 58.6
BFO pmax pmax
comp=Z,447nm,1.1s,mb6.4
BFO **Black Forest** 90.96 330 *e*P P 05 16 20.3 -0.5
comp=Z,447nm,1.1s,mb6.4
BFO *e*PP PP 05 19 58.6 +0.6
SELA **Sela** 91.01 316 *e*P P 05 16 20.0 -1.3
KWE **Weaver Farm** 91.01 338⇑*e*P P 05 16 20.8 -0.1
GIVF **Givet** 91.02 333 *e*P P 05 16 20.2 -0.9
comp=Z,371nm,1.3s,mb6.0
GIVF **Givet** 91.02 333 *e*P P 05 16 20.2 -0.9
comp=Z,186nm,1.3s,mb6.0
GIVF **Givet** 91.02 333 *e*P P 05 16 20.2 -0.9
GIVF pmax pmax
comp=Z,186nm,1.3s,mb6.0
IDI **Anoyia** 91.03 312 LR LR 06 02 41.8
comp=Z,693nm,21.2s,baz=186,slow=39
DAVA **Damuels** 91.06 329 *i* P P 05 16 21.0 -0.3
comp=Z,594nm,1.1s,mb6.5,SNR=193
DAVA **Damuels** 91.06 329 *i* PcP PcP 05 16 21.0 -1.2
comp=Z,594nm,1.1s,SNR=193
TCR **Colchester** 91.07 336 *e*P P 05 16 21.0 -0.3
CWF **Charnwood Fore** 91.07 338⇑*e*P P 05 16 21.1 -0.1
CWF AMb AMB 05 16 24.1
comp=Z,504nm,1.3s,mb6.4
SRN **Sarande** 91.08 318 *e*PN P 05 16 20.8 -0.7
DOU **Dourbes** 91.11 333 P P 05 16 20.9 -0.6
comp=Z,66nm,1.4s,mb5.5
IGT **Igoumenitsa** 91.11 318 *e*P P 05 16 20.1 -1.6
CTI **Castel Tesino** 91.17 327 P P 05 16 20.4 -1.4
GMM **Mts of Mourne** 91.20 341⇑*e*P P 05 16 21.3 -0.5
SIVA **Sivas** 91.25 312 *e*P P 05 16 22.3 -0.2
BAIF **Baives** 91.30 333 *e*P P 05 16 21.6 -0.7
comp=Z,241nm,1.2s,mb5.8
BAIF **Baives** 91.30 333 *e*P P 05 16 21.6 -0.7
comp=Z,120nm,1.2s,mb5.8
BAIF **Baives** 91.30 333 *e*P P 05 16 21.6 -0.7
BAIF pmax pmax
comp=Z,120nm,1.2s,mb5.8
VLX **Vlachokerasia** 91.30 315 *e*P P 05 16 21.5 -1.1
KEK **Kerkira** 91.31 318 *e*P P 05 16 21.1 -1.5
CDF **Champ du Feu** 91.34 331 *e*P P 05 16 22.0 -0.6
comp=Z,776nm,1.2s,mb6.3
CDF **Champ du Feu** 91.34 331 *e*P P 05 16 22.0 -0.6
comp=Z,388nm,1.2s,mb6.3
CDF **Champ du Feu** 91.34 331 *e*P P 05 16 22.0 -0.6
CDF pmax pmax
comp=Z,388nm,1.2s,mb6.3
VLI **Veliai** 91.37 314 *e*P P 05 16 20.5 -2.5
VAM **Vamos** 91.40 313 *e*P P 05 16 23.3 +0.2
DAVOX **Davos/Dischmat** 91.44 328 LR LR 06 02 02.3
comp=Z,1μm,18.5s,baz=34,slow=38
BRMO **Bormio** 91.44 328 *i* P P 05 16 22.8 -0.3
comp=Z,158nm,0.9s,mb6.0
FELD **Feldberg im Sc** 91.44 330 *e*P P 05 16 22.8 -0.3
LKD **Levkas** 91.47 317 *e*P P 05 16 22.4 -1.0
ECH **Echery** 91.55 331 *e*P P 05 16 23.0 -0.5
SBD1 **Bryn Du** 91.56 339⇑*e*P P 05 16 23.3 -0.2
KARN **Karanos** 91.58 313 *e*P P 05 16 22.9 -1.0
KYTH **Kithira** 91.58 314 *e*P P 05 16 22.5 -1.5
MENF **Mencas** 91.67 335 *e*P P 05 16 23.7 -0.4
CBKS **Cedar Bluff** 91.68 43 *e*P P 05 16 23.1 -1.2
comp=Z,128nm,1.2s,mb5.8
CBKS **Cedar Bluff** 91.68 43 P P 05 16 23.4 -1.0
CBKS pmax pmax
comp=Z,130nm,1.1s,mb5.9
MABI **Malga Bissina** 91.69 328 P P 05 16 23.1 -1.2
ITM **Ithomi** 91.69 315 *e*P P 05 16 23.0 -1.5
SKP1 **Kophill** 91.76 337⇑*e*P P 05 16 24.1 -0.4
HLM1 **Long Mynd** 91.77 338⇑*e*P P 05 16 24.3 -0.1
KFL **Anninata** 91.78 317 *e*P P 05 16 24.1 -0.7
GVD **Gavdhos** 91.83 312 *e*P P 05 16 22.9 -2.2
MOF **Molkenrain** 91.84 331 *e*P P 05 16 24.7 -0.2
VLS **Valsamata** 91.85 317 *e*P P 05 16 24.0 -1.2
SSW **Stow on the Wo** 91.90 338⇑*e*P P 05 16 25.5 +0.4

TUE Stuetta 91.92 328 P P 05 16 25.2 -0.1
BBS Basel-Blauen 91.97 330 eP P 05 16 25.0 -0.5
HINF Hinteralfeld 91.98 331 eP P 05 16 24.5 -1.1
comp=Z,427nm,1.1s,mb6.1
HINF Hinteralfeld 91.98 331 eP P 05 16 24.5 -1.1
comp=Z,213nm,1.1s,mb6.1
HINF Hinteralfeld 91.98 331 eP P 05 16 24.5 -1.1
HINF pmax pmax
comp=Z,213nm,1.1s,mb6.1
PYL PYLOS 91.99 315 eP P 05 16 25.6 -0.3
THEF They Montfort 92.03 331 eP P 05 16 25.4 -0.4
HAU Haudompre 92.05 331 eP P 05 16 25.0 -0.9
comp=Z,464nm,1.3s,mb6.1
HAU eMLR MLR
comp=Z,2μm,19.2s
HAU Haudompre 92.05 331 eP P 05 16 25.0 -0.9
comp=Z,232nm,1.3s,mb6.0
HAU LR LR
comp=Z,2μm,19.3s
HAU Haudompre 92.05 331 eP P 05 16 25.0 -0.9
HAU pmax pmax
comp=Z,232nm,1.3s,mb6.0
HAU MLR MLR
comp=Z,2μm,19.3s
HAE Alders End 92.07 338⇑ eP P 05 16 25.9 0.0
COWI Conover 92.09 32 eP P 05 16 24.9 -1.3
comp=Z,32nm,1.3s,mb5.2
FGMS Monte Sant'Ang 92.09 322 P P 05 16 25.7 -0.5
DLF Lyons Farm 92.20 341⇑ iP P 05 16 18.2 -8.2
DLF Lyons Farm 92.20 341⇑ iP P 05 16 26.2 -0.2
DLF Lyons Farm 92.20 341⇑ iP P 05 16 26.2 -0.2
MEZF Maizieres J'vi 92.20 332 eP P 05 16 26.2 -0.3
comp=Z,911nm,1.2s,mb6.4
MEZF Maizieres J'vi 92.20 332 eP P 05 16 26.2 -0.3
comp=Z,911nm,1.2s,mb6.7
WOL Wolverton 92.25 337⇑ eP P 05 16 26.2 -0.5
MCH1 Michaelchurch 92.25 338⇑ eP P 05 16 26.5 -0.2
MCH1 AMb AMB 05 16 30.6
comp=Z,386nm,1.4s,mb6.2
HTR Trewern Hill 92.27 338⇑ eP P 05 16 26.7 -0.1
SWN1 Swindon 92.27 337⇑ eP P 05 16 26.9 +0.1
CING Cingoli 92.35 324 P P 05 16 27.0 -0.4
LOMF Lomont 92.36 330 eP P 05 16 26.9 -0.4
DCN Croghan 92.36 341⇑ iP P 05 16 19.1 -8.1
DCN Croghan 92.36 341⇑ iP P 05 16 27.0 -0.2
DCN Croghan 92.36 341⇑ iP P 05 16 27.0 -0.2
SCHQ Schefferville 92.41 15 eP P 05 16 26.7 -0.6
comp=Z,41nm,1.0s,mb5.4
SCHQ Schefferville 92.41 15 P P 05 16 26.9 -0.4
comp=Z,18nm,0.8s,mb5.1,baz=356,slow=4.6,SNR=9.4
HGH Gray Hill 92.50 338⇑ eP P 05 16 27.6 -0.2
MNTX Cornudas Mount 92.63 51 eP P 05 16 28.7 -0.2
comp=Z,11μm,1.3s
MNTX ePP PP 05 20 12.1 +0.3
FG5 Orsara di Pugl 92.76 322 P P 05 16 30.1 +0.8
MURB Monte Urbino 92.77 325 P P 05 16 30.2 +0.9
FNVD Fontana Vidola 92.80 326 P P 05 16 29.7 +0.3
ORI Oriolo Calabro 92.97 320 P P 05 16 30.6 +0.3
AQU L'Aquila 92.98 324 P P 05 16 30.4 +0.1
MIDA Miranda 93.05 323 P P 05 16 30.2 -0.4
AMTX Amarillo 93.05 47 eP P 05 16 30.5 -0.3
comp=Z,177nm,1.1s,mb6.1
BDI Bagni Di Lucca 93.14 326 P P 05 16 30.6 -0.3
BOB Bobbio (Coli) 93.16 327 P P 05 16 30.6 -0.4
VLC Villacollemand 93.16 326 P P 05 16 32.4 +1.3
CSSN Cassano Irpino 93.19 322 P P 05 16 30.3 -1.0
comp=Z,31nm,0.8s,mb5.5
OG01 Vacheresse 93.21 330 eP P 05 16 31.1 -0.2
CSNT Castellina Chi 93.23 325 P P 05 16 31.0 -0.4
CABF La Chapelle 93.25 330 eP P 05 16 30.7 -0.7
comp=Z,464nm,1.0s,mb6.2
CABF La Chapelle 93.25 330 eP P 05 16 30.7 -0.7
comp=Z,232nm,1.0s,mb6.3
CABF La Chapelle 93.25 330 eP P 05 16 30.7 -0.7
CABF pmax pmax
comp=Z,232nm,1.0s,mb6.3
KSU1 Kansas State U 93.29 41 eP P 05 16 30.5 -1.3
comp=Z,120nm,0.9s,mb6.0
KSU1 epP pP 05 17 05.4 -2.1
HEX Exmoor 93.31 338⇑ eP P 05 16 30.8 -0.8
MNS Montasola 93.33 324 P P 05 16 30.7 -1.2
TIP Timpagrande 93.40 319 P P 05 16 32.2 -0.1
CERT Cerreto 93.49 323 P P 05 16 32.4 -0.2
LOR Lormes 93.67 332 eP P 05 16 32.5 -0.8
comp=Z,707nm,1.1s,mb6.4
LOR epP pP 05 17 08.3 -0.7
LOR eMLR MLR
comp=Z,2μm,20.8s
LOR Lormes 93.67 332 eP P 05 16 32.5 -0.8
comp=Z,353nm,1.1s,mb6.4
LOR epP pP 05 17 08.3 -0.7
LOR LR LR
comp=Z,2μm,20.8s
LOR Lormes 93.67 332 eP P 05 16 32.5 -0.8
LOR e*PP pP 05 17 08.3 -0.7
LOR pmax pmax
comp=Z,353nm,1.1s,mb6.4
LOR MLR MLR
comp=Z,2μm,20.8s
RSL Roselend 93.73 329 eP P 05 16 33.3 -0.4
LPL La Plagne 93.82 329 eP P 05 16 33.6 -0.5
comp=Z,440nm,0.9s,mb6.3
LPL epP pP 05 17 09.2 -0.6
LPL La Plagne 93.82 329 eP P 05 16 33.6 -0.5
comp=Z,220nm,0.9s,mb6.3
LPL epP pP 05 17 09.2 -0.6
LPL La Plagne 93.82 329 eP P 05 16 33.6 -0.5
LPL pmax pmax
comp=Z,220nm,0.9s,mb6.3
LPG La Plagne 93.83 329 eP P 05 16 33.8 -0.3
comp=Z,556nm,0.9s,mb6.4
LPG La Plagne 93.83 329 eP P 05 16 33.8 -0.3
comp=Z,278nm,0.9s,mb6.4
LPG La Plagne 93.83 329 eP P 05 16 33.8 -0.3
LPG pmax pmax
comp=Z,278nm,0.9s,mb6.4
DYA Yadsworthy 93.89 338⇑ eP P 05 16 33.6 -0.7
DYA AMb AMB 05 16 34.5
comp=Z,190nm,1.6s,mb6.0
JFWS Jewell Farm 93.94 35 eP P 05 16 33.6 -1.1
comp=Z,35nm,1.1s,mb5.4
JFWS Jewell Farm 93.94 35 P P 05 16 33.8 -0.9
JFWS pmax pmax
comp=Z,35nm,1.0s,mb5.4
OG05 Jujurieux 93.97 330 eP P 05 16 34.6 -0.1
SSF Saint Saulge 93.98 332 eP P 05 16 34.0 -0.7
comp=Z,608nm,1.1s,mb6.4
SSF Saint Saulge 93.98 332 eP P 05 16 34.0 -0.7
comp=Z,304nm,1.1s,mb6.3
SSF Saint Saulge 93.98 332 eP P 05 16 34.0 -0.7
SSF pmax pmax
comp=Z,304nm,1.1s,mb6.3
FLN La Foliniere 94.12 335 eP P 05 16 34.6 -0.8
comp=Z,519nm,1.2s,mb6.2
FLN eMLR MLR
comp=Z,2μm,21.0s
FLN La Foliniere 94.12 335 eP P 05 16 34.6 -0.8
comp=Z,260nm,1.2s,mb6.2
FLN LR LR
comp=Z,2μm,21.0s
FLN La Foliniere 94.12 335 eP P 05 16 34.6 -0.8
FLN pmax pmax
comp=Z,260nm,1.2s,mb6.2
FLN MLR MLR
comp=Z,2μm,21.0s
LDF La Druitiere 94.13 335 eP P 05 16 34.5 -0.9
comp=Z,490nm,1.2s,mb6.2
LDF epP pP 05 17 10.2 -0.9
LDF La Druitiere 94.13 335 eP P 05 16 34.5 -0.9
comp=Z,245nm,1.2s,mb6.2
LDF epP pP 05 17 10.2 -0.9
LDF La Druitiere 94.13 335 eP P 05 16 34.5 -0.9
LDF pmax pmax
comp=Z,245nm,1.2s,mb6.2
FIN Finale Ligure 94.16 328 P P 05 16 34.1 -1.5
HYF Humbligny 94.16 333 eP P 05 16 35.4 -0.2
SMF Signal de Mont 94.17 332 eP P 05 16 34.8 -0.9
comp=Z,677nm,1.1s,mb6.4
SMF epP pP 05 17 10.7 -0.7
SMF Signal de Mont 94.17 332 eP P 05 16 34.8 -0.9
comp=Z,338nm,1.1s,mb6.4
SMF epP pP 05 17 10.7 -0.7
SMF Signal de Mont 94.17 332 eP P 05 16 34.8 -0.9
SMF e*PP pP 05 17 10.7 -0.7
SMF pmax pmax
comp=Z,338nm,1.1s,mb6.4
BNI Bardonecchia 94.21 329 P P 05 16 35.6 -0.2
AVF Avril sur Loir 94.26 332 eP P 05 16 35.3 -0.7
comp=Z,1μm,1.1s,mb6.6
AVF Avril sur Loir 94.26 332 eP P 05 16 35.3 -0.7
comp=Z,504nm,1.1s,mb6.6
AVF Avril sur Loir 94.26 332 eP P 05 16 35.3 -0.7
AVF pmax pmax
comp=Z,504nm,1.1s,mb6.6
CSA1 St Austell 94.28 338 eP P 05 16 35.2 -0.8
GDM Grand'Maison 94.34 329 eP P 05 16 36.2 -0.2
DOI San Damiano 94.37 328 P P 05 16 34.0 -2.6
MBDF Montbardon 94.42 329 eP P 05 16 35.4 -1.4
comp=Z,185nm,0.8s,mb6.0
MBDF Montbardon 94.42 329 eP P 05 16 35.4 -1.4
comp=Z,93nm,0.8s,mb6.0
MBDF Montbardon 94.42 329 eP P 05 16 35.4 -1.4
MBDF pmax pmax
comp=Z,93nm,0.8s,mb6.0
GRR Gorron 94.57 335 eP P 05 16 36.9 -0.6
comp=Z,626nm,1.2s,mb6.4
GRR Gorron 94.57 335 eP P 05 16 36.9 -0.6
comp=Z,313nm,1.2s,mb6.4
GRR Gorron 94.57 335 eP P 05 16 36.9 -0.6
GRR pmax pmax
comp=Z,313nm,1.2s,mb6.4
SURF Saint Ours 94.59 329 eP P 05 16 37.1 -0.5
SCLL Scilla 94.63 319 P P 05 16 36.7 -1.2
SAOF Saorge 94.63 328 eP P 05 16 37.0 -0.8
BGF Bois d'Agland 94.65 332 eP P 05 16 37.2 -0.6
comp=Z,432nm,1.1s,mb6.3
BGF Bois d'Agland 94.65 332 eP P 05 16 37.2 -0.6
comp=Z,216nm,1.1s,mb6.3
BGF Bois d'Agland 94.65 332 eP P 05 16 37.2 -0.6
BGF pmax pmax
comp=Z,216nm,1.1s,mb6.3
ORIF Oris-en-Rattie 94.67 329 eP P 05 16 37.2 -0.8
comp=Z,107nm,0.7s,mb5.9
ORIF eMLR MLR
comp=Z,2μm,18.8s
ORIF Oris-en-Rattie 94.67 329 eP P 05 16 37.2 -0.8
comp=Z,54nm,0.7s,mb5.9
ORIF Oris-en-Rattie 94.67 329 eP P 05 16 37.2 -0.8
ORIF pmax pmax
comp=Z,54nm,0.7s,mb5.9
TOUF Mont Tournerai 94.75 328 eP P 05 16 38.0 -0.4
SBF Sospel 94.78 328 eP P 05 16 36.8 -1.7
comp=Z,406nm,0.9s,mb6.3
SBF Sospel 94.78 328 eP P 05 16 36.8 -1.7
comp=Z,203nm,0.9s,mb6.3
SBF Sospel 94.78 328 eP P 05 16 36.8 -1.7
SBF pmax pmax
comp=Z,203nm,0.9s,mb6.3
LUCF Luceram 94.80 328 eP P 05 16 37.8 -0.8
PLDF La Plantade 94.80 331 eP P 05 16 39.0 +0.4
MVIF Mont Vial 94.89 328 eP P 05 16 38.3 -0.7
REVF Revere 94.91 328 eP P 05 16 38.1 -1.0
AGO Saint Agoulin 94.94 332 eP P 05 16 39.6 +0.4
WMOK Wichita Mounta 94.95 45 eP P 05 16 38.9 -0.6
comp=Z,60nm,1.4s,mb5.6
WMOK ePP PP 05 20 26.9 -2.8
WMOK Wichita Mounta 94.95 45 eP P 05 16 38.9 -0.6
WMOK e 05 20 26.9
WMOK pmax pmax
comp=Z,60nm,1.4s,mb5.6
PGF Pioggiola 95.04 326 eP P 05 16 38.2 -1.5
comp=Z,140nm,0.9s,mb5.9
PGF Pioggiola 95.04 326 eP P 05 16 38.2 -1.5
comp=Z,70nm,0.9s,mb5.9
PGF Pioggiola 95.04 326 eP P 05 16 38.2 -1.5
PGF pmax pmax
comp=Z,70nm,0.9s,mb5.9
CALN Calern 95.12 328 eP P 05 16 39.4 -0.6
TCF Toulx Ste Croi 95.13 332 eP P 05 16 39.5 -0.5
comp=Z,358nm,1.1s,mb6.2
TCF epP pP 05 17 15.3 -0.5
TCF Toulx Ste Croi 95.13 332 eP P 05 16 39.5 -0.5
comp=Z,179nm,1.1s,mb6.2
TCF epP pP 05 17 15.3 -0.5
TCF Toulx Ste Croi 95.13 332 eP P 05 16 39.5 -0.5
TCF e*PP pP 05 17 15.3 -0.5
TCF pmax pmax
comp=Z,179nm,1.1s,mb6.2
COLF Collangettes 95.14 331 eP P 05 16 40.0 -0.1
CORF Corte 95.16 326 eP P 05 16 39.5 -0.7
OCF Saint Nazaire 95.19 329 eP P 05 16 39.7 -0.6
OG26 St.-Nazaire-De 95.19 329 eP P 05 16 39.7 -0.6
PYM Petit Puy Mans 95.23 331 eP P 05 16 40.3 -0.2
VIVF Saint-Julien-l 95.24 330 eP P 05 16 39.7 -0.9
comp=Z,493nm,1.1s,mb6.3
VIVF epP pP 05 17 15.6 -0.7
VIVF Saint-Julien-l 95.24 330 eP P 05 16 39.7 -0.9
comp=Z,247nm,1.1s,mb6.3
VIVF epP pP 05 17 15.6 -0.7
VIVF Saint-Julien-l 95.24 330 eP P 05 16 39.7 -0.9
VIVF e*PP pP 05 17 15.6 -0.7
VIVF pmax pmax
comp=Z,247nm,1.1s,mb6.3
LTX Lajitas 95.25 52 eP P 05 16 40.9 0.0
comp=Z,121nm,1.1s,mb6.0
LTX ePP PP 05 20 30.2 -2.0
LTX Lajitas 95.25 52 P P 05 16 41.0 +0.1
LTX pmax pmax
comp=Z,120nm,1.1s,mb6.0
TXAR Lajitas Array 95.25 52 P P 05 16 40.9 0.0
TXAR pP pP 05 17 14.2 -2.4
TXAR PP PP 05 20 30.6 -1.7
TXAR LR LR 05 56 37.5
TXAR Lajitas Array 95.25 52 P P 05 16 40.9 0.0
TXAR *PP pP 05 17 14.3 -2.4
TXAR 05 20 30.6
TXAR Lajitas Array 95.25 52 P P 05 16 40.9 0.0
comp=Z,30nm,0.6s,mb5.7,baz=307,slow=2.5,SNR=137
TXAR pP pP 05 17 14.2 -2.4
comp=Z,25nm,0.9s,baz=243,slow=1.4,SNR=2.3
TXAR PP PP 05 20 30.6 -1.7
comp=Z,6.2nm,0.9s,baz=312,slow=5.9,SNR=4.8
TXAR LR LR 05 56 37.5
comp=Z,1μm,20.2s,baz=135,slow=33
SGMF Saint Gilles 95.30 336 eP P 05 16 40.4 -0.4
comp=Z,317nm,1.3s,mb6.1
SGMF Saint Gilles 95.30 336 eP P 05 16 40.4 -0.4
comp=Z,158nm,1.3s,mb6.1
SGMF Saint Gilles 95.30 336 eP P 05 16 40.4 -0.4
SGMF pmax pmax
comp=Z,159nm,1.3s,mb6.1
STOF St-Etienne Org 95.37 329 eP P 05 16 40.7 -0.5
FRF La Foret Royal 95.38 328 eP P 05 16 39.5 -1.7
comp=Z,262nm,1.0s,mb6.1
FRF La Foret Royal 95.38 328 eP P 05 16 39.5 -1.7
comp=Z,131nm,1.0s,mb6.1
FRF La Foret Royal 95.38 328 eP P 05 16 39.5 -1.7
FRF pmax pmax
comp=Z,131nm,1.0s,mb6.1
VERF Verneugheol 95.45 332 eP P 05 16 42.5 +1.0
ROSF Rostrenen 95.47 336 eP P 05 16 41.2 -0.4
comp=Z,314nm,1.3s,mb6.1
ROSF Rostrenen 95.47 336 eP P 05 16 41.2 -0.4
comp=Z,157nm,1.3s,mb6.1
ROSF Rostrenen 95.47 336 eP P 05 16 41.2 -0.4
ROSF pmax pmax
comp=Z,157nm,1.3s,mb6.1
SMRF Simiane la Rot 95.54 329 eP P 05 16 41.0 -1.0
comp=Z,162nm,1.1s,mb6.0
SMRF Simiane la Rot 95.54 329 eP P 05 16 41.0 -1.0
comp=Z,162nm,1.1s,mb6.3
LBL Lubilhac 95.55 331 eP P 05 16 42.4 +0.4
TAVF Tavernes 95.60 328 eP P 05 16 40.5 -1.8
OSPF L'Ospedale 95.61 325 eP P 05 16 41.6 -0.8
LMR La Mourre 95.62 328 eP P 05 16 40.8 -1.5
comp=Z,368nm,1.1s,mb6.3
LMR La Mourre 95.62 328 eP P 05 16 40.8 -1.5
comp=Z,184nm,1.1s,mb6.3
LMR La Mourre 95.62 328 eP P 05 16 40.8 -1.5
LMR pmax pmax
comp=Z,184nm,1.1s,mb6.3
FRNF Fournols 95.71 332 eP P 05 16 44.2 +1.5
CSLB Castelbuono 95.78 320 P P 05 16 42.7 -0.5
QUIF Quistinic 95.80 336 eP P 05 16 41.2 -1.8
MFF Saint Martin d 95.80 334 eP P 05 16 42.8 -0.3
comp=Z,622nm,1.2s,mb6.5
MFF Saint Martin d 95.80 334 eP P 05 16 42.8 -0.3
comp=Z,311nm,1.2s,mb6.5
MFF Saint Martin d 95.80 334 eP P 05 16 42.8 -0.3
MFF pmax pmax
comp=Z,311nm,1.2s,mb6.5
PUYF Puyloubier 95.83 329 eP P 05 16 41.6 -1.7
PRAF Pradon 95.86 329 eP P 05 16 43.3 -0.1
TREF Trevaresse 95.90 329 eP P 05 16 43.5 -0.1
VAE Valguarnera 95.91 320 P P 05 16 46.0 +2.2
comp=Z,22nm,0.4s,mb5.8,baz=315,slow=7.1,SNR=2.2
VAE LR LR 06 07 23.4
comp=Z,1μm,18.2s,baz=28,slow=40
LCHF La Chataignera 95.97 334 eP P 05 16 45.4 +1.6
HMDC Modica 96.06 319 P P 05 16 44.3 -0.2
GELF Grande-Etoile 96.07 329 eP P 05 16 43.7 -0.7
HDIL Hopedale 96.18 36 eP P 05 16 43.8 -1.2
comp=Z,73nm,1.2s,mb5.9
RJF Les Rejaudoux 96.21 332 eP P 05 16 44.7 -0.3
comp=Z,478nm,1.2s,mb6.4
RJF eMLR MLR
comp=Z,2μm,22.5s
RJF Les Rejaudoux 96.21 332 eP P 05 16 44.7 -0.3
comp=Z,239nm,1.2s,mb6.4
RJF LR LR
comp=Z,2μm,22.5s
RJF Les Rejaudoux 96.21 332 eP P 05 16 44.7 -0.3
RJF pmax pmax
comp=Z,239nm,1.2s,mb6.4
RJF MLR MLR
comp=Z,2μm,22.5s
LASF Ste Croix 96.22 330 eP P 05 16 44.4 -0.6
comp=Z,272nm,1.0s,mb6.2
CAF Calviac 96.29 332 eP P 05 16 45.3 -0.1
comp=Z,334nm,1.3s,mb6.2
CAF Calviac 96.29 332 eP P 05 16 45.3 -0.1
comp=Z,167nm,1.3s,mb6.2
CAF Calviac 96.29 332 eP P 05 16 45.3 -0.1
CAF pmax pmax
comp=Z,167nm,1.3s,mb6.2
DRV Dumont d'Urvil 96.31 180 P pP 05 17 22.0 +1.5
DRV Dumont d'Urvil 96.31 180 PP PP 05 21 20.0 +40
DRV S S 05 27 58.0 +6.2
DRV SS SS 05 34 35.0 +6.4
DRV L 05 44 00.0
DRV R 05 50 00.0
LFF La Frestale 96.82 332 eP P 05 16 47.6 -0.2
RKT Rikitea 96.99 113 ePP PP 05 20 46.6 0.0
comp=Z,322nm,28.8s
RKT Rikitea 96.99 113 ePS PS 05 29 37.3 -2.0
comp=Z,962nm,30.8s
JCT Junction City 97.10 49 eP P 05 16 48.8 -0.6
comp=Z,33nm,1.1s,mb5.6
JCT Junction City 97.10 49 P P 05 16 49.3 0.0
JCT pmax pmax
comp=Z,33nm,1.1s,mb5.6
MTLF Montolieu 97.52 331 eP P 05 16 50.4 -0.5
comp=Z,140nm,1.2s,mb6.0
MTLF Montolieu 97.52 331 eP P 05 16 50.4 -0.5
comp=Z,70nm,1.2s,mb6.0
MTLF Montolieu 97.52 331 eP P 05 16 50.4 -0.5
MTLF pmax pmax
comp=Z,70nm,1.2s,mb6.0
MIAR Mount Ida 98.21 42 eP P 05 16 53.3 -0.9
comp=Z,17nm,1.0s,mb5.4
MIAR epP pP 05 17 30.7 +0.7
MIAR esP sP 05 17 42.5 -2.2
MIAR Mount Ida 98.21 42 eP P 05 16 53.3 -0.9
MIAR e*PP pP 05 17 30.7 +0.7
MIAR pmax pmax
comp=Z,17nm,1.0s,mb5.4
ETSF Etsaut 99.04 332 eP P 05 16 57.6 -0.1
comp=Z,46nm,0.8s,mb5.7
ETSF Etsaut 99.04 332 eP P 05 16 57.6 -0.1
comp=Z,23nm,0.8s,mb5.7
ETSF Etsaut 99.04 332 eP P 05 16 57.6 -0.1
ETSF pmax pmax
comp=Z,23nm,0.8s,mb5.7
WCI Wyandotte Cave 99.45 35 ePdif Pdif 05 17 00.7 +1.1
ACSO Alum Creek Sta 99.48 32 ePdif Pdif 05 16 58.7 -0.9
comp=Z,42nm,1.3s
KEST Kesra 99.97 321 P Pdif 05 17 02.3 +0.4
comp=Z,10nm,0.7s,baz=341,slow=2.6,SNR=36
HKT Hockley 100.01 47 ePdif Pdif 05 17 02.1 +0.1
CKFL Kef-Lekhel 100.86 323 P Pdif 05 17 06.0 +0.2
CASM Ain Smara 101.09 323 P Pdif 05 17 08.5 +1.7
DFRA Djebel Bou Aff 101.18 324 P Pdif 05 17 08.0 +0.8
CTEI Djebel Teioual 101.28 323 P Pdif 05 17 09.0 +1.4
SET Setif 101.69 324 P Pdif 05 17 11.0 +1.5
KMBO Kilima Mbogo 101.79 276 ePdif Pdif 05 17 10.7 +0.8
comp=Z,13nm,1.5s
KMBO Kilima Mbogo 101.79 276 eP Pdif 05 17 10.7 +0.8
KMBO pmax pmax
comp=Z,13nm,1.5s
KMBO Kilima Mbogo 101.79 276 P Pdif 05 17 09.8 -0.1
comp=Z,1.6nm,0.7s,baz=44,slow=7.4,SNR=5.9
KMBO PP PP 05 21 24.1 +1.0
comp=Z,3.4nm,1.0s,baz=59,slow=9.4,SNR=3.8
CMER Merouana 101.89 323 P Pdif 05 17 10.0 -0.3
ESDC Sonseca Array 103.13 332 Pdiff Pdif 05 17 15.0 -0.9
comp=Z,5.3nm,0.9s,baz=20,slow=3.0,SNR=11
ESDC PP PP 05 21 28.7 -2.8
comp=Z,14nm,0.8s,baz=25,slow=6.9,SNR=8.6
ELUQ Luque 105.06 331 P PKiKP 05 21 36.7 -1.9
ERON Agron 105.33 331 P PKiKP 05 21 29.4 -10
LFA Lagoa do Fogo 111.31 348 iP 05 18 33.2
LSZ Lusaka 116.38 267 ePKPdf PKPdf 05 22 00.6 +0.2
LSZ eSKPdf SKPdf 05 25 22.0 -0.8
LSZ Lusaka 116.38 267 PKIKP PKPdf 05 22 00.8 +0.4
LSZ pmax pmax
comp=Z,6.0nm,0.6s
LSZ pmax pmax
comp=N,15nm,1.2s
LSZ Lusaka 116.38 267 PKP PKPdf 05 22 00.8 +0.4
comp=N,6.3nm,0.6s,baz=42,slow=2.4,SNR=12
LSZ SKP 05 25 23.0
comp=N,15nm,1.2s,baz=162,slow=2.2,SNR=3.2
MATP Matopo 118.27 262 PKP PKPdf 05 22 03.5 -0.4
comp=N,6.4nm,0.5s,baz=15,slow=1.0,SNR=21
MATP SKP 05 25 25.8
comp=N,4.2nm,0.7s,baz=60,slow=1.4,SNR=3.2
QSPA South Pole Qui 119.72 180 PKP PKPdf 05 22 04.1 -0.9
QSPA SKP 05 25 26.4
QSPA PKKPbc PKKPbc 05 32 17.8 -0.2
QSPA South Pole Qui 119.72 180 PKP PKPdf 05 22 04.1 -0.9
comp=N,9.8nm,0.7s,baz=313,slow=1.9,SNR=26
QSPA SKP 05 25 26.4
comp=N,12nm,0.7s,baz=243,slow=1.5,SNR=7.7
QSPA PKKPbc PKKPbc 05 32 17.8 -0.2
comp=N,3.0nm,0.8s,baz=203,slow=2.6,SNR=5.0
JTS JuntasAbangare 120.93 54 ePKPdf PKPdf 05 22 08.2 -1.1
JTS JuntasAbangare 120.93 54 PKP PKPdf 05 22 06.8 -2.5
comp=N,6.2nm,0.5s,baz=299,slow=8.5,SNR=6.3
SYO Syowa Base 121.41 205⇑ ePKPdf PKPdf 05 22 08.0 -0.5
SYO Syowa Base 121.41 205⇓ ePP PP 05 23 47.2 +5.0
TORD Torodi Ar. Bea 121.41 311 PKP PKPdf 05 22 09.1 -1.0
TORD PP PP 05 23 40.2 -2.3
TORD SKP 05 25 32.9
TORD PKKPbc PKKPbc 05 32 08.8 -1.6
TORD Torodi Ar. Bea 121.41 311 PKP PKPdf 05 22 09.1 -1.0
comp=N,11nm,0.6s,baz=12,slow=2.0,SNR=54
TORD PP PP 05 23 40.2 -2.3
comp=N,27nm,1.0s,baz=39,slow=6.0,SNR=8.4
TORD SKP 05 25 32.9
comp=N,18nm,0.9s,baz=31,slow=2.1,SNR=5.5
TORD PKKPbc PKKPbc 05 32 08.8 -1.6
comp=N,2.7nm,0.6s,baz=224,slow=3.2,SNR=13
LBTB Lobatse 122.48 258 PKP PKPdf 05 22 12.1 +0.2
comp=N,24nm,0.6s,baz=131,slow=2.0,SNR=44
LBTB SKP 05 25 34.7
comp=N,9.2nm,0.8s,baz=47,slow=2.7,SNR=4.1
LBTB PKKPbc PKKPbc 05 32 05.4 -0.9
comp=N,6.0nm,0.6s,baz=274,slow=5.8,SNR=12
BOSA Boshof 123.97 254 PKP PKPdf 05 22 15.1 +0.4
BOSA PKKPbc PKKPbc 05 31 59.7 -0.8
BOSA Boshof 123.97 254 PKP PKPdf 05 22 15.1 +0.4
comp=N,6.8nm,0.6s,baz=100,slow=1.7,SNR=14
BOSA PKKPbc PKKPbc 05 31 59.7 -0.8
comp=N,2.0nm,0.5s,baz=246,slow=4.8,SNR=9.3
SJG San Juan 125.88 31 PKP PKPdf 05 22 18.6 -0.1
comp=N,6.8nm,0.5s,baz=349,slow=5.2,SNR=3.1
CPD Cerro la Pandu 126.05 31 ePKPdf PKPdf 05 22 18.5 -0.5
TSUM Tsumeb 127.21 268 ePKPdf PKPdf 05 22 21.5 +0.4
TSUM eSKP 05 25 36.0
TSUM Tsumeb 127.21 268 PKP PKPdf 05 22 21.6 +0.5
comp=N,18nm,1.0s,baz=90,slow=3.5,SNR=16
SUR Sutherland 128.71 251 SKPbc 05 25 32.3
comp=N,24nm,0.8s,baz=87,slow=5.7,SNR=8.9
MAIT Maitri 130.36 200 ePKPdf SKPbc 05 25 32.3 -3.6
DBIC Dimbokro 130.50 312 PKP PKPdf 05 22 27.9 +0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,18nm,0.7s,baz=22,slow=1.9,SNR=8.2						
DBIC				SKPbc	SKPbc	05 25 37.6	-0.6
	comp=N,80nm,0.8s,baz=24,slow=4.1,SNR=19						
TIC	Toumodi	130.63	312	eP	PKPdf	05 22 27.7	-0.2
	comp=N,59nm,1.2s						
KIC	Kosan Boka	130.66	311	eP	PKPdf	05 22 26.4	-1.5
	comp=N,316nm,1.1s						
LIC	Lamto	130.95	311	ePKIKP	PKPdf	05 22 26.9	-1.6
	comp=N,56nm,0.8s						
LIC	Lamto	130.95	311	eP	PKPdf	05 22 28.1	-0.4
	comp=N,133nm,1.2s						
SDV	Santo Domingo	131.30	42	ePKPdf	PKPdf	05 22 28.6	-0.5
SDV				eSKP		05 25 41.5	
SDV	Santo Domingo	131.30	42	PKP	PKPdf	05 22 29.0	-0.1
	comp=N,16nm,0.8s,baz=21,slow=1.3,SNR=16						
SDV				pPKP	pPKPdf	05 23 04.3	-2.1
	comp=N,14nm,0.8s,baz=350,slow=3.0,SNR=2.5						
SDV				SKPbc	SKPbc	05 25 41.8	+0.6
	comp=N,25nm,0.8s,baz=354,slow=3.6,SNR=16						
ROSC	El Rosal	132.11	50	ePKPdf	PKPdf	05 22 33.2	+2.5
ROSC	El Rosal	132.11	50	PKP	PKPdf	05 22 32.8	+2.2
	comp=N,8.1nm,0.6s,baz=325,slow=1.7,SNR=14						
ROSC				SKPbc	SKPbc	05 25 45.0	+0.9
	comp=N,6.7nm,0.8s,baz=335,slow=2.4,SNR=2.7						
OTAV	Otavalo	132.50	58	ePKPdf	PKPdf	05 22 30.1	-1.3
OTAV				ePP	PP	05 24 55.7	-0.3
OTAV				eSKPbc	SKPbc	05 25 45.8	+0.3
ATAH	Atahualpa	137.16	66	PKP	PKPdf	05 22 40.7	+0.6
	comp=N,22nm,1.0s,baz=359,slow=3.8,SNR=8.6						
ATAH				SKPbc	SKPbc	05 26 03.2	+2.9
	comp=N,4.8nm,0.8s,baz=170,slow=14,SNR=7.5						
NNA	Nana	141.28	70	PKP		05 22 38.1	
NNA				ePKPdf	PKPdf	05 22 47.3	-0.2
NNA				eSKPbc	SKPbc	05 26 13.0	+1.5
NNA	Nana	141.28	70	PKhKP		05 22 38.1	
	comp=N,9.2nm,0.5s,baz=315,slow=6.3,SNR=6.4						
NNA				PKP	PKPdf	05 22 47.7	+0.2
	comp=N,8.8nm,0.4s,baz=312,slow=8.0,SNR=4.1						
NNA				SKPbc	SKPbc	05 26 13.2	+1.7
	comp=N,6.3nm,0.4s,baz=286,slow=4.6,SNR=4.5						
ASCN	Ascension	147.62	307	ePKPbc	PKPbc	05 23 01.4	-0.1
ARE	Arequipa	148.03	72	eP	PKPbc	05 23 02.0	-0.4
LPAZ	La Paz	150.69	69	PKPdf	PKPdf	05 23 04.2	+0.8
LPAZ				PKPbc	PKPbc	05 23 10.0	+1.0
LPAZ	La Paz	150.69	69	PKP	PKPdf	05 23 04.7	+1.4
LPAZ				PKPbc	PKPbc	05 23 10.3	+1.3
LPAZ	La Paz	150.69	69	PKP	PKPdf	05 23 04.7	+1.4
	comp=N,15nm,1.0s,baz=354,slow=3.1,SNR=31						
LPAZ				PKPbc	PKPbc	05 23 10.3	+1.3
	comp=N,91nm,0.8s,baz=284,slow=2.5,SNR=112						
CEN1	Los Morros	152.10	84	eP	PKPbc	05 23 09.0	-3.1
LCO	Las Campanas	153.11	96	ePKPdf	PKPdf	05 23 07.0	+0.3
LCO				ePKPbc	PKPbc	05 23 14.5	+0.4
CMCH	Combarbala	153.13	101	eP	PKPdf	05 23 04.8	-1.8
TLL	Tololo Astrono	153.19	98	eP	PKPbc	05 23 14.1	-0.2
FCH	Farellones	153.85	105	eP	PKPbc	05 23 16.1	+0.5
MDZ	Mendoza	155.06	104	eP	PKPdf	05 23 23.7	+14
RCBR	Riachuelo	155.72	351	ePKPab	PKPab	05 23 35.0	-2.6
SIV	San Ignacio	156.03	59	PKP	PKPdf	05 23 11.2	+0.2
	comp=N,2.2nm,0.7s,baz=220,slow=1.8,SNR=8.8						
SIV				PKPbc	PKPdf	05 23 20.9	+10
	comp=N,6.2nm,0.6s,baz=319,slow=2.0,SNR=20						
SIV				PKPab	PKPab	05 23 37.5	-1.5
	comp=N,51nm,0.8s,baz=299,slow=5.2,SNR=32						

JMA 08 05:18:14.0±0.7, 3061N×14172E, h127km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
JHO	Hitachi	6.06	351	P	Pn	05 19 42.7	+1.4
JHO				S	Sn	05 20 50.9	+1.5
JAG	Ashikaga	6.10	343	S	Sn	05 20 52.3	+2.0
JFK	Kawauchi	6.78	354	S	Sn	05 21 08.6	+2.0

IDC 08 05:19:18.6±0.6, 4.17N×127.16E, h0km, mb4.5/18, mb1 4.6/18, mb1mx4.5/23, mbtmp4.5/18, MS4.4/1, Ms1 4.4/1, ms1mx3.8/32, Error ellipse: s-maj=29.8km s-min=13.4km az=72.0
MOS 08 05:19:22.3±1.0, 409N×12700E, h33km, mb5.0/19, Error ellipse: s-maj=17.2km s-min=7.3km az=114.7
BJI 08 05:19:24.5, 404N×12662E, h43km, mB5.6, mb4.8
ISCJB 08 05:19:26.5±1.5, 407N±005×12703E±007, h72km±12km, mb4.6/56, Error ellipse: s-maj=12.7km s-min=7.2km az=159.9
NEIC 08 05:19:28.3±1.1, 406N×12703E, h74km±9km, mb4.9/25, Error ellipse: s-maj=10.3km s-min=5.3km az=66.0
ISC 08 05:19:28.5±1.3, 406N±005×12705E±007, h76km±11km, n114, σ0.97/110, mb4.6/56, 9C-6D, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
DAV	Davao City (W)	3.33	334	ePn	Pn	05 20 18.3	-0.1
DAV	Davao City (W)	3.33	334	eP	Pn	05 20 20.0	+1.7
KKM	Kota Kinabalu	10.97	281	ePn	Pn	05 22 03.3	+0.6
KSM	Kuching	16.91	262	eP	Pn	05 23 20.8	+0.3
FITZ	Fitzroy Crossi	22.06	184	eP	P	05 24 15.3	-1.9
	16nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	22.06	184	P	P	05 24 14.6	-2.6
	9.4nm,1.0s,mb4.1,baz=9.7,slow=13,SNR=6.9						
COEN	Coen	24.01	138	eP	P	05 24 35.6	-0.8
	3.5nm,1.0s,mb3.6						
PMG	Port Moresby	24.10	124	eP	P	05 24 44.4	+7.2
PMG	Port Moresby	24.10	124	LR	LR	05 33 42.1	
	comp=Z,986nm,21.3s,baz=309,slow=36						
WRA	Warramunga Arr	24.90	164	P	P	05 24 44.3	-0.2
	16nm,0.7s,mb4.6,baz=343,slow=11,SNR=30						
WB2	Warramunga Arr	24.91	164	eP	P	05 24 43.9	-0.6
KULM	Kulim	26.34	274	eP	P	05 24 58.6	+1.0
PSI	Prapat	28.10	268	P	P	05 25 14.7	+1.3
	1.9nm,0.3s,mb4.1,baz=88,slow=6.3,SNR=3.1						
ASAR	Alice Springs	28.36	167	P	P	05 25 14.7	-0.8
	1.5nm,0.6s,mb3.7,baz=343,slow=10,SNR=11						
ASAR				PcP	PcP	05 28 27.4	+0.7
	1.2nm,0.9s,baz=325,slow=1.5,SNR=2.8						
NJ2	Nanjing	28.89	345	eP	P	05 25 18.4	-1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
CHTO	Chiang Mai	31.13	300	eP	P	05 25 39.7	-0.5
	comp=Z,17nm,0.9s,mb4.8						
CHTO	Chiang Mai	31.13	300	eP	P	05 25 39.7	-0.5
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.8						
KSRS	Korea Array	33.25	1	P	P	05 25 55.5	-2.9
	comp=Z,1.9nm,0.8s,mb4.0,baz=177,slow=10,SNR=4.4						
FORT	Forrest	34.65	178	eP	P	05 26 10.5	-0.2
	comp=Z,13nm,0.7s,mb4.9						
FORT	Forrest	34.65	178	eP	P	05 26 10.6	-0.2
	comp=Z,2.7nm,0.8s,mb4.1						
KLBR	Kellerberrin	36.54	193	eP	P	05 26 26.7	-0.2
BJT	Baijiatuau	37.12	346	eP	P	05 26 32.2	+0.4
	comp=Z,33nm,0.9s,mb5.3						
BJT	Baijiatuau	37.12	346	eP	P	05 26 32.2	+0.5
BJT				pmax	pmax		
	comp=Z,33nm,0.9s						
BJI	Beijing	37.14	346	P	P	05 26 32.0	+0.1
BJI				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
MUN	Mundaring	37.29	195	eP	P	05 26 33.3	+0.1
STKA	Stephens Creek	38.32	160	eP	P	05 26 42.6	+0.6
	comp=Z,8.6nm,0.6s,mb4.8						
STKA	Stephens Creek	38.32	160	eP	P	05 26 43.0	+1.1
	comp=Z,10nm,0.6s,mb4.8						
STKA	Stephens Creek	38.32	160	P	P	05 26 42.8	+0.8
	comp=Z,11nm,0.7s,mb4.8,baz=334,slow=8.7,SNR=28						
LZH	Lanzhou	38.38	329	eP	P	05 26 41.6	-0.8
LZH				AMB	AMB		
	comp=Z,24nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,125nm,4.3s						
ARMA	Armidale	41.57	147	eP	P	05 27 10.6	+1.7
LSA	Lhasa	42.46	311	eP	P	05 27 16.8	+0.5
	comp=Z,6.5nm,0.6s,mb4.5						
LSA	Lhasa	42.46	311	eP	P	05 27 16.8	+0.6
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
TAPN	Taplejung	44.08	306	eP	P	05 27 27.9	-1.4
ODAN	Odare	44.14	305	eP	P	05 27 29.0	-0.8
	comp=Z,20nm,0.6s,mb5.0						
HABR	Khabarovsk	44.78	8	P	P	05 27 30.8	-3.7
HABR				e		05 27 40.4	
HABR				eS	S	05 34 05.5	-0.4
HABR				e		05 34 16.5	
HABR				e		05 37 26.7	
YSS	Yuzh-Sakhalins	44.84	15	eP	P	05 27 34.5	-0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
JIRN	Jiri	45.44	305	eP	P	05 27 38.8	-1.3
	comp=Z,53nm,0.7s,mb5.3						
HIA	Hailar	45.47	353	eP	P	05 27 40.8	+0.8
	comp=Z,13nm,1.0s,mb4.6						
HIA	Hailar	45.47	353	eP	P	05 27 40.8	+0.8
HIA				pmax	pmax		
	comp=Z,13nm,1.0s						
GKN	Gorkha	46.84	305	eP	P	05 27 49.4	-1.7
	comp=Z,16nm,0.8s,mb4.8						
SONM	Songino Array	47.09	341	P	P	05 27 53.0	+0.3
	comp=Z,1.9nm,0.8s,mb3.9,baz=162,slow=8.0,SNR=9.3						
SONM				PcP	PcP	05 29 25.3	+1.8
	comp=Z,1.3nm,0.8s,baz=152,slow=3.7,SNR=2.6						
MOY	Mondy	52.18	340	eP	P	05 28 31.2	-0.1
WMQ	Urumqi	52.64	325	eP	P	05 28 35.0	+0.1
BOD	Bodaibo	54.59	351	eP	P	05 28 48.9	+0.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
MK31	Makanchi Array	57.47	325	i P	P	05 29 08.5	-1.1
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
MKAR	Makanchi Array	57.47	325	P	P	05 29 08.9	-0.7
	comp=Z,1.4nm,0.4s,mb4.3,baz=119,slow=7.7,SNR=23						
YAK	Yakutsk	57.87	1	eP	P	05 29 12.4	+0.2
	comp=Z,31nm,1.0s,mb5.3						
YAK	Yakutsk	57.87	1⇑	eP	P	05 29 12.7	+0.6
YAK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
TKM2	Tokmak 2	59.71	318	eP	P	05 29 25.7	+0.4
	comp=Z,3.7nm,0.7s,mb4.5						
TKM2	Tokmak 2	59.71	318	eP	P	05 29 25.7	+0.4
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
UCH	Uchtor	60.15	317	eP	P	05 29 29.1	+0.8
	comp=Z,12nm,1.1s,mb4.8						
AAK	Ala-Archa	60.33	318	eP	P	05 29 25.2	-4.3
	comp=Z,3.9nm,1.0s,mb4.4						
AAK	Ala-Archa	60.33	318	eP	P	05 29 28.4	-1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
AML	Almayashu	60.67	317	eP	P	05 29 32.4	+0.6
	comp=Z,13nm,1.1s,mb4.9						
EKS2	Erkin-Say	60.82	317	eP	P	05 29 32.9	0.0
	comp=Z,4.9nm,0.8s,mb4.6						
KBL	Kabul	61.58	307	eP	P	05 29 36.4	-1.7
KURK	Kurchatov	61.64	327	eP	P	05 29 37.5	-0.7
	comp=Z,12nm,0.8s,mb5.0						
KURK	Kurchatov	61.64	327	eP	P	05 29 37.5	-0.7
KURK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
NVS	Novosibirsk	61.72	333	eP	P	05 29 39.9	+1.2
KK31	Karatay Array	63.21	317	i P	P	05 29 48.0	-0.9
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BRVK	Borovoye	67.29	327	eP	P	05 30 14.6	-0.4
	comp=Z,14nm,0.9s,mb4.8						
BRVK	Borovoye	67.29	327	eP	P	05 30 14.6	-0.4
BRVK				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
TIXI	Tiksi	67.51	1	eP	P	05 30 16.1	0.0
	comp=Z,10nm,1.1s,mb4.6						
TIXI	Tiksi	67.51	1⇑	eP	P	05 30 16.6	+0.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.4						
BILL	Bilibino	69.16	15	eP	P	05 30 28.5	+2.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
AKTK	Aktyubinsk	73.60	322	P	P	05 30 53.6	0.0
AKTO	Aktyubinsk	73.60	322	P	P	05 30 53.6	0.0
	comp=Z,5.8nm,0.7s,mb4.4,baz=97,slow=7.2,SNR=21						
SVE	Sverdlovsk	73.85	328⇓	eP	P	05 30 54.9	0.0
SVE				e		05 35 20.5	
SVE				pmax	pmax		
	comp=Z,28nm,1.1s,mb4.9						
ARU	Arti	74.83	328	eP	P	05 30 59.7	-0.9
	comp=Z,20nm,1.0s,mb4.8						
ARU	Arti	74.83	328⇑	eP	P	05 30 59.9	-0.7
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
QRN	Al-Qurain	78.53	298	eP	P	05 31 20.5	-1.6
QRN				AMb	AMB	05 31 22.3	
	comp=Z,61nm,1.1s,mb5.3						
MIB	Mutribah	79.07	299	eP	P	05 31 24.4	-0.6
MIB				AMb	AMB	05 31 27.5	
	comp=Z,26nm,0.7s,mb5.2						
NAY	Al-Naaiem	79.14	299	eP	P	05 31 24.1	-1.3
NAY				AMb	AMB	05 31 26.6	
	comp=Z,13nm,0.9s,mb4.8						
KIV	Kislovodsk	83.14	314	eP	P	05 31 47.5	+1.2
KIV				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.2						
ATD	Arta Tunnel	83.53	281	P	P	05 31 51.0	+2.2
	comp=Z,5.9nm,0.6s,mb4.6,baz=15,slow=8.4,SNR=3.7						
MCK	McKinley	83.73	26	eP	P	05 31 49.2	+0.3
	comp=Z,32nm,1.3s,mb5.0						
MCK	McKinley	83.73	26	eP	P	05 31 49.2	+0.3
MCK				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.0						
MOS	Moscow	86.35	325	eP	P	05 32 01.7	-0.5
MALT	Malatya	86.43	308	eP	P	05 32 04.6	+1.7
	comp=Z,5.2nm,1.1s,mb4.4						
MALT	Malatya	86.43	308⇑	iP	P	05 32 05.4	+2.4
OBN	Obninsk	86.98	325	eP	P	05 32 06.3	+1.1
OBN				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.2						
JOF	Joensuu	89.03	333	ep	P	05 32 14.2	-0.6
	comp=Z,3.6nm,0.7s,mb4.5						
INK	Inuvik	89.74	22	eP	P	05 32 18.0	-0.1
	comp=Z,207nm,1.3s,mb6.1						
INK	Inuvik	89.74	22	P	P	05 32 17.9	-0.2
	comp=Z,2.0nm,0.8s,mb4.3,baz=267,slow=1.7,SNR=4.4						
EIL	Elat	89.84	300	P	P	05 32 19.7	+0.3
EIL	Elat	89.84	300	P	P	05 32 19.7	+0.3
	comp=Z,6.0nm,0.8s,mb4.8,baz=59,slow=9.1,SNR=4.1						
KMBO	Kilima Mbogo	89.88	269	P	P	05 32 20.8	+0.9
	comp=Z,4.0nm,1.0s,mb4.5,baz=70,slow=10,SNR=6.2						
BR131	Keskin Array S	90.06	310	eP	P	05 32 20.6	+0.5
	comp=Z,1.0nm,0.4s,mb4.3						
BRTR	Keskin Array B	90.06	310	P	P	05 32 20.1	-0.1
	comp=Z,4.3nm,1.0s,mb4.5,baz=91,slow=5.2,SNR=15						
ARCES	ARCESS Array B	90.25	340	P	P	05 32 19.4	-1.0
	comp=Z,3.2nm,0.8s,mb4.5,baz=77,slow=5.2,SNR=5.2						
FINES	FINESS Array B	91.69	332	i P	P	05 32 31.3	+4.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	91.69	332	P	P	05 32 27.6	+0.3
	comp=Z,2.0nm,0.9s,mb4.4,baz=64,slow=8.9,SNR=5.5						
AKASG	Malin Array Be	91.84	321	i P	P	05 32 28.1	-0.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKASG	Malin Array Be	91.84	321	P	P	05 32 27.9	-0.2
	comp=Z,5.3nm,0.9s,mb4.8,baz=71,slow=4.1,SNR=18						
KIEV	Kiev	91.85	321	eP	P	05 32 27.3	-0.9
	comp=Z,7.0nm,1.1s,mb4.8						
KIEV	Kiev	91.85	321	eP	P	05 32 27.3	-0.9
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.8						
VRI	Vrincioaia	94.28	316	⇑P	P	05 32 38.6	-0.9
VRI	Vrincioaia	94.28	316⇑	iP	P	05 32 38.6	-0.9
PLOR	Plostina	94.33	316⇑	iP	P	05 32 40.9	+1.1
MLR	Muntele Rosu	94.89	316	⇑P	P	05 32 43.5	+1.2
MLR	Muntele Rosu	94.89	316⇑	iP	P	05 32 43.5	+1.2
BURAR	Bucovina Array	94.97	318	⇓P	P	05 32 43.9	+1.2
BURAR	Bucovina Array	94.97	318⇓	iP	P	05 32 43.9	+1.2
UZH	Uzhgorod	96.66	320d	iP	P	05 32 51.8	+1.5
DRGR		96.81	318	⇓P	P	05 32 52.1	+1.0
DRGR		96.81	318⇓	iP	P	05 32 52.1	+1.0
RES	Resolute Bay	97.44	10	eP	P	05 32 54.2	+0.9
PSZ	Piszkesteto	98.39	319	eP	P	05 32 58.1	0.0
	comp=Z,5.4nm,0.9s,mb5.1						
PSZ	Piszkesteto	98.39	319	eP	P	05 32 58.1	0.0
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb5.0						
YKA	Yellowknife Ar	99.07	24	P	P	05 33 01.2	+0.4
	comp=Z,0.3nm,0.7s,mb3.9,baz=302,slow=4.6,SNR=4.5						
GERES	GERESS Array B	102.03	322	P	Pdif	05 33 15.0	+0.8
	comp=Z,1.2nm,0.9s,baz=57,slow=8.1,SNR=5.4						
TORD	Torodi Ar. Bea	123.12	288	PKP	PKPdf	05 38 18.5	+1.1
	comp=Z,2.1nm,0.8s,baz=56,slow=1.5,SNR=7.9						
CFAA	Coronel Fontan	149.06	154	PKPbc	PKPbc	05 39 09.7	+1.1
	comp=Z,0.6nm,0.8s,baz=220,slow=2.2,SNR=5.7						
LCO	Las Campanas	150.00	148	ePKPbc	PKPbc	05 39 12.2	+1.1
LCO				ePKPab	PKPab	05 39 18.3	+1.4

IDC 08 05:27:06.7±18.0, 343N×12542E, h452km±256km, mb2.9/5, mb1 3.0/5, mb1mx2.9/16, mbtmp2.9/5, Error ellipse: s-maj=136.1km s-min=32.2km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
WRA	Warramunga Arr	24.83	160	P	P	05 31 50.2	-1.4
	2.1nm,0.8s,baz=342,slow=10.0,SNR=7.2						
ASAR	Alice Springs	28.18	163	P	P	05 32 22.1	+0.9
	0.7nm,0.7s,baz=360,slow=7.7,SNR=5.8						
STKA	Stephens Creek	38.34	158	P	P	05 33 47.9	+0.5
	3.7nm,0.8s,baz=348,slow=9.4,SNR=6.1						
SONM	Songino Array	47.17	343	P	P	05 34 57.7	+0.9
	0.4nm,0.9s,baz=155,slow=7.6,SNR=2.5						
MKAR	Makanchi Array	57.06	326	P	P	05 36 07.4	-1.0
	0.4nm,0.5s,baz=118,slow=7.9,SNR=5.2						

ISCJB 08 05:39:21.3±0.4, 2991N±003×14082E±0.10, h141km±5km, mb3.8/17, Error ellipse: s-maj=14.5km s-min=4.5km az=164.9
IDC 08 05:39:21.3±0.5, 2975N×14027E, h115km±4km, mb3.6/10, mb1 3.8/13, mb1mx3.6/21, mbtmp3.7/13, Error ellipse: s-maj=22.8km s-min=7.5km az=69.0
JMA 08 05:39:22.5±0.1, 2990N×14094E, h121km, M4.3
NEIC 08 05:39:22.7±1.5, 2978N×14030E, h128km±11km, mb4.0/6, Error ellipse: s-maj=16.6km s-min=11.8km az=120.0
ISC 08 05:39:22.4±0.4, 2991N±004×14084E±010, h136km±5km, n46, σ1.16/59, mb3.8/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
CBIJ	Chichi jima	3.04	157	P	Pn	05 40 09.7	-0.2
CBIJ				S	Sn	05 40 45.0	-0.1
CBIJ	Chichi jima	3.04	157	P	Pn	05 40 09.7	-0.2
	48nm,0.3s,baz=312,slow=23,SNR=44						
CBIJ				S	Sn	05 40 46.6	+1.6
	61nm,0.3s,baz=291,slow=22,SNR=9.7						
JHJ2	Mitsune	3.31	345	P	Pn	05 40 14.8	+1.6
JHJ2				S	Sn	05 40 52.9	+1.5
JHJ	Hachijo jima 2	3.32	345	P	Pn	05 40 13.1	-0.3
	34nm,0.3s,baz=123,slow=15,SNR=16						
JHJ				S	Sn	05 40 52.1	+0.4
	52nm,0.3s,baz=68,slow=23,SNR=5.7						
JHHJ	Haha-jima-NKT	3.48	160	P	Pn	05 40 14.9	-0.6
JHHJ				S	Sn	05 40 56.2	+0.7
BSO1	Boso 1	4.73	1	P	Pn	05 40 32.9	+0.9
BSO1				S	Sn	05 41 26.0	+0.3
JOD2	Odawara 2	5.54	345	P	Pn	05 40 45.1	+2.4
JOD2				S	Sn	05 41 43.8	-1.4
JWZ	Kozaga	5.66	311	P	Pn	05 40 44.4	0.0
JIE	Ise	5.68	323	P	Pn	05 40 46.4	+1.8
JRY	Ryogami san	6.30	346	P	Pn	05 40 54.0	+1.0
JRY				S	Sn	05 42 01.4	-2.3
JYT	Yasato	6.32	355	P	Pn	05 40 53.7	+0.4
JGF	Kuroka	6.39	334	P	Pn	05 40 56.0	+1.9
MJAR	Matsushiro Arr	6.97	342	P	Pn	05 41 01.9	-0.1
	2.6nm,0.3s,baz=160,slow=11,SNR=11						
MJAR				S	Sn	05 42 17.4	-2.4
	1.6nm,0.3s,baz=154,slow=19,SNR=5.0						
MAJO	Matsushiro	6.97	342	ePn	Pn	05 41 02.5	+0.5
MAT	Matsushiro	6.97	342	P	Pn	05 41 03.0	+1.0
MAT				S	Sn	05 42 19.1	-0.7
JWT	Wachi	7.05	321	P	Pn	05 41 04.6	+1.6
JMM	Marumori	7.94	360	P	Pn	05 41 14.2	-0.7
JMM				eS	Sn	05 42 35.9	-7.2
JSD	Sado	8.38	346	P	Pn	05 41 20.3	-0.6
JYA	Atsumi	8.71	354	P	Pn	05 41 25.4	+0.1
JMK	Ichinoseki	9.03	2	P	Pn	05 41 29.0	-0.5
JMK				S	Sn	05 43 02.6	-6.8
JNU	Nakatsue	9.08	293	P	Pn	05 41 31.3	+1.0
JNU	Nakatsue	9.08	293	P	Pn	05 41 31.9	+1.6
	0.7nm,0.3s,baz=65,slow=9.9,SNR=3.6						
JOM	Ohasama	9.55	2	P	Pn	05 41 35.7	-0.8
JOM				eS	Sn	05 43 14.1	-7.9
JTM	Tenmabayashi	10.85	1	P	Pn	05 41 53.6	-0.3
JKB	Kayabe	11.95	1	P	Pn	05 42 07.3	-1.0
JEM	Erimo	12.22	8	eS	Sn	05 44 19.0	-7.6
JSH	Shimam	12.72	357	P	Pn	05 42 14.6	-3.7
YSS	Yuzh-Sakhalins	17.08	4	eP	Pn	05 43 15.1	+2.3
ENH	Enshi	27.09	279	eP	P	05 44 48.6	-3.7
	0.6nm,0.7s,mb3.3						
SONM	Songino Array	31.89	314	P	P	05 45 33.9	-0.7
	0.5nm,0.5s,mb3.5,baz=117,slow=8.5,SNR=5.7						
CHTO	Chiang Mai	39.53	264	eP	P	05 46 38.7	-1.5
	4.0nm,0.8s,mb4.1						
MKAR	Makanchi Array	47.80	308	P	P	05 47 44.5	-1.3
	1.1nm,0.7s,mb3.6,baz=91,slow=9.8,SNR=14						
MKAR				sP	sP	05 48 24.7	-7.5
	0.5nm,0.8s,baz=89,slow=8.9,SNR=2.5						
WRA	Warramunga Arr	49.96	188	P	P	05 48 01.8	-0.7
	0.3nm,0.6s,mb3.1,baz=6.8,slow=7.7,SNR=7.9						
WRA				pP	pP	05 48 28.5	-5.4
	0.7nm,0.8s,baz=4.9,slow=7.6,SNR=3.0						
WRA				sP	sP	05 48 40.5	-8.6
	1.4nm,0.7s,baz=10,slow=8.4,SNR=7.1						
KURK	Kurchatov	50.19	313	eP	P	05 48 02.8	-1.2
	2.6nm,0.9s,mb3.9						
AAK	Ala-Archa	53.71	303	eP	P	05 48 28.4	-1.8
	1.1nm,0.7s,mb3.7						
EKS2	Erkin-Say	54.22	303	eP	P	05 48 33.1	-0.9
	1.5nm,0.8s,mb3.8						
YKA	Yellowknife Ar	70.24	29	P	P	05 50 23.7	+3.4
	0.3nm,0.6s,mb3.2,baz=288,slow=6.1,SNR=3.4						
ARCES	ARCESS Array B	70.50	340	P	P	05 50 23.5	+1.7
	2.7nm,0.8s,mb4.0,baz=65,slow=7.0,SNR=8.3						
ARCES				sP	sP	05 51 04.9	-4.9
	4.1nm,1.0s,baz=67,slow=9.2,SNR=2.3						
JOF	Joensuu	72.04	333	ep	P	05 50 30.9	-0.2
	4.1nm,0.6s,mb4.3						
KAF	Kangasniemi	74.43	334	ep	P	05 50 45.4	+0.2
	3.3nm,0.5s,mb4.3,baz=53,slow=5.4						
FINES	FINESS Array B	74.91	333	P	P	05 50 48.8	+0.9
	1.9nm,0.4s,mb4.1,baz=67,slow=5.7,SNR=38						
FINES				sP	sP	05 51 31.1	-5.2
	0.9nm,0.4s,baz=72,slow=5.6,SNR=3.1						
AKASG	Malin Array Be	79.66	323	P	P	05 51 14.9	+0.3
	2.1nm,0.4s,mb4.2,baz=50,slow=5.3,SNR=27						
AKASG				sP	sP	05 51 57.3	-5.9
	0.7nm,0.3s,baz=51,slow=5.3,SNR=6.0						
NB2	NORSAR Subarra	80.57	338	P	P	05 51 20.0	+0.8
	comp=Z,0.1nm,0.7s,mb2.5,baz=52,slow=5.6						
NOA	NORSAR Array B	80.57	338	P	P	05 51 20.4	+1.1
	comp=Z,1.2nm,0.8s,mb3.6,baz=45,slow=5.0,SNR=4.9						
BRTR	Keskin Array B	83.23	312	P	P	05 51 34.5	+0.8
	comp=Z,1.9nm,0.8s,mb3.9,baz=64,slow=5.6,SNR=8.3						
GERES	GERESS Array B	88.50	328	P	P	05 52 00.2	+0.8
	comp=Z,0.8nm,0.7s,mb3.7,baz=35,slow=3.6,SNR=6.0						

IDC 08 05:53:04.3±1.0, 1537N×11965E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, Error ellipse: s-maj=174.5km s-min=18.4km az=66.0, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
SONM	Songino Array	34.18	344	P	P	05 59 51.4	+0.1
	0.6nm,0.6s,baz=161,slow=8.2,SNR=4.8						
WRA	Warramunga Arr	37.95	157	P	P	06 00 23.5	-0.4
	0.7nm,0.4s,baz=328,slow=10,SNR=22						
ASAR	Alice Springs	41.22	160	P	P	06 00 51.2	+0.1
	0.9nm,0.4s,baz=338,slow=7.0,SNR=22						
ASAR				PcP	PcP	06 02 48.9	-1.4
	0.3nm,0.4s,baz=344,slow=3.9,SNR=4.2						
MKAR	Makanchi Array	44.09	323	P	P	06 01 14.2	-0.1
	0.4nm,0.8s,baz=119,slow=9.9,SNR=4.0						
STKA	Stephens Creek	51.48	156	P	P	06 02 12.7	+1.0
	0.8nm,0.5s,baz=332,slow=11,SNR=2.9						
FINES	FINESS Array B	78.34	331	P	P	06 05 06.7	+0.4
	1.3nm,1.0s,baz=77,slow=6.1,SNR=4.7						

NNC 08 06:12:31.0±3.0, 40.12N×77.16E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=31.0km s-min=20.4km az=163.0
ISCJB 08 06:12:32.3±3.0, 399N±02×774E±02, h90km±39km, Error ellipse: s-maj=37.1km s-min=23.9km az=161.5
BJI 08 06:12:33.4, 4035N×7694E, h21km, ML3.3
ISC 08 06:12:34.0±3.3, 399N±02×773E±02, h77km±55km, n15, σ0.70/16, 8C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.11**	**251**	PG	**Pn**	**06 12 54.0**	**-0.2**
KSH				SG	**Sn**	**06 13 09.5**	**+0.1**
KSH				Smax			
	comp=N,5μm,0.2s						
KSH				Smax			
	comp=E,2μm,0.2s						
ULHL	**Ulahol**	**2.49**	**341**	P	**Pn**	**06 13 12.4**	**+0.1**
	SNR=91						
KZA	**Kyzart**	**2.69**	**325**	P	**Pn**	**06 13 16.0**	**+0.9**
	SNR=87						
UCH	**Uchtor**	**3.15**	**319**	P	**Pn**	**06 13 20.8**	**-0.5**
	SNR=44						
KBK	**Karagaybulak**	**3.29**	**328**	P	**Pn**	**06 13 27.1**	**+3.9**
	SNR=19						
TKM2	**Tokmak 2**	**3.29**	**337**	⇑Pn	**Pn**	**06 13 23.3**	**+0.1**
	comp=E,1.2nm,0.5s						
TKM2				⇑Lg		06 14 04.5	
	comp=E,2.3nm,0.5s						
TKM2	**Tokmak 2**	**3.29**	**337**	P	**Pn**	**06 13 23.4**	**+0.2**
	SNR=18						
KNDC	**Almaty**	**3.33**	**355**	⇑Pn	**Pn**	**06 13 22.4**	**-1.4**
	comp=E,22nm,0.3s						
KNDC				⇑Lg		06 14 09.5	
	comp=E,207nm,0.5s						
AAK	**Ala-Archa**	**3.47**	**323**	P	**Pn**	**06 13 29.7**	**+4.1**
	SNR=29						
AML	**Almayashu**	**3.54**	**310**	P	**Pn**	**06 13 26.1**	**-0.5**
	SNR=24						
EKS2	**Erkin-Say**	**3.85**	**317**	P	**Pn**	**06 13 31.1**	**+0.3**
	SNR=5.3						
USP	**Ospenovka**	**3.98**	**329**	P	**Pn**	**06 13 39.1**	**+6.5**
	SNR=9.4						
KK31	**Karatay Array**	**6.04**	**304**	⇑Pn	**Pn**	**06 14 00.6**	**0.0**
	comp=E,0.1nm,0.2s,baz=136,slow=13,SNR=4.5						
KK31				Pg	**Pn**	**06 14 14.3**	**+14**
	comp=E,1.7nm,0.6s,baz=132,slow=16,SNR=9.8						
KK31				⇓Lg		06 15 30.7	
	comp=E,4.8nm,0.6s,baz=127,slow=28,SNR=6.1						
MK31	**Makanchi Array**	**7.79**	**26**	⇑Pn	**Pn**	**06 14 25.0**	**+0.5**
	comp=E,0.2nm,0.3s,baz=202,slow=13,SNR=7.4						
MK31				⇑Lg		06 16 31.1	
	comp=E,1.8nm,0.6s,baz=213,slow=28,SNR=4.6						
KURK	**Kurchatov**	**10.86**	**4**	⇑Lg		06 18 09.0	
	comp=E,4.1nm,1.0s						

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*ISCJB **08** 06:24:33.6±3.7, 1242S±007×1664E±0.1, h12^{km}±23^{km}, mb4.3/9, MS3.6/4, Error ellipse: s-maj=19.9km s-min=9.3km az=155.8*

*BJI **08** 06:24:34.0, 1230S×16640E, h15^{km}, mB5.0, mb4.9*

*NEIC **08** 06:24:38.8±2.1, 1234S×16639E, h42^{km}±16^{km}, Error ellipse: s-maj=25.5km s-min=15.1km az=66.0*

*IDC **08** 06:24:39.1±3.6, 1237S×16642E, h45^{km}±29^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.9/17, mbtmp4.1/9, ML4.5/2, MS3.7/6, Ms1 3.7/6, ms1mx3.4/32, Error ellipse: s-maj=33.3km s-min=18.3km az=70.0*

ISC 08 06:24:39.5±2.3**, 1238S**±009×**1664E**±02**, h42**^{km}±18^{km}**, n15,** σ**1^{s}02**/14**, mb4.3**/9**, MS3.6**/4**, 1C, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.00**	**294**	P	**Pn**	**06 26 18.3**	**-1.2**
	28nm,0.3s,baz=97,slow=8.1,SNR=4.9						
HNR				S	**Sn**	**06 27 39.1**	**+1.3**
	19nm,0.3s,baz=266,slow=19,SNR=5.1						
HNR				LR	LR	06 28 47.8	
	comp=Z,390nm,19.3s,baz=178,slow=36						
DZM	**Mont Dzumac**	**9.64**	**180**	P	**Pn**	**06 26 55.5**	**-0.1**
	1.1nm,0.3s,baz=343,slow=17,SNR=12						
DZM				S	**Sn**	**06 28 43.4**	**+0.7**
	0.5nm,0.3s,baz=285,slow=19,SNR=1.7						
DZM				LR	LR	06 30 14.6	
	comp=Z,483nm,20.7s,baz=194,slow=35						
CTA	**Charters Tower**	**20.81**	**246**	P	**P**	**06 29 17.6**	**+0.1**
	2.7nm,0.7s,baz=66,slow=10.0,SNR=3.2						
CTA				LR	LR	06 36 19.9	
	comp=Z,215nm,20.3s,MS3.5,baz=28,slow=34						
AFI	**Afiamalu**	**21.29**	**97**	LR	LR	06 35 39.7	
	comp=Z,232nm,21.6s,MS3.5,baz=277,slow=31						
STKA	**Stephens Creek**	**29.96**	**226**	P	**P**	**06 30 44.5**	**+0.6**
	4.1nm,0.8s,mb4.2,baz=54,slow=9.0,SNR=8.2						
STKA				LR	LR	06 42 00.0	
	comp=Z,275nm,19.3s,MS3.9,baz=14,slow=35						
WRA	**Warramunga Arr**	**31.67**	**252**	P	**P**	**06 30 57.4**	**-1.7**
	0.4nm,0.4s,mb3.6,baz=83,slow=9.0,SNR=9.4						
WRA				LR	LR	06 42 41.3	
	comp=Z,88nm,18.1s,MS3.5,baz=70,slow=34						
ASAR	**Alice Springs**	**32.81**	**245**	P	**P**	**06 31 07.5**	**-1.6**
	0.6nm,0.5s,mb3.8,baz=69,slow=9.5,SNR=15						
KSRS	**Korea Array**	**61.34**	**326**	P	**P**	**06 34 49.7**	**-1.3**
	2.7nm,0.8s,mb4.5,baz=144,slow=6.6,SNR=7.1						
HHC	**Hu-ho-hao-te**	**73.27**	**320**	*e*P	**P**	**06 36 07.4**	**+0.9**
HHC				AMB	AMB		
	comp=Z,11nm,0.6s,mb5.0						
LZH	**Lanzhou**	**76.14**	**312**	⇑P	**P**	**06 36 24.5**	**+1.3**
LZH				AP	pP	06 36 29.3	-6.5
LZH				XP	sP	06 36 31.7	-8.9
LZH				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,71nm,4.1s						
SONM	**Songino Array**	**80.12**	**324**	P	**P**	**06 36 44.7**	**-0.3**
	comp=Z,1.8nm,0.9s,mb4.0,baz=139,slow=5.7,SNR=7.8						
GTA	**Gaotai**	**80.45**	**314**	*e*P	**P**	**06 36 48.0**	**+1.0**
GTA				AP	pP	06 36 52.3	-7.4
GTA				XP	sP	06 36 55.8	-8.7
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**94.94**	**317**	P	**P**	**06 37 57.4**	**0.0**
	comp=Z,3.7nm,0.6s,mb5.0,baz=97,slow=5.8,SNR=50						
ARCES	**ARCESS Array B**	**117.78**	**345**	PKP	PKPdf	06 43 19.4	-1.3
	comp=Z,1.1nm,0.7s,baz=71,slow=2.3,SNR=6.6						
TORD	**Torodi Ar. Bea**	**165.08**	**275**	PKPab	PKPab	06 45 36.9	-0.3
	comp=Z,0.9nm,0.9s,baz=88,slow=3.4,SNR=4.2						

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*ISCJB **08** 06:32:00.8±1.2, 3979N±006×3627E±007, h10^{km}±9^{km}, Error ellipse: s-maj=11.5km s-min=7.6km az=31.3*

*CSEM **08** 06:32:00.3±0.2, 3978N×3626E, h12^{km}, MD3.1, Error ellipse: s-maj=6.5km s-min=4.1km az=20.0*

*DDA **08** 06:32:12.3, 3975N×3550E, h15^{km}±4^{km}, Md3.1*

ISC 08 06:32:01.4±1.1**, 3978N**±007×**3628E**±007**, h13**^{km}±8^{km}**, n8,** σ**1^{s}13**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.75**	**260**	*i* PG	**Pg**	**06 32 15.5**	**-0.5**
YOZ				*i* SG	**Sg**	**06 32 18.6**	**-7.2**
CORM	**Corum**	**1.33**	**288**	PG	**Pg**	**06 32 25.6**	**-1.4**
CTKT	**Corum**	**1.42**	**307**	*i* P	**Pg**	**06 32 30.5**	**+1.8**
CTKT				*i* S	**Sn**	**06 32 44.4**	**-1.0**
CDAG	**Cicekdag**	**1.48**	**265**	*i* P	**Pn**	**06 32 27.4**	**-0.2**
CDAG				*i* S	**Sn**	**06 32 39.5**	**-7.3**
AVNT	**Avonos**	**1.49**	**228**	*i* P	**Pn**	**06 32 30.7**	**+3.0**
AVNT				*i* S	**Sn**	**06 32 46.7**	**-0.3**
BOYT	**Boyabat**	**1.95**	**328**	*i* P	**Pn**	**06 32 33.9**	**-0.2**
ELDT	**Eldivan**	**2.30**	**289**	*i* P	**Pn**	**06 32 42.1**	**+3.2**
ELDT				*i* S	**Sn**	**06 33 07.3**	**+0.3**
ELZG	**Elazig**	**2.46**	**120**	*i* P	**Pn**	**06 32 41.3**	**+0.1**
ELZG				*i* S	**Pb**	**06 32 45.0**	**-0.5**

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*ISCJB **08** 06:33:08.7±3.3, 45S±0.1×1525E±0.1, h132^{km}±29^{km}, mb4.0/11, Error ellipse: s-maj=23.6km s-min=20.7km az=154.8*

*IDC **08** 06:33:08.9±2.4, 456S×15255E, h120^{km}±21^{km}, mb3.8/10, mb1 4.1/12, mb1mx4.0/17, mbtmp3.8/12, MS3.3/1, Ms1 3.3/1, ms1mx2.9/27, Error ellipse: s-maj=22.2km s-min=13.3km az=131.0*

*NEIC **08** 06:33:08.7±2.1, 452S×15252E, h119^{km}±18^{km}, mb4.9/2, Error ellipse: s-maj=15.4km s-min=13.8km az=138.0*

ISC 08 06:33:08.6±1.9**, 45S**±01×**1526E**±01**, h118**^{km}±16^{km}**, n21,** σ**0^{s}76**/19**, mb4.1**/11**, 2C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.24**	**228**	P	**Pn**	**06 34 50.9**	**-0.9**
	7.9nm,0.3s,baz=52,slow=8.8,SNR=12						
PMG				S	**Sn**	**06 36 13.5**	**+0.9**
	2.8nm,0.3s,baz=254,slow=21,SNR=4.6						
PMG				LR	LR	06 37 29.9	
	comp=Z,233nm,18.5s,baz=141,slow=36						
CTA	**Charters Tower**	**16.66**	**201**	P	**Pn**	**06 36 55.5**	**+0.4**
CTA	**Charters Tower**	**16.66**	**201**	P	**Pn**	**06 36 55.5**	**+0.4**
	0.2nm,0.3s,baz=21,slow=15,SNR=4.0						
DZM	**Mont Dzumac**	**22.03**	**144**	P	**P**	**06 37 54.5**	**+0.8**
	5.8nm,0.5s,mb4.2,baz=217,slow=11,SNR=18						
WB2	**Warramunga Arr**	**23.45**	**228**	⇑*i*P	**P**	**06 38 07.3**	**-0.2**
WRA	**Warramunga Arr**	**23.46**	**228**	P	**P**	**06 38 07.4**	**-0.2**
	18nm,0.6s,mb4.6,baz=52,slow=10.0,SNR=112						
WRA				S	**S**	**06 42 13.1**	**+0.7**
	3.4nm,1.1s,baz=50,slow=15,SNR=4.8						
ASAR	**Alice Springs**	**26.20**	**222**	P	**P**	**06 38 32.4**	**-0.1**
	2.6nm,0.4s,mb4.0,baz=53,slow=9.0,SNR=50						
STKA	**Stephens Creek**	**29.10**	**199**	P	**P**	**06 38 57.7**	**-0.5**
STKA	**Stephens Creek**	**29.10**	**199**	P	**P**	**06 38 57.7**	**-0.5**
	2.3nm,0.5s,mb4.1,baz=22,slow=11,SNR=4.5						
FITZ	**Fitzroy Crossi**	**29.59**	**241**	⇑*i*P	**P**	**06 39 02.2**	**-0.6**
	31nm,1.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**29.59**	**241**	P	**P**	**06 39 01.5**	**-1.3**
	3.7nm,0.6s,mb4.2,baz=100,slow=9.0,SNR=12						
FORT	**Forrest**	**34.86**	**219**	*e*P	**P**	**06 39 48.1**	**-0.5**
	12nm,0.5s,mb5.0						
SONM	**Songino Array**	**65.96**	**328**	P	**P**	**06 43 44.2**	**+2.0**
	0.3nm,0.5s,mb3.4,baz=145,slow=5.3,SNR=3.3						
MKAR	**Makanchi Array**	**79.96**	**319**	P	**P**	**06 45 04.6**	**-0.1**
	0.3nm,0.6s,mb3.3,baz=111,slow=6.3,SNR=4.1						
NVAR	**Mina Array Bea**	**92.09**	**52**	P	**P**	**06 46 05.4**	**+0.6**
	0.1nm,0.3s,mb3.5,baz=238,slow=5.2,SNR=3.3						
YKA	**Yellowknife Ar**	**95.28**	**28**	P	**P**	**06 46 18.4**	**-0.5**
	0.8nm,0.7s,mb4.3,baz=270,slow=4.9,SNR=30						
PDAR	**Pinedale Array**	**98.83**	**48**	P	**P**	**06 46 34.7**	**-0.7**
	0.3nm,0.5s,mb4.0,baz=318,slow=1.2,SNR=3.7						
AKASG	**Malin Array Be**	**114.13**	**324**	PKP	PKiKP	06 51 32.8	-1.3
	0.6nm,0.4s,baz=65,slow=1.7,SNR=7.1						
GERES	**GERESS Array B**	**123.69**	**329**	PKP	PKPdf	06 51 52.8	+0.3
	0.5nm,0.4s,baz=66,slow=2.5,SNR=5.3						
LPAZ	**La Paz**	**134.75**	**118**	PKP	PKPdf	06 52 16.4	+1.9
	1.3nm,0.7s,baz=301,slow=5.9,SNR=4.9						
TORD	**Torodi Ar. Bea**	**150.00**	**289**	PKPbc	PKPbc	06 52 45.8	-0.5
	0.8nm,0.3s,baz=96,slow=1.9,SNR=18						

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*ISCJB **08** 06:40:15.5±0.9, 20.10S±008×17781W±009, h468^{km}±12^{km}, mb4.2/14, Error ellipse: s-maj=15.6km s-min=10.3km az=43.3*

*IDC **08** 06:40:18.4±1.6, 20.19S×17783W, h487^{km}±17^{km}, mb3.8/11, mb1 3.9/14, mb1mx3.8/19, mbtmp3.8/14, Error ellipse: s-maj=18.2km s-min=12.2km az=154.0*

*NEIC **08** 06:40:18.2±0.9, 20.18S×17777W, h489^{km}±11^{km}, mb4.8/6, Error ellipse: s-maj=15.6km s-min=9.9km az=147.0*

ISC 08 06:40:17.7±1.0**, 2015S**±009×**17781W**±009**, h479**^{km}±13^{km}**, n39,** σ**1^{s}08**/29**, mb4.2**/14**, 6D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.47**	**44**	P	**P**	**06 42 18.3**	**-0.3**
	8.1nm,0.3s,baz=354,slow=9.0,SNR=7.3						
AFI				S	**S**	**06 43 51.7**	**-6.3**
	20nm,0.3s,baz=27,slow=23,SNR=11						
RAO	**Raoul Island**	**9.06**	**181**	P	**P**	**06 42 25.9**	**+1.2**
	246nm,0.3s,baz=64,slow=23,SNR=5.7						
FUNA	**Funafuti**	**11.91**	**345**	*e*P	**P**	**06 42 52.5**	**-3.0**
DZM	**Mont Dzumac**	**14.82**	**260**	P	**P**	**06 43 28.0**	**+1.6**
	1.1nm,0.3s,baz=83,slow=15,SNR=12						
URZ	**Urewera**	**18.58**	**193**	P	**P**	**06 44 02.1**	**-2.2**
	1.6nm,0.3s,baz=326,slow=7.3,SNR=11						
ARMA	**Armidale**	**29.39**	**244**	⇓*i*P	**P**	**06 45 42.0**	**+1.1**
CTA	**Charters Tower**	**33.71**	**264**	⇓*i*P	**P**	**06 46 18.7**	**+0.5**
	19nm,0.4s,mb4.9						
CTA	**Charters Tower**	**33.71**	**264**	P	**P**	**06 46 18.8**	**+0.6**
	31nm,0.5s,mb5.0,baz=94,slow=11,SNR=64						
CTAO	**Charters Tower**	**33.71**	**264**	*e*P	**P**	**06 46 18.7**	**+0.5**
	35nm,0.6s,mb5.0						
PMG	**Port Moresby**	**35.44**	**282**	P	**P**	**06 46 33.4**	**+0.5**
	38nm,0.8s,mb4.9,baz=70,slow=4.5,SNR=11						
STKA	**Stephens Creek**	**38.11**	**244**	⇓*i*P	**P**	**06 46 54.9**	**+0.3**
	9.4nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**38.11**	**244**	P	**P**	**06 46 54.9**	**+0.3**
	17nm,1.0s,mb4.4,baz=89,slow=10.0,SNR=22						
STKA				PcP	PcP	06 48 57.1	-0.5
	1.0nm,0.4s,baz=228,slow=4.2,SNR=3.1						
ASAR	**Alice Springs**	**44.78**	**256**	P	**P**	**06 47 47.6**	**-0.2**
	35nm,0.8s,mb4.8,baz=100,slow=8.0,SNR=326						
ASAR				PcP	PcP	06 49 19.2	-0.7
	4.0nm,0.7s,baz=109,slow=3.4,SNR=9.3						
ASAR				ScP	ScP	06 52 24.6	-1.7
	1.0nm,0.9s,baz=110,slow=2.8,SNR=5.7						
WB2	**Warramunga Arr**	**44.82**	**262**	⇓*i*P	**P**	**06 47 47.4**	**-0.8**
WRA	**Warramunga Arr**	**44.83**	**262**	P	**P**	**06 47 47.5**	**-0.8**
	16nm,0.9s,mb4.5,baz=97,slow=7.6,SNR=222						
WRA				PcP	PcP	06 49 19.5	-0.7
	1.6nm,0.7s,baz=92,slow=4.0,SNR=5.3						
FORT	**Forrest**	**49.60**	**246**	⇓*i*P	**P**	**06 48 23.3**	**-0.9**
	36nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**53.26**	**262**	⇓*i*P	**P**	**06 48 50.7**	**-0.3**
	13nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.26**	**262**	P	**P**	**06 48 50.1**	**-0.9**
	4.4nm,0.5s,mb4.0,baz=8.0,slow=23,SNR=18						
VNDA	**Vanda**	**58.27**	**185**	P	**P**	**06 49 25.4**	**+0.5**
	0.8nm,0.5s,mb3.3,baz=96,slow=14,SNR=6.2						
KLBR	**Kellerberrin**	**58.37**	**245**	*e*P	**P**	**06 49 25.4**	**-1.0**
	51nm,1.0s,mb4.8						
MJAR	**Matsushiro Arr**	**70.04**	**323**	P	**P**	**06 50 40.6**	**+0.1**
	0.4nm,0.3s,mb3.4,baz=160,slow=7.1,SNR=4.7						
NVAR	**Mina Array Bea**	**80.64**	**43**	P	**P**	**06 51 41.0**	**+1.2**
	2.5nm,1.0s,mb3.7,baz=209,slow=7.2,SNR=11						
PSI	**Prapat**	**84.64**	**275**	P	**P**	**06 52 02.7**	**+2.1**
PSI	**Prapat**	**84.64**	**275**	P	**P**	**06 52 02.7**	**+2.1**
	3.7nm,0.8s,mb4.1,baz=206,slow=4.9,SNR=5.6						
TXAR	**Lajitas Array**	**86.71**	**57**	P	**P**	**06 52 11.4**	**+1.1**
	0.9nm,0.9s,mb3.5,baz=210,slow=7.0,SNR=8.6						
VNA3	**Neumayer Olymp**	**88.48**	**176**	*e*	**P**	**06 52 16.6**	**-1.2**
PDAR	**Pinedale Array**	**88.58**	**43**	P	**P**	**06 52 18.9**	**+0.2**
	0.8nm,0.8s,mb3.6,baz=191,slow=1.5,SNR=6.9						
VNA2	**Neumayer--Watz**	**88.92**	**177**	*e*	**P**	**06 52 18.9**	**-0.9**
	baz=196,slow=4.8						
MKAR	**Makanchi Array**	**111.09**	**313**	PKiKP	PKiKP	06 57 54.4	-1.6
	0.7nm,0.6s,baz=98,slow=0.8,SNR=6.5						
AKASG	**Malin Array Be**	**142.80**	**331**	PKP	PKPdf	06 58 51.4	-4.2
AKASG				PKP	PKPdf	06 58 56.5	+0.8
AKASG	**Malin Array Be**	**142.80**	**331**	PKhKP		06 58 51.4	
	1.9nm,0.3s,baz=43,slow=4.2,SNR=48						
AKASG				PKP	PKPdf	06 58 56.5	+0.8
	0.3nm,0.4s,baz=44,slow=3.3,SNR=4.1						
MALT	**Malatya**	**143.86**	**308**	*e*PKPdf	PKPdf	06 58 57.1	-0.8
BR131	**Keskin Array S**	**146.74**	**313**	*e*PKPbc	PKPbc	06 59 04.7	-0.7
BRTR	**Keskin Array B**	**146.74**	**313**	PKPbc	PKPbc	06 59 04.5	-0.8
	3.2nm,0.6s,baz=125,slow=3.5,SNR=12						
CLL	**Collm**	**147.76**	**347**	*i* P	PKPbc	06 59 07.3	-0.4
CLL				LR	LR		
	comp=Z,1μm,19.9s						
CLL	**Collm**	**147.76**	**347**	*i* PKPbc	PKPbc	06 59 07.3	-0.4
	comp=Z,14nm,0.7s						
BRG	**Berggiesshubel**	**147.97**	**346**	*i* P	PKPbc	06 59 08.1	-0.1
	comp=Z,6.2nm,0.8s						
KHC	**Kasperske Hory**	**149.68**	**345**	*e*PKPbc	PKPbc	06 59 11.5	-1.0
GERES	**GERESS Array B**	**149.91**	**345**	PKPbc	PKPbc	06 59 12.5	-0.5
	comp=Z,2.8nm,0.8s,baz=38,slow=2.4,SNR=16						

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*IDC **08** 06:47:13.7±0.8, 1036N×126.19E, h0^{km}, mb3.7/9, mb1 3.8/9, mb1mx3.7/19, mbtmp3.7/9, Error ellipse: s-maj=80.6km s-min=17.2km az=67.0*

*ISCJB **08** 06:47:15.4±1.8, 1048N±006×12646E±006, h19^{km}±12^{km}, mb3.7/9, Error ellipse: s-maj=10.9km s-min=9.6km az=149.3*

ISC 08 06:47:14.3±1.7**, 1049N**±006×**12642E**±006**, h2**^{km}±10^{km}**, n17,** σ**1^{s}10**/21**, mb3.7**/9**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.16**	**233**	*e*P	**Pg**	**06 47 35.9**	**-0.7**
SCPH				*e*S	**Sg**	**06 47 51.2**	**-0.4**
MSLP	**Maasin**	**1.58**	**257**	*e*P	**Pn**	**06 47 43.2**	**-0.2**
BUTP	**Butuan**	**1.71**	**208**	*e*P	**Pn**	**06 47 44.4**	**-0.7**
LLP	**Lapu-Lapu**	**2.42**	**266**	*e*P	**Pn**	**06 47 54.5**	**-0.5**
LLP				*e*S	**Sn**	**06 48 23.4**	**-1.8**
TBP	**Tagbilaran**	**2.64**	**253**	*e*P	**Pn**	**06 47 59.6**	**+1.6**
TBP				*e*S	**Sn**	**06 48 30.9**	**+0.2**
CGP	**Cagayan de Oro**	**2.65**	**220**	⇑*i*P	**Pn**	**06 47 59.5**	**+1.4**
CGP				*i* S	**Sn**	**06 48 31.8**	**+1.0**
BUKP	**Musuan**	**2.92**	**207**	*e*P	**Pn**	**06 48 03.7**	**+1.8**
PVCP	**Virac**	**3.80**	**324**	*e*P	**Pn**	**06 48 17.1**	**+3.2**
WRA	**Warramunga Arr**	**31.23**	**166**	P	**P**	**06 53 32.9**	**-2.5**
	0.3nm,0.8s,mb3.2,baz=344,slow=9.5,SNR=2.5						
ASAR	**Alice Springs**	**34.73**	**168**	P	**P**	**06 54 05.7**	**-0.3**
	0.2nm,0.4s,mb3.4,baz=353,slow=7.2,SNR=5.1						
CTA	**Charters Tower**	**36.12**	**147**	P	**P**	**06 54 18.3**	**+0.3**
	3.1nm,0.8s,mb4.3,baz=324,slow=8.7,SNR=2.9						
SONM	**Songino Array**	**40.86**	**339**	P	**P**	**06 54 58.9**	**+1.3**
	0.3nm,0.6s,mb3.1,baz=150,slow=6.7,SNR=2.7						
STKA	**Stephens Creek**	**44.56**	**161**	P	**P**	**06 55 27.3**	**-0.5**
	0.6nm,0.3s,mb3.8,baz=344,slow=7.4,SNR=4.4						
MKAR	**Makanchi Array**	**51.94**	**323**	P	**P**	**06 56 24.4**	**-0.3**
	0.8nm,0.7s,mb3.7,baz=117,slow=7.8,SNR=11						
ARCES	**ARCESS Array B**	**84.04**	**340**	P	**P**	**06 59 45.9**	**-0.2**
	1.1nm,0.7s,mb4.1,baz=82,slow=6.6,SNR=5.0						
FINES	**FINESS Array B**	**85.77**	**332**	P	**P**	**06 59 53.7**	**-1.3**
	0.6nm,0.7s,mb4.0,baz=64,slow=9.4,SNR=2.9						
YKA	**Yellowknife Ar**	**93.49**	**24**	P	**P**	**07 00 31.5**	**+0.1**
	0.3nm,1.0s,mb3.7,baz=300,slow=4.1,SNR=3.9						

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*ISCJB **08** 06:57:08.9±0.7, 2407N±009×12267E±004, h54^{km}±6^{km}, mb3.6/7, Error ellipse: s-maj=14.7km s-min=6.3km az=10.1*

*JMA **08** 06:57:08.8±0.2, 2407N×12264E, h36^{km}, M3.4*

*NEIC **08** 06:57:09.2±1.2, 2405N×12269E, h39^{km}±13^{km}, MG3.4(JMA), Error ellipse: s-maj=16.6km s-min=12.9km az=187.0*

*IDC **08** 06:57:10.9±5.1, 24.18N×12279E, h60^{km}±49^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.3/19, mbtmp3.3/7, ML3.3/1, Error ellipse: s-maj=45.2km s-min=19.9km az=69.0*

ISC 08 06:57:09.6±0.8**, 2406N**±009×**12266E**±005**, h43**^{km}±9^{km}**, n19,** σ**1^{s}05**/25**, mb3.6**/7**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**38**	P	**Pn**	**06 57 19.5**	**-1.2**
YOJ				*e*S	**Sn**	**06 57 27.1**	**-1.4**
NACB	**Ninganchiao**	**0.98**	**277**	*e*Pn	**Pn**	**06 57 25.8**	**-1.2**
IRIF	**Iriomote-Funau**	**1.01**	**74**	P	**Pn**	**06 57 26.8**	**-0.6**
IRIF				*e*S	**Sn**	**06 57 40.2**	**-0.3**
HATJ	**Hateruma jima**	**1.04**	**90**	P	**Pn**	**06 57 27.7**	**-0.1**
HATJ				*e*S	**Sn**	**06 57 41.4**	**+0.2**
JKRS	**Kuro-shima**	**1.24**	**81**	P	**Pn**	**06 57 30.9**	**+0.4**
JKRS				*e*S	**Sn**	**06 57 47.8**	**+1.7**
YHNB	**Yeheng**	**1.32**	**298**	*e*Pn	**Pn**	**06 57 31.9**	**+0.3**
JIJ	**Ishigaki jima**	**1.39**	**77**	P	**Pn**	**06 57 32.2**	**-0.3**
JIJ				*e*S	**Sn**	**06 57 50.0**	**+0.4**
TATO	**Taipei**	**1.41**	**311**	*e*Pn	**Pn**	**06 57 34.1**	**+1.3**
TATO				*e*Sn	**Sn**	**06 57 53.3**	**+3.2**
JTJ	**Tarama**	**1.95**	**72**	P	**Pn**	**06 57 40.8**	**+0.6**
JOW	**Kunigami**	**5.78**	**60**	P	**Pn**	**06 58 31.7**	**-1.1**
JOW	**Kunigami**	**5.78**	**60**	P	**Pn**	**06 58 31.7**	**-1.1**
	2.1nm,0.3s,baz=294,slow=18,SNR=4.7						
KSRS	**Korea Array**	**14.09**	**17**	P	**Pn**	**07 00 28.2**	**+1.6**
	0.3nm,0.3s,baz=198,slow=12,SNR=8.9						
SONM	**Songino Array**	**27.03**	**335**	P	**P**	**07 02 47.1**	**-0.4**
	0.7nm,0.7s,mb3.3,baz=151,slow=9.9,SNR=5.6						
MKAR	**Makanchi Array**	**39.37**	**315**	P	**P**	**07 04 34.9**	**0.0**
	0.7nm,0.7s,mb3.5,baz=96,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**45.19**	**164**	P	**P**	**07 05 22.0**	**-0.5**
	0.8nm,0.8s,mb3.6,baz=346,slow=8.8,SNR=5.2						
ASAR	**Alice Springs**	**48.68**	**166**	P	**P**	**07 05 50.6**	**+0.9**
	0.2nm,0.5s,mb3.4,baz=348,slow=7.0,SNR=5.1						
TNA	**Tin City**	**59.84**	**27**	*e*P	**P**	**07 07 11.8**	**+1.4**
	2.2nm,0.4s,mb4.5						
NOA	**NORSAR Array B**	**78.97**	**333**	P	**P**	**07 09 06.1**	**-2.5**
	0.5nm,0.7s,mb3.6,baz=58,slow=5.1,SNR=3.1						
YKA	**Yellowknife Ar**	**82.56**	**23**	P	**P**	**07 09 26.8**	**-0.9**
	0.3nm,0.8s,mb3.4,baz=318,slow=5.0,SNR=8.3						

IDC 08 07:14:54.8±6.3**, 4615S**×**9416E, h0**^{km}**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/12**, mbtmp4.1**/3**, MS4.0**/5**, Ms1 3.9**/5**, ms1mx3.6**/17**, Error ellipse: s-maj=173.1km s-min=71.7km az=17.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**22.06**	**61**	LR	LR	07 25 52.9	
	comp=Z,250nm,21.8s,baz=196,slow=30						
STKA	**Stephens Creek**	**38.94**	**86**	P	P	07 22 22.0	-0.3
	2.5nm,0.8s,baz=241,slow=4.9,SNR=5.4						
STKA				LR	LR	07 34 37.8	
	comp=Z,239nm,21.1s,baz=203,slow=30						
ASAR	**Alice Springs**	**39.01**	**69**	P	P	07 22 22.9	-0.1
	2.0nm,0.9s,baz=225,slow=7.2,SNR=18						
WRA	**Warramunga Arr**	**41.98**	**65**	P	P	07 22 47.8	+0.3
	2.5nm,0.7s,baz=223,slow=8.3,SNR=25						
WRA				LR	LR	07 37 43.8	
	comp=Z,218nm,21.4s,baz=220,slow=33						
BOSA	**Boshof**	**55.77**	**263**	LR	LR	07 42 19.5	
	comp=Z,93nm,19.1s,baz=258,slow=30						
HNR	**Honiara**	**66.52**	**79**	LR	LR	07 50 43.0	
	comp=Z,140nm,18.6s,baz=89,slow=32						
YKA	**Yellowknife Ar**	**156.87**	**35**	PKPab	PKPab	07 35 20.4	-0.4
	0.1nm,0.4s,baz=284,slow=2.5,SNR=3.2						

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*ISCJB **08** 07:23:52.2±0.9, 23.11S±005×665W±0.1, h172^{km}±23^{km}, mb3.6/1, Error ellipse: s-maj=20.4km s-min=6.9km az=17.0*

*NEIC **08** 07:23:53.2±1.2, 2320S×6641W, h167^{km}±13^{km}, mb4.7/1, Error ellipse: s-maj=22.4km s-min=12.1km az=113.0*

*IDC **08** 07:23:54.7±2.0, 2294S×6654W, h177^{km}±19^{km}, mb3.6/1, mb1 3.7/4, mb1mx3.4/17, mbtmp3.7/4, Error ellipse: s-maj=30.5km s-min=18.2km az=105.0*

ISC 08 07:23:52.8±0.8**, 2313S**±005×**665W**±01**, h155**^{km}±19^{km}**, n10,** σ**1^{s}16**/10**, mb3.6**/1**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.99**	**347**	P	**Pn**	**07 25 33.4**	**+0.7**
	6.0nm,0.3s,baz=164,slow=10,SNR=121						
LPAZ				S	**Sn**	**07 26 49.5**	**-1.6**
	baz=223,slow=19,SNR=1.9						
LCO	**Las Campanas**	**6.99**	**212**	*e*Pn	**Pn**	**07 25 32.9**	**+0.3**
	12nm,0.3s						
LCO				*e*Sn	**Sn**	**07 26 49.9**	**-1.2**
ARE	**Arequipa**	**8.15**	**324**	P	**Pn**	**07 25 51.0**	**+2.8**
CFAA	**Coronel Fontan**	**8.59**	**190**	P	**Pn**	**07 25 58.0**	**+4.0**
	0.3nm,0.3s,baz=5.1,slow=11,SNR=56						
CFAA				S	**Sn**	**07 27 29.8**	**+0.3**
	0.2nm,0.3s,baz=109,slow=21,SNR=7.1						
SIV	**San Ignacio**	**8.73**	**37**	P	**Pn**	**07 25 57.0**	**+1.1**
	14nm,0.3s,baz=219,slow=11,SNR=220						
SIV				S	**Sn**	**07 27 32.3**	**-0.7**
	0.3nm,0.3s,baz=180,slow=20,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.79**	**69**	P	**P**	**07 35 21.4**	**-0.7**
	0.6nm,0.3s,mb3.6,baz=258,slow=5.6,SNR=15						
ASAR	**Alice Springs**	**129.45**	**204**	PKP	PKPdf	07 42 42.4	-1.2
	0.2nm,0.7s,baz=127,slow=0.5,SNR=3.4						
WRA	**Warramunga Arr**	**132.63**	**207**	PKP	PKPdf	07 42 48.6	-1.2
	0.5nm,0.8s,baz=156,slow=1.9,SNR=5.2						
MKAR	**Makanchi Array**	**145.54**	**39**	PKPbc	PKPbc	07 43 12.3	-0.5
MKAR	**Makanchi Array**	**145.54**	**39**	PKPbc	PKPbc	07 43 12.3	-0.5
	0.2nm,0.3s,baz=329,slow=3.0,SNR=5.6						

WEL 08 07:56:21.0±0.8**, 3603S**×**17855E, h222**^{km}±11^{km}**, ML3.5**/6**, Error ellipse: s-maj=19.6km s-min=14.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.54**	**187**	PN	Pn	07 56 57.2	+0.3
MXZ				SN	S	07 57 24.0	-1.2
PUZ	**Puketiti**	**2.05**	**186**	PN	Pn	07 57 02.2	+0.6
PUZ				SN	S	07 57 33.2	-0.3
MWZ	**Matawai**	**2.44**	**199**	PN	Pn	07 57 05.9	+0.3
MWZ				SN	S	07 57 40.9	+0.3
URZ	**Urewera**	**2.50**	**207**	PN	Pn	07 57 05.6	-0.6
URZ				SN	S	07 57 41.4	-0.4
KNZ	**Kokohu**	**3.06**	**193**	PN	Pn	07 57 12.2	-0.2
BKZ	**Black Stump Fm**	**3.53**	**207**	PN	Pn	07 57 17.4	-0.4
BKZ				SN	S	07 58 02.3	-0.5
MRZ	**Mangatainoka R**	**5.18**	**206**	PN	Pn	07 57 35.9	-2.1
TIWZ	**Tintock**	**5.18**	**203**	PN	Pn	07 57 36.1	-2.0

CASC 08 07:56:22.4±2.2**, 1126N**×**8575W, h174**^{km}±7^{km}**, MD3.6, ML2.4, 3C-4D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.10**	**285**	⇑*e*P	Pn	07 56 45.7	+0.3
SSNN				*e*S	Sn	07 57 04.5	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MADN	**Villa Maderas**	**0.26**	**55**	eP	Pn	07 56 46.0	+0.3
CONN	**Concepcion**	**0.33**	**22**	⇑iP	Pn	07 56 46.2	+0.3
APON	**Apoyo**	**0.72**	**334**	eP	Pn	07 56 48.4	+0.7
2RIO	**Dos Rios de Up**	**0.89**	**145**	⇓iP	Pn	07 56 46.7	-2.0
2RIO				eS	Sn	07 57 05.6	-3.3
TICN	**Ticuantepe**	**0.90**	**328**	eP	Pn	07 56 50.0	+1.3
MGAN	**Managua**	**1.01**	**331**	⇓eP	Pn	07 56 49.8	+0.2
MGAN				eS	Sn	07 57 09.4	-1.1
MGAN				i		07 57 14.3	
	comp=N,37nm,0.3s						
HUEN		**1.15**	**339**	eP	Pn	07 56 50.9	+0.2
COPN	**Copaltepe**	**1.23**	**318**	⇓eP	Pn	07 56 51.4	0.0
JCR	**Jicaral**	**1.54**	**156**	eP	Pn	07 56 54.6	+0.4
JCR				eS	Sn	07 57 19.1	+0.3
TEL3	**Telica 3**	**1.69**	**321**	eP	Pn	07 56 56.2	+0.5
CGA2	**Cerro Gallo 2**	**1.77**	**134**	eP	Pn	07 56 57.1	+0.5
CGA2				eS	Sn	07 57 23.2	+0.2
PRS1	**Puriscal**	**1.90**	**132**	eP	Pn	07 56 59.3	+1.3
LAJ	**Bijagual**	**2.12**	**131**	eP	Pn	07 56 59.2	-1.2
LCR2	**La Lucha 2**	**2.29**	**131**	eP	Pn	07 57 03.2	+0.9
LCR2				⇑eS	Sn	07 57 33.7	+0.6
QCR	**Quepos**	**2.40**	**139**	eP	Pn	07 57 04.7	+1.1
URSC	**Urasca**	**2.40**	**126**	⇓eP	Pn	07 57 06.0	+2.4
URSC				eS	Sn	07 57 38.0	+2.5
BAR1		**3.13**	**130**	eP	Pn	07 57 13.9	+1.5

JMA 08 08:27:49.2±0.5, 4357N×14959E, h30km, M3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**2.81**	**267**	P	Pn	08 28 31.4	-0.6
NEM2				eS	Sn	08 29 02.7	-2.1
JRA	**Rausu**	**3.26**	**278**	eS	Sn	08 29 16.2	+0.3
JNK	**Nakash**	**3.54**	**272**	eS	Sn	08 29 21.0	-1.9
JAK	**Akkeshi**	**3.62**	**263**	P	Pn	08 28 42.4	-0.7
JAK				eS	Sn	08 29 21.6	-3.2
JAR	**Ashorobuto**	**4.25**	**268**	P	Pn	08 28 52.3	+0.5
JAR				eS	Sn	08 29 38.3	-2.0
JOB	**Onbets**	**4.26**	**263**	P	Pn	08 28 51.6	-0.3
JOB				eS	Sn	08 29 37.2	-3.4
JCH	**Churui**	**4.66**	**260**	P	Pn	08 28 57.0	-0.5
JCH				eS	Sn	08 29 47.0	-3.5
JNBK	**Urakawa-nobuka**	**5.18**	**258**	P	Pn	08 29 04.0	-0.6
JNBK				eS	Sn	08 29 58.2	-5.2
JKB	**Kayabe**	**6.52**	**258**	eS	Sn	08 30 31.2	-5.2
JANG	**Nango**	**6.81**	**245**	P	Pn	08 29 24.9	-2.1
JANG				eS	Sn	08 30 34.2	-9.3
JTH	**Tanohata**	**6.82**	**240**	eS	Sn	08 30 34.3	-9.4
OFUJ	**Ofunato**	**7.46**	**236**	eS	Sn	08 30 49.2	-10

*NEIC **08** 08:30:21.4±0.6, 47.16N×153.88E, h10km, mb4.1/5, Error ellipse: s-maj=13.7km s-min=8.6km az=136.0*
*BJI **08** 08:30:22.0, 47.20N×153.90E, h10km, mB4.9, mb4.2*
*ISCJB **08** 08:30:24.3±1.2, 47.22N±0.07×154.0E±0.1, h40km±9km, mb4.2/28, MS3.7/2, Error ellipse: s-maj=16.7km s-min=6.4km az=43.1*
*MOS **08** 08:30:25.3±1.3, 47.19N×153.91E, h53km, mb4.3/9, Error ellipse: s-maj=13.7km s-min=8.8km az=83.1*
*IDC **08** 08:30:29.9±4.1, 47.23N×153.90E, h73km±37km, mb3.6/15, mb1 3.8/17, mb1mx3.7/24, mbtmp3.6/17, ML3.6/2, MS3.4/3, Ms1 3.5/3, ms1mx3.0/31, Error ellipse: s-maj=20.0km s-min=16.4km az=126.0*
ISC 08 08:30:27.1±1.1, 4725N±007×1540E±01, h47km±8km, n58, σ1s20/60, mb4.2/28, MS3.7/2, 8C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.71**	**21**	ePN	**Pn**	**08 31 21.5**	**-0.3**
SKR				eS	**Sn**	**08 32 03.5**	**-0.7**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,150nm,0.5s						
SKR				smax			
	comp=E,60nm,0.5s						
KUR	**Kuril'sk**	**4.72**	**247**	PN	**Pn**	**08 31 34.5**	**-1.2**
KUR				i S	**Sn**	**08 32 27.6**	**-1.5**
KUR				smax			
	comp=N,300nm,0.6s						
KUR				smax			
	comp=E,210nm,0.6s						
PET	**Petropavlovsk**	**6.50**	**26**	ePn	**Pn**	**08 31 56.8**	**-3.3**
PET	**Petropavlovsk**	**6.50**	**26**	ePN	**Pn**	**08 31 55.2**	**-4.9**
PET				pmax	pmax		
	comp=Z,42nm,1.4s						
YSS	**Yuzh-Sakhalins**	**7.69**	**272**	Pn	**Pn**	**08 32 11.4**	**-5.1**
ASAJ	**Asahikawa**	**8.59**	**253**	P	**Pn**	**08 32 30.6**	**+1.9**
	comp=Z,0.6nm,0.3s,baz=86,slow=18,SNR=1.7						
ASAJ				LR	LR	08 36 41.6	
	comp=Z,72nm,18.6s,baz=168,slow=44						
ERM	**Erimo**	**9.34**	**240**	ePn	**Pn**	**08 32 39.1**	**+0.1**
ERM	**Erimo**	**9.34**	**240**	⇑ePN	**Pn**	**08 32 39.7**	**+0.7**
MA2	**Magadan**	**12.50**	**352**	Pn	**Pn**	**08 33 22.0**	**-0.1**
MA2	**Magadan**	**12.50**	**352**	⇑ePN	**Pn**	**08 33 22.4**	**+0.3**
KLR	**Kul'dur**	**14.96**	**286**	eP	**Pn**	**08 33 57.8**	**+2.4**
MAJO	**Matsushiro**	**15.87**	**233**	Pn	**Pn**	**08 34 03.1**	**-4.1**
	comp=Z,6.9nm,0.8s						
MAJO	**Matsushiro**	**15.87**	**233**	P	**Pn**	**08 34 03.1**	**-4.1**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MJAR	**Matsushiro Arr**	**15.87**	**233**	P	**Pn**	**08 34 09.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=16,slow=18,SNR=4.1						
YAK	**Yakutsk**	**20.25**	**326**	⇑eP	**P**	**08 35 00.3**	**+2.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSRS	**Korea Array**	**21.54**	**252**	P	**P**	**08 35 12.8**	**+0.5**
	comp=Z,1.4nm,0.9s,mb3.4,baz=62,slow=20,SNR=3.5						
BILL	**Bilibino**	**21.77**	**12**	eP	**P**	**08 35 13.0**	**-1.4**
	comp=Z,1.4nm,0.3s,mb3.9						
BILL	**Bilibino**	**21.77**	**12**	eP	**P**	**08 35 15.1**	**+0.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.8						
BOD	**Bodaibo**	**26.15**	**309**	eP	**P**	**08 35 57.3**	**+0.7**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
TIXI	**Tiksi**	**27.17**	**343**	⇓eP	**P**	**08 36 07.5**	**+1.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.6						
NJ2	**Nanjing**	**30.73**	**253**	eP	**P**	**08 36 36.4**	**-1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
SONM	**Songino Array**	**31.75**	**289**	P	**P**	**08 36 44.9**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=54,slow=8.1,SNR=4.2						
COLA	**College**	**35.36**	**39**	eP	**P**	**08 37 10.4**	**-7.3**
	comp=Z,2.1nm,0.6s,mb4.2						
COLA	**College**	**35.36**	**39**	⇓eP	**P**	**08 37 18.0**	**+0.3**
INK	**Inuvik**	**40.90**	**33**	P	**P**	**08 38 03.6**	**-0.6**
	comp=Z,0.7nm,0.4s,mb3.7,baz=260,slow=5.6,SNR=3.7						
MK31	**Makanchi Array**	**47.26**	**297**	eP	**P**	**08 38 54.0**	**-1.4**
MKAR	**Makanchi Array**	**47.26**	**297**	⇑eP	**P**	**08 38 54.4**	**-1.0**
MKAR	**Makanchi Array**	**47.26**	**297**	P	**P**	**08 38 54.4**	**-1.0**
	comp=Z,1.4nm,0.7s,mb4.0,baz=66,slow=8.1,SNR=19						
MKAR				PcP	PcP	08 40 25.7	-0.2
	comp=Z,0.5nm,0.8s,baz=90,slow=4.3,SNR=3.6						
MKAR				LR	LR	09 00 29.1	
	comp=Z,54nm,18.4s,MS3.5,baz=359,slow=38						
KURK	**Kurchatov**	**47.60**	**304**	eP	**P**	**08 38 55.9**	**-2.1**
	comp=Z,11nm,0.9s,mb4.9						
YKA	**Yellowknife Ar**	**50.16**	**37**	P	**P**	**08 39 18.6**	**+1.2**
YKA	**Yellowknife Ar**	**50.16**	**37**	P	**P**	**08 39 18.6**	**+1.2**
	comp=Z,0.5nm,0.7s,mb3.7,baz=296,slow=7.2,SNR=11						
AAK	**Ala-Archa**	**54.17**	**296**	eP	**P**	**08 39 45.7**	**-1.7**
	comp=Z,1.3nm,0.7s,mb4.0						
AAK	**Ala-Archa**	**54.17**	**296**	ceP	**P**	**08 39 46.4**	**-1.0**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
TAPN	**Taplejung**	**54.69**	**273**	eP	**P**	**08 39 52.3**	**+0.9**
	comp=Z,7.8nm,0.7s,mb4.8						
ARU	**Arti**	**55.06**	**318**	eP	**P**	**08 39 52.4**	**-1.3**
ARU	**Arti**	**55.06**	**318**	⇑eP	**P**	**08 39 51.4**	**-2.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
JIRN	**Jiri**	**55.52**	**275**	eP	**P**	**08 39 58.1**	**+0.7**
	comp=Z,19nm,0.7s,mb5.2						
KKN	**Kakani**	**56.06**	**276**	eP	**P**	**08 40 02.5**	**+1.2**
	comp=Z,14nm,0.6s,mb5.1						
GKN	**Gorkha**	**56.35**	**276**	eP	**P**	**08 40 04.3**	**+0.9**
	comp=Z,22nm,0.7s,mb5.3						
ARCES	**ARCESS Array B**	**57.59**	**341**	P	**P**	**08 40 10.7**	**-0.8**
	comp=Z,1.9nm,0.8s,mb4.2,baz=12,slow=9.2,SNR=4.4						
FINES	**FINESS Array B**	**63.85**	**335**	i P	**P**	**08 40 54.0**	**-0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.85**	**335**	P	**P**	**08 40 54.0**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.3,baz=40,slow=7.3,SNR=26						
PDAR	**Pinedale Array**	**63.95**	**55**	P	**P**	**08 40 55.5**	**+0.4**
	comp=Z,0.3nm,0.8s,mb3.4,baz=278,slow=6.9,SNR=2.7						
NB2	**NORSAR Subarra**	**67.96**	**341**	P	**P**	**08 41 20.9**	**+0.3**
	comp=Z,2.6nm,0.6s,mb4.4,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.96**	**341**	P	**P**	**08 41 21.2**	**+0.6**
	comp=Z,3.4nm,0.6s,mb4.5,baz=26,slow=6.3,SNR=17						
NOA				LR	LR	09 17 55.1	
	comp=Z,61nm,18.4s,MS3.9,baz=0.0,slow=42						
WRA	**Warramunga Arr**	**69.19**	**200**	P	**P**	**08 41 27.2**	**-1.4**
	comp=Z,1.2nm,1.0s,mb3.8,baz=19,slow=6.6,SNR=4.2						
AKASG	**Malin Array Be**	**71.48**	**327**	i P	**P**	**08 41 42.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.48**	**327**	P	**P**	**08 41 42.1**	**-0.3**
	comp=Z,1.4nm,0.4s,mb4.2,baz=34,slow=6.3,SNR=8.9						
ASAR	**Alice Springs**	**72.88**	**199**	P	**P**	**08 41 51.0**	**+0.1**
	comp=Z,1.9nm,0.8s,mb4.0,baz=10,slow=5.3,SNR=19						
KWP	**Kalwaria**	**74.71**	**330**	⇑iP	**P**	**08 41 59.3**	**-2.2**
BURAR	**Bucovina Array**	**75.51**	**327**	⇑iP	**P**	**08 42 07.3**	**+1.1**
CLL	**Collm**	**76.27**	**336**	eP	**P**	**08 42 11.0**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.7						
CLL				esP	sP	08 42 16.0	-13
TXAR	**Lajitas Array**	**76.71**	**61**	P	**P**	**08 42 13.6**	**+0.3**
TXAR	**Lajitas Array**	**76.71**	**61**	P	**P**	**08 42 13.6**	**+0.3**
	comp=Z,1.2nm,0.7s,mb4.0,baz=297,slow=3.8,SNR=21						
MLR	**Muntele Rosu**	**77.01**	**325**	⇓iP	**P**	**08 42 15.1**	**+0.4**
GERES	**GERESS Array B**	**78.28**	**334**	P	**P**	**08 42 22.0**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=32,slow=5.3,SNR=6.5						
BRTR	**Keskin Array B**	**78.45**	**317**	i P	**P**	**08 42 24.1**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**78.45**	**317**	P	**P**	**08 42 23.4**	**+0.6**
	comp=Z,1.2nm,0.7s,mb3.9,baz=22,slow=7.1,SNR=5.2						

CASC 08 08:31:04.9±2.7, 893N×8287W, h18km±8km, MD3.7, 3C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTCR	**Cotoan**	**0.11**	**105**	⇑iP	Pg	08 31 09.5	+0.8
BRU2	**Volcan**	**0.22**	**127**	⇑iP	Pg	08 31 11.0	+0.8
TBS2		**0.25**	**122**	⇓eP	Pg	08 31 16.5	+5.9
TBS2				eS	Sg	08 31 21.5	+7.0
BAR1		**0.54**	**306**	⇓eP	Pg	08 31 15.3	-0.4
BAR1				eS	Sg	08 31 22.6	-0.4
CNI	**Changuinola**	**0.60**	**35**	⇓iP	Pg	08 31 17.1	+0.3
CNI				eS	Sg	08 31 23.3	-1.6
BUS	**Buena Vista**	**1.08**	**306**	eP	Pb	08 31 24.8	-0.2
BUS				eS	Sb	08 31 39.1	+0.3
URSC	**Urasca**	**1.27**	**315**	⇓eP	Pn	08 31 28.2	+0.4
URSC				eS	Sn	08 31 45.5	+1.1
QCR	**Quepos**	**1.37**	**291**	eP	Pn	08 31 28.4	-0.7
QCR				eS	Sn	08 31 45.6	-1.2
LCR2	**La Lucha 2**	**1.38**	**306**	⇑eP	Pn	08 31 29.3	0.0
LCR2				eS	Sn	08 31 47.4	+0.3
LAJ	**Bijagual**	**1.55**	**307**	eP	Pn	08 31 36.7	+5.1
LAJ				eS	Sn	08 32 01.0	+10
PRS1	**Puriscal**	**1.77**	**307**	eP	Pn	08 31 34.9	+0.3
PRS1				eS	Sn	08 31 57.4	+0.8
CGA2	**Cerro Gallo 2**	**1.91**	**305**	⇓eP	Pn	08 31 37.5	+1.0
CGA2				eS	Sn	08 32 02.2	+2.0
AZU	**Azuero**	**2.80**	**114**	eP	Pn	08 31 49.2	+0.4
PTP	**Ponta Puerca**	**19.14**	**59**	eP		08 31 19.0	
PTP				eS		08 31 26.2	

MOS 08 09:26:59.2±0.5, 4364N×4410E, h17km, mb3.5/1, 2C-2D, Error ellipse: s-maj=12.0km s-min=9.2km az=93.1, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRTR	**Priterechnaya**	**0.17**	**50**	ePG	Pg	09 27 05.2	+1.6
PRTR				i S	Sg	09 27 08.8	+2.2
KMSR	**Komsomolskaya**	**0.30**	**153**	⇑iPG	Pg	09 27 06.7	+1.0
KMSR				i S	Sg	09 27 11.2	+1.1
LSNR	**Lesken**	**0.42**	**210**	ePG	Pg	09 27 08.4	+0.6
LSNR				eS	Sg	09 27 14.3	+0.8
TRKR	**Terskaya**	**0.47**	**80**	⇓iPG	Pg	09 27 10.0	+1.4
TRKR				i S	Sg	09 27 17.1	+2.2
KUBR	**Kubataba**	**0.53**	**288**	PG	Pg	09 27 09.9	+0.2
KUBR				S	Sg	09 27 17.9	+1.2
KUBR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
KUBR				smax			
	comp=N,10.0nm,0.2s						
KORR	**Kora**	**0.56**	**182**	ePG	Pg	09 27 10.9	+0.7
KORR				eS	Sg	09 27 18.6	+1.0
LACR	**Lac**	**0.83**	**170**	⇑iPG	Pg	09 27 15.9	+0.6
LACR				i S	Sb	09 27 27.2	+1.3
DIGR	**Digorskoe uzhe**	**0.83**	**207**	⇓iPG	Pg	09 27 15.9	+0.5
DIGR				i S	Sb	09 27 27.3	+1.2
ZEI	**Tsey**	**0.88**	**190**	ePG	Pg	09 27 16.5	+0.1
ZEI				eS	Sb	09 27 28.4	+0.9
BEYR	**Belyy Ugol+**	**1.00**	**292**	PG	Pg	09 27 18.7	+0.1
BEYR				S	Sb	09 27 32.9	+2.0
SHAR	**Shatzhatmas**	**1.04**	**276**	PG	Pg	09 27 18.7	-0.7
SHAR				S	Sb	09 27 33.2	+1.1
SHAR				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KIV0	**Kislovodsk Arr**	**1.06**	**288**	PG	Pg	09 27 19.1	-0.7
KIV0				S	Sb	09 27 33.5	+0.7
KIV	**Kislovodsk**	**1.07**	**288**	PG	Pg	09 27 19.2	-0.7
KIV				S	Sb	09 27 33.8	+0.9
KIV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KIV				smax			
	comp=N,6.0nm,0.2s						

*NIED **08** 09:32:00, 41.50N×142.60E, h35km, Mw3.7 Best double couple: $M_0$3.98000×10^{14} NP1:ϕ_s191.00000°, δ65.00000°, λ-158.00000°. NP2:ϕ_s91.00000°, δ70.00000°, λ-27.00000°.*
*ISCJB **08** 09:32:17.6±1.1, 41.51N±0.04×142.55E±0.05, h13km±8km, mb3.3/4, Error ellipse: s-maj=8.5km s-min=3.8km az=141.2*
*JMA **08** 09:32:18.3±0.1, 41.48N×142.63E, h36km±4km, M3.5*
*NEIC **08** 09:32:18.3, 41.48N×142.63E, h36km, MG3.5(JMA), After JMA.*
*IDC **08** 09:32:21.9±3.1, 41.49N×142.71E, h55km±23km, mb3.2/4, mb1 3.3/6, mb1mx3.2/22, mbtmp3.2/6, ML3.5/2, Error ellipse: s-maj=35.3km s-min=18.0km az=113.0*
ISC 08 09:32:17.9±0.8, 4151N±004×14255E±005, h14km±5km, n22, σ0s94/35, mb3.3/4, 5C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**0.68**	**42**	⇑iPg	**Pg**	**09 32 31.1**	**0.0**
ERM				eSn	**Sg**	**09 32 39.0**	**-1.1**
JEM	**Erimo**	**0.68**	**42**	⇓P	**Pg**	**09 32 31.2**	**+0.1**
JEM				eS	**Sg**	**09 32 40.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.78**	**11**	⇑P	**Pg**	**09 32 33.3**	**+0.3**
JNBK				eS	**Sg**	**09 32 44.3**	**+1.0**
JOT	**Ohata**	**1.14**	**264**	P	**Pb**	**09 32 39.0**	**-0.3**
JOT				eS	**Sb**	**09 32 53.9**	**+0.1**
JKB	**Kayabe**	**1.20**	**289**	⇑P	**Pn**	**09 32 39.4**	**-0.7**
JKB				eS	**Sb**	**09 32 54.2**	**-1.4**
JCH	**Churui**	**1.26**	**29**	⇓P	**Pn**	**09 32 40.3**	**-0.7**
JCH				eS	**Sb**	**09 32 55.9**	**-1.5**
JBT2	**Biratori 2**	**1.27**	**354**	P	**Pn**	**09 32 40.7**	**-0.5**
JTM	**Tenmabayashi**	**1.33**	**237**	⇓P	**Pn**	**09 32 42.1**	**+0.1**
JTM				eS	**Sb**	**09 32 59.4**	**-0.1**
JANG	**Nango**	**1.38**	**215**	P	**Pn**	**09 32 41.9**	**-0.8**
JNB	**Noboribetsu**	**1.48**	**311**	⇑P	**Pn**	**09 32 43.2**	**-0.8**
JNB				eS	**Sn**	**09 33 01.7**	**-1.4**
JEW	**Eniwo**	**1.56**	**329**	⇑P	**Pn**	**09 32 45.2**	**+0.1**
JEW				eS	**Sn**	**09 33 05.3**	**+0.2**
JSR	**Shiriuchi**	**1.60**	**271**	P	**Pn**	**09 32 46.5**	**+0.8**
JSR				eS	**Sn**	**09 33 06.6**	**+0.5**
JFR	**Furan**	**1.65**	**1**	P	**Pn**	**09 32 46.4**	**0.0**
JOB	**Onbets**	**1.69**	**34**	⇓P	**Pn**	**09 32 47.4**	**+0.5**
JOB				eS	**Sn**	**09 33 08.8**	**+0.5**
JYM2	**Yakumo 2**	**1.74**	**291**	P	**Pn**	**09 32 48.1**	**+0.5**
JYM2				eS	**Sn**	**09 33 10.1**	**+0.6**
ASAJ	**Asahikawa**	**2.60**	**1**	P	**Pn**	**09 33 01.5**	**+2.0**
	10nm,0.3s,baz=216,slow=11,SNR=36						
ASAJ				S	**Sn**	**09 33 33.2**	**+2.4**
	8.6nm,0.3s,baz=321,slow=29,SNR=16						
MJAR	**Matsushiro Arr**	**6.00**	**216**	P	**Pn**	**09 33 48.8**	**+2.5**
	0.4nm,0.3s,baz=82,slow=32,SNR=4.4						
SONM	**Songino Array**	**26.30**	**296**	P	**P**	**09 37 54.1**	**+1.3**
	0.3nm,0.4s,mb3.1,baz=74,slow=8.9,SNR=3.3						
MKAR	**Makanchi Array**	**42.63**	**298**	P	**P**	**09 40 13.3**	**-0.2**
	0.1nm,0.3s,mb3.0,baz=86,slow=9.8,SNR=5.1						
YKA	**Yellowknife Ar**	**59.52**	**32**	P	**P**	**09 42 18.9**	**-1.3**
	0.3nm,0.8s,mb3.4,baz=310,slow=7.0,SNR=11						
FINES	**FINESS Array B**	**65.28**	**332**	P	**P**	**09 42 57.5**	**-1.3**
FINES	**FINESS Array B**	**65.28**	**332**	P	**P**	**09 42 57.5**	**-1.3**
	0.5nm,0.5s,mb3.8,baz=77,slow=6.0,SNR=5.4						

*IDC **08** 09:37:25.1±5.7, 5.04S×144.69E, h73km±56km, mb3.4/3, mb1 3.8/5, mb1mx3.5/14, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=39.8km s-min=32.6km az=161.0*
*ISCJB **08** 09:37:27.8±4.9, 5.2S±0.2×144.9E±0.3, h126km±58km, mb3.7/3, Error ellipse: s-maj=48.3km s-min=31.9km az=41.1*
*NEIC **08** 09:37:33.6±1.1, 5.42S×145.47E, h200km, mb4.8/1, Error ellipse: s-maj=25.9km s-min=17.1km az=82.0*
ISC 08 09:37:29.3±4.9, 52S±03×1449E±03, h128km±60km, n8, σ0s86/8, mb3.7/3, New Guinea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.76**	**151**	P	**Pn**	**09 38 39.3**	**+0.2**
	6.1nm,0.3s,baz=35,slow=4.8,SNR=21						
PMG				S	**Sn**	**09 39 33.1**	**-0.3**
	4.9nm,0.3s,baz=310,slow=21,SNR=6.8						
WB2	**Warramunga Arr**	**17.86**	**214**	eP	**Pn**	**09 41 29.7**	**0.0**
WRA	**Warramunga Arr**	**17.86**	**214**	P	**Pn**	**09 41 29.8**	**0.0**
	0.5nm,0.3s,baz=37,slow=12,SNR=44						
WRA				PcP	PcP	09 46 02.4	+3.1
	0.1nm,0.3s,baz=16,slow=1.8,SNR=4.9						
ASAR	**Alice Springs**	**21.16**	**209**	P	**P**	**09 42 05.5**	**+1.0**
	2.2nm,0.6s,mb3.7,baz=31,slow=13,SNR=32						
FITZ	**Fitzroy Crossi**	**22.73**	**234**	eP	**P**	**09 42 19.0**	**-1.7**
	39nm,1.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**22.73**	**234**	P	**P**	**09 42 20.3**	**-0.4**
	1.9nm,0.5s,mb3.7,baz=46,slow=12,SNR=9.2						
MKAR	**Makanchi Array**	**75.53**	**321**	P	**P**	**09 48 59.8**	**+0.1**
	0.4nm,0.5s,mb3.5,baz=99,slow=7.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**142.82**	**285**	PKhKP		09 56 45.0	
	0.3nm,0.7s,baz=61,slow=2.7,SNR=2.3						
TORD				PKP	PKPdf	09 56 51.3	+2.6
	0.3nm,0.6s,baz=64,slow=1.6						

*ISCJB **08** 09:47:08.6±1.2, 41.24N±0.07×23.73E±0.10, h11km±12km, Error ellipse: s-maj=15.4km s-min=7.8km az=44.0*
*CSEM **08** 09:47:08.9±0.1, 41.23N×23.75E, h15km, MD3.5, Error ellipse: s-maj=4.2km s-min=3.2km az=89.0*
*ATH **08** 09:47:08.7, 41.30N×23.79E, h22km±3km, MD3.5/3*
*SOF **08** 09:47:09.8, 41.27N×23.79E, h20km, MD2.6*
ISC 08 09:47:09.1±0.9, 4123N±008×2373E±008, h14km±8km, n8, σ0s36/11, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.16**	**40**	ePB	**Pg**	**09 47 13.2**	**+0.2**
NVR				eSB	**Sg**	**09 47 15.6**	**-0.2**
MMB	**Musomiste**	**0.36**	**0**	i Pg	**Pg**	**09 47 16.4**	**0.0**
KKB	**Krupnik**	**0.80**	**323**	i Pg	**Pg**	**09 47 24.9**	**+0.3**
RZN	**Rozhen**	**0.87**	**58**	i Pg	**Pg**	**09 47 26.1**	**+0.1**
PLG	**Polygyros**	**0.88**	**194**	ePN	**Pn**	**09 47 26.8**	**-0.2**
PLG				eSN	**Sn**	**09 47 39.7**	**+0.2**
KDZ	**Kurdzhali**	**1.34**	**71**	i P	**Pn**	**09 47 32.6**	**-0.7**
RDO	**Rodhopi**	**1.37**	**93**	ePN	**Pn**	**09 47 33.2**	**-0.5**
RDO				eSN	**Sn**	**09 47 52.3**	**+0.7**
VTS	**Vitosha**	**1.42**	**344**	i Pg	**Pg**	**09 47 36.3**	**0.0**

*CSEM **08** 10:20:25.8±0.2, 38.81N×43.47E, h12km, MD2.9, Error ellipse: s-maj=7.9km s-min=3.0km az=94.0*
*ISK **08** 10:20:26.8, 38.80N×43.25E, h5km, MD2.9*
*ISCJB **08** 10:20:27.6±0.8, 38.82N±0.03×43.4E±0.1, h11km±7km, Error ellipse: s-maj=14.5km s-min=5.3km az=169.6*
*DDA **08** 10:20:27.6, 38.79N×43.48E, h17km±4km, Md3.1*
ISC 08 10:20:27.7±0.6, 3882N±003×434E±01, h16km±5km, n10, σ1s16/17, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.22**	**185**	PG	**Pg**	**10 20 31.9**	**-0.9**
VANB				SG	**Sg**	**10 20 37.6**	**+1.4**
TVAN	**Van**	**0.29**	**181**	i P	**Pg**	**10 20 32.5**	**-1.4**
TVAN				i S	**Sg**	**10 20 38.0**	**-0.1**
VANT	**Van**	**0.37**	**183**	PG	**Pg**	**10 20 34.4**	**-1.0**
VANT				SG	**Sg**	**10 20 42.2**	**+1.7**
TUTA	**Tutak**	**0.75**	**322**	i P	**Pg**	**10 20 42.1**	**-0.3**
TUTA				i S	**Sg**	**10 20 52.0**	**-0.4**
DYDN	**Diyadin**	**0.76**	**16**	i P	**Pg**	**10 20 41.9**	**-0.7**
DYDN				i S	**Sg**	**10 20 54.0**	**+1.4**
DYDN	**Diyadin**	**0.76**	**16**	i P	**Pg**	**10 20 41.8**	**-0.8**
DYDN				i S	**Sg**	**10 20 54.0**	**+1.4**
AGRB	**Hanur-Agry**	**0.83**	**337**	ePG	**Pg**	**10 20 43.3**	**-0.6**
HAKT	**HAKKARI**	**1.28**	**170**	i P	**Pn**	**10 20 48.7**	**-2.1**
HAKT				i S	**Sb**	**10 21 07.3**	**-0.2**
CUKT	**Cukurca**	**1.57**	**174**	ePN	**Pn**	**10 20 56.4**	**+1.5**
EZM	**Erzurum**	**1.93**	**305**	ePN	**Pn**	**10 21 01.4**	**+1.6**

*KRSC **08** 10:43:00.7±0.1, 50.10N×155.88E, h246km±46km, ML4.3*
*MOS **08** 10:43:01.8±1.4, 50.67N×154.56E, h230km, mb3.9/7, Error ellipse: s-maj=13.3km s-min=8.1km az=79.0*
*ISCJB **08** 10:43:02.3±0.7, 50.66N±0.09×154.63E±0.10, h230km±4km, mb3.9/28, Error ellipse: s-maj=16.1km s-min=7.4km az=150.4*
*NEIC **08** 10:43:04.9±0.9, 50.77N×154.58E, h242km±8km, mb4.3/11, Error ellipse: s-maj=12.7km s-min=6.8km az=163.0*
*IDC **08** 10:43:10.0±5.2, 50.73N×154.52E, h297km±58km, mb3.3/15, mb1 3.5/16, mb1mx3.4/23, mbtmp3.3/16, Error ellipse: s-maj=25.0km s-min=12.2km az=172.0*
ISC 08 10:43:03.1±0.7, 5064N±009×15465E±010, h225km±4km, n79, σ1s05/86, mb3.9/28, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.94**	**87**	⇑iPN	**Pn**	**10 43 31.7**	**-3.4**
SKR				pmax	pmax		
	comp=Z,410nm,0.4s						
SKR				pmax	pmax		
	comp=N,170nm,0.3s						
SKR				pmax	pmax		
	comp=E,90nm,0.3s						
MIPR	**Malaya Ipel'ka**	**2.10**	**38**	i P	**Pn**	**10 43 44.8**	**+0.4**
MIPR				i S	**S**	**10 44 18.2**	**+1.3**
GRL	**Gorelyy**	**2.87**	**47**	eP	**Pn**	**10 43 52.9**	**+0.4**
GRL				i S	**S**	**10 44 29.7**	**-1.7**
RUS	**Russkaya**	**3.01**	**52**	eP	**Pn**	**10 43 53.4**	**-0.7**
RUS				i S	**S**	**10 44 30.6**	**-3.6**
PET	**Petropavlovsk**	**3.44**	**45**	ePn	**Pn**	**10 44 00.3**	**+1.2**
PET	**Petropavlovsk**	**3.44**	**45**	ePN	**Pn**	**10 44 02.8**	**+3.7**
PET				eS	**S**	**10 44 42.7**	**-0.6**
PET				smax			
	comp=E,69nm,0.6s						
PET				smax			
	comp=N,88nm,0.5s						
PET	**Petropavlovsk**	**3.44**	**45**	P	**Pn**	**10 44 00.0**	**+0.9**
PET				i S	**S**	**10 44 42.3**	**-1.0**
SDLR	**Sedlovina**	**3.72**	**43**	eP	**Pn**	**10 44 03.1**	**+0.8**
SDLR				i S	**S**	**10 44 46.7**	**-2.5**
SPN	**Mys Shipunski**	**4.14**	**52**	eP	**Pn**	**10 44 05.9**	**-1.5**
SPN				i S	**S**	**10 44 51.6**	**-6.7**
TUMR	**Tumrok**	**5.71**	**33**	P	**Pn**	**10 44 27.2**	**+0.3**
KMNR	**Kamenistaya**	**6.12**	**31**	eP	**Pn**	**10 44 33.1**	**+0.9**
KOZ	**Kozyrevsk**	**6.26**	**28**	P	**Pn**	**10 44 35.5**	**+1.6**
KOZR	**Kozyr**	**6.28**	**28**	PN	**Pn**	**10 44 35.5**	**+1.4**
KPT	**Kopyto**	**6.29**	**30**	P	**Pn**	**10 44 35.5**	**+1.2**
SRDR	**Sredinnyy**	**6.44**	**26**	P	**Pn**	**10 44 38.1**	**+1.9**
KLY	**Klyuchi**	**6.71**	**30**	P	**Pn**	**10 44 41.4**	**+1.7**
KBTR	**Krutoberegovo**	**7.41**	**38**	eP	**Pn**	**10 44 46.7**	**-1.8**
ASAJ	**Asahikawa**	**10.45**	**236**	PN	**Pn**	**10 45 27.5**	**-0.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	10.45	236	P	Pn	10 45 27.5	-0.2
	comp=Z,0.6nm,0.3s,baz=144,slow=19,SNR=4.8						
KLR	Kul'dur	14.80	273	eP	Pn	10 46 20.0	-1.7
YAK	Yakutsk	17.79	319	eP	P	10 46 55.0	+0.3
	comp=Z,25nm,0.6s						
YAK	Yakutsk	17.79	319	eP	P	10 46 55.0	+0.3
YAK				pmax	pmax		
	comp=Z,25nm,0.6s						
BILL	Bilibino	18.37	14	eP	P	10 47 00.5	-0.3
	comp=Z,11nm,0.3s						
BILL	Bilibino	18.37	14⇓	iP	P	10 47 01.1	+0.3
BILL				pmax	pmax		
	comp=Z,16nm,1.2s						
MJAR	Matsushiro Arr	18.39	226	P	P	10 47 03.8	+2.4
	comp=Z,0.3nm,0.3s,baz=20,slow=12,SNR=4.6						
CLNS	Chul'man	18.56	301	eP	P	10 47 05.3	+2.3
CLNS				pmax	pmax		
	comp=E,8.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.8s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.6s						
KSRS	Korea Array	23.14	246	P	P	10 47 50.9	+1.5
	comp=N,1.4nm,0.8s,mb3.6,baz=55,slow=8.5,SNR=5.1						
TIXI	Tiksi	24.07	340	eP	P	10 47 57.0	-0.6
	comp=N,17nm,0.8s,mb4.7						
TIXI	Tiksi	24.07	340	iP	P	10 47 57.8	+0.3
TIXI				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
BOD	Bodaibo	24.50	303	eP	P	10 48 00.2	-1.3
BOD				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.5						
IMA2	Indian Mountai	30.10	40	eP	P	10 48 51.4	+0.1
SONM	Songino Array	31.19	284	P	P	10 49 00.4	-0.6
	comp=Z,0.7nm,0.4s,mb3.6,baz=67,slow=8.0,SNR=18						
ZAK	Zakamensk	32.13	290	eP	P	10 49 08.4	-0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.6						
COLA	College	32.51	42	eP	P	10 49 12.8	+0.5
	comp=Z,3.8nm,0.8s,mb4.0						
COLA	College	32.51	42	eP	P	10 49 12.8	+0.6
COLA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
EGAK	Eagle	35.36	42	eP	P	10 49 36.2	-0.6
	comp=Z,3.0nm,0.6s,mb4.0						
INK	Inuvik	37.85	35	eP	P	10 49 58.0	+0.3
	comp=Z,41nm,0.5s						
INK	Inuvik	37.85	35	P	P	10 49 58.4	+0.7
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	Inuvik	37.85	35	P	P	10 49 58.4	+0.8
	comp=Z,1.7nm,0.4s,mb3.9,baz=301,slow=8.3,SNR=48						
KURK	Kurchatov	46.13	301	eP	P	10 51 04.1	-0.6
	comp=Z,9.6nm,0.7s,mb4.2						
KURK	Kurchatov	46.13	301	eP	P	10 51 04.1	-0.6
KURK				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MKAR	Makanchi Array	46.14	295	P	P	10 51 04.5	-0.3
	comp=Z,1.7nm,0.4s,mb3.7,baz=55,slow=6.4,SNR=39						
RES	Resolute Bay	46.82	20	eP	P	10 51 10.1	+0.3
	comp=Z,104nm,0.4s						
YKA	Yellowknife Ar	47.23	39	P	P	10 51 13.4	+0.5
YKA	Yellowknife Ar	47.23	39	P	P	10 51 13.4	+0.5
	comp=Z,1.8nm,0.7s,mb3.5,baz=300,slow=7.5,SNR=36						
BRVK	Borovoye	49.27	308	eP	P	10 51 28.2	-0.4
	comp=Z,4.1nm,0.7s,mb3.9						
BRVK	Borovoye	49.27	308	eP	P	10 51 28.2	-0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
ARU	Arti	52.87	316	eP	P	10 51 54.4	-0.9
	comp=Z,8.4nm,0.5s,mb4.4						
ARU	Arti	52.87	316	eP	P	10 51 54.4	-0.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.4						
AAK	Ala-Archa	53.08	295	eP	P	10 51 56.0	-1.1
	comp=Z,1.9nm,0.7s,mb3.6						
AAK	Ala-Archa	53.08	295	eP	P	10 51 56.0	-1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
ARCES	ARCESS Array B	54.52	340	P	P	10 52 05.4	-1.7
	comp=Z,2.0nm,0.7s,mb3.7,baz=39,slow=8.1,SNR=24						
NVAR	Mina Array Bea	59.80	65	P	P	10 52 43.4	-1.1
	comp=Z,0.1nm,0.5s,baz=205,slow=11,SNR=3.1						
FINES	FINESS Array B	60.95	335	P	P	10 52 50.8	-1.1
	comp=Z,1.1nm,0.5s,mb3.8,baz=40,slow=6.8,SNR=8.4						
PDAR	Pinedale Array	61.68	56	P	P	10 52 57.2	+0.1
	comp=Z,0.6nm,0.8s,mb3.3,baz=301,slow=1.2,SNR=5.7						
NB2	NORSAR Subarra	64.87	341	P	P	10 53 16.5	-1.1
	comp=Z,1.2nm,0.8s,mb3.6,baz=25,slow=6.5						
NB2	NORSAR Subarra	64.87	341	P	P	10 53 16.5	-1.1
NB2				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
NOA	NORSAR Array B	64.87	341	P	P	10 53 16.8	-0.8
	comp=Z,1.2nm,0.8s,mb3.6,baz=26,slow=6.8,SNR=5.3						
AKASG	Malin Array Be	68.87	326	P	P	10 53 41.2	-1.8
AKASG	Malin Array Be	68.87	326	P	P	10 53 41.2	-1.8
	comp=Z,1.6nm,0.4s,mb4.0,baz=32,slow=6.3,SNR=7.5						
SCHQ	Schefferville	69.33	24	P	P	10 53 44.9	-0.8
	comp=Z,2.0nm,0.4s,mb4.1,baz=256,slow=10,SNR=9.8						
TXAR	Lajitas Array	74.74	62	P	P	10 54 18.3	0.0
TXAR	Lajitas Array	74.74	62	P	P	10 54 18.3	+0.1
	comp=Z,0.2nm,0.4s,mb3.1,baz=299,slow=4.9,SNR=9.3						
GERES	GERESS Array B	75.39	335	P	P	10 54 20.9	-0.7
	comp=Z,0.7nm,0.5s,mb3.6,baz=44,slow=5.9,SNR=4.9						
BRTR	Keskin Array B	76.24	317	P	P	10 54 26.4	-0.1
	comp=Z,0.9nm,0.7s,mb3.5,baz=126,slow=3.2,SNR=4.8						
BAIF	Baives	76.55	341	eP	P	10 54 28.0	-0.1
CDF	Champ du Feu	77.42	338	eP	P	10 54 33.1	+0.1
LDF	La Druitiere	78.80	343	eP	P	10 54 40.7	+0.2
GRR	Gorron	79.13	344	eP	P	10 54 42.4	+0.1
	comp=Z,38nm,1.0s,mb4.7						
SGMF	Saint Gilles	79.55	345	eP	P	10 54 44.8	+0.2
AVF	Avril sur Loir	79.83	340	eP	P	10 54 46.2	+0.1
LPL	La Plagne	80.27	338	eP	P	10 54 49.5	+1.0
	comp=Z,14nm,0.6s,mb4.4						
LPG	La Plagne	80.28	338	eP	P	10 54 49.7	+1.1
	comp=Z,11nm,0.6s,mb4.3						
MFF	Saint Martin d	80.72	343	eP	P	10 54 51.2	+0.3
MBDF	Montbardon	81.00	337	eP	P	10 54 53.5	+1.1
	comp=Z,5.6nm,0.6s,mb4.1						
ORIF	Oris-en-Rattie	81.03	338	eP	P	10 54 53.3	+0.7
CAF	Calviac	81.88	341	eP	P	10 54 57.7	+0.7
LFF	La Frestale	82.14	342	eP	P	10 54 58.9	+0.6
LMR	La Mourre	82.37	337	eP	P	10 54 59.7	+0.1
	comp=Z,11nm,0.6s,mb4.3						

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*ISCJB **08** 10:49:59.6±0.9, 6.39S±0.07×128.25E±0.08, h327^{km}±12^{km}, mb3.7/5, Error ellipse: s-maj=13.0km s-min=10.1km az=158.4*

*IDC **08** 10:50:01.3±1.6, 6.44S×128.15E, h330^{km}±20^{km}, mb3.5/5, mb1 3.7/9, mb1mx3.6/16, mbtmp3.6/9, Error ellipse: s-maj=18.3km s-min=9.3km az=63.0*

ISC 08 10:50:00.6±0.8, **6.42S**±0.06×**128.23E**±0.08, **h319**^{km}±11^{km}, **n14**, σ1^s**04**/20, **mb3.7**/5, **2C-1D**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	4.55	80⇑	eP	Pn	10 51 13.0	-0.8
TLE	Tual	4.55	80⇑	eP	Pn	10 51 13.0	-0.8
TLE				eS	S	10 52 04.0	-8.8
BATI	Kupang	5.88	230	P	Pn	10 51 30.7	+1.7
	144nm,0.3s,baz=75,slow=3.4,SNR=175						
BATI				S	S	10 52 39.3	-1.1
	32nm,0.3s,baz=262,slow=22,SNR=14						
FITZ	Fitzroy Crossi	11.88	192	eP	Pn	10 52 41.4	0.0
	22nm,0.6s						
FITZ				eS	S	10 55 02.1	+8.4
FITZ	Fitzroy Crossi	11.88	192	P	Pn	10 52 41.3	-0.1
	2.2nm,0.3s,baz=20,slow=9.9,SNR=26						
WRA	Warramunga Arr	14.70	157	P	P	10 53 13.1	-0.2
	2.8nm,0.3s,baz=339,slow=12,SNR=100						
WRA				S	S	10 55 50.1	-3.2
	1.1nm,0.3s,baz=344,slow=17,SNR=13						
WB2	Warramunga Arr	14.70	157⇓	iP	P	10 53 13.9	+0.5
WB2				eS	S	10 55 50.9	-2.5
ASAR	Alice Springs	18.00	163	P	P	10 53 50.5	+1.3
	2.8nm,0.3s,baz=343,slow=11,SNR=256						
ASAR				S	S	10 56 59.1	+0.4
	1.1nm,0.3s,baz=345,slow=20,SNR=53						
PMG	Port Moresby	18.98	100	P	P	10 54 00.4	+0.7
	1.8nm,0.3s,baz=311,slow=1.6,SNR=10.0						
CTA	Charters Tower	22.16	130	P	P	10 54 31.3	+0.7
	7.8nm,0.8s,mb4.0,baz=302,slow=10,SNR=8.1						
STKA	Stephens Creek	28.24	155	P	P	10 55 25.3	+0.3
	0.4nm,0.3s,mb3.2,baz=331,slow=13,SNR=2.7						
KSRS	Korea Array	43.65	360	P	P	10 57 33.5	-0.9
	2.3nm,0.5s,mb3.5,baz=176,slow=9.5,SNR=12						
SONM	Songino Array	57.35	343	P	P	10 59 16.0	+0.1
	1.7nm,0.7s,mb3.5,baz=160,slow=8.0,SNR=15						
MKAR	Makanchi Array	66.79	328	P	P	11 00 17.9	-0.4
	2.3nm,0.5s,mb4.2,baz=118,slow=8.6,SNR=43						

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*IDC **08** 11:14:28.7±0.4, 58.09S×7.93W, h0^{km}, mb4.9/16, mb1 5.0/17, mb1mx4.9/19, mbtmp4.9/17, MS5.7/20, Ms1 5.6/20, ms1mx5.6/22, Error ellipse: s-maj=13.8km s-min=10.3km az=142.0*

*ISCJB **08** 11:14:29.2±0.3, 58.21S±0.04×7.70W±0.09, h10^{km}, mb5.3/36, MS5.9/185, Error ellipse: s-maj=7.1km s-min=6.3km az=155.4*

*GCMT **08** 11:14:31.5±0.1, 58.13S×7.93W, h14^{km}, MW6.2/109, Moment Tensor Solution. s103,c227; s109,c405; Duration: 3^{s}0 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05±.01; $M_{\theta\theta}$-0.62±.01; $M_{\phi\phi}$0.67±.01; $M_{r\theta}$0.30±.03; $M_{\theta\phi}$2.21±.01; $M_{\phi r}$-0.45±.04; Best double couple: $M_0$2.36600×10^{18} NP1:ϕ_s261.00000°,δ78.00000°, λ-6.00000°. NP2:ϕ_s352.00000°,δ84.00000°, λ-168.00000°. Principal axes: T 2.3420, Plg4.0000°, Azm126.0000°; N 0.0480, Plg77.0000°, Azm17.0000°; P -2.3900, Plg12.0000°, Azm217.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **08** 11:14:31.5±0.3, 58.22S×7.62W, h10^{km}, mb5.6/19, MS5.9/155, MW6.1 Error ellipse: s-maj=10.7km s-min=9.9km az=51.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{18}Nm; M_{rr}0.07; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$0.66; $M_{r\theta}$-0.13; $M_{\theta\phi}$1.67; $M_{\phi r}$0.33; Best double couple: $M_0$1.80000×10^{18} NP1:ϕ_s79.00000°,δ79.00000°, λ-1.00000°. NP2:ϕ_s169.00000°,δ89.00000°, λ-169.00000°. Principal axes: T 1.8000, Plg7.0000°, Azm303.0000°; N 0.0900, Plg79.0000°, Azm176.0000°; P -1.8900, Plg9.0000°, Azm34.0000°;*

*BJI **08** 11:14:31.5, 58.20S×7.60W, h10^{km}, mB5.8, Ms6.0, Msz5.8*

*MOS **08** 11:14:35.2±1.8, 58.31S×7.14W, h33^{km}, mb5.7/10, Error ellipse: s-maj=29.3km s-min=12.3km az=89.3*

ISC 08 11:14:29.9±2.0, **58.16S**±0.05×**7.67W**±0.09, **h4**^{km}±11^{km}, **n334**, σ1^s**37**/85, **mb5.3**/36, **MS5.9**/185, **12C-5D**, **East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.54	181	ePn	Pn	11 17 29.9	+1.0
VNA1				e		11 17 32.6	
VNA1				e		11 17 34.2	
VNA1				e		11 17 37.0	
VNA1				e		11 17 40.5	
VNA1				e		11 17 45.3	
VNA1				e		11 17 50.9	
VNA1				e		11 17 55.9	
VNA1				e		11 18 00.6	
VNA1				e		11 19 50.0	
VNA1				e		11 19 52.4	
VNA1				e		11 20 00.0	
VNA2	Neumayer--Watz	12.82	180	ePn	Pn	11 17 33.9	+1.3
VNA2				e		11 17 35.5	
VNA2				e		11 17 37.3	
VNA2				e		11 17 40.3	
VNA2				e		11 17 42.7	
VNA2				e		11 17 48.9	
VNA2				e		11 17 54.4	
VNA2				e		11 17 58.9	
VNA2				e		11 18 03.9	
VNA2				e		11 19 55.3	
VNA2				e		11 19 59.9	
VNA2				e		11 20 07.7	
VNA3	Neumayer Olymp	13.16	183	ePn	Pn	11 17 35.8	-1.5
VNA3				e		11 17 38.1	
VNA3				e		11 17 40.2	
VNA3				e		11 17 42.5	
VNA3				e		11 17 45.6	
VNA3				e		11 17 48.0	
VNA3				e		11 17 53.7	
VNA3				e		11 17 58.5	
VNA3				e		11 18 07.9	
VNA3				e		11 20 04.0	
VNA3				e		11 20 06.4	
VNA3				e		11 20 15.4	
SNAA	Sanae	13.71	174	P	Pn	11 17 45.4	+0.6
SNAA	Sanae	13.71	174	ceP	Pn	11 17 46.1	+1.3
SNAA	Sanae	13.71	174	Pn	Pn	11 17 43.5	-1.3
	9.1nm,0.3s,baz=356,slow=13,SNR=52						
SNAA				Sn	Sn	11 20 05.7	-12
	11nm,0.3s,baz=287,slow=13,SNR=5.2						
SNAA				LR	LR	11 21 14.9	
	comp=Z,4μm,20.6s,baz=359,slow=29						
MAIT	Maitri	15.05	155	eP	Pn	11 18 00.5	-2.6
MAIT				eS	Sn	11 20 36.8	-13
TRIS	Tristan da Cun	21.32	350	eP	P	11 19 20.6	+3.0
	68nm,0.4s,mb5.3						
TRIS				LR	LR		
	comp=Z,17μm,21.0s,MS5.4						
SYO	Syowa Base	22.99	137⇓	eP	P	11 19 31.0	-4.1
SYO	Syowa Base	22.99	137⇓	eP	P	11 19 33.2	-1.9
PMSA	Palmer Station	26.89	232	PFAKE		11 20 20.0	+8.7
PMSA				LR	LR		
	comp=Z,19μm,22.0s,MS5.6						
PMSA	Palmer Station	26.89	232	LR	LR	11 28 00.7	
	comp=Z,14μm,20.8s,MS5.5,baz=268,slow=30						
EFI	East Falkland	29.08	261	eP	P	11 20 31.6	+0.5
	comp=Z,163nm,1.2s,mb5.6						
EFI				LR	LR		
	comp=Z,18μm,21.0s,MS5.7						
EFI	East Falkland	29.08	261⇓	eP	P	11 20 30.3	-0.8
MAW	Mawson	31.69	137	P	P	11 20 54.5	+0.5
	comp=Z,73nm,1.1s,mb5.4,baz=269,slow=1.6,SNR=5.8						
MAW				LR	LR	11 32 18.8	
	comp=Z,12μm,19.4s,MS5.6,baz=264,slow=34						
QSPA	South Pole Qui	32.08	180	eP	P	11 20 56.5	-0.7
	comp=Z,209nm,0.9s,mb6.0						
SUR	Sutherland	32.20	49	eP	P	11 21 00.9	+2.1
	comp=Z,69nm,1.0s,mb5.4						
SUR				LR	LR		
	comp=Z,21μm,20.0s,MS5.8						
SUR	Sutherland	32.20	49	P	P	11 21 00.2	+1.4
	comp=Z,12nm,0.9s,mb4.7,baz=218,slow=11,SNR=3.7						
SUR				S	S	11 26 15.1	+3.0
	comp=Z,5.9nm,0.9s,baz=345,slow=22,SNR=1.7						
SUR				LR	LR	11 31 01.2	
	comp=Z,21μm,20.9s,MS5.8,baz=207,slow=31						
USHA	Ushuaia	32.71	249	P	P	11 21 03.2	+0.1
	comp=Z,27nm,0.9s,mb5.2,baz=113,slow=8.7,SNR=15						
BOSA	Boshof	37.33	52	P	P	11 21 44.1	+1.0
BOSA				S	S	11 27 34.0	+2.8
BOSA				LR	LR	11 34 08.7	
BOSA	Boshof	37.33	52	P	P	11 21 44.1	+1.0
BOSA				S	S	11 27 34.0	+2.8
BOSA	Boshof	37.33	52	P	P	11 21 44.1	+1.0
	comp=Z,22nm,0.8s,mb5.0,baz=210,slow=8.6,SNR=16						
BOSA				S	S	11 27 34.0	+2.8
	comp=Z,1.9nm,0.8s,baz=339,slow=16,SNR=1.2						
BOSA				LR	LR	11 34 08.7	
	comp=Z,8μm,19.6s,MS5.5,baz=208,slow=32						
LPA	La Plata	40.40	283	ceP	P	11 22 08.0	-0.8
LPA				epP	pP	11 22 14.0	+4.0
LPA				ePP	PP	11 23 43.0	+1.5
LPA				eS	S	11 28 16.0	-1.3
LPA							
	comp=Z,21μm,20.0s						
LBTB	Lobatse	40.65	50	P	P	11 22 10.7	-0.3
	comp=Z,23nm,1.0s,mb4.8,baz=212,slow=10,SNR=15						
LBTB				S	S	11 28 20.9	-0.3
	comp=Z,1.5nm,0.8s,baz=189,slow=21,SNR=2.2						
PLCA	Paso Flores	42.71	266	eP	P	11 22 27.2	-0.4
	comp=Z,71nm,1.3s,mb5.2						
PLCA				LR	LR		
	comp=Z,8μm,20.0s,MS5.6						
TSUM	Tsumeb	43.09	36	eP	P	11 22 30.6	-0.3
	comp=Z,113nm,1.1s,mb5.5						
SBA	Scott Base	44.20	178	eP	P	11 22 41.2	+2.0
	comp=Z,116nm,1.0s,mb5.6						
SBA				LR	LR		
	comp=Z,7μm,19.0s,MS5.6						
SBA	Scott Base	44.20	178	eP	P	11 22 41.2	+1.9
SBA				pmax	pmax		
	comp=Z,116nm,1.0s,mb5.6						
SBA				MLR	MLR		
	comp=Z,7μm,19.0s,MS5.6						
VNDA	Vanda	44.42	177	P	P	11 22 42.7	+1.7
VNDA				S	S	11 29 16.6	+0.9
VNDA	Vanda	44.42	177	P	P	11 22 42.6	+1.6
	comp=Z,55nm,0.8s,mb5.3,baz=208,slow=7.3,SNR=36						
VNDA				S	S	11 29 16.6	+0.8
	comp=Z,1.2nm,0.8s,baz=118,slow=13,SNR=2.0						
VNDA				LR	LR	11 41 08.8	
	comp=Z,4μm,20.9s,MS5.3,baz=191,slow=36						
SPB	Sao Paulo	44.66	303	P	P	11 22 43.3	-0.2
CCHI	Chillan	46.55	268⇑	iP	P	11 22 59.6	+1.2
CASY	Casey	47.62	151	PFAKE		11 23 20.0	+14
CASY				LR	LR		
	comp=Z,16μm,21.0s,MS6.0						
FCH	Farellones	48.10	273	eP	P	11 23 11.6	+1.1
CFAA	Coronel Fontan	48.36	276	P	P	11 23 10.8	-1.7
CFAA				S	S	11 30 10.4	-2.7
CFAA	Coronel Fontan	48.36	276	P	P	11 23 10.8	-1.7
	comp=Z,12nm,1.1s,mb4.8,baz=147,slow=8.3,SNR=41						
CFAA				S	S	11 30 10.4	-2.7
	comp=Z,0.1nm,0.4s,baz=162,slow=22,SNR=2.8						
PEL	Peldehue	48.45	273⇑	iP	P	11 23 12.1	-1.1
ASCN	Ascension	50.37	351	PFAKE		11 23 40.0	+12
ASCN				LR	LR		
	comp=Z,7μm,19.0s,MS5.7						
LSZ	Lusaka	50.46	47	eP	P	11 23 28.1	-0.5
	comp=Z,60nm,0.9s,mb5.6						
LSZ				LR	LR		
	comp=Z,26μm,20.0s,MS6.2						
TLL	Tololo Astrono	50.84	275⇑	iP	P	11 23 32.9	+1.4
LCO	Las Campanas	51.71	276	eP	P	11 23 38.2	+0.3
	comp=Z,128nm,1.3s,mb5.7						
LCO				LR	LR		
	comp=Z,11μm,22.0s,MS5.8						
DRV	Dumont d'Urvil	53.18	165	P	P	11 23 55.0	+6.6
DRV				S	S	11 31 26.0	+6.8
DRV				SS	SS	11 34 58.0	+0.4
DRV				L		11 36 00.0	
DRV				R		11 40 00.0	
RCBR	Riachuelo	56.62	326	eP	P	11 24 14.7	+0.9
	comp=Z,58nm,1.4s,mb5.4						
RCBR				LR	LR		
	comp=Z,8μm,20.0s,MS5.8						
LPAZ	La Paz	60.83	287	eP	P	11 24 41.8	-1.5
	comp=Z,144nm,1.1s,mb6.0						
LPAZ	La Paz	60.83	287	eP	P	11 24 41.8	-1.4
LPAZ				pmax	pmax		
	comp=Z,144nm,1.1s						
LPAZ	La Paz	60.83	287	P	P	11 24 41.1	-2.1
	comp=Z,41nm,0.8s,mb5.6,baz=174,slow=5.2,SNR=40						
LPAZ				LR	LR	11 49 31.7	
	comp=Z,8μm,20.3s,MS5.8,baz=139,slow=35						
ARE	Arequipa	62.41	284⇑	iP	P	11 24 55.8	+2.0
LIC	Lamto	64.21	3	ePKIKP	P	11 25 02.9	-2.8
	comp=Z,197nm,1.2s,mb6.0						
KIC	Kosan Boka	64.35	3	ePKIKP	P	11 25 03.4	-3.2
	comp=Z,242nm,1.0s,mb6.2						
TIC	Toumodi	64.62	3	ePKIKP	P	11 25 03.6	-4.8
	comp=Z,10nm,0.2s,mb5.5						
DBIC	Dimbokro	64.65	3	P	P	11 25 06.0	-2.6
	comp=Z,8.3nm,1.0s,mb4.7,baz=160,slow=7.5,SNR=4.5						
DBIC				LR	LR	11 48 12.7	
	comp=Z,5μm,18.3s,MS5.8,baz=163,slow=31						
KMBO	Kilima Mbogo	66.93	50	eP	P	11 25 28.8	+5.5
	comp=Z,205nm,2.5s,mb5.7						
KMBO				LR	LR	11 52 21.4	
KMBO	Kilima Mbogo	66.93	50	eP	P	11 25 27.9	+4.5
KMBO				pmax	pmax		
	comp=Z,200nm,2.5s						
KMBO	Kilima Mbogo	66.93	50	P	P	11 25 24.0	+0.6
	comp=Z,0.3nm,0.3s,baz=53,slow=23,SNR=2.3						
KMBO				LR	LR	11 52 21.4	
	comp=Z,16μm,19.2s,MS6.3,baz=86,slow=34						
NNA	Nana	68.94	281	eP	P	11 25 37.9	+1.9
	comp=Z,106nm,1.4s,mb5.6						
NNA				LR	LR		
	comp=Z,6μm,20.0s,MS5.8						
TORD	Torodi Ar. Bea	71.47	10	P	P	11 25 49.8	-1.6
	comp=Z,12nm,1.0s,mb4.8,baz=198,slow=6.0,SNR=22						
TORD				LR	LR	11 50 22.8	
	comp=Z,3μm,21.5s,MS5.5,baz=175,slow=30						
BBTS	Babate	72.92	351	LR	LR	11 50 32.4	
	comp=Z,6μm,21.5s,MS5.9,baz=10,slow=30						
RPN	Rapa Nui	73.20	246	PFAKE		11 26 10.0	+8.2
RPN				LR	LR		
	comp=Z,6μm,21.0s,MS5.9						
TAU	Tasmania Unive	77.16	161	eP	P	11 26 25.3	+1.0
TAU				LR	LR		
	comp=Z,10μm,19.0s,MS6.2						
NWAO	Narrogin (SRO)	78.25	135	eP	P	11 26 31.7	+1.1
	comp=Z,51nm,0.9s,mb5.5						
NWAO				LR	LR		
	comp=Z,3μm,22.0s,MS5.6						
RPZ	Rata Peaks	78.48	179	LR	LR	11 57 13.8	
	comp=Z,5μm,20.6s,MS5.8,baz=176,slow=33						
MUN	Mundaring	78.71	134	eP	P	11 26 32.4	-0.8
KLBR	Kellerberrin	79.64	135	eP	P	11 26 45.0	+6.7
	comp=Z,26nm,0.8s,mb5.2						
OTAV	Otavalo	80.15	287	eP	P	11 26 44.6	+3.4
	comp=Z,47nm,1.4s,mb5.2						
OTAV				LR	LR		
	comp=Z,7μm,22.0s,MS6.0						
SNZO	South Karori	80.87	182	PFAKE		11 27 00.0	+15
SNZO				LR	LR		
	comp=Z,4μm,19.0s,MS5.8						
ROSC	El Rosal	82.07	293	eP	P	11 26 52.8	+1.4
ROSC	El Rosal	82.07	293	P	P	11 26 51.4	+0.1
	comp=Z,6.4nm,0.3s,mb5.0,baz=112,slow=17,SNR=7.6						
ROSC				LR	LR	12 02 07.9	
	comp=Z,7μm,18.4s,MS6.1,baz=184,slow=35						
BBGH	Gun Hill	82.69	309	PFAKE		11 27 10.0	+15
BBGH				LR	LR		
	comp=Z,13μm,20.0s,MS6.3						
SDV	Santo Domingo	83.80	298	eP	P	11 26 59.7	-0.5
	comp=Z,94nm,1.8s,mb5.6						
SDV				LR	LR		
	comp=Z,6μm,21.0s,MS6.0						
FORT	Forrest	83.97	143	eP	P	11 26 59.2	-1.9
	comp=Z,31nm,0.9s,mb5.4						
PTCN	Pitcairn Islan	84.29	230	PFAKE		11 27 10.0	+7.2
PTCN				LR	LR		
	comp=Z,7μm,22.0s,MS6.0						
CNB	Canberra Magne	84.91	161	eP	P	11 27 12.0	+6.2
	comp=Z,41nm,1.2s,mb5.4						
PAYG	Puerto Ayora	85.52	276	PFAKE		11 27 20.0	+11
PAYG				LR	LR		
	comp=Z,7μm,20.0s,MS6.0						
STKA	Stephens Creek	86.68	154	eP	P	11 27 14.0	-0.6
	comp=Z,12nm,0.8s,mb5.2						
STKA	Stephens Creek	86.68	154	P	P	11 27 14.6	-0.1
	comp=Z,5.2nm,0.9s,mb4.8,baz=173,slow=4.8,SNR=7.7						
STKA				LR	LR	12 03 15.8	
	comp=Z,6μm,19.3s,MS6.0,baz=193,slow=34						
RKT	Rikitea	87.98	227	eLQ		11 51 34.2	
	comp=Z,4μm,29.0s						
RKT	Rikitea	87.98	227	ePP	PP	11 30 35.0	-12
	comp=Z,276nm,28.8s						
RKT	Rikitea	87.98	227	eS	S	11 37 59.1	-5.9
	comp=Z,2μm,27.0s						
RKT				eSS	SS	11 43 36.9	-14
	comp=Z,2μm,28.2s						
RKT				eLR	LR	11 55 17.4	
	comp=Z,11μm,33.2s,baz=156						
MBWA	Marble Bar	89.79	132	PFAKE		11 27 40.0	+10
MBWA				LR	LR		
	comp=Z,7μm,20.0s,MS6.1						
SJG	San Juan	89.91	306	PFAKE		11 27 40.0	+10
SJG				LR	LR		
	comp=Z,5μm,20.0s,MS6.0						
ARMA	Armidale	90.07	162	eP	P	11 27 35.0	+4.3
MDT	Midelt	90.67	3	P	P	11 27 34.0	+0.9
	comp=Z,14nm,1.2s,mb5.2,baz=242,slow=1.6,SNR=5.3						
JTS	JuntasAbangare	92.04	286	eP	P	11 27 40.4	+0.4
	comp=Z,21nm,0.9s,mb5.5						
JTS				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
JTS	JuntasAbangare	92.04	286	eP	P	11 27 40.9	+0.9
JTS				pmax	pmax		
	comp=Z,21nm,0.9s						
ASAR	Alice Springs	92.43	145	P	P	11 27 40.4	-1.4
	comp=Z,4.1nm,1.0s,mb4.7,baz=201,slow=4.7,SNR=18						
TBI	Tubuai	92.79	215	eLQ		11 53 34.0	
	comp=Z,2μm,31.0s						
TBI	Tubuai	92.79	215	ePP	PP	11 31 25.1	+0.4
	comp=Z,266nm,28.0s						
TBI	Tubuai	92.79	215	eSKSac	SKSac	11 38 13.6	-4.3

comp=Z,638nm,24.5s
TBI eSP SP 11 39 56.1 -3.9
comp=Z,5µm,26.8s
TBI eSS SS 11 44 58.0 -2.7
comp=Z,2µm,26.2s
TBI eLR LR 11 57 28.8
comp=Z,10µm,28.0s,baz=162
SDDR Presa de Saban 92.94 302 PFAKE 11 28 00.0 +16
SDDR LR LR
comp=Z,7µm,22.0s,MS6.1
KEST Kesra 94.62 14 P **P 11 27 50.3 -1.0**
comp=Z,0.4nm,0.3s,baz=102,slow=14,SNR=2.1
KEST LR LR 12 06 37.6
comp=Z,1µm,19.5s,MS5.3,baz=322,slow=33
FITZ Fitzroy Crossi 94.82 136 LR LR 12 04 31.0
comp=Z,4µm,21.1s,MS5.8,baz=205,slow=32
PALK Pallekele 95.26 85 PFAKE 11 28 10.0 +15
PALK LR LR
comp=Z,3µm,22.0s,MS5.8
WRA Warramunga Arr 96.06 144 P **P 11 27 56.6 -1.9**
comp=Z,3.2nm,0.8s,mb4.8,baz=206,slow=4.3,SNR=12
WRA LR LR 12 07 03.2
comp=Z,3µm,20.1s,MS5.8,baz=185,slow=33
WB2 Warramunga Arr 96.06 144 eP **P 11 28 02.9 +4.4**
TGUH Tegucigalpa,Un 96.42 286 PFAKE 11 28 10.0 +10
TGUH LR LR
comp=Z,4µm,20.0s,MS5.9
PDA Ponta Delgada 96.73 346 i LR LR 11 59 32.0
PAB San Pablo 97.38 3 PFAKE 11 28 20.0 +16
PAB LR LR
comp=Z,2µm,19.0s,MS5.6
ESDC Sonseca Array 97.52 3 LR LR 12 09 22.7
comp=Z,2µm,18.1s,MS5.5,baz=150,slow=34
RAR Rarotonga 97.59 206 PFAKE 11 28 20.0 +15
RAR LR LR
comp=Z,2.0nm,19.0s
RAR Rarotonga 97.59 206 LR LR 12 05 22.2
comp=Z,3µm,18.3s,MS5.9,baz=166,slow=31
ADH Angra Heroismo 97.84 345 i LR LR 12 00 10.0
PPT Papeete 98.26 216 ePP PP 11 32 04.2 -3.0
comp=Z,466nm,28.0s
PPT Papeete 98.26 216 ePS PS 11 41 00.9 +0.7
comp=Z,7µm,30.8s
PPT Papeete 98.26 216 eSKSac SKSac 11 38 41.3 -5.7
comp=Z,3µm,29.5s
PPT eSS SS 11 46 13.6 -4.8
comp=Z,3µm,25.2s
PPT eLR LR 11 59 57.7
comp=Z,4µm,21.8s
PPT Papeete 98.26 216 LR LR 12 06 44.3
comp=Z,4µm,18.0s,MS6.0,baz=178,slow=32
CTAO Charters Tower 99.09 155 PFAKE 11 28 20.0 +7.8
CTAO LR LR
comp=Z,5µm,19.0s,MS6.0
BBSR BB Station 101.98 313 PFAKE 11 28 40.0 +15
BBSR LR LR
comp=Z,6µm,22.0s,MS6.0
TEIG Tepich 102.13 289 PFAKE 11 28 40.0 +14
TEIG LR LR
comp=Z,4µm,20.0s,MS5.9
ANTO Ankara 103.36 31 PFAKE 11 28 40.0 +8.8
ANTO LR LR
comp=Z,1µm,20.0s,MS5.5
BRTR Keskin Array B 103.45 32 Pdiff Pdif 11 28 33.8 +2.1
comp=Z,0.3nm,0.4s,baz=220,slow=6.3,SNR=2.7
BRTR PP PP 11 32 47.5 +0.2
comp=Z,2.2nm,0.9s,baz=180,slow=7.3,SNR=9.0
DWPF Disney 105.45 298 PFAKE 11 33 10.0 +16
DWPF LR LR
comp=Z,7µm,19.0s,MS6.2
BFO Black Forest 106.94 11 PFAKE 11 33 10.0 +14
BFO LR LR
comp=Z,2µm,20.0s,MS5.8
AFI Afiamalu 107.01 196 PFAKE 11 33 10.0 +13
AFI LR LR
comp=Z,3µm,20.0s,MS5.8
GERES GERESS Array B 108.09 15 PP PP 11 33 14.1 -7.3
comp=Z,0.2nm,0.3s,baz=200,slow=14,SNR=2.7
KHC Kasperske Hory 108.35 15 ePP PP 11 33 23.3 0.0
KHC ex x 11 33 31.2
KHC eSP SP 11 42 47.7 +1.6
KHC ex x 11 48 28.9
KHC AMS AMS 12 16 00.0
comp=Z,2µm,21.9s
GRFO Grafenberg 108.61 13 PFAKE 11 33 10.0 +11
GRFO LR LR
comp=Z,2µm,20.0s,MS5.6
GRF Grafenberg Arr 108.61 13 ePP PP 11 33 40.6 +15
GRF eL 12 15 15.3
comp=Z,1µm,20.7s
TREC Trest 108.78 16 AMS AMS 12 20 30.0
comp=Z,1µm,17.3s
KIS Kishinev 109.05 26 ePKP PP 11 33 26.0 -2.5
KIS eS Sdif 11 41 08.0 +0.8
KIS Kishinev 109.05 26 ePS PS 11 43 12.0 +18
KIS LRM 12 20 00.0
comp=Z,1µm,18.0s
NHSC New Hope 109.10 302 PFAKE 11 33 10.0 +10
NHSC LR LR
comp=Z,4µm,22.0s,MS6.0
NKC Novy Kostel 109.29 14 AMS AMS 12 17 10.0
comp=Z,2µm,18.9s
PRU Pruhonice 109.32 15 eSP SP 11 42 50.9 -5.0
PRU eSS SS 11 48 46.3 -5.5
PRU AMS AMS 12 18 10.0
comp=Z,2µm,20.6s
PMG Port Moresby 109.62 154 PFAKE 11 33 10.0 +8.1
PMG LR LR
comp=Z,4µm,22.0s,MS6.0
OKC Ostrava-Krasne 109.71 17 AMS AMS 12 18 10.0
comp=Z,1µm,12.4s
PVCC Panska Ves 109.85 15 AMS AMS 12 17 10.0
comp=Z,2µm,18.6s
CNNC Cliffs of the 109.89 305 PFAKE 11 33 10.0 +8.4
CNNC LR LR
comp=Z,6µm,21.0s,MS6.1
DPC Dobruska-Polom 109.93 16 ePP PP 11 33 40.0 +5.3
DPC eSP SP 11 43 07.7 +5.6
DPC AMS AMS 12 17 10.0
comp=Z,2µm,19.8s
KIV Kislovodsk 110.01 36 PFAKE 11 33 10.0 +8.5
KIV LR LR
comp=Z,3µm,19.0s,MS5.8
CLL Collm 110.41 14 ePP PP 11 33 39.0 +0.8
CLL ex x 11 34 03.0
CLL eSKSac SKSac 11 39 47.0 +6.3
CLL e(Sdif) 11 41 27.0
CLL ePS PS 11 43 11.0 +4.0
CLL ePPS 11 44 19.0
CLL eSS SS 11 49 04.0 -2.4
CLL ex x 11 50 04.0
CLL eSSS 11 53 12.0
CLL Collm 110.41 14 ePP PP 11 33 39.1 +0.9
CLL eSdiff Sdif 11 41 23.8 +5.3
CLL ePS PS 11 43 11.5 +4.5
CLL ePPS 11 44 20.3
CLL eSS SS 11 49 12.6 +6.2
CLL eSSS 11 53 20.1
CLL eLR LR 12 07 07.0
BRAL Brewton 110.54 296 PFAKE 11 33 20.0 +17
BRAL LR LR
comp=Z,10µm,21.0s,MS6.4
GOGA Godfrey 110.85 300 PFAKE 11 33 20.0 +17
GOGA LR LR
comp=Z,3µm,19.0s,MS6.0
HNR Honiara 111.89 167 PFAKE 11 33 20.0 +14
HNR LR LR
comp=Z,5µm,21.0s,MS6.0
CBN Corbin 112.17 307 PFAKE 11 33 20.0 +14
CBN LR LR
comp=Z,6µm,22.0s,MS6.1
LRAL Lakeview Retre 112.18 297 PFAKE 11 33 20.0 +14
LRAL LR LR
comp=Z,7µm,21.0s,MS6.2
KIEV Kiev 112.62 24 PFAKE 11 33 20.0 +14
KIEV LR LR
comp=Z,1µm,20.0s,MS5.5
AKASG Malin Array Be 112.63 24 i PKIKP PKiKP 11 33 10.1 +3.8
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 112.63 24 PKKPab PKKPab 11 44 00.0 +0.2
comp=Z,0.5nm,0.5s,baz=280,slow=36,SNR=3.6
BLA Blacksburg 112.65 304 PFAKE 11 33 20.0 +13
BLA LR LR
comp=Z,6µm,22.0s,MS6.2

KVTX Kingsville 113.07 285 PFAKE 11 33 20.0 +12
KVTX LR LR
comp=Z,3µm,20.0s,MS5.8
ESK Eskdalemuir 113.18 3 PFAKE 11 33 20.0 +13
ESK LR LR
comp=Z,1µm,19.0s,MS5.6
WES Weston 113.28 314 PFAKE 11 33 20.0 +12
WES LR LR
comp=Z,4µm,22.0s,MS5.9
FUNA Funafuti 113.31 187 PFAKE 11 33 20.0 +11
FUNA LR LR
comp=Z,7µm,21.0s,MS6.2
HRV Harvard--Oak R 113.47 314 PFAKE 11 33 20.0 +12
HRV LR LR
comp=Z,5µm,22.0s,MS6.0
TZTN Tazewell 113.49 302 PFAKE 11 33 20.0 +12
TZTN LR LR
comp=Z,5µm,22.0s,MS6.0
HKT Hockley 113.98 288 PFAKE 11 33 20.0 +10
HKT LR LR
comp=Z,3µm,22.0s,MS5.9
PLAL Pickwick Lake 114.29 297 PFAKE 11 33 20.0 +10
PLAL LR LR
comp=Z,4µm,20.0s,MS6.1
SSPA Standing Stone 114.43 308 PFAKE 11 33 20.0 +10
SSPA LR LR
comp=Z,5µm,20.0s,MS6.1
OXF Oxford 114.54 296 PFAKE 11 33 20.0 +10
OXF LR LR
comp=Z,8µm,22.0s,MS6.3
CHTO Chiang Mai 114.54 94 PFAKE 11 33 20.0 +9.0
CHTO LR LR
comp=Z,1µm,19.0s,MS5.6
NATX Nacogdoches 114.86 290 PFAKE 11 33 20.0 +8.8
NATX LR LR
comp=Z,3µm,21.0s,MS5.9
PKME Peaks-Kenny Pk 114.98 317 PFAKE 11 33 20.0 +9.0
PKME LR LR
comp=Z,4µm,22.0s,MS6.0
LBNH Lisbon 115.09 314 PFAKE 11 33 20.0 +8.8
LBNH LR LR
comp=Z,3µm,19.0s,MS6.0
NCB Newcomb 115.74 313 PFAKE 11 33 20.0 +7.5
NCB LR LR
comp=Z,4µm,21.0s,MS6.0
WCI Wyandotte Cave 116.11 301 PFAKE 11 33 30.0 +17
WCI LR LR
comp=Z,5µm,19.0s,MS6.1
ACSO Alum Creek Sta 116.27 304 PFAKE 11 33 30.0 +16
ACSO LR LR
comp=Z,6µm,22.0s,MS6.2
SHL Shillong 116.32 84 eP PKPdf 11 33 10.0 -4.2
JCT Junction City 116.42 286 PFAKE 11 33 30.0 +16
JCT LR LR
comp=Z,2µm,22.0s,MS5.6
LONY Lake Ozonia 116.43 313 PFAKE 11 33 30.0 +16
LONY LR LR
comp=Z,5µm,22.0s,MS6.1
ERPA Erie 116.54 308 PFAKE 11 33 30.0 +16
ERPA LR LR
comp=Z,6µm,21.0s,MS6.2
MIAR Mount Ida 116.57 293 PFAKE 11 33 30.0 +16
MIAR LR LR
comp=Z,5µm,20.0s,MS6.1
LTX Lajitas 117.49 282 PFAKE 11 33 30.0 +14
LTX LR LR
comp=Z,4µm,19.0s,MS6.1
TXAR Lajitas Array 117.49 282 PKP PKPdf 11 33 15.1 -1.3
comp=Z,0.5nm,1.0s,baz=270,slow=1.8,SNR=3.5
TXAR PKKPab PKKPab 11 43 40.7 -0.3
comp=Z,0.3nm,0.8s,baz=35,slow=3.3,SNR=3.4
DAV Davao City (W) 117.66 125 PFAKE 11 33 30.0 +13
DAV LR LR
comp=Z,1µm,22.0s,MS5.6
KONO Kongsberg 118.25 10 PFAKE 11 33 30.0 +13
KONO LR LR
comp=Z,2µm,21.0s,MS5.7
OBN Obninsk 118.41 27 i PKP PKPdf 11 33 19.5 +2.3
OBN LR LR
comp=Z,1µm,18.0s,MS5.5
OBN Obninsk 118.41 27 i PKIKP PKPdf 11 33 19.4 +2.2
OBN e 11 34 41.5
OBN i PS PS 11 44 22.7 +2.7
OBN i SS SS 11 50 53.1 +1.4
OBN pmax pmax
comp=Z,8.0nm,1.7s
OBN MLR MLR
comp=Z,1µm,18.0s,MS5.5
LSA Lhasa 119.26 80 PFAKE 11 33 30.0 +10
LSA LR LR
comp=Z,3µm,20.0s,MS5.9
LSA Lhasa 119.26 80 ePKIKP PKPdf 11 33 21.0 +1.3
WMOK Wichita Mounta 119.30 289 PFAKE 11 33 30.0 +10
WMOK LR LR
comp=Z,3µm,22.0s,MS5.8
HDIL Hopedale 119.36 300 PFAKE 11 33 30.0 +10
HDIL LR LR
comp=Z,4µm,19.0s,MS6.1
VSU Vasula 119.44 20 i PKP PKPdf 11 33 22.5 +3.4
NOA NORSAR Array B 119.78 10 PKP PKPdf 11 33 20.2 +0.5
comp=Z,1.6nm,1.0s,baz=193,slow=2.0,SNR=2.4
KK31 Karatay Array 119.86 56 i PKIKP PKPdf 11 33 23.0 +2.6
KK31 pmax pmax
comp=Z,3.0nm,0.9s
MNTX Cornudas Mount 120.27 282 PFAKE 11 33 30.0 +8.4
MNTX LR LR
comp=Z,3µm,20.0s,MS5.9
QIZ Qiongzhong 120.43 103 PKP PKPdf 11 33 21.6 -0.7
QIZ PP PP 11 34 52.7 +3.9
QIZ SS SS 11 51 21.5 +3.5
QIZ LR LR
comp=N,3µm,19.9s
QIZ LR LR
comp=Z,4µm,19.9s,MS6.1
QIZ Qiongzhong 120.43 103 PFAKE 11 33 30.0 +7.7
QIZ LR LR
comp=Z,4µm,20.0s,MS6.1
AML Almayashu 120.50 59 ePKPdf PKPdf 11 33 23.3 +1.6
AML LR LR
comp=Z,3µm,19.0s,MS6.0
AB31 Akbulak array 120.55 45 i PKP PKPdf 11 33 24.6 +3.1
AMTX Amarillo 120.88 287 PFAKE 11 33 40.0 +17
AMTX LR LR
comp=Z,2µm,21.0s,MS5.7
UCH Uchtor 120.95 59 ePKPdf PKPdf 11 33 24.3 +1.7
UCH LR LR
comp=Z,3µm,20.0s,MS5.9
EKS2 Erkin-Say 120.96 58 ePKPdf PKPdf 11 33 23.7 +1.1
EKS2 LR LR
comp=Z,3µm,20.0s,MS5.9
AAK Ala-Archa 121.26 59 ePKPdf PKPdf 11 33 23.3 +0.2
AAK LR LR
comp=Z,3µm,20.0s,MS5.9
AAK Ala-Archa 121.26 59 ⇑i PKIKP PKPdf 11 33 25.1 +2.0
FRU Bishkek 121.47 59 PKIKP PKPdf 11 33 24.2 +0.7
FRU e 11 35 06.4
JFWS Jewell Farm 121.67 301 PFAKE 11 33 40.0 +16
JFWS LR LR
comp=Z,4µm,22.0s,MS6.0
KSU1 Kansas State U 121.67 294 PFAKE 11 33 40.0 +16
KSU1 LR LR
comp=Z,4µm,22.0s,MS6.0
KMI Kunming 121.71 93 PKP PKPdf 11 33 27.1 +2.5
KMI XPKP 11 33 30.5
KMI PP PP 11 35 02.9 +5.2
KMI SKKS SKKSac 11 41 54.2 -3.2
KMI SS SS 11 51 33.7 -0.9
KMI PP PP
comp=Z,278nm,5.8s
KMI LR LR
comp=N,1µm,23.8s,MS5.6
KMI LR LR
comp=E,896nm,25.2s,MS5.6
KMI LR LR
comp=Z,3µm,27.9s,MS5.8
KMI Kunming 121.71 93 PKP PKPdf 11 33 27.1 +2.5
KMI sPKP 11 33 30.5
KMI PP PP 11 35 02.9 +5.2
KMI PPP 11 37 39.7
KMI SKKS SKKSac 11 41 54.2 -3.2
KMI SS SS 11 51 33.7 -0.9
KMI SSS 11 56 10.0
TKM2 Tokmak 2 121.98 59 ePKPdf PKPdf 11 33 26.0 +1.5
TKM2 LR LR
comp=Z,2µm,20.0s,MS5.8

FINES FINESS Array B 122.13 18 PKP PKPdf 11 33 22.3 -1.9
comp=Z,1.1nm,0.7s,baz=216,slow=6.1,SNR=4.6
SCHQ Schefferville 122.30 324 PKP PKPdf 11 33 24.1 -0.6
comp=Z,3.1nm,0.9s,baz=252,slow=8.8,SNR=2.5
CBKS Cedar Bluff 122.97 291 PFAKE 11 33 40.0 +13
CBKS LR LR
comp=Z,4µm,22.0s,MS6.0
ANMO Albuquerque 123.37 284 PKP PKPdf 11 33 28.4 +0.9
ANMO LR LR
comp=Z,4µm,20.0s,MS6.1
ANMO Albuquerque 123.37 284 ⇑i PKIKP PKPdf 11 33 27.8 +0.3
ANMO Albuquerque 123.37 284 PKP PKPdf 11 33 28.4 +0.9
comp=Z,0.7nm,0.7s,baz=146,slow=3.6,SNR=2.9
TUC Tucson 123.56 278 PFAKE 11 33 40.0 +12
TUC LR LR
comp=Z,2µm,22.0s,MS5.8
COWI Conover 123.66 304 PFAKE 11 33 40.0 +12
COWI LR LR
comp=Z,6µm,22.0s,MS6.2
GYA Guiyang 124.86 95 PDIF Pdif 11 30 08.4 +1.6
GYA PKP PKPdf 11 33 32.6 +2.0
GYA PP PP 11 35 25.0 +6.1
GYA PKS 11 37 07.9
GYA SKS SKSdf 11 40 42.0 -1.0
GYA SKKS SKKSac 11 42 15.8 -1.8
GYA S Sdif 11 43 16.6 -2.4
GYA SS SS 11 52 17.0 +2.5
GYA PP PP
comp=Z,970nm,9.4s
GYA LR LR
comp=N,6µm,22.2s,MS6.4
GYA LR LR
comp=E,7µm,23.8s,MS6.4
GYA LR LR
comp=Z,8µm,21.2s,MS6.3
SDCO Great Sand Dun 125.04 286 ePKPdf PKPdf 11 33 32.2 +1.6
SDCO LR LR
comp=Z,5µm,20.0s,MS6.2
ECSD EROS,Sioux Fal 125.24 297 PFAKE 11 33 40.0 +9.3
ECSD LR LR
comp=Z,5µm,21.0s,MS6.2
ARU Arti 125.90 39 ePKPdf PKPdf 11 33 30.4 -1.2
ARU LR LR
comp=Z,2µm,19.0s,MS5.8
ARU Arti 125.90 39 ⇑i PKIKP PKPdf 11 33 31.8 +0.2
EYMN Ely 126.11 304 PFAKE 11 33 40.0 +7.7
EYMN LR LR
comp=Z,5µm,22.0s,MS6.1
MVCO Mesa Verde 126.16 284 ePKPdf PKPdf 11 33 34.5 +1.8
MVCO LR LR
comp=Z,3µm,19.0s,MS6.0
WUAZ Wupatki 126.36 280 ePKPdf PKPdf 11 33 34.6 +1.5
WUAZ LR LR
comp=Z,2µm,20.0s,MS5.8
ISCO Idaho Springs 126.66 288 PFAKE 11 33 50.0 +16
ISCO LR LR
comp=Z,4µm,20.0s,MS6.1
CD2 Chengdu 126.86 90 ePKP PKPdf 11 33 36.7 +2.4
CD2 XPKP 11 33 45.0
CD2 PP PP 11 35 38.8 +6.6
CD2 PKS 11 37 11.9
CD2 SKS SKSdf 11 40 43.3 -3.2
CD2 SS SS 11 52 41.8 +2.2
CD2 PP PP
comp=Z,240nm,10.2s
CD2 LR LR
comp=N,720nm,20.4s,MS5.5
CD2 LR LR
comp=E,800nm,18.0s,MS5.5
CD2 LR LR
comp=Z,790nm,18.0s,MS5.4
TMCR Tamitsa 126.87 23 ePKIKP PKPdf 11 33 32.4 -0.8
SMCO Snowmass 126.88 286 ePKPdf PKPdf 11 33 34.5 +0.5
SVE Sverdlovsk 126.91 40 ePKIKP PKPdf 11 33 33.1 -0.4
PV10 Paradox Valley 127.33 284 ePKPdf PKPdf 11 33 37.3 +2.4
BRVK Borovoye 127.54 48 ePKPdf PKPdf 11 33 35.7 +0.9
BRVK LR LR
comp=Z,4µm,22.0s,MS6.0
PFO Pinyon Flat Ob 127.56 275 PFAKE 11 33 50.0 +14
PFO LR LR
comp=Z,2µm,20.0s,MS5.7
SOKR Solikamsk 127.84 36 i PKIKP PKPdf 11 33 33.0 -2.2
SOKR 11 35 50.7
SOKR pmax pmax
comp=Z,10.0nm,1.1s
SOKR MLR MLR
comp=Z,2µm,24.0s,MS5.6
MK31 Makanchi Array 128.01 61 ePKPdf PKPdf 11 33 35.0 -0.9
MKAR Makanchi Array 128.01 61 PKP PKPdf 11 33 36.0 +0.1
MKAR ⇑ePKP PKPdf 11 33 40.6 +4.7
MKAR Makanchi Array 128.01 61 ⇑i PKIKP PKPdf 11 33 40.5 +4.6
MKAR Makanchi Array 128.01 61 PKP PKPdf 11 33 36.0 +0.1
comp=Z,1.9nm,0.9s,baz=272,slow=1.9,SNR=8.2
AGMN Agassiz Refuge 128.32 302 ePKPdf PKPdf 11 33 38.0 +1.6
AGMN LR LR
comp=Z,5µm,22.0s,MS6.1
WMQ Urumqi 128.38 67 PKP PKPdf 11 33 38.0 +1.3
WMQ PP PP 11 35 46.0 +3.8
WMQ PP PP
comp=Z,245nm,5.5s
WMQ LR LR
comp=N,2µm,30.0s
WMQ LR LR
comp=E,631nm,24.6s
WMQ LR LR
comp=Z,1µm,29.0s,MS5.5
SRU San Rafael 128.64 284 ePKPdf PKPdf 11 33 40.2 +2.8
CCUT Cedar City 128.94 280 ePKPdf PKPdf 11 33 39.9 +1.9
APA Apatity 129.02 19 ⇑i PKIKP PKPdf 11 33 38.0 +0.8
APA i 11 33 54.7
APA pmax pmax
comp=Z,16nm,1.0s
MSU Marysvale 129.05 282 ePKPdf PKPdf 11 33 42.4 +4.2
MVU Marysvale 129.06 282 PFAKE 11 33 50.0 +12
MVU LR LR
comp=Z,4µm,19.0s,MS6.2
RSSD Black Hills 129.09 293 PFAKE 11 33 50.0 +12
RSSD LR LR
comp=Z,993nm,22.0s,MS5.5
KURK Kurchatov 129.25 55 ePKPdf PKPdf 11 33 39.7 +1.6
KURK LR LR
comp=Z,3µm,21.0s,MS6.0
ENH Enshi 129.39 95 PFAKE 11 33 50.0 +11
ENH LR LR
comp=Z,4.0nm,21.0s
LVZ Lovozero 129.53 19 PFAKE 11 33 50.0 +12
LVZ LR LR
comp=Z,1µm,22.0s,MS5.6
ARCES ARCESS Array B 129.62 14 PKP PKPdf 11 33 39.0 +0.7
ARCES ARCESS Array B 129.62 14 PKP PKPdf 11 33 39.0 +0.7
comp=Z,3.0nm,0.8s,baz=3.5,slow=4.0,SNR=4.2
ULM Lac du Bonnet 129.75 303 PKP PKPdf 11 33 39.5 +0.4
ULM LR LR
comp=Z,1µm,20.0s,MS5.7
ULM Lac du Bonnet 129.75 303 PKP PKPdf 11 33 39.5 +0.4
comp=Z,2.3nm,1.0s,baz=1.0,slow=7.0,SNR=3.2
QZH Quanzhou 129.81 108 ePKP PKPdf 11 33 37.4 -2.7
QZH PP PP 11 35 52.0 +0.5
QZH PKS 11 37 13.0
QZH LR LR
comp=N,8µm,25.6s
QZH LR LR
comp=E,4µm,19.4s
QZH LR LR
comp=Z,6µm,18.8s
MPU Maple Canyon 129.89 284 PFAKE 11 33 50.0 +10
MPU LR LR
comp=Z,4µm,20.0s,MS6.2
TPNV Topopah Spring 130.00 278 ePKPdf PKPdf 11 33 42.3 +2.2
TPNV LR LR
comp=Z,2µm,20.0s,MS5.9
KEV Kevo 130.03 15 PFAKE 11 33 50.0 +11
KEV LR LR
comp=Z,1µm,20.0s,MS5.7
DAC Darwin (Calif) 130.20 276 PFAKE 11 33 50.0 +10
DAC LR LR
comp=Z,3µm,19.0s,MS6.0
DUG Dugway 130.63 283 ePKPdf PKPdf 11 33 44.0 +2.8
DUG LR LR
comp=Z,4µm,21.0s,MS6.0
BW06 Boulder Array 130.85 288 PFAKE 11 33 50.0 +8.5
BW06 LR LR
comp=Z,3µm,22.0s,MS5.9
PDAR Pinedale Array 130.85 288 PKP PKPdf 11 33 42.4 +0.9
comp=Z,0.8nm,0.6s,baz=127,slow=5.1,SNR=5.5

LZH	Lanzhou	130.90	86	⇓PKP	PKPdf	11 33 47.5	+5.7
LZH				PP	PP	11 36 09.2	+11
LZH				PKS		11 37 21.5	
LZH				SKS	SKSdf	11 40 53.8	+0.2
LZH				SKKS	SKKSac	11 42 56.1	+1.0
LZH				SS	SS	11 53 34.3	+4.8
LZH				PP	PP		
	comp=Z,875nm,8.4s						
LZH				LR	LR		
	comp=E,2μm,18.1s						
LZH				LR	LR		
	comp=Z,3μm,20.3s,MS5.9						
LZH	Lanzhou	130.90	86	⇓PKP	PKPdf	11 33 47.5	+5.7
LZH				pPKP	pPKPdf	11 33 59.0	+16
LZH				sPKP		11 34 02.5	
LZH				PP	PP	11 36 09.2	+11
LZH				PKS		11 37 21.5	
LZH				SKS	SKSdf	11 40 53.8	+0.2
LZH				SKKS	SKKSac	11 42 56.1	+1.0
LZH				SS	SS	11 53 34.3	+4.8
GUMO	Guam	130.95	144	PFAKE		11 33 50.0	+7.5
GUMO				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
HWUT	Hardware Ranch	131.02	285	PFAKE		11 33 50.0	+8.2
HWUT				LR	LR		
	comp=Z,5μm,22.0s,MS6.2						
GTA	Gaotai	131.27	79	*e*PKP	PKPdf	11 33 44.5	+2.1
GTA				PP	PP	11 36 09.9	+8.9
GTA				PKS		11 37 19.0	
GTA				SKS	SKSdf	11 40 53.5	-0.6
GTA				SKKS	SKKSac	11 43 00.6	+3.4
GTA				PP	PP		
	comp=Z,236nm,9.6s						
GTA				LR	LR		
	comp=N,1μm,27.9s,MS5.5						
GTA				LR	LR		
	comp=E,775nm,23.7s,MS5.5						
GTA				LR	LR		
	comp=Z,1μm,23.7s,MS5.6						
TATO	Taipei	131.29	111	PFAKE		11 33 50.0	+7.1
TATO				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
TPH	Tonopah	131.36	278	PFAKE		11 34 00.0	+17
TPH				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
AHID	Auburn Hatcher	131.63	287	PFAKE		11 34 00.0	+17
AHID				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
LAO	LASA Array	132.01	294	PFAKE		11 34 00.0	+16
LAO				LR	LR		
	comp=Z,4μm,22.0s,MS6.1						
XAN	Xi'an	132.03	92	PKP	PKPdf	11 33 50.2	+6.2
NVAR	Mina Array Bea	132.19	277	PKP	PKPdf	11 33 44.6	+0.5
	comp=Z,0.8nm,0.7s,baz=128,slow=3.2,SNR=5.6						
ELK	Elko	132.29	282	PFAKE		11 34 00.0	+16
ELK				LR	LR		
	comp=Z,4μm,21.0s,MS6.1						
DGMT	Dagmar	132.30	297	PFAKE		11 34 00.0	+16
DGMT				LR	LR		
	comp=Z,4μm,19.0s,MS6.1						
RLMT	Red Lodge	132.40	290	PFAKE		11 34 00.0	+16
RLMT				LR	LR		
	comp=Z,5μm,21.0s,MS6.2						
LKWY	Lake	132.57	289	PFAKE		11 34 00.0	+15
LKWY				LR	LR		
	comp=Z,7μm,22.0s,MS6.3						
SAO	San Andreas Ge	132.60	273	PFAKE		11 34 00.0	+15
SAO				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
YMR	Madison River	132.93	288	PFAKE		11 34 00.0	+15
YMR				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
CMB	Columbia Colle	132.99	275	PFAKE		11 34 00.0	+14
CMB				LR	LR		
	comp=Z,2μm,19.0s,MS5.9						
GCMT	Greycliff	133.07	290	*e*PKPdf	PKPdf	11 33 49.3	+3.7
BMN	Battle Mountai	133.09	280	PFAKE		11 34 00.0	+14
BMN				LR	LR		
	comp=Z,3μm,21.0s,MS5.9						
HLID	Hailey	133.89	285	PFAKE		11 34 00.0	+13
HLID				LR	LR		
	comp=Z,3μm,21.0s,MS6.0						
BOZ	Bozeman (W)	133.95	289	PFAKE		11 34 00.0	+13
BOZ				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
MCCM	Marconi Confer	134.39	273	PFAKE		11 34 00.0	+12
MCCM				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
EGMT	Eagleton	134.66	293	PFAKE		11 34 00.0	+12
EGMT				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
POHA	Pohakuloa	135.05	225	PFAKE		11 34 00.0	+10
POHA				LR	LR		
	comp=Z,2μm,21.0s,MS5.8						
HOPS	Hopland	135.12	274	PFAKE		11 34 00.0	+10
HOPS				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
WVOR	Wild Horse Val	135.27	281	*e*PKPdf	PKPdf	11 33 53.5	+3.7
WVOR				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
CHMT	Chamberlain Mo	135.64	289	*e*PKPdf	PKPdf	11 33 53.2	+2.8
NJ2	Nanjing	135.70	102	*e*PKP	PKPdf	11 33 49.4	-1.6
NJ2				PP	PP	11 36 30.5	+1.2
NJ2				PKS		11 37 24.5	
NJ2				SKS	SKSdf	11 40 55.5	-6.9
MOD	Modoc	135.76	279	PFAKE		11 34 00.0	+9.3
MOD				LR	LR		
	comp=Z,4μm,22.0s,MS6.1						
MSO	Missoula	135.93	289	*e*PKPdf	PKPdf	11 33 50.7	-0.1
MSO				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
WDC	Whiskeytown Da	135.99	276	PFAKE		11 34 00.0	+8.8
WDC				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
SSE	Sheshan	136.14	105	PKP	PKPdf	11 33 52.8	+1.0
SSE				PP	PP	11 36 36.8	+4.8
SSE				SS	SS	11 54 34.0	+1.2
SSE				PP	PP		
	comp=Z,67nm,12.7s						
SSE				LR	LR		
	comp=N,2μm,17.6s,MS6.1						
SSE				LR	LR		
	comp=E,2μm,17.6s,MS6.1						
SSE				LR	LR		
	comp=Z,4μm,16.0s,MS6.2						
BMO	Blue Mountains	136.28	284	*e*PKPdf	PKPdf	11 33 53.9	+2.3
BMO				LR	LR		
	comp=Z,4μm,20.0s,MS6.1						
YBH	Yreka Blue Hor	136.91	277	PFAKE		11 34 10.0	+17
YBH				LR	LR		
	comp=Z,3μm,21.0s,MS5.9						
KBS	Kingsbay	137.34	5	PFAKE		11 34 10.0	+17
KBS				LR	LR		
	comp=Z,2μm,21.0s,MS5.7						
HAWA	Hanford	138.47	284	PFAKE		11 34 10.0	+14
HAWA				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
NEW	Newport	138.49	288	PFAKE		11 34 10.0	+14
NEW				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
HHC	Hu-ho-hao-te	138.49	87	*e*PKP	PKPdf	11 33 53.1	-2.7
HHC				PP	PP	11 36 48.2	+1.5
HHC				PKS		11 37 27.3	
HHC				SKKS	SKKSac	11 43 34.9	-5.9
HHC				SS	SS	11 54 57.6	-3.2
HHC				PP	PP		
	comp=Z,334nm,7.7s						
HHC				LR	LR		
	comp=N,1μm,21.4s,MS5.7						
HHC				LR	LR		
	comp=E,1μm,20.2s,MS5.7						
HHC				LR	LR		
	comp=Z,1μm,20.2s,MS5.7						
COR	Corvallis	139.20	280	PFAKE		11 34 10.0	+13
COR				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
BJT	Baijiatuau	140.34	92	PFAKE		11 34 10.0	+11
BJT				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
BJI	Beijing	140.35	92	PKP	PKPdf	11 34 00.3	+1.0
BJI				SKS	SKSdf	11 41 11.1	+1.3
BJI				SS	SS	11 55 25.6	+2.9
BJI				PP	PP		
	comp=Z,368nm,12.3s						
BJI				LR	LR		
	comp=N,863nm,19.1s,MS5.7						
BJI				LR	LR		
	comp=E,895nm,17.9s,MS5.7						
BJI				LR	LR		
	comp=Z,2μm,24.9s						
BJI	Beijing	140.35	92	PKP	PKPdf	11 34 00.3	+1.0
BJI				PP	PP	11 36 46.4	-12
BJI				SKS	SKSdf	11 41 11.1	+1.3
BJI				SKKS	SKKSdf	11 50 36.3	+3.1
BJI				PS		11 50 39.6	
BJI				SS	SS	11 55 25.6	+2.9
SONM	Songino Array	140.56	76	PKP	PKPdf	11 33 57.5	-1.9
	comp=Z,0.7nm,0.6s,baz=207,slow=3.7,SNR=6.2						
ZAK	Zakamensk	140.60	70	*e*PKHKP		11 33 54.8	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	Ulaanbaatar	140.91	76	PFAKE		11 34 10.0	+10
ULN				LR	LR		
	comp=Z,1μm,20.0s,MS5.7						
NLWA	Neilton Lookou	141.37	282	PFAKE		11 34 10.0	+9.2
NLWA				LR	LR		
	comp=Z,3μm,21.0s,MS6.0						
TLY	Talaya	141.58	69	PFAKE		11 34 10.0	+8.9
TLY				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
TLY	Talaya	141.58	69	*e*PKIKP	PKPdf	11 34 03.4	+2.3
TLY				*i*		11 34 14.1	
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
IRK	Irkutsk	142.23	69	*e*PKIKP	PKiKP	11 34 13.1	+7.9
IRK				pmax	pmax		
	comp=Z,29nm,1.3s						
DL2	Dalian	142.40	98	*e*PKP	PKPdf	11 33 58.5	-4.5
DL2				SS	SS	11 55 43.4	-3.1
DL2				PP	PP		
	comp=Z,160nm,7.9s						
DL2				LR	LR		
	comp=N,1μm,22.6s,MS5.6						
DL2				LR	LR		
	comp=E,460nm,24.7s,MS5.6						
DL2				LR	LR		
	comp=Z,1μm,22.5s,MS5.7						
INCN	Inchon	143.94	105	*e*PKPdf	PKPdf	11 34 04.8	-0.9
INCN				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
KSRS	Korea Array	144.57	106	PKP	PKPdf	11 34 04.9	-1.9
	comp=Z,9.9nm,1.0s,baz=226,slow=3.2,SNR=13						
YKA	Yellowknife Ar	145.35	309	PKPbc	PKPbc	11 34 03.3	-4.0
	comp=Z,5.0nm,0.9s,baz=104,slow=3.9,SNR=27						
SNY	Shenyang	145.55	97	PKPR	PKPdf	11 34 09.4	+1.0
SNY				SKS	SKSdf	11 41 14.4	-3.3
SNY				PP	PP		
	comp=Z,508nm,9.6s						
SNY				LR	LR		
	comp=N,1μm,22.8s,MS5.8						
SNY				LR	LR		
	comp=E,2μm,23.4s,MS5.8						
SNY				LR	LR		
	comp=Z,2μm,24.0s,MS5.9						
CIT	Chita	146.77	75	*e*PKIKP	PKPdf	11 34 11.0	+0.9
CIT				*e*		11 37 39.3	
CN2	Changchun	147.91	96	*e*PKP	PKPdf	11 34 13.1	+0.8
CN2				*e*PP	PP	11 37 48.7	+5.3
CN2				*e*SS	SS	11 56 48.8	-0.6
CN2				PP	PP		
	comp=Z,600nm,7.0s						
CN2				LR	LR		
	comp=N,2μm,21.0s,MS5.9						
CN2				LR	LR		
	comp=E,1μm,21.0s,MS5.9						
CN2				LR	LR		
	comp=Z,2μm,21.0s,MS5.9						
HIA	Hailar	148.39	83	*e*PKPdf	PKPdf	11 34 13.5	+0.7
HIA				*e*PKPbc	PKPbc	11 34 17.9	+1.5
HIA				LR	LR		
	comp=Z,2μm,19.0s,MS6.0						
HIA	Hailar	148.39	83	*e*PKIKP	PKPdf	11 34 13.5	+0.6
HIA				*e*		11 34 17.9	
MAJO	Matsushiro	148.88	119	*e*PKPdf	PKPdf	11 34 16.8	+2.7
MAJO				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
MAT	Matsushiro	148.88	119	PKP	PKPdf	11 34 16.3	+2.2
MJAR	Matsushiro Arr	148.88	119	PKP	PKPdf	11 34 12.4	-1.8
MJAR				PKPbc	PKPbc	11 34 16.9	-1.2
MJAR	Matsushiro Arr	148.88	119	PKP	PKPdf	11 34 12.4	-1.8
	comp=Z,0.3nm,0.3s,baz=333,slow=35,SNR=2.7						
MJAR				PKPbc	PKPbc	11 34 16.9	-1.1
	comp=Z,6.1nm,0.9s,baz=202,slow=3.7,SNR=10.0						
BOD	Bodaibo	149.91	65	*e*PKIKP	PKPdf	11 34 13.0	-2.0
BOD				*e*		11 34 23.2	
BOD				pmax	pmax		
	comp=Z,11nm,1.1s						
BOD				pmax	pmax		
	comp=Z,33nm,1.1s						
MDJ	Mudanjiang	150.64	99	PKP	PKPdf	11 34 18.2	+1.6
MDJ				APKP		11 34 21.6	
MDJ				XPKP		11 34 22.9	
MDJ				PKS		11 37 51.9	
MDJ				PP	PP	11 38 01.0	+1.7
MDJ				SKS	SKSdf	11 41 25.9	+1.3
MDJ				SS	SS	11 57 22.8	+2.9
MDJ				PP	PP		
	comp=Z,280nm,5.7s						
MDJ				LR	LR		
	comp=N,2μm,18.7s,MS5.9						
MDJ				LR	LR		
	comp=E,970nm,21.9s,MS5.9						
MDJ				LR	LR		
	comp=Z,2μm,17.2s,MS6.0						
MDJ	Mudanjiang	150.64	99	*e*PKPbc	PKPbc	11 34 23.4	+1.3
MDJ				LR	LR		
	comp=Z,2μm,20.0s,MS5.9						
WRAK	Wrangell Islan	150.76	291	PFAKE		11 34 30.0	+14
WRAK				LR	LR		
	comp=Z,4μm,22.0s,MS6.2						
VLA	Vladivostok	150.80	103	*e*PKIKP	PKPdf	11 34 20.3	+3.4
VLA				*e*		11 34 28.8	
VLA				*e*		11 34 33.3	
VLA				pmax	pmax		
	comp=Z,88nm,1.9s						
SIT	Sitka	152.51	290	PFAKE		11 34 30.0	+11
SIT				LR	LR		
	comp=Z,8μm,22.0s,MS6.5						
INK	Inuvik	154.50	316	*e*PKPdf	PKPdf	11 34 24.5	+3.0
INK	Inuvik	154.50	316	PKPbc	PKPbc	11 34 27.4	-2.5
	comp=Z,3.2nm,0.8s,baz=115,slow=2.5,SNR=13						
INK				PKPab	PKPab	11 34 44.0	-0.6
	comp=Z,9.3nm,0.8s,baz=70,slow=2.7,SNR=16						
KLR	Kul'dur	154.72	93	*e*PKIKP	PKPdf	11 34 22.2	-0.3
NRGR	Nerungri	154.73	73	*e*PKIKP	PKPbc	11 34 37.9	+7.1
NRGR				S	PP	11 38 25.0	+2.6
ERM	Erimo	155.56	119	PFAKE		11 34 40.0	+16
ERM				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
HABR	Khabarovsk	156.01	98	*e*PKIKP	PKPdf	11 34 24.5	+0.3
HABR				*e*		11 41 28.3	
EGAK	Eagle	157.29	306	PFAKE		11 34 40.0	+15
EGAK				LR	LR		
	comp=Z,4μm,21.0s,MS6.2						
TIXI	Tiksi	157.84	35	PFAKE		11 34 40.0	+14
TIXI				LR	LR		
	comp=Z,2μm,20.0s,MS6.0						
YAK	Yakutsk	158.69	61	PFAKE		11 34 40.0	+13
YAK				LR	LR		
	comp=Z,2μm,22.0s,MS6.0						
YSS	Yuzh-Sakhalins	159.00	109	PFAKE		11 34 40.0	+12
YSS				LR	LR		
	comp=Z,3μm,22.0s,MS6.0						
YSS	Yuzh-Sakhalins	159.00	109	*i* PKIKP	PKPdf	11 34 39.0	+11
YSS				*e*		11 38 56.0	
YSS				*e*SS		11 59 44.0	
COLA	College	160.15	306	PFAKE		11 34 40.0	+11
COLA				LR	LR		
	comp=Z,3μm,22.0s						
PMR	Palmer	160.56	296	PFAKE		11 34 40.0	+11
PMR				LR	LR		
	comp=Z,4μm,21.0s						
MCK	McKinley	160.62	303	PFAKE		11 34 40.0	+11
MCK				LR	LR		
	comp=Z,2μm,20.0s						
KDAK	Kodiak Island	161.51	284	PFAKE		11 34 40.0	+10
KDAK				LR	LR		
	comp=Z,1μm,21.0s						
UNV	Unalaska Valle	167.41	259	PFAKE		11 34 50.0	+14
UNV				LR	LR		
	comp=Z,7μm,22.0s						
TNA	Tin City	168.14	317	PFAKE		11 34 50.0	+14
TNA				LR	LR		
	comp=Z,3μm,22.0s						
MA2	Magadan	168.76	74	PFAKE		11 34 50.0	+13
MA2				LR	LR		
	comp=Z,3μm,22.0s						
BILL	Bilibino	169.72	13	PFAKE		11 34 50.0	+13
BILL				LR	LR		
	comp=Z,2μm,22.0s						
BILL	Bilibino	169.72	13	*e*PKIKP	PKPdf	11 34 38.4	+1.5
BILL				*e*		11 39 52.7	
BILL				pmax	pmax		
	comp=Z,11nm,1.7s						
PET	Petropavlovsk	170.71	118	PFAKE		11 34 50.0	+12
PET				LR	LR		
	comp=Z,3μm,21.0s						
SMY	Shemya	174.46	191	PFAKE		11 34 50.0	+11
SMY				LR	LR		
	comp=Z,2μm,22.0s						

ISCJB ***08*** *11:28:47.9±0.3, 1.13N±0.05×126.29E±0.08, h10km, mb4.7/39, Error ellipse: s-maj=12.3km s-min=5.6km az=158.7*

IDC ***08*** *11:28:48.1±0.6, 1.06N×126.18E, h0km, mb4.5/15, mb1 4.5/16, mb1mx4.5/19, mbtmp4.5/16, Error ellipse: s-maj=28.3km s-min=12.1km az=70.0*

NEIC ***08*** *11:28:49.7±0.3, 1.12N×126.27E, h10km, mb4.8/15, Error ellipse: s-maj=10.8km s-min=5.5km az=69.0*

MOS ***08*** *11:28:51.6±1.4, 1.18N×126.32E, h33km, mb4.8/16, Error ellipse: s-maj=16.8km s-min=8.5km az=118.8*

ISC 08 11:28:52.1±2.9, **1.08N**±0.05×**126.30E**±0.08, **h26**km±20km, **n69**, σ**0.96**/67, **mb4.7**/39, **5C-7D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	9.27	136	⇑*e*P	Pn	11 31 03.0	-1.2
BATI	Kupang	11.52	193	Pn	Pn	11 31 42.6	+7.7
	2.3nm,0.3s,baz=351,slow=7.6,SNR=4.0						
KSM	Kuching	15.99	272	*e*P	Pn	11 32 41.2	+5.8
FITZ	Fitzroy Crossi	19.08	182	*e*P	Pn	11 33 13.0	-0.7
	10nm,0.4s						
FITZ	Fitzroy Crossi	19.08	182	P	Pn	11 33 12.0	-1.6
	0.8nm,0.3s,baz=28,slow=7.3,SNR=16						
WRA	Warramunga Arr	22.34	160	P	P	11 33 47.7	-0.3
	22nm,0.3s,mb5.0,baz=333,slow=11,SNR=124						
WRA				S	S	11 37 49.8	-2.7
	6.7nm,0.9s,baz=341,slow=17,SNR=6.4						
WB2	Warramunga Arr	22.34	160	*e*P	P	11 33 47.6	-0.4
WB2				*e*		11 37 49.4	
MBWA	Marble Bar	23.02	196	*e*P	P	11 33 55.4	+0.1
	10nm,0.6s,mb4.4						
PMG	Port Moresby	23.25	117	P	P	11 33 58.9	+1.1
	7.9nm,0.8s,mb4.2,baz=280,slow=10,SNR=3.7						
JOW	Kunigami	25.67	4	P	P	11 34 21.4	+1.4
	20nm,0.8s,mb4.7,baz=160,slow=12,SNR=4.6						
ASAR	Alice Springs	25.69	164	P	P	11 34 20.3	+0.1
	9.3nm,0.6s,mb4.5,baz=346,slow=7.5,SNR=138						
ASAR				S	S	11 38 46.6	-0.7
	1.1nm,0.7s,baz=346,slow=17,SNR=3.8						
PSI	Prapat	27.41	274	P	P	11 34 38.4	+2.5
	11nm,0.9s,mb4.4,baz=129,slow=3.0,SNR=4.7						
CTA	Charters Tower	28.73	138	*e*P	P	11 34 48.1	+0.6
	4.0nm,1.0s,mb4.1						
CTA	Charters Tower	28.73	138	*e*P	P	11 34 48.1	+0.6
CTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CTA	Charters Tower	28.73	138	P	P	11 34 48.3	+0.8
	comp=Z,2.9nm,0.6s,mb4.2,baz=311,slow=9.7,SNR=5.3						
FORT	Forrest	31.73	177	⇓*i*P	P	11 35 14.8	+0.9
	comp=Z,39nm,0.6s,mb5.4						
KLBR	Kellerberrin	33.49	193	*e*P	P	11 35 29.8	+0.4
	comp=Z,13nm,0.5s,mb5.1						
MUN	Mundaring	34.24	195	*e*P	P	11 35 36.5	+0.6
HNR	Honiara	35.10	108	P	P	11 35 44.7	+1.1
	comp=Z,35nm,0.4s,mb5.7,baz=182,slow=2.7,SNR=2.9						
STKA	Stephens Creek	35.84	157	⇓*i*P	P	11 35 50.1	+0.4
	comp=Z,11nm,0.6s,mb5.0						
STKA	Stephens Creek	35.84	157	P	P	11 35 49.5	-0.2
	comp=Z,13nm,0.5s,mb5.1,baz=328,slow=9.0,SNR=52						
KSRS	Korea Array	36.22	2	P	P	11 35 53.5	+0.6
	comp=Z,2.0nm,0.6s,mb4.2,baz=181,slow=9.6,SNR=5.4						
MJAR	Matsushiro Arr	36.97	16	P	P	11 35 58.1	-1.1
	comp=Z,3.2nm,0.5s,mb4.4,baz=189,slow=9.2,SNR=5.9						
LSA	Lhasa	43.90	314	*e*P	P	11 36 57.5	+0.8
	comp=Z,10nm,0.8s,mb4.6						
LSA	Lhasa	43.90	314	*e*P	P	11 36 57.5	+0.8
LSA				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
TAPN	Taplejung	45.27	309	*e*P	P	11 37 07.1	-0.6
ODAN	Odare	45.29	308	*e*P	P	11 37 01.4	-6.5
	comp=Z,4.7nm,0.4s,mb4.7						
JIRN	Jiri	46.61	308	*e*P	P	11 37 16.9	-1.4
	comp=Z,8.8nm,0.4s,mb5.0						
KKN	Kakani	47.38	308	*e*P	P	11 37 22.9	-1.5
YSS	Yuzh-Sakhalins	47.89	15	⇓*e*P	P	11 37 27.5	-0.4
YSS				pmax	pmax		
	comp=Z,56nm,2.5s,mb5.2						
GKN	Gorkha	47.99	308	*e*P	P	11 37 29.3	+0.3
	comp=Z,9.8nm,0.5s,mb5.1						
SONM	Songino Array	49.66	342	P	P	11 37 41.5	0.0
	comp=Z,1.3nm,0.6s,mb4.2,baz=163,slow=8.1,SNR=5.8						
BOD	Bodaibo	57.41	352	*e*P	P	11 38 36.8	-1.3
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.4						
MK31	Makanchi Array	59.49	326	*e*P	P	11 38 52.2	-0.7
MK31	Makanchi Array	59.49	326	*i* P	P	11 38 52.3	-0.6
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
MKAR	Makanchi Array	59.49	326	⇑*e*P	P	11 38 52.4	-0.5
MKAR	Makanchi Array	59.49	326	P	P	11 38 52.3	-0.6
	comp=Z,3.9nm,0.4s,mb4.8,baz=120,slow=7.9,SNR=75						
YAK	Yakutsk	60.85	2	*e*P	P	11 39 02.4	+0.5
	comp=Z,9.9nm,0.6s,mb5.1						
YAK	Yakutsk	60.85	2	⇓*e*P	P	11 39 01.8	-0.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
MA2	Magadan	61.36	14	*e*P	P	11 39 06.0	+0.6
	comp=Z,7.9nm,0.7s,mb5.0						
MA2	Magadan	61.36	14	⇑*e*P	P	11 39 06.3	+0.9
MA2				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.1						
AAK	Ala-Archa	62.03	319	*e*P	P	11 39 09.4	-0.9
	comp=Z,1.3nm,0.4s,mb4.4						
AAK	Ala-Archa	62.03	319	⇓*e*P	P	11 39 09.8	-0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
KURK	Kurchatov	63.74	328	*e*P	P	11 39 20.4	-1.1
	comp=Z,14nm,0.6s,mb5.2						
KURK	Kurchatov	63.74	328	⇑*e*P	P	11 39 20.9	-0.6
NVS	Novosibirsk	64.03	334	*e*P	P	11 39 21.9	-1.4
KK31	Karatay Array	64.88	318	*i* P	P	11 39 28.5	-0.6
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
BRVK	Borovoye	69.37	328	*e*P	P	11 39 56.9	-0.5
	comp=Z,6.4nm,0.9s,mb4.5						
BRVK	Borovoye	69.37	328	*e*P	P	11 39 56.9	-0.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
SVE	Sverdlovsk	75.98	329	⇓*e*P	P	11 40 36.6	-0.1
SVE				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
ARU	Arti	76.93	328	*e*P	P	11 40 41.3	-0.8
	comp=Z,6.7nm,0.6s,mb4.8						
ARU	Arti	76.93	328	⇑*e*P	P	11 40 41.4	-0.7
ARU				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
VNDA	Vanda	80.87	173	*e*P	P	11 41 02.9	-0.4
	comp=Z,5.0nm,0.9s,mb4.4						
VNDA	Vanda	80.87	173	*e*P	P	11 41 02.9	-0.4
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VNDA	Vanda	80.87	173	P	P	11 41 03.3	0.0
	comp=Z,3.4nm,0.7s,mb4.4,baz=310,slow=6.3,SNR=13						
ZEI	Tsey	83.68	313	*e*P	P	11 41 19.6	+0.9
ZEI				*i*		11 41 29.8	
ZEI				*e*		11 44 25.9	
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
KIV	Kislovodsk	84.64	314	⇓*e*P	P	11 41 25.1	+1.5
KIV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
OBN	Obninsk	88.96	325	*e*P	P	11 41 48.6	+4.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OBN				pmax	pmax		
	comp=Z,20nm,1.6s,mb5.2						
BRTR	Keskin Array B	91.36	310	P	P	11 41 57.1	+1.2
	comp=Z,0.5nm,0.7s,mb4.0,baz=222,slow=31,SNR=2.9						
ARCES	ARCESS Array B	92.77	340	P	P	11 42 02.0	+0.3
	comp=Z,1.6nm,0.8s,mb4.5,baz=68,slow=6.8,SNR=3.6						
INK	Inuvik	92.77	21	P	P	11 42 01.1	-0.7
	comp=Z,1.3nm,1.0s,mb4.3,baz=88,slow=5.2,SNR=3.6						
AKASG	Malin Array Be	93.66	321	P	P	11 42 06.9	+0.7
	comp=Z,0.5nm,0.5s,mb4.2,baz=64,slow=5.6,SNR=4.0						
FINES	FINESS Array B	93.94	332	*i* P	P	11 42 11.6	+4.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	93.94	332	P	P	11 42 10.7	+3.3
	comp=Z,1.5nm,0.6s,mb4.6,baz=62,slow=4.5,SNR=11						
UZH	Uzhgorod	98.42	319	*e*P	P	11 42 30.0	+2.0
YKA	Yellowknife Ar	102.07	25	P	Pdif	11 42 44.0	-0.1
	comp=Z,0.2nm,0.6s,baz=300,slow=4.7,SNR=4.2						
TORD	Torodi Ar. Bea	123.29	286	PKP	PKPdf	11 47 47.2	-0.5
TORD	Torodi Ar. Bea	123.29	286	PKP	PKPdf	11 47 47.2	-0.5
	comp=Z,0.8nm,0.7s,baz=242,slow=3.2,SNR=3.4						
TXAR	Lajitas Array	123.53	53	PKP	PKPdf	11 47 48.3	+0.4
	comp=Z,0.4nm,0.7s,baz=320,slow=2.5,SNR=4.1						

IDC 08 11:33:00.9±55.0**, 1669S×17018W, h0km, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.7**/15**, mbtmp4.0**/3**, Error ellipse: s-maj=1081.0km s-min=198.5km az=81.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	46.12	242	P	P	11 41 28.1	+1.0
	2.2nm,0.8s,baz=75,slow=12,SNR=3.4						
WRA	Warramunga Arr	52.58	257	P	P	11 42 16.4	-0.4
	0.5nm,0.4s,baz=98,slow=7.0,SNR=13						
ASAR	Alice Springs	52.67	253	P	P	11 42 17.2	-0.3
	1.1nm,0.6s,baz=93,slow=7.7,SNR=11						

IDC 08 11:38:33.0±2.8**, 277N×9554E, h0km, mb3.5**/3**, mb1 3.6**/4**, mb1mx3.4**/22**, mbtmp3.5**/4**, ML2.8**/1**, Error ellipse: s-maj=78.4km s-min=26.7km az=49.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.38	89	Pn	Pn	11 39 28.5	+1.5
	0.9nm,0.3s,baz=328,slow=12,SNR=7.0						
WRA	Warramunga Arr	44.27	122	P	P	11 46 44.3	-0.4
	0.6nm,0.6s,baz=300,slow=9.2,SNR=7.8						
MKAR	Makanchi Array	45.34	347	P	P	11 46 53.7	+0.9
	0.7nm,0.7s,baz=161,slow=8.5,SNR=13						
SONM	Songino Array	45.86	10	P	P	11 46 55.6	-1.4
	0.3nm,0.6s,baz=194,slow=9.0,SNR=3.7						

MAN 08 11:41:59, 1619N×12030E, h1km, mb4.5, ML3.4, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.33	55	⇑*e*P	Pg	11 42 06.5	+1.0
BCPH				*e*S	Sg	11 42 12.1	+2.3
BOLP	Bolinao	0.41	297	*e*P	Pg	11 42 07.9	+1.0
BOLP				*e*S	Sg	11 42 12.3	-0.1
SCZP	Santa Cruz	0.55	222	*e*P	Pg	11 42 10.1	+0.4
SCZP				*e*S	Sg	11 42 24.8	+8.0
BALP	Baler	1.31	110	*e*P	Pg	11 42 25.1	+0.9
ABRA	Dolores	1.50	15	*e*P	Sg	11 42 49.5	+2.1
APYP	Conner	1.89	28	*e*P	Pn	11 42 37.9	+5.4

ISCJB ***08*** *12:05:22.5±1.1, 2076S±008×670W±01, h216km±10km, mb3.9/10, Error ellipse: s-maj=18.5km s-min=12.6km az=162.6*

IDC ***08*** *12:05:23.8±1.6, 2065S×6687W, h208km±11km, mb3.7/9, mb1 3.9/13, mb1mx3.8/21, mbtmp3.8/13, Error ellipse: s-maj=21.1km s-min=14.6km az=54.0*

ISC 08 12:05:23.3±1.1**, 2076S**±008×**670W**±01**, h207km**±10km**, n19, σ1s14**/17**, mb3.9**/10**, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.58	346	P	Pn	12 06 34.3	+1.6
	6.7nm,0.3s,baz=160,slow=9.5,SNR=110						
LPAZ				S	Sn	12 07 27.6	+2.2
	1.8nm,0.3s,baz=225,slow=25,SNR=7.1						
SIV	San Ignacio	7.32	51	P	Pn	12 07 07.3	-0.5
	21nm,0.3s,baz=246,slow=12,SNR=262						
CFAA	Coronel Fontan	10.86	186	P	Pn	12 07 52.8	-0.7
	0.2nm,0.3s,baz=18,slow=11,SNR=8.8						
CFAA				S	Sn	12 09 45.6	-9.2
	0.4nm,0.3s,baz=223,slow=13,SNR=10.0						
NNA	Nana	12.88	311	P	Pn	12 08 18.1	-1.0
	0.7nm,0.3s,baz=135,slow=14,SNR=2.5						
ATAH	Atahualpa	17.60	319	P	P	12 09 12.8	-1.5
	0.4nm,0.3s,baz=101,slow=5.2,SNR=3.3						
SDV	Santo Domingo	29.68	353	P	P	12 11 06.0	-4.0
	2.7nm,0.4s,mb4.2,baz=282,slow=17,SNR=5.9						
TXAR	Lajitas Array	61.09	323	P	P	12 15 15.4	-0.2
	0.5nm,0.6s,mb3.3,baz=151,slow=9.0,SNR=8.3						
DBIC	Dimbokro	66.77	73	P	P	12 15 53.2	+0.3
	2.7nm,0.8s,mb3.9,baz=236,slow=7.3,SNR=3.0						
QSPA	South Pole Qui	69.43	180	P	P	12 16 10.0	+1.7
	3.2nm,0.7s,mb4.1,baz=162,slow=3.5,SNR=24						
PDAR	Pinedale Array	74.40	329	P	P	12 16 39.0	+0.7
	1.3nm,0.5s,mb3.8,baz=121,slow=8.5,SNR=18						
ULM	Lac du Bonnet	75.18	341	P	P	12 16 42.1	-0.5
	3.6nm,0.5s,mb4.3,baz=152,slow=5.4,SNR=20						
SCHQ	Schefferville	75.28	0	P	P	12 16 42.4	-0.6
	1.8nm,0.7s,mb3.8,baz=172,slow=7.1,SNR=4.5						
TORD	Torodi Ar. Bea	75.39	70	P	P	12 16 43.6	-0.9
	1.8nm,0.7s,mb3.8,baz=254,slow=5.6,SNR=7.9						
NVAR	Mina Array Bea	76.05	321	P	P	12 16 49.7	+1.8
	0.9nm,0.9s,mb3.4,baz=180,slow=9.1,SNR=5.6						
YKA	Yellowknife Ar	91.11	340	P	P	12 18 04.0	+0.2
	1.9nm,0.5s,mb4.3,baz=130,slow=4.8,SNR=35						
ASAR	Alice Springs	131.39	206	PKP	PKPdf	12 24 11.7	0.0
	0.2nm,0.4s,baz=132,slow=1.7,SNR=8.4						
ASAR				SKPbc	SKPbc	12 27 16.9	-0.5
	0.6nm,0.7s,baz=152,slow=4.2,SNR=8.1						
WRA	Warramunga Arr	134.50	209	PKP	PKPdf	12 24 17.9	+0.3
	0.3nm,0.6s,baz=156,slow=1.8,SNR=5.2						
WRA				SKPbc	SKPbc	12 27 28.0	0.0
	0.9nm,0.8s,baz=151,slow=2.8,SNR=6.0						
MKAR	Makanchi Array	143.96	37	PKP	PKPdf	12 24 32.5	-1.4
	0.7nm,0.6s,baz=312,slow=3.9,SNR=9.9						
MKAR				SKPbc	SKPbc	12 27 54.0	+1.0
	0.5nm,0.7s,baz=313,slow=1.8,SNR=5.8						
SONM	Songino Array	152.46	10	PKPbc	PKPbc	12 24 55.4	+0.7
	0.5nm,0.5s,baz=308,slow=0.8,SNR=5.3						
SONM				PKPab	PKPab	12 25 05.2	-0.4
	0.7nm,0.8s,baz=324,slow=3.1,SNR=4.1						

IDC ***08*** *12:26:10.3±0.8, 799S×7563W, h0km, mb4.0/7, mb1 4.1/11, mb1mx4.1/20, mbtmp3.9/11, ML3.8/4, MS4.6/2, Ms1 4.6/2, ms1mx3.5/39, Error ellipse: s-maj=19.7km s-min=13.3km az=38.0*

ISCJB ***08*** *12:26:13.6±1.8, 807S±009×756W±01, h39km±20km, mb3.9/7, Error ellipse: s-maj=19.3km s-min=12.0km az=141.3*

ISC 08 12:26:15.1±3.7**, 805S**±007×**7561W**±009**, h33km**±28km**, n12, σ0s84**/12**, mb3.9**/7**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	2.95	291	Pn	Pn	12 26 59.6	-0.1
	16nm,0.3s,baz=75,slow=8.3,SNR=34						
ATAH				Lg		12 27 40.2	
	33nm,0.3s,baz=231,slow=22,SNR=19						
NNA	Nana	4.09	197	Pn	Pn	12 27 15.2	-0.3
	3.3nm,0.3s,baz=13,slow=6.1,SNR=7.6						
NNA				Sn	Sn	12 28 02.1	-0.1
	8.4nm,0.3s,baz=193,slow=18,SNR=4.5						
NNA				Lg		12 28 21.2	
	8.4nm,0.3s,baz=291,slow=11,SNR=5.0						
NNA				LR	LR	12 28 53.2	
	comp=Z,222nm,20.7s,baz=344,slow=39						
LPAZ	La Paz	10.97	139	Pn	Pn	12 28 51.6	+1.8
	0.1nm,0.3s,baz=347,slow=18,SNR=2.5						
LPAZ				Lg		12 32 03.6	
	0.2nm,0.3s,baz=210,slow=20,SNR=3.5						
SIV	San Ignacio	16.25	120	Pn	Pn	12 29 59.1	-1.9
	0.7nm,0.3s,baz=299,slow=13,SNR=21						
SIV				Lg		12 34 47.6	
	0.3nm,0.3s,baz=18,slow=17,SNR=4.5						
TXAR	Lajitas Array	45.95	325	P	P	12 34 35.9	+0.8
	0.9nm,0.5s,mb4.0,baz=148,slow=8.7,SNR=21						
TXAR				PcP	PcP	12 36 11.7	0.0
	0.3nm,0.8s,baz=157,slow=2.7,SNR=3.2						
PDAR	Pinedale Array	59.28	331	P	P	12 36 13.5	-0.1
	0.4nm,0.7s,mb3.6,baz=134,slow=6.4,SNR=3.6						
ULM	Lac du Bonnet	60.68	345	P	P	12 36 22.1	-0.9
	2.6nm,0.6s,mb4.5,baz=163,slow=6.3,SNR=9.0						
NVAR	Mina Array Bea	60.95	322	P	P	12 36 25.3	+0.2
	0.2nm,0.6s,mb3.5,baz=128,slow=6.4,SNR=3.9						
DBIC	Dimbokro	72.05	80	P	P	12 37 37.4	+0.8
	2.4nm,0.4s,mb4.5,baz=212,slow=5.7,SNR=7.5						
YKA	Yellowknife Ar	76.46	343	P	P	12 38 01.1	-0.1
	0.5nm,0.6s,mb3.6,baz=138,slow=5.8,SNR=16						
TORD	Torodi Ar. Bea	79.60	75	P	P	12 38 19.4	-0.2
	0.9nm,0.9s,mb3.7,baz=284,slow=5.7,SNR=4.1						
WRA	Warramunga Arr	139.47	226	PKP	PKPdf	12 45 39.6	-0.5
	1.4nm,1.2s,baz=126,slow=1.8,SNR=5.9						

BJI ***08*** *12:35:37.1, 3893N×3966E, h34km, mB5.1, mb4.7, Ms5.0, Msz4.6*

ISK ***08*** *12:35:38.4, 3906N×4038E, h5km, MD4.5, ML4.8*

CSEM ***08*** *12:35:38.8, 39.10N×4052E, h2km, ML4.8*

DDA ***08*** *12:35:38.8, 3904N×4046E, h5km±3km, Md4.8*

IDC ***08*** *12:35:39.1±0.6, 3901N×4055E, h0km, mb4.3/20, mb1 4.4/28, mb1mx4.3/31, mbtmp4.3/28, ML3.9/8, MS4.1/6, Ms1 4.1/6, ms1mx3.8/35, Error ellipse: s-maj=12.2km s-min=10.4km az=159.0*

NEIC ***08*** *12:35:39.1, 3907N×4041E, h5km, mb4.7/47, ML4.8(ISK), After ISK.*

ISCJB ***08*** *12:35:40.4±0.5, 3902N±001×4047E±002, h15km±3km, mb4.5/85, MS4.5/8, Error ellipse: s-maj=2.5km s-min=2.2km az=139.6*

MOS ***08*** *12:35:40.5±1.2, 3901N×4054E, h21km, mb4.8/41, Error ellipse: s-maj=5.1km s-min=3.7km az=117.8*

NSSC ***08*** *12:35:40.5, 3923N×4054E, h40km*

SZGRF ***08*** *12:35:47.9, 3935N×40.14E, h33km, mb4.5, Turkey*

NAO ***08*** *12:35:51.5, 39.10N×4052E, h33km, mb4.0*

ISC 08 12:35:41.7±0.6**, 3902N**±001×**4048E**±002**, h14km**±3km**, n428, σ1s15**/461**, mb4.5**/85**, MS4.5**/8**, 39C-32D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.14	177	*i* PG	Pg	12 35 43.5	-1.7
BINT	Bingol	0.14	177	P	Pg	12 35 43.7	-1.5
PTK	Pertek	0.86	262	PG	Pg	12 35 54.2	-4.1
PTK				SG	Sg	12 36 06.6	-2.9
PTK	Pertek	0.86	262	Pg	Pg	12 35 54.7	-3.6
PTK				Sg	Sg	12 36 07.7	-1.8
EZC	Erzincan	0.89	325	PG	Pg	12 35 59.2	+0.3
EZC	Erzincan	0.89	325	P	Pg	12 35 59.3	+0.4
EZM	Erzurum	1.12	37	Pn	Pn	12 36 00.3	-2.7
ERZM	Erzurum	1.12	37	⇓*i*P	Pb	12 36 00.2	-2.7
ERZM				*i* S	Sb	12 36 16.4	-0.9
DIY	Diyarbakir	1.14	190	PN	Pn	12 36 01.9	-1.3
DIY	Diyarbakir	1.14	190	Pn	Pn	12 36 02.5	-0.7
BTMT	Batman	1.14	136	PN	Pn	12 36 01.6	-1.7
ELZG	Elazig	1.28	247	⇑*i*P	Pn	12 36 02.3	-2.8
ELZG				*i* S	Sg	12 36 33.6	+11
KELT	Kelkit	1.47	320	⇑*i*P	Pn	12 36 05.2	-2.6
KELT				*i* S	Sn	12 36 27.7	+0.8
GUMT	Gumushane	1.63	332	PN	Pn	12 36 08.4	-1.6
GUMT	Gumushane	1.63	332	Pn	Pn	12 36 08.5	-1.5
MARD	Mardin	1.72	172	⇓*i*P	Pn	12 36 10.5	-0.7
MARD				*i* S	Sn	12 36 34.4	+1.5
MYA	Malataya	1.75	247	PN	Pn	12 36 10.8	-0.8
MALT	Malatya	1.75	247	PN	Pn	12 36 09.8	-1.9
MALT	Malatya	1.75	247	*e*P	Pn	12 36 10.9	-0.8
MALT				*e*S	Sn	12 36 37.1	+3.2
MALT	Malatya	1.75	247	*e*Pn	Pn	12 36 09.8	-1.9
MALT				*e*S	Sn	12 36 37.1	+3.2
TUTA	Tutak	1.85	77	⇑*i*P	Pn	12 36 12.5	-0.6
TUTA				*i* S	Sn	12 36 40.4	+4.1
MACK	Trabzon	2.00	344	⇓*i*P	Pn	12 36 14.2	-0.9
MACK				*e*S	Sn	12 36 40.2	+0.3
KBSD	Kabsdagh	2.01	179	⇑P	Pn	12 36 15.1	-0.1
KBSD				⇑S	Sn	12 36 39.9	-0.3
KBSD	Kabsdagh	2.01	179	⇑*i*P	Pn	12 36 15.1	-0.2
KBSD				⇑*i*S	Sn	12 36 39.9	-0.4
AGRB	Hanur-Agry	2.03	73	PN	Pn	12 36 15.4	0.0
KTUT	Trabzon	2.04	345	PN	Pn	12 36 14.9	-0.7
URFA	Urfa	2.05	220	PN	Pn	12 36 14.7	-1.0
URFA	Urfa	2.05	220	Pn	Pn	12 36 15.7	-0.1
SIRT	Sirnak	2.16	134	*e*PN	Pn	12 36 19.0	+1.7
PZAR	Pazar-Rize	2.18	8	*e*PN	Pn	12 36 17.6	0.0
DRBT	Darb Altahta	2.23	194	⇓P	Pg	12 36 28.5	+4.1
DRBT				⇓S	Sg	12 37 03.5	+10
VANB	Van	2.31	100	*e*PN	Pn	12 36 20.8	+1.5
VANB	Van	2.31	100	Pn	Pn	12 36 20.4	+1.1
ATAB	Bozova	2.31	229	⇓*i*P	Pn	12 36 18.8	-0.6
ATAB				*i* S	Sn	12 36 53.1	+5.5
ESPY	Espiye-Giresun	2.33	325	PN	Pn	12 36 17.8	-1.8
TVAN	Van	2.34	101	⇓*i*P	Pn	12 36 20.4	+0.7
TVAN				*i* S	Sn	12 36 51.7	+3.5
VANT	Van	2.34	103	*e*PN	Pn	12 36 20.0	+0.2
VANT	Van	2.34	103	P	Pn	12 36 22.8	+3.0
ARTV	Artvin	2.43	27	⇑*i*P	Pn	12 36 20.5	-0.5
ARTV				*i* S	Sn	12 36 54.2	+3.6
DYDN	Diyadin	2.54	77	⇑*i*P	Pn	12 36 22.5	-0.1
DYDN				*i* S	Sn	12 36 59.0	+5.6
GRSN	GIRESUNGRSN	2.55	319	⇓*i*P	Pn	12 36 21.9	-0.8
GRSN				*i* S	Sn	12 36 59.0	+5.5
KARS	Kars	2.56	51	*e*PN	Pn	12 36 23.0	+0.2
BCA	Borcka	2.58	19	Pn	Pn	12 36 22.6	-0.4
BCA	Borcka	2.58	19	Pn	Pn	12 36 22.6	-0.4
SFNV	Sufian	2.61	187	⇑P	Pn	12 36 23.8	+0.3
SFNV				⇑S	Sn	12 36 54.5	-0.5
SFNV	Sufian	2.61	187	⇑*i*P	Pn	12 36 23.8	+0.3
SFNV				⇑*i*S	Sn	12 36 54.5	-0.5
DIGO	Kars	2.63	57	⇑*i*P	Pn	12 36 23.6	-0.1
DIGO				*i* S	Sn	12 37 01.1	+5.6
GZT	Gaziantep	2.83	235	⇓*i*P	Pn	12 36 25.5	-1.1
GZT				*i* S	Sn	12 37 05.1	+4.6
HAKT	HAKKARI	2.93	119	⇑*i*P	Pn	12 36 29.1	+1.3
HKR	Hakkari	2.94	118	*e*PN	Pn	12 36 30.1	+2.1
HKR	Hakkari	2.94	118	Pn	Pn	12 36 30.2	+2.2
CUKT	Cukurca	3.03	125	*e*PN	Pn	12 36 29.8	+0.5
GAZ	Gaziantep	3.17	235	*e*PN	Pn	12 36 30.7	-0.5
GAZ	Gaziantep	3.17	235	Pn	Pn	12 36 32.3	+1.1
TOKT	Tokat	3.30	294	*e*PN	Pn	12 36 32.4	-0.6
TOKT	Tokat	3.30	294	Pn	Pn	12 36 32.9	-0.1
TOKT	Tokat	3.30	294	Pn	Pn	12 36 32.9	-0.1
MSL	Mosul	3.42	142	*e*x	x	12 36 39.5	
MSL				*i* x	x	12 36 42.5	
MSL				*i* x	x	12 36 57.0	
MSL				*i* x	x	12 37 28.5	
SLMH	Al Salmeh	3.46	217	⇓P	Pn	12 36 34.9	-0.2
SLMH				⇓S	Sn	12 37 15.0	-0.8
SLMH	Al Salmeh	3.46	217	⇓*i*P	Pn	12 36 34.9	-0.2
SLMH				⇓*i*S	Sn	12 37 15.0	-0.8
ANDN	Andirin	3.56	247	⇑*i*P	Pn	12 36 36.0	-0.4
ANDN				*i* S	Sg	12 37 31.6	-4.3
BNN	Bunyan	3.62	269	*e*PN	Pn	12 36 36.9	-0.4
BNN	Bunyan	3.62	269	Pn	Pn	12 36 40.5	+3.1
JHLN	Al Jahlan	3.71	207	⇓P	Pn	12 36 39.3	+0.7
JHLN				⇓S	Sn	12 37 22.1	-0.2
JHLN	Al Jahlan	3.71	207	⇓*i*P	Pn	12 36 39.3	+0.7
JHLN				⇓*i*S	Sn	12 37 22.0	-0.2
DRWC	Darouich	3.85	233	⇑P	Pn	12 36 40.0	-0.6
DRWC	Darouich	3.85	233	⇑*i*P	Pn	12 36 40.0	-0.6
KOZT	Kozan	3.97	249	*e*PN	Pn	12 36 41.6	-0.6
KVT	Kavak	3.98	303	Pn	Pn	12 36 43.6	+1.3
YOZ	Yozgat	4.05	280	*e*PN	Pn	12 36 43.3	0.0
YOZ	Yozgat	4.05	280	Pn	Pn	12 36 45.5	+2.3
YOZ	Yozgat	4.05	280	Pn	Pn	12 36 45.5	+2.2
COBT	Iskenderun	4.17	235	*i* P	Pn	12 36 44.5	-0.5
ONI	Oni	4.21	31	P	Pn	12 36 45.6	+0.2
ONI				S	Sg	12 37 51.9	-5.0
TBLG	Delisi	4.23	49	P	Pn	12 36 45.8	0.0
CEYT	Ceyhan	4.24	243	*e*PN	Pn	12 36 46.1	+0.2
CEYT	Ceyhan	4.24	243	Pn	Pn	12 36 48.0	+2.1
MTA	Mtatsminda	4.24	50	P	Pn	12 36 45.8	-0.1
MTA				S	Sg	12 37 59.5	+1.6
BTCH	Batrach	4.37	228	⇑*i*P	Pn	12 36 47.3	-0.3
AVNT	Avonos	4.40	269	⇑*i*P	Pn	12 36 47.4	-0.6
DGRG	David-gareji	4.46	55	P	Pn	12 36 49.9	+0.9
DGRG				S	Sg	12 38 14.2	+9.3
HTY	Hatay	4.50	231	*e*PN	Pn	12 36 49.0	-0.5
HTY	Hatay	4.50	231	Pn	Pn	12 36 50.1	+0.6
HTY	Hatay	4.50	231	Pn	Pn	12 36 50.1	+0.6
ZEI	Tsey	4.55	34	*e*P	Pn	12 36 51.3	+1.1
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.1s						
ZEI				pmax	pmax		
	comp=Z,288nm,0.9s						
ZEI	Tsey	4.55	34	*e*P	Pn	12 36 51.3	+1.1
	comp=Z,288nm,0.9s						
SOC	Sochi	4.60	353	*c i*P	Pn	12 36 49.7	-1.1
SOC				*e*		12 37 42.1	
SOC				pmax	pmax		
	comp=Z,128nm,0.6s						
SOC				MLR	MLR		
	comp=Z,936nm,9.0s						
SOC	Sochi	4.60	353	*i* P	Pn	12 36 49.6	-1.2
SOC				*e*S	Sn	12 37 42.1	-1.9
	comp=Z,936nm,9.0s						
KARA	Karaisali	4.62	249	*e*PN	Pn	12 36 52.2	+1.1
CORM	Corum	4.67	286	*e*PN	Pn	12 36 51.6	-0.1
CTKT	Corum	4.67	292	*i* P	Pn	12 36 52.3	+0.6
NIG	Nigde	4.69	261	*e*PN	Pn	12 36 52.4	+0.3
NIG	Nigde	4.69	261	Pn	Pn	12 36 56.8	+4.8
KRTS	Karatas	4.72	240	*e*PN	Pn	12 36 53.6	+1.1
ARNB	Al Arnab	4.78	230	⇑P	Pn	12 36 52.9	-0.3
ARNB				⇑S	Sn	12 37 46.0	-2.4
ARNB	Al Arnab	4.78	230	⇑*i*P	Pn	12 36 52.9	-0.3
ARNB				⇑*i*S	Sn	12 37 46.0	-2.4
WRDH	Warideh	4.78	224	⇑P	Pn	12 36 53.0	-0.2
WRDH				⇑S	Sn	12 37 46.2	-2.2
WRDH	Warideh	4.78	224	⇑*i*P	Pn	12 36 53.0	-0.2
WRDH				⇑*i*S	Sn	12 37 46.2	-2.2
CDAG	Cicekdag	4.78	279	⇓*i*P	Pn	12 36 54.0	+0.8
DIKM	Dikmen	4.78	305	*e*PN	Pn	12 36 54.0	+0.7
SLNF	Slenfeh	4.82	226	⇓P	Pn	12 36 53.4	-0.4
SLNF				⇓S	Sn	12 37 47.0	-2.4
SLNF	Slenfeh	4.82	226	⇓*i*P	Pn	12 36 53.4	-0.4
SLNF				⇓*i*S	Sn	12 37 47.0	-2.4
BOYT	Boyabat	4.90	301	*e*P	Pn	12 36 56.0	+1.1
MERS	Mersin	5.18	247	*e*PN	Pn	12 37 00.0	+1.3
BIDA	Albida	5.20	221	⇑P	Pn	12 36 59.0	-0.1
BIDA	Albida	5.20	221	⇑*i*P	Pn	12 36 59.0	-0.1
KIV	Kislovodsk	5.20	18	⇑*e*P	Pn	12 36 59.8	+0.7
KIV	Kislovodsk	5.20	18	P	Pn	12 37 00.2	+1.1
	SNR=19						
RABH	Abou Rabah	5.28	211	⇑P	Pn	12 37 00.7	+0.6
RABH	Abou Rabah	5.28	211	⇑*i*P	Pn	12 37 00.7	+0.6
BRTR	Keskin Array B	5.35	280	*i* P	Pn	12 37 00.6	-0.5
BRTR				pmax	pmax		
	comp=Z,25nm,0.5s						
BRTR	Keskin Array B	5.35	280	Pn	Pn	12 37 00.6	-0.5
	comp=Z,3.2nm,0.3s,baz=101,slow=15,SNR=38						
BRTR				Lg		12 38 31.5	
	baz=123,slow=29,SNR=2.4						
BRTR				LR	LR	12 39 30.6	
	comp=Z,942nm,19.1s,baz=318,slow=43						
TOS	Tosya	5.35	294	*e*PN	Pn	12 37 01.0	-0.1
TOS	Tosya	5.35	294	Pn	Pn	12 37 03.1	+2.0
TOS	Tosya	5.35	294	Pn	Pn	12 37 03.1	+2.0
ROOS	tl_alroos	5.48	209	⇑P	Pn	12 37 03.7	+0.8
ROOS	tl_alroos	5.48	209	⇑*i*P	Pn	12 37 03.7	+0.8
CANT	Cankiri	5.52	289	*e*PN	Pn	12 37 04.5	+1.1
CANT	Cankiri	5.52	289	Pn	Pn	12 37 05.6	+2.2
ELDT	Eldivan	5.63	287	*i* P	Pn	12 37 10.0	+5.0
BZK	Bozkurt	5.75	303	Pn	Pn	12 37 08.1	+1.6
BZK	Bozkurt	5.75	303	Pn	Pn	12 37 08.1	+1.6
FKH	Fakeheh	5.79	216	*e*Pn	Pn	12 37 06.5	-0.7
HWQ	Hawqa	5.97	219	Pn	Pn	12 37 09.6	-0.1
HWQ	Hawqa	5.97	219	*e*Pn	Pn	12 37 09.6	0.0
BALT	Daday	5.98	297	*e*P	Pn	12 37 12.2	+2.5
ANTO	Ankara	6.01	281	*e*PN	Pn	12 37 10.4	+0.2
ANTO	Ankara	6.01	281	*e*Pn	Pn	12 37 11.9	+1.7
	comp=Z,357nm,1.0s						
ANTO	Ankara	6.01	281	*e*P	Pn	12 37 11.9	+1.7
ANTO				pmax	pmax		
	comp=Z,357nm,1.0s						
ANTO	Ankara	6.01	281	P	Pb	12 37 27.9	+1.7
	SNR=37						
LOD	Lodumlu	6.04	281	Pn	Pn	12 37 11.9	+1.4
LOD	Lodumlu	6.04	281	Pn	Pn	12 37 11.9	+1.4
IKL	Isikli	6.07	245	*e*PN	Pn	12 37 12.2	+1.3
IKL	Isikli	6.07	245	Pn	Pn	12 37 15.7	+4.7
ANN	Anapa	6.21	340	*e*P	Pn	12 37 18.5	+5.6
ANN				*e*S	Sn	12 38 27.5	+3.9
ANN				MLR	MLR		
	comp=N,2μm,14.0s						
ANN				MLR	MLR		
	comp=Z,1μm,14.0s						
SAFT	Safranbolu	6.37	293	*e*PN	Pn	12 37 15.9	+0.8
SAFT	Safranbolu	6.37	293	Pn	Pn	12 37 17.6	+2.4
SAFT	Safranbolu	6.37	293	Pn	Pn	12 37 17.6	+2.5
BHL	Bhannes	6.42	219	*e*Pn	Pn	12 37 16.3	+0.5
BHL	Bhannes	6.42	219	P	Pn	12 37 16.2	+0.4
KONT	Konya--Tatoy	6.46	263	*e*PN	Pn	12 37 18.1	+1.7
KONT	Konya--Tatoy	6.46	263	Pn	Pn	12 37 19.5	+3.1
BHD	Baghdad	6.54	150	*e*x	x	12 37 16.0	
BHD				*e*x	x	12 37 46.0	
BHD				*e*x	x	12 38 28.0	
BHD				*i* x	x	12 38 46.0	
BHD				*i* x	x	12 39 01.0	
BHD				*i* x	x	12 39 09.0	
RCY	Rachaya	6.68	216	*e*Pn	Pn	12 37 19.7	+0.2
BRBR	Barbar	6.69	215	⇑P	Pn	12 37 19.7	+0.3
BRBR	Barbar	6.69	215	⇑*i*P	Pn	12 37 19.7	+0.2
KIZT	Kizilcal	6.71	272	*e*PN	Pn	12 37 20.2	+0.5
KIZT	Kizilcal	6.71	272	Pn	Pn	12 37 20.1	+0.4
SUDU	Sudak	7.15	327	*e*P	Pn	12 37 32.1	+6.3
SUDU				*e*S	Sn	12 38 57.1	+10
YAL	Yalta	7.22	321	*e*P	Pn	12 37 35.8	+9.0
ALU	Alushta	7.25	323	*e*P	Pn	12 37 36.6	+9.4
ALU				pmax	pmax		
	comp=Z,48nm,0.7s						
MMAI	Mount Meron Ar	7.26	216	Pn	Pn	12 37 28.2	+0.8
	comp=Z,9.9nm,0.3s,baz=59,slow=15,SNR=25						
ASF	Jabal al Asfar	7.43	204	Pn	Pn	12 37 29.9	+0.2
	comp=Z,2.9nm,0.3s,baz=254,slow=4.7,SNR=16						
ASF				Lg		12 39 34.8	
	comp=Z,3.4nm,0.3s,baz=221,slow=22,SNR=3.1						
ASF				LR	LR	12 40 45.8	
	comp=Z,706nm,18.8s,baz=66,slow=41						
ESKT	Eskisehir	7.49	277	Pn	Pn	12 37 34.6	+4.1
ESKT	Eskisehir	7.49	277	Pn	Pn	12 37 34.6	+4.1
SEV	Sevastopol'	7.51	320	*e*P	Pn	12 37 39.0	+8.3
SIM	Simferopol'	7.59	323	P		12 37 41.8	
SIM				pmax	pmax		
	comp=Z,18nm,0.8s						
BORA	Eskisehir	7.81	279	*i* P	Pn	12 37 36.8	+1.9
ISP	Isparta	7.92	265	*e*Pn	Pn	12 37 39.0	+2.7
ISP	Isparta	7.92	265	*e*Pn	Pn	12 37 39.0	+2.7
EIL	Elat	10.38	208	Pn	Pn	12 38 10.7	+0.5
	comp=Z,0.3nm,0.3s,baz=18,slow=9.4,SNR=6.6						
EIL				Lg		12 41 08.0	
	comp=Z,0.9nm,0.3s,baz=57,slow=16,SNR=3.8						
EIL				LR	LR	12 42 03.3	
	comp=Z,826nm,21.1s,baz=58,slow=37						
MIB	Mutribah	10.79	146	*e*P	Pn	12 38 12.9	-2.9
MIB				AML	AML	12 40 07.3	
	comp=Z,16nm,0.5s						
NAY	Al-Naaiem	11.23	148	*e*P	Pn	12 38 19.1	-2.7
NAY				AML	AML	12 40 17.7	
	comp=Z,2.2nm,0.4s						
KBD	Kabd	11.49	147	*e*P	Pn	12 38 23.5	-1.8
RDF	Al-Radifah	11.65	148	*e*P	Pn	12 38 25.4	-2.0
RDF				AML	AML	12 40 24.6	
	comp=Z,5.5nm,0.6s						
KIS	Kishinev	11.67	317	*e*P	Pn	12 38 33.0	+5.2
VRSR	Storozhevoye	12.23	356	*e*P	Pn	12 38 33.9	-1.5
VRSR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VRSR				pmax	pmax		
	comp=N,1.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.9s						
MLR	Muntele Rosu	12.55	306	⇑P	Pn	12 38 43.4	+3.6
MLR	Muntele Rosu	12.55	306	Pn	Pn	12 38 43.2	+3.4
	comp=E,0.2nm,0.3s,baz=137,slow=2.5,SNR=7.0						
MLR	Muntele Rosu	12.55	306	⇑*i*P	Pn	12 38 43.4	+3.6
IDI	Anoyia	12.98	258	Pn	Pn	12 38 46.9	+1.2
	comp=E,0.3nm,0.3s,baz=61,slow=13,SNR=8.0						
IDI				LR	LR	12 44 39.7	
	comp=E,682nm,18.6s,baz=122,slow=42						

VOIR 13.10 304 ⇑P Pn 12 38 49.1 +1.8
VOIR 13.10 304 ⇓*i*P Pn 12 38 49.1 +1.8
VTS Vitosha 13.56 291 P Pn 12 38 55.4 +1.8
BURAR Bucovina Array 14.03 313 ⇑P Pn 12 39 07.0 +7.1
BURAR Bucovina Array 14.03 313 ⇑*i*P Pn 12 39 07.0 +7.1
AKASG Malin Array Be 14.13 329 Pn Pn 12 38 58.3 -3.0
comp=E,0.4nm,0.3s,baz=138,slow=12,SNR=16
KIEV Kiev 14.13 329 *e*Pn Pn 12 38 59.5 -1.7
comp=E,13nm,0.9s
KIEV Kiev 14.13 329 *e*P Pn 12 38 59.5 -1.8
KIEV pmax pmax
comp=Z,13nm,0.9s
GZR Gura Zlata 14.57 302 ⇓P Pn 12 39 13.3 +6.0
GZR Gura Zlata 14.57 302 ⇓*i*P Pn 12 39 13.3 +5.9
DRGR 15.14 307 ⇓P Pn 12 39 21.3 +6.2
DRGR 15.14 307 ⇓*i*P Pn 12 39 21.3 +6.3
LVV L'vov 15.92 318 *e*P 12 39 36.5
UZH Uzhgorod 16.23 312 *e*P Pn 12 39 32.0 +2.8
UZH Uzhgorod 16.23 312 *e i*P Pn 12 39 32.0 +2.8
UZH Uzhgorod 16.23 312 *i* P Pn 12 39 32.0 +2.8
OBN Obninsk 16.32 352⇑*e*P Pn 12 39 30.9 +0.7
OBN Obninsk 16.32 352 *e*P Pn 12 39 30.8 +0.6
OBN pmax pmax
comp=Z,38nm,1.2s
OBN Obninsk 16.32 352 *e*P Pn 12 39 30.8 +0.6
comp=Z,38nm,1.2s
KOLS Kolonicke sedl 16.39 313 *e*P Pn 12 39 31.8 +0.6
MOS Moscow 16.84 354 *e*P Pn 12 39 33.9 -2.9
MOS pmax pmax
comp=Z,57nm,1.4s
CRVS Cervenica-Dubn 16.84 312 *e*P Pn 12 39 37.0 +0.1
AKTK Aktyubinsk 16.85 42 Pn Pn 12 39 33.9 -3.2
AKTO Aktyubinsk 16.85 42 Pn Pn 12 39 33.9 -3.2
comp=Z,0.3nm,0.3s,baz=242,slow=12,SNR=16
STHS Stebnicka Huta 17.22 313 *e*P Pn 12 39 43.6 +1.9
comp=Z,9.1nm,1.0s
STHS *e* 12 39 53.3
STHS Stebnicka Huta 17.22 313 *e*P Pn 12 39 43.6 +1.9
STHS pmax pmax
comp=Z,9.0nm,1.0s
AB31 Akbulak array 17.27 47 *i* P Pn 12 39 39.3 -3.0
PSZ Piszkesteto 17.35 308 *e*P Pn 12 39 41.3 -2.0
comp=Z,10nm,0.9s
PSZ Piszkesteto 17.35 308 *e*P Pn 12 39 41.3 -2.0
PSZ pmax pmax
comp=Z,10.0nm,0.9s
MNK Minsk 17.70 335 *e*P Pn 12 39 43.0 -4.6
NIE Niedzica 17.75 312 *e*P Pn 12 39 50.7 +2.4
VYHS Vyhne 18.23 308 *e*P Pn 12 39 53.8 -0.3
comp=Z,12nm,1.3s
VYHS *e* 12 40 08.7
VYHS Vyhne 18.23 308 *e*P Pn 12 39 53.8 -0.3
VYHS pmax pmax
comp=Z,12nm,1.3s
KOLL Kolacno 18.53 308 *e*P Pn 12 39 58.6 +0.8
KOLL Kolacno 18.53 308 *e*P Pn 12 39 58.7 +0.9
MODS Modra-Piesok 19.14 307 *e*P Pn 12 40 05.6 +0.3
comp=Z,14nm,1.5s
MODS *e* 12 40 13.8
MODS Modra-Piesok 19.14 307 *e*P Pn 12 40 05.6 +0.3
MODS pmax pmax
comp=Z,15nm,1.5s
HATD Hatta, Dubai 19.37 132 ⇑P Pn 12 40 09.1 +1.0
SNR=7.8
ASHO Ashiyiah 19.43 133 ⇑P Pn 12 40 08.2 -0.7
SNR=7.4
MORC Moravsky Berou 19.53 311 P Pn 12 40 10.9 +1.1
CONA Conrad Observa 19.89 305 ⇓*i*P Pn 12 40 13.1 -1.1
comp=Z,42nm,1.3s
CONA Conrad Observa 19.89 305 P Pn 12 40 13.1 -1.1
comp=Z,42nm,1.3s
ARSA Arzberg 19.92 302⇑*i*P Pn 12 40 13.5 -1.1
comp=Z,14nm,1.4s
KRUC Moravsky 19.94 308 P Pn 12 40 13.1 -1.6
DPC Dobruska-Polom 20.48 311 *e*P P 12 40 19.0 +0.1
TREC Trest 20.58 308 *e*P P 12 40 20.6 +0.6
KSP Ksiaz 20.70 313 *e*P P 12 40 20.8 -0.5
KSP *e*pP 12 40 23.4
UPC Upice 20.73 312 *e*P P 12 40 20.4 -1.2
ARQ Araqi 20.75 134 P P 12 40 22.7 +0.7
SNR=18
AQU L'Aquila 20.77 288 *e*Pn P 12 40 22.1 -0.1
comp=Z,68nm,1.0s
AQU L'Aquila 20.77 288 *e*P P 12 40 22.1 -0.1
AQU pmax pmax
comp=Z,68nm,1.0s
AQU L'Aquila 20.77 288 *e*P P 12 40 22.1 -0.1
comp=Z,68nm,1.0s
MOA Molln 20.90 303 P P 12 40 24.5 +1.0
HOQ Hoqain 21.01 132 P P 12 40 25.8 +0.9
SNR=16
ARU Arti 21.13 29 *e*P P 12 40 25.2 -0.7
comp=Z,27nm,0.8s,mb4.6
ARU Arti 21.13 29⇑*e*P P 12 40 24.7 -1.2
ARU pmax pmax
comp=Z,66nm,1.6s,mb4.7
ARU Arti 21.13 29 *e*P P 12 40 25.2 -0.7
comp=Z,27nm,0.8s,mb4.6
KBA Koelnbreinsper 21.33 301⇑*i*P P 12 40 28.3 +0.2
comp=Z,35nm,1.0s,mb4.6
KBA Koelnbreinsper 21.33 301⇑*i*P P 12 40 28.3 +0.2
KBA pmax pmax
comp=Z,35nm,1.0s,mb4.6
VSU Vasula 21.39 340 *e*P P 12 40 28.2 -0.4
PRU Pruhonice 21.40 309 *e*P P 12 40 28.7 -0.1
GERES GERESS Array B 21.54 306 P P 12 40 32.3 +1.9
comp=Z,4.3nm,0.7s,mb4.0,baz=108,slow=11,SNR=10
PVCC Panska Ves 21.58 311 *e*P P 12 40 30.7 -0.1
BSY Bisya 21.60 134 ⇑P P 12 40 33.5 +2.3
SNR=16
BSYO Bisya 21.63 134 P P 12 40 33.5 +1.9
SNR=16
KHC Kasperske Hory 21.71 307 *e*P P 12 40 30.7 -1.5
KHC *ex* x 12 40 40.5
SMDO Samad 21.84 132 P P 12 40 34.5 +0.8
SNR=42
BRG Berggiesshubel 22.08 311 *e*P P 12 40 36.6 +0.5
comp=Z,22nm,1.7s,mb4.3
BRG Berggiesshubel 22.08 311 *e*P P 12 40 36.8 +0.6
comp=Z,14nm,1.5s,mb4.2
BRG *e* 12 40 51.7
comp=Z,5.3nm,0.6s
WET Wettzell 22.15 306 *e*P P 12 40 37.1 +0.2
WET pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
WET Wettzell 22.15 306 *e*P P 12 40 37.1 +0.2
comp=Z,9.0nm,0.9s,mb4.2
SVE Sverdlovsk 22.21 30⇑*e*P P 12 40 37.5 0.0
SVE pmax pmax
comp=Z,62nm,1.5s,mb4.8
JMDO Jabal Madar 22.41 133 ⇑P P 12 40 41.3 +1.4
SNR=16
FBE Freiberg 22.44 311 *e*P P 12 40 40.6 +0.6
comp=Z,32nm,1.6s,mb4.5
WTTA Wattenberg 22.50 301⇑*i*P P 12 40 41.0 +0.3
comp=Z,34nm,1.5s,mb4.6
WTTA Wattenberg 22.50 301⇑*i*pP pP 12 40 41.0 -3.6
comp=Z,34nm,1.5s
WTTA Wattenberg 22.50 301⇑*i*P P 12 40 41.0 +0.3
WTTA pmax pmax
comp=Z,34nm,1.5s,mb4.6
WBK Wadi Bani Khal 22.72 131 P P 12 40 49.6 +6.4
SNR=9.8
NKC Novy Kostel 22.75 309 P P 12 40 42.8 -0.5
ROTZ Rotzenmuhle 22.75 307 *e*P P 12 40 43.7 +0.4
comp=Z,76nm,1.8s,mb4.8
CLL Collm 22.79 312 *i* P P 12 40 44.0 +0.3
comp=Z,23nm,1.3s,mb4.5
CLL *i* 12 40 48.5
CLL Collm 22.79 312 *i* P P 12 40 44.0 +0.3
CLL *i* 12 40 48.5
CLL pmax pmax
comp=Z,23nm,1.3s,mb4.5
CLL Collm 22.79 312 *i* sP P 12 40 44.0 +0.3
comp=Z,23nm,1.3s,mb4.5
CLL *i* x x 12 40 48.5
CLL *ex* x 12 40 56.0
CLL *e*(PP) 12 41 09.0
CLL Collm 22.79 312 *e*P P 12 40 43.8 +0.1
comp=Z,24nm,1.3s,mb4.5
TANN Tannenbergstha 22.80 309 *e*P P 12 40 45.5 +1.7
comp=Z,36nm,1.9s,mb4.5
WERN Wernitzgruen 22.81 309 *e*P P 12 40 43.3 -0.6
comp=Z,14nm,0.8s,mb4.4
RUE Ruedersdorf 22.82 315 *e*P P 12 40 43.9 -0.1
comp=Z,40nm,1.1s,mb4.8
RUE Ruedersdorf 22.82 315 *e*P P 12 40 43.9 -0.1
comp=Z,40nm,1.1s,mb4.8
MOTA Moosalm 22.88 301⇓*i*P P 12 40 45.1 +0.4
comp=Z,26nm,1.0s,mb4.6
MOTA Moosalm 22.88 301⇓*i*pP pP 12 40 45.1 -3.5
comp=Z,26nm,1.0s
MOTA Moosalm 22.88 301⇓*i*P P 12 40 45.1 +0.5
MOTA pmax pmax
comp=Z,26nm,1.0s,mb4.6
MANZ Manzenberg 22.88 308 *e*P P 12 40 43.7 -0.9
comp=Z,32nm,1.8s,mb4.5
KK31 Karatay Array 22.95 70 *i* P P 12 40 45.4 0.0
KK31 pmax pmax
comp=Z,26nm,0.9s,mb4.7
KK31 Karatay Array 22.95 70 *i* P P 12 40 45.4 0.0
comp=Z,26nm,0.9s,mb4.7
SOKR Solikamsk 23.03 21 *e*P P 12 40 44.3 -1.9
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.5
SOKR Solikamsk 23.03 21 *e*P P 12 40 44.3 -1.9
comp=Z,20nm,0.9s,mb4.5
FETA Feichten 23.07 300⇑*i*pP pP 12 40 47.1 -3.5
comp=Z,30nm,1.3s
GRA1 Grafenberg Arr 23.34 307 *e*P P 12 40 49.9 +0.4
comp=Z,65nm,1.2s,mb4.9
GRF Grafenberg Arr 23.34 307 *e*P P 12 40 49.9 +0.4
GRF pmax pmax
comp=Z,65nm,1.2s,mb4.9
GRF Grafenberg Arr 23.34 307 *e*P P 12 40 49.9 +0.4
GRF pmax pmax
comp=Z,65nm,1.2s,mb4.9
GRF Grafenberg Arr 23.34 307 *e*P P 12 40 49.9 +0.4
comp=Z,65nm,1.2s,mb4.9
DAVOX Davos/Dischmat 23.61 299 P P 12 40 53.4 +1.2
comp=Z,2.8nm,0.6s,mb3.9,baz=344,slow=23,SNR=3.2
DAVA Damuels 23.69 300⇑*i*P P 12 40 49.8 -3.1
comp=Z,12nm,0.8s,mb4.4
TUE Stuetta 23.93 298 P P 12 40 55.0 -0.2
PGF Pioggiola 24.02 289 *e*P P 12 40 55.6 -0.5
comp=Z,92nm,1.2s,mb4.8
PGF Pioggiola 24.02 289 *e*P P 12 40 55.6 -0.5
PGF pmax pmax
comp=Z,46nm,1.2s,mb4.8
PGF Pioggiola 24.02 289 *e*P P 12 40 55.6 -0.5
comp=Z,46nm,1.2s,mb4.8
FIA1 FINESS Array S 24.16 343 *e*P P 12 40 56.4 -0.6
FINES FINESS Array B 24.16 343 *i* P P 12 40 56.5 -0.6
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 24.16 343 P P 12 40 56.5 -0.6
comp=Z,6.3nm,0.6s,mb4.2,baz=146,slow=11,SNR=28
FINES FINESS Array B 24.16 343 *i* P P 12 40 56.5 -0.6
comp=Z,6.0nm,0.6s,mb4.2
UBBA Unterbreizbach 24.41 309 *e*P P 12 41 00.2 +0.6
comp=Z,12nm,1.1s,mb4.2
CLZ Clausthal 24.52 311 *e*P P 12 41 00.6 +0.1
CLZ pmax pmax
comp=Z,23nm,1.3s,mb4.5
CLZ Clausthal 24.52 311 *e*P P 12 41 00.6 +0.1
comp=Z,23nm,1.3s,mb4.5
JOF Joensuu 24.57 350 *e*p P 12 40 59.5 -1.3
comp=Z,29nm,0.7s,mb4.9
JOF Joensuu 24.57 350 *e*P P 12 40 59.5 -1.3
JOF pmax pmax
comp=Z,29nm,0.7s,mb4.9
KAF Kangasniemi 24.70 344 *e*p P 12 41 00.4 -1.6
baz=150,slow=9.7
BRVK Borovoye 24.78 46 *e*P P 12 41 03.2 +0.4
comp=Z,8.3nm,1.0s,mb4.2
BRVK Borovoye 24.78 46 *e*P P 12 41 03.2 +0.3
BRVK pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
BRVK Borovoye 24.78 46 *e*P P 12 41 03.2 +0.3
comp=Z,8.0nm,1.0s,mb4.2
KEST Kesra 24.90 272 P P 12 41 05.3 +1.2
comp=Z,27nm,0.9s,mb4.8,baz=319,slow=3.7,SNR=30
TNS Taunus Mts 25.21 307 *e*P P 12 41 08.2 +1.4
TNS pmax pmax
comp=Z,65nm,1.9s,mb4.8
TNS Taunus Mts 25.21 307 *e*P P 12 41 08.2 +1.4
comp=Z,65nm,1.9s,mb4.8
TMCR Tamitsa 25.23 357 *e*P P 12 41 04.7 -2.1
AML Almayashu 25.33 72 *e*P P 12 41 08.9 +1.0
comp=Z,3.8nm,0.6s,mb4.1
AML Almayashu 25.33 72 P P 12 41 09.0 +1.1
SNR=6.7
AML Almayashu 25.33 72 *e*P P 12 41 08.9 +0.9
comp=Z,3.8nm,0.6s,mb4.1
EKS2 Erkin-Say 25.36 71 P P 12 41 08.8 +0.6
SNR=18
EKS2 Erkin-Say 25.36 71 *e*P P 12 41 08.8 +0.6
comp=Z,16nm,1.0s,mb4.5
CDF Champ du Feu 25.60 302 *e*P P 12 41 11.0 +0.7
comp=Z,23nm,1.1s,mb4.3
CDF Champ du Feu 25.60 302 *e*P P 12 41 11.0 +0.7
CDF pmax pmax
comp=Z,12nm,1.1s,mb4.3
CDF Champ du Feu 25.60 302 *e*P P 12 41 11.0 +0.7
comp=Z,12nm,1.1s,mb4.3
MBDF Montbardon 25.62 294 *e*P P 12 41 11.1 +0.5
comp=Z,29nm,0.9s,mb4.5
MBDF Montbardon 25.62 294 *e*P P 12 41 11.1 +0.5
MBDF pmax pmax
comp=Z,14nm,0.9s,mb4.5
MBDF Montbardon 25.62 294 *e*P P 12 41 11.1 +0.5
comp=Z,14nm,0.9s,mb4.5
LPG La Plagne 25.66 296 *e*P P 12 41 12.0 +1.1
comp=Z,27nm,0.9s,mb4.5
LPG La Plagne 25.66 296 *e*P P 12 41 12.0 +1.1
LPG pmax pmax
comp=Z,13nm,0.9s,mb4.5
LPG La Plagne 25.66 296 *e*P P 12 41 12.0 +1.1
comp=Z,13nm,0.9s,mb4.5
LPL La Plagne 25.67 296 *e*P P 12 41 11.8 +0.7
comp=Z,41nm,1.0s,mb4.6
LPL La Plagne 25.67 296 *e*P P 12 41 11.8 +0.7
LPL pmax pmax
comp=Z,21nm,1.0s,mb4.6
LPL La Plagne 25.67 296 *e*P P 12 41 11.8 +0.7
comp=Z,20nm,1.0s,mb4.6
BNI Bardonecchia 25.69 295 *e*P P 12 41 11.6 +0.4
comp=Z,52nm,1.2s,mb4.9
BNI Bardonecchia 25.69 295 *e*P P 12 41 11.6 +0.4
BNI pmax pmax
comp=Z,52nm,1.2s,mb4.9
BNI Bardonecchia 25.69 295 *e*P P 12 41 11.6 +0.4
comp=Z,52nm,1.2s,mb4.9
FRF La Foret Royal 25.71 291 *e*P P 12 41 09.5 -2.0
AAK Ala-Archa 25.89 71 *e*P P 12 41 12.7 -0.4
comp=Z,5.4nm,0.9s,mb4.1
AAK Ala-Archa 25.89 71⇑*e*P P 12 41 12.3 -0.7
AAK pmax pmax
comp=Z,11nm,1.9s,mb4.1
AAK Ala-Archa 25.89 71 P P 12 41 13.8 +0.8
SNR=5.3
AAK Ala-Archa 25.89 71 *e*P P 12 41 12.3 -0.7
comp=Z,11nm,1.9s,mb4.1
FRU Bishkek 25.97 71 P P 12 41 14.0 +0.3
CABF La Chapelle 26.19 298 *e*P P 12 41 16.6 +0.9
comp=Z,43nm,0.9s,mb4.7
CABF La Chapelle 26.19 298 *e*P P 12 41 16.6 +0.9
CABF pmax pmax
comp=Z,21nm,0.9s,mb4.7
CABF La Chapelle 26.19 298 *e*P P 12 41 16.6 +0.9
comp=Z,21nm,0.9s,mb4.7
KZA Kyzart 26.49 72 P P 12 41 20.1 +1.6
SNR=6.8
TKM2 Tokmak 2 26.68 70 *e*P P 12 41 20.3 +0.1
comp=Z,9.1nm,1.1s,mb4.2
TKM2 Tokmak 2 26.68 70 *e*P P 12 41 20.3 +0.1
TKM2 pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
TKM2 Tokmak 2 26.68 70 *e*P P 12 41 20.3 +0.1
comp=Z,9.0nm,1.1s,mb4.2
HFS Hagfors 27.02 330 P P 12 41 22.8 -0.2
comp=Z,6.8nm,1.0s,mb4.2,baz=116,slow=15,SNR=5.3
ULHL Ulahol 27.21 72 P P 12 41 26.7 +1.8
SNR=5.5
AVF Avril sur Loir 28.08 298 *e*P P 12 41 33.2 +0.5
comp=Z,88nm,1.6s,mb4.8
AVF Avril sur Loir 28.08 298 *e*P P 12 41 33.2 +0.5
AVF pmax pmax
comp=Z,44nm,1.6s,mb4.8
AVF Avril sur Loir 28.08 298 *e*P P 12 41 33.2 +0.5
comp=Z,44nm,1.6s,mb4.8
NB2 NORSAR Subarra 28.54 330 P P 12 41 35.5 -1.1
NB2 pmax pmax
comp=Z,2.0nm,1.1s,mb3.8
NOA NORSAR Array B 28.54 330 P P 12 41 35.6 -1.0
comp=Z,0.7nm,0.6s,mb3.5,baz=127,slow=9.1,SNR=4.0
NOA LR LR 12 53 50.1
comp=Z,281nm,22.0s,MS3.8,baz=280,slow=38
KURK Kurchatov 29.13 54 *e*P P 12 41 41.4 -0.7
comp=Z,5.8nm,0.9s,mb4.3
KURK Kurchatov 29.13 54 *e*P P 12 41 41.4 -0.6
KURK pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
KURK Kurchatov 29.13 54 *e*P P 12 41 41.3 -0.7
comp=Z,5.8nm,0.9s,mb4.3
MK31 Makanchi Array 31.29 62 *e*P P 12 42 01.4 +0.2
MK31 Makanchi Array 31.29 62 *i* P P 12 42 00.9 -0.3
MK31 pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
MK31 Makanchi Array 31.29 62 *i* P P 12 42 00.9 -0.3
comp=Z,1.0nm,0.4s,mb4.0
MKAR Makanchi Array 31.29 62 P P 12 42 01.4 +0.2
comp=Z,4.2nm,0.9s,mb4.3,baz=274,slow=7.4,SNR=21
MKAR PcP PcP 12 44 54.7 -0.4
comp=Z,1.1nm,0.9s,baz=250,slow=2.9,SNR=4.3
MKAR Makanchi Array 31.29 62 *e*P P 12 42 01.3 +0.1
MKAR Makanchi Array 31.29 62 PcP PcP 12 44 54.7 -0.4
ARCES ARCESS Array B 31.61 350 P P 12 42 04.4 +0.7
comp=Z,2.2nm,0.6s,mb4.2,baz=151,slow=8.3,SNR=16
NVS Novosibirsk 32.61 47 *e*P P 12 42 12.6 0.0
EKA Eskdalemuir Ar 33.21 314 P P 12 42 17.9 +0.1
comp=Z,4.6nm,0.7s,mb4.5,baz=104,slow=8.7,SNR=9.6
ESDC Sonseca Array 34.11 286 P P 12 42 25.7 -0.2
comp=Z,1.0nm,0.5s,mb4.0,baz=72,slow=9.8,SNR=4.6
WMQ Urumqi 35.35 67⇑*i*P P 12 42 37.2 +0.6
WMQ PP PP 12 43 56.8 +0.1
WMQ S S 12 48 10.7 +0.3
WMQ AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
WMQ AMB AMB
comp=Z,90nm,5.4s
WMQ LR LR
comp=N,474nm,26.5s,MS4.3
WMQ LR LR
comp=E,482nm,28.0s,MS4.3
WMQ LR LR
comp=Z,422nm,20.3s
GKN Gorkha 38.09 93 *e*P P 12 43 00.3 +0.2
comp=Z,20nm,0.8s,mb4.9
KKN Kakani 38.69 93 *e*P P 12 43 05.1 -0.1
JIRN Jiri 39.46 93 *e*P P 12 43 12.0 +0.4
comp=Z,18nm,1.0s,mb4.7
ODAN Odare 40.78 93 *e*P P 12 43 21.6 -1.0
comp=Z,40nm,1.2s,mb4.9
TAPN Taplejung 40.79 92 *e*P P 12 43 22.6 -0.1
comp=Z,11nm,0.7s,mb4.6
LSA Lhasa 42.38 87 *e*P P 12 43 36.7 +1.0
comp=Z,5.4nm,0.6s,mb4.3
LSA Lhasa 42.38 87 *e*P P 12 43 36.7 +1.0
LSA pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
LSA Lhasa 42.38 87 *e*P P 12 43 36.7 +1.0
comp=Z,5.0nm,0.6s,mb4.3
TOA0 Torodi Ar. Sit 42.84 244 *e*P P 12 43 37.4 -2.1
TOA0 Torodi Ar. Sit 42.84 244 *e*P P 12 43 37.4 -2.1
TORD Torodi Ar. Bea 42.84 244 P P 12 43 38.2 -1.3
TORD Torodi Ar. Bea 42.84 244 P P 12 43 38.2 -1.3
comp=Z,3.2nm,0.8s,mb4.1,baz=46,slow=7.3,SNR=19
ZAK Zakamensk 44.80 54 *e*P P 12 43 55.3 +0.5
ZAK *e* 12 45 35.6
ZAK pmax pmax
comp=Z,2.0nm,1.4s,mb3.8
ZAK Zakamensk 44.80 54 *e*P P 12 43 55.3 +0.5
comp=Z,2.0nm,1.4s,mb3.8
ZAK Zakamensk 44.80 54 *e*PcP PcP 12 45 35.6 -1.0
TLY Talaya 44.80 52⇓*e*P P 12 43 55.6 +0.8
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
TLY Talaya 44.80 52 *e*P P 12 43 55.6 +0.8
comp=Z,4.0nm,0.9s,mb4.2
GTA Gaotai 45.23 70 *e*P P 12 43 59.2 +0.8
GTA AP pP 12 44 03.5 +0.8
GTA PCS PcS 12 49 32.7 +0.6
GTA S S 12 50 38.6 +0.6
GTA AMB AMB
comp=Z,5.0nm,1.4s,mb4.2
GTA AMB AMB
comp=Z,484nm,9.9s
GTA LR LR
comp=N,522nm,20.6s,MS4.6
GTA LR LR
comp=E,433nm,19.9s,MS4.6
GTA LR LR
comp=Z,701nm,23.3s,MS4.5
SONM Songino Array 47.35 57 P P 12 44 14.5 -0.4
comp=Z,0.7nm,0.8s,mb3.7,baz=278,slow=8.8,SNR=6.0
SONM PcP PcP 12 45 45.2 -0.4
comp=Z,0.9nm,0.6s,baz=265,slow=3.5,SNR=5.2
ULN Ulaanbaatar 47.77 57 *e*P P 12 44 18.1 -0.2
comp=Z,10nm,1.1s,mb4.8
ULN *e* 12 44 24.1
ULN Ulaanbaatar 47.77 57 *e*P P 12 44 18.1 -0.1
ULN *e* 12 44 24.1
ULN pmax pmax
comp=Z,11nm,1.1s,mb4.8
ULN Ulaanbaatar 47.77 57 *e*P P 12 44 18.1 -0.1
comp=Z,11nm,1.1s,mb4.8
LZH Lanzhou 49.41 72 *e*P P 12 44 30.5 -0.6
LZH *e*PP PP 12 46 26.2 +1.2
LZH AMB AMB
comp=Z,21nm,1.3s,mb5.0
LZH AMB AMB
comp=Z,74nm,6.2s
LZH LR LR
comp=N,407nm,14.3s
LZH LR LR
comp=Z,613nm,18.5s,MS4.6
LZH Lanzhou 49.41 72 *e*P P 12 44 30.5 -0.6
LZH *PP pP 12 44 35.2 -0.2
LZH *SP sP 12 44 37.5 +0.5
LZH *e* 12 46 26.2
BOD Bodaibo 49.62 42⇑*i*P P 12 44 31.2 -1.1
BOD pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BOD Bodaibo 49.62 42 *i* P P 12 44 31.2 -1.1
comp=Z,8.0nm,1.0s,mb4.7
CIT Chita 50.72 50 *e*P P 12 44 40.8 +0.1
CD2 Chengdu 51.57 79 *e*P P 12 44 47.4 0.0
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,30nm,8.4s
CD2 LR LR
comp=E,340nm,13.4s
CD2 LR LR
comp=Z,340nm,12.0s,MS4.6
DBIC Dimbokro 51.95 244 P P 12 44 49.1 -1.4
comp=Z,6.9nm,0.8s,mb4.6,baz=28,slow=6.4,SNR=8.8
TIC Toumodi 52.09 244 *e*P P 12 44 50.0 -1.5
comp=Z,3.9nm,0.2s,mb5.0
KIC Kosan Boka 52.09 243 *e*P P 12 44 49.8 -1.7
comp=Z,48nm,0.8s,mb5.5
LIC Lamto 52.39 244 *e*P P 12 44 52.1 -1.6
comp=Z,30nm,0.8s,mb5.0
LIC Lamto 52.39 244 *e*P P 12 44 52.2 -1.5
comp=Z,47nm,0.8s,mb5.5
LIC Lamto 52.39 244 *e*P P 12 44 52.1 -1.6
comp=Z,15nm,0.8s,mb5.0
TIXI Tiksi 53.01 23 *e*P P 12 44 57.0 -0.6
comp=Z,6.3nm,0.3s,mb5.0
TIXI Tiksi 53.01 23⇑*e*P P 12 44 56.9 -0.6
TIXI pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
TIXI Tiksi 53.01 23 *e*P P 12 44 56.9 -0.6
comp=Z,4.0nm,1.0s,mb4.3
HHC Hu-ho-hao-te 53.12 64 *e*P P 12 44 59.0 +0.2
HHC PCP PcP 12 46 04.3 -2.7
HHC PP PP 12 47 01.9 +3.4
HHC PCS PcS 12 50 03.5 -2.2
HHC AMB AMB
comp=Z,13nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,257nm,6.7s
HHC LR LR
comp=N,689nm,22.6s
HHC LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,523nm,16.6s						
HHC				LR	LR		
	comp=Z,944nm,21.4s,MS4.8						
KMI	Kunming	53.60	85	P	P	12 45 00.3	-2.2
KMI				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.7						
HIA	Hailar	55.33	51	eP	P	12 45 15.2	+0.4
	comp=Z,20nm,1.3s,mb5.0						
HIA	Hailar	55.33	51	eP	P	12 45 15.2	+0.4
HIA				pmax	pmax		
	comp=Z,20nm,1.3s						
HIA	Hailar	55.33	51	eP	P	12 45 15.2	+0.4
	comp=Z,20nm,1.3s,mb5.0						
GYA	Guiyang	55.95	82	P	P	12 45 21.8	+2.2
GYA				PP	PP	12 47 27.7	+3.4
GYA				S	S	12 53 08.0	+0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,370nm,19.9s,MS4.7						
GYA				LR	LR		
	comp=E,480nm,17.2s,MS4.7						
GYA				LR	LR		
	comp=Z,460nm,18.6s,MS4.6						
YAK	Yakutsk	56.08	35⇑	eP	P	12 45 18.6	-1.3
YAK	Yakutsk	56.08	35⇑	eP	P	12 45 18.5	-1.4
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
NJ2	Nanjing	62.33	70	eP	P	12 46 04.4	+0.7
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
KLR	Kul'dur	62.47	48	eP	P	12 46 00.0	-4.4
PSI	Prapat	64.05	109	P	P	12 46 16.4	+1.1
PSI	Prapat	64.05	109	P	P	12 46 16.4	+1.1
	comp=Z,4.7nm,0.7s,mb4.6,baz=319,slow=11,SNR=4.5						
BILL	Bilibino	65.82	20	eP	P	12 46 24.0	-2.1
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
KSRS	Korea Array	65.96	61	P	P	12 46 26.6	-0.9
	comp=Z,3.6nm,0.7s,mb4.5,baz=290,slow=6.8,SNR=13						
SCHQ	Schefferville	67.84	323	P	P	12 46 38.0	-1.1
SCHQ				LR	LR	13 16 06.7	
SCHQ	Schefferville	67.84	323	P	P	12 46 38.0	-1.1
	comp=Z,1.6nm,0.5s,mb4.3,baz=45,slow=5.7,SNR=3.4						
SCHQ				LR	LR	13 16 06.7	
	comp=Z,993nm,20.9s,MS5.0,baz=45,slow=36						
BOSA	Boshof	68.77	194	P	P	12 46 44.7	-0.4
	comp=Z,2.7nm,0.8s,mb4.2,baz=14,slow=7.3,SNR=3.5						
YSS	Yuzh-Sakhalins	69.92	45	eP	P	12 46 56.9	+4.7
INK	Inuvik	72.90	358	eP	P	12 47 09.1	-0.7
	comp=Z,132nm,0.9s,mb5.9						
INK	Inuvik	72.90	358	P	P	12 47 08.4	-1.4
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK	Inuvik	72.90	358	P	P	12 47 08.4	-1.5
	comp=Z,4.0nm,0.9s,mb4.3,baz=12,slow=8.0,SNR=7.7						
MJAR	Matsushiro Arr	73.30	56	P	P	12 47 11.7	-1.1
	comp=Z,2.8nm,0.9s,mb4.2,baz=312,slow=5.7,SNR=6.2						
MJAR	Matsushiro Arr	73.30	56	P	P	12 47 11.6	-1.2
FCC	Fort Churchill	75.51	337	eP	P	12 47 24.8	-0.4
	comp=Z,1.9nm,0.7s,mb4.1						
FCC	Fort Churchill	75.51	337	eP	P	12 47 24.8	-0.4
FCC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
FCC	Fort Churchill	75.51	337	eP	P	12 47 24.8	-0.4
	comp=Z,2.0nm,0.7s,mb4.2						
COLA	College	76.24	4	eP	P	12 47 29.1	-0.2
	comp=Z,8.5nm,1.0s,mb4.6						
COLA	College	76.24	4⇓	iP	P	12 47 29.4	+0.1
COLA	College	76.24	4	eP	P	12 47 29.1	-0.2
	comp=Z,8.5nm,1.0s,mb4.6						
EGAK	Eagle	76.53	1	eP	P	12 47 30.9	-0.1
	comp=Z,7.2nm,1.0s,mb4.6						
EGAK	Eagle	76.53	1	eP	P	12 47 30.9	0.0
	comp=Z,7.2nm,1.0s,mb4.6						
YKW3	Yellowknife Ar	76.80	348	eP	P	12 47 32.8	+0.3
YKW3	Yellowknife Ar	76.80	348	eP	P	12 47 32.8	+0.3
YKA	Yellowknife Ar	76.86	348	P	P	12 47 32.2	-0.6
YKA	Yellowknife Ar	76.86	348	P	P	12 47 32.2	-0.6
	comp=Z,2.8nm,0.9s,mb4.2,baz=22,slow=6.0,SNR=37						
YKA	Yellowknife Ar	76.86	348	eP	P	12 47 32.2	-0.6
DAWY	Dawson	77.26	360	eP	P	12 47 34.6	-0.4
DAWY	Dawson	77.26	360	eP	P	12 47 34.6	-0.4
NEW	Newport	90.85	345	eP	P	12 48 44.9	+0.4
	comp=Z,5.5nm,0.9s,mb4.9						
NEW	Newport	90.85	345	eP	P	12 48 44.9	+0.3
NEW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NEW	Newport	90.85	345	eP	P	12 48 44.9	+0.3
	comp=Z,5.0nm,0.9s,mb4.8						

IDC 08 12:39:19.7±1.0**,1681S**×**17344W,h0**km**,mb4.0**/6**, mb1 4.2**/7**,mb1mx4.0**/17**,mbtmp3.9**/7**,ML1.9**/1**,Error ellipse: s-maj=49.4km s-min=18.3km az=136.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AFI	Afiamalu	3.30	29	Pn	Pn	12 40 12.2	-0.5
	8.1nm,0.3s,baz=189,slow=7.3,SNR=15						
AFI				Sn	Sn	12 40 52.5	-0.2
	35nm,0.3s,baz=176,slow=18,SNR=11						
URZ	Urewera	22.92	199	P	P	12 44 19.7	-5.6
	5.7nm,0.4s,baz=36,slow=5.1,SNR=11						
RPZ	Rata Peaks	29.87	203	P	P	12 45 28.6	-0.3
	7.8nm,0.5s,baz=32,slow=5.2,SNR=9.0						
WRA	Warramunga Arr	49.50	258	P	P	12 48 12.6	+0.3
	1.2nm,0.5s,baz=97,slow=7.4,SNR=44						
ASAR	Alice Springs	49.65	253	P	P	12 48 13.2	-0.3
	3.2nm,0.5s,baz=89,slow=8.7,SNR=98						
NVAR	Mina Array Bea	75.40	42	P	P	12 51 05.1	-0.3
	0.3nm,0.7s,baz=225,slow=8.9,SNR=3.3						
TXAR	Lajitas Array	81.43	56	P	P	12 51 40.1	+1.2
	0.1nm,0.6s,baz=240,slow=3.0,SNR=3.7						
PDAR	Pinedale Array	83.34	42	P	P	12 51 49.3	+0.7
	0.2nm,0.7s,baz=210,slow=7.0,SNR=2.2						

CSEM 08 12:41:31.8±0.4,3904N×4040E,h8km,MD3.1,Error ellipse: s-maj=9.3km s-min=2.9km az=22.0
ISK 08 12:41:31.5,3907N×4041E,h4km,MD3.1
ISCJB 08 12:41:33.1±0.7,3899N±003×4051E±005,h15km±5km, Error ellipse: s-maj=6.8km s-min=5.5km az=20.7
DDA 08 12:41:33.5,3901N×4047E,h11km±1km,Md2.9
ISC 08 12:41:32.4±0.7**,3902N**±003×**4047E**±005**,h5**km±6km**,n18,** σ1.18/27**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BINT	Bingol	0.15	173	iPG	Pg	12 41 36.3	+1.0
BINT				iSG	Sg	12 41 39.6	+2.3
PTK	Pertek	0.85	262	PG	Pg	12 41 47.1	-1.6
EZC	Erzincan	0.88	325	PN	Pn	12 41 53.1	+1.7
EZM	Erzurum	1.12	38	PN	Pn	12 41 52.7	-2.0
ERZM	Erzurum	1.12	38	iP	Pg	12 41 52.9	-1.1
ERZM				iS	Sg	12 42 07.8	-0.7
ERZM	Erzurum	1.12	38	iP	Pg	12 41 52.9	-1.1
ERZM				iS	Sg	12 42 07.8	-0.8
DIY	Diyarbakir	1.14	190	PN	Pn	12 41 54.6	-0.3
BTMT	Batman	1.15	136	PN	Pn	12 41 55.0	-0.1
ELZG	Elazig	1.27	246	iP	Pg	12 41 55.6	-1.2
ELZG				iS	Sg	12 42 13.2	0.0
KELT	Kelkit	1.46	321	iP	Pn	12 41 59.4	-0.1
KELT				iS	Sb	12 42 20.6	+1.6
GUMT	Gumushane	1.63	332	PN	Pn	12 42 01.4	-0.3
MARD	Mardin	1.72	172	iP	Pn	12 42 02.9	-0.1
MARD				iS	Sn	12 42 22.7	-2.6
MYA	Malataya	1.74	247	ePN	Pn	12 42 03.8	+0.6
MALT	Malatya	1.75	247	ePN	Pn	12 42 02.9	-0.4
TUTA	Tutak	1.86	77	iP	Pn	12 42 06.3	+1.4
TUTA				iS	Sn	12 42 32.8	+4.0
TUTA	Tutak	1.86	77	iP	Pn	12 42 06.3	+1.4
TUTA				iS	Sn	12 42 32.8	+4.0
URFA	Urfa	2.04	220	ePN	Pn	12 42 06.9	-0.5
GRSN	GIRESUNGRSN	2.54	319	iP	Pn	12 42 15.3	+1.1
GRSN				iS	Sn	12 42 52.6	+7.0

BJI 08 12:43:54.9,4984N×15586E,h102km,mB5.1,mb4.7
MOS 08 12:44:00.6±0.9,4990N×15503E,h108km,mb4.6/40,Error ellipse: s-maj=8.3km s-min=4.8km az=80.0
ISCJB 08 12:44:00.0±0.1,4984N±003×15507E±003,h103km, mb4.5/116,Error ellipse: s-maj=4.3km s-min=2.2km az=150.5
KRSC 08 12:44:00.9±1.4,4972N×15649E,h4km±5km,ML5.1
NEIC 08 12:44:01.8±0.1,4994N×15492E,mb4.6/73,Error ellipse: s-maj=4.7km s-min=2.8km az=159.0
IDC 08 12:44:02.3±0.5,4999N×15503E,h108km±4km,mb4.1/32, mb1 4.3/34,mb1mx4.3/35,mbtmp4.2/34,MS4.6/1, Ms1 4.6/1,ms1mx3.4/30,Error ellipse: s-maj=12.6km s-min=9.0km az=145.0
ISC 08 12:44:02.3±0.1**,4991N**±003×**15499E**±003**,h105**km**,** **h105**km±.8km**:pP-P,n494,**σ0.**86**/480**,mb4.5**/116**,100C-82D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ALID	Alaid	1.03	20	P	Pn	12 44 24.7	+1.4
SKR	Severo-Kuril's	1.06	43⇓	iPN	Pn	12 44 22.5	-1.2
SKR				eS	Sn	12 44 37.0	-2.9
SKR				pmax	pmax		
	comp=N,970nm,0.7s						
SKR				pmax	pmax		
	comp=Z,2μm,0.7s						
SKR				pmax	pmax		
	comp=E,450nm,0.5s						
SKR				smax			
	comp=N,5μm,0.5s						
SKR				smax			
	comp=E,1μm,0.4s						
SKR				smax			
	comp=N,12μm,4.0s						
SKR				smax			
	comp=E,35μm,2.0s						
MIPR	Malaya Ipel'ka	2.62	25	iP	Pn	12 44 44.3	+1.3
MIPR				eS	Sn	12 45 16.3	+1.9
GRL	Gorelyy	3.28	35	iP	Pn	12 44 53.2	+1.4
GRL				eS	Sn	12 45 31.1	+1.0
RUS	Russkaya	3.36	40	iP	Pn	12 44 52.0	-0.9
RUS				iS	Sn	12 45 28.8	-3.2
PET	Petropavlovsk	3.87	35	ePn	Pn	12 45 00.2	+0.5
PET				eSn	Sn	12 45 41.7	-2.4
PET	Petropavlovsk	3.87	35	ePN	Pn	12 45 00.5	+0.8
PET				eS	Sn	12 45 45.2	+1.0
PET				pmax	pmax		
	comp=Z,476nm,0.9s						
PET				smax			
	comp=E,679nm,0.8s						
PET				smax			
	comp=N,1μm,0.9s						
PET	Petropavlovsk	3.87	35	iP	Pn	12 45 00.2	+0.5
PET				iS	Sn	12 45 42.9	-1.3
SDLR	Sedlovina	4.16	34	iP	Pn	12 45 04.3	+0.7
SDLR				eS	Sn	12 45 50.3	-0.8
NLC	Nalytchevo	4.25	38	eS	Sn	12 45 49.3	-4.0
SPN	Mys Shipunski	4.48	43	iP	Pn	12 45 06.6	-1.3
SPN				eS	Sn	12 45 53.7	-5.2
MKZ	Mys Kozlova	6.23	39	eP	Pn	12 45 29.6	-2.0
MKZ				eS	Sn	12 46 33.7	-7.5
TUMR	Tumrok	6.23	28	eP	Pn	12 45 33.2	+1.6
KMNR	Kamenistaya	6.66	26	eP	Pn	12 45 39.8	+2.4
KUR	Kuril'sk	6.71	229	ePN	Pn	12 45 39.0	+0.8
KUR				iS	Sn	12 46 58.2	+5.1
KUR				pmax	pmax		
	comp=N,300nm,1.0s						
KUR				pmax	pmax		
	comp=E,280nm,1.0s						
KUR				pmax	pmax		
	comp=Z,940nm,1.0s						
KUR				smax			
	comp=N,220nm,0.8s						
KUR				smax			
	comp=E,170nm,1.0s						
KOZ	Kozyrevsk	6.83	24	eP	Pn	12 45 41.2	+1.5
KOZR	Kozyr	6.84	24	PN	Pn	12 45 41.2	+1.4
KPT	Kopyto	6.84	26	eP	Pn	12 45 41.0	+1.2
BZMR	Bezymyannaya	6.89	27	eP	Pn	12 45 42.2	+1.7
SRDR	Sredinnyy	7.02	22	eP	Pn	12 45 43.9	+1.6
KRSR	Krestovskiy	7.15	26	eP	Pn	12 45 45.3	+1.2
KLY	Klyuchi	7.26	26	eP	Pn	12 45 47.3	+1.7
BDR	Baidarnaya	7.64	27	eP	Pn	12 45 51.4	+0.7
SRKR	Sorokina	7.70	26	eP	Pn	12 45 51.9	+0.4
KBTR	Krutoberegovo	7.87	34	eP	Pn	12 45 52.7	-1.2
YUK	Yuzh-Kuril'sk	8.57	230⇓	iPN	Pn	12 46 04.5	+1.1
YUK				eS	Sn	12 47 37.9	-0.3
YUK				pmax	pmax		
	comp=Z,900nm,0.6s						
YUK				pmax	pmax		
	comp=E,2μm,0.7s						
YUK				pmax	pmax		
	comp=Z,2μm,0.7s						
YUK				smax			
	comp=N,200nm,0.5s						
YUK				smax			
	comp=E,200nm,0.5s						
YSS	Yuzh-Sakhalins	8.65	255	ePn	Pn	12 46 08.5	+4.0
YSS	Yuzh-Sakhalins	8.65	255	ePN	Pn	12 46 08.3	+3.8
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
JMP	Maruseppu	9.90	238	P	Pn	12 46 23.4	+2.0
JWK2	Keihoku	9.96	248	P	Pn	12 46 30.2	+7.9
MA2	Magadan	9.98	348	ePn	Pn	12 46 24.4	+1.9
MA2	Magadan	9.98	348c	iPN	Pn	12 46 24.7	+2.2
MA2				pmax	pmax		
	comp=Z,49nm,1.7s						
ASAJ	Asahikawa	10.25	240	P	Pn	12 46 29.5	+3.3
ASAJ	Asahikawa	10.25	240	PN	Pn	12 46 28.7	+2.5
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ	Asahikawa	10.25	240	P	Pn	12 46 28.7	+2.5
	comp=Z,9.3nm,0.3s,baz=72,slow=12,SNR=78						
JEM	Erimo	11.39	231	P	Pn	12 46 40.0	-1.6
JEM				eS	Sn	12 48 37.7	-9.2
ERM	Erimo	11.39	231	ePn	Pn	12 46 40.0	-1.7
	comp=Z,94nm,0.5s						
ERM				eSn	Sn	12 48 37.8	-9.1
ERM	Erimo	11.39	231	ePN	Pn	12 46 40.0	-1.7
ERM				pmax	pmax		
	comp=Z,94nm,0.5s						
JEW	Eniwo	11.71	238	P	Pn	12 46 46.6	+0.8
JOT	Ohata	12.94	234	P	Pn	12 46 57.3	-4.7
JOT				eS	Sn	12 49 11.0	-13
HABR	Khabarovsk	13.12	271⇓	ePN	Pn	12 47 08.6	+4.3
HABR				S	Sn	12 49 37.3	+8.8
HABR				pmax	pmax		
	comp=Z,52nm,1.3s						
KLR	Kul'dur	15.08	276	eP	Pn	12 47 29.9	+0.3
JYA	Atsumi	15.70	230	P	Pn	12 47 33.7	-3.8
JMM	Marumori	15.77	226	P	Pn	12 47 33.8	-4.4
JMM				eS	S	12 50 18.2	-22
JSD	Sado	16.86	232	P	Pn	12 47 53.6	+1.9
MDJ	Mudanjiang	17.99	263	P	Pn	12 48 03.9	-1.4
MDJ				AMB	AMB		
	comp=Z,7.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,439nm,7.2s						
MDJ	Mudanjiang	17.99	263	eP	Pn	12 48 02.8	-2.5
	comp=Z,29nm,1.0s						
MAJO	Matsushiro	18.05	229	eP	P	12 48 05.2	0.0
	comp=Z,44nm,0.5s						
MAJO	Matsushiro	18.05	229	eP	P	12 48 05.2	0.0
MAJO				pmax	pmax		
	comp=Z,44nm,0.5s						
MAT	Matsushiro	18.05	229	P	P	12 48 04.4	-0.8
MAT				eS	S	12 51 44.0	+17
MAT	Matsushiro	18.05	229	P	P	12 48 05.1	-0.1
MJAR	Matsushiro Arr	18.05	229	P	P	12 48 04.9	-0.3
	comp=Z,1.5nm,0.3s,baz=24,slow=12,SNR=23						
JRY	Ryogami san	18.15	226	P	P	12 48 06.8	+0.5
YAK	Yakutsk	18.50	321	eP	P	12 48 09.9	+0.1
	comp=Z,25nm,0.7s						
YAK	Yakutsk	18.50	321⇑	eP	P	12 48 10.9	+1.1
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
JOD2	Odawara 2	18.68	224	P	P	12 48 11.7	-0.4
BILL	Bilibino	19.03	13	eP	P	12 48 14.0	-1.6
	comp=Z,8.3nm,0.5s						
BILL	Bilibino	19.03	13⇑	iP	P	12 48 15.1	-0.5
BILL				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CLNS	Chul'man	19.13	303	eP	P	12 48 19.5	+2.7
CLNS				pmax	pmax		
	comp=Z,37nm,1.0s						
CLNS				pmax	pmax		
	comp=N,18nm,1.2s						
CLNS				pmax	pmax		
	comp=E,23nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,1μm,16.0s						
CLNS				MLR	MLR		
	comp=N,300nm,14.0s						
CLNS				MLR	MLR		
	comp=E,700nm,14.0s						
NRGR	Nerungri	19.20	302	eP	P	12 48 21.9	+4.4
JWT	Wachi	20.44	232	P	P	12 48 30.9	-0.3
JIE	Ise	20.51	228	P	P	12 48 32.7	+0.8
CN2	Changchun	21.02	264	eP	P	12 48 34.8	-2.5
JWZ	Kozaga	21.69	228	P	P	12 48 46.8	+2.3
GAMB	Gambell	22.56	40	eP	P	12 48 52.2	-1.2
HIA	Hailar	22.73	282	eP	P	12 48 54.5	-0.9
	comp=E,4.4nm,0.4s,mb4.1						
HIA	Hailar	22.73	282⇓	iP	P	12 48 54.5	-0.9
KSRS	Korea Array	23.05	248	P	P	12 48 59.5	+1.1
	comp=E,5.7nm,0.6s,mb4.1,baz=41,slow=10.0,SNR=21						
JNU	Nakatsue	24.48	236	P	P	12 49 12.3	+0.9
	comp=E,35nm,0.7s,mb4.8,baz=20,slow=10,SNR=18						
TNA	Tin City	24.73	37	eP	P	12 49 14.1	+0.7
	comp=E,39nm,0.9s,mb4.8						
TIXI	Tiksi	24.84	341	eP	P	12 49 13.2	-1.1
	comp=E,35nm,1.0s,mb4.7						
TIXI				e		12 49 40.1	
TIXI	Tiksi	24.84	341⇑	eP	P	12 49 13.2	-1.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb3.9						
BOD	Bodaibo	25.09	304	eP	P	12 49 16.2	-0.5
BOD				e	pP	12 49 34.6	-5.0
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.8						
TTA	Tatalina	29.26	45	eP	P	12 49 52.9	-1.0
	comp=Z,9.0nm,0.8s,mb4.5						
TTA				e	pP	12 50 16.0	-1.2
TTA	Tatalina	29.26	45	eP	P	12 49 52.9	-1.1
TTA				e	pP	12 50 16.0	-1.2
TTA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
IMA2	Indian Mountai	30.53	39	eP	P	12 50 04.8	-0.3
ULN	Ulaanbaatar	31.16	285	eP	P	12 50 10.4	-0.5
	comp=Z,2.8nm,1.1s,mb3.9						
ULN	Ulaanbaatar	31.16	285	eP	P	12 50 10.4	-0.5
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
KDAK	Kodiak Island	31.20	55	P	P	12 50 09.6	-1.6
KDAK	Kodiak Island	31.20	55	P	P	12 50 09.6	-1.5
	comp=Z,15nm,0.8s,mb4.8,baz=293,slow=2.0,SNR=4.6						
HHC	Hu-ho-hao-te	31.43	270	eP	P	12 50 11.9	-1.4
HHC				S	S	12 55 16.0	+2.8
HHC				PCS	PcS	12 56 48.9	+0.4
HHC				AMB	AMB		
	comp=Z,16nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,482nm,7.9s						
HHC				LR	LR		
	comp=N,346nm,16.9s						
HHC				LR	LR		
	comp=E,396nm,14.9s						
HHC				LR	LR		
	comp=Z,1μm,19.0s						
SONM	Songino Array	31.58	285	P	P	12 50 14.4	-0.2
SONM						12 53 04.6	
SONM	Songino Array	31.58	285	P	P	12 50 14.4	-0.2
	comp=Z,0.6nm,0.3s,mb3.8,baz=80,slow=7.9,SNR=9.3						
SONM				PcP	PcP	12 53 04.6	+0.2
	comp=Z,1.7nm,0.5s,baz=107,slow=1.9,SNR=9.7						
SONM				ScP	ScP	12 56 38.3	+0.5
	comp=Z,1.1nm,0.8s,baz=52,slow=3.1,SNR=5.7						
TLY	Talaya	31.96	293⇑	eP	P	12 50 18.8	+1.0
TLY				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
NJ2	Nanjing	32.19	250	eP	P	12 50 21.4	+1.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
MCK	McKinley	32.46	43	eP	P	12 50 21.3	-0.8
	comp=Z,13nm,0.9s,mb4.7						
MCK	McKinley	32.46	43	eP	P	12 50 21.3	-0.8
MCK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
PMR	Palmer	32.50	47	eP	P	12 50 29.1	+6.7
	comp=Z,1.5nm,0.5s,mb4.0						
PMR	Palmer	32.50	47	eP	P	12 50 29.1	+6.7
PMR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
ZAK	Zakamensk	32.59	291	eP	P	12 50 23.0	-0.4
ZAK				e	pP	12 50 51.2	+4.4
ZAK				e		12 53 07.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
SML	Sawmill	32.86	47	eP	P	12 50 24.6	-1.0
COLA	College	32.91	41	eP	P	12 50 25.7	-0.3
	comp=Z,108nm,1.0s,mb5.6						
COLA				epP	pP	12 50 49.6	+0.2
COLA	College	32.91	41⇓	eP	P	12 50 26.2	+0.2
COLA				e*PP	pP	12 50 50.1	+0.7
EGAK	Eagle	35.77	41	eP	P	12 50 49.3	-1.4
	comp=Z,20nm,1.1s,mb5.0						
EGAK				epP	pP	12 51 12.3	-2.0
DAWY	Dawson	36.63	42	eP	P	12 50 57.9	0.0
INK	Inuvik	38.33	35	eP	P	12 51 12.1	-0.2
	comp=Z,150nm,0.6s						
INK				epP	pP	12 51 36.0	-0.1
INK	Inuvik	38.33	35	P	P	12 51 12.4	+0.2
INK				*PP	pP	12 51 35.8	-0.3
INK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
INK	Inuvik	38.33	35	P	P	12 51 12.4	+0.2
	comp=Z,3.8nm,0.5s,mb4.5,baz=259,slow=5.1,SNR=3.8						
INK				pP	pP	12 51 35.8	-0.3
	comp=Z,4.3nm,0.6s,baz=304,slow=4.6,SNR=3.4						
LZH	Lanzhou	39.11	269	eP	P	12 51 20.0	+0.8
LZH				AP	pP	12 51 43.5	+0.4
LZH				XP	sP	12 51 54.8	-0.3
LZH				PP	PP	12 52 55.9	+5.2
LZH				AMB	AMB		
	comp=Z,23nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,175nm,5.8s						
LZH				LR	LR		
	comp=N,365nm,13.7s						
LZH				LR	LR		
	comp=Z,572nm,17.8s						
GTA	Gaotai	39.78	276	eP	P	12 51 24.6	-0.1
GTA				AP	pP	12 51 49.8	+1.1
GTA				XP	sP	12 52 03.4	+2.7
GTA				PCP	PcP	12 53 29.6	+0.8
GTA				SCP	ScP	12 57 06.7	-1.1
GTA				S	S	12 57 20.6	-0.3
GTA				XS	sS	12 58 05.7	+3.3
GTA				SS	SS	13 00 17.8	-2.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,474nm,10.3s						
GTA				LR	LR		
	comp=N,599nm,19.5s						
GTA				LR	LR		
	comp=E,242nm,18.7s						
GTA				LR	LR		
	comp=Z,662nm,21.8s						
NVS	Novosibirsk	42.32	305⇑	iP	P	12 51 45.0	-0.3
NVS				i	pP	12 52 12.1	+2.6
NVS				e		12 53 34.8	
NVS				pmax	pmax		
	comp=Z,18nm,1.8s,mb4.5						
NVS				pmax	pmax		
	comp=N,10.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.6s						
CD2	Chengdu	42.44	263	eP	P	12 51 47.4	+0.8
CD2				AP	pP	12 52 10.2	-0.6
CD2				XP	sP	12 52 21.7	-1.0
CD2				PP	PP	12 53 29.9	+3.1
CD2				S	S	12 58 01.3	+0.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
DLBC	Dease Lake	42.53	49	eP	P	12 51 48.0	+1.1
WMQ	Urumqi	45.01	289⇓	iP	P	12 52 07.1	+0.2
WMQ				AP	pP	12 52 31.6	+0.2
WMQ				XP	sP	12 52 43.6	+0.4

WMQ PCP PcP 12 53 47.1 +1.0
WMQ PP PP 12 53 54.7 +0.9
WMQ S **S** **12 58 37.5 +0.1**
WMQ XS sS 12 59 19.1 -0.4
WMQ AMB AMB
comp=Z,4.0nm,0.6s,mb4.3
WMQ AMB AMB
comp=Z,373nm,5.0s
WMQ LR LR
comp=N,870nm,24.6s
WMQ LR LR
comp=E,710nm,23.3s
WMQ LR LR
comp=Z,905nm,24.6s
MK31 Makanchi Array 46.65 296 *i* P **P** **12 52 18.9 -0.9**
MK31 pmax pmax
comp=Z,1.0nm,0.2s,mb4.2
MKAR Makanchi Array 46.65 296⇑ *e*P **P** **12 52 19.0 -0.8**
MKAR Makanchi Array 46.65 296 P **P** **12 52 19.0 -0.8**
comp=Z,2.6nm,0.7s,mb4.1,baz=61,slow=7.7,SNR=31
MKAR pP pP 12 52 46.6 +2.2
comp=Z,3.6nm,0.7s,baz=48,slow=7.2,SNR=9.4
MKAR PcP PcP 12 53 51.2 -0.6
comp=Z,0.7nm,0.3s,baz=64,slow=5.5,SNR=3.7
KURK Kurchatov 46.70 302 *e*P **P** **12 52 19.3 -0.8**
comp=Z,19nm,0.8s,mb4.9
KURK *e*pP pP 12 52 49.2 +4.4
KURK Kurchatov 46.70 302 *e*P **P** **12 52 19.3 -0.9**
KURK *e**PP pP 12 52 49.2 +4.4
KURK pmax pmax
comp=Z,19nm,0.8s,mb4.9
KMI Kunming 47.08 258 P **P** **12 52 23.7 +0.3**
KMI AMB AMB
comp=Z,10.0nm,1.1s,mb4.5
YKW3 Yellowknife Ar 47.62 39 *e*P **P** **12 52 27.3 +0.2**
YKW3 *e*pP pP 12 52 51.5 -0.3
YKA Yellowknife Ar 47.66 39 P **P** **12 52 27.3 -0.1**
YKA pP pP 12 52 51.3 -0.8
YKA Yellowknife Ar 47.66 39 P **P** **12 52 27.3 -0.1**
comp=Z,3.7nm,0.6s,mb4.4,baz=298,slow=7.4,SNR=47
YKA pP pP 12 52 51.3 -0.8
comp=Z,4.8nm,0.7s,baz=300,slow=7.7,SNR=15
BRVK Borovoye 49.89 308 *e*P **P** **12 52 43.5 -1.1**
comp=Z,5.4nm,0.6s,mb4.7
BRVK *e*pP pP 12 53 11.3 +1.9
BRVK Borovoye 49.89 308 *e*P **P** **12 52 43.5 -1.1**
BRVK *e**PP pP 12 53 11.3 +1.8
BRVK pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
NLWA Neilton Lookou 51.14 60 ⇓P pP 12 53 19.3 +0.2
baz=51
A05A Maple Falls 51.21 57 ⇓P pP 12 53 19.1 -0.5
baz=51
LSA Lhasa 51.38 272 *e*P **P** **12 52 57.0 +0.9**
comp=Z,2.2nm,0.4s,mb4.5
LSA Lhasa 51.38 272 *e*P **P** **12 52 57.0 +0.9**
LSA pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
C04A Brinnon 51.46 59 ⇓P pP 12 53 20.7 -0.8
baz=51
A06A Chilliwack 51.48 57 ⇑P pP 12 53 20.8 -0.8
baz=51
B05A Bryant 51.62 58 ⇑P pP 12 53 21.9 -0.8
baz=51
B06A Marblemount 51.81 57 ⇓P pP 12 53 23.6 -0.5
baz=52
A07A Ashnola River, 52.10 56 ⇓P **P** **12 52 59.2 -2.0**
baz=52
C05A Tolt Reservoir 52.18 58 ⇑P **P** **12 52 57.6 -4.2**
baz=52
C06A Tall Timber Ra 52.48 58 ⇓P pP 12 53 28.5 -0.6
baz=52
B07A Winthrop 52.58 57 ⇑P **P** **12 53 02.4 -2.3**
baz=52
A08A Turner Farm, O 52.75 56 ⇑P **P** **12 53 05.2 -0.8**
baz=53,SNR=5.2
F04A Amboy 52.81 60 ⇑P **P** **12 53 05.4 -1.1**
baz=53
D06A Cle Elum 52.93 58 ⇑P **P** **12 53 06.3 -1.1**
baz=53
B08A Colville Reser 53.07 56 ⇓P **P** **12 53 06.9 -1.4**
baz=53,SNR=7.6
C07A Waterville 53.07 57 ⇓P **P** **12 53 07.3 -1.1**
baz=53
A09A Danville 53.10 55 ⇑P **P** **12 53 08.1 -0.5**
baz=53,SNR=6.3
EDM Edmonton 53.25 49 *e*P **P** **12 53 09.1 -0.5**
EDM *e*pP pP 12 53 34.4 -0.4
ARU Arti 53.55 317 *e*P **P** **12 53 10.8 -1.0**
comp=Z,13nm,0.4s,mb5.3
ARU *e*pP pP 12 53 38.5 +1.7
ARU Arti 53.55 317⇑ *e*P **P** **12 53 10.6 -1.1**
ARU pmax pmax
comp=Z,20nm,1.5s,mb4.9
C08A Higginbotham F 53.56 57 ⇓P **P** **12 53 10.9 -1.1**
baz=53
AAK Ala-Archa 53.58 295 *e*P **P** **12 53 10.5 -1.7**
comp=Z,2.7nm,0.9s,mb4.3
AAK *e*pP pP 12 53 37.3 0.0
AAK Ala-Archa 53.58 295 *e*P **P** **12 53 10.5 -1.7**
AAK *e**PP pP 12 53 37.3 -0.1
AAK pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
A10A Northport 53.64 55 ⇑P **P** **12 53 11.7 -0.8**
baz=53
B09A Rice 53.66 56 ⇓P pP 12 53 36.9 -1.0
baz=54
H04A Detroit Lake 53.69 61 ⇓P **P** **12 53 11.6 -1.3**
baz=54
J02A Umpqua 53.69 64 ⇓P **P** **12 53 12.6 -0.4**
baz=54
G05A Wamic 53.84 60 ⇑P pP 12 53 39.5 +0.3
baz=54
C09A Chrisman Ranch 53.97 56 ⇑P pP 12 53 40.0 -0.1
baz=54
J03A Ideyld Park 54.04 63 ⇑P pP 12 53 40.7 0.0
baz=54
D08A Wollman Farm, 54.07 57 ⇑P **P** **12 53 14.9 -0.8**
baz=54
CHTO Chiang Mai 54.08 256 *e*P **P** **12 53 16.9 +0.8**
comp=Z,8.4nm,0.6s,mb5.0
CHTO Chiang Mai 54.08 256 *e*P **P** **12 53 16.9 +0.8**
CHTO pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
I04A Tendick Farm, 54.10 62 ⇑P pP 12 53 41.4 +0.3
baz=54
F07A Phinny Hill Vi 54.22 59 ⇑P **P** **12 53 16.3 -0.5**
baz=54
H05A Madras 54.25 61 ⇓P **P** **12 53 16.9 -0.1**
baz=54
A11A Hall Mountain, 54.29 54 ⇓P **P** **12 53 16.7 -0.5**
baz=54
M01C Crescent City 54.30 65 ⇓P **P** **12 53 16.8 -0.7**
baz=54
E08A Dider Farm, El 54.34 58 ⇑P **P** **12 53 15.9 -1.7**
baz=54
D09A Jones Farm, Ri 54.40 57 ⇑P pP 12 53 42.5 -0.7
baz=54
L02A Cave Junction 54.42 65 ⇓P pP 12 53 43.5 0.0
baz=54
I05A Bend 54.53 61 ⇑P pP 12 53 43.9 -0.4
baz=54
B11A Sandpoint 54.60 55 ⇑P **P** **12 53 18.4 -1.1**
baz=54
J04A Umpqua Nationa 54.61 63 ⇑P **P** **12 53 18.6 -1.0**
baz=54
H06A Lindquist Farm 54.70 60 ⇓P **P** **12 53 19.2 -1.1**
baz=54
G07A Ruggs Ranch, H 54.75 60 ⇓P **P** **12 53 19.5 -1.1**
baz=55
E09A Wood Farm, Sta 54.82 58 ⇓P **P** **12 53 20.6 -0.5**
baz=55
F08A Pendleton 54.92 59 ⇓P pP 12 53 46.3 -0.8
baz=55
D10A Wagner Farm, O 54.96 57 ⇓P **P** **12 53 21.0 -1.1**
baz=55
J05A Fort Rock 55.09 62 P **P** **12 53 24.4 +1.4**
baz=55,SNR=10.0
G08A Pilot Rock 55.13 59 ⇓P **P** **12 53 22.9 -0.5**
baz=55
TAPN Taplejung 55.20 272 *e*P **P** **12 53 24.3 +0.2**
YBH Yreka Blue Hor 55.20 65 *e*P **P** **12 53 24.7 +0.8**
comp=Z,1.8nm,0.6s,mb4.3
YBH *e*pP pP 12 53 49.1 -0.1
YBH Yreka Blue Hor 55.20 65 *e*P **P** **12 53 24.7 +0.8**
YBH *e**PP pP 12 53 49.1 -0.1
YBH pmax pmax
comp=Z,2.0nm,0.6s
YBH Yreka Blue Hor 55.20 65 ⇓P **P** **12 53 23.2 -0.7**
baz=55
ARCES ARCESS Array B 55.28 341 P **P** **12 53 22.8 -1.2**
comp=Z,1.4nm,0.7s,mb4.1,baz=35,slow=7.9,SNR=9.6
ARCES PcP PcP 12 54 22.1 -1.3
comp=Z,3.1nm,0.9s,baz=34,slow=4.5,SNR=3.7
M02C Callahan 55.33 65⇑P **P** **12 53 25.4 +0.6**
baz=55
L04A Klamath Falls 55.40 64 ⇑P pP 12 53 50.9 +0.2
baz=55
E10A Myers Farm, Un 55.40 57 ⇑P **P** **12 53 24.5 -0.8**
baz=55
F09A S2 Ranch, Elgi 55.45 58 ⇓P pP 12 53 50.4 -0.5
baz=55
WALA Waterton Lakes 55.50 53 *e*P **P** **12 53 25.6 -0.3**
comp=Z,3.3nm,0.6s,mb4.5
WALA *e*pP pP 12 53 49.7 -1.6
I07A Izee 55.57 61⇑P **P** **12 53 25.8 -0.7**
baz=55
K05A Summer Lake 55.63 63 ⇓P **P** **12 53 27.8 +0.8**
baz=56,SNR=5.6
B13A Whitefish 55.64 54 ⇓P **P** **12 53 26.7 -0.2**
baz=55,SNR=6.9
F10A Beach Ranch, E 55.66 58 ⇓P pP 12 53 53.2 +0.7
baz=56
M04C Macdoel 55.68 64 ⇑P **P** **12 53 27.9 +0.5**
baz=56
J06A Christmas Vall 55.73 62 P **P** **12 53 28.4 +0.8**
baz=56,SNR=8.8
ODAN Odare 55.74 272 *e*P **P** **12 53 27.9 -0.1**
comp=Z,4.1nm,0.4s,mb4.8
H08A Prairie City 55.77 60 ⇓P **P** **12 53 28.1 +0.2**
baz=56
G09A Cove 55.79 59 ⇓P pP 12 53 52.3 -1.1
baz=56
BSMT Bassoo Peak 55.80 55 *e*P **P** **12 53 28.4 +0.4**
BSMT *e*pP pP 12 53 53.2 -0.2
M03C McCloud 55.83 65⇑P **P** **12 53 28.7 +0.2**
baz=56
K06A Valley Falls 55.95 62 P **P** **12 53 30.4 +1.1**
baz=56,SNR=8.1
JIRN Jiri 55.96 274 *e*P **P** **12 53 29.6 0.0**
comp=Z,6.8nm,0.4s,mb5.0
E11A Bogner Ranch, 55.97 57⇑P **P** **12 53 28.6 -0.8**
baz=56
C13A Hot Springs 56.02 55 ⇓P **P** **12 53 30.1 +0.4**
baz=56
WDC Whiskeytown Da 56.02 66 ⇓P **P** **12 53 29.8 -0.1**
baz=56
L05A Lakeview 56.09 63⇑P **P** **12 53 31.4 +1.1**
baz=56,SNR=6.1
J07A Hines 56.13 61 ⇓P **P** **12 53 29.8 -0.7**
baz=56
O02C Red Bluff 56.13 66⇑P **P** **12 53 31.2 +0.6**
baz=56
I08A Drewsey 56.21 60 P **P** **12 53 32.0 +1.0**
baz=56,SNR=8.3
P01C Double 8 Ranch 56.26 67 ⇓P **P** **12 53 31.5 0.0**
baz=56
F11A Grangeville 56.29 57 ⇓P **P** **12 53 31.5 -0.2**
baz=56
BMO Blue Mountains 56.32 59 *e*P **P** **12 53 31.6 -0.3**
comp=Z,7.8nm,1.1s,mb4.7
BMO *e*pP pP 12 53 56.4 -0.9
M05C Lookout 56.35 64⇑P **P** **12 53 32.3 +0.2**
baz=56
C14A Swan Lake 56.39 54⇑P **P** **12 53 32.1 -0.2**
baz=56
D13A Huson 56.44 55⇑P **P** **12 53 32.2 -0.5**
baz=56
KKN Kakani 56.46 274 *e*P **P** **12 53 32.5 -0.6**
comp=Z,9.8nm,0.4s,mb5.2
MOD Modoc 56.49 63 *e*P **P** **12 53 33.1 0.0**
comp=Z,14nm,0.8s,mb5.0
MOD *e*pP pP 12 53 58.9 +0.3
MOD Modoc 56.49 63 ⇓P **P** **12 53 33.6 +0.5**
baz=56,SNR=9.0
HATC Hat Creek Radi 56.51 65⇑P **P** **12 53 33.5 +0.2**
baz=56
GASB Alder Springs 56.51 67 ⇓P **P** **12 53 32.6 -0.7**
baz=56
K07A Rock Creek Ran 56.59 62 ⇓P **P** **12 53 34.7 +0.8**
baz=56,SNR=8.6
J08A Circle Bar Ran 56.61 61⇑P **P** **12 53 34.1 +0.2**
baz=56,SNR=6.1
I09A Lost Marbles R 56.63 60⇑P **P** **12 53 33.9 -0.1**
baz=56
GKN Gorkha 56.73 275 *e*P **P** **12 53 34.8 -0.2**
comp=Z,17nm,0.4s,mb5.5
H10A Noah's Angus R 56.79 59 ⇓P **P** **12 53 35.1 -0.1**
baz=57,SNR=6.4
F12A Elk City 56.87 57 P **P** **12 53 36.3 +0.6**
baz=57,SNR=5.1
MSO Missoula 56.89 55 *e*P **P** **12 53 36.0 +0.2**
comp=Z,3.7nm,1.0s,mb4.4
MSO *e*pP pP 12 54 00.9 -0.3
D14A Greenough 56.95 55 P **P** **12 53 36.5 +0.2**
baz=57,SNR=6.7
L07A Adell 56.97 62⇑P **P** **12 53 37.6 +1.1**
baz=57,SNR=6.5
E13A Victor 57.00 56⇑P **P** **12 53 36.2 -0.5**
baz=57
K08A Mann Creek Ran 57.00 61⇑P **P** **12 53 37.2 +0.5**
baz=57,SNR=7.4
J09A Fry Pan Ranch, 57.02 60 P **P** **12 53 37.9 +1.1**
baz=57,SNR=6.0
O04C Chester 57.05 65⇑P **P** **12 53 36.7 -0.4**
baz=57,SNR=6.1
ELFS Eagle Lake Fie 57.06 64 ⇓P pP 12 54 03.3 +0.7
baz=57
I10A Payette 57.08 59 ⇓P **P** **12 53 37.4 +0.2**
baz=57
WVOR Wild Horse Val 57.11 62 *e*P **P** **12 53 37.2 -0.2**
comp=Z,6.2nm,0.9s,mb4.6
WVOR *e*pP pP 12 54 02.5 -0.4
WVOR Wild Horse Val 57.11 62 *e*P **P** **12 53 37.2 -0.2**
WVOR *e**PP pP 12 54 02.5 -0.4
WVOR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
H11A Donnelly 57.12 58 P **P** **12 53 37.6 +0.1**
baz=57,SNR=12
MNRC McLaughlin Nat 57.17 67 ⇓P pP 12 54 03.5 +0.1
baz=57
CHMT Chamberlain Mo 57.20 55 *e*P **P** **12 53 37.9 -0.1**
CHMT *e*pP pP 12 54 03.5 +0.1
ORV Oroville 57.29 66 ⇓P **P** **12 53 37.9 -1.0**
baz=57,SNR=5.8
F13A Darby 57.34 56⇑P **P** **12 53 38.9 -0.2**
baz=57
E14A Clinton 57.39 55⇑P **P** **12 53 39.2 -0.2**
baz=57,SNR=6.2
L08A Fields 57.43 62⇑P **P** **12 53 39.9 +0.2**
baz=57,SNR=7.1
K09A Rome 57.45 61⇑P **P** **12 53 39.5 -0.4**
baz=57,SNR=7.0
M07A Soldier Meadow 57.47 63 P **P** **12 53 40.9 +0.9**
baz=57,SNR=11
D15A Lincoln 57.50 54 ⇓P **P** **12 53 39.3 -0.8**
baz=57
N06A Buffalo Meadow 57.50 64 ⇓P **P** **12 53 40.5 +0.2**
baz=57,SNR=5.9
J10A Berg Farm, Mel 57.52 60 ⇓P pP 12 54 05.8 0.0
baz=57
AKTK Aktyubinsk 57.56 311 P **P** **12 53 39.3 -1.2**
AKTO Aktyubinsk 57.56 311 P **P** **12 53 39.3 -1.2**
comp=Z,1.4nm,0.5s,mb4.2,baz=9.3,slow=8.1,SNR=7.9
E15A Deer Lodge 57.83 55⇑P **P** **12 53 42.3 -0.2**
baz=58,SNR=6.3
F14A Wisdom 57.84 56 ⇓P pP 12 54 08.9 +0.8
baz=58
H12A Diamond D Ranc 57.85 58⇑P **P** **12 53 41.3 -1.4**
baz=58
O06A Flanigan 57.88 64 ⇓P **P** **12 53 42.6 -0.4**
baz=58
K10A MacKenzie Ranc 57.88 60⇑P **P** **12 53 42.8 -0.1**
baz=58,SNR=8.9
M08A Happy Creek Ra 57.89 62⇑P **P** **12 53 42.9 -0.1**
baz=58
L09A Wilkinson Ranc 57.92 61⇑P **P** **12 53 43.1 -0.1**
baz=58
FCC Fort Churchill 57.95 35 *e*P **P** **12 53 42.4 -0.7**
comp=Z,13nm,1.1s,mb4.9
FCC *e*pP pP 12 54 07.7 -0.8
FCC Fort Churchill 57.95 35 *e*P **P** **12 53 42.4 -0.7**
FCC *e**PP pP 12 54 07.7 -0.9
FCC pmax pmax
comp=Z,13nm,1.1s,mb4.9
N07B Gerlach 57.98 63⇑P pP 12 54 10.0 +0.9
baz=58
MFID Camas Ranch 58.05 59 ⇓P **P** **12 53 43.3 -0.8**
baz=58,SNR=5.9
H13A Challis 58.17 57 P **P** **12 53 45.1 +0.2**
baz=58,SNR=6.8
LAVA Lava Cap Winer 58.26 66⇑P **P** **12 53 44.7 -1.0**
baz=58
EGMT Eagleton 58.29 52 ⇓P **P** **12 53 45.1 -0.5**
baz=58
F15A Butte 58.29 55 P **P** **12 53 46.2 +0.5**
baz=58,SNR=5.7
LRM Limekiln Ridge 58.33 55 *e*P **P** **12 53 46.0 +0.1**
LRM *e*pP pP 12 54 11.5 0.0
K11A Parker Ranch, 58.36 60⇑P **P** **12 53 46.1 -0.1**
baz=58,SNR=5.5
M09A Marrel Ranch, 58.43 62 ⇓P **P** **12 53 46.4 -0.4**
baz=58
O07A Toulon 58.44 64 P **P** **12 53 47.7 +0.9**
baz=58,SNR=6.1
N08A GE Springer Mi 58.46 63⇑P **P** **12 53 46.6 -0.4**
baz=58,SNR=5.2
WCN Washoe City 58.48 65⇑P pP 12 54 12.4 -0.3
baz=58
L10A Juniper Basin 58.56 61⇑P **P** **12 53 48.1 +0.5**
baz=58
J12A Stokes Ranch, 58.56 59 P **P** **12 53 48.3 +0.7**
baz=58,SNR=6.9
I13A Wildhorse Cree 58.67 58 P **P** **12 53 49.0 +0.7**
baz=58,SNR=9.2
G15A Dillon 58.73 56⇑P **P** **12 53 49.2 +0.4**
baz=58
HLID Hailey 58.74 58 *e*P **P** **12 53 48.9 +0.1**
comp=Z,12nm,1.3s,mb4.8
HLID *e*pP pP 12 54 14.7 +0.3
HLID Hailey 58.74 58 P **P** **12 53 50.0 +1.2**
baz=58,SNR=5.4
N09A Rock Creek Ran 58.77 62 P **P** **12 53 49.9 +0.8**
baz=59,SNR=6.4
BOZ Bozeman (W) 58.87 55 *e*P **P** **12 53 50.0 +0.2**
comp=Z,7.3nm,0.8s,mb4.8
BOZ *e*pP pP 12 54 15.4 +0.1
BOZ Bozeman (W) 58.87 55 *e*P **P** **12 53 50.0 +0.3**
BOZ *e**PP pP 12 54 15.4 +0.1
BOZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BOZ Bozeman (W) 58.87 55 ⇓P **P** **12 53 50.2 +0.4**
baz=59
M10A I.L. Ranch, Tu 58.89 61 ⇓P **P** **12 53 50.7 +0.8**
baz=59
CMB Columbia Colle 58.95 67 *e*P **P** **12 53 50.3 -0.1**
comp=Z,4.0nm,1.0s,mb4.4
CMB Columbia Colle 58.95 67 *e*P **P** **12 53 50.3 0.0**
CMB pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
CMB Columbia Colle 58.95 67⇑P **P** **12 53 50.3 0.0**
baz=59
J13A Cove Ranch, Pi 58.98 58 ⇓P **P** **12 53 51.6 +1.1**
baz=59,SNR=8.2
K12A Draper Farm, C 59.08 59 ⇓P **P** **12 53 51.0 -0.1**
baz=59,SNR=7.5
PACP Pacheco Peak 59.09 68 ⇓P **P** **12 53 50.7 -0.6**
baz=59
R06C Coleville 59.18 66⇑P **P** **12 53 51.9 0.0**
baz=59
P08A Dixie Valley 59.20 64 ⇓P **P** **12 53 53.0 +0.9**
baz=59
BMN Battle Mountai 59.21 63 *e*P **P** **12 53 52.2 0.0**
comp=Z,7.1nm,1.1s,mb4.6
BMN *e*pP pP 12 54 17.1 -0.7
BMN Battle Mountai 59.21 63 *e*P **P** **12 53 52.2 0.0**
BMN *e**PP pP 12 54 17.1 -0.7
BMN pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
HNR Honiara 59.25 174 LR LR 13 17 25.4
comp=Z,455nm,20.2s,baz=0.5,slow=34
L12A House Creek Ra 59.34 60 ⇓P **P** **12 53 53.5 +0.5**
baz=59
S06C San Francisco 59.36 66 ⇓P **P** **12 53 52.9 -0.3**
baz=59
M11A Holland Ranch, 59.37 61⇑P **P** **12 53 54.0 +0.8**
baz=59
O09A Fish Creek Ran 59.41 63 ⇓P **P** **12 53 54.3 +0.9**
baz=59
S05C Merced 59.43 67⇑P pP 12 54 19.6 +0.3
baz=59
QLMT Earthquake Lak 59.52 55 *e*P **P** **12 53 54.2 0.0**
QLMT *e*pP pP 12 54 20.4 +0.6
K13A Stover Farm, H 59.52 59 ⇓P **P** **12 53 55.0 +0.8**
baz=59
R07C Lee Vining 59.70 66⇑P **P** **12 53 56.1 +0.6**
baz=60
O10A Cortez Mining, 59.72 62 ⇓P **P** **12 53 56.5 +0.8**
baz=60
GCMT Greycliff 59.81 54 *e*P **P** **12 53 56.8 +0.6**
GCMT *e*pP pP 12 54 21.5 -0.3
Q08A Gabbs 59.84 64 P **P** **12 53 57.0 +0.5**
baz=60,SNR=9.2
M12A Wells 59.87 60 ⇓P **P** **12 53 57.5 +0.8**
baz=60
YMR Madison River 59.87 55 *e*P **P** **12 53 57.0 +0.4**
comp=Z,10nm,1.0s,mb4.8
YMR *e*pP pP 12 54 22.8 +0.6
NVAR Mina Array Bea 59.91 65 P **P** **12 53 57.4 +0.4**
NVAR pP pP 12 54 22.4 -0.2
NVAR Mina Array Bea 59.91 65 P **P** **12 53 57.4 +0.4**
comp=Z,4.1nm,0.7s,mb4.5,baz=306,slow=5.8,SNR=36
NVAR pP pP 12 54 22.4 -0.2
comp=Z,3.9nm,0.8s,baz=302,slow=5.7,SNR=9.2
L13A Double Diamond 59.97 59⇑P **P** **12 53 58.4 +1.1**
baz=60
YNR Norris Junctio 59.99 55 P **P** **12 53 58.6 +1.2**
YNR *e*pP pP 12 54 24.1 +1.0
T06C Millerton Lake 60.03 67⇑P **P** **12 53 56.6 -1.2**
baz=60
YFT Old Faithful 60.09 55 *e*P **P** **12 53 59.9 +1.8**
YFT *e*pP pP 12 54 25.5 +1.8
K14A Jones Ranch, D 60.09 58⇑P **P** **12 53 58.3 +0.2**
baz=60
N12A Clover Valley, 60.18 61⇑P **P** **12 53 59.3 +0.5**
baz=60
LKWY Lake 60.24 55 *e*P **P** **12 54 01.0 +1.8**
comp=Z,4.3nm,0.8s,mb4.5
LKWY *e*pP pP 12 54 26.5 +1.7
LKWY Lake 60.24 55 *e*P **P** **12 54 01.0 +1.9**
LKWY *e**PP pP 12 54 26.5 +1.7
LKWY pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
Q09A Carvers 60.30 64⇑P pP 12 54 24.8 -0.4
baz=60
O11A Cowboy Ranch, 60.31 62 ⇓P **P** **12 54 00.2 +0.5**
baz=60
M13A Montello 60.33 60 ⇓P **P** **12 54 00.0 +0.2**
baz=60
IMW Indian Meadow 60.40 56 *e*P **P** **12 54 01.1 +0.9**
comp=Z,16nm,1.5s,mb4.8
IMW *e*pP pP 12 54 26.4 +0.5
RLMT Red Lodge 60.47 54 *e*P **P** **12 54 01.2 +0.5**
comp=Z,9.5nm,1.1s,mb4.7
RLMT *e*pP pP 12 54 26.0 -0.3
DCID1 Drake Creek 60.48 56 *e*P **P** **12 54 02.4 +1.7**
DCID1 *e*pP pP 12 54 27.9 +1.5
MOOW Moose Ponds 60.61 56 *e*P **P** **12 54 02.4 +0.7**
comp=Z,5.2nm,1.2s,mb4.4
MOOW *e*pP pP 12 54 27.5 +0.2
S08C White Mtn Res 60.61 66 ⇓P **P** **12 54 02.4 +0.6**
baz=60
P11A Circle Ranch, 60.64 62 ⇓P **P** **12 54 02.2 +0.2**
baz=60
N13A Wendover, West 60.65 60⇑P **P** **12 54 02.8 +0.8**
baz=60
HELL Mitchell Peak, 60.66 67 P **P** **12 54 01.5 -0.5**
baz=60,SNR=6.2
TPAW Teton Pass 60.67 56 *e*P **P** **12 54 03.8 +1.8**
comp=Z,18nm,1.4s,mb4.9
TPAW *e*pP pP 12 54 28.6 +0.9
M14A Sheep Mountain 60.69 59 ⇓P pP 12 54 28.7 +0.7
baz=60
O12A Currie 60.74 61 P **P** **12 54 03.2 +0.7**
baz=60,SNR=6.9
DGMT Dagmar 60.75 49 *e*P **P** **12 54 02.1 -0.4**
comp=Z,18nm,1.1s,mb5.0
DGMT *e*pP pP 12 54 27.2 -1.1
Q10A Clear Creek Ra 60.76 64 P **P** **12 54 03.2 +0.5**
baz=61,SNR=5.4
R09A Tonopah 60.76 64 P **P** **12 54 03.0 +0.2**
baz=61,SNR=8.3

LOHW Long Hollow 60.77 56 *e*P P **12 54 03.8 +1.0**
comp=Z,5.8nm,1.0s,mb4.6
LOHW epP pP 12 54 29.3 +0.8
REDW Red Top Meadow 60.81 56 *e*P P **12 54 04.0 +1.0**
comp=Z,13nm,1.3s,mb4.8
REDW epP pP 12 54 29.2 +0.5
LAO LASA Array 60.97 51 *e*P P **12 54 04.5 +0.5**
comp=Z,12nm,0.9s,mb4.9
LAO epP pP 12 54 29.8 0.0
S09A Goldfield 61.02 65 ⇑P P **12 54 04.2 -0.3**
baz=61
AHID Auburn Hatcher 61.08 57 *e*P P **12 54 05.0 +0.2**
comp=Z,9.1nm,1.1s,mb4.7
AHID epP pP 12 54 30.9 +0.4
Q11A Duckwater 61.17 63 ⇑P P **12 54 05.8 +0.3**
baz=61
R10A Warm Springs 61.17 64 ⇑P P **12 54 05.2 -0.3**
baz=61
P12A McGill 61.18 62 ⇓P P **12 54 05.5 -0.1**
baz=61
M15A Larsen Ranch, 61.22 59 P P **12 54 06.5 +0.7**
baz=61,SNR=5.5
N14A Grayback Hills 61.22 60 ⇓P P **12 54 05.7 -0.1**
baz=61
S10A Tonopah Range, 61.25 64 ⇓P P **12 54 06.0 0.0**
baz=61
O13A Hicks Ranch, I 61.26 61 ⇑P P **12 54 05.4 -0.7**
baz=61
Q12A Willow Creek R 61.52 62 ⇑P P **12 54 07.8 -0.1**
baz=61
R11A Troy Canyon, C 61.55 63 P P **12 54 08.2 +0.1**
baz=61,SNR=7.8
N15A Stansbury Isla 61.57 59 ⇑P pP 12 54 34.3 +0.3
baz=61
HWUT Hardware Ranch 61.61 58 *e*P P **12 54 08.8 +0.4**
comp=Z,3.2nm,0.8s,mb4.4
HWUT epP pP 12 54 34.1 -0.1
FINES FINESS Array B 61.71 335 P P **12 54 09.3 +0.5**
FINES PcP PcP 12 54 48.3 -0.8
FINES FINESS Array B 61.71 335 *i* P P **12 54 08.8 0.0**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 61.71 335 P P **12 54 09.3 +0.5**
comp=Z,1.2nm,0.5s,mb4.2,baz=41,slow=7.9,SNR=10
FINES PcP PcP 12 54 48.3 -0.8
comp=Z,1.0nm,0.4s,baz=73,slow=4.8,SNR=7.2
DUG Dugway 61.88 60 *e*P P **12 54 10.5 +0.2**
comp=Z,5.7nm,1.3s,mb4.4
DUG epP pP 12 54 35.4 -0.7
DUG Dugway 61.88 60 *e*P P **12 54 10.5 +0.3**
DUG *e**PP pP 12 54 35.4 -0.6
DUG pmax pmax
comp=Z,6.0nm,1.3s,mb4.5
DUG Dugway 61.88 60 ⇑P P **12 54 10.8 +0.5**
baz=62
BW06 Boulder Array 61.91 56 *e*P P **12 54 10.4 -0.1**
comp=Z,6.6nm,0.9s,mb4.7
BW06 epP pP 12 54 36.1 -0.1
PDAR Pinedale Array 61.91 56 P P **12 54 10.8 +0.3**
comp=Z,5.6nm,0.8s,mb4.6,baz=317,slow=1.9,SNR=44
PDAR pP pP 12 54 36.3 +0.1
comp=Z,9.1nm,0.9s,baz=304,slow=2.9,SNR=17
S11A Rachel 61.93 64 P P **12 54 11.2 +0.6**
baz=62,SNR=5.5
MPMC Manual Prospec 61.98 66 ⇑P P **12 54 10.8 -0.3**
baz=62
FURC Furnace Creek, 62.08 66 P P **12 54 11.9 +0.2**
baz=62,SNR=9.6
TPNV Topopah Spring 62.11 65 *e*P P **12 54 11.6 -0.3**
comp=Z,4.7nm,0.8s,mb4.6
TPNV epP pP 12 54 37.0 -0.6
TPNV Topopah Spring 62.11 65 *e*P P **12 54 11.6 -0.3**
TPNV *e**PP pP 12 54 37.1 -0.6
TPNV pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
TPNV Topopah Spring 62.11 65 ⇓P P **12 54 12.2 +0.3**
baz=62
R12A Pony Springs, 62.13 63 ⇓P P **12 54 12.2 +0.3**
baz=62
NLU North Lily Min 62.45 60 *e*P P **12 54 14.2 0.0**
NLU epP pP 12 54 39.8 -0.1
S12A Delamar Landin 62.48 64 P P **12 54 15.3 +1.0**
baz=62,SNR=7.0
EDW2 Edwards Air Fo 62.49 68 ⇑P P **12 54 14.2 -0.3**
baz=62
T11A Corn Creek, Al 62.51 64 P P **12 54 14.8 +0.2**
baz=62,SNR=8.8
GSC Goldstone 62.91 67 ⇑P P **12 54 16.9 -0.3**
baz=63
R14A James Farms, M 63.05 62 ⇑P P **12 54 18.4 +0.3**
baz=63
S13A Holt Ranch, En 63.07 63 P P **12 54 18.9 +0.7**
baz=63,SNR=6.8
ULM Lac du Bonnet 63.33 43 P P **12 54 19.4 -0.4**
comp=Z,2.4nm,0.7s,mb4.2,baz=320,slow=6.2,SNR=8.2
ULM pP pP 12 54 44.9 -0.7
comp=Z,1.1nm,0.6s,baz=350,slow=12,SNR=2.7
TUQ Turquoise Mtn. 63.34 66 ⇑P P **12 54 19.5 -0.6**
baz=63
V11A Goodsprings 63.35 65 ⇑P P **12 54 20.5 +0.3**
baz=63
MSU Marysvale 63.39 61 *e*P P **12 54 20.8 +0.5**
KULM Kulim 63.56 245 *e*P P **12 54 22.7 +1.0**
U13A Pakoon Wash 63.81 64 P P **12 54 23.8 +0.7**
baz=64,SNR=6.8
MURC Murrieta 63.85 68 ⇑P P **12 54 22.3 -1.1**
baz=64
SRU San Rafael 63.90 60 *e*P P **12 54 23.4 -0.3**
comp=Z,11nm,0.8s,mb4.7
SRU epP pP 12 54 49.8 +0.1
SRU San Rafael 63.90 60 *e*P P **12 54 23.4 -0.3**
SRU *e**PP pP 12 54 49.8 +0.2
SRU pmax pmax
comp=Z,11nm,0.8s,mb4.7
GMRC Granite Mounta 63.95 66 ⇑P P **12 54 23.2 -0.9**
baz=64
U14A Mt Trumbull 64.26 64 P P **12 54 27.1 +1.0**
baz=64,SNR=5.7
BELC Belle Mtn. 64.29 67 ⇓P P **12 54 25.1 -1.2**
baz=64
T15A Red Dirt Ranch 64.31 63 ⇑P P **12 54 26.0 -0.3**
baz=64
IRM Iron Mountain 64.68 67 P P **12 54 28.7 -0.2**
baz=64,SNR=6.1
W13A Hualapai Mount 64.77 65 ⇓P P **12 54 29.4 0.0**
baz=65
BC3 Big Chuckw Mtn 64.85 67 ⇑P P **12 54 29.7 -0.2**
baz=65
X13A Yucca 65.16 65 ⇑P P **12 54 31.7 -0.3**
baz=65
W14A Seligman 65.16 64 P P **12 54 32.4 +0.5**
baz=65,SNR=9.0
PDMCI Parker Dam,Lak 65.18 66 ⇑P P **12 54 31.8 -0.3**
baz=65
PV10 Paradox Valley 65.24 59 *e*P P **12 54 32.8 +0.3**
PV10 epP pP 12 54 58.9 +0.4
NB2 NORSAR Subarra 65.63 342 P P **12 54 33.3 -1.2**
comp=Z,0.9nm,0.5s,mb3.9,baz=23,slow=6.5
NB2 NORSAR Subarra 65.63 342 P P **12 54 33.3 -1.2**
NB2 pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
NOA NORSAR Array B 65.63 342 P P **12 54 33.9 -0.7**
comp=Z,1.7nm,0.7s,mb4.0,baz=25,slow=6.5,SNR=7.5
GLA Glamis 65.65 67 ⇑P P **12 54 34.0 -1.1**
baz=66
PV01 Paradox Valley 65.68 59 *e*P P **12 54 34.7 -0.5**
PV01 epP pP 12 55 00.7 -0.6
X14A Yava 65.80 65 ⇓P P **12 54 35.8 -0.3**
baz=66
SMCO Snowmass 65.81 58 *e*P P **12 54 31.1 -4.9**
comp=Z,5.9nm,0.7s,mb4.5
SMCO epP pP 12 54 56.7 -5.4
HFS Hagfors 65.92 340 P P **12 54 36.0 -0.4**
comp=Z,1.6nm,0.4s,mb4.2,baz=64,slow=3.4,SNR=14
WUAZ Wupatki 65.94 63 *e*P P **12 54 37.8 +0.8**
comp=Z,1.7nm,0.7s,mb4.0
WUAZ Wupatki 65.94 63 ⇑P P **12 54 36.9 0.0**
baz=66
Y14A Wickenburg 66.10 65 ⇑P P **12 54 38.1 +0.1**
baz=66
ISCO Idaho Springs 66.11 56 *e*P P **12 54 38.1 +0.1**
comp=Z,14nm,1.3s,mb4.6
ISCO epP pP 12 55 04.6 +0.6
ISCO Idaho Springs 66.11 56 *e*P P **12 54 38.1 +0.1**
ISCO *e**PP pP 12 55 04.6 +0.6
ISCO pmax pmax
comp=Z,14nm,1.3s,mb4.6

X15A Humboldt 66.17 64 P P **12 54 39.1 +0.7**
baz=66,SNR=7.5
MVCO Mesa Verde 66.37 60 *e*P P **12 54 39.7 0.0**
comp=Z,3.7nm,0.7s,mb4.3
MVCO epP pP 12 55 05.3 -0.5
MVCO Mesa Verde 66.37 60 ⇑P P **12 54 39.6 0.0**
baz=66
EYMN Ely 66.97 42 *e*P P **12 54 42.8 -0.5**
comp=Z,4.5nm,0.7s,mb4.4
EYMN epP pP 12 55 08.7 -0.7
115A Sonoran Desert 67.44 66 ⇓P P **12 54 46.0 -0.5**
baz=67
SDCO Great Sand Dun 67.65 58 *e*P P **12 54 48.0 +0.3**
comp=Z,1.7nm,0.8s,mb3.9
SDCO epP pP 12 55 13.9 -0.1
116A Eloy 67.85 66 ⇑P P **12 54 48.5 -0.5**
baz=68
GOF Gofitskoye 68.48 315 *e*P P **12 54 54.7 +1.9**
ANMO Albuquerque 69.14 60 *e*P P **12 54 57.2 +0.1**
comp=Z,2.1nm,1.1s,mb3.9
ANMO epP pP 12 55 22.9 -0.4
ANMO Albuquerque 69.14 60⇑ *e*P P **12 54 57.7 +0.6**
LAZ Ladron 69.16 61 *e*P P **12 54 57.9 +0.7**
LAZ epP pP 12 55 23.3 -0.1
KIV Kislovodsk 69.48 314⇑ *e*P P **12 54 59.9 +0.9**
KIV *e**PP pP 12 55 23.1 -2.2
KIV pmax pmax
comp=Z,9.0nm,1.7s,mb4.3
AKASG Malin Array Be 69.61 327 P P **12 54 58.4 -1.2**
AKASG Malin Array Be 69.61 327 *i* P P **12 54 58.4 -1.3**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 69.61 327 P P **12 54 58.4 -1.2**
comp=Z,0.9nm,0.3s,mb4.0,baz=32,slow=6.2,SNR=8.4
SCHQ Schefferville 69.91 24 P P **12 54 59.5 -2.0**
comp=Z,1.9nm,0.4s,mb4.3,baz=339,slow=4.8,SNR=13
CTA Charters Tower 70.11 189 *e*P P **12 55 02.2 -0.8**
comp=Z,3.8nm,0.8s,mb4.3
CTA Charters Tower 70.11 189 *e*P P **12 55 02.2 -0.8**
CTA pmax pmax
comp=Z,4.0nm,0.8s
CTAO Charters Tower 70.11 189 *e*P P **12 55 02.1 -0.9**
comp=Z,4.1nm,0.7s,mb4.4
CTAO Charters Tower 70.11 189 *e*P P **12 55 02.1 -0.9**
CTAO pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
ANN Anapa 71.17 318 *e*P P **12 55 03.9 -5.4**
ANN pmax pmax
comp=Z,52nm,1.2s,mb5.2
ANN MLR MLR
comp=N,2μm,25.0s
ANN MLR MLR
comp=E,696nm,25.0s
ANN MLR MLR
comp=Z,830nm,25.0s
WB2 Warramunga Arr 71.91 200 *e*P P **12 55 13.3 -0.6**
WRA Warramunga Arr 71.91 200 *i* P P **12 55 13.5 -0.4**
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRA Warramunga Arr 71.91 200 P P **12 55 13.5 -0.4**
comp=Z,5.0nm,0.7s,mb4.4,baz=17,slow=6.7,SNR=62
MNTX Cornudas Mount 72.14 62 *e*P P **12 55 14.5 -0.8**
comp=Z,1.9nm,0.7s,mb4.0
MNTX epP pP 12 55 41.5 -0.3
FITZ Fitzroy Crossi 72.52 209 *e*P P **12 55 17.6 +0.1**
comp=Z,27nm,1.5s,mb4.9
STHS Stebnicka Huta 73.39 331 *e*P P **12 55 19.8 -2.6**
comp=Z,3.2nm,0.8s,mb4.2
STHS Stebnicka Huta 73.39 331 *e*P P **12 55 19.8 -2.6**
STHS pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
KOLS Kolnicke sedl 73.48 330 *e*P P **12 55 22.0 -1.0**
WMOK Wichita Mounta 73.51 56 *e*P P **12 55 23.1 -0.3**
comp=Z,1.7nm,0.8s,mb3.8
WMOK epP pP 12 55 47.5 -2.4
WMOK Wichita Mounta 73.51 56 *e*P P **12 55 23.1 -0.3**
WMOK *e**PP pP 12 55 47.5 -2.4
WMOK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
EKA Eskdalemuir Ar 73.55 347 P P **12 55 22.7 -0.5**
comp=Z,1.2nm,0.4s,mb4.0,baz=17,slow=5.2,SNR=8.8
CRVS Cervenica-Dubn 73.77 330 *e*P P **12 55 20.6 -4.1**
CLL Collm 74.09 336 *i* P P **12 55 26.5 0.0**
MORC Moravsky Berou 74.21 333 *e*P P **12 55 27.6 +0.5**
comp=Z,3.5nm,0.9s,mb4.1
MORC Moravsky Berou 74.21 333 *e*P P **12 55 27.7 +0.5**
MORC pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
PALK Pallekele 74.35 263 *e*P P **12 55 28.7 +0.2**
comp=Z,16nm,0.9s,mb4.8
LTX Lajitas 74.89 62 *e*P P **12 55 31.2 -0.3**
comp=Z,8.3nm,0.9s,mb4.5
LTX epP pP 12 55 57.5 -0.6
LTX Lajitas 74.89 62 *e*P P **12 55 31.2 -0.3**
LTX *e**PP pP 12 55 57.5 -0.6
LTX pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
TXAR Lajitas Array 74.89 62 P P **12 55 31.2 -0.2**
comp=Z,4.9nm,0.6s,mb4.4,baz=298,slow=4.6,SNR=87
TXAR pP pP 12 55 57.6 -0.5
comp=Z,6.5nm,0.7s,baz=299,slow=4.3,SNR=17
VYHS Vyhne 74.96 331 *e*P P **12 55 32.0 +0.4**
VYHS *e* 12 59 06.2
MLR Muntele Rosu 75.18 326 P P **12 55 33.1 +0.2**
comp=Z,2.2nm,0.3s,mb4.3,baz=339,slow=8.6,SNR=5.5
ASAR Alice Springs 75.60 200 P P **12 55 35.6 +0.3**
comp=Z,2.5nm,0.5s,mb4.2,baz=12,slow=5.6,SNR=53
ASAR pP pP 12 56 03.4 +1.3
comp=Z,1.4nm,0.7s,baz=15,slow=6.0,SNR=3.5
KHC Kasperske Hory 75.92 335 *e*P P **12 55 36.9 -0.1**
KHC *e* 12 55 41.9
KHC Kasperske Hory 75.92 335 *e*P P **12 55 36.9 -0.1**
KHC *ex* x 12 55 41.9
GERES GERESS Array B 76.14 335 P P **12 55 37.7 -0.6**
comp=Z,1.4nm,0.6s,mb3.9,baz=46,slow=5.8,SNR=9.0
BRTR Keskin Array B 76.92 317 *i* P P **12 55 45.7 +2.8**
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 76.92 317 P P **12 55 42.5 -0.3**
comp=Z,1.9nm,0.6s,mb4.0,baz=108,slow=1.6,SNR=7.8
GIVF Givet 77.14 341 *e*P P **12 55 43.4 -0.5**
BAIF Baives 77.31 341 *e*P P **12 55 44.6 -0.2**
CDF Champ du Feu 78.19 339 *e*P P **12 55 49.1 -0.6**
comp=Z,16nm,1.0s,mb4.4
CDF Champ du Feu 78.19 339 *e*P P **12 55 49.1 -0.6**
comp=Z,8.1nm,1.0s,mb4.4
CDF Champ du Feu 78.19 339 *e*P P **12 55 49.1 -0.6**
CDF pmax pmax
comp=Z,8.0nm,1.0s,mb4.4
HAU Haudompre 78.78 339 *e*P P **12 55 52.6 -0.4**
DAVOX Davos/Dischmat 79.06 336 P P **12 55 53.5 -1.0**
comp=Z,4.1nm,0.5s,mb4.5,baz=8.7,slow=8.8,SNR=5.9
GRR Gorron 79.89 344 *e*P P **12 55 58.5 -0.5**
LOR Lormes 80.03 340 *e*P P **12 55 59.5 -0.3**
CABF La Chapelle 80.15 339 *e*P P **12 56 00.3 -0.2**
SSF Saint Saulge 80.31 341 *e*P P **12 56 01.5 +0.2**
SGMF Saint Gilles 80.32 345 *e*P P **12 56 01.9 +0.6**
ROSF Rostrenen 80.36 345 *e*P P **12 56 01.1 -0.4**
AVF Avril sur Loir 80.60 341 *e*P P **12 56 02.4 -0.4**
comp=Z,15nm,0.6s,mb4.7
AVF Avril sur Loir 80.60 341 *e*P P **12 56 02.4 -0.4**
comp=Z,7.4nm,0.6s,mb4.7
AVF Avril sur Loir 80.60 341 *e*P P **12 56 02.4 -0.4**
AVF pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
SMF Signal de Mont 80.63 340 *e*P P **12 56 02.6 -0.4**
LPL La Plagne 81.03 338 *e*P P **12 56 05.7 +0.5**
comp=Z,15nm,0.6s,mb4.7
LPL La Plagne 81.03 338 *e*P P **12 56 05.7 +0.5**
comp=Z,7.7nm,0.6s,mb4.7
LPL La Plagne 81.03 338 *e*P P **12 56 05.7 +0.5**
LPL pmax pmax
comp=Z,8.0nm,0.6s,mb4.7
LPG La Plagne 81.04 338 *e*P P **12 56 05.9 +0.7**
comp=Z,20nm,0.7s,mb4.8
LPG La Plagne 81.04 338 *e*P P **12 56 05.9 +0.7**
comp=Z,9.8nm,0.7s,mb4.8
LPG La Plagne 81.04 338 *e*P P **12 56 05.9 +0.7**
LPG pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
TCF Toulx Ste Croi 81.32 341 *e*P P **12 56 06.3 -0.4**
comp=Z,14nm,0.9s,mb4.5
TCF Toulx Ste Croi 81.32 341 *e*P P **12 56 06.3 -0.4**
comp=Z,7.2nm,0.9s,mb4.5
TCF Toulx Ste Croi 81.32 341 *e*P P **12 56 06.3 -0.4**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
MFF Saint Martin d 81.48 343 *e*P P **12 56 06.6 -0.9**
ASF Jabal al Asfar 81.60 311 P P **12 56 08.4 0.0**
comp=Z,4.4nm,0.7s,mb4.4,baz=229,slow=1.6,SNR=7.2
MMAI Mount Meron Ar 81.63 312 P P **12 56 09.3 +0.8**
comp=Z,6.2nm,0.4s,mb4.8,baz=45,slow=7.2,SNR=17
MBDF Montbardon 81.76 338 *e*P P **12 56 08.9 -0.1**
comp=Z,14nm,0.7s,mb4.6
MBDF Montbardon 81.76 338 *e*P P **12 56 08.9 -0.1**
comp=Z,6.8nm,0.7s,mb4.6
MBDF Montbardon 81.76 338 *e*P P **12 56 08.9 -0.1**
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
ORIF Oris-en-Rattie 81.80 338 *e*P P **12 56 09.1 -0.1**
comp=Z,31nm,0.9s,mb4.9
ORIF Oris-en-Rattie 81.80 338 *e*P P **12 56 09.1 -0.1**
comp=Z,16nm,0.9s,mb4.8
ORIF Oris-en-Rattie 81.80 338 *e*P P **12 56 09.1 -0.1**
ORIF pmax pmax
comp=Z,16nm,0.9s,mb4.8
VIVF Saint-Julien-l 82.14 339 *e*P P **12 56 11.0 0.0**
comp=Z,18nm,0.9s,mb4.6
VIVF Saint-Julien-l 82.14 339 *e*P P **12 56 11.0 0.0**
comp=Z,9.3nm,0.9s,mb4.6
VIVF Saint-Julien-l 82.14 339 *e*P P **12 56 11.0 0.0**
VIVF pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
STKA Stephens Creek 82.29 191 *e*P P **12 56 11.8 +0.1**
comp=Z,2.6nm,1.0s,mb4.0
STKA Stephens Creek 82.29 191 P P **12 56 11.7 0.0**
comp=Z,2.4nm,0.9s,mb4.0,baz=8.1,slow=7.1,SNR=4.1
RJF Les Rejaudoux 82.40 341 *e*P P **12 56 12.1 -0.3**
CAF Calviac 82.65 341 *e*P P **12 56 13.9 +0.2**
IDI Anoyia 84.37 321 P P **12 56 20.6 -2.1**
comp=Z,7.5nm,0.5s,mb4.8,baz=26,slow=12,SNR=16
EIL Elat 84.60 311 P P **12 56 23.9 0.0**
comp=Z,11nm,0.7s,mb4.9,baz=1.4,slow=4.8,SNR=12
ETSF Etsaut 85.13 342 *e*P P **12 56 26.4 +0.1**
comp=Z,11nm,0.6s,mb4.7
ETSF Etsaut 85.13 342 *e*P P **12 56 26.4 +0.1**
comp=Z,5.7nm,0.6s,mb4.7
ETSF Etsaut 85.13 342 *e*P P **12 56 26.4 +0.1**
ETSF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
ESDC Sonseca Array 88.89 344 P P **12 56 43.4 -1.1**
comp=Z,1.6nm,0.4s,mb4.4,baz=1.2,slow=4.5,SNR=7.3
KEST Kesra 89.47 333 P P **12 56 47.2 -0.1**
comp=Z,4.2nm,0.8s,mb4.5,baz=224,slow=2.1,SNR=7.8
VNDA Vanda 127.23 178 PKP PKPdf 13 02 52.1 -0.4
comp=Z,2.2nm,1.1s,baz=25,slow=2.7,SNR=3.4
BOSA Boshof 136.62 280 PKP PKPdf 13 03 12.1 +0.3
BOSA Boshof 136.62 280 PKP PKPdf 13 03 12.1 +0.3
comp=Z,2.8nm,1.0s,baz=30,slow=10,SNR=3.1
QSPA South Pole Qui 139.65 180 *e*PKPdf PKPdf 13 03 16.5 +0.7

IDC 08 12:52:17.8±1.3, 1715S×17385W, h408km±20km, mb3.0/4, mb1 3.2/5, mb1mx3.0/17, mbtmp3.0/5, Error ellipse: s-maj=34.3km s-min=22.5km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.79**	**32**	P	Pn	12 53 29.9	+1.4
	3.0nm,0.3s,baz=264,slow=22,SNR=12						
AFI				S	S	12 54 25.5	-0.4
	2.8nm,0.3s,baz=233,slow=20,SNR=2.9						
URZ	**Urewera**	**22.48**	**199**	P	P	12 56 44.0	0.0
	3.3nm,0.7s,baz=337,slow=7.7,SNR=2.7						
WRA	**Warramunga Arr**	**49.04**	**258**	P	P	13 00 25.6	-0.2
	0.3nm,0.5s,baz=97,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**49.18**	**253**	P	P	13 00 26.9	+0.1
	1.2nm,0.5s,baz=89,slow=8.3,SNR=20						
TXAR	**Lajitas Array**	**81.94**	**56**	P	P	13 03 53.7	+0.2
	0.2nm,0.9s,baz=208,slow=5.0,SNR=3.6						

*ISK **08** 12:57:56.2, 39.08N×40.40E, h5km, ML3.9*
*CSEM **08** 12:57:56.6±0.1, 39.05N×40.41E, h2km, ML3.8, Error ellipse: s-maj=1.8km s-min=1.5km az=166.0*
*NEIC **08** 12:57:57.2, 39.03N×40.34E, h5km, ML3.8(ISK), After ISK.*
*ISCJB **08** 12:57:57.3±0.7, 39.06N±002×40.42E±003, h0km±6km, mb3.4/2, Error ellipse: s-maj=4.3km s-min=3.2km az=158.3*
*DDA **08** 12:57:58.4, 39.00N×40.45E, h5km±5km, Md3.8*
*IDC **08** 12:58:01.3±2.0, 39.37N×39.93E, h0km, mb3.3/2, mb1 3.4/5, mb1mx3.2/21, mbtmp3.3/5, ML2.9/3, Error ellipse: s-maj=36.0km s-min=22.0km az=158.0*
ISC 08 12:57:58.3±0.6, 3903N±003×4041E±003, h2km±5km, n65, σ1$23/81, mb3.2/2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.17**	**158**	*i* PG	**Pg**	**12 58 01.6**	**+0.1**
BINT	**Bingol**	**0.17**	**158**	Pg	**Pg**	**12 58 01.7**	**+0.2**
PTK	**Pertek**	**0.81**	**260**	PG	**Pg**	**12 58 12.6**	**-1.1**
PTK				SG	**Sg**	**12 58 25.0**	**+0.9**
PTK	**Pertek**	**0.81**	**260**	Pg	**Pg**	**12 58 12.7**	**-1.0**
PTK				Sg	**Sg**	**12 58 24.7**	**+0.6**
PTK	**Pertek**	**0.81**	**260**	Pg	**Pg**	**12 58 12.7**	**-1.0**
PTK				*e*Sg	**Sg**	**12 58 25.0**	**+0.9**
EZC	**Erzincan**	**0.85**	**327**	PG	**Pg**	**12 58 17.4**	**+2.9**
EZC	**Erzincan**	**0.85**	**327**	Pg	**Pg**	**12 58 18.4**	**+3.8**
EZM	**Erzurum**	**1.14**	**40**	PN	**Pn**	**12 58 18.0**	**-3.2**
DIY	**Diyarbakir**	**1.14**	**187**	PN	**Pn**	**12 58 20.0**	**-1.2**
DIY	**Diyarbakir**	**1.14**	**187**	Pn	**Pn**	**12 58 19.9**	**-1.3**
ERZM	**Erzurum**	**1.14**	**40**	*i* P	**Pg**	**12 58 18.0**	**-2.2**
ERZM				*i* S	**Sg**	**12 58 27.4**	**-7.6**
BTMT	**Batman**	**1.19**	**134**	PN	**Pn**	**12 58 20.0**	**-1.9**
ELZG	**Elazig**	**1.23**	**245**	*i* P	**Pg**	**12 58 19.8**	**-2.1**
ELZG				*i* S	**Sg**	**12 58 38.9**	**+0.9**
KELT	**Kelkit**	**1.43**	**322**	*i* P	**Pn**	**12 58 24.3**	**-0.8**
KELT				*i* S	**Sb**	**12 58 44.8**	**+0.7**
GUMT	**Gumushane**	**1.59**	**334**	PN	**Pn**	**12 58 26.7**	**-0.7**
GUMT	**Gumushane**	**1.59**	**334**	Pn	**Pn**	**12 58 27.4**	**0.0**
MYA	**Malatya**	**1.71**	**246**	PN	**Pn**	**12 58 28.8**	**-0.1**
MYA	**Malatya**	**1.71**	**246**	Pn	**Pn**	**12 58 27.4**	**-1.5**
MALT	**Malatya**	**1.71**	**246**	PN	**Pn**	**12 58 28.6**	**-0.4**
MALT	**Malatya**	**1.71**	**246**	Pn	**Pn**	**12 58 28.5**	**-0.5**
MALT	**Malatya**	**1.71**	**246**	Pn	**Pn**	**12 58 28.5**	**-0.5**
MARD	**Mardin**	**1.74**	**170**	*i* P	**Pn**	**12 58 28.6**	**-0.8**
MARD				*i* S	**Sn**	**12 58 52.8**	**+0.7**
TUTA	**Tutak**	**1.90**	**78**	*i* P	**Pn**	**12 58 30.5**	**-1.2**
TUTA				*i* S	**Sn**	**12 58 57.8**	**+1.6**
KTUT	**Trabzon**	**2.01**	**346**	PN	**Pn**	**12 58 32.0**	**-1.2**
URFA	**Urfa**	**2.02**	**219**	PN	**Pn**	**12 58 33.0**	**-0.3**
AGRB	**Hanur-Agry**	**2.08**	**74**	ePN	**Pn**	**12 58 33.1**	**-0.9**
SIRT	**Sirnak**	**2.21**	**133**	ePN	**Pn**	**12 58 36.1**	**+0.2**
VANB	**Van**	**2.37**	**100**	ePN	**Pn**	**12 58 38.8**	**+0.7**
VANB	**Van**	**2.37**	**100**	Pn	**Pn**	**12 58 41.2**	**+3.2**
VANT	**Van**	**2.40**	**103**	Pn	**Pn**	**12 58 39.7**	**+1.2**
ARTV	**Artvin**	**2.44**	**28**	*i* P	**Pn**	**12 58 38.4**	**-0.7**
ARTV				*i* S	**Sn**	**12 59 06.9**	**-2.6**
GRSN	**GIRESUNGRSN**	**2.50**	**320**	*i* P	**Pn**	**12 58 40.0**	**+0.1**
GRSN				*i* S	**Sn**	**12 59 11.0**	**0.0**
GRSN	**GIRESUNGRSN**	**2.50**	**320**	*i* P	**Pn**	**12 58 40.0**	**+0.1**
GRSN				*i* S	**Sn**	**12 59 11.0**	**0.0**
BCA	**Borcka**	**2.58**	**21**	ePN	**Pn**	**12 58 39.7**	**-1.3**
BCA	**Borcka**	**2.58**	**21**	Pn	**Pn**	**12 58 40.9**	**-0.1**
BCA	**Borcka**	**2.58**	**21**	Pn	**Pn**	**12 58 40.9**	**-0.1**
DYDN	**Diyadin**	**2.60**	**78**	*i* P	**Pn**	**12 58 43.5**	**+2.3**
DYDN				*i* S	**Sn**	**12 59 12.6**	**-0.7**
KARS	**Kars**	**2.60**	**52**	ePN	**Pn**	**12 58 41.5**	**+0.3**
KARS	**Kars**	**2.60**	**52**	Pn	**Pn**	**12 58 41.9**	**+0.7**
DIGO	**Kars**	**2.67**	**58**	*i* P	**Pn**	**12 58 41.4**	**-0.8**
DIGO				*i* S	**Sn**	**12 59 19.5**	**+4.4**
GZT	**Gaziantep**	**2.80**	**234**	*i* P	**Pn**	**12 58 43.4**	**-0.6**
HAKT	**HAKKARI**	**2.98**	**119**	*i* P	**Pn**	**12 58 50.0**	**+3.4**
HAKT				*i* S	**Sg**	**12 59 33.8**	**-0.3**
HKR	**Hakkari**	**3.00**	**118**	ePN	**Pn**	**12 58 47.7**	**+1.0**
HKR	**Hakkari**	**3.00**	**118**	Pn	**Pn**	**12 58 48.4**	**+1.7**
GAZ	**Gaziantep**	**3.13**	**235**	Pn	**Pn**	**12 58 47.9**	**-0.7**
GAZ	**Gaziantep**	**3.13**	**235**	Pn	**Pn**	**12 58 47.9**	**-0.7**
TOKT	**Tokat**	**3.25**	**295**	ePN	**Pn**	**12 58 49.9**	**-0.2**
TOKT	**Tokat**	**3.25**	**295**	Pn	**Pn**	**12 58 51.1**	**+0.9**
ANDN	**Andirin**	**3.51**	**247**	*i* P	**Pb**	**12 59 01.8**	**+0.8**
ANDN				*i* S	**Sg**	**12 59 55.4**	**+4.4**
BNN	**Bunyan**	**3.56**	**269**	Pn	**Pn**	**12 58 56.5**	**+2.0**
BNN	**Bunyan**	**3.56**	**269**	Pn	**Pn**	**12 58 56.5**	**+2.0**
KVT	**Kavak**	**3.92**	**303**	Pn	**Pn**	**12 58 59.7**	**+0.3**
KOZT	**Kozan**	**3.93**	**248**	ePN	**Pn**	**12 59 00.7**	**+1.2**
YOZ	**Yozgat**	**3.99**	**280**	Pn	**Pn**	**12 59 01.3**	**+0.9**

YOZ	Yozgat	3.99	280	Pn	Pn	12 59 01.3	+0.9
ONI	Oni	4.23	32	P	Pb	12 59 12.0	-1.3
ONI				S	Sg	13 00 16.7	+2.7
DGRG	David-gareji	4.50	56	P	Pb	12 59 19.1	+1.2
BRTR	Keskin Array B	5.29	280	Pn	Pn	12 59 17.6	-0.6
	0.2nm,0.3s,baz=96,slow=15,SNR=4.5						
BRTR				Lg		13 00 36.5	
	baz=83,slow=25,SNR=1.7						
BRTR	Keskin Array B	5.29	280	Pn	Pn	12 59 17.6	-0.6
ASF	Jabal al Asfar	7.42	204	Pn	Pn	12 59 53.7	+6.2
	0.2nm,0.3s,baz=198,slow=5.9,SNR=3.5						
ASF				Lg		13 01 54.2	
	0.4nm,0.3s,baz=32,slow=15,SNR=2.9						
AKTK	Aktyubinsk	16.88	42	Pn	Pn	13 01 57.7	+2.3
AKTK	Aktyubinsk	16.88	42	Pn	Pn	13 01 57.7	+2.3
AKTO	Aktyubinsk	16.88	42	Pn	Pn	13 01 57.7	+2.3
	0.1nm,0.3s,baz=241,slow=15,SNR=4.0						
FINES	FINESS Array B	24.12	343	P	P	13 03 14.5	-0.6
	0.7nm,0.7s,mb3.2,baz=143,slow=14,SNR=3.2						
YKA	Yellowknife Ar	76.84	348	P	P	13 09 50.8	-0.3
	0.3nm,0.9s,mb3.2,baz=30,slow=5.8,SNR=3.8						

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*GII **08** 13:23:15.3±2.9, 2980N×3623E, h0km, ML1.9/2*
*ISCJB **08** 13:24:13.0±1.1, 2989N±004×3631E±007, h0km, Error ellipse: s-maj=9.3km s-min=6.3km az=4.7*
*HLW **08** 13:24:12.7, 3003N×3668E, h20km, Mb3.1*
*SGS **08** 13:24:13.7, 3014N×3635E, h29km*
*CSEM **08** 13:24:14.4±0.2, 2976N×3620E, h1km, ML1.9, Error ellipse: s-maj=4.5km s-min=3.7km az=95.0, Mining explosion.*
ISC 08 13:24:13.0±1.1, **2987N**±004×**3635E**±007, **h0**km, **n19**, σ**0s89**/24, **Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.15	278	Pg	Pg	13 24 34.0	-1.1
HRFI				Sg	Sg	13 24 51.2	+1.3
ZFRI	Zfri	1.22	304	Pg	Pg	13 24 36.1	-0.3
EIL	Elat	1.23	261	Pg	Pg	13 24 35.9	-0.7
EIL				Sg	Sg	13 24 52.7	+0.2
HQLS		1.25	243	P	Pg	13 24 35.9	-1.2
HQLS		1.25	243	P	Pg	13 24 35.9	-1.2
HQLS				S	Sg	13 24 52.6	-0.8
PRNI	Paran	1.26	293	Pg	Pg	13 24 36.8	-0.4
JLOS		1.36	214	P	Pg	13 24 38.6	-0.5
JLOS		1.36	214	P	Pg	13 24 38.6	-0.5
JLOS				S	Sg	13 24 57.1	+0.5
KRMI	Paran Flat	1.43	280	Pn	Pn	13 24 39.1	-1.1
HBST	Basata	1.55	245	P	Pn	13 24 42.2	+0.4
SVTA	Shivta	1.82	306	Pn	Pn	13 24 46.2	+0.6
HDHB	Dhahab	1.89	233	P	Pn	13 24 47.3	+0.7
DRGI	Dragot	1.90	335	Pn	Pn	13 24 48.0	+1.2
HNKL	Nakhl	2.05	272	P	Pn	13 24 49.1	+0.3
RSHS		2.07	221	P	Pn	13 24 48.0	-1.1
RSHS		2.07	221	P	Pn	13 24 48.0	-1.1
RSHS				S	Sn	13 25 17.7	+2.1
AMAG	Maghara	2.82	287	P	Pn	13 24 58.7	-0.7
SUZ		3.05	270	P	Pn	13 25 03.4	+0.8
SUZ		3.05	270	P	Pn	13 25 03.3	+0.8

IDC 08 13:42:25.6±1.0, **5569S**×**2676W**, **h0**km, **mb4.1**/3, **mb1 4.3**/3, **mb1mx4.0**/13, **mbtmp4.1**/3, **Error ellipse: s-maj=44.8km s-min=30.2km az=80.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	46.95	183	P	P	13 50 57.5	+0.2
	3.3nm,0.7s,baz=184,slow=8.2,SNR=18						
LPAZ	La Paz	50.37	305	P	P	13 51 25.1	+0.8
	2.2nm,0.6s,baz=127,slow=5.6,SNR=8.2						
TORD	Torodi Ar. Bea	72.62	29	P	P	13 53 55.2	+0.7
	0.3nm,0.4s,baz=201,slow=5.0,SNR=4.3						
YKA	Yellowknife Ar	136.06	318	PKP	PKPdf	14 01 45.3	-1.6
	0.2nm,0.5s,baz=127,slow=2.3,SNR=5.9						
INK	Inuvik	145.67	321	PKPbc	PKPbc	14 02 03.5	-1.0
	2.0nm,0.7s,baz=80,slow=2.8,SNR=9.0						
SONM	Songino Array	150.46	86	PKPbc	PKPbc	14 02 17.4	-0.5
	1.5nm,0.7s,baz=220,slow=2.8,SNR=10						

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*CSEM **08** 13:43:09.1±0.1, 3910N×4043E, h5km, MD3.0, Error ellipse: s-maj=2.5km s-min=1.9km az=127.0*
*ISK **08** 13:43:09.6, 3908N×4042E, h9km, MD3.0*
*ISCJB **08** 13:43:10.3±0.4, 3908N±003×4039E±004, h5km, Error ellipse: s-maj=5.0km s-min=4.1km az=143.1*
*DDA **08** 13:43:12.8, 3905N×4040E, h17km±2km, Md3.4*
ISC 08 13:43:10.6±0.7, **3907N**±003×**4040E**±004, **h5**km±6km, **n17**, σ**1s15**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.20	161	*i* PG	Pg	13 43 14.6	0.0
BINT				*i* SG	Sg	13 43 17.3	0.0
PTK	Pertek	0.81	258	PG	Pg	13 43 25.6	-0.5
PTK				SG	Sg	13 43 38.0	+1.4
EZM	Erzurum	1.12	41	PN	Pn	13 43 30.8	-2.2
ERZM	Erzurum	1.12	41	*i* P	Pg	13 43 31.5	-0.6
ERZM				*i* S	Sg	13 43 48.6	+2.0
DIY	Diyarbakir	1.18	187	PN	Pn	13 43 33.6	-0.2
BTMT	Batman	1.22	135	PN	Pn	13 43 32.8	-1.6
ELZG	Elazig	1.25	243	*i* P	Pg	13 43 34.2	-0.3
ELZG				*i* S	Sg	13 43 50.0	-0.7
KELT	Kelkit	1.40	321	*i* P	Pn	13 43 37.3	+0.5
KELT				*i* S	Sb	13 43 58.0	+2.7
GUMT	Gumushane	1.56	333	*e*PN	Pn	13 43 38.1	-1.0
MYA	Malataya	1.71	245	*e*PN	Pn	13 43 39.9	-1.3
MALT	Malatya	1.72	245	*e*PN	Pn	13 43 41.3	+0.1
MARD	Mardin	1.78	170	*i* P	Pn	13 43 43.0	+1.0
MARD				*i* S	Sn	13 44 07.4	+2.5
TUTA	Tutak	1.90	79	*i* P	Pn	13 43 44.4	+0.6
TUTA				*i* S	Sn	13 44 11.8	+3.7
TUTA	Tutak	1.90	79	*i* P	Pn	13 43 44.3	+0.6
URFA	Urfa	2.05	218	*e*PN	Pn	13 43 45.7	0.0
AGRB	Hanur-Agry	2.07	75	*e*PN	Pn	13 43 45.7	-0.4
BCA	Borcka	2.55	21	*e*PN	Pn	13 43 51.7	-1.0

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*NIED **08** 13:43:00, 4670N×15330E, h38km, Mw4.4 Best double couple: M0 4.96000×10^15 NP1: φs 226.00000°, δ72.00000°, λ-167.00000°. NP2: φs 132.00000°, δ78.00000°, λ-19.00000°.*
*BJI **08** 13:43:38.3, 4680N×15358E, h10km, mB4.8, mb4.5, Ms4.3, Msz4.1*
*NEIC **08** 13:43:44.5±0.3, 4687N×15284E, h10km, mb4.6/41, Error ellipse: s-maj=9.3km s-min=5.0km az=155.0*
*IDC **08** 13:43:47.2±0.6, 4686N×15281E, h30km±4km, mb4.1/18, mb1 4.3/19, mb1mx4.2/24, mbtmp4.1/19, ML3.6/1, MS3.8/7, Ms1 3.8/7, ms1mx3.4/32, Error ellipse: s-maj=17.6km s-min=12.0km az=142.0*
*ISCJB **08** 13:43:47.4±0.7, 4679N±004×15285E±005, h48km±6km, mb4.5/74, MS3.9/11, Error ellipse: s-maj=8.0km s-min=4.5km az=142.1*
*MOS **08** 13:43:48.6±1.0, 4687N×15284E, h59km, mb4.7/24, Error ellipse: s-maj=8.8km s-min=6.5km az=91.5*
*SKHL **08** 13:43:48.7±1.0, 4678N×15299E, h68km±31km, mb4.9/6, Ms3.9/1*
ISC 08 13:43:49.6±0.5, **4680N**±004×**15285E**±005, **h49**km±5km, **h22**km±4.2km**:pP-P, n196,** σ**1s24**/218, **mb4.5**/74, **MS3.9**/11, **14C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.81	247⇑	*i*PN	Pn	13 44 45.6	0.0
KUR				*i* S	Sn	13 45 29.0	-0.1
KUR				pmax	pmax		
	comp=N,150nm,0.4s						
KUR				pmax	pmax		
	comp=E,80nm,0.4s						
KUR				pmax	pmax		
	comp=Z,230nm,0.4s						
KUR				smax			
	comp=N,610nm,0.6s						
KUR				smax			
	comp=E,500nm,0.6s						
KUR	Kuril'sk	3.81	247⇑	*i*P	Pn	13 44 45.6	0.0
KUR				AMB	AMB	13 44 47.8	
	comp=E,150nm,0.4s						
KUR				AMB	AMB	13 44 47.8	
	comp=E,80nm,0.4s						
KUR				AMB	AMB	13 44 47.8	
	comp=E,230nm,0.4s						
KUR				*i* S	Sn	13 45 29.0	-0.1
KUR				A		13 45 48.0	
	comp=E,2μm,1.2s						
KUR				A		13 45 48.0	
	comp=E,4μm,1.2s						
KUR				A		13 45 50.4	
	comp=E,540nm,0.8s						
KUR				A		13 45 50.4	
	comp=E,880nm,0.8s						
SKR	Severo-Kuril's	4.45	28	*e*P	Pn	13 44 53.3	-1.1
SKR				AMB	AMB	13 44 57.0	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	13 44 57.0	
	comp=E,90nm,0.5s						
SKR				*e*S	Sn	13 45 41.0	-3.8
SKR				A		13 45 52.5	
	comp=E,150nm,0.5s						
SKR				A		13 45 52.5	
	comp=E,330nm,0.6s						
SKR				A		13 45 52.5	
	comp=E,160nm,0.6s						
YUK	Yuzh-Kuril'sk	5.64	243	*e*PN	Pn	13 45 13.3	+2.5
YUK				*e*S	Sn	13 46 25.8	+12
YUK				pmax	pmax		
	comp=Z,200nm,0.5s						
YUK				smax			
	comp=N,2μm,1.6s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK	Yuzh-Kuril'sk	5.64	243	*e*P	Pn	13 45 13.3	+2.5
YUK				AMB	AMB	13 45 14.5	
	comp=E,200nm,0.5s						
YUK				A		13 46 35.0	
	comp=E,2μm,1.0s						
YUK				A		13 46 35.0	
	comp=E,2μm,1.6s						
YUK				A		13 46 42.5	
	comp=E,300nm,0.5s						
YUK				A		13 46 42.5	
	comp=E,500nm,0.6s						
NEM2	Nemuro 2	6.09	238	P	Pn	13 45 16.1	-0.9
NEM2				*e*S	Sn	13 46 22.5	-2.8
JRA	Rausu	6.15	245	P	Pn	13 45 19.6	+1.9
JNK	Nakash	6.58	244	P	Pn	13 45 24.8	+1.1
JNK				*e*S	Sn	13 46 38.9	+1.6
JTKR	Abashiri--Toko	6.90	249	P	Pn	13 45 30.2	+2.1
YSS	Yuzh-Sakhalins	6.92	275	*e*Pn	Pn	13 45 30.6	+2.3
YSS	Yuzh-Sakhalins	6.92	275	*e*PN	Pn	13 45 31.4	+3.1
YSS				*e*S	Sn	13 46 53.0	+7.4
YSS				pmax	pmax		
	comp=E,50nm,1.0s						
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
JAK	Akkeshi	6.92	240	P	Pn	13 45 27.6	-0.8
JAK				*e*S	Sn	13 46 42.1	-3.7
JMP	Maruseppu	7.24	251	P	Pn	13 45 35.8	+3.1
PET	Petropavlovsk	7.27	29	*e*Pn	Pn	13 45 33.4	+0.4
PET				*e*Sn	Sn	13 46 50.4	-3.7
PET	Petropavlovsk	7.27	29	*e*PN	Pn	13 45 33.9	+0.9
PET				pmax	pmax		
	comp=Z,55nm,0.8s						
PET				MLR	MLR		
	comp=Z,200nm,23.0s						
JAR	Ashorobuto	7.32	245	P	Pn	13 45 35.1	+1.3
JAR				*e*S	Sn	13 46 56.6	+1.1
JOB	Onbets	7.50	242	P	Pn	13 45 36.9	+0.7
JOB				*e*S	Sn	13 46 58.5	-1.3
UGL	Uglegorsk	7.59	291	*e*P	Pn	13 45 41.0	+3.5
UGL				AMB	AMB	13 45 42.5	
	comp=Z,60nm,0.8s						
UGL				AMS	AMS	13 48 18.0	
	comp=Z,500nm,14.0s						
UGL				AMS	AMS	13 48 18.0	
	comp=Z,600nm,16.0s						
UGL				AMS	AMS	13 48 18.0	
	comp=Z,600nm,18.0s						
ASAJ	Asahikawa	7.69	253	P	Pn	13 45 42.6	+3.7
ASAJ	Asahikawa	7.69	253	Pn	Pn	13 45 42.1	+3.2
	comp=Z,2.6nm,0.3s,baz=93,slow=13,SNR=27						
ASAJ				LR	LR	13 48 28.6	
	comp=Z,563nm,20.1s,baz=1.8,slow=37						
JKK2	Kamakawa 2	7.69	251	P	Pn	13 45 41.7	+2.8
JWK2	Keihoku	7.76	263	P	Pn	13 45 46.2	+6.4
JCH	Churui	7.95	242	P	Pn	13 45 42.3	-0.1
JCH				*e*S	Sn	13 47 07.0	-3.8
JFR	Furan	8.13	247	P	Pn	13 45 47.0	+2.2
JAB	Ashibetsu	8.20	250	P	Pn	13 45 49.0	+3.2
ERM	Erimo	8.42	239	*e*Pn	Pn	13 45 49.1	+0.2
	comp=Z,53nm,0.6s						
ERM	Erimo	8.42	239*c*	*e*PN	Pn	13 45 50.1	+1.2
JEM	Erimo	8.42	239	P	Pn	13 45 49.4	+0.5
JEM				*e*S	Sn	13 47 20.4	-2.1
JBT2	Biratori 2	8.47	245	P	Pn	13 45 50.3	+0.8
JNBK	Urakawa-nobuka	8.51	242	P	Pn	13 45 49.1	-1.0
JNBK				*e*S	Sn	13 47 23.3	-1.3
JEW	Eniwo	9.01	248	P	Pn	13 45 58.4	+1.4
OKH	Okha	9.27	320	*e*P	Pn	13 46 03.9	+3.4
OKH				*e*S	Sn	13 47 44.1	+0.9
OKH				*e*L		13 48 52.2	
OKH				AMS	AMS	13 49 59.0	
	comp=Z,500nm,15.0s						
OKH				AMS	AMS	13 49 59.0	
	comp=Z,500nm,15.0s						
OKH				AMS	AMS	13 49 59.0	
	comp=Z,600nm,12.0s						
JNB	Noboribetsu	9.46	247	P	Pn	13 46 03.1	-0.1
JNB				*e*S	Sn	13 47 45.3	-2.8
JKB	Kayabe	9.78	244	P	Pn	13 46 06.1	-1.4
JKB				*e*S	Sn	13 47 49.9	-5.9
JSH	Shimam	10.01	250	P	Pn	13 46 11.7	+1.0
JOT	Ohata	10.06	242	P	Pn	13 46 09.3	-2.1
JYM2	Yakumo 2	10.07	247	P	Pn	13 46 11.3	-0.2
NKL	Nikolayevsk	10.08	314	*e*P	Pn	13 46 09.0	-2.5
NKL				AMB	AMB	13 46 11.0	
	comp=Z,28nm,1.1s						
NKL				AMB	AMB	13 46 11.0	
	comp=Z,55nm,1.1s						
JTM	Tenmabayashi	10.42	239	P	Pn	13 46 13.6	-2.6
JTM				*e*S	Sn	13 48 02.9	-8.5
JANG	Nango	10.43	236	P	Pn	13 46 12.8	-3.5
JANG				*e*S	Sn	13 48 01.8	-10
JTH	Tanohata	10.53	233	P	Pn	13 46 14.8	-2.9
JOM	Ohasama	11.17	233	P	Pn	13 46 23.7	-2.8
JOM				*e*S	Sn	13 48 21.9	-7.9
OFUJ	Ofunato	11.24	231	*e*S	Sn	13 48 20.8	-11
JRG	Rokugo	11.59	235	P	Pn	13 46 29.7	-2.5
JIO	Ouri	11.88	230	P	Pn	13 46 32.7	-3.4
JIO				*e*S	Sn	13 48 35.0	-12
HABR	Khabarovsk	12.12	284	*e*PN	Pn	13 46 38.6	-0.8
MA2	Magadan	12.86	355	*e*Pn	Pn	13 46 50.1	+0.7
MA2	Magadan	12.86	355*c*	*i*PN	Pn	13 46 49.9	+0.5
MA2				pmax	pmax		
	comp=Z,12nm,0.7s						
KLR	Kul'dur	14.32	287	*e*P	Pn	13 47 09.4	+0.1
MJAR	Matsushiro Arr	14.96	232	Pn	Pn	13 47 14.7	-3.2
	comp=Z,0.3nm,0.3s,baz=27,slow=14,SNR=5.8						
MJAR				LR	LR	13 53 05.1	
	comp=Z,114nm,21.0s,baz=85,slow=37						
MAJO	Matsushiro	14.97	232	*e*P	Pn	13 47 23.2	+5.3
	comp=Z,15nm,0.7s						
MAJO	Matsushiro	14.97	232	*e*P	Pn	13 47 23.2	+5.3
MAJO				pmax	pmax		
	comp=Z,15nm,0.7s						
MAT	Matsushiro	14.97	232	P	Pn	13 47 19.4	+1.5
MAT	Matsushiro	14.97	232	P	Pn	13 47 15.8	-2.1
MDJ	Mudanjiang	16.38	271	P	Pn	13 47 35.8	-0.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,88nm,5.4s						
MDJ	Mudanjiang	16.38	271	*e*P	Pn	13 47 39.1	+3.2
	comp=Z,8.7nm,0.8s						
ZEA	Zeya	17.71	302	*e*P	Pn	13 47 51.6	-0.7
ZEA				AMB	AMB	13 47 54.2	
	comp=Z,12nm,1.0s						
CN2	Changchun	19.47	271	*e*P	Pn	13 48 10.8	-2.8
CN2				*e*AP	pP	13 48 25.0	+1.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,300nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
YAK	Yakutsk	20.18	327	*e*P	P	13 48 21.1	+1.5
	comp=Z,34nm,1.1s						
YAK	Yakutsk	20.18	327*d*	*i*P	P	13 48 20.6	+1.0
YAK				pmax	pmax		
	comp=Z,14nm,0.7s						
KSRS	Korea Array	20.64	252	P	P	13 48 26.1	+1.3
	comp=Z,4.0nm,0.6s,baz=64,slow=8.0,SNR=13						
KSRS				LR	LR	13 55 17.9	
	comp=Z,103nm,21.4s,MS3.2,baz=55,slow=33						
JNU	Nakatsue	21.59	239	P	P	13 48 35.9	+0.8
	comp=Z,18nm,1.0s,mb4.5,baz=60,slow=15,SNR=6.7						
BILL	Bilibino	22.38	13	*e*P	P	13 48 42.5	-0.7
	comp=Z,4.7nm,0.8s,mb4.0						
BILL	Bilibino	22.38	13⇓	*i*P	P	13 48 41.9	-1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
BOD	Bodaibo	25.81	310	*e*P	P	13 49 14.3	-1.5
BOD				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb3.7						
BJI	Beijing	27.29	269	P	P	13 49 33.8	+4.5
BJI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
BJI				LR	LR		
	comp=N,193nm,13.3s,MS4.1						
BJI				LR	LR		
	comp=E,314nm,12.6s,MS4.1						
BJI				LR	LR		
	comp=Z,269nm,20.6s						
TIXI	Tiksi	27.37	344⇑	*e*P	P	13 49 30.7	+1.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.2s,mb3.6						
NJ2	Nanjing	29.84	253	*e*P	P	13 49 53.4	+1.4
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
HHC	Hu-ho-hao-te	30.11	274	*e*P	P	13 49 54.9	+0.6
HHC				AP	pP	13 49 59.0	-8.1
HHC				XP	sP	13 50 01.4	-12
HHC				PP	PP	13 50 56.5	-6.2
HHC				PCP	PcP	13 52 48.7	-6.0
HHC				S	S	13 54 58.4	+9.0
HHC				XS	sS	13 55 05.9	-5.0
HHC				SCP	ScP	13 56 31.5	-1.1
HHC				PCS	PcS	13 56 33.9	-4.2
HHC				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,169nm,4.2s						
HHC				LR	LR		
	comp=N,233nm,12.9s,MS4.1						
HHC				LR	LR		
	comp=E,193nm,13.1s,MS4.1						
HHC				LR	LR		
	comp=Z,202nm,16.7s,MS3.8						
ULN	Ulaanbaatar	30.71	289	*e*P	P	13 50 03.6	+4.1
	comp=Z,4.6nm,0.9s,mb4.3						
ULN	Ulaanbaatar	30.71	289	*e*P	P	13 50 03.6	+4.1
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
SONM	Songino Array	31.14	289	P	P	13 50 02.8	-0.5
SONM						13 52 57.3	
SONM	Songino Array	31.14	289	P	P	13 50 02.8	-0.5
	comp=Z,1.2nm,0.9s,mb3.7,baz=67,slow=8.7,SNR=4.5						
SONM				PcP	PcP	13 52 57.3	0.0
	comp=Z,0.5nm,0.6s,baz=112,slow=2.5,SNR=4.1						
SONM				LR	LR	14 03 56.0	
	comp=Z,238nm,18.1s,MS3.9,baz=189,slow=39						
TLY	Talaya	31.99	297⇑	*e*P	P	13 50 09.4	-1.3
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
ZAK	Zakamensk	32.49	295	*e*P	P	13 50 14.1	-1.0
ZAK				*e*		13 52 59.7	
TTA	Tatalina	32.50	42	*e*P	P	13 50 15.7	+0.5
	comp=Z,16nm,1.7s,mb4.7						
TTA	Tatalina	32.50	42	*e*P	P	13 50 15.7	+0.6
TTA				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.7						
IMA2	Indian Mountai	33.87	36	*e*P	P	13 50 26.7	-0.3
XAN	Xi'an	35.34	265	P	P	13 50 40.3	+0.3
XAN				AMB	AMB		
	comp=Z,13nm,1.1s,mb4.8						
COLA	College	36.21	38	*e*P	P	13 50 47.1	0.0
	comp=Z,6.1nm,0.8s,mb4.6						
COLA	College	36.21	38⇑	*e*P	P	13 50 47.2	+0.1
LZH	Lanzhou	37.70	272	*e*P	P	13 51 01.8	+1.7
LZH				AP	pP	13 51 06.3	-6.8
LZH				XP	sP	13 51 08.9	-10
LZH				PP	PP	13 52 31.2	+4.4
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,56nm,5.2s						
LZH				LR	LR		
	comp=N,378nm,13.2s						
LZH				LR	LR		
	comp=Z,593nm,17.5s,MS4.5						
GTA	Gaotai	38.78	279	*e*P	P	13 51 11.4	+2.2
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.0						
EGAK	Eagle	39.07	38	*e*P	P	13 51 10.6	-0.7
	comp=Z,5.6nm,0.9s,mb4.3						
CD2	Chengdu	40.70	265	*e*P	P	13 51 26.8	+1.6
CD2				AP	pP	13 51 31.8	-6.5
CD2				XP	sP	13 51 33.9	-10
CD2				PP	PP	13 53 04.4	+4.8
CD2				S	S	13 57 37.0	+5.1
CD2				XS	sS	13 57 44.9	-9.0
CD2				SS	SS	14 00 33.1	-0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,120nm,12.4s						
CD2				LR	LR		
	comp=Z,100nm,14.2s,MS3.8						
INK	Inuvik	41.71	32	*e*P	P	13 51 33.5	+0.5
	comp=Z,177nm,0.6s,mb5.9						
INK	Inuvik	41.71	32	P	P	13 51 33.5	+0.5
	comp=Z,7.8nm,0.8s,mb4.4,baz=281,slow=6.8,SNR=31						
WMQ	Urumqi	44.74	291	⇑P	P	13 52 00.0	+2.3
WMQ				AP	pP	13 52 04.5	-6.5
WMQ				XP	sP	13 52 07.0	-10
WMQ				PCP	PcP	13 53 42.0	+2.8
WMQ				PP	PP	13 53 45.8	+3.1
WMQ				S	S	13 58 36.5	+5.6
WMQ				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb4.2						
WMQ				AMB	AMB		
	comp=Z,250nm,6.0s						
WMQ				LR	LR		
	comp=N,101nm,18.0s,MS3.9						
WMQ				LR	LR		
	comp=E,78nm,21.6s,MS3.9						
WMQ				LR	LR		
	comp=Z,100nm,21.6s,MS3.7						
KMI	Kunming	45.07	259	P	P	13 52 01.2	+0.6
KMI				PP	PP	13 53 47.8	+1.2
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
KMI				AMB	AMB		
	comp=Z,84nm,5.3s						
KMI				LR	LR		
	comp=Z,38nm,27.3s,MS3.2						
KMI	Kunming	45.07	259	P	P	13 52 01.2	+0.6
KMI				pP	pP	13 52 18.6	+4.7
KMI				sP	sP	13 52 27.6	+8.0
KMI				PP	PP	13 53 47.8	+1.2
KMI				S	S	13 58 31.2	-4.9
KMI				sS	sS	13 59 04.4	+6.1
KMI				SS	SS	14 01 47.3	-12
KMI	Kunming	45.07	259	P	P	13 52 01.2	+0.6
KMI				*PP	pP	13 52 18.6	+4.7
KMI				*SP	sP	13 52 27.6	+8.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI						13 53 47.8	
KMI				S	S	13 58 31.2	-4.9
KMI				SS	SS	14 01 47.3	-12
MKAR	**Makanchi Array**	**46.75**	**297**	P	**P**	**13 52 12.7**	**-0.9**
MKAR				PcP	PcP	13 53 46.2	0.0
MKAR				LR	LR	14 13 02.6	
MKAR	**Makanchi Array**	**46.75**	**297**	P	**P**	**13 52 12.7**	**-0.9**
MKAR						13 53 46.2	
MKAR	**Makanchi Array**	**46.75**	**297**	P	**P**	**13 52 12.7**	**-0.9**
	comp=Z,0.8nm,0.5s,mb3.9,baz=66,slow=6.6,SNR=12						
MKAR				PcP	PcP	13 53 46.2	0.0
	comp=Z,1.7nm,0.8s,baz=57,slow=4.2,SNR=5.1						
MKAR				LR	LR	14 13 02.6	
	comp=Z,186nm,19.4s,MS4.0,baz=248,slow=38						
KURK	**Kurchatov**	**47.18**	**303**	*e*P	**P**	**13 52 16.1**	**-0.8**
	comp=Z,2.5nm,0.8s,mb4.2						
KURK	**Kurchatov**	**47.18**	**303**	⇑*e*P	**P**	**13 52 16.3**	**-0.6**
LSA	**Lhasa**	**50.09**	**273**	*e*P	**P**	**13 52 41.5**	**+2.0**
	comp=Z,4.4nm,0.6s,mb4.7						
LSA	**Lhasa**	**50.09**	**273**	*e*P	**P**	**13 52 41.5**	**+2.0**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
RES	**Resolute Bay**	**50.85**	**18**	*e*P	**P**	**13 52 44.0**	**-0.7**
	comp=Z,56nm,0.7s,mb5.6						
YKW3	**Yellowknife Ar**	**50.96**	**37**	*e*P	**P**	**13 52 45.9**	**+0.3**
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**13 52 46.0**	**+0.1**
YKA				pP	pP	13 52 54.2	-5.1
YKA				PcP	PcP	13 54 00.8	-0.4
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**13 52 46.0**	**+0.1**
	comp=Z,3.7nm,0.8s,mb4.4,baz=298,slow=7.1,SNR=47						
YKA				pP	pP	13 52 54.2	-5.1
	comp=Z,2.4nm,0.6s,baz=296,slow=7.1,SNR=17						
YKA				PcP	PcP	13 54 00.8	-0.5
	comp=Z,1.1nm,0.9s,baz=299,slow=3.5,SNR=4.3						
CHTO	**Chiang Mai**	**51.95**	**256**	*e*P	**P**	**13 52 53.9**	**+0.4**
	comp=Z,8.0nm,0.9s,mb4.7						
CHTO	**Chiang Mai**	**51.95**	**256**	*e*P	**P**	**13 52 53.9**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
SHL	**Shillong**	**52.19**	**268**	*e*P	**P**	**13 52 57.0**	**+1.7**
AAK	**Ala-Archa**	**53.65**	**296**	*e*P	**P**	**13 53 04.8**	**-1.1**
AAK	**Ala-Archa**	**53.65**	**296**	⇑*e*P	**P**	**13 53 04.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
TAPN	**Taplejung**	**53.91**	**273**	*e*P	**P**	**13 53 09.5**	**+1.5**
	comp=Z,19nm,0.9s,mb5.0						
ODAN	**Odare**	**54.44**	**273**	*e*P	**P**	**13 53 13.0**	**+1.2**
	comp=Z,43nm,1.3s,mb5.2						
JIRN	**Jiri**	**54.76**	**274**	*e*P	**P**	**13 53 15.1**	**+1.0**
	comp=Z,54nm,1.0s,mb5.5						
ARU	**Arti**	**54.85**	**317**	⇑*e*P	**P**	**13 53 12.9**	**-1.4**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
KKN	**Kakani**	**55.30**	**275**	*e*P	**P**	**13 53 19.2**	**+1.2**
	comp=Z,30nm,1.0s,mb5.3						
KKN	**Kakani**	**55.30**	**275**	*e*P	**P**	**13 53 19.2**	**+1.2**
KKN				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
GKN	**Gorkha**	**55.60**	**276**	*e*P	**P**	**13 53 20.8**	**+0.6**
	comp=Z,48nm,1.0s,mb5.5						
ARCES	**ARCESS Array B**	**57.74**	**341**	P	**P**	**13 53 34.3**	**-0.5**
	comp=Z,2.5nm,0.9s,mb4.2,baz=34,slow=7.2,SNR=5.5						
ARCES				LR	LR	14 21 44.9	
	comp=Z,106nm,20.1s,MS4.0,baz=288,slow=40						
WALA	**Waterton Lakes**	**58.55**	**50**	*e*P	**P**	**13 53 40.4**	**-0.3**
	comp=Z,5.8nm,0.8s,mb4.7						
BMO	**Blue Mountains**	**59.20**	**56**	*e*P	**P**	**13 53 45.8**	**+0.5**
	comp=Z,7.8nm,1.6s,mb4.5						
MSO	**Missoula**	**59.88**	**52**	*e*P	**P**	**13 53 50.2**	**+0.3**
	comp=Z,5.5nm,1.2s,mb4.5						
JOF	**Joensuu**	**61.21**	**334**	*e*p	**P**	**13 53 56.5**	**-2.2**
	comp=Z,3.7nm,0.7s,mb4.6						
JOF	**Joensuu**	**61.21**	**334**	*e*P	**P**	**13 53 56.5**	**-2.2**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
LRM	**Limekiln Ridge**	**61.31**	**53**	*e*P	**P**	**13 54 00.6**	**+0.9**
FCC	**Fort Churchill**	**61.32**	**33**	*e*P	**P**	**13 53 58.7**	**-0.8**
	comp=Z,6.2nm,0.7s,mb4.8						
FCC	**Fort Churchill**	**61.32**	**33**	*e*P	**P**	**13 53 58.7**	**-0.8**
FCC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
NVAR	**Mina Array Bea**	**62.57**	**62**	P	**P**	**13 54 08.9**	**+0.6**
	comp=Z,1.8nm,0.8s,mb4.2,baz=302,slow=6.4,SNR=11						
NVAR				pP	pP	13 54 17.8	-4.4
	comp=Z,1.1nm,0.7s,baz=302,slow=6.0,SNR=5.6						
KAF	**Kangasniemi**	**63.32**	**335**	*e*p	**P**	**13 54 11.5**	**-1.3**
	comp=Z,3.2nm,0.6s,mb4.6,baz=36,slow=6.3						
KAF	**Kangasniemi**	**63.32**	**335**	*e*P	**P**	**13 54 11.5**	**-1.3**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
LOHW	**Long Hollow**	**63.73**	**54**	*e*P	**P**	**13 54 17.0**	**+1.1**
	comp=Z,2.2nm,0.9s,mb4.2						
REDW	**Red Top Meadow**	**63.76**	**54**	*e*P	**P**	**13 54 16.8**	**+0.7**
	comp=Z,6.4nm,0.9s,mb4.7						
DGMT	**Dagmar**	**63.91**	**46**	*e*P	**P**	**13 54 17.2**	**+0.3**
	comp=Z,7.6nm,0.8s,mb4.8						
FIA1	**FINESS Array S**	**63.91**	**335**	*e*P	**P**	**13 54 15.8**	**-1.0**
FINES	**FINESS Array B**	**63.92**	**335**	⇑*e*P	**P**	**13 54 16.0**	**-0.8**
FINES	**FINESS Array B**	**63.92**	**335**	P	**P**	**13 54 15.9**	**-0.8**
	comp=Z,3.3nm,0.4s,mb4.7,baz=38,slow=7.0,SNR=39						
FINES				LR	LR	14 25 08.4	
	comp=Z,124nm,19.4s,MS4.1,baz=10.0,slow=39						
LAO	**LASA Array**	**64.06**	**49**	*e*P	**P**	**13 54 18.9**	**+0.9**
	comp=Z,5.0nm,0.9s,mb4.5						
DUG	**Dugway**	**64.70**	**58**	*e*P	**P**	**13 54 22.4**	**+0.1**
	comp=Z,3.9nm,1.2s,mb4.3						
DUG	**Dugway**	**64.70**	**58**	*e*P	**P**	**13 54 22.4**	**+0.1**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
TPNV	**Topopah Spring**	**64.77**	**62**	*e*P	**P**	**13 54 22.6**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.3						
TPNV	**Topopah Spring**	**64.77**	**62**	*e*P	**P**	**13 54 22.6**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BW06	**Boulder Array**	**64.86**	**54**	*e*P	**P**	**13 54 23.6**	**+0.3**
	comp=Z,4.3nm,1.1s,mb4.4						
PDAR	**Pinedale Array**	**64.86**	**54**	P	**P**	**13 54 23.6**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.3,baz=307,slow=2.0,SNR=22						
PDAR				pP	pP	13 54 32.9	-4.3
	comp=Z,1.2nm,0.8s,baz=321,slow=2.0,SNR=6.2						
ULM	**Lac du Bonnet**	**66.60**	**41**	P	**P**	**13 54 33.4**	**-1.0**
ULM	**Lac du Bonnet**	**66.60**	**41**	P	**P**	**13 54 33.4**	**-0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=310,slow=5.9,SNR=8.2						
SRU	**San Rafael**	**66.75**	**57**	*e*P	**P**	**13 54 35.5**	**0.0**
PV10	**Paradox Valley**	**68.10**	**57**	*e*P	**P**	**13 54 44.4**	**+0.4**
NB2	**NORSAR Subarra**	**68.12**	**341**	P	**P**	**13 54 42.9**	**-0.9**
	comp=Z,11nm,0.8s,mb4.9,baz=27,slow=6.5						
NB2	**NORSAR Subarra**	**68.12**	**341**	P	**P**	**13 54 42.9**	**-0.9**
NB2				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
NOA	**NORSAR Array B**	**68.12**	**341**	P	**P**	**13 54 43.2**	**-0.6**
NOA	**NORSAR Array B**	**68.12**	**341**	P	**P**	**13 54 43.2**	**-0.5**
	comp=Z,9.1nm,0.8s,mb4.8,baz=27,slow=6.3,SNR=25						
WRA	**Warramunga Arr**	**68.50**	**199**	P	**P**	**13 54 45.8**	**-0.8**
	comp=Z,1.9nm,0.9s,mb4.0,baz=13,slow=6.9,SNR=7.9						
SMCO	**Snowmass**	**68.73**	**55**	*e*P	**P**	**13 54 42.9**	**-5.0**
	comp=Z,1.9nm,0.6s,mb4.2						
KIV	**Kislovodsk**	**70.63**	**314**	⇓*e*P	**P**	**13 54 57.1**	**-2.5**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.3						
ECSD	**EROS,Sioux Fal**	**70.98**	**46**	*e*P	**P**	**13 55 00.1**	**-1.6**
	comp=Z,3.3nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	**71.40**	**326**	P	**P**	**13 55 03.1**	**-1.0**
	comp=Z,4.8nm,0.4s,mb4.8,baz=35,slow=6.4,SNR=25						
KIEV	**Kiev**	**71.41**	**326**	*e*P	**P**	**13 55 02.8**	**-1.4**
	comp=Z,11nm,1.0s,mb4.7						
KIEV	**Kiev**	**71.41**	**326**	*e*P	**P**	**13 55 02.8**	**-1.4**
KIEV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
ASAR	**Alice Springs**	**72.20**	**198**	P	**P**	**13 55 09.6**	**+0.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=12,slow=4.9,SNR=26						
ASAR				pP	pP	13 55 19.1	-4.0
	comp=Z,1.5nm,0.7s,baz=12,slow=6.0,SNR=4.5						
KWP	**Kalwaria**	**74.69**	**329**	*e*P	**P**	**13 55 23.8**	**+0.2**
STHS	**Stebnicka Huta**	**75.38**	**330**	*e*P	**P**	**13 55 27.4**	**-0.1**
	comp=Z,6.1nm,0.9s,mb4.5						
STHS	**Stebnicka Huta**	**75.38**	**330**	*e*P	**P**	**13 55 27.4**	**-0.1**
STHS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KOLS	**Kolonicke sedl**	**75.43**	**329**	*e*P	**P**	**13 55 27.5**	**-0.3**
CRVS	**Cervenica-Dubn**	**75.74**	**329**	*e*P	**P**	**13 55 29.1**	**-0.5**
DPC	**Dobruska-Polom**	**76.20**	**333**	*e*P	**P**	**13 55 32.4**	**+0.2**
MORC	**Moravsky Berou**	**76.31**	**332**	*e*P	**P**	**13 55 32.6**	**-0.2**
	comp=Z,7.1nm,1.0s,mb4.5						
MORC	**Moravsky Berou**	**76.31**	**332**	*e*P	**P**	**13 55 32.6**	**-0.2**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CLL	**Collm**	**76.34**	**335**	⇓*i*P	**P**	**13 55 32.3**	**-0.7**
	comp=Z,17nm,1.1s,mb4.9						
CLL	**Collm**	**76.34**	**335**	⇓*i*P	**P**	**13 55 32.3**	**-0.7**
CLL				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
CLL	**Collm**	**76.34**	**335**	⇓*i*P	**P**	**13 55 32.3**	**-0.7**
	comp=Z,17nm,1.1s,mb4.9						
KECS	**Kecovo**	**76.44**	**330**	*e*P	**P**	**13 55 33.5**	**-0.1**
	comp=Z,3.2nm,1.0s,mb4.2						
KECS	**Kecovo**	**76.44**	**330**	*e*P	**P**	**13 55 33.5**	**-0.1**
KECS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
BRG	**Berggiesshubel**	**76.46**	**335**	*e*P	**P**	**13 55 33.4**	**-0.3**
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
BRG	**Berggiesshubel**	**76.46**	**335**	*e*P	**P**	**13 55 33.4**	**-0.2**
	comp=Z,2.7nm,0.9s,mb4.2						
PVCC	**Panska Ves**	**76.58**	**334**	*e*P	**P**	**13 55 33.3**	**-1.0**
VYHS	**Vyhne**	**76.99**	**331**	*e*P	**P**	**13 55 36.5**	**-0.2**
	comp=Z,3.6nm,1.0s,mb4.3						
VYHS	**Vyhne**	**76.99**	**331**	*e*P	**P**	**13 55 36.5**	**-0.2**
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
PRU	**Pruhonice**	**77.06**	**334**	*e*P	**P**	**13 55 37.0**	**-0.1**
NKC	**Novy Kostel**	**77.46**	**335**	*e*P	**P**	**13 55 39.1**	**-0.2**
MODS	**Modra-Piesok**	**77.61**	**331**	*e*P	**P**	**13 55 41.2**	**+1.0**
	comp=Z,3.9nm,1.0s,mb4.3						
MODS	**Modra-Piesok**	**77.61**	**331**	*e*P	**P**	**13 55 41.2**	**+1.0**
MODS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**77.63**	**60**	P	**P**	**13 55 40.5**	**-0.1**
TXAR				pP	pP	13 55 49.9	-4.9
TXAR	**Lajitas Array**	**77.63**	**60**	P	**P**	**13 55 40.5**	**-0.1**
	comp=Z,1.4nm,0.5s,mb4.1,baz=302,slow=4.4,SNR=24						
TXAR				pP	pP	13 55 49.9	-4.9
	comp=Z,3.6nm,0.6s,baz=299,slow=4.3,SNR=17						
KHC	**Kasperske Hory**	**78.11**	**334**	⇑*e*P	**P**	**13 55 43.1**	**+0.1**
KHC	**Kasperske Hory**	**78.11**	**334**	*e*P	**P**	**13 55 43.0**	**0.0**
BRTR	**Keskin Array B**	**78.23**	**317**	⇑*e*P	**P**	**13 55 44.2**	**+0.4**
BRTR	**Keskin Array B**	**78.23**	**317**	P	**P**	**13 55 44.1**	**+0.4**
	comp=Z,3.6nm,0.9s,mb4.3,baz=57,slow=4.6,SNR=13						
GERES	**GERESS Array B**	**78.33**	**334**	P	**P**	**13 55 43.4**	**-0.7**
	comp=Z,0.9nm,0.4s,mb4.0,baz=50,slow=7.2,SNR=10						
RST	**Umm Al-Ruwaisa**	**78.90**	**301**	*e*P	**P**	**13 55 47.1**	**-0.6**
RST				AMb	AMB	13 55 48.9	
	comp=Z,42nm,0.7s,mb5.5						
QRN	**Al-Qurain**	**78.92**	**300**	*e*P	**P**	**13 55 47.5**	**-0.2**
QRN				AMb	AMB	13 55 49.3	
	comp=Z,28nm,0.6s,mb5.3						
NAY	**Al-Naaiem**	**78.94**	**301**	*e*P	**P**	**13 55 47.4**	**-0.5**
NAY				AMb	AMB	13 55 49.5	
	comp=Z,18nm,1.0s,mb5.0						
RDF	**Al-Radifah**	**79.00**	**301**	*e*P	**P**	**13 55 48.0**	**-0.2**
RDF				AMb	AMB	13 55 50.1	
	comp=Z,43nm,1.0s,mb5.3						
LOR	**Lormes**	**82.47**	**339**	*e*P	**P**	**13 56 09.9**	**+3.5**
SMF	**Signal de Mont**	**83.05**	**339**	*e*P	**P**	**13 56 12.0**	**+2.6**
	comp=Z,17nm,1.0s,mb4.7						
SMF	**Signal de Mont**	**83.05**	**339**	*e*P	**P**	**13 56 12.0**	**+2.6**
	comp=Z,8.3nm,1.0s,mb4.7						
SMF	**Signal de Mont**	**83.05**	**339**	*e*P	**P**	**13 56 12.0**	**+2.6**
SMF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
CFAA	**Coronel Fontan**	**145.16**	**79**	PKPbc	PKPbc	14 03 19.9	-1.1
	comp=Z,0.6nm,0.7s,baz=289,slow=2.4,SNR=8.5						
MDZ	**Mendoza**	**145.52**	**81**	*e*P	PKPdf	14 03 17.6	-4.2
VNA2	**Neumayer--Watz**	**154.01**	**195**	*e*PKPdf	PKPab	14 03 56.2	+0.4
VNA3	**Neumayer Olymp**	**154.10**	**193**	*e*PKPdf	PKPab	14 03 56.1	-0.1

*NIED **08** 14:29:00,3560N×14100E,h32km,Mw4.2 Best double couple: Mo2.35000×10¹⁵ NP1:φs247.00000°,δ13.00000°, λ150.00000°. NP2:φs7.00000°,δ83.00000°,λ79.00000°.*
*ISCJB **08** 14:29:39.9±0.6,3555N±003×14120E±007,h41km±4km, mb4.3/36,MS3.6/4,Error ellipse: s-maj=9.0km s-min=5.1km az=179.8*
*MOS **08** 14:29:39.1±1.0,3556N×141.13E,h33km,mb4.5/18,Error ellipse: s-maj=12.9km s-min=6.8km az=111.1*
*BJI **08** 14:29:40.3,3560N×14095E,h39km,mB4.8,mb4.4,Ms4.5, Msz4.2*
*JMA **08** 14:29:41.5±0.1,3556N×14104E,h38km±1km,M4.2*
JMA Felt I J1.
*IDC **08** 14:29:42.1±2.9,3550N×14105E,h37km±23km,mb3.9/13, mb1 4.0/18,mb1mx3.9/26,mbtmp4.0/18,ML4.0/5,MS3.4/9, Ms1 3.5/9,ms1mx3.3/32,Error ellipse: s-maj=25.0km s-min=12.4km az=84.0*
*NEIC **08** 14:29:44.9±1.0,3553N×14091E,h62km±8km,mb4.5/13, MW4.2(NIED),Error ellipse: s-maj=9.4km s-min=6.8km az=99.0*
NEIC Recorded [1 JMA] in Chiba Prefecture.
ISC 08 14:29:41.0±0.8**,3553N**±003×**14114E**±006**,h32**km±5km**, n87,σ0s86**/91**,mb4.3**/36**,MS3.6**/4**,8C-7D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.29**	**307**	⇓P	**Pb**	**14 29 48.6**	**+0.1**
CHOJ				*e*S	**Sb**	**14 29 53.6**	**0.0**
JCN	**Nagara**	**0.78**	**262**	⇓P	**Pn**	**14 29 56.0**	**+0.3**
BSO4	**Boso 4**	**0.85**	**231**	⇓P	**Pn**	**14 29 56.7**	**0.0**
BSO1	**Boso 1**	**0.88**	**189**	⇓P	**Pn**	**14 29 57.3**	**+0.1**
BSO1				*e*S	**Sn**	**14 30 09.5**	**+0.6**
BSO3	**Boso 3**	**0.89**	**216**	⇓P	**Pn**	**14 29 57.2**	**-0.1**
BSO3				*e*S	**Sn**	**14 30 09.9**	**+0.8**
JYT	**Yasato**	**1.04**	**312**	⇓P	**Pn**	**14 29 58.6**	**-0.7**
JIM2	**Oshima 3**	**1.62**	**241**	P	**Pn**	**14 30 05.8**	**-1.5**
JAG	**Ashikaga**	**1.64**	**304**	P	**Pn**	**14 30 07.2**	**-0.3**
JOD2	**Odawara 2**	**1.70**	**262**	P	**Pn**	**14 30 08.0**	**-0.4**
MJAR	**Matsushiro Arr**	**2.58**	**294**	Pn	**Pn**	**14 30 21.4**	**+0.9**
	30nm,0.3s,baz=99,slow=7.9,SNR=263						
MJAR				LR	LR	14 31 26.9	
	comp=Z,1μm,19.5s,baz=50,slow=42						
MAJO	**Matsushiro**	**2.58**	**294**	*e*Pn	**Pn**	**14 30 21.9**	**+1.3**
MAT	**Matsushiro**	**2.58**	**294**	P	**Pn**	**14 30 22.0**	**+1.4**
MAT				*e*S	**Sn**	**14 30 52.5**	**+1.6**
JHJ	**Hachijo jima 2**	**2.65**	**205**	Pn	**Pn**	**14 30 21.4**	**-0.2**
	64nm,0.3s,baz=285,slow=22,SNR=22						
JHJ				Sn	**Sn**	**14 30 51.1**	**-1.5**
	95nm,0.3s,baz=266,slow=24,SNR=7.6						
JHJ				LR	LR	14 31 35.0	
	comp=Z,345nm,18.9s,baz=325,slow=44						
ERM	**Erimo**	**6.67**	**13**	⇑*e*P	**Pn**	**14 31 16.9**	**+0.3**
CBIJ	**Chichi jima**	**8.45**	**174**	Pn	**Pn**	**14 31 41.0**	**-0.3**
	19nm,0.3s,baz=48,slow=20,SNR=7.0						
ASAJ	**Asahikawa**	**8.65**	**7**	Pn	**Pn**	**14 31 43.0**	**-0.8**
	1.9nm,0.3s,baz=198,slow=7.0,SNR=13						
ASAJ				LR	LR	14 35 46.1	
	comp=Z,92nm,22.0s,baz=294,slow=42						
JNU	**Nakatsue**	**8.82**	**257**	Pn	**Pn**	**14 31 47.9**	**+1.6**
	0.5nm,0.3s,baz=147,slow=9.2,SNR=4.8						
KSRS	**Korea Array**	**10.81**	**284**	Pn	**Pn**	**14 32 17.4**	**+3.8**
	0.3nm,0.3s,baz=103,slow=14,SNR=6.5						
KSRS				LR	LR	14 36 23.3	
	comp=Z,349nm,20.2s,baz=163,slow=37						
YSS	**Yuzh-Sakhalins**	**11.48**	**6**	⇑*e*P	**Pn**	**14 32 21.8**	**-0.8**
HABR	**Khabarovsk**	**13.70**	**343**	P	**Pn**	**14 32 50.9**	**-2.0**
HABR				*e*		14 35 22.2	
JOW	**Kunigami**	**14.01**	**235**	LR	LR	14 38 14.1	
	comp=Z,95nm,20.5s,baz=34,slow=37						
CN2	**Changchun**	**14.62**	**309**	*e*P	**Pn**	**14 33 09.2**	**+3.7**
BJI	**Beijing**	**20.22**	**290**	P	**P**	**14 34 22.0**	**+8.8**
MA2	**Magadan**	**24.87**	**12**	*e*P	**P**	**14 35 02.2**	**+1.8**
	6.3nm,0.8s,mb4.2						
MA2	**Magadan**	**24.87**	**12**	⇑*e*P	**P**	**14 35 02.4**	**+2.0**
MA2				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
YAK	**Yakutsk**	**27.49**	**348**	*e*P	**P**	**14 35 23.8**	**-0.2**
YAK	**Yakutsk**	**27.49**	**348**	⇓*i*P	**P**	**14 35 24.2**	**+0.1**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
SONM	**Songino Array**	**28.47**	**306**	P	**P**	**14 35 32.6**	**-0.4**
	comp=Z,2.0nm,0.6s,mb3.9,baz=108,slow=8.8,SNR=11						
SONM				LR	LR	14 46 57.5	
	comp=Z,87nm,20.8s,MS3.3,baz=249,slow=36						
BOD	**Bodaibo**	**28.70**	**329**	*e*P	**P**	**14 35 34.1**	**-0.8**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.8						
ZAK	**Zakamensk**	**31.05**	**310**	*e*P	**P**	**14 35 54.8**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.6						
BILL	**Bilibino**	**35.53**	**16**	*e*P	**P**	**14 36 35.0**	**+0.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
TIXI	**Tiksi**	**36.76**	**354**	⇑*e*P	**P**	**14 36 45.1**	**+0.1**
LSA	**Lhasa**	**42.15**	**277**	P	**P**	**14 37 30.2**	**-0.3**
LSA	**Lhasa**	**42.15**	**277**	*e*P	**P**	**14 37 31.1**	**+0.6**
	comp=Z,1.4nm,0.4s,mb3.9						
LSA	**Lhasa**	**42.15**	**277**	*e*P	**P**	**14 37 31.1**	**+0.6**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
NVS	**Novosibirsk**	**43.73**	**315**	*e*P	**P**	**14 37 41.2**	**-1.8**
MK31	**Makanchi Array**	**44.75**	**303**	*e*P	**P**	**14 37 51.1**	**-0.1**
MK31				*e*	pP	14 38 00.9	+0.2
MK31	**Makanchi Array**	**44.75**	**303**	*i* P	**P**	**14 37 51.0**	**-0.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**44.75**	**303**	*i* P	**P**	**14 37 51.2**	**0.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	**Makanchi Array**	**44.75**	**303**	P	**P**	**14 37 51.2**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.2,baz=84,slow=9.4,SNR=45						
MKAR				PcP	PcP	14 39 33.7	+0.7
	comp=Z,0.6nm,0.8s,baz=84,slow=5.9,SNR=2.3						
MKAR				LR	LR	14 56 50.6	
	comp=Z,56nm,20.6s,MS3.5,baz=253,slow=36						
TAPN	**Taplejung**	**45.84**	**275**	*e*P	**P**	**14 37 59.5**	**-0.7**
	comp=Z,5.6nm,0.5s,mb4.8						
ODAN	**Odare**	**46.30**	**275**	*e*P	**P**	**14 38 03.2**	**-0.6**
	comp=Z,12nm,0.9s,mb4.8						
KURK	**Kurchatov**	**46.70**	**309**	*e*P	**P**	**14 38 05.9**	**-0.7**
	comp=Z,7.3nm,0.8s,mb4.7						
KURK	**Kurchatov**	**46.70**	**309**	⇑*e*P	**P**	**14 38 06.1**	**-0.5**
JIRN	**Jiri**	**46.95**	**276**	*e*P	**P**	**14 38 09.1**	**+0.2**
	comp=Z,5.5nm,0.3s,mb4.9						
KKN	**Kakani**	**47.64**	**277**	*e*P	**P**	**14 38 13.9**	**-0.3**
GKN	**Gorkha**	**48.07**	**278**	*e*P	**P**	**14 38 17.3**	**-0.3**
TKM2	**Tokmak 2**	**50.16**	**299**	*e*P	**P**	**14 38 33.3**	**-0.1**
	comp=Z,4.3nm,0.5s,mb4.7						
TKM2	**Tokmak 2**	**50.16**	**299**	*e*P	**P**	**14 38 33.3**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**51.02**	**299**	*e*P	**P**	**14 38 38.5**	**-1.4**
	comp=Z,2.3nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**51.02**	**299**	⇑*e*P	**P**	**14 38 38.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BRVK	**Borovoye**	**51.49**	**313**	*e*P	**P**	**14 38 43.0**	**-0.2**
	comp=Z,1.9nm,0.4s,mb4.4						
BRVK	**Borovoye**	**51.49**	**313**	*e*P	**P**	**14 38 43.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
EKS2	**Erkin-Say**	**51.52**	**300**	*e*P	**P**	**14 38 43.7**	**+0.1**
	comp=Z,5.9nm,1.3s,mb4.4						
AML	**Almayashu**	**51.73**	**299**	*e*P	**P**	**14 38 46.0**	**+0.8**
	comp=Z,7.9nm,0.8s,mb4.7						
KK31	**Karatay Array**	**53.70**	**301**	*i* P	**P**	**14 38 58.6**	**-1.1**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
FITZ	**Fitzroy Crossi**	**55.33**	**198**	P	**P**	**14 39 12.3**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.4,baz=7.7,slow=12,SNR=5.7						
WRA	**Warramunga Arr**	**55.54**	**188**	*i* P	**P**	**14 39 12.8**	**-0.4**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**55.54**	**188**	P	**P**	**14 39 12.9**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.5,baz=6.1,slow=8.1,SNR=42						
INK	**Inuvik**	**55.83**	**27**	P	**P**	**14 39 16.0**	**+1.3**
	comp=Z,0.5nm,0.6s,mb3.8,baz=292,slow=5.7,SNR=3.6						
SVE	**Sverdlovsk**	**56.14**	**319**	*e*P	**P**	**14 39 17.8**	**+0.7**
ARU	**Arti**	**57.35**	**319**	*e*P	**P**	**14 39 25.5**	**-0.2**
	comp=Z,9.6nm,1.0s,mb4.8						
ARU				*e*	pP	14 39 35.6	+0.2
ARU	**Arti**	**57.35**	**319**	⇑*e*P	**P**	**14 39 25.4**	**-0.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ASAR	**Alice Springs**	**59.27**	**188**	P	**P**	**14 39 39.8**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=9.3,slow=8.7,SNR=21						
RES	**Resolute Bay**	**64.11**	**14**	*e*P	**P**	**14 40 12.7**	**+1.2**
	comp=Z,130nm,1.0s						
YKA	**Yellowknife Ar**	**65.22**	**30**	*i* P	**P**	**14 40 21.0**	**+2.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**65.22**	**30**	P	**P**	**14 40 20.3**	**+1.4**
	comp=Z,0.5nm,0.9s,mb3.5,baz=301,slow=6.7,SNR=5.6						
ARCES	**ARCESS Array B**	**65.33**	**340**	P	**P**	**14 40 20.4**	**+0.9**
	comp=Z,3.4nm,0.9s,mb4.4,baz=51,slow=9.6,SNR=7.4						
STKA	**Stephens Creek**	**67.05**	**180**	P	**P**	**14 40 31.6**	**+0.7**
	comp=Z,1.0nm,0.5s,mb4.1,baz=38,slow=12,SNR=3.3						
JOF	**Joensuu**	**67.19**	**332**	*e*p	**P**	**14 40 31.1**	**-0.4**
	comp=Z,2.4nm,0.4s,mb4.6						
JOF	**Joensuu**	**67.19**	**332**	*e*P	**P**	**14 40 31.1**	**-0.4**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
KAF	**Kangasniemi**	**69.54**	**333**	*e*p	**P**	**14 40 45.3**	**-0.9**
	comp=Z,2.2nm,0.5s,mb4.3,baz=50,slow=5.8						
KAF	**Kangasniemi**	**69.54**	**333**	*e*P	**P**	**14 40 45.3**	**-0.9**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
FINES	**FINESS Array B**	**70.04**	**332**	*i* P	**P**	**14 40 49.7**	**+0.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**70.04**	**332**	P	**P**	**14 40 49.8**	**+0.5**
	comp=Z,1.5nm,0.5s,mb4.2,baz=60,slow=5.5,SNR=14						
FINES				LR	LR	15 13 43.8	
	comp=Z,64nm,19.2s,MS3.9,baz=340,slow=38						
KIV	**Kislovodsk**	**71.73**	**311**	P	**P**	**14 40 58.0**	**-1.9**
KIV	**Kislovodsk**	**71.73**	**311**	⇑*e*P	**P**	**14 40 58.1**	**-1.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
AKASG	**Malin Array Be**	**75.35**	**322**	P	**P**	**14 41 21.0**	**0.0**
AKASG	**Malin Array Be**	**75.35**	**322**	P	**P**	**14 41 21.0**	**0.0**
	comp=Z,1.6nm,0.4s,mb4.3,baz=47,slow=5.9,SNR=14						
NB2	**NORSAR Subarra**	**75.49**	**337**	P	**P**	**14 41 21.9**	**+0.3**
	comp=Z,1.5nm,0.6s,mb4.1,baz=41,slow=5.9						
NB2	**NORSAR Subarra**	**75.49**	**337**	P	**P**	**14 41 21.9**	**+0.3**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
NOA	**NORSAR Array B**	**75.49**	**337**	P	**P**	**14 41 22.5**	**+0.9**
NOA				LR	LR	15 15 55.8	
NOA	**NORSAR Array B**	**75.49**	**337**	P	**P**	**14 41 22.5**	**+0.9**
	comp=Z,1.9nm,0.6s,mb4.2,baz=39,slow=5.7,SNR=11						
NOA				LR	LR	15 15 55.8	
	comp=Z,46nm,18.6s,MS3.8,baz=0.0,slow=37						
BRTR	**Keskin Array B**	**79.69**	**312**	P	**P**	**14 41 45.2**	**-0.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=34,slow=5.4,SNR=4.5						
CLL	**Collm**	**82.29**	**330**	*i* P	**P**	**14 41 59.8**	**+0.7**
	comp=Z,6.0nm,0.7s,mb4.6						
CDF	**Champ du Feu**	**86.86**	**331**	*e*P	**P**	**14 42 22.1**	**-0.2**
LOR	**Lormes**	**89.11**	**332**	*e*P	**P**	**14 42 33.0**	**0.0**
	comp=Z,49nm,1.6s,mb5.3						

IDC 08 14:38:34.8±1.3**,235S**×**12266E,h0**km**,mb3.8**/5**,mb1 4.1**/7**, mb1mx3.8**/19**,mbtmp4.0**/7**,ML3.9**/2**,MS3.8**/2**,Ms1 3.8**/2**, ms1mx3.1**/23**,Error ellipse: s-maj=58.5km s-min=18.6km az=56.0,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**7.87**	**173**	Pn	Pn	14 40 32.2	+1.6
	0.9nm,0.3s,baz=0.0,slow=1.0,SNR=3.6						
BATI				LR	LR	14 43 57.7	
	comp=Z,634nm,18.8s,baz=180,slow=41						
FITZ	**Fitzroy Crossi**	**15.93**	**170**	Pn	Pn	14 42 21.8	+1.3
	0.5nm,0.3s,baz=357,slow=11,SNR=9.0						
WRA	**Warramunga Arr**	**20.89**	**148**	P	P	14 43 18.9	+0.2
	1.4nm,0.8s,baz=325,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**23.83**	**154**	P	P	14 43 49.3	-0.4
	2.6nm,1.0s,baz=328,slow=8.4,SNR=13						
PSI	**Prapat**	**24.27**	**282**	P	P	14 43 53.2	-0.7
	1.6nm,0.3s,baz=186,slow=12,SNR=4.8						
PSI				LR	LR	14 53 25.4	
	comp=Z,178nm,18.3s,baz=342,slow=37						
STKA	**Stephens Creek**	**34.37**	**151**	P	P	14 45 22.9	-0.7
	2.3nm,0.8s,baz=326,slow=13,SNR=3.5						
MKAR	**Makanchi Array**	**60.43**	**329**	P	P	14 48 46.6	+0.5
	0.5nm,0.5s,baz=124,slow=8.0,SNR=16						

*ISCJB **08** 15:08:31.7±0.5,3728N±004×3591E±005,h20km±7km, Error ellipse: s-maj=6.9km s-min=6.2km az=139.2*
*CSEM **08** 15:08:31.0±0.2,3727N×3593E,h20km,MD3.2,Error ellipse: s-maj=4.6km s-min=3.6km az=86.0*
*ISK **08** 15:08:31.0,3728N×3591E,h21km,MD3.2*
*DDA **08** 15:08:32.6,3728N×3604E,h7km±2km,Md3.0*
ISC 08 15:08:31.6±0.5**,3727N**±004×**3593E**±005**,h15**km±5km**,n14, σ0s84**/18**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.23**	**339**	*i* PG	**Pg**	**15 08 36.6**	**-0.1**
KOZT				*i* SG	**Sg**	**15 08 40.7**	**+0.6**
CEYT	**Ceyhan**	**0.29**	**209**	PG	**Pg**	**15 08 38.5**	**+0.8**
ANDN	**Andirin**	**0.46**	**47**	*i* P	**Pg**	**15 08 39.4**	**-1.3**
KARA	**Karaisali**	**0.70**	**270**	PG	**Pg**	**15 08 44.9**	**-0.3**
COBT	**Iskenderun**	**0.79**	**160**	*i* P	**Pg**	**15 08 46.7**	**-0.2**
COBT				*i* S	**Sg**	**15 08 58.0**	**+0.7**
KRTS	**Karatas**	**0.82**	**213**	PG	**Pg**	**15 08 47.8**	**+0.3**
GAZ	**Gaziantep**	**1.03**	**95**	PG	**Pg**	**15 08 50.6**	**-0.9**
MERS	**Mersin**	**1.19**	**251**	PN	**Pn**	**15 08 52.0**	**-1.8**
GZT	**Gaziantep**	**1.31**	**86**	*i* P	**Pn**	**15 08 54.8**	**-0.5**
GZT				*i* S	**Sb**	**15 09 13.4**	**+0.9**
NIG	**Nigde**	**1.34**	**309**	PN	**Pn**	**15 08 55.2**	**-0.6**
BNN	**Bunyan**	**1.58**	**358**	*e*PN	**Pn**	**15 08 59.4**	**+0.2**
AVNT	**Avonos**	**1.73**	**331**	*i* P	**Pn**	**15 09 02.8**	**+1.6**
AVNT				*i* S	**Sn**	**15 09 27.1**	**+4.0**
MALT	**Malatya**	**2.24**	**61**	*e*PN	**Pn**	**15 09 08.6**	**+0.4**
URFA	**Urfa**	**2.31**	**85**	*e*PN	**Pn**	**15 09 09.1**	**-0.1**

CSEM 08 15:20:58.5±0.3, 39.09N×40.42E, h2km, MD2.7, Error ellipse: s-maj=7.1km s-min=6.8km az=115.0
ISCJB 08 15:20:59.8±0.6, 39.04N±0.03×40.41E±0.05, h10km, Error ellipse: s-maj=5.6km s-min=4.4km az=167.8
ISK 08 15:20:59.2, 39.10N×40.42E, h6km, MD2.7
DDA 08 15:21:04.0, 38.89N×39.92E, h7km±3km, Md2.8
ISC 08 15:21:00.5±0.6, 39.05N±0.03×40.44E±0.05, h10km, n7, σ1.15/12, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.18**	**167**	*i* PG	**Pg**	**15 21 04.6**	**+0.3**
BINT				*i* SG	**Sg**	**15 21 07.8**	**+0.9**
PTK	**Pertek**	**0.83**	**260**	PG	**Pg**	**15 21 15.7**	**-0.8**
PTK				SG	**Sg**	**15 21 27.4**	**0.0**
EZC	**Erzincan**	**0.85**	**326**	*e*PG	**Pg**	**15 21 19.5**	**+2.6**
EZM	**Erzurum**	**1.12**	**40**	*e*PN	**Pg**	**15 21 20.4**	**-1.6**
ERZM	**Erzurum**	**1.12**	**40**	*i* P	**Pb**	**15 21 20.6**	**-1.3**
ERZM				*i* S	**Sg**	**15 21 39.3**	**+2.7**
KELT	**Kelkit**	**1.43**	**321**	*i* P	**Pg**	**15 21 27.9**	**0.0**
KELT				*i* S	**Sg**	**15 21 46.4**	**-0.1**
MARD	**Mardin**	**1.75**	**171**	*i* P	**Pg**	**15 21 33.4**	**-0.7**
MARD				*i* S	**Sg**	**15 21 57.0**	**+0.2**

NIED 08 15:37:00, 24.70N×122.00E, h65km, Mw4.2 Best double couple: $M_0$2.12000×10^{15} NP1:ϕ_s329.00000°, δ61.00000°, λ-13.00000°. NP2:ϕ_s66.00000°, δ78.00000°, λ-151.00000°.
BJI 08 15:37:33.0, 24.55N×122.04E, h46km, mB4.4, mb4.2, ML4.3
NEIC 08 15:37:36.0±0.5, 24.51N×121.96E, h69km±4km, mb4.3/13, Error ellipse: s-maj=7.4km s-min=6.0km az=49.0
NEIC Recorded [3 TAP] in I-lan; [2 TAP] in Hua-lien, T'ai-pei and T'ao-yuan; [1 TAP] in Hsin-chu and T'ai-chung Counties.
ISCJB 08 15:37:35.2±0.3, 24.58N±0.04×121.90E±0.02, h75km±3km, mb4.1/20, Error ellipse: s-maj=6.7km s-min=3.2km az=6.9
JMA 08 15:37:36.9±0.3, 24.65N×121.97E, h68km, M4.4
IDC 08 15:37:38.9±3.9, 24.55N×122.14E, h99km±37km, mb3.7/9, mb1 3.9/11, mb1mx3.7/22, mbtmp3.7/11, MS3.1/2, Ms1 3.2/2, ms1mx2.4/26, Error ellipse: s-maj=29.1km s-min=12.9km az=65.0
ISC 08 15:37:36.4±0.3, 24.54N±0.04×121.90E±0.02, h67km±3km, h73km±1.0km:pP-P, n62, σ0.96/78, mb4.1/20, 1C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.46**	**217**	*e*Pn	**Pn**	**15 37 48.2**	**-0.4**
NACB				*e*Sn	**Sn**	**15 37 57.4**	**-0.1**
YHNB	**Yeheng**	**0.49**	**285**	*e*Pn	**Pn**	**15 37 49.3**	**+0.4**
YHNB				*e*Sn	**Sn**	**15 37 56.3**	**-1.8**
TATO	**Taipei**	**0.57**	**319**	*e*Pn	**Pn**	**15 37 49.8**	**0.0**
TATO				*e*Sn	**Sn**	**15 37 58.9**	**-0.6**
YOJ	**Yonaguni jima**	**1.01**	**94**	P	**Pn**	**15 37 55.1**	**+0.2**
YOJ				S	**Sn**	**15 38 08.3**	**-0.4**
IRIF	**Iriomote-Funau**	**1.68**	**97**	P	**Pn**	**15 38 03.6**	**-0.1**
IRIF				S	**Sn**	**15 38 24.1**	**-0.2**
HATJ	**Hateruma jima**	**1.80**	**105**	P	**Pn**	**15 38 06.3**	**+1.0**
HATJ				S	**Sn**	**15 38 28.4**	**+1.1**
JKRS	**Kuro-shima**	**1.95**	**98**	P	**Pn**	**15 38 07.7**	**+0.5**
JKRS				S	**Sn**	**15 38 30.9**	**+0.2**
JIJ	**Ishigaki jima**	**2.05**	**94**	P	**Pn**	**15 38 08.5**	**-0.2**
JIJ				S	**Sn**	**15 38 32.4**	**-0.9**
JTJ	**Tarama**	**2.55**	**87**	P	**Pn**	**15 38 16.2**	**+0.7**
JTJ				S	**Sn**	**15 38 46.2**	**+0.8**
QZH	**Quanzhou**	**3.03**	**278**	⇓*i*P	**Pn**	**15 38 23.7**	**+1.7**
QZH				S	**Sn**	**15 38 56.2**	**-1.0**
QZH				Smax			
	comp=N,2μm,0.6s						
QZH				Smax			
	comp=E,700nm,0.6s						
JMJ	**Miyako jima 2**	**3.10**	**84**	P	**Pn**	**15 38 24.5**	**+1.6**
JMJ				*e*S	**Sn**	**15 38 58.2**	**-0.6**
JOGS	**Gusukube**	**3.20**	**85**	P	**Pn**	**15 38 25.5**	**+1.3**
JOGS				*e*S	**Sn**	**15 39 01.4**	**+0.2**
JKE	**Kume jima 2**	**4.76**	**67**	P	**Pn**	**15 38 46.8**	**+1.2**
JAGN	**Aguni-jima**	**5.24**	**66**	P	**Pn**	**15 38 53.2**	**+1.1**
JAGN				*e*S	**Sn**	**15 39 51.9**	**+0.7**
JJT2	**Tamagusuku 2**	**5.53**	**72**	P	**Pn**	**15 38 56.9**	**+0.8**
JIH	**Iheya**	**6.01**	**64**	P	**Pn**	**15 39 02.9**	**+0.3**
JOW	**Kunigami**	**6.19**	**67**	P	**Pn**	**15 39 04.8**	**-0.3**
JOW				*e*S	**Sn**	**15 40 12.9**	**-1.6**
JOW	**Kunigami**	**6.19**	**67**	P	**Pn**	**15 39 04.8**	**-0.3**
	comp=E,15nm,0.3s,baz=208,slow=11,SNR=44						
JOW				S	**Sn**	**15 40 12.9**	**-1.6**
	comp=E,4.2nm,0.3s,baz=114,slow=20,SNR=2.2						
JTK	**Tokunoshima**	**7.11**	**61**	P	**Pn**	**15 39 16.9**	**-0.8**
JAM	**Amami Oshima**	**7.91**	**59**	P	**Pn**	**15 39 27.2**	**-1.4**
NJ2	**Nanjing**	**7.95**	**341**	*e*P	**Pn**	**15 39 28.6**	**-0.6**
NJ2				S	**Sn**	**15 40 57.0**	**-0.6**
NJ2				PCP	PcP	15 46 02.0	+0.5
NJ2				Smax			
	comp=N,440nm,0.9s						
NJ2				Smax			
	comp=E,330nm,1.2s						
JZK	**Kikaishima**	**8.15**	**61**	P	**Pn**	**15 39 30.8**	**-1.2**
JMZ	**Minamidaito 2**	**8.54**	**79**	P	**Pn**	**15 39 33.6**	**-3.7**
WHN	**Wuhan**	**8.98**	**313**	P	**Pn**	**15 39 42.1**	**-1.2**
WHN				S	**Sn**	**15 41 17.7**	**-5.1**
WHN				Smax			
	comp=N,98nm,1.0s						
WHN				Smax			
	comp=E,93nm,1.0s						
KSRS	**Korea Array**	**13.86**	**20**	P	**Pn**	**15 40 51.2**	**+1.6**
	comp=E,0.1nm,0.3s,baz=207,slow=13,SNR=2.9						
KSRS				LR	LR	15 46 18.6	
	comp=E,29nm,20.0s,baz=185,slow=38						
GYA	**Guiyang**	**13.89**	**281**	P	**Pn**	**15 40 51.9**	**+1.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,190nm,5.4s						
XAN	**Xi'an**	**14.75**	**313**	P	**Pn**	**15 41 01.2**	**0.0**
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s						
CD2	**Chengdu**	**17.26**	**296**	P	**Pn**	**15 41 33.4**	**+0.5**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MAJO	**Matsushiro**	**18.42**	**46**	P	**Pn**	**15 41 46.5**	**-0.5**
	comp=Z,5.1nm,0.8s						
LZH	**Lanzhou**	**19.34**	**311**	*e*P	**Pn**	**15 41 59.2**	**+1.2**
LZH				AP	pP	15 42 05.6	-4.7
LZH				AMB	AMB		
	comp=Z,19nm,1.4s						
LZH				AMB	AMB		
	comp=Z,83nm,4.0s						
GTA	**Gaotai**	**23.80**	**314**	*e*P	**P**	**15 42 43.3**	**+0.4**
GTA				AP		15 42 50.8	
GTA				XP	sP	15 42 56.4	-10
GTA				AMB	AMB		
	comp=Z,3.0nm,1.6s,mb3.4						
KSM	**Kuching**	**25.52**	**208**	*e*P	**P**	**15 42 57.9**	**-0.8**
ULN	**Ulaanbaatar**	**26.09**	**337**	*e*P	**P**	**15 43 03.0**	**-0.6**
	comp=Z,3.0nm,0.8s,mb3.8						
SONM	**Songino Array**	**26.30**	**336**	P	**P**	**15 43 06.0**	**+0.5**
	comp=Z,1.4nm,0.7s,mb3.5,baz=155,slow=9.0,SNR=8.0						
LSA	**Lhasa**	**27.80**	**287**	P	**P**	**15 43 20.6**	**+1.4**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
LSA	**Lhasa**	**27.80**	**287**	*e*P	**P**	**15 43 20.1**	**+0.9**
	comp=Z,3.6nm,0.8s,mb4.0						
TAPN	**Taplejung**	**30.82**	**283**	*e*P	**P**	**15 43 47.5**	**+1.5**
	comp=Z,5.2nm,0.7s,mb4.4						
ODAN	**Odare**	**31.13**	**282**	*e*P	**P**	**15 43 49.1**	**+0.4**
	comp=Z,6.8nm,0.8s,mb4.4						
JIRN	**Jiri**	**32.15**	**283**	*e*P	**P**	**15 43 58.7**	**+1.0**
KKN	**Kakani**	**32.95**	**284**	*e*P	**P**	**15 44 04.4**	**-0.3**
GKN	**Gorkha**	**33.51**	**284**	*e*P	**P**	**15 44 09.4**	**-0.1**
	comp=Z,3.1nm,0.4s,mb4.5						
MK31	**Makanchi Array**	**38.54**	**315**	*e*P	**P**	**15 44 52.0**	**-0.3**
MK31				*e*	pP	15 45 09.7	+0.8
MKAR	**Makanchi Array**	**38.54**	**315**	P	**P**	**15 44 52.3**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=101,slow=10,SNR=17						
TKM2	**Tokmak 2**	**42.06**	**308**	*e*P	**P**	**15 45 22.6**	**+1.2**
	comp=Z,3.2nm,0.8s,mb4.1						
TKM2				*e*	pP	15 45 40.2	+2.0
KURK	**Kurchatov**	**42.24**	**320**	P	**P**	**15 45 22.5**	**-0.3**
KURK				*e*	pP	15 45 40.1	+0.5
WRA	**Warramunga Arr**	**45.84**	**164**	P	**P**	**15 45 50.5**	**-1.3**
	comp=Z,6.0nm,0.5s,mb4.6,baz=346,slow=8.8,SNR=82						
WB2	**Warramunga Arr**	**45.85**	**164**	*e*P	**P**	**15 45 50.1**	**-1.8**
BRVK	**Borovoye**	**47.88**	**320**	P	**P**	**15 46 06.5**	**-0.9**
	comp=Z,3.2nm,0.9s,mb4.2						
BRVK				*e*	pP	15 46 25.0	+0.4
ASAR	**Alice Springs**	**49.31**	**165**	P	**P**	**15 46 17.9**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.9,baz=345,slow=7.3,SNR=32						
ASAR				PcP	PcP	15 47 38.8	-1.8
	comp=Z,1.2nm,0.9s,baz=360,slow=3.0,SNR=5.9						
CTA	**Charters Tower**	**50.30**	**150**	⇑*i*P	**P**	**15 46 26.6**	**+0.3**
	comp=Z,5.7nm,0.6s,mb4.7						
CTAO	**Charters Tower**	**50.30**	**150**	*e*P	**P**	**15 46 26.4**	**+0.1**
	comp=Z,16nm,1.1s,mb4.9						
BILL	**Bilibino**	**51.13**	**20**	P	**P**	**15 46 30.4**	**-1.5**
	comp=Z,1.2nm,0.6s,mb4.1						
AKTK	**Aktyubinsk**	**54.98**	**315**	P	**P**	**15 47 02.0**	**+1.5**
AKTO	**Aktyubinsk**	**54.98**	**315**	P	**P**	**15 47 02.0**	**+1.5**
	comp=Z,0.5nm,0.4s,mb3.9,baz=104,slow=8.3,SNR=3.3						
ARU	**Arti**	**55.22**	**323**	P	**P**	**15 47 02.9**	**+0.7**
ARU				*e*	pP	15 47 20.4	+0.8
STKA	**Stephens Creek**	**59.17**	**160**	*e*P	**P**	**15 47 29.1**	**-1.2**
	comp=Z,1.9nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**59.17**	**160**	P	**P**	**15 47 29.5**	**-0.8**
	comp=Z,2.4nm,0.6s,mb4.4,baz=321,slow=4.9,SNR=6.0						
MCK	**McKinley**	**67.93**	**29**	P	**P**	**15 48 26.1**	**-1.5**
	comp=Z,1.7nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**69.45**	**338**	P	**P**	**15 48 36.7**	**-0.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=84,slow=8.3,SNR=3.0						
FINES	**FINESS Array B**	**71.47**	**330**	P	**P**	**15 48 48.6**	**-0.9**
	comp=Z,0.7nm,0.4s,mb3.9,baz=57,slow=5.3,SNR=11						
NOA	**NORSAR Array B**	**78.22**	**332**	LR	LR	16 27 19.3	
	comp=Z,28nm,21.5s,baz=285,slow=38						
YKA	**Yellowknife Ar**	**82.39**	**23**	P	**P**	**15 49 49.3**	**-1.4**
	comp=Z,0.8nm,0.5s,mb3.8,baz=313,slow=5.0,SNR=23						

ISCJB 08 15:40:11.1±0.5, 6.87N±0.05×73.02W±0.06, h171km±6km, mb3.7/6, Error ellipse: s-maj=11.1km s-min=6.7km az=41.9
IDC 08 15:40:11.6±0.8, 6.76N×72.95W, h165km±9km, mb3.5/5, mb1 3.7/7, mb1mx3.4/20, mbtmp3.5/7, Error ellipse: s-maj=28.2km s-min=8.8km az=130.0
FUNV 08 15:40:11.5, 6.78N×73.18W, h169km, MW3.6
NEIC 08 15:40:11.6±0.9, 6.84N×73.04W, h163km±11km, mb3.9/3, Error ellipse: s-maj=29.3km s-min=12.2km az=120.0
ISC 08 15:40:12.1±0.5, 6.86N±0.06×73.01W±0.06, h164km±6km, n32, σ0.92/41, mb3.7/6, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.21**	**34**	⇓*i*P	**Pn**	**15 40 40.8**	**+0.8**
CAPV				*e*S	**Sn**	**15 41 02.4**	**+0.9**
ROSC	**El Rosal**	**2.38**	**214**	P	**Pn**	**15 40 52.9**	**+0.4**
ROSC				*e*Sn	**Sn**	**15 41 17.5**	**-6.4**
ROSC				S	**Sn**	**15 41 23.4**	**-0.4**
ROSC	**El Rosal**	**2.38**	**214**	P	**Pn**	**15 40 52.9**	**+0.4**
	92nm,0.3s,baz=77,slow=4.2,SNR=98						
ROSC				S	**Sn**	**15 41 23.4**	**-0.4**
	78nm,0.3s,baz=105,slow=21,SNR=6.9						
VIGV	**El Vigia**	**2.55**	**39**	*e*P	**Pn**	**15 40 55.2**	**+0.7**
VIGV				*e*S	**Sn**	**15 41 27.9**	**+0.4**
SOCV	**Socops**	**2.56**	**56**	*e*P	**Pn**	**15 40 55.5**	**+0.9**
SOCV				*e*S	**Sn**	**15 41 27.8**	**+0.2**
SDV	**Santo Domingo**	**3.10**	**49**	P	**Pn**	**15 41 02.4**	**+1.2**
SDV				*e*Sn	**Sn**	**15 41 37.3**	**-2.1**
SDV				S	**Sn**	**15 41 39.6**	**+0.2**
SDV	**Santo Domingo**	**3.10**	**49**	P	**Pn**	**15 41 02.4**	**+1.2**
	12nm,0.3s,baz=266,slow=4.8,SNR=20						
SDV				S	**Sn**	**15 41 39.6**	**+0.2**
	13nm,0.3s,baz=28,slow=3.7,SNR=4.2						
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**15 41 06.7**	**+0.3**
ELOV				*e*S	**Sn**	**15 41 48.4**	**-0.1**
VIRV	**Villa del Rosa**	**3.67**	**9**	⇑*i*P	**Pn**	**15 41 07.9**	**-0.6**
VIRV				*e*S	**Sn**	**15 41 49.6**	**-2.9**
QARV	**Quebrada Arrib**	**4.13**	**36**	*e*P	**Pn**	**15 41 15.2**	**+0.7**
QARV				*e*S	**Sn**	**15 42 01.1**	**-2.1**
SANV	**Sanarito**	**4.32**	**52**	*e*P	**Pn**	**15 41 17.4**	**+0.4**
CURV	**Curarigua**	**4.35**	**44**	*e*P	**Pn**	**15 41 17.5**	**+0.2**
DABV	**Dabajuro**	**4.67**	**30**	*e*P	**Pn**	**15 41 21.6**	**+0.1**
TEPV	**Terepaima**	**4.88**	**50**	*e*P	**Pn**	**15 41 24.6**	**+0.5**
BAUV	**El Baul**	**5.34**	**67**	*e*P	**Pn**	**15 41 29.0**	**-1.2**
IMOV	**Isla Los Monje**	**5.85**	**21**	*e*P	**Pn**	**15 41 36.7**	**-0.2**
TURV	**Turiamo**	**6.23**	**55**	*e*P	**Pn**	**15 41 42.4**	**+0.3**
CAOV	**Caicara del Or**	**6.65**	**86**	*e*P	**Pn**	**15 41 46.4**	**-1.2**
CUPV	**Cœpira**	**7.82**	**66**	*e*P	**Pn**	**15 42 02.3**	**-0.7**
OTAV	**Otavalo**	**8.53**	**220**	P	**Pn**	**15 42 10.8**	**-1.7**
	2.1nm,0.7s						
SDDR	**Presa de Saban**	**12.17**	**8**	*e*P	**Pn**	**15 42 56.9**	**-3.2**
	29nm,1.3s						
TXAR	**Lajitas Array**	**36.52**	**312**	P	**P**	**15 47 02.5**	**+0.6**
TXAR	**Lajitas Array**	**36.52**	**312**	P	**P**	**15 47 02.5**	**+0.6**
	0.3nm,0.4s,mb3.3,baz=129,slow=9.2,SNR=7.4						
ULM	**Lac du Bonnet**	**47.29**	**340**	P	**P**	**15 48 28.3**	**-0.5**
	1.6nm,0.4s,mb4.0,baz=151,slow=6.6,SNR=6.7						
SCHQ	**Schefferville**	**48.09**	**5**	P	**P**	**15 48 36.0**	**+1.1**
	1.3nm,0.4s,mb3.9,baz=214,slow=11,SNR=4.5						
PDAR	**Pinedale Array**	**48.11**	**324**	P	**P**	**15 48 36.1**	**+0.8**
	0.7nm,0.8s,mb3.3,baz=124,slow=11,SNR=4.5						
HWUT	**Hardware Ranch**	**48.64**	**321**	P	**P**	**15 48 39.5**	**+0.1**
	1.5nm,0.8s,mb3.7						
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**15 50 23.1**	**+0.2**
YKA	**Yellowknife Ar**	**63.27**	**340**	P	**P**	**15 50 23.1**	**+0.2**
	1.5nm,0.6s,mb4.0,baz=132,slow=6.7,SNR=39						
MKAR	**Makanchi Array**	**122.25**	**20**	PKP	PKPdf	15 58 46.8	-0.8
	0.1nm,0.4s,baz=348,slow=2.1,SNR=2.2						
ASAR	**Alice Springs**	**149.22**	**234**	PKPbc	PKPbc	15 59 41.1	-1.0
	0.3nm,0.5s,baz=111,slow=3.6,SNR=7.4						
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	15 59 44.3	-0.9
	0.2nm,0.3s,baz=107,slow=2.7,SNR=15						

ISCJB 08 15:43:27.2±0.9, 39.16N±0.05×40.47E±0.07, h10km, Error ellipse: s-maj=8.9km s-min=6.3km az=135.5
CSEM 08 15:43:27.3, 39.11N×40.47E, h9km, MD2.8, After ISK
ISK 08 15:43:27.3, 39.11N×40.47E, h9km, MD2.8
ISC 08 15:43:27.5±0.9, 39.15N±0.05×40.49E±0.07, h10km, n7, σ0.52/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.28**	**180**	*i* PG	**Pg**	**15 43 33.1**	**0.0**
BINT				*i* SG	**Sg**	**15 43 36.3**	**-0.6**
EZC	**Erzincan**	**0.79**	**319**	PG	**Pg**	**15 43 49.1**	**+6.4**
PTK	**Pertek**	**0.89**	**253**	PG	**Pg**	**15 43 44.3**	**-0.4**
PTK				SG	**Sg**	**15 43 56.5**	**+0.2**
EZM	**Erzurum**	**1.01**	**42**	PG	**Pg**	**15 43 47.4**	**+0.4**
ERZM	**Erzurum**	**1.01**	**42**	*i* P	**Pg**	**15 43 46.4**	**-0.6**
ELZG	**Elazig**	**1.34**	**241**	*i* P	**Sg**	**15 44 15.6**	**+4.8**
MARD	**Mardin**	**1.85**	**173**	*i* P	**Pb**	**15 44 02.3**	**+0.9**

ISCJB 08 15:44:46.3±0.4, 35.75N±0.07×135.71E±0.07, h358km±4km, mb3.3/9, Error ellipse: s-maj=12.5km s-min=7.3km az=144.7
IDC 08 15:44:47.3±1.1, 35.78N×135.70E, h360km±12km, mb3.1/5, mb1 3.2/9, mb1mx3.0/24, mbtmp3.1/9, Error ellipse: s-maj=20.1km s-min=14.2km az=85.0
JMA 08 15:44:47.8±0.1, 35.81N×135.61E, h347km±1km, M3.0
NEIC 08 15:44:47.3±0.7, 35.74N×135.79E, h359km±9km, mb3.4/3, Error ellipse: s-maj=19.0km s-min=14.6km az=128.0
ISC 08 15:44:47.3±0.4, 35.75N±0.07×135.70E±0.07, h351km±4km, n36, σ0.73/45, mb3.3/9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.32**	**134**	P	**Pn**	**15 45 31.8**	**+0.4**
JFM				*e*S	**S**	**15 46 06.2**	**-0.4**
JKY	**Yasaka**	**0.50**	**256**	P	**Pn**	**15 45 31.9**	**+0.3**
JKY				*e*S	**S**	**15 46 06.3**	**-0.8**
JWT	**Wachi**	**0.53**	**208**	P	**Pn**	**15 45 32.0**	**+0.2**
JWT				*e*S	**S**	**15 46 06.0**	**-1.3**
JKG	**Kaga**	**0.73**	**44**	P	**Pn**	**15 45 32.4**	**+0.3**
JGM	**Miyama**	**0.83**	**93**	P	**Pn**	**15 45 33.0**	**+0.5**
JGM				*e*S	**S**	**15 46 08.6**	**-0.1**
JWY	**Kouya**	**1.53**	**183**	P	**Pn**	**15 45 36.3**	**+0.5**
JWY				*e*S	**S**	**15 46 13.2**	**-1.4**
JIE	**Ise**	**1.59**	**148**	P	**Pn**	**15 45 37.1**	**+1.0**
JIE				*e*S	**S**	**15 46 15.1**	**0.0**
MAJO	**Matsushiro**	**2.18**	**68**	*e*Pn	**Pn**	**15 45 39.7**	**-0.1**
MAJO				*e*		15 45 46.9	
MAT	**Matsushiro**	**2.18**	**68**	P	**Pn**	**15 45 40.3**	**+0.5**
MAT				*e*S	**S**	**15 46 26.5**	**+4.4**
MAT	**Matsushiro**	**2.18**	**68**	P	**Pn**	**15 45 40.5**	**+0.7**
MJAR	**Matsushiro Arr**	**2.18**	**68**	P	**Pn**	**15 45 40.9**	**+1.1**
	2.0nm,0.3s,baz=258,slow=7.6,SNR=23						
JAI	**Aioi**	**2.21**	**208**	P	**Pn**	**15 45 40.6**	**+0.4**
JAI				*e*S	**S**	**15 46 22.4**	**-0.3**
JWZ	**Kozaga**	**2.21**	**180**	P	**Pn**	**15 45 40.5**	**+0.2**
JHS	**Saijyo**	**2.24**	**251**	P	**Pn**	**15 45 40.3**	**-0.1**
JYN	**Shimob**	**2.33**	**95**	P	**Pn**	**15 45 41.6**	**+0.6**
JMN	**Monobe**	**2.52**	**217**	P	**Pn**	**15 45 43.0**	**+0.4**
JGT	**Gotsu**	**2.84**	**256**	P	**Pn**	**15 45 44.8**	**-0.5**
JHT	**Toyohira**	**2.90**	**249**	P	**Pn**	**15 45 45.6**	**-0.2**
JSD	**Sado**	**3.07**	**41**	P	**Pn**	**15 45 47.6**	**+0.4**
JAG	**Ashikaga**	**3.11**	**76**	P	**Pn**	**15 45 47.7**	**+0.1**
JAG				*e*S	**S**	**15 46 35.9**	**-0.3**
JNA	**Nagahama**	**3.44**	**231**	P	**Pn**	**15 45 51.0**	**+0.2**
JTO	**Tosashimizu**	**3.75**	**221**	P	**Pn**	**15 45 54.4**	**+0.5**
JNU	**Nakatsue**	**4.77**	**238**	P	**Pn**	**15 46 05.0**	**+0.6**
	3.7nm,0.3s,baz=42,slow=7.3,SNR=34						
KSRS	**Korea Array**	**6.48**	**287**	P	**Pn**	**15 46 23.9**	**+0.3**
	0.2nm,0.3s,baz=112,slow=12,SNR=7.5						
ASAJ	**Asahikawa**	**9.89**	**30**	P	**Pn**	**15 47 03.3**	**-0.4**
	2.1nm,0.3s,baz=227,slow=12,SNR=30						
YSS	**Yuzh-Sakhalins**	**12.38**	**23**	*e*P	**P**	**15 47 32.1**	**-0.7**
ULN	**Ulaanbaatar**	**24.40**	**309**	P	**P**	**15 49 34.4**	**-0.5**
	1.2nm,0.9s,mb3.1						
SONM	**Songino Array**	**24.81**	**308**	P	**P**	**15 49 41.4**	**+2.8**
	0.7nm,0.6s,mb3.1,baz=113,slow=9.5,SNR=5.4						
BILL	**Bilibino**	**36.64**	**19**	P	**P**	**15 51 20.1**	**-0.9**
	1.8nm,0.5s,mb3.6						
MKAR	**Makanchi Array**	**40.91**	**303**	P	**P**	**15 51 56.4**	**0.0**
	0.4nm,0.4s,mb3.0,baz=84,slow=11,SNR=14						
AML	**Almayashu**	**47.72**	**297**	P	**P**	**15 52 50.5**	**+0.6**
	1.9nm,0.7s,mb3.4						
WRA	**Warramunga Arr**	**55.40**	**182**	P	**P**	**15 53 46.1**	**-0.2**
	1.4nm,0.4s,mb3.6,baz=357,slow=7.7,SNR=33						
ASAR	**Alice Springs**	**59.12**	**182**	P	**P**	**15 54 10.8**	**-1.2**
	0.4nm,0.5s,mb3.1,baz=17,slow=11,SNR=13						
ARCES	**ARCESS Array B**	**63.53**	**338**	P	**P**	**15 54 37.8**	**-2.9**
	3.6nm,1.0s,mb3.9,baz=357,slow=11,SNR=6.3						
YKA	**Yellowknife Ar**	**67.18**	**28**	P	**P**	**15 55 04.2**	**+0.3**
YKA	**Yellowknife Ar**	**67.18**	**28**	P	**P**	**15 55 04.2**	**+0.3**
	0.1nm,0.4s,mb2.9,baz=304,slow=5.8,SNR=4.6						

IDC 08 16:19:29.1±3.0, 3.89S×152.61E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.5/14, mbtmp3.8/3, ML2.7/1, Error ellipse: s-maj=139.5km s-min=37.6km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.70**	**224**	Pn	Pn	16 21 24.8	+2.1
	0.6nm,0.3s,baz=64,slow=14,SNR=4.5						
PMG				Sn	Sn	16 22 52.8	+2.1
	1.4nm,0.3s,baz=26,slow=13,SNR=5.7						
WRA	**Warramunga Arr**	**23.91**	**227**	P	P	16 24 45.3	+0.4
	2.2nm,0.5s,baz=52,slow=9.9,SNR=32						
ASAR	**Alice Springs**	**26.70**	**221**	P	P	16 25 09.8	-0.5
	0.5nm,0.5s,baz=55,slow=8.6,SNR=10.0						
TORD	**Torodi Ar. Bea**	**149.84**	**290**	PKPbc	PKPbc	16 39 21.6	-0.8
	0.6nm,0.5s,baz=75,slow=1.1,SNR=4.7						

IDC 08 16:30:14.9±8.1, 5.06S×150.80E, h100km±57km, mb3.1/2, mb1 3.4/3, mb1mx3.1/13, mbtmp3.2/3, MS2.9/2, Ms1 2.9/2, ms1mx2.7/15, Error ellipse: s-maj=121.2km s-min=53.7km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.63**	**220**	P	Pn	16 31 35.6	-0.6
	1.9nm,0.3s,baz=39,slow=8.6,SNR=13						
PMG				S	Sn	16 32 41.1	+1.5
	3.8nm,0.3s,baz=139,slow=21,SNR=7.7						
PMG				LR	LR	16 33 48.7	
	comp=Z,70nm,18.6s,baz=87,slow=38						
CTA	**Charters Tower**	**15.58**	**196**	LR	LR	16 38 18.6	
	comp=Z,59nm,18.1s,baz=238,slow=31						
WRA	**Warramunga Arr**	**21.81**	**226**	P	P	16 34 59.3	+0.2
	1.3nm,0.5s,baz=51,slow=10,SNR=11						
ASAR	**Alice Springs**	**24.64**	**220**	P	P	16 35 25.8	-0.6
	0.9nm,0.8s,baz=56,slow=9.0,SNR=13						
TORD	**Torodi Ar. Bea**	**148.49**	**287**	PKPbc	PKPbc	16 49 51.0	-0.2
	2.1nm,0.7s,baz=87,slow=2.8,SNR=11						

IDC 08 16:30:54.8±2.1, 1.32N×126.24E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=193.0km s-min=26.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.57**	**160**	P	P	16 35 55.7	-1.1
	0.7nm,0.6s,baz=338,slow=11,SNR=7.8						
ASAR	**Alice Springs**	**25.93**	**164**	P	P	16 36 29.9	+0.9
	0.3nm,0.3s,baz=345,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**59.26**	**326**	P	P	16 40 58.1	0.0
	0.2nm,0.6s,baz=121,slow=7.3,SNR=5.1						

IDC 08 16:34:08.5±7.2, 6.38N×125.41E, h491km±80km, mb2.7/3, mb1 2.9/3, mb1mx2.6/18, mbtmp2.7/3, Error ellipse: s-maj=225.6km s-min=19.1km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.59**	**162**	P	P	16 39 15.3	-0.1
	0.2nm,0.3s,baz=341,slow=9.0,SNR=8.0						
ASAR	**Alice Springs**	**30.99**	**165**	P	P	16 39 45.1	+0.1
	0.7nm,0.3s,baz=339,slow=7.3,SNR=28						
ASAR				PcP	PcP	16 42 26.1	-0.2
	0.3nm,0.6s,baz=341,slow=2.6,SNR=5.3						
MKAR	**Makanchi Array**	**54.64**	**325**	P	P	16 42 50.2	0.0
	0.4nm,0.5s,baz=117,slow=8.2,SNR=12						

ISCJB 08 16:40:43.8±0.6, 0.18N±0.09×127.1E±0.1, h17km, mb4.2/8, Error ellipse: s-maj=22.2km s-min=10.6km az=160.3
NEIC 08 16:40:45.7±9.9, 0.16N×127.07E, h17km±64km, mb4.4/4, Error ellipse: s-maj=24.7km s-min=9.1km az=56.0
IDC 08 16:40:48.5±3.3, 0.19N×127.11E, h33km±22km, mb3.8/5, mb1 3.9/6, mb1mx3.7/16, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=91.5km s-min=15.0km az=71.0
ISC 08 16:40:43.5±4.5, 0.18N±0.09×127.1E±0.2, h2km±27km, n15, σ0.50/16, mb4.2/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**16.82**	**274**	*e*Pn	**Pn**	**16 44 40.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**18.22**	**184**	P	**Pn**	**16 44 57.3**	**-0.5**
	0.2nm,0.3s,baz=12,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**21.22**	**161**	P	**P**	**16 45 30.9**	**0.0**
	1.0nm,0.3s,mb3.6,baz=341,slow=11,SNR=46						
ASAR	**Alice Springs**	**24.61**	**165**	P	**P**	**16 46 05.9**	**+0.5**
	4.0nm,0.5s,mb4.2,baz=342,slow=11,SNR=104						
ASAR				S	**S**	**16 50 27.5**	**0.0**
	1.4nm,1.0s,baz=348,slow=21,SNR=6.3						
ASAR				ScP	ScP	16 53 16.5	-7.1
	0.2nm,0.7s,baz=340,slow=2.7,SNR=4.6						
KULM	**Kulim**	**26.88**	**281**	P	**P**	**16 46 20.9**	**-5.3**
STKA	**Stephens Creek**	**34.71**	**158**	P	**P**	**16 47 34.5**	**-0.5**
	2.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**34.71**	**158**	P	**P**	**16 47 35.8**	**+0.8**
	0.8nm,0.3s,mb4.1,baz=338,slow=11,SNR=4.3						

MAJO	**Matsushiro**	**37.63**	**15**	P	**P**	**16 47 59.6**	**-0.4**
	22nm,1.4s,mb4.7						
SONM	**Songino Array**	**50.76**	**342**	P	**P**	**16 49 46.2**	**+1.2**
	0.6nm,0.6s,mb3.7,baz=158,slow=7.8,SNR=4.5						
MK31	**Makanchi Array**	**60.67**	**326**	*e*P	**P**	**16 50 56.2**	**-0.1**
MKAR	**Makanchi Array**	**60.67**	**326**	P	**P**	**16 50 56.4**	**+0.1**
MKAR	**Makanchi Array**	**60.67**	**326**	P	**P**	**16 50 56.4**	**+0.1**
	1.4nm,0.4s,mb4.5,baz=120,slow=7.6,SNR=64						
TKM2	**Tokmak 2**	**62.65**	**320**	P	**P**	**16 51 09.7**	**0.0**
	1.2nm,0.6s,mb4.2						
UCH	**Uchtor**	**63.03**	**319**	P	**P**	**16 51 12.0**	**-0.3**
KURK	**Kurchatov**	**64.92**	**328**	*e*P	**P**	**16 51 23.8**	**-0.8**
	2.7nm,0.6s,mb4.5						

*NEIC **08** 16:40:54.7, 1909N×10230W, h79km, MD4.1(MEX), After MEX.*
MEX 08 16:40:54.7±1.0**, 1909N×10230W, h79**km±16km**, MD4.1, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**1.20**	**60**	*i* P	Pn	16 41 14.7	-1.5
MOIG				*i* S	Sn	16 41 31.6	-0.7
MMIG	**Aquila**	**1.27**	**232**	*i* P	Pn	16 41 15.4	-1.6
MMIG				*i* S	Sn	16 41 33.2	-0.5
SFJM	**Santa Fe**	**1.56**	**334**	*i* P	Pn	16 41 19.5	-1.2
SFJM				*i* S	Sn	16 41 39.6	-0.8
ZIIG	**Zihuatanejo**	**1.67**	**152**	*i* P	Pn	16 41 21.0	-1.2
ZIIG				*i* S	Sn	16 41 41.1	-2.0
CJM	**Chamela**	**2.62**	**279**	*i* P	Pn	16 41 33.0	-1.9
CJM				*i* S	Sn	16 42 03.0	-2.8
MEIG	**Mezcala**	**2.79**	**114**	*i* P	Pn	16 41 36.6	-0.6
MEIG				*i* S	Sn	16 42 06.9	-3.0
ANIG	**Ahuacatlan**	**2.86**	**314**	*i* P	Pn	16 41 37.0	-1.1
ANIG				*i* S	Sn	16 42 11.0	-0.6
ACX	**Acapulco**	**3.16**	**134**	*e*P	Pn	16 41 43.0	+0.7
PPM	**Popocatepetl**	**3.47**	**90**	*i* P	Pn	16 41 46.3	-0.1
PPM				*i* P		16 41 48.0	
PPM				*i* S	Sn	16 42 25.6	-0.9
ZAIG	**Zacatecas**	**3.67**	**356**	*i* P	Pn	16 41 48.1	-1.1
UTMO	**Huajuapan**	**4.45**	**106**	*i* P	Pn	16 41 59.5	-0.2
UTMO				*i* S	Sn	16 42 49.8	-0.5
TPIG	**Tehuac#an**	**4.73**	**97**	*i* P	Pn	16 42 04.8	+1.3
TPIG				*i* S	Sn	16 42 58.8	+1.7
VHO	**Vista Hermosa**	**5.66**	**110**	*i* S	Sn	16 43 15.3	-4.7

*CSEM **08** 16:50:06.3±0.2, 3998N×3953E, h10km, MD3.0, Error ellipse: s-maj=6.3km s-min=3.7km az=100.0*
*ISK **08** 16:50:06.3, 3999N×3962E, h8km, MD3.0*
*ISCJB **08** 16:50:07.0±0.6, 3997N±003×3956E±004, h9km±5km, Error ellipse: s-maj=5.8km s-min=4.1km az=162.7*
*DDA **08** 16:50:07.9, 3996N×3961E, h17km±4km, Md3.1*
ISC 08 16:50:07.2±0.6**, 3996N**±003×**3955E**±005**, h9**km±5km**, n15, σ1**s**12**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.29**	**310**	*i* P	**Pg**	**16 50 14.0**	**+1.0**
KELT				*i* S	**Sg**	**16 50 18.7**	**+1.8**
EZC	**Erzincan**	**0.30**	**136**	*i* PG	**Pg**	**16 50 12.9**	**-0.2**
EZC				*i* SG	**Sg**	**16 50 18.4**	**+1.3**
GUMT	**Gumushane**	**0.50**	**354**	*i* PG	**Pg**	**16 50 17.0**	**0.0**
GUMT				*i* SG	**Sg**	**16 50 23.7**	**+0.2**
MACK	**Trabzon**	**0.99**	**10**	*i* P	**Pg**	**16 50 25.4**	**-1.0**
MACK				*i* S	**Sg**	**16 50 38.7**	**-0.6**
KTUT	**Trabzon**	**1.04**	**9**	PG	**Pg**	**16 50 26.4**	**-0.8**
KTUT				SG	**Sg**	**16 50 39.4**	**-1.3**
PTK	**Pertek**	**1.08**	**186**	PN	**Pn**	**16 50 27.4**	**-1.1**
ESPY	**Espiye-Giresun**	**1.14**	**327**	PN	**Pn**	**16 50 27.8**	**-1.6**
BINT	**Bingol**	**1.31**	**146**	PN	**Pn**	**16 50 31.0**	**-0.7**
GRSN	**GIRESUNGRSN**	**1.37**	**315**	*i* P	**Pn**	**16 50 32.9**	**+0.4**
GRSN				*i* S	**Sb**	**16 50 51.3**	**+0.7**
EZM	**Erzurum**	**1.40**	**92**	PN	**Pn**	**16 50 32.1**	**-0.8**
ERZM	**Erzurum**	**1.40**	**92**	*i* P	**Pn**	**16 50 30.5**	**-2.4**
ERZM				*i* S	**Sn**	**16 50 53.1**	**+1.6**
ELZG	**Elazig**	**1.53**	**197**	*i* P	**Pn**	**16 50 33.6**	**-1.0**
ELZG				*i* S	**Sn**	**16 50 54.8**	**+0.1**
MALT	**Malatya**	**1.86**	**208**	*e*PN	**Pn**	**16 50 39.7**	**+0.4**
BCA	**Borcka**	**2.16**	**46**	*e*PN	**Pn**	**16 50 43.5**	**+0.1**
ARTV	**Artvin**	**2.19**	**55**	*i* P	**Pn**	**16 50 45.7**	**+1.9**
ARTV				*i* S	**Sn**	**16 51 13.1**	**+2.1**

*MOS **08** 16:54:17.9±1.1, 5159N×16.13E, h10km, mb4.4/4, Error ellipse: s-maj=6.0km s-min=3.6km az=85.5*
*ISCJB **08** 16:54:17.4±0.2, 5146N±001×16.10E±002, h0km, mb3.9/11, Error ellipse: s-maj=1.9km s-min=1.5km az=1.2*
*LDG **08** 16:54:17.2±0.1, 5157N×16.17E, h1km, Ml4.4/12, Error ellipse: s-maj=4.6km s-min=2.6km az=172.0, Suspected Mining induced.*
*NEIC **08** 16:54:19.0±0.2, 5155N×16.14E, h5km, ML3.7(SZGRF), ML3.4(BRA), ML3.4(STR), Error ellipse: s-maj=3.0km s-min=2.6km az=191.0*
*IDC **08** 16:54:19.8±0.5, 5149N×1607E, h0km, mb3.8/7, mb1 3.9/15, mb1mx3.8/25, mbtmp3.7/15, ML3.4/7, Error ellipse: s-maj=9.2km s-min=5.7km az=103.0*
*CSEM **08** 16:54:19.5±0.1, 5149N×16.13E, h12km, mb4.2/4, ML4.2/21, Ms3.8, Error ellipse: s-maj=1.1km s-min=0.8km az=167.0*
*BGR **08** 16:54:19.0±0.4, 5153N×16.14E, h1km, ML3.7, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0*
*WAR **08** 16:54:20.6, 5148N×16.10E, ML3.4, Mining Induced*
*IPEC **08** 16:54:20.1±0.2, 5150N×16.13E, h9km±1km, ML3.4/4, Error ellipse: s-maj=1.3km s-min=0.6km az=39.0*
*PRU **08** 16:54:20.5, 5147N×1608E, h0km, Felt In Harrachov*
*VIE **08** 16:54:21.6±0.6, 5127N×1606E, h0km, mb3.1/10, ML3.3/12, Ms3.8/1, Error ellipse: s-maj=3.7km s-min=2.6km az=7.0, Suspected Mining induced.*
*STR **08** 16:54:44.5±1.1, 5088N×1370E, h10km, Ml4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 08 16:54:18.8±0.2**, 5151N**±001×**1611E**±002**, h0**km**, n188, σ1**s**08**/315**, mb3.9**/11**, 25C-15D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 54 32.5**	**+0.7**
KSP				*e*Sg	**Sg**	**16 54 39.7**	**-0.9**
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 54 32.5**	**+0.7**
KSP				*e*Sg	**Sg**	**16 54 42.1**	**+1.5**
KSP	**Ksiaz**	**0.68**	**170**	⇓*i*Pg	**Pg**	**16 54 32.5**	**+0.7**
KSP				*e*Sg	**Sg**	**16 54 41.1**	**+0.5**
KSP				*e*		16 54 44.6	
KSP	**Ksiaz**	**0.68**	**170**	⇓*i*P	**Pg**	**16 54 32.5**	**+0.7**
KSP				*e*		16 54 41.1	
KSP	**Ksiaz**	**0.68**	**170**	*e*Pg	**Pg**	**16 54 32.4**	**+0.6**
KSP				*e*Sg	**Sg**	**16 54 41.1**	**+0.5**
UPC	**Upice**	**1.01**	**184**	*e*PG	**Pg**	**16 54 38.4**	**+0.3**
UPC	**Upice**	**1.01**	**184**	*e*Pg	**Pg**	**16 54 38.5**	**+0.4**
DPC	**Dobruska-Polom**	**1.17**	**173**	*e*Pn	**Pn**	**16 54 41.3**	**-1.1**
DPC				*e*Sg	**Sg**	**16 54 56.9**	**+0.6**
DPC	**Dobruska-Polom**	**1.17**	**173**	*e*PG	**Pg**	**16 54 41.2**	**0.0**
DPC				*e*SG	**Sg**	**16 54 55.9**	**-0.4**
	410nm,0.8s						
PVCC	**Panska Ves**	**1.39**	**225**	*e*SG	**Sg**	**16 55 04.6**	**+1.3**
	758nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**225**	*e*Pn	**Pn**	**16 54 45.3**	**-0.1**
PVCC				*e*Sg	**Sg**	**16 55 04.4**	**+1.1**
BRG	**Berggiesshubel**	**1.51**	**246**	*e*Pn	**Pn**	**16 54 46.4**	**-0.6**
BRG				*e*Sg	**Sg**	**16 55 08.1**	**+0.9**
BRG	**Berggiesshubel**	**1.51**	**246**	P	**Pn**	**16 54 46.4**	**-0.7**
BRG						16 55 08.2	
BRG				smax			
	comp=N,12nm,0.8s						
BRG	**Berggiesshubel**	**1.51**	**246**	PN	**Pn**	**16 54 46.4**	**-0.7**
BRG				PG	**Pg**	**16 54 48.4**	**+0.7**
BRG				SG	**Sg**	**16 55 08.2**	**+1.0**
	comp=N,379nm,0.8s						
RUE	**Ruedersdorf**	**1.74**	**305**	*e*Pn	**Pn**	**16 54 49.5**	**-0.8**
RUE				*e*Pg	**Pg**	**16 54 53.4**	**+1.2**
RUE				*e*Sn	**Sn**	**16 55 10.6**	**-2.5**
RUE	**Ruedersdorf**	**1.74**	**305**	*e*Pg	**Pg**	**16 54 53.4**	**+1.2**
RUE				*e*Sg	**Sg**	**16 55 16.1**	**+1.4**
PRA	**Prague**	**1.79**	**217**	PG	**Pg**	**16 54 51.0**	**-2.2**
PRA				SG	**Sg**	**16 55 15.0**	**-1.4**
PRU	**Pruhonice**	**1.82**	**214**	*e*PN	**Pn**	**16 54 51.0**	**-0.4**
PRU				*e*PG	**Pg**	**16 54 53.0**	**-0.7**
PRU				*e*SG	**Sg**	**16 55 16.2**	**-1.1**
	comp=N,248nm,0.8s						
FBE	**Freiberg**	**1.83**	**252**	*e*Pn	**Pn**	**16 54 52.4**	**+0.9**
FBE				*e*Sg	**Sg**	**16 55 18.1**	**+0.4**
RAC	**Raciborz**	**1.94**	**136**	*e*Pg	**Pg**	**16 54 56.0**	**-0.1**
RAC				*e*Sg	**Sg**	**16 55 21.9**	**+0.6**
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**16 54 52.7**	**-0.5**
CLL				*e*Pg	**Pg**	**16 54 56.0**	**-0.3**
CLL				*e*Sg	**Sg**	**16 55 22.1**	**+0.4**
CLL	**Collm**	**1.96**	**265**	*i* Pn	**Pn**	**16 54 52.7**	**-0.6**
CLL				*e*Pg	**Pg**	**16 54 56.0**	**-0.3**
CLL				*i* Sg	**Sg**	**16 55 21.4**	**-0.3**
CLL	**Collm**	**1.96**	**265**	*i* Pn	**Pn**	**16 54 52.7**	**-0.6**
CLL				*e*Pg	**Pg**	**16 54 56.0**	**-0.3**
CLL				*i* x	x	16 55 00.0	
CLL				*i* Sg	**Sg**	**16 55 21.4**	**-0.3**
	comp=Z,294nm,1.0s						
CLL	**Collm**	**1.96**	**265**	*e*Pn	**Pn**	**16 54 52.6**	**-0.7**
CLL	**Collm**	**1.96**	**265**	Pg	**Pg**	**16 54 56.0**	**-0.3**
CLL				Sg	**Sg**	**16 55 22.1**	**+0.4**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**16 54 53.0**	**-0.2**
MORC				*e*Sg	**Sg**	**16 55 20.6**	**-1.2**
MORC	**Moravsky Berou**	**1.96**	**152**	⇑*i*P	**Pn**	**16 54 53.1**	**-0.2**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*Pn	**Pn**	**16 54 54.9**	**-0.5**
OKC				*e*Sg	**Sg**	**16 55 25.8**	**-1.0**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG	**Pg**	**16 54 58.6**	**-0.8**
OKC				*e*SG	**Sg**	**16 55 24.4**	**-2.4**
	comp=Z,554nm,1.2s						
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*Pg	**Pg**	**16 54 58.6**	**-0.8**
OKC				Sg	**Sg**	**16 55 25.8**	**-1.0**
VRAC	**Vranov**	**2.23**	**172**	⇑P	**Pn**	**16 54 57.5**	**+0.6**
VRAC	**Vranov**	**2.23**	**172**	Pn	**Pn**	**16 54 57.4**	**+0.5**
	comp=Z,8.2nm,0.3s,baz=332,slow=16,SNR=24						
VRAC				Lg		16 55 29.9	
	comp=Z,7.1nm,0.3s,baz=258,slow=19,SNR=4.5						
VRAC	**Vranov**	**2.23**	**172**	⇑*i*P	**Pn**	**16 54 57.5**	**+0.6**
VRAC	**Vranov**	**2.23**	**172**	*e*Pn	**Pn**	**16 54 57.4**	**+0.5**
VRAC				*e*Sg	**Sg**	**16 55 29.0**	**-1.3**
	comp=Z,356nm,0.8s						
TREC	**Trest**	**2.25**	**190**	*e*PN	**Pn**	**16 54 57.3**	**0.0**
TREC				*e*PG	**Pg**	**16 55 00.9**	**-1.1**
TREC	**Trest**	**2.25**	**190**	*e*Pn	**Pn**	**16 54 58.2**	**+0.9**
TREC	**Trest**	**2.25**	**190**	*e*Pg	**Pg**	**16 55 00.9**	**-1.1**
TREC				*e*Sg	**Sg**	**16 55 29.7**	**-1.5**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pn	**Pn**	**16 55 01.0**	**+0.9**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pg	**Pg**	**16 55 04.6**	**-1.3**
KRUC				*e*Sg	**Sg**	**16 55 37.5**	**-0.2**
	comp=Z,219nm,0.9s						
TANN	**Tannenbergstha**	**2.56**	**246**	*e*Pn	**Pn**	**16 55 01.8**	**+0.4**
TANN				*e*Sg	**Sg**	**16 55 40.8**	**-0.1**
WERD	**Werda**	**2.63**	**248**	*e*Pn	**Pn**	**16 55 02.7**	**+0.2**
WERD				*e*Sg	**Sg**	**16 55 42.2**	**-1.1**
NKC	**Novy Kostel**	**2.65**	**243**	*e*PN	**Pn**	**16 55 03.1**	**+0.3**
NKC				*e*PG	**Pg**	**16 55 09.8**	**+0.2**
NKC				*e*SG	**Sg**	**16 55 45.1**	**+1.2**
	comp=Z,465nm,0.8s						
NKC	**Novy Kostel**	**2.65**	**243**	*e*Pg	**Pg**	**16 55 09.8**	**+0.2**
NKC				*e*Sg	**Sg**	**16 55 43.9**	**0.0**
OJC	**Ojcow**	**2.67**	**118**	*e*Pn	**Pn**	**16 55 01.6**	**-1.4**
OJC				*e*Pg	**Pg**	**16 55 10.0**	**0.0**
OJC				*e*Sg	**Sg**	**16 55 45.2**	**+0.7**
OJC	**Ojcow**	**2.67**	**118**	*e*Pn	**Pn**	**16 55 03.1**	**+0.1**
OJC				*e*Sg	**Sg**	**16 55 44.4**	**-0.1**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**16 55 10.0**	**0.0**
OJC				Sg	**Sg**	**16 55 44.4**	**-0.1**
JAVC	**Velka Javorina**	**2.84**	**159**	*e*Pn	**Pn**	**16 55 06.5**	**+1.2**
JAVC				*e*Sg	**Sg**	**16 55 49.7**	**-0.2**
	comp=Z,210nm,1.0s						
KHC	**Kasperske Hory**	**2.88**	**215**	*de*P	**Pn**	**16 55 05.7**	**-0.3**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**	**16 55 05.7**	**-0.3**
KHC				*e*PG	**Pg**	**16 55 12.4**	**-1.7**
KHC				*e*SN	**Sn**	**16 55 40.9**	**-0.4**
KHC				*e*SG	**Sg**	**16 55 50.5**	**-0.9**
	comp=Z,168nm,0.8s						
MGBB	**Grossbuechelbe**	**2.92**	**240**	⇓*i*Pn	**Pn**	**16 55 06.8**	**+0.4**
MANZ	**Manzenberg**	**2.97**	**241**	*e*Pn	**Pn**	**16 55 07.5**	**+0.4**
MANZ				*e*Sg	**Sg**	**16 55 53.0**	**-1.0**
MOX	**Moxa**	**2.97**	**255**	*e*Pn	**Pn**	**16 55 07.0**	**-0.1**
MOX				*e*Pg	**Pg**	**16 55 15.0**	**-0.6**
MOX				*e*Sg	**Sg**	**16 55 53.9**	**-0.2**
MOX	**Moxa**	**2.97**	**255**	*e*PN	**Pn**	**16 55 07.0**	**-0.1**
MOX				*e*PG	**Pg**	**16 55 15.0**	**-0.6**
MOX				*e*SG	**Sg**	**16 55 55.1**	**+1.0**
MOX	**Moxa**	**2.97**	**255**	*e*Pn	**Pn**	**16 55 07.2**	**+0.1**
ROTZ	**Rotzenmuhle**	**3.04**	**236**	*e*Pn	**Pn**	**16 55 08.5**	**+0.4**
ROTZ				*e*Sg	**Sg**	**16 55 55.9**	**-0.5**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**	**16 55 08.8**	**+0.1**
GEC2				*e*Pg	**Pg**	**16 55 17.1**	**-0.8**
GEC2				*e*S	**Sn**	**16 55 49.5**	**+3.2**
GEC2				*e*Sg	**Sg**	**16 55 59.6**	**+1.7**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*P	**Pn**	**16 55 08.8**	**+0.1**
GEC2				*e*S	**Sn**	**16 55 49.5**	**+3.2**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pn	**Pn**	**16 55 08.8**	**+0.1**
GEC2	**GERESS Array S**	**3.08**	**211**	*e*Pg	**Pg**	**16 55 17.1**	**-0.8**
GEC2				*e*S	**Sn**	**16 55 49.5**	**+3.2**
GERES	**GERESS Array B**	**3.08**	**211**	Pn	**Pn**	**16 55 09.0**	**+0.2**
	comp=Z,4.9nm,0.3s,baz=26,slow=13,SNR=84						
GERES				Pg	**Pg**	**16 55 16.8**	**-1.1**
	comp=Z,9.4nm,0.3s,baz=26,slow=16,SNR=74						
GERES				Lg		16 55 55.7	
	comp=Z,17nm,0.3s,baz=28,slow=27,SNR=9.5						
GERES	**GERESS Array B**	**3.08**	**211**	Pg	**Pg**	**16 55 16.8**	**-1.1**
SMOL	**Smolenice**	**3.12**	**164**	*e*PN	**Pn**	**16 55 11.3**	**+2.1**
SMOL				*e*PG	**Pg**	**16 55 18.6**	**+0.1**
SMOL				*e*SG	**Sg**	**16 56 00.2**	**+1.3**
WET	**Wettzell**	**3.15**	**222**	*e*Pn	**Pn**	**16 55 09.7**	**+0.1**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*Pn	**Pn**	**16 55 11.4**	**+0.7**
MODS				*e*Pg	**Pg**	**16 55 20.3**	**-0.4**
MODS				*e*Sg	**Sg**	**16 56 01.8**	**-0.7**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*PN	**Pn**	**16 55 11.4**	**+0.7**
MODS				*e*PG	**Pg**	**16 55 20.2**	**-0.5**
MODS				*e*SG	**Sg**	**16 56 01.8**	**-0.7**
KOLL	**Kolacno**	**3.28**	**152**	*e*PN	**Pn**	**16 55 12.3**	**+0.8**
KOLL				*e*PG	**Pg**	**16 55 21.6**	**-0.1**
KOLL				*e*SG	**Sg**	**16 56 07.2**	**+2.9**
ZST	**Bratislava**	**3.38**	**169**	*e*PN	**Pn**	**16 55 13.8**	**+1.0**
ZST				*e*PG	**Pg**	**16 55 21.7**	**-1.9**
ZST				*e*SG	**Sg**	**16 56 05.4**	**-1.9**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pg**	**16 55 23.6**	**-0.4**
NIE				*e*S	**Sg**	**16 56 08.8**	**+0.7**
VYHS	**Vyhne**	**3.49**	**149**	*e*Pn	**Pn**	**16 55 14.3**	**0.0**
VYHS				*e*Pg	**Pg**	**16 55 26.4**	**+0.7**
VYHS				*e*Sg	**Sg**	**16 56 13.2**	**+2.2**
VYHS	**Vyhne**	**3.49**	**149**	*e*PN	**Pn**	**16 55 14.2**	**-0.1**
VYHS				*e*PG	**Pg**	**16 55 26.4**	**+0.7**
VYHS				*e*SG	**Sg**	**16 56 13.2**	**+2.2**
CLZ	**Clausthal**	**3.59**	**278**	*e*Pn	**Pn**	**16 55 16.5**	**+0.8**
CLZ				*e*Sg	**Sg**	**16 56 13.5**	**-0.5**
CLZ	**Clausthal**	**3.59**	**278**	*e*Pn	**Pn**	**16 55 16.5**	**+0.8**
CLZ				*e*Sg	**Sg**	**16 56 13.5**	**-0.6**
CLZ	**Clausthal**	**3.59**	**278**	*e*Pn	**Pn**	**16 55 16.0**	**+0.3**
CLZ				*e*Sg	**Sg**	**16 56 13.5**	**-0.6**
CONA	**Conrad Observa**	**3.59**	**183**	*i* Pn	**Pn**	**16 55 16.0**	**+0.4**
	SNR=9.8						
CONA				⇑*i*Sg	**Sg**	**16 56 12.1**	**-2.0**
GRA1	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	**Pn**	**16 55 16.6**	**+0.7**
GRA1				*e*Sg	**Sg**	**16 56 14.8**	**+0.1**
GRF	**Grafenberg Arr**	**3.61**	**242**	*e*Pn	**Pn**	**16 55 16.6**	**+0.7**
GRF				*e*Sg	**Sg**	**16 56 14.8**	**+0.1**
GRFO	**Grafenberg**	**3.61**	**242**	*e*Pn	**Pn**	**16 55 16.2**	**+0.3**
GRFO				*e*Pg	**Pg**	**16 55 28.7**	**+0.8**
GRFO				*e*Sg	**Sg**	**16 56 16.9**	**+2.2**
GRFO	**Grafenberg**	**3.61**	**242**	*e*Pn	**Pn**	**16 55 16.2**	**+0.2**
GRFO	**Grafenberg**	**3.61**	**242**	*e*Pg	**Pg**	**16 55 28.7**	**+0.7**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**16 55 16.1**	**-0.8**
BSD				*i* S	**Sn**	**16 55 56.6**	**-4.4**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P	**Pn**	**16 55 16.1**	**-0.8**
BSD				*i*		16 55 17.1	
BSD				*i* S	**Sn**	**16 55 56.6**	**-4.4**
BSD				*i* LG		16 55 59.2	
MOA	**Molln**	**3.85**	**199**	⇓*i*Pn	**Pn**	**16 55 19.6**	**+0.3**
	SNR=14						
MOA				⇑*i*Sg	**Sg**	**16 56 22.3**	**-0.3**
	comp=Z,126nm,0.7s						
MOA	**Molln**	**3.85**	**199**	Pn	**Pn**	**16 55 19.6**	**+0.3**
	comp=Z,13nm,7.0s						
MOA				*i* Sg	**Sg**	**16 56 22.4**	**-0.2**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*PN	**Pn**	**16 55 20.3**	**+0.5**
STHS				*e*PG	**Pg**	**16 55 34.6**	**+1.2**
STHS				*e*SG	**Sg**	**16 56 25.8**	**+2.1**
KECS	**Kecovo**	**4.14**	**135**	*e*PN	**Pn**	**16 55 22.8**	**-0.4**
KECS				*e*PG	**Pg**	**16 55 38.6**	**+0.5**
KECS				*e*		16 56 28.6	
ARSA	**Arzberg**	**4.28**	**185**	⇓*i*Pn	**Pn**	**16 55 24.3**	**-0.9**
ARSA				⇑*i*Sg	**Sg**	**16 56 33.8**	**-2.5**
	comp=Z,122nm,0.9s						
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pn	**Pn**	**16 55 26.2**	**+0.6**
CRVS				*e*Pg	**Pg**	**16 55 42.1**	**+0.6**
CRVS				*e*		16 56 37.0	
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PN	**Pn**	**16 55 26.2**	**+0.6**
CRVS				*e*PG	**Pg**	**16 55 42.0**	**+0.5**
CRVS				*e*		16 56 37.0	
PSZ	**Piszkesteto**	**4.35**	**144**	⇓P	**Pn**	**16 55 26.1**	**0.0**
PSZ	**Piszkesteto**	**4.35**	**144**	*e*Pn	**Pn**	**16 55 27.1**	**+1.0**
PSZ	**Piszkesteto**	**4.35**	**144**	⇓*i*P	**Pn**	**16 55 26.1**	**0.0**
KWP	**Kalwaria**	**4.60**	**112**	⇓P	**Pn**	**16 55 28.8**	**-0.8**
KWP	**Kalwaria**	**4.60**	**112**	⇓*i*P	**Pn**	**16 55 28.8**	**-0.8**
KOLS	**Kolonicke sedl**	**4.72**	**121**	*e*PN	**Pn**	**16 55 31.5**	**+0.3**
KOLS				*e*		16 55 51.7	
KBA	**Koelnbreinsper**	**4.79**	**203**	⇑*i*Pn	**Pn**	**16 55 33.2**	**+1.0**
KBA				⇑*i*Sg	**Sg**	**16 56 52.4**	**-0.2**
	comp=Z,74nm,0.8s						
UZH	**Uzhgorod**	**4.91**	**124**	*e*P	**Pn**	**16 55 34.8**	**+0.9**
UZH				*e*S	**Sn**	**16 56 32.6**	**+1.3**
UZH				smax			
	comp=N,90nm,1.0s						
UZH				smax			
	comp=E,75nm,1.0s						
SUW	**Suwalki**	**4.97**	**57**	*e*Pg	**Pg**	**16 56 00.2**	**+6.2**
SUW				*e*Sg	**Sg**	**16 57 03.2**	**+4.9**
SUW	**Suwalki**	**4.97**	**57**	*e*Pg	**Pg**	**16 56 00.2**	**+6.2**
SUW				*e*Sg	**Sg**	**16 57 03.2**	**+4.8**
TOD	**Tromm**	**5.03**	**251**	P	**Pn**	**16 55 34.5**	**-1.0**
TOD				S	**Sn**	**16 56 18.1**	**-16**
WATA	**Walderalm**	**5.12**	**217**	⇑*i*Pn	**Pn**	**16 55 36.7**	**0.0**
WATA				⇑*i*Sg	**Sg**	**16 57 03.4**	**+0.2**
	comp=E,45nm,0.7s						
WTTA	**Wattenberg**	**5.16**	**216**	⇑*i*Pn	**Pn**	**16 55 37.3**	**+0.1**
WTTA				⇑*i*Sg	**Sg**	**16 57 04.7**	**+0.3**
	comp=E,72nm,0.8s						
WTTA	**Wattenberg**	**5.16**	**216**	Pn	**Pn**	**16 55 37.3**	**+0.1**
WTTA				Sg	**Sg**	**16 57 04.7**	**+0.3**
	comp=E,72nm,0.8s						
MOTA	**Moosalm**	**5.30**	**220**	⇑*i*Pn	**Pn**	**16 55 38.7**	**-0.5**
MOTA				⇑*i*Sg	**Sg**	**16 57 09.8**	**+0.9**
	comp=E,43nm,0.8s						
LVV	**L'vov**	**5.31**	**105**	*e*P	**Pn**	**16 55 41.0**	**+1.7**
LVV				*e*S	**Sn**	**16 56 41.0**	**-0.2**
ABTA	**Abfaltersbach**	**5.32**	**208**	⇑*i*Pn	**Pn**	**16 55 39.2**	**-0.2**
	SNR=6.3						
ABTA				⇑*i*Sg	**Sg**	**16 57 09.8**	**+0.2**
	comp=E,40nm,0.8s						
SQTA	**Sankt Quirin**	**5.36**	**219**	⇑*i*Pn	**Pn**	**16 55 39.9**	**-0.1**
TRPA	**Tarpa**	**5.36**	**127**	⇑*i*P	**Pn**	**16 55 39.9**	**-0.1**
PKSM	**Moragy**	**5.56**	**162**	⇓P	**Pn**	**16 55 43.6**	**+0.9**
PKSM	**Moragy**	**5.56**	**162**	⇓*i*P	**Pn**	**16 55 43.6**	**+0.9**
KTD	**Kalmit**	**5.58**	**250**	P	**Pn**	**16 55 44.9**	**+1.9**
ABH	**Alteburg**	**5.68**	**257**	P	**Pn**	**16 55 44.5**	**+0.1**
ABH				S	**Sn**	**16 56 36.3**	**-14**
DAVA	**Damuels**	**5.87**	**226**	⇓*i*Pn	**Pn**	**16 55 46.9**	**-0.1**
DAVA				⇑*i*Sg	**Sg**	**16 57 28.6**	**+1.5**
	comp=E,34nm,0.8s						
LANF	**Langenberg**	**5.90**	**248**	P	**Pn**	**16 55 48.3**	**+0.9**
BFO	**Black Forest**	**5.95**	**241**	*e*Pn	**Pn**	**16 55 46.3**	**-1.8**
	comp=E,27nm,1.2s						
BFO				*e*Pg	**Pg**	**16 56 12.9**	**+0.1**
BFO				*e*Sg	**Sg**	**16 57 28.8**	**-1.0**
BFO	**Black Forest**	**5.95**	**241**	*e*P	**Pn**	**16 55 46.3**	**-1.8**
BFO				pmax	pmax		
	comp=Z,27nm,1.2s						
BFO	**Black Forest**	**5.95**	**241**	*e*Pn	**Pn**	**16 55 46.3**	**-1.8**
	comp=Z,27nm,1.2s						
BFO	**Black Forest**	**5.95**	**241**	*e*Pg	**Pg**	**16 56 12.9**	**+0.1**
RUP	**Ruppelstein**	**6.04**	**256**	P	**Pn**	**16 55 49.6**	**+0.3**
DAVOX	**Davos/Dischmat**	**6.25**	**223**	Pn	**Pn**	**16 55 53.0**	**+0.8**
DAVOX				Sn	**Sn**	**16 57 06.4**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=307,slow=23,SNR=3.0						
DAVOX				Lg		16 57 38.6	
	comp=Z,0.6nm,0.3s,baz=234,slow=20,SNR=4.7						
DAVOX	**Davos/Dischmat**	**6.25**	**223**	Pn	**Pn**	**16 55 53.0**	**+0.7**
DRGR		**6.40**	**135**	⇑P	**Pn**	**16 55 54.3**	**0.0**
DRGR		**6.40**	**135**	⇑*i*P	**Pn**	**16 55 54.3**	**0.0**
CDF	**Champ du Feu**	**6.49**	**245**	*e*Pn	**Pn**	**16 55 51.9**	**-3.6**
CDF				*e*Sg	**Sg**	**16 57 41.5**	**-5.6**
	comp=Z,248nm,1.2s						
CDF	**Champ du Feu**	**6.49**	**245**	*e*Pn	**Pn**	**16 55 51.9**	**-3.6**
CDF				*e*Sg	**Sg**	**16 57 41.5**	**-5.6**
	comp=Z,124nm,1.2s						
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Pn	**Pn**	**16 55 59.4**	**-3.9**
HINF				*e*Sg	**Sg**	**16 58 01.3**	**-4.0**
	comp=Z,117nm,1.1s						
HINF	**Hinteralfeld**	**7.05**	**242**	*e*Pn	**Pn**	**16 55 59.4**	**-3.9**
HINF				*e*Sg	**Sg**	**16 58 01.3**	**-4.0**
	comp=Z,58nm,1.1s						
BURAR	**Bucovina Array**	**7.09**	**120**	⇑P	**Pn**	**16 56 04.2**	**+0.5**
BURAR	**Bucovina Array**	**7.09**	**120**	⇑*i*P	**Pn**	**16 56 04.2**	**+0.5**
HAU	**Haudompre**	**7.23**	**245**	*e*Pn	**Pn**	**16 56 02.4**	**-3.3**
HAU				*e*Sg	**Sg**	**16 58 05.6**	**-5.3**
	comp=Z,116nm,1.1s						
HAU	**Haudompre**	**7.23**	**245**	*e*Pn	**Pn**	**16 56 02.4**	**-3.3**
HAU				*e*Sg	**Sg**	**16 58 05.6**	**-5.3**
	comp=Z,58nm,1.1s						
GIVF	**Givet**	**7.29**	**263**	*e*Sg	**Sg**	**16 58 06.2**	**-6.7**
	comp=Z,116nm,1.1s						
GIVF	**Givet**	**7.29**	**263**	*e*Sg	**Sg**	**16 58 06.2**	**-6.7**
	comp=Z,58nm,1.1s						
RFYF	**Reffroy**	**7.43**	**251**	*e*Sg	**Sg**	**16 58 12.3**	**-5.0**
	comp=Z,172nm,1.4s						
RFYF	**Reffroy**	**7.43**	**251**	*e*Sg	**Sg**	**16 58 12.3**	**-5.0**
	comp=Z,86nm,1.4s						
BAIF	**Baives**	**7.69**	**264**	*e*Pn	**Pn**	**16 56 07.3**	**-4.6**
BAIF				*e*Sg	**Sg**	**16 58 19.6**	**-5.9**
	comp=Z,88nm,1.1s						
BAIF	**Baives**	**7.69**	**264**	*e*Pn	**Pn**	**16 56 07.3**	**-4.6**
BAIF				*e*Sg	**Sg**	**16 58 19.6**	**-5.9**
	comp=Z,44nm,1.1s						
SFTF	**Sexfontaines**	**7.88**	**250**	*e*Sg	**Sg**	**16 58 27.0**	**-4.8**
	comp=Z,199nm,1.3s						
SFTF	**Sexfontaines**	**7.88**	**250**	*e*Sg	**Sg**	**16 58 27.0**	**-4.8**
	comp=Z,100nm,1.3s						
CABF	**La Chapelle**	**8.21**	**237**	*e*Sg	**Sg**	**16 58 36.2**	**-6.0**
	comp=Z,236nm,1.3s						
CABF	**La Chapelle**	**8.21**	**237**	*e*Sg	**Sg**	**16 58 36.2**	**-6.0**
	comp=Z,118nm,1.3s						
KIEV	**Kiev**	**8.29**	**91**	*e*Pn	**Pn**	**16 56 18.6**	**-1.6**
	comp=Z,11nm,0.6s						
KIEV				*e*Pg	**Pg**	**16 56 55.6**	**-1.8**
KIEV				*e*Sb	**Sb**	**16 58 20.1**	**-2.0**
KIEV				*e*Sg	**Sg**	**16 58 45.3**	**+0.6**
KIEV	**Kiev**	**8.29**	**91**	*e*P	**Pn**	**16 56 18.6**	**-1.5**
KIEV				pmax	pmax		
	comp=Z,11nm,0.6s						
KIEV	**Kiev**	**8.29**	**91**	*e*Pn	**Pn**	**16 56 18.6**	**-1.5**
	comp=Z,11nm,0.6s						
AKASG	**Malin Array Be**	**8.29**	**90**	P	**Pn**	**16 56 18.4**	**-1.8**
AKASG						16 57 46.9	
AKASG	**Malin Array Be**	**8.29**	**90**	Pn	**Pn**	**16 56 18.4**	**-1.9**
	comp=Z,2.6nm,0.3s,baz=280,slow=12,SNR=13						
AKASG				Sn	**Sn**	**16 57 46.9**	**-7.6**
	comp=Z,1.6nm,0.3s,baz=274,slow=23,SNR=4.1						
AKASG				Lg		16 58 46.2	
	baz=276,slow=29,SNR=4.1						
AKBB	**Malin Array Si**	**8.29**	**90**	*e*Pn	**Pn**	**16 56 18.8**	**-1.5**
AKBB				*e*Pg	**Pg**	**16 56 55.4**	**-2.2**
AKBB				*e*Sb	**Sb**	**16 58 16.5**	**-5.9**
AKBB				*e*Sg	**Sg**	**16 58 46.4**	**+1.4**
AKBB	**Malin Array Si**	**8.29**	**90**	*e*Pn	**Pn**	**16 56 18.8**	**-1.4**
HFS	**Hagfors**	**8.75**	**352**	P	**Pn**	**16 56 25.4**	**-1.1**
HFS						16 58 01.5	
HFS	**Hagfors**	**8.75**	**352**	Pn	**Pn**	**16 56 25.4**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=159,slow=14,SNR=9.3						
HFS				Sn	**Sn**	**16 58 01.5**	**-4.2**
	comp=Z,0.3nm,0.3s,baz=182,slow=27,SNR=4.5						
HFS				Lg		16 59 01.2	
	comp=Z,0.3nm,0.3s,baz=166,slow=27,SNR=4.1						
LOR	**Lormes**	**9.05**	**247**	*e*Pn	**Pn**	**16 56 27.3**	**-3.3**
	baz=64						
LOR				*e*Sg	**Sg**	**16 59 02.7**	**-6.4**
	comp=Z,48nm,1.1s						
LOR	**Lormes**	**9.05**	**247**	*e*Pn	**Pn**	**16 56 27.3**	**-3.3**
LOR				*e*Sg	**Sg**	**16 59 02.7**	**-6.4**
	comp=Z,24nm,1.1s						
MBDF	**Montbardon**	**9.22**	**226**	*e*P	**Pn**	**16 56 35.6**	**+2.7**
VSU	**Vasula**	**9.25**	**37**	*e*P	**Pn**	**16 56 34.4**	**+1.0**
SMF	**Signal de Mont**	**9.41**	**244**	*e*Sg	Sx	16 59 15.0	
	comp=Z,78nm,1.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMF	**Signal de Mont**	**9.41**	**244**	*e*Sg	Sx	16 59 15.0	
	comp=Z,39nm,1.3s						
NB2	**NORSAR Subarra**	**9.93**	**346**	P	**Pn**	**16 56 40.7**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=163,slow=12						
NB2	**NORSAR Subarra**	**9.93**	**346**	P	**Pn**	**16 56 40.7**	**-1.9**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**9.93**	**346**	Pn	**Pn**	**16 56 40.8**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=157,slow=12,SNR=3.7						
NOA				Sn	**Sn**	**16 58 27.0**	**-7.7**
	comp=Z,0.1nm,0.3s,baz=327,slow=21,SNR=2.9						
NOA				Lg		16 59 33.5	
	comp=Z,0.2nm,0.3s,baz=310,slow=12,SNR=3.9						
NOA	**NORSAR Array B**	**9.93**	**346**	Pn	**Pn**	**16 56 40.8**	**-1.8**
NOA				Sn	**Sn**	**16 58 27.0**	**-7.6**
FINES	**FINESS Array B**	**11.36**	**25**	Pn	**Pn**	**16 57 00.4**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=209,slow=11,SNR=11						
FINES				Sn	**Sn**	**16 59 02.6**	**-7.1**
	comp=Z,0.3nm,0.3s,baz=226,slow=26,SNR=6.2						
OBN	**Obninsk**	**12.74**	**66**	*e*P	**Pn**	**16 57 18.6**	**-2.5**
OBN				*e*S	**Sn**	**16 59 34.9**	**-8.6**
OBN				pmax	pmax		
	comp=Z,19nm,1.5s						
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn	**Pn**	**16 58 33.8**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=188,slow=14,SNR=15						
KIV	**Kislovodsk**	**19.33**	**103**⇓	*i*P	**Pn**	**16 58 43.0**	**-3.4**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ARU	**Arti**	**25.14**	**62**	*e*P	**P**	**16 59 43.9**	**-1.3**
	comp=Z,8.5nm,1.1s,mb4.4						
ARU	**Arti**	**25.14**	**62**⇑	*e*P	**P**	**16 59 43.0**	**-2.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
ARU	**Arti**	**25.14**	**62**	*e*P	**P**	**16 59 43.9**	**-1.3**
	comp=Z,8.5nm,1.1s,mb4.4						
AKTK	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 59 54.8**	**+0.3**
AKTO	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 59 54.8**	**+0.3**
	comp=Z,2.3nm,0.8s,mb3.9,baz=300,slow=12,SNR=6.4						
SVE	**Sverdlovsk**	**26.23**	**61**	*e*P	**P**	**16 59 55.9**	**+0.9**
KBS	**Kingsbay**	**27.57**	**358**	*e*P	**P**	**17 00 07.3**	**+0.3**
KURK	**Kurchatov**	**38.19**	**66**	*e*P	**P**	**17 01 40.6**	**+0.9**
NVS	**Novosibirsk**	**38.98**	**58**	*e*P	**P**	**17 01 44.3**	**-2.1**
AAK	**Ala-Archa**	**39.77**	**79**⇓	*e*P	**P**	**17 01 54.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.0						
AAK	**Ala-Archa**	**39.77**	**79**	*e*P	**P**	**17 01 54.1**	**+1.0**
	comp=Z,7.0nm,1.7s,mb4.0						
TORD	**Torodi Ar. Bea**	**40.00**	**202**	P	**P**	**17 01 55.0**	**-0.2**
	comp=Z,2.7nm,1.1s,mb3.8,baz=9.5,slow=5.2,SNR=7.4						
MKAR	**Makanchi Array**	**42.21**	**69**	*i* P	**P**	**17 02 14.6**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**42.21**	**69**	P	**P**	**17 02 13.8**	**+0.6**
	comp=Z,0.6nm,0.8s,mb3.4,baz=303,slow=6.8,SNR=6.5						
TLY	**Talaya**	**51.12**	**53**	*e*P	**P**	**17 03 22.2**	**-0.7**
ZAK	**Zakamensk**	**51.72**	**55**	*e*P	**P**	**17 03 28.8**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.8						
ZAK	**Zakamensk**	**51.72**	**55**	*e*P	**P**	**17 03 28.8**	**+1.4**
	comp=Z,2.0nm,1.5s,mb3.8						
SONM	**Songino Array**	**54.91**	**55**	P	**P**	**17 03 52.8**	**+1.9**
	comp=Z,0.8nm,0.8s,mb3.8,baz=274,slow=7.0,SNR=6.7						
YAK	**Yakutsk**	**55.20**	**32***c*	*i*P	**P**	**17 03 52.6**	**-0.2**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
YAK	**Yakutsk**	**55.20**	**32**	*i* P	**P**	**17 03 52.6**	**-0.2**
	comp=Z,7.0nm,1.3s,mb4.5						
YKA	**Yellowknife Ar**	**59.86**	**336**	P	**P**	**17 04 26.2**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.9,baz=29,slow=6.8,SNR=16						
YKA	**Yellowknife Ar**	**59.86**	**336**	P	**P**	**17 04 26.3**	**+0.7**
PDAR	**Pinedale Array**	**74.94**	**322**	P	**P**	**17 06 02.4**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=50,slow=4.1,SNR=3.9						
ANMO	**Albuquerque**	**80.28**	**315**	*e*P	**P**	**17 06 32.3**	**+0.9**
TXAR	**Lajitas Array**	**83.72**	**310**	P	**P**	**17 06 51.5**	**+2.0**
	comp=Z,0.9nm,1.0s,mb3.9,baz=96,slow=1.3,SNR=4.6						

*ISCJB **08** 17:03:42.5±0.7, 5141N±003×1608E±003, h0km, Error ellipse: s-maj=5.0km s-min=2.4km az=15.3*
*IPEC **08** 17:03:43.0±0.2, 5153N×1621E, h0km, ML2.2/3, Error ellipse: s-maj=1.8km s-min=1.0km az=33.0*
*NEIC **08** 17:03:44.2±1.1, 5142N×1608E, h5km, ML2.6(BRA), Error ellipse: s-maj=12.1km s-min=4.4km az=197.0*
*CSEM **08** 17:03:44.6±0.3, 5145N×1607E, h1km±1km, ML3.0/7, Error ellipse: s-maj=5.5km s-min=2.4km az=11.0*
*WAR **08** 17:03:45, 5147N×1610E, ML2.5, Mining Induced*
*PRU **08** 17:03:45.4, 5142N×1607E, h0km*
*VIE **08** 17:03:46.5±0.7, 5125N×1630E, h0km, mb2.0/2, ML2.6/4, Error ellipse: s-maj=5.1km s-min=4.1km az=75.0, Suspected Mining induced.*
ISC 08 17:03:44.0±0.7**, 5145N**±004×**1608E**±003**, h0km, n26, σ1s01**/50**, 2C-2D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**167**	*e*Pg	**Pg**	**17 03 56.4**	**+0.6**
KSP				*e*Sg	**Sg**	**17 04 05.0**	**+1.2**
KSP	**Ksiaz**	**0.62**	**167**	*e*Pg	**Pg**	**17 03 56.3**	**+0.5**
KSP				*e*Sg	**Sg**	**17 04 04.7**	**+0.9**
UPC	**Upice**	**0.94**	**182**	*e*PG	**Pg**	**17 04 02.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*PG	**Pg**	**17 04 05.1**	**-0.1**
DPC				*e*SG	**Sg**	**17 04 19.6**	**+0.1**
	18nm,0.3s						
PVCC	**Panska Ves**	**1.32**	**227**	*e*PG	**Pg**	**17 04 09.5**	**+0.2**
PVCC				*e*SG	**Sg**	**17 04 27.1**	**+0.7**
	46nm,0.2s						
BRG	**Berggiesshubel**	**1.46**	**248**	Pg	**Pg**	**17 04 12.1**	**+0.2**
BRG				Sg	**Sg**	**17 04 32.1**	**+1.3**
BRG	**Berggiesshubel**	**1.46**	**248**	Pg	**Pg**	**17 04 12.1**	**+0.2**
BRG				*e*Sg	**Sg**	**17 04 31.7**	**+0.9**
PRU	**Pruhonice**	**1.75**	**214**	*e*PG	**Pg**	**17 04 16.8**	**-0.8**
PRU				*e*SG	**Sg**	**17 04 39.8**	**-0.5**
	15nm,0.5s						
MORC	**Moravsky Berou**	**1.92**	**150**	*e*Pn	**Pn**	**17 04 15.9**	**-1.8**
MORC				*e*Sn	**Sn**	**17 04 41.0**	**-1.5**
MORC	**Moravsky Berou**	**1.92**	**150**	*e*Pn	**Pn**	**17 04 15.9**	**-1.9**
MORC				*e*Sn	**Sn**	**17 04 41.0**	**-1.5**
MORC				*e*Sg	**Sg**	**17 04 44.1**	**-1.3**
	16nm,0.4s						
CLL	**Collm**	**1.93**	**267**	*e*Pg	**Pg**	**17 04 20.0**	**-0.9**
CLL				*i* Sg	**Sg**	**17 04 46.2**	**+0.3**
	comp=Z,10.0nm,0.6s						
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*SG	**Sg**	**17 04 48.9**	**-1.9**
	comp=Z,16nm,0.6s						
VRAC	**Vranov**	**2.17**	**171**	*e*Pn	**Pn**	**17 04 22.1**	**+0.9**
VRAC				*e*Sg	**Sg**	**17 04 52.7**	**-0.8**
	comp=Z,12nm,0.3s						
TREC	**Trest**	**2.19**	**190**	*e*PG	**Pg**	**17 04 25.0**	**-0.8**
KRUC	**Moravsky**	**2.40**	**175**	*e*Sg	**Sg**	**17 05 00.3**	**-0.5**
	comp=Z,8.2nm,0.5s						
NKC	**Novy Kostel**	**2.60**	**244**	*e*PN	**Pn**	**17 04 27.7**	**+0.5**
NKC				*e*PG	**Pg**	**17 04 32.6**	**-1.1**
NKC				*e*SG	**Sg**	**17 05 07.5**	**+0.1**
	comp=Z,21nm,0.9s						
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pg**	**17 04 35.5**	**+0.6**
OJC				*e*Sg	**Sg**	**17 05 09.8**	**+0.4**
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PN	**Pn**	**17 04 30.3**	**+0.1**
KHC				*e*PG	**Pg**	**17 04 36.2**	**-1.7**
KHC				*e*SN	**Sn**	**17 05 03.0**	**-1.8**
KHC				*e*SG	**Sg**	**17 05 14.1**	**-0.3**
MOX	**Moxa**	**2.93**	**256**	*e*PG	**Pg**	**17 04 39.3**	**-0.7**
MOX				*e*SG	**Sg**	**17 05 19.4**	**+1.5**
MODS	**Modra-Piesok**	**3.17**	**165**	*e*PG	**Pg**	**17 04 44.6**	**-0.1**
MODS				*e*SG	**Sg**	**17 05 27.8**	**+2.0**
KOLL	**Kolacno**	**3.24**	**151**	*e*SG	**Sg**	**17 05 27.4**	**-0.5**
VYHS	**Vyhne**	**3.45**	**148**	*e*PG	**Pg**	**17 04 49.2**	**-0.8**
VYHS				*e*SG	**Sg**	**17 05 36.0**	**+1.3**
CONA	**Conrad Observa**	**3.52**	**182**⇓	*i*Pn	**Pn**	**17 04 40.5**	**+0.6**
CONA			⇑	*i*Sg	**Sg**	**17 05 37.0**	**-0.1**
MOA	**Molln**	**3.79**	**199**⇑	*i*Pn	**Pn**	**17 04 44.5**	**+1.0**
MOA			⇓	*i*Sg	**Sg**	**17 05 47.4**	**+1.8**
	comp=Z,4.4nm,0.4s						
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PG	**Pg**	**17 04 58.7**	**+0.5**
STHS				*e*SG	**Sg**	**17 05 50.6**	**+2.1**
KECS	**Kecovo**	**4.11**	**134**	*e*SG	**Sg**	**17 06 00.0**	**+4.1**

DMN 08 17:33:03.6±110.0**, 2763N**×**9332E, h10km, Mb4.8**/4**, Error ellipse: s-maj=3034.2km s-min=84.3km az=89.0, Northeastern India**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.42**	**212**	*e*PN	Pn	17 33 32.0	-11
SHL				*e*SN	Sn	17 34 17.0	+4.0
TAPN	**Taplejung**	**4.99**	**268**	*e*P	Pn	17 34 21.0	+2.4
	6.8nm,0.3s						
ODAN	**Odare**	**5.34**	**263**	*e*P	Pn	17 34 25.4	+2.1
	3.9nm,0.2s						
JIRN	**Jiri**	**6.33**	**272**	*e*P	Pn	17 34 39.4	+2.5
	10nm,0.3s						
KKN	**Kakani**	**7.13**	**273**	*e*P	Pn	17 34 50.8	+2.8
	6.7nm,0.2s						
GKN	**Gorkha**	**7.70**	**275**	*e*P	Pn	17 34 59.0	+3.2
	6.9nm,0.3s						

IDC 08 17:37:50.8±2.0**, 399S**×**12932E, h0km, mb3.0**/2**, mb1 3.4**/3**, mb1mx3.3**/15**, mbtmp3.2**/3**, ML3.2**/1**, Error ellipse: s-maj=112.6km s-min=28.3km az=69.0, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.59**	**163**	Pn	Pn	17 41 45.3	+0.4
	0.1nm,0.3s,baz=343,slow=12,SNR=9.4						
ASAR	**Alice Springs**	**20.05**	**168**	P	P	17 42 25.6	-0.1
	0.4nm,0.5s,baz=341,slow=10,SNR=11						
MKAR	**Makanchi Array**	**65.36**	**326**	P	P	17 48 35.1	+0.1
	0.1nm,0.5s,baz=114,slow=8.0,SNR=3.1						

IDC 08 18:29:09.2±2.0**, 802S**×**12655E, h0km, mb3.2**/1**, mb1 3.7**/3**, mb1mx3.5**/13**, mbtmp3.5**/3**, ML3.7**/2**, Error ellipse: s-maj=214.5km s-min=32.1km az=61.0, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.05**	**148**	Pn	Pn	18 32 28.8	-0.9
	0.4nm,0.3s,baz=321,slow=14,SNR=39						
WRA				Sn	Sn	18 34 53.4	-13
	0.9nm,0.3s,baz=332,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.08**	**156**	P	Pn	18 33 10.3	+0.8
	0.3nm,0.3s,baz=338,slow=11,SNR=26						
ASAR				S	Sn	18 36 11.4	-8.7
	0.3nm,0.3s,baz=42,slow=23,SNR=8.1						
MKAR	**Makanchi Array**	**67.26**	**329**	P	P	18 40 05.6	+0.1
	0.1nm,0.3s,baz=129,slow=7.9,SNR=5.0						

IDC 08 19:11:35.9±4.1**, 528S**×**15038E, h0km, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/14**, mbtmp3.6**/5**, ML2.9**/1**, Error ellipse: s-maj=117.5km s-min=27.4km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.20**	**218**	Pn	Pn	19 12 56.8	+1.8
	2.8nm,0.3s,baz=42,slow=5.8,SNR=18						
PMG				Sn	Sn	19 13 59.3	+3.6
	1.7nm,0.3s,baz=325,slow=23,SNR=6.1						
WRA	**Warramunga Arr**	**21.36**	**226**	P	P	19 16 23.2	-1.8
	1.3nm,0.7s,baz=49,slow=10,SNR=16						
ASAR	**Alice Springs**	**24.21**	**219**	P	P	19 16 53.3	-1.1
	0.7nm,0.6s,baz=54,slow=8.8,SNR=19						
FITZ	**Fitzroy Crossi**	**27.32**	**240**	P	P	19 17 24.1	+1.4
	2.8nm,0.9s,baz=33,slow=13,SNR=6.9						
MKAR	**Makanchi Array**	**79.11**	**320**	P	P	19 23 42.7	+0.4
	0.1nm,0.8s,baz=103,slow=4.6,SNR=2.2						

*CSEM **08** 19:42:34.8, 3908N×4043E, h9km, MD2.7, After ISK*
*ISK **08** 19:42:34.8, 3908N×4043E, h9km, MD2.7*
*ISCJB **08** 19:42:35.6±0.9, 3903N±008×4050E±008, h16km±12km, Error ellipse: s-maj=13.6km s-min=10.4km az=158.2*
ISC 08 19:42:35.3±1.0**, 3907N**±009×**4046E**±008**, h14km**±11km**, n6, σ0s88**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.20**	**174**	PG	**Pg**	**19 42 39.6**	**-0.1**
BINT				SG	**Sg**	**19 42 43.0**	**+0.2**
EZC	**Erzincan**	**0.84**	**324**	*e*PG	**Pg**	**19 42 55.7**	**+4.2**
PTK	**Pertek**	**0.85**	**258**	*e*PG	**Pg**	**19 42 50.5**	**-1.3**
PTK				*e*SG	**Sg**	**19 43 03.6**	**+0.6**
EZM	**Erzurum**	**1.08**	**40**	*e*PN	**Pn**	**19 42 56.4**	**+0.4**
ERZM	**Erzurum**	**1.08**	**40**	*i* P	**Pb**	**19 42 55.5**	**-0.3**
MARD	**Mardin**	**1.77**	**172**	*i* P	**Pn**	**19 43 05.6**	**+0.1**

MEX 08 19:46:41.2±1.0**, 1669N**×**10208W, h10km, MD3.5, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**1.77**	**78**	*i* P	Pn	19 47 08.2	-3.8
CAIG				*i* S	Sn	19 47 29.0	-5.6
ACX	**Acapulco**	**2.08**	**85**	*i* P	Pn	19 47 14.0	-2.2
ACX				*i* S	Sn	19 47 38.0	-4.2
MEIG	**Mezcala**	**2.65**	**62**	*i* P	Pn	19 47 20.9	-3.1
MEIG				*i* S	Sn	19 47 53.2	-3.1

*NEIC **08** 19:50:48.3, 3543N×2313E, h5km, MD3.8(ATH), After ATH.*
*CSEM **08** 19:50:48.3, 3543N×2313E, h5km, MD3.7/7, After ATH*
ATH 08 19:50:48.2, 3543N×**2313E, h5km, MD3.8**/7**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAM	**Vamos**	**0.87**	**91**	*e*PB	Pb	19 51 05.0	-0.8
VAM				*e*SB	Sb	19 51 17.0	-0.8
GVD	**Gavdhos**	**0.98**	**127**	*e*P	Pg	19 51 08.1	+1.1
VLI	**Veliai**	**1.29**	**353**	*e*PB	Pb	19 51 13.1	+0.1
VLI				*e*SB	Sb	19 51 30.7	+0.7
ITM	**Ithomi**	**2.00**	**331**	*e*PG	Pg	19 51 25.4	-1.1
NPS	**Neapolis**	**2.04**	**94**	*e*PG	Pg	19 51 26.5	-0.7
APE	**Apeiranthos**	**2.54**	**49**	*e*PG	Pg	19 51 35.0	-1.8
APE				*e*SN	Sn	19 52 06.8	+5.5
LKR	**Lokris**	**3.22**	**358**	*e*PB	Pb	19 51 41.9	-3.9
KAP	**Karpathos**	**3.30**	**87**	*e*PN	Pn	19 51 44.3	+3.8

MAN 08 20:06:41, 840N×**12584E, h53km, mb4.6, ML3.5, MS3.4, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**1.14**	**273**⇑	*i*P	Pn	20 07 01.1	+0.4
CGP				*i* S	Sn	20 07 17.4	+2.2
SCPH	**Surigao**	**1.42**	**346**	*e*P	Pn	20 07 05.4	+0.9
SCPH				*e*S	Sn	20 07 24.5	+2.5
TBP	**Tagbilaran**	**2.34**	**303**	*e*P	Pn	20 07 19.2	+2.1

*NEIC **08** 20:30:56.6±3.7, 2960S×17742W, h57km±21km, mb4.6/3, Error ellipse: s-maj=65.8km s-min=20.2km az=154.0*
*ISCJB **08** 20:30:57.2±1.3, 294S±02×1777W±02, h66km±8km, mb4.4/5, Error ellipse: s-maj=44.8km s-min=24.3km az=33.6*
*IDC **08** 20:30:58.5±1.6, 2940S×17784W, h57km±9km, mb4.2/4, mb1 4.4/4, mb1mx4.0/12, mbtmp4.2/4, MS3.4/2, Ms1 3.4/2, ms1mx2.8/19, Error ellipse: s-maj=34.6km s-min=26.3km az=151.0*
ISC 08 20:30:57.9±1.5**, 295S**±02×**1776W**±02**, h59km**±9km**, n33, σ0s87**/14**, mb4.5**/5**, 1C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.36**	**306**	P	**Pn**	**20 31 08.9**	**+0.6**
	7µm,0.3s,baz=99,slow=8.1,SNR=149						
RAO				S	**Sn**	**20 31 15.4**	**-0.5**
	14µm,0.3s,baz=225,slow=19,SNR=39						
DZM	**Mont Dzumac**	**16.15**	**293**	LR	LR	20 39 41.1	
	comp=Z,157nm,18.9s,baz=48,slow=33						
TBI	**Tubuai**	**25.88**	**83**	*e*LR	LR	20 42 44.4	
	148nm,33.0s						
TBI	**Tubuai**	**25.88**	**83**	*e*T		21 03 35.4	
	35nm,0.3s						
ARMA	**Armidale**	**26.65**	**260**	*e*P	**P**	**20 36 33.3**	**+2.2**
PAE	**Paea**	**28.16**	**72**	*e*T		21 06 25.0	
	79nm,0.3s						
PPT	**Papeete**	**28.21**	**71**	*e*LR	LR	20 43 50.9	
	72nm,22.2s						
PPT	**Papeete**	**28.21**	**71**	LR	LR	20 46 22.8	
	comp=Z,68nm,19.1s,baz=159,slow=33						
PMOR	**Pomariorio Ree**	**30.91**	**69**	*e*T		21 09 51.3	
	5.0nm,0.3s						
CTA	**Charters Tower**	**34.01**	**278**	*e*P	**P**	**20 37 37.2**	**+0.9**
	3.6nm,0.5s,mb4.6						
CTAO	**Charters Tower**	**34.01**	**278**	*e*P	**P**	**20 37 37.2**	**+1.0**
	4.1nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**35.05**	**256**	*e*P	**P**	**20 37 45.4**	**+0.3**
	3.0nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**35.05**	**256**	P	**P**	**20 37 45.2**	**+0.1**
	4.9nm,0.5s,mb4.7,baz=88,slow=9.5,SNR=21						
ASAR	**Alice Springs**	**43.52**	**266**	P	**P**	**20 38 54.7**	**-1.1**
	2.5nm,0.6s,mb4.2,baz=103,slow=7.0,SNR=33						
ASAR				PcP	PcP	20 40 42.5	-0.4
	0.6nm,0.5s,baz=123,slow=3.9,SNR=5.4						
WB2	**Warramunga Arr**	**44.42**	**271**	*e*P	**P**	**20 39 01.9**	**-1.1**
WRA	**Warramunga Arr**	**44.43**	**271**	P	**P**	**20 39 02.1**	**-1.0**
	8.2nm,0.4s,mb4.8,baz=110,slow=8.0,SNR=168						
MJAR	**Matsushiro Arr**	**77.68**	**325**	P	**P**	**20 42 48.4**	**+0.4**
	1.6nm,0.7s,mb4.1,baz=159,slow=7.0,SNR=4.5						
SYO	**Syowa Base**	**78.10**	**193**⇑	*e*P	**P**	**20 42 50.0**	**0.0**
VNA3	**Neumayer Olymp**	**79.21**	**176**	*e*	**P**	**20 42 55.8**	**-0.3**
VNA3				*e*		20 42 59.0	
VNA3				*e*		20 43 03.2	
VNA3				*e*	pP	20 43 08.7	-3.8
VNA3				*e*	pP	20 43 11.3	-1.2
VNA2	**Neumayer--Watz**	**79.65**	**177**	*e*	**P**	**20 42 58.5**	**0.0**
	baz=180,slow=5.8						
VNA2				*e*		20 43 01.3	
VNA2				*e*		20 43 05.7	
VNA2				*e*	pP	20 43 11.9	-3.0
VNA2				*e*	pP	20 43 14.6	-0.3
MKAR	**Makanchi Array**	**117.44**	**310**	PKP	PKPdf	20 49 36.0	-0.6
MKAR	**Makanchi Array**	**117.44**	**310**	PKP	PKPdf	20 49 36.0	-0.6
	0.3nm,0.5s,baz=91,slow=0.5,SNR=7.2						
BRVK	**Borovoye**	**126.05**	**316**	*e*PKPdf	PKPdf	20 49 52.6	-0.3
ARCES	**ARCESS Array B**	**137.75**	**348**	PKhKP		20 50 07.4	
	3.5nm,1.0s,baz=29,slow=1.5,SNR=9.0						
ARCES				PKP	PKPdf	20 50 14.9	+0.5
	1.8nm,0.6s,baz=77,slow=2.4,SNR=11						
KAF	**Kangasniemi**	**143.78**	**341**	*e*p	PKPdf	20 50 23.1	-2.4
	2.0nm,0.6s						
FINES	**FINESS Array B**	**144.39**	**341**	PKP	PKPdf	20 50 25.4	-1.2
	4.2nm,0.5s,baz=67,slow=3.8,SNR=64						
NB2	**NORSAR Subarra**	**147.88**	**352**	PKP	PKPbc	20 50 36.1	+0.5
	comp=Z,6.3nm,0.7s,baz=14,slow=2.9						
NOA	**NORSAR Array B**	**147.88**	**352**	PKPbc	PKPbc	20 50 36.4	+0.8
	comp=Z,5.1nm,0.6s,baz=15,slow=4.3,SNR=21						
AKASG	**Malin Array Be**	**150.76**	**324**	PKPbc	PKPbc	20 50 43.1	0.0
	comp=Z,3.6nm,0.4s,baz=46,slow=3.0,SNR=22						
BRTR	**Keskin Array B**	**152.45**	**300**	PKPbc	PKPbc	20 50 47.6	+0.3
	comp=Z,0.7nm,0.5s,baz=154,slow=6.9,SNR=5.9						
CLL	**Collm**	**156.78**	**343**	*e*PKPab	PKPab	20 51 18.0	+2.2
GERES	**GERESS Array B**	**158.80**	**339**	PKPab	PKPab	20 51 26.0	+1.5
	comp=Z,0.4nm,0.6s,baz=38,slow=6.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**163.75**	**178**	PKPab	PKPab	20 51 46.7	-0.2
	comp=Z,1.3nm,0.6s,baz=173,slow=2.8,SNR=5.7						

IDC 08 20:43:04.4±1.2**, 2315S**×**6980W, h46km**±7km**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/16**, mbtmp3.4**/3**, ML3.3**/1**, Error ellipse: s-maj=45.9km s-min=24.2km az=99.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.01**	**13**	P	Pn	20 44 46.0	+1.5
	0.3nm,0.3s,baz=197,slow=8.9,SNR=5.0						
LPAZ				S	Sn	20 46 04.5	+1.6
	baz=229,slow=18,SNR=1.5						
TORD	**Torodi Ar. Bea**	**78.69**	**70**	P	P	20 55 02.0	-0.2
	0.3nm,0.5s,baz=260,slow=4.5,SNR=3.0						
TORD				pP	pP	20 55 15.1	-0.7
	0.9nm,0.8s,baz=251,slow=5.2,SNR=4.3						
YKA	**Yellowknife Ar**	**92.47**	**341**	P	P	20 56 08.7	-1.1
	0.2nm,0.5s,baz=138,slow=4.1,SNR=5.7						
YKA				pP	pP	20 56 23.1	-0.5
	0.5nm,0.8s,baz=137,slow=4.3,SNR=5.8						
WRA	**Warramunga Arr**	**131.12**	**211**	PKP	PKPdf	21 02 12.0	0.0
	0.3nm,0.5s,baz=155,slow=1.6,SNR=8.4						
MKAR	**Makanchi Array**	**147.45**	**37**	PKPbc	PKPbc	21 02 43.2	+0.1
	0.4nm,0.4s,baz=324,slow=3.2,SNR=11						
MKAR				pPKPbc	pPKPbc	21 02 57.5	+0.2
	0.6nm,0.7s,baz=335,slow=1.8,SNR=5.0						

*ISK **08** 20:47:11.9, 3909N×4044E, h14km, MD2.7*
*CSEM **08** 20:47:12.3±0.2, 3907N×4040E, h8km, MD2.7, Error ellipse: s-maj=5.5km s-min=4.5km az=169.0*
*ISCJB **08** 20:47:13.2±0.5, 3904N±004×4043E±004, h8km, Error ellipse: s-maj=5.4km s-min=4.7km az=161.9*
*DDA **08** 20:47:13.1, 3905N×4074E, h33km±6km, Md2.9*
ISC 08 20:47:13.4±0.7**, 3906N**±004×**4044E**±005**, h7km**±6km**, n10, σ1s24**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.18**	**167**	*i* PG	**Pg**	**20 47 17.0**	**-0.1**
BINT				*i* SG	**Sg**	**20 47 20.8**	**+1.2**
PTK	**Pertek**	**0.83**	**259**	PG	**Pg**	**20 47 28.1**	**-1.2**
PTK				SG	**Sg**	**20 47 40.5**	**+0.4**
EZC	**Erzincan**	**0.84**	**325**	PN	**Pn**	**20 47 33.8**	**+2.1**
EZM	**Erzurum**	**1.11**	**40**	PN	**Pn**	**20 47 33.2**	**-2.2**
ERZM	**Erzurum**	**1.11**	**40**	*i* P	**Pg**	**20 47 33.2**	**-1.6**
ERZM				*i* S	**Sg**	**20 47 50.0**	**+0.9**
ELZG	**Elazig**	**1.27**	**244**	*i* P	**Pn**	**20 47 37.0**	**-0.5**
ELZG				*i* S	**Sb**	**20 47 57.4**	**+3.4**
KELT	**Kelkit**	**1.42**	**320**	*i* P	**Pn**	**20 47 40.0**	**+0.3**
KELT				*i* S	**Sn**	**20 47 58.8**	**+0.1**
MARD	**Mardin**	**1.76**	**171**	*i* P	**Pn**	**20 47 42.3**	**-2.0**
TUTA	**Tutak**	**1.88**	**79**	*i* P	**Pn**	**20 47 46.5**	**+0.7**
TUTA				*i* S	**Sn**	**20 48 10.7**	**+0.9**
TUTA	**Tutak**	**1.88**	**79**	*i* P	**Pn**	**20 47 46.5**	**+0.6**
TUTA				*i* S	**Sn**	**20 48 10.7**	**+0.9**

*IDC **08** 21:40:44.5±0.7, 5782S×2583W, h0km, mb4.3/6, mb1 4.3/7, mb1mx4.1/15, mbtmp4.2/7, ML3.5/1, Error ellipse: s-maj=38.4km s-min=20.3km az=89.0*
*NEIC **08** 21:40:46.1±0.5, 5776S×2541W, h10km, mb4.5/1, Error ellipse: s-maj=21.6km s-min=14.5km az=68.0*
*ISCJB **08** 21:40:49.5±3.7, 579S±0.1×256W±03, h45km±35km, mb4.2/6, Error ellipse: s-maj=28.0km s-min=18.2km az=140.2*
ISC 08 21:40:51.2±2.8**, 579S**±01×**257W**±03**, h43km**±28km**, n17, σ0s58**/10**, mb4.2**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.98**	**160**	*e*P	**Pn**	**21 44 19.4**	**-0.2**
VNA3				*e*		21 44 20.5	
VNA3				*e*		21 44 21.8	
VNA3				*e*		21 44 24.5	
VNA3				*e*		21 44 27.3	
VNA3				*e*		21 44 28.2	
VNA2	**Neumayer--Watz**	**15.18**	**157**	*e*P	**Pn**	**21 44 21.8**	**-0.3**
	baz=316,slow=14						
VNA2				*e*		21 44 22.9	
VNA2				*e*		21 44 24.1	
VNA2				*e*		21 44 26.4	
VNA2				*e*		21 44 29.2	
VNA2				*e*		21 44 30.0	
SNAA	**Sanae**	**16.73**	**155**	Pn	**Pn**	**21 44 42.1**	**+0.2**
	0.2nm,0.3s,baz=318,slow=16,SNR=12						
EFI	**East Falkland**	**19.56**	**275**	P	**Pn**	**21 45 16.7**	**+0.1**
	27nm,1.1s						
QSPA	**South Pole Qui**	**32.37**	**180**	P	**P**	**21 47 16.3**	**+0.4**
	3.8nm,1.0s,mb4.2,baz=208,slow=6.2,SNR=6.3						
VNDA	**Vanda**	**44.78**	**182**	P	**P**	**21 49 00.7**	**+0.9**
	1.8nm,0.8s,mb4.0,baz=214,slow=7.1,SNR=6.4						
LPAZ	**La Paz**	**52.12**	**305**	P	**P**	**21 49 56.4**	**-0.5**
	1.1nm,0.4s,mb4.2,baz=130,slow=8.4,SNR=6.1						
DBIC	**Dimbokro**	**66.51**	**23**	P	**P**	**21 51 36.5**	**+0.3**
	2.4nm,0.5s,mb4.5,baz=86,slow=9.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**74.26**	**28**	P	**P**	**21 52 23.8**	**+0.3**
	1.6nm,0.4s,mb4.3,baz=198,slow=6.1,SNR=26						
ASAR	**Alice Springs**	**96.99**	**161**	P	**P**	**21 54 16.7**	**-1.3**
	0.5nm,0.6s,mb4.1,baz=187,slow=4.7,SNR=3.4						
PDAR	**Pinedale Array**	**122.01**	**300**	PKP	PKPdf	21 59 38.9	-1.0
	0.4nm,0.5s,baz=120,slow=4.3,SNR=5.3						
NVAR	**Mina Array Bea**	**122.86**	**291**	PKP	PKPdf	21 59 41.9	+0.3
	0.2nm,0.3s,baz=147,slow=1.8,SNR=6.3						
FINES	**FINESS Array B**	**125.61**	**28**	PKP	PKPdf	21 59 44.5	-1.6
	0.8nm,0.5s,baz=116,slow=4.4,SNR=9.2						
ARCES	**ARCESS Array B**	**132.33**	**22**	PKP	PKPdf	21 59 57.8	-0.9
	3.1nm,1.0s,baz=267,slow=2.6,SNR=8.0						
YKA	**Yellowknife Ar**	**138.08**	**316**	PKP	PKPdf	22 00 09.0	-0.6
YKA	**Yellowknife Ar**	**138.08**	**316**	PKP	PKPdf	22 00 09.0	-0.6

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.7nm,0.4s,baz=129,slow=2.2,SNR=14						
SONM	Songino Array	149.97	88	PKPbc	PKPbc	22 00 35.0	-0.7
	1.5nm,0.4s,baz=223,slow=3.6,SNR=23						

IDC 08 21:48:16.1±2.1**, 2.71S×128.44E, h0**km**, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.7**/15**, mbtmp3.9**/3**, ML3.5**/1**, Error ellipse: s-maj=144.5km s-min=26.6km az=68.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.07	162	P	Pn	21 52 28.9	+0.2
	0.2nm,0.3s,baz=341,slow=12,SNR=18						
ASAR	Alice Springs	21.49	166	P	P	21 53 06.0	-0.5
	6.9nm,0.8s,baz=343,slow=11,SNR=48						
MKAR	Makanchi Array	63.81	326	P	P	21 58 50.5	+0.4
	0.4nm,0.8s,baz=126,slow=6.2,SNR=5.0						

GUC 08 21:54:40.8±0.3**, 45.37S×73.05W, h5**km±2km**, ML4.8, Southern Chile**

IDC 08 21:58:22.4±9.2**, 6.57S×129.25E, h141**km±94km**, mb3.0**/1**, mb1 3.1**/5**, mb1mx3.1**/15**, mbtmp3.0**/5**, Error ellipse: s-maj=79.3km s-min=27.6km az=40.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	6.60	236	P	Pn	21 59 58.0	+0.9
	2.6nm,0.3s,baz=84,slow=19,SNR=4.8						
BATI				S	Sn	22 01 11.9	+0.7
	1.0nm,0.3s,baz=202,slow=19,SNR=3.0						
FITZ	Fitzroy Crossi	11.99	197	P	Pn	22 01 07.6	-1.2
	0.2nm,0.3s,baz=108,slow=19,SNR=16						
FITZ				S	Sn	22 03 13.8	-7.5
	0.2nm,0.3s,baz=261,slow=19,SNR=4.2						
WRA	Warramunga Arr	14.18	160	P	Pn	22 01 35.9	-1.1
	0.1nm,0.3s,baz=331,slow=13,SNR=10.0						
WRA				S	Sn	22 04 06.2	-7.8
	0.2nm,0.3s,baz=336,slow=21,SNR=7.2						
ASAR	Alice Springs	17.58	166	P	Pn	22 02 19.2	+0.5
	0.2nm,0.3s,baz=341,slow=9.7,SNR=14						
MKAR	Makanchi Array	67.46	327	P	P	22 09 03.0	0.0
	0.3nm,0.8s,baz=115,slow=8.2,SNR=2.9						

*IDC **08** 22:05:40.0±1.8, 22.79S×170.77E, h0km, mb4.1/5, mb1 4.2/6, mb1mx4.0/15, mbtmp4.1/6, ML4.4/1, MS3.5/1, Ms1 3.5/1, ms1mx3.0/24, Error ellipse: s-maj=82.4km s-min=25.0km az=163.0*

*ISCJB **08** 22:05:47.6±4.0, 22.5S±0.3×170.4E±0.2, h48km±29km, mb4.0/5, Error ellipse: s-maj=51.2km s-min=26.9km az=21.7*

ISC 08 22:05:48.1±4.2**, 22.5S**±0.3×**170.5E**±0.2**, h42**km±31km**, n43, σ0.69**/9**, mb4.0**/5**, 5C-2D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.75	276	Pn	Pn	22 06 43.3	-0.2
	24nm,0.3s,baz=102,slow=16,SNR=798						
DZM				Sn	Sn	22 07 26.2	-0.1
	21nm,0.3s,baz=112,slow=15,SNR=4.0						
HNR	Honiara	16.48	321	LR	LR	22 15 01.3	
	comp=Z,138nm,18.2s,baz=182,slow=33						
CTA	Charters Tower	22.68	272	P	P	22 10 47.7	+1.7
	3.2nm,0.6s,mb4.0,baz=84,slow=12,SNR=5.5						
ASAR	Alice Springs	33.59	261	P	P	22 12 24.8	+0.4
	1.9nm,0.7s,mb4.1,baz=77,slow=9.7,SNR=29						
WRA	Warramunga Arr	33.72	268	P	P	22 12 24.9	-0.7
	0.7nm,0.8s,mb3.7,baz=101,slow=8.5,SNR=5.8						
FITZ	Fitzroy Crossi	42.15	268	P	P	22 13 35.8	-0.9
	4.1nm,1.0s,mb4.0,baz=193,slow=12,SNR=3.9						
VNA3	Neumayer Olymp	86.47	180	e	P	22 18 25.7	-0.2
VNA3				e		22 18 30.0	
VNA3				e	pP	22 18 36.4	-2.3
VNA3				e		22 18 44.6	
VNA2	Neumayer--Watz	86.78	181	e	P	22 18 27.7	+0.2
	baz=190,slow=2.9						
VNA2				e		22 18 32.3	
VNA2				e	pP	22 18 38.2	-2.0
VNA2				e		22 18 47.0	
SONM	Songino Array	90.53	323	P	P	22 18 45.4	0.0
	2.1nm,0.9s,mb4.5,baz=148,slow=5.9,SNR=13						
ARCES	ARCESS Array B	128.54	345	PKP	PKPdf	22 24 48.4	-1.3
	3.9nm,1.0s,baz=18,slow=2.3,SNR=5.4						
BURAR	Bucovina Array	142.62	321	⇓iP	PKPdf	22 25 19.6	+3.1
MLR	Muntele Rosu	143.17	317	PKP	PKPdf	22 25 18.1	+0.6
	1.4nm,0.7s,baz=84,slow=21,SNR=4.1						
MLR	Muntele Rosu	143.17	317	⇑iP	PKPdf	22 25 19.6	+2.1
STHS	Stebnicka Huta	143.84	325	ePKP	PKPdf	22 25 20.3	+1.7
DRGR		144.50	321	⇓iP	PKPdf	22 25 18.3	-1.5
KECS	Kecovo	144.80	325	ePKP	PKPdf	22 25 19.7	-0.6
OKC	Ostrava-Krasne	145.14	328	ePKP	PKPdf	22 25 19.3	-1.5
MORC	Moravsky Berou	145.47	329	⇑iP	PKPdf	22 25 21.2	-0.2
DPC	Dobruska-Polom	145.65	330	ePKP	PKPdf	22 25 22.2	+0.5
VYHS	Vyhne	145.66	326	i PKP	PKPdf	22 25 22.1	+0.4
VYHS				e		22 25 32.5	
UPC	Upice	145.68	331	ePKP	PKPdf	22 25 22.0	+0.3
BZS	Buzias	145.77	320	⇑iP	PKPdf	22 25 23.2	+1.2
KOLL	Kolacno	145.83	326	ePKP	PKPdf	22 25 22.9	+0.9
VRAC	Vranov	146.24	329	PKPbc	PKPbc	22 25 22.8	-1.1
	1.8nm,0.8s,baz=25,slow=3.7,SNR=4.9						
VRAC	Vranov	146.24	329	⇑iP	PKPdf	22 25 24.9	+2.2
PVCC	Panska Ves	146.31	332	ePKP	PKPdf	22 25 23.9	+1.1
BRG	Berggiesshubel	146.32	333	i P	PKPdf	22 25 23.5	+0.7
	6.7nm,0.7s						
CLL	Collm	146.38	334	i P	PKPdf	22 25 23.1	+0.2
	comp=Z,7.0nm,0.6s						
CLL				ex	x	22 25 39.0	
MODS	Modra-Piesok	146.53	327	ePKP	PKPdf	22 25 24.6	+1.4
MODS	Modra-Piesok	146.53	327	ePKP	PKPdf	22 25 24.5	+1.3
PRU	Pruhonice	146.71	331	ePKP	PKPdf	22 25 24.5	+1.0
EKA	Eskdalemuir Ar	146.91	353	PKPbc	PKPbc	22 25 23.6	-1.9
	comp=Z,3.6nm,0.7s,baz=338,slow=1.9,SNR=10						
PKSM	Moragy	147.16	323	⇑iP	PKPdf	22 25 26.6	+2.3
NKC	Novy Kostel	147.43	333	ePKP	PKPdf	22 25 27.2	+2.5
KHC	Kasperske Hory	147.77	331	ePKP	PKPdf	22 25 27.3	+2.0
GERES	GERESS Array B	147.92	331	PKPbc	PKPbc	22 25 28.3	-0.2
	comp=Z,1.4nm,0.6s,baz=37,slow=3.3,SNR=12						
DAVOX	Davos/Dischmat	151.18	332	PKPbc	PKPbc	22 25 36.7	0.0
	comp=Z,4.2nm,0.7s,baz=337,slow=2.8,SNR=5.6						
DAVOX				PKPab	PKPab	22 25 43.7	-0.8
	comp=Z,4.3nm,0.6s,baz=6.8,slow=5.5,SNR=5.5						
CABF	La Chapelle	152.86	336	ePKP1	PKPbc	22 25 49.6	+9.1
LOR	Lormes	153.07	340	ePKP1	PKPbc	22 25 51.1	+10
	comp=Z,2.4nm,0.5s						
LPL	La Plagne	153.51	334	ePKP1	PKPbc	22 25 54.0	+12
	comp=Z,4.8nm,0.7s						
LPG	La Plagne	153.52	334	ePKP1	PKPbc	22 25 54.2	+12
	comp=Z,7.5nm,0.7s						
BGF	Bois d'Agland	154.02	340	ePKP1	PKPbc	22 25 51.3	+8.3
TORD	Torodi Ar. Bea	165.81	231	PKP	PKPdf	22 25 46.3	-2.8
	comp=Z,1.1nm,1.0s,baz=59,slow=5.7,SNR=4.0						

*ISCJB **08** 22:11:17.3±0.8, 36.41N±0.05×69.1E±0.1, h151km±13km, Error ellipse: s-maj=15.3km s-min=6.5km az=164.6*

*NNC **08** 22:11:17.4±7.3, 36.92N×68.61E, h0km, mb3.5, mpv2.8, Error ellipse: s-maj=64.9km s-min=54.2km az=111.0*

ISC 08 22:11:18.6±1.0**, 36.41N**±0.04×**69.1E**±0.1**, h140**km±13km**, n13, σ0.91**/17**, 4C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.43	138	P	Pn	22 12 10.9	-0.3
CEP				S	Sn	22 12 53.0	+1.1
THW	Thamme Wali	4.19	148	P	Pn	22 12 19.3	-1.9
SBDP	Sheikh Budin	4.32	161	P	Pn	22 12 22.6	-0.3
CHCP	Chirah Chowk	4.35	128	P	Pn	22 12 23.5	+0.2
DRP	Derazinda	4.73	169	P	Pn	22 12 29.3	+1.0
KK31	Karatay Array	6.77	9	⇑Pn	Pn	22 12 55.1	-0.4
	0.4nm,0.2s,baz=188,slow=10,SNR=6.2						
KK31				⇓Sn	Sn	22 14 12.0	+0.7
	0.8nm,0.3s,baz=203,slow=25,SNR=4.9						
KK31				⇓Lg		22 14 42.5	
	3.8nm,0.6s,baz=193,slow=32,SNR=4.0						
TKM2	Tokmak 2	8.19	35	⇑Pn	Pn	22 13 14.2	-0.3
	0.1nm,0.4s						
TKM2				⇑Sn	Sn	22 14 45.2	-0.2
	0.3nm,0.7s						
AB31	Akbulak array	14.49	335	⇓Pn	Pn	22 14 37.1	+0.2
	1.7nm,0.4s,baz=154,slow=12,SNR=46						
AB31				⇑Sn	Sn	22 17 11.5	-5.8
	0.4nm,0.5s,baz=156,slow=22,SNR=4.6						
GKN	Gorkha	15.55	118	eP	Pn	22 14 48.9	-1.4
KKN	Kakani	16.13	118	eP	Pn	22 14 56.6	-0.9
	16nm,0.8s						
JIRN	Jiri	16.86	116	eP	Pn	22 15 06.8	+0.5
	9.3nm,0.6s						
TAPN	Taplejung	18.15	115	eP	P	22 15 22.3	+2.1
	4.3nm,0.4s						
ODAN	Odare	18.20	116	eP	P	22 15 20.6	-0.1
	6.1nm,0.5s						

*BJI **08** 22:11:23.8, 3.84S×127.99E, h13km, mB5.1, mb4.7, Ms4.3, Msz4.1*

*MOS **08** 22:11:33.3±1.3, 3.14S×127.42E, h33km, mb4.8/12, Error ellipse: s-maj=15.2km s-min=7.1km az=116.9*

*IDC **08** 22:11:35.2±1.8, 3.18S×127.40E, h37km±14km, mb4.4/17, mb1 4.5/19, mb1mx4.4/23, mbtmp4.4/19, ML4.6/2, MS4.2/16, Ms1 4.2/16, ms1mx4.0/32, Error ellipse: s-maj=21.6km s-min=8.4km az=71.0*

*ISCJB **08** 22:11:37.9±1.3, 3.22S±0.05×127.51E±0.06, h80km±13km, mb4.5/47, Error ellipse: s-maj=11.3km s-min=6.9km az=151.0*

*NEIC **08** 22:11:38.9±1.4, 3.20S×127.47E, h70km±13km, mb4.6/24, Error ellipse: s-maj=9.6km s-min=5.1km az=55.0*

NEIC Felt [III] on Ambon.

ISC 08 22:11:39.5±1.1**, 3.22S**±0.04×**127.50E**±0.06**, h77**km±11km**, h40**km±15.1km**:pP-P, n106, σ0.82**/101**, mb4.5**/47**, 2C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	5.75	115	⇑eP	Pn	22 13 03.0	+0.7
TLE	Tual	5.75	115	⇑eP	Pn	22 13 03.0	+0.7
BATI	Kupang	7.91	209	Pn	Pn	22 13 36.6	+4.7
	24nm,0.3s,baz=55,slow=1.8,SNR=12						
BATI				LR	LR	22 16 48.3	
	comp=Z,4μm,19.1s,baz=23,slow=40						
KKM	Kota Kinabalu	14.55	309	ePn	Pn	22 15 01.6	0.0
FITZ	Fitzroy Crossi	14.90	187	eP	Pn	22 15 05.8	-0.2
	26nm,0.8s						
FITZ	Fitzroy Crossi	14.90	187	Pn	Pn	22 15 05.5	-0.5
	0.5nm,0.3s,baz=18,slow=10,SNR=13						
FITZ				LR	LR	22 21 24.4	
	comp=Z,739nm,20.2s,baz=15,slow=40						
KSM	Kuching	17.80	285	eP	Pn	22 15 42.3	-0.1
WRA	Warramunga Arr	17.91	159	P	Pn	22 15 43.6	+0.1
WRA				S	S	22 19 02.7	-1.1
WRA	Warramunga Arr	17.91	159	P	Pn	22 15 43.6	+0.1
	5.8nm,0.3s,baz=340,slow=11,SNR=207						
WRA				S	S	22 19 02.7	-1.0
	1.0nm,0.3s,baz=340,slow=21,SNR=5.1						
WRA				ScP	ScP	22 23 49.4	+4.9
	0.4nm,0.3s,baz=318,slow=2.3,SNR=16						
WB2	Warramunga Arr	17.91	159	eP	Pn	22 15 42.2	-1.4
WB2				eS	S	22 19 05.7	+1.8
COEN	Coen	18.80	125	eP	Pn	22 15 53.1	-1.2
	12nm,0.6s						
PMG	Port Moresby	20.48	108	eP	P	22 16 09.8	-1.5
PMG	Port Moresby	20.48	108	P	P	22 16 11.6	+0.4
	4.3nm,0.4s,baz=264,slow=14,SNR=3.7						
ASAR	Alice Springs	21.25	164	P	P	22 16 19.8	+0.4
ASAR				S	S	22 20 14.4	+3.1
ASAR	Alice Springs	21.25	164	P	P	22 16 19.8	+0.3
	24nm,0.4s,mb4.9,baz=344,slow=12,SNR=171						
ASAR				S	S	22 20 14.3	+3.1
	8.7nm,0.8s,baz=342,slow=19,SNR=8.7						
ASAR				ScP	ScP	22 23 57.0	+4.9
	4.5nm,0.6s,baz=345,slow=2.3,SNR=22						
CTA	Charters Tower	24.82	134	eP	P	22 16 57.9	+3.3
	2.8nm,0.6s,mb3.9						
CTA	Charters Tower	24.82	134	eP	P	22 16 57.9	+3.3
CTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CTA	Charters Tower	24.82	134	P	P	22 16 57.8	+3.2
	comp=Z,2.7nm,0.6s,mb3.9,baz=306,slow=9.8,SNR=4.4						
CTA				ScP	ScP	22 24 07.0	+5.4
	comp=Z,2.9nm,0.8s,baz=303,slow=9.7,SNR=4.0						
CTAO	Charters Tower	24.82	134	eP	P	22 16 57.4	+2.8
	comp=Z,8.1nm,0.8s,mb4.2						
CTAO	Charters Tower	24.82	134	eP	P	22 16 57.4	+2.8
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
FORT	Forrest	27.41	179	eP	P	22 17 18.0	+0.1
	comp=Z,24nm,0.6s,mb4.9						
PSI	Prapat	29.18	282	P	P	22 17 34.1	+0.2
	comp=Z,2.9nm,0.3s,mb4.3,baz=48,slow=3.7,SNR=4.0						
MUN	Mundaring	30.51	199	eP	P	22 17 44.9	-0.5
NWAO	Narrogin (SRO)	31.08	197	P	P	22 17 50.4	0.0
NWAO				ScP	ScP	22 24 25.8	+5.2
NWAO	Narrogin (SRO)	31.08	197	P	P	22 17 50.4	0.0
	comp=Z,14nm,0.6s,mb4.9,baz=16,slow=8.0,SNR=15						
NWAO				ScP	ScP	22 24 25.8	+5.2
	comp=Z,13nm,1.1s,baz=278,slow=3.3,SNR=4.5						
STKA	Stephens Creek	31.44	157	eP	P	22 17 53.9	+0.3
	comp=Z,7.7nm,0.5s,mb4.7						
STKA	Stephens Creek	31.44	157	P	P	22 17 54.2	+0.6
	comp=Z,6.8nm,0.5s,mb4.7,baz=328,slow=8.5,SNR=30						
STKA				ScP	ScP	22 24 26.0	+4.1
	comp=Z,1.8nm,0.6s,baz=36,slow=7.9,SNR=4.2						
STKA				LR	LR	22 31 55.5	
	comp=Z,437nm,18.5s,baz=110,slow=39						
CBIJ	Chichi jima	33.31	24	LR	LR	22 29 07.7	
	comp=Z,128nm,19.3s,baz=352,slow=32						
CHTO	Chiang Mai	35.63	309	eP	P	22 18 30.8	+0.6
	comp=Z,4.6nm,0.9s,mb4.4						
CHTO	Chiang Mai	35.63	309	eP	P	22 18 30.8	+0.6
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
JNU	Nakatsue	36.29	5	LR	LR	22 32 41.5	
	comp=Z,331nm,19.1s,baz=321,slow=35						
KMI	Kunming	37.03	321	P	P	22 18 42.4	+0.4
KMI				AMB	AMB		
	comp=Z,7.0nm,1.2s,mb4.5						
JHJ	Hachijo jima 2	37.97	17	LR	LR	22 31 47.7	
	comp=Z,235nm,19.6s,baz=72,slow=32						
KSRS	Korea Array	40.47	1	P	P	22 19 09.9	-0.7
	comp=Z,4.9nm,0.9s,mb4.3,baz=176,slow=9.4,SNR=13						
KSRS				LR	LR	22 34 22.8	
	comp=Z,172nm,20.3s,baz=169,slow=34						
MAJO	Matsushiro	40.80	13	P	P	22 19 13.7	+0.4
MJAR	Matsushiro Arr	40.80	13	P	P	22 19 11.0	-2.4
	comp=Z,4.2nm,1.0s,mb4.2,baz=176,slow=9.7,SNR=7.5						
MJAR				LR	LR	22 32 36.0	
	comp=Z,332nm,20.2s,baz=170,slow=31						
XAN	Xi'an	40.99	336	P	P	22 19 14.4	-0.6
XAN				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.5						
DZM	Mont Dzumac	42.17	120	P	P	22 19 26.5	+1.7
	comp=Z,4.2nm,0.9s,mb4.2,baz=203,slow=15,SNR=2.5						
BJT	Baijiatuau	44.27	348	eP	P	22 19 41.2	-0.2
	comp=Z,5.0nm,0.6s,mb4.4						
BJT	Baijiatuau	44.27	348	eP	P	22 19 41.3	-0.1
BJT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BJI	Beijing	44.29	348	P	P	22 19 41.6	0.0
BJI				S	S	22 26 10.3	+0.5
BJI				SS	SS	22 29 34.5	+3.5
BJI				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.4						
BJI				LR	LR		
	comp=Z,71nm,18.3s						
SHL	Shillong	44.83	312	eP	P	22 19 48.0	+1.8
LZH	Lanzhou	44.92	333	eP	P	22 19 47.5	+0.8
LZH				AP	pP	22 19 55.2	-10
LZH				XP	sP	22 19 59.0	-16
LZH				AMB	AMB		
	comp=Z,31nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,109nm,4.7s						
LZH				LR	LR		
	comp=E,379nm,13.6s						
LZH				LR	LR		
	comp=Z,576nm,16.9s						
LZH	Lanzhou	44.92	333	eP	P	22 19 47.5	+0.8
LZH				pP	pP	22 19 55.2	-10
LZH				sP	sP	22 19 59.0	-16
LZH				PP	PP	22 21 25.4	-7.7
LZH				eS	S	22 25 57.0	-22
LZH				sS	sS	22 26 09.5	-42
LZH				eSS	SS	22 28 54.3	-49
MDJ	Mudanjiang	47.66	2	eP	P	22 20 07.9	-0.2
LSA	Lhasa	47.77	316	P	P	22 20 10.1	+1.0
LSA				AP	pP	22 20 19.8	-8.5
LSA				XP	sP	22 20 21.7	-15
LSA				PCP	PcP	22 21 34.3	-2.9
LSA				PP	PP	22 22 03.7	+2.1
LSA				SCS	ScS	22 30 00.4	+4.9
LSA				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
LSA	Lhasa	47.77	316	eP	P	22 20 10.8	+1.7
	comp=Z,8.4nm,0.6s,mb4.8						
LSA	Lhasa	47.77	316	eP	P	22 20 10.8	+1.7
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
PALK	Pallekele	47.85	283	eP	P	22 20 09.7	-0.4
	comp=Z,12nm,1.1s,mb4.7						
ODAN	Odare	48.92	310	eP	P	22 20 18.3	+0.2
	comp=Z,13nm,0.6s,mb5.0						
TAPN	Taplejung	48.94	311	eP	P	22 20 18.5	+0.3
	comp=Z,14nm,0.6s,mb5.1						
ASAJ	Asahikawa	49.04	14	LR	LR	22 40 41.4	
	comp=Z,102nm,20.6s,baz=84,slow=36						
GTA	Gaotai	49.48	332	eP	P	22 20 23.1	+1.0
GTA				AP	pP	22 20 27.4	-14
GTA				XP	sP	22 20 30.9	-19
GTA				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.2						
JIRN	Jiri	50.25	310	eP	P	22 20 28.5	+0.4
	comp=Z,11nm,0.5s,mb5.0						
KKN	Kakani	51.01	310	eP	P	22 20 33.9	0.0
	comp=Z,10nm,0.6s,mb5.1						
KKN	Kakani	51.01	310	eP	P	22 20 33.9	0.0
KKN				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
GKN	Gorkha	51.61	310	eP	P	22 20 38.3	0.0
	comp=Z,14nm,0.5s,mb5.2						
KLR	Kul'dur	52.37	4	eP	P	22 20 38.9	-4.7
HYB	Hyderabad	52.45	295	eP	P	22 20 44.0	-0.8
HYB	Hyderabad	52.45	295	i P	P	22 20 44.0	-0.8
ULN	Ulaanbaatar	53.94	343	eP	P	22 20 54.5	-0.6
	comp=Z,5.0nm,0.8s,mb4.6						
ULN	Ulaanbaatar	53.94	343	eP	P	22 20 54.5	-0.6
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
SONM	Songino Array	54.10	343	P	P	22 20 55.9	-0.5
	comp=Z,1.2nm,0.5s,mb4.2,baz=152,slow=8.4,SNR=10						
WMQ	Urumqi	58.89	327	eP	P	22 21 31.3	+0.9
MOY	Mondy	59.15	341	eP	P	22 21 33.3	+1.3
BOD	Bodaibo	61.81	352	eP	P	22 21 49.7	-0.3
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.3						
MKAR	Makanchi Array	63.72	327	P	P	22 22 02.9	-0.1
	comp=Z,5.1nm,0.6s,mb4.5,baz=126,slow=7.8,SNR=68						
MA2	Magadan	65.24	13	P	P	22 22 13.5	+0.8
TKM2	Tokmak 2	65.50	321	eP	P	22 22 14.6	0.0
	comp=Z,4.1nm,0.7s,mb4.4						
TKM2	Tokmak 2	65.50	321	eP	P	22 22 14.6	-0.1
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
UCH	Uchtor	65.85	319	eP	P	22 22 18.1	+1.2
	comp=Z,2.0nm,0.7s,mb4.1						
AAK	Ala-Archa	66.06	320	eP	P	22 22 18.1	-0.2
	comp=Z,1.6nm,1.1s,mb3.8						
AAK				e	pP	22 22 34.6	-3.8
AAK	Ala-Archa	66.06	320	eP	P	22 22 18.1	-0.2
AAK				e	pP	22 22 34.6	-3.8
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
AML	Almayashu	66.34	319	eP	P	22 22 20.5	+0.4
	comp=Z,2.4nm,0.8s,mb4.1						
EKS2	Erkin-Say	66.54	320	eP	P	22 22 22.1	+0.7
	comp=Z,3.5nm,0.8s,mb4.2						
KURK	Kurchatov	68.02	329	eP	P	22 22 29.8	-0.6
	comp=Z,8.6nm,0.8s,mb4.6						
KURK	Kurchatov	68.02	329	eP	P	22 22 29.8	-0.7
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
NVS	Novosibirsk	68.40	334	eP	P	22 22 31.3	-1.5
BRVK	Borovoye	73.63	328	eP	P	22 23 04.5	0.0
	comp=Z,5.2nm,0.9s,mb4.3						
BRVK	Borovoye	73.63	328	eP	P	22 23 04.5	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
CHKZ	Chkalovo	73.76	329	eP	P	22 23 04.6	-0.7
TIXI	Tiksi	74.74	0	eP	P	22 23 09.5	-1.1
	comp=Z,4.4nm,0.6s,mb4.4						
TIXI	Tiksi	74.74	0	eP	P	22 23 10.0	-0.6
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
VNDA	Vanda	76.48	173	P	P	22 23 20.0	-0.5
	comp=Z,1.7nm,0.7s,mb3.9,baz=313,slow=6.8,SNR=12						
VNDA				LR	LR	22 53 56.3	
	comp=Z,222nm,21.4s,baz=341,slow=33						
MAW	Mawson	77.55	201	P	P	22 23 25.8	-0.9
	comp=Z,6.8nm,0.7s,mb4.5,baz=86,slow=7.0,SNR=4.1						
MAW				LR	LR	22 52 18.3	
	comp=Z,222nm,20.2s,baz=281,slow=32						
AKTK	Aktyubinsk	79.58	322	P	P	22 23 37.6	-0.5
AKTO	Aktyubinsk	79.58	322	P	P	22 23 37.6	-0.5
	comp=Z,1.5nm,0.7s,mb3.9,baz=112,slow=8.2,SNR=7.2						
ARU	Arti	81.20	328	eP	P	22 23 46.8	+0.1
	comp=Z,4.0nm,0.6s,mb4.4						
ARU	Arti	81.20	328	eP	P	22 23 46.8	+0.1
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
RDF	Al-Radifah	82.77	300	eP	P	22 23 54.9	-0.6
RDF				AMb	AMB	22 24 06.0	
	comp=Z,15nm,0.6s,mb5.0						
MIB	Mutribah	83.07	300	eP	P	22 23 56.5	-0.6
MIB				AMb	AMB	22 24 07.5	
	comp=Z,18nm,0.8s,mb5.0						
NAY	Al-Naaiem	83.08	300	eP	P	22 23 56.5	-0.6
NAY				AMb	AMB	22 24 08.2	
	comp=Z,12nm,0.6s,mb4.9						
RST	Umm Al-Ruwaisa	83.32	300	eP	P	22 23 57.5	-0.9
RST				AMb	AMB	22 24 08.6	
	comp=Z,29nm,0.7s,mb5.2						
QSPA	South Pole Qui	86.73	180	eP	P	22 24 14.4	0.0
QSPA	South Pole Qui	86.73	180	P	P	22 24 14.6	+0.2
	comp=Z,4.3nm,0.5s,mb4.6,baz=281,slow=0.7,SNR=14						
QSPA				LR	LR	23 02 32.8	
	comp=Z,217nm,18.9s,baz=159,slow=35						
KMBO	Kilima Mbogo	90.18	269	P	P	22 24 32.8	+0.6
	comp=Z,0.2nm,0.3s,mb3.7,baz=42,slow=24,SNR=3.3						
KMBO				LR	LR	23 00 03.9	
	comp=Z,210nm,21.1s,baz=96,slow=32						
MALT	Malatya	91.25	308	eP	P	22 24 37.2	+0.7
EIL	Elat	93.79	299	LR	LR	23 15 20.0	
	comp=Z,115nm,18.0s,baz=291,slow=41						
ARCES	ARCESS Array B	97.19	340	P	P	22 25 03.4	+0.3
	comp=Z,1.8nm,0.6s,mb4.7,baz=81,slow=5.8,SNR=9.7						
ARCES				LR	LR	23 16 28.9	
	comp=Z,78nm,18.3s,baz=94,slow=40						
BOSA	Boshof	99.18	241	P	P	22 25 12.0	-1.0
	comp=Z,2.7nm,0.9s,mb4.8,baz=33,slow=19,SNR=3.5						
BOSA				LR	LR	23 09 00.4	
	comp=Z,111nm,18.3s,baz=131,slow=35						
ULM	Lac du Bonnet	120.58	31	PKP	PKPdf	22 30 22.6	+0.2
	comp=Z,1.5nm,0.7s,baz=42,slow=3.8,SNR=3.4						
TXAR	Lajitas Array	125.02	56	PKP	PKPdf	22 30 33.1	+1.5
	comp=Z,0.4nm,0.7s,baz=280,slow=0.8,SNR=4.4						
TORD	Torodi Ar. Bea	125.56	284	PKP	PKPdf	22 30 32.6	-0.3
	comp=Z,1.2nm,0.6s,baz=61,slow=2.3,SNR=5.9						
SCHQ	Schefferville	127.25	10	PKP	PKPdf	22 30 37.3	+2.2
	comp=Z,1.8nm,1.0s,baz=216,slow=8.7,SNR=2.9						
DBIC	Dimbokro	132.42	276	PKP	PKPdf	22 30 47.4	+1.3
DBIC	Dimbokro	132.42	276	PKP	PKPdf	22 30 47.4	+1.4
	comp=Z,3.5nm,0.8s,baz=228,slow=22,SNR=4.0						

*IDC **08** 22:28:46.5±0.9, 33.08N×141.91E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.8/21, mbtmp3.8/10, ML3.7/2, MS3.9/4, Ms1 3.9/4, ms1mx3.2/40, Error ellipse: s-maj=23.9km s-min=17.0km az=68.0*

*BJI **08** 22:28:46.0, 33.10N×141.90E, h10km, mB5.0, mb4.4*

*ISCJB **08** 22:28:47.1±1.9, 33.12N±0.05×141.94E±0.08, h17km±14km, mb3.9/10, MS4.0/4, Error ellipse: s-maj=12.3km s-min=8.0km az=155.3*

*JMA **08** 22:28:50.9±0.4, 33.20N×141.73E, h94km, M3.0*

*NEIC **08** 22:28:51.8±0.7, 33.10N×141.87E, h35km, mb4.5/1, Error ellipse: s-maj=25.4km s-min=12.4km az=68.0*

ISC 08 22:28:48.3±2.2**, 33.13N**±0.05×**141.88E**±0.08**, h11**km±14km**, n29, σ0.87**/33**, mb3.9**/10**, MS4.0**/4**, Off east coast of Honshu**

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

BSO1	Boso 1	1.70	334	P	Pn	22 29 18.6	+0.8
JHJ2	Mitsune	1.73	270	P	Pn	22 29 18.3	0.0
JHJ	Hachijo jima 2	1.76	270	Pn	Pn	22 29 17.9	-0.8
	32nm,0.3s,baz=205,slow=15,SNR=8.8						
JHJ				Sn	Sn	22 29 41.2	+0.1
	61nm,0.3s,baz=90,slow=21,SNR=5.9						
BSO3	Boso 3	2.02	326	P	Pn	22 29 21.6	-0.7
BSO4	Boso 4	2.26	326	P	Pn	22 29 26.1	+0.6
JOD2	Odawara 2	3.15	313	P	Pn	22 29 36.9	-0.9
JHU	Hanno	3.46	322	P	Pn	22 29 42.0	-0.1
JHU				*e*S	Sn	22 30 21.9	-1.2
JYN	Shimob	3.64	311	P	Pn	22 29 43.8	-0.7
JHO	Hitachi	3.64	343	P	Pn	22 29 43.8	-0.7
JAG	Ashikaga	3.85	329	P	Pn	22 29 46.8	-0.6
JAG				*e*S	Sn	22 30 30.2	-2.4
JNY	Yasuok	4.01	305	P	Pn	22 29 51.3	+1.7
MJAR	Matsushiro Arr	4.55	319	Pn	Pn	22 29 57.6	+0.6
	2.1nm,0.3s,baz=145,slow=11,SNR=28						
MJAR				Sn	Sn	22 30 51.3	+1.4
	0.9nm,0.3s,baz=136,slow=27,SNR=6.8						
MAT	Matsushiro	4.56	319	P	Pn	22 29 58.1	+1.0
MAT				S	Sn	22 30 44.3	-5.7
CBIJ	Chichi jima	6.02	177	Pn	Pn	22 30 16.2	-0.9
	6.5nm,0.3s,baz=291,slow=18,SNR=5.1						
CBIJ				Sn	Sn	22 31 20.4	-5.7
	16nm,0.3s,baz=282,slow=22,SNR=6.1						
HHC	Hu-ho-hao-te	25.32	296	*e*P	P	22 34 18.8	+3.9
SONM	Songino Array	30.43	309	P	P	22 35 02.0	+1.4
	0.9nm,0.6s,mb3.7,baz=119,slow=8.8,SNR=8.2						
GTA	Gaotai	34.26	293	*e*P	P	22 35 34.0	-0.2
GTA				AP	pP	22 35 38.8	+1.1
GTA				XP	sP	22 35 42.3	+3.1
GTA				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.5						
MKAR	Makanchi Array	46.61	305	P	P	22 37 16.4	+0.1
MKAR	Makanchi Array	46.61	305	P	P	22 37 16.4	+0.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=87,slow=9.3,SNR=12						
KURK	Kurchatov	48.71	311	*e*P	P	22 37 32.5	-0.1
	comp=Z,8.5nm,1.5s,mb4.5						
WRA	Warramunga Arr	53.26	189	P	P	22 38 06.5	-0.5
	comp=Z,1.4nm,0.5s,mb4.1,baz=6.0,slow=7.7,SNR=27						
ASAR	Alice Springs	56.98	189	P	P	22 38 33.8	0.0
	comp=Z,0.3nm,0.4s,mb3.6,baz=5.3,slow=6.3,SNR=6.6						
YKA	Yellowknife Ar	67.00	29	P	P	22 39 41.0	+0.3
	comp=Z,0.1nm,0.5s,mb3.1,baz=299,slow=5.9,SNR=3.2						
YKA				LR	LR	23 09 05.4	
	comp=Z,73nm,21.7s,MS3.9,baz=170,slow=36						
FINES	FINESS Array B	72.45	333	P	P	22 40 14.3	0.0
	comp=Z,1.0nm,0.7s,mb3.8,baz=108,slow=4.8,SNR=4.7						
NOA	NORSAR Array B	77.94	338	P	P	22 40 45.5	-0.4
	comp=Z,0.7nm,0.8s,mb3.7,baz=78,slow=14,SNR=3.6						
NOA				LR	LR	23 19 25.7	
	comp=Z,47nm,19.6s,MS3.8,baz=305,slow=39						
PDAR	Pinedale Array	80.14	45	LR	LR	23 11 53.5	
	comp=Z,85nm,20.3s,MS4.1,baz=145,slow=32						
BRTR	Keskin Array B	81.74	312	P	P	22 41 08.3	+1.3
	comp=Z,0.8nm,0.8s,mb3.7,baz=86,slow=7.6,SNR=4.9						
ULM	Lac du Bonnet	82.55	33	LR	LR	23 21 11.0	
	comp=Z,84nm,18.5s,MS4.1,baz=0.9,slow=38						
CLL	Collm	84.68	331	*e*P	P	22 41 22.0	+0.1

*IDC **08** 22:36:08.2±0.8, 071S×10032E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, MS3.6/4, Ms1 3.6/4, ms1mx3.2/34, Error ellipse: s-maj=41.6km s-min=15.6km az=50.0*
*MOS **08** 22:36:10.7±1.5, 100S×10008E, h33km, mb4.6/8, Error ellipse: s-maj=27.1km s-min=9.9km az=113.8*
*ISCJB **08** 22:36:11.1±0.4, 077S±006×10032E±006, h33km, mb4.3/29, MS3.6/3, Error ellipse: s-maj=10.1km s-min=7.7km az=138.7*
*NEIC **08** 22:36:12.6±0.5, 1.11S×10000E, h35km, mb4.6/15, Error ellipse: s-maj=13.3km s-min=7.2km az=217.0*
NEIC Felt [IV] at Padangpanjang and Payakumbuh.
ISC 08 22:36:13.2±0.5**, 099S**±008×**10009E**±007**, h35**km**, n63, σ1^{s}15**/60**, mb4.3**/29**, MS3.6**/3**, 1C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.94	343	Pn	Pn	22 37 11.3	+0.2
	0.9nm,0.3s,baz=136,slow=14,SNR=11						
PSI				Sn	Sn	22 38 04.5	+8.4
	8.1nm,0.3s,baz=196,slow=19,SNR=3.4						
PSI				LR	LR	22 38 34.9	
	comp=Z,430nm,20.8s,baz=142,slow=40						
KGM	Kluang	4.39	47	⇑P	Pn	22 37 11.7	-5.7
FRIM	Kepong	4.46	20	⇓P	Pn	22 37 13.0	-5.4
MYKOM	Kota Tinggi	4.66	54	⇓P	Pn	22 37 14.0	-7.1
IPM	Ipoh	5.51	10	⇓P	Pn	22 37 29.5	-3.3
KULM	Kulim	6.26	5	*e*Pn	Pn	22 37 38.4	-4.7
KULM	Kulim	6.26	5	⇓P	Pn	22 37 38.8	-4.3
KTGM	Kuala Trenggan	6.97	26	⇓P	Pn	22 37 47.7	-5.1
KSM	Kuching	10.50	77	Pn	Pn	22 38 42.6	+1.3
KKM	Kota Kinabalu	17.55	66	Pn	Pn	22 40 16.8	+1.6
PALK	Pallekele	21.01	293	Pn	P	22 40 53.4	-0.5
BATI	Kupang	25.16	112	LR	LR	22 52 42.0	
	comp=Z,298nm,18.6s,MS3.8,baz=122,slow=40						
MBWA	Marble Bar	27.74	138	*e*P	P	22 41 57.6	-1.0
ODAN	Odare	30.27	337	*e*P	P	22 42 20.8	-0.2
	10nm,0.8s,mb4.6						
TAPN	Taplejung	30.59	338	*e*P	P	22 42 23.2	-0.6
	17nm,0.9s,mb4.9						
JIRN	Jiri	31.46	336	*e*P	P	22 42 31.7	+0.2
	14nm,0.9s,mb4.8						
LSA	Lhasa	31.68	345	*e*P	P	22 42 35.2	+1.8
	2.1nm,0.9s,mb4.0						
LSA	Lhasa	31.68	345	*e*P	P	22 42 35.3	+1.8
LSA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
KKN	Kakani	31.95	335	*e*P	P	22 42 35.4	-0.5
	comp=Z,7.7nm,0.6s,mb4.7						
KKN	Kakani	31.95	335	*e*P	P	22 42 35.4	-0.5
KKN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
GKN	Gorkha	32.42	334	*e*P	P	22 42 39.7	-0.2
	comp=Z,6.2nm,0.7s,mb4.6						
NACB	Ninganchiao	32.58	38	P	P	22 42 43.2	+1.8
NWAO	Narrogin (SRO)	35.63	155	LR	LR	22 59 31.8	
	comp=Z,153nm,18.6s,MS3.8,baz=116,slow=39						
WRA	Warramunga Arr	38.43	122	P	P	22 43 30.6	-1.2
	comp=Z,2.5nm,0.6s,mb4.1,baz=302,slow=9.0,SNR=14						
WRA				PcP	PcP	22 45 45.6	+0.8
	comp=Z,0.5nm,0.5s,baz=310,slow=2.4,SNR=8.0						
WB2	Warramunga Arr	38.44	122	*e*P	P	22 43 30.6	-1.3
ASAR	Alice Springs	39.78	127	P	P	22 43 42.6	-0.3
	comp=Z,2.2nm,0.7s,mb4.0,baz=302,slow=7.5,SNR=23						
ASAR				PcP	PcP	22 45 50.1	+1.1
	comp=Z,0.6nm,0.5s,baz=313,slow=2.4,SNR=8.1						
KBL	Kabul	45.77	324	*e*P	P	22 44 32.6	+1.1
KSRS	Korea Array	46.11	31	P	P	22 44 32.2	-1.8
	comp=Z,1.0nm,0.7s,mb3.8,baz=219,slow=8.0,SNR=3.3						
KSRS				LR	LR	23 03 58.1	
	comp=Z,24nm,19.2s,MS3.2,baz=95,slow=36						
UCH	Uchtor	48.82	335	*e*P	P	22 44 55.8	+0.8
	comp=Z,2.5nm,0.9s,mb4.2						
SONM	Songino Array	48.93	6	P	P	22 44 53.5	-2.3
	comp=Z,0.7nm,0.7s,mb3.8,baz=192,slow=8.9,SNR=6.0						
TKM2	Tokmak 2	48.95	336	*e*P	P	22 44 56.6	+0.6
	comp=Z,4.6nm,0.8s,mb4.6						
TKM2	Tokmak 2	48.95	336	*e*P	P	22 44 56.6	+0.6
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
AML	Almayashu	49.10	334	*e*P	P	22 44 57.6	+0.5
	comp=Z,3.8nm,0.7s,mb4.5						
AAK	Ala-Archa	49.16	335	*e*P	P	22 44 57.4	-0.2
	comp=Z,16nm,1.8s,mb4.8						
AAK	Ala-Archa	49.16	335	*e*P	P	22 44 57.4	-0.2
AAK				pmax	pmax		
	comp=Z,16nm,1.8s,mb4.8						
EKS2	Erkin-Say	49.49	335	*e*P	P	22 45 00.5	+0.3
	comp=Z,5.0nm,0.7s,mb4.7						
EKS2				PcP	PcP	22 46 23.1	+1.3
STKA	Stephens Creek	49.76	132	*e*P	P	22 45 04.3	+1.9
STKA	Stephens Creek	49.76	132	P	P	22 45 03.0	+0.6
	comp=Z,2.6nm,0.7s,mb4.4,baz=293,slow=3.9,SNR=7.1						
MK31	Makanchi Array	50.08	344	*e*P	P	22 45 02.9	-1.7
MKAR	Makanchi Array	50.08	344	P	P	22 45 02.6	-1.9
	comp=Z,1.0nm,0.6s,mb4.0,baz=160,slow=7.9,SNR=9.7						
MAJO	Matsushiro	51.44	39	P	P	22 45 17.1	+2.1
KURK	Kurchatov	54.67	343	*e*P	P	22 45 37.4	-1.1
	comp=Z,1.9nm,0.8s,mb4.2						
KURK	Kurchatov	54.67	343	*e*P	P	22 45 37.4	-1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
NAY	Al-Naaiem	58.71	305	*e*P	P	22 46 07.8	+0.1
NAY				AMb	AMB	22 46 17.0	
	comp=Z,6.7nm,1.1s,mb4.6						
MIB	Mutribah	58.83	306	*e*P	P	22 46 10.3	+1.7
MIB				AMb	AMB	22 46 12.7	
	comp=Z,8.3nm,0.7s,mb4.9						
RST	Umm Al-Ruwaisa	59.00	306	*e*P	P	22 46 10.8	+1.1
RST				AMb	AMB	22 46 16.1	
	comp=Z,8.8nm,0.8s,mb4.8						
BRVK	Borovoye	59.33	340	*e*P	P	22 46 12.7	+1.2
	comp=Z,2.0nm,0.7s,mb4.3						
BRVK	Borovoye	59.33	340	*e*P	P	22 46 12.7	+1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
AKTK	Aktyubinsk	62.52	331	P	P	22 46 32.0	-1.2
AKTO	Aktyubinsk	62.52	331	P	P	22 46 32.0	-1.2
	comp=Z,2.7nm,0.8s,mb4.4,baz=120,slow=8.4,SNR=6.9						
KMBO	Kilima Mbogo	62.83	269	P	P	22 46 35.5	-0.5
ARU	Arti	66.32	336	*e*P	P	22 46 56.6	-1.3
ARU	Arti	66.32	336	*e*P	P	22 46 56.6	-1.4
KIV	Kislovodsk	67.84	319	*e*P	P	22 47 08.6	+0.7
	comp=Z,3.0nm,0.5s,mb4.6						
KIV	Kislovodsk	67.84	319	*e*P	P	22 47 08.6	+0.7
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
MALT	Malatya	68.73	312	*e*P	P	22 47 14.6	+1.0
	comp=Z,6.6nm,1.4s,mb4.4						
MALT	Malatya	68.73	312	*e*P	P	22 47 14.6	+1.0
MALT				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
BRTR	Keskin Array B	72.71	312	P	P	22 47 38.6	+0.8
	comp=Z,0.9nm,0.7s,mb3.8,baz=147,slow=7.2,SNR=6.9						
AKASG	Malin Array Be	78.74	322	P	P	22 48 12.2	+0.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=88,slow=4.8,SNR=5.2						
FINES	FINESS Array B	83.26	332	P	P	22 48 36.0	+0.1
	comp=Z,1.2nm,0.7s,mb4.0,baz=104,slow=8.0,SNR=5.4						
GERES	GERESS Array B	88.35	319	P	P	22 49 02.3	+1.0
	comp=Z,0.3nm,0.5s,mb3.8,baz=64,slow=2.3,SNR=3.9						
MSU	Marysvale	132.36	35	PKPdf	PKPdf	22 55 19.6	-4.5
TXAR	Lajitas Array	143.84	37	PKP	PKPdf	22 55 45.5	0.0
	comp=Z,0.3nm,0.5s,baz=208,slow=0.9,SNR=6.4						

*NEIC **08** 22:39:45.0±0.6, 072S×10051E, h20km, mb4.2/8, Error ellipse: s-maj=27.3km s-min=9.5km az=55.0*
*ISCJB **08** 22:39:48.7±2.4, 09S±0.1×1003E±0.1, h67km±20km, mb4.0/18, Error ellipse: s-maj=27.3km s-min=10.3km az=144.9*
*IDC **08** 22:39:52.2±3.8, 069S×10052E, h84km±32km, mb3.6/9, mb1 3.7/10, mb1mx3.6/21, mbtmp3.6/10, Error ellipse: s-maj=56.9km s-min=14.1km az=47.0*
ISC 08 22:39:49.9±2.3**, 10S**±01×**1003E**±01**, h63**km±19km**, n31, σ1^{s}22**/33**, mb4.1**/18**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	3.97	340	P	Pn	22 40 48.0	-0.4
PSI				S	Sn	22 41 39.3	+5.6
PSI	Prapat	3.97	340	P	Pn	22 40 48.0	-0.4
	3.2nm,0.3s,baz=113,slow=7.7,SNR=3.2						
PSI				S	Sn	22 41 39.3	+5.6
	18nm,0.3s,baz=246,slow=23,SNR=3.9						
KULM	Kulim	6.22	3	*e*Pn	Pn	22 41 11.6	-7.5
KULM				Sn	Sn	22 42 29.1	+0.2
BATI	Kupang	24.99	112	P	P	22 45 08.2	+0.1
	21nm,0.6s,mb4.8,baz=40,slow=3.6,SNR=4.3						
MBWA	Marble Bar	27.63	138	P	P	22 45 33.5	+1.8
LSA	Lhasa	31.71	345	*e*P	P	22 46 08.8	+1.0
	2.3nm,0.9s,mb4.0						
WRA	Warramunga Arr	38.28	122	P	P	22 47 03.5	-1.1
	1.9nm,0.6s,mb4.0,baz=302,slow=9.0,SNR=16						
ASAR	Alice Springs	39.64	127	P	P	22 47 16.1	+0.3
	2.0nm,0.7s,mb4.0,baz=307,slow=8.3,SNR=12						
CTAO	Charters Tower	48.79	116	*e*P	P	22 48 27.6	-1.4
UCH	Uchtor	48.88	335	*e*P	P	22 48 30.5	+1.2
	5.2nm,1.2s,mb4.4						
SONM	Songino Array	48.88	5	P	P	22 48 27.5	-1.8
	0.3nm,0.4s,mb3.6,baz=190,slow=8.7,SNR=3.7						
ULN	Ulaanbaatar	48.98	6	P	P	22 48 33.0	+3.0
TKM2	Tokmak 2	49.00	336	*e*P	P	22 48 32.8	+2.5
	3.1nm,0.8s,mb4.4						
AML	Almayashu	49.16	334	*e*P	P	22 48 30.8	-0.6
	5.8nm,1.1s,mb4.5						
AAK	Ala-Archa	49.22	335	*e*P	P	22 48 32.3	+0.4
	1.2nm,0.9s,mb3.9						
EKS2	Erkin-Say	49.55	334	*e*P	P	22 48 33.7	-0.7
	4.7nm,1.0s,mb4.5						
STKA	Stephens Creek	49.63	133	*e*P	P	22 48 39.2	+3.9
MK31	Makanchi Array	50.11	344	*e*P	P	22 48 37.3	-1.3
MKAR	Makanchi Array	50.11	344	P	P	22 48 36.1	-2.6
	0.7nm,0.4s,mb4.0,baz=157,slow=8.1,SNR=9.6						
TLY	Talaya	52.52	3	*e*P	P	22 48 59.3	+2.7
	1.0nm,0.4s,mb4.1						
KURK	Kurchatov	54.69	343	*e*P	P	22 49 11.5	-1.0
CHKZ	Chkalovo	59.77	340	*e*P	P	22 49 50.4	+2.2
AKTK	Aktyubinsk	62.59	331	P	P	22 50 07.0	-0.4
AKTO	Aktyubinsk	62.59	331	P	P	22 50 07.0	-0.4
	1.2nm,0.7s,mb4.2,baz=77,slow=7.7,SNR=3.6						
MALT	Malatya	68.85	312	*e*P	P	22 50 48.0	0.0
	0.9nm,0.7s,mb3.8						
BRTR	Keskin Array B	72.83	312	P	P	22 51 12.1	-0.1
	0.3nm,0.5s,mb3.5,baz=120,slow=7.1,SNR=3.1						
FINES	FINESS Array B	83.33	332	P	P	22 52 09.9	+0.1
	0.5nm,0.5s,mb3.9,baz=87,slow=6.4,SNR=7.3						
ARCES	ARCESS Array B	85.59	340	P	P	22 52 20.9	-0.2
ARCES	ARCESS Array B	85.59	340	P	P	22 52 20.9	-0.2
	1.1nm,0.7s,mb4.2,baz=118,slow=7.3,SNR=2.6						
GERES	GERESS Array B	88.46	319	P	P	22 52 35.0	-0.4
	0.3nm,0.6s,mb3.7,baz=59,slow=6.3,SNR=2.6						
TXAR	Lajitas Array	143.71	37	PKP	PKPdf	22 59 17.1	-1.4
	1.1nm,1.0s,baz=207,slow=2.5,SNR=5.6						

*IDC **08** 22:43:12.7±1.4, 304S×12790E, h0km, mb4.2/3, mb1 4.6/4, mb1mx4.1/16, mbtmp4.4/4, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/29, Error ellipse: s-maj=119.9km s-min=22.6km az=70.0*
*NEIC **08** 22:43:17.2±0.7, 303S×12805E, h35km, mb4.3/1, Error ellipse: s-maj=34.0km s-min=10.9km az=64.0*
*ISCJB **08** 22:43:29.5±2.7, 34S±0.1×1280E±02, h184km±29km, mb4.2/5, Error ellipse: s-maj=38.8km s-min=17.4km az=159.5*
ISC 08 22:43:30.0±2.6**, 34S**±01×**1280E**±02**, h171**km±30km**, n13, σ0^{s}74**/12**, mb4.2**/5**, 2C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLE	Tual	5.24	115	⇑*e*P	Pn	22 44 47.0	+0.1
TLE	Tual	5.24	115	⇑*e*P	Pn	22 44 47.0	+0.1
FITZ	Fitzroy Crossi	14.75	189	LR	LR	22 53 19.0	
	comp=Z,75nm,20.3s,baz=186,slow=40						
WRA	Warramunga Arr	17.54	160	P	Pn	22 47 23.5	-0.8
	0.5nm,0.3s,baz=340,slow=12,SNR=36						
WB2	Warramunga Arr	17.55	160	*e*P	Pn	22 47 23.7	-0.6
WB2	Warramunga Arr	17.55	160	*e*Pn	Pn	22 47 24.1	-0.2
ASAR	Alice Springs	20.91	165	P	P	22 48 00.8	+1.6
	30nm,0.9s,baz=343,slow=11,SNR=112						
HNR	Honiara	32.32	102	*e*P	P	22 49 42.9	-0.4
	24nm,0.4s,mb5.3						
LZH	Lanzhou	45.33	332	*e*P	P	22 51 31.5	+0.5
LZH				pP	pP	22 51 36.0	-33
LZH				sP	sP	22 51 38.7	-49
LSA	Lhasa	48.25	316	*e*P	P	22 51 53.2	-0.6
	2.3nm,0.7s,mb3.9						
SONM	Songino Array	54.45	342	P	P	22 52 40.6	+1.1
	2.2nm,1.1s,mb3.8,baz=164,slow=8.0,SNR=8.3						
MKAR	Makanchi Array	64.16	327	P	P	22 53 45.6	-0.6
	1.7nm,1.0s,mb3.9,baz=113,slow=8.4,SNR=9.3						
KURK	Kurchatov	68.44	329	*e*P	P	22 54 13.0	-0.3
	6.6nm,1.4s,mb4.2						
KURK				*e*PP	PP	22 56 44.7	-2.1

IDC 08 22:44:15.3±3.3**, 331S**×**15206E, h0**km**, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.7**/14**, mbtmp3.9**/4**, ML3.4**/1**, Error ellipse: s-maj=129.6km s-min=39.7km az=119.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.77	219	Pn	Pn	22 46 07.9	-1.9
	3.0nm,0.3s,baz=256,slow=1.5,SNR=6.9						
PMG				Sn	Sn	22 47 35.5	-3.1
	3.3nm,0.3s,baz=118,slow=19,SNR=11						
WRA	Warramunga Arr	23.93	225	P	P	22 49 31.7	+0.5
	1.2nm,0.4s,baz=50,slow=10.0,SNR=5.8						
ASAR	Alice Springs	26.79	219	P	P	22 49 58.0	+0.8
	0.3nm,0.5s,baz=51,slow=8.8,SNR=2.2						
FITZ	Fitzroy Crossi	29.77	238	P	P	22 50 24.6	+0.7
	1.4nm,0.8s,baz=66,slow=10.0,SNR=3.8						
TORD	Torodi Ar. Bea	149.13	290	PKPbc	PKPbc	23 04 05.3	-1.5
	0.7nm,0.3s,baz=67,slow=2.1,SNR=11						

*ISCJB **08** 22:51:37.8±1.0, 2770N±006×1406E±02, h157km±9km, mb3.6/9, Error ellipse: s-maj=28.5km s-min=6.2km az=163.3*
*IDC **08** 22:51:37.0±1.8, 2766N×14038E, h138km±16km, mb3.6/9, mb1 3.7/10, mb1mx3.4/21, mbtmp3.5/10, Error ellipse: s-maj=26.3km s-min=15.5km az=88.0*
*JMA **08** 22:51:39.7±0.1, 2765N×141.14E, h191km, M4.1*
*NEIC **08** 22:51:39.2±2.1, 2768N×140.19E, h157km±19km, MG4.1(JMA), Error ellipse: s-maj=31.7km s-min=13.5km az=93.0*
ISC 08 22:51:38.6±1.0**, 2769N**±006×**1405E**±02**, h149**km±9km**, n23, σ1^{s}22**/30**, mb3.6**/9**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.58	112	P	Pn	22 52 09.3	+0.4
CBIJ				*e*S	Sn	22 52 31.7	-0.4
CBIJ	Chichi jima	1.58	112	P	Pn	22 52 09.3	+0.4
	99nm,0.3s,baz=249,slow=21,SNR=44						
CBIJ				S	Sn	22 52 31.2	-0.9
	385nm,0.3s,baz=173,slow=23,SNR=21						
JHHJ	Haha-jima-NKT	1.80	126	P	Pn	22 52 11.5	+0.1
JHHJ				*e*S	Sn	22 52 36.0	-0.5
JHJ	Hachijo jima 2	5.45	353	P	Pn	22 53 03.2	+5.4
	3.2nm,0.3s,baz=82,slow=18,SNR=3.2						
JHJ				S	Sn	22 53 59.0	-0.8
	7.8nm,0.3s,baz=234,slow=19,SNR=2.2						
BSO2	Boso 2	7.04	1	*e*S	Sn	22 54 36.9	-1.0
BSO3	Boso 3	7.09	360	P	Pn	22 53 21.3	+1.6
BSO3				*e*S	Sn	22 54 36.6	-2.4
BSO4	Boso 4	7.28	359	P	Pn	22 53 24.3	+2.1
BSO4				*e*S	Sn	22 54 43.5	-0.1
JOD2	Odawara 2	7.65	351	P	Pn	22 53 30.8	+3.6
JHU	Hanno	8.20	353	P	Pn	22 53 37.7	+3.1
JRY	Ryogami san	8.41	351	P	Pn	22 53 40.4	+3.0
JAG	Ashikaga	8.75	354	P	Pn	22 53 41.7	-0.2
JAG				*e*S	Sn	22 55 15.6	-3.5
MJAR	Matsushiro Arr	9.04	348	P	Pn	22 53 45.6	-0.1
	0.3nm,0.3s,baz=157,slow=9.7,SNR=3.0						
MAT	Matsushiro	9.04	348	P	Pn	22 53 51.6	+5.8
WRA	Warramunga Arr	47.73	188	P	P	22 59 59.7	-0.8
	1.8nm,0.4s,mb4.0,baz=6.6,slow=7.8,SNR=48						
ASAR	Alice Springs	51.46	188	P	P	23 00 28.3	-0.3
	0.2nm,0.5s,mb3.0,baz=3.6,slow=6.3,SNR=4.3						
INK	Inuvik	63.10	25	P	P	23 01 50.3	+0.6
	0.6nm,0.5s,mb3.7,baz=272,slow=5.5,SNR=3.8						
YKA	Yellowknife Ar	72.31	28	P	P	23 02 47.9	+0.4
	1.0nm,0.5s,mb3.8,baz=294,slow=6.2,SNR=15						
ARCES	ARCESS Array B	72.50	340	P	P	23 02 48.8	+0.3
	1.9nm,0.8s,mb3.9,baz=80,slow=10,SNR=7.0						
FINES	FINESS Array B	76.76	333	P	P	23 03 12.5	-0.7
	0.6nm,0.3s,mb3.6,baz=74,slow=4.0,SNR=16						
NVAR	Mina Array Bea	81.29	51	P	P	23 03 39.8	+1.5
	0.8nm,0.6s,mb3.5,baz=294,slow=6.0,SNR=7.2						
HFS	Hagfors	82.29	336	P	P	23 03 41.1	-2.0
	0.7nm,0.4s,mb3.6,baz=91,slow=5.9,SNR=5.8						
NOA	NORSAR Array B	82.51	338	P	P	23 03 43.3	-0.9
NOA	NORSAR Array B	82.51	338	P	P	23 03 43.3	-0.9
	0.4nm,0.8s,mb3.2,baz=54,slow=8.1,SNR=2.9						

*IDC **08** 23:13:07.9±1.5, 3365N×13538E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/23, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=28.6km s-min=18.9km az=135.0*
*ISCJB **08** 23:13:13.8±0.5, 3387N±004×13531E±004, h57km±5km, mb3.2/3, Error ellipse: s-maj=7.1km s-min=4.6km az=163.7*
*JMA **08** 23:13:15.1, 3389N×13533E, h51km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs86.00000°, δ54.00000°, λ-153.00000°. NP2: φs340.00000°, δ69.00000°, λ-39.00000°. Principal axes: T Plg9.0000°, Azm36.0000°; N Plg47.0000°, Azm136.0000°; P Plg42.0000°, Azm298.0000°;*
JMA Felt I J1.
ISC 08 23:13:14.8±0.5**, 3388N**±004×**13531E**±003**, h50**km±5km**, n19, σ0^{s}64**/32**, mb3.2**/3**, 5C-4D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.05	124	⇓P	Pn	23 13 22.7	+0.2
JWM				S	Sn	23 13 28.0	+0.1
JWY	Kouya	0.42	34	P	Pn	23 13 25.3	+0.2
JWY				S	Sn	23 13 32.4	-0.1
JWZ	Kozaga	0.48	135	⇓P	Pn	23 13 26.0	+0.2
JWZ				S	Sn	23 13 34.1	+0.4
JAJ2	Tsuna	0.65	327	⇓P	Pn	23 13 28.1	+0.2
JAJ2				S	Sn	23 13 37.5	+0.2
JAI	Aioi	0.72	264	⇑P	Pn	23 13 29.0	+0.2
JAI				S	Sn	23 13 38.9	0.0
JHE	Heguri	0.84	22	⇑P	Pn	23 13 30.2	-0.1
JHE				S	Sn	23 13 41.2	-0.5
JKN2	Miekihoku	0.88	65	⇑P	Pn	23 13 30.5	-0.4
JKN2				S	Sn	23 13 41.9	-0.8
JKS	Kasai	1.17	341	⇑P	Pn	23 13 34.7	-0.1
JKS				S	Sn	23 13 49.0	-0.7
JMN	Monobe	1.20	263	P	Pn	23 13 35.2	0.0
JMN				S	Sn	23 13 49.9	-0.5
TSUJ	Tsu 2	1.24	48	⇑P	Pn	23 13 35.2	-0.6
JJS	Sakaide	1.25	294	⇓P	Pn	23 13 35.7	-0.1
JJS				S	Sn	23 13 51.2	-0.3
JIE	Ise	1.27	66	P	Pn	23 13 36.1	0.0
MAT	Matsushiro	3.57	41	P	Pn	23 14 09.3	+1.7
MAT				*e*S	Sn	23 14 48.0	-0.4
MJAR	Matsushiro Arr	3.57	41	Pn	Pn	23 14 08.6	+1.0
	1.1nm,0.3s,baz=233,slow=14,SNR=12						
MJAR				Pg	Pn	23 14 17.0	+9.5
	3.3nm,0.3s,baz=213,slow=16,SNR=18						
MJAR				Lg		23 15 03.4	
	0.7nm,0.3s,baz=216,slow=27,SNR=8.1						
JNU	Nakatsue	3.78	260	Pn	Pn	23 14 10.6	+0.1
	2.3nm,0.3s,baz=54,slow=15,SNR=11						
JNU				Sn	Sn	23 14 52.7	-0.9
	baz=72,slow=16						
KSRS	Korea Array	6.99	303	Pn	Pn	23 14 56.2	+1.6
	0.5nm,0.3s,baz=122,slow=14,SNR=3.3						
SONM	Songino Array	25.76	311	P	P	23 18 41.3	+0.7
	0.6nm,0.7s,mb3.3,baz=122,slow=9.7,SNR=5.3						
MKAR	Makanchi Array	41.67	304	P	P	23 20 59.0	+0.8
	0.5nm,0.6s,mb3.3,baz=91,slow=10,SNR=9.1						
WRA	Warramunga Arr	53.52	181	P	P	23 22 28.8	-1.5
	0.1nm,0.6s,mb3.0,baz=15,slow=7.6,SNR=3.9						

IDC 08 23:40:14.3±7.8**, 598S**×**15066E, h62**km±60km**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.5**/15**, mbtmp3.7**/5**, ML2.7**/1**, Error ellipse: s-maj=64.0km s-min=27.3km az=2.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.86	225	P	Pn	23 41 26.9	+1.9
	1.9nm,0.3s,baz=44,slow=13,SNR=7.9						
PMG				S	Sn	23 42 20.6	+0.6
	5.3nm,0.3s,baz=102,slow=18,SNR=8.8						
WRA	Warramunga Arr	21.08	227	P	P	23 44 53.9	+0.2
	2.5nm,0.5s,baz=52,slow=10.0,SNR=30						
WRA				PcP	PcP	23 48 59.1	+0.7
	0.4nm,0.5s,baz=48,slow=1.9,SNR=5.4						
DZM	Mont Dzumac	22.10	138	P	P	23 45 04.0	-0.6
	4.1nm,0.8s,baz=311,slow=7.7,SNR=5.3						
ASAR	Alice Springs	23.86	221	P	P	23 45 22.9	+0.7
	0.7nm,0.4s,baz=51,slow=9.1,SNR=11						
FITZ	Fitzroy Crossi	27.23	242	P	P	23 45 51.2	-1.6
	3.5nm,1.0s,baz=31,slow=13,SNR=3.2						
TORD	Torodi Ar. Bea	148.61	285	PKPbc	PKPbc	23 59 54.9	-0.5
	1.0nm,0.5s,baz=84,slow=2.4,SNR=5.4						

*NEIC **08** 23:51:51.6±1.5, 247S×9731E, h35km, Error ellipse: s-maj=44.5km s-min=13.9km az=88.0*

NEIC Felt [III] at Bukittinggi and Padangpanjang.
*ISCJB **08** 23:52:04.7±3.2, 15S±0.1×992E±0.2, h84^{km}±28^{km}, mb3.6/4, Error ellipse: s-maj=42.2km s-min=19.5km az=163.6*
*IDC **08** 23:52:14.7±3.3, 0.72S×100.64E, h108^{km}±25^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.2/20, mbtmp3.2/5, MS3.2/2, Ms1 3.2/2, ms1mx3.0/8, Error ellipse: s-maj=112.6km s-min=18.1km az=57.0*
ISC 08 23:52:05.2±3.2, 16S±01×992E±03, h74^{km}±28^{km}, n8, σ0^{s}79/10, mb3.6/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	4.36	357	P	Pn	23 53 09.8	+0.7
PSI				S	Sn	23 53 57.3	-1.4
PSI				LR	LR	23 54 46.6	
PSI	Prapat	4.36	357	P	Pn	23 53 09.8	+0.7
	6.5nm,0.3s,baz=131,slow=9.3,SNR=30						
PSI				S	Sn	23 53 57.3	-1.4
	2.4nm,0.3s,baz=226,slow=23,SNR=3.4						
PSI				LR	LR	23 54 46.6	
	comp=Z,445nm,21.3s,baz=129,slow=40						
KULM	Kulim	6.98	12	Pn	Pn	23 53 50.0	+5.1
KULM				eSn	Sn	23 55 03.7	+0.8
BATI	Kupang	25.80	110	LR	LR	00 09 09.7	
	comp=Z,32nm,18.9s,baz=128,slow=41						
WRA	Warramunga Arr	38.91	120	P	P	23 59 23.4	-0.7
	0.5nm,0.5s,mb3.6,baz=304,slow=9.1,SNR=4.3						
WRA				PcP	PcP	00 01 37.6	+3.9
	0.2nm,0.5s,baz=308,slow=2.5,SNR=4.6						
ASAR	Alice Springs	40.16	126	P	P	23 59 34.6	+0.2
	0.9nm,0.7s,mb3.7,baz=313,slow=8.8,SNR=8.2						
SONM	Songino Array	49.62	6	P	P	00 00 48.6	-0.4
	0.3nm,0.7s,mb3.3,baz=193,slow=8.7,SNR=4.1						
SONM				PcP	PcP	00 02 12.3	+2.7
	0.5nm,0.9s,baz=189,slow=3.9,SNR=3.8						
MKAR	Makanchi Array	50.41	345	P	P	00 00 55.9	+0.8
	0.5nm,0.5s,mb3.7,baz=151,slow=7.3,SNR=11						

CASC 08 23:55:19.5±1.9, 838N×8292W, h4^{km}±6^{km}, MD3.7, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.47	29	⇓iP	Pg	23 55 29.9	+1.3
BRU2				eS	Sg	23 55 37.8	+3.0
CTCR	Cotoan	0.54	17	⇓iP	Pg	23 55 30.9	+1.1
CTCR				eS	Sg	23 55 40.2	+3.3
BAR1		0.94	336	eP	Pg	23 55 36.6	-0.9
BAR1				eS	Sg	23 55 50.4	+0.6
URSC	Urasca	1.68	330	eP	Pn	23 55 48.8	-0.8
URSC				eS	Sn	23 56 11.5	-0.1
LCR2	La Lucha 2	1.73	322	eP	Pn	23 55 49.7	-0.6
LCR2				eS	Sn	23 56 13.5	+0.7
LAJ	Bijagual	1.89	321	eP	Pn	23 55 55.9	+3.3
LAJ				eS	Sn	23 56 24.7	+7.8
PRS1	Puriscal	2.10	319	eP	Pn	23 55 54.7	-0.8
PRS1				eS	Sn	23 56 22.7	+0.6
PTP	Ponta Puerca	19.46	58	⇑iP		23 55 23.2	
PTP				eS		23 55 27.1	

MAN 09 00:30:25, 961N×12606E, h25^{km}, mb4.1, ML2.9, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.59	287	eP	Pb	00 30 38.4	+1.7
SCPH				i S	Sb	00 30 48.7	+4.0
PLP	Palo	1.88	326	eP	Pn	00 30 57.1	+1.6
PLP				eS	Sn	00 31 19.4	+1.1

*MOS **09** 00:37:29.5±1.0, 48.11N×102.88E, h9^{km}, mb4.4/1, Error ellipse: s-maj=85.1km s-min=16.2km az=89.3*
BYKL 09 00:37:28.0±0.6, 4804N×10295E, h4^{km}±15^{km}, 2C-1D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK	Zakamensk	2.35	5	ePN	Pn	00 38 08.2	+0.8
ZAK				e		00 38 10.2	
ZAK				e		00 38 40.8	
ZAK				pmax	pmax		
	comp=Z,133nm,0.4s						
ZAK				smax			
	comp=E,488nm,0.2s						
ZAK	Zakamensk	2.35	5	ePn	Pn	00 38 08.4	+1.0
ZAK				ePg	Pg	00 38 10.3	-2.8
ZAK				e		00 38 39.2	
ZAK				eSg	Sg	00 38 42.0	-1.6
ZAK				Pmax			
	comp=E,142nm,0.3s						
ZAK				Smax			
	comp=E,718nm,0.8s						
ULN	Ulaanbaatar	2.76	92	⇑iPn	Pn	00 38 13.6	+0.6
ULN				ePg	Pg	00 38 17.1	-3.8
ULN				i		00 38 48.9	
ULN				eSg	Sg	00 38 53.2	-3.5
TLY	Talaya	3.67	7	ePN	Pn	00 38 26.4	+0.9
TLY				e		00 38 34.7	
TLY				e		00 39 21.3	
TLY				pmax	pmax		
	comp=Z,54nm,0.8s						
TLY				smax			
	comp=E,208nm,0.5s						
TLY	Talaya	3.67	7	ePn	Pn	00 38 26.5	+1.0
TLY				ePg	Pg	00 38 33.5	-4.8
TLY				eSg	Sg	00 39 21.4	-4.5
TLY				Pmax			
	comp=E,52nm,0.8s						
TLY				Smax			
	comp=E,315nm,1.7s						
MOY	Mondy	3.84	342	ePN	Pn	00 38 29.2	+1.3
MOY				e		00 38 36.9	
MOY				e		00 39 27.5	
MOY				pmax	pmax		
	comp=Z,58nm,0.4s						
MOY				smax			
	comp=E,303nm,0.6s						
MOY	Mondy	3.84	342	ePn	Pn	00 38 29.1	+1.2
MOY				⇑iPg	Pg	00 38 36.9	-4.7
MOY				i Sg	Sg	00 39 27.5	-3.9
MOY				Pmax			
	comp=E,59nm,0.4s						
MOY				Smax			
	comp=E,302nm,0.8s						
ARS	Arshan	3.90	355	ePN	Pn	00 38 30.0	+1.4
ARS				eS	Sn	00 39 29.1	+14
ARS				smax			
	comp=N,397nm,0.9s						
ARS	Arshan	3.90	355	ePn	Pn	00 38 29.7	+1.1
ARS				e		00 38 41.4	
ARS				eSg	Sg	00 39 29.7	-3.5
ARS				max			
ARS				Smax			
	comp=N,393nm,1.4s						
LSTR	Listvyanka	4.02	17	ePn	Pn	00 38 30.8	+0.5
LSTR				ePg	Pg	00 38 40.1	-4.9
LSTR				eSg	Sg	00 39 32.9	-4.1
LSTR				Pmax			
	comp=N,24nm,1.0s						
LSTR				Smax			
	comp=N,100nm,1.0s						
IRK	Irkutsk	4.29	11	ePN	Pg	00 38 46.2	-4.0
IRK	Irkutsk	4.29	11	eSg	Sg	00 39 40.6	-5.2
IRK				Smax			
	comp=N,870nm,0.5s						
HRMR	Khuramsha	4.43	34	ePn	Pn	00 38 36.4	+0.5
HRMR				ePg	Pg	00 38 47.5	-5.3
HRMR				e		00 38 53.1	
HRMR				eSg	Sg	00 39 45.4	-4.8
HRMR				max			
	comp=N,59nm,0.5s						
HRMR				Smax			
	comp=N,381nm,0.9s						
KAB	Kabansk	4.67	29	eSg	Sg	00 39 53.2	-4.7
KAB				Smax			
	comp=N,528nm,1.4s						
FFNB	Fofonovo	4.70	30	eSg	Sg	00 39 53.8	-5.2
FFNB				Smax			
	comp=N,376nm,0.6s						
ORL	Orlik	4.93	337	ePN	Pg	00 38 55.2	-7.2
ORL				e		00 39 59.1	
ORL				pmax	pmax		
	comp=Z,17nm,0.4s						
ORL				smax			
	comp=N,151nm,1.4s						
ORL	Orlik	4.93	337	ePn	Pn	00 38 43.7	+0.9
ORL				ePg	Pg	00 38 56.3	-6.1
ORL				eSg	Sg	00 39 59.2	-7.1
ORL				Pmax			
	comp=N,18nm,0.8s						
ORL				Smax			
	comp=N,152nm,1.3s						
TRTB	Turuntaevo	5.16	34	ePn	Pn	00 38 45.9	0.0
TRTB				ePg	Pg	00 39 00.1	-6.7
TRTB				eSg	Sg	00 40 07.5	-6.2
TRTB				Pmax			
	comp=N,23nm,0.7s						
TRTB				Smax			
	comp=N,87nm,1.0s						
TRG	Tyrgan	5.20	23	⇓iPn	Pn	00 38 46.8	+0.3
TRG				ePg	Pg	00 39 02.1	-5.5
TRG				eSg	Sg	00 40 09.2	-5.7
TRG				Pmax			
	comp=N,7.0nm,0.5s						
TRG				Smax			
	comp=N,54nm,0.7s						
ZRHB	Zarechye	5.26	29	ePn	Pn	00 38 47.2	-0.1
ZRHB				ePg	Pg	00 39 02.8	-5.9
ZRHB				eSg	Sg	00 40 09.9	-6.9
ZRHB				Pmax			
	comp=N,40nm,0.6s						
ZRHB				Smax			
	comp=N,371nm,0.9s						
TDJR	Todzha	6.19	317	e	Pg	00 39 17.5	-9.1
TDJR				eSg	Sg	00 40 40.9	-5.8
OGRR	Ongureny	6.33	26	ePN	Pn	00 39 02.8	+0.8
OGRR				e		00 39 22.5	
OGRR				e		00 40 44.2	
OGRR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OGRR				smax			
	comp=E,28nm,0.7s						
OGRR	Ongureny	6.33	26	ePn	Pn	00 39 02.8	+0.8
OGRR				eSg	Sg	00 40 43.9	-7.3
OGRR				max			
	comp=E,11nm,0.5s						
OGRR				Smax			
	comp=E,39nm,1.0s						
MXMB	Maximikha	6.39	33	eSg	Sg	00 40 45.2	-8.0
MXMB				Smax			
	comp=E,96nm,1.1s						
KPC	Khapcheranga	6.44	72	ePn	Pn	00 39 02.7	-0.8
KPC				ePg	Pg	00 39 23.1	-8.2
KPC				eSn	Sn	00 40 15.1	-2.3
KPC				eSg	Sg	00 40 46.3	-8.3
KPC				e		00 41 01.9	
KPC				Pmax			
	comp=E,4.0nm,0.3s						
KPC				max			
	comp=E,180nm,1.6s						
SYVR	Suvo	7.18	36	eSg	Sg	00 41 11.3	-7.0
SYVR				Smax			
	comp=E,52nm,1.7s						
ARDR	Aradan	7.60	310	ePg	Pg	00 39 44.9	-8.6
ARDR				eSg	Sg	00 41 24.2	-7.6
CIT	Chita	7.90	56	eSg	Sg	00 41 31.3	-10
CIT				Smax			
	comp=E,39nm,1.6s						
YLYR	Ulyunkhan	8.55	34	eSg	Sg	00 41 53.5	-8.6
YLYR				Smax			
	comp=E,24nm,0.8s						
NIZ	Nizh Angarsk	8.75	25	eSg	Sn	00 42 00.6	+47
NIZ				Smax			
	comp=E,13nm,0.5s						
KMO	Kumora	9.36	30	eSg	Sx	00 42 17.8	
KMO				Smax			
	comp=E,30nm,1.4s						

*CSEM **09** 00:51:26.6±0.1, 40.57N×34.12E, h10^{km}, MD3.0, Error ellipse: s-maj=2.5km s-min=1.9km az=25.0*
*ISK **09** 00:51:26.9, 40.57N×34.10E, h9^{km}, MD3.0*
*ISCJB **09** 00:51:27.3±0.6, 40.56N±0.03×34.11E±0.03, h5^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=4.0km az=18.7*
*DDA **09** 00:51:28.1, 40.56N×34.11E, h6^{km}±2^{km}, Md3.3*
ISC 09 00:51:27.7±0.5, 4056N±003×3411E±003, h8^{km}±5^{km}, n16, σ0^{s}86/25, 5C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CANT	Cankiri	0.38	277	PG	Pg	00 51 34.6	-0.4
CANT				SG	Sg	00 51 40.0	0.0
TOS	Tosya	0.48	352	PG	Pg	00 51 36.6	-0.4
CTKT	Corum	0.52	83	⇑iP	Pg	00 51 37.6	-0.2
CTKT				i S	Sg	00 51 45.9	+1.3
ELDT	Eldivan	0.52	263	⇓iP	Pg	00 51 37.8	-0.1
ELDT				i S	Sg	00 51 45.3	+0.6
CORM	Corum	0.55	134	PG	Pg	00 51 38.3	0.0
CORM				SG	Sg	00 51 46.6	+1.1
CDAG	Cicekdag	0.96	168	⇑iP	Pg	00 51 44.8	-1.2
CDAG				i S	Sg	00 51 58.2	-0.3
BOYT	Boyabat	1.05	35	⇑iP	Pg	00 51 46.1	-1.7
BOYT				⇓iS	Sg	00 52 01.8	+0.4
BALT	Daday	1.12	331	⇑iP	Pg	00 51 48.7	-0.5
BALT				⇑iS	Sg	00 52 05.3	+1.7
ANTO	Ankara	1.22	236	ePN	Pn	00 51 50.5	-0.5
LOD	Lodumlu	1.23	237	ePN	Pn	00 51 50.9	-0.2
SAFT	Safranbolu	1.27	303	ePN	Pn	00 51 51.5	-0.2
YOZ	Yozgat	1.31	134	ePN	Pn	00 51 51.3	-0.9
DIKM	Dikmen	1.39	38	ePN	Pn	00 51 52.4	-0.9
KVT	Kavak	1.56	70	ePN	Pn	00 51 55.9	+0.3
SGKT	Sivrigoynuk	1.56	271	i P	Pn	00 51 56.2	+0.5
SGKT				i S	Sn	00 52 19.8	+3.7
AVNT	Avonos	1.87	162	i P	Pn	00 52 00.1	+0.2
AVNT				i S	Sn	00 52 26.9	+3.3

*ISK **09** 01:13:56.5, 39.38N×40.88E, h5^{km}, MD3.7*
*CSEM **09** 01:13:57.5±0.1, 39.36N×40.88E, h5^{km}, MD3.7, Error ellipse: s-maj=1.9km s-min=1.7km az=170.0*
*ISCJB **09** 01:13:58.3±0.2, 39.34N±0.02×40.93E±0.02, h10^{km}, Error ellipse: s-maj=3.3km s-min=2.4km az=144.9*
*DDA **09** 01:13:58.1, 39.36N×40.95E, h5^{km}±3^{km}, Md3.9, Ml4.0*
ISC 09 01:13:58.9±0.2, 3934N±002×4094E±002, h10^{km}, n50, σ1^{s}11/71, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.58	217	i PG	Pg	01 14 09.0	-1.1
BINT				i SG	Sg	01 14 18.2	+0.5
EZM	Erzurum	0.65	30	PG	Pg	01 14 09.7	-1.8
ERZM	Erzurum	0.65	30	i P	Pg	01 14 09.7	-1.8
ERZM				i S	Sg	01 14 21.4	+1.3
EZC	Erzincan	0.96	295	PN	Pg	01 14 20.9	+3.6
BTMT	Batman	1.23	159	PN	Pn	01 14 21.5	-0.5
PTK	Pertek	1.28	250	PN	Pn	01 14 20.8	-2.0
PTK				SN	Sn	01 14 39.5	-0.5
TUTA	Tutak	1.46	87	i P	Pn	01 14 23.2	-2.0
TUTA				i S	Sn	01 14 45.0	+0.6
KELT	Kelkit	1.52	302	i P	Pn	01 14 25.0	-1.2
KELT				i S	Sn	01 14 46.5	+0.5
DIY	Diyarbakir	1.55	201	PN	Pn	01 14 27.4	+0.9
DIYA	Diyarbakir	1.55	205	i P	Pn	01 14 27.2	+0.7
DIYA				i S	Sn	01 14 47.7	+0.9
GUMT	Gumushane	1.58	315	PN	Pn	01 14 26.3	-0.6
AGRB	Hanur-Agry	1.61	81	PN	Pn	01 14 26.7	-0.6
ELZG	Elazig	1.74	242	i P	Pn	01 14 28.6	-0.5
ELZG				i S	Sn	01 14 53.2	+1.9
MACK	Trabzon	1.83	331	i P	Pn	01 14 30.9	+0.6
MACK				i S	Sn	01 14 57.1	+3.5
PZAR	Pazar-Rize	1.83	359	PN	Pn	01 14 30.7	+0.3
KTUT	Trabzon	1.87	332	PN	Pn	01 14 30.7	-0.2
ARTV	Artvin	1.99	22	i P	Pn	01 14 32.4	-0.2
ARTV				i S	Sn	01 15 00.1	+2.5
MARD	Mardin	2.03	184	i P	Pn	01 14 33.1	0.0
MARD				i S	Sn	01 14 58.2	-0.3
VANB	Van	2.05	111	PN	Pn	01 14 34.8	+1.4
KARS	Kars	2.09	52	PN	Pn	01 14 33.2	-0.7
TVAN	Van	2.09	112	i P	Pn	01 14 34.7	+0.8
TVAN				i S	Sn	01 14 58.9	-1.1
VANT	Van	2.11	114	PN	Pn	01 14 34.8	+0.6
DYDN	Diyadin	2.14	84	i P	Pn	01 14 33.4	-1.2
DYDN				i S	Sn	01 15 05.1	+3.9
DIGO	Kars	2.16	60	i P	Pn	01 14 34.5	-0.4
DIGO				i S	Sn	01 15 04.0	+2.3
BCA	Borcka	2.17	14	PN	Pn	01 14 34.2	-0.7
SIRT	Sirnak	2.19	147	PN	Pn	01 14 36.8	+1.6
MYA	Malataya	2.21	243	PN	Pn	01 14 35.6	+0.1
MALT	Malatya	2.21	243	PN	Pn	01 14 35.4	-0.2
ESPY	Espiye-Giresun	2.31	314	PN	Pn	01 14 37.0	0.0
URFA	Urfa	2.52	222	ePN	Pn	01 14 39.7	-0.2
GRSN	GIRESUNGRSN	2.58	309	i P	Pn	01 14 41.6	+0.9
GRSN				i S	Sg	01 15 18.8	-3.1
HAKT	HAKKARI	2.81	128	i P	Pn	01 14 45.3	+1.5
HAKT				i S	Sg	01 15 28.8	-0.4
HKR	Hakkari	2.82	128	ePN	Pn	01 14 45.0	+1.1
CUKT	Cukurca	2.96	134	ePN	Pn	01 14 47.3	+1.3
GZT	Gaziantep	3.31	234	i P	Pn	01 14 51.4	+0.7
GZT				i S	Sn	01 15 31.4	+1.3
GAZ	Gaziantep	3.65	235	ePN	Pn	01 14 56.1	+0.8
KMRS	Kahramanmaras	3.66	241	ePN	Pn	01 14 55.5	0.0
ONI	Oni	3.75	30	P	Pn	01 14 59.8	+3.0
ONI				S	Sg	01 15 59.1	-0.2
TBLG	Delisi	3.75	49	P	Pn	01 14 56.5	-0.3
MTA	Mtatsminda	3.76	50	P	Pn	01 14 56.9	0.0
DGRG	David-gareji	3.99	57	P	Pb	01 15 07.7	-1.6
BNN	Bunyan	3.99	265	ePN	Pn	01 15 00.2	+0.2
ANDN	Andirin	4.01	245	i P	Pn	01 15 00.0	-0.3
ANDN				i S	Sb	01 16 02.4	+4.3
KVT	Kavak	4.13	296	ePN	Pn	01 15 02.7	+0.8
COBT	Iskenderun	4.65	234	i P	Pn	01 15 08.8	-0.3
COBT				i S	Sn	01 16 11.4	+8.3
AVNT	Avonos	4.77	265	i P	Pn	01 15 09.6	-1.1
AVNT				i S	Sb	01 16 24.7	+4.8
YAYL	Yayladag	5.06	231	i P	Pn	01 15 15.1	+0.3
YAYL				i S	Sb	01 16 26.1	-2.1
MIB	Mutribah	10.88	149	eP	Pn	01 16 33.7	-0.8
MIB				AML	AML	01 16 35.0	
	comp=Z,4.2nm,0.5s						
RST	Umm Al-Ruwaisa	11.02	151	eP	Pn	01 16 35.4	-1.0
RST				AMb	AMB	01 16 40.6	
	comp=Z,5.8nm,0.7s						
NAY	Al-Naaiem	11.33	151	eP	Pn	01 16 38.8	-2.1
NAY				AMb	AMB	01 16 45.4	
	comp=Z,1.3nm,0.7s						

*IDC **09** 01:42:52.8±1.5, 9.64N×126.46E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.7/19, mbtmp3.8/6, MS2.9/2, Ms1 2.9/2, ms1mx2.6/34, Error ellipse: s-maj=114.5km s-min=20.8km az=71.0*
*ISCJB **09** 01:43:00.5±0.7, 9.51N±0.04×126.20E±0.07, h70^{km}±7^{km}, mb3.7/6, Error ellipse: s-maj=11.9km s-min=5.4km az=161.1*
*MAN **09** 01:43:02, 9.54N×126.07E, h25^{km}, mb4.7, ML3.6, MS3.6*
ISC 09 01:43:01.6±0.7, 951N±004×12618E±007, h62^{km}±8^{km}, n21, σ0^{s}95/28, mb3.7/6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.74	292	eP	Pn	01 43 14.8	-1.5
SCPH				i S	Sn	01 43 25.1	-2.1
BUTP	Butuan	0.77	226	eP	Pn	01 43 16.0	-0.8
BUTP				eS	Sn	01 43 27.4	-0.5
BIPH	Bislig	1.33	172	⇑eP	Pn	01 43 23.7	-0.3
BIPH				i S	Sn	01 43 41.2	+0.4
MSLP	Maasin	1.45	296	eP	Pn	01 43 26.4	+0.8
MSLP				eS	Sn	01 43 44.9	+1.3
CGP	Cagayan de Oro	1.81	235	⇑iP	Pn	01 43 30.7	+0.3
CGP				i S	Sn	01 43 52.2	-0.2
BUKP	Musuan	1.96	215	eP	Pn	01 43 34.2	+1.7
PLP	Palo	2.03	324	eP	Pn	01 43 33.5	0.0
PLP				eS	Sn	01 43 58.1	+0.4
BESP	Borongan	2.21	341	eP	Pn	01 43 36.5	+0.7
TBP	Tagbilaran	2.30	275	eP	Pn	01 43 38.5	+1.4
TBP				eS	Sn	01 44 01.4	-2.9
LLP	Lapu-Lapu	2.33	290	⇓eP	Pn	01 43 38.6	+1.1
LLP				eS	Sn	01 44 04.9	-0.1
PAGZ	Pagadian	3.22	239	eP	Pn	01 43 51.4	+1.6
CNP	Catarman	3.34	334	eP	Pn	01 43 51.7	+0.4
CNP				eS	Sn	01 44 29.1	-0.6
GUIM	Jordan	3.71	288	eP	Pn	01 43 56.3	-0.1
JOW	Kunigami	17.34	6	LR	LR	01 51 42.2	
	comp=Z,22nm,21.1s,baz=117,slow=31						
BATI	Kupang	19.74	187	LR	LR	01 56 35.5	
	comp=Z,56nm,18.9s,baz=56,slow=41						
FITZ	Fitzroy Crossi	27.44	181	P	P	01 48 42.1	+0.3
	1.9nm,0.8s,mb3.7,baz=7.1,slow=16,SNR=2.9						
WRA	Warramunga Arr	30.35	165	P	P	01 49 06.7	-0.9
	0.2nm,0.5s,mb3.1,baz=345,slow=8.4,SNR=9.2						
ASAR	Alice Springs	33.82	167	P	P	01 49 37.4	-0.6
	0.3nm,0.3s,mb3.6,baz=349,slow=7.1,SNR=7.1						
STKA	Stephens Creek	43.71	161	P	P	01 50 60.0	-0.7
	0.6nm,0.3s,mb3.8,baz=334,slow=10,SNR=5.1						
MKAR	Makanchi Array	52.58	323	P	P	01 52 08.6	-0.3
	0.4nm,0.6s,mb3.6,baz=117,slow=7.5,SNR=5.6						
ARCES	ARCESS Array B	84.88	340	P	P	01 55 29.2	-0.1
	4.8nm,1.1s,mb4.5,baz=69,slow=4.5,SNR=5.6						

IDC 09 01:57:23.1±27.0, 2344S×17381W, h0^{km}, mb4.2/4, mb1 4.3/4, mb1mx3.9/14, mbtmp4.2/4, Error ellipse: s-maj=506.3km s-min=154.4km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.16	267	P	P	02 04 36.1	+0.2
	1.9nm,0.3s,baz=108,slow=11						
STKA	Stephens Creek	40.16	248	P	P	02 05 00.8	-0.2
	0.9nm,0.4s,baz=28,slow=9.0,SNR=2.9						
ASAR	Alice Springs	47.70	259	P	P	02 06 01.6	-0.2
	0.9nm,0.4s,baz=91,slow=8.7,SNR=17						
WRA	Warramunga Arr	48.10	264	P	P	02 06 04.9	0.0
	1.1nm,0.3s,baz=104,slow=8.1,SNR=53						

*IDC **09** 02:04:09.9±0.7, 0.19S×124.40E, h0^{km}, mb4.2/8, mb1 4.4/8, mb1mx4.1/18, mbtmp4.3/8, Error ellipse: s-maj=57.0km s-min=15.6km az=61.0*
*ISCJB **09** 02:04:13.4±1.9, 0.26S±0.08×124.3E±0.1, h38^{km}±18^{km}, mb4.3/13, Error ellipse: s-maj=20.6km s-min=10.1km az=146.4*
*NEIC **09** 02:04:14.9±3.7, 0.23S×124.45E, h34^{km}±27^{km}, mb4.3/6, Error ellipse: s-maj=18.3km s-min=6.3km az=57.0*
ISC 09 02:04:15.7±1.5, 026S±008×1244E±01, h41^{km}±15^{km}, n22, σ0^{s}60/22, mb4.3/13, 1C-1D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	3.14	71	⇓eP	Pn	02 05 03.0	+0.3
KKM	Kota Kinabalu	10.30	308	ePn	Pn	02 06 41.2	+0.1
MBWA	Marble Bar	21.27	192	eP	P	02 08 58.2	-0.5
	48nm,1.1s,mb4.7						
WRA	Warramunga Arr	21.85	154	P	P	02 09 04.2	-0.7
	4.3nm,0.4s,mb4.2,baz=332,slow=10,SNR=76						
WRA				PcP	PcP	02 13 03.8	0.0
	0.3nm,0.6s,baz=350,slow=1.7,SNR=4.4						
WB2	Warramunga Arr	21.85	154	⇑iP	P	02 09 04.3	-0.7
COEN	Coen	23.03	127	eP	P	02 09 17.3	-0.3
	4.3nm,0.6s,mb4.1						
PMG	Port Moresby	24.40	113	eP	P	02 09 30.3	-0.2
	5.5nm,0.5s,mb4.2						
PMG	Port Moresby	24.40	113	P	P	02 09 30.7	+0.1
	6.3nm,0.5s,mb4.3,baz=120,slow=14,SNR=6.1						
ASAR	Alice Springs	25.03	159	P	P	02 09 36.8	+0.6
	5.3nm,0.6s,mb4.3,baz=330,slow=6.9,SNR=62						
ASAR				PcP	PcP	02 13 11.6	+1.2
	0.8nm,0.4s,baz=348,slow=1.9,SNR=8.3						
FORT	Forrest	30.55	174	eP	P	02 10 26.5	+1.0
	12nm,0.8s,mb4.8						
FORT	Forrest	30.55	174	eP	P	02 10 25.6	+0.2
	3.5nm,0.9s,mb4.2						
STKA	Stephens Creek	35.40	154	eP	P	02 11 08.6	+0.8
	4.9nm,0.4s,mb4.8						
STKA	Stephens Creek	35.40	154	eP	P	02 11 08.3	+0.5
STKA	Stephens Creek	35.40	154	P	P	02 11 08.6	+0.7
	5.6nm,0.4s,mb4.8,baz=330,slow=8.5,SNR=30						
SONM	Songino Array	50.40	344	P	P	02 13 08.2	-0.8
	0.6nm,0.4s,mb3.9,baz=160,slow=8.7,SNR=5.8						
MK31	Makanchi Array	59.58	328	eP	P	02 14 14.9	-0.4
MKAR	Makanchi Array	59.58	328	P	P	02 14 15.2	-0.1
	1.3nm,0.4s,mb4.3,baz=128,slow=8.2,SNR=19						
EKS2	Erkin-Say	62.30	320	eP	P	02 14 35.4	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.8nm,0.6s,mb4.0						
KURK	**Kurchatov**	**63.91**	**330**	*e*P	**P**	**02 14 43.8**	**-0.6**
	1.9nm,0.4s,mb4.5						
AKTK	**Aktyubinsk**	**75.36**	**323**	P	**P**	**02 15 54.9**	**-0.1**
AKTO	**Aktyubinsk**	**75.36**	**323**	P	**P**	**02 15 54.9**	**-0.1**
	1.7nm,0.5s,mb4.2,baz=100,slow=8.7,SNR=12						
VNDA	**Vanda**	**79.80**	**172**	P	**P**	**02 16 19.7**	**+0.5**
	0.6nm,0.6s,mb3.7,baz=326,slow=7.0,SNR=5.3						

*ATH **09** 02:28:49.4, 3765N×2701E, h24km±2km, MD3.3/3*
*ISCJB **09** 02:28:51.9±0.7, 3778N±002×2678E±005, h6km±5km, Error ellipse: s-maj=6.4km s-min=4.1km az=172.2*
*CSEM **09** 02:28:51.7±0.1, 3779N×2676E, h18km, MD3.3, Error ellipse: s-maj=3.3km s-min=1.7km az=95.0*
*ISK **09** 02:28:52.5, 3781N×2683E, h21km, MD3.1*
*DDA **09** 02:28:53.8, 3781N×2682E, h3km±3km, Md3.2*
ISC 09 02:28:52.6±0.5**, 3778N**±002×**2677E**±005**, h13**km±3km**, n20,** σ**0s93**/30**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.09**	**145**	*e*PB	**Pg**	**02 28 55.5**	**0.0**
SMG				*e*SB	**Sg**	**02 28 57.7**	**+0.1**
URLA	**Izmir**	**0.59**	**347**	*i* P	**Pg**	**02 29 03.9**	**-0.3**
URLA				*i* S	**Sg**	**02 29 12.0**	**-0.1**
BLCB	**Balcova**	**0.64**	**20**	*i* PG	**Pg**	**02 29 04.8**	**-0.3**
BLCB				*i* SG	**Sg**	**02 29 13.7**	**+0.2**
IZM	**Izmir**	**0.73**	**32**	*i* PG	**Pg**	**02 29 06.7**	**0.0**
KDAG	**Bornova**	**0.73**	**32**	*i* P	**Pg**	**02 29 06.7**	**-0.1**
KDAG				*i* S	**Sg**	**02 29 16.6**	**+0.1**
BODT	**Bodrum**	**0.84**	**149**	PG	**Pg**	**02 29 09.6**	**+0.7**
BDRM	**Kayabasi**	**0.90**	**143**	*i* P	**Pg**	**02 29 09.8**	**-0.2**
BDRM				*i* S	**Sg**	**02 29 22.6**	**+0.9**
MLSB	**Milas**	**0.94**	**121**	PG	**Pg**	**02 29 10.4**	**-0.3**
APE	**Apeiranthos**	**1.22**	**235**	*e*PN	**Pn**	**02 29 14.1**	**-1.2**
APE				*e*SN	**Sn**	**02 29 32.5**	**+0.9**
DAT	**Datca**	**1.23**	**148**	PN	**Pn**	**02 29 14.9**	**-0.6**
AKHS	**Akhisar**	**1.37**	**37**	*i* P	**Pn**	**02 29 18.6**	**+1.2**
AKHS				*i* S	**Sn**	**02 29 34.8**	**-0.6**
AKS	**Akhisar**	**1.37**	**37**	PN	**Pn**	**02 29 16.2**	**-1.2**
YER	**Yerkesik**	**1.37**	**118**	*e*PN	**Pn**	**02 29 16.1**	**-1.3**
PRK	**Paraskevi**	**1.51**	**345**	*e*PB	**Pb**	**02 29 18.7**	**-1.8**
PRK				*e*SN	**Sn**	**02 29 42.0**	**+3.1**
AYVA	**Ayvalik**	**1.52**	**358**	*i* P	**Pn**	**02 29 21.5**	**+2.0**
AYVA				*i* S	**Sn**	**02 29 43.6**	**+4.4**
MANT	**Manisa**	**1.58**	**63**	*i* P	**Pn**	**02 29 22.6**	**+2.4**
MANT				*i* S	**Sn**	**02 29 40.6**	**+0.1**
KULA	**Kula-Manisa**	**1.66**	**63**	*e*PN	**Pn**	**02 29 21.3**	**-0.1**
DALT	**Dalyan (Mudla)**	**1.80**	**124**	*e*PN	**Pn**	**02 29 22.7**	**-0.6**
BALB	**Balikesir**	**2.05**	**25**	*e*PN	**Pn**	**02 29 26.1**	**-0.6**
DST	**Dursunbey**	**2.33**	**38**	*e*PN	**Pn**	**02 29 30.7**	**+0.1**

IDC 09 02:40:50.8±71.0**, 1775S**×**17526E, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.9**/13**, mbtmp4.1**/3**, Error ellipse: s-maj=1239.0km s-min=136.3km az=76.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.48**	**239**	P	P	02 47 32.2	+0.4
	1.5nm,0.5s,baz=92,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**38.72**	**260**	P	P	02 48 16.7	-0.2
	0.8nm,0.7s,baz=95,slow=8.0,SNR=19						
ASAR	**Alice Springs**	**39.03**	**254**	P	P	02 48 19.3	-0.1
	3.2nm,0.4s,baz=88,slow=8.0,SNR=42						

CASC 09 02:45:04.3±4.0**, 1326N**×**8704W, h21**km±17km**, MD3.5, ML3.1, 3D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TELN	**Telica**	**0.68**	**162**	*e*P	Pb	02 45 20.6	+3.2
TELN				*e*S	Sb	02 45 29.6	+3.2
TEL3	**Telica 3**	**0.71**	**164**	*e*P	Pb	02 45 20.3	+2.4
TEL3				*e*S	Sb	02 45 29.2	+1.9
MOMJ	**Momotombo**	**0.97**	**150**	⇓*e*P	Pb	02 45 23.6	+1.1
COPN	**Copaltepe**	**1.16**	**158**	*e*P	Pn	02 45 22.1	-3.1
BLLM	**Bellamira**	**1.18**	**279**	*e*P	x	02 45 47.5	
BLLM				*e*S	x	02 46 05.1	
XAVN	**Gruta Xavier**	**1.30**	**147**	*e*P	Pn	02 45 26.5	-0.8
TISN	**Laguna Tiscapa**	**1.34**	**146**	*e*P	Pn	02 45 27.2	-0.6
MGAN	**Managua**	**1.35**	**145**	*e*P	Pn	02 45 27.4	-0.5
MGAN				*e*S	Sn	02 45 46.5	+1.3
MGAN				*i*		02 45 49.1	
	comp=E,318nm,0.5s						
TICN	**Ticuantepe**	**1.45**	**147**	⇓*e*P	Pn	02 45 28.2	-1.1
TICN				*e*S	Sn	02 45 49.4	+1.7
LCBS	**La Ceiba**	**1.92**	**282**	*e*P	x	02 45 54.7	
LCBS				*e*S	x	02 46 19.1	
LFRS	**El Faro**	**2.00**	**281**	⇓*e*P	x	02 45 54.9	
LFRS				*e*S	x	02 46 19.7	
LBRS	**Las Brisas**	**2.00**	**284**	*e*P	x	02 45 56.5	
LBRS				*e*S	x	02 46 21.6	
LFU	**La Fuente**	**2.07**	**284**	*e*P	x	02 45 57.9	
LFU				*e*S	x	02 46 24.7	

IDC 09 03:08:48.0±27.0**, 4687N**×**15446E, h0**km**, mb3.9**/4**, mb1 3.9**/4**, mb1mx3.5**/21**, mbtmp3.9**/4**, Error ellipse: s-maj=631.1km s-min=77.6km az=153.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**47.71**	**298**	P	P	03 17 26.1	0.0
	0.8nm,0.7s,baz=67,slow=8.0,SNR=8.9						
FINES	**FINESS Array B**	**64.32**	**335**	P	P	03 19 24.8	0.0
	0.7nm,0.4s,baz=41,slow=7.3,SNR=9.8						
NB2	**NORSAR Subarra**	**68.41**	**342**	P	P	03 19 51.2	+0.2
	comp=Z,0.7nm,0.6s,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**68.41**	**342**	P	P	03 19 51.2	+0.2
	comp=Z,1.0nm,0.7s,baz=26,slow=6.4,SNR=4.4						
AKASG	**Malin Array Be**	**71.96**	**327**	P	P	03 20 12.8	-0.1
	comp=Z,0.5nm,0.4s,baz=33,slow=5.9,SNR=5.1						

*IDC **09** 03:12:02.0±1.2, 4577N×15398E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/21, mbtmp3.6/5, Error ellipse: s-maj=38.5km s-min=34.7km az=55.0*
*ISCJB **09** 03:12:05.6±1.1, 457N±02×1537E±02, h33km, mb3.7/6, Error ellipse: s-maj=24.7km s-min=20.0km az=167.8*
*MOS **09** 03:12:05.9±1.8, 4596N×15420E, h41km, mb4.1/4, Error ellipse: s-maj=47.2km s-min=25.5km az=106.4*
ISC 09 03:12:07.7±1.1**, 457N**±02×**1537E**±02**, h35**km**, n12,** σ**0s73**/12**, mb3.7**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.15**	**265**	*e*P	**Pn**	**03 13 07.4**	**-1.2**
YAK	**Yakutsk**	**21.41**	**328**	*i* P	**P**	**03 16 52.2**	**0.0**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.3						
COLA	**College**	**36.68**	**38**	*i* P	**P**	**03 19 04.5**	**-6.2**
MKAR	**Makanchi Array**	**47.80**	**298**	P	**P**	**03 20 41.8**	**+0.4**
	comp=Z,0.2nm,0.3s,mb3.6,baz=66,slow=8.7,SNR=4.5						
KURK	**Kurchatov**	**48.29**	**305**	*e*P	**P**	**03 20 46.1**	**+1.0**
FINES	**FINESS Array B**	**65.15**	**335**	*e*P	**P**	**03 22 44.6**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.15**	**335**	P	**P**	**03 22 44.6**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=46,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**71.38**	**199**	*e*P	**P**	**03 23 25.1**	**+1.2**
ASAR	**Alice Springs**	**71.38**	**199**	P	**P**	**03 23 24.3**	**+0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=22,slow=5.6,SNR=4.4						
AKASG	**Malin Array Be**	**72.64**	**327**	P	**P**	**03 23 31.2**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**72.64**	**327**	P	**P**	**03 23 31.2**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=36,slow=5.9,SNR=5.3						
TXAR	**Lajitas Array**	**77.62**	**61**	P	**P**	**03 23 59.3**	**-1.0**
	comp=Z,0.4nm,0.8s,mb3.4,baz=328,slow=7.9,SNR=2.5						

*BJI **09** 03:17:29.1, 3840N×11940W, h9km, mB4.9, mb5.0, Ms5.0, Msz4.9*
*ISCJB **09** 03:17:32.5±0.1, 38419N±0009×11931W±001, h10km, mb4.6/34, MS4.3/6, Error ellipse: s-maj=1.2km s-min=1.2km az=175.1*
*NEIC **09** 03:17:32.1, 3843N×11938W, h9km, mb4.7/27, ML4.8(REN), MW4.7(BRK), After REN.*
NEIC Felt [IV] at Bridgeport, Coleville, Groveland, Mi-Wuk Village, Pine Grove, Twain Harte and Volcano; [III] at Arnold, Camino, Clovis, Colfax, Columbia, Coulterville, El Portal, Fair Oaks, Foresthill, Fresno, Friant, Grass Valley, Jackson, Mariposa, Midpines, Modesto, Mokelumne Hill, Mountain Ranch, Murphys, Nevada City, North Fork, Penn Valley, Pioneer, Riverbank, Sacramento, San Andreas, Somerset, Sonora, Soulsbyville, South Lake Tahoe, Sutter Creek, Tuolumne, Vallecito, Visalia, West Point and Yosemite National Park. Felt [III] at Hawthorne and Wellington; [II] at Reno, Nevada. Felt as far north as Portola, as far west as San Francisco, as far south as Merced and as far east as Hawthorne, Nevada.
*IDC **09** 03:17:32.5±0.8, 3841N×11936W, h0km, mb4.0/9, mb1 4.2/14, mb1mx4.1/25, mbtmp4.0/14, ML3.9/5, MS3.9/11, Ms1 3.9/11, ms1mx3.8/53, Error ellipse: s-maj=10.9km s-min=7.3km az=16.0*
*MOS **09** 03:17:32.7±1.3, 3831N×11933W, h10km, mb5.0/18, Error ellipse: s-maj=6.5km s-min=5.6km az=46.7*
ISC 09 03:17:33.6±0.1**, 38412N**±0008×**119360W**±0010**, h10**km**, n362,** σ**1s32**/509**, mb4.6**/34**, MS4.3**/6**, 130C-126D, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAKR	**Walker**	**0.11**	**327**	*e*Pg	**Pg**	**03 17 34.6**	**-1.8**
R06C	**Coleville**	**0.13**	**327**	⇓P	**Pg**	**03 17 34.7**	**-2.0**
	baz=0.1						
R06C				⇓S	**Sg**	**03 17 37.5**	**-1.3**
	baz=0.1						
R07C	**Lee Vining**	**0.41**	**143**	⇑P	**Pg**	**03 17 40.4**	**-1.2**
	baz=0.4						
R07C				⇓S	**Sg**	**03 17 46.7**	**-0.3**
	baz=0.4						
R05C	**Kirkwood Meado**	**0.63**	**298**	⇓P	**Pg**	**03 17 43.9**	**-2.0**
	baz=0.6,SNR=1000						
R05C				⇑S	**Sg**	**03 17 52.4**	**-1.7**
	baz=0.6						
S06C	**San Francisco**	**0.66**	**216**	⇓P	**Pg**	**03 17 44.5**	**-1.7**
	baz=0.7,SNR=1000						
S06C				⇑S	**Sg**	**03 17 53.6**	**-1.3**
	baz=0.7						
Q07A	**Schurz**	**0.68**	**39**	⇓P	**Pg**	**03 17 45.0**	**-1.8**
	baz=0.7,SNR=281						
Q07A				⇑S	**Sg**	**03 17 54.8**	**-0.9**
	baz=0.7						
NVAR	**Mina Array Bea**	**0.83**	**88**	Pg	**Pg**	**03 17 47.4**	**-2.3**
	2µm,0.3s,baz=356,slow=7.1						
NVAR				Lg		03 17 59.7	
	4µm,0.3s,baz=266,slow=28,SNR=39						
MLAC	**Mammoth Lakes**	**0.88**	**152**	⇑P	**Pg**	**03 17 49.4**	**-1.3**
	baz=0.9,SNR=83						
MLAC				⇑S	**Sg**	**03 18 02.1**	**0.0**
	baz=0.9						
CMB	**Columbia Colle**	**0.89**	**245**	*e*Pg	**Pg**	**03 17 48.5**	**-2.3**
CMB				*e*Sg	**Sg**	**03 18 00.3**	**-2.1**
CMB	**Columbia Colle**	**0.89**	**245**	⇑P	**Pg**	**03 17 48.2**	**-2.6**
	baz=0.9,SNR=1000						
CMB				⇑S	**Sg**	**03 18 00.7**	**-1.7**
	baz=0.9						
WCN	**Washoe City**	**0.94**	**341**	⇑P	**Pg**	**03 17 49.7**	**-2.0**
	baz=0.9,SNR=1000						
WCN				⇑S	**Sg**	**03 18 02.6**	**-1.4**
	baz=0.9						
R08A	**Mina**	**0.99**	**93**	⇑P	**Pg**	**03 17 50.8**	**-1.8**
	baz=1.0,SNR=205						
R08A				⇑S	**Sg**	**03 18 04.6**	**-0.8**
	baz=1.0						
KCC	**Kaiser Creek**	**1.09**	**178**	⇓P	**Pb**	**03 17 52.6**	**-1.9**
	baz=1.1,SNR=854						
KCC				⇓S	**Sg**	**03 18 07.0**	**-1.6**
	baz=1.1						
LAVA	**Lava Cap Winer**	**1.13**	**288**	⇓P	**Pb**	**03 17 52.7**	**-2.6**
	baz=1.1,SNR=714						
LAVA				⇓S	**Sb**	**03 18 08.3**	**-1.8**
	baz=1.1						
P07A	**Fallon**	**1.18**	**18**	P	**Pb**	**03 17 54.5**	**-1.7**
	baz=1.2,SNR=102						
P07A				⇑S	**Sb**	**03 18 11.2**	**-0.3**
	baz=1.2						
Q08A	**Gabbs**	**1.21**	**68**	P	**Pb**	**03 17 54.5**	**-2.0**
	baz=1.2,SNR=1000						
Q08A				⇓S	**Sb**	**03 18 10.9**	**-1.2**
	baz=1.2						
MTUM	**Tungsten Hills**	**1.23**	**149**	*e*Pn	**Pn**	**03 17 55.5**	**-1.3**
R04C	**Big Horse Ranc**	**1.25**	**263**	⇓P	**Pn**	**03 17 55.0**	**-2.1**
	baz=1.2,SNR=1000						
R04C				⇑S	**Sb**	**03 18 12.1**	**-1.3**
	baz=1.2						
PAHR	**Pah Rah Range**	**1.29**	**359**	*e*Pn	**Pn**	**03 17 56.1**	**-1.6**
S08C	**White Mtn Res**	**1.31**	**134**	P	**Pn**	**03 17 56.7**	**-1.3**
	baz=1.3,SNR=1000						
S08C				⇓S	**Sb**	**03 18 15.2**	**+0.1**
	baz=1.3						
S05C	**Merced**	**1.31**	**216**	⇑P	**Pn**	**03 17 56.4**	**-1.6**
	baz=1.3,SNR=1000						
S05C				⇑S	**Sb**	**03 18 14.1**	**-1.1**
	baz=1.3						
P05C	**Yuba Gap, Truc**	**1.32**	**313**	⇓P	**Pn**	**03 17 56.2**	**-1.9**
	baz=1.3,SNR=1000						
P05C				⇓S	**Sb**	**03 18 13.3**	**-2.1**
	baz=1.3						
P06A	**Stead Airport,**	**1.33**	**342**	⇓P	**Pn**	**03 17 57.0**	**-1.3**
	baz=1.3						
P06A				⇑S	**Sb**	**03 18 15.4**	**-0.4**
	baz=1.3						
T06C	**Millerton Lake**	**1.43**	**191**	⇓P	**Pn**	**03 17 58.5**	**-1.1**
	baz=1.4,SNR=1000						
T06C				⇓S	**Sn**	**03 18 17.5**	**-0.9**
	baz=1.4						
P08A	**Dixie Valley**	**1.62**	**37**	⇑P	**Pn**	**03 18 00.7**	**-1.6**
	baz=1.6,SNR=119						
P08A				⇑Sb	**Sb**	**03 18 25.7**	**+1.6**
	baz=1.6						
TIN	**Tinemaha**	**1.62**	**146**	⇓P	**Pn**	**03 18 01.8**	**-0.4**
	baz=1.6						
TIN				⇑Sb	**Sb**	**03 18 25.5**	**+1.3**
	baz=1.6						
Q04C	**Lincoln**	**1.64**	**286**	⇓P	**Pn**	**03 18 02.0**	**-0.4**
	baz=1.6,SNR=1000						
Q04C				⇓S	**Sn**	**03 18 23.7**	**+0.2**
	baz=1.6						
BEKR	**Beckwourth**	**1.65**	**332**	⇓P	**Pn**	**03 18 01.3**	**-1.3**
	baz=1.6,SNR=1000						
BEKR				⇑S	**Sn**	**03 18 24.3**	**+0.5**
	baz=1.6						
HELL	**Mitchell Peak,**	**1.75**	**171**	P	**Pn**	**03 18 04.1**	**+0.2**
	baz=1.8,SNR=1000						
HELL				⇑S	**Sn**	**03 18 27.4**	**+1.1**
	baz=1.8						
Q09A	**Carvers**	**1.76**	**75**	⇓P	**Pn**	**03 18 03.2**	**-0.9**
	baz=1.8,SNR=144						
Q09A				⇓S	**Sn**	**03 18 27.8**	**+1.3**
	baz=1.8						
O07A	**Toulon**	**1.79**	**12**	⇑P	**Pn**	**03 18 02.9**	**-1.6**
	baz=1.8,SNR=1000						
O07A				⇓S	**Sn**	**03 18 28.7**	**+1.4**
	baz=1.8						
O06A	**Flanigan**	**1.79**	**348**	⇑P	**Pn**	**03 18 03.3**	**-1.2**
	baz=1.8,SNR=677						
O06A				⇑S	**Sn**	**03 18 28.1**	**+0.8**
	baz=1.8						
S04C	**Ingram Canyon,**	**1.80**	**240**	P	**Pn**	**03 18 05.0**	**+0.3**
	baz=1.8,SNR=1000						
S04C				⇓Sb	**Sb**	**03 18 29.2**	**0.0**
	baz=1.8						
R09A	**Tonopah**	**1.81**	**95**	P	**Pn**	**03 18 03.3**	**-1.5**
	baz=1.8,SNR=700						
R09A				⇓S	**Sn**	**03 18 29.4**	**+1.6**
	baz=1.8						
S09A	**Goldfield**	**1.82**	**112**	P	**Pn**	**03 18 03.6**	**-1.3**
	baz=1.8,SNR=1000						
S09A				⇑S	**Sn**	**03 18 29.1**	**+1.0**
	baz=1.8						
T05C	**Eagle Field, D**	**1.84**	**215**	⇑Pb	**Pb**	**03 18 06.3**	**-1.0**
	baz=1.8,SNR=912						
T05C				⇓Sb	**Sb**	**03 18 31.3**	**+1.0**
	baz=1.8						
OHCM	**Honcut**	**1.90**	**300**	*e*Pn	**Pn**	**03 18 05.1**	**-0.9**
O05C	**Quincy**	**1.96**	**322**	⇓P	**Pn**	**03 18 06.5**	**-0.5**
	baz=1.9						
O05C				⇑S	**Sn**	**03 18 32.5**	**+0.9**
	baz=1.9						
ORV	**Oroville**	**2.02**	**305**	⇓P	**Pn**	**03 18 07.0**	**-0.7**
	baz=2.0,SNR=94						
ORV				⇓S	**Sn**	**03 18 33.3**	**+0.2**
	baz=2.0						
BDM	**Black Diamond**	**2.03**	**258**	⇑P	**Pn**	**03 18 08.2**	**+0.4**
	baz=2.0						
BDM				⇓Sb	**Sb**	**03 18 36.1**	**+0.4**
	baz=2.0						
WENL	**Wente Brothers**	**2.05**	**248**	⇓P	**Pn**	**03 18 08.2**	**+0.1**
	baz=2.0						
WENL				⇓Sb	**Sb**	**03 18 36.6**	**+0.1**
	baz=2.0						
SUTB	**Sutter Butte**	**2.06**	**294**	⇑P	**Pn**	**03 18 08.2**	**-0.1**
	baz=2.0						
SUTB				⇑Sb	**Sb**	**03 18 36.6**	**-0.2**
	baz=2.0						
P09A	**Austin**	**2.07**	**56**	⇓P	**Pn**	**03 18 06.9**	**-1.5**
	baz=2.1,SNR=52						
P09A				⇑Sb	**Sb**	**03 18 37.9**	**+0.9**
	baz=2.1						
PACP	**Pacheco Peak**	**2.07**	**228**	P	**Pn**	**03 18 08.4**	**0.0**
	baz=2.1,SNR=1000						
PACP				⇑S	**Sn**	**03 18 35.5**	**+1.2**
	baz=2.1						
Q03C	**Winters**	**2.09**	**277**	⇑P	**Pn**	**03 18 09.1**	**+0.3**
	baz=2.1,SNR=253						
Q03C				⇑Sb	**Sb**	**03 18 38.7**	**+0.9**
	baz=2.1						
O08A	**Rochester Mine**	**2.10**	**26**	⇓P	**Pn**	**03 18 07.2**	**-1.6**
	baz=2.1,SNR=5.6						
O08A				⇓Sb	**Sb**	**03 18 38.4**	**+0.7**
	baz=2.1						
RCTC	**Rector, Farmer**	**2.10**	**177**	⇓P	**Pn**	**03 18 08.9**	**+0.1**
	baz=2.1						
RCTC				⇑Sb	**Sb**	**03 18 39.0**	**+1.1**
	baz=2.1						
GRAC	**Grapevine Rang**	**2.12**	**131**	⇑P	**Pn**	**03 18 08.4**	**-0.6**
	baz=2.1,SNR=78						
GRAC				⇓Sb	**Sb**	**03 18 40.8**	**+2.5**
	baz=2.1						
U05C	**Westside ANR,**	**2.16**	**197**	⇓P	**Pn**	**03 18 10.2**	**+0.6**
	baz=2.2						
U05C				⇓Sb	**Sb**	**03 18 41.1**	**+1.5**
	baz=2.2						
CWC	**Cottonwood Cre**	**2.22**	**152**	⇑P	**Pn**	**03 18 10.6**	**+0.2**
	baz=2.2,SNR=123						
CWC				⇓Sb	**Sb**	**03 18 43.2**	**+1.9**
	baz=2.2						
S10A	**Tonopah Range,**	**2.23**	**102**	P	**Pn**	**03 18 09.4**	**-1.3**
	baz=2.2,SNR=224						
S10A				⇑Sb	**Sb**	**03 18 43.9**	**+2.2**
	baz=2.2						
O04C	**Chester**	**2.33**	**325**	⇑P	**Pn**	**03 18 11.9**	**0.0**
	baz=2.3,SNR=118						
O04C				⇑Sb	**Sb**	**03 18 44.9**	**+0.5**
	baz=2.3						
SAO	**San Andreas Ge**	**2.34**	**226**	⇓*i*Pn	**Pn**	**03 18 12.1**	**+0.1**
SAO				*e*Sn	**Sn**	**03 18 41.7**	**+0.9**
U04C	**Hernandez Rese**	**2.34**	**209**	⇑P	**Pn**	**03 18 12.2**	**+0.1**
	baz=2.4,SNR=1000						
U04C				⇑Sb	**Sb**	**03 18 45.6**	**+0.8**
	baz=2.4						
Q10A	**Clear Creek Ra**	**2.35**	**79**	⇑P	**Pn**	**03 18 11.2**	**-1.1**
	baz=2.4,SNR=225						
Q10A				⇓Sb	**Sb**	**03 18 47.2**	**+1.9**
	baz=2.4						
N06A	**Buffalo Meadow**	**2.36**	**351**	⇓P	**Pn**	**03 18 11.9**	**-0.6**
	baz=2.3,SNR=55						
N06A				⇓Sb	**Sb**	**03 18 46.4**	**+0.9**
	baz=2.3						
N07B	**Gerlach**	**2.38**	**7**	P	**Pn**	**03 18 11.8**	**-0.9**
	baz=2.4,SNR=59						
N07B				⇓Sb	**Sb**	**03 18 47.5**	**+1.4**
	baz=2.4						
R10A	**Warm Springs**	**2.41**	**92**	P	**Pn**	**03 18 12.0**	**-1.0**
	baz=2.4,SNR=68						
R10A				⇑Sb	**Sb**	**03 18 49.3**	**+2.6**
	baz=2.4						
O09A	**Fish Creek Ran**	**2.43**	**43**	P	**Pn**	**03 18 11.7**	**-1.7**
	baz=2.4,SNR=109						
O09A				⇓Sb	**Sb**	**03 18 49.0**	**+1.6**
	baz=2.4						
CVS	**Carmenet Viney**	**2.44**	**269**	⇑P	**Pn**	**03 18 12.9**	**-0.5**
	baz=2.4,SNR=733						
CVS				⇓S	**Sn**	**03 18 43.6**	**+0.3**
	baz=2.4						
ELFS	**Eagle Lake Fie**	**2.44**	**335**	⇑P	**Pn**	**03 18 13.6**	**+0.1**
	baz=2.4,SNR=168						
ELFS				⇑Sb	**Sb**	**03 18 49.0**	**+1.2**
	baz=2.4						
MNRC	**McLaughlin Nat**	**2.46**	**282**	P	**Pn**	**03 18 14.0**	**+0.3**
	baz=2.4,SNR=348						
MNRC				⇑Sb	**Sb**	**03 18 49.6**	**+1.3**
	baz=2.4						
JRSC	**Jasper Ridge**	**2.49**	**247**	⇓P	**Pn**	**03 18 13.7**	**-0.5**
	baz=2.5,SNR=119						
JRSC				⇓S	**Sn**	**03 18 44.6**	**0.0**
	baz=2.5						
N08A	**GE Springer Mi**	**2.55**	**21**	P	**Pn**	**03 18 13.4**	**-1.6**
	baz=2.5,SNR=382						
N08A				⇑Sb	**Sb**	**03 18 52.4**	**+1.6**
	baz=2.5						
NSHM	**Saint Helena R**	**2.55**	**273**	*e*Pn	**Pn**	**03 18 14.8**	**-0.2**
SAC	**San Andreas**	**2.55**	**252**	*e*Pn	**Pn**	**03 18 15.1**	**0.0**
P10A	**Eureka**	**2.56**	**61**	⇑P	**Pn**	**03 18 13.7**	**-1.4**
	baz=2.6,SNR=109						
P10A				⇑Sb	**Sb**	**03 18 53.3**	**+2.2**
	baz=2.6						
BNLO	**Ben Lomond (Sa**	**2.57**	**241**	⇓P	**Pn**	**03 18 14.7**	**-0.6**
	baz=2.6,SNR=21						
BNLO				⇑S	**Sn**	**03 18 46.7**	**+0.1**
	baz=2.6						
V05C	**Boulder Hill,**	**2.58**	**190**	⇓P	**Pn**	**03 18 16.4**	**+1.0**
	baz=2.6,SNR=44						
V05C				⇑Sb	**Sb**	**03 18 52.6**	**+1.0**
	baz=2.6						
O03C	**Acorn Hollow,**	**2.61**	**308**	⇑P	**Pn**	**03 18 16.1**	**+0.3**
	baz=2.6,SNR=103						
O03C				⇑Sb	**Sb**	**03 18 53.0**	**+0.4**
	baz=2.6						
PKD	**Parkfield**	**2.64**	**201**	⇓P	**Pn**	**03 18 16.2**	**0.0**
	baz=2.7,SNR=184						
PKD				⇓Sb	**Sb**	**03 18 54.4**	**+1.0**
	baz=2.7						
HAST	**UC Hastings Re**	**2.67**	**222**	P	**Pn**	**03 18 16.7**	**+0.1**
	baz=2.7,SNR=293						
HAST				⇑S	**Sn**	**03 18 49.7**	**+0.7**
	baz=2.7						
FURC	**Furnace Creek,**	**2.78**	**133**	⇑P	**Pn**	**03 18 17.6**	**-0.5**
	baz=2.8,SNR=6.7						
FURC				⇑Sb	**Sb**	**03 19 00.7**	**+3.3**
	baz=2.8						
MPMC	**Manual Prospec**	**2.78**	**147**	⇓P	**Pn**	**03 18 17.8**	**-0.3**
	baz=2.8						
MPMC				⇑Sb	**Sb**	**03 19 01.0**	**+3.5**
	baz=2.8						
MCCM	**Marconi Confer**	**2.78**	**266**	*e*Pn	**Pn**	**03 18 18.0**	**-0.2**
MCCM				*e*Sg	**Sg**	**03 18 55.5**	**-7.6**
MCCM	**Marconi Confer**	**2.78**	**266**	⇑P	**Pn**	**03 18 17.6**	**-0.6**
	baz=2.8,SNR=98						
MCCM				⇑S	**Sn**	**03 18 53.0**	**+1.1**
	baz=2.8						
V03C	**Hunter Liggett**	**2.82**	**213**	⇑P	**Pn**	**03 18 18.8**	**+0.1**
	baz=2.8,SNR=144						
V03C				⇑S	**Sn**	**03 18 54.0**	**+1.3**
	baz=2.8						
N09A	**Rock Creek Ran**	**2.82**	**30**	⇓P	**Pn**	**03 18 17.0**	**-1.7**
	baz=2.8,SNR=83						
N09A				⇑Sb	**Sb**	**03 19 00.2**	**+1.7**
	baz=2.8						
ISA	**Isabella**	**2.83**	**165**	⇓P	**Pn**	**03 18 19.4**	**+0.5**
	baz=2.9,SNR=226						
ISA				⇓Sb	**Sb**	**03 19 00.8**	**+1.8**
	baz=2.9						
PTRM	**Twissleman Ran**	**2.83**	**194**	*e*Pn	**Pn**	**03 18 20.1**	**+1.2**
TPNV	**Topopah Spring**	**2.87**	**120**	*e*Pn	**Pn**	**03 18 18.7**	**-0.6**
TPNV				*e*Pg	**Pg**	**03 18 24.7**	**-3.8**
TPNV				*e*Sg	**Sg**	**03 19 03.3**	**-2.4**
TPNV	**Topopah Spring**	**2.87**	**120**	P	**Pn**	**03 18 18.7**	**-0.7**
	baz=2.9,SNR=170						
GASB	**Alder Springs**	**2.89**	**296**	⇑P	**Pn**	**03 18 19.5**	**-0.2**
	baz=2.9,SNR=24						
HATC	**Hat Creek Radi**	**2.90**	**327**	⇓P	**Pn**	**03 18 20.1**	**+0.3**
	baz=2.9,SNR=30						
O10A	**Cortez Mining,**	**2.91**	**49**	⇓P	**Pn**	**03 18 18.2**	**-1.7**
	baz=2.9,SNR=99						
O10A				⇑Sb	**Sb**	**03 19 03.3**	**+2.3**
	baz=2.9						

M06C Likely Place G 2.92 343 ⇑P Pn 03 18 20.3 +0.2
baz=2.9,SNR=11
M06C ⇓Sb Sb 03 19 04.2 +2.8
baz=2.9
Q11A Duckwater 2.93 80 ⇑P Pn 03 18 19.1 -1.2
baz=2.9,SNR=828
Q11A ⇑Sb Sb 03 19 04.4 +2.5
baz=2.9
S11A Rachel 2.95 104 ⇑P Pn 03 18 19.6 -0.9
baz=3.0,SNR=68
S11A ⇓Sb Sb 03 19 06.1 +3.7
baz=3.0
FARB Farallon Islan 2.96 257 ⇑P Pn 03 18 19.9 -0.8
baz=3.0
FARB ⇓S Sn 03 18 56.9 +0.6
baz=3.0
HOPS Hopland 2.96 282 *e*Pn Pn 03 18 20.5 -0.2
HOPS Hopland 2.96 282 ⇓P Pn 03 18 20.2 -0.5
baz=2.9,SNR=178
R11A Troy Canyon, C 2.97 90 P Pn 03 18 18.9 -1.8
baz=3.0,SNR=147
R11A ⇑Sb Sb 03 19 05.4 +2.6
baz=3.0
TRCR Troy Canyon 2.97 90 *e*Pn Pn 03 18 18.9 -1.8
TRCR *e*Pg Pg 03 18 26.2 -4.2
TRCR *e*Sg Sg 03 19 05.5 -3.4
M07A Soldier Meadow 2.98 3 ⇓P Pn 03 18 20.4 -0.5
baz=3.0,SNR=22
M07A ⇑Sb Sb 03 19 05.6 +2.5
baz=3.0
V04C Ramage Ranch, 3.02 204 ⇓P Pn 03 18 20.9 -0.6
baz=3.0
P11A Circle Ranch, 3.03 67 ⇓P Pn 03 18 20.3 -1.3
baz=3.0
P11A ⇓S Sn 03 18 59.0 +1.0
baz=3.0
M08A Happy Creek Ra 3.12 14 ⇓P Pn 03 18 22.6 -0.3
baz=3.1,SNR=42
M08A ⇓Sb Sb 03 19 10.4 +3.1
baz=3.1
U10A Ash Meadows, A 3.13 129 ⇓P Pn 03 18 22.5 -0.4
baz=3.1
SMMC Simmler 3.14 190 ⇓P Pn 03 18 22.9 -0.2
baz=3.2,SNR=52
N10A Dunphy 3.19 43 ⇑P Pn 03 18 21.8 -2.0
baz=3.2,SNR=48
N10A ⇑Sb Sb 03 19 12.0 +2.8
baz=3.2
O02C Red Bluff 3.19 305 ⇑P Pn 03 18 23.3 -0.5
baz=3.2,SNR=19
LRMC Laurel Mountai 3.22 155 ⇑P Pn 03 18 24.6 +0.4
baz=3.2
LRMC ⇑Sb Sb 03 19 13.4 +3.3
baz=3.2
M05C Lookout 3.25 336 ⇑P Pn 03 18 24.9 +0.3
baz=3.2
M05C ⇓Sb Sb 03 19 13.3 +2.4
baz=3.2
P01C Double 8 Ranch 3.28 290 ⇑P Pn 03 18 25.3 +0.3
baz=3.3,SNR=32
WDC Whiskeytown Da 3.28 312 *e*Pn Pn 03 18 24.4 -0.6
WDC *e*Pg Pg 03 18 30.4 -6.0
WDC *e*Sn Sn 03 19 04.4 +0.3
WDC *e*Sg Sg 03 19 14.1 -4.8
WDC Whiskeytown Da 3.28 312 *e*P Pn 03 18 24.4 -0.6
WDC *e* 03 19 04.4
WDC Whiskeytown Da 3.28 312 ⇑P Pn 03 18 24.6 -0.4
baz=3.3,SNR=39
WDC ⇑Sb Sb 03 19 13.2 +1.5
baz=3.3
ARVC Arvin 3.31 172 ⇓P Pn 03 18 26.2 +0.8
baz=3.3,SNR=60
ARVC ⇓Sb Sb 03 19 14.4 +1.8
baz=3.3
M09A Marrel Ranch, 3.35 25 ⇓P Pn 03 18 25.0 -1.0
baz=3.3,SNR=102
M09A ⇑Sb Sb 03 19 17.6 +3.9
baz=3.3
O11A Cowboy Ranch, 3.35 58 ⇑P Pn 03 18 24.5 -1.4
baz=3.3,SNR=209
O11A ⇑Sb Sb 03 19 17.2 +3.4
baz=3.3
T11A Corn Creek, Al 3.48 108 ⇓P Pn 03 18 26.9 -0.9
baz=3.5,SNR=176
KIPM Iron Peak 3.50 295 *e*Pn Pn 03 18 30.3 +2.3
KIPM *e*Pg Pg 03 18 35.5 -5.1
SHOC Shoshone 3.51 135 ⇓P Pn 03 18 27.2 -1.0
baz=3.5
KCPM Cahto Peak 3.52 292 *e*Pn Pn 03 18 30.9 +2.4
PKM Peak Mountain 3.53 186 ⇓P Pn 03 18 28.8 +0.3
baz=3.6,SNR=36
MOD Modoc 3.56 349 *e*Pn Pn 03 18 29.9 +1.1
MOD *e*Pg Pg 03 18 37.3 -4.5
MOD Modoc 3.56 349 ⇓P Pn 03 18 29.3 +0.4
baz=3.5
M03C McCloud 3.56 324 ⇓P Pn 03 18 29.1 +0.2
baz=3.5,SNR=12
M03C ⇑Sb Sb 03 19 22.8 +2.8
baz=3.5
L07A Adell 3.60 0 ⇓P Pn 03 18 29.1 -0.4
baz=3.6
L07A ⇓Sb Sb 03 19 24.9 +3.7
baz=3.6
P12A McGill 3.63 72 P Pn 03 18 28.5 -1.3
baz=3.6,SNR=305
P12A ⇓S Sn 03 19 13.4 +0.7
baz=3.6
S12A Delamar Landin 3.65 101 ⇑P Pn 03 18 29.1 -1.1
baz=3.7,SNR=64
S12A ⇓Sb Sb 03 19 27.1 +4.5
baz=3.7
N11A Elko Archery C 3.69 48 ⇓P Pn 03 18 28.9 -1.7
baz=3.7,SNR=72
N11A ⇑Sb Sb 03 19 28.0 +4.4
baz=3.7
EDW2 Edwards Air Fo 3.69 162 ⇓P Pn 03 18 30.3 -0.4
baz=3.7,SNR=7.6
EDW2 ⇑Sb Sb 03 19 27.7 +3.9
baz=3.7
GSC Goldstone 3.72 146 ⇓P Pn 03 18 31.1 0.0
baz=3.7
R12A Pony Springs, 3.74 90 ⇓P Pn 03 18 29.7 -1.6
baz=3.7,SNR=66
R12A ⇓Sb Sb 03 19 28.5 +3.5
baz=3.7
U11A Corn Creek 3.74 121 ⇓P Pn 03 18 31.1 -0.2
baz=3.7
M10A I.L. Ranch, Tu 3.79 34 P Pn 03 18 30.9 -1.1
baz=3.8,SNR=60
M10A ⇑Sb Sb 03 19 29.9 +3.5
baz=3.8
L05A Lakeview 3.80 343 ⇓P Pn 03 18 33.4 +1.2
baz=3.8
OSI Osito Adit 3.82 172 ⇑P Pn 03 18 32.4 -0.1
baz=3.8
OSI ⇑Sb Sb 03 19 30.8 +3.2
baz=3.8
L09A Wilkinson Ranc 3.83 19 ⇓P Pn 03 18 32.2 -0.4
baz=3.8,SNR=21
L09A ⇑Sb Sb 03 19 31.4 +3.7
baz=3.8
SHPR Sheep Range 3.84 118 *e*Pn Pn 03 18 32.5 -0.3
L08A Fields 3.85 11 ⇑P Pn 03 18 32.7 -0.2
baz=3.8
M04C Macdoel 3.87 331 ⇑P Pn 03 18 34.6 +1.5
baz=3.9
M04C ⇑Sb Sb 03 19 32.7 +4.0
baz=3.9
O01C Eel River Cons 3.87 298 ⇑P Pn 03 18 32.3 -0.8
baz=3.8
N02C Big Bar 3.88 310 ⇑P Pn 03 18 33.5 +0.1
baz=3.9,SNR=14
ELK Elko 3.94 53 *e*Pn Pn 03 18 32.8 -1.4
ELK *e*Sg Sg 03 19 34.9 -5.4
O12A Currie 4.03 61 P Pn 03 18 34.1 -1.3
baz=4.0,SNR=200
O12A ⇓S Sn 03 19 23.9 +1.4
baz=4.0
TUQ Turquoise Mtn. 4.05 136 ⇑P Pn 03 18 34.7 -1.0
baz=4.1
WVOR Wild Horse Val 4.05 8 *e*Pn Pn 03 18 35.4 -0.3
WVOR *e*Pg Pg 03 18 48.1 -3.2
WVOR *e*Sg Sg 03 19 41.1 -2.7
V11A Goodsprings 4.06 128 ⇓P Pn 03 18 35.3 -0.4
baz=4.1
V11A ⇑Sb Sb 03 19 39.8 +5.6
baz=4.1

M11A Holland Ranch, 4.08 41 P Pn 03 18 34.5 -1.4
baz=4.1,SNR=54
M11A ⇓Sb Sb 03 19 39.6 +4.8
baz=4.1
N12A Clover Valley, 4.13 52 ⇓P Pn 03 18 35.5 -1.2
baz=4.1,SNR=401
N12A ⇓Sb Sb 03 19 41.0 +4.7
baz=4.1
KHMM Horse Mountain 4.17 307 *e*Pn Pn 03 18 39.7 +2.3
YBH Yreka Blue Hor 4.20 323 *e*Pn Pn 03 18 38.8 +1.2
YBH Yreka Blue Hor 4.20 323 ⇓P Pn 03 18 38.7 +1.1
baz=4.2
L04A Klamath Falls 4.23 334 ⇑P Pn 03 18 39.7 +1.6
baz=4.2
L04A ⇑Sb Sb 03 19 43.8 +4.7
baz=4.2
DECC Green Verdugo 4.24 168 ⇑P Pn 03 18 39.6 +1.4
baz=4.3
DECC ⇓Sb Sb 03 19 43.8 +4.4
baz=4.3
K07A Rock Creek Ran 4.28 1 ⇓P Pn 03 18 40.6 +1.9
baz=4.3
L10A Juniper Basin 4.28 30 P Pn 03 18 37.9 -0.8
baz=4.3,SNR=48
L10A ⇑Sb Sb 03 19 44.8 +4.3
baz=4.3
BLG Laguna Peak 4.30 177 ⇓P Pn 03 18 40.7 +1.7
baz=4.3
U12A Valley of Fire 4.32 116 ⇓P Pn 03 18 38.9 -0.4
baz=4.3,SNR=8.2
HEC Hector,Ludlow 4.33 145 ⇑P Pn 03 18 39.0 -0.4
baz=4.3
K08A Mann Creek Ran 4.37 8 ⇑P Pn 03 18 40.0 0.0
baz=4.4
BFSC Mount Baldy St 4.38 161 ⇓P Pn 03 18 40.5 +0.3
baz=4.4
BFSC ⇑Sb Sb 03 19 48.3 +4.7
baz=4.4
BSC Santa Cruz Isl 4.41 183 ⇑P Pn 03 18 41.6 +0.9
baz=4.4
S13A Holt Ranch, En 4.42 99 P Pn 03 18 39.7 -1.0
baz=4.4,SNR=103
K06A Valley Falls 4.43 351 ⇓P Pn 03 18 42.0 +1.1
baz=4.4
K09A Rome 4.46 16 ⇑P Pn 03 18 40.3 -1.0
baz=4.5,SNR=12
K05A Summer Lake 4.46 345 ⇓P Pn 03 18 43.0 +1.6
baz=4.5
V12A Nelson 4.49 125 ⇑P Pn 03 18 41.4 -0.3
baz=4.5
O13A Hicks Ranch, I 4.51 66 P Pn 03 18 40.8 -1.2
baz=4.5,SNR=51
T13A Saint George 4.54 106 P Pn 03 18 41.5 -0.9
baz=4.5,SNR=72
M12A Wells 4.55 47 P Pn 03 18 40.7 -1.8
baz=4.5,SNR=178
N13A Wendover, West 4.67 57 P Pn 03 18 42.8 -1.4
baz=4.7,SNR=44
N13A ⇓S Sn 03 19 38.6 +0.3
baz=4.7
KRMB Red Mountain 4.68 313 *e*Pn Pn 03 18 44.7 +0.5
KRMB *e*Pg Pg 03 18 57.8 -5.4
KRMB *e*Sg Sg 03 19 58.1 -5.7
GMRC Granite Mounta 4.69 139 ⇓P Pn 03 18 43.5 -0.9
baz=4.7,SNR=6.1
ARUT Antelope Range 4.71 96 *e*Pn Pn 03 18 43.6 -1.1
ARUT *e*Pg Pg 03 18 59.5 -4.4
U13A Pakoon Wash 4.73 113 P Pn 03 18 44.5 -0.5
baz=4.7,SNR=76
U13A ⇓S Sn 03 19 40.9 +0.9
baz=4.7
K10A MacKenzie Ranc 4.75 23 ⇑P Pn 03 18 45.1 -0.2
baz=4.7,SNR=18
CCUT Cedar City 4.81 98 *e*Pn Pn 03 18 44.7 -1.5
CCUT *e*Pg Pg 03 19 02.4 -3.4
CCUT *e*Sg Sg 03 20 03.8 -4.4
J06A Christmas Vall 4.87 353 ⇓P Pn 03 18 48.5 +1.6
baz=4.9
S14A Cedar City 4.93 96 ⇓P Pn 03 18 47.0 -0.7
baz=4.9
L02A Cave Junction 4.95 320 ⇓P Pn 03 18 51.1 +3.1
baz=4.9
J07A Hines 4.96 0 ⇑P Pn 03 18 51.6 +3.5
baz=4.9
M13A Montello 4.96 52 P Pn 03 18 46.6 -1.6
baz=5.0,SNR=39
R14A James Farms, M 4.98 89 ⇑P Pn 03 18 48.1 -0.4
baz=5.0
J08A Circle Bar Ran 4.99 7 ⇓P Pn 03 18 49.9 +1.4
baz=5.0
L12A House Creek Ra 4.99 40 ⇓P Pn 03 18 48.3 -0.3
baz=5.0
K11A Parker Ranch, 5.04 29 P Pn 03 18 48.9 -0.3
baz=5.0,SNR=16
J09A Fry Pan Ranch, 5.08 13 ⇓P Pn 03 18 51.0 +1.3
baz=5.1
MURC Murrieta 5.11 159 ⇑P Pn 03 18 51.3 +1.1
baz=5.1
T14A Hurricane 5.15 103 P Pn 03 18 50.3 -0.5
baz=5.2,SNR=21
BELC Belle Mtn. 5.17 147 ⇑P Pn 03 18 51.1 +0.1
baz=5.2
U14A Mt Trumbull 5.31 110 ⇓P Pn 03 18 52.5 -0.4
baz=5.3,SNR=67
PFO Pinyon Flat Ob 5.34 153 *e*Pn Pn 03 18 53.4 +0.1
PFO *e*Pg Pg 03 19 10.8 -5.0
PFO *e*Sg Sg 03 20 22.9 -2.1
PFO Pinyon Flat Ob 5.34 153 Pn Pn 03 18 54.9 +1.5
0.7nm,0.3s,baz=339,slow=13,SNR=7.9
PFO Lg 03 20 22.1
14nm,0.3s,baz=224,slow=16,SNR=7.3
PFO LR LR 03 20 39.6
comp=Z,274nm,21.4s,baz=59,slow=35
PFO Pinyon Flat Ob 5.34 153 ⇑P Pn 03 18 53.9 +0.5
baz=5.4
N14A Grayback Hills 5.35 61 ⇑P Pn 03 18 52.5 -1.0
baz=5.3,SNR=130
DUG Dugway 5.38 69 *e*Pn Pn 03 18 53.1 -0.8
DUG *e*Pg Pg 03 19 14.7 -2.0
DUG *e*Sg Sg 03 20 22.7 -3.6
DUG Dugway 5.38 69 ⇑P Pn 03 18 53.4 -0.5
baz=5.4,SNR=90
J10A Berg Farm, Mel 5.38 21 ⇑P Pn 03 18 53.8 -0.1
baz=5.4
K12A Draper Farm, C 5.42 37 ⇓P Pn 03 18 53.5 -0.9
baz=5.4,SNR=5.4
IRM Iron Mountain 5.44 140 ⇓P Pn 03 18 54.5 -0.2
baz=5.5
BGU Big Grassy Mou 5.49 61 *e*Pn Pn 03 18 54.1 -1.3
BGU *e*Pg Pg 03 19 14.3 -4.5
BGU *e*Sg Sg 03 20 25.8 -4.1
W13A Hualapai Mount 5.50 125 ⇑P Pn 03 18 55.7 +0.1
baz=5.5
L13A Double Diamond 5.54 47 ⇑P Pn 03 18 54.9 -1.1
baz=5.5,SNR=21
M14A Sheep Mountain 5.56 54 ⇑P Pn 03 18 55.0 -1.3
baz=5.5,SNR=44
MSU Marysvale 5.64 87 *e*Pn Pn 03 18 57.8 +0.4
MSU *e*Pg Pg 03 19 17.8 -3.8
MSU *e*Sg Sg 03 20 32.0 -2.6
T15A Red Dirt Ranch 5.70 102 ⇓P Pn 03 18 58.0 -0.4
baz=5.7,SNR=54
BC3 Big Chuckw Mtn 5.71 145 ⇑P Pn 03 18 58.0 -0.3
baz=5.7
N15A Stansbury Isla 5.83 63 ⇓P Pn 03 18 59.6 -0.5
baz=5.8
N15A ⇑S Sn 03 20 08.4 +1.5
baz=5.8
K13A Stover Farm, H 5.84 42 ⇓P Pn 03 18 59.2 -1.0
baz=5.8,SNR=8.6
NLU North Lily Min 5.87 73 *e*Pn Pn 03 18 59.6 -1.0
NLU *e*Pg Pg 03 19 21.8 -4.1
NLU *e*Sg Sg 03 20 36.2 -5.7
W14A Seligman 5.96 120 ⇑P Pn 03 19 02.0 +0.1
baz=6.0
NOQ North Oquirrh 6.03 66 *e*Pn Pn 03 19 02.7 0.0
NOQ *e*Sg Sg 03 20 43.1 -3.9
SPUT South Promonto 6.05 59 *e*Pn Pn 03 19 02.2 -0.9
SPUT *e*Pg Pg 03 19 24.2 -5.3
SPUT *e*Sg Sg 03 20 44.2 -3.7
HVU Hansel Valley 6.07 54 *e*Pn Pn 03 19 01.6 -1.7
HVU *e*Pg Pg 03 19 26.0 -3.8
HVU *e*Sg Sg 03 20 41.5 -6.8
Y12C Blythe 6.08 138 ⇑P Pn 03 19 03.2 -0.3
baz=6.1
M15A Larsen Ranch, 6.12 58 ⇓P Pn 03 19 03.8 -0.3
baz=6.1,SNR=38

MPU Maple Canyon 6.21 73 *e*Pn Pn 03 19 05.1 -0.2
MPU *e*Pg Pg 03 19 30.6 -2.0
MPU *e*Sg Sg 03 20 48.4 -4.6
CTU Camp Tracy 6.31 66 *e*Pn Pn 03 19 05.4 -1.2
CTU *e*Sg Sg 03 20 50.7 -5.3
HLID Hailey 6.36 34 *e*Pn Pn 03 19 05.0 -2.4
HLID *e*Pg Pb 03 19 23.3 -1.1
HLID *e*Sg Sg 03 20 48.7 -9.0
TMUT Trail Mountain 6.42 80 *e*Pn Pn 03 19 10.1 +1.9
TMUT *e*Pg Pg 03 19 35.0 -1.6
TMUT *e*Sg Sg 03 20 54.3 -5.4
JLU Jordanelle 6.50 68 *e*Pn Pn 03 19 09.1 -0.1
JLU *e*Sg Sg 03 20 55.0 -7.1
X14A Yava 6.53 125 ⇓P Pn 03 19 10.7 +1.0
baz=6.5
W15A Williams 6.54 117 ⇓P Pn 03 19 10.7 +0.9
baz=6.5
DAU Daniels Canyon 6.58 70 *e*Pn Pn 03 19 12.5 +2.1
DAU *e*Pg Pg 03 19 36.0 -3.6
DAU *e*Sg Sg 03 20 58.9 -6.1
BMO Blue Mountains 6.62 13 *e*Pn Pn 03 19 12.6 +1.8
BMO *e*Pg Pg 03 19 33.1 -7.2
BMO *e*Sg Sg 03 20 59.9 -6.1
HWUT Hardware Ranch 6.78 59 *e*Pn Pn 03 19 12.1 -1.1
HWUT *e*Sg Sg 03 21 05.6 -5.6
Y14A Wickenburg 6.81 129 ⇑P Pn 03 19 14.4 +0.9
baz=6.8
COR Corvallis 6.84 336 *e*Pn Pn 03 19 19.9 +6.0
SRU San Rafael 6.94 81 *e*Pn Pn 03 19 17.9 +2.6
SRU *e*Sg Sg 03 21 08.6 -7.8
X15A Humboldt 6.95 122 ⇓P Pn 03 19 16.0 +0.5
baz=7.0
HOOD Mount Hood Mea 7.11 347 *e*Pn Pn 03 19 27.2 +9.5
HAWA Hanford 7.98 359 *e*Pn Pn 03 19 34.3 +4.8
30nm,0.9s
MCMT McKenzie Canyo 8.05 35 *e*Pn Pn 03 19 34.0 +3.4
DCID1 Drake Creek 8.06 47 *e*Pn Pn 03 19 31.9 +1.2
DCID1 *e*Lg 03 21 47.9
PV10 Paradox Valley 8.11 87 *e*Pn Pn 03 19 32.3 +1.0
REDW Red Top Meadow 8.12 50 *e*Pn Pn 03 19 33.2 +1.7
REDW *e*Lg 03 21 51.0
TPAW Teton Pass 8.13 49 *e*Pn Pn 03 19 34.5 +2.8
TPAW *e*Lg 03 21 45.6
IMW Indian Meadow 8.39 47 *e*Pn Pn 03 19 36.2 +1.0
MOOW Moose Ponds 8.41 48 *e*Pn Pn 03 19 39.7 +4.2
MOOW *e*Lg 03 21 50.3
LOHW Long Hollow 8.41 49 *e*Pn Pn 03 19 37.9 +2.4
PV01 Paradox Valley 8.49 89 *e*Pn Pn 03 19 37.7 +1.1
DLMT Dillon 8.58 34 *e*Pn Pn 03 19 41.0 +3.2
BW06 Boulder Array 8.63 57 *e*Pn Pn 03 19 39.0 +0.5
BW06 *e*Lg 03 22 01.4
PDAR Pinedale Array 8.63 57 Pn Pn 03 19 40.5 +2.0
1.0nm,0.3s,baz=221,slow=13,SNR=68
PDAR Lg 03 22 00.9
1.1nm,0.3s,baz=222,slow=28,SNR=6.5
PDAR LR LR 03 22 56.5
comp=Z,587nm,21.8s,baz=168,slow=38
MVCO Mesa Verde 8.68 95 *e*Pn Pn 03 19 39.8 +0.5
LRM Limekiln Ridge 9.01 33 *e*Pn Pn 03 19 47.9 +4.2
BOZ Bozeman (W) 9.23 36 *e*Pn Pn 03 19 50.3 +3.5
TUC Tucson 9.28 128 *e*Pn Pn 03 19 47.6 +0.2
MSO Missoula 9.31 24 *e*Pn Pn 03 19 52.1 +4.4
CHMT Chamberlain Mo 9.61 26 *e*Pn Pn 03 19 55.4 +3.5
SMCO Snowmass 9.70 82 *e*Pn Pn 03 19 52.6 -0.6
RWWY Rawlins 9.87 67 *e*Pn Pn 03 19 56.6 +1.1
NEW Newport 9.98 9 *e*Pn Pn 03 20 02.0 +5.0
NEW Newport 9.98 9 Pn Pn 03 19 59.4 +2.4
0.2nm,0.3s,baz=172,slow=9.8,SNR=5.5
NEW Lg 03 22 49.0
0.2nm,0.3s,baz=294,slow=20,SNR=3.7
NEW LR LR 03 24 35.2
comp=Z,392nm,19.5s,baz=200,slow=42
BSMT Bassoo Peak 10.01 18 *e*Pn Pn 03 20 02.1 +4.7
RLMT Red Lodge 10.08 45 *e*Pn Pn 03 20 06.1 +7.7
ISCO Idaho Springs 10.77 78 *e*Pn Pn 03 20 12.0 +4.1
ANMO Albuquerque 10.92 105 *e*Pn Pn 03 20 12.7 +2.8
ANMO Albuquerque 10.92 105 Pn Pn 03 20 12.4 +2.5
0.1nm,0.3s,baz=312,slow=12,SNR=4.4
ANMO Lg 03 23 17.1
0.1nm,0.3s,baz=217,slow=20,SNR=3.5
ANMO LR LR 03 24 56.2
comp=Z,1μm,19.5s,baz=269,slow=41
SDCO Great Sand Dun 10.95 89 *e*Pn Pn 03 20 11.9 +1.7
BNM Barren Site 11.12 109 *e*Pn Pn 03 20 14.3 +1.7
WALA Waterton Lakes 11.34 19 *e*Pn Pn 03 20 18.4 +2.8
LAO LASA Array 12.72 45 *e*Pn Pn 03 20 37.9 +3.4
MNTX Cornudas Mount 13.26 116 *e*Pn Pn 03 20 46.5 +4.7
GDL2 Guadalupe Moun 13.72 112 *e*Pn Pn 03 20 54.1 +5.9
AMTX Amarillo 14.62 99 *e*Pn Pn 03 21 03.7 +3.3
26nm,1.1s
DGMT Dagmar 14.89 43 *e*Pn Pn 03 21 05.8 +1.8
BBB Bella Bella 15.07 339 LR LR 03 26 33.3
comp=Z,312nm,18.6s,baz=128,slow=36
EDM Edmonton 15.38 14 *e*P Pn 03 21 13.4 +2.9
LTX Lajitas 15.85 120 *e*Pn Pn 03 21 20.6 +3.8
3.4nm,0.8s
LTX Lajitas 15.85 120 *e*P Pn 03 21 20.6 +3.8
LTX pmax pmax
comp=Z,3.0nm,0.8s
TXAR Lajitas Array 15.85 120 Pn Pn 03 21 20.3 +3.4
TXAR Lajitas Array 15.85 120 Pn Pn 03 21 20.3 +3.5
comp=Z,0.2nm,0.3s,baz=300,slow=8.3,SNR=29
LPIG La Paz 16.21 149 LR LR 03 26 58.9
comp=Z,300nm,18.9s,baz=131,slow=35
WMOK Wichita Mounta 16.93 96 *e*P Pn 03 21 33.6 +3.1
ECSD EROS,Sioux Fal 17.93 66 *e*Pn Pn 03 21 44.1 +1.1
JCT Junction City 17.95 110 *e*P Pn 03 21 42.6 -0.7
AGMN Agassiz Refuge 19.67 52 *e*P Pn 03 22 02.2 -1.7
comp=Z,19nm,0.9s
ULM Lac du Bonnet 20.45 47 *e*P P 03 22 10.1 -1.0
comp=Z,27nm,1.4s
ULM Lac du Bonnet 20.45 47 P P 03 22 10.0 -1.0
comp=Z,9.2nm,1.1s,baz=244,slow=10,SNR=11
MIAR Mount Ida 21.07 93 *e*P P 03 22 19.2 +1.3
comp=Z,147nm,2.3s,mb4.9
MIAR Mount Ida 21.07 93 *e*P P 03 22 19.2 +1.3
MIAR pmax pmax
comp=Z,147nm,2.3s,mb4.9
HKT Hockley 21.17 106 *e*P P 03 22 20.3 +1.3
comp=Z,46nm,1.6s,mb4.6
HKT Hockley 21.17 106 *e*P P 03 22 20.3 +1.3
HKT pmax pmax
comp=Z,46nm,1.6s,mb4.6
EYMN Ely 22.34 56 *e*P P 03 22 32.1 +0.7
comp=Z,78nm,1.9s,mb4.8
JFWS Jewell Farm 22.48 69 *e*P P 03 22 32.4 -0.6
comp=Z,43nm,1.3s,mb4.7
JFWS Jewell Farm 22.48 69 *e*P P 03 22 32.4 -0.5
JFWS pmax pmax
comp=Z,43nm,1.3s,mb4.7
FVM French Village 22.71 82 *e*P P 03 22 35.3 -0.1
comp=Z,50nm,1.5s,mb4.7
FVM French Village 22.71 82 *e*P P 03 22 35.3 -0.1
FVM pmax pmax
comp=Z,50nm,1.5s,mb4.7
PARMO Parma 23.50 85 *e*P P 03 22 43.9 +0.1
YKA Yellowknife Ar 24.29 5 P P 03 22 53.2 +2.5
YKA Yellowknife Ar 24.29 5 P P 03 22 53.2 +2.5
comp=Z,2.0nm,0.8s,mb3.6,baz=189,slow=9.5,SNR=40
OXF Oxford 24.35 90 *e*P P 03 22 52.4 +0.8
comp=Z,43nm,1.0s,mb4.8
OXF Oxford 24.35 90 *e*P P 03 22 52.4 +0.8
OXF pmax pmax
comp=Z,43nm,1.0s,mb4.8
USIN University of 24.86 81 *e*P P 03 22 55.4 -0.8
comp=Z,86nm,1.4s,mb5.1
WVT Waverly 25.13 85 *e*P P 03 22 57.1 -1.7
comp=Z,0.1nm,0.7s
PLAL Pickwick Lake 25.25 88 *e*P P 03 23 03.0 +3.1
BLO Bloomington 25.53 78 *e*P P 03 23 03.2 +0.9
comp=Z,18nm,0.9s,mb4.6
BLO Bloomington 25.53 78 *e*P P 03 23 03.2 +0.9
BLO pmax pmax
comp=Z,18nm,0.9s,mb4.6
FCC Fort Churchill 26.06 30 *e*P P 03 23 09.1 +2.2
comp=Z,47nm,1.8s,mb4.7
FCC Fort Churchill 26.06 30 *e*P P 03 23 09.1 +2.2
FCC pmax pmax
comp=Z,47nm,1.8s,mb4.7
LRAL Lakeview Retre 26.73 92 *e*P P 03 23 13.2 -0.1
ACSO Alum Creek Sta 28.08 75 *e*P P 03 23 26.3 +1.0
comp=Z,55nm,1.4s,mb5.0
TKL Tuckaleechee C 28.43 84 P P 03 23 27.8 -0.7
comp=Z,3.1nm,0.7s,mb4.0,baz=310,slow=8.2,SNR=3.7

TKL LR LR 03 35 41.2
comp=Z,727nm,20.6s,MS4.3,baz=157,slow=38
ELN Prospectdale 30.38 80 *eP* **P 03 23 45.0 -0.7**
MCK McKinley 30.89 335 *eP* **P 03 23 48.1 -1.8**
comp=Z,5.8nm,1.0s,mb4.4
MCK McKinley 30.89 335 *eP* **P 03 23 48.1 -1.8**
MCK pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
INK Inuvik 30.95 350 P **P 03 23 52.6 +2.2**
comp=Z,3.4nm,0.9s,mb4.2,baz=152,slow=10,SNR=6.0
COLA College 31.32 337 *eP* **P 03 23 52.7 -0.9**
TEIG Tepich 32.38 115 LR LR 03 40 55.5
comp=Z,195nm,18.7s,MS3.8,baz=168,slow=43
RES Resolute Bay 38.14 10 *eP* **P 03 24 54.1 +1.7**
comp=Z,101nm,0.9s,mb5.5
SCHQ Schefferville 38.63 47 LR LR 03 41 38.4
comp=Z,377nm,20.1s,MS4.2,baz=91,slow=37
JTS JuntasAbangare 41.61 123 *eP* **P 03 25 22.8 +0.9**
JTS JuntasAbangare 41.61 123 LR LR 03 42 23.6
comp=Z,185nm,21.1s,MS3.9,baz=72,slow=36
BILL Bilibino 49.24 331 *eP* **P 03 26 21.6 -0.2**
comp=Z,4.0nm,0.8s,mb4.5
BILL Bilibino 49.24 331⇑ *eP* **P 03 26 20.2 -1.6**
BILL pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
SDV Santo Domingo 52.62 111 *eP* **P 03 26 49.1 +1.1**
comp=Z,4.1nm,0.8s,mb4.4
OTAV Otavalo 53.40 125 *eP* **P 03 26 55.6 +2.0**
comp=Z,4.1nm,1.0s,mb4.3
CLNS Chul'man 70.77 328 *eP* **P 03 28 42.5 -7.3**
LPAZ La Paz 72.54 128 P **P 03 29 01.5 +0.6**
comp=Z,1.7nm,0.9s,mb4.0,baz=13,slow=7.1,SNR=5.5
NB2 NORSAR Subarra 73.03 23 P **P 03 29 06.5 +3.2**
comp=Z,1.0nm,0.7s,mb3.9,baz=320,slow=6.2
NB2 NORSAR Subarra 73.03 23 P **P 03 29 06.5 +3.2**
NB2 pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
NOA NORSAR Array B 73.03 23 P **P 03 29 03.5 +0.3**
comp=Z,1.5nm,0.8s,mb4.0,baz=322,slow=5.9,SNR=5.3
FINES FINESS Array B 76.60 16 P **P 03 29 23.6 -0.3**
comp=Z,1.5nm,0.9s,mb3.9,baz=232,slow=2.2,SNR=4.2
MDJ Mudanjiang 76.61 317 P **P 03 29 21.2 -3.1**
MDJ AMB AMB
comp=Z,98nm,2.0s,mb5.4
MAJO Matsushiro 76.67 306 *eP* **P 03 29 22.1 -2.7**
comp=Z,171nm,1.0s
BAIF Baives 78.87 33 *eP* **P 03 29 39.1 +2.3**
TCF Toulx Ste Croi 80.76 37 *eP* **P 03 29 48.0 +0.9**
SSF Saint Saulge 80.79 36 *eP* **P 03 29 48.6 +1.4**
comp=Z,63nm,1.8s,mb4.4
SSF Saint Saulge 80.79 36 *eP* **P 03 29 48.6 +1.4**
comp=Z,32nm,1.8s,mb4.9
SSF Saint Saulge 80.79 36 *eP* **P 03 29 48.6 +1.4**
SSF pmax pmax
comp=Z,31nm,1.8s,mb4.9
LOR Lormes 80.80 35 *eP* **P 03 29 48.5 +1.2**
comp=Z,27nm,1.3s,mb4.7
LOR Lormes 80.80 35 *eP* **P 03 29 48.5 +1.2**
comp=Z,14nm,1.3s,mb4.7
LOR Lormes 80.80 35 *eP* **P 03 29 48.5 +1.2**
LOR pmax pmax
comp=Z,14nm,1.3s,mb4.7
BGF Bois d'Agland 80.86 36 *eP* **P 03 29 48.6 +1.0**
comp=Z,20nm,1.0s,mb4.7
BGF Bois d'Agland 80.86 36 *eP* **P 03 29 48.6 +1.0**
comp=Z,10nm,1.0s,mb4.7
BGF Bois d'Agland 80.86 36 *eP* **P 03 29 48.6 +1.0**
BGF pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
AVF Avril sur Loir 80.92 36 *eP* **P 03 29 49.4 +1.5**
HAU Haudompre 81.34 33 *eP* **P 03 29 50.7 +0.5**
CLL Collm 81.41 28 P **P 03 29 54.0 +3.5**
CLL Collm 81.41 28 *e*PcP PcP 03 29 54.0 -2.5
CDF Champ du Feu 81.43 33 *eP* **P 03 29 51.5 +0.9**
HINF Hinteralfeld 81.70 33 *eP* **P 03 29 52.9 +0.8**
comp=Z,14nm,1.2s,mb4.5
HINF Hinteralfeld 81.70 33 *eP* **P 03 29 52.9 +0.8**
comp=Z,6.8nm,1.2s,mb4.5
HINF Hinteralfeld 81.70 33 *eP* **P 03 29 52.9 +0.8**
HINF pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
BRG Berggiesshubel 82.11 28 *eP* **P 03 29 57.6 +3.5**
BRG pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
BRG Berggiesshubel 82.11 28 *eP* **P 03 29 57.6 +3.5**
comp=Z,8.7nm,1.2s,mb4.6
GERES GERESS Array B 83.67 29 P **P 03 30 04.0 +1.7**
comp=Z,0.8nm,0.8s,mb3.9,baz=19,slow=8.5,SNR=4.7
MBDF Montbardon 84.05 35 *eP* **P 03 30 05.6 +1.3**
comp=Z,29nm,1.3s,mb5.0
MBDF Montbardon 84.05 35 *eP* **P 03 30 05.6 +1.3**
comp=Z,14nm,1.3s,mb5.0
MBDF Montbardon 84.05 35 *eP* **P 03 30 05.6 +1.3**
MBDF pmax pmax
comp=Z,15nm,1.3s,mb5.0
OBN Obninsk 84.59 14⇑ *eP* **P 03 30 09.7 +2.9**
OBN pmax pmax
comp=Z,12nm,1.0s,mb5.0
MODS Modra-Piesok 85.39 27 *eP* **P 03 30 15.5 +4.5**
VYHS Vyhne 85.85 26 *eP* **P 03 30 17.3 +4.0**
VYHS Vyhne 85.85 26 *eP* **P 03 30 17.2 +3.9**
STHS Stebnicka Huta 85.87 25 *eP* **P 03 30 18.2 +4.8**
comp=Z,5.2nm,0.9s,mb4.8
STHS Stebnicka Huta 85.87 25 *eP* **P 03 30 18.2 +4.8**
STHS pmax pmax
comp=Z,5.0nm,0.9s,mb4.7
KECS Kecovo 86.42 25 *eP* **P 03 30 19.9 +3.8**
comp=Z,2.3nm,1.0s,mb4.4
KECS Kecovo 86.42 25 *eP* **P 03 30 19.9 +3.8**
KECS pmax pmax
comp=Z,2.0nm,1.0s,mb4.3
PSZ Piszkesteto 86.71 26 *eP* **P 03 30 19.2 +1.7**
comp=Z,27nm,1.7s,mb5.2
PSZ Piszkesteto 86.71 26 *eP* **P 03 30 19.2 +1.7**
PSZ pmax pmax
comp=Z,27nm,1.7s,mb5.2
AKASG Malin Array Be 87.07 19 P **P 03 30 18.4 -0.8**
comp=Z,1.1nm,0.7s,mb4.2,baz=338,slow=3.8,SNR=5.8
NJ2 Nanjing 91.41 314 *eP* **P 03 30 38.6 -1.5**
WMQ Urumqi 94.56 341 *eP* **P 03 30 51.7 -2.6**
LZH Lanzhou 95.80 326 *eP* **P 03 30 58.1 -2.1**
LZH AP pP 03 31 02.5 -1.0
LZH XP sP 03 31 05.2 +0.5
LZH AMB AMB
comp=Z,66nm,9.2s
LZH LR LR
comp=N,235nm,17.2s
LZH LR LR
comp=Z,403nm,19.5s,MS4.9
LZH Lanzhou 95.80 326 *eP* **P 03 30 58.1 -2.1**
LZH *PP pP 03 31 02.5 -1.0
LZH *SP sP 03 31 05.2 +0.5
LZH *e* 03 34 51.4
URZ Urewera 96.08 225 LR LR 04 02 54.9
comp=Z,268nm,21.7s,MS4.7,baz=188,slow=28
CD2 Chengdu 100.17 323 *eP* Pdif 03 31 18.1 -1.7
KMI Kunming 105.50 321 P PKiKP 03 35 58.4 +1.2

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*ORF **09** 03:21:50.1, 41.49N×134.75E, h30km, mb6.6*
*NIED **09** 03:22:00, 4300N×134.30E, h580km, Mw6.1 Best double couple: M0 1.84000×10^18 NP1:φ=290.00000°, δ=5.00000°, λ=0.00000°. NP2:φ=200.00000°, δ=90.00000°, λ=95.00000°.*
*BGS **09** 03:22:31.5, 4181N×13582E, h441km, mb5.8*
*CRAAG **09** 03:22:39.1, 4322N×13352E, Mw6.2*
*ISCJB **09** 03:22:41.7±0.1, 4322N±001×13351E±001, h439km, mb6.0/456, Error ellipse: s-maj=1.7km s-min=1.4km az=166.2*
*MOS **09** 03:22:41.1±0.8, 4322N×13362E, h443km, mb6.5/165, MS5.0/17, Error ellipse: s-maj=6.7km s-min=4.6km az=104.6*
*SKHL **09** 03:22:42.6±0.2, 4328N×13363E, h445km±6km, mb6.7/8, mbh6.4/4, Ms5.4/5, msh6.6/8*
*NEIC **09** 03:22:42.8±0.1, 4322N×13353E, mb6.1/295, ME6.1, MW6.0, Error ellipse: s-maj=2.2km s-min=1.8km az=178.0 Broadband fault plane solution: P waves. NP1: φ=205.00000°, δ=80.00000°, λ=90.00000°. NP2:φ=25.00000°, δ=10.00000°, λ=90.00000°. Principal axes: T Plg55.0000°, Azm115.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm295.0000°; Moment Tensor Solution. s55 Moment tensor: Scale 10^18 Nm; Mrr=0.37; Mθθ=0.27; Mφφ=-0.63; Mrθ=-0.43; Mθφ=-0.27; Mφr=1.10; Best double couple: M0 1.30000×10^18 NP1:φ=360.00000°, δ=13.00000°, λ=68.00000°. NP2:φ=202.00000°, δ=78.00000°, λ=95.00000°. Principal axes: T 1.1300, Plg57.0000°, Azm119.0000°; N 0.3300, Plg5.0000°, Azm21.0000°; P -1.4700, Plg33.0000°, Azm288.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Vladivostok. Recorded [2 JMA] in Aomori and [1 JMA] in Chiba, Fukushima, Ibaraki, Iwate, Kanagawa, Miyagi and Saitama Prefectures, Honshu. Recorded [1 JMA] on Nishino-shima. Also recorded [1 JMA] in south-central Hokkaido.
*JMA **09** 03:22:42.9±0.3, 4301N×13429E, h501km, M6.2*
JMA Felt II J1.
*BJI **09** 03:22:42.9, 4321N×13348E, h460km, mB6.1, mb6.3*
*GCMT **09** 03:22:42.8±0.1, 4322N×13365E, h451km, MW6.0/95, Moment Tensor Solution. s95,c220; s72,c95; Duration: 2^5 Moment tensor: Scale 10^18Nm; Mrr=0.37±.01; Mθθ=0.16±.01; Mφφ=-0.53±.01; Mrθ=-0.53±.01; Mθφ=-0.21±.01; Mφr=1.19±.01; Best double couple: M0 1.39000×10^18 NP1:φ=357.00000°, δ=11.00000°, λ=64.00000°. NP2: φ=204.00000°, δ=80.00000°, λ=95.00000°. Principal axes: T 1.2890, Plg55.0000°, Azm120.0000°; N 0.2020, Plg5.0000°, Azm23.0000°; P -1.4910, Plg35.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
*IDC **09** 03:22:43.2±0.3, 4322N×13351E, h447km±2km, mb5.5/54 Error ellipse: s-maj=5.6km s-min=4.1km az=88.0*
*SZGRF **09** 03:22:45.6, 4365N×13436E, h444km, mb6.7, Primorye, Russia*

ISC 09 03:22:42.9±0.1, 4323N±001×13351E±001, h441km, h441km±.5km:pP-P, n2165, σ0s79/2210, mb6.0/455, 458C-709D, Primorye

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLA	**Vladivostok**	**1.19**	**265**	*i* P		**P**	**03 23 39.9**	**+1.1**
VLA	**Vladivostok**	**1.19**	**265**	⇓*i*P		**P**	**03 23 39.7**	**+0.9**
VLA				*i* S		**S**	**03 24 25.3**	**+1.1**
VLA	comp=Z,29μm,0.6s			pmax	pmax			
VLA	comp=N,59nm,1.8s			smax				
VLA	**Vladivostok**	**1.19**	**265**	⇓*i*P		**P**	**03 23 39.7**	**+0.9**
VLA				*i* S		**S**	**03 24 25.3**	**+1.1**
TEY	**Ternei**	**2.87**	**50**	⇓*i*P		**P**	**03 23 48.5**	**+0.3**
TEY	comp=N,11μm,2.0s			AMB	AMB		03 23 49.5	
TEY	comp=N,15μm,2.0s			AMB	AMB		03 23 49.5	
TEY	comp=N,47μm,2.0s			*e*S		**S**	**03 24 40.7**	**-0.6**
TEY	comp=N,11μm,3.0s			A			03 24 44.0	
TEY	comp=N,14μm,3.0s			A			03 24 44.0	
MDJ	**Mudanjiang**	**3.15**	**297**	P		**P**	**03 23 51.7**	**+1.4**
MDJ				S		**S**	**03 24 47.8**	**+2.6**
MDJ	comp=Z,72μm,0.7s			AMB	AMB			
MDJ	comp=Z,41μm,7.3s			AMB	AMB			
MDJ	**Mudanjiang**	**3.15**	**297**	⇑*i*Pn		**P**	**03 23 52.0**	**+1.7**
MDJ				*e*S		**S**	**03 24 46.7**	**+1.5**
JOSM	**Okushiri--Mats**	**4.54**	**103**	⇓P		**P**	**03 24 01.2**	**-1.3**
JOSM				*e*S		**S**	**03 25 04.4**	**-2.9**
HABR	**Khabarovsk**	**5.36**	**11**	⇑*i*P		**P**	**03 24 11.4**	**+1.2**
HABR				*e*S		**S**	**03 25 22.5**	**+1.0**
HABR	**Khabarovsk**	**5.36**	**11**	⇑*i*P		**P**	**03 24 11.4**	**+1.2**
HABR				*i* S		**S**	**03 25 22.1**	**+0.6**
JKB	**Kayabe**	**5.71**	**101**	⇓P		**P**	**03 24 11.4**	**-2.5**
JKB				S		**S**	**03 25 23.1**	**-5.2**
JOT	**Ohata**	**5.88**	**106**	⇓P		**P**	**03 24 13.0**	**-2.7**
JOT				S		**S**	**03 25 25.7**	**-5.8**
CN2	**Changchun**	**5.89**	**278**	⇑P		**P**	**03 24 17.7**	**+2.0**
CN2				*e*S		**S**	**03 25 32.6**	**+1.1**
CN2				PCP	PcP		03 30 25.3	+3.0
CN2				SCS	ScS		03 36 40.7	-3.4
CN2	comp=Z,9μm,1.0s			AMB	AMB			
CN2	comp=Z,24μm,4.0s			AMB	AMB			
JHR	**Hokuryu**	**6.00**	**82**	⇓P		**P**	**03 24 15.2**	**-1.6**
KLR	**Kul'dur**	**6.13**	**349**	⇓P		**P**	**03 24 15.1**	**-2.9**
KLR				*e*S		**S**	**03 25 31.5**	**-4.3**
KLR	comp=N,15μm,12.0s			pmax	pmax			
KLR	comp=E,8μm,12.0s			pmax	pmax			
KLR	comp=Z,24μm,12.0s			pmax	pmax			
KLR	comp=E,42μm,7.5s			smax				
KLR	**Kul'dur**	**6.13**	**349**	⇓*i*P		**P**	**03 24 15.1**	**-2.9**
KLR				AMB	AMB		03 24 17.5	
KLR	comp=E,15μm,12.0s			AMB	AMB		03 24 17.5	
KLR	comp=E,8μm,12.0s			AMB	AMB		03 24 17.5	
KLR	comp=E,24μm,12.0s			*e*S		**S**	**03 25 31.5**	**-4.3**
KLR				A			03 25 34.5	
KLR	comp=E,42μm,7.5s							
JWK2	**Keihoku**	**6.37**	**68**	⇓P		**P**	**03 24 20.2**	**-0.5**
JWK2				S		**S**	**03 25 37.7**	**-2.9**
ASAJ	**Asahikawa**	**6.65**	**79**	P		**P**	**03 24 21.7**	**-1.9**
ASAJ	comp=E,3μm,0.3s,baz=272,slow=12,SNR=1306			S		**S**	**03 25 40.5**	**-5.5**
ASAJ	baz=129,slow=29,SNR=16			ScP	ScP		03 33 12.5	+0.7
SAI	**Saigo**	**7.02**	**181**	P		**P**	**03 24 29.0**	**+1.3**
SAI				S		**S**	**03 25 53.5**	**+0.1**
KSRS	**Korea Array**	**7.17**	**218**	P		**P**	**03 24 31.6**	**+2.3**
KSRS	comp=E,158nm,0.3s,baz=39,slow=10,SNR=2607			S		**S**	**03 25 59.4**	**+3.0**
KSRS	baz=255,slow=38,SNR=4.2			ScP	ScP		03 33 11.9	-0.4
KSRS	comp=E,1.1nm,0.3s,baz=297,slow=1.1,SNR=14			P3KPbc			04 01 17.5	
ERM	**Erimo**	**7.22**	**96**	P		**P**	**03 24 27.5**	**-2.2**
ERM	**Erimo**	**7.22**	**96**	⇑*i*Pn		**P**	**03 24 26.7**	**-3.0**
ERM	comp=E,9μm,0.4s			*e*Sn		**S**	**03 25 43.5**	**-14**
ERM	**Erimo**	**7.22**	**96**	*c* iP		**P**	**03 24 27.2**	**-2.5**
JMK	**Ichinoseki**	**7.22**	**124**	⇓P		**P**	**03 24 25.8**	**-4.0**
JMK				S		**S**	**03 24 48.7**	**-8.6**
JCH	**Churui**	**7.26**	**91**	⇓P		**P**	**03 24 25.9**	**-4.2**
JCH				S		**S**	**03 25 48.1**	**-10**
SNY	**Shenyang**	**7.47**	**263**	⇓P		**P**	**03 24 35.6**	**+3.2**
SNY				S		**S**	**03 26 02.8**	**+0.7**
SNY	comp=Z,9μm,9.4s			AMB	AMB			
YSS	**Yuzh-Sakhalins**	**7.53**	**57**	⇓*i*P		**P**	**03 24 31.6**	**-1.3**
YSS				*e*S		**S**	**03 25 56.3**	**-6.9**
YSS				*e*ScP		ScP	03 33 12.8	+0.2
YSS	**Yuzh-Sakhalins**	**7.53**	**57**	к *i*P		**P**	**03 24 31.5**	**-1.4**
YSS				*i* S		**S**	**03 25 58.0**	**-5.2**
YSS	comp=N,1μm,1.0s			pmax	pmax			
YSS	comp=E,1μm,1.0s			pmax	pmax			
YSS	comp=Z,3μm,1.0s			pmax	pmax			
YSS	comp=N,5μm,4.0s			pmax	pmax			
YSS	comp=E,7μm,4.0s			pmax	pmax			
YSS	comp=Z,10μm,4.0s			MLR	MLR			
YSS	comp=N,4μm,8.0s			MLR	MLR			
YSS	comp=Z,3μm,8.0s			MLR	MLR			
YSS	comp=E,4μm,7.0s							
YSS	**Yuzh-Sakhalins**	**7.53**	**57**	⇓*i*P		**P**	**03 24 31.5**	**-1.4**
YSS				⇓*i*P			03 24 31.5	
YSS				AMB	AMB		03 24 34.0	
YSS	comp=E,10μm,4.0s			AMB	AMB		03 24 34.0	
YSS	comp=E,5μm,4.0s			AMB	AMB		03 24 34.0	
YSS	comp=E,7μm,4.0s			AMB	AMB		03 24 34.0	
YSS	comp=E,1μm,1.0s			AMB	AMB		03 24 34.0	
YSS	comp=E,1μm,1.0s			AMB	AMB		03 24 34.0	
YSS	comp=E,3μm,1.0s			*e*rx	rx		03 25 36.0	
YSS				*i* S		**S**	**03 25 58.0**	**-5.2**
YSS	comp=E,5μm,1.1s			A			03 26 01.5	
YSS	comp=E,59μm,5.0s			A			03 26 04.0	
YSS	comp=E,34μm,5.0s			A			03 26 04.0	
YSS	comp=E,4μm,8.0s			AMS	AMS		03 28 26.0	
YSS	comp=E,4μm,8.0s			AMS	AMS		03 28 26.0	
YSS	comp=E,3μm,8.0s			AMS	AMS		03 28 26.0	
JTKR	**Abashiri--Toko**	**7.58**	**81**	⇓P		**P**	**03 24 31.2**	**-2.4**
JTKR				S		**S**	**03 25 57.8**	**-6.6**
MAJO	**Matsushiro**	**7.59**	**150**	⇓*i*P		**P**	**03 24 31.6**	**-2.2**
MAJO				*e*S		**S**	**03 26 00.5**	**-4.2**
MAJO				*e*ScP	ScP		03 33 12.5	-0.3
MAJO	**Matsushiro**	**7.59**	**150**	⇓*i*P		**P**	**03 24 31.6**	**-2.2**
MAJO				*e*S		**S**	**03 26 00.5**	**-4.1**
MAT	**Matsushiro**	**7.59**	**150**	P		**P**	**03 24 31.7**	**-2.1**
MAT				S		**S**	**03 26 02.1**	**-2.5**
MAT	**Matsushiro**	**7.59**	**150**	P		**P**	**03 24 31.3**	**-2.5**
MJAR	**Matsushiro Arr**	**7.59**	**150**	P		**P**	**03 24 32.1**	**-1.7**
MJAR				PP			03 25 29.4	
MJAR				S		**S**	**03 26 02.0**	**-2.7**
MJAR				ScP	ScP		03 33 11.6	-1.2
MJAR	**Matsushiro Arr**	**7.59**	**150**	P		**P**	**03 24 32.1**	**-1.7**
MJAR	comp=E,74nm,0.3s,baz=333,slow=11,SNR=705			PP			03 25 29.4	
MJAR	comp=E,74nm,0.3s,baz=348,slow=10,SNR=9.4			S		**S**	**03 26 02.0**	**-2.7**
MJAR	comp=E,15nm,0.3s,baz=45,slow=7.5,SNR=2.2			ScP	ScP		03 33 11.6	-1.2
MJAR	comp=E,0.7nm,0.3s,baz=313,slow=0.7,SNR=13			P3KPbc			04 01 21.2	
INCN	**Inchon**	**7.78**	**225**	P		**P**	**03 24 38.0**	**+2.2**
INCN				S		**S**	**03 26 11.7**	**+3.4**
INCN				ScS	ScS		03 36 43.2	-3.4
INCN				SCS	ScS		03 36 44.0	-2.7
INCN	**Inchon**	**7.78**	**225**	⇓*i*P		**P**	**03 24 37.8**	**+2.0**
INCN	comp=E,3μm,1.0s			*e*ScP	ScP		03 33 12.4	-0.5
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
INCN	**Inchon** SNR=100	**7.78**	**225**	P		**P**	**03 24 38.3**	**+2.5**
GRNR	**Gornyy**	**7.80**	**14**	⇑*i*P		**P**	**03 24 36.2**	**+0.4**
GRNR				AMB	AMB		03 24 37.6	
GRNR	comp=E,4μm,1.0s			AMB	AMB		03 24 37.6	
GRNR	comp=E,670nm,1.0s			AMB	AMB		03 24 37.6	
GRNR	comp=E,4μm,1.0s			*e*S		**S**	**03 26 06.9**	**-1.6**
GRNR				A			03 26 07.7	
JHS	**Saijyo**	**8.22**	**182**	⇑P		**P**	**03 24 41.7**	**+1.0**
JHS				S		**S**	**03 26 18.0**	**+0.7**
JRY	**Ryogami san**	**8.31**	**148**	⇓P		**P**	**03 24 38.6**	**-3.1**
JRY				S		**S**	**03 26 13.5**	**-5.6**
UGL	**Uglegorsk**	**8.33**	**42**	к *i*P		**P**	**03 24 41.0**	**-0.6**
UGL				*e*S		**S**	**03 26 15.0**	**-4.2**
UGL	comp=N,943nm,1.0s			pmax	pmax			
UGL	comp=E,1μm,1.0s			pmax	pmax			
UGL	comp=Z,4μm,1.0s			pmax	pmax			
UGL	comp=N,2μm,2.0s			pmax	pmax			
UGL	comp=E,2μm,2.0s			pmax	pmax			
UGL	comp=Z,8μm,2.0s			smax				
UGL	comp=N,14μm,2.0s			smax				
UGL	comp=E,16μm,2.0s			smax				
UGL	comp=Z,2μm,1.5s							
UGL	**Uglegorsk**	**8.33**	**42**	⇓*i*P		**P**	**03 24 41.0**	**-0.6**
UGL				⇓*i*P			03 24 41.0	
UGL				AMB	AMB		03 24 43.0	
UGL	comp=Z,943nm,1.0s			AMB	AMB		03 24 43.0	
UGL	comp=Z,1347μm,1.0s			AMB	AMB		03 24 43.0	
UGL	comp=Z,4μm,1.0s			AMB	AMB		03 24 44.0	
UGL	comp=Z,2μm,2.0s			AMB	AMB		03 24 44.0	
UGL	comp=Z,8μm,2.0s			*i* S		**S**	**03 26 15.0**	**-4.2**
UGL				A			03 26 18.0	
UGL	comp=Z,14μm,2.0s			A			03 26 18.0	
UGL	comp=Z,16μm,2.0s			A			03 26 22.0	
UGL	comp=Z,40μm,9.0s			A				
NEM2	**Nemuro 2**	**8.92**	**85**	P		**P**	**03 24 43.8**	**-4.4**
NEM2				*e*S		**S**	**03 26 19.9**	**-11**
JOD2	**Odawara 2**	**9.05**	**150**	P		**P**	**03 24 46.0**	**-3.7**
JOD2				S		**S**	**03 26 25.6**	**-8.3**
JIE	**Ise**	**9.17**	**163**	P		**P**	**03 24 49.1**	**-1.9**
JIE				S		**S**	**03 26 33.4**	**-2.8**
JTU	**Tsushima**	**9.26**	**202**	P		**P**	**03 24 53.0**	**+1.0**
JWZ	**Kozaga**	**9.83**	**169**	P		**P**	**03 24 56.5**	**-1.8**
JWZ				S		**S**	**03 26 44.9**	**-4.8**
EKMR	**Ekimchan**	**9.86**	**358**	⇓*i*P		**P**	**03 24 55.6**	**-2.6**
EKMR				AMB	AMB		03 24 58.5	
EKMR	comp=Z,330nm,0.5s			AMB	AMB		03 24 58.5	
EKMR	comp=Z,440nm,0.5s			AMB	AMB		03 24 58.5	
EKMR	comp=Z,880nm,0.5s			AMB	AMB		03 24 58.5	
TYV	**Tymovskoe**	**9.86**	**36**	⇓*i*P		**P**	**03 24 58.3**	**+0.1**
TYV				AMB	AMB		03 25 00.5	
TYV	comp=Z,5μm,3.0s			AMB	AMB		03 25 00.5	
TYV	comp=Z,2μm,2.0s			AMB	AMB		03 25 00.5	
TYV	comp=Z,4μm,2.0s			AMB	AMB		03 25 02.5	
TYV	comp=Z,205nm,0.8s			AMB	AMB		03 25 02.5	
TYV	comp=Z,176nm,0.8s			AMB	AMB		03 25 02.5	
TYV	comp=Z,957nm,0.8s			*e*S		**S**	**03 26 46.0**	**-3.7**
DL2	**Dalian**	**9.96**	**248**	*i* P		**P**	**03 25 02.0**	**+2.5**
DL2				XP			03 26 30.4	
DL2				S		**S**	**03 26 54.7**	**+2.7**
DL2				SCP	ScP		03 33 15.1	-0.3
DL2				SCS	ScS		03 36 46.1	-4.0
DL2	comp=Z,3μm,0.6s			AMB	AMB			

DL2				AMB	AMB			
	comp=Z,4μm,3.9s							
JNU	**Nakatsue**	**10.30**	**192**	P	**P**	**03**	**25**	**04.2** **+0.8**
	comp=Z,49nm,0.3s,baz=24,slow=14,SNR=298							
JNU				S	**S**	**03**	**26**	**58.5** **-0.5**
	baz=158,slow=19,SNR=7.9							
JNU				ScP	ScP	03	33	15.1 -0.8
	comp=Z,2.7nm,0.3s,baz=50,slow=7.4,SNR=18							
BSO1	**Boso 1**	**10.34**	**143**	P	**P**	**03**	**25**	**00.0** **-3.9**
BSO1				S	**S**	**03**	**26**	**51.3** **-8.6**
JTO	**Tosashimizu**	**10.37**	**183**	P	**P**	**03**	**25**	**03.6** **-0.5**
KUR	**Kuril'sk**	**10.50**	**74***j*	*i*P	**P**	**03**	**25**	**02.8** **-2.5**
KUR				*i* S	**S**	**03**	**26**	**56.0** **-6.7**
KUR				pmax	pmax			
	comp=N,1μm,0.9s							
KUR				pmax	pmax			
	comp=E,1μm,0.9s							
KUR				pmax	pmax			
	comp=Z,6μm,0.9s							
KUR				pmax	pmax			
	comp=N,6μm,2.0s							
KUR				pmax	pmax			
	comp=E,10μm,2.0s							
KUR				pmax	pmax			
	comp=Z,22μm,2.0s							
KUR				smax				
	comp=N,90μm,4.0s							
KUR				smax				
	comp=E,50μm,4.0s							
KUR				smax				
	comp=N,13μm,1.0s							
KUR				smax				
	comp=E,8μm,1.0s							
KUR				MLR	MLR			
	comp=Z,14μm,11.0s							
KUR	**Kuril'sk**	**10.50**	**74**⇑	*i*P	**P**	**03**	**25**	**02.8** **-2.5**
KUR				⇓*i*P		03	25	02.8
KUR				AMB	AMB	03	25	04.6
	comp=Z,1μm,0.9s							
KUR				AMB	AMB	03	25	04.6
	comp=Z,1μm,0.9s							
KUR				AMB	AMB	03	25	04.6
	comp=Z,6μm,0.9s							
KUR				AMB	AMB	03	25	05.0
	comp=Z,22μm,2.0s							
KUR				*i* S	**S**	**03**	**26**	**56.0** **-6.7**
KUR				A		03	26	59.8
	comp=Z,90μm,4.0s							
KUR				A		03	26	59.8
	comp=Z,50μm,4.0s							
KUR				A		03	26	59.8
	comp=Z,13μm,1.0s							
KUR				A		03	26	59.8
	comp=Z,15μm,1.0s							
KUR				AMS	AMS	03	29	51.0
	comp=Z,14μm,11.0s							
NKL	**Nikolayevsk**	**11.02**	**23**⇑	*i*P	**P**	**03**	**25**	**05.2** **-5.6**
NKL				⇑*i*P		03	25	06.0
NKL				AMB	AMB	03	25	06.5
	comp=Z,1μm,0.8s							
NKL				AMB	AMB	03	25	06.5
	comp=Z,720nm,0.8s							
NKL				AMB	AMB	03	25	06.5
	comp=Z,2μm,0.7s							
NKL				AMB	AMB	03	25	07.0
	comp=Z,5μm,4.0s							
NKL				AMB	AMB	03	25	07.0
	comp=Z,4μm,4.0s							
NKL				AMB	AMB	03	25	07.0
	comp=Z,8μm,4.0s							
NKL				*i* S	**S**	**03**	**27**	**06.0** **-6.9**
NKL				A		03	27	09.0
	comp=Z,12μm,3.0s							
NKL				A		03	27	09.0
	comp=Z,6μm,3.0s							
NKL				A		03	27	10.0
	comp=Z,1μm,1.0s							
NKL				A		03	27	10.0
	comp=Z,2μm,1.0s							
NKL				AMS	AMS	03	29	44.0
	comp=Z,6μm,4.0s							
NKL				AMS	AMS	03	29	44.0
	comp=Z,5μm,4.0s							
NKL				AMS	AMS	03	29	44.0
	comp=Z,4μm,4.0s							
JHJ	**Hachijo jima 2**	**11.23**	**152**	P	**P**	**03**	**25**	**10.8** **-2.8**
	comp=Z,624nm,0.3s,baz=278,slow=1.1,SNR=123							
JHJ				S	**S**	**03**	**27**	**11.5** **-6.2**
	comp=Z,320nm,0.3s,baz=93,slow=23,SNR=11							
JHJ2	**Mitsune**	**11.25**	**152**	P	**P**	**03**	**25**	**10.5** **-3.2**
HIA	**Hailar**	**11.28**	**307**⇓	*i*P	**P**	**03**	**25**	**14.9** **+1.1**
	comp=Z,1μm,0.4s							
HIA				*e*S	**S**	**03**	**27**	**16.6** **-1.7**
HIA				*e*ScP	ScP	03	33	16.3 -0.6
HIA	**Hailar**	**11.28**	**307**⇓	*i*P	**P**	**03**	**25**	**14.7** **+0.9**
HIA				*e*S	**S**	**03**	**27**	**16.6** **-1.6**
HIA				pmax	pmax			
	comp=Z,1μm,0.5s							
ZEA	**Zeya**	**11.30**	**341**⇓	*i*P	**P**	**03**	**25**	**15.3** **+1.3**
ZEA				⇓*i*P		03	25	15.3
ZEA				AMB	AMB	03	25	16.2
	comp=Z,1μm,0.4s							
ZEA				AMB	AMB	03	25	16.2
	comp=Z,3μm,0.4s							
ZEA				AMB	AMB	03	25	16.4
	comp=Z,12μm,2.0s							
ZEA				AMB	AMB	03	25	16.4
	comp=Z,7μm,2.0s							
ZEA				AMB	AMB	03	25	16.4
	comp=Z,4μm,2.0s							
ZEA				*e*S	**S**	**03**	**27**	**17.7** **-0.9**
ZEA				A		03	27	24.2
	comp=Z,40μm,6.0s							
ZEA				A		03	27	24.2
	comp=Z,45μm,6.0s							
BMKR	**Bomnak**	**11.89**	**347**⇓	*i*P	**P**	**03**	**25**	**17.9** **-2.5**
BMKR				AMB	AMB	03	25	21.5
	comp=Z,405nm,0.5s							
JSJ	**Shimokoshiki**	**11.91**	**196**	P	**P**	**03**	**25**	**21.6** **+0.6**
KROS	**Kirovskiy**	**12.01**	**341**⇓	*i*P	**P**	**03**	**25**	**20.0** **-1.6**
KROS				AMB	AMB	03	25	23.6
	comp=Z,620nm,0.5s							
KROS				*e*rx	rx	03	26	27.1
KROS				*e*rx	rx	03	26	43.1
OKH	**Okha**	**12.07**	**28**⇑	*i*P	**P**	**03**	**25**	**23.8** **+1.5**
OKH				*i* S	**S**	**03**	**27**	**32.4** **-1.5**
OKH				pmax	pmax			
	comp=Z,11μm,6.0s							
OKH				smax				
	comp=N,12μm,4.0s							
OKH	**Okha**	**12.07**	**28**⇑	*i*P	**P**	**03**	**25**	**23.9** **+1.6**
OKH				AMB	AMB	03	25	24.0
	comp=N,11μm,6.0s							
OKH				AMB	AMB	03	25	24.0
	comp=N,4μm,4.0s							
OKH				AMB	AMB	03	25	24.0
	comp=N,2μm,4.0s							
OKH				AMB	AMB	03	25	24.6
	comp=N,2μm,0.9s							
OKH				*e*rx	rx	03	26	02.0
OKH				*i* S	**S**	**03**	**27**	**32.4** **-1.5**
OKH				A		03	27	34.2
	comp=N,12μm,4.0s							
OKH				A		03	27	34.2
	comp=N,10μm,4.0s							
OKH				AMS	AMS	03	31	55.6
	comp=N,10μm,6.0s							
OKH				AMS	AMS	03	31	55.6
	comp=N,11μm,6.0s							
OKH				AMS	AMS	03	31	55.6
	comp=N,6μm,6.0s							
BJI	**Beijing**	**13.35**	**262**	P	**P**	**03**	**25**	**38.2** **+1.7**
BJI				S	**S**	**03**	**27**	**59.9** **+0.1**
BJI				SCP	ScP	03	33	19.9 -0.4
BJI				SCS	ScS	03	36	55.6 -1.6
BJI				AMB	AMB			
	comp=Z,459nm,0.8s							
BJI	**Beijing**	**13.35**	**262**	P	**P**	**03**	**25**	**38.2** **+1.7**
BJI				S	**S**	**03**	**27**	**59.9** **+0.1**
BJI				ScP	ScP	03	33	19.9 -0.4
BJI				ScS	ScS	03	36	55.6 -1.6
BJT	**Baijiatuau**	**13.37**	**262**⇓	*i*P	**P**	**03**	**25**	**37.5** **+0.9**
	comp=Z,4μm,0.9s							
BJT				*e*S	**S**	**03**	**28**	**01.0** **+0.9**
BJT				*e*ScP	ScP	03	33	19.8 -0.5
BJT	**Baijiatuau**	**13.37**	**262**⇓	*i*P	**P**	**03**	**25**	**37.6** **+1.0**
BJT				*e*S	**S**	**03**	**28**	**01.0** **+0.9**
BJT				pmax	pmax			
	comp=Z,4μm,0.9s							
TIA	**Tai'an**	**14.41**	**246**	⇓P	**P**	**03**	**25**	**48.8** **+0.8**
TIA				S	**S**	**03**	**28**	**20.0** **-0.9**
TIA				SCP	ScP	03	33	21.7 -0.5
TIA				SCS	ScS	03	36	56.0 -3.9
TIA				AMB	AMB			
	comp=Z,727nm,1.0s							
TIA				AMB	AMB			
	comp=Z,9μm,6.0s							
NRGR	**Nerungri**	**14.57**	**340**	*i* P	**P**	**03**	**25**	**49.4** **+0.1**
NRGR				S	**S**	**03**	**28**	**21.0** **-2.3**
NRGR				smax				
	comp=E,6μm,1.2s							
CLNS	**Chul'man**	**14.69**	**341**	*e*P	**P**	**03**	**25**	**49.7** **-0.9**
CLNS				*e*S	**S**	**03**	**28**	**24.5** **-1.1**
CLNS				pmax	pmax			
	comp=Z,2μm,0.6s							
CLNS				pmax	pmax			
	comp=N,1μm,1.0s							
CLNS				pmax	pmax			
	comp=E,305nm,0.5s							
CLNS				smax				
	comp=N,3μm,1.5s							
CLNS				smax				
	comp=Z,1μm,1.4s							
CLNS				smax				
	comp=E,820nm,0.9s							
CLNS				MLR	MLR			
	comp=N,1μm,11.0s							
CLNS				MLR	MLR			
	comp=Z,2μm,11.0s							
CLNS				MLR	MLR			
	comp=E,900nm,15.0s							
CLNS	**Chul'man**	**14.69**	**341**	*e*P	**P**	**03**	**25**	**49.7** **-0.9**
CLNS				AMB	AMB	03	25	50.9
	comp=E,2μm,0.6s							
CLNS				*e*S	**S**	**03**	**28**	**24.5** **-1.1**
CLNS				AMS	AMS	03	30	35.0
	comp=E,2μm,13.0s							
CLNS				AMS	AMS	03	30	35.0
	comp=E,1μm,13.0s							
CLNS				AMS	AMS	03	30	35.0
	comp=E,900nm,13.0s							
JAM	**Amami Oshima**	**15.12**	**193**	P	**P**	**03**	**25**	**52.6** **-3.0**
JAM				S	**S**	**03**	**28**	**25.1** **-10**
SSE	**Sheshan**	**15.57**	**223**	P	**P**	**03**	**26**	**00.1** **-0.3**
SSE				XP		03	27	44.7
SSE				S	**S**	**03**	**28**	**40.7** **-2.9**
SSE				AMB	AMB			
	comp=Z,150nm,1.0s							
SSE				AMB	AMB			
	comp=Z,1μm,7.1s							
CIT	**Chita**	**16.03**	**310**⇓	*i*P	**P**	**03**	**26**	**05.4** **+0.4**
CIT				*e*S	**S**	**03**	**28**	**51.9** **0.0**
CIT				pmax	pmax			
	comp=Z,9μm,1.7s							
NJ2	**Nanjing**	**16.07**	**231**	*e*P	**P**	**03**	**26**	**05.9** **+0.2**
NJ2				XP		03	27	51.3
NJ2				S	**S**	**03**	**28**	**52.5** **-0.8**
NJ2				PCP	PcP	03	30	36.5 +3.1
NJ2				AMB	AMB			
	comp=Z,510nm,0.6s							
NJ2				AMB	AMB			
	comp=Z,4μm,7.9s							
HHC	**Hu-ho-hao-te**	**16.47**	**269**	⇓P	**P**	**03**	**26**	**10.5** **+0.7**
HHC				XP	sP	03	27	55.0 -8.8
HHC				S	**S**	**03**	**28**	**59.9** **-0.8**
HHC				PCP	PcP	03	30	33.2 -0.7
HHC				SCP	ScP	03	33	26.5 +0.6
HHC				PCS	PcS	03	34	09.9 +0.1
HHC				AMB	AMB			
	comp=Z,1μm,0.8s							
HHC				AMB	AMB			
	comp=Z,10μm,4.1s							
JOW	**Kunigami**	**16.90**	**196**	S	**S**	**03**	**28**	**57.6** **-12**
JOW	**Kunigami**	**16.90**	**196**	P	**P**	**03**	**26**	**09.7** **-4.8**
	comp=Z,9.9nm,0.3s,baz=15,slow=5.9,SNR=15							
JOW				S	**S**	**03**	**28**	**58.6** **-11**
	comp=Z,5.9nm,0.3s,baz=295,slow=28,SNR=7.4							
JOW				ScP	ScP	03	33	27.1 +0.1
	comp=Z,14nm,0.3s,baz=94,slow=22,SNR=11							
TIY	**Taiyuan**	**16.94**	**258**	*i* P	**P**	**03**	**26**	**15.3** **+0.5**
TIY				S	**S**	**03**	**29**	**12.4** **+2.6**
TIY				AMB	AMB			
	comp=Z,8μm,3.8s							
SKR	**Severo-Kuril's**	**17.10**	**56**κ	*i*P	**P**	**03**	**26**	**14.4** **-1.8**
SKR				*i* S	**S**	**03**	**29**	**08.0** **-4.4**
SKR				pmax	pmax			
	comp=N,2μm,2.0s							
SKR				pmax	pmax			
	comp=E,3μm,2.0s							
SKR				pmax	pmax			
	comp=Z,5μm,2.0s							
SKR				pmax	pmax			
	comp=N,330nm,0.9s							
SKR				pmax	pmax			
	comp=E,490nm,0.9s							
SKR				pmax	pmax			
	comp=Z,2μm,0.9s							
SKR				smax				
	comp=N,6μm,2.0s							
SKR				smax				
	comp=E,3μm,1.5s							
SKR				MLR	MLR			
	comp=N,5μm,12.0s							
SKR				MLR	MLR			
	comp=E,3μm,12.0s							
SKR				MLR	MLR			
	comp=Z,5μm,12.0s							
SKR	**Severo-Kuril's**	**17.10**	**56**⇑	*i*P	**P**	**03**	**26**	**13.5** **-2.7**
SKR				⇓*i*P		03	26	14.3
SKR				AMB	AMB	03	26	15.0
	comp=Z,2μm,2.0s							
SKR				AMB	AMB	03	26	15.0
	comp=Z,3μm,2.0s							
SKR				AMB	AMB	03	26	15.0
	comp=Z,5μm,2.0s							
SKR				*e*rx	rx	03	27	12.0
SKR				sP	sP	03	28	07.0 -3.8
SKR				*i* S	**S**	**03**	**29**	**08.0** **-4.4**
SKR				A		03	29	19.0
	comp=Z,8μm,12.0s							
SKR				A		03	29	19.0
	comp=Z,16μm,12.0s							
SKR				AMS	AMS	03	33	53.0
	comp=Z,5μm,12.0s							
SKR				AMS	AMS	03	33	53.0
	comp=Z,3μm,12.0s							
SKR				AMS	AMS	03	33	53.0
	comp=Z,5μm,12.0s							
JMZ	**Minamidaito 2**	**17.47**	**187**	P	**P**	**03**	**26**	**19.6** **-0.8**
CBIJ	**Chichi jima**	**17.57**	**154**	P	**P**	**03**	**26**	**17.8** **-3.7**
	comp=Z,250nm,0.3s,baz=317,slow=3.5,SNR=69							
CBIJ				S	**S**	**03**	**29**	**17.1** **-5.0**
	comp=Z,149nm,0.3s,baz=356,slow=23,SNR=7.4							
CBIJ				ScP	ScP	03	33	27.1 -1.3
	comp=Z,19nm,0.3s,baz=282,slow=4.3,SNR=4.2							
BTO	**Baotou**	**17.67**	**270**	*e*P	**P**	**03**	**26**	**22.4** **+0.1**
BTO				S	**S**	**03**	**29**	**24.6** **+1.1**
YAK	**Yakutsk**	**18.97**	**354**⇓	*e*P	**P**	**03**	**26**	**31.7** **-3.3**
	comp=Z,807nm,0.6s							
YAK				*e*S	**S**	**03**	**29**	**40.8** **-3.7**
YAK				*e*ScP	ScP	03	33	30.3 -0.6
YAK	**Yakutsk**	**18.97**	**354***d*	*i*P	**P**	**03**	**26**	**32.3** **-2.7**
YAK				*e*S	**S**	**03**	**29**	**40.4** **-4.1**
YAK				pmax	pmax			
	comp=N,1μm,1.3s							
YAK				pmax	pmax			
	comp=E,320nm,1.3s							
YAK				pmax	pmax			
	comp=Z,2μm,1.3s							
YAK				smax				
	comp=E,13μm,1.4s							
YAK				smax				
	comp=Z,8μm,1.4s							
YAK				smax				
	comp=N,31μm,2.7s							
YAK	**Yakutsk**	**18.97**	**354**⇓	*i*P	**P**	**03**	**26**	**32.3** **-2.7**
YAK	**Yakutsk**	**18.97**	**354**	P	**P**	**03**	**26**	**31.7** **-3.3**
YAK				S	**S**	**03**	**29**	**40.1** **-4.4**
YAK				ScP	ScP	03	33	30.3 -0.6
YAK				ScS	ScS	03	37	07.3 -5.1
BOD	**Bodaibo**	**19.05**	**327**⇑	*i*P	**P**	**03**	**26**	**33.3** **-2.5**
BOD				*e*		03	29	45.7
BOD				pmax	pmax			
	comp=Z,14nm,1.1s							
ULN	**Ulaanbaatar**	**19.06**	**293**⇓	*i*P	**P**	**03**	**26**	**36.0** **+0.1**
	comp=Z,1μm,0.9s							
ULN				*e*ScP	ScP	03	33	31.1 -0.3
ULN	**Ulaanbaatar**	**19.06**	**293**⇓	*i*P	**P**	**03**	**26**	**36.0** **0.0**
ULN				pmax	pmax			
	comp=Z,1μm,0.9s							
PET	**Petropavlovsk**	**19.34**	**51**⇑	*e*P	**P**	**03**	**26**	**35.9** **-2.6**
PET				*e*S	**S**	**03**	**29**	**51.4** **+0.7**
PET				*e*ScP	ScP	03	33	31.8 -0.1
PET	**Petropavlovsk**	**19.34**	**51**α	*i*P	**P**	**03**	**26**	**35.9** **-2.6**
PET				*i* S	**S**	**03**	**29**	**42.2** **-8.5**
PET				pmax	pmax			
	comp=Z,8μm,2.3s							
PET				pmax	pmax			
	comp=Z,2μm,3.0s							
PET				pmax	pmax			
	comp=Z,1μm,1.1s							
PET				smax				
	comp=N,239nm,1.1s							
PET				smax				
	comp=E,229nm,1.3s							
PET				MLR	MLR			
	comp=Z,3μm,12.0s							
PET				MLR	MLR			
	comp=Z,4μm,13.0s							
PET	**Petropavlovsk**	**19.34**	**51**⇑	*i*P	**P**	**03**	**26**	**35.9** **-2.6**
MA2	**Magadan**	**19.49**	**27**	*e*P	**P**	**03**	**26**	**38.6** **-1.1**
	comp=Z,1μm,0.9s							
MA2				*e*S	**S**	**03**	**29**	**52.5** **-0.5**
MA2				*e*ScP	ScP	03	33	32.2 +0.1
MA2	**Magadan**	**19.49**	**27***c*	*i*P	**P**	**03**	**26**	**38.5** **-1.2**
MA2				*e*S	**S**	**03**	**29**	**50.0** **-3.0**
MA2				pmax	pmax			
	comp=N,1μm,0.9s							
MA2				pmax	pmax			
	comp=E,800nm,0.9s							
MA2				pmax	pmax			
	comp=Z,3μm,0.9s							
MA2	**Magadan**	**19.49**	**27**⇑	*i*P	**P**	**03**	**26**	**38.5** **-1.2**
SONM	**Songino Array**	**19.50**	**293**	P	**P**	**03**	**26**	**40.2** **+0.2**
	comp=Z,169nm,0.3s,baz=98,slow=8.4,SNR=1773							
SONM				ScP	ScP	03	33	31.8 -0.5
	comp=Z,5.1nm,0.3s,baz=148,slow=2.5,SNR=11							
SONM				P3KPbc		04	00	47.8
	comp=Z,0.1nm,0.3s,baz=255,slow=4.3,SNR=32							
WHN	**Wuhan**	**19.82**	**237**	⇓P	**P**	**03**	**26**	**41.5** **-1.7**
WHN				XP	sP	03	28	41.0 0.0
WHN				S	**S**	**03**	**29**	**56.0** **-3.1**
WHN				AMB	AMB			
	comp=Z,3μm,0.8s							
TATO	**Taipei**	**20.71**	**212**	*e*P	**P**	**03**	**26**	**52.7** **+1.4**
	comp=Z,251nm,0.8s							
YHNB	**Yeheng**	**21.03**	**212**	*e*P	**P**	**03**	**26**	**53.9** **-0.3**
YHNB				*e*S	**S**	**03**	**30**	**19.6** **+1.0**
YHNB				*e*ScP	ScP	03	33	35.3 -1.1
XAN	**Xi'an**	**21.23**	**253**	P	**P**	**03**	**26**	**55.8** **-0.1**
XAN				S	**S**	**03**	**30**	**17.3** **-4.3**
XAN				AMB	AMB			
	comp=Z,470nm,1.3s,mb5.8							
XAN				AMB	AMB			
	comp=Z,4μm,8.0s							
NACB	**Ninganchiao**	**21.39**	**211**	*e*P	**P**	**03**	**26**	**55.8** **-1.8**
NACB				*e*S	**S**	**03**	**30**	**19.4** **-5.1**
IRK	**Irkutsk**	**21.51**	**305**⇓	*i*P	**P**	**03**	**26**	**57.8** **-0.4**
IRK				*e*		03	30	32.8
IRK				pmax	pmax			
	comp=Z,1μm,1.4s,mb6.2							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**00.3** **-0.3**
	comp=Z,7μm,0.7s,mb7.2							
TLY	**Talaya**	**21.77**	**303**⇓	*i*P	**P**	**03**	**27**	**00.7** **+0.1**
	comp=Z,768nm,0.7s,mb6.2							
TLY				*e*ScP	ScP	03	33	37.7 -0.2
TLY	**Talaya**	**21.77**	**303***d*	*i*P	**P**	**03**	**27**	**00.9** **+0.3**
TLY				*e*S	**S**	**03**	**30**	**30.3** **+0.4**
TLY				pmax	pmax			
	comp=Z,2μm,1.5s,mb6.3							
TLY				smax				
	comp=E,185nm,1.7s							
TLY				MLR	MLR			
	comp=Z,2μm,12.0s							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
TLY	**Talaya**	**21.77**	**303**	P	**P**	**03**	**27**	**01.0** **+0.4**
	SNR=623							
ZAK	**Zakamensk**	**21.79**	**300**⇑	*i*P	**P**	**03**	**27**	**00.7** **-0.1**
ZAK				pmax	pmax			
	comp=Z,690nm,1.3s,mb5.9							
QZH	**Quanzhou**	**21.97**	**219**⇓	*i*P	**P**	**03**	**27**	**04.1** **+1.4**
QZH				XP	sP	03	29	11.5 +6.9
QZH				S	**S**	**03**	**30**	**32.1** **-1.5**
QZH				AMB	AMB			
	comp=Z,650nm,0.7s,mb6.2							
QZH				AMB	AMB			
	comp=Z,2μm,4.4s							
MOY	**Mondy**	**23.39**	**303**⇑	*i*P	**P**	**03**	**27**	**15.1** **-0.2**
MOY				pmax	pmax			
	comp=Z,1μm,2.6s,mb5.9							
LZH	**Lanzhou**	**23.84**	**263**⇓	*i*P	**P**	**03**	**27**	**20.8** **+1.3**
LZH				PP		03	28	32.8
LZH				XP	sP	03	29	27.2 +2.3
LZH				PCP	PcP	03	30	50.3 +2.4
LZH				AMB	AMB			
	comp=Z,2μm,1.2s,mb6.4							
LZH				AMB	AMB			
	comp=Z,6μm,5.1s							
LZH	**Lanzhou**	**23.84**	**263**⇓	*i*P	**P**	**03**	**27**	**20.8** **+1.3**
LZH				PP		03	28	32.8
LZH				pP		03	28	35.1
LZH				sP	sP	03	29	27.2 +2.3
LZH				PcP	PcP	03	30	50.3 +2.4
LZH				S	**S**	**03**	**31**	**04.0** **+1.0**
LZH				sS	sS	03	33	22.0 +13
LZH				ScP	ScP	03	33	45.7 +2.0
LZH				PcS	PcS	03	34	28.5 +0.6
LZH				ScS	ScS	03	37	31.2 0.0
GTA	**Gaotai**	**25.49**	**273**	P	**P**	**03**	**27**	**35.2** **+1.1**
GTA				XP	sP	03	29	42.0 -0.4
GTA				PCP	PcP	03	30	52.8 +1.3
GTA				S	**S**	**03**	**31**	**28.2** **-0.6**
GTA				SCP	ScP	03	33	48.4 +0.1
GTA				PCS	PcS	03	34	34.1 +1.6
GTA				SCS	ScS	03	37	37.5 -0.5
GTA				AMB	AMB			
	comp=Z,2μm,1.1s,mb6.5							
GTA				AMB	AMB			
	comp=Z,6μm,8.0s							
CD2	**Chengdu**	**26.59**	**252**⇓	*i*P	**P**	**03**	**27**	**43.6** **-0.3**
CD2				AMB	AMB			
	comp=Z,530nm,0.8s,mb6.0							
CD2				AMB	AMB			
	comp=Z,3μm,4.0s							
GYA	**Guiyang**	**27.50**	**241**⇓	*i*P	**P**	**03**	**27**	**51.3** **-0.7**
GYA				PCP	PcP	03	30	59.2 +2.7
GYA				S	**S**	**03**	**31**	**55.7** **-4.8**
GYA				SCP	ScP	03	33	57.3 +2.8
GYA				PCS	PcS	03	34	40.8 +1.8
GYA				SCS	ScS	03	37	44.3 -3.0
GYA				AMB	AMB			
	comp=Z,580nm,0.7s,mb6.1							
CAUP	**Cauayan**	**28.02**	**204**	*e*P	**P**	**03**	**27**	**57.0** **+0.4**

SMY Shemya 28.44 56 eP P 03 27 59.8 -0.1
comp=Z,2µm,0.9s,mb6.4
SMY Shemya 28.44 56 eP P 03 27 59.8 -0.1
SMY pmax pmax
comp=Z,2µm,0.9s,mb6.4
TIXI Tiksi 28.59 357⇓iP P 03 27 59.7 -1.3
comp=Z,987nm,1.6s,mb5.9
TIXI e 03 29 18.9
TIXI eS S 03 32 15.7 -0.9
TIXI eScP ScP 03 33 55.4 -1.7
TIXI Tiksi 28.59 357 d iP P 03 27 59.8 -1.2
TIXI e*SP sP 03 30 09.7 -0.6
TIXI eS S 03 32 14.7 -1.9
TIXI e 03 37 46.9
TIXI pmax pmax
comp=N,273nm,1.3s
TIXI pmax pmax
comp=E,184nm,1.3s
TIXI pmax pmax
comp=Z,493nm,1.3s,mb5.7
BILL Bilibino 30.29 24⇑iP P 03 28 15.4 -0.4
comp=Z,388nm,1.2s,mb5.6
BILL ePP PP 03 29 35.8 -0.8
BILL ePcP PcP 03 31 03.7 +0.7
BILL eS S 03 32 43.9 +0.9
BILL eScP ScP 03 34 03.3 +0.7
BILL Bilibino 30.29 24α iP P 03 28 15.3 -0.5
BILL e pP 03 29 37.0 +3.0
BILL e*SP sP 03 30 27.0 +1.5
BILL i 03 31 03.6
BILL i S S 03 32 41.8 -1.1
BILL eSS SS 03 35 09.5 -7.7
BILL i 03 37 59.7
BILL pmax pmax
comp=Z,800nm,1.9s,mb5.7
BILL pmax pmax
comp=Z,429nm,1.7s,mb5.5
BILL MLR MLR
comp=Z,900nm,15.0s
KMI Kunming 30.97 244 ⇓P P 03 28 22.1 -0.2
KMI AP pP 03 29 41.9 +1.1
KMI PP PP 03 29 47.6 +2.9
KMI XP sP 03 30 32.8 +0.9
KMI S S 03 32 52.3 -2.2
KMI SCP ScP 03 34 05.7 0.0
KMI SS SS 03 35 23.4 -8.8
KMI SCS ScS 03 38 01.4 -2.5
KMI AMB AMB
comp=Z,806nm,1.4s,mb5.9
KMI AMB AMB
comp=Z,3µm,3.1s
KMI Kunming 30.97 244 ⇓P P 03 28 22.1 -0.2
KMI pP pP 03 29 41.9 +1.1
KMI PP PP 03 29 47.6 +2.9
KMI PPP 03 30 09.1
KMI sP sP 03 30 32.8 +0.9
KMI Kunming 30.97 244 ⇓P P 03 28 22.1 -0.2
KMI *PP pP 03 29 41.9 +1.1
KMI 03 29 47.6
KMI *SP sP 03 30 32.8 +0.9
GUMO Guam 31.11 158 eP P 03 28 22.8 -0.8
comp=Z,1µm,1.1s,mb6.1
GUMO ePP PP 03 29 45.8 -0.7
GUMO Guam 31.11 158 eP P 03 28 22.8 -0.8
GUMO pmax pmax
comp=Z,1µm,1.1s,mb6.1
QIZ Qiongzhong 31.30 227 P P 03 28 25.8 +0.6
QIZ AP pP 03 29 43.0 -0.8
QIZ PP PP 03 29 48.0 -0.4
QIZ S S 03 32 59.6 -0.1
QIZ XS sS 03 35 25.7 +0.8
QIZ AMB AMB
comp=Z,114nm,0.9s,mb5.2
QIZ AMB AMB
comp=Z,1µm,4.3s
QIZ Qiongzhong 31.30 227⇓iP P 03 28 25.2 0.0
comp=Z,72nm,0.7s,mb5.1
QIZ eScP ScP 03 34 06.7 -0.1
BOAC Boac 31.32 202 eP P 03 28 25.7 +0.3
AMKA Amchitka 31.66 59⇑iP P 03 28 27.6 -0.3
AMKA ePcP PcP 03 31 06.8 -0.2
AMKA eS S 03 33 04.2 -0.3
AMKA eScP ScP 03 34 07.6 0.0
PLP Palo 32.79 196 eP P 03 28 37.6 -0.4
WMQ Urumqi 32.90 287⇓iP P 03 28 39.4 +0.7
WMQ AP pP 03 29 58.9 +1.1
WMQ PP PP 03 30 09.6 +4.2
WMQ AMB AMB
comp=Z,1µm,0.7s,mb6.4
WMQ AMB AMB
comp=Z,824nm,8.4s
LLP Lapu-Lapu 33.82 197⇓eP P 03 28 47.2 +0.3
comp=Z,237µm,2.0s
SCPH Surigao 34.05 194 eP P 03 28 48.1 -0.6
ADK Adak 34.11 58⇑iP P 03 28 46.8 -2.0
comp=Z,1µm,1.2s,mb6.2
ADK ePcP PcP 03 31 12.7 -1.2
ADK eScP ScP 03 34 15.3 -0.9
ADK Adak 34.11 58⇑iP P 03 28 46.8 -2.0
ADK e 03 31 12.7
ADK pmax pmax
comp=Z,1µm,1.2s,mb6.2
NVS Novosibirsk 34.22 308⇓iP P 03 28 49.3 -0.4
NVS i *PP pP 03 30 21.4 +12
NVS i S S 03 33 38.1 -5.4
NVS pmax pmax
comp=N,432nm,1.6s
NVS pmax pmax
comp=Z,2µm,1.6s,mb6.3
NVS pmax pmax
comp=E,2µm,1.4s
NVS smax
comp=N,230nm,1.5s
NVS smax
comp=E,540nm,2.2s
TBP Tagbilaran 34.45 197 eP P 03 28 51.7 -0.4
BUTP Butuan 34.82 194 eP P 03 28 54.5 -0.7
MK31 Makanchi Array 35.87 294⇓iP P 03 29 03.7 +0.1
MK31 eScP ScP 03 34 21.7 -1.0
MKAR Makanchi Array 35.87 294 P P 03 29 03.8 +0.2
MKAR S S 03 34 08.2 -0.4
MKAR ScP ScP 03 34 22.0 -0.7
MKAR e 03 59 34.5
MKAR Makanchi Array 35.87 294 P P 03 29 03.8 +0.2
MKAR S S 03 34 08.2 -0.4
MKAR smax
comp=N,26nm,0.9s
MKAR Makanchi Array 35.87 294 P P 03 29 03.8 +0.1
comp=N,1µm,0.7s,mb6.4,baz=84,slow=9.6,SNR=6492
MKAR S S 03 34 08.2 -0.4
comp=N,26nm,0.9s,baz=101,slow=12,SNR=2.6
MKAR ScP ScP 03 34 22.0 -0.6
comp=N,90nm,0.7s,baz=71,slow=5.4,SNR=10
MKAR P3KPbc 03 59 34.5
comp=N,4.6nm,0.7s,baz=254,slow=4.5,SNR=47
LSA Lhasa 36.26 262 P P 03 29 08.1 +0.9
LSA AMB AMB
comp=Z,620nm,1.0s,mb5.9
LSA AMB AMB
comp=Z,2µm,4.3s
LSA Lhasa 36.26 262⇓iP P 03 29 08.6 +1.4
comp=Z,1µm,1.3s,mb6.0
LSA eScP ScP 03 34 25.5 +1.0
LSA Lhasa 36.26 262⇓iP P 03 29 08.6 +1.4
LSA e 03 34 25.5
LSA pmax pmax
comp=Z,1µm,1.3s,mb6.0
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
DAV Davao City (W) 36.68 193 P P 03 29 10.9 +0.2
SNR=6.3
GAMB Gambell 37.00 37⇑iP P 03 29 11.6 -1.2
comp=Z,424nm,1.6s,mb5.5
GAMB eScP ScP 03 34 27.4 +0.9
IMP Imphal 37.20 253 i P P 03 29 13.0 -2.0
IMP eS S 03 34 25.0 -4.1
KURK Kurchatov 37.44 301 P P 03 29 16.8 +0.2
comp=Z,48µm,0.6s
KURK Kurchatov 37.44 301⇓iP P 03 29 16.3 -0.3
comp=Z,5µm,0.7s,mb7.0
KURK eScP ScP 03 34 26.9 -1.6
KURK Kurchatov 37.44 301 eP P 03 29 16.3 -0.3
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
KURK Kurchatov 37.44 301 P P 03 29 16.5 -0.1
SNR=1454
CHTO Chiang Mai 37.92 241⇓iP P 03 29 21.0 0.0
comp=Z,715nm,1.1s,mb5.9
CHTO Chiang Mai 37.92 241⇓iP P 03 29 21.0 0.0
CHTO pmax pmax
comp=Z,715nm,1.1s,mb5.9
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.4 +0.4
SNR=338
CHTO Chiang Mai 37.92 241 P P 03 29 21.1 +0.1
CHTO ScS ScS 03 38 38.8 -3.0
SHL Shillong 38.15 256 eP P 03 29 19.4 -3.4
SHL AMb AMB 03 29 22.0
comp=Z,10µm,1.4s,mb6.9
SHL ex x 03 34 31.0
TNA Tin City 38.82 34⇑iP P 03 29 27.4 -0.3
comp=Z,766nm,0.9s,mb6.0
TNA epP pP 03 30 49.6 +0.3
TNA eScP ScP 03 34 34.2 +0.7
KDM Kudat 39.03 207 ⇑P P 03 29 32.2 +2.1
TURI Tura 39.27 258 eP P 03 29 33.0 +1.1
TURI ex x 03 30 38.0
GTK Gangtok 39.44 261 eP P 03 29 32.0 -1.3
AGT Agartala 39.65 255 ex x 03 29 26.0
AGT ex x 03 30 16.0
UNV Unalaska Valle 39.97 53 eP P 03 29 35.2 -2.0
comp=Z,250nm,1.1s,mb5.5
UNV ePcP PcP 03 31 31.3 -0.7
UNV eScP ScP 03 34 37.8 -0.5
KKM Kota Kinabalu 40.05 207⇑iP P 03 29 38.8 +0.4
KKM eScP ScP 03 34 37.8 -1.3
KKM Kota Kinabalu 40.05 207 ⇓P P 03 29 39.9 +1.5
TAPN Taplejung 40.08 262 eP P 03 29 39.5 +1.0
SDKM Sandakan 40.11 206 ⇑P P 03 29 39.7 +0.9
MYLDM Lahad Datu 40.15 204 ⇑P P 03 29 41.2 +2.0
AKUT Akutan 40.35 52 eP P 03 29 38.8 -1.5
comp=Z,393nm,0.8s,mb5.8
AAA Alma-Ata 40.51 290 i P P 03 29 44.0 +2.2
AAA pmax pmax
comp=Z,10µm,3.1s
AAA MLR MLR
comp=Z,2µm,9.9s
ODAN Odare 40.60 262 eP P 03 29 43.3 +0.6
JIRN Jiri 41.01 264 eP P 03 29 46.9 +1.0
TSM Tawau 41.18 204 ⇑P P 03 29 48.2 +0.7
ULHL Ulahol 41.36 289 P P 03 29 49.2 +0.7
SNR=184
TKM2 Tokmak 2 41.56 290⇓iP P 03 29 51.2 +1.0
comp=Z,146nm,1.3s,mb5.2
TKM2 epP pP 03 31 15.9 +2.8
TKM2 Tokmak 2 41.56 290⇓iP P 03 29 51.2 +1.0
TKM2 e*PP pP 03 31 15.9 +2.8
TKM2 pmax pmax
comp=Z,146nm,1.3s,mb5.2
TKM2 Tokmak 2 41.56 290 P P 03 29 51.3 +1.1
SNR=4950
FALS False Pass 41.57 51 eP P 03 29 48.5 -1.5
KKN Kakani 41.59 264 eP P 03 29 51.0 +0.4
GKN Gorkha 41.94 265 eP P 03 29 53.6 +0.2
comp=Z,996nm,0.5s,mb6.4
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
comp=Z,7µm,1.3s,mb6.8
BRVK Borovoye 42.03 306⇓iP P 03 29 53.6 -0.1
comp=Z,1µm,1.0s,mb6.2
BRVK eScP ScP 03 34 46.0 -0.5
BRVK eS S 03 35 40.0 +0.6
BRVK Borovoye 42.03 306⇓iP P 03 29 53.6 -0.1
BRVK eS S 03 35 40.0 +0.7
BRVK pmax pmax
comp=Z,1µm,1.0s,mb6.2
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
BRVK Borovoye 42.03 306 P P 03 29 53.9 +0.2
SNR=520
KBK Karagaybulak 42.10 290 P P 03 29 55.4 +1.0
SNR=3415
KZA Kyzart 42.11 289 P P 03 29 55.9 +1.4
SNR=2236
CHMS Chumysh 42.11 291 P P 03 29 54.9 +0.3
SNR=357
USP Ospenovka 42.19 291 P P 03 29 55.6 +0.5
SNR=77
FRU Bishkek 42.26 291⇓iP P 03 29 55.5 -0.2
FRU pmax pmax
comp=Z,2µm,2.0s,mb6.2
FRU pmax pmax
comp=Z,8µm,3.0s
AAK Ala-Archa 42.42 290 P P 03 29 56.9 -0.1
comp=Z,11µm,0.9s,mb7.2
AAK Ala-Archa 42.42 290⇓iP P 03 29 56.5 -0.5
comp=Z,1µm,0.8s,mb6.3
AAK eScP ScP 03 34 46.8 -1.4
AAK Ala-Archa 42.42 290 d iP P 03 29 56.3 -0.7
AAK pmax pmax
comp=Z,2µm,1.2s,mb6.4
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 56.8 -0.2
SNR=696
AAK Ala-Archa 42.42 290 P P 03 29 57.5 +0.5
SNR=1626
UCH Uchtor 42.56 290⇓iP P 03 29 59.1 +1.0
comp=Z,932nm,1.0s,mb6.1
UCH ePcP PcP 03 31 42.4 +1.6
UCH Uchtor 42.56 290 P P 03 29 59.2 +1.1
SNR=955
TNE Ternate 42.61 189⇓eP P 03 29 53.0 -5.8
KSH Kashi 42.61 285 i P P 03 30 00.0 +1.5
KSH AP pP 03 31 25.2 +3.2
KSH ePCP PcP 03 31 42.2 +1.2
KSH PP PP 03 31 49.9 +1.8
KSH SCP ScP 03 34 49.1 +0.1
KSH ePCS PcS 03 35 35.3 +1.4
KSH S S 03 35 51.0 +2.9
KSH eXS sS 03 38 22.8 +3.2
KSH SCS ScS 03 39 09.1 -0.5
KSH SS SS 03 39 12.3 -0.7
KSH AMB AMB
comp=Z,27µm,3.2s
EKS2 Erkin-Say 42.90 291⇓iP P 03 30 01.1 +0.3
comp=Z,650nm,1.1s,mb5.9
EKS2 ePcP PcP 03 31 42.7 +0.7
EKS2 eScP ScP 03 34 49.8 -0.4
EKS2 Erkin-Say 42.90 291 P P 03 30 01.2 +0.4
SNR=1996
SDPT Sand Point 43.12 50 eP P 03 30 00.1 -2.2
comp=Z,539nm,0.5s,mb6.1
SDPT eScP ScP 03 34 50.5 -0.3
AML Almayashu 43.16 290 P P 03 30 04.0 +1.2
SNR=1805
BOK Bokaro 43.53 259 eP P 03 30 06.2 +0.3
BOK AMb AMB 03 30 08.1
comp=Z,989nm,1.1s,mb6.1
BTM Bintulu 43.80 210 ⇑P P 03 30 03.5 -4.7
CHGN Chignik 44.05 48 eP P 03 30 09.2 -0.4
CHGN eScP ScP 03 34 54.2 -0.4
TTA Tatalina 44.06 38 eP P 03 30 09.4 -0.2
PTH Pithoragarh 44.31 270 eP P 03 30 12.2 +0.2
PTH eS S 03 36 12.1 -0.7
LGTI Lohaghat 44.34 270 eP P 03 30 12.7 +0.4
LGTI ex x 03 32 06.5
SVW2 Sparrevohn 44.55 41 eP P 03 30 11.8 -1.6
IMA2 Indian Mountai 44.66 34 eP P 03 30 14.3 +0.1
SBUM Sibu 44.81 211 ⇓P P 03 30 17.5 +1.5
DDI Dehra Dun 45.48 273 eP P 03 30 19.0 -2.0
DDI ex x 03 36 08.0
PCI Palu 45.62 199 P P 03 30 21.0 -1.3
SDNR Sundarnagar 45.65 275 eP P 03 30 22.0 -0.3
SDNR ex x 03 39 26.2
DLH Dalhousie 45.84 277 eP P 03 30 23.0 -0.8
DLH ex x 03 31 19.0
JAY Jayapura 45.99 170 P P 03 30 24.7 -0.4
THN Thein Dam 46.08 277 eP P 03 30 24.6 -1.0
THN eS S 03 36 33.4 -4.2
KTGM Kuala Trenggan 46.30 224 ⇑P P 03 30 28.9 +1.4
KTGM Kuala Trenggan 46.30 224 ⇓P ScP 03 35 02.0 -2.6
KSM Kuching 46.45 213 eP P 03 30 28.7 0.0
KSM eScP ScP 03 35 04.4 -0.8
KSM Kuching 46.45 213 ⇑P P 03 30 29.5 +0.9
SVE Sverdlovsk 46.50 314 i P P 03 30 28.8 +0.4
SVE pmax pmax
comp=E,560nm,0.9s
SVE pmax pmax
comp=Z,1µm,0.7s,mb6.3
SVE pmax pmax
comp=N,167nm,0.6s
KDAK Kodiak Island 46.78 45⇑iP P 03 30 29.9 -0.7
comp=N,571nm,0.6s,mb6.1
KDAK ePcP PcP 03 31 56.0 +0.8
KDAK eScP ScP 03 35 06.5 +0.5
KDAK eS S 03 36 47.4 +0.6
KDAK Kodiak Island 46.78 45 P P 03 30 30.2 -0.4
comp=N,728nm,0.7s,mb6.1,baz=297,slow=4.2,SNR=400
KDAK PcP PcP 03 31 55.4 +0.2
comp=N,189nm,0.7s,baz=236,slow=2.5,SNR=5.8
KDAK ScP ScP 03 35 06.6 +0.6
comp=N,117nm,0.8s,baz=297,slow=2.1,SNR=11
KDAK S S 03 36 44.8 -2.0
comp=N,42nm,1.1s,baz=113,slow=21,SNR=3.6
AAI Ambon 46.94 187 P P 03 30 31.7 -0.7
NDI New Delhi 46.98 271 eP P 03 30 32.4 -0.1
NDI AMb AMB 03 30 33.1
comp=Z,3µm,0.8s,mb6.6
NDI ex x 03 36 31.0
MCK McKinley 47.06 36⇑iP P 03 30 32.2 -0.4
comp=Z,660nm,0.9s,mb6.0
MCK ePcP PcP 03 31 56.2 +0.1
MCK eScP ScP 03 35 07.3 +0.3
MCK McKinley 47.06 36 eP P 03 30 32.4 -0.2
PBA Port Blair 47.21 241 eP P 03 30 34.1 -0.3
PBA ex x 03 30 41.8
PBA Port Blair 47.21 241 eP S 03 36 55.7 +1.9
PBA ex x 03 37 05.6
comp=Z,356nm,1.4s
PBA eS x 03 39 37.2
SLKM Skilak Lake 47.24 41 eP P 03 30 33.6 -0.4
SLKM ePcP PcP 03 31 56.8 0.0
SLKM eScP ScP 03 35 07.6 -0.2
SLKM eS S 03 36 52.5 -0.6
SLKM Skilak Lake 47.24 41 eP P 03 30 33.6 -0.5
SLKM e pP 03 31 56.8 -2.9
SLKM eS S 03 36 52.5 -0.6
BLSP Bilaspur 47.26 261 eP P 03 30 34.0 -0.8
BLSP AMb AMB 03 30 35.8
comp=Z,2µm,1.4s,mb6.2
COLA College 47.27 35⇑iP P 03 30 34.4 +0.2
comp=Z,948nm,0.8s,mb6.2
COLA eScP ScP 03 35 08.9 +1.0
COLA eS S 03 36 53.5 +0.1
COLA College 47.27 35⇑iP P 03 30 34.4 +0.2
COLA eS S 03 36 53.5 +0.2
COLA pmax pmax
comp=Z,948nm,0.8s,mb6.2
PMR Palmer 47.48 39 eP P 03 30 35.2 -0.6
comp=Z,1µm,1.4s,mb6.0
PMR Palmer 47.48 39 eP P 03 30 35.2 -0.6
PMR pmax pmax
comp=Z,840nm,1.2s,mb6.0
KULM Kulim 47.63 227⇓iP P 03 30 38.1 +0.5
KULM eScP ScP 03 35 09.3 -0.9

KULM **Kulim** 47.63 227 ⇑P P 03 30 38.5 +0.9
KULM **Kulim** 47.63 227 ⇓P ScP 03 35 09.7 -0.5
ARU Arti 47.71 314 ⇓*i*P **P** **03 30 37.6 -0.1**
comp=Z,1μm,0.8s,mb6.2
ARU *e*PcP PcP 03 31 58.4 -0.2
ARU *e*ScP ScP 03 35 09.1 -0.8
ARU Arti 47.71 314*d* *i*P **P** **03 30 37.5 -0.1**
ARU *e* 03 31 58.7
ARU *e* 03 32 31.5
ARU *e*S **S** **03 36 59.8 +0.1**
ARU *e* 03 39 39.5
ARU *e*SS SS 03 40 35.7 +1.4
ARU pmax pmax
comp=E,1μm,1.7s
ARU pmax pmax
comp=Z,3μm,1.7s,mb6.3
ARU pmax pmax
comp=N,117nm,0.6s
SOKR Solikamsk 47.71 318*d* *i*P **P** **03 30 37.8 +0.2**
SOKR 03 36 57.6
SOKR 03 39 38.7
SOKR pmax pmax
comp=Z,1μm,0.9s,mb6.2
SML Sawmill 47.79 39 *e*P **P** **03 30 38.2 0.0**
SML *e*ScP ScP 03 35 11.3 +1.1
SML *e*S **S** **03 37 01.3 +0.6**
IPM Ipoh 48.11 226 ⇑P **P** **03 30 41.3 0.0**
IPM Ipoh 48.11 226 ⇑P ScP 03 35 10.5 -1.8
JBP Jabalpur 48.18 263 ⇓*i*P **P** **03 30 41.4 -0.2**
JBP *ex* x 03 30 43.7
comp=Z,2μm,1.1s
JBP *e*S **S** **03 37 04.8 -2.3**
TLE Tual 48.64 181 ⇓*e*P **P** **03 30 45.0 -0.1**
FRIM Kepong 48.86 224 ⇑P **P** **03 30 47.1 +0.3**
FRIM Kepong 48.86 224 ⇑P ScP 03 35 15.0 -0.4
MYKOM **Kota Tinggi** 49.00 221 ⇑P **P** **03 30 48.9 +1.0**
MYKOM **Kota Tinggi** 49.00 221 ⇑P ScP 03 35 15.7 -0.3
KGM Kluang 49.06 222 ⇓P **P** **03 30 49.1 +0.8**
KGM Kluang 49.06 222 ⇑P ScP 03 35 16.1 -0.2
VIS P Vishakhapatnam 49.26 255 *i*P **P** **03 30 50.1 +0.3**
VIS *i*S **S** **03 37 20.0 -2.1**
EYAK Cordova Ski Ar 49.35 40 ⇑*i*P **P** **03 30 50.5 +0.6**
comp=Z,1μm,1.1s,mb6.1
EYAK *e*PcP PcP 03 32 05.9 +1.4
EYAK *e*ScP ScP 03 35 18.1 +1.3
EYAK *e*S **S** **03 37 24.0 +1.7**
MID Middleton Isla 49.42 42 *e*P **P** **03 30 51.6 +1.2**
MENT Mentasta 49.54 37 *e*P **P** **03 30 52.1 +0.9**
KAPI Kappang 49.60 198 P **P** **03 30 50.7 -1.6**
comp=Z,72nm,0.3s,mb5.5,SNR=20
BHPL Bhopal 49.99 265 *e*P **P** **03 30 54.2 -1.0**
BHPL AMb AMB 03 30 56.3
comp=Z,2μm,1.5s,mb6.2
EGAK Eagle 50.05 34 ⇑*i*P **P** **03 30 54.7 -0.2**
comp=Z,508nm,0.7s,mb6.0
EGAK *e*pP pP 03 32 23.5 +1.6
EGAK *e*ScP ScP 03 35 20.1 +0.4
EGAK *e*S **S** **03 37 33.5 +1.8**
AKTK Aktyubinsk 50.08 306 P **P** **03 30 55.0 -0.4**
AKTK S **S** **03 37 31.9 -0.5**
AKTO Aktyubinsk 50.08 306 P **P** **03 30 55.1 -0.3**
AKTO S **S** **03 37 31.9 -0.6**
AKTO pmax pmax
comp=Z,200nm,0.5s,mb5.7
AKTO smax
comp=N,26nm,1.0s
AKTO Aktyubinsk 50.08 306 P **P** **03 30 55.0 -0.4**
comp=N,200nm,0.5s,mb5.7,baz=75,slow=7.8,SNR=629
AKTO S **S** **03 37 31.9 -0.5**
comp=N,26nm,1.0s,baz=287,slow=22,SNR=6.9
NGP Nagpur 50.10 262 *e*P **P** **03 30 52.6 -3.4**
NGP *ex* x 03 30 54.1
comp=Z,2μm,0.9s
NGP *ex* x 03 37 27.6
AJM Ajmer 50.11 271 *e*P **P** **03 30 55.5 -0.5**
AJM AMb AMB 03 30 57.2
comp=Z,2μm,1.1s,mb6.3
TSI Tuntungan 50.25 228 P **P** **03 30 57.5 +0.3**
BSI Banda Aceh 50.46 233 P **P** **03 30 57.1 -1.6**
PSI Prapat 50.64 227 P **P** **03 31 02.3 +2.3**
PSI S **S** **03 37 42.9 +1.9**
PSI pmax pmax
comp=Z,136nm,0.7s,mb5.3
PSI smax
comp=N,2.0nm,0.6s
PSI Prapat 50.64 227 P **P** **03 31 02.3 +2.3**
comp=N,136nm,0.7s,mb5.3,baz=8.4,slow=6.9,SNR=164
PSI ScP ScP 03 35 23.2 +0.1
comp=N,351nm,1.1s,baz=3.1,slow=3.7,SNR=38
PSI S **S** **03 37 42.9 +1.9**
comp=N,2.2nm,0.6s,baz=273,slow=22,SNR=6.4
DAWY Dawson 51.01 34 ⇑*i*P **P** **03 31 01.8 -0.2**
DAWY *e*ScP ScP 03 35 24.5 +0.5
INK Inuvik 51.73 28 ⇑*i*P **P** **03 31 07.3 +0.1**
INK *e*PcP PcP 03 32 13.8 +0.5
INK *e*pP pP 03 32 36.4 +1.5
INK *e*ScP ScP 03 35 26.3 -0.6
INK *e*S **S** **03 37 52.6 -1.7**
INK Inuvik 51.73 28 ⇑*i*P **P** **03 31 07.3 +0.1**
INK *e* 03 32 13.8
INK *e**PP pP 03 32 36.4 +1.6
INK *e*S **S** **03 37 52.6 -1.6**
INK Inuvik 51.73 28 P **P** **03 31 07.2 0.0**
comp=N,423nm,0.6s,mb5.8,baz=300,slow=6.5,SNR=2204
INK PcP PcP 03 32 12.6 -0.7
comp=N,68nm,0.9s,baz=314,slow=4.7,SNR=4.7
INK pP pP 03 32 35.8 +1.0
comp=N,112nm,1.0s,baz=305,slow=5.5,SNR=3.7
INK ScP ScP 03 35 25.9 -1.1
comp=N,85nm,1.0s,baz=286,slow=4.2,SNR=7.1
INK S **S** **03 37 54.8 +0.6**
comp=N,24nm,1.1s,baz=321,slow=6.3,SNR=11
INK PKPPKP 04 01 36.1
comp=N,2.2nm,1.0s,baz=176,slow=6.9,SNR=3.0
AKL Akola 51.86 263 ⇓*i*P **P** **03 31 08.8 0.0**
AKL *ex* x 03 31 11.2
comp=Z,3μm,1.5s
AKL *i*S **S** **03 37 54.3 -3.1**
HYB Hyderabad 52.86 259 ⇓*e*P **P** **03 31 16.0 -0.2**
comp=Z,440nm,1.0s,mb5.6
HYB *e*S **S** **03 38 08.0 -2.9**
HYB Hyderabad 52.86 259 ⇓*e*P **P** **03 31 16.0 -0.2**
HYB *e*S **S** **03 38 08.0 -2.9**
HYB pmax pmax
comp=Z,440nm,1.0s,mb5.6
HYB Hyderabad 52.86 259 ⇓*i*P **P** **03 31 16.0 -0.2**
comp=Z,440nm,1.0s,mb5.6
HYB *e* 03 31 20.5
HYB *e* 03 31 46.5
HYB *e* 03 31 59.0
HYB *e*PcP PcP 03 32 18.5 +0.1
HYB *e*pP pP 03 32 46.0 +1.7
HYB *e* 03 33 10.0
HYB *e*sP sP 03 33 34.0 +1.2
HYB *e* 03 34 38.0
HYB *e*ScP ScP 03 35 32.0 -0.8
HYB *e*S **S** **03 38 09.0 -1.9**
HYB *e* 03 38 16.5
HYB *e* 03 38 26.0
HYB *e*ScS ScS 03 40 15.0 -4.0
HYB *e* 03 40 52.0
KBS Kingsbay 53.45 348 ⇓*i*P **P** **03 31 19.5 +0.1**
comp=Z,471nm,1.2s,mb5.6
KBS *e*pP pP 03 32 48.1 +0.2
KBS *e*ScP ScP 03 35 33.9 -0.4
KBS Kingsbay 53.45 348 ⇓*i*P **P** **03 31 19.8 +0.4**
KBS AMb AMB 03 31 21.5
comp=Z,343nm,1.9s,mb5.3
KBS *e*S **S** **03 38 18.1 +1.1**
KBS Kingsbay 53.45 348 ⇓*i*P **P** **03 31 19.5 0.0**
KBS *e**PP pP 03 32 48.1 +0.3
KBS pmax pmax
comp=Z,471nm,1.2s,mb5.6
PMG Port Moresby 53.84 163 ⇑*i*P **P** **03 31 21.8 -1.3**
comp=Z,120nm,0.8s,mb5.2
PMG *e*PcP PcP 03 32 21.9 -0.2
PMG *e*ScP ScP 03 35 35.6 -1.3
PMG Port Moresby 53.84 163 P **P** **03 31 22.0 -1.1**
PMG 03 32 21.1
PMG pmax pmax
comp=Z,87nm,0.6s
PMG Port Moresby 53.84 163 P **P** **03 31 22.0 -1.0**
comp=Z,87nm,0.6s,mb5.2,baz=358,slow=6.6,SNR=74
PMG PcP PcP 03 32 21.1 -0.9
comp=Z,119nm,0.9s,baz=344,slow=9.4,SNR=4.0
PMG ScP ScP 03 35 36.0 -0.9
comp=Z,67nm,1.0s,baz=12,slow=7.5,SNR=9.0
PMG PKPPKP 04 01 37.3
comp=Z,2.3nm,0.4s,baz=218,slow=9.9,SNR=5.1
LVZ Lovozero 53.91 332 P **P** **03 31 22.2 -0.7**
comp=Z,2μm,1.1s,mb6.2,SNR=63
LVZ Lovozero 53.91 332 ⇑*e*P **P** **03 31 22.2 -0.7**
LVZ Lovozero 53.91 332 ⇑*e*P **P** **03 31 22.1 -0.8**
LVZ pmax pmax
comp=Z,494nm,1.2s,mb5.6
BATI Kupang 53.93 192 P **P** **03 31 22.1 -1.6**
comp=Z,847nm,0.6s,mb6.2,baz=220,slow=3.4,SNR=94
BATI ScP ScP 03 35 35.8 -1.5
comp=Z,111nm,0.6s,baz=321,slow=1.1,SNR=5.3
BATI S **S** **03 38 20.8 -4.1**
comp=Z,72nm,0.8s,baz=107,slow=22,SNR=18
WSI Waingapu 54.00 196 ⇓*e*P **P** **03 31 16.0 -8.2**
WSI Waingapu 54.00 196 ⇓*e*P **P** **03 31 16.0 -8.2**
ALE Alert 54.26 3 P **P** **03 31 25.0 -0.2**
comp=Z,1μm,0.8s,mb6.1,SNR=40
TMCR Tamitsa 54.35 328 ⇓*i*P **P** **03 31 26.4 +0.4**
TMCR *e*S **S** **03 38 28.9 -0.4**
TMCR pmax pmax
comp=Z,1μm,1.4s,mb6.0
KSI Kapahiang 54.36 219 P **P** **03 31 26.2 -0.7**
KLI Kotabumi 54.43 216 P **P** **03 31 26.9 -0.4**
APA Apatity 54.48 332 ⇓*i*P **P** **03 31 26.0 -1.0**
APA *i**PP pP 03 32 51.0 -4.7
APA *i* 03 32 32.0
APA *i*S **S** **03 38 29.0 -1.9**
APA *i* 03 40 25.4
APA *i**SS sS 03 41 11.0 +0.8
APA pmax pmax
comp=Z,3μm,2.0s,mb6.2
APA MLR MLR
comp=Z,1μm,17.0s
MDRS Chennai 54.60 253 *e*P **P** **03 31 28.2 -0.3**
MDRS *ex* x 03 32 24.5
SKAG Skagway 54.61 39 *e*P **P** **03 31 28.7 +0.7**
SKAG LR LR
comp=Z,500nm,19.0s
BHV Bhavnagar 54.76 268 *ex* x 03 31 24.0
LEM Lembang 55.08 212 P **P** **03 31 31.8 -0.1**
KEV Kevo 55.43 336 *ep* P **03 31 31.7 -1.9**
KEV Kevo 55.43 336 P **P** **03 31 33.6 0.0**
KEV pmax pmax
comp=Z,1μm,1.2s,mb6.0
POO Poona 55.54 263 ⇓*i*P **P** **03 31 33.0 -2.1**
comp=Z,800nm,1.0s,mb6.0
POO *e*P 03 31 34.8
POO AMb AMB 03 31 36.5
comp=Z,1μm,0.8s,mb6.4
VAN Vannovskaya 55.70 292 *i* P **P** **03 31 36.0 0.0**
VAN *e*S **S** **03 38 48.0 +0.2**
ABKT Ailbek 55.70 292 P **P** **03 31 36.1 +0.1**
comp=Z,5μm,0.8s,mb6.9
SIT Sitka 55.71 41 *e*P **P** **03 31 36.4 +0.7**
comp=Z,2μm,1.3s,mb6.2
SIT *e*ScP ScP 03 35 46.5 +1.9
SIT Sitka 55.71 41 *e*P **P** **03 31 36.4 +0.7**
SIT pmax pmax
comp=Z,2μm,1.3s,mb6.2
ARCES ARCESS Array B 55.99 336 P **P** **03 31 37.4 -0.1**
ARCES PcP PcP 03 32 29.8 +0.1
ARCES pP pP 03 33 08.1 +1.1
ARCES PP PP 03 33 46.5 -1.3
ARCES ScP ScP 03 35 45.1 -0.5
ARCES S **S** **03 38 49.4 -1.2**
ARCES P'P' 04 01 32.1
ARCES ARCESS Array B 55.99 336 P **P** **03 31 37.4 -0.1**
ARCES 03 32 29.8
ARCES *PP pP 03 33 08.1 +1.2
ARCES 03 33 46.5
ARCES S **S** **03 38 49.4 -1.2**
ARCES pmax pmax
comp=Z,139nm,0.7s
ARCES smax
comp=N,46nm,1.2s
ARCES ARCESS Array B 55.99 336 P **P** **03 31 37.4 -0.1**
comp=N,139nm,0.7s,mb5.4,baz=67,slow=8.6,SNR=918
ARCES PcP PcP 03 32 29.8 +0.1
comp=N,87nm,1.0s,baz=60,slow=5.8,SNR=4.8
ARCES pP pP 03 33 08.1 +1.1
comp=N,44nm,0.8s,baz=63,slow=8.3,SNR=3.1
ARCES PP PP 03 33 46.5 -1.3
comp=N,89nm,1.0s,baz=65,slow=9.9,SNR=4.5
ARCES ScP ScP 03 35 45.1 -0.5
comp=N,53nm,0.9s,baz=67,slow=4.1,SNR=7.0
ARCES S **S** **03 38 49.4 -1.2**
comp=N,46nm,1.1s,baz=77,slow=18,SNR=6.2
ARCES tx tx 04 01 09.9
comp=N,5.2nm,1.1s,baz=193,slow=2.8,SNR=6.4
ARCES PKPPKP 04 01 32.1
comp=N,10.0nm,1.0s,baz=194,slow=0.5,SNR=6.1
ARE0 ARCESS Array S 55.99 336 ⇓*i*P **P** **03 31 37.4 -0.1**
BOM Bombay 56.06 264 *i* x 03 30 25.7
BOM *ex* x 03 40 19.5
KAD Karad 56.08 262 *e*P **P** **03 31 37.6 -1.3**
KAD AMb AMB 03 31 40.1
comp=Z,1μm,1.0s,mb6.1
KTK1 Kautokeino 56.95 336 ⇓*i*P **P** **03 31 45.1 +0.9**
comp=Z,1μm,1.3s,mb6.0
KTK1 *i* pP 03 33 15.9 +1.9
KTK1 Kautokeino 56.95 336 ⇓*i*P **P** **03 31 45.1 +0.9**
KTK1 AMb AMB 03 31 46.8
comp=Z,1μm,1.3s,mb6.0
KTK1 *ep*P pP 03 33 14.2 +0.2
WRAK Wrangell Islan 57.45 41 ⇑*i*P **P** **03 31 48.8 +1.0**
comp=Z,613nm,1.0s,mb5.9
WRAK *e*ScP ScP 03 35 53.5 +1.3
DLBC Dease Lake 57.51 38 ⇑*i*P **P** **03 31 49.4 +1.2**
DLBC *e*ScP ScP 03 35 54.0 +1.4
DLBC Dease Lake 57.51 38 P **P** **03 31 48.9 +0.7**
baz=297,slow=6.9
DLBC ScP ScP 03 35 53.1 +0.6
baz=307,slow=5.2
GOA Goa 57.53 261 *e*P **P** **03 31 49.0 0.0**
GOA AMb AMB 03 31 51.0
comp=Z,1μm,1.1s,mb6.2
CRAG Craig 57.55 42 *e*P **P** **03 31 50.1 +1.6**
comp=Z,876nm,0.9s,mb6.1
CRAG *e*ScP ScP 03 35 54.0 +1.2
JOF Joensuu 57.58 328 *ep* **P** **03 31 46.5 -2.1**
comp=Z,560nm,0.8s,mb6.0
COEN Coen 57.59 169 ⇑*i*P **P** **03 31 48.6 -0.6**
comp=Z,301nm,0.8s,mb5.7
COEN *e*PcP PcP 03 32 36.4 -0.3
COEN *e*ScP ScP 03 35 52.3 -1.0
HNR Honiara 57.68 149 *e*P **P** **03 31 50.1 +0.2**
comp=Z,2μm,1.0s,mb6.4
HNR Honiara 57.68 149 *e*P **P** **03 31 50.1 +0.2**
HNR pmax pmax
comp=Z,2μm,1.0s,mb6.4
HNR Honiara 57.68 149 P **P** **03 31 48.7 -1.2**
comp=Z,853nm,0.7s,mb6.2,baz=281,slow=0.7,SNR=14
TRO Tromso 57.81 338 ⇓*i*P **P** **03 31 48.6 -1.4**
comp=Z,710nm,1.4s,mb5.8
TRO Tromso 57.81 338 ⇓*i*P **P** **03 31 48.6 -1.4**
TRO AMb AMB 03 31 52.0
comp=Z,710nm,1.4s,mb5.8
TRO *e*S **S** **03 39 13.3 -0.7**
TRO *e*SS SS 03 43 15.3 +2.8
TRO Tromso 57.81 338 ⇓*i*P **P** **03 31 48.6 -1.4**
TRO pmax pmax
comp=Z,710nm,1.4s,mb5.8
RES Resolute Bay 58.07 14 ⇑*i*P **P** **03 31 51.6 -0.1**
RES *e*PcP PcP 03 32 38.3 +0.5
RES *e*pP pP 03 33 22.9 +0.9
RES *e*ScP ScP 03 35 54.3 -0.4
RES *e*S **S** **03 39 16.3 -1.0**
RES Resolute Bay 58.07 14 ⇑*i*P **P** **03 31 51.6 -0.2**
RES *e* 03 32 38.3
RES *e**PP pP 03 33 22.9 +0.9
RES *e*S **S** **03 39 16.3 -1.0**
PALK Pallekele 58.39 248 P **P** **03 31 54.6 -0.3**
comp=Z,2μm,1.1s,mb6.3,SNR=45
PALK Pallekele 58.39 248 ⇓*i*P **P** **03 31 54.2 -0.6**
comp=Z,498nm,1.2s,mb5.7
PALK *ep*P pP 03 33 29.1 +3.8
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
PALK Pallekele 58.39 248 P **P** **03 31 55.0 +0.2**
SNR=36
KOD Kodaikanal 58.51 253 *e*P **P** **03 31 55.9 +0.2**
KOD AMb AMB 03 31 57.8
comp=Z,488nm,0.8s,mb5.9
MNGI Mangalore 58.52 258 *i* P **P** **03 31 55.3 -0.4**
MNGI AMb AMB 03 31 57.5
comp=Z,1μm,1.5s,mb5.9
MNGI *i* S **S** **03 39 22.9 -1.7**
MOS Moscow 58.64 319 κ *i*P **P** **03 31 56.3 +0.4**
MOS *i**PP pP 03 33 27.2 +0.8
MOS *i* 03 34 09.8
MOS *i* S **S** **03 39 24.5 -0.6**
MOS *i* 03 40 56.6
MOS *i* SSS 03 46 09.3
MOS pmax pmax
comp=Z,7μm,1.6s,mb6.8
MOS pmax pmax
comp=Z,5μm,1.3s,mb6.6
MOS smax
comp=N,4μm,2.0s
MOS smax
comp=E,2μm,2.2s
DAG Danmarks Havn 58.99 353 ⇑*i*P **P** **03 31 57.6 -0.4**
DAG pmax pmax
comp=Z,172nm,0.8s,mb5.4
DAG Danmarks Havn 58.99 353 ⇑*i*P **P** **03 31 57.6 -0.4**
comp=Z,171nm,0.8s,mb5.4
VRHR Novokhopersk 59.04 313 *e*P **P** **03 31 58.0 -0.7**
VRHR *e**PP pP 03 33 29.9 +0.6
VRHR *e*S **S** **03 39 28.5 -1.8**
VRHR *e* 03 40 59.3
VRHR pmax pmax
comp=Z,220nm,0.5s,mb5.7
VRHR pmax pmax
comp=N,220nm,0.8s
VRHR pmax pmax
comp=E,90nm,0.4s
VRHR smax
comp=N,690nm,1.0s
VRHR smax
comp=Z,90nm,1.9s
VRHR smax
comp=E,480nm,1.5s
XMIS Christmas Isla 59.19 212 *e*P **P** **03 31 59.3 -0.9**
OBN Obninsk 59.48 319 P **P** **03 32 01.6 0.0**
comp=E,9μm,1.6s,mb6.9,SNR=94
OBN Obninsk 59.48 319 ⇓*i*P **P** **03 32 01.4 -0.3**
comp=E,3μm,1.3s,mb6.5
OBN *e*S **S** **03 39 35.3 -0.5**
OBN Obninsk 59.48 319 κ *i*P **P** **03 32 01.5 -0.1**
OBN 03 32 43.0
OBN *i**PP pP 03 33 32.6 +0.2
OBN *i**SP sP 03 34 19.9 -0.4
OBN *i* S **S** **03 39 35.3 -0.5**
OBN *i* 03 41 02.6
OBN *e*SS SS 03 43 36.6 -2.6
OBN pmax pmax
comp=Z,6μm,1.7s,mb6.7
OBN pmax pmax
comp=Z,4μm,1.7s,mb6.4
OBN MLR MLR
comp=Z,600nm,10.0s
PUL Pulkovo 59.72 325 *i* P **P** **03 32 03.3 +0.1**
MAK Makhachkala 59.95 302*d* *i*P **P** **03 32 04.7 -0.3**
MAK *i* 03 32 44.4
MAK *i**PP pP 03 33 36.0 0.0
MAK *i* 03 34 22.6
MAK *i* 03 35 59.6
MAK *i* S **S** **03 39 41.2 -0.8**
MAK *i* 03 41 08.6
MAK pmax pmax
comp=Z,646nm,1.3s,mb5.9
MAK pmax pmax
comp=N,684nm,1.5s
MAK pmax pmax
comp=E,940nm,1.6s
MAK MLR MLR
comp=Z,1μm,12.0s
KAF Kangasniemi 59.96 329 *ep* **P** **03 32 02.1 -2.6**
comp=Z,360nm,0.5s,mb6.1,baz=51,slow=6.4
KAF Kangasniemi 59.96 329 *ep* pP 03 33 34.4 -1.3
comp=Z,207nm,0.9s,baz=55,slow=6.7
KAF Kangasniemi 59.96 329 *e*P **P** **03 32 02.1 -2.6**
KAF pmax pmax
comp=Z,360nm,0.5s,mb6.1
VOR Voronezh 59.98 314 ⇓*i*P **P** **03 32 04.5 -0.6**
VOR *e*S **S** **03 39 40.0 -2.2**
VOR pmax pmax
comp=Z,3μm,1.4s,mb6.6
TRD Trivandrum 60.08 252 *e*P **P** **03 32 05.7 -0.6**
KIP Kipapa 60.15 88 ⇑*i*P **P** **03 32 06.8 +0.1**
comp=Z,864nm,0.8s,mb6.2
KIP Kipapa 60.15 88 *c* *i*P **P** **03 32 06.7 0.0**
HON Honolulu 60.22 88 ⇑*i*P **P** **03 32 06.8 -0.3**
LOF Lofoten 60.27 338 ⇓*i*P **P** **03 32 08.0 +1.3**
comp=Z,324nm,1.4s,mb5.6
LOF Lofoten 60.27 338 ⇓*i*P **P** **03 32 08.0 +1.3**
LOF AMb AMB 03 32 11.8
comp=Z,324nm,1.4s,mb5.5
VRSR Storozhevoye 60.27 314 *e*P **P** **03 32 06.6 -0.4**
VRSR *e*S **S** **03 39 43.9 -1.9**
VRSR pmax pmax
comp=Z,360nm,1.2s,mb5.7
VRSR pmax pmax
comp=N,320nm,1.1s
VRSR pmax pmax
comp=E,290nm,0.8s
VRSR smax
comp=N,250nm,3.8s
VRSR smax
comp=Z,70nm,3.9s
VRSR smax
comp=E,240nm,4.6s
VORD Divnogorie 60.35 313 *e*P **P** **03 32 07.1 -0.4**
VORD *e* 03 32 46.9
VORD *e**PP pP 03 33 38.9 +0.3
VORD *e* 03 34 23.2
VORD *e*S **S** **03 39 43.9 -2.9**
VORD pmax pmax
comp=Z,2μm,1.5s,mb6.4
VORD pmax pmax
comp=N,1μm,1.2s
VORD pmax pmax
comp=E,1μm,1.1s
VORD smax
comp=E,130nm,0.9s
VORD smax
comp=Z,20nm,0.9s
VORD smax
comp=N,310nm,1.0s
FINES FINESS Array B 60.45 328 P **P** **03 32 07.6 -0.3**
FINES pP pP 03 33 39.9 +0.7
FINES PP PP 03 34 21.6 -5.5
FINES S **S** **03 39 46.1 -1.6**
FINES P'P' 04 01 14.1
FINES FINESS Array B 60.45 328 P **P** **03 32 07.6 -0.4**
FINES *PP pP 03 33 39.9 +0.8
FINES S **S** **03 39 46.1 -1.6**
FINES pmax pmax
comp=Z,619nm,0.9s
FINES smax
comp=N,15nm,0.8s
FINES FINESS Array B 60.45 328 P **P** **03 32 07.6 -0.3**

comp=N,619nm,0.9s,mb6.0,baz=65,slow=6.7,SNR=1204
FINES pP pP 03 33 39.9 +0.7
comp=N,258nm,0.9s,baz=61,slow=9.0,SNR=11
FINES PP PP 03 34 21.6 -5.5
comp=N,153nm,1.0s,baz=54,slow=9.7,SNR=5.4
FINES S **S** **03 39 46.1 -1.6**
comp=N,15nm,0.8s,baz=47,slow=17,SNR=6.4
FINES PKPPKP 04 01 14.1
comp=N,3.1nm,0.9s,baz=204,slow=4.0,SNR=6.3
FINES P4KPbc 04 09 04.3
comp=N,3.6nm,1.1s,baz=70,slow=4.6,SNR=6.0
MOR8 Moi Rana 61.36 336 ⇓*i*P **P 03 32 12.5 -1.4**
comp=N,1μm,1.0s,mb6.4
MOR8 Moi Rana 61.36 336 ⇓*i*P **P 03 32 12.5 -1.4**
MOR8 AMb AMB 03 32 14.1
comp=Z,1μm,1.0s,mb6.4
MOR8 *ep*P pP 03 33 44.8 -0.6
YKW3 Yellowknife Ar 61.40 29 *e*P **P 03 32 12.8 -1.4**
FITZ Fitzroy Crossi 61.45 189 ⇑*i*P **P 03 32 14.6 -0.5**
comp=Z,515nm,0.9s,mb6.0
FITZ *i* S **S** **03 39 58.9 -2.3**
FITZ *e*SKS 03 41 17.1
FITZ *es*S sS 03 42 40.8 -4.2
FITZ Fitzroy Crossi 61.45 189 P **P 03 32 14.7 -0.4**
comp=Z,325nm,1.0s,mb5.7,baz=7.6,slow=7.4,SNR=237
FITZ S **S** **03 39 59.6 -1.6**
comp=Z,37nm,1.0s,baz=225,slow=18,SNR=15
YKA Yellowknife Ar 61.45 29 P **P 03 32 13.9 -0.7**
YKA PcP PcP 03 32 52.2 +0.6
YKA pP pP 03 33 47.0 +0.9
YKA ScP ScP 03 36 10.3 +0.4
YKA S **S** **03 39 59.2 -0.9**
YKA *e* 03 58 59.3
YKA P'P' 04 01 15.2
YKA Yellowknife Ar 61.45 29 P **P 03 32 13.9 -0.7**
YKA 03 32 52.2
YKA *PP pP 03 33 47.0 +0.9
YKA 03 36 10.3
YKA S **S** **03 39 59.3 -0.9**
YKA pmax pmax
comp=Z,140nm,0.7s
YKA smax
comp=N,4.0nm,1.0s
YKA Yellowknife Ar 61.45 29 P **P 03 32 13.9 -0.6**
comp=N,140nm,0.7s,mb5.5,baz=310,slow=6.6,SNR=1680
YKA PcP PcP 03 32 52.2 +0.6
comp=N,38nm,0.6s,baz=315,slow=3.6,SNR=15
YKA pP pP 03 33 47.0 +0.9
comp=N,26nm,0.8s,baz=310,slow=6.9,SNR=4.4
YKA ScP ScP 03 36 10.3 +0.4
comp=N,21nm,0.8s,baz=318,slow=4.6,SNR=8.5
YKA S **S** **03 39 59.2 -0.9**
comp=N,4.1nm,1.0s,baz=308,slow=13,SNR=3.2
YKA P3KPbc 03 58 59.3
comp=N,0.2nm,0.6s,baz=122,slow=2.3,SNR=4.1
YKA tx tx 04 00 57.5
comp=N,2.3nm,0.9s,baz=108,slow=4.7,SNR=15
YKA PKPPKP 04 01 15.1
comp=N,1.0nm,0.6s,baz=160,slow=2.4,SNR=6.3
YKA tx tx 04 03 26.0
comp=N,1.4nm,1.1s,baz=117,slow=2.6,SNR=3.8
YKA P4KPbc 04 09 12.1
comp=N,1.2nm,0.8s,baz=315,slow=4.4,SNR=24
STOK Stokkvaagen 61.67 337 ⇓*i*P **P 03 32 15.3 -0.7**
comp=N,690nm,1.4s,mb6.0
STOK Stokkvaagen 61.67 337 ⇓*i*P **P 03 32 15.3 -0.7**
STOK AMb AMB 03 32 17.1
comp=Z,690nm,1.4s,mb6.0
BBB Bella Bella 61.82 44 P **P 03 32 17.5 +0.3**
BBB Bella Bella 61.82 44 P **P 03 32 17.5 +0.3**
comp=Z,476nm,0.9s,mb6.0,baz=309,slow=5.4,SNR=42
VSU Vasula 61.99 325 *i*P **P 03 32 18.2 0.0**
VSU Vasula 61.99 325 *d*P **P 03 32 18.1 -0.1**
VSU *i* *PP pP 03 33 49.9 0.0
DGRG David-gareji 62.10 302 P **P 03 32 18.5 -0.8**
ZEI Tsey 62.27 304 *e*P **P 03 32 19.4 -0.9**
ZEI *e*S **S** **03 40 05.4 -5.5**
ZEI pmax pmax
comp=Z,387nm,1.2s,mb5.8
ZEI smax
comp=N,71nm,1.7s
MTA Mtatsminda 62.33 302 P **P 03 32 20.4 -0.3**
KIV Kislovodsk 62.33 305 P **P 03 32 21.7 +1.0**
comp=N,11μm,1.3s,mb7.2
KIV Kislovodsk 62.33 305 ⇓*i*P **P 03 32 21.2 +0.5**
comp=N,3μm,1.2s,mb6.7
KIV Kislovodsk 62.33 305 ⇓*e*P **P 03 32 20.9 +0.2**
KIV *e**PP PcP 03 32 54.3 -1.3
KIV *i* S **S** **03 40 12.6 +1.0**
KIV pmax pmax
comp=Z,4μm,1.5s,mb6.7
KIV MLR MLR
comp=Z,600nm,16.0s
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
KIV Kislovodsk 62.33 305 P **P 03 32 21.3 +0.7**
SNR=752
TBLG Delisi 62.34 302 P **P 03 32 20.9 +0.1**
GOR Gori 62.58 303 P **P 03 32 23.0 +0.6**
ONI Oni 62.65 304 P **P 03 32 23.2 +0.4**
WB2 Warramunga Arr 62.86 179 ⇑P **P 03 32 23.2 -1.1**
WB2 *e*S **S** **03 40 14.7 -3.8**
WB2 *i* SKS 03 41 29.8
WB2 *i* sS sS 03 42 59.0 -4.1
WRA Warramunga Arr 62.86 179 P **P 03 32 23.2 -1.1**
WRA 03 32 57.6
WRA *PP pP 03 33 57.1 +0.6
WRA S **S** **03 40 18.5 0.0**
WRA 03 41 29.6
WRA Warramunga Arr 62.86 179 P **P 03 32 23.2 -1.1**
comp=Z,406nm,0.6s,mb6.1,baz=354,slow=7.3,SNR=2953
WRA PcP PcP 03 32 57.6 -0.3
comp=Z,51nm,0.7s,baz=356,slow=4.6,SNR=5.4
WRA pP pP 03 33 57.1 +0.6
comp=Z,24nm,0.7s,baz=358,slow=8.3,SNR=3.0
WRA S **S** **03 40 18.5 0.0**
comp=Z,19nm,0.8s,baz=2.3,slow=12,SNR=16
WRA ScS ScS 03 41 29.6 -2.8
comp=Z,14nm,1.2s,baz=342,slow=7.5,SNR=5.5
WRA tx tx 04 00 54.5
comp=Z,2.6nm,0.8s,baz=181,slow=3.9,SNR=17
WRA PKP2bc 04 01 20.4
comp=Z,6.0nm,1.1s,baz=203,slow=2.3,SNR=7.2
WRA tx tx 04 03 11.2
comp=Z,4.7nm,1.0s,baz=198,slow=2.1,SNR=5.4
WRA P4KPbc 04 09 17.7
comp=Z,1.1nm,0.9s,baz=193,slow=4.1,SNR=5.1
JMIC Jan Mayen 62.88 347 P **P 03 32 23.5 -0.3**
comp=Z,235nm,0.8s,mb5.8,baz=78,slow=4.2,SNR=8.6
POHA Pohakuloa 63.00 88 *e*P **P 03 32 25.2 -0.3**
comp=Z,2μm,0.9s,mb6.7
NSS Namsos 63.26 336 *e*P **P 03 32 24.9 -1.5**
comp=Z,502nm,1.9s,mb5.7
NSS Namsos 63.26 336 *e*P **P 03 32 24.9 -1.5**
NSS AMb AMB 03 32 26.5
comp=Z,502nm,1.9s,mb5.7
STCH Steam Cracks 63.53 88 *e*P **P 03 32 28.7 -0.2**
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
BANOM Banah 63.74 282 P **P 03 32 30.4 +0.3**
SNR=28
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
WBK Wadi Bani Khal 63.84 277 P **P 03 32 31.9 +1.1**
SNR=117
IZAR Zarasai 63.88 323 *e*P **P 03 32 30.8 +0.3**
IZAR AMb AMB 03 32 32.8
comp=Z,334nm,1.3s,mb5.7
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
BIDO Bidbid 63.89 278 P **P 03 32 31.6 +0.4**
SNR=87
DIGO Kars 63.94 302 ⇓*i*P **P 03 32 31.7 +0.5**
IDID Didziasalis 63.94 322 *e*P **P 03 32 31.0 +0.2**
IDID *e* 03 32 31.2
IDID AMb AMB 03 32 33.2
comp=Z,382nm,1.1s,mb5.8
MNK Minsk 63.95 321 *d*iP **P 03 32 29.0 -2.0**
MNK *e**PP pP 03 34 04.0 +0.6
MNK *e* 03 34 58.0
MNK *e*S **S** **03 40 30.0 -1.1**
MNK *e*SS SS 03 44 58.0 +9.4
MNK pmax pmax
comp=Z,14μm,3.0s
MNK pmax pmax
comp=N,4μm,1.0s
MNK pmax pmax
comp=Z,3μm,1.0s,mb6.8
KARS Kars 64.00 302 P **P 03 32 32.5 +1.0**
CTA Charters Tower 64.08 167 ⇑*i*P **P 03 32 31.3 -0.9**
comp=Z,355nm,1.2s,mb5.8
CTA *i* S **S** **03 40 31.2 -2.2**
CTA *e*SKS 03 41 42.2
CTA *es*S sS 03 43 16.9 -1.8
CTA Charters Tower 64.08 167 ⇑*i*P **P 03 32 31.3 -0.9**
CTA *i* S **S** **03 40 31.2 -2.2**
CTA *e* 03 41 42.2
CTA pmax pmax
comp=Z,355nm,1.2s
CTA Charters Tower 64.08 167 P **P 03 32 31.4 -0.8**
comp=Z,167nm,0.7s,mb5.7,baz=350,slow=7.2,SNR=253
CTA PKP2bc 04 01 25.6
comp=Z,2.7nm,0.8s,baz=282,slow=6.5,SNR=4.3
CTAO Charters Tower 64.08 167 ⇑*i*P **P 03 32 31.4 -0.7**
comp=Z,693nm,1.3s,mb6.0
CTAO Charters Tower 64.08 167 ⇑*i*P **P 03 32 31.4 -0.8**
CTAO pmax pmax
comp=Z,693nm,1.3s,mb6.0
CTAO Charters Tower 64.08 167 P **P 03 32 31.4 -0.8**
CTAO pP pP 03 34 07.9 +3.0
CTAO S **S** **03 40 31.2 -2.1**
CTAO ScS ScS 03 41 41.6 -0.2
IIGN Ignalina 64.14 323 *e*P **P 03 32 32.4 +0.2**
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
SMDO Samad 64.23 278 P **P 03 32 33.6 +0.3**
SNR=160
DYDN Diyadin 64.25 301 ⇓*i*P **P 03 32 33.9 +0.8**
SOC Sochi 64.30 306 *i*P **P 03 32 33.1 -0.3**
SOC Sochi 64.30 306 *d*iP **P 03 32 33.2 -0.2**
SOC *e* 03 33 02.5
SOC *i* *PP pP 03 34 06.1 +0.1
SOC *i* *SP sP 03 34 53.5 +0.2
SOC *e* 03 35 00.8
SOC *e*PPP 03 36 40.5
SOC *i* S **S** **03 40 33.8 -1.9**
SOC *i* 03 41 41.2
SOC *e*SS SS 03 44 54.7 +0.2
SOC pmax pmax
comp=Z,1μm,1.2s,mb6.4
ARTV Artvin 64.38 303 ⇓*i*P **P 03 32 34.4 +0.5**
BCA Borcka 64.41 304 P **P 03 32 34.2 0.0**
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HOQ Hoqain 64.44 279 P **P 03 32 34.9 +0.3**
SNR=156
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
HATD Hatta, Dubai 64.53 281 P **P 03 32 35.4 +0.3**
SNR=170
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
JMDO Jabal Madar 64.61 277 P **P 03 32 36.2 +0.5**
SNR=115
AGRB Hanur-Agry 64.67 301 P **P 03 32 36.7 +0.9**
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
ASHO Ashiyiah 64.67 281 P **P 03 32 36.5 +0.4**
SNR=191
TUTA Tutak 64.88 301 ⇓*i*P **P 03 32 38.0 +0.8**
ANN Anapa 64.90 309 *d*iP **P 03 32 36.9 -0.3**
ANN *e**PP pP 03 34 10.1 +0.1
ANN *i* S **S** **03 40 41.9 -1.0**
ANN *i* 03 41 44.6
ANN pmax pmax
comp=Z,2μm,1.6s,mb6.5
VANB Van 64.99 300 P **P 03 32 38.7 +0.8**
PZAR Pazar-Rize 65.01 304 P **P 03 32 39.1 +1.2**
TVAN Van 65.02 300 ⇓*i*P **P 03 32 38.3 +0.2**
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
BSY Bisya 65.04 278 P **P 03 32 39.0 +0.5**
SNR=250
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
ARQ Araqi 65.16 279 P **P 03 32 39.7 +0.5**
SNR=188
MBWA Marble Bar 65.31 194 *e*P **P 03 32 39.5 -0.4**
comp=Z,493nm,1.2s,mb6.0
HKR Hakkari 65.37 299 P **P 03 32 40.0 -0.3**
HAKT HAKKARI 65.40 299 ⇓*i*P **P 03 32 40.4 -0.1**
ERZM Erzurum 65.48 302 ⇓*i*P **P 03 32 41.9 +0.9**
EZM Erzurum 65.48 302 P **P 03 32 42.1 +1.1**
CUKT Cukurca 65.65 299 P **P 03 32 42.0 -0.1**
AKASG Malin Array Be 65.67 317 P **P 03 32 41.5 -0.4**
AKASG pP pP 03 34 15.2 +0.2
AKASG PP PP 03 35 07.6 -5.3
AKASG S S 03 40 51.2 -0.7
AKASG ScS ScS 03 41 50.0 -3.7
AKASG P'P' 04 01 07.8
AKASG ⇑*e* 04 01 13.2
AKASG Malin Array Be 65.67 317 P **P 03 32 41.5 -0.5**
AKASG *PP pP 03 34 15.3 +0.3
AKASG S S 03 40 51.3 -0.6
AKASG 03 41 50.0
AKASG pmax pmax
comp=Z,192nm,0.5s
AKASG smax
comp=N,12nm,0.8s
AKASG Malin Array Be 65.67 317 P **P 03 32 41.5 -0.4**
comp=N,192nm,0.5s,mb6.0,baz=46,slow=6.8,SNR=1787
AKASG pP pP 03 34 15.2 +0.2
comp=N,39nm,0.6s,baz=44,slow=6.9,SNR=4.3
AKASG PP PP 03 35 07.6 -5.3
comp=N,21nm,0.5s,baz=47,slow=8.9,SNR=4.3
AKASG S S 03 40 51.2 -0.7
comp=N,12nm,0.8s,baz=48,slow=12,SNR=12
AKASG ScS ScS 03 41 50.0 -3.7
comp=N,21nm,1.2s,baz=56,slow=7.4,SNR=7.7
AKASG tx tx 04 00 41.3
comp=N,0.8nm,0.6s,baz=236,slow=4.2,SNR=7.1
AKASG PKPPKP 04 01 07.8
comp=N,9.8nm,1.0s,baz=245,slow=2.8,SNR=5.8
AKASG PKP2bc 04 01 13.2
comp=N,12nm,1.1s,baz=244,slow=3.4,SNR=16
AKASG tx tx 04 03 03.9
comp=N,0.3nm,0.3s,baz=250,slow=2.9,SNR=4.1
AKASG tx tx 04 04 08.5
comp=N,2.7nm,0.9s,baz=247,slow=3.1,SNR=7.7
AKASG P4KPbc 04 09 27.1
comp=N,1.6nm,0.8s,baz=45,slow=4.6,SNR=8.9
KIEV Kiev 65.68 317 ⇓*i*P **P 03 32 41.7 -0.3**
comp=N,976nm,1.0s,mb6.4
KIEV *ep*P pP 03 34 15.4 +0.3
KIEV *e*S S 03 40 50.7 -1.4
KIEV Kiev 65.68 317 ⇓*i*P **P 03 32 41.7 -0.3**
KIEV *e**PP pP 03 34 15.4 +0.3
KIEV *e*S S 03 40 50.7 -1.4
KIEV pmax pmax
comp=Z,977nm,1.0s,mb6.4
KTUT Trabzon 65.81 304 P **P 03 32 42.1 -1.0**
MACK Trabzon 65.84 304 ⇓*i*P **P 03 32 42.6 -0.6**
HFS Hagfors 65.86 332 P **P 03 32 42.3 -0.7**
HFS ⇑*e* 04 01 12.0
HFS Hagfors 65.86 332 P **P 03 32 42.3 -0.7**
comp=Z,228nm,0.9s,mb5.8,baz=63,slow=6.8,SNR=191
HFS PKP2bc 04 01 12.0
comp=Z,6.3nm,1.0s,baz=268,slow=8.3,SNR=3.8
DOMB Dombas 65.98 335 ⇓*i*P **P 03 32 43.6 -0.1**
comp=Z,766nm,1.2s,mb6.2
DOMB *i* pP 03 34 17.4 +0.5
DOMB Dombas 65.98 335 ⇓*i*P **P 03 32 43.6 -0.1**
DOMB AMb AMB 03 32 45.2
comp=Z,766nm,1.2s,mb6.2
DOMB *ep*P pP 03 34 17.4 +0.5
NB2 NORSAR Subarra 66.04 333 P **P 03 32 43.7 -0.4**
comp=Z,681nm,1.0s,mb6.2,baz=41,slow=6.5
NOA NORSAR Array B 66.04 333 P **P 03 32 43.7 -0.4**
NOA pP pP 03 34 17.4 +0.1
NOA PP PP 03 35 14.3 -1.5
NOA S S 03 40 54.1 -1.9
NOA P'P' 04 01 05.6
NOA NORSAR Array B 66.04 333 P **P 03 32 43.7 -0.4**
comp=Z,432nm,1.0s,mb6.0,baz=42,slow=6.2,SNR=485

NOA pP pP 03 34 17.4 +0.1
comp=Z,84nm,0.9s,baz=39,slow=6.4,SNR=8.7
NOA PP PP 03 35 14.3 -1.5
comp=Z,102nm,1.0s,baz=44,slow=8.8,SNR=6.3
NOA S S 03 40 54.1 -1.9
comp=Z,4.7nm,1.0s,baz=52,slow=12,SNR=2.3
NOA tx tx 04 00 41.0
comp=Z,1.0nm,0.8s,baz=226,slow=4.4,SNR=3.3
NOA PKPPKP 04 01 05.6
comp=Z,2.9nm,0.9s,baz=205,slow=3.2,SNR=3.2
FUNA Funafuti 66.14 129 *e*P **P 03 32 45.0 -0.4**
FUNA Z,351nm,1.1s,mb5.9
FUNA *e*pP pP 03 34 19.7 +1.0
OTR Olympics--Tyee 66.22 46 P **P 03 32 46.7 +1.2**
NAO01 NORSAR Array S 66.30 333 ⇓*i*P **P 03 32 45.0 -0.7**
comp=Z,0.1nm,0.3s
NAO01 *e*pP pP 03 34 19.4 +0.4
NAO01 *e*PP PP 03 35 15.7 -2.3
GUMT Gumushane 66.30 304 P **P 03 32 46.8 +0.7**
PGC Sidney 66.33 45 ⇑*i*P **P 03 32 45.8 -0.4**
comp=Z,757nm,0.7s,mb6.4
SUW Suwalki 66.36 323 *i* P **P 03 32 45.8 -0.4**
comp=Z,3μm,1.9s,mb6.5
SUW *e*pP pP 03 34 20.1 +0.6
SUW *e*sP sP 03 35 05.1 -1.6
SUW *e*PP PP 03 35 15.6 -3.2
SUW *e*S S 03 40 59.2 -0.8
SUW *e*ScS ScS 03 41 55.5 -3.4
BTMT Batman 66.43 301 P **P 03 32 47.3 +0.4**
ESPY Espiye-Giresun 66.48 305 P **P 03 32 46.5 -0.7**
EZC Erzincan 66.53 303 P **P 03 32 50.0 +2.5**
STW Striped Peak 66.53 45 P **P 03 32 48.2 +0.8**
VGZ Gonzales 66.55 45 P **P 03 32 47.6 +0.1**
ASAR Alice Springs 66.56 180 P **P 03 32 47.3 -0.5**
ASAR PcP PcP 03 33 12.9 -0.2
ASAR S S 03 41 02.8 -0.2
ASAR ⇑*e* 04 01 09.9
ASAR Alice Springs 66.56 180 P **P 03 32 47.3 -0.5**
ASAR 03 33 13.0
ASAR S S 03 41 02.8 -0.2
ASAR pmax pmax
comp=Z,286nm,0.5s
ASAR smax
comp=N,7.0nm,0.8s
ASAR Alice Springs 66.56 180 P **P 03 32 47.3 -0.5**
comp=N,286nm,0.5s,mb6.2,baz=355,slow=6.7,SNR=1897
ASAR PcP PcP 03 33 12.9 -0.2
comp=N,47nm,0.8s,baz=359,slow=4.9,SNR=4.8
ASAR S S 03 41 02.8 -0.2
comp=N,7.1nm,0.8s,baz=15,slow=20,SNR=8.2
ASAR tx tx 04 00 38.0
comp=N,1.4nm,0.6s,baz=174,slow=4.1,SNR=19
ASAR PKP2bc 04 01 09.9
comp=N,2.3nm,0.8s,baz=165,slow=2.5,SNR=4.7
ASAR tx tx 04 03 00.1
comp=N,5.1nm,1.1s,baz=184,slow=2.4,SNR=6.6
ASAR tx tx 04 03 56.9
comp=N,4.2nm,1.0s,baz=149,slow=3.0,SNR=4.8
ASAR P4KPbc 04 09 37.5
comp=N,0.4nm,0.5s,baz=1.4,slow=4.7,SNR=7.2
MSL Mosul 66.56 298 *i* x x 03 32 46.5
MSL *ex* x x 03 34 15.5
MSL *ex* x x 03 35 08.5
MSL *ex* x x 03 40 58.5
MSL *ex* x x 03 41 58.0
KELT Kelkit 66.63 304 ⇓*i*P **P 03 32 49.0 +0.8**
BINT Bingol 66.64 302 P **P 03 32 48.9 +0.7**
A04A Legoe Bay, Lum 66.67 44 ⇓S S 03 41 02.8 -1.0
baz=66
SIM Simferopol' 66.69 310 *de*P **P 03 32 47.8 -0.6**
SIM *e**PP pP 03 34 21.0 -0.8
SIM *e* 03 35 09.0
SIM *e*S S 03 41 03.0 -1.2
SIM *e*PS 03 41 58.0
SIM pmax pmax
comp=Z,1μm,1.1s,mb6.4
GRSN GIRESUNGRSN 66.75 305 ⇑*i*P **P 03 32 48.0 -1.0**
A05A Maple Falls 66.81 44 ⇑S S 03 41 05.1 -0.4
baz=66
NLWA Neilton Lookou 66.91 46 ⇑*i*P **P 03 32 50.3 +0.5**
comp=Z,528nm,0.7s,mb6.3
OSL Oslo 67.03 333 *e*P **P 03 32 49.6 -0.6**
comp=Z,680nm,1.4s,mb6.1
OSL *i* pP 03 34 24.8 +1.1
OSL Oslo 67.03 333 *e*P **P 03 32 49.6 -0.6**
OSL AMb AMB 03 32 52.7
comp=Z,680nm,1.4s,mb6.1
OSL *e*pP pP 03 34 23.9 +0.2
MBW Mount Baker 67.04 44 P **P 03 32 50.6 0.0**
B05A Bryant 67.28 45 ⇑S S 03 41 10.9 -0.1
baz=67
ON2 Olympics--Nort 67.28 47 P **P 03 32 53.5 +1.4**
PTK Pertek 67.31 302 P **P 03 32 52.6 +0.2**
GNW Green Mountain 67.35 45 *e*P **P 03 32 53.4 +0.9**
DIY Diyarbakir 67.40 301 P **P 03 32 53.6 +0.6**
JCW Jim Creek 67.41 45 P **P 03 32 53.0 +0.1**
MARD Mardin 67.41 300 ⇓*i*P **P 03 32 53.3 +0.3**
B06A Marblemount 67.42 44 ⇑S S 03 41 13.7 +0.9
baz=67
HYA Hoyanger 67.54 335 ⇓*i*P **P 03 32 54.7 +1.3**
HYA *i* pP 03 34 29.4 +2.3
HYA Hoyanger 67.54 335 ⇓*i*P **P 03 32 54.7 +1.3**
HYA AMb AMB 03 32 57.8
comp=Z,975nm,1.4s,mb6.2
HYA *e*pP pP 03 34 29.4 +2.3
BHD Baghdad 67.55 295 *i* x x 03 32 52.0
BHD *i* x x 03 34 27.0
BHD *i* x x 03 41 09.5
BHD *i* x x 03 42 04.5
UMR Umm Al-Rimmam 67.57 290 *e*P **P 03 32 53.3 -0.9**
UMR AMb AMB 03 32 54.5
comp=Z,1μm,0.8s,mb6.7
KONO Kongsberg 67.62 333 ⇓*i*P **P 03 32 53.6 -0.3**
comp=Z,260nm,1.0s,mb5.8
KONO *e*pP pP 03 34 28.6 +1.0
KONO *e*PP PP 03 35 24.1 -5.3
KONO Kongsberg 67.62 333 ⇓*i*P **P 03 32 53.6 -0.3**
KONO *e*S S 03 41 14.7 +0.1
KONO Kongsberg 67.62 333 *e*P **P 03 32 53.7 -0.2**
MIB Mutribah 67.67 290 *e*P **P 03 32 53.9 -0.9**
MIB AMb AMB 03 32 55.1
comp=Z,3μm,0.7s,mb6.9
ELZG Elazig 67.80 302 ⇓*i*P **P 03 32 56.3 +0.9**
KBD Kabd 67.81 290 *e*P **P 03 32 54.9 -0.8**
KBD AMb AMB 03 32 55.8
comp=Z,2μm,0.7s,mb6.8
QRN Al-Qurain 67.93 289 *e*P **P 03 32 55.6 -0.7**
QRN AMb AMB 03 32 56.9
comp=Z,2μm,0.8s,mb6.8
KVT Kavak 67.98 306 P **P 03 32 57.0 +0.5**
SUE Sulen 68.06 336 ⇓*i*P **P 03 32 56.9 +0.3**
comp=Z,643nm,1.6s,mb6.0
SUE *e* pP 03 34 31.4 +1.0
SUE Sulen 68.06 336 ⇓*i*P **P 03 32 56.9 +0.3**
SUE AMb AMB 03 32 60.0
comp=Z,643nm,1.6s,mb6.0
SUE *e*pP pP 03 34 31.4 +0.9
RDF Al-Radifah 68.07 289 *e*P **P 03 32 56.6 -0.7**
RDF AMb AMB 03 32 57.9
comp=Z,2μm,0.9s,mb6.7
NAY Al-Naaiem 68.08 290 *e*P **P 03 32 56.3 -1.0**
NAY AMb AMB 03 32 57.5
comp=Z,765nm,0.7s,mb6.4
DIKM Dikmen 68.09 307 P **P 03 32 57.8 +0.7**
C06A Tall Timber Ra 68.11 44 ⇓S S 03 41 21.6 +0.8
baz=68
EDM Edmonton 68.13 37 ⇑*i*P **P 03 32 56.8 -0.4**
EDM Edmonton 68.13 37 *e*P **P 03 32 57.0 -0.2**
B07A Winthrop 68.15 43 ⇑S S 03 41 21.9 +0.6
baz=68
TOKT Tokat 68.16 305 P **P 03 32 58.3 +0.7**
KIS Kishinev 68.25 315 α*i*P **P 03 32 55.0 -3.0**
KIS *i* *SP pP 03 34 30.0 -1.9
KIS *e* 03 35 20.0
KIS *i* 03 42 10.0
KIS pmax pmax
comp=Z,4μm,1.2s,mb6.9
KIS pmax pmax
comp=N,2μm,1.4s
KIS pmax pmax
comp=E,2μm,1.4s
KIS pmax pmax
comp=N,2μm,2.0s
KIS pmax pmax
comp=E,2μm,2.0s
KIS pmax pmax
comp=Z,6μm,2.0s,mb6.9
KIS Kishinev 68.25 315 ⇑*i*P **P 03 32 55.0 -3.0**
comp=Z,2μm,1.4s,mb6.5
KIS Kishinev 68.25 315 *e*PcP PcP 03 33 10.0 -10
KIS *i* pP 03 34 30.0 -1.9
KIS Kishinev 68.25 315 *e*PP PP 03 35 20.0 -15
KIS *i* S S 03 41 20.0 -2.4
comp=Z,700nm,2.0s
KIS *i* ScS ScS 03 42 10.0 -3.9
KIS *i* sS sS 03 43 52.0 -18
KIS LRM 04 03 08.0
comp=Z,2μm,16.0s
MYA Malataya 68.25 302 P **P 03 32 59.0 +0.8**
MALT Malatya 68.26 302 P **P 03 32 58.2 0.0**
MALT Malatya 68.26 302 ⇓*i*P **P 03 32 59.0 +0.7**
comp=Z,679nm,1.3s,mb6.1
MALT Malatya 68.26 302 *e*P **P 03 32 59.0 +0.7**
MALT pmax pmax
comp=Z,660nm,1.3s,mb6.1
MALT Malatya 68.26 302 ⇑*i*P **P 03 32 58.5 +0.2**
ASK Askoy 68.38 335 *e*P **P 03 32 58.8 +0.3**
comp=Z,1μm,1.5s,mb6.3
ASK Askoy 68.38 335 *e*P **P 03 32 58.8 +0.3**
ASK AMb AMB 03 33 00.7
comp=Z,1μm,1.5s,mb6.3
ASK *e*pP pP 03 34 33.2 +0.7
ODD1 Odda 68.38 334 ⇓*i*P **P 03 32 58.0 -0.6**
comp=Z,717nm,1.2s,mb6.2
ODD1 *i* pP 03 34 32.3 -0.2
ODD1 Odda 68.38 334 ⇓*i*P **P 03 32 58.0 -0.6**
ODD1 AMb AMB 03 32 59.7
comp=Z,717nm,1.2s,mb6.2
ODD1 *e*pP pP 03 34 32.8 +0.3
RUND Rundenannen 68.38 335 *e*P **P 03 33 01.3 +2.7**
comp=Z,876nm,1.2s,mb6.3
RUND Rundenannen 68.38 335 *e*P **P 03 33 01.3 +2.7**
RUND AMb AMB 03 33 02.8
comp=Z,876nm,1.2s,mb6.2
LON Longmire 68.40 46 *e*P **P 03 32 59.0 0.0**
BER Bergen 68.42 335 *e*P **P 03 32 59.1 +0.3**
BER ⇓*i*P 03 32 59.1
BER AMb AMB 03 33 00.5
comp=Z,841nm,2.0s,mb6.0
BER AMb AMB 03 33 01.2
comp=Z,901nm,1.1s,mb6.3
BER *e*pP pP 03 34 32.9 +0.2
BER *e*S S 03 41 25.7 +1.8
BOYT Boyabat 68.44 307 ⇑*i*P **P 03 33 00.1 +0.8**
WAR Warsaw 68.52 322 *i* P **P 03 33 00.3 +0.7**
comp=Z,3μm,1.4s,mb6.8
WAR *e*pP pP 03 34 34.8 +1.3
WAR *e*PP PP 03 35 37.5 +0.2
WAR *e*S S 03 41 27.4 +2.1
WAR *e*ScS ScS 03 42 13.8 -2.0
WAR Warsaw 68.52 322 ⇓*i*P **P 03 33 00.3 +0.8**
comp=Z,3.2nm,1.4s
WAR *e*pP pP 03 34 34.8 +1.2
WAR *e*PP PP 03 35 37.5 +0.2
WAR *e*S S 03 41 27.4 +2.0
WAR *e*ScS ScS 03 42 13.8 -2.1
WAR Warsaw 68.52 322 ⇓*i*P **P 03 33 00.3 +0.8**
WAR *e**PP pP 03 34 34.8 +1.2
WAR *e* 03 35 37.5
WAR *e*S S 03 41 27.4 +2.0
WAR *e* 03 42 13.8
WAR pmax pmax
comp=Z,3.0nm,1.4s
EGD Espegrend 68.54 335 ⇓*i*P **P 03 32 59.9 +0.4**
comp=Z,843nm,1.7s,mb6.1
EGD Espegrend 68.54 335 ⇓*i*P **P 03 32 59.9 +0.4**
EGD AMb AMB 03 33 01.6
comp=Z,843nm,1.7s,mb6.1
E05A Randle 68.55 46 ⇑S S 03 41 26.0 0.0
baz=68
WPW White Pass 68.57 46 P **P 03 33 00.3 +0.4**
A09A Danville 68.58 42 ⇓S S 03 41 26.1 -0.1
baz=68
F04A Amboy 68.61 47 ⇓S S 03 41 26.2 -0.5
baz=68
B08A Colville Reser 68.61 43 ⇑S S 03 41 26.1 -0.5
baz=68
BZK Bozkurt 68.62 308 P **P 03 33 00.1 -0.3**
C07A Waterville 68.69 44 ⇓S S 03 41 27.0 -0.5
baz=68
WTV Waterville 68.74 44 P **P 03 33 00.6 -0.4**
TBM Table Mountain 68.75 45 P **P 03 33 01.6 +0.5**
IAS Iasi 68.77 315 ⇓P **P 03 33 01.1 0.0**
IAS Iasi 68.77 315 P **P 03 33 01.3 +0.1**
IAS Iasi 68.77 315 ⇓*i*P **P 03 33 01.1 -0.1**
LVV L'vov 68.78 319 ⇑*i*P **P 03 33 01.6 +0.4**
LVV *i* pP 03 34 36.4 +1.1
LVV *i* S S 03 41 28.4 -0.1
LVV *e* 03 42 14.4
LVV MLR MLR
comp=Z,600nm,16.0s
BLS5 Blasjo 68.82 334 ⇓*i*P **P 03 33 01.9 +0.6**
comp=Z,406nm,1.3s,mb5.9
BLS5 *i* pP 03 34 37.0 +1.6
BLS5 Blasjo 68.82 334 ⇓*i*P **P 03 33 01.9 +0.6**
BLS5 AMb AMB 03 33 04.8
comp=Z,406nm,1.3s,mb5.9
BLS5 *e*pP pP 03 34 37.0 +1.6
ATAB Bozova 68.87 302 ⇓*i*P **P 03 33 02.7 +0.8**
CRA Chernovtsy 68.87 317 P PcP 03 33 24.5 +1.7
EBG Ellensburg 68.94 45 P **P 03 33 02.5 +0.3**
H03A Soap Creek Ran 68.95 48 ⇑S S 03 41 30.4 -0.3
baz=69
E06A Yakima 68.97 45 ⇑S S 03 41 31.4 +0.6
baz=69
COR Corvallis 69.01 48 ⇑*i*P **P 03 33 03.7 +1.1**
comp=Z,858nm,1.0s,mb6.3
COR Corvallis 69.01 48 ⇑*i*P **P 03 33 03.7 +1.0**
COR pmax pmax
comp=Z,858nm,1.0s,mb6.3
CTKT Corum 69.01 306 ⇓*i*P **P 03 33 03.5 +0.7**
BSD Bornholm Skovb 69.05 327 ⇓*i*P **P 03 33 02.4 -0.3**
comp=Z,1μm,1.1s,mb6.4
BSD *i* pP 03 34 37.0 +0.1
BSD *i* S S 03 41 31.0 -0.5
BSD *i* 03 42 15.8
BSD Bornholm Skovb 69.05 327 ⇓*i*P **P 03 33 02.4 -0.3**
comp=Z,1μm,1.1s,mb6.4
BSD *i* pP 03 34 37.0 +0.1
BSD *i* S S 03 41 31.0 -0.5
BSD *i* 03 42 15.8
BSD
comp=Z,490nm,18.0s
G04A Mulino 69.05 47 ⇓S S 03 41 32.2 +0.3
baz=69
A10A Northport 69.07 42 ⇑S S 03 41 31.6 -0.3
baz=69
C08A Higginbotham F 69.14 44 ⇑S S 03 41 32.3 -0.5
baz=69
EPH Ephrata 69.15 44 P **P 03 33 03.2 -0.3**
SHAO Shalim 69.16 275 P **P 03 33 04.3 +0.3**
SNR=18
SHAO Shalim 69.16 275 P **P 03 33 04.3 +0.3**
SNR=18
SHAO Shalim 69.16 275 P **P 03 33 04.3 +0.3**
SNR=18
B09A Rice 69.16 43 ⇓S S 03 41 32.7 -0.2
baz=69
TOS Tosya 69.20 307 P **P 03 33 05.1 +1.2**
BALT Daday 69.25 308 ⇓*i*P **P 03 33 05.2 +1.0**
CORM Corum 69.38 306 P **P 03 33 06.1 +1.1**
GZT Gaziantep 69.39 302 ⇓*i*P **P 03 33 06.0 +0.8**
HOOD Mount Hood Mea 69.42 47 *e*P **P 03 33 05.7 +0.5**
I03A Eugene 69.42 49 ⇓P **P 03 33 05.8 +0.6**
baz=69,SNR=64
SNART Snartemo 69.42 333 ⇓*i*P **P 03 33 05.1 +0.2**
SNART AMb AMB 03 33 06.8
comp=Z,707nm,1.3s,mb6.1
SNART *e*pP pP 03 34 38.8 -0.4
STAV Stavanger 69.44 334 ⇓*i*P **P 03 33 05.2 +0.2**
comp=Z,590nm,1.7s,mb5.9
STAV Stavanger 69.44 334 ⇓*i*P **P 03 33 05.2 +0.2**
STAV AMb AMB 03 33 08.4
comp=Z,590nm,1.7s,mb6.0
STAV *e*pP pP 03 34 39.6 +0.3
BNN Bunyan 69.50 304 P **P 03 33 03.8 -1.9**
K01A Sixes 69.51 50 ⇓P **P 03 33 06.3 +0.5**
baz=69,SNR=15
C09A Chrisman Ranch 69.52 43 ⇓P **P 03 33 05.8 +0.1**
baz=69,SNR=396
C09A ⇓S S 03 41 37.2 +0.1
baz=69
KWP Kalwaria 69.53 320 *i* P **P 03 33 06.6 +0.9**
comp=Z,5μm,1.4s,mb6.8
KWP *e*pP pP 03 34 41.6 +1.5
KWP *e*sP sP 03 35 28.6 +1.6
KWP *e*PP PP 03 35 47.1 +1.1
KWP *e*S S 03 41 36.9 -0.3
KWP *e*ScS ScS 03 42 21.9 -2.2
KWP Kalwaria 69.53 320 ⇓*i*P **P 03 33 06.2 +0.4**
H04A Detroit Lake 69.55 48 ⇑P **P 03 33 05.9 -0.1**
baz=69,SNR=165
H04A ⇑S S 03 41 38.3 +0.7
baz=69
OD2 Odessa Site #2 69.57 44 P **P 03 33 05.7 -0.3**
F06A Goldendale 69.58 46 ⇓P **P 03 33 06.7 +0.6**
baz=69,SNR=122
F06A ⇑S S 03 41 38.2 +0.2
baz=69
COP Copenhagen 69.59 329 *i* P **P 03 33 06.2 +0.2**
COP *i* pP 03 34 41.7 +1.4
COP *i* S S 03 41 38.6 +0.9
COP *i* 03 42 22.6
COP pmax pmax
comp=Z,539nm,0.9s,mb6.1
COP Copenhagen 69.59 329 *i* P **P 03 33 06.2 +0.2**
comp=Z,539nm,0.9s,mb6.1
COP *i* pP 03 34 41.7 +1.4
COP *i* S S 03 41 38.6 +0.9
COP *i* 03 42 22.6
G05A Wamic 69.65 47 ⇑P **P 03 33 07.2 +0.7**
baz=69,SNR=74
J02A Umpqua 69.65 49 ⇓P **P 03 33 07.2 +0.6**
baz=69,SNR=54
J02A ⇓S S 03 41 38.7 -0.1
baz=69
A11A Hall Mountain, 69.67 41 ⇓P **P 03 33 07.5 +0.9**
baz=69,SNR=321
A11A ⇓S S 03 41 38.9 +0.1
baz=69
BURAR Bucovina Array 69.68 317 ⇓P **P 03 33 06.8 +0.1**
BURAR Bucovina Array 69.68 317 ⇓*i*P **P 03 33 06.8 +0.1**
D08A Wollman Farm, 69.69 44 ⇓P **P 03 33 06.7 0.0**
baz=69,SNR=382
D08A ⇓S S 03 41 39.5 +0.3
baz=69
B10A Chitwood Farm, 69.70 42 ⇓P **P 03 33 06.7 -0.1**
baz=69,SNR=34
CANT Cankiri 69.71 307 P **P 03 33 07.5 +0.5**
KMRS Kahramanmaras 69.71 303 P **P 03 33 07.2 +0.1**
GAZ Gaziantep 69.73 302 P **P 03 33 07.9 +0.8**
WRD Warden 69.74 44 P **P 03 33 06.7 -0.4**
NEW Newport 69.77 42 ⇑*i*P **P 03 33 07.1 -0.2**
comp=Z,382nm,0.8s,mb6.0
NEW Newport 69.77 42 P **P 03 33 07.3 +0.1**
comp=Z,344nm,0.8s,mb6.0,baz=315,slow=6.1,SNR=441
NEW S S 03 41 40.4 +0.4
comp=Z,4.1nm,0.8s,baz=93,slow=18,SNR=8.0
NEW PKP2bc 04 01 01.0
comp=Z,4.3nm,1.0s,baz=212,slow=5.3,SNR=4.4
NEW tx tx 04 03 51.7
comp=Z,2.1nm,0.4s,baz=223,slow=1.1,SNR=7.8
CFR Carcaliu 69.80 313 P **P 03 33 10.7 +3.3**
HAWA Hanford 69.82 45 ⇑*i*P **P 03 33 07.7 +0.2**
comp=Z,675nm,0.8s,mb6.2
SAFT Safranbolu 69.84 308 P **P 03 33 08.6 +0.8**
CDAG Cicekdag 69.89 306 ⇓*i*P **P 03 33 08.5 +0.4**
ELDT Eldivan 69.89 307 ⇑*i*P **P 03 33 08.8 +0.7**
F07A Phinny Hill Vi 69.95 45 ⇑P **P 03 33 08.7 +0.4**
baz=70,SNR=298
J03A Ideyld Park 69.98 49 ⇓P **P 03 33 09.0 +0.4**
baz=70,SNR=66
C10A Spilker Farm, 69.98 43 ⇓P **P 03 33 08.3 -0.2**
baz=70,SNR=59
C10A ⇓S S 03 41 41.4 -1.1
baz=70
D09A Jones Farm, Ri 70.00 44 ⇓P **P 03 33 08.7 +0.1**
baz=70,SNR=206
D09A ⇑S S 03 41 42.1 -0.5
baz=70
E08A Dider Farm, El 70.00 45 ⇓P **P 03 33 08.6 0.0**
baz=70,SNR=149
E08A ⇓S S 03 41 42.8 +0.1
baz=70
ANDN Andirin 70.00 303 ⇓*i*P **P 03 33 09.5 +0.7**
I04A Tendick Farm, 70.01 48 ⇑P **P 03 33 08.9 +0.1**
baz=70,SNR=126
I04A ⇑S S 03 41 43.3 +0.4
baz=70
G06A Carlson Farm, 70.01 46 ⇓P **P 03 33 08.9 +0.2**
baz=70,SNR=134
G06A ⇑S S 03 41 43.3 +0.4
baz=70
B11A Sandpoint 70.02 42 ⇓P **P 03 33 09.2 +0.5**
baz=70,SNR=276
B11A ⇑S S 03 41 42.9 0.0
baz=70
A12A Yaak River Ran 70.03 41 ⇑P **P 03 33 09.4 +0.6**
baz=70,SNR=118
A12A ⇓S S 03 41 43.1 +0.2
baz=70
SFJD Kangerlussuaq 70.06 2 *i* P **P 03 33 08.5 -0.1**
SFJD *i* pP 03 34 40.3 -2.8
SFJD *i* S S 03 41 40.4 -2.4
SFJD *i* 03 42 26.1
SFJD pmax pmax
comp=Z,167nm,1.1s,mb5.5
SFJD MLR MLR
comp=Z,340nm,21.0s
SFJD Kangerlussuaq 70.06 2 P **P 03 33 08.6 0.0**
comp=Z,170nm,1.1s,mb5.5,baz=343,slow=5.8,SNR=21
SFJD Kangerlussuaq 70.06 2 *i* P **P 03 33 08.5 -0.1**
comp=Z,167nm,1.1s,mb5.5
SFJD *i* pP 03 34 40.3 -2.8
SFJD *i* S S 03 41 40.4 -2.4
SFJD *i* 03 42 26.1
SFJD
comp=Z,340nm,21.0s
VRI Vrincioaia 70.08 315 ⇓P **P 03 33 09.5 +0.4**
VRI Vrincioaia 70.08 315 P **P 03 33 09.9 +0.8**
VRI Vrincioaia 70.08 315 ⇓*i*P **P 03 33 09.5 +0.4**
K02A Glendale 70.09 50 ⇓P **P 03 33 09.7 +0.5**
baz=70,SNR=98
H05A Madras 70.09 47 ⇓P **P 03 33 09.4 +0.2**
baz=70,SNR=30
H05A ⇑S S 03 41 43.2 -0.6
baz=70
RGN Rugen 70.09 328 ⇓*i*P **P 03 33 09.0 0.0**
comp=Z,2μm,1.3s,mb6.4
RGN *e*pP pP 03 34 44.0 +0.5
RGN *e*PP PP 03 35 45.5 -5.1
TIRR Tirgusor 70.12 313 P **P 03 33 09.7 +0.3**
TIRR Tirgusor 70.12 313 ⇓*i*P **P 03 33 08.9 -0.5**
PLOR Plostina 70.13 315 P **P 03 33 10.0 +0.6**
AVNT Avonos 70.14 305 ⇓*i*P **P 03 33 09.8 +0.2**
EIDS Eidsvold 70.14 163 ⇑*i*P **P 03 33 09.5 -0.1**
comp=Z,148nm,0.6s,mb5.7
MUD Monsted U'grnd 70.20 331 ⇓*i*P **P 03 33 09.8 +0.2**
comp=Z,683nm,1.2s,mb6.1
MUD *i* pP 03 34 45.4 +1.2
MUD *i* S S 03 41 44.1 -0.6
MUD *i* 03 42 27.4
MUD Monsted U'grnd 70.20 331 ⇓*i*P **P 03 33 09.8 +0.2**
comp=Z,683nm,1.2s,mb6.1
MUD *i* pP 03 34 45.4 +1.2
MUD *i* S S 03 41 44.1 -0.6
MUD *i* 03 42 27.4
MUD
comp=Z,530nm,17.0s
KOLS Kolonicke sedl 70.22 319 *i* P **P 03 33 10.4 +0.5**
KOLS *e* 03 31 35.4
KOLS *e*PP PP 03 35 43.8 -8.1
KOLS *e*S S 03 41 44.9 -0.3
HARR Harsova 70.23 313 ⇓P **P 03 33 10.1 0.0**
HARR Harsova 70.23 313 P **P 03 33 10.5 +0.5**
HARR Harsova 70.23 313 ⇓*i*P **P 03 33 10.1 +0.1**
BR131 Keskin Array S 70.26 306 ⇓*i*P **P 03 33 10.4 +0.1**
comp=Z,473nm,1.1s,mb5.9
BRTR Keskin Array B 70.26 306 P **P 03 33 10.4 +0.1**
BRTR *e* pP pP 03 34 45.2 +0.3
BRTR PP PP 03 35 52.9 +0.3
BRTR ⇑*e* 04 01 00.1

BRTR **Keskin Array B** 70.26 306 P P 03 33 10.4 +0.1
BRTR *PP pP 03 34 45.2 +0.3
BRTR 03 35 52.9
BRTR pmax pmax
comp=Z,202nm,1.0s
BRTR Keskin Array B 70.26 306 P P 03 33 10.4 +0.1
comp=Z,202nm,1.0s,mb5.6,baz=64,slow=5.6,SNR=586
BRTR pP pP 03 34 45.2 +0.3
comp=Z,20nm,0.8s,baz=63,slow=4.4,SNR=2.6
BRTR PP PP 03 35 52.9 +0.3
comp=Z,42nm,0.9s,baz=76,slow=5.2,SNR=6.1
BRTR tx tx 04 00 22.5
comp=Z,1.9nm,0.8s,baz=201,slow=5.3,SNR=8.4
BRTR PKP2bc 04 01 00.1
comp=Z,5.7nm,1.2s,baz=181,slow=4.9,SNR=6.3
M01C Crescent City 70.33 51 ⇑P P 03 33 11.3 +0.7
baz=70,SNR=29
STHS Stebnicka Huta 70.37 320 *i* P P 03 33 11.7 +0.9
comp=Z,566nm,1.3s,mb5.9
STHS *e*S S 03 41 47.1 +0.2
STHS Stebnicka Huta 70.37 320 *i* P P 03 33 11.7 +0.9
STHS *e*S S 03 41 47.1 +0.2
STHS pmax pmax
comp=Z,566nm,1.3s,mb5.9
B12A Libby 70.38 41 ⇓P P 03 33 11.3 +0.4
baz=70,SNR=44
B12A ⇑S S 03 41 47.5 +0.5
baz=70
KOZT Kozan 70.38 303 P P 03 33 10.7 -0.4
I05A Bend 70.39 47 ⇓P P 03 33 11.2 +0.2
baz=70,SNR=82
UZH Uzhgorod 70.42 319 *d* iP P 03 33 10.2 -0.9
UZH *i* 03 33 28.0
UZH *i* 03 35 32.0
UZH *i* S S 03 41 48.0 +0.6
UZH *i* 03 42 27.0
UZH MLR MLR
comp=Z,1μm,13.0s
L02A Cave Junction 70.42 50 ⇓P P 03 33 11.7 +0.5
baz=70,SNR=52
L02A ⇑S S 03 41 49.3 +1.6
baz=70
E09A Wood Farm, Sta 70.45 44 ⇓P P 03 33 11.4 +0.1
baz=70,SNR=539
E09A ⇑S S 03 41 49.0 +1.1
baz=70
OJC Ojcow 70.48 321 *i* P P 03 33 12.0 +0.6
OJC *i* pP pP 03 34 47.4 +1.3
OJC *e*sP sP 03 35 34.6 +1.7
OJC *e*PP PP 03 35 55.3 +1.3
OJC *i* S S 03 41 47.6 -0.5
OJC *e*SKSac SKSac 03 42 29.8 +0.2
OJC L 03 52 30.2
comp=Z,2.2nm,25.6s
OJC Ojcow 70.48 321 ⇓iP P 03 33 12.0 +0.6
OJC *i* *PP pP 03 34 47.4 +1.3
OJC *e**SP sP 03 35 34.6 +1.7
OJC *e* 03 35 55.3
OJC *i* S S 03 41 47.6 -0.5
OJC *e* 03 42 29.8
G07A Ruggs Ranch, H 70.50 46 ⇑P P 03 33 11.8 +0.1
baz=70,SNR=80
H06A Lindquist Farm 70.51 47 ⇑P P 03 33 11.7 +0.1
baz=70,SNR=149
KDZE Karadeniz Ereo 70.51 309 P P 03 33 10.0 -1.7
LRW Lerwick 70.52 338 *e*P P 03 33 10.9 -0.5
LRW AMb AMB 03 33 13.4
comp=Z,478nm,1.2s,mb5.9
D10A Wagner Farm, O 70.52 43 ⇓P P 03 33 11.4 -0.3
baz=70,SNR=260
D10A ⇓S S 03 41 49.2 +0.5
baz=70
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
RBK Rabkut 70.52 276 P P 03 33 11.7 -0.5
SNR=79
WAL1 Walls 70.53 338 *e*P P 03 33 11.3 -0.2
J04A Umpqua Nationa 70.54 49 ⇑P P 03 33 12.5 +0.6
baz=70,SNR=147
J04A ⇑S S 03 41 49.6 +0.6
baz=70
BORG Borgarnes 70.57 349 *e*P P 03 33 13.1 +1.4
comp=Z,248nm,1.2s,mb5.6
BORG Borgarnes 70.57 349 P P 03 33 12.5 +0.8
comp=Z,138nm,0.9s,mb5.5,baz=19,slow=3.8,SNR=13
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
WHFO Wadi Hawf 70.57 277 P P 03 33 11.8 -0.7
SNR=148
F08A Pendleton 70.61 45 ⇑P P 03 33 12.8 +0.6
baz=70,SNR=476
F08A ⇓S S 03 41 50.4 +0.7
baz=70
A13A Flathead Natio 70.62 40 ⇓P P 03 33 12.5 +0.3
baz=70,SNR=255
A13A ⇑S S 03 41 49.3 -0.4
baz=70
CRVS Cervenica-Dubn 70.63 320 *i* P P 03 33 12.8 +0.5
CRVS *e*S S 03 41 50.0 +0.2
SGKT Sivrigoynuk 70.64 308 ⇑iP P 03 33 13.3 +0.8
TRPA Tarpa 70.65 318 ⇑iP P 03 33 12.7 +0.3
KRMB Red Mountain 70.66 51 ⇑iP P 03 33 13.3 +0.6
ANTO Ankara 70.66 307 P P 03 33 13.2 +0.5
ANTO Ankara 70.66 307 ⇓iP P 03 33 12.9 +0.2
comp=Z,2μm,1.4s,mb6.5
ANTO *e*pP pP 03 34 47.9 +0.4
ANTO *e*PP PP 03 35 54.7 -1.2
ANTO *e*S S 03 41 49.6 -1.0
ANTO Ankara 70.66 307 ⇓iP P 03 33 12.9 +0.2
ANTO *e**PP pP 03 34 47.9 +0.5
ANTO *e* 03 35 54.7
ANTO *e*S S 03 41 49.6 -0.9
ANTO pmax pmax
comp=Z,2μm,1.4s,mb6.5
ANTO Ankara 70.66 307 P P 03 33 13.5 +0.8
SNR=245
ANTO Ankara 70.66 307 P P 03 33 13.5 +0.8
SNR=245
ANTO Ankara 70.66 307 P P 03 33 13.5 +0.8
SNR=245
ANTO Ankara 70.66 307 P P 03 33 13.5 +0.8
SNR=245
ANTO Ankara 70.66 307 P P 03 33 13.5 +0.8
SNR=245
ANTO Ankara 70.66 307 ⇓iP P 03 33 13.0 +0.3
LOD Lodumlu 70.67 307 P P 03 33 12.9 +0.2
ISR Istrita 70.68 314 ⇑P P 03 33 13.9 +1.2
ISR Istrita 70.68 314 ⇑iP P 03 33 13.9 +1.2
NIG Nigde 70.72 304 P P 03 33 14.2 +1.1
CEYT Ceyhan 70.73 303 P P 03 33 13.7 +0.5
COBT Iskenderun 70.73 302 ⇓iP P 03 33 13.6 +0.4
MLR Muntele Rosu 70.74 315 ⇑P P 03 33 13.4 +0.3
MLR Muntele Rosu 70.74 315 P P 03 33 13.3 +0.3
MLR S S 03 41 52.0 +0.8
comp=Z,18nm,1.0s,baz=270,slow=23,SNR=11
MLR PKP2bc 04 01 00.4
comp=Z,29nm,1.3s,baz=304,slow=3.4,SNR=19
MLR Muntele Rosu 70.74 315 ⇑*i*P P 03 33 13.4 +0.4
PSN Preselentsi 70.76 312 *i* P P 03 33 14.0 +0.8
WALA Waterton Lakes 70.77 40 ⇑*i*P P 03 33 13.4 +0.2
comp=Z,482nm,0.9s,mb6.0

NIE Niedzica 70.81 321 *i* P P 03 33 14.5 +1.1
NIE *i* pP pP 03 34 50.1 +2.0
NIE *i* PP PP 03 35 58.3 +1.5
G08A Pilot Rock 70.86 45 ⇑P P 03 33 14.1 +0.4
baz=71,SNR=184
B13A Whitefish 70.98 41 ⇓P P 03 33 14.9 +0.5
baz=71,SNR=148
B13A ⇓S S 03 41 53.8 -0.1
baz=71
J05A Fort Rock 70.99 48 P P 03 33 15.3 +0.7
baz=71,SNR=287
J05A ⇑S S 03 41 55.3 +1.2
baz=71
E10A Myers Farm, Un 70.99 44 ⇓P P 03 33 14.7 +0.2
baz=71,SNR=389
KARA Karaisali 71.00 303 P P 03 33 15.3 +0.6
FCC Fort Churchill 71.00 24 ⇑iP P 03 33 13.8 -0.6
comp=Z,390nm,0.9s,mb5.9
FCC *e*pP pP 03 34 49.2 0.0
FCC Fort Churchill 71.00 24 *e*P P 03 33 13.8 -0.5
FCC pmax pmax
comp=Z,390nm,0.9s,mb5.9
H07A Lands Inn, Kim 71.01 46 ⇑P P 03 33 15.0 +0.4
baz=71
JCC Jacoby Creek 71.06 52 ⇓P P 03 33 15.8 +0.7
baz=71,SNR=46
JCC ⇓S S 03 41 56.2 +1.3
baz=71
HTY Hatay 71.06 302 P P 03 33 15.6 +0.5
I06A Prineville 71.10 47 ⇓P P 03 33 15.8 +0.6
baz=71,SNR=172
F09A S2 Ranch, Elgi 71.11 45 P P 03 33 15.7 +0.5
baz=71,SNR=177
HENT Hendek 71.14 308 ⇓iP P 03 33 15.2 -0.3
K04A Chilquin 71.16 49 ⇑P P 03 33 16.1 +0.5
baz=71,SNR=57
K04A ⇑S S 03 41 56.4 +0.3
baz=71
KHMM Horse Mountain 71.19 51 *e*P P 03 33 16.8 +1.0
BSMT Bassoo Peak 71.19 41 *e*P P 03 33 16.4 +0.7
YBH Yreka Blue Hor 71.20 50 ⇑iP P 03 33 16.3 +0.4
comp=Z,280nm,1.1s,mb5.7
YBH Yreka Blue Hor 71.20 50 ⇑iP P 03 33 16.3 +0.4
YBH pmax pmax
comp=Z,280nm,1.1s
YBH Yreka Blue Hor 71.20 50 ⇓P P 03 33 16.3 +0.4
baz=71,SNR=108
YBH ⇓S S 03 41 57.3 +0.7
baz=71
VOIR 71.24 315 ⇑P P 03 33 15.9 -0.1
VOIR 71.24 315 ⇑iP P 03 33 15.9 -0.1
KRTS Karatas 71.24 303 P P 03 33 16.8 +0.6
ABTO Aybut 71.28 276 P P 03 33 16.1 -0.5
SNR=226
ABTO Aybut 71.28 276 P P 03 33 16.1 -0.5
SNR=226
ABTO Aybut 71.28 276 P P 03 33 16.1 -0.5
SNR=226
ABTO Aybut 71.28 276 P P 03 33 16.1 -0.5
SNR=226
ABTO Aybut 71.28 276 P P 03 33 16.1 -0.5
SNR=226
F10A Beach Ranch, E 71.28 44 ⇑P P 03 33 16.6 +0.4
baz=71,SNR=360
RAC Raciborz 71.30 322 *e*P P 03 33 17.2 +0.9
RAC *e*pP pP 03 34 52.5 +1.3
RAC *e*S S 03 41 57.2 -0.2
L04A Klamath Falls 71.36 49 ⇓P P 03 33 17.3 +0.4
baz=71,SNR=120
L04A ⇓S S 03 41 58.4 0.0
baz=71
MTUR Matau 71.38 315 ⇑P P 03 33 16.8 0.0
MTUR Matau 71.38 315 ⇑iP P 03 33 16.8 0.0
KECS Kecovo 71.38 320 *i* P P 03 33 17.3 +0.5
comp=Z,141nm,1.2s,mb5.4
KECS *e* pP 03 34 52.1 +0.4
KECS *e*PP PP 03 35 57.9 -3.8
KECS *e*S S 03 41 58.6 +0.2
KECS Kecovo 71.38 320 *i* P P 03 33 17.3 +0.5
KECS *e* pP 03 34 52.1 +0.4
KECS *e* 03 35 57.9
KECS *e*S S 03 41 58.6 +0.2
KECS pmax pmax
comp=Z,141nm,1.2s,mb5.4
I07A Izee 71.39 47 ⇓P P 03 33 17.4 +0.5
baz=71,SNR=324
I07A ⇑S S 03 41 58.5 -0.1
baz=71
C13A Hot Springs 71.42 41 ⇓P P 03 33 17.7 +0.6
baz=71,SNR=622
C13A ⇓S S 03 41 58.0 -0.8
baz=71
RUE Ruedersdorf 71.45 326 ⇓iP P 03 33 17.4 +0.4
comp=Z,1μm,1.2s,mb6.3
RUE *e*pP pP 03 34 52.5 +0.4
N02C Big Bar 71.47 51 ⇑P P 03 33 17.7 +0.2
baz=71,SNR=154
N02C ⇓S S 03 42 00.5 +0.9
baz=71
BUC1 Bucharest 71.47 314 P P 03 33 18.1 +0.7
BUC1 Bucharest 71.47 314 ⇓iP P 03 33 17.3 -0.1
D12A Red Ives Fores 71.47 42 ⇓P P 03 33 17.3 0.0
baz=71
DRGR 71.49 317 ⇑P P 03 33 17.5 +0.1
DRGR 71.49 317 P P 03 33 18.0 +0.6
DRGR 71.49 317 ⇑iP P 03 33 17.5 +0.1
OKC Ostrava-Krasne 71.50 322 ⇓iP P 03 33 18.0 +0.6
OKC *e* pP 03 34 52.9 +0.5
OKC *e*S S 03 42 01.2 +1.6
OKC Ostrava-Krasne 71.50 322 ⇓iP P 03 33 18.0 +0.6
OKC *e*pP pP 03 34 52.9 +0.5
OKC *e*S S 03 42 01.2 +1.6
OKC *ex* x 04 03 56.5
PRD Provadia 71.51 312 *i* P P 03 33 18.0 +0.4
H08A Prairie City 71.53 46 ⇓P P 03 33 18.2 +0.4
baz=71,SNR=264
E11A Bogner Ranch, 71.53 43 ⇓P P 03 33 17.6 -0.1
baz=71,SNR=236
E11A ⇑S S 03 42 00.0 -0.1
baz=71
K05A Summer Lake 71.55 48 ⇓P P 03 33 18.6 +0.7
baz=71,SNR=232
K05A ⇓S S 03 42 00.5 +0.1
baz=71
MERS Mersin 71.57 303 P P 03 33 18.4 +0.2
KSP Ksiaz 71.59 324 *i* P P 03 33 18.7 +0.7
comp=Z,3μm,1.4s,mb6.7
KSP *e*pP pP 03 34 54.7 +1.7
KSP *e*sP sP 03 35 40.5 +0.8
KSP *e*PP PP 03 35 59.7 -3.7
KSP *e*S S 03 42 00.6 -0.1
KSP *e*ScS ScS 03 42 36.9 -3.4
KSP Ksiaz 71.59 324 ⇓iP P 03 33 18.5 +0.5
KSP *e* 03 33 32.7
KSP *e**PP pP 03 34 53.7 +0.7
KSP *e* 03 36 00.0
KSP *e*S S 03 42 00.1 -0.6
KSP *e* 03 42 36.3
J06A Christmas Vall 71.60 48 ⇑P P 03 33 18.7 +0.5
baz=71,SNR=229
J06A ⇓S S 03 42 00.6 -0.4
baz=71
FFC Flin Flon 71.60 30 P P 03 33 17.4 -0.5
comp=Z,3μm,0.9s,mb6.8
GULT Gulveren 71.62 308 P P 03 33 18.6 +0.3
O01C Eel River Cons 71.62 52 ⇑P P 03 33 19.0 +0.6
baz=71,SNR=134
O01C ⇓S S 03 42 01.4 0.0
baz=71
LIKS Likavka 71.62 321 *i* P P 03 33 18.8 +0.6
comp=Z,705nm,1.0s,mb6.2
LIKS Likavka 71.62 321 *i* P P 03 33 18.8 +0.6
LIKS pmax pmax
comp=Z,705nm,1.0s,mb6.2
M04C Macdoel 71.66 50 ⇑P P 03 33 19.1 +0.6
baz=71,SNR=395
M04C ⇓S S 03 42 02.2 +0.5
baz=71
NOUC Port Laguerre 71.67 148 *e*P P 03 33 19.1 +0.4
NOUC Port Laguerre 71.67 148 *e*P P 03 33 19.1 +0.4
DZM Mont Dzumac 71.69 148 *e*P P 03 33 19.9 +1.0
DZM Mont Dzumac 71.69 148 P P 03 33 19.1 +0.2
comp=Z,433nm,0.8s,mb6.1,baz=24,slow=8.9,SNR=215

BSEG Bad Segeberg 71.72 329 *e*P P 03 33 19.1 +0.5
comp=Z,995nm,1.1s,mb6.3
BSEG *e*pP pP 03 34 54.8 +1.1
BSEG *e*PP PP 03 36 04.7 +0.3
C14A Swan Lake 71.75 41 ⇑P P 03 33 19.4 +0.4
baz=72
C14A ⇓S S 03 42 02.2 -0.4
baz=72
MORC Moravsky Berou 71.81 322 ⇓*i*P P 03 33 19.9 +0.6
comp=Z,1μm,1.0s,mb6.3
MORC *e*pP pP 03 34 56.0 +1.6
GPA Golpazari 71.83 308 P P 03 33 19.2 -0.4
M03C McCloud 71.84 50 ⇓P P 03 33 19.8 +0.2
baz=72,SNR=204
M03C ⇑S S 03 42 03.7 -0.1
baz=72
HRT Hereke 71.84 309 P P 03 33 20.2 +0.5
KIZT Kizilcal 71.84 306 P P 03 33 19.5 -0.2
K06A Valley Falls 71.85 48 ⇑P P 03 33 20.2 +0.6
baz=72,SNR=207
D13A Huson 71.88 42 ⇑P P 03 33 19.7 -0.1
baz=72,SNR=252
D13A ⇓S S 03 42 04.4 +0.4
baz=72
DPC Dobruska-Polom 71.94 323 ⇓*i*P P 03 33 21.0 +1.0
DPC *e* pP 03 34 54.7 -0.4
DPC *e* 03 35 53.7
DPC *e*S S 03 42 05.6 +1.0
DPC Dobruska-Polom 71.94 323 ⇓*i*P P 03 33 21.0 +1.0
DPC *e* pP 03 34 54.7 -0.4
DPC *e*S S 03 42 05.6 +1.0
DPC Dobruska-Polom 71.94 323 ⇓*i*P P 03 33 21.0 +1.0
DPC *e*pP pP 03 34 54.7 -0.4
DPC *ex* x 03 35 53.7
DPC *e*S S 03 42 05.6 +1.0
DPC *e*PKPPKP 04 00 51.0
DPC *ex* x 04 03 55.5
H09A Durkee 71.95 45 ⇑P P 03 33 20.7 +0.5
baz=72,SNR=355
H09A ⇑S S 03 42 06.2 +1.2
baz=72
UPC Upice 71.96 323 ⇓*i*P P 03 33 20.8 +0.7
UPC *e*PKPPKP 04 00 53.6
UPC *ex* x 04 03 55.1
J07A Hines 71.97 47 ⇓P P 03 33 21.1 +0.8
baz=72,SNR=359
I08A Drewsey 72.00 46 ⇓P P 03 33 21.1 +0.6
baz=72,SNR=425
I08A ⇑S S 03 42 07.4 +2.0
baz=72
BMO Blue Mountains 72.01 45 ⇑*i*P P 03 33 20.8 +0.2
comp=Z,585nm,0.8s,mb6.2
BORA Eskisehir 72.02 308 ⇓*i*P P 03 33 20.6 -0.1
ISK Istanbul-Kandi 72.02 310 P P 03 33 20.1 -0.6
ESKT Eskisehir 72.03 307 P P 03 33 20.7 -0.1
ESKT Eskisehir 72.03 307 ⇓*i*P P 03 33 20.5 -0.3
L05A Lakeview 72.03 49 ⇑P P 03 33 21.2 +0.4
baz=72,SNR=101
L05A ⇓S S 03 42 07.1 +1.1
baz=72
KIPM Iron Peak 72.04 52 *e*P P 03 33 21.1 +0.3
KIPM *e*PP PP 03 36 12.0 +4.4
KCPM Cahto Peak 72.06 52 ⇑*i*P P 03 33 21.1 +0.2
ADVT Abdulvahap 72.06 309 P P 03 33 17.3 -3.6
WDC Whiskeytown Da 72.06 51 ⇑*i*P P 03 33 20.7 -0.2
comp=Z,349nm,0.9s,mb5.9
WDC Whiskeytown Da 72.06 51 ⇑*i*P P 03 33 20.7 -0.2
WDC pmax pmax
comp=Z,349nm,0.9s,mb5.9
WDC Whiskeytown Da 72.06 51 ⇓P P 03 33 20.7 -0.3
baz=72,SNR=249
WDC ⇓S S 03 42 06.1 -0.3
baz=72
PSZ Piszkesteto 72.06 320 ⇓*i*P P 03 33 21.6 +0.8
comp=Z,1μm,1.3s,mb6.3
PSZ *e*pP pP 03 34 57.5 +1.5
PSZ *e*PP PP 03 36 07.2 -0.3
PSZ Piszkesteto 72.06 320 ⇓*i*P P 03 33 21.6 +0.8
PSZ *e**PP pP 03 34 57.5 +1.5
PSZ *e* 03 36 07.2
PSZ pmax pmax
comp=Z,1μm,1.3s,mb6.3
PSZ Piszkesteto 72.06 320 ⇓*e*P P 03 33 21.8 +1.0
PSZ Piszkesteto 72.06 320 ⇓*i*P P 03 33 21.3 +0.5
FKH Fakeheh 72.11 300 *e*P P 03 33 21.6 +0.3
VYHS Vyhne 72.15 321 *i* P P 03 33 22.1 +0.8
comp=Z,374nm,1.3s,mb5.8
VYHS *e* pP 03 34 58.2 +1.7
VYHS *e*S S 03 42 07.6 +0.6
VYHS Vyhne 72.15 321 *i* P P 03 33 22.1 +0.8
VYHS *e* pP 03 34 58.2 +1.7
VYHS *e*S S 03 42 07.6 +0.6
VYHS pmax pmax
comp=Z,374nm,1.3s,mb5.8
G11A Walters Elk Ra 72.17 44 ⇑P P 03 33 21.3 -0.2
baz=72,SNR=654
G11A ⇑S S 03 42 05.9 -1.4
baz=72
KONT Konya--Tatoy 72.17 305 P P 03 33 21.9 +0.2
YLV Yalova 72.18 309 P P 03 33 21.4 -0.2
O02C Red Bluff 72.19 51 ⇑P P 03 33 22.2 +0.5
baz=72,SNR=370
O02C ⇑S S 03 42 07.6 -0.1
baz=72
SZH Strazhica 72.25 313 *i* P P 03 33 22.0 0.0
IZI Iznik 72.27 309 P P 03 33 22.6 +0.4
KOLL Kolacno 72.29 321 *i* P P 03 33 23.0 +0.9
KOLL *e*pP pP 03 34 55.5 -1.8
KOLL *e*PP PP 03 36 10.4 +1.0
KOLL *e*S S 03 42 09.8 +1.2
ZIMR 72.29 314 ⇓P P 03 33 22.1 -0.1
ZIMR 72.29 314 ⇓iP P 03 33 22.1 -0.1
CTT Catalca 72.32 310 P P 03 33 21.5 -0.9
MSO Missoula 72.32 42 ⇑iP P 03 33 22.2 -0.1
comp=Z,401nm,1.2s,mb5.8
M05C Lookout 72.33 50 ⇑P P 03 33 22.5 +0.1
baz=72,SNR=110
M05C ⇓S S 03 42 08.0 -1.2
baz=72
P01C Double 8 Ranch 72.34 52 ⇑P P 03 33 22.5 -0.1
baz=72,SNR=68
D14A Greenough 72.35 41 ⇓P P 03 33 22.7 +0.2
baz=72,SNR=755
D14A ⇑S S 03 42 09.5 +0.1
baz=72
HWQ Hawqa 72.37 301 *e*P P 03 33 22.6 -0.2
GEMT Gemlik 72.37 309 P P 03 33 22.4 -0.3
GEDT Gedikpinar 72.37 308 P P 03 33 22.3 -0.5
I09A Lost Marbles R 72.39 46 ⇑P P 03 33 23.1 +0.4
baz=72,SNR=350
I09A ⇓S S 03 42 10.8 +0.9
baz=72
J08A Circle Bar Ran 72.42 47 ⇓P P 03 33 23.5 +0.5
baz=72,SNR=619
J08A ⇓S S 03 42 10.8 +0.5
baz=72
MOD Modoc 72.42 49 ⇓*i*P P 03 33 23.1 +0.1
comp=Z,438nm,1.1s,mb5.9
MOD Modoc 72.42 49 ⇓P P 03 33 23.2 +0.2
baz=72,SNR=173
F12A Elk City 72.43 43 ⇑P P 03 33 22.9 0.0
baz=72,SNR=887
F12A ⇑S S 03 42 10.7 +0.5
baz=72
GZR Gura Zlata 72.43 316 ⇑P P 03 33 23.1 +0.2
GZR Gura Zlata 72.43 316 P P 03 33 23.4 +0.4
GZR Gura Zlata 72.43 316 ⇑iP P 03 33 23.1 +0.1
JMB Yambol 72.45 312 *e*P P 03 33 23.4 +0.3
JMB Yambol 72.45 312 *i* P P 03 33 23.0 -0.1
K07A Rock Creek Ran 72.47 48 ⇓P P 03 33 23.9 +0.7
baz=72,SNR=504
K07A ⇑S S 03 42 11.7 +0.9
baz=72
E13A Victor 72.47 42 ⇑P P 03 33 22.8 -0.4
baz=72,SNR=181
E13A ⇓S S 03 42 10.6 -0.1
baz=72
H10A Noah's Angus R 72.48 45 ⇓P P 03 33 22.8 -0.4
baz=72,SNR=778
H10A ⇓S S 03 42 10.7 -0.2
baz=72
IKL Isikli 72.49 303 P P 03 33 23.3 -0.2
HATC Hat Creek Radi 72.51 50 ⇑P P 03 33 23.8 +0.2
baz=72,SNR=143
PVCC Panska Ves 72.57 324 ⇓*i*P P 03 33 24.3 +0.6

PVCC ePP pP 03 35 00.2 +1.2
PVCC eS S 03 42 11.2 -0.4
BRG Berggiesshubel 72.58 325 ⇓*iP* **P 03 33 24.0 +0.3**
comp=Z,320nm,1.1s,mb5.8
BRG *e* 03 33 30.8
BRG PcP PcP 03 33 40.3 +1.8
BRG pP pP 03 35 00.1 +1.1
BRG PP PP 03 36 13.3 +1.6
BRG S S 03 42 15.0 +3.3
BRG *i* 03 42 47.0
BRG *e* 03 52 38.0
BRG SKPP' 04 04 01.2
BRG Berggiesshubel 72.58 325 ⇓*iP* **P 03 33 24.0 +0.3**
BRG 03 33 40.3
BRG *PP pP 03 35 00.2 +1.1
BRG 03 36 13.3
BRG S S 03 42 15.0 +3.3
BRG *i* 03 42 47.0
BRG pmax pmax
comp=Z,320nm,1.1s,mb5.8
BRG Berggiesshubel 72.58 325 *eP* **P 03 33 24.2 +0.5**
comp=Z,534nm,1.1s,mb6.0
BRG *ePcP PcP 03 33 39.8 +1.3
BRG *epP pP 03 35 00.2 +1.1
BRG *ePP PP 03 36 12.5 +0.8
BRG Berggiesshubel 72.58 325 ⇓*iP* **P 03 33 24.0 +0.3**
comp=Z,534nm,1.1s,mb6.0
BRG *e* 03 33 30.8
comp=Z,147nm,0.9s
BRG PCP PcP 03 33 40.3 +1.8
comp=Z,189nm,1.1s
BRG pP pP 03 35 00.1 +1.1
comp=Z,2µm,3.0s
BRG PP PP 03 36 13.3 +1.6
comp=Z,317nm,1.3s
BRG S S 03 42 15.0 +3.3
BRG *i* 03 42 47.0
BRG *e* 03 52 38.0
GASB Alder Springs 72.58 52 ⇓P **P 03 33 24.9 +0.9**
baz=72,SNR=372
GASB ⇓S S 03 42 13.2 +1.1
baz=72
VRAC Vranov 72.58 322 ⇑*iP* **P 03 33 24.4 +0.7**
VRAC Vranov 72.58 322 P **P 03 33 24.6 +0.8**
comp=Z,511nm,1.0s,mb6.0,baz=50,slow=5.9,SNR=254
VRAC S S 03 42 13.2 +1.4
comp=Z,4.0nm,0.8s,baz=151,slow=22,SNR=7.7
VRAC Vranov 72.58 322 ⇑*iP* **P 03 33 24.4 +0.6**
CHMT Chamberlain Mo 72.59 41 *eP* **P 03 33 23.8 -0.1**
PVL Pavlikeni 72.61 313 *iP* **P 03 33 24.7 +0.7**
CLL Collm 72.64 325 ⇓*iP* **P 03 33 24.3 +0.2**
comp=Z,895nm,1.0s,mb6.2
CLL *iP pP pP 03 35 00.4 +0.9
CLL *eS S 03 42 13.0 +0.6
CLL *eSKS 03 42 47.0
CLL *eP'P' 04 00 54.0
CLL Collm 72.64 325 ⇓*iP* **P 03 33 24.3 +0.2**
CLL *i* *PP pP 03 35 00.4 +0.9
CLL *eS S 03 42 13.0 +0.6
CLL *e* 03 42 47.0
CLL pmax pmax
comp=Z,895nm,1.0s,mb6.2
CLL Collm 72.64 325 ⇓*iP* **P 03 33 24.3 +0.2**
comp=Z,895nm,1.0s,mb6.2
CLL *ePlp 03 33 29.0
comp=Z,400nm,23.7s
CLL *iP pP pP 03 35 00.4 +0.9
CLL *esP sP 03 35 48.0 +1.9
CLL *e*(sPcP) 03 36 02.0
CLL *iPP PP 03 36 11.0 -1.3
comp=Z,127nm,1.0s
CLL *epPP 03 37 37.0
CLL *ePPP 03 37 55.0
CLL *eS S 03 42 13.0 +0.6
comp=N,400nm,20.6s
CLL *eS S 03 42 13.0 +0.6
comp=E,2µm,25.7s
CLL *ex x 03 42 38.0
CLL *eSKSac SKSac 03 42 47.0 +1.1
CLL *esPS 03 45 30.0
CLL *e*(SS) 03 46 54.0
CLL *esSS 03 49 35.0
CLL *ex x 03 49 55.0
CLL *eSSS 03 50 23.0
CLL *ex x 03 51 17.0
CLL *e*(SSSS) 03 52 26.0
CLL *ex x 03 53 02.0
comp=Z,1µm,24.6s
CLL *ex x 04 00 54.0
CLL *epSKKSdf 04 01 40.0
CLL *ex x 04 03 48.0
CLL *iSKPPKPbc 04 04 00.6
comp=Z,46nm,1.7s
CLL Collm 72.64 325 ⇓*iP* **P 03 33 24.3 +0.2**
comp=Z,901nm,1.0s,mb6.2
CLL *epP pP 03 35 00.5 +1.0
CLL *ePP PP 03 36 11.5 -0.8
CLL *eS S 03 42 12.2 -0.2
CLL *eSKSac SKSac 03 42 43.5 -2.4
CLL *esS sS 03 45 05.4 +3.1
CLL *eSSS 03 50 29.8
CLL *eSSSS 03 52 56.9
CLL *ePKPPKPdf 04 00 53.6
CLL *eSKPPKPdf 04 03 53.0
CRAR CRAIOVA 72.65 315 P **P 03 33 24.6 +0.3**
CRAR CRAIOVA 72.65 315 ⇓*iP* **P 03 33 24.4 +0.1**
MLA1 Latheron 72.67 338 *eP* **P 03 33 23.7 -0.4**
O03C Acorn Hollow, 72.74 51 ⇓P **P 03 33 24.5 -0.3**
baz=72,SNR=53
H11A Donnelly 72.78 44 ⇑P **P 03 33 24.6 -0.4**
baz=72,SNR=252
H11A ⇑S S 03 42 14.7 +0.5
baz=72
EDRB Edirne 72.78 311 P **P 03 33 22.0 -3.1**
SMOL Smolenice 72.78 321 *iP* **P 03 33 26.0 +1.0**
BUD Budapest 72.78 320 ⇓*eP* **P 03 33 25.9 +0.9**
BHL Bhannes 72.80 300 *eP* **P 03 33 25.1 -0.3**
I10A Payette 72.80 45 ⇓P **P 03 33 25.7 +0.6**
baz=72,SNR=293
M06C Likely Place G 72.80 49 ⇓P **P 03 33 25.7 +0.5**
baz=72,SNR=46
HOPS Hopland 72.81 53 ⇑*iP* **P 03 33 25.1 -0.2**
comp=Z,479nm,1.1s,mb5.9
HOPS *ePcP PcP 03 33 39.8 0.0
HOPS *ePP PP 03 36 19.6 +5.4
HOPS Hopland 72.81 53 ⇑P **P 03 33 25.2 -0.1**
baz=73,SNR=56
HOPS ⇑S S 03 42 14.8 0.0
baz=73
J09A Fry Pan Ranch, 72.81 46 ⇓P **P 03 33 26.0 +0.7**
baz=72,SNR=670
J09A ⇓S S 03 42 14.1 -0.5
baz=72
E14A Clinton 72.83 42 ⇑P **P 03 33 25.4 +0.1**
baz=72,SNR=485
E14A ⇑S S 03 42 14.3 -0.4
baz=72
SHUT Suhut-Afyon 72.84 307 P **P 03 33 26.1 +0.6**
K08A Mann Creek Ran 72.85 47 ⇑P **P 03 33 25.8 +0.4**
baz=73,SNR=339
K08A ⇓S S 03 42 15.1 +0.1
baz=73
KRUC Moravsky 72.85 322 P **P 03 33 26.0 +0.7**
BZS Buzias 72.85 317 P **P 03 33 25.7 +0.3**
BZS Buzias 72.85 317 ⇓*iP* **P 03 33 25.3 -0.1**
D15A Lincoln 72.86 41 ⇑P **P 03 33 25.5 +0.1**
baz=73,SNR=281
D15A ⇓S S 03 42 15.3 +0.3
baz=73
F13A Darby 72.86 43 ⇓P **P 03 33 24.8 -0.7**
baz=73,SNR=128
F13A ⇓S S 03 42 13.9 -1.2
baz=73
L07A Adell 72.87 48 ⇓P **P 03 33 26.3 +0.7**
baz=73,SNR=343
L07A ⇓S S 03 42 15.3 -0.1
baz=73
NRDL Niedersach Rie 72.90 328 *eP* **P 03 33 25.9 +0.3**
comp=Z,606nm,1.1s,mb6.0
NRDL *epP pP 03 35 02.2 +1.2
MODS Modra-Piesok 72.95 321 *iP* **P 03 33 27.2 +1.3**
MODS *epP pP 03 35 03.1 +1.7
MODS *ePP PP 03 36 17.7 +2.7
MODS *eS S 03 42 15.1 -0.9

RCY Rachaya 72.96 300 *eP* **P 03 33 26.4 +0.1**
PRA Prague 72.97 324 ⇓P **P 03 33 27.0 +1.0**
PRA pP pP 03 35 02.0 +0.6
PRA PP PP 03 36 17.0 +2.0
PRA *ex* x 03 42 26.0
WVOR Wild Horse Val 72.97 47 ⇑*iP* **P 03 33 26.4 +0.3**
comp=Z,425nm,1.0s,mb5.9
WVOR Wild Horse Val 72.97 47 P **P 03 33 26.4 +0.2**
WVOR pmax pmax
comp=Z,420nm,1.0s,mb5.9
PRU Pruhonice 72.98 324 ⇓*iP* **P 03 33 26.7 +0.6**
PRU *e* pP 03 35 03.3 +1.8
PRU *e* 03 36 17.4
PRU *eS S 03 42 16.4 +0.2
PRU *e* 03 45 11.1
PRU Pruhonice 72.98 324 ⇓*iP* **P 03 33 26.7 +0.6**
PRU *e* pP 03 35 03.3 +1.8
PRU *e* 03 36 17.4
PRU *eS S 03 42 16.4 +0.2
PRU Pruhonice 72.98 324 ⇓*iP* **P 03 33 26.7 +0.6**
PRU *epP pP 03 35 03.3 +1.8
PRU *ePP PP 03 36 17.4 +2.2
PRU *eS S 03 42 16.4 +0.2
PRU *eXS sS 03 45 11.1 +4.8
PRU *ePKPPKP 04 00 49.8
PRU *ex* x 04 03 49.7
ELFS Eagle Lake Fie 73.06 50 ⇓P **P 03 33 27.1 +0.4**
baz=73,SNR=40
ELFS ⇓S S 03 42 16.8 -0.6
baz=73
O04C Chester 73.06 50 ⇑P **P 03 33 27.2 +0.5**
baz=73,SNR=342
O04C ⇑S S 03 42 17.4 0.0
baz=73
TREC Trest 73.08 323 ⇓*iP* **P 03 33 27.3 +0.6**
TREC *e* pP 03 35 03.3 +1.1
TREC *eS S 03 42 18.2 +0.8
TREC Trest 73.08 323 ⇓*iP* **P 03 33 27.3 +0.6**
TREC *epP pP 03 35 03.3 +1.1
TREC *eS S 03 42 18.2 +0.8
TREC *ex* x 04 03 59.5
GDZ Gediz 73.10 308 ⇓*iP* **P 03 33 27.1 +0.1**
RSC Scourie 73.12 339 *eP* **P 03 33 26.1 -0.6**
ASF Jabal al Asfar 73.13 298 P **P 03 33 27.5 +0.2**
ASF *PP pP 03 35 04.2 +1.4
ASF 03 36 15.3
comp=Z,175nm,1.0s
ASF Jabal al Asfar 73.13 298 P **P 03 33 27.5 +0.2**
comp=Z,175nm,1.0s,mb5.5,baz=275,slow=2.7,SNR=187
ASF pP pP 03 35 04.2 +1.4
comp=Z,27nm,0.9s,baz=104,slow=5.5,SNR=2.4
ASF PP PP 03 36 15.3 -1.7
comp=Z,54nm,1.0s,baz=305,slow=3.4,SNR=7.1
BNT Bandirma 73.14 310 P **P 03 33 27.5 +0.3**
MRMT Marmara Adasi 73.15 310 P **P 03 33 26.9 -0.4**
ZST Bratislava 73.16 321 *iP* **P 03 33 28.3 +1.1**
comp=Z,393nm,1.3s,mb5.8
ZST *e* pP 03 35 04.1 +1.4
ZST *ePP PP 03 36 19.5 +2.8
ZST *eS S 03 42 20.1 +1.8
ZST Bratislava 73.16 321 *iP* **P 03 33 28.3 +1.1**
ZST *e* pP 03 35 04.1 +1.4
ZST *e* 03 36 19.5
ZST *eS S 03 42 20.1 +1.8
ZST pmax pmax
comp=Z,393nm,1.3s,mb5.8
EDC Edincik 73.18 310 P **P 03 33 27.3 -0.1**
MFT Murefte 73.20 310 P **P 03 33 27.7 +0.2**
MVH1 Achvaich 73.22 338 *eP* **P 03 33 26.8 -0.5**
E15A Deer Lodge 73.24 41 ⇓P **P 03 33 27.8 +0.2**
baz=73,SNR=361
E15A ⇓S S 03 42 18.3 -0.9
baz=73
DST Dursunbey 73.25 309 P **P 03 33 27.8 0.0**
MCD Coleburn Disti 73.25 337 *eP* **P 03 33 27.4 -0.1**
MNRC McLaughlin Nat 73.25 52 ⇑P **P 03 33 28.6 +0.7**
baz=73,SNR=198
K09A Rome 73.28 47 ⇓P **P 03 33 28.3 +0.4**
baz=73,SNR=283
J10A Berg Farm, Mel 73.28 46 ⇑P **P 03 33 27.7 -0.2**
baz=73,SNR=66
L08A Fields 73.30 48 ⇑P **P 03 33 28.6 +0.6**
baz=73,SNR=121
L08A ⇑S S 03 42 19.8 -0.2
baz=73
DIM Dimitrovgrad 73.30 312 *iP* **P 03 33 29.0 +0.9**
CLZ Clausthal 73.30 327 *eP* **P 03 33 28.6 +0.7**
CLZ *e*PP pP 03 35 05.0 +1.5
CLZ pmax pmax
comp=Z,1µm,1.2s,mb6.3
CLZ Clausthal 73.30 327 *eP* **P 03 33 28.6 +0.7**
comp=Z,1µm,1.2s,mb6.3
CLZ *epP pP 03 35 05.0 +1.5
F14A Wisdom 73.32 42 ⇑P **P 03 33 28.3 +0.1**
baz=73,SNR=244
F14A ⇓S S 03 42 20.2 +0.1
baz=73
SART Tekirdag 73.33 310 ⇓*iP* **P 03 33 28.5 +0.3**
RKY Sarkoy-Tekirda 73.33 310 P **P 03 33 29.0 +0.8**
ISP Isparta 73.34 306 P **P 03 33 27.9 -0.5**
ISP Isparta 73.34 306 *eP* **P 03 33 28.0 -0.4**
ISP Isparta 73.34 306*d* *iP* **P 03 33 27.9 -0.5**
ISP Isparta 73.34 306 ⇓*iP* **P 03 33 27.6 -0.8**
ORV Oroville 73.34 51 ⇑P **P 03 33 27.4 -0.9**
baz=73,SNR=91
ORV ⇓S S 03 42 19.5 -1.1
baz=73
REB Eisgnbrachaidh 73.35 339 *eP* **P 03 33 26.7 -1.4**
RTO Tolsta 73.37 339 *eP* **P 03 33 27.3 -0.8**
M07A Soldier Meadow 73.40 49 ⇑P **P 03 33 29.3 +0.7**
baz=73,SNR=184
M07A ⇓S S 03 42 20.0 -1.2
baz=73
O05C Quincy 73.40 51 ⇓P **P 03 33 28.7 0.0**
baz=73,SNR=151
O05C ⇓S S 03 42 20.2 -1.0
baz=73
SUTB Sutter Butte 73.40 52 ⇓P **P 03 33 27.8 -0.9**
baz=73
SUTB ⇓S S 03 42 20.6 -0.6
baz=73
NSHM Saint Helena R 73.40 53 *eP* **P 03 33 28.9 +0.2**
G13A Cobalt 73.41 43 ⇓P **P 03 33 27.7 -0.9**
baz=73,SNR=150
EGMT Eagleton 73.44 39 ⇑*iP* **P 03 33 28.7 0.0**
comp=Z,837nm,0.8s,mb6.3
EGMT Eagleton 73.44 39 ⇓P **P 03 33 28.7 0.0**
baz=73,SNR=298
EGMT ⇑S S 03 42 21.5 +0.1
baz=73
N06A Buffalo Meadow 73.47 49 ⇑P **P 03 33 29.4 +0.4**
baz=73,SNR=235
N06A ⇓S S 03 42 21.4 -0.6
baz=73
H12A Diamond D Ranc 73.48 44 ⇓P **P 03 33 29.3 +0.3**
baz=73,SNR=1000
H12A ⇓S S 03 42 22.4 +0.5
baz=73
BTOK Tokmak 73.48 309 ⇓*iP* **P 03 33 29.3 +0.2**
MAMC Mammari 73.48 303 P PcP 03 33 42.9 +0.2
MCCM Marconi Confer 73.49 53 ⇑*iP* **P 03 33 29.0 -0.2**
comp=Z,394nm,0.7s,mb6.0
MCCM Marconi Confer 73.49 53 ⇓P **P 03 33 28.7 -0.5**
baz=73,SNR=24
MCCM ⇓S S 03 42 21.6 -0.7
baz=73
OHCM Honcut 73.50 51 *eP* **P 03 33 29.4 +0.1**
MMAI Mount Meron Ar 73.53 300 P **P 03 33 29.9 +0.3**
comp=Z,96nm,0.6s,mb5.6,baz=46,slow=7.3,SNR=259
TANN Tannenbergstha 73.54 325 *eP* **P 03 33 29.9 +0.6**
comp=Z,515nm,1.4s,mb6.0
TANN *epP pP 03 35 06.4 +1.5
BCK Bucak 73.55 306 P **P 03 33 28.7 -0.8**
CSS Prodhromos 73.55 303 P PcP 03 33 43.4 +0.4
comp=Z,6.7nm,0.8s
CSS Prodhromos 73.55 303 P **P 03 33 29.2 -0.4**
CSS Prodhromos 73.55 303 *eP* **P 03 33 29.4 -0.3**
KHL Karahalli 73.59 307 P **P 03 33 29.5 -0.3**
CVS Carmenet Viney 73.60 53 ⇑P **P 03 33 29.6 -0.3**
baz=73,SNR=109
CVS ⇓S S 03 42 23.3 -0.3
baz=73
KDZ Kurdzhali 73.64 312 *iP* **P 03 33 30.0 0.0**

BALB Balikesir 73.65 309 P **P 03 33 30.3 +0.2**
BERN Bernov 73.66 325 ⇓P PcP 03 33 53.0 +10
Q03C Winters 73.67 52 ⇓P **P 03 33 30.9 +0.7**
baz=73,SNR=75
Q03C ⇑S S 03 42 24.9 +0.6
baz=73
K10A MacKenzie Ranc 73.67 46 ⇓P **P 03 33 30.6 +0.4**
baz=73,SNR=563
K10A ⇑S S 03 42 24.0 -0.2
baz=73
G14A Jackson 73.68 43 P **P 03 33 29.8 -0.4**
baz=73,SNR=146
G14A ⇑S S 03 42 23.8 -0.4
baz=73
NKC Novy Kostel 73.69 325 ⇓*iP* **P 03 33 30.6 +0.5**
NKC *epP pP 03 35 07.0 +1.2
NKC *eS S 03 42 23.3 -0.7
PGB Panagyurishte 73.69 313 *iP* **P 03 33 30.0 -0.3**
PLD Plovdiv 73.71 313 *eP* **P 03 33 30.8 +0.3**
PLD Plovdiv 73.71 313 *iP* **P 03 33 31.0 +0.6**
MOX Moxa 73.72 326 ⇓*iP* **P 03 33 30.6 +0.3**
comp=Z,743nm,1.5s,mb6.1
MOX *e* pP 03 35 07.0 +1.0
MOX
comp=Z,400nm,18.0s
MOX Moxa 73.72 326 ⇓*iP* **P 03 33 30.6 +0.3**
MOX *e* pP 03 35 07.0 +1.0
MOX pmax pmax
comp=Z,743nm,1.5s,mb6.1
MOX MLR MLR
comp=Z,400nm,18.0s
MOX Moxa 73.72 326 ⇓*iP* **P 03 33 30.8 +0.5**
comp=Z,671nm,1.3s,mb6.1
MOX *epP pP 03 35 07.3 +1.3
FARB Farallon Islan 73.72 53 ⇑P **P 03 33 29.7 -0.8**
baz=74,SNR=20
FARB ⇓S S 03 42 24.4 -0.5
baz=74
F15A Butte 73.73 42 ⇓P **P 03 33 30.5 0.0**
baz=73,SNR=348
F15A ⇓S S 03 42 24.8 +0.2
baz=73
LRM Limekiln Ridge 73.76 42 *eP* **P 03 33 31.1 +0.5**
H13A Challis 73.77 44 ⇓P **P 03 33 30.6 -0.2**
baz=74,SNR=139
H13A ⇑S S 03 42 24.7 -0.5
baz=74
MFID Camas Ranch 73.78 45 ⇓P **P 03 33 31.4 +0.6**
baz=74,SNR=910
MFID ⇓S S 03 42 25.6 +0.3
baz=74
BEKR Beckwourth 73.78 50 ⇓P **P 03 33 30.9 0.0**
baz=74,SNR=140
LPK Lapseki 73.78 310 P **P 03 33 30.6 -0.2**
L09A Wilkinson Ranc 73.78 47 ⇓P **P 03 33 31.3 +0.5**
baz=74,SNR=152
L09A ⇓S S 03 42 25.4 +0.1
baz=74
M08A Happy Creek Ra 73.79 48 ⇑P **P 03 33 31.5 +0.6**
baz=74,SNR=55
M08A ⇑S S 03 42 24.9 -0.6
baz=74
SOP Sopron 73.79 321 ⇓*eP* **P 03 33 32.1 +1.3**
ALN Alexandroupoli 73.81 311 *eP* **P 03 33 31.2 +0.2**
FORT Forrest 73.81 185 ⇑*iP* **P 03 33 30.5 -0.4**
comp=Z,377nm,0.6s,mb6.2
FORT *eS S 03 42 24.8 -0.9
ENEZ Enez 73.86 311 P **P 03 33 32.0 +0.6**
ALFC Alevga 73.87 303 ⇓P PcP 03 33 44.5 +0.1
comp=Z,8.1nm,1.1s
O06A Flanigan 73.87 50 ⇑P **P 03 33 31.6 +0.2**
baz=74,SNR=273
O06A ⇓S S 03 42 25.6 -0.8
baz=74
ANTB Antalya 73.88 306 P **P 03 33 29.9 -1.6**
PKSM Moragy 73.88 319 ⇑P **P 03 33 30.9 -0.5**
PKSM Moragy 73.88 319 P **P 03 33 31.3 0.0**
PKSM Moragy 73.88 319 ⇑*iP* **P 03 33 30.9 -0.4**
KAC Achnashellach 73.89 338 *eP* **P 03 33 30.1 -1.1**
RRH Rhenigidale 73.89 339 *eP* **P 03 33 30.3 -0.8**
Q04C Lincoln 73.89 52 ⇑P **P 03 33 31.7 +0.1**
baz=74,SNR=42
Q04C ⇑S S 03 42 26.8 0.0
baz=74
RDO Rodhopi 73.92 312 *eP* **P 03 33 32.1 +0.5**
CONA Conrad Observa 73.92 322 *iP* **P 03 33 32.5 +0.9**
SNR=318
N07B Gerlach 73.92 49 ⇑P **P 03 33 32.0 +0.3**
baz=74,SNR=67
N07B ⇓S S 03 42 26.5 -0.5
baz=74
IBBN Ibbenburen 73.95 329 *eP* **P 03 33 31.7 +0.1**
comp=Z,993nm,1.3s,mb6.3
IBBN *epP pP 03 35 08.2 +0.8
IBBN *ePP PP 03 36 20.5 -2.7
SZAC Souni-Zanaja 73.96 303 ⇓P PcP 03 33 45.6 +0.8
KULA Kula-Manisa 73.96 308 P **P 03 33 30.4 -1.6**
RZN Rozhen 73.99 312 *iP* **P 03 33 33.0 +1.0**
BEO Belgrade 74.00 317 P **P 03 33 31.7 -0.3**
P05C Yuba Gap, Truc 74.02 51 ⇓P **P 03 33 32.2 0.0**
baz=74,SNR=70
P05C ⇓S S 03 42 27.3 -0.8
baz=74
DLMT Dillon 74.02 42 ⇑*iP* **P 03 33 33.1 +0.9**
comp=Z,1µm,0.6s,mb6.8
DLMT *epP pP 03 35 09.5 +1.5
KHC Kasperske Hory 74.04 324 ⇓*iP* **P 03 33 32.6 +0.4**
KHC *e* pP 03 35 09.4 +1.4
KHC *eS S 03 42 29.2 +1.2
KHC Kasperske Hory 74.04 324 ⇓*iP* **P 03 33 32.6 +0.4**
KHC *epP pP 03 35 09.4 +1.4
KHC *ex* x 03 36 03.5
KHC *eS S 03 42 29.2 +1.2
KHC *ex* x 04 03 47.0
MANT Manisa 74.04 308 ⇓*iP* **P 03 33 32.4 +0.1**
K11A Parker Ranch, 74.12 46 ⇑P **P 03 33 33.2 +0.4**
baz=74,SNR=257
AKMC Akamas 74.12 303 ⇓P PcP 03 33 46.4 +0.9
KPL Plockton 74.13 338 *eP* **P 03 33 32.3 -0.2**
KPL AMb AMB 03 33 34.9
comp=Z,876nm,1.4s,mb6.2
ROTZ Rotzenmuhle 74.14 325 *eP* **P 03 33 33.6 +0.9**
comp=Z,899nm,1.3s,mb6.2
ROTZ *epP pP 03 35 10.2 +1.6
ROTZ *ePP PP 03 36 26.4 +1.5
SAC San Andreas 74.14 53 *eP* **P 03 33 33.0 0.0**
P06A Stead Airport, 74.16 50 ⇓P **P 03 33 33.4 +0.3**
baz=74,SNR=75
P06A ⇓S S 03 42 29.1 -0.5
baz=74
VTS Vitosha 74.17 314 *eP* **P 03 33 33.8 +0.8**
VTS Vitosha 74.17 314 *iP* **P 03 33 33.0 0.0**
VTS Vitosha 74.17 314 ⇑*iP* **P 03 33 33.6 +0.6**
KSB Sheil Bridge 74.18 338 *eP* **P 03 33 31.7 -1.1**
GEC2 GERESS Array S 74.20 323 *eP* **P 03 33 33.5 +0.4**
GEC2 *e**PP pP 03 35 10.2 +1.3
GEC2 *e* 03 36 27.7
GEC2 pmax pmax
comp=Z,414nm,1.1s,mb6.0
GEC2 GERESS Array S 74.20 323 *eP* **P 03 33 33.5 +0.4**
comp=Z,414nm,1.1s,mb6.0
GEC2 *epP pP 03 35 10.2 +1.3
GEC2 *ePP PP 03 36 27.7 +2.3
GERES GERESS Array B 74.20 323 P **P 03 33 33.4 +0.3**
GERES pP pP 03 35 09.6 +0.7
GERES PP PP 03 36 25.0 -0.4
GERES S S 03 42 31.3 +1.5
GERES ScS ScS 03 42 59.7 -1.7
GERES PKKPbc PKKPbc 03 52 56.5 -0.4
GERES ⇑*e* 04 00 51.9
GERES GERESS Array B 74.20 323 P **P 03 33 33.4 +0.3**
GERES *PP pP 03 35 09.6 +0.7
GERES 03 36 25.0
GERES S S 03 42 31.3 +1.6
GERES 03 42 59.7
GERES pmax pmax
comp=Z,188nm,0.9s
GERES smax
comp=N,9.0nm,1.3s
GERES GERESS Array B 74.20 323 P **P 03 33 33.4 +0.3**
comp=N,188nm,0.9s,mb5.7,baz=44,slow=4.4,SNR=359
GERES pP pP 03 35 09.6 +0.7
comp=N,35nm,1.0s,baz=36,slow=5.0,SNR=4.6
GERES PP PP 03 36 25.0 -0.4
comp=N,50nm,1.0s,baz=45,slow=7.7,SNR=6.7

GERES S S 03 42 31.3 +1.5
comp=N,9.1nm,1.3s,baz=21,slow=17,SNR=3.9
GERES ScS ScS 03 42 59.7 -1.6
comp=N,3.6nm,0.9s,baz=52,slow=9.2,SNR=3.9
GERES PKKPbc PKKPbc 03 52 56.5 -0.4
comp=N,0.7nm,0.7s,baz=222,slow=1.8,SNR=3.9
GERES PKP2bc 04 00 51.9
comp=N,2.4nm,1.1s,baz=207,slow=1.5,SNR=5.7
GERES tx tx 04 03 45.5
comp=N,1.6nm,0.9s,baz=194,slow=2.8,SNR=6.4
AKHS Akhisar 74.20 309⇓*i*P P 03 33 32.8 -0.5
AKS Akhisar 74.20 309 P P 03 33 30.1 -3.2
PPCY Paphos 74.21 303 ⇓P PcP 03 33 46.9 +1.1
BDM Black Diamond 74.21 53 ⇓P P 03 33 33.5 +0.1
baz=74,SNR=20
BDM ⇓S S 03 42 30.1 -0.2
baz=74
G15A Dillon 74.22 42 ⇓P P 03 33 33.8 +0.6
baz=74,SNR=1000
G15A ⇓S S 03 42 29.3 -0.8
baz=74
UBBA Unterbreizbach 74.24 327 *e*P P 03 33 33.5 +0.2
comp=Z,736nm,1.6s,mb6.1
UBBA *e*pP pP 03 35 10.2 +1.1
DENT Denizli 74.26 307 P P 03 33 34.1 +0.4
J12A Stokes Ranch, 74.27 45 ⇓P P 03 33 34.0 +0.4
baz=74,SNR=202
J12A ⇑S S 03 42 30.3 -0.5
baz=74
MCMT McKenzie Canyo 74.28 43 *e*P P 03 33 34.1 +0.4
BOZ Bozeman (W) 74.29 41⇑*i*P P 03 33 34.1 +0.5
comp=Z,515nm,0.8s,mb6.2
BOZ *e*pP pP 03 35 11.1 +1.6
BOZ Bozeman (W) 74.29 41⇑*i*P P 03 33 34.1 +0.5
BOZ *e**PP pP 03 35 11.1 +1.6
BOZ pmax pmax
comp=Z,515nm,0.8s,mb6.2
BOZ Bozeman (W) 74.29 41 P P 03 33 34.3 +0.7
baz=74,SNR=814
BOZ ⇑S S 03 42 30.3 -0.5
baz=74
I13A Wildhorse Cree 74.30 44 P P 03 33 34.5 +0.7
baz=74,SNR=1000
I13A ⇓S S 03 42 31.9 +0.8
baz=74
GOLH Golhisar 74.30 306⇓*i*P P 03 33 33.6 -0.3
M09A Marrel Ranch, 74.31 48 ⇓P P 03 33 34.6 +0.7
baz=74,SNR=94
LAVA Lava Cap Winer 74.32 51 ⇓P P 03 33 33.7 -0.3
baz=74,SNR=116
WET Wettzell 74.33 324 *e*P P 03 33 34.7 +0.9
WET *e**PP pP 03 35 11.4 +1.7
WET *e* 03 36 28.9
WET pmax pmax
comp=Z,614nm,1.1s,mb6.2
WET Wettzell 74.33 324 *e*P P 03 33 34.7 +0.9
comp=Z,614nm,1.1s,mb6.2
WET *e*pP pP 03 35 11.4 +1.7
WET *e*PP PP 03 36 28.9 +2.4
JRSC Jasper Ridge 74.37 53 ⇑P P 03 33 33.8 -0.5
baz=74,SNR=58
L10A Juniper Basin 74.38 47 ⇓P P 03 33 35.0 +0.7
baz=74,SNR=315
L10A ⇑S S 03 42 32.3 +0.4
baz=74
GADA Gvkgeada 74.38 311 P P 03 33 34.5 +0.2
N08A GE Springer Mi 74.38 48 ⇑P P 03 33 34.6 +0.3
baz=74,SNR=207
N08A ⇑S S 03 42 31.8 -0.2
baz=74
EZN Ezine 74.39 310 P P 03 33 32.2 -2.1
HLID Hailey 74.40 44⇑*i*P P 03 33 35.1 +0.8
comp=Z,428nm,1.2s,mb6.0
HLID Hailey 74.40 44 ⇓P P 03 33 34.8 +0.5
baz=74,SNR=352
HLID ⇓S S 03 42 32.4 +0.3
baz=74
O07A Toulon 74.40 49 ⇑P P 03 33 35.0 +0.6
baz=74,SNR=59
O07A ⇓S S 03 42 31.7 -0.6
baz=74
ELL Elmali 74.43 306 P P 03 33 34.6 0.0
PAHR Pah Rah Range 74.43 50⇑*i*P P 03 33 34.6 0.0
comp=Z,1μm,1.0s,mb6.5
PAHR *e*pP pP 03 35 12.1 +1.6
ESY Stoneypath 74.49 336 *e*P P 03 33 34.4 -0.2
WCN Washoe City 74.50 50 ⇓P P 03 33 35.4 +0.4
baz=74,SNR=55
WCN ⇓S S 03 42 32.9 -0.5
baz=74
WENL Wente Brothers 74.50 53 ⇓P P 03 33 35.0 0.0
baz=74,SNR=46
WENL ⇓S S 03 42 33.4 -0.1
baz=74
BOZC Bozcaada 74.54 310⇓*i*P P 03 33 35.0 -0.2
KAR1 Arisaig 74.54 338 *e*P P 03 33 34.0 -0.8
R04C Big Horse Ranc 74.54 52 ⇓P P 03 33 34.7 -0.5
baz=74,SNR=12
R04C ⇑S S 03 42 32.6 -1.3
baz=74
AYVA Ayvalik 74.55 310⇓*i*P P 03 33 35.0 -0.3
ARSA Arzberg 74.58 321 *i*P P 03 33 35.9 +0.7
comp=Z,1μm,1.6s,mb6.3,SNR=152
WTSB Winterswijk 74.59 329⇓*i*P P 03 33 35.4 +0.1
comp=Z,815nm,1.8s,mb6.0
BNLO Ben Lomond (Sa 74.59 53 ⇑P P 03 33 35.1 -0.4
baz=74,SNR=70
BNLO ⇑S S 03 42 32.9 -1.6
baz=74
MMB Musomiste 74.59 313 *i*P P 03 33 36.0 +0.6
GRA1 Grafenberg Arr 74.61 325 *e*P P 03 33 36.4 +1.0
comp=Z,2μm,1.1s,mb6.6
GRA1 *e*pP pP 03 35 13.1 +1.7
GRA1 *e*sP sP 03 35 56.4 -1.5
GRA1 *e*PP PP 03 36 30.0 +1.2
GRF Grafenberg Arr 74.61 325 *e*P P 03 33 36.4 +1.0
GRF *e**PP pP 03 35 13.1 +1.7
GRF *e**SP sP 03 35 56.4 -1.5
GRF *e* 03 36 30.0
GRF pmax pmax
comp=Z,2μm,1.1s,mb6.6
GRF Grafenberg Arr 74.61 325 *e*P P 03 33 36.4 +1.0
GRF *e**PP pP 03 35 13.1 +1.7
GRF *e**SP sP 03 35 56.4 -1.5
GRF *e* 03 36 30.0
GRF pmax pmax
comp=Z,2μm,1.1s,mb6.6
GRF Grafenberg Arr 74.61 325 *e*P P 03 33 36.4 +1.0
comp=Z,2μm,1.1s,mb6.6
GRF *e*pP pP 03 35 13.1 +1.7
GRF *e*sP sP 03 35 56.4 -1.5
GRF *e*PP PP 03 36 30.0 +1.2
GRFO Grafenberg 74.61 325⇓*i*P P 03 33 36.3 +0.9
comp=Z,2μm,1.3s,mb6.5
GRFO *e*pP pP 03 35 12.9 +1.6
GRFO Grafenberg 74.61 325⇓*i*P P 03 33 36.3 +0.9
GRFO *e**PP pP 03 35 12.9 +1.5
GRFO pmax pmax
comp=Z,2μm,1.3s,mb6.5
J13A Cove Ranch, Pi 74.64 44 ⇑P P 03 33 36.9 +1.2
baz=74,SNR=869
J13A ⇓S S 03 42 34.2 -0.5
baz=74
EDI Edinburgh 74.66 336 *e*P P 03 33 35.7 +0.1
EDI AMb AMb 03 33 37.8
comp=Z,323nm,1.4s,mb5.8
N09A Rock Creek Ran 74.67 48 ⇑P P 03 33 36.3 +0.4
baz=74,SNR=89
N09A ⇑S S 03 42 34.0 -1.1
baz=74
NVR Nevrokopi 74.69 313 *e*P P 03 33 36.3 +0.3
MOA Molln 74.70 322 *i*P P 03 33 36.4 +0.4
comp=Z,1μm,2.0s,mb6.2,SNR=68
O08A Rochester Mine 74.71 49 ⇓P P 03 33 36.8 +0.6
baz=74,SNR=21
BARS Barje 74.73 315 P P 03 33 37.3 +1.1
M10A I.L. Ranch, Tu 74.73 47 ⇑P P 03 33 37.3 +1.0
baz=74,SNR=184
M10A ⇓S S 03 42 35.2 -0.6
baz=74
R05C Kirkwood Meado 74.73 51 ⇑P P 03 33 36.6 +0.3
baz=74,SNR=77
R05C ⇓S S 03 42 35.9 0.0
baz=74
KKB Krupnik 74.74 313 *i*P P 03 33 37.0 +0.7
EBL Broad Law 74.74 336 *e*P P 03 33 35.4 -0.6

XSO Sourhope Farm 74.75 336 *e*P P 03 33 36.2 +0.1
DIVS Divcibare 74.75 317 *e*P P 03 33 36.3 0.0
EAB Aberfoyle 74.76 337 *e*P P 03 33 36.0 -0.2
EAU Auchinoon 74.80 336 *e*P P 03 33 35.9 -0.5
K12A Draper Farm, C 74.81 45 ⇑P P 03 33 37.2 +0.6
baz=74,SNR=642
K12A ⇓S S 03 42 36.8 +0.2
baz=74
P07A Fallon 74.82 50 ⇓P P 03 33 37.5 +0.7
baz=75,SNR=35
P07A ⇑S S 03 42 37.2 +0.3
baz=75
PRK Paraskevi 74.82 310 *e*P P 03 33 36.5 -0.3
BUG Bochum--Univer 74.83 328 *e*P P 03 33 36.7 +0.1
comp=Z,829nm,1.2s,mb6.2
BUG *e*pP pP 03 35 13.6 +1.0
BUG *e*sP sP 03 35 57.9 -1.2
BUG *e*PP PP 03 36 28.5 -2.0
S04C Ingram Canyon, 74.83 53 ⇓P P 03 33 36.8 -0.1
baz=75,SNR=17
S04C ⇑S S 03 42 36.1 -1.0
baz=75
KDAG Bornova 74.84 309⇓*i*P P 03 33 36.6 -0.3
KOGS Kog 74.84 320 P P 03 33 36.6 -0.2
IZM Izmir 74.85 309 P P 03 33 37.0 0.0
QLMT Earthquake Lak 74.98 42 *e*P P 03 33 38.2 +0.6
LIA Limnos Island 74.98 311 *e*P P 03 33 40.3 +2.6
BLCB Balcova 74.98 309 P P 03 33 36.4 -1.3
BLCB Balcova 74.98 309 *e*P P 03 33 37.4 -0.3
FETY Fethiye 74.99 306 P P 03 33 37.2 -0.6
SRS Serrai 75.00 313 *e*P P 03 33 37.5 -0.2
LOS Limnos 75.01 311 P P 03 33 38.2 +0.4
CMB Columbia Colle 75.01 52 ⇓P P 03 33 37.8 -0.1
baz=75,SNR=75
CMB ⇑S S 03 42 38.3 -0.7
baz=75
L12A House Creek Ra 75.09 46 P P 03 33 39.1 +0.9
baz=75,SNR=326
L12A ⇓S S 03 42 40.1 +0.3
baz=75
STKA Stephens Creek 75.10 173⇑*i*P P 03 33 38.4 +0.2
comp=Z,324nm,0.6s,mb6.1
STKA *i* S S 03 42 41.0 +1.2
STKA *i* sS sS 03 45 30.3 -1.0
STKA Stephens Creek 75.10 173 P P 03 33 38.5 +0.2
comp=Z,442nm,0.7s,mb6.2,baz=344,slow=7.5
STKA S S 03 42 41.2 +1.4
comp=Z,3.9nm,1.0s,baz=124,slow=21,SNR=5.0
STKA tx tx 04 03 42.9
comp=Z,3.6nm,1.0s,baz=74,slow=1.8,SNR=3.6
GCMT Greycliff 75.12 40 *e*P P 03 33 39.2 +0.8
YER Yerkesik 75.12 307 P P 03 33 39.3 +0.8
PGBU Glenifferbraes 75.13 337 *e*P P 03 33 37.6 -0.6
PGBU AMb AMb 03 33 40.1
comp=Z,1μm,1.1s,mb6.5
ARMA Armidale 75.15 164⇑*i*P P 03 33 39.4 +0.9
EKA Eskdalemuir Ar 75.15 336 PKKPbc PKKPbc 03 52 53.7 -1.5
comp=Z,2.0nm,0.9s,baz=357,slow=1.7,SNR=8.8
DALT Dalyan (Mudla) 75.16 307 P P 03 33 39.1 +0.3
P08A Dixie Valley 75.17 49 ⇑P P 03 33 39.7 +1.0
baz=75,SNR=23
P08A ⇓S S 03 42 41.0 +0.4
baz=75
GROS Grobnik 75.18 321⇓*i*P P 03 33 38.9 +0.2
ESK Eskdalemuir 75.18 336 *e*P P 03 33 38.6 +0.1
ESK AMb AMb 03 33 40.2
comp=Z,476nm,1.4s,mb5.9
ESK Eskdalemuir 75.18 336⇓*i*P P 03 33 38.5 0.0
comp=Z,383nm,1.1s,mb5.9
ESK *e*pP pP 03 35 15.7 +1.1
ESK Eskdalemuir 75.18 336 *e*P P 03 33 37.9 -0.6
ESK *e* pP 03 35 16.2 +1.6
ESK pmax pmax
comp=Z,380nm,1.1s,mb5.9
M11A Holland Ranch, 75.19 47 P P 03 33 40.2 +1.4
baz=75,SNR=212
M11A ⇑S S 03 42 41.3 +0.4
baz=75
PACP Pacheco Peak 75.19 53 ⇑P P 03 33 39.2 +0.3
baz=75,SNR=89
PACP ⇑S S 03 42 41.2 +0.2
baz=75
R06C Coleville 75.21 51 ⇑P P 03 33 39.7 +0.7
baz=75,SNR=38
R06C ⇓S S 03 42 41.7 +0.5
baz=75
BISS Bistriski jare 75.21 321⇓*i*P P 03 33 39.3 +0.5
K13A Stover Farm, H 75.22 45 P P 03 33 40.0 +1.0
baz=75,SNR=158
K13A ⇑S S 03 42 41.2 +0.1
baz=75
PERS Pernice 75.22 321 *i* P P 03 33 39.5 +0.6
PERS *i* pP pP 03 35 16.4 +1.4
PERS *e*S S 03 42 40.9 -0.1
WAKR Walker 75.23 51 *e*P P 03 33 40.4 +1.3
URLA Izmir 75.25 309⇓*i*P P 03 33 38.8 -0.4
SAO San Andreas Ge 75.27 53⇑*i*P P 03 33 39.0 -0.4
comp=Z,430nm,1.3s,mb5.9
SAO San Andreas Ge 75.27 53⇑*i*P P 03 33 39.0 -0.3
SAO pmax pmax
comp=Z,430nm,1.3s,mb5.9
XAL Allendale 75.27 335 *e*P P 03 33 38.5 -0.6
Q07A Schurz 75.29 50 ⇓P P 03 33 39.8 +0.4
baz=75,SNR=9.9
Q07A ⇑S S 03 42 41.9 -0.1
baz=75
MLSB Milas 75.31 307 P P 03 33 40.3 +0.7
N10A Dunphy 75.31 48 ⇓P P 03 33 40.3 +0.8
baz=75,SNR=40
N10A ⇓S S 03 42 42.0 -0.2
baz=75
YMR Madison River 75.32 42⇑*i*P P 03 33 40.2 +0.7
comp=Z,490nm,0.8s,mb6.2
O09A Fish Creek Ran 75.32 48 P P 03 33 40.5 +0.9
baz=75,SNR=92
O09A ⇑S S 03 42 41.9 -0.5
baz=75
TNS Taunus Mts 75.33 327 *e*P P 03 33 39.9 +0.5
TNS *e**PP pP 03 35 16.9 +1.3
TNS pmax pmax
comp=Z,541nm,1.2s,mb6.0
TNS Taunus Mts 75.33 327 *e*P P 03 33 39.9 +0.5
comp=Z,541nm,1.2s,mb6.0
TNS *e*pP pP 03 35 16.9 +1.3
SOH Sokhos 75.33 313 *e*P P 03 33 39.2 -0.5
OUR Ouranopolis 75.33 312 *e*P P 03 33 39.5 -0.2
KNT Kendrikon 75.34 313 *e*P P 03 33 39.6 0.0
STIP Stip 75.34 314 *e*P P 03 33 39.2 -0.5
STIP Stip 75.34 314⇓*i*P P 03 33 39.3 -0.3
STIP *i* 03 33 43.5
VAY Valandovo 75.40 313 *e*P P 03 33 39.9 -0.1
VAY Valandovo 75.40 313⇓*i*P P 03 33 39.9 -0.1
VAY *i* 03 33 44.9
VAY *i* PP pP 03 35 15.8 -0.4
VAY *i* 1 sP 03 36 02.9 +0.3
S06C San Francisco 75.42 52 ⇓P P 03 33 40.1 -0.1
baz=75,SNR=75
S06C ⇓S S 03 42 43.5 0.0
baz=75
YNR Norris Junctio 75.43 42⇑*i*P P 03 33 41.2 +1.1
HAST UC Hastings Re 75.46 54 P P 03 33 40.4 0.0
baz=75,SNR=116
HAST ⇓S S 03 42 43.4 -0.6
baz=75
SISC Sisak 75.51 320 P P 03 33 40.8 +0.3
S05C Merced 75.52 52 P P 03 33 40.6 -0.1
baz=75,SNR=77
S05C ⇓S S 03 42 43.8 -0.7
baz=75
SKO Skopje 75.53 314 *e*P P 03 33 41.9 +1.2
SKO Skopje 75.53 314⇓*i*P P 03 33 42.1 +1.4
SKO *i* PP pP 03 35 18.6 +1.7
SKO *i* 1 sP 03 36 05.4 +2.1
CHOS Chios island 75.54 309 *e*P P 03 33 40.8 0.0
SIND Sindeldorf 75.55 326 P P 03 33 40.9 +0.2
YFT Old Faithful 75.55 42⇑*i*P P 03 33 42.9 +2.1
DGMT Dagmar 75.55 36⇑*i*P P 03 33 40.7 0.0
comp=Z,580nm,0.8s,mb6.3
SMG Samos 75.56 308 *e*P P 03 33 40.6 -0.4
OBKA Obir 75.58 321 *i*P P 03 33 41.2 +0.3
comp=Z,1μm,2.2s,mb6.2,SNR=53
PLG Polygyros 75.60 312 *e*P P 03 33 40.8 -0.3
PLG Polygyros 75.60 312 *e*P P 03 33 41.1 0.0
PLE Pljevlja 75.60 317⇓*i*P P 03 33 41.7 +0.6
O10A Cortez Mining, 75.61 48 P P 03 33 42.4 +1.1
baz=75,SNR=116
O10A ⇑S S 03 42 46.4 +0.9
baz=75
HORT Hortiatis 75.63 313 *e*P P 03 33 40.7 -0.6
T05C Eagle Field, D 75.63 53 ⇓P P 03 33 41.9 +0.5
baz=75,SNR=80
N11A Elko Archery C 75.66 47 P P 03 33 42.5 +1.1
baz=75,SNR=75
N11A ⇓S S 03 42 46.2 +0.3
baz=75
BDRM Kayabasi 75.66 307⇓*i*P P 03 33 41.8 +0.3
M12A Wells 75.67 46 ⇓P P 03 33 42.5 +1.0
baz=75,SNR=40
M12A ⇓S S 03 42 46.6 +0.6
baz=75
TOD Tromm 75.67 326⇓*e*P P 03 33 41.5 +0.2
CRES Cresnjev 75.67 320 P P 03 33 41.6 +0.2
LKWY Lake 75.67 41⇑*i*P P 03 33 43.2 +1.8
comp=Z,278nm,0.9s,mb5.9
LKWY Lake 75.67 41⇑*i*P P 03 33 43.3 +1.8
LKWY pmax pmax
comp=Z,278nm,0.9s,mb5.9
THE Thessaloniki 75.67 313 *e*P P 03 33 41.0 -0.6
IVA Berane 75.68 316⇓*i*P P 03 33 40.8 -0.7
KBA Koelnbreinsper 75.69 322 *i*P P 03 33 42.2 +0.7
comp=Z,1μm,1.5s,mb6.4,SNR=180
KBA Koelnbreinsper 75.69 322 *i* P P 03 33 42.2 +0.7
KBA pmax pmax
comp=Z,1μm,1.5s,mb6.4
L13A Double Diamond 75.69 45 ⇑P P 03 33 42.6 +1.0
baz=75,SNR=217
L13A ⇓S S 03 42 46.3 +0.1
baz=75
AFI Afiamalu 75.70 125⇑*i*P P 03 33 42.1 +0.1
comp=Z,884nm,1.5s,mb6.2
AFI *e*pP pP 03 35 22.4 +4.1
AFI Afiamalu 75.70 125⇑*i*P P 03 33 42.1 +0.2
AFI *e**PP pP 03 35 22.4 +4.0
AFI pmax pmax
comp=Z,884nm,1.5s,mb6.2
AFI Afiamalu 75.70 125 P P 03 33 42.2 +0.3
comp=Z,156nm,0.7s,mb5.8,baz=199,slow=3.7,SNR=19
AFI pP pP 03 35 20.4 +2.0
comp=Z,203nm,1.3s,baz=328,slow=8.6,SNR=2.3
BODT Bodrum 75.74 308 P P 03 33 42.2 +0.3
R07C Lee Vining 75.74 51 ⇑P P 03 33 42.7 +0.7
baz=76,SNR=89
R07C ⇑S S 03 42 47.7 +0.9
baz=76
GRG Griva 75.75 313 *e*P P 03 33 41.8 -0.1
K14A Jones Ranch, D 75.76 44 P P 03 33 43.1 +1.1
baz=76,SNR=411
K14A ⇑S S 03 42 47.7 +0.8
baz=76
FUR Furstenfeldbru 75.76 324 *e*P P 03 33 42.6 +0.7
FUR *e* 03 33 52.9
FUR *e**PP pP 03 35 19.8 +1.6
FUR *e* 03 36 41.0
FUR pmax pmax
comp=Z,1μm,1.1s,mb6.5
FUR Furstenfeldbru 75.76 324 *e*P P 03 33 42.6 +0.7
comp=Z,1μm,1.1s,mb6.5
FUR *e*PcP PcP 03 33 52.9 +0.6
FUR *e*pP pP 03 35 19.8 +1.6
FUR *e*PP PP 03 36 41.0 +2.5
P09A Austin 75.78 49 ⇑P P 03 33 42.8 +0.6
baz=76,SNR=37
P09A ⇓S S 03 42 47.3 0.0
baz=76
PAIG Paliouri 75.78 312 *e*P P 03 33 41.5 -0.7
GCD Castle Douglas 75.79 336 *e*P P 03 33 41.4 -0.5
RLMT Red Lodge 75.81 40⇑*i*P P 03 33 42.7 +0.5
comp=Z,419nm,0.7s,mb6.2
DAT Datca 75.81 307 P P 03 33 42.1 -0.3
Q08A Gabbs 75.83 50 ⇑P P 03 33 42.6 +0.1
baz=76,SNR=60
PVY Plav 75.84 316⇓*i*P P 03 33 41.4 -1.0
ARG Arkhangelos 75.84 306 *e*P P 03 33 42.9 +0.3
KLBR Kellerberrin 75.84 194⇑*i*P P 03 33 41.6 -0.8
comp=Z,70nm,0.7s,mb5.4
KLBR *e*S S 03 42 47.2 -0.6
GMK Mull of Kintyr 75.85 337 *e*P P 03 33 41.7 -0.5
HPK Haverah Park 75.86 335 *e*P P 03 33 42.6 +0.3
HPK AMb AMb 03 33 44.8
comp=Z,1μm,1.6s,mb6.3
HDH Heidenheim-Cha 75.89 325 P P 03 33 42.8 +0.2
V03C Hunter Liggett 75.90 54 ⇓P P 03 33 42.9 +0.1
baz=76,SNR=49
V03C ⇑S S 03 42 48.1 -0.6
baz=76
MYKA Terra Mystica 75.90 322⇑*i*P P 03 33 42.4 -0.3
comp=Z,2μm,1.4s,mb6.6
IMW Indian Meadow 75.90 42⇑*i*P P 03 33 44.0 +1.3
comp=Z,635nm,0.8s,mb6.3
NVAR Mina Array Bea 75.92 50 P P 03 33 43.6 +0.6
comp=Z,544nm,0.7s,mb6.3,baz=312,slow=3.8,SNR=143
NVAR tx tx 04 03 38.4
comp=Z,4.0nm,1.0s,baz=125,slow=4.2,SNR=4.4
U04C Hernandez Rese 75.93 53 ⇓P P 03 33 43.3 +0.2
baz=76,SNR=19
U04C ⇓S S 03 42 48.6 -0.4
baz=76
UPM Unac-Piva 75.94 317⇓*i*P P 03 33 42.7 -0.3
LJU Ljubljana 75.94 321 *i*P P 03 33 42.9 0.0
LJU *i* 03 35 47.9
LJU *e**PP pP 03 35 19.3 0.0
LJU *e* 03 36 43.2
LJU *i* S S 03 42 47.3 -1.4
LJU Ljubljana 75.94 321 *i*P P 03 33 42.9 0.0
LJU *i* PcP PcP 03 33 47.9 -5.2
LJU *e*pP pP 03 35 19.3 0.0
LJU *e*PP PP 03 36 43.2 +3.2
LJU *i* S S 03 42 47.3 -1.5
LJU *e*SKSac SKSac 03 43 10.8 +0.3
LJU *e*sS sS 03 45 37.0 -3.4
BEBN Eben Emael 75.94 329 P P 03 33 42.9 0.0
comp=Z,185nm,1.4s,mb5.5
ABH Alteburg 75.95 327⇓*e*P P 03 33 43.3 +0.4
MEM Membach 75.97 329 P P 03 33 42.9 -0.1
comp=Z,356nm,1.3s,mb5.8
DCID1 Drake Creek 76.00 43⇑*i*P P 03 33 44.5 +1.2
N12A Clover Valley, 76.00 47 P P 03 33 44.5 +1.1
baz=76,SNR=185
N12A ⇑S S 03 42 49.5 -0.1
baz=76
BOJS Bojanci 76.01 320 *i* P P 03 33 43.2 -0.1
BOJS *i* pP pP 03 35 20.4 +0.7
BOJS *i* S S 03 42 48.4 -1.1
GAL1 Galloway 76.01 337 *e*P P 03 33 43.3 +0.1
GAL1 AMb AMb 03 33 44.6
comp=Z,659nm,1.1s,mb6.2
EIL Elat 76.03 298 P P 03 33 43.8 +0.1
comp=Z,525nm,1.1s,mb6.1,baz=20,slow=3.5,SNR=235
LAO LASA Array 76.03 38⇑*i*P P 03 33 43.5 0.0
comp=Z,444nm,1.0s,mb6.0
KRUS Krusevo 76.06 314⇓*i*P P 03 33 44.5 +0.8
KRUS *i* PP pP 03 35 21.5 +1.4
R08A Mina 76.09 50 ⇓P P 03 33 44.4 +0.5
baz=76,SNR=50
R08A ⇑S S 03 42 50.3 -0.4
baz=76
M13A Montello 76.10 46 ⇓P P 03 33 44.6 +0.7
baz=76,SNR=209
M13A ⇓S S 03 42 50.5 -0.2
baz=76
MOOW Moose Ponds 76.11 42⇑*i*P P 03 33 44.8 +1.0
comp=Z,637nm,0.8s,mb6.3
MOOW *e*pP pP 03 35 22.4 +2.0
P10A Eureka 76.11 48 ⇓P P 03 33 44.6 +0.6
baz=76,SNR=73
P10A ⇑S S 03 42 50.6 -0.2
baz=76
T06C Millerton Lake 76.11 52 P P 03 33 43.9 -0.2
baz=76,SNR=69
T06C ⇓S S 03 42 49.2 -1.7
baz=76
KCC Kaiser Creek 76.11 52 ⇑P P 03 33 44.1 0.0
baz=76,SNR=56
STU Stuttgart 76.17 326 *e*P P 03 33 44.5 +0.4
comp=Z,852nm,1.2s,mb6.2
STU *e*pP pP 03 35 21.7 +1.1
STU *e*PP PP 03 36 44.2 +2.4
NKY Niksic 76.18 316⇓*i*P P 03 33 43.0 -1.3
MLAC Mammoth Lakes 76.18 51 ⇑P P 03 33 45.3 +0.9
baz=76,SNR=38

MLAC ⇓S S 03 42 51.6 0.0
baz=76
O11A Cowboy Ranch, 76.18 48 P **P 03 33 45.2 +0.9**
baz=76,SNR=100
O11A ⇓S S 03 42 51.0 -0.6
baz=76
KTD Kalmit 76.19 327⇓*eP* **P 03 33 44.5 +0.3**
TPAW Teton Pass 76.19 43⇑*iP* **P 03 33 45.3 +0.9**
comp=Z,385nm,0.8s,mb6.1
PTCC Patocco-Chiusa 76.20 322 *i* P **P 03 33 43.9 -0.5**
comp=Z,646nm,1.7s,mb6.0
AOS Alonnisos 76.21 311 *eP* **P 03 33 44.4 -0.1**
GCL Cushendall 76.23 337 *eP* **P 03 33 44.2 -0.1**
VOY Vojsko 76.24 321 *eP* **P 03 33 42.8 -1.8**
VOY *epP* pP 03 35 20.0 -1.0
VOY *e* 03 36 44.3
MUKL Al Mukalla 76.25 277 *eP* **P 03 33 45.1 0.0**
MUKL AMb AMB 03 33 45.8
comp=Z,197nm,0.6s,mb5.9
JAVS Javornik 76.26 321 *i* P **P 03 33 44.3 -0.4**
JAVS *iP* pP 03 35 21.5 +0.3
JAVS *i* S S 03 42 50.4 -1.9
Q09A Carvers 76.27 49 P **P 03 33 45.6 +0.7**
baz=76,SNR=68
Q09A ⇑S S 03 42 51.7 -0.9
baz=76
BIA Bitola 76.27 314 *eP* **P 03 33 43.6 -1.3**
BIA Bitola 76.27 314⇓*iP* **P 03 33 44.0 -0.8**
LOHW Long Hollow 76.27 42⇑*iP* **P 03 33 45.6 +0.8**
comp=Z,361nm,0.8s,mb6.0
WATA Walderalm 76.27 324⇓*iP* **P 03 33 45.3 +0.5**
comp=Z,573nm,1.3s,mb6.0,SNR=14
WATA Walderalm 76.27 324⇓*iP* **P 03 33 45.3 +0.5**
WATA pmax pmax
comp=Z,573nm,1.3s,mb6.0
PUK Puka 76.28 315 *eP* **P 03 33 45.4 +0.5**
PUK Puka 76.28 315 *eP* **P 03 33 45.4 +0.5**
RUP Ruppelstein 76.29 327⇓*eP* **P 03 33 45.2 +0.4**
WTTA Wattenberg 76.30 323 *i* P **P 03 33 45.6 +0.7**
comp=Z,2μm,2.3s,mb6.3,SNR=63
WTTA Wattenberg 76.30 323 *i* P **P 03 33 45.6 +0.7**
WTTA pmax pmax
comp=Z,2μm,2.3s,mb6.3
LIT Litokhoron 76.31 313 *eP* **P 03 33 44.6 -0.5**
ABTA Abfaltersbach 76.31 323⇓*iP* **P 03 33 44.4 -0.6**
comp=Z,636nm,1.6s,mb6.0,SNR=87
TTG Podgorica 76.32 316⇓*iP* **P 03 33 45.2 +0.1**
U05C Westside ANR, 76.33 53 P **P 03 33 45.9 +0.6**
baz=76,SNR=86
U05C ⇓S S 03 42 54.0 +0.6
baz=76
REDW Red Top Meadow 76.34 43⇑*iP* **P 03 33 46.1 +0.9**
comp=Z,514nm,0.9s,mb6.2
BRY Bratogost 76.34 317⇓*iP* **P 03 33 44.9 -0.3**
GMNA Gemona 76.35 322 *i* P **P 03 33 44.6 -0.6**
comp=Z,1μm,1.0s,mb6.5
BUCH Bad Urach 76.35 325 P **P 03 33 45.8 +0.6**
PKD Parkfield 76.36 53 P **P 03 33 45.4 0.0**
baz=76,SNR=98
PKD ⇓S S 03 42 53.9 +0.3
baz=76
V04C Ramage Ranch, 76.38 54⇑P **P 03 33 45.8 +0.3**
baz=76
V04C ⇑S S 03 42 53.2 -0.6
baz=76
BCLA Clavier 76.39 329 P **P 03 33 45.1 -0.3**
comp=Z,258nm,1.5s,mb5.6
FNA Florina 76.41 314 *eP* **P 03 33 44.8 -0.8**
LBG Lerchenberg 76.41 326 P **P 03 33 45.9 +0.4**
KBI1 Birley Grange 76.42 334 *eP* **P 03 33 44.3 -1.1**
M14A Sheep Mountain 76.42 45⇑P **P 03 33 46.4 +0.7**
baz=76,SNR=487
M14A ⇓S S 03 42 54.1 0.0
baz=76
UCC Uccle 76.44 330 P **P 03 33 45.2 -0.3**
comp=Z,394nm,1.8s,mb5.7
N13A Wendover, West 76.44 46⇓P **P 03 33 46.4 +0.6**
baz=76,SNR=65
N13A ⇓S S 03 42 54.0 -0.3
baz=76
XOR Xorichti 76.45 312 *eP* **P 03 33 45.0 -0.9**
MOTA Moosalm 76.47 324 *i* P **P 03 33 46.3 +0.5**
comp=Z,725nm,1.2s,mb6.2,SNR=234
MOTA Moosalm 76.47 324 *i* P **P 03 33 46.3 +0.5**
MOTA pmax pmax
comp=Z,725nm,1.2s,mb6.2
OHR Ohrid 76.48 314 *eP* **P 03 33 45.3 -0.8**
OHR Ohrid 76.48 314⇓*iP* **P 03 33 45.4 -0.7**
OHR *i* PP pP 03 35 21.8 -0.8
OHR *i* 1 sP 03 36 08.7 -0.2
MUN Mundaring 76.50 195 *eP* **P 03 33 46.0 0.0**
MUN *i* S S 03 42 53.9 -0.9
RETA Reutte 76.51 324 *i* P **P 03 33 46.6 +0.6**
SNR=93
HVU Hansel Valley 76.52 45⇑*iP* **P 03 33 46.8 +0.6**
comp=Z,213nm,0.8s,mb5.8
HVU Hansel Valley 76.52 45⇑*iP* **P 03 33 46.8 +0.6**
HVU pmax pmax
comp=Z,213nm,0.8s,mb5.8
SQTA Sankt Quirin 76.52 324⇓*iP* **P 03 33 46.4 +0.3**
comp=Z,490nm,1.3s,mb6.0,SNR=68
SQTA Sankt Quirin 76.52 324⇓*iP* **P 03 33 46.5 +0.4**
SQTA pmax pmax
comp=Z,490nm,1.3s,mb6.0
MTUM Tungsten Hills 76.53 51 *eP* **P 03 33 46.9 +0.5**
P11A Circle Ranch, 76.54 48⇑P **P 03 33 47.2 +0.8**
baz=76,SNR=69
KZN Kozani 76.55 313 *eP* **P 03 33 44.3 -2.1**
LANF Langenberg 76.57 327⇓*eP* **P 03 33 46.4 +0.1**
O12A Currie 76.58 47 P **P 03 33 47.3 +0.7**
baz=76,SNR=151
O12A ⇑S S 03 42 54.8 -1.0
baz=76
BUM Brajici-Budva 76.60 316⇓*iP* **P 03 33 46.4 -0.3**
WIM Isle of Man 76.62 336 *eP* **P 03 33 46.4 -0.2**
UBR Ueberruh 76.64 325 P **P 03 33 47.0 +0.2**
S08C White Mtn Res 76.65 51 P **P 03 33 48.0 +0.9**
baz=76,SNR=124
S08C ⇑S S 03 42 55.9 -0.8
baz=76
AHID Auburn Hatcher 76.65 43⇑*iP* **P 03 33 47.2 +0.3**
comp=Z,329nm,0.9s,mb6.0
ULC Ulcinj 76.67 316⇓*iP* **P 03 33 46.6 -0.4**
WLF Walferdange 76.67 328⇓*iP* **P 03 33 46.9 0.0**
comp=Z,283nm,1.1s,mb5.8
WLF Walferdange 76.67 328⇓*iP* **P 03 33 46.9 0.0**
WLF pmax pmax
comp=Z,283nm,1.1s,mb5.8
WLF Walferdange 76.67 328 P **P 03 33 47.2 +0.3**
comp=Z,266nm,1.9s,mb5.5
WLF Walferdange 76.67 328 *eP* **P 03 33 47.4 +0.5**
comp=Z,1μm,2.1s,mb6.2
WLF *epP* pP 03 35 24.8 +1.3
HCY Herceg Novi 76.69 316⇓*iP* **P 03 33 46.2 -1.0**
SNF Seneffe 76.70 329 P **P 03 33 47.0 -0.1**
comp=Z,352nm,1.7s,mb5.7
Q10A Clear Creek Ra 76.70 49⇓P **P 03 33 47.6 +0.3**
baz=76,SNR=73
Q10A ⇑S S 03 42 56.6 -0.7
baz=76
KWE Weaver Farm 76.73 334 *eP* **P 03 33 46.4 -0.8**
HELL Mitchell Peak, 76.73 52⇑P **P 03 33 47.1 -0.4**
baz=76,SNR=99
HELL ⇑S S 03 42 56.2 -1.4
baz=76
R09A Tonopah 76.75 50 P **P 03 33 47.9 +0.3**
baz=76,SNR=141
R09A ⇑S S 03 42 57.6 0.0
baz=76
GUT Gutenstein 76.75 325 P **P 03 33 47.6 +0.2**
PTRM Twissleman Ran 76.75 53 *eP* **P 03 33 48.3 +0.7**
APE Apeiranthos 76.75 309 *eP* **P 03 33 46.2 -1.4**
APE Apeiranthos 76.75 309 P **P 03 33 46.9 -0.7**
APE Apeiranthos 76.75 309 *eP* **P 03 33 46.3 -1.3**
APE Apeiranthos 76.75 309⇑*iP* **P 03 33 46.1 -1.5**
STON Ston 76.78 317 P **P 03 33 46.7 -1.0**
V05C Boulder Hill, 76.79 53⇓P **P 03 33 47.9 +0.1**
baz=76,SNR=19
V05C ⇑S S 03 42 58.6 +0.3
baz=76
CWF Charnwood Fore 76.79 334 *eP* **P 03 33 47.3 -0.2**
CWF AMb AMB 03 33 50.5
comp=Z,756nm,1.4s,mb6.1
TIR Tirane 76.80 315 *eP* **P 03 33 47.8 0.0**
TIR Tirane 76.80 315 *eP* **P 03 33 48.2 +0.4**
TIR Tirane 76.80 315 *eP* **P 03 33 48.2 +0.4**
GIVF Givet 76.83 329⇓*iP* **P 03 33 47.3 -0.5**
comp=Z,2μm,1.6s,mb6.2
GIVF *epP* pP 03 35 22.1 -2.3
GIVF Givet 76.83 329⇓*iP* **P 03 33 47.3 -0.5**
comp=Z,1μm,1.6s,mb6.2
GIVF *epP* pP 03 35 22.1 -2.3
GIVF Givet 76.83 329⇓*iP* **P 03 33 47.3 -0.5**
GIVF *e**PP pP 03 35 22.1 -2.3
GIVF pmax pmax
comp=Z,1μm,1.6s,mb6.2
KBN Korca 76.84 314 *eP* **P 03 33 47.9 -0.1**
KBN Korca 76.84 314 *eP* **P 03 33 47.9 -0.1**
SPAK Spaichingen-Ko 76.86 326⇓*eP* **P 03 33 48.4 +0.4**
RCTC Rector, Farmer 76.86 52⇑P **P 03 33 47.6 -0.6**
baz=77,SNR=49
RCTC ⇑S S 03 42 56.9 -2.1
baz=77
BFO Black Forest 76.87 326 P **P 03 33 48.1 +0.1**
comp=Z,4μm,1.3s,mb6.9
BFO Black Forest 76.87 326 *eP* **P 03 33 48.4 +0.4**
comp=Z,1μm,1.3s,mb6.4
BFO *e**PP pP 03 35 25.8 +1.1
BFO *e**SP sP 03 36 10.8 -0.2
BFO *e* 03 36 49.2
BFO pmax pmax
comp=Z,1μm,1.3s,mb6.4
BFO Black Forest 76.87 326 *eP* **P 03 33 48.4 +0.4**
comp=Z,1μm,1.3s,mb6.4
BFO *epP* pP 03 35 25.8 +1.1
BFO *es*P sP 03 36 10.8 -0.2
BFO *ePP* PP 03 36 49.2 +1.6
KARP Karpathos 76.87 307 *eP* **P 03 33 47.8 -0.5**
FETA Feichten 76.88 324⇓*iP* **P 03 33 48.5 +0.4**
comp=Z,647nm,1.4s,mb6.1,SNR=254
NVLJ Novalja 76.89 320 P **P 03 33 47.5 -0.7**
STR Strasbourg 76.90 326⇓*eP* **P 03 33 48.6 +0.4**
GMM Mts of Mourne 76.91 337 *eP* **P 03 33 47.1 -1.1**
DOU Dourbes 76.92 329 P **P 03 33 47.9 -0.3**
comp=Z,228nm,1.6s,mb5.5
M15A Larsen Ranch, 76.92 45 P **P 03 33 48.8 +0.4**
baz=77,SNR=351
M15A ⇑S S 03 42 59.3 -0.1
baz=77
TIN Tinemaha 76.93 51⇓P **P 03 33 49.0 +0.4**
baz=77,SNR=60
TIN ⇑S S 03 42 59.9 +0.2
baz=77
N14A Grayback Hills 76.98 46 P **P 03 33 49.5 +0.7**
baz=77,SNR=228
N14A ⇓S S 03 43 00.5 +0.4
baz=77
BGU Big Grassy Mou 77.01 46⇑*iP* **P 03 33 49.5 +0.6**
S09A Goldfield 77.02 50 P **P 03 33 49.6 +0.5**
baz=77,SNR=297
S09A ⇑S S 03 43 00.8 +0.2
baz=77
SPUT South Promonto 77.03 45⇑*iP* **P 03 33 49.3 +0.3**
DAVA Damuels 77.04 324⇓*iP* **P 03 33 49.5 +0.5**
comp=Z,1μm,1.4s,mb6.4,SNR=219
P12A McGill 77.06 48⇓P **P 03 33 49.8 +0.5**
baz=77,SNR=249
P12A ⇓S S 03 43 00.4 -0.6
baz=77
LKR Lokris 77.06 311 *eP* **P 03 33 48.2 -1.1**
O13A Hicks Ranch, I 77.08 47⇑P **P 03 33 49.9 +0.5**
baz=77,SNR=50
O13A ⇓S S 03 43 01.9 +0.7
baz=77
APPI Appiano 77.09 323 *i* P **P 03 33 48.2 -1.1**
BAIF Baives 77.09 329⇓*iP* **P 03 33 48.8 -0.4**
comp=Z,1μm,1.5s,mb5.9
BAIF Baives 77.09 329⇓*iP* **P 03 33 48.8 -0.4**
comp=Z,516nm,1.5s,mb5.9
BAIF Baives 77.09 329⇓*iP* **P 03 33 48.8 -0.4**
BAIF pmax pmax
comp=Z,517nm,1.5s,mb5.9
Q11A Duckwater 77.10 48 P **P 03 33 49.6 +0.1**
baz=77,SNR=74
Q11A ⇓S S 03 43 00.2 -1.3
baz=77
SISB Singen-Schiene 77.11 325 P **P 03 33 49.5 +0.1**
SMMC Simmler 77.12 54⇓P **P 03 33 49.6 0.0**
baz=77,SNR=92
SMMC ⇑S S 03 43 00.6 -1.2
baz=77
R10A Warm Springs 77.14 49⇑P **P 03 33 50.0 +0.3**
baz=77,SNR=94
R10A ⇑S S 03 43 00.6 -1.3
baz=77
ATH Athens Observa 77.14 310 *eP* **P 03 33 48.4 -1.3**
AGG Agios Georgios 77.16 312 *eP* **P 03 33 48.2 -1.6**
CDF Champ du Feu 77.23 327⇓*iP* **P 03 33 50.0 0.0**
comp=Z,1μm,1.3s,mb6.1
CDF *epP* pP 03 35 24.7 -2.1
CDF Champ du Feu 77.23 327⇓*iP* **P 03 33 50.0 0.0**
comp=Z,692nm,1.3s,mb6.1
CDF *epP* pP 03 35 24.7 -2.1
CDF Champ du Feu 77.23 327⇓*iP* **P 03 33 50.0 0.0**
CDF *e**PP pP 03 35 24.7 -2.1
CDF pmax pmax
comp=Z,692nm,1.3s,mb6.1
CTI Castel Tesino 77.23 323 *i* P **P 03 33 49.5 -0.6**
comp=Z,519nm,1.0s,mb6.1
CTI Castel Tesino 77.23 323 *i* P **P 03 33 49.5 -0.6**
CTI pmax pmax
comp=Z,519nm,1.0s,mb6.1
S10A Tonopah Range, 77.23 50 P **P 03 33 50.6 +0.4**
baz=77,SNR=147
S10A ⇑S S 03 43 03.0 +0.1
baz=77
NWAO Narrogin (SRO) 77.24 194⇑*iP* **P 03 33 50.1 +0.1**
comp=Z,179nm,1.1s,mb5.6
NWAO *epP* pP 03 35 32.2 +5.2
NWAO Narrogin (SRO) 77.24 194⇑*iP* **P 03 33 50.1 +0.1**
NWAO *e**PP pP 03 35 32.2 +5.2
NWAO pmax pmax
comp=Z,179nm,1.1s
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 50.3 +0.2**
SNR=5.4
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 50.3 +0.2**
SNR=5.4
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 50.3 +0.2**
SNR=5.4
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 50.3 +0.2**
SNR=5.4
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 50.3 +0.2**
SNR=5.4
NWAO Narrogin (SRO) 77.24 194 P **P 03 33 49.7 -0.3**
comp=Z,67nm,0.5s,mb5.5,baz=19,slow=5.7,SNR=64
NWAO *epP* pP 03 35 28.5 +1.5
comp=Z,48nm,0.8s,baz=3.3,slow=6.8,SNR=2.2
SLE Schleitheim 77.25 325⇓P **P 03 33 49.9 -0.2**
WCB1 Church Bay 77.25 336 *eP* **P 03 33 50.0 0.0**
HWUT Hardware Ranch 77.27 44⇑*iP* **P 03 33 50.6 +0.2**
comp=Z,681nm,0.8s,mb6.3
SBD1 Bryn Du 77.27 335 *eP* **P 03 33 49.0 -1.1**
SANT Santorini 77.28 308 *eP* **P 03 33 48.4 -2.1**
WLF1 Llynfaes 77.28 336 *eP* **P 03 33 49.7 -0.5**
N15A Stansbury Isla 77.30 45 P **P 03 33 51.0 +0.5**
baz=77,SNR=279
N15A ⇓S S 03 43 04.5 +1.0
baz=77
KIZ Kirchzarten 77.33 326 P **P 03 33 50.6 0.0**
WILA Wila 77.35 325⇓P **P 03 33 50.7 0.0**
FELD Feldberg im Sc 77.36 326⇓*eP* **P 03 33 50.8 +0.1**
YRC Rhoscolyn 77.37 336 *eP* **P 03 33 49.6 -1.1**
BW06 Boulder Array 77.41 42⇑*iP* **P 03 33 50.9 -0.2**
comp=Z,556nm,0.8s,mb6.2
BW06 *epP* pP 03 35 29.5 +1.6
PDAR Pinedale Array 77.42 42 P **P 03 33 51.0 -0.2**
PDAR *ep* pP 03 35 29.4 +1.5
PDAR S S 03 43 04.6 0.0
PDAR Pinedale Array 77.42 42 P **P 03 33 51.0 -0.2**
comp=Z,539nm,0.8s,mb6.2,baz=12,slow=0.8,SNR=2604
PDAR *ep* pP 03 35 29.4 +1.5
comp=Z,47nm,0.8s,baz=329,slow=1.7,SNR=6.8
PDAR S S 03 43 04.6 0.0
comp=Z,2.4nm,1.0s,baz=345,slow=3.2,SNR=8.2
PDAR tx 03 59 48.1
comp=Z,2.5nm,1.0s,baz=145,slow=5.4,SNR=10.0
PDAR tx tx 04 03 24.1
comp=Z,1.8nm,0.9s,baz=148,slow=2.6,SNR=4.6
ULM Lac du Bonnet 77.42 30⇑*iP* **P 03 33 49.9 -1.1**
comp=Z,0.5nm,0.3s
ULM Lac du Bonnet 77.42 30 P **P 03 33 50.0 -1.0**
comp=Z,249nm,0.7s,mb6.0,baz=328,slow=6.2,SNR=560
ULM pP pP 03 35 29.4 +1.6
comp=Z,34nm,0.9s,baz=7.1,slow=5.1,SNR=3.7
ULM S S 03 43 00.6 -3.9
comp=Z,8.3nm,1.0s,baz=58,slow=23,SNR=8.3
ULM tx tx 04 03 19.6
comp=Z,3.3nm,0.8s,baz=205,slow=3.1,SNR=6.1
ECH Echery 77.44 327⇓*eP* **P 03 33 51.3 +0.2**
MENF Mencas 77.44 331⇓*eP* **P 03 33 50.8 -0.3**
DAVOX Davos/Dischmat 77.44 324 P **P 03 33 51.7 +0.5**
comp=Z,253nm,0.9s,mb5.8,baz=34,slow=3.2,SNR=190
DAVOX S S 03 43 03.7 -1.0
comp=Z,45nm,1.1s,baz=23,slow=14,SNR=20
DAVOX PKKPbc PKKPbc 03 52 50.4 +0.3
comp=Z,4.5nm,0.7s,baz=227,slow=5.2,SNR=4.0
CWC Cottonwood Cre 77.44 52⇓P **P 03 33 51.5 +0.1**
baz=77,SNR=55
CWC ⇑S S 03 43 05.4 +0.3
baz=77
GRAC Grapevine Rang 77.45 51 P **P 03 33 52.1 +0.6**
baz=77,SNR=152
GRAC ⇑S S 03 43 05.3 0.0
baz=77
HLM1 Long Mynd 77.48 334 *eP* **P 03 33 49.6 -1.7**
SKP1 Kophill 77.49 333 *eP* **P 03 33 50.5 -0.8**
R11A Troy Canyon, C 77.49 49 P **P 03 33 52.0 +0.3**
baz=77,SNR=159
R11A ⇑S S 03 43 05.2 -0.4
baz=77
TRCR Troy Canyon 77.49 49⇑*iP* **P 03 33 51.8 +0.2**
JAN Janina 77.50 313 *eP* **P 03 33 51.8 +0.1**
PKM Peak Mountain 77.51 54 P **P 03 33 52.3 +0.5**
baz=77,SNR=132
PKM ⇓S S 03 43 05.7 -0.2
baz=77
EVR Evrytania 77.52 312 *eP* **P 03 33 50.8 -1.0**
ZUR Degenried 77.52 325⇓P **P 03 33 51.6 0.0**
LTK Loutraki 77.53 311 *eP* **P 03 33 49.5 -2.3**
YRE Yr Eifl 77.56 335 *eP* **P 03 33 51.1 -0.6**
SULZ Cheisacher 77.59 326⇓P **P 03 33 51.9 -0.1**
SSW Stow on the Wo 77.62 334 *eP* **P 03 33 51.5 -0.6**
DUG Dugway 77.65 46⇑*iP* **P 03 33 52.9 +0.5**
comp=Z,553nm,1.1s,mb6.1
DUG Dugway 77.65 46⇑*iP* **P 03 33 52.9 +0.4**
DUG pmax pmax
comp=Z,553nm,1.1s,mb6.1
DUG Dugway 77.65 46 P **P 03 33 53.1 +0.7**
baz=77,SNR=234
DUG ⇓S S 03 43 08.3 +1.1
baz=77
NOQ North Oquirrh 77.68 45⇑*iP* **P 03 33 53.0 +0.4**
comp=Z,419nm,0.7s,mb6.2
ZKR Zakros 77.72 307 *eP* **P 03 33 52.7 -0.2**
MABI Malga Bissina 77.73 323 *i* P **P 03 33 52.3 -0.5**
MOF Molkenrain 77.74 326⇓*eP* **P 03 33 52.7 -0.1**
DID Didima 77.74 310 *eP* **P 03 33 48.9 -4.2**
LLS Linth-Limmern 77.76 325⇓P **P 03 33 53.1 +0.2**
ISA Isabella 77.76 52⇓P **P 03 33 52.0 -1.1**
baz=78,SNR=42
ISA ⇓S S 03 43 05.9 -2.6
baz=78
HAE Alders End 77.79 334 *eP* **P 03 33 51.9 -1.1**
SRN Sarande 77.79 314 *eP* **P 03 33 53.2 0.0**
SRN Sarande 77.79 314 *eP* **P 03 33 53.2 0.0**
MUO Muotathal 77.82 325⇓P **P 03 33 53.5 +0.3**
CTU Camp Tracy 77.84 45⇑*iP* **P 03 33 53.6 +0.1**
comp=Z,247nm,1.0s,mb5.8
VDL Val di Lei 77.85 324⇓P **P 03 33 53.9 +0.5**
IGT Igoumenitsa 77.87 313 *eP* **P 03 33 53.0 -0.7**
HINF Hinteralfeld 77.88 326⇓*iP* **P 03 33 53.1 -0.4**
comp=Z,906nm,1.4s,mb5.9
HINF Hinteralfeld 77.88 326⇓*iP* **P 03 33 53.1 -0.4**
comp=Z,453nm,1.4s,mb5.9
HINF Hinteralfeld 77.88 326⇓*iP* **P 03 33 53.1 -0.4**
HINF pmax pmax
comp=Z,453nm,1.4s,mb5.9
SBC Santa Barbara 77.89 54⇑P **P 03 33 53.9 0.0**
baz=78,SNR=22
BBS Basel-Blauen 77.89 326 P **P 03 33 54.1 +0.5**
THEF They Montfort 77.89 327⇓*eP* **P 03 33 53.5 -0.1**
S11A Rachel 77.91 49 P **P 03 33 54.5 +0.7**
baz=78,SNR=129
S11A ⇑S S 03 43 10.6 +0.6
baz=78
TUE Stuetta 77.91 324 *i* P **P 03 33 54.5 +0.8**
DLF Lyons Farm 77.91 337⇑*iP* pP 03 35 30.9 +0.4
DLF Lyons Farm 77.91 337⇓*iP* **P 03 33 53.7 +0.1**
DLF ⇑*iP* pP 03 35 30.9 +0.4
DSB Dublin 77.91 337⇓*iP* **P 03 33 53.3 -0.3**
comp=Z,625nm,1.5s,mb6.0
DSB *epP* pP 03 35 31.8 +1.3
HAU Haudompre 77.93 327⇓*iP* **P 03 33 53.5 -0.3**
comp=Z,544nm,1.0s,mb5.8
HAU *e*MLR MLR
comp=Z,674nm,21.0s
HAU Haudompre 77.93 327⇓*iP* **P 03 33 53.5 -0.3**
comp=Z,272nm,1.0s,mb5.8
HAU LR LR
comp=Z,670nm,21.0s
HAU Haudompre 77.93 327⇓*iP* **P 03 33 53.5 -0.3**
HAU pmax pmax
comp=Z,272nm,1.0s,mb5.8
HAU MLR MLR
comp=Z,670nm,21.0s
ARVC Arvin 77.93 53⇑P **P 03 33 53.4 -0.7**
baz=78,SNR=67
ARVC ⇓S S 03 43 09.4 -1.0
baz=78
SELA Sela 77.94 312 *eP* **P 03 33 53.1 -0.9**
MCH1 Michaelchurch 77.97 334 *eP* **P 03 33 53.4 -0.5**
MCH1 AMb AMB 03 33 56.2
comp=Z,791nm,1.8s,mb6.0
NPS Neapolis 77.97 307 *eP* **P 03 33 53.0 -1.3**
HTR Trewern Hill 77.98 334 *eP* **P 03 33 53.2 -0.8**
SWN1 Swindon 77.99 333 *eP* **P 03 33 53.5 -0.6**
SWN1 AMb AMB 03 33 56.6
comp=Z,2μm,1.5s,mb6.5
KEK Kerkira 78.02 314 *eP* **P 03 33 54.3 -0.2**
MEZF Maizieres J'vi 78.04 326⇓*iP* **P 03 33 54.6 +0.2**
comp=Z,2μm,1.2s,mb6.4
MEZF *epP* pP 03 35 29.5 -1.9
MEZF Maizieres J'vi 78.04 328⇓*iP* **P 03 33 54.6 +0.2**
comp=Z,2μm,1.2s,mb6.7
MEZF *epP* pP 03 35 29.5 -1.9
R12A Pony Springs, 78.04 48 P **P 03 33 55.1 +0.5**
baz=78,SNR=196
R12A ⇑S S 03 43 11.3 -0.1
baz=78
MPMC Manual Prospec 78.05 52 P **P 03 33 54.9 +0.3**
baz=78,SNR=401
MPMC ⇓S S 03 43 11.6 +0.1
baz=78
JLU Jordanelle 78.06 45⇑*iP* **P 03 33 55.0 +0.3**
DCN Croghan 78.08 337⇑*iP* pP 03 35 31.8 +0.3
DCN Croghan 78.08 337⇓*iP* **P 03 33 54.8 +0.3**
DCN ⇑*iP* pP 03 35 31.8 +0.3
FURC Furnace Creek, 78.12 51 P **P 03 33 55.5 +0.4**
baz=78,SNR=250
FURC ⇑S S 03 43 12.8 +0.5
baz=78
TPNV Topopah Spring 78.12 50⇑*iP* **P 03 33 55.3 +0.3**
comp=Z,622nm,0.8s,mb6.3
TPNV Topopah Spring 78.12 50⇑*iP* **P 03 33 55.3 +0.2**
TPNV pmax pmax
comp=Z,622nm,0.8s,mb6.3
TPNV Topopah Spring 78.12 50 P **P 03 33 55.3 +0.3**
baz=78,SNR=344
TPNV ⇓S S 03 43 13.0 +0.7
baz=78
LAST Lasithi 78.12 307 *eP* **P 03 33 54.6 -0.5**
HGH Gray Hill 78.21 334 *eP* **P 03 33 54.0 -1.2**
NLU North Lily Min 78.21 46⇑*iP* **P 03 33 56.0 +0.5**
BSC Santa Cruz Isl 78.25 54⇑P **P 03 33 55.3 -0.5**
baz=78,SNR=8.7
LOMF Lomont 78.26 326⇓*eP* **P 03 33 55.7 +0.1**
LKD Levkas 78.30 313 *eP* **P 03 33 55.5 -0.5**
DAU Daniels Canyon 78.30 45 *eP* **P 03 33 56.8 +0.8**
VLX Vlachokerasia 78.32 311 *eP* **P 03 33 54.4 -1.7**
RLS Riolos of Patr 78.33 312 *eP* **P 03 33 55.7 -0.5**
LRMC Laurel Mountai 78.34 52 P **P 03 33 56.3 0.0**
baz=78,SNR=200
LRMC ⇓S S 03 43 13.7 -1.1
baz=78
OSI Osito Adit 78.35 53⇓P **P 03 33 56.3 -0.1**
baz=78,SNR=16
OSI ⇓S S 03 43 14.5 -0.3

baz=78
RIV Riverview 78.36 165 *e*P **P 03 33 57.7 +1.5**
IDI Anoyia 78.37 308 P **P 03 33 55.2 -1.3**
comp=Z,866nm,1.1s,mb6.3,baz=27,slow=8.1,SNR=245
IDI S S 03 43 08.5 -6.6
comp=Z,23nm,0.6s,baz=106,slow=20,SNR=40
IDI PKKPbc PKKPbc 03 52 48.3 +0.5
comp=Z,2.4nm,0.6s,baz=253,slow=4.2,SNR=3.6
MPU Maple Canyon 78.40 45⇑*i*P **P 03 33 57.0 +0.5**
comp=Z,282nm,0.8s,mb6.0
S12A Delamar Landin 78.43 49 ⇓P **P 03 33 57.4 +0.7**
baz=78,SNR=28
S12A ⇑S S 03 43 16.3 +0.8
baz=78
LCI Lecce 78.44 315 *i* P **P 03 33 56.9 +0.1**
comp=Z,371nm,1.0s,mb6.0
LCI Lecce 78.44 315 *i* P **P 03 33 56.9 +0.1**
LCI pmax pmax
comp=Z,371nm,1.0s,mb6.0
U10A Ash Meadows, A 78.45 51 ⇓P **P 03 33 57.4 +0.6**
baz=78
U10A ⇑S S 03 43 17.1 +1.3
baz=78
VLI Veliai 78.47 310 *e*P **P 03 33 54.5 -2.5**
T11A Corn Creek, Al 78.49 49 P **P 03 33 57.5 +0.5**
baz=78,SNR=246
T11A ⇓S S 03 43 16.6 +0.5
baz=78
BLG Laguna Peak 78.50 54⇑P **P 03 33 56.5 -0.7**
baz=78,SNR=29
BLG ⇓S S 03 43 15.4 -1.1
baz=78
FGMS Monte Sant'Ang 78.51 317 *i* Pu **P 03 33 57.0 -0.1**
comp=Z,372nm,0.7s,mb6.1
CING Cingoli 78.58 320 *i* P **P 03 33 57.7 +0.3**
EDW2 Edwards Air Fo 78.59 53 P **P 03 33 57.6 0.0**
baz=78,SNR=341
EDW2 ⇓S S 03 43 16.8 -0.5
baz=78
SIVA Sivas 78.61 308 *e*P **P 03 33 57.7 -0.1**
KFL Anninata 78.66 312 *e*P **P 03 33 57.4 -0.5**
VAM Vamos 78.69 308 *e*P **P 03 33 57.1 -1.1**
LKBD Leukerbad 78.70 325 ⇓P **P 03 33 58.1 +0.1**
ITM Ithomi 78.70 311 *e*P **P 03 33 57.1 -1.1**
VLS Valsamata 78.72 312 *e*P **P 03 33 57.4 -0.8**
MMK Mattmark 78.83 325 ⇓P **P 03 33 59.2 +0.5**
SNCC San Nicolas Is 78.83 55⇑P **P 03 33 58.6 -0.4**
baz=79,SNR=16
SNCC ⇓S S 03 43 19.2 -0.7
baz=79
DECC Green Verdugo 78.84 53⇑P **P 03 33 58.6 -0.4**
baz=79,SNR=50
DECC ⇓S S 03 43 18.4 -1.6
baz=79
SHOC Shoshone 78.85 51⇑P **P 03 33 59.0 0.0**
baz=79,SNR=32
SHOC ⇓S S 03 43 19.7 -0.3
baz=79
KARN Karanos 78.85 308 *e*P **P 03 33 58.2 -0.8**
R14A James Farms, M 78.92 47⇑P **P 03 33 60.0 +0.6**
baz=79,SNR=8.4
R14A ⇓S S 03 43 22.0 +1.4
baz=79
FNVD Fontana Vidola 78.93 322 *i* P **P 03 34 00.6 +1.3**
GSC Goldstone 78.98 52 P **P 03 33 59.8 +0.1**
baz=79,SNR=279
GSC ⇑S S 03 43 20.6 -0.8
baz=79
MURB Monte Urbino 78.98 320 *i* P **P 03 34 00.3 +0.7**
U11A Corn Creek 78.98 50⇑P **P 03 34 00.3 +0.5**
baz=79,SNR=59
U11A ⇑S S 03 43 22.8 +1.5
baz=79
S13A Holt Ranch, En 78.99 48 P **P 03 34 00.3 +0.5**
baz=79,SNR=152
S13A ⇓S S 03 43 22.4 +1.0
baz=79
RSSD Black Hills 78.99 38⇑*i*P **P 03 33 59.5 -0.2**
comp=Z,312nm,0.8s,mb6.0
RSSD *e*pP pP 03 35 39.0 +2.1
RSSD Black Hills 78.99 38 *e*P **P 03 33 59.5 -0.1**
RSSD *e* pP 03 35 39.0 +2.1
PYL PYLOS 79.01 311 *e*P **P 03 33 58.7 -1.2**
HEX Exmoor 79.02 334 *e*P **P 03 33 58.7 -1.0**
AGMN Agassiz Refuge 79.04 31⇑*i*P **P 03 33 58.5 -1.3**
comp=Z,339nm,0.9s,mb6.0
AGMN *e*pP pP 03 35 37.7 +0.7
DIX Grande Dixence 79.04 325 ⇓P **P 03 34 00.3 +0.5**
SHPR Sheep Range 79.05 50 *e*P **P 03 34 00.6 +0.6**
ARUT Antelope Range 79.07 48 *e*P **P 03 34 00.5 +0.3**
BDHA Al Bayda' 79.09 279 *e*P **P 03 34 01.3 +0.7**
T12A Moapa 79.14 49⇑P **P 03 34 01.1 +0.5**
baz=79,SNR=21
T12A ⇓S S 03 43 23.8 +0.9
baz=79
TMUT Trail Mountain 79.15 46⇑*i*P **P 03 34 01.1 +0.6**
GVD Gavdhos 79.16 308 *e*P **P 03 34 00.2 -0.5**
CABF La Chapelle 79.16 326⇓*i*P **P 03 34 00.3 -0.1**
comp=Z,787nm,1.5s,mb5.8
CABF La Chapelle 79.16 326⇓*i*P **P 03 34 00.3 -0.1**
comp=Z,393nm,1.5s,mb5.8
CABF La Chapelle 79.16 326⇓*i*P **P 03 34 00.3 -0.1**
CABF pmax pmax
comp=Z,393nm,1.5s,mb5.8
RRX Edison Barstow 79.17 52⇑P **P 03 34 00.9 +0.2**
baz=79,SNR=27
RRX ⇓S S 03 43 23.2 -0.1
baz=79
BOB Bobbio (Coli) 79.20 323 *i* P **P 03 34 01.2 +0.5**
MSU Marysvale 79.22 47 *e*P **P 03 34 02.0 +1.1**
S14A Cedar City 79.23 48 P **P 03 34 01.6 +0.6**
baz=79,SNR=85
S14A ⇓S S 03 43 24.9 +1.0
baz=79
BFSC Mount Baldy St 79.24 53 P **P 03 34 00.8 -0.3**
baz=79,SNR=156
BFSC ⇑S S 03 43 23.4 -0.7
baz=79
FMP Fort Macarthur 79.24 54 ⇓P **P 03 34 00.7 -0.5**
baz=79,SNR=12
FMP ⇑S S 03 43 23.8 -0.3
baz=79
EMV Vieux Emosson 79.26 325 ⇓P **P 03 34 01.1 +0.1**
VLC Villacollemand 79.26 322⇓*i*P **P 03 34 00.8 -0.3**
comp=Z,515nm,1.1s,mb6.1
VLC *e*pP pP 03 35 40.5 +2.0
AQU L'Aquila 79.27 319⇓*i*P **P 03 34 01.6 +0.5**
comp=Z,1μm,1.1s,mb6.5
AQU *e*pP pP 03 35 39.8 +1.3
AQU L'Aquila 79.27 319 P **P 03 34 01.9 +0.8**
AQU L'Aquila 79.27 319⇑*i*P **P 03 34 01.2 +0.1**
CCUT Cedar City 79.28 48⇑*i*P **P 03 34 01.7 +0.4**
CCUT *e*PP PP 03 37 10.0 +2.1
HTL Hartland 79.30 335 *e*P **P 03 33 59.2 -1.9**
HTL AMb AMB 03 34 02.7
comp=Z,429nm,1.1s,mb6.0
T13A Saint George 79.37 49 P **P 03 34 02.7 +0.9**
baz=79,SNR=431
T13A ⇑S S 03 43 26.3 +0.9
baz=79
RWWY Rawlins 79.37 42⇑*i*P **P 03 34 01.3 -0.4**
comp=Z,857nm,1.4s,mb6.2
V11A Goodsprings 79.38 50 ⇓P **P 03 34 02.0 +0.2**
baz=79,SNR=85
V11A ⇑S S 03 43 26.0 +0.5
baz=79
TUQ Turquoise Mtn. 79.39 51 P **P 03 34 02.2 +0.3**
baz=79,SNR=403
TUQ ⇑S S 03 43 26.4 +0.9
baz=79
CIS Catalina Islan 79.39 54⇑P **P 03 34 01.1 -0.8**
baz=79,SNR=28
CIS ⇓S S 03 43 24.6 -1.0
baz=79
CSNT Castellina Chi 79.39 321 *i* P **P 03 34 01.5 -0.2**
LBOS 79.39 279 *e*P **P 03 34 02.9 +0.7**
MIDA Miranda 79.40 318 *i* P **P 03 34 02.6 +0.8**
U12A Valley of Fire 79.45 50 P **P 03 34 02.8 +0.6**
baz=79,SNR=99
U12A ⇓S S 03 43 27.8 +1.6
baz=79
CNB Canberra Magne 79.50 167 *e*P **P 03 34 03.3 +1.1**
comp=Z,100nm,1.2s,mb5.3
LOR Lormes 79.51 328⇓*i*P **P 03 34 01.9 -0.4**
comp=Z,2μm,1.1s,mb6.3
LOR *e*pP pP 03 35 37.3 -2.4
LOR *e*MLR MLR
comp=Z,447nm,20.0s
LOR Lormes 79.51 328⇓*i*P **P 03 34 01.9 -0.4**
comp=Z,912nm,1.1s,mb6.3
LOR *e*pP pP 03 35 37.3 -2.4
LOR LR LR
comp=Z,450nm,20.0s
LOR Lormes 79.51 328⇓*i*P **P 03 34 01.9 -0.4**
LOR *e**PP pP 03 35 37.3 -2.4
LOR pmax pmax
comp=Z,913nm,1.1s,mb6.3
LOR MLR MLR
comp=Z,450nm,20.0s
DHBB Dhamar BB 79.55 280 *e*P **P 03 34 03.8 +0.8**
HEC Hector,Ludlow 79.59 52 ⇓P **P 03 34 03.0 0.0**
baz=79,SNR=97
HEC ⇓S S 03 43 28.3 +0.6
baz=79
SCI San Clemente I 79.60 54⇑P **P 03 34 02.7 -0.4**
baz=79,SNR=8.2
DYA Yadsworthy 79.61 334 *e*P **P 03 34 02.5 -0.2**
DYA AMb AMB 03 34 04.0
comp=Z,597nm,1.3s,mb6.1
SRU San Rafael 79.64 45⇑*i*P **P 03 34 03.2 0.0**
comp=Z,222nm,0.6s,mb6.0
SRU *e*PP PP 03 37 11.8 +1.0
SRU San Rafael 79.64 45⇑*i*P **P 03 34 03.2 0.0**
SRU *e* 03 37 11.8
SRU pmax pmax
comp=Z,222nm,0.6s,mb6.0
BBRC Big Bear Sol-O 79.65 52 P **P 03 34 03.4 +0.1**
baz=79,SNR=90
BBRC ⇓S S 03 43 27.5 -0.9
baz=79
LPL La Plagne 79.77 325⇓*i*P **P 03 34 04.0 +0.3**
comp=Z,1μm,1.0s,mb6.2
LPL La Plagne 79.77 325⇓*i*P **P 03 34 04.0 +0.3**
comp=Z,609nm,1.0s,mb6.2
LPL La Plagne 79.77 325⇓*i*P **P 03 34 04.0 +0.3**
LPL pmax pmax
comp=Z,609nm,1.0s,mb6.2
CERT Cerreto 79.78 319 *i* P **P 03 34 03.7 -0.1**
U13A Pakoon Wash 79.78 49 P **P 03 34 04.8 +0.8**
baz=80,SNR=233
U13A ⇓S S 03 43 30.5 +0.9
baz=80
LPG La Plagne 79.78 325⇓*i*P **P 03 34 04.2 +0.4**
comp=Z,2μm,1.0s,mb6.3
LPG *e*pP pP 03 35 39.7 -1.6
LPG La Plagne 79.78 325⇓*i*P **P 03 34 04.2 +0.4**
comp=Z,763nm,1.0s,mb6.3
LPG *e*pP pP 03 35 39.7 -1.6
LPG La Plagne 79.78 325⇓*i*P **P 03 34 04.2 +0.4**
LPG *e**PP pP 03 35 39.7 -1.6
LPG pmax pmax
comp=Z,763nm,1.0s,mb6.3
V12A Nelson 79.78 50 P **P 03 34 04.5 +0.5**
baz=80,SNR=250
V12A ⇓S S 03 43 30.2 +0.5
baz=80
RFI Roccamonfina 79.79 318 P **P 03 34 04.2 +0.3**
comp=Z,140nm,1.2s,mb5.5
T14A Hurricane 79.79 48⇑P **P 03 34 04.3 +0.3**
baz=80,SNR=38
T14A ⇓S S 03 43 30.0 +0.3
baz=80
SSF Saint Saulge 79.82 328⇓*i*P **P 03 34 03.5 -0.4**
comp=Z,903nm,1.0s,mb6.0
SSF Saint Saulge 79.82 328⇓*i*P **P 03 34 03.5 -0.4**
comp=Z,452nm,1.0s,mb6.0
SSF Saint Saulge 79.82 328⇓*i*P **P 03 34 03.5 -0.4**
SSF pmax pmax
comp=Z,452nm,1.0s,mb6.1
FLN La Foliniere 79.88 331⇓*i*P **P 03 34 03.4 -0.8**
comp=Z,768nm,1.2s,mb5.9
FLN *e*MLR MLR
comp=Z,1μm,21.2s
FLN La Foliniere 79.88 331⇓*i*P **P 03 34 03.4 -0.8**
comp=Z,384nm,1.2s,mb5.9
FLN LR LR
comp=Z,1μm,21.3s
FLN La Foliniere 79.88 331⇓*i*P **P 03 34 03.4 -0.8**
FLN pmax pmax
comp=Z,384nm,1.2s,mb5.9
FLN MLR MLR
comp=Z,1μm,21.3s
LDF La Druitiere 79.89 331⇓*i*P **P 03 34 03.5 -0.8**
comp=Z,256nm,0.9s,mb5.5
LDF *e*pP pP 03 35 39.3 -2.5
LDF La Druitiere 79.89 331⇓*i*P **P 03 34 03.5 -0.8**
comp=Z,128nm,0.9s,mb5.5
LDF *e*pP pP 03 35 39.3 -2.5
LDF La Druitiere 79.89 331⇓*i*P **P 03 34 03.5 -0.8**
LDF *e**PP pP 03 35 39.3 -2.5
LDF pmax pmax
comp=Z,128nm,0.9s,mb5.5
MURC Murrieta 79.96 53 P **P 03 34 04.6 -0.3**
baz=80,SNR=117
MURC ⇑S S 03 43 30.6 -1.0
baz=80
CSA1 St Austell 79.99 334 *e*P **P 03 34 03.2 -1.5**
TIP Timpagrande 80.00 315⇓*i*P **P 03 34 05.2 +0.2**
comp=Z,643nm,1.2s,mb6.1
TIP *e*pP pP 03 35 43.9 +1.3
TIP *e*PP PP 03 37 15.0 +1.3
GMRC Granite Mounta 80.00 51 P **P 03 34 05.4 +0.2**
baz=80,SNR=222
GMRC ⇓S S 03 43 32.0 0.0
baz=80
SMF Signal de Mont 80.03 327⇓*i*P **P 03 34 04.7 -0.4**
comp=Z,1μm,1.1s,mb6.1
SMF Signal de Mont 80.03 327⇓*i*P **P 03 34 04.7 -0.4**
comp=Z,566nm,1.1s,mb6.1
SMF Signal de Mont 80.03 327⇓*i*P **P 03 34 04.7 -0.4**
SMF pmax pmax
comp=Z,566nm,1.1s,mb6.1
QLNO Quiliano 80.04 323 *i* P **P 03 34 04.5 -0.6**
W12A Cal Nev Ari 80.08 51 ⇓P **P 03 34 05.6 0.0**
baz=80,SNR=22
W12A ⇓S S 03 43 32.8 0.0
baz=80
AVF Avril sur Loir 80.10 328⇓*i*P **P 03 34 05.2 -0.2**
comp=Z,2μm,1.1s,mb6.4
AVF *e*pP pP 03 35 40.9 -2.1
AVF Avril sur Loir 80.10 328⇓*i*P **P 03 34 05.2 -0.2**
comp=Z,1μm,1.1s,mb6.4
AVF *e*pP pP 03 35 40.9 -2.1
AVF Avril sur Loir 80.10 328⇓*i*P **P 03 34 05.2 -0.2**
AVF *e**PP pP 03 35 40.9 -2.1
AVF pmax pmax
comp=Z,1μm,1.1s,mb6.4
TOLF Tolfa 80.15 320 *i* P **P 03 34 05.8 0.0**
VAL Valentia 80.16 338⇑*i*P **P 03 34 05.3 -0.3**
BNI Bardonecchia 80.17 325⇓*i*P **P 03 34 05.8 0.0**
comp=Z,265nm,1.0s,mb5.8
BNI *e*pP pP 03 35 44.5 +1.1
BNI *e*PP PP 03 37 16.2 +1.3
BNI Bardonecchia 80.17 325⇓*i*P **P 03 34 05.8 0.0**
BNI *e**PP pP 03 35 44.5 +1.1
BNI *e* 03 37 16.2
BNI pmax pmax
comp=Z,265nm,1.0s,mb5.8
T15A Red Dirt Ranch 80.20 48 P **P 03 34 06.7 +0.5**
baz=80,SNR=222
T15A ⇑S S 03 43 35.0 +1.1
baz=80
U14A Mt Trumbull 80.21 49 P **P 03 34 07.1 +0.9**
baz=80,SNR=170
U14A ⇑S S 03 43 35.3 +1.2
baz=80
CRQ2 Rosemanowes 2 80.24 334 *e*P **P 03 34 04.8 -1.3**
CCA1 Carnmenellis 80.24 335 *e*P **P 03 34 04.7 -1.4**
GDM Grand'Maison 80.28 325⇓*e*P **P 03 34 06.6 +0.2**
CMA1 Manaccan 80.30 334 *e*P **P 03 34 05.1 -1.3**
GRR Gorron 80.33 331⇓*i*P **P 03 34 06.0 -0.6**
comp=Z,976nm,1.2s,mb6.0
GRR Gorron 80.33 331⇓*i*P **P 03 34 06.0 -0.6**
comp=Z,488nm,1.2s,mb6.0
GRR Gorron 80.33 331⇓*i*P **P 03 34 06.0 -0.6**
GRR pmax pmax
comp=Z,488nm,1.2s,mb6.0
DOI San Damiano 80.37 324 P **P 03 34 05.4 -1.5**
BELC Belle Mtn. 80.37 52 P **P 03 34 06.9 -0.2**
baz=80,SNR=156
BELC ⇑S S 03 43 34.4 -1.4
baz=80
CPZ Penzance 80.38 335 *e*P **P 03 34 05.9 -0.9**
PFO Pinyon Flat Ob 80.39 53 P **P 03 34 06.8 -0.4**
comp=Z,3μm,1.2s,mb6.8,SNR=92
PFO Pinyon Flat Ob 80.39 53⇑*i*P **P 03 34 06.8 -0.4**
comp=Z,493nm,0.9s,mb6.1
PFO Pinyon Flat Ob 80.39 53⇑*i*P **P 03 34 06.8 -0.4**
PFO pmax pmax
comp=Z,493nm,0.9s,mb6.1
PFO Pinyon Flat Ob 80.39 53 P **P 03 34 06.6 -0.6**
comp=Z,484nm,1.0s,mb6.1,baz=329,slow=4.9,SNR=263
PFO tx tx 04 03 23.4
comp=Z,3.5nm,0.9s,baz=134,slow=3.8,SNR=3.7
PFO Pinyon Flat Ob 80.39 53 P **P 03 34 07.0 -0.2**
baz=80,SNR=263
PFO ⇑S S 03 43 34.8 -1.1
baz=80
MBDF Montbardon 80.39 325⇓*i*P **P 03 34 06.6 -0.4**
comp=Z,608nm,0.9s,mb5.9
MBDF *e*pP pP 03 35 45.0 +0.3
MBDF Montbardon 80.39 325⇓*i*P **P 03 34 06.6 -0.4**
comp=Z,304nm,0.9s,mb5.9
MBDF *e*pP pP 03 35 45.0 +0.3
MBDF Montbardon 80.39 325⇓*i*P **P 03 34 06.6 -0.4**
MBDF *e**PP pP 03 35 45.0 +0.3
MBDF pmax pmax
comp=Z,304nm,0.9s,mb5.9
GRN Grenoble 80.40 325⇓*e*P **P 03 34 07.7 +0.6**
BGF Bois d'Agland 80.49 328⇓*i*P **P 03 34 07.1 -0.4**
comp=Z,463nm,1.0s,mb5.8
BGF *e*pP pP 03 35 42.9 -2.3
BGF Bois d'Agland 80.49 328⇓*i*P **P 03 34 07.1 -0.4**
comp=Z,231nm,1.0s,mb5.8
BGF *e*pP pP 03 35 42.9 -2.3
BGF Bois d'Agland 80.49 328⇓*i*P **P 03 34 07.1 -0.4**
BGF *e**PP pP 03 35 42.9 -2.3
BGF pmax pmax
comp=Z,231nm,1.0s,mb5.8
PHWY Pilot Hill 80.52 41⇑*i*P **P 03 34 07.5 -0.2**
109C Camp Elliot, M 80.52 54⇑P **P 03 34 07.4 -0.5**
baz=80,SNR=83
109C ⇑S S 03 43 36.0 -1.4
baz=80
SURF Saint Ours 80.57 324⇓*e*P **P 03 34 08.3 +0.3**
NEE2 Needles Airpor 80.61 51 ⇓P **P 03 34 08.0 -0.3**
baz=80,SNR=15
NEE2 ⇑S S 03 43 37.4 -0.8
baz=80
ORIF Oris-en-Rattie 80.61 325⇓*i*P **P 03 34 08.1 0.0**
comp=Z,468nm,0.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,817nm,20.2s
ORIF Oris-en-Rattie 80.61 325⇓*i*P **P 03 34 08.1 0.0**
comp=Z,234nm,0.9s,mb5.9
ORIF Oris-en-Rattie 80.61 325⇓*i*P **P 03 34 08.1 0.0**
ORIF pmax pmax
comp=Z,234nm,0.9s,mb5.9
TRBA At Turbah 80.64 279 *e*P **P 03 34 09.6 +0.9**
SAOF Saorge 80.65 324⇓*e*P **P 03 34 07.8 -0.6**
PLDF La Plantade 80.67 327⇓*e*P **P 03 34 08.6 +0.2**
AUTN L'Aution 80.70 324⇓*e*P **P 03 34 08.3 -0.3**
IRM Iron Mountain 80.74 51 P **P 03 34 09.4 +0.3**
baz=80,SNR=352
IRM ⇑S S 03 43 40.7 +1.1
baz=80
TOUF Mont Tournerai 80.76 324⇓*e*P **P 03 34 08.9 0.0**
W13A Hualapai Mount 80.78 50 P **P 03 34 09.7 +0.5**
baz=80,SNR=210
W13A ⇓S S 03 43 41.0 +1.1
baz=80
SCHQ Schefferville 80.79 12 P **P 03 34 08.7 -0.2**
SCHQ pP pP 03 35 47.2 +0.6
SCHQ S S 03 43 38.2 -1.1
SCHQ PKKPbc PKKPbc 03 52 41.7 -1.5
SCHQ Schefferville 80.79 12 P **P 03 34 08.7 -0.2**
comp=Z,41nm,0.9s,mb5.2,baz=0.4,slow=5.5,SNR=40
SCHQ pP pP 03 35 47.2 +0.6
comp=Z,47nm,0.9s,baz=0.6,slow=5.5,SNR=8.9
SCHQ S S 03 43 38.2 -1.1
comp=Z,4.2nm,1.0s,baz=237,slow=18,SNR=5.6
SCHQ PKKPbc PKKPbc 03 52 41.7 -1.5
comp=Z,8.6nm,0.6s,baz=116,slow=0.6,SNR=23
SCHQ tx tx 04 03 24.6
comp=Z,14nm,1.0s,baz=175,slow=4.3,SNR=8.5
AGO Saint Agoulin 80.80 327 *e*P **P 03 34 09.5 +0.4**
SBF Sospel 80.80 324⇓*i*P **P 03 34 08.4 -0.8**
comp=Z,2μm,1.2s,mb6.3
SBF *e*pP pP 03 35 44.3 -2.6
SBF Sospel 80.80 324⇓*i*P **P 03 34 08.4 -0.8**
comp=Z,799nm,1.2s,mb6.3
SBF *e*pP pP 03 35 44.3 -2.6
SBF Sospel 80.80 324⇓*i*P **P 03 34 08.4 -0.8**
SBF *e**PP pP 03 35 44.3 -2.6
SBF pmax pmax
comp=Z,799nm,1.2s,mb6.3
LUCF Luceram 80.81 324⇓*e*P **P 03 34 08.7 -0.5**
MVIF Mont Vial 80.89 324⇓*e*P **P 03 34 09.4 -0.3**
MONP Monument Peak 80.92 53 P **P 03 34 09.9 -0.1**
baz=81,SNR=132
MONP ⇑S S 03 43 42.2 +0.7
baz=81
EYMN Ely 80.93 29⇑*i*P **P 03 34 08.3 -1.4**
comp=Z,209nm,0.9s,mb5.9
EYMN *e*pP pP 03 35 47.7 +0.1
REVF Revere 80.93 324⇓*e*P **P 03 34 09.5 -0.3**
BC3 Big Chuckw Mtn 80.93 52 P **P 03 34 10.1 0.0**
baz=81,SNR=216
BC3 ⇓S S 03 43 42.2 +0.7
baz=81
TCF Toulx Ste Croi 80.96 328⇓*i*P **P 03 34 09.8 -0.1**
comp=Z,2μm,1.5s,mb6.2
TCF *e*pP pP 03 35 45.9 -1.9
TCF Toulx Ste Croi 80.96 328⇓*i*P **P 03 34 09.8 -0.1**
comp=Z,776nm,1.5s,mb6.2
TCF *e*pP pP 03 35 45.9 -1.9
TCF Toulx Ste Croi 80.96 328⇓*i*P **P 03 34 09.8 -0.1**
TCF *e**PP pP 03 35 45.9 -1.9
TCF pmax pmax
comp=Z,777nm,1.5s,mb6.2
PV10 Paradox Valley 80.96 45 *e*P **P 03 34 10.7 +0.6**
SGMF Saint Gilles 81.03 332⇓*i*P **P 03 34 10.1 -0.2**
comp=Z,1μm,1.2s,mb6.2
SGMF *e*pP pP 03 35 46.1 -2.0
SGMF Saint Gilles 81.03 332⇓*i*P **P 03 34 10.1 -0.2**
comp=Z,595nm,1.2s,mb6.2
SGMF *e*pP pP 03 35 46.1 -2.0
SGMF Saint Gilles 81.03 332⇓*i*P **P 03 34 10.1 -0.2**
SGMF *e**PP pP 03 35 46.1 -2.0
SGMF pmax pmax
comp=Z,595nm,1.2s,mb6.2
PYM Petit Puy Mans 81.09 327 *e*P **P 03 34 11.0 +0.4**
CALN Calern 81.12 324⇓*e*P **P 03 34 10.7 -0.1**
W14A Seligman 81.14 50 P **P 03 34 11.7 +0.6**
baz=81,SNR=529
W14A ⇓S S 03 43 44.3 +0.7
baz=81
VIVF Saint-Julien-l 81.16 326⇓*i*P **P 03 34 11.0 0.0**
comp=Z,2μm,1.2s,mb6.3
VIVF Saint-Julien-l 81.16 326⇓*i*P **P 03 34 11.0 0.0**
comp=Z,823nm,1.2s,mb6.3
VIVF Saint-Julien-l 81.16 326⇓*i*P **P 03 34 11.0 0.0**
VIVF pmax pmax
comp=Z,823nm,1.2s,mb6.3
X13A Yucca 81.18 50 ⇓P **P 03 34 11.7 +0.4**
baz=81
X13A ⇑S S 03 43 44.1 +0.1
baz=81
ROSF Rostrenen 81.21 332⇓*i*P **P 03 34 11.1 -0.1**
comp=Z,2μm,1.2s,mb6.3
ROSF Rostrenen 81.21 332⇓*i*P **P 03 34 11.1 -0.1**
comp=Z,752nm,1.2s,mb6.3
ROSF Rostrenen 81.21 332⇓*i*P **P 03 34 11.1 -0.1**
ROSF pmax pmax
comp=Z,752nm,1.2s,mb6.3
PDMCI Parker Dam,Lak 81.22 51⇑P **P 03 34 11.5 0.0**
baz=81,SNR=162
PDMCI ⇑S S 03 43 44.7 +0.3
baz=81
SCLL Scilla 81.23 315 *i* Pu **P 03 34 10.9 -0.6**
comp=Z,182nm,1.0s,mb5.8
SWSC Sam W. Stewart 81.25 53⇑P **P 03 34 11.2 -0.5**
baz=81,SNR=64
SWSC ⇑S S 03 43 45.4 +0.6
baz=81
DVTC Desert V Tower 81.28 53 ⇓P **P 03 34 11.8 -0.1**
baz=81,SNR=26
DVTC ⇓S S 03 43 45.1 0.0

baz=81
CORF Corte 81.28 322⇓*e*P P 03 34 11.7 0.0
STOF St-Etienne Org 81.34 325⇓*e*P P 03 34 11.6 -0.4
FRF La Foret Royal 81.38 324⇓*i*P P 03 34 11.5 -0.7
comp=Z,882nm,1.2s,mb6.0
FRF La Foret Royal 81.38 324⇓*i*P P 03 34 11.5 -0.7
comp=Z,441nm,1.2s,mb6.1
FRF La Foret Royal 81.38 324⇓*i*P P 03 34 11.5 -0.7
FRF pmax pmax
comp=Z,441nm,1.2s,mb6.1
PV01 Paradox Valley 81.39 45 *e*P P 03 34 12.8 +0.5
Y12C Blythe 81.40 51 ⇓P P 03 34 12.5 +0.1
baz=81,SNR=298
Y12C ⇓S S 03 43 46.9 +0.7
baz=81
SMCO Snowmass 81.41 43⇑*i*P P 03 34 08.0 -4.4
comp=Z,525nm,0.7s,mb6.4
LBL Lubilhac 81.43 327⇓*e*P P 03 34 12.9 +0.5
SLNA Salina 81.45 316 *i*Pu P 03 34 12.6 0.0
comp=Z,1μm,1.0s,mb6.6
SMRF Simiane la Rot 81.50 325⇓*i*P P 03 34 12.7 -0.1
comp=Z,867nm,1.3s,mb6.0
SMRF Simiane la Rot 81.50 325⇓*i*P P 03 34 12.7 -0.1
comp=Z,867nm,1.3s,mb6.3
QUIF Quistinic 81.53 332⇓*i*P P 03 34 12.5 -0.4
comp=Z,450nm,1.0s,mb5.8
QUIF Quistinic 81.53 332⇓*i*P P 03 34 12.5 -0.4
comp=Z,225nm,1.0s,mb5.8
QUIF Quistinic 81.53 332⇓*i*P P 03 34 12.5 -0.4
QUIF pmax pmax
comp=Z,225nm,1.0s,mb5.8
MFF Saint Martin d 81.58 330⇓*i*P P 03 34 13.1 -0.1
comp=Z,840nm,1.0s,mb6.1
MFF *e*pP pP 03 35 49.4 -1.8
MFF Saint Martin d 81.58 330⇓*i*P P 03 34 13.1 -0.1
comp=Z,420nm,1.0s,mb6.1
MFF *e*pP pP 03 35 49.4 -1.8
MFF Saint Martin d 81.58 330⇓*i*P P 03 34 13.1 -0.1
MFF *e**PP pP 03 35 49.4 -1.8
MFF pmax pmax
comp=Z,420nm,1.0s,mb6.1
TAVF Tavernes 81.59 324⇓*e*P P 03 34 12.4 -0.9
ISCO Idaho Springs 81.60 42⇑*i*P P 03 34 13.7 +0.4
comp=Z,191nm,0.8s,mb5.9
ISCO Idaho Springs 81.60 42⇑*i*P P 03 34 13.7 +0.3
ISCO pmax pmax
comp=Z,191nm,0.8s,mb5.9
W15A Williams 81.62 49 ⇓P P 03 34 14.5 +0.9
baz=81,SNR=138
W15A ⇑S S 03 43 49.9 +1.4
baz=81
LMR La Mourre 81.62 324⇓*i*P P 03 34 12.9 -0.5
comp=Z,2μm,1.1s,mb6.4
LMR La Mourre 81.62 324⇓*i*P P 03 34 12.9 -0.5
comp=Z,843nm,1.1s,mb6.4
LMR La Mourre 81.62 324⇓*i*P P 03 34 12.9 -0.5
LMR pmax pmax
comp=Z,843nm,1.1s,mb6.4
GLA Glamis 81.73 52 ⇑P P 03 34 14.2 +0.1
baz=82,SNR=276
GLA ⇑S S 03 43 50.9 +1.3
baz=82
Y13A Salome 81.75 51 P P 03 34 14.7 +0.4
baz=82,SNR=138
Y13A ⇑S S 03 43 50.8 +1.0
baz=82
X14A Yava 81.80 50 P P 03 34 15.4 +0.9
baz=82,SNR=481
X14A ⇑S S 03 43 51.6 +1.4
baz=82
PRAF Pradon 81.81 325⇓*e*P P 03 34 14.3 -0.1
TREF Trevaresse 81.87 325 *e*P P 03 34 15.0 +0.3
BERF Bertagne 81.99 324⇓*e*P P 03 34 15.3 0.0
GELF Grande-Etoile 82.05 325⇓*e*P P 03 34 15.5 -0.1
RJF Les Rejaudoux 82.05 328⇓*i*P P 03 34 15.5 -0.1
comp=Z,1μm,1.4s,mb6.2
RJF *e*MLR MLR
comp=Z,624nm,20.2s
RJF Les Rejaudoux 82.05 328⇓*i*P P 03 34 15.5 -0.1
comp=Z,646nm,1.4s,mb6.2
RJF LR LR
comp=Z,620nm,20.3s
RJF Les Rejaudoux 82.05 328⇓*i*P P 03 34 15.5 -0.1
RJF pmax pmax
comp=Z,646nm,1.4s,mb6.2
RJF MLR MLR
comp=Z,620nm,20.3s
Y14A Wickenburg 82.12 50 P P 03 34 16.5 +0.3
baz=82,SNR=443
Y14A ⇑S S 03 43 53.7 +0.2
baz=82
MVCO Mesa Verde 82.12 45⇑*i*P P 03 34 16.4 +0.3
comp=Z,407nm,1.1s,mb6.1
MVCO Mesa Verde 82.12 45 P P 03 34 16.6 +0.5
baz=82,SNR=166
MVCO ⇓S S 03 43 53.6 +0.2
baz=82
LASF Ste Croix 82.13 326⇓*i*P P 03 34 16.1 +0.1
comp=Z,1μm,1.2s,mb6.2
LASF *e*pP pP 03 35 52.5 -1.7
X15A Humboldt 82.15 49 P P 03 34 17.1 +0.8
baz=82,SNR=727
X15A ⇑S S 03 43 53.8 0.0
baz=82
CAF Calviac 82.15 327⇓*i*P P 03 34 16.6 +0.5
comp=Z,2μm,1.2s,mb6.3
CAF *e*pP pP 03 35 52.9 -1.4
CAF Calviac 82.15 327⇓*i*P P 03 34 16.6 +0.5
comp=Z,811nm,1.2s,mb6.3
CAF *e*pP pP 03 35 52.9 -1.4
CAF Calviac 82.15 327⇓*i*P P 03 34 16.6 +0.5
CAF *e**PP pP 03 35 52.9 -1.4
CAF pmax pmax
comp=Z,811nm,1.2s,mb6.3
USI Ustica 82.17 317 P P 03 34 16.2 -0.1
GIB Gibilmanna 82.30 316 P P 03 34 16.1 -0.9
VAE Valguarnera 82.49 315 P P 03 34 18.3 +0.3
comp=Z,28nm,0.7s,mb5.1,baz=61,slow=13,SNR=3.9
ECSD EROS,Sioux Fal 82.51 34⇑*i*P P 03 34 17.0 -0.9
comp=Z,304nm,0.7s,mb6.1
Z14A Wintersburg 82.58 51 P P 03 34 18.7 +0.2
baz=82,SNR=152
Z14A ⇑S S 03 43 57.9 -0.2
baz=82
DGI Dorgali Grotta 82.64 320 P P 03 34 19.0 +0.3
LFF La Frestale 82.65 328⇓*i*P P 03 34 19.0 +0.3
comp=Z,2μm,1.3s,mb6.5
LFF La Frestale 82.65 328⇓*i*P P 03 34 19.0 +0.3
comp=Z,1μm,1.3s,mb6.5
LFF La Frestale 82.65 328⇓*i*P P 03 34 19.0 +0.3
LFF pmax pmax
comp=Z,1μm,1.3s,mb6.5
ATD Arta Tunnel 82.69 279 P P 03 34 20.8 +1.4
comp=Z,470nm,1.2s,mb6.1,baz=19,slow=4.0,SNR=144
HMDC Modica 82.70 315 *i*P P 03 34 19.8 +0.7
SDCO Great Sand Dun 83.24 43⇑*i*P P 03 34 22.1 +0.3
comp=Z,139nm,0.8s,mb5.7
COWI Conover 83.34 28 *e*P P 03 34 21.4 -0.7
comp=Z,219nm,1.6s,mb5.6
VSL Villasalto 83.40 320⇓*i*P P 03 34 21.9 -0.6
comp=Z,549nm,1.0s,mb6.2
MTLF Montolieu 83.41 327⇓*i*P P 03 34 22.6 +0.1
comp=Z,898nm,1.3s,mb6.0
MTLF Montolieu 83.41 327⇓*i*P P 03 34 22.6 +0.1
comp=Z,449nm,1.3s,mb6.0
MTLF Montolieu 83.41 327⇓*i*P P 03 34 22.6 +0.1
MTLF pmax pmax
comp=Z,449nm,1.3s,mb6.0
115A Sonoran Desert 83.47 51 ⇓P P 03 34 23.4 +0.4
baz=83
115A ⇑S S 03 44 05.9 -1.1
baz=83
LRDF Laroque-de-Fa 83.61 326⇓*e*P P 03 34 23.9 +0.4
SJAF Saint Jean de 83.85 326 *e*P P 03 34 22.7 -2.0
116A Eloy 83.87 50 P P 03 34 25.4 +0.4
baz=84,SNR=328
116A ⇓S S 03 44 09.2 -1.8
baz=84
EJON La Jonquera 83.88 326 P P 03 34 24.7 -0.2
comp=Z,449nm,1.4s,mb6.0
EJON P pP 03 36 02.5 -1.0
FILF Fillols 83.92 326⇓*e*P P 03 34 25.3 +0.2
CARF Carcanieres 83.97 326 *e*P P 03 34 25.4 +0.1
MLS Moulis 84.18 327⇓*e*P P 03 34 26.7 +0.3
VALF Valcebollere 84.27 326⇓*e*P P 03 34 27.3 +0.5
SALF Salau 84.31 327 *e*P P 03 34 27.0 0.0

MELF Melles 84.38 327 *e*P P 03 34 27.3 -0.1
EPF Esparros 84.42 327⇓*i*P P 03 34 27.2 -0.3
comp=Z,540nm,1.0s,mb5.9
EPF Esparros 84.42 327⇓*i*P P 03 34 27.2 -0.3
comp=Z,270nm,1.0s,mb5.9
EPF Esparros 84.42 327⇓*i*P P 03 34 27.2 -0.3
EPF pmax pmax
comp=Z,270nm,1.0s,mb5.9
LABF Labassere 84.51 328⇓*e*P P 03 34 27.7 -0.3
TUC Tucson 84.58 50⇑*i*P P 03 34 28.7 +0.2
comp=Z,158nm,0.9s,mb5.7
TUC *e*PP PP 03 37 52.0 +1.1
TUC Tucson 84.58 50⇑*i*P P 03 34 28.7 +0.2
TUC *e* 03 37 52.0
TUC pmax pmax
comp=Z,158nm,0.9s,mb5.7
RESF Ens 84.61 327⇓*e*P P 03 34 29.5 +1.0
VIEF Viey 84.67 328⇓*e*P P 03 34 29.6 +0.8
REYF Montagne du Re 84.67 328⇓*e*P P 03 34 28.5 -0.3
ORDF Ordiarp 84.76 328 *e*P P 03 34 28.8 -0.4
ATE Arette 84.78 328⇓*e*P P 03 34 28.9 -0.4
EBIE Bielsa 84.78 327 P P 03 34 29.9 +0.5
comp=Z,860nm,1.3s,mb6.3
EBIE P pP 03 36 10.0 +1.7
OSSF Osses 84.84 329⇓*e*P P 03 34 29.4 -0.2
ETSF Etsaut 84.88 328⇓*i*P P 03 34 30.5 +0.7
comp=Z,359nm,0.9s,mb5.8
ETSF *e*pP pP 03 36 07.4 -1.3
ETSF Etsaut 84.88 328⇓*i*P P 03 34 30.5 +0.7
comp=Z,179nm,0.9s,mb5.8
ETSF *e*pP pP 03 36 07.4 -1.3
ETSF Etsaut 84.88 328⇓*i*P P 03 34 30.5 +0.7
ETSF *e**PP pP 03 36 07.4 -1.3
ETSF pmax pmax
comp=Z,179nm,0.9s,mb5.8
EMIR Miracle 84.88 326 P P 03 34 29.6 -0.3
comp=Z,1μm,1.9s,mb6.2
EMIR P pP 03 36 09.3 +0.5
ANMO Albuquerque 84.91 46 P P 03 34 31.0 +0.9
ANMO sP sP 03 36 57.4 +2.6
ANMO SKKSac SKKSac 03 44 15.5 -3.8
ANMO S S 03 44 24.1 +3.0
ANMO sS sS 03 47 19.8 +2.5
ANMO Albuquerque 84.91 46⇑*i*P P 03 34 30.6 +0.4
comp=Z,396nm,1.3s,mb6.0
ANMO Albuquerque 84.91 46⇑*e*P P 03 34 30.6 +0.5
ANMO Albuquerque 84.91 46 P P 03 34 30.5 +0.4
comp=Z,137nm,1.0s,mb5.7,baz=309,slow=7.9,SNR=197
ANMO tx tx 04 03 12.3
comp=Z,6.7nm,1.0s,baz=172,slow=5.0,SNR=11
LARF Larrau 84.93 328⇓*e*P P 03 34 30.3 +0.3
SJPF Ste Jean 84.95 329⇓*i*P P 03 34 29.9 -0.3
comp=Z,262nm,1.0s,mb5.6
SJPF Ste Jean 84.95 329⇓*i*P P 03 34 29.9 -0.3
comp=Z,131nm,1.0s,mb5.6
SJPF Ste Jean 84.95 329⇓*i*P P 03 34 29.9 -0.3
SJPF pmax pmax
comp=Z,131nm,1.0s,mb5.6
LAZ Ladron 84.98 46 *e*P P 03 34 31.4 +1.0
ELIZ Elizondo 85.03 329 P P 03 34 30.6 +0.1
comp=Z,176nm,1.0s,mb5.8
ELIZ P pP 03 36 10.9 +1.5
ELIZ Elizondo 85.03 329 P P 03 34 30.6 +0.1
ELIZ pP 03 36 10.9 +1.4
ELIZ pmax pmax
comp=Z,176nm,1.0s,mb5.8
CBKS Cedar Bluff 85.16 39⇑*i*P P 03 34 30.3 -1.0
comp=Z,468nm,0.9s,mb6.2
CBKS Cedar Bluff 85.16 39⇑*i*P P 03 34 30.3 -1.0
CBKS pmax pmax
comp=Z,468nm,0.9s,mb6.2
LENM Lemitar 85.25 46 *e*P P 03 34 32.5 +0.7
DESE Dese 85.28 281 *e*P P 03 34 33.9 +1.6
DESE S S 03 44 17.9 -7.3
LPM Los Pinos Moun 85.31 46 *e*P P 03 34 32.7 +0.6
Y22C IRIS PASSCAL I 85.34 46 ⇑P P 03 34 33.3 +1.0
baz=85,SNR=23
Y22C ⇓S S 03 44 20.3 -5.0
baz=85
BNM Barren Site 85.44 46 *e*P P 03 34 33.5 +0.8
EPOB Poblet 85.53 326 P P 03 34 32.2 -0.8
comp=Z,569nm,1.4s,mb6.1
EPOB P pP 03 36 12.9 +0.8
ELAN Lanestosa 85.68 330 P P 03 34 33.5 -0.2
comp=Z,634nm,1.2s,mb6.2
ELAN P pP 03 36 13.6 +0.7
JFWS Jewell Farm 85.69 31⇑*i*P P 03 34 32.6 -1.2
comp=Z,155nm,0.7s,mb5.8
JFWS Jewell Farm 85.69 31⇑*i*P P 03 34 32.6 -1.2
JFWS pmax pmax
comp=Z,155nm,0.7s,mb5.8
ESAC San Caprasio 85.84 327 P P 03 34 34.7 +0.1
comp=Z,1μm,1.2s,mb6.6
ESAC P pP 03 36 15.3 +1.6
ECRI Cripan 85.87 329 P P 03 34 35.2 +0.6
comp=Z,414nm,1.4s,mb6.0
ECRI P pP 03 36 15.9 +2.0
ECRI Cripan 85.87 329 P P 03 34 35.2 +0.6
ECRI pP 03 36 15.9 +2.1
ECRI pmax pmax
comp=Z,414nm,1.4s,mb6.0
ETOS Mallorca 86.13 324 P P 03 34 36.2 +0.3
comp=Z,775nm,2.0s,mb6.1
ETOS P pP 03 36 15.3 +0.1
ERTA Horta de San J 86.17 326 P P 03 34 35.5 -0.6
comp=Z,883nm,1.7s,mb6.2
ERTA P pP 03 36 15.5 +0.1
EARI Arriondas 86.25 331 P P 03 34 36.3 -0.1
comp=Z,934nm,1.5s,mb6.3
EARI P pP 03 36 16.3 +0.5
KSU1 Kansas State U 86.33 37⇑*i*P P 03 34 36.1 -0.8
comp=Z,326nm,0.8s,mb6.1
KEST Kesra 86.40 318 P P 03 34 37.1 -0.2
comp=Z,22nm,0.9s,mb4.9,baz=306,slow=1.3,SNR=20
KEST pP pP 03 36 17.8 +1.1
comp=Z,74nm,1.1s,baz=319,slow=1.7,SNR=11
KEST S S 03 44 18.3 -17
comp=Z,1.2nm,0.5s,baz=116,slow=23,SNR=9.2
CMAH Djebel Manchou 86.62 319 P P 03 34 36.0 -2.3
TAU Tasmania Unive 86.64 170 *e*P P 03 34 39.0 +1.0
comp=Z,96nm,0.8s,mb5.6
TAU Tasmania Unive 86.64 170 *e*P P 03 34 39.0 +1.0
TAU pmax pmax
comp=Z,96nm,0.8s,mb5.6
CAEH 'Ain El Ouahch 86.77 320 P P 03 34 36.5 -2.5
EPON Pontenova 86.90 332 P P 03 34 39.0 -0.5
comp=Z,913nm,1.4s,mb6.3
EPON P pP 03 36 19.7 +0.6
EMOS Mosqueruela 87.00 327 P P 03 34 39.7 -0.3
comp=Z,499nm,1.0s,mb6.2
EMOS P pP 03 36 21.0 +1.4
CKFL Kef-Lekhel 87.13 320 P P 03 34 37.0 -3.8
ETOR Torete 87.23 328 P P 03 34 41.0 -0.2
comp=Z,167nm,1.1s,mb5.7
ETOR P pP 03 36 21.9 +1.2
ETOR Torete 87.23 328 P P 03 34 41.0 -0.1
ETOR pP 03 36 21.9 +1.1
ETOR pmax pmax
comp=Z,167nm,1.1s,mb5.7
MRKH Merkhyat 87.28 289 *i*P P 03 34 41.6 -0.1
MRKH AMb AMB 03 34 44.1
comp=Z,1μm,1.2s,mb6.5
MRKH *i*S S 03 44 23.4 -21
CASM Ain Smara 87.36 320 P P 03 34 40.0 -1.8
EIBI Ibiza 87.38 325 P P 03 34 41.2 -0.7
comp=Z,84nm,0.7s,mb5.6
EIBI P pP 03 36 23.0 +1.5
AMTX Amarillo 87.39 43⇑*i*P P 03 34 42.1 +0.1
comp=Z,213nm,0.8s,mb5.9
DFRA Djebel Bou Aff 87.41 320 P P 03 34 41.0 -1.1
JAWL J.Aulia 87.52 288 *i*P P 03 34 42.5 -0.4
baz=46,slow=5.9
JAWL AMb AMB 03 34 45.8
comp=Z,915nm,1.5s,mb6.3
JAWL *i*S S 03 44 24.5 -22
CTEI Djebel Teioual 87.55 320 P P 03 34 42.0 -0.7
SADO Sadowa 87.67 23 P P 03 34 41.9 -1.3
ERUA La Rua 87.73 332 P P 03 34 43.0 -0.4
comp=Z,32nm,1.0s,mb5.0
ERUA P pP 03 36 24.9 +1.8
ERUA La Rua 87.73 332 P P 03 34 43.0 -0.4
ERUA pP 03 36 24.9 +1.7
ERUA pmax pmax
comp=Z,32nm,1.0s,mb5.0
STS Santiago 87.76 333 P P 03 34 43.4 -0.2
comp=Z,18nm,0.5s,mb5.0
STS P pP 03 36 24.4 +1.0
STS Santiago 87.76 333 P P 03 34 43.4 -0.2
STS pP 03 36 24.4 +1.1
STS pmax pmax
comp=Z,18nm,0.5s,mb5.1
EMAZ Mazaricos 87.85 333 P P 03 34 42.7 -1.3
comp=Z,706nm,1.7s,mb6.1
EMAZ P pP 03 36 24.4 +0.7
ECHE Chera 87.86 327 P P 03 34 44.1 0.0
comp=Z,55nm,0.8s,mb5.3
ECHE P pP 03 36 25.0 +1.2
ECHE Chera 87.86 327 P P 03 34 44.1 0.0
ECHE pP 03 36 25.0 +1.1
ECHE pmax pmax
comp=Z,55nm,0.8s,mb5.3
SET Setif 87.92 320 P P 03 34 44.0 -0.4
ECAL Calabor 87.99 331 P P 03 34 44.3 -0.3
comp=Z,353nm,1.4s,mb5.9
ECAL P pP 03 36 25.4 +1.0
MNTX Cornudas Mount 88.00 47⇑*i*P P 03 34 45.0 +0.1
comp=Z,659nm,0.7s,mb6.5
MNTX *e*PP PP 03 38 20.3 +2.1
CKHR Kef el Ahmar 88.01 320 P P 03 34 47.0 +2.1
HDIL Hopedale 88.09 31⇑*i*P P 03 34 44.5 -0.6
comp=Z,404nm,1.0s,mb6.1
HDIL *e*pP pP 03 36 25.7 +0.7
PBRG Braganca 88.11 331 *i*P P 03 34 44.9 -0.3
comp=Z,204nm,1.6s,mb5.6
PBRG *e*pP pP 03 36 26.0 +0.9
PBRG Braganca 88.11 331 *e*PP PP 03 38 21.3 +2.7
GDL2 Guadalupe Moun 88.15 46 *e*P P 03 34 45.9 +0.3
CMER Merouana 88.15 320 P P 03 34 45.0 -0.6
GUD Guadarrama 88.19 329 P P 03 34 45.6 0.0
comp=Z,93nm,0.8s,mb5.6
GUD P pP 03 36 26.5 +1.0
GUD Guadarrama 88.19 329 P P 03 34 45.6 0.0
GUD pP 03 36 26.5 +1.0
GUD pmax pmax
comp=Z,93nm,0.8s,mb5.6
EBEN Beniarda 88.31 326 P P 03 34 45.0 -1.2
comp=Z,310nm,1.3s,mb5.9
EBEN P pP 03 36 26.2 +0.1
EZAM Zamans 88.47 333 P P 03 34 46.8 -0.1
comp=Z,113nm,1.0s,mb5.5
EZAM P pP 03 36 28.1 +1.2
EZAM Zamans 88.47 333 P P 03 34 46.8 -0.1
EZAM pP 03 36 28.1 +1.3
EZAM pmax pmax
comp=Z,113nm,1.0s,mb5.5
ELOB Lobios 88.51 332 P P 03 34 46.4 -0.7
comp=Z,174nm,1.3s,mb5.6
ELOB P pP 03 36 27.8 +0.8
AAM Ann Arbor 88.54 27 *e*P P 03 34 46.8 -0.4
comp=Z,214nm,1.1s,mb5.8
AAM *e*pP pP 03 36 28.6 +1.4
AAM Ann Arbor 88.54 27 *e*P P 03 34 46.8 -0.4
AAM *e**PP pP 03 36 28.6 +1.4
AAM pmax pmax
comp=Z,213nm,1.1s,mb5.8
MSNY Massena 88.59 20 *e*P P 03 34 47.0 -0.4
MSNY *e*pP pP 03 36 27.6 +0.3
RAR Rarotonga 88.62 121 P P 03 34 48.2 +0.4
RAR pmax pmax
comp=Z,141nm,0.8s
RAR Rarotonga 88.62 121 P P 03 34 48.2 +0.4
comp=Z,141nm,0.8s,mb5.8,baz=242,slow=6.3,SNR=15
PCAB Cabril 88.64 332 *e*P P 03 34 47.8 +0.1
comp=Z,158nm,1.9s,mb5.4
PCAB *e*pP pP 03 36 28.4 +0.8
PCAB Cabril 88.64 332 *e*PP PP 03 38 19.2 -3.6
MVO Moncorvo 88.78 331 *i*P P 03 34 47.8 -0.6
comp=Z,224nm,1.6s,mb5.7
MVO *e*pP pP 03 36 28.8 +0.5
ETOB Tobarra 88.90 326 P P 03 34 49.1 +0.1
comp=Z,939nm,1.8s,mb6.2
ETOB P pP 03 36 29.9 +0.9
PVRL Vila Real 88.92 332 *i*P P 03 34 48.7 -0.3
comp=Z,193nm,1.4s,mb5.6
PVRL *e*pP pP 03 36 30.6 +1.6
PVRL Vila Real 88.92 332 *e*PP PP 03 38 26.1 +1.1
WMOK Wichita Mounta 88.92 41⇑*i*P P 03 34 49.0 -0.2
comp=Z,257nm,1.2s,mb5.8
WMOK Wichita Mounta 88.92 41⇑*i*P P 03 34 49.0 -0.1
WMOK pmax pmax
comp=Z,257nm,1.2s,mb5.8
ESDC Sonseca Array 88.96 329 P P 03 34 48.4 -0.8
comp=Z,62nm,0.8s,mb5.4
ESDC P pP 03 36 30.1 +0.8
ESDC Sonseca Array 88.96 329 P P 03 34 48.7 -0.5
comp=Z,36nm,0.8s,mb5.1,baz=20,slow=4.1,SNR=86
ESDC pP pP 03 36 30.2 +0.9
comp=Z,29nm,0.9s,baz=20,slow=4.5,SNR=14
ESDC PP PP 03 38 19.2 -6.3
comp=Z,28nm,0.9s,baz=30,slow=7.6,SNR=7.1
ESDC PKKPbc PKKPbc 03 52 23.7 -0.2
comp=Z,5.3nm,0.7s,baz=231,slow=1.6,SNR=15
ESDC SKKPbc 03 55 18.9
comp=Z,0.9nm,0.7s,baz=225,slow=1.4,SNR=5.5
ESLA Sonseca Array 88.96 329 *e*P P 03 34 49.0 -0.2
comp=Z,168nm,1.9s,mb5.5
ESLA *e*pP pP 03 36 30.2 +1.0
ESLA *e*PP PP 03 38 24.4 -1.0
LONY Lake Ozonia 89.02 20 *e*P P 03 34 49.2 -0.2
comp=Z,37nm,0.9s,mb5.1
LONY *e*pP pP 03 36 29.7 +0.3
EMHD Djebel Mahouad 89.03 322 P P 03 34 50.0 +0.3
FRNY Flat Rock 89.05 19 *e*P P 03 34 49.5 -0.1
comp=Z,32nm,0.7s,mb5.2
FRNY *e*pP pP 03 36 29.9 +0.3
PAB San Pablo 89.22 329⇓*i*P P 03 34 49.3 -1.1
comp=Z,97nm,1.3s,mb5.4
PAB *e*pP pP 03 36 31.4 +0.9
PAB *e*PP PP 03 38 21.7 -5.8
PAB San Pablo 89.22 329⇓*i*P P 03 34 49.3 -1.1
PAB *e**PP pP 03 36 31.4 +0.9
PAB pmax pmax
comp=Z,97nm,1.3s,mb5.4
EVIA Vianos 89.28 327 P P 03 34 51.0 +0.2
comp=Z,225nm,1.0s,mb5.8
EVIA P pP 03 36 32.1 +1.3
EVIA Vianos 89.28 327 P P 03 34 51.0 +0.2
EVIA pP 03 36 32.1 +1.2
EVIA pmax pmax
comp=Z,225nm,1.0s,mb5.8
PTO Porto 89.34 332 *e*P P 03 34 51.0 0.0
comp=Z,174nm,1.1s,mb5.7
PTO *e*pP pP 03 36 32.3 +1.2
PTO Porto 89.34 332 *e*PP PP 03 38 29.1 +0.7
SLM Saint Louis 89.38 33⇑*i*P P 03 34 50.9 -0.3
EMUR La Murta 89.46 326 P P 03 34 50.4 -1.2
comp=Z,126nm,1.1s,mb5.6
EMUR P pP 03 36 31.2 -0.5
PVIS Viseu 89.47 332 *i*P P 03 34 51.5 -0.1
comp=Z,155nm,1.4s,mb5.5
PVIS *e*pP pP 03 36 33.3 +1.6
PVIS Viseu 89.47 332 *e*PP PP 03 38 30.3 +0.9
CART Cartagena 89.58 325 *e*P P 03 34 50.1 -2.0
comp=Z,426nm,1.8s,mb6.0
HIZ Hauiti 89.58 149 PN P 03 34 53.3 +1.4
PKME Peaks-Kenny Pk 89.58 16 *e*P P 03 34 51.7 -0.3
comp=Z,122nm,1.3s,mb5.6
PKME *e*pP pP 03 36 32.9 +0.7
MTE Manteigas 89.63 331 *e*P P 03 34 52.4 0.0
comp=Z,160nm,1.1s,mb5.8
MTE *e*pP pP 03 36 33.6 +1.1
MTE Manteigas 89.63 331 *e*PP PP 03 38 30.5 -0.2
MTE Manteigas 89.63 331⇓*i*P P 03 34 52.1 -0.2
comp=Z,100nm,1.0s,mb5.6
MTE *e*pP pP 03 36 33.8 +1.3
MTE *e*PP PP 03 38 26.7 -4.0
NCB Newcomb 89.71 20 *e*P P 03 34 52.6 -0.1
comp=Z,73nm,1.0s,mb5.5
NCB *e*pP pP 03 36 33.7 +0.9
ERPA Erie 89.86 24⇑*i*P P 03 34 52.7 -0.6
comp=Z,73nm,0.7s,mb5.6
ERPA *e*pP pP 03 36 35.0 +1.5
FVM French Village 89.87 33 *e*P P 03 34 53.3 -0.2
LBNH Lisbon 90.00 18 *e*P P 03 34 54.8 +0.8
comp=Z,71nm,1.2s,mb5.4
LBNH *e*pP pP 03 36 35.0 +0.9
LBNH Lisbon 90.00 18 *e*P P 03 34 54.8 +0.8
LBNH *e**PP pP 03 36 35.0 +0.9
LBNH pmax pmax
comp=Z,71nm,1.2s,mb5.4

EANR 'Ain N'Sour 90.06 323 P **P** 03 34 54.0 -0.5
PCBR Castelo Branco 90.11 331 *i* P **P** 03 34 54.0 -0.6
comp=Z,142nm,1.4s,mb5.6
PCBR *e*pP pP 03 36 36.0 +1.3
PCBR Castelo Branco 90.11 331 *e*PP PP 03 38 35.1 +0.7
EBAN Banos Encina 90.20 328 P **P** 03 34 55.0 0.0
comp=Z,170nm,1.2s,mb5.8
EBAN P pP 03 36 36.4 +1.2
EBAN Banos Encina 90.20 328 P **P** 03 34 55.0 0.0
EBAN pP 03 36 36.4 +1.2
EBAN pmax pmax
comp=Z,170nm,1.2s,mb5.8
EQES Quesada 90.23 327 P **P** 03 34 54.5 -0.7
comp=Z,362nm,1.4s,mb6.0
EQES P pP 03 36 35.2 -0.2
URZ Urewera 90.24 147 P **P** 03 34 54.2 -0.6
comp=Z,81nm,0.9s,mb5.5,baz=342,slow=2.9,SNR=47
ALLY Alegheny Colle 90.24 25 *e*P **P** 03 34 51.3 -3.9
ALLY *e*pP pP 03 36 33.0 -2.3
BLO Bloomington 90.33 30⇑*i*P **P** 03 34 55.4 -0.2
comp=Z,133nm,0.8s,mb5.8
BLO *e*pP pP 03 36 37.0 +1.2
BLO Bloomington 90.33 30⇑*i*P **P** 03 34 55.4 -0.2
BLO *e**PP pP 03 36 37.0 +1.2
BLO pmax pmax
comp=Z,133nm,0.8s,mb5.8
ACCN Adirondack Com 90.40 19⇑*i*P **P** 03 34 55.1 -0.7
comp=Z,70nm,1.1s,mb5.4
ACCN *e*pP pP 03 36 36.9 +0.8
HNH Hanover 90.42 18 *e*P **P** 03 34 55.7 -0.3
comp=Z,127nm,1.1s,mb5.7
HNH *e*pP pP 03 36 36.9 +0.8
ETRT Tiaret 90.45 323 P **P** 03 34 56.0 -0.2
EADA Adamuz 90.50 328 P **P** 03 34 55.3 -1.1
comp=Z,222nm,1.5s,mb5.8
EADA P pP 03 36 36.6 0.0
SIUC Southern Illin 90.58 33 *e*P **P** 03 34 57.0 +0.2
comp=Z,444nm,0.8s,mb6.3
SIUC *e*pP pP 03 36 38.4 +1.3
ENIJ Nijar 90.60 326 P **P** 03 34 56.1 -0.8
comp=Z,32nm,0.6s,mb5.3
ENIJ P pP 03 36 36.9 -0.2
ENIJ Nijar 90.60 326 P **P** 03 34 56.1 -0.8
ENIJ pP 03 36 36.9 -0.2
ENIJ pmax pmax
comp=Z,32nm,0.6s,mb5.3
ACSO Alum Creek Sta 90.62 27⇑*i*P **P** 03 34 56.6 -0.3
comp=Z,288nm,0.9s,mb6.1
ACSO *e*pP pP 03 36 38.3 +1.1
LTX Lajitas 90.77 47⇑*i*P **P** 03 34 57.8 0.0
comp=Z,304nm,0.9s,mb6.1
LTX Lajitas 90.77 47 P **P** 03 34 57.8 0.0
LTX pmax pmax
comp=Z,300nm,1.0s,mb6.1
TXAR Lajitas Array 90.77 47 P **P** 03 34 57.9 +0.1
TXAR pP pP 03 36 37.5 -0.5
TXAR PP PP 03 38 38.8 -1.2
TXAR S S 03 44 47.4 -28
TXAR PKKPbc PKKPbc 03 52 20.6 +1.3
TXAR SKKPbc 03 55 12.9
TXAR Lajitas Array 90.77 47 P **P** 03 34 57.9 +0.1
TXAR *PP pP 03 36 37.6 -0.4
TXAR 03 38 38.8
TXAR S S 03 44 47.4 -28
TXAR 03 55 12.9
TXAR pmax pmax
comp=Z,196nm,0.7s
TXAR Lajitas Array 90.77 47 P **P** 03 34 57.9 +0.1
comp=Z,196nm,0.7s,mb6.0,baz=291,slow=3.1,SNR=1222
TXAR pP pP 03 36 37.5 -0.5
comp=Z,12nm,1.0s,baz=255,slow=5.5,SNR=2.2
TXAR PP PP 03 38 38.8 -1.2
comp=Z,21nm,0.9s,baz=310,slow=6.1,SNR=6.4
TXAR S S 03 44 47.4 -28
comp=Z,4.5nm,1.1s,baz=273,slow=2.4,SNR=3.9
TXAR PKKPbc PKKPbc 03 52 20.6 +1.3
comp=Z,3.1nm,1.1s,baz=146,slow=9.1,SNR=5.3
TXAR SKKPbc 03 55 12.9
comp=Z,1.7nm,0.8s,baz=152,slow=5.7,SNR=6.8
TXAR tx tx 04 02 52.6
comp=Z,0.4nm,0.8s,baz=90,slow=1.3,SNR=3.6
QRZ Quartz Range 90.77 151 PN **P** 03 34 57.3 0.0
ECOG Cogollos-Vega 90.88 327 P **P** 03 34 57.1 -1.1
comp=Z,24nm,0.7s,mb5.1
ECOG P pP 03 36 38.4 0.0
ECOG Cogollos-Vega 90.88 327 P **P** 03 34 57.1 -1.1
ECOG pP 03 36 38.4 0.0
ECOG pmax pmax
comp=Z,24nm,0.7s,mb5.1
EBAD Badajoz 90.90 330 P **P** 03 34 56.7 -1.5
comp=Z,102nm,1.1s,mb5.6
EBAD P pP 03 36 38.3 -0.2
ELUQ Luque 90.91 328 P **P** 03 34 58.4 +0.1
comp=Z,74nm,0.8s,mb5.6
ELUQ P pP 03 36 39.5 +1.0
ELUQ Luque 90.91 328 P **P** 03 34 58.4 +0.1
ELUQ pP 03 36 39.5 +0.9
ELUQ pmax pmax
comp=Z,74nm,0.8s,mb5.6
BINY Binghamton 90.92 21 *e*P **P** 03 34 58.3 +0.1
comp=Z,190nm,1.5s,mb5.7
BINY *e*pP pP 03 36 39.4 +0.9
USIN University of 90.96 31⇑*i*P **P** 03 34 58.3 -0.3
comp=Z,54nm,0.8s,mb5.4
USIN *e*pP pP 03 36 40.2 +1.5
LPIG La Paz 91.01 55 P **P** 03 34 59.5 +0.4
comp=Z,197nm,1.0s,mb5.9,baz=350,slow=1.2,SNR=27
LPIG PP PP 03 38 38.9 -3.3
comp=Z,14nm,0.3s,baz=341,slow=2.7,SNR=4.9
PESTR Estremoz 91.01 331 *i* P **P** 03 34 58.0 -0.8
comp=Z,110nm,1.8s,mb5.4
PESTR *e*pP pP 03 36 39.2 +0.2
PESTR Estremoz 91.01 331 *e*PP PP 03 38 41.6 +0.1
ERON Agron 91.20 327 P **P** 03 34 58.7 -1.0
comp=Z,18nm,0.5s,mb5.1
ERON P pP 03 36 39.6 -0.4
ELOJ Sierra Loja 91.23 327 P **P** 03 34 58.9 -0.9
comp=Z,62nm,1.0s,mb5.4
ELOJ P pP 03 36 40.3 +0.2
ELOJ Sierra Loja 91.23 327 P **P** 03 34 58.9 -0.9
ELOJ pP 03 36 40.3 +0.3
ELOJ pmax pmax
comp=Z,63nm,1.0s,mb5.4
WCI Wyandotte Cave 91.25 30⇑*i*P **P** 03 34 59.8 -0.1
comp=Z,80nm,0.8s,mb5.6
WCI *e*pP pP 03 36 41.4 +1.3
WCI Wyandotte Cave 91.25 30⇑*i*P **P** 03 34 59.8 -0.1
WCI *e**PP pP 03 36 41.4 +1.3
WCI pmax pmax
comp=Z,80nm,0.8s,mb5.6
PARMO Parma 91.28 33⇑*i*P **P** 03 34 59.9 -0.1
PARMO *e*pP pP 03 36 41.7 +1.4
PBAR Barrancos 91.42 330 *i* P **P** 03 34 59.8 -0.9
comp=Z,102nm,1.3s,mb5.5
PBAR *e*pP pP 03 36 41.1 +0.2
PBAR Barrancos 91.42 330 *e*PP PP 03 38 45.2 +0.5
EVO Evora 91.46 331 *e*P **P** 03 35 00.1 -0.7
EVO *e*pP pP 03 36 41.9 +0.8
MIAR Mount Ida 91.47 37⇑*i*P **P** 03 35 01.0 0.0
comp=Z,244nm,0.9s,mb6.0
MIAR Mount Ida 91.47 37 P **P** 03 35 01.0 0.0
MIAR pmax pmax
comp=Z,240nm,0.9s,mb6.0
PMAFR Mafra 91.53 332 *e*P **P** 03 35 00.9 -0.2
comp=Z,219nm,1.4s,mb5.9
PMAFR *e*pP pP 03 36 42.0 +0.6
PMAFR Mafra 91.53 332 *e*PP PP 03 38 45.9 +0.4
MOE Montemor 91.59 331 *e*P **P** 03 35 01.7 +0.3
EMIN Mina Concepcio 91.65 329 P **P** 03 35 01.1 -0.6
comp=Z,328nm,1.5s,mb6.0
EMIN P pP 03 36 42.4 +0.4
HRV Harvard--Oak R 91.73 18 *e*P **P** 03 35 02.0 0.0
comp=Z,99nm,0.9s,mb5.7
HRV *e*pP pP 03 36 43.1 +0.9
HRV Harvard--Oak R 91.73 18 P **P** 03 35 02.9 +0.9
HRV *e* pP 03 36 43.1 +0.8
HRV pmax pmax
comp=Z,99nm,1.0s,mb5.7
THZ Tophouse 91.73 152 PN **P** 03 35 00.9 -0.8
GNAR Gosnell 91.77 34⇑*i*P **P** 03 35 02.4 +0.1
comp=Z,2µm,0.9s,mb7.1
GLAT Glass 91.81 33⇑*i*P **P** 03 35 02.6 +0.2
GLAT *e*pP pP 03 36 45.3 +2.6
UALR University of 91.81 36⇑*i*P **P** 03 35 02.1 -0.4
comp=Z,62nm,1.0s,mb5.5
SSPA Standing Stone 91.84 23⇑*i*P **P** 03 35 02.0 -0.6
comp=Z,232nm,1.6s,mb5.9
SSPA *e*pP pP 03 36 43.6 +0.7
PBEJ Beja 91.85 330 *e*P **P** 03 35 02.3 -0.4
comp=Z,116nm,1.3s,mb5.7
PBEJ *e*pP pP 03 36 43.4 +0.4
PBEJ Beja 91.85 330 *e*PP PP 03 38 48.9 +0.8
HBAR Harrisburg 91.86 35 *e*P **P** 03 35 03.5 +0.8
HBAR *e*pP pP 03 36 45.0 +2.0
JCT Junction City 91.87 44⇑*i*P **P** 03 35 02.1 -0.7
comp=Z,137nm,0.8s,mb5.9
JCT *e*PP PP 03 38 49.6 +1.1
JCT Junction City 91.87 44⇑*i*P **P** 03 35 02.2 -0.7
JCT *e* 03 38 49.6
JCT pmax pmax
comp=Z,137nm,0.8s,mb5.9
WES Weston 91.90 18 *e*P **P** 03 35 03.4 +0.6
comp=Z,172nm,1.0s,mb5.9
WES *e*pP pP 03 36 44.2 +1.2
WES Weston 91.90 18 *e*P **P** 03 35 03.4 +0.6
WES *e**PP pP 03 36 44.3 +1.2
WES pmax pmax
comp=Z,172nm,1.0s,mb5.9
EMIJ Mijas 91.98 328 P **P** 03 35 00.8 -2.5
comp=Z,92nm,1.1s,mb5.6
EMIJ P pP 03 36 42.5 -1.0
BFZ Birch Farm 92.00 149 PN **P** 03 35 02.9 0.0
PMOR Pomariorio Ree 92.06 109 *e*P **P** 03 35 05.0 +1.2
comp=Z,80nm,0.9s,mb5.6
PMOR *e*pP pP 03 36 47.8 +3.6
comp=Z,216nm,1.3s
HALT Halls 92.09 34 *e*P **P** 03 35 04.2 +0.3
ESPR Espera 92.13 328 P **P** 03 35 03.6 -0.3
comp=Z,332nm,1.4s,mb6.1
ESPR P pP 03 36 45.0 +0.8
MCWV Mont Chateau 92.15 25 *e*P **P** 03 35 04.2 +0.2
comp=Z,105nm,0.9s,mb5.8
MCWV *e*pP pP 03 36 45.8 +1.5
EGRO El Granado 92.15 330 P **P** 03 35 02.1 -2.0
comp=Z,167nm,1.2s,mb5.8
EGRO P pP 03 36 44.6 +0.2
BRYW Bryant College 92.29 18 *e*P **P** 03 35 05.4 +0.8
PVAQ Vaqueiros 92.35 330 *e*P **P** 03 35 04.5 -0.5
comp=Z,106nm,1.3s,mb5.6
PVAQ *e*pP pP 03 36 46.0 +0.7
MET Memphis--Engin 92.53 34 *e*P **P** 03 35 05.9 0.0
PBDV Barranco-do-Ve 92.57 330 *e*P **P** 03 35 05.7 -0.3
comp=Z,120nm,1.5s,mb5.6
PBDV *e*pP pP 03 36 46.9 +0.6
PBDV Barranco-do-Ve 92.57 330 *e*PP PP 03 38 54.4 +0.7
PAL Palisades 92.58 20 *e*P **P** 03 35 06.0 +0.1
PTEO Sao Teotonio 92.59 331 *e*P **P** 03 35 05.6 -0.5
comp=Z,238nm,1.6s,mb5.9
PTEO *e*pP pP 03 36 46.9 +0.5
PTEO Sao Teotonio 92.59 331 *e*PP PP 03 38 53.3 -0.5
PPT Papeete 92.69 112 *e*P **P** 03 35 07.9 +1.2
comp=Z,106nm,1.4s,mb5.6
PPT Papeete 92.69 112 *e*P **P** 03 35 07.6 +0.9
PPT Papeete 92.69 112 P **P** 03 35 07.9 +1.2
comp=Z,52nm,0.7s,mb5.5,baz=285,slow=3.3,SNR=5.6
PAE Paea 92.75 112 *e*P **P** 03 35 08.0 +1.0
comp=Z,194nm,1.2s,mb5.9
PAE Paea 92.75 112 *e*P **P** 03 35 08.0 +1.0
PAE pmax pmax
comp=Z,194nm,1.2s,mb5.9
MORF Marmelete 92.78 331 *e*P **P** 03 35 06.5 -0.4
comp=Z,72nm,1.1s,mb5.5
MORF *e*pP pP 03 36 47.8 +0.5
RPZ Rata Peaks 92.85 154 P **P** 03 35 06.6 -0.2
comp=Z,36nm,0.6s,mb5.5,baz=278,slow=2.2,SNR=27
MVL Millersville 92.87 23 *e*P **P** 03 35 06.3 -1.0
comp=Z,83nm,1.3s,mb5.5
MVL *e*pP pP 03 36 47.9 +0.3
PFVI Vila Bisbo 93.00 331 *e*P **P** 03 35 07.2 -0.7
comp=Z,164nm,1.5s,mb5.7
PFVI *e*pP pP 03 36 48.9 +0.6
PFVI Vila Bisbo 93.00 331 *e*PP PP 03 38 57.2 +0.3
TVO Taravao 93.06 111 *e*P **P** 03 35 10.0 +1.6
comp=Z,173nm,0.9s,mb6.0
TVO Taravao 93.06 111 *e*P **P** 03 35 10.0 +1.6
TVO pmax pmax
comp=Z,173nm,0.9s,mb6.0
OXF Oxford 93.28 34⇑*i*P **P** 03 35 08.8 -0.4
comp=Z,396nm,1.2s,mb6.2
OXF *e*pP pP 03 36 50.8 +1.1
OXF *e*PP PP 03 38 59.0 -0.3
OXF Oxford 93.28 34⇑*i*P **P** 03 35 08.8 -0.5
OXF *e**PP pP 03 36 50.8 +1.2
OXF *e* 03 38 59.0
OXF pmax pmax
comp=Z,396nm,1.2s,mb6.2
SDMD Soldier's Deli 93.28 23 *e*P **P** 03 35 08.8 -0.3
comp=Z,21nm,0.8s,mb5.1
SDMD *e*pP pP 03 36 49.7 +0.2
NATX Nacogdoches 93.31 39⇑*i*P **P** 03 35 09.6 +0.1
comp=Z,341nm,1.1s,mb6.2
PLAL Pickwick Lake 93.41 33⇑*i*P **P** 03 35 09.1 -0.7
comp=Z,115nm,0.8s,mb5.9
PLAL *e*pP pP 03 36 51.3 +1.0
TZTN Tazewell 93.74 29⇑*i*P **P** 03 35 10.8 -0.6
comp=Z,121nm,1.2s,mb5.8
TZTN *e*pP pP 03 36 53.2 +1.5
SWET Sewanee 94.04 31 *e*P **P** 03 35 12.0 -0.7
SWET *e*pP pP 03 36 53.9 +0.8
ELN Prospectdale 94.08 27 *e*P **P** 03 35 12.0 -0.9
ELN *e*pP pP 03 36 52.6 -0.7
BLA Blacksburg 94.20 27 *e*P **P** 03 35 12.7 -0.7
comp=Z,45nm,1.1s,mb5.4
BLA *e*pP pP 03 36 54.7 +0.8
BLA Blacksburg 94.20 27 P **P** 03 35 13.6 +0.2
BLA *e* pP 03 36 55.2 +1.3
BLA pmax pmax
comp=Z,45nm,1.1s,mb5.4
HKT Hockley 94.26 41 *e*P **P** 03 35 13.8 -0.1
comp=Z,54nm,1.5s,mb5.4
HKT Hockley 94.26 41 *e*P **P** 03 35 13.8 -0.1
HKT pmax pmax
comp=Z,54nm,1.5s,mb5.4
CPCT Cooper Cave 94.36 30 *e*P **P** 03 35 13.5 -0.7
CPCT *e*pP pP 03 36 55.6 +0.9
TKL Tuckaleechee C 94.45 30 P **P** 03 35 13.8 -0.8
TKL pP pP 03 36 55.8 +0.7
TKL S SKSac 03 45 05.0 -1.7
TKL Tuckaleechee C 94.45 30 P **P** 03 35 13.8 -0.8
TKL *PP pP 03 36 55.8 +0.8
TKL S SKSac 03 45 05.0 -1.7
TKL pmax pmax
comp=Z,50nm,1.0s,mb5.5
TKL Tuckaleechee C 94.45 30 P **P** 03 35 13.8 -0.8
comp=Z,50nm,1.0s,mb5.5,baz=5.0,slow=1.1,SNR=32
TKL pP pP 03 36 55.8 +0.7
comp=Z,36nm,1.2s,baz=316,slow=3.4,SNR=4.9
TKL S SKSac 03 45 05.0 -1.7
comp=Z,9.2nm,1.2s,baz=324,slow=23,SNR=8.1
MDT Midelt 95.18 326 P **P** 03 35 17.4 -0.5
comp=Z,70nm,0.9s,mb5.7,baz=43,slow=4.5,SNR=69
MDT pP pP 03 36 58.8 +0.4
comp=Z,53nm,1.1s,baz=47,slow=5.1,SNR=12
MDT S SKSac 03 45 10.3 -0.3
comp=Z,2.8nm,1.0s,baz=188,slow=20,SNR=9.5
MDT PKKPbc PKKPbc 03 52 09.3 +1.1
comp=Z,4.4nm,0.8s,baz=284,slow=4.3,SNR=5.9
KMBO Kilima Mbogo 95.34 273 P **P** 03 35 19.6 +0.7
comp=Z,132nm,1.0s,mb5.9,baz=32,slow=7.0,SNR=184
KMBO pP pP 03 37 00.4 +0.9
comp=Z,42nm,1.1s,baz=35,slow=7.0,SNR=9.0
KMBO PP PP 03 39 16.3 0.0
comp=Z,32nm,1.1s,baz=37,slow=9.0,SNR=8.0
KMBO PKKPbc PKKPbc 03 52 10.2 +2.9
comp=Z,3.8nm,0.8s,baz=189,slow=1.4,SNR=11
LRAL Lakeview Retre 95.54 33 *e*P **P** 03 35 19.2 -0.4
comp=Z,50nm,1.1s,mb5.6
GOGA Godfrey 96.57 30⇑*i*P **P** 03 35 23.8 -0.4
comp=Z,47nm,0.8s,mb5.7
GOGA *e*pP pP 03 37 05.7 +0.9
GOGA Godfrey 96.57 30 P **P** 03 35 24.4 +0.2
GOGA pmax pmax
comp=Z,47nm,0.8s,mb5.7
JSC Jenkinsville 96.58 28 *e*P **P** 03 35 24.5 +0.3
BRAL Brewton 97.29 34⇑*i*P **P** 03 35 27.3 -0.2
comp=Z,97nm,0.7s,mb6.0
OPO Ambohidratompo 99.88 254 P Pdif 03 35 38.7 -0.2
comp=Z,6.4nm,0.7s,baz=11,slow=3.4,SNR=8.1
CMIG Matias Romero 105.36 48 Pdif Pdif 03 36 03.4 +0.1
CMIG SKKP 03 54 38.0
CMIG Matias Romero 105.36 48 Pdiff Pdif 03 36 03.4 +0.1
comp=Z,8.7nm,0.8s,baz=323,slow=5.3,SNR=6.1
CMIG SKKP 03 54 38.0
comp=Z,5.6nm,1.0s,baz=116,slow=1.7,SNR=5.0
RKT Rikitea 106.51 106 *e*PP PP 03 40 21.6 -18
comp=Z,209nm,28.0s
RKT Rikitea 106.51 106 *e*SS SS 03 55 06.3 -3.3
comp=Z,741nm,30.2s
RKT Rikitea 106.51 106 *e*PP PP 03 40 21.6 -18
RKT *e*SS SS 03 55 06.3 -3.3
TOA0 Torodi Ar. Sit 108.69 310 *e*PKP PKiKP 03 40 21.5 +0.4
TOA0 *e*PP PP 03 40 52.7 -2.0
TORD Torodi Ar. Bea 108.69 310 Pdif Pdif 03 36 19.4 +1.3
TORD PKPdf PKiKP 03 40 20.8 -0.3
TORD PP PP 03 40 48.6 -6.1
TORD SKS SKSdf 03 47 05.5 +15
TORD PKKPbc PKKPbc 03 51 24.1 -5.2
TORD PKKPab PKKPab 03 51 45.0 -1.9
TORD SKKP 03 54 30.2
TORD Torodi Ar. Bea 108.69 310 Pdiff Pdif 03 36 19.4 +1.3
comp=Z,0.7nm,0.6s,baz=356,slow=2.2,SNR=3.8
TORD PKiKP PKiKP 03 40 20.8 -0.3
comp=Z,12nm,1.0s,baz=47,slow=6.6,SNR=6.1
TORD PP PP 03 40 48.6 -6.1
comp=Z,75nm,1.3s,baz=32,slow=8.8,SNR=11
TORD SKS SKSdf 03 47 05.5 +15
comp=Z,6.5nm,1.1s,baz=32,slow=4.0,SNR=4.1
TORD PKKPbc PKKPbc 03 51 24.1 -5.2
comp=Z,13nm,0.7s,baz=209,slow=1.8,SNR=6.0
TORD PKKPab PKKPab 03 51 45.0 -1.9
comp=Z,11nm,0.8s,baz=217,slow=4.3,SNR=7.9
TORD SKKP 03 54 30.2
comp=Z,4.6nm,0.8s,baz=203,slow=1.3,SNR=4.9
DRV Dumont d'Urvil 109.67 177 PP PP 03 41 05.0 +3.1
DRV SP SP 03 49 44.0 0.0
DRV L 07 57 00.0
PTCN Pitcairn Islan 111.19 105 *e*PKP PKiKP 03 40 21.6 -3.9
LSZ Lusaka 111.41 269 *e*Pdif Pdif 03 36 29.9 -0.3
LSZ Lusaka 111.41 269 P Pdif 03 36 30.0 -0.2
LSZ pmax pmax
comp=Z,4.0nm,1.0s
LSZ Lusaka 111.41 269 PKP Pdif 03 36 30.0 -0.2
comp=Z,3.6nm,0.9s,baz=65,slow=1.9,SNR=5.6
LSZ PKKPbc PKKPbc 03 51 22.2 +1.9
comp=Z,8.9nm,0.7s,baz=194,slow=2.6,SNR=14
LSZ PKKPab PKKPab 03 51 33.5 +1.3
comp=Z,22nm,0.7s,baz=202,slow=2.6,SNR=21
MATP Matopo 114.48 264 PKKPbc PKKPbc 03 51 12.2 +1.9
comp=Z,27nm,0.6s,baz=228,slow=3.0,SNR=61
MATP PKKPab PKKPab 03 51 19.1 +0.7
comp=Z,26nm,0.7s,baz=232,slow=4.2,SNR=16
BBTS Babate 116.19 327 PKP PKPdf 03 40 34.2 -1.1
BBTS PP PP 03 41 42.0 -5.1
comp=Z,210nm,1.1s,baz=28,slow=2.5,SNR=8.3
JTS JuntasAbangare 116.24 43 PKIKP PKPdf 03 40 34.0 -1.5
JTS pmax pmax
comp=Z,3.0nm,0.4s
JTS JuntasAbangare 116.24 43 PKP PKPdf 03 40 34.0 -1.6
comp=Z,2.8nm,0.4s,baz=12,slow=17,SNR=3.5
CPD Cerro la Pandu 116.48 21 P Pdif 03 36 54.3 +1.5
DBIC Dimbokro 117.64 312 PKP PKPdf 03 40 37.1 -1.1
DBIC PP PP 03 41 50.4 -7.1
DBIC SKP 03 43 29.9
DBIC PKKPbc PKKPbc 03 50 54.5 -5.1
DBIC SKKPbc 03 54 01.7
DBIC Dimbokro 117.64 312 PKP PKPdf 03 40 37.1 -1.1
comp=Z,12nm,0.6s,baz=41,slow=3.1,SNR=24
DBIC PP PP 03 41 50.4 -7.1
comp=Z,80nm,1.1s,baz=14,slow=7.5,SNR=6.8
DBIC SKP 03 43 29.9
comp=Z,12nm,0.7s,baz=44,slow=7.6,SNR=4.2
DBIC PKKPbc PKKPbc 03 50 54.5 -5.1
comp=Z,5.8nm,0.8s,baz=274,slow=1.2,SNR=5.5
DBIC SKKPbc 03 54 01.7
comp=Z,11nm,1.0s,baz=195,slow=1.9,SNR=4.7
LIC Lamto 118.11 312⇑*i*PKIKP PKPdf 03 40 37.8 -1.3
comp=Z,46nm,0.9s
LIC *e*MLR MLR
comp=Z,517nm,21.0s
LIC Lamto 118.11 312 *e*PKP1 PKPdf 03 40 37.8 -1.3
comp=Z,68nm,0.9s
LIC Lamto 118.11 312⇑*i*PKPdf PKPdf 03 40 37.8 -1.3
LIC LR LR
comp=Z,260nm,21.0s
LBTB Lobatse 119.40 262 *e*Pdif Pdif 03 37 08.1 +2.4
LBTB *e*PKPdf PKPdf 03 40 41.0 -0.2
LBTB *e*PP PP 03 42 01.0 -9.4
LBTB SKP 03 43 32.5
LBTB *e*SKPdf SKPdf 03 43 33.7 -0.2
LBTB PKKPbc PKKPbc 03 50 54.3 +1.1
LBTB Lobatse 119.40 262 *e*P Pdif 03 37 08.1 +2.4
LBTB *e* 03 40 41.0
LBTB Lobatse 119.40 262 PKP PKPdf 03 40 41.0 -0.1
comp=Z,25nm,0.7s,baz=103,slow=1.8,SNR=35
LBTB SKP 03 43 32.5
comp=Z,20nm,0.7s,baz=149,slow=1.7,SNR=6.0
LBTB PKKPbc PKKPbc 03 50 54.3 +1.1
comp=Z,36nm,0.9s,baz=257,slow=5.3,SNR=32
BCIP Isla Barro Col 119.66 39 *e*PKPdf PKPdf 03 40 40.9 -1.2
TSUM Tsumeb 121.68 273 PKP PKPdf 03 40 44.5 -1.3
TSUM PKKPbc PKKPbc 03 50 46.7 +1.9
comp=Z,8.5nm,0.8s,baz=252,slow=2.6,SNR=12
VNDA Vanda 121.75 173 PKP PKPdf 03 40 43.1 -1.0
comp=Z,35nm,0.6s,baz=319,slow=4.5,SNR=161
VNDA PP PP 03 42 21.8 -3.6
comp=Z,6.8nm,0.7s,baz=331,slow=8.1,SNR=8.0
VNDA SKP 03 43 35.1
comp=Z,22nm,0.9s,baz=312,slow=5.1,SNR=6.3
BOSA Boshof 121.76 259 *e*PKPdf PKPdf 03 40 45.1 -0.5
BOSA *e*PP PP 03 42 24.7 -1.7
BOSA Boshof 121.76 259 PKIKP PKPdf 03 40 45.2 -0.4
BOSA 03 42 22.3
BOSA pmax pmax
comp=Z,16nm,1.0s
BOSA Boshof 121.76 259 PKP PKPdf 03 40 45.2 -0.4
comp=Z,16nm,1.0s,baz=47,slow=2.4,SNR=12
BOSA PP PP 03 42 22.3 -4.1
comp=Z,22nm,1.0s,baz=52,slow=7.0,SNR=3.9
BOSA SKP 03 43 37.0
comp=Z,18nm,0.9s,baz=342,slow=1.5,SNR=4.3
BOSA PKKPbc PKKPbc 03 50 46.2 +1.7
comp=Z,35nm,0.8s,baz=236,slow=4.9,SNR=27
SBA Scott Base 122.51 172 *e*PKPdf PKPdf 03 40 45.8 +0.2
SBA *ep*PKPdf pPKPdf 03 42 29.5 -2.4
SBA *e*SKPdf SKPdf 03 43 38.9 +0.6
SBA Scott Base 122.51 172 *e*PKIKP PKPdf 03 40 45.8 +0.2
SBA *e* 03 42 29.5
MAW Mawson 122.51 205 PKP PKPdf 03 40 44.9 -1.0
comp=Z,21nm,0.9s,baz=63,slow=4.0,SNR=13
MAW SKP 03 43 37.0
comp=Z,33nm,0.8s,baz=331,slow=2.6,SNR=7.0
MAW PKKPbc PKKPbc 03 50 42.4 -0.1
comp=Z,24nm,1.1s,baz=269,slow=8.3,SNR=3.9
SDV Santo Domingo 123.67 29 *e*PKPdf PKPdf 03 40 49.1 -0.7
SDV *e*PP PP 03 42 37.0 -0.8
SDV *e*SKPdf SKPdf 03 43 43.5 +0.9
SDV Santo Domingo 123.67 29 PKP PKPdf 03 40 49.0 -0.8
comp=Z,150nm,0.7s,baz=148,slow=1.9,SNR=134
SDV pPKP pPKPdf 03 42 35.2 -0.8
comp=Z,22nm,0.8s,baz=16,slow=1.7,SNR=3.9
SDV SKP 03 43 42.7
comp=Z,64nm,0.9s,baz=59,slow=2.8,SNR=5.8
PCRV Puerto La Cruz 124.33 22 PKP PKPdf 03 40 49.0 -2.1
comp=Z,22nm,0.6s,baz=315,slow=1.8,SNR=13
PCRV SKPbc 03 43 21.4
comp=Z,15nm,0.6s,baz=247,slow=5.3,SNR=5.7
ROSC El Rosal 125.92 35 PKP PKPdf 03 40 54.1 0.0
comp=Z,48nm,0.6s,baz=44,slow=1.6,SNR=39
ROSC SKPbc 03 43 31.1
comp=Z,45nm,0.9s,baz=217,slow=1.1,SNR=7.7
SUR Sutherland 127.04 258 PKP PKPdf 03 40 55.0 -0.6
SUR SKPbc 03 43 29.3
comp=Z,22nm,0.8s,baz=87,slow=4.2,SNR=5.4
SUR PKKPbc 03 50 26.8
comp=Z,16nm,0.8s,baz=202,slow=4.3,SNR=13
OTAV Otavalo 128.12 42 *e*PKPdf PKPdf 03 40 58.8 +0.5
SYO Syowa Base 130.89 208‖*e*PKPdf PKPdf 03 41 00.8 -1.0
SYO Syowa Base 130.89 208⇑*i*P SKPbc 03 43 41.0 -3.1
QSPA South Pole Qui 132.96 180 PKP 03 40 51.0
QSPA PKP PKPdf 03 41 05.4 0.0
QSPA PP PP 03 43 37.6 -0.6
QSPA SKPbc SKPbc 03 43 49.5 -1.5
QSPA SKKPbc 03 53 11.6
QSPA South Pole Qui 132.96 180 PKhKP 03 40 51.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,7.6nm,0.6s,baz=7.7,slow=1.3,SNR=12						
QSPA				PKP	PKPdf	03 41 05.4	0.0
	comp=Z,80nm,0.8s,baz=296,slow=1.0,SNR=34						
QSPA				PP	PP	03 43 37.6	-0.6
	comp=Z,61nm,1.0s,baz=318,slow=3.4,SNR=7.2						
QSPA				SKPbc	SKPbc	03 43 49.5	-1.5
	comp=Z,390nm,0.8s,baz=313,slow=1.3,SNR=52						
QSPA				SKKPbc		03 53 11.6	
	comp=Z,14nm,1.0s,baz=162,slow=2.7,SNR=7.1						
ATAH	Atahualpa	134.31	47	PKhKP		03 41 01.0	
	comp=Z,7.9nm,0.6s,baz=288,slow=4.6,SNR=6.3						
ATAH				PKP	PKPdf	03 41 10.4	+0.4
	comp=Z,66nm,0.8s,baz=133,slow=4.2,SNR=13						
ATAH				SKPbc	SKPbc	03 43 59.3	+1.8
	comp=Z,194nm,1.0s,baz=339,slow=2.3,SNR=32						
NNA	Nana	139.29	49	ePKPpre		03 41 09.8	
NNA				ePKPdf	PKPdf	03 41 18.7	-0.4
NNA				eSKP		03 44 11.4	
NNA				SKPbc	SKPbc	03 44 11.6	-0.5
NNA	Nana	139.29	49	PKhKP		03 41 09.8	
	comp=Z,53nm,0.6s,baz=346,slow=5.3,SNR=26						
NNA				PKP	PKPdf	03 41 18.6	-0.5
	comp=Z,69nm,0.7s,baz=308,slow=5.1,SNR=11						
NNA				SKPbc	SKPbc	03 44 11.6	-0.5
	comp=Z,167nm,0.9s,baz=310,slow=4.7,SNR=24						
NVL	N'lazarevskaya	140.45	206	i PKHKP		03 41 12.8	
NVL				pmax	pmax		
	comp=N,5.0nm,0.6s						
NVL				pmax	pmax		
	comp=E,1.0nm,0.6s						
NVL				pmax	pmax		
	comp=Z,29nm,0.6s						
MAIT	Maitri	140.48	206	ePKPdf	PKPdf	03 41 11.7	-7.8
RCBR	Riachuelo	141.60	343	ePKPpre		03 41 18.6	
RCBR				eSKP		03 44 17.7	
SNAA	Sanae	144.56	202	PKIKP	PKPdf	03 41 25.5	-1.2
SNAA						03 43 13.2	
SNAA				pmax	pmax		
	comp=Z,49nm,0.8s						
SNAA	Sanae	144.56	202	PKP	PKPdf	03 41 25.5	-1.2
	comp=Z,49nm,0.8s,baz=148,slow=2.2,SNR=105						
SNAA				pPKP	pPKPdf	03 43 13.2	0.0
	comp=Z,37nm,1.1s,baz=94,slow=3.5,SNR=4.7						
SNAA				SKPbc	SKPbc	03 44 22.1	-1.2
	comp=Z,33nm,1.0s,baz=156,slow=2.3,SNR=6.8						
SNAA				SKKPbc		03 52 26.3	
	comp=Z,13nm,0.9s,baz=322,slow=4.2,SNR=17						
ARE	Arequipa	145.88	46	eP	PKPdf	03 41 32.0	+1.4
LPAZ	La Paz	147.43	41	PKP	PKPdf	03 41 34.0	+0.8
	comp=Z,183nm,1.0s,baz=358,slow=4.6,SNR=69						
LPAZ				PKPbc	PKPbc	03 41 36.7	+0.3
	comp=Z,199nm,0.8s,baz=2.4,slow=6.0,SNR=95						
LPAZ				pPKPbc	pPKPbc	03 43 22.6	+1.3
	comp=Z,81nm,1.1s,baz=3.3,slow=11,SNR=4.6						
LPAZ				SKKPbc		03 52 12.1	
	comp=Z,17nm,1.2s,baz=97,slow=3.5,SNR=9.1						
SIV	San Ignacio	150.14	29	PKP	PKPdf	03 41 37.5	-0.1
	comp=Z,28nm,0.9s,baz=334,slow=0.9,SNR=80						
SIV				PKPbc	PKPbc	03 41 42.9	-0.2
	comp=Z,224nm,0.9s,baz=288,slow=1.8,SNR=111						
SIV				PKPab	PKPab	03 41 51.3	+0.5
	comp=Z,13nm,0.5s,baz=286,slow=16,SNR=6.9						
SIV				pPKPbc	pPKPbc	03 43 28.8	+0.2
	comp=Z,63nm,1.1s,baz=327,slow=1.3,SNR=5.3						
CEN1	Los Morros	152.16	52	eP	PKPdf	03 41 41.4	+0.9
TRIS	Tristan da Cun	153.29	272	ePKPab	PKPab	03 42 04.7	+0.9
LCO	Las Campanas	155.95	62	ePKPdf	PKPdf	03 41 45.6	+0.1
LCO				ePKPdif		03 41 55.9	
LCO				ePKPab	PKPab	03 42 16.3	+0.9
PMSA	Palmer Station	156.24	161	PKPab	PKPab	03 42 15.3	-0.3
	comp=Z,40nm,0.8s,baz=141,slow=6.5,SNR=5.0						
TLL	Tololo Astrono	156.65	64	eP	PKPdf	03 41 46.0	-0.4
FCH	Farellones	158.93	70	⇑iP	PKPdf	03 41 48.1	-1.0
CFAA	Coronel Fontan	159.26	63	PKP	PKPdf	03 41 48.2	-1.3
CFAA				PKPab	PKPab	03 42 29.4	-0.3
CFAA				PP	PP	03 46 10.3	-2.4
CFAA	Coronel Fontan	159.26	63	PKP	PKPdf	03 41 48.2	-1.3
	comp=Z,2.0nm,0.9s,baz=281,slow=2.5,SNR=20						
CFAA				PKPab	PKPab	03 42 29.4	-0.3
CFAA				PP	PP	03 46 10.3	-2.4
	comp=Z,3.1nm,1.1s,baz=319,slow=5.8,SNR=6.3						
CCHI	Chillan	159.33	80	eP	PKPab	03 42 23.8	-6.2
USHA	Ushuaia	161.60	137	PKP	PKPdf	03 41 51.2	-0.1
	comp=Z,20nm,1.2s,baz=9.3,slow=0.9,SNR=5.2						
USHA				PKPab	PKPab	03 42 39.3	0.0
	comp=Z,94nm,1.2s,baz=214,slow=5.9,SNR=14						

BJI 09 03:30:40.1, 2571N×9983E, h15km, ML4.5, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	6.23	33	eP	Pn	03 32 15.4	+3.9
CD2				PG	Pg	03 32 30.2	-9.2
CD2				SG	Sg	03 33 49.8	-10
CD2				Smax			
	comp=N,160nm,1.8s						
CD2				Smax			
	comp=E,250nm,1.9s						
LZH	Lanzhou	10.90	17	eP	Pn	03 33 17.5	+1.9
LZH				AP		03 33 20.8	
LZH				XP		03 33 23.9	
LZH				PP		03 33 26.3	
NJ2	Nanjing	17.81	65	eP	Pn	03 34 45.9	-1.5

ISCJB 09 03:30:47.3±0.6, 5033N±005×1894E±004, h0km, Error ellipse: s-maj=6.8km s-min=3.3km az=9.8
PRU 09 03:30:48.6, 5032N×1888E, h0km
WAR 09 03:30:48.3, 5025N×1995E, ML2.7, Mining Induced
ISC 09 03:30:48.2±0.5, 5032N±004×1891E±003, h0km, n22, σ1^{s}24/36, 3C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.52	243	ePg	Pg	03 30 59.3	+1.2
RAC				eSg	Sg	03 31 07.1	+2.3
OJC	Ojcow	0.58	100	i Pg	Pg	03 30 59.1	-0.1
OJC				eSg	Sg	03 31 07.0	+0.3
OKC	Ostrava-Krasne	0.69	226	ePG	Pg	03 31 01.1	-0.3
OKC				eSG	Sg	03 31 10.4	+0.1
	40nm,0.8s						
MORC	Moravsky Berou	1.04	239	⇑iP	Pg	03 31 08.0	0.0
NIE	Niedzica	1.28	134	ePg	Pg	03 31 11.5	-1.2
NIE				eSg	Sg	03 31 29.3	+0.1
DPC	Dobruska-Polom	1.66	272	ePG	Pn	03 31 18.0	-0.5
DPC				eSG	Sn	03 31 40.1	-0.4
	20nm,0.5s						
KSP	Ksiaz	1.75	288	ePn	Pn	03 31 21.8	+2.1
KSP				eSn	Sn	03 31 46.1	+3.3
STHS	Stebnicka Huta	1.76	120	ePN	Pn	03 31 20.8	+0.9
KOLL	Kolacno	1.77	191	i PN	Pn	03 31 20.9	+0.8
KOLL				eSN	Sn	03 31 44.3	+1.0
VRAC	Vranov	1.81	237	⇓iP	Pn	03 31 20.7	+0.1
VYHS	Vyhne	1.83	182	i PN	Pn	03 31 19.1	-1.7
VYHS				eSN	Sn	03 31 42.0	-2.6
KECS	Kecovo	2.10	150	ePN	Pn	03 31 22.7	-1.9
KECS				ePG	Pg	03 31 26.6	-1.9
KECS				eSN	Sn	03 31 52.8	+1.3
CRVS	Cervenica-Dubn	2.18	130	ePN	Pn	03 31 27.7	+2.0
MODS	Modra-Piesok	2.22	209	ePG	Pn	03 31 29.0	+2.8
PSZ	Piszkesteto	2.49	165	⇑iP	Pn	03 31 35.3	+5.4
KWP	Kalwaria	2.54	104	⇑iP	Pn	03 31 34.5	+3.8
PRU	Pruhonice	2.83	265	ePG	Pn	03 31 40.4	+5.8
PRU				eSG	Sn	03 32 17.0	+7.7
BRG	Berggiesshubel	3.21	282	PG	Pg	03 31 50.0	+0.2
BRG				SG	Sg	03 32 30.4	-1.0
	3.2nm,0.6s						
KHC	Kasperske Hory	3.66	253	ePN	Pn	03 31 45.0	-1.0
KHC				ex	x	03 31 52.2	
KHC				eSG	Sg	03 32 44.3	-1.4
	6.7nm,0.6s						
CLL	Collm	3.88	287	ePg	Pg	03 32 02.0	-0.4
CLL				eSg	Sg	03 32 52.0	-0.6
DRGR		4.34	143	⇓iP	Pn	03 31 54.4	-0.9
BURAR	Bucovina Array	4.96	121	⇓iP	Pn	03 32 03.6	-0.2

ATH 09 03:45:22.5, 3870N×2002E, h25km±1km, MD3.7/7
NEIC 09 03:45:22.4, 3869N×2000E, h27km, MD3.7(ATH), After ATH.
ISCJB 09 03:45:23.8±0.9, 3864N±004×1991E±005, h30km±7km, Error ellipse: s-maj=8.1km s-min=5.2km az=143.5
THE 09 03:45:23.7, 3863N×1987E, h3km, ML4.1
CSEM 09 03:45:25.8±0.1, 3868N×2005E, h40km, ML4.1, Error ellipse: s-maj=2.9km s-min=1.6km az=40.0
ISC 09 03:45:25.1±0.9, 3863N±004×1998E±006, h32km±7km, n30, σ1^{s}08/43, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD	Levkas	0.53	82	ePg	Pb	03 45 34.9	-1.3
LKD				eSg	Sb	03 45 44.3	+0.6
LKD	Levkas	0.53	82	ePg	Pb	03 45 34.8	-1.4
LKD				eSg	Sb	03 45 44.3	+0.6
VLS	Valsamata	0.66	133	ePN	Pn	03 45 36.2	-2.1
VLS				eSN	Sn	03 45 47.1	-0.4
KFL	Anninata	0.82	129	ePg	Pn	03 45 41.3	+0.8
IGT	Igoumenitsa	0.94	17	ePg	Pn	03 45 41.3	-0.7
IGT				eSg	Sn	03 45 55.7	+1.3
KEK	Kerkira	1.09	353	ePB	Pb	03 45 41.6	-3.8
KEK				eSN	Sn	03 45 57.5	-0.5
JAN	Janina	1.23	33	ePN	Pn	03 45 44.0	-2.0
JAN				eSN	Sn	03 46 00.4	-1.1
RLS	Riolos of Patr	1.30	116	ePN	Pn	03 45 47.1	0.0
EVR	Evrytania	1.46	78	ePN	Pn	03 45 49.1	-0.1
MEV	Metsovon	1.50	40	ePg	Pn	03 45 52.5	+2.7
SELA	Sela	1.54	103	ePb	Pb	03 45 52.9	-0.2
AGG	Agios Georgios	1.88	77	ePb	Pb	03 45 57.3	-1.5
AGG				eSb	Sb	03 46 24.2	+2.3
ITM	Ithomi	2.12	133	ePN	Pn	03 45 58.8	+0.5
KZN	Kozani	2.17	39	ePN	Pn	03 45 58.4	-0.6
LKR	Lokris	2.37	89	ePN	Pn	03 46 01.5	-0.2
FNA	Florina	2.40	26	ePn	Pn	03 46 03.6	+1.5
FNA				eSn	Sn	03 46 37.0	+6.6
BIA	Bitola	2.60	23	ePn	Pn	03 46 07.4	+2.5
BIA				eSn	Sn	03 46 41.0	+5.7
BIA	Bitola	2.60	23	ePn	Pn	03 46 05.4	+0.5
BIA				i Pg	Pn	03 46 11.8	+6.9
BIA	Bitola	2.60	23	i Pg	Pn	03 46 11.7	+6.8
NEO	Neokhori	2.62	74	ePN	Pn	03 46 04.4	-0.7
DID	Didima	2.81	113	ePn	Pn	03 46 09.9	+2.1
DID				eSn	Sn	03 46 46.7	+6.2
KRUS	Krusevo	2.90	19	i Pn	Pn	03 46 09.9	+0.9
KRUS				i Sg	Sn	03 46 42.0	-0.8
PE1	Pezze di Greco	2.93	319	ePn	Pn	03 46 09.3	-0.1
VLI	Veliai	3.03	128	ePB	Pb	03 46 13.6	-4.7
PLG	Polygyros	3.20	56	ePN	Pn	03 46 12.7	-0.4
SG1	Sgolgore (BA)	3.37	312	ePn	Pn	03 46 15.9	+0.5
BAI	Bari	3.43	317	ePn	Pn	03 46 16.8	+0.5
STIP	Stip	3.49	28	i Pn	Pn	03 46 17.2	0.0
CDT	Castel del Mon	3.75	312	ePn	Pn	03 46 21.1	+0.3
BOJS	Bojanci	7.71	334	i Pn	Pn	03 47 14.9	-0.2
BOJS				i Sn	Sn	03 48 36.0	-5.2

IDC 09 03:53:59.1±8.1, 687S×15039E, h56km±60km, mb3.4/3, mb1 3.7/4, mb1mx3.4/14, mbtmp3.6/4, ML2.6/1, Error ellipse: s-maj=93.7km s-min=52.5km az=137.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.08	232	P	Pn	03 54 59.0	+0.1
	3.0nm,0.3s,baz=42,slow=9.6,SNR=16						
PMG				S	Sn	03 55 46.6	+1.3
	3.5nm,0.3s,baz=180,slow=17,SNR=4.6						
WB2	Warramunga Arr	20.28	229	eP	P	03 58 29.3	-1.0
WRA	Warramunga Arr	20.29	229	P	P	03 58 30.1	-0.2
	3.1nm,0.7s,baz=54,slow=11,SNR=32						
ASAR	Alice Springs	23.02	222	P	P	03 58 58.7	-0.8
	0.6nm,0.6s,baz=55,slow=9.1,SNR=7.3						
FITZ	Fitzroy Crossi	26.58	243	P	P	03 59 32.0	-0.2
	2.3nm,0.9s,baz=100,slow=6.1,SNR=5.0						
TORD	Torodi Ar. Bea	148.57	284	PKPbc	PKPbc	04 13 40.9	+0.1
	0.3nm,0.4s,baz=66,slow=3.8,SNR=6.5						

IDC 09 04:37:59.5±1.2, 4133S×7278W, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.9/17, mbtmp3.9/9, ML2.6/1, Error ellipse: s-maj=45.3km s-min=19.7km az=89.0
ISCJB 09 04:38:02.5±3.5, 412S±0.1×738W±03, h53km±26km, mb4.0/9, Error ellipse: s-maj=44.1km s-min=17.1km az=170.6
NEIC 09 04:38:03.5±2.8, 4120S×7372W, h45km±21km, mb4.0/2, Error ellipse: s-maj=36.0km s-min=15.5km az=78.0
ISC 09 04:38:04.0±2.8, 412S±01×737W±03, h47km±21km, n17, σ1^{s}18/16, mb4.0/9, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.41	80	ePn	Pn	04 38 42.4	+1.5
CFAA	Coronel Fontan	10.52	26	Pn	Pn	04 40 30.2	-1.9
	0.1nm,0.3s,baz=210,slow=16,SNR=4.7						
LCO	Las Campanas	12.39	12	ePn	Pn	04 40 57.5	-0.2
LPAZ	La Paz	25.27	13	eP	P	04 43 28.4	+2.6
	1.8nm,0.8s,mb3.6						
LPAZ	La Paz	25.27	13	P	P	04 43 28.0	+2.2
	0.6nm,0.6s,mb3.3,baz=124,slow=7.3,SNR=3.9						
SIV	San Ignacio	27.38	27	P	P	04 43 44.0	-0.9
	1.3nm,0.8s,mb3.5,baz=219,slow=12,SNR=6.1						
SNAA	Sanae	45.52	155	P	P	04 46 17.0	-1.3
	3.5nm,0.9s,mb4.3,baz=300,slow=5.9,SNR=13						
QSPA	South Pole Qui	49.06	180	P	P	04 46 46.5	+0.8
	0.8nm,0.4s,mb4.1,baz=217,slow=2.2,SNR=5.3						
SDV	Santo Domingo	49.91	4	eP	P	04 46 54.0	+1.1
	2.7nm,0.8s,mb4.3						
TXAR	Lajitas Array	75.46	333	P	P	04 49 49.5	+6.6
TXAR	Lajitas Array	75.46	333	P	P	04 49 49.5	+6.6
	0.4nm,0.7s,mb3.4,baz=151,slow=13,SNR=3.4						
BOSA	Boshof	77.91	117	P	P	04 49 56.7	-0.3
BOSA	Boshof	77.91	117	P	P	04 49 56.7	-0.3
	3.2nm,0.7s,mb4.4,baz=215,slow=8.4,SNR=8.0						
DBIC	Dimbokro	78.75	71	P	P	04 50 01.9	+0.2
DBIC	Dimbokro	78.75	71	P	P	04 50 01.9	+0.2
	4.8nm,0.9s,mb4.4,baz=197,slow=6.0,SNR=3.1						
TORD	Torodi Ar. Bea	87.86	71	P	P	04 50 47.5	-1.0
	0.3nm,0.4s,mb3.9,baz=228,slow=3.5,SNR=6.6						
GERES	GERESS Array B	118.02	48	PKP	PKPdf	04 56 44.5	-0.3
	0.5nm,0.6s,baz=205,slow=4.3,SNR=4.5						

IDC 09 04:38:12.9±1.3, 2581N×4486W, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.8/24, mbtmp4.1/9, MS3.8/2, Ms1 3.8/2, ms1mx3.1/30, Error ellipse: s-maj=33.8km s-min=22.5km az=0.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	21.16	253	P	P	04 42 58.0	-1.8
	7.5nm,0.3s,baz=292,slow=19,SNR=6.0						
BBTS	Babate	28.73	107	P	P	04 44 13.8	+1.6
	8.3nm,0.5s,baz=315,slow=1.4,SNR=2.7						
SFJD	Kangerlussuaq	41.35	357	P	P	04 46 01.3	+1.1
	9.2nm,0.8s,baz=144,slow=12,SNR=3.4						
DBIC	Dimbokro	42.62	109	LR	LR	05 02 23.0	
	comp=Z,101nm,19.9s,baz=285,slow=34						
GERES	GERESS Array B	50.53	47	P	P	04 47 11.5	-1.3
	0.2nm,0.5s,baz=245,slow=2.8,SNR=5.3						
PDAR	Pinedale Array	54.78	305	P	P	04 47 46.3	+1.8
	0.8nm,0.9s,baz=116,slow=7.1,SNR=3.4						
YKA	Yellowknife Ar	58.10	329	P	P	04 48 07.7	0.0
	1.3nm,1.1s,baz=107,slow=7.2,SNR=6.2						
YKA				LR	LR	05 11 12.9	
	comp=Z,92nm,18.3s,baz=185,slow=34						
FINES	FINESS Array B	58.58	32	P	P	04 48 11.6	+0.4
	2.2nm,0.9s,baz=260,slow=7.6,SNR=5.4						
ARCES	ARCESS Array B	59.21	23	P	P	04 48 15.1	-0.3
	1.1nm,0.6s,baz=272,slow=3.2,SNR=7.6						
AKASG	Malin Array Be	60.57	45	P	P	04 48 23.4	-1.7
	0.2nm,0.3s,baz=281,slow=5.7,SNR=5.3						

IDC 09 05:06:53.9±5.7, 3722N×7214E, h175km±51km, mb3.4/7, mb1 3.5/9, mb1mx3.3/23, mbtmp3.4/9, Error ellipse: s-maj=31.1km s-min=19.2km az=9.0
NEIC 09 05:06:53.9±1.0, 3730N×7207E, h171km±10km, mb3.9/4, Error ellipse: s-maj=13.6km s-min=5.7km az=54.0
ISCJB 09 05:06:54.2±0.4, 3739N±002×7222E±007, h186km±6km, mb3.6/8, Error ellipse: s-maj=8.5km s-min=3.7km az=173.7
NNC 09 05:07:05.6±3.2, 3832N×7236E, h252km±34km, mb2.6, mpv3.7, Error ellipse: s-maj=34.6km s-min=16.0km az=9.0
ISC 09 05:06:55.0±0.4, 3739N±002×7221E±007, h178km±5km, n51, σ1^{s}15/68, mb3.6/8, 4C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.57	184	⇓P	Pn	05 07 53.9	+3.3
CEP				S	Sn	05 08 33.0	-0.9
CHCP	Chirah Chowk	3.82	167	P	Pn	05 07 57.8	+4.0
THW	Thamme Wali	4.60	185	P	Pn	05 08 06.3	+2.5
AML	Almayashu	4.87	13	ePn	Pn	05 08 07.8	+0.6
AML				eSn	Sn	05 09 01.1	-2.7
AML	Almayashu	4.87	13	P	Pn	05 08 08.1	+1.0
	SNR=335						
UCH	Uchtor	5.15	19	ePn	Pn	05 08 11.7	+0.9
	39nm,1.0s						
UCH				eSn	Sn	05 09 08.5	-1.8
UCH	Uchtor	5.15	19	P	Pn	05 08 11.9	+1.1
	SNR=85						
SBDP	Sheikh Budin	5.21	193	P	Pn	05 08 13.2	+1.5
SBDP				S	Sn	05 09 12.0	+0.3
KZA	Kyzart	5.24	26	P	Pn	05 08 12.4	+0.5
	SNR=36						
EKS2	Erkin-Say	5.40	12	ePn	Pn	05 08 14.7	+0.7
	40nm,0.6s						
EKS2				eSn	Sn	05 09 14.1	-2.1
EKS2	Erkin-Say	5.40	12	P	Pn	05 08 15.1	+1.0
	SNR=69						
AAK	Ala-Archa	5.52	18	ePn	Pn	05 08 15.8	+0.1
	51nm,0.4s						
AAK				eSn	Sn	05 09 16.5	-2.5
AAK	Ala-Archa	5.52	18	P	Pn	05 08 16.9	+1.2
	SNR=36						
KBK	Karagaybulak	5.66	21	P	Pn	05 08 19.2	+1.7
	SNR=16						
THN	Thein Dam	5.72	149	eP	Pn	05 08 19.6	+1.2
THN				eS	Sn	05 09 23.6	-0.2
DLH	Dalhousie	5.73	146	eP	Pn	05 08 19.0	+0.5
DLH				eS	Sn	05 09 23.0	-1.1
ULHL	Ulahol	5.76	31	P	Pn	05 08 19.4	+0.7
	SNR=16						
KK31	Karatay Array	5.85	348	P	Pn	05 08 20.2	+0.3
	20nm,0.4s,baz=163,slow=12,SNR=437						
KK31				⇓S	Sn	05 09 22.3	-4.5
	30nm,0.3s,baz=161,slow=22						
CHMS	Chumysh	5.93	18	P	Pn	05 08 21.6	+0.7
	SNR=18						
TKM2	Tokmak 2	6.10	24	⇓P	Pn	05 08 24.1	+0.9
	2.6nm,0.8s						
TKM2				⇑S	Sn	05 09 27.1	-5.6
	0.6nm,0.5s						
TKM2	Tokmak 2	6.10	24	ePn	Pn	05 08 23.8	+0.6
	39nm,1.0s						
TKM2				eSn	Sn	05 09 23.2	-10
TKM2	Tokmak 2	6.10	24	P	Pn	05 08 24.1	+0.9
	SNR=17						
USP	Ospenovka	6.13	16	P	Pn	05 08 23.6	+0.1
	SNR=11						
SDNR	Sundarnagar	7.07	145	eP	Pn	05 08 36.0	0.0
SDNR				eS	Sn	05 09 52.0	-3.7
JOSI	Joshimath	9.14	136	eP	Pn	05 09 03.7	+0.3
JOSI				eS	Sn	05 10 41.0	-4.4
KHET	Khetri	9.77	161	eP	Pn	05 09 09.7	-1.9
KHET				AMb	AMB	05 09 11.4	
	comp=Z,16nm,0.4s						
KHET				eS	Sn	05 10 51.7	-8.7
KUDL	Kundal	9.89	157	eP	Pn	05 09 11.9	-1.4
KUDL				AMb	AMB	05 09 12.8	
	comp=Z,18nm,0.4s						
KUDL				eS	Sn	05 10 55.4	-7.9
SONA	Sohna	9.99	154	eP	Pn	05 09 13.3	-1.1
SONA				AMb	AMB	05 09 14.8	
	comp=Z,15nm,0.3s						
SONA				eS	Sn	05 10 57.5	-8.2
MK31	Makanchi Array	12.00	35	⇑P	Pn	05 09 40.9	+0.5
	comp=Z,0.6nm,0.5s,baz=221,slow=16,SNR=7.8						
MKAR	Makanchi Array	12.00	35	P	Pn	05 09 40.2	-0.2
	comp=Z,0.1nm,0.3s,baz=209,slow=11,SNR=8.0						
GKN	Gorkha	14.03	128	eP	Pn	05 10 06.4	+0.3
	comp=Z,38nm,0.3s						
KURK	Kurchatov	14.09	17	eP	Pn	05 10 08.8	+2.1
	comp=Z,7.5nm,0.9s						
KKN	Kakani	14.58	127	eP	Pn	05 10 12.4	-0.6
	comp=Z,23nm,0.5s						
AB31	Akbulak array	14.82	327	⇑P	Pn	05 10 14.2	-1.6
	comp=Z,2.8nm,0.3s,baz=135,slow=12,SNR=108						
AB31				⇑S	Sn	05 12 50.4	-10
	comp=Z,7.3nm,0.8s						
JIRN	Jiri	15.25	125	eP	Pn	05 10 21.1	-0.2
	comp=Z,53nm,0.5s						
BRVK	Borovoye	15.73	356	eP	Pn	05 10 25.9	-1.0
	comp=Z,8.7nm,0.8s						
TAPN	Taplejung	16.46	123	eP	Pn	05 10 35.7	-0.3
	comp=Z,12nm,0.3s						
AKTK	Aktyubinsk	16.53	327	P	Pn	05 10 36.9	+0.3
AKTO	Aktyubinsk	16.53	327	P	Pn	05 10 36.9	+0.3
	comp=Z,1.6nm,0.3s,baz=124,slow=10,SNR=27						
ODAN	Odare	16.58	125	eP	Pn	05 10 38.4	+1.0
	comp=Z,7.6nm,0.4s						
SONM	Songino Array	27.03	56	P	P	05 12 22.2	+1.7
	comp=Z,0.3nm,0.5s,mb3.2,baz=254,slow=10,SNR=4.3						
ULN	Ulaanbaatar	27.48	56	eP	P	05 12 25.5	+1.1
	comp=Z,0.8nm,0.5s,mb3.6						
FINES	FINESS Array B	37.30	325	P	P	05 13 49.7	+0.2
FINES	FINESS Array B	37.30	325	P	P	05 13 49.7	+0.2
	comp=Z,1.1nm,0.9s,mb3.5,baz=123,slow=10.0,SNR=3.9						
ARCES	ARCESS Array B	40.70	337	P	P	05 14 18.0	+0.3
	comp=Z,3.2nm,0.9s,mb4.0,baz=118,slow=8.1,SNR=12						
NB2	NORSAR Subarra	44.26	322	P	P	05 14 46.1	-0.3
	comp=Z,0.7nm,0.4s,mb3.6,baz=96,slow=7.9						
NOA	NORSAR Array B	44.26	322	P	P	05 14 46.2	-0.2
	comp=Z,0.9nm,0.5s,mb3.7,baz=94,slow=7.6,SNR=4.0						
TOA0	Torodi Ar. Sit	66.71	269	eP	P	05 17 25.8	-1.4
TORD	Torodi Ar. Bea	66.71	269	P	P	05 17 26.1	-1.0
	comp=Z,2.2nm,0.4s,mb4.4,baz=49,slow=5.2,SNR=18						
YKA	Yellowknife Ar	80.31	3	P	P	05 18 45.4	-0.3
	comp=Z,1.1nm,0.4s,mb3.8,baz=350,slow=5.6,SNR=21						
WRA	Warramunga Arr	81.64	123	P	P	05 18 52.2	-1.2
	comp=Z,0.6nm,1.2s,mb3.1,baz=331,slow=5.1,SNR=4.7						

NEIC 09 05:34:50.3, 1727N×10173W, h5km, MD4.0(MEX), After MEX.
MEX 09 05:34:50.4±0.7, 1727N×10171W, h8km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.41	34	i P	Pg	05 34 58.2	-0.2
ZIIG				i S	Sg	05 35 03.8	0.0
ACX	Acapulco	1.76	103	i P	Pn	05 35 24.0	+2.8
ACX	Acapulco	1.76	103	i P	Pn	05 35 22.0	+0.8
MMIG	Aquila	1.86	303	i P	Pn	05 35 19.3	-3.3
MMIG				i S	Sn	05 35 41.0	-5.4
MOIG	Morelia	2.45	11	i P	Pn	05 35 27.4	-3.3
MOIG				i S	Sn	05 35 56.7	-4.2
PPM	Popocatepetl	3.43	58	i P	Pn	05 35 40.1	-4.1
PPM				i S	Sn	05 36 23.8	-1.4
PPM	Popocatepetl	3.43	58	i P	Pn	05 35 41.7	-2.5
PPM				i S	Sn	05 36 23.8	-1.4
UTMO	Huajuapan	3.77	81	i P	Pn	05 35 44.6	-4.2
UTMO				i S	Sn	05 36 29.0	-4.3

IDC 09 05:41:19.1±4.1, 283S×14128E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.7/13, mbtmp3.8/4, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/14, Error ellipse: s-maj=128.0km s-min=28.4km az=94.0
ISCJB 09 05:41:22.3±2.8, 29S±0.1×1412E±07, h33km, mb3.9/4, Error ellipse: s-maj=94.4km s-min=16.5km az=2.5
NEIC 09 05:41:24.5±1.9, 286S×141.18E, h35km, mb4.0/1, Error ellipse: s-maj=62.4km s-min=12.9km az=92.0
ISC 09 05:41:24.5±2.6, 29S±01×1412E±06, h35km, n9, σ0^{s}23/9, mb3.9/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	18.24	201	eP	Pn	05 45 35.3	+0.3
WRA	Warramunga Arr	18.25	201	P	Pn	05 45 34.8	-0.3
	0.4nm,0.3s,baz=21,slow=13,SNR=26						
FITZ	Fitzroy Crossi	21.49	224	eP	P	05 46 10.3	-0.1
	10nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	21.49	224	P	P	05 46 10.5	+0.1
	3.6nm,0.6s,mb3.9,baz=45,slow=12,SNR=9.8						
FITZ				LR	LR	05 56 00.8	
	comp=Z,54nm,18.7s,baz=82,slow=41						
ASAR	Alice Springs	21.85	198	P	P	05 46 14.0	-0.2
	1.5nm,0.7s,mb3.6,baz=31,slow=10,SNR=17						

FORT Forrest 30.42 203 eP P 05 47 34.0 +0.4
12nm,0.6s,mb4.8
FORT Forrest 30.42 203 eP P 05 47 33.8 +0.2
1.9nm,0.7s,mb3.9
MK31 Makanchi Array 71.44 322 eP P 05 52 41.1 -0.2
MKAR Makanchi Array 71.44 322 P P 05 52 41.5 +0.2
0.6nm,0.8s,mb3.6,baz=108,slow=7.9,SNR=6.3

IDC 09 06:51:47.1±1.0, 2846N×13980E, h420km±193km, mb2.8/3, mb1 2.9/4, mb1mx2.7/19, mbtmp2.9/4, Error ellipse: s-maj=559.5km s-min=23.1km az=68.0, Bonin Islands region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 2.51 122 P P 06 52 48.8 +0.6
28nm,0.3s,baz=300,slow=23,SNR=10
CBIJ S S 06 53 37.6 0.0
14nm,0.3s,baz=110,slow=24,SNR=7.3
SONM Songino Array 32.27 316 P P 06 57 39.1 +0.3
0.5nm,0.4s,baz=125,slow=7.9,SNR=6.8
MKAR Makanchi Array 47.98 309 P P 06 59 45.5 -0.3
0.2nm,0.4s,baz=83,slow=9.4,SNR=6.6
WRA Warramunga Arr 48.41 187 P P 06 59 49.2 0.0
0.9nm,1.2s,baz=7.0,slow=8.6,SNR=4.6

KRSC 09 06:59:37.1±0.7, 5373N×16101E, h42km±31km, ML3.7, Off east coast of Kamchatka Peninsula

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SPN Mys Shipunski 0.87 223 eP Pn 06 59 52.2 -0.6
SPN eS Sn 07 00 03.2 -1.0
MKZ Mys Kozlova 0.93 27 eP Pn 06 59 52.2 -1.5
MKZ eS Sn 07 00 03.3 -2.5
KII Karymskiy 0.97 289 eP Pn 06 59 54.6 +0.3
KII eS Sn 07 00 07.1 +0.2
NLC Nalytchevo 1.14 241 P Pn 06 59 56.5 -0.1
NLC eS Sn 07 00 11.1 +0.1
AVH Avacha 1.44 252 eP Pn 07 00 01.7 +1.1
AVH eS Sn 07 00 19.5 +1.3
PET Petropavlovsk 1.58 244 P Pn 07 00 03.2 +0.6
PET eS Sn 07 00 22.3 +0.6
TUMR Tumrok 1.64 342 P Pn 07 00 04.3 +1.0
TUMR eS Sn 07 00 24.1 +1.0
GNL Ganaly 1.82 270 eP Pn 07 00 08.0 +2.1
GNL eS Sn 07 00 31.0 +3.2
RUS Russkaya 1.99 230 P Pn 07 00 09.7 +1.5
RUS eS Sn 07 00 33.0 +1.2
KMNR Kamenistaya 2.08 348 eP Pn 07 00 11.3 +1.9
KMNR eS Sn 07 00 36.1 +2.1
GRL Gorelyy 2.13 237 P Pn 07 00 12.0 +1.9
GRL S Sn 07 00 37.4 +2.2
KPT Kopyto 2.29 349 S Sn 07 00 40.3 +1.2
KOZ Kozyrevsk 2.42 345 P Pn 07 00 15.7 +1.6
KOZ S Sn 07 00 43.8 +1.3
KBTR Krutoberegovo 2.69 22 P Pn 07 00 18.6 +0.8
KBTR eS Sn 07 00 48.5 -0.7
SRDR Sredinnyy 2.70 345 P Pn 07 00 19.6 +1.7
SRDR S Sn 07 00 50.9 +1.6
SRKR Sorokina 2.93 2 S Sn 07 00 55.8 +0.8

*NIED **09** 07:00:00, 4340N×14690E, h68km, Mw4.3 Best double couple: M₀3.37000×10¹⁵ NP1:φs266.00000°, δ62.00000°, λ171.00000°. NP2:φs360.00000°, δ82.00000°, λ28.00000°.*
*MOS **09** 07:00:52.3±1.2, 4349N×14703E, h63km, mb4.5/16, Error ellipse: s-maj=10.9km s-min=7.9km az=104.2*
MOS Felt (II) at Yuzhno-Kuril'sk.
*ISCJB **09** 07:00:53.7±0.7, 4348N±004×14695E±006, h72km±5km, mb4.1/25, Error ellipse: s-maj=8.3km s-min=5.5km az=35.6*
*JMA **09** 07:00:54.8±0.2, 4344N×14693E, h56km±3km, M4.4*
JMA Felt II J1.
*SKHL **09** 07:00:55.1±0.1, 4362N×147.19E, h61km±29km, mb5.7/4*
SKHL Felt (II) at Yushno-Kurilsk.
*IDC **09** 07:00:55.5±3.0, 4351N×14683E, h68km±27km, mb3.7/15, mb1 4.0/18, mb1mx3.9/24, mbtmp3.8/18, MS3.1/5, Ms1 3.1/5, ms1mx2.9/31, Error ellipse: s-maj=17.9km s-min=16.1km az=110.0*
*NEIC **09** 07:00:56.2±1.4, 4349N×14678E, h76km±12km, mb4.4/6, Error ellipse: s-maj=15.8km s-min=11.4km az=98.0*
NEIC Felt [II] at Yuzhno-Kuril'sk, Kunashir. Recorded [2 JMA] in eastern Hokkaido.
ISC 09 07:00:54.9±0.7, 4347N±004×14695E±006, h65km±5km, n91, σ1§08/109, mb4.1/25, 3C-4D, Kuril Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEM2 Nemuro 2 0.89 264 P Pn 07 01 11.2 -0.4
NEM2 eS Sn 07 01 23.1 -0.9
YUK Yuzh-Kuril'sk 0.97 306⇓iPN Pn 07 01 12.5 -0.2
YUK eS Sn 07 01 25.5 -0.4
YUK pmax pmax
comp=Z,18μm,0.3s
YUK pmax pmax
comp=N,2μm,0.3s
YUK pmax pmax
comp=E,2μm,0.3s
YUK smax
comp=N,10μm,0.3s
YUK smax
comp=E,15μm,0.4s
YUK Yuzh-Kuril'sk 0.97 306⇓iP Pn 07 01 12.5 -0.2
YUK AMB AMB 07 01 13.0
comp=E,10μm,0.8s
YUK AMB AMB 07 01 13.0
comp=E,12μm,0.8s
YUK AMB AMB 07 01 13.0
comp=E,2μm,0.2s
YUK AMB AMB 07 01 13.0
comp=E,30μm,0.8s
YUK AMB AMB 07 01 13.0
comp=E,2μm,0.3s
YUK AMB AMB 07 01 13.0
comp=E,18μm,0.3s
YUK eS Sn 07 01 25.5 -0.4
YUK A 07 01 27.1
comp=E,10μm,0.3s
YUK A 07 01 27.1
comp=E,15μm,0.3s
YUK A 07 01 41.0
comp=E,15μm,1.0s
JRA Rausu 1.41 290 P Pn 07 01 18.4 0.0
JRA eS Sn 07 01 36.3 +0.2
JNK Nakash 1.63 275 P Pn 07 01 21.1 -0.2
JNK eS Sn 07 01 40.3 -1.0
JAK Akkeshi 1.71 255 P Pn 07 01 22.4 -0.1
JAK eS Sn 07 01 42.4 -1.0
KUR Kuril'sk 1.88 20 ePN Pn 07 01 22.2 -2.6
KUR iS Sn 07 01 42.6 -4.9
KUR pmax pmax
comp=Z,2μm,1.0s
KUR pmax pmax
comp=N,1μm,0.3s
KUR pmax pmax
comp=E,2μm,0.3s
KUR pmax pmax
comp=Z,2μm,0.3s
KUR smax
comp=N,4μm,0.4s
KUR smax
comp=E,6μm,0.4s
KUR smax
comp=N,7μm,0.8s
KUR smax
comp=E,9μm,0.8s
KUR Kuril'sk 1.88 20 eP Pn 07 01 22.2 -2.6
KUR AMB AMB 07 01 23.2
comp=E,2μm,1.0s
KUR AMB AMB 07 01 24.8
comp=E,1μm,0.3s
KUR AMB AMB 07 01 24.8
comp=E,2μm,0.3s
KUR AMB AMB 07 01 24.8
comp=E,2μm,0.3s
KUR iS Sn 07 01 42.6 -4.9
KUR A 07 01 46.0
comp=E,4μm,0.4s
KUR A 07 01 46.0
comp=E,6μm,0.4s
KUR A 07 01 46.0
comp=E,7μm,0.8s
KUR A 07 01 46.0
comp=E,9μm,0.8s
JTKR Abashiri--Toko 2.26 284 P Pn 07 01 30.6 +0.7
JTKR eS Sn 07 01 58.1 +1.4
JAR Ashorobuto 2.33 267 P Pn 07 01 31.3 +0.5
JAR eS Sn 07 01 58.5 +0.2
JOB Onbets 2.35 257 P Pn 07 01 31.3 +0.2
JOB eS Sn 07 01 58.1 -0.7
JMP Maruseppu 2.66 283 P Pn 07 01 36.2 +0.9
JCH Churui 2.77 253 P Pn 07 01 36.6 -0.2
JCH eS Sn 07 02 08.0 -1.0
JKK2 Kamakawa 2 3.08 279 P Pn 07 01 42.3 +1.3
JKK2 eS Sn 07 02 19.0 +2.4
JEM Erimo 3.15 244 P Pn 07 01 43.4 +1.4
JEM eS Sn 07 02 19.3 +0.9
ERM Erimo 3.15 244 ePn Pn 07 01 44.1 +2.1
ERM eSn Sn 07 02 16.9 -1.5
JFR Furan 3.19 266 P Pn 07 01 44.1 +1.5
JFR eS Sn 07 02 20.3 +0.8
ASAJ Asahikawa 3.22 283 P Pn 07 01 44.6 +1.7
ASAJ Asahikawa 3.22 283 P Pn 07 01 43.5 +0.6
comp=E,11nm,0.3s,baz=88,slow=13,SNR=33
ASAJ S Sn 07 02 28.1 +8.1
comp=E,48nm,0.3s,baz=28,slow=31,SNR=11
ASAJ LR LR 07 02 57.3
comp=E,320nm,19.3s,baz=308,slow=39
JNBK Urakawa-nobuka 3.31 250 P Pn 07 01 44.4 +0.2
JNBK eS Sn 07 02 20.4 -1.8
YSS Yuzh-Sakhalins 4.57 321 ePn Pn 07 02 01.9 +0.4
YSS Yuzh-Sakhalins 4.57 321 d iPN Pn 07 02 01.9 +0.5
YSS Yuzh-Sakhalins 4.57 321⇓iP Pn 07 02 01.9 +0.5
YSS AMB AMB 07 02 02.7
comp=E,320nm,0.7s
YSS AMB AMB 07 02 02.7
comp=E,440nm,0.7s
YSS eS Sn 07 02 52.0 -1.2
YSS A 07 02 53.0
comp=E,100nm,0.8s
UGL Uglegorsk 6.55 331 eP Pn 07 02 30.0 +1.5
TYV Tymovskoe 7.95 340 eP Pn 07 02 49.0 +1.4
SKR Severo-Kuril's 9.54 38 ePN Pn 07 03 06.1 -3.2
SKR pmax pmax
comp=N,80nm,0.5s
SKR pmax pmax
comp=E,60nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s
MJAR Matsushiro Arr 9.63 227 PN Pn 07 03 10.2 -0.5
MJAR pmax pmax
comp=Z,4.0nm,0.3s
MJAR MLR MLR
comp=Z,83nm,21.0s
MJAR Matsushiro Arr 9.63 227 P Pn 07 03 10.2 -0.5
comp=Z,4.2nm,0.3s,baz=30,slow=13,SNR=42
MJAR LR LR 07 07 26.9
comp=Z,83nm,21.0s,baz=220,slow=41
MAJO Matsushiro 9.63 227 ePn Pn 07 03 09.3 -1.4
comp=Z,36nm,0.6s
MAJO Matsushiro 9.63 227 ePN Pn 07 03 09.3 -1.4
MAJO pmax pmax
comp=Z,36nm,0.6s
MAT Matsushiro 9.63 227 P Pn 07 03 10.0 -0.7
MAT eS Sn 07 05 02.4 +5.2
HABR Khabarovsk 9.68 305 ePN Pn 07 03 12.1 +0.9
KLR Kul'dur 11.97 304 ePN Pn 07 03 41.8 -0.7
KSRS Korea Array 15.67 254 P Pn 07 04 30.4 -1.2
comp=Z,0.4nm,0.3s,baz=62,slow=14,SNR=3.4
KSRS LR LR 07 09 57.0
comp=Z,44nm,20.9s,baz=170,slow=35
JNU Nakatsue 16.28 236 LR LR 07 11 13.7
comp=Z,47nm,21.8s,baz=331,slow=38
HIA Hailar 19.59 297 iP Pn 07 05 14.5 -4.9
YAK Yakutsk 21.20 337 eP P 07 05 32.9 -1.8
YAK pmax pmax
comp=Z,11nm,0.7s,mb4.3
BOD Bodaibo 25.03 317 eP P 07 06 07.7 -4.9
ULN Ulaanbaatar 28.00 293 eP P 07 06 39.3 -0.1
comp=Z,7.0nm,0.8s,mb4.2
ULN Ulaanbaatar 28.00 293 iP P 07 06 38.9 -0.5
SONM Songino Array 28.45 293 P P 07 06 43.4 0.0
SONM LR LR 07 18 49.5
SONM Songino Array 28.45 293 P P 07 06 43.4 +0.1
SONM pmax pmax
comp=Z,4.0nm,0.7s
SONM MLR MLR
comp=Z,93nm,20.0s
SONM Songino Array 28.45 293 P P 07 06 43.4 0.0
comp=Z,4.2nm,0.7s,mb4.1,baz=85,slow=8.9,SNR=32
SONM LR LR 07 18 49.5
comp=Z,93nm,20.0s,baz=6.9,slow=38
COLA College 41.38 36 eP P 07 08 34.4 +0.2
MKAR Makanchi Array 44.59 298 P P 07 08 60.0 -0.3
MKAR Makanchi Array 44.59 298 P P 07 09 00.0 -0.3
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 44.59 298 P P 07 08 60.0 -0.3
comp=Z,1.8nm,0.5s,mb4.0,baz=79,slow=9.1,SNR=38
KURK Kurchatov 45.57 304 eP P 07 09 05.9 -2.1
comp=Z,6.6nm,0.6s,mb4.5
KURK Kurchatov 45.57 304 iP P 07 09 07.2 -0.8
INK Inuvik 46.72 30 P P 07 09 16.9 +0.1
INK pmax pmax
comp=Z,3.0nm,0.6s
INK Inuvik 46.72 30 P P 07 09 16.9 +0.1
comp=Z,3.2nm,0.6s,mb4.3,baz=303,slow=6.8,SNR=38
ULHL Ulahol 50.37 295 P P 07 09 46.0 +0.8
SNR=6.8
TKM2 Tokmak 2 50.50 296 P P 07 09 47.2 +1.0
SNR=7.8
USP Ospenovka 51.06 296 P P 07 09 50.6 +0.3
SNR=8.3
KZA Kyzart 51.11 295 P P 07 09 52.4 +1.6
SNR=16
AAK Ala-Archa 51.35 296 eP P 07 09 51.6 -1.0
comp=Z,5.1nm,1.1s,mb4.5
AAK Ala-Archa 51.35 296 iP P 07 09 51.7 -0.9
AAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.4
EKS2 Erkin-Say 51.81 296 P P 07 09 56.3 +0.4
SNR=7.7
AML Almayashu 52.11 295 P P 07 09 59.2 +1.0
SNR=5.5
ARU Arti 54.45 317 c iP P 07 10 14.0 -1.2
ARU e 07 12 15.8
ARU PPP 07 13 27.2
ARU S S 07 17 46.6 -2.1
ARU SS SS 07 21 27.3 -3.9
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
YKA Yellowknife Ar 56.12 34 P P 07 10 26.5 -0.5
comp=Z,0.6nm,0.6s,mb3.8,baz=298,slow=6.7,SNR=11
KEV Kevo 58.92 339 ep P 07 10 46.8 +0.1
comp=Z,4.6nm,1.0s,mb4.5
KEV Kevo 58.92 339 eP P 07 10 46.8 +0.1
KEV pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
ARCES ARCESS Array B 59.46 340 P P 07 10 49.0 -1.4
ARCES pmax pmax
comp=Z,3.0nm,0.9s
ARCES ARCESS Array B 59.46 340 P P 07 10 49.0 -1.4
comp=Z,2.9nm,0.9s,mb4.3,baz=43,slow=7.1,SNR=15
JOF Joensuu 62.27 332 ep P 07 11 07.2 -2.3
comp=Z,2.4nm,0.5s,mb4.5
WRA Warramunga Arr 64.15 193 P P 07 11 22.2 -0.2
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 64.15 193 P P 07 11 22.2 -0.2
comp=Z,1.4nm,0.8s,mb3.9,baz=10,slow=6.9,SNR=13
KAF Kangasniemi 64.50 333 ep P 07 11 20.8 -3.4
comp=Z,1.3nm,0.5s,mb4.0
KAF Kangasniemi 64.50 333 eP P 07 11 20.8 -3.4
KAF pmax pmax
comp=Z,1.0nm,0.5s,mb3.9
FINES FINESS Array B 65.06 333 P P 07 11 27.4 -0.5
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 65.06 333 P P 07 11 27.4 -0.5
comp=Z,1.3nm,0.4s,mb4.2,baz=48,slow=8.2,SNR=24
OBN Obninsk 65.45 324⇑eP P 07 11 30.4 -0.2
OBN pmax pmax
comp=Z,11nm,1.3s,mb4.5
NVAR Mina Array Bea 67.85 58 P P 07 11 48.0 +1.9
comp=Z,0.4nm,0.5s,mb3.5,baz=303,slow=7.2,SNR=4.0
ASAR Alice Springs 67.87 193 P P 07 11 47.0 +0.8
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 67.87 193 P P 07 11 47.0 +0.8
comp=Z,0.7nm,0.8s,mb3.5,baz=14,slow=7.0,SNR=7.4
NB2 NORSAR Subarra 69.81 339 P P 07 11 57.2 -0.7
comp=Z,1.5nm,0.6s,mb4.0,baz=32,slow=6.5
NB2 NORSAR Subarra 69.81 339 P P 07 11 57.2 -0.7
NB2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.1
NOA NORSAR Array B 69.81 339 P P 07 11 57.8 -0.1
NOA pmax pmax
comp=Z,2.0nm,0.7s
NOA NORSAR Array B 69.81 339 P P 07 11 57.8 -0.1
comp=Z,2.1nm,0.7s,mb4.1,baz=34,slow=6.1,SNR=7.1
KIV Kislovodsk 69.84 312⇑eP P 07 11 57.9 -0.5
KIV e*PP pP 07 12 23.6 +7.8
KIV pmax pmax
comp=Z,11nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,200nm,16.0s
PDAR Pinedale Array 70.20 50 P P 07 12 02.6 +2.0
comp=Z,0.6nm,0.7s,mb3.6,baz=286,slow=6.5,SNR=6.1
AKASG Malin Array Be 71.72 324 P P 07 12 09.0 -0.7
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 71.72 324 P P 07 12 09.0 -0.7
comp=Z,1.3nm,0.4s,mb4.1,baz=38,slow=6.2,SNR=8.9
BRTR Keskin Array B 77.63 314 P P 07 12 45.8 +1.7
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 77.63 314 P P 07 12 45.8 +1.7
comp=Z,1.1nm,0.8s,mb3.6,baz=50,slow=5.7,SNR=4.4
KHC Kasperske Hory 79.14 331 eP P 07 12 51.8 -0.4
GERES GERESS Array B 79.33 331 P P 07 12 54.3 +1.0
comp=Z,0.3nm,0.3s,mb3.5,baz=37,slow=6.9,SNR=3.5
TXAR Lajitas Array 82.93 56 P P 07 13 13.1 +0.4
comp=Z,0.4nm,0.7s,mb3.4,baz=284,slow=4.5,SNR=4.0
VNA2 Neumayer--Watz 149.68 196 ePKPdf PKPdf 07 20 29.2 -1.8
VNA2 e 07 20 36.9
VNA3 Neumayer Olymp 149.87 195 ePKPdf PKPdf 07 20 29.4 -1.9
VNA3 e 07 20 36.2

CASC 09 07:03:34.9±1.9, 879N×8314W, h32km±4km, MD3.5, 2D, Costa Rica

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTCR Cotoan 0.39 74⇓eP Pb 07 03 43.6 -0.3
CTCR eS Sb 07 03 51.5 +1.6
TBS2 0.48 89 eP Pb 07 03 45.0 -0.1
BAR1 0.48 339⇓eP Pb 07 03 44.6 -0.5
BAR1 eS Sb 07 03 52.0 -0.3
CNI Changuinola 0.88 45 eP Pn 07 03 50.6 -0.4
CNI eS Sn 07 04 04.2 +1.6
QCR Quepos 1.19 302 eP Pn 07 03 54.9 -0.5
URSC Urasca 1.22 329 eP Pn 07 03 55.1 -0.5
URSC eS Sn 07 04 11.7 +0.7
LCR2 La Lucha 2 1.27 318 eP Pn 07 03 55.7 -0.8
LCR2 eS Sn 07 04 15.0 +2.6
LAJ Bijagual 1.44 318 eP Pn 07 04 01.7 +2.9
LAJ eS Sn 07 04 25.2 +8.6
PRS1 Puriscal 1.66 316 eP Pn 07 04 01.1 -0.7
PRS1 eS Sn 07 04 21.9 0.0
CGA2 Cerro Gallo 2 1.79 313 eP Pn 07 04 03.4 -0.1
CGA2 eS Sn 07 04 26.3 +1.2
PTP Ponta Puerca 19.44 59 eS 07 03 57.5

*CSEM **09** 07:08:17.1±0.1, 4055N×34.10E, h9km±1km, MD3.3, Error ellipse: s-maj=1.9km s-min=1.7km az=13.0*
*ISK **09** 07:08:17.4, 4056N×34.10E, h8km, MD3.3*
*ISCJB **09** 07:08:18.2±0.3, 4056N±003×34.11E±003, h9km, Error ellipse: s-maj=3.8km s-min=3.2km az=13.3*
*DDA **09** 07:08:18.6, 4054N×34.13E, h5km±1km, Md3.7*
ISC 09 07:08:18.1±0.5, 4056N±002×3412E±003, h2km±5km, n26, σ1§01/38, Turkey

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CANT Cankiri 0.39 277 i PG Pg 07 08 25.5 0.0
TOS Tosya 0.48 351 PG Pg 07 08 27.1 -0.3
CTKT Corum 0.51 82 iP Pg 07 08 28.3 +0.4
CTKT iS Sg 07 08 35.5 +0.9
ELDT Eldivan 0.54 263 iP Pg 07 08 28.4 +0.1
ELDT iS Sg 07 08 36.1 +0.8
CORM Corum 0.54 134 PG Pg 07 08 28.6 +0.1
CORM SG Sg 07 08 36.9 +1.4
CDAG Cicekdag 0.95 168 iP Pg 07 08 35.3 -1.1
CDAG iS Sg 07 08 49.2 +0.5
BYBT Boyabat 1.03 28 PG Pg 07 08 37.5 -0.4
BOYT Boyabat 1.04 34 iP Pg 07 08 37.7 -0.5
BOYT iS Sg 07 08 52.4 +0.7
BALT Daday 1.12 330 iP Pg 07 08 39.3 -0.4
BALT iS Sg 07 08 55.2 +1.0
LOD Lodumlu 1.24 238 PN Pn 07 08 40.8 -1.6
SAFT Safranbolu 1.28 303 PN Pn 07 08 42.4 -0.6
YOZ Yozgat 1.30 135 PN Pn 07 08 42.5 -0.7
DIKM Dikmen 1.39 38 ePN Pn 07 08 44.1 -0.3
BZK Bozkurt 1.41 356 PN Pn 07 08 43.9 -0.8
KVT Kavak 1.55 70 ePN Pn 07 08 46.1 -0.6
SGKT Sivrigoynuk 1.57 271 iP Pn 07 08 46.7 -0.3
SGKT iS Sn 07 09 10.6 +2.6
AVNT Avonos 1.86 162 iP Pn 07 08 50.6 -0.4
AVNT iS Sn 07 09 17.0 +2.0
TOKT Tokat 1.86 97 ePN Pn 07 08 51.7 +0.7
KDZE Karadeniz Ereo 2.17 291 ePN Pn 07 08 55.0 -0.2
KIZT Kizilcal 2.41 227 ePN Pn 07 08 57.5 -1.0
HENT Hendek 2.47 277 iP Pn 07 09 01.5 +2.3
HENT iS Sn 07 09 37.3 +7.4
ESKT Eskisehir 2.72 249 iP Pn 07 09 01.5 -1.2
ESKT iS Sn 07 09 40.3 +4.2
ESKT Eskisehir 2.72 249 ePn Pn 07 09 01.9 -0.8
SEYT Eskypehyr 2.72 249 iP Pn 07 09 01.5 -1.2
GRSN GIRESUNGRSN 3.17 82 iP Pn 07 09 05.8 -3.1
GRSN iS Sb 07 09 54.9 +0.7
GZT Gaziantep 4.17 139 iP Pg 07 09 34.0 -4.1
GZT iS Sg 07 10 30.8 -1.4

*IDC **09** 07:15:43.4±2.3, 2446S×6686W, h129km±20km, mb3.7/2, mb1 3.7/4, mb1mx3.4/17, mbtmp3.5/4, Error ellipse: s-maj=42.5km s-min=20.3km az=110.0*
*ISCJB **09** 07:15:45.6±1.0, 2433S±005×670W±0.1, h164km±16km, mb3.6/2, Error ellipse: s-maj=17.6km s-min=7.6km az=5.7*
*GUC **09** 07:15:49.4±0.8, 2443S×6759W, h200km, ML3.9*
ISC 09 07:15:46.3±0.9, 2432S±005×670W±01, h157km±15km, n12, σ1§20/16, mb3.6/2, 3C, Salta Province

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CEN1 Los Morros 3.08 287⇑iP Pn 07 16 36.8 +1.8
CEN1 iS Sn 07 17 12.5 0.0
CEN1 AML AML 07 17 15.7
comp=N,238nm,0.5s
ANCH Antofagasta 3.19 281⇑iP Pn 07 16 39.8 +3.5
ANCH iS Sn 07 17 15.4 +0.4
CPCH Copiapo 4.28 224 eP Pn 07 16 51.0 +0.6
CPCH iS Sn 07 17 39.2 -1.1
CDCH Caldera 4.42 231⇑iP Pn 07 16 52.5 +0.3
CDCH iS Sn 07 17 40.6 -2.8
CFAA Coronel Fontan 7.34 188 P Pn 07 17 25.6 -5.3
CFAA S Sn 07 18 53.2 +0.1
comp=N,0.1nm,0.3s,baz=173,slow=15,SNR=6.1
LPAZ La Paz 8.06 352 P Pn 07 17 41.9 +1.3
comp=N,0.6nm,0.3s,baz=156,slow=10.0,SNR=17
LPAZ S Sn 07 19 08.2 -2.3
comp=N,0.2nm,0.3s,baz=328,slow=20,SNR=5.2
SIV San Ignacio 9.97 35 P Pn 07 18 05.4 -0.6
comp=N,0.5nm,0.3s,baz=220,slow=14,SNR=14
SIV S Sn 07 19 50.9 -5.6
comp=N,0.1nm,0.3s,baz=239,slow=15,SNR=2.5
TORD Torodi Ar. Bea 76.67 69 P P 07 27 20.8 +0.4
comp=N,2.0nm,0.7s,mb3.8,baz=243,slow=6.3,SNR=5.3
YKA Yellowknife Ar 94.42 340 P P 07 28 47.4 -0.4
comp=N,0.1nm,0.4s,mb3.3,baz=127,slow=4.4,SNR=5.9
ASAR Alice Springs 128.17 205 PKP PKPdf 07 34 34.2 -0.4
comp=N,0.5nm,0.7s,baz=128,slow=2.4,SNR=5.5
WRA Warramunga Arr 131.35 207 PKP PKPdf 07 34 41.5 +0.8
comp=N,0.3nm,0.4s,baz=154,slow=1.7,SNR=9.1

MKAR	**Makanchi Array**	**146.76**	**40**	PKPbc	PKPbc	07 35 10.0	+0.3
	comp=N,0.3nm,0.7s,baz=355,slow=1.9,SNR=3.9						

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*ISCJB **09** 07:20:33.9±2.1, 5.91S±0.07×128.2E±0.2, h198km±34km, mb4.4/4, Error ellipse: s-maj=25.3km s-min=11.0km az=167.2*
*NEIC **09** 07:20:34.2±1.6, 5.85S×128.36E, h174km±21km, mb4.4/4, Error ellipse: s-maj=21.9km s-min=8.8km az=73.0*
*IDC **09** 07:20:47.1±6.4, 6.73S×128.06E, h250km±73km, mb3.4/1, mb1 3.6/5, mb1mx3.3/15, mbtmp3.5/5, Error ellipse: s-maj=68.4km s-min=57.0km az=44.0*
ISC 09 07:20:34.1±2.3**, 5.88S**±0.08×**128.2E**±0.2**, h177**km±37km**, n13, σ0s84**/16**, mb4.4**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.22**	**226**	P	**Pn**	**07 22 10.8**	**+6.8**
	42nm,0.3s,baz=98,slow=2.3,SNR=29						
BATI				S	**Sn**	**07 23 14.0**	**-0.8**
	7.9nm,0.3s,baz=273,slow=12,SNR=4.7						
FITZ	**Fitzroy Crossi**	**12.40**	**191**	*e*P	**Pn**	**07 23 26.0**	**+1.2**
	10nm,1.2s						
FITZ				*e*S	**Sn**	**07 25 27.8**	**-15**
FITZ	**Fitzroy Crossi**	**12.40**	**191**	P	**Pn**	**07 23 26.2**	**+1.3**
	0.5nm,0.3s,baz=27,slow=9.1,SNR=12						
DAV	**Davao City (W)**	**13.13**	**348**	*e*Pn	**Pn**	**07 23 33.9**	**-0.2**
WRA	**Warramunga Arr**	**15.20**	**157**	P	**Pn**	**07 24 00.1**	**+0.3**
	0.9nm,0.3s,baz=339,slow=12,SNR=46						
WRA				S	**S**	**07 26 38.4**	**-11**
	0.2nm,0.3s,baz=336,slow=19,SNR=5.7						
WB2	**Warramunga Arr**	**15.20**	**157**	*e*P	**Pn**	**07 23 59.9**	**+0.1**
WB2				*e*S	**S**	**07 26 37.2**	**-12**
KKM	**Kota Kinabalu**	**16.84**	**314**	*e*P	**Pn**	**07 24 20.1**	**+0.4**
ASAR	**Alice Springs**	**18.52**	**163**	P	**P**	**07 24 37.6**	**+0.5**
	0.9nm,0.3s,baz=340,slow=11,SNR=76						
CTAO	**Charters Tower**	**22.52**	**131**	*e*P	**P**	**07 25 16.6**	**-2.5**
	21nm,1.9s,mb4.2						
GUMO	**Guam**	**25.45**	**40**	*e*P	**P**	**07 25 46.1**	**+0.3**
	45nm,1.0s,mb5.0						
STKA	**Stephens Creek**	**28.74**	**156**	P	**P**	**07 26 15.4**	**+0.4**
	0.7nm,0.3s,mb3.8,baz=328,slow=13,SNR=4.1						
FUNA	**Funafuti**	**50.62**	**96**	*e*P	**P**	**07 29 15.1**	**-0.4**
	6.8nm,0.5s,mb4.5						
NHSC	**New Hope**	**142.18**	**41**	*e*PKPdf	PKPdf	07 39 46.3	+0.5

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*IDC **09** 07:25:37.8±3.8, 38.01N×74.42E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/23, mbtmp3.8/4, Error ellipse: s-maj=344.7km s-min=27.3km az=52.0*
*ISCJB **09** 07:25:54.6±1.1, 36.7N±0.1×71.4E±0.3, h200km, mb3.2/3, Error ellipse: s-maj=33.8km s-min=10.8km az=154.5*
ISC 09 07:25:56.3±1.1**, 36.8N**±0.1×**71.5E**±0.3**, h200**km**, n6, σ1s00**/8**, mb3.2**/3**, 2C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.33**	**353**	P	**Pn**	**07 27 29.4**	**+1.8**
	0.8nm,0.3s,baz=179,slow=13,SNR=46						
KK31				⇑S	**Sn**	**07 28 39.3**	**-0.8**
	12nm,0.4s						
AB31	**Akbulak array**	**15.03**	**329**	⇑P	**Pn**	**07 29 17.1**	**-1.4**
	0.9nm,0.7s,baz=0.1,slow=26,SNR=10						
AB31				⇓S	**S**	**07 31 59.7**	**-5.5**
	0.4nm,0.5s						
AKTO	**Aktyubinsk**	**16.73**	**329**	P	**P**	**07 29 38.5**	**+0.6**
	0.3nm,0.3s,baz=134,slow=7.5,SNR=9.3						
ARCES	**ARCESS Array B**	**41.02**	**337**	P	**P**	**07 33 20.3**	**+1.0**
	2.1nm,0.9s,mb3.6,baz=115,slow=8.6,SNR=5.3						
WRA	**Warramunga Arr**	**81.79**	**122**	P	**P**	**07 37 52.4**	**-0.5**
	0.3nm,0.5s,mb3.2,baz=326,slow=4.8,SNR=11						
ASAR	**Alice Springs**	**84.08**	**125**	P	**P**	**07 38 04.2**	**-0.3**
	0.2nm,0.7s,mb3.0,baz=306,slow=4.8,SNR=6.2						

BJI 09 07:26:58.4, 47.69N×122.25E, h14km, mB4.4, mb4.2, ML4.3, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	**Changchun**	**4.49**	**149**	*e*P	Pn	07 28 06.9	+1.0
CN2				*e*PG	Pg	07 28 21.2	-3.1
CN2				*e*SG	Sg	07 29 24.1	+1.7
CN2				Smax			
	comp=N,320nm,0.6s						
CN2				Smax			
	comp=E,290nm,0.6s						
MDJ	**Mudanjiang**	**5.96**	**118**	PG	Pg	07 28 48.2	-4.2
MDJ				SG	Sg	07 30 04.0	-5.4
MDJ				Smax			
	comp=N,231nm,0.7s						
MDJ				Smax			
	comp=E,259nm,0.7s						
LZH	**Lanzhou**	**17.90**	**236**	*e*P	Pn	07 31 08.5	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.0s						
LZH				AMB	AMB		
	comp=Z,82nm,4.1s						
GTA	**Gaotai**	**18.20**	**251**	*e*P	Pn	07 31 15.3	+4.8
GTA				AP	pP	07 31 19.5	+4.9
GTA				XP	sP	07 31 22.3	+5.9
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s						
CD2	**Chengdu**	**21.94**	**227**	*e*P	P	07 31 53.5	+2.1
CD2				AP	pP	07 31 57.7	+2.3
CD2				XP	sP	07 32 00.8	+3.6
CD2				PP		07 32 19.3	
CD2				S	S	07 35 51.6	-1.7
CD2				XS	sS	07 35 58.6	-1.1
CD2				SS		07 36 30.5	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						

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*BJI **09** 07:27:24.7, 11.81S×65.81E, h10km, mB5.8, mb5.6, Ms5.7, Msz5.5*
*IDC **09** 07:27:30.0±0.4, 11.37S×66.36E, h0km, mb5.1/28, mb1 5.2/29, mb1mx5.2/30, mbtmp5.1/29, ML4.4/1, MS5.3/17, Ms1 5.3/17, ms1mx5.1/26, Error ellipse: s-maj=14.9km s-min=10.6km az=20.0*
*ISCJB **09** 07:27:29.4±0.2, 11.43S±0.03×66.28E±0.02, h10km, mb5.6/238, MS5.5/202, Error ellipse: s-maj=4.6km s-min=3.5km az=4.9*
*MOS **09** 07:27:29.5±0.8, 11.35S×66.31E, h10km, mb6.0/106, MS5.3/41, Error ellipse: s-maj=7.5km s-min=3.6km az=116.2*
*NEIC **09** 07:27:31.2±0.1, 11.43S×66.26E, h10km, mb5.8/138, MS5.6/159, MW5.5, Error ellipse: s-maj=4.7km s-min=3.2km az=27.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^17Nm; Mrr-2.47; Mθθ2.12; Mφφ0.35; Mrθ0.24; Mθφ-1.09; Mφr0.20; Best double couple: M0 2.60000×10^17 NP1:φs122.00000°, δ44.00000°, λ-80.00000°. NP2:φs289.00000°, δ47.00000°, λ-99.00000°. Principal axes: T 2.6400, Plg1.0000°, Azm25.0000°; N -0.1300, Plg7.0000°, Azm295.0000°; P -2.5100, Plg83.0000°, Azm127.0000°;*
*GCMT **09** 07:27:31.2±0.1, 11.58S×66.32E, h12km, MW5.7/103, Moment Tensor Solution. s71,c113; s103,c285; Duration: 1s7 Moment tensor: Scale 10^17Nm; Mrr-3.70±.04; Mθθ1.47±.04; Mφφ2.23±.04; Mrθ0.39±.13; Mθφ-2.02±.03; Mφr1.35±.13; Best double couple: M0 4.05600×10^17 NP1:φs305.00000°, δ41.00000°, λ-115.00000°. NP2:φs156.00000°, δ53.00000°, λ-70.00000°. Principal axes: T 3.9910, Plg6.0000°, Azm232.0000°; N 0.1300, Plg16.0000°, Azm324.0000°; P -4.1210, Plg73.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*SZGRF **09** 07:27:38.2, 11.24S×64.74E, h33km, mb6.1, South Indian Ocean*
ISC 09 07:27:31.2±0.2**, 11.46S**±0.03×**66.26E**±0.02**, h10**km**, (h12**km±1.0km**:pP-P), n924, σ0s90**/749**, mb5.6**/238**, MS5.5**/202**, 26C-94D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**19.72**	**247**	P	**Pn**	**07 32 02.9**	**+0.3**
	1.1nm,0.3s,baz=72,slow=12,SNR=13						
TRD	**Trivandrum**	**22.51**	**29**	⇓*i*P	**P**	**07 32 32.0**	**+0.8**
TRD				*i* x	x	07 36 46.0	
PALK	**Pallekele**	**23.51**	**38**	*e*P	**P**	**07 32 42.0**	**+0.3**
	780nm,1.8s,mb5.8						
PALK				LR	LR		
	comp=Z,8μm,19.0s,MS5.2						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
PALK	**Pallekele**	**23.51**	**38**	P	**P**	**07 32 42.9**	**+1.1**
	SNR=44						
MNGI	**Mangalore**	**25.69**	**20**	*i* P	**P**	**07 33 03.2**	**+1.6**
MNGI				*e*x	x	07 33 07.9	
	comp=Z,441nm,1.6s						
MNGI				*e*S	**S**	**07 37 34.1**	**+3.7**
MDRS	**Chennai**	**28.04**	**30**	⇑*e*P	**P**	**07 33 22.5**	**-0.3**
MDRS				*e*x	x	07 34 08.5	
MDRS				*e*x	x	07 35 17.5	
KAD	**Karad**	**29.64**	**15**	*i* P	**P**	**07 33 37.0**	**0.0**
KMBO	**Kilima Mbogo**	**30.57**	**288**	*e*P	**P**	**07 33 46.6**	**+1.2**
	comp=Z,460nm,2.5s,mb5.9						
KMBO				LR	LR		
	comp=Z,5μm,20.0s,MS5.2						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.6**	**+2.2**
	SNR=27						
KMBO	**Kilima Mbogo**	**30.57**	**288**	P	**P**	**07 33 47.2**	**+1.8**
	comp=Z,21nm,0.9s,mb5.0,baz=74,slow=10.0,SNR=52						
KMBO				LR	LR	07 44 31.2	
	comp=Z,6μm,18.5s,MS5.3,baz=101,slow=33						
POO	**Poona**	**30.72**	**14**	⇓*i*P	**P**	**07 33 46.0**	**-0.6**
	comp=Z,250nm,1.2s,mb5.9						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
RBK	**Rabkut**	**31.15**	**337**	P	**P**	**07 33 52.3**	**+1.9**
	SNR=8.2						
HYB	**Hyderabad**	**31.16**	**23**	*e*P	**P**	**07 33 51.0**	**+0.6**
	comp=Z,179nm,1.2s,mb5.8						
HYB				*e*S	**S**	**07 38 58.0**	**+1.6**
HYB	**Hyderabad**	**31.16**	**23**	*e*P	**P**	**07 33 51.0**	**+0.6**
HYB				*e*S	**S**	**07 38 58.0**	**+1.6**
HYB				pmax	pmax		
	comp=Z,179nm,1.2s,mb5.8						
HYB	**Hyderabad**	**31.16**	**23**	*i* P	**P**	**07 33 51.0**	**+0.6**
	comp=Z,179nm,1.2s,mb5.8						
HYB				*e*PP	PP	07 35 00.0	-0.9
HYB				*e*S	**S**	**07 38 58.0**	**+1.6**
HYB				LR	LR	07 42 32.0	
	comp=Z,20nm,20.0s						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
ABTO	**Aybut**	**31.37**	**336**	P	**P**	**07 33 54.1**	**+1.8**
	SNR=9.9						
AKL	**Akola**	**33.66**	**18**	*e*P	**P**	**07 34 13.2**	**+0.8**
AKL				*e*x	x	07 34 16.2	
	comp=Z,189nm,1.4s						
AKL				*i* S	**S**	**07 39 35.4**	**-0.1**
DESE	**Dese**	**34.69**	**309**	*e*P	**P**	**07 34 25.6**	**+4.2**
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
BSY	**Bisya**	**35.13**	**345**	P	**P**	**07 34 26.4**	**+1.2**
	SNR=12						
PSI	**Prapat**	**35.44**	**68**	P	**P**	**07 34 28.6**	**+0.7**
	comp=Z,17nm,0.9s,mb5.0,baz=254,slow=5.9,SNR=35						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
ARQ	**Araqi**	**35.87**	**345**	P	**P**	**07 34 32.7**	**+1.2**
	SNR=11						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
HOQ	**Hoqain**	**35.91**	**346**	P	**P**	**07 34 33.2**	**+1.4**
	SNR=8.1						
MBAR	**Mbarara**	**36.88**	**285**	PFAKE		07 34 50.0	+10
MBAR				LR	LR		
	comp=Z,490nm,20.0s,MS4.3						
JBP	**Jabalpur**	**36.94**	**21**	⇓*i*P	**P**	**07 34 40.3**	**-0.3**
JBP				*e*x	x	07 34 44.8	
	comp=Z,382nm,1.9s						
JBP				*e*S	**S**	**07 40 28.9**	**+3.1**
LSZ	**Lusaka**	**37.21**	**260**	*e*P	**P**	**07 34 44.5**	**+1.5**
	comp=Z,112nm,1.1s,mb5.6						
LSZ				LR	LR		
	comp=Z,6μm,21.0s,MS5.4						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
LSZ	**Lusaka**	**37.21**	**260**	P	**P**	**07 34 45.4**	**+2.3**
	SNR=28						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
ASHO	**Ashiyiah**	**37.28**	**345**	P	**P**	**07 34 44.3**	**+0.8**
	SNR=20						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
HATD	**Hatta, Dubai**	**37.40**	**345**	P	**P**	**07 34 45.1**	**+0.6**
	SNR=15						
IPM	**Ipoh**	**38.03**	**67**	⇑P	**P**	**07 34 51.8**	**+1.7**
KULM	**Kulim**	**38.04**	**66**	*e*P	**P**	**07 34 50.6**	**+0.5**
KULM	**Kulim**	**38.04**	**66**	⇑P	**P**	**07 34 51.5**	**+1.4**
FRIM	**Kepong**	**38.08**	**70**	⇓P	**P**	**07 34 52.3**	**+1.9**
BANOM	**Banah**	**38.40**	**345**	P	**P**	**07 34 53.3**	**+0.4**
	SNR=7.1						
BANOM	**Banah**	**38.40**	**345**	P	**P**	**07 34 53.3**	**+0.4**
	SNR=7.1						
BANOM	**Banah**	**38.40**	**345**	P	**P**	**07 34 53.3**	**+0.4**
	SNR=7.1						
BANOM	**Banah**	**38.40**	**345**	P	**P**	**07 34 53.3**	**+0.4**
	SNR=7.1						
BANOM	**Banah**	**38.40**	**345**	P	**P**	**07 34 53.3**	**+0.4**
	SNR=7.1						
AJM	**Ajmer**	**38.58**	**12**	*e*P	**P**	**07 34 55.0**	**+0.6**
KGM	**Kluang**	**39.20**	**72**	⇓P	**P**	**07 35 01.5**	**+1.7**
MYKOM	**Kota Tinggi**	**39.62**	**73**	⇓P	**P**	**07 35 04.9**	**+1.6**
KTGM	**Kuala Trenggan**	**40.30**	**67**	⇑P	**P**	**07 35 09.3**	**+0.3**
LBTB	**Lobatse**	**40.74**	**245**	P	**P**	**07 35 14.2**	**+1.7**
	comp=Z,37nm,0.9s,mb5.0,baz=94,slow=8.5,SNR=37						
NDI	**New Delhi**	**41.29**	**15**	*e*P	**P**	**07 35 16.0**	**-0.9**
BOSA	**Boshof**	**41.89**	**240**	P	**P**	**07 35 23.0**	**+1.1**
BOSA				LR	LR	07 50 50.6	
BOSA	**Boshof**	**41.89**	**240**	P	**P**	**07 35 23.0**	**+1.1**
	comp=Z,11nm,0.9s,mb4.5,baz=73,slow=9.3,SNR=9.0						
BOSA				LR	LR	07 50 50.6	
	comp=Z,11μm,19.0s,MS5.8,baz=84,slow=33						
AGT	**Agartala**	**42.78**	**35**	*e*P	**P**	**07 35 26.0**	**-3.2**
AGT				*e*x	x	07 35 55.0	
LGTI	**Lohaghat**	**42.85**	**18**	*e*P	**P**	**07 35 29.0**	**-0.7**
NST	**Nakhon Sawan**	**43.02**	**52**	P	**P**	**07 35 32.0**	**+0.7**
GKN	**Gorkha**	**43.08**	**24**	*e*P	**P**	**07 35 32.1**	**+0.6**
	comp=Z,1μm,1.6s,mb6.3						
BDT	**Bhumibol Dam**	**43.13**	**49**	P	**P**	**07 35 31.0**	**-1.1**
KKN	**Kakani**	**43.15**	**25**	*e*P	**P**	**07 35 32.8**	**+0.7**
	comp=Z,732nm,1.5s,mb6.2						
KKN	**Kakani**	**43.15**	**25**	*e*P	**P**	**07 35 32.8**	**+0.7**
KKN				pmax	pmax		
	comp=Z,732nm,1.5s,mb6.2						
ODAN	**Odare**	**43.27**	**28**	*e*P	**P**	**07 35 34.1**	**+1.0**
	comp=Z,408nm,1.0s,mb6.1						
JIRN	**Jiri**	**43.42**	**26**	*e*P	**P**	**07 35 35.1**	**+0.8**
	comp=Z,415nm,1.4s,mb6.0						
TAPN	**Taplejung**	**43.83**	**28**	*e*P	**P**	**07 35 38.4**	**+0.8**
	comp=Z,388nm,1.2s,mb6.0						
RDF	**Al-Radifah**	**44.03**	**336**	*e*P	**P**	**07 35 38.4**	**-0.8**
RDF				AMb	AMB	07 35 42.1	
	comp=Z,104nm,1.2s,mb5.4						
CHG	**Chiang Mai**	**44.08**	**47**	⇓P	**P**	**07 35 40.1**	**+0.3**
	comp=Z,150nm,1.4s,mb5.5						
CHTO	**Chiang Mai**	**44.08**	**47**	*e*P	**P**	**07 35 39.9**	**+0.1**
	comp=Z,323nm,1.7s,mb5.8						
CHTO				LR	LR		
	comp=Z,4μm,20.0s,MS5.3						
CHTO	**Chiang Mai**	**44.08**	**47**	P	**P**	**07 35 40.2**	**+0.4**
	SNR=49						
CHTO	**Chiang Mai**	**44.08**	**47**	P	**P**	**07 35 40.2**	**+0.4**
	SNR=49						
CHTO	**Chiang Mai**	**44.08**	**47**	P	**P**	**07 35 40.2**	**+0.4**
	SNR=49						
CHTO	**Chiang Mai**	**44.08**	**47**	P	**P**	**07 35 40.2**	**+0.4**
	SNR=49						
CHTO	**Chiang Mai**	**44.08**	**47**	P	**P**	**07 35 40.2**	**+0.4**
	SNR=49						
KBD	**Kabd**	**44.20**	**336**	*e*P	**P**	**07 35 39.9**	**-0.6**
KBD				AMb	AMB	07 35 43.6	
	comp=Z,290nm,1.3s,mb5.8						
NAY	**Al-Naaiem**	**44.44**	**336**	*e*P	**P**	**07 35 41.6**	**-0.9**
NAY				AMb	AMB	07 35 45.5	
	comp=Z,70nm,2.1s,mb5.0						
SHL	**Shillong**	**44.47**	**34**	*i* P	**P**	**07 35 44.0**	**+1.2**
	comp=Z,36nm,1.0s,mb5.1						
SHL				*e*x	x	07 41 18.0	
UMR	**Umm Al-Rimmam**	**44.52**	**337**	*e*P	**P**	**07 35 42.4**	**-0.7**
UMR				AMb	AMB	07 35 46.1	
	comp=Z,133nm,1.3s,mb5.6						
THN	**Thein Dam**	**44.57**	**11**	*e*P	**P**	**07 35 43.1**	**-0.4**
MIB	**Mutribah**	**44.90**	**336**	*e*P	**P**	**07 35 45.4**	**-0.7**
MIB				AMb	AMB	07 35 49.1	
	comp=Z,109nm,1.4s,mb5.5						
IMP	**Imphal**	**45.02**	**37**	*e*P	**P**	**07 35 45.0**	**-2.2**
KSM	**Kuching**	**45.62**	**76**	*e*P	**P**	**07 35 52.2**	**-0.1**
KSM	**Kuching**	**45.62**	**76**	⇓P	**P**	**07 35 53.0**	**+0.8**
SUR	**Sutherland**	**46.60**	**236**	*e*P	**P**	**07 36 00.7**	**+1.0**
	comp=Z,87nm,1.2s,mb5.6						
SUR				LR	LR		
	comp=Z,8μm,19.0s,MS5.7						
LSA	**Lhasa**	**47.43**	**30**	P	**P**	**07 36 07.7**	**+1.6**
LSA				AP	pP	07 36 14.6	+5.3
LSA				XP	sP	07 36 19.5	+9.0
LSA				PCP	PcP	07 37 35.4	-1.2
LSA				PP	PP	07 37 57.4	-0.2
LSA				SCP	ScP	07 41 27.8	-3.2
LSA				PCS	PcS	07 41 30.3	-1.7
LSA				S	**S**	**07 42 58.3**	**-2.3**
LSA				XS	sS	07 43 15.4	+10
LSA				SCS	ScS	07 45 56.9	-3.7
LSA				AMB	AMB		
	comp=Z,190nm,1.3s,mb5.9						
LSA				AMB	AMB		
	comp=Z,740nm,4.9s						
LSA				LR	LR		
	comp=N,5μm,17.2s,MS5.7						
LSA				LR	LR		
	comp=E,4μm,18.7s,MS5.7						
LSA				LR	LR		
	comp=Z,12μm,17.2s,MS5.9						
LSA	**Lhasa**	**47.43**	**30**	*e*P	**P**	**07 36 07.8**	**+1.6**
	comp=Z,188nm,1.1s,mb5.9						
LSA				LR	LR		
	comp=Z,12μm,19.0s,MS5.9						
LSA	**Lhasa**	**47.43**	**30**	*e*P	**P**	**07 36 07.8**	**+1.7**
LSA				pmax	pmax		
	comp=Z,188nm,1.1s,mb5.9						
LSA				MLR	MLR		
	comp=Z,12μm,19.0s,MS5.9						
TSUM	**Tsumeb**	**47.45**	**254**	*e*P	**P**	**07 36 07.3**	**+0.8**
TSUM				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
SBUM	**Sibu**	**47.74**	**76**	⇓P	**P**	**07 36 09.7**	**+0.9**
BTM	**Bintulu**	**48.79**	**75**	⇓P	**P**	**07 36 18.3**	**+1.3**
ABKT	**Ailbek**	**49.72**	**352**	P	**P**	**07 36 23.9**	**+0.3**
	comp=Z,112nm,1.4s,mb5.7,SNR=11						
MUN	**Mundaring**	**50.19**	**122**	*e*P	**P**	**07 36 27.4**	**0.0**
KMI	**Kunming**	**50.86**	**44**	P	**P**	**07 36 33.2**	**+0.7**
KMI				AP	pP	07 36 37.8	+2.2
KMI				S	**S**	**07 43 49.2**	**+0.3**

KMI SS SS 07 47 21.9 -2.1
KMI AMB AMB
comp=Z,44nm,1.7s,mb5.1
KMI AMB AMB
comp=Z,553nm,5.3s
KMI LR LR
comp=N,2μm,18.1s,MS5.5
KMI LR LR
comp=E,4μm,19.3s,MS5.5
KMI LR LR
comp=Z,4μm,23.7s,MS5.3
KMI Kunming 50.86 44 P **P 07 36 33.2 +0.7**
KMI *PP pP 07 36 37.8 +2.2
KMI 07 38 23.6
KMI PPP 07 39 25.2
KMI S **S 07 43 49.2 +0.3**
KMI *SS sS 07 43 55.9 +1.8
KMI SS SS 07 47 21.9 -2.1
NWAO Narrogin (SRO) 51.24 123 *eP* **P 07 36 35.6 +0.3**
NWAO LR LR
comp=Z,1μm,22.0s,MS5.0
NWAO Narrogin (SRO) 51.24 123 P **P 07 36 35.3 0.0**
comp=Z,35nm,0.9s,mb5.3,baz=296,slow=10,SNR=8.2
KLBR Kellerberrin 51.41 121 *eP* **P 07 36 36.2 -0.4**
comp=Z,173nm,1.2s,mb5.9
KSH Kashi 51.51 10 *i* P **P 07 36 37.4 +0.3**
KSH *e*AP pP 07 36 41.3 +1.0
KSH *e*XP sP 07 36 45.7 +4.2
KSH PCP PcP 07 37 49.7 -1.5
KSH *e*PP PP 07 38 36.3 +1.7
KSH *e*SCP ScP 07 41 45.8 -2.3
KSH *e*PCS PcS 07 41 47.3 -1.7
KSH S **S 07 43 58.4 +1.0**
KSH *e*XS sS 07 44 06.5 +3.8
KSH SCS ScS 07 46 23.9 -3.8
KSH SS SS 07 47 33.3 -0.6
KSH LR LR
comp=N,3μm,7.4s
KSH LR LR
comp=E,14μm,12.0s
KSH LR LR
comp=Z,14μm,19.5s
MBWA Marble Bar 52.01 108 *eP* **P 07 36 40.5 -0.7**
comp=Z,58nm,0.9s,mb5.5
MBWA LR LR
comp=Z,2μm,20.0s,MS5.1
QIZ Qiongzhong 52.56 55 P **P 07 36 45.3 0.0**
QIZ XP sP 07 36 51.7 +2.0
QIZ S **S 07 44 12.0 -0.6**
QIZ AMB AMB
comp=Z,52nm,1.8s,mb5.2
QIZ AMB AMB
comp=Z,720nm,4.6s
QIZ LR LR
comp=E,4μm,22.4s
QIZ LR LR
comp=Z,5μm,22.8s,MS5.5
QIZ Qiongzhong 52.56 55 *eP* **P 07 36 45.5 +0.1**
comp=Z,202nm,1.8s,mb5.8
QIZ LR LR
comp=Z,5μm,22.0s,MS5.5
KKM Kota Kinabalu 52.65 73 *eP* **P 07 36 46.0 -0.1**
KKM Kota Kinabalu 52.65 73 ⇑P **P 07 36 46.8 +0.7**
HAKT HAKKARI 53.15 338 ⇓*i*P **P 07 36 49.9 +0.5**
SDKM Sandakan 53.44 74 ⇓P **P 07 36 51.7 -0.2**
KDM Kudat 53.52 73 ⇓P **P 07 36 53.7 +1.2**
TSM Tawau 53.67 76 ⇓P **P 07 36 54.1 +0.5**
AML Almayashu 53.76 7 *eP* **P 07 36 53.8 +0.1**
comp=Z,287nm,1.6s,mb6.0
AML LR LR
comp=Z,1μm,20.0s,MS5.0
AML Almayashu 53.76 7 P **P 07 36 54.0 +0.3**
SNR=55
KZA Kyzart 53.91 8 P **P 07 36 55.2 +0.4**
SNR=90
UCH Uchtor 53.96 8 *eP* **P 07 36 55.7 +0.6**
comp=Z,83nm,1.4s,mb5.5
UCH LR LR
comp=Z,3μm,19.0s,MS5.3
UCH Uchtor 53.96 8 P **P 07 36 55.1 0.0**
SNR=45
MARD Mardin 54.10 335 ⇓*i*P **P 07 36 57.5 +1.2**
ULHL Ulahol 54.22 9 P **P 07 36 57.0 0.0**
SNR=67
EKS2 Erkin-Say 54.29 7 *eP* **P 07 36 57.9 +0.3**
comp=Z,385nm,1.8s,mb6.0
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.1
EKS2 Erkin-Say 54.29 7 P **P 07 36 58.1 +0.5**
SNR=72
AAK Ala-Archa 54.35 7 *eP* **P 07 36 57.2 -0.8**
AAK LR LR
comp=Z,3μm,22.0s,MS5.2
AAK Ala-Archa 54.35 7 *d i*P **P 07 36 57.2 -0.8**
AAK pmax pmax
comp=Z,94nm,1.8s,mb5.4
AAK MLR MLR
comp=Z,2μm,19.0s,MS5.2
AAK Ala-Archa 54.35 7 P **P 07 36 57.5 -0.5**
SNR=69
AAK Ala-Archa 54.35 7 P **P 07 36 57.5 -0.5**
SNR=69
AAK Ala-Archa 54.35 7 P **P 07 36 57.5 -0.5**
SNR=69
AAK Ala-Archa 54.35 7 P **P 07 36 57.5 -0.5**
SNR=69
AAK Ala-Archa 54.35 7 P **P 07 36 58.2 +0.2**
SNR=62
GYA Guiyang 54.42 46 ⇓*i*P **P 07 36 58.3 -0.6**
GYA AP pP 07 37 02.8 +0.7
GYA XP sP 07 37 05.6 +2.3
GYA PCP PcP 07 38 04.7 +2.1
GYA PP PP 07 39 05.0 +3.8
GYA SCP ScP 07 42 01.6 +0.4
GYA S **S 07 44 37.2 -0.5**
GYA SCS ScS 07 46 47.3 -1.4
GYA SS SS 07 48 20.9 +0.6
GYA AMB AMB
comp=Z,40nm,1.2s,mb5.2
GYA LR LR
comp=N,2μm,23.9s,MS5.1
GYA LR LR
comp=E,1μm,21.0s,MS5.1
GYA LR LR
comp=Z,2μm,21.2s,MS5.1
KBK Karagaybulak 54.44 8 P **P 07 36 57.7 -0.9**
SNR=18
MYLDM Lahad Datu 54.53 75 ⇓P **P 07 37 01.1 +1.2**
FRU Bishkek 54.56 8 *i* P **P 07 36 59.0 -0.6**
FRU pmax pmax
comp=Z,320nm,2.0s,mb6.0
CHMS Chumysh 54.74 8 P **P 07 37 02.6 +1.7**
SNR=6.8
TKM2 Tokmak 2 54.78 8 *eP* **P 07 37 01.0 -0.2**
comp=Z,31nm,0.5s,mb5.6
TKM2 LR LR
comp=Z,2μm,21.0s,MS5.2
TKM2 Tokmak 2 54.78 8 P **P 07 37 01.6 +0.5**
TKM2 Tokmak 2 54.78 8 P **P 07 37 00.8 -0.3**
SNR=69
DYDN Diyadin 54.92 339 ⇓*i*P **P 07 37 03.3 +1.1**
USP Ospenovka 54.98 7 P **P 07 37 02.1 -0.4**
SNR=58
TUTA Tutak 55.11 338 ⇓*i*P **P 07 37 03.6 0.0**
ATAB Bozova 55.30 333 ⇓*i*P **P 07 37 06.1 +1.1**
CD2 Chengdu 55.41 39 P **P 07 37 05.1 -0.9**
CD2 AP pP 07 37 09.5 +0.3
CD2 XP sP 07 37 12.0 +1.6
CD2 PCP PcP 07 38 04.6 -1.7
CD2 PP PP 07 39 09.1 -0.9
CD2 PCS PcS 07 42 03.6 -2.8
CD2 S **S 07 44 47.5 -3.3**
CD2 SCS ScS 07 46 50.3 -5.3
CD2 AMB AMB
comp=Z,140nm,1.0s,mb6.0
CD2 AMB AMB
comp=Z,330nm,3.6s
CD2 LR LR
comp=N,1μm,20.4s,MS5.1
CD2 LR LR
comp=E,1μm,21.6s,MS5.1
CD2 LR LR
comp=Z,2μm,21.6s,MS5.1
DIGO Kars 55.80 339 ⇓*i*P **P 07 37 09.4 +0.9**
MALT Malatya 55.94 334 *eP* **P 07 37 10.4 +0.9**
MALT Malatya 55.94 334 ⇓*i*P **P 07 37 10.7 +1.1**
MAW Mawson 56.13 182 LR LR 07 56 18.3
comp=Z,4μm,18.2s,MS5.5,baz=354,slow=31
ANDN Andirin 56.28 332 ⇓*i*P **P 07 37 12.9 +0.9**
MTA Mtatsminda 56.47 341 P **P 07 37 13.8 +0.5**
TBLG Delisi 56.52 341 P **P 07 37 14.1 +0.5**
MAK Makhachkala 56.81 344 *d i*P **P 07 37 16.7 +1.0**
MAK *i* 07 38 04.2
MAK *e*S **S 07 45 08.8 -0.1**
MAK pmax pmax
comp=Z,349nm,2.3s,mb6.0
MAK pmax pmax
comp=N,428nm,2.1s
MAK pmax pmax
comp=E,371nm,2.0s
MAK MLR MLR
comp=Z,1μm,20.0s,MS5.0
ARTV Artvin 57.00 338 ⇓*i*P **P 07 37 17.9 +0.9**
KELT Kelkit 57.13 336 ⇓*i*P **P 07 37 19.2 +1.2**
GZH Guangzhou 57.47 53 P **P 07 37 19.3 -1.4**
GZH S **S 07 45 21.0 +2.7**
GZH LR LR
comp=N,2μm,17.4s,MS5.4
GZH LR LR
comp=E,1μm,18.0s,MS5.4
GZH LR LR
comp=Z,3μm,18.3s,MS5.5
FITZ Fitzroy Crossi 57.59 104 *eP* **P 07 37 22.2 +0.4**
comp=Z,69nm,1.1s,mb5.6
FITZ *e*PCP PcP 07 38 16.1 +1.0
FITZ Fitzroy Crossi 57.59 104 P **P 07 37 22.1 +0.4**
comp=Z,41nm,1.1s,mb5.4,baz=262,slow=6.4,SNR=22
ONI Oni 57.70 340 P **P 07 37 20.0 -2.0**
ZEI Tsey 57.72 341 *eP* **P 07 37 23.4 +1.3**
ZEI pmax pmax
comp=Z,51nm,1.4s,mb5.4
AVNT Avonos 57.94 331 ⇓*i*P **P 07 37 23.8 0.0**
WMQ Urumqi 58.38 18 ⇓*i*P **P 07 37 26.8 +0.1**
WMQ AP pP 07 37 31.3 +1.4
WMQ XP sP 07 37 33.8 +2.7
WMQ PCP PcP 07 38 17.7 +0.2
WMQ PP PP 07 39 37.6 +1.5
WMQ SCP ScP 07 42 16.0 -2.1
WMQ SCP ScP 07 42 17.9 -0.2
WMQ S **S 07 45 26.8 -2.7**
WMQ SCS ScS 07 47 12.2 -4.4
WMQ *e*SS SS 07 49 19.8 -2.2
WMQ AMB AMB
comp=Z,141nm,2.0s,mb5.7
WMQ AMB AMB
comp=Z,159nm,7.9s
WMQ LR LR
comp=N,7μm,22.6s,MS5.8
WMQ LR LR
comp=E,5μm,20.0s,MS5.8
WMQ LR LR
comp=Z,7μm,20.0s,MS5.8
ENH Enshi 58.73 44 PFAKE 07 37 40.0 +10
ENH LR LR
comp=Z,5.0nm,19.0s
CDAG Cicekdag 58.84 332 ⇓*i*P **P 07 37 30.1 +0.1**
LZH Lanzhou 59.10 35 ⇓P **P 07 37 31.6 -0.3**
LZH AP pP 07 37 34.7 -0.4
LZH XP sP 07 37 36.3 0.0
LZH PP PP 07 39 44.5 +1.8
LZH S **S 07 45 37.6 -1.6**
LZH SS SS 07 49 33.9 +0.2
LZH AMB AMB
comp=Z,45nm,1.4s,mb5.3
LZH AMB AMB
comp=Z,371nm,7.6s
LZH LR LR
comp=E,3μm,17.5s
LZH LR LR
comp=Z,4μm,19.7s,MS5.6
LZH Lanzhou 59.10 35 ⇓P **P 07 37 31.6 -0.3**
LZH *PP pP 07 37 34.7 -0.4
LZH *SP sP 07 37 36.3 0.0
LZH 07 39 44.5
LZH PPP 07 41 09.5
LZH S **S 07 45 37.6 -1.6**
LZH *SS sS 07 45 44.7 +0.2
LZH PS 07 45 53.4
LZH SS SS 07 49 33.9 +0.2
KIV Kislovodsk 59.18 340 *eP* **P 07 37 32.7 +0.4**
KIV LR LR
comp=Z,708nm,20.0s,MS4.8
KIV Kislovodsk 59.18 340 ⇑*eP* **P 07 37 31.6 -0.7**
KIV *e* 07 39 45.7
KIV *i* S **S 07 45 40.7 +0.8**
KIV pmax pmax
comp=Z,43nm,1.5s,mb5.3
KIV MLR MLR
comp=Z,600nm,17.0s,MS4.8
KIV Kislovodsk 59.18 340 P **P 07 37 33.3 +1.0**
SNR=12
KIV Kislovodsk 59.18 340 P **P 07 37 33.3 +1.0**
SNR=12
KIV Kislovodsk 59.18 340 P **P 07 37 33.3 +1.0**
SNR=12
KIV Kislovodsk 59.18 340 P **P 07 37 33.3 +1.0**
SNR=12
BRTR Keskin Array B 59.26 331 P **P 07 37 33.4 +0.4**
comp=Z,6.8nm,1.1s,mb4.6,baz=139,slow=5.9,SNR=21
BRTR LR LR 08 02 59.5
comp=Z,426nm,18.2s,MS4.6,baz=132,slow=36
BR131 Keskin Array S 59.26 331 PFAKE 07 37 50.0 +17
BR131 LR LR
comp=Z,703nm,21.0s,MS4.8
GOLH Golhisar 59.45 326 ⇓*i*P **P 07 37 32.2 -2.1**
GTA Gaotai 59.46 30 P **P 07 37 34.3 0.0**
GTA AP pP 07 37 38.3 +0.7
GTA XP sP 07 37 41.5 +2.7
GTA PP PP 07 39 48.4 +2.5
GTA S **S 07 45 45.8 +2.1**
GTA XS sS 07 45 53.8 +4.8
GTA SCS ScS 07 47 20.8 -4.0
GTA SS SS 07 49 43.4 +4.2
GTA AMB AMB
comp=Z,110nm,2.0s,mb5.5
GTA AMB AMB
comp=Z,732nm,6.5s
GTA LR LR
comp=N,3μm,19.9s,MS5.6
GTA LR LR
comp=E,4μm,21.4s,MS5.6
GTA LR LR
comp=Z,5μm,20.6s,MS5.6
MK31 Makanchi Array 59.74 13 *eP* **P 07 37 34.8 -1.3**
MKAR Makanchi Array 59.74 13 P **P 07 37 34.9 -1.2**
MKAR LR LR 08 01 59.0
MKAR ⇑*e* 08 07 15.1
MKAR Makanchi Array 59.74 13 P **P 07 37 34.9 -1.2**
comp=Z,14nm,0.7s,mb5.1,baz=209,slow=7.6,SNR=86
MKAR LR LR 08 01 59.0
comp=Z,3μm,21.5s,MS5.3,baz=186,slow=35
MKAR PKP2bc 08 07 15.1
comp=Z,0.8nm,1.0s,baz=343,slow=2.0,SNR=6.4
ANTO Ankara 59.78 331 PFAKE 07 37 50.0 +13
ANTO LR LR
comp=Z,788nm,20.0s,MS4.8
ANTO Ankara 59.78 331 P **P 07 37 37.0 +0.4**
SNR=8.6
ANTO Ankara 59.78 331 P **P 07 37 37.0 +0.4**
SNR=8.6
ANTO Ankara 59.78 331 P **P 07 37 37.0 +0.4**
SNR=8.6
ANTO Ankara 59.78 331 P **P 07 37 37.0 +0.4**
SNR=8.6
SOC Sochi 59.89 338 *d i*P **P 07 37 36.9 -0.3**
SOC *e* 07 38 20.7
SOC *e* 07 39 44.7
SOC *e*S **S 07 45 48.3 -0.8**
SOC *e* 07 47 24.4
SOC *e*SS SS 07 49 40.8 -5.0
SOC *e*SSS 07 52 17.9
SOC pmax pmax
comp=Z,55nm,1.4s,mb5.4
SOC MLR MLR
comp=Z,679nm,15.0s,MS4.9
SOC Sochi 59.89 338 *i* P **P 07 37 37.5 +0.3**
SYO Syowa Base 60.01 191 ⇓*eP* **P 07 37 36.7 -1.0**
FORT Forrest 60.05 119 *eP* **P 07 37 37.8 -0.9**
comp=Z,69nm,0.8s,mb5.7
XAN Xi'an 60.74 40 P **P 07 37 41.4 -1.9**
XAN S **S 07 45 52.0 -8.5**
XAN AMB AMB
comp=Z,150nm,1.2s,mb6.0
XAN AMB AMB
comp=Z,345nm,5.2s
XAN LR LR
comp=N,2μm,19.4s,MS5.3
XAN LR LR
comp=E,1μm,20.0s,MS5.3
XAN LR LR
comp=Z,3μm,21.4s,MS5.4
GDZ Gediz 60.85 328 ⇓*i*P **P 07 37 43.8 -0.1**
BORA Eskisehir 60.94 329 ⇓*i*P **P 07 37 43.9 -0.6**
SANT Santorini 61.16 323 *eP* **P 07 37 46.2 +0.2**
comp=Z,8μm,2.0s
AKHS Akhisar 61.59 327 ⇓*i*P **P 07 37 49.1 +0.2**
ANN Anapa 61.78 337 *eP* **P 07 37 49.9 -0.2**
ANN *eS* **S 07 46 14.4 +1.2**
ANN pmax pmax
comp=Z,125nm,1.8s,mb5.7
DAV Davao City (W) 61.81 76 PFAKE 07 38 00.0 +9.1
DAV LR LR
comp=Z,2μm,20.0s,MS5.3
AKTK Aktyubinsk 62.05 354 P **P 07 37 51.1 -0.6**
AKTO Aktyubinsk 62.05 354 P **P 07 37 51.1 -0.6**
comp=Z,47nm,1.2s,mb5.5,baz=161,slow=7.0,SNR=63
WHN Wuhan 62.28 46 P **P 07 37 53.5 -0.2**
WHN S **S 07 46 18.0 -2.1**
WHN LR LR
comp=Z,10μm,18.0s,MS6.0
CASY Casey 62.32 161 *eP* **P 07 37 50.1 -3.3**
comp=Z,250nm,1.9s,mb6.0
CASY LR LR
comp=Z,2μm,19.0s,MS5.2
QZH Quanzhou 62.54 54 P **P 07 37 53.5 -2.1**
QZH S **S 07 46 26.4 +2.8**
QZH LR LR
comp=N,7μm,18.0s,MS6.0
QZH LR LR
comp=E,3μm,13.8s,MS6.0
QZH LR LR
comp=Z,7μm,18.4s,MS5.9
KURK Kurchatov 62.84 9 *eP* **P 07 37 55.5 -1.6**
comp=Z,103nm,1.0s,mb5.9
KURK LR LR
comp=Z,3μm,21.0s,MS5.4
KURK Kurchatov 62.84 9 *d i*P **P 07 37 56.4 -0.6**
KURK Kurchatov 62.84 9 P **P 07 37 56.7 -0.3**
SNR=53
KURK Kurchatov 62.84 9 P **P 07 37 56.7 -0.3**
SNR=53
KURK Kurchatov 62.84 9 P **P 07 37 56.7 -0.3**
SNR=53
SIM Simferopol' 63.23 335 *de*P **P 07 37 59.3 -0.4**
SIM *e*S **S 07 46 41.0 +10**
SIM pmax pmax
comp=Z,309nm,1.9s,mb6.1
ALN Alexandroupoli 63.98 327 *eP* **P 07 38 04.3 -0.5**
BRVK Borovoye 64.35 3 *eP* **P 07 38 06.3 -0.6**
BRVK LR LR
comp=Z,3μm,21.0s,MS5.4
BRVK Borovoye 64.35 3 P **P 07 38 06.7 -0.3**
SNR=34
BRVK Borovoye 64.35 3 P **P 07 38 06.7 -0.3**
SNR=34
BRVK Borovoye 64.35 3 P **P 07 38 06.7 -0.3**
SNR=34
BRVK Borovoye 64.35 3 P **P 07 38 06.7 -0.3**
SNR=34
NACB Ninganchiao 64.60 56 P **P 07 38 10.1 +0.8**
YHNB Yeheng 64.65 56 P **P 07 38 10.4 +0.9**
AGG Agios Georgios 64.78 323 *eP* **P 07 38 07.3 -2.8**
TATO Taipei 64.88 55 PFAKE 07 38 20.0 +9.0
TATO LR LR
comp=Z,5μm,20.0s,MS5.7
CHKZ Chkalovo 64.98 3 P **P 07 38 11.2 +0.1**
ASAR Alice Springs 65.12 111 P **P 07 38 11.7 -1.0**
ASAR ⇑*e* 08 07 05.5
ASAR Alice Springs 65.12 111 P **P 07 38 11.7 -1.0**
comp=Z,34nm,1.0s,mb5.3,baz=275,slow=5.6,SNR=87
ASAR PKP2bc 08 07 05.5
comp=Z,1.6nm,1.0s,baz=106,slow=3.0,SNR=6.0
TIY Taiyuan 65.28 39 *i* P **P 07 38 12.4 -1.0**
TIY S S 07 46 54.7 -2.4
TIY LR LR
comp=N,865nm,16.1s,MS5.5
TIY LR LR
comp=E,3μm,19.6s,MS5.5
TIY LR LR
comp=Z,1μm,19.3s,MS5.2
TIRR Tirgusor 65.38 331 P **P 07 38 14.0 +0.1**
TIRR Tirgusor 65.38 331 ⇓*i*P **P 07 38 13.7 -0.2**
LIT Litokhoron 65.40 324 *eP* **P 07 38 12.3 -1.8**
PLD Plovdiv 65.54 327 *eP* **P 07 38 13.4 -1.5**
WRA Warramunga Arr 65.71 107 P **P 07 38 16.0 -0.6**
comp=Z,83nm,1.1s,mb5.7,baz=275,slow=5.8,SNR=134
WRA LR LR 08 02 51.2
comp=Z,3μm,21.6s,MS5.4,baz=280,slow=32
BTO Baotou 65.72 35 *eP* **P 07 38 16.0 -0.2**
WB2 Warramunga Arr 65.72 107 ⇓*i*P **P 07 38 16.0 -0.7**
HARR Harsova 65.79 331 P **P 07 38 17.2 +0.7**
VRHR Novokhopersk 65.88 343 *eP* **P 07 38 17.4 +0.5**
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.5
VRHR pmax pmax
comp=N,150nm,1.3s
CFR Carcaliu 66.05 331 P **P 07 38 16.2 -2.0**
VAY Valandovo 66.17 325 ⇓*i*P **P 07 38 17.8 -1.3**
NJ2 Nanjing 66.33 47 *eP* **P 07 38 21.6 +1.3**
NJ2 AP pP 07 38 26.5 +3.0
NJ2 XP sP 07 38 29.6 +4.9
NJ2 PP PP 07 40 50.5 +4.0
NJ2 S S 07 47 09.0 -1.2
NJ2 XS sS 07 47 17.0 +1.5
NJ2 AMB AMB
comp=Z,90nm,1.1s,mb5.7
NJ2 AMB AMB
comp=Z,170nm,7.4s
NJ2 LR LR
comp=N,2μm,28.1s
NJ2 LR LR
comp=E,2μm,34.3s
NJ2 LR LR
comp=Z,2μm,34.3s
VORD Divnogorie 66.45 342 *eP* **P 07 38 20.0 -0.6**
VORD pmax pmax
comp=Z,150nm,1.5s,mb5.8
VORD pmax pmax
comp=N,140nm,1.4s
VORD pmax pmax
comp=E,50nm,0.6s
VTS Vitosha 66.68 327 *eP* **P 07 38 20.5 -1.8**
VTS Vitosha 66.68 327 P **P 07 38 22.7 +0.4**
VTS Vitosha 66.68 327 ⇓*i*P **P 07 38 22.6 +0.3**
VRSR Storozhevoye 66.70 342 *eP* **P 07 38 21.8 -0.4**
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.8
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,6.0nm,1.0s
HHC Hu-ho-hao-te 66.77 36 *eP* **P 07 38 23.3 +0.4**
HHC AP pP 07 38 27.3 +1.2
HHC XP sP 07 38 29.8 +2.5
HHC PCP PcP 07 38 49.2 -2.5
HHC PP PP 07 40 50.1 0.0
HHC SCP 07 42 53.8
HHC PCS 07 42 56.1
HHC S S 07 47 11.8 -3.3
HHC SCS ScS 07 48 16.0 -4.3
HHC SS SS 07 51 37.0 +3.6
HHC AMB AMB
comp=Z,81nm,1.4s,mb5.6
HHC AMB AMB
comp=Z,485nm,3.7s
HHC LR LR
comp=N,1μm,17.8s,MS5.4
HHC LR LR
comp=E,2μm,20.2s,MS5.4
HHC LR LR
comp=Z,2μm,21.4s,MS5.4
KRUS Krusevo 66.94 325 *eP* **P 07 38 23.8 -0.2**

OHR Ohrid 67.03 324 eP P 07 38 21.4 -3.1
KIS Kishinev 67.12 333x iP P 07 38 23.0 -2.0
KIS e 07 42 36.0
KIS e 07 47 13.0
KIS pmax pmax
comp=Z,400nm,2.0s,mb6.1
KIS pmax pmax
comp=Z,1μm,4.0s
KIS MLR MLR
comp=Z,400nm,15.0s,MS4.8
KIS MLR MLR
comp=Z,800nm,15.0s
KIS Kishinev 67.12 333⇓ iP P 07 38 23.0 -2.0
comp=Z,400nm,2.0s,mb6.1
KIS Kishinev 67.12 333 ePcP PcP 07 38 45.0 -8.1
KIS LRM 08 10 45.0
comp=Z,800nm,15.0s
VRI Vrincioaia 67.23 331 P P 07 38 26.3 +0.6
VRI Vrincioaia 67.23 331⇓ iP P 07 38 26.5 +0.8
SKO Skopje 67.23 325⇓ eP P 07 38 25.8 0.0
PLOR Plostina 67.25 331⇑ iP P 07 38 26.8 +1.0
MLR Muntele Rosu 67.33 330⇓ iP P 07 38 27.1 +0.8
MLR Muntele Rosu 67.33 330⇓ iP P 07 38 27.1 +0.8
SSE Sheshan 67.55 49 P P 07 38 28.1 0.0
SSE AP pP 07 38 31.5 +0.2
SSE S S 07 47 23.3 -1.7
SSE SS SS 07 51 44.0 -2.0
SSE AMB AMB
comp=Z,98nm,1.2s,mb5.7
SSE AMB AMB
comp=Z,257nm,3.5s
SSE LR LR
comp=N,1μm,19.7s,MS5.5
SSE LR LR
comp=E,3μm,19.7s,MS5.5
SSE LR LR
comp=Z,3μm,15.0s,MS5.6
NVS Novosibirsk 67.58 11 eP P 07 38 26.6 -1.1
NVS eS S 07 47 18.6 -5.8
NVS pmax pmax
comp=N,324nm,1.8s
NVS pmax pmax
comp=E,77nm,1.8s
NVS pmax pmax
comp=Z,289nm,1.8s,mb6.0
NVS smax
comp=N,51nm,2.2s
NVS smax
comp=E,40nm,2.2s
VOIR 67.72 330⇓ iP P 07 38 28.9 0.0
VOIR 67.72 330⇓ iP P 07 38 28.9 +0.1
ARU Arti 67.94 355 P P 07 38 29.6 -0.3
comp=E,412nm,1.3s,mb6.3,SNR=19
ARU Arti 67.94 355 eP P 07 38 29.1 -0.9
comp=E,155nm,1.3s,mb5.9
ARU LR LR
comp=Z,1μm,20.0s,MS5.2
ARU Arti 67.94 355d iP P 07 38 29.3 -0.6
ARU ePPP 07 42 35.9
ARU eS S 07 47 28.7 +0.1
ARU pmax pmax
comp=Z,187nm,1.7s,mb5.8
ARU MLR MLR
comp=Z,1μm,18.0s,MS5.1
ARU MLR MLR
comp=N,1μm,20.0s,MS5.1
ARU MLR MLR
comp=E,590nm,18.0s,MS5.1
NVL N'lazarevskaya 67.96 197 i P P 07 38 31.4 +1.4
NVL pmax pmax
comp=N,32nm,1.7s
NVL pmax pmax
comp=E,17nm,1.7s
NVL pmax pmax
comp=Z,49nm,1.7s,mb5.3
MAIT Maitri 67.99 197 eP P 07 38 29.8 -0.4
SVE Sverdlovsk 68.19 357⇑ iP P 07 38 31.2 -0.3
SVE e 07 38 59.4
SVE eS S 07 47 22.5 -9.1
SVE e 07 48 12.8
SVE eSS SS 07 51 50.1 -4.8
SVE pmax pmax
comp=Z,155nm,1.6s,mb5.8
SVE MLR MLR
comp=Z,1μm,20.0s,MS5.2
TIP Timpagrande 68.25 320 eP P 07 38 33.0 +0.7
PVY Plav 68.46 325⇓ iP P 07 38 33.5 0.0
ULC Ulcinj 68.47 324⇓ iP P 07 38 33.9 +0.3
TORD Torodi Ar. Bea 68.56 289 P P 07 38 35.2 +0.4
comp=Z,3.0nm,0.5s,mb4.5,baz=151,slow=3.3,SNR=12
TORD LR LR 08 11 02.2
comp=Z,2μm,18.3s,MS5.3,baz=115,slow=38
IVA Berane 68.69 325⇓ iP P 07 38 34.6 -0.3
TTG Podgorica 68.76 324⇓ iP P 07 38 35.6 +0.2
TDS Terranova Siba 68.80 321 P P 07 38 39.2 +3.5
comp=Z,734nm,1.7s,mb6.3
TDS Terranova Siba 68.80 321 P P 07 38 39.2 +3.5
TDS pmax pmax
comp=Z,734nm,1.7s,mb6.3
GZR Gura Zlata 68.83 329⇓ iP P 07 38 36.3 +0.5
GZR Gura Zlata 68.83 329⇓ iP P 07 38 36.3 +0.5
BUM Brajici-Budva 68.89 324⇓ iP P 07 38 35.9 -0.3
SONM Songino Array 68.95 28 P P 07 38 36.8 +0.3
SONM ⇑e 08 06 48.2
SONM LR LR 08 07 59.9
SONM Songino Array 68.95 28 P P 07 38 36.8 +0.3
comp=Z,61nm,0.8s,mb5.6,baz=218,slow=5.6,SNR=124
SONM PKP2bc 08 06 48.2
comp=Z,0.6nm,0.7s,baz=8.1,slow=3.1,SNR=7.3
SONM LR LR 08 07 59.9
comp=Z,7μm,20.7s,MS5.9,baz=214,slow=35
ORI Oriolo Calabro 68.97 321 P P 07 38 38.9 +2.2
comp=Z,972nm,2.6s,mb6.3
ORI Oriolo Calabro 68.97 321 P P 07 38 38.9 +2.2
ORI pmax pmax
comp=Z,972nm,2.6s,mb6.3
BJT Baijiatuau 68.99 39 eP P 07 38 37.0 +0.1
comp=Z,63nm,0.9s,mb5.5
BJT LR LR
comp=Z,4μm,19.0s,MS5.6
BJT Baijiatuau 68.99 39 eP P 07 38 37.0 +0.1
BJT pmax pmax
comp=Z,63nm,0.9s
BJT MLR MLR
comp=Z,4μm,19.0s
BJI Beijing 69.01 39 P P 07 38 36.7 -0.3
BJI PP PP 07 41 16.0 +6.3
BJI S S 07 47 45.8 +3.8
BJI SS SS 07 52 09.1 +0.9
BJI AMB AMB
comp=Z,82nm,0.9s,mb5.7
BJI AMB AMB
comp=Z,596nm,4.7s
BJI LR LR
comp=N,3μm,19.4s,MS5.5
BJI LR LR
comp=E,590nm,19.8s,MS5.5
BJI LR LR
comp=Z,2μm,19.3s,MS5.4
NKY Niksic 69.15 325⇓ iP P 07 38 38.1 +0.3
HCY Herceg Novi 69.21 324⇓ iP P 07 38 38.1 -0.1
BURAR Bucovina Array 69.22 332⇓ iP P 07 38 39.1 +0.9
BURAR Bucovina Array 69.22 332⇓ iP P 07 38 39.1 +1.0
PLE Pljevlja 69.26 325⇓ iP P 07 38 39.3 +0.8
ULN Ulaanbaatar 69.28 28 PFAKE 07 38 50.0 +12
ULN LR LR
comp=Z,4μm,21.0s,MS5.7
DIVS Divcibare 69.43 326 eP P 07 38 39.4 -0.1
UPM Unac-Piva 69.45 325⇓ iP P 07 38 39.3 -0.4
BRY Bratogost 69.47 325⇓ iP P 07 38 40.0 +0.2
ZAK Zakamensk 69.54 24 eP P 07 38 38.1 -2.0
ZAK e 07 41 15.0
ZAK pmax pmax
comp=Z,22nm,1.8s,mb4.8
BZS Buzias 69.58 328 P P 07 38 40.6 +0.2
BZS Buzias 69.58 328⇓ iP P 07 38 40.5 +0.1
MOY Mondy 69.67 22 eP P 07 38 41.5 +0.6
MOY pmax pmax
comp=Z,154nm,2.7s,mb5.5
AKASG Malin Array Be 69.80 336 P P 07 38 40.8 -0.8
comp=Z,18nm,0.8s,mb5.0,baz=140,slow=5.0,SNR=51
KIEV Kiev 69.80 336 eP P 07 38 40.7 -1.0
comp=Z,188nm,1.6s,mb5.8
KIEV LR LR
comp=Z,631nm,20.0s,MS4.9
KIEV Kiev 69.80 336 eP P 07 38 40.7 -1.0
KIEV pmax pmax
comp=Z,188nm,1.6s,mb5.8
KIEV MLR MLR
comp=Z,631nm,20.0s,MS4.9
DRGR 69.83 330 P P 07 38 42.4 +0.4
DRGR 69.83 330⇓ iP P 07 38 42.4 +0.4
SGO Sicignano 69.96 321 P P 07 38 44.2 +1.3
comp=Z,77nm,1.3s,mb5.5
SGO Sicignano 69.96 321 P P 07 38 44.2 +1.3
SGO pmax pmax
comp=Z,77nm,1.3s,mb5.5
TLY Talaya 70.70 24 eP P 07 38 47.8 +0.7
TLY LR LR
comp=Z,5μm,22.0s,MS5.8
TLY Talaya 70.70 24d iP P 07 38 47.3 +0.2
TLY e 07 39 08.8
TLY e 07 41 19.8
TLY eS S 07 48 03.0 +1.6
TLY ePS 07 48 33.6
TLY eSS SS 07 52 36.7 +3.0
TLY pmax pmax
comp=Z,80nm,1.1s,mb5.6
TLY Talaya 70.70 24 P P 07 38 47.9 +0.8
SNR=44
TLY Talaya 70.70 24 P P 07 38 47.9 +0.8
SNR=44
TLY Talaya 70.70 24 P P 07 38 47.9 +0.8
SNR=44
TRPA Tarpa 70.85 331⇓ iP P 07 38 48.2 +0.1
OBN Obninsk 70.87 342 eP P 07 38 48.1 0.0
comp=Z,89nm,1.0s,mb5.7
OBN LR LR
comp=Z,980nm,20.0s,MS5.1
OBN Obninsk 70.87 342x iP P 07 38 48.0 -0.1
OBN e pP 07 38 50.5 -0.9
OBN e 07 38 54.5
OBN 07 39 08.0
OBN eS S 07 47 58.7 -4.5
OBN eSS SS 07 52 40.4 +4.2
OBN pmax pmax
comp=Z,420nm,2.2s,mb6.0
OBN MLR MLR
comp=Z,700nm,19.0s,MS4.9
SGG Gregorio Mates 71.02 321 P P 07 38 49.3 0.0
comp=Z,56nm,1.0s,mb5.5
MOS Moscow 71.11 343x iP P 07 38 49.7 +0.2
MOS e 07 39 06.4
MOS e 07 48 52.5
MOS pmax pmax
comp=Z,2μm,2.1s,mb6.6
MOS pmax pmax
comp=Z,680nm,1.7s,mb6.3
SOKR Solikamsk 71.20 355d iP P 07 38 50.1 +0.1
SOKR S S 07 48 10.8 +3.9
SOKR pmax pmax
comp=Z,90nm,0.9s,mb5.7
SOKR MLR MLR
comp=Z,810nm,17.0s,MS5.0
RFI Roccamonfina 71.21 321 P P 07 38 52.0 +1.5
comp=Z,135nm,2.8s,mb5.4
KEST Kesra 71.30 314 P P 07 38 53.1 +1.9
comp=Z,4.3nm,0.9s,mb4.4,baz=94,slow=11,SNR=3.7
KEST LR LR 08 12 05.8
comp=Z,267nm,18.4s,MS4.5,baz=81,slow=38
UZH Uzhgorod 71.32 331 eP P 07 38 50.0 -1.0
UZH eS S 07 48 04.0 -4.7
RNI2 Rionero Sannit 71.34 321 P P 07 38 52.7 +1.4
comp=Z,793nm,2.9s,mb6.1
LVV L'vov 71.35 333⇓ iP P 07 38 51.2 +0.1
LVV e 07 41 27.4
LVV eS S 07 48 13.2 +4.2
LVV MLR MLR
comp=Z,400nm,20.0s,MS4.7
IRK Irkutsk 71.38 24⇓ iP P 07 38 51.0 -0.3
IRK e 07 39 04.9
IRK e 07 41 26.8
IRK pmax pmax
comp=Z,247nm,1.9s,mb5.8
PKSM Moragy 71.53 327 P P 07 38 52.6 +0.3
PKSM Moragy 71.53 327⇓ iP P 07 38 52.5 +0.2
KOLS Kolonicke sedl 71.54 331 eP P 07 38 52.4 +0.1
comp=Z,55nm,1.5s,mb5.3
KOLS ePP PP 07 41 33.4 +2.1
KOLS Kolonicke sedl 71.54 331 eP P 07 38 52.4 +0.1
KOLS e 07 41 33.4
KOLS pmax pmax
comp=Z,55nm,1.5s,mb5.3
SDI San Donato 71.55 321 P P 07 38 52.7 +0.2
STKA Stephens Creek 71.64 120 P P 07 38 53.4 -0.1
comp=Z,20nm,0.9s,mb5.0,baz=278,slow=6.1,SNR=33
STKA LR LR 08 05 54.0
comp=Z,2μm,19.1s,MS5.3,baz=256,slow=32
VVLD Villa Vallelon 71.76 321 P P 07 38 53.6 -0.2
KWP Kalwaria 71.82 332 eP P 07 38 54.0 0.0
DL2 Dalian 71.86 42 P P 07 38 53.9 -0.6
DL2 S S 07 48 16.0 +0.6
DL2 SS SS 07 52 57.6 +5.5
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.2
DL2 AMB AMB
comp=Z,190nm,3.8s
DL2 LR LR
comp=N,980nm,17.2s,MS5.3
DL2 LR LR
comp=E,920nm,17.1s,MS5.3
DL2 LR LR
comp=Z,1μm,17.8s,MS5.3
CRVS Cervenica-Dubn 71.90 331 eP P 07 38 54.4 -0.1
PSZ Piszkesteto 72.00 329 eP P 07 38 55.2 +0.1
comp=Z,42nm,1.4s,mb5.2
PSZ Piszkesteto 72.00 329 eP P 07 38 55.2 +0.1
PSZ pmax pmax
comp=Z,42nm,1.4s,mb5.2
PSZ Piszkesteto 72.00 329⇑ eP P 07 38 55.5 +0.4
PSZ Piszkesteto 72.00 329⇓ iP P 07 38 54.9 -0.2
KECS Kecovo 72.09 330 eP P 07 38 55.3 -0.3
comp=Z,12nm,1.2s,mb4.7
KECS e 07 39 14.2
KECS Kecovo 72.09 330 eP P 07 38 55.3 -0.3
KECS e 07 39 14.2
KECS pmax pmax
comp=Z,12nm,1.2s,mb4.7
KECS Kecovo 72.09 330 eP P 07 38 55.3 -0.3
KECS ePCP PcP 07 39 14.1 +0.1
BUD Budapest 72.16 328⇓ eP P 07 38 55.8 -0.3
AQU L'Aquila 72.17 322 eP P 07 38 56.7 +0.4
STHS Stebnicka Huta 72.36 331 eP P 07 38 57.2 0.0
comp=Z,14nm,1.0s,mb4.8
STHS e 07 39 12.4
STHS ePP PP 07 41 39.8 +1.5
STHS Stebnicka Huta 72.36 331 eP P 07 38 57.2 0.0
STHS e 07 39 12.4
STHS e 07 41 39.8
STHS pmax pmax
comp=Z,14nm,1.0s,mb4.8
MNS Montasola 72.63 321 P P 07 38 58.7 -0.3
NIE Niedzica 72.81 331 eP P 07 38 59.6 -0.3
KIC Kosan Boka 72.82 280 ePKP2 P 07 39 02.0 +1.3
comp=Z,298nm,1.1s,mb6.1
VYHS Vyhne 72.92 329 eP P 07 39 00.4 -0.2
comp=Z,57nm,1.4s,mb5.3
VYHS e 07 39 17.0
VYHS ePP PP 07 41 43.0 -0.1
VYHS Vyhne 72.92 329 eP P 07 39 00.4 -0.2
VYHS e 07 39 17.0
VYHS e 07 41 43.0
VYHS pmax pmax
comp=Z,57nm,1.4s,mb5.3
VYHS Vyhne 72.92 329 eP P 07 39 00.4 -0.2
VYHS ePCP PcP 07 39 16.9 -0.6
VYHS ePP PP 07 41 43.0 -0.1
BOJS Bojanci 72.94 325 eP P 07 39 00.3 -0.4
DBIC Dimbokro 73.00 281 P P 07 39 02.8 +0.9
comp=Z,15nm,0.9s,mb4.9,baz=85,slow=8.2,SNR=12
DBIC LR LR 08 08 55.1
comp=Z,4μm,21.8s,MS5.6,baz=94,slow=34
LIC Lamto 73.06 280 eP P 07 39 01.7 -0.5
comp=Z,94nm,1.1s,mb5.3,baz=109
LIC eMLR MLR
comp=Z,6μm,23.0s,MS5.5
LIC Lamto 73.06 280 ePKP2 P 07 39 03.3 +1.1
comp=Z,419nm,2.3s,mb6.0
LIC Lamto 73.06 280 eP P 07 39 01.7 -0.5
comp=Z,47nm,1.1s,mb5.3
LIC LR LR
comp=Z,3μm,23.0s,MS5.5
TIC Toumodi 73.16 281 ePKP2 P 07 39 02.7 0.0
comp=Z,206nm,2.2s,mb5.7
KOLL Kolacno 73.19 329 eP P 07 39 02.1 -0.1
SOP Sopron 73.57 327⇓ eP P 07 39 04.5 +0.1
OJC Ojcow 73.59 331 eP P 07 39 04.2 -0.3
ZST Bratislava 73.61 328 eP P 07 39 04.4 -0.2
comp=Z,259nm,2.3s,mb5.8
ZST ePP PP 07 41 46.8 -2.2
ZST LR LR
comp=Z,400nm,15.0s,MS4.8
ZST Bratislava 73.61 328 eP P 07 39 04.4 -0.2
ZST e 07 41 46.8
ZST pmax pmax
comp=Z,259nm,2.3s,mb5.8
ZST MLR MLR
comp=Z,400nm,15.0s,MS4.8
ZST Bratislava 73.61 328 eP P 07 39 04.4 -0.2
ZST ePP PP 07 41 46.8 -2.2
MODS Modra-Piesok 73.63 328 eP P 07 39 04.1 -0.7
MODS ePP PP 07 41 49.1 -0.1
LJU Ljubljana 73.67 325 iP P 07 39 05.3 +0.3
PERS Pernice 73.70 326 eP P 07 39 05.6 +0.3
JAVS Javornik 73.84 325 iP P 07 39 05.9 -0.2
ARSA Arzberg 73.85 327 iP P 07 39 06.4 +0.3
comp=Z,747nm,2.8s,mb6.1,SNR=23
VNA2 Neumayer--Watz 73.91 199 eP P 07 39 06.9 +0.8
VNA2 e pP 07 39 09.8 +0.4
VNA2 e 07 39 13.5
VNA2 e 07 39 18.2
VNA2 e 07 39 21.0
VNA2 e 07 39 25.1
OBKA Obir 73.93 326⇓ iP P 07 39 07.0 +0.4
comp=Z,672nm,2.8s,mb6.1
VOY Vojsko 74.02 325 eP P 07 39 07.6 +0.5
CONA Conrad Observa 74.09 327 iP P 07 39 07.7 +0.3
SNR=46
OKC Ostrava-Krasne 74.14 330 eP P 07 39 07.6 -0.1
OKC ePCP PcP 07 39 23.3 +0.6
MORC Moravsky Berou 74.40 330 eP P 07 39 09.2 0.0
MORC Moravsky Berou 74.40 330⇓ iP P 07 39 09.1 -0.1
WAR Warsaw 74.41 333 eP P 07 39 10.3 +1.0
MYKA Terra Mystica 74.51 325⇑ iP P 07 39 10.0 +0.1
comp=Z,1μm,2.1s,mb6.5
VRAC Vranov 74.57 329 P P 07 39 10.6 +0.4
VRAC Vranov 74.57 329⇓ iP P 07 39 09.9 -0.4
INCN Inchon 74.58 46 eP P 07 39 11.1 +0.6
comp=Z,207nm,1.6s,mb5.8
INCN LR LR
comp=Z,5μm,20.0s,MS5.8
INCN Inchon 74.58 46 P P 07 39 11.2 +0.6
SNR=5.1
INCN Inchon 74.58 46 P P 07 39 11.2 +0.6
SNR=5.1
SNY Shenyang 74.66 41 ⇓P P 07 39 09.9 -1.1
SNY S S 07 48 40.0 -7.1
SNY AMB AMB
comp=Z,86nm,0.9s,mb5.7
SNY AMB AMB
comp=Z,300nm,4.9s
VNA3 Neumayer Olymp 74.70 199 eP P 07 39 10.5 -0.2
VNA3 e pP 07 39 13.5 -0.5
VNA3 e 07 39 17.7
VNA3 e 07 39 21.7
VNA3 e 07 39 24.3
VNA3 e 07 39 29.2
SUW Suwalki 74.74 335 eP P 07 39 10.8 -0.3
CORF Corte 74.78 320 eP P 07 39 10.5 -1.1
MOA Molln 74.89 327 iP P 07 39 12.4 +0.2
comp=Z,788nm,2.7s,mb6.2,SNR=27
KBA Koelnbreinsper 74.94 326⇑ iP P 07 39 13.1 +0.6
comp=Z,363nm,2.6s,mb5.8,SNR=11
KBA Koelnbreinsper 74.94 326⇑ iP P 07 39 13.1 +0.7
KBA pmax pmax
comp=Z,363nm,2.6s,mb5.8
PGF Pioggiola 75.00 320 eP P 07 39 11.3 -1.6
comp=Z,287nm,1.9s,mb5.6
PGF Pioggiola 75.00 320 eP P 07 39 11.3 -1.6
comp=Z,144nm,1.9s,mb5.6
PGF Pioggiola 75.00 320 eP P 07 39 11.3 -1.6
PGF pmax pmax
comp=Z,144nm,1.9s,mb5.6
TREC Trest 75.13 328 eP P 07 39 13.3 -0.2
TREC ePCP PcP 07 39 30.4 +3.4
CIT Chita 75.18 28 eP P 07 39 13.4 -0.3
CIT e 07 39 25.7
CIT pmax pmax
comp=Z,271nm,1.9s,mb5.8
ABTA Abfaltersbach 75.21 325 iP P 07 39 14.6 +0.6
comp=Z,611nm,2.1s,mb6.2,SNR=31
DPC Dobruska-Polom 75.37 330 eP P 07 39 14.6 -0.2
DPC ePCP PcP 07 39 28.6 +0.6
KSRS Korea Array 75.47 46 P P 07 39 14.9 -0.8
comp=Z,38nm,1.0s,mb5.3,baz=253,slow=6.2,SNR=57
KSRS LR LR 08 11 54.9
comp=Z,4μm,20.8s,MS5.7,baz=248,slow=35
UPC Upice 75.62 330 eP P 07 39 16.4 +0.1
UPC ePCP PcP 07 39 29.7 +0.6
KSP Ksiaz 75.69 330 eP P 07 39 17.5 +0.8
KSP Ksiaz 75.69 330⇑ eP P 07 39 18.1 +1.4
KSP e 07 39 34.5
KSP e 07 42 08.0
TAU Tasmania Unive 75.77 132 eP P 07 39 17.7 +0.3
comp=Z,49nm,1.0s,mb5.4
TAU LR LR
comp=Z,881nm,19.0s,MS5.1
TAU Tasmania Unive 75.77 132 eP P 07 39 17.9 +0.5
TAU pmax pmax
comp=Z,110nm,1.2s,mb5.7
GEC2 GERESS Array S 75.79 327 eP P 07 39 16.5 -0.8
GEC2 pmax pmax
comp=Z,418nm,2.7s,mb5.9
GEC2 GERESS Array S 75.79 327 eP P 07 39 16.5 -0.8
comp=Z,418nm,2.7s,mb5.9
GERES GERESS Array B 75.79 327 P P 07 39 16.5 -0.7
comp=Z,7.6nm,0.9s,mb4.6,baz=133,slow=5.7,SNR=28
WTTA Wattenberg 76.00 325 iP P 07 39 18.6 +0.1
comp=Z,630nm,2.5s,mb6.1,SNR=22
WTTA Wattenberg 76.00 325 iP P 07 39 18.6 +0.1
WTTA pmax pmax
comp=Z,630nm,2.5s,mb6.1
KHC Kasperske Hory 76.03 327 eP P 07 39 17.8 -0.8
KHC ePCP PcP 07 39 28.5 -2.4
PRU Pruhonice 76.04 329 eP P 07 39 18.6 -0.1
PRU ePCP PcP 07 39 29.5 -1.4
WATA Walderalm 76.07 325⇑ iP P 07 39 19.2 +0.3
comp=Z,190nm,1.7s,mb5.8
WATA Walderalm 76.07 325⇑ iP P 07 39 19.2 +0.3
WATA pmax pmax
comp=Z,190nm,1.7s,mb5.8
PRA Prague 76.15 329 P P 07 39 19.0 -0.3
SQTA Sankt Quirin 76.21 325⇑ iP P 07 39 20.3 +0.6
comp=Z,392nm,2.4s,mb5.9,SNR=7.3
SQTA Sankt Quirin 76.21 325⇑ iP P 07 39 20.3 +0.6
SQTA pmax pmax
comp=Z,392nm,2.4s,mb5.9
MOTA Moosalm 76.34 325⇑ iP P 07 39 20.9 +0.4
comp=Z,440nm,2.5s,mb5.9,SNR=7.0
MOTA Moosalm 76.34 325⇑ iP P 07 39 20.9 +0.4
MOTA pmax pmax
comp=Z,440nm,2.5s,mb6.0
PVCC Panska Ves 76.36 329 eP P 07 39 20.9 +0.4
PVCC ePCP PcP 07 39 31.6 -0.7
FETA Feichten 76.37 325 iP P 07 39 21.0 +0.3
SNR=11
WET Wettzell 76.40 327 eP P 07 39 19.7 -1.1
WET pmax pmax
comp=Z,287nm,2.3s,mb5.8
WET Wettzell 76.40 327 eP P 07 39 19.7 -1.1
comp=Z,287nm,2.3s,mb5.8
HIA Hailar 76.52 33 eP P 07 39 21.2 -0.2
comp=Z,270nm,1.9s,mb5.8
HIA LR LR
comp=Z,3μm,20.0s,MS5.6
HIA Hailar 76.52 33 eP P 07 39 21.2 -0.3
HIA pmax pmax
comp=Z,270nm,1.9s
HIA MLR MLR
comp=Z,3μm,20.0s
RETA Reutte 76.61 325⇓ iP P 07 39 22.1 0.0
comp=Z,405nm,2.4s,mb5.9,SNR=14
REVF Revere 76.64 320 eP P 07 39 22.7 +0.4
SAOF Saorge 76.65 321 eP P 07 39 22.4 +0.1

SBF Sospel 76.66 321 *e*P P 07 39 21.4 -1.0
comp=Z,161nm,1.4s,mb5.5
SBF Sospel 76.66 321 *e*P P 07 39 21.4 -1.0
comp=Z,81nm,1.4s,mb5.5
SBF Sospel 76.66 321 *e*P P 07 39 21.4 -1.0
SBF pmax pmax
comp=Z,81nm,1.4s,mb5.5
FUR Furstenfeldbru 76.71 326 *e*P P 07 39 22.1 -0.4
FUR pmax pmax
comp=Z,728nm,1.7s,mb6.3
FUR Furstenfeldbru 76.71 326 *e*P P 07 39 22.1 -0.4
comp=Z,728nm,1.7s,mb6.3
LUCF Luceram 76.73 320 *e*P P 07 39 23.1 +0.3
VSU Vasula 76.73 340 *i* P P 07 39 22.2 -0.2
VSU Vasula 76.73 340 *i* P P 07 39 22.1 -0.3
AUTN L'Aution 76.73 321 *e*P P 07 39 23.1 +0.3
CTA Charters Tower 76.85 108 *e*P P 07 39 23.4 -0.6
comp=Z,41nm,1.2s,mb5.2
CTA Charters Tower 76.85 108 *e*P P 07 39 23.4 -0.6
CTA pmax pmax
comp=Z,41nm,1.2s
CTA Charters Tower 76.85 108 P P 07 39 24.4 +0.4
comp=Z,43nm,1.1s,mb5.3,baz=268,slow=7.1,SNR=36
CTAO Charters Tower 76.85 108 *e*P P 07 39 23.2 -0.8
comp=Z,176nm,1.4s,mb5.8
CTAO LR LR
comp=Z,2µm,21.0s,MS5.4
CN2 Changchun 76.85 40 *e*P P 07 39 22.1 -1.3
CN2 *e*XP sP 07 39 29.2 +1.3
CN2 PP PP 07 42 17.4 +0.8
CN2 *e*S S 07 49 10.3 -0.9
CN2 AMB AMB
comp=Z,80nm,0.9s,mb5.7
CN2 AMB AMB
comp=Z,500nm,4.0s
CN2 LR LR
comp=N,1µm,17.0s,MS5.4
CN2 LR LR
comp=E,1µm,17.0s,MS5.4
CN2 LR LR
comp=Z,2µm,17.0s,MS5.4
TOUF Mont Tournerai 76.85 321 *e*P P 07 39 23.3 -0.1
MVIF Mont Vial 76.85 320 *e*P P 07 39 24.5 +1.0
BRG Berggiesshubel 76.88 329 *e*P P 07 39 23.7 +0.2
comp=Z,264nm,1.7s,mb5.9
BRG Berggiesshubel 76.88 329 *i* P P 07 39 24.1 +0.6
comp=Z,264nm,1.7s,mb5.9
BRG *e* 07 39 35.1
comp=Z,62nm,1.4s
BRG *e* 07 39 42.0
comp=Z,100nm,1.6s
LMR La Mourre 76.98 320 *e*P P 07 39 23.3 -0.9
comp=Z,438nm,1.9s,mb5.8
LMR La Mourre 76.98 320 *e*P P 07 39 23.3 -0.9
comp=Z,219nm,1.9s,mb5.8
LMR La Mourre 76.98 320 *e*P P 07 39 23.3 -0.9
LMR pmax pmax
comp=Z,219nm,1.9s,mb5.8
DAVA Damuels 77.00 324 *i* P P 07 39 24.5 +0.3
comp=Z,504nm,2.6s,mb6.0,SNR=12
FRF La Foret Royal 77.00 320 *e*P P 07 39 23.4 -0.9
comp=Z,173nm,1.4s,mb5.5
FRF La Foret Royal 77.00 320 *e*P P 07 39 23.4 -0.9
comp=Z,87nm,1.4s,mb5.5
FRF La Foret Royal 77.00 320 *e*P P 07 39 23.4 -0.9
FRF pmax pmax
comp=Z,87nm,1.4s,mb5.5
ROTZ Rotzenmuhle 77.12 327 *e*P P 07 39 24.4 -0.4
comp=Z,335nm,2.2s,mb5.9
NKC Novy Kostel 77.27 328 *e*P P 07 39 26.4 +0.8
SURF Saint Ours 77.36 321 *e*P P 07 39 27.6 +1.3
TANN Tannenbergstha 77.37 328 *e*P P 07 39 26.5 +0.3
comp=Z,370nm,2.2s,mb5.9
MBDF Montbardon 77.51 321 *e*P P 07 39 26.6 -0.5
comp=Z,84nm,1.2s,mb5.3
MBDF Montbardon 77.51 321 *e*P P 07 39 26.6 -0.5
comp=Z,42nm,1.2s,mb5.2
MBDF Montbardon 77.51 321 *e*P P 07 39 26.6 -0.5
MBDF pmax pmax
comp=Z,42nm,1.2s,mb5.2
GRA1 Grafenberg Arr 77.60 327 *e*P P 07 39 27.0 -0.5
comp=Z,210nm,1.5s,mb5.8
GRF Grafenberg Arr 77.60 327 *e*P P 07 39 27.0 -0.5
GRF pmax pmax
comp=Z,210nm,1.5s,mb5.8
GRF Grafenberg Arr 77.60 327 *e*P P 07 39 27.0 -0.5
GRF pmax pmax
comp=Z,210nm,1.5s,mb5.8
GRF Grafenberg Arr 77.60 327 *e*P P 07 39 27.0 -0.5
comp=Z,210nm,1.5s,mb5.8
GRFO Grafenberg 77.60 327 *e*P P 07 39 27.8 +0.2
comp=Z,169nm,1.4s,mb5.8
GRFO Grafenberg 77.60 327 *e*P P 07 39 27.8 +0.3
GRFO pmax pmax
comp=Z,169nm,1.4s,mb5.8
CLL Collm 77.62 329⇓ *i*P P 07 39 28.3 +0.7
comp=Z,492nm,2.3s,mb6.0
CLL *i* 07 39 45.4
CLL *e*S S 07 49 16.0 -3.2
CLL LR LR
comp=Z,400nm,20.4s,MS4.7
CLL Collm 77.62 329⇓ *i*P P 07 39 28.3 +0.7
CLL *i* 07 39 45.4
CLL *e*S S 07 49 16.0 -3.2
CLL pmax pmax
comp=Z,492nm,2.3s,mb6.0
CLL MLR MLR
comp=Z,400nm,20.4s,MS4.7
CLL Collm 77.62 329⇓ *i*P P 07 39 28.3 +0.7
comp=Z,492nm,2.3s,mb6.0
CLL *e*PcP PcP 07 39 39.0 +1.3
CLL *i* x x 07 39 45.4
CLL *e*PP PP 07 42 30.0 +7.2
CLL *e*S S 07 49 16.0 -3.2
CLL *e*PS 07 50 04.0
CLL *e*SS SS 07 54 20.0 +0.9
CLL *e*SSS 07 57 30.0
CLL *e*SSSS 07 59 54.0
CLL LmV 08 16 00.0
comp=Z,400nm,20.4s
CLL Collm 77.62 329 *e*P P 07 39 27.8 +0.2
comp=Z,495nm,2.3s,mb6.0
BNI Bardonecchia 77.73 321 *e*P P 07 39 29.6 +1.3
CNB Canberra Magne 77.88 124 *e*P P 07 39 29.9 +0.4
comp=Z,96nm,1.4s,mb5.5
SMRF Simiane la Rot 77.88 320 *e*P P 07 39 29.1 -0.1
comp=Z,255nm,1.6s,mb5.6
SMRF Simiane la Rot 77.88 320 *e*P P 07 39 29.1 -0.1
comp=Z,255nm,1.6s,mb5.9
LPG La Plagne 77.91 322 *e*P P 07 39 30.1 +0.8
LPL La Plagne 77.93 322 *e*P P 07 39 30.1 +0.7
comp=Z,109nm,1.3s,mb5.3
LPL La Plagne 77.93 322 *e*P P 07 39 30.1 +0.7
comp=Z,55nm,1.3s,mb5.3
LPL La Plagne 77.93 322 *e*P P 07 39 30.1 +0.7
LPL pmax pmax
comp=Z,55nm,1.3s,mb5.3
MOX Moxa 77.94 328 *e*P P 07 39 30.0 +0.6
comp=Z,328nm,2.2s,mb5.9
MOX Moxa 77.94 328 *e*P P 07 39 30.0 +0.6
MOX pmax pmax
comp=Z,328nm,2.2s,mb5.9
MOX Moxa 77.94 328 *e*P P 07 39 29.5 +0.1
comp=Z,430nm,2.4s,mb6.0
RSL Roselend 78.08 322 *e*P P 07 39 29.3 -1.0
ORIF Oris-en-Rattie 78.15 321 *e*P P 07 39 29.9 -0.8
comp=Z,188nm,1.6s,mb5.5
ORIF *e*MLR MLR
comp=Z,550nm,22.2s,MS4.5
ORIF Oris-en-Rattie 78.15 321 *e*P P 07 39 29.9 -0.8
comp=Z,94nm,1.6s,mb5.5
ORIF Oris-en-Rattie 78.15 321 *e*P P 07 39 29.9 -0.8
ORIF pmax pmax
comp=Z,94nm,1.6s,mb5.5
STU Stuttgart 78.20 325 *e*P P 07 39 30.2 -0.7
comp=Z,197nm,1.5s,mb5.8
OG01 Vacheresse 78.37 322 *e*P P 07 39 31.6 -0.3
FELD Feldberg im Sc 78.39 324 *e*P P 07 39 31.9 0.0
GRN Grenoble 78.40 321 *e*P P 07 39 32.6 +0.6
TMCR Tamitsa 78.40 348 *e*P P 07 39 30.3 -1.3
BFO Black Forest 78.45 325 *e*P P 07 39 31.9 -0.3
BFO pmax pmax
comp=Z,414nm,2.5s,mb5.9
BFO Black Forest 78.45 325 *e*P P 07 39 31.9 -0.3
comp=Z,414nm,2.5s,mb5.9
QSPA South Pole Qui 78.60 180 *e*P P 07 39 33.1 +0.4
QSPA LR LR
comp=Z,4µm,21.0s,MS5.7
LOMF Lomont 78.80 323 *e*P P 07 39 34.6 +0.4
TOD Tromm 78.86 326 *e*P P 07 39 34.6 +0.1
CABF La Chapelle 78.87 322 *e*P P 07 39 33.9 -0.7
comp=Z,492nm,1.9s,mb5.8
CABF La Chapelle 78.87 322 *e*P P 07 39 33.9 -0.7
comp=Z,246nm,1.9s,mb5.8
CABF La Chapelle 78.87 322 *e*P P 07 39 33.9 -0.7
CABF pmax pmax
comp=Z,246nm,1.9s,mb5.8
VIVF Saint-Julien-l 78.87 320 *e*P P 07 39 34.0 -0.7
comp=Z,287nm,1.8s,mb5.6
VIVF Saint-Julien-l 78.87 320 *e*P P 07 39 34.0 -0.7
comp=Z,143nm,1.8s,mb5.6
VIVF Saint-Julien-l 78.87 320 *e*P P 07 39 34.0 -0.7
VIVF pmax pmax
comp=Z,143nm,1.8s,mb5.6
MOF Molkenrain 78.88 324 *e*P P 07 39 34.4 -0.2
UBBA Unterbreizbach 78.89 327 *e*P P 07 39 34.5 -0.1
comp=Z,186nm,1.8s,mb5.7
EJON La Jonquera 78.91 318 P P 07 39 34.2 -0.7
comp=Z,175nm,2.3s,mb5.6
JOF Joensuu 78.92 345 *e*p P 07 39 33.4 -1.1
comp=Z,44nm,0.9s,mb5.4
OG05 Jujurieux 78.96 322 *e*P P 07 39 34.9 -0.2
LASF Ste Croix 79.02 319 *e*P P 07 39 35.1 -0.4
comp=Z,197nm,1.8s,mb5.4
HINF Hinteralfeld 79.02 324 *e*P P 07 39 33.9 -1.5
comp=Z,104nm,1.5s,mb5.2
HINF Hinteralfeld 79.02 324 *e*P P 07 39 33.9 -1.5
comp=Z,52nm,1.5s,mb5.2
HINF Hinteralfeld 79.02 324 *e*P P 07 39 33.9 -1.5
HINF pmax pmax
comp=Z,52nm,1.5s,mb5.2
BSD Bornholm Skovb 79.03 333 *e*P P 07 39 37.5 +2.2
BSD Bornholm Skovb 79.03 333 *i* P P 07 39 37.5 +2.2
ECH Echery 79.05 324 *e*P P 07 39 35.3 -0.3
LANF Langenberg 79.08 325 *e*P P 07 39 35.5 -0.2
CDF Champ du Feu 79.09 324 *e*P P 07 39 34.5 -1.3
comp=Z,231nm,1.6s,mb5.6
CDF Champ du Feu 79.09 324 *e*P P 07 39 34.5 -1.3
comp=Z,115nm,1.6s,mb5.6
CDF Champ du Feu 79.09 324 *e*P P 07 39 34.5 -1.3
CDF pmax pmax
comp=Z,115nm,1.6s,mb5.6
KTD Kalmit 79.11 326 *e*P P 07 39 36.0 +0.1
FINES FINESS Array B 79.24 342 P P 07 39 35.9 -0.4
comp=Z,5.0nm,0.9s,mb4.4,baz=132,slow=5.7,SNR=17
CLZ Clausthal 79.27 328 *e*P P 07 39 36.9 +0.2
CLZ pmax pmax
comp=Z,204nm,1.5s,mb5.8
CLZ Clausthal 79.27 328 *e*P P 07 39 36.9 +0.2
comp=Z,204nm,1.5s,mb5.8
BOD Bodaibo 79.28 24 *e*P P 07 39 34.9 -1.7
BOD pmax pmax
comp=Z,35nm,1.8s,mb5.0
ASCN Ascension 79.32 264 PFAKE 07 39 50.0 +12
ASCN LR LR
comp=Z,3µm,19.0s,MS5.6
PMG Port Moresby 79.33 98 *e*P P 07 39 37.8 -0.1
comp=Z,145nm,1.2s,mb5.8
PMG LR LR
comp=Z,1µm,22.0s,MS5.3
PMG Port Moresby 79.33 98 *d* iP P 07 39 37.5 -0.4
PMG Port Moresby 79.33 98 P P 07 39 38.4 +0.5
comp=Z,52nm,1.0s,mb5.4,baz=275,slow=5.4,SNR=33
TNS Taunus Mts 79.39 326 *e*P P 07 39 37.4 0.0
TNS pmax pmax
comp=Z,368nm,2.3s,mb5.9
TNS Taunus Mts 79.39 326 *e*P P 07 39 37.4 0.0
comp=Z,368nm,2.3s,mb5.9
HAU Haudompre 79.41 324 *e*P P 07 39 36.2 -1.4
comp=Z,240nm,1.9s,mb5.5
HAU *e*MLR MLR
comp=Z,382nm,20.2s,MS4.4
HAU Haudompre 79.41 324 *e*P P 07 39 36.2 -1.4
comp=Z,120nm,1.8s,mb5.5
HAU LR LR
comp=Z,380nm,20.3s,MS4.7
HAU Haudompre 79.41 324 *e*P P 07 39 36.2 -1.4
HAU pmax pmax
comp=Z,120nm,1.8s,mb5.5
HAU MLR MLR
comp=Z,380nm,20.3s,MS4.7
KAF Kangasniemi 79.68 342 *e*p P 07 39 38.6 -0.1
comp=Z,31nm,0.9s,mb5.2,baz=140,slow=5.3
KAF Kangasniemi 79.68 342 *e*P P 07 39 38.6 -0.1
KAF pmax pmax
comp=Z,31nm,0.9s,mb5.2
ABH Alteburg 79.70 326 *e*P P 07 39 38.8 -0.3
THEF Theyskantfort 79.73 324 *e*P P 07 39 39.3 0.0
MTLF Montolieu 79.75 318 *e*P P 07 39 38.8 -0.7
comp=Z,598nm,1.9s,mb5.9
MTLF Montolieu 79.75 318 *e*P P 07 39 38.8 -0.7
comp=Z,299nm,1.9s,mb5.9
MTLF Montolieu 79.75 318 *e*P P 07 39 38.8 -0.7
MTLF pmax pmax
comp=Z,299nm,1.9s,mb5.9
MDJ Mudanjiang 79.86 40 P P 07 39 39.6 -0.5
MDJ AP pP 07 39 41.5 -1.9
MDJ PP PP 07 42 41.5 -0.2
MDJ S S 07 49 43.1 -0.3
MDJ AMB AMB
comp=Z,87nm,1.0s,mb5.6
MDJ AMB AMB
comp=Z,368nm,5.1s
MDJ LR LR
comp=N,2µm,20.7s,MS5.5
MDJ LR LR
comp=E,2µm,21.3s,MS5.5
MDJ LR LR
comp=Z,3µm,20.7s,MS5.5
MDJ Mudanjiang 79.86 40 *e*P P 07 39 39.9 -0.2
comp=Z,73nm,0.9s,mb5.6
MDJ LR LR
comp=Z,3µm,20.0s,MS5.6
RUP Ruppelstein 79.88 325 *e*P P 07 39 40.0 0.0
LBL Lubilhac 79.94 320 *e*P P 07 39 41.5 +1.0
PLDF La Plantade 80.05 321 *e*P P 07 39 41.5 +0.4
VNDA Vanda 80.10 167 P P 07 39 41.4 +0.5
comp=Z,18nm,1.3s,mb4.9,baz=270,slow=6.6,SNR=16
VNDA LR LR 08 11 25.2
comp=Z,2µm,19.8s,MS5.4,baz=240,slow=33
SMF Signal de Mont 80.24 322 *e*P P 07 39 40.9 -1.2
comp=Z,105nm,1.5s,mb5.2
SMF Signal de Mont 80.24 322 *e*P P 07 39 40.9 -1.2
comp=Z,53nm,1.5s,mb5.2
SMF Signal de Mont 80.24 322 *e*P P 07 39 40.9 -1.2
SMF pmax pmax
comp=Z,53nm,1.5s,mb5.2
EMOS Mosqueruela 80.30 315 P P 07 39 40.6 -1.9
comp=Z,173nm,2.3s,mb5.6
PYM Petit Puy Mans 80.33 321 *e*P P 07 39 43.0 +0.4
ARMA Armidale 80.34 119 *e*P P 07 39 43.5 +0.4
ECHE Chera 80.34 314 P P 07 39 39.3 -3.5
comp=Z,58nm,1.2s,mb5.4
ECHE Chera 80.34 314 P P 07 39 39.3 -3.5
ECHE pmax pmax
comp=Z,58nm,1.2s,mb5.4
WLF Walferdange 80.36 325 P P 07 39 43.8 +1.1
comp=Z,50nm,2.6s,mb5.0
WLF Walferdange 80.36 325 *e*P P 07 39 42.4 -0.3
comp=Z,234nm,2.2s,mb5.7
AGO Saint Agoulin 80.39 321 *e*P P 07 39 43.0 +0.1
MEZF Maizieres J'vi 80.41 324 *e*P P 07 39 42.1 -0.9
comp=Z,592nm,1.9s,mb5.9
MEZF Maizieres J'vi 80.41 324 *e*P P 07 39 42.1 -0.9
comp=Z,592nm,1.9s,mb6.2
BSEG Bad Segeberg 80.48 330 *e*P P 07 39 43.2 0.0
LOR Lormes 80.52 322 *e*P P 07 39 42.7 -0.9
comp=Z,83nm,1.3s,mb5.2
LOR *e*MLR MLR
comp=Z,415nm,19.5s,MS4.5
LOR Lormes 80.52 322 *e*P P 07 39 42.7 -0.9
comp=Z,41nm,1.3s,mb5.2
LOR LR LR
comp=Z,410nm,19.5s,MS4.8
LOR Lormes 80.52 322 *e*P P 07 39 42.7 -0.9
LOR pmax pmax
comp=Z,41nm,1.3s,mb5.2
LOR MLR MLR
comp=Z,410nm,19.5s,MS4.8
EIDS Eidsvold 80.55 114 *e*P P 07 39 43.9 -0.5
comp=Z,102nm,1.7s,mb5.5
CAF Calviac 80.55 320 *e*P P 07 39 43.4 -0.4
comp=Z,293nm,1.8s,mb5.6
CAF Calviac 80.55 320 *e*P P 07 39 43.4 -0.4
comp=Z,147nm,1.8s,mb5.6
CAF Calviac 80.55 320 *e*P P 07 39 43.4 -0.4
CAF pmax pmax
comp=Z,147nm,1.8s,mb5.6
AVF Avril sur Loir 80.60 322 *e*P P 07 39 42.9 -1.1
SSF Saint Saulge 80.64 322 *e*P P 07 39 43.2 -1.0
comp=Z,182nm,1.5s,mb5.5
SSF Saint Saulge 80.64 322 *e*P P 07 39 43.2 -1.0
comp=Z,91nm,1.5s,mb5.5
SSF Saint Saulge 80.64 322 *e*P P 07 39 43.2 -1.0
SSF pmax pmax
comp=Z,91nm,1.5s,mb5.5
VERF Verneugheol 80.66 320 *e*P P 07 39 44.7 +0.4
BUG Bochum--Univer 80.67 327 *e*P P 07 39 44.4 +0.1
comp=Z,415nm,2.3s,mb6.0
VLA Vladivostok 80.69 43 *i* P P 07 39 43.7 -0.9
VLA pmax pmax
comp=Z,193nm,1.7s,mb5.8
BGF Bois d'Agland 80.80 321 *e*P P 07 39 44.6 -0.5
comp=Z,722nm,1.9s,mb6.0
BGF Bois d'Agland 80.80 321 *e*P P 07 39 44.6 -0.5
comp=Z,361nm,1.9s,mb6.0
BGF Bois d'Agland 80.80 321 *e*P P 07 39 44.6 -0.5
BGF pmax pmax
comp=Z,361nm,1.9s,mb6.0
EBIE Bielsa 80.84 317 P P 07 39 43.7 -1.7
comp=Z,167nm,2.2s,mb5.6
EPF Esparros 80.85 317 *e*P P 07 39 44.7 -0.7
comp=Z,164nm,1.7s,mb5.4
EPF Esparros 80.85 317 *e*P P 07 39 44.7 -0.7
comp=Z,82nm,1.7s,mb5.4
EPF Esparros 80.85 317 *e*P P 07 39 44.7 -0.7
EPF pmax pmax
comp=Z,82nm,1.7s,mb5.4
ESAC San Caprasio 80.85 316 P P 07 39 45.1 -0.4
comp=Z,238nm,1.6s,mb5.9
IBBN Ibbenburen 80.87 328 *e*P P 07 39 45.6 +0.3
comp=Z,584nm,2.5s,mb6.1
LABF Labassere 81.03 317 *e*P P 07 39 46.9 +0.5
EVIA Vianos 81.07 312 P P 07 39 46.2 -0.5
comp=Z,56nm,1.1s,mb5.4
EVIA Vianos 81.07 312 P P 07 39 46.2 -0.5
EVIA pmax pmax
comp=Z,56nm,1.1s,mb5.4
RJF Les Rejaudoux 81.07 320 *e*P P 07 39 46.1 -0.4
comp=Z,543nm,1.9s,mb5.8
RJF *e*MLR MLR
comp=Z,598nm,20.5s,MS4.6
RJF Les Rejaudoux 81.07 320 *e*P P 07 39 46.1 -0.4
comp=Z,272nm,1.9s,mb5.9
RJF LR LR
comp=Z,600nm,20.5s,MS4.9
RJF Les Rejaudoux 81.07 320 *e*P P 07 39 46.1 -0.4
RJF pmax pmax
comp=Z,272nm,1.9s,mb5.9
RJF MLR MLR
comp=Z,600nm,20.5s,MS4.9
TCF Toulx Ste Croi 81.07 321 *e*P P 07 39 46.2 -0.3
comp=Z,254nm,1.9s,mb5.5
TCF Toulx Ste Croi 81.07 321 *e*P P 07 39 46.2 -0.3
comp=Z,127nm,1.9s,mb5.5
TCF Toulx Ste Croi 81.07 321 *e*P P 07 39 46.2 -0.3
TCF pmax pmax
comp=Z,127nm,1.9s,mb5.5
SBA Scott Base 81.08 168 *e*P P 07 39 46.8 +0.6
comp=Z,79nm,1.6s,mb5.4
SBA LR LR
comp=Z,695nm,19.0s,MS5.0
SBA Scott Base 81.08 168 *e*P P 07 39 46.8 +0.7
SBA pmax pmax
comp=Z,79nm,1.6s,mb5.4
SBA MLR MLR
comp=Z,695nm,19.0s,MS5.0
EQES Quesada 81.17 311 P P 07 39 45.7 -1.6
comp=Z,148nm,2.2s,mb5.5
BCLA Clavier 81.22 326 P P 07 39 48.4 +1.2
comp=Z,29nm,2.5s,mb4.8
HYF Humbligny 81.25 322 *e*P P 07 39 47.0 -0.5
GIVF Givet 81.33 325 *e*P P 07 39 47.1 -0.7
comp=Z,420nm,1.8s,mb5.8
GIVF Givet 81.33 325 *e*P P 07 39 47.1 -0.7
comp=Z,210nm,1.8s,mb5.8
GIVF Givet 81.33 325 *e*P P 07 39 47.1 -0.7
GIVF pmax pmax
comp=Z,210nm,1.8s,mb5.8
ECOG Cogollos-Vega 81.34 311 P P 07 39 47.3 -0.9
comp=Z,16nm,0.8s,mb5.0
ECOG Cogollos-Vega 81.34 311 P P 07 39 47.3 -0.9
ECOG pmax pmax
comp=Z,16nm,0.8s,mb5.0
REYF Montagne du Re 81.35 317 *e*P P 07 39 48.9 +0.8
ETSF Etsaut 81.39 317 *e*P P 07 39 48.2 -0.1
comp=Z,179nm,1.4s,mb5.5
ETSF Etsaut 81.39 317 *e*P P 07 39 48.2 -0.1
comp=Z,89nm,1.4s,mb5.5
ETSF Etsaut 81.39 317 *e*P P 07 39 48.2 -0.1
ETSF pmax pmax
comp=Z,89nm,1.4s,mb5.5
LFF La Frestale 81.40 319 *e*P P 07 39 48.1 -0.2
comp=Z,617nm,1.9s,mb5.9
LFF La Frestale 81.40 319 *e*P P 07 39 48.1 -0.2
comp=Z,308nm,1.9s,mb5.9
LFF La Frestale 81.40 319 *e*P P 07 39 48.1 -0.2
LFF pmax pmax
comp=Z,308nm,1.9s,mb5.9
ERON Agron 81.42 310 P P 07 39 48.5 -0.2
comp=Z,26nm,1.0s,mb5.1
DOU Dourbes 81.45 325 P P 07 39 49.2 +0.7
comp=Z,62nm,2.5s,mb5.1
ATE Arette 81.57 317 *e*P P 07 39 50.5 +1.3
ETOR Torete 81.59 315 P P 07 39 49.4 -0.1
comp=Z,42nm,1.1s,mb5.3
ETOR Torete 81.59 315 P P 07 39 49.4 0.0
ETOR pmax pmax
comp=Z,42nm,1.1s,mb5.3
BAIF Baives 81.65 325 *e*P P 07 39 49.1 -0.4
comp=Z,490nm,1.8s,mb5.8
BAIF Baives 81.65 325 *e*P P 07 39 49.1 -0.4
comp=Z,245nm,1.8s,mb5.8
BAIF Baives 81.65 325 *e*P P 07 39 49.1 -0.4
BAIF pmax pmax
comp=Z,245nm,1.8s,mb5.8
GUMO Guam 81.82 74 *e*P P 07 39 50.6 -0.6
comp=Z,568nm,1.6s,mb6.2
GUMO LR LR
comp=Z,817nm,20.0s,MS5.1
GUMO Guam 81.82 74 *e*P P 07 39 50.5 -0.7
GUMO pP 07 39 52.5 -2.0
SNF Seneffe 81.83 325 P P 07 39 51.4 +0.9
comp=Z,33nm,2.2s,mb4.9
SJPF Ste Jean 81.93 317 *e*P P 07 39 50.8 -0.4
comp=Z,347nm,1.8s,mb5.7
SJPF Ste Jean 81.93 317 *e*P P 07 39 50.8 -0.4
comp=Z,173nm,1.8s,mb5.7
SJPF Ste Jean 81.93 317 *e*P P 07 39 50.8 -0.4
SJPF pmax pmax
comp=Z,173nm,1.8s,mb5.7
UCC Uccle 81.93 326 P P 07 39 52.1 +1.1
EMIJ Mijas 81.99 310 P P 07 39 49.6 -2.1
comp=Z,117nm,1.6s,mb5.6
APA Apatity 82.31 348⇑ *e*P P 07 39 46.0 -6.6
APA pmax pmax
comp=Z,40nm,1.2s,mb5.2
APA MLR MLR
comp=Z,1µm,17.0s,MS5.2
LVZ Lovozero 82.34 348 *e*P P 07 39 53.6 +0.8
LVZ LR LR
comp=Z,889nm,21.0s,MS5.1
LVZ Lovozero 82.34 348 *e*P P 07 39 53.5 +0.7
LVZ pmax pmax
comp=Z,168nm,1.9s,mb5.7
EADA Adamuz 82.41 311 P P 07 39 51.9 -1.9
comp=Z,159nm,2.2s,mb5.6
MUD Monsted U'grnd 82.44 332⇓ *i*P P 07 39 54.6 +1.1
MUD pmax pmax
comp=Z,117nm,1.6s,mb5.6
MUD Monsted U'grnd 82.44 332⇓ *i*P P 07 39 54.6 +1.1
comp=Z,117nm,1.6s,mb5.6
ESDC Sonseca Array 82.51 313 P P 07 39 52.7 -1.6
comp=Z,86nm,2.0s,mb5.4
ESDC Sonseca Array 82.51 313 P P 07 39 55.3 +1.0
comp=Z,9.9nm,0.8s,mb4.9,baz=106,slow=4.2,SNR=20
ESDC LR LR 08 19 30.9
comp=Z,462nm,19.2s,MS4.9,baz=145,slow=38
ECRI Cripan 82.60 316 P P 07 39 53.3 -1.4

comp=Z,28nm,1.1s,mb5.2
ECRI Cripan 82.60 316 P **P** 07 39 53.3 -1.4
ECRI pmax pmax
comp=Z,28nm,1.1s,mb5.2
MAJO Matsushiro 82.66 51 *e*P **P** 07 39 55.2 0.0
comp=Z,160nm,1.4s,mb5.9
MAJO LR LR
comp=Z,2µm,19.0s,MS5.5
MAT Matsushiro 82.66 51 P **P** 07 39 54.4 -0.8
MAT S S 07 50 16.0 +3.0
MJAR Matsushiro Arr 82.67 51 P **P** 07 39 55.4 +0.2
comp=Z,40nm,0.9s,mb5.5,baz=242,slow=6.2,SNR=61
MJAR LR LR 08 18 56.1
comp=Z,2µm,18.6s,MS5.5,baz=275,slow=37
MFF Saint Martin d 82.67 320 *e*P **P** 07 39 54.3 -0.7
comp=Z,175nm,1.5s,mb5.6
MFF Saint Martin d 82.67 320 *e*P **P** 07 39 54.3 -0.7
comp=Z,87nm,1.5s,mb5.6
MFF Saint Martin d 82.67 320 *e*P **P** 07 39 54.3 -0.7
MFF pmax pmax
comp=Z,87nm,1.5s,mb5.6
PAB San Pablo 82.74 313 *e*P **P** 07 39 55.9 +0.5
comp=Z,290nm,1.9s,mb6.0
PAB LR LR
comp=Z,978nm,22.0s,MS5.1
PAB San Pablo 82.74 313 *e*P **P** 07 39 55.9 +0.4
PAB pmax pmax
comp=Z,290nm,1.9s,mb6.0
PAB MLR MLR
comp=Z,978nm,22.0s,MS5.1
ESPR Espera 82.91 310 P **P** 07 39 54.3 -2.1
comp=Z,142nm,1.9s,mb5.7
GUD Guadarrama 83.00 314 P **P** 07 39 56.7 -0.1
comp=Z,42nm,1.4s,mb5.3
GUD Guadarrama 83.00 314 P **P** 07 39 56.7 -0.1
GUD pmax pmax
comp=Z,42nm,1.4s,mb5.3
KLR Kul'dur 83.25 37⇑ *i*P **P** 07 39 52.8 -5.1
KLR *e*S S 07 50 09.5 -8.8
KLR *e*SS SS 07 55 46.0 +2.6
KLR pmax pmax
comp=E,110nm,2.0s
KLR pmax pmax
comp=Z,230nm,2.0s,mb5.9
CLNS Chul'man 83.36 28 *e*P **P** 07 39 58.3 0.0
CLNS *e* 07 43 05.5
CLNS *e*S S 07 50 15.5 -3.7
CLNS *e*PS 07 51 07.4
CLNS pmax pmax
comp=Z,99nm,0.9s,mb5.8
CLNS pmax pmax
comp=N,21nm,0.7s
CLNS pmax pmax
comp=E,42nm,1.0s
CLNS smax
comp=E,249nm,12.2s
CLNS smax
comp=Z,71nm,11.8s
CLNS smax
comp=N,87nm,11.2s
CLNS MLR MLR
comp=Z,2µm,16.0s,MS5.5
CLNS MLR MLR
comp=N,500nm,19.0s,MS5.5
CLNS MLR MLR
comp=E,2µm,17.0s,MS5.5
LDF La Druitiere 83.51 322 *e*P **P** 07 39 58.4 -0.8
comp=E,233nm,1.8s,mb5.7
LDF La Druitiere 83.51 322 *e*P **P** 07 39 58.4 -0.8
comp=E,116nm,1.8s,mb5.7
LDF La Druitiere 83.51 322 *e*P **P** 07 39 58.4 -0.8
LDF pmax pmax
comp=Z,116nm,1.8s,mb5.7
FLN La Foliniere 83.80 322 *e*P **P** 07 39 59.8 -0.9
comp=Z,206nm,1.8s,mb5.7
FLN *e*MLR MLR
comp=Z,535nm,18.0s,MS4.7
FLN La Foliniere 83.80 322 *e*P **P** 07 39 59.8 -0.9
comp=Z,103nm,1.8s,mb5.7
FLN LR LR
comp=Z,530nm,18.0s,MS5.0
FLN La Foliniere 83.80 322 *e*P **P** 07 39 59.8 -0.9
FLN pmax pmax
comp=Z,103nm,1.8s,mb5.7
FLN MLR MLR
comp=Z,530nm,18.0s,MS5.0
EMIN Mina Concepcio 83.83 310 P **P** 07 39 58.9 -2.3
comp=Z,58nm,1.6s,mb5.5
GRR Gorron 83.86 322 *e*P **P** 07 40 00.4 -0.7
comp=Z,96nm,1.5s,mb5.4
GRR Gorron 83.86 322 *e*P **P** 07 40 00.4 -0.7
comp=Z,48nm,1.5s,mb5.4
GRR Gorron 83.86 322 *e*P **P** 07 40 00.4 -0.7
GRR pmax pmax
comp=Z,48nm,1.5s,mb5.4
KONO Kongsberg 84.06 335 *e*P **P** 07 40 02.5 +0.7
NOA NORSAR Array B 84.21 336 P **P** 07 40 03.0 +0.4
comp=Z,19nm,1.0s,mb5.0,baz=117,slow=4.9,SNR=8.1
PBAR Barrancos 84.23 311 *e*P **P** 07 40 03.2 0.0
comp=Z,59nm,1.8s,mb5.4
EGRO El Granado 84.36 310 P **P** 07 40 03.4 -0.4
comp=Z,61nm,1.7s,mb5.5
EBAD Badajoz 84.41 311 P **P** 07 40 01.9 -2.2
comp=Z,156nm,2.2s,mb5.8
PBDV Barranco-do-Ve 84.60 310 *e*P **P** 07 40 04.8 -0.3
comp=Z,91nm,1.9s,mb5.6
SGMF Saint Gilles 84.84 321 *e*P **P** 07 40 04.8 -1.3
comp=Z,347nm,1.8s,mb5.9
SGMF Saint Gilles 84.84 321 *e*P **P** 07 40 04.8 -1.3
comp=Z,174nm,1.8s,mb5.9
SGMF Saint Gilles 84.84 321 *e*P **P** 07 40 04.8 -1.3
SGMF pmax pmax
comp=Z,174nm,1.8s,mb5.9
PESTR Estremoz 84.87 311 *e*P **P** 07 40 07.5 +1.1
comp=Z,88nm,1.7s,mb5.6
HABR Khabarovsk 84.91 39 *e*P **P** 07 40 04.4 -2.0
HABR *e* pP 07 40 07.1 -2.6
HABR *e* 07 43 18.9
HABR *e*S S 07 50 27.0 -8.1
HABR *e* 07 56 03.9
HABR pmax pmax
comp=Z,144nm,1.9s,mb5.8
EVO Evora 85.07 311 *e*P **P** 07 40 09.0 +1.5
QUIF Quistinic 85.09 321 *e*P **P** 07 40 05.9 -1.4
PCBR Castelo Branco 85.10 312 *e*P **P** 07 40 08.8 +1.2
comp=Z,85nm,1.8s,mb5.6
MORF Marmelete 85.16 309 *e*P **P** 07 40 08.8 +0.9
comp=Z,87nm,1.9s,mb5.6
MVO Moncorvo 85.22 313 *e*P **P** 07 40 08.5 +0.4
comp=Z,58nm,2.1s,mb5.3
PBRG Braganca 85.23 314 *e*P **P** 07 40 09.8 +1.6
comp=Z,94nm,1.6s,mb5.7
ECAL Calabor 85.28 314 P **P** 07 40 03.9 -4.5
comp=Z,134nm,1.7s,mb5.8
PTEO Sao Teotonio 85.29 310 *e*P **P** 07 40 10.2 +1.6
comp=Z,165nm,1.5s,mb5.9
ROSF Rostrenen 85.32 321 *e*P **P** 07 40 07.0 -1.4
comp=Z,296nm,1.9s,mb5.8
ROSF Rostrenen 85.32 321 *e*P **P** 07 40 07.0 -1.4
comp=Z,148nm,1.9s,mb5.8
ROSF Rostrenen 85.32 321 *e*P **P** 07 40 07.0 -1.4
ROSF pmax pmax
comp=Z,148nm,1.9s,mb5.8
MTE Manteigas 85.33 313 *e*P **P** 07 40 10.6 +1.9
comp=Z,57nm,1.6s,mb5.5
MTE Manteigas 85.33 313 *e*P **P** 07 40 09.7 +1.0
comp=Z,325nm,2.8s,mb6.0
KEV Kevo 85.46 347 PFAKE 07 40 20.0 +11
KEV LR LR
comp=Z,1µm,19.0s,MS5.2
ARCES ARCESS Array B 85.62 347 P **P** 07 40 10.0 +0.5
ARCES LR LR 08 19 10.3
ARCES ARCESS Array B 85.62 347 P **P** 07 40 10.0 +0.6
comp=Z,16nm,0.9s,mb5.3,baz=143,slow=4.2,SNR=25
ARCES LR LR 08 19 10.3
comp=Z,887nm,20.1s,MS5.2,baz=124,slow=36
ERUA La Rua 85.71 315 P **P** 07 40 08.9 -1.7
comp=Z,44nm,1.4s,mb5.5
ERUA La Rua 85.71 315 P **P** 07 40 08.9 -1.6
ERUA pmax pmax
comp=Z,44nm,1.4s,mb5.5
EPON Pontenova 86.03 315 P **P** 07 40 12.4 +0.4
comp=Z,148nm,2.1s,mb5.8
PCAB Cabril 86.11 314 *e*P **P** 07 40 14.3 +1.8
comp=Z,113nm,1.8s,mb5.8
ELOB Lobios 86.18 314 P **P** 07 40 12.5 -0.4
comp=Z,164nm,2.2s,mb5.9
EMAZ Mazaricos 87.17 315 P **P** 07 40 15.1 -2.6
comp=Z,216nm,2.1s,mb6.0
ERM Erimo 88.05 47 *e*P **P** 07 40 22.0 0.0
comp=Z,124nm,1.4s,mb6.0
ERM LR LR
comp=Z,2µm,20.0s,MS5.5
ERM Erimo 88.05 47 *e*P **P** 07 40 22.0 +0.1
ERM pmax pmax
comp=Z,124nm,1.4s,mb6.0
ERM MLR MLR
comp=Z,2µm,20.0s,MS5.5
HOPE Hope Point 88.11 215 PFAKE 07 40 30.0 +7.9
HOPE LR LR
comp=Z,5.0nm,19.0s
YAK Yakutsk 88.12 25 *e*P **P** 07 40 22.2 +0.4
YAK LR LR
comp=Z,2µm,21.0s,MS5.6
YAK Yakutsk 88.12 25 *e*P **P** 07 40 21.2 -0.6
YAK *i* pP 07 40 24.2 -1.0
YAK *e* 07 43 52.5
YAK *e*S S 07 50 47.4 -18
YAK *i* 07 51 04.4
YAK *i* SS SS 07 56 54.5 0.0
YAK pmax pmax
comp=Z,49nm,2.6s,mb5.3
YAK pmax pmax
comp=N,1.0nm,0.7s
YAK pmax pmax
comp=E,19nm,2.7s
YAK smax
comp=N,353nm,18.7s
YAK smax
comp=Z,262nm,25.1s
YAK smax
comp=E,282nm,16.7s
YAK MLR MLR
comp=E,2µm,26.0s
YAK MLR MLR
comp=Z,3µm,26.0s,MS5.6
YAK MLR MLR
comp=N,983nm,16.0s
ASAJ Asahikawa 88.29 44 P **P** 07 40 23.4 +0.4
comp=N,36nm,0.8s,mb5.6,baz=274,slow=10,SNR=17
YSS Yuzh-Sakhalins 89.25 42 *e*P **P** 07 40 27.0 -0.5
YSS LR LR
comp=Z,2µm,20.0s,MS5.5
YSS Yuzh-Sakhalins 89.25 42 *ae*P **P** 07 40 26.8 -0.7
YSS *e* 07 50 58.0
YSS *e*S S 07 51 12.0 -5.0
YSS *e*PPS 07 52 19.0
YSS *e*SS SS 07 57 14.0 +2.4
YSS pmax pmax
comp=Z,150nm,1.3s,mb6.2
YSS MLR MLR
comp=Z,2µm,19.0s,MS5.4
YSS MLR MLR
comp=N,2µm,18.0s
HNR Honiara 91.72 100 *e*P **P** 07 40 38.9 -0.8
comp=N,47nm,0.8s,mb5.9
HNR LR LR
comp=Z,1µm,21.0s,MS5.3
TIXI Tiksi 92.54 16 *e*P **P** 07 40 41.7 -0.6
comp=Z,99nm,1.3s,mb6.1
TIXI LR LR
comp=Z,4µm,21.0s,MS5.8
TIXI Tiksi 92.54 16 *e*P **P** 07 40 40.6 -1.7
TIXI *e* 07 44 20.4
TIXI *e*S SKSac 07 51 13.2 -2.3
TIXI *e* 07 51 46.0
TIXI *e*SS SS 07 57 56.5 -1.5
TIXI pmax pmax
comp=N,9.0nm,1.4s
TIXI pmax pmax
comp=E,15nm,1.4s
TIXI pmax pmax
comp=Z,93nm,1.4s,mb6.0
TIXI MLR MLR
comp=Z,3µm,19.0s,MS5.8
TIXI MLR MLR
comp=E,2µm,19.0s,MS5.7
TIXI MLR MLR
comp=N,2µm,18.0s,MS5.7
KBS Kingsbay 94.77 351 *e*P **P** 07 40 53.6 +1.2
DZM Mont Dzumac 94.99 114 LR LR 08 22 01.9
comp=N,2µm,18.6s,MS5.5,baz=334,slow=34
PMSA Palmer Station 95.36 199 PFAKE 07 41 10.0 +15
PMSA LR LR
comp=Z,2µm,20.0s,MS5.5
SNZO South Karori 95.96 134 PFAKE 07 41 10.0 +11
SNZO LR LR
comp=Z,534nm,19.0s,MS5.0
MA2 Magadan 97.02 31 *e*P **P** 07 41 02.3 -0.7
MA2 LR LR
comp=Z,2µm,20.0s,MS5.5
MA2 Magadan 97.02 31 *e*P **P** 07 41 01.6 -1.4
MA2 *e* 07 45 00.4
MA2 *e* 07 51 40.1
MA2 *e*S S 07 52 20.0 -5.6
MA2 *e*PS PS 07 53 46.1 -2.1
MA2 *e*SS SS 07 58 56.7 -5.5
MA2 pmax pmax
comp=Z,50nm,0.9s,mb5.9
MA2 MLR MLR
comp=Z,4µm,19.0s,MS6.0
PET Petropavlovsk 100.49 38 PFAKE 07 41 30.0 +11
PET LR LR
comp=Z,2µm,21.0s,MS5.5
RCBR Riachuelo 100.70 262 PFAKE 07 41 30.0 +10
RCBR LR LR
comp=Z,2µm,20.0s,MS5.6
EFI East Falkland 100.94 212 PFAKE 07 41 30.0 +9.3
EFI LR LR
comp=Z,2µm,20.0s,MS5.6
BILL Bilibino 104.30 22 *e*Pdif Pdif 07 41 35.2 -0.5
BILL LR LR
comp=Z,2µm,20.0s,MS5.7
BILL Bilibino 104.30 22 P Pdif 07 41 37.0 +1.3
BILL 07 45 55.0
BILL *e*SS SS 08 00 54.6 +12
RAO Raoul Island 106.09 125 *e*PKP PKiKP 07 45 53.1 -3.3
SMY Shemya 109.83 38 PFAKE 07 46 10.0 +7.5
SMY LR LR
comp=Z,1µm,22.0s,MS5.4
FUNA Funafuti 110.41 104 PFAKE 07 46 20.0 +15
FUNA LR LR
comp=Z,8µm,19.0s,MS6.3
TNA Tin City 114.72 22 PFAKE 07 46 20.0 +8.5
TNA LR LR
comp=Z,1µm,19.0s,MS5.5
UNV Unalaska Valle 120.70 33 PFAKE 07 46 30.0 +6.7
UNV LR LR
comp=Z,5µm,20.0s,MS6.2
COLA College 121.67 16 PFAKE 07 46 40.0 +15
COLA LR LR
comp=Z,2µm,20.0s,MS5.8
INK Inuvik 121.75 9 PKP PKPdf 07 46 25.2 +0.3
comp=Z,5.1nm,0.9s,baz=44,slow=3.0,SNR=12
INK PP PP 07 47 55.7 -1.8
comp=Z,5.2nm,1.0s,baz=336,slow=5.5,SNR=5.5
LCO Las Campanas 122.17 225 PFAKE 07 46 40.0 +13
LCO LR LR
comp=Z,2µm,20.0s,MS5.7
MCK McKinley 122.22 18 *e*PKPdf PKPdf 07 46 26.4 +0.4
MCK LR LR
comp=Z,966nm,21.0s,MS5.4
EGAK Eagle 123.45 14 PFAKE 07 46 40.0 +12
EGAK LR LR
comp=Z,1µm,21.0s,MS5.5
PMR Palmer 123.75 19 PFAKE 07 46 40.0 +11
PMR LR LR
comp=Z,2µm,21.0s,MS5.7
RAR Rarotonga 124.33 126 PFAKE 07 46 40.0 +8.7
RAR LR LR
comp=Z,2.0nm,22.0s
DAWY Dawson 124.46 13 *e*PKPdf PKPdf 07 46 29.9 -0.3
KDAK Kodiak Island 125.15 24 PFAKE 07 46 40.0 +8.3
KDAK LR LR
comp=Z,690nm,20.0s,MS5.3
LPAZ La Paz 127.13 239 PKP PKPdf 07 46 38.9 +2.1
LPAZ La Paz 127.13 239 PKP PKPdf 07 46 38.9 +2.1
comp=Z,2.5nm,0.9s,baz=3.8,slow=5.1,SNR=6.6
YKA Yellowknife Ar 129.05 1 PKP PKPdf 07 46 38.4 -0.6
YKA PP PP 07 48 45.6 -0.4
YKA Yellowknife Ar 129.05 1 PKP PKPdf 07 46 38.4 -0.6
comp=Z,5.4nm,0.9s,baz=354,slow=2.3,SNR=48
YKA PP PP 07 48 45.6 -0.4
comp=Z,4.7nm,1.1s,baz=359,slow=6.3,SNR=7.8
PKME Peaks-Kenny Pk 129.35 320 PFAKE 07 46 50.0 +10
PKME LR LR
comp=Z,592nm,20.0s,MS5.3
BBSR BB Station 130.47 303 PFAKE 07 46 50.0 +7.3
BBSR LR LR
comp=Z,1µm,21.0s,MS5.5
SIT Sitka 131.56 16 PFAKE 07 47 00.0 +16
SIT LR LR
comp=Z,1µm,20.0s,MS5.6
WES Weston 131.98 318 PFAKE 07 47 00.0 +15
WES LR LR
comp=Z,652nm,19.0s,MS5.4
HRV Harvard--Oak R 132.07 318 PFAKE 07 47 00.0 +15
HRV LR LR
comp=Z,617nm,19.0s,MS5.3
WRAK Wrangell Islan 132.88 14 PFAKE 07 47 00.0 +14
WRAK LR LR
comp=Z,2µm,22.0s,MS5.7
LONY Lake Ozonia 132.93 322 PFAKE 07 47 00.0 +13
LONY LR LR
comp=Z,450nm,20.0s,MS5.2
SJG San Juan 133.62 284 PFAKE 07 47 00.0 +11
SJG LR LR
comp=Z,790nm,19.0s,MS5.5
PPT Papeete 134.34 129 *e*PS PS 07 59 41.9 -0.5
comp=Z,60nm,23.8s
PPT Papeete 134.34 129 *e*SS SS 08 07 11.4 -0.5
comp=Z,120nm,27.0s
PPT *e*LR LR 08 29 50.8
comp=Z,683nm,26.2s
BINY Binghamton 135.08 320 PFAKE 07 47 00.0 +8.9
BINY LR LR
comp=Z,923nm,19.0s,MS5.5
NNA Nana 136.59 239 PFAKE 07 47 10.0 +15
NNA LR LR
comp=Z,1µm,20.0s,MS5.7
SSPA Standing Stone 137.12 319 PFAKE 07 47 10.0 +15
SSPA LR LR
comp=Z,965nm,20.0s,MS5.5
SDV Santo Domingo 137.53 271 PFAKE 07 47 10.0 +14
SDV LR LR
comp=Z,772nm,20.0s,MS5.4
ERPA Erie 137.59 322 PFAKE 07 47 10.0 +14
ERPA LR LR
comp=Z,826nm,19.0s,MS5.5
CBN Corbin 138.03 316 PFAKE 07 47 10.0 +13
CBN LR LR
comp=Z,1µm,21.0s,MS5.5
SDDR Presa de Saban 138.45 286 PFAKE 07 47 10.0 +12
SDDR LR LR
comp=Z,952nm,19.0s,MS5.5
ULM Lac du Bonnet 138.62 343 PKP PKPdf 07 46 57.6 +0.2
comp=Z,2.3nm,0.7s,baz=29,slow=4.0,SNR=7.1
MCWV Mont Chateau 138.91 319 PFAKE 07 47 10.0 +12
MCWV LR LR
comp=Z,2µm,20.0s,MS5.8
EYMN Ely 139.13 337 PFAKE 07 47 10.0 +12
EYMN LR LR
comp=Z,1µm,20.0s,MS5.6
AAM Ann Arbor 139.62 325 PFAKE 07 47 10.0 +11
AAM LR LR
comp=Z,1µm,19.0s,MS5.7
COWI Conover 139.64 333 PFAKE 07 47 10.0 +11
COWI LR LR
comp=Z,1µm,19.0s,MS5.6
CNNC Cliffs of the 139.81 312 PFAKE 07 47 10.0 +10
CNNC LR LR
comp=Z,1µm,20.0s,MS5.7
RKT Rikitea 139.83 149 *e*LR LR 08 32 23.4
comp=Z,1µm,35.5s
RKT Rikitea 139.83 149 *e*T 10 22 25.2
comp=Z,10nm,0.2s
AGMN Agassiz Refuge 140.35 341 PFAKE 07 47 10.0 +9.4
AGMN LR LR
comp=Z,1µm,20.0s,MS5.7
ACSO Alum Creek Sta 140.53 322 PFAKE 07 47 10.0 +8.8
ACSO LR LR
comp=Z,1µm,20.0s,MS5.7
BLA Blacksburg 140.62 316 PFAKE 07 47 10.0 +8.6
BLA LR LR
comp=Z,1µm,22.0s,MS5.7
DGMT Dagmar 142.25 350 PFAKE 07 47 20.0 +16
DGMT LR LR
comp=Z,740nm,19.0s,MS5.5
NHSC New Hope 142.47 310 PFAKE 07 47 20.0 +15
NHSC LR LR
comp=Z,584nm,21.0s,MS5.3
JFWS Jewell Farm 142.60 331 PFAKE 07 47 20.0 +15
JFWS LR LR
comp=Z,1µm,21.0s,MS5.6
TZTN Tazewell 143.08 318 PFAKE 07 47 20.0 +14
TZTN LR LR
comp=Z,1µm,22.0s,MS5.6
NLWA Neilton Lookou 143.18 12 PFAKE 07 47 20.0 +14
NLWA LR LR
comp=Z,1µm,19.0s,MS5.7
NEW Newport 143.20 4 PFAKE 07 47 20.0 +14
NEW LR LR
comp=Z,1µm,19.0s,MS5.7
OTAV Otavalo 143.23 255 *e*PKPdf PKPdf 07 47 05.6 -1.3
OTAV LR LR
comp=Z,2µm,19.0s,MS5.9
BLO Bloomington 143.31 323 *e*PKPdf PKPdf 07 47 03.3 -2.9
EGMT Eagleton 143.40 356 *e*PKPdf PKPdf 07 47 04.8 -1.2
EGMT LR LR
comp=Z,2µm,19.0s,MS5.8
WCI Wyandotte Cave 143.79 322 *e*PKPdf PKPdf 07 47 04.8 -2.3
WCI LR LR
comp=Z,933nm,20.0s,MS5.5
HDIL Hopedale 143.89 328 *e*PKPdf PKPdf 07 47 05.1 -2.1
HDIL LR LR
comp=Z,1µm,20.0s,MS5.7
CCCC Cccc 144.23 290 *e*P PKPdf 07 46 58.5 -10
LAO LASA Array 144.32 351 *e*PKPdf PKPdf 07 47 06.6 -1.1
LAO LR LR
comp=Z,1µm,21.0s,MS5.7
CPCT Cooper Cave 144.35 317 *e*PKPdf PKPdf 07 47 06.1 -2.0
ECSD EROS,Sioux Fal 144.60 338 *e*PKPdf PKPdf 07 47 06.3 -2.0
ECSD LR LR
comp=Z,1µm,21.0s,MS5.6
CHMT Chamberlain Mo 144.66 359 *e*PKPdf PKPdf 07 47 06.8 -1.5
GOGA Godfrey 144.72 313 *e*PKPdf PKPdf 07 47 07.6 -1.2
GOGA LR LR
comp=Z,899nm,20.0s,MS5.5
MSO Missoula 144.75 0 *e*PKPdf PKPdf 07 47 07.2 -1.2
MSO LR LR
comp=Z,581nm,21.0s,MS5.3
USIN University of 144.78 323 *e*PKPdf PKPdf 07 47 07.2 -1.6
HAWA Hanford 144.84 7 PFAKE 07 47 20.0 +11
HAWA LR LR
comp=Z,693nm,20.0s,MS5.4
YPT Yellepit 145.24 6 P PKPbc 07 47 09.4 +0.4
SWET Sewanee 145.42 318 *e*PKPbc PKPbc 07 47 09.6 -0.4
LNOR Lincton Mounta 145.49 6 P PKPdf 07 47 09.7 -0.1
DWPF Disney 145.53 303 *e*PKPdf PKPdf 07 47 10.7 +0.3
DWPF LR LR
comp=Z,969nm,20.0s,MS5.6
GCMT Greycliff 145.61 355 *e*PKPdf PKPdf 07 47 10.5 +0.5
VFP Flag Point 145.62 10 P PKPdf 07 47 10.3 +0.3
SLM Saint Louis 145.78 326 *e*PKPdf PKPdf 07 47 10.9 +0.4
SIUC Southern Illin 145.85 324 *e*PKPdf PKPdf 07 47 11.3 +0.7
BOZ Bozeman (W) 145.88 357 *e*PKPdf PKPdf 07 47 11.5 +1.1
BOZ LR LR
comp=Z,1µm,20.0s,MS5.6
MGV Manicaragua 146.07 293 *e*P PKPbc 07 47 15.9 +3.6
WVT Waverly 146.07 321 PFAKE 07 47 20.0 +8.9
WVT LR LR
comp=Z,8.0nm,22.0s
DLMT Dillon 146.20 359 *e*PKPdf PKPdf 07 47 11.6 +0.6
RLMT Red Lodge 146.24 354 *e*PKPdf PKPdf 07 47 12.5 +1.5
RLMT LR LR
comp=Z,1µm,19.0s,MS5.6
FVM French Village 146.35 326 *e*PKPdf PKPdf 07 47 11.9 +0.4
FVM French Village 146.35 326 PKIKP PKPdf 07 47 12.1 +0.6
RSSD Black Hills 146.40 347 PFAKE 07 47 20.0 +8.6
RSSD LR LR
comp=Z,4µm,22.0s,MS6.1
VIPM Ingram Point 146.54 9 P PKPdf 07 47 13.3 +1.7
BCIP Isla Barro Col 146.58 269 *e*PKPdf PKPdf 07 47 13.4 +0.9
BCIP LR LR
comp=Z,1µm,20.0s,MS5.7
BMO Blue Mountains 146.59 5 *e*PKPdf PKPdf 07 47 11.9 +0.2
BMO LR LR

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1µm,22.0s,MS5.7						
QLMT	**Earthquake Lak**	**146.69**	**357**	*e*PKPdf	PKPdf	07 47 13.3	+1.4
MCMT	**McKenzie Canyo**	**146.74**	**359**	*e*PKPdf	PKPdf	07 47 13.9	+1.9
YNR	**Norris Junctio**	**146.76**	**356**	*e*PKPab	PKPab	07 47 15.8	+1.0
YMR	**Madison River**	**146.82**	**356**	*e*PKPdf	PKPdf	07 47 13.1	+1.0
YMR				*e*PKPab	PKPab	07 47 15.7	+0.6
YMR				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
GLAT	**Glass**	**146.87**	**322**	*e*PKPbc	PKPbc	07 47 14.5	+0.3
PARMO	**Parma**	**146.88**	**323**	*e*PKPbc	PKPbc	07 47 14.8	+0.5
PARMO				*e*PKPab	PKPab	07 47 16.7	+1.1
LKWY	**Lake**	**146.89**	**356**	*e*PKPab	PKPab	07 47 16.7	+1.4
LKWY				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
PLAL	**Pickwick Lake**	**146.96**	**319**	*e*PKPdf	PKPdf	07 47 12.6	0.0
PLAL				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
YFT	**Old Faithful**	**147.03**	**356**	*e*PKPab	PKPab	07 47 17.1	+1.2
LRAL	**Lakeview Retre**	**147.41**	**315**	*e*PKPdf	PKPdf	07 47 14.6	+1.2
LRAL				*e*PKPab	PKPab	07 47 18.0	+0.3
LRAL				LR	LR		
	comp=Z,935nm,20.0s,MS5.6						
GNAR	**Gosnell**	**147.51**	**323**	*e*PKPbc	PKPbc	07 47 16.5	+0.4
IMW	**Indian Meadow**	**147.59**	**356**	*e*PKPdf	PKPdf	07 47 14.4	+1.0
IMW				*e*PKPab	PKPab	07 47 18.9	+0.8
MOOW	**Moose Ponds**	**147.73**	**356**	*e*PKPdf	PKPdf	07 47 14.0	+0.4
BBOR	**Butler Butte**	**147.74**	**12**	P	PKPbc	07 47 16.6	+0.2
LOHW	**Long Hollow**	**147.85**	**356**	*e*PKPdf	PKPdf	07 47 14.6	+0.8
LOHW				*e*PKPab	PKPab	07 47 19.7	+0.6
DCID1	**Drake Creek**	**147.91**	**357**	*e*PKPdf	PKPdf	07 47 14.5	+0.6
DCID1				*e*PKPab	PKPab	07 47 20.0	+0.6
TPAW	**Teton Pass**	**148.00**	**356**	*e*PKPdf	PKPdf	07 47 15.2	+1.2
TPAW				*e*PKPab	PKPab	07 47 20.5	+0.8
HLID	**Hailey**	**148.01**	**1**	*e*PKPdf	PKPdf	07 47 14.7	+0.6
HLID				*e*PKPab	PKPab	07 47 20.2	+0.4
HLID				LR	LR		
	comp=Z,901nm,20.0s,MS5.6						
OXF	**Oxford**	**148.10**	**320**	*e*PKPdf	PKPdf	07 47 15.3	+0.8
OXF				LR	LR		
	comp=Z,833nm,20.0s,MS5.5						
REDW	**Red Top Meadow**	**148.12**	**356**	*e*PKPdf	PKPdf	07 47 14.7	+0.4
HBAR	**Harrisburg**	**148.18**	**323**	*e*PKPbc	PKPbc	07 47 18.2	+0.4
BUOR	**Burton Butte**	**148.41**	**12**	P	PKPbc	07 47 19.7	+1.4
KSU1	**Kansas State U**	**148.54**	**334**	*e*PKPdf	PKPdf	07 47 15.0	-0.1
KSU1				*e*PKPbc	PKPbc	07 47 19.3	+0.7
KSU1				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
BRAL	**Brewton**	**148.57**	**312**	*e*PKPbc	PKPbc	07 47 19.2	+0.2
BRAL				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
BW06	**Boulder Array**	**148.60**	**354**	*e*PKPdf	PKPdf	07 47 14.8	-0.2
BW06				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
PDAR	**Pinedale Array**	**148.60**	**354**	PKP	PKPdf	07 47 15.1	0.0
	comp=Z,3.7nm,0.7s,baz=48,slow=2.2,SNR=20						
PDAR				PKPbc	PKPbc	07 47 19.9	+1.2
	comp=Z,20nm,0.8s,baz=64,slow=2.1,SNR=61						
PDAR				PP	PP	07 50 47.6	+0.6
	comp=Z,1.5nm,1.1s,baz=48,slow=2.2,SNR=3.6						
SOR	**Soroa**	**148.62**	**295**	*e*P	PKPdf	07 47 14.1	-1.6
AHID	**Auburn Hatcher**	**148.73**	**356**	*e*PKPbc	PKPbc	07 47 18.5	-0.5
AHID				LR	LR		
	comp=Z,688nm,20.0s,MS5.4						
KRMB	**Red Mountain**	**148.75**	**15**	*e*PKPbc	PKPbc	07 47 20.3	+1.2
YBH	**Yreka Blue Hor**	**148.84**	**13**	*e*PKPbc	PKPbc	07 47 19.6	+0.3
YBH				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
WVOR	**Wild Horse Val**	**148.85**	**7**	*e*PKPdf	PKPdf	07 47 15.8	+0.3
WVOR				*e*PKPbc	PKPbc	07 47 20.2	+0.9
WVOR				LR	LR		
	comp=Z,798nm,19.0s,MS5.5						
MOD	**Modoc**	**149.13**	**10**	*e*PKPdf	PKPdf	07 47 16.6	+0.6
MOD				LR	LR		
	comp=Z,785nm,21.0s,MS5.5						
RWWY	**Rawlins**	**149.35**	**350**	*e*PKPdf	PKPdf	07 47 17.2	+0.8
RWWY				*e*PKPbc	PKPbc	07 47 21.7	+1.0
PHWY	**Pilot Hill**	**149.40**	**348**	*e*PKPdf	PKPdf	07 47 17.5	+1.1
PHWY				*e*PKPbc	PKPbc	07 47 21.7	+0.9
UALR	**University of**	**149.71**	**323**	*e*PKPdf	PKPdf	07 47 17.5	+0.3
UALR				*e*PKPbc	PKPbc	07 47 22.2	+0.5
UALR				*e*PKPab	PKPab	07 47 27.2	+0.3
HVU	**Hansel Valley**	**149.79**	**359**	*e*PKPdf	PKPdf	07 47 18.3	+1.3
HVU				*e*PKPbc	PKPbc	07 47 22.8	+1.0
HWUT	**Hardware Ranch**	**149.91**	**357**	*e*PKPdf	PKPdf	07 47 17.6	+0.4
HWUT				*e*PKPbc	PKPbc	07 47 22.7	+0.7
HWUT				LR	LR		
	comp=Z,845nm,19.0s,MS5.6						
WDC	**Whiskeytown Da**	**149.97**	**13**	*e*PKPbc	PKPbc	07 47 22.0	-0.3
WDC				LR	LR		
	comp=Z,932nm,20.0s,MS5.6						
CBKS	**Cedar Bluff**	**150.04**	**338**	*e*PKPdf	PKPdf	07 47 18.6	+1.1
CBKS				*e*PKPbc	PKPbc	07 47 22.7	+0.3
CBKS				LR	LR		
	comp=Z,1µm,19.0s,MS5.8						
SPUT	**South Promonto**	**150.25**	**358**	*e*PKPdf	PKPdf	07 47 17.8	+0.1
SPUT				*e*PKPbc	PKPbc	07 47 23.3	+0.5
KIPM	**Iron Peak**	**150.47**	**15**	*e*PKPbc	PKPbc	07 47 22.8	-0.7
KCPM	**Cahto Peak**	**150.56**	**16**	*e*PKPbc	PKPbc	07 47 24.4	+0.7
MIAR	**Mount Ida**	**150.58**	**325**	*e*PKPdf	PKPdf	07 47 19.1	+0.6
MIAR				*e*PKPbc	PKPbc	07 47 24.6	+0.7
MIAR				LR	LR		
	comp=Z,673nm,19.0s,MS5.5						
BGU	**Big Grassy Mou**	**150.64**	**359**	*e*PKPdf	PKPdf	07 47 18.7	+0.3
BGU				*e*PKPbc	PKPbc	07 47 24.4	+0.6
ELK	**Elko**	**150.80**	**2**	*e*PKPdf	PKPdf	07 47 19.8	+1.2
ELK				*e*PKPbc	PKPbc	07 47 24.7	+0.5
ELK				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
CTU	**Camp Tracy**	**150.83**	**357**	*e*PKPbc	PKPbc	07 47 24.7	+0.4
ISCO	**Idaho Springs**	**150.87**	**347**	PFAKE		07 47 30.0	+11
ISCO				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
NOQ	**North Oquirrh**	**150.89**	**357**	*e*PKPbc	PKPbc	07 47 24.8	+0.3
JLU	**Jordanelle**	**150.90**	**356**	*e*PKPdf	PKPdf	07 47 19.8	+1.0
JLU				*e*PKPbc	PKPbc	07 47 25.3	+0.9
BMN	**Battle Mountai**	**150.98**	**5**	*e*PKPdf	PKPdf	07 47 19.6	+0.7
BMN				*e*PKPbc	PKPbc	07 47 25.5	+0.9
BMN				LR	LR		
	comp=Z,907nm,19.0s,MS5.6						
DAU	**Daniels Canyon**	**151.08**	**356**	*e*PKPdf	PKPdf	07 47 20.1	+1.0
HOPS	**Hopland**	**151.35**	**15**	*e*PKPbc	PKPbc	07 47 27.0	+1.4
HOPS				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
DUG	**Dugway**	**151.37**	**359**	*e*PKPdf	PKPdf	07 47 20.1	+0.6
DUG				*e*PKPbc	PKPbc	07 47 26.2	+0.6
DUG				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
OHCM	**Honcut**	**151.40**	**13**	*e*PKPdf	PKPdf	07 47 19.7	+0.1
OHCM				*e*PKPbc	PKPbc	07 47 25.7	+0.1
PAHR	**Pah Rah Range**	**151.43**	**9**	*e*PKPdf	PKPdf	07 47 20.2	+0.6
PAHR				*e*PKPbc	PKPbc	07 47 26.6	+0.9
PAHR				*e*PKPab	PKPab	07 47 33.2	-0.6
MPU	**Maple Canyon**	**151.50**	**357**	*e*PKPdf	PKPdf	07 47 20.5	+0.8
MPU				*e*PKPbc	PKPbc	07 47 26.3	+0.5
MPU				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
NLU	**North Lily Min**	**151.58**	**357**	*e*PKPdf	PKPdf	07 47 19.8	0.0
NLU				*e*PKPbc	PKPbc	07 47 26.6	+0.5
JTS	**JuntasAbangare**	**151.71**	**270**	PFAKE		07 47 30.0	+9.2
JTS				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
SMCO	**Snowmass**	**151.75**	**349**	*e*PKPdf	PKPdf	07 47 16.1	-4.0
SMCO				*e*PKPbc	PKPbc	07 47 22.3	-4.2
NSHM	**Saint Helena R**	**151.91**	**15**	*e*PKPbc	PKPbc	07 47 27.3	+0.5
TMUT	**Trail Mountain**	**152.19**	**356**	*e*PKPdf	PKPdf	07 47 21.4	+0.7
TMUT				*e*PKPbc	PKPbc	07 47 28.4	+0.9
MCCM	**Marconi Confer**	**152.20**	**16**	PFAKE		07 47 30.0	+9.2
MCCM				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
SRU	**San Rafael**	**152.31**	**355**	*e*PKPdf	PKPdf	07 47 21.9	+0.9
SRU				*e*PKPbc	PKPbc	07 47 28.0	+0.2
SDCO	**Great Sand Dun**	**152.80**	**346**	*e*PKPdf	PKPdf	07 47 22.2	+0.5
SDCO				*e*PKPbc	PKPbc	07 47 29.6	+0.7
SDCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
NVAR	**Mina Array Bea**	**152.84**	**8**	PKP	PKPdf	07 47 23.2	+1.4
NVAR				PKPbc	PKPbc	07 47 30.1	+1.2
NVAR				PP	PP	07 51 14.1	+2.7
NVAR	**Mina Array Bea**	**152.84**	**8**	PKP	PKPdf	07 47 23.2	+1.4
	comp=Z,0.6nm,0.7s,baz=96,slow=0.9,SNR=9.7						
NVAR				PKPbc	PKPbc	07 47 30.1	+1.2
	comp=Z,18nm,0.9s,baz=31,slow=1.1,SNR=47						
NVAR				PP	PP	07 51 14.1	+2.7
	comp=Z,2.4nm,0.9s,baz=357,slow=2.8,SNR=4.8						
PV10	**Paradox Valley**	**152.87**	**352**	*e*PKPbc	PKPbc	07 47 29.3	+0.3
PV10				*e*PKPab	PKPab	07 47 40.7	+0.9
CMB	**Columbia Colle**	**152.88**	**12**	*e*PKPbc	PKPbc	07 47 29.2	+0.1
CMB				*e*PKPab	PKPab	07 47 41.5	+1.6
CMB				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
MSU	**Marysvale**	**153.03**	**357**	*e*PKPdf	PKPdf	07 47 23.4	+1.4
MSU				*e*PKPbc	PKPbc	07 47 30.6	+1.3
MVU	**Marysvale**	**153.03**	**357**	PFAKE		07 47 30.0	+7.9
MVU				LR	LR		
	comp=Z,990nm,21.0s,MS5.6						
PV01	**Paradox Valley**	**153.04**	**351**	*e*PKPdf	PKPdf	07 47 21.8	-0.3
WMOK	**Wichita Mounta**	**153.12**	**332**	*e*PKPdf	PKPdf	07 47 22.9	+0.6
WMOK				*e*PKPbc	PKPbc	07 47 30.1	+0.4
WMOK				*e*PKPab	PKPab	07 47 40.5	-0.6
WMOK				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
WMOK	**Wichita Mounta**	**153.12**	**332**	*e*PKIKP	PKPdf	07 47 23.0	+0.7
WMOK				*e*		07 47 30.1	
WMOK				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.7						
TRCR	**Troy Canyon**	**153.17**	**3**	*e*PKPdf	PKPdf	07 47 22.2	0.0
TRCR				*e*PKPbc	PKPbc	07 47 30.4	+0.7
TRCR				*e*PKPab	PKPab	07 47 42.4	+1.3
NATX	**Nacogdoches**	**153.21**	**322**	PFAKE		07 47 30.0	+7.5
NATX				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
TPH	**Tonopah**	**153.31**	**6**	PFAKE		07 47 30.0	+7.5
TPH				LR	LR		
	comp=Z,956nm,22.0s,MS5.6						
MTUM	**Tungsten Hills**	**153.85**	**9**	*e*PKPdf	PKPdf	07 47 23.8	+0.5
MTUM				*e*PKPbc	PKPbc	07 47 32.4	+1.2
SAO	**San Andreas Ge**	**153.86**	**14**	PFAKE		07 47 30.0	+6.7
SAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
MVCO	**Mesa Verde**	**153.93**	**350**	PFAKE		07 47 30.0	+6.6
MVCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
TEIG	**Tepich**	**154.03**	**293**	PFAKE		07 47 40.0	+16
TEIG				LR	LR		
	comp=Z,808nm,19.0s,MS5.6						
TGUH	**Tegucigalpa,Un**	**154.07**	**279**	*e*PKPdf	PKPdf	07 47 23.9	-0.2
TGUH				*e*PKPbc	PKPbc	07 47 34.4	+2.1
TGUH				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
TPNV	**Topopah Spring**	**154.52**	**5**	PFAKE		07 47 40.0	+16
TPNV				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
DAC	**Darwin (Calif)**	**155.05**	**7**	*e*PKPdf	PKPdf	07 47 25.4	+0.4
DAC				*e*PKPbc	PKPdf	07 47 34.4	+9.4
DAC				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
HKT	**Hockley**	**155.19**	**321**	PFAKE		07 47 40.0	+15
HKT				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
ANMO	**Albuquerque**	**155.70**	**345**	*e*PKPdf	PKPdf	07 47 26.6	+0.7
ANMO				*e*PKPab	PKPab	07 47 52.4	+0.4
ANMO				LR	LR		
	comp=Z,941nm,20.0s,MS5.6						
LAZ	**Ladron**	**156.38**	**346**	*e*PKPdf	PKPdf	07 47 28.0	+1.2
BNM	**Barren Site**	**156.50**	**345**	*e*PKPdf	PKPdf	07 47 26.8	-0.2
BNM				*e*PKPdif		07 47 37.4	
LENM	**Lemitar**	**156.57**	**346**	*e*PKPdf	PKPdf	07 47 27.0	-0.1
LENM				*e*pPKPdf	pPKPdf	07 47 39.3	+8.8
JCT	**Junction City**	**157.08**	**328**	*e*PKPdf	PKPdf	07 47 28.5	+0.7
JCT				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
PFO	**Pinyon Flat Ob**	**157.81**	**6**	PFAKE		07 47 40.0	+11
PFO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
KVTX	**Kingsville**	**158.15**	**319**	PFAKE		07 47 40.0	+11
KVTX				LR	LR		
	comp=Z,582nm,19.0s,MS5.4						
MNTX	**Cornudas Mount**	**158.43**	**340**	*e*PKPdf	PKPdf	07 47 29.6	+0.2
MNTX				*e*PKPab	PKPab	07 48 04.1	+0.3
MNTX				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
TUC	**Tucson**	**159.07**	**353**	PFAKE		07 47 40.0	+10
TUC				LR	LR		
	comp=Z,741nm,21.0s,MS5.5						
LTX	**Lajitas**	**159.89**	**334**	PFAKE		07 47 40.0	+8.7
LTX				LR	LR		
	comp=Z,953nm,21.0s,MS5.6						
TXAR	**Lajitas Array**	**159.89**	**334**	PKP	PKPdf	07 47 31.5	+0.3
TXAR				PKPab	PKPab	07 48 12.0	+1.7
TXAR				PP	PP	07 51 50.9	-0.1
TXAR	**Lajitas Array**	**159.89**	**334**	PKP	PKPdf	07 47 31.5	+0.3
	comp=Z,1.3nm,1.0s,baz=168,slow=0.6,SNR=11						
TXAR				PKPab	PKPab	07 48 12.0	+1.7
	comp=Z,4.2nm,0.9s,baz=40,slow=4.6,SNR=13						
TXAR				PP	PP	07 51 50.9	-0.1
	comp=Z,1.3nm,1.1s,baz=28,slow=3.0,SNR=3.5						

*NIED **09** 07:28:00, 42.10N×14260E, h59km, Mw3.7 Best double couple: Mo3.81000×10^14 NP1:φs218.00000°, δ23.00000°, λ99.00000°. NP2:φs28.00000°, δ68.00000°, λ86.00000°.*

JMA 09 07:28:47.3±0.2**, 4211N×14262E, h65**km±2km**, M3.5, 5C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.20**	**30**	⇑P	Pn	07 28 57.1	-0.2
JNBK				*e*S	Sn	07 29 04.5	-0.1
JEM	**Erimo**	**0.41**	**103**	⇑P	Pn	07 28 59.2	+0.4
JEM				*e*S	Sn	07 29 08.3	+1.1
JBT2	**Biratori 2**	**0.69**	**344**	⇓P	Pn	07 29 01.5	-0.3
JBT2				*e*S	Sn	07 29 12.3	-0.1
JCH	**Churui**	**0.75**	**47**	⇑P	Pn	07 29 02.6	+0.2
JCH				*e*S	Sn	07 29 14.0	+0.5
JFR	**Furan**	**1.05**	**359**	P	Pn	07 29 06.2	0.0
JFR				*e*S	Sn	07 29 21.1	+0.8
JEW	**Eniwo**	**1.13**	**311**	⇓P	Pn	07 29 07.3	+0.1
JEW				*e*S	Sn	07 29 22.6	+0.5
JOB	**Onbets**	**1.20**	**48**	⇑P	Pn	07 29 09.2	+1.1
JOB				*e*S	Sn	07 29 25.8	+2.2
JKB	**Kayabe**	**1.20**	**260**	⇓P	Pn	07 29 07.8	-0.3
JKB				*e*S	Sn	07 29 23.0	-0.7
JNB	**Noboribetsu**	**1.23**	**288**	⇓P	Pn	07 29 07.6	-0.8
JNB				*e*S	Sn	07 29 23.1	-1.2
JOT	**Ohata**	**1.38**	**239**	⇓P	Pn	07 29 10.2	-0.3
JOT				*e*S	Sn	07 29 27.2	-0.8
JAB	**Ashibetsu**	**1.42**	**348**	P	Pn	07 29 11.5	+0.4
JAB				*e*S	Sn	07 29 30.8	+1.9
JAR	**Ashorobuto**	**1.46**	**35**	⇑P	Pn	07 29 11.7	+0.2
JAR				*e*S	Sn	07 29 29.6	-0.1
JYM2	**Yakumo 2**	**1.67**	**271**	⇓P	Pn	07 29 14.1	-0.3
JYM2				*e*S	Sn	07 29 35.0	+0.1

IDC 09 07:52:41.8±67.0**, 1972S×17985W, h0**km**, mb3.9**/3**, mb1 4.0**/3**, mb1mx3.7**/13**, mbtmp3.9**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.9**/22**, Error ellipse: s-maj=1207.0km s-min=159.1km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.02**	**257**	LR	LR	07 59 30.2	
	comp=Z,189nm,21.6s,baz=158,slow=31						
STKA	**Stephens Creek**	**36.58**	**243**	P	P	07 59 49.0	-0.6
	1.1nm,0.6s,baz=105,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**42.99**	**262**	P	P	08 00 43.6	+0.5
	0.4nm,0.3s,baz=96,slow=7.6,SNR=24						
ASAR	**Alice Springs**	**43.01**	**256**	P	P	08 00 43.0	-0.2
	1.0nm,0.5s,baz=92,slow=7.9,SNR=16						

GUC 09 08:13:25.8±0.6**, 3042S×7148W, h25**km±10km**, ML4.1, 5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.55**	**22**	⇓*i*P	Pb	08 13 36.1	-0.7
LSCH				*i* S	Sb	08 13 44.5	+0.2
TLL	**Tololo Astrono**	**0.64**	**67**	⇓*i*P	Pb	08 13 38.4	+0.1
TLL				*i* S	Sb	08 13 47.9	+1.1
VACH	**Vallenar**	**1.94**	**19**	⇓*i*P	Pn	08 13 56.2	-1.0
VACH				*i* S	Sn	08 14 21.8	+1.0
VACH				AML	AML	08 14 24.4	
	comp=N,3µm,0.4s						
PEL	**Peldehue**	**2.80**	**166**	*e*P	Pn	08 14 10.5	+1.5
PEL				*i* S	Sn	08 14 44.2	+2.3
PEL				AML	AML	08 14 57.4	
	comp=E,1µm,0.4s						
FCH	**Farellones**	**3.07**	**161**	*e*P	Pn	08 14 14.8	+2.0
FCH				*i* S	Sn	08 14 51.7	+3.0
FCH				AML	AML	08 14 59.1	
	comp=E,226nm,0.3s						
RCDM	**Rinconada Maip**	**3.12**	**170**	⇓*i*P	Pn	08 14 14.4	+1.1
RCDM				*i* S	Sn	08 14 51.9	+2.2
RCDM				AML	AML	08 15 00.3	
	comp=E,259nm,0.9s						
ANTU	**Antumapu**	**3.22**	**167**	*i* S	Sn	08 14 54.2	+1.9
CHCH	**Chadas Angostu**	**3.57**	**169**	*e*P	Pn	08 14 21.0	+1.4
LMEL	**Las Melosas**	**3.59**	**163**	⇓*i*P	Pn	08 14 21.5	+1.7
LMEL				*i* S	Sn	08 15 03.7	+2.4
LMEL				AML	AML	08 15 17.1	
	comp=N,225nm,0.2s						
CACH	**El Canelo**	**3.76**	**169**	*e*P	Pn	08 14 24.4	+2.2
CACH				*i* S	Sn	08 15 09.1	+3.4

MDD 09 08:17:35.4±1.3**, 3570N×167W, h29**km±25km**, mb3.8**/1**, mbLg2.4**/15**, 1C, Error ellipse: s-maj=15.6km s-min=7.4km az=138.0, PRXIMO, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALB	**Alboran**	**1.13**	**283**	P	Pn	08 17 53.2	-2.0
	10nm,0.2s,SNR=4.0						
EALB				S	Sn	08 18 07.3	-2.5
	50nm,0.2s						
ZAI	**Zaio**	**1.14**	**231**	P	Pn	08 17 54.0	-1.3
ENIJ	**Nijar**	**1.34**	**341**	P	Pn	08 17 55.6	-2.5
	2.8nm,0.1s,SNR=4.7						
ENIJ				S	Sn	08 18 12.2	-2.7
	35nm,0.2s,SNR=11						
EBER	**Berja**	**1.55**	**321**	P	Pn	08 17 59.1	-1.8
	7.2nm,0.3s,SNR=7.9						
EBER				S	Sn	08 18 17.4	-2.6
	56nm,0.4s,SNR=7.9						
EGUA	**Guajares**	**1.90**	**307**	P	Pn	08 18 05.0	-0.9
	1.7nm,0.2s,SNR=4.0						
EGUA				S	Sn	08 18 26.0	-2.8
	4.5nm,0.2s,SNR=4.0						
EQUE	**Quentar**	**2.07**	**317**	⇑P	Pn	08 18 07.8	-0.3
	8.4nm,0.3s,SNR=18						
EQUE				S	Sn	08 18 31.2	-1.7
	18nm,0.4s,SNR=7.1						
EMUR	**La Murta**	**2.17**	**9**	P	Pn	08 18 07.2	-2.3
	2.2nm,0.2s,SNR=5.5						
EMUR				S	Sn	08 18 31.9	-3.4
	3.1nm,0.1s,SNR=4.0						
ERON	**Agron**	**2.17**	**308**	P	Pn	08 18 09.0	-0.4
	7.3nm,0.2s,SNR=6.7						
ERON				S	Sn	08 18 33.6	-1.7
	5.5nm,0.2s						
ECOG	**Cogollos-Vega**	**2.19**	**316**	P	Pn	08 18 09.2	-0.5
	4.8nm,0.3s,SNR=7.9						
ECOG				S	Sn	08 18 33.7	-2.2
	4.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.38**	**332**	P	Pn	08 18 12.9	+0.5
	29nm,0.4s,SNR=31						
EQES				S	Sn	08 18 41.0	+0.4
	14nm,0.2s,SNR=7.0						
EMIJ	**Mijas**	**2.65**	**290**	P	Pn	08 18 14.8	-1.3
	0.8nm,0.1s,SNR=7.9						
EMIJ				S	Sn	08 18 44.0	-3.3
	7.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**2.94**	**2**	P	Pn	08 18 19.3	-0.8
	3.2nm,0.1s,SNR=13						
ETOB				S	Sn	08 18 52.8	-1.6
	5.8nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**2.99**	**326**	P	Pn	08 18 21.6	+0.9
	2.4nm,0.2s,SNR=7.9						
EBAN				S	Sn	08 18 53.5	-2.0
	3.5nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**3.01**	**347**	P	Pn	08 18 19.9	-1.1
	3.7nm,0.2s,SNR=7.8						
EVIA				S	Sn	08 18 53.5	-2.6
	7.3nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.21**	**21**	P	Pn	08 18 23.6	-0.2
	0.2nm,0.1s,SNR=4.0						
EBEN				S	Sn	08 18 58.0	-3.1
	1.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**3.39**	**317**	P	Pn	08 18 25.5	-0.7
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	08 19 02.3	-3.1
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.51**	**299**	P	Pn	08 18 40.2	-1.5
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	08 19 28.1	-5.1
	0.5nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**4.96**	**301**	*e*Pn	Pn	08 18 47.2	-0.6
PBAR				*e*Sn	Sn	08 19 41.0	-3.1
ETOR	**Torete**	**5.12**	**357**	P	Pn	08 18 49.2	-0.8
	6.5nm,0.2s,SNR=5.6						
PVAQ	**Vaqueiros**	**5.16**	**291**	*e*Pn	Pn	08 18 50.4	-0.1
PVAQ				*e*Sn	Sn	08 19 45.4	-3.6
PVAQ				A		08 19 49.0	
	2.6nm,0.4s						
PVAQ	**Vaqueiros**	**5.16**	**291**	Pn	Pn	08 18 50.4	-0.1
PVAQ				Sn	Sn	08 19 45.4	-3.6
	1.3nm,0.4s						
EBAD	**Badajoz**	**5.24**	**307**	P	Pn	08 18 50.1	-1.6
	0.8nm,0.1s,SNR=4.0						
EBAD				S	Sn	08 19 46.5	-4.6
	2.6nm,0.2s,SNR=7.9						

*ISCJB **09** 08:19:09.8±2.8, 208S±03×1796E±03, h585km±43km, mb3.6/5, Error ellipse: s-maj=45.1km s-min=30.8km az=139.3*

*NEIC **09** 08:19:09.9±1.9, 2083S×17962E, h561km±26km, mb3.8/1, Error ellipse: s-maj=30.3km s-min=21.6km az=140.0*

*IDC **09** 08:19:11.1±17.0, 2088S×17954E, h570km±93km, mb3.0/5, mb1 3.2/6, mb1mx3.0/16, mbtmp3.0/6, Error ellipse: s-maj=292.1km s-min=29.1km az=41.0*

ISC 09 08:19:10.0±2.5**, 208S**±02×**1796E**±03**, h564**km±36km**, n8, σ0.55**/8**, mb3.5**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**12.22**	**358**	*e*P	**P**	**08 21 51.0**	**0.0**
DZM	**Mont Dzumac**	**12.32**	**262**	P	**P**	**08 21 51.8**	**-0.1**
	0.2nm,0.3s,baz=103,slow=18,SNR=2.8						
CTA	**Charters Tower**	**31.23**	**265**	P	**P**	**08 24 45.6**	**+1.2**
	1.1nm,0.3s,mb3.8,baz=88,slow=9.3,SNR=6.0						
CTAO	**Charters Tower**	**31.23**	**265**	*e*P	**P**	**08 24 44.7**	**+0.3**
	1.7nm,0.6s,mb3.8						
ASAR	**Alice Springs**	**42.27**	**257**	P	**P**	**08 26 14.6**	**-0.2**
	3.2nm,0.7s,mb4.0,baz=96,slow=8.3,SNR=31						
WRA	**Warramunga Arr**	**42.34**	**263**	P	**P**	**08 26 14.9**	**-0.5**
	0.8nm,0.3s,mb3.7,baz=98,slow=7.6,SNR=9.6						
FITZ	**Fitzroy Crossi**	**50.77**	**263**	P	**P**	**08 27 19.0**	**0.0**
	0.6nm,0.3s,mb3.4,baz=129,slow=6.5,SNR=7.7						
VNDA	**Vanda**	**57.42**	**185**	P	**P**	**08 28 04.9**	**+0.1**
	0.3nm,0.4s,mb2.9,baz=14,slow=5.6,SNR=3.6						

IDC 09 08:20:11.2±1.2**, 188N×12741E, h0**km**, mb4.0**/5**, mb1 4.2**/5**, mb1mx3.9**/15**, mbtmp4.1**/5**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx3.1**/25**, Error ellipse: s-maj=122.3km s-min=18.1km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**12.57**	**197**	LR	LR	08 28 42.0	
	comp=Z,201nm,19.1s,baz=289,slow=41						
WRA	**Warramunga Arr**	**22.73**	**163**	P	P	08 25 15.8	+0.9
	4.2nm,0.3s,baz=342,slow=10.0,SNR=126						
ASAR	**Alice Springs**	**26.16**	**166**	P	P	08 25 47.4	-0.1
	1.3nm,0.5s,baz=349,slow=7.4,SNR=38						
STKA	**Stephens Creek**	**36.17**	**159**	P	P	08 27 14.6	-0.9
	0.9nm,0.3s,baz=327,slow=9.4,SNR=7.7						
SONM	**Songino Array**	**49.26**	**341**	P	P	08 29 02.0	+0.4
	0.3nm,0.5s,baz=151,slow=7.4,SNR=2.8						
MKAR	**Makanchi Array**	**59.45**	**326**	P	P	08 30 16.1	+0.2
	1.4nm,0.5s,baz=115,slow=8.0,SNR=18						

IDC 09 08:52:21.0±5.7**, 967N×13875E, h0**km**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=244.4km s-min=30.3km az=76.0, Western Caroline Islands**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**29.74**	**188**	P	P	08 58 28.5	-0.7
	1.1nm,0.6s,baz=11,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**33.47**	**188**	P	P	08 59 03.1	+1.1
	0.2nm,0.7s,baz=15,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**60.30**	**319**	P	P	09 02 31.5	0.0
	0.2nm,0.4s,baz=96,slow=5.8,SNR=4.3						

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*HLW **09** 09:29:26.1, 35.14N×32.73E, h33km, Mb3.4*
*ISK **09** 09:29:28.4, 34.88N×32.87E, h7km, MD3.6*
*CSEM **09** 09:29:28.5±0.1, 34.72N×32.98E, h15km, Mw3.2, Error ellipse: s-maj=3.1km s-min=1.8km az=105.0*
*ISCJB **09** 09:29:29.8±0.5, 34.74N±0.03×32.91E±0.04, h28km±5km, mb3.4/1, Error ellipse: s-maj=6.5km s-min=5.0km az=44.1*
*NIC **09** 09:29:30.4±0.2, 34.80N×33.00E, h18km, ML3.4, MW3.2*
*IDC **09** 09:29:32.4±2.4, 34.66N×32.80E, h65km±42km, mb3.3/2, mb1 3.3/7, mb1mx3.1/22, mbtmp3.2/7, ML3.2/5, Error ellipse: s-maj=28.4km s-min=16.8km az=66.0*
ISC 09 09:29:30.4±0.5**, 34.77N**±0.03×**32.92E**±0.04**, h19**km±4km**, n29, σ1.13**/37**, mb3.4**/1**, 1C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SZAC	**Souni-Zanaja**	**0.04**	**254**	⇑ *i*P	**Pg**	**09 29 34.4**	**+0.6**
CSS	**Prodhromos**	**0.39**	**60**	⇓P	**Pg**	**09 29 37.3**	**-1.3**
	33nm,0.2s						
CSS				S	**Sg**	**09 29 42.7**	**-1.3**
CSS	**Prodhromos**	**0.39**	**60**	*i* PG	**Pg**	**09 29 36.6**	**-2.0**
CSS				*i* SG	**Sg**	**09 29 42.2**	**-1.8**
CSS	**Prodhromos**	**0.39**	**60**	⇓ *i*P	**Pg**	**09 29 37.3**	**-1.3**
	33nm,0.2s						
CSS				*i* Sg	**Sg**	**09 29 42.2**	**-1.8**
MAMC	**Mammari**	**0.47**	**31**	P	**Pg**	**09 29 39.3**	**-0.8**
ALFC	**Alevga**	**0.47**	**326**	P	**Pg**	**09 29 40.0**	**-0.1**
	54nm,0.3s						
ALFC				S	**Sg**	**09 29 48.3**	**+1.7**
PPCY	**Paphos**	**0.49**	**284**	P	**Pg**	**09 29 41.2**	**+0.8**
AKMC	**Akamas**	**0.55**	**298**	P	**Pb**	**09 29 42.1**	**+0.6**
PHNC	**Paralimni**	**0.94**	**75**	P	**Pb**	**09 29 48.2**	**+0.1**
	13nm,0.5s						
PHNC				S	**Sb**	**09 30 00.9**	**+0.7**
IKL	**Isikli**	**1.59**	**23**	PN	**Pn**	**09 29 55.9**	**-1.7**
MERS	**Mersin**	**2.47**	**31**	PN	**Pn**	**09 30 09.6**	**0.0**
MMAI	**Mount Meron Ar**	**2.70**	**130**	P	**Pn**	**09 30 12.0**	**-0.8**
	9.8nm,0.3s,baz=313,slow=13,SNR=25						
MMAI				S	**Sn**	**09 30 46.4**	**+1.3**
	9.6nm,0.3s,baz=305,slow=28,SNR=10						
HTY	**Hatay**	**2.95**	**62**	*e*PN	**Pn**	**09 30 17.2**	**+0.9**
KARA	**Karaisali**	**3.03**	**34**	*e*PN	**Pn**	**09 30 17.9**	**+0.5**
FETY	**Fethiye**	**3.64**	**302**	*e*PN	**Pn**	**09 30 25.2**	**-0.5**
AMAG	**Maghara**	**4.12**	**177**	P	**Pn**	**09 30 32.0**	**-0.4**
KIZT	**Kizilcal**	**4.19**	**349**	*e*PN	**Pn**	**09 30 33.6**	**+0.3**
ASF	**Jabal al Asfar**	**4.21**	**127**	P	**Pn**	**09 30 33.5**	**-0.1**
	0.4nm,0.3s,baz=307,slow=10,SNR=4.1						
ASF				S	**Sn**	**09 31 24.2**	**+2.0**
	0.3nm,0.3s,baz=198,slow=20,SNR=2.3						
HNKL	**Nakhl**	**4.91**	**169**	P	**Pn**	**09 30 43.0**	**-0.1**
SUZ		**4.91**	**181**	P	**Pn**	**09 30 43.0**	**-0.2**
SUZ		**4.91**	**181**	P	**Pn**	**09 30 43.0**	**-0.2**
BRTR	**Keskin Array B**	**4.98**	**6**	P	**Pn**	**09 30 46.2**	**+2.0**
	0.2nm,0.3s,baz=173,slow=14,SNR=7.9						
EIL	**Elat**	**5.36**	**161**	P	**Pn**	**09 30 50.4**	**+0.9**
	0.8nm,0.3s,baz=350,slow=14,SNR=7.2						
EIL				S	**Sn**	**09 31 48.8**	**-1.9**
	1.7nm,0.3s,baz=288,slow=22,SNR=4.8						
HDHB	**Dhahab**	**6.20**	**166**	P	**Pn**	**09 31 01.3**	**+0.4**
HKAT	**Jabal Katrina**	**6.29**	**171**	P	**Pn**	**09 31 02.4**	**+0.2**
IDI	**Anoyia**	**6.61**	**277**	S	**Sn**	**09 32 18.8**	**-2.6**
	1.8nm,0.3s,baz=332,slow=18,SNR=4.7						
AKASG	**Malin Array Be**	**16.15**	**352**	P	**Pn**	**09 33 17.5**	**+1.2**
	0.3nm,0.3s,baz=172,slow=11,SNR=3.5						
GERES	**GERESS Array B**	**20.00**	**321**	P	**P**	**09 34 00.8**	**-1.0**
	0.7nm,0.5s,baz=128,slow=13,SNR=4.3						
FINES	**FINESS Array B**	**27.05**	**353**	P	**P**	**09 35 08.7**	**-2.6**
	0.5nm,0.4s,mb3.4,baz=166,slow=9.5,SNR=6.3						

MEX 09 09:55:51.2±0.4**, 16.88N×100.54W, h2**km±4km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.31**	**58**	*i* P	Pg	09 55 57.0	-0.2
CAIG				*i* S	Sg	09 56 01.6	+0.3
ACX	**Acapulco**	**0.60**	**91**	*i* P	Pg	09 56 02.5	-0.2
ACX				*i* S	Sg	09 56 11.0	+0.5
MEIG	**Mezcala**	**1.36**	**40**	*i* P	Pn	09 56 13.8	-3.5
MEIG				*i* S	Sg	09 56 31.1	-4.0
UTMO	**Huajuapan**	**2.78**	**70**	*i* P	Pn	09 56 33.4	-3.5
UTMO				*i* S	Sn	09 57 08.0	-3.1
PPM	**Popocatepetl**	**2.84**	**40**	*i* P	Pn	09 56 33.7	-3.9
PPM				*i* S	Sn	09 57 08.8	-3.6

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*BJI **09** 10:38:01.9, 6.66S×130.46E, h136km, mB5.4, mb5.5*
*ISCJB **09** 10:38:06.0±0.5, 6.41S±0.03×130.25E±0.03, h148km±4km, mb5.4/116, Error ellipse: s-maj=5.0km s-min=3.9km az=151.7*
*MOS **09** 10:38:07.2±1.1, 6.27S×130.20E, h149km, mb5.4/33, MS4.7/6, Error ellipse: s-maj=10.3km s-min=5.8km az=113.2*
*GCMT **09** 10:38:08.2±0.1, 6.35S×130.26E, h150km, MW5.6/104, Moment Tensor Solution. s95,c183; s104,c262; Duration: 1.6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.46±.04; $M_{\theta\theta}$-1.12±.04; $M_{\phi\phi}$-0.34±.05; $M_{r\theta}$0.34±.03; $M_{\theta\phi}$0.76±.04; $M_{\phi r}$3.09±.03; Best double couple: $M_0$3.32600×10^{17} NP1:ϕ_s116.00000°, δ18.00000°, λ31.00000°. NP2:ϕ_s356.00000°, δ81.00000°, λ106.00000°. Principal axes: T 3.8830, Plg52.0000°, Azm284.0000°; N -1.1200, Plg15.0000°, Azm173.0000°; P -2.7680, Plg34.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **09** 10:38:08.2±0.9, 6.36S×130.17E, h151km±7km, mb5.4/42, MW5.6 Error ellipse: s-maj=5.0km s-min=3.6km az=55.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}1.88; $M_{\theta\theta}$-0.70; $M_{\phi\phi}$-1.19; $M_{r\theta}$0.67; $M_{\theta\phi}$-0.21; $M_{\phi r}$2.78; Best double couple: $M_0$3.30000×10^{17} NP1: ϕ_s199.00000°, δ14.00000°, λ95.00000°. NP2:ϕ_s14.00000°, δ76.00000°, λ89.00000°. Principal axes: T 3.5700, Plg59.0000°, Azm282.0000°; N -0.6300, Plg1.0000°, Azm15.0000°; P -2.9500, Plg31.0000°, Azm105.0000°;*
NEIC Felt [II] at Tual, Indonesia.
*IDC **09** 10:38:09.1±0.9, 6.36S×130.18E, h158km±7km, mb5.0/27, mb1 5.0/30, mb1mx5.0/31, mbtmp5.1/30, MS4.5/14, Ms1 4.5/14, ms1mx4.3/31 Error ellipse: s-maj=10.3km s-min=6.7km az=64.0*
ISC 09 10:38:07.7±0.5**, 6.41S**±0.03×**130.25E**±0.03**, h147**km±4km**, h145**km±2.8km**:pP-P, n569, σ0.99**/458**, mb5.4**/114**, 42C-26D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.59**	**73**	⇓*e*P	**Pn**	**10 38 48.0**	**-1.9**
TLE				*e*S	**Sn**	**10 39 12.0**	**-10**
AAI	**Ambon**	**3.39**	**323**	P	**Pn**	**10 39 00.1**	**+0.1**
	3μm,1.2s						
BATI	**Kupang**	**7.53**	**239**	P	**Pn**	**10 39 54.4**	**-0.5**
	329nm,0.3s,baz=93,slow=1.8,SNR=96						
BATI				S	**Sn**	**10 41 12.5**	**-6.3**
	70nm,0.3s,baz=11,slow=12,SNR=1.7						
TNE	**Ternate**	**7.70**	**338**	⇓*e*P	**Pn**	**10 39 56.5**	**-0.7**
MMPI	**Merauke**	**10.26**	**102**	P	**Pn**	**10 40 29.7**	**-1.5**
	5μm,0.7s						
WSI	**Waingapu**	**10.37**	**251**	⇑*e*P	**Pn**	**10 40 31.5**	**-1.2**
WSI				*e*S	**Sn**	**10 42 20.0**	**-7.4**
WSI	**Waingapu**	**10.37**	**251**	⇑*e*P	**Pn**	**10 40 31.5**	**-1.2**
JAY	**Jayapura**	**11.12**	**70**	P	**Pn**	**10 40 42.2**	**-0.4**
	203nm,1.5s						
PCI	**Palu**	**11.73**	**297**	P	**Pn**	**10 40 54.1**	**+3.4**
	972nm,1.9s						
FITZ	**Fitzroy Crossi**	**12.46**	**201**	*e*P	**Pn**	**10 40 55.3**	**-4.7**
	207nm,0.2s						
FITZ				*e*S	**Sn**	**10 43 04.1**	**-14**
FITZ	**Fitzroy Crossi**	**12.46**	**201**	P	**Pn**	**10 40 55.8**	**-4.3**
	20nm,0.3s,baz=35,slow=13,SNR=255						
FITZ				S	**Sn**	**10 43 08.9**	**-8.9**
	80nm,0.3s,baz=230,slow=16,SNR=12						
FITZ				LR	LR	10 46 24.4	
	comp=Z,1μm,18.8s,baz=24,slow=40						
WRA	**Warramunga Arr**	**14.03**	**164**	P	**Pn**	**10 41 16.1**	**-4.0**
	0.1nm,0.3s,baz=353,slow=11,SNR=98						
WRA				S	**Sn**	**10 43 45.3**	**-10**
	109nm,0.3s,baz=342,slow=22,SNR=11						
WB2	**Warramunga Arr**	**14.03**	**164**	*e*P	**Pn**	**10 41 15.0**	**-5.1**
WB2				*e*S	**Sn**	**10 43 37.8**	**-18**
DAV	**Davao City (W)**	**14.18**	**341**	*e*Pn	**Pn**	**10 41 24.6**	**+2.5**
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	Pn	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	P	**Pn**	**10 41 28.1**	**+6.1**
	SNR=10.0						
DAV	**Davao City (W)**	**14.18**	**341**	*e*P	**Pn**	**10 41 20.0**	**-2.0**
COEN	**Coen**	**14.77**	**122**	*e*Pn	**Pn**	**10 41 27.2**	**-2.2**
	240nm,0.6s						
COEN				*e*Sn	**Sn**	**10 44 00.2**	**-13**
BIPH	**Bislig**	**15.01**	**345**	⇑*i*P	**Pn**	**10 41 34.2**	**+1.8**
BIPH				*i* S	**S**	**10 44 34.2**	**+8.7**
PAGZ	**Pagadian**	**15.73**	**334**	*e*P	**Pn**	**10 41 42.4**	**+1.0**
CGP	**Cagayan de Oro**	**15.77**	**339**	*e*P	**Pn**	**10 41 40.7**	**-1.2**
TSM	**Tawau**	**16.30**	**310**	⇑P	**Pn**	**10 41 48.7**	**+0.3**
MYLDM	**Lahad Datu**	**16.43**	**314**	⇓P	**Pn**	**10 41 52.1**	**+2.1**
SCPH	**Surigao**	**16.77**	**344**	*e*P	**Pn**	**10 41 54.0**	**0.0**
PMG	**Port Moresby**	**17.02**	**101**	*e*P	**Pn**	**10 41 58.3**	**+1.3**
PMG	**Port Moresby**	**17.02**	**101**	*d i*P	**Pn**	**10 41 57.9**	**+0.9**
PMG	**Port Moresby**	**17.02**	**101**	P	**Pn**	**10 41 58.3**	**+1.3**
	82nm,0.3s,baz=284,slow=6.6,SNR=165						
PMG				S	**S**	**10 44 56.3**	**-10**
	15nm,0.3s,baz=201,slow=18,SNR=7.2						
PMG				ScP	ScP	10 49 55.9	+0.5
	0.6nm,0.3s,baz=23,slow=1.6,SNR=5.0						
SNPH	**Sibulan**	**17.14**	**336**	*e*P	**Pn**	**10 41 59.5**	**+1.0**
TBP	**Tagbilaran**	**17.21**	**338**	*e*P	**Pn**	**10 41 60.0**	**+0.6**
ASAR	**Alice Springs**	**17.52**	**169**	P	**Pn**	**10 42 02.7**	**-0.2**
	41nm,0.3s,baz=342,slow=11,SNR=364						
ASAR				S	**S**	**10 45 09.5**	**-6.8**
	24nm,0.3s,baz=354,slow=25,SNR=7.2						
SDKM	**Sandakan**	**17.69**	**312**	⇑P	**Pn**	**10 42 06.5**	**+1.3**
KRKI	**Karangkates**	**17.73**	**263**	P	**Pn**	**10 42 04.9**	**-0.7**
	547nm,0.7s						
LLP	**Lapu-Lapu**	**17.75**	**339**	*e*P	**Pn**	**10 42 06.7**	**+0.8**
MBWA	**Marble Bar**	**17.85**	**214**	*e*P	**Pn**	**10 42 06.0**	**-1.0**
	190nm,0.8s						
PLP	**Palo**	**18.23**	**343**	*e*P	**P**	**10 42 10.7**	**+0.9**
KKM	**Kota Kinabalu**	**18.68**	**311**	*e*P	**P**	**10 42 15.2**	**+0.5**
KKM	**Kota Kinabalu**	**18.68**	**311**	⇑P	**P**	**10 42 15.5**	**+0.8**
KDM	**Kudat**	**18.82**	**314**	⇓P	**P**	**10 42 17.5**	**+1.2**
RCP	**Roxas**	**19.35**	**337**	⇓*e*P	**P**	**10 42 22.6**	**+0.7**
CUYO	**Cuyo Island**	**19.45**	**332**	*e*P	**P**	**10 42 24.4**	**+1.4**
BATP	**Bataraza**	**19.55**	**320**	*e*P	**P**	**10 42 23.9**	**-0.2**
BTM	**Bintulu**	**19.61**	**299**	⇓P	**P**	**10 42 26.2**	**+1.4**
SBUM	**Sibu**	**20.03**	**296**	⇓P	**P**	**10 42 30.4**	**+1.1**
BJII	**Banjamegara**	**20.41**	**266**	P	**P**	**10 42 33.8**	**+0.4**
	189nm,1.8s						
CTA	**Charters Tower**	**20.65**	**133**	⇓*i*P	**P**	**10 42 37.2**	**+1.3**
	104nm,1.1s						
CTA				*i* S	**S**	**10 46 18.3**	**-0.3**
CTA	**Charters Tower**	**20.65**	**133**	⇓*i*P	**P**	**10 42 37.2**	**+1.3**
CTA				*i* S	**S**	**10 46 18.3**	**-0.3**
CTA				pmax	pmax		
	comp=Z,104nm,1.1s						
CTA	**Charters Tower**	**20.65**	**133**	P	**P**	**10 42 37.4**	**+1.5**
	comp=Z,58nm,0.5s,baz=315,slow=12,SNR=151						
CTA				S	**S**	**10 46 20.2**	**+1.6**
	comp=Z,28nm,0.8s,baz=233,slow=21,SNR=3.8						
CTAO	**Charters Tower**	**20.65**	**133**	*e*P	**P**	**10 42 37.4**	**+1.5**
KSM	**Kuching**	**21.39**	**291**	*e*P	**P**	**10 42 43.4**	**-0.5**
KSM	**Kuching**	**21.39**	**291**	⇑P	**P**	**10 42 44.4**	**+0.5**
LEM	**Lembang**	**22.48**	**268**	P	**P**	**10 42 54.4**	**-0.7**
	comp=Z,726nm,1.2s,mb6.0						
FORT	**Forrest**	**24.33**	**185**	⇑*i*P	**P**	**10 43 11.8**	**0.0**
	comp=Z,316nm,0.7s,mb6.0						
BCPH	**Baguio City Da**	**24.58**	**337**	⇑*i*P	**P**	**10 43 14.4**	**+0.2**
XMIS	**Christmas Isla**	**24.65**	**259**	P	**P**	**10 43 13.7**	**-1.2**
EIDS	**Eidsvold**	**27.43**	**136**	*e*P	**P**	**10 43 39.2**	**-0.6**
	comp=Z,26nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**27.47**	**159**	*e*P	**P**	**10 43 40.4**	**+0.4**
	comp=Z,35nm,0.4s,mb5.3						
STKA				*e*S	**S**	**10 48 04.2**	**-5.7**
STKA	**Stephens Creek**	**27.47**	**159**	P	**P**	**10 43 40.5**	**+0.4**
	comp=Z,40nm,0.4s,mb5.4,baz=333,slow=8.6,SNR=116						
STKA				LR	LR	10 55 27.4	
	comp=Z,1μm,19.6s,baz=330,slow=38						
MYKOM	**Kota Tinggi**	**27.58**	**286**	⇑P	**P**	**10 43 41.1**	**-0.2**
KLBR	**Kellerberrin**	**27.64**	**203**	⇑*i*P	**P**	**10 43 41.8**	**+0.2**
	comp=Z,96nm,0.9s,mb5.5						
KLBR				*e*S	sS	10 48 59.3	-8.2
KGM	**Kluang**	**28.16**	**286**	⇓P	**P**	**10 43 46.4**	**0.0**
MUN	**Mundaring**	**28.62**	**205**	*e*P	**P**	**10 43 50.4**	**+0.1**
NWAO	**Narrogin (SRO)**	**29.03**	**203**	*e*P	**P**	**10 43 54.1**	**+0.2**
	comp=Z,96nm,1.1s,mb5.4						
NWAO	**Narrogin (SRO)**	**29.03**	**203**	P	**P**	**10 43 54.3**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,22nm,0.3s						
NWAO				MLR	MLR		
	comp=Z,2μm,19.8s						
NWAO	**Narrogin (SRO)**	**29.03**	**203**	P	**P**	**10 43 54.3**	**+0.4**
	comp=Z,22nm,0.3s,mb5.3,baz=40,slow=8.6,SNR=44						
NWAO				LR	LR	10 56 35.0	
	comp=Z,2μm,19.8s,baz=22,slow=38						
KTGM	**Kuala Trenggan**	**29.47**	**293**	⇑P	**P**	**10 43 58.1**	**0.0**
HNR	**Honiara**	**29.57**	**98**	*e*P	**P**	**10 43 57.2**	**-1.6**
	comp=Z,243nm,0.8s,mb6.0						
HNR	**Honiara**	**29.57**	**98**	P	**P**	**10 43 58.6**	**-0.3**
HNR						10 50 27.5	
HNR				pmax	pmax		
	comp=Z,237nm,0.8s,mb6.0						
HNR	**Honiara**	**29.57**	**98**	P	**P**	**10 43 58.6**	**-0.3**
	comp=Z,237nm,0.8s,mb6.0,baz=245,slow=0.8,SNR=24						
HNR				ScP	ScP	10 50 27.5	-1.3
	comp=Z,26nm,0.6s,baz=270,slow=7.8,SNR=3.7						
FRIM	**Kepong**	**30.14**	**288**	⇑P	**P**	**10 44 03.4**	**-0.6**
IPM	**Ipoh**	**31.11**	**290**	⇓P	**P**	**10 44 11.9**	**-0.7**
ARMA	**Armidale**	**31.21**	**143**	*e*P	**P**	**10 44 07.3**	**-5.9**
ARMA	**Armidale**	**31.21**	**143**	*e*P	**P**	**10 44 14.7**	**+1.5**
	comp=Z,3.4nm,1.6s						
KULM	**Kulim**	**31.75**	**291**	*e*P	**P**	**10 44 16.4**	**-1.7**
KULM	**Kulim**	**31.75**	**291**	⇑P	**P**	**10 44 17.2**	**-0.9**
YHNB	**Yeheng**	**32.08**	**345**	*e*P	**P**	**10 44 20.3**	**-0.5**
QIZ	**Qiongzhong**	**32.30**	**322**	P	**P**	**10 44 22.3**	**-0.5**
QIZ				XP	sP	10 45 05.5	-5.7
QIZ				S	**S**	**10 49 21.1**	**-4.7**
QIZ				AMB	AMB		
	comp=Z,77nm,1.0s,mb5.4						
QIZ				AMB	AMB		
	comp=Z,479nm,4.5s						
QIZ	**Qiongzhong**	**32.30**	**322**	*e*P	**P**	**10 44 22.0**	**-0.8**
	comp=Z,84nm,1.0s,mb5.4						
SNG	**Songkhla**	**32.49**	**294**	P	**P**	**10 44 21.0**	**-3.6**
	comp=Z,296nm,0.9s,mb6.0						
PSI	**Prapat**	**32.58**	**285**	P	**P**	**10 44 23.3**	**-2.1**
	comp=Z,82nm,0.9s,mb5.5,baz=107,slow=5.4,SNR=42						
PSI				ScP	ScP	10 50 36.4	-2.5
	comp=Z,26nm,0.9s,baz=191,slow=2.1,SNR=8.9						
UBT	**Ubonrachathani**	**32.98**	**311**	⇓P	**P**	**10 44 29.0**	**+0.2**
JOW	**Kunigami**	**33.10**	**357**	P	**P**	**10 44 30.6**	**+0.9**
	comp=Z,143nm,0.7s,mb5.8,baz=202,slow=8.1,SNR=28						
JOW				ScP	ScP	10 50 39.5	-0.9
	comp=Z,55nm,0.9s,baz=141,slow=9.6,SNR=4.7						
JOW				LR	LR	10 57 36.6	
	comp=Z,959nm,20.3s,baz=66,slow=35						
QZH	**Quanzhou**	**33.16**	**340**	⇑*i*P	**P**	**10 44 31.7**	**+1.4**
QZH				S	**S**	**10 49 37.0**	**-2.0**
QZH				AMB	AMB		
	comp=Z,140nm,0.6s,mb5.9						
QZH				AMB	AMB		
	comp=Z,1μm,5.6s						
GZH	**Guangzhou**	**33.65**	**331**	P	**P**	**10 44 33.4**	**-1.1**
GZH				S	**S**	**10 49 43.8**	**-2.8**
GZH				LR	LR		
	comp=N,453nm,16.5s						
GZH				LR	LR		
	comp=E,594nm,17.4s						
GZH				LR	LR		
	comp=Z,781nm,17.1s						
CNB	**Canberra Magne**	**33.72**	**151**	*e*P	**P**	**10 44 36.6**	**+1.6**
	comp=Z,31nm,0.8s,mb5.1						
CBIJ	**Chichi jima**	**35.26**	**19**	P	**P**	**10 44 47.2**	**-1.0**
	comp=Z,78nm,0.3s,mb5.8,baz=105,slow=11,SNR=10						
NNT	**Nongplab**	**35.72**	**302**	P	**P**	**10 44 52.0**	**-0.4**
NST	**Nakhon Sawan**	**37.02**	**307**	P	**P**	**10 45 03.0**	**-0.5**
DZM	**Mont Dzumac**	**38.25**	**118**	*e*P	**P**	**10 45 14.5**	**+0.7**
DZM	**Mont Dzumac**	**38.25**	**118**	*e*P	**P**	**10 45 14.5**	**+0.7**
DZM	**Mont Dzumac**	**38.25**	**118**	P	**P**	**10 45 14.4**	**+0.7**
	comp=Z,24nm,0.6s,mb5.0,baz=280,slow=5.7,SNR=24						
DZM				ScP	ScP	10 50 59.7	+0.3
	comp=Z,8.7nm,0.9s,baz=311,slow=11,SNR=3.3						
SSE	**Sheshan**	**38.29**	**347**	P	**P**	**10 45 14.1**	**+0.2**
SSE				XP	sP	10 46 01.5	-1.3
SSE				S	**S**	**10 50 59.1**	**+2.0**
SSE				XS	sS	10 51 53.8	+0.6
SSE				AMB	AMB		
	comp=Z,73nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,258nm,7.0s						
SSE				LR	LR		
	comp=N,74nm,16.4s						
SSE				LR	LR		
	comp=E,478nm,16.3s						
SSE				LR	LR		
	comp=Z,206nm,17.7s						
BDT	**Bhumibol Dam**	**38.80**	**308**	⇓P	**P**	**10 45 18.5**	**+0.1**
	comp=Z,67nm,0.3s,mb5.8						
JNU	**Nakatsue**	**39.32**	**1**	P	**P**	**10 45 22.2**	**-0.2**
	comp=Z,47nm,0.9s,mb5.1,baz=174,slow=4.5,SNR=28						
CHG	**Chiang Mai**	**39.75**	**310**	⇓P	**P**	**10 45 26.3**	**0.0**
	comp=Z,150nm,0.6s,mb5.8						
CHTO	**Chiang Mai**	**39.75**	**310**	*e*P	**P**	**10 45 25.4**	**-0.8**
	comp=Z,113nm,0.8s,mb5.5						
CHTO	**Chiang Mai**	**39.75**	**310**	*e*P	**P**	**10 45 25.4**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,113nm,0.8s,mb5.5						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHTO	**Chiang Mai**	**39.75**	**310**	P	**P**	**10 45 26.6**	**+0.3**
	SNR=63						
CHRT	**Chiangrai**	**39.75**	**312**	⇑P	**P**	**10 45 26.5**	**+0.2**
	comp=Z,632nm,0.7s,mb6.4						
NJ2	**Nanjing**	**39.76**	**345**	*e*P	**P**	**10 45 26.8**	**+0.7**
NJ2				AP	pP	10 45 58.2	-0.2
NJ2				XP	sP	10 46 13.4	-1.7
NJ2				PP	PP	10 47 04.6	+4.0
NJ2				S	**S**	**10 51 21.0**	**+1.9**
NJ2				XS	sS	10 52 16.0	+0.5
NJ2				AMB	AMB		
	comp=Z,90nm,0.9s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,300nm,7.0s						
NJ2				LR	LR		
	comp=N,910nm,19.7s						
NJ2				LR	LR		
	comp=E,800nm,21.3s						
NJ2				LR	LR		
	comp=Z,870nm,16.5s						
GYA	**Guiyang**	**39.88**	**326**	⇑*i*P	**P**	**10 45 27.0**	**-0.2**
GYA				AP	pP	10 46 01.2	+1.6
GYA				XP	sP	10 46 17.3	+1.0
GYA				PP	PP	10 47 08.0	+6.0
GYA				PCP	PcP	10 47 30.8	+0.7
GYA				SCP	ScP	10 51 07.7	+2.2
GYA				S	**S**	**10 51 25.1**	**+4.0**
GYA				SS	SS	10 54 21.5	-2.4
GYA				SCS	ScS	10 55 19.8	+0.8
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,450nm,7.9s						
GYA				LR	LR		
	comp=N,310nm,18.9s						
GYA				LR	LR		
	comp=E,260nm,19.4s						
GYA				LR	LR		
	comp=Z,310nm,18.7s						
KMI	**Kunming**	**41.22**	**321**	P	**P**	**10 45 38.7**	**+0.5**
KMI				AP	pP	10 46 13.1	+2.4
KMI				PP	PP	10 47 19.0	+2.5
KMI				PCP	PcP	10 47 35.7	+1.2
KMI				S	**S**	**10 51 39.3**	**-1.7**
KMI				XS	sS	10 52 38.7	+1.1
KMI				AMB	AMB		
	comp=Z,71nm,1.2s,mb5.2						
KMI				AMB	AMB		
	comp=Z,354nm,8.7s						
KMI				LR	LR		
	comp=N,458nm,16.5s						
KMI				LR	LR		
	comp=E,578nm,16.1s						
KMI				LR	LR		
	comp=Z,605nm,16.8s						
KMI	**Kunming**	**41.22**	**321**	P	**P**	**10 45 38.7**	**+0.5**
KMI				*PP	pP	10 46 13.1	+2.4
KMI				*SP	sP	10 46 31.5	+4.1
KMI						10 47 19.0	
KMI						10 47 35.7	
KMI				PPP		10 47 55.6	
KMI				S	**S**	**10 51 39.3**	**-1.7**
KMI				*SS	sS	10 52 38.7	+1.1
KMI				SS	SS	10 54 41.2	-9.1
KMI				SSS		10 55 31.9	
MJAR	**Matsushiro Arr**	**43.37**	**9**	P	**P**	**10 45 54.1**	**-1.3**
	comp=Z,28nm,0.7s,mb5.0,baz=185,slow=9.2,SNR=41						
MJAR				ScP	ScP	10 51 18.7	-0.4
	comp=Z,4.2nm,0.8s,baz=192,slow=5.4,SNR=7.3						
MJAR				LR	LR	11 03 01.3	
	comp=Z,626nm,19.5s,baz=200,slow=34						
MAJO	**Matsushiro**	**43.37**	**9**	*e*P	**P**	**10 45 53.7**	**-1.7**
MAT	**Matsushiro**	**43.37**	**9**	P	**P**	**10 45 54.1**	**-1.3**
MAT				S	**S**	**10 52 05.0**	**-7.3**
KSRS	**Korea Array**	**43.69**	**357**	P	**P**	**10 45 58.4**	**+0.4**
	comp=Z,12nm,0.6s,mb4.7,baz=174,slow=9.0,SNR=54						
KSRS				PcP	PcP	10 47 40.1	-2.4
	comp=Z,8.0nm,0.7s,baz=180,slow=3.8,SNR=7.1						
KSRS				ScP	ScP	10 51 20.1	-0.3
	comp=Z,6.3nm,0.8s,baz=185,slow=3.9,SNR=11						
INCN	**Inchon**	**43.79**	**356**	*e*P	**P**	**10 45 59.3**	**+0.5**
	comp=Z,48nm,0.6s,mb5.3						
TIA	**Tai'an**	**44.15**	**345**	*e*P	**P**	**10 46 01.2**	**-0.5**
CD2	**Chengdu**	**44.94**	**327**	P	**P**	**10 46 07.3**	**-0.7**
CD2				AP	pP	10 46 38.6	-2.5
CD2				XP	sP	10 46 55.0	-2.6
CD2				PCP	PcP	10 47 47.1	+0.2
CD2				PP	PP	10 47 51.0	-5.1
CD2				PCS	PcS	10 51 41.3	+0.4
CD2				S	**S**	**10 52 29.2**	**-6.0**
CD2				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.8						
CD2				AMB	AMB		
	comp=Z,250nm,6.9s						
CD2				LR	LR		
	comp=N,270nm,14.4s						
CD2				LR	LR		
	comp=E,290nm,19.2s						
CD2				LR	LR		
	comp=Z,280nm,9.6s						
XAN	**Xi'an**	**45.01**	**335**	P	**P**	**10 46 07.4**	**-1.1**
XAN				AP	pP	10 46 44.8	+3.2
XAN				S	**S**	**10 52 29.9**	**-6.2**
XAN				AMB	AMB		
	comp=Z,61nm,0.9s,mb5.2						
XAN				AMB	AMB		
	comp=Z,292nm,7.8s						
XAN				LR	LR		
	comp=N,134nm,8.9s						
XAN				LR	LR		
	comp=E,162nm,7.9s						
XAN				LR	LR		
	comp=Z,251nm,7.3s						
DL2	**Dalian**	**45.79**	**351**	P	**P**	**10 46 14.7**	**+0.1**

DL2 S **S** **10 52 46.0 -1.1**
DL2 XS sS 10 53 42.5 -2.1
DL2 SCS ScS 10 55 56.5 +1.3
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.8
DL2 AMB AMB
comp=Z,170nm,6.7s
IMP Imphal 47.02 313 *eP* **P** **10 46 23.0 -1.5**
IMP *ex* x 10 51 35.0
BJT Baijiatuau 47.99 345 *eP* **P** **10 46 31.4 -0.2**
comp=Z,115nm,0.5s,mb5.8
BJT Baijiatuau 47.99 345 *eP* **P** **10 46 31.5 -0.1**
BJT pmax pmax
comp=Z,115nm,0.5s
BJI Beijing 48.01 345 P **P** **10 46 31.7 -0.1**
BJI XP sP 10 47 18.9 -2.7
BJI PCP PcP 10 47 57.6 +0.1
BJI SCP ScP 10 51 38.0 -0.3
BJI S **S** **10 53 15.5 -3.1**
BJI XS sS 10 54 13.5 -3.0
BJI SCS ScS 10 56 11.0 +1.2
BJI AMB AMB
comp=Z,150nm,0.7s,mb5.7
BJI Beijing 48.01 345 P **P** **10 46 31.7 -0.1**
BJI *SP sP 10 47 18.9 -2.7
BJI 10 47 57.6
BJI S **S** **10 53 15.5 -3.1**
BJI *SS sS 10 54 13.5 -3.0
BJI 10 56 11.0
SNY Shenyang 48.39 353 ⇑P **P** **10 46 34.5 -0.2**
SNY S **S** **10 53 18.6 -5.3**
SNY AMB AMB
comp=Z,58nm,0.7s,mb5.3
SNY AMB AMB
comp=Z,221nm,9.2s
SNY LR LR
comp=N,546nm,16.5s
SNY LR LR
comp=E,862nm,17.4s
SNY LR LR
comp=Z,469nm,21.9s
FUNA Funafuti 48.56 96 *eP* **P** **10 46 36.7 +0.2**
comp=Z,74nm,0.8s,mb5.4
SHL Shillong 48.98 312 *i P* **P** **10 46 39.0 -0.5**
comp=Z,53nm,1.0s,mb5.1
SHL *eS* **S** **10 53 30.0 -2.8**
LZH Lanzhou 49.00 331 ⇑P **P** **10 46 40.0 +0.5**
LZH AMB AMB
comp=Z,104nm,1.3s,mb5.3
VLA Vladivostok 49.32 2 *eP* **P** **10 46 39.5 -2.2**
VLA *i* S **S** **10 53 33.6 -3.2**
VLA *i* 10 54 32.6
VLA pmax pmax
comp=Z,69nm,1.2s,mb5.2
HHC Hu-ho-hao-te 50.06 342 *eP* **P** **10 46 47.6 +0.2**
HHC AP pP 10 47 20.0 -1.1
HHC XP sP 10 47 35.3 -2.1
HHC PP PP 10 48 43.5 -0.6
HHC SCP ScP 10 51 45.9 -1.2
HHC PCS PcS 10 52 00.9 -1.2
HHC S **S** **10 53 48.0 +0.7**
HHC XS sS 10 54 42.9 -2.7
HHC SCS ScS 10 56 21.4 -2.3
HHC AMB AMB
comp=Z,48nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,284nm,4.3s
CN2 Changchun 50.16 355 ⇑P **P** **10 46 47.6 -0.5**
CN2 PCP PcP 10 48 05.4 +0.1
CN2 SCP ScP 10 51 46.0 -1.4
CN2 *eS* **S** **10 53 49.0 +0.4**
CN2 AMB AMB
comp=Z,70nm,0.6s,mb5.5
CN2 AMB AMB
comp=Z,400nm,6.0s
BTO Baotou 50.35 340 *eP* **P** **10 46 49.3 -0.3**
MDJ Mudanjiang 50.79 359 P **P** **10 46 53.1 +0.3**
MDJ AP pP 10 47 23.3 -3.3
MDJ SCP ScP 10 51 51.5 +1.4
MDJ S **S** **10 53 55.8 -1.4**
MDJ XS sS 10 54 51.5 -4.2
MDJ SCS ScS 10 56 30.4 +1.9
MDJ SS SS 10 57 35.5 +1.5
MDJ AMB AMB
comp=Z,48nm,0.9s,mb5.1
MDJ AMB AMB
comp=Z,166nm,6.8s
MDJ Mudanjiang 50.79 359 *eP* **P** **10 46 53.1 +0.2**
comp=Z,44nm,0.8s,mb5.1
PALK Pallekele 51.26 285 *eP* **P** **10 46 55.8 -1.1**
ASAJ Asahikawa 51.51 11 P **P** **10 46 58.1 -0.1**
comp=Z,18nm,0.7s,mb4.8,baz=224,slow=12,SNR=16
ASAJ LR LR 11 06 15.5
comp=Z,411nm,20.7s,baz=0.3,slow=33
LSA Lhasa 51.94 316 P **P** **10 47 03.0 +1.3**
LSA S **S** **10 54 09.8 -3.8**
LSA SS SS 10 57 49.8 -2.9
LSA AMB AMB
comp=Z,110nm,0.9s,mb5.5
LSA AMB AMB
comp=Z,410nm,4.2s
LSA Lhasa 51.94 316 *eP* **P** **10 47 02.8 +1.1**
comp=Z,91nm,0.8s,mb5.5
LSA Lhasa 51.94 316 *eP* **P** **10 47 02.8 +1.1**
LSA pmax pmax
comp=Z,91nm,0.8s,mb5.5
URZ Urewera 52.89 134 LR LR 11 08 41.6
comp=Z,439nm,18.4s,baz=286,slow=35
ODAN Odare 53.06 311 *eP* **P** **10 47 10.1 +0.1**
comp=Z,371nm,0.6s,mb6.3
TAPN Taplejung 53.08 311 *eP* **P** **10 47 10.3 +0.2**
comp=Z,652nm,0.9s,mb6.4
GTA Gaotai 53.58 331 P **P** **10 47 13.5 0.0**
GTA AP pP 10 47 46.0 -1.6
GTA XP sP 10 48 01.9 -1.9
GTA PCP PcP 10 48 19.2 +1.0
GTA PP PP 10 49 16.4 +0.6
GTA SCP ScP 10 52 02.6 +0.2
GTA PCS PcS 10 52 17.7 +0.3
GTA S **S** **10 54 36.0 +0.6**
GTA XS sS 10 55 32.1 -2.3
GTA SCS ScS 10 56 46.7 -1.5
GTA SS SS 10 58 18.4 +0.2
GTA AMB AMB
comp=Z,66nm,1.1s,mb5.3
GTA AMB AMB
comp=Z,642nm,7.3s
GTA LR LR
comp=N,295nm,19.5s
GTA LR LR
comp=E,244nm,19.9s
GTA LR LR
comp=Z,341nm,16.4s
YSS Yuzh-Sakhalins 54.28 11 *eP* **P** **10 47 17.0 -1.4**
comp=Z,27nm,0.6s,mb5.2
YSS Yuzh-Sakhalins 54.28 11 ⇑*iP* **P** **10 47 18.0 -0.4**
YSS *e**PP pP 10 47 49.0 -3.6
YSS *e* 10 48 15.0
YSS *eS* **S** **10 54 40.0 -4.5**
YSS pmax pmax
comp=Z,30nm,0.7s,mb5.1
JIRN Jiri 54.39 311 *eP* **P** **10 47 20.0 +0.4**
comp=Z,555nm,0.8s,mb6.3
HABR Khabarovsk 54.81 4 *eP* **P** **10 47 21.8 -0.4**
HABR *e* 10 48 21.2
HABR *eS* **S** **10 54 49.8 -1.8**
HABR *e* 10 55 49.2
HABR *e* 10 56 55.0
HABR *e* 10 58 33.4
HABR pmax pmax
comp=Z,45nm,0.8s,mb5.2
KKN Kakani 55.14 310 *eP* **P** **10 47 25.1 +0.1**
comp=Z,456nm,0.9s,mb6.2
KKN Kakani 55.14 310 *eP* **P** **10 47 25.1 +0.1**
KKN pmax pmax
comp=Z,456nm,0.9s,mb6.2
TRD Trivandrum 55.15 285⇓ *eP* **P** **10 47 24.0 -1.4**
KLR Kul'dur 55.42 1⇓ *iP* **P** **10 47 23.3 -3.3**
KLR *eS* **S** **10 54 53.5 -6.2**
KLR pmax pmax
comp=E,63nm,2.0s
KLR pmax pmax
comp=Z,140nm,2.0s,mb5.3
KLR smax
comp=N,600nm,9.0s
KLR smax
comp=E,1μm,9.0s
GKN Gorkha 55.74 310 *eP* **P** **10 47 29.3 0.0**
comp=E,389nm,0.5s,mb6.5
HIA Hailar 56.20 352 *eP* **P** **10 47 32.2 +0.1**
comp=E,8.5nm,0.6s,mb4.8
HIA Hailar 56.20 352 *eP* **P** **10 47 32.2 +0.1**
HIA pmax pmax
comp=Z,8.0nm,0.6s
HYB Hyderabad 56.28 296 *eP* **P** **10 47 32.0 -1.3**
comp=Z,175nm,1.0s,mb5.8
HYB Hyderabad 56.28 296 *eP* **P** **10 47 32.0 -1.3**
HYB pmax pmax
comp=Z,175nm,1.0s,mb5.8
HYB Hyderabad 56.28 296 *i P* **P** **10 47 32.0 -1.3**
comp=Z,175nm,1.0s,mb5.8
HYB *epP pP 10 48 11.0 +3.3
HYB *esP sP 10 48 26.0 +2.1
HYB *ePcP PcP 10 48 32.5 +3.4
HYB *eS* **S** **10 55 10.0 -2.2**
AFI Afiamalu 57.44 102 *eP* **P** **10 47 43.1 +1.6**
comp=Z,52nm,0.6s,mb5.5
AFI Afiamalu 57.44 102 *eP* **P** **10 47 43.1 +1.5**
AFI pmax pmax
comp=Z,53nm,0.6s,mb5.5
AFI Afiamalu 57.44 102 P **P** **10 47 42.7 +1.1**
comp=Z,53nm,0.6s,mb5.6,baz=194,slow=7.8,SNR=16
AFI LR LR 11 09 06.4
comp=Z,506nm,19.7s,baz=124,slow=32
SONM Songino Array 57.96 341 P **P** **10 47 45.5 +0.9**
comp=Z,31nm,0.6s,mb5.3,baz=159,slow=6.5,SNR=272
SONM PKPPKP 11 17 26.0
comp=Z,0.3nm,0.3s,baz=326,slow=6.3,SNR=4.2
LGTI Lohaghat 59.80 309 *eP* **P** **10 47 56.0 -1.7**
CIT Chita 59.93 348 *eP* **P** **10 47 59.1 +1.1**
CIT *e* pP 10 48 35.0 +2.2
CIT *e* 10 48 42.8
CIT *e* 10 48 55.3
KAD Karad 60.18 294⇑ *eP* **P** **10 47 59.3 -1.1**
DRV Dumont d'Urvil 60.53 176 S **S** **10 55 57.0 -8.8**
DRV L 11 03 00.0
DRV R 11 07 00.0
AGRA Agra 60.62 306 *eP* **P** **10 48 01.9 -1.4**
AGRA AMb AMB 10 48 02.5
comp=Z,213nm,0.5s,mb6.3
JOSI Joshimath 60.85 310 *eP* **P** **10 48 04.8 0.0**
POO Poona 60.87 295⇑ *iP* **P** **10 48 04.0 -1.1**
comp=Z,150nm,1.0s,mb5.8
ZAK Zakamensk 61.19 341⇓ *iP* **P** **10 48 06.7 +0.1**
ZAK *e* 10 56 09.5
ZAK pmax pmax
comp=Z,20nm,1.1s,mb4.9
CASY Casey 61.32 189 *eP* **P** **10 48 08.0 +0.7**
ASOR Ausora 61.41 308 *eP* **P** **10 48 08.1 -0.5**
BISR Bishrakh 61.60 307 *eP* **P** **10 48 08.2 -1.6**
BISR AMb AMB 10 48 09.8
comp=Z,4.6nm,0.9s,mb4.3
SONA Sohna 61.74 307 *eP* **P** **10 48 09.6 -1.2**
SONA AMb AMB 10 48 10.6
comp=Z,300nm,0.8s,mb6.2
AYAN Aya Nagar 61.81 307 *ex* x 10 48 15.8
AYAN AMb AMB 10 48 16.7
comp=Z,506nm,0.7s,mb6.5
NDI New Delhi 61.82 307 *eP* **P** **10 48 09.0 -2.3**
DDI Dehra Dun 61.89 309 *eP* **P** **10 48 11.0 -0.8**
BHGR Bahadurgarh 62.04 307 *eP* **P** **10 48 10.7 -2.1**
BHGR AMb AMB 10 48 12.4
comp=Z,412nm,0.6s,mb6.5
KUDL Kundal 62.17 306 *eP* **P** **10 48 12.3 -1.4**
KUDL AMb AMB 10 48 13.4
comp=Z,230nm,0.9s,mb6.0
TLY Talaya 62.19 342 *eP* **P** **10 48 14.5 +1.1**
TLY Talaya 62.19 342*c iP* **P** **10 48 14.4 +1.1**
TLY *eS* **S** **10 56 27.6 +0.5**
TLY pmax pmax
comp=Z,31nm,0.8s,mb5.2
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
TLY Talaya 62.19 342 P **P** **10 48 14.7 +1.4**
SNR=18
IRK Irkutsk 62.49 342⇓ *iP* **P** **10 48 15.3 0.0**
IRK *e* 10 49 05.5
IRK pmax pmax
comp=Z,138nm,0.8s,mb5.8
RTK Rohtak 62.61 307 *ex* x 10 48 09.6
RTK AMb AMB 10 48 10.8
comp=Z,134nm,0.5s,mb6.0
KHET Khetri 62.69 306 *eP* **P** **10 48 16.0 -1.1**
KHET AMb AMB 10 48 17.7
comp=Z,151nm,1.1s,mb5.7
AJM Ajmer 63.00 304 *eP* **P** **10 48 18.0 -1.2**
NRGR Nerungri 63.01 357 *i P* **P** **10 48 19.9 +1.3**
WMQ Urumqi 63.04 327⇑ *iP* **P** **10 48 19.7 +0.6**
WMQ AP pP 10 48 52.9 -1.3
WMQ PCP PcP 10 48 56.1 +0.5
WMQ XP sP 10 49 08.3 -1.9
WMQ PP PP 10 50 41.4 +1.7
WMQ SCP ScP 10 52 43.4 -0.7
WMQ S **S** **10 56 37.0 -1.0**
WMQ XS sS 10 57 35.7 -2.9
WMQ SCS ScS 10 57 54.9 -2.8
WMQ *eSS SS 11 00 47.2 +0.6
WMQ AMB AMB
comp=Z,195nm,2.5s,mb5.5
WMQ AMB AMB
comp=Z,122nm,7.6s
WMQ LR LR
comp=N,414nm,27.8s
WMQ LR LR
comp=E,278nm,25.0s
WMQ LR LR
comp=Z,155nm,22.3s
MOY Mondy 63.05 340 *eP* **P** **10 48 20.9 +1.9**
MOY pmax pmax
comp=Z,121nm,2.1s,mb5.4
CLNS Chul'man 63.18 357 *eP* **P** **10 48 19.6 -0.1**
CLNS *eS* **S** **10 56 39.8 +0.6**
CLNS *e* 10 57 24.4
CLNS *eSS SS 11 00 48.8 +0.5
CLNS pmax pmax
comp=Z,64nm,0.8s,mb5.5
CLNS pmax pmax
comp=N,36nm,0.9s
CLNS pmax pmax
comp=E,15nm,0.7s
CLNS smax
comp=E,614nm,12.3s
CLNS smax
comp=Z,173nm,13.7s
CLNS smax
comp=N,141nm,11.2s
SDNR Sundarnagar 63.26 310 *eP* **P** **10 48 20.2 -0.6**
PET Petropavlovsk 63.92 19 *eP* **P** **10 48 25.2 +0.5**
PET *eS* **S** **10 56 46.7 -1.8**
PET pmax pmax
comp=Z,46nm,0.8s,mb5.4
DLH Dalhousie 64.49 311 *eP* **P** **10 48 27.0 -1.8**
THN Thein Dam 64.63 310 *eP* **P** **10 48 28.4 -1.4**
BOD Bodaibo 65.36 351 *eP* **P** **10 48 33.8 -0.1**
KSH Kashi 67.75 317⇑ *iP* **P** **10 48 51.0 +1.5**
KSH *ePCP PcP 10 49 16.6 +1.4
KSH *eAP pP 10 49 25.8 +0.7
KSH XP sP 10 49 42.5 +1.5
KSH *ePP PP 10 51 24.3 +3.3
KSH *eSCP 10 53 02.5
KSH PCS 10 53 20.2
KSH S S 10 57 33.3 -2.3
KSH *eSCS ScS 10 58 32.3 -2.0
KSH XS sS 10 58 36.9 -0.1
KSH *eSS SS 11 02 00.7 +0.7
KSH AMB AMB
comp=Z,938nm,7.2s
KSH LR LR
comp=N,2μm,5.9s
KSH LR LR
comp=E,3μm,7.0s
KSH LR LR
comp=Z,2μm,8.7s
MA2 Magadan 67.78 11 *eP* **P** **10 48 49.9 +0.7**
comp=Z,28nm,0.8s,mb5.0
MA2 Magadan 67.78 11 *eP* **P** **10 48 49.5 +0.3**
MA2 *e* 10 49 15.6
MA2 *eS S 10 57 31.1 -4.0
MA2 *e*sS sS 10 58 34.8 -1.7
MA2 *eSS SS 11 01 53.3 -6.3
MA2 *eSSS 11 05 05.4
MA2 pmax pmax
comp=N,20nm,0.9s
MA2 pmax pmax
comp=Z,50nm,0.9s,mb5.2
MKAR Makanchi Array 67.87 327 P **P** **10 48 50.7 +0.6**
MKAR S S 10 57 33.0 -3.7
MKAR P'P' 11 17 08.5
MKAR Makanchi Array 67.87 327 P **P** **10 48 50.7 +0.6**
MKAR S S 10 57 33.0 -3.7
MKAR Makanchi Array 67.87 327 P **P** **10 48 50.7 +0.6**
comp=Z,110nm,0.6s,mb5.8,baz=113,slow=8.4,SNR=746
MKAR S S 10 57 33.0 -3.7
comp=Z,1.0nm,0.9s,baz=128,slow=9.3,SNR=2.8
MKAR PKPPKP 11 17 08.5
comp=Z,1.1nm,0.8s,baz=77,slow=4.8,SNR=7.7
YAK Yakutsk 68.24 360 *eP* **P** **10 48 52.3 +0.2**
YAK Yakutsk 68.24 360*c iP* **P** **10 48 52.5 +0.4**
YAK *i **PP pP 10 49 15.1 -13
YAK *i* pP 10 49 24.2 -3.5
YAK *i* S S 10 57 40.4 -0.1
YAK *i* 10 58 36.3
YAK pmax pmax
comp=E,9.0nm,0.9s
YAK pmax pmax
comp=Z,211nm,0.9s,mb5.9
YAK pmax pmax
comp=N,52nm,1.0s
YAK smax
comp=N,226nm,2.2s
YAK smax
comp=E,674nm,4.3s
ULHL Ulahol 68.94 320 P **P** **10 48 57.9 +1.0**
SNR=33
KZA Kyzart 69.49 319 P **P** **10 49 02.1 +1.8**
SNR=122
TKM2 Tokmak 2 69.69 320 *eP* **P** **10 49 02.4 +0.9**
comp=E,56nm,0.6s,mb5.5
TKM2 Tokmak 2 69.69 320 *eP* **P** **10 49 02.5 +1.1**
TKM2 Tokmak 2 69.69 320 P **P** **10 49 02.5 +1.1**
SNR=81
KBK Karagaybulak 69.97 320 P **P** **10 49 03.8 +0.6**
SNR=29
UCH Uchtor 70.04 319 *eP* **P** **10 49 05.1 +1.5**
comp=E,92nm,0.9s,mb5.5
UCH Uchtor 70.04 319 P **P** **10 49 05.3 +1.7**
SNR=107
AAK Ala-Archa 70.25 320 *eP* **P** **10 49 05.0 +0.1**
AAK Ala-Archa 70.25 320*c iP* **P** **10 49 05.1 +0.2**
AAK pmax pmax
comp=Z,184nm,2.1s,mb5.4
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 05.4 +0.5**
SNR=47
AAK Ala-Archa 70.25 320 P **P** **10 49 06.2 +1.3**
SNR=86
CHMS Chumysh 70.26 320 P **P** **10 49 05.6 +0.6**
SNR=14
FRU Bishkek 70.27 320 *eP* **P** **10 49 05.0 0.0**
FRU *e* 10 49 29.0
FRU pmax pmax
comp=Z,100nm,1.8s,mb5.2
AML Almayashu 70.53 319 *eP* **P** **10 49 08.1 +1.5**
comp=Z,150nm,0.9s,mb5.7
AML Almayashu 70.53 319 P **P** **10 49 08.3 +1.7**
SNR=139
USP Ospenovka 70.56 320 P **P** **10 49 07.6 +0.8**
SNR=89
EKS2 Erkin-Say 70.73 319 *eP* **P** **10 49 09.0 +1.2**
comp=Z,143nm,1.1s,mb5.6
EKS2 Erkin-Say 70.73 319 P **P** **10 49 09.2 +1.4**
SNR=115
ZALV Zalesovo Beam 71.17 334 P **P** **10 49 09.6 -0.6**
comp=Z,38nm,0.6s,mb5.3,baz=119,slow=5.1,SNR=108
ZALV S S 10 58 09.9 -5.1
comp=Z,3.9nm,0.9s,baz=131,slow=16,SNR=6.5
ZALV LR LR 11 23 48.5
comp=Z,99nm,20.7s,baz=292,slow=38
ZAL Zalesovo 71.17 334 P **P** **10 49 09.6 -0.6**
ZAL S S 10 58 09.9 -5.1
KURK Kurchatov 72.14 328 *eP* **P** **10 49 16.3 +0.2**
comp=Z,68nm,1.0s,mb5.3
KURK Kurchatov 72.14 328 *eP* **P** **10 49 16.3 +0.2**
KURK pmax pmax
comp=Z,68nm,1.0s,mb5.3
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
KURK Kurchatov 72.14 328 P **P** **10 49 16.5 +0.4**
SNR=27
NVS Novosibirsk 72.45 334⇑ *iP* **P** **10 49 17.2 -0.6**
NVS *e* pP 10 49 52.9 -0.9
NVS *eS* S 10 58 24.7 -5.0
NVS pmax pmax
comp=E,58nm,1.7s
NVS pmax pmax
comp=Z,114nm,1.7s,mb5.3
NVS pmax pmax
comp=N,69nm,1.8s
NVS smax
comp=N,58nm,2.0s
NVS smax
comp=E,53nm,1.6s
VNDA Vanda 73.00 173 P **P** **10 49 21.4 +0.6**
VNDA S S 10 58 32.2 -3.1
VNDA LR LR 11 22 54.2
VNDA Vanda 73.00 173 P **P** **10 49 21.4 +0.6**
VNDA S S 10 58 32.2 -3.2
VNDA Vanda 73.00 173 P **P** **10 49 21.4 +0.6**
comp=E,23nm,0.6s,mb5.1,baz=320,slow=6.5,SNR=89
VNDA S S 10 58 32.2 -3.1
comp=E,1.8nm,0.4s,baz=51,slow=1.1,SNR=17
VNDA LR LR 11 22 54.2
comp=E,360nm,19.2s,baz=342,slow=37
SBA Scott Base 73.88 172 *eP* **P** **10 49 27.7 +1.7**
WBK Wadi Bani Khal 75.38 295 P **P** **10 49 36.5 +0.9**
SNR=16
WBK Wadi Bani Khal 75.38 295 P **P** **10 49 36.5 +0.9**
SNR=16
WBK Wadi Bani Khal 75.38 295 P **P** **10 49 36.5 +0.9**
SNR=16
WBK Wadi Bani Khal 75.38 295 P **P** **10 49 36.5 +0.9**
SNR=16
WBK Wadi Bani Khal 75.38 295 P **P** **10 49 36.5 +0.9**
SNR=16

WBK Wadi Bani Khal 75.38 295 P P 10 49 36.5 +0.9
SNR=16
WBK Wadi Bani Khal 75.38 295 P P 10 49 36.5 +0.9
SNR=16
WBK Wadi Bani Khal 75.38 295 P P 10 49 36.5 +0.9
SNR=16
WBK Wadi Bani Khal 75.38 295 P P 10 49 36.5 +0.9
SNR=16
MAW Mawson 75.58 201⇑iP P 10 49 36.8 +0.9
comp=E,28nm,0.7s,mb5.0
MAW Mawson 75.58 201⇑iP P 10 49 36.8 +0.9
MAW pmax pmax
comp=Z,29nm,0.7s
MAW Mawson 75.58 201 P P 10 49 36.8 +1.0
comp=Z,32nm,0.6s,mb5.1,baz=74,slow=6.2,SNR=32
MAW LR LR 11 20 42.3
comp=Z,569nm,18.5s,baz=72,slow=34
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
JMDO Jabal Madar 76.11 295 P P 10 49 40.1 +0.4
SNR=14
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
SMDO Samad 76.31 296 P P 10 49 41.5 +0.6
SNR=23
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BIDO Bidbid 76.34 296 P P 10 49 41.9 +0.8
SNR=43
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
BSY Bisya 77.00 295 P P 10 49 45.2 +0.4
SNR=12
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
HOQ Hoqain 77.09 296 P P 10 49 45.7 +0.5
SNR=16
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
ARQ Araqi 77.74 295 P P 10 49 49.3 +0.5
SNR=14
BRVK Borovoye 77.77 328 eP P 10 49 48.2 -0.1
BRVK Borovoye 77.77 328 P P 10 49 48.6 +0.3
SNR=19
BRVK Borovoye 77.77 328 P P 10 49 48.6 +0.3
SNR=19
BRVK Borovoye 77.77 328 P P 10 49 48.6 +0.3
SNR=19
BRVK Borovoye 77.77 328 P P 10 49 48.6 +0.3
SNR=19
BRVK Borovoye 77.77 328 P P 10 49 48.6 +0.3
SNR=19
TIXI Tiksi 77.91 360 eP P 10 49 48.0 -0.7
comp=Z,40nm,0.9s,mb5.0
TIXI Tiksi 77.91 360c iP P 10 49 47.8 -0.9
TIXI pmax pmax
comp=Z,38nm,0.8s,mb5.1
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
HATD Hatta, Dubai 78.41 297 P P 10 49 53.2 +0.6
SNR=12
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
ASHO Ashiyiah 78.44 297 P P 10 49 52.8 +0.1
SNR=13
BILL Bilibino 78.49 13 eP P 10 49 51.7 -0.2
comp=Z,6.7nm,0.6s,mb4.5
BILL Bilibino 78.49 13 eP P 10 49 51.8 -0.2
BILL e 10 50 44.6
BILL eS S 10 59 33.3 -2.4
BILL e 11 00 02.2
BILL eSS SS 11 04 35.9 -6.5
BILL SSS 11 08 10.0
BILL pmax pmax
comp=Z,50nm,0.8s,mb5.2
BILL MLR MLR
comp=Z,200nm,20.0s
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
BANOM Banah 78.50 298 P P 10 49 54.2 +1.2
SNR=20
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
RBK Rabkut 78.72 289 P P 10 49 54.9 +0.6
SNR=14
PPT Papeete 78.76 107 eLR LR 11 14 40.9
comp=Z,1μm,41.8s
WHFO Wadi Hawf 79.20 290 P P 10 49 56.8 -0.1
SNR=31
WHFO Wadi Hawf 79.20 290 P P 10 49 56.8 -0.1
SNR=31
WHFO Wadi Hawf 79.20 290 P P 10 49 56.8 -0.1
SNR=31
WHFO Wadi Hawf 79.20 290 P P 10 49 56.8 -0.1
SNR=31
WHFO Wadi Hawf 79.20 290 P P 10 49 56.8 -0.1
SNR=31
ABTO Aybut 79.54 289 P P 10 49 59.2 +0.4
SNR=32
ABTO Aybut 79.54 289 P P 10 49 59.2 +0.4
SNR=32
ABTO Aybut 79.54 289 P P 10 49 59.2 +0.4
SNR=32
ABTO Aybut 79.54 289 P P 10 49 59.2 +0.4
SNR=32
UNV Unalaska Valle 79.88 33 eP P 10 50 00.8 +0.9
ABKT Ailbek 80.02 310 P P 10 50 01.6 +0.6
comp=Z,269nm,0.8s,mb5.9,SNR=5.7
OPO Ambohidratompo 81.43 252 P P 10 50 09.8 +0.9
comp=Z,12nm,0.8s,mb4.6,baz=86,slow=6.0,SNR=18
GAMB Gambell 82.28 22 eP P 10 50 13.4 +1.1
MUKL Al Mukalla 83.13 285 eP P 10 50 18.6 +0.8
MUKL AMb AMB 10 50 19.6
comp=Z,41nm,0.5s,mb5.4
QSPA South Pole Qui 83.56 180 eP P 10 50 19.2 +0.5
comp=Z,50nm,0.8s,mb5.3
AKTK Aktyubinsk 83.76 322 P P 10 50 20.1 -0.1
AKTK S S 11 00 26.4 -4.4
AKTK LR LR 11 27 24.5
AKTO Aktyubinsk 83.76 322 P P 10 50 20.1 -0.1
AKTO S S 11 00 26.5 -4.3
AKTO Aktyubinsk 83.76 322 P P 10 50 20.1 -0.1
comp=Z,25nm,0.7s,mb5.0,baz=109,slow=7.2,SNR=58
AKTO S S 11 00 26.4 -4.4
comp=Z,1.2nm,0.7s,baz=198,slow=21,SNR=7.5
AKTO LR LR 11 27 24.5
comp=Z,270nm,21.4s,baz=299,slow=35
SYO Syowa Base 84.30 201⇓eP P 10 50 21.8 -0.8
SVE Sverdlovsk 84.39 329⇑eP P 10 50 23.7 +0.4
SVE eS S 11 00 38.4 +1.5
SVE e 11 01 24.3
SVE eSS SS 11 06 15.4 +4.9
SVE pmax pmax
comp=Z,73nm,0.8s,mb5.5
TNA Tin City 84.59 22 eP P 10 50 24.4 +0.4
ARU Arti 85.34 328 P P 10 50 27.2 -0.8
comp=Z,395nm,0.9s,mb6.1,SNR=15
ARU Arti 85.34 328 eP P 10 50 26.8 -1.2
comp=Z,60nm,0.9s,mb5.3
ARU Arti 85.34 328 eP P 10 50 26.8 -1.2
ARU pmax pmax
comp=Z,60nm,0.9s,mb5.3
KBD Kabd 86.62 300 eP P 10 50 34.6 -0.4
KBD AMb AMB 10 50 35.8
comp=Z,172nm,0.6s,mb6.0
UMR Umm Al-Rimmam 86.67 300 eP P 10 50 34.7 -0.5
UMR AMb AMB 10 50 35.7
comp=Z,84nm,0.7s,mb5.7
LBOS 86.69 284⇑eP P 10 50 37.0 +1.4
RDF Al-Radifah 86.71 299 eP P 10 50 35.0 -0.4
RDF AMb AMB 10 50 35.9
comp=Z,98nm,0.8s,mb5.7
NAY Al-Naaiem 87.03 300 eP P 10 50 36.3 -0.6
NAY AMb AMB 10 50 37.2
comp=Z,100nm,0.8s,mb5.7
MIB Mutribah 87.03 300 eP P 10 50 36.5 -0.4
MIB AMb AMB 10 50 37.3
comp=Z,124nm,0.9s,mb5.8
SOKR Solikamsk 87.21 331d iP P 10 50 36.1 -1.0
SOKR pmax pmax
comp=Z,30nm,0.9s,mb5.1
DHBB Dhamar BB 87.60 285 eP P 10 50 41.4 +1.4
TRBA At Turbah 87.70 284 eP P 10 50 41.7 +1.2
TRBA AMb AMB 10 50 42.8
comp=Z,19nm,0.5s,mb5.2
SVW2 Sparrevohn 88.01 28 eP P 10 50 41.6 +0.7
TTA Tatalina 88.36 26 eP P 10 50 42.7 +0.2
KDAK Kodiak Island 88.59 32 P P 10 50 43.6 0.0
comp=Z,16nm,0.9s,mb5.0,baz=313,slow=1.5,SNR=7.9
PMR Palmer 91.14 28 eP P 10 50 54.3 -1.2
comp=Z,4.9nm,0.6s,mb4.7
PMR Palmer 91.14 28 eP P 10 50 54.3 -1.2
PMR pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
ZEI Tsey 91.63 313 eP P 10 50 58.6 +0.4
ZEI i pP 10 51 34.9 -0.7
ZEI e 10 54 37.0
ZEI pmax pmax
comp=Z,13nm,0.8s,mb5.0
RKT Rikitea 91.89 113 eLR LR 11 20 42.0
comp=Z,308nm,34.8s
COLA College 92.32 25 eP P 10 50 58.7 -2.2
comp=Z,6.4nm,0.8s,mb4.7
COLA College 92.32 25 iP P 10 51 00.7 -0.2
KIV Kislovodsk 92.64 314 eP P 10 51 05.6 +2.7
KIV e*PP pP 10 51 45.5 +5.2
KIV e 10 54 52.6
KIV pmax pmax
comp=Z,9.0nm,1.2s,mb4.8
KMBO Kilima Mbogo 92.85 269 eP P 10 51 05.4 +0.9
comp=Z,24nm,1.2s,mb5.2
KMBO Kilima Mbogo 92.85 269 eP P 10 51 05.4 +0.9
KMBO pmax pmax
comp=Z,24nm,1.2s
KMBO Kilima Mbogo 92.85 269 P P 10 51 05.6 +1.1
SNR=10
KMBO Kilima Mbogo 92.85 269 P P 10 51 05.6 +1.1
SNR=10
KMBO Kilima Mbogo 92.85 269 P P 10 51 05.6 +1.1
SNR=10
KMBO Kilima Mbogo 92.85 269 P P 10 51 05.6 +1.1
SNR=10
KMBO Kilima Mbogo 92.85 269 P P 10 51 05.5 +1.0
comp=Z,14nm,1.0s,mb5.1,baz=60,slow=6.9,SNR=27
EGAK Eagle 95.15 25 eP P 10 51 13.9 0.0
MALT Malatya 95.35 308 eP P 10 51 15.4 -0.1
comp=Z,2.8nm,0.6s,mb4.7
MALT Malatya 95.35 308 eP P 10 51 15.4 0.0
MALT pmax pmax
comp=Z,3.0nm,0.6s,mb4.7
DAWY Dawson 95.88 26 eP P 10 51 17.7 +0.5
ASF Jabal al Asfar 96.20 302 P P 10 51 20.2 +0.7
comp=Z,9.8nm,0.8s,mb5.2,baz=338,slow=4.1,SNR=19
OBN Obninsk 97.32 325⇓eP P 10 51 22.4 -1.5
OBN e pP 10 51 56.7 -4.7
OBN e 10 52 19.8
OBN pmax pmax
comp=Z,25nm,0.9s,mb5.5
MMAI Mount Meron Ar 97.50 302 P P 10 51 25.9 +0.6
comp=Z,6.3nm,0.8s,mb5.1,baz=101,slow=8.1,SNR=9.7
EIL Elat 97.72 299 P P 10 51 26.3 -0.1
EIL LR LR 11 39 40.3
EIL Elat 97.72 299 P P 10 51 26.3 -0.1
comp=Z,5.7nm,0.8s,mb5.1,baz=89,slow=4.5,SNR=4.7
EIL LR LR 11 39 40.3
comp=Z,280nm,19.6s,baz=281,slow=38
VNA2 Neumayer--Watz 97.86 193 eP P 10 51 26.6 +0.5
VNA2 e 10 51 30.0
VNA2 e 10 51 32.4
VNA2 e 10 51 41.9
VNA2 e 10 51 43.8
VNA2 e 10 51 48.1
VNA2 e 18 03 04.3
VNA2 e 18 03 07.5
VNA3 Neumayer Olymp 98.11 192 eP P 10 51 27.5 +0.3
VNA3 e 10 51 30.5
VNA3 e 10 51 33.2
VNA3 e 10 51 42.1
VNA3 e 10 51 44.1
VNA3 e 10 51 48.6
VNA3 e 18 03 05.4
VNA3 e 18 03 08.8
INK Inuvik 98.23 22 eP P 10 51 26.5 -1.2
VNA1 Neumayer--Stat 98.25 193 eP P 10 51 26.4 -1.5
VNA1 e 10 51 28.8
VNA1 e 10 51 31.2
VNA1 e 10 51 47.2
APA Apatity 98.50 337⇓eP P 10 51 35.0 +6.0
APA pmax pmax
comp=Z,93nm,1.7s,mb5.9
BRTR Keskin Array B 99.14 309 P P 10 51 31.4 -1.0
comp=Z,2.7nm,0.9s,mb4.7,baz=103,slow=5.3,SNR=12
BRTR PP PP 10 55 33.8 -3.1
comp=Z,1.5nm,0.7s,baz=96,slow=10,SNR=4.2
JOF Joensuu 99.74 333 ep Pdif 10 51 31.5 -3.3
comp=Z,15nm,0.8s
LSZ Lusaka 99.86 253 ePdif Pdif 10 51 35.9 +0.5
comp=Z,9.8nm,1.1s
LSZ Lusaka 99.86 253 eP Pdif 10 51 35.9 +0.5
LSZ pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
BOSA Boshof 99.97 240 P Pdif 10 51 36.5 +0.6
BOSA LR LR 11 31 35.7
BOSA Boshof 99.97 240 P Pdif 10 51 36.5 +0.6
comp=Z,2.6nm,0.8s,baz=24,slow=4.2,SNR=4.3
BOSA LR LR 11 31 35.7
comp=Z,129nm,18.7s,baz=156,slow=32
ARCES ARCESS Array B 101.11 340 P Pdif 10 51 39.3 -1.6
comp=Z,6.5nm,0.7s,baz=77,slow=3.9,SNR=13
ARCES PKiKP PKiKP 10 56 04.0 -0.7
comp=Z,0.8nm,0.7s,baz=75,slow=1.0,SNR=5.9
AKASG Malin Array Be 101.91 320 P Pdif 10 51 43.0 -1.4
comp=Z,0.3nm,0.3s,baz=69,slow=5.3,SNR=5.6
AKASG PP PP 10 55 57.6 +0.2
comp=Z,2.1nm,0.7s,baz=82,slow=6.9,SNR=5.1
KAF Kangasniemi 102.15 332 ep Pdif 10 51 42.7 -2.8
comp=Z,8.7nm,0.8s,baz=79,slow=4.3
KAF Kangasniemi 102.15 332 eP Pdif 10 51 42.7 -2.8
KAF pmax pmax
comp=Z,9.0nm,0.8s
FINES FINESS Array B 102.36 332 Pdif Pdif 10 51 44.7 -1.8
FINES FINESS Array B 102.36 332 Pdiff Pdif 10 51 44.7 -1.8
comp=Z,3.1nm,0.7s,baz=104,slow=6.1,SNR=12
FINES PKiKP PKiKP 10 56 07.5 +0.4
comp=Z,1.5nm,0.6s,baz=100,slow=5.8,SNR=5.2
FINES SKP 10 59 27.9
comp=Z,1.2nm,0.8s,baz=60,slow=7.5,SNR=4.0
MLR Muntele Rosu 104.57 315 Pdiff Pdif 10 51 56.5 +0.2
comp=Z,2.6nm,0.7s,baz=46,slow=3.7,SNR=5.3
MLR PKiKP PKiKP 10 56 11.5 -0.2
comp=Z,4.6nm,0.7s,baz=227,slow=2.6,SNR=3.2
IDI Anoyia 106.20 305 PKiKP PKiKP 10 56 14.3 -0.7
comp=Z,3.9nm,0.3s,baz=70,slow=12,SNR=3.6
YKA Yellowknife Ar 107.12 26 Pdif Pdif 10 52 07.2 -0.4
YKA PKPdf PKiKP 10 56 15.4 -0.4
YKA SKP 10 59 36.2
YKA PKKPbc PKKPbc 11 07 32.6 -3.1
YKA Yellowknife Ar 107.12 26 Pdiff Pdif 10 52 07.2 -0.4
comp=Z,0.6nm,0.7s,baz=295,slow=4.8,SNR=10
YKA PKiKP PKiKP 10 56 15.4 -0.4
comp=Z,3.5nm,0.6s,baz=292,slow=1.6,SNR=63
YKA SKP 10 59 36.2
comp=Z,0.6nm,0.8s,baz=302,slow=1.7,SNR=3.7
YKA PKKPbc PKKPbc 11 07 32.6 -3.1
comp=Z,1.7nm,0.7s,baz=106,slow=2.9,SNR=26
HFS Hagfors 108.56 332 Pdiff Pdif 10 52 12.5 -1.5
comp=Z,0.9nm,0.5s,baz=90,slow=1.5,SNR=5.2
HFS PKiKP PKiKP 10 56 18.7 +0.1
comp=Z,6.6nm,1.0s,baz=270,slow=0.6,SNR=4.2
NB2 NORSAR Subarra109.37 333 P Pdif 10 52 16.1 -1.5
comp=Z,1.7nm,0.7s,baz=70,slow=4.6
NOA NORSAR Array B 109.37 333 Pdif Pdif 10 52 16.1 -1.5
NOA PKPdf PKiKP 10 56 19.4 -0.7
NOA PKKPbc PKKPbc 11 07 27.5 -1.1
NOA NORSAR Array B 109.37 333 Pdiff Pdif 10 52 16.1 -1.5
comp=Z,3.0nm,0.8s,baz=70,slow=4.6,SNR=6.4
NOA PKiKP PKiKP 10 56 19.4 -0.7
comp=Z,1.8nm,0.9s,baz=53,slow=4.4,SNR=3.3
NOA PKKPbc PKKPbc 11 07 27.5 -1.0
comp=Z,1.6nm,0.9s,baz=67,slow=2.7,SNR=3.8
NVAR Mina Array Bea 110.74 51 Pdif Pdif 10 52 27.0 +3.3
NVAR PKPdf PKiKP 10 56 24.9 +1.5
NVAR PKKPbc PKKPbc 11 07 24.0 +0.6
NVAR PKKPab PKKPab 11 07 34.0 +1.0
NVAR Mina Array Bea 110.74 51 Pdiff Pdif 10 52 27.0 +3.3
comp=Z,0.1nm,0.3s,baz=246,slow=18,SNR=2.2
NVAR PKiKP PKiKP 10 56 24.9 +1.5
comp=Z,0.9nm,0.7s,baz=276,slow=0.9,SNR=7.1
NVAR PKKPbc PKKPbc 11 07 24.0 +0.6
comp=Z,0.8nm,0.7s,baz=96,slow=5.1,SNR=7.5
NVAR PKKPab PKKPab 11 07 34.0 +1.0
comp=Z,1.4nm,0.7s,baz=109,slow=6.7,SNR=10.0
EDM Edmonton 110.75 35 eP PKiKP 10 56 22.6 -0.3
CLL Collm 111.83 323 ePKP PKiKP 10 56 23.0 -2.1
CLL ePP PP 10 57 09.0 -0.9
CLL Collm 111.83 323 ePP PP 10 57 09.0 -0.9
CLL eSdif Sdif 11 04 36.0 -0.4
CLL ePS PS 11 06 48.0 +3.2
CLL epPS 11 07 17.0
CLL ePPS 11 08 00.0
CLL esPPS 11 08 34.0
CLL eSS SS 11 12 30.0 -4.9
CLL eSSS 11 16 30.0
CLL ex x 11 18 12.0
CLL LmV 11 34 00.0
comp=Z,300nm,18.6s
KHC Kasperske Hory 112.12 321 ePKP PKiKP 10 56 25.5 -0.2
GERES GERESS Array B 112.13 320 PKiKP PKiKP 10 56 25.8 0.0
comp=Z,3.6nm,0.5s,baz=78,slow=1.8,SNR=23
GERES SKP 10 59 46.6
comp=Z,0.3nm,0.4s,baz=85,slow=1.6,SNR=3.6
CHMT Chamberlain Mo 112.63 42 eP PKiKP 10 56 27.1 +0.3
KBA Koelnbreinsper 112.85 319⇓iP PKiKP 10 56 27.5 +0.3
comp=Z,5.8nm,0.6s
MCMT McKenzie Canyo 113.45 44 eP PKiKP 10 56 28.6 +0.3
ABTA Abfaltersbach 113.49 318⇑iPKiKP PKiKP 10 56 27.9 -0.5
comp=Z,7.0nm,0.6s
WTTA Wattenberg 113.91 319⇑iP PKiKP 10 56 29.1 -0.1
comp=Z,23nm,0.4s
WATA Walderalm 113.93 319⇑iP PKiKP 10 56 28.9 -0.3
comp=Z,6.5nm,0.5s
SQTA Sankt Quirin 114.20 319⇑iP PKiKP 10 56 29.6 -0.2
comp=Z,5.8nm,0.4s
MOTA Moosalm 114.23 319⇓iP PKiKP 10 56 29.7 -0.1
comp=Z,6.3nm,0.4s
EGMT Eagleton 114.57 40 eP PKiKP 10 56 30.3 -0.1
FETA Feichten 114.57 319⇑iPKiKP PKiKP 10 56 30.5 +0.1
comp=Z,8.3nm,1.0s
DAVA Damuels 115.04 320⇑iP PKiKP 10 56 31.2 -0.2
comp=Z,13nm,0.4s
DAVA Damuels 115.04 320⇑iP PKiKP 10 56 31.2 -0.2
DAVOX Davos/Dischmat 115.20 319 PKiKP PKiKP 10 56 31.7 +0.1
comp=Z,9.2nm,0.5s,baz=175,slow=4.3,SNR=11
DAVOS Davos 115.24 319 PKiKP PKPdf 10 56 31.8 0.0
LOHW Long Hollow 115.33 45 eP PKiKP 10 56 33.0 +0.9
MSU Marysvale 115.45 50 eP PKiKP 10 56 33.9 +1.5
TMUT Trail Mountain 116.01 49 eP PKPdf 10 56 34.5 +1.1
CDF Champ du Feu 116.30 321 ePKIKP PKPdf 10 56 33.0 -0.7
PDAR Pinedale Array 116.30 45 PKiKP PKPdf 10 56 34.6 +0.7
comp=Z,2.7nm,0.7s,baz=215,slow=1.1,SNR=24
PDAR SKP 10 59 56.0
comp=Z,1.4nm,1.0s,baz=213,slow=2.9,SNR=3.8
PDAR PKKPbc PKKPbc 11 07 03.4 -1.3
comp=Z,1.6nm,0.9s,baz=113,slow=4.0,SNR=9.1
SRU San Rafael 116.57 49 eP PKPdf 10 56 35.3 +0.8
HINF Hinteralfeld 116.78 321 ePKIKP PKPdf 10 56 34.1 -0.6
comp=Z,13nm,0.5s
USHA Ushuaia 117.02 168 PKP PKPdf 10 56 35.9 +0.9
comp=Z,5.8nm,0.6s,baz=213,slow=2.5,SNR=11
HAU Haudompre 117.03 321 ePKIKP PKPdf 10 56 34.4 -0.8
comp=Z,10nm,0.7s
HAU eMLR MLR
comp=Z,304nm,18.2s
HAU Haudompre 117.03 321 ePKIKP PKPdf 10 56 34.4 -0.8
HAU MLR MLR

comp=Z,300nm,18.3s
GIVF Givet 117.11 324 ePKIKP PKPdf 10 56 35.5 +0.2
LAO LASA Array 117.28 40 eP PKPdf 10 56 36.7 +1.0
BAIF Baives 117.49 324 ePKIKP PKPdf 10 56 36.2 +0.2
comp=Z,5.2nm,0.5s
MEZF Maizieres J'vi 117.63 322 ePKIKP PKPdf 10 56 35.5 -0.8
comp=Z,16nm,0.3s
LPG La Plagne 117.68 319 ePKIKP PKPdf 10 56 36.8 +0.3
comp=Z,15nm,0.5s
LPL La Plagne 117.69 319 ePKIKP PKPdf 10 56 36.7 +0.2
comp=Z,20nm,0.5s
CABF La Chapelle 117.71 320 ePKIKP PKPdf 10 56 36.7 +0.2
comp=Z,29nm,0.5s
SBF Sospel 117.78 317 ePKIKP PKPdf 10 56 36.3 -0.5
comp=Z,37nm,0.8s
PV10 Paradox Valley 117.88 50 eP PKPdf 10 56 38.2 +1.1
MBDF Montbardon 117.94 318 ePKIKP PKPdf 10 56 37.4 +0.4
comp=Z,14nm,0.7s
PV01 Paradox Valley 118.30 50 eP PKPdf 10 56 38.7 +0.8
FRF La Foret Royal 118.42 316 ePKIKP PKPdf 10 56 37.8 -0.2
ORIF Oris-en-Rattie 118.46 318 ePKIKP PKPdf 10 56 37.9 -0.1
comp=Z,15nm,0.5s
ORIF eMLR MLR
comp=Z,313nm,22.2s
MVCO Mesa Verde 118.59 51 ePKPdf PKPdf 10 56 39.8 +1.2
LMR La Mourre 118.59 316 ePKIKP PKPdf 10 56 38.0 -0.3
KEST Kesra 118.67 307 PKP PKPdf 10 56 38.9 +0.2
comp=Z,2.0nm,0.5s,baz=355,slow=7.1,SNR=4.2
EKA Eskdalemuir Ar 118.77 332 PKP PKPdf 10 56 38.1 -0.2
comp=Z,3.4nm,0.5s,baz=39,slow=3.3,SNR=11
EKA PKKPbc PKKPbc 11 06 55.4 -1.0
comp=Z,2.4nm,0.8s,baz=224,slow=5.8,SNR=3.6
LOR Lormes 118.86 321 ePKIKP PKPdf 10 56 38.6 -0.1
LOR eMLR MLR
comp=Z,216nm,22.2s
LOR Lormes 118.86 321 ePKIKP PKPdf 10 56 38.6 -0.1
LOR MLR MLR
comp=Z,220nm,22.2s
SMRF Simiane la Rot 119.00 317 ePKIKP PKPdf 10 56 39.5 +0.4
SMF Signal de Mont 119.13 321 ePKIKP PKPdf 10 56 38.8 -0.5
comp=Z,8.9nm,0.6s
SSF Saint Saulge 119.17 321 ePKIKP PKPdf 10 56 39.3 0.0
comp=Z,19nm,0.7s
VIVF Saint-Julien-l 119.28 318 ePKIKP PKPdf 10 56 39.0 -0.6
comp=Z,6.5nm,0.5s
AVF Avril sur Loir 119.37 321 ePKIKP PKPdf 10 56 39.3 -0.4
comp=Z,7.2nm,0.5s
BGF Bois d'Agland 119.79 321 ePKIKP PKPdf 10 56 40.7 +0.2
comp=Z,28nm,0.6s
LASF Ste Croix 120.12 318 ePKIKP PKPdf 10 56 41.2 0.0
TCF Toulx Ste Croi 120.30 321 ePKIKP PKPdf 10 56 41.7 +0.2
comp=Z,13nm,0.7s
LAZ Ladron 120.35 54 ePKPdf PKPdf 10 56 43.2 +1.2
LDF La Druitiere 120.68 324 ePKIKP PKPdf 10 56 42.3 +0.1
ANMO Albuquerque 120.76 53 ePKPdf PKPdf 10 56 43.9 +1.1
LPM Los Pinos Moun 120.78 54 ePKPdf PKPdf 10 56 43.9 +1.1
FLN La Foliniere 120.81 324 ePKIKP PKPdf 10 56 42.3 -0.1
FLN eMLR MLR
comp=Z,320nm,19.0s
FLN La Foliniere 120.81 324 ePKIKP PKPdf 10 56 42.3 -0.1
FLN MLR MLR
comp=Z,320nm,19.0s
CAF Calviac 120.96 319 ePKIKP PKPdf 10 56 43.2 +0.4
RJF Les Rejaudoux 121.16 320 ePKIKP PKPdf 10 56 43.4 +0.2
RJF eMLR MLR
comp=Z,280nm,17.0s
RJF Les Rejaudoux 121.16 320 ePKIKP PKPdf 10 56 43.4 +0.2
RJF MLR MLR
comp=Z,280nm,17.0s
GRR Gorron 121.21 324 ePKIKP PKPdf 10 56 43.5 +0.3
MTLF Montolieu 121.50 318 ePKIKP PKPdf 10 56 43.7 -0.2
comp=Z,11nm,0.6s
MFF Saint Martin d 121.62 322 ePKIKP PKPdf 10 56 44.0 -0.1
comp=Z,38nm,0.6s
LFF La Frestale 121.81 320 ePKIKP PKPdf 10 56 44.9 +0.4
comp=Z,11nm,0.5s
ULM Lac du Bonnet 121.82 33 ePKPdf PKPdf 10 56 43.5 -0.9
ULM Lac du Bonnet 121.82 33 PKP PKPdf 10 56 43.6 -0.7
comp=Z,9.1nm,0.8s,baz=302,slow=2.5,SNR=23
ULM SKP 11 00 06.3
comp=Z,1.4nm,0.7s,baz=284,slow=4.6,SNR=3.1
ULM PKKPbc PKKPbc 11 06 42.7 -2.2
comp=Z,3.7nm,0.8s,baz=119,slow=3.4,SNR=9.6
SGMF Saint Gilles 122.26 325 ePKIKP PKPdf 10 56 45.1 -0.1
MNTX Cornudas Mount 122.43 56 ePKPdf PKPdf 10 56 46.1 +0.1
ROSF Rostrenen 122.63 325 ePKIKP PKPdf 10 56 45.2 -0.7
QUIF Quistinic 122.79 324 ePKIKP PKPdf 10 56 46.1 -0.1
comp=Z,27nm,0.8s
EPF Esparros 122.88 318 ePKIKP PKPdf 10 56 46.8 +0.2
comp=Z,7.9nm,0.5s
SJPF Ste Jean 123.88 319 ePKIKP PKPdf 10 56 49.2 +0.7
TXAR Lajitas Array 124.42 59 PKP PKPdf 10 56 50.8 +0.8
comp=Z,3.8nm,0.8s,baz=248,slow=1.1,SNR=38
TXAR PKKPab PKKPab 11 06 33.6 +0.3
comp=Z,0.3nm,0.6s,baz=116,slow=6.0,SNR=6.7
ECSD EROS,Sioux Fal 124.68 40 ePKPdf PKPdf 10 56 49.3 -0.7
EYMN Ely 125.50 33 ePKPdf PKPdf 10 56 51.0 -0.4
KSU1 Kansas State U 126.76 45 ePKPdf PKPdf 10 56 54.7 +0.6
ESDC Sonseca Array 127.25 316 PKP PKPdf 10 56 54.4 -0.7
comp=Z,0.3nm,0.3s,baz=22,slow=8.5,SNR=5.5
ESDC PP PP 10 58 56.5 +0.6
comp=Z,5.2nm,0.9s,baz=63,slow=6.8,SNR=7.0
JCT Junction City 127.37 56 ePKPdf PKPdf 10 56 55.8 +0.2
MVO Moncorvo 128.60 319 ei- 11 00 05.5
TORD Torodi Ar. Bea 128.93 282 PKP PKPdf 10 56 59.4 +0.4
comp=Z,11nm,0.6s,baz=77,slow=1.9,SNR=24
TORD SKPbc 11 00 05.5
comp=Z,31nm,0.8s,baz=115,slow=2.2,SNR=22
JFWS Jewell Farm 129.09 38 ePKPdf PKPdf 10 56 58.2 -0.2
MTE Manteigas 129.33 318 ei- 11 00 05.8
PVIS Viseu 129.40 319 ei- 11 00 07.2
PCBR Castelo Branco 129.56 318 ei- 11 00 07.3
SCHQ Schefferville 129.80 13 PKP PKPdf 10 57 00.2 +0.8
comp=Z,5.3nm,0.6s,baz=356,slow=0.9,SNR=23
SCHQ SKPbc 11 00 07.4
comp=Z,15nm,0.7s,baz=356,slow=3.8,SNR=29
PBAR Barrancos 130.07 316 ei- SKPbc 11 00 09.4 -0.3
PESTR Estremoz 130.12 317 ei- SKPbc 11 00 09.7 -0.2
EVO Evora 130.57 317 ei- SKPbc 11 00 11.3 -0.3
PBEJ Beja 130.72 316 ei- SKPbc 11 00 12.3 +0.1
PVAQ Vaqueiros 130.91 315 ei- SKPbc 11 00 12.6 -0.3
PBDV Barranco-do-Ve 131.14 315 ei- SKPbc 11 00 14.4 +0.6
FVM French Village 131.57 44 ePKPdf PKPdf 10 57 02.7 -0.6
UALR University of 131.71 48 ePKPdf PKPdf 10 57 04.2 +0.5
BLO Bloomington 133.52 40 ePKPdf PKPdf 10 57 08.3 +1.4
PLAL Pickwick Lake 134.71 46 ePKPdf PKPdf 10 57 08.4 -1.0
ACSO Alum Creek Sta 135.06 36 ePKPpre 10 57 00.2
KIC Kosan Boka 135.28 273 eP 10 56 56.4
comp=Z,66nm,0.8s
DBIC Dimbokro 135.40 273 PKP PKPdf 10 57 10.8 -0.4
comp=Z,9.1nm,0.8s,baz=89,slow=4.6,SNR=5.4
DBIC SKPbc SKPbc 11 00 28.1 -0.8
comp=Z,32nm,1.0s,baz=86,slow=2.4,SNR=12
LIC Lamto 135.56 272 ⇑iPKIKP PKPdf 10 57 11.3 -0.2
comp=Z,27nm,0.5s
LIC eMLR MLR
comp=Z,186nm,22.5s
LIC Lamto 135.56 272 ⇑iPKPdf PKPdf 10 57 11.3 -0.2
LIC LR LR
comp=Z,90nm,22.5s
TIC Toumodi 135.57 273 eP 10 56 58.0
comp=Z,8.3nm,0.6s
NCB Newcomb 136.87 26 ePKPdf PKPdf 10 57 13.7 +0.6
BINY Binghamton 137.45 29 ePKPdf PKPdf 10 57 14.6 +0.4
SSPA Standing Stone 137.64 32 ePKPpre 10 57 09.2
ELN Prospectdale 138.31 38 ePKPdf PKPdf 10 57 16.4 +0.5
MVL Millersville 138.91 32 ePKPdf PKPdf 10 57 17.0 +0.1
SOR Soroa 144.07 60 eP PKPdf 10 57 25.9 -0.8
CEN1 Los Morros 144.28 147 ⇓eP PKPdf 10 57 26.4 -0.6
JCR Jicaral 144.84 82 eP PKPdf 10 57 29.8 +1.5
JTS JuntasAbangare 144.98 81 ePKPbc PKPdf 10 57 28.2 -0.3
CGA2 Cerro Gallo 2 145.47 82 eP PKPdf 10 57 31.9 +2.6
PRS1 Puriscal 145.62 82 eP PKPdf 10 57 31.6 +2.0
QCR Quepos 145.80 83 eP PKPdf 10 57 31.9 +2.0
LAJ Bijagual 145.82 82 eP PKPdf 10 57 31.3 +1.4
LCR2 La Lucha 2 145.94 82 eP PKPdf 10 57 31.8 +1.7
URSC Urasca 146.16 82 eP PKPdf 10 57 31.5 +1.0
BAR1 146.65 83 eP PKPdf 10 57 32.8 +1.5
NNA Nana 147.45 124 ePKPdf PKPdf 10 57 33.2 +0.6
NNA ePKPbc PKPbc 10 57 36.1 +0.7
ARE Arequipa 148.71 137 eP PKPbc 10 57 40.0 +1.4
CCCC Cccc 149.16 59 eP PKPdf 10 57 36.9 +1.6
OTAV Otavalo 150.72 101 ePKPdf PKPdf 10 57 39.3 +1.3
LPAZ La Paz 151.03 141 PKP PKPdf 10 57 39.8 +1.4
comp=Z,15nm,0.6s,baz=134,slow=2.0,SNR=17
LPAZ PKPbc PKPbc 10 57 45.3 +1.1
comp=Z,26nm,0.8s,baz=50,slow=2.8,SNR=54
ROSC El Rosal 155.50 92 PKP PKPdf 10 57 45.2 +0.3
comp=Z,4.9nm,0.3s,baz=109,slow=19,SNR=4.0
SDDR Presa de Saban 155.60 57 ePKPab PKPab 10 58 12.5 +1.0
SDV Santo Domingo 159.16 82 ePKPdf PKPdf 10 57 49.4 0.0

ISCJB ***09*** *10:42:47.3±0.8, 3521N±005×13662E±009, h10km, Error ellipse: s-maj=11.7km s-min=4.7km az=30.7*
JMA ***09*** *10:42:47.4, 3523N×13661E, h14km±1km, M3.0 Broadband fault plane solution: P waves. NP1: φs353.00000°, δ42.00000°, λ51.00000°. NP2: φs221.00000°, δ59.00000°, λ120.00000°. Principal axes: T Plg63.0000°, Azm182.0000°; N Plg25.0000°, Azm24.0000°; P Plg9.0000°, Azm290.0000°;*
JMA Felt I J1.
ISC 09 10:42:47.4±1.2**, 3520N**±005×**1367E**±01**, h1**km±15km**, n4, σ0s48**/8**, 1C-1D, Western Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
JEG Eigenji 0.24 254 ⇓P Pg 10 42 52.0 -0.1
JEG S Sg 10 42 55.3 0.0
JGM Miyama 0.50 4 ⇑P Pg 10 42 57.1 +0.1
JGM S Sg 10 43 03.5 +0.1
TSUJ Tsu 2 0.54 203 P Pg 10 42 57.4 -0.3
TSUJ S Sg 10 43 05.0 +0.4
MAT Matsushiro 1.83 42 P Pn 10 43 19.3 -0.7
MAT S Sn 10 43 44.2 +0.5

CSEM ***09*** *10:57:51.7±0.2, 3863N×4428E, h2km, MD2.9, Error ellipse: s-maj=5.3km s-min=2.7km az=89.0*
DDA ***09*** *10:57:51.6, 3867N×4461E, h2km±6km, Md3.0*
ISK ***09*** *10:57:52.5, 3862N×4430E, h8km, MD2.9*
ISC 09 10:57:50.7±2.0**, 3865N**±004×**446E**±01**, h2**km±13km**, n9, σ0s98**/14**, Turkey-Iran border region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CLDR Caldiran 0.71 314 PG Pg 10 58 04.6 +0.3
CLDR SG Sg 10 58 13.7 +0.2
TVAN Van 0.92 263 iP Pg 10 58 05.7 -2.6
VANB Van 0.93 267 ePG Pg 10 58 06.0 -2.4
VANT Van 0.95 258 ePG Pg 10 58 08.9 0.0
VANT eSG Sg 10 58 21.1 0.0
DYDN Diyadin 1.13 323 iP Pg 10 58 13.2 +0.8
DYDN iS Sg 10 58 26.4 -0.5
HAKT HAKKARI 1.28 212 iP Pg 10 58 15.5 +0.3
HAKT iS Sg 10 58 32.8 +0.9
AGRB Hanur-Agry 1.54 308 ePN Pn 10 58 18.7 -0.4
TUTA Tutak 1.56 299 iP Pn 10 58 19.6 +0.1
TUTA iS Sg 10 58 42.3 +1.5
CUKT Cukurca 1.59 209 ePN Pn 10 58 20.1 +0.3

ISCJB ***09*** *11:03:35.0±0.5, 2979N±004×14036E±008, h121km±5km, mb4.0/22, Error ellipse: s-maj=12.3km s-min=4.7km az=162.0*
IDC ***09*** *11:03:35.5±1.0, 2979N×14032E, h110km±9km, mb3.8/19, mb1 3.9/23, mb1mx3.9/26, mbtmp3.8/23, MS3.7/1, Ms1 3.7/1, ms1mx2.9/35, Error ellipse: s-maj=16.9km s-min=6.9km az=72.0*
JMA ***09*** *11:03:35.8, 2982N×14081E, h166km, M4.1*
NEIC ***09*** *11:03:38.6±1.2, 2988N×14030E, h136km±10km, mb4.2/4, Error ellipse: s-maj=9.9km s-min=8.3km az=111.0*
ISC 09 11:03:36.5±0.5**, 2981N**±003×**14042E**±008**, h119**km±4km**, n52, σ1s16**/57**, mb4.0**/22**, Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CBIJ Chichi jima 3.12 150 P Pn 11 04 24.0 -0.2
CBIJ Chichi jima 3.12 150 P Pn 11 04 24.1 -0.1
89nm,0.3s,baz=307,slow=23,SNR=78
CBIJ S Sn 11 04 59.9 -1.2
180nm,0.3s,baz=277,slow=22,SNR=13
JHJ2 Mitsune 3.33 351 P Pn 11 04 29.5 +2.4
JHJ Hachijo jima 2 3.35 351 P Pn 11 04 24.7 -2.5
7.3nm,0.3s,baz=120,slow=14,SNR=7.8
JHJ S Sn 11 05 06.5 0.0
64nm,0.3s,baz=251,slow=22,SNR=8.6
JHHJ Haha-jima-NKT 3.52 153 P Pn 11 04 29.1 -0.6
JHHJ eS Sn 11 05 10.6 -0.2
BSO1 Boso 1 4.86 5 P Pn 11 04 47.6 +0.2
BSO1 eS Sn 11 05 39.2 -3.4
JWZ Kozaga 5.46 314 P Pn 11 04 58.8 +3.2
JIE Ise 5.55 326 P Pn 11 05 00.0 +3.2
JOD2 Odawara 2 5.56 349 P Pn 11 04 57.9 +1.1
JOD2 eS Sn 11 05 59.8 +0.3
JRY Ryogami san 6.32 349 P Pn 11 05 08.4 +1.2
JRY eS Sn 11 06 15.0 -3.0
MJAR Matsushiro Arr 6.97 345 P Pn 11 05 16.2 +0.3
2.3nm,0.3s,baz=158,slow=11,SNR=16
MAJO Matsushiro 6.97 345 eP Pn 11 05 17.1 +1.2
8.5nm,0.4s
MAT Matsushiro 6.97 345 P Pn 11 05 17.2 +1.3
MAT eS Sn 11 06 31.8 -1.8
JTO Tosashimizu 7.19 297 P Pn 11 05 23.5 +4.5
JNU Nakatsue 8.79 294 P Pn 11 05 46.2 +5.6
1.1nm,0.3s,baz=100,slow=12,SNR=10
JNU LR LR 11 08 35.3
comp=Z,430nm,18.6s,baz=287,slow=34
JMK Ichinoseki 9.15 4 P Pn 11 05 43.5 -1.9
KSRS Korea Array 12.90 310 P Pn 11 06 39.0 +3.6
0.1nm,0.3s,baz=103,slow=40,SNR=3.1
ASAJ Asahikawa 14.39 6 P Pn 11 06 54.0 -0.5
1.0nm,0.3s,baz=268,slow=10,SNR=6.0
TATO Taipei 17.48 259 P Pn 11 07 31.6 -1.3
YHNB Yeheng 17.69 258 eP Pn 11 07 37.1 +1.8
ULN Ulaanbaatar 31.31 315 eP P 11 09 45.0 -0.1
1.5nm,0.5s,mb4.0
SONM Songino Array 31.70 314 P P 11 09 48.2 -0.4
0.8nm,0.5s,mb3.7,baz=126,slow=8.8,SNR=9.3
ZALV Zalesovo Beam 46.44 318 P P 11 11 49.8 -1.3
1.3nm,0.5s,mb4.0,baz=101,slow=7.9,SNR=4.2
ZALV PcP PcP 11 13 23.4 -0.4
0.8nm,0.5s,baz=82,slow=4.1,SNR=3.3
MK31 Makanchi Array 47.57 308 eP P 11 11 58.9 -1.1
MKAR Makanchi Array 47.57 308 P P 11 11 58.9 -1.1
MKAR Makanchi Array 47.57 308 P P 11 11 58.9 -1.1
1.4nm,0.7s,mb3.9,baz=90,slow=9.3,SNR=16
WRA Warramunga Arr 49.80 187 P P 11 12 16.9 -0.3
0.6nm,0.2s,mb4.1,baz=6.5,slow=7.8,SNR=56
WRA sP sP 11 12 53.2 -5.0
1.9nm,0.7s,baz=11,slow=8.5,SNR=7.9
KDAK Kodiak Island 53.16 38 P P 11 12 42.0 +0.2
5.4nm,0.3s,mb5.1,baz=288,slow=6.4,SNR=26
ASAR Alice Springs 53.53 187 P P 11 12 44.6 -0.3
0.4nm,0.3s,mb3.9,baz=0.8,slow=4.8,SNR=17
BRVK Borovoye 55.07 316 eP P 11 12 53.9 -1.9
4.3nm,0.7s,mb4.6
DZM Mont Dzumac 57.34 151 P P 11 13 14.0 +1.8
2.2nm,0.5s,mb4.5,baz=135,slow=20,SNR=7.9
INK Inuvik 61.23 25 eP P 11 13 38.6 +0.2
INK Inuvik 61.23 25 P P 11 13 38.4 0.0
0.6nm,0.3s,mb4.1,baz=240,slow=4.6,SNR=4.2
STKA Stephens Creek 61.35 179 P P 11 13 40.3 +0.7
0.3nm,0.3s,mb3.8,baz=11,slow=16,SNR=2.3
STKA sP sP 11 14 18.6 -2.7
1.5nm,0.8s,baz=67,slow=13,SNR=2.2
ARCES ARCESS Array B 70.48 340 P P 11 14 38.1 +0.5
1.3nm,0.7s,mb3.9,baz=76,slow=7.0,SNR=10
YKA Yellowknife Ar 70.50 28 P P 11 14 37.6 -0.3
1.7nm,0.6s,mb4.0,baz=294,slow=6.3,SNR=25
FINES FINESS Array B 74.84 333 P P 11 15 03.5 -0.1
FINES FINESS Array B 74.84 333 P P 11 15 03.5 -0.1
1.4nm,0.4s,mb4.0,baz=67,slow=5.8,SNR=18
AKASG Malin Array Be 79.52 323 P P 11 15 29.3 -0.6
AKASG Malin Array Be 79.52 323 P P 11 15 29.3 -0.6
2.5nm,0.3s,mb4.5,baz=51,slow=5.4,SNR=21
HLID Hailey 79.96 45 eP P 11 15 33.4 +1.0
1.5nm,0.8s,mb3.9
NVAR Mina Array Bea 80.06 51 P P 11 15 33.9 +0.9
NVAR Mina Array Bea 80.06 51 P P 11 15 33.9 +0.9
1.1nm,0.5s,mb4.0,baz=295,slow=4.7,SNR=13
NOA NORSAR Array B 80.52 338 P P 11 15 34.5 -0.5
1.0nm,0.7s,mb3.7,baz=77,slow=4.2,SNR=3.7
BRTR Keskin Array B 83.03 312 P P 11 15 48.8 +0.1
1.4nm,0.8s,mb3.9,baz=72,slow=5.6,SNR=8.4
PDAR Pinedale Array 83.37 44 P P 11 15 50.9 +0.5
0.5nm,0.6s,mb3.5,baz=132,slow=2.2,SNR=4.6
PV01 Paradox Valley 86.65 48 eP P 11 16 07.7 +0.9
GERES GERESS Array B 88.40 328 P P 11 16 14.2 -0.8
0.3nm,0.3s,mb3.9,baz=46,slow=5.8,SNR=5.1
TXAR Lajitas Array 95.20 52 P P 11 16 47.7 +0.8
TXAR Lajitas Array 95.20 52 P P 11 16 47.7 +0.8
0.8nm,0.6s,mb4.4,baz=313,slow=3.0,SNR=16
LPAZ La Paz 150.58 69 PKPbc PKPbc 11 23 16.3 +1.3
LPAZ La Paz 150.58 69 PKPbc PKPbc 11 23 16.3 +1.3
1.6nm,0.8s,baz=326,slow=4.9,SNR=8.1

ISCJB ***09*** *11:36:30.7±1.1, 466N±02×1529E±02, h33km, mb3.6/6, Error ellipse: s-maj=31.7km s-min=5.7km az=143.8*
JMA ***09*** *11:36:30.6±0.6, 4689N×15315E, h30km, M4.2*
IDC ***09*** *11:36:39.3±5.5, 4670N×15292E, h94km±69km, mb3.3/6, mb1 3.5/7, mb1mx3.2/24, mbtmp3.3/7, ML3.6/1, Error ellipse: s-maj=91.3km s-min=31.0km az=2.0*
ISC 09 11:36:33.1±1.0**, 467N**±02×**1529E**±02**, h35**km**, n23, σ1s42**/29**, mb3.6**/6**, Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
NEM2 Nemuro 2 6.07 240 P Pn 11 38 01.0 +0.7
NEM2 eS Sn 11 39 07.2 -1.3
JRA Rausu 6.15 247 P Pn 11 38 04.9 +3.5
JNK Nakash 6.58 245 P Pn 11 38 09.7 +2.5
JAK Akkeshi 6.91 241 P Pn 11 38 12.5 +0.7
JAK eS Sn 11 39 27.7 -1.4
JTKR Abashiri--Toko 6.91 250 P Pn 11 38 15.1 +3.3
JMP Maruseppu 7.25 252 P Pn 11 38 20.6 +4.1
JAR Ashorobuto 7.32 246 P Pn 11 38 20.4 +3.0
JAR eS Sn 11 39 41.4 +2.2
JOB Onbets 7.48 243 eS Sn 11 39 43.1 -0.2
JKK2 Kamakawa 2 7.71 253 P Pn 11 38 26.8 +4.0
ASAJ Asahikawa 7.71 255 P Pn 11 38 28.7 +5.9
0.9nm,0.3s,baz=71,slow=13,SNR=7.0
JCH Churui 7.93 243 eS Sn 11 39 53.0 -1.3
JNBK Urakawa-nobuka 8.49 243 eS Sn 11 40 06.5 -1.6
JNB Noboribetsu 9.47 248 P Pn 11 38 49.0 +2.1
JNB eS Sn 11 40 32.8 +0.8
JKB Kayabe 9.78 245 P Pn 11 38 51.5 +0.4
JKB eS Sn 11 40 36.2 -3.4
JTM Tenmabayashi 10.40 240 eS Sn 11 40 49.1 -5.7
JANG Nango 10.40 237 P Pn 11 38 57.7 -2.0
JANG eS Sn 11 40 47.2 -7.7
JTH Tanohata 10.49 234 eS Sn 11 40 49.4 -7.7
MKAR Makanchi Array 46.88 297 P P 11 44 59.7 0.0
0.1nm,0.5s,mb3.0,baz=77,slow=7.9,SNR=2.9
YKA Yellowknife Ar 51.08 37 P P 11 45 31.3 -0.2
0.2nm,0.5s,mb3.3,baz=296,slow=7.1,SNR=5.3
FINES FINESS Array B 64.08 335 P P 11 47 02.0 -1.0
0.4nm,0.5s,mb3.7,baz=45,slow=8.1,SNR=2.5
NOA NORSAR Array B 68.28 341 P P 11 47 29.3 -0.7
0.9nm,0.6s,mb4.0,baz=28,slow=6.4,SNR=3.0
HFS Hagfors 68.51 339 P P 11 47 30.8 -0.6
1.0nm,0.4s,mb4.1,baz=45,slow=4.3,SNR=5.5
TXAR Lajitas Array 77.64 60 P P 11 48 25.6 -0.3
0.2nm,0.6s,mb3.3,baz=289,slow=5.6,SNR=4.0

MAN 09 11:36:42, 1377N×12361E, h2km**, mb3.7, ML2.5, MS2.0, 2D, Luzon**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PVCP Virac 0.55 108 ⇓iP Pg 11 36 53.9 +1.3
GQP Guinayangan 1.14 277 ⇓eP Pg 11 37 05.4 +1.5
GQP eS Sg 11 37 21.4 +2.7

ISCJB ***09*** *11:38:18.0±1.1, 1377N±004×12364E±004, h1km±8km, mb4.1/11, Error ellipse: s-maj=7.7km s-min=5.9km az=39.2*
IDC ***09*** *11:38:17.3±0.9, 1324N×12308E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/20, mbtmp4.0/8, Error ellipse: s-maj=75.1km s-min=15.8km az=71.0*
NEIC ***09*** *11:38:18.9±0.6, 1323N×12315E, h10km, mb4.5/3, Error ellipse: s-maj=47.8km s-min=11.8km az=68.0*
MAN ***09*** *11:38:19, 1380N×12370E, h13km, mb4.5, ML3.4, MS3.2*
ISC 09 11:38:19.4±0.8**, 1370N**±004×**12364E**±004**, h3**km±6km**, n23, σ1s20**/27**, mb4.1**/11**, 3C-2D, Luzon**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PVCP Virac 0.51 102 ⇑iP Pg 11 38 29.4 +0.1
PVCP iS Sg 11 38 36.7 +0.7
GQP Guinayangan 1.18 280 ⇓eP Pg 11 38 41.7 -0.3
GQP eS Sg 11 38 57.1 -0.1
MMPH Masbate 1.34 181 ⇑eP Pn 11 38 43.7 -1.3
MMPH iS Sg 11 39 03.2 +0.9
CNP Catarman 1.55 140 eP Pn 11 38 46.6 -1.2
CNP eS Sn 11 39 08.4 0.0
OTRP Odiongan 2.06 230 eS Sn 11 39 24.5 +3.4
RCP Roxas 2.30 202 ⇑eP Pn 11 38 57.1 -1.1
KALP Kalibo 2.38 212 eP Pg 11 39 05.8 +0.8
BESP Borongan 2.73 140 eP Pg 11 39 10.2 -1.6
PLP Palo 2.84 152 eP Pn 11 39 06.1 +0.5
GUIM Jordan 3.22 199 eP Pn 11 39 12.7 +1.8
BCPH Baguio City Da 3.98 312 ⇓eP Pn 11 39 20.6 -0.6
BATI Kupang 23.75 180 P P 11 43 27.3 -5.9
17nm,0.5s,mb4.7,baz=82,slow=7.1,SNR=4.1
WRA Warramunga Arr 35.05 162 P P 11 45 09.2 -4.4
0.6nm,0.5s,mb3.8,baz=342,slow=8.8,SNR=8.8
SONM Songino Array 36.93 341 P P 11 45 30.3 +0.7
1.1nm,0.8s,mb3.7,baz=159,slow=8.4,SNR=7.2
ASAR Alice Springs 38.47 165 P P 11 45 39.3 -3.5
0.7nm,0.4s,mb3.7,baz=341,slow=7.0,SNR=26
MKAR Makanchi Array 47.75 322 P P 11 46 56.5 -1.2
0.6nm,0.8s,mb3.7,baz=124,slow=8.5,SNR=6.9
STKA Stephens Creek 48.48 159 P P 11 46 59.4 -4.0
3.9nm,0.7s,mb4.6,baz=324,slow=10,SNR=11
ZALV Zalesovo Beam 50.40 331 P P 11 47 17.0 -0.8
1.1nm,0.7s,mb4.0,baz=101,slow=7.7,SNR=6.1
KURK Kurchatov 51.80 325 eP P 11 47 27.0 -1.4
11nm,1.3s,mb4.6
BRVK Borovoye 57.47 325 P P 11 48 11.1 +1.5
1.9nm,0.8s,mb4.2
TIXI Tiksi 58.01 2 eP P 11 48 14.9 +1.8
4.0nm,0.8s,mb4.5
YKA Yellowknife Ar 91.67 23 P P 11 51 29.6 +1.8
YKA Yellowknife Ar 91.67 23 P P 11 51 29.6 +1.8
0.2nm,0.6s,mb3.6,baz=304,slow=4.3,SNR=6.2

GII ***09*** *12:14:11.6±3.2, 2992N×3619E, h0km, ML2.2/2*
ISCJB ***09*** *12:14:23.6±1.1, 2990N±005×3629E±007, h0km, Error ellipse: s-maj=8.9km s-min=6.6km az=7.0*
SGS ***09*** *12:14:23.6, 3012N×3622E, h7km*
CSEM ***09*** *12:14:25.2±0.1, 2981N×3616E, h2km, ML2.2, Error ellipse: s-maj=2.8km s-min=1.9km az=106.0, Mining explosion.*
HLW ***09*** *12:14:25.0, 2966N×3653E, h15km, Mb3.2*
ISC 09 12:14:23.6±1.1**, 2988N**±004×**3634E**±007**, h0**km**, n20, σ1s03**/24**, Western Arabian Peninsula**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ZFRI Zfri 1.21 304 Pg Pg 12 14 45.5 -1.2
ZFRI Zfri 1.21 304 Pg Pg 12 14 45.4 -1.3
EIL Elat 1.22 260 Pg Pg 12 14 46.5 -0.5
EIL Sg Sg 12 15 04.4 +1.5
MBH Mount Berech 1.24 266 Pg Pg 12 14 47.0 -0.4
MBH Mount Berech 1.24 266 Pg Pg 12 14 46.9 -0.4
PRNI Paran 1.25 292 Pg Pg 12 14 47.0 -0.5
PRNI Paran 1.25 292 Pg Pg 12 14 46.9 -0.5
HQLS 1.25 243 P Pg 12 14 46.3 -1.3
HQLS 1.25 243 P Pg 12 14 46.3 -1.3
HQLS S Sg 12 15 03.3 -0.5
JLOS 1.36 213 P Pg 12 14 49.4 -0.2
JLOS S Sg 12 15 08.6 +1.3
KRMI Paran Flat 1.42 280 Pg Pg 12 14 49.3 -1.5
KRMI Sg Sg 12 15 09.1 0.0
HBST Basata 1.55 245 P Pn 12 14 52.3 -0.1
MZDA Masada 1.65 330 Pn Pn 12 14 54.1 +0.3
DSI Dead Sea 1.87 334 Pn Pn 12 14 57.8 +0.9
HDHB Dhahab 1.89 233 P Pn 12 14 56.5 -0.6
HNKL Nakhl 2.05 272 P Pn 12 15 00.0 +0.8
RSHS 2.07 221 P Pn 12 14 58.6 -1.0
HKAT Jabal Katrina 2.46 237 P Pn 12 15 04.5 -0.4
AMAG Maghara 2.81 286 P Pn 12 15 12.3 +2.6
SUZ 3.04 270 P Pn 12 15 14.8 +1.8

ISCJB ***09*** *12:16:14.2±1.4, 6.12S±0.07×128.70E±0.09, h320km±16km, mb3.6/9, Error ellipse: s-maj=16.3km s-min=8.4km az=147.0*
IDC ***09*** *12:16:16.8±1.5, 6.22S×128.55E, h333km±17km, mb3.4/7, mb1 3.6/12, mb1mx3.5/19, mbtmp3.5/12, Error ellipse: s-maj=17.9km s-min=9.2km az=65.0*
NEIC ***09*** *12:16:16.4±2.2, 6.11S×128.66E, h328km±26km, mb4.0/5, Error ellipse: s-maj=13.3km s-min=10.0km az=216.0*
ISC 09 12:16:17.0±1.2**, 6.25S**±0.06×**128.59E**±0.09**, h337**km±14km**, n22,** σ**1.02**/28**, mb3.6**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.27**	**231**	P	**Pn**	**12 17 51.3**	**+0.8**
	32nm,0.3s,baz=91,slow=2.0,SNR=34						
BATI				S	**S**	**12 19 04.6**	**-1.7**
	28nm,0.3s,baz=16,slow=2.0,SNR=7.6						
FITZ	**Fitzroy Crossi**	**12.13**	**193**	*e*P	**Pn**	**12 19 00.1**	**-0.4**
	9.1nm,0.4s						
FITZ				*e*S	**S**	**12 21 21.4**	**+6.1**
FITZ	**Fitzroy Crossi**	**12.13**	**193**	P	**Pn**	**12 19 00.5**	**-0.1**
	0.6nm,0.3s,baz=33,slow=14,SNR=24						
FITZ				S	**S**	**12 21 18.9**	**+3.6**
	0.4nm,0.3s,baz=89,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**14.71**	**158**	P	**P**	**12 19 29.6**	**+0.5**
	1.5nm,0.3s,baz=335,slow=12,SNR=68						
WRA				S	**S**	**12 22 06.0**	**-2.5**
	0.7nm,0.3s,baz=330,slow=21,SNR=7.7						
WB2	**Warramunga Arr**	**14.72**	**158**	*e*P	**P**	**12 19 29.6**	**+0.4**
WB2				*e*S	**S**	**12 22 06.7**	**-1.9**
COEN	**Coen**	**16.26**	**119**	*e*P	**P**	**12 19 45.3**	**-0.8**
	32nm,0.9s						
MBWA	**Marble Bar**	**17.13**	**209**	P	**P**	**12 19 57.5**	**+2.2**
ASAR	**Alice Springs**	**18.06**	**164**	P	**P**	**12 20 06.3**	**+1.0**
	3.0nm,0.3s,baz=346,slow=11,SNR=179						
ASAR				S	**S**	**12 23 14.9**	**+0.3**
	1.4nm,0.3s,baz=345,slow=20,SNR=77						
ASAR				ScP	ScP	12 27 27.2	+1.7
	0.1nm,0.3s,baz=309,slow=1.7,SNR=5.7						
PMG	**Port Moresby**	**18.66**	**101**	P	**P**	**12 20 11.6**	**-0.2**
	1.4nm,0.3s,baz=293,slow=4.1,SNR=11						
CTA	**Charters Tower**	**21.99**	**130**	*e*P	**P**	**12 20 45.0**	**+0.8**
	4.6nm,0.6s,mb3.9						
CTA	**Charters Tower**	**21.99**	**130**	P	**P**	**12 20 45.4**	**+1.2**
	6.3nm,0.7s,mb4.0,baz=318,slow=12,SNR=15						
CTAO	**Charters Tower**	**21.99**	**130**	*e*P	**P**	**12 20 45.0**	**+0.8**
	4.7nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**28.25**	**156**	*e*P	**P**	**12 21 35.0**	**-5.1**
	2.5nm,0.6s,mb3.6						
STKA	**Stephens Creek**	**28.25**	**156**	*e*P	**P**	**12 21 40.7**	**+0.6**
STKA	**Stephens Creek**	**28.25**	**156**	P	**P**	**12 21 40.9**	**+0.8**
	3.6nm,0.6s,mb3.8,baz=344,slow=8.9,SNR=10						
CHTO	**Chiang Mai**	**38.40**	**311**	*e*P	**P**	**12 23 06.7**	**-0.6**
	6.9nm,0.9s,mb3.9						
DZM	**Mont Dzumac**	**39.78**	**117**	P	**P**	**12 23 19.2**	**+0.6**
	5.1nm,1.0s,mb3.7,baz=280,slow=19,SNR=3.1						
KSRS	**Korea Array**	**43.48**	**359**	P	**P**	**12 23 47.2**	**-0.8**
	1.3nm,0.6s,mb3.3,baz=178,slow=10.0,SNR=6.1						
SONM	**Songino Array**	**57.30**	**342**	P	**P**	**12 25 30.4**	**0.0**
	0.6nm,0.7s,mb3.1,baz=156,slow=6.2,SNR=6.3						
MKAR	**Makanchi Array**	**66.84**	**327**	P	**P**	**12 26 33.4**	**+0.1**
	0.9nm,0.3s,mb3.9,baz=127,slow=7.4,SNR=22						
ZALV	**Zalesovo Beam**	**70.30**	**334**	P	**P**	**12 26 53.7**	**-0.7**
	0.6nm,0.4s,mb3.6,baz=131,slow=6.1,SNR=4.0						
VNDA	**Vanda**	**73.36**	**173**	*e*P	**P**	**12 27 12.8**	**+0.7**
	1.7nm,1.0s,mb3.7						

ISCJB ***09*** *12:17:11.6±1.4, 59.22N±0.05×28.1E±0.2, h0km, Error ellipse: s-maj=13.6km s-min=5.4km az=17.6*
HEL ***09*** *12:17:14.2±0.2, 59.24N×28.03E, h0km, ML2.3(NAO), Explosion*
NAO ***09*** *12:17:15.0±1.6, 59.31N×27.34E, ML2.3*
BER ***09*** *12:17:15.0±5.0, 59.30N×27.68E, h0km, ML2.3(NAO), Suspected explosion*
IDC ***09*** *12:17:21.0±2.1, 59.56N×27.48E, h0km, mb1 3.2/3, mb1mx2.9/21, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=18.7km s-min=11.1km az=110.0*
ISC 09 12:17:12.6±1.4**, 59.24N**±0.04×**28.1E**±0.2**, h0**km**, n15,** σ**0.99**/21**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSU	**Vasula**	**1.06**	**223**	*e*P	**Pg**	**12 17 32.8**	**-0.1**
VSU				*e*S	**Sg**	**12 17 45.6**	**-0.9**
VJF	**Virojoki**	**1.33**	**348**	*e*P	**Pg**	**12 17 37.7**	**-0.4**
VJF				*e*S	**Sg**	**12 17 55.0**	**-0.4**
PVF	**Pernaja**	**1.73**	**320**	*e*P	**Pn**	**12 17 44.4**	**+0.5**
PVF				*e*S	**Sn**	**12 18 06.5**	**-0.2**
MEF	**Metsahovi**	**2.12**	**299**	*e*P	**Pn**	**12 17 50.6**	**+1.4**
MEF				*e*S	**Sn**	**12 18 16.3**	**0.0**
FIA0	**FINESS Array S**	**2.43**	**336**	*e*P	**Pn**	**12 17 54.8**	**+1.3**
FIA0				*e*S	**Sn**	**12 18 25.3**	**+1.4**
FIA0	**FINESS Array S**	**2.43**	**336**	Pn	**Pn**	**12 17 54.8**	**+1.3**
	baz=153,slow=18						
FIA0				Lg		12 18 25.3	
	baz=163,slow=37						
FINES	**FINESS Array B**	**2.43**	**336**	Pg	**Pg**	**12 17 55.7**	**-3.5**
	0.7nm,0.3s,baz=155,slow=18,SNR=23						
FINES				Lg		12 18 25.3	
	3.6nm,0.3s,baz=159,slow=28,SNR=28						
KAF	**Kangasniemi**	**3.02**	**344**	*e*PB	**Pb**	**12 18 05.7**	**-1.4**
KAF				*e*SG	**Sg**	**12 18 45.9**	**-3.5**
HFS	**Hagfors**	**7.36**	**283**	Pn	**Pn**	**12 18 53.9**	**-7.1**
	baz=73,slow=28						
HFS				Sn	**Sn**	**12 20 13.2**	**-12**
HFS				Lg		12 20 53.7	
	baz=97,slow=37						
HFS	**Hagfors**	**7.36**	**283**	*e*	**Pn**	**12 18 53.9**	**-7.1**
HFS				*e*		12 20 13.2	
HFS				*e*		12 20 53.7	
HFS	**Hagfors**	**7.36**	**283**	Pn	**Pn**	**12 19 01.9**	**+0.9**
	0.1nm,0.3s,baz=117,slow=15,SNR=8.2						
HFS				Sn	**Sn**	**12 20 25.8**	**+0.7**
	0.2nm,0.3s,baz=102,slow=28,SNR=5.1						
HFS				Lg		12 20 57.2	
	0.5nm,0.3s,baz=93,slow=27,SNR=5.4						
NB2	**NORSAR Subarra**	**8.62**	**289**	Lg		12 21 37.6	
NB2	**NORSAR Subarra**	**8.62**	**289**	*e*SG		12 21 37.6	
NOA	**NORSAR Array B**	**8.62**	**289**	Pn	**Pn**	**12 19 18.1**	**-0.3**
	0.2nm,0.3s,baz=97,slow=9.4,SNR=2.5						
NOA				Lg		12 21 35.6	
	0.2nm,0.3s,baz=268,slow=4.7,SNR=4.1						
ARCES	**ARCESS Array B**	**10.40**	**355**	Pn	**Pn**	**12 19 42.9**	**+0.3**
	0.1nm,0.3s,baz=174,slow=12,SNR=6.3						
ARCES				Lg		12 22 32.8	
	0.2nm,0.3s,baz=171,slow=31,SNR=3.7						

CSEM ***09*** *12:33:20.2±0.3, 38.04N×38.68E, h28km±3km, MD2.7, Error ellipse: s-maj=9.2km s-min=7.2km az=91.0*
ISK ***09*** *12:33:20.8, 38.02N×38.70E, h21km, MD2.7*
ISCJB ***09*** *12:33:21.8±0.6, 38.05N±0.03×38.80E±0.06, h5km±12km, Error ellipse: s-maj=8.7km s-min=5.3km az=15.6*
DDA ***09*** *12:33:23.6, 38.07N×38.79E, h4km±2km, Md2.7*
ISC 09 12:33:22.2±0.6**, 38.06N**±0.03×**38.79E**±0.05**, h15**km±10km**, n8,** σ**1.02**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.38**	**311**	PG	**Pg**	**12 33 28.7**	**-1.2**
MALT				SG	**Sg**	**12 33 34.4**	**-0.6**
MYA	**Malataya**	**0.39**	**313**	PG	**Pg**	**12 33 29.9**	**-0.1**
ELZG	**Elazig**	**0.46**	**20**	*i* P	**Pg**	**12 33 31.6**	**+0.3**
ELZG				*i* S	**Sg**	**12 33 38.1**	**+0.5**
URFA	**Urfa**	**0.62**	**178**	PG	**Pg**	**12 33 33.7**	**-0.7**
URFA				SG	**Sg**	**12 33 41.3**	**-1.3**
PTK	**Pertek**	**0.95**	**30**	*e*PG	**Pg**	**12 33 40.3**	**-0.3**
DIYA	**Diyarbakir**	**1.06**	**97**	*i* P	**Pg**	**12 33 43.1**	**+0.5**
DIYA				*i* S	**Sg**	**12 33 57.1**	**+0.6**
GZT	**Gaziantep**	**1.20**	**234**	*i* P	**Pg**	**12 33 46.2**	**+0.9**
GZT				*i* S	**Sg**	**12 34 03.2**	**+2.2**
MARD	**Mardin**	**1.75**	**115**	*i* P	**Pn**	**12 33 49.6**	**-2.3**
MARD				*i* S	**Sn**	**12 34 14.5**	**+0.6**

NEIC ***09*** *13:12:42.8, 37.79S×176.72E, h8km, ML3.9(WEL), After WEL.*
NEIC Felt at Ohope.
WEL 09 13:12:43.2±0.1**, 37.82S**×**176.75E, h5**km**, ML3.8**/18**, 4C-1D, Error ellipse: s-maj=0.8km s-min=0.7km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.16**	**261**	⇑PG	Pg	13 12 46.6	+0.3
OPRZ				SG	Sg	13 12 49.1	+0.7
MARZ	**Manawahe**	**0.17**	**201**	P	Pg	13 12 47.1	+0.4
MARZ				S	Sg	13 12 49.7	+0.7
MARZ	**Manawahe**	**0.17**	**201**	⇑PG	Pg	13 12 47.1	+0.4
MARZ				SG	Sg	13 12 49.7	+0.6
EDRZ	**Edgecumbe**	**0.28**	**182**	P	Pg	13 12 49.2	+0.5
EDRZ	**Edgecumbe**	**0.28**	**182**	⇑PG	Pg	13 12 49.2	+0.5
LIRZ	**Lichensteins R**	**0.34**	**238**	PG	Pg	13 12 50.5	+0.7
MKRZ	**Makatiti**	**0.39**	**215**	P	Pg	13 12 51.6	+0.9
MKRZ	**Makatiti**	**0.39**	**215**	PG	Pg	13 12 51.6	+0.9
TGRZ	**Tauranga**	**0.40**	**283**	P	Pg	13 12 51.3	+0.4
TGRZ	**Tauranga**	**0.40**	**283**	PG	Pg	13 12 51.3	+0.4
KARZ	**Kaharoa**	**0.45**	**244**	P	Pg	13 12 52.3	+0.5
KARZ	**Kaharoa**	**0.45**	**244**	⇓PG	Pg	13 12 52.3	+0.5
TAZ	**Tarawera**	**0.45**	**205**	P	Pg	13 12 52.7	+0.8
TAZ	**Tarawera**	**0.45**	**205**	PG	Pg	13 12 52.7	+0.8
WIZ	**White Island**	**0.46**	**50**	P	Pg	13 12 52.5	+0.6
WIZ	**White Island**	**0.46**	**50**	PG	Pg	13 12 52.4	+0.5
URZ	**Urewera**	**0.52**	**147**	P	Pg	13 12 53.2	0.0
URZ	**Urewera**	**0.52**	**147**	⇑PG	Pg	13 12 53.2	0.0
UTU	**Utuhina**	**0.57**	**231**	P	Pg	13 12 55.3	+1.2
MYRZ	**Mayor Island**	**0.68**	**323**	P*	Pb	13 12 56.5	-0.9
PATZ	**Paeroa**	**0.68**	**215**	P	Pg	13 12 57.3	+1.0
PATZ	**Paeroa**	**0.68**	**215**	P*	Pb	13 12 57.3	-0.3
MWZ	**Matawai**	**0.80**	**130**	P*	Pb	13 12 58.4	-1.1
TOZ	**Tahuroa Road**	**0.99**	**275**	P	Pg	13 13 01.5	-0.8
TOZ	**Tahuroa Road**	**0.99**	**275**	P*	Pb	13 13 01.5	-1.4
PUZ	**Puketiti**	**1.22**	**102**	*e*P	Pg	13 13 06.1	-0.4
PUZ	**Puketiti**	**1.22**	**102**	P*	Pb	13 13 06.1	-0.6
MXZ	**Matakaoa Point**	**1.26**	**79**	*e*P	Pg	13 13 06.4	-0.9
KUZ	**Kuaotunu**	**1.35**	**322**	*e*P	Pn	13 13 05.9	-2.8
BKZ	**Black Stump Fm**	**1.36**	**189**	*e*P	Pn	13 13 06.8	-2.0
KNZ	**Kokohu**	**1.40**	**149**	*e*P	Pn	13 13 08.9	-0.5
KNZ	**Kokohu**	**1.40**	**149**	PN	Pn	13 13 08.9	-0.4
MKAZ	**Moumakai**	**1.45**	**299**	P	Pn	13 13 07.3	-2.7
NGZ	**Ngauruhoe**	**1.63**	**213**	P	Pn	13 13 12.9	+0.4
HIZ	**Hauiti**	**1.65**	**245**	P	Pn	13 13 10.2	-2.6
WPVZ	**Whakapapa**	**1.67**	**214**	P	Pn	13 13 14.6	+1.5
OTAZ	**Otara**	**1.70**	**300**	P	Pn	13 13 11.3	-2.1
FWVZ	**Far West T-bar**	**1.71**	**213**	*e*P	Pn	13 13 14.1	+0.4
WNVZ	**Wahianoa**	**1.75**	**211**	P	Pn	13 13 14.8	+0.6
MOVZ	**Moawhango**	**1.77**	**206**	P	Pn	13 13 14.8	+0.4
KAAZ	**Kauri Point**	**1.91**	**301**	P	Pn	13 13 14.5	-1.9
WTAZ	**Waiatarua**	**1.95**	**296**	P	Pn	13 13 17.7	+0.8
PXZ	**Pawanui**	**2.21**	**178**	PN	Pn	13 13 19.4	-1.1
TSZ	**Takapari Road**	**2.32**	**195**	*e*P	Pn	13 13 22.2	+0.2
TSZ	**Takapari Road**	**2.32**	**195**	PN	Pn	13 13 22.2	+0.2
WAZ	**Wanganui**	**2.37**	**215**	PN	Pn	13 13 25.6	+2.8
WCZ	**Waipu Caves**	**2.69**	**313**	*e*P	Pn	13 13 24.9	-2.2
WCZ	**Waipu Caves**	**2.69**	**313**	PN	Pn	13 13 24.9	-2.3
BFZ	**Birch Farm**	**2.88**	**188**	*e*P	Pn	13 13 28.0	-1.7
MRZ	**Mangatainoka R**	**2.98**	**197**	*e*P	Pn	13 13 30.0	-1.1
OUZ	**Omahuta**	**3.63**	**315**	*e*P	Pn	13 13 38.3	-1.8
OUZ	**Omahuta**	**3.63**	**315**	PN	Pn	13 13 38.3	-1.8

NEIC ***09*** *13:43:58.0, 40.43N×26.29E, h7km, MD3.7(ATH), ML3.3(ISK), After ISK.*
CSEM ***09*** *13:43:58.1±0.1, 40.41N×26.27E, h10km, ML3.9, Error ellipse: s-maj=1.7km s-min=1.3km az=71.0*
SOF ***09*** *13:43:58.1, 40.48N×26.18E, h8km, MD3.1*
DDA ***09*** *13:43:58.6, 40.48N×26.21E, h26km±4km, Md3.3*
ISCJB ***09*** *13:43:58.0±0.4, 40.43N±0.02×26.31E±0.02, h3km±3km, Error ellipse: s-maj=3.1km s-min=2.8km az=144.2*
ATH ***09*** *13:43:58.1, 40.56N×26.37E, h45km, MD3.7/6*
ISK ***09*** *13:43:58.0, 40.41N×26.26E, h13km, ML3.6*
THE ***09*** *13:43:59.7, 40.42N×26.29E, h3km, ML3.9*
ISC 09 13:43:58.8±0.3**, 40.42N**±0.02×**26.31E**±0.02**, h4**km±3km**, n69,** σ**1.11**/88**, 9C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENEZ	**Enez**	**0.33**	**339**	*i* PG	**Pg**	**13 44 05.5**	**+0.3**
ENEZ				*i* SG	**Sg**	**13 44 10.3**	**+0.7**
GADA	**Gvkgeada**	**0.39**	**234**	*i* PG	**Pg**	**13 44 05.8**	**-0.5**
GADA				*i* SG	**Sg**	**13 44 10.8**	**-0.6**
ALN	**Alexandroupoli**	**0.51**	**337**	*e*Pg	**Pg**	**13 44 08.8**	**+0.1**
ALN				*e*Sg	**Sg**	**13 44 16.9**	**+1.6**
EZN	**Ezine**	**0.60**	**179**	PG	**Pg**	**13 44 10.4**	**+0.2**
BOZC	**Bozcaada**	**0.61**	**199**	*i* P	**Pg**	**13 44 10.2**	**-0.4**
BOZC				*i* S	**Sg**	**13 44 19.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**0.71**	**68**	PG	**Pg**	**13 44 13.1**	**+0.7**
SART	**Tekirdag**	**0.71**	**68**	*i* P	**Pg**	**13 44 13.2**	**+0.8**
SART				*i* S	**Sg**	**13 44 22.4**	**+0.7**
MFT	**Murefte**	**0.82**	**64**	PG	**Pg**	**13 44 15.0**	**+0.5**
RDO	**Rodhopi**	**0.93**	**321**	*e*P	**Pg**	**13 44 15.3**	**-1.3**
RDO				*e*S	**Sg**	**13 44 26.6**	**-2.1**
MRMT	**Marmara Adasi**	**0.99**	**79**	PG	**Pg**	**13 44 17.2**	**-0.6**
LIA	**Limnos Island**	**1.01**	**239**	⇑*i*P	**Pg**	**13 44 19.7**	**+1.6**
LIA				*e*S	**Sg**	**13 44 33.3**	**+2.1**
LOS	**Limnos**	**1.06**	**243**	*e*Pg	**Pg**	**13 44 19.1**	**0.0**
AYVA	**Ayvalik**	**1.15**	**165**	*i* P	**Pg**	**13 44 20.6**	**-0.2**
AYVA				*i* S	**Sg**	**13 44 36.1**	**+0.4**
PRK	**Paraskevi**	**1.18**	**181**	⇑*i*P	**Pg**	**13 44 21.0**	**-0.3**
EDC	**Edincik**	**1.19**	**93**	PN	**Pn**	**13 44 21.4**	**-0.7**
BNT	**Bandirma**	**1.23**	**93**	PN	**Pn**	**13 44 21.5**	**-1.2**
KDZ	**Kurdzhali**	**1.40**	**331**	*i* Pg	**Pg**	**13 44 24.4**	**-1.2**
BALB	**Balikesir**	**1.44**	**123**	*e*PN	**Pn**	**13 44 25.3**	**-0.2**
EDRB	**Edirne**	**1.46**	**13**	*e*PN	**Pn**	**13 44 24.3**	**-1.5**
BTOK	**Tokmak**	**1.48**	**116**	*i* P	**Pn**	**13 44 26.2**	**+0.2**
BTOK				*i* S	**Sn**	**13 44 47.0**	**+1.2**
BTOK	**Tokmak**	**1.48**	**116**	*i* P	**Pn**	**13 44 26.2**	**+0.1**
BTOK				*i* S	**Sn**	**13 44 47.0**	**+1.2**
DIM	**Dimitrovgrad**	**1.73**	**340**	P	**Pn**	**13 44 29.3**	**-0.2**
RZN	**Rozhen**	**1.75**	**317**	P	**Pn**	**13 44 28.3**	**-1.5**
CTT	**Catalca**	**1.76**	**65**	*e*PN	**Pn**	**13 44 29.2**	**-0.8**
AKS	**Akhisar**	**1.93**	**143**	*e*PN	**Pn**	**13 44 31.6**	**-0.7**
DST	**Dursunbey**	**1.96**	**114**	*e*PN	**Pn**	**13 44 32.8**	**+0.1**
CHOS	**Chios island**	**2.04**	**186**	*e*Pn	**Pn**	**13 44 34.5**	**+0.6**
CHOS				*e*Sn	**Sn**	**13 45 01.9**	**+2.1**
JMB	**Yambol**	**2.05**	**6**	*e*Pn	**Pn**	**13 44 35.0**	**+1.0**
JMB				*e*Sn	**Sn**	**13 45 02.2**	**+2.2**
JMB	**Yambol**	**2.05**	**6**	P	**Pn**	**13 44 33.5**	**-0.5**
JMB	**Yambol**	**2.05**	**6**	*e*Pn	**Pn**	**13 44 35.0**	**+1.0**
JMB				*e*Sn	**Sn**	**13 45 02.2**	**+2.2**
PLD	**Plovdiv**	**2.07**	**325**	*e*Pn	**Pn**	**13 44 34.8**	**+0.6**
PLD				*e*Sn	**Sn**	**13 45 02.6**	**+2.1**
PLD	**Plovdiv**	**2.07**	**325**	P	**Pn**	**13 44 34.1**	**-0.2**
PLD	**Plovdiv**	**2.07**	**325**	*e*Pn	**Pn**	**13 44 34.8**	**+0.5**
PLD				*e*Sn	**Sn**	**13 45 02.6**	**+2.1**
NVR	**Nevrokopi**	**2.08**	**297**	*e*P	**Pn**	**13 44 31.8**	**-2.5**
KDAG	**Bornova**	**2.15**	**160**	*i* P	**Pn**	**13 44 34.7**	**-0.6**
KDAG				*i* S	**Sn**	**13 44 58.9**	**-3.5**
ISK	**Istanbul-Kandi**	**2.18**	**72**	*e*PN	**Pn**	**13 44 35.4**	**-0.4**
PLG	**Polygyros**	**2.19**	**270**	*e*Pn	**Pn**	**13 44 36.5**	**+0.6**
PLG	**Polygyros**	**2.19**	**270**	*e*P	**Pn**	**13 44 33.5**	**-2.4**
PLG	**Polygyros**	**2.19**	**270**	*e*Pn	**Pn**	**13 44 36.5**	**+0.6**
GEMT	**Gemlik**	**2.20**	**89**	*e*PN	**Pn**	**13 44 36.0**	**0.0**
AOS	**Alonnisos**	**2.25**	**237**	*e*Pn	**Pn**	**13 44 37.1**	**+0.4**
MMB	**Musomiste**	**2.27**	**302**	*i* P	**Pn**	**13 44 35.4**	**-1.7**
SOH	**Sokhos**	**2.29**	**281**	*e*Pn	**Pn**	**13 44 37.6**	**+0.4**
SOH				*e*Sn	**Sn**	**13 45 08.3**	**+2.6**
YLV	**Yalova**	**2.34**	**86**	*e*PN	**Pn**	**13 44 38.6**	**+0.7**
IZI	**Iznik**	**2.42**	**91**	*e*PN	**Pn**	**13 44 37.8**	**-1.2**
HRT	**Hereke**	**2.59**	**80**	*e*PN	**Pn**	**13 44 41.7**	**+0.4**
ADVT	**Abdulvahap**	**2.62**	**89**	*e*PN	**Pn**	**13 44 42.5**	**+0.8**
KULA	**Kula-Manisa**	**2.63**	**136**	*e*PN	**Pn**	**13 44 41.0**	**-1.0**
KNT	**Kendrikon**	**2.69**	**287**	*e*Pn	**Pn**	**13 44 43.6**	**+0.8**
SMG	**Samos**	**2.74**	**171**	*e*P	**Pn**	**13 44 42.7**	**-0.8**
GDZ	**Gediz**	**2.78**	**118**	*i* P	**Pn**	**13 44 44.8**	**+0.7**
GDZ				*i* S	**Sg**	**13 45 28.5**	**+0.3**
KKB	**Krupnik**	**2.83**	**302**	P	**Pn**	**13 44 43.0**	**-1.7**
SZH	**Strazhica**	**2.85**	**354**	*i* P	**Pn**	**13 44 45.4**	**+0.4**
VTS	**Vitosha**	**3.18**	**314**	P	**Pn**	**13 44 49.3**	**-0.2**
GULT	**Gulveren**	**3.21**	**88**	*e*PN	**Pn**	**13 44 49.7**	**-0.2**
APE	**Apeiranthos**	**3.41**	**191**	P	**Pn**	**13 44 51.1**	**-1.5**
HENT	**Hendek**	**3.51**	**82**	*i* P	**Pn**	**13 44 54.2**	**+0.1**
HENT				*i* S	**Sg**	**13 45 48.8**	**-2.8**
ESKT	**Eskisehir**	**3.60**	**103**	*e*PN	**Pn**	**13 44 56.5**	**+1.2**
BARS	**Barje**	**4.13**	**307**	Pn	**Pn**	**13 45 02.3**	**-0.2**
TIRR	**Tirgusor**	**4.32**	**20**	⇓*i*P	**Pg**	**13 45 24.5**	**+3.0**
MLR	**Muntele Rosu**	**5.07**	**357**	⇑P	**Pn**	**13 45 16.4**	**+1.0**
MLR	**Muntele Rosu**	**5.07**	**357**	⇑*i*P	**Pn**	**13 45 16.4**	**+0.9**
VOIR		**5.09**	**350**	⇑P	**Pn**	**13 45 16.1**	**+0.3**
VOIR		**5.09**	**350**	⇑*i*P	**Pn**	**13 45 16.1**	**+0.3**
PLOR	**Plostina**	**5.43**	**3**	⇑*i*P	**Pn**	**13 45 22.1**	**+1.7**
GZR	**Gura Zlata**	**5.60**	**334**	⇓P	**Pn**	**13 45 20.6**	**-2.2**
GZR	**Gura Zlata**	**5.60**	**334**	⇓*i*P	**Pn**	**13 45 20.6**	**-2.2**
BZS	**Buzias**	**6.23**	**328**	⇑P	**Pn**	**13 45 29.6**	**-1.8**
BZS	**Buzias**	**6.23**	**328**	⇑*i*P	**Pn**	**13 45 29.6**	**-1.7**

ISCJB ***09*** *13:53:28.5±1.3, 13.8S±0.1×75.7W±0.1, h89km±12km, mb3.7/3, Error ellipse: s-maj=29.8km s-min=9.1km az=140.5*
NEIC ***09*** *13:53:28.6±0.9, 13.75S×75.66W, mb4.3/1, Error ellipse: s-maj=25.1km s-min=11.5km az=50.0*
NEIC Felt [III] at Pisco.
IDC ***09*** *13:53:29.1±1.0, 13.73S×75.71W, h76km±7km, mb3.5/3, mb1 3.8/7, mb1mx3.6/19, mbtmp3.6/7, MS3.2/2, Ms1 3.2/2, ms1mx2.6/17, Error ellipse: s-maj=39.1km s-min=10.2km az=53.0*
ISC 09 13:53:29.4±1.2**, 13.8S**±0.1×**75.7W**±0.1**, h83**km±12km**, n18,** σ**1.10**/18**, mb3.7**/3**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**2.11**	**327**	*e*Pn	**Pn**	**13 54 01.7**	**-1.1**
NNA				*e*Sn	**Sn**	**13 54 22.2**	**-6.1**
NNA	**Nana**	**2.11**	**327**	P	**Pn**	**13 54 02.1**	**-0.7**
	131nm,0.3s,baz=139,slow=11,SNR=81						
NNA				S	**Sn**	**13 54 27.1**	**-1.2**
	918nm,0.3s,baz=235,slow=19,SNR=28						
ARE	**Arequipa**	**4.85**	**124**	*e*P	**Pn**	**13 54 44.0**	**+4.1**
ARE				*e*S	**Sn**	**13 55 44.0**	**+9.2**
ATAH	**Atahualpa**	**7.24**	**338**	P	**Pn**	**13 55 13.2**	**+0.6**
	6.1nm,0.3s,baz=161,slow=7.1,SNR=22						
ATAH				S	**Sn**	**13 56 37.7**	**+4.3**
	8.0nm,0.3s,baz=335,slow=16,SNR=6.3						
LPAZ	**La Paz**	**7.71**	**110**	P	**Pn**	**13 55 19.6**	**+0.6**
	1.8nm,0.3s,baz=288,slow=10,SNR=47						
OTAV	**Otavalo**	**14.19**	**349**	P	**Pn**	**13 56 47.3**	**+0.7**
	9.3nm,0.8s						
SIV	**San Ignacio**	**14.29**	**101**	P	**Pn**	**13 56 46.8**	**-1.0**
	0.3nm,0.3s,baz=287,slow=11,SNR=13						
CFAA	**Coronel Fontan**	**19.01**	**160**	P	**Pn**	**13 57 46.6**	**+0.4**
	0.0nm,0.3s,baz=308,slow=6.1,SNR=4.9						
SDV	**Santo Domingo**	**23.07**	**13**	*e*P	**P**	**13 58 29.2**	**+1.2**
	6.6nm,0.6s,mb4.1						
SDV				LR	LR	14 08 39.3	
SDV	**Santo Domingo**	**23.07**	**13**	P	**P**	**13 58 29.4**	**+1.4**
	5.7nm,0.4s,mb4.2,baz=210,slow=5.8,SNR=10						
SDV				LR	LR	14 08 39.3	
	comp=Z,48nm,18.2s,baz=311,slow=40						
PCRV	**Puerto La Cruz**	**26.20**	**25**	LR	LR	14 09 48.5	
	comp=Z,78nm,21.6s,baz=183,slow=37						
TXAR	**Lajitas Array**	**50.66**	**328**	P	**P**	**14 02 21.7**	**+1.3**
	0.7nm,1.0s,mb3.6,baz=143,slow=11,SNR=3.2						
TXAR				pP	pP	14 02 38.5	-2.4
	0.5nm,0.7s,baz=150,slow=9.1,SNR=5.1						
PDAR	**Pinedale Array**	**64.28**	**333**	pP	pP	14 04 16.4	-0.8
	0.7nm,1.0s,baz=151,slow=3.4,SNR=3.5						
TOA0	**Torodi Ar. Sit**	**81.18**	**74**	*e*P	**P**	**14 05 34.9**	**-1.7**
YKA	**Yellowknife Ar**	**81.87**	**343**	P	**P**	**14 05 37.9**	**-1.3**
YKA				pP	pP	14 05 59.2	-2.1
YKA	**Yellowknife Ar**	**81.87**	**343**	P	**P**	**14 05 37.9**	**-1.3**
	0.3nm,0.7s,mb3.3,baz=140,slow=5.3,SNR=6.2						
YKA				pP	pP	14 05 59.2	-2.1
	0.6nm,0.7s,baz=143,slow=5.9,SNR=8.1						
WRA	**Warramunga Arr**	**135.33**	**222**	PKP	PKPdf	14 12 40.1	-0.4
	0.5nm,0.9s,baz=127,slow=1.7,SNR=3.2						
SONM	**Songino Array**	**146.00**	**357**	PKPbc	PKPbc	14 12 59.8	+0.2
	0.7nm,0.8s,baz=347,slow=2.0,SNR=6.2						
SONM				pPKPbc	pPKPbc	14 13 21.5	-1.2
	2.6nm,0.9s,baz=352,slow=0.8,SNR=11						

NEIC ***09*** *14:38:59.7, 39.59S×174.29E, h214km, MG3.8(WEL), After WEL.*
WEL 09 14:39:00.8±0.4**, 39.61S**×**174.31E, h203**km±3km**, ML3.7**/15**, 7C-3D, Error ellipse: s-maj=2.8km s-min=1.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAEZ	**Rainy Point**	**0.33**	**11**	P	Pn	14 39 27.4	-0.3
RAEZ	**Rainy Point**	**0.33**	**11**	PN	Pn	14 39 27.3	-0.4
NEZ	**North Egmont**	**0.38**	**334**	P	Pn	14 39 28.1	+0.2
NEZ	**North Egmont**	**0.38**	**334**	PN	Pn	14 39 28.1	+0.3
NWEZ	**Newall Road**	**0.48**	**314**	P	Pn	14 39 28.2	0.0
NWEZ	**Newall Road**	**0.48**	**314**	PN	Pn	14 39 28.2	+0.1
PKE	**Pukeiti**	**0.48**	**329**	P	Pn	14 39 28.0	-0.2
PKE				S	Sn	14 39 49.0	-0.4
PKE	**Pukeiti**	**0.48**	**329**	PN	Pn	14 39 28.0	-0.2
PKE				SN	Sn	14 39 49.0	-0.4
WAZ	**Wanganui**	**0.54**	**106**	P	Pn	14 39 29.1	+0.8
WAZ				S	Sn	14 39 49.8	+0.1
WAZ	**Wanganui**	**0.54**	**106**	PN	Pn	14 39 28.9	+0.5
WAZ				SN	Sn	14 39 49.8	+0.1
VRZ	**Vera Road**	**0.59**	**36**	P	Pn	14 39 27.9	-0.7
VRZ	**Vera Road**	**0.59**	**36**	PN	Pn	14 39 27.9	-0.7
VRZ				SN	Sn	14 39 48.5	-1.6
VRZ				SN	Sn	14 39 48.7	-1.4
PKVZ	**Pokaka**	**0.86**	**69**	PN	Pn	14 39 29.7	-0.3
PKVZ				SN	Sn	14 39 51.3	-1.2
MTVZ	**Mangateitei**	**0.92**	**76**	PN	Pn	14 39 30.4	0.0
TRVZ	**Turoa**	**1.01**	**73**	PN	Pn	14 39 31.0	+0.1
FWVZ	**Far West T-bar**	**1.02**	**70**	P	Pn	14 39 31.1	+0.1
FWVZ				S	Sn	14 39 51.7	-2.7
FWVZ	**Far West T-bar**	**1.02**	**70**	PN	Pn	14 39 31.1	+0.1
FWVZ				SN	Sn	14 39 52.6	-1.8
TWVZ	**Taurewa**	**1.02**	**59**	P	Pn	14 39 30.6	-0.4
TWVZ	**Taurewa**	**1.02**	**59**	PN	Pn	14 39 30.6	-0.4
WNVZ	**Wahianoa**	**1.03**	**75**	P	Pn	14 39 31.2	+0.1
WNVZ	**Wahianoa**	**1.03**	**75**	PN	Pn	14 39 31.2	+0.2
WPVZ	**Whakapapa**	**1.04**	**68**	⇓PN	Pn	14 39 31.0	-0.1
NGZ	**Ngauruhoe**	**1.09**	**67**	P	Pn	14 39 31.4	0.0
NGZ	**Ngauruhoe**	**1.09**	**67**	PN	Pn	14 39 31.4	-0.1
TUVZ	**Tukino**	**1.09**	**72**	P	Pn	14 39 31.7	+0.2
TUVZ	**Tukino**	**1.09**	**72**	PN	Pn	14 39 31.7	+0.3
WTVZ	**West Tongariro**	**1.11**	**64**	PN	Pn	14 39 31.4	-0.2
MOVZ	**Moawhango**	**1.13**	**80**	P	Pn	14 39 31.4	-0.3
MOVZ	**Moawhango**	**1.13**	**80**	PN	Pn	14 39 31.4	-0.3
KRVZ	**Karewarewa**	**1.15**	**64**	PN	Pn	14 39 31.9	0.0
HIZ	**Hauiti**	**1.17**	**21**	P	Pn	14 39 31.1	-1.0
HIZ	**Hauiti**	**1.17**	**21**	⇓PN	Pn	14 39 31.1	-0.9
KATZ	**Kakaramea**	**1.25**	**60**	P	Pn	14 39 32.6	0.0
KATZ	**Kakaramea**	**1.25**	**60**	PN	Pn	14 39 32.6	0.0
KIW	**Kapiti Island**	**1.33**	**160**	P	Pn	14 39 33.2	-0.1
KIW	**Kapiti Island**	**1.33**	**160**	PN	Pn	14 39 33.2	0.0
TSZ	**Takapari Road**	**1.35**	**110**	P	Pn	14 39 33.7	+0.3
TSZ	**Takapari Road**	**1.35**	**110**	PN	Pn	14 39 33.7	+0.3
RATZ	**Rangitukua**	**1.35**	**57**	P	Pn	14 39 33.3	-0.2
RATZ	**Rangitukua**	**1.35**	**57**	PN	Pn	14 39 33.3	-0.2
WATZ	**Wairara**	**1.42**	**51**	P	Pn	14 39 33.9	-0.2
WATZ	**Wairara**	**1.42**	**51**	PN	Pn	14 39 33.9	-0.2
MRZ	**Mangatainoka R**	**1.43**	**138**	P	Pn	14 39 34.0	-0.1
MRZ	**Mangatainoka R**	**1.43**	**138**	⇑PN	Pn	14 39 34.0	-0.1
TCW	**Tory Channel**	**1.60**	**181**	P	Pn	14 39 35.7	+0.1
TCW	**Tory Channel**	**1.60**	**181**	PN	Pn	14 39 35.7	+0.2
CAW	**Cannon Point**	**1.61**	**159**	P	Pn	14 39 35.5	-0.1
CAW	**Cannon Point**	**1.61**	**159**	PN	Pn	14 39 35.5	-0.1
MRW	**Makara Radio**	**1.65**	**170**	P	Pn	14 39 35.9	-0.1
MRW	**Makara Radio**	**1.65**	**170**	PN	Pn	14 39 35.9	-0.1
TIWZ	**Tintock**	**1.68**	**135**	PN	Pn	14 39 36.3	0.0
WEL	**Wellington**	**1.71**	**168**	P	Pn	14 39 36.4	-0.2
WEL	**Wellington**	**1.71**	**168**	PN	Pn	14 39 36.4	-0.2
SNZO	**South Karori**	**1.73**	**170**	P	Pn	14 39 36.5	-0.2
SNZO	**South Karori**	**1.73**	**170**	PN	Pn	14 39 36.5	-0.3
BKZ	**Black Stump Fm**	**1.75**	**76**	P	Pn	14 39 36.5	-0.5
BKZ				S	Sn	14 40 02.2	-2.9
BKZ	**Black Stump Fm**	**1.75**	**76**	⇓PN	Pn	14 39 36.5	-0.4
BKZ				SN	Sn	14 40 02.2	-2.9
NNZ	**Nelson**	**1.76**	**204**	P	Pn	14 39 36.8	-0.2
NNZ	**Nelson**	**1.76**	**204**	⇑PN	Pn	14 39 36.8	-0.3
MTW	**Mount Morrison**	**1.80**	**150**	P	Pn	14 39 37.1	-0.3
MTW	**Mount Morrison**	**1.80**	**150**	⇑PN	Pn	14 39 37.1	-0.3
QRZ	**Quartz Range**	**1.83**	**228**	P	Pn	14 39 36.6	-1.1
QRZ	**Quartz Range**	**1.83**	**228**	⇑PN	Pn	14 39 36.6	-1.1
BFZ	**Birch Farm**	**1.83**	**126**	P	Pn	14 39 37.6	-0.1
BFZ	**Birch Farm**	**1.83**	**126**	⇑PN	Pn	14 39 37.6	-0.1
TUWZ	**Tuamarina**	**1.84**	**189**	PN	Pn	14 39 37.6	-0.2
BHW	**Baring Head**	**1.85**	**167**	P	Pn	14 39 37.4	-0.5
BHW	**Baring Head**	**1.85**	**167**	PN	Pn	14 39 37.4	-0.5
MSWZ	**Moikau Station**	**1.94**	**159**	P	Pn	14 39 38.4	-0.4

MSWZ	Moikau Station	1.94	159	⇑PN	Pn	14 39 38.4	-0.4
PAWZ	Paruwai Farm	1.97	155	P	Pn	14 39 38.7	-0.4
PAWZ	Paruwai Farm	1.97	155	⇑PN	Pn	14 39 38.7	-0.3
PXZ	Pawanui	2.01	103	PN	Pn	14 39 39.7	+0.2
TRWZ	Traveller	2.08	150	PN	Pn	14 39 39.9	-0.3
BSWZ	Blackbirch Sta	2.13	189	P	Pn	14 39 40.6	-0.2
BSWZ	Blackbirch Sta	2.13	189	PN	Pn	14 39 40.6	-0.1
THZ	Tophouse	2.40	206	P	Pn	14 39 43.1	-0.6
THZ	Tophouse	2.40	206	PN	Pn	14 39 42.9	-0.8
URZ	Urewera	2.56	59	P	Pn	14 39 43.9	-1.6
URZ	Urewera	2.56	59	PN	Pn	14 39 43.8	-1.8
KNZ	Kokohu	2.67	78	P	Pn	14 39 46.2	-0.5
KNZ	Kokohu	2.67	78	PN	Pn	14 39 46.2	-0.6
MWZ	Matawai	2.81	64	PN	Pn	14 39 46.9	-1.4
DSZ	Denniston Nort	2.86	221	P	Pn	14 39 47.8	-1.1
DSZ	Denniston Nort	2.86	221	PN	Pn	14 39 47.8	-1.1
KHZ	Kahutara	2.87	191	P	Pn	14 39 48.1	-0.8
KHZ	Kahutara	2.87	191	PN	Pn	14 39 48.1	-0.8
PUZ	Puketiti	3.44	65	P	Pn	14 39 54.3	-1.5
PUZ	Puketiti	3.44	65	PN	Pn	14 39 54.3	-1.5
LTZ	Lake Taylor	3.53	205	P	Pn	14 39 55.4	-1.3
LTZ	Lake Taylor	3.53	205	PN	Pn	14 39 55.4	-1.3
MXZ	Matakaoa Point	3.74	58	P	Pn	14 39 57.8	-1.6
MXZ	Matakaoa Point	3.74	58	PN	Pn	14 39 57.8	-1.6
CRLZ	Canterbury Las	4.16	197	P	Pn	14 40 02.3	-2.2
CRLZ	Canterbury Las	4.16	197	PN	Pn	14 40 02.3	-2.3
MQZ	McQueen's Vall	4.28	196	P	Pn	14 40 03.4	-2.6
MQZ	McQueen's Vall	4.28	196	PN	Pn	14 40 03.4	-2.6
WVZ	Waitaha Valley	4.39	217	eP	Pn	14 40 05.1	-2.2
WVZ	Waitaha Valley	4.39	217	PN	Pn	14 40 05.1	-2.2
RPZ	Rata Peaks	4.77	210	eP	Pn	14 40 10.2	-2.0
RPZ	Rata Peaks	4.77	210	PN	Pn	14 40 10.2	-2.1
LBZ	Lake Benmore	5.68	211	eP	Pn	14 40 21.2	-2.6
ODZ	Otahua Downs	6.07	205	eP	Pn	14 40 27.2	-1.7
ODZ	Otahua Downs	6.07	205	PN	Pn	14 40 27.2	-1.6
JCZ	Jackson Bay	6.09	221	eP	Pn	14 40 26.6	-2.5
JCZ	Jackson Bay	6.09	221	PN	Pn	14 40 26.6	-2.5
WKZ	Wanaka	6.53	215	eP	Pn	14 40 31.8	-2.9
EAZ	Earnscleugh	6.73	212	eP	Pn	14 40 34.2	-3.1
TUZ	Tuapeka	7.22	207	eP	Pn	14 40 42.5	-1.1

*BJI **09** 14:39:19.5, 5.17S×139.79E, h15km, mB5.4, mb4.9, Ms5.2, Msz4.8*
*IDC **09** 14:39:26.4±0.5, 4.54S×138.96E, h0km, mb4.7/14, mb1 4.8/19, mb1mx4.8/20, mbtmp4.8/19, ML5.0/5, MS4.1/13, Ms1 4.1/13, ms1mx4.0/18, Error ellipse: s-maj=18.8km s-min=11.7km az=68.0*
*MOS **09** 14:39:29.3±0.8, 4.52S×138.98E, h33km, mb5.0/16, Error ellipse: s-maj=13.9km s-min=6.6km az=108.7*
*ISCJB **09** 14:39:30.3±1.1, 4.58S±0.03×139.02E±0.05, h45km±10km, mb4.8/54, MS4.1/11, Error ellipse: s-maj=8.3km s-min=5.3km az=162.6*
*NEIC **09** 14:39:31.8±1.1, 4.53S×138.98E, h42km±11km, mb4.9/32, Error ellipse: s-maj=7.7km s-min=5.9km az=75.0*
NEIC Felt [IV] at Wamena.
ISC 09 14:39:32.5±0.9**, 4.59S**±0.04×**139.01E**±0.05**, h47**km±8km**, h39**km±4.2km**:pP-P, n125,** σ0.88/126**, mb4.8**/54**, MS4.1**/11**, 2C-2D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPI	Merauke	4.09	161	P	Pn	14 40 36.2	+3.7
	2μm,0.6s						
BAKI	Biak	4.45	319	P	Pn	14 40 37.8	+0.3
	594nm,0.7s						
TLE	Tual	6.33	260⇓	eP	Pn	14 41 03.5	+0.2
PMG	Port Moresby	9.40	121	ePn	Pn	14 41 45.5	+0.2
PMG				Pn	Pn	14 41 45.7	+0.3
PMG				Sn	Sn	14 43 24.0	-5.8
PMG	Port Moresby	9.40	121	Pn	Pn	14 41 45.7	+0.3
	2.3nm,0.3s,baz=359,slow=5.7,SNR=14						
PMG				Sn	Sn	14 43 24.0	-5.7
	0.8nm,0.3s,baz=196,slow=16,SNR=1.9						
COEN	Coen	10.18	156	ePn	Pn	14 41 56.0	0.0
	28nm,0.6s						
COEN				eSn	Sn	14 43 45.4	-3.4
AAI	Ambon	10.82	274	P	Pn	14 42 06.3	+1.4
	95nm,0.9s						
WB2	Warramunga Arr	15.92	196	eP	Pn	14 43 09.7	-3.7
WB2				e		14 43 18.0	
WB2				eS	S	14 45 57.6	-24
WRA	Warramunga Arr	15.92	196	P	Pn	14 43 11.0	-2.5
WRA						14 46 01.2	
WRA	Warramunga Arr	15.92	196	Pn	Pn	14 43 11.0	-2.5
	2.9nm,0.3s,baz=14,slow=13,SNR=63						
WRA				Sn	Sn	14 46 01.2	-7.8
	5.8nm,0.3s,baz=8.5,slow=24,SNR=5.5						
WRA				Lg		14 48 04.3	
	baz=26,slow=26,SNR=4.8						
WRA				LR	LR	14 49 51.4	
	comp=Z,1μm,18.6s,baz=20,slow=39						
BATI	Kupang	16.20	249	Pn	Pn	14 43 16.8	-0.3
	17nm,0.3s,baz=120,slow=1.6,SNR=23						
BATI				Sn	Sn	14 46 09.8	-6.2
	4.1nm,0.3s,baz=270,slow=15,SNR=3.6						
CTA	Charters Tower	16.94	156	eP	Pn	14 43 28.1	+1.8
	52nm,1.0s						
CTA				e		14 43 42.5	
CTA				eS	S	14 46 29.1	-13
CTA	Charters Tower	16.94	156	P	Pn	14 43 27.7	+1.4
CTA						14 46 28.5	
CTA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CTA				smax			
	comp=N,1.0nm,0.3s						
CTA				MLR	MLR		
	comp=Z,1μm,18.7s						
CTA	Charters Tower	16.94	156	Pn	Pn	14 43 27.7	+1.4
	comp=Z,3.4nm,0.3s,baz=333,slow=12,SNR=79						
CTA				Sn	Sn	14 46 28.4	-5.3
	comp=Z,0.6nm,0.3s,baz=66,slow=20,SNR=3.5						
CTA				Lg		14 48 39.8	
	comp=Z,1.0nm,0.3s,baz=234,slow=22,SNR=4.5						
CTA				LR	LR	14 50 23.7	
	comp=Z,1μm,18.7s,baz=345,slow=39						
CTAO	Charters Tower	16.94	156	ePn	Pn	14 43 28.0	+1.7
	comp=Z,128nm,1.1s						
CTAO				e		14 43 42.5	
CTAO				eSn	Sn	14 46 22.6	-11
CTAO	Charters Tower	16.94	156	eP	Pn	14 43 28.0	+1.7
CTAO				pmax	pmax		
	comp=Z,128nm,1.1s						
FITZ	Fitzroy Crossi	18.75	223	eP	Pn	14 43 47.5	-0.9
	comp=Z,60nm,0.6s						
FITZ				eS	S	14 47 04.9	-13
FITZ	Fitzroy Crossi	18.75	223	P	Pn	14 43 47.9	-0.5
	comp=Z,3.4nm,0.3s,baz=53,slow=12,SNR=57						
FITZ				S	S	14 47 05.2	-13
	comp=Z,2.9nm,0.3s,baz=207,slow=15,SNR=8.9						
FITZ				LR	LR	14 51 40.8	
	comp=Z,654nm,18.2s,baz=47,slow=39						
WSI	Waingapu	19.23	254⇑	eP	Pn	14 44 02.5	+8.2
PCI	Palu	19.49	280	P	Pn	14 44 01.5	+4.1
	comp=Z,121nm,1.1s						
ASAR	Alice Springs	19.59	194	P	Pn	14 43 58.4	-0.1
	comp=Z,20nm,0.3s,baz=19,slow=9.5,SNR=2268						
ASAR				S	S	14 47 30.3	-5.3
	comp=Z,1.9nm,0.3s,baz=22,slow=18,SNR=4.1						
HNR	Honiara	21.32	104	P	P	14 44 15.0	-0.7
	comp=Z,158nm,1.1s,mb5.3						
HNR	Honiara	21.32	104	P	P	14 44 16.4	+0.7
HNR				pmax	pmax		
	comp=Z,27nm,0.5s,mb4.8						
HNR	Honiara	21.32	104	P	P	14 44 16.4	+0.7
	comp=Z,27nm,0.5s,mb4.8,baz=275,slow=0.9,SNR=5.2						
EIDS	Eidsvold	23.69	152	eP	P	14 44 39.8	-0.3
	comp=Z,11nm,0.8s,mb4.3						
MBWA	Marble Bar	24.93	227	eP	P	14 44 52.2	+0.7
	comp=Z,264nm,1.0s,mb5.7						
KMMI	Kalianget	25.03	263	P	P	14 44 52.3	-0.1
	comp=Z,232nm,0.9s,mb5.7						
KKM	Kota Kinabalu	25.09	295	eP	P	14 44 52.8	-0.2
STKA	Stephens Creek	27.25	175	eP	P	14 45 11.3	-1.0
	comp=Z,6.9nm,0.5s,mb4.4						
STKA	Stephens Creek	27.25	175	eP	P	14 45 10.8	-1.5
	comp=Z,31nm,0.9s,mb4.8						
STKA				eS	S	14 50 13.1	+25
STKA	Stephens Creek	27.25	175	P	P	14 45 11.6	-0.7
	comp=Z,8.4nm,0.7s,mb4.4,baz=346,slow=8.8,SNR=24						
STKA				LR	LR	14 57 04.1	
	comp=Z,866nm,19.1s,MS4.3,baz=359,slow=39						
FORT	Forrest	28.02	200	eP	P	14 45 19.3	+0.1
	comp=Z,26nm,0.6s,mb5.0						
FORT				e		14 45 39.7	
FORT	Forrest	28.02	200	eP	P	14 45 18.9	-0.3
	comp=Z,16nm,0.8s,mb4.7						
FORT				e		14 45 39.7	
CBIJ	Chichi jima	31.65	5	LR	LR	14 56 17.5	
	comp=Z,166nm,18.9s,MS3.7,baz=144,slow=32						
DZM	Mont Dzumac	31.75	126	P	P	14 45 52.7	+0.4
	comp=Z,8.6nm,1.1s,mb4.5,baz=285,slow=12,SNR=4.0						
JOW	Kunigami	32.92	342	LR	LR	14 56 46.5	
	comp=Z,203nm,21.3s,MS3.8,baz=202,slow=32						
KLBR	Kellerberrin	33.46	214	eP	P	14 46 07.8	+0.6
	comp=Z,23nm,0.7s,mb5.2						
NWAO	Narrogin (SRO)	34.76	213	eP	P	14 46 19.1	+0.7
	comp=Z,10.0nm,0.5s,mb5.0						
NWAO	Narrogin (SRO)	34.76	213	P	P	14 46 19.3	+0.9
NWAO				pmax	pmax		
	comp=Z,11nm,0.4s						
NWAO	Narrogin (SRO)	34.76	213	P	P	14 46 19.3	+0.8
	comp=Z,11nm,0.4s,mb5.1,baz=50,slow=8.2,SNR=32						
JHJ	Hachijo jima 2	37.51	1	LR	LR	15 00 02.9	
	comp=Z,209nm,19.3s,MS4.0,baz=131,slow=33						
PPI	Padang Panjang	38.78	275	P	P	14 46 52.5	-0.5
	comp=Z,66nm,1.0s,mb5.3						
TAU	Tasmania Unive	38.87	170	P	P	14 46 53.6	+0.5
	comp=Z,20nm,1.1s,mb4.8						
TAU	Tasmania Unive	38.87	170	P	P	14 46 53.7	+0.5
TAU				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
KULM	Kulim	39.55	284	P	P	14 46 59.0	-0.3
PSI	Prapat	40.72	280	P	P	14 47 08.5	-0.6
	comp=Z,8.6nm,0.7s,mb4.5,baz=109,slow=6.1,SNR=13						
MJAR	Matsushiro Arr	40.92	359	P	P	14 47 09.5	-0.9
	comp=Z,7.5nm,0.7s,mb4.4,baz=179,slow=8.9,SNR=22						
MJAR				LR	LR	15 02 19.3	
	comp=Z,171nm,19.9s,MS3.9,baz=350,slow=34						
MAJO	Matsushiro	40.92	359	eP	P	14 47 08.4	-1.9
	comp=Z,11nm,0.6s,mb4.7						
MAJO	Matsushiro	40.92	359	eP	P	14 47 08.4	-1.9
MAJO				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.7						
MAT	Matsushiro	40.92	359	P	P	14 47 09.3	-1.0
NJ2	Nanjing	41.18	334	eP	P	14 47 12.1	-0.4
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
WHN	Wuhan	42.15	328	P	P	14 47 22.0	+1.5
KSRS	Korea Array	43.08	347	P	P	14 47 28.6	+0.6
	comp=Z,4.8nm,0.6s,mb4.4,baz=156,slow=8.5,SNR=28						
KSRS				LR	LR	15 02 19.1	
	comp=Z,137nm,21.0s,MS3.8,baz=157,slow=32						
CHTO	Chiang Mai	45.80	302	eP	P	14 47 50.2	+0.3
	comp=Z,10nm,0.9s,mb4.8						
CHTO				e	pP	14 48 01.8	-1.0
CHTO	Chiang Mai	45.80	302	eP	P	14 47 50.2	+0.2
CHTO				e	pP	14 48 01.8	-1.0
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
XAN	Xi'an	47.78	326	P	P	14 48 04.7	-0.5
XAN				AP	pP	14 48 09.4	-8.7
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
VLA	Vladivostok	47.92	353	eP	P	14 48 05.7	-0.4
VLA				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
RPZ	Rata Peaks	48.13	149	P	P	14 48 09.1	+1.3
	comp=Z,54nm,1.0s,mb5.5,baz=181,slow=0.4,SNR=27						
URZ	Urewera	48.20	139	P	P	14 48 09.3	+0.9
	comp=Z,9.1nm,0.7s,mb4.9,baz=68,slow=4.5,SNR=9.8						
ASAJ	Asahikawa	48.59	3	LR	LR	15 06 12.9	
	comp=Z,105nm,21.9s,MS3.8,baz=165,slow=33						
BJT	Baijiatuau	49.11	337	eP	P	14 48 15.2	-0.2
	comp=Z,9.6nm,0.5s,mb5.1						
BJT	Baijiatuau	49.11	337	eP	P	14 48 15.2	-0.1
BJT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI	Beijing	49.13	337	P	P	14 48 15.5	+0.1
BJI				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.1						
BJI				LR	LR		
	comp=N,256nm,7.7s						
BJI				LR	LR		
	comp=E,309nm,6.8s						
CN2	Changchun	49.70	347	eP	P	14 48 19.9	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
MDJ	Mudanjiang	49.71	351	P	P	14 48 15.6	-4.2
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,144nm,5.9s						
YSS	Yuzh-Sakhalins	51.43	3	eP	P	14 48 32.8	+0.1
	comp=Z,40nm,0.8s,mb5.4						
YSS	Yuzh-Sakhalins	51.43	3c	iP	P	14 48 32.9	+0.2
YSS				pmax	pmax		
	comp=Z,32nm,0.6s,mb5.4						
HHC	Hu-ho-hao-te	51.73	334	eP	P	14 48 35.5	+0.4
HHC				AP	pP	14 48 45.8	-2.4
HHC				AMB	AMB		
	comp=Z,16nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,89nm,5.2s						
HHC				LR	LR		
	comp=N,371nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=E,607nm,17.8s,MS4.8						
HHC				LR	LR		
	comp=Z,212nm,15.5s,MS4.3						
HABR	Khabarovsk	52.95	357	eP	P	14 48 44.2	+0.2
HABR				eS	S	14 56 13.9	+3.9
HABR				e		14 56 28.3	
HABR				e		14 58 31.5	
HABR				e		14 59 52.4	
KLR	Kul'dur	53.97	354	eP	P	14 48 48.4	-3.1
KLR				e	pP	14 49 02.6	-2.0
HIA	Hailar	56.20	345	eP	P	14 49 07.4	-0.1
GTA	Gaotai	56.75	324	eP	P	14 49 12.7	+1.0
GTA				AP	pP	14 49 17.7	-7.2
GTA				XP	sP	14 49 21.1	-9.2
GTA				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.4						
LSA	Lhasa	57.13	310	P	P	14 49 16.6	+2.0
LSA	Lhasa	57.13	310	P	P	14 49 14.9	+0.3
ULN	Ulaanbaatar	59.29	336	eP	P	14 49 30.6	+1.3
	comp=Z,3.3nm,0.6s,mb4.5						
ULN	Ulaanbaatar	59.29	336	iP	P	14 49 29.1	-0.2
PALK	Pallekele	59.37	281	P	P	14 49 28.9	-1.6
	comp=Z,7.8nm,0.9s,mb4.7						
SONM	Songino Array	59.54	335	P	P	14 49 32.1	+1.1
	comp=Z,2.3nm,0.6s,mb4.4,baz=155,slow=7.6,SNR=22						
SONM				LR	LR	15 14 10.3	
	comp=Z,125nm,20.9s,MS4.0,baz=173,slow=35						
CIT	Chita	60.42	342	eP	P	14 49 38.1	+1.2
CIT				e	pP	14 49 52.8	+2.5
ZAK	Zakamensk	62.80	335	eP	P	14 49 53.0	-0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
TLY	Talaya	63.65	336	P	P	14 49 57.0	-1.7
	comp=Z,5.7nm,0.9s,mb4.6						
TLY	Talaya	63.65	336	eP	P	14 50 00.0	+1.4
TLY				e		14 58 41.5	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
MA2	Magadan	64.64	7	eP	P	14 50 03.5	-1.5
	comp=Z,7.0nm,0.9s,mb4.7						
MA2	Magadan	64.64	7	eP	P	14 50 03.5	-1.5
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
CASY	Casey	64.71	192	eP	P	14 50 06.1	+0.7
	comp=Z,137nm,1.4s,mb5.8						
MOY	Mondy	64.73	335	eP	P	14 50 07.1	+1.4
BOD	Bodaibo	65.40	346	eP	P	14 50 09.9	0.0
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
WMQ	Urumqi	66.66	322	eP	P	14 50 19.0	+0.6
YAK	Yakutsk	66.82	355	eP	P	14 50 17.7	-1.2
	comp=Z,32nm,1.2s,mb5.2						
YAK	Yakutsk	66.82	355	eP	P	14 50 18.9	-0.1
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
POHA	Pohakuloa	68.70	67	eP	P	14 50 32.3	+0.6
	comp=Z,79nm,1.1s,mb5.5						
MKAR	Makanchi Array	71.45	323	P	P	14 50 48.9	+0.9
	comp=Z,2.0nm,0.5s,mb4.3,baz=113,slow=7.2,SNR=28						
ZAA0	Zalesovo Array	73.70	330	eP	P	14 51 00.9	-0.4
ZAA0				e	pP	14 51 09.3	-5.5
ZALV	Zalesovo Beam	73.70	330	P	P	14 51 01.0	-0.3
	comp=Z,3.8nm,0.6s,mb4.5,baz=115,slow=6.6,SNR=22						
ZAL	Zalesovo	73.70	330	P	P	14 51 01.0	-0.3
VNDA	Vanda	73.89	175	P	P	14 51 02.6	+0.6
	comp=Z,3.9nm,0.7s,mb4.5,baz=328,slow=6.2,SNR=24						
VNDA				LR	LR	15 23 12.0	
	comp=Z,192nm,18.1s,MS4.4,baz=310,slow=36						
TKM2	Tokmak 2	74.11	317	eP	P	14 51 04.0	+0.1
	comp=Z,4.0nm,0.7s,mb4.5						
TKM2	Tokmak 2	74.11	317	eP	P	14 51 04.0	+0.1
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
UCH	Uchtor	74.60	316	eP	P	14 51 05.9	-0.9
	comp=Z,6.0nm,1.2s,mb4.4						
UCH				e		14 51 27.0	
SBA	Scott Base	74.66	174	eP	P	14 51 06.2	-0.3
	comp=Z,24nm,1.4s,mb4.9						
SBA	Scott Base	74.66	174	eP	P	14 51 06.2	-0.3
SBA				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
AAK	Ala-Archa	74.76	316	eP	P	14 51 06.4	-1.2
	comp=Z,2.2nm,1.0s,mb4.0						
AAK	Ala-Archa	74.76	316	eP	P	14 51 06.8	-0.9
AAK				pmax	pmax		
	comp=Z,4.0nm,2.2s,mb4.0						
BILL	Bilibino	74.95	10	eP	P	14 51 08.3	+0.1
	comp=Z,2.5nm,0.9s,mb4.1						
BILL	Bilibino	74.95	10	iP	P	14 51 08.6	+0.4
BILL				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
NVS	Novosibirsk	74.96	330	iP	P	14 51 08.6	+0.1
NVS				pmax	pmax		
	comp=N,6.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
AML	Almayashu	75.13	316	eP	P	14 51 09.0	-0.8
	comp=Z,18nm,1.0s,mb5.0						
AML				e	pP	14 51 20.3	-3.2
AML				e		14 51 33.9	
KURK	Kurchatov	75.42	325	eP	P	14 51 11.3	+0.1
	comp=Z,15nm,1.0s,mb4.9						
KURK				e	pP	14 51 20.4	-4.5
KURK	Kurchatov	75.42	325	eP	P	14 51 11.6	+0.3
TIXI	Tiksi	76.38	357	eP	P	14 51 16.0	-0.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
MAW	Mawson	80.51	202	P	P	14 51 40.2	+1.0
	comp=Z,4.4nm,0.6s,mb4.6,baz=97,slow=12,SNR=4.7						
MAW				LR	LR	15 23 07.4	
	comp=Z,172nm,18.3s,MS4.4,baz=251,slow=32						
BRVK	Borovoye	81.09	325	eP	P	14 51 42.7	+0.2
	comp=Z,13nm,0.9s,mb4.9						
BRVK				e	pP	14 51 52.1	-4.2
BRVK	Borovoye	81.09	325	eP	P	14 51 42.7	+0.1
BRVK				e	pP	14 51 52.1	-4.3
BRVK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
IMA2	Indian Mountai	85.16	22	P	P	14 52 02.5	-0.8
IMA2				e	pP	14 52 17.3	+0.1
QSPA	South Pole Qui	85.37	180	eP	P	14 52 04.3	+0.1
	comp=Z,7.3nm,0.7s,mb4.9						
ARU	Arti	88.52	327	P	P	14 52 18.4	-1.4
	comp=Z,4.4nm,0.8s,mb4.8						
ARU	Arti	88.52	327d	iP	P	14 52 19.4	-0.5
ARU				e		14 55 47.9	
ARU				PPP		14 57 47.6	
ARU				S	S	15 02 45.4	-17
ARU				SS	SS	15 08 53.0	-0.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.7						
ARCES	ARCESS Array B	102.37	341	P	Pdif	14 53 22.9	-0.1
	comp=Z,2.1nm,0.8s,baz=75,slow=5.4,SNR=7.1						
TORD	Torodi Ar. Bea	137.03	284	PKP	PKPdf	14 58 51.3	0.0
	comp=Z,1.5nm,0.8s,baz=58,slow=1.3,SNR=6.8						
KIC	Kosan Boka	143.88	274	ePKP1	PKPdf	14 59 01.2	-2.6
	comp=Z,40nm,0.8s						
DBIC	Dimbokro	143.99	275	PKP	PKPdf	14 59 02.0	-1.9
	comp=Z,13nm,0.8s,baz=88,slow=4.9,SNR=16						
TIC	Toumodi	144.15	275	ePKP1	PKPdf	14 59 02.0	-2.2
	comp=Z,8.0nm,0.7s						
LIC	Lamto	144.16	274	ePKP1	PKPdf	14 59 02.2	-2.1
	comp=Z,81nm,1.4s						
LPAZ	La Paz	146.08	128	PKPbc	PKPbc	14 59 09.9	+1.6
	comp=Z,10nm,0.7s,baz=248,slow=2.4,SNR=45						
SDV	Santo Domingo	150.26	80	ePKPdf	PKPdf	14 59 14.7	+0.3

*ISCJB **09** 14:50:25.7±1.2, 24.34N±0.07×94.8E±0.1, h94km±11km, mb4.1/26, Error ellipse: s-maj=19.6km s-min=7.8km az=148.4*
*IDC **09** 14:50:26.9±6.5, 24.30N×94.67E, h91km±61km, mb3.8/16, mb1 3.8/16, mb1mx3.7/28, mbtmp3.8/16, Error ellipse: s-maj=29.7km s-min=11.5km az=62.0*
*BJI **09** 14:50:26.9, 24.68N×94.48E, h60km, mb4.2, ML3.6*
*NEIC **09** 14:50:27.1±0.8, 24.34N×94.75E, h91km±8km, mb4.2/10, Error ellipse: s-maj=12.6km s-min=4.6km az=60.0*
ISC 09 14:50:27.1±1.0**, 24.34N**±0.07×**94.7E**±0.1**, h90**km±10km**, n39,** σ0.65/41**, mb4.1**/26**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	2.86	296	ePN	Pn	14 51 10.0	-0.8
SHL				eSN	Sn	14 51 39.0	-5.4
LSA	Lhasa	6.22	330	P	Pn	14 51 56.6	+0.2
LSA				S	Sn	14 53 02.1	-4.0
LSA				Smax			
	comp=N,40nm,0.6s						
LSA				Smax			
	comp=E,60nm,0.7s						
LSA	Lhasa	6.22	330	ePn	Pn	14 51 56.0	-0.5
	comp=E,22nm,0.4s						
CHTO	Chiang Mai	6.75	144	eP	Pn	14 52 04.3	+0.7
	comp=E,8.1nm,0.7s						
KMI	Kunming	7.32	82	P	Pn	14 52 16.2	+4.8
KMI				AMB	AMB		
	comp=Z,17nm,0.9s						
WMQ	Urumqi	20.28	345	P	P	14 54 55.7	+0.3
PSI	Prapat	21.79	169	P	P	14 55 12.0	+0.2
PSI	Prapat	21.79	169	P	P	14 55 12.0	+0.2
	comp=Z,3.3nm,0.5s,mb3.9,baz=318,slow=7.2,SNR=6.7						
TKM2	Tokmak 2	24.34	324	eP	P	14 55 37.6	+1.1
	comp=Z,7.4nm,0.8s,mb4.1						
UCH	Uchtor	24.48	322	eP	P	14 55 38.9	+1.2
	comp=Z,2.5nm,0.7s,mb3.6						
MKAR	Makanchi Array	24.53	339	P	P	14 55 38.7	+0.6
MKAR	Makanchi Array	24.53	339	P	P	14 55 38.7	+0.6
	comp=Z,7.9nm,0.6s,mb4.3,baz=142,slow=9.9,SNR=60						
AAK	Ala-Archa	24.75	322	eP	P	14 55 40.5	+0.3
	comp=Z,4.2nm,0.8s,mb3.9						
EKS2	Erkin-Say	25.17	322	eP	P	14 55 45.3	+1.3
	comp=Z,5.8nm,0.8s,mb4.1						
SONM	Songino Array	25.22	19	P	P	14 55 44.8	+0.5
	comp=Z,1.9nm,0.7s,mb3.6,baz=200,slow=10.0,SNR=14						
ULN	Ulaanbaatar	25.44	20	eP	P	14 55 46.1	-0.2
	comp=Z,3.4nm,0.9s,mb3.8						
KURK	Kurchatov	29.14	339	eP	P	14 56 19.2	-0.2
ZALV	Zalesovo Beam	30.50	348	P	P	14 56 31.5	+0.1
	comp=Z,0.8nm,0.5s,mb3.6,baz=156,slow=6.5,SNR=3.8						
BRVK	Borovoye	34.11	334	eP	P	14 57 02.9	-0.1
	comp=Z,1.6nm,0.6s,mb4.0						
AKTK	Aktyubinsk	38.50	322	P	P	14 57 39.9	-0.5
AKTO	Aktyubinsk	38.50	322	P	P	14 57 39.9	-0.5
	comp=Z,0.7nm,0.5s,mb3.8,baz=129,slow=8.8,SNR=4.4						
ARU	Arti	41.43	330	eP	P	14 58 04.5	0.0
	comp=Z,5.3nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	51.84	142	P	P	14 59 26.1	-0.1
	comp=Z,1.7nm,0.8s,mb4.1,baz=13,slow=19,SNR=1.4						
AKASG	Malin Array Be	56.17	316	P	P	14 59 55.8	-1.6
	comp=Z,0.3nm,0.4s,mb3.7,baz=80,slow=6.7,SNR=3.2						
WRA	Warramunga Arr	58.52	135	P	P	15 00 14.4	+0.1
	comp=Z,3.7nm,0.5s,mb4.7,baz=326,slow=7.3,SNR=74						
WRA				pP	pP	15 00 37.0	+0.3
	comp=Z,1.0nm,0.7s,baz=324,slow=7.6,SNR=3.2						
FINES	FINESS Array B	58.74	328	P	P	15 00 15.1	-0.2
	comp=Z,0.7nm,0.5s,mb3.9,baz=93,slow=7.6,SNR=3.9						
ARCES	ARCESS Array B	60.17	338	P	P	15 00 25.0	0.0
	comp=Z,1.3nm,0.7s,mb4.1,baz=19,slow=7.7,SNR=4.3						
NWAO	Narrogin (SRO)	60.85	158	eP	P	15 00 29.2	-0.8
ASAR	Alice Springs	61.00	139	P	P	15 00 31.6	+0.3
	comp=Z,2.3nm,0.6s,mb4.4,baz=319,slow=6.7,SNR=51						
ASAR				pP	pP	15 00 55.5	+1.6
	comp=Z,0.6nm,0.6s,baz=323,slow=6.9,SNR=3.2						
PMG	Port Moresby	61.16	117	P	P	15 00 32.1	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,4.0nm,0.6s,mb4.6						
HFS	**Hagfors**	**64.79**	**327**	P	**P**	**15 00 55.6**	**-0.3**
	comp=Z,1.3nm,0.5s,mb4.0,baz=112,slow=6.6,SNR=8.8						
NOA	**NORSAR Array B**	**65.92**	**328**	P	**P**	**15 01 02.9**	**-0.3**
	comp=Z,0.7nm,0.7s,mb3.6,baz=83,slow=6.6,SNR=2.7						
CTAO	**Charters Tower**	**66.82**	**127**	*e*P	**P**	**15 01 09.5**	**0.0**
	comp=Z,7.4nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**71.62**	**139**	P	**P**	**15 01 37.8**	**-1.1**
	comp=Z,2.6nm,0.9s,mb4.1,baz=333,slow=6.8,SNR=4.3						
INK	**Inuvik**	**81.11**	**16**	P	**P**	**15 02 31.5**	**-0.6**
	comp=Z,45nm,0.8s,mb5.3						
INK	**Inuvik**	**81.11**	**16**	P	**P**	**15 02 31.6**	**-0.4**
	comp=Z,0.5nm,0.4s,mb3.7,baz=310,slow=2.5,SNR=5.4						
LBTB	**Lobatse**	**82.97**	**239**	*e*P	**P**	**15 02 43.5**	**+1.0**
	comp=Z,4.8nm,0.6s,mb4.5						
BOSA	**Boshof**	**85.07**	**236**	P	**P**	**15 02 53.5**	**+0.4**
BOSA	**Boshof**	**85.07**	**236**	P	**P**	**15 02 53.5**	**+0.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=60,slow=4.6,SNR=5.4						

IDC 09 15:32:04.8±1.7, 129S×12044E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/17, mbtmp3.2/3, Error ellipse: s-maj=402.0km s-min=27.3km az=59.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**145**	P	P	15 37 10.6	-0.8
	0.3nm,0.6s,baz=311,slow=10.0,SNR=6.0						
ASAR	**Alice Springs**	**25.79**	**151**	P	P	15 37 38.5	+0.8
	0.3nm,0.7s,baz=345,slow=14,SNR=6.6						
MKAR	**Makanchi Array**	**58.40**	**330**	P	P	15 42 02.2	0.0
	0.3nm,0.7s,baz=141,slow=7.5,SNR=3.8						

JMA 09 15:47:01.4, 3715N×13865E, h9km±2km, M1.3, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.31**	**71**	P	Pg	15 47 07.4	-0.1
JIZZ	**Izumozaki**	**0.38**	**7**	P	Pg	15 47 09.7	+0.8
JSD	**Sado**	**0.94**	**341**	P	Pg	15 47 18.2	-1.2
JAG	**Ashikaga**	**0.97**	**138**	P	Pg	15 47 19.5	-0.5

*NIED **09** 15:47:00, 37.10N×138.60E, h5km, Mw3.9 Best double couple: M0 6.94000×10^14 NP1:φs226.00000°, δ33.00000°, λ127.00000°. NP2:φs5.00000°, δ64.00000°, λ69.00000°.*
*ISCJB **09** 15:47:06.1±0.6, 37.15N±0.02×138.61E±0.04, h13km±4km, mb3.6/10, Error ellipse: s-maj=4.9km s-min=3.9km az=27.0*
*JMA **09** 15:47:06.9, 37.15N×138.65E, h9km±2km, M4.0 Broadband fault plane solution: P waves. NP1: φs323.00000°, δ41.00000°, λ-33.00000°. NP2:φs79.00000°, δ69.00000°, λ-126.00000°. Principal axes: T Plg16.0000°, Azm195.0000°; N Plg33.0000°, Azm94.0000°; P Plg52.0000°, Azm307.0000°;*
JMA Felt III J1.
*NEIC **09** 15:47:07.7±1.8, 37.09N×138.52E, h17km±12km, mb3.8/1 Error ellipse: s-maj=17.1km s-min=12.6km az=58.0*
NEIC Recorded [3 JMA] in Niigata and [1 JMA] in Nagano Prefectures.
*IDC **09** 15:47:07.2±2.7, 37.13N×138.53E, h14km±18km, mb3.6/9, mb1 3.8/11, mb1mx3.7/24, mbtmp3.6/11, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/34, Error ellipse: s-maj=22.8km s-min=15.7km az=90.0*
ISC 09 15:47:06.5±0.4, 3716N±002×13862E±003, h7km±4km, n25, σ0^{s}69/34, mb3.6/10, 6C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.33**	**74**	⇑P	**Pg**	**15 47 13.0**	**-0.1**
JHK				S	**Sg**	**15 47 18.2**	**+0.7**
JIZZ	**Izumozaki**	**0.38**	**11**	⇑P	**Pg**	**15 47 15.1**	**+1.1**
JGK	**Kuni**	**0.59**	**178**	⇑P	**Pg**	**15 47 18.2**	**+0.2**
JGK				*e*S	**Sg**	**15 47 26.5**	**+0.8**
JKT	**Katashina**	**0.64**	**127**	P	**Pg**	**15 47 18.4**	**-0.5**
MAJO	**Matsushiro**	**0.70**	**208**	⇑*i*Pg	**Pg**	**15 47 19.3**	**-0.6**
MAJO				*e*Sg	**Sg**	**15 47 29.2**	**+0.2**
MAT	**Matsushiro**	**0.70**	**208**	P	**Pg**	**15 47 19.5**	**-0.4**
MAT				S	**Sg**	**15 47 28.9**	**-0.1**
MAT	**Matsushiro**	**0.70**	**208**	P	**Pg**	**15 47 19.5**	**-0.4**
MAT				S	**Sg**	**15 47 29.1**	**+0.1**
MJAR	**Matsushiro Arr**	**0.70**	**208**	Pg	**Pg**	**15 47 19.7**	**-0.3**
	59nm,0.3s,baz=29,slow=17,SNR=229						
MJAR				Lg		15 47 29.2	
	122nm,0.3s,baz=81,slow=39,SNR=45						
JNS	**Sasagawa**	**0.86**	**40**	⇑P	**Pg**	**15 47 22.4**	**-0.8**
JNS				S	**Sg**	**15 47 34.5**	**+0.1**
JFY	**Yanaizu**	**0.90**	**74**	S	**Sg**	**15 47 35.4**	**-0.2**
JSD	**Sado**	**0.92**	**342**	⇓P	**Pg**	**15 47 23.5**	**-0.8**
JSD				S	**Sg**	**15 47 36.3**	**0.0**
JAG	**Ashikaga**	**0.99**	**137**	⇑P	**Pg**	**15 47 25.2**	**-0.4**
JAG				S	**Sg**	**15 47 38.4**	**-0.1**
JSZ	**Suzu**	**1.04**	**287**	⇓P	**Pg**	**15 47 25.8**	**-0.7**
JSZ				S	**Sg**	**15 47 40.7**	**+0.7**
JHJ	**Hachijo jima 2**	**4.14**	**166**	Pn	**Pn**	**15 48 11.6**	**+1.4**
	4.4nm,0.3s,baz=53,slow=20,SNR=2.6						
KSRS	**Korea Array**	**8.53**	**275**	Pn	**Pn**	**15 49 11.9**	**+1.5**
	0.3nm,0.3s,baz=89,slow=14,SNR=3.8						
KSRS				LR	LR	15 52 26.6	
	comp=Z,84nm,18.0s,baz=80,slow=38						
ULN	**Ulaanbaatar**	**25.44**	**305**	*e*P	**P**	**15 52 35.5**	**+0.7**
	2.7nm,1.1s,mb3.7						
SONM	**Songino Array**	**25.87**	**305**	P	**P**	**15 52 38.2**	**-0.4**
	0.8nm,0.9s,mb3.3,baz=94,slow=10,SNR=5.9						
MKAR	**Makanchi Array**	**42.15**	**302**	P	**P**	**15 54 58.3**	**-1.1**
	0.2nm,0.8s,mb2.8,baz=87,slow=7.7,SNR=2.6						
WRA	**Warramunga Arr**	**56.93**	**185**	P	**P**	**15 56 51.1**	**-1.2**
	1.1nm,0.8s,mb4.0,baz=0.9,slow=7.5,SNR=17						
ASAR	**Alice Springs**	**60.66**	**185**	P	**P**	**15 57 17.6**	**-0.6**
	0.5nm,0.9s,mb3.7,baz=355,slow=4.9,SNR=5.4						
YKA	**Yellowknife Ar**	**64.81**	**29**	P	**P**	**15 57 45.1**	**-0.4**
	0.1nm,0.6s,mb3.1,baz=306,slow=7.0,SNR=5.1						
FINES	**FINESS Array B**	**67.65**	**331**	P	**P**	**15 58 03.3**	**-0.4**
	2.2nm,0.9s,mb4.2,baz=62,slow=5.8,SNR=5.1						
NOA	**NORSAR Array B**	**73.19**	**336**	P	**P**	**15 58 37.3**	**-0.2**
	1.5nm,0.8s,mb4.0,baz=41,slow=6.1,SNR=3.4						
NVAR	**Mina Array Bea**	**76.69**	**52**	P	**P**	**15 58 59.0**	**+0.8**
	0.4nm,0.5s,mb3.6,baz=281,slow=5.4,SNR=3.6						
PDAR	**Pinedale Array**	**79.16**	**44**	P	**P**	**15 59 12.7**	**+0.9**
	0.7nm,0.8s,mb3.6,baz=253,slow=1.5,SNR=5.3						

MAN 09 15:47:11, 721N×12499E, h28km, mb4.1, ML2.9, MS2.6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.67**	**6**	*e*P	Pb	15 47 25.2	+1.1
BUKP				*e*S	Sb	15 47 35.5	+2.5
CGP	**Cagayan de Oro**	**1.27**	**347**	*e*P	Pn	15 47 33.6	+0.8
CGP				*i* S	Sn	15 47 50.1	+1.1
MATI	**Mati**	**1.29**	**102**	*e*P	Pn	15 47 33.2	+0.1
MATI				*e*S	Sn	15 47 50.9	+1.4

IDC 09 15:54:52.9±7.0, 3128S×17780W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/12, mbtmp3.7/2, Error ellipse: s-maj=302.2km s-min=55.0km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.24**	**268**	P	P	16 02 55.6	-0.5
	0.5nm,0.7s,baz=104,slow=7.6,SNR=13						
WRA	**Warramunga Arr**	**44.31**	**273**	P	P	16 03 05.1	+0.3
	0.6nm,0.3s,baz=112,slow=8.0,SNR=35						
FINES	**FINESS Array B**	**146.03**	**340**	PKPbc	PKPbc	16 14 33.1	-0.8
	0.4nm,0.5s,baz=61,slow=8.6,SNR=4.0						

*CSEM **09** 16:12:00.4±0.1, 40.53N×34.13E, h10km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.6km az=154.0*
*ISCJB **09** 16:12:01.4±0.5, 40.55N±0.03×34.11E±0.03, h7km±5km, Error ellipse: s-maj=4.7km s-min=4.0km az=15.7*
*ISK **09** 16:12:01.1, 40.55N×34.10E, h14km, MD3.1*
*DDA **09** 16:12:02.2, 40.53N×34.12E, h7km, Md2.8*
ISC 09 16:12:01.8±0.4, 4055N±003×3411E±003, h11km±5km, n21, σ0^{s}71/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CANT	**Cankiri**	**0.38**	**278**	PG	**Pg**	**16 12 08.9**	**-0.4**
CANT				SG	**Sg**	**16 12 14.8**	**+0.5**
TOS	**Tosya**	**0.49**	**352**	PG	**Pg**	**16 12 10.9**	**-0.4**
CTKT	**Corum**	**0.52**	**82**	*i* P	**Pg**	**16 12 11.8**	**-0.1**
CTKT				*i* S	**Sg**	**16 12 19.1**	**+0.3**
ELDT	**Eldivan**	**0.53**	**264**	*i* P	**Pg**	**16 12 12.2**	**+0.1**
ELDT				*i* S	**Sg**	**16 12 19.4**	**+0.4**
ELDT	**Eldivan**	**0.53**	**264**	*i* P	**Pg**	**16 12 12.1**	**+0.1**
ELDT				*i* S	**Sg**	**16 12 19.4**	**+0.4**
CORM	**Corum**	**0.54**	**133**	PG	**Pg**	**16 12 12.2**	**-0.1**
CORM				SG	**Sg**	**16 12 21.2**	**+1.7**
CDAG	**Cicekdag**	**0.95**	**168**	*i* P	**Pg**	**16 12 19.1**	**-0.9**
CDAG				*i* S	**Sg**	**16 12 31.9**	**-0.4**
BYBT	**Boyabat**	**1.04**	**28**	*e*PG	**Pg**	**16 12 21.1**	**-0.7**
BOYT	**Boyabat**	**1.05**	**34**	*i* P	**Pg**	**16 12 21.3**	**-0.8**
BOYT				*i* S	**Sg**	**16 12 36.3**	**+0.5**
BALT	**Daday**	**1.12**	**331**	*i* P	**Pb**	**16 12 23.1**	**-0.1**
BALT				*i* S	**Sb**	**16 12 38.2**	**+0.3**
ANTO	**Ankara**	**1.22**	**236**	*e*PN	**Pn**	**16 12 24.0**	**-0.7**
LOD	**Lodumlu**	**1.23**	**238**	*e*PN	**Pn**	**16 12 23.6**	**-1.2**
SAFT	**Safranbolu**	**1.28**	**303**	*e*PN	**Pn**	**16 12 25.8**	**+0.2**
YOZ	**Yozgat**	**1.30**	**134**	*e*PN	**Pn**	**16 12 24.8**	**-1.0**
DIKM	**Dikmen**	**1.40**	**38**	*e*PN	**Pn**	**16 12 27.0**	**-0.2**
BZK	**Bozkurt**	**1.41**	**357**	*e*PN	**Pn**	**16 12 27.9**	**+0.6**
KVT	**Kavak**	**1.56**	**70**	*e*PN	**Pn**	**16 12 29.4**	**0.0**
SGKT	**Sivrigoynuk**	**1.57**	**271**	*i* P	**Pn**	**16 12 30.9**	**+1.4**
SGKT				*i* S	**Sn**	**16 12 54.2**	**+4.5**
SGKT	**Sivrigoynuk**	**1.57**	**271**	*i* P	**Pn**	**16 12 30.9**	**+1.4**
SGKT				*i* S	**Sn**	**16 12 54.2**	**+4.4**
AVNT	**Avonos**	**1.86**	**162**	*i* P	**Pn**	**16 12 34.3**	**+0.8**
AVNT				*i* S	**Sn**	**16 13 00.9**	**+3.9**
KIZT	**Kizilcal**	**2.40**	**227**	*e*PN	**Pn**	**16 12 40.8**	**-0.1**

*CSEM **09** 17:22:52.5±0.1, 39.05N×40.38E, h2km, MD3.4, Error ellipse: s-maj=1.6km s-min=1.5km az=30.0*
*ISK **09** 17:22:52.1, 39.08N×40.38E, h5km, MD3.4*
*ISCJB **09** 17:22:54.0±0.3, 39.06N±0.02×40.41E±0.03, h10km, Error ellipse: s-maj=3.4km s-min=3.2km az=149.4*
*DDA **09** 17:22:53.9, 39.08N×40.49E, h3km±4km, Md3.5, Ml3.5*
ISC 09 17:22:54.5±0.3, 3905N±002×4041E±003, h10km, n36, σ1^{s}20/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.18**	**160**	*i* PG	**Pg**	**17 22 57.2**	**-1.2**
BINT				*i* SG	**Sg**	**17 23 00.9**	**-0.2**
PTK	**Pertek**	**0.81**	**259**	*i* PG	**Pg**	**17 23 08.1**	**-1.9**
PTK				*i* SG	**Sg**	**17 23 20.8**	**+0.3**
EZC	**Erzincan**	**0.83**	**327**	PG	**Pg**	**17 23 13.0**	**+2.4**
EZM	**Erzurum**	**1.13**	**41**	PN	**Pn**	**17 23 13.9**	**-2.4**
ERZM	**Erzurum**	**1.13**	**41**	*i* P	**Pb**	**17 23 13.7**	**-2.4**
ERZM				*i* S	**Sb**	**17 23 27.3**	**-3.6**
DIYA	**Diyarbakir**	**1.15**	**191**	*i* P	**Pb**	**17 23 15.9**	**-0.4**
DIYA				*i* S	**Sb**	**17 23 31.9**	**+0.7**
DIY	**Diyarbakir**	**1.16**	**187**	PN	**Pn**	**17 23 16.1**	**-0.6**
BTMT	**Batman**	**1.21**	**135**	PN	**Pn**	**17 23 16.2**	**-1.2**
ELZG	**Elazig**	**1.24**	**244**	*i* P	**Pn**	**17 23 16.1**	**-1.7**
ELZG				*i* S	**Sb**	**17 23 31.6**	**-2.4**
KELT	**Kelkit**	**1.41**	**321**	*i* P	**Pn**	**17 23 19.2**	**-1.0**
KELT				*i* S	**Sn**	**17 23 40.1**	**+1.2**
GUMT	**Gumushane**	**1.58**	**333**	PN	**Pn**	**17 23 22.4**	**-0.1**
MYA	**Malataya**	**1.71**	**246**	PN	**Pn**	**17 23 24.0**	**-0.3**
MALT	**Malatya**	**1.71**	**245**	PN	**Pn**	**17 23 24.2**	**-0.2**
MARD	**Mardin**	**1.76**	**170**	*i* P	**Pn**	**17 23 24.8**	**-0.2**
MARD				*i* S	**Sn**	**17 23 44.3**	**-3.0**
MARD				*i* S	**Sn**	**17 23 49.5**	**+2.2**
TUTA	**Tutak**	**1.90**	**79**	*i* P	**Pn**	**17 23 26.9**	**0.0**
TUTA				*i* S	**Sn**	**17 23 51.4**	**+0.5**
KTUT	**Trabzon**	**2.00**	**346**	*e*PN	**Pn**	**17 23 28.3**	**0.0**
URFA	**Urfa**	**2.03**	**218**	*e*PN	**Pn**	**17 23 29.2**	**+0.5**
AGRB	**Hanur-Agry**	**2.07**	**75**	*e*PN	**Pn**	**17 23 29.7**	**+0.4**
PZAR	**Pazar-Rize**	**2.16**	**10**	*e*PN	**Pn**	**17 23 30.9**	**+0.4**
SIRT	**Sirnak**	**2.23**	**133**	*e*PN	**Pn**	**17 23 31.7**	**+0.3**
ESPY	**Espiye-Giresun**	**2.27**	**326**	*e*PN	**Pn**	**17 23 31.9**	**-0.1**
VANT	**Van**	**2.41**	**104**	*e*PN	**Pn**	**17 23 33.9**	**0.0**
ARTV	**Artvin**	**2.43**	**28**	*i* P	**Pn**	**17 23 33.9**	**-0.3**
ARTV				*i* S	**Sn**	**17 24 00.9**	**-3.1**
GRSN	**GIRESUNGRSN**	**2.49**	**319**	*i* P	**Pn**	**17 23 37.5**	**+2.4**
GRSN				*i* S	**Sn**	**17 24 05.3**	**-0.1**
GRSN	**GIRESUNGRSN**	**2.49**	**319**	*i* P	**Pn**	**17 23 37.5**	**+2.5**
GRSN				*i* S	**Sn**	**17 24 05.3**	**-0.2**
BCA	**Borcka**	**2.57**	**21**	*e*PN	**Pn**	**17 23 35.5**	**-0.6**
DYDN	**Diyadin**	**2.59**	**78**	*i* P	**Pn**	**17 23 37.4**	**+0.9**
DYDN				*i* S	**Sn**	**17 24 11.7**	**+3.7**
DYDN	**Diyadin**	**2.59**	**78**	*i* P	**Pn**	**17 23 37.3**	**+0.8**
DYDN				*i* S	**Sn**	**17 24 11.7**	**+3.7**
CLDR	**Caldiran**	**2.73**	**87**	*e*PN	**Pn**	**17 23 39.6**	**+1.2**
GZT	**Gaziantep**	**2.81**	**234**	*i* P	**Pn**	**17 23 41.5**	**+2.1**
GZT				*i* S	**Sn**	**17 24 18.8**	**+5.5**
HAKT	**HAKKARI**	**2.99**	**119**	*i* P	**Pn**	**17 23 42.9**	**+0.9**
HAKT				*i* S	**Sg**	**17 24 29.9**	**-0.8**
HAKT	**HAKKARI**	**2.99**	**119**	*i* P	**Pn**	**17 23 42.8**	**+0.8**
HKR	**Hakkari**	**3.01**	**118**	*e*PN	**Pn**	**17 23 43.4**	**+1.3**
CUKT	**Cukurca**	**3.10**	**124**	*e*PN	**Pn**	**17 23 45.0**	**+1.6**
KMRS	**Kahramanmaras**	**3.16**	**242**	*e*PN	**Pn**	**17 23 44.7**	**+0.5**
BNN	**Bunyan**	**3.56**	**268**	*e*PN	**Pn**	**17 23 50.9**	**+1.1**

IDC 09 17:23:35.4±2.1, 362N×12726E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/18, mbtmp3.2/3, Error ellipse: s-maj=156.8km s-min=26.0km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.43**	**164**	P	P	17 28 56.0	+0.1
	0.4nm,0.5s,baz=344,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**27.88**	**167**	P	P	17 29 27.2	+0.1
	0.2nm,0.6s,baz=347,slow=7.3,SNR=3.5						
MKAR	**Makanchi Array**	**57.95**	**325**	P	P	17 33 29.7	+0.1
	0.1nm,0.3s,baz=119,slow=7.9,SNR=6.1						

IDC 09 17:25:43.3±3.7, 2497N×9611E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.1/23, mbtmp3.2/3, Error ellipse: s-maj=395.2km s-min=27.3km az=59.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.99**	**265**	*i* P	Pn	17 26 09.0	-9.2
MKAR	**Makanchi Array**	**24.42**	**337**	P	P	17 31 03.5	+0.2
	0.3nm,0.5s,baz=148,slow=9.8,SNR=9.5						
WRA	**Warramunga Arr**	**58.10**	**137**	P	P	17 35 38.7	0.0
	0.3nm,0.9s,baz=326,slow=7.2,SNR=4.7						
ASAR	**Alice Springs**	**60.65**	**140**	P	P	17 35 56.4	+0.1
	0.6nm,1.1s,baz=319,slow=6.6,SNR=3.6						

*NIED **09** 17:44:00, 20.30N×121.60E, h8km, Mw5.2 Best double couple: M0 6.41000×10^16 NP1:φs339.00000°, δ30.00000°, λ107.00000°. NP2:φs139.00000°, δ61.00000°, λ80.00000°.*
*BJI **09** 17:44:00.9, 19.98N×121.40E, h30km, mB5.2, mb4.7, ML4.7, Ms5.0, Msz4.9*
*MOS **09** 17:44:02.2±0.9, 20.11N×121.46E, h33km, mb5.3/52, MS4.9/16, Error ellipse: s-maj=8.8km s-min=4.6km az=113.5*
*MAN **09** 17:44:02, 20.19N×121.35E, h70km, mb5.2, ML4.2, MS4.4*
*NEIC **09** 17:44:02.9±1.5, 20.06N×121.41E, h29km±10km, mb5.1/64, Error ellipse: s-maj=5.2km s-min=4.0km az=85.0*
*ISCJB **09** 17:44:02.6±0.1, 20.12N±0.01×121.49E±0.02, h35km, mb5.0/103, MS4.8/43, Error ellipse: s-maj=3.2km s-min=1.9km az=13.8*
*GCMT **09** 17:44:02.9±0.1, 20.10N×121.21E, h30km, MW5.4/91, Moment Tensor Solution. s83,c137; s91,c153; Duration: 1^{s}2 Moment tensor: Scale 10^17Nm; Mrr1.16±.02; Mθθ0.11±.01; Mφφ-1.27±.02; Mrθ0.32±.03; Mθφ0.28±.01; Mφr-0.82±.03; Best double couple: M0 1.52500×10^17 NP1:φs356.00000°, δ28.00000°, λ102.00000°. NP2:φs163.00000°, δ63.00000°, λ84.00000°. Principal axes: T 1.4490, Plg72.0000°, Azm58.0000°; N 0.1480, Plg6.0000°, Azm166.0000°; P -1.6000, Plg18.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IDC **09** 17:44:03.4±2.0, 20.00N×121.30E, h38km±16km, mb4.6/28, mb1 4.7/31, mb1mx4.6/34, mbtmp4.6/31, ML4.7/3, MS4.7/23, Ms1 4.7/23, ms1mx4.6/30 Error ellipse: s-maj=15.3km s-min=8.1km az=69.0*
ISC 09 17:44:04.7±0.1, 2013N±001×12142E±002, h37km, h37km±2.5km:pP-P, n345, σ1^{s}14/382, mb5.0/103, MS4.8/43, 41C-31D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.95**	**203**	⇑*i*P	**Pn**	**17 44 33.2**	**-2.1**
PIP				*e*S	**Sn**	**17 44 55.7**	**-2.9**
SGCP	**Mt. Cagua**	**1.97**	**162**	*e*P	**Pn**	**17 44 36.2**	**+0.6**
SGCP				*e*S	**Sn**	**17 45 00.5**	**+1.4**
CVP	**Callao Caves**	**2.44**	**171**	*i* P	**Pn**	**17 44 42.3**	**+0.2**
CVP				*i* S	**Sn**	**17 45 12.4**	**+1.6**
BCPH	**Baguio City Da**	**3.81**	**192**	⇓*e*P	**Pn**	**17 45 01.2**	**+0.3**
BCPH				*i* S	**Sn**	**17 45 46.6**	**+2.1**
BOLP	**Bolinao**	**3.99**	**201**	*e*P	**Pn**	**17 45 02.9**	**-0.5**
NACB	**Ninganchiao**	**4.03**	**2**	*e*Pn	**Pn**	**17 45 04.3**	**+0.3**
NACB				*e*Sn	**Sn**	**17 45 49.0**	**-0.9**
BALP	**Baler**	**4.37**	**178**	*e*S	**Sn**	**17 45 59.4**	**+1.1**
HATJ	**Hateruma jima**	**4.49**	**29**	P	**Pn**	**17 45 10.5**	**+0.2**
HATJ				*e*S	**Sn**	**17 46 00.5**	**-0.8**
YHNB	**Yeheng**	**4.52**	**359**	*e*Pn	**Pn**	**17 45 11.9**	**+1.2**
YHNB				*e*Sn	**Sn**	**17 46 10.7**	**+8.7**
PCPH	**Palayan**	**4.55**	**184**	⇓*e*P	**Pn**	**17 45 12.4**	**+1.3**
PCPH				*e*S	**Sn**	**17 46 06.8**	**+3.9**
YOJ	**Yonaguni jima**	**4.56**	**19**	P	**Pn**	**17 45 11.6**	**+0.4**
YOJ				*e*S	**Sn**	**17 46 03.1**	**+0.2**
SCZP	**Santa Cruz**	**4.56**	**199**	*e*P	**Pn**	**17 45 11.0**	**-0.2**
IRIF	**Iriomote-Funau**	**4.70**	**27**	P	**Pn**	**17 45 13.5**	**+0.3**
IRIF				*e*S	**Sn**	**17 46 07.0**	**+0.5**
JKRS	**Kuro-shima**	**4.74**	**30**	P	**Pn**	**17 45 14.1**	**+0.4**
JKRS				*e*S	**Sn**	**17 46 08.4**	**+0.9**
TATO	**Taipei**	**4.83**	**1**	*e*Pn	**Pn**	**17 45 18.5**	**+3.7**
JIJ	**Ishigaki jima**	**4.91**	**30**	P	**Pn**	**17 45 15.8**	**-0.3**
JIJ				*e*S	**Sn**	**17 46 09.1**	**-2.6**
POLP	**Polilio Island**	**5.39**	**175**	*e*P	**Pn**	**17 45 23.5**	**+0.8**
POLP				*e*S	**Sn**	**17 46 24.8**	**+1.2**
JTJ	**Tarama**	**5.42**	**33**	P	**Pn**	**17 45 23.4**	**+0.3**
JTJ				*e*S	**Sn**	**17 46 23.7**	**-0.5**
QZH	**Quanzhou**	**5.46**	**332**	P	**Pn**	**17 45 23.0**	**-0.6**
QZH				S	**Sn**	**17 46 18.0**	**-7.1**
QZH				Smax			
	comp=N,290nm,0.7s						
QZH				Smax			
	comp=E,850nm,1.1s						
QZH				LR	LR		
	comp=N,18μm,14.9s						
QZH				LR	LR		
	comp=E,12μm,17.5s						
QZH				LR	LR		
	comp=Z,4μm,16.8s						
JMJ	**Miyako jima 2**	**5.88**	**37**	*e*S	**Sn**	**17 46 36.4**	**+0.9**
JOGS	**Gusukube**	**5.90**	**38**	P	**Pn**	**17 45 30.2**	**+0.5**
JOGS				*e*S	**Sn**	**17 46 37.7**	**+1.6**
TGY	**Tagaytay City**	**6.01**	**184**	*e*P	**Pn**	**17 45 24.1**	**-7.1**
GQP	**Guinayangan**	**6.27**	**171**	⇓*e*P	**Pn**	**17 45 36.1**	**+1.4**
GQP				*e*S	**Sn**	**17 46 44.8**	**-0.3**
LUBP	**Lubang**	**6.46**	**190**	*e*P	**Pn**	**17 45 38.6**	**+1.3**
PVCP	**Virac**	**7.00**	**158**	*e*P	**Pn**	**17 45 44.9**	**+0.1**
OTRP	**Odiongan**	**7.74**	**176**	*e*P	**Pn**	**17 45 56.7**	**+1.7**
JKE	**Kume jima 2**	**7.90**	**38**	P	**Pn**	**17 45 57.2**	**+0.1**
JKE				*e*S	**Sn**	**17 47 24.7**	**-0.5**
BUSP	**Coron**	**8.16**	**188**	*e*P	**Pn**	**17 46 00.7**	**-0.1**
JJT2	**Tamagusuku 2**	**8.35**	**43**	P	**Pn**	**17 46 04.1**	**+0.9**
JAGN	**Aguni-jima**	**8.36**	**39**	P	**Pn**	**17 46 04.6**	**+1.2**
ENPP	**El Nido**	**9.08**	**193**	*e*P	**Pn**	**17 46 12.6**	**-0.7**
JOW	**Kunigami**	**9.17**	**42**	P	**Pn**	**17 46 13.9**	**-0.6**
JOW	**Kunigami**	**9.17**	**42**	Pn	**Pn**	**17 46 14.1**	**-0.4**
	comp=Z,39nm,0.3s,baz=189,slow=9.6,SNR=41						
JOW				Sn	**Sn**	**17 47 52.2**	**-4.2**
	comp=Z,3.0nm,0.3s,baz=128,slow=28,SNR=2.5						
JOW				LR	LR	17 49 42.9	
	comp=Z,10μm,21.5s,baz=213,slow=36						
JTK	**Tokunoshima**	**10.27**	**41**	P	**Pn**	**17 46 30.1**	**+0.5**
MSLP	**Maasin**	**10.47**	**161**	*e*P	**Pn**	**17 46 36.0**	**+3.5**
JMZ	**Minamidaito 2**	**10.66**	**56**	P	**Pn**	**17 46 35.0**	**+0.1**
SSE	**Sheshan**	**10.92**	**359**	P	**Pn**	**17 46 43.3**	**+4.8**
SSE				S	**Sn**	**17 48 46.1**	**+6.7**
SSE				AMB	AMB		
	comp=Z,33nm,0.7s						
SSE				AMB	AMB		
	comp=Z,54nm,3.5s						
SSE				LR	LR		
	comp=N,2μm,12.2s						
SSE				LR	LR		
	comp=E,2μm,12.1s						
SSE				LR	LR		
	comp=Z,3μm,13.6s						
QIZ	**Qiongzhong**	**10.97**	**266**	P	**Pn**	**17 46 35.9**	**-3.3**
QIZ				S	**Sn**	**17 48 34.7**	**-5.9**
QIZ				AMB	AMB		
	comp=Z,115nm,0.8s						
QIZ				AMB	AMB		
	comp=Z,390nm,6.2s						
QIZ				LR	LR		
	comp=N,3μm,15.4s						
QIZ				LR	LR		
	comp=E,6μm,15.0s						
QIZ				LR	LR		
	comp=Z,8μm,15.9s						
QIZ	**Qiongzhong**	**10.97**	**266**	*e*Pn	**Pn**	**17 46 35.5**	**-3.7**
	comp=Z,103nm,0.8s						
QIZ				*e*Sn	**Sn**	**17 48 31.2**	**-9.5**
JAM	**Amami Oshima**	**11.12**	**41**	P	**Pn**	**17 46 40.0**	**-1.2**
NJ2	**Nanjing**	**12.10**	**350**	*e*P	**Pn**	**17 46 59.1**	**+4.6**
NJ2				AP		17 47 07.9	
NJ2				PP		17 47 11.0	
NJ2				XP		17 47 13.2	
NJ2				S	**Sn**	**17 49 14.5**	**+6.4**
NJ2				AMB	AMB		
	comp=Z,430nm,11.2s						
NJ2				LR	LR		
	comp=N,9μm,18.6s						
NJ2				LR	LR		
	comp=E,6μm,18.1s						
NJ2				LR	LR		
	comp=Z,6μm,18.1s						
WHN	**Wuhan**	**12.18**	**330**	⇓P	**Pn**	**17 46 59.0**	**+3.3**
WHN				S	**Sn**	**17 49 17.2**	**+7.0**
WHN				LR	LR		
	comp=Z,13μm,15.8s						
DAV	**Davao City (W)**	**13.59**	**162**	Pn	**Pn**	**17 47 13.2**	**-1.9**
KDM	**Kudat**	**13.87**	**199**	⇓P	**Pn**	**17 47 21.1**	**+2.2**
KKM	**Kota Kinabalu**	**14.88**	**201**	*e*Pn	**Pn**	**17 47 32.0**	**-0.6**
KKM	**Kota Kinabalu**	**14.88**	**201**	⇑P	**Pn**	**17 47 35.0**	**+2.4**
GYA	**Guiyang**	**14.94**	**298**	P	**Pn**	**17 47 31.3**	**-2.0**
GYA				AP	pP	17 47 40.3	-7.6
GYA				PP		17 47 43.7	
GYA				XP	sP	17 47 48.1	-4.5
GYA				S	**Sn**	**17 50 22.6**	**+4.9**
GYA				XS	sS	17 50 31.8	-18
GYA				SS		17 50 36.5	
GYA				PCP	PcP	17 52 43.4	+2.0
GYA				AMB	AMB		
	comp=Z,30nm,0.6s						
GYA				AMB	AMB		
	comp=Z,280nm,4.2s						
GYA				LR	LR		
	comp=N,3μm,14.9s						
GYA				LR	LR		
	comp=E,5μm,15.9s						
GYA				LR	LR		
	comp=Z,5μm,14.9s						
SDKM	**Sandakan**	**14.97**	**196**	⇑P	**Pn**	**17 47 36.7**	**+2.8**
JNU	**Nakatsue**	**15.45**	**31**	Pn	**Pn**	**17 47 40.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=311,slow=13,SNR=7.3						
JNU				Sn	**Sn**	**17 50 33.0**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=121,slow=11,SNR=1.5						
JNU				LR	LR	17 53 44.7	
	comp=Z,3μm,21.4s,baz=14,slow=37						
TSM	**Tawau**	**16.11**	**193**	⇑P	**Pn**	**17 47 51.9**	**+3.3**
TIA	**Tai'an**	**16.46**	**348**	*e*P	**Pn**	**17 47 53.9**	**+1.1**
XAN	**Xi'an**	**17.75**	**324**	P	**Pn**	**17 48 08.4**	**-0.5**
XAN				AP	pP	17 48 21.2	+2.3
XAN				S	**S**	**17 51 25.8**	**-5.9**
XAN				LR	LR		
	comp=N,4μm,14.6s						
XAN				LR	LR		
	comp=E,3μm,15.1s						
XAN				LR	LR		
	comp=Z,4μm,16.0s						
INCN	**Inchon**	**17.88**	**14**	*e*Pn	**Pn**	**17 48 08.1**	**-2.4**
	comp=Z,121nm,2.0s						

INCN *e* 17 48 22.9
KMI Kunming 17.94 290 P **Pn** **17 48 11.1 -0.3**
KMI AP pP 17 48 18.4 -2.8
KMI XP sP 17 48 22.7 -3.2
KMI S **S** **17 51 30.4 -5.3**
KMI XS sS 17 51 42.0 -8.8
KMI AMB AMB
comp=Z,37nm,1.6s
KMI AMB AMB
comp=Z,477nm,5.8s
KMI LR LR
comp=N,2µm,19.9s
KMI LR LR
comp=E,5µm,15.9s
KMI LR LR
comp=Z,5µm,15.5s
KKTK Khon Kaen 18.06 261 P **Pn** **17 48 13.0 +0.1**
KSRS Korea Array 18.17 17 P **Pn** **17 48 14.3 +0.3**
comp=Z,3.0nm,0.3s,baz=196,slow=11,SNR=88
KSRS LR LR 17 56 04.6
comp=Z,2µm,18.7s,baz=198,slow=39
BTM Bintulu 18.69 207 ⇑P **Pn** **17 48 21.0 +0.5**
DL2 Dalian 18.71 1 P **Pn** **17 48 24.3 +3.6**
DL2 AP pP 17 48 34.2 +4.7
DL2 S **S** **17 51 53.5 +2.4**
DL2 AMB AMB
comp=Z,20nm,0.8s
DL2 AMB AMB
comp=Z,310nm,6.4s
DL2 LR LR
comp=N,1µm,13.8s
DL2 LR LR
comp=E,1µm,17.7s
DL2 LR LR
comp=Z,2µm,16.1s
TIY Taiyuan 19.19 338 P **Pn** **17 48 30.1 +3.7**
TIY S **S** **17 52 03.7 +3.0**
TIY AMB AMB
comp=Z,650nm,4.9s
TIY LR LR
comp=N,4µm,12.7s
TIY LR LR
comp=E,1µm,8.5s
TIY LR LR
comp=Z,4µm,14.7s
CD2 Chengdu 19.19 308 P **Pn** **17 48 26.3 -0.2**
CD2 AP pP 17 48 35.3 +0.4
CD2 XP sP 17 48 41.0 +1.4
CD2 PP 17 48 44.4
CD2 S **S** **17 51 54.3 -6.6**
CD2 XS sS 17 52 13.0 -3.1
CD2 SS 17 52 24.1
CD2 AMB AMB
comp=Z,30nm,1.1s
CD2 AMB AMB
comp=Z,380nm,4.7s
CD2 LR LR
comp=N,3µm,14.4s
CD2 LR LR
comp=E,3µm,16.8s
CD2 LR LR
comp=Z,15µm,15.0s
SBUM Sibu 19.73 208 ⇓P **Pn** **17 48 32.7 -0.4**
CBIJ Chichi jima 20.24 66 P **P** **17 48 37.4 +0.6**
comp=Z,82nm,0.5s,baz=305,slow=5.4,SNR=8.1
CBIJ LR LR 17 54 42.9
comp=Z,2µm,20.0s,MS4.6,baz=210,slow=31
BJT Baijiatuan 20.33 348 *e*P **P** **17 48 37.9 +0.3**
comp=Z,178nm,1.0s
BJT Baijiatuan 20.33 348 *e*P **P** **17 48 37.9 +0.2**
BJT pmax pmax
comp=Z,178nm,1.0s
CHRT Chiangrai 20.34 273 ⇓P **P** **17 48 38.5 +0.6**
comp=Z,182nm,1.2s
BJI Beijing 20.35 348 P **P** **17 48 38.3 +0.4**
BJI AP 17 48 50.8
BJI XP sP 17 48 56.2 +4.0
BJI S **S** **17 52 31.3 +7.4**
BJI AMB AMB
comp=Z,113nm,0.8s
BJI AMB AMB
comp=Z,404nm,3.4s
BJI LR LR
comp=N,3µm,16.8s,MS4.8
BJI LR LR
comp=E,2µm,15.4s,MS4.8
BJI LR LR
comp=Z,3µm,18.4s,MS4.7
NST Nakhon Sawan 20.73 261 P **P** **17 48 43.0 +0.8**
JHJ Hachijo jima 2 20.86 48 LR LR 17 55 36.8
comp=Z,2µm,20.5s,MS4.6,baz=289,slow=33
CHG Chiang Mai 21.23 270 ⇓P **P** **17 48 47.6 0.0**
comp=Z,141nm,1.4s,mb5.1
CHTO Chiang Mai 21.23 270⇓ *e*P **P** **17 48 46.9 -0.7**
comp=Z,90nm,1.3s,mb4.9
CHTO Chiang Mai 21.23 270⇓ *e*P **P** **17 48 46.9 -0.7**
CHTO pmax pmax
comp=Z,90nm,1.3s,mb4.9
KSM Kuching 21.49 212 *e*P **P** **17 48 48.5 -1.8**
KSM Kuching 21.49 212 ⇓P **P** **17 48 50.2 -0.2**
SNY Shenyang 21.71 4 ⇓P **P** **17 48 53.7 +1.2**
SNY S **S** **17 52 53.8 +3.2**
SNY AMB AMB
comp=Z,50nm,0.5s,mb5.2
SNY AMB AMB
comp=Z,360nm,8.2s
SNY LR LR
comp=N,2µm,19.4s,MS4.7
SNY LR LR
comp=E,2µm,15.9s,MS4.7
SNY LR LR
comp=Z,3µm,15.1s,MS4.8
MAJO Matsushiro 21.98 38 *e*P **P** **17 48 56.1 +0.6**
comp=Z,63nm,1.3s,mb4.9
MAJO Matsushiro 21.98 38 *e*P **P** **17 48 56.1 +0.6**
MAJO pmax pmax
comp=Z,63nm,1.3s,mb4.9
MAT Matsushiro 21.98 38 P **P** **17 48 56.9 +1.4**
MAT S **S** **17 52 49.0 -7.1**
MJAR Matsushiro Arr 21.98 38 P **P** **17 48 55.5 0.0**
comp=Z,9.8nm,0.7s,mb4.3,baz=230,slow=7.9,SNR=21
MJAR LR LR 17 57 23.6
comp=Z,833nm,20.0s,MS4.2,baz=245,slow=36
NNT Nongplab 22.10 254 P **P** **17 48 58.0 +1.1**
HHC Hu-ho-hao-te 22.30 340 *e*P **P** **17 48 59.1 +0.3**
HHC AP 17 49 10.8
HHC XP sP 17 49 16.8 +3.6
HHC PCP PcP 17 52 54.0 +0.3
HHC S **S** **17 53 00.0 -2.1**
HHC XS sS 17 53 15.8 -1.9
HHC SS 17 53 40.6
HHC SCP ScP 17 56 25.1 -3.3
HHC AMB AMB
comp=Z,19nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,646nm,5.1s
HHC LR LR
comp=N,4µm,14.9s,MS4.9
HHC LR LR
comp=E,2µm,18.8s,MS4.9
HHC LR LR
comp=Z,4µm,14.9s,MS5.0
BTO Baotou 22.62 337 *e*P **P** **17 49 03.3 +1.1**
KTGM Kuala Trenggan 23.08 233 ⇓P **P** **17 49 07.0 -0.3**
CN2 Changchun 23.84 7 *e*P **P** **17 49 13.8 -0.6**
CN2 *e*AP 17 49 25.2
CN2 *e*S **S** **17 53 23.9 -3.8**
CN2 AMB AMB
comp=Z,400nm,8.0s
CN2 LR LR
comp=N,4µm,15.0s,MS5.0
CN2 LR LR
comp=E,2µm,15.0s,MS5.0
CN2 LR LR
comp=Z,5µm,17.0s,MS5.1
VLA Vladivostok 24.55 19 *e*P **P** **17 49 19.4 -1.5**
VLA *e*S **S** **17 53 28.4 -11**
VLA pmax pmax
comp=Z,96nm,2.1s,mb5.0
VLA MLR MLR
comp=Z,2µm,15.2s,MS4.6
KULM Kulim 25.01 237⇓ *e*P **P** **17 49 23.6 -1.7**
KULM Kulim 25.01 237 ⇓P **P** **17 49 25.7 +0.4**
KAPI Kappang 25.04 184 P **P** **17 49 24.1 -1.4**
comp=Z,133nm,0.7s,mb5.6,SNR=5.5

MYKOM **Kota Tinggi 25.04 225** ⇓P **P** **17 49 26.2 +0.6**
IPM Ipoh 25.22 235 ⇓P **P** **17 49 26.9 -0.4**
KGM Kluang 25.23 227 ⇑P **P** **17 49 27.8 +0.4**
MDJ Mudanjiang 25.35 14 P **P** **17 49 27.6 -0.5**
MDJ AP pP 17 49 40.4 +1.9
MDJ XP sP 17 49 46.7 +3.7
MDJ PP 17 50 07.6
MDJ SCP ScP 17 56 33.9 -2.6
MDJ PCS PcS 17 56 40.0 -0.4
MDJ AMB AMB
comp=Z,21nm,1.5s,mb4.5
MDJ AMB AMB
comp=Z,210nm,4.6s
MDJ LR LR
comp=N,2µm,19.1s,MS4.8
MDJ LR LR
comp=E,2µm,20.4s,MS4.8
MDJ LR LR
comp=Z,2µm,19.1s,MS4.7
MDJ Mudanjiang 25.35 14 *e*Pn **P** **17 49 26.8 -1.3**
comp=Z,21nm,0.9s,mb4.7
FRIM Kepong 25.59 232 ⇓P **P** **17 49 31.8 +1.2**
IMP Imphal 25.80 285 *e*P **P** **17 49 32.0 -0.5**
GTA Gaotai 26.73 321 *e*P **P** **17 49 41.8 +1.1**
GTA AP pP 17 49 53.4 +2.3
GTA XP sP 17 49 59.2 +3.5
GTA PP 17 50 28.2
GTA PCP PcP 17 53 04.3 +0.9
GTA S **S** **17 54 13.5 -0.4**
GTA XS sS 17 54 33.7 +2.5
GTA SS 17 55 26.5
GTA SCP ScP 17 56 40.7 0.0
GTA PCS PcS 17 56 45.0 +0.4
GTA AMB AMB
comp=Z,195nm,7.3s
GTA LR LR
comp=N,2µm,16.0s,MS4.8
GTA LR LR
comp=E,2µm,14.1s,MS4.8
GTA LR LR
comp=Z,2µm,15.3s,MS4.8
SHL Shillong 27.72 287 *e*P **P** **17 49 57.0 +7.3**
PSI Prapat 27.90 235 P **P** **17 49 50.0 -1.4**
PSI LR LR 18 01 20.5
PSI Prapat 27.90 235 P **P** **17 49 50.0 -1.4**
comp=Z,7.4nm,0.5s,mb4.6,baz=37,slow=5.2,SNR=15
PSI LR LR 18 01 20.5
comp=Z,2µm,18.1s,MS4.6,baz=228,slow=37
LSA Lhasa 28.99 295 P **P** **17 50 02.5 +1.5**
LSA AP pP 17 50 10.4 -1.1
LSA XP sP 17 50 14.3 -1.7
LSA PCP PcP 17 53 07.4 -1.7
LSA S **S** **17 54 51.0 +1.4**
LSA XS sS 17 55 09.4 +2.4
LSA SCP ScP 17 56 46.4 -1.4
LSA PCS PcS 17 56 50.1 -1.8
LSA SCS ScS 18 00 41.2 -0.6
LSA AMB AMB
comp=Z,10.0nm,1.0s,mb4.5
LSA LR LR
comp=N,780nm,20.2s,MS4.6
LSA LR LR
comp=E,1µm,15.5s,MS4.6
LSA LR LR
comp=Z,920nm,17.8s,MS4.4
LSA Lhasa 28.99 295 *e*P **P** **17 50 02.5 +1.5**
comp=Z,12nm,0.8s,mb4.7
LSA Lhasa 28.99 295 *e*P **P** **17 50 02.5 +1.5**
LSA pmax pmax
comp=Z,12nm,0.8s,mb4.7
HIA Hailar 29.10 358 *e*P **P** **17 50 00.1 -1.6**
HIA *e* 17 50 17.7
ASAJ Asahikawa 29.73 32 P **P** **17 50 07.5 +0.2**
comp=Z,14nm,0.6s,mb4.8,baz=222,slow=10,SNR=17
ASAJ LR LR 18 02 35.7
comp=Z,2µm,21.0s,MS4.6,baz=246,slow=37
ULN Ulaanbaatar 30.02 340⇑ *e*P **P** **17 50 08.7 -1.1**
comp=Z,6.7nm,0.7s,mb4.5
ULN Ulaanbaatar 30.02 340 *c i*P **P** **17 50 09.6 -0.3**
KLR Kul'dur 30.19 14 *e*P **P** **17 50 07.8 -3.6**
KLR pmax pmax
comp=N,35nm,1.8s
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.2
KLR MLR MLR
comp=Z,4µm,13.5s,MS5.3
SONM Songino Array 30.20 340 P **P** **17 50 10.1 -1.4**
SONM 17 56 52.8
SONM Songino Array 30.20 340 P **P** **17 50 10.1 -1.4**
comp=Z,7.2nm,0.6s,mb4.6,baz=157,slow=9.5,SNR=32
SONM ScP ScP 17 56 52.8 +1.4
comp=Z,1.1nm,0.9s,baz=155,slow=2.8,SNR=3.9
SONM LR LR 18 04 26.9
comp=Z,2µm,18.4s,MS4.8,baz=152,slow=40
BATI Kupang 30.22 176 P **P** **17 50 09.1 -2.9**
comp=Z,22nm,0.5s,mb5.2,baz=352,slow=2.2,SNR=7.1
BATI LR LR 18 01 51.5
comp=Z,1µm,21.5s,MS4.5,baz=259,slow=36
HABR Khabarovsk 30.34 18⇑ *i*P **P** **17 50 11.9 -0.8**
HABR *e* pP 17 50 24.8 +1.6
HABR *e* 17 51 07.0
HABR *e* 17 53 14.8
HABR *e*S **S** **17 55 06.5 -3.9**
HABR *e* 17 55 26.0
HABR *e* 17 56 57.5
HABR *e* 18 00 46.3
HABR pmax pmax
comp=Z,26nm,0.7s,mb5.1
TAPN Taplejung 31.61 290 *e*P **P** **17 50 24.7 +0.5**
comp=Z,32nm,0.9s,mb5.2
ODAN Odare 31.85 289 *e*P **P** **17 50 26.0 -0.3**
comp=Z,37nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 31.92 28⇑ *i*P **P** **17 50 26.7 +0.1**
comp=Z,34nm,0.8s,mb5.2
YSS Yuzh-Sakhalins 31.92 28⇑ *e*P **P** **17 50 27.0 +0.4**
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,900nm,16.0s,MS4.5
YSS MLR MLR
comp=N,900nm,18.0s,MS4.7
YSS MLR MLR
comp=E,900nm,18.0s,MS4.7
CIT Chita 32.42 351 *e*P **P** **17 50 29.4 -1.6**
UGL Uglegorsk 33.29 25 *e*P **P** **17 50 39.0 +0.4**
UGL pmax pmax
comp=Z,36nm,1.0s,mb5.3
ZAK Zakamensk 33.44 339 *e*P **P** **17 50 39.4 -0.5**
ZAK *e* 17 52 13.2
ZAK *e* 17 53 21.0
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb4.2
KKN Kakani 33.80 290 *e*P **P** **17 50 43.6 +0.2**
comp=Z,36nm,1.0s,mb5.3
KKN Kakani 33.80 290 *e*P **P** **17 50 43.6 +0.2**
KKN pmax pmax
comp=Z,36nm,1.0s,mb5.3
GKN Gorkha 34.39 290 *e*P **P** **17 50 48.3 -0.2**
comp=Z,38nm,1.0s,mb5.3
TLY Talaya 34.43 340⇑ *e*P **P** **17 50 48.1 -0.3**
comp=Z,12nm,0.8s,mb4.9
TLY Talaya 34.43 340 *e*P **P** **17 50 48.9 +0.4**
TLY *e* 17 51 03.6
TLY *e*S **S** **17 56 20.2 +6.2**
TLY pmax pmax
comp=Z,21nm,1.8s,mb4.8
TLY MLR MLR
comp=Z,1µm,16.0s,MS4.7
IRK Irkutsk 34.73 341 *e*P **P** **17 50 50.8 -0.2**
IRK *e* 17 56 24.4
IRK *e* 18 01 10.9
IRK pmax pmax
comp=Z,50nm,1.8s,mb5.1
MOY Mondy 35.31 338 *e*P **P** **17 50 56.5 +0.5**
MOY pmax pmax
comp=Z,44nm,2.2s,mb5.0
NRGR Nerungri 36.56 3 *e*P **P** **17 51 06.8 +0.1**
WMQ Urumqi 36.70 318 ⇑P **P** **17 51 10.0 +1.9**
WMQ PP PP 17 52 36.2 +4.1
WMQ S **S** **17 56 50.5 +1.4**
WMQ XS sS 17 57 11.0 +4.3
WMQ PCS PcS 17 57 13.5 -4.6
WMQ AMB AMB
comp=Z,11nm,0.9s,mb4.7
WMQ AMB AMB
comp=Z,526nm,6.5s
WMQ LR LR
comp=N,1µm,16.3s,MS4.9
WMQ LR LR
comp=E,865nm,16.3s,MS4.9
WMQ LR LR
comp=Z,1µm,17.0s,MS4.8
BOD Bodaibo 38.03 354 *e*P **P** **17 51 18.1 -1.1**
BOD pmax pmax
comp=Z,50nm,4.3s
FITZ Fitzroy Crossi 38.22 174 *e*P **P** **17 51 18.3 -2.8**
comp=Z,8.5nm,0.8s,mb4.5
FITZ Fitzroy Crossi 38.22 174 P **P** **17 51 18.0 -3.1**
comp=Z,4.7nm,0.8s,mb4.3,baz=2.9,slow=12,SNR=14
FITZ LR LR 18 10 02.3
comp=Z,246nm,18.9s,MS4.0,baz=356,slow=41
PMG Port Moresby 38.77 137 *e*P **P** **17 51 23.9 -2.0**
comp=Z,7.8nm,0.6s,mb4.6
PMG Port Moresby 38.77 137 *e*P **P** **17 51 23.9 -2.0**
PMG pmax pmax
comp=Z,8.0nm,0.6s
PMG Port Moresby 38.77 137 P **P** **17 51 24.0 -1.9**
comp=Z,8.2nm,0.6s,mb4.6,baz=319,slow=3.1,SNR=8.7
PMG LR LR 18 07 24.5
comp=Z,536nm,18.6s,MS4.4,baz=315,slow=36
HYB Hyderabad 40.60 274 *e*P **P** **17 51 41.0 -0.1**
HYB *e* pP 17 51 49.0 -2.9
HYB *e* pP 17 51 53.5 +1.6
HYB Hyderabad 40.60 274 *i* P **P** **17 51 41.0 -0.1**
HYB *e*pP pP 17 51 49.0 -2.9
HYB *e*sP sP 17 51 53.5 -2.8
HYB *e*S **S** **17 57 44.0 -4.4**
MBWA Marble Bar 41.07 182 *e*P **P** **17 51 42.5 -2.3**
comp=Z,27nm,0.9s,mb4.9
PALK Pallekele 41.45 258 P **P** **17 51 45.9 -2.2**
comp=Z,16nm,1.2s,mb4.5
MKAR Makanchi Array 41.46 319⇑ *e*P **P** **17 51 48.7 +0.8**
MKAR Makanchi Array 41.46 319 P **P** **17 51 47.1 -0.7**
comp=Z,9.3nm,0.6s,mb4.6,baz=110,slow=9.1,SNR=72
MKAR LR LR 18 11 14.3
comp=Z,850nm,18.3s,MS4.7,baz=209,slow=39
WRA Warramunga Arr 41.78 162 P **P** **17 51 48.6 -2.1**
comp=Z,39nm,0.5s,mb5.3,baz=343,slow=9.0,SNR=426
WRA S **S** **17 58 00.6 -5.2**
comp=Z,7.3nm,0.9s,baz=343,slow=16,SNR=7.8
WB2 Warramunga Arr 41.79 162 *e*P **P** **17 51 47.6 -3.2**
YAK Yakutsk 42.26 6‖ *e*P **P** **17 51 52.0 -2.1**
comp=Z,31nm,0.6s,mb5.1
YAK Yakutsk 42.26 6*c i*P **P** **17 51 53.5 -0.6**
YAK *i* *PP pP 17 51 59.5 -5.4
YAK pmax pmax
comp=Z,28nm,0.7s,mb5.0
YAK pmax pmax
comp=N,29nm,1.6s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK MLR MLR
comp=Z,2µm,19.0s,MS5.0
YAK MLR MLR
comp=N,1µm,20.0s,MS4.9
YAK MLR MLR
comp=E,1µm,22.0s,MS4.9
PET Petropavlovsk 43.57 32 *e*P **P** **17 52 04.7 -0.2**
comp=E,62nm,1.0s,mb5.3
PET Petropavlovsk 43.57 32 *e*P **P** **17 52 05.2 +0.3**
PET *e*S **S** **17 58 30.5 -0.9**
PET pmax pmax
comp=Z,62nm,0.8s,mb5.4
PET pmax pmax
comp=Z,100nm,11.5s
PET MLR MLR
comp=Z,1µm,20.0s,MS4.7
ZALV Zalesovo Beam 43.79 329 P **P** **17 52 05.8 -0.9**
comp=Z,22nm,0.8s,mb4.9,baz=125,slow=8.2,SNR=92
ZALV LR LR 18 11 39.0
comp=Z,816nm,19.7s,MS4.6,baz=127,slow=38
ZAL Zalesovo 43.80 329 P **P** **17 52 05.8 -0.9**
TKM2 Tokmak 2 44.51 311 *e*P **P** **17 52 13.9 +1.3**
comp=Z,19nm,1.1s,mb4.8
TKM2 Tokmak 2 44.51 311 *e*P **P** **17 52 13.9 +1.3**
TKM2 pmax pmax
comp=Z,19nm,1.1s,mb4.8
MA2 Magadan 44.66 21 *e*P **P** **17 52 12.2 -1.3**
comp=Z,25nm,1.3s,mb4.9
MA2 Magadan 44.66 21 *e*P **P** **17 52 13.2 -0.3**
MA2 *e* 17 53 55.4
MA2 *e*S **S** **17 58 43.5 -3.6**
MA2 pmax pmax
comp=N,30nm,1.5s
MA2 pmax pmax
comp=Z,50nm,1.5s,mb5.1
MA2 MLR MLR
comp=Z,3µm,17.0s,MS5.3
NVS Novosibirsk 45.07 330⇑ *i*P **P** **17 52 16.5 -0.3**
NVS *e* 17 53 55.5
NVS *i* S **S** **17 58 50.9 -2.2**
NVS pmax pmax
comp=N,37nm,2.0s
NVS pmax pmax
comp=Z,76nm,2.0s,mb5.2
NVS pmax pmax
comp=E,33nm,1.7s
NVS smax
comp=N,19nm,2.0s
NVS smax
comp=E,42nm,2.0s
UCH Uchtor 45.10 310 *e*P **P** **17 52 19.3 +2.0**
comp=E,37nm,1.3s,mb5.0
FRU Bishkek 45.18 311 *e*P **P** **17 52 21.0 +3.1**
FRU MLR MLR
comp=Z,2µm,16.0s,MS5.2
ASAR Alice Springs 45.20 164 P **P** **17 52 17.1 -1.0**
comp=Z,27nm,0.5s,mb5.3,baz=345,slow=6.8,SNR=847
ASAR S **S** **17 58 53.5 -2.1**
comp=Z,3.6nm,0.8s,baz=354,slow=21,SNR=8.1
AAK Ala-Archa 45.22 311⇑ *e*P **P** **17 52 17.9 -0.4**
comp=Z,9.2nm,1.0s,mb4.6
AAK Ala-Archa 45.22 311 *i* P **P** **17 52 19.0 +0.8**
AAK pmax pmax
comp=Z,9.0nm,1.7s,mb4.3
KURK Kurchatov 45.38 323 P **P** **17 52 20.2 +0.8**
comp=Z,66nm,0.7s,mb5.6,SNR=7.5
KURK Kurchatov 45.38 323 *e*P **P** **17 52 19.7 +0.3**
comp=Z,60nm,1.4s,mb5.2
AML Almayashu 45.67 310 *e*P **P** **17 52 22.7 +0.9**
comp=Z,26nm,1.1s,mb5.1
EKS2 Erkin-Say 45.73 310 *e*P **P** **17 52 23.0 +0.7**
comp=Z,13nm,1.1s,mb4.8
CTA Charters Tower 46.78 147 *e*P **P** **17 52 30.6 -0.2**
comp=Z,7.1nm,0.4s,mb5.0
CTA Charters Tower 46.78 147 *e*P **P** **17 52 30.6 -0.2**
CTA pmax pmax
comp=Z,7.0nm,0.4s
CTA Charters Tower 46.78 147 P **P** **17 52 29.0 -1.7**
comp=Z,14nm,0.7s,mb5.0,baz=326,slow=9.4,SNR=22
CTA PcP PcP 17 54 04.5 +0.8
comp=Z,3.9nm,0.6s,baz=338,slow=4.2,SNR=3.0
CTA LR LR 18 11 04.4
comp=Z,732nm,20.7s,MS4.6,baz=336,slow=35
CTAO Charters Tower 46.78 147 *e*P **P** **17 52 30.0 -0.8**
comp=Z,14nm,0.8s,mb5.0
CTAO *e*PcP PcP 17 54 03.3 -0.3
CTAO Charters Tower 46.78 147 *e*P **P** **17 52 30.0 -0.8**
CTAO *e* 17 54 03.3
CTAO pmax pmax
comp=Z,14nm,0.8s,mb4.9
KBL Kabul 48.19 299⇑ *i*P **P** **17 52 43.0 +1.3**
FORT Forrest 51.01 173 *e*P **P** **17 53 02.8 -0.2**
comp=Z,90nm,0.5s,mb6.0
BRVK Borovoye 51.05 323 P **P** **17 53 04.2 +1.1**
comp=Z,75nm,1.0s,mb5.6,SNR=6.9
BRVK Borovoye 51.05 323⇑ *e*P **P** **17 53 03.0 -0.1**
comp=Z,22nm,0.9s,mb5.1
BRVK Borovoye 51.05 323⇑ *e*P **P** **17 53 03.0 -0.1**
BRVK pmax pmax
comp=Z,22nm,0.9s,mb5.1
KLBR Kellerberrin 51.54 184 *e*P **P** **17 53 05.8 -1.2**
comp=Z,110nm,1.6s,mb5.5
MUN Mundaring 52.05 186 *e*P **P** **17 53 11.6 +0.9**
NWAO Narrogin (SRO) 52.91 184 *e*P **P** **17 53 13.6 -3.5**
comp=Z,27nm,0.8s,mb5.2
NWAO Narrogin (SRO) 52.91 184 *e*P **P** **17 53 13.6 -3.5**
NWAO pmax pmax
comp=Z,27nm,0.8s

NWAO Narrogin (SRO) 52.91 184 P **P** **17 53 14.1 -3.0**
comp=Z,11nm,0.5s,mb5.0,baz=349,slow=7.4,SNR=13
EIDS Eidsvold 53.63 146⇑ *e*P **P** **17 53 20.4 -2.2**
comp=Z,6.3nm,0.6s,mb4.7
STKA Stephens Creek 55.21 159 *e*P **P** **17 53 33.3 -0.6**
comp=Z,7.6nm,0.6s,mb4.9
STKA Stephens Creek 55.21 159 P **P** **17 53 32.6 -1.3**
comp=Z,7.8nm,0.6s,mb4.9,baz=335,slow=6.8,SNR=31
STKA LR LR 18 17 08.6
comp=Z,417nm,20.7s,MS4.5,baz=130,slow=36
BILL Bilibino 55.42 19 *e*P **P** **17 53 34.2 -0.8**
comp=Z,21nm,0.6s,mb5.3
BILL Bilibino 55.42 19*α e*P **P** **17 53 34.6 -0.4**
BILL *e* pP 17 53 44.6 -1.5
BILL *e* 17 55 48.1
BILL *e* 18 01 26.3
BILL *e* 18 06 59.9
BILL pmax pmax
comp=Z,24nm,0.7s,mb5.3
BILL MLR MLR
comp=Z,400nm,18.0s,MS4.5
SVE Sverdlovsk 57.46 325⇑ *e*P **P** **17 53 50.8 +1.1**
SVE *e*S **S** **18 01 42.9 -1.2**
SVE pmax pmax
comp=Z,52nm,1.1s,mb5.5
SVE MLR MLR
comp=Z,1μm,16.0s,MS5.0
ARMA Armidale 58.05 149 *e*P **P** **17 53 54.5 +0.3**
ARU Arti 58.49 325 P **P** **17 53 57.5 +0.5**
comp=Z,107nm,0.6s,mb6.0,SNR=7.8
ARU Arti 58.49 325⇑ *e*P **P** **17 53 56.6 -0.4**
comp=Z,50nm,1.3s,mb5.4
ARU Arti 58.49 325*d i*P **P** **17 53 57.3 +0.3**
ARU *e* 17 56 02.4
ARU *e*S **S** **18 01 56.0 -1.7**
ARU SS SS 18 05 48.5 -1.7
ARU pmax pmax
comp=Z,17nm,1.2s,mb5.0
ARU MLR MLR
comp=Z,2μm,17.0s,MS5.2
ARU MLR MLR
comp=N,394nm,18.0s,MS5.1
ARU MLR MLR
comp=E,991nm,14.0s,MS5.1
DZM Mont Dzumac 60.77 131 P **P** **17 54 12.1 -1.1**
comp=E,4.6nm,0.6s,mb4.8,baz=346,slow=18,SNR=15
CNB Canberra Magne 61.18 154 *e*P **P** **17 54 16.4 +0.8**
comp=E,32nm,1.0s,mb5.4
GAMB Gambell 61.94 28 *e*P **P** **17 54 19.5 -0.9**
GAMB *e* pP 17 54 27.6 -4.0
TNA Tin City 63.86 26⇑ *i*P **P** **17 54 33.4 +0.3**
comp=E,154nm,2.0s,mb5.7
TAU Tasmania Unive 67.11 160⇑ *e*P **P** **17 54 55.2 +0.8**
comp=E,171nm,1.8s,mb5.8
TAU Tasmania Unive 67.11 160⇑ *e*P **P** **17 54 55.2 +0.9**
TAU pmax pmax
comp=Z,171nm,1.8s,mb5.8
ZEI Tsey 67.61 309 *e*P **P** **17 54 59.0 +1.3**
ZEI *i* pP 17 55 11.6 +2.6
ZEI pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
ONI Oni 67.96 309 P **P** **17 55 02.5 +2.5**
KIV Kislovodsk 68.33 310 *e*P **P** **17 55 02.4 +0.1**
comp=Z,43nm,1.0s,mb5.4
KIV Kislovodsk 68.33 310⇑ *e*P **P** **17 55 04.1 +1.8**
KIV *e* 17 57 31.8
KIV *e*S S 18 04 02.6 +1.8
KIV *e*SS SS 18 08 25.1 +0.9
KIV pmax pmax
comp=Z,42nm,1.7s,mb5.2
KIV MLR MLR
comp=Z,600nm,18.0s,MS4.9
TTA Tatalina 68.91 29 *e*P **P** **17 55 06.1 +0.6**
comp=Z,26nm,0.5s,mb5.4
TTA *e* 17 55 12.3
TTA Tatalina 68.91 29 *e*P **P** **17 55 06.1 +0.6**
TTA *e* 17 55 12.3
TTA pmax pmax
comp=Z,26nm,0.5s,mb5.4
TMCR Tamitsa 69.21 332 *e*P **P** **17 55 08.2 +0.9**
TMCR pmax pmax
comp=Z,31nm,1.3s,mb5.1
SVW2 Sparrevohn 69.23 31 *e*P **P** **17 55 07.6 +0.1**
MOS Moscow 70.15 323 *e*P **P** **17 55 10.0 -3.3**
MOS *e* 17 55 28.8
MOS pmax pmax
comp=Z,55nm,1.4s,mb5.3
SOC Sochi 70.52 310 *e*P **P** **17 55 18.3 +2.5**
SOC *e**PP pP 17 55 28.9 +1.8
SOC *e* 17 57 51.6
SOC *e*S S 18 04 23.1 -3.4
SOC *e**SS sS 18 04 46.2 +0.9
SOC *e*SS SS 18 09 00.5 +2.6
SOC pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
SOC MLR MLR
comp=Z,840nm,17.0s,MS5.1
OBN Obninsk 70.83 323⇑ *e*P **P** **17 55 18.1 +0.7**
OBN *e* pP 17 55 30.7 +1.9
OBN *e*S S 18 04 22.6 -7.1
OBN SS SS 18 09 10.0 +7.9
OBN *e*SSS 18 12 09.9
OBN pmax pmax
comp=Z,12nm,1.2s,mb4.7
OBN MLR MLR
comp=Z,400nm,14.0s,MS4.8
APA Apatity 70.83 336⇑ *i*P **P** **17 55 17.7 +0.5**
SLKM Skilak Lake 71.91 31 *e*P **P** **17 55 23.8 0.0**
ANN Anapa 71.92 312 *e*P **P** **17 55 28.4 +4.1**
ANN *e**PP pP 17 55 42.9 +7.3
ANN pmax pmax
comp=Z,29nm,1.3s,mb5.0
MCK McKinley 72.00 28⇑ *i*P **P** **17 55 23.5 -0.8**
comp=Z,41nm,1.1s,mb5.3
MCK McKinley 72.00 28⇑ *i*P **P** **17 55 23.5 -0.9**
MCK pmax pmax
comp=Z,41nm,1.1s,mb5.3
COLA College 72.29 27 *e*P **P** **17 55 26.3 +0.2**
comp=Z,6.8nm,0.7s,mb4.7
COLA College 72.29 27 *i*P **P** **17 55 27.7 +1.6**
JOF Joensuu 72.34 331 *e*p **P** **17 55 26.0 -0.4**
comp=Z,14nm,0.8s,mb4.9
MALT Malatya 72.46 305⇑ P **P** **17 55 31.2 +3.6**
MALT Malatya 72.46 305⇑ *i*P **P** **17 55 31.2 +3.6**
KEV Kevo 72.81 339 *e*p **P** **17 55 28.8 -0.3**
ARCES ARCESS Array B 73.37 339 P **P** **17 55 31.7 -0.7**
comp=Z,5.3nm,0.6s,mb4.7,baz=71,slow=8.4,SNR=37
ARCES LR LR 18 34 35.8
comp=Z,683nm,18.9s,MS5.0,baz=69,slow=41
ARE0 ARCESS Array S 73.37 339 *e*P **P** **17 55 32.4 0.0**
KTK1 Kautokeino 74.28 338⇓ *i*P **P** **17 55 39.5 +1.7**
KAF Kangasniemi 74.78 331 *e*p **P** **17 55 40.1 -0.6**
comp=Z,12nm,0.8s,mb4.9,baz=74,slow=5.5
KAF Kangasniemi 74.78 331 *e*P **P** **17 55 40.1 -0.6**
KAF pmax pmax
comp=Z,12nm,0.8s,mb4.9
FINES FINESS Array B 75.05 330 *i*P **P** **17 55 42.7 +0.4**
FINES pmax pmax
comp=Z,9.0nm,0.8s
FINES FINESS Array B 75.05 330 P **P** **17 55 41.7 -0.6**
comp=Z,9.4nm,0.8s,mb4.8,baz=53,slow=6.6,SNR=61
FINES LR LR 18 32 31.5
comp=Z,623nm,20.6s,MS4.9,baz=254,slow=39
EGAK Eagle 75.10 26 *e*P **P** **17 55 42.6 +0.1**
comp=Z,12nm,0.6s,mb5.0
VSU Vasula 75.48 327 *e*P **P** **17 55 45.5 +0.6**
TRO Tromso 75.57 339 *e*P **P** **17 55 44.8 -0.3**
comp=Z,33nm,1.7s,mb5.0
TRO Tromso 75.57 339 *e*P **P** **17 55 44.8 -0.3**
TRO AMb AMB 17 55 48.3
comp=Z,33nm,1.7s,mb5.0
BRTR Keskin Array B 75.77 307 P **P** **17 55 46.1 -0.8**
comp=Z,0.7nm,0.4s,mb3.9,baz=132,slow=3.6,SNR=8.9
DAWY Dawson 76.04 27 *e*P **P** **17 55 47.7 -0.2**
AKASG Malin Array Be 76.05 319 *i*P **P** **17 55 47.2 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 76.05 319 P **P** **17 55 47.2 -1.0**
comp=Z,3.8nm,0.8s,mb4.4,baz=63,slow=5.2,SNR=20
AKASG LR LR 18 31 47.1
comp=Z,624nm,19.5s,MS4.9,baz=75,slow=38
KIEV Kiev 76.06 319 *e*P **P** **17 55 45.8 -2.5**
comp=Z,10.0nm,0.8s,mb4.8
KIEV Kiev 76.06 319 *e*P **P** **17 55 45.8 -2.5**
KIEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
ANTO Ankara 76.36 308 *e*P **P** **17 55 51.2 +1.0**
comp=Z,16nm,1.1s,mb4.9
ANTO Ankara 76.36 308 *e*P **P** **17 55 51.3 +1.0**
ANTO pmax pmax
comp=Z,16nm,1.1s,mb4.9
CSS Prodhromos 77.24 303 P **P** **17 55 54.6 -0.7**
comp=Z,14nm,0.6s,mb5.1
LOF Lofoten 77.93 339 *e*P **P** **17 56 04.2 +5.7**
MOR8 Moi Rana 78.40 337 *e*P **P** **17 56 00.6 -0.5**
comp=Z,50nm,1.6s,mb5.2
MOR8 Moi Rana 78.40 337 *e*P **P** **17 55 59.9 -1.2**
MOR8 AMb AMB 17 56 02.1
comp=Z,50nm,1.6s,mb5.2
ISP Isparta 78.63 306 *i* P **P** **17 56 03.6 +0.6**
SUW Suwalki 78.66 323 *e*pP **P** **17 56 03.0 +0.2**
VRI Vrincioaia 78.99 315⇓ P **P** **17 56 07.3 +2.5**
VRI Vrincioaia 78.99 315⇓ *i*P **P** **17 56 07.3 +2.5**
BURAR Bucovina Array 79.44 317⇑ P **P** **17 56 07.8 +0.6**
BURAR Bucovina Array 79.44 317⇑ *i*P **P** **17 56 07.8 +0.6**
MLR Muntele Rosu 79.63 315⇓ P **P** **17 56 09.3 +1.0**
MLR Muntele Rosu 79.63 315 P **P** **17 56 06.3 -2.0**
comp=Z,3.7nm,0.5s,mb4.6,baz=356,slow=8.5,SNR=7.6
MLR Muntele Rosu 79.63 315⇓ *i*P **P** **17 56 09.3 +1.0**
KWP Kalwaria 80.37 319 *e*pP **P** **17 56 13.2 +1.0**
KWP Kalwaria 80.37 319 *e*P **P** **17 56 12.2 0.0**
comp=Z,36nm,1.0s,mb5.2
KWP Kalwaria 80.37 319 *e*P **P** **17 56 12.2 0.0**
KWP pmax pmax
comp=Z,35nm,1.0s,mb5.2
KWP Kalwaria 80.37 319⇑ *i*P **P** **17 56 13.1 +0.9**
KOLS Kolonicke sedl 80.87 319 *e*P **P** **17 56 16.0 +1.1**
KOLS *e*pP pP 17 56 24.6 -1.8
HFS Hagfors 81.20 331 P **P** **17 56 14.6 -1.8**
comp=Z,6.0nm,0.6s,mb4.7,baz=103,slow=4.7,SNR=26
STHS Stebnicka Huta 81.34 319 *e*P **P** **17 56 19.8 +2.4**
comp=Z,5.9nm,1.0s,mb4.5
STHS Stebnicka Huta 81.34 319 *e*P **P** **17 56 19.8 +2.4**
STHS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
CRVS Cervenica-Dubn 81.38 319 *e*P **P** **17 56 17.8 +0.2**
NB2 NORSAR Subarra 81.90 333 P **P** **17 56 19.3 -0.8**
comp=Z,9.7nm,0.8s,mb4.8,baz=61,slow=5.3
NOA NORSAR Array B 81.90 333 P **P** **17 56 17.7 -2.4**
comp=Z,9.2nm,0.9s,mb4.7,baz=63,slow=5.2,SNR=14
NOA LR LR 18 37 01.4
comp=Z,1μm,18.6s,MS5.3,baz=45,slow=39
OJC Ojcow 81.92 321 *e*P **P** **17 56 21.2 +0.8**
KECS Kecovo 82.14 319 *e*P **P** **17 56 19.6 -2.0**
comp=Z,4.2nm,1.3s,mb4.2
KECS Kecovo 82.14 319 *e*P **P** **17 56 19.6 -2.0**
KECS pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
KECS Kecovo 82.14 319 *e*P **P** **17 56 19.5 -2.1**
VTS Vitosha 82.44 312⇓ P **P** **17 56 26.2 +2.9**
VTS Vitosha 82.44 312⇓ *i*P **P** **17 56 26.3 +3.0**
PSZ Piszkesteto 82.71 318⇓ *e*P **P** **17 56 25.7 +1.1**
OKC Ostrava-Krasne 83.05 321 *e*P **P** **17 56 25.8 -0.5**
OKC *e*pP pP 17 56 34.5 -3.4
VYHS Vyhne 83.15 319 *i*P **P** **17 56 27.2 +0.3**
comp=Z,16nm,1.8s,mb4.8
VYHS Vyhne 83.15 319 *i* P **P** **17 56 27.2 +0.3**
VYHS pmax pmax
comp=Z,17nm,1.8s,mb4.8
KOLL Kolacno 83.39 319 *e*P **P** **17 56 28.3 +0.2**
MORC Moravsky Berou 83.43 321⇓ P **P** **17 56 29.3 +1.0**
MORC Moravsky Berou 83.43 321⇓ *i*P **P** **17 56 29.3 +1.0**
KSP Ksiaz 83.74 322 *e*pP **P** **17 56 30.1 +0.3**
KSP Ksiaz 83.74 322 *e*P **P** **17 56 30.0 +0.2**
KSP *e**PP pP 17 56 38.7 -2.7
DPC Dobruska-Polom 83.92 322 *e*P **P** **17 56 31.1 +0.3**
DPC *ex* x 17 56 44.0
UPC Upice 84.04 322 *e*P **P** **17 56 31.6 +0.2**
UPC *e*pP pP 17 56 44.9 +1.9
MODS Modra-Piesok 84.15 319 *e*P **P** **17 56 33.4 +1.4**
MODS *e*pP pP 17 56 43.9 +0.3
PKSM Moragy 84.16 317⇓ P **P** **17 56 34.0 +2.0**
PKSM Moragy 84.16 317⇓ *i*P **P** **17 56 34.0 +1.9**
VRAC Vranov 84.19 321 P **P** **17 56 29.4 -2.8**
VRAC ⇑P 17 56 33.5
VRAC Vranov 84.19 321 P **P** **17 56 29.4 -2.8**
comp=Z,19nm,1.0s,mb5.2,baz=57,slow=5.8,SNR=11
VRAC Vranov 84.19 321⇑ *i*P **P** **17 56 33.5 +1.3**
ZST Bratislava 84.33 319 *e*P **P** **17 56 32.0 -0.9**
comp=Z,4.2nm,0.6s,mb4.8
ZST LR LR
comp=Z,600nm,16.7s,MS5.0
ZST Bratislava 84.33 319 *e*P **P** **17 56 32.0 -0.9**
ZST pmax pmax
comp=Z,4.0nm,0.6s,mb4.7
ZST MLR MLR
comp=Z,600nm,16.7s,MS5.0
TREC Trest 84.85 321 *e*P **P** **17 56 36.0 +0.5**
TREC *e*pP pP 17 56 47.8 +0.7
PVCC Panska Ves 84.87 322 *e*P **P** **17 56 36.2 +0.6**
PVCC *e*pP pP 17 56 44.5 -2.7
KMBO Kilima Mbogo 84.91 267 *e*P **P** **17 56 34.7 -1.8**
comp=Z,37nm,1.6s,mb5.3
KMBO P 17 56 35.0
KMBO LR LR 18 33 23.2
KMBO Kilima Mbogo 84.91 267 *e*P **P** **17 56 34.7 -1.8**
KMBO pmax pmax
comp=Z,37nm,1.6s
KMBO Kilima Mbogo 84.91 267 P **P** **17 56 35.0 -1.4**
comp=Z,3.1nm,0.9s,mb4.4,baz=40,slow=16,SNR=3.5
KMBO LR LR 18 33 23.2
comp=Z,391nm,19.6s,MS4.8,baz=97,slow=35
BRG Berggiesshubel 85.08 323 *i* P **P** **17 56 37.1 +0.5**
BRG *e* pP 17 56 45.4 -2.8
BRG *e* pP 17 56 50.4 +2.2
BRG pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
BRG Berggiesshubel 85.08 323 *i* P **P** **17 56 37.1 +0.5**
comp=Z,14nm,1.2s,mb5.0
BRG *e* pP 17 56 45.4 -2.8
comp=Z,12nm,1.2s
BRG *e* pP 17 56 50.4 +2.2
comp=Z,31nm,1.5s
PRU Pruhonice 85.11 322 *e*P **P** **17 56 36.8 0.0**
PRU *e* pP 17 56 48.5 +0.1
PRU Pruhonice 85.11 322 *e*P **P** **17 56 36.8 0.0**
PRU *e*pP pP 17 56 48.5 +0.1
CLL Collm 85.41 323 *i* P **P** **17 56 38.3 0.0**
comp=Z,66nm,2.2s,mb5.4
CLL *i* pP pP 17 56 51.8 +1.9
CLL *i* sP sP 17 56 57.2 +3.0
CLL Collm 85.41 323 *i* P **P** **17 56 38.3 0.0**
CLL *i* *PP pP 17 56 51.8 +1.9
CLL pmax pmax
comp=Z,66nm,2.2s,mb5.4
CLL Collm 85.41 323 *i* P **P** **17 56 38.3 0.0**
comp=Z,66nm,2.2s,mb5.4
CLL *i* sPcP pP 17 56 51.8 +1.9
comp=Z,23nm,1.4s
CLL *i* x x 17 56 57.2
CLL *e*pPP 18 00 06.0
KHC Kasperske Hory 86.05 321 *e*P **P** **17 56 41.8 +0.3**
KHC *e* pP 17 56 52.6 -0.5
KHC Kasperske Hory 86.05 321 *e*P **P** **17 56 41.8 +0.3**
KHC *e*pP pP 17 56 52.6 -0.5
GERES GERESS Array B 86.11 321 P **P** **17 56 40.3 -1.5**
comp=Z,0.2nm,0.3s,mb3.8,baz=308,slow=28,SNR=10
GERES LR LR 18 41 00.9
comp=Z,390nm,18.4s,MS4.8,baz=169,slow=40
NKC Novy Kostel 86.21 323 *e*P **P** **17 56 41.3 -1.0**
MOX Moxa 86.50 323 *e*(P) pP 17 56 58.6 +3.3
comp=Z,22nm,1.6s
YKA Yellowknife Ar 86.61 23 P **P** **17 56 42.8 -1.2**
YKA PKKPbc PKKPbc 18 14 35.9 -5.0
YKA LR LR 18 44 01.4
YKA Yellowknife Ar 86.61 23 P **P** **17 56 42.7 -1.2**
comp=Z,9.0nm,0.5s,mb5.2,baz=307,slow=4.6,SNR=198
YKA PKKPbc PKKPbc 18 14 35.9 -5.0
comp=Z,0.3nm,0.5s,baz=134,slow=2.7,SNR=6.3
YKA LR LR 18 44 01.5
comp=Z,207nm,18.8s,MS4.6,baz=225,slow=42
CDF Champ du Feu 90.06 323 *e*P **P** **17 57 00.3 -0.4**
comp=Z,38nm,1.4s,mb5.2
CDF Champ du Feu 90.06 323 *e*P **P** **17 57 00.3 -0.4**
comp=Z,19nm,1.4s,mb5.2
CDF Champ du Feu 90.06 323 *e*P **P** **17 57 00.3 -0.4**
CDF pmax pmax
comp=Z,19nm,1.4s,mb5.2
GIVF Givet 90.53 325 *e*P **P** **17 57 02.1 -0.7**
HINF Hinteralfeld 90.61 322 *e*P **P** **17 57 03.2 0.0**
HAU Haudompre 90.80 323 *e*P **P** **17 57 03.6 -0.5**
MEZF Maizieres J'vi 91.27 323 *e*P **P** **17 57 06.2 -0.1**
comp=Z,11nm,0.7s,mb5.0
MEZF Maizieres J'vi 91.27 323 *e*P **P** **17 57 06.2 -0.1**
comp=Z,11nm,0.7s,mb5.3
CABF La Chapelle 91.68 321 *e*P **P** **17 57 07.8 -0.5**
LPG La Plagne 91.87 320 *e*P **P** **17 57 08.3 -0.9**
comp=Z,18nm,1.0s,mb5.0
LPG La Plagne 91.87 320 *e*P **P** **17 57 08.3 -0.9**
comp=Z,8.8nm,1.0s,mb5.0
LPG La Plagne 91.87 320 *e*P **P** **17 57 08.3 -0.9**
LPG pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LPL La Plagne 91.87 320 *e*P **P** **17 57 08.5 -0.7**
comp=Z,12nm,1.0s,mb4.9
LPL La Plagne 91.87 320 *e*P **P** **17 57 08.5 -0.7**
comp=Z,5.9nm,1.0s,mb4.9
LPL La Plagne 91.87 320 *e*P **P** **17 57 08.5 -0.7**
LPL pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
MBDF Montbardon 92.26 320 *e*P **P** **17 57 09.8 -1.2**
comp=Z,18nm,1.1s,mb5.0
MBDF Montbardon 92.26 320 *e*P **P** **17 57 09.8 -1.2**
comp=Z,9.1nm,1.1s,mb5.0
MBDF Montbardon 92.26 320 *e*P **P** **17 57 09.8 -1.2**
MBDF pmax pmax
comp=Z,9.0nm,1.1s,mb5.0
LOR Lormes 92.61 323 *e*P **P** **17 57 11.7 -0.8**
ORIF Oris-en-Rattie 92.70 320 *e*P **P** **17 57 11.9 -1.1**
SSF Saint Saulge 92.93 323 *e*P **P** **17 57 12.6 -1.4**
comp=Z,15nm,1.0s,mb5.0
SSF Saint Saulge 92.93 323 *e*P **P** **17 57 12.6 -1.4**
comp=Z,7.3nm,1.0s,mb5.1
SSF Saint Saulge 92.93 323 *e*P **P** **17 57 12.6 -1.4**
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
FRF La Foret Royal 92.94 319 *e*P **P** **17 57 13.3 -0.8**
comp=Z,202nm,1.8s,mb6.0
FRF La Foret Royal 92.94 319 *e*P **P** **17 57 13.3 -0.8**
comp=Z,101nm,1.8s,mb6.0
SMF Signal de Mont 92.97 322 *e*P **P** **17 57 13.2 -1.0**
EDM Edmonton 93.02 29 *e*P **P** **17 57 15.2 +0.9**
LMR La Mourre 93.15 318 *e*P **P** **17 57 14.1 -1.0**
AVF Avril sur Loir 93.17 323 *e*P **P** **17 57 14.3 -0.8**
SMRF Simiane la Rot 93.39 319 *e*P **P** **17 57 15.6 -0.6**
VIVF Saint-Julien-l 93.46 320 *e*P **P** **17 57 15.5 -1.0**
TCF Toulx Ste Croi 94.10 323 *e*P **P** **17 57 18.6 -0.8**
PPT Papeete 94.99 107 *e*PS PS 18 09 51.9 -5.7
comp=Z,300nm,26.2s
PPT Papeete 94.99 107 *e*SS SS 18 15 10.3 +7.8
comp=Z,222nm,28.2s
PPT *e*LR LR 18 28 13.9
comp=Z,747nm,25.5s,baz=293
NSHM Saint Helena R 96.35 45 P **P** **17 57 31.3 +1.4**
NVAR Mina Array Bea 99.23 43 P **P** **17 57 42.7 -0.1**
comp=Z,1.4nm,0.7s,mb4.6,baz=293,slow=3.8,SNR=12
RKT Rikitea 109.70 108 *e*LR LR 18 34 53.4
comp=Z,426nm,27.2s,baz=292
TORD Torodi Ar. Bea 112.12 294 PP PP 18 03 25.8 +4.5
comp=Z,2.2nm,1.0s,baz=51,slow=3.2,SNR=6.9
TORD PKKPbc PKKPbc 18 13 37.6 +10
comp=Z,1.4nm,0.7s,baz=264,slow=4.0,SNR=7.2
TXAR Lajitas Array 114.37 43 PKP PKiKP 18 02 39.9 -1.2
comp=Z,0.7nm,0.6s,baz=238,slow=1.0,SNR=7.3
DBIC Dimbokro 120.85 291 PKP PKPdf 18 02 53.8 -0.2
comp=Z,1.6nm,0.6s,baz=241,slow=12,SNR=5.4
EFI East Falkland 148.51 181 *e*PKPbc PKPbc 18 03 47.1 -0.2
SDV Santo Domingo 148.82 23 *e*PKPdf PKPdf 18 03 44.6 -0.8
SDV *e*PKPbc PKPbc 18 03 49.6 +0.4
ROSC El Rosal 150.74 34 PKPbc PKPbc 18 03 55.2 +1.2
comp=Z,12nm,0.3s,baz=288,slow=20,SNR=7.9
LPAZ La Paz 170.15 69 PKP PKPdf 18 04 10.6 +1.2
LPAZ La Paz 170.15 69 PKP PKPdf 18 04 10.6 +1.2
comp=Z,0.9nm,0.6s,baz=0.3,slow=3.0,SNR=7.3

MAN 09 17:48:29,2003N×12095E,h86km,mb4.4,ML3.3,MS3.1, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
APYP	**Conner**	**2.17**	**173**	*e*P		Pn	17 49 04.4	+1.0
APYP				*e*S		Sn	17 49 31.2	+1.5
ABRA	**Dolores**	**2.38**	**185**	*e*P		Pn	17 49 07.6	+1.4
ABRA				*e*S		Sn	17 49 38.3	+3.7
BALP	**Baler**	**4.31**	**172**	*e*P		Pn	17 49 35.0	+2.8

*BJI **09** 17:49:33.3,256N×12678E,h42km,mB5.3,mb4.9,Ms5.0, Msz4.7*
*IDC **09** 17:49:34.2±0.6,3.19N×126.41E,h0km,mb4.4/17, mb1 4.5/17,mb1mx4.4/21,mbtmp4.4/17,MS4.4/3, Ms1 4.4/3,ms1mx3.7/31,Error ellipse: s-maj=33.5km s-min=11.1km az=77.0*
*MOS **09** 17:49:37.1±1.1,3.16N×12652E,h33km,mb4.9/18,Error ellipse: s-maj=17.8km s-min=7.7km az=109.2*
*NEIC **09** 17:49:39.9±1.4,3.19N×12662E,h42km±13km,mb4.7/25, Error ellipse: s-maj=10.9km s-min=6.0km az=76.0*
*ISCJB **09** 17:49:40.8±0.7,321N±004×12658E±007,h66km±6km, mb4.5/49,Error ellipse: s-maj=12.1km s-min=6.0km az=157.6*

ISC 09 17:49:42.1±0.7,319N±004×12656E±007,h61km±6km, n104,σ1°08/106,mb4.6/49,6C-1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	ISC	Time h m s	Res ISC
TNE	**Ternate**	**2.52**	**161**⇓	*e*P		Pn	17 50 21.0	+0.3
GSPH	**General Santos**	**3.30**	**331**⇑	*e*P		Pn	17 50 30.5	-0.8
GSPH				*e*S		Sn	17 51 08.8	-0.5
MATI	**Mati**	**3.74**	**355**	*e*P		Pn	17 50 35.4	-2.0
DAV	**Davao City (W)**	**3.98**	**346**	*e*Pn		Pn	17 50 38.2	-2.4
KCP	**Kidapawan**	**4.07**	**339**⇑	*e*P		Pn	17 50 44.3	+2.4
KCP				*i* S		Sn	17 51 35.3	+7.0
BUKP	**Musuan**	**4.89**	**342**	*e*P		Pn	17 50 53.4	+0.3
CGP	**Cagayan de Oro**	**5.55**	**341**⇑	*i*P		Pn	17 50 59.1	-3.1
PAGZ	**Pagadian**	**5.61**	**326**	*e*P		Pn	17 51 04.4	+1.4
SCPH	**Surigao**	**6.64**	**351**	*e*P		Pn	17 51 18.9	+1.8
BAKI	**Biak**	**10.49**	**114**	P		Pn	17 52 12.4	+2.6
264nm,1.2s								
KKM	**Kota Kinabalu**	**10.70**	**286**	*e*Pn		Pn	17 52 17.6	+4.9
BATI	**Kupang**	**13.62**	**192**	Pn		Pn	17 52 58.5	+6.0
0.5nm,0.3s,baz=330,slow=4.6,SNR=3.9								
KSM	**Kuching**	**16.33**	**264**	P		Pn	17 53 21.9	-5.7
FITZ	**Fitzroy Crossi**	**21.18**	**182**	*e*P		P	17 54 23.8	+1.3
14nm,0.6s,mb4.5								
FITZ	**Fitzroy Crossi**	**21.18**	**182**	P		P	17 54 22.3	-0.2
12nm,0.9s,mb4.2,baz=343,slow=19,SNR=5.0								
YHNB	**Yeheng**	**21.93**	**347**	*e*P		P	17 54 25.7	-4.9
JOW	**Kunigami**	**23.57**	**4**	LR		LR	18 03 06.5	
comp=Z,970nm,18.8s,baz=91,slow=34								
PMG	**Port Moresby**	**24.04**	**122**	P		P	17 54 48.9	-2.8
9.5nm,0.9s,mb4.2								
PMG	**Port Moresby**	**24.04**	**122**	P		P	17 54 48.9	-2.8
PMG				pmax	pmax			
comp=Z,9.0nm,0.9s								
WRA	**Warramunga Arr**	**24.22**	**162**	P		P	17 54 52.6	-0.7
comp=Z,16nm,0.7s,mb4.5,baz=340,slow=10,SNR=8.3								
WB2	**Warramunga Arr**	**24.23**	**162**	*e*P		P	17 54 52.6	-0.7
MBWA	**Marble Bar**	**25.11**	**195**	P		P	17 55 01.3	0.0
comp=Z,41nm,1.1s,mb4.9								
KULM	**Kulim**	**25.92**	**276**	P		P	17 55 09.9	+1.0
ASAR	**Alice Springs**	**27.64**	**165**	P		P	17 55 23.6	-0.5
comp=Z,2.0nm,0.7s,mb3.8,baz=345,slow=6.7,SNR=4.4								
ASAR				S		S	18 00 09.2	+7.5
comp=Z,2.9nm,1.0s,baz=346,slow=20,SNR=4.8								
NJ2	**Nanjing**	**29.61**	**347**	*e*P		P	17 55 42.2	+0.6
NJ2				AMB		AMB		
comp=Z,20nm,0.7s,mb5.0								
JNU	**Nakatsue**	**30.05**	**7**	P		P	17 55 44.0	-1.4
comp=Z,8.6nm,0.9s,mb4.5,baz=177,slow=8.7,SNR=4.0								
KSRS	**Korea Array**	**34.12**	**2**	P		P	17 56 21.6	+0.5
comp=Z,5.8nm,0.9s,mb4.5,baz=184,slow=9.8,SNR=8.5								
MAJO	**Matsushiro**	**34.88**	**17**	P		P	17 56 27.4	-0.3
comp=Z,17nm,1.3s,mb4.8								
MAJO	**Matsushiro**	**34.88**	**17**	P		P	17 56 27.4	-0.3
MAJO				pmax	pmax			
comp=Z,17nm,1.3s,mb4.8								
MJAR	**Matsushiro Arr**	**34.88**	**17**	P		P	17 56 28.5	+0.8
MJAR	**Matsushiro Arr**	**34.88**	**17**	P		P	17 56 28.5	+0.8
comp=Z,1.0nm,0.7s,mb3.9,baz=211,slow=4.4,SNR=5.3								
STKA	**Stephens Creek**	**37.69**	**159**	*e*P		P	17 56 51.6	-0.1
comp=Z,10nm,0.9s,mb4.5								
STKA	**Stephens Creek**	**37.69**	**159**	P		P	17 56 51.6	-0.1

	comp=Z,15nm,0.9s,mb4.7,baz=342,slow=11,SNR=10						
BJT	**Baijiatuau**	**37.85**	**347**	P	**P**	**17 56 53.3**	**+0.4**
	comp=Z,15nm,0.8s,mb4.8						
BJT	**Baijiatuau**	**37.85**	**347**	P	**P**	**17 56 53.3**	**+0.4**
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
BJI	**Beijing**	**37.87**	**347**	P	**P**	**17 56 52.7**	**-0.4**
BJI				AMB	AMB		
	comp=Z,19nm,1.6s,mb4.6						
SHL	**Shillong**	**40.06**	**307**	*e*P	**P**	**17 57 13.0**	**+1.3**
MDJ	**Mudanjiang**	**41.34**	**3**	P	**P**	**17 57 22.6**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,11nm,1.3s,mb4.3						
MDJ	**Mudanjiang**	**41.34**	**3**	*e*P	**P**	**17 57 22.3**	**+0.4**
	comp=Z,13nm,0.9s,mb4.5						
LSA	**Lhasa**	**42.67**	**312**	*e*P	**P**	**17 57 33.7**	**+0.7**
	comp=Z,6.4nm,0.9s,mb4.3						
LSA	**Lhasa**	**42.67**	**312**	*e*P	**P**	**17 57 33.7**	**+0.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
ASAJ	**Asahikawa**	**43.15**	**17**	P	**P**	**17 57 36.8**	**+0.2**
	comp=Z,7.9nm,0.8s,mb4.5,baz=262,slow=28,SNR=5.6						
GTA	**Gaotai**	**43.47**	**330**	*e*P	**P**	**17 57 39.4**	**+0.1**
GTA				AMB	AMB		
	comp=Z,5.0nm,1.3s,mb4.1						
TAPN	**Taplejung**	**44.20**	**307**	*e*P	**P**	**17 57 46.4**	**+1.0**
	comp=Z,9.5nm,0.9s,mb4.5						
ODAN	**Odare**	**44.25**	**306**	*e*P	**P**	**17 57 45.4**	**-0.3**
	comp=Z,10nm,0.8s,mb4.6						
JIRN	**Jiri**	**45.55**	**306**	*e*P	**P**	**17 57 55.4**	**-0.7**
	comp=Z,28nm,1.2s,mb5.1						
HABR	**Khabarovsk**	**45.70**	**8**	*e*P	**P**	**17 57 57.6**	**+0.7**
HABR				*e*		17 59 33.3	
HABR				*e*		17 59 43.8	
HABR				S	**S**	**18 04 38.8**	**+3.3**
HABR				*e*		18 04 52.8	
HABR				*e*		18 07 50.2	
HABR				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
YSS	**Yuzh-Sakhalins**	**45.80**	**15**	P	**P**	**17 57 58.5**	**+0.7**
	comp=Z,20nm,1.3s,mb4.9						
YSS	**Yuzh-Sakhalins**	**45.80**	**15**	P	**P**	**17 57 58.5**	**+0.8**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
KLR	**Kul'dur**	**46.08**	**5**	*e*P	**P**	**17 57 55.4**	**-4.5**
HIA	**Hailar**	**46.28**	**354**	*e*P	**P**	**17 58 03.2**	**+1.8**
	comp=Z,8.9nm,0.9s,mb4.7						
HIA				*e*	pP	17 58 17.1	0.0
HIA	**Hailar**	**46.28**	**354**	*e*P	**P**	**17 58 03.2**	**+1.8**
HIA				*e*	pP	17 58 17.1	-0.1
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GKN	**Gorkha**	**46.95**	**306**	*e*P	**P**	**17 58 04.0**	**-3.0**
	comp=Z,7.2nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**47.58**	**342**	*e*P	**P**	**17 58 11.5**	**-0.1**
	comp=Z,6.6nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	**47.58**	**342**	*i* P	**P**	**17 58 11.4**	**-0.2**
SONM	**Songino Array**	**47.75**	**342**	P	**P**	**17 58 13.2**	**+0.2**
SONM				LR	LR	18 18 25.8	
SONM	**Songino Array**	**47.75**	**342**	P	**P**	**17 58 13.2**	**+0.2**
	comp=Z,4.6nm,1.0s,mb4.5,baz=154,slow=8.3,SNR=15						
SONM				LR	LR	18 18 25.8	
	comp=Z,400nm,21.7s,baz=166,slow=36						
HYB	**Hyderabad**	**49.14**	**290**	*e*P	**P**	**17 58 25.0**	**+0.8**
HYB	**Hyderabad**	**49.14**	**290**	*i* P	**P**	**17 58 25.0**	**+0.8**
ZAK	**Zakamensk**	**50.98**	**341**	*e*P	**P**	**17 58 36.9**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
TLY	**Talaya**	**51.99**	**342**	*e*P	**P**	**17 58 44.8**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.3						
TLY	**Talaya**	**51.99**	**342**	*e*P	**P**	**17 58 46.0**	**+1.0**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BOD	**Bodaibo**	**55.37**	**352**	*e*P	**P**	**17 59 09.6**	**0.0**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.5						
MKAR	**Makanchi Array**	**57.90**	**326**	P	**P**	**17 59 27.7**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.5,baz=116,slow=7.2,SNR=19						
YAK	**Yakutsk**	**58.75**	**2**	*e*P	**P**	**17 59 32.7**	**-0.8**
	comp=Z,34nm,0.9s,mb5.4						
YAK	**Yakutsk**	**58.75**	**2**	*e*P	**P**	**17 59 33.3**	**-0.1**
YAK				pmax	pmax		
	comp=Z,43nm,0.8s,mb5.5						
MA2	**Magadan**	**59.27**	**14**	P	**P**	**17 59 40.4**	**+3.4**
TKM2	**Tokmak 2**	**60.04**	**319**	*e*P	**P**	**17 59 42.1**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.3						
TKM2	**Tokmak 2**	**60.04**	**319**	*e*P	**P**	**17 59 42.1**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
UCH	**Uchtor**	**60.46**	**318**	P	**P**	**17 59 46.6**	**+1.1**
	comp=Z,6.3nm,0.9s,mb4.7						
ZALV	**Zalesovo Beam**	**60.99**	**333**	P	**P**	**17 59 47.7**	**-1.3**
	comp=Z,4.3nm,0.8s,mb4.6,baz=114,slow=6.6,SNR=11						
ZAL	**Zalesovo**	**60.99**	**333**	P	**P**	**17 59 47.7**	**-1.3**
EKS2	**Erkin-Say**	**61.13**	**318**	P	**P**	**17 59 51.1**	**+0.9**
KURK	**Kurchatov**	**62.10**	**328**⇑	*e*P	**P**	**17 59 55.6**	**-1.0**
	comp=Z,23nm,0.8s,mb5.4						
KURK	**Kurchatov**	**62.10**	**328**⇑	*i*P	**P**	**17 59 56.1**	**-0.4**
BRVK	**Borovoye**	**67.75**	**327**	*e*P	**P**	**18 00 32.8**	**-0.4**
	comp=Z,8.5nm,0.9s,mb4.8						
BRVK	**Borovoye**	**67.75**	**327**	*e*P	**P**	**18 00 32.8**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
TIXI	**Tiksi**	**68.38**	**1**	*e*P	**P**	**18 00 36.1**	**-0.7**
	comp=Z,14nm,0.9s,mb5.0						
TIXI	**Tiksi**	**68.38**	**1**	*e*P	**P**	**18 00 36.1**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
BILL	**Bilibino**	**70.11**	**15**	P	**P**	**18 00 47.6**	**+0.1**
	comp=Z,2.3nm,0.8s,mb4.2						
BILL	**Bilibino**	**70.11**	**15**	P	**P**	**18 00 44.0**	**-3.6**
AKTK	**Aktyubinsk**	**73.98**	**322**	P	**P**	**18 01 10.6**	**-0.4**
AKTK				LR	LR	18 35 31.7	
AKTO	**Aktyubinsk**	**73.98**	**322**	P	**P**	**18 01 10.6**	**-0.4**
	comp=Z,4.7nm,0.7s,mb4.5,baz=104,slow=6.5,SNR=25						
AKTO				LR	LR	18 35 31.7	
	comp=Z,277nm,19.1s,baz=145,slow=37						
SVE	**Sverdlovsk**	**74.33**	**329**	*e*P	**P**	**18 01 13.2**	**+0.3**
ARU	**Arti**	**75.30**	**328**	*e*P	**P**	**18 01 17.7**	**-0.9**
	comp=Z,7.7nm,1.0s,mb4.6						
ARU	**Arti**	**75.30**	**328***c*	*i*P	**P**	**18 01 18.5**	**-0.1**
ARU				*e*		18 04 06.8	
ARU				*e*S	S	18 10 54.8	+1.7
ARU				SS	SS	18 15 50.8	+6.8
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KIV	**Kislovodsk**	**83.39**	**314**	P	**P**	**18 02 01.7**	**-1.1**
KIV	**Kislovodsk**	**83.39**	**314**	P	**P**	**18 02 01.7**	**-1.2**
MCK	**McKinley**	**84.72**	**26**	P	**P**	**18 02 09.5**	**+0.3**
	comp=Z,30nm,1.5s,mb5.2						
MCK	**McKinley**	**84.72**	**26**	P	**P**	**18 02 09.5**	**+0.3**
MCK				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.2						
SOC	**Sochi**	**85.53**	**313**	*e*P	**P**	**18 02 11.4**	**-2.3**
SOC				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
MALT	**Malatya**	**86.58**	**308**	P	**P**	**18 02 17.9**	**-1.1**
	comp=Z,4.7nm,1.0s,mb4.7						
MALT	**Malatya**	**86.58**	**308**	P	**P**	**18 02 17.9**	**-1.1**
MALT				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
OBN	**Obninsk**	**87.40**	**325**	P	**P**	**18 02 22.5**	**-0.1**
	comp=Z,20nm,0.9s,mb5.3						
OBN	**Obninsk**	**87.40**	**325**	P	**P**	**18 02 23.0**	**+0.4**
OBN				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.1						
KMBO	**Kilima Mbogo**	**89.37**	**269**	*e*P	**P**	**18 02 34.7**	**+1.8**
KMBO	**Kilima Mbogo**	**89.37**	**269**	P	**P**	**18 02 34.1**	**+1.2**
	comp=Z,1.1nm,0.9s,mb4.2,baz=60,slow=20,SNR=5.1						
BRTR	**Keskin Array B**	**90.23**	**310**	P	**P**	**18 02 36.2**	**-0.1**
	comp=Z,2.9nm,0.9s,mb4.6,baz=102,slow=5.4,SNR=14						
ARCES	**ARCESS Array B**	**90.89**	**340**	P	**P**	**18 02 40.6**	**+1.9**
	comp=Z,6.2nm,1.1s,mb4.8,baz=83,slow=7.4,SNR=3.0						
AKASG	**Malin Array Be**	**92.20**	**321**	*i* P	**P**	**18 02 45.2**	**0.0**
AKASG	**Malin Array Be**	**92.20**	**321**	P	**P**	**18 02 44.6**	**-0.6**
	comp=Z,0.3nm,0.3s,mb4.0,baz=70,slow=4.4,SNR=6.7						
FINES	**FINESS Array B**	**92.23**	**332**	*i* P	**P**	**18 02 49.7**	**+4.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**92.23**	**332**	P	**P**	**18 02 46.0**	**+0.9**
	comp=Z,1.1nm,0.8s,mb4.2,baz=153,slow=1.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**122.93**	**288**	PKP	PKPdf	18 08 33.9	+1.4
	comp=Z,1.0nm,1.0s,baz=82,slow=1.5,SNR=3.6						

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*ISCJB **09** 18:13:13.9±0.6, 3748N±005×3872E±003, h11km±4km, Error ellipse: s-maj=8.8km s-min=4.4km az=172.5*
*CSEM **09** 18:13:13.2±0.1, 3747N×3868E, h12km, MD2.9, Error ellipse: s-maj=5.0km s-min=3.1km az=170.0*
*ISK **09** 18:13:13.1, 3746N×3866E, h10km, MD2.9*
*DDA **09** 18:13:14.6, 3751N×3871E, h3km±2km, Md2.9*
ISC 09 18:13:14.1±0.5**, 3748N**±005×**3873E**±003**, h13**km±4km**, n12, σ0.ˢ81**/19**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.09**	**115**	PG	**Pg**	**18 13 16.7**	**-0.1**
URFA				SG	**Sg**	**18 13 19.0**	**+0.2**
ATAB	**Bozova**	**0.34**	**269**	*i* P	**Pg**	**18 13 20.5**	**-0.5**
ATAB				*i* S	**Sg**	**18 13 25.2**	**-0.5**
MALT	**Malatya**	**0.87**	**344**	*e*PG	**Pg**	**18 13 29.4**	**-1.5**
MYA	**Malataya**	**0.88**	**344**	*e*PG	**Pg**	**18 13 31.2**	**+0.1**
GZT	**Gaziantep**	**0.93**	**263**	*i* P	**Pg**	**18 13 32.5**	**+0.5**
GZT				*i* S	**Sg**	**18 13 45.4**	**+1.1**
ELZG	**Elazig**	**1.04**	**11**	*i* P	**Pb**	**18 13 34.0**	**0.0**
ELZG				*i* S	**Sb**	**18 13 48.0**	**+0.5**
DIYA	**Diyarbakir**	**1.19**	**68**	*i* P	**Pn**	**18 13 36.9**	**+0.5**
DIYA				*i* S	**Sb**	**18 13 51.7**	**-0.2**
GAZ	**Gaziantep**	**1.25**	**256**	*e*PN	**Pn**	**18 13 36.8**	**-0.4**
KMRS	**Kahramanmaras**	**1.45**	**272**	*e*PN	**Pn**	**18 13 38.6**	**-1.4**
PTK	**Pertek**	**1.51**	**20**	*e*PN	**Pn**	**18 13 41.6**	**+0.8**
MARD	**Mardin**	**1.64**	**95**	*i* P	**Pn**	**18 13 43.0**	**+0.3**
MARD				*i* S	**Sn**	**18 14 02.9**	**-0.7**
ANDN	**Andirin**	**1.90**	**274**	*i* P	**Pn**	**18 13 48.4**	**+2.3**
ANDN				*i* S	**Sn**	**18 14 09.2**	**-0.7**

IDC 09 18:47:25.4±1.0**, 1126S**×**6660E, h0**km**, mb3.9**/11**, mb1 4.1**/11**, mb1mx3.9**/24**, mbtmp3.9**/11**, Error ellipse: s-maj=33.4km s-min=21.0km az=36.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**20.11**	**247**	P	P	18 52 03.0	+2.1
	2.4nm,0.9s,baz=209,slow=9.1,SNR=3.4						
BRTR	**Keskin Array B**	**59.25**	**331**	P	P	18 57 28.1	-0.6
	1.1nm,1.1s,baz=176,slow=6.9,SNR=3.8						
MKAR	**Makanchi Array**	**59.47**	**12**	P	P	18 57 30.3	+0.3
	0.5nm,0.7s,baz=198,slow=7.0,SNR=5.0						
ASAR	**Alice Springs**	**64.88**	**111**	P	P	18 58 06.5	-0.4
	1.5nm,1.0s,baz=272,slow=6.3,SNR=6.8						
WRA	**Warramunga Arr**	**65.45**	**107**	P	P	18 58 10.6	-0.1
	2.2nm,0.9s,baz=274,slow=6.1,SNR=12						
ZALV	**Zalesovo Beam**	**66.77**	**12**	P	P	18 58 18.7	+0.3
	1.5nm,0.8s,baz=229,slow=5.7,SNR=7.6						
MLR	**Muntele Rosu**	**67.32**	**330**	P	P	18 58 22.9	+0.8
	1.0nm,0.5s,baz=166,slow=17,SNR=3.3						
SONM	**Songino Array**	**68.62**	**28**	P	P	18 58 31.9	+1.7
	0.7nm,0.7s,baz=208,slow=6.2,SNR=7.8						
AKASG	**Malin Array Be**	**69.75**	**336**	P	P	18 58 36.0	-1.2
	1.0nm,0.7s,baz=141,slow=5.5,SNR=8.7						
GERES	**GERESS Array B**	**75.80**	**327**	P	P	18 59 12.1	-1.0
	0.7nm,0.8s,baz=174,slow=1.3,SNR=5.6						
FINES	**FINESS Array B**	**79.15**	**341**	P	P	18 59 32.6	+1.0
	0.4nm,0.6s,baz=58,slow=7.2,SNR=3.8						
TXAR	**Lajitas Array**	**159.85**	**335**	PKPab	PKPab	19 08 06.0	+0.1
	0.5nm,0.8s,baz=35,slow=4.6,SNR=3.7						

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*NIED **09** 18:48:00, 2370N×12300E, h17km, Mw3.9 Best double couple: M₀6.72000×10¹⁴ NP1:φs163.00000°, δ79.00000°, λ11.00000°. NP2:φs71.00000°, δ79.00000°, λ169.00000°.*
*JMA **09** 18:48:10.9±0.2, 2370N×12302E, h49km±4km, M3.7*
*ISCJB **09** 18:48:11.3±1.7, 238N±0.1×12302E±007, h44km±11km, mb3.6/7, Error ellipse: s-maj=20.6km s-min=9.4km az=10.4*
*IDC **09** 18:48:18.0±6.1, 2425N×12298E, h62km±56km, mb3.4/7, mb1 3.6/8, mb1mx3.4/22, mbtmp3.4/8, ML3.2/1, Error ellipse: s-maj=33.6km s-min=23.3km az=75.0*
ISC 09 18:48:11.2±1.8**, 237N**±01×**12302E**±005**, h30**km±9km**, n17, σ0.ˢ50**/24**, mb3.6**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.74**	**359**	P	**Pb**	**18 48 25.5**	**-0.1**
YOJ				S	**Sb**	**18 48 35.7**	**+0.3**
HATJ	**Hateruma jima**	**0.79**	**65**	P	**Pn**	**18 48 25.9**	**-0.4**
HATJ				S	**Sb**	**18 48 37.2**	**+0.3**
IRIF	**Iriomote-Funau**	**0.89**	**46**	P	**Pn**	**18 48 27.5**	**-0.2**
JKRS	**Kuro-shima**	**1.04**	**60**	P	**Pn**	**18 48 29.8**	**+0.1**
JKRS				*e*S	**Sn**	**18 48 43.0**	**-0.3**
JIJ	**Ishigaki jima**	**1.21**	**58**	P	**Pn**	**18 48 31.6**	**-0.5**
JIJ				S	**Sn**	**18 48 47.3**	**-0.1**
JTJ	**Tarama**	**1.79**	**59**	P	**Pn**	**18 48 39.8**	**-0.2**
JTJ				*e*S	**Sn**	**18 49 02.1**	**+0.4**
JMJ	**Miyako jima 2**	**2.34**	**62**	P	**Pn**	**18 48 48.0**	**+0.4**
JMJ				*e*S	**Sn**	**18 49 15.5**	**+0.1**
JOGS	**Gusukube**	**2.41**	**64**	P	**Pn**	**18 48 48.8**	**+0.2**
JOGS				*e*S	**Sn**	**18 49 17.6**	**+0.5**
JKE	**Kume jima 2**	**4.29**	**52**	P	**Pn**	**18 49 13.4**	**-1.0**
KSRS	**Korea Array**	**14.32**	**16**	P	**Pn**	**18 51 31.6**	**-0.2**
	0.1nm,0.3s,baz=122,slow=13,SNR=3.6						
ASAJ	**Asahikawa**	**25.91**	**34**	P	**P**	**18 53 39.8**	**-0.8**
	3.1nm,0.7s,mb4.0,baz=260,slow=23,SNR=5.6						
SONM	**Songino Array**	**27.47**	**335**	P	**P**	**18 53 53.5**	**-1.0**
	0.5nm,0.7s,mb3.2,baz=149,slow=9.2,SNR=5.7						
MKAR	**Makanchi Array**	**39.84**	**316**	P	**P**	**18 55 42.2**	**+0.4**
	0.3nm,0.6s,mb3.2,baz=104,slow=8.2,SNR=6.2						
WRA	**Warramunga Arr**	**44.78**	**165**	P	**P**	**18 56 29.6**	**+7.4**
	0.5nm,0.8s,mb3.4,baz=344,slow=9.0,SNR=2.6						
INK	**Inuvik**	**73.02**	**22**	P	**P**	**18 59 38.5**	**+0.7**
	1.8nm,0.7s,mb4.1,baz=316,slow=6.7,SNR=8.2						
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**19 00 32.6**	**+0.7**
	0.3nm,0.5s,mb3.6,baz=310,slow=4.8,SNR=9.1						
GERES	**GERESS Array B**	**84.26**	**321**	P	**P**	**19 00 40.7**	**+0.7**
	0.4nm,0.7s,mb3.6,baz=46,slow=5.7,SNR=3.8						

IDC 09 18:51:10.2±20.0**, 3220S**×**17857W, h334**km±183km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/12**, mbtmp3.5**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/18**, Error ellipse: s-maj=97.4km s-min=35.3km az=75.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**16.71**	**303**	LR	LR	18 59 19.8	
	comp=Z,110nm,21.4s,baz=324,slow=29						
STKA	**Stephens Creek**	**33.63**	**260**	*e*P	P	18 57 21.5	+1.1
	8.5nm,1.8s						
STKA	**Stephens Creek**	**33.63**	**260**	P	P	18 57 20.9	+0.6
	2.2nm,0.8s,baz=116,slow=7.0,SNR=5.4						
CTA	**Charters Tower**	**33.65**	**282**	*e*P	P	18 57 21.0	+0.4
	3.7nm,1.0s						
CTA	**Charters Tower**	**33.65**	**282**	P	P	18 57 20.8	+0.2
	3.6nm,0.6s,baz=114,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**42.56**	**269**	P	P	18 58 34.3	0.0
	3.9nm,1.0s,baz=113,slow=8.3,SNR=17						
WB2	**Warramunga Arr**	**43.70**	**274**	*e*P	P	18 58 43.2	-0.2
WRA	**Warramunga Arr**	**43.71**	**274**	P	P	18 58 42.5	-1.0
	3.0nm,0.9s,baz=113,slow=7.9,SNR=16						
MKAR	**Makanchi Array**	**118.54**	**309**	PKP	PKPdf	19 09 17.5	-0.6
	0.5nm,0.9s,baz=97,slow=1.3,SNR=3.4						
KAF	**Kangasniemi**	**146.07**	**339**	*e*p	PKPdf	19 10 08.8	0.0
	2.2nm,0.6s						
FINES	**FINESS Array B**	**146.65**	**339**	PKPbc	PKPbc	19 10 11.3	-0.7
	4.5nm,0.9s,baz=46,slow=3.2,SNR=18						
NOA	**NORSAR Array B**	**150.45**	**350**	PKPbc	PKPbc	19 10 21.1	-0.5
	3.4nm,1.0s,baz=14,slow=4.1,SNR=3.6						
AKASG	**Malin Array Be**	**152.40**	**320**	PKPbc	PKPbc	19 10 26.8	+0.4
	1.7nm,1.0s,baz=43,slow=1.9,SNR=5.0						
AKASG				PKPab	PKPab	19 10 36.9	-1.2
	0.5nm,0.5s,baz=47,slow=6.0,SNR=5.5						
BRTR	**Keskin Array B**	**152.97**	**295**	PKPbc	PKPbc	19 10 28.4	+0.4
	0.3nm,0.5s,baz=216,slow=38,SNR=2.6						
BRTR				PKPab	PKPab	19 10 41.6	+0.7
	1.7nm,1.0s,baz=92,slow=3.7,SNR=5.5						
GERES	**GERESS Array B**	**160.98**	**334**	PKPab	PKPab	19 11 15.5	+0.4
	0.1nm,0.3s,baz=64,slow=3.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**161.03**	**181**	PKPab	PKPab	19 11 15.6	-0.5
	0.7nm,0.5s,baz=164,slow=2.2,SNR=13						

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*ISCJB **09** 19:09:28.6±0.6, 3743N±003×2204E±005, h15km±6km, Error ellipse: s-maj=7.2km s-min=5.1km az=7.7*
*ATH **09** 19:09:28.7, 3739N×2190E, h23km±4km, MD3.3/5*
*CSEM **09** 19:09:29.4±0.1, 3744N×2203E, h8km, MD3.3, Error ellipse: s-maj=3.0km s-min=2.6km az=108.0*
*THE **09** 19:09:29.5, 3742N×2206E, h1km, ML3.5*
*NEIC **09** 19:09:29.0, 3744N×2198E, h2km, MD3.3(ATH), After ATH.*
ISC 09 19:09:29.1±0.5**, 3743N**±004×**2204E**±005**, h13**km±7km**, n10, σ1.ˢ05**/16**, 1C, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.26**	**200**⇑	*i*PB	**Pg**	**19 09 34.1**	**-0.6**
ITM				*e*SB	**Sg**	**19 09 38.2**	**-0.2**
VLX	**Vlachokerasia**	**0.28**	**102**	*e*Pg	**Pg**	**19 09 34.1**	**-0.9**
VLX				*e*Sg	**Sg**	**19 09 38.1**	**-0.8**
PYL	**PYLOS**	**0.58**	**204**	*e*Pg	**Pg**	**19 09 40.6**	**+0.1**
PYL				*e*Sg	**Sg**	**19 09 49.2**	**+1.0**
RLS	**Riolos of Patr**	**0.77**	**324**	*e*PN	**Pn**	**19 09 43.7**	**-2.0**
RLS				*e*SN	**Sn**	**19 09 54.0**	**-3.2**
SELA	**Sela**	**0.85**	**352**	*e*Pg	**Pg**	**19 09 44.7**	**-1.0**
SELA				*e*Sg	**Sg**	**19 09 58.6**	**+1.8**
LTK	**Loutraki**	**0.95**	**51**	*e*Pg	**Pg**	**19 09 47.2**	**-0.2**
DID	**Didima**	**0.96**	**85**	*e*Pg	**Pg**	**19 09 47.4**	**-0.2**
DID				*e*Sg	**Sg**	**19 10 01.4**	**+1.2**
VLI	**Veliai**	**1.01**	**134**	*e*PN	**Pn**	**19 09 49.5**	**+0.6**
VLS	**Valsamata**	**1.37**	**304**	*e*PN	**Pn**	**19 09 55.0**	**+1.1**
EVR	**Evrytania**	**1.50**	**353**	*e*PN	**Pn**	**19 09 56.3**	**+0.7**

JMA 09 19:32:10.0±0.1**, 3715N**×**13865E, h10**km±2km**, M2.9, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHK	**Hiroka**	**0.31**	**71**	P	Pg	19 32 15.9	-0.3
JHK				S	Sg	19 32 20.8	+0.5
JIZZ	**Izumozaki**	**0.38**	**7**	P	Pg	19 32 18.1	+0.5
JGK	**Kuni**	**0.59**	**181**	P	Pg	19 32 21.3	-0.1
JGK				S	Sg	19 32 29.8	+0.7
MAT	**Matsushiro**	**0.70**	**211**	P	Pg	19 32 22.6	-1.0
MAT				S	Sg	19 32 32.4	-0.3

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*IDC **09** 19:37:28.7±0.8, 2004N×12144E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/20, mbtmp3.9/8, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/27, Error ellipse: s-maj=52.5km s-min=15.9km az=70.0*
*MAN **09** 19:37:33, 2008N×121.12E, h44km, mb5.1, ML4.0, MS4.2*
*ISCJB **09** 19:37:34.4±1.3, 2007N±006×1213E±02, h59km±14km, mb3.9/7, Error ellipse: s-maj=24.8km s-min=10.3km az=173.0*
ISC 09 19:37:35.5±1.2**, 2007N**±007×**1213E**±02**, h53**km±14km**, n17, σ1.ˢ08**/20**, mb3.9**/7**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**2.20**	**182**	*e*P	**Pn**	**19 38 08.9**	**-0.8**
APYP				*e*S	**Sn**	**19 38 35.6**	**-0.1**
CVP	**Callao Caves**	**2.41**	**169**	*e*P	**Pn**	**19 38 12.2**	**-0.2**
CVP				*e*S	**Sn**	**19 38 41.3**	**+0.6**
ABRA	**Dolores**	**2.48**	**194**	*e*P	**Pn**	**19 38 11.8**	**-1.7**
ABRA				*e*S	**Sn**	**19 38 43.0**	**+0.4**
CAUP	**Cauayan**	**3.15**	**171**	*e*P	**Pn**	**19 38 24.6**	**+1.9**
BALP	**Baler**	**4.32**	**177**	*e*P	**Pn**	**19 38 38.9**	**+0.3**
BALP				*e*S	**Sn**	**19 39 29.2**	**+1.4**
SCZP	**Santa Cruz**	**4.48**	**198**	*e*P	**Pn**	**19 38 39.5**	**-1.4**
JNU	**Nakatsue**	**15.54**	**31**	LR	LR	19 47 12.0	
	comp=Z,68nm,19.8s,baz=30,slow=38						
KSRS	**Korea Array**	**18.25**	**17**	P	**Pn**	**19 41 44.6**	**-0.3**
	0.1nm,0.3s,baz=201,slow=11,SNR=3.3						
SONM	**Songino Array**	**30.22**	**340**	P	**P**	**19 43 41.6**	**+0.6**
	0.3nm,0.5s,mb3.3,baz=157,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**41.44**	**319**	P	**P**	**19 45 18.3**	**+1.3**
	1.3nm,0.5s,mb3.8,baz=112,slow=9.1,SNR=23						
WRA	**Warramunga Arr**	**41.76**	**161**	P	**P**	**19 45 18.1**	**-1.7**
	1.5nm,0.4s,mb4.0,baz=342,slow=9.0,SNR=57						
WB2	**Warramunga Arr**	**41.77**	**161**	*e*P	**P**	**19 45 18.2**	**-1.7**
ZALV	**Zalesovo Beam**	**43.79**	**329**	P	**P**	**19 45 36.4**	**+0.4**
	2.5nm,0.8s,mb4.0,baz=116,slow=6.8,SNR=14						
ASAR	**Alice Springs**	**45.17**	**164**	P	**P**	**19 45 46.7**	**-0.5**
	0.9nm,0.3s,mb4.1,baz=345,slow=6.9,SNR=86						
STKA	**Stephens Creek**	**55.19**	**159**	*e*P	**P**	**19 47 05.1**	**+2.1**
	3.6nm,1.6s,mb4.2						
STKA	**Stephens Creek**	**55.19**	**159**	P	**P**	**19 47 04.4**	**+1.4**
	2.0nm,0.8s,mb4.2,baz=352,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**86.69**	**23**	P	**P**	**19 50 13.3**	**-0.1**
	0.4nm,0.6s,mb3.8,baz=308,slow=4.8,SNR=9.8						

IDC 09 19:43:05.6±2.2**, 6131S**×**15178E, h0**km**, mb4.1**/4**, mb1 4.3**/4**, mb1mx4.2**/9**, mbtmp4.1**/4**, MS4.0**/8**, Ms1 4.0**/8**, ms1mx3.8**/16**, Error ellipse: s-maj=144.5km s-min=35.8km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**16.61**	**172**	Pn	Pn	19 46 59.9	+0.5
	baz=344,slow=12						
RPZ	**Rata Peaks**	**21.02**	**42**	LR	LR	19 53 57.2	
	comp=Z,544nm,18.0s,baz=193,slow=31						
URZ	**Urewera**	**27.94**	**46**	LR	LR	19 58 04.0	
	comp=Z,229nm,21.2s,baz=238,slow=32						
QSPA	**South Pole Qui**	**28.78**	**180**	LR	LR	19 59 50.3	
	comp=Z,364nm,20.4s,baz=43,slow=35						
STKA	**Stephens Creek**	**30.19**	**343**	P	P	19 49 19.1	+1.8
	3.0nm,1.1s,baz=162,slow=13,SNR=4.0						
MAW	**Mawson**	**35.66**	**221**	LR	LR	20 04 04.4	
	comp=Z,309nm,19.9s,baz=65,slow=35						
NWAO	**Narrogin (SRO)**	**36.09**	**306**	LR	LR	20 00 58.0	
	comp=Z,205nm,20.8s,baz=347,slow=30						
ASAR	**Alice Springs**	**39.59**	**334**	P	P	19 50 38.2	-0.2
	1.9nm,0.9s,baz=166,slow=8.9,SNR=9.7						
DZM	**Mont Dzumac**	**40.52**	**21**	LR	LR	20 04 16.5	
	comp=Z,217nm,19.0s,baz=301,slow=31						
CTA	**Charters Tower**	**41.37**	**352**	P	P	19 50 53.1	0.0
	3.0nm,1.0s,baz=181,slow=10,SNR=3.8						
CTA				LR	LR	20 06 37.7	
	comp=Z,96nm,18.6s,baz=180,slow=34						
WRA	**Warramunga Arr**	**43.11**	**336**	P	P	19 51 06.4	-1.0
	2.6nm,1.0s,baz=165,slow=7.2,SNR=16						
BOSA	**Boshof**	**80.52**	**226**	LR	LR	20 26 18.9	
	comp=Z,122nm,19.2s,baz=168,slow=32						
YKA	**Yellowknife Ar**	**142.17**	**49**	PKP	PKPdf	20 02 36.7	-1.3
	0.1nm,0.4s,baz=194,slow=2.0,SNR=3.6						

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*IDC **09** 19:47:25.2±1.2, 101S×12735E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/14, mbtmp3.8/5, Error ellipse: s-maj=123.3km s-min=19.2km az=68.0*
*ISCJB **09** 19:47:28.1±0.9, 133S±0.10×1267E±03, h33km, mb3.8/4, Error ellipse: s-maj=42.2km s-min=12.1km az=170.7*
ISC 09 19:47:30.1±0.9**, 13S**±01×**1270E**±03**, h35**km**, n8, σ0.ˢ99**/8**, mb3.8**/4**, 1D, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**2.12**	**11**⇓	*e*P	**Pn**	**19 48 03.0**	**0.0**
WRA	**Warramunga Arr**	**19.88**	**159**	P	**Pn**	**19 51 59.2**	**-1.1**
	1.6nm,0.3s,baz=340,slow=11,SNR=47						
WB2	**Warramunga Arr**	**19.89**	**159**	*e*P	**Pn**	**19 51 59.2**	**-1.2**
ASAR	**Alice Springs**	**23.23**	**164**	P	**P**	**19 52 35.2**	**+0.9**
	2.2nm,0.6s,mb3.8,baz=346,slow=12,SNR=29						
STKA	**Stephens Creek**	**33.40**	**157**	*e*P	**P**	**19 54 07.3**	**+1.9**
	2.4nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**33.40**	**157**	P	**P**	**19 54 07.5**	**+2.1**
	1.0nm,0.3s,mb4.2,baz=338,slow=11,SNR=10						
SONM	**Songino Array**	**52.12**	**343**	P	**P**	**19 56 36.7**	**-0.1**
	0.7nm,0.9s,mb3.6,baz=155,slow=8.2,SNR=4.6						
MKAR	**Makanchi Array**	**61.83**	**327**	P	**P**	**19 57 45.4**	**-0.2**
	0.4nm,0.6s,mb3.8,baz=117,slow=7.1,SNR=9.1						

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*CSEM **09** 19:55:21.6, 3731N×58.13E, h14km, ML3.5, After TEH*
TEH 09 19:55:21.6, 3731N×**5813E, h14**km**, ML3.5, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISFR	**Esferayen**	**0.29**	**202**	*e*Sg		19 57 01.5	
ISFR				*e*		19 57 05.6	
	comp=Z,91μm,0.1s						
IQHU	**Quchan**	**0.41**	**127**	*e*		19 57 00.3	
	comp=Z,11μm,0.1s						
ISHV	**Shirvan**	**0.41**	**302**	*e*Sg		19 57 05.7	
ISHV				*e*		19 57 09.1	
	comp=Z,9μm,0.1s						
IEMG	**Emamqoli**	**0.42**	**77**	*e*Sg		19 57 05.9	
IEMG				*e*		19 57 07.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,42µm,0.2s						
IKRD	**Kardeh**	**0.62**	**150**	eSn		19 57 31.2	
IKRD				e		19 57 14.5	
	comp=Z,18µm,0.1s						
IAKL	**Akhlamad**	**0.87**	**147**	eSg		19 57 18.8	
IAKL				e		19 57 24.1	
	comp=Z,32µm,0.1s						
IPAY	**Payeh**	**1.10**	**141**	ePg		19 57 10.6	
IPAY				eSg		19 57 25.0	
IPAY				e		19 57 30.6	
	comp=Z,25µm,0.1s						
IPAY	**Payeh**	**1.10**	**141**	ePg		19 57 10.6	
IPAY				eSg		19 57 25.0	
MHI	**Mashhad**	**1.47**	**133**	eSg		19 57 36.2	
MHI				e		19 57 40.1	
	comp=Z,21µm,0.0s						
IMOG	**Moghan**	**1.54**	**141**	eSn		19 57 38.6	
IMOG				e		19 57 21.4	
	comp=Z,10µm,0.2s						
IMYA	**Miamay**	**1.85**	**121**	e		19 57 29.8	
	comp=Z,4µm,0.2s						
IGLO	**Galoogah**	**3.86**	**256**	ePn		19 57 48.5	
IGLO				e		19 58 56.9	
	comp=Z,752nm,0.3s						
ITEG		**4.44**	**173**	ePn		19 57 59.9	
IFIR	**Firoozkooh**	**4.65**	**251**	ePn		19 58 01.4	
IFIR				e		19 58 24.5	
	comp=Z,216nm,0.1s						
IPRN	**Paran-Amol**	**4.85**	**259**	ePn		19 58 05.6	
IPRN				e		19 59 37.7	
	comp=Z,329nm,0.2s						
IKOO		**4.93**	**171**	ePn		19 58 07.8	
IZEF	**Zefreh**	**6.49**	**229**	ePn		19 58 28.3	
IZEF				e		19 58 35.0	
	comp=Z,34nm,0.2s						

*SZGRF **09** 20:49:37.4, 1760N×6971W, h33km, mb5.5, Dominican Republic region*
*LDG **09** 20:49:48.0±0.3, 1801N×6891W, h104km, Mb4.9/32, Error ellipse: s-maj=12.5km s-min=7.4km az=80.0*
*ISCJB **09** 20:49:49.6±0.2, 18.11N±003×6878W±002, h104km, mb4.7/107, Error ellipse: s-maj=4.8km s-min=2.2km az=15.8*
*IDC **09** 20:49:50.7±0.4, 1803N×6877W, h106km±3km, mb4.1/17, mb1 4.3/22, mb1mx4.3/23, mbtmp4.2/22, MS3.4/2, Ms1 3.4/2, ms1mx2.9/37, Error ellipse: s-maj=10.5km s-min=7.3km az=11.0*
*BJI **09** 20:49:50.7, 1820N×6870W, h96km, mB5.1*
*RSPR **09** 20:49:51.7, 18.19N×6873W, h97km±3km, MD4.6/20, MD4.6/20*
*NEIC **09** 20:49:51.7, 18.19N×6873W, h97km, mb4.9/84, MD5.1(TRN), MD4.6(RSPR), After RSPR.*
NEIC Felt [IV] at El Seybo, Sabana Grande de Boya and Santo Domingo. Also felt [IV] at Anasco, Carolina, Cidra, Guayama, Guaynabo, Lares, Mayaguez, Moca, Naranjito, Orocovis, Quebradillas, San German, San Juan, San Sebastian, Toa Baja and Utuado, Puerto Rico.
ISC 09 20:49:51.4±0.2**, 1809N**±003×**6876W**±002**, h105**km**, h105**km±.7km**:pP-P, n410, σ0§88**/285**, mb4.7**/107**, 82C-65D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STDO	**Santo Domingo**	**1.17**	**288**	⇑eP	**Pn**	**20 50 12.8**	**-1.2**
STDO				eS	**Sn**	**20 50 28.3**	**-2.9**
MPR	**Mayaguez**	**1.54**	**85**	⇑eP	**Pn**	**20 50 18.4**	**0.0**
MPR				eS	**Sn**	**20 50 37.9**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.57**	**93**	⇓eP	**Pn**	**20 50 18.2**	**-0.6**
CRPR				eS	**Sn**	**20 50 38.2**	**-1.4**
LSP	**Las Mesas**	**1.59**	**87**	⇑eP	**Pn**	**20 50 18.6**	**-0.4**
AGPR	**Aguadilla, PR**	**1.61**	**76**	⇓eP	**Pn**	**20 50 19.7**	**+0.5**
AGPR				eS	**Sn**	**20 50 40.2**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.79**	**93**	⇑eP	**Pn**	**20 50 21.2**	**-0.3**
AOPR	**Arecibo Observ**	**1.92**	**82**	⇑eP	**Pn**	**20 50 23.1**	**-0.1**
AOPR				eS	**Sn**	**20 50 46.1**	**-1.3**
OBIP	**Obispado Ponce**	**2.05**	**91**	⇑eP	**Pn**	**20 50 24.6**	**-0.2**
OBIP				eS	**Sn**	**20 50 49.1**	**-1.2**
CELP	**Cerrillos**	**2.07**	**90**	⇓eP	**Pn**	**20 50 24.7**	**-0.4**
ICM	**Isla Caja Muer**	**2.14**	**95**	⇑eP	**Pn**	**20 50 25.9**	**-0.1**
ICM				eS	**Sn**	**20 50 50.9**	**-1.5**
SJG	**San Juan**	**2.48**	**89**	⇓eP	**Pn**	**20 50 29.8**	**-0.6**
SJG	**San Juan**	**2.48**	**89**	⇑eP	**Pn**	**20 50 30.3**	**-0.1**
SJG	**San Juan**	**2.48**	**89**	eS	**Sn**	**20 50 59.1**	**-1.3**
SJG	**San Juan**	**2.48**	**89**	⇑eP	**Pn**	**20 50 30.3**	**-0.1**
SJG				eS	**Sn**	**20 50 59.1**	**-1.3**
SJG	**San Juan**	**2.48**	**89**	P	**Pn**	**20 50 29.9**	**-0.5**
	386nm,0.3s,baz=284,slow=19,SNR=171						
SJG				S	**Sn**	**20 50 59.8**	**-0.6**
	2µm,0.3s,baz=111,slow=23,SNR=24						
SDDR	**Presa de Saban**	**2.56**	**291**	⇑eP	**Pn**	**20 50 30.5**	**-0.9**
SDDR				eS	**Sn**	**20 51 01.8**	**-0.4**
CPD	**Cerro la Pandu**	**2.71**	**91**	⇑eP	**Pn**	**20 50 33.0**	**-0.3**
CPD				eS	**Sn**	**20 51 04.5**	**-1.2**
CBYP	**Canovanas**	**2.77**	**86**	⇑eP	**Pn**	**20 50 34.1**	**0.0**
CBYP				eS	**Sn**	**20 51 07.0**	**0.0**
HUMP	**Col San Antoni**	**2.77**	**88**	⇑eP	**Pn**	**20 50 33.9**	**-0.3**
HUMP				eS	**Sn**	**20 51 05.2**	**-1.9**
MTP	**Monte Pirata**	**3.05**	**89**	⇓eP	**Pn**	**20 50 38.0**	**0.0**
MTP				eS	**Sn**	**20 51 11.6**	**-2.2**
TBVI	**Tortola**	**3.95**	**85**	⇓eP	**Pn**	**20 50 48.9**	**-1.0**
TBVI				eS	**Sn**	**20 51 33.0**	**-2.5**
ABV	**Anegada**	**4.25**	**81**	⇑eP	**Pn**	**20 50 54.2**	**+0.1**
ABV	**Anegada**	**4.25**	**81**	eS	**Sn**	**20 51 41.6**	**-1.0**
STMA	**St. Maarten, A**	**5.38**	**90**	eP	**Pn**	**20 51 09.4**	**+0.2**
STMA				eS	**Sn**	**20 52 07.3**	**-2.6**
MASC	**Masc**	**5.57**	**293**	eP	**Pn**	**20 51 10.9**	**-1.0**
	baz=63						
MASC				eS	**Sn**	**20 52 10.1**	**-4.6**
	comp=N,7.0nm,1.1s						
MASC				e			
	comp=E,0.6nm,0.1s						
BPA	**Boggy Peak**	**6.67**	**98**	eP	**Pn**	**20 51 27.6**	**+0.9**
BPA				eS	**Sn**	**20 52 38.6**	**-2.7**
LZG	**Guadaloupe-1**	**6.95**	**105**	eP	**Pn**	**20 51 31.4**	**+0.8**
SCG	**Saint Claude**	**7.07**	**106**	eP	**Pn**	**20 51 33.3**	**+1.0**
TBG	**Guadaloupe-3**	**7.16**	**107**	eP	**Pn**	**20 51 33.7**	**+0.2**
MGG	**Marie-Galante**	**7.44**	**106**	eP	**Pn**	**20 51 38.1**	**+0.9**
DEG	**La Desirade**	**7.57**	**102**	eP	**Pn**	**20 51 39.1**	**+0.1**
FDF	**Fort de France**	**8.03**	**113**	eP	**Pn**	**20 51 46.2**	**+1.0**
LMGC	**Las Mercedes**	**8.04**	**285**	eP	**Pn**	**20 51 39.3**	**-6.1**
	baz=123						
LMGC				eS	**Sn**	**20 53 03.1**	**-12**
	comp=N,298nm,1.1s						
LMGC				e			
	comp=E,281nm,1.1s						
BIM	**Bigot**	**8.19**	**115**	eP	**Pn**	**20 51 46.7**	**-0.8**
MVM	**Montagne Vaucl**	**8.33**	**114**	eP	**Pn**	**20 51 50.7**	**+1.3**
SLB	**Belfond**	**8.54**	**119**	eP	**Pn**	**20 51 53.5**	**+1.1**
SLB				eS	**Sn**	**20 53 21.5**	**-5.5**
SLB	**Belfond**	**8.54**	**119**	eP	**Pn**	**20 51 53.5**	**+1.1**
SLB				eS	**Sn**	**20 53 21.5**	**-5.5**
SVB	**Belmont**	**8.67**	**122**	eP	**Pn**	**20 51 50.1**	**-3.9**
SVB				eS	**Sn**	**20 53 24.0**	**-6.1**
SVB	**Belmont**	**8.67**	**122**	eP	**Pn**	**20 51 50.1**	**-3.9**
SVB				eS	**Sn**	**20 53 24.0**	**-6.1**
SSV	**Crater Summit**	**8.69**	**122**	eP	**Pn**	**20 52 00.9**	**+6.7**
PCRV	**Puerto La Cruz**	**8.82**	**153**	P	**Pn**	**20 51 56.6**	**+0.5**
	comp=E,4.3nm,0.3s,baz=357,slow=4.3,SNR=22						
PCRV				S	**Sn**	**20 53 23.8**	**-10**
	comp=E,12nm,0.3s,baz=314,slow=16,SNR=8.5						
PCRV				LR	LR	20 55 12.8	
	comp=E,225nm,19.2s,baz=325,slow=37						
CCCC	**Cccc**	**9.03**	**292**	eP	**Pn**	**20 51 51.2**	**-7.7**
GRW	**Mount Saint Ca**	**9.04**	**130**	eP	**Pn**	**20 51 58.3**	**-0.7**
GRGR	**Grenville**	**9.06**	**130**	eP	**Pn**	**20 51 57.5**	**-1.8**
SDV	**Santo Domingo**	**9.32**	**192**	eP	**Pn**	**20 52 02.2**	**-0.7**
	comp=E,204nm,0.6s						
SDV	**Santo Domingo**	**9.32**	**192**	P	**Pn**	**20 52 02.6**	**-0.3**
	comp=E,63nm,0.3s,baz=41,slow=7.5,SNR=139						
SDV				S	**Sn**	**20 53 39.2**	**-6.9**
	comp=E,4.3nm,0.3s,baz=36,slow=19,SNR=2.0						
TCE	**Chacachacare**	**10.00**	**136**	eP	**Pn**	**20 52 12.7**	**+0.6**
TCE				eS	**Sn**	**20 53 54.7**	**-7.7**
TRN	**Trinidad (W)**	**10.27**	**135**	eP	**Pn**	**20 52 15.5**	**-0.3**
TRN				eS	**Sn**	**20 54 00.9**	**-8.0**
TRN	**Trinidad (W)**	**10.27**	**135**	eP	**Pn**	**20 52 15.5**	**-0.3**
TRN				eS	**Sn**	**20 54 00.9**	**-8.0**
TPR	**Prospect**	**10.33**	**131**	eP	**Pn**	**20 52 17.3**	**+0.8**
TPR				eS	**Sn**	**20 54 03.9**	**-6.6**
TPR	**Prospect**	**10.33**	**131**	eP	**Pn**	**20 52 17.3**	**+0.8**
TPR				eS	**Sn**	**20 54 03.9**	**-6.6**
TBH	**Brigand Hill**	**10.61**	**134**	eP	**Pn**	**20 52 21.4**	**+0.9**
ROSC	**El Rosal**	**14.23**	**203**	P	**Pn**	**20 53 09.0**	**+0.8**
	comp=E,13nm,0.3s,baz=71,slow=14,SNR=15						
ROSC				S	**Sn**	**20 55 35.8**	**-9.3**
	comp=E,0.4nm,0.3s,baz=85,slow=22,SNR=1.8						
ROSC				LR	LR	20 58 15.5	
	comp=E,157nm,21.2s,baz=191,slow=36						
BBSR	**BB Station**	**14.69**	**14**	eP	**Pn**	**20 53 13.6**	**-0.2**
	comp=E,57nm,0.8s						
JTS	**JuntasAbangare**	**17.50**	**246**	eP	**Pn**	**20 53 47.6**	**-1.2**
	comp=E,106nm,1.1s						
JTS				epP	pP	20 54 09.3	+1.4
JTS	**JuntasAbangare**	**17.50**	**246**	P	**Pn**	**20 53 48.5**	**-0.4**
	comp=E,1.0nm,0.3s,baz=54,slow=9.7,SNR=12						
TEIG	**Tepich**	**18.56**	**280**	eP	**P**	**20 54 00.3**	**+0.2**
TEIG	**Tepich**	**18.56**	**280**	P	**P**	**20 54 01.1**	**+1.0**
	comp=E,0.5nm,0.3s,baz=68,slow=14,SNR=3.0						
JSC	**Jenkinsville**	**19.62**	**328**	eP	**P**	**20 54 10.9**	**-0.6**
JSC				eS	**S**	**20 57 34.2**	**-13**
GOGA	**Godfrey**	**20.17**	**322**	eP	**P**	**20 54 17.4**	**0.0**
	comp=E,23nm,0.9s						
URVA	**University of**	**20.88**	**340**	eP	**P**	**20 54 25.5**	**+0.5**
BLA	**Blacksburg**	**21.64**	**334**	eP	**P**	**20 54 33.4**	**+0.3**
	comp=E,25nm,0.7s,mb4.7						
BLA				eS	**S**	**20 58 25.3**	**-1.4**
ELN	**Prospectdale**	**21.79**	**333**	eP	**P**	**20 54 35.6**	**+0.9**
TKL	**Tuckaleechee C**	**21.99**	**326**	P	**P**	**20 54 36.1**	**-0.8**
	comp=E,6.0nm,0.8s,mb4.0,baz=161,slow=10,SNR=3.8						
TKL				pP		20 54 56.9	
	comp=E,9.8nm,0.6s,baz=126,slow=12,SNR=4.2						
TKL				sP	sP	20 55 11.3	+1.0
	comp=E,13nm,0.7s,baz=128,slow=7.2,SNR=3.5						
LRAL	**Lakeview Retre**	**22.14**	**316**	eP	**P**	**20 54 38.0**	**-0.4**
	comp=E,36nm,1.3s,mb4.5						
LRAL				epP		20 54 57.5	
CPCT	**Cooper Cave**	**22.24**	**324**	eP	**P**	**20 54 39.2**	**-0.4**
MVL	**Millersville**	**22.80**	**345**	eP	**P**	**20 54 45.5**	**+0.3**
	comp=E,72nm,1.5s,mb4.8						
MVL				epP		20 55 07.4	
SSPA	**Standing Stone**	**23.81**	**343**	eP	**P**	**20 54 52.6**	**-1.9**
SSPA				eS	**S**	**20 59 18.4**	**+16**
PLAL	**Pickwick Lake**	**24.05**	**318**	eP	**P**	**20 54 56.1**	**-0.6**
	comp=E,10nm,0.7s,mb4.3						
PLAL				e		20 55 18.7	
OXF	**Oxford**	**24.63**	**316**	P	**P**	**20 55 01.4**	**-0.6**
	comp=E,30nm,0.9s,mb4.7						
OXF				epP		20 55 22.6	
BINY	**Binghamton**	**24.81**	**347**	eP	**P**	**20 55 04.4**	**+0.9**
	comp=E,59nm,1.4s,mb4.8						
FFD	**Franklin Falls**	**25.42**	**355**	eP	**P**	**20 55 09.8**	**+0.7**
	comp=E,10nm,0.3s,mb4.7						
ACCN	**Adirondack Com**	**25.56**	**352**	eP	**P**	**20 55 11.2**	**+0.9**
	comp=E,16nm,1.0s,mb4.4						
NCB	**Newcomb**	**26.21**	**351**	eP	**P**	**20 55 16.3**	**+0.1**
SIUC	**Southern Illin**	**26.52**	**322**	P	**P**	**20 55 18.7**	**-0.4**
SIUC				epP	pP	20 55 41.3	-1.0
ATAH	**Atahualpa**	**26.68**	**202**	P	**P**	**20 55 21.4**	**+0.7**
	comp=E,7.5nm,0.7s,mb4.3,baz=24,slow=7.4,SNR=5.2						
NATX	**Nacogdoches**	**27.06**	**305**	epP	pP	20 55 47.6	+0.4
	comp=E,66nm,0.8s						
WMOK	**Wichita Mounta**	**31.43**	**308**	eP	**P**	**20 56 03.1**	**+0.5**
WMOK				epP	pP	20 56 24.9	-1.3
TXAR	**Lajitas Array**	**33.74**	**296**	P	**P**	**20 56 22.9**	**-0.1**
	comp=E,0.8nm,0.7s,mb3.7,baz=92,slow=8.4,SNR=5.4						
TXAR				ScP	ScP	21 02 33.6	-1.8
	comp=E,0.7nm,0.6s,baz=119,slow=5.8,SNR=5.9						
LPAZ	**La Paz**	**34.16**	**179**	P	**P**	**20 56 25.7**	**-0.9**
	comp=E,6.4nm,0.5s,mb4.7,baz=9.0,slow=8.8,SNR=16						
MNTX	**Cornudas Mount**	**35.70**	**299**	eP	**P**	**20 56 39.4**	**-0.3**
MNTX				epP	pP	20 57 03.6	0.0
SCHQ	**Schefferville**	**36.71**	**2**	P	**P**	**20 56 48.6**	**+0.6**
	comp=E,50nm,0.6s,mb5.7,baz=188,slow=7.0,SNR=152						
SDCO	**Great Sand Dun**	**37.60**	**309**	eP	**P**	**20 56 55.4**	**-0.4**
	comp=E,3.1nm,0.7s,mb4.2						
SDCO				epP	pP	20 57 19.5	-0.2
ISCO	**Idaho Springs**	**38.45**	**312**	eP	**P**	**20 57 01.8**	**-1.2**
ISCO				epP	pP	20 57 27.0	0.0
ULM	**Lac du Bonnet**	**38.73**	**332**	P	**P**	**20 57 03.4**	**-1.7**
	comp=E,2.2nm,0.8s,mb4.0,baz=127,slow=9.2,SNR=2.4						
ULM				pP	pP	20 57 27.3	-1.8
	comp=E,8.7nm,0.9s,baz=138,slow=8.9,SNR=7.7						
ULM				ScP	ScP	21 02 50.3	-3.0
	comp=E,2.8nm,0.8s,baz=161,slow=5.0,SNR=6.3						
319A	**Douglas**	**38.89**	**298**	⇑P	pP	20 57 31.1	+0.3
	baz=39						
318A	**Bisbee**	**39.50**	**298**	⇑P	pP	20 57 36.6	+0.7
	baz=40						
218A	**Dragoon**	**39.64**	**298**	⇓P	pP	20 57 37.8	+0.6
	baz=40						
217A	**Green Valley**	**40.25**	**298**	⇓P	pP	20 57 42.5	+0.3
	baz=40						
216A	**Three Points,**	**40.83**	**298**	⇑P	pP	20 57 46.9	-0.1
	baz=41						
115A	**Sonoran Desert**	**41.59**	**299**	⇓P	pP	20 57 54.0	+0.8
	baz=42						
DGMT	**Dagmar**	**41.75**	**325**	eP	**P**	**20 57 29.9**	**-0.1**
	comp=E,13nm,0.9s,mb4.7						
DGMT				epP	pP	20 57 54.2	-0.2
X14A	**Yava**	**42.45**	**302**	⇓P	pP	20 58 00.1	-0.2
	baz=42						
T15A	**Red Dirt Ranch**	**42.60**	**305**	⇓P	pP	20 58 02.2	+0.7
	baz=42						
DAU	**Daniels Canyon**	**42.71**	**310**	P	**P**	**20 57 37.5**	**-0.5**
DAU				epP	pP	20 58 02.3	-0.1
W14A	**Seligman**	**42.75**	**303**	⇑P	pP	20 58 02.8	0.0
	baz=43						
JLU	**Jordanelle**	**42.91**	**311**	epP	pP	20 58 04.1	+0.1
U14A	**Mt Trumbull**	**43.08**	**304**	⇑P	pP	20 58 06.4	+0.9
	baz=43						
NLU	**North Lily Min**	**43.17**	**310**	eP	**P**	**20 57 39.0**	**-2.7**
NLU				epP	pP	20 58 06.0	-0.1
X13A	**Yucca**	**43.23**	**301**	⇓P	pP	20 58 07.3	+0.6
	baz=43						
HWUT	**Hardware Ranch**	**43.33**	**312**	eP	**P**	**20 57 41.7**	**-1.2**
	comp=E,7.4nm,0.8s,mb4.5						
HWUT				epP	pP	20 58 06.0	-1.3
W13A	**Hualapai Mount**	**43.37**	**302**	⇓P	pP	20 58 08.1	+0.3
	baz=43						
LOHW	**Long Hollow**	**43.38**	**315**	eP	**P**	**20 57 40.9**	**-2.4**
	comp=E,2.3nm,0.7s,mb4.0						
LOHW				epP	pP	20 58 07.2	-0.7
ARUT	**Antelope Range**	**43.60**	**306**	P	**P**	**20 57 45.2**	**0.0**
ARUT				epP	pP	20 58 09.4	-0.3
U13A	**Pakoon Wash**	**43.70**	**304**	⇓P	pP	20 58 11.4	+0.9
	baz=44						
N15A	**Stansbury Isla**	**43.78**	**311**	⇑P	pP	20 58 10.8	-0.3
	baz=44						
DUG	**Dugway**	**43.78**	**310**	⇑P	pP	20 58 11.4	+0.3
	baz=44						
GLA	**Glamis**	**43.80**	**299**	⇑P	pP	20 58 12.8	+1.4
	baz=44						
S13A	**Holt Ranch, En**	**43.88**	**306**	⇓P	pP	20 58 11.9	0.0
	baz=44						
M15A	**Larsen Ranch,**	**43.90**	**312**	⇑P	pP	20 58 11.5	-0.6
	baz=44						
BGU	**Big Grassy Mou**	**44.16**	**311**	eP	**P**	**20 57 48.5**	**-1.0**
BGU				epP	pP	20 58 13.6	-0.5
IRM	**Iron Mountain**	**44.23**	**301**	⇑P	pP	20 58 16.2	+1.4
	baz=44						
N14A	**Grayback Hills**	**44.25**	**310**	⇑P	pP	20 58 15.4	+0.6
	baz=44						
V12A	**Nelson**	**44.27**	**303**	⇑P	pP	20 58 15.3	+0.2
	baz=44						
Q13A	**Wheeler Ranch,**	**44.34**	**308**	⇓P	pP	20 58 16.8	+1.2
	baz=44						
BC3	**Big Chuckw Mtn**	**44.41**	**300**	⇓P	pP	20 58 16.4	+0.2
	baz=44						
P13A	**Bates Ranch, G**	**44.46**	**308**	⇓P	pP	20 58 16.8	+0.2
	baz=44						
M14A	**Sheep Mountain**	**44.56**	**311**	⇓P	pP	20 58 15.8	-1.6
	baz=44						
R12A	**Pony Springs,**	**44.63**	**307**	P	pP	20 58 19.4	+1.4
	baz=45,SNR=5.3						
FCC	**Fort Churchill**	**44.65**	**342**	eP	**P**	**20 57 51.9**	**-1.3**
	comp=E,24nm,0.8s,mb5.0						
FCC				epP	pP	20 58 16.4	-1.3
EGMT	**Eagleton**	**44.71**	**321**	⇑P	pP	20 58 19.4	+1.0
	baz=45						
GMRC	**Granite Mounta**	**44.75**	**301**	⇓P	pP	20 58 19.4	+0.5
	baz=45						
K14A	**Jones Ranch, D**	**44.77**	**313**	⇓P	pP	20 58 18.6	-0.4
	baz=45						
BOZ	**Bozeman (W)**	**44.85**	**317**	eP	**P**	**20 57 54.7**	**-0.3**
	comp=E,7.0nm,1.5s,mb4.2						
BOZ				epP	pP	20 58 19.0	-0.6
BOZ	**Bozeman (W)**	**44.85**	**317**	⇑P	pP	20 58 19.6	0.0
	baz=45						
T11A	**Corn Creek, Al**	**44.86**	**305**	⇓P	pP	20 58 20.3	+0.5
	baz=45						
BELC	**Belle Mtn.**	**44.91**	**300**	⇓P	pP	20 58 20.7	+0.4
	baz=45						
Q12A	**Willow Creek R**	**44.97**	**307**	⇑P	pP	20 58 21.2	+0.5
	baz=45						
N13A	**Wendover, West**	**44.99**	**310**	⇑P	pP	20 58 20.7	-0.1
	baz=45						
M13A	**Montello**	**45.10**	**311**	⇓P	pP	20 58 21.3	-0.4
	baz=45						
MONP	**Monument Peak**	**45.11**	**299**	⇓P	pP	20 58 21.4	-0.5
	baz=45						
P12A	**McGill**	**45.13**	**308**	P	pP	20 58 22.9	+0.9
	baz=45,SNR=5.5						
L13A	**Double Diamond**	**45.16**	**312**	⇑P	pP	20 58 20.9	-1.3
	baz=45						
O12A	**Currie**	**45.22**	**309**	⇓P	pP	20 58 22.5	-0.1
	baz=45						
G15A	**Dillon**	**45.22**	**316**	⇑P	pP	20 58 22.5	-0.1
	baz=45						
S11A	**Rachel**	**45.35**	**305**	⇓P	pP	20 58 25.7	+1.9
	baz=45						
R11A	**Troy Canyon, C**	**45.38**	**306**	P	pP	20 58 24.8	+0.8
	baz=45,SNR=6.7						
F15A	**Butte**	**45.48**	**317**	⇑P	pP	20 58 24.6	-0.1
	baz=45						
Q11A	**Duckwater**	**45.55**	**307**	P	pP	20 58 25.9	+0.5
	baz=46,SNR=6.0						
TPNV	**Topopah Spring**	**45.61**	**304**	eP	**P**	**20 58 01.1**	**-0.1**
TPNV				epP	pP	20 58 24.7	-1.1
TPNV	**Topopah Spring**	**45.61**	**304**	⇑P	pP	20 58 27.4	+1.6
	baz=46						
M12A	**Wells**	**45.66**	**311**	⇓P	pP	20 58 25.7	-0.5
	baz=46						
J13A	**Cove Ranch, Pi**	**45.74**	**314**	⇓P	pP	20 58 26.6	-0.2
	baz=46						
E15A	**Deer Lodge**	**45.81**	**318**	⇑P	pP	20 58 27.1	-0.1
	baz=46						
O11A	**Cowboy Ranch,**	**45.86**	**309**	P	pP	20 58 28.2	+0.5
	baz=46,SNR=6.8						
I13A	**Wildhorse Cree**	**45.87**	**314**	⇓P	pP	20 58 27.9	+0.1
	baz=46						
G14A	**Jackson**	**45.89**	**316**	⇓P	pP	20 58 28.1	+0.2
	baz=46						
R10A	**Warm Springs**	**45.92**	**306**	P	pP	20 58 29.7	+1.5
	baz=46,SNR=9.7						
L12A	**House Creek Ra**	**45.94**	**312**	⇓P	pP	20 58 27.9	-0.5
	baz=46						
HLID	**Hailey**	**45.96**	**314**	eP	**P**	**20 58 04.1**	**+0.3**
	comp=E,3.4nm,0.9s,mb4.1						
HLID				epP	pP	20 58 27.7	-0.7
HLID	**Hailey**	**45.96**	**314**	⇑P	pP	20 58 28.6	+0.1
	baz=46						
D15A	**Lincoln**	**45.98**	**319**	⇑P	pP	20 58 28.8	+0.2
	baz=46						
FURC	**Furnace Creek,**	**46.00**	**303**	⇑P	pP	20 58 30.2	+1.3
	baz=46						
K12A	**Draper Farm, C**	**46.01**	**312**	⇑P	pP	20 58 29.0	+0.1
	baz=46						
F14A	**Wisdom**	**46.04**	**317**	P	pP	20 58 29.7	+0.6
	baz=46,SNR=5.5						
S10A	**Tonopah Range,**	**46.07**	**306**	P	pP	20 58 30.8	+1.3
	baz=46,SNR=6.2						
Q10A	**Clear Creek Ra**	**46.11**	**307**	P	pP	20 58 30.8	+1.0
	baz=46,SNR=7.3						
H13A	**Challis**	**46.18**	**315**	⇑P	pP	20 58 30.4	+0.1
	baz=46						
M11A	**Holland Ranch,**	**46.30**	**310**	⇓P	pP	20 58 31.6	+0.4
	baz=46						
BFSC	**Mount Baldy St**	**46.30**	**300**	⇑P	pP	20 58 31.1	-0.3
	baz=46						
J12A	**Stokes Ranch,**	**46.33**	**313**	⇑P	pP	20 58 31.5	+0.1
	baz=46						
P10A	**Eureka**	**46.34**	**308**	⇓P	pP	20 58 32.5	+0.9
	baz=46						
E14A	**Clinton**	**46.35**	**318**	⇑P	pP	20 58 31.4	-0.2
	baz=46						
G13A	**Cobalt**	**46.35**	**316**	⇑P	pP	20 58 31.7	+0.1
	baz=46						
MPMC	**Manual Prospec**	**46.43**	**303**	⇑P	pP	20 58 33.0	+0.6
	baz=46						
GRAC	**Grapevine Rang**	**46.50**	**304**	⇑P	pP	20 58 33.4	+0.6
	baz=46						
LRMC	**Laurel Mountai**	**46.50**	**302**	⇑P	pP	20 58 33.2	+0.2
	baz=46						
R09A	**Tonopah**	**46.50**	**306**	P	pP	20 58 34.1	+1.3
	baz=46,SNR=10						
S09A	**Goldfield**	**46.52**	**305**	⇑P	pP	20 58 33.9	+0.9
	baz=46						
O10A	**Cortez Mining,**	**46.52**	**309**	⇓P	pP	20 58 32.5	-0.6
	baz=46						
DAC	**Darwin (Calif)**	**46.55**	**303**	eP	**P**	**20 58 07.1**	**-1.5**
DAC				epP	pP	20 58 34.2	+0.8
H12A	**Diamond D Ranc**	**46.58**	**315**	⇑P	pP	20 58 33.5	+0.1
	baz=46						
D14A	**Greenough**	**46.61**	**319**	P	pP	20 58 33.8	+0.2
	baz=46,SNR=5.1						
F13A	**Darby**	**46.66**	**317**	⇑P	pP	20 58 34.1	+0.1
	baz=47						
EDW2	**Edwards Air Fo**	**46.66**	**301**	⇓P	pP	20 58 35.1	+0.9
	baz=47						
Q09A	**Carvers**	**46.71**	**307**	⇑P	pP	20 58 35.1	+0.6
	baz=47						
E13A	**Victor**	**46.80**	**317**	⇑P	pP	20 58 34.9	-0.2
	baz=47						
K11A	**Parker Ranch,**	**46.84**	**312**	⇓P	pP	20 58 34.9	-0.6
	baz=47						
LCO	**Las Campanas**	**46.86**	**182**	eP	**P**	**20 58 09.5**	**-1.4**
	comp=E,57nm,1.0s,mb5.3						
MFID	**Camas Ranch**	**46.89**	**313**	⇓P	pP	20 58 34.7	-1.2
	baz=47						
L10A	**Juniper Basin**	**46.96**	**311**	⇓P	pP	20 58 35.8	-0.6
	baz=47						
O09A	**Fish Creek Ran**	**47.01**	**308**	⇓P	pP	20 58 36.8	0.0
	baz=47						
C14A	**Swan Lake**	**47.03**	**319**	⇑P	pP	20 58 37.6	+0.7
	baz=47						
S08C	**White Mtn Res**	**47.22**	**305**	P	pP	20 58 40.1	+1.6
	baz=47,SNR=9.6						
D13A	**Huson**	**47.22**	**318**	⇓P	pP	20 58 38.1	-0.2
	baz=47						
F12A	**Elk City**	**47.25**	**316**	⇑P	pP	20 58 37.8	-0.9
	baz=47						
Q08A	**Gabbs**	**47.29**	**306**	P	pP	20 58 39.5	+0.5
	baz=47,SNR=12						
N09A	**Rock Creek Ran**	**47.42**	**309**	⇑P	pP	20 58 40.3	+0.3
	baz=47						
K10A	**MacKenzie Ranc**	**47.44**	**312**	⇑P	pP	20 58 39.5	-0.6
	baz=47						
NVAR	**Mina Array Bea**	**47.49**	**306**	P	**P**	**20 58 16.5**	**+0.7**
NVAR				pP	pP	20 58 40.8	+0.2
NVAR				ScP	ScP	21 03 27.0	-2.0
NVAR	**Mina Array Bea**	**47.49**	**306**	P	**P**	**20 58 16.5**	**+0.7**
	comp=E,0.8nm,0.6s,mb3.6,baz=95,slow=7.2,SNR=6.9						
NVAR				pP	pP	20 58 40.8	+0.2
	comp=E,11nm,0.9s,baz=183,slow=5.4,SNR=24						
NVAR				ScP	ScP	21 03 27.0	-2.0
	comp=E,3.1nm,1.1s,baz=118,slow=6.2,SNR=5.8						
MTUM	**Tungsten Hills**	**47.50**	**304**	P	**P**	**20 58 15.7**	**-0.2**
MTUM				epP	pP	20 58 40.8	+0.1
M09A	**Marrel Ranch,**	**47.50**	**310**	⇑P	pP	20 58 40.6	-0.1
	baz=47						
C13A	**Hot Springs**	**47.51**	**319**	⇑P	pP	20 58 41.0	+0.4
	baz=47						
B13A	**Whitefish**	**47.71**	**320**	⇑P	pP	20 58 42.3	0.0
	baz=48						
HELL	**Mitchell Peak,**	**47.75**	**303**	⇑P	pP	20 58 43.5	+0.8
	baz=48						
D12A	**Red Ives Fores**	**47.77**	**318**	⇑P	pP	20 58 40.6	-2.1
	baz=48						
G11A	**Walters Elk Ra**	**47.80**	**315**	⇓P	pP	20 58 42.7	-0.3
	baz=48						
N08A	**GE Springer Mi**	**47.85**	**309**	P	pP	20 58 43.5	+0.1
	baz=48,SNR=6.1						
H10A	**Noah's Angus R**	**47.88**	**314**	⇓P	pP	20 58 42.3	-1.3
	baz=48						
F11A	**Grangeville**	**47.89**	**316**	⇓P	pP	20 58 42.7	-0.9
	baz=48						
A13A	**Flathead Natio**	**47.90**	**321**	⇓P	pP	20 58 43.7	0.0
	baz=48						
R07C	**Lee Vining**	**48.00**	**305**	P	pP	20 58 45.8	+1.2
	baz=48,SNR=6.1						
K09A	**Rome**	**48.02**	**312**	⇓P	pP	20 58 45.6	+0.8
	baz=48						
E11A	**Bogner Ranch,**	**48.08**	**317**	⇓P	pP	20 58 44.8	-0.3

	baz=48						
KCC	Kaiser Creek	48.09	304	⇓P	pP	20 58 45.2	-0.2
	baz=48						
PKM	Peak Mountain	48.15	301	⇑P	pP	20 58 46.6	+0.7
	baz=48						
M08A	Happy Creek Ra	48.18	310	P	pP	20 58 46.7	+0.7
	baz=48,SNR=5.5						
J09A	Fry Pan Ranch,	48.22	312	⇓P	pP	20 58 45.8	-0.4
	baz=48						
O07A	Toulon	48.27	308	P	pP	20 58 46.7	0.0
	baz=48,SNR=9.2						
R06C	Coleville	48.39	306	P	pP	20 58 49.5	+1.8
	baz=48,SNR=5.7						
N07B	Gerlach	48.47	309	P	pP	20 58 48.1	-0.1
	baz=48,SNR=6.2						
H09A	Durkee	48.52	314	⇓P	pP	20 58 47.3	-1.3
	baz=48						
K08A	Mann Creek Ran	48.57	311	⇑P	pP	20 58 48.9	-0.1
	baz=48						
S06C	San Francisco	48.59	305	P	pP	20 58 50.0	+0.8
	baz=48,SNR=5.6						
F10A	Beach Ranch, E	48.62	316	⇑P	pP	20 58 48.4	-1.0
	baz=48						
A12A	Yaak River Ran	48.65	320	⇑P	pP	20 58 49.5	0.0
	baz=49						
E10A	Myers Farm, Un	48.71	317	⇑P	pP	20 58 49.6	-0.4
	baz=49						
J08A	Circle Bar Ran	48.72	312	⇑P	pP	20 58 49.1	-1.1
	baz=49						
M07A	Soldier Meadow	48.75	310	P	pP	20 58 51.0	+0.6
	baz=49,SNR=5.8						
G09A	Cove	48.78	315	⇑P	pP	20 58 50.8	+0.2
	baz=49						
PKD	Parkfield	48.87	302	⇓P	pP	20 58 46.9	-4.5
	baz=49						
R05C	Kirkwood Meado	48.90	306	P	pP	20 58 52.8	+1.2
	baz=49,SNR=16						
B11A	Sandpoint	48.91	319	⇓P	pP	20 58 51.4	-0.1
	baz=49						
F09A	S2 Ranch, Elgi	49.00	315	⇓P	pP	20 58 51.2	-1.0
	baz=49						
D10A	Wagner Farm, O	49.01	317	⇓P	pP	20 58 51.3	-1.0
	baz=49						
L07A	Adell	49.02	310	P	pP	20 58 52.5	+0.1
	baz=49,SNR=6.6						
CMB	Columbia Colle	49.03	305	⇑P	pP	20 58 52.4	-0.2
	baz=49						
N06A	Buffalo Meadow	49.10	309	P	pP	20 58 52.9	-0.3
	baz=49,SNR=6.2						
K07A	Rock Creek Ran	49.11	311	⇓P	pP	20 58 52.9	-0.2
	baz=49						
H08A	Prairie City	49.17	314	⇑P	pP	20 58 53.4	-0.2
	baz=49						
NEW	Newport	49.32	319	eP	P	20 58 28.4	-1.3
	comp=E,5.7nm,1.0s,mb4.5						
NEW				epP	pP	20 58 53.8	-0.9
BEKR	Beckwourth	49.33	307	⇑P	pP	20 58 54.3	-0.6
	baz=49						
B10A	Chitwood Farm,	49.40	319	⇓P	pP	20 58 55.1	-0.1
	baz=49						
E09A	Wood Farm, Sta	49.40	316	⇓P	pP	20 58 54.6	-0.8
	baz=49						
P05C	Yuba Gap, Truc	49.41	307	⇑P	pP	20 58 56.2	+0.7
	baz=49						
LAVA	Lava Cap Winer	49.42	306	P	pP	20 58 56.0	+0.4
	baz=49,SNR=7.4						
G08A	Pilot Rock	49.58	315	⇓P	pP	20 58 55.9	-0.8
	baz=50						
PACP	Pacheco Peak	49.60	303	⇓P	pP	20 58 58.2	+1.2
	baz=50						
F08A	Pendleton	49.60	315	⇓P	pP	20 58 56.7	-0.2
	baz=50						
I07A	Izee	49.63	313	⇑P	pP	20 58 56.6	-0.5
	baz=50						
M06C	Likely Place G	49.67	309	P	pP	20 58 57.5	-0.1
	baz=50,SNR=9.1						
D09A	Jones Farm, Ri	49.68	317	⇑P	pP	20 58 56.4	-1.1
	baz=50						
MOD	Modoc	49.69	310	⇓P	pP	20 58 55.9	-1.8
	baz=50						
H07A	Lands Inn, Kim	49.81	314	⇓P	pP	20 58 58.0	-0.5
	baz=50						
B09A	Rice	50.02	319	⇑P	pP	20 58 58.9	-1.1
	baz=50						
YKA	Yellowknife Ar	54.48	336	P	P	20 59 06.3	-1.4
YKA				pP	pP	20 59 31.7	-1.5
YKA				ScP	ScP	21 03 57.4	-1.2
YKA	Yellowknife Ar	54.48	336	P	P	20 59 06.3	-1.4
	comp=E,1.7nm,0.6s,mb4.3,baz=114,slow=7.2,SNR=27						
YKA				pP	pP	20 59 31.7	-1.5
	comp=E,17nm,0.7s,baz=113,slow=7.2,SNR=35						
YKA				ScP	ScP	21 03 57.4	-1.2
	comp=E,0.9nm,0.8s,baz=108,slow=4.8,SNR=7.6						
EVO	Evora	56.22	55	eP	P	20 59 21.6	+0.9
	comp=E,19nm,0.8s,mb5.2						
PBDV	Barranco-do-Ve	56.22	57	eP	P	20 59 22.6	+1.9
PBEJ	Beja	56.31	56	eP	P	20 59 22.6	+1.3
	comp=E,24nm,1.7s,mb5.0						
PVAQ	Vaqueiros	56.40	57	eP	P	20 59 23.6	+1.6
ELOB	Lobios	56.44	51	P	P	20 59 22.5	+0.4
	comp=E,6.0nm,0.5s,mb4.9						
PVIS	Viseu	56.46	53	eP	P	20 59 23.0	+0.7
PESTR	Estremoz	56.57	55	eP	P	20 59 24.3	+1.2
	comp=E,24nm,1.2s,mb5.1						
EGRO	El Granado	56.59	57	P	P	20 59 23.8	+0.5
	comp=E,18nm,0.8s,mb5.1						
PVRL	Vila Real	56.64	52	eP	P	20 59 24.4	+0.8
	comp=E,48nm,1.3s,mb5.4						
MTE	Manteigas	56.70	53	eP	P	20 59 24.7	+0.7
	comp=E,34nm,1.9s,mb5.0						
PCBR	Castelo Branco	56.72	54	eP	P	20 59 24.9	+0.8
	comp=E,32nm,1.3s,mb5.2						
PBAR	Barrancos	56.97	56	eP	P	20 59 27.1	+1.1
	comp=E,31nm,2.3s,mb4.9						
MVO	Moncorvo	57.15	52	eP	P	20 59 27.9	+0.7
	comp=E,19nm,0.9s,mb5.1						
EMIN	Mina Concepcio	57.24	56	P	P	20 59 28.3	+0.4
	comp=E,5.0nm,0.7s,mb4.7						
EPON	Pontenova	57.25	50	P	P	20 59 27.6	-0.3
	comp=E,14nm,0.7s,mb5.1						
ECAL	Calabor	57.43	51	P	P	20 59 28.9	-0.3
	comp=E,8.5nm,0.7s,mb4.9						
ESPR	Espera	57.87	57	P	P	20 59 33.1	+0.8
	comp=E,12nm,1.0s,mb4.9						
EMIJ	Mijas	58.74	58	P	P	20 59 38.9	+0.5
	comp=E,4.6nm,0.6s,mb4.7						
GUD	Guadarrama	59.30	53	P	P	20 59 42.7	+0.6
	comp=E,12nm,0.6s,mb5.1						
ESDC	Sonseca Array	59.41	54	P	P	20 59 43.8	+0.8
	comp=E,15nm,0.6s,mb5.2						
ESDC	Sonseca Array	59.41	54	P	P	20 59 43.5	+0.6
	comp=E,11nm,0.7s,mb5.0,baz=271,slow=7.2,SNR=49						
ESDC				pP	pP	21 00 08.5	-0.3
	comp=E,4.0nm,0.7s,baz=270,slow=7.0,SNR=4.3						
ESDC				sP	sP	21 00 17.7	-2.7
	comp=E,2.9nm,0.6s,baz=272,slow=7.1,SNR=2.8						
ERON	Agron	59.52	57	P	P	20 59 45.3	+1.6
	comp=E,10nm,0.7s,mb5.0						
EBAN	Banos Encina	59.53	56	P	P	20 59 44.8	+1.0
	comp=E,12nm,0.6s,mb5.1						
ECOG	Cogollos-Vega	59.71	57	P	P	20 59 45.8	+0.7
	comp=E,9.1nm,0.6s,mb5.0						
EQES	Quesada	60.10	56	P	P	20 59 47.8	+0.1
	comp=E,2.2nm,0.5s,mb4.4						
EBER	Berja	60.25	57	P	P	20 59 49.6	+0.9
	comp=E,8.9nm,0.5s,mb5.0						
ROSF	Rostrenen	60.45	44	eP	P	20 59 50.1	+0.2
QUIF	Quistinic	60.48	45	eP	P	20 59 50.2	+0.1
	comp=E,14nm,0.6s,mb4.8						
QUIF	Quistinic	60.48	45	eP	P	20 59 50.2	+0.1
	comp=E,7.1nm,0.6s,mb4.9						
ENIJ	Nijar	60.80	57	P	P	20 59 53.3	+0.9
	comp=E,13nm,0.6s,mb5.1						
ETOR	Torete	60.90	53	P	P	20 59 53.5	+0.4
	comp=E,8.7nm,0.8s,mb4.8						
EMUR	La Murta	61.55	56	P	P	20 59 57.7	+0.2
	comp=E,10nm,0.6s,mb5.0						
SJPF	Ste Jean	61.56	50	eP	P	20 59 58.2	+0.7
	comp=E,65nm,1.0s,mb5.3						
SJPF	Ste Jean	61.56	50	eP	P	20 59 58.2	+0.7
	comp=E,32nm,1.0s,mb5.3						
ETSF	Etsaut	62.04	51	eP	P	21 00 01.4	+0.7
	comp=E,13nm,0.8s,mb4.7						
ETSF	Etsaut	62.04	51	eP	P	21 00 01.4	+0.7
	comp=E,6.4nm,0.8s,mb4.7						
GRR	Gorron	62.06	44	eP	P	21 00 00.7	0.0
	comp=E,34nm,0.8s,mb5.1						
GRR	Gorron	62.06	44	eP	P	21 00 00.7	0.0
	comp=E,17nm,0.8s,mb5.1						
EMOS	Mosqueruela	62.10	53	P	P	21 00 02.9	+1.8
	comp=E,16nm,0.7s,mb5.2						
EBEN	Beniarda	62.32	55	P	P	21 00 04.2	+1.5
	comp=E,19nm,0.9s,mb5.1						
FLN	La Foliniere	62.34	44	eP	P	21 00 02.6	0.0
	comp=E,12nm,0.5s,mb4.9						
FLN	La Foliniere	62.34	44	eP	P	21 00 02.6	0.0
	comp=E,6.2nm,0.5s,mb4.9						
MFF	Saint Martin d	62.44	46	eP	P	21 00 03.6	+0.3
	comp=E,32nm,0.5s,mb5.3						
MFF				epP	pP	21 00 28.9	-0.4
MFF	Saint Martin d	62.44	46	eP	P	21 00 03.6	+0.3
	comp=E,16nm,0.5s,mb5.3						
MFF				epP	pP	21 00 28.9	-0.4
EBIE	Bielsa	62.55	51	P	P	21 00 05.5	+1.4
	comp=E,7.9nm,0.7s,mb4.8						
LDF	La Druitiere	62.56	44	eP	P	21 00 04.1	0.0
	comp=E,30nm,0.7s,mb5.0						
LDF				epP	pP	21 00 29.5	-0.6
LDF	La Druitiere	62.56	44	eP	P	21 00 04.1	0.0
	comp=E,15nm,0.7s,mb5.0						
LDF				epP	pP	21 00 29.5	-0.6
EPF	Esparros	62.70	50	eP	P	21 00 05.9	+0.8
	comp=E,55nm,0.8s,mb5.3						
EPF	Esparros	62.70	50	eP	P	21 00 05.9	+0.8
	comp=E,28nm,0.8s,mb5.2						
ERTA	Horta de San J	62.70	53	P	P	21 00 06.1	+0.9
	comp=E,20nm,0.7s,mb5.2						
LFF	La Frestale	63.01	48	eP	P	21 00 07.2	+0.1
	comp=E,33nm,0.7s,mb5.1						
LFF	La Frestale	63.01	48	eP	P	21 00 07.2	+0.1
	comp=E,16nm,0.7s,mb5.1						
DBIC	Dimbokro	63.18	92	P	P	21 00 08.1	-0.7
DBIC				sP	sP	21 00 43.9	-2.5
DBIC	Dimbokro	63.18	92	P	P	21 00 08.1	-0.7
	comp=E,3.8nm,0.8s,mb4.4,baz=231,slow=1.4,SNR=5.6						
DBIC				sP	sP	21 00 43.9	-2.5
	comp=E,2.3nm,0.5s,baz=266,slow=3.3,SNR=1.7						
EPOB	Poblet	63.26	52	P	P	21 00 08.3	-0.5
	comp=E,6.8nm,0.8s,mb4.6						
RJF	Les Rejaudoux	63.57	48	eP	P	21 00 10.6	-0.2
	comp=E,23nm,0.7s,mb4.8						
RJF				epP	pP	21 00 37.5	+0.6
RJF	Les Rejaudoux	63.57	48	eP	P	21 00 10.6	-0.2
	comp=E,11nm,0.7s,mb4.8						
RJF				epP	pP	21 00 37.5	+0.6
DAG	Danmarks Havn	63.85	11	⇓iP	P	21 00 12.0	-0.1
	comp=E,11nm,0.6s,mb4.8						
CAF	Calviac	63.95	48	eP	P	21 00 13.4	+0.1
	comp=E,20nm,0.7s,mb4.8						
CAF	Calviac	63.95	48	eP	P	21 00 13.4	+0.1
	comp=E,10nm,0.7s,mb4.8						
TCF	Toulx Ste Croi	64.06	47	eP	P	21 00 13.9	-0.1
	comp=E,32nm,1.0s,mb4.8						
TCF				epP	pP	21 00 39.3	-0.9
TCF	Toulx Ste Croi	64.06	47	eP	P	21 00 13.9	-0.1
	comp=E,16nm,1.0s,mb4.8						
TCF				epP	pP	21 00 39.3	-0.9
INK	Inuvik	64.07	338	eP	P	21 00 12.3	-1.4
	comp=E,1μm,1.5s						
INK				epP	pP	21 00 37.8	-2.0
MTLF	Montolieu	64.07	50	eP	P	21 00 14.2	0.0
	comp=E,41nm,0.8s,mb5.0						
MTLF	Montolieu	64.07	50	eP	P	21 00 14.2	0.0
	comp=E,21nm,0.8s,mb5.0						
BGF	Bois d'Agland	64.50	47	eP	P	21 00 16.6	-0.3
	comp=E,16nm,0.7s,mb4.7						
BGF	Bois d'Agland	64.50	47	eP	P	21 00 16.6	-0.3
	comp=E,8.3nm,0.7s,mb4.7						
EJON	La Jonquera	64.59	51	P	P	21 00 17.6	+0.1
	comp=E,17nm,0.8s,mb4.9						
AVF	Avril sur Loir	64.85	46	eP	P	21 00 18.6	-0.6
	comp=E,24nm,0.9s,mb4.7						
AVF	Avril sur Loir	64.85	46	eP	P	21 00 18.6	-0.6
	comp=E,12nm,0.9s,mb4.7						
SSF	Saint Saulge	64.96	46	eP	P	21 00 19.2	-0.7
SMF	Signal de Mont	65.19	46	eP	P	21 00 21.0	-0.4
	comp=E,18nm,0.7s,mb4.7						
SMF				epP	pP	21 00 46.6	-1.0
SMF	Signal de Mont	65.19	46	eP	P	21 00 21.0	-0.4
	comp=E,8.8nm,0.7s,mb4.7						
SMF				epP	pP	21 00 46.6	-1.0
LOR	Lormes	65.20	46	eP	P	21 00 21.0	-0.4
	comp=E,25nm,0.6s,mb4.9						
LOR				epP	pP	21 00 46.0	-1.6
LOR	Lormes	65.20	46	eP	P	21 00 21.0	-0.4
	comp=E,12nm,0.6s,mb4.9						
LOR				epP	pP	21 00 46.0	-1.6
LASF	Ste Croix	65.25	49	eP	P	21 00 22.3	+0.5
	comp=E,42nm,1.2s,mb4.8						
VIVF	Saint-Julien-l	65.81	48	eP	P	21 00 26.1	+0.7
	comp=E,27nm,0.8s,mb4.8						
VIVF	Saint-Julien-l	65.81	48	eP	P	21 00 26.1	+0.7
	comp=E,13nm,0.8s,mb4.8						
GIVF	Givet	65.85	43	eP	P	21 00 25.2	-0.3
MEZF	Maizieres J'vi	66.00	44	eP	P	21 00 26.5	0.0
	comp=E,47nm,0.6s,mb5.2						
MEZF				epP	pP	21 00 52.1	-0.7
MEZF	Maizieres J'vi	66.00	44	eP	P	21 00 26.5	0.0
	comp=E,47nm,0.6s,mb5.5						
MEZF				epP	pP	21 00 52.1	-0.7
BCLA	Clavier	66.16	42	P	P	21 00 28.6	+1.1
MEM	Membach	66.61	42	P	P	21 00 31.1	+0.8
ORIF	Oris-en-Rattie	66.66	48	eP	P	21 00 31.7	+0.9
	comp=E,22nm,1.1s,mb4.6						
ORIF	Oris-en-Rattie	66.66	48	eP	P	21 00 31.7	+0.9
	comp=E,11nm,1.0s,mb4.6						
WLF	Walferdange	66.71	43	P	P	21 00 31.7	+0.7
	comp=Z,9.8nm,2.4s,mb4.2						
CABF	La Chapelle	66.74	46	eP	P	21 00 31.2	-0.1
HAU	Haudompre	66.87	45	eP	P	21 00 31.6	-0.5
HINF	Hinteralfeld	67.22	45	eP	P	21 00 33.6	-0.7
	comp=Z,8.3nm,0.6s,mb4.4						
HINF	Hinteralfeld	67.22	45	eP	P	21 00 33.6	-0.7
	comp=Z,4.2nm,0.6s,mb4.5						
LPL	La Plagne	67.23	48	eP	P	21 00 35.1	+0.7
	comp=Z,20nm,0.7s,mb4.7						
LPL	La Plagne	67.23	48	eP	P	21 00 35.1	+0.7
	comp=Z,9.8nm,0.7s,mb4.8						
LPG	La Plagne	67.25	48	eP	P	21 00 35.3	+0.8
	comp=Z,19nm,0.8s,mb4.7						
LPG	La Plagne	67.25	48	eP	P	21 00 35.3	+0.8
	comp=Z,9.5nm,0.8s,mb4.7						
FRF	La Foret Royal	67.29	50	eP	P	21 00 34.6	-0.2
MBDF	Montbardon	67.31	48	eP	P	21 00 35.6	+0.7
	comp=Z,22nm,0.9s,mb4.7						
MBDF	Montbardon	67.31	48	eP	P	21 00 35.6	+0.7
	comp=Z,11nm,0.9s,mb4.7						
CDF	Champ du Feu	67.48	44	eP	P	21 00 35.5	-0.4
	comp=Z,6.6nm,0.6s,mb4.3						
CDF				epP	pP	21 01 01.2	-1.1
CDF	Champ du Feu	67.48	44	eP	P	21 00 35.5	-0.4
	comp=Z,3.3nm,0.6s,mb4.3						
CDF				epP	pP	21 01 01.2	-1.1
TORD	Torodi Ar. Bea	67.68	83	P	P	21 00 36.9	-0.9
	comp=Z,4.7nm,0.7s,mb4.4,baz=295,slow=6.7,SNR=38						
TORD				pP	pP	21 01 04.9	+0.8
	comp=Z,3.3nm,0.7s,baz=290,slow=6.9,SNR=3.3						
TORD				sP	sP	21 01 14.5	-1.2
	comp=Z,2.5nm,0.7s,baz=284,slow=6.5,SNR=2.2						
SBF	Sospel	67.84	49	eP	P	21 00 38.2	-0.1
	comp=Z,30nm,0.8s,mb4.9						
SBF	Sospel	67.84	49	eP	P	21 00 38.2	-0.1
	comp=Z,15nm,0.8s,mb4.9						
PGF	Pioggiola	69.09	51	eP	P	21 00 45.8	-0.3
	comp=Z,19nm,0.8s,mb4.7						
PGF	Pioggiola	69.09	51	eP	P	21 00 45.8	-0.3
	comp=Z,9.5nm,0.8s,mb4.7						
NB2	NORSAR Subarra	69.50	31	P	P	21 00 48.7	+0.4
	comp=Z,4.2nm,0.7s,mb4.4,baz=271,slow=6.2						
NOA	NORSAR Array B	69.50	31	P	P	21 00 49.0	+0.7
NOA				pP	pP	21 01 14.7	-0.1
NOA	NORSAR Array B	69.50	31	P	P	21 00 49.0	+0.7
	comp=Z,4.0nm,0.7s,mb4.3,baz=271,slow=6.3,SNR=12						
NOA				pP	pP	21 01 14.7	-0.1
	comp=Z,2.1nm,0.7s,baz=270,slow=6.4,SNR=3.9						
MCK	McKinley	69.60	332	eP	P	21 00 47.9	-1.0
	comp=Z,6.3nm,1.1s,mb4.4						
MCK				epP	pP	21 01 14.0	-1.3
GRA1	Grafenberg Arr	70.00	43	eP	P	21 00 51.4	-0.1
	comp=Z,111nm,2.6s,mb5.2						
GRF	Grafenberg Arr	70.00	43	eP	P	21 00 51.4	-0.1
	comp=Z,111nm,2.6s,mb5.2						
KEST	Kesra	70.19	58	P	P	21 00 53.1	+0.2
	comp=Z,8.1nm,1.0s,mb4.5,baz=201,slow=4.2,SNR=8.8						
CLL	Collm	70.99	41	iP	P	21 00 57.8	+0.3
CLL				epP	pP	21 01 24.0	-0.1
CLL	Collm	70.99	41	iP	P	21 00 57.8	+0.3
CLL				epP	pP	21 01 24.0	-0.1
CLL				ePP	PP	21 03 33.0	-2.9
IMA2	Indian Mountai	71.58	335	eP	P	21 00 59.2	-1.6
IMA2				epP	pP	21 01 26.3	-1.1
KHC	Kasperske Hory	71.58	43	eP	P	21 01 01.3	+0.2
KHC				epP	pP	21 01 27.0	-0.8
BRG	Berggiesshubel	71.62	41	iP	P	21 01 01.7	+0.4
	comp=Z,6.7nm,0.7s,mb4.6						
BRG				e		21 01 09.8	
	comp=Z,6.8nm,1.3s						
GERES	GERESS Array B	71.69	44	P	P	21 01 01.1	-0.7
	comp=Z,3.5nm,0.8s,mb4.2,baz=277,slow=2.2,SNR=22						
PVCC	Panska Ves	72.06	42	eP	P	21 01 04.4	+0.4
PRU	Pruhonice	72.10	42	eP	P	21 01 04.8	+0.6
TREC	Trest	72.80	43	eP	P	21 01 07.3	-1.1
UPC	Upice	72.97	42	eP	P	21 01 09.6	+0.2
LEGS	Legarje	73.17	46	eSg	S	21 10 27.1	-3.1
DPC	Dobruska-Polom	73.19	42	eP	P	21 01 10.8	+0.1
DPC				epP	pP	21 01 36.5	-0.9
ZST	Bratislava	74.02	44	eP	P	21 01 16.2	+0.6
	comp=Z,9.2nm,1.0s,mb4.5						
ARCES	ARCESS Array B	74.69	21	P	P	21 01 19.1	0.0
	comp=Z,7.7nm,0.7s,mb4.6,baz=282,slow=4.5,SNR=52						
ARCES				pP	pP	21 01 46.7	+0.8
	comp=Z,5.2nm,0.6s,baz=283,slow=4.5,SNR=5.8						
KOLL	Kolacno	74.81	43	eP	P	21 01 21.5	+1.3
VYHS	Vyhne	75.11	43	eP	P	21 01 22.6	+0.7
	comp=Z,4.2nm,1.0s,mb4.1						
PKSM	Moragy	75.41	46	⇓P	P	21 01 24.0	+0.4
PKSM	Moragy	75.41	46	⇓iP	P	21 01 24.0	+0.4
KECS	Kecovo	76.19	43	eP	P	21 01 29.0	+1.0
	comp=Z,2.0nm,0.8s,mb3.9						
KECS				e	pP	21 01 54.6	-0.3
KECS	Kecovo	76.19	43	eP	P	21 01 29.0	+1.0
KECS				epP	pP	21 01 54.6	-0.3
STHS	Stebnicka Huta	76.49	42	eP	P	21 01 31.5	+1.8
	comp=Z,5.6nm,0.9s,mb4.3						
STHS				e	pP	21 01 57.2	+0.6
STHS				ePP	PP	21 04 20.0	-2.7
STHS	Stebnicka Huta	76.49	42	eP	P	21 01 31.5	+1.8
STHS				epP	pP	21 01 57.2	+0.6
STHS				ePP	PP	21 04 20.0	-2.7
KAF	Kangasniemi	76.54	29	ep	P	21 01 29.1	-0.6
	comp=Z,5.9nm,0.5s,mb4.6,baz=283,slow=5.1						
FINES	FINESS Array B	76.58	29	P	P	21 01 30.3	+0.3
	comp=Z,12nm,0.7s,mb4.8,baz=264,slow=3.7,SNR=85						
FINES				pP	pP	21 01 57.0	+0.2
	comp=Z,3.0nm,0.6s,baz=252,slow=3.8,SNR=3.6						
KOLS	Kolonicke sedl	77.25	43	eP	P	21 01 35.4	+1.4
KWP	Kalwaria	77.37	42	eP	P	21 01 36.3	+1.7
	comp=Z,18nm,1.0s,mb4.8						
KWP	Kalwaria	77.37	42	⇑iP	P	21 01 36.5	+1.8
BZS	Buzias	77.56	46	⇑P	P	21 01 36.7	+0.9
BZS	Buzias	77.56	46	⇑iP	P	21 01 36.7	+0.9
DRGR		78.03	45	⇑P	P	21 01 39.1	+0.8
DRGR		78.03	45	⇑iP	P	21 01 39.1	+0.7
JOF	Joensuu	78.57	27	ep	P	21 01 40.0	-1.0
	comp=Z,13nm,0.6s,mb4.9						
MLR	Muntele Rosu	80.53	45	⇑P	P	21 01 53.7	+1.7
MLR	Muntele Rosu	80.53	45	⇑iP	P	21 01 53.7	+1.7
AKASG	Malin Array Be	81.13	40	P	P	21 01 54.9	-0.2
	comp=Z,4.5nm,0.7s,mb4.4,baz=282,slow=4.4,SNR=14						
AKASG				pP	pP	21 02 21.3	-1.0
	comp=Z,0.6nm,0.6s,baz=280,slow=4.0,SNR=2.1						
OBN	Obninsk	83.80	34	eP	P	21 02 09.2	+0.4
	comp=Z,17nm,0.6s,mb5.0						
OBN				epP	pP	21 02 36.0	-0.2
BILL	Bilibino	85.36	342	eP	P	21 02 16.6	+0.2
	comp=Z,24nm,1.4s,mb4.9						
BILL				epP	pP	21 02 43.0	-0.9
BRTR	Keskin Array B	87.77	49	P	P	21 02 29.1	+0.4
	comp=Z,5.2nm,0.8s,mb4.6,baz=276,slow=3.3,SNR=30						
BRTR				pP	pP	21 02 56.3	0.0
	comp=Z,5.3nm,0.9s,baz=270,slow=3.2,SNR=8.4						
WMQ	Urumqi	114.73	19	PKP	PKiKP	21 08 19.9	+0.3
WMQ				PP	PP	21 09 24.2	+6.6
WMQ				PP	PP		
	comp=Z,638nm,7.5s						
HHC	Hu-ho-hao-te	121.37	360	ePKP	PKPdf	21 08 30.3	-2.2
HHC				XPKP		21 09 06.8	
HHC				PP	PP	21 10 05.3	+1.9
HHC				PKS		21 12 05.2	
HHC				SKS	SKSdf	21 15 30.4	-4.6
HHC				SKKS	SKKSac	21 16 45.9	-8.3
HHC				PP	PP		
	comp=Z,100nm,9.3s						
NJ2	Nanjing	129.62	352	ePKP	PKPdf	21 08 50.1	+1.5
CD2	Chengdu	130.76	8	ePKP	PKPdf	21 08 49.4	-1.3
GYA	Guiyang	135.50	6	ePDIF	Pdif	21 06 02.8	+0.4
GYA				PKP	PKPdf	21 09 00.2	+0.4
GYA				XPKP		21 09 37.5	
GYA				PP	PP	21 11 40.4	+4.4
GYA				PP	PP		
	comp=Z,110nm,8.4s						
KMI	Kunming	136.26	11	PKP	PKPdf	21 09 03.2	+2.0
KMI				XPKP		21 09 38.2	
KMI				PP	PP	21 11 46.6	+5.7
CTA	Charters Tower	146.89	261	eP	PKPdf	21 09 19.4	-0.8
	comp=Z,2.2nm,0.5s						
CTAO	Charters Tower	146.89	261	ePKPdf	PKPdf	21 09 19.4	-0.8
STKA	Stephens Creek	149.37	238	eP	PKPdf	21 09 22.7	-1.3
	comp=Z,6.9nm,0.7s						
STKA	Stephens Creek	149.37	238	PKPbc	PKPbc	21 09 26.6	-1.9
	comp=Z,8.0nm,0.7s,baz=360,slow=2.5,SNR=18						
STKA				pPKPbc	pPKPbc	21 09 55.7	-1.5
	comp=Z,3.5nm,0.8s,baz=58,slow=6.5,SNR=1.5						
WB2	Warramunga Arr	158.07	261	eP	PKPdf	21 09 44.9	+8.3
WRA	Warramunga Arr	158.09	261	PKP	PKPdf	21 09 35.0	-1.6
	comp=Z,1.3nm,0.9s,baz=95,slow=1.2,SNR=9.0						
WRA				PKPab	PKPab	21 10 08.3	-2.4
	comp=Z,1.7nm,0.7s,baz=88,slow=3.9,SNR=7.0						
ASAR	Alice Springs	158.12	251	PKP	PKPdf	21 09 34.3	-2.3
	comp=Z,0.9nm,0.9s,baz=86,slow=1.8,SNR=6.2						
ASAR				PKPab	PKPab	21 10 08.8	-2.0
	comp=Z,2.9nm,0.9s,baz=112,slow=4.2,SNR=12						
ASAR				pPKPab	pPKPab	21 10 35.4	-3.2
	comp=Z,1.2nm,0.9s,baz=103,slow=4.2,SNR=2.8						

BGS **09** *21:01:05.0, 9.48N×92.16W, h226km, mb5.1*

ISCJB **09** *21:01:37.0±0.1, 13.31N±0.02×87.37W±0.02, h228km, mb5.1/229, Error ellipse: s-maj=3.2km s-min=1.6km az=38.8*

CASC **09** *21:01:36.6±2.8, 13.07N×87.64W, h222km±7km, MD4.8, ML5.2, mb5.2(NEIC)*

MOS **09** *21:01:37.0±0.9, 13.25N×87.49W, h224km, mb5.3/75, Error ellipse: s-maj=11.9km s-min=5.1km az=109.7*

GCMT **09** *21:01:37.8±0.2, 13.25N×87.59W, h217km±1km, MW5.5/102, Moment Tensor Solution. s82,c130; s102,c227; Duration: 1.4 Moment tensor: Scale 10^{17}Nm; Mrr0.40±.03; Mθθ-0.66±.04; Mφφ0.25±.04; Mrθ1.94±.03; Mθφ-0.05±.04; Mφr-1.65±.03; Best double couple: M0 2.60700×10^{17} NP1:φs238.00000°, δ11.00000°, λ20.00000°. NP2:φs129.00000°, δ86.00000°, λ100.00000°. Principal axes: T 2.6840, Plg48.0000°, Azm50.0000°; N -0.1530, Plg10.0000°, Azm308.0000°; P -2.5310, Plg40.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI **09** *21:01:37.8, 13.30N×87.40W, h226km, mB5.4*

NEIC **09** *21:01:37.8±0.1, 13.26N×87.39W, mb5.2/186, MW5.6, Error ellipse: s-maj=4.4km s-min=2.8km az=45.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{17}Nm; Mrr0.94; Mθθ-0.66; Mφφ-0.28; Mrθ2.25; Mθφ1.22; Mφr-2.27; Best double couple: M0 3.50000×10^{17} NP1:φs298.00000°, δ12.00000°, λ72.00000°. NP2:φs136.00000°, δ79.00000°, λ94.00000°. Principal axes: T 3.0800, Plg56.0000°, Azm50.0000°; N 0.7500, Plg4.0000°, Azm315.0000°; P -3.8300, Plg34.0000°, Azm223.0000°;*

NEIC Felt [III] at San Salvador; felt at Antiguo Cuscatlan, El Salvador.

IDC **09** *21:01:38.8±0.4, 13.38N×87.33W, h230km±3km, mb4.6/23, mb1 4.7/25, mb1mx4.7/26, mbtmp4.6/25 Error ellipse: s-maj=10.4km s-min=6.0km az=60.0*

SZGRF **09** *21:01:43.9, 13.38N×85.70W, h229km, mb5.4, Nicaragua*

ISC 09 21:01:38.3±0.1, **13.26N**±0.02×**87.35W**±0.02, **h229**km,

h229km±.7km: pP-P, n993, σ0.95/934, mb5.1/229, 166C-94D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.47**	**273**	⇑iP	x	21 02 33.7	
CNCH				eS	x	21 02 56.2	
CRIN	**San Cristobal**	**0.63**	**152**	⇑eP	**Pn**	**21 02 07.9**	**-1.5**
CRIN				eS	**S**	**21 02 30.9**	**-2.7**
TGUH	**Tegucigalpa,Un**	**0.80**	**6**	⇓iPn	**Pn**	**21 02 08.9**	**-1.2**
TGUH				eS	**S**	**21 02 35.1**	**+0.1**
TGUH	**Tegucigalpa,Un**	**0.80**	**6**	⇓iP	**Pn**	**21 02 08.9**	**-1.1**
TGUH				eP		21 02 08.5	
TGUH				eS	**S**	**21 02 31.6**	**-3.4**
TELN	**Telica**	**0.82**	**142**	⇑eP	**Pn**	**21 02 09.1**	**-1.1**
TEL3	**Telica 3**	**0.84**	**144**	⇑eP	**Pn**	**21 02 08.8**	**-1.4**
LEON	**Leon**	**0.95**	**152**	⇑iP	**Pn**	**21 02 09.0**	**-1.9**
CAHU	**Cacacuatique**	**0.98**	**302**	⇑iP	x	21 02 36.3	
CAHU				eS	x	21 03 02.5	
CNGN	**Cerro Negro**	**0.98**	**140**	⇑eP	**Pn**	**21 02 09.8**	**-1.3**
MOMJ	**Momotombo**	**1.16**	**137**	eP	**Pn**	**21 02 12.2**	**+0.1**
MOMJ				eS	**S**	**21 02 39.9**	**+1.2**
MOMN	**Momotombo**	**1.16**	**137**	⇑eP	**Pn**	**21 02 11.4**	**-0.8**
MOMN				eS	**S**	**21 02 37.2**	**-1.4**
COPN	**Copaltepe**	**1.30**	**145**	⇓iP	**Pn**	**21 02 11.8**	**-1.4**
HUEN		**1.47**	**128**	⇓eP	**Pn**	**21 02 14.4**	**-0.1**
XAVN	**Gruta Xavier**	**1.49**	**138**	⇑eP	**Pn**	**21 02 13.8**	**-0.8**
TISN	**Laguna Tiscapa**	**1.53**	**136**	⇓iP	**Pn**	**21 02 14.4**	**-0.6**
MGAN	**Managua**	**1.54**	**135**	⇑eP	**Pn**	**21 02 14.0**	**-1.1**
MGAN				eS	**S**	**21 02 43.9**	**0.0**
CRUN	**El Crucero**	**1.63**	**141**	eP	**Pn**	**21 02 16.2**	**+0.4**
CRUN				eS	**S**	**21 02 45.7**	**+0.5**
TICN	**Ticuantepe**	**1.63**	**138**	⇑eP	**Pn**	**21 02 15.4**	**-0.5**
AIES		**1.67**	**277**	⇑iP	x	21 02 11.7	
AIES				eS	x	21 02 39.4	
AIES				i		21 02 53.3	
	comp=Z,27μm,0.4s						
APON	**Apoyo**	**1.83**	**136**	⇑eP	**Pn**	**21 02 17.7**	**+0.2**
SNET	**Serv Nac Est T**	**1.88**	**283**	⇑iP	x	21 02 13.7	
SNET				eS	x	21 02 43.0	
MTO2	**Montecristo 2**	**2.26**	**301**	⇑iP	x	21 02 47.0	
MTO2				eS	x	21 03 19.8	
SNJE	**San Jose**	**2.27**	**286**	⇑iP	x	21 02 46.1	
SNJE				eS	x	21 03 18.3	
SONS		**2.35**	**282**	eS	x	21 02 50.2	
CONN	**Concepcion**	**2.38**	**135**	⇑eP	**Pn**	**21 02 23.3**	**+0.4**
SSN	**San Juan del S**	**2.43**	**143**	⇓eP	**Pn**	**21 02 23.0**	**-0.5**
MADN	**Villa Maderas**	**2.56**	**136**	⇑eP	**Pn**	**21 02 24.7**	**-0.1**
MADN				eS	**S**	**21 03 00.8**	**-0.4**
LIM1	**Limonal**	**3.27**	**141**	⇑eP	**Pn**	**21 02 32.9**	**+0.3**
CUI		**3.34**	**140**	eP	**Pn**	**21 02 33.8**	**+0.3**
CUI				eS	**S**	**21 03 15.7**	**-1.4**
PCG	**Pacaya**	**3.36**	**290**	eP	**Pn**	**21 02 30.8**	**-2.8**
VCR	**Vista de Mar**	**3.54**	**151**	eP	**Pn**	**21 02 35.9**	**+0.1**
VCR	**Vista de Mar**	**3.54**	**151**	eP	**Pn**	**21 02 36.0**	**+0.2**
FUG	**Fuego 3**	**3.59**	**290**	⇑iP	**Pn**	**21 02 33.8**	**-2.6**
FG6		**3.67**	**291**	⇑iP	**Pn**	**21 02 34.9**	**-2.3**
JTS	**JuntasAbangare**	**3.77**	**141**	Pn	**Pn**	**21 02 37.6**	**-0.9**
	comp=Z,8μm,0.4s						
JTS	**JuntasAbangare**	**3.77**	**141**	ePn	**Pn**	**21 02 37.6**	**-0.9**
JTS				eSn	**S**	**21 03 19.3**	**-6.8**
JTS	**JuntasAbangare**	**3.77**	**141**	P	**Pn**	**21 02 37.8**	**-0.7**
	comp=Z,141nm,0.3s,baz=329,slow=12,SNR=108						
JTS				S	**S**	**21 03 20.3**	**-5.8**
	comp=Z,293nm,0.3s,baz=303,slow=22,SNR=5.7						
JTS	**JuntasAbangare**	**3.77**	**141**	⇑eP	**Pn**	**21 02 36.5**	**-2.0**
JCR	**Jicaral**	**4.03**	**147**	⇓eP	**Pn**	**21 02 42.4**	**+0.7**
JCR				eS	**S**	**21 03 34.0**	**+2.1**
JCR	**Jicaral**	**4.03**	**147**	⇓eP	**Pn**	**21 02 42.3**	**+0.6**
CGA2	**Cerro Gallo 2**	**4.29**	**138**	eP	**Pn**	**21 02 46.0**	**+1.2**
CGA2				eS	**S**	**21 03 34.6**	**-2.7**
CGA2	**Cerro Gallo 2**	**4.29**	**138**	eP	**Pn**	**21 02 46.0**	**+1.3**
JAT	**Jato**	**4.29**	**285**	⇓eP	**Pn**	**21 02 42.0**	**-2.8**
PRS1	**Puriscal**	**4.41**	**137**	eP	**Pn**	**21 02 48.5**	**+2.2**
PRS1	**Puriscal**	**4.41**	**137**	eP	**Pn**	**21 02 48.5**	**+2.2**
LAJ	**Bijagual**	**4.62**	**136**	⇑eP	**Pn**	**21 02 47.7**	**-1.2**
LAJ	**Bijagual**	**4.62**	**136**	⇑eP	**Pn**	**21 02 47.8**	**-1.1**
LCR2	**La Lucha 2**	**4.79**	**136**	⇑eP	**Pn**	**21 02 52.6**	**+1.6**
LCR2	**La Lucha 2**	**4.79**	**136**	⇑eP	**Pn**	**21 02 52.7**	**+1.7**
URSC	**Urasca**	**4.88**	**134**	eP	**Pn**	**21 02 53.9**	**+1.9**
URSC	**Urasca**	**4.88**	**134**	eP	**Pn**	**21 02 54.5**	**+2.4**
QCR	**Quepos**	**4.93**	**140**	⇑eP	**Pn**	**21 02 53.5**	**+0.9**
QCR	**Quepos**	**4.93**	**140**	⇑iP	**Pn**	**21 02 53.8**	**+1.2**
BUS	**Buena Vista**	**5.09**	**136**	⇓eP	**Pn**	**21 02 57.4**	**+2.7**
BUS				eS	**S**	**21 03 56.0**	**+0.6**
BUS	**Buena Vista**	**5.09**	**136**	⇓eP	**Pn**	**21 02 57.3**	**+2.6**
CCIG	**Comitan**	**5.52**	**304**	⇑iP	**Pn**	**21 02 58.4**	**-1.6**
CCIG				iS	**S**	**21 03 58.6**	**-6.3**
BAR1		**5.62**	**135**	⇑eP	**Pn**	**21 03 03.3**	**+2.0**
CNI	**Changuinola**	**6.09**	**128**	eP	**Pn**	**21 03 09.6**	**+2.4**
SCX	**San Cristobal**	**6.17**	**305**	iP	**Pn**	**21 03 06.0**	**-2.2**
TEIG	**Tepich**	**6.99**	**353**	ePn	**Pn**	**21 03 18.4**	**-0.3**
	comp=Z,1μm,1.4s						
TEIG				eSn	**S**	**21 04 39.5**	**+0.6**
TEIG	**Tepich**	**6.99**	**353**	P	**Pn**	**21 03 17.7**	**-0.9**
	comp=Z,28nm,0.3s,baz=163,slow=3.6,SNR=124						
TEIG				S	**S**	**21 04 39.0**	**+0.1**
	comp=Z,15nm,0.3s,baz=8.4,slow=19,SNR=8.0						
TEIG				ScP	ScP	21 12 53.7	+0.7
	comp=Z,0.9nm,0.3s,baz=309,slow=2.6,SNR=7.6						
TEIG	**Tepich**	**6.99**	**353**	⇓iP	**Pn**	**21 03 18.8**	**+0.1**
CMIG	**Matias Romero**	**8.21**	**299**	P	**Pn**	**21 03 30.5**	**-3.8**
	comp=Z,10nm,0.3s,baz=119,slow=9.8,SNR=110						
CMIG				S	**S**	**21 04 52.5**	**-15**
	comp=Z,36nm,0.3s,baz=5.4,slow=20,SNR=15						
CMIG				ScP	ScP	21 12 54.6	+0.4
	comp=Z,0.4nm,0.3s,baz=17,slow=5.7,SNR=4.6						
BCIP	**Isla Barro Col**	**8.42**	**118**	ePn	**Pn**	**21 03 36.9**	**-0.2**
	comp=Z,67nm,0.7s						
AZU	**Azuero**	**8.83**	**127**	eP	**Pn**	**21 03 44.7**	**+2.4**
HUIG	**Huatulco**	**8.84**	**287**	iP	**Pn**	**21 03 37.3**	**-5.0**
HUIG				iS	S	21 05 01.1	-21
OXX	**Oaxaca**	**9.81**	**294**	iP	**Pn**	**21 03 52.0**	**-2.8**
VHO	**Vista Hermosa**	**9.82**	**294**	iP	**Pn**	**21 03 52.5**	**-2.4**
VHO				iS	**S**	**21 05 31.6**	**-14**
SOR	**Soroa**	**10.35**	**23**	ePG	**Pn**	**21 04 04.0**	**+2.5**
	baz=211						
SOR				eSG	**S**	**21 06 00.2**	**+2.6**
	comp=N,23nm,4.8s						
SOR				e			
	comp=E,9.6nm,4.8s						
PNIG	**Pinotepa**	**10.87**	**288**	iP	**Pn**	**21 04 05.4**	**-2.9**
PNIG				iS	**S**	**21 06 00.1**	**-10**
MGV	**Manicaragua**	**11.26**	**38**	eP	**Pn**	**21 04 17.6**	**+4.5**
	baz=215						
MGV				eS	**S**	**21 06 12.9**	**-6.2**
	comp=N,121nm,1.8s						
MGV				e			
	comp=E,73nm,2.1s						
LMGC	**Las Mercedes**	**12.00**	**54**	eP	**Pn**	**21 04 20.5**	**-2.0**
	baz=251						
LMGC				eS	**S**	**21 06 23.7**	**-13**
	comp=N,95nm,2.1s						
LMGC				e			
	comp=E,159nm,1.8s						
CCCC	**Cccc**	**12.09**	**48**	eP	**Pn**	**21 04 30.8**	**+7.2**
PPM	**Popocatepetl**	**12.27**	**300**	iP	**Pn**	**21 04 16.3**	**-10**
PPM				iS	S	21 06 19.5	-23
PLIG	**Platanillo**	**12.76**	**295**	iP	**Pn**	**21 04 31.3**	**-0.6**
CAIG	**El Cayaco**	**13.02**	**288**	iP	**Pn**	**21 04 33.9**	**-1.3**
PAYG	**Puerto Ayora**	**14.14**	**192**	ePn	**Pn**	**21 04 52.0**	**+3.0**
	comp=E,389nm,0.8s						
MASC	**Masc**	**14.32**	**60**	eP	**Pn**	**21 04 54.5**	**+3.3**
ROSC	**El Rosal**	**15.32**	**122**	P	**Pn**	**21 05 05.3**	**+1.9**
	comp=E,10nm,0.3s,baz=90,slow=4.9,SNR=58						
DWPF	**Disney**	**15.78**	**20**	eP	**Pn**	**21 05 10.2**	**+1.5**
	comp=E,1μm,1.5s						
SDDR	**Presa de Saban**	**16.45**	**68**	eP	**P**	**21 05 19.3**	**+3.9**
	comp=E,179nm,0.6s						
SDDR				eScP	ScP	21 13 07.4	+0.8
SFJM	**Santa Fe**	**16.64**	**298**	eP	**P**	**21 05 18.0**	**+0.6**
SDV	**Santo Domingo**	**16.97**	**103**	eP	**P**	**21 05 24.2**	**+3.0**
	comp=E,814nm,0.6s						
SDV				eS	**S**	**21 08 31.6**	**+5.2**
SDV				eScP	ScP	21 13 08.5	+0.8
SDV	**Santo Domingo**	**16.97**	**103**	P	**P**	**21 05 23.6**	**+2.4**
	comp=E,53nm,0.3s,baz=298,slow=4.3,SNR=460						
SDV				S	**S**	**21 08 30.1**	**+3.7**
	baz=123,slow=19,SNR=3.7						
SDV				ScP	ScP	21 13 08.5	+0.7
	comp=E,0.6nm,0.3s,baz=306,slow=1.5,SNR=13						
KVTX	**Kingsville**	**17.30**	**327**	eP	**P**	**21 05 25.8**	**+1.2**
	comp=E,98nm,0.6s						
BRAL	**Brewton**	**17.68**	**1**	eP	**P**	**21 05 32.4**	**+3.8**
	comp=E,2μm,1.1s						
HKT	**Hockley**	**18.38**	**336**	eP	**P**	**21 05 37.2**	**+0.9**
	comp=E,505nm,1.1s						
HKT				eS	**S**	**21 08 53.6**	**-0.4**
HKT				eScP	ScP	21 13 10.4	0.0
HKT	**Hockley**	**18.38**	**336**	eP	**P**	**21 05 37.2**	**+0.9**
HKT				pmax	pmax		
	comp=Z,500nm,1.1s						
NATX	**Nacogdoches**	**19.60**	**341**	eP	**P**	**21 05 50.1**	**+0.7**
	comp=Z,853nm,0.9s						
LRAL	**Lakeview Retre**	**19.69**	**1**	eP	**P**	**21 05 51.7**	**+1.4**
	comp=Z,611nm,0.9s						
GOGA	**Godfrey**	**20.38**	**9**	eP	**P**	**21 05 59.0**	**+1.3**
	comp=Z,2μm,0.9s						
GOGA				eS	**S**	**21 09 36.6**	**+3.6**
GOGA	**Godfrey**	**20.38**	**9**	P	**P**	**21 05 59.3**	**+1.7**
GOGA				pmax	pmax		
	comp=Z,2μm,0.9s						
JCT	**Junction City**	**20.64**	**328**	eP	**P**	**21 05 59.1**	**-1.3**
	comp=Z,469nm,1.5s						
JCT	**Junction City**	**20.64**	**328**	P	**P**	**21 05 59.3**	**-1.2**
JCT				pmax	pmax		
	comp=Z,470nm,1.5s						
NHSC	**New Hope**	**20.82**	**17**	eP	**P**	**21 06 03.7**	**+1.4**
	comp=Z,1μm,1.1s						
COW	**Cow Castle Cre**	**20.93**	**16**	eP	**P**	**21 06 05.0**	**+1.5**
SJG	**San Juan**	**20.97**	**74**	eP	**P**	**21 06 05.2**	**+1.2**
	comp=Z,210nm,0.6s						
SJG	**San Juan**	**20.97**	**74**	P	**P**	**21 06 05.4**	**+1.3**
SJG				pmax	pmax		
	comp=Z,210nm,0.7s						
SJG	**San Juan**	**20.97**	**74**	P	**P**	**21 06 05.8**	**+1.7**
	comp=Z,199nm,0.6s,baz=283,slow=5.1,SNR=46						
SJG				ScP	ScP	21 13 15.7	-0.9
	comp=Z,24nm,0.6s,baz=350,slow=3.7,SNR=6.0						
CPD	**Cerro la Pandu**	**21.18**	**74**	eP	**P**	**21 06 07.8**	**+1.5**
	comp=Z,234nm,0.8s,mb5.8						
CPD	**Cerro la Pandu**	**21.18**	**74**	P	**P**	**21 06 08.1**	**+1.8**
OXF	**Oxford**	**21.25**	**355**	eP	**P**	**21 06 06.2**	**-0.6**
	comp=Z,2μm,1.0s,mb6.5						
OXF	**Oxford**	**21.25**	**355**	P	**P**	**21 06 06.4**	**-0.4**
OXF				pmax	pmax		
	comp=Z,2μm,1.0s,mb6.5						
MTP	**Monte Pirata**	**21.53**	**74**	eP	**P**	**21 06 11.5**	**+1.7**
PLAL	**Pickwick Lake**	**21.64**	**358**	eP	**P**	**21 06 10.4**	**-0.3**
	comp=Z,492nm,1.3s,mb5.9						
JSC	**Jenkinsville**	**21.65**	**14**	eP	**P**	**21 06 11.9**	**+1.1**
JSC	**Jenkinsville**	**21.65**	**14**	P	**P**	**21 06 12.3**	**+1.5**
MET	**Memphis--Engin**	**21.90**	**354**	eP	**P**	**21 06 12.7**	**-0.3**
UALR	**University of**	**21.90**	**349**	eP	**P**	**21 06 12.8**	**-0.2**
	comp=Z,437nm,0.8s,mb6.0						
UALR				eS	**S**	**21 09 56.8**	**-1.4**
UALR				eScP	ScP	21 13 18.9	+0.2
SWET	**Sewanee**	**21.90**	**3**	eP	**P**	**21 06 13.5**	**+0.5**
MIAR	**Mount Ida**	**21.93**	**346**	eP	**P**	**21 06 13.2**	**-0.2**
	comp=Z,572nm,0.9s,mb6.1						
MIAR	**Mount Ida**	**21.93**	**346**	eP	**P**	**21 06 13.2**	**-0.2**
MIAR				pmax	pmax		
	comp=Z,572nm,0.9s,mb6.1						
LHS	**Liberty Hill**	**21.95**	**15**	eP	**P**	**21 06 15.2**	**+1.8**
ATAH	**Atahualpa**	**22.00**	**156**	P	**P**	**21 06 18.6**	**+4.4**
	comp=Z,74nm,0.7s,mb5.3,baz=0.8,slow=5.8,SNR=46						
ATAH				PcP	PcP	21 10 05.0	+1.2
	comp=Z,14nm,0.7s,baz=146,slow=5.0,SNR=4.0						
ATAH				ScP	ScP	21 13 20.8	+1.5
	comp=Z,24nm,0.9s,baz=316,slow=5.1,SNR=12						
LTX	**Lajitas**	**22.02**	**319**	eP	**P**	**21 06 13.8**	**-0.5**
	comp=Z,107nm,0.8s,mb5.4						
LTX	**Lajitas**	**22.02**	**319**	eP	**P**	**21 06 13.8**	**-0.4**
LTX				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.4						
TXAR	**Lajitas Array**	**22.02**	**319**	P	**P**	**21 06 13.7**	**-0.6**
TXAR				pP		21 06 54.1	
TXAR				sP	sP	21 07 21.8	-0.5
TXAR				PcP	PcP	21 10 03.6	+0.1
TXAR				ScP	ScP	21 13 19.3	+0.2
TXAR	**Lajitas Array**	**22.02**	**319**	P	**P**	**21 06 13.7**	**-0.5**
TXAR				*SP	sP	21 07 21.8	-0.5
TXAR						21 10 03.7	
TXAR	**Lajitas Array**	**22.02**	**319**	P	**P**	**21 06 13.7**	**-0.6**
	comp=Z,82nm,0.6s,mb5.4,baz=138,slow=10,SNR=272						
TXAR				pP		21 06 54.1	
	comp=Z,26nm,0.7s,baz=143,slow=9.9,SNR=4.4						
TXAR				sP	sP	21 07 21.8	-0.5
	comp=Z,20nm,0.9s,baz=139,slow=8.3,SNR=2.1						
TXAR				PcP	PcP	21 10 03.6	+0.1
	comp=Z,6.6nm,0.9s,baz=131,slow=3.8,SNR=4.0						
TXAR				ScP	ScP	21 13 19.3	+0.2
	comp=Z,5.6nm,0.7s,baz=150,slow=6.5,SNR=18						
CPCT	**Cooper Cave**	**22.25**	**6**	eP	**P**	**21 06 17.3**	**+1.1**
CPCT				eScP	ScP	21 13 19.0	-0.5
HBAR	**Harrisburg**	**22.40**	**353**	eP	**P**	**21 06 17.5**	**-0.1**
PCRV	**Puerto La Cruz**	**22.45**	**95**	P	**P**	**21 06 20.8**	**+2.5**
	comp=Z,265nm,0.7s,mb5.9,baz=184,slow=4.5,SNR=53						
TKL	**Tuckaleechee C**	**22.54**	**8**	P	**P**	**21 06 20.1**	**+1.2**
	comp=Z,2μm,1.1s,mb6.5,baz=182,slow=9.8,SNR=160						
HALT	**Halls**	**22.63**	**356**	eP	**P**	**21 06 19.5**	**-0.2**
GLAT	**Glass**	**22.98**	**356**	eP	**P**	**21 06 23.1**	**+0.1**
UTMT	**University of**	**23.03**	**357**	eP	**P**	**21 06 23.5**	**+0.2**
	comp=Z,593nm,0.8s,mb6.2						
PARMO	**Parma**	**23.41**	**355**	eP	**P**	**21 06 26.8**	**0.0**
TZTN	**Tazewell**	**23.44**	**8**	eP	**P**	**21 06 27.9**	**+0.8**
	comp=Z,713nm,0.9s,mb6.2						
CNNC	**Cliffs of the**	**23.50**	**20**	eP	**P**	**21 06 29.3**	**+1.7**
	comp=Z,1μm,1.0s,mb6.3						
WMOK	**Wichita Mounta**	**23.76**	**336**	eP	**P**	**21 06 29.1**	**-0.9**
	comp=Z,1μm,1.2s,mb6.4						
WMOK				eScP	ScP	21 13 23.3	-0.3
WMOK	**Wichita Mounta**	**23.76**	**336**	eP	**P**	**21 06 29.1**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,1μm,1.2s,mb6.4						
SIUC	**Southern Illin**	**24.42**	**356**	eP	**P**	**21 06 36.1**	**+0.2**
	comp=Z,445nm,0.8s,mb6.2						
ELN	**Prospectdale**	**24.59**	**13**	eP	**P**	**21 06 39.2**	**+1.7**
USIN	**University of**	**24.61**	**359**	eP	**P**	**21 06 37.6**	**0.0**
	comp=Z,172nm,0.7s,mb5.8						
MNTX	**Cornudas Mount**	**24.72**	**321**	eP	**P**	**21 06 37.7**	**-1.0**
	comp=Z,4μm,1.1s						
FVM	**French Village**	**24.78**	**354**	eP	**P**	**21 06 38.1**	**-1.1**
	comp=Z,28nm,0.5s,mb5.1						
FVM	**French Village**	**24.78**	**354**	P	**P**	**21 06 38.4**	**-0.8**
FVM				pmax	pmax		
	comp=Z,28nm,0.5s,mb5.2						
WCI	**Wyandotte Cave**	**24.89**	**2**	eP	**P**	**21 06 40.1**	**0.0**
	comp=Z,314nm,0.8s,mb6.0						
WCI	**Wyandotte Cave**	**24.89**	**2**	P	**P**	**21 06 40.3**	**+0.1**
WCI				pmax	pmax		
	comp=Z,310nm,0.9s,mb5.9						
SCG	**Saint Claude**	**24.99**	**80**	eP	**P**	**21 06 42.9**	**+1.6**
TBG	**Guadaloupe-3**	**25.01**	**81**	eP	**P**	**21 06 43.8**	**+2.2**
GRW	**Mount Saint Ca**	**25.08**	**90**	eS	**P**	**21 06 45.5**	**+3.3**
GRGR	**Grenville**	**25.09**	**90**	eP	**P**	**21 06 44.4**	**+2.1**
	comp=Z,843nm,1.3s,mb6.2						
MGG	**Marie-Galante**	**25.33**	**81**	eP	**P**	**21 06 48.3**	**+3.8**
SVB	**Belmont**	**25.40**	**87**	eS	**P**	**21 06 47.5**	**+2.4**
SLM	**Saint Louis**	**25.41**	**355**	eP	**P**	**21 06 44.4**	**-0.4**
	comp=Z,207nm,1.0s,mb5.7						
SLM	**Saint Louis**	**25.41**	**355**	P	**P**	**21 06 44.6**	**-0.2**
SLM				pmax	pmax		
	comp=Z,210nm,1.0s,mb5.7						
SSV	**Crater Summit**	**25.46**	**87**	eS	**P**	**21 06 47.9**	**+2.3**
FDF	**Fort de France**	**25.46**	**84**	eP	**P**	**21 06 47.0**	**+1.4**
TRN	**Trinidad (W)**	**25.52**	**93**	eS	**P**	**21 06 45.3**	**-0.8**
BIM	**Bigot**	**25.54**	**84**	eP	**P**	**21 06 47.9**	**+1.6**
SLB	**Belfond**	**25.58**	**86**	eS	**P**	**21 06 48.0**	**+1.3**
DEG	**La Desirade**	**25.60**	**80**	eP	**P**	**21 06 46.8**	**0.0**
MVM	**Montagne Vaucl**	**25.71**	**84**	⇑iP	**P**	**21 06 49.7**	**+1.9**
URVA	**University of**	**25.75**	**18**	eP	**P**	**21 06 48.4**	**+0.4**
BLO	**Bloomington**	**25.82**	**1**	eP	**P**	**21 06 48.4**	**-0.2**
	comp=Z,174nm,0.9s,mb5.7						
BLO	**Bloomington**	**25.82**	**1**	P	**P**	**21 06 48.6**	**0.0**
BLO				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.6						
TBH	**Brigand Hill**	**25.87**	**93**	eS	**P**	**21 06 50.2**	**+1.0**
TPR	**Prospect**	**26.05**	**92**	eS	**P**	**21 06 50.0**	**-0.9**
CBN	**Corbin**	**26.39**	**18**	eP	**P**	**21 06 55.6**	**+2.0**
	comp=Z,692nm,0.9s,mb6.3						
KSU1	**Kansas State U**	**27.02**	**344**	eP	**P**	**21 06 58.6**	**-0.6**
	comp=Z,373nm,0.9s,mb6.0						
319A	**Douglas**	**27.05**	**315**	⇓P	**P**	**21 06 59.7**	**+0.1**
	baz=27						
MCWV	**Mont Chateau**	**27.12**	**13**	eP	**P**	**21 07 01.3**	**+1.2**
	comp=Z,241nm,0.5s,mb6.1						
ACSO	**Alum Creek Sta**	**27.15**	**7**	eP	**P**	**21 07 00.3**	**-0.1**
	comp=Z,404nm,0.8s,mb6.1						
NNA	**Nana**	**27.16**	**157**	eP	**P**	**21 07 02.4**	**+1.7**
NNA	**Nana**	**27.16**	**157**	P	**P**	**21 07 01.9**	**+1.2**
	comp=Z,25nm,0.8s,mb4.9,baz=356,slow=11,SNR=8.9						
NNA				ScP	ScP	21 13 34.8	+1.1
	comp=Z,48nm,1.0s,baz=313,slow=4.5,SNR=11						
HDIL	**Hopedale**	**27.25**	**357**	eP	**P**	**21 07 00.7**	**-0.6**
	comp=Z,352nm,0.9s,mb6.0						
SDMD	**Soldier's Deli**	**27.66**	**18**	eP	**P**	**21 07 06.5**	**+1.6**
	comp=Z,337nm,0.8s,mb6.0						
ANMO	**Albuquerque**	**27.66**	**325**	eP	**P**	**21 07 05.2**	**+0.2**
	comp=Z,109nm,1.6s,mb5.2						
ANMO				epP	pP	21 07 49.7	-0.9
ANMO	**Albuquerque**	**27.66**	**325**	P	**P**	**21 07 06.0**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,110nm,1.6s						
ANMO	**Albuquerque**	**27.66**	**325**	P	**P**	**21 07 05.5**	**+0.5**
	comp=Z,18nm,0.9s,mb4.7,baz=142,slow=8.2,SNR=33						
ANMO				pP	pP	21 07 50.5	-0.1
	comp=Z,11nm,0.9s,baz=139,slow=14,SNR=1.9						
ANMO				ScP	ScP	21 13 35.2	+0.3
	comp=Z,5.6nm,0.8s,baz=136,slow=3.7,SNR=6.1						
CBKS	**Cedar Bluff**	**27.72**	**339**	eP	**P**	**21 07 05.2**	**-0.3**
	comp=Z,166nm,0.9s,mb5.7						
CBKS				eScP	ScP	21 13 35.4	+0.4
CBKS	**Cedar Bluff**	**27.72**	**339**	P	**P**	**21 07 05.4**	**-0.1**
CBKS				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.6						
BBSR	**BB Station**	**28.14**	**44**	eP	**P**	**21 07 12.4**	**+3.0**
	comp=Z,435nm,0.9s,mb6.1						
217A	**Green Valley**	**28.34**	**314**	⇑P	**P**	**21 07 11.1**	**0.0**
	baz=28						
MVL	**Millersville**	**28.35**	**18**	eP	**P**	**21 07 12.8**	**+1.7**
	comp=Z,156nm,0.7s,mb5.8						
SSPA	**Standing Stone**	**28.51**	**15**	eP	**P**	**21 07 13.7**	**+1.2**
	comp=Z,168nm,0.8s,mb5.7						
ALLY	**Alegheny Colle**	**28.98**	**11**	eP	**P**	**21 07 17.2**	**+0.7**
	comp=Z,163nm,0.6s,mb5.8						
AAM	**Ann Arbor**	**29.12**	**6**	eP	**P**	**21 07 17.9**	**+0.1**
	comp=Z,116nm,0.3s,mb6.0						
AAM	**Ann Arbor**	**29.12**	**6**	P	**P**	**21 07 18.3**	**+0.5**
AAM				pmax	pmax		
	comp=Z,120nm,0.4s,mb5.9						
SDCO	**Great Sand Dun**	**29.27**	**330**	eP	**P**	**21 07 20.0**	**+0.8**
	comp=Z,63nm,0.8s,mb5.3						
ERPA	**Erie**	**29.46**	**11**	eP	**P**	**21 07 21.6**	**+0.7**
	comp=Z,344nm,0.7s,mb6.1						
ERPA				e	pP	21 08 06.7	0.0
BRNJ	**Basking Ridge**	**29.53**	**20**	eP	**P**	**21 07 24.2**	**+2.7**
	comp=Z,223nm,0.6s,mb6.0						
JFWS	**Jewell Farm**	**29.66**	**356**	eP	**P**	**21 07 21.7**	**-0.9**
	comp=Z,398nm,1.4s,mb5.8						
JFWS				ePcP	PcP	21 10 20.0	-0.9
JFWS				eS	**S**	**21 11 59.3**	**-1.6**
JFWS				eScP	ScP	21 13 40.5	-0.6
JFWS	**Jewell Farm**	**29.66**	**356**	eP	**P**	**21 07 21.7**	**-0.9**
JFWS				e		21 10 20.0	
JFWS				eS	**S**	**21 11 59.3**	**-1.6**
JFWS				pmax	pmax		
	comp=Z,400nm,1.3s,mb5.9						
CPNY	**Central Park**	**29.84**	**21**	eP	**P**	**21 07 25.7**	**+1.6**
	comp=Z,31nm,0.6s,mb5.1						
CPNY				e	pP	21 08 11.4	+1.3
CPNY				e		21 08 40.9	
PAL	**Palisades**	**30.05**	**21**	eP	**P**	**21 07 27.3**	**+1.3**
	comp=Z,110nm,0.8s,mb5.5						
PAL				e		21 08 42.2	
PAL	**Palisades**	**30.05**	**21**	eP	**P**	**21 07 27.3**	**+1.3**
PAL				e		21 08 42.2	
PAL				pmax	pmax		
	comp=Z,93nm,0.8s,mb5.5						
MVCO	**Mesa Verde**	**30.43**	**325**	eP	**P**	**21 07 30.0**	**+0.5**
	comp=Z,50nm,0.9s,mb5.2						
MVCO				e	pP	21 08 17.9	+2.4
MVCO				eScP	ScP	21 13 44.0	+0.3
MVCO	**Mesa Verde**	**30.43**	**325**	P	**P**	**21 07 30.3**	**+0.9**
	baz=30,SNR=33						
BINY	**Binghamton**	**30.48**	**17**	eP	**P**	**21 07 30.9**	**+1.1**
	comp=Z,268nm,0.8s,mb5.9						
BINY				epP	pP	21 08 16.9	+1.1
BINY				e		21 08 48.3	
Z14A	**Wintersburg**	**30.72**	**315**	⇑P	**P**	**21 07 32.2**	**+0.1**
	baz=31						
X15A	**Humboldt**	**30.90**	**317**	⇑P	**P**	**21 07 34.1**	**+0.4**
	baz=31,SNR=10						
ISCO	**Idaho Springs**	**30.95**	**332**	eP	**P**	**21 07 34.1**	**+0.1**
	comp=Z,44nm,1.3s,mb4.9						
ISCO	**Idaho Springs**	**30.95**	**332**	eP	**P**	**21 07 34.1**	**+0.1**
ISCO				pmax	pmax		
	comp=Z,44nm,1.3s,mb4.9						
Y14A	**Wickenburg**	**31.09**	**316**	⇓P	**P**	**21 07 35.2**	**-0.1**
	baz=31						
SMCO	**Snowmass**	**31.11**	**330**	eP	**P**	**21 07 31.2**	**-4.1**
	comp=Z,103nm,1.3s,mb5.3						
PV01	**Paradox Valley**	**31.14**	**327**	eP	**P**	**21 07 36.2**	**+0.5**
X14A	**Yava**	**31.32**	**317**	⇓P	**P**	**21 07 37.8**	**+0.5**
	baz=31,SNR=9.1						
W15A	**Williams**	**31.34**	**318**	⇑P	**P**	**21 07 38.3**	**+0.8**
	baz=31						
ECSD	**EROS,Sioux Fal**	**31.40**	**347**	eP	**P**	**21 07 36.6**	**-1.3**
	comp=Z,383nm,0.9s,mb6.0						
PV10	**Paradox Valley**	**31.57**	**326**	eP	**P**	**21 07 39.8**	**+0.4**
Y13A	**Salome**	**31.59**	**315**	⇑P	**P**	**21 07 39.9**	**+0.2**
	baz=32,SNR=6.0						
BRYW	**Bryant College**	**31.70**	**23**	eP	**P**	**21 07 41.9**	**+1.5**
	comp=Z,76nm,0.5s,mb5.5						
QUA2	**Belchertown**	**31.71**	**21**	eP	**P**	**21 07 41.7**	**+1.1**
	comp=Z,521nm,1.2s,mb5.9						
GLA	**Glamis**	**31.88**	**313**	⇑P	**P**	**21 07 42.3**	**+0.1**
	baz=32,SNR=7.5						
W14A	**Seligman**	**31.89**	**318**	⇓P	**P**	**21 07 42.9**	**+0.6**
	baz=32,SNR=16						
X13A	**Yucca**	**32.03**	**316**	⇑P	**P**	**21 07 43.6**	**+0.2**
	baz=32						
Y12C	**Blythe**	**32.03**	**314**	⇑P	**P**	**21 07 43.5**	**0.0**
	baz=32						
PDMCI	**Parker Dam,Lak**	**32.07**	**315**	⇑P	**P**	**21 07 44.1**	**+0.2**
	baz=32,SNR=12						
PHWY	**Pilot Hill**	**32.10**	**334**	eP	**P**	**21 07 44.7**	**+0.7**
PHWY				e	pP	21 08 31.3	+1.1
SADO	**Sadowa**	**32.18**	**11**	P	**P**	**21 07 44.9**	**+0.3**
SADO				pP	pP	21 08 30.8	-0.1
SADO	**Sadowa**	**32.18**	**11**	P	**P**	**21 07 44.9**	**+0.3**
	baz=215,slow=11						
SADO				pP	pP	21 08 30.8	-0.1
	baz=204,slow=12						
WES	**Weston**	**32.18**	**23**	eP	**P**	**21 07 46.3**	**+1.7**
	comp=Z,717nm,1.4s,mb6.0						
WES	**Weston**	**32.18**	**23**	eP	**P**	**21 07 46.3**	**+1.6**
WES				pmax	pmax		
	comp=Z,717nm,1.4s,mb6.0						
HRV	**Harvard--Oak R**	**32.20**	**22**	eP	**P**	**21 07 46.3**	**+1.5**
	comp=Z,228nm,1.3s,mb5.5						
HRV	**Harvard--Oak R**	**32.20**	**22**	P	**P**	**21 07 46.5**	**+1.7**
HRV				pmax	pmax		
	comp=Z,230nm,1.3s,mb5.5						
ACCN	**Adirondack Com**	**32.26**	**19**	eP	**P**	**21 07 46.2**	**+0.9**
	comp=Z,185nm,1.1s,mb5.5						
W13A	**Hualapai Mount**	**32.36**	**317**	⇑P	**P**	**21 07 46.8**	**+0.5**
	baz=32,SNR=14						
SWSC	**Sam W. Stewart**	**32.52**	**312**	⇓P	**P**	**21 07 48.0**	**+0.3**
	baz=32						
T15A	**Red Dirt Ranch**	**32.57**	**321**	⇓P	**P**	**21 07 49.1**	**+1.0**
	baz=33,SNR=22						
DVTC	**Desert V Tower**	**32.60**	**311**	⇑P	**P**	**21 07 48.8**	**+0.4**
	baz=33						
NCB	**Newcomb**	**32.62**	**18**	eP	**P**	**21 07 49.0**	**+0.6**
	comp=Z,213nm,1.4s,mb5.5						
BC3	**Big Chuckw Mtn**	**32.64**	**313**	⇓P	**P**	**21 07 49.0**	**+0.2**
	baz=33,SNR=7.2						
NEE2	**Needles Airpor**	**32.66**	**316**	⇑P	**P**	**21 07 49.0**	**+0.1**
	baz=33						
U14A	**Mt Trumbull**	**32.69**	**319**	⇓P	**P**	**21 07 50.0**	**+0.9**
	baz=33,SNR=26						
IRM	**Iron Mountain**	**32.69**	**314**	⇑P	**P**	**21 07 49.5**	**+0.2**
	baz=33,SNR=6.5						
COWI	**Conover**	**32.77**	**358**	eP	**P**	**21 07 48.7**	**-1.0**
	comp=Z,172nm,0.9s,mb5.6						
SRU	**San Rafael**	**32.91**	**326**	eP	**P**	**21 07 51.4**	**+0.4**
	comp=Z,55nm,0.5s,mb5.3						
SRU	**San Rafael**	**32.91**	**326**	P	**P**	**21 07 51.7**	**+0.7**
SRU				pmax	pmax		
	comp=Z,55nm,0.5s,mb5.3						
MONP	**Monument Peak**	**32.95**	**311**	⇓P	**P**	**21 07 51.7**	**+0.3**
	baz=33						
HNH	**Hanover**	**32.99**	**20**	eP	**P**	**21 07 53.0**	**+1.4**
	comp=Z,36nm,0.6s,mb5.1						

FFD **Franklin Falls** 33.00 21 *e*P P 21 07 53.4 +1.6
comp=Z,98nm,0.6s,mb5.5
T14A **Hurricane** 33.03 320 ⇓P P 21 07 53.0 +0.9
baz=33,SNR=7.2
LONY **Lake Ozonia** 33.11 17 *e*P P 21 07 53.1 +0.4
comp=Z,354nm,1.1s,mb5.8
W12A **Cal Nev Ari** 33.13 316 ⇑P P 21 07 53.5 +0.4
baz=33
RWWY **Rawlins** 33.19 332 *e*P P 21 07 54.1 +0.7
comp=Z,228nm,1.2s,mb5.6
U13A **Pakoon Wash** 33.19 319 P P 21 07 54.7 +1.2
baz=33,SNR=23
BELC **Belle Mtn.** 33.20 313 ⇑P P 21 07 54.0 +0.4
baz=33,SNR=8.9
PFO **Pinyon Flat Ob** 33.33 312 *e*P P 21 07 54.5 -0.3
comp=Z,12nm,1.0s,mb4.4
PFO **Pinyon Flat Ob** 33.33 312 P P 21 07 54.7 -0.1
PFO *e* pP 21 08 43.3 +2.1
PFO pmax pmax
comp=Z,12nm,1.0s,mb4.4
PFO **Pinyon Flat Ob** 33.33 312 P P 21 07 55.0 +0.3
comp=Z,8.2nm,0.8s,mb4.3,baz=101,slow=6.9,SNR=6.3
PFO pP pP 21 08 42.8 +1.6
comp=Z,17nm,1.0s,baz=113,slow=5.6,SNR=3.6
PFO PcP PcP 21 10 31.2 +0.1
comp=Z,7.8nm,0.9s,baz=136,slow=0.7,SNR=3.7
PFO ScP ScP 21 13 54.0 +0.3
comp=Z,16nm,1.0s,baz=148,slow=1.7,SNR=11
PFO **Pinyon Flat Ob** 33.33 312 ⇓P P 21 07 55.1 +0.4
baz=33
V12A **Nelson** 33.36 317 ⇓P P 21 07 55.5 +0.5
baz=33,SNR=10
MSNY **Massena** 33.38 16 *e*P P 21 07 55.5 +0.5
GMRC **Granite Mounta** 33.38 315 ⇑P P 21 07 55.6 +0.4
baz=33,SNR=8.3
TMUT **Trail Mountain** 33.41 325 *e*P P 21 07 55.5 +0.1
MSU **Marysvale** 33.43 323 *e*P P 21 07 56.4 +0.8
ARE **Arequipa** 33.43 152 *e*P P 21 07 58.0 +2.2
109C **Camp Elliot, M** 33.45 311 ⇑P P 21 07 56.4 +0.6
baz=33
CCUT **Cedar City** 33.51 321 *e*P P 21 07 57.2 +0.9
CCUT *e*pP pP 21 08 41.6 -1.2
CCUT *e*PcP PcP 21 10 32.4 +0.8
T13A **Saint George** 33.52 320 ⇑P P 21 07 57.5 +1.2
baz=34,SNR=7.0
S14A **Cedar City** 33.53 321 ⇑P P 21 07 57.4 +1.0
baz=34
U12A **Valley of Fire** 33.57 318 ⇑P P 21 07 57.5 +0.7
baz=34
LBNH **Lisbon** 33.59 20 *e*P P 21 07 57.8 +0.9
comp=Z,181nm,1.1s,mb5.5
LBNH *e*pP pP 21 08 44.2 +0.9
LBNH Lisbon 33.59 20 P P 21 07 58.1 +1.3
LBNH pmax pmax
comp=Z,180nm,1.1s,mb5.5
FRNY **Flat Rock** 33.59 18 *e*P P 21 07 57.4 +0.6
comp=Z,232nm,1.1s,mb5.6
FRNY *e*pP pP 21 08 44.0 +0.7
ARUT Antelope Range 33.71 321 *e*P P 21 07 58.8 +0.8
ARUT Antelope Range 33.71 321 P P 21 07 59.0 +1.0
R14A **James Farms, M** 33.78 322 ⇑P P 21 07 59.3 +0.7
baz=34
V11A **Goodsprings** 33.81 317 ⇑P P 21 07 59.3 +0.4
baz=34
S13A **Holt Ranch, En** 33.84 320 ⇑P P 21 08 00.4 +1.3
baz=34,SNR=50
T12A **Moapa** 33.86 318 ⇑P P 21 07 59.7 +0.5
baz=34
MURC **Murrieta** 33.86 312 ⇑P P 21 07 59.7 +0.3
baz=34
HEC **Hector,Ludlow** 33.87 314 ⇑P P 21 08 00.0 +0.6
baz=34
TUQ **Turquoise Mtn.** 33.92 316 ⇑P P 21 08 00.4 +0.6
baz=34
MPU **Maple Canyon** 34.15 326 *e*P P 21 08 02.4 +0.7
comp=Z,73nm,1.0s,mb5.2
MPU *e*pP pP 21 08 47.4 -0.9
DAU **Daniels Canyon** 34.23 327 *e*P P 21 08 03.0 +0.7
DAU **Daniels Canyon** 34.23 327 P P 21 08 03.7 +1.3
GSC **Goldstone** 34.45 315 P P 21 08 05.3 +0.9
baz=34,SNR=8.7
JLU **Jordanelle** 34.47 327 *e*P P 21 08 05.0 +0.6
S12A **Delamar Landin** 34.47 320 ⇑P P 21 08 05.6 +1.0
baz=34,SNR=8.2
T11A **Corn Creek, Al** 34.49 319 ⇑P P 21 08 05.5 +0.8
baz=34,SNR=8.3
BFSC **Mount Baldy St** 34.51 312 ⇓P P 21 08 05.3 +0.4
baz=34
CIS **Catalina Islan** 34.65 311 ⇓P P 21 08 06.6 +0.5
baz=35
CTU **Camp Tracy** 34.69 327 *e*P P 21 08 06.6 +0.2
U10A **Ash Meadows, A** 34.74 317 ⇓P P 21 08 07.6 +0.7
baz=35,SNR=6.0
EYMN **Ely** 34.76 355 *e*P P 21 08 05.1 -1.7
comp=Z,175nm,1.1s,mb5.5
R12A **Pony Springs,** 34.77 321 P P 21 08 08.4 +1.4
baz=35,SNR=24
NOQ **North Oquirrh** 34.86 326 *e*P P 21 08 08.0 +0.2
comp=Z,41nm,0.5s,mb5.2
DUG **Dugway** 34.93 325 *e*P P 21 08 09.0 +0.6
DUG *e*pP pP 21 08 54.4 -0.7
DUG Dugway 34.93 325 P P 21 08 09.3 +0.9
DUG Dugway 34.93 325 ⇓P P 21 08 09.4 +1.0
baz=35
LPAZ **La Paz** 34.97 147 P P 21 08 10.7 +1.7
comp=Z,40nm,0.5s,mb5.2,baz=332,slow=8.3,SNR=179
LPAZ ScP ScP 21 14 01.4 +1.7
comp=Z,23nm,1.2s,baz=5.9,slow=9.0,SNR=13
TPNV **Topopah Spring** 34.99 318 *e*P P 21 08 09.9 +0.9
comp=Z,24nm,0.9s,mb4.7
TPNV *e*pP pP 21 08 55.6 0.0
TPNV Topopah Spring 34.99 318 P P 21 08 10.2 +1.3
TPNV pmax pmax
comp=Z,24nm,0.9s,mb4.7
TPNV Topopah Spring 34.99 318 ⇓P P 21 08 09.9 +0.9
baz=35
S11A **Rachel** 35.06 319 ⇑P P 21 08 10.7 +1.1
baz=35
EDW2 **Edwards Air Fo** 35.07 313 P P 21 08 10.1 +0.4
baz=35,SNR=8.3
FURC **Furnace Creek,** 35.12 316 ⇓P P 21 08 10.9 +0.7
baz=35,SNR=11
P13A **Bates Ranch, G** 35.13 323 ⇓P P 21 08 11.3 +1.3
baz=35
LRMC **Laurel Mountai** 35.16 314 P P 21 08 11.1 +0.6
baz=35,SNR=8.7
N15A **Stansbury Isla** 35.24 326 P P 21 08 11.8 +0.7
baz=35,SNR=18
HWUT **Hardware Ranch** 35.25 328 *e*P P 21 08 11.3 +0.3
comp=Z,128nm,0.9s,mb5.5
HWUT *e*pP pP 21 08 58.2 +0.3
MPMC **Manual Prospec** 35.33 315 ⇓P P 21 08 12.2 +0.3
baz=35,SNR=19
Q12A **Willow Creek R** 35.35 322 ⇓P P 21 08 12.8 +0.8
baz=35
R11A **Troy Canyon, C** 35.38 320 P P 21 08 13.3 +1.0
baz=35,SNR=22
TRCR **Troy Canyon** 35.38 320 *e*P P 21 08 13.1 +0.8
TRCR *e*pP pP 21 08 58.0 -1.1
PKME **Peaks-Kenny Pk** 35.41 22 *e*P P 21 08 13.9 +1.5
comp=Z,242nm,0.9s,mb5.7
SPUT **South Promonto** 35.50 327 *e*P P 21 08 13.7 +0.5
SPUT *e*pP pP 21 09 01.9 +1.8
SPUT *e*PcP PcP 21 10 36.7 -0.5
DAC **Darwin (Calif)** 35.52 316 *e*P P 21 08 13.7 +0.3
comp=Z,8.9nm,1.0s,mb4.2
DAC *e*pP pP 21 09 00.1 -0.2
DAC Darwin (Calif) 35.52 316 *e*P P 21 08 13.7 +0.2
DAC *e**PP pP 21 09 00.1 -0.2
DAC pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
BGU **Big Grassy Mou** 35.55 326 *e*P P 21 08 14.0 +0.3
BGU *e*pP pP 21 09 02.6 +2.0
O13A **Hicks Ranch, I** 35.55 324 ⇑P P 21 08 14.8 +1.1
baz=36,SNR=14
N14A **Grayback Hills** 35.58 325 P P 21 08 14.9 +0.9
baz=36,SNR=23
M15A **Larsen Ranch,** 35.61 327 P P 21 08 14.7 +0.5
baz=36,SNR=56
AGMN **Agassiz Refuge** 35.65 350 *e*P P 21 08 13.5 -0.9
comp=Z,287nm,0.8s,mb5.8
P12A **McGill** 35.67 322 P P 21 08 15.8 +1.1
baz=36,SNR=20
Q11A **Duckwater** 35.73 321 ⇑P P 21 08 16.1 +0.9
baz=36,SNR=26
GRAC **Grapevine Rang** 35.76 317 ⇑P P 21 08 16.1 +0.6
baz=36,SNR=20
S10A **Tonopah Range,** 35.77 319 P P 21 08 16.5 +0.9
baz=36,SNR=23
ARVC **Arvin** 35.79 313 ⇓P P 21 08 15.9 +0.1
baz=36
R10A **Warm Springs** 35.80 319 ⇓P P 21 08 16.9 +1.1
baz=36,SNR=11
ISA **Isabella** 35.80 314 ⇓P P 21 08 16.3 +0.4
baz=36,SNR=6.3
AHID **Auburn Hatcher** 35.86 330 *e*P P 21 08 16.5 +0.2
comp=Z,55nm,0.7s,mb5.2
HVU **Hansel Valley** 36.00 327 *e*P P 21 08 17.8 +0.3
comp=Z,55nm,1.0s,mb5.0
HVU **Hansel Valley** 36.00 327 P P 21 08 18.3 +0.8
HVU pmax pmax
comp=Z,55nm,1.0s,mb5.0
S09A **Goldfield** 36.07 318 ⇑P P 21 08 18.5 +0.4
baz=36
O12A **Currie** 36.08 323 ⇑P P 21 08 18.9 +0.7
baz=36,SNR=11
M14A **Sheep Mountain** 36.12 326 P P 21 08 19.1 +0.6
baz=36,SNR=112
N13A **Wendover, West** 36.16 324 ⇑P P 21 08 19.7 +0.9
baz=36,SNR=40
Q10A **Clear Creek Ra** 36.18 320 ⇑P P 21 08 20.1 +1.1
baz=36,SNR=35
REDW **Red Top Meadow** 36.18 330 *e*P P 21 08 19.5 +0.5
comp=Z,440nm,1.0s,mb5.9
REDW *e*pP pP 21 09 06.6 +0.6
P11A **Circle Ranch,** 36.23 322 ⇑P P 21 08 20.1 +0.7
baz=36
LOHW **Long Hollow** 36.26 331 *e*P P 21 08 19.9 +0.3
comp=Z,135nm,1.1s,mb5.4
LOHW *e*pP pP 21 09 05.7 -0.9
R09A **Tonopah** 36.26 319 ⇓P P 21 08 20.3 +0.6
baz=36
TPH **Tonopah** 36.27 318 *e*P P 21 08 19.9 +0.1
TPH *e*pP pP 21 09 06.0 -0.8
TPAW **Teton Pass** 36.33 331 *e*P P 21 08 20.8 +0.6
comp=Z,296nm,1.3s,mb5.7
TPAW *e*pP pP 21 09 07.7 +0.5
TIN **Tinemaha** 36.36 316 ⇓P P 21 08 21.1 +0.5
baz=36
PKM **Peak Mountain** 36.39 312 ⇑P P 21 08 21.0 +0.1
baz=36
MOOW **Moose Ponds** 36.42 331 *e*P P 21 08 21.2 +0.1
comp=Z,38nm,0.8s,mb5.0
MOOW *e*pP pP 21 09 09.3 +1.2
M13A **Montello** 36.47 325 P P 21 08 22.2 +0.8
baz=36,SNR=18
DCID1 **Drake Creek** 36.52 330 *e*P P 21 08 21.5 -0.3
O11A **Cowboy Ranch,** 36.53 322 ⇑P P 21 08 22.8 +0.8
baz=36,SNR=15
S08C **White Mtn Res** 36.57 317 ⇓P P 21 08 23.2 +0.8
baz=36,SNR=26
IMW **Indian Meadow** 36.63 331 *e*P P 21 08 23.2 +0.5
comp=Z,25nm,0.6s,mb4.9
IMW *e*PcP PcP 21 10 40.2 -0.3
N12A **Clover Valley,** 36.63 324 P P 21 08 23.7 +0.9
baz=37,SNR=39
ELK **Elko** 36.68 323 *e*P P 21 08 23.9 +0.7
comp=Z,40nm,1.1s,mb4.9
ELK *e*pP pP 21 09 09.6 -0.7
ELK Elko 36.68 323 P P 21 08 24.6 +1.4
ELK *e* pP 21 09 12.8 +2.5
ELK pmax pmax
comp=Z,40nm,1.0s
Q09A **Carvers** 36.68 319 ⇓P P 21 08 24.2 +1.0
baz=37,SNR=5.6
P10A **Eureka** 36.70 321 ⇓P P 21 08 24.4 +0.9
baz=37,SNR=9.4
HELL **Mitchell Peak,** 36.71 315 P P 21 08 24.0 +0.4
baz=37,SNR=19
SMMC **Simmler** 36.71 312 ⇓P P 21 08 24.1 +0.5
baz=37
MTUM **Tungsten Hills** 36.75 316 *e*P P 21 08 24.1 +0.2
MTUM *e*pP pP 21 09 11.1 +0.1
K14A **Jones Ranch, D** 36.76 327 P P 21 08 24.0 +0.1
baz=37,SNR=65
RLMT **Red Lodge** 36.83 334 *e*P P 21 08 24.3 -0.1
comp=Z,117nm,1.3s,mb5.2
RLMT pP pP 21 09 12.5 +1.0
L13A **Double Diamond** 36.85 326 ⇑P P 21 08 24.9 +0.3
baz=37,SNR=16
LKWY **Lake** 36.89 332 *e*P P 21 08 25.9 +1.0
comp=Z,65nm,1.3s,mb5.0
LKWY **Lake** 36.89 332 *e*P P 21 08 25.9 +0.9
LKWY pmax pmax
comp=Z,65nm,1.3s,mb5.0
LAO **LASA Array** 36.91 338 *e*P P 21 08 24.9 -0.2
comp=Z,84nm,0.8s,mb5.3
M12A **Wells** 36.93 325 ⇑P P 21 08 25.6 +0.3
baz=37,SNR=26
R08A **Mina** 36.99 318 ⇓P P 21 08 26.9 +0.9
baz=37,SNR=6.6
YFT **Old Faithful** 37.00 332 *e*P P 21 08 27.4 +1.5
YFT *e*pP pP 21 09 14.5 +1.5
N11A **Elko Archery C** 37.01 323 ⇑P P 21 08 26.8 +0.7
baz=37,SNR=8.7
P09A **Austin** 37.08 320 ⇑P P 21 08 27.2 +0.6
baz=37,SNR=7.7
O10A **Cortez Mining,** 37.13 322 ⇑P P 21 08 27.9 +0.9
baz=37,SNR=11
YNR **Norris Junctio** 37.13 332 *e*P P 21 08 28.1 +1.2
NVAR **Mina Array Bea** 37.17 318 P P 21 08 28.1 +0.8
NVAR pP pP 21 09 15.2 +0.6
NVAR PcP PcP 21 10 42.4 +0.1
NVAR ScP ScP 21 14 07.8 +0.3
NVAR Mina Array Bea 37.17 318 P P 21 08 28.1 +0.8
comp=Z,12nm,0.7s,mb4.5,baz=124,slow=8.9,SNR=66
NVAR pP pP 21 09 15.2 +0.6
comp=Z,7.9nm,0.8s,baz=120,slow=8.3,SNR=2.9
NVAR PcP PcP 21 10 42.4 +0.1
comp=Z,11nm,0.8s,baz=126,slow=5.4,SNR=6.5
NVAR ScP ScP 21 14 07.8 +0.3
comp=Z,19nm,0.7s,baz=119,slow=5.0,SNR=26
Q08A **Gabbs** 37.17 319 P P 21 08 28.1 +0.7
baz=37,SNR=22
YMR **Madison River** 37.23 332 *e*P P 21 08 28.8 +1.0
comp=Z,217nm,1.4s,mb5.5
YMR *e*pP pP 21 09 15.2 +0.2
KCC **Kaiser Creek** 37.24 316 ⇑P P 21 08 28.1 +0.1
baz=37,SNR=10
K13A **Stover Farm, H** 37.31 327 ⇑P P 21 08 28.6 +0.1
baz=37,SNR=6.5
T06C **Millerton Lake** 37.35 315 ⇓P P 21 08 28.6 -0.3
baz=37,SNR=5.8
PKD **Parkfield** 37.40 313 ⇑P P 21 08 29.4 -0.1
baz=37
M11A **Holland Ranch,** 37.44 324 ⇑P P 21 08 30.0 +0.4
baz=38
R07C **Lee Vining** 37.47 317 ⇑P P 21 08 30.8 +0.9
baz=37,SNR=6.5
L12A **House Creek Ra** 37.47 325 P P 21 08 30.2 +0.3
baz=38,SNR=11
O09A **Fish Creek Ran** 37.48 321 ⇓P P 21 08 30.8 +0.8
baz=38,SNR=12
V04C **Ramage Ranch,** 37.49 312 ⇓P P 21 08 31.2 +1.0
baz=38
GCMT **Greycliff** 37.53 334 *e*P P 21 08 28.8 -1.5
ULM **Lac du Bonnet** 37.55 351 P P 21 08 28.9 -1.4
comp=Z,117nm,0.5s,mb5.7,baz=166,slow=9.1,SNR=386
QLMT **Earthquake Lak** 37.57 332 *e*P P 21 08 31.7 +1.1
QLMT *e*pP pP 21 09 21.1 +3.2
QLMT *e*ScP ScP 21 14 09.5 +0.6
BMN **Battle Mountai** 37.66 322 *e*P P 21 08 31.9 +0.5
comp=Z,73nm,1.3s,mb5.0
BMN *e*pP pP 21 09 19.7 +1.0
BMN Battle Mountai 37.66 322 P P 21 08 32.3 +0.9
BMN *e* pP 21 09 19.8 +1.1
BMN pmax pmax
comp=Z,73nm,1.2s,mb5.1
K12A **Draper Farm, C** 37.74 326 P P 21 08 32.4 +0.3
baz=38,SNR=18
P08A **Dixie Valley** 37.75 320 ⇑P P 21 08 32.8 +0.6
baz=38
U04C **Hernandez Rese** 37.78 313 ⇓P P 21 08 32.7 +0.2
baz=38
DGMT **Dagmar** 37.79 342 *e*P P 21 08 32.8 +0.4
comp=Z,585nm,0.9s,mb6.1
DGMT *e*ScP ScP 21 14 10.7 +1.0
J13A **Cove Ranch, Pi** 37.88 328 P P 21 08 33.5 +0.3
baz=38,SNR=23
S06C **San Francisco** 37.90 316 ⇑P P 21 08 33.6 +0.1
baz=38,SNR=8.4
M10A **I.L. Ranch, Tu** 37.93 323 ⇑P P 21 08 33.9 +0.2
baz=38,SNR=8.9
V03C **Hunter Liggett** 37.94 313 ⇓P P 21 08 34.1 +0.2
baz=38
S05C **Merced** 37.95 315 ⇓P P 21 08 33.8 -0.2
baz=38
R06C **Coleville** 37.97 317 ⇑P P 21 08 34.7 +0.6
baz=38,SNR=8.2
N09A **Rock Creek Ran** 38.09 322 P P 21 08 35.7 +0.6
baz=38,SNR=31
HLID **Hailey** 38.12 328 *e*P P 21 08 35.3 0.0
comp=Z,24nm,0.8s,mb4.8
HLID *e*pP pP 21 09 23.6 +1.0
HLID Hailey 38.12 328 P P 21 08 35.6 +0.4
baz=38,SNR=41
I13A **Wildhorse Cree** 38.21 328 P P 21 08 37.0 +1.0
baz=38,SNR=72
L10A **Juniper Basin** 38.24 324 P P 21 08 36.4 +0.1
baz=38,SNR=17
J12A **Stokes Ranch,** 38.26 327 P P 21 08 36.6 +0.1
baz=38,SNR=42
BOZ **Bozeman (W)** 38.28 332 *e*P P 21 08 36.5 -0.1
comp=Z,112nm,1.4s,mb5.2
BOZ **Bozeman (W)** 38.28 332 *e*P P 21 08 36.5 -0.1
BOZ pmax pmax
comp=Z,112nm,1.4s,mb5.2
BOZ Bozeman (W) 38.28 332 ⇑P P 21 08 37.1 +0.6
baz=38
G15A **Dillon** 38.31 331 P P 21 08 38.0 +1.1
baz=38,SNR=40
HAST **UC Hastings Re** 38.33 313 ⇑P P 21 08 36.8 -0.4
baz=38
CMB **Columbia Colle** 38.34 316 *e*P P 21 08 37.1 -0.1
comp=Z,15nm,1.1s,mb4.4
CMB **Columbia Colle** 38.34 316 P P 21 08 37.3 +0.1
CMB pmax pmax
comp=Z,15nm,1.1s,mb4.4
CMB **Columbia Colle** 38.34 316 ⇑P P 21 08 37.0 -0.2
baz=38,SNR=8.6
M09A **Marrel Ranch,** 38.40 323 ⇑P P 21 08 38.0 +0.4
baz=38,SNR=6.0
N08A **GE Springer Mi** 38.42 321 ⇓P P 21 08 37.9 0.0
baz=38,SNR=13
PACP **Pacheco Peak** 38.44 314 ⇑P P 21 08 38.0 -0.1
baz=38
K11A **Parker Ranch,** 38.45 325 P P 21 08 38.3 +0.3
baz=38,SNR=27
R05C **Kirkwood Meado** 38.48 317 P P 21 08 39.2 +0.9
baz=38,SNR=14
DLMT **Dillon** 38.51 331 *e*P P 21 08 39.8 +1.3
comp=Z,38nm,0.8s,mb5.0
O07A **Toulon** 38.52 320 P P 21 08 38.7 +0.1
baz=38,SNR=18
PAHR **Pah Rah Range** 38.58 319 *e*P P 21 08 39.3 +0.2
comp=Z,56nm,1.5s,mb4.9
PAHR *e*pP pP 21 09 27.9 +1.3
WCN Washoe City 38.59 318 ⇓P P 21 08 39.6 +0.3
baz=39
S04C **Ingram Canyon,** 38.71 315 ⇓P P 21 08 40.2 -0.1
baz=39,SNR=5.2
H13A **Challis** 38.74 329 P P 21 08 41.0 +0.6
baz=39,SNR=74
MFID **Camas Ranch** 38.77 326 P P 21 08 41.0 +0.4
baz=39,SNR=15
F15A **Butte** 38.82 332 P P 21 08 41.6 +0.6
baz=39,SNR=47
R04C **Big Horse Ranc** 38.82 316 ⇑P P 21 08 41.7 +0.5
baz=39
G14A **Jackson** 38.84 330 P P 21 08 41.9 +0.7
baz=39,SNR=24
L09A **Wilkinson Ranc** 38.90 323 ⇓P P 21 08 41.6 -0.2
baz=39,SNR=9.8
K10A **MacKenzie Ranc** 38.92 325 P P 21 08 42.2 +0.2
baz=39,SNR=12
N07B **Gerlach** 38.93 321 ⇑P P 21 08 42.3 +0.3
baz=39
LAVA **Lava Cap Winer** 38.95 317 ⇓P P 21 08 42.2 0.0
baz=39,SNR=5.9
M08A **Happy Creek Ra** 38.97 322 ⇑P P 21 08 42.2 -0.1
baz=39,SNR=15
SIV **San Ignacio** 38.98 137 P P 21 08 42.1 -0.6
comp=Z,33nm,0.5s,mb5.1,baz=310,slow=6.9,SNR=62
SIV pP pP 21 09 31.9 +1.5
comp=Z,13nm,0.7s,baz=311,slow=5.6,SNR=2.5
SIV sP sP 21 09 58.0 +1.6
comp=Z,18nm,0.8s,baz=317,slow=6.5,SNR=2.3
SIV PcP PcP 21 10 48.4 0.0
comp=Z,17nm,0.5s,baz=292,slow=4.2,SNR=6.6
SIV ScP ScP 21 14 14.9 +0.1
comp=Z,14nm,0.8s,baz=352,slow=3.2,SNR=13
H12A **Diamond D Ranc** 39.03 328 P P 21 08 43.3 +0.5
baz=39,SNR=44
G13A **Cobalt** 39.10 329 P P 21 08 43.5 +0.1
baz=39,SNR=34
O06A **Flanigan** 39.12 319 ⇑P P 21 08 44.0 +0.4
baz=39
P05C **Yuba Gap, Truc** 39.15 318 ⇑P P 21 08 44.4 +0.5
baz=39,SNR=7.3
F14A **Wisdom** 39.21 331 ⇓P P 21 08 44.6 +0.4
baz=39,SNR=15
J10A **Berg Farm, Mel** 39.28 326 ⇑P P 21 08 45.0 0.0
baz=39
BEKR **Beckwourth** 39.29 319 P P 21 08 45.5 +0.5
baz=39,SNR=20
JRSC **Jasper Ridge** 39.30 314 ⇓P P 21 08 45.0 -0.1
baz=39
E15A **Deer Lodge** 39.33 332 ⇓P P 21 08 45.6 +0.3
baz=39,SNR=28
K09A **Rome** 39.35 324 P P 21 08 45.8 +0.3
baz=39,SNR=65
EGMT **Eagleton** 39.36 336 *e*P P 21 08 45.6 +0.2
comp=Z,288nm,1.5s,mb5.6
EGMT **Eagleton** 39.36 336 ⇓P P 21 08 45.9 +0.4
baz=39
L08A **Fields** 39.40 323 ⇓P P 21 08 45.8 -0.1
baz=39,SNR=18
Q04C **Lincoln** 39.42 317 ⇑P P 21 08 46.6 +0.5
baz=39
N06A **Buffalo Meadow** 39.45 320 ⇑P P 21 08 46.4 +0.1
baz=39,SNR=6.3
F13A **Darby** 39.65 330 P P 21 08 47.9 -0.1
baz=40,SNR=45
O05C **Quincy** 39.70 318 ⇓P P 21 08 48.8 +0.3
baz=40
E14A **Clinton** 39.71 332 P P 21 08 48.6 +0.2
baz=40,SNR=36
WVOR **Wild Horse Val** 39.72 323 *e*P P 21 08 48.2 -0.3
comp=Z,41nm,0.9s,mb4.9
WVOR *e*pP pP 21 09 36.5 +0.2
WVOR *e*ScP ScP 21 14 18.7 +1.5
WVOR Wild Horse Val 39.72 323 P P 21 08 48.3 -0.2
WVOR pmax pmax
comp=Z,41nm,0.9s,mb4.9
H11A **Donnelly** 39.73 328 P P 21 08 48.8 +0.1
baz=40,SNR=12
I10A **Payette** 39.74 326 ⇓P P 21 08 48.8 +0.1
baz=40,SNR=8.2
D15A **Lincoln** 39.74 333 P P 21 08 48.9 +0.3
baz=40,SNR=11
OHCM **Honcut** 39.74 317 *e*P P 21 08 48.9 +0.1
OHCM *e*pP pP 21 09 34.2 -2.3
J09A **Fry Pan Ranch,** 39.78 325 P P 21 08 49.3 +0.2
baz=40,SNR=109
K08A **Mann Creek Ran** 39.81 323 P P 21 08 49.7 +0.4
baz=40,SNR=118
ORV **Oroville** 39.87 317 P P 21 08 50.6 +0.8
baz=40,SNR=12
L07A **Adell** 39.88 322 P P 21 08 49.9 0.0
baz=40,SNR=32
SUTB **Sutter Butte** 39.89 317 ⇑P P 21 08 49.9 -0.1
baz=40
CVS **Carmenet Viney** 39.90 315 ⇓P P 21 08 49.1 -1.1
baz=40
CHMT **Chamberlain Mo** 39.97 332 *e*P P 21 08 50.3 -0.3
CHMT *e*pP pP 21 09 40.6 +2.3
O04C **Chester** 40.01 319 ⇓P P 21 08 50.9 0.0
baz=40,SNR=9.9
H10A **Noah's Angus R** 40.04 327 P P 21 08 50.5 -0.7
baz=40,SNR=32
E13A **Victor** 40.06 331 P P 21 08 51.3 +0.1
baz=40,SNR=23
F12A **Elk City** 40.08 329 P P 21 08 51.5 0.0
baz=40,SNR=127
NSHM **Saint Helena R** 40.09 315 *e*P P 21 08 51.6 0.0
MCCM **Marconi Confer** 40.10 315 ⇑P P 21 08 50.9 -0.8
baz=40
MNRC **McLaughlin Nat** 40.16 316 ⇑P P 21 08 52.0 -0.1
baz=40,SNR=7.5
I09A **Lost Marbles R** 40.18 326 P P 21 08 52.0 -0.2
baz=40,SNR=15

J08A Circle Bar Ran 40.20 324 P P 21 08 52.4 -0.1
baz=40,SNR=19
D14A Greenough 40.22 332 P P 21 08 52.2 -0.3
baz=40,SNR=15
MSO Missoula 40.23 332 *eP* P 21 08 52.1 -0.5
comp=Z,34nm,1.1s,mb4.7
MSO *epP* pP 21 09 40.2 -0.2
K07A Rock Creek Ran 40.23 323 P P 21 08 52.8 +0.1
baz=40,SNR=25
G11A Walters Elk Ra 40.34 328 P P 21 08 53.0 -0.6
baz=40,SNR=61
MOD Modoc 40.40 321 ⇓P P 21 08 53.1 -1.0
baz=40
HATC Hat Creek Radi 40.52 319 ⇑P P 21 08 54.9 -0.2
baz=40,SNR=5.6
BMO Blue Mountains 40.52 327 *eP* P 21 08 53.5 -1.5
comp=Z,28nm,0.8s,mb4.7
BMO *epP* pP 21 09 42.5 -0.4
H09A Durkee 40.59 326 ⇑P P 21 08 54.7 -0.9
baz=41,SNR=14
I08A Drewsey 40.60 325 ⇓P P 21 08 55.3 -0.4
baz=41
M05C Lookout 40.61 320 P P 21 08 55.6 -0.3
baz=41,SNR=7.7
HOPS Hopland 40.64 316 ⇑P P 21 08 55.6 -0.6
baz=41
D13A Huson 40.66 331 P P 21 08 56.0 -0.1
baz=41,SNR=20
J07A Hines 40.68 324 ⇑P P 21 08 56.1 -0.3
baz=41
GASB Alder Springs 40.73 317 ⇑P P 21 08 56.9 +0.1
baz=41,SNR=7.7
C14A Swan Lake 40.84 333 ⇑P P 21 08 57.9 +0.3
baz=41
K06A Valley Falls 40.89 322 ⇑P P 21 08 58.0 -0.1
baz=41,SNR=6.3
E11A Bogner Ranch, 40.98 329 P P 21 08 57.9 -0.8
baz=41,SNR=34
LASM Arnica Sink 41.02 320 P P 21 08 59.2 0.0
H08A Prairie City 41.04 326 P P 21 08 58.5 -0.7
baz=41,SNR=24
O02C Red Bluff 41.04 317 ⇓P P 21 08 58.5 -0.9
baz=41,SNR=6.2
G09A Cove 41.05 327 P P 21 08 58.6 -0.8
baz=41,SNR=29
P01C Double 8 Ranch 41.05 316 ⇓P P 21 08 59.4 0.0
baz=41
D12A Red Ives Fores 41.05 331 ⇑P P 21 08 59.1 -0.3
baz=41
WDC Whiskeytown Da 41.09 318 ⇓P P 21 08 58.1 -1.6
baz=41
J06A Christmas Vall 41.10 323 ⇓P P 21 08 59.0 -0.8
baz=41,SNR=8.6
C13A Hot Springs 41.15 332 P P 21 09 00.5 +0.4
baz=41,SNR=5.6
M03C McCloud 41.18 319 ⇑P P 21 08 59.8 -0.7
baz=41
F10A Beach Ranch, E 41.23 328 ⇓P P 21 09 00.2 -0.6
baz=41,SNR=36
I07A Izee 41.23 324 ⇓P P 21 09 00.2 -0.7
baz=41,SNR=12
K05A Summer Lake 41.23 322 ⇓P P 21 09 00.5 -0.4
baz=41
M04C Macdoel 41.28 320 ⇑P P 21 09 00.8 -0.5
baz=41,SNR=8.1
F09A S2 Ranch, Elgi 41.40 327 P P 21 09 01.9 -0.3
baz=41,SNR=47
E10A Myers Farm, Un 41.52 329 P P 21 09 02.7 -0.4
baz=42,SNR=9.4
L04A Klamath Falls 41.53 321 ⇑P P 21 09 02.9 -0.4
baz=42
I06A Prineville 41.55 324 ⇑P P 21 09 02.8 -0.7
baz=42,SNR=10
H07A Lands Inn, Kim 41.58 325 ⇑P P 21 09 02.7 -1.0
baz=42,SNR=16
B13A Whitefish 41.61 333 ⇓P P 21 09 03.9 0.0
baz=42,SNR=15
G08A Pilot Rock 41.69 326 P P 21 09 04.2 -0.4
baz=42,SNR=8.3
N02C Big Bar 41.71 318 ⇓P P 21 09 03.7 -1.1
baz=42
M02C Callahan 41.71 319 ⇓P P 21 09 03.3 -1.5
baz=42
J05A Fort Rock 41.76 322 ⇓P P 21 09 04.4 -0.7
baz=42
YBH Yreka Blue Hor 41.80 319 ⇓P P 21 09 04.4 -1.1
baz=42
WALA Waterton Lakes 41.88 334 *eP* P 21 09 06.1 +0.1
comp=Z,403nm,2.0s,mb5.5
WALA *epP* pP 21 09 56.3 +2.0
F08A Pendleton 41.92 327 ⇑P P 21 09 05.4 -1.0
baz=42,SNR=18
D10A Wagner Farm, O 41.99 329 P P 21 09 06.1 -0.8
baz=42,SNR=45
A13A Flathead Natio 42.01 333 ⇓P P 21 09 07.4 +0.4
baz=42
E09A Wood Farm, Sta 42.06 328 ⇑P P 21 09 07.0 -0.6
baz=42,SNR=16
G07A Ruggs Ranch, H 42.06 326 ⇓P P 21 09 07.0 -0.5
baz=42
H06A Lindquist Farm 42.10 325 ⇓P P 21 09 07.3 -0.6
baz=42
B12A Libby 42.19 332 P P 21 09 09.0 +0.5
baz=42,SNR=22
J04A Umpqua Nationa 42.26 322 ⇓P P 21 09 08.8 -0.4
baz=42
I05A Bend 42.29 323 ⇑P P 21 09 09.1 -0.4
baz=42
D09A Jones Farm, Ri 42.51 329 ⇑P P 21 09 10.9 -0.3
baz=42,SNR=16
E08A Dider Farm, El 42.52 328 P P 21 09 10.3 -1.0
baz=42,SNR=12
B11A Sandpoint 42.52 331 P P 21 09 11.3 +0.1
baz=43,SNR=36
C10A Spiker Farm, 42.53 330 ⇑P P 21 09 11.1 -0.2
baz=43
A12A Yaak River Ran 42.55 332 P P 21 09 11.9 +0.4
baz=43,SNR=15
G06A Carlson Farm, 42.58 325 ⇑P P 21 09 11.7 0.0
baz=43
F07A Phinny Hill Vi 42.60 326 ⇑P P 21 09 11.7 -0.2
baz=43
HAWA Hanford 42.71 327 *eP* P 21 09 11.8 -1.0
comp=Z,35nm,0.8s,mb4.8
HAWA *epP* pP 21 09 59.6 -1.5
RSW Rattlesnake Hi 42.74 327 P P 21 09 12.8 -0.2
I04A Tendick Farm, 42.75 322 P P 21 09 12.6 -0.6
baz=43,SNR=7.8
NEW Newport 42.76 331 *eP* P 21 09 12.0 -1.1
comp=Z,15nm,0.8s,mb4.5
NEW Newport 42.76 331 P P 21 09 12.9 -0.2
NEW pmax pmax
comp=Z,15nm,0.8s
NEW Newport 42.76 331 P P 21 09 12.3 -0.8
comp=Z,13nm,0.6s,mb4.5,baz=139,slow=8.6,SNR=12
NEW PcP PcP 21 10 58.9 -1.3
comp=Z,4.8nm,0.5s,baz=147,slow=10.0,SNR=4.7
FRIS Frissel Point 42.81 323 P P 21 09 13.7 +0.1
SNIWA Snively Ranch 42.82 327 P P 21 09 13.5 -0.2
D08A Wollman Farm, 42.82 328 P P 21 09 13.4 -0.2
baz=43,SNR=30
K02A Glendale 42.84 320 ⇑P P 21 09 13.1 -0.8
baz=43
A11A Hall Mountain, 42.90 332 P P 21 09 14.7 +0.5
baz=43,SNR=44
GBB Gable Butte 42.90 327 P P 21 09 14.0 -0.2
G05A Wamic 42.96 325 ⇑P P 21 09 15.2 +0.4
baz=43
F06A Goldendale 42.98 326 ⇑P P 21 09 15.4 +0.4
baz=43,SNR=27
C09A Chrisman Ranch 42.99 329 ⇑P P 21 09 14.8 -0.2
baz=43,SNR=20
H04A Detroit Lake 43.13 323 ⇑P P 21 09 15.5 -0.6
baz=43,SNR=11
J02A Umpqua 43.22 321 ⇓P P 21 09 16.5 -0.4
baz=43
MXC Moxie City 43.23 327 P P 21 09 17.6 +0.7
B09A Rice 43.36 330 P P 21 09 17.4 -0.5
baz=43,SNR=56
C08A Higginbotham F 43.37 329 ⇓P P 21 09 18.3 +0.3
baz=43,SNR=8.3
I03A Eugene 43.37 322 ⇑P P 21 09 18.1 0.0
baz=43
F05A White Salmon 43.43 325 ⇓P P 21 09 19.0 +0.5
baz=43,SNR=6.4
D07A Quincy 43.45 328 ⇑P P 21 09 18.4 -0.3
baz=44
A10A Northport 43.47 331 P P 21 09 17.9 -0.8
baz=44,SNR=12
K01A Sixes 43.48 320 ⇑P P 21 09 18.4 -0.6
baz=44
E06A Yakima 43.58 326 ⇑P P 21 09 19.8 +0.2
baz=44,SNR=14
G04A Mulino 43.60 324 ⇑P P 21 09 19.8 -0.1
baz=44
I02A Mapleton 43.72 322 ⇓P P 21 09 20.3 -0.6
baz=44
TBM Table Mountain 43.77 327 P P 21 09 21.7 +0.5
WTV Waterville 43.77 328 P P 21 09 21.4 +0.1
H03A Soap Creek Ran 43.77 323 ⇑P P 21 09 20.8 -0.5
baz=44
C07A Waterville 43.82 328 P P 21 09 21.4 -0.2
baz=44,SNR=28
B08A Colville Reser 43.90 329 P P 21 09 22.1 -0.1
baz=44,SNR=29
D06A Cle Elum 43.91 327 ⇑P P 21 09 22.2 -0.1
baz=44,SNR=8.9
A09A Danville 43.95 331 P P 21 09 22.3 -0.3
baz=44,SNR=31
F04A Amboy 44.00 325 ⇑P P 21 09 22.5 -0.6
baz=44
E05A Randle 44.01 326 ⇑P P 21 09 22.7 -0.4
baz=44,SNR=9.7
G03A Yamhill 44.13 324 ⇑P P 21 09 24.1 0.0
baz=44,SNR=5.2
A08A Turner Farm, O 44.27 330 P P 21 09 24.9 -0.2
baz=44,SNR=14
B07A Winthrop 44.35 329 ⇓P P 21 09 25.3 -0.5
baz=44
C06A Tall Timber Ra 44.40 328 P P 21 09 26.2 0.0
baz=44,SNR=22
SCHQ Schefferville 44.48 17 P P 21 09 26.5 -0.3
comp=Z,350nm,0.7s,mb5.8,baz=213,slow=6.2,SNR=484
D05A Enumclaw 44.52 326 ⇓P P 21 09 26.9 -0.2
baz=44
E04A Onalaska 44.56 325 ⇓P P 21 09 27.2 -0.3
baz=45
F03A Seaside 44.64 324 ⇑P P 21 09 27.9 -0.3
baz=45
C05A Tolt Reservoir 44.67 327 P P 21 09 27.9 -0.4
baz=45,SNR=11
A07A Ashnola River, 44.87 329 P P 21 09 30.3 +0.4
baz=45,SNR=26
EDM Edmonton 44.90 338 *eP* P 21 09 29.4 -0.7
EDM Edmonton 44.90 338 *eP* P 21 09 29.7 -0.4
LCO Las Campanas 44.99 159 *eP* P 21 09 32.4 +1.3
comp=Z,85nm,0.9s,mb5.1
LCO *ePcP* PcP 21 11 09.3 +1.2
E03A Lebam 45.00 325 ⇓P P 21 09 30.7 -0.2
baz=45
B06A Marblemount 45.09 328 ⇑P P 21 09 30.9 -0.7
baz=45,SNR=19
JCW Jim Creek 45.11 328 P P 21 09 30.8 -1.0
B05A Bryant 45.24 328 P P 21 09 31.9 -0.9
baz=45,SNR=7.1
C04A Brinnon 45.37 326 ⇓P P 21 09 33.0 -0.9
baz=45,SNR=6.5
D03A Wishkah Elem. 45.45 325 ⇑P P 21 09 33.6 -0.8
baz=46
RPN Rapa Nui 45.46 208 P P 21 09 36.6 +1.8
comp=Z,77nm,0.5s,mb5.3,baz=0.4,slow=8.0,SNR=4.7
NLWA Neilton Lookou 45.66 326 ⇑P P 21 09 36.1 0.0
baz=46
A05A Maple Falls 45.70 328 ⇑P P 21 09 35.6 -0.8
baz=46,SNR=6.2
FCC Fort Churchill 45.70 355 *eP* P 21 09 35.7 -0.6
comp=Z,192nm,0.8s,mb5.5
FCC Fort Churchill 45.70 355 P P 21 09 35.8 -0.4
FCC pmax pmax
comp=Z,190nm,0.8s,mb5.5
A04A Legoe Bay, Lum 45.84 328 ⇑P P 21 09 37.1 -0.4
baz=46
B04A Port Angeles 45.86 327 ⇓P P 21 09 37.7 0.0
baz=46
CFAA Coronel Fontan 48.23 158 P P 21 09 57.5 +1.4
CFAA ScP ScP 21 14 53.0 +0.9
CFAA Coronel Fontan 48.23 158 P P 21 09 57.5 +1.4
comp=Z,5.4nm,0.7s,mb4.0,baz=336,slow=6.6,SNR=64
CFAA ScP ScP 21 14 53.0 +0.9
comp=Z,1.4nm,1.0s,baz=349,slow=3.5,SNR=7.1
FCH Farellones 49.10 161 *i* P P 21 10 04.8 +2.1
MDZ Mendoza 49.17 159 *eP* P 21 10 05.1 +1.9
BBB Bella Bella 50.68 329 P P 21 10 14.4 +0.1
comp=Z,24nm,0.9s,mb4.7,baz=61,slow=12,SNR=2.8
YKA Yellowknife Ar 52.87 345 P P 21 10 29.5 -0.8
YKA pP pP 21 11 20.2 -0.5
YKA PP PP 21 12 32.3 +0.1
YKA ScP ScP 21 15 10.5 -1.0
YKA Yellowknife Ar 52.87 345 P P 21 10 29.5 -0.8
YKA *PP pP 21 11 20.2 -0.5
YKA 21 12 32.3
YKA Yellowknife Ar 52.87 345 P P 21 10 29.5 -0.8
comp=Z,41nm,0.7s,mb5.0,baz=139,slow=7.7,SNR=566
YKA pP pP 21 11 20.2 -0.5
comp=Z,41nm,1.1s,baz=138,slow=7.9,SNR=4.2
YKA PP PP 21 12 32.3 +0.1
comp=Z,5.4nm,0.9s,baz=145,slow=9.1,SNR=2.9
YKA ScP ScP 21 15 10.5 -1.0
comp=Z,18nm,0.7s,baz=141,slow=4.2,SNR=32
RCBR Riachuelo 54.50 107 *eP* P 21 10 42.4 -0.6
comp=Z,32nm,0.8s,mb4.9
RCBR *epP* pP 21 11 33.2 -0.5
DLBC Dease Lake 55.23 334 *eP* P 21 10 47.6 +0.2
DLBC *epP* pP 21 11 38.5 +0.2
DLBC Dease Lake 55.23 334 P P 21 10 48.0 +0.6
baz=140,slow=6.1
DLBC pP pP 21 11 38.4 +0.1
baz=139,slow=6.1
PLCA Paso Flores 55.92 165 *eP* P 21 10 53.3 +0.8
comp=Z,37nm,0.9s,mb4.9
PLCA *e* pP 21 11 48.9 +5.3
PLCA *eS*P sP 21 12 05.0 -3.8
PLCA Paso Flores 55.92 165 *eP* P 21 10 53.3 +0.8
PLCA *e* pP 21 11 48.9 +5.3
PLCA *e**SP sP 21 12 05.0 -3.8
PLCA pmax pmax
comp=Z,37nm,0.9s
TRQA Tornquist 56.31 156 *eP* P 21 10 55.3 0.0
comp=Z,50nm,1.1s,mb5.0
SKAG Skagway 58.08 333 *eP* P 21 11 09.5 +2.1
comp=Z,22nm,0.9s,mb4.8
SFJD Kangerlussuaq 58.92 16 *i* P P 21 11 12.3 -0.8
SFJD pmax pmax
comp=Z,103nm,0.9s,mb5.5
SFJD Kangerlussuaq 58.92 16 *i* P P 21 11 12.3 -0.8
comp=Z,103nm,0.9s,mb5.5
RKT Rikitea 58.98 233 *eS* S 21 18 59.8 -2.7
comp=Z,590nm,32.2s
RKT Rikitea 58.98 233 *eP* P 21 11 14.5 +0.3
comp=Z,192nm,1.0s,mb5.7
RKT *eS* S 21 18 59.8 -2.7
RKT Rikitea 58.98 233 *eP* P 21 11 14.5 +0.3
RKT *eS* S 21 18 59.8 -2.7
RKT pmax pmax
comp=Z,192nm,1.0s,mb5.7
RES Resolute Bay 61.57 358 *eP* P 21 11 30.0 -0.9
comp=Z,44nm,0.6s,mb5.3
RES *epP* pP 21 12 22.3 -0.6
RES Resolute Bay 61.57 358 P P 21 11 30.0 -0.9
RES pmax pmax
comp=Z,44nm,0.7s,mb5.2
DAWY Dawson 62.10 337 *eP* P 21 11 33.1 -1.4
DAWY *epP* pP 21 12 25.6 -1.1
DAWY *ePP* PP 21 13 55.8 +1.8
INK Inuvik 62.47 342 *eP* P 21 11 36.1 -0.9
comp=Z,3.8nm,1.1s,mb3.9
INK *ePcP* PcP 21 12 12.8 -1.1
INK *epP* pP 21 12 28.4 -0.7
INK *eScP* ScP 21 15 53.2 -0.7
INK Inuvik 62.47 342 *eP* P 21 11 36.1 -0.9
INK *e* 21 12 12.9
INK *e**PP pP 21 12 28.4 -0.8
INK pmax pmax
comp=Z,4.0nm,1.0s
EGAK Eagle 63.11 337 *eP* P 21 11 39.9 -1.3
comp=Z,23nm,1.0s,mb4.8
EGAK *epP* pP 21 12 32.6 -1.0
EYAK Cordova Ski Ar 63.24 332 *eP* P 21 11 42.3 +0.1
comp=Z,96nm,1.4s,mb5.2
EYAK *epP* pP 21 12 32.1 -2.4
PMR Palmer 65.15 332 *eP* P 21 11 53.4 -1.1
comp=Z,19nm,0.8s,mb4.8
PMR Palmer 65.15 332 *eP* P 21 11 53.4 -1.1
PMR pmax pmax
comp=Z,19nm,0.8s,mb4.8
SLKM Skilak Lake 65.31 331 *eP* P 21 11 54.7 -0.8
SLKM Skilak Lake 65.31 331 P P 21 11 55.0 -0.6
COLA College 65.75 336⇑ *iP* P 21 11 57.1 -1.2
COLA College 65.75 336 *c iP* P 21 11 57.0 -1.3
MCK McKinley 65.78 335 *eP* P 21 11 57.3 -1.2
comp=Z,50nm,1.0s,mb5.1
MCK McKinley 65.78 335 P P 21 11 57.7 -0.8
MCK pmax pmax
comp=Z,25nm,1.0s,mb4.8
PMOR Pomariorio Ree 66.16 247 *eP* P 21 12 02.8 +1.0
comp=Z,54nm,1.0s,mb5.1
SVW2 Sparrevohn 68.00 331 *eP* P 21 12 11.2 -1.3
TVO Taravao 68.42 245 *eP* P 21 12 16.7 +0.8
comp=Z,173nm,1.4s,mb5.5
TVO Taravao 68.42 245 *eP* P 21 12 16.7 +0.8
TVO pmax pmax
comp=Z,173nm,1.4s,mb5.5
IMA2 Indian Mountai 68.44 336 *eP* P 21 12 14.4 -0.8
TTA Tatalina 68.61 333 *eP* P 21 12 15.1 -1.2
PPT Papeete 68.62 245 *eS* S 21 20 58.9 -2.4
comp=Z,283nm,26.8s
PPT Papeete 68.62 245 *eP* P 21 12 18.0 +0.9
comp=Z,59nm,1.5s,mb5.0
PPT *eS* S 21 20 58.9 -2.4
PPT Papeete 68.62 245 *eP* P 21 12 18.0 +0.9
PPT *eS* S 21 20 58.9 -2.4
PPT pmax pmax
comp=Z,59nm,1.5s
PAE Paea 68.66 245 *eP* P 21 12 18.1 +0.7
comp=Z,99nm,1.1s,mb5.4
PAE Paea 68.66 245 *eP* P 21 12 18.1 +0.7
PAE pmax pmax
comp=Z,99nm,1.1s,mb5.3
EFI East Falkland 69.48 161 P P 21 12 22.4 +0.7
comp=Z,331nm,1.3s,mb5.8,SNR=7.5
EFI East Falkland 69.48 161 *eP* P 21 12 22.3 +0.6
comp=Z,73nm,1.1s,mb5.2
EFI East Falkland 69.48 161 P P 21 12 22.6 +0.9
EFI pmax pmax
comp=Z,73nm,1.1s,mb5.2
ALE Alert 70.02 3 P P 21 12 24.0 -0.6
comp=Z,214nm,1.1s,mb5.7,SNR=14
DAG Danmarks Havn 72.35 13⇑ *iP* P 21 12 38.3 -0.4
DAG pmax pmax
comp=Z,22nm,0.6s,mb5.0
DAG Danmarks Havn 72.35 13⇑ *iP* P 21 12 38.3 -0.4
comp=Z,22nm,0.6s,mb5.0
EMAZ Mazaricos 72.62 49 P P 21 12 41.6 +0.7
comp=Z,86nm,1.5s,mb5.2
EZAM Zamans 72.86 50 P P 21 12 43.4 +1.1
comp=Z,22nm,0.6s,mb5.0
EZAM Zamans 72.86 50 P P 21 12 43.4 +1.1
EZAM pmax pmax
comp=Z,22nm,0.6s,mb5.0
STS Santiago 72.94 49 P P 21 12 43.5 +0.8
comp=Z,6.6nm,0.6s,mb4.4
STS Santiago 72.94 49 P P 21 12 43.5 +0.8
STS pmax pmax
comp=Z,7.0nm,0.6s,mb4.5
UNV Unalaska Valle 73.01 323 *eP* P 21 12 42.3 -0.6
PFVI Vila Bisbo 73.04 55 *eP* P 21 12 43.7 +0.3
comp=Z,102nm,1.5s,mb5.2
PTEO Sao Teotonio 73.09 55 *eP* P 21 12 46.2 +2.4
comp=Z,70nm,1.3s,mb5.1
MORF Marmelete 73.17 55 *eP* P 21 12 45.7 +1.5
comp=Z,73nm,1.1s,mb5.2
MOE Montemor 73.32 53 *eP* P 21 12 45.4 +0.3
PVIS Viseu 73.53 51 *eP* P 21 12 46.1 -0.2
comp=Z,52nm,1.2s,mb5.0
DCN Croghan 73.56 38 *eP* P 21 12 44.6 -1.6
EVO Evora 73.58 53 *eP* P 21 12 46.3 -0.3
comp=Z,24nm,1.7s,mb4.6
EVO *epP* pP 21 13 41.0 +0.5
PBEJ Beja 73.74 54 *eP* P 21 12 47.6 +0.1
comp=Z,24nm,1.3s,mb4.7
PBEJ *epP* pP 21 13 41.5 +0.1
PBDV Barranco-do-Ve 73.74 55 *eP* P 21 12 48.1 +0.5
PBDV *epP* pP 21 13 41.4 -0.1
MTE Manteigas 73.82 52 *eP* P 21 12 47.8 -0.1
comp=Z,47nm,1.4s,mb4.9
MTE Manteigas 73.82 52 *eP* P 21 12 49.2 +1.2
comp=Z,37nm,1.0s,mb5.2
PVAQ Vaqueiros 73.90 55 *eP* P 21 12 48.6 +0.1
comp=Z,36nm,1.5s,mb4.8
PCBR Castelo Branco 73.91 52 *eP* P 21 12 48.4 -0.1
comp=Z,45nm,1.5s,mb4.9
PCBR *epP* pP 21 13 43.0 +0.6
RRH Rhenigidale 73.92 33 *eP* P 21 12 47.8 -0.3
EPON Pontenova 73.94 48 P P 21 12 49.3 +0.7
comp=Z,126nm,1.9s,mb5.2
DLF Lyons Farm 74.01 38 *eP* P 21 12 47.0 -1.8
EGRO El Granado 74.08 54 P P 21 12 48.4 -1.1
comp=Z,54nm,1.3s,mb5.0
TNA Tin City 74.12 335 *eP* P 21 12 49.0 -0.2
comp=Z,38nm,1.4s,mb4.8
MVO Moncorvo 74.16 51 *eP* P 21 12 50.0 +0.1
comp=Z,29nm,0.6s,mb5.1
MVO *epP* pP 21 13 45.6 +1.7
ECAL Calabor 74.33 50 P P 21 12 50.3 -0.5
comp=Z,59nm,2.0s,mb4.9
PBRG Braganca 74.33 50 *eP* P 21 12 51.4 +0.5
comp=Z,26nm,1.4s,mb4.7
PBAR Barrancos 74.38 54 *eP* P 21 12 51.1 -0.1
comp=Z,38nm,1.4s,mb4.8
PBAR *epP* pP 21 13 45.6 +0.4
KPL Plockton 74.48 34 *eP* P 21 12 50.3 -1.1
KPL AMb AMB 21 12 52.1
comp=Z,263nm,1.6s,mb5.6
GMK Mull of Kintyr 74.53 36 *eP* P 21 12 50.3 -1.4
KSB Sheil Bridge 74.60 34 *eP* P 21 12 51.0 -1.1
KAC Achnashellach 74.67 34 *eP* P 21 12 51.4 -1.0
EMIN Mina Concepcio 74.70 54 P P 21 12 51.6 -1.4
comp=Z,2.6nm,1.5s
CRQ2 Rosemanowes 2 74.95 41 *eP* P 21 12 54.7 +0.5
CMA1 Manaccan 74.98 41 *eP* P 21 12 54.0 -0.4
MDO Dochfour 75.17 34⇑ *eP* P 21 12 53.8 -1.6
MVH1 Achvaich 75.26 33⇑ *eP* P 21 12 54.3 -1.5
ESPR Espera 75.43 55 P P 21 12 56.2 -1.0
comp=Z,22nm,1.0s,mb4.8
MCD Coleburn Disti 75.77 34⇑ *eP* P 21 12 57.5 -1.2
HEX Exmoor 75.77 40 *eP* P 21 12 58.0 -0.9
EJIF Jimena Fronter 75.78 55 P P 21 12 59.8 +0.5
comp=Z,18nm,0.8s,mb4.8
EJIF Jimena Fronter 75.78 55 P P 21 12 59.8 +0.5
EJIF pmax pmax
comp=Z,18nm,0.8s,mb4.8
ESK Eskdalemuir 75.90 36 P P 21 12 58.3 -1.2
comp=Z,219nm,1.2s,mb5.7,SNR=7.5
ESK Eskdalemuir 75.90 36 *eP* P 21 12 57.9 -1.5
ESK AMb AMB 21 13 01.7
comp=Z,52nm,1.7s,mb4.9
ESK Eskdalemuir 75.90 36 *eP* P 21 12 58.1 -1.4
comp=Z,37nm,0.9s,mb5.0
ESK Eskdalemuir 75.90 36 *eP* P 21 12 58.1 -1.4
ESK pmax pmax
comp=Z,37nm,0.9s,mb5.0
BHH Howats Hill 75.90 36 *eP* P 21 12 59.1 -0.4
ECK Cauldkaine Hil 75.95 36 *eP* P 21 12 58.1 -1.7
HTR Trewern Hill 76.04 39 *eP* P 21 12 59.5 -0.8
ESY Stoneypath 76.20 35 *eP* P 21 12 59.9 -1.2
MCH1 Michaelchurch 76.22 39 *eP* P 21 13 00.3 -1.1
MCH1 AMb AMB 21 13 05.6
comp=Z,55nm,1.8s,mb4.9
HLM1 Long Mynd 76.25 39 *eP* P 21 13 00.2 -1.3
ROSF Rostrenen 76.31 43 *eP* P 21 13 00.6 -1.3
comp=Z,70nm,0.9s,mb5.0
ROSF Rostrenen 76.31 43 *eP* P 21 13 00.6 -1.3
comp=Z,35nm,0.9s,mb5.0
ROSF Rostrenen 76.31 43 *eP* P 21 13 00.6 -1.3
ROSF pmax pmax
comp=Z,35nm,0.9s,mb5.0
EMIJ Mijas 76.33 55 P P 21 13 01.1 -1.2
comp=Z,21nm,0.7s,mb4.9
PAB San Pablo 76.34 52 *eP* P 21 13 01.8 -0.6
comp=Z,52nm,1.5s,mb4.9
PAB *epP* pP 21 13 57.5 +0.8
PAB San Pablo 76.34 52 P P 21 13 02.3 0.0
PAB *e* pP 21 13 57.8 +1.2
PAB pmax pmax
comp=Z,52nm,1.5s,mb4.9
GUD Guadarrama 76.38 51 P P 21 13 02.8 +0.3
comp=Z,17nm,0.6s,mb4.8
GUD Guadarrama 76.38 51 P P 21 13 02.8 +0.3
GUD pmax pmax

comp=Z,17nm,0.6s,mb4.8
QUIF Quistinic 76.41 44 *e*P **P 21 13 01.5 -1.1**
comp=Z,95nm,0.7s,mb5.2
QUIF *e*pP pP 21 13 55.6 -1.3
QUIF Quistinic 76.41 44 *e*P **P 21 13 01.5 -1.1**
comp=Z,48nm,0.7s,mb5.2
QUIF *e*pP pP 21 13 55.6 -1.3
QUIF Quistinic 76.41 44 *e*P **P 21 13 01.5 -1.1**
QUIF *e**PP pP 21 13 55.6 -1.3
QUIF pmax pmax
comp=Z,48nm,0.7s,mb5.2
ESDC Sonseca Array 76.62 52 P **P 21 13 04.0 +0.1**
comp=Z,22nm,0.6s,mb5.0
ESDC Sonseca Array 76.62 52 P **P 21 13 03.8 -0.1**
comp=Z,8.0nm,0.5s,mb4.6,baz=284,slow=5.0,SNR=36
ESDC pP pP 21 13 58.1 -0.1
comp=Z,5.6nm,0.7s,baz=286,slow=5.6,SNR=5.2
ELOJ Sierra Loja 76.76 55 P **P 21 13 04.3 -0.4**
comp=Z,12nm,0.8s,mb4.6
ELOJ Sierra Loja 76.76 55 P **P 21 13 04.4 -0.3**
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb4.6
SGMF Saint Gilles 76.79 43 *e*P **P 21 13 03.2 -1.5**
comp=Z,34nm,0.8s,mb4.8
SGMF Saint Gilles 76.79 43 *e*P **P 21 13 03.2 -1.5**
comp=Z,17nm,0.8s,mb4.7
SGMF Saint Gilles 76.79 43 *e*P **P 21 13 03.2 -1.5**
SGMF pmax pmax
comp=Z,17nm,0.8s,mb4.7
LHO Holmfirth 76.80 38⇑ *e*P **P 21 13 03.1 -1.4**
HPK Haverah Park 76.90 37 *e*P **P 21 13 04.3 -0.9**
HPK AMb AMB 21 13 04.3
comp=Z,85nm,0.9s,mb5.4
EBAN Banos Encina 76.93 54 P **P 21 13 05.9 +0.3**
comp=Z,11nm,0.7s,mb4.6
EBAN Banos Encina 76.93 54 P **P 21 13 05.9 +0.3**
EBAN pmax pmax
comp=Z,11nm,0.7s,mb4.6
ERON Agron 77.05 55 P **P 21 13 06.3 0.0**
comp=Z,11nm,0.5s,mb4.8
CWF Charnwood Fore 77.19 38 *e*P **P 21 13 05.4 -1.4**
CWF AMb AMB 21 13 05.7
comp=Z,83nm,1.3s,mb5.2
ECOG Cogollos-Vega 77.21 54 P **P 21 13 07.2 -0.1**
comp=Z,33nm,0.8s,mb5.0
ECOG Cogollos-Vega 77.21 54 P **P 21 13 07.2 0.0**
ECOG pmax pmax
comp=Z,33nm,0.8s,mb5.0
EGUA Guajares 77.26 55 P **P 21 13 07.4 -0.1**
comp=Z,2.6nm,0.5s,mb4.1
EGUA Guajares 77.26 55 P **P 21 13 07.4 -0.1**
EGUA pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
ECRI Cripan 77.39 49 P **P 21 13 07.2 -0.9**
comp=Z,20nm,0.6s,mb4.9
ECRI Cripan 77.39 49 P **P 21 13 07.2 -0.9**
ECRI pmax pmax
comp=Z,20nm,0.6s,mb4.9
EQES Quesada 77.53 54 P **P 21 13 08.8 -0.2**
comp=Z,44nm,1.3s,mb4.9
SKP1 Kophill 77.59 39 *e*P **P 21 13 07.0 -2.0**
EBER Berja 77.79 55 P **P 21 13 09.6 -0.8**
comp=Z,27nm,0.8s,mb4.9
EVIA Vianos 77.87 53 P **P 21 13 09.7 -1.2**
comp=Z,13nm,0.8s,mb4.6
EVIA Vianos 77.87 53 P **P 21 13 09.7 -1.2**
EVIA pmax pmax
comp=Z,13nm,0.8s,mb4.6
GRR Gorron 77.91 43 *e*P **P 21 13 09.7 -1.1**
comp=Z,106nm,0.7s,mb5.3
GRR Gorron 77.91 43 *e*P **P 21 13 09.7 -1.1**
comp=Z,53nm,0.7s,mb5.3
GRR Gorron 77.91 43 *e*P **P 21 13 09.7 -1.1**
GRR pmax pmax
comp=Z,53nm,0.7s,mb5.3
ETOR Torete 77.94 51 P **P 21 13 09.7 -1.5**
comp=Z,9.4nm,1.0s,mb4.4
ETOR Torete 77.94 51 P **P 21 13 09.7 -1.5**
ETOR pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
FLN La Foliniere 78.11 42 *e*P **P 21 13 10.8 -1.2**
comp=Z,97nm,0.8s,mb5.2
FLN La Foliniere 78.11 42 *e*P **P 21 13 10.8 -1.2**
comp=Z,48nm,0.8s,mb5.2
FLN La Foliniere 78.11 42 *e*P **P 21 13 10.8 -1.2**
FLN pmax pmax
comp=Z,48nm,0.8s,mb5.2
SJPF Ste Jean 78.27 48 *e*P **P 21 13 12.8 -0.2**
SJPF *e*pP pP 21 14 06.6 -0.9
ENIJ Nijar 78.32 55 P **P 21 13 12.3 -1.0**
comp=Z,4.8nm,1.1s,mb4.0
ENIJ Nijar 78.32 55 P **P 21 13 12.3 -1.1**
ENIJ pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
LDF La Druitiere 78.37 43 *e*P **P 21 13 12.1 -1.3**
comp=Z,66nm,0.8s,mb5.0
LDF La Druitiere 78.37 43 *e*P **P 21 13 12.1 -1.3**
comp=Z,33nm,0.8s,mb5.0
LDF La Druitiere 78.37 43 *e*P **P 21 13 12.1 -1.3**
LDF pmax pmax
comp=Z,33nm,0.8s,mb5.0
MFF Saint Martin d 78.60 45 *e*P **P 21 13 13.5 -1.2**
comp=Z,61nm,0.8s,mb5.0
MFF Saint Martin d 78.60 45 *e*P **P 21 13 13.5 -1.2**
comp=Z,30nm,0.8s,mb5.0
MFF Saint Martin d 78.60 45 *e*P **P 21 13 13.5 -1.2**
MFF pmax pmax
comp=Z,31nm,0.8s,mb5.0
ETSF Etsaut 78.78 48 *e*P **P 21 13 15.5 -0.3**
comp=Z,16nm,0.6s,mb4.5
ETSF Etsaut 78.78 48 *e*P **P 21 13 15.5 -0.3**
comp=Z,7.9nm,0.6s,mb4.5
ETSF Etsaut 78.78 48 *e*P **P 21 13 15.5 -0.3**
ETSF pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
KBS Kingsbay 78.87 11 *e*P **P 21 13 16.5 +1.0**
comp=Z,52nm,1.1s,mb5.1
KBS *e*pP pP 21 14 10.3 +0.1
KBS Kingsbay 78.87 11 *e*P **P 21 13 16.8 +1.3**
ESAC San Caprasio 79.01 50 P **P 21 13 15.3 -1.7**
comp=Z,7.0nm,0.9s,mb4.3
EMOS Mosqueruela 79.20 51 P **P 21 13 15.8 -2.2**
comp=Z,65nm,1.7s,mb5.0
EBIE Bielsa 79.32 49 P **P 21 13 17.0 -1.7**
comp=Z,16nm,1.1s,mb4.6
EPF Esparros 79.42 48 *e*P **P 21 13 18.6 -0.6**
LFF La Frestale 79.43 46 *e*P **P 21 13 18.3 -0.9**
comp=Z,42nm,0.5s,mb5.0
LFF La Frestale 79.43 46 *e*P **P 21 13 18.3 -0.9**
comp=Z,21nm,0.5s,mb5.0
LFF La Frestale 79.43 46 *e*P **P 21 13 18.3 -0.9**
LFF pmax pmax
comp=Z,21nm,0.5s,mb5.0
ERTA Horta de San J 79.72 50 P **P 21 13 19.2 -1.7**
comp=Z,29nm,0.7s,mb5.0
RJF Les Rejaudoux 79.92 46 *e*P **P 21 13 20.7 -1.2**
EPOB Poblet 80.21 50 P **P 21 13 19.4 -4.0**
comp=Z,39nm,1.7s,mb4.8
TCF Toulx Ste Croi 80.25 45 *e*P **P 21 13 22.2 -1.4**
comp=Z,17nm,0.6s,mb4.5
TCF *e*pP pP 21 14 16.3 -2.1
TCF Toulx Ste Croi 80.25 45 *e*P **P 21 13 22.2 -1.4**
comp=Z,8.4nm,0.6s,mb4.5
TCF *e*pP pP 21 14 16.3 -2.1
TCF Toulx Ste Croi 80.25 45 *e*P **P 21 13 22.2 -1.4**
TCF *e**PP pP 21 14 16.3 -2.1
TCF pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
CAF Calviac 80.36 46 *e*P **P 21 13 23.3 -0.9**
BGF Bois d'Agland 80.65 44 *e*P **P 21 13 24.3 -1.4**
comp=Z,42nm,0.8s,mb4.8
BGF Bois d'Agland 80.65 44 *e*P **P 21 13 24.3 -1.4**
comp=Z,21nm,0.8s,mb4.8
BGF Bois d'Agland 80.65 44 *e*P **P 21 13 24.3 -1.4**
BGF pmax pmax
comp=Z,21nm,0.8s,mb4.8
MTLF Montolieu 80.73 48 *e*P **P 21 13 25.1 -1.1**
comp=Z,21nm,0.6s,mb4.6
MTLF Montolieu 80.73 48 *e*P **P 21 13 25.1 -1.1**
comp=Z,10nm,0.6s,mb4.6
MTLF Montolieu 80.73 48 *e*P **P 21 13 25.1 -1.1**
MTLF pmax pmax
comp=Z,11nm,0.6s,mb4.7
SNF Seneffe 80.93 40 P **P 21 13 27.8 +0.7**
comp=Z,15nm,1.9s,mb4.3
AVF Avril sur Loir 80.95 44 *e*P **P 21 13 25.4 -1.9**

BAIF Baives 80.96 41 *e*P **P 21 13 25.7 -1.6**
SSF Saint Saulge 81.01 44 *e*P **P 21 13 25.8 -1.8**
comp=Z,22nm,0.7s,mb4.6
SSF Saint Saulge 81.01 44 *e*P **P 21 13 25.8 -1.8**
comp=Z,11nm,0.7s,mb4.6
SSF Saint Saulge 81.01 44 *e*P **P 21 13 25.8 -1.8**
SSF pmax pmax
comp=Z,11nm,0.7s,mb4.6
TIC Toumodi 81.07 85 *e*P **P 21 13 27.5 -1.1**
comp=Z,3.0nm,0.3s,mb4.5
LBL Lubilhac 81.14 46 *e*P **P 21 13 29.6 +1.3**
LIC Lamto 81.15 86 *e*P **P 21 13 27.5 -1.5**
comp=Z,25nm,0.6s,mb4.7
LIC Lamto 81.15 86 *e*P **P 21 13 28.1 -0.9**
comp=Z,49nm,0.7s,mb5.3
LIC Lamto 81.15 86 *e*P **P 21 13 27.5 -1.5**
comp=Z,13nm,0.6s,mb4.7
DOU Dourbes 81.20 41 P **P 21 13 29.1 +0.6**
LOR Lormes 81.21 44 *e*P **P 21 13 27.2 -1.4**
LOR *e*pP pP 21 14 21.4 -2.2
DBIC Dimbokro 81.22 85 PKKPbc PKKPbc 21 32 02.7 -0.1
comp=Z,4.2nm,1.1s,baz=262,slow=19,SNR=6.2
SMF Signal de Mont 81.31 44 *e*P **P 21 13 27.4 -1.8**
comp=Z,16nm,0.6s,mb4.5
SMF *e*pP pP 21 14 21.4 -2.7
SMF Signal de Mont 81.31 44 *e*P **P 21 13 27.4 -1.8**
comp=Z,8.1nm,0.6s,mb4.5
SMF *e*pP pP 21 14 21.4 -2.7
SMF Signal de Mont 81.31 44 *e*P **P 21 13 27.4 -1.8**
SMF *e**PP pP 21 14 21.4 -2.7
SMF pmax pmax
comp=Z,8.0nm,0.6s,mb4.5
GIVF Givet 81.34 41 *e*P **P 21 13 27.9 -1.4**
KIC Kosan Boka 81.40 85 *e*P **P 21 13 29.4 -0.9**
comp=Z,162nm,1.1s,mb5.5
BCLA Clavier 81.59 40 P **P 21 13 31.1 +0.5**
comp=Z,25nm,1.9s,mb4.5
LASF Ste Croix 81.77 47 *e*P **P 21 13 31.0 -0.6**
comp=Z,16nm,0.8s,mb4.4
MEZF Maizieres J'vi 81.78 42 *e*P **P 21 13 30.3 -1.3**
LOF Lofoten 81.82 22 *e*P **P 21 13 35.5 +4.1**
comp=Z,140nm,1.8s,mb5.3
LOF Lofoten 81.82 22 *e*P **P 21 13 35.5 +4.1**
LOF AMb AMB 21 13 37.9
comp=Z,140nm,1.9s,mb5.3
MEM Membach 82.00 40 P **P 21 13 33.1 +0.4**
comp=Z,17nm,1.5s,mb4.5
VIVF Saint-Julien-l 82.20 46 *e*P **P 21 13 33.4 -0.5**
comp=Z,35nm,1.0s,mb4.6
VIVF *e*pP pP 21 14 27.7 -1.3
VIVF Saint-Julien-l 82.20 46 *e*P **P 21 13 33.4 -0.5**
comp=Z,18nm,1.0s,mb4.6
VIVF *e*pP pP 21 14 27.7 -1.3
VIVF Saint-Julien-l 82.20 46 *e*P **P 21 13 33.4 -0.5**
VIVF *e**PP pP 21 14 27.7 -1.3
VIVF pmax pmax
comp=Z,18nm,1.0s,mb4.7
WLF Walferdange 82.27 41 P **P 21 13 34.3 +0.2**
comp=Z,27nm,1.8s,mb4.6
WLF Walferdange 82.27 41 *e*P **P 21 13 33.3 -0.8**
comp=Z,59nm,1.6s,mb5.0
BUG Bochum-Univer 82.61 39 *e*P **P 21 13 35.1 -0.7**
NB2 NORSAR Subarra 82.62 29 P **P 21 13 35.4 -0.3**
comp=Z,22nm,0.9s,mb4.9,baz=285,slow=5.1
NB2 NORSAR Subarra 82.62 29 P **P 21 13 35.4 -0.3**
NB2 pmax pmax
comp=Z,22nm,0.9s,mb4.9
NOA NORSAR Array B 82.62 29 P **P 21 13 34.1 -1.6**
NOA *PP pP 21 14 30.0 -0.8
NOA 21 16 46.4
NOA NORSAR Array B 82.62 29 P **P 21 13 34.1 -1.5**
comp=Z,12nm,0.8s,mb4.7,baz=286,slow=5.0,SNR=20
NOA pP pP 21 14 30.0 -0.8
comp=Z,7.2nm,1.0s,baz=287,slow=5.0,SNR=4.3
NOA PP PP 21 16 46.4 -1.9
comp=Z,1.9nm,0.9s,baz=286,slow=7.9,SNR=3.3
NOA PKKPbc PKKPbc 21 31 58.9 -2.5
comp=Z,1.0nm,0.6s,baz=90,slow=3.7,SNR=4.0
MOR8 Moi Rana 82.69 24 *e*P **P 21 13 36.9 +1.0**
HAU Haudompre 82.73 42 *e*P **P 21 13 35.1 -1.4**
comp=Z,26nm,0.7s,mb4.8
HAU Haudompre 82.73 42 *e*P **P 21 13 35.1 -1.4**
comp=Z,13nm,0.7s,mb4.8
HAU Haudompre 82.73 42 *e*P **P 21 13 35.1 -1.4**
HAU pmax pmax
comp=Z,13nm,0.7s,mb4.8
IBBN Ibbenburen 82.73 38 *e*P **P 21 13 35.4 -1.0**
CABF La Chapelle 82.83 44 *e*P **P 21 13 36.0 -1.1**
RUP Ruppelstein 82.84 41 *e*P **P 21 13 36.2 -0.8**
SMRF Simiane la Rot 83.01 47 *e*P **P 21 13 37.3 -0.7**
ORIF Oris-en-Rattie 83.03 46 *e*P **P 21 13 37.2 -0.9**
HINF Hinteralfeld 83.10 43 *e*P **P 21 13 36.9 -1.5**
ABH Alteburg 83.11 40 *e*P **P 21 13 37.2 -1.2**
ECH Echery 83.22 42 *e*P **P 21 13 36.9 -2.1**
TRO Tromso 83.23 20 *e*P **P 21 13 39.0 +0.3**
comp=Z,41nm,2.3s,mb4.8
TRO Tromso 83.23 20 *e*P **P 21 13 39.0 +0.3**
TRO AMb AMB 21 13 42.7
comp=Z,41nm,2.3s,mb4.7
CDF Champ du Feu 83.25 42 *e*P **P 21 13 37.9 -1.3**
LANF Langenberg 83.47 41 *e*P **P 21 13 38.8 -1.5**
LPL La Plagne 83.50 45 *e*P **P 21 13 39.0 -1.5**
comp=Z,8.8nm,0.6s,mb4.4
LPL La Plagne 83.50 45 *e*P **P 21 13 39.0 -1.5**
comp=Z,4.4nm,0.6s,mb4.4
LPL La Plagne 83.50 45 *e*P **P 21 13 39.0 -1.5**
LPL pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
LPG La Plagne 83.52 45 *e*P **P 21 13 39.5 -1.1**
comp=Z,8.6nm,0.6s,mb4.4
LPG La Plagne 83.52 45 *e*P **P 21 13 39.5 -1.1**
comp=Z,4.3nm,0.6s,mb4.4
LPG La Plagne 83.52 45 *e*P **P 21 13 39.5 -1.1**
LPG pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
TNS Taunus Mts 83.61 40 *e*P **P 21 13 40.0 -0.9**
TNS *e* 21 17 00.9
TNS pmax pmax
comp=Z,22nm,1.0s,mb4.8
TNS Taunus Mts 83.61 40 *e*P **P 21 13 40.0 -0.9**
comp=Z,22nm,1.0s,mb4.8
TNS *e*PP PP 21 17 00.9 +4.3
MBDF Montbardon 83.69 46 *e*P **P 21 13 41.1 -0.4**
LMR La Mourre 83.81 47 *e*P **P 21 13 41.0 -1.1**
BILL Bilibino 83.81 339 *e*P **P 21 13 40.6 -1.0**
comp=Z,49nm,1.0s,mb5.2
BILL Bilibino 83.81 339α*e*P **P 21 13 40.8 -0.8**
BILL *e**PP pP 21 14 36.3 -0.6
BILL *e* 21 16 56.2
BILL *e* 21 23 44.2
BILL pmax pmax
comp=Z,50nm,1.1s,mb5.2
FELD Feldberg im Sc 83.84 42 *e*P **P 21 13 40.7 -1.5**
FRF La Foret Royal 83.85 47 *e*P **P 21 13 41.4 -0.9**
BSEG Bad Segeberg 83.86 36 *e*P **P 21 13 43.0 +0.8**
comp=Z,22nm,1.0s,mb4.8
BFO Black Forest 83.95 42 *e*P **P 21 13 43.1 +0.4**
BFO pmax pmax
comp=Z,19nm,1.3s,mb4.7
BFO Black Forest 83.95 42 *e*P **P 21 13 43.0 +0.3**
comp=Z,17nm,1.2s,mb4.7
SPAK Spaichingen-Ko 84.30 42 *e*P **P 21 13 43.0 -1.5**
SBF Sospel 84.35 46 *e*P **P 21 13 43.2 -1.6**
CLZ Clausthal 84.41 38 *e*P **P 21 13 44.4 -0.5**
CLZ pmax pmax
comp=Z,29nm,1.0s,mb5.0
CLZ Clausthal 84.41 38 *e*P **P 21 13 44.4 -0.5**
comp=Z,29nm,1.0s,mb5.0
STU Stuttgart 84.41 41 *e*P **P 21 13 43.8 -1.2**
KTK1 Kautokeino 84.89 20 *e*P **P 21 13 48.3 +1.3**
comp=Z,58nm,1.3s,mb5.2
KTK1 Kautokeino 84.89 20 *e*P **P 21 13 48.3 +1.3**
KTK1 AMb AMB 21 13 51.1
comp=Z,58nm,1.3s,mb5.1
DAVA Damuels 85.22 43⇑ *i*P **P 21 13 48.5 -0.5**
comp=Z,30nm,1.1s,mb4.9,SNR=7.9
ARCES ARCESS Array B 85.40 19 P **P 21 13 48.1 -1.4**
ARCES pP pP 21 14 43.6 -1.4
ARCES PP PP 21 17 06.3 -4.3
ARCES PKKPbc PKKPbc 21 31 51.7 -3.6
ARCES ARCESS Array B 85.40 19 P **P 21 13 48.1 -1.4**
ARCES *PP pP 21 14 43.6 -1.4
ARCES 21 17 06.3
ARCES ARCESS Array B 85.40 19 P **P 21 13 48.1 -1.4**
comp=Z,7.6nm,0.6s,mb4.6,baz=285,slow=4.3,SNR=52
ARCES pP pP 21 14 43.6 -1.4
comp=Z,6.6nm,0.9s,baz=279,slow=3.1,SNR=2.8
ARCES PP PP 21 17 06.3 -4.3
comp=Z,8.9nm,0.9s,baz=270,slow=7.3,SNR=7.3
ARCES PKKPbc PKKPbc 21 31 51.7 -3.6
comp=Z,1.3nm,0.5s,baz=140,slow=2.3,SNR=27
MOX Moxa 85.47 39 *e*P **P 21 13 49.7 -0.5**
comp=Z,39nm,1.6s,mb4.9
MOX Moxa 85.47 39 *e*P **P 21 13 49.7 -0.5**
MOX pmax pmax
comp=Z,39nm,1.6s,mb4.9
MOX Moxa 85.47 39 *e*P **P 21 13 49.3 -0.9**
comp=Z,38nm,1.5s,mb4.9
MOX *e*PP PP 21 17 14.3 +2.6
GRFO Grafenberg 85.47 40 *e*P **P 21 13 49.3 -1.0**
comp=Z,19nm,1.1s,mb4.7
GRFO Grafenberg 85.47 40 *e*P **P 21 13 49.3 -1.0**
GRFO pmax pmax
comp=Z,19nm,1.1s,mb4.7
GRA1 Grafenberg Arr 85.47 40 *e*P **P 21 13 49.7 -0.6**
comp=Z,97nm,2.2s,mb5.1
GRA1 *e*pP pP 21 14 45.0 -0.8
GRA1 *e*PP PP 21 17 14.9 +3.1
GRF Grafenberg Arr 85.47 40 *e*P **P 21 13 49.7 -0.6**
GRF *e**PP pP 21 14 45.0 -0.8
GRF *e* 21 17 14.9
GRF pmax pmax
comp=Z,97nm,2.2s,mb5.1
GRF Grafenberg Arr 85.47 40 *e*P **P 21 13 49.7 -0.6**
comp=Z,97nm,2.2s,mb5.1
GRF *e*pP pP 21 14 45.0 -0.8
GRF *e*PP PP 21 17 14.9 +3.1
RETA Reutte 85.75 42⇑ *i*P **P 21 13 50.6 -1.1**
comp=Z,34nm,1.4s,mb4.9
PGF Pioggiola 85.76 47 *e*P **P 21 13 50.6 -1.3**
comp=Z,14nm,0.7s,mb4.5
PGF Pioggiola 85.76 47 *e*P **P 21 13 50.6 -1.3**
comp=Z,7.1nm,0.6s,mb4.6
PGF Pioggiola 85.76 47 *e*P **P 21 13 50.6 -1.3**
PGF pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
FETA Feichten 85.84 43 *i*P **P 21 13 51.6 -0.5**
comp=Z,14nm,1.1s,mb4.6,SNR=7.5
CORF Corte 85.94 48 *e*P **P 21 13 52.6 -0.1**
MOTA Moosalm 86.01 42⇑ *i*P **P 21 13 52.1 -0.8**
comp=Z,12nm,1.1s,mb4.5
MOTA Moosalm 86.01 42⇑ *i*P **P 21 13 52.1 -0.9**
MOTA pmax pmax
comp=Z,13nm,1.1s,mb4.6
TANN Tannenbergstha 86.05 39 *e*P **P 21 13 52.6 -0.5**
ROTZ Rotzenmuhle 86.07 40 *e*P **P 21 13 52.4 -0.8**
NKC Novy Kostel 86.09 39 *e*P **P 21 13 52.7 -0.6**
NKC *e*pP pP 21 14 46.8 -2.1
NKC *e*PP PP 21 17 22.0 +5.3
CLL Collm 86.13 38⇑ *i*P **P 21 13 52.6 -0.9**
comp=Z,44nm,1.7s,mb4.9
CLL *i* pP pP 21 14 47.8 -1.3
CLL *e*S S 21 24 04.0 -4.2
CLL Collm 86.13 38⇑ *i*P **P 21 13 52.6 -0.9**
CLL *i* *PP pP 21 14 47.8 -1.3
CLL *e*S S 21 24 04.0 -4.2
CLL pmax pmax
comp=Z,44nm,1.7s,mb4.9
CLL Collm 86.13 38⇑ *i*P **P 21 13 52.6 -0.9**
comp=Z,44nm,1.7s,mb4.9
CLL *i* pP pP 21 14 47.8 -1.3
CLL *i* PP PP 21 17 18.0 +1.0
comp=Z,48nm,1.5s
CLL *e*S S 21 24 04.0 -4.2
CLL *e*sS sS 21 25 41.0 -4.7
CLL *e*x x 21 37 54.0
CLL Collm 86.13 38 *e*P **P 21 13 52.6 -0.9**
comp=Z,45nm,1.7s,mb4.9
CLL *e*PP PP 21 17 18.1 +1.1
TORD Torodi Ar. Bea 86.14 77 P **P 21 13 52.2 -2.0**
comp=Z,3.0nm,0.5s,mb4.3,baz=296,slow=5.3,SNR=12
TORD pP pP 21 14 49.1 -0.7
comp=Z,2.7nm,0.8s,baz=333,slow=5.0,SNR=3.1
TORD PKKPbc PKKPbc 21 31 52.2 +0.7
comp=Z,3.3nm,0.6s,baz=84,slow=1.3,SNR=14
WET Wettzell 86.66 40 *e*P **P 21 13 55.7 -0.4**
WET *e**PP pP 21 14 51.0 -0.8
WET pmax pmax
comp=Z,42nm,1.3s,mb5.0
WET Wettzell 86.66 40 *e*P **P 21 13 55.7 -0.4**
comp=Z,42nm,1.3s,mb5.0
WET *e*pP pP 21 14 51.0 -0.8
BRG Berggiesshubel 86.82 38 *e*P **P 21 13 55.9 -0.9**
BRG *e**PP pP 21 14 51.7 -0.8
BRG 21 17 25.2
BRG pmax pmax
comp=Z,14nm,1.6s,mb4.4
BRG Berggiesshubel 86.82 38 *e*P **P 21 13 56.6 -0.2**
BRG *e*PP PP 21 17 23.1 +0.5
BRG Berggiesshubel 86.82 38 *e*P **P 21 13 55.9 -0.9**
comp=Z,24nm,1.6s,mb4.7
BRG pP pP 21 14 51.7 -0.8
comp=Z,13nm,1.1s
BRG PP PP 21 17 25.2 +2.6
comp=Z,75nm,1.8s
KHC Kasperske Hory 87.11 40 *e*P **P 21 13 57.2 -1.0**
KHC *ex* x 21 14 03.0
KHC *e*pP pP 21 14 52.7 -1.3
KHC *e*PP PP 21 17 21.5 -3.4
GEC2 GERESS Array S 87.27 40 *e*P **P 21 13 58.5 -0.5**
GEC2 *e**PP pP 21 14 53.9 -0.9
GEC2 pmax pmax
comp=Z,59nm,1.9s,mb5.0
GEC2 GERESS Array S 87.27 40 *e*P **P 21 13 58.5 -0.5**
comp=Z,59nm,1.9s,mb5.0
GEC2 *e*pP pP 21 14 53.9 -0.9
GERES GERESS Array B 87.27 40 P **P 21 13 58.5 -0.5**
GERES *PP pP 21 14 53.7 -1.1
GERES 21 17 25.8
GERES GERESS Array B 87.27 40 P **P 21 13 58.5 -0.5**
comp=Z,3.2nm,0.6s,mb4.2,baz=302,slow=3.0,SNR=26
GERES pP pP 21 14 53.7 -1.0
comp=Z,6.2nm,0.9s,baz=262,slow=2.7,SNR=7.6
GERES PP PP 21 17 25.8 -0.4
comp=Z,2.2nm,0.9s,baz=302,slow=7.7,SNR=4.9
GERES PKKPbc PKKPbc 21 31 48.2 -1.8
comp=Z,0.5nm,0.6s,baz=128,slow=2.2,SNR=6.2
PVCC Panska Ves 87.31 39 *e*P **P 21 13 59.8 +0.6**
PVCC *e*pP pP 21 14 53.2 -1.7
PVCC *e*PP PP 21 17 29.8 +3.4
PRU Pruhonice 87.45 39 *e*P **P 21 14 04.6 +4.7**
PRU *e*pP pP 21 14 54.3 -1.3
PRU *e*PP PP 21 17 32.6 +5.0
KBA Koelnbreinsper 87.55 42⇑ *i*P **P 21 13 59.6 -0.7**
comp=Z,14nm,1.1s,mb4.7,SNR=5.9
KBA Koelnbreinsper 87.55 42⇑ *i*P **P 21 13 59.7 -0.7**
KBA pmax pmax
comp=Z,15nm,1.1s,mb4.7
KEST Kesra 87.71 54 P **P 21 14 01.1 -0.2**
comp=Z,2.6nm,0.5s,mb4.3,baz=250,slow=3.0,SNR=7.5
UPC Upice 88.19 38 *e*P **P 21 14 02.7 -0.6**
UPC *e**PP pP 21 14 58.0 -1.2
UPC Upice 88.19 38 *e*P **P 21 14 02.7 -0.6**
UPC *e*pP pP 21 14 58.0 -1.2
UPC *e*PP PP 21 17 26.9 -6.6
VOJS Vojsko 88.21 43 *e*P **P 21 14 03.9 +0.3**
VOY Vojsko 88.22 43 *e*P **P 21 14 03.5 -0.1**
VOY *e* 21 14 09.8
TREC Trest 88.25 40 *e*P **P 21 14 02.4 -1.2**
TREC *e*PP PP 21 17 32.0 -2.0
KSP Ksiaz 88.25 38 *e*P **P 21 14 02.8 -0.8**
KSP *e*PP PP 21 17 35.9 +1.9
JAVS Javornik 88.37 43 *e*P **P 21 14 07.3 +3.1**
DPC Dobruska-Polom 88.43 39 *e*P **P 21 14 03.9 -0.5**
DPC *e*pP pP 21 14 59.7 -0.7
DPC *e*PP PP 21 17 37.6 +2.2
LJU Ljubljana 88.63 43 *i*P **P 21 14 05.2 -0.3**
PERS Pernice 88.84 42 *e*P **P 21 14 07.1 +0.6**
KAF Kangasniemi 89.01 26 *e*p **P 21 14 07.1 +0.2**
comp=Z,3.8nm,0.6s,mb4.4
KAF Kangasniemi 89.01 26 *e*P **P 21 14 07.1 +0.2**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
FINES FINESS Array B 89.21 26 P **P 21 14 06.9 -1.0**

FINES *PP pP 21 15 03.2 -0.7
FINES 21 17 39.9
FINES FINESS Array B 89.21 26 P P 21 14 06.8 -1.0
comp=Z,2.1nm,0.5s,mb4.2,baz=264,slow=2.8,SNR=14
FINES pP pP 21 15 03.1 -0.7
comp=Z,2.4nm,0.8s,baz=222,slow=2.6,SNR=2.3
FINES PP PP 21 17 39.9 -1.4
comp=Z,7.3nm,1.0s,baz=290,slow=5.7,SNR=6.5
FINES PKKPbc PKKPbc 21 31 42.9 -3.0
comp=Z,1.2nm,0.5s,baz=115,slow=4.1,SNR=13
BOJS Bojanci 89.28 43 i P **P 21 14 09.5 +0.9**
ZST Bratislava 89.62 40 eP **P 21 14 10.1 0.0**
ZST ePP PP 21 17 46.7 +1.8
OKC Ostrava-Krasne 89.71 39 ePP PP 21 17 45.0 -0.5
KOLL Kolacno 90.30 40 ePP PP 21 17 54.1 +3.8
VYHS Vyhne 90.60 40 eP **P 21 14 15.2 +0.6**
VYHS ePP PP 21 17 49.7 -2.9
JOF Joensuu 90.64 24 ep **P 21 14 11.7 -2.8**
comp=Z,1.7nm,0.5s,mb4.2
KECS Kecovo 91.63 39 eP **P 21 14 21.2 +1.8**
KECS ePP PP 21 18 03.2 +2.5
STHS Stebnicka Huta 91.73 38 ePP PP 21 18 02.8 +1.3
STHS Stebnicka Huta 91.73 38 eP **P 21 14 23.6 +3.7**
STHS ePP PP 21 18 02.8 +1.3
TIXI Tiksi 91.88 349 eP **P 21 14 18.5 -1.6**
comp=Z,8.4nm,0.8s,mb4.7
TIXI Tiksi 91.88 349 eP **P 21 14 18.5 -1.6**
TIXI pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
KOLS Kolonicke sedl 92.55 38 eP **P 21 14 24.8 +1.2**
KOLS ePP PP 21 18 10.7 +2.8
LVV L'vov 93.23 37 eP **P 21 14 26.8 0.0**
LVV i 21 18 13.8
BZS Buzias 93.43 42⇓iP PP 21 18 07.3 -7.6
DRGR 93.67 40⇑iP PP 21 18 19.5 +2.8
BURAR Bucovina Array 94.88 39⇓iP PP 21 18 21.7 -4.3
AKASG Malin Array Be 95.81 35 P **P 21 14 37.3 -1.2**
comp=Z,0.5nm,0.5s,mb4.0,baz=314,slow=33,SNR=5.0
AKASG PP PP 21 18 29.3 -3.8
comp=Z,3.7nm,0.8s,baz=296,slow=6.8,SNR=12
OBN Obninsk 97.22 29 eP **P 21 14 44.3 -0.5**
OBN Obninsk 97.22 29 P **P 21 14 44.0 -0.8**
OBN *PP pP 21 15 40.0 -1.0
OBN i 21 18 43.7
OBN pmax pmax
comp=Z,20nm,1.6s,mb5.1
VNA3 Neumayer Olymp 98.53 161 eP **P 21 14 50.6 +0.4**
VNA3 e 21 14 52.9
VNA3 e 21 14 56.9
VNA3 e 21 15 11.7
VNA1 Neumayer--Stat 98.82 161 eP **P 21 14 52.3 +0.8**
VNA1 e 21 15 13.6
VNA2 Neumayer--Watz 99.17 161 eP Pdif 21 14 53.4 -0.1
baz=299,slow=6.3
VNA2 e 21 14 55.2
VNA2 e 21 14 59.7
VNA2 e 21 15 14.7
BRTR Keskin Array B 103.98 43 PP PP 21 19 32.1 -2.9
comp=Z,3.5nm,1.1s,baz=274,slow=5.9,SNR=7.9
BRTR PKKPbc PKKPbc 21 31 04.7 -0.4
comp=Z,1.7nm,0.8s,baz=142,slow=4.5,SNR=9.3
ARU Arti 104.99 19 ePKPdf PKiKP 21 19 34.2 +1.3
ZEI Tsey 108.58 36 i P Pdif 21 15 34.6 -0.8
ZEI e 21 20 09.0
AKTO Aktyubinsk 109.71 23 PKKPbc PKKPbc 21 30 45.7 -2.3
comp=Z,1.0nm,0.6s,baz=123,slow=6.5,SNR=5.3
ZALV Zalesovo Beam 112.73 5 PKiKP PKiKP 21 19 45.8 -1.7
comp=Z,1.3nm,0.4s,baz=242,slow=2.4,SNR=9.9
ZALV PP PP 21 20 35.3 -2.2
comp=Z,14nm,0.7s,baz=338,slow=7.0,SNR=17
ZALV PKKPbc PKKPbc 21 30 33.2 -5.1
comp=Z,0.5nm,0.5s,baz=63,slow=1.7,SNR=3.7
ZAL Zalesovo 112.74 5 PKIKP PKiKP 21 19 45.8 -1.7
ZAL 21 20 35.3
MDJ Mudanjiang 113.35 332 PDIF Pdif 21 15 56.0 -0.6
MDJ S Sdif 21 28 01.0 -1.7
MDJ SS SS 21 36 11.1 +1.8
MJAR Matsushiro Arr 114.45 321 SKiKP 21 23 04.1
comp=Z,0.8nm,0.5s,baz=97,slow=1.2,SNR=4.8
SYO Syowa Base 115.05 161⇑ePP PP 21 20 50.4 -4.0
CN2 Changchun 115.82 334 ePKP PKPdf 21 19 51.4 -2.3
CN2 ePP PP 21 21 02.3 +2.7
BOSA Boshof 115.95 115 PKP PKPdf 21 19 53.8 -0.6
comp=Z,7.0nm,0.6s,baz=270,slow=1.9,SNR=18
BOSA SKiKP 21 23 08.5
comp=Z,2.5nm,0.8s,baz=37,slow=7.6,SNR=3.4
BOSA PKKPbc PKKPbc 21 30 25.9 -0.4
comp=Z,1.8nm,0.6s,baz=140,slow=2.0,SNR=8.1
ZAK Zakamensk 115.95 352 ePKIKP PKPdf 21 19 47.3 -6.5
ZAK pmax pmax
comp=Z,1.0nm,2.2s
LBTB Lobatse 116.12 111 SKiKP 21 23 09.1
comp=Z,2.3nm,0.8s,baz=270,slow=4.0,SNR=3.9
LSZ Lusaka 117.70 100 ePKPdf PKPdf 21 19 58.2 +0.1
ULN Ulaanbaatar 117.81 349 ePKPdf PKPdf 21 19 56.6 -0.9
ULN epPKPdf pPKPdf 21 20 59.3 +3.0
SONM Songino Array 117.96 350 PKIKP PKPdf 21 19 56.4 -1.3
SONM 21 20 57.2
SONM 21 21 12.6
SONM Songino Array 117.96 350 PKP PKPdf 21 19 56.4 -1.4
comp=Z,1.4nm,0.3s,baz=300,slow=1.1,SNR=45
SONM pPKP pPKPdf 21 20 57.2 +0.6
comp=Z,1.3nm,0.8s,baz=27,slow=3.8,SNR=3.0
SONM PP PP 21 21 12.6 -1.6
comp=Z,1.7nm,0.9s,baz=15,slow=4.5,SNR=6.2
SONM PKKPbc PKKPbc 21 30 17.8 -2.4
comp=Z,4.6nm,0.6s,baz=193,slow=3.7,SNR=42
SONM SKKPbc 21 33 42.6
comp=Z,3.4nm,0.9s,baz=182,slow=3.4,SNR=19
MKAR Makanchi Array 119.51 8 PKP PKPdf 21 19 58.6 -2.1
MKAR PP PP 21 21 19.9 -4.8
MKAR PKKPbc PKKPbc 21 30 12.0 -2.6
MKAR SKKPbc 21 33 37.9
MKAR Makanchi Array 119.51 8 PKIKP PKPdf 21 19 58.6 -2.1
MKAR 21 21 19.9
MKAR Makanchi Array 119.51 8 PKP PKPdf 21 19 58.6 -2.1
comp=Z,1.0nm,0.5s,baz=334,slow=2.7,SNR=20
MKAR PP PP 21 21 19.9 -4.8
comp=Z,3.1nm,0.6s,baz=16,slow=3.5,SNR=7.7
MKAR SKiKP 21 23 12.6
comp=Z,0.9nm,0.7s,baz=264,slow=4.0,SNR=4.2
MKAR PKKPbc PKKPbc 21 30 12.0 -2.6
comp=Z,1.8nm,0.8s,baz=141,slow=4.7,SNR=16
MKAR SKKPbc 21 33 37.9
comp=Z,0.4nm,0.6s,baz=219,slow=3.1,SNR=3.9
KSRS Korea Array 119.65 328 PKP PKPdf 21 20 00.0 -1.3
comp=Z,8.5nm,0.7s,baz=4.6,slow=1.5,SNR=35
KSRS pPKP pPKPdf 21 21 00.3 +0.2
comp=Z,1.5nm,0.6s,baz=7.8,slow=1.9,SNR=2.6
KSRS SKiKP 21 23 15.1
comp=Z,3.4nm,0.7s,baz=21,slow=1.6,SNR=8.6
AAK Ala-Archa 121.94 16 ePKPdf PKPdf 21 20 04.2 -1.4
AAK ePP PP 21 21 41.6 +0.2
AAK Ala-Archa 121.94 16 ePKIKP PKPdf 21 20 04.2 -1.4
AAK e 21 21 27.5
AAK e 21 21 41.6
AML Almayashu 122.19 17 ePKPdf PKPdf 21 20 04.7 -1.3
MAW Mawson 122.30 167 ePKP PKPdf 21 20 05.4 0.0
comp=Z,8.4nm,0.5s
MAW Mawson 122.30 167 PKP PKPdf 21 20 04.9 -0.5
comp=Z,14nm,0.6s,baz=195,slow=3.7,SNR=9.5
UCH Uchtor 122.33 16 ePKPdf PKPdf 21 20 06.5 +0.2
UCH ePP PP 21 21 45.6 +1.6
WMQ Urumqi 123.02 4 PKP PKPdf 21 20 06.6 -1.0
WMQ XPKP 21 21 28.1
WMQ PP PP 21 21 52.8 +4.3
WMQ PP PP
comp=Z,571nm,7.0s
WMQ LR LR
comp=N,210nm,25.6s
WMQ LR LR
comp=E,134nm,18.8s
WMQ LR LR
comp=Z,94nm,25.6s
ARMA Armidale 123.24 242 ePKP PKPdf 21 20 09.7 +1.4
HHC Hu-ho-hao-te 123.39 343 ePKP PKPdf 21 20 08.0 -0.4
HHC XPKP 21 21 28.6
HHC PP PP 21 21 55.8 +4.6
HHC PKS 21 23 43.1
HHC SKS SKSdf 21 26 55.6 -2.9
HHC SKKS SKKSac 21 28 23.6 -4.1
HHC SS SS 21 38 19.8 +1.6
HHC PP PP
comp=Z,105nm,5.6s
HHC LR LR
comp=N,308nm,14.3s
HHC LR LR
comp=E,158nm,15.5s
HHC LR LR
comp=Z,282nm,14.3s
CNB Canberra Magne 124.62 236 ePKP PKPdf 21 20 11.9 +1.1
comp=Z,32nm,0.8s
KSH Kashi 125.25 16 ePKP PKPdf 21 20 12.4 +0.4
KSH eXPKP 21 21 28.1
KSH ePKS 21 23 50.7
KSH eSKKS SKKSac 21 28 39.8 +0.1
KSH LR LR
comp=N,714nm,4.0s
KSH LR LR
comp=E,2µm,5.9s
KSH LR LR
comp=Z,2µm,6.3s
PMG Port Moresby 126.50 268 PKP PKPdf 21 20 14.6 -0.4
comp=Z,6.5nm,0.5s,baz=237,slow=5.5,SNR=5.5
GTA Gaotai 127.19 353 ePKP PKPdf 21 20 14.8 -0.9
GTA PP PP 21 22 18.0 +1.8
GTA PKS 21 23 50.0
GTA PP PP
comp=Z,212nm,7.6s
GTA LR LR
comp=N,227nm,8.8s
GTA LR LR
comp=E,219nm,9.6s
GTA LR LR
comp=Z,218nm,8.4s
KBL Kabul 127.44 25 ePKPdf PKPdf 21 20 15.5 -0.8
CTA Charters Tower 128.37 255⇑iPKP PKPdf 21 20 18.8 +0.4
comp=Z,13nm,0.6s
CTA eSKP 21 23 19.2
NJ2 Nanjing 128.43 331 ePKP PKPdf 21 20 18.8 +0.5
STKA Stephens Creek 131.59 239⇑iPKP PKPdf 21 20 25.0 +0.8
comp=Z,44nm,0.6s
STKA eSKP 21 23 29.4
STKA Stephens Creek 131.59 239 PKhKP 21 20 09.7
comp=Z,1.0nm,0.5s,baz=348,slow=20,SNR=5.2
STKA PKP PKPdf 21 20 24.9 +0.6
comp=Z,50nm,0.6s,baz=92,slow=4.5,SNR=154
STKA SKPbc SKPbc 21 23 28.5 +0.4
comp=Z,19nm,1.0s,baz=88,slow=3.0,SNR=12
CD2 Chengdu 134.81 346 ePKP PKPdf 21 20 29.5 -0.9
CD2 XPKP 21 21 50.5
CD2 PP PP 21 23 09.3 +3.9
CD2 PKS 21 24 04.6
CD2 SKS SKSdf 21 27 16.4 -3.4
CD2 SKKS SKKSac 21 29 36.3 -2.7
CD2 SS SS 21 40 39.5 +1.1
CD2 PP PP
comp=Z,100nm,10.8s
CD2 LR LR
comp=N,70nm,20.4s
CD2 LR LR
comp=Z,140nm,19.2s
OPO Ambohidratompo136.05 103 PKP PKPdf 21 20 34.9 +1.9
comp=Z,0.8nm,0.3s,baz=225,slow=7.1,SNR=7.6
OPO SKPbc SKPbc 21 23 44.6 +1.4
comp=Z,13nm,0.7s,baz=257,slow=3.0,SNR=29
LSA Lhasa 137.27 2 PKP PKPdf 21 20 35.4 +0.4
LSA Lhasa 137.27 2 ePKIKP PKPdf 21 20 35.2 +0.2
GYA Guiyang 138.24 341 PDIF Pdif 21 17 46.2 -1.0
GYA XPKP 21 21 57.8
GYA PP PP 21 23 30.2 +3.3
GYA PKS 21 24 10.3
GYA SKS SKSdf 21 27 21.6 -4.2
GYA SKKS SKKSac 21 29 56.4 -3.2
GYA SS SS 21 41 20.0 +0.7
GYA PP PP
comp=Z,670nm,8.6s
GYA LR LR
comp=N,1µm,20.9s
GYA LR LR
comp=E,2µm,21.4s
GYA LR LR
comp=Z,1µm,22.7s
GKN Gorkha 138.26 11 eP PKPdf 21 20 27.9 -8.9
comp=Z,11nm,0.3s
KKN Kakani 138.58 10 eP PKPdf 21 20 28.3 -9.1
comp=Z,21nm,0.8s
TAPN Taplejung 139.35 7 eP PKPdf 21 20 30.6 -8.3
comp=Z,7.1nm,0.3s
WB2 Warramunga Arr 139.56 255 ePKP PKPdf 21 20 30.6 -8.8
WB2 e 21 20 40.2
WB2 epPKP pPKPdf 21 21 36.4 -1.9
WB2 eSKIKP 21 23 54.8
WB2 ePKS 21 24 15.3
WRA Warramunga Arr 139.58 255 PKP PKPdf 21 20 40.1 +0.7
WRA SKPbc SKPbc 21 23 53.1 -0.2
WRA SKKPbc 21 32 27.7
WRA Warramunga Arr 139.58 255 PKhKP 21 20 31.0
comp=Z,9.2nm,0.5s,baz=88,slow=3.7,SNR=99
WRA PKP PKPdf 21 20 40.1 +0.7
comp=Z,60nm,0.6s,baz=89,slow=2.3,SNR=97
WRA SKPbc SKPbc 21 23 53.1 -0.2
comp=Z,6.8nm,0.8s,baz=91,slow=2.9,SNR=8.2
WRA SKKPbc 21 32 27.7
comp=Z,1.3nm,0.9s,baz=288,slow=3.0,SNR=6.8
ASAR Alice Springs 139.65 249 PKP PKPdf 21 20 40.3 +0.9
ASAR SKPbc SKPbc 21 23 53.2 -0.1
ASAR Alice Springs 139.65 249 PKhKP 21 20 31.4
comp=Z,7.0nm,0.6s,baz=106,slow=3.3,SNR=72
ASAR PKP PKPdf 21 20 40.3 +0.9
comp=Z,55nm,0.6s,baz=91,slow=1.9,SNR=94
ASAR SKPbc SKPbc 21 23 53.2 -0.1
comp=Z,4.6nm,0.6s,baz=108,slow=2.7,SNR=6.2
ODAN Odare 139.80 7 eP 21 20 29.7
comp=Z,6.9nm,0.6s
KMI Kunming 140.61 346 PKP PKPdf 21 20 40.0 -1.2
KMI XPKP 21 22 02.8
KMI PP PP 21 23 47.2 +5.9
KMI SS SS 21 41 46.7 -0.2
KMI PP PP
comp=Z,161nm,6.0s
KMI LR LR
comp=Z,70nm,22.3s
KMI Kunming 140.61 346 PKIKP PKPdf 21 20 40.0 -1.2
KMI 21 22 02.8
KMI 21 23 47.2
KMI PPP 21 26 50.0
KMI SS SS 21 41 46.7 -0.2
KMI SSS 21 47 03.5
FORT Forrest 143.03 236 ePKP PKPdf 21 20 42.4 -2.9
comp=Z,88nm,0.6s
QIZ Qiongzhong 143.72 332 PKP PKPdf 21 20 47.3 +0.4
QIZ APKP 21 21 41.4
QIZ SS SS 21 42 27.2 +3.7
QIZ PP PP
comp=Z,220nm,6.8s
QIZ Qiongzhong 143.72 332 ePKPdf PKPdf 21 20 44.7 -2.2
HYB Hyderabad 146.50 25 eP PKPdf 21 20 50.5 -1.2
HYB Hyderabad 146.50 25 i PKP PKPdf 21 20 50.5 -1.2
HYB ePKPAB PKPab 21 20 56.0 +1.2
HYB e 21 21 49.0
CHG Chiang Mai 147.54 349 ⇑P PKPdf 21 20 52.4 -1.0
comp=Z,36nm,0.8s
CHTO Chiang Mai 147.54 349 ePKPdf PKPdf 21 20 52.3 -1.0
CHTO Chiang Mai 147.54 349 PKIKP PKPdf 21 20 52.9 -0.5
FITZ Fitzroy Crossi 147.90 257 ePKP PKPdf 21 20 54.5 +0.6
comp=Z,85nm,0.6s
FITZ epPKP pPKPdf 21 21 53.2 +0.3
FITZ Fitzroy Crossi 147.90 257 PKP PKPdf 21 20 53.9 0.0
comp=Z,68nm,0.8s,baz=169,slow=5.8,SNR=4.9
FITZ PKPbc PKPbc 21 20 57.9 +0.6
comp=Z,68nm,0.8s,baz=151,slow=4.2,SNR=15
FITZ pPKP pPKPdf 21 21 54.0 +1.1
comp=Z,18nm,0.7s,baz=172,slow=6.5,SNR=3.3
KKTK Khon Kaen 148.93 341 P PKPdf 21 20 56.0 +0.3
BDT Bhumibol Dam 149.05 348 P PKPdf 21 20 55.0 -0.9
BATI Kupang 149.49 272 PKPbc PKPbc 21 21 02.5 +1.1
comp=Z,68nm,0.5s,baz=36,slow=0.4,SNR=8.3
NWAO Narrogin (SRO) 150.22 225 ePKPdf PKPdf 21 20 57.5 +0.2
NWAO ePKPbc PKPbc 21 21 02.6 0.0
NWAO Narrogin (SRO) 150.22 225 PKP PKPdf 21 20 57.3 +0.1
comp=Z,25nm,0.8s,baz=122,slow=2.8,SNR=13
NWAO PKPbc PKPbc 21 21 03.3 +0.7
comp=Z,110nm,0.8s,baz=125,slow=3.3,SNR=52
NST Nakhon Sawan 150.32 345 P PKPbc 21 21 02.1 -1.2
KLBR Kellerberrin 150.60 228 ePKP PKPdf 21 20 58.4 +0.5
comp=Z,123nm,1.5s
KLBR e 21 21 04.0
MUN Mundaring 151.47 225 ePKP PKPdf 21 20 59.9 +0.7
MUN e 21 21 06.1
MBWA Marble Bar 152.99 249 ePKPbc PKPbc 21 21 08.8 -0.4
PSI Prapat 162.88 338 PKP PKPdf 21 21 13.4 -0.6
comp=Z,9.7nm,1.0s,baz=214,slow=4.1,SNR=9.6

NEIC 09 21:14:35.3, 4603S×16682E, h99km, ML3.7(WEL), After WEL.
WEL 09 21:14:35.4±0.2**, 4600S×16682E, h100**km±2km**, ML3.7**/9**, 1C, Error ellipse: s-maj=2.2km s-min=1.1km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.57**	**24**	P	Pn	21 14 51.6	-0.1
DCZ	**Deep Cove**	**0.57**	**24**	PN	Pn	21 14 51.6	-0.1
WHZ	**Wether Hill Ro**	**0.80**	**83**	P	Pn	21 14 53.6	-0.1
WHZ				S	Sn	21 15 07.3	-0.1
WHZ	**Wether Hill Ro**	**0.80**	**83**	⇑PN	Pn	21 14 53.6	-0.1
WHZ				SN	Sn	21 15 07.0	-0.4
MLZ	**Mavora Lakes**	**1.15**	**56**	P	Pn	21 14 57.2	-0.3
MLZ	**Mavora Lakes**	**1.15**	**56**	PN	Pn	21 14 57.2	-0.3
MLZ				SN	Sn	21 15 13.1	-1.1
APZ	**The Paps**	**1.16**	**136**	PN	Pn	21 14 57.5	-0.1
SYZ	**Scrubby Hill**	**1.70**	**109**	PN	Pn	21 15 03.7	-0.4
EAZ	**Earnscleugh**	**1.91**	**67**	P	Pn	21 15 06.4	-0.4
EAZ	**Earnscleugh**	**1.91**	**67**	PN	Pn	21 15 06.4	-0.4
WKZ	**Wanaka**	**1.94**	**54**	P	Pn	21 15 07.5	+0.3
WKZ	**Wanaka**	**1.94**	**54**	PN	Pn	21 15 07.5	+0.3
TUZ	**Tuapeka**	**1.96**	**90**	PN	Pn	21 15 07.0	-0.4
JCZ	**Jackson Bay**	**2.37**	**36**	PN	Pn	21 15 12.7	-0.1
ODZ	**Otahua Downs**	**2.85**	**72**	eP	Pn	21 15 17.3	-1.9
ODZ	**Otahua Downs**	**2.85**	**72**	PN	Pn	21 15 17.3	-1.9
LBZ	**Lake Benmore**	**2.88**	**57**	eP	Pn	21 15 17.6	-1.9
LBZ	**Lake Benmore**	**2.88**	**57**	PN	Pn	21 15 17.6	-1.8
FOZ	**Fox Glacier**	**3.18**	**41**	PN	Pn	21 15 23.1	-0.4
RPZ	**Rata Peaks**	**3.78**	**54**	eP	Pn	21 15 29.0	-2.6
RPZ	**Rata Peaks**	**3.78**	**54**	PN	Pn	21 15 29.0	-2.6
LTZ	**Lake Taylor**	**5.06**	**52**	eP	Pn	21 15 46.1	-2.8
LTZ	**Lake Taylor**	**5.06**	**52**	PN	Pn	21 15 46.1	-2.8
QRZ	**Quartz Range**	**6.64**	**41**	eP	Pn	21 16 09.2	-1.1

NEIC 09 21:23:38.7, 1804N×6266W, h28km, MD3.2(TRN), After TRN.
TRN 09 21:23:38.5, 1810N×6267W, h35km**, MD3.2, M3.7**(FDF)**, 1C-1D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STMA	**St. Maarten, A**	**0.42**	**263**	⇑iP	Pn	21 23 49.9	+1.8
STMA				eS	Sn	21 23 56.8	+2.1
SKI	**Saint Kitts**	**0.76**	**185**	⇓eP	Pn	21 23 55.0	+2.3
SKI				eS	Sn	21 24 05.4	+2.4
SKTB	**Turtle Beach**	**0.88**	**177**	eP	Pn	21 23 56.2	+1.8
SKTB				eS	Sn	21 24 08.4	+2.4
NVRH	**Round Hill, Ne**	**0.91**	**176**	eP	Pn	21 23 56.9	+2.1
NVRH				eS	Sn	21 24 08.4	+1.8
BPA	**Boggy Peak**	**1.30**	**143**	eP	Pn	21 24 00.7	+0.6
BPA				eS	Sn	21 24 16.9	+0.7
SCG	**Saint Claude**	**2.26**	**155**	eP	Pn	21 24 15.9	+2.5
SCG				eS	Sn	21 24 42.0	+2.0
DEG	**La Desirade**	**2.34**	**139**	eP	Pn	21 24 15.2	+0.7
DEG				eS	Sn	21 24 41.7	-0.4
TBG	**Guadaloupe-3**	**2.43**	**156**	eP	Pn	21 24 18.2	+2.5
MGG	**Marie-Galante**	**2.52**	**149**	eP	Pn	21 24 18.6	+1.6
MTP	**Monte Pirata**	**2.75**	**270**	ePn	Pn	21 24 19.8	-0.3
MTP				eSn	Sn	21 24 49.6	-2.5
CPD	**Cerro la Pandu**	**3.09**	**269**	ePn	Pn	21 24 24.6	-0.2
CPD				eSn	Sn	21 24 57.8	-2.8

IDC 09 21:38:40.5±1.8**, 104N×12570E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/17**, mbtmp3.6**/4**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.8**/24**, Error ellipse: s-maj=174.2km s-min=24.7km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**11.35**	**190**	LR	LR	21 46 57.1	
	comp=Z,119nm,18.7s,baz=260,slow=44						
WRA	**Warramunga Arr**	**22.51**	**158**	P	P	21 43 42.1	+0.3
	1.6nm,0.5s,baz=338,slow=10,SNR=25						
ASAR	**Alice Springs**	**25.82**	**163**	P	P	21 44 12.6	-1.0
	0.6nm,0.7s,baz=338,slow=9.5,SNR=5.7						
STKA	**Stephens Creek**	**36.04**	**157**	P	P	21 45 44.2	+0.6
	1.2nm,0.4s,baz=332,slow=11,SNR=8.9						
MKAR	**Makanchi Array**	**59.19**	**327**	P	P	21 48 43.5	+0.2
	0.1nm,0.4s,baz=127,slow=8.5,SNR=4.8						

NAO 09 21:43:46.6, 4347N×2631E, h33km, mb3.9
CSEM 09 21:44:16.5±0.1, 4561N×2630E, h155km, mb4.4/6, Error ellipse: s-maj=1.5km s-min=1.3km az=9.0
MOS 09 21:44:16.6±0.9, 4560N×2634E, h158km, mb3.7/5, Error ellipse: s-maj=8.4km s-min=5.5km az=117.9
ISCJB 09 21:44:16.6±0.2, 4561N±002×2631E±003, h156km±2km, mb3.9/12, Error ellipse: s-maj=3.7km s-min=2.9km az=5.2
BUC 09 21:44:17.0±0.8, 4559N×2631E, h160km±8km, MD4.8/2, Error ellipse: s-maj=5.8km s-min=4.9km az=25.0
BEO 09 21:44:17.8±1.2, 4551N×2626E, h140km±9km, ML3.5/1
IDC 09 21:44:17.3±0.5, 4562N×2621E, h147km±4km, mb3.3/8, mb1 3.3/14, mb1mx3.3/24, mbtmp3.2/14, MS3.1/1, Ms1 3.1/1, ms1mx2.5/28, Error ellipse: s-maj=15.9km s-min=12.7km az=151.0
SOF 09 21:44:18.5, 4547N×2632E, h150km, MD3.0
NEIC 09 21:44:18.0, 4559N×2635E, h150km, mb3.8/2, After BUC.
ISC 09 21:44:17.5±0.2**, 4561N**±002×**2631E**±002**, h154**km±2km**, n141, σ1**§**03**/190**, mb3.9**/12**, 30C-23D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.28**	**246**	P	**Pn**	**21 44 38.8**	**+0.4**
MLR	**Muntele Rosu**	**0.28**	**246**	P	**Pn**	**21 44 38.8**	**+0.5**
MLR				S	**Sn**	**21 44 53.4**	**-0.8**
MLR				pmax	pmax		
	comp=Z,55nm,0.3s						
MLR				smax			
	comp=N,400nm,0.3s						
MLR	**Muntele Rosu**	**0.28**	**246**	P	**Pn**	**21 44 38.8**	**+0.4**
	comp=N,55nm,0.3s,baz=339,slow=10,SNR=2310						
MLR				S	**Sn**	**21 44 53.4**	**-0.8**
	comp=N,400nm,0.3s,baz=155,slow=20,SNR=92						
MLR	**Muntele Rosu**	**0.28**	**246**	S	**Sn**	**21 44 55.0**	**+0.8**
MLR	**Muntele Rosu**	**0.28**	**246**	⇓iP	**Pn**	**21 44 38.8**	**+0.5**
MLR				i S	**Sn**	**21 44 55.0**	**+0.8**
PLOR	**Plostina**	**0.34**	**44**	P	**Pn**	**21 44 38.8**	**+0.3**
VRI	**Vrincioaia**	**0.39**	**48**	P	**Pn**	**21 44 39.0**	**+0.4**
VRI	**Vrincioaia**	**0.39**	**48**	⇓iP	**Pn**	**21 44 39.0**	**+0.3**
VRI				i S	**Sn**	**21 44 55.1**	**+0.2**
VRI	**Vrincioaia**	**0.39**	**48**	P	**Pn**	**21 44 39.1**	**+0.4**
VRI				i S	**Sn**	**21 44 54.8**	**-0.1**
BRD	**Bordesti**	**0.51**	**96**	⇑P	**Pn**	**21 44 40.7**	**+1.4**
BRD	**Bordesti**	**0.51**	**96**	⇑iP	**Pn**	**21 44 40.7**	**+1.5**
AAR	**Sfinta Ana**	**0.60**	**331**	⇓iP	**Pn**	**21 44 44.6**	**+4.9**
AAR				i S	**Sn**	**21 45 04.3**	**+7.5**
OZUR		**0.61**	**324**	⇓iP	**Pn**	**21 44 39.9**	**+0.1**
OZUR				i S	**Sn**	**21 44 56.4**	**-0.4**
SNX	**Sinaia**	**0.61**	**246**	⇑P	**Pn**	**21 44 40.6**	**+0.8**
SNX	**Sinaia**	**0.61**	**246**	⇓iP	**Pn**	**21 44 40.6**	**+0.8**
PETR		**0.66**	**79**	⇑iP	**Pn**	**21 44 40.9**	**+0.9**
PETR				i S	**Sn**	**21 44 58.3**	**+1.1**
FULR		**0.72**	**173**	⇑iP	**Pn**	**21 44 41.0**	**+0.5**
FULR				i S	**Sn**	**21 44 58.8**	**+0.8**
DOPR	**Dopca**	**0.74**	**300**	⇓iP	**Pn**	**21 44 40.8**	**+0.2**
DOPR				i S	**Sn**	**21 44 57.9**	**-0.3**
PGOR	**Pogoanele**	**0.84**	**145**	⇑iP	**Pn**	**21 44 41.8**	**+0.5**
PGOR				i S	**Sn**	**21 45 00.2**	**+0.7**
GHRR		**0.89**	**59**	⇑iP	**Pn**	**21 44 42.2**	**+0.5**
GHRR				i S	**Sn**	**21 45 00.9**	**+0.7**
GHRR				i S	**Sn**	**21 45 01.4**	**+1.2**
VOIR		**0.90**	**260**	P	**Pn**	**21 44 41.8**	**+0.1**
VOIR		**0.90**	**260**	⇓iP	**Pn**	**21 44 41.7**	**0.0**
VOIR				i S	**Sn**	**21 45 00.4**	**+0.2**
SULR		**0.93**	**182**	⇑iP	**Pn**	**21 44 42.4**	**+0.4**
SULR				i S	**Sn**	**21 45 01.2**	**+0.6**
TESR		**0.94**	**14**	⇓iP	**Pn**	**21 44 42.2**	**+0.2**
TESR				i S	**Sn**	**21 45 00.3**	**-0.6**
TUDR		**0.95**	**90**	⇑iP	**Pn**	**21 44 42.0**	**-0.1**
TUDR				i S	**Sn**	**21 45 00.7**	**-0.3**

VARR		1.12	75	⇑iP	Pn	21 44 43.8	+0.3
VARR				iS	Sn	21 45 03.0	-0.5
BGMR	Bucharest-Geol	1.16	188	⇑iP	Pn	21 44 45.2	+1.2
BGMR				iS	Sn	21 45 05.1	+0.9
CNCR	Cernica	1.16	182	⇑iP	Pn	21 44 44.1	+0.1
CNCR				iS	Sn	21 45 03.9	-0.3
GOLR		1.22	232	⇑iP	Pn	21 44 45.0	+0.5
GOLR				iS	Sn	21 45 05.6	+0.5
AMRR		1.23	143	⇑iP	Pn	21 44 44.8	+0.2
AMRR				iS	Sn	21 45 04.7	-0.6
BUC1	Bucharest	1.27	189	P	Pn	21 44 45.2	+0.1
BUC1	Bucharest	1.27	189	⇑iP	Pn	21 44 45.2	+0.2
BUC1				iS	Sn	21 45 05.6	-0.4
CFR	Carcaliu	1.36	108	⇓iP	Pn	21 44 45.5	-0.3
CFR				iS	Sn	21 45 06.2	-1.2
MDB	Medias	1.45	292	⇑iP	Pn	21 44 47.8	+1.1
HARR	Harsova	1.47	128	P	Pn	21 44 46.9	0.0
HARR	Harsova	1.47	128	⇑iP	Pn	21 44 46.9	0.0
BERR	Berezeni	1.49	59	⇑iP	Pn	21 44 47.6	+0.5
BERR				iS	Sn	21 45 09.4	-0.5
IAS	Iasi	1.81	28	P	Pn	21 44 51.0	+0.4
IAS				S	Sn	21 45 16.2	+0.2
IAS	Iasi	1.81	28	⇑iP	Pn	21 44 50.8	+0.2
IAS				iS	Sn	21 45 15.4	-0.7
IAS	Iasi	1.81	28	⇑iP	Pn	21 44 50.8	+0.2
IAS				S	Sn	21 45 16.2	+0.1
TLCR		1.81	102	⇑iP	Pn	21 44 50.4	-0.2
TLCR				iS	Sn	21 45 15.1	-1.0
TIRR	Tirgusor	1.88	127	P	Pn	21 44 51.4	0.0
TIRR	Tirgusor	1.88	127	⇑iP	Pn	21 44 51.3	-0.1
TIRR				iS	Sn	21 45 16.1	-1.3
ZIMR		2.06	199	⇑P	Pn	21 44 53.3	-0.2
ZIMR				S	Sn	21 45 19.5	-1.7
ZIMR		2.06	199	⇑iP	Pn	21 44 53.3	-0.2
ZIMR				iS	Sn	21 45 18.8	-2.4
BURAR	Bucovina Array	2.15	340	P	Pn	21 44 56.3	+1.9
BURAR	Bucovina Array	2.15	340	⇓P	Pn	21 44 56.4	+2.0
BURAR	Bucovina Array	2.15	340	⇓iP	Pn	21 44 56.3	+1.9
CRAR	CRAIOVA	2.19	235	⇓iP	Pn	21 44 54.7	-0.3
CRAR				iS	Sn	21 45 22.8	-1.1
KIS	Kishinev	2.23	50	d iP	Pn	21 44 53.0	-2.4
KIS				iS	Sn	21 45 22.0	-2.7
KIS				pmax	pmax		
	comp=Z,500nm,0.7s						
KIS				smax			
	comp=N,3µm,0.8s						
KIS				smax			
	comp=E,2µm,0.5s						
KIS				smax			
	comp=N,3µm,0.8s						
KIS				smax			
	comp=E,3µm,0.5s						
KIS	Kishinev	2.23	50	⇓iP	Pn	21 44 53.0	-2.4
	comp=E,500nm,0.7s						
KIS				iS	Sn	21 45 22.0	-2.7
	comp=E,3µm,0.8s						
KIS	Kishinev	2.23	50	iP	Pn	21 44 53.0	-2.4
	comp=E,500nm,0.7s						
KIS				iS	Sn	21 45 21.0	-3.7
	comp=E,3µm,0.8s						
PSN	Preselentsi	2.34	145	iP	Pn	21 44 56.9	+0.1
SZH	Strazhica	2.35	187	iP	Pn	21 44 56.6	-0.4
PVL	Pavlikeni	2.49	197	iP	Pn	21 44 59.7	+1.1
GZR	Gura Zlata	2.49	266	P	Pn	21 44 58.8	+0.2
GZR	Gura Zlata	2.49	266	⇑iP	Pn	21 44 59.0	+0.4
GZR				iS	Sn	21 45 31.5	+1.2
GZR	Gura Zlata	2.49	266	P	Pn	21 44 58.8	+0.2
PRD	Provadia	2.53	162	iP	Pn	21 44 59.4	+0.3
DRGR		2.77	297	P	Pn	21 45 02.2	+0.2
DRGR		2.77	297	⇓iP	Pn	21 45 02.0	0.0
DRGR				iS	Sn	21 45 31.9	-4.5
DJES	Djerdap	2.85	251	⇑iPn	Pn	21 45 01.5	-1.5
DJES				eSn	Sn	21 45 34.9	-3.3
JMB	Yambol	3.14	176	iP	Pn	21 45 05.9	-0.9
BZS	Buzias	3.29	272	P	Pn	21 45 08.5	-0.1
BZS	Buzias	3.29	272	⇓iP	Pn	21 45 08.4	-0.2
BZS	Buzias	3.29	272	P	Pn	21 45 08.5	-0.1
PGB	Panagyurishte	3.42	208	iP	Pn	21 45 12.7	+2.4
TRPA	Tarpa	3.62	316	⇓iP	Pn	21 45 13.0	+0.3
SVIS	Svilajnac	3.84	252	⇑iPn	Pn	21 45 15.0	-0.7
SVIS				eSn	Sn	21 45 57.8	-3.1
UZH	Uzhgorod	4.08	319	d iP	Pn	21 45 18.9	+0.1
UZH				eS	Sn	21 46 06.9	+0.3
UZH				smax			
	comp=N,11nm,0.8s						
UZH				smax			
	comp=E,20nm,0.8s						
UZH	Uzhgorod	4.08	319	iP	Pn	21 45 18.9	+0.1
UZH				eS	Sn	21 46 06.9	+0.3
BEO	Belgrade	4.21	261	eSn	Sn	21 46 06.8	-2.7
KOLS	Kolonicke sedl	4.32	322	ePN	Pn	21 45 23.0	+1.2
GRUS	Gruza	4.34	249	⇑iPn	Pn	21 45 21.6	-0.6
GRUS				eSn	Sn	21 46 09.3	-3.2
GRUS	Gruza	4.34	249	Pn	Pn	21 45 20.9	-1.3
LVV	L'vov	4.49	341	eP	Pn	21 45 16.2	-7.9
FGSL	Fruska Gora	4.60	267	iP	Pn	21 45 25.6	0.0
FGSL	Fruska Gora	4.60	267	Pn	Pn	21 45 25.6	0.0
CRVS	Cervenica-Dubn	4.67	317	ePN	Pn	21 45 26.7	+0.3
KWP	Kalwaria	4.71	330	⇓P	Pn	21 45 30.7	+3.8
KWP	Kalwaria	4.71	330	⇓iP	Pn	21 45 30.7	+3.8
DIVS	Divcibare	4.74	254	⇓iPn	Pn	21 45 26.9	-0.5
DIVS				eSn	Sn	21 46 19.1	-2.8
DIVS	Divcibare	4.74	254	Pn	Pn	21 45 27.1	-0.3
KECS	Kecovo	4.91	308	ePN	Pn	21 45 30.1	+0.4
PSZ	Piszkesteto	4.98	300	⇓iP	Pn	21 45 31.4	+0.9
STHS	Stebnicka Huta	5.13	320	ePN	Pn	21 45 33.6	+1.1
SEV	Sevastopol'	5.32	99	eP	Pn	21 45 34.2	-0.9
SEV				eS	Sn	21 46 33.7	-2.0
PKSM	Moragy	5.39	279	P	Pn	21 45 37.0	+1.1
PKSM	Moragy	5.39	279	⇑iP	Pn	21 45 36.9	+1.0
PKSM	Moragy	5.39	279	P	Pn	21 45 37.0	+1.1
AKASG	Malin Array Be	5.46	20	P	Pn	21 45 36.9	0.0
	comp=E,2.7nm,0.3s,baz=203,slow=11,SNR=12						
AKASG				S	Sn	21 46 28.6	-10
	comp=E,3.3nm,0.3s,baz=189,slow=17,SNR=5.9						
SIM	Simferopol'	5.55	94	c eP	Pn	21 45 36.8	-1.3
SIM				eS	Sn	21 46 38.0	-3.1
SIM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SIM	Simferopol'	5.55	94	eP	Pn	21 45 36.8	-1.3
	comp=Z,9.0nm,0.7s						
NIE	Niedzica	5.57	315	ePnc		21 45 40.6	
YAL	Yalta	5.67	99	eP	Pn	21 45 39.8	+0.1
YAL				eS	Sn	21 46 45.8	+1.8
ALU	Alushta	5.80	96	eP	Pn	21 45 41.3	-0.1
ALU				eS	Sn	21 46 48.3	+1.2
VYHS	Vyhne	5.87	302	ePN	Pn	21 45 43.0	+0.7
VYHS				e		21 45 56.5	
SUDU	Sudak	6.18	94	eP	Pn	21 45 45.5	-1.0
SUDU				eS	Sn	21 46 53.5	-2.7
VRAC	Vranov	7.55	303	P	Pn	21 46 04.4	-0.4
	comp=Z,0.3nm,0.3s,baz=283,slow=22,SNR=4.2						
BRTR	Keskin Array B	7.98	135	P	Pn	21 46 10.7	+0.2
	comp=Z,0.2nm,0.3s,baz=320,slow=10,SNR=7.9						
GERES	GERESS Array B	9.17	295	P	Pn	21 46 26.5	+0.3
	comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=16						
IDI	Anoyia	10.36	186	LR	LR	21 50 59.8	
	comp=Z,103nm,20.8s,baz=255,slow=39						
KIV	Kislovodsk	11.76	92	⇓eP	Pn	21 47 10.1	+10
KIV				eS	Sn	21 49 01.5	-8.8
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,200nm,19.0s						
ONI	Oni	12.69	98	P	Pn	21 47 20.9	+8.5
FINES	FINESS Array B	15.87	360	P	Pn	21 47 49.3	-2.8
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=4.2						
HFS	Hagfors	16.38	337	P	Pn	21 47 56.9	-1.4
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	Hagfors	16.38	337	P	Pn	21 47 56.9	-1.4
	comp=Z,0.9nm,0.3s,baz=161,slow=14,SNR=21						
KAF	Kangasniemi	16.54	360	ep	Pn	21 47 59.2	-1.0
	comp=Z,1.4nm,0.5s						
KAF	Kangasniemi	16.54	360	eP	Pn	21 47 59.2	-1.0
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	Joensuu	17.58	8	ep	Pn	21 48 10.7	-2.0
	comp=Z,1.6nm,0.5s						
NB2	NORSAR Subarra	17.82	336	P	Pn	21 48 13.6	-2.0
	comp=Z,4.9nm,0.6s,baz=146,slow=12						
NB2	NORSAR Subarra	17.82	336	P	Pn	21 48 13.6	-2.0
NB2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NOA	NORSAR Array B	17.82	336	P	Pn	21 48 13.7	-1.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	NORSAR Array B	17.82	336	P	Pn	21 48 13.7	-1.9
	comp=Z,0.7nm,0.3s,baz=145,slow=11,SNR=11						
EKA	Eskdalemuir Ar	20.98	308	P	P	21 48 48.7	+0.4
EKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	Eskdalemuir Ar	20.98	308	P	P	21 48 48.7	+0.4
	comp=Z,1.2nm,0.7s,baz=118,slow=9.9,SNR=3.7						
AKTK	Aktyubinsk	21.65	66	P	P	21 48 56.5	+1.1
AKTK	Aktyubinsk	21.65	66	P	P	21 48 56.5	+1.1
AKTO	Aktyubinsk	21.65	66	P	P	21 48 56.6	+1.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
AKTO	Aktyubinsk	21.65	66	P	P	21 48 56.5	+1.1
	comp=Z,1.0nm,0.5s,mb3.5,baz=267,slow=9.6,SNR=6.6						
MIB	Mutribah	22.82	126	eP	P	21 49 08.1	+0.9
MIB				AMb	AMB	21 49 09.2	
	comp=Z,21nm,0.5s,mb4.8						
MIB	Mutribah	22.82	126	eP	P	21 49 08.1	+0.9
	comp=Z,21nm,0.5s,mb4.8						
ESDC	Sonseca Array	22.96	266	P	P	21 49 07.3	-1.0
	comp=Z,0.5nm,0.5s,mb3.2,baz=65,slow=10,SNR=5.3						
NAY	Al-Naaiem	23.19	128	eP	P	21 49 11.8	+1.3
NAY				AMb	AMB	21 49 12.8	
	comp=Z,8.2nm,0.6s,mb4.3						
NAY	Al-Naaiem	23.19	128	eP	P	21 49 11.8	+1.3
	comp=Z,8.2nm,0.6s,mb4.3						
UMR	Umm Al-Rimmam	23.23	126	eP	P	21 49 11.9	+1.0
UMR				AMb	AMB	21 49 13.2	
	comp=Z,14nm,0.6s,mb4.6						
UMR	Umm Al-Rimmam	23.23	126	eP	P	21 49 11.9	+1.0
	comp=Z,14nm,0.6s,mb4.6						
RDF	Al-Radifah	23.61	128	eP	P	21 49 16.1	+1.7
RDF				AMb	AMB	21 49 17.2	
	comp=Z,8.0nm,0.3s,mb4.7						
RDF	Al-Radifah	23.61	128	eP	P	21 49 16.1	+1.7
	comp=Z,8.0nm,0.3s,mb4.7						
ARCES	ARCESS Array B	24.00	359	P	P	21 49 14.5	-3.0
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	24.00	359	P	P	21 49 14.4	-3.0
	comp=Z,1.1nm,0.8s,mb3.5,baz=187,slow=8.3,SNR=6.5						
ZAL	Zalesovo	37.69	56	P	P	21 51 18.4	+0.8
MKAR	Makanchi Array	38.07	67	P	P	21 51 21.4	+0.6
MKAR	Makanchi Array	38.07	67	P	P	21 51 21.4	+0.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	38.07	67	P	P	21 51 21.4	+0.6
	comp=Z,0.7nm,0.4s,mb3.6,baz=270,slow=7.8,SNR=7.8						
TORD	Torodi Ar. Bea	38.49	221	P	P	21 51 25.2	+0.5
TORD	Torodi Ar. Bea	38.49	221	P	P	21 51 25.2	+0.5
	comp=Z,2.3nm,0.5s,mb4.0,baz=30,slow=8.7,SNR=53						
DBIC	Dimbokro	47.25	224	P	P	21 52 34.8	-0.3
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DBIC	Dimbokro	47.25	224	P	P	21 52 34.8	-0.3
	comp=Z,2.2nm,0.5s,mb4.0,baz=20,slow=12,SNR=10						
SONM	Songino Array	52.58	57	P	P	21 53 16.5	+1.6
	comp=Z,0.3nm,0.4s,mb3.3,baz=305,slow=7.0,SNR=5.8						
YKA	Yellowknife Ar	67.81	342	P	P	21 54 57.6	-0.6
	comp=Z,0.3nm,0.6s,mb3.2,baz=28,slow=6.2,SNR=4.7						

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*ISCJB **09** 21:46:10.8±0.4, 5154N±002×697E±003, h0km, Error ellipse: s-maj=3.5km s-min=2.5km az=158.2*
*NEIC **09** 21:46:12.8, 5161N×685E, h1km, ML2.9(LDG), After LDG.*
*LDG **09** 21:46:12.8±0.1, 5161N×685E, h1km, Ml2.9/11, Error ellipse: s-maj=1.8km s-min=1.3km az=33.0, Suspected Mining induced.*
*CSEM **09** 21:46:12.3±0.1, 5162N×691E, h1km, ML3.0/10, Error ellipse: s-maj=1.7km s-min=1.4km az=114.0*
*BGR **09** 21:46:12.1±0.7, 5157N×685E, h1km, ML2.4/4, Error ellipse: s-maj=8.9km s-min=4.4km az=122.0*
*BUG **09** 21:46:12.6, 5150N×663E, h1km, ML1.6*
*BNS **09** 21:46:14.2±0.6, 5153N×684E, h1km, ML2.4*
ISC 09 21:46:11.9±0.4**, 5159N**±002×**686E**±003**, h0**km**, n57, σ1§18**/107**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	Rheinberg	0.19	249	Pg	Pg	21 46 16.8	+1.3
BRHE				Sg	Sg	21 46 20.6	+2.6
BUG	Bochum--Univer	0.30	119	ePg	Pg	21 46 18.5	+1.0
	SNR=14						
WTSB	Winterswijk	0.38	355	ePg	Pg	21 46 20.3	+1.1
BNS	Bensberg	0.65	162	ePg	Pg	21 46 25.8	+1.4
BNS				eSg	Sg	21 46 34.4	+1.5
HOBG	Hohbusch	0.67	153	ePg	Pg	21 46 26.1	+1.3
HOBG				eSg	Sg	21 46 34.9	+1.4
IBBN	Ibbenburen	0.91	37	ePg	Pg	21 46 29.7	+0.3
	SNR=6.0						
STB	Steinbach	0.99	181	ePg	Pg	21 46 32.0	+1.1
STB				eSg	Sg	21 46 45.0	+1.2
	87nm,0.4s						
KLL	Kalltalsperre	1.00	200	ePg	Pg	21 46 32.0	+0.9
KLL				eSg	Sg	21 46 46.0	+2.0
	69nm,0.2s						
DREG	Dreilaegerbach	1.00	203	ePg	Pg	21 46 32.0	+0.9
DREG				eSg	Sg	21 46 45.3	+1.2
	178nm,0.2s						
HGN	Heimansgroeve	1.01	216	ePg	Pg	21 46 32.0	+0.8
	19nm,0.2s						
HGN				eSg	Sg	21 46 45.8	+1.6
BEBN	Eben Emael	1.08	224	P	Pg	21 46 33.3	+0.7
BEBN				S	Sg	21 46 48.0	+1.3
	comp=N,60nm,0.4s						
MEM	Membach	1.11	209	P	Pg	21 46 33.5	+0.3
MEM				S	Sg	21 46 48.4	+0.8
	comp=E,104nm,0.3s						
MEM	Membach	1.11	209	P	Pg	21 46 33.5	+0.3
MEM				S	Sg	21 46 48.4	+0.7
	comp=E,104nm,0.3s						
HILG	Hillesheim	1.30	185	ePg	Pg	21 46 37.4	+0.6
HILG				eSg	Sg	21 46 54.1	+0.5
	comp=E,82nm,0.2s						
BGG	Burgeitz	1.41	167	ePg	Pg	21 46 38.5	-0.5
BGG				eSg	Sg	21 46 56.7	-0.6
	comp=E,43nm,0.3s						
BCLA	Clavier	1.52	221	P	Pn	21 46 39.7	-0.7
BCLA				S	Sg	21 46 60.0	-0.9
	comp=N,24nm,0.0s						
BCLA	Clavier	1.52	221	P	Pn	21 46 39.6	-0.8
BCLA				S	Sg	21 46 59.9	-0.9
TNS	Taunus Mts	1.70	143	ePg	Pg	21 46 43.3	-1.1
	SNR=4.9						
TNS				eSg	Sg	21 47 05.8	-0.5
	SNR=3.8						
SNF	Seneffe	1.95	237	P	Pn	21 46 45.4	-0.8
GIVF	Givet	1.97	222	ePg	Pg	21 46 49.4	-0.2
GIVF				eS	Sn	21 47 13.8	+2.1
GIVF				eSg	Sg	21 47 15.0	0.0
	comp=N,65nm,0.4s						
GIVF	Givet	1.97	222	ePn	Pn	21 46 45.7	-0.7
GIVF				ePg	Pg	21 46 49.4	-0.2
GIVF				eS	Sn	21 47 13.8	+2.1
GIVF				eSg	Sg	21 47 15.0	0.0
GIVF	Givet	1.97	222	ePg	Pg	21 46 49.4	-0.2
GIVF				eSg	Sg	21 47 15.0	0.0
	comp=N,32nm,0.4s						
WLF	Walferdange	1.98	193	ePg	Pg	21 46 49.3	-0.4
	SNR=3.3						
WLF				eSg	Sg	21 47 13.6	-1.7
	SNR=3.0						
WLF	Walferdange	1.98	193	ePn	Pn	21 46 49.0	+2.5
WLF				eSn	Sn	21 47 12.5	+0.6
WLF	Walferdange	1.98	193	P	Pn	21 46 49.4	+2.8
WLF				S	Sn	21 47 13.4	+1.4
	comp=N,15nm,0.4s						
WLF	Walferdange	1.98	193	ePn	Pn	21 46 49.0	+2.5
WLF				eSn	Sn	21 47 12.5	+0.5
WLF				S	Sn	21 47 13.3	+1.3
	comp=N,15nm,0.4s						
DOU	Dourbes	2.07	225	P	Pn	21 46 47.5	-0.3
DOU				S	Sn	21 47 16.1	+1.9
	comp=N,11nm,0.3s						
CLZ	Clausthal	2.20	82	ePn	Pn	21 46 48.7	-1.0
	SNR=1.0						
CLZ				eSg	Sg	21 47 21.7	-0.9
	SNR=2.5						
BAIF	Baives	2.27	229	ePg	Pg	21 46 55.2	-0.2
BAIF				eSg	Sg	21 47 24.7	-0.1
	comp=N,14nm,0.3s						
BAIF	Baives	2.27	229	ePn	Pn	21 46 49.7	-0.9
BAIF				ePg	Pg	21 46 55.2	-0.2
BAIF				eSg	Sg	21 47 24.7	-0.1
BAIF	Baives	2.27	229	ePg	Pg	21 46 55.2	-0.2
BAIF				eSg	Sg	21 47 24.7	-0.1
	comp=N,6.8nm,0.3s						
MOX	Moxa	3.14	106	eSg	Sg	21 47 51.2	-1.7
	SNR=3.1						
MOX	Moxa	3.14	106	(PG)	Pg	21 47 03.5	-8.6
MOX				eSG	Sg	21 47 50.9	-1.9
CDF	Champ du Feu	3.19	175	ePn	Pn	21 47 02.5	-0.7
CDF				eSg	Sg	21 47 54.0	-0.3
	comp=N,7.6nm,0.5s						
CDF	Champ du Feu	3.19	175	ePn	Pn	21 47 02.5	-0.7
CDF				eSg	Sg	21 47 54.0	-0.3
	comp=N,3.8nm,0.5s						
MEZF	Maizieres J'vi	3.30	201	ePn	Pn	21 47 03.8	-0.9
MEZF				eSg	Sg	21 47 57.1	-0.7
	comp=N,4.6nm,0.2s						
MEZF	Maizieres J'vi	3.30	201	ePn	Pn	21 47 03.8	-0.9
MEZF				eSg	Sg	21 47 57.1	-0.7
	comp=N,2.3nm,0.2s						
BFO	Black Forest	3.40	163	ePn	Pn	21 47 06.9	+0.8
	SNR=1.5						
BFO				eSn	Sn	21 47 43.5	-3.5
	SNR=1.9						
BFO				eSg	Sg	21 47 59.8	-1.1
	SNR=1.8						
SFTF	Sexfontaines	3.58	200	eSg	Sg	21 48 05.3	-1.6
	comp=N,11nm,0.4s						
SFTF	Sexfontaines	3.58	200	eSg	Sg	21 48 05.3	-1.6
	comp=N,5.6nm,0.4s						
HAU	Haudompre	3.60	185	eSg	Sg	21 48 06.5	-0.9
	comp=N,6.6nm,0.4s						
HAU	Haudompre	3.60	185	eSg	Sg	21 48 06.5	-0.9
	comp=N,3.3nm,0.4s						
HINF	Hinteralfeld	3.77	180	ePn	Pn	21 47 09.9	-1.3
HINF				eSg	Sg	21 48 11.9	-1.1
	comp=N,2.5nm,0.3s						
HINF	Hinteralfeld	3.77	180	ePn	Pn	21 47 09.9	-1.3
HINF				eSg	Sg	21 48 11.9	-1.1
	comp=N,1.2nm,0.3s						
CLL	Collm	3.85	92	eSg	Sg	21 48 17.0	+1.3
BRG	Berggiesshubel	4.51	96	SG	Sg	21 48 39.0	+2.3
	comp=N,4.5nm,1.1s						
LOR	Lormes	4.74	206	ePn	Pn	21 47 23.7	-0.9
	baz=29						
LOR				eSn	Sn	21 48 16.2	-4.0
LOR				eSg	Sg	21 48 40.9	-3.3
	comp=N,2.6nm,0.2s						
LOR	Lormes	4.74	206	ePn	Pn	21 47 23.7	-0.9
LOR				eSn	Sn	21 48 16.2	-4.0
LOR				eSg	Sg	21 48 40.9	-3.3
	comp=N,1.3nm,0.2s						
CABF	La Chapelle	5.00	186	ePn	Pn	21 47 27.1	-1.1
SSF	Saint Saulge	5.03	207	ePn	Pn	21 47 27.5	-1.0
SSF				eSg	Sg	21 48 51.3	-2.1
	comp=N,4.4nm,0.3s						
SSF	Saint Saulge	5.03	207	ePn	Pn	21 47 27.5	-1.0
SSF				eSg	Sg	21 48 51.3	-2.1
	comp=N,2.2nm,0.3s						
AVF	Avril sur Loir	5.32	207	ePn	Pn	21 47 31.3	-1.2
LDF	La Druitiere	5.40	239	ePn	Pn	21 47 32.5	-1.1
FLN	La Foliniere	5.50	242	ePn	Pn	21 47 33.6	-1.3
	baz=59						
FLN				eSn	Sn	21 48 34.2	-4.6
BGF	Bois d'Agland	5.68	209	ePn	Pn	21 47 36.3	-1.1
GRR	Gorron	5.92	240	ePn	Pn	21 47 39.5	-1.2
GRR				eSn	Sn	21 48 43.6	-5.5
	comp=N,6.8nm,0.3s						
GRR	Gorron	5.92	240	ePn	Pn	21 47 39.5	-1.2
GRR				eSn	Sn	21 48 43.6	-5.5
	comp=N,3.4nm,0.3s						

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*IDC **09** 21:46:34.8±0.9, 3470N×7297E, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.8/25, mbtmp4.0/12, ML3.7/2, Error ellipse: s-maj=26.1km s-min=19.6km az=39.0*
*NEIC **09** 21:46:36.6±0.5, 3474N×7320E, h10km, mb4.0/2, Error ellipse: s-maj=14.9km s-min=7.9km az=217.0*
*NDI **09** 21:46:36.7±2.6, 3473N×7264E, h10km, ML3.8, mb4.0(NEIC)*
*ISCJB **09** 21:46:37.9±0.8, 3478N±003×7299E±004, h27km±7km, mb4.0/16, Error ellipse: s-maj=6.0km s-min=4.8km az=148.2*
*BJI **09** 21:46:39.6, 3485N×73.19E, h21km, ML3.4*
*NNC **09** 21:46:46.8±8.8, 3509N×7308E, h78km±94km, mb3.2, mpv3.5, Error ellipse: s-maj=76.0km s-min=66.1km az=106.0*
ISC 09 21:46:38.4±1.5**, 3475N**±003×**7298E**±004**, h20**km±10km**, n48, σ1§25**/60**, mb4.0**/16**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.11	168	P	Pb	21 46 59.0	0.0
CEP	Cherat	1.28	224	P	Pn	21 47 01.5	+0.3
THW	Thamme Wali	2.20	208	P	Pb	21 47 17.9	+0.3
JMU	Jammu	2.58	141	eS	Sn	21 47 55.0	+5.1
SBDP	Sheikh Budin	3.04	217	P	Pb	21 47 28.7	-3.2
THN	Thein Dam	3.25	135	eP	Pn	21 47 31.0	+2.8
THN				ex	Sg	21 48 13.9	-8.9
KBL	Kabul	3.25	267	ePn	Pb	21 47 33.2	-2.3
KBL				eS	Sb	21 48 14.3	-0.3
DLH	Dalhousie	3.32	131	eP	Pn	21 47 32.0	+2.7
DLH				ex	Sg	21 48 18.0	-7.2
DRP	Derazinda	3.79	219	P	Pn	21 47 39.3	+3.6
SDNR	Sundarnagar	4.66	133	eP	Pn	21 47 49.0	+1.4
SDNR				ex	Sg	21 49 01.0	-7.0
SMLA	Simla	5.04	135	eP	Pn	21 47 55.0	+2.1
SMLA				eS	Sn	21 48 52.0	+1.5
KSH	Kashi	5.33	26	ePG	Pb	21 48 10.4	-0.4
KSH				S	Sn	21 49 00.3	+2.8
KSH				Smax			
	comp=N,155nm,0.3s						
KSH				Smax			
	comp=E,153nm,0.4s						
JOSI	Joshimath	6.95	125	eP	Pn	21 48 20.2	+1.2
JOSI				eS	Sn	21 49 37.4	-0.1
JOSI				AML	AML	21 49 57.1	
	comp=E,77nm,0.8s						
JOSI				AML	AML	21 50 05.5	
	comp=N,78nm,0.7s						
NDI	New Delhi	7.04	148	eS	Sn	21 49 35.0	-4.8
KHET	Khetri	7.08	159	eP	Pn	21 48 21.6	+0.7
KHET				eS	Sn	21 49 37.1	-3.7
SONA	Sohna	7.36	150	eP	Pn	21 48 25.2	+0.4
SONA				eS	Sn	21 49 45.6	-2.1
TKM2	Tokmak 2	8.41	13	⇓P	Pn	21 48 42.3	+3.1
	comp=N,0.3nm,0.7s						
TKM2				⇑S	Sn	21 50 12.1	-1.4
	comp=N,0.5nm,0.6s						
KK31	Karatay Array	8.56	348	P	Pn	21 48 42.7	+1.6
	comp=N,5.8nm,0.5s,baz=158,slow=12,SNR=179						
KK31				⇓S	Sn	21 50 15.7	-1.5
	comp=N,6.2nm,0.3s,baz=144,slow=25						
GKN	Gorkha	12.01	121	eP	Pn	21 49 26.3	-2.2
	comp=N,13nm,0.4s						
GKN				eS	Sn	21 51 34.2	-7.7
KKN	Kakani	12.60	120	eP	Pn	21 49 33.8	-2.7
	comp=N,13nm,0.5s						
MK31	Makanchi Array	13.93	27	P	Pn	21 49 54.7	+0.1
	comp=N,0.2nm,0.3s,baz=201,slow=13,SNR=3.9						
MKAR	Makanchi Array	13.93	27	Pn	Pn	21 49 54.5	-0.1
	comp=N,0.1nm,0.3s,baz=214,slow=17,SNR=4.5						
TAPN	Taplejung	14.61	116	eP	Pn	21 50 00.4	-3.6
	comp=N,9.6nm,0.4s						
ODAN	Odare	14.66	119	eP	Pn	21 50 01.3	-3.3
	comp=N,22nm,0.9s						
AB31	Akbulak array	17.40	330	⇑P	Pn	21 50 40.6	+0.8
	comp=N,0.8nm,0.4s,baz=152,slow=11,SNR=11						
BRVK	Borovoye	18.41	355	⇑P	Pn	21 50 52.2	0.0
	comp=N,1.1nm,0.7s						
AKTK	Aktyubinsk	19.10	330	P	Pn	21 51 00.7	0.0
AKTO	Aktyubinsk	19.10	330	P	Pn	21 51 00.7	0.0
	comp=N,1.5nm,0.3s,baz=142,slow=9.1,SNR=18						
ZALV	Zalesovo Beam	20.93	20	P	P	21 51 18.4	-1.2
	comp=N,5.1nm,0.5s,baz=212,slow=11,SNR=25						
KBD	Kabd	22.14	262	eP	P	21 51 33.7	+0.9
KBD				AMb	AMB	21 51 37.0	
	comp=Z,32nm,0.7s,mb4.9						
MIB	Mutribah	22.21	264	eP	P	21 51 34.3	+0.7

MIB				AMb	AMB	21 51 37.5	
	comp=Z,11nm,0.7s,mb4.4						
RDF	Al-Radifah	22.34	262	eP	P	21 51 35.7	+0.7
RDF				AMb	AMB	21 51 38.9	
	comp=Z,12nm,0.7s,mb4.4						
NAY	Al-Naaiem	22.48	263	eP	P	21 51 37.3	+0.9
NAY				AMb	AMB	21 51 43.5	
	comp=Z,5.0nm,0.7s,mb4.0						
RST	Umm Al-Ruwaisa	22.59	264	eP	P	21 51 38.5	+0.9
RST				AMb	AMB	21 51 41.0	
	comp=Z,8.1nm,0.6s,mb4.4						
ARU	Arti	23.82	340	eP	P	21 51 50.3	+0.4
	comp=Z,3.4nm,0.6s,mb4.0						
FINES	FINESS Array B	39.83	327	P	P	21 54 09.5	-0.6
	comp=Z,0.6nm,0.5s,mb3.6,baz=119,slow=11,SNR=6.8						
ARCES	ARCESS Array B	43.37	338	P	P	21 54 39.1	+0.1
	comp=Z,2.5nm,0.6s,mb4.1,baz=112,slow=8.1,SNR=20						
HFS	Hagfors	45.44	323	P	P	21 54 55.0	-0.5
	comp=Z,2.2nm,0.5s,mb4.2,baz=104,slow=9.6,SNR=12						
NB2	NORSAR Subarra	46.74	324	P	P	21 55 05.8	-0.1
	comp=Z,0.6nm,0.5s,mb3.8,baz=94,slow=7.9						
NOA	NORSAR Array B	46.74	324	P	P	21 55 05.8	0.0
NOA	NORSAR Array B	46.74	324	P	P	21 55 05.8	0.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=95,slow=7.6,SNR=3.6						
MJAR	Matsushiro Arr	52.11	68	P	P	21 55 48.4	+1.2
	comp=Z,0.3nm,0.3s,mb3.7,baz=289,slow=7.8,SNR=4.1						
TORD	Torodi Ar. Bea	67.32	271	P	P	21 57 31.9	-0.4
	comp=Z,1.3nm,0.6s,mb4.1,baz=46,slow=5.3,SNR=24						
INK	Inuvik	75.36	10	eP	P	21 58 20.1	+0.1
	comp=Z,43nm,0.6s						
INK	Inuvik	75.36	10	P	P	21 58 20.6	+0.6
	comp=Z,1.0nm,0.5s,mb4.0,baz=5.9,slow=5.8,SNR=4.6						
WRA	Warramunga Arr	79.69	123	P	P	21 58 44.5	-0.3
	comp=Z,0.3nm,0.5s,mb3.5,baz=324,slow=4.9,SNR=6.1						
ASAR	Alice Springs	81.93	126	P	P	21 58 56.0	-0.7
	comp=Z,0.6nm,1.0s,mb3.5,baz=166,slow=11,SNR=4.3						
YKA	Yellowknife Ar	82.91	4	P	P	21 59 00.5	-0.8
	comp=Z,0.3nm,0.6s,mb3.5,baz=346,slow=5.3,SNR=6.5						

*CSEM **09** 21:55:52.9±1.0, 3789N×2011E, h2^{km}, ML3.6, Error ellipse: s-maj=20.3km s-min=10.3km az=52.0*
*THE **09** 21:55:53.5, 3790N×2024E, h6^{km}, ML3.6*
*ATH **09** 21:55:57.4, 3811N×2040E, h4^{km}, MD3.3/3*
ISC 09 21:55:50.6±3.8**, 379N**±01×**201E**±02**, h1**^{km}±18^{km}**, n7,** σ**0^{s}50**/11**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.53	52	ePG	Pg	21 56 00.4	-0.5
VLS				eSG	Sg	21 56 03.7	-4.1
KFL	Anninata	0.64	66	ePg	Pg	21 56 03.1	+0.3
LKD	Levkas	0.97	29	ePg	Pg	21 56 09.5	+0.2
LKD				eSg	Sg	21 56 22.7	+0.8
RLS	Riolos of Patr	1.14	79	ePB	Pb	21 56 13.4	+0.4
IGT	Igoumenitsa	1.69	7	ePb	Pb	21 56 21.9	-0.6
IGT				eSb	Sb	21 56 44.2	0.0
IGT	Igoumenitsa	1.69	7	ePb	Pb	21 56 21.9	-0.6
IGT				eSb	Sb	21 56 44.2	0.0
EVR	Evrytania	1.74	52	ePN	Pb	21 56 23.5	+0.2

*IDC **09** 22:03:52.1±2.0, 1391N×9026W, h0^{km}, mb4.0/3, mb1 4.0/7, mb1mx3.8/18, mbtmp3.9/7, ML4.0/4, Error ellipse: s-maj=52.2km s-min=21.1km az=36.0*
*CASC **09** 22:03:52.9±2.8, 1320N×9096W, h20^{km}±12^{km}, MD4.0, mb4.4(NEIC)*
*ISCJB **09** 22:03:53.0±1.3, 132N±01×9072W±008, h58^{km}±10^{km}, mb4.3/7, Error ellipse: s-maj=19.5km s-min=7.8km az=32.8*
*NEIC **09** 22:03:56.8±0.8, 1381N×9023W, h35^{km}, mb4.4/5, Error ellipse: s-maj=25.7km s-min=8.9km az=215.0*
ISC 09 22:03:55.5±1.2**, 133N**±01×**9063W**±009**, h58**^{km}±10^{km}**, n30,** σ**1^{s}40**/31**, mb4.3**/7**, 5C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	Pacaya	1.13	1	eP	Pn	22 04 14.9	-0.3
SBLS	San Blas	1.14	59	⇑eP	x	22 04 45.2	
SBLS				eS	x	22 05 05.7	
SNJE	San Jose	1.17	58	eP	x	22 04 45.6	
SNJE				eS	x	22 05 09.4	
FUG	Fuego 3	1.21	350	⇑eP	Pn	22 04 15.1	-1.1
RBDL	Robledal	1.25	47	⇑eP	x	22 04 46.8	
RBDL				eS	x	22 05 06.4	
FG6		1.32	349	⇑eP	Pn	22 04 16.7	-1.1
FG6				eS	Sn	22 04 35.4	+1.0
SNET	Serv Nac Est T	1.43	72	eP	x	22 04 22.9	
SNET				eS	x	22 04 45.2	
JAT	Jato	1.44	317	⇑eP	Pn	22 04 15.8	-3.5
JAT				eS	Sn	22 04 35.3	-2.0
CCIG	Comitan	3.34	334	eP	Pn	22 04 44.0	-1.4
CCIG				i S	Sn	22 05 24.6	+0.8
TGUH	Tegucigalpa,Un	3.36	76	ePn	Pn	22 04 39.8	-5.7
SCX	San Cristobal	3.97	331	eP	Pn	22 04 55.0	+1.2
CMIG	Matias Romero	5.61	313	Pn	Pn	22 05 15.0	-1.3
CMIG				Sn	Sn	22 06 20.4	+1.0
CMIG	Matias Romero	5.61	313	Pn	Pn	22 05 15.0	-1.3
	1.7nm,0.3s,baz=126,slow=8.2,SNR=7.8						
CMIG				Sn	Sn	22 06 20.4	+1.0
	2.1nm,0.3s,baz=67,slow=22,SNR=4.8						
JTS	JuntasAbangare	6.29	117	ePn	Pn	22 05 26.6	+0.8
JTS	JuntasAbangare	6.29	117	Pn	Pn	22 05 26.4	+0.7
	1.3nm,0.3s,baz=306,slow=20,SNR=6.8						
TEIG	Tepich	7.29	18	ePn	Pn	22 05 41.9	+2.5
PPM	Popocatepetl	9.61	308	eP	Pn	22 06 21.1	+10
PPM				i S	Sn	22 08 00.8	+3.1
TXAR	Lajitas Array	20.06	325	P	P	22 08 24.5	+0.5
	0.3nm,0.3s,baz=154,slow=12,SNR=20						
SDV	Santo Domingo	20.10	100	ePn	P	22 08 25.7	+1.1
	4.4nm,0.7s						
SDV	Santo Domingo	20.10	100	P	P	22 08 25.6	+1.1
	0.5nm,0.3s,baz=291,slow=7.5,SNR=6.4						
MNTX	Cornudas Mount	22.82	326	eP	P	22 08 51.8	-1.7
	12nm,1.4s,mb4.1						
SJG	San Juan	24.05	75	eP	P	22 09 04.9	-0.5
	6.4nm,0.4s,mb4.4						
MCMT	McKenzie Canyo	36.73	333	eP	P	22 10 59.2	+2.2
ULM	Lac du Bonnet	37.14	354	P	P	22 10 58.6	-1.8
	2.2nm,0.5s,mb4.2,baz=164,slow=9.7,SNR=7.5						
SCHQ	Schefferville	45.47	19	P	P	22 12 07.6	-1.1
	1.3nm,0.3s,mb4.2,baz=233,slow=7.1,SNR=10						
YKA	Yellowknife Ar	52.06	346	P	P	22 12 58.5	-0.6
YKA	Yellowknife Ar	52.06	346	P	P	22 12 58.5	-0.6
	0.2nm,0.4s,mb3.4,baz=146,slow=7.6,SNR=7.7						
RCBR	Riachuelo	57.56	106	eP	P	22 13 43.1	+3.4
	5.2nm,0.8s,mb4.6						
TRQA	Tornquist	57.68	153	P	P	22 13 45.9	+5.9
	21nm,1.3s,mb5.0						
WRA	Warramunga Arr	136.50	255	PKP	PKPdf	22 23 17.6	+5.9
	0.5nm,0.7s,baz=90,slow=2.1,SNR=6.2						

*IDC **09** 22:06:58.6±1.3, 3464N×7312E, h0^{km}, mb3.7/5, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, ML3.3/2, Error ellipse: s-maj=31.8km s-min=26.7km az=65.0*
*BJI **09** 22:07:01.0, 3460N×7320E, h10^{km}, ML3.3*
*ISCJB **09** 22:07:04.1±0.5, 3480N±003×7316E±005, h54^{km}±9^{km}, mb3.5/4, Error ellipse: s-maj=7.2km s-min=5.3km az=178.0*
*NEIC **09** 22:07:04.0±1.2, 3464N×7324E, h35^{km}, Error ellipse: s-maj=21.0km s-min=12.8km az=131.0*
*NDI **09** 22:07:19.0±9.4, 3431N×7302E, h33^{km}, ML3.2*
ISC 09 22:07:06.2±0.5**, 3479N**±003×**7313E**±005**, h58**^{km}±9^{km}**, n28,** σ**1^{s}08**/35**, mb3.5**/4**, 2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.13	174	P	Pn	22 07 21.5	-4.4
CHCP				S	Sn	22 07 42.0	+1.5
CEP	Cherat	1.39	227	P	Pn	22 07 25.8	-3.5
THW	Thamme Wali	2.30	211	P	Pn	22 07 41.1	-0.5
JMU	Jammu	2.54	144	eS	Sn	22 08 18.0	+3.3
SBDP	Sheikh Budin	3.15	219	P	Pn	22 07 52.4	-0.9
THN	Thein Dam	3.19	137	ex	x	22 07 53.1	
THN				eS	Sn	22 08 36.8	+6.1
KBL	Kabul	3.38	267	ePn	Pn	22 07 57.2	+0.8
KBL				eSn	Sn	22 08 35.8	+0.6
DRP	Derazinda	3.90	220	P	Pn	22 08 02.8	-0.8
SDNR	Sundarnagar	4.60	134	ex	x	22 08 12.0	
SDNR				ex	x	22 09 23.6	
SMLA	Simla	4.98	136	ex	x	22 08 16.7	
SMLA				eS	Sn	22 09 18.6	+3.9
KSH	Kashi	5.24	25	ePG	Pn	22 08 36.7	+15
KSH				S	Sn	22 09 21.6	+0.7
KSH				Smax			
	comp=N,60nm,0.4s						
KSH				Smax			
	comp=E,88nm,0.3s						
JOSI	Joshimath	6.87	126	eP	Pn	22 08 43.8	-0.5
JOSI				eS	Sn	22 10 00.0	-1.0
JOSI				AML	AML	22 10 43.9	
	comp=N,58nm,0.8s						
JOSI				AML	AML	22 10 46.3	
	comp=E,62nm,0.8s						
KHET	Khetri	7.07	160	ex	x	22 09 13.2	
KHET				eS	Sn	22 10 01.9	-4.1
KHET				AML	AML	22 10 50.7	
	comp=E,16nm,0.5s						
KHET				AML	AML	22 10 52.4	
	comp=N,10nm,0.5s						
SONA	Sohna	7.34	152	eP	Pn	22 08 59.1	+8.4
SONA				eS	Sn	22 10 11.9	-0.7
SONA				AML	AML	22 11 10.6	
	comp=E,28nm,0.5s						
SONA				AML	AML	22 11 11.4	
	comp=N,12nm,0.6s						
AML	Almayashu	7.35	3	ePn	Pn	22 08 51.9	+1.2
	comp=N,4.3nm,0.5s						
UCH	Uchtor	7.51	8	ePn	Pn	22 08 53.9	+1.0
	comp=N,4.3nm,0.7s						
UCH				eSn	Sn	22 10 17.5	+0.9
EKS2	Erkin-Say	7.88	3	ePn	Pn	22 08 59.9	+1.9
	comp=N,2.0nm,0.6s						
EKS2				eSn	Sn	22 10 23.7	-2.0
AAK	Ala-Archa	7.91	7	ePn	Pn	22 08 56.9	-1.5
	comp=N,25nm,1.9s						
KK31	Karatay Array	8.55	347	⇓P	Pn	22 09 06.7	-0.5
	comp=N,0.8nm,0.2s,baz=161,slow=12,SNR=40						
KK31				⇓S	Sn	22 10 40.0	-2.1
	comp=N,2.6nm,0.4s,baz=165,slow=23						
MKAR	Makanchi Array	13.84	27	Pn	Pn	22 10 19.5	+0.1
	comp=N,0.0nm,0.3s,baz=206,slow=13,SNR=2.8						
AKTK	Aktyubinsk	19.13	329	P	Pn	22 11 25.5	-0.2
AKTO	Aktyubinsk	19.13	329	P	Pn	22 11 25.5	-0.2
	comp=N,0.4nm,0.3s,baz=147,slow=10.0,SNR=9.5						
ZALV	Zalesovo Beam	20.85	20	P	P	22 11 42.7	-0.3
ZALV	Zalesovo Beam	20.85	20	P	P	22 11 42.7	-0.3
	comp=N,2.1nm,0.4s,baz=213,slow=9.3,SNR=14						
FINES	FINESS Array B	39.87	327	P	P	22 14 33.8	-0.1
	comp=N,0.6nm,0.7s,mb3.5,baz=134,slow=11,SNR=3.5						
ARCES	ARCESS Array B	43.38	338	P	P	22 15 03.5	+1.0
	comp=N,1.7nm,0.8s,mb3.8,baz=113,slow=8.2,SNR=8.0						
TORD	Torodi Ar. Bea	67.44	271	P	P	22 17 56.4	+0.3
	comp=N,0.2nm,0.5s,mb3.4,baz=50,slow=5.3,SNR=6.3						
WRA	Warramunga Arr	79.61	123	P	P	22 19 07.7	+0.3
	comp=N,0.5nm,1.0s,mb3.4,baz=321,slow=4.7,SNR=7.3						

*IDC **09** 22:50:41.7±9.0, 3634N×7103E, h175^{km}±75^{km}, mb3.3/4, mb1 3.5/6, mb1mx3.1/24, mbtmp3.3/6, Error ellipse: s-maj=68.7km s-min=29.2km az=54.0*
*MOS **09** 22:50:41.8±1.1, 3642N×7091E, h186^{km}, mb3.9/3, Error ellipse: s-maj=25.9km s-min=13.6km az=84.6*
*ISCJB **09** 22:50:42.9±0.9, 3655N±004×7105E±009, h193^{km}±10^{km}, mb3.6/4, Error ellipse: s-maj=13.1km s-min=5.0km az=159.8*
*NEIC **09** 22:50:43.3±1.7, 3651N×7090E, h186^{km}±16^{km}, mb4.4/10, Error ellipse: s-maj=21.7km s-min=8.3km az=55.0*
*NNC **09** 22:50:48.7±3.8, 3698N×7081E, h189^{km}±47^{km}, mb2.7, mpv3.5, Error ellipse: s-maj=36.9km s-min=21.9km az=11.0*
*NDI **09** 22:52:19.1±2.8, 3286N×7386E, h10^{km}, ML3.0*
ISC 09 22:50:43.6±0.9**, 3656N**±004×**710E**±01**, h183**^{km}±10^{km}**, n43,** σ**1^{s}05**/52**, mb3.6**/4**, 2C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	5.67	135	ex	Pn	22 52 06.1	-0.3
THN				eS	Sn	22 53 10.3	-1.2
AML	Almayashu	5.95	20	⇓iPn	Pn	22 52 10.7	+0.9
	32nm,0.5s						
AML				eSn	Sn	22 53 16.7	-1.1
AML	Almayashu	5.95	20	P	Pn	22 52 10.8	+1.0
	SNR=42						
UCH	Uchtor	6.28	25	⇓ePn	Pn	22 52 15.2	+1.0
	8.1nm,0.7s						
UCH				eSn	Sn	22 53 24.8	-1.0
UCH	Uchtor	6.28	25	P	Pn	22 52 15.6	+1.3
	SNR=12						
EKS2	Erkin-Say	6.46	19	ePn	Pn	22 52 17.4	+0.9
	8.2nm,0.4s						
EKS2				eSn	Sn	22 53 28.2	-1.8
EKS2	Erkin-Say	6.46	19	P	Pn	22 52 17.6	+1.0
	SNR=9.9						
KK31	Karatay Array	6.55	357	P	Pn	22 52 17.7	0.0
	4.5nm,0.4s,baz=179,slow=13,SNR=172						
KK31				⇑S	Sn	22 53 27.8	-4.2
	18nm,0.4s,baz=186,slow=23						
AAK	Ala-Archa	6.64	23	ePn	Pn	22 52 19.1	+0.2
	5.5nm,0.3s						
AAK				eSn	Sn	22 53 33.1	-1.1
AAK	Ala-Archa	6.64	23	ePN	Pn	22 52 19.2	+0.3
AAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AAK	Ala-Archa	6.64	23	P	Pn	22 52 20.2	+1.2
	SNR=11						
KBK	Karagaybulak	6.81	25	P	Pn	22 52 23.1	+1.9
	SNR=7.8						
CHMS	Chumysh	7.05	23	P	Pn	22 52 25.2	+0.9
	SNR=5.4						
SDNR	Sundarnagar	7.08	134	ex	Pn	22 52 25.0	+0.2
SDNR				eS	Sn	22 53 40.0	-4.7
USP	Ospenovka	7.22	21	P	Pn	22 52 26.9	+0.4
	SNR=9.7						
TKM2	Tokmak 2	7.28	28	⇓P	Pn	22 52 28.4	+1.1
	comp=Z,0.9nm,0.6s						
TKM2				⇑S	Sn	22 53 48.2	-1.1
	comp=Z,0.5nm,0.8s						
TKM2	Tokmak 2	7.28	28	ePn	Pn	22 52 28.1	+0.9
	comp=Z,16nm,0.8s						
TKM2	Tokmak 2	7.28	28	ePN	Pn	22 52 28.2	+1.0
TKM2				pmax	pmax		
	comp=Z,16nm,0.8s						
TKM2	Tokmak 2	7.28	28	P	Pn	22 52 28.4	+1.2
	SNR=12						
JOSI	Joshimath	9.32	127	eP	Px	22 53 38.9	
JOSI				ex	Sn	22 54 33.7	-4.6
JOSI				AML	AML	22 54 35.4	
	comp=E,70nm,1.3s						
JOSI				AML	AML	22 54 35.4	
	comp=N,55nm,0.8s						
KHET	Khetri	9.39	153	eP	Px	22 53 34.1	
KHET				eS	Sn	22 54 29.8	-10
KHET				AML	AML	22 54 35.5	
	comp=N,14nm,0.0s						
KHET				AML	AML	22 54 35.8	
	comp=E,17nm,0.4s						
SONA	Sohna	9.75	146	eP	Px	22 53 40.4	
SONA				eS	Sn	22 54 38.2	-10
SONA				AML	AML	22 54 42.9	
	comp=E,17nm,0.4s						
SONA				AML	AML	22 54 47.9	
	comp=N,12nm,0.6s						
MKAR	Makanchi Array	13.25	36	P	Pn	22 53 44.8	+0.2
	comp=N,0.1nm,0.3s,baz=216,slow=9.7,SNR=6.6						
GKN	Gorkha	14.34	123	eP	Pn	22 53 59.0	+0.6
	comp=N,9.0nm,0.4s						
KKN	Kakani	14.92	122	eP	Pn	22 54 05.5	0.0
KKN				eS	Sn	22 56 41.1	-11
AB31	Akbulak array	15.03	331	⇓P	Pn	22 54 05.4	-1.3
	comp=N,2.3nm,0.6s						
JIRN	Jiri	15.62	120	eP	Pn	22 54 15.0	+0.8
	comp=N,8.2nm,0.3s						
BRVK	Borovoye	16.50	358	⇓P	Pn	22 54 24.6	0.0
	comp=N,0.6nm,0.6s						
AKTK	Aktyubinsk	16.73	330	P	Pn	22 54 27.1	-0.1
AKTO	Aktyubinsk	16.73	330	P	Pn	22 54 27.1	-0.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	16.73	330	P	Pn	22 54 27.1	-0.1
	comp=Z,0.6nm,0.3s,baz=142,slow=11,SNR=17						
TAPN	Taplejung	16.88	118	eP	Pn	22 54 30.7	+1.4
	comp=Z,6.1nm,0.4s						
ODAN	Odare	16.96	120	eP	Pn	22 54 25.1	-5.1
	comp=Z,11nm,0.7s						
ZAL	Zalesovo	19.85	25	P	P	22 55 01.3	+1.1
ZALV	Zalesovo Beam	19.86	25	P	P	22 55 01.3	+0.9
	comp=Z,0.8nm,0.4s,baz=232,slow=12,SNR=5.8						
ARU	Arti	21.57	341	P	P	22 55 19.8	+1.3
	comp=Z,0.8nm,0.3s,mb3.6						
ARU	Arti	21.57	341	P	P	22 55 19.8	+1.3
ARU				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
GVD	Gavdhos	37.84	282	eP	P	22 57 40.3	-2.2
	comp=Z,56nm,0.3s						
YKA	Yellowknife Ar	81.19	3	P	P	23 02 38.4	0.0
	comp=Z,0.3nm,0.4s,mb3.3,baz=350,slow=5.4,SNR=8.1						
WRA	Warramunga Arr	82.03	122	P	P	23 02 41.5	-1.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	82.03	122	P	P	23 02 41.5	-1.8
	comp=Z,0.9nm,0.5s,mb3.7,baz=324,slow=4.9,SNR=25						
ASAR	Alice Springs	84.30	125	P	P	23 02 53.4	-1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	84.30	125	P	P	23 02 53.4	-1.5
	comp=Z,0.9nm,0.6s,mb3.6,baz=308,slow=5.0,SNR=12						

*CSEM **09** 23:02:18.7±0.4, 3907N×4062E, h1^{km}±2^{km}, MD2.7, Error ellipse: s-maj=3.5km s-min=1.9km az=125.0*
*ISK **09** 23:02:18.2, 3912N×4039E, h5^{km}, MD2.7*
*ISCJB **09** 23:02:20.0±0.6, 3908N±004×4051E±005, h1^{km}, Error ellipse: s-maj=6.0km s-min=4.9km az=135.1*
*DDA **09** 23:02:21.3, 3907N×4053E, h7^{km}±1^{km}, Md2.6*
ISC 09 23:02:20.1±0.9**, 3908N**±004×**4050E**±005**, h0**^{km}±10^{km}**, n9,** σ**1^{s}16**/14**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.20	182	i PG	Pg	23 02 24.3	+0.3
PTK	Pertek	0.88	258	PG	Pg	23 02 34.9	-2.1
PTK				SG	Sg	23 02 47.3	-1.1
EZM	Erzurum	1.06	39	PN	Pn	23 02 40.3	-1.9
ERZM	Erzurum	1.06	39	i P	Pg	23 02 40.4	-0.1
ERZM				i S	Sg	23 02 54.9	+0.6
BTMT	Batman	1.18	138	ePN	Pn	23 02 42.9	-0.9
ELZG	Elazig	1.32	244	i P	Pg	23 02 45.0	-0.4
ELZG				i S	Sg	23 03 05.0	+2.5
KELT	Kelkit	1.44	318	i P	Pn	23 02 47.2	-0.1
KELT				i S	Sg	23 03 07.7	+1.5
MARD	Mardin	1.78	173	i P	Pn	23 02 52.1	+0.1
MARD				i S	Sn	23 03 16.3	+1.1
AGRB	Hanur-Agry	2.00	75	ePN	Pn	23 02 55.9	+0.9

*SZGRF **09** 23:24:49.9, 3839N×4147E, h33^{km}, mb5.0, Turkey*
*NSSC **09** 23:24:51.9, 3944N×4081E, h40^{km}*
*ISCJB **09** 23:24:54.0±0.5, 3904N±001×4043E±002, h3^{km}±3^{km}, mb4.3/51, MS3.8/12, Error ellipse: s-maj=2.3km s-min=2.0km az=140.3*
*ISK **09** 23:24:53.3, 3907N×4039E, h5^{km}, ML4.7*
*NEIC **09** 23:24:53.2, 3908N×4039E, h5^{km}, mb4.5/33, ML4.7(ISK), After ISK.*
*BJI **09** 23:24:53.1, 3956N×3951E, h27^{km}, mB5.3, mb4.3*
*CSEM **09** 23:24:54.8±0.0, 3907N×4039E, h10^{km}, mb4.6/15, Error ellipse: s-maj=1.0km s-min=0.9km az=116.0*
*IDC **09** 23:24:54.7±0.7, 3902N×4038E, h0^{km}, mb4.1/18, mb1 4.2/26, mb1mx4.1/29, mbtmp4.1/26, ML3.8/8, MS3.7/20, Ms1 3.7/20, ms1mx3.6/37, Error ellipse: s-maj=14.3km s-min=10.9km az=143.0*
*DDA **09** 23:24:54.5, 3906N×4047E, h5^{km}±5^{km}, Md4.7, Ml4.8*
*MOS **09** 23:24:55.7±1.2, 3905N×4048E, h19^{km}, mb4.7/27, Error ellipse: s-maj=6.8km s-min=3.8km az=123.9*
ISC 09 23:24:55.1±0.5**, 3904N**±001×**4046E**±002**, h1**^{km}±3^{km}**, n338,** σ**1^{s}16**/380**, mb4.4**/51**, MS3.8**/12**, 19C-33D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.17	171	i PG	Pg	23 24 58.6	+0.2
PTK	Pertek	0.84	260	PG	Pg	23 25 09.4	-1.9
PTK				SG	Sg	23 25 21.8	-0.4
EZC	Erzincan	0.86	325	PG	Pg	23 25 14.3	+2.7
EZM	Erzurum	1.11	39	PN	Pn	23 25 15.2	-2.6
ERZM	Erzurum	1.11	39	⇓i P	Pg	23 25 15.5	-1.0
ERZM				i S	Sg	23 25 23.6	-7.3
DIYA	Diyarbakir	1.15	193	i P	Pg	23 25 17.3	+0.2
DIYA				i S	Sg	23 25 34.3	+2.2
DIY	Diyarbakir	1.16	189	PN	Pn	23 25 17.1	-1.4
BTMT	Batman	1.17	136	PN	Pn	23 25 17.4	-1.2
ELZG	Elazig	1.27	245	i P	Pn	23 25 17.2	-2.8
ELZG				i S	Sn	23 25 29.6	-8.0
KELT	Kelkit	1.44	320	i P	Pn	23 25 20.9	-1.4
KELT				i S	Sb	23 25 39.7	-1.8
GUMT	Gumushane	1.60	332	PN	Pn	23 25 23.2	-1.3
MYA	Malataya	1.74	246	PN	Pn	23 25 25.4	-1.1
MARD	Mardin	1.75	172	⇓i P	Pn	23 25 25.7	-0.8
MARD				i S	Sn	23 25 46.5	-2.9
MALT	Malatya	1.75	246	PN	Pn	23 25 25.6	-0.9
MALT	Malatya	1.75	246	ePn	Pn	23 25 25.0	-1.6
MALT				eSn	Sn	23 25 51.6	+2.2
MALT	Malatya	1.75	246	ePn	Pn	23 25 25.6	-0.9
MALT				eSn	Sn	23 25 51.6	+2.2
TUTA	Tutak	1.87	78	⇑i P	Pn	23 25 28.0	-0.2
TUTA				i S	Sn	23 25 54.4	+2.0
MACK	Trabzon	1.97	345	i P	Pn	23 25 29.4	-0.1
MACK				i S	Sn	23 25 56.4	+1.5
KTUT	Trabzon	2.01	345	PN	Pn	23 25 29.7	-0.5
AGRB	Hanur-Agry	2.04	74	PN	Pn	23 25 30.7	+0.2
KBSD	Kabsdagh	2.04	178	⇑P	Pn	23 25 30.1	-0.5
KBSD				⇑S	Sn	23 25 55.9	-0.7
KBSD	Kabsdagh	2.04	178	⇑i P	Pn	23 25 30.1	-0.5
KBSD				⇑i S	Sn	23 25 55.9	-0.7
URFA	Urfa	2.05	219	PN	Pn	23 25 30.3	-0.4
PZAR	Pazar-Rize	2.16	9	PN	Pn	23 25 31.6	-0.6
SIRT	Sirnak	2.19	134	ePN	Pn	23 25 33.0	+0.3
DRBT	Darb Altahta	2.25	193	⇓P	Pg	23 25 43.4	+5.2
DRBT				⇓S	Sg	23 26 20.8	+13
ESPY	Espiye-Giresun	2.29	325	ePN	Pn	23 25 33.6	-0.4
ATAB	Bozova	2.32	228	i P	Pn	23 25 33.6	-0.7
ATAB				i S	Sn	23 26 03.8	+0.3
VANB	Van	2.33	100	ePN	Pn	23 25 35.4	+0.8
TVAN	Van	2.36	102	i P	Pn	23 25 35.5	+0.6
TVAN				i S	Sg	23 26 12.1	+1.1
VANT	Van	2.37	104	ePN	Pn	23 25 35.4	+0.3
ARTV	Artvin	2.42	27	i P	Pn	23 25 35.5	-0.2
ARTV				i S	Sn	23 26 09.8	+3.9
GRSN	GIRESUNGRSN	2.52	319	eP	Pn	23 25 29.6	-7.6
GRSN				i S	Sn	23 26 09.4	+0.9
DYDN	Diyadin	2.56	78	i P	Pn	23 25 38.7	+1.0
DYDN				i S	Sg	23 26 16.7	-0.6
BCA	Borcka	2.56	20	ePN	Pn	23 25 37.6	-0.1
KARS	Kars	2.56	52	ePN	Pn	23 25 38.5	+0.7
DIGO	Kars	2.63	58	i P	Pn	23 25 38.9	+0.1
DIGO				i S	Sb	23 26 16.9	+1.0
SFNV	Sufian	2.64	186	⇑P	Pn	23 25 38.8	0.0
SFNV				⇑S	Sn	23 26 11.7	+0.4
SFNV	Sufian	2.64	186	⇑i P	Pn	23 25 38.8	+0.1
SFNV				⇑i S	Sn	23 26 11.7	+0.4
CLDR	Caldiran	2.69	87	ePN	Pn	23 25 39.4	-0.2
GZT	Gaziantep	2.83	234	i P	Pn	23 25 40.2	-1.3
GZT				i S	Sg	23 26 24.9	-1.3
HAKT	HAKKARI	2.96	119	i P	Pn	23 25 44.2	+1.1
HAKT				i S	Sg	23 26 29.8	-0.4
HKR	Hakkari	2.97	119	ePN	Pn	23 25 43.5	+0.2
CUKT	Cukurca	3.06	125	ePN	Pn	23 25 45.4	+0.8
GAZ	Gaziantep	3.17	235	ePN	Pn	23 25 45.4	-0.7
KMRS	Kahramanmaras	3.19	242	ePN	Pn	23 25 46.3	-0.1
TOKT	Tokat	3.28	294	ePN	Pn	23 25 47.1	-0.4
MSL	Mosul	3.45	142	i x	x	23 25 50.0	
MSL				i x	x	23 26 09.5	
MSL				i x	x	23 26 42.5	
MSL				i x	x	23 26 56.0	
MSL				i x	x	23 27 07.5	
SLMH	Al Salmeh	3.46	216	⇓P	Pn	23 25 49.9	-0.3
SLMH				⇓S	Sn	23 26 33.3	+1.5
SLMH	Al Salmeh	3.46	216	⇓i P	Pn	23 25 49.9	-0.2
SLMH				⇓i S	Sn	23 26 33.3	+1.5
ANDN	Andirin	3.55	247	eP	Pn	23 25 56.6	+5.3
ANDN				i S	Sb	23 26 44.7	+2.5
BNN	Bunyan	3.60	268	ePN	Pn	23 25 52.2	+0.2
JHLN	Al Jahlan	3.73	206	⇑P	Pn	23 25 53.5	-0.3
JHLN				⇑S	Sn	23 26 39.7	+1.4
JHLN	Al Jahlan	3.73	206	⇑i P	Pn	23 25 53.5	-0.3

JHLN ⇑*i*S **Sn** **23 26 39.7 +1.4**
DRWC Darouich **3.85 232** ⇓P **Pn** **23 25 55.5 +0.1**
DRWC Darouich **3.85 232** ⇓*i*P **Pn** **23 25 55.5 0.0**
KVT Kavak **3.95 302** *e*PN **Pn** **23 25 56.3 -0.5**
KOZT Kozan **3.96 248** *e*PN **Pn** **23 25 57.2 +0.2**
YOZ Yozgat **4.03 280** *e*PN **Pn** **23 25 58.4 +0.5**
GOR Gori **4.05 42** P **Pn** **23 25 59.2 +1.1**
COBT Iskenderun **4.17 234** *i* P **Pn** **23 25 59.4 -0.5**
ONI Oni **4.20 32** P **Pn** **23 26 00.9 +0.7**
ONI S **Sg** **23 27 07.3 -2.7**
TBLG Delisi **4.23 49** P **Pn** **23 26 00.9 +0.3**
CEYT Ceyhan **4.24 243** *e*PN **Pn** **23 26 01.2 +0.5**
MTA Mtatsminda **4.24 50** P **Pn** **23 26 01.1 +0.3**
MTA S **Sg** **23 27 15.0 +3.7**
BTCH Batrach **4.37 228** ⇓P **Pn** **23 26 02.4 -0.2**
BTCH ⇓S **Sn** **23 26 54.5 +0.4**
BTCH Batrach **4.37 228** ⇓*i*P **Pn** **23 26 02.4 -0.2**
BTCH ⇓*i*S **Sn** **23 26 54.5 +0.4**
AVNT Avonos **4.38 268** *i* P **Pn** **23 26 02.2 -0.5**
AVNT *i* S **Sn** **23 26 53.5 -0.7**
HTY Hatay **4.50 231** *e*PN **Pn** **23 26 04.0 -0.4**
ZEI Tsey **4.54 34** *e*P **Pn** **23 26 05.9 +0.9**
ZEI pmax pmax
comp=Z,18nm,0.3s
ZEI Tsey **4.54 34** *e*P **Pn** **23 26 05.9 +0.9**
comp=Z,18nm,0.3s
SOC Sochi **4.57 353** *d*P **Pn** **23 26 04.7 -0.6**
SOC *e* 23 27 06.3
SOC pmax pmax
comp=Z,155nm,0.6s
SOC MLR MLR
comp=Z,555nm,10.0s
SOC Sochi **4.57 353** *i* P **Pn** **23 26 04.7 -0.6**
comp=Z,155nm,0.6s
YAYL Yayladag **4.58 230** *i* P **Pn** **23 26 05.0 -0.4**
YAYL *i* S **Sb** **23 27 12.7 +0.8**
KARA Karaisali **4.61 249** *e*PN **Pn** **23 26 06.5 +0.6**
CTKT Corum **4.64 292** *i* P **Pn** **23 26 06.7 +0.5**
CORM Corum **4.64 286** *e*PN **Pn** **23 26 06.3 0.0**
NIG Nigde **4.67 260** *e*PN **Pn** **23 26 07.3 +0.2**
KRTS Karatas **4.72 240** *e*PN **Pn** **23 26 08.1 +0.7**
DIKM Dikmen **4.75 305** *e*PN **Pn** **23 26 07.9 +0.1**
CDAG Cicekdag **4.75 279** *i* P **Pn** **23 26 11.5 +3.7**
CDAG *i* S **Sb** **23 27 16.1 -0.7**
ARNB Al Arnab **4.78 230** ⇑P **Pn** **23 26 08.8 +0.6**
ARNB ⇑S **Sn** **23 27 04.2 +0.1**
ARNB Al Arnab **4.78 230** ⇑*i*P **Pn** **23 26 08.8 +0.6**
ARNB ⇑*i*S **Sn** **23 27 04.2 0.0**
WRDH Warideh **4.78 224** ⇑P **Pn** **23 26 08.0 -0.3**
WRDH ⇑S **Sn** **23 27 05.0 +0.7**
WRDH Warideh **4.78 224** ⇑*i*P **Pn** **23 26 07.9 -0.3**
WRDH ⇑*i*S **Sn** **23 27 05.0 +0.8**
GULE Gulek **4.81 250** *i* P **Pn** **23 26 11.0 +2.4**
SLNF Slenfeh **4.82 226** ⇑P **Pn** **23 26 08.5 -0.3**
SLNF Slenfeh **4.82 226** ⇑*i*P **Pn** **23 26 08.5 -0.3**
BOYT Boyabat **4.87 301** *i* P **Pn** **23 26 10.8 +1.4**
BOYT *i* S **Sn** **23 27 04.4 -2.0**
MERS Mersin **5.17 247** *e*PN **Pn** **23 26 13.7 +0.2**
KIV Kislovodsk **5.18 18**⇑*e*P **Pn** **23 26 14.4 +0.6**
KIV *e*S **Sn** **23 27 07.4 -6.8**
KIV pmax pmax
comp=Z,16nm,0.5s
KIV MLR MLR
comp=Z,500nm,17.0s
KIV Kislovodsk **5.18 18** P **Pn** **23 26 14.9 +1.2**
SNR=17
KIV Kislovodsk **5.18 18**⇓*i*Pn **Pn** **23 26 14.6 +0.8**
comp=Z,160nm,1.0s
RABH Abou Rabah **5.29 211** ⇑P **Pn** **23 26 15.5 +0.3**
RABH Abou Rabah **5.29 211** ⇑*i*P **Pn** **23 26 15.5 +0.3**
TOS Tosya **5.32 294** *e*PN **Pn** **23 26 15.9 +0.2**
BRTR Keskin Array B **5.33 279** Pn **Pn** **23 26 15.5 -0.2**
comp=Z,2.8nm,0.3s,baz=102,slow=15,SNR=68
BRTR Pg **Pg** **23 26 28.8 -8.3**
comp=Z,11nm,0.3s,baz=97,slow=15,SNR=21
BRTR Lg 23 27 46.3
baz=133,slow=24,SNR=2.0
BRTR LR LR 23 28 45.8
comp=Z,671nm,18.4s,baz=30,slow=44
ROOS tl_alroos **5.49 209** ⇓P **Pn** **23 26 18.7 +0.7**
ROOS tl_alroos **5.49 209** ⇓*i*P **Pn** **23 26 18.7 +0.7**
ELDT Eldivan **5.61 287** *i* P **Pn** **23 26 21.1 +1.5**
ELDT Eldivan **5.61 287** *i* P **Pn** **23 26 21.0 +1.5**
BZK Bozkurt **5.71 303** *e*PN **Pn** **23 26 22.4 +1.3**
FKH Fakeheh **5.80 215** *e*Pn **Pn** **23 26 21.6 -0.6**
BALT Daday **5.95 297** *i* P **Pn** **23 26 24.8 +0.5**
HWQ Hawqa **5.98 219** *e*Pn **Pn** **23 26 24.4 -0.3**
ANTO Ankara **5.99 280** *e*Pn **Pn** **23 26 26.5 +1.7**
comp=Z,386nm,0.9s
ANTO Ankara **5.99 280** *e*P **Pn** **23 26 26.5 +1.7**
ANTO pmax pmax
comp=Z,386nm,0.9s
ANTO Ankara **5.99 280** P **Pn** **23 26 28.7 +3.9**
SNR=87
ANTO Ankara **5.99 280** ⇓*i*P **Pb** **23 26 43.0 +2.8**
ANTO Ankara **5.99 280** *e*Pn **Pn** **23 26 26.5 +1.7**
comp=Z,386nm,0.9s
ANN Anapa **6.18 340** *e*P **Pn** **23 26 28.8 +1.4**
ANN *e*S **Sn** **23 27 37.4 -1.2**
ANN pmax pmax
comp=Z,27nm,1.3s
ANN MLR MLR
comp=N,399nm,11.0s
ANN MLR MLR
comp=E,1μm,11.0s
ANN MLR MLR
comp=Z,460nm,11.0s
ANN Anapa **6.18 340** *e*P **Pn** **23 26 28.8 +1.4**
comp=Z,27nm,1.3s
ANN *e*S **Sn** **23 27 37.4 -1.2**
BHL Bhannes **6.42 218** *e*Pn **Pn** **23 26 30.6 -0.3**
BHL Bhannes **6.42 218** *e*Pn **Pn** **23 26 30.5 -0.3**
TOTH TOTAH **6.54 211** ⇑P **Pn** **23 26 32.7 +0.3**
TOTH TOTAH **6.54 211** ⇑*i*P **Pn** **23 26 32.7 +0.3**
BHD Baghdad **6.58 150** *ex* x 23 26 27.5
BHD *ex* x 23 27 03.0
BHD *ex* x 23 27 43.0
BHD *ex* x 23 28 27.5
MAK Makhachkala **6.61 51** *e*P **Pb** **23 26 47.8 -3.0**
MAK MLR MLR
comp=Z,1μm,9.0s
RCY Rachaya **6.69 215** *e*Pn **Pn** **23 26 34.4 -0.1**
BRBR Barbar **6.70 214** ⇑P **Pn** **23 26 36.1 +1.5**
BRBR ⇑S **Sn** **23 27 51.0 -0.4**
BRBR Barbar **6.70 214** ⇑*i*P **Pn** **23 26 36.1 +1.5**
BRBR ⇑*i*S **Sn** **23 27 51.0 -0.5**
CSS Prodhromos **7.01 237** *e*Pn **Pn** **23 26 38.1 -0.7**
comp=Z,19nm,0.6s
CSS Prodhromos **7.01 237** *e*Pn **Pn** **23 26 38.1 -0.7**
comp=Z,19nm,0.6s
SUDU Sudak **7.12 327** *e*P **Pn** **23 26 47.4 +7.1**
SUDU *e*S **Sn** **23 28 10.1 +8.4**
YAL Yalta **7.19 321** *e*P **Pn** **23 26 49.8 +8.5**
ALU Alushta **7.22 323** *e*P **Pn** **23 26 49.0 +7.3**
ALU *e* 23 28 10.0
MMAI Mount Meron Ar **7.28 216** Pn **Pn** **23 26 43.1 +0.6**
comp=Z,6.1nm,0.3s,baz=56,slow=15,SNR=67
MMAI Pg **Pg** **23 27 13.5 -1.0**
comp=Z,8.9nm,0.3s,baz=35,slow=17,SNR=8.6
MMAI Lg 23 28 46.2
comp=Z,4.2nm,0.3s,baz=34,slow=39,SNR=2.9
MMAI LR LR 23 29 31.0
comp=Z,530nm,20.4s,baz=20,slow=38
ASF Jabal al Asfar **7.44 204** Pn **Pn** **23 26 44.8 0.0**
comp=Z,1.4nm,0.3s,baz=264,slow=4.1,SNR=18
ASF Lg 23 28 51.1
comp=Z,3.5nm,0.3s,baz=250,slow=23,SNR=6.1
ASF LR LR 23 30 00.8
comp=Z,457nm,18.3s,baz=131,slow=41
SIM Simferopol' **7.55 323** P **Pn** **23 26 53.3 +7.0**
SIM *e*S **Sn** **23 28 10.0 -2.5**
SIM MLR MLR
comp=Z,200nm,14.0s
ISP Isparta **7.90 264** *i* P **Pn** **23 26 54.9 +3.9**
EIL Elat **10.40 208** Pn **Pn** **23 27 25.0 -0.3**
comp=Z,0.2nm,0.3s,baz=358,slow=7.4,SNR=7.1
EIL Lg 23 30 30.4
comp=Z,0.6nm,0.3s,baz=132,slow=19,SNR=2.6
EIL LR LR 23 31 44.7
comp=Z,469nm,20.7s,baz=18,slow=40
TIRR Tirgusor **10.49 305** ⇓P **Pn** **23 27 27.4 +0.8**
TIRR Tirgusor **10.49 305** ⇓*i*P **Pn** **23 27 27.4 +0.8**
MIB Mutribah **10.82 146** *e*P **Pn** **23 27 28.2 -3.0**
MIB AML AML 23 31 06.0
comp=Z,34nm,0.7s
UMR Umm Al-Rimmam **11.21 145** *e*P **Pn** **23 27 33.0 -3.4**
UMR AML AML 23 31 10.9
comp=Z,19nm,0.6s
NAY Al-Naaiem **11.27 148** *e*P **Pn** **23 27 34.4 -2.8**
NAY AML AML 23 31 16.0
comp=Z,11nm,0.7s
KBD Kabd **11.52 147** *e*P **Pn** **23 27 37.0 -3.7**
KBD AML AML 23 31 18.9
comp=Z,39nm,0.8s
KIS Kishinev **11.64 317** *e*P **Pn** **23 27 45.0 +2.7**
KIS *e* 23 30 00.0
RDF Al-Radifah **11.68 148** *e*P **Pn** **23 27 39.8 -3.1**
RDF AML AML 23 31 23.9
comp=Z,11nm,0.6s
QRN Al-Qurain **11.99 147** *e*P **Pn** **23 27 44.0 -3.1**
VRHR Novokhopersk **12.08 4** *e*P **Pn** **23 27 50.4 +2.2**
VRHR pmax pmax
comp=Z,10.0nm,1.1s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,3.0nm,0.5s
VRHR Novokhopersk **12.08 4** *e*P **Pn** **23 27 50.4 +2.2**
comp=E,10.0nm,0.7s
VRSR Storozhevoye **12.20 356** *e*P **Pn** **23 27 48.2 -1.7**
VRSR pmax pmax
comp=N,2.0nm,0.8s
VRSR pmax pmax
comp=Z,1.0nm,0.8s
VRSR pmax pmax
comp=E,1.0nm,0.9s
MLR Muntele Rosu **12.52 306** Pn **Pn** **23 27 54.8 +0.5**
MLR ⇓P 23 27 58.8
MLR LR LR 23 33 36.3
MLR Muntele Rosu **12.52 306** Pn **Pn** **23 27 54.8 +0.5**
comp=E,0.1nm,0.3s,baz=88,slow=9.0,SNR=3.3
MLR LR LR 23 33 36.3
comp=E,271nm,20.3s,baz=325,slow=42
MLR Muntele Rosu **12.52 306** ⇓*i*P **Pn** **23 27 58.8 +4.5**
IDI Anoyia **12.97 258** ⇓ Pn **Pn** **23 27 60.0 -0.5**
comp=E,0.2nm,0.3s,baz=66,slow=15,SNR=2.6
IDI LR LR 23 33 56.2
comp=E,346nm,21.3s,baz=242,slow=42
VOIR **13.07 304** ⇓P **Pn** **23 28 05.8 +3.9**
VOIR **13.07 304** ⇓*i*P **Pn** **23 28 05.8 +4.0**
BURAR Bucovina Array **13.99 313** ⇑P **Pn** **23 28 21.0 +6.6**
BURAR Bucovina Array **13.99 313** ⇑*i*P **Pn** **23 28 21.0 +6.6**
AKASG Malin Array Be **14.10 329** P **Pn** **23 28 13.9 -1.9**
AKASG 23 30 55.4
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG smax
comp=N,1.0nm,0.3s
AKASG Malin Array Be **14.10 329** Pn **Pn** **23 28 13.9 -1.9**
comp=N,1.0nm,0.3s,baz=136,slow=12,SNR=12
AKASG Sn **Sn** **23 30 55.4 +2.6**
comp=N,1.2nm,0.3s,baz=136,slow=24,SNR=10.0
KIEV Kiev **14.10 329** *e*Pn **Pn** **23 28 11.8 -4.0**
comp=N,12nm,0.8s
KIEV Kiev **14.10 329** *e*P **Pn** **23 28 11.8 -4.0**
KIEV pmax pmax
comp=Z,13nm,0.8s
KIEV Kiev **14.10 329** *e*Pn **Pn** **23 28 11.8 -4.0**
comp=Z,12nm,0.8s
GZR Gura Zlata **14.54 302** ⇓P **Pn** **23 28 27.7 +5.8**
GZR Gura Zlata **14.54 302** ⇓*i*P **Pn** **23 28 27.7 +5.8**
DRGR **15.11 307** ⇓P **Pn** **23 28 36.0 +6.4**
DRGR **15.11 307** ⇓*i*P **Pn** **23 28 36.0 +6.4**
BZS Buzias **15.39 301** ⇑*i*P **Pn** **23 28 37.7 +4.4**
LVV L'vov **15.89 318** *e*P **Pn** **23 28 48.0 +8.2**
LVV MLR MLR
comp=Z,600nm,9.0s
UZH Uzhgorod **16.20 312** *e*P **Pn** **23 28 46.7 +2.9**
OBN Obninsk **16.29 352** *e*Pn **Pn** **23 28 42.8 -2.1**
comp=Z,29nm,0.9s
OBN Obninsk **16.29 352**⇓*e*P **Pn** **23 28 43.2 -1.7**
OBN pmax pmax
comp=Z,18nm,1.3s
OBN Obninsk **16.29 352** *e*P **Pn** **23 28 43.2 -1.7**
comp=Z,18nm,1.3s
KOLS Kolonicke sedl **16.36 313** *e*P **Pn** **23 28 49.3 +3.4**
KWP Kalwaria **16.49 316** *e*Pn **Pn** **23 28 45.2 -2.3**
KWP ⇑P 23 28 46.8
KWP Kalwaria **16.49 316**⇑*i*P **Pn** **23 28 46.8 -0.7**
MOS Moscow **16.81 354** *e*P **Pn** **23 28 51.8 +0.3**
MOS *e*S **Sn** **23 31 55.8 -2.9**
MOS pmax pmax
comp=Z,44nm,1.3s
MOS Moscow **16.81 354** *e*P **Pn** **23 28 51.8 +0.3**
comp=Z,44nm,1.3s
CRVS Cervenica-Dubn **16.81 312** *e*P **Pn** **23 28 54.2 +2.6**
AKTK Aktyubinsk **16.84 42** Pn **Pn** **23 28 51.4 -0.6**
AKTK LR LR 23 37 04.8
AKTK Aktyubinsk **16.84 42** P **Pn** **23 28 51.4 -0.6**
comp=Z,484nm,21.2s
AKTO Aktyubinsk **16.84 42** Pn **Pn** **23 28 51.4 -0.6**
comp=Z,0.4nm,0.3s,baz=238,slow=10,SNR=12
AKTO LR LR 23 37 04.8
comp=Z,484nm,21.2s,baz=228,slow=43
STHS Stebnicka Huta **17.19 313** *e*P **Pn** **23 28 59.8 +3.5**
comp=Z,13nm,1.4s
STHS Stebnicka Huta **17.19 313** *e*P **Pn** **23 28 59.8 +3.5**
STHS pmax pmax
comp=Z,13nm,1.4s
KECS Kecovo **17.19 310** *e*P **Pn** **23 28 57.3 +0.9**
comp=Z,3.4nm,1.0s
KECS Kecovo **17.19 310** *e*P **Pn** **23 28 57.3 +0.9**
KECS pmax pmax
comp=Z,3.0nm,1.0s
PSZ Piszkesteto **17.32 307** *e*Pn **Pn** **23 28 55.5 -2.4**
comp=Z,6.5nm,0.9s
PSZ Piszkesteto **17.32 307** *e*P **Pn** **23 28 55.5 -2.5**
PSZ pmax pmax
comp=Z,7.0nm,0.9s
PSZ Piszkesteto **17.32 307**⇑*e*PP 23 29 06.4
PSZ Piszkesteto **17.32 307** *e*P **Pn** **23 28 55.5 -2.5**
comp=Z,7.0nm,0.9s
PKSM Moragy **17.55 301** ⇑P **Pn** **23 29 01.9 +1.0**
PKSM Moragy **17.55 301** ⇑*i*P **Pn** **23 29 01.9 +1.1**
NIE Niedzica **17.72 312** *e*P **Pn** **23 29 05.3 +2.3**
VYHS Vyhne **18.20 308** *e*P **Pn** **23 29 08.9 +0.1**
VYHS pmax pmax
comp=Z,11nm,1.4s
VYHS Vyhne **18.20 308** *e*P **Pn** **23 29 08.9 +0.1**
comp=Z,11nm,1.4s
OJC Ojcow **18.40 314** *e*P **Pn** **23 29 09.7 -1.6**
KOLL Kolacno **18.49 308** *e*P **Pn** **23 29 13.4 +0.9**
KOLL *e* 23 29 22.6
NAZ Nazwa, Dubai **19.00 133** P **Pn** **23 29 19.0 +0.2**
SNR=12
MODS Modra-Piesok **19.11 307** *e*P **Pn** **23 29 20.4 +0.4**
ZST Bratislava **19.16 306** *e*P **Pn** **23 29 19.9 -0.7**
ZST pmax pmax
comp=Z,21nm,1.6s
ZST Bratislava **19.16 306** *e*P **Pn** **23 29 19.9 -0.7**
comp=Z,21nm,1.6s
OKC Ostrava-Krasne **19.16 312** *e*P **Pn** **23 29 19.6 -1.0**
SOP Sopron **19.34 304** *e*pP pP 23 29 23.5 +1.4
SOP Sopron **19.34 304** *e*P **Pn** **23 29 23.4 +0.6**
HATD Hatta, Dubai **19.40 132** ⇓P **Pn** **23 29 22.7 -0.9**
SNR=10
ASHO Ashiyiah **19.47 133** ⇑P **Pn** **23 29 22.8 -1.6**
SNR=17
MORC Moravsky Berou **19.49 311** *e*P **Pn** **23 29 23.3 -1.2**
comp=Z,3.0nm,0.8s
MORC Moravsky Berou **19.49 311** *e*P **Pn** **23 29 23.3 -1.3**
MORC pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou **19.49 311** *e*P **Pn** **23 29 23.3 -1.3**
comp=Z,3.0nm,0.8s
CONA Conrad Observa **19.86 305**⇑*i*P **Pn** **23 29 27.9 -1.1**
comp=Z,24nm,1.2s
VRAC Vranov **19.88 309** LR LR 23 36 40.8
comp=Z,163nm,21.1s,baz=284,slow=36
DPC Dobruska-Polom **20.45 311** *e*P **P** **23 29 36.4 +2.6**
DPC *ex* x 23 29 48.5
KSP Ksiaz **20.67 313** *e*P **P** **23 29 36.7 +0.5**
UPC Upice **20.69 312** *e*P **P** **23 29 39.4 +3.0**
ARQ Araqi **20.78 134** ⇑P **P** **23 29 37.6 0.0**
SNR=18
ARQ Araqi **20.78 134** P **P** **23 29 37.6 0.0**
SNR=18
MOA Molln **20.87 303**⇑*i*P **P** **23 29 38.8 +0.4**
comp=Z,17nm,1.0s
HOQ Hoqain **21.04 132** ⇓P **P** **23 29 40.6 +0.2**
SNR=11
ARU Arti **21.12 29** *e*P **P** **23 29 40.2 -0.8**
comp=Z,14nm,0.8s,mb4.3
ARU Arti **21.12 29***c i*P **P** **23 29 40.4 -0.6**
ARU *e* 23 29 58.2
ARU *e*S **S** **23 33 32.7 -3.8**
ARU *e*SS 23 33 54.6
ARU pmax pmax
comp=Z,52nm,2.5s,mb4.4
ARU Arti **21.12 29** *i* P **P** **23 29 40.4 -0.6**
comp=Z,52nm,2.5s,mb4.4
VSU Vasula **21.36 340** *e*P **P** **23 29 42.4 -1.1**
PRU Pruhonice **21.36 309** *e*P **P** **23 29 43.3 -0.4**
PRU *ex* x 23 29 56.7
GERES GERESS Array B **21.51 306** P **P** **23 29 45.2 -0.1**
GERES pmax pmax
comp=Z,3.0nm,0.8s
GERES GERESS Array B **21.51 306** P **P** **23 29 45.2 -0.1**
comp=Z,2.7nm,0.8s,mb3.7,baz=109,slow=10,SNR=18
PVCC Panska Ves **21.55 311** *e*P **P** **23 29 45.6 -0.1**
BIDO Bidbid **21.56 131** P **P** **23 29 52.8 +6.8**
SNR=7.7
BSY Bisya **21.63 134** ⇓P **P** **23 29 48.5 +1.8**
SNR=10
BSYO Bisya **21.66 134** P **P** **23 29 48.5 +1.4**
SNR=10
KHC Kasperske Hory **21.68 306** *e*P **P** **23 29 47.8 +0.8**
KHC *ex* x 23 30 02.1
KHC Kasperske Hory **21.68 306** *e*P **P** **23 29 47.0 0.0**
SMDO Samad **21.87 132** ⇑P **P** **23 29 50.6 +1.3**
SNR=23
BRG Berggiesshubel **22.05 311** *e*P **P** **23 29 51.0 0.0**
BRG *e* 23 29 59.5
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb3.5
BRG Berggiesshubel **22.05 311** *e*P **P** **23 29 51.0 0.0**
comp=Z,3.3nm,0.9s,mb3.8
BRG *e* 23 29 59.5
comp=Z,9.2nm,1.2s
SVE Sverdlovsk **22.20 30** *e*P **P** **23 29 53.2 +0.6**
SVE pmax pmax
comp=Z,37nm,1.1s,mb4.7
SVE MLR MLR
comp=Z,447nm,7.0s
SVE Sverdlovsk **22.20 30** *e*P **P** **23 29 53.2 +0.6**
comp=Z,447nm,7.0s
JMDO Jabal Madar **22.44 133** P **P** **23 29 59.6 +4.2**
SNR=7.2
NKC Novy Kostel **22.72 309** *e*P **P** **23 29 58.2 +0.1**
CLL Collm **22.76 312** *i* P **P** **23 29 58.6 0.0**
comp=Z,27nm,1.6s,mb4.5
CLL *i* 23 30 04.2
CLL *i* 23 30 14.9
CLL Collm **22.76 312** *i* P **P** **23 29 58.6 0.0**
CLL *i* 23 30 04.2
CLL pmax pmax
comp=Z,27nm,1.6s,mb4.5
CLL Collm **22.76 312** *i* sP sP 23 29 58.6 -0.5
comp=Z,27nm,1.6s
CLL *i* x x 23 30 04.2
CLL *i* (PP) 23 30 14.9
FETA Feichten **23.04 300**⇑*i*pP pP 23 30 01.7 -0.3
comp=Z,17nm,1.1s
KBL Kabul **23.29 92** *e*P **P** **23 30 05.3 +1.0**
GRA1 Grafenberg Arr **23.31 307** *e*P **P** **23 30 04.6 +0.2**
comp=Z,97nm,2.0s,mb5.0
GRF Grafenberg Arr **23.31 307** *e*P **P** **23 30 04.6 +0.2**
GRF pmax pmax
comp=Z,97nm,2.0s,mb5.0
GRF Grafenberg Arr **23.31 307** *e*P **P** **23 30 04.6 +0.2**
GRF pmax pmax
comp=Z,97nm,2.0s,mb5.0
GRF Grafenberg Arr **23.31 307** *e*P **P** **23 30 04.6 +0.2**
comp=Z,97nm,2.0s,mb5.0
GRFO Grafenberg **23.31 307** *e*P **P** **23 30 02.2 -2.2**
comp=Z,26nm,1.0s,mb4.7
GRFO Grafenberg **23.31 307** *e*P **P** **23 30 02.2 -2.2**
GRFO pmax pmax
comp=Z,26nm,1.0s,mb4.7
MOX Moxa **23.35 309** *e*(P) **P** **23 30 02.2 -2.7**
DAVOX Davos/Dischmat **23.58 299** P **P** **23 30 07.6 +0.3**
comp=Z,3.7nm,0.8s,mb4.0,baz=153,slow=9.0,SNR=4.8
DAVA Damuels **23.66 300**⇑*i*P **P** **23 30 08.3 +0.4**
comp=Z,13nm,0.8s,mb4.5
DAVA Damuels **23.66 300**⇑*i*pP pP 23 30 08.3 0.0
comp=Z,13nm,0.8s
PGF Pioggiola **24.00 289** *e*P **P** **23 30 10.2 -1.0**
FINES FINESS Array B **24.12 343** P **P** **23 30 12.1 0.0**
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES MLR MLR
comp=Z,156nm,19.8s
FINES FINESS Array B **24.12 343** P **P** **23 30 12.1 0.0**
comp=Z,6.2nm,0.6s,mb4.3,baz=149,slow=10,SNR=42
FINES LR LR 23 41 47.1
comp=Z,156nm,19.8s,MS3.5,baz=328,slow=42
JOF Joensuu **24.54 350** *ep* **P** **23 30 14.0 -1.9**
comp=Z,12nm,0.6s,mb4.8
KAF Kangasniemi **24.67 344** *ep* **P** **23 30 16.5 -0.6**
comp=Z,12nm,0.9s,mb4.6,baz=151,slow=9.6
KAF Kangasniemi **24.67 344** *eP* **P** **23 30 16.5 -0.6**
KAF pmax pmax
comp=Z,13nm,0.9s,mb4.7
KEST Kesra **24.88 272** P **P** **23 30 19.9 +0.7**
comp=Z,22nm,1.0s,mb4.8,baz=342,slow=3.9,SNR=18
SBF Sospel **25.11 292** *e*P **P** **23 30 20.9 -0.4**
comp=Z,92nm,1.1s,mb5.1
SBF Sospel **25.11 292** *e*P **P** **23 30 20.9 -0.4**
SBF pmax pmax
comp=Z,46nm,1.1s,mb5.1
SBF Sospel **25.11 292** *e*P **P** **23 30 20.9 -0.4**
comp=Z,46nm,1.1s,mb5.1
TMCR Tamitsa **25.20 358** *e*P **P** **23 30 20.5 -1.4**
TMCR pmax pmax
comp=Z,34nm,1.0s,mb5.0
EKS2 Erkin-Say **25.37 71** *e*P **P** **23 30 23.7 +0.1**
comp=Z,8.0nm,0.9s,mb4.5
CDF Champ du Feu **25.57 302** *e*P **P** **23 30 25.3 -0.1**
comp=Z,18nm,1.1s,mb4.3
CDF Champ du Feu **25.57 302** *e*P **P** **23 30 25.3 -0.1**
CDF pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
CDF Champ du Feu **25.57 302** *e*P **P** **23 30 25.3 -0.1**
comp=Z,8.9nm,1.1s,mb4.3
MBDF Montbardon **25.59 294** *e*P **P** **23 30 25.7 +0.1**
comp=Z,25nm,0.8s,mb4.6
MBDF Montbardon **25.59 294** *e*P **P** **23 30 25.7 +0.1**
MBDF pmax pmax
comp=Z,13nm,0.8s,mb4.6
MBDF Montbardon **25.59 294** *e*P **P** **23 30 25.7 +0.1**
comp=Z,13nm,0.8s,mb4.6
LPG La Plagne **25.63 296** *e*P **P** **23 30 26.4 +0.4**
comp=Z,32nm,1.0s,mb4.6
LPG La Plagne **25.63 296** *e*P **P** **23 30 26.4 +0.4**
LPG pmax pmax
comp=Z,16nm,1.0s,mb4.6
LPG La Plagne **25.63 296** *e*P **P** **23 30 26.4 +0.4**
comp=Z,16nm,1.0s,mb4.6
LPL La Plagne **25.64 296** *e*P **P** **23 30 26.6 +0.5**
comp=Z,26nm,1.0s,mb4.5
LPL La Plagne **25.64 296** *e*P **P** **23 30 26.6 +0.5**
LPL pmax pmax
comp=Z,13nm,1.0s,mb4.5
LPL La Plagne **25.64 296** *e*P **P** **23 30 26.6 +0.5**
comp=Z,13nm,1.0s,mb4.5
FRF La Foret Royal **25.69 291** *e*P **P** **23 30 26.2 -0.3**
comp=Z,72nm,1.3s,mb4.9
FRF La Foret Royal **25.69 291** *e*P **P** **23 30 26.2 -0.3**
FRF pmax pmax
comp=Z,36nm,1.3s,mb4.8
FRF La Foret Royal **25.69 291** *e*P **P** **23 30 26.2 -0.3**
comp=Z,36nm,1.3s,mb4.8
HINF Hinteralfeld **25.76 301** *e*P **P** **23 30 27.6 +0.4**
AAK Ala-Archa **25.90 71** *e*P **P** **23 30 27.6 -0.8**
comp=Z,5.5nm,0.9s,mb4.2
AAK *e*S **S** **23 34 57.1 -2.1**
AAK Ala-Archa **25.90 71** *e*P **P** **23 30 27.6 -0.8**
AAK *e*S **S** **23 34 57.2 -2.0**
AAK pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
FRU Bishkek **25.98 71** *e*P **P** **23 30 32.0 +2.9**
CABF La Chapelle **26.16 298** *e*P **P** **23 30 31.5 +0.7**
comp=Z,61nm,1.1s,mb4.9
CABF La Chapelle **26.16 298** *e*P **P** **23 30 31.5 +0.7**

CABF				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.8						
CABF	La Chapelle	26.16	298	eP	P	23 30 31.5	+0.7
	comp=Z,30nm,1.1s,mb4.9						
ORIF	Oris-en-Rattie	26.23	294	eP	P	23 30 31.5	+0.1
	comp=Z,13nm,0.7s,mb4.3						
ORIF	Oris-en-Rattie	26.23	294	eP	P	23 30 31.5	+0.1
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
ORIF	Oris-en-Rattie	26.23	294	eP	P	23 30 31.5	+0.1
	comp=Z,6.3nm,0.7s,mb4.3						
TKM2	Tokmak 2	26.69	70	eP	P	23 30 39.9	+4.3
	comp=Z,12nm,1.1s,mb4.5						
TKM2	Tokmak 2	26.69	70	eP	P	23 30 39.9	+4.3
TKM2				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
HFS	Hagfors	26.98	330	P	P	23 30 38.0	-0.1
HFS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HFS	Hagfors	26.98	330	P	P	23 30 38.0	0.0
	comp=Z,7.2nm,0.8s,mb4.4,baz=132,slow=10,SNR=7.1						
ATD	Arta Tunnel	27.48	175	LR	LR	23 40 52.6	
	comp=Z,177nm,18.3s,MS3.7,baz=14,slow=35						
SMF	Signal de Mont	27.70	298	eP	P	23 30 45.2	+0.5
LOR	Lormes	27.73	299	eP	P	23 30 45.7	+0.8
BAIF	Baives	27.82	305	eP	P	23 30 45.7	+0.1
AVF	Avril sur Loir	28.05	298	eP	P	23 30 48.0	+0.3
	comp=Z,16nm,1.0s,mb4.5						
AVF	Avril sur Loir	28.05	298	eP	P	23 30 48.0	+0.3
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
AVF	Avril sur Loir	28.05	298	eP	P	23 30 48.0	+0.3
	comp=Z,8.1nm,1.0s,mb4.5						
NB2	NORSAR Subarra	28.51	330	P	P	23 30 50.4	-1.3
	comp=Z,1.9nm,0.7s,mb4.0,baz=125,slow=9.3						
NB2	NORSAR Subarra	28.51	330	P	P	23 30 50.4	-1.3
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
NOA	NORSAR Array B	28.51	330	P	P	23 30 50.2	-1.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,33nm,21.1s						
NOA	NORSAR Array B	28.51	330	P	P	23 30 50.2	-1.5
	comp=Z,0.8nm,0.9s,mb3.5,baz=96,slow=17,SNR=2.6						
NOA				LR	LR	23 41 37.3	
	comp=Z,33nm,21.1s,MS2.9,baz=105,slow=35						
TCF	Toulx Ste Croi	28.82	297	eP	P	23 30 55.3	+0.7
KURK	Kurchatov	29.13	54	eP	P	23 30 58.8	+1.5
ETSF	Etsaut	30.99	291	eP	P	23 31 14.9	+1.0
	comp=Z,51nm,1.4s,mb5.0						
ETSF	Etsaut	30.99	291	eP	P	23 31 14.9	+1.0
ETSF				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
ETSF	Etsaut	30.99	291	eP	P	23 31 14.9	+1.0
	comp=Z,26nm,1.4s,mb5.0						
MKAR	Makanchi Array	31.30	62	P	P	23 31 16.6	+0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,103nm,20.0s						
MKAR	Makanchi Array	31.30	62	P	P	23 31 16.6	0.0
	comp=Z,1.7nm,0.8s,mb4.0,baz=266,slow=6.8,SNR=13						
MKAR				LR	LR	23 44 02.6	
	comp=Z,103nm,20.0s,MS3.5,baz=343,slow=37						
ARCES	ARCESS Array B	31.58	350	P	P	23 31 18.2	-0.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,260nm,18.8s						
ARCES	ARCESS Array B	31.58	350	P	P	23 31 18.2	-0.6
	comp=Z,1.3nm,0.8s,mb3.9,baz=184,slow=3.6,SNR=11						
ARCES				LR	LR	23 45 33.5	
	comp=Z,260nm,18.8s,MS3.9,baz=311,slow=39						
EKA	Eskdalemuir Ar	33.17	314	P	P	23 31 31.9	-1.0
EKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EKA	Eskdalemuir Ar	33.17	314	P	P	23 31 31.9	-1.0
	comp=Z,3.0nm,0.8s,mb4.3,baz=107,slow=7.7,SNR=5.0						
ZAL	Zalesovo	33.36	49	P	P	23 31 35.1	+0.6
ZALV	Zalesovo Beam	33.37	49	P	P	23 31 35.1	+0.5
	comp=Z,0.5nm,0.5s,mb3.7,baz=237,slow=15,SNR=2.6						
ZALV				LR	LR	23 46 23.7	
	comp=Z,164nm,18.2s,MS3.8,baz=260,slow=39						
ESDC	Sonseca Array	34.09	285	P	P	23 31 38.7	-2.4
	comp=Z,1.4nm,0.7s,mb4.0,baz=70,slow=8.6,SNR=5.7						
TORD	Torodi Ar. Bea	42.84	244	P	P	23 32 52.4	-2.4
	comp=Z,1.7nm,0.8s,mb3.8,baz=30,slow=4.1,SNR=14						
TORD				LR	LR	23 54 04.8	
	comp=Z,104nm,19.9s,MS3.7,baz=355,slow=41						
ZAK	Zakamensk	44.80	54	eP	P	23 33 16.9	+6.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb3.8						
GTA	Gaotai	45.24	70	eP	P	23 33 14.2	+0.3
GTA				AP		23 33 18.8	
GTA				XP	sP	23 33 22.5	+8.1
GTA				AMB	AMB		
	comp=Z,4.0nm,1.4s,mb4.2						
SONM	Songino Array	47.35	57	P	P	23 33 30.1	-0.3
SONM						23 35 00.9	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,184nm,21.5s						
SONM	Songino Array	47.35	57	P	P	23 33 30.1	-0.3
	comp=Z,0.4nm,0.5s,mb3.8,baz=276,slow=8.4,SNR=3.0						
SONM				PcP	PcP	23 35 00.9	-0.3
	comp=Z,0.6nm,0.7s,baz=259,slow=3.8,SNR=2.5						
SONM				LR	LR	23 55 06.2	
	comp=Z,184nm,21.4s,MS4.0,baz=229,slow=38						
ULN	Ulaanbaatar	47.77	57	eP	P	23 33 32.6	-1.1
	comp=Z,6.1nm,1.0s,mb4.7						
ULN	Ulaanbaatar	47.77	57	i P	P	23 33 34.1	+0.4
BOD	Bodaibo	49.61	42	eP	P	23 33 46.2	-1.4
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
DBIC	Dimbokro	51.95	244	P	P	23 34 03.7	-2.1
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DBIC	Dimbokro	51.95	244	P	P	23 34 03.7	-2.1
	comp=Z,5.1nm,0.9s,mb4.5,baz=56,slow=1.7,SNR=7.1						
LIC	Lamto	52.38	244	eP	P	23 34 06.3	-2.8
	comp=Z,13nm,0.7s,mb4.7						
LIC	Lamto	52.38	244	eP	P	23 34 06.3	-2.8
	comp=Z,6.6nm,0.7s,mb4.7						
HHC	Hu-ho-hao-te	53.13	64	eP	P	23 34 11.1	-3.2
HHC				XP	sP	23 34 23.8	+9.0
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.9						
XAN	Xi'an	54.06	73	P	P	23 34 23.0	+1.8
XAN				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb4.3						
PSI	Prapat	64.07	109	LR	LR	00 05 12.1	
	comp=Z,129nm,18.9s,MS4.1,baz=284,slow=38						
BILL	Bilibino	65.80	20	P	P	23 35 45.0	+3.6
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
KSRS	Korea Array	65.97	61	P	P	23 35 42.0	-1.0
	comp=Z,1.8nm,0.7s,mb4.4,baz=296,slow=5.7,SNR=4.3						
KSRS				LR	LR	00 09 54.9	
	comp=Z,46nm,18.8s,MS3.7,baz=128,slow=41						
SCHQ	Schefferville	67.80	323	P	P	23 35 55.8	+1.4
	comp=Z,3.6nm,0.8s,mb4.6,baz=16,slow=19,SNR=8.6						
BOSA	Boshof	68.79	194	LR	LR	00 10 16.5	
	comp=Z,115nm,19.4s,MS4.1,baz=205,slow=40						
MJAR	Matsushiro Arr	73.30	56	LR	LR	00 09 59.7	
	comp=Z,91nm,18.2s,MS4.1,baz=5.0,slow=37						
EGAK	Eagle	76.51	1	eP	P	23 36 46.7	+0.4
	comp=Z,4.2nm,0.9s,mb4.6						
YKA	Yellowknife Ar	76.83	348	P	P	23 36 48.7	+0.5
YKA	Yellowknife Ar	76.83	348	P	P	23 36 48.7	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	76.83	348	P	P	23 36 48.7	+0.5
	comp=Z,1.2nm,0.7s,mb4.2,baz=21,slow=5.9,SNR=13						
ULM	Lac du Bonnet	83.14	333	P	P	23 37 23.6	+1.0
	comp=Z,1.1nm,0.7s,mb4.2,baz=39,slow=5.8,SNR=4.4						
PLAL	Pickwick Lake	92.31	320	P	P	23 38 02.5	-4.6
	comp=Z,1.4nm,0.3s,mb4.8						

IDC 09 23:36:51.2±2.9**, 2474N**×**9025E, h0**km**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/22**, mbtmp3.2**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx3.0**/13**, Error ellipse: s-maj=103.2km s-min=27.7km az=70.0, Bangladesh**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	1.69	60	i PG	Pn	23 37 11.5	-11
SHL				eSG	Sn	23 37 20.0	-24
MKAR	Makanchi Array	22.92	346	P	P	23 41 56.4	-0.3
	0.1nm,0.5s,baz=149,slow=9.8,SNR=3.5						
SONM	Songino Array	26.36	25	P	P	23 42 29.7	+0.7
	0.3nm,0.6s,baz=200,slow=10,SNR=4.1						
JHJ	Hachijo jima 2	43.82	67	LR	LR	00 05 03.9	
	comp=Z,74nm,19.1s,baz=233,slow=39						
WRA	Warramunga Arr	61.74	132	P	P	23 47 11.8	0.0
	0.4nm,0.5s,baz=322,slow=7.2,SNR=11						

*IDC **09** 23:41:43.8±0.7, 4763N×15535E, h0km, mb4.2/20, mb1 4.3/21, mb1mx4.3/25, mbtmp4.2/21, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/36, Error ellipse: s-maj=19.4km s-min=14.5km az=153.0*

*BJI **09** 23:41:46.6, 4833N×15505E, h7km, mB5.0, mb4.5, Ms4.6, Msz4.1*

*ISCJB **09** 23:41:47.1±1.7, 4803N±007×15531E±008, h19km±12km, mb4.4/43, MS4.0/6, Error ellipse: s-maj=12.5km s-min=6.6km az=149.4*

*NEIC **09** 23:41:47.9±0.4, 4809N×15522E, h10km, mb4.6/11, Error ellipse: s-maj=11.3km s-min=7.8km az=160.0*

*MOS **09** 23:41:50.7±1.0, 4814N×15526E, h42km, mb4.6/21, Error ellipse: s-maj=12.5km s-min=8.3km az=100.3*

ISC 09 23:41:48.9±1.9**, 4803N**±007×**15529E**±008**, h18**km±11km**, h14**km±1.5km**:pP-P, n102,** σ**1.08**/108**, mb4.4**/43**, MS4.0**/6**, 3C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PET	Petropavlovsk	5.44	22	ePn	Pn	23 43 10.1	+1.1
PET				eSn	Sn	23 44 14.6	+3.5
PET	Petropavlovsk	5.44	22	⇓ i PN	Pn	23 43 10.2	+1.2
PET				eS	Sn	23 44 14.8	+3.7
PET				pmax	pmax		
	comp=Z,47nm,0.6s						
PET				smax			
	comp=E,84nm,0.8s						
PET				smax			
	comp=N,95nm,0.8s						
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
ASAJ	Asahikawa	9.65	251	Pn	Pn	23 44 04.3	-2.4
	comp=Z,0.5nm,0.3s,baz=86,slow=10,SNR=6.5						
ASAJ				LR	LR	23 48 08.3	
	comp=Z,78nm,18.7s,baz=324,slow=40						
ERM	Erimo	10.48	239	i PN	Pn	23 44 12.1	-6.0
KLR	Kul'dur	15.60	283	eP	Pn	23 45 30.0	+2.3
MAJO	Matsushiro	17.03	234	Pn	Pn	23 45 48.7	+2.7
	comp=Z,7.1nm,0.7s						
MAJO	Matsushiro	17.03	234	P	Pn	23 45 48.7	+2.7
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MJAR	Matsushiro Arr	17.03	234	P	Pn	23 45 46.8	+0.8
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	17.03	234	Pn	Pn	23 45 46.8	+0.8
	comp=Z,0.5nm,0.3s,baz=31,slow=13,SNR=6.7						
MDJ	Mudanjiang	18.05	269	P	Pn	23 45 57.0	-1.6
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.7s						
MDJ				AMB	AMB		
	comp=Z,147nm,7.1s						
BILL	Bilibino	20.83	12	eP	P	23 46 29.5	+0.4
	comp=Z,4.7nm,0.4s						
BILL	Bilibino	20.83	12	eP	P	23 46 29.3	+0.2
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSRS	Korea Array	22.60	252	P	P	23 46 46.9	-1.5
	comp=Z,3.1nm,0.8s,mb3.8,baz=50,slow=9.2,SNR=7.5						
JNU	Nakatsue	23.65	240	LR	LR	23 57 29.0	
	comp=Z,31nm,18.7s,MS2.8,baz=315,slow=40						
BOD	Bodaibo	26.35	307	eP	P	23 47 21.7	-1.9
TIXI	Tiksi	26.69	342	eP	P	23 47 26.6	+0.1
	comp=Z,2.2nm,0.6s,mb3.9						
TIXI	Tiksi	26.69	342	eP	P	23 47 26.3	-0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
HHC	Hu-ho-hao-te	31.69	273	eP	P	23 48 11.6	+0.4
HHC				AP	pP	23 48 16.1	-0.5
HHC				XP	sP	23 48 18.6	-0.1
HHC				PP	PP	23 49 14.0	-8.7
HHC				PCP	PcP	23 51 05.6	+3.0
HHC				S	S	23 53 15.8	-3.9
HHC				PCS	PcS	23 54 49.3	+2.3
HHC				SS	SS	23 55 02.3	-33
HHC				SCS	ScS	23 58 42.0	-0.8
HHC				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,184nm,5.5s						
HHC				LR	LR		
	comp=N,181nm,11.9s,MS4.1						
HHC				LR	LR		
	comp=E,165nm,13.1s,MS4.1						
HHC				LR	LR		
	comp=Z,215nm,13.1s,MS4.0						
NJ2	Nanjing	31.79	253	eP	P	23 48 13.2	+1.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
ULN	Ulaanbaatar	31.89	288	eP	P	23 48 13.4	+0.5
SONM	Songino Array	32.32	288	P	P	23 48 15.9	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	32.32	288	P	P	23 48 15.9	-0.8
	comp=Z,1.2nm,0.8s,mb3.8,baz=79,slow=7.7,SNR=12						
TLY	Talaya	32.93	296	eP	P	23 48 23.8	+1.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZAK	Zakamensk	33.50	294	eP	P	23 48 28.4	+1.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
EGAK	Eagle	37.07	40	eP	P	23 48 57.4	-0.1
INK	Inuvik	39.77	33	P	P	23 49 20.9	+0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	Inuvik	39.77	33	P	P	23 49 20.9	+0.7
	comp=Z,3.3nm,0.6s,mb4.3,baz=296,slow=6.8,SNR=20						
GTA	Gaotai	40.23	279	eP	P	23 49 26.4	+2.0
GTA				AP	pP	23 49 30.5	+0.7
GTA				XP	sP	23 49 33.7	+1.7
GTA				PP	PP	23 51 03.2	+6.4
GTA				PCP	PcP	23 51 32.8	+4.8
GTA				SCP	ScP	23 55 16.4	+0.2
GTA				S	S	23 55 31.6	+1.1
GTA				XS	sS	23 55 40.0	+0.5
GTA				SS	SS	23 58 20.6	-8.0
GTA				SCS	ScS	23 59 28.7	-1.1
GTA				AMB	AMB		
	comp=Z,2.0nm,1.2s,mb3.7						
GTA				AMB	AMB		
	comp=Z,197nm,6.1s						
GTA				LR	LR		
	comp=N,211nm,9.6s						
GTA				LR	LR		
	comp=E,182nm,9.2s						
GTA				LR	LR		
	comp=Z,263nm,10.3s,MS4.4						
CD2	Chengdu	42.46	265	eP	P	23 49 43.1	+0.4
CD2				AP	pP	23 49 47.6	-0.6
CD2				XP	sP	23 49 50.8	+0.5
CD2				PP	PP	23 51 24.1	+3.0
CD2				S	S	23 56 02.9	-0.8
CD2				XS	sS	23 56 11.3	-1.4
CD2				SS	SS	23 59 06.9	-6.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,90nm,15.6s,MS4.3						
CD2				LR	LR		
	comp=E,280nm,13.2s,MS4.3						
CD2				LR	LR		
	comp=Z,110nm,12.0s,MS4.0						
ZALV	Zalesovo Beam	43.07	305	P	P	23 49 46.1	-1.3
	comp=Z,1.7nm,0.5s,mb4.0,baz=58,slow=6.8,SNR=9.7						
ZALV				PcP	PcP	23 51 35.3	-1.7
	comp=Z,0.8nm,0.8s,baz=129,slow=2.1,SNR=3.7						
ZAL	Zalesovo	43.09	305	P	P	23 49 46.1	-1.4
ZAL						23 51 35.3	
GYA	Guiyang	43.43	258	P	P	23 49 51.4	+0.8
GYA				AP	pP	23 49 55.8	-0.3
GYA				XP	sP	23 49 58.6	+0.3
GYA				PP	PP	23 51 34.6	+3.0
GYA				PCP	PcP	23 51 41.0	+2.3
GYA				SCP	ScP	23 55 31.2	+2.1
GYA				S	S	23 56 18.8	+0.7
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=N,490nm,17.9s,MS4.6						
GYA				LR	LR		
	comp=E,400nm,18.0s,MS4.6						
GYA				LR	LR		
	comp=Z,580nm,17.6s,MS4.5						
WMQ	Urumqi	45.84	291	⇑P	P	23 50 10.2	+0.5
WMQ				AP	pP	23 50 14.7	-0.5
WMQ				XP	sP	23 50 17.2	-0.1
WMQ				PCP	PcP	23 51 49.2	+2.5
WMQ				PP	PP	23 51 57.5	+0.5
WMQ				AMB	AMB		
	comp=Z,3.0nm,0.4s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,156nm,5.6s						
WMQ				LR	LR		
	comp=N,124nm,15.0s,MS4.0						
WMQ				LR	LR		
	comp=E,70nm,16.4s,MS4.0						
WMQ				LR	LR		
	comp=Z,65nm,16.0s,MS3.7						
KMI	Kunming	46.93	260	P	P	23 50 19.8	+1.4
KMI				AP	pP	23 50 22.3	-1.6
KMI				XP	sP	23 50 24.1	-1.9
KMI				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.5						
KMI	Kunming	46.93	260	P	P	23 50 19.8	+1.4
KMI				pP	pP	23 50 22.3	-1.6
KMI				sP	sP	23 50 24.1	-1.9
MKAR	Makanchi Array	47.67	297	P	P	23 50 23.0	-0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	47.67	297	P	P	23 50 23.0	-1.0
	comp=Z,1.6nm,0.7s,mb4.2,baz=68,slow=8.0,SNR=14						
KURK	Kurchatov	47.89	304	eP	P	23 50 24.9	-0.7
	comp=Z,8.4nm,0.7s,mb4.9						
KURK	Kurchatov	47.89	304	eP	P	23 50 24.9	-0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
POHA	Pohakuloa	48.52	108	P	P	23 50 33.3	+2.5
YKA	Yellowknife Ar	49.01	38	P	P	23 50 34.3	+0.3
YKA	Yellowknife Ar	49.01	38	⇑eP	P	23 50 34.2	+0.2
YKA	Yellowknife Ar	49.01	38	P	P	23 50 34.3	+0.3
	comp=Z,2.5nm,0.9s,mb4.2,baz=297,slow=7.5,SNR=18						
BRVK	Borovoye	51.23	310	eP	P	23 50 50.6	-0.4
LSA	Lhasa	51.68	274	eP	P	23 50 55.0	+0.3
LSA	Lhasa	51.68	274	eP	P	23 50 54.7	0.0
	comp=Z,4.5nm,0.6s,mb4.6						
LSA	Lhasa	51.68	274	eP	P	23 50 54.7	0.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
AAK	Ala-Archa	54.59	297	eP	P	23 51 15.4	-0.6
ARU	Arti	55.07	318	eP	P	23 51 18.4	-0.8
	comp=Z,6.7nm,0.7s,mb4.8						
ARU	Arti	55.07	318	d i P	P	23 51 18.8	-0.4
ARU				e		23 52 19.5	
ARU						23 53 20.9	
ARU				eS	S	23 59 00.8	+0.3
ARU				SS	SS	00 02 43.1	-0.5
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
ARCES	ARCESS Array B	57.13	341	P	P	23 51 33.7	0.0
ARCES	ARCESS Array B	57.13	341	P	P	23 51 33.7	0.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	57.13	341	P	P	23 51 33.7	0.0
	comp=Z,2.0nm,0.8s,mb4.2,baz=39,slow=7.8,SNR=5.9						
PMG	Port Moresby	57.63	190	eP	P	23 51 40.7	+2.8
	comp=Z,50nm,0.8s,mb5.6						
PMG	Port Moresby	57.63	190	d i P	P	23 51 40.5	+2.6
AKTK	Aktyubinsk	58.97	312	P	P	23 51 46.6	-0.3
AKTO	Aktyubinsk	58.97	312	P	P	23 51 46.6	-0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AKTO	Aktyubinsk	58.97	312	P	P	23 51 46.6	-0.3
	comp=Z,1.8nm,0.6s,mb4.3,baz=52,slow=6.7,SNR=9.2						
FCC	Fort Churchill	59.38	35	eP	P	23 51 49.5	-0.1
	comp=Z,66nm,2.4s,mb5.2						
FCC	Fort Churchill	59.38	35	eP	P	23 51 49.5	-0.1
FCC				pmax	pmax		
	comp=Z,66nm,2.4s,mb5.2						
BOZ	Bozeman (W)	59.80	54	eP	P	23 51 52.6	-0.2
	comp=Z,3.8nm,1.0s,mb4.4						
BOZ	Bozeman (W)	59.80	54	eP	P	23 51 52.6	-0.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
NVAR	Mina Array Bea	60.54	64	P	P	23 51 56.9	-1.0
	comp=Z,1.0nm,0.8s,mb4.0,baz=295,slow=5.6,SNR=6.4						
JOF	Joensuu	60.84	334	ep	P	23 51 59.7	+0.2
	comp=Z,6.2nm,0.7s,mb4.8						
KAF	Kangasniemi	62.90	336	ep	P	23 52 13.3	-0.1
	comp=Z,6.1nm,0.9s,mb4.7,baz=36,slow=6.1						
KAF	Kangasniemi	62.90	336	eP	P	23 52 13.3	-0.1
KAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
KBL	Kabul	62.96	292	eP	P	23 52 12.6	-1.7
FIA1	FINESS Array S	63.50	335	eP	P	23 52 17.3	-0.1
FINES	FINESS Array B	63.51	335	P	P	23 52 18.0	+0.6
FINES	FINESS Array B	63.51	335	P	P	23 52 18.0	+0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	FINESS Array B	63.51	335	P	P	23 52 18.0	+0.6
	comp=Z,2.8nm,0.4s,mb4.6,baz=39,slow=7.6,SNR=58						
ULM	Lac du Bonnet	64.58	42	P	P	23 52 24.1	-0.6
	comp=Z,2.4nm,0.6s,mb4.4,baz=313,slow=8.0,SNR=6.3						
OBN	Obninsk	65.08	326	P	P	23 52 28.0	+0.1
OBN				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
MVCO	Mesa Verde	67.15	59	eP	P	23 52 47.0	+5.6
NB2	NORSAR Subarra	67.48	342	P	P	23 52 43.7	+0.5
	comp=Z,2.0nm,0.5s,mb4.4,baz=26,slow=6.5						
NB2	NORSAR Subarra	67.48	342	P	P	23 52 43.7	+0.5
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
NOA	NORSAR Array B	67.48	342	P	P	23 52 44.0	+0.8
NOA	NORSAR Array B	67.48	342	P	P	23 52 44.0	+0.8
NOA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NOA	NORSAR Array B	67.48	342	P	P	23 52 44.0	+0.8
	comp=Z,2.8nm,0.6s,mb4.4,baz=26,slow=6.4,SNR=9.7						
HFS	Hagfors	67.76	340	P	P	23 52 43.9	-1.0
HFS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
HFS	Hagfors	67.76	340	P	P	23 52 43.9	-1.1
	comp=Z,3.8nm,0.5s,mb4.7,baz=58,slow=5.6,SNR=34						
ANMO	Albuquerque	69.90	60	eP	P	23 52 57.5	-1.2
WRA	Warramunga Arr	70.22	201	P	P	23 52 55.4	-5.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	70.22	201	P	P	23 52 55.4	-5.2
	comp=Z,0.8nm,0.9s,mb3.6,baz=20,slow=6.3,SNR=4.7						
KIV	Kislovodsk	70.95	315	⇑eP	P	23 53 05.7	+0.7
KIV				e*PP	pP	23 53 31.9	+21
KIV				eS	S	00 02 06.8	-13
KIV				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
AKASG	Malin Array Be	71.29	327	P	P	23 53 06.5	-0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	71.29	327	P	P	23 53 06.5	-0.4
	comp=Z,1.5nm,0.5s,mb4.2,baz=30,slow=6.1,SNR=4.6						
SCHQ	Schefferville	71.55	24	P	P	23 53 08.7	+0.4
	comp=Z,1.0nm,0.6s,mb3.9,baz=301,slow=6.9,SNR=5.1						
ASAR	Alice Springs	73.91	200	P	P	23 53 18.7	-3.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	73.91	200	P	P	23 53 18.6	-4.0
	comp=Z,0.6nm,0.6s,mb3.7,baz=15,slow=5.4,SNR=9.1						
HDIL	Hopedale	74.90	45	eP	P	23 53 27.6	-0.8
EKA	Eskdalemuir Ar	75.43	347	P	P	23 53 31.7	+0.5
EKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EKA	Eskdalemuir Ar	75.43	347	P	P	23 53 31.6	+0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,3.0nm,0.6s,mb4.4,baz=18,slow=5.4,SNR=13						
LTX	Lajitas	75.58	62	eP	P	23 53 31.6	-1.0
TXAR	Lajitas Array	75.58	62	P	P	23 53 31.2	-1.3
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TXAR	Lajitas Array	75.58	62	P	P	23 53 31.2	-1.3
	comp=Z,4.2nm,0.8s,mb4.4,baz=301,slow=4.4,SNR=45						
KHC	Kasperske Hory	77.71	335	eP	P	23 53 44.5	+0.3
KHC				ex	x	23 53 59.0	
GERES	GERESS Array B	77.94	335	P	P	23 53 47.3	+1.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	77.94	335	P	P	23 53 47.3	+1.8
	comp=Z,0.9nm,0.6s,mb3.9,baz=30,slow=5.2,SNR=9.6						
UMR	Umm Al-Rimmam	79.22	302	eP	P	23 53 52.1	-0.7
UMR				AMb	AMB	23 53 53.2	
	comp=Z,9.3nm,0.8s,mb4.8						
MIB	Mutribah	79.24	303	eP	P	23 53 52.5	-0.5
MIB				AMb	AMB	23 53 56.8	
	comp=Z,14nm,0.5s,mb5.1						
NAY	Al-Naaiem	79.72	302	eP	P	23 53 54.4	-1.2
NAY				AMb	AMB	23 53 55.9	
	comp=Z,5.1nm,0.8s,mb4.5						

*ISCJB **10** 00:03:35.4±1.3, 178S±04×1788W±02, h600km, mb4.3/8, Error ellipse: s-maj=54.5km s-min=20.9km az=156.6*
*IDC **10** 00:03:37.2±4.8, 1793S×17873W, h608km±53km, mb3.8/7, mb1 3.9/8, mb1mx3.5/16, mbtmp3.7/8, Error ellipse: s-maj=49.8km s-min=29.9km az=149.0*
*NEIC **10** 00:03:37.5±4.3, 1782S×17882W, h613km±50km, mb4.4/5, Error ellipse: s-maj=43.6km s-min=28.2km az=160.0*
ISC 10 00:03:36.7±1.3**, 179S**±04×**1788W**±02**, h600**km**, n19, σ0^{s}60**/18**, mb4.3**/8**, 3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.50	251	P	P	00 06 39.6	-0.7
	0.9nm,0.3s,baz=77,slow=17,SNR=26						
ARMA	Armidale	29.65	240	⇓iP	P	00 08 56.2	+0.8
CTA	Charters Tower	33.10	260	⇓iP	P	00 09 24.8	-0.1
	6.2nm,0.8s,mb4.3						
CTA	Charters Tower	33.10	260	P	P	00 09 24.9	+0.1
	6.6nm,0.6s,mb4.4,baz=88,slow=9.8,SNR=18						
CTAO	Charters Tower	33.10	260	eP	P	00 09 24.6	-0.2
	6.4nm,0.7s,mb4.4						
PMG	Port Moresby	34.10	280	eP	P	00 09 33.9	+0.6
	15nm,0.7s,mb4.7						
PMG	Port Moresby	34.10	280	P	P	00 09 34.7	+1.4
	20nm,0.8s,mb4.8,baz=89,slow=6.0,SNR=9.4						
STKA	Stephens Creek	38.33	241	⇓iP	P	00 10 08.4	+0.6
	10nm,0.5s,mb4.6						
STKA	Stephens Creek	38.33	241	P	P	00 10 08.5	+0.7
	13nm,0.5s,mb4.8,baz=93,slow=9.4,SNR=25						
WB2	Warramunga Arr	44.27	260	eP	P	00 10 53.9	-0.9
WRA	Warramunga Arr	44.28	260	P	P	00 10 54.2	-0.7
WRA				PcP	PcP	00 12 25.8	0.0
WRA	Warramunga Arr	44.28	260	P	P	00 10 54.2	-0.7
	7.0nm,0.5s,mb4.5,baz=95,slow=7.0,SNR=132						
WRA				PcP	PcP	00 12 25.8	0.0
	0.8nm,0.4s,baz=94,slow=3.6,SNR=4.6						
ASAR	Alice Springs	44.45	254	P	P	00 10 56.2	+0.1
	57nm,0.6s,mb5.3,baz=88,slow=8.4,SNR=828						
ASAR				PcP	PcP	00 12 26.0	-0.3
	1.4nm,0.4s,baz=104,slow=4.2,SNR=4.2						
FITZ	Fitzroy Crossi	52.68	261	eP	P	00 11 57.1	+0.2
	4.5nm,0.6s,mb4.0						
FITZ	Fitzroy Crossi	52.68	261	eP	P	00 11 57.2	+0.2
FITZ	Fitzroy Crossi	52.68	261	P	P	00 11 57.2	+0.3
	1.3nm,0.3s,mb3.8,baz=147,slow=10,SNR=19						
MBWA	Marble Bar	57.73	256	eP	P	00 12 31.6	-0.3
	6.3nm,0.6s,mb3.9						
TXAR	Lajitas Array	86.28	58	P	P	00 15 16.2	0.0
	0.7nm,0.7s,mb3.4,baz=221,slow=5.1,SNR=9.9						
GERES	GERESS Array B	147.48	345	PKPbc	PKPbc	00 22 13.2	-0.9
	0.7nm,0.4s,baz=18,slow=3.3,SNR=11						

IDC 10 00:13:08.4±1.9**, 091N**×**12634E, h0**km**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=167.8km s-min=24.3km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.16	160	P	P	00 18 04.9	-1.1
	1.1nm,0.5s,baz=338,slow=11,SNR=13						
ASAR	Alice Springs	25.51	164	P	P	00 18 39.6	+0.9
	0.9nm,0.5s,baz=346,slow=12,SNR=12						
MKAR	Makanchi Array	59.65	326	P	P	00 23 14.4	0.0
	0.3nm,0.4s,baz=120,slow=8.0,SNR=8.7						

*NIED **10** 00:22:00, 2400N×12270E, h26km, Mw4.0 Best double couple: $M_0$1.03000×10^{15} NP1:ϕ_s304.00000°, δ20.00000°, λ150.00000°. NP2:ϕ_s63.00000°, δ80.00000°, λ73.00000°.*
*ISCJB **10** 00:22:04.9±0.7, 2406N±009×12266E±005, h54km±6km, mb3.8/9, Error ellipse: s-maj=15.5km s-min=6.5km az=10.1*
*JMA **10** 00:22:04.8±0.3, 2400N×12265E, h34km, M3.7*
*NEIC **10** 00:22:04.9±0.7, 2404N×12270E, h35km, MG3.7(JMA), Error ellipse: s-maj=15.9km s-min=10.8km az=26.0*
*IDC **10** 00:22:05.5±4.5, 24.11N×12270E, h42km±43km, mb3.6/9, mb1 3.8/10, mb1mx3.7/18, mbtmp3.7/10, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/32, Error ellipse: s-maj=41.7km s-min=16.6km az=67.0*
ISC 10 00:22:05.6±0.8**, 2406N**±009×**12265E**±005**, h44**km±8km**, n20, σ0^{s}69**/26**, mb3.8**/9**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.52	40	P	Pn	00 22 16.1	-0.6
YOJ				S	Sn	00 22 23.8	-0.8
NACB	Ninganchiao	0.97	277	eP	Pn	00 22 21.8	-0.9
IRIF	Iriomote-Funau	1.02	74	P	Pn	00 22 23.1	-0.4
IRIF				S	Sn	00 22 37.7	+1.0
HATJ	Hateruma jima	1.06	90	P	Pn	00 22 23.4	-0.6
HATJ				S	Sn	00 22 37.1	-0.4
JKRS	Kuro-shima	1.25	82	P	Pn	00 22 26.7	0.0
JKRS				eS	Sn	00 22 43.3	+0.9
YHNB	Yeheng	1.31	298	⇑iPn	Pn	00 22 28.2	+0.8
TATO	Taipei	1.39	311	ePn	Pn	00 22 29.9	+1.4
TATO				eSn	Sn	00 22 49.9	+4.1
JIJ	Ishigaki jima	1.40	77	P	Pn	00 22 28.2	-0.4
JIJ				S	Sn	00 22 46.7	+0.8
JTJ	Tarama	1.96	73	P	Pn	00 22 36.6	+0.3
JOW	Kunigami	5.79	60	P	Pn	00 23 28.1	-0.8
	2.9nm,0.3s,baz=125,slow=19,SNR=6.8						
JOW				LR	LR	00 25 58.1	
	comp=Z,110nm,18.2s,baz=43,slow=41						
KSRS	Korea Array	14.09	17	P	Pn	00 25 27.0	+4.5
	0.5nm,0.3s,baz=200,slow=12,SNR=5.8						
KSRS				LR	LR	00 31 41.7	
	comp=Z,64nm,18.3s,baz=190,slow=41						
SONM	Songino Array	27.02	335	P	P	00 27 43.3	-0.1
	0.8nm,0.6s,mb3.4,baz=155,slow=12,SNR=12						
MKAR	Makanchi Array	39.36	315	P	P	00 29 31.4	+0.7
	0.9nm,0.6s,mb3.7,baz=100,slow=10,SNR=20						
MKAR				PcP	PcP	00 31 39.0	+0.6
	0.6nm,0.7s,baz=90,slow=5.3,SNR=5.7						
ZALV	Zalesovo Beam	41.08	327	P	P	00 29 44.1	-0.7
	0.8nm,0.4s,mb3.7,baz=116,slow=9.1,SNR=6.6						
ZALV				PcP	PcP	00 31 43.4	-0.4
	0.3nm,0.4s,baz=130,slow=5.3,SNR=4.1						
WRA	Warramunga Arr	45.20	164	P	P	00 30 18.1	-0.3
	0.8nm,0.5s,mb3.8,baz=346,slow=8.7,SNR=9.9						
ASAR	Alice Springs	48.69	166	P	P	00 30 46.4	+0.7
	0.6nm,0.5s,mb3.9,baz=346,slow=7.4,SNR=11						
ARCES	ARCESS Array B	70.15	338	P	P	00 33 13.0	-0.1
	2.5nm,0.9s,mb4.1,baz=54,slow=6.2,SNR=4.0						
FINES	FINESS Array B	72.22	330	P	P	00 33 25.6	-0.3
	2.0nm,0.9s,mb4.0,baz=58,slow=5.8,SNR=7.1						
NOA	NORSAR Array B	78.95	333	P	P	00 34 03.8	-0.6
	0.5nm,0.5s,mb3.7,baz=55,slow=5.4,SNR=3.3						
YKA	Yellowknife Ar	82.56	23	P	P	00 34 23.8	+0.2
	0.4nm,0.6s,mb3.6,baz=315,slow=4.9,SNR=8.9						

*IDC **10** 00:36:52.2±1.7, 188N×127.17E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, ML3.5/1, Error ellipse: s-maj=104.4km s-min=22.4km az=68.0*
*ISCJB **10** 00:36:54.8±1.6, 19N±03×1272E±05, h33km, mb3.8/4, Error ellipse: s-maj=84.0km s-min=21.0km az=158.7*
*NEIC **10** 00:36:56.9±1.5, 194N×12745E, h35km, Error ellipse: s-maj=78.4km s-min=19.5km az=69.0*
ISC 10 00:36:57.3±1.5**, 18N**±02×**1271E**±05**, h35**km**, n6, σ1^{s}35**/6**, mb3.8**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.79	184	P	Pn	00 41 26.2	-0.3
	0.1nm,0.3s,baz=355,slow=14,SNR=6.0						
WRA	Warramunga Arr	22.71	162	P	P	00 41 56.0	-0.2
	2.2nm,0.4s,mb3.9,baz=339,slow=11,SNR=53						
WB2	Warramunga Arr	22.71	162	eP	P	00 41 55.8	-0.4
ASAR	Alice Springs	26.13	166	P	P	00 42 30.7	+2.5
	0.6nm,0.4s,mb3.4,baz=346,slow=12,SNR=9.6						
STKA	Stephens Creek	36.17	159	P	P	00 43 55.8	-0.8
	1.7nm,0.6s,mb4.1,baz=355,slow=11,SNR=4.9						
MKAR	Makanchi Array	59.37	326	P	P	00 46 56.0	-0.1
	0.2nm,0.4s,mb3.5,baz=119,slow=7.7,SNR=8.2						

IDC 10 00:57:41.8±12.0**, 2492S**×**17245W, h0**km**, mb4.0**/4**, mb1 4.1**/5**, mb1mx3.9**/14**, mbtmp4.0**/5**, Error ellipse: s-maj=246.8km s-min=117.2km az=51.0, South of Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	19.56	274	P	Pn	01 02 11.8	-0.7
	0.3nm,0.3s,baz=103,slow=14,SNR=11						
CTA	Charters Tower	38.35	269	P	P	01 05 04.5	-0.2
	1.6nm,0.3s,baz=89,slow=9.1,SNR=5.2						
STKA	Stephens Creek	40.78	249	P	P	01 05 24.1	-0.8
	1.9nm,0.9s,baz=97,slow=12,SNR=3.2						
ASAR	Alice Springs	48.64	260	P	P	01 06 28.1	+0.3
	0.4nm,0.3s,baz=90,slow=7.7,SNR=8.8						
WRA	Warramunga Arr	49.18	265	P	P	01 06 32.0	+0.1
	0.6nm,0.3s,baz=105,slow=8.2,SNR=30						

*ISCJB **10** 01:12:17.1±0.6, 687N±006×7300W±006, h169km±7km, mb3.5/3, Error ellipse: s-maj=11.5km s-min=8.7km az=44.2*
*IDC **10** 01:12:17.7±1.2, 677N×7294W, h165km±14km, mb3.3/3, mb1 3.6/5, mb1mx3.3/17, mbtmp3.4/5, Error ellipse: s-maj=34.1km s-min=14.1km az=127.0*
*FUNV **10** 01:12:17.4, 677N×73.16W, h164km, MW3.4*
*NEIC **10** 01:12:17.9±0.7, 673N×7295W, h170km±9km, mb3.7/1, Error ellipse: s-maj=28.1km s-min=10.2km az=126.0*
ISC 10 01:12:17.8±0.6**, 684N**±006×**7301W**±006**, h161**km±7km**, n24, σ0^{s}75**/30**, mb3.5**/3**, 6D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.23	34	⇓iP	Pn	01 12 46.6	+0.9
CAPV				eS	Sn	01 13 07.4	+0.3
ROSC	El Rosal	2.37	214	P	Pn	01 12 58.2	+0.2
	20nm,0.3s,baz=31,slow=2.8,SNR=124						
ROSC				S	Sn	01 13 25.1	-3.9
	38nm,0.3s,baz=61,slow=19,SNR=13						
VIGV	El Vigia	2.57	39	⇓iP	Pn	01 13 01.1	+0.7
VIGV				eS	Sn	01 13 33.0	-0.3
SOCV	Socops	2.57	56	⇓iP	Pn	01 13 01.2	+0.8
SOCV				eS	Sn	01 13 33.0	-0.3
SDV	Santo Domingo	3.11	49	P	Pn	01 13 08.0	+1.0
SDV				S	Sn	01 13 45.8	+0.6
SDV	Santo Domingo	3.11	49	P	Pn	01 13 08.0	+1.0
	28nm,0.3s,baz=233,slow=2.9,SNR=269						
SDV				S	Sn	01 13 45.8	+0.6
	12nm,0.3s,baz=69,slow=23,SNR=16						
ELOV	Elorza	3.51	87	⇓iP	Pn	01 13 12.6	+0.6
ELOV				eS	Sn	01 13 54.0	-0.2
VIRV	Villa del Rosa	3.69	9	eP	Pn	01 13 13.5	-0.9
VIRV				eS	Sn	01 13 56.0	-2.4
QARV	Quebrada Arrib	4.15	36	⇓iP	Pn	01 13 21.1	+0.7
SANV	Sanarito	4.34	52	eP	Pn	01 13 22.9	+0.1
CURV	Curarigua	4.36	44	eP	Pn	01 13 23.3	+0.2
DABV	Dabajuro	4.68	30	eP	Pn	01 13 28.0	+0.6
TEPV	Terepaima	4.89	50	eP	Pn	01 13 30.2	+0.2
SIQV	Siquisique	4.93	40	eP	Pn	01 13 30.4	-0.2
BAUV	El Baul	5.35	67	⇓iP	Pn	01 13 34.7	-1.3
TURV	Turiamo	6.24	55	eP	Pn	01 13 47.9	0.0
CAOV	Caicara del Or	6.66	85	eP	Pn	01 13 52.1	-1.3
BIRV	Birongo	7.58	61	eP	Pn	01 14 05.0	-0.7
OTAV	Otavalo	8.51	220	ePn	Pn	01 14 18.0	-0.1
	1.1nm,0.3s						
TXAR	Lajitas Array	36.53	312	P	P	01 19 08.5	+0.5
	0.2nm,0.6s,mb2.9,baz=126,slow=9.4,SNR=4.8						
ULM	Lac du Bonnet	47.30	340	P	P	01 20 35.0	0.0
	1.0nm,0.4s,mb3.8,baz=140,slow=5.2,SNR=7.3						
YKA	Yellowknife Ar	63.28	340	P	P	01 22 29.2	+0.2
	0.8nm,0.5s,mb3.8,baz=123,slow=6.8,SNR=4.0						
ASAR	Alice Springs	149.21	234	PKPbc	PKPbc	01 31 46.9	-1.3
	0.6nm,0.5s,baz=116,slow=3.8,SNR=9.4						
WRA	Warramunga Arr	150.44	241	PKPbc	PKPbc	01 31 50.7	-0.6
	0.8nm,0.6s,baz=108,slow=2.6,SNR=20						

*NEIC **10** 01:23:17.8, 38.15S×17647E, h144km, MG4.0(WEL), After WEL.*
WEL 10 01:23:17.7±0.3**, 3813S**×**17646E, h144**km±2km**, ML3.6**/8**, Error ellipse: s-maj=2.2km s-min=1.9km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAZ	Tarawera	0.11	158	P	Pn	01 23 38.0	+1.0
TAZ	Tarawera	0.11	158	PN	Pn	01 23 37.6	+0.6
PATZ	Paeroa	0.29	212	P	Pn	01 23 38.1	+0.7
PATZ	Paeroa	0.29	212	PN	Pn	01 23 38.0	+0.6
URZ	Urewera	0.53	104	P	Pn	01 23 38.3	-0.1
URZ	Urewera	0.53	104	PN	Pn	01 23 38.3	-0.1
URZ				SN	Sn	01 23 53.8	-0.4
MWZ	Matawai	0.87	104	P	Pn	01 23 40.9	+0.2
MWZ	Matawai	0.87	104	PN	Pn	01 23 40.9	+0.2
MWZ				SN	Sn	01 23 58.4	+0.2
KATZ	Kakaramea	1.03	215	P	Pn	01 23 43.0	+0.9
BKZ	Black Stump Fm	1.03	178	P	Pn	01 23 42.3	+0.2
BKZ				S	Sn	01 24 00.9	+0.1
BKZ	Black Stump Fm	1.03	178	PN	Pn	01 23 42.3	+0.2
BKZ				SN	Sn	01 24 00.9	0.0
KRVZ	Karewarewa	1.16	213	PN	Pn	01 23 43.4	+0.2
WTVZ	West Tongariro	1.20	214	P	Pn	01 23 43.8	+0.2
WTVZ	West Tongariro	1.20	214	PN	Pn	01 23 43.8	+0.2
OTVZ	Oturere	1.20	211	PN	Pn	01 23 44.1	+0.4
TWVZ	Taurewa	1.23	220	P	Pn	01 23 44.1	+0.1
TWVZ	Taurewa	1.23	220	PN	Pn	01 23 44.1	+0.1
NGZ	Ngauruhoe	1.24	212	P	Pn	01 23 44.2	+0.2
NGZ	Ngauruhoe	1.24	212	PN	Pn	01 23 44.2	+0.2
WPVZ	Whakapapa	1.29	213	P	Pn	01 23 44.6	+0.1
WPVZ	Whakapapa	1.29	213	PN	Pn	01 23 44.6	+0.1
TUVZ	Tukino	1.30	209	P	Pn	01 23 45.0	+0.4
KNZ	Kokohu	1.30	133	eP	Pn	01 23 45.1	+0.4
KNZ	Kokohu	1.30	133	PN	Pn	01 23 45.1	+0.4
KNZ				SN	Sn	01 24 05.2	-0.1
FWVZ	Far West T-bar	1.33	212	P	Pn	01 23 45.2	+0.3
FWVZ	Far West T-bar	1.33	212	PN	Pn	01 23 45.2	+0.3
TRVZ	Turoa	1.37	211	PN	Pn	01 23 45.7	+0.4
WNVZ	Wahianoa	1.37	209	P	Pn	01 23 45.6	+0.2
WNVZ	Wahianoa	1.37	209	PN	Pn	01 23 45.6	+0.2
MOVZ	Moawhango	1.39	203	P	Pn	01 23 45.2	-0.3
MOVZ	Moawhango	1.39	203	PN	Pn	01 23 45.2	-0.3
PUZ	Puketiti	1.42	88	eP	Pn	01 23 45.9	0.0
PUZ	Puketiti	1.42	88	PN	Pn	01 23 45.9	0.0
PUZ				SN	Sn	01 24 06.8	-0.7
PKVZ	Pokaka	1.45	217	PN	Pn	01 23 46.3	+0.1
MTVZ	Mangateitei	1.47	211	PN	Pn	01 23 46.5	+0.1
MXZ	Matakaoa Point	1.57	69	PN	Pn	01 23 47.6	+0.1
MXZ				SN	Sn	01 24 09.9	-0.4
TSZ	Takapari Road	1.96	191	eP	Pn	01 23 51.3	-0.7
TSZ	Takapari Road	1.96	191	PN	Pn	01 23 51.3	-0.7
WAZ	Wanganui	1.99	215	P	Pn	01 23 51.9	-0.3
WAZ	Wanganui	1.99	215	PN	Pn	01 23 51.9	-0.3
BFZ	Birch Farm	2.55	184	PN	Pn	01 23 57.8	-1.3
MRZ	Mangatainoka R	2.62	195	P	Pn	01 23 58.2	-1.7
MRZ	Mangatainoka R	2.62	195	PN	Pn	01 23 58.2	-1.7
TIWZ	Tintock	2.68	189	PN	Pn	01 23 59.3	-1.4
KIW	Kapiti Island	2.98	203	PN	Pn	01 24 02.1	-2.4
MTW	Mount Morrison	3.11	193	P	Pn	01 24 03.7	-2.5
MTW	Mount Morrison	3.11	193	PN	Pn	01 24 03.7	-2.4
CAW	Cannon Point	3.16	199	PN	Pn	01 24 04.4	-2.4
DUWZ	D'Urville Isla	3.31	216	PN	Pn	01 24 06.7	-2.1
TRWZ	Traveller	3.32	190	PN	Pn	01 24 06.4	-2.4
PAWZ	Paruwai Farm	3.34	193	P	Pn	01 24 06.5	-2.6
PAWZ	Paruwai Farm	3.34	193	PN	Pn	01 24 06.5	-2.7
MRW	Makara Radio	3.38	203	P	Pn	01 24 06.9	-2.7
MRW	Makara Radio	3.38	203	PN	Pn	01 24 06.9	-2.7
MSWZ	Moikau Station	3.41	195	P	Pn	01 24 07.1	-2.9
MSWZ	Moikau Station	3.41	195	PN	Pn	01 24 07.1	-2.8
WEL	Wellington	3.41	202	P	Pn	01 24 07.4	-2.6
WEL	Wellington	3.41	202	PN	Pn	01 24 07.4	-2.6
SNZO	South Karori	3.45	202	P	Pn	01 24 07.6	-2.9
SNZO	South Karori	3.45	202	PN	Pn	01 24 07.6	-3.0
BHW	Baring Head	3.49	200	P	Pn	01 24 08.0	-3.1
BHW	Baring Head	3.49	200	PN	Pn	01 24 08.0	-3.0
TCW	Tory Channel	3.51	208	P	Pn	01 24 08.4	-2.9
TCW	Tory Channel	3.51	208	PN	Pn	01 24 08.4	-2.9
TUWZ	Tuamarina	3.82	210	PN	Pn	01 24 12.3	-3.0
NNZ	Nelson	3.89	217	eP	Pn	01 24 13.1	-3.2
NNZ	Nelson	3.89	217	PN	Pn	01 24 13.1	-3.1
QRZ	Quartz Range	4.06	227	eP	Pn	01 24 15.2	-3.3
QRZ	Quartz Range	4.06	227	PN	Pn	01 24 15.2	-3.3
BSWZ	Blackbirch Sta	4.09	208	P	Pn	01 24 15.8	-3.1
BSWZ	Blackbirch Sta	4.09	208	PN	Pn	01 24 15.8	-3.1
THZ	Tophouse	4.54	216	eP	Pn	01 24 22.0	-2.8
THZ	Tophouse	4.54	216	PN	Pn	01 24 22.0	-2.8
KHZ	Kahutara	4.83	207	PN	Pn	01 24 24.9	-3.7
LTZ	Lake Taylor	5.64	213	eP	Pn	01 24 34.8	-4.6
MQZ	McQueen's Vall	6.27	206	eP	Pn	01 24 42.2	-5.6
MQZ	McQueen's Vall	6.27	206	PN	Pn	01 24 42.2	-5.6
ODZ	Otahua Downs	8.16	210	eP	Pn	01 25 07.9	-5.3

*NEIC **10** 02:05:48.1±1.0, 4700N×15384E, h10km, mb4.1/5, Error ellipse: s-maj=23.9km s-min=13.1km az=118.0*
*IDC **10** 02:05:51.1±0.8, 4681N×15374E, h32km±6km, mb3.6/11, mb1 3.8/12, mb1mx3.6/21, mbtmp3.7/12, ML3.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/39, Error ellipse: s-maj=23.7km s-min=17.7km az=109.0*
*ISCJB **10** 02:05:52.4±3.0, 469N±01×1536E±02, h48km±24km, mb4.0/22, Error ellipse: s-maj=24.5km s-min=17.7km az=21.8*
*MOS **10** 02:05:54.2±1.6, 4691N×15344E, h71km, mb4.3/7, Error ellipse: s-maj=16.9km s-min=12.3km az=76.3*
ISC 10 02:05:54.7±2.2**, 469N**±01×**1536E**±02**, h55**km±18km**, h33**km±1.4km**:pP-P, n42, σ1^{s}07**/42**, mb4.0**/22**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	8.22	254	Pn	Pn	02 07 50.9	-0.3
	0.9nm,0.3s,baz=110,slow=9.7,SNR=4.3						
ASAJ				LR	LR	02 10 48.9	
	comp=Z,47nm,18.3s,baz=168,slow=36						
ERM	Erimo	8.93	241	ePn	Pn	02 07 57.9	-2.9
MAJO	Matsushiro	15.45	233	ePn	Pn	02 09 30.4	+1.5
MJAR	Matsushiro Arr	15.45	233	Pn	Pn	02 09 31.1	+2.2
	0.4nm,0.3s,baz=38,slow=10.0,SNR=4.8						
KSRS	Korea Array	21.17	253	P	P	02 10 35.9	+0.7
	2.1nm,0.7s,mb3.6,baz=57,slow=9.9,SNR=6.2						
BILL	Bilibino	22.16	13	eP	P	02 10 46.0	+0.5
BILL				e		02 11 13.0	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
ZALV	Zalesovo Beam	42.79	306	P	P	02 13 45.3	-1.2
	comp=Z,0.4nm,0.4s,mb3.5,baz=93,slow=5.8,SNR=3.4						
ZAL	Zalesovo	42.81	306	P	P	02 13 45.3	-1.4
MKAR	Makanchi Array	47.17	297	i P	P	02 14 20.7	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	47.17	297	P	P	02 14 20.7	-0.7
	comp=Z,0.7nm,0.4s,mb3.9,baz=68,slow=7.2,SNR=15						
KURK	Kurchatov	47.56	304	eP	P	02 14 22.2	-2.1
	comp=Z,1.8nm,0.7s,mb4.2						
KURK	Kurchatov	47.56	304	eP	P	02 14 22.3	-2.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BRVK	Borovoye	51.06	310	eP	P	02 14 51.0	0.0
	comp=Z,1.3nm,0.5s,mb4.1						
BRVK	Borovoye	51.06	310	eP	P	02 14 51.1	+0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AAK	Ala-Archa	54.07	296	eP	P	02 15 12.3	-1.1
	comp=Z,1.1nm,0.8s,mb3.8						
AAK	Ala-Archa	54.07	296	eP	P	02 15 12.3	-1.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
EKS2	Erkin-Say	54.49	297	eP	P	02 15 16.5	0.0
	comp=Z,0.9nm,0.7s,mb3.8						
ARCES	ARCESS Array B	57.82	341	P	P	02 15 39.5	-0.3
	comp=Z,1.9nm,0.8s,mb4.2,baz=29,slow=8.3,SNR=6.7						
JOF	Joensuu	61.34	334	ep	P	02 16 03.2	-0.9
	comp=Z,2.8nm,0.8s,mb4.4						
FINES	FINESS Array B	64.04	335	i P	P	02 16 22.2	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	64.04	335	P	P	02 16 22.1	+0.1
	comp=Z,2.1nm,0.7s,mb4.3,baz=39,slow=7.9,SNR=15						
NB2	NORSAR Subarra	68.19	341	P	P	02 16 48.7	0.0
	comp=Z,0.9nm,0.6s,mb4.0,baz=28,slow=6.5						
NB2	NORSAR Subarra	68.19	341	P	P	02 16 48.7	0.0
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
NOA	NORSAR Array B	68.19	341	P	P	02 16 48.4	-0.3
NOA	NORSAR Array B	68.19	341	P	P	02 16 48.4	-0.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=28,slow=6.3,SNR=4.8						
WRA	Warramunga Arr	68.77	199	P	P	02 16 50.8	-2.0
	comp=Z,0.3nm,0.8s,mb3.3,baz=17,slow=6.9,SNR=3.1						
WRA				pP	pP	02 17 01.3	-6.6
	comp=Z,0.3nm,0.6s,baz=22,slow=7.2,SNR=2.6						
AKASG	Malin Array Be	71.61	326	i P	P	02 17 09.0	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	71.61	326	P	P	02 17 09.4	-0.4
	comp=Z,0.9nm,0.5s,mb4.0,baz=36,slow=5.4,SNR=8.5						
ASAR	Alice Springs	72.47	199	P	P	02 17 14.3	-0.8
	comp=Z,0.4nm,0.8s,mb3.4,baz=18,slow=6.2,SNR=3.1						
ASAR				pP	pP	02 17 23.6	-6.8
	comp=Z,0.5nm,0.6s,baz=7.8,slow=5.6,SNR=4.2						
BURAR	Bucovina Array	75.64	327	⇑iP	P	02 17 34.5	+0.9
CLL	Collm	76.46	336	eP	P	02 17 39.0	+0.9
TXAR	Lajitas Array	77.12	61	P	P	02 17 41.7	-0.6
TXAR				pP	pP	02 17 51.8	-5.9
TXAR	Lajitas Array	77.12	61	eP	P	02 17 41.7	-0.5
TXAR	Lajitas Array	77.12	61	P	P	02 17 41.7	-0.6
	comp=Z,0.4nm,0.7s,mb3.5,baz=304,slow=4.5,SNR=6.4						
TXAR				pP	pP	02 17 51.8	-5.9
	comp=Z,0.6nm,0.7s,baz=293,slow=4.3,SNR=5.5						
MLR	Muntele Rosu	77.13	325	⇑iP	P	02 17 43.7	+1.7
GERES	GERESS Array B	78.46	334	P	P	02 17 50.5	+1.1
	comp=Z,0.3nm,0.4s,mb3.6,baz=54,slow=6.8,SNR=4.6						
BZS	Buzias	78.66	328	⇓iP	P	02 17 51.3	+0.8
UMR	Umm Al-Rimmam	78.84	301	eP	P	02 17 52.0	+0.2
UMR				AMb	AMB	02 17 53.4	
	comp=Z,10nm,0.4s,mb5.1						
MIB	Mutribah	78.87	302	eP	P	02 17 52.0	+0.1
MIB				AMb	AMB	02 17 55.2	
	comp=Z,9.9nm,1.0s,mb4.7						
QRN	Al-Qurain	79.31	301	eP	P	02 17 55.5	+1.2
QRN				AMb	AMB	02 17 57.6	
	comp=Z,12nm,0.5s,mb5.1						
NAY	Al-Naaiem	79.34	301	eP	P	02 17 54.8	+0.3
NAY				AMb	AMB	02 17 57.8	
	comp=Z,5.2nm,1.0s,mb4.4						
RDF	Al-Radifah	79.39	301	eP	P	02 17 56.0	+1.2
RDF				AMb	AMB	02 17 57.9	
	comp=Z,7.3nm,0.7s,mb4.7						

DDA 10 02:18:15.6, 3745N×3628E, h16km, Md2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.14	24	i P	Pg	02 18 19.1	-0.4
ANDN				i S	Sg	02 18 23.8	+1.7
ANDN	Andirin	0.14	24	i P	Pg	02 18 19.3	-0.2
ANDN				i S	Sg	02 18 23.3	+1.3
COBT	Iskenderun	0.93	181	i P	Pb	02 18 30.4	-3.0
COBT				i S	Sb	02 18 44.5	-1.0
COBT	Iskenderun	0.93	181	i P	Pb	02 18 32.1	-1.3
COBT				i S	Sb	02 18 44.3	-1.2
GZT	Gaziantep	1.03	95	i P	Pb	02 18 33.9	-1.2
GZT				i S	Sb	02 18 47.1	-1.2
GZT	Gaziantep	1.03	95	i P	Pb	02 18 33.7	-1.4
GZT				i S	Sb	02 18 47.4	-1.0

IDC 10 02:40:47.7±3.3, 657S×14829E, h0^{km}, mb3.9/2, mb1 3.9/4, mb1mx3.6/15, mbtmp3.7/4, ML2.9/2, Error ellipse: s-maj=81.7km s-min=34.1km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.03	202	Pn	Pn	02 41 38.9	+2.0
	1.1nm,0.3s,baz=333,slow=4.5,SNR=3.5						
PMG				Sn	Sn	02 42 16.5	+2.6
	6.0nm,0.3s,baz=175,slow=3.5,SNR=4.5						
WRA	Warramunga Arr	18.97	224	P	Pn	02 45 10.1	-1.2
	0.2nm,0.3s,baz=52,slow=11,SNR=11						
ASAR	Alice Springs	21.91	218	P	P	02 45 42.5	-0.1
	1.1nm,0.5s,baz=52,slow=9.5,SNR=29						
FITZ	Fitzroy Crossi	24.88	241	P	P	02 46 11.3	-1.0
	2.7nm,0.4s,baz=45,slow=12,SNR=36						
TORD	Torodi Ar. Bea	146.47	284	PKPbc	PKPbc	03 00 31.9	0.0
	0.5nm,0.4s,baz=76,slow=3.0,SNR=4.8						

ISCJB 10 02:41:05.9±0.6, 4496N±003×1498E±007, h7^{km}±10^{km}, Error ellipse: s-maj=8.0km s-min=4.5km az=175.9
VIE 10 02:41:07.0±0.7, 4502N×1494E, h8^{km}, mb2.0/1, ML2.5/1, Error ellipse: s-maj=4.4km s-min=2.5km az=166.0 55 km SE of Rijeka
ISC 10 02:41:06.5±0.6, 4494N±003×1501E±007, h9^{km}±10^{km}, n11, σ0^{s}82/18, 3C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	0.39	195	ePg	Pg	02 41 14.0	-0.2
NVLJ				Sg	Sg	02 41 20.4	+1.0
BOJS	Bojanci	0.59	17	i Pg	Pg	02 41 17.6	-0.3
BOJS				i Sg	Sg	02 41 25.8	+0.2
BOJS							
	comp=Z,36nm,0.2s						
VISS	Visnje	0.87	352	ePg	Pg	02 41 22.2	-1.0
VISS				i Sg	Sg	02 41 35.1	+0.5
CEY	Cerknica	0.90	333	i Pg	Pg	02 41 22.9	-0.8
CEY							
	comp=Z,8.0nm,0.1s						
CRES	Cresnjev	0.94	20	i Pg	Pg	02 41 24.8	+0.2
GOLS	Golise	1.15	22	ePg	Pg	02 41 29.1	+0.5
GOLS				eSg	Sg	02 41 44.5	+0.9
VOY	Vojsko	1.34	325	⇓ePg	Pg	02 41 32.0	-0.3
VOY				eSg	Sg	02 41 51.7	+2.0
DRE	Drenchia	1.56	323	⇑iPg	Pg	02 41 34.9	-1.5
DRE				i Sg	Sg	02 41 56.4	-0.3
CADS	Cadrg	1.56	326	ePn	Pn	02 41 35.4	+1.0
CADS							
	comp=Z,13nm,0.3s						
OBKA	Obir	1.60	349	⇑iPg	Pg	02 41 36.3	-0.9
OBKA				⇑iSg	Sg	02 41 57.5	-0.4
	comp=Z,10nm,0.2s						
STON	Ston	2.84	136	Sn	Sb	02 42 31.7	-0.4

IDC 10 02:54:50.3±1.9, 5414N×16406W, h0^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.6/25, mbtmp3.6/10, ML3.2/1, Error ellipse: s-maj=47.2km s-min=20.3km az=176.0
ISCJB 10 02:54:54.6±1.4, 539N±02×1640W±0.1, h54^{km}±8^{km}, mb3.5/8, Error ellipse: s-maj=30.6km s-min=10.3km az=162.6
NEIC 10 02:54:54.9, 5381N×16397W, h15^{km}, ML3.7(PMR), ML3.5(AEIC), After AEIC.
ISC 10 02:54:55.5±1.4, 539N±02×1640W±01, h43^{km}±9^{km}, n18, σ0^{s}81/19, mb3.5/8, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FALS	False Pass	1.00	20	P	Pn	02 55 13.2	+0.1
AKUT	Akutan	1.05	282	eP	Pn	02 55 13.8	0.0
AKLV	Akutan Long Va	1.17	282	P	Pn	02 55 15.5	+0.2
UNV	Unalaska Valle	1.47	268	P	Pn	02 55 18.8	-0.7
SDPT	Sand Point	2.50	54	eP	Pn	02 55 34.2	+0.5
KDAK	Kodiak Island	7.50	54	Pn	Pn	02 56 41.3	-0.9
	0.4nm,0.3s,baz=322,slow=18,SNR=7.9						
KDAK				Sn	Sn	02 58 02.2	-3.6
	0.6nm,0.3s,baz=342,slow=20,SNR=2.8						
SVW2	Sparrevohn	8.50	29	eP	Pn	02 56 57.7	+1.9
INK	Inuvik	20.28	33	P	P	02 59 23.2	-3.8
	0.2nm,0.3s,baz=135,slow=1.4,SNR=3.1						
YKA	Yellowknife Ar	26.77	52	P	P	03 00 31.0	+0.3
	0.1nm,0.3s,mb2.8,baz=278,slow=8.3,SNR=3.8						
TXAR	Lajitas Array	49.57	95	P	P	03 03 42.8	+0.7
	0.3nm,0.6s,mb3.5,baz=317,slow=8.5,SNR=3.7						
SONM	Songino Array	53.22	303	P	P	03 04 09.2	+0.1
	0.1nm,0.4s,mb3.1,baz=39,slow=7.1,SNR=3.1						
ARCES	ARCESS Array B	56.65	356	P	P	03 04 33.1	-0.5
	1.3nm,0.8s,mb4.0,baz=14,slow=7.5,SNR=4.4						
FINES	FINESS Array B	64.70	355	P	P	03 05 28.1	-0.2
	0.4nm,0.5s,mb3.7,baz=34,slow=7.1,SNR=7.1						
MKAR	Makanchi Array	65.00	316	P	P	03 05 30.4	-0.2
	0.1nm,0.3s,mb3.4,baz=43,slow=6.8,SNR=4.2						
AKTK	Aktyubinsk	70.18	333	P	P	03 06 03.9	+0.6
AKTO	Aktyubinsk	70.18	333	P	P	03 06 03.9	+0.6
	1.9nm,0.6s,mb4.2,baz=46,slow=6.1,SNR=7.9						
AKASG	Malin Array Be	75.15	351	P	P	03 06 31.7	-1.0
AKASG	Malin Array Be	75.15	351	P	P	03 06 31.7	-1.0
	0.3nm,0.4s,mb3.6,baz=9.5,slow=5.2,SNR=3.2						

ISCJB 10 02:57:34.3±0.9, 2796S±005×667W±0.1, h151^{km}±10^{km}, mb4.0/13, Error ellipse: s-maj=14.7km s-min=9.0km az=175.6
IDC 10 02:57:34.4±1.7, 2793S×6661W, h137^{km}±16^{km}, mb4.1/8, mb1 4.1/11, mb1mx4.0/18, mbtmp4.1/11, Error ellipse: s-maj=22.5km s-min=12.2km az=96.0
NEIC 10 02:57:35.1±0.6, 2792S×6665W, h145^{km}±6^{km}, mb4.1/5, Error ellipse: s-maj=11.3km s-min=6.2km az=90.0
ISC 10 02:57:35.0±0.9, 2793S±005×667W±01, h142^{km}±10^{km}, n35, σ0^{s}74/25, mb4.0/13, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	3.70	252	ePn	Pn	02 58 31.9	+0.7
LCO				eSn	Sn	02 59 13.9	-0.7
CFAA	Coronel Fontan	3.90	200	P	Pn	02 58 34.8	+1.1
	20nm,0.3s,baz=16,slow=12,SNR=1317						
CFAA				S	Sn	02 59 18.6	-0.8
	31nm,0.3s,baz=131,slow=20,SNR=33						
MDZ	Mendoza	5.28	200	eP	Pn	02 58 52.1	+0.1
TRQA	Tornquist	10.84	160	ePn	Pn	03 00 05.2	-1.0
	6.7nm,0.5s						
LPAZ	La Paz	11.67	353	P	Pn	03 00 17.9	+0.7
	3.6nm,0.3s,baz=166,slow=10,SNR=68						
SIV	San Ignacio	12.97	25	P	Pn	03 00 34.6	+0.5
	1.1nm,0.3s,baz=212,slow=14,SNR=70						
USHA	Ushuaia	26.91	182	P	P	03 03 02.2	-0.3
	2.2nm,0.4s,mb4.2,baz=337,slow=8.5,SNR=8.9						
SDV	Santo Domingo	36.80	353	eP	P	03 04 27.7	-1.5
	6.9nm,0.8s,mb4.3						
VNA3	Neumayer Olymp	53.36	160	e	P	03 06 39.4	+0.1
VNA2	Neumayer--Watz	53.94	160	e	P	03 06 44.2	+0.7
	baz=293,slow=8.2						
SNAA	Sanae	55.57	160	P	P	03 06 55.6	+0.4
	3.9nm,0.6s,mb4.4,baz=277,slow=8.5,SNR=26						
TXAR	Lajitas Array	67.05	325	P	P	03 08 13.7	+0.8
	0.4nm,1.0s,mb3.2,baz=180,slow=11,SNR=2.9						
DBIC	Dimbokro	68.82	70	P	P	03 08 23.0	-1.4
DBIC	Dimbokro	68.82	70	P	P	03 08 23.0	-1.4
	4.7nm,0.6s,mb4.4,baz=200,slow=7.5,SNR=8.0						
VNDA	Vanda	70.89	190	P	P	03 08 37.0	+1.0
	2.5nm,0.8s,mb4.0,baz=135,slow=4.6,SNR=11						
TSUM	Tsumeb	76.35	105	eP	P	03 09 09.2	+0.3
	1.1nm,0.7s,mb3.6						
MAW	Mawson	77.61	162	P	P	03 09 15.5	+0.4
	5.4nm,0.8s,mb4.2,baz=238,slow=6.7,SNR=3.8						
TORD	Torodi Ar. Bea	77.74	68	P	P	03 09 15.7	-0.9
	7.9nm,0.7s,mb4.5,baz=259,slow=5.2,SNR=25						
BOSA	Boshof	78.71	116	P	P	03 09 22.4	+0.5
	4.6nm,0.7s,mb4.2,baz=178,slow=1.2,SNR=12						
LOHW	Long Hollow	81.80	329	eP	P	03 09 38.2	+0.4
	0.8nm,0.6s,mb3.5						
ULM	Lac du Bonnet	82.03	342	P	P	03 09 38.2	-0.7
ULM	Lac du Bonnet	82.03	342	P	P	03 09 38.2	-0.7
	0.7nm,0.5s,mb3.5,baz=148,slow=8.0,SNR=3.1						
FCC	Fort Churchill	89.33	346	eP	P	03 10 14.3	-0.4
	1.3nm,0.5s,mb4.1						
ASAR	Alice Springs	125.00	203	PKP	PKPdf	03 16 17.6	-1.3
	2.0nm,0.6s,baz=132,slow=1.8,SNR=34						
WRA	Warramunga Arr	128.25	205	PKP	PKPdf	03 16 24.2	-1.0
	3.6nm,0.7s,baz=154,slow=2.0,SNR=89						
FITZ	Fitzroy Crossi	132.71	196	PKP	PKPdf	03 16 33.3	-0.4
	3.8nm,1.0s,baz=153,slow=2.3,SNR=5.4						
EKS2	Erkin-Say	144.87	55	ePKPdf	PKPdf	03 16 54.9	-0.2
KURK	Kurchatov	145.30	39	ePKPbc	PKPbc	03 16 56.0	+0.4
AAK	Ala-Archa	145.40	55	ePKPbc	PKPbc	03 16 56.3	+0.1
UCH	Uchtor	145.50	55	ePKPbc	PKPbc	03 16 57.9	+1.4
TKM2	Tokmak 2	146.12	54	ePKPbc	PKPbc	03 17 01.5	+3.1
ZAA0	Zalesovo Array	146.66	31	ePKPbc	PKPbc	03 16 58.7	-0.9
ZALV	Zalesovo Beam	146.66	31	PKPbc	PKPbc	03 16 59.9	+0.3
	2.8nm,0.3s,baz=308,slow=4.0,SNR=19						
MKAR	Makanchi Array	149.26	44	PKPbc	PKPbc	03 17 06.9	+0.2
	1.7nm,0.6s,baz=307,slow=2.6,SNR=24						
ULN	Ulaanbaatar	159.51	12	ePKPab	PKPab	03 17 54.2	-0.9

NEIC 10 03:04:24.7, 1824N×10326W, h15^{km}, MD4.1(MEX), After MEX.
MEX 10 03:04:24.5±1.1, 1822N×10326W, h15^{km}, MD4.1, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	1.81	109	i P	Pn	03 04 51.6	-3.5
ZIIG				i S	Sn	03 05 14.8	-3.0
ZIIG	Zihuatanejo	1.81	109	i P	Pn	03 04 51.4	-3.7
ZIIG				i S	Sn	03 05 14.0	-3.8
CJM	Chamela	2.12	307	i P	Pn	03 04 56.5	-2.8
CJM				i S	Sn	03 05 21.7	-3.7
SFJM	Santa Fe	2.26	5	i P	Pn	03 04 58.5	-2.9
SFJM				i S	Sn	03 05 26.0	-3.1
MOIG	Morelia	2.43	53	i P	Pn	03 05 00.3	-3.5
MOIG				i S	Sn	03 05 29.2	-4.0
ANIG	Ahuacatlan	3.06	337	i P	Pn	03 05 08.0	-4.4
ANIG				i S	Sn	03 05 43.9	-4.8
CAIG	El Cayaco	3.08	112	i P	Pn	03 05 08.7	-3.9
CAIG				i S	Sn	03 05 46.0	-3.2
ACX	Acapulco	3.46	112	eP	Pn	03 05 32.9	+15
ACX	Acapulco	3.46	112	i P	Pn	03 05 19.1	+1.3
MEIG	Mezcala	3.47	94	i P	Pn	03 05 17.7	-0.3
MEIG				i S	Sn	03 05 54.2	-4.7
SZVM	Salazar	3.83	73	i P	Pn	03 05 22.1	-0.8
SZVM				i S	Sn	03 06 08.2	+0.5
PPM	Popocatepetl	4.47	78	i P	Pn	03 05 35.1	+3.4
PPM				i S	Sn	03 06 27.3	+3.8
PPM	Popocatepetl	4.47	78	i P	Pn	03 05 31.1	-0.6
PPM				i S	Sn	03 06 23.9	+0.4
ZAIG	Zacatecas	4.57	8	i P	Pn	03 05 36.7	+3.6
ZAIG				i S	Sn	03 06 34.0	+8.0
ZAIG	Zacatecas	4.57	8	i P	Pn	03 05 32.8	-0.3
ZAIG				i S	Sn	03 06 26.0	0.0

IDC 10 03:19:47.1±2.7, 684N×12523E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=256.2km s-min=25.5km az=65.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	28.09	162	P	P	03 25 41.1	+0.4
	0.5nm,0.3s,baz=342,slow=9.4,SNR=6.6						
ASAR	Alice Springs	31.48	165	P	P	03 26 10.6	-0.2
	1.0nm,0.3s,baz=339,slow=7.6,SNR=33						
MKAR	Makanchi Array	54.17	325	P	P	03 29 14.3	0.0
	0.1nm,0.4s,baz=133,slow=6.7,SNR=2.5						

NEIC 10 03:24:27.9, 1688N×9985W, h12^{km}, MD3.8(MEX), After MEX.
MEX 10 03:24:27.9±1.2, 1687N×9984W, h13^{km}±11^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.07	267	i P	Pg	03 24 29.5	-1.0
CAIG	El Cayaco	0.44	294	i P	Pg	03 24 36.2	-0.4
CAIG				i S	Sg	03 24 41.7	-0.9
MEIG	Mezcala	1.07	11	i P	Pb	03 24 44.5	-3.9
MEIG				i S	Sb	03 24 59.0	-3.3
PLIG	Platanillo	1.55	12	i P	Pn	03 24 52.4	-2.8
PLIG				i S	Sn	03 25 09.1	-6.1
PPM	Popocatepetl	2.47	28	i P	Pn	03 25 04.2	-3.7
PPM				i S	Sn	03 25 35.8	-2.2
TPIG	Tehuac#an	2.82	57	i P	Pn	03 25 08.8	-4.0
TPIG				i S	Sn	03 25 41.1	-5.6
IIO	Organos	2.91	21	i P	Pn	03 25 18.1	+4.2
IIO				i S	Sn	03 25 52.6	+3.8
VHO	Vista Hermosa	2.98	86	i P	Pn	03 25 16.6	+1.6
VHO				i S	Sn	03 25 52.1	+1.5
VHO	Vista Hermosa	2.98	86	i P	Pn	03 25 11.8	-3.2
VHO				i S	Sn	03 25 49.5	-1.1

IDC 10 03:27:08.8±1.4, 131S×12660E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.7/4, Error ellipse: s-maj=59.9km s-min=23.7km az=58.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.01	158	P	P	03 31 42.7	-0.5
	0.8nm,0.6s,baz=340,slow=11,SNR=17						
PMG	Port Moresby	21.98	112	P	P	03 32 05.6	+1.0
	5.0nm,0.5s,baz=281,slow=19,SNR=3.8						
ASAR	Alice Springs	23.33	163	P	P	03 32 18.6	-0.2
	0.9nm,0.7s,baz=340,slow=8.9,SNR=12						
MKAR	Makanchi Array	61.64	327	P	P	03 37 28.4	0.0
	0.3nm,0.3s,baz=116,slow=7.4,SNR=8.3						

MAN 10 04:18:52, 1028N×12507E, h41^{km}, mb4.3, ML3.1, MS2.9, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.65	140	eP	Pn	04 19 06.5	+1.7
SCPH				eS	Sn	04 19 17.1	+3.1
PLP	Palo	0.88	354	eP	Pn	04 19 09.5	+1.6
PLP				eS	Sn	04 19 21.6	+2.0

NEIC 10 04:54:04.2, 1693N×9990W, h6^{km}, MD3.7(MEX), After MEX.
MEX 10 04:54:03.9±0.7, 1694N×9988W, h8^{km}±32^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.08	210	i P	Pg	04 54 05.0	-0.9
CAIG	El Cayaco	0.39	287	i P	Pg	04 54 11.5	0.0
CAIG				i S	Sg	04 54 16.7	0.0
MEIG	Mezcala	1.01	14	i P	Pg	04 54 20.7	-2.7
MEIG				i S	Sg	04 54 32.7	-4.0
PLIG	Platanillo	1.49	14	eP	Pn	04 54 27.9	-3.2
PLIG				i S	Sn	04 54 46.0	-4.8
SZVM	Salazar	2.42	11	i P	Pn	04 54 43.0	-0.8
SZVM				i S	Sn	04 55 09.9	-3.8
PPM	Popocatepetl	2.43	29	i P	Pn	04 54 42.9	-1.1
PPM				i S	Sn	04 55 10.6	-3.4
VHO	Vista Hermosa	3.01	87	i P	Pn	04 54 52.4	+0.4
VHO				i S	Sn	04 55 28.0	-0.3
VHO	Vista Hermosa	3.01	87	i P	Pn	04 54 49.6	-2.3
VHO				i S	Sn	04 55 25.8	-2.5
CMIG	Matias Romero	4.78	87	eP	Pn	04 55 19.5	+3.2
CMIG				i S	Sn	04 56 09.6	-2.4
CMIG	Matias Romero	4.78	87	eP	Pn	04 55 14.3	-2.0
CMIG				i S	Sn	04 56 09.6	-2.4

FUNV 10 05:03:56.6, 976N×6972W, h5^{km}, MW3.6, 7C-5D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANV	Sanarito	0.32	144	⇓iP	Pg	05 04 02.4	-0.3
SANV				eS	Sg	05 04 06.8	-0.1
CURV	Curarigua	0.34	317	⇓iP	Pg	05 04 02.8	-0.5
CURV				eS	Sg	05 04 07.6	-0.2
TEPV	Terepaima	0.56	69	⇓eP	Pg	05 04 07.4	0.0
TEPV				eS	Sg	05 04 14.7	0.0
SIQV	Siquisique	0.89	355	⇑eP	Pg	05 04 13.5	-0.2
SIQV				eS	Sg	05 04 25.5	+0.3
QARV	Quebrada Arrib	0.91	299	⇓iP	Pg	05 04 13.6	-0.4
QARV				eS	Sg	05 04 26.1	+0.3
DABV	Dabajuro	1.46	322	eP	Pn	05 04 23.3	-0.4
DABV				eS	Sn	05 04 43.7	+0.4
JACV	Jacura	1.58	34	⇑eP	Pn	05 04 25.0	-0.4
JACV				eS	Sn	05 04 46.8	+0.6
SOCV	Socops	1.84	217	⇑eP	Pn	05 04 27.2	-1.7
SOCV				eS	Sn	05 04 52.3	-0.3
BAUV	El Baul	1.85	116	eP	Pn	05 04 27.8	-1.2
BAUV				eS	Sn	05 04 51.9	-0.8
VIGV	El Vigia	1.86	241	⇑iP	Pn	05 04 29.2	+0.1
VIGV				eS	Sn	05 04 52.9	-0.1
TURV	Turiamo	1.98	70	⇑iP	Pn	05 04 29.7	-1.0
VIRV	Villa del Rosa	2.74	286	⇓eP	Pn	05 04 40.0	-1.3
VIRV				eS	Sn	05 05 12.3	-2.5
ELOV	Elorza	2.75	175	⇑eP	Pn	05 04 40.1	-1.3
ELOV				eS	Sn	05 05 13.2	-1.9
FUNV	FUNVISIS	2.95	76	eP	Pn	05 04 44.0	-0.2
CAPV	Capacho	3.18	234	eP	Pn	05 04 47.4	+0.1
CAPV				eS	Sn	05 05 24.2	-1.4
MERV	Las Mercedes	3.42	98	eP	Pn	05 04 49.9	-0.7
BIRV	Birongo	3.47	78	eP	Pn	05 04 51.2	-0.1
CUPV	Cœpira	3.89	85	⇑eP	Pn	05 04 56.6	-0.4
CAOV	Caicara del Or	4.14	125	eP	Pn	05 04 58.9	-1.7
PCRV	Puerto La Cruz	5.03	85	eP	Pn	05 05 12.8	0.0
PRGV	PARIAGUAN	5.11	101	eP	Pn	05 05 12.5	-1.4
LUEV	Luepa	9.06	115	eP	Pn	05 06 04.8	-3.4

IDC 10 05:13:45.9±1.0, 4899N×15463E, h0^{km}, mb3.6/6, mb1 3.8/6, mb1mx3.5/20, mbtmp3.6/6, Error ellipse: s-maj=40.4km s-min=23.9km az=108.0
MOS 10 05:13:48.5±1.6, 4916N×15472E, h33^{km}, mb4.1/1, Error ellipse: s-maj=72.0km s-min=27.4km az=75.5
ISCJB 10 05:13:49.1±0.9, 490N±0.1×1546E±03, h33^{km}, mb3.5/6, Error ellipse: s-maj=32.5km s-min=11.0km az=33.1
ISC 10 05:13:51.4±0.9, 490N±01×1545E±03, h35^{km}, n8, σ0^{s}49/9, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PET	Petropavlovsk	4.82	31	ePN	Pn	05 14 55.6	-5.8
PET				eS	Sn	05 15 56.5	+0.5
PET				smax			
	comp=E,43nm,0.5s						
PET				smax			
	comp=N,51nm,0.4s						
MKAR	Makanchi Array	46.79	296	P	P	05 22 17.3	+0.2
	comp=N,0.2nm,0.5s,mb3.3,baz=64,slow=8.3,SNR=4.0						
YKA	Yellowknife Ar	48.58	38	P	P	05 22 30.3	-0.6
	comp=N,0.2nm,0.7s,mb3.3,baz=294,slow=7.4,SNR=4.3						
FINES	FINESS Array B	62.43	335	P	P	05 24 10.2	-0.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	62.43	335	P	P	05 24 10.2	-0.1
	comp=Z,0.5nm,0.4s,mb4.0,baz=39,slow=7.1,SNR=8.5						
SCHQ	Schefferville	70.89	24	P	P	05 25 03.7	-0.6
	comp=Z,0.7nm,0.3s,mb4.0,baz=280,slow=6.1,SNR=5.1						
WRA	Warramunga Arr	70.92	200	P	P	05 25 04.7	-0.1
	comp=Z,0.3nm,0.5s,mb3.4,baz=15,slow=6.4,SNR=6.9						
ASAR	Alice Springs	74.62	200	P	P	05 25 27.5	+0.8
	comp=Z,0.2nm,0.5s,mb3.3,baz=12,slow=5.8,SNR=5.1						

ISCJB 10 05:31:02.3±0.7, 3.1S±0.1×1014E±02, h54^{km}, mb4.3/12, Error ellipse: s-maj=28.7km s-min=9.2km az=144.1
NEIC 10 05:31:04.0±0.5, 325S×10136E, mb4.4/4, Error ellipse: s-maj=22.3km s-min=7.4km az=55.0
NEIC Felt [III] at Bengkulu and [II] at Argamakmur.
IDC 10 05:31:04.1±0.9, 315S×10143E, h52^{km}±6^{km}, mb4.1/9, mb1 4.2/10, mb1mx3.9/21, mbtmp4.1/10, MS3.1/1, Ms1 3.1/1, ms1mx2.9/39, Error ellipse: s-maj=32.7km s-min=12.7km az=52.0
ISC 10 05:31:04.4±0.7, 32S±01×1014E±02, h56^{km}, h56^{km}±.5^{km}:pP-P, n20, σ0^{s}77/19, mb4.3/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.44	337	P	Pn	05 32 35.5	-1.2
PSI				LR	LR	05 35 15.7	
PSI	Prapat	6.44	337	P	Pn	05 32 35.5	-1.2
	2.2nm,0.3s,baz=107,slow=1.5,SNR=7.6						
PSI				LR	LR	05 35 15.7	
	comp=Z,142nm,18.6s,baz=168,slow=40						
KULM	Kulim	8.45	355	ePn	Pn	05 33 06.7	+2.4
FITZ	Fitzroy Crossi	27.99	124	P	P	05 36 49.8	-0.3
	4.7nm,0.7s,mb4.2,baz=268,slow=3.2,SNR=10.0						
WRA	Warramunga Arr	36.19	120	P	P	05 38 01.8	-0.1
	5.3nm,0.5s,mb4.8,baz=302,slow=8.9,SNR=40						
WRA				pP	pP	05 38 15.5	-0.7
	2.6nm,0.5s,baz=302,slow=8.9,SNR=7.5						
WB2	Warramunga Arr	36.20	120	eP	P	05 38 01.3	-0.7
ASAR	Alice Springs	37.42	126	P	P	05 38 12.8	+0.4
	4.2nm,0.4s,mb4.6,baz=298,slow=8.1,SNR=70						
CTAO	Charters Tower	46.83	115	eP	P	05 39 28.9	-0.1
	7.1nm,1.1s,mb4.5						
STKA	Stephens Creek	47.32	132	eP	P	05 39 33.5	+0.8
	1.8nm,0.4s,mb4.3						
STKA	Stephens Creek	47.32	132	P	P	05 39 33.2	+0.5
	2.4nm,0.8s,mb4.2,baz=289,slow=9.7,SNR=4.8						
SONM	Songino Array	50.99	4	P	P	05 40 01.1	+0.7
	0.7nm,0.5s,mb3.9,baz=187,slow=9.4,SNR=11						
TKM2	Tokmak 2	51.47	336	eP	P	05 40 04.2	+0.1
	3.2nm,0.8s,mb4.3						
EKS2	Erkin-Say	52.03	334	eP	P	05 40 08.6	+0.4
EKS2				epP	pP	05 40 23.1	-0.1
MKAR	Makanchi Array	52.55	344	P	P	05 40 11.8	-0.3
MKAR				pP	pP	05 40 26.6	-0.5
MKAR	Makanchi Array	52.55	344	P	P	05 40 11.8	-0.2
	2.4nm,0.7s,mb4.2,baz=152,slow=8.2,SNR=21						
MKAR				pP	pP	05 40 26.6	-0.5
	1.1nm,0.5s,baz=146,slow=7.8,SNR=5.7						
KURK	Kurchatov	57.14	343	eP	P	05 40 44.5	-0.7
	2.0nm,0.7s,mb4.3						
ZALV	Zalesovo Beam	58.59	349	P	P	05 40 54.6	-0.7
	1.9nm,0.4s,mb4.5,baz=163,slow=5.6,SNR=13						
ZALV				pP	pP	05 41 09.6	-1.0
	1.9nm,0.3s,baz=154,slow=5.8,SNR=6.4						
MATP	Matopo	72.88	250	P	P	05 42 28.8	+0.8
	2.0nm,0.5s,mb4.3,baz=113,slow=5.1,SNR=7.8						
ARCES	ARCESS Array B	88.06	340	P	P	05 43 47.8	-0.5
	2.5nm,1.0s,mb4.4,baz=94,slow=6.4,SNR=2.8						
TXAR	Lajitas Array	144.75	40	PKP	PKPdf	05 50 35.0	-0.6
	0.5nm,0.6s,baz=336,slow=1.0,SNR=6.4						
TXAR				pPKP	pPKPdf	05 50 50.1	-2.3
	0.8nm,0.5s,baz=197,slow=1.3,SNR=7.4						

ISCJB 10 05:53:52.0±2.4, 1774N±005×11961E±004, h4^{km}±17^{km}, mb4.1/19, MS3.2/2, Error ellipse: s-maj=8.7km s-min=5.8km az=21.3
IDC 10 05:53:51.3±0.7, 1753N×11991E, h0^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.1/21, mbtmp4.0/12, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx3.2/27, Error ellipse: s-maj=26.5km s-min=14.8km az=81.0
MAN 10 05:53:53, 1769N×11953E, h12^{km}, mb4.7, ML3.6, MS3.6
NEIC 10 05:53:53.3±7.7, 1752N×11983E, h15^{km}±48^{km}, mb4.4/9, Error ellipse: s-maj=10.1km s-min=7.6km az=60.0
ISC 10 05:53:53.6±1.5, 1767N±005×11965E±005, h7^{km}±9^{km}, n38, σ1^{s}09/40, mb4.1/20, MS3.2/2, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	1.01	91	eP	Pg	05 54 12.7	-0.3
ABRA				eS	Sg	05 54 26.7	+0.5
BOLP	Bolinao	1.30	169	eP	Pn	05 54 16.9	-1.4
APYP	Conner	1.53	82	eP	Pn	05 54 20.9	-0.4
BCPH	Baguio City Da	1.56	145	⇑eP	Pn	05 54 20.7	-1.0
BCPH				i S	Sn	05 54 43.2	+1.0
SCZP	Santa Cruz	1.90	172	eP	Pn	05 54 26.1	-0.3
CVP	Callao Caves	2.07	89	eP	Pn	05 54 29.5	+0.7
CVP				eS	Sn	05 54 56.0	+1.2
SGCP	Mt. Cagua	2.35	76	eP	Pn	05 54 32.0	-0.7
PCPH	Palayan	2.51	146	⇓eP	Pn	05 54 35.8	+1.0
BALP	Baler	2.66	136	eP	Pn	05 54 38.4	+1.5
PALP	Palanan	2.72	102	eP	Pn	05 54 39.3	+1.6
PALP				i S	Sn	05 55 18.2	+7.4
PALP	Palanan	2.72	102	eP	Pn	05 54 39.3	+1.7
JOW	Kunigami	12.12	40	LR	LR	06 00 59.8	
	comp=Z,262nm,21.8s,baz=196,slow=36						

JNU	**Nakatsue**	**18.41**	**31**	P	**Pn**	**05 58 08.6**	**-0.8**
	0.2nm,0.3s,baz=83,slow=23,SNR=4.8						
JNU				LR	LR	06 05 36.1	
	comp=Z,116nm,18.1s,baz=22,slow=38						
KSRS	**Korea Array**	**21.01**	**19**	P	**P**	**05 58 37.0**	**-0.8**
	6.6nm,0.8s,mb4.0,baz=201,slow=11,SNR=15						
KSRS				LR	LR	06 07 39.8	
	comp=Z,57nm,18.2s,MS3.0,baz=6.1,slow=39						
MJAR	**Matsushiro Arr**	**24.95**	**37**	P	**P**	**05 59 15.8**	**-1.8**
	0.7nm,0.3s,mb3.6,baz=220,slow=11,SNR=3.5						
PSI	**Prapat**	**25.13**	**236**	P	**P**	**05 59 20.4**	**+0.9**
	4.5nm,1.0s,mb4.0,baz=70,slow=13,SNR=4.6						
PSI				LR	LR	06 08 21.7	
	comp=Z,122nm,18.5s,MS3.4,baz=195,slow=34						
TAPN	**Taplejung**	**30.96**	**294**	*e*P	**P**	**06 00 12.2**	**+0.6**
ODAN	**Odare**	**31.15**	**293**	*e*P	**P**	**06 00 14.0**	**+0.8**
	16nm,0.7s,mb5.0						
SONM	**Songino Array**	**31.99**	**343**	P	**P**	**06 00 21.0**	**+0.7**
	0.2nm,0.5s,mb3.2,baz=150,slow=12,SNR=3.2						
JIRN	**Jiri**	**32.35**	**294**	*e*P	**P**	**06 00 24.8**	**+1.1**
	14nm,0.7s,mb4.9						
GKN	**Gorkha**	**33.76**	**294**	*e*P	**P**	**06 00 36.1**	**0.0**
WRA	**Warramunga Arr**	**40.06**	**158**	P	**P**	**06 01 26.1**	**-3.6**
	2.4nm,0.7s,mb4.0,baz=341,slow=9.0,SNR=17						
WB2	**Warramunga Arr**	**40.06**	**158**	*e*P	**P**	**06 01 25.9**	**-3.8**
MKAR	**Makanchi Array**	**42.28**	**322**	P	**P**	**06 01 48.8**	**+1.1**
	1.2nm,0.9s,mb3.5,baz=120,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**43.38**	**161**	P	**P**	**06 01 54.2**	**-2.6**
	3.3nm,0.7s,mb4.2,baz=340,slow=6.7,SNR=51						
TKM2	**Tokmak 2**	**44.93**	**314**	*e*P	**P**	**06 02 07.0**	**-2.1**
	1.1nm,0.7s,mb3.8						
ZALV	**Zalesovo Beam**	**45.10**	**332**	P	**P**	**06 02 10.9**	**+0.6**
	0.4nm,0.3s,mb3.7,baz=126,slow=7.7,SNR=4.2						
UCH	**Uchtor**	**45.45**	**312**	*e*P	**P**	**06 02 14.5**	**+1.2**
	5.5nm,1.1s,mb4.3						
AML	**Almayashu**	**46.00**	**312**	*e*P	**P**	**06 02 18.0**	**+0.4**
	6.3nm,1.1s,mb4.5						
EKS2	**Erkin-Say**	**46.11**	**313**	*e*P	**P**	**06 02 19.5**	**+1.1**
	1.8nm,0.8s,mb4.0						
KURK	**Kurchatov**	**46.36**	**325**	*e*P	**P**	**06 02 20.8**	**+0.4**
	4.4nm,0.8s,mb4.4						
BRVK	**Borovoye**	**52.03**	**324**	*e*P	**P**	**06 03 03.5**	**-0.2**
	1.8nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**53.57**	**157**	P	**P**	**06 03 12.7**	**-2.6**
	5.4nm,0.8s,mb4.5,baz=324,slow=9.1,SNR=7.7						
MCK	**McKinley**	**74.95**	**27**	*e*P	**P**	**06 05 34.2**	**-0.9**
	5.0nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**76.35**	**330**	P	**P**	**06 05 43.1**	**-0.1**
	1.1nm,0.8s,mb3.8,baz=27,slow=0.9,SNR=4.1						
INK	**Inuvik**	**79.78**	**21**	*e*P	**P**	**06 06 01.3**	**-0.8**
YKA	**Yellowknife Ar**	**89.51**	**22**	P	**P**	**06 06 50.6**	**-0.7**
	0.7nm,0.6s,mb4.2,baz=313,slow=4.4,SNR=23						
SDV	**Santo Domingo**	**151.73**	**22**	*e*PKPbc	PKPbc	06 13 48.0	-1.9

*IDC **10** 06:10:15.4±5.8, 35.15N×21.06E, h0^{km}, mb3.9/3, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, ML3.3/2, Error ellipse: s-maj=103.5km s-min=33.9km az=29.0*
*ISCJB **10** 06:10:19.0±1.5, 35.20N±0.09×20.97E±0.08, h44^{km}±13^{km}, mb4.0/3, Error ellipse: s-maj=15.4km s-min=9.8km az=28.5*
*ATH **10** 06:10:18.5, 35.27N×20.89E, h38^{km}±33^{km}, MD3.6/8*
*NEIC **10** 06:10:18.3, 35.38N×20.97E, h20^{km}, MD3.6(ATH), MD3.3(ISK), After ATH.*
*CSEM **10** 06:10:19.2±0.5, 35.34N×20.94E, h10^{km}, MD3.6, Error ellipse: s-maj=11.3km s-min=6.7km az=7.0*
ISC 10 06:10:20.7±1.5**, 35.21N**±0.09×**21.01E**±0.08**, h38**^{km}±14^{km}**, n17,** σ0^s**86**/21**, mb4.0**/3**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	**Kithira**	**1.96**	**57**	*e*PN	**Pn**	**06 10 51.5**	**+0.1**
ITM	**Ithomi**	**2.10**	**21**	*e*PN	**Pn**	**06 10 53.5**	**+0.2**
ITM				*e*SN	**Sn**	**06 11 17.7**	**-0.4**
VLI	**Veliai**	**2.17**	**46**	*e*PN	**Pn**	**06 10 54.8**	**+0.6**
VLI				*e*SN	**Sn**	**06 11 21.2**	**+1.3**
RLS	**Riolos of Patr**	**2.86**	**7**	*e*PN	**Pn**	**06 11 03.8**	**0.0**
RLS				*e*SN	**Sn**	**06 11 35.7**	**-1.3**
VLS	**Valsamata**	**2.98**	**354**	*e*PN	**Pn**	**06 11 05.1**	**-0.2**
IDI	**Anoyia**	**3.18**	**88**	Pn	**Pn**	**06 11 07.9**	**-0.3**
	0.8nm,0.3s,baz=347,slow=19,SNR=10						
IDI				Sn	**Sn**	**06 11 43.7**	**-1.1**
	8.9nm,0.3s,baz=315,slow=22,SNR=22						
EVR	**Evrytania**	**3.75**	**10**	P	**Pn**	**06 11 18.6**	**+2.6**
LKR	**Lokris**	**3.78**	**24**	*e*PN	**Pn**	**06 11 16.0**	**-0.4**
THL	**Klokotos Trika**	**4.42**	**10**	*e*PN	**Pn**	**06 11 25.2**	**+0.1**
NEO	**Neokhori**	**4.45**	**23**	P	**Pn**	**06 11 27.2**	**+1.6**
KEK	**Kerkira**	**4.59**	**348**	*e*PN	**Pn**	**06 11 26.8**	**-0.7**
TIP	**Timpagrande**	**5.21**	**321**	P	**Pn**	**06 11 35.8**	**-0.2**
PLG	**Polygyros**	**5.50**	**20**	P	**Pn**	**06 11 39.8**	**-0.2**
AKASG	**Malin Array Be**	**16.59**	**19**	Pn	**Pn**	**06 14 08.8**	**-1.4**
	0.5nm,0.3s,baz=209,slow=9.7,SNR=4.4						
ARCES	**ARCESS Array B**	**34.47**	**3**	P	**P**	**06 17 05.2**	**+0.9**
	3.1nm,1.0s,mb4.2,baz=186,slow=9.7,SNR=6.2						
MKAR	**Makanchi Array**	**46.58**	**56**	P	**P**	**06 18 44.6**	**0.0**
	1.5nm,0.5s,mb4.2,baz=269,slow=7.6,SNR=25						
ZALV	**Zalesovo Beam**	**47.42**	**46**	P	**P**	**06 18 50.9**	**-0.2**
	0.3nm,0.4s,mb3.6,baz=289,slow=5.8,SNR=2.6						

*IDC **10** 06:11:50.5±0.9, 65.14N×139.21W, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, ML3.6/2, Error ellipse: s-maj=15.6km s-min=9.6km az=50.0*
*ISCJB **10** 06:11:51.1±0.4, 65.28N±0.03×138.70W±0.08, h10^{km}, mb4.0/7, Error ellipse: s-maj=4.6km s-min=4.0km az=16.7*
*BJI **10** 06:11:51.0, 65.30N×139.10W, h5^{km}, mB4.8, mb4.7, Ms4.6, Msz4.3*
*PGC **10** 06:11:52.6±1.9, 65.29N×139.07W, h1^{km}, ML4.0/4, 138km Nne of Dawson, Yt Northern Yukon Territory, Canada*
*NEIC **10** 06:11:52.6, 65.29N×139.07W, h1^{km}, ML4.0(PGC), ML3.7(AEIC), After PGC.*
ISC 10 06:11:53.0±0.4**, 65.24N**±0.03×**138.73W**±0.07**, h10**^{km}**, n44,** σ1^s**25**/58**, mb4.0**/7**, Northern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.13**	**247**	P	**Pb**	**06 12 11.8**	**-2.8**
EGAK				S	**Sb**	**06 12 27.0**	**-2.4**
DAWY	**Dawson**	**1.22**	**194**	P	**Pn**	**06 12 14.9**	**-1.1**
DAWY				S	**Sb**	**06 12 31.4**	**-0.4**
DAWY	**Dawson**	**1.22**	**194**	Trac			
DAWY	**Dawson**	**1.22**	**194**	P	**Pn**	**06 12 15.1**	**-1.0**
DAWY				S	**Sb**	**06 12 30.9**	**-0.8**
BCA3	**Beaver Creek A**	**2.56**	**213**	P	**Pn**	**06 12 34.2**	**-0.3**
BCA3				S	**Sn**	**06 13 07.8**	**+2.1**
DOT	**Dot Lake**	**2.81**	**238**	P	**Pn**	**06 12 36.9**	**-1.0**
DOT				S	**Sn**	**06 13 14.3**	**+2.4**
MENT	**Mentasta**	**3.19**	**226**	*e*P	**Pn**	**06 12 43.5**	**+0.4**
BM3	**Burnt Mountain**	**3.23**	**315**	P	**Pn**	**06 12 43.0**	**-0.7**
IL1	**Eielson Array**	**3.50**	**266**	P	**Pn**	**06 12 45.6**	**-1.7**
INK	**Inuvik**	**3.71**	**31**	Pn	**Pn**	**06 12 51.1**	**+0.9**
	1.6nm,0.3s,baz=228,slow=16,SNR=54						
INK				Pg	**Pg**	**06 12 59.5**	**-4.4**
	5.7nm,0.3s,baz=227,slow=16,SNR=29						
INK				Sn	**Sn**	**06 13 34.6**	**+0.8**
	16nm,0.3s,baz=265,slow=24,SNR=7.0						
INK				Lg		06 13 50.9	
	22nm,0.3s,baz=119,slow=19,SNR=7.1						
INK	**Inuvik**	**3.71**	**31**	Trac			
INK	**Inuvik**	**3.71**	**31**	Pn	**Pn**	**06 12 50.3**	**+0.1**
INK				Pg	**Pg**	**06 12 59.3**	**-4.6**
INK				Sn	**Sn**	**06 13 34.0**	**+0.1**
PAX	**Paxson**	**3.73**	**235**	P	**Pn**	**06 12 50.5**	**-0.1**
COLA	**College**	**3.88**	**269**	P	**Pn**	**06 12 51.0**	**-1.6**
HYT	**Haines Junctio**	**4.47**	**172**	Trac			
HYT	**Haines Junctio**	**4.47**	**172**	Pn	**Pn**	**06 13 02.1**	**+1.4**
HYT				Pg	**Pg**	**06 13 13.3**	**-5.2**
HYT				Sn	**Sn**	**06 13 52.5**	**-0.2**
HYT				Sg	**Sg**	**06 14 14.2**	**-2.2**
MCK	**McKinley**	**4.67**	**256**	P	**Pn**	**06 13 03.4**	**0.0**
WHY	**Whitehorse**	**4.92**	**157**	P	**Pn**	**06 13 08.1**	**+1.2**
WHY	**Whitehorse**	**4.92**	**157**	Trac			
WHY	**Whitehorse**	**4.92**	**157**	Pn	**Pn**	**06 13 08.0**	**+1.1**
WHY				Sn	**Sn**	**06 14 03.6**	**-0.2**
WHY				Sg	**Sg**	**06 14 28.6**	**-2.3**
TRF	**Thorofare Moun**	**5.33**	**256**	P	**Pn**	**06 13 12.6**	**0.0**
KTH	**Kantishna Hill**	**5.55**	**258**	P	**Pn**	**06 13 14.9**	**-0.7**
PNL	**Peninsula**	**5.60**	**183**	P	**Pn**	**06 13 18.6**	**+2.3**
EYAK	**Cordova Ski Ar**	**5.70**	**217**	P	**Pn**	**06 13 18.9**	**+1.3**
GHO	**Glory Hole Cre**	**5.74**	**237**	P	**Pn**	**06 13 19.0**	**+0.9**
PMR	**Palmer**	**5.93**	**237**	*e*P	**Pn**	**06 13 22.6**	**+1.8**
SKAG	**Skagway**	**6.01**	**163**	*e*P	**Pn**	**06 13 23.8**	**+1.9**
IMA2	**Indian Mountai**	**6.24**	**284**	*e*P	**Pn**	**06 13 25.9**	**+0.9**
IM3	**Indian Mountai**	**6.27**	**284**	P	**Pn**	**06 13 24.9**	**-0.5**
RC01	**Rabbit Creek A**	**6.49**	**235**	P	**Pn**	**06 13 29.6**	**+1.2**
DLBC	**Dease Lake**	**7.96**	**145**	Pn	**Pn**	**06 13 45.2**	**-3.4**
DLBC				Sn	**Sn**	**06 15 18.9**	**+0.3**
DLBC				Lg		06 16 03.4	
DLBC	**Dease Lake**	**7.96**	**145**	Pn	**Pn**	**06 13 45.2**	**-3.4**
	baz=225,slow=16						
DLBC				Sn	**Sn**	**06 15 18.9**	**+0.3**
	baz=210,slow=20						
DLBC				Lg		06 16 03.4	
	baz=252,slow=19						
SVW2	**Sparrevohn**	**8.67**	**249**	*e*P	**Pn**	**06 13 59.1**	**+0.8**
YKA	**Yellowknife Ar**	**10.96**	**93**	Pn	**Pn**	**06 14 28.8**	**-0.8**
YKA				Sn	**Sn**	**06 16 27.3**	**-4.7**
YKA				Lg		06 17 43.8	
YKA	**Yellowknife Ar**	**10.96**	**93**	Pn	**Pn**	**06 14 28.8**	**-0.8**
	0.9nm,0.3s,baz=291,slow=13,SNR=27						
YKA				Sn	**Sn**	**06 16 27.3**	**-4.7**
	1.0nm,0.3s,baz=292,slow=23,SNR=10						
YKA				Lg		06 17 43.8	
	baz=301,slow=30,SNR=2.2						
PV01	**Paradox Valley**	**32.34**	**132**	*e*P	**P**	**06 18 24.9**	**+2.9**
ARCES	**ARCESS Array B**	**45.05**	**8**	P	**P**	**06 20 08.3**	**+0.2**
	1.2nm,0.7s,mb3.8,baz=345,slow=6.5,SNR=3.6						
FINES	**FINESS Array B**	**53.12**	**9**	P	**P**	**06 21 09.8**	**-0.3**
FINES	**FINESS Array B**	**53.12**	**9**	P	**P**	**06 21 09.8**	**-0.3**
	1.5nm,0.8s,mb4.0,baz=358,slow=7.0,SNR=7.4						
ZALV	**Zalesovo Beam**	**56.55**	**331**	P	**P**	**06 21 35.0**	**0.0**
	0.3nm,0.3s,mb3.9,baz=18,slow=5.0,SNR=3.3						
SONM	**Songino Array**	**56.57**	**313**	P	**P**	**06 21 35.1**	**-0.2**
	0.3nm,0.5s,mb3.6,baz=32,slow=5.8,SNR=3.9						
MKAR	**Makanchi Array**	**63.85**	**330**	P	**P**	**06 22 23.3**	**-1.8**
	0.3nm,0.7s,mb3.4,baz=46,slow=8.3,SNR=3.7						
AKASG	**Malin Array Be**	**64.02**	**8**	P	**P**	**06 22 25.8**	**-0.4**
	1.4nm,0.5s,mb4.2,baz=356,slow=6.6,SNR=10						
GYA	**Guiyang**	**75.83**	**303**	P	**P**	**06 23 39.4**	**+0.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						

*LDG **10** 07:00:55.4±0.9, 14.95S×166.76E, h10^{km}, Mb4.1/1, Error ellipse: s-maj=116.1km s-min=69.2km az=29.0*
*IDC **10** 07:01:08.9±6.7, 14.74S×167.09E, h114^{km}±65^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.7/14, mbtmp3.7/6, Error ellipse: s-maj=53.6km s-min=35.1km az=148.0*
*NEIC **10** 07:01:09.0±4.9, 14.59S×166.91E, h108^{km}±46^{km}, Error ellipse: s-maj=50.1km s-min=27.6km az=163.0*
*ISCJB **10** 07:01:11.3±5.2, 14.9S±0.3×166.9E±0.3, h141^{km}±58^{km}, mb3.8/5, Error ellipse: s-maj=59.0km s-min=36.1km az=25.3*
ISC 10 07:01:11.3±5.3**, 14.8S**±0.3×**167.0E**±0.4**, h131**^{km}±62^{km}**, n28,** σ1^s**18**/12**, mb3.8**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.21**	**184**	*e*P	**Pn**	**07 02 55.1**	**+0.9**
DZM				*e*S	**Sn**	**07 04 14.1**	**-0.5**
DZM	**Mont Dzumac**	**7.21**	**184**	*e*P	**Pn**	**07 02 55.1**	**+0.9**
DZM				*e*S	**Sn**	**07 04 14.1**	**-0.5**
DZM	**Mont Dzumac**	**7.21**	**184**	P	**Pn**	**07 02 54.6**	**+0.4**
	2.3nm,0.3s,baz=37,slow=20,SNR=38						
DZM				S	**Sn**	**07 04 13.1**	**-1.5**
	0.3nm,0.3s,baz=342,slow=20,SNR=2.2						
STKA	**Stephens Creek**	**28.70**	**229**	P	**P**	**07 06 58.2**	**+2.0**
STKA	**Stephens Creek**	**28.70**	**229**	P	**P**	**07 06 58.2**	**+2.0**
	7.2nm,0.5s,mb4.7,baz=49,slow=8.2,SNR=14						
WRA	**Warramunga Arr**	**31.52**	**256**	P	**P**	**07 07 19.6**	**-1.6**
	0.7nm,0.7s,mb3.5,baz=85,slow=9.0,SNR=5.6						
ASAR	**Alice Springs**	**32.36**	**249**	P	**P**	**07 07 29.0**	**+0.5**
	1.4nm,0.6s,mb3.9,baz=78,slow=9.0,SNR=18						
SONM	**Songino Array**	**82.41**	**324**	P	**P**	**07 13 19.3**	**+0.6**
	0.3nm,0.5s,mb3.2,baz=142,slow=5.7,SNR=3.3						
MKAR	**Makanchi Array**	**97.08**	**316**	P	**P**	**07 14 27.3**	**-1.2**
	0.5nm,0.7s,mb4.0,baz=109,slow=5.4,SNR=4.9						
ARCES	**ARCESS Array B**	**120.28**	**345**	PKP	PKPdf	07 19 44.8	-1.5
	3.1nm,1.1s,baz=77,slow=1.5,SNR=16						
CDF	**Champ du Feu**	**142.57**	**338**	*e*PKP1	PKPdf	07 20 26.5	-2.3
CABF	**La Chapelle**	**144.52**	**337**	*e*PKP1	PKPdf	07 20 31.4	-0.9
FLN	**La Foliniere**	**144.63**	**346**	*e*PKP1	PKPdf	07 20 30.6	-1.8
LDF	**La Druitiere**	**144.70**	**345**	*e*PKP1	PKPdf	07 20 30.8	-1.7
LOR	**Lormes**	**144.74**	**340**	*e*PKP1	PKPdf	07 20 31.6	-1.1
	6.0nm,0.6s						
SSF	**Saint Saulge**	**145.04**	**340**	*e*PKP1	PKPbc	07 20 32.8	0.0
	18nm,0.8s						
GRR	**Gorron**	**145.07**	**346**	*e*PKP1	PKPbc	07 20 32.3	-0.6
	9.5nm,0.6s						
LPL	**La Plagne**	**145.17**	**335**	*e*PKP1	PKPbc	07 20 33.7	+0.4
	14nm,0.8s						
LPG	**La Plagne**	**145.18**	**335**	*e*PKP1	PKPbc	07 20 33.8	+0.5
	6.4nm,0.6s						
SMF	**Signal de Mont**	**145.29**	**339**	*e*PKP1	PKPbc	07 20 33.3	-0.3
AVF	**Avril sur Loir**	**145.33**	**340**	*e*PKP1	PKPbc	07 20 33.2	-0.5
BGF	**Bois d'Agland**	**145.70**	**340**	*e*PKP1	PKPbc	07 20 34.6	-0.3
	12nm,0.7s						
ORIF	**Oris-en-Rattie**	**146.01**	**336**	*e*PKP1	PKPbc	07 20 36.0	+0.1
	19nm,0.9s						
TCF	**Toulx Ste Croi**	**146.14**	**341**	*e*PKP1	PKPbc	07 20 35.9	-0.3
MFF	**Saint Martin d**	**146.55**	**344**	*e*PKP1	PKPbc	07 20 37.0	-0.4
	13nm,0.6s						
RJF	**Les Rejaudoux**	**147.24**	**341**	*e*PKP1	PKPbc	07 20 39.1	-0.3
	3.5nm,0.5s						
LFF	**La Frestale**	**147.81**	**341**	*e*PKP1	PKPbc	07 20 40.6	-0.4
	26nm,0.8s						
ETSF	**Etsaut**	**150.05**	**341**	*e*PKP1	PKPbc	07 20 46.7	0.0

MAN 10 07:01:17, 9.18N×122.25E, h22^{km}**, mb4.4, ML3.3, MS3.1, 1C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.98**	**81**	⇑*e*P	Pb	07 01 34.0	-1.4
TBP	**Tagbilaran**	**1.67**	**72**	*e*P	Pn	07 01 46.0	+1.1

*NEIC **10** 07:08:31.9, 16.44N×98.17W, h32^{km}, MD3.6(MEX), After MEX.*
MEX 10 07:08:32.6±0.7**, 16.46N×98.29W, h19**^{km}±17^{km}**, MD3.7, 2C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**113**	⇑*i*P	Pg	07 08 36.0	-1.2
PNIG				*i* S	Sg	07 08 39.6	-0.6
PNIG	**Pinotepa**	**0.17**	**113**	⇑*i*P	Pg	07 08 36.0	-1.2
PNIG				*i* S	Sg	07 08 39.6	-0.6
UTMO	**Huajuapan**	**1.44**	**19**	*i* P	Pn	07 08 54.7	-3.1
UTMO				*i* S	Sn	07 09 11.9	-4.3
VHO	**Vista Hermosa**	**1.61**	**67**	*i* P	Pn	07 08 55.2	-4.8
VHO				*i* S	Sn	07 09 12.9	-7.4
VHO	**Vista Hermosa**	**1.61**	**67**	*i* P	Pn	07 08 57.2	-2.9
VHO				*i* S	Sn	07 09 16.4	-3.9
ACX	**Acapulco**	**1.62**	**285**	*i* P	Pn	07 08 58.0	-2.1
ACX				*i* S	Sn	07 09 18.4	-2.1
ACX	**Acapulco**	**1.62**	**285**	*i* P	Pn	07 08 58.0	-2.1
ACX				*i* S	Sn	07 09 17.5	-2.9
TPIG	**Tehuac#an**	**2.14**	**24**	*i* P	Pn	07 09 02.5	-4.9
TPIG				*i* S	Sn	07 09 28.8	-4.7
PPM	**Popocatepetl**	**2.62**	**353**	*e*P	Pn	07 09 18.1	+4.2
PPM				*i* S	Sn	07 09 45.2	0.0
PPM	**Popocatepetl**	**2.62**	**353**	*i* P	Pn	07 09 10.6	-3.3
PPM				*i* S	Sn	07 09 43.0	-2.2
CMIG	**Matias Romero**	**3.32**	**79**	*i* P	Pn	07 09 30.0	+6.4
CMIG				*i* S	Sn	07 09 43.5	-19

*ISCJB **10** 07:11:49.5±1.0, 38.88N±0.03×26.18E±0.07, h5^{km}±6^{km}, Error ellipse: s-maj=10.3km s-min=4.2km az=157.6*
*CSEM **10** 07:11:49.3±0.3, 38.89N×26.21E, h12^{km}, MD2.9, Error ellipse: s-maj=7.0km s-min=3.0km az=68.0*
*ISK **10** 07:11:50.4, 38.89N×26.29E, h17^{km}, MD3.2*
*DDA **10** 07:11:51.3, 38.90N×26.28E, h8^{km}, Md2.9*
ISC 10 07:11:50.2±0.9**, 38.88N**±0.03×**26.18E**±0.08**, h12**^{km}±5^{km}**, n16,** σ0^s**74**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.59**	**43**	*i* P	**Pg**	**07 12 00.9**	**-0.7**
AYVA				*i* S	**Sg**	**07 12 08.6**	**-0.8**
URLA	**Izmir**	**0.61**	**148**	*i* P	**Pg**	**07 12 02.2**	**+0.2**
URLA				*i* S	**Sg**	**07 12 10.7**	**+0.6**
BLCB	**Balcova**	**0.84**	**126**	PG	**Pg**	**07 12 06.1**	**-0.2**
BLCB				SG	**Sg**	**07 12 16.8**	**-0.4**
EZN	**Ezine**	**0.95**	**7**	*e*PG	**Pg**	**07 12 08.9**	**+0.3**
EZN				*e*SG	**Sg**	**07 12 22.3**	**+1.2**
BOZC	**Bozcaada**	**0.97**	**354**	*i* P	**Pg**	**07 12 08.7**	**-0.1**
BOZC				*i* S	**Sg**	**07 12 22.3**	**+0.8**
KDAG	**Bornova**	**0.97**	**119**	*i* P	**Pg**	**07 12 08.2**	**-0.7**
KDAG				*i* S	**Sg**	**07 12 22.4**	**+0.7**
AKS	**Akhisar**	**1.28**	**89**	*e*PN	**Pn**	**07 12 13.4**	**-0.5**
AKHS	**Akhisar**	**1.28**	**89**	*i* P	**Pn**	**07 12 13.2**	**-0.7**
AKHS				*i* S	**Sb**	**07 12 30.8**	**+0.3**
GADA	**Gvkgeada**	**1.33**	**351**	*e*PN	**Pn**	**07 12 14.4**	**-0.2**
BALB	**Balikesir**	**1.52**	**59**	*e*PN	**Pn**	**07 12 16.6**	**-0.7**
AYDN	**Tasoluk**	**1.81**	**132**	*i* P	**Pn**	**07 12 21.4**	**+0.2**
AYDN				*i* S	**Sn**	**07 12 49.1**	**+5.1**
MANT	**Manisa**	**1.90**	**101**	*i* P	**Pn**	**07 12 23.3**	**+0.9**
MANT				*i* S	**Sn**	**07 12 48.8**	**+2.5**
KULA	**Kula-Manisa**	**1.98**	**100**	*e*PN	**Pn**	**07 12 22.6**	**-0.9**
KCT	**Karacabey**	**2.18**	**50**	*e*PN	**Pn**	**07 12 25.7**	**-0.6**
IZI	**Iznik**	**2.93**	**59**	*e*PN	**Pn**	**07 12 36.1**	**-0.5**
YLV	**Yalova**	**2.99**	**55**	*e*PN	**Pn**	**07 12 37.7**	**+0.3**

*SSNC **10** 07:13:01.9, 18.18N×77.82W, h5^{km}, MD3.0, ML2.0*
*JSN **10** 07:13:02.5±1.0, 18.24N×75.99W, h0^{km}±13^{km}, MD3.0*
ISC 10 07:13:00.7±2.5**, 18.40N**±0.10×**76.0W**±0.1**, h7**^{km}±11^{km}**, n5,** σ0^s**47**/9**, 2D, Jamaica region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJ	**Castle Mountai**	**0.46**	**235**	⇓*e*P	**Pg**	**07 13 10.3**	**+0.7**
CMJ				*e*S	**Sg**	**07 13 15.4**	**-0.2**
STH	**Stony Hill**	**0.86**	**248**	⇓*e*P	**Pg**	**07 13 16.6**	**-0.6**
STH				*e*S	**Sg**	**07 13 27.7**	**-0.6**
BBJ	**Bamboo Saint A**	**1.23**	**269**	*e*P	**Pb**	**07 13 24.4**	**+0.1**
BBJ				*e*S	**Sg**	**07 13 40.9**	**+0.7**
MCJ	**Malvern**	**1.70**	**254**	*e*S	**Sn**	**07 13 53.0**	**+0.2**
LMGC	**Las Mercedes**	**1.92**	**330**	*e*P	**Pn**	**07 13 34.1**	**+0.2**
	baz=203						
LMGC				*e*S	**Sn**	**07 13 57.9**	**-0.4**
	comp=N,9.5nm,0.1s						
LMGC				*e*			
	comp=E,9.4nm,0.1s						

*NEIC **10** 07:13:28.4, 28.97S×72.31W, h33^{km}, ML3.6(GUC), After GUC.*
GUC 10 07:13:28.4±1.0**, 28.97S×72.31W, h33**^{km}±7^{km}**, MD3.9, ML3.6, 2C-6D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	**1.32**	**135**	⇑*i*P	Pn	07 13 51.4	+0.8
LSCH				*i* S	Sn	07 14 08.4	+1.4
LSCH	**La Serena**	**1.32**	**135**	⇑*i*P	Pn	07 13 51.4	+0.8
LSCH				*i* S	Sn	07 14 08.4	+1.4
LSCH				AML	AML	07 14 09.4	
	comp=E,347nm,0.4s						
VACH	**Vallenar**	**1.42**	**74**	⇓*i*P	Pn	07 13 53.3	+1.4
VACH				*i* S	Sn	07 14 11.5	+2.1
VACH	**Vallenar**	**1.42**	**74**	⇓*i*P	Pn	07 13 53.3	+1.4
VACH				*i* S	Sn	07 14 11.5	+2.1
VACH				AML	AML	07 14 14.4	
	comp=N,2μm,0.2s						
TLL	**Tololo Astrono**	**1.78**	**133**	⇓*i*P	Pn	07 13 59.2	+2.4
TLL				*i* S	Sn	07 14 22.0	+3.8
TLL	**Tololo Astrono**	**1.78**	**133**	⇓*i*P	Pn	07 13 59.2	+2.4
TLL				*i* S	Sn	07 14 22.0	+3.8
TLL				AML	AML	07 14 27.0	
	comp=N,1μm,0.7s						
CDCH	**Caldera**	**2.30**	**35**	*i* P	Pn	07 14 02.9	-1.1
CDCH				*i* S	Sn	07 14 30.0	-1.1
CDCH	**Caldera**	**2.30**	**35**	*i* P	Pn	07 14 02.9	-1.1
CDCH				*i* S	Sn	07 14 30.0	-1.1
CDCH				AML	AML	07 14 31.2	
	comp=N,241nm,0.6s						
CPCH	**Copiapo**	**2.36**	**48**	⇓*i*P	Pn	07 14 05.9	+1.1
CPCH				*i* S	Sn	07 14 35.3	+2.7
CPCH	**Copiapo**	**2.36**	**48**	⇓*i*P	Pn	07 14 05.9	+1.1
CPCH				*i* S	Sn	07 14 35.3	+2.7
CPCH				AML	AML	07 14 38.4	
	comp=E,2μm,0.1s						

*NEIC **10** 07:20:48.6, 41.19S×173.03E, h132^{km}, MG3.9(WEL), After WEL.*
WEL 10 07:20:48.5±0.2**, 41.20S×173.03E, h132**^{km}±1^{km}**, ML3.9**/18**, 3C, Error ellipse: s-maj=1.7km s-min=1.5km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.27**	**95**	P	Pn	07 21 06.9	+0.1
NNZ				S	Sn	07 21 19.8	-0.8
NNZ	**Nelson**	**0.27**	**95**	⇑PN	Pn	07 21 06.9	+0.1
NNZ				SN	Sn	07 21 20.0	-0.5
QRZ	**Quartz Range**	**0.53**	**314**	P	Pn	07 21 08.1	+0.1
QRZ				S	Sn	07 21 21.6	-1.1
QRZ	**Quartz Range**	**0.53**	**314**	⇑PN	Pn	07 21 08.1	+0.1
QRZ				SN	Sn	07 21 21.7	-1.0
THZ	**Tophouse**	**0.58**	**189**	P	Pn	07 21 08.4	+0.1
THZ	**Tophouse**	**0.58**	**189**	⇑PN	Pn	07 21 08.4	+0.2
THZ				SN	Sn	07 21 22.6	-0.7
TUWZ	**Tuamarina**	**0.73**	**109**	PN	Pn	07 21 09.5	+0.2
DUWZ	**D'Urville Isla**	**0.78**	**60**	PN	Pn	07 21 10.1	+0.4
BSWZ	**Blackbirch Sta**	**0.82**	**129**	PN	Pn	07 21 10.1	+0.1
TCW	**Tory Channel**	**0.94**	**91**	P	Pn	07 21 11.4	+0.4
TCW	**Tory Channel**	**0.94**	**91**	PN	Pn	07 21 11.4	+0.4
CMWZ	**Cape Campbell**	**1.05**	**122**	P	Pn	07 21 12.3	+0.3
CMWZ				S	Sn	07 21 30.4	+0.5
CMWZ	**Cape Campbell**	**1.05**	**122**	PN	Pn	07 21 12.3	+0.3
CMWZ				SN	Sn	07 21 30.4	+0.5
DSZ	**Denniston Nort**	**1.07**	**239**	P	Pn	07 21 12.1	-0.2
DSZ	**Denniston Nort**	**1.07**	**239**	PN	Pn	07 21 12.1	-0.2
MRW	**Makara Radio**	**1.26**	**92**	P	Pn	07 21 13.9	-0.2
MRW	**Makara Radio**	**1.26**	**92**	PN	Pn	07 21 13.9	-0.2
SNZO	**South Karori**	**1.27**	**96**	P	Pn	07 21 13.9	-0.3
SNZO	**South Karori**	**1.27**	**96**	PN	Pn	07 21 13.9	-0.3
KHZ	**Kahutara**	**1.28**	**163**	PN	Pn	07 21 14.2	-0.1
WEL	**Wellington**	**1.31**	**95**	P	Pn	07 21 14.4	-0.3
WEL	**Wellington**	**1.31**	**95**	PN	Pn	07 21 14.4	-0.3
BHW	**Baring Head**	**1.40**	**99**	P	Pn	07 21 15.2	-0.5
BHW	**Baring Head**	**1.40**	**99**	PN	Pn	07 21 15.2	-0.5
KIW	**Kapiti Island**	**1.46**	**77**	PN	Pn	07 21 16.1	-0.2
CAW	**Cannon Point**	**1.54**	**87**	PN	Pn	07 21 16.7	-0.5
LTZ	**Lake Taylor**	**1.68**	**199**	PN	Pn	07 21 18.5	-0.3
MSWZ	**Moikau Station**	**1.69**	**98**	P	Pn	07 21 18.5	-0.3
MSWZ	**Moikau Station**	**1.69**	**98**	PN	Pn	07 21 18.5	-0.3
PAWZ	**Paruwai Farm**	**1.82**	**97**	P	Pn	07 21 19.7	-0.6
PAWZ	**Paruwai Farm**	**1.82**	**97**	PN	Pn	07 21 19.7	-0.6
MTW	**Mount Morrison**	**1.87**	**90**	P	Pn	07 21 20.2	-0.8
MTW	**Mount Morrison**	**1.87**	**90**	PN	Pn	07 21 20.2	-0.8
NRZ	**Ngariki Road**	**1.98**	**21**	P	Pn	07 21 23.0	+0.6
NRZ	**Ngariki Road**	**1.98**	**21**	PN	Pn	07 21 23.0	+0.6
MRZ	**Mangatainoka R**	**2.00**	**75**	P	Pn	07 21 21.8	-0.8
MRZ	**Mangatainoka R**	**2.00**	**75**	PN	Pn	07 21 21.8	-0.9
TRWZ	**Traveller**	**2.01**	**97**	PN	Pn	07 21 22.4	-0.3
NWEZ	**Newall Road**	**2.02**	**19**	P	Pn	07 21 23.5	+0.6
NWEZ	**Newall Road**	**2.02**	**19**	PN	Pn	07 21 23.5	+0.7
DFE	**Dawson Falls**	**2.04**	**24**	P	Pn	07 21 23.8	+0.7
DFE	**Dawson Falls**	**2.04**	**24**	PN	Pn	07 21 23.8	+0.8
WAZ	**Wanganui**	**2.07**	**47**	P	Pn	07 21 24.2	+0.7
WAZ	**Wanganui**	**2.07**	**47**	PN	Pn	07 21 24.2	+0.8
NEZ	**North Egmont**	**2.09**	**23**	P	Pn	07 21 24.4	+0.7
NEZ	**North Egmont**	**2.09**	**23**	PN	Pn	07 21 24.4	+0.7
PKE	**Pukeiti**	**2.13**	**20**	P	Pn	07 21 24.6	+0.4
PKE	**Pukeiti**	**2.13**	**20**	PN	Pn	07 21 24.6	+0.5
RAEZ	**Rainy Point**	**2.17**	**29**	P	Pn	07 21 25.7	+1.0
RAEZ	**Rainy Point**	**2.17**	**29**	PN	Pn	07 21 25.7	+1.0
TIWZ	**Tintock**	**2.20**	**80**	PN	Pn	07 21 24.2	-0.8
CRLZ	**Canterbury Las**	**2.40**	**187**	*e*P	Pn	07 21 26.6	-0.9
CRLZ	**Canterbury Las**	**2.40**	**187**	PN	Pn	07 21 26.6	-0.9
VRZ	**Vera Road**	**2.46**	**33**	P	Pn	07 21 28.7	+0.5
VRZ	**Vera Road**	**2.46**	**33**	PN	Pn	07 21 28.7	+0.4
BFZ	**Birch Farm**	**2.49**	**79**	P	Pn	07 21 27.6	-1.0
BFZ	**Birch Farm**	**2.49**	**79**	PN	Pn	07 21 27.6	-1.0
TSZ	**Takapari Road**	**2.50**	**64**	P	Pn	07 21 27.9	-0.9
TSZ	**Takapari Road**	**2.50**	**64**	PN	Pn	07 21 27.9	-0.9
MQZ	**McQueen's Vall**	**2.53**	**186**	P	Pn	07 21 27.5	-1.6
MQZ	**McQueen's Vall**	**2.53**	**186**	PN	Pn	07 21 27.5	-1.6
WVZ	**Waitaha Valley**	**2.54**	**221**	*e*P	Pn	07 21 28.2	-1.0
WVZ	**Waitaha Valley**	**2.54**	**221**	PN	Pn	07 21 28.2	-1.0

PKVZ	**Pokaka**	**2.60**	**44**	PN	Pn	07 21 30.1	+0.1
TRVZ	**Turoa**	**2.70**	**46**	PN	Pn	07 21 31.2	-0.1
WNVZ	**Wahianoa**	**2.71**	**47**	P	Pn	07 21 31.3	-0.1
WNVZ	**Wahianoa**	**2.71**	**47**	PN	Pn	07 21 31.3	-0.1
FWVZ	**Far West T-bar**	**2.73**	**46**	P	Pn	07 21 31.6	-0.2
MOVZ	**Moawhango**	**2.74**	**50**	P	Pn	07 21 31.2	-0.7
MOVZ	**Moawhango**	**2.74**	**50**	PN	Pn	07 21 31.2	-0.7
WPVZ	**Whakapapa**	**2.77**	**45**	P	Pn	07 21 32.0	-0.2
WPVZ	**Whakapapa**	**2.77**	**45**	PN	Pn	07 21 32.0	-0.2
TUVZ	**Tukino**	**2.78**	**47**	PN	Pn	07 21 32.5	+0.1
TWVZ	**Taurewa**	**2.81**	**42**	P	Pn	07 21 32.5	-0.3
TWVZ	**Taurewa**	**2.81**	**42**	PN	Pn	07 21 32.5	-0.2
NGZ	**Ngauruhoe**	**2.82**	**45**	P	Pn	07 21 32.6	-0.2
NGZ	**Ngauruhoe**	**2.82**	**45**	PN	Pn	07 21 32.6	-0.3
WTVZ	**West Tongariro**	**2.86**	**44**	P	Pn	07 21 33.0	-0.3
WTVZ	**West Tongariro**	**2.86**	**44**	PN	Pn	07 21 33.0	-0.4
OTVZ	**Oturere**	**2.86**	**46**	PN	Pn	07 21 33.2	-0.2
KRVZ	**Karewarewa**	**2.90**	**45**	PN	Pn	07 21 33.5	-0.4
RPZ	**Rata Peaks**	**2.91**	**209**	*e*P	Pn	07 21 32.9	-1.1
RPZ	**Rata Peaks**	**2.91**	**209**	PN	Pn	07 21 32.9	-1.1
RPZ				SN	Sn	07 22 04.7	-4.4
KATZ	**Kakaramea**	**3.02**	**44**	P	Pn	07 21 35.2	-0.2
KATZ	**Kakaramea**	**3.02**	**44**	PN	Pn	07 21 35.2	-0.2
HIZ	**Hauiti**	**3.02**	**28**	P	Pn	07 21 35.2	-0.3
HIZ	**Hauiti**	**3.02**	**28**	PN	Pn	07 21 35.2	-0.3
PXZ	**Pawanui**	**3.14**	**70**	PN	Pn	07 21 35.7	-1.3
WATZ	**Wairara**	**3.24**	**41**	P	Pn	07 21 38.0	-0.3
BKZ	**Black Stump Fm**	**3.34**	**54**	P	Pn	07 21 38.1	-1.5
BKZ	**Black Stump Fm**	**3.34**	**54**	PN	Pn	07 21 38.1	-1.4
LBZ	**Lake Benmore**	**3.82**	**212**	P	Pn	07 21 44.0	-1.8
LBZ	**Lake Benmore**	**3.82**	**212**	PN	Pn	07 21 44.0	-1.8
KNZ	**Kokohu**	**4.17**	**60**	*e*P	Pn	07 21 47.9	-2.6
KNZ	**Kokohu**	**4.17**	**60**	*e*PN	Pn	07 21 47.9	-2.7
ODZ	**Otahua Downs**	**4.22**	**204**	*e*P	Pn	07 21 49.8	-1.4
ODZ	**Otahua Downs**	**4.22**	**204**	PN	Pn	07 21 49.8	-1.4
JCZ	**Jackson Bay**	**4.27**	**226**	P	Pn	07 21 50.0	-1.8
JCZ	**Jackson Bay**	**4.27**	**226**	PN	Pn	07 21 50.0	-1.8
URZ	**Urewera**	**4.30**	**48**	*e*P	Pn	07 21 49.9	-2.4
URZ	**Urewera**	**4.30**	**48**	*e*PN	Pn	07 21 49.3	-3.0
MWZ	**Matawai**	**4.49**	**52**	*e*P	Pn	07 21 52.1	-2.7
MWZ	**Matawai**	**4.49**	**52**	*e*PN	Pn	07 21 51.9	-2.9
WKZ	**Wanaka**	**4.67**	**218**	*e*P	Pn	07 21 54.3	-2.9
WKZ	**Wanaka**	**4.67**	**218**	*e*PN	Pn	07 21 54.1	-3.0
EAZ	**Earnscleugh**	**4.87**	**213**	*e*P	Pn	07 21 57.3	-2.4
EAZ	**Earnscleugh**	**4.87**	**213**	PN	Pn	07 21 57.3	-2.4
WCZ	**Waipu Caves**	**5.35**	**12**	*e*PN	Pn	07 22 06.5	+0.3
TUZ	**Tuapeka**	**5.36**	**206**	*e*P	Pn	07 22 05.0	-1.4
TUZ	**Tuapeka**	**5.36**	**206**	PN	Pn	07 22 05.0	-1.3
MLZ	**Mavora Lakes**	**5.46**	**219**	*e*P	Pn	07 22 07.0	-0.7
WHZ	**Wether Hill Ro**	**5.97**	**216**	*e*P	Pn	07 22 11.9	-2.7
WHZ	**Wether Hill Ro**	**5.97**	**216**	PN	Pn	07 22 11.9	-2.7

*IDC **10** 07:35:08.0±1.1, 5131N×16852W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.7/23, mbtmp3.6/7, Error ellipse: s-maj=36.3km s-min=22.1km az=175.0*

*ISCJB **10** 07:35:08.6±0.9, 515N±0.1×1685W±02, h12km, mb3.5/7, Error ellipse: s-maj=20.6km s-min=11.9km az=34.5*

*NEIC **10** 07:35:12.4, 5152N×16829W, h12km, ML3.1(AEIC), After AEIC.*

ISC 10 07:35:11.6±5.9**, 515N**±01×**1684W**±02**, h19**km±37km**, n9,** σ**1s03**/10**, mb3.5**/7**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**2.59**	**26**	*e*Pn	**Pn**	**07 35 53.0**	**+0.6**
UNV				S	**Sn**	**07 36 22.8**	**-0.5**
KDAK	**Kodiak Island**	**11.08**	**49**	Pn	**Pn**	**07 37 46.8**	**-2.0**
	0.6nm,0.3s,baz=288,slow=19,SNR=3.3						
INK	**Inuvik**	**23.73**	**32**	P	**P**	**07 40 22.9**	**+0.8**
	2.0nm,0.5s,mb3.8,baz=245,slow=6.4,SNR=10						
YKA	**Yellowknife Ar**	**30.35**	**48**	P	**P**	**07 41 23.5**	**+1.9**
	0.4nm,0.6s,mb3.4,baz=269,slow=7.6,SNR=8.4						
NVAR	**Mina Array Bea**	**37.05**	**91**	P	**P**	**07 42 20.6**	**+0.6**
	0.4nm,0.8s,mb3.3,baz=308,slow=6.3,SNR=4.7						
TXAR	**Lajitas Array**	**52.16**	**89**	P	**P**	**07 44 20.2**	**-0.3**
	0.2nm,0.5s,mb3.3,baz=297,slow=6.3,SNR=6.7						
SONM	**Songino Array**	**52.26**	**302**	P	**P**	**07 44 21.6**	**+0.5**
	0.2nm,0.6s,mb3.2,baz=50,slow=6.3,SNR=5.8						
MKAR	**Makanchi Array**	**64.83**	**314**	P	**P**	**07 45 48.5**	**-0.3**
	0.1nm,0.3s,mb3.3,baz=59,slow=5.6,SNR=3.6						
ASAR	**Alice Springs**	**90.32**	**231**	P	**P**	**07 48 09.7**	**-1.3**
	0.9nm,0.7s,mb4.2,baz=39,slow=4.3,SNR=14						

*NIED **10** 07:43:00, 4600N×143.10E, h340km, Mw4.3 Best double couple: $M_0$3.32000×10^15 NP1:ϕ_s72.00000°, δ47.00000°, λ122.00000°. NP2:ϕ_s209.00000°, δ52.00000°, λ61.00000°.*

*MOS **10** 07:43:13.3±1.0, 4626N×14287E, h339km, mb4.3/17, Error ellipse: s-maj=11.1km s-min=6.7km az=93.2*

*IDC **10** 07:43:14.4±0.6, 4622N×14296E, h337km±7km, mb3.8/25, mb1 3.9/28, mb1mx3.9/31, mbtmp3.7/28, Error ellipse: s-maj=11.1km s-min=9.3km az=139.0*

*SKHL **10** 07:43:14.5±0.3, 4609N×14260E, h347km±20km, mb5.6/1, msh5.4/2*

*NEIC **10** 07:43:14.7±0.4, 4623N×14286E, h339km±4km, mb4.5/40, Error ellipse: s-maj=6.3km s-min=4.6km az=159.0*

*BJI **10** 07:43:14.6, 4655N×14304E, h357km, mB4.7, mb4.4*

*ISCJB **10** 07:43:14.1±0.1, 46.14N±0.03×14287E±0.03, h344km±2km, mb4.3/84, Error ellipse: s-maj=4.1km s-min=3.2km az=177.1*

*JMA **10** 07:43:14.1±0.2, 4598N×143.10E, h356km±2km, M4.9*

ISC 10 07:43:14.8±0.1**, 4616N**±002×**14281E**±003**, h337**km±1km**, h338**km±1.5km**:pP-P, n436,** σ**0s83**/473**, mb4.3**/84**, 100C-104D, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.80**	**357**	*e*Pn	**Pn**	**07 43 60.0**	**+1.7**
YSS				*e*S	**S**	**07 44 31.7**	**-1.4**
YSS	**Yuzh-Sakhalins**	**0.80**	**357**	⇑*i*P	**Pn**	**07 43 59.9**	**+1.6**
YSS				AMB	AMB	07 44 01.4	
	200nm,0.4s						
YSS				AMB	AMB	07 44 01.4	
	760nm,0.4s						
YSS				AMB	AMB	07 44 01.4	
	1μm,0.4s						
YSS				*i* S	**S**	**07 44 35.0**	**+1.9**
YSS				A		07 44 36.0	
	2μm,1.5s						
YSS				A		07 44 36.0	
	2μm,1.5s						
YSS				A		07 44 36.0	
	2μm,0.9s						
YSS				A		07 44 36.0	
	1μm,0.9s						
JWK2	**Keihoku**	**1.06**	**217**	P	**Pn**	**07 44 01.1**	**+1.7**
JSE	**Soyaes**	**1.21**	**188**	P	**Pn**	**07 44 01.0**	**+0.8**
JSE				*e*S	**S**	**07 44 37.3**	**+0.8**
JRR	**Rishiri**	**1.47**	**226**	P	**Pn**	**07 44 03.1**	**+1.6**
JSS	**Shosan**	**1.89**	**201**	P	**Pn**	**07 44 05.3**	**+1.2**
JYG	**Yagishiri**	**1.99**	**210**	P	**Pn**	**07 44 06.1**	**+1.2**
JYG				*e*S	**S**	**07 44 46.7**	**+1.7**
ASAJ	**Asahikawa**	**2.05**	**184**	PN	**Pn**	**07 44 06.2**	**+0.9**
ASAJ				S	**S**	**07 44 46.6**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,60nm,0.3s						
ASAJ				smax			
	comp=N,7.0nm,0.3s						
ASAJ	**Asahikawa**	**2.05**	**184**	P	**Pn**	**07 44 06.2**	**+0.8**
	comp=N,60nm,0.3s,baz=6.7,slow=6.5,SNR=675						
ASAJ				S	**S**	**07 44 46.6**	**+0.8**
	comp=N,6.8nm,0.3s,baz=226,slow=33,SNR=11						
JKK2	**Kamakawa 2**	**2.29**	**181**	P	**Pn**	**07 44 07.7**	**+0.6**
JKK2				*e*S	**S**	**07 44 49.4**	**+0.3**
JTKR	**Abashiri--Toko**	**2.32**	**160**	P	**Pn**	**07 44 07.4**	**0.0**
JTKR				S	**S**	**07 44 48.6**	**-1.0**
JHR	**Hokuryu**	**2.54**	**198**	P	**Pn**	**07 44 10.0**	**+0.9**
JRA	**Rausu**	**2.76**	**143**	P	**Pn**	**07 44 10.4**	**-0.6**
JRA				*e*S	**S**	**07 44 55.3**	**-0.9**
JAR	**Ashorobuto**	**2.94**	**166**	P	**Pn**	**07 44 12.4**	**-0.3**
JAR				*e*S	**S**	**07 44 57.4**	**-1.8**
UGL	**Uglegorsk**	**2.96**	**351**κ	*i*PN	**Pn**	**07 44 14.7**	**+2.0**
UGL				*e*S	**S**	**07 45 01.5**	**+2.3**
UGL				pmax	pmax		
	comp=Z,690nm,0.8s						
UGL				pmax	pmax		
	comp=Z,1μm,1.0s						
UGL				smax			
	comp=N,2μm,1.8s						
UGL				smax			
	comp=E,1μm,1.8s						
UGL				smax			
	comp=N,630nm,1.2s						
UGL				smax			
	comp=E,160nm,0.8s						
UGL	**Uglegorsk**	**2.96**	**351**	⇓*i*P	**Pn**	**07 44 14.5**	**+1.8**
UGL				⇓*i*P		07 44 14.5	
UGL				AMB	AMB	07 44 15.5	
	comp=E,100nm,0.7s						
UGL				AMB	AMB	07 44 15.5	
	comp=E,140nm,0.7s						
UGL				AMB	AMB	07 44 15.5	
	comp=E,690nm,0.7s						
UGL				AMB	AMB	07 44 15.5	
	comp=E,1μm,1.0s						
UGL				*e*S	**S**	**07 45 01.3**	**+2.1**
UGL				A		07 45 03.0	
	comp=E,2μm,1.8s						
UGL				A		07 45 03.0	
	comp=E,1μm,1.8s						
UGL				A		07 45 03.5	
	comp=E,630nm,1.0s						
UGL				A		07 45 03.5	
	comp=E,160nm,1.0s						
UGL				A		07 45 03.5	
	comp=E,110nm,1.0s						
JFR	**Furan**	**3.00**	**183**	P	**Pn**	**07 44 13.2**	**0.0**
JFR				*e*S	**S**	**07 44 58.9**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**3.03**	**133**	PN	**Pn**	**07 44 15.5**	**+2.0**
YUK				*e*S	**S**	**07 45 02.0**	**+1.4**
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,380nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,3μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**3.03**	**133**	*e*P	**Pn**	**07 44 15.5**	**+2.0**
YUK				*e*S	**S**	**07 45 03.3**	**+2.7**
YUK				A		07 45 03.5	
	comp=E,380nm,0.5s						
YUK				A		07 45 11.0	
	comp=E,2μm,1.0s						
YUK				A		07 45 11.0	
	comp=E,3μm,1.0s						
JSK	**Shakotan**	**3.26**	**211**	P	**Pn**	**07 44 16.7**	**+1.0**
JAK	**Akkeshi**	**3.44**	**156**	P	**Pn**	**07 44 15.5**	**-1.9**
JAK				*e*S	**S**	**07 45 01.9**	**-5.8**
JEW	**Eniwo**	**3.46**	**197**	P	**Pn**	**07 44 17.6**	**0.0**
JEW				*e*S	**S**	**07 45 07.1**	**-1.0**
NEM2	**Nemuro 2**	**3.49**	**142**	P	**Pn**	**07 44 15.3**	**-2.6**
NEM2				*e*S	**S**	**07 45 00.8**	**-7.8**
JCH	**Churui**	**3.57**	**173**	P	**Pn**	**07 44 16.6**	**-2.1**
JCH				*e*S	**S**	**07 45 03.8**	**-6.2**
KUR	**Kuril'sk**	**3.66**	**103**	PN	**Pn**	**07 44 16.5**	**-3.0**
KUR				pmax	pmax		
	comp=Z,140nm,0.9s						
KUR	**Kuril'sk**	**3.66**	**103**	*e*P	**Pn**	**07 44 18.0**	**-1.5**
KUR				AMB	AMB	07 44 18.9	
	comp=Z,142nm,0.9s						
KUR				*e*S	**S**	**07 45 11.5**	**-0.1**
KUR				A		07 45 29.0	
	comp=Z,76nm,0.5s						
JNBK	**Urakawa-nobuka**	**3.88**	**181**	P	**Pn**	**07 44 20.3**	**-1.5**
JNBK				*e*S	**S**	**07 45 12.1**	**-3.7**
ERM	**Erimo**	**4.15**	**176**	*e*Pn	**Pn**	**07 44 23.4**	**-1.3**
ERM				*e*S	**S**	**07 45 11.8**	**-9.1**
JKB	**Kayabe**	**4.46**	**197**	P	**Pn**	**07 44 26.9**	**-1.0**
JKB				*e*S	**S**	**07 45 21.0**	**-5.9**
TEY	**Ternei**	**4.50**	**258**	*e*P	**Pn**	**07 44 27.5**	**-0.8**
TEY				AMB	AMB	07 44 28.0	
	comp=Z,50nm,0.5s						
TEY				*e*S	**S**	**07 45 25.0**	**-2.5**
TEY				A		07 45 27.0	
	comp=Z,28nm,0.6s						
TYV	**Tymovskoe**	**4.71**	**359**	*e*P	**Pn**	**07 44 31.5**	**+1.1**
TYV				AMB	AMB	07 44 33.0	
	comp=Z,66nm,0.8s						
TYV				AMB	AMB	07 44 33.0	
	comp=Z,262nm,0.8s						
TYV				*e*S	**S**	**07 45 33.0**	**+1.5**
TYV				A		07 45 36.5	
	comp=Z,59nm,0.8s						
TYV				A		07 45 36.5	
	comp=Z,35nm,0.8s						
JOSM	**Okushiri--Mats**	**4.73**	**212**	P	**Pn**	**07 44 30.8**	**-0.1**
JOSM				*e*S	**S**	**07 45 30.0**	**-2.2**
JOT	**Ohata**	**4.94**	**196**	P	**Pn**	**07 44 31.8**	**-1.4**
JOT				*e*S	**S**	**07 45 30.4**	**-6.1**
HABR	**Khabarovsk**	**5.76**	**296**	⇓*i*PN	**Pn**	**07 44 45.6**	**+3.3**
HABR				pmax	pmax		
	comp=Z,381nm,1.4s						
GRNR	**Gornyy**	**6.27**	**320**	*e*P	**Pn**	**07 44 45.2**	**-2.9**
GRNR				AMB	AMB	07 44 46.0	
	comp=Z,120nm,0.3s						
GRNR				*e*S	**S**	**07 45 54.5**	**-9.2**
GRNR				A		07 45 55.0	
	comp=Z,30nm,0.3s						
OKH	**Okha**	**7.40**	**1**	*i* P	**Pn**	**07 45 03.0**	**+1.7**
OKH				AMB	AMB	07 45 04.0	
	comp=Z,169nm,0.5s						
KLR	**Kul'dur**	**8.07**	**296**	*e*PN	**Pn**	**07 45 08.6**	**-0.8**
KLR				pmax	pmax		
	comp=E,50nm,1.4s						
KLR				pmax	pmax		
	comp=Z,48nm,1.4s						
EKMR	**Ekimchan**	**9.42**	**321**	*e*P	**Pn**	**07 45 24.1**	**-1.4**
EKMR				AMB	AMB	07 45 26.3	
	comp=Z,68nm,0.5s						
EKMR				*e*S	**S**	**07 47 12.5**	**+0.1**
EKMR				A		07 47 14.5	
	comp=Z,70nm,0.5s						
EKMR				A		07 47 14.5	
	comp=Z,40nm,0.5s						
MDJ	**Mudanjiang**	**9.43**	**265**	P	**Pn**	**07 45 28.6**	**+2.8**
MDJ				AMB	AMB		
	comp=Z,59nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,118nm,6.1s						
MDJ	**Mudanjiang**	**9.43**	**265**	*e*Pn	**Pn**	**07 45 28.5**	**+2.7**
	comp=Z,54nm,0.9s						
MDJ				*e*S	**S**	**07 47 11.5**	**-1.4**
MAJO	**Matsushiro**	**10.21**	**201**	*e*Pn	**Pn**	**07 45 34.9**	**-0.4**
	comp=Z,12nm,0.5s						
MAJO				*e*S	**S**	**07 47 27.0**	**-3.4**
MAJO	**Matsushiro**	**10.21**	**201**	*e*PN	**Pn**	**07 45 34.9**	**-0.4**
MAJO				*e*S	**S**	**07 47 27.0**	**-3.4**
MAJO				pmax	pmax		
	comp=Z,12nm,0.5s						
MAT	**Matsushiro**	**10.21**	**201**	P	**Pn**	**07 45 34.8**	**-0.5**
MAT				S	**S**	**07 47 23.0**	**-7.4**
MJAR	**Matsushiro Arr**	**10.21**	**201**	P	**Pn**	**07 45 35.4**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=19,slow=11,SNR=28						
MJAR				S	**S**	**07 47 32.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=6.2,slow=14,SNR=4.9						
BMKR	**Bomnak**	**12.33**	**319**	*e*P	**Pn**	**07 45 59.0**	**-1.3**
BMKR				AMB	AMB	07 46 01.5	
	comp=Z,18nm,0.5s						
PET	**Petropavlovsk**	**12.35**	**50**	*e*Pn	**Pn**	**07 45 59.1**	**-1.5**
	comp=Z,42nm,1.1s						
PET	**Petropavlovsk**	**12.35**	**50**	*e*PN	**Pn**	**07 45 59.1**	**-1.5**
PET				pmax	pmax		
	comp=Z,42nm,1.1s						
CN2	**Changchun**	**12.52**	**265**	*e*P	**Pn**	**07 46 04.4**	**+1.7**
CN2				*e*S	**S**	**07 48 19.5**	**-1.9**
CN2				AMB	AMB		
	comp=Z,30nm,0.7s						
ZEA	**Zeya**	**12.55**	**313**	*e*P	**Pn**	**07 46 02.0**	**-0.9**
KROS	**Kirovskiy**	**13.06**	**315**	*e*P	**Pn**	**07 46 06.3**	**-2.6**
KROS				AMB	AMB	07 46 08.0	
	comp=Z,7.0nm,0.5s						
KSRS	**Korea Array**	**14.09**	**237**	P	**P**	**07 46 22.8**	**+2.9**
	comp=Z,0.4nm,0.3s,baz=48,slow=11,SNR=5.7						
MA2	**Magadan**	**14.26**	**17**	*e*Pn	**Pn**	**07 46 20.9**	**-2.0**
	comp=Z,19nm,0.7s						
MA2	**Magadan**	**14.26**	**17**	*e*P	**P**	**07 46 22.3**	**+0.9**
MA2				pmax	pmax		
	comp=N,30nm,0.9s						
MA2				pmax	pmax		
	comp=Z,40nm,0.9s						
SNY	**Shenyang**	**14.50**	**260**	⇑P	**P**	**07 46 29.5**	**+5.2**
SNY				AMB	AMB		
	comp=Z,18nm,2.2s						
HIA	**Hailar**	**15.82**	**290**	*e*P	**P**	**07 46 39.3**	**+0.6**
	comp=Z,16nm,0.8s						
HIA	**Hailar**	**15.82**	**290**	*e*P	**P**	**07 46 39.3**	**+0.6**
HIA				pmax	pmax		
	comp=Z,17nm,0.8s						
JNU	**Nakatsue**	**15.91**	**219**	P	**P**	**07 46 41.0**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=17,slow=19,SNR=4.6						
YAK	**Yakutsk**	**17.61**	**339**	*e*P	**P**	**07 46 56.4**	**-1.4**
	comp=Z,9.9nm,0.4s						
YAK	**Yakutsk**	**17.61**	**339**	*e*P	**P**	**07 46 57.5**	**-0.3**
YAK				*e*S	**S**	**07 50 01.1**	**-1.6**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.4s						
YAK				smax			
	comp=N,199nm,1.4s						
YAK				smax			
	comp=E,198nm,2.4s						
HHC	**Hu-ho-hao-te**	**23.19**	**268**	*e*P	**P**	**07 47 56.1**	**+3.6**
HHC				XP	sP	07 49 38.5	+7.2
HHC				S	**S**	**07 51 40.7**	**+2.1**
HHC				SCP	ScP	07 54 36.5	+1.9
HHC				PCS	PcS	07 55 11.2	+2.4
HHC				SCS	ScS	07 58 22.1	+1.1
HHC				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.3						
HHC				AMB	AMB		
	comp=Z,196nm,5.4s						
NJ2	**Nanjing**	**23.21**	**241**	*e*P	**P**	**07 47 55.2**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.5						
ULN	**Ulaanbaatar**	**24.31**	**287**	⇑*e*P	**P**	**07 48 03.9**	**+1.4**
SONM	**Songino Array**	**24.75**	**287**	P	**P**	**07 48 07.4**	**+0.9**
	comp=Z,3.8nm,0.7s,mb3.7,baz=84,slow=8.8,SNR=30						
SONM				PcP	PcP	07 51 32.8	+0.1
	comp=Z,0.7nm,0.6s,baz=139,slow=2.9,SNR=4.4						
BILL	**Bilibino**	**25.05**	**21**	*e*P	**P**	**07 48 07.4**	**-1.5**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb3.9						
ZAK	**Zakamensk**	**26.43**	**294**	*e*P	**P**	**07 48 22.5**	**+1.1**
ZAK				*e*		07 49 27.8	
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb3.9						
YHNB	**Yeheng**	**27.50**	**226**	*e*P	**P**	**07 48 27.7**	**-3.4**
CD2	**Chengdu**	**33.76**	**257**	*e*P	**P**	**07 49 26.7**	**+1.1**
CD2				PP	PP	07 50 55.8	+5.5
CD2				XP	sP	07 51 11.7	+2.8
CD2				S	**S**	**07 54 24.6**	**+0.9**
CD2				SS	SS	07 57 02.7	-3.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
GYA	**Guiyang**	**34.74**	**248**	P	**P**	**07 49 36.2**	**+2.1**
GYA				AP	pP	07 50 42.2	+3.5
GYA				PP	PP	07 51 07.9	+6.8
GYA				PCP	PcP	07 52 02.0	+2.9
GYA				S	**S**	**07 54 42.9**	**+4.1**
GYA				SCP	ScP	07 55 14.2	+2.7
GYA				PCS	PcS	07 55 47.8	+1.5
GYA				SCS	ScS	07 59 17.4	+1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.0						
GYA				AMB	AMB		
	comp=Z,70nm,4.9s						
ZALV	**Zalesovo Beam**	**37.09**	**304**	P	**P**	**07 49 54.9**	**+1.4**
ZALV				PcP	PcP	07 52 05.7	0.0
ZALV	**Zalesovo Beam**	**37.09**	**304**	P	**P**	**07 49 54.9**	**+1.4**
	comp=Z,0.7nm,0.5s,mb3.2,baz=98,slow=7.7,SNR=4.3						
ZALV				PcP	PcP	07 52 05.7	0.0
	comp=Z,4.3nm,0.6s,baz=79,slow=2.5,SNR=20						
ZAL	**Zalesovo**	**37.11**	**304**	P	**P**	**07 49 54.9**	**+1.3**
ZAL						07 52 05.7	
SVW2	**Sparrevohn**	**37.91**	**44**	*e*P	**P**	**07 49 59.3**	**-0.9**
KMI	**Kunming**	**38.21**	**251**	P	**P**	**07 50 07.2**	**+4.0**
KMI				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.2						
WMQ	**Urumqi**	**38.39**	**287**	⇑*i*P	**P**	**07 50 05.6**	**+1.2**
WMQ				AP	pP	07 51 11.6	+1.4
WMQ				PP	PP	07 51 44.4	+4.0
WMQ				XP	sP	07 51 50.6	+1.8
WMQ				S	**S**	**07 55 36.5**	**+3.1**
WMQ				XS	sS	07 57 32.1	-0.1
WMQ				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.0						
WMQ				AMB	AMB		
	comp=Z,338nm,6.4s						
IMA2	**Indian Mountai**	**38.47**	**36**	*e*P	**P**	**07 50 02.9**	**-1.9**
KDAK	**Kodiak Island**	**39.94**	**49**	P	**P**	**07 50 15.4**	**-1.4**
	comp=Z,7.6nm,0.5s,mb4.2,baz=159,slow=5.7,SNR=7.7						
MKAR	**Makanchi Array**	**40.77**	**294**	P	**P**	**07 50 24.5**	**+0.8**
	comp=Z,1.2nm,0.4s,mb3.5,baz=74,slow=8.1,SNR=20						
MKAR				PcP	PcP	07 52 17.4	-0.2
	comp=Z,1.3nm,0.7s,baz=40,slow=1.9,SNR=7.4						
PMR	**Palmer**	**40.92**	**43**	*e*P	**P**	**07 50 23.3**	**-1.5**
	comp=Z,24nm,1.4s,mb4.2						
PMR	**Palmer**	**40.92**	**43**	*e*P	**P**	**07 50 23.3**	**-1.5**
PMR				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.2						
COLA	**College**	**40.99**	**38***d*	*i*P	**P**	**07 50 23.9**	**-1.4**
KURK	**Kurchatov**	**41.64**	**301**	*e*P	**P**	**07 50 31.4**	**+0.7**
	comp=Z,3.3nm,0.5s,mb3.7						
KURK	**Kurchatov**	**41.64**	**301**	*e*P	**P**	**07 50 31.4**	**+0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.7						
MENT	**Mentasta**	**43.13**	**40**	*e*P	**P**	**07 50 40.0**	**-2.5**
EGAK	**Eagle**	**43.82**	**37**	*e*P	**P**	**07 50 46.1**	**-1.8**
	comp=Z,7.3nm,0.6s,mb4.0						
DAWY	**Dawson**	**44.74**	**38**	*e*P	**P**	**07 50 53.6**	**-1.5**
INK	**Inuvik**	**45.90**	**31**	*e*P	**P**	**07 51 02.4**	**-1.7**
	comp=Z,196nm,0.4s						
INK	**Inuvik**	**45.90**	**31**	P	**P**	**07 51 02.5**	**-1.5**
	comp=Z,7.0nm,0.3s,mb4.2,baz=275,slow=6.0,SNR=24						
AAK	**Ala-Archa**	**47.57**	**292**	*e*P	**P**	**07 51 17.6**	**+0.3**
	comp=Z,0.8nm,0.5s,mb3.2						
ARU	**Arti**	**50.47**	**314**	*e*P	**P**	**07 51 37.8**	**-1.0**
ARU						07 53 36.2	
ARU				S	**S**	**07 58 26.4**	**+0.7**
ARU				SS	SS	08 02 06.8	+3.0
DLBC	**Dease Lake**	**50.98**	**43**	P	**P**	**07 51 42.3**	**-0.3**
	baz=289,slow=8.1						
RES	**Resolute Bay**	**53.53**	**16**	*e*P	**P**	**07 51 59.2**	**-1.7**
	comp=Z,388nm,0.8s						
AKTK	**Aktyubinsk**	**53.63**	**308**	P	**P**	**07 52 02.0**	**0.0**
AKTK				PcP	PcP	07 53 03.0	-0.5
AKTO	**Aktyubinsk**	**53.63**	**308**	P	**P**	**07 52 02.0**	**0.0**
	comp=Z,1.0nm,0.4s,mb3.5,baz=59,slow=9.1,SNR=5.5						
AKTO				PcP	PcP	07 53 03.0	-0.5
	comp=Z,2.0nm,0.5s,baz=79,slow=5.2,SNR=5.9						
KEV	**Kevo**	**55.34**	**338**	*e*p	**P**	**07 52 12.3**	**-1.6**
YKW3	**Yellowknife Ar**	**55.46**	**33**	*e*P	**P**	**07 52 13.5**	**-1.2**
YKA	**Yellowknife Ar**	**55.50**	**33**	P	**P**	**07 52 14.0**	**-1.1**
	comp=Z,9.5nm,0.5s,mb4.4,baz=308,slow=7.1,SNR=260						
YKA				PcP	PcP	07 53 09.6	-0.9
	comp=Z,0.8nm,0.5s,baz=313,slow=3.3,SNR=5.3						
ARCES	**ARCESS Array B**	**55.88**	**338**	P	**P**	**07 52 17.0**	**-0.7**
	comp=Z,0.9nm,0.5s,mb3.3,baz=34,slow=7.3,SNR=9.1						
JOF	**Joensuu**	**58.49**	**330**	*e*p	**P**	**07 52 33.4**	**-2.5**
	comp=Z,4.8nm,0.4s,mb4.2						
KAF	**Kangasniemi**	**60.75**	**331**	*e*p	**P**	**07 52 49.5**	**-1.6**
	comp=Z,3.4nm,0.4s,mb4.1,baz=44,slow=6.5						
KAF	**Kangasniemi**	**60.75**	**331**	*e*P	**P**	**07 52 49.5**	**-1.6**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
A07A	**Ashnola River,**	**60.84**	**48**	⇑P	**P**	**07 52 51.2**	**-0.8**
	baz=60						
C05A	**Tolt Reservoir**	**60.98**	**50**	⇓P	**P**	**07 52 52.7**	**-0.3**
	baz=61						
E04A	**Onalaska**	**61.10**	**52**	⇑P	**P**	**07 52 55.1**	**+1.3**
	baz=61						
FINES	**FINESS Array B**	**61.30**	**331**	*i* P	**P**	**07 52 53.7**	**-1.1**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FINES	**FINESS Array B**	**61.30**	**331**	P	**P**	**07 52 53.8**	**-1.0**
	comp=Z,6.2nm,0.5s,mb4.3,baz=52,slow=7.8,SNR=89						
B07A	**Winthrop**	**61.34**	**49**	⇓P	**P**	**07 52 55.2**	**-0.2**
	baz=61						
A08A	**Turner Farm, O**	**61.48**	**48**	⇓P	**P**	**07 52 55.8**	**-0.4**
	baz=61						
E05A	**Randle**	**61.64**	**51**	⇑P	**P**	**07 52 57.4**	**+0.1**
	baz=61						
F04A	**Amboy**	**61.67**	**52**	⇓P	**P**	**07 52 58.1**	**+0.6**
	baz=61						
EDM	**Edmonton**	**61.68**	**42**	*e*P	**P**	**07 52 56.8**	**-0.7**

D06A **Cle Elum** 61.74 50 ⇓P P 07 52 57.6 -0.4
baz=61
B08A **Colville Reser** 61.82 49 ⇓P P 07 52 57.7 -0.8
baz=62
A09A **Danville** 61.82 48 ⇓P P 07 52 58.2 -0.2
baz=62,SNR=7.8
C07A **Waterville** 61.85 49 ⇑P P 07 52 58.2 -0.5
baz=62
D07A **Quincy** 62.21 50 ⇓P P 07 53 00.8 -0.3
baz=62
C08A **Higginbotham F** 62.33 49 ⇑P P 07 53 01.5 -0.4
baz=62
A10A **Northport** 62.34 47 ⇑P P 07 53 01.7 -0.2
baz=62,SNR=6.0
B09A **Rice** 62.39 48 ⇑P P 07 53 02.2 0.0
baz=62
HOOD **Mount Hood Mea** 62.47 52 *e*P P 07 53 03.2 +0.4
H04A **Detroit Lake** 62.58 53 ⇓P P 07 53 03.8 +0.3
baz=62
J02A **Umpqua** 62.62 55 ⇑P P 07 53 04.5 +0.7
baz=62
F06A **Goldendale** 62.67 52 ⇓P P 07 53 04.5 +0.4
baz=62
G05A **Wamic** 62.71 52 ⇓P P 07 53 04.8 +0.4
baz=62
C09A **Chrisman Ranch** 62.72 49 ⇓P P 07 53 04.2 -0.2
baz=62
D08A **Wollman Farm,** 62.85 49 ⇑P P 07 53 05.0 -0.3
baz=62
HAWA **Hanford** 62.95 50 *e*P P 07 53 05.6 -0.3
A11A **Hall Mountain,** 62.96 47 P P 07 53 06.5 +0.5
baz=63,SNR=8.9
I04A **Tendick Farm,** 63.01 54 ⇑P P 07 53 06.6 +0.2
baz=63
NEW **Newport** 63.02 48 *e*P P 07 53 06.1 -0.2
F07A **Phinny Hill Vi** 63.05 51 ⇓P P 07 53 06.8 +0.2
baz=63
G06A **Carlson Farm,** 63.09 52 ⇑P P 07 53 07.1 +0.2
baz=63
H05A **Madras** 63.13 53 ⇓P P 07 53 07.3 +0.1
baz=63
D09A **Jones Farm, Ri** 63.17 49 ⇑P P 07 53 07.1 -0.3
baz=63
C10A **Spilker Farm,** 63.21 48 ⇓P P 07 53 07.5 -0.1
baz=63
B11A **Sandpoint** 63.30 47 ⇓P P 07 53 08.4 +0.3
baz=63,SNR=5.3
A12A **Yaak River Ran** 63.34 46 ⇑P P 07 53 08.9 +0.5
baz=63
I05A **Bend** 63.42 53 ⇓P P 07 53 09.6 +0.5
baz=63
J04A **Umpqua Nationa** 63.53 54 ⇑P P 07 53 10.3 +0.5
baz=63
H06A **Lindquist Farm** 63.57 52 ⇓P P 07 53 10.1 +0.1
baz=63
G07A **Ruggs Ranch, H** 63.59 51 ⇓P P 07 53 10.2 +0.1
baz=63
E09A **Wood Farm, Sta** 63.61 50 ⇓P P 07 53 10.3 +0.1
baz=63
D10A **Wagner Farm, O** 63.72 49 P P 07 53 10.7 -0.3
baz=63,SNR=6.4
F08A **Pendleton** 63.73 51 ⇑P P 07 53 11.2 +0.2
baz=63
A13A **Flathead Natio** 63.95 46 P P 07 53 12.5 +0.1
baz=64,SNR=6.4
G08A **Pilot Rock** 63.96 51 ⇑P P 07 53 12.5 0.0
baz=64
J05A **Fort Rock** 63.99 54 ⇑P P 07 53 13.7 +0.9
baz=64,SNR=5.1
I06A **Prineville** 64.14 53 ⇓P P 07 53 14.6 +0.9
baz=64
YBH **Yreka Blue Hor** 64.14 56 ⇓P P 07 53 14.5 +0.7
baz=64
E10A **Myers Farm, Un** 64.17 49 ⇑P P 07 53 13.8 -0.1
baz=64,SNR=6.5
F09A **S2 Ranch, Elgi** 64.25 50 ⇓P P 07 53 14.5 +0.1
baz=64
M02C **Callahan** 64.28 56 ⇑P P 07 53 15.2 +0.6
baz=64
B13A **Whitefish** 64.30 46 ⇑P P 07 53 14.7 +0.1
baz=64
L04A **Klamath Falls** 64.33 55 ⇓P P 07 53 15.5 +0.6
baz=64
N02C **Big Bar** 64.38 57 ⇑P P 07 53 15.6 +0.3
baz=64
I07A **Izee** 64.44 52 ⇑P P 07 53 15.7 0.0
baz=64
F10A **Beach Ranch, E** 64.45 50 ⇑P P 07 53 15.7 0.0
baz=64
K05A **Summer Lake** 64.54 54 ⇓P P 07 53 17.2 +0.9
baz=64
G09A **Cove** 64.60 50 ⇑P P 07 53 16.8 +0.1
baz=64
M04C **Macdoel** 64.61 56 ⇓P P 07 53 16.8 0.0
baz=64
H08A **Prairie City** 64.62 52 ⇓P P 07 53 17.1 +0.3
baz=64
J06A **Christmas Vall** 64.62 53 ⇓P P 07 53 16.8 0.0
baz=64
C13A **Hot Springs** 64.70 47 P P 07 53 17.4 +0.1
baz=64,SNR=5.1
E11A **Bogner Ranch,** 64.73 49 ⇑P P 07 53 16.9 -0.6
baz=64
M03C **McCloud** 64.78 56 ⇓P P 07 53 18.6 +0.7
baz=64
KIPM **Iron Peak** 64.92 58 *e*P P 07 53 19.3 +0.5
WDC **Whiskeytown Da** 64.98 57 ⇓P P 07 53 19.2 +0.1
baz=65
J07A **Hines** 65.01 53 ⇓P P 07 53 20.1 +0.8
baz=65,SNR=7.1
L05A **Lakeview** 65.02 55 ⇑P P 07 53 20.0 +0.7
baz=65
C14A **Swan Lake** 65.06 46 ⇓P P 07 53 19.6 0.0
baz=65
F11A **Grangeville** 65.07 49 ⇑P P 07 53 19.4 -0.2
baz=65
H09A **Durkee** 65.07 51 ⇓P P 07 53 19.7 +0.1
baz=65
I08A **Drewsey** 65.07 52 ⇓P P 07 53 20.2 +0.6
baz=65,SNR=7.3
O02C **Red Bluff** 65.10 57 ⇑P P 07 53 20.3 +0.4
baz=65
D13A **Huson** 65.15 47 P P 07 53 19.8 -0.3
baz=65,SNR=12
M05C **Lookout** 65.28 55 ⇓P P 07 53 21.1 +0.1
baz=65
G11A **Walters Elk Ra** 65.33 50 ⇓P P 07 53 20.8 -0.5
baz=65,SNR=16
MOD **Modoc** 65.41 55 *e*P P 07 53 21.9 0.0
comp=Z,5.2nm,0.6s,mb4.3
MOD **Modoc** 65.41 55 P P 07 53 22.0 +0.1
baz=65,SNR=6.4
FCC **Fort Churchill** 65.43 29 *e*P P 07 53 20.2 -1.5
comp=Z,10.0nm,0.6s,mb4.6
FCC **Fort Churchill** 65.43 29 *e*P P 07 53 20.2 -1.5
FCC pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
HATC **Hat Creek Radi** 65.45 56 ⇓P P 07 53 22.4 +0.3
baz=65
GASB **Alder Springs** 65.48 58 ⇑P P 07 53 23.1 +0.8
baz=65
I09A **Lost Marbles R** 65.48 52 ⇓P P 07 53 22.6 +0.4
baz=65
J08A **Circle Bar Ran** 65.48 52 ⇑P P 07 53 22.8 +0.5
baz=65
K07A **Rock Creek Ran** 65.49 53 ⇓P P 07 53 22.7 +0.4
baz=65,SNR=11
MSO **Missoula** 65.59 47 *e*P P 07 53 22.7 -0.2
comp=Z,11nm,1.4s,mb4.4
H10A **Noah's Angus R** 65.61 50 ⇓P P 07 53 22.6 -0.5
baz=65,SNR=12
F12A **Elk City** 65.63 49 ⇑P P 07 53 23.3 +0.1
baz=65,SNR=13
D14A **Greenough** 65.64 47 ⇓P P 07 53 22.8 -0.4
baz=65,SNR=12
E13A **Victor** 65.72 48 ⇓P P 07 53 23.4 -0.4
baz=65
KIV **Kislovodsk** 65.86 309 *i* P P 07 53 26.0 +1.3
KIV pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
L07A **Adell** 65.88 54 P P 07 53 25.5 +0.6
baz=66,SNR=11
J09A **Fry Pan Ranch,** 65.88 52 ⇑P P 07 53 25.3 +0.5
baz=66
K08A **Mann Creek Ran** 65.89 53 ⇑P P 07 53 25.4 +0.5
baz=66
I10A **Payette** 65.91 51 ⇑P P 07 53 25.5 +0.5
baz=66,SNR=5.7

H11A **Donnelly** 65.93 50 ⇑P P 07 53 24.6 -0.5
baz=66,SNR=6.6
O04C **Chester** 65.99 56 P P 07 53 26.0 +0.4
baz=66,SNR=14
ELFS **Eagle Lake Fie** 66.00 56 ⇓P P 07 53 26.2 +0.5
baz=66
F13A **Darby** 66.08 48 ⇓P P 07 53 25.3 -0.7
baz=66
E14A **Clinton** 66.09 47 P P 07 53 26.0 -0.1
baz=66,SNR=9.6
MNRC **McLaughlin Nat** 66.14 58 ⇑P P 07 53 27.1 +0.5
baz=66
D15A **Lincoln** 66.17 46 ⇓P P 07 53 26.5 0.0
baz=66,SNR=6.2
NB2 **NORSAR Subarra** 66.21 337 P P 07 53 25.7 -0.9
comp=Z,1.4nm,0.5s,mb4.0,baz=32,slow=6.9
NB2 **NORSAR Subarra** 66.21 337 P P 07 53 25.7 -0.9
NB2 pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
NOA **NORSAR Array B** 66.21 337 P P 07 53 25.4 -1.2
comp=Z,2.1nm,0.6s,mb4.0,baz=34,slow=6.3,SNR=7.0
WRA **Warramunga Arr** 66.23 189 *i* P P 07 53 26.3 -0.9
WRA pmax pmax
comp=Z,2.0nm,0.5s
WRA **Warramunga Arr** 66.23 189 P P 07 53 26.4 -0.8
comp=Z,1.5nm,0.5s,mb4.0,baz=5.8,slow=6.6,SNR=23
HFS **Hagfors** 66.24 335 P P 07 53 25.7 -1.1
comp=Z,4.4nm,0.5s,mb4.5,baz=46,slow=6.4,SNR=26
ORV **Oroville** 66.25 57 ⇑P P 07 53 26.7 -0.5
baz=66
SUTB **Sutter Butte** 66.30 58 ⇑P P 07 53 26.6 -0.9
baz=66
L08A **Fields** 66.32 53 ⇓P P 07 53 28.0 +0.3
baz=66,SNR=5.8
O05C **Quincy** 66.33 57 ⇑P P 07 53 27.6 -0.1
baz=66
K09A **Rome** 66.33 53 ⇓P P 07 53 27.8 +0.1
baz=66
OHCM **Honcut** 66.41 57 *e*P P 07 53 27.5 -0.7
N06A **Buffalo Meadow** 66.43 55 P P 07 53 28.4 +0.1
baz=66,SNR=7.9
E15A **Deer Lodge** 66.52 47 ⇓P P 07 53 28.4 -0.4
baz=66,SNR=5.3
F14A **Wisdom** 66.57 48 ⇑P P 07 53 28.7 -0.4
baz=66
G13A **Cobalt** 66.61 49 ⇓P P 07 53 28.3 -1.1
baz=66
H12A **Diamond D Ranc** 66.64 50 ⇓P P 07 53 29.7 +0.1
baz=66,SNR=14
BEKR **Beckwourth** 66.71 56 P P 07 53 30.0 -0.1
baz=66,SNR=6.8
SFJD **Kangerlussuaq** 66.71 6 P P 07 53 28.3 -1.3
comp=Z,7.5nm,0.8s,mb4.5,baz=9.5,slow=6.1,SNR=3.8
K10A **MacKenzie Ranc** 66.75 52 P P 07 53 30.6 +0.3
baz=66,SNR=8.6
L09A **Wilkinson Ranc** 66.81 53 ⇓P P 07 53 31.2 +0.4
baz=66,SNR=5.8
EGMT **Eagleton** 66.86 44 *e*P P 07 53 30.6 -0.3
comp=Z,6.5nm,0.6s,mb4.5
EGMT *e*pP pP 07 54 46.0 +0.8
EGMT **Eagleton** 66.86 44 P P 07 53 30.7 -0.2
baz=66,SNR=9.2
MFID **Camas Ranch** 66.89 51 P P 07 53 32.0 +0.9
baz=66,SNR=5.7
N07B **Gerlach** 66.90 55 ⇑P P 07 53 31.7 +0.4
baz=67
P05C **Yuba Gap, Truc** 66.94 57 ⇓P P 07 53 31.5 0.0
baz=67
H13A **Challis** 66.95 49 ⇑P P 07 53 31.7 +0.2
baz=67
F15A **Butte** 67.00 47 ⇓P P 07 53 32.0 +0.2
baz=67,SNR=9.4
LRM **Limekiln Ridge** 67.03 47 *e*P P 07 53 32.3 +0.3
K11A **Parker Ranch,** 67.21 52 ⇑P P 07 53 33.1 0.0
baz=67
LAVA **Lava Cap Winer** 67.22 57 P P 07 53 33.0 -0.3
baz=67,SNR=6.0
DLMT **Dillon** 67.27 48 *e*P P 07 53 33.5 0.0
comp=Z,16nm,0.7s,mb4.8
M09A **Marrel Ranch,** 67.33 53 ⇑P P 07 53 34.5 +0.5
baz=67
O07A **Toulon** 67.37 55 ⇓P P 07 53 34.5 +0.3
baz=67
N08A **GE Springer Mi** 67.38 54 ⇑P P 07 53 34.3 +0.1
baz=67,SNR=7.3
PAHR **Pah Rah Range** 67.38 56 *e*P P 07 53 34.1 -0.2
comp=Z,6.0nm,0.6s,mb4.5
J12A **Stokes Ranch,** 67.39 51 ⇑P P 07 53 34.5 +0.2
baz=67
WCN **Washoe City** 67.43 56 ⇑P P 07 53 34.7 +0.1
baz=67
L10A **Juniper Basin** 67.44 52 P P 07 53 34.9 +0.3
baz=67,SNR=7.3
G15A **Dillon** 67.46 48 ⇓P P 07 53 34.5 -0.2
baz=67,SNR=38
I13A **Wildhorse Cree** 67.46 50 ⇓P P 07 53 34.6 -0.1
baz=67,SNR=18
MCMT **McKenzie Canyo** 67.51 48 *e*P P 07 53 34.7 -0.3
HLID **Hailey** 67.55 50 *e*P P 07 53 34.8 -0.4
comp=Z,35nm,2.3s,mb4.7
HLID **Hailey** 67.55 50 ⇓P P 07 53 35.5 +0.3
baz=67
BOZ **Bozeman (W)** 67.57 47 *e*P P 07 53 35.7 +0.3
comp=Z,3.6nm,0.6s,mb4.3
BOZ **Bozeman (W)** 67.57 47 *e*P P 07 53 35.7 +0.3
BOZ pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
BOZ **Bozeman (W)** 67.57 47 P P 07 53 35.6 +0.2
baz=67,SNR=14
R05C **Kirkwood Meado** 67.65 57 ⇑P P 07 53 36.0 0.0
baz=67,SNR=5.2
N09A **Rock Creek Ran** 67.67 54 ⇓P P 07 53 36.4 +0.3
baz=67
M10A **I.L. Ranch, Tu** 67.77 53 ⇑P P 07 53 37.1 +0.5
baz=67,SNR=5.0
J13A **Cove Ranch, Pi** 67.79 50 ⇓P P 07 53 37.3 +0.6
baz=67,SNR=9.9
AKASG **Malin Array Be** 67.79 321 P P 07 53 35.4 -1.2
AKASG **Malin Array Be** 67.79 321 *i* P P 07 53 35.7 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG **Malin Array Be** 67.79 321 P P 07 53 35.4 -1.2
comp=Z,0.8nm,0.4s,mb3.8,baz=39,slow=6.2,SNR=8.5
CMB **Columbia Colle** 67.91 58 ⇓P P 07 53 37.5 -0.1
baz=68,SNR=8.0
K12A **Draper Farm, C** 67.91 51 ⇑P P 07 53 37.8 +0.2
baz=68
PACP **Pacheco Peak** 68.06 59 ⇓P P 07 53 38.7 +0.1
baz=68
R06C **Coleville** 68.13 57 ⇑P P 07 53 39.5 +0.5
baz=68,SNR=7.0
L12A **House Creek Ra** 68.19 52 ⇑P P 07 53 39.8 +0.5
baz=68
M11A **Holland Ranch,** 68.25 53 ⇑P P 07 53 40.6 +0.9
baz=68,SNR=7.1
S06C **San Francisco** 68.33 58 ⇑P P 07 53 40.1 -0.1
baz=68,SNR=7.5
S05C **Merced** 68.40 58 ⇑P P 07 53 40.2 -0.5
baz=68
GCMT **Greycliff** 68.46 46 *e*P P 07 53 40.8 0.0
R07C **Lee Vining** 68.66 57 ⇑P P 07 53 42.9 +0.7
baz=68,SNR=12
Q08A **Gabbs** 68.78 56 ⇑P P 07 53 43.1 +0.2
baz=68,SNR=5.2
YFT **Old Faithful** 68.80 47 *e*P P 07 53 44.5 +1.5
L13A **Double Diamond** 68.81 51 ⇓P P 07 53 43.7 +0.7
baz=68
NVAR **Mina Array Bea** 68.86 56 P P 07 53 43.6 +0.2
comp=Z,7.3nm,0.7s,mb4.5,baz=313,slow=4.3,SNR=33
K14A **Jones Ranch, D** 68.90 50 ⇑P P 07 53 44.2 +0.6
baz=69,SNR=6.6
LKWY **Lake** 68.95 47 *e*P P 07 53 45.8 +1.9
comp=Z,54nm,2.8s,mb4.8
LKWY **Lake** 68.95 47 *e*P P 07 53 45.8 +1.9
LKWY pmax pmax
comp=Z,54nm,2.8s,mb4.8
T06C **Milleton Lake** 69.00 58 ⇑P P 07 53 43.7 -0.6
baz=69
KCC **Kaiser Creek** 69.01 58 ⇑P P 07 53 44.3 -0.1
baz=69
R08A **Mina** 69.03 56 ⇑P P 07 53 45.0 +0.5
baz=69
N12A **Clover Valley,** 69.06 53 ⇑P P 07 53 45.4 +0.8
baz=69,SNR=7.8
P10A **Eureka** 69.10 54 ⇑P P 07 53 45.3 +0.4
baz=69
RLMT **Red Lodge** 69.13 46 *e*P P 07 53 45.0 +0.1
IMW **Indian Meadow** 69.14 48 *e*P P 07 53 45.9 +0.8
comp=Z,5.9nm,0.9s,mb4.3
DGMT **Dagmar** 69.15 41 *e*P P 07 53 44.6 -0.5
M13A **Montello** 69.19 52 ⇑P P 07 53 45.7 +0.3
baz=69
O11A **Cowboy Ranch,** 69.21 53 ⇓P P 07 53 46.0 +0.5
baz=69
DCID1 **Drake Creek** 69.22 48 *e*P P 07 53 46.1 +0.5
MOOW **Moose Ponds** 69.34 48 *e*P P 07 53 46.8 +0.6
TPAW **Teton Pass** 69.42 48 *e*P P 07 53 47.8 +1.0
comp=Z,6.8nm,0.9s,mb4.4
LOHW **Long Hollow** 69.51 48 *e*P P 07 53 48.0 +0.7
comp=Z,17nm,1.8s,mb4.5
N13A **Wendover, West** 69.51 52 ⇑P P 07 53 47.5 +0.1
baz=69
REDW **Red Top Meadow** 69.56 48 *e*P P 07 53 48.3 +0.7
S08C **White Mtn Res** 69.57 57 ⇓P P 07 53 47.9 +0.2
baz=69
O12A **Currie** 69.62 53 ⇓P P 07 53 48.4 +0.4
baz=69,SNR=6.8
HELL **Mitchell Peak,** 69.62 58 ⇑P P 07 53 47.5 -0.6
baz=69,SNR=11
Q10A **Clear Creek Ra** 69.68 55 ⇓P P 07 53 48.7 +0.3
baz=69,SNR=5.1
R09A **Tonopah** 69.70 56 ⇓P P 07 53 48.2 -0.4
baz=69,SNR=6.7
ASAR **Alice Springs** 69.96 189 P P 07 53 50.6 +0.5
comp=Z,1.9nm,0.7s,mb4.0,baz=3.3,slow=5.6,SNR=27
S09A **Goldfield** 69.96 56 ⇓P P 07 53 50.4 +0.3
baz=70,SNR=11
M15A **Larsen Ranch,** 70.05 51 ⇑P P 07 53 50.6 0.0
baz=70,SNR=6.6
N14A **Grayback Hills** 70.07 52 ⇓P P 07 53 50.9 +0.1
baz=70,SNR=5.8
P12A **McGill** 70.08 54 ⇑P P 07 53 50.9 +0.1
baz=70,SNR=6.0
Q11A **Duckwater** 70.09 54 ⇓P P 07 53 50.8 -0.1
baz=70
R10A **Warm Springs** 70.11 55 ⇑P P 07 53 51.0 0.0
baz=70
S10A **Tonopah Range,** 70.19 56 ⇑P P 07 53 51.6 +0.1
baz=70,SNR=6.4
MBWA **Marble Bar** 70.19 203 *e*P P 07 53 51.5 -0.1
comp=Z,22nm,1.2s,mb4.8
CWC **Cottonwood Cre** 70.34 58 ⇑P P 07 53 52.3 -0.1
baz=70
GRAC **Grapevine Rang** 70.37 57 ⇓P P 07 53 53.2 +0.5
baz=70,SNR=9.0
N15A **Stansbury Isla** 70.41 51 ⇓P P 07 53 53.1 +0.3
baz=70
HWUT **Hardware Ranch** 70.42 50 *e*P P 07 53 53.0 +0.2
comp=Z,7.3nm,0.9s,mb4.4
Q12A **Willow Creek R** 70.42 54 ⇓P P 07 53 53.4 +0.5
baz=70,SNR=7.2
R11A **Troy Canyon, C** 70.47 55 P P 07 53 53.1 0.0
baz=70,SNR=9.3
P13A **Bates Ranch, G** 70.59 53 ⇓P P 07 53 53.8 0.0
baz=70
BW06 **Boulder Array** 70.65 48 *e*P P 07 53 53.7 -0.5
comp=Z,7.5nm,0.8s,mb4.5
DUG **Dugway** 70.73 52 *e*P P 07 53 54.9 +0.1
comp=Z,5.7nm,0.8s,mb4.3
DUG **Dugway** 70.73 52 *e*P P 07 53 54.9 +0.2
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
DUG **Dugway** 70.73 52 ⇑P P 07 53 54.8 +0.1
baz=70
DAC **Darwin (Calif)** 70.74 58 *e*P P 07 53 54.5 -0.3
comp=Z,3.5nm,0.5s,mb4.3
DAC **Darwin (Calif)** 70.74 58 *e*P P 07 53 54.5 -0.3
DAC pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
S11A **Rachel** 70.87 55 ⇓P P 07 53 56.1 +0.5
baz=70,SNR=12
Q13A **Wheeler Ranch,** 70.93 53 ⇓P P 07 53 56.4 +0.5
baz=71,SNR=12
MPMC **Manual Prospec** 70.95 58 P P 07 53 56.0 -0.1
baz=71,SNR=11
FURC **Furnace Creek,** 71.03 57 ⇓P P 07 53 56.8 +0.2
baz=71,SNR=9.3
R12A **Pony Springs,** 71.04 54 ⇑P P 07 53 56.8 +0.2
baz=71,SNR=5.8
TPNV **Topopah Spring** 71.06 56 *e*P P 07 53 56.6 -0.2
comp=Z,14nm,0.7s,mb4.8
TPNV **Topopah Spring** 71.06 56 *e*P P 07 53 56.6 -0.1
TPNV pmax pmax
comp=Z,14nm,0.7s,mb4.8
TPNV **Topopah Spring** 71.06 56 ⇑P P 07 53 56.6 -0.1
baz=71,SNR=22
JLU **Jordanelle** 71.19 51 *e*P P 07 53 57.5 +0.1
LRMC **Laurel Mountai** 71.23 58 ⇓P P 07 53 57.6 -0.2
baz=71
NLU **North Lily Min** 71.31 52 *e*P P 07 53 58.5 +0.4
U10A **Ash Meadows, A** 71.38 57 ⇓P P 07 53 59.0 +0.4
baz=71
ULM **Lac du Bonnet** 71.38 35 P P 07 53 57.1 -1.3
comp=Z,12nm,0.6s,mb4.8,baz=319,slow=6.5,SNR=50
S12A **Delamar Landin** 71.40 55 ⇓P P 07 53 59.3 +0.6
baz=71,SNR=6.7
DAU **Daniels Canyon** 71.42 51 *e*P P 07 53 58.1 -0.8
T11A **Corn Creek, Al** 71.45 55 P P 07 53 59.1 +0.1
baz=71,SNR=15
EDW2 **Edwards Air Fo** 71.47 59 ⇑P P 07 53 58.9 -0.3
baz=71
MPU **Maple Canyon** 71.50 51 *e*P P 07 53 59.0 -0.3
comp=Z,5.6nm,0.6s,mb4.5
SHOC **Shoshone** 71.77 57 ⇑P P 07 53 59.9 -0.1
baz=72
GSC **Goldstone** 71.87 58 ⇓P P 07 54 01.2 -0.4
baz=72
U11A **Corn Creek** 71.92 56 ⇑P P 07 54 02.6 +0.8
baz=72
S13A **Holt Ranch, En** 71.98 54 ⇓P P 07 54 02.3 +0.1
baz=72,SNR=5.4
SHPR **Sheep Range** 72.00 56 *e*P P 07 54 02.8 +0.5
BFSC **Mount Baldy St** 72.11 59 ⇑P P 07 54 03.0 0.0
baz=72
TMUT **Trail Mountain** 72.24 52 *e*P P 07 54 03.7 0.0
S14A **Cedar City** 72.25 54 ⇑P P 07 54 03.8 +0.1
baz=72
MSU **Marysvale** 72.27 53 *e*P P 07 54 04.5 +0.6
TUQ **Turquoise Mtn.** 72.30 57 ⇓P P 07 54 04.0 0.0
baz=72,SNR=8.9
V11A **Goodsprings** 72.31 57 ⇓P P 07 54 04.3 +0.1
baz=72
T13A **Saint George** 72.35 55 P P 07 54 04.8 +0.5
baz=72,SNR=9.5
U12A **Valley of Fire** 72.40 56 P P 07 54 05.2 +0.5
baz=72,SNR=6.3
HEC **Hector,Ludlow** 72.48 58 ⇓P P 07 54 05.2 0.0
baz=72
BBRC **Big Bear Sol-O** 72.53 59 ⇑P P 07 54 05.8 +0.3
baz=72
V12A **Nelson** 72.72 56 ⇓P P 07 54 06.8 +0.3
baz=72,SNR=5.5
U13A **Pakoon Wash** 72.74 55 ⇑P P 07 54 06.9 +0.3
baz=72,SNR=15
SRU **San Rafael** 72.75 51 *e*P P 07 54 06.6 0.0
comp=Z,5.6nm,0.6s,mb4.5
SRU **San Rafael** 72.75 51 *e*P P 07 54 06.6 0.0
SRU pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
T14A **Hurricane** 72.79 54 ⇑P P 07 54 07.2 +0.3
baz=72
GMRC **Granite Mounta** 72.91 58 P P 07 54 07.6 0.0
baz=73,SNR=6.0
AGMN **Agassiz Refuge** 72.91 37 *e*P P 07 54 05.6 -1.8
comp=Z,16nm,1.4s,mb4.6
W12A **Cal Nev Ari** 73.01 57 ⇑P P 07 54 08.2 0.0
baz=73
U14A **Mt Trumbull** 73.19 55 ⇓P P 07 54 09.7 +0.4
baz=73,SNR=11
T15A **Red Dirt Ranch** 73.21 54 ⇓P P 07 54 09.5 +0.1
baz=73,SNR=6.3
BELC **Belle Mtn.** 73.26 58 ⇓P P 07 54 08.9 -0.8
baz=73
PFO **Pinyon Flat Ob** 73.26 59 ⇑P P 07 54 09.7 0.0
baz=73
IRM **Iron Mountain** 73.64 58 P P 07 54 11.9 -0.1
baz=73,SNR=6.8
W13A **Hualapai Mount** 73.72 56 ⇑P P 07 54 12.5 +0.2
baz=73,SNR=6.3
CLL **Collm** 73.72 330 ⇑*i*P P 07 54 11.5 -0.5
comp=Z,6.0nm,1.0s,mb4.3
CLL **Collm** 73.72 330 ⇑*i*P P 07 54 11.5 -0.5
CLL pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
CLL **Collm** 73.72 330 ⇑*i*P P 07 54 11.5 -0.5
comp=Z,6.0nm,1.0s,mb4.3

BC3	Big Chuckw Mtn	73.82	58	⇓P	P	07 54 12.6	-0.3
	baz=74						
W14A	Seligman	74.10	56	⇓P	P	07 54 14.8	+0.2
	baz=74,SNR=9.0						
X13A	Yucca	74.11	57	⇓P	P	07 54 14.6	0.0
	baz=74,SNR=12						
PDMCI	Parker Dam,Lak	74.14	57	⇓P	P	07 54 14.6	-0.1
	baz=74,SNR=5.9						
Y12C	Blythe	74.30	58	P	P	07 54 15.5	-0.2
	baz=74,SNR=5.3						
PV01	Paradox Valley	74.51	51	eP	P	07 54 16.7	-0.1
SMCO	Snowmass	74.60	49	eP	P	07 54 12.4	-4.9
	comp=Z,7.4nm,0.7s,mb4.5						
GLA	Glamis	74.62	58	⇑P	P	07 54 17.3	-0.2
	baz=74						
Y13A	Salome	74.66	57	⇓P	P	07 54 17.9	+0.1
	baz=74						
X14A	Yava	74.74	56	⇑P	P	07 54 18.6	+0.4
	baz=74,SNR=9.7						
ISCO	Idaho Springs	74.84	48	eP	P	07 54 18.5	-0.2
	comp=Z,3.1nm,0.8s,mb4.1						
ISCO	Idaho Springs	74.84	48	eP	P	07 54 18.5	-0.2
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
EKA	Eskdalemuir Ar	74.88	341	P	P	07 54 17.6	-1.0
	comp=Z,2.4nm,0.8s,mb4.0,baz=18,slow=4.9,SNR=6.5						
EYMN	Ely	74.96	34	eP	P	07 54 18.2	-1.0
	comp=Z,13nm,0.8s,mb4.7						
Y14A	Wickenburg	75.06	57	⇑P	P	07 54 20.1	+0.1
	baz=75						
X15A	Humboldt	75.11	56	⇑P	P	07 54 20.7	+0.5
	baz=75,SNR=15						
MVCO	Mesa Verde	75.22	51	eP	P	07 54 20.8	0.0
	comp=Z,7.7nm,0.7s,mb4.5						
MVCO	Mesa Verde	75.22	51	⇑P	P	07 54 20.8	-0.1
	baz=75,SNR=6.9						
KHC	Kasperske Hory	75.33	328	eP	P	07 54 20.5	-0.7
GERES	GERESS Array B	75.52	328	P	P	07 54 22.0	-0.3
	comp=Z,0.5nm,0.4s,mb3.6,baz=42,slow=6.1,SNR=5.7						
ECSD	EROS,Sioux Fal	76.18	40	eP	P	07 54 24.9	-1.2
	comp=Z,7.6nm,0.4s,mb4.8						
SCHQ	Schefferville	76.30	17	P	P	07 54 25.8	-0.8
	comp=Z,5.5nm,0.7s,mb4.4,baz=5.5,slow=5.8,SNR=21						
115A	Sonoran Desert	76.39	57	⇑P	P	07 54 28.0	+0.4
	baz=76						
SDCO	Great Sand Dun	76.43	49	eP	P	07 54 27.6	0.0
116A	Eloy	76.80	57	⇓P	P	07 54 29.9	+0.1
	baz=76						
ASF	Jabal al Asfar	77.33	303	P	P	07 54 33.8	+1.1
	comp=Z,2.7nm,0.8s,mb4.1,baz=204,slow=2.7,SNR=4.5						
216A	Three Points,	77.35	57	⇓P	P	07 54 33.0	+0.1
	baz=77						
MMAI	Mount Meron Ar	77.58	305	P	P	07 54 35.3	+1.2
	comp=Z,5.5nm,0.7s,mb4.4,baz=35,slow=7.8,SNR=10						
217A	Green Valley	77.89	57	⇑P	P	07 54 35.9	+0.1
	baz=78,SNR=5.3						
ANMO	Albuquerque	78.00	52	eP	P	07 54 36.7	+0.3
	comp=Z,10nm,1.4s,mb4.4						
ANMO	Albuquerque	78.00	52	eP	P	07 54 36.7	+0.3
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
CDF	Champ du Feu	78.13	332	eP	P	07 54 36.6	-0.2
	comp=Z,8.3nm,0.8s,mb4.2						
CDF	Champ du Feu	78.13	332	eP	P	07 54 36.6	-0.2
	comp=Z,4.2nm,0.8s,mb4.2						
CDF	Champ du Feu	78.13	332	eP	P	07 54 36.6	-0.2
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
218A	Dragoon	78.19	56	⇑P	P	07 54 37.9	+0.4
	baz=78						
318A	Bisbee	78.61	56	⇓P	P	07 54 40.0	+0.3
	baz=78,SNR=6.3						
HAU	Haudompre	78.79	332	eP	P	07 54 39.7	-0.7
319A	Douglas	79.07	56	⇓P	P	07 54 42.5	+0.3
	baz=79,SNR=5.5						
CABF	La Chapelle	80.10	331	eP	P	07 54 47.2	-0.2
FLN	La Foliniere	80.19	336	eP	P	07 54 47.3	-0.6
	comp=Z,3.6nm,0.4s,mb4.1						
LOR	Lormes	80.24	333	eP	P	07 54 47.5	-0.7
	comp=Z,10.0nm,0.8s,mb4.3						
LDF	La Druitiere	80.25	336	eP	P	07 54 47.7	-0.5
EIL	Elat	80.30	303	P	P	07 54 49.2	+0.4
EIL	Elat	80.30	303	P	P	07 54 49.2	+0.4
	comp=Z,3.8nm,0.7s,mb4.2,baz=3.4,slow=17,SNR=3.4						
SSF	Saint Saulge	80.54	333	eP	P	07 54 49.1	-0.6
GRR	Gorron	80.64	336	eP	P	07 54 49.8	-0.4
	comp=Z,9.2nm,0.6s,mb4.4						
SMF	Signal de Mont	80.80	333	eP	P	07 54 50.7	-0.4
	comp=Z,17nm,0.7s,mb4.6						
AVF	Avril sur Loir	80.83	333	eP	P	07 54 50.8	-0.5
	comp=Z,20nm,0.9s,mb4.5						
LPL	La Plagne	80.84	330	eP	P	07 54 51.5	+0.2
	comp=Z,5.6nm,0.6s,mb4.2						
LPG	La Plagne	80.85	330	eP	P	07 54 51.7	+0.3
	comp=Z,11nm,0.7s,mb4.4						
MNTX	Cornudas Mount	81.04	53	eP	P	07 54 52.3	-0.3
BGF	Bois d'Agland	81.19	333	eP	P	07 54 53.4	+0.2
SGMF	Saint Gilles	81.22	337	eP	P	07 54 53.7	+0.4
ROSF	Rostrenen	81.34	338	eP	P	07 54 54.0	+0.1
	comp=Z,24nm,0.8s,mb4.7						
MBDF	Montbardon	81.51	330	eP	P	07 54 54.4	-0.5
	comp=Z,5.8nm,0.6s,mb4.3						
TCF	Toulx Ste Croi	81.63	334	eP	P	07 54 54.7	-0.8
ORIF	Oris-en-Rattie	81.65	331	eP	P	07 54 55.5	-0.1
	comp=Z,14nm,0.8s,mb4.5						
MFF	Saint Martin d	82.06	335	eP	P	07 54 57.6	-0.1
	comp=Z,25nm,1.0s,mb4.7						
RJF	Les Rejaudoux	82.73	334	eP	P	07 55 01.1	0.0
CAF	Calviac	82.90	333	eP	P	07 55 02.5	+0.5
	comp=Z,14nm,0.8s,mb4.6						
LFF	La Frestale	83.30	334	eP	P	07 55 04.3	+0.3
	comp=Z,19nm,0.7s,mb4.8						
TXAR	Lajitas Array	83.79	54	P	P	07 55 06.6	-0.2
	comp=Z,3.1nm,0.6s,mb4.3,baz=293,slow=4.4,SNR=51						
EPF	Esparros	85.14	333	eP	P	07 55 13.1	-0.2
	comp=Z,9.7nm,0.9s,mb4.3						
ETSF	Etsaut	85.54	334	eP	P	07 55 15.9	+0.7
	comp=Z,17nm,0.6s,mb4.7						
SWET	Sewanee	87.86	38	eP	P	07 55 25.3	-1.2
ESDC	Sonseca Array	89.52	335	P	P	07 55 32.9	-1.2
	comp=Z,0.6nm,0.4s,mb3.9,baz=25,slow=4.6,SNR=5.2						
DBIC	Dimbokro	120.03	322	PKP	PKPdf	08 01 24.6	-1.3
	comp=Z,2.0nm,0.6s,baz=145,slow=12,SNR=3.5						
MATP	Matopo	121.18	272	PKP	PKPdf	08 01 27.4	-0.4
	baz=82,slow=7.1						
VNA2	Neumayer--Watz	151.32	200	ePKPdf	PKPbc	08 02 25.9	-1.3
	baz=95,slow=0.8						
VNA3	Neumayer Olymp	151.60	198	ePKPdf	PKPbc	08 02 26.1	-1.7

*NEIC **10** 07:44:41.7,3451S×7177W,h28km,mb4.4/1,ML4.3(GUC), After GUC.*
NEIC Felt [III] at Curico, Linares and Talco; [II] at Pichilemu.
GUC 10 07:44:41.7±1.0,**3451S×7177W,h28**km±7km,**MD4.3, ML4.3,13C-5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNV	Longovilo	0.63	29	⇓iP	Pb	07 44 55.3	+1.1
LNV				iS	Sb	07 45 04.6	+2.0
SFDO	San Fernando	0.63	100	⇑iP	Pb	07 44 54.3	0.0
NICH	Los Niches	0.66	138	⇑iP	Pb	07 44 54.7	-0.1
NICH				iS	Sb	07 45 04.1	+0.4
TALC	Talca	0.89	173	⇑iP	Pn	07 44 57.7	-0.6
TALC				iS	Sb	07 45 09.9	-0.3
TALC	Talca	0.89	173	⇑iP	Pn	07 44 57.7	-0.6
TALC				iS	Sb	07 45 09.9	-0.3
TALC				AML	AML	07 45 11.8	
	comp=N,18µm,0.4s						
CACH	El Canelo	1.04	68	⇓iP	Pn	07 45 00.8	+0.3
CACH				iS	Sn	07 45 15.4	+1.3
CHCH	Chadas Angostu	1.09	59	⇑iP	Pn	07 45 01.4	+0.4
TACH	Talagante	1.10	39	⇓iP	Pn	07 45 01.6	+0.4
CICH	Cipreses	1.13	81	⇑iP	Pn	07 45 01.5	-0.1
ANTU	Antumapu	1.33	46	eP	Pn	07 45 04.6	+0.2
ANTU				iS	Sn	07 45 22.4	+1.3
ANTU	Antumapu	1.33	46	eP	Pn	07 45 04.6	+0.2
ANTU				iS	Sn	07 45 22.4	+1.3
ANTU				AML	AML	07 45 29.4	
	comp=N,7µm,0.6s						
PCH	Pirque	1.37	50	⇓iP	Pn	07 45 05.3	+0.5
LMEL	Las Melosas	1.46	64	⇑iP	Pn	07 45 06.7	+0.6
LMEL				iS	Sn	07 45 26.1	+1.9
LMEL	Las Melosas	1.46	64	⇑iP	Pn	07 45 06.7	+0.6
LMEL				iS	Sn	07 45 26.1	+1.9
LMEL				AML	AML	07 45 27.2	
	comp=N,7µm,0.3s						
IHA	Instituto Hidr	1.48	4	⇑iP	Pn	07 45 07.1	+0.7
DSCH	Colegio Aleman	1.49	42	iP	Pn	07 45 06.4	-0.2
DSCH				iS	Sn	07 45 26.2	+1.1
CLCH	Cerro Calan	1.51	43	⇑iP	Pn	07 45 07.9	+1.1
CLCH				iS	Sn	07 45 27.8	+2.2
CLCH	Cerro Calan	1.51	43	⇑iP	Pn	07 45 07.9	+1.1
CLCH				iS	Sn	07 45 27.8	+2.2
CLCH				AML	AML	07 45 35.2	
	comp=N,9µm,0.7s						
PEL	Peldehue	1.63	34	⇓iP	Pn	07 45 09.3	+0.7
PEL				iS	Sn	07 45 31.2	+2.7
PEL				AML	AML	07 45 35.8	
	comp=E,10µm,0.5s						
YECH	El Yeso	1.63	59	⇑iP	Pn	07 45 09.6	+1.0
YECH				iS	Sn	07 45 30.5	+1.9
YECH				AML	AML	07 45 34.5	
	comp=N,5µm,0.2s						
FCH	Farellones	1.70	47	⇑iP	Pn	07 45 10.1	+0.6
FCH				iS	Sn	07 45 32.2	+1.9
FCH				AML	AML	07 45 37.7	
	comp=N,4µm,0.2s						
CCHI	Chillan	2.10	187	eP	Pn	07 45 16.3	+1.3
CCHI				iS	Sn	07 45 42.6	+2.5
CCHI	Chillan	2.10	187	eP	Pn	07 45 16.3	+1.3
CCHI				iS	Sn	07 45 42.6	+2.5
CCHI				AML	AML	07 45 56.6	
	comp=E,2µm,1.0s						
TLL	Tololo Astrono	4.41	11	eP	Pn	07 45 47.1	+0.5
LCO	Las Campanas	5.56	10	ePn	Pn	07 46 01.7	-0.8
	comp=E,22nm,0.4s						
LCO				eSn	Sn	07 47 04.7	-0.7
TRQA	Tornquist	8.66	117	ePn	Pn	07 46 44.9	-0.1
NNA	Nana	22.89	347	eP	P	07 49 43.0	-0.1
	comp=E,16nm,1.2s						

*IDC **10** 07:50:06.2±5.8,633N×12692E,h75km±54km,mb3.9/12, mb1 3.9/12,mb1mx3.8/22,mbtmp3.9/12,MS3.4/2, Ms1 3.4/2,ms1mx3.0/29,Error ellipse: s-maj=41.5km s-min=12.9km az=77.0*
*NEIC **10** 07:50:06.5±2.4,640N×12721E,h84km±19km,mb4.2/1, Error ellipse: s-maj=41.7km s-min=8.5km az=70.0*
*ISCJB **10** 07:50:07.3±1.3,628N±007×1270E±02,h104km±11km, mb4.1/13,Error ellipse: s-maj=26.2km s-min=10.4km az=164.6*
*MAN **10** 07:50:08,644N×12702E,h43km,mb5.2,ML4.2,MS4.3*
ISC 10 07:50:08.2±1.3,**628N**±007×**1270E**±01,**h96**km±11km,**n28,** σ**0s99**/30,**mb4.1**/13,**3C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.59	300	ePn	Pn	07 50 35.3	-0.1
DAV				eSn	Sn	07 50 58.0	+2.0
DMPH	Davao City--Mi	1.66	299	⇑iP	Pn	07 50 35.8	-0.5
DMPH				iS	Sn	07 50 59.6	+2.1
KCP	Kidapawan	2.00	291	⇑eP	Pn	07 50 39.7	-1.0
KCP				iS	Sn	07 51 04.2	-1.3
GSPH	General Santos	2.02	265	⇓eP	Pn	07 50 37.6	-3.3
GSPH				eS	Sn	07 51 00.2	-5.6
CGP	Cagayan de Oro	3.12	314	⇑eP	Pn	07 50 55.6	+0.1
CGP				iS	Sn	07 51 31.0	-1.1
SCPH	Surigao	3.78	337	eP	Pn	07 51 03.7	-0.7
SCPH				eS	Sn	07 51 32.3	-16
TBP	Tagbilaran	4.58	318	eP	Pn	07 51 16.0	+0.7
SNPH	Sibulan	4.79	310	eP	Pn	07 51 19.0	+0.9
FITZ	Fitzroy Crossi	24.26	183	P	P	07 55 16.3	-0.2
	2.9nm,0.7s,mb3.7,baz=349,slow=23,SNR=8.3						
FITZ				PcP	PcP	07 58 55.4	+1.0
	2.0nm,0.9s,baz=5.7,slow=10,SNR=3.5						
WRA	Warramunga Arr	27.05	165	P	P	07 55 42.1	+0.4
	2.4nm,0.7s,mb3.9,baz=342,slow=10,SNR=19						
WRA				PcP	PcP	07 59 01.7	+0.9
	1.0nm,0.4s,baz=339,slow=2.6,SNR=7.9						
PSI	Prapat	28.16	264	LR	LR	08 08 09.3	
	comp=Z,79nm,18.1s,baz=310,slow=38						
ASAR	Alice Springs	30.52	167	P	P	07 56 12.4	-0.1
	0.6nm,0.5s,mb3.6,baz=341,slow=7.2,SNR=13						
ASAR				PcP	PcP	07 59 10.2	+0.8
	2.3nm,0.5s,baz=346,slow=2.5,SNR=24						
KSRS	Korea Array	31.04	1	LR	LR	08 07 18.5	
	comp=Z,61nm,21.5s,baz=164,slow=33						
NWAO	Narrogin (SRO)	40.07	193	P	P	07 57 35.6	+1.4
	5.5nm,0.4s,mb4.7,baz=7.7,slow=6.4,SNR=9.3						
ASAJ	Asahikawa	40.10	18	P	P	07 57 35.3	+0.9
	1.9nm,0.4s,mb4.3,baz=126,slow=13,SNR=5.9						
STKA	Stephens Creek	40.43	161	eP	P	07 57 36.6	-0.6
	3.6nm,1.0s,mb4.2						
SONM	Songino Array	44.98	340	P	P	07 58 13.6	-0.2
	0.3nm,0.4s,mb3.4,baz=150,slow=8.9,SNR=2.9						
MKAR	Makanchi Array	55.62	324	P	P	07 59 34.2	+0.1
MKAR	Makanchi Array	55.62	324	P	P	07 59 34.2	+0.1
	1.2nm,0.5s,mb4.2,baz=120,slow=8.0,SNR=13						
ZALV	Zalesovo Beam	58.45	332	P	P	07 59 53.0	-0.9
ZALV	Zalesovo Beam	58.45	332	P	P	07 59 53.0	-0.9
	2.9nm,0.8s,mb4.3,baz=108,slow=8.0,SNR=9.4						
AKTK	Aktyubinsk	71.83	321	P	P	08 01 21.1	+0.5
AKTO	Aktyubinsk	71.83	321	P	P	08 01 21.1	+0.5
	3.6nm,0.6s,mb4.4,baz=94,slow=9.2,SNR=14						
ASF	Jabal al Asfar	86.76	302	P	P	08 02 43.2	+1.1
	5.7nm,0.8s,mb4.6,baz=314,slow=1.6,SNR=8.1						
ARCES	ARCESS Array B	88.15	340	P	P	08 02 46.5	-1.5
	1.6nm,0.8s,mb4.1,baz=86,slow=6.4,SNR=7.8						
FINES	FINESS Array B	89.71	332	P	P	08 02 54.6	-0.8
	0.4nm,0.5s,mb3.8,baz=48,slow=3.1,SNR=6.1						
TORD	Torodi Ar. Bea	122.32	290	PKP	PKPdf	08 08 52.9	-0.2
TORD	Torodi Ar. Bea	122.32	290	PKP	PKPdf	08 08 52.9	-0.2
	1.2nm,0.7s,baz=62,slow=2.1,SNR=5.1						

*ISK **10** 07:55:34.3,3873N×2637E,h5km,MD3.3*
*ISCJB **10** 07:55:36.0±0.7,3876N±003×2646E±005,h8km±5km, Error ellipse: s-maj=7.7km s-min=3.8km az=155.2*
*ATH **10** 07:55:35.3,3893N×2671E,h44km±16km,MD3.2/3*
*CSEM **10** 07:55:36.0±0.3,3879N×2654E,h8km,MD2.9,Error ellipse: s-maj=6.7km s-min=3.7km az=80.0*
*DDA **10** 07:55:36.7,3873N×2643E,h14km,Md2.9*
ISC 10 07:55:36.4±0.8,**3876N**±003×**2645E**±006,**h11**km±5km,**n21,** σ**0s91**/30,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.51	344	eP	Pg	07 55 46.5	+0.2
PRK				eS	Sg	07 55 54.1	+1.1
AYVA	Ayvalik	0.58	19	iP	Pg	07 55 47.0	-0.6
AYVA				iS	Sg	07 55 57.4	+2.1
BLCB	Balcova	0.59	129	PG	Pg	07 55 47.0	-0.9
BLCB				SG	Sg	07 55 55.9	+0.2
IZM	Izmir	0.73	119	PG	Pg	07 55 49.3	-1.2
AKS	Akhisar	1.07	83	PN	Pn	07 55 56.8	-0.5
AKHS	Akhisar	1.07	83	iP	Pb	07 55 56.2	-0.7
AKHS				iS	Sg	07 56 10.7	-0.2
EZN	Ezine	1.07	355	PN	Pn	07 55 55.7	-1.7
EZN				SN	Sn	07 56 11.2	-1.0
SMG	Samos	1.09	164	eP	Pb	07 55 57.0	-0.3
SMG				eS	Sb	07 56 13.0	+1.5
BOZC	Bozcaada	1.13	344	iP	Pb	07 55 57.2	-0.7
BOZC				iS	Sb	07 56 12.8	+0.2
BALB	Balikesir	1.42	51	ePN	Pn	07 56 02.4	+0.3
GADA	Gvkgeada	1.49	344	ePN	Pn	07 56 02.2	-1.0
AYDN	Tasoluk	1.57	134	iP	Pn	07 56 03.4	-0.8
AYDN				iS	Sn	07 56 30.2	+5.7
MANT	Manisa	1.67	99	iP	Pn	07 56 05.2	-0.4
MANT				iS	Sn	07 56 28.4	+1.3
KULA	Kula-Manisa	1.75	97	ePN	Pn	07 56 06.8	+0.2
BODT	Bodrum	1.82	158	ePN	Pn	07 56 07.5	-0.2
APE	Apeiranthos	1.84	204	eP	Pn	07 56 09.6	+1.7
EDC	Edincik	1.93	34	ePN	Pn	07 56 08.7	-0.4
ENEZ	Enez	1.99	353	ePN	Pn	07 56 10.3	+0.3
YER	Yerkesik	2.17	138	ePN	Pn	07 56 12.4	-0.1
IZI	Iznik	2.82	55	ePN	Pn	07 56 22.4	+1.0
YLV	Yalova	2.89	50	ePN	Pn	07 56 23.5	+1.2

*CSEM **10** 07:58:31.6±0.1,3590N×2328E,h55km,ML3.9,Error ellipse: s-maj=2.6km s-min=1.4km az=48.0*
*HLW **10** 07:58:31.4,3612N×2336E,h33km,Mb4.1*
*ISCJB **10** 07:58:32.5±0.3,3601N±002×2319E±003,h96km±3km, mb3.9/14,Error ellipse: s-maj=4.8km s-min=2.4km az=140.6*
*IDC **10** 07:58:35.0±1.9,3633N×2340E,h57km±22km,mb3.8/12, mb1 3.8/16,mb1mx3.7/25,mbtmp3.7/16,ML3.9/4,Error ellipse: s-maj=32.0km s-min=14.2km az=38.0*
*ATH **10** 07:58:35.2,3619N×2334E,h56km±1km,MD3.9/22,ML3.9*
*PDG **10** 07:58:35.1±0.2,3646N×2278E,h11km±11km,ML4.3/9, Error ellipse: s-maj=251.0km s-min=137.2km az=90.0*
*THE **10** 07:58:35.6,3631N×2350E,h3km,ML4.5*
*NEIC **10** 07:58:35.2,3619N×2335E,h55km,MG3.9(ATH),After ATH.*
*NAO **10** 07:59:08.4,4048N×2480E,h33km,mb3.3*
ISC 10 07:58:33.9±0.2,**3602N**±002×**2320E**±003,**h75**km±3km, **n141,**σ**1s39**/180,**mb3.9**/14,**7C-3D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	0.30	333	eP	Pn	07 58 45.0	-0.6
VLI	Veliai	0.73	343	⇓iP	Pn	07 58 49.0	-0.6
VLI				eS	Sn	07 58 58.6	-2.5
KARN	Karanos	0.84	136	ePg	Pn	07 58 53.4	+2.6
KARN				eSg	Sn	07 59 08.7	+5.4
VAM	Vamos	1.01	126	⇑iP	Pn	07 58 54.7	+1.9
VAM				eS	Sn	07 59 09.0	+2.1
GVD	Gavdhos	1.38	148	ePg	Pn	07 59 04.0	+6.6
GVD				eSg	Sn	07 59 25.3	+10
PYL	PYLOS	1.47	307	ePg	Pn	07 59 02.8	+4.2
PYL				eSg	Sn	07 59 24.6	+7.4
DID	Didima	1.49	1	ePg	Pn	07 58 58.5	-0.4
DID				eSg	Sn	07 59 16.4	-1.3
VLX	Vlachokerasia	1.50	334	ePg	Pn	07 59 02.0	+2.9
VLX				eSg	Sn	07 59 20.9	+2.8
ITM	Ithomi	1.55	319	⇓iP	Pn	07 59 00.8	+1.1
ITM				eS	Sn	07 59 20.1	+1.0
IDI	Anoyia	1.55	117	P	Pn	07 59 01.4	+1.6
	71nm,0.3s,baz=316,slow=15,SNR=131						
IDI				S	Sn	07 59 20.7	+1.5
	268nm,0.3s,baz=66,slow=20,SNR=16						
SIVA	Sivas	1.65	127	ePb	Pn	07 59 05.6	+4.7
SIVA				eSb	Sn	07 59 28.1	+6.7
NAIG	Nisos Aigina	1.75	7	eP	Pn	07 59 02.5	+0.1
NAIG				eS	Sn	07 59 22.0	-2.0
SANT	Santorini	1.86	78	ePg	Pn	07 59 04.2	+0.4
KVR	Kavouri	1.86	14	eP	Pn	07 59 03.0	-0.9
ATH	Athens Observa	2.00	12	eP	Pn	07 59 05.2	-0.4
ATH				eS	Sn	07 59 26.4	-3.3
LTK	Loutraki	2.01	355	ePb	Pn	07 59 06.0	+0.2
LTK				eSb	Sn	07 59 30.5	+0.4
LAST	Lasithi	2.04	114	ePn	Pn	07 59 09.5	+3.3
LAST				eSn	Sn	07 59 35.7	+4.9
PTL	Penteli	2.10	14	eP	Pn	07 59 07.0	0.0
NPS	Neapolis	2.10	110	⇑iP	Pn	07 59 08.9	+1.9
NPS				eS	Sn	07 59 33.1	+0.8
APE	Apeiranthos	2.15	60	ePb	Pn	07 59 07.7	0.0
APE				eSb	Sn	07 59 31.3	-2.1
APE	Apeiranthos	2.15	60	eP	Pn	07 59 07.5	-0.1
APE				eS	Sn	07 59 31.1	-2.3
XRY	Khrisi	2.33	118	eP	Pn	07 59 12.5	+2.4
RLS	Riolos of Patr	2.47	326	eP	Pn	07 59 13.8	+1.9
ZKR	Zakros	2.62	109	ePn	Pn	07 59 16.2	+2.3
ZKR				eSn	Sn	07 59 48.4	+3.6
LKR	Lokris	2.63	357	eP	Pn	07 59 14.1	-0.1
LKR				eS	Sn	07 59 43.0	-2.1
VLS	Valsamata	3.00	317	eP	Pn	07 59 20.0	+0.8
AGG	Agios Georgios	3.08	347	ePn	Pn	07 59 21.7	+1.4
AGG				eSn	Sn	07 59 57.2	+1.3
EVR	Evrytania	3.10	339	eP	Pn	07 59 22.0	+1.5
KARP	Karpathos	3.25	97	eP	Pn	07 59 24.3	+1.7
KARP				eS	Sn	08 00 00.5	+0.3
CHOS	Chios island	3.29	43	ePn	Pn	07 59 22.7	-0.3
CHOS				eSn	Sn	07 59 59.2	-1.7
NEO	Neokhori	3.29	0	eP	Pn	07 59 23.2	+0.2
XOR	Xorichti	3.34	360	ePn	Pn	07 59 24.3	+0.5
LKD	Levkas	3.37	324	ePn	Pn	07 59 27.9	+3.8
LKD				eSn	Sn	08 00 08.3	+5.4
SMG	Samos	3.37	59	⇑iP	Pn	07 59 24.3	+0.1
BODT	Bodrum	3.47	71	ePN	Pn	07 59 26.5	+0.9
DAT	Datca	3.60	77	ePN	Pn	07 59 28.4	+1.1
THL	Klokotos Trika	3.67	345	eP	Pn	07 59 29.7	+1.5
BLCB	Balcova	3.87	51	ePN	Pn	07 59 28.2	-2.8
PAIG	Paliouri	3.92	5	ePn	Pn	07 59 31.6	-0.1
ARG	Arkhangelos	3.99	86	eP	Pn	07 59 35.0	+2.4
LTBQ	Tobruq	3.99	171	eS	Sn	08 00 17.0	-1.3
	SNR=36						
IZM	Izmir	4.02	53	ePN	Pn	07 59 28.0	-5.0
PRK	Paraskevi	4.04	36	eP	Pn	07 59 32.8	-0.5
MEV	Metsovon	4.07	338	ePn	Pn	07 59 35.8	+2.1
JAN	Janina	4.08	334	eP	Pn	07 59 35.2	+1.3
LIT	Litokhoron	4.12	352	ePn	Pn	07 59 35.4	+1.1
LIT				eSn	Sn	08 00 22.8	+1.6
YER	Yerkesik	4.24	73	ePN	Pn	07 59 38.3	+2.3
OUR	Ouranopolis	4.36	8	ePn	Pn	07 59 37.5	0.0
OUR	Ouranopolis	4.36	8	ePn	Pn	07 59 37.5	-0.1
PLG	Polygyros	4.36	2	⇓iP	Pn	07 59 38.0	+0.4
DALT	Dalyan (Mudla)	4.45	79	ePN	Pn	07 59 41.5	+2.6
EZN	Ezine	4.54	32	ePN	Pn	07 59 38.4	-1.6
FETY	Fethiye	4.79	81	ePN	Pn	07 59 45.9	+2.4
SOH	Sokhos	4.80	1	ePn	Pn	07 59 44.8	+1.2
FNA	Florina	4.97	344	ePn	Pn	07 59 48.5	+2.5
FNA				eSn	Sn	08 00 45.7	+3.6
KNT	Kendrikon	5.14	357	ePn	Pn	07 59 49.5	+1.2
RDO	Rodhopi	5.44	19	P	Pn	07 59 53.6	+1.2
ELL	Elmali	5.46	80	ePN	Pn	07 59 54.4	+1.8
MMB	Musomiste	5.58	4	P	Pn	07 59 55.0	+0.7
LJBD	Adjabya	5.67	207	iP	Pn	07 59 56.1	+0.5
	SNR=36						
RZN	Rozhen	5.79	11	P	Pn	07 59 57.6	+0.5
KCT	Karacabey	5.87	42	ePN	Pn	07 59 56.3	-2.0
KDZ	Kurdzhali	5.89	16	P	Pn	07 59 57.6	-0.9
LCI	Lecce	5.89	319	Pn	Pn	07 59 58.4	-0.1
	42nm,0.4s						
TIP	Timpagrande	6.01	304	ePn	Pn	08 00 00.4	+0.2
TIP	Timpagrande	6.01	304	ePn	Pn	08 00 00.4	+0.2
DIM	Dimitrovgrad	6.29	16	P	Pn	08 00 04.0	0.0
IZI	Iznik	6.56	47	ePN	Pn	08 00 05.1	-2.5
VTS	Vitosha	6.57	0	P	Pn	08 00 11.4	+3.6
VTS	Vitosha	6.57	0	P	Pn	08 00 10.0	+2.2
PE1	Pezze di Greco	6.59	318	ePn	Pn	08 00 07.5	-0.6
YLV	Yalova	6.65	45	ePN	Pn	08 00 07.3	-1.5
ULC	Ulcinj	6.69	334	ePn	Pn	08 00 07.3	-2.1
ULC				eSn	Sn	08 01 17.2	-6.9
PZI	Palazzolo	6.73	281	Pn	Pn	08 00 08.8	-1.2
SG1	Sgolgore (BA)	7.03	315	ePn	Pn	08 00 14.6	+0.5
PVY	Plav	7.03	340	ePn	Pn	08 00 11.7	-2.4
PVY				eSn	Sn	08 01 25.7	-6.8
BAI	Bari	7.10	318	ePn	Pn	08 00 14.7	-0.3
PDG	Podgorica	7.10	336	ePn	Pn	08 00 13.1	-1.9
TTG	Podgorica	7.10	336	ePn	Pn	08 00 13.1	-1.9
TTG				eSn	Sn	08 01 26.9	-7.2
BUM	Brajici-Budva	7.11	333	ePn	Pn	08 00 13.4	-1.8
BUM				eSn	Sn	08 01 26.8	-7.6
MGR	Morigerati	7.30	307	Pn	Pn	08 00 17.5	-0.3
	73nm,0.5s						
BEY	Berane	7.31	341	ePn	Pn	08 00 16.4	-1.5
IVA	Berane	7.31	341	ePn	Pn	08 00 16.4	-1.5
IVA				eSn	Sn	08 01 31.6	-7.6
PVL	Pavlikeni	7.38	12	P	Pn	08 00 18.0	-0.8
HCY	Herceg Novi	7.39	332	ePn	Pn	08 00 17.7	-1.2
HCY				eSn	Sn	08 01 33.5	-7.7
CDT	Castel del Mon	7.42	315	ePn	Pn	08 00 18.6	-0.8
KIZT	Kizilcal	7.47	65	PN	Pn	08 00 23.4	+3.3
NKY	Niksic	7.53	336	ePn	Pn	08 00 20.0	-0.9
NKY				eSn	Sn	08 01 36.7	-7.9
SGO	Sicignano	7.69	309	Pn	Pn	08 00 23.1	0.0
	26nm,0.3s						
BRY	Bratogost	7.76	334	ePn	Pn	08 00 22.2	-1.9
BRY				eSn	Sn	08 01 42.4	-7.9
PLE	Pljevlja	7.87	339	ePn	Pn	08 00 23.7	-1.9
PLE				eSn	Sn	08 01 45.7	-7.3
UPM	Unac-Piva	7.90	337	ePn	Pn	08 00 24.6	-1.4
UPM				eSn	Sn	08 01 46.1	-7.7
MS1	Monte Sant'Ang	8.02	317	ePn	Pn	08 00 27.1	-0.5
STON	Ston	8.06	330	⇑iPn	Pn	08 00 25.7	-2.5
STON				Sn	Sn	08 01 46.4	-11
BBLS	Bajina Basta -	8.37	341	Pn	Pn	08 00 31.9	-0.4
IKL	Isikli	8.49	85	ePN	Pn	08 00 34.1	+0.1
HMYD	Mayadein	8.90	132	P	Pn	08 00 38.1	-1.6
HNAT	Natroun	8.91	133	P	Pn	08 00 38.6	-1.2
FYM	Al Fayyum	9.12	132	P	Pn	08 00 41.8	-1.0
AYT	Al 'Ayyat	9.18	131	P	Pn	08 00 42.2	-1.3
AYT	Al 'Ayyat	9.18	131	P	Pn	08 00 42.2	-1.3
HSAF	As Saff	9.49	130	P	Pn	08 00 46.3	-1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VOIR		9.52	8	⇑iP	Pn	08 00 49.4	+1.4
HHAG	Hagoal	9.61	126	P	Pn	08 00 47.8	-1.5
GLL	Jalalah	9.61	129	P	Pn	08 00 48.3	-1.2
MLR	Muntele Rosu	9.69	12	P	Pn	08 00 52.3	+1.9
	1.6nm,0.3s,baz=307,slow=21,SNR=14						
MLR	Muntele Rosu	9.69	12	⇑iP	Pn	08 00 52.5	+2.1
HFRF	Wahat Farafira	9.85	152	P	Pn	08 00 52.4	-0.3
AMAG	Maghara	9.94	120	P	Pn	08 00 52.3	-1.5
SUZ		10.16	125	P	Pn	08 00 55.5	-1.4
VRI	Vrincioaia	10.20	14	⇑iP	Pn	08 00 59.8	+2.6
ZAF		10.35	128	P	Pn	08 00 58.1	-1.3
ZAF		10.35	128	P	Pn	08 00 58.1	-1.3
	2μm,0.2s						
ZNM		10.49	126	P	Pn	08 00 59.5	-1.9
MMAI	Mount Meron Ar	10.50	103	P	Pn	08 01 00.3	-1.3
	1.6nm,0.3s,baz=311,slow=12,SNR=7.6						
MMAI				S	Sn	08 02 54.9	-2.5
	8.0nm,0.3s,baz=304,slow=20,SNR=13						
HNKL	Nakhl	10.89	121	P	Pn	08 01 04.8	-2.1
HDK1	Dakhla	11.72	151	P	Pn	08 01 17.6	-0.6
EIL	Elat	11.73	119	P	Pn	08 01 16.6	-1.7
	1.6nm,0.3s,baz=251,slow=2.9,SNR=17						
EIL				S	Sn	08 03 19.5	-7.8
	3.3nm,0.3s,baz=316,slow=20,SNR=9.1						
ASF	Jabal al Asfar	11.98	105	P	Pn	08 01 22.6	+0.9
	0.5nm,0.3s,baz=162,slow=3.2,SNR=4.6						
ASF				S	Sn	08 03 31.3	-2.1
	0.4nm,0.3s,baz=9.8,slow=19,SNR=3.8						
AKRG	Al Kharijah	12.21	147	P	Pn	08 01 24.9	+0.1
GTR	Jabal at Tayr	12.23	147	P	Pn	08 01 24.4	-0.7
HHRG	Al Ghardaqah	12.44	132	P	Pn	08 01 27.4	-0.6
GERES	GERESS Array B	14.60	334	P	Pn	08 01 56.0	-0.3
	0.2nm,0.3s,baz=145,slow=11,SNR=3.3						
KHC	Kasperske Hory	14.88	335	eP	Pn	08 02 07.5	+7.5
AKASG	Malin Array Be	15.31	15	P	Pn	08 02 03.6	-1.9
	0.8nm,0.3s,baz=204,slow=12,SNR=7.2						
HFS	Hagfors	24.90	349	P	P	08 03 49.9	+0.4
	3.3nm,0.5s,mb4.0,baz=143,slow=10,SNR=22						
FINES	FINESS Array B	25.52	3	P	P	08 03 54.4	-0.6
	0.6nm,0.3s,mb3.5,baz=171,slow=11,SNR=13						
NB2	NORSAR Subarra	26.18	347	P	P	08 04 01.4	+0.3
	comp=Z,0.5nm,0.4s,mb3.3,baz=152,slow=11						
NOA	NORSAR Array B	26.18	347	P	P	08 04 01.9	+0.8
	comp=Z,0.7nm,0.7s,mb3.2,baz=151,slow=10.0,SNR=3.4						
KAF	Kangasniemi	26.19	3	ep	P	08 04 02.0	+0.9
	comp=Z,0.9nm,0.3s,mb3.7						
EKA	Eskdalemuir Ar	26.43	325	P	P	08 04 03.5	+0.2
	comp=Z,1.3nm,0.8s,mb3.4,baz=124,slow=7.3,SNR=4.7						
JOF	Joensuu	27.39	8	ep	P	08 04 10.6	-1.3
ARCES	ARCESS Array B	33.60	1	P	P	08 05 06.4	-0.2
	comp=Z,1.0nm,0.6s,mb3.8,baz=187,slow=10,SNR=15						
KEV	Kevo	33.86	2	ep	P	08 05 07.8	-1.0
	comp=Z,7.2nm,0.9s,mb4.5						
MKAR	Makanchi Array	44.64	57	P	P	08 06 39.8	+0.9
	comp=Z,2.8nm,0.5s,mb4.2,baz=280,slow=6.9,SNR=40						
ZALV	Zalesovo Beam	45.57	47	P	P	08 06 46.6	+0.5
	comp=Z,3.3nm,0.3s,mb4.5,baz=266,slow=8.6,SNR=14						
SONM	Songino Array	60.18	50	P	P	08 08 35.1	+1.4
	comp=Z,0.5nm,0.4s,mb3.9,baz=284,slow=7.8,SNR=7.3						
SCHQ	Schefferville	61.50	319	P	P	08 08 44.6	+2.1
	comp=Z,4.1nm,1.1s,mb4.4,baz=41,slow=1.7,SNR=6.0						
YKA	Yellowknife Ar	76.14	341	P	P	08 10 14.9	+1.7
	comp=Z,0.2nm,0.4s,mb3.2,baz=32,slow=5.4,SNR=7.4						
KSRS	Korea Array	79.02	52	P	P	08 10 31.2	+1.5
	comp=Z,1.1nm,0.5s,mb4.0,baz=312,slow=5.4,SNR=3.9						
MJAR	Matsushiro Arr	85.93	47	P	P	08 11 06.6	+0.9
	comp=Z,0.9nm,0.7s,mb3.8,baz=316,slow=5.1,SNR=4.1						

IDC 10 08:01:12.8±1.6**, 505S×12980E, h0km, mb3.8**/3**, mb1 3.8**/5**, mb1mx3.6**/14**, mbtmp3.7**/5**, ML3.4**/2**, Error ellipse: s-maj=83.9km s-min=24.7km az=61.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.44	164	Pn	Pn	08 04 51.0	-1.1
	0.1nm,0.3s,baz=345,slow=13,SNR=6.0						
ASAR	Alice Springs	18.92	168	P	Pn	08 05 36.4	+0.6
	0.4nm,0.3s,baz=351,slow=10,SNR=24						
CTA	Charters Tower	21.90	134	P	P	08 06 07.4	-0.2
	2.1nm,0.8s,baz=334,slow=13,SNR=5.2						
STKA	Stephens Creek	28.88	159	P	P	08 07 13.2	-0.2
	1.1nm,0.4s,baz=7.6,slow=15,SNR=5.9						
MKAR	Makanchi Array	66.50	326	P	P	08 12 04.5	+0.1
	0.3nm,0.5s,baz=125,slow=9.0,SNR=4.7						

*NIED **10** 08:50:00, 4660N×15330E, h11km, Mw4.1 Best double couple: M0 1.83000×10^15 NP1: φs347.00000°, δ56.00000°, λ38.00000°. NP2: φs234.00000°, δ60.00000°, λ139.00000°.*
*BJI **10** 08:50:04.6, 4652N×15334E, h10km, mB4.8, mb4.5, Ms4.3, Msz4.0*
*SKHL **10** 08:50:04.5±1.3, 4602N×15404E, h67km±32km, mb5.0/5, Ms4.1/4, msh5.5/1*
*ISCJB **10** 08:50:06.3±1.4, 4629N±006×15326E±008, h20km±9km, mb4.5/53, MS3.9/15, Error ellipse: s-maj=12.0km s-min=6.4km az=137.7*
*JMA **10** 08:50:06.8±0.8, 4659N×15334E, h30km, M4.5*
*NEIC **10** 08:50:06.6±0.5, 4635N×15326E, h10km, mb4.6/28, Error ellipse: s-maj=11.0km s-min=5.9km az=138.0*
*MOS **10** 08:50:09.5±1.2, 4640N×15307E, h40km, mb4.7/22, Error ellipse: s-maj=9.1km s-min=6.8km az=105.9*
*IDC **10** 08:50:12.5±3.7, 4639N×153.13E, h54km±34km, mb3.8/16, mb1 4.1/18, mb1mx4.0/24, mbtmp3.9/18, ML3.7/2, MS3.8/7, Ms1 3.8/7, ms1mx3.5/29, Error ellipse: s-maj=18.3km s-min=15.5km az=141.0*

ISC 10 08:50:10.5±0.8**, 4632N**±006×**15322E**±008**, h36**km±5km**, h6**km±5.4km**: pP-P, n174, σ1s18**/189**, mb4.5**/53**, MS3.9**/15**, 20C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.90	256	iPN	Pn	08 51 08.5	+0.7
KUR				eS	Sn	08 51 57.5	+5.1
KUR				pmax	pmax		
	comp=N,110nm,0.5s						
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,680nm,0.5s						
KUR				smax			
	comp=N,320nm,0.8s						
KUR				smax			
	comp=E,430nm,0.8s						
KUR				smax			
	comp=Z,2μm,1.0s						
KUR				smax			
	comp=N,2μm,2.0s						
KUR				smax			
	comp=E,2μm,2.0s						
KUR	Kuril'sk	3.90	256	⇑iP	Pn	08 51 08.5	+0.7
KUR				AMB	AMB	08 51 08.9	
	comp=E,2μm,1.0s						
KUR				AMB	AMB	08 51 08.9	
	comp=E,114nm,0.5s						
KUR				AMB	AMB	08 51 08.9	
	comp=E,684nm,0.5s						
KUR				eS	Sn	08 51 57.5	+5.1
KUR				A		08 52 06.0	
	comp=E,2μm,2.0s						
KUR				A		08 52 06.0	
	comp=E,2μm,2.0s						
KUR				A		08 52 11.6	
	comp=E,323nm,0.8s						
KUR				A		08 52 11.6	
	comp=E,430nm,0.8s						
YUK	Yuzh-Kuril'sk	5.68	249	eP	Pn	08 51 33.4	+1.1
YUK				eS	Sn	08 52 43.2	+6.9
YUK				A		08 53 07.0	
	comp=E,750nm,0.8s						
YUK				A		08 53 07.0	
	comp=E,450nm,0.8s						
YUK				A		08 53 07.0	
	comp=E,3μm,1.5s						
YUK				A		08 53 07.0	
	comp=E,2μm,1.5s						
NEM2	Nemuro 2	6.08	244	P	Pn	08 51 36.6	-1.2
NEM2				eS	Sn	08 52 42.3	-3.8
JRA	Rausu	6.21	250	P	Pn	08 51 40.5	+1.0
JNK	Nakash	6.62	249	P	Pn	08 51 45.7	+0.5
JAK	Akkeshi	6.93	244	P	Pn	08 51 48.0	-1.4
JAK				eS	Sn	08 53 03.2	-3.7
JTKR	Abashiri--Toko	6.99	254	P	Pn	08 51 51.7	+1.4
YSS	Yuzh-Sakhalins	7.24	279	Pn	Pn	08 51 53.6	+0.1
	comp=E,26nm,0.8s						
YSS	Yuzh-Sakhalins	7.24	279	ePN	Pn	08 51 58.0	+4.4
YSS				eS	Sn	08 53 22.2	+7.8
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,17.0s						
YSS	Yuzh-Sakhalins	7.24	279	eP	Pn	08 51 58.0	+4.4
YSS				AMB	AMB	08 51 59.1	
	comp=E,30nm,0.8s						
YSS				erx	rx	08 52 01.3	
YSS				eS	Sn	08 53 22.2	+7.8
YSS				eLQ		08 53 39.0	
YSS				AMS	AMS	08 54 36.0	
	comp=E,500nm,17.0s						
YSS				AMS	AMS	08 54 36.0	
	comp=E,500nm,16.0s						
JMP	Maruseppu	7.34	255	P	Pn	08 51 57.4	+2.3
JAR	Ashorobuto	7.37	249	P	Pn	08 51 55.9	+0.4
JOB	Onbets	7.52	246	P	Pn	08 51 56.8	-0.7
JOB				eS	Sn	08 53 18.0	-3.4
PET	Petropavlovsk	7.58	26	ePn	Pn	08 51 57.1	-1.1
PET	Petropavlovsk	7.58	26	ePN	Pn	08 52 04.5	+6.2
PET				MLR	MLR		
	comp=Z,200nm,17.0s						
JKK2	Kamakawa 2	7.80	256	P	Pn	08 52 03.3	+1.9
ASAJ	Asahikawa	7.82	257	P	Pn	08 52 04.1	+2.5
ASAJ	Asahikawa	7.82	257	P	Pn	08 52 04.2	+2.6
	comp=Z,1.5nm,0.3s,baz=104,slow=17,SNR=16						
ASAJ				LR	LR	08 54 55.5	
	comp=Z,252nm,18.7s,baz=166,slow=36						
JCH	Churui	7.96	246	P	Pn	08 52 02.9	-0.7
JCH				eS	Sn	08 53 28.6	-3.8
UGL	Uglegorsk	8.02	294	ePN	Pn	08 52 08.0	+3.7
UGL				pmax	pmax		
	comp=Z,56nm,0.7s						
UGL				MLR	MLR		
	comp=E,500nm,17.0s						
UGL				MLR	MLR		
	comp=Z,800nm,17.0s						
UGL				MLR	MLR		
	comp=N,400nm,13.0s						
UGL	Uglegorsk	8.02	294	eP	Pn	08 52 08.0	+3.7
UGL				AMB	AMB	08 52 09.5	
	comp=N,56nm,0.7s						
UGL				eL		08 54 28.0	
UGL				AMS	AMS	08 55 20.0	
	comp=N,500nm,17.0s						
UGL				AMS	AMS	08 55 20.0	
	comp=N,800nm,17.0s						
UGL				AMS	AMS	08 55 20.0	
	comp=N,400nm,13.0s						
JFR	Furan	8.20	251	P	Pn	08 52 08.0	+1.2
JAB	Ashibetsu	8.30	254	P	Pn	08 52 10.0	+1.8
TYV	Tymovskoe	8.35	307	eP	Pn	08 52 11.8	+3.0
TYV				AMB	AMB	08 52 14.0	
	comp=N,8.0nm,0.8s						
TYV				AMB	AMB	08 52 14.0	
	comp=N,26nm,0.8s						
TYV				AMB	AMB	08 52 14.0	
	comp=N,18nm,1.0s						
TYV				erx	rx	08 53 36.0	
TYV				AMS	AMS	08 55 32.0	
	comp=N,500nm,18.0s						
TYV				AMS	AMS	08 55 32.0	
	comp=N,1μm,18.0s						
TYV				AMS	AMS	08 55 32.0	
	comp=N,1μm,18.0s						
JEM	Erimo	8.41	243	P	Pn	08 52 09.3	-0.5
ERM	Erimo	8.42	243	ePn	Pn	08 52 09.3	-0.5
	comp=N,36nm,0.8s						
ERM	Erimo	8.42	243	⇑ePN	Pn	08 52 10.0	+0.2
JBT2	Biratori 2	8.52	249	P	Pn	08 52 11.7	+0.4
JNBK	Urakawa-nobuka	8.52	245	P	Pn	08 52 09.8	-1.5
JNB	Noboribetsu	9.53	251	P	Pn	08 52 24.7	-0.4
JKB	Kayabe	9.82	248	P	Pn	08 52 27.4	-1.7
JKB				eS	Sn	08 54 11.0	-7.0
JYM2	Yakumo 2	10.14	250	P	Pn	08 52 32.6	-0.8
JANG	Nango	10.39	239	P	Pn	08 52 32.5	-4.3
JANG				eS	Sn	08 54 22.9	-9.0
JTM	Tenmabayashi	10.41	242	P	Pn	08 52 34.6	-2.5
JTH	Tanohata	10.46	237	P	Pn	08 52 34.0	-3.8
JTH				eS	Sn	08 54 21.7	-12
NKL	Nikolayevsk	10.60	315	eP	Pn	08 52 36.5	-3.2
NKL				AMB	AMB	08 52 48.2	
	comp=N,30nm,1.4s						
NKL				AMB	AMB	08 52 48.2	
	comp=N,50nm,1.4s						
NKL				eL		08 55 42.0	
NKL				AMS	AMS	08 57 48.0	
	comp=N,600nm,16.0s						
NKL				AMS	AMS	08 57 48.0	
	comp=N,1μm,16.0s						
OFUJ	Ofunato	11.15	234	eS	Sn	08 54 40.8	-10
JIO	Ouri	11.77	232	eS	Sn	08 54 54.7	-11
MA2	Magadan	13.36	355	ePn	Pn	08 53 17.6	+0.2
	comp=N,5.2nm,0.5s						
MA2	Magadan	13.36	355	ePN	Pn	08 53 17.6	+0.3
MA2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KLR	Kul'dur	14.72	289	eP	Pn	08 53 35.2	-0.7
MJAR	Matsushiro Arr	14.88	234	P	Pn	08 53 38.5	+0.3
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=9.0						
MAJO	Matsushiro	14.88	234	Pn	Pn	08 53 36.3	-1.8
	comp=Z,14nm,0.7s						
MAJO	Matsushiro	14.88	234	P	Pn	08 53 36.3	-1.9
MAJO				pmax	pmax		
	comp=Z,14nm,0.7s						
MAT	Matsushiro	14.88	234	P	Pn	08 53 34.8	-3.4
MDJ	Mudanjiang	16.65	273	P	Pn	08 54 02.4	+1.5
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,104nm,6.3s						
MDJ	Mudanjiang	16.65	273	eP	Pn	08 54 02.6	+1.7
	comp=Z,8.1nm,0.6s						
CN2	Changchun	19.74	273	eP	Pn	08 54 37.5	-1.1
CN2				eXP	sP	08 54 44.5	-6.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	20.73	328	eP	P	08 54 47.6	+0.1
	comp=Z,14nm,0.5s						
YAK	Yakutsk	20.73	328	iP	P	08 54 45.5	-1.9
YAK				pmax	pmax		
	comp=Z,11nm,0.5s						
YAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.3						
KSRS	Korea Array	20.74	254	P	P	08 54 49.9	+2.0
	comp=Z,4.3nm,0.7s,baz=60,slow=9.3,SNR=11						
KSRS				LR	LR	09 01 57.3	
	comp=Z,148nm,19.3s,MS3.4,baz=159,slow=34						
JNU	Nakatsue	21.57	240	LR	LR	09 03 13.9	
	comp=Z,120nm,18.2s,MS3.3,baz=207,slow=36						
HIA	Hailar	22.58	290	iP	P	08 55 07.6	+0.2
BILL	Bilibino	22.80	13	eP	P	08 55 08.8	-0.7
	comp=Z,3.9nm,0.5s,mb4.1						
BILL	Bilibino	22.80	13	iP	P	08 55 10.9	+1.4
BILL				e		08 55 22.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
BILL				MLR	MLR		
	comp=Z,200nm,24.0s,MS3.5						
BOD	Bodaibo	26.32	310	eP	P	08 55 37.9	-4.6
BJT	Baijiatuau	27.57	270	P	P	08 55 53.0	-0.9
	comp=Z,8.6nm,0.8s,mb4.4						
BJT	Baijiatuau	27.57	270	P	P	08 55 53.0	-0.9
BJT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIXI	Tiksi	27.90	344	eP	P	08 55 55.7	-0.8
	comp=Z,0.6nm,0.4s,mb3.6						
TIXI	Tiksi	27.90	344	iP	P	08 55 54.3	-2.3
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s,MS3.6						
NJ2	Nanjing	29.95	254	eP	P	08 56 14.2	-0.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
HHC	Hu-ho-hao-te	30.40	275	eP	P	08 56 19.8	+0.8
HHC				AP	pP	08 56 24.0	-5.3
HHC				XP	sP	08 56 26.7	-6.9
HHC				PP	PP	08 57 18.8	-9.1
HHC				S	S	09 01 16.7	-0.5
HHC				SS	SS	09 02 54.7	-33
HHC				SCP	ScP	09 03 00.4	+2.9
HHC				PCS	PcS	09 03 03.7	+2.1
HHC				SCS	ScS	09 06 50.9	-2.5
HHC				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,4.9s						
HHC				LR	LR		
	comp=N,211nm,13.1s,MS4.1						
HHC				LR	LR		
	comp=E,252nm,15.5s,MS4.1						
HHC				LR	LR		
	comp=Z,242nm,20.2s,MS3.8						
ULN	Ulaanbaatar	31.11	290	eP	P	08 56 25.0	-0.2
	comp=Z,3.3nm,1.0s,mb4.1						
ULN	Ulaanbaatar	31.11	290	iP	P	08 56 24.7	-0.5
SONM	Songino Array	31.55	290	P	P	08 56 28.2	-0.9
SONM						08 59 21.3	
SONM	Songino Array	31.55	290	P	P	08 56 28.2	-0.9
	comp=Z,1.0nm,0.8s,mb3.7,baz=69,slow=7.7,SNR=10						
SONM				PcP	PcP	08 59 21.3	+0.4
	comp=Z,0.6nm,0.7s,baz=156,slow=0.8,SNR=4.6						
SONM				LR	LR	09 10 20.8	
	comp=Z,180nm,18.0s,MS3.8,baz=109,slow=38						
TLY	Talaya	32.45	298	eP	P	08 56 35.9	-1.0
	comp=Z,1.8nm,0.6s,mb4.1						
TLY	Talaya	32.45	298c	iP	P	08 56 36.0	-0.9
COLA	College	36.43	38	eP	P	08 57 10.8	-0.4
	comp=Z,4.3nm,0.9s,mb4.4						
COLA	College	36.43	38	eP	P	08 57 10.8	-0.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
GTA	Gaotai	39.12	280	eP	P	08 57 35.9	+1.7
GTA				AP	pP	08 57 39.7	-4.8
GTA				XP	sP	08 57 42.3	-6.5
GTA				PP	PP	08 59 10.6	+6.5
GTA				PCP	PcP	08 59 45.0	+1.7
GTA				S	S	09 03 38.2	+6.9
GTA				XS	sS	09 03 43.9	-4.5
GTA				SS	SS	09 06 23.3	-1.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GTA				AMB	AMB		
	comp=Z,178nm,6.5s						
GTA				LR	LR		
	comp=N,179nm,14.5s,MS4.2						
GTA				LR	LR		
	comp=E,192nm,15.6s,MS4.2						
GTA				LR	LR		
	comp=Z,202nm,14.8s,MS4.1						
CD2	Chengdu	40.92	266	eP	P	08 57 49.3	+0.1
CD2				AP	pP	08 57 53.8	-5.9
CD2				PP	PP	08 59 27.3	+3.4
CD2				S	S	09 04 00.3	+1.9
CD2				XS	sS	09 04 08.4	-7.2
CD2				SS	SS	09 06 58.3	-2.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,100nm,14.4s,MS4.3						
CD2				LR	LR		
	comp=E,290nm,14.4s,MS4.3						
CD2				LR	LR		
	comp=Z,90nm,16.8s,MS3.7						
GYA	Guiyang	41.70	258	⇓iP	P	08 57 57.0	+1.3
GYA				PP	PP	08 59 35.8	+3.5
GYA				PCP	PcP	08 59 53.7	+1.9
GYA				SCP	ScP	09 03 42.7	+3.7
GYA				S	S	09 04 12.9	+2.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GYA				AMB	AMB		
	comp=Z,140nm,6.4s						
GYA				LR	LR		
	comp=N,290nm,18.0s,MS4.3						
GYA				LR	LR		
	comp=E,300nm,18.2s,MS4.3						
GYA				LR	LR		
	comp=Z,380nm,17.9s,MS4.3						
INK	Inuvik	41.98	32	eP	P	08 57 57.5	+0.1
	comp=Z,110nm,1.0s,mb5.4						
INK	Inuvik	41.98	32	eP	P	08 57 57.5	+0.1
INK				pmax	pmax		
	comp=Z,11nm,1.0s						
INK	Inuvik	41.98	32	P	P	08 57 57.6	+0.2
	comp=Z,2.4nm,0.7s,mb3.9,baz=290,slow=7.4,SNR=14						
ZALV	Zalesovo Beam	42.93	306	P	P	08 58 03.5	-1.8
	comp=Z,1.6nm,0.7s,mb3.9,baz=65,slow=6.8,SNR=8.5						
ZALV				PcP	PcP	08 59 56.1	+0.7
	comp=Z,1.0nm,0.7s,baz=113,slow=1.9,SNR=5.0						
ZALV				LR	LR	09 17 06.9	
	comp=Z,160nm,21.0s,MS3.9,baz=314,slow=38						
ZAL	Zalesovo	42.94	306	P	P	08 58 03.6	-1.8
ZAL						08 59 56.2	
WMQ	Urumqi	45.16	292	⇓P	P	08 58 22.6	-0.7
WMQ				AP	pP	08 58 27.1	-6.7
WMQ				XP	sP	08 58 29.6	-8.5
WMQ				PCP	PcP	09 00 03.1	-0.1
WMQ				PP	PP	09 00 09.0	-0.1
WMQ				AMB	AMB		
	comp=Z,7.0nm,0.4s,mb4.8						
WMQ				LR	LR		
	comp=N,94nm,20.0s						
WMQ				LR	LR		
	comp=E,187nm,14.5s						
WMQ				LR	LR		
	comp=Z,130nm,17.0s,MS3.9						
KMI	Kunming	45.24	260	P	P	08 58 25.3	+1.1
KMI				AP	pP	08 58 27.3	-7.4
KMI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
MK31	Makanchi Array	47.21	298	iP	P	08 58 38.4	-1.0
MK31				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
MKAR	Makanchi Array	47.21	298	iP	P	08 58 38.5	-0.9
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	Makanchi Array	47.21	298	P	P	08 58 38.5	-0.9
	comp=Z,4.6nm,0.8s,mb4.5,baz=67,slow=7.5,SNR=32						
MKAR				PcP	PcP	09 00 11.1	+0.7
	comp=Z,0.7nm,0.7s,baz=63,slow=3.2,SNR=3.9						
MKAR				LR	LR	09 19 56.8	
	comp=Z,193nm,21.2s,MS4.0,baz=320,slow=38						
KURK	Kurchatov	47.67	304	eP	P	08 58 41.4	-1.5
	comp=Z,10.0nm,0.6s,mb5.0						
KURK	Kurchatov	47.67	304	eP	P	08 58 41.4	-1.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
LSA	Lhasa	50.37	274	P	P	08 59 07.1	+3.2
LSA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
LSA	Lhasa	50.37	274	eP	P	08 59 04.1	+0.1
	comp=Z,7.5nm,0.6s,mb4.9						
LSA	Lhasa	50.37	274	eP	P	08 59 04.1	+0.2
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
YKA	Yellowknife Ar	51.23	37	P	P	08 59 09.7	-0.1
YKA	Yellowknife Ar	51.23	37	P	P	08 59 09.7	-0.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=296,slow=7.1,SNR=20						
BRVK	Borovoye	51.23	310	eP	P	08 59 09.2	-0.9
	comp=Z,2.8nm,0.6s,mb4.4						
BRVK	Borovoye	51.23	310	eP	P	08 59 09.2	-0.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TKM2	Tokmak 2	53.26	296	eP	P	08 59 25.7	+0.5
	comp=Z,2.2nm,0.8s,mb4.1						
TKM2	Tokmak 2	53.26	296	eP	P	08 59 25.7	+0.4
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
AAK	Ala-Archa	54.10	297	eP	P	08 59 30.7	-0.7
	comp=Z,4.2nm,0.8s,mb4.4						
AAK	Ala-Archa	54.10	297	⇓eP	P	08 59 30.8	-0.6
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
AAK				MLR	MLR		
	comp=Z,300nm,22.0s,MS4.3						
TAPN	Taplejung	54.20	274	eP	P	08 59 34.4	+2.0
	comp=Z,12nm,0.7s,mb4.9						
EKS2	Erkin-Say	54.52	297	eP	P	08 59 35.0	+0.4
	comp=Z,3.8nm,0.7s,mb4.5						
ODAN	Odare	54.73	273	eP	P	08 59 41.8	+5.6
AML	Almayashu	54.87	297	eP	P	08 59 37.9	+0.9
	comp=Z,3.1nm,0.8s,mb4.4						
JIRN	Jiri	55.06	275	eP	P	08 59 40.4	+1.8

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
	comp=Z,23nm,0.7s,mb5.3						
ARU	**Arti**	**55.38**	**318**	eP	**P**	**08 59 36.5**	**-4.0**
KKN	**Kakani**	**55.60**	**276**	eP	**P**	**08 59 44.4**	**+1.9**
	comp=Z,22nm,0.6s,mb5.3						
KKN	**Kakani**	**55.60**	**276**	eP	**P**	**08 59 44.4**	**+1.9**
KKN				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.4						
GKN	**Gorkha**	**55.91**	**276**	eP	**P**	**08 59 46.2**	**+1.5**
	comp=Z,31nm,0.7s,mb5.4						
KEV	**Kevo**	**57.77**	**341**	ep	**P**	**08 59 54.2**	**-3.1**
	comp=Z,11nm,1.0s,mb4.8						
KEV	**Kevo**	**57.77**	**341**	eP	**P**	**08 59 54.2**	**-3.1**
KEV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
ARCES	**ARCESS Array B**	**58.29**	**341**	P	**P**	**09 00 00.5**	**-0.4**
ARCES	**ARCESS Array B**	**58.29**	**341**	P	**P**	**09 00 00.5**	**-0.4**
	comp=Z,4.4nm,1.0s,mb4.5,baz=29,slow=6.6,SNR=6.9						
AKTK	**Aktyubinsk**	**59.07**	**312**	P	**P**	**09 00 05.9**	**-0.7**
AKTK				LR	LR	09 28 02.5	
AKTO	**Aktyubinsk**	**59.07**	**312**	P	**P**	**09 00 05.9**	**-0.7**
	comp=Z,0.8nm,0.5s,mb4.0,baz=74,slow=10,SNR=4.9						
AKTO				LR	LR	09 28 02.5	
	comp=Z,310nm,20.5s,MS4.4,baz=317,slow=38						
JOF	**Joensuu**	**61.76**	**334**	ep	**P**	**09 00 23.8**	**-1.0**
NVAR	**Mina Array Bea**	**62.57**	**62**	P	**P**	**09 00 31.5**	**+0.9**
NVAR	**Mina Array Bea**	**62.57**	**62**	P	**P**	**09 00 31.5**	**+0.9**
	comp=Z,0.2nm,0.3s,mb3.7,baz=288,slow=6.3,SNR=3.4						
KAF	**Kangasniemi**	**63.87**	**335**	ep	**P**	**09 00 36.6**	**-2.2**
	comp=Z,2.7nm,0.7s,mb4.4,baz=36,slow=6.2						
KAF	**Kangasniemi**	**63.87**	**335**	eP	**P**	**09 00 36.6**	**-2.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**64.46**	**335**	P	**P**	**09 00 41.9**	**-0.8**
FINES	**FINESS Array B**	**64.46**	**335**	iP	**P**	**09 00 41.9**	**-0.8**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**64.46**	**335**	P	**P**	**09 00 41.9**	**-0.8**
	comp=Z,4.4nm,0.7s,mb4.6,baz=39,slow=7.8,SNR=22						
OBN	**Obninsk**	**65.71**	**326**	eP	**P**	**09 00 49.7**	**-1.2**
OBN				e		09 04 48.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**68.13**	**199**	P	**P**	**09 01 06.0**	**-0.6**
	comp=Z,0.7nm,0.9s,mb3.7,baz=13,slow=6.4,SNR=3.5						
NB2	**NORSAR Subarra**	**68.66**	**341**	P	**P**	**09 01 08.9**	**-0.6**
	comp=Z,2.1nm,0.5s,mb4.3,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**68.66**	**341**	P	**P**	**09 01 08.9**	**-0.6**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
NOA	**NORSAR Array B**	**68.66**	**341**	P	**P**	**09 01 09.3**	**-0.2**
	comp=Z,2.5nm,0.6s,mb4.3,baz=28,slow=6.3,SNR=14						
KIV	**Kislovodsk**	**71.16**	**314**	⇓eP	**P**	**09 01 24.6**	**-0.6**
KIV				e		09 04 01.2	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ASAR	**Alice Springs**	**71.82**	**199**	P	**P**	**09 01 29.6**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=11,slow=5.8,SNR=8.6						
AKASG	**Malin Array Be**	**71.95**	**326**	P	**P**	**09 01 29.1**	**-0.7**
	comp=Z,12nm,0.7s,mb4.9,baz=33,slow=6.2,SNR=42						
KIEV	**Kiev**	**71.96**	**326**	eP	**P**	**09 01 29.1**	**-0.8**
	comp=Z,11nm,0.8s,mb4.8						
KIEV	**Kiev**	**71.96**	**326**	eP	**P**	**09 01 29.1**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
ANMO	**Albuquerque**	**71.99**	**58**	iP	**P**	**09 01 32.9**	**+2.5**
ANN	**Anapa**	**73.05**	**318**	eP	**P**	**09 01 43.7**	**+7.2**
ANN				e		09 01 58.0	
ANN				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
STHS	**Stebnicka Huta**	**75.93**	**330**	eP	**P**	**09 01 54.3**	**+1.2**
	comp=Z,3.2nm,0.8s,mb4.3						
STHS	**Stebnicka Huta**	**75.93**	**330**	eP	**P**	**09 01 54.3**	**+1.2**
STHS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KOLS	**Kolonicke sedl**	**75.97**	**329**	eP	**P**	**09 01 53.6**	**+0.2**
BURAR	**Bucovina Array**	**75.99**	**327**	⇑P	**P**	**09 01 53.6**	**+0.2**
BURAR	**Bucovina Array**	**75.99**	**327**	⇑iP	**P**	**09 01 53.7**	**+0.2**
TRPA	**Tarpa**	**76.56**	**329**	⇑iP	**P**	**09 01 57.4**	**+0.7**
UPC	**Upice**	**76.70**	**334**	eP	**P**	**09 01 57.9**	**+0.4**
DPC	**Dobruska-Polom**	**76.74**	**333**	eP	**P**	**09 01 58.4**	**+0.7**
MORC	**Moravsky Berou**	**76.86**	**332**	eP	**P**	**09 01 58.2**	**-0.2**
	comp=Z,4.4nm,0.8s,mb4.4						
MORC	**Moravsky Berou**	**76.86**	**332**	eP	**P**	**09 01 58.2**	**-0.1**
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
MORC	**Moravsky Berou**	**76.86**	**332**	⇑P	**P**	**09 01 58.7**	**+0.4**
MORC	**Moravsky Berou**	**76.86**	**332**	⇑iP	**P**	**09 01 58.7**	**+0.4**
CLL	**Collm**	**76.89**	**336**	eP	**P**	**09 01 58.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CLL	**Collm**	**76.89**	**336**	eP	**P**	**09 01 58.0**	**-0.5**
	comp=Z,10.0nm,0.7s,mb4.8						
CLL				iPcP	PcP	09 02 08.6	-0.9
KECS	**Kecovo**	**76.98**	**330**	eP	**P**	**09 01 59.1**	**0.0**
	comp=Z,2.6nm,0.9s,mb4.2						
KECS				ePP	PP	09 04 45.5	-6.4
KECS	**Kecovo**	**76.98**	**330**	eP	**P**	**09 01 59.1**	**0.0**
KECS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
MLR	**Muntele Rosu**	**77.46**	**325**	⇑P	**P**	**09 02 02.8**	**+1.0**
MLR	**Muntele Rosu**	**77.46**	**325**	⇑iP	**P**	**09 02 02.8**	**+1.0**
MALT	**Malatya**	**77.50**	**313**	⇑P	**P**	**09 02 03.6**	**+1.4**
MALT	**Malatya**	**77.50**	**313**	⇑iP	**P**	**09 02 03.6**	**+1.4**
VYHS	**Vyhne**	**77.54**	**331**	eP	**P**	**09 02 02.4**	**+0.2**
	comp=Z,2.5nm,0.9s,mb4.1						
VYHS	**Vyhne**	**77.54**	**331**	eP	**P**	**09 02 02.4**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
PRU	**Pruhonice**	**77.61**	**334**	eP	**P**	**09 02 02.7**	**+0.1**
DRGR		**77.62**	**328**	⇑P	**P**	**09 02 02.6**	**0.0**
DRGR		**77.62**	**328**	⇑iP	**P**	**09 02 02.6**	**-0.1**
TXAR	**Lajitas Array**	**77.64**	**61**	P	**P**	**09 02 03.0**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=297,slow=3.9,SNR=18						
VOIR		**77.86**	**326**	⇑P	**P**	**09 02 04.9**	**+0.8**
VOIR		**77.86**	**326**	⇑iP	**P**	**09 02 04.9**	**+0.9**
NKC	**Novy Kostel**	**78.01**	**335**	eP	**P**	**09 02 06.0**	**+1.2**
KHC	**Kasperske Hory**	**78.66**	**334**	eP	**P**	**09 02 08.5**	**+0.1**
GZR	**Gura Zlata**	**78.77**	**327**	⇑P	**P**	**09 02 10.2**	**+1.1**
GZR	**Gura Zlata**	**78.77**	**327**	⇑iP	**P**	**09 02 10.2**	**+1.1**
GERES	**GERESS Array B**	**78.88**	**334**	P	**P**	**09 02 09.7**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.0,baz=35,slow=4.9,SNR=9.8						
BZS	**Buzias**	**79.02**	**328**	⇑P	**P**	**09 02 11.0**	**+0.6**
BZS	**Buzias**	**79.02**	**328**	⇑iP	**P**	**09 02 11.0**	**+0.6**
VTS	**Vitosha**	**80.97**	**325**	⇓P	**P**	**09 02 22.7**	**+1.7**
VTS	**Vitosha**	**80.97**	**325**	⇓iP	**P**	**09 02 22.7**	**+1.7**
CDF	**Champ du Feu**	**81.08**	**338**	eP	**P**	**09 02 21.4**	**-0.1**
SSF	**Saint Saulge**	**83.29**	**340**	eP	**P**	**09 02 32.1**	**-1.0**
	comp=Z,12nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**83.58**	**340**	eP	**P**	**09 02 34.5**	**-0.1**
SMF	**Signal de Mont**	**83.59**	**339**	eP	**P**	**09 02 33.1**	**-1.6**
	comp=Z,18nm,1.0s,mb4.9						
LPG	**La Plagne**	**83.91**	**337**	eP	**P**	**09 02 35.1**	**-1.2**

*NIED **10** 09:52:00,2270N×12530E,h32^{km},Mw3.7 Best double couple: $M_0$3.54000×10^{14} NP1:ϕ_s136.00000°,δ76.00000°, λ-3.00000°. NP2:ϕ_s227.00000°,δ87.00000°, λ-166.00000°.*

JMA 10 09:52:48.9±0.3,**2265N**×**12527E**,**h50**^{km},**M3.8**, **Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.94**	**316**	P	Pn	09 53 19.9	+0.4
HATJ				eS	Sn	09 53 42.8	+0.1
JKRS	**Kuro-shima**	**1.96**	**324**	P	Pn	09 53 21.2	+1.5
JKRS				eS	Sn	09 53 44.6	+1.5
JIJ	**Ishigaki jima**	**2.00**	**329**	P	Pn	09 53 21.0	+0.8
JIJ				eS	Sn	09 53 44.3	+0.3
JTJ	**Tarama**	**2.05**	**345**	P	Pn	09 53 22.0	+1.1
JTJ				eS	Sn	09 53 46.4	+1.1
JOGS	**Gusukube**	**2.10**	**3**	P	Pn	09 53 22.3	+0.6
JOGS				eS	Sn	09 53 47.7	+1.1
JMJ	**Miyako jima 2**	**2.15**	**1**	P	Pn	09 53 23.2	+0.8
JMJ				eS	Sn	09 53 48.8	+0.9
IRIF	**Iriomote-Funau**	**2.19**	**320**	P	Pn	09 53 24.0	+1.1
IRIF				eS	Sn	09 53 49.8	+1.0
YOJ	**Yonaguni jima**	**2.75**	**311**	P	Pn	09 53 31.9	+1.4
YOJ				eS	Sn	09 54 03.1	+0.6
JKE	**Kume jima 2**	**3.91**	**20**	P	Pn	09 53 45.2	-1.3
JKE				eS	Sn	09 54 31.4	+0.3

IDC 10 09:55:00.3±1.2,**2853N**×**13825E**,**h511**^{km}±18^{km},**mb2.9**/5, **mb1 3.0**/7,**mb1mx2.8**/20,**mbtmp2.9**/7,**Error ellipse: s-maj=35.3km s-min=16.5km az=79.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.77**	**111**	P	P	09 56 18.4	+0.8
	13nm,0.3s,baz=5.4,slow=18,SNR=12						
CBIJ				S	S	09 57 20.6	0.0
	14nm,0.3s,baz=281,slow=23,SNR=11						
MJAR	**Matsushiro Arr**	**7.99**	**360**	P	P	09 56 56.5	-0.2
	0.5nm,0.3s,baz=174,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**46.87**	**309**	P	P	10 02 43.9	+0.1
	0.3nm,0.3s,baz=100,slow=9.7,SNR=4.0						
WRA	**Warramunga Arr**	**48.33**	**185**	P	P	10 02 55.0	-0.1
	0.6nm,0.4s,baz=1.7,slow=7.8,SNR=20						
ARCES	**ARCESS Array B**	**71.03**	**340**	P	P	10 05 26.0	+0.3
	1.1nm,0.6s,baz=67,slow=8.0,SNR=8.9						
YKA	**Yellowknife Ar**	**72.52**	**28**	P	P	10 05 34.8	+0.3
	0.1nm,0.4s,baz=303,slow=6.0,SNR=4.2						
FINES	**FINESS Array B**	**75.10**	**333**	P	P	10 05 49.0	-0.3
	0.7nm,0.3s,baz=73,slow=4.7,SNR=14						

IDC 10 10:01:22.4±4.5,**267S**×**13962E**,**h0**^{km},**mb3.5**/2,**mb1 3.7**/3, **mb1mx3.4**/11,**mbtmp3.5**/3,**ML3.6**/1,**Error ellipse: s-maj=174.1km s-min=29.2km az=88.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.93**	**196**	P	Pn	10 05 34.1	+0.8
	0.2nm,0.3s,baz=18,slow=13,SNR=10						
ASAR	**Alice Springs**	**21.60**	**194**	P	P	10 06 14.0	0.0
	1.0nm,0.6s,baz=27,slow=10,SNR=14						
MKAR	**Makanchi Array**	**70.31**	**322**	P	P	10 12 37.9	0.0
	0.6nm,0.7s,baz=113,slow=8.0,SNR=5.4						

IDC 10 10:01:29.8±13.0,**1138S**×**6638E**,**h0**^{km},**mb3.6**/4, **mb1 3.7**/4,**mb1mx3.5**/20,**mbtmp3.6**/4,**Error ellipse: s-maj=406.2km s-min=40.9km az=61.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**59.63**	**13**	P	P	10 11 34.9	-0.7
	0.3nm,0.7s,baz=208,slow=8.6,SNR=3.7						
WRA	**Warramunga Arr**	**65.63**	**107**	P	P	10 12 16.1	-0.1
	0.8nm,0.9s,baz=278,slow=5.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**66.94**	**12**	P	P	10 12 24.6	+0.7
	0.2nm,0.3s,baz=217,slow=6.9,SNR=4.1						
SONM	**Songino Array**	**68.83**	**28**	P	P	10 12 36.7	+0.8
	0.6nm,0.8s,baz=208,slow=6.9,SNR=4.9						

IDC 10 10:27:10.2±2.6,**2305S**×**17082E**,**h0**^{km},**mb3.5**/2, **mb1 3.8**/3,**mb1mx3.7**/11,**mbtmp3.7**/3,**ML4.1**/1,**MS2.9**/1, **Ms1 2.9**/1,**ms1mx2.6**/19,**Error ellipse: s-maj=99.2km s-min=42.2km az=178.0,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.16**	**283**	eP	Pn	10 28 15.5	+0.5
DZM				eS	Sn	10 29 05.4	+1.1
DZM	**Mont Dzumac**	**4.16**	**283**	Pn	Pn	10 28 16.4	+1.4
	12nm,0.3s,baz=120,slow=22,SNR=462						
DZM				LR	LR	10 29 03.0	
	comp=Z,132nm,18.1s,baz=248,slow=27						
DZM				Sn	Sn	10 29 06.6	+2.3
	15nm,0.3s,baz=117,slow=21,SNR=13						
ASAR	**Alice Springs**	**33.84**	**262**	P	P	10 33 54.8	+0.2
	0.9nm,0.7s,baz=92,slow=9.6,SNR=11						
WRA	**Warramunga Arr**	**34.03**	**268**	P	P	10 33 55.0	-1.3
	0.2nm,0.4s,baz=96,slow=8.3,SNR=8.0						
GERES	**GERESS Array B**	**148.52**	**331**	PKPbc	PKPbc	10 46 59.0	+0.1
	0.5nm,0.7s,baz=323,slow=1.5,SNR=4.3						

MAN 10 10:40:57,688N×**12508E,h15**^{km}**,mb4.0,ML2.8,MS2.5, Mindanao**

*ISCJB **10** 10:48:55.4±0.8,260S±007×140.1E±0.1,h33^{km},mb3.9/6, MS3.5/4,Error ellipse: s-maj=15.5km s-min=10.2km az=0.4*
*NEIC **10** 10:48:57.2±0.7,262S×14000E,h30^{km},mb4.1/2,Error ellipse: s-maj=17.5km s-min=10.9km az=76.0*
*IDC **10** 10:48:59.7±4.4,276S×14007E,h58^{km}±41^{km},mb3.7/6, mb1 3.9/9,mb1mx3.8/15,mbtmp3.8/9,ML3.8/3,MS3.6/6, Ms1 3.6/6,ms1mx3.3/21,Error ellipse: s-maj=30.0km s-min=18.7km az=94.0*
ISC 10 10:48:57.8±0.8,**263S**±009×**1401E**±01,**h35**^{km},**n20**, σ0^{s}**87**/15,**mb3.9**/6,**MS3.5**/4,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.74**	**134**	P	**Pn**	**10 51 16.4**	**+0.8**
	0.5nm,0.3s,baz=311,slow=10,SNR=3.4						
BATI	**Kupang**	**17.95**	**244**	P	**Pn**	**10 53 06.5**	**+1.6**
	2.2nm,0.3s,baz=103,slow=1.3,SNR=3.2						
WB2	**Warramunga Arr**	**18.09**	**198**	eP	**Pn**	**10 53 05.4**	**-1.1**
WRA	**Warramunga Arr**	**18.10**	**198**	P	**Pn**	**10 53 05.8**	**-0.8**
WRA				S	**S**	**10 56 25.1**	**-7.3**
WRA	**Warramunga Arr**	**18.10**	**198**	P	**Pn**	**10 53 05.8**	**-0.8**
	0.6nm,0.3s,baz=20,slow=12,SNR=37						
WRA				S	**S**	**10 56 25.1**	**-7.3**
	0.1nm,0.3s,baz=18,slow=21,SNR=4.5						
WRA				LR	LR	11 00 40.0	
	comp=Z,144nm,18.8s,baz=20,slow=39						
CTA	**Charters Tower**	**18.37**	**161**	LR	LR	11 00 31.1	
	comp=Z,133nm,19.5s,baz=353,slow=38						
FITZ	**Fitzroy Crossi**	**20.90**	**222**	eP	**P**	**10 53 38.3**	**+1.0**
	7.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.90**	**222**	P	**P**	**10 53 37.7**	**+0.3**
	4.6nm,0.7s,baz=59,slow=14,SNR=5.8						
ASAR	**Alice Springs**	**21.75**	**195**	P	**P**	**10 53 46.0**	**-0.4**
	1.9nm,0.6s,mb3.7,baz=31,slow=9.9,SNR=33						
EIDS	**Eidsvold**	**24.97**	**156**	eP	**P**	**10 54 19.2**	**+0.9**
	3.3nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**29.13**	**177**	LR	LR	11 08 29.2	
	comp=Z,163nm,20.1s,MS3.6,baz=23,slow=40						
CBIJ	**Chichi jima**	**29.62**	**4**	LR	LR	11 04 48.4	
	comp=Z,67nm,19.9s,MS3.3,baz=124,slow=32						
NWAO	**Narrogin (SRO)**	**36.97**	**213**	LR	LR	11 12 25.6	
	comp=Z,130nm,18.2s,MS3.8,baz=275,slow=38						
KSRS	**Korea Array**	**41.44**	**345**	LR	LR	11 10 57.2	
	comp=Z,70nm,19.2s,MS3.5,baz=345,slow=32						
SONM	**Songino Array**	**58.23**	**334**	P	**P**	**10 58 48.7**	**0.0**
	0.3nm,0.6s,mb3.5,baz=150,slow=6.6,SNR=2.8						
MKAR	**Makanchi Array**	**70.56**	**322**	P	**P**	**11 00 09.6**	**+0.3**
	3.2nm,0.8s,mb4.3,baz=115,slow=8.0,SNR=36						
ZALV	**Zalesovo Beam**	**72.55**	**329**	P	**P**	**11 00 20.4**	**-0.8**
	1.9nm,0.8s,mb4.1,baz=105,slow=5.6,SNR=10.0						
QSPA	**South Pole Qui**	**87.32**	**180**	P	**P**	**11 01 39.6**	**-1.0**
	0.7nm,0.8s,mb4.0,baz=292,slow=0.8,SNR=2.1						
DBIC	**Dimbokro**	**144.82**	**278**	PKP	PKPdf	11 08 30.9	-1.4
	5.1nm,0.6s,baz=62,slow=5.6,SNR=9.3						
LPAZ	**La Paz**	**146.38**	**125**	PKPbc	PKPbc	11 08 35.2	-0.8
	1.4nm,0.9s,baz=224,slow=11,SNR=4.4						

IDC 10 10:51:16.0±7.7,**501S**×**9986E**,**h0**^{km},**mb3.7**/2,**mb1 3.8**/2, **mb1mx3.4**/17,**mbtmp3.7**/2,**Error ellipse: s-maj=299.5km s-min=34.0km az=61.0,Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**37.67**	**123**	P	P	10 58 33.3	0.0
	0.5nm,0.3s,baz=300,slow=7.4,SNR=12						
SONM	**Songino Array**	**52.93**	**6**	P	P	11 00 34.2	+0.3
	0.5nm,0.6s,baz=189,slow=9.7,SNR=6.1						
TXAR	**Lajitas Array**	**147.12**	**40**	PKPbc	PKPbc	11 11 01.1	-0.7
	0.1nm,0.4s,baz=305,slow=0.8,SNR=5.8						

*ISCJB **10** 10:57:12.9±0.9,3772N±003×3250E±003,h6^{km}±7^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=7.5*
*CSEM **10** 10:57:12.6±0.1,3772N×3250E,h10^{km},Mw3.5,Error ellipse: s-maj=1.6km s-min=1.3km az=30.0*
*ISK **10** 10:57:13.4,3775N×3250E,h14^{km},MD3.5*
*DDA **10** 10:57:14.8,3780N×3248E,h9^{km},Md3.5*
*NIC **10** 10:57:14.1±0.1,3779N×3263E,h55^{km},ML3.3,MW3.5*
ISC 10 10:57:14.0±0.9,**3771N**±003×**3248E**±003,**h9**^{km}±6^{km},**n46**, σ0^{s}**84**/55,**Turkey**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.26**	**338**	iPG	**Pg**	**10 57 18.3**	**-0.9**
KONT				iSG	**Sg**	**10 57 23.0**	**+0.3**
KIZT	**Kizilcal**	**1.26**	**338**	PN	**Pn**	**10 57 35.9**	**-1.9**
BCK	**Bucak**	**1.52**	**261**	PN	**Pn**	**10 57 41.9**	**+0.5**
ISP	**Isparta**	**1.57**	**276**	PN	**Pn**	**10 57 41.3**	**-0.7**
ANTB	**Antalya**	**1.67**	**242**	PN	**Pn**	**10 57 43.0**	**-0.4**
NIG	**Nigde**	**1.73**	**76**	PN	**Pn**	**10 57 43.6**	**-0.6**
SHUT	**Suhut-Afyon**	**1.74**	**300**	PN	**Pn**	**10 57 44.9**	**+0.5**
IKL	**Isikli**	**1.75**	**146**	PN	**Pn**	**10 57 43.8**	**-0.8**
MERS	**Mersin**	**1.83**	**117**	ePN	**Pn**	**10 57 46.2**	**+0.6**
KARA	**Karaisali**	**2.09**	**102**	ePN	**Pn**	**10 57 48.6**	**-0.6**
AVNT	**Avonos**	**2.15**	**59**	iP	**Pn**	**10 57 49.8**	**-0.2**
AVNT				iS	**Sg**	**10 58 24.1**	**+0.9**
ANTO	**Ankara**	**2.17**	**6**	ePN	**Pn**	**10 57 49.8**	**-0.5**
LOD	**Lodumlu**	**2.19**	**6**	ePN	**Pn**	**10 57 49.9**	**-0.6**
ESKT	**Eskisehir**	**2.22**	**325**	ePN	**Pn**	**10 57 50.0**	**-0.9**
ESKT	**Eskisehir**	**2.22**	**325**	iP	**Pn**	**10 57 50.2**	**-0.7**
SEYT	**Eskypehyr**	**2.22**	**325**	iP	**Pn**	**10 57 50.2**	**-0.7**
ELL	**Elmali**	**2.27**	**246**	ePN	**Pn**	**10 57 52.4**	**+0.8**
GOLH	**Golhisar**	**2.37**	**259**	iP	**Pn**	**10 57 54.0**	**+0.9**
GOLH				iS	**Sn**	**10 58 25.3**	**+3.1**
CDAG	**Cicekdag**	**2.42**	**37**	iP	**Pn**	**10 57 53.9**	**+0.3**
CDAG				iS	**Sg**	**10 58 31.2**	**-0.5**
KHL	**Karahalli**	**2.42**	**286**	ePN	**Pn**	**10 57 53.7**	**0.0**
ALFC	**Alevga**	**2.55**	**178**	P	**Pn**	**10 57 54.5**	**-1.0**
	8.5nm,0.3s						
ALFC				S	**Sn**	**10 58 25.9**	**-0.7**
KRTS	**Karatas**	**2.57**	**115**	ePN	**Pn**	**10 57 56.8**	**+1.0**
KOZT	**Kozan**	**2.67**	**94**	ePN	**Pn**	**10 57 57.7**	**+0.6**
AKMC	**Akamas**	**2.68**	**183**	P	**Pn**	**10 57 56.7**	**-0.6**
GDZ	**Gediz**	**2.73**	**301**	iP	**Pn**	**10 57 58.3**	**+0.3**
GDZ				iS	**Sg**	**10 58 42.4**	**+0.6**
PPCY	**Paphos**	**2.82**	**182**	P	**Pn**	**10 57 58.5**	**-0.7**
CSS	**Prodhromos**	**2.82**	**166**	P	**Pn**	**10 57 58.0**	**-1.3**
	2.7nm,0.4s						
CSS				S	**Sn**	**10 58 32.4**	**-1.0**
ELDT	**Eldivan**	**2.87**	**15**	iP	**Pn**	**10 57 58.8**	**-1.2**
SGKT	**Sivrigoynuk**	**2.88**	**354**	iP	**Pn**	**10 58 00.5**	**+0.5**
BNN	**Bunyan**	**2.88**	**66**	ePN	**Pn**	**10 58 00.1**	**0.0**
FETY	**Fethiye**	**2.92**	**250**	ePN	**Pn**	**10 58 01.8**	**+1.2**
YOZ	**Yozgat**	**2.94**	**48**	ePN	**Pn**	**10 58 00.8**	**-0.1**
SZAC	**Souni-Zanaja**	**2.96**	**174**	P	**Pn**	**10 58 05.0**	**+3.8**
SZAC				S	**Sn**	**10 58 43.3**	**+6.5**
CORM	**Corum**	**2.98**	**33**	ePN	**Pn**	**10 58 01.2**	**-0.2**
CANT	**Cankiri**	**3.03**	**17**	ePN	**Pn**	**10 58 01.5**	**-0.5**
GULT	**Gulveren**	**3.12**	**331**	ePN	**Pn**	**10 58 02.9**	**-0.5**
COBT	**Iskenderun**	**3.24**	**110**	iP	**Pn**	**10 58 06.7**	**+1.7**
COBT				iS	**Sn**	**10 58 44.6**	**+1.0**
HTY	**Hatay**	**3.33**	**117**	ePN	**Pn**	**10 58 07.4**	**+1.2**
HENT	**Hendek**	**3.34**	**339**	iP	**Pn**	**10 58 07.0**	**+0.6**
CTKT	**Corum**	**3.42**	**31**	iP	**Pn**	**10 58 10.6**	**+3.1**
ADVT	**Abdulvahap**	**3.46**	**323**	ePN	**Pn**	**10 58 07.9**	**-0.1**
KMRS	**Kahramanmaras**	**3.51**	**92**	ePN	**Pn**	**10 58 09.1**	**+0.4**
IZI	**Iznik**	**3.52**	**319**	ePN	**Pn**	**10 58 09.5**	**+0.7**
TOS	**Tosya**	**3.53**	**19**	ePN	**Pn**	**10 58 08.8**	**-0.2**
GEMT	**Gemlik**	**3.74**	**318**	ePN	**Pn**	**10 58 11.5**	**-0.4**
YLV	**Yalova**	**3.74**	**321**	ePN	**Pn**	**10 58 11.6**	**-0.3**

GUC 10 11:08:28.4±0.8,**3241S**×**7156W**,**h20**^{km}±14^{km},**MD3.6**, **ML2.3**,**1C-1D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PEL	**Peldehue**	**1.04**	**135**	⇓iP	Pb	11 08 47.3	-0.4
PEL				iS	Sb	11 09 01.3	+0.3
PEL				AML	AML	11 09 02.3	
	comp=E,161nm,0.3s						
FCH	**Farellones**	**1.41**	**131**	⇑iP	Pn	11 08 53.4	+0.4
FCH				iS	Sn	11 09 11.9	+0.9
FCH				AML	AML	11 09 13.0	
	comp=N,54nm,0.3s						
PCH	**Pirque**	**1.50**	**144**	iS	Sn	11 09 14.1	+0.9
CHCH	**Chadas Angostu**	**1.70**	**154**	eP	Pn	11 08 57.0	0.0
LMEL	**Las Melosas**	**1.83**	**142**	eP	Pn	11 08 59.5	+0.7
LMEL				iS	Sn	11 09 23.4	+1.9
LMEL				AML	AML	11 09 31.9	
	comp=N,51nm,0.2s						
SFDO	**San Fernando**	**2.25**	**168**	iS	Sn	11 09 34.2	+2.5

*CSEM **10** 11:09:14.2±0.5,3900N×4231E,h30^{km},MD2.8,Error ellipse: s-maj=14.6km s-min=5.9km az=163.0*
*ISK **10** 11:09:14.2,3904N×4221E,h15^{km},MD2.8*
*ISCJB **10** 11:09:16.1±0.8,39.11N±005×4220E±005,h8^{km},Error ellipse: s-maj=7.7km s-min=5.0km az=151.8*
*DDA **10** 11:09:17.5,39.16N×4224E,h8^{km},Md2.9*
ISC 10 11:09:17.0±1.2,**3915N**±006×**4219E**±007,**h14**^{km}±12^{km},**n6**, σ1^{s}**21**/11,**Turkey**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TUTA	**Tutak**	**0.55**	**62**	iP	**Pg**	**11 09 26.9**	**-0.8**
TUTA				iS	**Sg**	**11 09 35.8**	**+0.8**
AGRB	**Hanur-Agry**	**0.75**	**55**	PG	**Pg**	**11 09 30.8**	**-0.8**
AGRB				SG	**Sg**	**11 09 41.9**	**+0.4**
ERZM	**Erzurum**	**0.99**	**320**	iP	**Pg**	**11 09 35.7**	**-0.5**
ERZM				iS	**Sg**	**11 09 51.4**	**+2.2**
EZM	**Erzurum**	**0.99**	**320**	PN	**Pn**	**11 09 35.4**	**-1.1**
EZM				SN	**Sn**	**11 09 50.9**	**+0.6**
BINT	**Bingol**	**1.36**	**259**	ePN	**Pn**	**11 09 38.7**	**-2.7**
MARD	**Mardin**	**2.14**	**212**	iP	**Pn**	**11 09 54.0**	**+1.8**
MARD				iS	**Sn**	**11 10 18.9**	**+0.4**

IDC 10 11:33:22.1±1.4,**416N**×**12747E**,**h0**^{km},**mb3.5**/4,**mb1 3.7**/4, **mb1mx3.5**/17,**mbtmp3.5**/4,**Error ellipse: s-maj=124.8km s-min=20.8km az=70.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.88**	**164**	P	P	11 38 46.6	-0.1
	0.9nm,0.5s,baz=345,slow=10.0,SNR=14						
ASAR	**Alice Springs**	**28.36**	**168**	P	P	11 39 18.3	+0.3
	0.3nm,0.5s,baz=357,slow=7.4,SNR=8.2						
SONM	**Songino Array**	**47.14**	**341**	P	P	11 41 56.6	+0.5
	0.4nm,0.6s,baz=153,slow=5.7,SNR=2.9						
MKAR	**Makanchi Array**	**57.63**	**325**	P	P	11 43 13.7	-0.4
	0.3nm,0.4s,baz=112,slow=7.6,SNR=7.7						

*NEIC **10** 11:40:44.0±1.6,633S×130.15E,h77^{km}±18^{km},mb3.5/1, Error ellipse: s-maj=26.0km s-min=9.4km az=69.0*
*IDC **10** 11:40:52.3±4.9,673S×12984E,h165^{km}±48^{km},mb3.5/2, mb1 3.4/6,mb1mx3.3/14,mbtmp3.3/6,Error ellipse: s-maj=44.3km s-min=18.9km az=61.0*
*ISCJB **10** 11:40:53.6±2.7,69S±0.1×1298E±0.1,h202^{km}±29^{km}, mb3.6/2,Error ellipse: s-maj=23.9km s-min=11.7km az=138.1*
ISC 10 11:40:51.9±2.2,**673S**±010×**1299E**±01,**h161**^{km}±22^{km},**n9**, σ0^{s}**69**/13,**mb3.8**/2,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BATI	**Kupang**	**7.06**	**240**	P	**Pn**	**11 42 33.5**	**+0.8**
	4.0nm,0.3s,baz=68,slow=4.8,SNR=4.3						
BATI				S	**Sn**	**11 43 51.3**	**-0.8**
	9.3nm,0.3s,baz=124,slow=20,SNR=15						
FITZ	**Fitzroy Crossi**	**12.04**	**200**	P	**Pn**	**11 43 39.1**	**+0.7**
	0.2nm,0.3s,baz=27,slow=14,SNR=10						
FITZ				S	**Sn**	**11 45 47.3**	**-4.5**
	0.3nm,0.3s,baz=323,slow=20,SNR=4.1						
WRA	**Warramunga Arr**	**13.83**	**162**	P	**Pn**	**11 44 00.2**	**-1.0**
	1.0nm,0.3s,baz=343,slow=13,SNR=22						
WRA				S	**Sn**	**11 46 27.4**	**-7.4**
	0.9nm,0.3s,baz=338,slow=22,SNR=6.5						
DAV	**Davao City (W)**	**14.36**	**343**	ePn	**Pn**	**11 43 59.8**	**-8.2**
ASAR	**Alice Springs**	**17.28**	**168**	P	**Pn**	**11 44 44.7**	**+1.2**
	0.7nm,0.3s,baz=344,slow=9.4,SNR=49						
ASAR				S	**S**	**11 47 54.0**	**0.0**
	0.2nm,0.3s,baz=356,slow=26,SNR=4.9						
CTAO	**Charters Tower**	**20.70**	**131**	eP	**P**	**11 45 18.9**	**-0.7**
	2.3nm,1.0s						
SONM	**Songino Array**	**58.15**	**342**	P	**P**	**11 50 28.7**	**+0.1**
	0.3nm,0.6s,mb3.3,baz=145,slow=5.3,SNR=2.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**67.94**	**327**	*e*P	**P**	**11 51 33.0**	**-0.2**
MKAR	**Makanchi Array**	**67.94**	**327**	P	**P**	**11 51 33.1**	**0.0**
	2.3nm,0.4s,mb4.2,baz=118,slow=8.3,SNR=35						

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*IDC **10** 11:52:10.0±6.0, 18.01S×178.59W, h630km±77km, mb3.1/8, mb1 3.3/9, mb1mx3.2/15, mbtmp3.1/9, Error ellipse: s-maj=43.2km s-min=32.1km az=154.0*

*NEIC **10** 11:52:09.8±0.6, 17.86S×178.63W, h630km, mb4.2/6, Error ellipse: s-maj=18.7km s-min=12.2km az=151.0*

*ISCJB **10** 11:52:11.3±3.6, 17.9S±0.2×178.8W±0.2, h666km±47km, mb4.0/13, Error ellipse: s-maj=30.2km s-min=26.1km az=160.6*

ISC 10 11:52:12.3±3.7**, 17.9S**±0.2×**178.7W**±0.2**, h661**km±50km**, n19, σ0.69**/18**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.55**	**251**	P	**P**	**11 55 13.8**	**-0.3**
	0.2nm,0.3s,baz=94,slow=15,SNR=4.9						
CTA	**Charters Tower**	**33.15**	**261**	P	**P**	**11 57 57.9**	**+0.2**
	0.9nm,0.4s,mb3.7,baz=86,slow=12,SNR=3.7						
CTAO	**Charters Tower**	**33.15**	**261**	*e*P	**P**	**11 57 57.6**	**-0.1**
	1.2nm,0.4s,mb3.8						
CNB	**Canberra Magne**	**33.20**	**232**	*e*P	**P**	**11 57 57.7**	**-0.2**
	11nm,0.5s,mb4.7						
PMG	**Port Moresby**	**34.16**	**280**	P	**P**	**11 58 07.4**	**+1.3**
	6.4nm,0.8s,mb4.2,baz=75,slow=12,SNR=5.8						
STKA	**Stephens Creek**	**38.37**	**241**	*e*P	**P**	**11 58 40.5**	**+0.3**
	5.3nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**38.37**	**241**	P	**P**	**11 58 41.0**	**+0.8**
	2.4nm,0.5s,mb3.9,baz=91,slow=11,SNR=4.2						
WB2	**Warramunga Arr**	**44.33**	**260**	*e*P	**P**	**11 59 26.6**	**-0.4**
WRA	**Warramunga Arr**	**44.34**	**260**	P	**P**	**11 59 26.9**	**-0.2**
	1.8nm,0.5s,mb3.7,baz=97,slow=7.3,SNR=76						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**11 59 28.4**	**+0.1**
	11nm,0.7s,mb4.3,baz=87,slow=8.5,SNR=196						
GUMO	**Guam**	**47.63**	**309**	*e*P	**P**	**11 59 50.7**	**-1.1**
	124nm,0.9s,mb5.2						
MJAR	**Matsushiro Arr**	**67.71**	**324**	P	**P**	**12 02 07.3**	**+0.9**
MJAR	**Matsushiro Arr**	**67.71**	**324**	P	**P**	**12 02 07.3**	**+0.9**
	1.0nm,0.5s,mb3.4,baz=155,slow=6.0,SNR=5.9						
MAJO	**Matsushiro**	**67.72**	**324**	*e*P	**P**	**12 02 04.9**	**-1.5**
	1.1nm,0.5s,mb3.4						
QIZ	**Qiongzhong**	**79.17**	**294**	*e*P	**P**	**12 03 12.0**	**+0.5**
	12nm,1.2s,mb4.3						
NVAR	**Mina Array Bea**	**79.62**	**44**	P	**P**	**12 03 13.6**	**+0.2**
	0.5nm,0.7s,mb3.0,baz=218,slow=6.7,SNR=4.7						
PMSA	**Palmer Station**	**83.94**	**157**	*e*P	**P**	**12 03 34.2**	**-0.5**
	18nm,1.2s,mb4.5						
TXAR	**Lajitas Array**	**86.24**	**58**	P	**P**	**12 03 46.9**	**+0.5**
	0.5nm,0.6s,mb3.3,baz=214,slow=6.3,SNR=8.9						
GERES	**GERESS Array B**	**147.52**	**345**	PKPbc	PKPbc	12 10 45.2	+1.1
	0.5nm,0.5s,baz=27,slow=3.3,SNR=5.7						

IDC 10 11:52:31.2±9.9**, 18.12S**×**178.66W, h676**km±136km**, mb3.4**/7**, mb1 3.6**/8**, mb1mx3.3**/15**, mbtmp3.4**/8**, Error ellipse: s-maj=65.6km s-min=37.8km az=129.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.54**	**252**	P	P	11 55 33.2	+0.5
	0.3nm,0.3s,baz=90,slow=18,SNR=6.3						
CTA	**Charters Tower**	**33.18**	**261**	P	P	11 58 15.8	-0.4
	4.8nm,0.6s,baz=88,slow=8.6,SNR=11						
PMG	**Port Moresby**	**34.26**	**280**	P	P	11 58 26.0	+0.7
	15nm,0.8s,baz=69,slow=6.2,SNR=11						
STKA	**Stephens Creek**	**38.32**	**241**	P	P	11 58 58.6	+0.6
	9.1nm,0.9s,baz=85,slow=11,SNR=7.6						
WRA	**Warramunga Arr**	**44.36**	**260**	P	P	11 59 45.1	-0.3
	3.1nm,0.5s,baz=96,slow=7.2,SNR=22						
ASAR	**Alice Springs**	**44.51**	**254**	P	P	11 59 46.5	+0.1
	21nm,0.7s,baz=87,slow=8.6,SNR=49						
NVAR	**Mina Array Bea**	**79.74**	**44**	P	P	12 03 31.7	-0.1
	0.9nm,0.7s,baz=210,slow=7.2,SNR=9.9						
TXAR	**Lajitas Array**	**86.31**	**58**	P	P	12 04 05.2	+0.8
	1.4nm,0.8s,baz=222,slow=6.6,SNR=18						

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*IDC **10** 12:04:32.7±6.3, 30.99S×179.96W, h444km±75km, mb3.3/4, mb1 3.5/5, mb1mx3.3/13, mbtmp3.4/5, Error ellipse: s-maj=71.7km s-min=32.5km az=12.0*

ISC 10 12:04:31.9±2.7**, 30.9S**±0.1×**179.7E**±0.4**, h400**km**, n12, σ0.88**/11**, mb3.6**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**7.27**	**189**	*e*PN	**Pn**	**12 06 18.8**	**+0.4**
MWZ	**Matawai**	**7.65**	**193**	*e*PN	**Pn**	**12 06 22.2**	**-0.5**
URZ	**Urewera**	**7.66**	**195**	P	**P**	**12 06 25.1**	**+1.7**
	9.9nm,0.3s,baz=338,slow=3.5,SNR=57						
URZ				S	**S**	**12 07 53.6**	**-0.2**
	0.9nm,0.3s,baz=306,slow=19,SNR=5.3						
URZ	**Urewera**	**7.66**	**195**	*e*PN	**Pn**	**12 06 23.4**	**+0.5**
PXZ	**Pawanui**	**9.42**	**193**	*e*PN	**Pn**	**12 06 41.9**	**-1.1**
MRZ	**Mangatainoka R**	**10.32**	**198**	PN	**Pn**	**12 06 52.8**	**-0.6**
CTA	**Charters Tower**	**31.94**	**282**	P	**P**	**12 10 23.0**	**+0.4**
	1.8nm,0.6s,mb3.5,baz=100,slow=11,SNR=5.5						
STKA	**Stephens Creek**	**32.44**	**258**	P	**P**	**12 10 28.2**	**+1.4**
	1.6nm,0.5s,mb3.6,baz=113,slow=11,SNR=12						
ASAR	**Alice Springs**	**41.11**	**269**	P	**P**	**12 11 38.2**	**-0.8**
	0.8nm,0.6s,mb3.3,baz=103,slow=7.2,SNR=18						
WRA	**Warramunga Arr**	**42.15**	**274**	P	**P**	**12 11 46.4**	**-1.0**
	3.6nm,0.3s,mb4.1,baz=111,slow=8.1,SNR=148						
KAF	**Kangasniemi**	**144.31**	**339**	*e*p	PKPdf	12 23 14.7	-5.6
FINES	**FINESS Array B**	**144.89**	**338**	PKPbc	PKPdf	12 23 17.4	-3.8
	2.2nm,0.6s,baz=68,slow=3.9,SNR=21						

WEL 10 12:59:28.4±0.4**, 45.45S**×**166.70E, h5**km**, ML3.6**/8**, Error ellipse: s-maj=3.5km s-min=1.6km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.32**	**96**	PG	Pg	12 59 35.8	+1.2
DCZ				*e*SG	Sg	12 59 39.6	+0.7
DCZ				SG	Sg	12 59 39.8	+0.9
WHZ	**Wether Hill Ro**	**0.98**	**118**	P*	Pb	12 59 47.1	-0.8
WHZ				*e*S*	Sb	12 59 59.5	-1.7
MLZ	**Mavora Lakes**	**1.04**	**85**	P*	Pb	12 59 46.9	-2.1
MLZ				*e*S*	Sb	12 59 59.9	-2.9
MSZ	**Milford Sound**	**1.16**	**49**	P*	Pb	12 59 48.6	-2.4
MSZ				S*	Sb	13 00 05.9	-0.5
APZ	**The Paps**	**1.65**	**148**	*e*PN	Pn	12 59 58.6	+0.6
WKZ	**Wanaka**	**1.75**	**70**	PN	Pn	12 59 58.7	-0.7
EAZ	**Earnscleugh**	**1.85**	**84**	PN	Pn	13 00 00.3	-0.5
EAZ				*e*SN	Sn	13 00 22.3	-2.3
JCZ	**Jackson Bay**	**2.01**	**48**	PN	Pn	13 00 01.5	-1.4
SYZ	**Scrubby Hill**	**2.02**	**124**	PN	Pn	13 00 03.1	0.0
TUZ	**Tuapeka**	**2.12**	**105**	PN	Pn	13 00 04.3	-0.1
LBZ	**Lake Benmore**	**2.69**	**68**	PN	Pn	13 00 10.6	-1.8
HHSZ	**Highcliff Hill**	**2.77**	**101**	*e*PN	Pn	13 00 13.1	-0.3
ODZ	**Otahua Downs**	**2.82**	**83**	PN	Pn	13 00 12.5	-1.5
FOZ	**Fox Glacier**	**2.85**	**50**	PN	Pn	13 00 14.0	-0.5
RPZ	**Rata Peaks**	**3.56**	**62**	*e*PN	Pn	13 00 22.5	-1.7
WVZ	**Waitaha Valley**	**3.74**	**52**	*e*PN	Pn	13 00 24.8	-1.9
LTZ	**Lake Taylor**	**4.81**	**58**	*e*PN	Pn	13 00 40.6	-0.8
DSZ	**Denniston Nort**	**5.23**	**47**	PN	Pn	13 00 44.9	-2.4
THZ	**Tophouse**	**5.82**	**53**	*e*PN	Pn	13 00 54.7	-0.5
QRZ	**Quartz Range**	**6.28**	**45**	PN	Pn	13 00 59.3	-2.3

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*IDC **10** 13:18:45.0±0.7, 13.67N×90.22W, h0km, mb4.2/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.2/12, ML4.8/1, MS3.9/10, Ms1 3.8/10, ms1mx3.6/25, Error ellipse: s-maj=26.8km s-min=16.2km az=56.0*

*CASC **10** 13:18:46.1±2.7, 13.61N×90.99W, h20km±39km, MD4.5, mb4.4(NEIC)*

*ISCJB **10** 13:18:52.0±0.6, 13.49N±0.05×90.55W±0.04, h71km±5km, mb4.4/35, Error ellipse: s-maj=10.8km s-min=4.1km az=36.1*

*NEIC **10** 13:18:51.2±0.8, 13.35N×90.69W, h57km±6km, mb4.4/27, Error ellipse: s-maj=11.4km s-min=6.1km az=214.0*

ISC 10 13:18:54.4±0.5**, 13.53N**±0.05×**90.49W**±0.04**, h77**km±5km**, n272, σ0.85**/260**, mb4.4**/35**, 77C-76D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.90**	**70**	*e*P	x	13 19 46.0	
SBLS				*e*S	x	13 20 05.5	
SNJE	**San Jose**	**0.93**	**68**	⇑*e*P	x	13 19 46.8	
SNJE				*e*S	x	13 20 04.8	
RBDL	**Robledal**	**0.98**	**53**	⇑*e*P	x	13 19 47.6	
RBDL				*e*S	x	13 20 04.3	
SNET	**Serv Nac Est T**	**1.24**	**82**	*e*P	x	13 19 16.0	
SNET				*e*S	x	13 19 36.8	
CNCH	**Conchagua**	**2.60**	**95**	⇓*e*P	x	13 20 08.0	
CNCH				*e*S	x	13 20 46.3	
CCIG	**Comitan**	**3.17**	**330**	*i* P	**Pn**	**13 19 38.6**	**-3.4**
CCIG				*i* S	**Sn**	**13 20 19.8**	**+1.1**
TGUH	**Tegucigalpa,Un**	**3.17**	**80**	*e*Pn	**Pn**	**13 19 43.0**	**+1.0**
SCX	**San Cristobal**	**3.80**	**327**	*e*P	**Pn**	**13 19 47.7**	**-3.0**
SCX				*i* S	**Sn**	**13 20 43.6**	**+9.4**
CMIG	**Matias Romero**	**5.52**	**310**	*i* P	**Pn**	**13 20 05.8**	**-8.3**
CMIG				*i* S	**Sn**	**13 21 08.4**	**-7.9**
CMIG	**Matias Romero**	**5.52**	**310**	Pn	**Pn**	**13 20 06.3**	**-7.8**
	2.5nm,0.3s,baz=119,slow=11,SNR=15						
CMIG				Sn	**Sn**	**13 21 13.2**	**-3.1**
	3.6nm,0.3s,baz=116,slow=14,SNR=4.3						
VCR	**Vista de Mar**	**5.84**	**125**	*e*P	**Pn**	**13 20 19.3**	**+0.9**
JTS	**JuntasAbangare**	**6.30**	**120**	*e*Pn	**Pn**	**13 20 22.6**	**-2.2**
JTS	**JuntasAbangare**	**6.30**	**120**	Pn	**Pn**	**13 20 21.1**	**-3.7**
	2.0nm,0.3s,baz=313,slow=15,SNR=13						
JTS				Lg		13 22 00.0	
	baz=273,slow=22,SNR=3.5						
JTS				LR	LR	13 22 55.2	
	comp=Z,568nm,21.3s,baz=146,slow=41						
JCR	**Jicaral**	**6.41**	**124**	*e*P	**Pn**	**13 20 24.6**	**-1.7**
VHO	**Vista Hermosa**	**6.98**	**301**	*e*P	**Pn**	**13 20 29.6**	**-4.4**
VHO				*i* S	**Sn**	**13 21 51.1**	**-0.8**
TEIG	**Tepich**	**6.99**	**17**	*e*Pn	**Pn**	**13 20 35.5**	**+1.4**
TEIG	**Tepich**	**6.99**	**17**	Pn	**Pn**	**13 20 35.8**	**+1.7**
	8.4nm,0.3s,baz=202,slow=6.6,SNR=76						
PRS1	**Puriscal**	**7.00**	**120**	*e*P	**Pn**	**13 20 36.4**	**+2.1**
LAJ	**Bijagual**	**7.22**	**120**	*e*P	**Pn**	**13 20 33.9**	**-3.4**
LCR2	**La Lucha 2**	**7.39**	**120**	*e*P	**Pn**	**13 20 40.4**	**+0.8**
QCR	**Quepos**	**7.42**	**123**	*e*P	**Pn**	**13 20 40.4**	**+0.3**
URSC	**Urasca**	**7.53**	**118**	*e*P	**Pn**	**13 20 42.4**	**+0.9**
BAR1		**8.23**	**120**	*e*P	**Pn**	**13 20 50.6**	**-0.5**
PPM	**Popocatepetl**	**9.55**	**306**	*i* P	**Pn**	**13 21 06.7**	**-2.5**
PPM				*i* S	**Sn**	**13 22 54.5**	**-0.4**
IIO	**Organos**	**9.93**	**308**	*e*P	**Pn**	**13 21 09.0**	**-5.2**
IIO				*i* S	**Sn**	**13 23 07.4**	**+3.4**
SOR	**Soroa**	**11.64**	**37**	*e*P	**Pn**	**13 21 43.4**	**+5.8**
ZAIG	**Zacatecas**	**14.69**	**310**	*e*P	**Pn**	**13 22 19.7**	**+1.5**
HKT	**Hockley**	**17.07**	**344**	*e*Pn	**Pn**	**13 22 47.5**	**-0.6**
	14nm,1.4s						
JCT	**Junction City**	**18.93**	**335**	*e*P	**Pn**	**13 23 09.6**	**-1.0**
	4.5nm,0.6s						
LRAL	**Lakeview Retre**	**19.68**	**9**	*e*Pn	**Pn**	**13 23 21.1**	**+1.7**
	30nm,1.3s						
LTX	**Lajitas**	**19.91**	**324**	*e*P	**Pn**	**13 23 19.4**	**-2.9**
	2.1nm,0.4s						
TXAR	**Lajitas Array**	**19.91**	**324**	P	**Pn**	**13 23 19.2**	**-3.0**
	0.7nm,0.3s,baz=150,slow=13,SNR=43						
TXAR				PcP	PcP	13 27 36.8	+2.7
	0.0nm,0.3s,baz=111,slow=2.8,SNR=3.9						
TXAR				ScP	ScP	13 31 17.6	+14
	0.0nm,0.3s,baz=164,slow=5.1,SNR=4.8						
TXAR				LR	LR	13 32 05.6	
	comp=Z,205nm,18.7s,baz=325,slow=40						
SDV	**Santo Domingo**	**20.02**	**101**	*e*P	**P**	**13 23 20.8**	**-0.3**
	10.0nm,0.7s						
SDV	**Santo Domingo**	**20.02**	**101**	P	**P**	**13 23 20.6**	**-0.5**
	0.9nm,0.3s,baz=298,slow=5.1,SNR=14						
GOGA	**Godfrey**	**20.80**	**17**	*e*P	**P**	**13 23 35.0**	**+5.5**
OXF	**Oxford**	**20.92**	**3**	*e*P	**P**	**13 23 33.7**	**+3.0**
	51nm,1.1s						
MIAR	**Mount Ida**	**21.11**	**353**	*e*P	**P**	**13 23 32.2**	**-0.6**
	7.1nm,0.7s,mb4.1						
UALR	**University of**	**21.22**	**356**	*e*P	**P**	**13 23 34.2**	**+0.2**
LPIG	**La Paz**	**21.48**	**302**	LR	LR	13 33 04.8	
	comp=Z,222nm,18.5s,baz=124,slow=40						
SWET	**Sewanee**	**21.98**	**10**	*e*P	**P**	**13 23 43.6**	**+1.5**
WMOK	**Wichita Mounta**	**22.41**	**342**	*e*P	**P**	**13 23 43.7**	**-2.9**
	10.0nm,1.3s,mb4.0						
MNTX	**Cornudas Mount**	**22.67**	**325**	*e*P	**P**	**13 23 47.2**	**-2.2**
	31nm,1.3s,mb4.5						
TKL	**Tuckaleechee C**	**22.85**	**14**	P	**P**	**13 23 51.8**	**+0.6**
	6.6nm,0.5s,mb4.2,baz=182,slow=11,SNR=15						
TKL				LR	LR	13 33 41.7	
	comp=Z,732nm,19.6s,baz=252,slow=40						
ATAH	**Atahualpa**	**23.67**	**149**	LR	LR	13 31 16.5	
	comp=Z,199nm,21.1s,baz=151,slow=32						
SIUC	**Southern Illin**	**24.12**	**2**	*e*P	**P**	**13 24 03.4**	**+0.4**
	13nm,0.9s,mb4.2						
319A	**Douglas**	**24.77**	**319**	⇓P	**P**	**13 24 09.2**	**+0.2**
	baz=25,SNR=7.6						
WCI	**Wyandotte Cave**	**24.88**	**8**	*e*P	**P**	**13 24 10.5**	**+0.5**
	12nm,0.6s,mb4.5						
318A	**Bisbee**	**25.27**	**318**	⇓P	**P**	**13 24 13.3**	**-0.2**
	baz=25,SNR=15						
218A	**Dragoon**	**25.66**	**319**	⇓P	**P**	**13 24 17.2**	**+0.2**
	baz=26						
ANMO	**Albuquerque**	**25.75**	**329**	*e*P	**P**	**13 24 17.6**	**-0.3**
	2.6nm,1.0s,mb3.6						
ANMO	**Albuquerque**	**25.75**	**329**	P	**P**	**13 24 17.4**	**-0.4**
	1.4nm,0.7s,mb3.5,baz=147,slow=9.6,SNR=7.1						
ANMO				PcP	PcP	13 27 48.4	+2.4
	0.6nm,0.6s,baz=263,slow=1.2,SNR=3.8						
217A	**Green Valley**	**26.02**	**318**	⇓P	**P**	**13 24 20.1**	**-0.3**
	baz=26						
KSU1	**Kansas State U**	**26.04**	**349**	*e*P	**P**	**13 24 20.3**	**-0.1**
	8.2nm,0.4s,mb4.5						
TUC	**Tucson**	**26.35**	**319**	*e*P	**P**	**13 24 22.8**	**-0.5**
	7.7nm,1.1s,mb4.0						
216A	**Three Points,**	**26.59**	**317**	⇓P	**P**	**13 24 24.7**	**-0.8**
	baz=27						
ACSO	**Alum Creek Sta**	**27.41**	**13**	*e*P	**P**	**13 24 33.6**	**+0.9**
	8.3nm,0.3s,mb4.7						
115A	**Sonoran Desert**	**27.54**	**318**	⇓P	**P**	**13 24 33.9**	**0.0**
	baz=28						
SDCO	**Great Sand Dun**	**27.58**	**334**	*e*P	**P**	**13 24 33.8**	**-0.4**
	74nm,2.9s,mb4.7						
Z14A	**Wintersburg**	**28.42**	**318**	⇓P	**P**	**13 24 42.1**	**+0.3**
	baz=28						
MVCO	**Mesa Verde**	**28.55**	**329**	*e*P	**P**	**13 24 43.3**	**+0.4**
	3.7nm,0.7s,mb4.1						
MVCO	**Mesa Verde**	**28.55**	**329**	⇑P	**P**	**13 24 43.4**	**+0.5**
	baz=29						
X15A	**Humboldt**	**28.69**	**320**	⇑P	**P**	**13 24 44.5**	**+0.3**
	baz=29						
Y14A	**Wickenburg**	**28.82**	**319**	⇓P	**P**	**13 24 45.4**	**0.0**
	baz=29						
X14A	**Yava**	**29.09**	**320**	⇑P	**P**	**13 24 48.2**	**+0.5**
	baz=29						
Y13A	**Salome**	**29.28**	**318**	⇓P	**P**	**13 24 49.8**	**+0.4**
	baz=29						
PV01	**Paradox Valley**	**29.30**	**330**	*e*P	**P**	**13 24 49.4**	**-0.1**
GLA	**Glamis**	**29.49**	**315**	⇑P	**P**	**13 24 51.1**	**-0.2**
	baz=30						
W14A	**Seligman**	**29.69**	**321**	⇓P	**P**	**13 24 53.0**	**0.0**
	baz=30						
Y12C	**Blythe**	**29.70**	**317**	⇓P	**P**	**13 24 53.0**	**-0.1**
	baz=30						
PV10	**Paradox Valley**	**29.72**	**330**	*e*P	**P**	**13 24 53.2**	**-0.1**
X13A	**Yucca**	**29.76**	**319**	⇓P	**P**	**13 24 53.8**	**+0.1**
	baz=30						
PDMCI	**Parker Dam,Lak**	**29.78**	**318**	⇓P	**P**	**13 24 53.8**	**-0.1**
	baz=30						
BC3	**Big Chuckw Mtn**	**30.27**	**316**	⇑P	**P**	**13 24 58.1**	**-0.1**
	baz=30						
IRM	**Iron Mountain**	**30.36**	**317**	⇓P	**P**	**13 24 58.9**	**-0.1**
	baz=30						
T15A	**Red Dirt Ranch**	**30.50**	**324**	⇑P	**P**	**13 25 01.5**	**+1.4**
	baz=31						
U14A	**Mt Trumbull**	**30.55**	**322**	⇑P	**P**	**13 25 01.1**	**+0.4**
	baz=31,SNR=6.3						
T14A	**Hurricane**	**30.93**	**323**	⇑P	**P**	**13 25 05.0**	**+1.0**
	baz=31,SNR=7.9						
U13A	**Pakoon Wash**	**31.02**	**321**	⇑P	**P**	**13 25 05.6**	**+0.8**
	baz=31,SNR=6.9						
GMRC	**Granite Mounta**	**31.07**	**317**	⇓P	**P**	**13 25 05.3**	**+0.1**
	baz=31						
V12A	**Nelson**	**31.12**	**320**	⇓P	**P**	**13 25 05.8**	**+0.1**
	baz=31,SNR=5.8						
T13A	**Saint George**	**31.39**	**322**	⇓P	**P**	**13 25 09.4**	**+1.4**
	baz=32,SNR=5.2						
MSU	**Marysvale**	**31.44**	**326**	*e*P	**P**	**13 25 08.8**	**+0.3**
S14A	**Cedar City**	**31.46**	**324**	⇑P	**P**	**13 25 10.2**	**+1.6**
	baz=32						
HEC	**Hector,Ludlow**	**31.54**	**317**	⇓P	**P**	**13 25 10.1**	**+0.7**
	baz=32						
V11A	**Goodsprings**	**31.56**	**319**	⇓P	**P**	**13 25 10.1**	**+0.5**
	baz=32						
RWWY	**Rawlins**	**31.61**	**336**	*e*P	**P**	**13 25 09.8**	**0.0**
BBRC	**Big Bear Sol-O**	**31.61**	**315**	⇑P	**P**	**13 25 10.4**	**+0.4**
	baz=32						
TUQ	**Turquoise Mtn.**	**31.63**	**318**	⇓P	**P**	**13 25 10.5**	**+0.3**
	baz=32						
S13A	**Holt Ranch, En**	**31.73**	**323**	⇓P	**P**	**13 25 12.5**	**+1.4**
	baz=32,SNR=10						
DAU	**Daniels Canyon**	**32.38**	**330**	*e*P	**P**	**13 25 17.0**	**+0.4**
COWI	**Conover**	**32.49**	**2**	*e*P	**P**	**13 25 16.6**	**-0.9**
	12nm,0.6s,mb4.8						
R12A	**Pony Springs,**	**32.67**	**323**	⇑P	**P**	**13 25 21.1**	**+1.9**
	baz=33,SNR=9.2						
Q13A	**Wheeler Ranch,**	**32.77**	**325**	P	**P**	**13 25 21.2**	**+1.1**
	baz=33,SNR=11						
LRMC	**Laurel Mountai**	**32.82**	**317**	⇑P	**P**	**13 25 20.6**	**0.0**
	baz=33						
FURC	**Furnace Creek,**	**32.86**	**319**	⇑P	**P**	**13 25 21.5**	**+0.5**
	baz=33						
DUG	**Dugway**	**33.01**	**328**	⇑P	**P**	**13 25 22.9**	**+0.7**
	baz=33						
MPMC	**Manual Prospec**	**33.03**	**318**	⇑P	**P**	**13 25 22.3**	**0.0**
	baz=33,SNR=7.4						
P13A	**Bates Ranch, G**	**33.12**	**326**	P	**P**	**13 25 24.4**	**+1.2**
	baz=33,SNR=8.6						
R11A	**Troy Canyon, C**	**33.26**	**323**	⇑P	**P**	**13 25 25.9**	**+1.5**
	baz=33,SNR=6.1						
Q12A	**Willow Creek R**	**33.29**	**324**	⇑P	**P**	**13 25 26.4**	**+1.8**
	baz=33						
HWUT	**Hardware Ranch**	**33.45**	**331**	*e*P	**P**	**13 25 25.9**	**0.0**
	7.1nm,1.0s,mb4.5						
O13A	**Hicks Ranch, I**	**33.58**	**326**	⇓P	**P**	**13 25 28.5**	**+1.4**
	baz=34						
S10A	**Tonopah Range,**	**33.59**	**321**	⇓P	**P**	**13 25 28.0**	**+0.7**
	baz=34						
P12A	**McGill**	**33.63**	**325**	⇓P	**P**	**13 25 28.8**	**+1.2**
	baz=34						
Q11A	**Duckwater**	**33.63**	**323**	P	**P**	**13 25 29.3**	**+1.7**
	baz=34,SNR=7.6						
CWC	**Cottonwood Cre**	**33.63**	**318**	⇓P	**P**	**13 25 27.9**	**+0.3**
	baz=34						
R10A	**Warm Springs**	**33.65**	**322**	⇑P	**P**	**13 25 28.7**	**+0.9**
	baz=34						
SBC	**Santa Barbara**	**33.66**	**313**	⇓P	**P**	**13 25 28.0**	**+0.1**
	baz=34						
BGU	**Big Grassy Mou**	**33.66**	**328**	*e*P	**P**	**13 25 27.5**	**-0.3**
N14A	**Grayback Hills**	**33.68**	**328**	⇑P	**P**	**13 25 28.8**	**+0.8**
	baz=34						
M15A	**Larsen Ranch,**	**33.77**	**330**	⇓P	**P**	**13 25 29.4**	**+0.6**
	baz=34						
S09A	**Goldfield**	**33.86**	**320**	⇓P	**P**	**13 25 29.8**	**+0.2**
	baz=34						
Q10A	**Clear Creek Ra**	**34.05**	**322**	⇓P	**P**	**13 25 32.1**	**+0.9**
	baz=34,SNR=7.8						
R09A	**Tonopah**	**34.09**	**321**	⇑P	**P**	**13 25 32.1**	**+0.6**
	baz=34						
O12A	**Currie**	**34.09**	**326**	⇓P	**P**	**13 25 32.4**	**+0.9**
	baz=34,SNR=7.7						
N13A	**Wendover, West**	**34.22**	**327**	⇑P	**P**	**13 25 33.8**	**+1.2**
	baz=34						
M14A	**Sheep Mountain**	**34.24**	**329**	P	**P**	**13 25 33.3**	**+0.5**
	baz=34,SNR=16						
S08C	**White Mtn Res**	**34.32**	**319**	⇓P	**P**	**13 25 34.2**	**+0.6**
	baz=34						
EYMN	**Ely**	**34.33**	**359**	*e*P	**P**	**13 25 32.1**	**-1.3**
	7.4nm,0.6s,mb4.7						
RCTC	**Rector, Farmer**	**34.33**	**316**	⇓P	**P**	**13 25 34.4**	**+0.8**
	baz=34						
HELL	**Mitchell Peak,**	**34.39**	**317**	P	**P**	**13 25 34.7**	**+0.4**
	baz=34,SNR=5.5						
REDW	**Red Top Meadow**	**34.51**	**333**	*e*P	**P**	**13 25 35.1**	**0.0**
	9.7nm,0.8s,mb4.7						
M13A	**Montello**	**34.56**	**328**	P	**P**	**13 25 36.0**	**+0.4**
	baz=35,SNR=14						
LOHW	**Long Hollow**	**34.60**	**334**	*e*P	**P**	**13 25 36.0**	**+0.1**
P10A	**Eureka**	**34.61**	**323**	⇑P	**P**	**13 25 37.3**	**+1.2**
	baz=35						
TPAW	**Teton Pass**	**34.65**	**333**	*e*P	**P**	**13 25 36.8**	**+0.4**
	11nm,1.4s,mb4.5						
N12A	**Clover Valley,**	**34.66**	**326**	⇑P	**P**	**13 25 37.6**	**+1.2**
	baz=35						
MOOW	**Moose Ponds**	**34.77**	**334**	*e*P	**P**	**13 25 37.3**	**-0.1**
R08A	**Mina**	**34.79**	**320**	⇓P	**P**	**13 25 38.7**	**+1.0**
	baz=35						
K14A	**Jones Ranch, D**	**34.94**	**330**	⇑P	**P**	**13 25 38.5**	**-0.4**
	baz=35,SNR=9.0						
AGMN	**Agassiz Refuge**	**34.95**	**354**	*e*P	**P**	**13 25 37.8**	**-1.0**
KCC	**Kaiser Creek**	**34.95**	**318**	⇓P	**P**	**13 25 39.2**	**+0.1**
	baz=35						
NVAR	**Mina Array Bea**	**34.96**	**320**	P	**P**	**13 25 39.6**	**+0.5**
	5.9nm,0.8s,mb4.5,baz=124,slow=8.9,SNR=47						
NVAR				PcP	PcP	13 28 13.0	+2.9
	2.0nm,0.9s,baz=123,slow=4.8,SNR=6.5						
NVAR				ScP	ScP	13 32 00.8	+12
	0.6nm,0.7s,baz=121,slow=5.1,SNR=4.9						
IMW	**Indian Meadow**	**34.97**	**334**	*e*P	**P**	**13 25 39.3**	**+0.2**
	21nm,1.8s,mb4.7						
L13A	**Double Diamond**	**34.98**	**329**	⇑P	**P**	**13 25 39.6**	**+0.4**
	baz=35						
M12A	**Wells**	**34.99**	**327**	P	**P**	**13 25 39.7**	**+0.4**
	baz=35,SNR=6.8						
Q08A	**Gabbs**	**35.00**	**321**	⇓P	**P**	**13 25 39.7**	**+0.3**
	baz=35						
T06C	**Millerton Lake**	**35.03**	**317**	⇓P	**P**	**13 25 38.8**	**-0.9**
	baz=35						
R07C	**Lee Vining**	**35.23**	**319**	⇓P	**P**	**13 25 42.0**	**+0.6**
	baz=35						
M11A	**Holland Ranch,**	**35.47**	**326**	⇓P	**P**	**13 25 43.2**	**-0.2**
	baz=36,SNR=8.3						
L12A	**House Creek Ra**	**35.57**	**328**	⇓P	**P**	**13 25 44.8**	**+0.5**
	baz=36						
S06C	**San Francisco**	**35.62**	**318**	⇓P	**P**	**13 25 44.5**	**-0.2**
	baz=36						
S05C	**Merced**	**35.63**	**317**	⇑P	**P**	**13 25 44.7**	**-0.2**
	baz=36						
R06C	**Coleville**	**35.74**	**319**	⇓P	**P**	**13 25 46.4**	**+0.6**
	baz=36						
K12A	**Draper Farm, C**	**35.86**	**329**	⇓P	**P**	**13 25 46.7**	**-0.1**
	baz=36						
M10A	**I.L. Ranch, Tu**	**35.94**	**326**	P	**P**	**13 25 48.2**	**+0.8**
	baz=36,SNR=5.9						
CMB	**Columbia Colle**	**36.06**	**318**	*e*P	**P**	**13 25 47.1**	**-1.4**
	5.3nm,1.0s,mb4.4						
CMB	**Columbia Colle**	**36.06**	**318**	⇑P	**P**	**13 25 48.1**	**-0.4**
	baz=36,SNR=7.2						
J13A	**Cove Ranch, Pi**	**36.06**	**330**	⇑P	**P**	**13 25 48.3**	**-0.2**
	baz=36						
L10A	**Juniper Basin**	**36.28**	**327**	⇑P	**P**	**13 25 50.3**	**-0.1**
	baz=36						
HLID	**Hailey**	**36.30**	**330**	*e*P	**P**	**13 25 50.4**	**-0.2**
	4.7nm,1.3s,mb4.3						
J12A	**Stokes Ranch,**	**36.41**	**329**	⇑P	**P**	**13 25 51.2**	**-0.2**
	baz=37						
I13A	**Wildhorse Cree**	**36.42**	**331**	P	**P**	**13 25 51.9**	**+0.4**
	baz=37,SNR=6.7						
K11A	**Parker Ranch,**	**36.54**	**328**	⇑P	**P**	**13 25 52.5**	**-0.1**
	baz=37						
R04C	**Big Horse Ranc**	**36.54**	**318**	P	**P**	**13 25 53.5**	**+0.8**
	baz=37,SNR=5.1						
MCMT	**McKenzie Canyo**	**36.55**	**333**	*e*P	**P**	**13 25 52.5**	**0.0**
G15A	**Dillon**	**36.66**	**334**	⇑P	**P**	**13 25 54.5**	**+1.0**
	baz=37,SNR=5.7						
BOZ	**Bozeman (W)**	**36.68**	**335**	⇑P	**P**	**13 25 53.9**	**+0.2**
	baz=37						
LAVA	**Lava Cap Winer**	**36.69**	**319**	⇓P	**P**	**13 25 53.7**	**-0.3**
	baz=37						
ULM	**Lac du Bonnet**	**36.88**	**354**	P	**P**	**13 25 53.6**	**-1.7**
	11nm,0.8s,mb4.9,baz=173,slow=8.9,SNR=30						
ULM				LR	LR	13 44 47.0	
	comp=Z,147nm,19.4s,baz=176,slow=42						
L09A	**Wilkinson Ranc**	**36.89**	**325**	⇓P	**P**	**13 25 56.3**	**+0.7**
	baz=37						
P05C	**Yuba Gap, Truc**	**36.93**	**320**	⇑P	**P**	**13 25 56.4**	**+0.5**
	baz=37						
O06A	**Flanigan**	**36.96**	**321**	⇑P	**P**	**13 25 56.4**	**+0.2**
	baz=37						
LPAZ	**La Paz**	**36.96**	**143**	P	**P**	**13 25 55.6**	**-0.8**
	1.0nm,0.9s,mb3.7,baz=346,slow=8.3,SNR=3.6						
LPAZ				LR	LR	13 40 04.6	
	comp=Z,75nm,21.8s,baz=4.9,slow=35						
H13A	**Challis**	**36.98**	**331**	⇓P	**P**	**13 25 56.3**	**+0.1**
	baz=37,SNR=11						
BEKR	**Beckwourth**	**37.10**	**321**	⇓P	**P**	**13 25 57.9**	**+0.5**
	baz=37,SNR=5.7						
G14A	**Jackson**	**37.14**	**333**	⇑P	**P**	**13 25 57.8**	**+0.2**
	baz=37						
LRM	**Limekiln Ridge**	**37.16**	**334**	*e*P	**P**	**13 25 58.0**	**+0.2**
F15A	**Butte**	**37.19**	**334**	⇑P	**P**	**13 25 58.1**	**+0.1**
	baz=37						

H12A	Diamond D Ranc	37.25	331	⇑P	P	13 25 58.9	+0.3
	baz=37,SNR=7.6						
N06A	Buffalo Meadow	37.32	322	⇑P	P	13 25 59.4	+0.2
	baz=38,SNR=5.6						
G13A	Cobalt	37.37	332	⇓P	P	13 25 59.6	0.0
	baz=38						
L08A	Fields	37.38	325	P	P	13 25 59.7	0.0
	baz=38,SNR=6.4						
K09A	Rome	37.38	326	P	P	13 26 00.0	+0.3
	baz=38,SNR=11						
OHCM	Honcut	37.50	319	*e*P	P	13 26 00.5	-0.3
O05C	Quincy	37.51	320	⇓P	P	13 26 01.5	+0.7
	baz=38						
F14A	Wisdom	37.55	334	⇑P	P	13 26 01.2	+0.1
	baz=38						
SUTB	Sutter Butte	37.63	319	⇑P	P	13 26 02.0	+0.1
	baz=38						
ORV	Oroville	37.64	319	⇓P	P	13 26 01.4	-0.4
	baz=38						
E15A	Deer Lodge	37.72	335	⇑P	P	13 26 02.3	-0.2
	baz=38						
K08A	Mann Creek Ran	37.82	326	⇓P	P	13 26 03.6	+0.3
	baz=38,SNR=7.9						
O04C	Chester	37.82	321	⇑P	P	13 26 03.4	0.0
	baz=38						
L07A	Adell	37.83	324	⇑P	P	13 26 03.5	0.0
	baz=38,SNR=8.4						
J09A	Fry Pan Ranch,	37.84	327	⇓P	P	13 26 03.9	+0.3
	baz=38,SNR=12						
I10A	Payette	37.87	329	⇓P	P	13 26 03.7	0.0
	baz=38						
H11A	Donnelly	37.92	330	P	P	13 26 03.9	-0.3
	baz=38,SNR=7.8						
F13A	Darby	37.95	333	⇑P	P	13 26 04.1	-0.3
	baz=38,SNR=6.5						
M06C	Likely Place G	37.98	322	⇑P	P	13 26 04.0	-0.8
	baz=38						
E14A	Clinton	38.07	334	⇓P	P	13 26 05.5	+0.1
	baz=38						
D15A	Lincoln	38.17	335	⇑P	P	13 26 06.1	-0.2
	baz=38						
H10A	Noah's Angus R	38.20	329	⇓P	P	13 26 05.2	-1.4
	baz=38						
K07A	Rock Creek Ran	38.22	325	⇑P	P	13 26 06.9	+0.2
	baz=38,SNR=6.0						
J08A	Circle Bar Ran	38.23	326	P	P	13 26 06.8	0.0
	baz=38,SNR=12						
I09A	Lost Marbles R	38.27	328	⇑P	P	13 26 07.0	-0.1
	baz=38,SNR=11						
MOD	Modoc	38.31	323	⇑P	P	13 26 07.4	-0.2
	baz=38						
HATC	Hat Creek Radi	38.34	321	⇑P	P	13 26 07.6	-0.2
	baz=38						
F12A	Elk City	38.34	332	⇑P	P	13 26 07.2	-0.5
	baz=38,SNR=18						
E13A	Victor	38.39	333	⇓P	P	13 26 07.7	-0.5
	baz=39,SNR=7.9						
GASB	Alder Springs	38.47	319	⇑P	P	13 26 07.8	-1.1
	baz=39						
G11A	Walters Elk Ra	38.55	331	⇓P	P	13 26 08.6	-0.9
	baz=39,SNR=14						
D14A	Greenough	38.60	335	⇑P	P	13 26 09.1	-0.8
	baz=39						
H09A	Durkee	38.71	329	⇑P	P	13 26 10.6	-0.2
	baz=39						
O02C	Red Bluff	38.80	319	⇓P	P	13 26 10.2	-1.5
	baz=39						
D13A	Huson	39.02	334	⇑P	P	13 26 12.8	-0.5
	baz=39,SNR=5.2						
M03C	McCloud	39.02	321	⇑P	P	13 26 12.5	-1.0
	baz=39						
G09A	Cove	39.20	329	⇑P	P	13 26 13.5	-1.5
	baz=39						
E11A	Bogner Ranch,	39.23	332	⇓P	P	13 26 13.9	-1.3
	baz=39,SNR=7.7						
C14A	Swan Lake	39.25	335	⇑P	P	13 26 14.7	-0.6
	baz=39						
I07A	Izee	39.27	326	⇑P	P	13 26 14.0	-1.5
	baz=39						
D12A	Red Ives Fores	39.37	333	⇓P	P	13 26 15.5	-0.8
	baz=40						
F10A	Beach Ranch, E	39.43	330	⇓P	P	13 26 16.2	-0.6
	baz=40,SNR=12						
N02C	Big Bar	39.49	320	⇑P	P	13 26 15.6	-1.8
	baz=40						
C13A	Hot Springs	39.52	334	⇓P	P	13 26 16.6	-1.0
	baz=40						
H07A	Lands Inn, Kim	39.65	327	⇓P	P	13 26 17.9	-0.8
	baz=40						
E10A	Myers Farm, Un	39.75	331	⇓P	P	13 26 18.1	-1.4
	baz=40						
B13A	Whitefish	40.02	335	⇓P	P	13 26 21.2	-0.5
	baz=40						
F08A	Pendleton	40.07	329	⇑P	P	13 26 21.5	-0.6
	baz=40						
G07A	Ruggs Ranch, H	40.16	328	⇑P	P	13 26 21.9	-1.0
	baz=40						
D10A	Wagner Farm, O	40.24	332	⇓P	P	13 26 22.0	-1.5
	baz=40						
A13A	Flathead Natio	40.45	336	⇓P	P	13 26 24.8	-0.3
	baz=41						
B12A	Libby	40.57	334	⇓P	P	13 26 26.4	+0.3
	baz=41						
D09A	Jones Farm, Ri	40.74	331	⇓P	P	13 26 27.3	-0.3
	baz=41						
C10A	Spilker Farm,	40.83	332	⇓P	P	13 26 28.3	0.0
	baz=41						
B11A	Sandpoint	40.87	334	⇑P	P	13 26 28.8	+0.1
	baz=41						
A12A	Yaak River Ran	40.95	335	⇑P	P	13 26 29.4	+0.1
	baz=41						
G05A	Wamic	41.01	327	⇓P	P	13 26 30.4	+0.5
	baz=41						
D08A	Wollman Farm,	41.03	330	⇑P	P	13 26 29.4	-0.6
	baz=41						
F06A	Goldendale	41.07	327	⇑P	P	13 26 30.6	+0.2
	baz=41,SNR=5.1						
NEW	Newport	41.07	333	*e*P	P	13 26 29.2	-1.2
	1.1nm,0.6s,mb3.9						
H04A	Detroit Lake	41.13	325	⇓P	P	13 26 30.5	-0.3
	baz=41						
HOOD	Mount Hood Mea	41.24	326	*e*P	P	13 26 32.7	+0.9
C09A	Chrisman Ranch	41.25	332	⇑P	P	13 26 31.8	-0.1
	baz=41,SNR=5.8						
A11A	Hall Mountain,	41.27	334	⇓P	P	13 26 32.0	+0.1
	baz=42,SNR=6.6						
SIV	San Ignacio	41.31	134	P	P	13 26 31.2	-1.4
	3.5nm,0.9s,mb4.2,baz=320,slow=12,SNR=8.1						
C08A	Higginbotham F	41.60	331	⇓P	P	13 26 34.3	-0.4
	baz=42,SNR=7.3						
D07A	Quincy	41.63	330	⇑P	P	13 26 34.5	-0.4
	baz=42						
B09A	Rice	41.65	332	⇑P	P	13 26 34.4	-0.7
	baz=42						
E06A	Yakima	41.70	328	⇓P	P	13 26 35.1	-0.4
	baz=42						
C07A	Waterville	42.02	330	⇑P	P	13 26 38.3	+0.1
	baz=42						
B08A	Colville Reser	42.15	331	⇑P	P	13 26 38.3	-0.8
	baz=42						
A09A	Danville	42.25	333	⇑P	P	13 26 39.5	-0.5
	baz=42,SNR=5.5						
A08A	Turner Farm, O	42.55	332	⇓P	P	13 26 41.6	-0.8
	baz=43						
A07A	Ashnola River,	43.13	331	⇑P	P	13 26 47.3	+0.2
	baz=43						
SCHQ	Schefferville	45.17	19	P	P	13 27 02.4	-0.9
SCHQ				LR	LR	13 47 22.2	
SCHQ	Schefferville	45.17	19	P	P	13 27 02.4	-0.9
	11nm,0.9s,mb4.5,baz=221,slow=5.5,SNR=26						
SCHQ				LR	LR	13 47 22.2	
	comp=Z,304nm,18.1s,baz=347,slow=38						
FCC	Fort Churchill	45.23	357	*e*P	P	13 27 02.5	-1.3
	4.7nm,1.0s,mb4.2						
YKA	Yellowknife Ar	51.83	346	P	P	13 27 52.6	-1.6
YKA				PcP	PcP	13 29 05.8	-0.4
YKA				ScP	ScP	13 33 06.0	+10
YKA				LR	LR	13 54 44.8	
YKA	Yellowknife Ar	51.83	346	P	P	13 27 52.6	-1.6
	1.3nm,0.7s,mb4.1,baz=145,slow=7.7,SNR=24						
YKA				PcP	PcP	13 29 05.8	-0.4
	0.2nm,0.6s,baz=151,slow=4.0,SNR=2.7						
YKA				ScP	ScP	13 33 05.9	+10
	0.3nm,0.9s,baz=148,slow=3.4,SNR=3.7						
YKA				LR	LR	13 54 44.7	
	comp=Z,92nm,18.1s,baz=155,slow=42						
DLBC	Dease Lake	53.69	335	*e*P	P	13 28 07.6	-0.5
RKT	Rikitea	56.76	230	*e*LR	LR	13 44 51.0	
	139nm,36.0s						
RKT	Rikitea	56.76	230	*e*T		14 28 54.3	
	3.5nm,0.3s						
RES	Resolute Bay	61.20	359	*e*P	P	13 28 59.0	-1.6
	132nm,0.5s						
INK	Inuvik	61.31	343	*e*P	P	13 29 00.4	-1.1
	38nm,0.5s						
PPT	Papeete	65.98	244	*e*LR	LR	13 49 00.4	
	102nm,25.0s						
PPT	Papeete	65.98	244	P	P	13 29 35.8	+2.7
	35nm,0.6s,mb5.4,baz=318,slow=3.5,SNR=4.0						
PPT				LR	LR	13 50 39.7	
	comp=Z,116nm,18.6s,baz=69,slow=29						
TBI	Tubuai	68.33	238	*e*LR	LR	13 50 08.2	
	98nm,25.5s						
ESDC	Sonseca Array	78.86	52	P	P	13 30 48.5	-0.9
	0.1nm,0.3s,baz=293,slow=6.6,SNR=4.1						
TIC	Toumodi	84.09	85	*e*P	P	13 31 17.9	+0.4
	7.1nm,0.8s,mb4.5						
LIC	Lamto	84.18	85	*e*P	P	13 31 17.5	-0.4
	36nm,0.9s,mb5.2						
DBIC	Dimbokro	84.24	85	P	P	13 31 18.5	+0.3
	5.3nm,0.6s,mb4.5,baz=273,slow=5.7,SNR=12						
KIC	Kosan Boka	84.42	85	*e*P	P	13 31 19.8	+0.6
	61nm,0.8s,mb5.5						
ARCES	ARCESS Array B	86.12	18	P	P	13 31 25.8	-0.7
	1.5nm,0.9s,mb3.9,baz=316,slow=5.0,SNR=4.2						
CLL	Collm	87.80	38	*e*P	P	13 31 35.0	0.0
GERES	GERESS Array B	89.03	40	P	P	13 31 41.4	+0.5
	0.8nm,0.9s,mb3.7,baz=251,slow=6.5,SNR=4.3						
BOSA	Boshof	118.83	115	PKP	PKPdf	13 37 36.4	+1.9
	1.4nm,0.8s,baz=315,slow=2.9,SNR=3.1						
MKAR	Makanchi Array	119.61	6	PKP	PKPdf	13 37 35.4	-0.1
	0.3nm,0.8s,baz=339,slow=3.6,SNR=3.5						
WRA	Warramunga Arr	136.69	255	PKP	PKPdf	13 38 08.5	-0.2
	0.6nm,0.8s,baz=90,slow=2.6,SNR=3.0						
ASAR	Alice Springs	136.88	250	PKP	PKPdf	13 38 15.1	+6.2
	0.4nm,0.6s,baz=88,slow=2.1,SNR=5.5						
FITZ	Fitzroy Crossi	144.98	258	PKPbc	PKPdf	13 38 28.9	+5.3
	4.6nm,1.2s,baz=225,slow=4.3,SNR=7.4						
CHTO	Chiang Mai	146.55	344	*e*PKPbc	PKPbc	13 38 27.3	-0.5
HYB	Hyderabad	147.41	20	*e*P	PKPdf	13 38 30.5	+2.7
HYB	Hyderabad	147.41	20	*i* PKP	PKPdf	13 38 30.5	+2.7

*IDC **10** 13:25:45.4±0.7, 29.33N×81.33E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.2/23, mbtmp4.1/15, ML4.0/1, Error ellipse: s-maj=23.0km s-min=16.1km az=52.0*
*ISCJB **10** 13:25:45.6±0.2, 29.39N±0.02×81.26E±0.02, h10km, mb4.3/35, Error ellipse: s-maj=3.8km s-min=2.5km az=26.9*
*BJI **10** 13:25:46.5, 29.37N×81.05E, h31km, mb4.0*
*NEIC **10** 13:25:47.2±2.6, 29.44N×81.14E, h6km±17km, mb4.6/16, Error ellipse: s-maj=9.8km s-min=5.0km az=51.0*
*LDG **10** 13:25:48.1±0.1, 29.37N×81.25E, h33km, Mb4.6/10, Error ellipse: s-maj=8.8km s-min=3.5km az=22.0*
*MOS **10** 13:25:49.2±0.9, 29.49N×81.24E, h33km, mb4.7/17, Error ellipse: s-maj=11.6km s-min=6.1km az=114.5*
*NDI **10** 13:25:49.9±3.3, 29.32N×81.27E, h10km, mb4.6, mb4.6(NEIC)*
*DMN **10** 13:25:50.3±0.7, 29.48N×81.74E, h10km, Ml4.8/7, Error ellipse: s-maj=61.5km s-min=12.5km az=26.0*
ISC 10 13:25:47.9±0.2, **29.43N**±0.02×**81.29E**±0.02, **h10**km, **n139**, σ**1§19**/174, **mb4.3**/35, **3C-6D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGTI	Lohaghat	0.91	272	*e*P	Pg	13 26 08.2	+2.7
LGTI				*e*S	Sg	13 26 23.8	+6.5
JOSI	Joshimath	1.88	307	*e*P	Pg	13 26 24.5	+0.5
JOSI				*e*P	Pg	13 26 24.9	+1.0
JOSI				*e*S	Sg	13 26 49.2	+0.9
KOLN	Koldanda	2.62	129	*e*Pn	Pg	13 26 41.5	+3.4
KOLN				*e*Sn	Sg	13 27 19.1	+7.1
DDI	Dehra Dun	2.95	288	*e*P	Pn	13 26 36.6	+1.8
DDI				*e*S	Sn	13 27 11.0	+0.8
GKN	Gorkha	3.26	115	*e*Pn	Pn	13 26 41.5	+2.4
GKN				*e*Sn	Sn	13 27 19.1	+1.1
	2µm,0.3s						
GKN	Gorkha	3.26	115	*e*Pn	Pn	13 26 41.6	+2.5
GKN				*e*Sn	Sn	13 27 19.1	+1.1
	512nm,0.2s						
GKN	Gorkha	3.26	115	*e*Pn	Pn	13 26 41.6	+2.5
GKN				*e*Sn	Sn	13 27 19.1	+1.1
NDI	New Delhi	3.64	259	*e*P	Pn	13 26 46.2	+1.8
NDI				*e*S	Sn	13 27 27.4	0.0
AGRA	Agra	3.67	234	*e*P	Pn	13 26 37.4	-7.4
AGRA				*e*S	Sn	13 27 20.2	-8.0
AYAN	Aya Nagar	3.77	257	*e*x	x	13 26 40.9	
KKN	Kakani	3.87	114	*e*Pn	Pn	13 26 49.5	+2.1
KKN				*e*Sn	Sn	13 27 33.8	+0.9
	538nm,0.4s						
KKN	Kakani	3.87	114	*e*Pn	Pn	13 26 50.1	+2.7
KKN				*e*Sn	Sn	13 27 33.8	+0.9
	769nm,0.6s						
KKN	Kakani	3.87	114	*e*P	Pn	13 26 50.1	+2.7
SONA	Sohna	3.87	253	*e*P	Pn	13 26 49.6	+2.1
SONA				*e*x	x	13 27 48.1	
SMLA	Simla	3.95	296	*e*P	Pn	13 26 50.9	+2.4
SMLA				*e*S	Sn	13 27 36.9	+2.0
SDNR	Sundarnagar	4.26	300	*e*P	Pn	13 26 56.0	+3.1
SDNR				*e*x	x	13 28 04.0	
KUDL	Kundal	4.40	254	*e*P	Pn	13 26 58.6	+3.8
KUDL				*e*S	Sn	13 27 43.3	-2.9
JIRN	Jiri	4.66	111	*e*Pn	Pn	13 27 00.5	+2.2
JIRN				*e*Sn	Sn	13 27 52.6	+0.2
	352nm,0.2s						
KHET	Khetri	5.00	256	*e*P	Pn	13 27 03.2	+0.2
KHET				*e*S	Sn	13 28 00.0	-0.8
DLH	Dalhousie	5.53	306	*e*P	Pn	13 27 11.0	+0.8
DLH				*e*S	Sn	13 28 14.0	+0.2
THN	Thein Dam	5.65	303	*e*P	Pn	13 27 13.5	+1.6
THN				*e*S	Sn	13 28 16.9	+0.1
ODAN	Odare	5.96	114	*e*Pn	Pn	13 27 18.1	+1.9
ODAN				*e*Sn	Sn	13 28 24.7	+0.1
	312nm,0.3s						
TAPN	Taplejung	6.02	109	*e*Pn	Pn	13 27 18.9	+1.9
TAPN				*e*Sn	Sn	13 28 26.3	+0.2
	180nm,0.5s						
TAPN				*e*		13 31 35.3	
JBP	Jabalpur	6.34	191	⇓*i*P	Pn	13 27 26.5	+5.0
JBP				*i* S	Sn	13 28 33.5	-0.6
AJM	Ajmer	6.57	245	*e*P	Pn	13 27 26.0	+1.4
AJM				*e*S	Sn	13 28 35.8	-3.8
GTK	Gangtok	6.78	106	*e*P	Pn	13 27 31.3	+3.8
BOK	Bokaro	6.96	143	*e*P	Pn	13 27 30.5	+0.6
BOK				*e*S	Sn	13 28 45.0	-4.1
BHPL	Bhopal	7.07	210	*i* P	Pn	13 27 30.9	-0.5
BHPL				*e*P		13 27 31.5	
BHPL				*e*S	Sn	13 28 45.9	-6.0
BLSP	Bilaspur	7.31	174	*e*P	Pn	13 27 34.4	-0.3
CHCP	Chirah Chowk	8.04	304	P	Pn	13 27 45.7	+0.9
NGP	Nagpur	8.49	194	*e*P	Pn	13 27 50.0	-0.9
NGP				*e*S	Sn	13 29 19.5	-7.3
LSA	Lhasa	8.59	86	P	Pn	13 27 55.3	+3.0
LSA				S	Sn	13 29 27.3	-2.0
LSA	Lhasa	8.59	86	*e*Pn	Pn	13 27 55.3	+3.0
	7.8nm,0.4s						
LSA				*e*Sn	Sn	13 29 30.2	+0.9
LSA	Lhasa	8.59	86	*e*P	Pn	13 27 55.3	+3.0
LSA				*e*		13 29 30.2	
LSA				pmax	pmax		
	comp=Z,8.0nm,0.4s						
THW	Thamme Wali	8.85	295	P	Pn	13 27 56.2	+0.4
CEP	Cherat	9.12	301	P	Pn	13 27 59.7	+0.1
CEP				S	Sn	13 29 37.0	-5.3
SBDP	Sheikh Budin	9.45	290	P	Pn	13 28 04.2	+0.1
AKL	Akola	9.51	205	*e*P	Pn	13 28 06.2	+1.2
AKL				*i* S	Sn	13 29 43.1	-8.9
SHL	Shillong	10.16	110	*e*P	Pn	13 28 13.0	-0.8
SHL				*e*S	Sn	13 30 00.0	-7.9
BHV	Bhavnagar	11.25	229	*e*P	Pn	13 28 28.0	-0.7
VIS	Vishakhapatnam	11.80	170	*e*P	Pn	13 28 34.3	-2.0
VIS				*e*S	Sn	13 30 38.5	-10
HYB	Hyderabad	12.21	192	*e*P	Pn	13 28 40.5	-1.5
	comp=Z,50nm,1.0s						
HYB				*e*S	Sn	13 30 51.0	-7.3
HYB	Hyderabad	12.21	192	*e*P	Pn	13 28 40.5	-1.5
HYB				pmax	pmax		
	comp=Z,50nm,1.0s						
HYB	Hyderabad	12.21	192	*i* P	Pn	13 28 40.5	-1.5
	comp=Z,50nm,1.0s						
HYB				*e*S	Sn	13 30 51.0	-7.3
POO	Poona	12.80	214	*e*P	Pn	13 28 50.0	0.0
KAD	Karad	13.71	210	*e*P	Pn	13 29 00.8	-1.7
KAD				AMb	AMB	13 29 04.1	
	comp=Z,18nm,1.5s						
KAD				*e*x	x	13 31 20.0	
AML	Almayashu	14.09	336	*e*Pn	Pn	13 29 04.2	-3.2
	comp=Z,4.3nm,0.6s						
TKM2	Tokmak 2	14.22	343	*e*Pn	Pn	13 29 09.5	+0.2
TKM2				*e*P		13 29 18.1	
AAK	Ala-Archa	14.27	339	*e*Pn	Pn	13 29 08.9	-1.0
AAK	Ala-Archa	14.27	339	⇑*e*P	Pn	13 29 09.3	-0.7
EKS2	Erkin-Say	14.53	337	*e*Pn	Pn	13 29 12.2	-1.3
	comp=Z,6.5nm,0.8s						
KK31	Karatay Array	16.16	331	*i* P	Pn	13 29 31.5	-3.6
KK31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
MK31	Makanchi Array	17.36	2	*e*P	Pn	13 29 51.0	+0.8
MK31				*e*Sn	Sn	13 32 53.6	-10
MKAR	Makanchi Array	17.36	2	Pn	Pn	13 29 47.7	-2.4
MKAR				Sn	Sn	13 32 55.8	-7.5
MKAR	Makanchi Array	17.36	2	Pn	Pn	13 29 47.7	-2.4
	comp=Z,0.5nm,0.3s,baz=177,slow=12,SNR=15						
MKAR				Sn	Sn	13 32 55.8	-7.5
	comp=Z,0.1nm,0.3s,baz=182,slow=22,SNR=3.8						
GTA	Gaotai	18.21	52	*e*P	Pn	13 30 03.7	+2.9
GTA				AP	pP	13 30 13.2	+9.4
GTA				XP	sP	13 30 17.1	+12
GTA				AMB	AMB		
	comp=Z,2.0nm,0.5s						
KURK	Kurchatov	21.36	355	*e*P	P	13 30 33.7	-1.5
	comp=Z,5.0nm,0.6s,mb4.0						
KURK	Kurchatov	21.36	355	*e*P	P	13 30 33.7	-1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
XAN	Xi'an	23.91	72	P	P	13 31 01.1	-0.9
XAN				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb4.0						
ZAL	Zalesovo	24.62	5	P	P	13 31 07.5	-0.7
ZALV	Zalesovo Beam	24.64	5	P	P	13 31 07.5	-0.8
	comp=Z,9.0nm,0.5s,mb4.5,baz=193,slow=9.4,SNR=71						
BRVK	Borovoye	24.96	344	*e*P	P	13 31 11.1	-0.2
	comp=Z,3.0nm,0.9s,mb3.8						
BRVK	Borovoye	24.96	344	*e*P	P	13 31 11.1	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
NVS	Novosibirsk	25.43	3	*i* P	P	13 31 13.2	-2.4
NVS				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.1						
NVS				pmax	pmax		
	comp=E,6.0nm,1.5s						
SONM	Songino Array	26.69	40	P	P	13 31 28.0	+0.9
	comp=E,1.0nm,0.4s,mb3.7,baz=232,slow=9.3,SNR=17						
SONM				PcP	PcP	13 34 49.6	-0.9
	comp=E,0.5nm,0.6s,baz=207,slow=3.4,SNR=4.4						
ZAK	Zakamensk	26.70	32	*e*P	P	13 31 27.0	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
ULN	Ulaanbaatar	27.07	40	*i* P	P	13 31 31.2	+0.7
AKTK	Aktyubinsk	27.34	327	P	P	13 31 33.0	+0.2
AKTO	Aktyubinsk	27.34	327	P	P	13 31 33.0	+0.2
	comp=Z,1.0nm,0.4s,mb3.7,baz=118,slow=13,SNR=5.1						
ARU	Arti	31.41	336	*e*P	P	13 32 09.1	+0.2
	comp=Z,3.0nm,0.5s,mb4.4						
ARU	Arti	31.41	336	*d i*P	P	13 32 08.9	0.0
ARU				*e*		13 33 06.2	
ARU				*e*S	S	13 37 14.5	-1.8
ARU				SS	SS	13 38 59.7	-31
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.3						
KIV	Kislovodsk	33.85	306	*e*P	P	13 32 32.8	+2.3
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
AKASG	Malin Array Be	44.09	314	P	P	13 33 55.7	-0.4
AKASG	Malin Array Be	44.09	314	*i* P	P	13 33 55.7	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	44.09	314	P	P	13 33 55.7	-0.4
	comp=Z,2.5nm,0.5s,mb4.2,baz=82,slow=7.2,SNR=11						
JOF	Joensuu	46.26	331	*e*p	P	13 34 12.9	-0.2
	comp=Z,10nm,0.3s,mb5.2						
BURAR	Bucovina Array	46.42	309	⇓*i*P	P	13 34 15.5	+0.9
FINES	FINESS Array B	48.10	328	P	P	13 34 27.7	+0.2
FINES	FINESS Array B	48.10	328	*i* P	P	13 34 28.0	+0.5
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	FINESS Array B	48.10	328	P	P	13 34 27.7	+0.2
	comp=Z,4.2nm,0.6s,mb4.7,baz=110,slow=9.4,SNR=25						
DRGR		48.12	308	⇓*i*P	P	13 34 28.7	+0.9
KAF	Kangasniemi	48.18	329	*e*p	P	13 34 27.5	-0.6
	comp=Z,8.9nm,0.9s,mb4.8,baz=106,slow=7.6						
KAF	Kangasniemi	48.18	329	*e*P	P	13 34 27.5	-0.6
KAF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
BZS	Buzias	48.90	306	⇓*i*P	P	13 34 35.2	+1.3
TIXI	Tiksi	49.45	18	*i* P	P	13 34 36.7	-1.1
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb4.3						
KEV	Kevo	50.54	339	*e*p	P	13 34 45.0	-1.0
	comp=Z,3.4nm,0.5s,mb4.5						
KEV	Kevo	50.54	339	*e*P	P	13 34 45.0	-1.0
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ARCES	ARCESS Array B	50.94	338	P	P	13 34 49.0	-0.1
	comp=Z,2.7nm,0.6s,mb4.4,baz=103,slow=8.1,SNR=26						
MORC	Moravsky Berou	51.51	312	*e*P	P	13 34 54.1	+0.5
	comp=Z,3.0nm,0.8s,mb4.3						
MORC	Moravsky Berou	51.51	312	*e*P	P	13 34 54.1	+0.4
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MORC	Moravsky Berou	51.51	312	⇓*i*P	P	13 34 54.2	+0.5
BRG	Berggiesshubel	53.77	314	⇑*i*P	P	13 35 10.7	+0.4
BRG				*e*		13 35 16.5	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BRG	Berggiesshubel	53.77	314	⇑*i*P	P	13 35 10.7	+0.4
	comp=Z,5.5nm,0.8s,mb4.5						
BRG				*e*		13 35 16.5	
	comp=Z,8.7nm,1.3s						
GERES	GERESS Array B	54.08	311	P	P	13 35 13.0	+0.4
	comp=Z,1.0nm,0.5s,mb4.0,baz=87,slow=6.4,SNR=10						
NB2	NORSAR Subarra	55.13	326	P	P	13 35 19.2	-0.9
	comp=Z,2.0nm,0.6s,mb4.3,baz=90,slow=7.4						
NB2	NORSAR Subarra	55.13	326	P	P	13 35 19.2	-0.9
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NOA	NORSAR Array B	55.13	326	P	P	13 35 19.7	-0.4
NOA	NORSAR Array B	55.13	326	P	P	13 35 19.7	-0.4
	comp=Z,2.9nm,0.7s,mb4.4,baz=91,slow=7.3,SNR=8.2						
HINF	Hinteralfeld	58.74	311	*e*P	P	13 35 45.0	-0.9
	comp=Z,3.8nm,0.5s,mb4.4						
HINF	Hinteralfeld	58.74	311	*e*P	P	13 35 45.0	-0.9
	comp=Z,1.9nm,0.5s,mb4.4						
HINF	Hinteralfeld	58.74	311	*e*P	P	13 35 45.0	-0.9
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
HAU	Haudompre	59.04	311	*e*P	P	13 35 47.1	-0.9
SBF	Sospel	59.14	306	*e*P	P	13 35 48.2	-0.5
LPG	La Plagne	59.27	308	*e*P	P	13 35 49.6	0.0
	comp=Z,15nm,0.6s,mb4.9						
LPG	La Plagne	59.27	308	*e*P	P	13 35 49.6	0.0
	comp=Z,7.7nm,0.6s,mb4.9						
LPG	La Plagne	59.27	308	*e*P	P	13 35 49.6	0.0
LPG				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
LPL	La Plagne	59.28	308	*e*P	P	13 35 49.6	0.0
	comp=Z,21nm,0.6s,mb5.1						
LPL	La Plagne	59.28	308	*e*P	P	13 35 49.6	0.0
	comp=Z,10nm,0.6s,mb5.0						
LPL	La Plagne	59.28	308	*e*P	P	13 35 49.6	0.0
LPL				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
MBDF	Montbardon	59.42	307	*e*P	P	13 35 49.5	-1.1
	comp=Z,11nm,0.6s,mb4.7						
MBDF	Montbardon	59.42	307	*e*P	P	13 35 49.5	-1.1
	comp=Z,5.5nm,0.6s,mb4.8						
MBDF	Montbardon	59.42	307	*e*P	P	13 35 49.5	-1.1
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
FRF	La Foret Royal	59.76	306	*e*P	P	13 35 52.2	-0.8
	comp=Z,23nm,0.8s,mb5.0						
FRF	La Foret Royal	59.76	306	*e*P	P	13 35 52.2	-0.8
	comp=Z,12nm,0.8s,mb5.0						
FRF	La Foret Royal	59.76	306	*e*P	P	13 35 52.2	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FRF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
MEZF	Maizieres J'vi	59.80	312	eP	P	13 35 52.4	-0.8
LMR	La Mourre	59.91	306	eP	P	13 35 53.3	-0.8
SMRF	Simiane la Rot	60.42	306	eP	P	13 35 56.9	-0.7
SMF	Signal de Mont	60.99	310	eP	P	13 36 00.4	-1.0
SSF	Saint Saulge	61.12	310	eP	P	13 36 01.1	-1.2
AVF	Avril sur Loir	61.29	310	eP	P	13 36 02.2	-1.2
TCF	Toulx Ste Croi	62.17	310	eP	P	13 36 08.7	-0.7
	comp=Z,4.1nm,0.5s,mb4.5						
TCF	Toulx Ste Croi	62.17	310	eP	P	13 36 08.7	-0.7
	comp=Z,2.0nm,0.5s,mb4.5						
TCF	Toulx Ste Croi	62.17	310	eP	P	13 36 08.7	-0.7
TCF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
CAF	Calviac	62.62	308	eP	P	13 36 11.9	-0.5
LFF	La Frestale	63.52	308	eP	P	13 36 17.8	-0.6
	comp=Z,9.8nm,0.5s,mb4.8						
LFF	La Frestale	63.52	308	eP	P	13 36 17.8	-0.6
	comp=Z,4.9nm,0.5s,mb4.8						
LFF	La Frestale	63.52	308	eP	P	13 36 17.8	-0.6
LFF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
SGMF	Saint Gilles	64.78	313	eP	P	13 36 28.3	+1.7
ETSF	Etsaut	65.01	307	eP	P	13 36 27.8	-0.4
	comp=Z,17nm,0.9s,mb4.8						
ETSF	Etsaut	65.01	307	eP	P	13 36 27.8	-0.4
	comp=Z,8.4nm,0.9s,mb4.8						
ETSF	Etsaut	65.01	307	eP	P	13 36 27.8	-0.4
ETSF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
ESDC	Sonseca Array	68.50	304	P	P	13 36 50.6	+0.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=63,slow=6.5,SNR=6.7						
WRA	Warramunga Arr	70.87	127	P	P	13 37 04.2	-1.1
	comp=Z,0.5nm,0.5s,mb3.7,baz=320,slow=6.2,SNR=12						
ASAR	Alice Springs	73.11	130	P	P	13 37 17.2	-1.4
	comp=Z,0.5nm,0.5s,mb3.7,baz=316,slow=6.1,SNR=12						
TORD	Torodi Ar. Bea	74.70	277	P	P	13 37 27.4	-0.8
	comp=Z,1.4nm,0.7s,mb4.0,baz=62,slow=4.5,SNR=7.8						
BOSA	Boshof	78.72	228	P	P	13 37 50.0	-0.5
	comp=Z,2.0nm,0.7s,mb4.1,baz=63,slow=2.3,SNR=4.5						
YKA	Yellowknife Ar	87.52	7	P	P	13 38 33.8	-1.8
	comp=Z,0.4nm,0.7s,mb3.8,baz=339,slow=4.9,SNR=9.4						
TXAR	Lajitas Array	121.38	5	PKP	PKPdf	13 44 41.3	-0.5
	comp=Z,0.2nm,0.5s,baz=167,slow=1.0,SNR=4.9						

MAN 10 13:33:40,1416N×12133E,h7km,mb4.1,ML2.9,MS2.6, 2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LQP	Lukban	0.21	103⇑	eP	Pg	13 33 46.3	+2.1
TGY	Tagaytay City	0.38	261⇑	eP	Pg	13 33 48.5	+1.1
TGY				i S	Sg	13 33 54.1	+1.6
POLP	Polilio Island	0.82	46	eP	Pg	13 33 56.5	+0.8
POLP				eS	Sg	13 34 10.4	+4.0
LUBP	Lubang	1.13	248	eP	Pg	13 33 58.6	-3.1
BALP	Baler	1.59	9	eP	Pn	13 34 09.1	+0.6
OTRP	Odiongan	1.91	159	eP	Pn	13 34 13.7	+0.7
BOLP	Bolinao	2.60	328	eP	Pn	13 34 12.6	-10
CAUP	Cauayan	2.81	10	eP	Pn	13 34 26.9	+1.6

IDC 10 13:55:42.1±3.4,1398N×9031W,h0km,mb3.7/3, mb1 3.9/6,mb1mx3.7/18,mbtmp3.6/6,ML3.4/2,Error ellipse: s-maj=95.9km s-min=25.2km az=28.0,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	5.38	306	Pn	Pn	13 57 01.9	-1.8
	0.4nm,0.3s,baz=129,slow=13,SNR=3.7						
CMIG				Sn	Sn	13 58 05.6	-0.9
	0.6nm,0.3s,baz=117,slow=18,SNR=2.5						
TEIG	Tepich	6.51	17	Pn	Pn	13 57 31.7	+12
	1.6nm,0.3s,baz=190,slow=6.6,SNR=13						
TXAR	Lajitas Array	19.66	323	P	Pn	14 00 14.3	+0.4
	0.1nm,0.3s,baz=150,slow=12,SNR=9.9						
SDV	Santo Domingo	19.94	103	P	Pn	14 00 15.8	-1.6
	0.4nm,0.3s,baz=312,slow=9.2,SNR=3.4						
NVAR	Mina Array Bea	34.73	320	P	P	14 02 35.0	+1.0
	1.0nm,0.7s,baz=122,slow=9.0,SNR=8.7						
ULM	Lac du Bonnet	36.46	354	P	P	14 02 48.4	-0.3
	1.4nm,0.5s,baz=166,slow=11,SNR=6.9						
YKA	Yellowknife Ar	51.44	346	P	P	14 04 48.1	-0.6
	0.2nm,0.5s,baz=139,slow=8.2,SNR=4.1						

*ISCJB **10** 14:07:08.4±0.2,2290S±003×7004W±004,h31km, mb5.3/105,MS4.9/16,Error ellipse: s-maj=5.3km s-min=3.6km az=175.1*

*NEIC **10** 14:07:08.6,2329S×6971W,h50km,mb5.4/82,MW5.4, Moment Tensor Solution. s8 Moment tensor: Scale 10^{17} Nm; M_{rr}1.00; $M_{\theta\theta}$0.61; $M_{\phi\phi}$-1.60; $M_{r\theta}$0.31; $M_{\theta\phi}$0.34; $M_{\phi r}$-0.74; Best double couple: $M_0$1.60000×10^{17} NP1: ϕ_s12.00000°,δ33.00000°,λ121.00000°. NP2: ϕ_s157.00000°,δ62.00000°,λ72.00000°. Principal axes: T 1.2700, Plg67.0000°, Azm31.0000°; N 0.6000, Plg16.0000°, Azm166.0000°; P -1.8700, Plg15.0000°, Azm260.0000°; After GUC.*

NEIC Felt [IV] at Mejillones; [III] at Maria Elena and Tocopilla; [II] at Calama.

*GUC **10** 14:07:08.6±0.7,2329S×6971W,h50km,ML5.1, mb5.4(NEIC),MW5.4(NEIC)*

*GCMT **10** 14:07:08.6±0.2,2287S×7064W,h26km±1km,MW5.5/70, Moment Tensor Solution. s55,c81; s70,c104; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.78±.03; $M_{\theta\theta}$0.12±.02; $M_{\phi\phi}$-0.90±.03; $M_{r\theta}$0.53±.05; $M_{\theta\phi}$0.11±.02; $M_{\phi r}$-1.57±.08; Best double couple: $M_0$1.86200×10^{17} NP1:ϕ_s8.00000°,δ15.00000°,λ115.00000°. NP2: ϕ_s163.00000°,δ77.00000°,λ84.00000°. Principal axes: T 1.8140, Plg58.0000°, Azm64.0000°; N 0.0960, Plg6.0000°, Azm164.0000°; P -1.9100, Plg31.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **10** 14:07:09.7±1.1,2269S×7026W,h33km,mb5.5/33 Error ellipse: s-maj=22.3km s-min=7.0km az=105.9*

*IDC **10** 14:07:09.8±0.5,2289S×7014W,h31km±3km,mb4.6/18, mb1 4.7/21,mb1mx4.7/23,mbtmp4.6/21,ML4.1/4,MS4.7/16, Ms1 4.7/16,ms1mx4.6/23,Error ellipse: s-maj=19.3km s-min=12.1km az=70.0*

*BJI **10** 14:07:14.0,2330S×6970W,h50km,mB5.4,Ms5.4,Msz5.1*

ISC 10 14:07:10.6±0.1,2291S±002×7008W±004,h33km, h33km±.3km:pP-P,n558,σ0^{s}83/502,mb5.3/105,MS4.9/16, 74C-91D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	Los Morros	0.49	193⇓	iP	Pb	14 07 22.1	+1.1
CEN1				i S	Sb	14 07 31.7	+3.6
CEN1				AML	AML	14 07 34.7	
	comp=N,94µm,0.5s						
ANCH	Antofagasta	0.82	202⇓	iP	Pn	14 07 23.2	-2.8
ANCH				i S	Sn	14 07 34.2	-2.8
ANCH	Antofagasta	0.82	202⇓	iP	Pn	14 07 23.2	-2.8
ANCH				i S	Sn	14 07 34.2	-2.8
ANCH				AML	AML	14 07 36.8	
	comp=N,262µm,0.6s						
CDCH	Caldera	4.20	189⇓	eP	Pn	14 08 07.6	-4.8
CDCH				i S	Sn	14 08 52.0	-8.3
CPCH	Copiapo	4.43	183	eP	Pn	14 08 13.8	-1.9
CPCH				i S	Sn	14 09 01.1	-5.0
VACH	Vallenar	5.67	186	eP	Pn	14 08 26.1	-6.6
VACH				i S	Sn	14 09 31.4	-5.3
LCO	Las Campanas	6.10	185	ePn	Pn	14 08 35.8	-2.7
	comp=N,265nm,0.6s						
ARE	Arequipa	6.55	348⇓	iP	Pn	14 08 43.0	-1.8
ARE				eS	Sn	14 09 52.8	-5.6
LPAZ	La Paz	6.84	16	Pn	Pn	14 08 52.4	+3.6
	comp=N,8.5nm,0.3s,baz=208,slow=6.0,SNR=160						
LPAZ				LR	LR	14 11 48.8	
	comp=N,9µm,20.7s,baz=196,slow=41						
TLL	Tololo Astrono	7.25	185	eP	Pn	14 08 50.7	-3.7
TLL				i S	Sn	14 10 12.7	-2.9
CFAA	Coronel Fontan	8.81	170	Pn	Pn	14 09 14.9	-0.8
CFAA				Sn	Sn	14 10 56.2	+2.3
CFAA				LR	LR	14 13 02.4	
CFAA	Coronel Fontan	8.81	170	Pn	Pn	14 09 14.9	-0.8
	comp=N,0.1nm,0.3s,baz=341,slow=13,SNR=16						
CFAA				Sn	Sn	14 10 56.2	+2.3
	comp=N,0.6nm,0.3s,baz=340,slow=16,SNR=1.7						
CFAA				LR	LR	14 13 02.4	
	comp=N,1µm,18.8s,baz=336,slow=40						
PEL	Peldehue	10.21	183	eP	Pn	14 09 35.3	+0.4
FCH	Farellones	10.38	181	eP	Pn	14 09 43.7	+6.5
SIV	San Ignacio	10.93	53	Pn	Pn	14 09 45.6	+0.8
	comp=N,5.8nm,0.3s,baz=247,slow=13,SNR=90						
SIV				Sn	Sn	14 11 47.1	+1.0
	baz=266,slow=16,SNR=2.1						
NNA	Nana	12.63	328	ePn	Pn	14 10 06.6	-1.5
NNA	Nana	12.63	328	Pn	Pn	14 10 06.2	-1.9
	comp=N,1.9nm,0.3s,baz=149,slow=15,SNR=5.0						
NNA				Sn	Sn	14 12 18.2	-9.5
	comp=N,7.0nm,0.3s,baz=172,slow=15,SNR=5.4						
NNA				LR	LR	14 14 21.4	
	comp=N,3µm,21.1s,baz=156,slow=34						
TRQA	Tornquist	16.62	157	eP	Pn	14 11 03.8	+2.8
ATAH	Atahualpa	17.73	332	P	Pn	14 11 14.0	-1.1
	comp=N,0.5nm,0.3s,baz=148,slow=9.9,SNR=13						
PLCA	Paso Flores	17.77	181	eP	Pn	14 11 16.1	+0.6
	comp=N,116nm,1.6s						
PLCA	Paso Flores	17.77	181	eP	Pn	14 11 16.1	+0.7
PLCA				pmax	pmax		
	comp=Z,116nm,1.6s						
OTAV	Otavalo	24.41	339	eP	P	14 12 27.1	+0.8
	comp=Z,54nm,1.1s,mb4.9						
ROSC	El Rosal	27.91	351	eP	P	14 12 58.6	+0.8
ROSC	El Rosal	27.91	351	P	P	14 12 58.5	+0.6
	comp=Z,4.5nm,0.4s,mb4.5,baz=109,slow=22,SNR=5.9						
ROSC				LR	LR	14 24 53.8	
	comp=Z,1µm,20.7s,MS4.5,baz=24,slow=38						
SDV	Santo Domingo	31.61	359	eP	P	14 13 29.0	-1.6
	comp=Z,13nm,0.8s,mb4.8						
SDV	Santo Domingo	31.61	359	P	P	14 13 28.7	-1.9
	comp=Z,8.6nm,1.0s,mb4.5,baz=258,slow=9.2,SNR=4.8						
USHA	Ushuaia	31.90	178	P	P	14 13 31.1	-1.7
	comp=Z,4.3nm,0.7s,mb4.4,baz=331,slow=8.0,SNR=4.5						
PCRV	Puerto La Cruz	33.31	10	P	P	14 13 43.8	-1.8
	comp=Z,7.2nm,0.6s,mb4.8,baz=263,slow=8.1,SNR=2.9						
RPN	Rapa Nui	35.72	255	LR	LR	14 24 23.8	
	comp=Z,2µm,20.8s,MS5.0,baz=121,slow=29						
JTS	JuntasAbangare	36.07	335	eP	P	14 14 09.0	-0.4
	comp=Z,53nm,1.6s,mb5.2						
JTS	JuntasAbangare	36.07	335	eP	P	14 14 09.0	-0.4
JTS				pmax	pmax		
	comp=Z,53nm,1.6s						
RCBR	Riachuelo	37.06	68	eP	P	14 14 19.3	+1.3
	comp=Z,81nm,1.0s,mb5.5						
RCBR				e		14 14 32.4	
TGUH	Tegucigalpa,Un	40.42	334	eP	P	14 14 45.5	-0.5
TGUH				epP	pP	14 14 53.7	-1.9
CPD	Cerro la Pandu	40.90	6	eP	P	14 14 47.7	-2.2
CPD				epP	pP	14 15 01.0	+1.5
SJG	San Juan	40.95	6	eP	P	14 14 48.0	-2.3
	comp=Z,93nm,0.9s,mb5.4						
SJG	San Juan	40.95	6	eP	P	14 14 48.0	-2.3
SJG				pmax	pmax		
	comp=Z,93nm,0.9s						
SJG	San Juan	40.95	6	P	P	14 14 48.0	-2.3
	comp=Z,85nm,0.9s,mb5.4,baz=162,slow=3.0,SNR=19						
MPR	Mayaguez	40.97	4	eP	P	14 14 48.8	-1.8
MPR				epP	pP	14 14 56.1	-4.0
MTP	Monte Pirata	41.00	7	eP	P	14 14 48.5	-2.2
MTP				epP	pP	14 15 01.5	+1.2
HUMP	Col San Antoni	41.01	6	eP	P	14 14 48.7	-2.1
CBYP	Canovanas	41.14	6	eP	P	14 14 49.4	-2.4
TEIG	Tepich	46.41	336	eP	P	14 15 33.3	-1.0
	comp=Z,16nm,0.6s,mb5.1						
TEIG				epP	pP	14 15 42.0	-2.0
CMIG	Matias Romero	46.58	326	i P	P	14 15 34.8	-0.8
SOR	Soroa	47.14	344	eP	P	14 15 38.7	-1.2
PPM	Popocatepetl	50.18	324	eP	P	14 16 05.6	+2.2
IIO	Organos	50.66	324	eP	P	14 16 07.4	+0.4
BRAL	Brewton	56.03	342	eP	P	14 16 46.1	-0.2
	comp=Z,170nm,1.0s,mb6.0						
BRAL				epP	pP	14 16 55.2	-1.0
LRAL	Lakeview Retre	57.93	343	eP	P	14 16 57.7	-1.9
	comp=Z,48nm,1.3s,mb5.4						
LRAL				epP	pP	14 17 07.0	-2.6
HKT	Hockley	58.10	334	eP	P	14 16 60.0	-1.0
	comp=Z,27nm,1.5s,mb5.0						
HKT				epP	pP	14 17 09.2	-1.6
HKT	Hockley	58.10	334	eP	P	14 17 00.0	-0.9
HKT				e*PP	pP	14 17 09.2	-1.7
HKT				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.1						
VNA3	Neumayer Olymp	59.10	161	eP	P	14 17 07.4	0.0
VNA3				e		14 17 10.3	
VNA3				e		14 17 20.1	
VNA3				e		14 17 24.8	
VNA3				e		14 17 31.0	
VNA3				e		14 17 34.5	
VNA3				e		14 17 54.2	
NATX	Nacogdoches	59.24	336	eP	P	14 17 08.6	-0.3
	comp=Z,55nm,0.8s,mb5.6						
NATX				epP	pP	14 17 17.1	-1.7
RKT	Rikitea	59.25	256	eS	S	14 25 15.1	-0.3
	comp=Z,1µm,26.5s						
RKT				eSS	SS	14 29 13.0	+2.8
	comp=Z,504nm,36.0s						
RKT				eLR	LR	14 34 38.3	
	comp=Z,3µm,26.2s,baz=110						
TKL	Tuckaleechee C	59.68	347	P	P	14 17 10.1	-1.7
	comp=Z,5.0nm,0.4s,mb4.9,baz=159,slow=12,SNR=5.2						
TKL				pP	pP	14 17 19.7	-2.1
	comp=Z,29nm,0.9s,baz=151,slow=9.6,SNR=3.1						
VNA2	Neumayer--Watz	59.69	160	eP	P	14 17 10.9	-0.6
VNA2				e		14 17 13.5	
VNA2				e		14 17 24.1	
VNA2				e		14 17 29.0	
VNA2				e		14 17 34.9	
VNA2				e		14 17 38.5	
VNA2				e		14 17 58.1	
SWET	Sewanee	59.73	345	eP	P	14 17 10.6	-1.6
OXF	Oxford	59.99	342	eP	P	14 17 12.0	-1.9
	comp=Z,182nm,1.2s,mb6.0						
OXF				epP	pP	14 17 21.3	-2.7
OXF	Oxford	59.99	342	eP	P	14 17 12.0	-2.0
OXF				e*PP	pP	14 17 21.3	-2.6
OXF				pmax	pmax		
	comp=Z,182nm,1.2s,mb6.0						
PLAL	Pickwick Lake	60.06	343	eP	P	14 17 12.0	-2.4
	comp=Z,58nm,1.2s,mb5.5						
PLAL				epP	pP	14 17 21.5	-2.9
JCT	Junction City	60.27	330	eP	P	14 17 15.0	-1.0
	comp=Z,47nm,1.0s,mb5.5						
JCT	Junction City	60.27	330	eP	P	14 17 15.0	-1.0
JCT				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.5						
URVA	University of	60.57	353	eP	P	14 17 17.3	-0.5
ELN	Prospectdale	60.66	350	eP	P	14 17 18.0	-0.4
ELN				epP	pP	14 17 27.0	-1.5
UALR	University of	61.14	339	eP	P	14 17 20.7	-1.1
	comp=Z,86nm,1.3s,mb5.7						
UALR				epP	pP	14 17 30.0	-1.8
LTX	Lajitas	61.18	327	eP	P	14 17 20.8	-1.4
	comp=Z,34nm,0.8s,mb5.5						
LTX				epP	pP	14 17 30.7	-1.6
LTX	Lajitas	61.18	327	eP	P	14 17 20.8	-1.4
LTX				e*PP	pP	14 17 30.7	-1.5
LTX				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.5						
TXAR	Lajitas Array	61.18	327	P	P	14 17 21.3	-0.9
TXAR				*PP	pP	14 17 30.9	-1.3
TXAR	Lajitas Array	61.18	327	P	P	14 17 21.2	-1.0
	comp=Z,4.2nm,0.9s,mb4.6,baz=149,slow=9.4,SNR=38						
TXAR				pP	pP	14 17 30.9	-1.4
	comp=Z,9.8nm,1.0s,baz=140,slow=7.6,SNR=18						
TXAR				LR	LR	14 40 17.5	
	comp=Z,458nm,19.7s,MS4.6,baz=235,slow=32						
MIAR	Mount Ida	61.35	338	eP	P	14 17 21.9	-1.3
	comp=Z,106nm,1.2s,mb5.8						
MIAR				epP	pP	14 17 31.4	-1.8
MIAR	Mount Ida	61.35	338	eP	P	14 17 21.9	-1.3
MIAR				e*PP	pP	14 17 31.4	-1.8
MIAR				pmax	pmax		
	comp=Z,106nm,1.2s,mb5.8						
UTMT	University of	61.55	343	eP	P	14 17 23.3	-1.3
UTMT				epP	pP	14 17 33.1	-1.4
SDMD	Soldier's Deli	62.32	354	eP	P	14 17 29.9	+0.3
SDMD				epP	pP	14 17 39.1	-0.6
WCI	Wyandotte Cave	62.70	346	eP	P	14 17 30.1	-2.1
	comp=Z,24nm,0.5s,mb5.6						
WCI	Wyandotte Cave	62.70	346	eP	P	14 17 30.1	-2.1
WCI				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.6						
USIN	University of	62.77	344	eP	P	14 17 31.1	-1.6
	comp=Z,90nm,1.2s,mb5.8						
USIN				epP	pP	14 17 40.4	-2.4
MVL	Millersville	62.86	355	eP	P	14 17 33.5	+0.3
MCWV	Mont Chateau	62.91	352	eP	P	14 17 33.4	-0.1
	comp=Z,56nm,1.3s,mb5.5						
MCWV				epP	pP	14 17 42.9	-0.7
SIUC	Southern Illin	62.94	343	eP	P	14 17 32.2	-1.6
	comp=Z,104nm,1.1s,mb5.9						
SIUC				epP	pP	14 17 41.4	-2.4
WMOK	Wichita Mounta	63.48	334	eP	P	14 17 35.8	-1.7
	comp=Z,40nm,1.7s,mb5.3						
WMOK	Wichita Mounta	63.48	334	eP	P	14 17 35.8	-1.7
WMOK				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.3						
FVM	French Village	63.52	342	eP	P	14 17 36.0	-1.7
	comp=Z,86nm,1.0s,mb5.7						
FVM				epP	pP	14 17 45.5	-2.2
FVM	French Village	63.52	342	eP	P	14 17 36.0	-1.7
FVM				e*PP	pP	14 17 45.5	-2.2
FVM				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.7						
SSPA	Standing Stone	63.64	353	eP	P	14 17 37.0	-1.3
	comp=Z,46nm,1.4s,mb5.3						
SSPA				epP	pP	14 17 47.5	-0.9
BLO	Bloomington	63.65	346	eP	P	14 17 36.5	-2.0
	comp=Z,56nm,1.4s,mb5.4						
BLO	Bloomington	63.65	346	eP	P	14 17 36.5	-2.0
BLO				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.4						
ACSO	Alum Creek Sta	63.96	349	eP	P	14 17 37.9	-2.6
	comp=Z,44nm,0.9s,mb5.5						
MNTX	Cornudas Mount	63.96	327	eP	P	14 17 39.1	-1.6
	comp=Z,40nm,1.2s,mb5.3						
MNTX				epP	pP	14 17 48.5	-2.2
BRYW	Bryant College	64.51	359	eP	P	14 17 44.4	+0.3
BRYW				epP	pP	14 17 54.1	-0.1
ALLY	Alegheny Colle	64.91	352	eP	P	14 17 41.5	-5.2
BINY	Binghamton	65.01	355	eP	P	14 17 47.4	0.0
	comp=Z,44nm,1.1s,mb5.4						
BINY				epP	pP	14 17 56.9	-0.5
HRV	Harvard--Oak R	65.10	359	eP	P	14 17 47.8	-0.1
ERPA	Erie	65.35	352	eP	P	14 17 48.7	-0.8
	comp=Z,55nm,1.2s,mb5.5						
ERPA				epP	pP	14 17 58.4	-1.2
HDIL	Hopedale	65.63	344	eP	P	14 17 49.2	-2.2
HDIL				epP	pP	14 17 58.9	-2.6
319A	Douglas	65.76	324	P	P	14 17 52.6	+0.2
	baz=66,SNR=20						
MAIT	Maitri	65.88	159	eP	P	14 17 52.6	-0.1
ACCN	Adirondack Com	66.05	357	eP	P	14 17 54.5	+0.5
ACCN				epP	pP	14 18 03.9	-0.2
318A	Bisbee	66.20	323	P	P	14 17 55.5	+0.2
	baz=67,SNR=24						
HNH	Hanover	66.32	358	eP	P	14 17 56.8	+1.1
KSU1	Kansas State U	66.50	338	eP	P	14 17 55.5	-1.5
	comp=Z,44nm,1.2s,mb5.4						
KSU1				epP	pP	14 18 05.1	-2.0
Y22C	IRIS PASSCAL I	66.63	327	⇓P	P	14 17 59.1	+1.1
	baz=67						
218A	Dragoon	66.64	324	⇓P	P	14 17 58.6	+0.5
	baz=67,SNR=12						
NCB	Newcomb	66.66	357	eP	P	14 17 57.2	-0.7
	comp=Z,38nm,1.5s,mb5.2						
LBNH	Lisbon	66.84	359	eP	P	14 17 59.5	+0.5
	comp=Z,73nm,1.4s,mb5.5						
LBNH				epP	pP	14 18 09.9	+0.7
LBNH	Lisbon	66.84	359	eP	P	14 17 59.6	+0.5
LBNH				e*PP	pP	14 18 09.9	+0.7
LBNH				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.5						
217A	Green Valley	66.91	323	⇑P	P	14 17 59.7	-0.1
	baz=68,SNR=21						
ANMO	Albuquerque	67.11	328	eP	P	14 18 00.9	-0.1
	comp=Z,117nm,1.7s,mb5.6						
ANMO				epP	pP	14 18 10.4	-0.7
ANMO	Albuquerque	67.11	328	eP	P	14 18 00.9	-0.1
ANMO				e*PP	pP	14 18 10.4	-0.7
ANMO				pmax	pmax		
	comp=Z,117nm,1.7s						
ANMO	Albuquerque	67.11	328	P	P	14 18 01.1	+0.1
	comp=Z,7.7nm,0.9s,mb4.8,baz=147,slow=8.0,SNR=24						
ANMO				pP	pP	14 18 10.8	-0.2
	comp=Z,15nm,1.1s,baz=144,slow=8.0,SNR=10						
QSPA	South Pole Qui	67.28	180	eP	P	14 18 01.6	0.0
	comp=Z,14nm,0.5s,mb5.2						
TUC	Tucson	67.30	323	eP	P	14 18 02.2	0.0
LONY	Lake Ozonia	67.33	357	eP	P	14 18 02.0	-0.1
	comp=Z,36nm,1.3s,mb5.2						
LONY				epP	pP	14 18 11.8	-0.4
EMMW	East Machias	67.33	2	eP	P	14 18 02.1	-0.1
	comp=Z,46nm,1.0s,mb5.5						
CBKS	Cedar Bluff	67.40	335	epP	pP	14 18 11.6	-1.3
216A	Three Points,	67.44	323	⇑P	P	14 18 03.5	+0.4
	baz=68						
FRNY	Flat Rock	67.49	357	eP	P	14 18 03.2	0.0
MSNY	Massena	67.72	356	eP	P	14 18 04.5	-0.1
PKME	Peaks-Kenny Pk	67.85	1	eP	P	14 18 06.1	+0.7
116A	Eloy	68.00	323	⇑P	P	14 18 07.2	+0.5
	baz=69,SNR=6.8						
JFWS	Jewell Farm	68.09	344	eP	P	14 18 05.5	-1.5
	comp=Z,24nm,0.9s,mb5.2						
JFWS	Jewell Farm	68.09	344	eP	P	14 18 05.5	-1.5
JFWS				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
115A	Sonoran Desert	68.39	323	P	P	14 18 09.4	+0.3
	baz=69,SNR=7.2						
SDCO	Great Sand Dun	68.92	330	eP	P	14 18 12.5	+0.2
	comp=Z,120nm,1.3s,mb5.7						
SDCO				epP	pP	14 18 22.1	-0.3
Z14A	Wintersburg	69.29	323	⇓P	P	14 18 15.9	+1.2
	baz=70						
X15A	Humboldt	69.73	324	P	P	14 18 17.9	+0.5
	baz=70,SNR=16						
Y14A	Wickenburg	69.75	323	⇑P	P	14 18 17.3	-0.2
	baz=70						
LIC	Lamto	69.82	74	eP	P	14 18 18.4	0.0
	comp=Z,93nm,1.6s,mb5.5						
MVCO	Mesa Verde	69.90	328	eP	P	14 18 18.6	+0.2
	comp=Z,160nm,1.6s,mb5.7						
MVCO				epP	pP	14 18 28.0	-0.5
MVCO	Mesa Verde	69.90	328	P	P	14 18 18.7	+0.3
	baz=71,SNR=15						
TIC	Toumodi	70.02	73	eP	P	14 18 19.7	+0.1
	comp=Z,8.4nm,0.8s,mb4.7						
WUAZ	Wupatki	70.05	325	eP	P	14 18 20.4	+1.1
	comp=Z,81nm,1.3s,mb5.5						
WUAZ				epP	pP	14 18 31.1	+1.6
X14A	Yava	70.08	323	⇑P	P	14 18 20.1	+0.6
	baz=71,SNR=14						
Y13A	Salome	70.12	322	P	P	14 18 20.1	+0.3
	baz=71,SNR=12						
GLA	Glamis	70.13	321	⇓P	P	14 18 20.4	+0.5
	baz=71,SNR=6.9						
KIC	Kosan Boka	70.14	74	eP	P	14 18 20.2	-0.2
	comp=Z,298nm,1.3s,mb6.0						
DBIC	Dimbokro	70.17	73	P	P	14 18 21.2	+0.6
	comp=Z,10nm,0.6s,mb5.0,baz=232,slow=8.1,SNR=14						
DBIC				LR	LR	14 50 22.0	
	comp=Z,641nm,18.3s,MS4.9,baz=207,slow=37						
W15A	Williams	70.27	324	P	P	14 18 21.6	+0.9
	baz=71,SNR=8.7						
Y12C	Blythe	70.46	322	⇑P	P	14 18 22.4	+0.5
	baz=71						
SWSC	Sam W. Stewart	70.62	320	⇓P	P	14 18 23.7	+0.8
	baz=71						
PDMCI	Parker Dam,Lak	70.65	322	⇑P	P	14 18 23.1	+0.1
	baz=71						
ECSD	EROS,Sioux Fal	70.65	340	eP	P	14 18 21.5	-1.3
	comp=Z,69nm,1.3s,mb5.4						
ECSD				epP	pP	14 18 31.0	-2.0
ISCO	Idaho Springs	70.66	332	eP	P	14 18 23.2	+0.2
	comp=Z,42nm,1.4s,mb5.2						
ISCO				epP	pP	14 18 32.4	-0.7
ISCO	Idaho Springs	70.66	332	eP	P	14 18 23.2	+0.3
ISCO				e*PP	pP	14 18 32.4	-0.7
ISCO				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.2						
PV01	Paradox Valley	70.67	329	eP	P	14 18 23.3	+0.2
PV01				epP	pP	14 18 32.8	-0.4
X13A	Yucca	70.69	323	P	P	14 18 23.6	+0.3
	baz=71,SNR=14						
W14A	Seligman	70.74	324	P	P	14 18 24.2	+0.6
	baz=72,SNR=8.2						

SMCO **Snowmass** 70.76 330 *e*P P 14 18 19.3 -4.3
BC3 **Big Chuckw Mtn** 70.93 321 P P 14 18 25.0 +0.2
baz=72,SNR=8.3
MONP **Monument Peak** 70.95 320 ⇓P P 14 18 25.6 +0.7
baz=72
PV10 **Paradox Valley** 71.08 329 *e*P P 14 18 24.7 -0.9
PV10 *e*pP pP 14 18 35.5 -0.2
W13A **Hualapai Mount** 71.09 323 P P 14 18 26.4 +0.7
baz=72,SNR=6.7
IRM **Iron Mountain** 71.12 322 P P 14 18 26.2 +0.3
baz=72,SNR=14
PFO **Pinyon Flat Ob** 71.48 320 *e*P P 14 18 27.4 -0.7
PFO *e*pP pP 14 18 37.1 -1.1
PFO **Pinyon Flat Ob** 71.48 320 P P 14 18 27.9 -0.3
comp=Z,11nm,1.1s,mb4.7,baz=144,slow=4.2,SNR=6.6
PFO pP pP 14 18 37.9 -0.4
comp=Z,10nm,1.1s,baz=132,slow=7.6,SNR=6.6
PFO **Pinyon Flat Ob** 71.48 320 P P 14 18 28.8 +0.7
baz=72,SNR=6.2
BELC **Belle Mtn.** 71.49 321 ⇑P P 14 18 28.7 +0.5
baz=72
U14A **Mt Trumbull** 71.69 325 P P 14 18 30.2 +0.9
baz=72,SNR=35
T15A **Red Dirt Ranch** 71.72 325 P P 14 18 30.3 +0.8
baz=72,SNR=22
W12A **Cal Nev Ari** 71.79 323 ⇓P P 14 18 31.0 +1.1
baz=72
PHWY **Pilot Hill** 71.83 333 *e*P P 14 18 30.1 +0.1
GMRC **Granite Mounta** 71.86 322 ⇑P P 14 18 30.7 +0.4
baz=73,SNR=15
MURC **Murrieta** 71.92 320 ⇑P P 14 18 31.3 +0.6
baz=73
TBI **Tubuai** 72.02 252 *e*S S 14 27 50.8 -0.7
comp=Z,355nm,28.0s
TBI *e*LR LR 14 40 29.9
comp=Z,984nm,24.0s,baz=109
V12A **Nelson** 72.09 323 P P 14 18 32.3 +0.6
baz=73,SNR=10.0
U13A **Pakoon Wash** 72.11 324 P P 14 18 32.5 +0.6
baz=73,SNR=8.3
T14A **Hurricane** 72.12 325 P P 14 18 32.6 +0.8
baz=73,SNR=12
BBRC **Big Bear Sol-O** 72.22 321 ⇓P P 14 18 34.0 +1.5
baz=73
HEC **Hector,Ludlow** 72.28 321 P P 14 18 33.5 +0.7
baz=73,SNR=7.0
SRU **San Rafael** 72.38 328 *e*P P 14 18 33.5 +0.1
comp=Z,53nm,1.2s,mb5.3
SRU *e*pP pP 14 18 42.7 -0.8
SRU **San Rafael** 72.38 328 *e*P P 14 18 33.5 +0.1
SRU *e**PP pP 14 18 42.7 -0.8
SRU pmax pmax
comp=Z,53nm,1.2s,mb5.3
U12A **Valley of Fire** 72.43 324 P P 14 18 34.2 +0.5
baz=73,SNR=8.8
TUQ **Turquoise Mtn.** 72.48 322 ⇓P P 14 18 34.6 +0.6
baz=73
V11A **Goodsprings** 72.49 323 P P 14 18 34.3 +0.2
baz=73,SNR=7.3
T13A **Saint George** 72.52 324 P P 14 18 35.1 +0.8
baz=73,SNR=6.9
CCUT **Cedar City** 72.63 325 *e*P P 14 18 35.8 +0.9
CCUT *e*pP pP 14 18 45.1 0.0
BFSC **Mount Baldy St** 72.63 320 ⇓P P 14 18 35.3 +0.3
baz=73
S14A **Cedar City** 72.69 325 ⇓P P 14 18 35.5 +0.3
baz=73,SNR=6.4
MSU **Marysvale** 72.74 327 *e*P P 14 18 36.0 +0.5
MSU *e*pP pP 14 18 45.8 +0.1
SHPR **Sheep Range** 72.83 323 *e*P P 14 18 36.6 +0.5
TMUT **Trail Mountain** 72.86 328 *e*P P 14 18 37.0 +0.8
TMUT *e*pP pP 14 18 46.5 +0.2
GSC **Goldstone** 72.89 321 P P 14 18 36.9 +0.4
baz=74,SNR=7.1
RWWY **Rawlins** 72.90 332 *e*P P 14 18 36.6 +0.2
comp=Z,88nm,1.4s,mb5.5
S13A **Holt Ranch, En** 72.92 325 P P 14 18 37.5 +1.0
baz=74,SNR=32
R14A **James Farms, M** 73.01 326 ⇓P P 14 18 38.2 +1.1
baz=74
SHOC **Shoshone** 73.01 322 ⇑P P 14 18 37.9 +0.7
baz=74
EYMN **Ely** 73.11 345 *e*P P 14 18 36.2 -1.3
comp=Z,37nm,1.1s,mb5.2
T11A **Corn Creek, Al** 73.39 324 P P 14 18 40.2 +0.7
baz=74,SNR=17
U10A **Ash Meadows, A** 73.41 323 P P 14 18 40.6 +1.0
baz=74,SNR=7.8
S12A **Delamar Landin** 73.46 324 ⇓P P 14 18 40.8 +1.0
baz=74
LRMC **Laurel Mountai** 73.52 321 ⇓P P 14 18 40.7 +0.5
baz=74
MPU **Maple Canyon** 73.62 328 *e*P P 14 18 40.9 +0.2
comp=Z,74nm,1.3s,mb5.5
DAU **Daniels Canyon** 73.74 328 *e*P P 14 18 42.0 +0.6
DAU *e*pP pP 14 18 51.8 +0.2
FURC **Furnace Creek,** 73.75 322 ⇓P P 14 18 41.8 +0.3
baz=74
TPNV **Topopah Spring** 73.75 323 *e*P P 14 18 42.2 +0.7
comp=Z,64nm,1.5s,mb5.3
TPNV **Topopah Spring** 73.75 323 *e*P P 14 18 42.2 +0.7
TPNV pmax pmax
comp=Z,63nm,1.5s,mb5.3
TPNV **Topopah Spring** 73.75 323 ⇓P P 14 18 42.2 +0.7
baz=74,SNR=16
NLU **North Lily Min** 73.79 328 *e*P P 14 18 42.5 +0.8
MPMC **Manual Prospec** 73.81 322 ⇑P P 14 18 41.9 0.0
baz=75
R12A **Pony Springs,** 73.86 325 P P 14 18 43.1 +0.9
baz=75,SNR=26
PPT **Papeete** 73.95 257 *e*S S 14 28 12.3 -1.3
comp=Z,590nm,28.2s
PPT *e*LQ 14 38 24.5
comp=Z,568nm,27.0s
PPT *e*LR LR 14 41 27.2
comp=Z,2μm,25.2s,baz=107
PPT **Papeete** 73.95 257 LR LR 14 44 36.8
comp=Z,406nm,18.4s,MS4.8,baz=147,slow=30
S11A **Rachel** 73.98 324 ⇓P P 14 18 44.0 +1.1
baz=75
JLU **Jordanelle** 73.98 328 *e*P P 14 18 43.2 +0.4
JLU *e*pP pP 14 18 52.8 -0.2
Q13A **Wheeler Ranch,** 74.02 326 ⇑P P 14 18 43.3 +0.2
baz=75,SNR=13
DAC **Darwin (Calif)** 74.03 322 *e*P P 14 18 43.2 0.0
comp=Z,32nm,1.3s,mb5.1
DAC *e*pP pP 14 18 52.7 -0.7
DAC **Darwin (Calif)** 74.03 322 *e*P P 14 18 43.2 0.0
DAC *e**PP pP 14 18 52.7 -0.7
DAC pmax pmax
comp=Z,32nm,1.3s,mb5.1
ISA **Isabella** 74.11 321 ⇓P P 14 18 43.8 +0.1
baz=75,SNR=10
SBA **Scott Base** 74.25 191 *e*P P 14 18 44.5 +0.5
comp=Z,78nm,1.6s,mb5.4
SBA **Scott Base** 74.25 191 *e*P P 14 18 44.5 +0.6
SBA pmax pmax
comp=Z,78nm,1.6s,mb5.4
DUG **Dugway** 74.34 327 *e*P P 14 18 45.2 +0.3
comp=Z,48nm,1.3s,mb5.3
DUG **Dugway** 74.34 327 *e*P P 14 18 45.2 +0.3
DUG pmax pmax
comp=Z,48nm,1.3s,mb5.3
DUG **Dugway** 74.34 327 ⇑P P 14 18 45.2 +0.3
baz=75,SNR=19
PKM **Peak Mountain** 74.38 319 ⇓P P 14 18 45.4 +0.2
baz=75
P13A **Bates Ranch, G** 74.39 326 ⇑P P 14 18 45.3 +0.1
baz=75,SNR=13
R11A **Troy Canyon, C** 74.40 324 ⇑P P 14 18 45.8 +0.5
baz=75,SNR=20
TRCR **Troy Canyon** 74.40 324 *e*P P 14 18 45.6 +0.3
GRAC **Grapevine Rang** 74.41 322 ⇑P P 14 18 45.4 0.0
baz=75
CWC **Cottonwood Cre** 74.42 322 ⇓P P 14 18 45.8 +0.3
baz=75,SNR=9.7
Q12A **Willow Creek R** 74.51 325 P P 14 18 46.4 +0.5
baz=75,SNR=8.4
AGMN **Agassiz Refuge** 74.56 342 *e*P P 14 18 44.6 -1.4
comp=Z,24nm,1.0s,mb5.1
AGMN *e*pP pP 14 18 54.2 -1.9
S10A **Tonopah Range,** 74.64 323 P P 14 18 47.2 +0.5
baz=75,SNR=12
N15A **Stansbury Isla** 74.73 328 ⇓P P 14 18 47.0 -0.1
baz=76
R10A **Warm Springs** 74.75 324 P P 14 18 48.4 +1.1
baz=76,SNR=18

SMMC **Simmler** 74.77 320 ⇓P P 14 18 47.9 +0.4
baz=76
BW06 **Boulder Array** 74.80 331 *e*P P 14 18 46.9 -0.6
Q11A **Duckwater** 74.80 325 P P 14 18 48.1 +0.5
baz=76,SNR=19
HWUT **Hardware Ranch** 74.82 329 *e*P P 14 18 47.4 -0.3
comp=Z,52nm,1.3s,mb5.3
S09A **Goldfield** 74.85 323 P P 14 18 48.0 +0.2
baz=76,SNR=10
P12A **McGill** 74.87 326 ⇑P P 14 18 48.9 +0.9
baz=76,SNR=12
O13A **Hicks Ranch, I** 74.88 327 ⇓P P 14 18 48.4 +0.4
baz=76
TIN **Tinemaha** 74.94 322 P P 14 18 49.7 +1.3
baz=76
RCTC **Rector, Farmer** 75.00 321 ⇓P P 14 18 48.9 0.0
baz=76
BGU **Big Grassy Mou** 75.00 328 *e*P P 14 18 48.1 -0.6
BGU *e*pP pP 14 18 58.3 -0.7
SPUT **South Promonto** 75.01 328 *e*P P 14 18 48.8 +0.1
N14A **Grayback Hills** 75.02 328 P P 14 18 49.0 +0.1
baz=76,SNR=7.8
TPH **Tonopah** 75.09 323 *e*P P 14 18 50.2 +0.9
comp=Z,50nm,1.4s,mb5.2
TPH *e*pP pP 14 19 00.1 +0.6
TPH **Tonopah** 75.09 323 *e*P P 14 18 50.2 +0.9
TPH *e**PP pP 14 19 00.1 +0.6
TPH pmax pmax
comp=Z,50nm,1.4s,mb5.2
M15A **Larsen Ranch,** 75.13 328 ⇓P P 14 18 49.2 -0.2
baz=76,SNR=7.9
R09A **Tonopah** 75.13 323 ⇓P P 14 18 49.7 +0.2
baz=76,SNR=10
HELL **Mitchell Peak,** 75.13 321 P P 14 18 49.3 -0.3
baz=76,SNR=13
Q10A **Clear Creek Ra** 75.19 324 ⇑P P 14 18 50.4 +0.6
baz=76,SNR=8.3
S08C **White Mtn Res** 75.22 322 P P 14 18 50.5 +0.4
baz=76,SNR=10.0
MTUM **Tungsten Hills** 75.34 322 *e*P P 14 18 51.2 +0.5
P11A **Circle Ranch,** 75.37 325 ⇑P P 14 18 51.6 +0.8
baz=76
O12A **Currie** 75.37 326 P P 14 18 51.3 +0.4
baz=76,SNR=16
AHID **Auburn Hatcher** 75.50 330 *e*P P 14 18 51.6 0.0
comp=Z,51nm,1.2s,mb5.3
HVU **Hansel Valley** 75.53 328 *e*P P 14 18 52.0 +0.3
HVU *e*pP pP 14 19 01.8 -0.1
N13A **Wendover, West** 75.53 327 ⇓P P 14 18 52.5 +0.7
baz=76
SYO **Syowa Base** 75.57 159 ⇓*e*P P 14 18 50.2 -1.5
SYO **Syowa Base** 75.57 159 ⇓*e*PcP PcP 14 19 03.0 -1.5
M14A **Sheep Mountain** 75.60 328 P P 14 18 52.0 -0.1
baz=76,SNR=11
Q09A **Carvers** 75.61 324 ⇓P P 14 18 53.2 +0.9
baz=76
MLAC **Mammoth Lakes** 75.69 322 ⇑P P 14 18 53.2 +0.4
baz=76
O11A **Cowboy Ranch,** 75.74 326 P P 14 18 53.4 +0.4
baz=76,SNR=9.1
KCC **Kaiser Creek** 75.75 321 ⇓P P 14 18 53.2 +0.1
baz=76
P10A **Eureka** 75.80 325 P P 14 18 54.2 +0.9
baz=77,SNR=8.9
REDW **Red Top Meadow** 75.85 331 *e*P P 14 18 53.6 +0.1
comp=Z,69nm,1.4s,mb5.4
M13A **Montello** 75.89 327 ⇓P P 14 18 53.4 -0.5
baz=77,SNR=9.4
LOHW **Long Hollow** 75.94 331 *e*P P 14 18 54.0 0.0
NVAR **Ming Array Bea** 75.95 323 P P 14 18 54.2 +0.1
comp=Z,5.9nm,1.0s,mb4.5,baz=136,slow=6.9,SNR=26
NVAR pP pP 14 19 04.2 -0.2
comp=Z,7.6nm,1.0s,baz=135,slow=6.9,SNR=11
N12A **Clover Valley,** 75.95 326 ⇑P P 14 18 54.3 +0.2
baz=77
TPAW **Teton Pass** 76.00 331 *e*P P 14 18 54.5 +0.1
comp=Z,41nm,1.2s,mb5.2
TPAW *e*pP pP 14 19 04.2 -0.4
Q08A **Gabbs** 76.05 323 P P 14 18 54.7 0.0
baz=77,SNR=9.6
MOOW **Moose Ponds** 76.11 331 *e*P P 14 18 54.2 -0.8
P09A **Austin** 76.11 324 ⇑P P 14 18 56.1 +1.0
baz=77
R07C **Lee Vining** 76.12 322 P P 14 18 55.9 +0.7
baz=77,SNR=7.0
DCID1 **Drake Creek** 76.19 331 *e*P P 14 18 56.3 +0.9
DCID1 *e*pP pP 14 19 05.8 +0.1
O10A **Cortez Mining,** 76.30 325 ⇑P P 14 18 57.0 +0.8
baz=77
K14A **Jones Ranch, D** 76.31 329 P P 14 18 55.8 -0.4
baz=77,SNR=5.3
M12A **Wells** 76.31 327 P P 14 18 56.5 +0.4
baz=77,SNR=8.7
IMW **Indian Meadow** 76.31 331 *e*P P 14 18 56.4 +0.2
comp=Z,79nm,1.5s,mb5.4
L13A **Double Diamond** 76.33 328 ⇑P P 14 18 57.0 +0.7
baz=77,SNR=12
ULM **Lac du Bonnet** 76.34 343 P P 14 18 54.6 -1.5
comp=Z,4.1nm,0.4s,mb4.7,baz=160,slow=6.2,SNR=23
ULM pP pP 14 19 04.4 -2.0
comp=Z,6.4nm,0.7s,baz=156,slow=7.7,SNR=7.7
ULM LR LR 14 54 25.2
comp=Z,387nm,20.9s,MS4.7,baz=148,slow=37
S05C **Merced** 76.35 321 ⇓P P 14 18 57.4 +0.9
baz=77
HAST **UC Hastings Re** 76.42 320 ⇓P P 14 18 57.5 +0.6
baz=77
S06C **San Francisco** 76.44 322 ⇓P P 14 18 56.8 -0.2
baz=77,SNR=12
RLMT **Red Lodge** 76.55 333 *e*P P 14 18 57.6 +0.2
comp=Z,59nm,1.4s,mb5.3
RLMT *e*pP pP 14 19 07.2 -0.5
O09A **Fish Creek Ran** 76.58 325 ⇓P P 14 18 57.8 +0.1
baz=77
LAO **LASA Array** 76.60 335 *e*P P 14 18 57.5 -0.1
comp=Z,142nm,1.4s,mb5.7
LAO *e*pP pP 14 19 06.9 -1.0
LKWY **Lake** 76.60 332 *e*P P 14 18 59.1 +1.3
comp=Z,29nm,1.2s,mb5.1
LKWY *e*pP pP 14 19 08.8 +0.8
LKWY **Lake** 76.60 332 *e*P P 14 18 59.1 +1.4
LKWY *e**PP pP 14 19 08.8 +0.8
LKWY pmax pmax
comp=Z,29nm,1.2s,mb5.1
WAKR **Walker** 76.63 322 *e*P P 14 18 58.9 +0.8
WAKR *e*pP pP 14 19 05.5 -2.8
R06C **Coleville** 76.65 322 ⇓P P 14 18 58.9 +0.7
baz=77,SNR=8.3
PACP **Pacheco Peak** 76.68 320 ⇓P P 14 18 58.0 -0.4
baz=77
YFT **Old Faithful** 76.70 331 *e*P P 14 19 00.1 +1.8
P08A **Dixie Valley** 76.72 324 P P 14 18 59.5 +0.9
baz=78,SNR=5.1
M11A **Holland Ranch,** 76.77 326 P P 14 18 59.2 +0.4
baz=78,SNR=18
K13A **Stover Farm, H** 76.82 328 P P 14 18 59.7 +0.7
baz=78,SNR=6.4
YNR **Norris Junctio** 76.84 332 *e*P P 14 19 01.0 +1.9
YNR *e*pP pP 14 19 10.4 +1.1
CMB **Columbia Colle** 76.85 321 *e*P P 14 18 58.1 -1.2
comp=Z,20nm,1.4s,mb4.8
CMB **Columbia Colle** 76.85 321 *e*P P 14 18 58.2 -1.1
CMB pmax pmax
comp=Z,20nm,1.4s,mb4.8
CMB **Columbia Colle** 76.85 321 ⇓P P 14 18 59.1 -0.3
baz=78
L12A **House Creek Ra** 76.90 327 ⇓P P 14 19 00.4 +0.9
baz=78,SNR=7.7
YMR **Madison River** 76.93 331 *e*P P 14 19 00.2 +0.6
comp=Z,118nm,1.4s,mb5.6
S04C **Ingram Canyon,** 77.04 320 ⇓P P 14 19 00.8 +0.4
baz=78
R05C **Kirkwood Meado** 77.13 322 ⇑P P 14 19 01.3 +0.4
baz=78,SNR=8.9
K12A **Draper Farm, C** 77.21 328 P P 14 19 01.9 +0.7
baz=78,SNR=17
M10A **I.L. Ranch, Tu** 77.22 326 ⇑P P 14 19 01.5 +0.2
baz=78
N09A **Rock Creek Ran** 77.25 325 ⇓P P 14 19 01.6 +0.1
baz=78
GCMT **Greycliff** 77.26 333 *e*P P 14 19 00.2 -1.2
GCMT *e*pP pP 14 19 11.2 -0.5
QLMT **Earthquake Lak** 77.26 331 *e*P P 14 19 02.2 +0.7
R04C **Big Horse Ranc** 77.32 321 ⇓P P 14 19 02.3 +0.3
baz=78
DGMT **Dagmar** 77.34 338 *e*P P 14 19 02.0 +0.1
DGMT *e*pP pP 14 19 11.4 -0.7

WCN **Washoe City** 77.36 323 ⇓P P 14 19 02.4 +0.2
baz=78
WENL **Wente Brothers** 77.37 320 ⇓P P 14 19 02.9 +0.7
baz=78
J13A **Cove Ranch, Pi** 77.43 329 ⇑P P 14 19 02.6 +0.1
baz=78,SNR=9.3
SCHQ **Schefferville** 77.47 2 P P 14 19 01.8 -0.6
comp=Z,4.6nm,1.0s,mb4.4,baz=162,slow=8.7,SNR=8.4
SCHQ LR LR 14 50 19.4
comp=Z,281nm,19.9s,MS4.6,baz=352,slow=33
O07A **Toulon** 77.48 324 ⇑P P 14 19 02.4 -0.4
baz=78,SNR=10
N08A **GE Springer Mi** 77.52 325 P P 14 19 02.9 -0.1
baz=78,SNR=7.7
LAVA **Lava Cap Winer** 77.55 322 P P 14 19 03.4 +0.1
baz=78,SNR=5.5
L10A **Juniper Basin** 77.58 326 P P 14 19 03.7 +0.4
baz=78,SNR=20
M09A **Marrel Ranch,** 77.61 325 P P 14 19 04.0 +0.5
baz=78,SNR=7.7
BDM **Black Diamond** 77.66 321 ⇑P P 14 19 04.5 +0.6
baz=78
HLID **Hailey** 77.67 329 *e*P P 14 19 04.2 +0.4
comp=Z,52nm,1.3s,mb5.3
HLID *e*pP pP 14 19 14.1 +0.1
HLID **Hailey** 77.67 329 P P 14 19 04.1 +0.3
baz=78,SNR=48
J12A **Stokes Ranch,** 77.76 328 ⇓P P 14 19 04.4 +0.1
baz=78,SNR=18
I13A **Wildhorse Cree** 77.79 329 P P 14 19 05.2 +0.7
baz=79,SNR=17
P05C **Yuba Gap, Truc** 77.84 322 P P 14 19 05.1 +0.2
baz=79,SNR=7.8
K11A **Parker Ranch,** 77.87 327 P P 14 19 05.2 +0.2
baz=79,SNR=12
MCMT **McKenzie Canyo** 77.90 330 P P 14 19 05.6 +0.6
N07B **Gerlach** 77.97 324 P P 14 19 05.6 +0.1
baz=79,SNR=15
Q04C **Lincoln** 77.97 321 ⇑P P 14 19 05.7 +0.1
baz=79
BOZ **Bozeman (W)** 77.99 332 *e*P P 14 19 05.2 -0.3
comp=Z,16nm,1.1s,mb4.9
BOZ *e*pP pP 14 19 14.7 -1.0
BOZ **Bozeman (W)** 77.99 332 *e*P P 14 19 05.2 -0.3
BOZ *e**PP pP 14 19 14.7 -1.1
BOZ pmax pmax
comp=Z,16nm,1.1s,mb4.9
BOZ **Bozeman (W)** 77.99 332 ⇓P P 14 19 05.1 -0.4
baz=79,SNR=12
G15A **Dillon** 77.99 331 ⇑P P 14 19 06.0 +0.4
baz=79,SNR=14
BEKR **Beckwourth** 78.09 323 P P 14 19 06.4 +0.2
baz=79,SNR=12
M08A **Happy Creek Ra** 78.12 325 ⇑P P 14 19 06.4 0.0
baz=79,SNR=6.7
L09A **Wilkinson Ranc** 78.16 326 ⇓P P 14 19 06.6 +0.1
baz=79,SNR=8.7
DLMT **Dillon** 78.19 331 *e*P P 14 19 06.7 0.0
comp=Z,68nm,1.4s,mb5.4
Q03C **Winters** 78.20 321 ⇓P P 14 19 06.9 +0.1
baz=79
MFID **Camas Ranch** 78.24 328 P P 14 19 07.2 +0.3
baz=79,SNR=15
CVS **Carmenet Viney** 78.26 320 ⇓P P 14 19 07.1 -0.2
baz=79
K10A **MacKenzie Ranc** 78.30 327 P P 14 19 07.2 -0.1
baz=79,SNR=13
H13A **Challis** 78.35 329 P P 14 19 08.0 +0.5
baz=79,SNR=36
OHCM **Honcut** 78.36 322 *e*P P 14 19 07.5 -0.3
OHCM *e*pP pP 14 19 17.4 -0.6
N06A **Buffalo Meadow** 78.41 324 P P 14 19 08.1 +0.1
baz=79,SNR=15
SUTB **Sutter Butte** 78.47 322 ⇓P P 14 19 07.9 -0.4
baz=79
NSHM **Saint Helena R** 78.47 321 *e*P P 14 19 07.8 -0.5
O05C **Quincy** 78.47 323 ⇓P P 14 19 08.4 +0.1
baz=79,SNR=7.3
LRM **Limekiln Ridge** 78.48 331 *e*P P 14 19 08.4 +0.1
G14A **Jackson** 78.49 330 P P 14 19 08.7 +0.4
baz=79,SNR=6.4
F15A **Butte** 78.52 331 P P 14 19 08.5 +0.1
baz=79,SNR=19
ORV **Oroville** 78.52 322 P P 14 19 08.6 0.0
baz=79,SNR=21
H12A **Diamond D Ranc** 78.62 329 P P 14 19 09.2 +0.2
baz=79,SNR=16
L08A **Fields** 78.63 326 P P 14 19 08.9 -0.2
baz=79,SNR=8.2
K09A **Rome** 78.67 326 ⇑P P 14 19 09.5 +0.1
baz=79,SNR=14
J10A **Berg Farm, Mel** 78.72 327 ⇓P P 14 19 09.7 +0.1
baz=80
G13A **Cobalt** 78.73 330 P P 14 19 10.3 +0.6
baz=80,SNR=64
O04C **Chester** 78.81 323 P P 14 19 10.1 -0.1
baz=80,SNR=9.9
ELFS **Eagle Lake Fie** 78.81 323 P P 14 19 10.4 +0.2
baz=80,SNR=31
TORD **Torodi Ar. Bea** 78.85 71 P P 14 19 11.2 +0.3
comp=Z,12nm,0.4s,mb5.1,baz=256,slow=5.1,SNR=30
TORD LR LR 14 53 50.2
comp=Z,691nm,20.2s,MS5.0,baz=225,slow=36
F14A **Wisdom** 78.89 331 P P 14 19 10.9 +0.5
baz=80,SNR=26
L07A **Adell** 79.03 325 P P 14 19 11.6 +0.3
baz=80,SNR=16
E15A **Deer Lodge** 79.03 332 P P 14 19 11.6 +0.3
baz=80,SNR=16
EGMT **Eagleton** 79.08 334 *e*P P 14 19 10.8 -0.6
comp=Z,44nm,1.3s,mb5.2
EGMT *e*pP pP 14 19 20.4 -1.4
EGMT **Eagleton** 79.08 334 P P 14 19 11.0 -0.5
baz=80,SNR=10
M06C **Likely Place G** 79.08 324 P P 14 19 12.1 +0.5
baz=80,SNR=9.1
K08A **Mann Creek Ran** 79.09 326 ⇑P P 14 19 11.5 -0.1
baz=80
J09A **Fry Pan Ranch,** 79.16 327 P P 14 19 12.3 +0.3
baz=80,SNR=7.8
I10A **Payette** 79.22 328 ⇑P P 14 19 12.5 +0.2
baz=80
GASB **Alder Springs** 79.28 321 P P 14 19 13.8 +1.0
baz=80,SNR=5.8
H11A **Donnelly** 79.28 329 P P 14 19 12.3 -0.4
baz=80,SNR=9.3
F13A **Darby** 79.31 330 P P 14 19 13.1 +0.3
baz=80,SNR=43
LBCM **Butte Creek Ri** 79.31 323 P P 14 19 12.6 -0.3
HATC **Hat Creek Radi** 79.36 323 ⇓P P 14 19 13.2 0.0
baz=80,SNR=7.1
E14A **Clinton** 79.40 331 P P 14 19 13.8 +0.6
baz=80,SNR=5.8
K07A **Rock Creek Ran** 79.46 325 ⇓P P 14 19 14.1 +0.4
baz=80,SNR=8.4
D15A **Lincoln** 79.46 332 ⇓P P 14 19 13.9 +0.3
baz=80,SNR=14
MOD **Modoc** 79.47 324 *e*P P 14 19 14.1 +0.4
comp=Z,47nm,1.3s,mb5.3
MOD *e*pP pP 14 19 23.7 -0.3
MOD **Modoc** 79.47 324 ⇓P P 14 19 14.1 +0.4
baz=80,SNR=13
P01C **Double 8 Ranch** 79.52 321 ⇓P P 14 19 13.8 -0.3
baz=80
J08A **Circle Bar Ran** 79.53 326 ⇑P P 14 19 14.0 0.0
baz=80
M05C **Lookout** 79.55 323 ⇑P P 14 19 13.9 -0.3
baz=80,SNR=6.8
H10A **Noah's Angus R** 79.56 328 ⇓P P 14 19 13.9 -0.2
baz=80,SNR=11
I09A **Lost Marbles R** 79.60 327 ⇑P P 14 19 14.2 -0.2
baz=80,SNR=6.4
O02C **Red Bluff** 79.67 322 ⇓P P 14 19 14.7 -0.2
baz=80
CHMT **Chamberlain Mo** 79.68 332 *e*P P 14 19 14.9 +0.2
CHMT *e*pP pP 14 19 24.6 -0.4
F12A **Elk City** 79.71 330 P P 14 19 14.8 -0.1
baz=80,SNR=9.4
E13A **Victor** 79.74 331 ⇓P P 14 19 15.5 +0.4
baz=80,SNR=18
WDC **Whiskeytown Da** 79.80 322 ⇑P P 14 19 14.7 -0.9
baz=80
L05A **Lakeview** 79.85 324 P P 14 19 16.3 +0.4
baz=81,SNR=10
D14A **Greenough** 79.92 331 ⇓P P 14 19 15.8 -0.3
baz=81,SNR=9.1
MSO **Missoula** 79.92 331 *e*P P 14 19 16.3 +0.2
G11A **Walters Elk Ra** 79.92 329 P P 14 19 16.2 +0.1

baz=81,SNR=40
J07A Hines 79.97 326 ⇑P P 14 19 16.9 +0.5
baz=81,SNR=6.0
I08A Drewsey 79.97 327 P P 14 19 16.8 +0.3
baz=81,SNR=18
BMO Blue Mountains 80.02 328 eP P 14 19 16.3 -0.4
comp=Z,44nm,1.3s,mb5.2
BMO epP pP 14 19 26.7 -0.3
M03C McCloud 80.03 323 P P 14 19 16.4 -0.4
baz=81,SNR=6.2
M04C Macdoel 80.22 323 ⇑P P 14 19 17.1 -0.7
baz=81,SNR=8.9
F11A Grangeville 80.23 329 ⇓P P 14 19 17.0 -0.7
baz=81
J06A Christmas Vall 80.32 325 P P 14 19 18.3 -0.1
baz=81,SNR=19
LHEM Herd Peak 80.33 323 P P 14 19 18.0 -0.4
D13A Huson 80.35 331 ⇑P P 14 19 18.3 -0.1
baz=81,SNR=14
K05A Summer Lake 80.35 325 ⇑P P 14 19 19.2 +0.7
baz=81,SNR=8.9
N02C Big Bar 80.40 322 ⇓P P 14 19 19.0 +0.2
baz=81,SNR=5.8
H08A Prairie City 80.46 327 ⇓P P 14 19 19.3 +0.3
baz=81,SNR=5.8
M02C Callahan 80.52 323 ⇓P P 14 19 18.9 -0.5
baz=81
C14A Swan Lake 80.55 332 ⇓P P 14 19 19.6 +0.2
baz=81
G09A Cove 80.56 328 ⇑P P 14 19 19.9 +0.4
baz=81
I07A Izee 80.57 326 ⇑P P 14 19 19.7 +0.1
baz=81,SNR=12
E11A Bogner Ranch, 80.60 330 ⇑P P 14 19 19.1 -0.6
baz=81,SNR=8.4
TSUM Tsumeb 80.67 107 eP P 14 19 22.0 +1.2
comp=Z,34nm,1.3s,mb5.1
D12A Red Ives Fores 80.72 331 ⇑P P 14 19 20.3 -0.1
baz=82
K04A Chilquin 80.72 324 ⇑P P 14 19 20.6 +0.1
baz=82
F10A Beach Ranch, E 80.80 329 P P 14 19 20.6 -0.2
baz=82,SNR=10
I06A Prineville 80.84 326 ⇓P P 14 19 21.8 +0.7
baz=82,SNR=9.8
C13A Hot Springs 80.84 331 ⇑P P 14 19 21.3 +0.2
baz=82,SNR=18
J05A Fort Rock 80.92 325 ⇑P P 14 19 21.8 +0.3
baz=82,SNR=11
F09A S2 Ranch, Elgi 80.94 328 ⇓P P 14 19 21.2 -0.4
baz=82,SNR=7.4
H07A Lands Inn, Kim 80.96 327 ⇑P P 14 19 21.7 0.0
baz=82
BSMT Bassoo Peak 81.07 331 P P 14 19 22.4 +0.2
E10A Myers Farm, Un 81.12 329 ⇑P P 14 19 22.3 -0.2
baz=82,SNR=27
G08A Pilot Rock 81.15 327 ⇑P P 14 19 22.2 -0.6
baz=82,SNR=15
B13A Whitefish 81.33 332 P P 14 19 23.5 0.0
baz=82,SNR=16
F08A Pendleton 81.42 328 ⇓P P 14 19 23.9 -0.2
baz=82,SNR=5.7
H06A Lindquist Farm 81.45 326 ⇑P P 14 19 24.7 +0.4
baz=82,SNR=11
G07A Ruggs Ranch, H 81.49 327 P P 14 19 24.9 +0.4
baz=82,SNR=13
I05A Bend 81.54 325 ⇑P P 14 19 25.0 +0.2
baz=82,SNR=7.6
WALA Waterton Lakes 81.61 333 eP P 14 19 24.9 -0.1
comp=Z,47nm,1.3s,mb5.3
D10A Wagner Farm, O 81.61 330 ⇑P P 14 19 24.0 -1.1
baz=82,SNR=11
E09A Wood Farm, Sta 81.63 329 ⇑P P 14 19 24.7 -0.5
baz=82
A13A Flathead Natio 81.73 332 ⇓P P 14 19 26.1 +0.4
baz=82
H05A Madras 81.85 326 ⇑P P 14 19 27.0 +0.5
baz=83
B12A Libby 81.89 331 P P 14 19 26.7 +0.2
baz=83,SNR=11
I04A Tendick Farm, 81.89 325 ⇓P P 14 19 26.6 0.0
baz=83
G06A Carlson Farm, 81.95 327 ⇑P P 14 19 27.0 0.0
baz=83
FFC Flin Flon 82.02 342 P P 14 19 25.9 -1.2
comp=Z,91nm,1.4s,mb5.5,SNR=9.3
FFC Flin Flon 82.02 342 eP P 14 19 25.8 -1.3
E08A Dider Farm, El 82.05 328 ⇑P P 14 19 27.1 -0.4
baz=83
F07A Phinny Hill Vi 82.06 327 ⇑P P 14 19 27.8 +0.3
baz=83
D09A Jones Farm, Ri 82.10 329 ⇓P P 14 19 27.3 -0.4
baz=83,SNR=9.1
H2OWA Water 82.16 328 P P 14 19 28.3 +0.2
C10A Spilker Farm, 82.18 330 ⇑P P 14 19 28.1 0.0
baz=83
HAWA Hanford 82.22 328 eP P 14 19 28.1 -0.2
comp=Z,57nm,1.3s,mb5.3
HAWA epP pP 14 19 38.0 -0.6
A12A Yaak River Ran 82.26 332 P P 14 19 28.9 +0.4
baz=83,SNR=6.8
D08A Wollman Farm, 82.39 329 P P 14 19 29.1 -0.2
baz=83,SNR=5.6
F06A Goldendale 82.40 327 ⇓P P 14 19 29.4 +0.1
baz=83
NEW Newport 82.42 330 eP P 14 19 28.1 -1.2
comp=Z,35nm,1.6s,mb5.0
NEW Newport 82.42 330 eP P 14 19 28.1 -1.3
NEW pmax pmax
comp=Z,35nm,1.6s
OD2 Odessa Site #2 82.53 329 P P 14 19 29.6 -0.3
HOOD Mount Hood Mea 82.53 326 eP P 14 19 30.2 +0.2
A11A Hall Mountain, 82.59 331 P P 14 19 29.9 -0.4
baz=83,SNR=17
C09A Chrisman Ranch 82.62 330 ⇑P P 14 19 29.9 -0.4
baz=83,SNR=13
F05A White Salmon 82.82 327 ⇓P P 14 19 31.6 +0.1
baz=84
EPH Ephrata 82.92 329 P P 14 19 31.9 -0.1
H03A Soap Creek Ran 82.95 325 ⇑P P 14 19 32.0 -0.2
baz=84
C08A Higginbotham F 82.97 329 ⇓P P 14 19 31.7 -0.5
baz=84,SNR=5.9
D07A Quincy 82.99 328 ⇓P P 14 19 32.4 0.0
baz=84,SNR=5.7
B09A Rice 83.01 330 ⇑P P 14 19 31.6 -0.8
baz=84,SNR=11
E06A Yakima 83.03 327 ⇓P P 14 19 31.6 -0.9
baz=84
EBG Ellensburg 83.09 328 P P 14 19 32.8 0.0
A10A Northport 83.15 331 ⇓P P 14 19 32.3 -0.8
baz=84,SNR=5.2
MAW Mawson 83.29 164 P P 14 19 33.4 -0.3
comp=Z,9.4nm,0.8s,mb4.9,baz=257,slow=11,SNR=4.8
MAW LR LR 14 56 24.2
comp=Z,805nm,19.8s,MS5.1,baz=236,slow=36
WTV Waterville 83.34 329 P P 14 19 33.6 -0.5
F04A Amboy 83.34 326 ⇓P P 14 19 33.7 -0.4
baz=84
C07A Waterville 83.39 329 ⇑P P 14 19 33.5 -0.9
baz=84,SNR=12
D06A Cle Elum 83.42 328 ⇓P P 14 19 34.3 -0.2
baz=84
B08A Colville Reser 83.51 329 ⇑P P 14 19 34.1 -0.9
baz=84,SNR=8.5
A09A Danville 83.61 330 ⇑P P 14 19 34.6 -0.9
baz=84,SNR=11
PBDV Barranco-do-Ve 83.66 45 eP P 14 19 39.4 +3.4
BOSA Boshof 83.74 118 P P 14 19 37.2 +0.4
comp=Z,4.5nm,0.5s,mb4.9,baz=252,slow=7.2,SNR=16
BOSA LR LR 14 54 27.9
comp=Z,787nm,18.7s,MS5.1,baz=247,slow=34
FCC Fort Churchill 83.77 348 eP P 14 19 35.3 -0.7
comp=Z,25nm,1.1s,mb5.3
FCC Fort Churchill 83.77 348 eP P 14 19 35.3 -0.7
FCC pmax pmax
comp=Z,25nm,1.1s,mb5.3
PVAQ Vaqueiros 83.89 45 eP P 14 19 40.0 +2.8
comp=Z,65nm,1.6s,mb5.5
A08A Turner Farm, O 83.91 330 P P 14 19 36.3 -0.7
baz=85,SNR=14
B07A Winthrop 83.96 329 ⇑P P 14 19 36.3 -1.0
baz=85,SNR=9.6
PBEJ Beja 84.14 45 eP P 14 19 40.8 +2.3
comp=Z,39nm,1.7s,mb5.3
A07A Ashnola River, 84.49 329 ⇓P P 14 19 39.1 -0.9
baz=85,SNR=16
EDM Edmonton 84.58 336 eP P 14 19 38.5 -1.8
EDM epP pP 14 19 48.2 -2.5
PBAR Barrancos 84.77 45 eP P 14 19 43.3 +1.7
comp=Z,48nm,1.7s,mb5.3
EMIN Mina Concepcio 84.78 45 P P 14 19 40.7 -1.0
comp=Z,128nm,1.5s,mb5.8
PESTR Estremoz 84.80 44 eP P 14 19 43.3 +1.5
comp=Z,54nm,1.5s,mb5.5
ESPR Espera 84.82 46 P P 14 19 42.3 +0.4
comp=Z,41nm,1.4s,mb5.4
EBAD Badajoz 85.11 44 P P 14 19 43.3 0.0
comp=Z,232nm,2.2s,mb5.9
A05A Maple Falls 85.27 329 ⇓P P 14 19 43.6 -0.3
baz=86
EMIJ Mijas 85.38 47 P P 14 19 45.2 +0.5
comp=Z,100nm,1.4s,mb5.8
PCBR Castelo Branco 85.43 43 eP P 14 19 46.0 +1.1
comp=Z,29nm,1.7s,mb5.1
MTE Manteigas 85.71 43 eP P 14 19 47.7 +1.4
comp=Z,45nm,1.3s,mb5.5
MTE Manteigas 85.71 43 eP P 14 19 46.6 +0.4
comp=Z,32nm,1.2s,mb5.4
PVRL Vila Real 86.10 42 eP P 14 19 49.8 +1.6
comp=Z,37nm,1.7s,mb5.3
EADA Adamuz 86.38 46 P P 14 19 47.0 -2.6
comp=Z,13nm,0.9s,mb5.2
ECOG Cogollos-Vega 86.58 47 P P 14 19 50.6 -0.1
comp=Z,9.6nm,0.8s,mb5.1
ECOG Cogollos-Vega 86.58 47 P P 14 19 50.6 -0.1
ECOG pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
EBER Berja 86.84 48 P P 14 19 49.7 -2.2
PBRG Braganca 87.00 42 eP P 14 19 53.9 +1.3
ERUA La Rua 87.09 41 P P 14 19 51.4 -1.6
EQES Quesada 87.19 47 P P 14 19 52.4 -1.3
ENIJ Nijar 87.34 48 P P 14 19 54.1 -0.3
comp=Z,5.6nm,0.7s,mb4.9
ENIJ Nijar 87.34 48 P P 14 19 54.1 -0.3
ENIJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.9
ESDC Sonseca Array 87.59 45 P P 14 19 54.9 -0.7
comp=Z,2.0nm,0.8s,mb4.4
ESDC Sonseca Array 87.59 45 P P 14 19 55.6 +0.1
comp=Z,2.4nm,0.8s,mb4.5,baz=246,slow=4.4,SNR=8.5
ESDC LR LR 14 54 55.0
comp=Z,500nm,21.9s,MS4.9,baz=270,slow=33
LSZ Lusaka 91.52 107 eP P 14 20 17.8 +3.2
YKA Yellowknife Ar 92.16 341 P P 14 20 15.0 -1.3
YKA pP pP 14 20 24.9 -1.8
YKA LR LR 15 04 36.9
YKA Yellowknife Ar 92.16 341 P P 14 20 15.0 -1.3
YKA *PP pP 14 20 24.9 -1.8
YKA Yellowknife Ar 92.16 341 P P 14 20 15.0 -1.3
comp=Z,4.3nm,0.9s,mb4.8,baz=136,slow=4.3,SNR=51
YKA pP pP 14 20 24.9 -1.8
comp=Z,6.0nm,1.0s,baz=137,slow=4.7,SNR=11
YKA LR LR 15 04 36.9
comp=Z,375nm,19.5s,MS4.8,baz=85,slow=37
YKW3 Yellowknife Ar 92.21 341 eP P 14 20 15.2 -1.3
KEST Kesra 95.01 53 LR LR 15 03 41.0
comp=Z,340nm,19.9s,MS4.8,baz=4.6,slow=36
OBN Obninsk 117.94 39 i PKIKP PKPdf 14 25 53.7 +0.2
OBN pmax pmax
comp=Z,2.0nm,0.8s
OBN MLR MLR
comp=Z,200nm,10.0s,MS5.0
ANN Anapa 117.99 50 i PKIKP 14 25 42.3
ANN pmax pmax
comp=Z,34nm,1.3s
KIV Kislovodsk 121.70 52 i PKIKP PKPdf 14 26 01.3 +0.2
KIV pmax pmax
comp=Z,5.0nm,1.2s
KIV MLR MLR
comp=Z,200nm,15.0s,MS4.9
ASAR Alice Springs 128.16 208 PKP PKPdf 14 26 13.1 -1.1
comp=Z,4.2nm,0.9s,baz=133,slow=1.7,SNR=51
ASAR pPKP pPKPdf 14 26 23.2 -1.7
comp=Z,1.5nm,0.7s,baz=137,slow=2.1,SNR=5.7
ARU Arti 129.92 34 i PKIKP PKPdf 14 26 16.1 -0.3
ARU 14 28 26.4
ARU SS SS 14 45 45.8 -5.0
TIXI Tiksi 130.05 352 ePKPdf PKPdf 14 26 14.9 -1.4
TIXI Tiksi 130.05 352 ⇑iPKIKP PKPdf 14 26 15.2 -1.1
WB2 Warramunga Arr 131.19 211 eP 14 26 11.3
WRA Warramunga Arr 131.19 211 PKP PKPdf 14 26 19.2 -0.9
comp=Z,3.4nm,0.4s,baz=152,slow=1.7,SNR=5.1
WRA pPKP pPKPdf 14 26 29.5 -1.3
comp=Z,9.5nm,1.2s,baz=151,slow=1.6,SNR=9.0
FITZ Fitzroy Crossi 136.44 202 eP PKPdf 14 26 25.3 -4.6
comp=Z,3.1nm,0.4s
YAK Yakutsk 138.63 346 i PKIKP PKPdf 14 26 32.2 -0.4
NVS Novosibirsk 142.40 25 ePKIKP PKPdf 14 26 38.3 -1.3
NVS e 14 29 49.3
NVS pmax pmax
comp=Z,28nm,1.7s
NVS pmax pmax
comp=E,9.0nm,1.8s
KURK Kurchatov 143.10 33 ePKPdf PKPdf 14 26 37.8 -3.2
KURK Kurchatov 143.10 33 ⇓iPKIKP PKPdf 14 26 38.1 -2.9
ZAL Zalesovo 143.69 25 PKIKP PKPdf 14 26 39.1 -2.8
ZALV Zalesovo Beam 143.69 25 PKP PKPdf 14 26 39.1 -2.8
comp=E,3.4nm,0.6s,baz=300,slow=3.3,SNR=15
EKS2 Erkin-Say 144.15 48 ePKPdf PKPdf 14 26 42.3 -0.8
EKS2 Erkin-Say 144.15 48 P PKPdf 14 26 42.6 -0.5
SNR=11
AML Almayashu 144.29 49 ePKPdf PKPdf 14 26 43.1 -0.2
AML Almayashu 144.29 49 P PKPdf 14 26 43.3 0.0
SNR=38
YSS Yuzh-Sakhalins 144.36 320 ePKHKP 14 26 38.0
CLNS Chul'man 144.38 346 ePKIKP PKPdf 14 26 41.1 -1.9
CLNS pmax pmax
comp=N,14nm,1.0s
CLNS pmax pmax
comp=Z,17nm,1.0s
CLNS pmax pmax
comp=E,15nm,0.9s
USP Ospenovka 144.41 47 P PKPdf 14 26 43.4 -0.1
SNR=17
AAK Ala-Archa 144.66 48 ePKPdf PKPdf 14 26 43.5 -0.5
AAK Ala-Archa 144.66 48c iPKIKP PKPdf 14 26 43.4 -0.6
AAK Ala-Archa 144.66 48 P PKPdf 14 26 40.0 -4.0
SNR=6.4
FRU Bishkek 144.66 47 ⇑iPKIKP PKPdf 14 26 43.8 -0.2
FRU i 14 26 54.0
FRU pmax pmax
comp=Z,180nm,2.0s
CHMS Chumysh 144.69 47 P PKPdf 14 26 44.3 +0.2
SNR=15
UCH Uchtor 144.82 48 ePKPdf PKPdf 14 26 45.2 +1.0
UCH Uchtor 144.82 48 P PKPdf 14 26 45.6 +1.3
SNR=51
KBK Karagaybulak 144.96 47 P PKPdf 14 26 45.2 +0.7
SNR=33
BOD Bodaibo 145.00 356 ⇓iPKIKP PKPdf 14 26 42.0 -2.1
BOD e 14 26 51.7
BOD pmax pmax
comp=Z,54nm,1.5s
BOD pmax pmax
comp=Z,57nm,1.3s
TKM2 Tokmak 2 145.29 47 ePKPdf PKPdf 14 26 46.0 +1.0
TKM2 Tokmak 2 145.29 47 P PKPbc 14 26 46.2 +1.3
SNR=28
KZA Kyzart 145.38 48 P PKPbc 14 26 47.0 +1.8
SNR=33
KSH Kashi 146.82 52 ePKP PKPdf 14 26 48.0 +0.2
KSH ePKP2 PKPab 14 26 53.8 +2.9
KSH eAPKP 14 26 58.5
KSH ePKS 14 30 21.8
KSH eSKS SKSdf 14 33 51.5 -2.7
KSH PP PP
comp=Z,2μm,5.9s
MKAR Makanchi Array 147.41 36 PKPbc PKPbc 14 26 48.5 -2.6
comp=Z,15nm,0.9s,baz=278,slow=1.8,SNR=37
KLR Kul'dur 148.59 332 ePKHKP 14 26 43.3
HYB Hyderabad 150.09 95 ⇑iPKP PKPdf 14 26 49.0 -4.7
comp=Z,71nm,1.2s
HYB ePKPAB PKPab 14 26 59.0 -5.7
HYB epPKPAB 14 27 10.5
HYB e 14 27 15.0
IRK Irkutsk 150.40 7 ePKIKP PKPdf 14 26 51.9 -1.3
IRK pmax pmax
comp=Z,64nm,2.1s
MOY Mondy 150.48 11 ePKIKP PKPbc 14 26 59.4 +0.8
MOY pmax pmax
comp=Z,65nm,1.7s
CIT Chita 150.81 355 ePKIKP PKPdf 14 26 52.3 -1.5
CIT e 14 26 59.7
TLY Talaya 150.87 8 ePKPbc PKPbc 14 26 59.0 -0.6
TLY Talaya 150.87 8 ePKIKP PKPdf 14 26 53.9 0.0
TLY pmax pmax
comp=Z,26nm,1.1s
MJAR Matsushiro Arr 152.05 305 PKPbc PKPbc 14 27 01.8 -1.0
comp=Z,6.2nm,0.9s,baz=94,slow=0.6,SNR=18
MJAR pPKPbc pPKPbc 14 27 11.5 -2.0
comp=Z,6.8nm,0.9s,baz=136,slow=3.3,SNR=9.5
MAJO Matsushiro 152.05 305 ePKPbc PKPbc 14 27 01.6 -1.3
MAJO ePKPab PKPab 14 27 11.4 -0.9
MAT Matsushiro 152.05 305 PKP PKPbc 14 27 01.6 -1.2
ZAK Zakamensk 152.09 9 ePKIKP PKPdf 14 26 56.2 +0.4
ZAK e 14 27 02.2
ZAK pmax pmax
comp=Z,9.0nm,1.2s
WMQ Urumqi 152.24 36 PKP PKPdf 14 26 56.4 +0.1
WMQ APKP 14 27 07.4
WMQ PKP2 PKPab 14 27 14.9 +2.1
WMQ PP PP
comp=Z,320nm,6.5s
WMQ LR LR
comp=N,190nm,24.0s,MS5.1
WMQ LR LR
comp=E,270nm,19.2s,MS5.1
WMQ LR LR
comp=Z,259nm,24.0s,MS5.0
SONM Songino Array 154.97 6 PKP PKPdf 14 27 00.1 +0.1
comp=Z,1.5nm,0.9s,baz=268,slow=0.9,SNR=11
SONM PKPbc PKPbc 14 27 08.5 -0.3
comp=Z,2.1nm,0.9s,baz=303,slow=1.4,SNR=11
ULN Ulaanbaatar 155.00 5 ⇓iPKIKP PKPdf 14 27 00.9 +0.8
KSRS Korea Array 158.79 317 PKPab PKPab 14 27 40.4 -0.7
comp=Z,3.1nm,1.0s,baz=45,slow=4.0,SNR=4.2
GTA Gaotai 161.44 25 PKP PKPdf 14 27 08.8 +0.6
GTA PKP2 PKPab 14 27 57.2 +4.7
GTA PKS 14 30 40.7
GTA PP PP 14 31 41.9 +6.8
GTA SKS SKSdf 14 34 09.0 -1.8
GTA SKKS SKKSac 14 38 24.2 +2.4
GTA SS SS 14 51 54.4 +5.4
GTA PP PP
comp=Z,231nm,9.5s
GTA LR LR
comp=N,293nm,19.4s
GTA LR LR
comp=E,297nm,18.6s
GTA LR LR
comp=Z,312nm,18.6s
LSA Lhasa 161.87 64 ePKPdf PKPdf 14 27 09.4 +0.5
HHC Hu-ho-hao-te 162.06 356 ePKP PKPdf 14 27 07.4 -1.4
HHC PKP2 PKPab 14 27 55.5 +0.4
HHC PKS 14 30 39.5
HHC PP PP 14 31 40.2 +2.1
HHC SKS SKSdf 14 34 06.5 -4.7
HHC SKKS SKKSac 14 38 22.7 -2.1
HHC PP PP
comp=Z,161nm,7.4s
HHC LR LR
comp=N,264nm,17.8s
HHC LR LR
comp=E,279nm,15.5s
HHC LR LR
comp=Z,242nm,20.2s
SHL Shillong 163.34 77 eP PKPdf 14 27 10.0 -0.5
NJ2 Nanjing 167.93 321 ePKP PKPdf 14 27 12.2 -1.9
CD2 Chengdu 170.32 33 ePKP PKPdf 14 27 14.8 -0.8
CD2 PKP2 PKPab 14 28 32.7 +0.8
CD2 PP PP 14 32 23.9 +2.5
CD2 SKS SKSdf 14 34 13.3 -3.5
CD2 SKKS SKKSac 14 39 05.8 -0.9
CD2 SS SS 14 53 18.7 -1.1
CD2 PP PP
comp=Z,280nm,10.8s
CD2 LR LR
comp=N,130nm,18.0s
CD2 LR LR
comp=E,180nm,16.8s
CD2 LR LR
comp=Z,110nm,20.4s
KMI Kunming 173.07 70 PKP PKPdf 14 27 16.8 -0.3
KMI APKP 14 27 27.8
KMI PKP2 PKPab 14 28 45.3 +0.8
KMI PP PP 14 32 36.5 +0.1
KMI SS SS 14 53 48.7 -0.6
KMI PP PP
comp=Z,138nm,6.1s
KMI LR LR
comp=N,203nm,20.3s
KMI LR LR
comp=E,275nm,21.8s
KMI LR LR
comp=Z,328nm,24.7s
GYA Guiyang 175.39 39 PKP PKPdf 14 27 16.2 -1.6
GYA PKP2 PKPab 14 28 55.0 +0.5
GYA PKS 14 30 47.4
GYA PP PP 14 32 48.0 +1.5
GYA SKS SKSdf 14 34 14.6 -4.1
GYA SKKS SKKSac 14 39 30.0 -1.2
GYA PP PP
comp=Z,180nm,8.9s
GYA LR LR
comp=N,1μm,21.9s
GYA LR LR
comp=E,1μm,21.6s
GYA LR LR
comp=Z,810nm,22.0s
QIZ Qiongzhong 176.14 179 PKP PKPdf 14 27 16.7 -1.5
QIZ LR LR
comp=E,242nm,19.3s
QIZ LR LR
comp=Z,411nm,22.6s

*ISCJB **10** 14:44:13.0±1.4, 1569S±009×1739W±0.1, h94km±13km, mb4.3/17, Error ellipse: s-maj=19.9km s-min=11.0km az=38.7*

*IDC **10** 14:44:14.2±2.6, 1570S×17396W, h89km±24km, mb4.0/11, mb1 4.2/12, mb1mx4.1/16, mbtmp4.0/12, MS4.1/3, Ms1 4.1/3, ms1mx3.5/35, Error ellipse: s-maj=25.1km s-min=13.9km az=131.0*

*NEIC **10** 14:44:15.5±1.3, 1567S×17386W, h104km±12km, mb4.6/6, Error ellipse: s-maj=16.2km s-min=9.3km az=130.0*

ISC 10 14:44:14.0±1.2, 1566S±009×1739W±01, h89km±12km, n65, σ0°87/24, mb4.3/17, 5C-6D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.67**	**50**	P		**Pn**	**14 44 56.6 +1.6**
	265nm,0.3s,baz=177,slow=0.5,SNR=312						
AFI				S		**Sn**	**14 45 25.2 -1.4**
	303nm,0.3s,baz=52,slow=19,SNR=16						
RAR	**Rarotonga**	**14.47**	**115**	LR	LR	14 50 56.7	
	comp=Z,308nm,20.5s,baz=20,slow=28						
DZM	**Mont Dzumac**	**19.68**	**248**	P		**Pn**	**14 48 39.4 +1.0**
	0.7nm,0.3s,baz=84,slow=17,SNR=13						
URZ	**Urewera**	**23.88**	**198**	P		**P**	**14 49 18.5 -0.9**
	11nm,0.4s,mb4.6,baz=351,slow=5.3,SNR=23						
RPZ	**Rata Peaks**	**30.78**	**202**	P		**P**	**14 50 20.4 -0.6**
RPZ				LR		15 00 35.0	
RPZ	**Rata Peaks**	**30.78**	**202**	P		**P**	**14 50 20.5 -0.6**
	3.9nm,0.7s,mb4.3,baz=0.0,slow=2.0,SNR=3.1						
RPZ				LR	LR	15 00 35.0	
	comp=Z,775nm,18.6s,baz=47,slow=32						
CTA	**Charters Tower**	**38.15**	**257**	P		**P**	**14 51 24.2 -0.7**
	1.4nm,0.5s,mb4.1,baz=102,slow=9.3,SNR=3.6						
PMG	**Port Moresby**	**38.50**	**275**	P		**P**	**14 51 28.1 +0.1**
	11nm,1.0s,mb4.6						
STKA	**Stephens Creek**	**43.52**	**240**	P		**P**	**14 52 08.7 -0.2**
	4.4nm,0.5s,mb4.4,baz=91,slow=11,SNR=12						
WRA	**Warramunga Arr**	**49.35**	**257**	P		**P**	**14 52 53.8 -0.9**
	9.3nm,0.9s,mb4.7,baz=97,slow=6.1,SNR=6.0						
ASAR	**Alice Springs**	**49.60**	**252**	P		**P**	**14 52 56.0 -0.7**
	20nm,0.6s,mb5.3,baz=88,slow=7.8,SNR=83						
FITZ	**Fitzroy Crossi**	**57.72**	**258**	LR	LR	15 14 22.4	
	comp=Z,205nm,18.9s,baz=171,slow=31						
SBA	**Scott Base**	**62.96**	**185**	eP		**P**	**14 54 31.6 +0.9**
	5.6nm,0.8s,mb4.5						
VNDA	**Vanda**	**63.08**	**186**	P		**P**	**14 54 32.2 +0.7**
	baz=3.5,slow=7.8						
MJAR	**Matsushiro Arr**	**68.84**	**320**	P		**P**	**14 55 09.7 +0.7**
	0.6nm,0.5s,mb3.6,baz=159,slow=6.8,SNR=4.6						
YSS	**Yuzh-Sakhalins**	**73.48**	**331**	eP		**P**	**14 55 37.5 +0.7**
	23nm,1.3s,mb4.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	South Pole Qui	74.39	180	eP	P	14 55 41.5	-0.2
	14nm,1.1s,mb4.6						
NVAR	Mina Array Bea	74.82	42	P	P	14 55 47.4	+2.5
	0.3nm,0.3s,mb3.6,baz=220,slow=7.4,SNR=5.1						
TXAR	Lajitas Array	81.13	56	P	P	14 56 20.1	+0.1
	0.6nm,0.8s,mb3.5,baz=212,slow=6.8,SNR=7.6						
MCK	McKinley	81.46	11	eP	P	14 56 20.1	-0.8
	15nm,1.1s,mb4.7						
COLA	College	82.70	11	eP	P	14 56 26.3	-1.1
	4.8nm,0.8s,mb4.4						
DAWY	Dawson	83.78	15	eP	P	14 56 32.8	-0.1
YKA	Yellowknife Ar	90.51	24	P	P	14 57 05.3	-0.2
YKA	Yellowknife Ar	90.51	24	P	P	14 57 05.3	-0.2
	0.4nm,0.8s,mb3.6,baz=242,slow=4.5,SNR=7.5						
SONM	Songino Array	94.73	318	P	P	14 57 25.6	+0.2
	0.6nm,0.9s,mb4.0,baz=103,slow=4.6,SNR=3.7						
ARCES	ARCESS Array B	124.80	352	PKP	PKPdf	15 03 01.9	-0.9
	1.4nm,0.5s,baz=154,slow=0.6,SNR=12						
MALT	Malatya	143.72	315	ePKPdf	PKPdf	15 03 37.1	-1.9
STHS	Stebnicka Huta	144.14	343	ePKP	PKPdf	15 03 37.6	-1.8
UPC	Upice	144.33	349	ePKP	PKPdf	15 03 38.0	-1.7
DPC	Dobruska-Polom	144.43	349	ePKP	PKPdf	15 03 38.5	-1.3
BURAR	Bucovina Array	144.43	338	⇑iP	PKPdf	15 03 39.1	-0.8
OKC	Ostrava-Krasne	144.54	347	ePKP	PKPdf	15 03 38.7	-1.3
CRVS	Cervenica-Dubn	144.54	342	ePKP	PKPdf	15 03 38.6	-1.5
MORC	Moravsky Berou	144.72	347	⇓iP	PKPdf	15 03 39.0	-1.4
GZT	Gaziantep	144.79	314	i P	PKPdf	15 03 40.7	-0.2
CTKT	Corum	144.82	321	i P	PKPdf	15 03 40.8	0.0
KMBO	Kilima Mbogo	145.02	244	PKP	PKPdf	15 03 42.6	+0.6
	0.8nm,0.5s,baz=173,slow=8.3,SNR=4.6						
PRU	Pruhonice	145.08	351	ePKP	PKPdf	15 03 40.3	-0.7
PRU				ex	x	15 03 45.1	
NKC	Novy Kostel	145.13	353	ePKP	PKPdf	15 03 40.7	-0.4
KECS	Kecovo	145.20	343	ePKP	PKPdf	15 03 40.9	-0.3
VRI	Vrincioaia	145.28	334	⇓iP	PKPbc	15 03 41.6	+0.2
TREC	Trest	145.59	349	ePKP	PKPdf	15 03 42.2	+0.3
VYHS	Vyhne	145.63	345	ePKP	PKPdf	15 03 42.1	+0.1
HARR	Harsova	145.69	332	⇑iP	PKPdf	15 03 42.7	+0.5
ELDT	Eldivan	145.73	322	i P	PKPdf	15 03 43.5	+1.1
GRA1	Grafenberg Arr	145.80	354	ePKP	PKPdf	15 03 43.0	+0.8
AVNT	Avonos	145.85	318	i P	PKPdf	15 03 43.3	+0.6
PSZ	Piszkesteto	145.88	343	⇓iP	PKPdf	15 03 44.5	+2.1
MLR	Muntele Rosu	145.91	335	⇑iP	PKPdf	15 03 43.8	+1.3
DRGR		146.02	339	⇑iP	PKPdf	15 03 43.5	+0.8
KHC	Kasperske Hory	146.06	351	ePKP	PKPdf	15 03 44.6	+1.9
VOIR		146.31	336	⇓iP	PKPdf	15 03 44.4	+1.2
GERES	GERESS Array B	146.32	351	PKPbc	PKPbc	15 03 44.3	-0.1
	1.3nm,0.6s,baz=21,slow=4.4,SNR=10						
FLN	La Foliniere	146.54	8	ePKP1	PKPbc	15 03 43.4	-1.7
LDF	La Druitiere	146.75	8	ePKP1	PKPbc	15 03 43.9	-1.8
GRR	Gorron	146.86	9	ePKP1	PKPbc	15 03 45.1	-0.9
MOA	Molln	147.20	350	⇑iP	PKPbc	15 03 46.9	0.0
	comp=Z,5.4nm,0.9s						
GZR	Gura Zlata	147.21	338	⇓iP	PKPbc	15 03 47.7	+0.6
CDF	Champ du Feu	147.32	359	ePKP1	PKPbc	15 03 45.7	-1.6
	8.1nm,0.8s						
BFO	Black Forest	147.37	357	ePKPbc	PKPbc	15 03 47.0	-0.5
BZS	Buzias	147.42	340	⇓iP	PKPbc	15 03 47.7	0.0
HAU	Haudompre	147.74	360	ePKP1	PKPbc	15 03 46.8	-1.7
	12nm,0.8s						
LOR	Lormes	148.42	3	ePKP1	PKPbc	15 03 48.6	-1.7
	20nm,1.1s						
SSF	Saint Saulge	148.61	3	ePKP1	PKPbc	15 03 49.2	-1.6
	20nm,1.0s						
CABF	La Chapelle	149.14	0	ePKP1	PKPbc	15 03 51.1	-1.0
	73nm,1.2s						

*IDC **10** 14:44:22.4±0.9, 499S×13974E, h0km, mb3.6/3, mb1 4.0/9, mb1mx3.9/14, mbtmp3.9/9, ML3.7/5, MS3.3/2, Ms1 3.3/2, ms1mx3.1/23, Error ellipse: s-maj=27.3km s-min=19.4km az=83.0*

*ISCJB **10** 14:44:24.0±0.8, 524S±007×13991E±005, h33km, mb3.6/3, Error ellipse: s-maj=9.7km s-min=7.4km az=177.5*

ISC 10 14:44:26.5±0.8, 522S±007×13985E±005, h35km, n13, σ0s93/15, mb3.6/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.36	120	Pn	Pn	14 46 25.6	+0.5
	0.7nm,0.3s,baz=311,slow=5.2,SNR=6.0						
PMG				Sn	Sn	14 47 57.6	-0.8
	0.5nm,0.3s,baz=26,slow=14,SNR=2.4						
PMG				LR	LR	14 49 54.2	
	comp=Z,124nm,19.0s,baz=40,slow=39						
WB2	Warramunga Arr	15.59	200	eP	Pn	14 48 03.8	+0.2
WRA	Warramunga Arr	15.59	200	Pn	Pn	14 48 03.8	+0.1
	0.3nm,0.3s,baz=23,slow=12,SNR=20						
WRA				Sn	Sn	14 50 54.6	-0.8
	0.2nm,0.3s,baz=17,slow=21,SNR=3.9						
WRA				Lg		14 52 41.8	
	0.3nm,0.3s,baz=13,slow=24,SNR=3.4						
WRA				LR	LR	14 54 24.9	
	comp=Z,174nm,19.1s,baz=30,slow=38						
CTA	Charters Tower	16.04	158	Pn	Pn	14 48 14.2	+4.7
	baz=336,slow=13,SNR=3.5						
CTA				Lg		14 52 55.0	
	0.2nm,0.3s,baz=237,slow=18,SNR=5.3						
BATI	Kupang	16.79	252	Pn	Pn	14 48 17.6	-1.5
	0.6nm,0.3s,baz=48,slow=12,SNR=2.1						
BATI				Sn	Sn	14 51 24.6	-0.1
	0.9nm,0.3s,baz=247,slow=24,SNR=4.0						
FITZ	Fitzroy Crossi	18.89	226	eP	Pn	14 48 45.8	+0.9
	4.3nm,0.6s						
FITZ	Fitzroy Crossi	18.89	226	P	Pn	14 48 45.9	+1.0
	0.3nm,0.3s,baz=56,slow=14,SNR=8.3						
FITZ				S	S	14 52 09.2	-7.6
	0.4nm,0.3s,baz=171,slow=10,SNR=5.3						
ASAR	Alice Springs	19.22	197	P	Pn	14 48 51.4	+2.6
	0.7nm,0.3s,baz=28,slow=9.7,SNR=56						
SONM	Songino Array	60.46	335	P	P	14 54 31.8	-0.8
	0.2nm,0.3s,mb3.6,baz=156,slow=8.4,SNR=2.7						
MKAR	Makanchi Array	72.46	323	P	P	14 55 49.5	0.0
	0.8nm,0.7s,mb3.8,baz=108,slow=7.8,SNR=7.6						
ZALV	Zalesovo Beam	74.66	330	P	P	14 56 02.9	+0.6
	0.3nm,0.4s,mb3.6,baz=123,slow=5.3,SNR=4.4						
LPAZ	La Paz	145.03	128	PKPbc	PKPbc	15 04 03.2	+2.7
	1.3nm,0.8s,baz=257,slow=3.3,SNR=5.2						
SIV	San Ignacio	150.45	136	PKPbc	PKPbc	15 04 17.3	+1.9
	1.9nm,0.8s,baz=217,slow=7.4,SNR=6.3						

*ISCJB **10** 14:53:01.6±1.6, 2022S±010×689W±02, h122km±15km, mb3.9/6, Error ellipse: s-maj=26.6km s-min=16.1km az=0.9*

*IDC **10** 14:53:02.1±2.5, 2016S×6897W, h110km±21km, mb3.7/6, mb1 4.0/8, mb1mx3.8/16, mbtmp3.8/8, Error ellipse: s-maj=26.1km s-min=18.7km az=70.0*

ISC 10 14:53:02.5±1.5, 2022S±010×689W±02, h114km±14km, n14, σ0s92/9, mb3.9/6, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.98	11	P	Pn	14 54 02.9	+1.2
	7.6nm,0.3s,baz=190,slow=8.6,SNR=196						
SIV	San Ignacio	8.54	62	P	Pn	14 55 02.4	-1.0
	7.0nm,0.3s,baz=251,slow=12,SNR=136						
CFAA	Coronel Fontan	11.36	177	P	Pn	14 55 40.7	-0.5
	0.1nm,0.3s,baz=357,slow=14,SNR=4.3						
TXAR	Lajitas Array	59.59	325	P	P	15 02 52.8	-1.6
	0.2nm,0.6s,mb3.3,baz=169,slow=10,SNR=3.1						
SNAA	Sanae	63.48	161	P	P	15 03 21.4	+1.4
	1.9nm,0.9s,mb4.0,baz=233,slow=5.1,SNR=4.0						
DBIC	Dimbokro	68.36	74	P	P	15 03 52.4	+0.2
	3.6nm,0.6s,mb4.4,baz=247,slow=6.9,SNR=8.3						
NVAR	Mina Array Bea	74.50	322	P	P	15 04 29.0	+0.5
	0.6nm,0.8s,mb3.4,baz=154,slow=6.7,SNR=4.2						
TORD	Torodi Ar. Bea	76.91	71	P	P	15 04 42.9	+0.1
	2.7nm,0.5s,mb4.2,baz=260,slow=4.6,SNR=6.7						
YKA	Yellowknife Ar	89.99	341	P	P	15 05 48.1	-0.4
	1.2nm,0.6s,mb4.2,baz=133,slow=4.6,SNR=28						
ASAR	Alice Springs	131.05	208	PKP	PKPdf	15 12 00.8	-0.8
	0.3nm,0.5s,baz=134,slow=1.6,SNR=5.6						
WRA	Warramunga Arr	134.06	211	PKP	PKPdf	15 12 07.3	+0.1
	0.4nm,0.7s,baz=153,slow=1.8,SNR=5.5						
ZALV	Zalesovo Beam	140.79	24	PKP	PKPdf	15 12 17.6	-1.0
	0.4nm,0.5s,baz=332,slow=5.7,SNR=3.3						
MKAR	Makanchi Array	144.58	35	PKP	PKPdf	15 12 25.1	-0.4
	0.3nm,0.4s,baz=322,slow=3.6,SNR=4.4						
SONM	Songino Array	152.19	7	PKPbc	PKPbc	15 12 45.3	+0.8
	0.4nm,0.6s,baz=284,slow=1.1,SNR=7.3						

*IDC **10** 15:05:38.9±0.7, 2256S×17593W, h0km, mb4.3/11, mb1 4.6/12, mb1mx4.4/17, mbtmp4.4/12, ML4.8/1, MS4.3/14, Ms1 4.3/14, ms1mx4.1/25, Error ellipse: s-maj=27.1km s-min=16.3km az=148.0*

*BJI **10** 15:05:44.2, 2250S×17600W, h40km, mB5.4, mb5.1, Ms5.3, Msz4.9*

*ISCJB **10** 15:05:44.1±0.3, 2251S±008×17603W±007, h41km, mb4.8/31, MS4.5/17, Error ellipse: s-maj=13.3km s-min=8.0km az=148.4*

*GCMT **10** 15:05:45.3±0.3, 2260S×17557W, h39km±1km, MW5.1/61, Moment Tensor Solution. s33,c44; s61,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.90±.30; $M_{\theta\theta}$-5.51±.18; $M_{\phi\phi}$0.60±.20; $M_{r\theta}$2.04±.20; $M_{\theta\phi}$0.26±.12; $M_{\phi r}$-2.01±.20; Best double couple: $M_0$5.97000×10^{16} NP1:ϕ_s254.00000°, δ37.00000°, λ58.00000°. NP2: ϕ_s111.00000°, δ59.00000°, λ112.00000°. Principal axes: T 5.9810, Plg68.0000°, Azm65.0000°; N -0.0250, Plg18.0000°, Azm280.0000°; P -5.9590, Plg12.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 15:05:45.3±0.2, 2249S×17605W, mb5.0/14 Error ellipse: s-maj=11.2km s-min=6.7km az=143.0*

*MOS **10** 15:05:49.1±3.0, 2113S×17655W, h33km, mb5.2/12, Error ellipse: s-maj=15.6km s-min=11.6km az=137.7*

ISC 10 15:05:45.7±0.3, 2257S±008×17600W±007, h43km±1.7km: pP-P, n152, σ0s82/80, mb4.8/31, MS4.5/17, 13C-5D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.50	26	ePn	Pn	15 07 55.4	-4.7
	104nm,1.1s						
AFI				eSn	Sn	15 09 31.6	-14
AFI	Afiamalu	9.50	26	eP	Pn	15 07 55.4	-4.7
AFI				e		15 09 31.6	
AFI				pmax	pmax		
	comp=Z,104nm,1.1s						
AFI	Afiamalu	9.50	26	Pn	Pn	15 07 53.8	-6.2
	comp=Z,4.7nm,0.3s,baz=203,slow=13,SNR=8.8						
AFI				Sn	Sn	15 09 29.6	-16
	comp=Z,7.3nm,0.3s,baz=214,slow=18,SNR=3.1						
FUNA	Funafuti	14.71	341	ePn	Pn	15 09 06.9	-4.2
RAR	Rarotonga	15.12	88	LR	LR	15 13 36.0	
	comp=Z,678nm,20.9s,baz=21,slow=32						
DZM	Mont Dzumac	16.26	268	Pn	Pn	15 09 41.4	+10
	comp=Z,0.3nm,0.3s,baz=94,slow=18,SNR=5.9						
DZM				LR	LR	15 13 16.3	
	comp=Z,413nm,19.6s,baz=312,slow=28						
URZ	Urewera	16.72	199	Pn	Pn	15 09 35.6	-1.1
	comp=Z,3.3nm,0.3s,baz=14,slow=3.3,SNR=33						
URZ				Sn	Sn	15 12 32.8	-8.6
	comp=Z,2.9nm,0.3s,baz=340,slow=20,SNR=19						
URZ	Urewera	16.72	199	ePN	Pn	15 09 32.4	-4.4
PXZ	Pawanui	18.43	198	ePN	Pn	15 09 50.7	-7.2
THZ	Tophouse	21.28	203	ePN	P	15 10 24.7	-3.8
KHZ	Kahutara	21.63	201	ePN	P	15 10 27.8	-4.5
RPZ	Rata Peaks	23.65	204	P	P	15 10 52.1	-1.0
	comp=Z,5.6nm,0.6s,mb4.2,baz=66,slow=10.0,SNR=8.0						
TBI	Tubuai	24.44	97	eLQ		15 15 34.8	
	comp=Z,709nm,31.8s						
TBI				eLR	LR	15 16 37.0	
	comp=Z,1μm,28.8s,baz=267						
PPT	Papeete	25.30	83	eLR	LR	15 17 10.2	
	comp=Z,2μm,26.5s,baz=249						
PPT	Papeete	25.30	83	LR	LR	15 17 52.9	
	comp=Z,1μm,21.1s,MS4.3,baz=243,slow=29						
HNR	Honiara	26.50	296	LR	LR	15 18 40.8	
	comp=Z,151nm,19.4s,MS3.5,baz=180,slow=29						
CTA	Charters Tower	35.19	267	eP	P	15 12 36.7	+0.8
	comp=Z,12nm,0.7s,mb4.9						
CTA	Charters Tower	35.19	267	eP	P	15 12 36.7	+0.8
CTA				pmax	pmax		
	comp=Z,12nm,0.7s						
CTA	Charters Tower	35.19	267	P	P	15 12 36.7	+0.8
	comp=Z,2.9nm,0.4s,mb4.6,baz=96,slow=11,SNR=17						
CTA				LR	LR	15 24 55.2	
	comp=Z,199nm,18.7s,MS3.9,baz=88,slow=33						
CTAO	Charters Tower	35.19	267	eP	P	15 12 36.6	+0.7
	comp=Z,15nm,0.7s,mb5.0						
CTAO				epP	pP	15 12 46.5	-1.0
CTAO	Charters Tower	35.19	267	eP	P	15 12 36.6	+0.7
CTAO				e*PP	pP	15 12 46.5	-1.1
CTAO				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
PMG	Port Moresby	37.64	284	eP	P	15 12 58.0	+1.1
	comp=Z,28nm,1.1s,mb4.9						
PMG	Port Moresby	37.64	284	⇓eP	P	15 12 57.4	+0.5
PMG	Port Moresby	37.64	284	P	P	15 12 57.4	+0.5
	comp=Z,24nm,1.0s,mb4.9,baz=74,slow=7.4,SNR=9.4						
PMG				LR	LR	15 27 18.4	
	comp=Z,347nm,18.0s,MS4.2,baz=98,slow=34						
RKT	Rikitea	37.72	99	eLR	LR	15 22 59.1	
	comp=Z,885nm,27.5s,baz=277						
STKA	Stephens Creek	38.63	247	eP	P	15 13 05.4	+0.4
	comp=Z,3.5nm,1.0s,mb4.0						
STKA	Stephens Creek	38.63	247	P	P	15 13 04.7	-0.3
	comp=Z,2.5nm,0.9s,mb4.0,baz=107,slow=11,SNR=6.4						
STKA				LR	LR	15 27 43.6	
	comp=Z,543nm,19.1s,MS4.4,baz=67,slow=34						
ASAR	Alice Springs	45.90	258	P	P	15 14 03.5	-0.8
	comp=Z,2.2nm,0.6s,mb4.3,baz=100,slow=6.9,SNR=22						
ASAR				PcP	PcP	15 15 40.5	-0.4
	comp=Z,0.7nm,0.5s,baz=109,slow=4.1,SNR=2.5						
WB2	Warramunga Arr	46.18	264	eP	P	15 14 05.7	-0.9
WRA	Warramunga Arr	46.19	264	P	P	15 14 06.0	-0.7
	comp=Z,1.1nm,0.4s,mb4.2,baz=91,slow=8.4,SNR=28						
WRA				LR	LR	15 32 15.7	
	comp=Z,411nm,19.3s,MS4.4,baz=130,slow=34						
FITZ	Fitzroy Crossi	54.62	263	P	P	15 15 10.3	-0.1
	comp=Z,3.5nm,1.0s,mb4.3,baz=128,slow=12,SNR=2.9						
BATI	Kupang	58.84	272	P	P	15 15 43.6	+3.2
	comp=Z,5.4nm,0.6s,mb4.8,baz=238,slow=9.5,SNR=2.4						
QSPA	South Pole Qui	67.51	180	eP	P	15 16 38.7	+1.9
	comp=Z,15nm,1.3s,mb4.9						
MJAR	Matsushiro Arr	72.98	323	P	P	15 17 09.3	-1.5
	comp=Z,1.7nm,0.8s,mb4.1,baz=156,slow=5.9,SNR=4.9						
YSS	Yuzh-Sakhalins	78.58	333	i P	P	15 17 41.1	-1.5
YSS				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.8						
KSRS	Korea Array	79.67	318	LR	LR	15 47 30.5	
	comp=Z,150nm,20.9s,MS4.3,baz=350,slow=32						
CMB	Columbia Colle	79.74	41	eP	P	15 17 48.6	-0.6
	comp=Z,7.6nm,1.1s,mb4.5						
CMB	Columbia Colle	79.74	41	eP	P	15 17 48.6	-0.6
CMB				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
OHCM	Honcut	79.91	40	eP	P	15 17 49.5	-0.6
MAW	Mawson	80.25	199	LR	LR	15 51 29.4	
	comp=Z,330nm,18.2s,MS4.7,baz=85,slow=34						
DAC	Darwin (Calif)	80.42	44	eP	P	15 17 52.1	-0.8
SSE	Sheshan	80.44	309	P	P	15 17 54.5	+1.4
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				LR	LR		
	comp=N,195nm,22.3s,MS4.4						
SSE				LR	LR		
	comp=E,51nm,22.4s,MS4.4						
SSE				LR	LR		
	comp=Z,213nm,23.2s,MS4.4						
MTUM	Tungsten Hills	80.45	43	eP	P	15 17 53.3	+0.3
MTUM				epP	pP	15 18 06.3	+0.5
WAKR	Walker	80.62	42	eP	P	15 17 54.2	+0.3
YBH	Yreka Blue Hor	80.77	37	eP	P	15 17 55.3	+0.7
NVAR	Mina Array Bea	81.27	42	P	P	15 17 57.8	+0.4
	comp=Z,1.1nm,0.5s,mb4.1,baz=215,slow=7.6,SNR=18						
TPNV	Topopah Spring	81.69	44	eP	P	15 17 59.4	-0.2
	comp=Z,30nm,1.8s,mb4.9						
TPNV	Topopah Spring	81.69	44	eP	P	15 17 59.4	-0.2
TPNV				pmax	pmax		
	comp=Z,30nm,1.8s,mb4.9						
SHPR	Sheep Range	82.14	45	eP	P	15 18 02.2	+0.2
MOD	Modoc	82.25	38	eP	P	15 18 02.8	+0.4
NJ2	Nanjing	82.63	309	eP	P	15 18 05.2	+0.5
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
TUC	Tucson	82.81	51	eP	P	15 18 06.2	+0.6
HABR	Khabarovsk	83.16	330	P	P	15 18 05.2	-1.8
HABR				e		15 18 10.5	
HABR				eS	S	15 28 20.8	-2.9
MDJ	Mudanjiang	83.28	324	P	P	15 18 08.9	+1.2
MDJ				AMB	AMB		
	comp=Z,289nm,4.6s						
WUAZ	Wupatki	84.12	48	eP	P	15 18 13.0	+0.7
	comp=Z,27nm,1.4s,mb5.2						
SYO	Syowa Base	85.11	192	⇑ePcP	PcP	15 18 26.4	+6.5
MSU	Marysvale	85.22	45	eP	P	15 18 18.2	+0.5
MSU				epP	pP	15 18 31.5	+0.9
HAWA	Hanford	85.53	35	eP	P	15 18 19.3	+0.2
	comp=Z,30nm,1.5s,mb5.3						
BMO	Blue Mountains	85.79	38	eP	P	15 18 20.0	-0.4
VNA3	Neumayer Olymp	85.95	176	eP	P	15 18 21.6	+0.7
VNA3				e		15 18 24.6	
VNA3				e	pP	15 18 31.0	-2.8
VNA3				e	pP	15 18 33.5	-0.3
GAMB	Gambell	86.13	2	eP	P	15 18 21.2	-0.4
VNA2	Neumayer--Watz	86.41	176	eP	P	15 18 24.0	+0.8
	baz=173,slow=1.9						
VNA2				e		15 18 27.6	
VNA2				e	pP	15 18 33.6	-2.5
VNA2				e	pP	15 18 36.2	+0.1
MNTX	Cornudas Mount	86.45	54	eP	P	15 18 23.5	-0.5
	comp=Z,23nm,1.4s,mb5.2						
TXAR	Lajitas Array	86.62	56	P	P	15 18 24.9	0.0
	comp=Z,5.6nm,1.1s,mb4.7,baz=212,slow=4.4,SNR=29						
TXAR				LR	LR	15 52 03.3	
	comp=Z,216nm,18.6s,MS4.6,baz=60,slow=32						
LTX	Lajitas	86.62	56	eP	P	15 18 24.8	-0.1
	comp=Z,23nm,1.4s,mb5.2						
LTX	Lajitas	86.62	56	eP	P	15 18 24.8	-0.1
LTX				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.2						
HLID	Hailey	86.69	40	eP	P	15 18 24.4	-0.5
ANMO	Albuquerque	87.26	50	eP	P	15 18 28.1	+0.3
	comp=Z,14nm,1.3s,mb5.0						
ANMO	Albuquerque	87.26	50	eP	P	15 18 28.1	+0.2
ANMO				pmax	pmax		
	comp=Z,14nm,1.3s						
NEW	Newport	87.98	35	LR	LR	15 49 44.7	
	comp=Z,509nm,20.7s,MS4.9,baz=215,slow=30						
MCK	McKinley	88.60	12	eP	P	15 18 33.0	-0.5
	comp=Z,18nm,1.1s,mb5.3						
MCK				epP	pP	15 18 46.3	-0.2
MCK	McKinley	88.60	12	eP	P	15 18 33.0	-0.5
MCK				e*PP	pP	15 18 46.3	-0.2
MCK				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.3						
SMCO	Snowmass	89.02	47	eP	P	15 18 31.3	-4.8
GYA	Guiyang	89.28	299	P	P	15 18 39.2	+1.5
GYA				AP	pP	15 18 52.7	+2.1
GYA				XP	sP	15 18 58.2	+2.8
GYA				PP	PP	15 22 12.4	+3.3
GYA				SKS		15 29 03.4	
GYA				S	S	15 29 23.0	-1.4
GYA				XS	sS	15 29 44.9	-1.1
GYA				SS	SS	15 35 21.2	+1.1
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.5						
GYA				AMB	AMB		
	comp=Z,140nm,5.8s						
GYA				LR	LR		
	comp=N,590nm,18.6s,MS5.1						
GYA				LR	LR		
	comp=E,400nm,18.5s,MS5.1						
GYA				LR	LR		
	comp=Z,680nm,19.2s,MS5.1						
SDCO	Great Sand Dun	89.31	48	eP	P	15 18 37.4	-0.1
BOZ	Bozeman (W)	89.51	39	eP	P	15 18 38.2	0.0
COLA	College	89.84	12	eP	P	15 18 38.4	-0.9
	comp=Z,6.1nm,1.0s,mb4.9						
COLA				epP	pP	15 18 49.8	-2.5
COLA	College	89.84	12	eP	P	15 18 38.4	-0.9
COLA				e*PP	pP	15 18 49.8	-2.5
COLA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
XAN	Xi'an	90.86	307	P	P	15 18 45.1	+0.2
XAN				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.6						
DAWY	Dawson	90.95	15	eP	P	15 18 44.0	-0.5
DAWY				epP	pP	15 18 56.1	-1.3
EGAK	Eagle	91.13	14	eP	P	15 18 45.7	+0.3
EGAK				epP	pP	15 18 58.6	+0.3
KMI	Kunming	91.94	296	P	P	15 18 50.7	+0.6
KMI				AP	pP	15 19 03.0	0.0
KMI				XP	sP	15 19 07.8	0.0
KMI				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,83nm,6.5s						
HHC	Hu-ho-hao-te	92.13	314	eP	P	15 18 51.5	+1.0
HHC				AP	pP	15 19 04.8	+1.3
HHC				XP	sP	15 19 10.2	+1.9
HHC				PP	PP	15 22 33.5	+2.2
HHC				SKS		15 29 19.1	
HHC				S	S	15 29 46.9	-2.9
HHC				XS	sS	15 30 09.8	-1.7
HHC				SS	SS	15 36 00.0	-0.6
HHC				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb5.2						
HHC				AMB	AMB		
	comp=Z,116nm,6.1s						
HHC				LR	LR		
	comp=N,252nm,14.3s,MS5.1						
HHC				LR	LR		
	comp=E,379nm,14.3s,MS5.1						
HHC				LR	LR		
	comp=Z,311nm,15.5s,MS4.9						
CD2	Chengdu	93.47	302	eP	P	15 18 57.4	+0.4
CD2				AP	pP	15 19 10.9	+0.9
CD2				XP	sP	15 19 16.1	+1.4
CD2				PP	PP	15 22 44.6	+2.5
CD2				SKS		15 29 26.3	
CD2				S	S	15 29 58.8	-3.3
CD2				XS	sS	15 30 21.7	-2.2
CD2				SS	SS	15 36 20.1	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,30nm,9.2s						
CD2				LR	LR		
	comp=N,140nm,16.8s,MS4.8						
CD2				LR	LR		
	comp=E,280nm,18.0s,MS4.8						
CD2				LR	LR		
	comp=Z,180nm,16.8s,MS4.6						
YAK	Yakutsk	94.73	337	⇑eP	P	15 19 01.4	-0.6
YAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
YAK				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.4						
JTS	JuntasAbangare	94.84	81	LR	LR	15 53 04.1	
	comp=Z,256nm,18.5s,MS4.7,baz=10.0,slow=30						
YKA	Yellowknife Ar	97.62	24	P	P	15 19 14.7	-0.4
YKA				LR	LR	15 56 49.9	
YKA	Yellowknife Ar	97.62	24	P	P	15 19 14.7	-0.4
	comp=Z,0.4nm,0.7s,mb4.0,baz=232,slow=4.6,SNR=7.0						
YKA				LR	LR	15 56 49.9	
	comp=Z,150nm,19.0s,MS4.5,baz=180,slow=32						
LHS	Liberty Hill	106.51	59	ePKiKP	PKiKP	15 24 07.6	+1.4
RES	Resolute Bay	109.26	16	ePKiKP	PKiKP	15 24 08.9	-1.3
ZALV	Zalesovo Beam	113.27	321	PKiKP	PKiKP	15 24 17.8	-0.5
	comp=Z,0.4nm,0.5s,baz=5.7,slow=1.4,SNR=2.8						
ZAL	Zalesovo	113.28	321	PKIKP	PKiKP	15 24 17.8	-0.6
MKAR	Makanchi Array	113.97	313	i PKIKP	PKiKP	15 24 17.7	-2.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	113.97	313	PKIKP	PKiKP	15 24 17.8	-2.1
MKAR	Makanchi Array	113.97	313	PKP	PKiKP	15 24 17.8	-2.1
	comp=Z,0.5nm,0.4s,baz=71,slow=0.8,SNR=6.4						
CPD	Cerro la Pandu	114.80	80	ePKiKP	PKiKP	15 24 20.5	-1.8
AAK	Ala-Archa	119.03	307	⇑iPKIKP	PKPdf	15 24 30.9	+1.1
ARU	Arti	127.96	325	ePKPdf	PKPdf	15 24 45.4	-1.0
ARU	Arti	127.96	325	i PKIKP	PKPdf	15 24 45.6	-0.9
ARU						15 26 44.3	
ARU						15 31 48.3	
ARU				SS	SS	15 43 48.6	-11
ARCES	ARCESS Array B	131.28	350	PKP	PKPdf	15 24 51.5	-1.0
ARCES	ARCESS Array B	131.28	350	PKP	PKPdf	15 24 51.5	-0.9
	comp=Z,2.1nm,0.8s,baz=67,slow=3.2,SNR=9.7						
APA	Apatity	131.41	345	⇑ePKIKP	PKPdf	15 24 53.0	+0.3
APA				pmax	pmax		
	comp=Z,43nm,1.2s						
FINES	FINESS Array B	138.27	344	PKP	PKPdf	15 25 04.7	-1.0
FINES	FINESS Array B	138.27	344	PKhKP		15 24 56.0	
	comp=Z,0.5nm,0.6s,baz=101,slow=1.4,SNR=4.4						
FINES				PKP	PKPdf	15 25 04.7	-1.0
	comp=Z,2.5nm,1.0s,baz=66,slow=1.7,SNR=3.5						
OBN	Obninsk	139.46	332	i PKIKP	PKPdf	15 25 09.9	+1.8
OBN				pmax	pmax		

	comp=Z,6.0nm,1.0s						
ERZM	Erzurum	144.00	307	i P	PKPdf	15 25 15.4	-1.3
ANN	Anapa	144.81	317	i PKHKP		15 25 15.9	
ANN				e		15 32 26.7	
ANN				pmax	pmax		
	comp=Z,37nm,1.3s						
MARD	Mardin	145.15	303	i P	PKPbc	15 25 18.4	0.0
SUW	Suwalki	145.42	340	ePKP	PKPdf	15 25 18.3	-0.4
KELT	Kelkit	145.45	309	i P	PKPdf	15 25 19.7	+0.5
AKASG	Malin Array Be	145.72	331	i PKHKP		15 25 17.8	
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	145.72	331	PKPbc	PKPbc	15 25 17.9	-1.8
	comp=Z,2.7nm,0.5s,baz=37,slow=4.1,SNR=24						
ELZG	Elazig	146.19	306	i P	PKPdf	15 25 22.6	+2.1
MALT	Malatya	146.66	306	ePKPdf	PKPdf	15 25 23.2	+1.9
MALT	Malatya	146.66	306	⇑iP	PKPbc	15 25 24.3	+1.3
GZT	Gaziantep	147.60	305	i P	PKPdf	15 25 25.2	+2.3
LVV	L'vov	148.57	335	ePKIKP	PKPbc	15 25 27.0	-0.8
OJC	Ojcow	149.75	340	ePKP	PKPbc	15 25 30.4	-0.3
BURAR	Bucovina Array	149.77	331	⇓P	PKPbc	15 25 31.6	+0.8
BURAR	Bucovina Array	149.77	331	⇓iP	PKPbc	15 25 31.6	+0.7
STHS	Stebnicka Huta	149.94	337	ePKP	PKPbc	15 25 30.9	-0.3
KOLS	Kolonicke sedl	149.97	336	ePKP	PKPbc	15 25 31.3	0.0
KOLS	Kolonicke sedl	149.97	336	ePKP	PKPbc	15 25 31.2	-0.1
KSP	Ksiaz	150.20	344	ePKP	PKPbc	15 25 31.9	+0.1
UZH	Uzhgorod	150.20	335c	iPKIKP	PKPbc	15 25 31.8	-0.1
UZH				e		15 25 39.4	
UZH				i		15 25 48.2	
NIE	Niedzica	150.27	338	ePKP	PKPbc	15 25 32.5	+0.5
CRVS	Cervenica-Dubn	150.29	336	ePKP	PKPbc	15 25 31.7	-0.4
CLL	Collm	150.48	349	⇓iPKP	PKPbc	15 25 32.1	-0.3
CLL	Collm	150.48	349	⇓iPKPbc	PKPbc	15 25 32.1	-0.3
	comp=Z,19nm,1.2s						
CLL				ePKPab	PKPab	15 25 38.0	-1.0
	comp=Z,7.0nm,1.1s						
CLL				i pPKPbc	pPKPbc	15 25 45.3	-0.4
CLL				i (pPKiKP)		15 25 47.4	
UPC	Upice	150.57	344	ePKPbc	PKPbc	15 25 32.6	-0.1
DPC	Dobruska-Polom	150.64	344	ePKPbc	PKPbc	15 25 33.0	+0.1
DPC				epPKP	pPKPdf	15 25 44.9	+4.1
BRG	Berggiesshubel	150.71	347	ePKP	PKPbc	15 25 32.2	-0.7
	comp=Z,10nm,1.1s						
BRG				i		15 25 44.8	
	comp=Z,9.5nm,0.9s						
MORC	Moravsky Berou	150.83	342	ePKPbc	PKPbc	15 25 32.7	-0.6
MORC	Moravsky Berou	150.83	342	⇑iP	PKPbc	15 25 33.0	-0.3
PVCC	Panska Ves	150.90	346	ePKPbc	PKPbc	15 25 33.4	0.0
MLR	Muntele Rosu	150.97	327	⇑P	PKPbc	15 25 33.5	-0.3
MLR	Muntele Rosu	150.97	327	⇑iP	PKPbc	15 25 33.5	-0.3
KECS	Kecovo	151.00	337	ePKP	PKPbc	15 25 34.5	+0.7
KECS				e		15 25 41.2	
MOX	Moxa	151.35	350	e(PKP)	PKPbc	15 25 34.7	+0.2
PRU	Pruhonice	151.41	346	ePKPbc	PKPbc	15 25 34.2	-0.5
PRU				epPKP	pPKPdf	15 25 45.9	+3.9
DRGR		151.50	332	⇑P	PKPbc	15 25 34.5	-0.5
DRGR		151.50	332	⇑iP	PKPbc	15 25 34.5	-0.5
VYHS	Vyhne	151.56	339	i PKP	PKPbc	15 25 34.7	-0.4
VYHS				i		15 25 44.0	
NKC	Novy Kostel	151.61	349	ePKPbc	PKPbc	15 25 34.9	-0.2
KOLL	Kolacno	151.63	340	ePKP	PKPbc	15 25 35.6	+0.4
KOLL				e		15 25 45.4	
KOLL	Kolacno	151.63	340	ePKP	PKPbc	15 25 35.6	+0.4
KOLL				e		15 25 45.4	
KHC	Kasperske Hory	152.43	346	ePKPbc	PKPbc	15 25 36.6	-0.4
KHC				ePKPab	PKPab	15 25 47.3	+0.1
GERES	GERESS Array B	152.67	346	PKPbc	PKPbc	15 25 36.7	-0.9
	comp=Z,1.6nm,0.8s,baz=346,slow=1.7,SNR=8.5						
GERES				PKPab	PKPab	15 25 47.4	-0.8
	comp=Z,1.6nm,0.9s,baz=112,slow=1.4,SNR=5.6						
BZS	Buzias	152.90	332	⇑P	PKPbc	15 25 37.3	-0.9
BZS	Buzias	152.90	332	⇑iP	PKPbc	15 25 37.3	-0.9
ESDC	Sonseca Array	161.66	20	PKPab	PKPab	15 26 27.6	+0.4
	comp=Z,0.3nm,0.3s,baz=330,slow=4.6,SNR=3.5						
TORD	Torodi Ar. Bea	170.37	166	PKP	PKPdf	15 25 50.1	+0.3
	comp=Z,0.3nm,0.5s,baz=201,slow=1.2,SNR=1.5						
TORD				PKPab	PKPab	15 27 05.3	-0.8
	comp=Z,0.4nm,0.4s,baz=180,slow=2.9,SNR=5.4						

IDC 10 15:10:24.0±3.2, 3150S×17751W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.6/11, mbtmp3.5/3, ML3.5/1, MS4.4/1, Ms1 4.4/1, ms1mx3.5/15, Error ellipse: s-maj=75.9km s-min=36.9km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.06	212	Pn	Pn	15 12 20.9	-1.5
	0.6nm,0.3s,baz=49,slow=19,SNR=10						
URZ				Sn	Sn	15 13 57.9	+3.7
	baz=108,slow=20,SNR=1.8						
RPZ	Rata Peaks	15.18	213	LR	LR	15 20 08.9	
	comp=Z,1μm,19.5s,baz=42,slow=38						
ASAR	Alice Springs	43.48	268	P	P	15 18 29.6	+0.4
	0.2nm,0.4s,baz=111,slow=7.6,SNR=3.7						
WRA	Warramunga Arr	44.57	273	P	P	15 18 37.4	-0.6
	0.2nm,0.4s,baz=110,slow=8.1,SNR=5.4						
FINES	FINESS Array B	146.31	340	PKPbc	PKPbc	15 30 05.3	-0.6
	2.1nm,0.9s,baz=64,slow=3.2,SNR=5.0						

IDC 10 15:23:24.4±5.2, 4623N×15305E, h84km±60km, mb3.5/7, mb1 3.6/8, mb1mx3.4/21, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=73.3km s-min=27.4km az=7.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.68	258	P	Pn	15 25 13.3	-0.1
	0.4nm,0.3s,baz=90,slow=10,SNR=4.3						
MKAR	Makanchi Array	47.14	298	P	P	15 31 48.0	+0.1
	0.3nm,0.2s,baz=65,slow=8.8,SNR=6.3						
YKA	Yellowknife Ar	51.37	36	P	P	15 32 19.9	0.0
	0.1nm,0.3s,baz=296,slow=7.3,SNR=4.0						
ARCES	ARCESS Array B	58.33	341	P	P	15 33 10.3	+0.3
	2.5nm,0.9s,baz=62,slow=11,SNR=3.0						
FINES	FINESS Array B	64.49	335	P	P	15 33 51.8	+0.2
	0.9nm,0.8s,baz=24,slow=5.2,SNR=3.9						
NOA	NORSAR Array B	68.70	341	P	P	15 34 17.9	-0.5
	1.8nm,0.9s,baz=28,slow=6.5,SNR=2.5						
AKASG	Malin Array Be	71.95	326	P	P	15 34 38.5	+0.1
	2.1nm,0.9s,baz=32,slow=6.4,SNR=4.4						
TXAR	Lajitas Array	77.79	60	P	P	15 35 12.7	+0.2
	0.7nm,0.6s,baz=301,slow=3.5,SNR=13						

NEIC 10 15:24:36.4, 1645N×9385W, h133km, MD4.0(MEX), After MEX.
MEX 10 15:24:36.4±1.2, 1645N×9385W, h133km±16km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.17	303	i P	Pn	15 25 00.1	-1.1
CMIG				i S	Sn	15 25 18.4	-1.7
SCX	San Cristobal	1.20	76	i P	Pn	15 25 00.1	-1.4
SCX				i S	Sn	15 25 19.3	-1.2
CCIG	Comitan	1.66	96	i P	Pn	15 25 06.0	-0.5
CCIG				i S	Sn	15 25 27.2	-2.2
TUIG	Tuzandepetl	1.66	341	i P	Pn	15 25 04.8	-1.8
TUIG				i S	Sn	15 25 27.0	-2.6
HUIG	Huatulco	2.27	253	i P	Pn	15 25 11.8	-2.1
HUIG				i S	Sn	15 25 41.5	-1.1
OXX	Oaxaca	2.82	283	i P	Pn	15 25 21.5	+0.7
VHO	Vista Hermosa	2.83	283	i P	Pn	15 25 21.3	+0.4
VHO				i S	Sn	15 25 52.9	-2.3
TPIG	Tehuac#an	3.88	301	i S	Sn	15 26 18.4	-1.4
UTMO	Huajuapan	4.02	290	i P	Pn	15 25 35.8	-0.7
UTMO				i S	Sn	15 26 20.9	-2.1
PPM	Popocatepetl	5.24	300	i P	Pn	15 25 54.4	+1.7
PPM				eP		15 25 55.0	
PPM				i S	Sn	15 26 54.1	+1.9
ACX	Acapulco	5.83	275	eP	Pn	15 25 58.6	-2.1
ACX				i S	Sn	15 26 53.8	-13

IDC 10 16:05:31.9±2.0, 075S×12760E, h0km, mb3.0/3, mb1 3.2/3, mb1mx3.1/14, mbtmp3.0/3, MS3.7/2, Ms1 3.7/2, ms1mx3.1/11, Error ellipse: s-maj=151.5km s-min=25.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.18	161	P	P	16 10 08.2	+0.1
	0.2nm,0.4s,baz=340,slow=11,SNR=7.6						
ASAR	Alice Springs	23.58	165	P	P	16 10 44.5	-0.1
	0.4nm,0.8s,baz=347,slow=11,SNR=4.4						
CBIJ	Chichi jima	31.04	26	LR	LR	16 23 34.8	
	comp=Z,234nm,18.8s,baz=167,slow=35						
JHJ	Hachijo jima 2	35.59	18	LR	LR	16 26 37.5	
	comp=Z,55nm,18.5s,baz=88,slow=36						
MKAR	Makanchi Array	61.73	326	P	P	16 15 52.1	+0.1
	0.1nm,0.3s,baz=120,slow=9.4,SNR=3.1						

IDC 10 16:16:00.0±66.0, 1796S×17563E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/11, mbtmp4.0/3, Error ellipse: s-maj=1157.0km s-min=139.7km az=76.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.67	239	P	P	16 22 43.3	+0.5
	1.6nm,0.8s,baz=96,slow=10,SNR=4.6						
WRA	Warramunga Arr	39.03	260	P	P	16 23 28.7	-0.1
	0.5nm,0.5s,baz=95,slow=7.9,SNR=26						
ASAR	Alice Springs	39.31	254	P	P	16 23 30.6	-0.4
	3.7nm,0.5s,baz=89,slow=7.8,SNR=137						

ISCJB 10 16:24:11.8±0.9, 869N±004×12647E±008, h76km±7km, mb4.1/21, Error ellipse: s-maj=13.4km s-min=5.7km az=171.4
IDC 10 16:24:12.3±5.4, 871N×12638E, h63km±51km, mb3.7/12, mb1 3.9/13, mb1mx3.8/19, mbtmp3.8/13, ML4.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/33, Error ellipse: s-maj=39.7km s-min=12.8km az=80.0
MAN 10 16:24:12, 866N×12641E, h28km, mb5.1, ML4.1, MS4.2
NEIC 10 16:24:14.3±1.5, 866N×12627E, h82km±14km, mb4.3/11, Error ellipse: s-maj=20.0km s-min=7.9km az=77.0
ISC 10 16:24:13.6±0.9, 869N±004×12640E±009, h75km±8km, n41, σ1s07/46, mb4.1/21, 4C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.50	185	⇑eP	Pn	16 24 22.6	-4.2
BIPH				eS	Sn	16 24 29.8	-6.9
SCPH	Surigao	1.41	321	eP	Pn	16 24 36.9	-0.7
SCPH				eS	Sn	16 24 54.5	-1.2
CGP	Cagayan de Oro	1.70	262	⇑iP	Pn	16 24 40.8	-0.6
CGP				i S	Sn	16 25 01.5	-1.0
DAV	Davao City (W)	1.80	207	ePn	Pn	16 24 42.0	-0.7
KCP	Kidapawan	2.11	218	⇑eP	Pn	16 24 46.7	-0.2
KCP				i S	Sn	16 25 13.3	+1.0
TBP	Tagbilaran	2.70	292	eP	Pn	16 24 55.3	+0.5
PLP	Palo	2.83	330	eP	Pn	16 24 56.3	-0.3
PLP				eS	Sn	16 25 31.4	+1.7
LLP	Lapu-Lapu	2.90	304	⇑eP	Pn	16 24 58.2	+0.7
LLP				eS	Sn	16 25 33.5	+2.2
JOW	Kunigami	18.14	5	P	Pn	16 28 22.2	+1.8
	1.4nm,0.3s,baz=159,slow=8.6,SNR=3.0						
BATI	Kupang	18.96	188	P	Pn	16 28 30.9	+0.5
	2.0nm,0.3s,baz=53,slow=3.6,SNR=6.6						
QIZ	Qiongzhong	19.07	304	P	Pn	16 28 29.7	-1.9
	4.2nm,0.7s						
FITZ	Fitzroy Crossi	26.63	182	eP	P	16 29 45.9	+0.7
	5.8nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	26.63	182	P	P	16 29 46.1	+0.9
	3.7nm,0.8s,mb4.0,baz=11,slow=10,SNR=18						
PMG	Port Moresby	27.39	131	LR	LR	16 40 10.9	
	comp=Z,69nm,19.2s,baz=80,slow=35						
KSRS	Korea Array	28.67	3	P	P	16 30 03.6	+0.3
	2.2nm,0.7s,mb3.9,baz=185,slow=9.8,SNR=8.6						
WRA	Warramunga Arr	29.50	165	P	P	16 30 09.9	-0.9
	0.8nm,0.7s,mb3.5,baz=342,slow=9.1,SNR=12						
MJAR	Matsushiro Arr	29.74	19	P	P	16 30 13.2	+0.4
	1.9nm,0.7s,mb3.8,baz=194,slow=9.5,SNR=6.5						
ASAR	Alice Springs	32.98	167	P	P	16 30 41.4	0.0
	0.4nm,0.3s,mb3.7,baz=338,slow=7.3,SNR=21						
ASAR				PcP	PcP	16 33 25.0	+1.0
	0.7nm,0.6s,baz=347,slow=2.5,SNR=8.3						
FORT	Forrest	39.27	178	eP	P	16 31 36.3	+1.3
	8.5nm,0.4s,mb4.9						
KLBR	Kellerberrin	40.89	191	eP	P	16 31 49.7	+1.3
MUN	Mundaring	41.59	193	eP	P	16 31 56.3	+2.2
NWAO	Narrogin (SRO)	42.29	191	P	P	16 31 58.0	-1.8
	32nm,1.4s,mb4.8						
SONM	Songino Array	42.54	340	P	P	16 32 00.8	-0.9
	0.3nm,0.6s,mb3.2,baz=153,slow=8.3,SNR=2.9						
SONM				PcP	PcP	16 33 53.8	+0.8
	0.5nm,0.8s,baz=158,slow=3.8,SNR=3.3						
STKA	Stephens Creek	42.87	161	eP	P	16 32 04.8	+0.3
	6.9nm,1.2s,mb4.3						
STKA	Stephens Creek	42.87	161	P	P	16 32 04.0	-0.5
	1.4nm,0.5s,mb3.9,baz=335,slow=7.9,SNR=4.5						
MKAR	Makanchi Array	53.36	323	P	P	16 33 25.4	+0.1
	1.2nm,0.6s,mb4.1,baz=122,slow=8.1,SNR=12						
MKAR				PcP	PcP	16 34 32.4	+0.5
	0.6nm,0.6s,baz=111,slow=5.3,SNR=4.3						
ZALV	Zalesovo Beam	56.07	332	P	P	16 33 44.0	-0.8
ZALV				PcP	PcP	16 34 41.3	-0.8
ZALV	Zalesovo Beam	56.07	332	P	P	16 33 44.0	-0.8
	0.4nm,0.4s,mb3.8,baz=134,slow=6.2,SNR=5.0						
ZALV				PcP	PcP	16 34 41.3	-0.8
	0.5nm,0.4s,baz=126,slow=2.5,SNR=2.9						
UCH	Uchtor	56.38	315	eP	P	16 33 48.9	+1.7
	1.7nm,0.6s,mb4.2						
AAK	Ala-Archa	56.54	316	eP	P	16 33 48.5	+0.3
	1.0nm,0.8s,mb3.9						
EKS2	Erkin-Say	57.04	316	P	P	16 33 52.8	+0.9
	1.2nm,0.6s,mb4.1						
KURK	Kurchatov	57.44	326	eP	P	16 33 53.5	-1.0
	2.8nm,0.9s,mb4.3						
TIXI	Tiksi	62.92	1	eP	P	16 34 32.0	+0.4
	2.4nm,0.8s,mb4.2						
BRVK	Borovoye	63.11	326	P	P	16 34 30.9	-2.3
	2.5nm,0.6s,mb4.3						
ARU	Arti	70.61	327	eP	P	16 35 19.9	-0.8
	3.4nm,0.5s,mb4.4						
JOF	Joensuu	84.65	333	ep	P	16 36 38.1	-0.6
ARCES	ARCESS Array B	85.72	340	P	P	16 36 44.0	+0.1
	1.4nm,0.7s,mb4.0,baz=86,slow=4.4,SNR=7.3						
KAF	Kangasniemi	87.08	332	ep	P	16 36 49.4	-1.4
FINES	FINESS Array B	87.34	332	P	P	16 36 51.5	-0.6
	0.7nm,0.4s,mb4.0,baz=98,slow=3.9,SNR=13						
YKA	Yellowknife Ar	95.14	24	P	P	16 37 28.6	+0.3
YKA	Yellowknife Ar	95.14	24	P	P	16 37 28.6	+0.3
	0.9nm,0.6s,mb4.3,baz=300,slow=4.6,SNR=18						

FUNV 10 16:34:53.0, 1151N×7225W, h14km, MW3.5, 2C-1D, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIRV	Villa del Rosa	1.01	189	⇓iP	Pb	16 35 11.6	-0.7
VIRV				eS	Sb	16 35 24.7	-0.8
IMOV	Isla Los Monje	1.56	57	eP	Pn	16 35 19.5	-0.9
IMOV				eS	Sn	16 35 39.5	-1.0
DABV	Dabajuro	1.69	110	eP	Pn	16 35 21.1	-1.0
DABV				eS	Sn	16 35 43.8	+0.3
QARV	Quebrada Arrib	2.13	127	eP	Pn	16 35 27.8	-0.5
QARV				eS	Sn	16 35 53.3	-1.2
SIQV	Siquisique	2.54	109	eP	Pn	16 35 33.2	-0.7
SIQV				eS	Sn	16 36 03.0	-1.7
CURV	Curarigua	2.69	123	⇑iP	Pn	16 35 35.3	-0.7
CURV				eS	Sn	16 36 05.6	-2.8
VIGV	El Vigia	2.79	162	eP	Pn	16 35 36.4	-0.9
VIGV				eS	Sn	16 36 08.3	-2.5
SANV	Sanarito	3.33	127	eP	Pn	16 35 44.7	-0.1
TEPV	Terepaima	3.37	117	eP	Pn	16 35 44.4	-0.9
SOCV	Socops	3.48	157	eP	Pn	16 35 46.2	-0.7
CAPV	Capacho	3.62	181	eP	Pn	16 35 48.4	-0.3
TURV	Turiamo	4.45	103	⇑iP	Pn	16 35 58.1	-2.1
BAUV	El Baul	4.86	121	eP	Pn	16 36 04.9	-0.9
BIRV	Birongo	5.96	99	eP	Pn	16 36 18.2	-2.7
MERV	Las Mercedes	6.27	110	eP	Pn	16 36 23.9	-1.3
CUPV	Cœpira	6.51	102	eP	Pn	16 36 26.6	-1.9
CAOV	Caicara del Or	7.17	125	eP	Pn	16 36 34.9	-2.7
PCRV	Puerto La Cruz	7.59	99	eP	Pn	16 36 42.2	-1.2

ISCJB 10 16:53:26.7±4.4, 4.1S±02×103.1E±02, h133km±38km, mb4.0/9, Error ellipse: s-maj=49.7km s-min=14.0km az=39.7
IDC 10 16:53:30.2±4.0, 408S×10320E, h145km±32km, mb3.5/7, mb1 3.6/7, mb1mx3.4/18, mbtmp3.5/7, Error ellipse: s-maj=56.0km s-min=12.2km az=49.0
ISC 10 16:53:29.4±4.2, 41S±02×1031E±02, h140km±37km, n12, σ0s60/11, mb4.0/9, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	21.23	108	P	P	16 58 04.2	-0.2
	7.2nm,0.4s,mb4.4,baz=70,slow=2.2,SNR=9.2						
WRA	Warramunga Arr	34.22	120	P	P	17 00 01.8	-0.1
	0.3nm,0.4s,mb3.4,baz=310,slow=9.0,SNR=22						
WRA				PcP	PcP	17 02 36.1	+0.4
	0.4nm,0.4s,baz=302,slow=2.2,SNR=7.2						
ASAR	Alice Springs	35.47	126	P	P	17 00 12.9	+0.3
	0.5nm,0.3s,mb3.6,baz=297,slow=7.8,SNR=35						
ASAR				PcP	PcP	17 02 40.2	+1.0
	0.7nm,0.4s,baz=307,slow=2.4,SNR=10.0						
ASAR				S	S	17 05 37.5	-0.1
	0.6nm,0.6s,baz=298,slow=15,SNR=6.2						
SONM	Songino Array	51.83	3	P	P	17 02 24.1	+1.2
	1.0nm,0.6s,mb3.6,baz=186,slow=9.1,SNR=12						
MKAR	Makanchi Array	53.95	342	P	P	17 02 38.0	-0.5
	0.8nm,0.4s,mb3.8,baz=142,slow=8.0,SNR=14						
ZALV	Zalesovo Beam	59.87	348	P	P	17 03 19.0	-1.1
	0.7nm,0.3s,mb3.9,baz=177,slow=6.7,SNR=6.8						
NAY	Al-Naaiem	63.00	306	eP	P	17 03 41.5	-0.2
NAY				AMb	AMB	17 03 44.5	
	comp=Z,7.2nm,0.6s,mb4.7						
MIB	Mutribah	63.13	306	eP	P	17 03 43.3	+0.7
MIB				AML	AML	17 03 45.3	
	comp=Z,2.4nm,0.5s						
RST	Umm Al-Ruwaisa	63.30	306	eP	P	17 03 43.3	-0.3
RST				AMb	AMB	17 03 44.2	
	comp=Z,5.4nm,0.4s,mb4.7						
FINES	FINESS Array B	87.45	332	P	P	17 06 01.0	+0.2
	comp=Z,0.5nm,0.4s,mb3.7,baz=117,slow=6.1,SNR=9.5						
CFAA	Coronel Fontan	143.53	192	PKP	PKPdf	17 12 47.0	-1.1
	comp=Z,0.4nm,0.7s,baz=267,slow=2.0,SNR=4.7						
TXAR	Lajitas Array	144.31	42	PKP	PKPdf	17 12 49.3	-0.2
	comp=Z,0.4nm,0.7s,baz=243,slow=1.0,SNR=6.4						

WEL 10 16:54:06.7±0.2, 3684S×17689E, h281km±2km, ML3.5/11, Error ellipse: s-maj=3.8km s-min=2.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.43	173	PN	Pn	16 54 47.6	+0.2
URZ				SN	S	16 55 19.2	-0.6
MWZ	Matawai	1.58	161	PN	Pn	16 54 48.8	+0.4
MWZ				SN	S	16 55 21.4	-0.2
PUZ	Puketiti	1.65	139	PN	Pn	16 54 49.0	+0.1
PUZ				eSN	S	16 55 21.4	-1.1
KNZ	Kokohu	2.27	164	PN	Pn	16 54 54.2	+0.2
BKZ	Black Stump Fm	2.35	188	PN	Pn	16 54 55.0	+0.3
PXZ	Pawanui	3.19	180	PN	Pn	16 55 03.0	0.0
PXZ				SN	S	16 55 47.2	-0.6
TSZ	Takapari Road	3.30	192	PN	Pn	16 55 04.3	+0.2
MRZ	Mangatainoka R	3.95	195	PN	Pn	16 55 10.6	-0.7
MRZ				SN	S	16 56 01.4	-1.5
KIW	Kapiti Island	4.30	200	PN	Pn	16 55 14.6	-0.6
TCW	Tory Channel	4.82	204	PN	Pn	16 55 20.5	-0.7
TUWZ	Tuamarina	5.12	206	PN	Pn	16 55 23.7	-1.1
QRZ	Quartz Range	5.24	219	ePN	Pn	16 55 24.1	-2.1
THZ	Tophouse	5.81	211	PN	Pn	16 55 32.0	-1.0
KHZ	Kahutara	6.14	204	PN	Pn	16 55 36.0	-1.0
DSZ	Denniston Nort	6.29	217	PN	Pn	16 55 37.5	-1.4
LTZ	Lake Taylor	6.92	209	PN	Pn	16 55 44.6	-2.0

ISCJB 10 17:02:50.4±0.3, 7421N±004×88E±02, h10km, mb4.0/29, Error ellipse: s-maj=8.4km s-min=5.3km az=147.3
IDC 10 17:02:50.9±0.8, 7419N×893E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.8/22, mbtmp3.8/13, ML3.3/2, Error ellipse: s-maj=19.5km s-min=13.8km az=42.0
MOS 10 17:02:50.4±1.5, 7425N×900E, h10km, mb4.7/23, Error ellipse: s-maj=37.7km s-min=6.7km az=97.3
NEIC 10 17:02:51.7±0.3, 7428N×890E, h10km, mb4.2/18, Error ellipse: s-maj=8.4km s-min=5.7km az=63.0
BER 10 17:02:52.9±3.6, 7436N×900E, h0km±999km
CSEM 10 17:02:52.2±0.3, 7439N×953E, h10km, mb4.2, After HEL
HEL 10 17:02:52.2±0.3, 7439N×953E, h10km, mb4.2(NEIC)
ISC 10 17:02:52.4±0.3, 7420N±004×88E±02, h10km, n87, σ1s18/85, mb4.0/29, 1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	4.80	7	eP	Pn	17 04 01.9	-2.7
KBS	Kingsbay	4.80	7	ePn	Pn	17 04 01.3	-3.3
KBS	Kingsbay	4.80	7	i P	Pn	17 04 01.8	-2.8
TRO	Tromso	5.56	141	eP	Pn	17 04 13.2	-1.8
LOF	Lofoten	6.29	164	eP	Pn	17 04 26.0	+1.0
KIF	Kilpisjarvi	6.44	138	eP	Pn	17 04 26.2	-0.8
KTK1	Kautokeino	6.91	132	eP	Pn	17 04 35.0	+1.6
ARCES	ARCESS Array B	6.98	124	Pn	Pn	17 04 32.7	-1.7
ARCES	ARCESS Array B	6.98	124	Pn	Pn	17 04 32.7	-1.7
	1.9nm,0.3s,baz=323,slow=10,SNR=35						
KEV	Kevo	7.17	119	eP	Pn	17 04 34.6	-2.4
KEV	Kevo	7.17	119	eP	Pn	17 04 35.4	-1.6
KEV	Kevo	7.17	119	P	Pn	17 04 34.5	-2.5
NIKU	Nikkaluokta	7.17	147	P	Pn	17 04 37.6	+0.6
DAG	Danmarks Havn	7.31	303	eP	Pn	17 04 34.0	-4.9
DAG	Danmarks Havn	7.31	303	i P	Pn	17 04 34.0	-4.9
HEF	Hetta	7.50	133	eP	Pn	17 04 41.0	-0.5
SALU	Saltoluokta	7.55	150	P	Pn	17 04 42.4	+0.2
	baz=56						
DUNU	Dundret	8.09	146	P	Pn	17 04 49.4	-0.3
MOR8	Moi Rana	8.29	164	eP	Pn	17 04 51.5	-0.8
SGF	Sodankyl	8.90	131	eP	Pn	17 04 58.9	-1.8
SGF	Sodankyl	8.90	131	P	Pn	17 04 58.8	-1.9
APA	Apatity	10.36	117	⇓eP	Pn	17 05 24.0	+3.3
APA				pmax	pmax		
	comp=Z,18nm,1.0s						
LVZ	Lovozero	10.41	114	i P	Pn	17 05 24.2	+2.8
HFS	Hagfors	14.25	170	Pn	Pn	17 06 21.0	+7.2
HFS	Hagfors	14.25	170	Pn	Pn	17 06 21.0	+7.2
	comp=Z,0.5nm,0.3s,baz=359,slow=12,SNR=14						
FINES	FINESS Array B	14.27	145	Pn	Pn	17 06 11.7	-2.4
	comp=Z,0.2nm,0.3s,baz=355,slow=12,SNR=7.7						
SFJD	Kangerlussuaq	20.10	280	P	P	17 07 25.2	-0.4
	comp=Z,20nm,1.1s						
SFJD	Kangerlussuaq	20.10	280	P	P	17 07 25.2	-0.4
SFJD				pmax	pmax		
	comp=Z,20nm,1.1s						
OBN	Obninsk	22.11	135	eP	P	17 07 46.6	-0.8
	comp=Z,8.9nm,0.6s,mb4.4						
OBN	Obninsk	22.11	135	eP	P	17 07 46.8	-0.6
OBN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.2						
CLL	Collm	23.05	173	i P	P	17 08 02.8	+5.5
CLL	Collm	23.05	173	i sP	sP	17 08 02.8	+1.3
CLL				i PP		17 08 22.3	
MOX	Moxa	23.68	176	eP	P	17 08 02.5	-1.2
	comp=Z,89nm,2.0s,mb4.8						
MOX	Moxa	23.68	176	eP	P	17 08 02.5	-1.2
MOX							
	comp=Z,6μm,19.0s						
NKC	Novy Kostel	24.11	174	eP	P	17 08 07.8	+0.1
PRU	Pruhonice	24.43	171	eP	P	17 08 11.9	+1.3
RES	Resolute Bay	24.51	322	P	P	17 08 12.8	+1.6
	comp=Z,192nm,1.4s						
MORC	Moravsky Berou	24.80	166	eP	P	17 08 12.9	-1.1
	comp=Z,1.4nm,0.8s,mb3.5						
MORC	Moravsky Berou	24.80	166	eP	P	17 08 12.9	-1.1
MORC				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
AKASG	Malin Array Be	25.11	148	P	P	17 08 15.5	-1.3
	comp=Z,1.9nm,0.7s,mb3.8,baz=345,slow=9.3,SNR=9.0						
KIEV	Kiev	25.11	149	eP	P	17 08 15.7	-1.1
	comp=Z,2.1nm,0.7s,mb3.8						
KIEV	Kiev	25.11	149	eP	P	17 08 15.7	-1.1
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
VRAC	Vranov	25.21	168	P	P	17 08 18.5	+0.8
	comp=Z,5.2nm,0.8s,mb4.1,baz=360,slow=7.9,SNR=5.8						
KHC	Kasperske Hory	25.25	173	eP	P	17 08 19.0	+1.0
KWP	Kalwaria	25.37	159	eP	P	17 08 19.2	0.0
	comp=Z,13nm,1.1s,mb4.4						
KWP	Kalwaria	25.37	159	eP	P	17 08 19.2	+0.1
KWP				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
STHS	Stebnicka Huta	25.44	161	eP	P	17 08 21.2	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	**GERESS Array B**	**25.54**	**172**	P	**P**	**17 08 21.2**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.4,baz=10,slow=8.1,SNR=9.6						
CRVS	**Cervenica-Dubn**	**25.97**	**161**	*e*P	**P**	**17 08 25.1**	**+0.5**
KOLS	**Kolonicke sedl**	**26.02**	**160**	*e*P	**P**	**17 08 25.2**	**+0.2**
ARU	**Arti**	**26.10**	**105**	*e*P	**P**	**17 08 25.0**	**-0.7**
	comp=Z,88nm,1.4s,mb5.1						
ARU	**Arti**	**26.10**	**105**	*i* P	**P**	**17 08 29.1**	**+3.4**
VYHS	**Vyhne**	**26.16**	**165**	*e*P	**P**	**17 08 26.4**	**0.0**
KECS	**Kecovo**	**26.30**	**162**	*e*P	**P**	**17 08 21.4**	**-6.2**
UZH	**Uzhgorod**	**26.32**	**160**	*e*P	**P**	**17 08 19.0**	**-8.7**
TIXI	**Tiksi**	**29.68**	**34**	*e*P	**P**	**17 08 54.3**	**-3.3**
	comp=Z,6.0nm,1.2s,mb4.2						
TIXI	**Tiksi**	**29.68**	**34**	*e*P	**P**	**17 08 58.7**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
TIXI	**Tiksi**	**29.68**	**34**	*i* P	**P**	**17 08 59.6**	**+2.0**
MLR	**Muntele Rosu**	**29.80**	**155**	P	**P**	**17 09 01.7**	**+2.8**
	comp=Z,1.7nm,0.9s,mb3.8,baz=313,slow=21,SNR=3.0						
AKTK	**Aktyubinsk**	**31.37**	**112**	P	**P**	**17 09 12.8**	**+0.2**
AKTO	**Aktyubinsk**	**31.37**	**112**	P	**P**	**17 09 12.8**	**+0.2**
	comp=Z,2.3nm,0.8s,mb4.0,baz=339,slow=11,SNR=7.4						
BRVK	**Borovoye**	**32.25**	**96**	P	**P**	**17 09 21.3**	**+1.0**
	comp=Z,2.0nm,0.7s,mb4.1						
BRVK	**Borovoye**	**32.25**	**96**	P	**P**	**17 09 21.3**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
ESDC	**Sonseca Array**	**35.14**	**197**	P	**P**	**17 09 46.2**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.4,baz=5.4,slow=8.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**35.42**	**82**	P	**P**	**17 09 48.2**	**+0.3**
	comp=Z,0.3nm,0.2s,mb3.8,baz=325,slow=7.2,SNR=3.0						
INK	**Inuvik**	**35.69**	**337**	P	**P**	**17 09 48.5**	**-1.6**
	comp=Z,205nm,1.3s						
KURK	**Kurchatov**	**36.63**	**90**	*e*P	**P**	**17 09 57.6**	**-0.7**
	comp=Z,3.6nm,0.9s,mb4.2						
BILL	**Bilibino**	**37.26**	**14**	P	**P**	**17 10 04.6**	**+1.2**
	comp=Z,4.3nm,1.2s,mb4.2						
BILL	**Bilibino**	**37.26**	**14**	*e*P	**P**	**17 10 05.1**	**+1.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
YKA	**Yellowknife Ar**	**38.58**	**322**	P	**P**	**17 10 14.1**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.3,baz=16,slow=8.4,SNR=9.2						
MALT	**Malatya**	**38.64**	**141**	P	**P**	**17 10 16.2**	**+0.8**
	comp=Z,1.8nm,0.8s,mb3.9						
MALT	**Malatya**	**38.64**	**141**	P	**P**	**17 10 16.2**	**+0.8**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
MKAR	**Makanchi Array**	**41.21**	**89**	P	**P**	**17 10 37.4**	**+0.7**
	comp=Z,0.2nm,0.3s,mb3.3,baz=333,slow=7.1,SNR=5.5						
EKS2	**Erkin-Say**	**42.70**	**100**	*e*P	**P**	**17 10 49.3**	**+0.4**
	comp=Z,3.5nm,1.1s,mb4.0						
UCH	**Uchtor**	**43.31**	**99**	*e*P	**P**	**17 10 56.0**	**+2.2**
	comp=Z,1.7nm,0.9s,mb3.8						
FFC	**Flin Flon**	**43.37**	**308**	*e*P	**P**	**17 10 52.5**	**-1.6**
	comp=Z,3.9nm,0.8s,mb4.2						
FFC	**Flin Flon**	**43.37**	**308**	*e*P	**P**	**17 10 52.5**	**-1.6**
FFC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
SONM	**Songino Array**	**46.66**	**67**	P	**P**	**17 11 20.8**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.5,baz=335,slow=6.4,SNR=5.1						
ECSD	**EROS,Sioux Fal**	**52.43**	**298**	*e*P	**P**	**17 12 03.8**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.4						
MSO	**Missoula**	**53.31**	**314**	*e*P	**P**	**17 12 10.5**	**-0.3**
	comp=Z,7.4nm,1.5s,mb4.4						
TOA0	**Torodi Ar. Sit**	**61.17**	**188**	*e*P	**P**	**17 13 06.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**61.17**	**188**	P	**P**	**17 13 06.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**61.17**	**188**	P	**P**	**17 13 06.6**	**-0.2**
	comp=Z,1.7nm,0.4s,mb4.5,baz=356,slow=7.2,SNR=6.4						
TXAR	**Lajitas Array**	**67.83**	**299**	P	**P**	**17 13 51.5**	**+1.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=39,slow=5.8,SNR=2.9						
CHTO	**Chiang Mai**	**72.08**	**85**	*e*P	**P**	**17 14 15.4**	**-1.0**
	comp=Z,2.8nm,0.9s,mb4.2						
CHTO	**Chiang Mai**	**72.08**	**85**	*e*P	**P**	**17 14 15.4**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**121.89**	**62**	PKP	PKPdf	17 21 44.5	-1.4
	comp=Z,0.2nm,0.7s,baz=341,slow=1.9,SNR=4.7						

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*ISCJB **10** 17:03:04.6±0.2, 7429N±003×87E±0.1, h10km, mb4.7/82, Error ellipse: s-maj=5.6km s-min=3.7km az=143.3*
*IDC **10** 17:03:04.9±0.6, 7427N×855E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.3/23, mbtmp4.2/17, ML4.0/2, Error ellipse: s-maj=15.8km s-min=12.1km az=47.0*
*MOS **10** 17:03:04.7±0.8, 7432N×9.18E, h10km, mb5.0/25, Error ellipse: s-maj=47.8km s-min=6.4km az=94.7*
*BJI **10** 17:03:04.2, 7430N×870E, h5km, mb4.8*
*NEIC **10** 17:03:06.2±0.2, 7426N×868E, h10km, mb4.8/58, Error ellipse: s-maj=5.5km s-min=3.3km az=55.0*
ISC 10 17:03:06.5±0.2**, 7425N**±003×**87E**±01**, h10**km**, n156,** σ**1ˢ04**/151**, mb4.7**/82**, 2C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**4.77**	**8**	*e*Pn	**Pn**	**17 04 16.3**	**-1.9**
ARCES	**ARCESS Array B**	**7.04**	**124**	Pn	**Pn**	**17 04 49.7**	**+0.3**
	4.2nm,0.3s,baz=325,slow=12,SNR=17						
KEV	**Kevo**	**7.22**	**119**	*e*Pn	**Pn**	**17 04 51.1**	**-0.8**
NOA	**NORSAR Array B**	**13.30**	**175**	Pn	**Pn**	**17 06 15.9**	**+0.8**
	0.3nm,0.3s,baz=355,slow=14,SNR=3.2						
KONO	**Kongsberg**	**14.67**	**178**	Pn	**Pn**	**17 06 39.9**	**+6.3**
SFJD	**Kangerlussuaq**	**20.05**	**280**	P	**P**	**17 07 41.6**	**+2.3**
	51nm,1.4s						
SFJD	**Kangerlussuaq**	**20.05**	**280**	P	**P**	**17 07 41.6**	**+2.4**
SFJD				pmax	pmax		
	comp=Z,51nm,1.4s						
MOS	**Moscow**	**21.80**	**132**	*e*P	**P**	**17 07 56.6**	**-1.6**
MOS				pmax	pmax		
	comp=Z,265nm,1.5s,mb5.5						
RUE	**Ruedersdorf**	**21.95**	**172**	*e*P	**P**	**17 07 58.3**	**-1.6**
	comp=Z,81nm,1.7s,mb4.9						
OBN	**Obninsk**	**22.17**	**135**	*e*P	**P**	**17 08 00.6**	**-1.6**
	comp=Z,191nm,1.3s,mb5.4						
CLL	**Collm**	**23.10**	**173**	*i* P	**P**	**17 08 12.3**	**+0.3**
CLL				*e*		17 08 17.0	
CLL				*e*x		17 08 17.0	
CLL	**Collm**	**23.10**	**173**	*i* x	**P**	**17 08 12.3**	**+0.3**
BRG	**Berggiesshubel**	**23.57**	**172**	*e*P	**P**	**17 08 17.1**	**+0.2**
BRG				*e*		17 08 24.1	
BRG				pmax	pmax		
	comp=Z,60nm,2.2s,mb4.6						
BRG	**Berggiesshubel**	**23.57**	**172**	*e*P	**P**	**17 08 17.1**	**+0.2**
	comp=Z,100nm,2.2s,mb4.9						
BRG				*e*		17 08 24.1	
	comp=Z,22nm,1.5s						
MOX	**Moxa**	**23.72**	**175**	*e*P	**P**	**17 08 18.8**	**+0.5**
MOX				*e*		17 08 50.1	
MOX				*e*		17 08 50.1	
	comp=Z,1μm,2.1s						
MOX	**Moxa**	**23.72**	**175**	*e*	**P**	**17 08 18.8**	**+0.5**
	comp=Z,89nm,2.0s,mb4.8						
PVCC	**Panska Ves**	**23.94**	**171**	*e*P	**P**	**17 08 19.3**	**-1.0**
UPC	**Upice**	**24.03**	**168**	*e*P	**P**	**17 08 21.2**	**+0.1**
NKC	**Novy Kostel**	**24.16**	**174**	*e*P	**P**	**17 08 22.4**	**+0.1**
DPC	**Dobruska-Polom**	**24.20**	**168**	*e*P	**P**	**17 08 23.3**	**+0.6**
RES	**Resolute Bay**	**24.45**	**321**	P	**P**	**17 08 29.4**	**+4.6**
	comp=Z,350nm,1.0s,mb5.7						
PRU	**Pruhonice**	**24.48**	**171**	*e*P	**P**	**17 08 24.4**	**-0.8**
OKC	**Ostrava-Krasne**	**24.83**	**165**	*e*P	**P**	**17 08 29.5**	**+1.1**
MORC	**Moravsky Berou**	**24.85**	**166**	P	**P**	**17 08 27.1**	**-1.5**
	comp=Z,7.6nm,1.0s,mb4.2						
MORC	**Moravsky Berou**	**24.85**	**166**	P	**P**	**17 08 27.1**	**-1.5**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
AKASG	**Malin Array Be**	**25.17**	**148**	P	**P**	**17 08 30.6**	**-0.9**
	comp=Z,4.3nm,0.7s,mb4.1,baz=341,slow=9.6,SNR=13						
KIEV	**Kiev**	**25.17**	**148**	*e*P	**P**	**17 08 29.7**	**-1.9**
	comp=Z,7.9nm,0.8s,mb4.3						
KIEV	**Kiev**	**25.17**	**148**	*e*P	**P**	**17 08 29.7**	**-1.8**
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
VRAC	**Vranov**	**25.26**	**168**	P	**P**	**17 08 32.5**	**+0.1**
	comp=Z,16nm,1.0s,mb4.5,baz=6.2,slow=12,SNR=5.5						
KHC	**Kasperske Hory**	**25.29**	**172**	*i* P	**P**	**17 08 34.0**	**+1.4**
KHC	**Kasperske Hory**	**25.29**	**172**	*e*P	**P**	**17 08 33.3**	**+0.7**
KWP	**Kalwaria**	**25.42**	**158**	*e*P	**P**	**17 08 32.7**	**-1.1**
	comp=Z,21nm,1.0s,mb4.6						
KWP	**Kalwaria**	**25.42**	**158**	*e*P	**P**	**17 08 32.7**	**-1.1**
KWP				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.6						
STHS	**Stebnicka Huta**	**25.50**	**161**	*e*P	**P**	**17 08 35.2**	**+0.7**
STHS	**Stebnicka Huta**	**25.50**	**161**	*e*	**P**	**17 08 35.2**	**+0.7**
GERES	**GERESS Array B**	**25.58**	**172**	P	**P**	**17 08 35.9**	**+0.6**
	comp=Z,3.2nm,0.9s,mb3.9,baz=9.6,slow=8.8,SNR=12						
VOR	**Voronezh**	**25.89**	**134**	*e*P	**P**	**17 08 47.0**	**+9.0**
VOR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.3						
CRVS	**Cervenica-Dubn**	**26.03**	**161**	*e*P	**P**	**17 08 39.0**	**-0.3**
CRVS	**Cervenica-Dubn**	**26.03**	**161**	*e*	**P**	**17 08 39.0**	**-0.3**
KOLS	**Kolonicke sedl**	**26.07**	**159**	*e*P	**P**	**17 08 39.4**	**-0.3**
KOLS	**Kolonicke sedl**	**26.07**	**159**	*e*	**P**	**17 08 39.4**	**-0.3**
KOLL	**Kolacno**	**26.10**	**165**	*e*P	Px	17 08 48.4	
KOLL	**Kolacno**	**26.10**	**165**	*e*	Px	17 08 48.4	
ARU	**Arti**	**26.16**	**105**	*e*P	**P**	**17 08 39.6**	**-0.8**
	comp=Z,291nm,1.4s,mb5.6						
VYHS	**Vyhne**	**26.22**	**165**	*e*P	**P**	**17 08 40.9**	**-0.1**
VYHS	**Vyhne**	**26.22**	**165**	*e*	**P**	**17 08 40.9**	**-0.1**
KECS	**Kecovo**	**26.36**	**162**	*e*P	**P**	**17 08 42.1**	**-0.2**
KECS	**Kecovo**	**26.36**	**162**	*e*	**P**	**17 08 42.0**	**-0.3**
PSZ	**Piszkesteto**	**26.87**	**163**	*e*P	**P**	**17 08 46.0**	**-0.9**
	comp=Z,18nm,1.2s,mb4.5						
PSZ	**Piszkesteto**	**26.87**	**163**	*e*P	**P**	**17 08 46.0**	**-0.9**
PSZ				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.5						
TIXI	**Tiksi**	**29.67**	**34**	*e*P	**P**	**17 09 12.7**	**+1.0**
	comp=Z,16nm,1.2s,mb4.6						
AKTK	**Aktyubinsk**	**31.42**	**111**	P	**P**	**17 09 27.0**	**-0.3**
AKTO	**Aktyubinsk**	**31.42**	**111**	P	**P**	**17 09 27.0**	**-0.3**
	comp=Z,9.6nm,1.0s,mb4.6,baz=337,slow=10,SNR=13						
AQU	**L'Aquila**	**32.06**	**173**	P	**P**	**17 09 34.4**	**+1.5**
	comp=Z,19nm,0.9s,mb4.9						
AQU	**L'Aquila**	**32.06**	**173**	P	**P**	**17 09 34.4**	**+1.4**
AQU				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
BRVK	**Borovoye**	**32.29**	**96**	*e*P	**P**	**17 09 35.3**	**+0.4**
	comp=Z,9.6nm,0.9s,mb4.6						
BRVK	**Borovoye**	**32.29**	**96**	*e*P	**P**	**17 09 35.3**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
KIV	**Kislovodsk**	**34.02**	**134**	P	**P**	**17 09 47.0**	**-3.0**
	comp=Z,10nm,0.8s,mb4.8						
KIV	**Kislovodsk**	**34.02**	**134**	*e*P	**P**	**17 09 44.5**	**-5.5**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NVS	**Novosibirsk**	**34.24**	**82**	*e*P	**P**	**17 09 52.2**	**+0.4**
ESDC	**Sonseca Array**	**35.17**	**197**	P	**P**	**17 10 01.4**	**+1.3**
	comp=Z,1.3nm,0.7s,mb4.0,baz=12,slow=9.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**35.46**	**82**	P	**P**	**17 10 02.3**	**-0.1**
	comp=Z,4.7nm,0.9s,mb4.4,baz=332,slow=9.1,SNR=15						
ZAL	**Zalesovo**	**35.46**	**82**	P	**P**	**17 10 02.3**	**-0.1**
INK	**Inuvik**	**35.63**	**337**	*e*P	**P**	**17 10 02.4**	**-1.3**
	comp=Z,411nm,1.1s						
KURK	**Kurchatov**	**36.67**	**90**	*e*P	**P**	**17 10 12.7**	**-0.1**
	comp=Z,30nm,1.1s,mb5.0						
KURK	**Kurchatov**	**36.67**	**90**	*e*P	**P**	**17 10 12.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
KURK	**Kurchatov**	**36.67**	**90**	⇑P	**P**	**17 10 14.2**	**+1.4**
	SNR=6.8						
BILL	**Bilibino**	**37.22**	**14**	*e*P	**P**	**17 10 18.0**	**+0.7**
	comp=Z,9.7nm,1.1s,mb4.5						
BILL	**Bilibino**	**37.22**	**14**	*e*P	**P**	**17 10 18.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.6						
FCC	**Fort Churchill**	**37.85**	**304**	*e*P	**P**	**17 10 21.8**	**-0.9**
	comp=Z,13nm,1.2s,mb4.5						
YKA	**Yellowknife Ar**	**38.52**	**321**	P	**P**	**17 10 28.4**	**+0.1**
	comp=Z,3.1nm,0.9s,mb4.0,baz=13,slow=8.4,SNR=22						
SFS	**San Fernando**	**38.55**	**199**	P	**P**	**17 10 28.6**	**-0.2**
	comp=Z,209nm,1.0s,mb5.8						
YAK	**Yakutsk**	**38.56**	**40**	*e*P	**P**	**17 10 27.1**	**-1.5**
	comp=Z,23nm,1.5s,mb4.7						
YAK	**Yakutsk**	**38.56**	**40**	*e*P	**P**	**17 10 27.1**	**-1.5**
YAK				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.7						
MALT	**Malatya**	**38.70**	**141**	*e*P	**P**	**17 10 31.3**	**+1.2**
	comp=Z,12nm,1.0s,mb4.6						
MALT	**Malatya**	**38.70**	**141**	*e*P	**P**	**17 10 31.3**	**+1.2**
MALT				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
BOD	**Bodaibo**	**39.29**	**55**	*e*P	**P**	**17 10 31.9**	**-2.9**
BOD				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.2						
EGAK	**Eagle**	**39.83**	**340**	*e*P	**P**	**17 10 39.4**	**+0.2**
	comp=Z,21nm,1.2s,mb4.8						
EGAK				*e*		17 10 46.6	
COLA	**College**	**40.28**	**345**	P	**P**	**17 10 45.4**	**+2.4**
	comp=Z,12nm,1.0s,mb4.6						
COLA				*e*		17 10 50.7	
DAWY	**Dawson**	**40.36**	**339**	*e*P	**P**	**17 10 41.9**	**-1.7**
MKAR	**Makanchi Array**	**41.25**	**89**	P	**P**	**17 10 51.7**	**+0.6**
MKAR	**Makanchi Array**	**41.25**	**89**	P	**P**	**17 10 51.7**	**+0.6**
	comp=Z,5.0nm,1.0s,mb4.1,baz=344,slow=6.7,SNR=19						
MCK	**McKinley**	**41.49**	**345**	*e*P	**P**	**17 10 55.5**	**+2.5**
	comp=Z,12nm,1.0s,mb4.5						
MOY	**Mondy**	**41.78**	**69**	*e*P	**P**	**17 10 57.7**	**+2.2**
MOY				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.8						
MDT	**Midelt**	**42.03**	**197**	P	**P**	**17 10 58.1**	**+0.4**
	comp=Z,2.8nm,1.1s,mb3.8,baz=7.3,slow=2.4,SNR=3.7						
TLY	**Talaya**	**42.44**	**67**	*e*P	**P**	**17 10 58.7**	**-2.1**
	comp=Z,6.3nm,1.1s,mb4.2						
TLY	**Talaya**	**42.44**	**67**	*e*P	**P**	**17 10 58.7**	**-2.1**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
EKS2	**Erkin-Say**	**42.75**	**100**	*e*P	**P**	**17 11 03.4**	**0.0**
	comp=Z,98nm,1.1s,mb5.5						
EKS2				*e*		17 11 10.7	
AAK	**Ala-Archa**	**42.97**	**99**	*e*P	**P**	**17 11 05.3**	**+0.1**
	comp=Z,196nm,1.5s,mb5.6						
AAK				*e*		17 11 10.9	
AAK	**Ala-Archa**	**42.97**	**99**	*e*P	**P**	**17 11 05.3**	**+0.1**
AAK				*e*		17 11 11.0	
AAK				pmax	pmax		
	comp=Z,196nm,1.5s,mb5.6						
AAK	**Ala-Archa**	**42.97**	**99**	P	**P**	**17 11 12.9**	**+7.7**
	SNR=5.9						
TKM2	**Tokmak 2**	**43.00**	**98**	*e*P	**P**	**17 11 07.0**	**+1.5**
	comp=Z,22nm,1.1s,mb4.8						
TKM2	**Tokmak 2**	**43.00**	**98**	*e*P	**P**	**17 11 07.0**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.8						
AML	**Almayashu**	**43.22**	**100**	*e*P	**P**	**17 11 09.1**	**+1.8**
	comp=Z,15nm,0.9s,mb4.7						
AML				*e*		17 11 15.9	
FFC	**Flin Flon**	**43.31**	**308**	*e*P	**P**	**17 11 07.0**	**-0.8**
	comp=Z,17nm,1.1s,mb4.7						
FFC	**Flin Flon**	**43.31**	**308**	*e*P	**P**	**17 11 07.0**	**-0.8**
FFC				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.7						
UCH	**Uchtor**	**43.35**	**99**	*e*P	**P**	**17 11 10.7**	**+2.4**
	comp=Z,56nm,1.6s,mb5.0						
UCH				*e*		17 11 17.1	
ZAK	**Zakamensk**	**43.54**	**68**	*e*P	**P**	**17 11 10.4**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.8						
PMR	**Palmer**	**43.63**	**345**	P	**P**	**17 11 05.1**	**-5.2**
	comp=Z,68nm,1.8s,mb5.1						
SKAG	**Skagway**	**44.42**	**335**	*e*P	**P**	**17 11 15.9**	**-0.8**
	comp=Z,47nm,1.5s,mb5.0						
SVW2	**Sparrevohn**	**44.52**	**349**	*e*P	**P**	**17 11 19.0**	**+1.6**
SVW2				*e*		17 11 25.3	
WMQ	**Urumqi**	**45.47**	**85**	P	**P**	**17 11 26.0**	**+0.8**
ULM	**Lac du Bonnet**	**46.09**	**300**	P	**P**	**17 11 29.8**	**-0.3**
	comp=Z,4.5nm,0.9s,mb4.4,baz=40,slow=9.0,SNR=7.0						
SONM	**Songino Array**	**46.68**	**67**	P	**P**	**17 11 35.5**	**+0.8**
	comp=Z,4.7nm,1.0s,mb4.4,baz=327,slow=8.3,SNR=22						
EYMN	**Ely**	**47.18**	**296**	*e*P	**P**	**17 11 38.3**	**-0.3**
	comp=Z,15nm,1.2s,mb4.8						
AGMN	**Agassiz Refuge**	**47.91**	**299**	*e*P	**P**	**17 11 44.1**	**-0.2**
	comp=Z,1.2nm,0.5s,mb4.2						
HIA	**Hailar**	**48.51**	**55**	P	**P**	**17 11 47.1**	**-1.8**
	comp=Z,16nm,1.5s,mb4.8						
EGMT	**Eagleton**	**51.27**	**311**	*e*P	**P**	**17 12 10.7**	**+0.8**
	comp=Z,32nm,1.5s,mb5.0						
ECSD	**EROS,Sioux Fal**	**52.37**	**298**	*e*P	**P**	**17 12 18.0**	**-0.2**
	comp=Z,13nm,1.0s,mb4.8						
NEW	**Newport**	**52.49**	**317**	*e*P	**P**	**17 12 18.6**	**-0.3**
	comp=Z,6.2nm,1.1s,mb4.5						
GTA	**Gaotai**	**52.84**	**76**	*e*P	**P**	**17 12 22.5**	**+0.8**
GTA				AP	pP	17 12 28.9	+4.0
GTA				XP	sP	17 12 32.1	+6.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
CHMT	**Chamberlain Mo**	**53.03**	**313**	*e*P	**P**	**17 12 22.2**	**-0.8**
MSO	**Missoula**	**53.25**	**314**	*e*P	**P**	**17 12 24.0**	**-0.6**
	comp=Z,18nm,1.4s,mb4.8						
RLMT	**Red Lodge**	**53.93**	**309**	*e*P	**P**	**17 12 29.4**	**-0.2**
	comp=Z,11nm,1.4s,mb4.6						
HAWA	**Hanford**	**54.73**	**318**	*e*P	**P**	**17 12 34.9**	**-0.5**
	comp=Z,16nm,1.4s,mb4.9						
MCMT	**McKenzie Canyo**	**54.95**	**312**	P	**P**	**17 12 36.8**	**-0.2**
YSS	**Yuzh-Sakhalins**	**55.21**	**37**	P	**P**	**17 12 39.1**	**+0.2**
IMW	**Indian Meadow**	**55.45**	**310**	*e*P	**P**	**17 12 40.4**	**-0.3**
	comp=Z,15nm,1.2s,mb4.9						
MOOW	**Moose Ponds**	**55.55**	**310**	*e*P	**P**	**17 12 39.8**	**-1.6**
	comp=Z,14nm,1.5s,mb4.8						
LOHW	**Long Hollow**	**55.65**	**310**	*e*P	**P**	**17 12 43.9**	**+1.8**
	comp=Z,12nm,1.5s,mb4.7						
BMO	**Blue Mountains**	**55.80**	**316**	*e*P	**P**	**17 12 42.2**	**-0.9**
	comp=Z,13nm,1.4s,mb4.8						
TPAW	**Teton Pass**	**55.84**	**310**	*e*P	**P**	**17 12 42.4**	**-1.1**
	comp=Z,16nm,1.6s,mb4.8						
REDW	**Red Top Meadow**	**55.95**	**310**	*e*P	**P**	**17 12 44.5**	**+0.3**
	comp=Z,17nm,1.5s,mb4.9						
BW06	**Boulder Array**	**56.24**	**309**	*e*P	**P**	**17 12 45.8**	**-0.6**
	comp=Z,11nm,1.4s,mb4.7						
HLID	**Hailey**	**56.48**	**313**	*e*P	**P**	**17 12 48.0**	**0.0**
	comp=Z,109nm,1.7s,mb5.6						
RWWY	**Rawlins**	**56.76**	**306**	*e*P	**P**	**17 12 50.4**	**+0.4**
	comp=Z,12nm,1.2s,mb4.8						
HALT	**Halls**	**57.94**	**288**	P	**P**	**17 12 57.5**	**-0.9**
LSA	**Lhasa**	**59.65**	**88**	P	**P**	**17 13 12.6**	**+2.2**
LSA	**Lhasa**	**59.65**	**88**	*e*P	**P**	**17 13 11.9**	**+1.5**
	comp=Z,166nm,1.4s,mb5.9						
SDCO	**Great Sand Dun**	**60.15**	**303**	*e*P	**P**	**17 13 13.4**	**-0.3**
	comp=Z,6.0nm,1.4s,mb4.4						
MIAR	**Mount Ida**	**60.32**	**292**	*e*P	**P**	**17 13 10.7**	**-4.2**
	comp=Z,11nm,1.3s,mb4.7						
PV01	**Paradox Valley**	**60.46**	**306**	*e*P	**P**	**17 13 16.7**	**+0.8**
MSU	**Marysvale**	**60.88**	**310**	*e*P	**P**	**17 13 19.5**	**+0.8**
TOA0	**Torodi Ar. Sit**	**61.21**	**188**	*e*P	**P**	**17 13 21.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**61.21**	**188**	P	**P**	**17 13 20.6**	**-0.6**
	comp=Z,8.7nm,0.9s,mb4.9,baz=352,slow=6.9,SNR=11						
MVCO	**Mesa Verde**	**61.34**	**306**	*e*P	**P**	**17 13 21.9**	**+0.1**
	comp=Z,23nm,1.4s,mb5.1						
WMOK	**Wichita Mounta**	**61.43**	**297**	*e*P	**P**	**17 13 21.6**	**-0.9**
	comp=Z,9.0nm,1.1s,mb4.8						
CD2	**Chengdu**	**61.91**	**76**	P	**P**	**17 13 26.4**	**+0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
CCUT	**Cedar City**	**62.05**	**310**	*e*P	**P**	**17 13 27.3**	**+0.7**
NVAR	**Mina Array Bea**	**62.20**	**315**	P	**P**	**17 13 27.9**	**+0.3**
NVAR	**Mina Array Bea**	**62.20**	**315**	P	**P**	**17 13 27.9**	**+0.3**
	comp=Z,1.0nm,1.0s,mb3.9,baz=36,slow=5.7,SNR=5.1						
MTUM	**Tungsten Hills**	**63.29**	**315**	*e*P	**P**	**17 13 41.2**	**+6.3**
WUAZ	**Wupatki**	**63.59**	**308**	*e*P	**P**	**17 13 38.9**	**+2.1**
	comp=Z,8.3nm,1.1s,mb4.7						
MJAR	**Matsushiro Arr**	**64.52**	**43**	P	**P**	**17 13 43.1**	**+0.1**
MJAR	**Matsushiro Arr**	**64.52**	**43**	P	**P**	**17 13 43.1**	**+0.1**
	comp=Z,3.2nm,1.0s,mb4.3,baz=356,slow=6.3,SNR=6.2						
JCT	**Junction City**	**65.74**	**296**	*e*P	**P**	**17 13 50.7**	**-0.3**
	comp=Z,3.5nm,0.6s,mb4.6						
JIE	**Ise**	**66.32**	**45**	P	**P**	**17 13 52.0**	**-2.7**
TUC	**Tucson**	**66.55**	**307**	*e*P	**P**	**17 13 57.5**	**+1.4**
	comp=Z,14nm,1.4s,mb4.8						
TUC				*e*		17 14 04.6	
LTX	**Lajitas**	**67.78**	**299**	*e*P	**P**	**17 14 04.5**	**+0.5**
	comp=Z,10nm,1.5s,mb4.6						
TXAR	**Lajitas Array**	**67.78**	**299**	P	**P**	**17 14 03.9**	**-0.1**
	comp=Z,1.8nm,1.1s,mb4.0,baz=19,slow=5.4,SNR=7.6						
CHG	**Chiang Mai**	**72.12**	**84**	⇑P	**P**	**17 14 30.8**	**0.0**
	comp=Z,98nm,1.3s,mb5.6						
CHTO	**Chiang Mai**	**72.12**	**84**	*e*P	**P**	**17 14 29.8**	**-0.9**
	comp=Z,16nm,1.3s,mb4.8						
CHTO	**Chiang Mai**	**72.12**	**84**	*e*P	**P**	**17 14 29.8**	**-1.0**
CHTO				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
WRA	**Warramunga Arr**	**118.43**	**60**	PKP	PKPdf	17 21 52.5	-1.1
WRA	**Warramunga Arr**	**118.43**	**60**	PKP	PKPdf	17 21 52.5	-1.1
	comp=Z,0.4nm,0.8s,baz=334,slow=3.1,SNR=3.6						
ASAR	**Alice Springs**	**121.91**	**62**	PKP	PKPdf	17 21 59.0	-1.1
	comp=Z,1.1nm,0.9s,baz=326,slow=1.8,SNR=7.1						

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*BJI **10** 17:03:34.8, 7430N×870E, h10km, mB6.0, mb5.5, Ms5.8, Msz5.6*
*ISCJB **10** 17:03:36.0±0.1, 7427N±001×873E±005, h10km, mb5.6/342, MS5.5/202, Error ellipse: s-maj=2.0km s-min=1.5km az=162.5*
*CSEM **10** 17:03:35.4±0.0, 7430N×885E, h10km, mb5.7/99, Ms4.9, Mw5.7, Error ellipse: s-maj=1.1km s-min=0.7km az=67.0*
*NAO **10** 17:03:35.8±1.5, 7422N×865E, ML4.4*
*BGS **10** 17:03:35.1, 7448N×8.11E, h9km, mb5.5, MS4.7*
*MOS **10** 17:03:36.3±0.9, 7422N×875E, h10km, mb5.9/121, MS5.2/55, Error ellipse: s-maj=17.5km s-min=4.4km az=93.1*
*IDC **10** 17:03:36.3±0.4, 7426N×883E, h0km, mb5.1/27, mb1 5.1/31, mb1mx5.1/31, mbtmp5.0/31, ML4.0/4, MS5.6/4, Ms1 5.6/4, ms1mx5.0/12, Error ellipse: s-maj=11.5km s-min=9.0km az=48.0*
*IPEC **10** 17:03:36.4±0.8, 7425N×887E, h0km, Error ellipse: s-maj=25.3km s-min=12.1km az=75.0*
*HEL **10** 17:03:36.7±0.5, 7437N×843E, h10km, mb5.7(NEIC), MS5.5(NEIC), MS4.4(BER)*
*GCMT **10** 17:03:37.9±0.1, 7423N×872E, h12km, MW5.7/105, Moment Tensor Solution. s76,c125; s105,c318; Duration: 1ˢ7 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.25±.04; $M_{\theta\theta}$0.21±.04; $M_{\phi\phi}$4.04±.04; $M_{r\theta}$-0.15±.13; $M_{\theta\phi}$1.50±.04; $M_{\phi r}$-0.17±.11; Best double couple: $M_0$4.41000×10^{17} NP1:ϕ_s198.00000°, δ44.00000°, λ-92.00000°. NP2:ϕ_s20.00000°, δ46.00000°, λ-88.00000°. Principal axes: T 4.5630, Plg1.0000°, Azm109.0000°; N -0.3020, Plg1.0000°, Azm199.0000°; P -4.2570, Plg88.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BER **10** 17:03:37.9±4.1, 7423N×890E, h10km, ML3.7, MS4.4, ML4.4(NAO)*
*NEIC **10** 17:03:37.9±0.1, 7426N×871E, h10km, mb5.7/235, MS5.5/164, MW5.6, Error ellipse: s-maj=2.6km s-min=1.5km az=67.0, Moment Tensor Solution. s46 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.74; $M_{\theta\theta}$-0.23; $M_{\phi\phi}$2.97; $M_{r\theta}$0.74; $M_{\theta\phi}$0.29; $M_{\phi r}$0.19; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s351.00000°, δ44.00000°, λ-112.00000°. NP2:ϕ_s200.00000°, δ49.00000°, λ-70.00000°. Principal axes: T 3.0100, Plg3.0000°, Azm276.0000°; N -0.0600, Plg15.0000°, Azm6.0000°; P -2.9500, Plg75.0000°, Azm176.0000°;*
*SFS **10** 17:03:38.0, 7420N×856E, h10km, ML5.7*
*CRAAG **10** 17:03:40.1, 7424N×845E, Mw5.7*
*SZGRF **10** 17:03:53.5, 7289N×988E, h33km, mb5.8, Norwegian Sea*
ISC 10 17:03:38.0±0.1**, 7425N**±001×**873E**±005**, h10**km**, (h16**km±2.0km**:pP-P), n1539,** σ**0ˢ97**/1527**, mb5.6**/342**, MS5.5**/202**, 120C-107D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.79**	**80**	AML	AML	17 02 04.7	
	comp=Z,2μm,0.6s						
SPA0	**Spitsbergen Ar**	**4.34**	**21**	*e*P	**Pn**	**17 04 43.5**	**-0.5**
	baz=191,slow=16						
SPA0				*e*S	**Sn**	**17 05 29.3**	**-5.2**
	baz=191,slow=16						
SPA0	**Spitsbergen Ar**	**4.34**	**21**	P	**Pn**	**17 04 43.4**	**-0.5**
SPA0				Sn	**Sn**	**17 05 29.3**	**-5.2**
KBS	**Kingsbay**	**4.76**	**7**	Pn	**Pn**	**17 04 48.6**	**-1.0**
KBS				Sn	**Sn**	**17 05 39.6**	**-5.2**
KBS	**Kingsbay**	**4.76**	**7**	*e*Pn	**Pn**	**17 04 47.9**	**-1.8**
KBS				*e*Sn	**Sn**	**17 05 42.3**	**-2.4**
KBS	**Kingsbay**	**4.76**	**7**	*e*P	**Pn**	**17 04 48.3**	**-1.3**
KBS	**Kingsbay**	**4.76**	**7**	*e*Pn	**Pn**	**17 04 47.8**	**-1.8**
KBS	**Kingsbay**	**4.76**	**7**	*i* P	**Pn**	**17 04 48.0**	**-1.6**
KBS				Sn	**Sn**	**17 05 39.6**	**-5.1**
TRO	**Tromso**	**5.61**	**141**	*e*P	**Pn**	**17 04 59.1**	**-2.2**
TRO				*e*S	**Sn**	**17 05 56.5**	**-9.3**
TRO				AML	AML	17 06 01.7	
	comp=Z,354nm,0.5s						
TRO				AMS	AMS	17 07 45.2	
	comp=Z,15μm,19.8s						
TRO	**Tromso**	**5.61**	**141**	*e*P	**Pn**	**17 04 59.1**	**-2.2**
TRO				*e*S	**Sn**	**17 05 56.5**	**-9.2**
JNE	**Jan Mayen East**	**6.05**	**246**	*e*P	**Pn**	**17 05 05.0**	**-2.3**
JNE	**Jan Mayen East**	**6.05**	**246**	P	**Pn**	**17 05 04.9**	**-2.4**
JNW	**Jan Mayen West**	**6.05**	**246**	*e*P	**Pn**	**17 05 04.5**	**-2.8**
JMIC	**Jan Mayen**	**6.10**	**246**	*e*P	**Pn**	**17 05 04.5**	**-3.6**
JMIC	**Jan Mayen**	**6.10**	**246**	LR	LR	17 06 54.9	
	comp=Z,31μm,21.0s,baz=41,slow=32						
JMIC	**Jan Mayen**	**6.10**	**246**	P	**Pn**	**17 05 04.4**	**-3.6**

JMI Jan Mayen 6.19 246 eP Pn 17 05 06.3 -3.0
LOF Lofoten 6.34 163 ePn Pn 17 05 11.6 +0.2
LOF eSn Sn 17 06 16.6 -7.1
LOF e 17 10 25.5
LOF Lofoten 6.34 163 ePn Pn 17 05 11.6 +0.2
LOF eSn Sn 17 06 16.6 -7.1
LOF AML AML 17 06 20.1
comp=Z,174nm,0.5s
LOF e 17 10 25.5
KIF Kilpisjarvi 6.49 138 eP Pn 17 05 11.9 -1.5
KTK1 Kautokeino 6.96 132 ePn Pn 17 05 19.9 +0.1
KTK1 eSn Sn 17 06 31.0 -7.8
KTK1 Kautokeino 6.96 132 P Pn 17 05 19.8 0.0
KTK1 eSn Sn 17 06 31.0 -7.8
SNR=50
ARA0 ARCESS Array S 7.03 124 Pn Pn 17 05 19.2 -1.5
baz=329,slow=11
ARA0 Sn Sn 17 06 30.6 -10
baz=323,slow=22
ARA0 ARCESS Array S 7.03 124 eP Pn 17 05 19.2 -1.5
baz=329,slow=11
ARA0 ARCESS Array S 7.03 124 Sn Sn 17 06 30.6 -10
SNR=8.5
ARCES ARCESS Array B 7.03 124 Pn Pn 17 05 18.2 -2.5
comp=Z,1.9nm,0.3s,baz=330,slow=14,SNR=7.2
ARCES Sn Sn 17 06 30.6 -10
comp=Z,32nm,0.3s,baz=326,slow=21,SNR=9.1
KEV Kevo 7.21 120 eP Pn 17 05 21.1 -2.2
KEV Kevo 7.21 120 ePn Pn 17 05 20.8 -2.4
comp=Z,226nm,0.6s
KEV eSn Sn 17 06 30.5 -14
KEV Kevo 7.21 120 eP Pn 17 05 21.7 -1.5
KEV pmax pmax
comp=Z,230nm,0.7s
KEV Kevo 7.21 120 ePn Pn 17 05 20.8 -2.4
comp=Z,226nm,0.6s
KEV Kevo 7.21 120 eP Pn 17 05 21.7 -1.5
comp=Z,230nm,0.7s
STOK Stokkvaagen 8.09 168 eP Pn 17 05 34.5 -0.8
STOK AML AML 17 07 04.3
comp=Z,44nm,0.6s
MOR8 Moi Rana 8.34 164 eP Pn 17 05 37.7 -1.1
MOR8 AML AML 17 07 06.3
comp=Z,76nm,0.7s
NSS Namsos 9.83 172 eP Pn 17 05 58.4 -0.8
NSS AML AML 17 07 52.0
comp=Z,15nm,0.5s
APA0 Apatity Array 10.27 118 eP Pn 17 06 00.5 -4.7
baz=321,slow=14
APA0 Apatity Array 10.27 118 Pn Pn 17 06 00.4 -4.8
SNR=2.1
APA Apatity 10.40 117⇑iP Pn 17 06 06.0 -0.9
APA pmax pmax
comp=Z,150nm,0.8s
APA MLR MLR
comp=Z,33µm,19.0s
APA Apatity 10.40 117 i P Pn 17 06 06.0 -0.9
comp=Z,33µm,19.0s
LVZ Lovozero 10.46 114 Pn Pn 17 06 04.0 -3.7
comp=Z,1µm,1.0s,SNR=5.5
LVZ Lovozero 10.46 114 i P Pn 17 06 06.7 -1.0
LVZ Lovozero 10.46 114 i P Pn 17 06 06.6 -1.1
LVZ pmax pmax
comp=Z,142nm,0.7s
LVZ Lovozero 10.46 114 i P Pn 17 06 06.6 -1.1
comp=Z,142nm,0.7s
DOMB Dombas 12.27 179 eP Pn 17 06 31.0 -1.5
FOO Floro 12.78 188 eP Pn 17 06 39.2 -0.2
HYA Hoyanger 13.18 185 eP Pn 17 06 44.8 -0.1
NB2 NORSAR Subarra 13.31 175 Pn Pn 17 06 45.5 -1.1
comp=Z,25nm,1.0s,baz=357,slow=14
NB2 NORSAR Subarra 13.31 175 eP Pn 17 06 45.6 -1.0
baz=350,slow=12
NB2 NORSAR Subarra 13.31 175 P Pn 17 06 45.5 -1.1
NB2 pmax pmax
comp=Z,25nm,1.0s
NOA NORSAR Array B 13.31 175 Pn Pn 17 06 45.7 -0.9
NOA NORSAR Array B 13.31 175 Pn Pn 17 06 45.7 -0.9
comp=Z,1.5nm,0.3s,baz=356,slow=12,SNR=8.8
BORG Borgarnes 13.98 243 ePn Pn 17 06 57.4 +1.6
comp=Z,367nm,1.5s
BORG Borgarnes 13.98 243 Pn Pn 17 06 58.4 +2.6
comp=Z,0.3nm,0.3s,baz=93,slow=12,SNR=3.1
BORG LR LR 17 10 47.3
comp=Z,15µm,21.9s,baz=32,slow=31
TMCR Tamitsa 14.29 120 i P Pn 17 06 58.5 -1.4
HFS Hagfors 14.30 170 eP Pn 17 06 59.5 -0.7
baz=5.8,slow=11
HFS Hagfors 14.30 170 Pn Pn 17 06 59.5 -0.7
HFS Pn Pn 17 07 06.2 +6.0
HFS Hagfors 14.30 170 P Pn 17 07 06.2 +6.0
HFS pmax pmax
comp=Z,2.0nm,0.3s
HFS Hagfors 14.30 170 Pn Pn 17 07 06.2 +6.0
comp=Z,1.5nm,0.3s,baz=357,slow=11,SNR=8.2
FIA0 FINESS Array S 14.32 145 eP Pn 17 06 57.6 -2.8
baz=353,slow=12
FINES FINESS Array B 14.32 145 Pn Pn 17 06 57.8 -2.7
comp=Z,1.4nm,0.3s,baz=352,slow=12,SNR=15
FINES Sn Sn 17 09 23.8 -15
comp=Z,1.9nm,0.3s,baz=349,slow=20,SNR=4.0
KONO Kongsberg 14.67 178 ePn Pn 17 07 03.6 -1.6
comp=Z,303nm,1.3s
KONO Kongsberg 14.67 178 ePn Pn 17 07 03.6 -1.6
comp=Z,303nm,1.3s
KONO Kongsberg 14.67 178 i P Pn 17 07 04.3 -0.9
ALE Alert 15.14 332 Pn Pn 17 07 09.0 -2.5
comp=Z,589nm,1.4s,SNR=7.7
REB Eisghbrachaidh 17.07 206⇑eP Pn 17 07 35.8 -0.5
MVH1 Achvaich 17.13 204⇑eP Pn 17 07 35.9 -1.2
VSU Vasula 17.27 147 i P Pn 17 07 38.6 -0.3
VSU Vasula 17.27 147 i P Pn 17 07 38.5 -0.4
MCD Coleburn Disti 17.37 202 eP Pn 17 07 40.4 +0.4
MME1 Meikle Cairn 17.60 201 eP Pn 17 07 42.3 -0.7
MDO Dochfour 17.63 204⇑eP Pn 17 07 42.0 -1.3
KAC Achnashellach 17.68 206 eP Pn 17 07 43.1 -0.7
MUD Monsted U'grnd 17.87 179 i P Pn 17 07 46.8 +0.5
comp=Z,58nm,1.0s
MUD i 17 12 41.6
MUD Monsted U'grnd 17.87 179 i P Pn 17 07 46.8 +0.5
comp=Z,58nm,1.0s
MUD i 17 12 41.6
MUD
comp=Z,6µm,18.0s
KPL Plockton 17.88 206 eP Pn 17 07 46.9 +0.5
KPL AMb AMB 17 07 48.0
comp=Z,299nm,1.7s
KPL AMS AMS 17 13 23.8
comp=Z,4µm,20.3s
COP Copenhagen 18.70 173 i P Pn 17 07 55.8 -0.7
comp=Z,134nm,1.1s
COP i S Sn 17 11 31.6 +6.3
COP Copenhagen 18.70 173 i P Pn 17 07 55.8 -0.7
comp=Z,134nm,1.1s
COP i S Sn 17 11 31.6 +6.3
COP
comp=Z,4µm,18.0s
EBH Black Hill 18.71 202 eP Pn 17 07 54.4 -2.1
EAB Aberfoyle 18.86 203 eP Pn 17 07 56.3 -2.0
ESY Stoneypath 18.95 200 eP Pn 17 07 57.3 -2.1
EDI Edinburgh 19.00 201 eP Pn 17 07 59.2 -0.8
EDI AMb AMB 17 08 15.2
comp=Z,238nm,2.0s
EDI AMS AMS 17 14 19.0
comp=Z,4µm,18.6s
EBL Broad Law 19.13 201 eP Pn 17 07 59.3 -2.4
PGBU Glenifferbraes 19.24 203 eP Pn 17 08 01.8 -1.1
PGBU AMb AMB 17 08 08.0
comp=Z,183nm,1.5s
BSD Bornholm Skovb 19.38 169⇑iP Pn 17 08 02.8 -1.8
comp=Z,142nm,0.8s
BSD
comp=Z,8µm,19.0s
EKA Eskdalemuir Ar 19.58 201 P Pn 17 08 07.1 +0.1
comp=Z,0.2nm,0.3s,baz=6.6,slow=10,SNR=14
ESK Eskdalemuir 19.60 201 eP Pn 17 08 05.1 -2.2
ESK AMb AMB 17 08 12.0
comp=Z,227nm,1.8s
ESK AMS AMS 17 14 38.2
comp=Z,4µm,19.1s
ESK Eskdalemuir 19.60 201 eP Pn 17 08 05.2 -2.1
comp=Z,231nm,1.4s
ESK Eskdalemuir 19.60 201 eP Pn 17 08 05.2 -2.0
ESK pmax pmax
comp=Z,231nm,1.4s

ESK Eskdalemuir 19.60 201 eP Pn 17 08 05.2 -2.0
comp=Z,231nm,1.4s
ECK Cauldkaine Hil 19.73 200⇑eP Pn 17 08 05.5 -3.3
BHH Howats Hill 19.82 201 eP Pn 17 08 07.3 -2.6
IZAR Zarasai 19.83 150 eP Pn 17 08 08.2 -1.8
IZAR AMb AMB 17 08 15.3
comp=Z,57nm,1.6s
IZAR Zarasai 19.83 150 eP Pn 17 08 08.2 -1.7
comp=Z,57nm,1.6s,SNR=40
RGN Rugen 19.87 172⇑eP Pn 17 08 09.1 -1.4
comp=Z,430nm,1.3s
RGN Rugen 19.87 172 eP Pn 17 08 10.0 -0.5
XAL Allendale 19.96 199 eP Pn 17 08 08.8 -2.7
SFJD Kangerlussuaq 20.07 280 i P P 17 08 10.3 -0.6
SFJD pmax pmax
comp=Z,132nm,1.1s
SFJD MLR MLR
comp=Z,19µm,18.0s,MS5.5
SFJD Kangerlussuaq 20.07 280 P P 17 08 10.2 -0.7
comp=Z,71nm,1.0s,baz=25,slow=11,SNR=21
SFJD Kangerlussuaq 20.07 280 i P P 17 08 10.3 -0.6
comp=Z,131nm,1.1s
SFJD eS S 17 12 05.7 +10
SFJD
comp=Z,19µm,18.0s
GCD Castle Douglas 20.12 202 eP P 17 08 10.8 -0.7
HLG Helgoland 20.15 181 eP P 17 08 12.5 +0.6
IIGN Ignalina 20.21 150⇑eP P 17 08 12.6 0.0
IIGN Ignalina 20.21 150⇑eP P 17 08 12.6 0.0
SNR=35
CKE Keswick 20.31 200 eP P 17 08 12.3 -1.4
IDID Didziasalis 20.32 149 eP P 17 08 13.7 -0.1
IDID AMb AMB 17 08 21.1
comp=Z,90nm,1.4s
IDID Didziasalis 20.32 149 eP P 17 08 13.7 0.0
comp=Z,90nm,1.4s,SNR=35
BSEG Bad Segeberg 20.41 177 eP P 17 08 14.3 -0.4
comp=Z,390nm,1.5s
HPK Haverah Park 20.80 197 eP P 17 08 18.6 -0.4
HPK AMb AMB 17 08 24.2
comp=Z,547nm,1.2s
HPK AMS AMS 17 15 28.9
comp=Z,2µm,19.1s,MS4.6
GMM Mts of Mourne 20.95 205 eP P 17 08 19.9 -0.6
SUW Suwalki 21.15 156 eP P 17 08 21.6 -1.1
SUW epP 17 08 24.2
SUW eS S 17 12 16.1 -1.4
SUW esS sS 17 12 19.9 -2.2
SUW ePcP PcP 17 12 28.8 +0.9
SUW LMZ 17 15 47.6
comp=Z,10µm,22.3s
SUW Suwalki 21.15 156 eP P 17 08 21.6 -1.1
SUW e*PP 17 08 24.2
SUW eS S 17 12 16.1 -1.4
SUW eSS 17 12 19.9
SUW e 17 12 28.8
SUW Suwalki 21.15 156 eP P 17 08 21.6 -1.1
SUW epP 17 08 24.2
SUW eS S 17 12 16.1 -1.4
LHO Holmfirth 21.23 198⇑eP P 17 08 23.3 -0.3
KBI1 Birley Grange 21.50 197⇑eP P 17 08 25.9 -0.5
KWE Weaver Farm 21.76 197⇑eP P 17 08 28.9 -0.3
MOS Moscow 21.78 133κ iP P 17 08 28.3 -1.2
MOS i 17 08 33.3
MOS i 17 08 56.1
MOS eS S 17 12 29.5 -0.5
MOS eSS 17 12 55.7
MOS eSSS 17 13 08.9
MOS pmax pmax
comp=Z,1µm,1.1s,mb6.3
MOS pmax pmax
comp=N,928nm,1.1s
MOS pmax pmax
comp=Z,1µm,1.1s,mb6.3
MOS smax
comp=N,5µm,6.0s
MOS smax
comp=E,4µm,5.0s
MOS MLR MLR
comp=N,10µm,16.0s
MOS MLR MLR
comp=Z,12µm,16.0s,MS5.4
MOS Moscow 21.78 133 i P P 17 08 28.3 -1.2
comp=Z,1µm,1.1s,mb6.3
DLF Lyons Farm 21.94 205⇑iP P 17 08 29.6 -1.7
RUE Ruedersdorf 21.96 172 eP P 17 08 30.6 -0.8
comp=Z,263nm,1.3s,mb5.5
DSB Dublin 21.98 205 eP P 17 08 30.9 -0.7
comp=Z,70nm,1.1s,mb5.0
DCN Croghan 21.98 206⇑iP P 17 08 30.1 -1.6
SBD1 Bryn Du 21.99 200⇑eP P 17 08 30.1 -1.6
CWF Charnwood Fore 21.99 196 eP P 17 08 30.7 -1.0
CWF AMb AMB 17 08 36.2
comp=Z,337nm,1.8s,mb5.5
IBBN Ibbenburen 22.03 182 eP P 17 08 31.3 -0.9
comp=Z,504nm,1.8s,mb5.7
OBN Obninsk 22.16 135 eP P 17 08 31.8 -1.7
comp=Z,1µm,1.3s,mb6.2
OBN LR LR
comp=Z,12µm,14.0s,MS5.5
OBN Obninsk 22.16 135d iP P 17 08 32.5 -1.1
OBN e*SP sP 17 08 37.6 -0.1
OBN pmax pmax
comp=Z,908nm,1.7s,mb5.9
OBN MLR MLR
comp=Z,12µm,14.0s,MS5.5
OBN Obninsk 22.16 135 eP P 17 08 31.8 -1.8
comp=Z,1µm,1.3s,mb6.2
HLM1 Long Mynd 22.34 199⇑eP P 17 08 34.7 -0.7
CLZ Clausthal 22.51 177 eP P 17 08 36.9 -0.4
CLZ pmax pmax
comp=Z,313nm,1.5s,mb5.5
CLZ Clausthal 22.51 177 eP P 17 08 36.9 -0.4
comp=Z,313nm,1.5s,mb5.5
WAR Warsaw 22.68 160 eP P 17 08 39.3 +0.3
WAR eS S 17 12 41.6 -5.7
WAR LMZ 17 16 46.5
comp=Z,14µm,21.0s
WAR Warsaw 22.68 160 eP P 17 08 39.3 +0.3
WAR eS S 17 12 41.6 -5.7
HAE Alders End 22.79 198⇑eP P 17 08 38.3 -2.0
SSW Stow on the Wo 22.80 197⇑eP P 17 08 39.9 -0.5
HTR Trewern Hill 22.81 199⇑eP P 17 08 39.6 -0.8
MCH1 Michaelchurch 22.87 199⇑eP P 17 08 39.8 -1.2
MCH1 AMb AMB 17 08 52.1
comp=Z,338nm,1.7s,mb5.5
SOKR Solikamsk 22.94 104c iP P 17 08 40.8 -0.9
SOKR pmax pmax
comp=Z,600nm,1.1s,mb5.9
SOKR MLR MLR
comp=Z,9µm,17.0s,MS5.3
SKP1 Kophill 22.96 195⇑eP P 17 08 40.9 -1.2
CLL Collm 23.10 173⇑iP P 17 08 43.9 +0.4
comp=Z,2µm,3.3s
CLL i 17 08 48.9
CLL eS S 17 12 57.0 +2.8
CLL LR LR
comp=Z,8µm,18.8s,MS5.2
CLL Collm 23.10 173⇑iP P 17 08 43.9 +0.4
CLL i 17 08 48.9
CLL eS S 17 12 57.0 +2.8
CLL pmax pmax
comp=Z,2µm,3.3s
CLL MLR MLR
comp=Z,8µm,18.8s,MS5.2
CLL Collm 23.10 173⇑iP P 17 08 43.9 +0.4
comp=Z,2µm,3.3s
CLL i sP sP 17 08 48.9 +1.2
CLL ex x 17 09 00.0
CLL ePP 17 09 08.0
CLL eS S 17 12 57.0 +2.8
comp=N,2µm,14.5s
CLL eS S 17 12 57.0 +2.8
comp=E,6µm,20.3s
CLL e(SS) 17 14 14.0
CLL Lm 17 18 00.0
comp=N,6µm,19.0s
CLL Lm 17 18 00.0
comp=E,4µm,18.7s
CLL Lm 17 18 00.0
comp=Z,8µm,18.8s
CLL Collm 23.10 173⇑iP P 17 08 43.9 +0.4
comp=Z,477nm,1.8s,mb5.6
CLL eS S 17 12 56.2 +2.0
CLL eLR LR 17 14 20.0

HGH Gray Hill 23.21 198⇑eP P 17 08 44.2 -0.5
SWN1 Swindon 23.25 197 eP P 17 08 44.5 -0.5
SWN1 AMb AMB 17 08 52.8
comp=Z,449nm,1.4s,mb5.7
WOL Wolverton 23.40 196 eP P 17 08 46.1 -0.6
UBBA Unterbreizbach 23.53 178 eP P 17 08 46.9 -1.1
comp=Z,1µm,2.3s,mb5.9
BRG Berggiesshubel 23.57 172⇑iP P 17 08 48.4 0.0
comp=Z,415nm,2.0s,mb5.5
BRG e 17 08 59.2
BRG e 17 09 05.2
BRG e 17 09 12.0
BRG S S 17 13 07.0 +5.1
BRG LR LR
comp=Z,4µm,17.1s,MS5.0
BRG Berggiesshubel 23.57 172⇑iP P 17 08 48.4 0.0
BRG S S 17 13 07.0 +5.1
BRG pmax pmax
comp=Z,415nm,2.0s,mb5.5
BRG MLR MLR
comp=Z,4µm,17.1s,MS5.0
BRG MLR MLR
comp=N,3µm,20.5s,MS4.8
BRG MLR MLR
comp=E,2µm,20.5s,MS4.8
BRG Berggiesshubel 23.57 172 eP P 17 08 46.9 -1.5
comp=Z,2µm,2.7s,mb6.0
BRG Berggiesshubel 23.57 172⇑iP P 17 08 48.4 0.0
comp=Z,693nm,2.0s,mb5.7
BRG e 17 08 59.2
comp=Z,292nm,1.8s
BRG e 17 09 05.2
comp=Z,479nm,2.1s
BRG e 17 09 12.0
comp=Z,240nm,1.8s
BRG S S 17 13 07.0 +5.1
BRG
comp=Z,7µm,17.1s
BRG
comp=N,4µm,20.5s
BRG
comp=E,2µm,20.5s
BEBN Eben Emael 23.58 185 P P 17 08 47.6 -0.9
comp=Z,50nm,1.8s,mb4.7
UCC Uccle 23.61 187 P P 17 08 48.3 -0.5
comp=Z,557nm,3.0s
KSP Ksiaz 23.71 168 eP P 17 08 48.9 -0.8
KSP eS S 17 12 50.8 -13
KSP esS sS 17 13 10.2 +1.0
KSP LMZ 17 16 45.9
comp=Z,10µm,27.2s
KSP Ksiaz 23.71 168⇓eP P 17 08 48.8 -0.9
KSP eS S 17 13 06.0 +1.8
KSP MLR MLR
comp=Z,12µm,18.1s,MS5.4
MOX Moxa 23.73 175 eP P 17 08 49.0 -0.9
comp=Z,682nm,1.5s,mb5.9
VAL Valentia 23.74 210 eP P 17 08 49.1 -0.9
MEM Membach 23.76 184 P P 17 08 49.6 -0.5
comp=Z,72nm,1.3s,mb5.0
HEX Exmoor 23.86 200 eP P 17 08 49.4 -1.7
SNF Seneffe 23.91 187 P P 17 08 50.8 -0.7
PVCC Panska Ves 23.94 171⇑iP P 17 08 51.8 0.0
PVCC eS S 17 13 13.6 +5.7
PVCC AMS AMS 17 17 50.0
comp=Z,6µm,19.4s
MENF Mencas 23.94 190 eP P 17 08 52.4 +0.6
BCLA Clavier 23.96 185 P P 17 08 51.8 -0.2
comp=Z,274nm,2.7s,mb5.2
TANN Tannenbergstha 23.98 174 eP P 17 08 51.4 -0.8
HTL Hartland 24.00 201⇑eP P 17 08 51.0 -1.3
HTL AMb AMB 17 08 54.8
comp=Z,501nm,1.4s,mb5.8
HTL AMS AMS 17 17 30.7
comp=Z,3µm,17.9s,MS4.8
UPC Upice 24.03 169⇑eP P 17 08 52.6 0.0
TNS Taunus Mts 24.12 180 eP P 17 08 52.8 -0.6
TNS pmax pmax
comp=Z,652nm,1.8s,mb5.8
TNS Taunus Mts 24.12 180 eP P 17 08 52.8 -0.6
comp=Z,652nm,1.8s,mb5.8
NKC Novy Kostel 24.16 174⇑iP P 17 08 53.8 0.0
NKC eS S 17 13 14.7 +3.3
NKC Novy Kostel 24.16 174⇑iP P 17 08 53.8 0.0
NKC eS S 17 13 14.7 +3.3
NKC AMS AMS 17 18 10.0
comp=Z,8µm,18.3s
DPC Dobruska-Polom 24.20 168⇑iP P 17 08 53.6 -0.6
DPC eS S 17 13 17.0 +4.9
DPC AMS AMS 17 18 00.0
comp=Z,5µm,17.0s
GIVF Givet 24.30 186 eP P 17 08 54.6 -0.5
comp=Z,190nm,1.1s,mb5.1
GIVF Givet 24.30 186 eP P 17 08 54.6 -0.5
GIVF pmax pmax
comp=Z,95nm,1.1s,mb5.1
GIVF Givet 24.30 186 eP P 17 08 54.6 -0.5
comp=Z,95nm,1.1s,mb5.1
DOU Dourbes 24.31 186 P P 17 08 54.8 -0.4
DOU Dourbes 24.31 186 P P 17 08 54.7 -0.5
BAIF Baives 24.36 187 eP P 17 08 55.4 -0.2
comp=Z,488nm,1.3s,mb5.5
BAIF Baives 24.36 187 eP P 17 08 55.4 -0.2
BAIF pmax pmax
comp=Z,244nm,1.3s,mb5.5
BAIF Baives 24.36 187 eP P 17 08 55.4 -0.2
comp=Z,244nm,1.3s,mb5.5
PRA Prague 24.39 171 ⇑P P 17 08 57.0 +1.1
RES Resolute Bay 24.46 321⇑eP P 17 08 55.8 -0.6
comp=Z,8µm,1.7s
RES Resolute Bay 24.46 321⇑eP P 17 08 55.8 -0.5
comp=Z,8µm,1.7s
ABH Alteburg 24.46 182⇓eP P 17 08 56.9 +0.3
PRU Pruhonice 24.48 171⇑iP P 17 08 56.3 -0.4
PRU eS S 17 13 20.6 +4.1
PRU AMS AMS 17 18 20.0
comp=Z,5µm,16.9s
DYA Yadsworthy 24.50 200 eP P 17 08 56.2 -0.7
DYA AMb AMB 17 08 59.0
comp=Z,283nm,1.9s,mb5.4
DYA AMS AMS 17 18 04.6
comp=Z,3µm,18.2s,MS4.8
OJC Ojcow 24.57 163 i P P 17 08 57.4 -0.2
OJC eS S 17 13 19.3 +1.2
OJC L 17 18 15.1
comp=Z,11nm,21.2s
RAC Raciborz 24.59 165 eP P 17 08 57.2 -0.5
RAC eS S 17 13 12.8 -5.5
RAC LR LR
comp=Z,9µm,22.4s,MS5.2
ROTZ Rotzenmuhle 24.62 175 eP P 17 08 57.7 -0.3
RUP Ruppelstein 24.65 183⇓eP P 17 08 58.7 +0.4
CSA1 St Austell 24.67 201 eP P 17 08 57.4 -1.1
GRA1 Grafenberg Arr 24.67 176 eP P 17 08 58.0 -0.5
comp=Z,2µm,2.6s,mb6.2
GRF Grafenberg Arr 24.67 176 eP P 17 08 58.0 -0.5
GRF pmax pmax
comp=Z,2µm,2.6s,mb6.2
GRF Grafenberg Arr 24.67 176 eP P 17 08 58.0 -0.5
GRF pmax pmax
comp=Z,2µm,2.6s,mb6.2
GRF Grafenberg Arr 24.67 176 eP P 17 08 58.0 -0.5
comp=Z,2µm,2.6s,mb6.2
GRFO Grafenberg 24.67 176 eP P 17 08 58.2 -0.3
comp=Z,783nm,1.9s,mb5.9
GRFO LR LR
comp=Z,6µm,19.0s,MS5.1
GRFO Grafenberg 24.67 176 P P 17 08 59.3 +0.8
GRFO pmax pmax
comp=Z,770nm,1.9s,mb5.9
GRFO Grafenberg 24.67 176 P P 17 08 59.3 +0.8
comp=Z,770nm,1.9s,mb5.9
WLF Walferdange 24.70 184 eP P 17 08 58.4 -0.3
comp=Z,1µm,2.5s,mb6.1
WLF Walferdange 24.70 184 eP P 17 08 58.9 +0.2
WLF pmax pmax
comp=Z,1µm,2.5s,mb6.0
WLF Walferdange 24.70 184 P P 17 08 58.7 -0.1
comp=Z,189nm,2.7s,mb5.2
WLF Walferdange 24.70 184 eP P 17 08 58.5 -0.2
WLF Walferdange 24.70 184 P P 17 08 58.6 -0.1
comp=Z,189nm,2.7s,mb5.2
TOD Tromm 24.73 180⇓eP P 17 08 59.1 0.0
OKC Ostrava-Krasne 24.83 165 eP P 17 08 58.4 -1.5
OKC eS S 17 13 31.3 +9.1

OKC **Ostrava-Krasne** **24.83 165**⇑ *eP* **P** **17 08 58.4 -1.5**
OKC *eS* **S** **17 13 31.8 +10**
OKC AMS AMS 17 18 00.0
comp=Z,6µm,20.8s
MORC **Moravsky Berou** **24.85 166** *eP* **P** **17 08 59.6 -0.5**
comp=Z,132nm,1.3s,mb5.3
MORC **Moravsky Berou** **24.85 166**⇑ *iP* **P** **17 09 00.5 +0.4**
MORC **Moravsky Berou** **24.85 166** *eP* **P** **17 08 59.7 -0.4**
SWS **Schriesheim-Wi** **24.86 180** P **P** **17 09 00.8 +0.6**
CMA1 **Manaccan** **24.96 201** *eP* **P** **17 08 58.9 -2.3**
CMA1 **Manaccan** **24.96 201** *eP* **P** **17 08 58.8 -2.3**
SIND **Sindeldorf** **25.00 179** P **P** **17 09 01.9 +0.5**
KTD **Kalmit** **25.02 181**⇓ *eP* **P** **17 09 01.9 +0.2**
AKASG **Malin Array Be** **25.16 148** P **P** **17 09 01.1 -1.8**
comp=Z,50nm,0.7s,mb5.1,baz=345,slow=9.3,SNR=26
AKASG PcP PcP 17 12 35.9 -0.4
comp=Z,6.8nm,0.7s,baz=354,slow=2.4,SNR=7.4
AKASG **Malin Array Be** **25.16 148** P **P** **17 09 01.1 -1.8**
AKASG **Malin Array Be** **25.16 148** PcP PcP 17 12 35.9 -0.4
KIEV **Kiev** **25.17 148** *eP* **P** **17 09 01.6 -1.4**
comp=Z,327nm,1.4s,mb5.7
KIEV LR LR
comp=Z,11µm,20.0s,MS5.3
KIEV **Kiev** **25.17 148** *eP* **P** **17 09 01.6 -1.4**
KIEV pmax pmax
comp=Z,327nm,1.4s,mb5.7
KIEV MLR MLR
comp=Z,11µm,20.0s,MS5.3
KIEV **Kiev** **25.17 148** *eP* **P** **17 09 01.6 -1.4**
comp=Z,327nm,1.4s,mb5.7
TREC **Trest** **25.21 170**⇑ *eP* **P** **17 09 03.7 +0.3**
TREC *eS* S **17 13 42.3 +14**
TREC AMS AMS 17 18 20.0
comp=Z,6µm,15.7s
TREC **Trest** **25.21 170** *eP* **P** **17 09 03.7 +0.3**
comp=Z,6µm,15.7s
VRAC **Vranov** **25.26 168** P **P** **17 09 04.7 +0.8**
VRAC **Vranov** **25.26 168** P **P** **17 09 04.1 +0.3**
comp=Z,108nm,0.9s,mb5.4,baz=3.5,slow=10,SNR=27
VRAC **Vranov** **25.26 168** *eP* **P** **17 09 03.9 +0.1**
WET **Wettzell** **25.26 174** *eP* **P** **17 09 04.0 +0.2**
WET pmax pmax
comp=Z,193nm,1.4s,mb5.4
WET **Wettzell** **25.26 174** *eP* **P** **17 09 04.0 +0.2**
comp=Z,193nm,1.4s,mb5.4
KHC **Kasperske Hory** **25.30 173**⇑ *iP* **P** **17 09 04.3 +0.1**
KHC *ex* x 17 09 20.5
KHC *eS* **S** **17 13 41.0 +11**
KHC AMS AMS 17 18 50.0
comp=Z,6µm,16.3s
LANF **Langenberg** **25.36 181**⇓ *eP* **P** **17 09 04.8 0.0**
LVV **L'vov** **25.37 156**⇑ *iP* **P** **17 09 04.4 -0.5**
LVV *eS* **S** **17 13 23.6 -7.3**
LVV MLR MLR
comp=Z,3µm,14.0s,MS5.0
LVV MLR MLR
comp=N,2µm,15.0s,MS4.9
LVV MLR MLR
comp=E,2µm,15.0s,MS4.9
NIE **Niedzica** **25.41 162** *eP* **P** **17 09 05.6 +0.4**
KWP **Kalwaria** **25.42 159** *eP* **P** **17 09 05.1 -0.2**
KWP *epP* pP 17 09 06.8 -1.5
KWP *eS* **S** **17 13 31.8 +0.2**
KWP LMZ 17 18 37.4
comp=E,14µm,20.4s
KWP **Kalwaria** **25.42 159**⇓ *iP* **P** **17 09 05.7 +0.4**
KWP **Kalwaria** **25.42 159** *eP* **P** **17 09 05.1 -0.2**
KWP *epP* pP 17 09 06.8 -1.5
KWP *eS* **S** **17 13 31.8 +0.2**
KRUC **Moravsky** **25.49 168** *eP* **P** **17 09 05.4 -0.6**
STHS **Stebnicka Huta** **25.49 161** *eP* **P** **17 09 06.8 +0.8**
STHS pmax pmax
comp=Z,117nm,1.1s,mb5.3
STHS **Stebnicka Huta** **25.49 161** *eP* **P** **17 09 06.8 +0.8**
comp=Z,117nm,1.1s,mb5.3
STU **Stuttgart** **25.57 179** *eP* **P** **17 09 05.9 -0.8**
comp=Z,510nm,1.6s,mb5.8
GEC2 **GERESS Array S** **25.59 172** *eP* **P** **17 09 07.2 +0.4**
GEC2 pmax pmax
comp=Z,181nm,1.4s,mb5.4
GEC2 **GERESS Array S** **25.59 172** *eP* **P** **17 09 07.2 +0.4**
comp=Z,181nm,1.4s,mb5.4
GERES **GERESS Array B** **25.59 172** P **P** **17 09 07.3 +0.5**
comp=Z,25nm,0.8s,mb4.8,baz=3.1,slow=7.3,SNR=35
GERES PcP PcP 17 12 38.0 +0.8
comp=Z,2.1nm,0.8s,baz=358,slow=2.9,SNR=4.1
GERES **GERESS Array B** **25.59 172** PcP PcP 17 12 38.0 +0.7
LBG **Lerchenberg** **25.68 180** P **P** **17 09 08.6 +1.0**
HDH **Heidenheim-Cha** **25.77 178** P **P** **17 09 09.4 +1.0**
JAVC **Velka Javorina** **25.77 166** *eP* **P** **17 09 08.5 0.4**
VOR **Voronezh** **25.88 134** *eP* **P** **17 09 09.0 -0.4**
VOR *eS* **S** **17 13 44.0 +5.1**
VOR pmax pmax
comp=Z,2µm,2.0s,mb6.2
VOR smax
comp=N,400nm,1.5s
VOR **Voronezh** **25.88 134** *eP* **P** **17 09 09.0 -0.4**
comp=N,2µm,2.0s,mb6.2
FLN **La Foliniere** **25.89 194** *eP* **P** **17 09 08.2 -1.3**
comp=N,260nm,1.3s,mb5.3
FLN *e*MLR MLR
comp=Z,3µm,18.2s,MS4.5
FLN **La Foliniere** **25.89 194** *eP* **P** **17 09 08.2 -1.3**
comp=Z,130nm,1.3s,mb5.3
FLN LR LR
comp=Z,3µm,18.3s,MS4.8
FLN **La Foliniere** **25.89 194** *eP* **P** **17 09 08.2 -1.3**
FLN pmax pmax
comp=Z,130nm,1.3s,mb5.3
FLN MLR MLR
comp=Z,3µm,18.3s,MS4.8
MEZF **Maizieres J'vi** **25.89 186** *eP* **P** **17 09 09.7 +0.2**
comp=Z,735nm,1.5s,mb5.7
MEZF **Maizieres J'vi** **25.89 186** *eP* **P** **17 09 09.7 +0.2**
comp=Z,368nm,1.5s,mb5.7
BUCH **Bad Urach** **25.89 179** P **P** **17 09 10.9 +1.3**
CDF **Champ du Feu** **25.94 182** *eP* **P** **17 09 09.9 -0.1**
comp=Z,447nm,1.5s,mb5.5
CDF **Champ du Feu** **25.94 182** *eP* **P** **17 09 09.9 -0.1**
CDF pmax pmax
comp=Z,224nm,1.5s,mb5.5
CDF **Champ du Feu** **25.94 182** *eP* **P** **17 09 09.9 -0.1**
comp=Z,224nm,1.5s,mb5.5
BFO **Black Forest** **26.01 181** *eP* **P** **17 09 09.9 -0.8**
comp=Z,344nm,1.3s,mb5.7
BFO LR LR
comp=Z,4µm,20.0s,MS5.0
BFO **Black Forest** **26.01 181** *eP* **P** **17 09 09.9 -0.8**
BFO pmax pmax
comp=Z,344nm,1.3s,mb5.7
BFO MLR MLR
comp=Z,4µm,20.0s,MS5.0
CRVS **Cervenica-Dubn** **26.02 161** *eP* **P** **17 09 09.3 -1.5**
CRVS *eS* **S** **17 13 46.3 +5.1**
LDF **La Druitiere** **26.03 193** *eP* **P** **17 09 09.6 -1.2**
comp=Z,472nm,1.6s,mb5.5
LDF **La Druitiere** **26.03 193** *eP* **P** **17 09 09.6 -1.2**
LDF pmax pmax
comp=Z,236nm,1.6s,mb5.5
LDF **La Druitiere** **26.03 193** *eP* **P** **17 09 09.6 -1.2**
comp=Z,236nm,1.6s,mb5.5
KOLS **Kolonicke sedl** **26.07 159** *eP* **P** **17 09 10.9 -0.3**
KOLS *eS* **S** **17 13 48.2 +6.3**
KOLL **Kolacno** **26.10 165** *eP* **P** **17 09 11.3 -0.2**
KOLL *e* 17 09 29.2
SMOL **Smolenice** **26.10 167** *eP* **P** **17 09 12.3 +0.8**
SMOL *epP* pP 17 09 19.1 +4.6
ECH **Echery** **26.14 182**⇓ *eP* **P** **17 09 12.0 +0.2**
ARU **Arti** **26.14 105** P **P** **17 09 13.2 +1.5**
comp=Z,3µm,1.4s,mb6.6,SNR=7.1
ARU **Arti** **26.14 105** *eP* **P** **17 09 11.0 -0.7**
comp=Z,3µm,1.4s,mb6.6
ARU LR LR
comp=Z,9µm,20.0s,MS5.3
ARU **Arti** **26.14 105** *eP* **P** **17 09 12.1 +0.4**
ARU *e* 17 09 49.8
ARU *e*PPP 17 10 00.0
ARU *eS* **S** **17 13 46.3 +3.5**
ARU *e*SS 17 14 47.0
ARU MLR MLR
comp=Z,10µm,22.0s,MS5.3
ARU MLR MLR
comp=N,8µm,22.0s
ARU **Arti** **26.14 105** *eP* **P** **17 09 11.0 -0.7**
comp=N,3µm,1.4s,mb6.6

THEF **They Montfort** **26.14 184**⇓ *eP* **P** **17 09 12.1 +0.3**
FUR **Furstenfeldbru** **26.20 176** *eP* **P** **17 09 12.5 +0.1**
FUR pmax pmax
comp=Z,274nm,1.2s,mb5.7
FUR **Furstenfeldbru** **26.20 176** *eP* **P** **17 09 12.5 +0.1**
comp=Z,274nm,1.2s,mb5.7
VYHS **Vyhne** **26.22 165** *eP* **P** **17 09 12.3 -0.2**
comp=Z,68nm,1.4s,mb5.0
VYHS *e*S **S** **17 13 52.4 +8.2**
VYHS LR LR
comp=Z,4µm,23.5s,MS4.9
VYHS **Vyhne** **26.22 165** *eP* **P** **17 09 12.3 -0.2**
VYHS pmax pmax
comp=Z,68nm,1.4s,mb5.0
VYHS MLR MLR
comp=Z,4µm,23.5s,MS4.9
VYHS **Vyhne** **26.22 165** *eP* **P** **17 09 12.3 -0.2**
VYHS *e*S **S** **17 13 52.4 +8.2**
VYHS **Vyhne** **26.22 165** *eP* **P** **17 09 12.3 -0.2**
comp=Z,68nm,1.4s,mb5.0
SPAK **Spaichingen-Ko** **26.24 180**⇓ *eP* **P** **17 09 13.3 +0.6**
GUT **Gutenstein** **26.27 179** P **P** **17 09 14.0 +1.0**
GRR **Gorron** **26.29 195** *eP* **P** **17 09 11.7 -1.4**
comp=Z,360nm,1.6s,mb5.4
GRR **Gorron** **26.29 195** *eP* **P** **17 09 11.7 -1.4**
GRR pmax pmax
comp=Z,180nm,1.6s,mb5.3
GRR **Gorron** **26.29 195** *eP* **P** **17 09 11.7 -1.4**
comp=Z,180nm,1.6s,mb5.4
KECS **Kecovo** **26.36 162** *eP* **P** **17 09 13.2 -0.5**
comp=Z,24nm,1.0s,mb4.7
KECS **Kecovo** **26.36 162** *eP* **P** **17 09 13.2 -0.5**
KECS pmax pmax
comp=Z,24nm,1.0s,mb4.7
HAU **Haudompre** **26.36 184** *eP* **P** **17 09 13.8 0.0**
comp=Z,655nm,1.5s,mb5.6
HAU *e*MLR MLR
comp=Z,4µm,18.8s,MS4.7
HAU **Haudompre** **26.36 184** *eP* **P** **17 09 13.8 0.0**
comp=Z,327nm,1.5s,mb5.6
HAU LR LR
comp=Z,4µm,18.8s,MS5.0
HAU **Haudompre** **26.36 184** *eP* **P** **17 09 13.8 0.0**
HAU pmax pmax
comp=Z,327nm,1.5s,mb5.6
HAU MLR MLR
comp=Z,4µm,18.8s,MS5.0
VRSR **Storozhevoye** **26.37 134** *eP* **P** **17 09 12.5 -1.4**
VRSR *e**PP pP 17 09 17.0 +0.1
VRSR *eS* **S** **17 13 44.2 -2.4**
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=Z,10.0nm,1.0s
VRSR pmax pmax
comp=E,7.0nm,0.8s
VRSR smax
comp=N,20nm,2.7s
VRSR smax
comp=Z,10.0nm,2.5s
VRSR smax
comp=E,20nm,1.4s
VRSR MLR MLR
comp=N,2µm,20.0s,MS4.7
VRSR MLR MLR
comp=Z,2µm,20.0s,MS4.7
VRSR MLR MLR
comp=E,1µm,19.0s,MS4.7
VRSR **Storozhevoye** **26.37 134** *eP* **P** **17 09 12.5 -1.4**
VRSR *eS* **S** **17 13 44.2 -2.4**
comp=E,10.0nm,2.5s
UZH **Uzhgorod** **26.37 160**c *iP* **P** **17 09 13.4 -0.5**
UZH *i* 17 09 56.6
UZH *e* 17 10 01.6
UZH *eS* **S** **17 13 42.6 -4.0**
UZH MLR MLR
comp=Z,8µm,17.0s,MS5.3
UZH **Uzhgorod** **26.37 160** *i* P **P** **17 09 13.4 -0.5**
KIZ **Kirchzarten** **26.39 181** P **P** **17 09 14.6 +0.5**
ZST **Bratislava** **26.40 167** *eP* **P** **17 09 14.9 +0.8**
comp=Z,247nm,1.5s,mb5.5
ZST *eS* **S** **17 14 00.8 +14**
ZST LR LR
comp=Z,4µm,17.7s,MS5.1
ZST **Bratislava** **26.40 167** *eP* **P** **17 09 14.9 +0.8**
ZST pmax pmax
comp=Z,247nm,1.5s,mb5.5
ZST MLR MLR
comp=Z,4µm,17.7s,MS5.1
ZST **Bratislava** **26.40 167** *eP* **P** **17 09 14.9 +0.8**
ZST *eS* **S** **17 14 00.8 +14**
ZST **Bratislava** **26.40 167** *eP* **P** **17 09 14.9 +0.8**
comp=Z,247nm,1.5s,mb5.5
FELD **Feldberg im Sc** **26.47 181**⇓ *eP* **P** **17 09 15.1 +0.3**
MOF **Molkenrain** **26.50 182**⇓ *eP* **P** **17 09 15.0 -0.1**
ROSF **Rostrenen** **26.52 198** *eP* **P** **17 09 14.1 -1.2**
comp=Z,192nm,1.4s,mb5.2
ROSF **Rostrenen** **26.52 198** *eP* **P** **17 09 14.1 -1.2**
ROSF pmax pmax
comp=Z,96nm,1.4s,mb5.1
ROSF **Rostrenen** **26.52 198** *eP* **P** **17 09 14.1 -1.2**
comp=Z,96nm,1.4s,mb5.2
HINF **Hinteralfeld** **26.54 183** *eP* **P** **17 09 15.3 -0.1**
comp=Z,651nm,1.9s,mb5.5
HINF **Hinteralfeld** **26.54 183** *eP* **P** **17 09 15.3 -0.1**
HINF pmax pmax
comp=Z,326nm,1.9s,mb5.5
HINF **Hinteralfeld** **26.54 183** *eP* **P** **17 09 15.3 -0.1**
comp=Z,326nm,1.9s,mb5.5
SGMF **Saint Gilles** **26.55 197** *eP* **P** **17 09 14.6 -0.9**
comp=Z,755nm,1.5s,mb5.7
SGMF **Saint Gilles** **26.55 197** *eP* **P** **17 09 14.6 -0.9**
SGMF pmax pmax
comp=Z,378nm,1.5s,mb5.7
SGMF **Saint Gilles** **26.55 197** *eP* **P** **17 09 14.6 -0.9**
comp=Z,378nm,1.5s,mb5.7
SLE **Schleitheim** **26.58 180** ⇓P **P** **17 09 16.0 +0.2**
CONA **Conrad Observa** **26.60 169**⇓ *iP* **P** **17 09 16.6 +0.6**
SNR=16
MOA **Molln** **26.60 172**⇓ *iP* **P** **17 09 16.0 0.0**
comp=Z,594nm,2.3s,mb5.7,SNR=17
VORD **Divnogorie** **26.63 134** *eP* **P** **17 09 15.0 -1.2**
VORD *eS* **S** **17 13 46.2 -4.4**
VORD pmax pmax
comp=N,250nm,0.9s
VORD pmax pmax
comp=E,120nm,0.9s
VORD pmax pmax
comp=Z,100nm,0.9s,mb5.3
VORD smax
comp=Z,290nm,4.4s
VORD smax
comp=N,1µm,5.0s
VORD smax
comp=E,920nm,4.8s
VORD MLR MLR
comp=Z,14µm,18.0s,MS5.5
VORD MLR MLR
comp=N,8µm,17.0s,MS5.5
VORD MLR MLR
comp=E,6µm,14.0s,MS5.5
SISB **Singen-Schiene** **26.66 180** P **P** **17 09 18.6 +2.1**
UBR **Ueberruh** **26.67 178** P **P** **17 09 17.6 +1.0**
SULZ **Cheisacher** **26.82 181** ⇓P **P** **17 09 18.1 +0.2**
PSZ **Piszkesteto** **26.87 163** P **P** **17 09 19.4 +1.0**
PSZ **Piszkesteto** **26.87 163**⇓ *eP* **P** **17 09 18.7 +0.3**
PSZ **Piszkesteto** **26.87 163**⇑ *iP* **P** **17 09 18.5 +0.1**
PSZ **Piszkesteto** **26.87 163** *eP* **P** **17 09 16.7 -1.7**
comp=E,191nm,1.4s,mb5.4
RETA **Reutte** **26.87 177**⇓ *iP* **P** **17 09 19.1 +0.7**
comp=E,778nm,2.7s,mb5.8,SNR=11
SOP **Sopron** **26.88 168**⇓ *eP* **P** **17 09 18.8 +0.3**
BBS **Basel-Blauen** **26.88 182**⇓ *eP* **P** **17 09 18.7 +0.2**
WILA **Wila** **26.93 180** ⇓P **P** **17 09 19.4 +0.5**
QUIF **Quistinic** **26.93 198** *eP* **P** **17 09 18.1 -0.8**
comp=E,137nm,1.4s,mb5.0
QUIF **Quistinic** **26.93 198** *eP* **P** **17 09 18.1 -0.8**
QUIF pmax pmax
comp=Z,68nm,1.4s,mb5.0
QUIF **Quistinic** **26.93 198** *eP* **P** **17 09 18.1 -0.8**
comp=Z,68nm,1.4s,mb5.0
PENC **Penc** **26.95 164**⇑ *eP* **P** **17 09 20.0 +0.9**
VRHR **Novokhopersk** **26.97 131** *eP* **P** **17 09 18.1 -1.2**
VRHR pmax pmax
comp=Z,230nm,1.2s,mb5.6
VRHR pmax pmax
comp=N,290nm,1.6s
VRHR pmax pmax
comp=E,230nm,1.3s
VRHR MLR MLR
comp=Z,7µm,18.0s,MS5.3
VRHR MLR MLR
comp=N,9µm,22.0s
VRHR MLR MLR
comp=E,2µm,14.0s
VRHR **Novokhopersk** **26.97 131** *eP* **P** **17 09 18.1 -1.2**
comp=E,9µm,22.0s
ZUR **Degenried** **26.97 180**⇑P **P** **17 09 20.0 +0.7**
LOMF **Lomont** **27.00 183**⇓ *eP* **P** **17 09 19.8 +0.2**
MOTA **Moosalm** **27.02 176**⇑ *iP* **P** **17 09 19.4 -0.4**
comp=E,209nm,1.5s,mb5.4,SNR=18
MOTA **Moosalm** **27.02 176**⇑ *iP* **P** **17 09 19.4 -0.3**
MOTA pmax pmax
comp=Z,209nm,1.5s,mb5.4
WATA **Walderalm** **27.04 176**⇑ *iP* **P** **17 09 20.2 +0.3**
comp=Z,167nm,1.5s,mb5.3,SNR=14
WATA **Walderalm** **27.04 176**⇑ *iP* **P** **17 09 20.2 +0.3**
WATA pmax pmax
comp=Z,167nm,1.5s,mb5.3
DAVA **Damuels** **27.06 178**⇓ *iP* **P** **17 09 21.3 +1.2**
comp=Z,1µm,3.2s,SNR=9.4
DAVA **Damuels** **27.06 178**⇓ *ipP* pP 17 09 21.3 -1.9
comp=Z,1µm,3.2s,SNR=9.4
WTTA **Wattenberg** **27.11 176**⇓ *iP* **P** **17 09 21.5 +0.9**
comp=Z,552nm,2.0s,mb5.7,SNR=14
WTTA **Wattenberg** **27.11 176**⇓ *iP* **P** **17 09 21.5 +0.9**
WTTA pmax pmax
comp=Z,552nm,2.0s,mb5.7
SQTA **Sankt Quirin** **27.14 176**⇓ *iP* **P** **17 09 21.5 +0.7**
comp=Z,192nm,1.6s,mb5.4,SNR=11
SQTA **Sankt Quirin** **27.14 176**⇓ *iP* **P** **17 09 21.6 +0.7**
SQTA pmax pmax
comp=Z,192nm,1.6s,mb5.4
SQTA **Sankt Quirin** **27.14 176** P **P** **17 09 21.5 +0.6**
comp=Z,192nm,1.6s,mb5.4,SNR=11
LOR **Lormes** **27.16 187** *eP* **P** **17 09 20.3 -0.7**
comp=Z,339nm,1.6s,mb5.3
LOR *e*MLR MLR
comp=Z,4µm,19.5s,MS4.7
LOR **Lormes** **27.16 187** *eP* **P** **17 09 20.3 -0.7**
comp=Z,170nm,1.6s,mb5.3
LOR LR LR
comp=Z,4µm,19.5s,MS5.0
LOR **Lormes** **27.16 187** *eP* **P** **17 09 20.3 -0.7**
LOR pmax pmax
comp=Z,170nm,1.6s,mb5.3
LOR MLR MLR
comp=Z,4µm,19.5s,MS5.0
BUD **Budapest** **27.23 165**⇓ *eP* **P** **17 09 21.8 +0.1**
ARSA **Arzberg** **27.26 170**⇑ *iP* **P** **17 09 22.5 +0.6**
comp=Z,582nm,3.1s,SNR=8.2
PKSG **27.28 166**⇑ *eP* **P** **17 09 23.0 +0.9**
FETA **Feichten** **27.34 177**⇓ *iP* **P** **17 09 23.5 +0.9**
comp=Z,648nm,3.1s,SNR=10.0
KBA **Koelnbreinsper** **27.34 173**⇓ *iP* **P** **17 09 23.7 +1.1**
comp=Z,876nm,3.5s,SNR=12
KBA **Koelnbreinsper** **27.34 173**⇓ *ipP* pP 17 09 23.7 -1.9
comp=Z,876nm,3.5s,SNR=12
KBA **Koelnbreinsper** **27.34 173**⇓ *iP* **P** **17 09 23.7 +1.1**
KBA pmax pmax
comp=Z,877nm,3.4s
MUO **Muotathal** **27.38 180** ⇓P **P** **17 09 23.5 +0.6**
SSF **Saint Saulge** **27.38 188** *eP* **P** **17 09 22.2 -0.8**
comp=Z,464nm,1.9s,mb5.4
SSF **Saint Saulge** **27.38 188** *eP* **P** **17 09 22.2 -0.8**
SSF pmax pmax
comp=Z,232nm,1.9s,mb5.4
SSF **Saint Saulge** **27.38 188** *eP* **P** **17 09 22.2 -0.8**
comp=Z,232nm,1.9s,mb5.4
LLS **Linth-Limmern** **27.50 180** ⇓P **P** **17 09 24.6 +0.6**
DAVOX **Davos/Dischmat** **27.57 178** P **P** **17 09 25.0 +0.3**
comp=Z,35nm,1.2s,mb4.9,baz=345,slow=8.6,SNR=18
SEST **Monte Rota** **27.64 175** P **P** **17 09 26.6 +1.3**
ABTA **Abfaltersbach** **27.65 174**⇓ *iP* **P** **17 09 26.1 +0.7**
comp=Z,495nm,2.7s,mb5.7,SNR=12
AVF **Avril sur Loir** **27.66 188** *eP* **P** **17 09 24.6 -0.8**
comp=Z,549nm,1.9s,mb5.6
AVF **Avril sur Loir** **27.66 188** *eP* **P** **17 09 24.6 -0.8**
AVF pmax pmax
comp=Z,275nm,1.9s,mb5.6
AVF **Avril sur Loir** **27.66 188** *eP* **P** **17 09 24.6 -0.8**
comp=Z,274nm,1.9s,mb5.6
BURAR **Bucovina Array** **27.68 156** ⇓P **P** **17 09 25.2 -0.4**
BURAR **Bucovina Array** **27.68 156**⇓ *iP* **P** **17 09 25.3 -0.4**
CABF **La Chapelle** **27.76 184** *eP* **P** **17 09 26.2 -0.2**
comp=Z,259nm,1.3s,mb5.4
CABF **La Chapelle** **27.76 184** *eP* **P** **17 09 26.2 -0.2**
CABF pmax pmax
comp=Z,130nm,1.3s,mb5.4
CABF **La Chapelle** **27.76 184** *eP* **P** **17 09 26.2 -0.2**
comp=Z,130nm,1.3s,mb5.4
SMF **Signal de Mont** **27.78 187** *eP* **P** **17 09 25.6 -1.0**
MYKA **Terra Mystica** **27.80 173**⇓ *iP* **P** **17 09 27.6 +0.9**
comp=Z,4µm,2.3s,mb6.6
FVI **Forni Avoltri** **27.80 174** P **P** **17 09 27.7 +0.9**
PERS **Pernice** **27.85 171** *i* P **P** **17 09 27.7 +0.5**
VDL **Val di Lei** **27.86 179** ⇓P **P** **17 09 28.7 +1.4**
BRMO **Bormio** **27.88 178** P **P** **17 09 27.9 +0.5**
APPI **Appiano** **27.89 176** P **P** **17 09 28.5 +1.0**
BGF **Bois d'Agland** **27.91 189** *eP* **P** **17 09 27.1 -0.6**
comp=Z,514nm,1.3s,mb5.7
BGF **Bois d'Agland** **27.91 189** *eP* **P** **17 09 27.1 -0.6**
BGF pmax pmax
comp=Z,257nm,1.3s,mb5.7
BGF **Bois d'Agland** **27.91 189** *eP* **P** **17 09 27.1 -0.6**
comp=Z,257nm,1.3s,mb5.7
OBKA **Obir** **27.95 171**⇓ *iP* **P** **17 09 29.0 +0.8**
comp=Z,897nm,2.6s,mb5.9,SNR=11
LKBD **Leukerbad** **27.96 182** ⇓P **P** **17 09 29.2 +1.0**
LKBD ⇑P 17 09 29.6
LKBD **Leukerbad** **27.96 182** ⇑P **P** **17 09 29.6 +1.4**
PTCC **Patocco-Chiusa** **28.01 173** P **P** **17 09 29.0 +0.4**
MFF **Saint Martin d** **28.02 193** *eP* **P** **17 09 28.0 -0.7**
comp=Z,586nm,1.9s,mb5.6
MFF **Saint Martin d** **28.02 193** *eP* **P** **17 09 28.0 -0.7**
MFF pmax pmax
comp=Z,293nm,1.9s,mb5.6
MFF **Saint Martin d** **28.02 193** *eP* **P** **17 09 28.0 -0.7**
comp=Z,293nm,1.9s,mb5.6
OG01 **Vacheresse** **28.03 183** *eP* **P** **17 09 27.7 -1.1**
OG01 **Vacheresse** **28.03 183** *eP* **P** **17 09 28.6 -0.2**
OG01 **Vacheresse** **28.03 183** *eP* **P** **17 09 28.6 -0.2**
KOGS **Kog** **28.09 169** P **P** **17 09 30.8 +1.4**
GMNA **Gemona** **28.14 173** P **P** **17 09 30.3 +0.5**
TCF **Toulx Ste Croi** **28.20 190** *eP* **P** **17 09 29.8 -0.6**
comp=Z,527nm,1.5s,mb5.6
TCF **Toulx Ste Croi** **28.20 190** *eP* **P** **17 09 29.8 -0.6**
TCF pmax pmax
comp=Z,263nm,1.5s,mb5.6
TCF **Toulx Ste Croi** **28.20 190** *eP* **P** **17 09 29.8 -0.6**
comp=Z,263nm,1.5s,mb5.6
DRGR **28.23 159** P **P** **17 09 31.2 +0.6**
DRGR **28.23 159** P **P** **17 09 31.2 +0.6**
DRGR **28.23 159**⇑ *iP* **P** **17 09 30.9 +0.3**
DIX **Grande Dixence** **28.27 182** ⇓P **P** **17 09 32.3 +1.4**
EMV **Vieux Emosson** **28.29 183** ⇑P **P** **17 09 32.2 +1.1**
MMK **Mattmark** **28.30 181** ⇓P **P** **17 09 32.6 +1.4**
MABI **Malga Bissina** **28.30 177** P **P** **17 09 32.5 +1.3**
CTI **Castel Tesino** **28.32 176** P **P** **17 09 32.0 +0.6**
OG05 **Jujurieux** **28.34 185** *eP* **P** **17 09 31.1 -0.5**
AGO **Saint Agoulin** **28.40 188** *eP* **P** **17 09 31.4 -0.7**
VOY **Vojsko** **28.41 172** *eP* **P** **17 09 31.3 -0.8**
VOY *e* 17 09 44.2
LJU **Ljubljana** **28.42 172** P **P** **17 09 34.3 +2.1**
PLDF **La Plantade** **28.46 187**⇓ *eP* **P** **17 09 32.0 -0.7**
PKSM **Moragy** **28.47 165**⇑ *iP* **P** **17 09 33.1 +0.4**
PKSM **Moragy** **28.47 165** P **P** **17 09 33.0 +0.3**
VAI **Varese** **28.48 180** P **P** **17 09 33.4 +0.6**
JAVS **Javornik** **28.55 172** *i* P **P** **17 09 31.7 -1.8**
JAVS *i* pP 17 09 34.7 -1.8
JAVS *i* 17 09 43.0
MAGA **Magasa** **28.58 177** P **P** **17 09 36.0 +2.3**
MRGE **Morge** **28.58 182** P **P** **17 09 34.9 +1.2**
RSL **Roselend** **28.67 183**⇓ *eP* **P** **17 09 34.7 +0.2**
PYM **Petit Puy Mans** **28.71 188** *eP* **P** **17 09 34.7 -0.1**
ORX **Oropa** **28.71 181** P **P** **17 09 34.8 -0.1**
ORO **Oropa** **28.72 181** P **P** **17 09 35.7 +0.8**
VERF **Verneugheol** **28.73 189**⇓ *eP* **P** **17 09 35.0 0.0**
KIS **Kishinev** **28.73 151**α *iP* **P** **17 09 33.0 -2.0**
KIS *e* 17 10 36.0
KIS *i* S **S** **17 14 16.0 -7.8**

KIS pmax pmax
comp=Z,900nm,3.0s
KIS pmax pmax
comp=Z,1μm,4.0s
KIS MLR MLR
comp=Z,7μm,13.0s,MS5.4
KIS MLR MLR
comp=N,7μm,15.0s
KIS MLR MLR
comp=Z,7μm,16.0s
KIS Kishinev 28.73 151⇑ *i*P **P** 17 09 33.0 -2.0
comp=Z,900nm,3.0s
KIS Kishinev 28.73 151 *e*PP PP 17 10 36.0 -3.7
KIS *i* S **S** **17 14 16.0 -7.8**
KIS *i* SS SS 17 16 40.0 +15
KIS *i* Li 17 17 52.0
KIS *i* LQ 17 19 20.0
KIS LRM 17 20 48.0
comp=Z,7μm,16.0s
RHK3 Tenkes 28.77 166⇑ *e*P **P** **17 09 35.7 +0.3**
TRAV 28.83 181 P **P** **17 09 36.4 +0.4**
LPL La Plagne 28.84 183 *e*P **P** **17 09 36.7 +0.7**
comp=Z,353nm,1.5s,mb5.6
LPL La Plagne 28.84 183 *e*P **P** **17 09 36.7 +0.7**
LPL pmax pmax
comp=Z,177nm,1.5s,mb5.6
LPL La Plagne 28.84 183 *e*P **P** **17 09 36.7 +0.7**
comp=Z,177nm,1.5s,mb5.6
LPG La Plagne 28.86 183 *e*P **P** **17 09 36.8 +0.6**
comp=Z,705nm,1.6s,mb5.8
LPG La Plagne 28.86 183 *e*P **P** **17 09 36.8 +0.6**
LPG pmax pmax
comp=Z,353nm,1.6s,mb5.8
LPG La Plagne 28.86 183 *e*P **P** **17 09 36.8 +0.6**
comp=Z,353nm,1.6s,mb5.8
LSD Ceresole Reale 28.89 182 P **P** **17 09 37.7 +1.2**
COLF Collangettes 28.91 187⇓ *e*P **P** **17 09 36.6 -0.1**
BOJS Bojanci 28.99 171 *i* P **P** **17 09 43.1 +5.8**
BOJS *i* 17 09 50.0
GRN Grenoble 29.13 184 *e*P **P** **17 09 38.8 +0.2**
GDM Grand'Maison 29.16 184 *e*P **P** **17 09 39.3 +0.4**
RSP Reno Superiore 29.20 182 P **P** **17 09 40.3 +1.1**
LBL Lubilhac 29.21 188⇓ *e*P **P** **17 09 39.0 -0.3**
RJF Les Rejaudoux 29.22 190 *e*P **P** **17 09 38.7 -0.7**
RJF *e*MLR MLR
comp=Z,3μm,20.8s,MS4.5
RJF Les Rejaudoux 29.22 190 *e*P **P** **17 09 38.7 -0.7**
RJF MLR MLR
comp=Z,3μm,20.8s,MS4.8
BZS Buzias 29.30 161⇑ P **P** **17 09 39.3 -0.7**
BZS Buzias 29.30 161⇑ *i*P **P** **17 09 39.3 -0.8**
BNI Bardonecchia 29.31 183 *e*P **P** **17 09 40.3 +0.1**
comp=Z,238nm,1.4s,mb5.7
BNI Bardonecchia 29.31 183 P **P** **17 09 41.0 +0.9**
BNI pmax pmax
comp=Z,240nm,1.4s,mb5.7
BNI Bardonecchia 29.31 183 P **P** **17 09 41.0 +0.9**
comp=Z,240nm,1.4s,mb5.7
RRL Cesana Torines 29.44 183 P **P** **17 09 42.1 +0.8**
ORIF Oris-en-Rattie 29.45 184 *e*P **P** **17 09 41.7 +0.2**
comp=Z,53nm,0.9s,mb4.9
ORIF *e*MLR MLR
comp=Z,4μm,18.0s,MS4.8
ORIF Oris-en-Rattie 29.45 184 *e*P **P** **17 09 41.7 +0.2**
ORIF pmax pmax
comp=Z,26nm,0.9s,mb5.0
ORIF Oris-en-Rattie 29.45 184 *e*P **P** **17 09 41.7 +0.2**
comp=Z,26nm,0.9s,mb4.9
VIVF Saint-Julien-I 29.54 186 *e*P **P** **17 09 42.1 -0.2**
comp=Z,453nm,1.7s,mb5.6
VIVF Saint-Julien-I 29.54 186 *e*P **P** **17 09 42.1 -0.2**
VIVF pmax pmax
comp=Z,226nm,1.7s,mb5.6
VIVF Saint-Julien-I 29.54 186 *e*P **P** **17 09 42.1 -0.2**
comp=Z,226nm,1.7s,mb5.6
CAF Calviac 29.57 190 *e*P **P** **17 09 42.1 -0.4**
VRI Vrincioaia 29.58 154 P **P** **17 09 42.9 +0.3**
VRI Vrincioaia 29.58 154⇑ *i*P **P** **17 09 43.2 +0.6**
PLOR Plostina 29.59 154 P **P** **17 09 43.1 +0.5**
FGSL Fruska Gora 29.61 164 P **P** **17 09 43.0 +0.2**
LFF La Frestale 29.62 192 *e*P **P** **17 09 42.8 -0.2**
comp=Z,493nm,1.8s,mb5.6
LFF La Frestale 29.62 192 *e*P **P** **17 09 42.8 -0.2**
LFF pmax pmax
comp=Z,247nm,1.8s,mb5.6
LFF La Frestale 29.62 192 *e*P **P** **17 09 42.8 -0.2**
comp=Z,246nm,1.8s,mb5.6
GZR Gura Zlata 29.62 160⇑ P **P** **17 09 43.4 +0.5**
GZR Gura Zlata 29.62 160⇑ *i*P **P** **17 09 43.4 +0.4**
MBDF Montbardon 29.63 183 *e*P **P** **17 09 43.8 +0.8**
comp=Z,391nm,1.6s,mb5.6
MBDF Montbardon 29.63 183 *e*P **P** **17 09 43.8 +0.8**
MBDF pmax pmax
comp=Z,196nm,1.6s,mb5.6
MBDF Montbardon 29.63 183 *e*P **P** **17 09 43.8 +0.8**
comp=Z,196nm,1.6s,mb5.6
TIXI Tiksi 29.66 34 *i* P **P** **17 09 43.9 +0.9**
TIXI LR LR
comp=Z,2μm,20.0s,MS4.7
TIXI Tiksi 29.66 34 *d i*P **P** **17 09 44.3 +1.3**
TIXI *e*S **S** **17 14 42.2 +4.2**
TIXI pmax pmax
comp=Z,243nm,1.7s,mb5.7
TIXI pmax pmax
comp=N,107nm,1.7s
TIXI pmax pmax
comp=E,48nm,1.7s
TIXI pmax pmax
comp=Z,276nm,5.2s
TIXI MLR MLR
comp=Z,2μm,17.0s,MS4.8
TIXI Tiksi 29.66 34 *i* P **P** **17 09 44.3 +1.3**
comp=Z,2μm,17.0s
PCP Pian Castagno 29.80 180 P **P** **17 09 44.4 -0.1**
DOI San Damiano 29.85 182 P **P** **17 09 45.4 +0.5**
PZZ Prazzo 29.85 182 P **P** **17 09 45.3 +0.3**
GRAM 29.86 178 P **P** **17 09 46.2 +1.2**
MLR Muntele Rosu 29.86 155 P **P** **17 09 46.0 +1.0**
MLR Muntele Rosu 29.86 155 P **P** **17 09 46.7 +1.7**
MLR pmax pmax
comp=Z,35nm,1.1s
MLR Muntele Rosu 29.86 155 P **P** **17 09 46.7 +1.6**
comp=Z,35nm,1.1s,mb5.0,baz=298,slow=10.0,SNR=13
MLR Muntele Rosu 29.86 155⇓ *i*P **P** **17 09 46.1 +1.1**
MLR Muntele Rosu 29.86 155 P **P** **17 09 46.0 +1.0**
SURF Saint Ours 29.88 183⇓ *e*P **P** **17 09 46.2 +1.0**
SC2M Scurtabr 29.94 179 P **P** **17 09 46.4 +0.6**
CODM 29.96 178 P **P** **17 09 45.5 -0.4**
VALM 30.00 178 P **P** **17 09 47.1 +0.8**
GSCL Gusciola 30.00 177 P **P** **17 09 48.1 +1.8**
ROB Roburent 30.05 181 P **P** **17 09 46.5 -0.3**
STV Sta Anna Valdi 30.11 182 P **P** **17 09 46.5 -0.7**
ENR Entracque 30.12 182 P **P** **17 09 46.8 -0.6**
FIN Finale Ligure 30.14 181 P **P** **17 09 47.5 0.0**
SARO Sassorosso 30.17 178 P **P** **17 09 48.9 +1.1**
VLC Villacollemand 30.19 178 *e*P **P** **17 09 48.1 +0.1**
comp=Z,273nm,1.4s,mb5.8
VLC Villacollemand 30.19 178 *e*P **P** **17 09 48.1 +0.1**
comp=Z,273nm,1.4s,mb5.8
VINC Vinca 30.21 178 P **P** **17 09 48.1 -0.1**
RORO 30.23 181 P **P** **17 09 48.5 +0.1**
MONE Monesi 30.27 181 P **P** **17 09 47.8 -0.9**
TOUF Mont Tournerai 30.34 182⇓ *e*P **P** **17 09 50.3 +1.0**
LASF Ste Croix 30.35 187 *e*P **P** **17 09 50.1 +0.7**
comp=Z,592nm,1.5s,mb5.8
LASF Ste Croix 30.35 187 *e*P **P** **17 09 50.1 +0.7**
comp=Z,296nm,1.5s,mb5.8
AUTN L'Aution 30.35 182 *e*P **P** **17 09 50.6 +1.2**
SAOF Saorge 30.36 182 *e*P **P** **17 09 50.2 +0.7**
SMRF Simiane la Rot 30.40 185 *e*P **P** **17 09 49.8 0.0**
comp=Z,234nm,1.6s,mb5.4
SMRF Simiane la Rot 30.40 185 *e*P **P** **17 09 49.8 0.0**
comp=Z,117nm,1.6s,mb5.4
VMG Vicchio 30.41 176 P **P** **17 09 51.4 +1.5**
IMI Imperia 30.43 181 P **P** **17 09 50.4 +0.2**
MAIM 30.44 177 P **P** **17 09 50.2 0.0**
MVIF Mont Vial 30.45 182 *e*P **P** **17 09 50.8 +0.5**
LUCF Luceram 30.46 182⇓ *e*P **P** **17 09 50.1 -0.2**
SFI Santa Sofia 30.47 176 P **P** **17 09 52.0 +1.5**
SBF Sospel 30.49 182 *e*P **P** **17 09 50.8 +0.2**
comp=Z,846nm,1.2s,mb6.0
SBF Sospel 30.49 182 *e*P **P** **17 09 50.8 +0.2**
SBF pmax pmax
comp=Z,423nm,1.2s,mb6.0
SBF Sospel 30.49 182 *e*P **P** **17 09 50.8 +0.2**
comp=Z,423nm,1.2s,mb6.0
NEGI Negi 30.50 181 P **P** **17 09 49.3 -1.4**
CALN Calern 30.60 183 *e*P **P** **17 09 52.2 +0.6**
REVF Revere 30.61 182⇓ *e*P **P** **17 09 51.6 -0.1**
DIVS Divcibare 30.67 164 *e*P **P** **17 09 51.8 -0.4**
DIVS Divcibare 30.67 164 P **P** **17 09 51.9 -0.3**
FSSB Fossombrone 30.71 174 P **P** **17 09 53.5 +1.0**
CRE Caprese Michel 30.76 175 P **P** **17 09 54.2 +1.2**
FRF La Foret Royal 30.80 183 *e*P **P** **17 09 53.2 -0.1**
BADI Badiali 30.88 175 P **P** **17 09 56.0 +2.0**
HARR Harsova 30.89 153 P **P** **17 09 54.1 0.0**
HARR Harsova 30.89 153⇑ *i*P **P** **17 09 53.9 -0.2**
HARR Harsova 30.89 153 P **P** **17 09 54.1 0.0**
CSNT Castellina Chi 30.89 176 P **P** **17 09 54.5 +0.3**
CDCA Citt' di Caste 30.93 175 P **P** **17 09 56.0 +1.5**
LMR La Mourre 31.03 183 *e*P **P** **17 09 55.2 -0.2**
comp=Z,472nm,1.7s,mb5.8
LMR La Mourre 31.03 183 *e*P **P** **17 09 55.2 -0.2**
LMR pmax pmax
comp=Z,236nm,1.7s,mb5.7
LMR La Mourre 31.03 183 *e*P **P** **17 09 55.2 -0.2**
comp=Z,236nm,1.7s,mb5.8
MURB Monte Urbino 31.13 175 P **P** **17 09 58.4 +2.1**
MTLF Montolieu 31.14 189 *e*P **P** **17 09 56.6 +0.2**
comp=Z,158nm,1.4s,mb5.3
MTLF Montolieu 31.14 189 *e*P **P** **17 09 56.6 +0.2**
MTLF pmax pmax
comp=Z,79nm,1.4s,mb5.3
MTLF Montolieu 31.14 189 *e*P **P** **17 09 56.6 +0.2**
comp=Z,79nm,1.4s,mb5.3
SNTG Esanatoglia 31.15 174 P **P** **17 09 57.7 +1.3**
TIRR Tirgusor 31.17 152 P **P** **17 09 56.8 +0.1**
TIRR Tirgusor 31.17 152⇓ *i*P **P** **17 09 56.4 -0.3**
TIRR Tirgusor 31.17 152 P **P** **17 09 56.8 +0.1**
GRFL Gerfalco 31.21 177 P **P** **17 09 57.9 +0.9**
AKTK Aktyubinsk 31.41 112 P **P** **17 09 58.6 -0.1**
AKTK Aktyubinsk 31.41 112 P **P** **17 09 58.6 -0.1**
AKTO Aktyubinsk 31.41 112 P **P** **17 09 58.6 -0.1**
comp=Z,114nm,0.9s,mb5.7,baz=330,slow=8.7,SNR=42
OSSF Osses 31.42 194 *e*P **P** **17 09 58.9 +0.1**
ORDF Ordiarp 31.44 194 *e*P **P** **17 09 58.8 -0.2**
SIM Simferopol' 31.51 144 *ce*P **P** **17 09 59.6 0.0**
SIM *e*S **S** **17 15 08.4 +1.0**
SIM pmax pmax
comp=Z,32nm,1.0s,mb5.1
SIM MLR MLR
comp=Z,5μm,14.0s,MS5.3
SIM Simferopol' 31.51 144 *e*P **P** **17 09 59.6 0.0**
comp=Z,32nm,1.0s,mb5.1
ELIZ Elizondo 31.53 194 P **P** **17 10 00.1 +0.2**
comp=Z,107nm,1.0s,mb5.6
ELIZ Elizondo 31.53 194 P **P** **17 10 00.1 +0.3**
ELIZ pmax pmax
comp=Z,107nm,1.0s,mb5.6
ELIZ Elizondo 31.53 194 P **P** **17 10 00.1 +0.3**
comp=Z,107nm,1.0s,mb5.6
EPF Esparros 31.55 192 *e*P **P** **17 09 59.6 -0.4**
comp=Z,490nm,1.5s,mb5.8
EPF Esparros 31.55 192 *e*P **P** **17 09 59.6 -0.4**
EPF pmax pmax
comp=Z,245nm,1.5s,mb5.8
EPF Esparros 31.55 192 *e*P **P** **17 09 59.6 -0.4**
comp=Z,245nm,1.5s,mb5.8
SJPF Ste Jean 31.56 194 *e*P **P** **17 09 59.6 -0.5**
comp=Z,169nm,1.4s,mb5.4
SJPF Ste Jean 31.56 194 *e*P **P** **17 09 59.6 -0.5**
SJPF pmax pmax
comp=Z,85nm,1.4s,mb5.4
SJPF Ste Jean 31.56 194 *e*P **P** **17 09 59.6 -0.5**
comp=Z,85nm,1.4s,mb5.4
ELAN Lanestosa 31.61 197 P **P** **17 09 59.7 -0.8**
comp=Z,500nm,2.6s,mb5.9
ELAN Lanestosa 31.61 197 P **P** **17 09 59.7 -0.8**
comp=Z,500nm,2.6s,mb5.9
EARI Arriondas 31.69 200 P **P** **17 10 00.6 -0.6**
comp=Z,426nm,1.8s,mb6.0
EARI Arriondas 31.69 200 P **P** **17 10 00.6 -0.6**
comp=Z,426nm,1.8s,mb6.0
VIEF Viey 31.71 192 *e*P **P** **17 10 02.8 +1.4**
ETSF Etsaut 31.73 193 *e*P **P** **17 10 02.6 +1.0**
comp=Z,578nm,1.5s,mb5.9
ETSF Etsaut 31.73 193 *e*P **P** **17 10 02.6 +1.0**
ETSF pmax pmax
comp=Z,289nm,1.5s,mb5.9
ETSF Etsaut 31.73 193 *e*P **P** **17 10 02.6 +1.0**
comp=Z,289nm,1.5s,mb5.9
RESF Ens 31.77 192 *e*P **P** **17 10 03.4 +1.5**
PGF Pioggiola 31.80 180 *e*P **P** **17 10 02.2 +0.1**
comp=Z,596nm,1.7s,mb5.8
PGF Pioggiola 31.80 180 *e*P **P** **17 10 02.2 +0.1**
PGF pmax pmax
comp=Z,298nm,1.7s,mb5.8
PGF Pioggiola 31.80 180 *e*P **P** **17 10 02.2 +0.1**
comp=Z,298nm,1.7s,mb5.8
EPON Pontenova 31.85 202 P **P** **17 10 02.5 -0.1**
comp=Z,396nm,1.8s,mb5.9
EPON Pontenova 31.85 202 P **P** **17 10 02.5 -0.1**
comp=Z,396nm,1.8s,mb5.9
EBIE Bielsa 31.90 192 P **P** **17 10 04.2 +1.2**
comp=Z,436nm,2.0s,mb5.9
EBIE Bielsa 31.90 192 P **P** **17 10 04.2 +1.1**
comp=Z,436nm,2.0s,mb5.9
PSN Preselentsi 31.91 153 P **P** **17 10 03.8 +0.7**
EJON La Jonquera 32.01 188 P **P** **17 10 05.8 +1.7**
comp=Z,67nm,0.8s,mb5.5
EJON La Jonquera 32.01 188 P **P** **17 10 05.8 +1.8**
comp=Z,67nm,0.8s,mb5.5
PVL Pavlikeni 32.04 157 P **P** **17 10 04.4 +0.1**
CORF Corte 32.05 179 *e*P **P** **17 10 04.5 +0.2**
AQU L'Aquila 32.06 173⇓ *e*P **P** **17 10 05.1 +0.6**
comp=Z,458nm,1.7s,mb6.0
AQU L'Aquila 32.06 173 P **P** **17 10 06.3 +1.8**
AQU L'Aquila 32.06 173⇓ *e*P **P** **17 10 05.1 +0.6**
comp=Z,458nm,1.7s,mb6.0
BARS Barje 32.09 162 P **P** **17 10 03.8 -0.9**
FIAM Fiamignano 32.14 174 P **P** **17 10 05.9 +0.7**
ECRI Cripan 32.15 196 P **P** **17 10 06.7 +1.5**
comp=Z,161nm,1.2s,mb5.7
ECRI Cripan 32.15 196 P **P** **17 10 06.7 +1.4**
ECRI pmax pmax
comp=Z,161nm,1.2s,mb5.7
ECRI Cripan 32.15 196 P **P** **17 10 06.7 +1.4**
comp=Z,161nm,1.2s,mb5.7
ANN Anapa 32.21 140 *d i*P **P** **17 10 04.7 -1.1**
ANN *e*PP pP 17 10 07.7 -1.1
ANN *e* 17 11 12.4
ANN *e*PPP 17 11 21.3
ANN *e*S **S** **17 15 19.6 +1.2**
ANN *e*SS SS 17 17 13.8 -22
ANN *e*SSS 17 17 30.4
ANN pmax pmax
comp=Z,151nm,1.4s,mb5.6
ANN MLR MLR
comp=N,4μm,17.0s,MS5.4
ANN MLR MLR
comp=E,5μm,17.0s,MS5.4
ANN MLR MLR
comp=Z,5μm,17.0s,MS5.2
ANN Anapa 32.21 140 *i* P **P** **17 10 04.7 -1.1**
comp=Z,151nm,1.4s,mb5.6
BRVK Borovoye 32.27 96⇓ *e*P **P** **17 10 06.6 +0.3**
comp=Z,600nm,1.5s,mb6.2
BRVK LR LR
comp=Z,11μm,19.0s,MS5.5
BRVK Borovoye 32.27 96⇓ *e*P **P** **17 10 06.6 +0.4**
BRVK pmax pmax
comp=Z,599nm,1.5s,mb6.2
BRVK MLR MLR
comp=Z,11μm,19.0s,MS5.5
BRVK Borovoye 32.27 96⇓ *e*P **P** **17 10 06.6 +0.4**
comp=Z,600nm,1.5s,mb6.2
PRD Provadia 32.29 154 P **P** **17 10 06.4 -0.1**
TOLF Tolfa 32.31 175 P **P** **17 10 08.0 +1.3**
PTQR Pietraquaria 32.39 174 P **P** **17 10 08.7 +1.3**
INTR Introdacqua 32.42 173 P **P** **17 10 07.4 -0.2**
EMAZ Mazaricos 32.42 205 P **P** **17 10 07.4 -0.3**
comp=Z,397nm,2.0s,mb5.9
EMAZ Mazaricos 32.42 205 P **P** **17 10 07.4 -0.3**
comp=Z,397nm,2.0s,mb5.9
STS Santiago 32.44 204 P **P** **17 10 08.3 +0.6**
comp=Z,165nm,1.3s,mb5.7
STS Santiago 32.44 204 P **P** **17 10 08.3 +0.5**
STS pmax pmax
comp=Z,165nm,1.3s,mb5.7
STS Santiago 32.44 204 P **P** **17 10 08.3 +0.5**
comp=Z,165nm,1.3s,mb5.7
VTS Vitosha 32.44 160 *e*P **P** **17 10 05.8 -2.0**
VTS Vitosha 32.44 160 P **P** **17 10 07.3 -0.5**
CERT Cerreto 32.45 174 P **P** **17 10 08.9 +1.0**
VVLD Villa Vallelon 32.55 173 P **P** **17 10 09.4 +0.6**
PGB Panagyurishte 32.58 159 P **P** **17 10 08.3 -0.7**
MA9 Marino 32.62 175 P **P** **17 10 09.7 +0.3**
RDP Rocca di Papa 32.64 174 P **P** **17 10 10.2 +0.7**
SDI San Donato 32.72 173 P **P** **17 10 11.2 +1.0**
RNI2 Rionero Sannit 32.74 172 P **P** **17 10 12.2 +1.8**
ERUA La Rua 32.78 202 P **P** **17 10 11.7 +0.9**
comp=Z,22nm,1.0s,mb5.0
ERUA La Rua 32.78 202 P **P** **17 10 11.7 +1.0**
ERUA pmax pmax
comp=Z,22nm,1.0s,mb5.0
ERUA La Rua 32.78 202 P **P** **17 10 11.7 +1.0**
comp=Z,22nm,1.0s,mb5.0
MIDA Miranda 32.80 172 P **P** **17 10 11.2 +0.2**
ESAC San Caprasio 32.90 193 P **P** **17 10 11.8 -0.1**
comp=Z,866nm,1.9s,mb6.4
ESAC San Caprasio 32.90 193 P **P** **17 10 11.8 0.0**
comp=Z,866nm,1.9s,mb6.4
SKO Skopje 32.90 162 *i* P **P** **17 10 12.6 +0.8**
JMB Yambol 32.92 155 *e*P **P** **17 10 10.4 -1.6**
JMB Yambol 32.92 155 P **P** **17 10 11.5 -0.5**
AB31 Akbulak array 32.98 110 *i* P **P** **17 10 12.2 -0.3**
GOF Gofitskoye 33.02 133 *e*P **P** **17 10 26.0 +13**
GOF pmax pmax
comp=Z,76nm,1.5s,mb5.4
PLD Plovdiv 33.07 158 *e*P **P** **17 10 11.5 -1.8**
PLD Plovdiv 33.07 158 P **P** **17 10 12.3 -1.0**
RFI Roccamonfina 33.13 173 P **P** **17 10 15.1 +1.2**
KKB Krupnik 33.15 160 P **P** **17 10 14.1 +0.1**
EPOB Poblet 33.18 191 P **P** **17 10 14.6 +0.3**
comp=Z,576nm,1.9s,mb6.2
EPOB Poblet 33.18 191 P **P** **17 10 14.6 +0.3**
comp=Z,576nm,1.9s,mb6.2
ECAL Calabor 33.18 201 P **P** **17 10 14.8 +0.5**
comp=Z,646nm,1.9s,mb6.2
ECAL Calabor 33.18 201 P **P** **17 10 14.8 +0.5**
comp=Z,646nm,1.9s,mb6.2
PSB1 Pescosannita 33.24 172 P **P** **17 10 15.4 +0.6**
STIP Stip 33.24 161 *i* P **P** **17 10 13.7 -1.1**
STIP Stip 33.24 161 *i* P **P** **17 10 13.6 -1.2**
PBRG Braganca 33.32 201 *e*P **P** **17 10 16.2 +0.7**
comp=Z,186nm,1.4s,mb5.8
MRB1 Monte Rocchett 33.34 171 P **P** **17 10 17.1 +1.4**
ELOB Lobios 33.39 203 P **P** **17 10 15.9 -0.2**
comp=Z,344nm,2.1s,mb5.9
ELOB Lobios 33.39 203 P **P** **17 10 15.9 -0.2**
comp=Z,344nm,2.1s,mb5.9
KRUS Krusevo 33.48 163⇑ *i*P **P** **17 10 17.3 +0.4**
MMB Musomiste 33.48 159 P **P** **17 10 17.0 +0.1**
RZN Rozhen 33.48 158 P **P** **17 10 16.4 -0.5**
PCAB Cabril 33.54 203 *e*P **P** **17 10 18.4 +1.0**
comp=Z,157nm,1.4s,mb5.8
EDRB Edime 33.55 155 *e*P **P** **17 10 14.3 -3.1**
KDZ Kurdzhali 33.59 157 P **P** **17 10 17.7 -0.2**
CSSN Cassano Irpino 33.61 171 P **P** **17 10 18.6 +0.6**
ERTA Horta de San J 33.62 192 P **P** **17 10 17.8 -0.2**
comp=Z,431nm,1.8s,mb6.1
ERTA Horta de San J 33.62 192 P **P** **17 10 17.8 -0.3**
comp=Z,431nm,1.8s,mb6.1
VAY Valandovo 33.64 161⇓ *i*P **P** **17 10 17.2 -1.1**
VAY Valandovo 33.64 161 P **P** **17 10 17.4 -0.9**
OHR Ohrid 33.70 163 *e*P **P** **17 10 15.4 -3.5**
OHR Ohrid 33.70 163 *i* P **P** **17 10 16.0 -2.8**
MRLC Muro Lucano 33.73 171 P **P** **17 10 20.6 +1.5**
NVR Nevrokopi 33.73 159 *e*P **P** **17 10 13.5 -5.6**
SOC Sochi 33.80 138 *d i*P **P** **17 10 18.6 -1.0**
SOC *e* 17 10 25.4
SOC *e* 17 11 30.3
SOC *e*S **S** **17 15 44.9 +1.9**
SOC *e*SS SS 17 17 43.8 -25
SOC pmax pmax
comp=Z,54nm,1.9s,mb5.2
SOC pmax pmax
comp=Z,1μm,4.4s
SOC MLR MLR
comp=Z,16μm,22.0s,MS5.7
SOC Sochi 33.80 138 *i* P **P** **17 10 18.9 -0.7**
KNT Kendrikon 33.83 161 *e*P **P** **17 10 19.1 -0.8**
ETOR Torete 33.90 195 P **P** **17 10 21.3 +0.8**
comp=Z,32nm,1.1s,mb5.2
ETOR Torete 33.90 195 P **P** **17 10 21.3 +0.7**
ETOR pmax pmax
comp=Z,32nm,1.1s,mb5.2
ETOR Torete 33.90 195 P **P** **17 10 21.3 +0.7**
comp=Z,32nm,1.1s,mb5.2
SGO Sicignano 33.92 171 P **P** **17 10 21.0 +0.3**
PVRL Vila Real 33.94 202 *e*P **P** **17 10 21.4 +0.5**
comp=Z,239nm,2.0s,mb5.8
MVO Moncorvo 33.98 202 *e*P **P** **17 10 21.7 +0.5**
comp=Z,162nm,1.7s,mb5.7
MVO *e*LR LR 17 20 05.0
comp=Z,2μm,18.0s
MVO Moncorvo 33.98 202 *e*P **P** **17 10 21.6 +0.4**
GRG Griva 33.99 161 *e*P **P** **17 10 20.1 -1.3**
KIV Kislovodsk 34.01 134 *e*P **P** **17 10 21.2 -0.2**
comp=Z,84nm,1.0s,mb5.6
KIV LR LR
comp=Z,12μm,20.0s,MS5.6
KIV Kislovodsk 34.01 134 *d i*P **P** **17 10 21.0 -0.4**
KIV pmax pmax
comp=Z,49nm,0.7s,mb5.5
KIV MLR MLR
comp=Z,11μm,18.0s,MS5.6
KIV Kislovodsk 34.01 134 P **P** **17 10 21.7 +0.3**
SNR=17
KIV Kislovodsk 34.01 134 *i* P **P** **17 10 21.0 -0.4**
comp=Z,11μm,18.0s
FNA Florina 34.08 163 *e*P **P** **17 10 20.7 -1.4**
RDO Rodhopi 34.11 157 *e*P **P** **17 10 22.1 -0.2**
PTO Porto 34.17 204 *e*P **P** **17 10 23.3 +0.4**
comp=Z,177nm,1.5s,mb5.8
SOH Sokhos 34.21 160 *e*P **P** **17 10 21.9 -1.4**
NVS Novosibirsk 34.22 82⇓ *i*P **P** **17 10 24.1 +0.9**
NVS pmax pmax
comp=Z,446nm,1.6s,mb6.2
NVS pmax pmax
comp=N,478nm,1.9s
NVS Novosibirsk 34.22 82 *i* P **P** **17 10 24.1 +0.9**
comp=N,478nm,1.9s,mb6.1
GUD Guadarrama 34.23 198 P **P** **17 10 23.8 +0.3**
comp=N,52nm,1.2s,mb5.3
GUD Guadarrama 34.23 198 P **P** **17 10 23.8 +0.3**
GUD pmax pmax
comp=Z,52nm,1.2s,mb5.3
GUD Guadarrama 34.23 198 P **P** **17 10 23.8 +0.3**
comp=Z,52nm,1.2s,mb5.3
EMOS Mosqueruela 34.25 193 P **P** **17 10 23.5 -0.1**
EMOS Mosqueruela 34.25 193 P **P** **17 10 23.5 -0.1**
BZK Bozkurt 34.41 146 *e*P **P** **17 10 24.4 -0.6**
SCHQ Schefferville 34.51 279 P **P** **17 10 24.3 -1.4**
comp=Z,7.4nm,0.9s,mb4.6,baz=20,slow=7.0,SNR=7.1
PVIS Viseu 34.51 203 *e*P **P** **17 10 26.4 +0.5**
comp=Z,188nm,1.6s,mb5.8
KZN Kozani 34.58 162 *e*P **P** **17 10 26.7 +0.2**
ISK Istanbul-Kandi 34.60 152 *e*P **P** **17 10 25.6 -0.9**
PLG Polygyros 34.66 160 *e*P **P** **17 10 25.6 -1.6**
PLG Polygyros 34.66 160 *e*P **P** **17 10 26.3 -0.9**
PLG Polygyros 34.66 160 P **P** **17 10 25.5 -1.7**
KDZE Karadeniz Ereo 34.67 149 *e*P **P** **17 10 25.6 -1.6**
BALT Daday 34.73 147 *i* P **P** **17 10 26.7 -1.1**
MTE Manteigas 34.79 202 *e*P **P** **17 10 29.3 +1.0**
comp=Z,149nm,1.8s,mb5.6
MTE *e*LR LR 17 20 26.4
comp=Z,1μm,20.0s
MTE Manteigas 34.79 202 *e*P **P** **17 10 28.7 +0.4**
comp=Z,154nm,1.5s,mb5.7
LIT Litokhoron 34.85 161 *e*P **P** **17 10 27.9 -0.9**
DIKM Dikmen 34.91 144 *e*P **P** **17 10 29.1 -0.2**
HRT Hereke 34.91 152 *e*P **P** **17 10 28.8 -0.5**
SAFT Safranbolu 34.92 148 *e*P **P** **17 10 29.6 +0.2**
LPK Lapseki 35.01 156 *e*P **P** **17 10 30.8 +0.7**
ECHE Chera 35.05 193 P **P** **17 10 31.2 +0.6**
comp=Z,190nm,2.2s,mb5.6
ECHE Chera 35.05 193 P **P** **17 10 31.2 +0.7**
ECHE pmax pmax
comp=Z,190nm,2.2s,mb5.6
ECHE Chera 35.05 193 P **P** **17 10 31.2 +0.7**
comp=Z,190nm,2.2s,mb5.6
HENT Hendek 35.08 150 *i* P **P** **17 10 30.6 -0.2**

BOYT **Boyabat** 35.08 145 *i* P P 17 10 31.8 +1.0
YLV **Yalova** 35.13 152 *e*P P 17 10 29.9 -1.2
ESDC **Sonseca Array** 35.18 197 P P 17 10 31.9 +0.3
comp=Z,15nm,0.8s,mb5.0,baz=5.0,slow=9.0,SNR=29
GEMT **Gemlik** 35.23 152 *e*P P 17 10 31.4 -0.6
ADVT **Abdulvahap** 35.30 152 *e*P P 17 10 31.6 -1.1
TOS **Tosya** 35.32 146 *e*P P 17 10 33.3 +0.5
PCBR **Castelo Branco** 35.34 202 *e*P P 17 10 33.8 +0.8
comp=Z,165nm,2.1s,mb5.6
PAB **San Pablo** 35.34 198 *e*P P 17 10 33.7 +0.7
comp=Z,298nm,1.7s,mb5.9
PAB LR LR
comp=Z,2µm,19.0s,MS4.9
PAB **San Pablo** 35.34 198 P P 17 10 33.9 +0.9
PAB pmax pmax
comp=Z,300nm,1.7s,mb6.0
PAB **San Pablo** 35.34 198 P P 17 10 33.9 +0.9
comp=Z,300nm,1.7s,mb6.0
IZI **Iznik** 35.37 152 *e*P P 17 10 32.0 -1.2
TIP **Timpagrande** 35.37 169 *e*P P 17 10 32.7 -0.5
comp=Z,113nm,1.4s,mb5.6
TIP **Timpagrande** 35.37 169 *e*P P 17 10 32.7 -0.5
comp=Z,113nm,1.4s,mb5.6
ZEI **Tsey** 35.39 133 *e*P P 17 10 33.6 +0.2
ZEI *e* 17 11 52.2
ZEI *e* 17 13 02.1
ZEI *e*S S 17 16 11.2 +3.7
ZEI pmax pmax
comp=Z,30nm,1.0s,mb5.2
ZEI **Tsey** 35.39 133 *e*P P 17 10 33.6 +0.2
comp=Z,30nm,1.0s,mb5.2
ZEI **Tsey** 35.39 133 *e*PcP PcP 17 13 02.1 -0.9
GULT **Gulveren** 35.41 151 *e*P P 17 10 33.1 -0.5
ZALV **Zalesovo Beam** 35.44 82 P P 17 10 33.8 +0.1
comp=Z,23nm,0.9s,mb5.1,baz=331,slow=8.8,SNR=24
ZALV PcP PcP 17 13 02.5 -0.4
comp=Z,8.5nm,0.7s,baz=327,slow=3.2,SNR=5.8
ZAL **Zalesovo** 35.44 82 P P 17 10 33.8 +0.1
ZAL 17 13 02.6
ZAL **Zalesovo** 35.44 82 PcP PcP 17 13 02.6 -0.4
BOZC **Bozcaada** 35.45 157 *i* P P 17 10 25.1 -8.9
ONI **Oni** 35.48 134 P P 17 10 34.7 +0.5
SGKT **Sivrigoynuk** 35.48 149 *i* P P 17 10 35.2 +1.0
EZN **Ezine** 35.50 156 *e*P P 17 10 30.8 -3.6
KVT **Kavak** 35.59 143 *e*P P 17 10 35.4 +0.2
INK **Inuvik** 35.64 337⇑ *e*P P 17 10 34.8 -0.5
comp=Z,15µm,1.9s
INK *e*PcP PcP 17 13 03.9 +0.6
INK **Inuvik** 35.64 337 P P 17 10 35.8 +0.5
INK **Inuvik** 35.64 337⇑ *e*P P 17 10 34.8 -0.5
comp=Z,10µm,1.9s
INK **Inuvik** 35.64 337 *e*PcP PcP 17 13 03.9 +0.6
CANT **Cankiri** 35.68 147 *e*P P 17 10 36.3 +0.4
ELDT **Eldivan** 35.76 147 *i* P P 17 10 36.0 -0.6
CTKT **Corum** 35.84 145 *i* P P 17 10 38.5 +1.2
BALB **Balikesir** 35.86 154 *e*P P 17 10 36.7 -0.7
EBEN **Beniarda** 35.89 192 P P 17 10 38.3 +0.6
EBEN **Beniarda** 35.89 192 P P 17 10 38.3 +0.6
SLNA **Salina** 35.89 172 P P 17 10 38.2 +0.4
BORA **Eskisehir** 35.94 151 *i* P P 17 10 38.5 +0.3
MAK **Makhachkala** 35.95 128 *d i*P P 17 10 38.7 +0.5
MAK *i* 17 11 59.7
MAK *i*S S 17 16 19.3 +3.2
MAK *e*SS SS 17 18 36.4 -16
MAK pmax pmax
comp=Z,278nm,1.6s,mb5.9
MAK MLR MLR
comp=Z,11µm,21.0s,MS5.6
MAK **Makhachkala** 35.95 128 *i* P P 17 10 38.7 +0.5
comp=Z,278nm,1.6s,mb5.9
EVR **Evrytania** 35.97 163 *e*P P 17 10 39.2 +0.8
ETOB **Tobarra** 36.03 194 P P 17 10 39.1 +0.1
comp=Z,1µm,3.4s
ETOB **Tobarra** 36.03 194 P P 17 10 39.1 +0.2
comp=Z,1µm,3.4s
PRK **Paraskevi** 36.06 157 *e*P P 17 10 38.1 -1.1
EVIA **Vianos** 36.10 195 P P 17 10 39.1 -0.5
comp=Z,84nm,1.1s,mb5.6
EVIA **Vianos** 36.10 195 P P 17 10 39.1 -0.4
EVIA pmax pmax
comp=Z,84nm,1.1s,mb5.6
EVIA **Vianos** 36.10 195 P P 17 10 39.1 -0.4
comp=Z,84nm,1.1s,mb5.6
GRSN **GIRESUNGRSN** 36.12 141 *i* P P 17 10 40.0 +0.3
ESPY **Espiye-Giresun** 36.21 140 *e*P P 17 10 40.2 -0.2
BCA **Borcka** 36.22 136 *e*P P 17 10 38.4 -2.2
CORM **Corum** 36.25 146 *e*P P 17 10 41.4 +0.6
LOD **Lodumlu** 36.26 148 *e*P P 17 10 34.6 -6.2
ANTO **Ankara** 36.28 148 *e*P P 17 10 36.2 -4.9
ANTO **Ankara** 36.28 148⇓ *e*P P 17 10 41.4 +0.4
comp=Z,84nm,1.3s,mb5.5
ANTO LR LR
comp=Z,5µm,21.0s,MS5.2
ANTO **Ankara** 36.28 148 P P 17 10 42.0 +0.9
ANTO pmax pmax
comp=Z,84nm,1.3s,mb5.5
ANTO **Ankara** 36.28 148⇓ *e*P P 17 10 41.4 +0.3
comp=Z,84nm,1.3s,mb5.5
PESTR **Estremoz** 36.31 202 *e*P P 17 10 41.7 +0.4
comp=Z,178nm,1.5s,mb5.8
PESTR *e*LR LR 17 20 40.9
comp=Z,809nm,16.0s
KTUT **Trabzon** 36.32 139 *e*P P 17 10 41.0 -0.4
ESKT **Eskisehir** 36.35 151 *e*P P 17 10 41.2 -0.4
EBAD **Badajoz** 36.37 201 P P 17 10 40.9 -0.9
comp=Z,68nm,1.3s,mb5.4
EBAD **Badajoz** 36.37 201 P P 17 10 40.9 -0.9
comp=Z,68nm,1.3s,mb5.4
PMAFR **Mafra** 36.40 204 *e*P P 17 10 42.8 +0.7
PMAFR **Mafra** 36.40 204 *e*LR LR 17 21 23.8
comp=Z,3µm,20.0s
CSLB **Castelbuono** 36.49 173 P P 17 10 42.6 -0.3
ARTV **Artvin** 36.53 136 *i* P P 17 10 43.7 +0.5
TBLG **Delisi** 36.55 132 P P 17 10 43.7 +0.3
GDZ **Gediz** 36.60 152 *i* P P 17 10 44.1 +0.3
AKHS **Akhisar** 36.60 155 *i* P P 17 10 44.0 +0.1
MTA **Mtatsminda** 36.60 132 P P 17 10 44.0 +0.2
KURK **Kurchatov** 36.65 90 *i* P P 17 10 43.9 -0.2
KURK *e*PP PP 17 12 08.7 +1.4
KURK LR LR
comp=Z,16µm,19.0s,MS5.8
KURK **Kurchatov** 36.65 90 *d i*P P 17 10 43.8 -0.3
KURK pmax pmax
comp=Z,245nm,1.8s,mb5.7
KURK **Kurchatov** 36.65 90 *i* P P 17 10 43.8 -0.3
comp=Z,245nm,1.8s,mb5.7
EBAN **Banos Encina** 36.67 197 P P 17 10 44.6 +0.2
EBAN pmax pmax
comp=Z,14nm,0.9s,mb4.8
EBAN **Banos Encina** 36.67 197 P P 17 10 44.6 +0.2
comp=Z,14nm,0.9s,mb4.8
EVO **Evora** 36.69 202 *e*P P 17 10 44.9 +0.4
EADA **Adamuz** 36.73 198 P P 17 10 44.8 -0.1
EADA **Adamuz** 36.73 198 P P 17 10 44.8 -0.1
CDAG **Cicekdag** 36.75 146 *i* P P 17 10 45.9 +0.8
GUMT **Gumushane** 36.78 139 *e*P P 17 10 44.4 -0.9
EMUR **La Murta** 36.81 193 P P 17 10 45.5 -0.1
EMUR **La Murta** 36.81 193 P P 17 10 45.5 -0.1
PBAR **Barrancos** 36.94 201 *e*P P 17 10 47.0 +0.3
comp=Z,199nm,1.5s,mb5.7
PBAR **Barrancos** 36.94 201 *e*LR LR 17 21 07.8
DGRG **David-gareji** 36.95 132 P P 17 10 47.1 +0.3
EQES **Quesada** 36.97 196 P P 17 10 47.5 +0.5
comp=Z,69nm,1.2s,mb5.4
EQES **Quesada** 36.97 196 P P 17 10 47.5 +0.5
comp=Z,69nm,1.2s,mb5.4
URLA **Izmir** 36.98 156 *i* P P 17 10 47.1 +0.1
BLCB **Balcova** 37.00 156 *e*P P 17 10 46.8 -0.4
BLCB **Balcova** 37.00 156 *e*P P 17 10 44.4 -2.9
PTL **Penteli** 37.01 160 *e*P P 17 10 47.0 -0.3
KDAG **Bornova** 37.01 155 *i* P P 17 10 47.2 -0.1
IZM **Izmir** 37.01 155 *e*P P 17 10 47.4 0.0
KELT **Kelkit** 37.05 140 *i* P P 17 10 48.1 +0.5
KULA **Kula-Manisa** 37.06 154 *e*P P 17 10 46.9 -0.9
KIZT **Kizilcal** 37.12 149 *e*P P 17 10 48.2 -0.1
PBEJ **Beja** 37.17 202 *e*P P 17 10 49.1 +0.4
comp=Z,216nm,1.5s,mb5.8
BILL **Bilibino** 37.21 14 *e*P P 17 10 48.7 0.0
comp=Z,51nm,1.0s,mb5.3
BILL LR LR
comp=Z,2µm,20.0s,MS5.0
BILL **Bilibino** 37.21 14 *d i*P P 17 10 49.3 +0.6
BILL *e*SS SS 17 19 11.1 -6.2
BILL pmax pmax
comp=Z,67nm,1.4s,mb5.3
BILL MLR MLR
comp=Z,3µm,24.0s,MS5.0
SHUT **Suhut-Afyon** 37.26 151 *e*P P 17 10 50.5 +1.1
ELUQ **Luque** 37.30 197 P P 17 10 49.9 +0.1
comp=Z,17nm,0.9s,mb4.9
ELUQ **Luque** 37.30 197 P P 17 10 49.9 +0.1
ELUQ pmax pmax
comp=Z,17nm,0.9s,mb4.9
ELUQ **Luque** 37.30 197 P P 17 10 49.9 +0.1
comp=Z,17nm,0.9s,mb4.9
KARS **Kars** 37.31 135 *e*P P 17 10 50.5 +0.7
EMIN **Mina Concepcio** 37.31 200 P P 17 10 47.6 -2.2
EMIN **Mina Concepcio** 37.31 200 P P 17 10 47.6 -2.3
KHL **Karahalli** 37.36 153 *e*P P 17 10 50.9 +0.6
ECOG **Cogollos-Vega** 37.53 196 P P 17 10 52.5 +0.8
EZC **Erzincan** 37.53 139 *e*P P 17 10 50.2 -1.5
DIGO **Kars** 37.55 135 *i* P P 17 10 52.4 +0.5
CAEH **'Ain El Ouahch** 37.57 182 P P 17 10 54.0 +2.0
EGRO **El Granado** 37.62 201 P P 17 10 51.7 -0.8
ABA **Alger-Bouzarea** 37.63 187 P P 17 10 59.0 +6.4
SMG **Samos** 37.65 156 *e*P P 17 10 52.5 -0.2
AVNT **Avonos** 37.66 146 *i* P P 17 10 53.5 +0.8
ERZM **Erzurum** 37.66 137 *i* P P 17 10 54.2 +1.4
EZM **Erzurum** 37.66 137 *e*P P 17 10 54.3 +1.4
ELOJ **Sierra Loja** 37.71 197 P P 17 10 53.7 +0.5
ELOJ **Sierra Loja** 37.71 197 P P 17 10 53.7 +0.5
CMAH **Djebel Manchou** 37.72 182 P P 17 10 55.0 +1.7
PTEO **Sao Teotonio** 37.74 203 *e*P P 17 10 54.0 +0.5
comp=Z,181nm,1.6s,mb5.5
BNN **Bunyan** 37.74 144 *e*P P 17 10 47.5 -5.9
ENIJ **Nijar** 37.74 194 P P 17 10 54.3 +0.8
PVAQ **Vaqueiros** 37.77 202 *e*P P 17 10 54.4 +0.6
comp=Z,110nm,1.5s,mb5.4
PVAQ **Vaqueiros** 37.77 202 *e*LR LR 17 21 52.7
comp=Z,1µm,18.0s
ERON **Agon** 37.81 196 P P 17 10 55.5 +1.4
comp=Z,39nm,1.2s,mb5.0
ERON **Agon** 37.81 196 P P 17 10 55.5 +1.4
comp=Z,39nm,1.2s,mb5.0
AYDN **Tasoluk** 37.81 155 *i* P P 17 10 54.0 -0.1
DENT **Denizli** 37.86 153 *e*P P 17 10 55.0 +0.5
EBER **Berja** 37.86 195 P P 17 10 54.6 +0.1
EBER **Berja** 37.86 195 P P 17 10 54.6 +0.1
FCC **Fort Churchill** 37.87 304⇑ *i*P P 17 10 53.3 -1.1
comp=Z,52nm,1.2s,mb5.1
FCC *e*PP PP 17 12 08.9 -12
FCC **Fort Churchill** 37.87 304⇑ *i*P P 17 10 53.3 -1.0
FCC pmax pmax
comp=Z,52nm,1.2s,mb5.1
FCC **Fort Churchill** 37.87 304 *e*P P 17 10 53.1 -1.2
GANJ **Ganja** 37.92 131 P P 17 10 54.5 -0.5
SNR=16
CKFL **Kef-Lekhel** 37.95 183 P P 17 10 57.5 +2.2
PBDV **Barranco-do-Ve** 37.95 202 *e*P P 17 10 55.7 +0.4
comp=Z,270nm,1.5s,mb5.8
PBDV **Barranco-do-Ve** 37.95 202 *e*LR LR 17 21 44.5
ISP **Isparta** 37.95 151 *e*P P 17 10 53.6 -1.7
ISP **Isparta** 37.95 151 *e*P P 17 10 54.2 -1.1
MORF **Marmelete** 37.97 203 *e*P P 17 10 55.4 0.0
comp=Z,117nm,2.1s,mb5.2
MORF **Marmelete** 37.97 203 *e*LR LR 17 22 26.3
comp=Z,3µm,20.0s
MORF **Marmelete** 37.97 203 *e*P P 17 10 56.1 +0.7
EGUA **Guajares** 37.97 196 P P 17 10 56.8 +1.3
EGUA **Guajares** 37.97 196 P P 17 10 56.8 +1.3
LIJA **Lijar** 38.05 199 *e*P P 17 10 57.7 +1.6
SIZA **Siyzn** 38.05 128 P P 17 10 57.3 +1.2
SNR=12
ABSA **Djebel Ababsia** 38.07 182 P P 17 10 58.0 +1.7
CASM **Ain Smara** 38.09 183 P P 17 10 58.0 +1.5
KONT **Konya--Tatoy** 38.11 149 *e*P P 17 10 56.7 +0.1
ESPR **Espera** 38.13 199 P P 17 10 56.7 0.0
comp=Z,71nm,1.2s,mb5.3
ESPR **Espera** 38.13 199 P P 17 10 56.7 -0.1
comp=Z,71nm,1.2s,mb5.3
APE **Apeiranthos** 38.14 158 *e*P P 17 10 55.4 -1.5
PFVI **Vila Bisbo** 38.16 203 *e*P P 17 10 57.3 +0.3
PFVI **Vila Bisbo** 38.16 203 *e*LR LR 17 21 54.7
comp=Z,3µm,18.0s
MLSB **Milas** 38.16 155 *e*P P 17 10 56.9 -0.1
SET **Setif** 38.17 184 P P 17 11 02.0 +4.9
GIBL **Gibalbin** 38.17 199 *i* P P 17 10 59.6 +2.4
EBNR **Beni Rached** 38.20 189 P P 17 11 00.0 +2.6
EMHD **Djebel Mahouad** 38.24 188 P P 17 10 58.5 +0.8
AGRB **Hanur-Agry** 38.29 135 *e*P P 17 10 56.8 -1.3
PTK **Pertek** 38.29 140 *e*P P 17 10 58.4 +0.3
EMIJ **Mijas** 38.34 198 P P 17 10 58.6 +0.1
comp=Z,71nm,1.1s,mb5.3
EMIJ **Mijas** 38.34 198 P P 17 10 58.6 +0.1
comp=Z,71nm,1.1s,mb5.3
BODT **Bodrum** 38.34 156 *e*P P 17 10 55.9 -2.6
BDRM **Kayabasi** 38.35 156 *i* P P 17 10 58.2 -0.4
ECHA **Ech Chlef** 38.35 190 P P 17 11 01.5 +2.8
YER **Yerkesik** 38.38 154 *e*P P 17 10 59.7 +0.8
TUTA **Tutak** 38.42 136 *i* P P 17 11 00.2 +1.0
GOLH **Golhisar** 38.43 153 *i* P P 17 10 59.7 +0.4
DYDN **Diyadin** 38.46 135 *i* P P 17 11 00.5 +1.0
BRDA **Brd** 38.47 130 P P 17 11 00.7 +1.1
SNR=15
EJIF **Jimena Fronter** 38.51 199 P P 17 11 00.6 +0.7
EJIF **Jimena Fronter** 38.51 199 P P 17 11 00.6 +0.6
YKA **Yellowknife Ar** 38.53 321 P P 17 10 59.8 0.0
comp=Z,27nm,1.1s,mb4.9,baz=15,slow=8.5,SNR=39
YKA PP PP 17 12 26.9 -0.8
comp=Z,7.9nm,1.1s,baz=22,slow=9.9,SNR=4.0
YKA PcP PcP 17 13 12.4 +0.2
comp=Z,4.8nm,0.8s,baz=14,slow=3.1,SNR=9.5
YKA **Yellowknife Ar** 38.53 321 P P 17 10 59.8 -0.1
YKA **Yellowknife Ar** 38.53 321 PP PP 17 12 26.9 -0.8
YKA **Yellowknife Ar** 38.53 321 PcP PcP 17 13 12.4 +0.2
YAK **Yakutsk** 38.54 40 *i* P P 17 10 58.9 -1.1
YAK LR LR
comp=Z,3µm,21.0s,MS5.1
YAK **Yakutsk** 38.54 40 *d i*P P 17 10 59.5 -0.5
YAK *e* 17 12 31.3
YAK *e*PPP 17 12 48.4
YAK *e* 17 13 11.1
YAK *e*S S 17 16 51.5 -3.7
YAK *e*SS SS 17 19 43.4 -0.6
YAK *e* 17 21 07.7
YAK pmax pmax
comp=Z,79nm,1.4s,mb5.2
YAK pmax pmax
comp=N,86nm,1.6s
YAK pmax pmax
comp=E,45nm,1.6s
YAK smax
comp=E,2µm,15.4s
YAK smax
comp=Z,341nm,4.6s
YAK smax
comp=N,212nm,3.4s
YAK MLR MLR
comp=N,3µm,22.0s,MS5.3
YAK MLR MLR
comp=Z,3µm,22.0s,MS5.1
YAK MLR MLR
comp=E,4µm,19.0s,MS5.3
YAK **Yakutsk** 38.54 40 *i* P P 17 10 59.5 -0.5
comp=E,79nm,1.4s,mb5.2
YAK **Yakutsk** 38.54 40 *e*PcP PcP 17 13 11.1 -1.1
YAK *e*ScS ScS 17 21 07.7 -1.9
EANR **'Ain N'Sour** 38.56 190 P P 17 11 02.0 +1.6
KEST **Kesra** 38.60 179 P P 17 11 00.8 0.0
comp=E,8.2nm,0.8s,baz=356,slow=5.7,SNR=12
ELZG **Elazig** 38.60 141 *i* P P 17 11 02.2 +1.4
MALT **Malatya** 38.69 141 *e*P P 17 11 01.8 +0.3
MALT **Malatya** 38.69 141⇓ *e*P P 17 11 02.5 +1.0
comp=E,180nm,1.5s,mb5.6
MALT *e*PP PP 17 12 28.0 -1.8
MALT **Malatya** 38.69 141⇓ *e*P P 17 11 02.5 +1.0
MALT *e* 17 12 28.0
MALT pmax pmax
comp=Z,180nm,1.5s,mb5.6
MALT **Malatya** 38.69 141 *e*PP PP 17 12 28.0 -1.8
DAT **Datca** 38.70 155 *e*P P 17 10 55.4 -6.1
CMER **Merouana** 38.74 184 P P 17 11 04.0 +2.1
DALT **Dalyan (Mudla)** 38.78 154 *e*P P 17 11 00.8 -1.5
EALB **Alboran** 38.82 195 P P 17 11 02.5 -0.1
comp=Z,44nm,1.1s,mb5.1
EALB **Alboran** 38.82 195 P P 17 11 02.5 -0.1
comp=Z,44nm,1.1s,mb5.1
USTO **Oran** 38.87 192 P P 17 11 05.0 +2.0
CLDR **Caldiran** 38.89 134 *e*P P 17 11 03.2 0.0
ANTB **Antalya** 38.90 152 *e*P P 17 11 05.2 +1.9
ELL **Elmali** 38.96 153 *e*P P 17 11 02.4 -1.3
FETY **Fethiye** 38.97 154 *e*P P 17 11 00.1 -3.7
ANDN **Andirin** 39.06 144 *i* P P 17 11 05.5 +0.9
KOZT **Kozan** 39.08 145 *e*P P 17 11 02.8 -1.9
ETRT **Tiaret** 39.11 190 P P 17 11 06.0 +0.9
ALIB **Ii-Bayraml** 39.15 128 P P 17 11 07.5 +2.2
SNR=12
NAX **Nakhchivan** 39.17 133 P P 17 11 05.8 +0.3
SNR=12
KARA **Karaisali** 39.17 146 *e*P P 17 11 06.1 +0.6
KMRS **Kahramanmaras** 39.22 144 *e*P P 17 11 06.5 +0.6
ODJA **Bouhanifia** 39.25 192 P P 17 11 09.0 +2.8
BOD **Bodaibo** 39.27 55 *e*P P 17 11 03.9 -2.3
VANB **Van** 39.31 135 *e*P P 17 11 08.8 +2.1
TVAN **Van** 39.38 135 *i* P P 17 11 09.0 +1.7
DKH **Dar Kharkhour** 39.45 198 *i* P P 17 11 10.0 +2.1
IMA2 **Indian Mountai** 39.46 349 *e*P P 17 11 08.0 +0.4
IMA2 *e*PcP PcP 17 13 12.6 -2.5
IMA2 **Indian Mountai** 39.46 349 *e*P P 17 11 08.0 +0.4
IMA2 **Indian Mountai** 39.46 349 *e*PcP PcP 17 13 12.6 -2.5
MERS **Mersin** 39.48 147 *e*P P 17 11 07.5 -0.5
GZT **Gaziantep** 39.48 143 *i* P P 17 11 08.8 +0.7
ATAB **Bozova** 39.49 142 *i* P P 17 11 09.3 +1.2
CEYT **Ceyhan** 39.52 145 *e*P P 17 11 08.4 0.0
MPAL **Palemas** 39.60 196 *i* P P 17 11 11.0 +1.9
GAZ **Gaziantep** 39.60 143 *e*P P 17 11 09.4 +0.3
URFA **Urfa** 39.61 141 *e*P P 17 11 10.9 +1.7
TSY **Tnine Yamani** 39.62 199 *i* P P 17 11 11.0 +1.7
ZAI **Zaio** 39.77 195 *i* P P 17 11 09.0 -1.5
EGAK **Eagle** 39.83 340 *e*P P 17 11 11.5 +0.8
comp=Z,226nm,1.4s,mb5.7
EGAK LR LR
comp=Z,2µm,22.0s,MS4.9
EGAK **Eagle** 39.83 340 *e*P P 17 11 11.5 +0.8
comp=Z,226nm,1.4s,mb5.7
TOU **Touzarine** 39.85 196 *i* P P 17 11 09.0 -2.2
KRTS **Karatas** 39.90 146 *e*P P 17 11 10.1 -1.5
IKL **Isikli** 39.97 148 *e*P P 17 11 10.7 -1.5
MARD **Mardin** 40.07 139 *i* P P 17 11 12.8 -0.2
COBT **Iskenderun** 40.09 145 *i* P P 17 11 13.8 +0.7
SIRT **Sirnak** 40.20 137 *e*P P 17 11 15.9 +1.9
COLA **College** 40.28 345 *e*P P 17 11 15.9 +1.4
comp=Z,143nm,1.4s,mb5.5
COLA LR LR
comp=Z,1µm,19.0s,MS4.8
COLA **College** 40.28 345 *c i*P P 17 11 16.0 +1.5
COLA **College** 40.28 345 *e*P P 17 11 15.9 +1.4
comp=Z,143nm,1.4s,mb5.5
DAWY **Dawson** 40.36 339 *e*P P 17 11 15.8 +0.6
DAWY *e*PcP PcP 17 13 16.5 -1.5
DAWY **Dawson** 40.36 339 *e*P P 17 11 15.6 +0.5
DAWY **Dawson** 40.36 339 *e*PcP PcP 17 13 16.5 -1.5
HKR **Hakkari** 40.37 135 *e*P P 17 11 16.2 +0.7
HAKT **HAKKARI** 40.38 135 *i* P P 17 11 16.9 +1.4
TNA **Tin City** 40.42 358⇓ *e*P P 17 11 15.9 +0.4
comp=Z,38nm,1.2s,mb5.0
TNA *e*PcP PcP 17 13 18.9 +0.7
TNA LR LR
comp=Z,1µm,19.0s,MS4.8
HTY **Hatay** 40.46 145 *e*P P 17 11 16.4 +0.2
CUKT **Cukurca** 40.66 136 *e*P P 17 11 17.5 -0.4
CSS **Prodhromos** 41.17 149 *e*P P 17 11 19.8 -2.3
MK31 **Makanchi Array** 41.23 89 *i* P P 17 11 22.6 +0.1
MKAR **Makanchi Array** 41.23 89 P P 17 11 22.9 +0.5
comp=Z,99nm,1.2s,mb5.3,baz=349,slow=4.9,SNR=38
MKAR PP PP 17 13 02.9 +5.5
comp=Z,60nm,1.1s,baz=343,slow=8.0,SNR=5.6
KK31 **Karatay Array** 41.45 103 *i* P P 17 11 24.8 +0.5
MCK **McKinley** 41.49 345 *e*P P 17 11 24.5 +0.1
comp=Z,149nm,1.5s,mb5.4
MCK LR LR
comp=Z,762nm,21.0s,MS4.5
MCK **McKinley** 41.49 345 P P 17 11 26.6 +2.2
MCK pmax pmax
comp=Z,73nm,1.4s,mb5.1
MCK **McKinley** 41.49 345 *e*P P 17 11 24.5 +0.1
comp=Z,149nm,1.5s,mb5.4
MSL **Mosul** 41.49 137 *ex* x 17 11 25.5
MSL *ex* x 17 17 32.0
MOY **Mondy** 41.76 69 *e*P P 17 11 28.6 +1.8
MENT **Mentasta** 41.87 342 *e*P P 17 11 29.8 +2.3
MDT **Midelt** 42.04 197 P P 17 11 29.1 -0.2
comp=Z,14nm,1.1s,mb4.5,baz=15,slow=8.5,SNR=19
IRK **Irkutsk** 42.06 66 *i* P P 17 11 28.9 -0.3
IRK *e* 17 13 07.3
IRK *e* 17 13 38.8
IRK pmax pmax
comp=Z,350nm,2.4s,mb5.6
GAMB **Gambell** 42.23 0 *e*P P 17 11 28.8 -1.6
comp=Z,62nm,1.3s,mb5.1
HWQ **Hawqa** 42.23 146 *e*P P 17 11 30.1 -0.8
USP **Ospenovka** 42.37 99 P P 17 11 32.7 +0.9
SNR=11
TLY **Talaya** 42.42 67 *e*P P 17 11 32.0 -0.1
comp=Z,120nm,1.6s,mb5.3
TLY LR LR
comp=Z,4µm,21.0s,MS5.3
TLY **Talaya** 42.42 67 *d i*P P 17 11 32.4 +0.2
TLY *e* 17 13 10.2
TLY *e*S S 17 17 56.9 +3.7
TLY pmax pmax
comp=Z,77nm,1.6s,mb5.1
TLY MLR MLR
comp=Z,5µm,17.0s,MS5.5
TLY **Talaya** 42.42 67 P P 17 11 32.8 +0.6
SNR=18
TLY **Talaya** 42.42 67 *e*P P 17 11 32.0 -0.1
comp=Z,120nm,1.6s,mb5.3
CLNS **Chul'man** 42.48 47 *e*P P 17 11 33.0 +0.4
CLNS *e* 17 13 13.5
CLNS *e* 17 13 27.9
CLNS *e*S S 17 17 51.4 -2.6
CLNS pmax pmax
comp=Z,164nm,1.2s,mb5.5
CLNS pmax pmax
comp=N,134nm,1.4s
CLNS pmax pmax
comp=E,39nm,1.1s
CLNS smax
comp=N,174nm,13.7s
CLNS smax
comp=Z,146nm,13.9s
CLNS smax
comp=E,601nm,12.6s
CLNS MLR MLR
comp=Z,4µm,16.0s,MS5.4
CLNS MLR MLR
comp=N,1µm,15.0s,MS5.2
CLNS MLR MLR
comp=E,2µm,12.0s,MS5.2
BHL **Bhannes** 42.55 146 *e*P P 17 11 32.6 -0.8
NRGR **Nerungri** 42.62 47 *i* P P 17 11 34.2 +0.5
CHMS **Chumysh** 42.68 99 P P 17 11 35.6 +1.3
SNR=13
TTA **Tatalina** 42.71 350 *e*P P 17 11 36.0 +1.7
comp=E,308nm,1.9s,mb5.7
TTA *e*PP PP 17 13 13.9 +0.9
TTA *e*PcP PcP 17 13 26.8 +1.1
TTA **Tatalina** 42.71 350 *e*P P 17 11 36.0 +1.7
TTA *e* 17 13 13.9
TTA *e* 17 13 26.8
TTA pmax pmax
comp=Z,308nm,1.9s,mb5.7
EKS2 **Erkin-Say** 42.73 100 *e*P P 17 11 35.7 +0.9
comp=Z,112nm,1.1s,mb5.5
EKS2 *e*PP PP 17 13 10.3 -3.4
EKS2 LR LR
comp=Z,6µm,20.0s,MS5.5
EKS2 **Erkin-Say** 42.73 100 P P 17 11 36.1 +1.3
SNR=14
EKS2 **Erkin-Say** 42.73 100 *e*P P 17 11 35.7 +0.9
comp=Z,112nm,1.1s,mb5.5
EKS2 **Erkin-Say** 42.73 100 *e*PP PP 17 13 10.3 -3.3
FRU **Bishkek** 42.80 99 *e*P P 17 11 35.5 +0.2
FRU pmax pmax
comp=Z,930nm,2.8s,mb6.0
AAK **Ala-Archa** 42.95 99 *e*P P 17 11 36.6 +0.1
comp=Z,232nm,1.5s,mb5.7
AAK *e*PP PP 17 13 16.0 0.0
AAK LR LR
comp=Z,7µm,20.0s,MS5.5
AAK **Ala-Archa** 42.95 99 *d i*P P 17 11 37.0 +0.4

AAK pmax pmax
comp=Z,74nm,1.3s,mb5.3
AAK MLR MLR
comp=Z,6µm,17.0s,MS5.5
AAK Ala-Archa 42.95 99 P **P 17 11 38.2 +1.6**
SNR=11
AAK Ala-Archa 42.95 99 *e*P **P 17 11 36.7 +0.1**
comp=Z,232nm,1.5s,mb5.7
AAK Ala-Archa 42.95 99 *e*PP PP 17 13 16.0 0.0
TKM2 Tokmak 2 42.98 98⇓ *e*P **P 17 11 38.1 +1.2**
comp=Z,200nm,1.2s,mb5.7
TKM2 LR LR
comp=Z,7µm,19.0s,MS5.6
TKM2 Tokmak 2 42.98 98⇓ *e*P **P 17 11 38.1 +1.3**
TKM2 pmax pmax
comp=Z,200nm,1.2s,mb5.7
TKM2 MLR MLR
comp=Z,7µm,19.0s,MS5.6
TKM2 Tokmak 2 42.98 98 P **P 17 11 38.5 +1.7**
SNR=14
TKM2 Tokmak 2 42.98 98⇓ *e*P **P 17 11 38.1 +1.3**
comp=Z,200nm,1.2s,mb5.7
KBK Karagaybulak 43.05 99 P **P 17 11 39.2 +1.8**
SNR=13
VAN Vannovskaya 43.14 119 P **P 17 11 38.9 +0.7**
ABKT Ailbek 43.16 119 P **P 17 11 39.4 +1.1**
comp=Z,755nm,1.2s,mb6.3,SNR=14
AML Almayashu 43.20 100 *e*P **P 17 11 39.9 +1.3**
comp=Z,140nm,1.0s,mb5.7
AML *e*PP PP 17 13 17.6 -1.1
AML LR LR
comp=Z,7µm,21.0s,MS5.5
AML Almayashu 43.20 100 P **P 17 11 41.3 +2.7**
SNR=10
AML Almayashu 43.20 100 *e*P **P 17 11 39.9 +1.3**
comp=Z,140nm,1.0s,mb5.7
AML Almayashu 43.20 100 *e*PP PP 17 13 17.6 -1.1
FFC Flin Flon 43.32 308 PFAKE 17 11 50.0 +11
FFC LR LR
comp=Z,6µm,20.0s,MS5.5
UCH Uchtor 43.34 99 *e*P **P 17 11 41.7 +2.0**
comp=Z,713nm,1.8s,mb6.1
UCH *e*PP PP 17 13 21.5 +1.4
UCH LR LR
comp=Z,7µm,20.0s,MS5.6
UCH Uchtor 43.34 99 P **P 17 11 42.4 +2.7**
SNR=9.2
UCH Uchtor 43.34 99 *e*P **P 17 11 41.7 +2.0**
comp=Z,713nm,1.8s,mb6.1
SML Sawmill 43.35 344 *e*P **P 17 11 40.2 +0.6**
SML Sawmill 43.35 344 P **P 17 11 41.3 +1.7**
MMAI Mount Meron Ar 43.39 147 P **P 17 11 40.2 0.0**
comp=Z,22nm,1.0s,mb4.9,baz=352,slow=7.3,SNR=17
MMAI PP PP 17 13 20.8 -0.1
comp=Z,17nm,1.0s,baz=333,slow=5.2,SNR=7.6
ZAK Zakamensk 43.52 68 *e*P **P 17 11 41.5 +0.4**
PMR Palmer 43.63 345 *e*P **P 17 11 40.7 -1.1**
comp=Z,56nm,1.0s,mb5.2
PMR LR LR
comp=Z,1µm,20.0s,MS4.8
PMR Palmer 43.63 345 P **P 17 11 43.5 +1.7**
PMR pmax pmax
comp=Z,59nm,1.2s,mb5.2
PMR Palmer 43.63 345 *e*P **P 17 11 40.7 -1.1**
comp=Z,56nm,1.0s,mb5.2
KZA Kyzart 43.67 99 P **P 17 11 44.7 +2.3**
SNR=7.7
PKME Peaks-Kenny Pk 43.86 274 *e*P **P 17 11 43.5 -0.3**
comp=Z,211nm,1.3s,mb5.7
PKME LR LR
comp=Z,7µm,19.0s,MS5.6
MA2 Magadan 44.07 27 *i* P **P 17 11 46.3 +0.9**
MA2 LR LR
comp=Z,1µm,20.0s,MS4.8
MA2 Magadan 44.07 27 *d i*P **P 17 11 46.2 +0.8**
MA2 *e* 17 13 30.8
MA2 *e*S **S 17 18 16.0 -1.2**
MA2 *e*SS SS 17 21 28.3 -5.4
MA2 *e* 17 21 46.0
MA2 pmax pmax
comp=Z,200nm,1.8s,mb5.5
MA2 pmax pmax
comp=N,100nm,1.4s
MA2 MLR MLR
comp=Z,4µm,17.6s,MS5.4
MA2 Magadan 44.07 27 *i* P **P 17 11 46.2 +0.8**
comp=Z,100nm,1.4s,mb5.3
MA2 *e*S **S 17 18 16.0 -1.2**
SKAG Skagway 44.43 335 *e*P **P 17 11 48.6 +0.4**
comp=Z,144nm,1.7s,mb5.4
SKAG LR LR
comp=Z,3µm,18.0s,MS5.2
CIT Chita 44.51 58 *e*P **P 17 11 47.5 -1.5**
SVW2 Sparrevohn 44.51 349 *e*P **P 17 11 50.2 +1.3**
SVW2 Sparrevohn 44.51 349 *e*P **P 17 11 50.2 +1.3**
BHD Baghdad 44.67 136 *ex* x 17 11 49.0
BHD *ex* x 17 13 33.0
BHD *ex* x 17 18 28.0
DLBC Dease Lake 44.76 330 *e*P **P 17 11 51.0 +0.1**
DLBC Dease Lake 44.76 330 *e*P **P 17 11 52.6 +1.7**
FRNY Flat Rock 45.42 278⇑ *e*P **P 17 11 55.8 -0.5**
comp=Z,164nm,1.5s,mb5.6
WMQ Urumqi 45.45 86⇓ *i*P **P 17 11 58.0 +1.5**
WMQ AP pP 17 12 02.5 +2.8
WMQ XP sP 17 12 05.0 +4.1
WMQ AMB AMB
comp=Z,111nm,1.1s,mb5.6
WMQ AMB AMB
comp=Z,3µm,3.8s
LBNH Lisbon 45.52 276 *e*P **P 17 11 56.7 -0.4**
comp=Z,275nm,1.8s,mb5.9
LBNH LR LR
comp=Z,5µm,19.0s,MS5.5
LBNH Lisbon 45.52 276 P **P 17 11 57.7 +0.6**
LBNH pmax pmax
comp=Z,270nm,1.8s,mb5.9
LBNH Lisbon 45.52 276 P **P 17 11 57.7 +0.6**
comp=Z,270nm,1.8s,mb5.9
MSNY Massena 45.61 279⇑ *e*P **P 17 11 57.3 -0.5**
LONY Lake Ozonia 45.89 279 *e*P **P 17 11 59.4 -0.7**
comp=Z,249nm,1.8s,mb5.8
LONY LR LR
comp=Z,10µm,19.0s,MS5.8
ULM Lac du Bonnet 46.10 300 P **P 17 12 00.8 -0.9**
comp=Z,38nm,1.1s,mb5.2,baz=24,slow=8.1,SNR=30
HNH Hanover 46.11 276 *e*P **P 17 11 59.2 -2.6**
comp=Z,177nm,1.5s,mb5.8
FFD Franklin Falls 46.16 276 *e*P **P 17 12 01.4 -0.8**
comp=Z,152nm,1.3s,mb5.8
KSH Kashi 46.26 99 *i* P **P 17 12 04.8 +1.8**
KSH AP pP 17 12 09.5 +3.4
KSH XP sP 17 12 13.2 +5.8
KSH *e*PP PP 17 13 53.2 +2.0
KSH *e*PCS PcS 17 17 32.6 -0.1
KSH *e*S **S 17 18 50.0 +0.7**
KSH *e*XS sS 17 18 57.2 +2.8
KSH SCS ScS 17 21 53.0 -4.8
KSH SS SS 17 22 07.6 -6.5
KSH AMB AMB
comp=Z,220nm,1.0s,mb6.0
KSH AMB AMB
comp=Z,7µm,4.2s
KSH LR LR
comp=N,12µm,9.1s
KSH LR LR
comp=E,16µm,9.6s
KSH LR LR
comp=Z,22µm,14.2s,MS6.3
NCB Newcomb 46.39 278⇑ *e*P **P 17 12 03.2 -0.8**
comp=Z,141nm,1.8s,mb5.6
NCB LR LR
comp=Z,9µm,20.0s,MS5.7
SONM Songino Array 46.66 67 P **P 17 12 06.9 +0.9**
comp=Z,35nm,1.1s,mb5.2,baz=328,slow=6.8,SNR=44
SONM PP PP 17 14 00.9 +5.6
comp=Z,16nm,1.1s,baz=335,slow=9.8,SNR=4.5
SIT Sitka 46.77 334 PFAKE 17 12 20.0 +13
SIT LR LR
comp=Z,4µm,21.0s,MS5.4
ACCN Adirondack Com 46.78 277 *e*P **P 17 12 07.1 0.0**
comp=Z,202nm,1.6s,mb5.8
ACCN *e*PP PP 17 13 51.8 -4.9
ULN Ulaanbaatar 46.80 66 PFAKE 17 12 20.0 +13
ULN LR LR
comp=Z,2µm,19.0s,MS5.1
WRAK Wrangell Islan 47.02 332 *e*P **P 17 12 09.1 +0.3**
comp=Z,34nm,1.0s,mb5.2
WRAK LR LR
comp=Z,6µm,21.0s,MS5.5
HRV Harvard--Oak R 47.03 275 *e*P **P 17 12 07.1 -1.9**
comp=Z,351nm,2.1s,mb5.9
HRV LR LR
comp=Z,5µm,21.0s,MS5.5
HRV Harvard--Oak R 47.03 275 P **P 17 12 09.6 +0.6**
HRV pmax pmax
comp=Z,350nm,2.1s,mb5.9
HRV Harvard--Oak R 47.03 275 P **P 17 12 09.6 +0.6**
comp=Z,350nm,2.1s,mb5.9
EDM Edmonton 47.05 316⇑ *i*P **P 17 12 08.9 -0.1**
EDM *e*PcP PcP 17 13 40.9 +0.1
EDM Edmonton 47.05 316 P **P 17 12 09.2 +0.2**
EDM Edmonton 47.05 316 *e*PcP PcP 17 13 40.9 +0.1
WES Weston 47.08 275 PFAKE 17 12 20.0 +11
WES LR LR
comp=Z,3µm,19.0s,MS5.3
EYMN Ely 47.19 296⇑ *e*P **P 17 12 08.7 -1.5**
comp=Z,178nm,1.7s,mb5.7
EYMN *e*PcP PcP 17 13 39.9 -1.5
EYMN LR LR
comp=Z,10µm,19.0s,MS5.8
EYMN Ely 47.19 296⇑ *e*P **P 17 12 08.7 -1.5**
comp=Z,178nm,1.7s,mb5.7
EYMN Ely 47.19 296 *e*PcP PcP 17 13 39.9 -1.5
CFTV Fuerteventura 47.38 208 P **P 17 12 11.0 -0.9**
comp=Z,11nm,0.7s,mb4.9
CFTV Fuerteventura 47.38 208 P **P 17 12 11.0 -0.9**
comp=Z,11nm,0.7s,mb4.9
QUA2 Belchertown 47.45 276 *e*P **P 17 12 11.9 -0.4**
comp=Z,268nm,1.5s,mb6.0
QUA2 Belchertown 47.45 276 *e*P **P 17 12 11.9 -0.4**
comp=Z,268nm,1.5s,mb6.0
KDAK Kodiak Island 47.65 347 P **P 17 12 14.9 +1.3**
comp=Z,900nm,1.0s,SNR=5.3
KDAK Kodiak Island 47.65 347⇓ *e*P **P 17 12 11.9 -1.7**
comp=Z,197nm,1.1s,mb6.0
KDAK LR LR
comp=Z,584nm,20.0s,MS4.5
KDAK Kodiak Island 47.65 347⇓ *e*P **P 17 12 11.9 -1.7**
comp=Z,197nm,1.1s,mb6.0
AGMN Agassiz Refuge 47.92 299 *e*P **P 17 12 15.0 -0.9**
comp=Z,73nm,1.2s,mb5.6
AGMN *e*PcP PcP 17 13 43.7 -0.3
AGMN LR LR
comp=Z,9µm,19.0s,MS5.8
AGMN Agassiz Refuge 47.92 299 *e*P **P 17 12 15.0 -0.9**
comp=Z,73nm,1.2s,mb5.6
AGMN Agassiz Refuge 47.92 299 *e*PcP PcP 17 13 43.7 -0.3
LUMB Murzuk 48.27 173 *i* P **P 17 12 19.2 +0.4**
SNR=24
COWI Conover 48.33 293 *e*P **P 17 12 18.1 -0.9**
comp=Z,137nm,1.8s,mb5.7
COWI LR LR
comp=Z,9µm,20.0s,MS5.8
COWI Conover 48.33 293 *e*P **P 17 12 18.1 -0.9**
comp=Z,137nm,1.8s,mb5.7
GLMI Grayling 48.36 288 PFAKE 17 12 30.0 +11
GLMI LR LR
comp=Z,881nm,19.0s,MS4.8
HIA Hailar 48.49 55⇓ *e*P **P 17 12 20.2 0.0**
comp=Z,90nm,1.5s,mb5.6
HIA LR LR
comp=Z,7µm,20.0s,MS5.7
HIA Hailar 48.49 55⇓ *e*P **P 17 12 20.2 -0.1**
HIA pmax pmax
comp=Z,90nm,1.5s
HIA MLR MLR
comp=Z,7µm,20.0s
HIA Hailar 48.49 55 *e*P **P 17 12 20.3 0.0**
BINY Binghamton 48.51 279⇑ *i*P **P 17 12 20.6 +0.1**
comp=Z,208nm,1.6s,mb5.9
BINY LR LR
comp=Z,11µm,19.0s,MS5.9
BINY Binghamton 48.51 279⇑ *i*P **P 17 12 20.6 +0.1**
comp=Z,208nm,1.6s,mb5.9
MIB Mutribah 48.61 134 *e*P **P 17 12 21.2 -0.1**
MIB AMb AMB 17 12 23.9
comp=Z,221nm,1.1s,mb6.1
MIB Mutribah 48.61 134 *e*P **P 17 12 21.2 -0.2**
comp=Z,221nm,1.1s,mb6.1
RST Umm Al-Ruwaisa 48.84 134 *e*P **P 17 12 22.6 -0.5**
RST AML AML 17 12 25.7
comp=Z,17nm,0.7s
UMR Umm Al-Rimmam 48.93 133 *e*P **P 17 12 23.5 -0.3**
PAL Palisades 49.06 276 *e*P **P 17 12 24.6 -0.2**
comp=Z,134nm,1.8s,mb5.7
PAL Palisades 49.06 276 P **P 17 12 24.8 +0.1**
PAL pmax pmax
comp=Z,110nm,1.7s,mb5.6
PAL Palisades 49.06 276 P **P 17 12 24.8 +0.1**
comp=Z,110nm,1.7s,mb5.6
NAY Al-Naaiem 49.13 134 *e*P **P 17 12 24.6 -0.7**
NAY AMb AMB 17 12 27.7
comp=Z,74nm,1.2s,mb5.6
NAY Al-Naaiem 49.13 134 *e*P **P 17 12 24.6 -0.8**
comp=Z,74nm,1.2s,mb5.6
KBD Kabd 49.29 133 *e*P **P 17 12 26.3 -0.3**
KBD AMb AMB 17 12 29.1
comp=Z,571nm,0.9s,mb6.6
KBD Kabd 49.29 133 *e*P **P 17 12 26.3 -0.3**
comp=Z,571nm,0.9s,mb6.6
RDF Al-Radifah 49.50 134 *e*P **P 17 12 27.5 -0.7**
RDF AML AML 17 12 31.7
comp=Z,44nm,0.8s
BRNJ Basking Ridge 49.54 277 *e*P **P 17 12 28.6 +0.2**
comp=Z,268nm,1.6s,mb6.0
BRNJ Basking Ridge 49.54 277 *e*P **P 17 12 28.6 +0.2**
comp=Z,268nm,1.6s,mb6.0
ERPA Erie 49.66 283 *e*P **P 17 12 28.7 -0.6**
comp=Z,78nm,1.4s,mb5.5
ERPA LR LR
comp=Z,5µm,19.0s,MS5.6
ERPA Erie 49.66 283 *e*P **P 17 12 28.7 -0.6**
comp=Z,78nm,1.4s,mb5.5
DGMT Dagmar 49.67 306⇑ *e*P **P 17 12 29.2 -0.1**
comp=Z,155nm,1.5s,mb5.8
DGMT *e*PcP PcP 17 13 51.3 +1.0
DGMT LR LR
comp=Z,6µm,20.0s,MS5.6
DGMT Dagmar 49.67 306⇑ *e*P **P 17 12 29.2 -0.1**
comp=Z,155nm,1.5s,mb5.8
QRN Al-Qurain 49.75 133 *e*P **P 17 12 30.4 +0.3**
QRN AML AML 17 12 33.5
comp=Z,28nm,0.6s
AAM Ann Arbor 50.46 286 *e*P **P 17 12 35.2 -0.1**
comp=Z,178nm,1.7s,mb5.8
AAM LR LR
comp=Z,4µm,19.0s,MS5.5
AAM Ann Arbor 50.46 286 P **P 17 12 35.6 +0.2**
AAM pmax pmax
comp=Z,180nm,1.7s,mb5.8
AAM Ann Arbor 50.46 286 P **P 17 12 35.6 +0.2**
comp=Z,180nm,1.7s,mb5.8
SDPT Sand Point 50.48 352 *e*P **P 17 12 35.1 -0.2**
comp=Z,234nm,1.2s,mb6.1
SDPT LR LR
comp=Z,2µm,20.0s,MS5.1
SSPA Standing Stone 50.48 280 *e*P **P 17 12 34.9 -0.6**
comp=Z,120nm,1.5s,mb5.7
SSPA LR LR
comp=Z,10µm,19.0s,MS5.8
SSPA Standing Stone 50.48 280 *e*P **P 17 12 34.9 -0.6**
comp=Z,120nm,1.5s,mb5.7
MVL Millersville 50.66 278 *e*P **P 17 12 36.9 0.0**
comp=Z,210nm,1.9s,mb5.7
MVL Millersville 50.66 278 *e*P **P 17 12 36.9 0.0**
comp=Z,210nm,1.9s,mb5.7
LKFR Kufra 50.72 163 *i* P **P 17 12 37.9 +0.4**
SNR=23
KLR Kul'dur 51.03 45 *e*P **P 17 12 36.0 -3.6**
KLR *e*S **S 17 19 55.0 -1.3**
KLR *e* 17 22 23.0
KLR pmax pmax
comp=Z,100nm,2.0s,mb5.4
KLR smax
comp=N,500nm,11.5s
KLR smax
comp=E,900nm,11.5s
KLR MLR MLR
comp=E,2µm,13.5s
KLR MLR MLR
comp=Z,9µm,13.5s,MS6.0
WALA Waterton Lakes 51.12 315 *e*P **P 17 12 39.6 -0.6**
comp=Z,196nm,1.6s,mb5.8
WALA Waterton Lakes 51.12 315 *e*P **P 17 12 39.6 -0.7**
comp=Z,196nm,1.6s,mb5.8
EGMT Eagleton 51.28 311⇑ *e*P **P 17 12 41.0 -0.4**
comp=Z,263nm,1.6s,mb5.9
EGMT LR LR
comp=Z,11µm,19.0s,MS5.9
EGMT Eagleton 51.28 311⇑ *e*P **P 17 12 41.0 -0.4**
comp=Z,263nm,1.6s,mb5.9
SDMD Soldier's Deli 51.35 278⇑ *e*P **P 17 12 41.6 -0.5**
comp=Z,201nm,1.7s,mb5.8
SDMD Soldier's Deli 51.35 278⇑ *e*P **P 17 12 41.6 -0.5**
comp=Z,201nm,1.7s,mb5.8
PET Petropavlovsk 51.40 23 PFAKE 17 12 50.0 +7.7
PET LR LR
comp=Z,3µm,20.0s,MS5.2
PET Petropavlovsk 51.40 23 *e*P **P 17 12 47.9 +5.6**
PET *e* 17 14 47.1
PET *e* 17 20 00.8
PET MLR MLR
comp=Z,2µm,15.0s,MS5.3
PET Petropavlovsk 51.40 23 *e*S **S 17 20 00.8 -0.5**
comp=Z,2µm,15.0s
JFWS Jewell Farm 51.59 292⇑ *i*P **P 17 12 42.9 -1.0**
comp=Z,212nm,1.6s,mb5.8
JFWS LR LR
comp=Z,6µm,20.0s,MS5.6
JFWS Jewell Farm 51.59 292 P **P 17 12 43.8 0.0**
JFWS pmax pmax
comp=Z,210nm,1.6s,mb5.8
JFWS Jewell Farm 51.59 292 P **P 17 12 43.8 0.0**
comp=Z,210nm,1.6s,mb5.8
LAO LASA Array 51.80 307⇑ *e*P **P 17 12 45.1 -0.2**
comp=Z,288nm,1.8s,mb5.9
LAO LR LR
comp=Z,7µm,19.0s,MS5.7
LAO LASA Array 51.80 307⇑ *e*P **P 17 12 45.1 -0.2**
comp=Z,288nm,1.8s,mb5.9
MCWV Mont Chateau 51.92 281⇑ *e*P **P 17 12 46.1 -0.3**
comp=Z,197nm,1.6s,mb5.8
MCWV LR LR
comp=Z,7µm,19.0s,MS5.7
MCWV Mont Chateau 51.92 281⇑ *e*P **P 17 12 46.1 -0.3**
comp=Z,197nm,1.6s,mb5.8
UNV Unalaska Valle 52.15 356 PFAKE 17 13 00.0 +12
UNV LR LR
comp=Z,6µm,22.0s,MS5.6
ACSO Alum Creek Sta 52.22 284 *e*P **P 17 12 47.8 -0.7**
comp=Z,131nm,1.5s,mb5.6
ACSO LR LR
comp=Z,4µm,19.0s,MS5.5
ACSO Alum Creek Sta 52.22 284 *e*P **P 17 12 47.8 -0.8**
comp=Z,131nm,1.5s,mb5.6
HABR Khabarovsk 52.38 43⇓ *e*P **P 17 12 45.5 -4.2**
HABR *e* pP 17 12 46.6 -6.2
HABR *e*S **S 17 20 10.5 -4.4**
HABR *e* 17 22 39.6
HABR *e* 17 23 49.0
HABR pmax pmax
comp=Z,193nm,1.7s,mb5.8
HABR MLR MLR
comp=Z,3µm,18.7s,MS5.3
ECSD EROS,Sioux Fal 52.39 298⇑ *i*P **P 17 12 49.2 -0.6**
comp=Z,286nm,1.7s,mb5.9
ECSD LR LR
comp=Z,9µm,19.0s,MS5.8
ECSD EROS,Sioux Fal 52.39 298⇑ *i*P **P 17 12 49.2 -0.6**
comp=Z,286nm,1.7s,mb5.9
BSMT Bassoo Peak 52.45 315 P **P 17 12 50.7 +0.5**
BSMT Bassoo Peak 52.45 315 P **P 17 12 50.7 +0.5**
NEW Newport 52.50 317 *e*P **P 17 12 50.5 -0.1**
comp=Z,124nm,1.6s,mb5.6
NEW LR LR
comp=Z,9µm,20.0s,MS5.8
NEW Newport 52.50 317 P **P 17 12 51.4 +0.9**
NEW pmax pmax
comp=Z,120nm,1.6s
NEW Newport 52.50 317 P **P 17 12 51.4 +0.9**
comp=Z,120nm,1.6s,mb5.6
CBN Corbin 52.62 278 P **P 17 12 49.8 -1.8**
comp=Z,55nm,0.7s,mb5.6
CBN LR LR
comp=Z,6µm,19.0s,MS5.6
CBN Corbin 52.62 278 P **P 17 12 49.8 -1.8**
comp=Z,55nm,0.7s,mb5.6
GTA Gaotai 52.82 76⇓ *i*P **P 17 12 54.1 +1.1**
GTA AP pP 17 12 58.3 +2.1
GTA XP sP 17 13 01.1 +3.7
GTA PCP PcP 17 14 04.1 +1.9
GTA PP PP 17 14 54.8 +2.7
GTA S **S 17 20 20.3 -0.8**
GTA XS sS 17 20 28.3 +2.0
GTA SS SS 17 23 58.5 -0.7
GTA AMB AMB
comp=Z,107nm,1.4s,mb5.6
GTA AMB AMB
comp=Z,2µm,5.3s
GTA LR LR
comp=N,5µm,17.5s,MS5.7
GTA LR LR
comp=E,3µm,16.7s,MS5.7
GTA LR LR
comp=Z,6µm,16.7s,MS5.7
THN Thein Dam 52.86 102 *e*P **P 17 12 54.0 +0.6**
CHMT Chamberlain Mo 53.05 313 *e*P **P 17 12 54.1 -0.4**
CHMT Chamberlain Mo 53.05 313 *e*P **P 17 12 54.2 -0.4**
PGC Sidney 53.24 322 *e*P **P 17 12 55.9 -0.1**
comp=Z,641nm,1.9s,mb6.2
PGC Sidney 53.24 322 *e*P **P 17 12 55.9 -0.1**
comp=Z,641nm,1.9s,mb6.2
URVA University of 53.26 278 *e*P **P 17 12 55.5 -0.8**
URVA University of 53.26 278 *e*P **P 17 12 55.5 -0.8**
MSO Missoula 53.26 314 *e*P **P 17 12 56.3 +0.2**
comp=Z,250nm,1.7s,mb5.9
MSO LR LR
comp=Z,8µm,19.0s,MS5.8
MSO Missoula 53.26 314 *e*P **P 17 12 56.3 +0.1**
comp=Z,250nm,1.7s,mb5.9
GCMT Greycliff 53.39 310 *e*P **P 17 12 57.3 +0.2**
GCMT Greycliff 53.39 310 *e*P **P 17 12 57.3 +0.2**
HDIL Hopedale 53.56 290⇑ *e*P **P 17 12 58.0 -0.5**
comp=Z,428nm,1.7s,mb6.1
HDIL LR LR
comp=Z,4µm,19.0s,MS5.5
HDIL Hopedale 53.56 290⇑ *e*P **P 17 12 58.0 -0.5**
comp=Z,428nm,1.7s,mb6.1
RSSD Black Hills 53.76 305 PFAKE 17 13 10.0 +10
RSSD LR LR
comp=Z,2µm,19.0s,MS5.1
STW Striped Peak 53.77 322 P **P 17 13 01.1 +1.3**
STW Striped Peak 53.77 322 P **P 17 13 01.1 +1.2**
EPH Ephrata 53.83 319 P **P 17 12 59.7 -0.6**
EPH Ephrata 53.83 319 P **P 17 12 59.7 -0.6**
BOZ Bozeman (W) 53.93 312 *e*P **P 17 13 01.0 -0.1**
comp=Z,46nm,1.8s,mb5.1
BOZ LR LR
comp=Z,9µm,19.0s,MS5.8
BOZ Bozeman (W) 53.93 312 P **P 17 13 01.8 +0.7**
BOZ pmax pmax
comp=Z,46nm,1.8s,mb5.1
BOZ Bozeman (W) 53.93 312 P **P 17 13 01.8 +0.7**
comp=Z,46nm,1.8s,mb5.1
RLMT Red Lodge 53.94 309 *e*P **P 17 13 01.4 +0.3**
comp=Z,140nm,1.6s,mb5.6
RLMT LR LR
comp=Z,5µm,21.0s,MS5.6
RLMT Red Lodge 53.94 309 *e*P **P 17 13 01.5 +0.3**
comp=Z,140nm,1.6s,mb5.6
BLO Bloomington 54.15 287 *e*P **P 17 13 01.7 -1.1**
comp=Z,161nm,1.5s,mb5.7
BLO Bloomington 54.15 287 P **P 17 13 02.1 -0.6**
BLO pmax pmax
comp=Z,250nm,1.8s,mb5.8
BLO Bloomington 54.15 287 P **P 17 13 02.1 -0.6**
comp=Z,250nm,1.8s,mb5.8
BANOM Banah 54.25 125 P **P 17 13 04.3 +0.7**
SNR=12
BANOM Banah 54.25 125 P **P 17 13 04.3 +0.6**
SNR=12
BTO Baotou 54.34 67 *e*P **P 17 13 04.3 +0.2**
BLA Blacksburg 54.37 281 *e*P **P 17 13 03.9 -0.6**
comp=Z,214nm,1.7s,mb5.8
BLA LR LR
comp=Z,9µm,20.0s,MS5.8
BLA Blacksburg 54.37 281 P **P 17 13 04.3 -0.1**
BLA pmax pmax
comp=Z,210nm,1.7s,mb5.8

BLA Blacksburg 54.37 281 P P 17 13 04.3 -0.1
comp=Z,210nm,1.7s,mb5.8
ELN Prospectdale 54.45 281 eP P 17 13 03.6 -1.4
ELN Prospectdale 54.45 281 eP P 17 13 03.6 -1.4
HHC Hu-ho-hao-te 54.50 65 eP P 17 13 05.1 -0.2
HHC AP pP 17 13 09.2 +0.7
HHC XP sP 17 13 11.6 +1.9
HHC PCP PcP 17 14 09.2 +0.7
HHC PP PP 17 15 13.4 +6.3
HHC SCP ScP 17 18 05.8 -0.6
HHC PCS PcS 17 18 07.5 -0.5
HHC S S 17 20 38.1 -5.6
HHC SCS ScS 17 22 50.1 -3.9
HHC AMB AMB
comp=Z,54nm,1.4s,mb5.3
HHC AMB AMB
comp=Z,1µm,4.8s
HHC LR LR
comp=N,5µm,15.5s,MS5.7
HHC LR LR
comp=E,3µm,17.8s,MS5.7
HHC LR LR
comp=Z,7µm,15.5s,MS5.8
GBL Gable Mountain 54.53 318 P P 17 13 05.8 +0.4
GBL Gable Mountain 54.53 318 P P 17 13 05.8 +0.3
NLWA Neilton Lookou 54.53 322 eP P 17 13 05.4 0.0
comp=Z,136nm,1.4s,mb5.8
NLWA LR LR
comp=Z,5µm,19.0s,MS5.6
NLWA Neilton Lookou 54.53 322 eP P 17 13 05.4 -0.1
comp=Z,136nm,1.4s,mb5.8
MDW Midway 54.57 319 P P 17 13 06.5 +0.8
MDW Midway 54.57 319 P P 17 13 06.5 +0.8
YNR Norris Junctio 54.63 310 eP P 17 13 06.8 +0.7
YNR Norris Junctio 54.63 310 eP P 17 13 06.8 +0.6
BBSR BB Station 54.66 264 P P 17 13 06.9 +0.4
comp=Z,143nm,1.3s,mb5.8
BBSR LR LR
comp=Z,3µm,21.0s,MS5.3
QLMT Earthquake Lak 54.67 311 eP P 17 13 07.0 +0.5
QLMT Earthquake Lak 54.67 311 eP P 17 13 06.9 +0.4
LKWY Lake 54.71 310 eP P 17 13 08.4 +1.6
comp=Z,94nm,1.6s,mb5.6
LKWY LR LR
comp=Z,12µm,20.0s,MS6.0
LKWY Lake 54.71 310 P P 17 13 08.7 +1.9
LKWY pmax pmax
comp=Z,95nm,1.6s,mb5.6
LKWY Lake 54.71 310 P P 17 13 08.7 +1.9
comp=Z,95nm,1.6s,mb5.6
YMR Madison River 54.73 311 eP P 17 13 07.1 +0.2
comp=Z,113nm,1.7s,mb5.6
YMR LR LR
comp=Z,12µm,20.0s,MS6.0
YMR Madison River 54.73 311 eP P 17 13 07.1 +0.2
comp=Z,113nm,1.7s,mb5.6
HAWA Hanford 54.74 318 eP P 17 13 06.3 -0.7
comp=Z,78nm,1.2s,mb5.6
HAWA LR LR
comp=Z,7µm,21.0s,MS5.7
LON Longmire 54.80 320 P P 17 13 08.2 +0.8
LON Longmire 54.80 320 P P 17 13 08.2 +0.8
WPW White Pass 54.81 320 P P 17 13 08.3 +0.9
WPW White Pass 54.81 320 P P 17 13 08.3 +0.8
YFT Old Faithful 54.91 310 eP P 17 13 10.0 +1.8
CN2 Changchun 54.93 52 eP P 17 13 08.0 -0.4
CN2 eXP sP 17 13 13.6 +0.8
CN2 eS S 17 20 46.7 -2.8
CN2 AMB AMB
comp=Z,70nm,0.9s,mb5.7
CN2 AMB AMB
comp=Z,1µm,4.0s
CN2 LR LR
comp=N,3µm,15.0s,MS5.7
CN2 LR LR
comp=E,3µm,15.0s,MS5.7
CN2 LR LR
comp=Z,3µm,19.0s,MS5.4
PRW Prosser 54.95 318 P P 17 13 09.8 +1.3
PRW Prosser 54.95 318 P P 17 13 09.8 +1.3
MCMT McKenzie Canyo 54.96 312 eP P 17 13 08.7 +0.1
MCMT McKenzie Canyo 54.96 312 eP P 17 13 08.7 +0.1
WCI Wyandotte Cave 54.97 287 eP P 17 13 07.5 -1.3
comp=Z,187nm,1.8s,mb5.8
WCI LR LR
comp=Z,4µm,19.0s,MS5.5
WCI Wyandotte Cave 54.97 287 P P 17 13 08.4 -0.4
WCI pmax pmax
comp=Z,190nm,1.7s,mb5.8
WCI Wyandotte Cave 54.97 287 P P 17 13 08.4 -0.4
comp=Z,190nm,1.7s,mb5.8
NAZ Nazwa, Dubai 55.01 126 P P 17 13 09.4 +0.2
SNR=12
MDJ Mudanjiang 55.02 48 P P 17 13 08.2 -0.8
MDJ AP pP 17 13 11.4 -0.8
MDJ XP sP 17 13 12.7 -0.7
MDJ PP PP 17 15 11.1 -0.6
MDJ PCS PcS 17 18 10.1 -0.1
MDJ S S 17 20 50.1 -0.6
MDJ XS sS 17 20 55.5 -0.4
MDJ SS SS 17 24 34.8 +1.3
MDJ AMB AMB
comp=Z,495nm,5.5s
MDJ LR LR
comp=N,1µm,19.3s,MS5.4
MDJ LR LR
comp=E,2µm,17.4s,MS5.4
MDJ LR LR
comp=Z,3µm,17.4s,MS5.4
MDJ Mudanjiang 55.02 48 eP P 17 13 08.3 -0.7
comp=Z,21nm,1.5s,mb5.0
MDJ LR LR
comp=Z,3µm,22.0s,MS5.3
MDJ Mudanjiang 55.02 48 eP P 17 13 08.3 -0.7
comp=Z,21nm,1.5s,mb5.0
YSS Yuzh-Sakhalins 55.20 37 i P P 17 13 10.6 +0.4
YSS LR LR
comp=Z,2µm,21.0s,MS5.2
YSS Yuzh-Sakhalins 55.20 37κ iP P 17 13 10.3 +0.1
YSS e*SP sP 17 13 15.0 +0.3
YSS e 17 14 08.0
YSS eS S 17 20 58.0 +5.0
YSS ePS 17 21 16.0
YSS eSS SS 17 24 44.0 +7.8
YSS eSSS 17 26 46.0
YSS pmax pmax
comp=N,370nm,2.0s
YSS pmax pmax
comp=Z,740nm,2.0s,mb6.4
YSS pmax pmax
comp=N,1µm,4.0s
YSS pmax pmax
comp=Z,1µm,4.0s
YSS MLR MLR
comp=E,2µm,16.0s
YSS MLR MLR
comp=Z,2µm,16.0s,MS5.3
YSS Yuzh-Sakhalins 55.20 37 i P P 17 13 10.3 +0.1
YSS Yuzh-Sakhalins 55.20 37 ePcP PcP 17 14 08.0 -3.1
HATD Hatta, Dubai 55.27 126 P P 17 13 11.4 +0.3
SNR=15
ASHO Ashiyiah 55.40 126 ⇓P P 17 13 11.7 -0.2
SNR=17
IMW Indian Meadow 55.46 310 eP P 17 13 13.4 +1.1
comp=Z,98nm,1.3s,mb5.7
IMW Indian Meadow 55.46 310 eP P 17 13 13.4 +1.2
comp=Z,98nm,1.3s,mb5.7
CNNC Cliffs of the 55.55 278 PFAKE 17 13 30.0 +17
CNNC LR LR
comp=Z,4µm,20.0s,MS5.5
MOOW Moose Ponds 55.57 310 eP P 17 13 13.2 +0.2
comp=Z,80nm,1.5s,mb5.5
MOOW ePcP PcP 17 14 13.5 +0.9
MOOW Moose Ponds 55.57 310 eP P 17 13 13.1 +0.1
comp=Z,80nm,1.5s,mb5.5
USIN University of 55.58 288 eP P 17 13 12.5 -0.6
comp=Z,32nm,0.8s,mb5.4
USIN University of 55.58 288 eP P 17 13 12.5 -0.6
comp=Z,32nm,0.8s,mb5.4
SLM Saint Louis 55.61 290 eP P 17 13 12.3 -1.1
comp=Z,30nm,0.5s,mb5.6
SLM Saint Louis 55.61 290 P P 17 13 13.3 -0.1
SLM pmax pmax
comp=Z,30nm,0.5s,mb5.6
SLM Saint Louis 55.61 290 P P 17 13 13.3 -0.1

comp=Z,30nm,0.5s,mb5.6
LOHW Long Hollow 55.67 310 eP P 17 13 14.2 +0.5
comp=Z,102nm,1.6s,mb5.6
LOHW Long Hollow 55.67 310 eP P 17 13 14.2 +0.5
comp=Z,102nm,1.6s,mb5.6
JOSI Joshimath 55.67 99 ex x 17 12 43.5
JOSI AMb AMB 17 12 45.9
comp=Z,106nm,0.8s,mb5.9
DCID1 Drake Creek 55.80 310 eP P 17 13 15.7 +1.0
DCID1 Drake Creek 55.80 310 eP P 17 13 15.7 +1.0
BMO Blue Mountains 55.81 316 eP P 17 13 14.2 -0.5
comp=Z,130nm,1.6s,mb5.7
BMO LR LR
comp=Z,7µm,19.0s,MS5.8
BMO Blue Mountains 55.81 316 eP P 17 13 14.2 -0.5
comp=Z,130nm,1.6s,mb5.7
TZTN Tazewell 55.84 283 eP P 17 13 14.0 -1.0
comp=Z,155nm,1.6s,mb5.8
TZTN LR LR
comp=Z,4µm,19.0s,MS5.6
TZTN Tazewell 55.84 283 eP P 17 13 14.0 -1.0
comp=Z,155nm,1.6s,mb5.8
TPAW Teton Pass 55.86 310 eP P 17 13 16.0 +0.9
comp=Z,88nm,1.6s,mb5.5
TPAW Teton Pass 55.86 310 eP P 17 13 16.0 +0.9
comp=Z,88nm,1.6s,mb5.5
REDW Red Top Meadow 55.96 310 eP P 17 13 16.2 +0.4
comp=Z,165nm,1.7s,mb5.8
REDW ePcP PcP 17 14 14.5 +0.4
REDW Red Top Meadow 55.96 310 eP P 17 13 16.2 +0.4
comp=Z,165nm,1.7s,mb5.8
REDW Red Top Meadow 55.96 310 ePcP PcP 17 14 14.5 +0.4
SIUC Southern Illin 56.22 289 eP P 17 13 16.8 -0.9
comp=Z,224nm,1.4s,mb6.0
BW06 Boulder Array 56.26 309 eP P 17 13 17.8 -0.2
comp=Z,107nm,1.5s,mb5.7
BW06 LR LR
comp=Z,7µm,19.0s,MS5.7
BW06 Boulder Array 56.26 309 eP P 17 13 17.8 -0.1
comp=Z,107nm,1.5s,mb5.7
RTK Rohtak 56.27 103 ex x 17 13 22.4
RTK AMb AMB 17 13 25.8
comp=Z,105nm,0.9s,mb5.9
FVM French Village 56.27 290 eP P 17 13 16.0 -2.1
comp=Z,119nm,1.4s,mb5.7
FVM French Village 56.27 290 P P 17 13 16.8 -1.3
FVM pmax pmax
comp=Z,120nm,1.4s,mb5.7
FVM French Village 56.27 290 P P 17 13 16.8 -1.3
comp=Z,120nm,1.4s,mb5.7
BJI Beijing 56.39 62 P P 17 13 19.1 +0.2
BJI S S 17 21 09.4 +0.4
BJI AMB AMB
comp=Z,48nm,1.4s,mb5.3
BJI AMB AMB
comp=Z,1µm,4.9s
BJI LR LR
comp=N,2µm,23.0s,MS5.7
BJI LR LR
comp=E,6µm,21.2s,MS5.7
BJI LR LR
comp=Z,5µm,20.0s,MS5.6
SNY Shenyang 56.40 55 ⇓P P 17 13 17.7 -1.3
SNY AP pP 17 13 30.6 +8.4
SNY PP PP 17 15 26.0 +1.9
SNY S S 17 21 14.9 +5.7
SNY AMB AMB
comp=Z,95nm,1.8s,mb5.5
SNY AMB AMB
comp=Z,618nm,6.4s
SNY LR LR
comp=N,3µm,16.8s,MS5.6
SNY LR LR
comp=E,3µm,18.9s,MS5.6
SNY LR LR
comp=Z,3µm,19.8s,MS5.3
BJT Baijiatuau 56.41 62 eP P 17 13 19.4 +0.3
comp=Z,29nm,1.0s,mb5.3
BJT ePP PP 17 15 20.6 -3.5
BJT LR LR
comp=Z,7µm,21.0s,MS5.7
BJT Baijiatuau 56.41 62 eP P 17 13 19.4 +0.4
BJT e 17 15 20.6
BJT pmax pmax
comp=Z,29nm,1.0s
BJT MLR MLR
comp=Z,7µm,21.0s
BJT Baijiatuau 56.41 62 eP P 17 13 19.4 +0.4
comp=Z,28nm,1.0s,mb5.2
BJT Baijiatuau 56.41 62 ePP PP 17 15 20.6 -3.6
HLID Hailey 56.49 313⇑eP P 17 13 19.2 -0.4
comp=Z,82nm,1.5s,mb5.5
HLID LR LR
comp=Z,9µm,19.0s,MS5.9
HLID Hailey 56.49 313⇑eP P 17 13 19.2 -0.4
comp=Z,82nm,1.5s,mb5.5
AHID Auburn Hatcher 56.58 310 eP P 17 13 21.2 +1.0
comp=Z,127nm,1.7s,mb5.7
AHID LR LR
comp=Z,7µm,19.0s,MS5.8
AHID Auburn Hatcher 56.58 310 eP P 17 13 21.2 +1.0
comp=Z,127nm,1.7s,mb5.7
PHWY Pilot Hill 56.76 305⇑eP P 17 13 21.3 -0.2
VIPM Ingram Point 56.76 319 P P 17 13 23.1 +1.6
KSU1 Kansas State U 56.77 296⇑eP P 17 13 20.1 -1.5
comp=Z,280nm,1.6s,mb6.0
KSU1 LR LR
comp=Z,10µm,20.0s,MS5.9
ARQ Araqi 56.80 126 P P 17 13 22.2 +0.2
SNR=12
NDI New Delhi 56.81 102 eP P 17 13 22.9 +0.8
NDI AMb AMB 17 13 24.6
comp=Z,176nm,0.8s,mb6.1
LGTI Lohaghat 56.90 99 eP P 17 13 22.0 -0.7
VLA Vladivostok 56.92 47 eP P 17 13 19.8 -2.8
VLA eS S 17 21 13.8 -2.2
VLA i 17 21 24.5
VLA pmax pmax
comp=Z,158nm,1.4s,mb5.8
VLA MLR MLR
comp=Z,3µm,16.0s,MS5.5
VLA Vladivostok 56.92 47 i P P 17 13 22.0 -0.6
VLA eS S 17 21 13.8 -2.2
comp=Z,3µm,16.0s
AYAN Aya Nagar 56.98 103 ex x 17 13 18.3
AYAN AMb AMB 17 13 20.4
comp=Z,168nm,0.9s,mb6.1
BIDO Bidbid 56.98 124 P P 17 13 23.5 +0.2
SNR=11
KHET Khetri 57.02 104 eP P 17 13 23.3 -0.2
KHET AMb AMB 17 13 25.0
comp=Z,103nm,1.0s,mb5.8
LHS Liberty Hill 57.05 280 eP P 17 13 22.6 -1.1
LHS Liberty Hill 57.05 280 P P 17 13 23.9 +0.2
CPCT Cooper Cave 57.13 284 eP P 17 13 22.9 -1.3
CPCT e 17 13 35.1
CPCT Cooper Cave 57.13 284 eP P 17 13 22.9 -1.3
KUDL Kundal 57.13 103 eP P 17 13 24.4 0.0
KUDL AMb AMB 17 13 26.8
comp=Z,105nm,1.3s,mb5.7
COR Corvallis 57.16 321 PFAKE 17 13 40.0 +16
COR LR LR
comp=Z,4µm,20.0s,MS5.5
SONA Sohna 57.19 103 eP P 17 13 24.9 +0.2
SONA AMb AMB 17 13 27.2
comp=Z,50nm,1.2s,mb5.4
WVT Waverly 57.35 287 PFAKE 17 13 40.0 +14
WVT LR LR
comp=Z,4.0nm,21.0s
JSC Jenkinsville 57.36 280 eP P 17 13 25.4 -0.5
JSC Jenkinsville 57.36 280 P P 17 13 26.1 +0.2
SMDO Samad 57.41 124 ⇑P P 17 13 25.7 -0.6
SNR=13
BSY Bisya 57.52 125 ⇑P P 17 13 26.6 -0.5
SNR=12
BSYO Bisya 57.54 125 P P 17 13 26.6 -0.7
SNR=12
TIY Taiyuan 57.68 66 i P P 17 13 28.5 +0.4
TIY PP PP 17 15 31.9 -3.6
TIY S S 17 21 31.9 +5.8
TIY AMB AMB
comp=Z,1µm,4.7s
TIY LR LR
comp=N,3µm,14.3s
TIY LR LR
comp=E,1µm,8.3s

TIY LR LR
comp=Z,4µm,17.6s,MS5.6
SWET Sewanee 57.72 285 eP P 17 13 26.6 -1.7
SWET Sewanee 57.72 285 eP P 17 13 26.6 -1.8
HWUT Hardware Ranch 57.79 310 eP P 17 13 28.6 -0.1
comp=Z,10nm,0.6s,mb5.0
HWUT LR LR
comp=Z,9µm,20.0s,MS5.9
HWUT Hardware Ranch 57.79 310 eP P 17 13 28.6 -0.2
comp=Z,10nm,0.6s,mb5.0
CBKS Cedar Bluff 57.80 299⇑eP P 17 13 27.9 -1.0
comp=Z,200nm,1.3s,mb6.0
CBKS LR LR
comp=Z,9µm,20.0s,MS5.8
CBKS Cedar Bluff 57.80 299 P P 17 13 28.9 0.0
CBKS pmax pmax
comp=Z,200nm,1.2s,mb6.0
CBKS Cedar Bluff 57.80 299 P P 17 13 28.9 0.0
comp=Z,200nm,1.2s,mb6.0
HVU Hansel Valley 57.88 311⇑eP P 17 13 29.0 -0.4
comp=Z,56nm,1.8s,mb5.3
HVU Hansel Valley 57.88 311 P P 17 13 30.0 +0.6
HVU e 17 13 38.3
HVU pmax pmax
comp=Z,64nm,1.6s,mb5.4
HVU Hansel Valley 57.88 311 P P 17 13 30.0 +0.6
comp=Z,64nm,1.6s,mb5.4
ASAJ Asahikawa 57.93 38 P P 17 13 27.8 -1.9
WBK Wadi Bani Khal 58.05 123 ⇓P P 17 13 30.7 -0.2
SNR=7.7
JMDO Jabal Madar 58.09 124 P P 17 13 30.8 -0.3
SNR=12
JMP Maruseppu 58.16 37 P P 17 13 39.4 +8.0
NHSC New Hope 58.18 279 PFAKE 17 13 40.0 +8.4
NHSC LR LR
comp=Z,3µm,20.0s,MS5.5
ISCO Idaho Springs 58.23 304 eP P 17 13 32.1 +0.2
comp=Z,16nm,0.6s,mb5.2
ISCO LR LR
comp=Z,4µm,21.0s,MS5.6
ISCO Idaho Springs 58.23 304 eP P 17 13 32.1 +0.2
ISCO pmax pmax
comp=Z,16nm,0.6s,mb5.2
ISCO MLR MLR
comp=Z,4µm,21.0s,MS5.6
ISCO Idaho Springs 58.23 304 eP P 17 13 32.1 +0.2
comp=Z,16nm,0.6s,mb5.2
AJM Ajmer 58.23 106 ex P 17 13 29.0 -3.1
AGRA Agra 58.39 102 eP P 17 13 33.1 -0.1
AGRA AMb AMB 17 13 34.4
comp=Z,71nm,0.5s,mb5.9
WVOR Wild Horse Val 58.40 316 eP P 17 13 32.5 -0.6
comp=Z,65nm,1.9s,mb5.3
WVOR LR LR
comp=Z,7µm,20.0s,MS5.8
WVOR Wild Horse Val 58.40 316 P P 17 13 33.6 +0.5
WVOR pmax pmax
comp=Z,65nm,1.8s,mb5.4
WVOR Wild Horse Val 58.40 316 P P 17 13 33.6 +0.5
comp=Z,65nm,1.8s,mb5.4
PLAL Pickwick Lake 58.50 287 eP P 17 13 31.8 -2.1
comp=Z,111nm,1.7s,mb5.6
PLAL LR LR
comp=Z,4µm,19.0s,MS5.5
PLAL Pickwick Lake 58.50 287 eP P 17 13 31.8 -2.1
comp=Z,111nm,1.7s,mb5.6
CTU Camp Tracy 58.71 310 eP P 17 13 34.9 -0.4
comp=Z,15nm,0.6s,mb5.2
CTU Camp Tracy 58.71 310 eP P 17 13 34.9 -0.3
comp=Z,15nm,0.6s,mb5.2
JLU Jordanelle 58.73 310 eP P 17 13 35.4 0.0
JLU Jordanelle 58.73 310 eP P 17 13 35.4 0.0
BGU Big Grassy Mou 58.75 311 eP P 17 13 35.3 -0.2
BGU Big Grassy Mou 58.75 311 eP P 17 13 35.3 -0.2
DL2 Dalian 58.75 57 P P 17 13 34.8 -0.7
DL2 S S 17 21 40.6 +0.6
DL2 SS SS 17 25 28.7 -3.6
DL2 AMB AMB
comp=Z,10.0nm,1.3s,mb4.7
DL2 AMB AMB
comp=Z,370nm,5.1s
DL2 LR LR
comp=N,1µm,15.8s,MS5.4
DL2 LR LR
comp=E,2µm,15.5s,MS5.4
DL2 LR LR
comp=Z,4µm,15.8s,MS5.6
GOGA Godfrey 58.77 282 eP P 17 13 34.7 -1.0
comp=Z,137nm,1.6s,mb5.7
GOGA LR LR
comp=Z,6µm,20.0s,MS5.7
GOGA Godfrey 58.77 282 P P 17 13 35.4 -0.4
GOGA pmax pmax
comp=Z,140nm,1.5s,mb5.8
GOGA Godfrey 58.77 282 P P 17 13 35.4 -0.4
comp=Z,140nm,1.5s,mb5.8
DAU Daniels Canyon 58.87 309 P P 17 13 37.8 +1.4
MOD Modoc 59.23 318 eP P 17 13 39.3 +0.5
comp=Z,132nm,1.7s,mb5.7
MOD LR LR
comp=Z,7µm,20.0s,MS5.8
MOD Modoc 59.23 318 eP P 17 13 39.3 +0.5
comp=Z,132nm,1.7s,mb5.7
OXF Oxford 59.30 288 eP P 17 13 37.5 -1.9
comp=Z,145nm,1.3s,mb5.8
OXF LR LR
comp=Z,2µm,21.0s,MS5.2
OXF Oxford 59.30 288 P P 17 13 38.4 -1.0
OXF pmax pmax
comp=Z,140nm,1.3s,mb5.8
OXF Oxford 59.30 288 P P 17 13 38.4 -1.0
comp=Z,140nm,1.3s,mb5.8
MPU Maple Canyon 59.33 310 eP P 17 13 40.2 +0.7
comp=Z,122nm,1.7s,mb5.7
MPU LR LR
comp=Z,8µm,21.0s,MS5.8
MPU Maple Canyon 59.33 310 eP P 17 13 40.2 +0.6
comp=Z,122nm,1.7s,mb5.7
ELK Elko 59.37 313 eP P 17 13 40.1 +0.3
comp=Z,69nm,1.5s,mb5.5
ELK LR LR
comp=Z,9µm,19.0s,MS5.9
ELK Elko 59.37 313 P P 17 13 41.2 +1.4
ELK pmax pmax
comp=Z,69nm,1.5s
ELK Elko 59.37 313 P P 17 13 41.2 +1.4
comp=Z,69nm,1.5s,mb5.5
DUG Dugway 59.41 311 eP P 17 13 40.2 +0.2
comp=Z,89nm,1.6s,mb5.5
DUG LR LR
comp=Z,9µm,19.0s,MS5.9
DUG Dugway 59.41 311 P P 17 13 41.2 +1.1
DUG pmax pmax
comp=Z,89nm,1.6s,mb5.5
DUG Dugway 59.41 311 P P 17 13 41.2 +1.1
comp=Z,89nm,1.6s,mb5.5
GKN Gorkha 59.46 95 eP P 17 13 40.6 0.0
comp=Z,607nm,1.5s,mb6.4
NLU North Lily Min 59.48 310 eP P 17 13 41.1 +0.5
NLU North Lily Min 59.48 310 eP P 17 13 41.1 +0.5
LSA Lhasa 59.63 88 P P 17 13 42.9 +1.1
LSA AP pP 17 13 52.2 +7.2
LSA XP sP 17 13 56.9 +11
LSA PP PP 17 15 56.7 +3.7
LSA SCS ScS 17 23 33.5 +1.8
LSA AMB AMB
comp=Z,90nm,1.3s,mb5.6
LSA AMB AMB
comp=Z,990nm,5.2s
LSA LR LR
comp=N,1µm,26.5s,MS5.3
LSA LR LR
comp=E,3µm,25.7s,MS5.3
LSA LR LR
comp=Z,4µm,25.7s,MS5.5
LSA Lhasa 59.63 88 eP P 17 13 43.5 +1.8
comp=Z,186nm,1.4s,mb5.9
LSA e 17 13 51.1
LSA LR LR
comp=Z,4µm,19.0s,MS5.6
LSA Lhasa 59.63 88 eP P 17 13 43.6 +1.8
LSA e 17 13 51.1
LSA pmax pmax
comp=Z,186nm,1.4s,mb5.9
LSA MLR MLR
comp=Z,4µm,19.0s,MS5.6

LSA Lhasa 59.63 88 *e*P **P 17 13 43.6 +1.8**
comp=Z,186nm,1.4s,mb5.9
UALR University of 59.80 291 *e*P **P 17 13 40.9 -2.0**
comp=Z,236nm,1.9s,mb5.9
YBH Yreka Blue Hor 59.83 320 PFAKE 17 14 00.0 +17
YBH LR LR
comp=Z,4μm,22.0s,MS5.5
KKN Kakani 59.84 95 *e*P **P 17 13 43.3 +0.1**
LHEM Herd Peak 59.84 319 P **P 17 13 43.9 +0.9**
LHEM Herd Peak 59.84 319 P **P 17 13 43.9 +0.9**
MRKH Merkhyat 60.02 154 *i* P **P 17 13 43.9 -0.6**
baz=352,slow=8.6
MRKH AMb AMB 17 13 48.8
comp=Z,151nm,1.9s,mb5.7
JEM Erimo 60.06 38 P **P 17 13 43.7 -0.9**
LRAL Lakeview Retre 60.06 285 PFAKE 17 14 00.0 +15
LRAL LR LR
comp=Z,5μm,20.0s,MS5.7
ERM Erimo 60.06 38 *e*P **P 17 13 45.2 +0.7**
comp=Z,305nm,1.5s,mb6.1
ERM LR LR
comp=Z,2μm,21.0s,MS5.2
ERM Erimo 60.06 38 P **P 17 13 45.8 +1.2**
ERM pmax pmax
comp=Z,310nm,1.5s,mb6.1
ERM Erimo 60.06 38 P **P 17 13 45.8 +1.2**
comp=Z,310nm,1.5s,mb6.1
SDCO Great Sand Dun 60.16 304 *e*P **P 17 13 45.2 -0.1**
comp=Z,176nm,1.9s,mb5.8
SDCO LR LR
comp=Z,8μm,19.0s,MS5.9
SDCO Great Sand Dun 60.16 304 *e*P **P 17 13 45.2 -0.1**
comp=Z,176nm,1.9s,mb5.8
JIRN Jiri 60.21 94 *e*P **P 17 13 46.5 +0.7**
comp=Z,723nm,1.4s,mb6.5
TIA Tai'an 60.26 62 *e*P **P 17 13 46.0 0.0**
TIA AMB AMB
comp=Z,131nm,1.5s,mb5.7
XAN Xi'an 60.27 70 P **P 17 13 45.8 -0.3**
XAN S **S 17 21 59.1 -0.7**
XAN AMB AMB
comp=Z,18nm,1.2s,mb5.0
XAN AMB AMB
comp=Z,740nm,5.4s
XAN LR LR
comp=N,2μm,15.4s,MS5.8
XAN LR LR
comp=E,5μm,17.7s,MS5.8
XAN LR LR
comp=Z,4μm,15.4s,MS5.6
JOT Ohata 60.32 40 P **P 17 13 45.0 -1.3**
MIAR Mount Ida 60.33 292 *e*P **P 17 13 45.7 -0.8**
comp=Z,269nm,1.6s,mb6.0
MIAR LR LR
comp=Z,7μm,20.0s,MS5.8
MIAR Mount Ida 60.33 292 P **P 17 13 46.4 -0.1**
MIAR pmax pmax
comp=Z,270nm,1.6s,mb6.0
MIAR Mount Ida 60.33 292 P **P 17 13 46.4 -0.1**
comp=Z,270nm,1.6s,mb6.0
PV10 Paradox Valley 60.35 307 *e*P **P 17 13 47.8 +1.2**
PV10 Paradox Valley 60.35 307 *e*P **P 17 13 47.8 +1.2**
JAWL J.Aulia 60.49 153 *i* P **P 17 13 47.3 -0.5**
baz=353,slow=7.9
JAWL AMb AMB 17 13 51.1
comp=Z,108nm,1.9s,mb5.5
MSU Marysvale 60.89 310 *e*P **P 17 13 51.5 +1.3**
MSU Marysvale 60.89 310 P **P 17 13 51.9 +1.6**
WDC Whiskeytown Da 60.91 319 *e*P **P 17 13 49.7 -0.7**
comp=Z,100nm,1.8s,mb5.7
WDC LR LR
comp=Z,4μm,20.0s,MS5.6
WDC Whiskeytown Da 60.91 319 P **P 17 13 50.5 +0.1**
WDC pmax pmax
comp=Z,100nm,1.8s,mb5.6
WDC Whiskeytown Da 60.91 319 P **P 17 13 50.5 +0.1**
comp=Z,100nm,1.8s,mb5.6
TAPN Taplejung 60.92 93 *e*P **P 17 13 51.1 +0.5**
comp=Z,836nm,1.8s,mb6.6
PAHR Pah Rah Range 61.18 316 *e*P **P 17 13 53.2 +1.0**
comp=Z,196nm,1.8s,mb5.9
PAHR Pah Rah Range 61.18 316 *e*P **P 17 13 53.2 +1.0**
comp=Z,196nm,1.8s,mb5.9
TOA0 Torodi Ar. Sit 61.22 188⇓ *i* P **P 17 13 52.1 -0.6**
TOA0 *e* 17 13 58.8
TOA0 Torodi Ar. Sit 61.22 188⇓ *i* P **P 17 13 52.1 -0.6**
TORD Torodi Ar. Bea 61.22 188 P **P 17 13 52.4 -0.3**
TORD Torodi Ar. Bea 61.22 188 P **P 17 13 52.4 -0.3**
comp=Z,66nm,0.9s,mb5.8,baz=355,slow=5.2,SNR=49
INCN Inchon 61.23 53 PFAKE 17 14 00.0 +7.4
INCN LR LR
comp=Z,2μm,20.0s,MS5.3
ODAN Odare 61.30 93 *e*P **P 17 13 53.9 +0.7**
comp=Z,1μm,1.5s
MVCO Mesa Verde 61.35 306 *e*P **P 17 13 53.4 0.0**
comp=Z,34nm,0.6s,mb5.7
MVCO LR LR
comp=Z,4μm,19.0s,MS5.6
MVCO Mesa Verde 61.35 306 *e*P **P 17 13 53.4 0.0**
comp=Z,34nm,0.6s,mb5.7
WMOK Wichita Mounta 61.45 297⇑ *i* P **P 17 13 53.7 -0.4**
comp=Z,203nm,1.8s,mb6.0
WMOK LR LR
comp=Z,8μm,20.0s,MS5.9
WMOK Wichita Mounta 61.45 297 P **P 17 13 54.6 +0.5**
WMOK pmax pmax
comp=Z,200nm,1.8s,mb6.0
WMOK Wichita Mounta 61.45 297 P **P 17 13 54.6 +0.5**
comp=Z,200nm,1.8s,mb6.0
WHFO Wadi Hawf 61.45 130⇑ P **P 17 13 53.4 -0.9**
SNR=8.7
KSRS Korea Array 61.54 52 P **P 17 13 52.5 -2.1**
comp=Z,1.8nm,0.7s,baz=349,slow=6.6,SNR=6.3
KSRS PP PP 17 16 08.7 -1.0
comp=Z,4.3nm,1.0s,baz=340,slow=9.5,SNR=5.0
TRCR Troy Canyon 61.75 313 *e*P **P 17 13 56.3 +0.3**
TRCR Troy Canyon 61.75 313 *e*P **P 17 13 56.3 +0.2**
ARUT Antelope Range 61.85 310 *e*P **P 17 13 57.8 +1.0**
ARUT Antelope Range 61.85 310 P **P 17 13 58.5 +1.7**
CD2 Chengdu 61.89 76 P **P 17 13 57.8 +0.7**
CD2 AP pP 17 14 02.9 +2.6
CD2 XP sP 17 14 05.2 +3.6
CD2 PCP PcP 17 14 36.4 -1.5
CD2 PP PP 17 16 16.7 +3.8
CD2 PCS PcS 17 18 40.2 -0.8
CD2 S **S 17 22 17.3 -3.2**
CD2 SCS ScS 17 23 45.3 -3.3
CD2 SS SS 17 26 20.1 -1.8
CD2 AMB AMB
comp=Z,90nm,1.5s,mb5.7
CD2 AMB AMB
comp=Z,680nm,5.5s
CD2 LR LR
comp=N,4μm,16.8s
CD2 LR LR
comp=E,3μm,22.8s
CD2 LR LR
comp=Z,3μm,18.0s,MS5.5
ABTO Aybut 61.90 131 P **P 17 13 56.9 -0.4**
SNR=11
ABTO Aybut 61.90 131 P **P 17 13 56.8 -0.5**
SNR=11
OHCM Honcut 61.93 318 *e*P **P 17 13 57.3 +0.1**
OHCM Honcut 61.93 318 *e*P **P 17 13 57.3 0.0**
BRAL Brewton 62.00 285 PFAKE 17 14 10.0 +12
BRAL LR LR
comp=Z,4μm,21.0s,MS5.6
CCUT Cedar City 62.06 310⇑ *e*P **P 17 13 59.5 +1.3**
NVAR Mina Array Bea 62.21 315 P **P 17 14 00.1 +0.9**
comp=Z,4.4nm,0.8s,mb4.7,baz=28,slow=6.4,SNR=18
HOPS Hopland 62.55 319 PFAKE 17 14 10.0 +8.6
HOPS LR LR
comp=Z,2μm,20.0s,MS5.3
NSHM Saint Helena R 62.93 319 *e*P **P 17 14 04.6 +0.7**
NSHM Saint Helena R 62.93 319 *e*P **P 17 14 04.6 +0.6**
CMB Columbia Colle 62.99 317 *e*P **P 17 14 04.2 -0.1**
comp=Z,102nm,2.0s,mb5.6
CMB LR LR
comp=Z,7μm,20.0s,MS5.8
CMB Columbia Colle 62.99 317 P **P 17 14 05.0 +0.6**
CMB pmax pmax
comp=Z,110nm,2.0s,mb5.6
CMB Columbia Colle 62.99 317 P **P 17 14 05.0 +0.6**
comp=Z,110nm,2.0s,mb5.6
ANMO Albquerque 63.06 304 *e*P **P 17 14 03.3 -1.6**
comp=Z,238nm,2.2s,mb5.9
ANMO *e*PP PP 17 16 22.5 -0.6
ANMO LR LR
comp=Z,7μm,19.0s,MS5.8
ANMO Albquerque 63.06 304 *c i* P **P 17 14 05.6 +0.7**
ANMO Albquerque 63.06 304 LR LR 17 41 58.6
comp=Z,6μm,19.1s,MS5.8,baz=18,slow=36
ANMO Albquerque 63.06 304 *i* P **P 17 14 05.6 +0.7**
ANMO Albquerque 63.06 304 *e*PP PP 17 16 22.5 -0.6
JSD Sado 63.06 43 P **P 17 14 04.8 -0.1**
TPNV Topopah Spring 63.24 313 *e*P **P 17 14 06.0 -0.1**
comp=Z,155nm,1.7s,mb5.9
TPNV LR LR
comp=Z,9μm,19.0s,MS6.0
TPNV Topopah Spring 63.24 313 P **P 17 14 06.6 +0.6**
TPNV pmax pmax
comp=Z,150nm,1.6s,mb5.9
TPNV Topopah Spring 63.24 313 P **P 17 14 06.6 +0.6**
comp=Z,150nm,1.6s,mb5.9
DWPF Disney 63.24 278 PFAKE 17 14 20.0 +14
DWPF LR LR
comp=Z,5μm,20.0s,MS5.7
NATX Nacogdoches 63.26 292 *e*P **P 17 14 06.0 -0.2**
comp=Z,184nm,1.5s,mb6.0
NATX LR LR
comp=Z,5μm,19.0s,MS5.7
MTUM Tungsten Hills 63.30 315 *e*P **P 17 14 08.0 +1.5**
MTUM Tungsten Hills 63.30 315 *e*P **P 17 14 07.9 +1.4**
MCCM Marconi Confer 63.34 319 PFAKE 17 14 20.0 +13
MCCM LR LR
comp=Z,2μm,20.0s,MS5.3
WUAZ Wupatki 63.60 308 *e*P **P 17 14 09.5 +1.0**
comp=Z,129nm,1.6s,mb5.7
WUAZ LR LR
comp=Z,5μm,20.0s,MS5.7
JMM Marumori 63.69 41 P **P 17 14 08.1 -0.9**
SHL Shillong 63.75 89 *e*P **P 17 14 11.0 +1.4**
SHL *ex* x 17 22 50.0
BOK Bokaro 63.80 96 *e*P **P 17 14 08.7 -1.2**
ENH Enshi 64.00 71 PFAKE 17 14 20.0 +8.9
ENH LR LR
comp=Z,4.0nm,22.0s
AKL Akola 64.36 105⇓ *i* P **P 17 14 12.8 -0.8**
AKL *ex* x 17 14 22.9
comp=Z,161nm,1.8s
SAO San Andreas Ge 64.42 317 PFAKE 17 14 30.0 +16
SAO LR LR
comp=Z,5μm,20.0s,MS5.7
NGP Nagpur 64.47 103⇓ *i* P **P 17 14 11.4 -2.9**
NGP *ex* x 17 14 13.6
comp=Z,127nm,1.3s
NGP *e*S **S 17 22 51.3 -1.7**
MAJO Matsushiro 64.50 44 *e*P **P 17 14 13.2 -1.2**
comp=Z,197nm,1.9s,mb5.8
MAJO LR LR
comp=Z,2μm,20.0s,MS5.3
MAJO Matsushiro 64.50 44 P **P 17 14 13.9 -0.5**
MAJO pmax pmax
comp=Z,200nm,1.9s,mb5.8
MAJO Matsushiro 64.50 44 P **P 17 14 13.9 -0.5**
comp=Z,200nm,1.9s,mb5.8
MAT Matsushiro 64.50 44 P **P 17 14 13.6 -0.8**
MAT S **S 17 22 56.0 +3.0**
MAT Matsushiro 64.50 44 P **P 17 14 13.4 -1.0**
MJAR Matsushiro Arr 64.50 44 P **P 17 14 14.1 -0.3**
comp=Z,27nm,1.1s,mb5.2,baz=340,slow=6.6,SNR=28
NJ2 Nanjing 64.64 62 *e*P **P 17 14 15.0 -0.4**
NJ2 AP pP 17 14 21.1 +2.5
NJ2 XP sP 17 14 23.9 +4.1
NJ2 PP PP 17 16 38.6 +1.6
NJ2 S **S 17 22 55.5 +0.6**
NJ2 XS sS 17 23 04.0 +3.8
NJ2 AMB AMB
comp=Z,180nm,1.0s,mb6.1
NJ2 AMB AMB
comp=Z,950nm,4.5s
NJ2 LR LR
comp=N,5μm,22.8s,MS5.8
NJ2 LR LR
comp=E,5μm,20.6s,MS5.8
NJ2 LR LR
comp=Z,5μm,20.6s,MS5.7
WHN Wuhan 64.98 66 *e*P **P 17 14 16.0 -1.5**
WHN S **S 17 22 58.0 -1.0**
WHN LR LR
comp=Z,5μm,20.2s,MS5.7
IMP Imphal 65.05 87 *e*P **P 17 14 16.0 -2.1**
JRY Ryogami san 65.14 43 P **P 17 14 16.9 -1.7**
AGT Agartala 65.17 90 *ex* x 17 14 13.0
AGT *ex* x 17 14 44.0
JYT Yasato 65.18 42 P **P 17 14 17.6 -1.2**
JWT Wachi 65.18 46 P **P 17 14 16.0 -2.8**
JAD Aida 65.27 47 P **P 17 14 18.8 -0.6**
HKT Hockley 65.28 292 *e*P **P 17 14 18.6 -0.9**
comp=Z,155nm,1.9s,mb5.7
HKT LR LR
comp=Z,6μm,21.0s,MS5.8
HKT Hockley 65.28 292 P **P 17 14 19.8 +0.3**
HKT pmax pmax
comp=Z,160nm,1.9s,mb5.7
HKT Hockley 65.28 292 P **P 17 14 19.8 +0.3**
comp=Z,160nm,1.9s,mb5.7
DESE Dese 65.53 146 *e*P **P 17 14 22.4 +1.2**
POO Poona 65.61 109⇓ *i* P **P 17 14 21.0 -0.8**
comp=Z,182nm,1.2s,mb6.0
JCT Junction City 65.76 296 *e*P **P 17 14 22.4 -0.2**
comp=Z,131nm,1.4s,mb5.8
JCT LR LR
comp=Z,11μm,19.0s,MS6.1
JCT Junction City 65.76 296 P **P 17 14 23.1 +0.5**
JCT pmax pmax
comp=Z,130nm,1.4s,mb5.8
JCT Junction City 65.76 296 P **P 17 14 23.1 +0.5**
comp=Z,130nm,1.4s,mb5.8
JOD2 Odawara 2 65.91 43 P **P 17 14 22.6 -0.9**
MNTX Cornudas Mount 65.93 302 *e*P **P 17 14 22.4 -1.3**
comp=Z,16nm,1.2s,mb4.9
MNTX LR LR
comp=Z,4μm,19.0s,MS5.7
MNTX Cornudas Mount 65.93 302 *e*P **P 17 14 22.4 -1.3**
comp=Z,16nm,1.2s,mb4.9
SSE Sheshan 66.12 60 P **P 17 14 24.5 -0.4**
SSE PP PP 17 16 54.2 +4.3
SSE S S 17 23 13.8 +0.9
SSE XS sS 17 23 19.1 +0.9
SSE SS SS 17 27 30.1 +2.4
SSE AMB AMB
comp=Z,32nm,0.9s,mb5.3
SSE AMB AMB
comp=Z,430nm,6.7s
SSE LR LR
comp=N,4μm,18.4s,MS5.9
SSE LR LR
comp=E,6μm,18.9s,MS5.9
SSE LR LR
comp=Z,900nm,19.2s,MS5.0
JNU Nakatsue 66.35 51 P **P 17 14 23.2 -3.1**
PFO Pinyon Flat Ob 66.51 312 *e*P **P 17 14 27.2 -0.2**
comp=Z,58nm,1.6s,mb5.4
PFO LR LR
comp=Z,3μm,22.0s,MS5.5
PFO Pinyon Flat Ob 66.51 312 P **P 17 14 28.7 +1.3**
PFO pmax pmax
comp=Z,58nm,1.6s,mb5.4
PFO Pinyon Flat Ob 66.51 312 P **P 17 14 28.7 +1.3**
comp=Z,58nm,1.6s,mb5.4
TUC Tucson 66.56 307⇑ *e*P **P 17 14 28.5 +0.7**
comp=Z,140nm,1.6s,mb5.7
TUC LR LR
comp=Z,3μm,19.0s,MS5.6
TUC Tucson 66.56 307⇑ *e*P **P 17 14 28.5 +0.8**
TUC pmax pmax
comp=Z,140nm,1.6s,mb5.7
TUC MLR MLR
comp=Z,3μm,19.0s,MS5.6
TUC Tucson 66.56 307⇑ *e*P **P 17 14 28.5 +0.8**
comp=Z,140nm,1.6s,mb5.7
KAD Karad 66.87 109 *e*P **P 17 14 29.3 -0.5**
GYA Guiyang 66.89 75⇓ *i* P **P 17 14 29.9 0.0**
GYA PCP PcP 17 15 00.6 +2.1
GYA PP PP 17 17 00.8 +4.0
GYA SCP 17 19 02.7
GYA S S 17 23 24.4 +2.0
GYA SKS 17 24 24.7
GYA SS SS 17 27 42.0 +2.1
GYA AMB AMB
comp=Z,90nm,1.3s,mb5.6
GYA AMB AMB
comp=Z,720nm,5.2s
GYA LR LR
comp=N,3μm,25.7s
GYA LR LR
comp=E,3μm,19.1s
GYA LR LR
comp=Z,3μm,26.9s,MS5.3
KMI Kunming 67.12 79 P **P 17 14 30.6 -0.7**
KMI AP pP 17 14 37.6 +3.0
KMI XP sP 17 14 41.0 +5.2
KMI PP PP 17 17 00.0 +1.2
KMI S S 17 23 21.7 -3.4
KMI XS sS 17 23 33.6 +3.1
KMI SS SS 17 27 41.1 -2.4
KMI AMB AMB
comp=Z,51nm,1.9s,mb5.2
KMI AMB AMB
comp=Z,1μm,4.0s
KMI LR LR
comp=N,4μm,18.9s,MS5.8
KMI LR LR
comp=E,3μm,17.5s,MS5.8
KMI LR LR
comp=Z,7μm,18.9s,MS5.9
KMI Kunming 67.12 79 P **P 17 14 30.6 -0.7**
KMI pP pP 17 14 37.6 +3.0
KMI sP sP 17 14 41.0 +5.2
KMI PP PP 17 17 00.0 +1.2
KMI PPP 17 18 35.0
KMI S S 17 23 21.7 -3.4
KMI sS sS 17 23 33.6 +3.1
KMI SS SS 17 27 41.1 -2.4
KMI SSS 17 30 43.5
KMI Kunming 67.12 79 P **P 17 14 30.6 -0.7**
KMI *PP pP 17 14 37.6 +3.0
KMI 17 17 00.0
KMI PPP 17 18 35.0
KMI S S 17 23 21.7 -3.4
KMI SS SS 17 27 41.1 -2.4
KMI SSS 17 30 43.5
LTX Lajitas 67.79 299 *e*P **P 17 14 35.0 -0.5**
comp=Z,71nm,1.5s,mb5.5
LTX LR LR
comp=Z,10μm,20.0s,MS6.0
LTX Lajitas 67.79 299 *e*P **P 17 14 35.1 -0.5**
LTX pmax pmax
comp=Z,71nm,1.5s,mb5.5
LTX MLR MLR
comp=Z,10μm,20.0s,MS6.0
LTX Lajitas 67.79 299 *e*P **P 17 14 35.1 -0.5**
comp=Z,10μm,20.0s
TXAR Lajitas Array 67.79 299 P **P 17 14 35.6 +0.1**
TXAR ⇑ *e* 17 42 56.4
TXAR LR LR 17 44 46.3
TXAR Lajitas Array 67.79 299 P **P 17 14 35.6 0.0**
comp=Z,36nm,1.3s,mb5.2,baz=42,slow=3.9,SNR=30
TXAR PKP2bc 17 42 56.4
comp=Z,0.5nm,1.0s,baz=188,slow=2.5,SNR=3.4
TXAR LR LR 17 44 46.3
comp=Z,8μm,18.1s,MS6.0,baz=0.0,slow=36
HYB Hyderabad 67.91 105⇓ *e*P **P 17 14 35.5 -0.9**
comp=Z,80nm,1.0s,mb5.7
HYB *e* 17 14 42.0
HYB *e* 17 14 54.5
HYB *e*S S 17 23 40.0 +5.3
HYB Hyderabad 67.91 105⇓ *e*P **P 17 14 35.5 -0.9**
HYB *e* 17 14 42.0
HYB *e*S S 17 23 40.0 +5.3
HYB pmax pmax
comp=Z,80nm,1.0s,mb5.7
HYB Hyderabad 67.91 105⇓ *i* P **P 17 14 35.5 -0.9**
comp=Z,80nm,1.0s,mb5.7
HYB *e*pP pP 17 14 42.0 +2.4
HYB *e* 17 14 54.5
HYB *e*S S 17 23 38.0 +3.3
DBIC Dimbokro 68.00 195 P **P 17 14 35.4 -1.6**
comp=Z,19nm,0.8s,mb5.2,baz=338,slow=7.2,SNR=12
TIC Toumodi 68.03 195 *e*P **P 17 14 35.8 -1.4**
comp=Z,92nm,1.5s,mb5.6
KVTX Kingsville 68.09 294 PFAKE 17 14 50.0 +13
KVTX LR LR
comp=Z,3μm,19.0s,MS5.6
KIC Kosan Boka 68.29 194 *e*P **P 17 14 37.8 -1.0**
comp=Z,1μm,1.5s,mb6.7
MTP Monte Pirata 68.45 260 *e*P **P 17 14 39.9 +0.1**
MTP Monte Pirata 68.45 260 *e*P **P 17 14 39.9 +0.1**
LIC Lamto 68.45 195⇑ *i* P **P 17 14 39.6 -0.2**
comp=Z,144nm,1.1s,mb5.6
LIC *e*MLR MLR
comp=Z,2μm,20.2s,MS5.0
LIC Lamto 68.45 195 *e*P **P 17 14 38.6 -1.2**
comp=Z,337nm,1.6s,mb6.1
LIC Lamto 68.45 195⇑ *i* P **P 17 14 39.6 -0.2**
comp=Z,72nm,1.1s,mb5.6
LIC LR LR
comp=Z,950nm,20.3s,MS5.0
MOAC Moa 68.56 270 *e*P **P 17 14 48.6 +8.1**
SJG San Juan 68.59 260 PFAKE 17 14 50.0 +9.3
SJG LR LR
comp=Z,1μm,22.0s,MS5.1
CPD Cerro la Pandu 68.60 260 *e*P **P 17 14 41.3 +0.5**
comp=Z,234nm,1.6s,mb5.9
CPD Cerro la Pandu 68.60 260 P **P 17 14 42.2 +1.4**
SOR Soroa 68.72 278 *e*P **P 17 14 40.8 -0.7**
VIS Vishakhapatnam 68.89 100 *i* P **P 17 14 44.0 +1.4**
SDDR Presa de Saban 69.16 266 *e*P **P 17 14 44.0 -0.2**
comp=Z,193nm,1.6s,mb5.8
SDDR LR LR
comp=Z,3μm,21.0s,MS5.5
SDDR Presa de Saban 69.16 266 *e*P **P 17 14 44.0 -0.2**
comp=Z,193nm,1.6s,mb5.8
RCC Rio Carpintero 69.40 270 *e*P **P 17 14 45.1 -0.6**
MNGI Mangalore 71.22 110 *i* P **P 17 14 56.0 -0.8**
MNGI AMb AMB 17 14 58.3
comp=Z,67nm,1.7s,mb5.3
CHRT Chiangrai 71.32 83⇓ P **P 17 14 58.0 +0.6**
comp=Z,184nm,1.0s,mb6.0
QZH Quanzhou 71.39 64 P **P 17 15 00.1 +2.3**
QZH *e*S S 17 24 15.4 -0.2
QZH AMB AMB
comp=Z,1μm,4.1s
QZH LR LR
comp=N,14μm,25.6s
QZH LR LR
comp=E,7μm,16.0s
QZH LR LR
comp=Z,6μm,15.3s
BBGH Gun Hill 71.59 253 PFAKE 17 15 10.0 +11
BBGH LR LR
comp=Z,3μm,20.0s,MS5.6
TATO Taipei 72.06 62 PFAKE 17 15 10.0 +8.2
TATO LR LR
comp=Z,3μm,19.0s,MS5.5
CHTO Chiang Mai 72.10 85 *e*P **P 17 15 01.1 -1.0**
comp=Z,175nm,1.4s,mb5.8
CHTO *e*PP PP 17 17 43.2 +1.2
CHTO LR LR
comp=Z,2μm,20.0s,MS5.3
CHTO Chiang Mai 72.10 85 P **P 17 15 01.6 -0.5**
CHTO pmax pmax
comp=Z,170nm,1.4s,mb5.8
CHTO Chiang Mai 72.10 85 P **P 17 15 02.2 +0.1**
SNR=16
CHTO Chiang Mai 72.10 85 P **P 17 15 01.6 -0.5**
comp=Z,170nm,1.4s,mb5.8
TEIG Tepich 72.58 282 *e*P **P 17 15 04.8 -0.2**
comp=Z,90nm,1.6s,mb5.5
TEIG LR LR
comp=Z,6μm,20.0s,MS5.8
TEIG Tepich 72.58 282 *e*P **P 17 15 04.8 -0.2**
comp=Z,90nm,1.6s,mb5.5
BDT Bhumibol Dam 73.61 85 P **P 17 15 11.0 -0.1**
comp=Z,16nm,1.1s,mb4.8
MAIG Mazatlaan 74.35 300 *e*P **P 17 15 16.1 +0.8**
MAIG Mazatlaan 74.35 300 *e*P **P 17 15 16.1 +0.7**
KOD Kodaikanal 74.50 108 *e*P **P 17 15 15.5 -0.8**
KOD AMb AMB 17 15 18.9
comp=Z,655nm,3.2s
QIZ Qiongzhong 74.81 74 P **P 17 15 17.4 -0.7**
QIZ PP PP 17 18 03.5 -1.5
QIZ S S 17 24 55.1 +0.5
QIZ SS SS 17 29 44.2 +2.5
QIZ AMB AMB

comp=Z,47nm,2.2s,mb5.0
QIZ AMB AMB
comp=Z,579nm,5.5s
QIZ LR LR
comp=E,3µm,17.9s
QIZ LR LR
comp=Z,3µm,17.9s,MS5.6
QIZ Qiongzhong 74.81 74 *eP* **P 17 15 17.1 -1.1**
comp=Z,225nm,2.1s,mb5.7
QIZ LR LR
comp=Z,3µm,19.0s,MS5.6
QIZ Qiongzhong 74.81 74 *eP* **P 17 15 17.1 -1.0**
comp=Z,225nm,2.1s,mb5.7
NST Nakhon Sawan 75.42 84 P **P 17 15 19.6 -2.0**
comp=Z,55nm,1.7s,mb5.2
KKTK Khon Kaen 75.51 82 P **P 17 15 21.0 -1.2**
comp=Z,278nm,1.0s,mb6.1
PCRV Puerto La Cruz 75.77 257 P **P 17 15 23.1 -0.5**
comp=Z,19nm,0.9s,mb5.0,baz=55,slow=9.9,SNR=3.4
IIO Organos 75.91 292 *i* P **P 17 15 26.7 +2.3**
IIO Organos 75.91 292 *i* P **P 17 15 26.7 +2.3**
MBAR Mbarara 75.93 157 P **P 17 15 24.6 +0.1**
SNR=11
PTVM Pico Tres Padr 76.01 292 *eP* **P 17 15 20.6 -4.5**
SFJM Santa Fe 76.13 296 *i* P **P 17 15 26.8 +1.1**
SFJM Santa Fe 76.13 296 *i* P **P 17 15 26.8 +1.1**
PPM Popocatepetl 76.39 292 *eP* **P 17 15 33.0 +5.8**
KMBO Kilima Mbogo 77.22 151 *eP* **P 17 15 33.4 +1.5**
KMBO LR LR
comp=Z,647nm,20.0s,MS4.9
KMBO Kilima Mbogo 77.22 151 P **P 17 15 33.1 +1.3**
comp=Z,11nm,1.0s,mb4.7,baz=343,slow=6.8,SNR=31
KMBO Kilima Mbogo 77.22 151 P **P 17 15 32.7 +0.8**
SNR=17
CCIG Comitan 77.38 285 *eP* **P 17 15 33.3 +0.5**
CCIG Comitan 77.38 285 *eP* **P 17 15 33.3 +0.6**
VHO Vista Hermosa 77.82 289 *i* P **P 17 15 36.1 +0.9**
VHO Vista Hermosa 77.82 289 *i* P **P 17 15 36.2 +1.0**
PALK Pallekele 78.18 105 *eP* **P 17 15 36.5 -0.8**
comp=Z,494nm,2.3s,mb6.0
PALK LR LR
comp=Z,3µm,21.0s,MS5.6
PALK Pallekele 78.18 105 P **P 17 15 38.2 +0.9**
SNR=6.6
PALK Pallekele 78.18 105 *eP* **P 17 15 36.5 -0.7**
comp=Z,494nm,2.3s,mb6.0
TGUH Tegucigalpa,Un 78.20 280 *eP* **P 17 15 39.0 +1.7**
TGUH LR LR
comp=Z,4µm,22.0s,MS5.7
TGUH Tegucigalpa,Un 78.20 280 *eP* **P 17 15 39.0 +1.6**
NNT Nongplab 78.25 86 P **P 17 15 38.3 +0.7**
SDV Santo Domingo 78.61 262 *eP* **P 17 15 40.0 +0.4**
comp=Z,81nm,1.5s,mb5.4
SDV LR LR
comp=Z,422nm,21.0s,MS4.8
SDV Santo Domingo 78.61 262 P **P 17 15 40.3 +0.7**
comp=Z,13nm,0.8s,mb4.9,baz=50,slow=4.6,SNR=15
SDV Santo Domingo 78.61 262 *eP* **P 17 15 40.0 +0.4**
comp=Z,81nm,1.5s,mb5.4
BCIP Isla Barro Col 80.85 271 *eP* **P 17 15 50.2 -1.6**
comp=Z,150nm,1.6s,mb5.7
BCIP Isla Barro Col 80.85 271 *eP* **P 17 15 50.2 -1.6**
comp=Z,150nm,1.6s,mb5.7
JTS JuntasAbangare 81.17 276 PFAKE 17 16 00.0 +6.5
JTS LR LR
comp=Z,3µm,19.0s,MS5.6
ROSC El Rosal 83.47 265 P **P 17 16 07.3 +1.8**
comp=Z,16nm,0.8s,mb5.1,baz=83,slow=7.6,SNR=11
RCBR Riachuelo 84.47 225 P **P 17 16 10.4 -0.1**
comp=Z,233nm,1.9s,mb6.0
RCBR LR LR
comp=Z,665nm,22.0s,MS5.0
RCBR Riachuelo 84.47 225 P **P 17 16 10.4 -0.1**
comp=Z,233nm,1.9s,mb6.0
KULM Kulim 85.47 87 *eP* **P 17 16 11.8 -3.8**
GUMO Guam 88.10 42 PFAKE 17 16 40.0 +12
GUMO LR LR
comp=Z,1µm,22.0s,MS5.3
OTAV Otavalo 89.00 267 *eP* **P 17 16 34.9 +2.2**
comp=Z,138nm,1.5s,mb6.1
OTAV LR LR
comp=Z,845nm,22.0s,MS5.1
OTAV Otavalo 89.00 267 *eP* **P 17 16 34.9 +2.2**
comp=Z,138nm,1.5s,mb6.1
LSZ Lusaka 90.19 161 *eP* **P 17 16 37.9 -0.1**
comp=Z,96nm,2.0s,mb5.8
LSZ LR LR
comp=Z,1µm,22.0s,MS5.2
LSZ Lusaka 90.19 161 *eP* **P 17 16 37.9 -0.2**
LSZ pmax pmax
comp=Z,96nm,2.0s,mb5.8
LSZ MLR MLR
comp=Z,1µm,22.0s,MS5.2
LSZ Lusaka 90.19 161 *eP* **P 17 16 37.9 -0.2**
comp=Z,96nm,2.0s,mb5.8
DAV Davao City (W) 90.28 62 PFAKE 17 16 50.0 +11
DAV LR LR
comp=Z,2µm,20.0s,MS5.5
PAYG Puerto Ayora 93.10 278 PFAKE 17 17 00.0 +8.3
PAYG LR LR
comp=Z,2µm,20.0s,MS5.6
TSUM Tsumeb 93.41 172 PFAKE 17 17 00.0 +7.1
TSUM LR LR
comp=Z,1µm,21.0s,MS5.3
NNA Nana 100.25 262 PFAKE 17 17 40.0 +16
NNA LR LR
comp=Z,821nm,21.0s,MS5.2
SUR Sutherland 106.66 169 PFAKE 17 22 10.0 +7.7
SUR LR LR
comp=Z,950nm,21.0s,MS5.3
PMG Port Moresby 110.97 45 PFAKE 17 22 20.0 +9.0
PMG LR LR
comp=Z,619nm,20.0s,MS5.2
HNR Honiara 113.13 31 PFAKE 17 22 30.0 +15
HNR LR LR
comp=Z,623nm,20.0s,MS5.2
FUNA Funafuti 114.08 10 PFAKE 17 22 30.0 +13
FUNA LR LR
comp=Z,8µm,19.0s,MS6.3
LCO Las Campanas 114.85 252 PFAKE 17 22 30.0 +12
LCO LR LR
comp=Z,697nm,21.0s,MS5.2
MBWA Marble Bar 115.88 76 PFAKE 17 22 30.0 +10
MBWA LR LR
comp=Z,1µm,20.0s,MS5.6
WRA Warramunga Arr 118.41 60 PKP PKPdf 17 22 23.7 -1.3
comp=Z,1.8nm,0.7s,baz=325,slow=2.6,SNR=16
WRA PKKPbc PKKPbc 17 32 42.5 +2.9
comp=Z,1.2nm,0.8s,baz=172,slow=3.6,SNR=7.1
CTAO Charters Tower 121.18 48 PFAKE 17 22 40.0 +10
CTAO LR LR
comp=Z,487nm,20.0s,MS5.2
TRQA Tornquist 121.29 241 PFAKE 17 22 40.0 +10
TRQA LR LR
comp=Z,664nm,21.0s,MS5.3
ASAR Alice Springs 121.89 62 PKP PKPdf 17 22 30.2 -1.4
comp=Z,4.4nm,0.7s,baz=352,slow=1.7,SNR=40
ASAR PKKPbc PKKPbc 17 32 30.6 +3.9
comp=Z,1.1nm,0.9s,baz=136,slow=3.6,SNR=7.3
PPT Papeete 122.05 335 *e*SS SS 17 40 45.6 +1.4
comp=Z,576nm,41.0s
PPT *e*LR LR 18 00 03.1
comp=Z,2µm,23.8s
RKT Rikitea 125.33 318 *e*SS SS 17 41 31.2 +5.5
comp=Z,1µm,34.0s
RKT *e*LR LR 18 01 35.2
comp=Z,1µm,23.8s
PTCN Pitcairn Islan 126.29 312 PFAKE 17 22 50.0 +10
PTCN LR LR
comp=Z,3µm,19.0s,MS5.9
NWAO Narrogin (SRO) 126.39 82 PFAKE 17 22 50.0 +10
NWAO LR LR
comp=Z,865nm,21.0s,MS5.4
DZM Mont Dzumac 126.43 26 PKP PKPdf 17 22 40.8 +0.4
comp=Z,5.9nm,0.9s,baz=303,slow=2.7,SNR=6.2
RAR Rarotonga 126.57 347 PFAKE 17 22 50.0 +9.3
RAR LR LR
comp=Z,1.0nm,20.0s
TBI Tubuai 127.75 334 *e*SS SS 17 41 53.4 -2.4
comp=Z,1µm,36.0s
TBI *e*LR LR 18 02 34.3
comp=Z,2µm,40.0s
STKA Stephens Creek 131.58 56 PKP PKPdf 17 22 49.6 -0.3
comp=Z,4.5nm,0.9s,baz=307,slow=2.8,SNR=4.0
TAU Tasmania Unive 143.43 55 PFAKE 17 23 20.0 +8.7
TAU LR LR
comp=Z,842nm,22.0s,MS5.5

URZ Urewera 143.50 15 PKP PKPdf 17 23 11.7 +0.1
comp=Z,7.9nm,0.9s,baz=305,slow=7.7,SNR=3.6
SYO Syowa Base 144.38 161⇓ *eP* PKPdf 17 23 04.5 -7.6
SYO Syowa Base 144.38 161⇑ *eP* PKPdf 17 23 09.8 -2.3
SYO Syowa Base 144.38 161⇑ *iP* PKPdf 17 23 10.6 -1.5
NVL N'lazarevskaya 144.81 178 *e*PKIKP PKPdf 17 23 12.9 +0.1
NVL pmax pmax
comp=N,20nm,1.6s
NVL pmax pmax
comp=E,9.0nm,1.6s
NVL pmax pmax
comp=Z,86nm,1.6s
MAIT Maitri 144.82 178 *e*PKPdf PKPdf 17 23 10.4 -2.4
VNA1 Neumayer--Stat 145.07 190 *e*PKPdf PKPdf 17 23 12.6 -0.7
VNA1 *e* 17 23 14.0
VNA1 *e* 17 23 15.0
VNA1 *e* 17 23 16.0
VNA1 *e* 17 23 19.6
VNA1 *e* 17 23 20.6
VNA1 *e* 17 23 22.1
VNA1 *e* 17 23 34.6
VNA2 Neumayer--Watz 145.31 189 *e*PKPdf PKPdf 17 23 13.0 -0.7
VNA2 *e* 17 23 15.3
VNA2 *e* 17 23 16.6
VNA2 *e* 17 23 17.5
VNA2 *e* 17 23 19.8
VNA2 *e* 17 23 21.2
VNA2 *e* 17 23 22.4
VNA2 *e* 17 23 34.6
VNA3 Neumayer Olymp 145.73 190 *e*PKPdf PKPdf 17 23 14.3 -0.1
VNA3 *e* 17 23 16.8
VNA3 *e* 17 23 17.8
VNA3 *e* 17 23 18.6
VNA3 *e* 17 23 21.1
VNA3 *e* 17 23 22.5
VNA3 *e* 17 23 24.1
VNA3 *e* 17 23 32.6
MAW Mawson 145.81 146 PKPbc PKPbc 17 23 15.8 +0.6
comp=Z,57nm,0.8s,baz=322,slow=3.7,SNR=26
SNAA Sanae 145.88 186 PKPbc PKPbc 17 23 15.2 -0.2
comp=Z,12nm,0.9s,baz=10,slow=4.3,SNR=24
SNZO South Karori 146.33 19 PFAKE 17 23 30.0 +14
SNZO LR LR
comp=Z,627nm,21.0s,MS5.4
PMSA Palmer Station 146.57 228 PKPbc PKPbc 17 23 18.3 +0.7
PMSA LR LR
comp=Z,741nm,19.0s,MS5.5
PMSA Palmer Station 146.57 228 PKPbc PKPbc 17 23 18.3 +0.7
comp=Z,44nm,0.9s,baz=325,slow=5.1,SNR=3.5
RPZ Rata Peaks 148.34 25 PKPbc PKPbc 17 23 21.8 -1.3
comp=Z,26nm,0.8s,baz=348,slow=1.2,SNR=10
QSPA South Pole Qui 164.20 180 *e*PKPdf PKPdf 17 23 33.9 -5.2
QSPA PKP PKPdf 17 23 39.0 -0.1
QSPA PKPab PKPab 17 24 33.1 -0.2
QSPA LR LR
comp=Z,1µm,22.0s
QSPA South Pole Qui 164.20 180 PKP PKPdf 17 23 39.0 -0.1
comp=Z,3.9nm,1.1s,baz=235,slow=2.5,SNR=4.6
QSPA PKPab PKPab 17 24 33.1 -0.2
comp=Z,5.1nm,0.9s,baz=243,slow=1.4,SNR=10

IDC 10 17:06:46.8±5.2,3097S×17963E,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.7/9,mbtmp3.5/2,Error ellipse: s-maj=311.1km s-min=71.6km az=169.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.05**	**269**	P	P	17 14 31.9	-0.2
	0.2nm,0.6s,baz=109,slow=7.4,SNR=6.4						
WRA	**Warramunga Arr**	**42.09**	**274**	P	P	17 14 40.8	+0.1
	0.6nm,0.4s,baz=111,slow=8.1,SNR=11						
FINES	**FINESS Array B**	**144.94**	**338**	PKP	PKPdf	17 26 24.7	-0.5
	0.4nm,0.5s,baz=48,slow=4.3,SNR=3.4						

*KNET **10** 17:17:11.5±0.8, 42.16N×7600E, h16km±6km, ml3.1, Error ellipse: s-maj=8.6km s-min=3.5km az=137.0*
*ISCJB **10** 17:17:13.1±0.8, 4215N±005×7601E±004, h10km, Error ellipse: s-maj=8.0km s-min=3.7km az=165.3*
*NNC **10** 17:17:13.6±2.5, 4221N×7595E, h0km, mb4.2, mpv3.7, Error ellipse: s-maj=19.5km s-min=3.2km az=165.0*

ISC 10 17:17:13.3±0.8,4216N±005×7600E±004,h10km,n14, σ0s89/25,11C-16D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.20**	**64**	⇑P	**Pg**	**17 17 17.1**	**-0.4**
	600nm,0.1s,SNR=1127						
ULHL				⇓S	**Sg**	**17 17 19.3**	**-1.1**
	5µm,0.1s						
KZA	**Kyzart**	**0.56**	**262**	⇓P	**Pg**	**17 17 24.0**	**-0.3**
	605nm,0.3s,SNR=1363						
KZA				⇓S	**Sg**	**17 17 31.9**	**+0.2**
	682nm,0.2s						
TKM2	**Tokmak 2**	**0.82**	**339**	⇓P	**Pg**	**17 17 28.5**	**-0.6**
	2.5nm,0.2s						
TKM2				⇑S	**Sg**	**17 17 39.9**	**+0.1**
	0.8nm,0.1s						
TKM2	**Tokmak 2**	**0.82**	**339**	⇓P	**Pg**	**17 17 28.5**	**-0.6**
	173nm,0.1s,SNR=663						
TKM2				⇑S	**Sg**	**17 17 39.8**	**0.0**
	1µm,0.1s						
KBK	**Karagaybulak**	**0.93**	**303**	⇑P	**Pg**	**17 17 30.6**	**-0.5**
	124nm,0.1s,SNR=22						
KBK				⇑S	**Sg**	**17 17 43.0**	**-0.1**
	418nm,0.2s						
UCH	**Uchtor**	**1.11**	**274**	⇓P	**Pb**	**17 17 33.4**	**-1.1**
	40nm,0.2s,SNR=14						
UCH				⇑S	**Sg**	**17 17 48.6**	**-0.4**
	263nm,0.3s						
AAK	**Ala-Archa**	**1.21**	**294**	⇑P	**Pn**	**17 17 35.4**	**-0.9**
	75nm,0.2s,SNR=12						
AAK				⇓S	**Sb**	**17 17 51.5**	**-0.5**
	223nm,0.2s						
CHMS	**Chumysh**	**1.25**	**313**	⇓P	**Pn**	**17 17 36.0**	**-0.8**
	57nm,0.1s,SNR=65						
CHMS				⇑S	**Sb**	**17 17 52.8**	**-0.3**
	292nm,0.2s						
KNDC	**Almaty**	**1.28**	**34**	⇓P	**Pn**	**17 17 37.3**	**+0.1**
	326nm,0.2s						
KNDC				⇑S	**Sb**	**17 17 54.8**	**+0.9**
	372nm,0.3s						
USP	**Ospenovka**	**1.57**	**316**	⇓P	**Pn**	**17 17 41.4**	**+0.2**
	97nm,0.2s,SNR=281						
USP				⇓S	**Sn**	**17 18 02.1**	**+0.6**
	207nm,0.2s						
AML	**Almayashu**	**1.71**	**270**	⇓P	**Pn**	**17 17 44.5**	**+1.2**
	83nm,0.2s,SNR=332						
AML				⇑S	**Sn**	**17 18 07.4**	**+2.2**
	323nm,0.3s						
KK31	**Karatay Array**	**4.16**	**285**	⇓Pg	**Pg**	**17 18 27.9**	**-5.1**
	3.0nm,0.3s,baz=98,slow=15,SNR=27						
KK31				⇓Lg		17 19 22.5	
	21nm,0.5s,baz=91,slow=29,SNR=10						
MK31	**Makanchi Array**	**6.46**	**42**	Pn	**Pn**	**17 18 52.1**	**+3.7**
	2.9nm,0.5s,baz=228,slow=16,SNR=14						
MK31				⇓Lg		17 20 34.5	
	9.0nm,0.8s						
KURK	**Kurchatov**	**8.75**	**11**	⇓Pn	**Pn**	**17 19 21.7**	**+1.9**
	15nm,1.8s						
KURK				⇑Lg		17 21 50.3	
	17nm,1.6s						

*ISCJB **10** 17:26:32.8±0.5, 2656N±010×4470W±010, h10km, mb4.1/17, Error ellipse: s-maj=14.4km s-min=12.3km az=172.9*
*IDC **10** 17:26:33.3±0.8, 2656N×4467W, h0km, mb4.0/11, mb1 4.2/11,mb1mx4.0/20,mbtmp4.0/11, MS4.9/1, Ms1 4.9/1,ms1mx3.7/23, Error ellipse: s-maj=23.7km s-min=18.2km az=137.0*
*NEIC **10** 17:26:34.4±0.4, 2649N×4471W, h10km, mb4.4/6, Error ellipse: s-maj=11.5km s-min=9.8km az=165.0*

ISC 10 17:26:34.8±0.5,265N±01×4469W±010,h10km,n22, σ0s69/22,mb4.1/17,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**41.71**	**237**	P	**P**	**17 34 21.2**	**-2.9**
	10nm,1.3s,mb4.3						
SIV	**San Ignacio**	**45.18**	**202**	P	**P**	**17 34 51.7**	**-0.2**
	1.7nm,1.1s,mb3.8,baz=41,slow=5.7,SNR=5.4						

TOA0 Torodi Ar. Sit 45.38 98 P **P 17 34 53.8 +0.1**
TORD Torodi Ar. Bea 45.38 98 P **P 17 34 53.8 +0.1**
0.6nm,0.6s,mb3.6,baz=293,slow=7.5,SNR=2.7
ULM Lac du Bonnet 45.48 315 P **P 17 34 54.0 0.0**
1.9nm,0.9s,mb3.9,baz=97,slow=7.0,SNR=4.3
WMOK Wichita Mounta 46.78 294 *eP* **P 17 35 04.9 +0.4**
1.3nm,0.8s,mb3.9
LPAZ La Paz 48.29 211 P **P 17 35 17.5 +1.2**
4.3nm,1.0s,mb4.4,baz=28,slow=11,SNR=8.0
GERES GERESS Array B 49.92 47 P **P 17 35 28.0 -0.6**
1.2nm,1.0s,mb3.9,baz=276,slow=3.9,SNR=5.3
NOA NORSAR Array B 50.75 31 P **P 17 35 35.6 +1.0**
2.1nm,0.9s,mb4.1,baz=251,slow=7.5,SNR=3.2
TXAR Lajitas Array 51.70 288 P **P 17 35 42.9 +0.6**
0.5nm,0.9s,mb3.4,baz=54,slow=9.2,SNR=3.3
RES Resolute Bay 54.49 345 *eP* **P 17 36 01.9 -0.2**
222nm,1.2s
YKA Yellowknife Ar 57.56 329 P **P 17 36 23.9 -0.3**
YKA PcP PcP 17 37 17.2 -0.4
YKA Yellowknife Ar 57.56 329 P **P 17 36 23.9 -0.3**
1.9nm,1.0s,mb4.1,baz=94,slow=7.6,SNR=16
YKA PcP PcP 17 37 17.2 -0.4
0.1nm,0.3s,baz=91,slow=5.3,SNR=4.7
FINES FINESS Array B 57.89 32 P **P 17 36 26.7 +0.1**
3.2nm,0.8s,mb4.4,baz=242,slow=4.1,SNR=7.1
HLID Hailey 57.94 306 P **P 17 36 27.8 +0.6**
1.3nm,0.9s,mb4.0
ARCES ARCESS Array B 58.48 23 P **P 17 36 30.7 +0.1**
5.1nm,0.8s,mb4.6,baz=260,slow=6.0,SNR=19
AKASG Malin Array Be 59.94 45 P **P 17 36 40.4 -0.6**
0.6nm,0.4s,mb4.0,baz=271,slow=6.6,SNR=6.8
INK Inuvik 65.20 336 *eP* **P 17 37 14.9 -1.0**
90nm,0.8s
DAWY Dawson 68.48 332 *eP* **P 17 37 36.7 -0.1**
MALT Malatya 68.97 57 P **P 17 37 40.9 +0.6**
12nm,1.6s,mb4.6
TIXI Tiksi 81.97 2 *eP* **P 17 38 54.8 +0.4**
7.6nm,1.2s,mb4.5
LSZ Lusaka 82.06 111 P **P 17 38 55.3 -0.5**
4.6nm,1.2s,mb4.3

*IDC **10** 17:33:07.2±6.1, 3625N×7087E, h157km±55km, mb3.6/11, mb1 3.8/13,mb1mx3.6/23,mbtmp3.7/13,MS4.5/1, Ms1 4.5/1,ms1mx3.5/36,Error ellipse: s-maj=26.0km s-min=15.3km az=19.0*
*BJI **10** 17:33:10.7,3659N×7080E,h202km,mb4.4*
*ISCJB **10** 17:33:11.4±0.4, 3657N±003×7102E±005, h202km±5km, mb4.0/16,Error ellipse: s-maj=6.5km s-min=4.0km az=171.0*
*NEIC **10** 17:33:11.2±1.4, 3650N×7086E, h185km±13km, mb4.6/15, Error ellipse: s-maj=15.8km s-min=7.6km az=48.0*
*NNC **10** 17:33:16.1±2.6, 3744N×7049E, h0km, mb4.3, mpv3.8, Error ellipse: s-maj=24.5km s-min=18.2km az=174.0*

ISC 10 17:33:11.7±0.4,3654N±003×7095E±005,h189km±5km, n63,σ1s26/77,mb4.1/16,5C-1D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.82**	**163**	⇑P	**Pn**	**17 34 01.2**	**+2.5**
CEP				S	**Sn**	**17 34 38.0**	**+2.7**
CHCP	**Chirah Chowk**	**3.44**	**146**	P	**Pn**	**17 34 08.6**	**+2.4**
CHCP				S	**Sn**	**17 34 46.0**	**-2.8**
THW	**Thamme Wali**	**3.79**	**170**	P	**Pn**	**17 34 12.4**	**+1.8**
SBDP	**Sheikh Budin**	**4.23**	**182**	P	**Pn**	**17 34 16.3**	**+0.2**
DRP	**Derazinda**	**4.82**	**188**	P	**Pn**	**17 34 25.4**	**+1.8**
KSH	**Kashi**	**4.96**	**52**⇓	*i*P	**Pn**	**17 34 27.4**	**+2.1**
KSH				S	**Sn**	**17 35 24.2**	**+1.1**
KSH				Smax			
	comp=N,628nm,0.4s						
KSH				Smax			
	comp=E,708nm,0.6s						
THN	**Thein Dam**	**5.68**	**135**	*e*P	**Pn**	**17 34 35.5**	**+0.8**
THN				*e*S	**Sn**	**17 35 38.1**	**-2.0**
DLH	**Dalhousie**	**5.75**	**132**	*e*P	**Pn**	**17 34 35.0**	**-0.6**
DLH				*e*S	**Sn**	**17 35 39.0**	**-2.6**
AML	**Almayashu**	**5.98**	**20**	*e*Pn	**Pn**	**17 34 38.6**	**+0.2**
	comp=E,115nm,0.5s						
AML				*e*Sn	**Sn**	**17 35 44.0**	**-2.9**
PONG	**Pong**	**6.17**	**136**	*ex*	x	17 35 30.5	
UCH	**Uchtor**	**6.32**	**25**	*e*Pn	**Pn**	**17 34 43.5**	**+0.7**
	comp=E,42nm,0.6s						
UCH				*e*Sn	**Sn**	**17 35 52.6**	**-2.2**
EKS2	**Erkin-Say**	**6.49**	**19**	*e*Pn	**Pn**	**17 34 45.6**	**+0.5**
	comp=E,17nm,0.4s						
EKS2				*e*Sn	**Sn**	**17 35 55.6**	**-3.4**
KK31	**Karatay Array**	**6.57**	**357**	Pn	**Pn**	**17 34 46.5**	**+0.4**
	comp=E,4.0nm,0.3s,baz=188,slow=14,SNR=137						
KK31				⇑Sn	**Sn**	**17 35 54.2**	**-6.5**
	comp=E,12nm,0.4s,baz=185,slow=19,SNR=12						
AAK	**Ala-Archa**	**6.67**	**23**	*e*Pn	**Pn**	**17 34 47.0**	**-0.5**
	comp=E,16nm,0.3s						
AAK				*e*Sn	**Sn**	**17 35 55.6**	**-7.7**
SDNR	**Sundarnagar**	**7.09**	**133**	*ex*	x	17 35 04.0	
SDNR				*e*S	**Sn**	**17 36 08.6**	**-4.7**
TKM2	**Tokmak 2**	**7.31**	**28**	⇑Pn	**Pn**	**17 34 56.1**	**+0.3**
	comp=E,3.8nm,0.6s						
TKM2				⇑Sn	**Sn**	**17 36 14.8**	**-3.6**
	comp=E,1.4nm,0.7s						
TKM2	**Tokmak 2**	**7.31**	**28**	*e*Pn	**Pn**	**17 34 56.2**	**+0.4**
	comp=E,48nm,0.6s						
JOSI	**Joshimath**	**9.34**	**127**	*eP*	**Pn**	**17 35 24.4**	**+1.9**
JOSI				AMb	AMB	17 35 26.0	
	comp=Z,37nm,1.0s						
JOSI				*e*S	**Sn**	**17 37 01.3**	**-5.5**
KHET	**Khetri**	**9.39**	**153**	*eP*	**Pn**	**17 35 22.7**	**-0.5**
KHET				AMb	AMB	17 35 23.8	
	comp=Z,4.3nm,0.3s						
KHET				*e*S	**Sn**	**17 37 00.8**	**-7.2**
NDI	**New Delhi**	**9.45**	**144**	*ex*	x	17 36 50.0	
KUDL	**Kundal**	**9.59**	**149**	*eP*	**Pn**	**17 35 25.0**	**-0.8**
KUDL				*e*S	**Sn**	**17 37 04.5**	**-8.3**
SONA	**Sohna**	**9.75**	**146**	*eP*	**Pn**	**17 35 28.0**	**+0.1**
SONA				AMb	AMB	17 35 30.9	
	comp=Z,6.3nm,0.2s						
SONA				*e*S	**Sn**	**17 37 07.4**	**-9.4**
AJM	**Ajmer**	**10.51**	**162**	*ex*	x	17 36 47.0	
LGTI	**Lohaghat**	**10.53**	**130**	*e*S	**Sn**	**17 37 26.5**	**-8.8**
MK31	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**17 36 18.3**	**+5.3**
	comp=Z,6.0nm,0.8s,baz=223,slow=12,SNR=34						
MKAR	**Makanchi Array**	**13.29**	**36**	P	**Pn**	**17 36 12.8**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=221,slow=13,SNR=28						
GKN	**Gorkha**	**14.36**	**122**	*eP*	**Pn**	**17 36 26.6**	**+0.1**
	comp=Z,43nm,0.5s						
KKN	**Kakani**	**14.93**	**122**	*eP*	**Pn**	**17 36 33.4**	**-0.2**
AB31	**Akbulak array**	**15.03**	**331**	Pn	**Pn**	**17 36 36.4**	**+1.9**
	comp=Z,3.6nm,0.7s,baz=145,slow=11,SNR=48						
AB31				⇑Sn	**Sn**	**17 39 10.3**	**-12**
	comp=Z,1.4nm,0.6s,baz=151,slow=24,SNR=3.5						
KURK	**Kurchatov**	**15.21**	**19**	Pn	**Pn**	**17 36 30.8**	**-5.9**
	comp=Z,8.8nm,1.2s						
JIRN	**Jiri**	**15.64**	**120**	*eP*	**Pn**	**17 36 42.6**	**+0.4**
	comp=Z,49nm,0.4s						
JIRN				*e*S	**S**	**17 39 27.6**	**-8.3**
BRVK	**Borovoye**	**16.52**	**359**	*eP*	**Pn**	**17 36 52.6**	**0.0**
	comp=Z,2.7nm,0.7s						
AKTK	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**17 36 55.1**	**+0.1**
AKTO	**Aktyubinsk**	**16.73**	**330**	P	**Pn**	**17 36 55.1**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=139,slow=10,SNR=57						
TAPN	**Taplejung**	**16.90**	**118**	*eP*	**Pn**	**17 36 58.0**	**+0.6**
	comp=Z,21nm,0.4s						
ODAN	**Odare**	**16.98**	**120**	*eP*	**Pn**	**17 36 59.5**	**+1.3**
	comp=Z,20nm,0.6s						
LSA	**Lhasa**	**18.23**	**106**	P	**P**	**17 37 14.0**	**+3.3**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
LSA	**Lhasa**	**18.23**	**106**	*eP*	**P**	**17 37 14.0**	**+3.3**
	comp=Z,7.3nm,0.8s						
ZALV	**Zalesovo Beam**	**19.90**	**25**	P	**P**	**17 37 28.4**	**0.0**
ZALV	**Zalesovo Beam**	**19.90**	**25**	P	**P**	**17 37 28.4**	**0.0**
	comp=Z,5.4nm,0.5s,baz=221,slow=12,SNR=40						
MIB	**Mutribah**	**20.84**	**258**	*eP*	**P**	**17 37 37.5**	**-1.4**
MIB				AMb	AMB	17 37 42.0	
	comp=Z,14nm,0.6s						
RDF	**Al-Radifah**	**21.06**	**256**	*eP*	**P**	**17 37 40.4**	**-0.7**
RDF				AML	AML	17 37 46.3	
	comp=Z,6.8nm,0.4s						
NAY	**Al-Naaiem**	**21.16**	**257**	*eP*	**P**	**17 37 41.6**	**-0.5**
NAY				AML	AML	17 37 45.1	
	comp=Z,1.2nm,0.3s						
RST	**Umm Al-Ruwaisa**	**21.24**	**258**	*eP*	**P**	**17 37 41.8**	**-1.2**
RST				AML	AML	17 37 45.4	
	comp=Z,9.5nm,0.4s						
ARU	**Arti**	**21.58**	**341**	P	**P**	**17 37 44.0**	**-2.2**

	comp=Z,5.6nm,0.8s,mb4.0						
SONM	**Songino Array**	**28.35**	**55**	P	**P**	**17 38 49.0**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=269,slow=8.6,SNR=12						
SONM				LR	LR	17 50 34.2	
	comp=Z,809nm,18.5s,baz=89,slow=37						
ULN	**Ulaanbaatar**	**28.79**	**55**	*e*P	**P**	**17 38 52.5**	**+0.7**
	comp=Z,1.3nm,0.6s,mb3.8						
XAN	**Xi'an**	**30.97**	**83**	P	**P**	**17 39 12.1**	**+1.0**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.3						
AKASG	**Malin Array Be**	**32.89**	**309**	P	**P**	**17 39 28.0**	**+0.4**
	comp=Z,1.2nm,0.4s,mb4.0,baz=79,slow=7.5,SNR=7.4						
JOF	**Joensuu**	**35.81**	**330**	*e*p	**P**	**17 39 52.5**	**-0.1**
	comp=Z,5.6nm,0.3s,mb4.7						
FINES	**FINESS Array B**	**37.43**	**326**	P	**P**	**17 40 06.7**	**+0.4**
	comp=Z,1.9nm,0.5s,mb4.0,baz=118,slow=10,SNR=21						
KAF	**Kangasniemi**	**37.57**	**327**	*e*p	**P**	**17 40 07.2**	**-0.2**
	baz=112,slow=8.5						
KEV	**Kevo**	**40.75**	**338**	*e*p	**P**	**17 40 33.7**	**+0.1**
ARCES	**ARCESS Array B**	**41.09**	**338**	P	**P**	**17 40 37.0**	**+0.6**
	comp=Z,3.0nm,0.5s,mb4.2,baz=117,slow=8.1,SNR=42						
AQU	**L'Aquila**	**44.09**	**296**	*e*P	**P**	**17 41 02.9**	**+2.0**
	comp=Z,46nm,1.2s,mb5.0						
NB2	**NORSAR Subarra**	**44.32**	**323**	P	**P**	**17 41 02.4**	**-0.1**
	comp=Z,1.5nm,0.5s,mb3.9,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**44.32**	**323**	P	**P**	**17 41 02.5**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.0,baz=96,slow=7.8,SNR=8.7						
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	**P**	**17 43 33.6**	**-2.4**
	comp=Z,1.4nm,0.6s,mb4.0,baz=47,slow=6.2,SNR=6.6						
INK	**Inuvik**	**73.88**	**9**	*e*P	**P**	**17 44 25.3**	**+0.1**
	comp=Z,34nm,0.6s,mb5.2						
BOSA	**Boshof**	**77.75**	**220**	P	**P**	**17 44 46.4**	**-1.3**
	comp=Z,0.8nm,0.5s,mb3.6,baz=42,slow=6.1,SNR=3.7						
YKA	**Yellowknife Ar**	**81.21**	**3**	P	**P**	**17 45 06.5**	**+0.6**
	comp=Z,1.1nm,0.4s,mb3.9,baz=351,slow=5.4,SNR=25						
WRA	**Warramunga Arr**	**82.05**	**122**	P	**P**	**17 45 09.4**	**-1.5**
	comp=Z,0.4nm,0.4s,mb3.5,baz=324,slow=4.9,SNR=30						
ASAR	**Alice Springs**	**84.31**	**125**	P	**P**	**17 45 21.3**	**-1.1**
	comp=Z,0.3nm,0.6s,mb3.2,baz=313,slow=5.0,SNR=8.4						

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*MOS **10** 17:35:32.6±0.5, 4323N×4353E, h11km, mb3.6/1, Error ellipse: s-maj=16.9km s-min=8.4km az=119.4*
*TIF **10** 17:35:32.5, 4328N×4351E, h17km±3km*
*ISCJB **10** 17:35:33.2±0.4, 4326N±003×4350E±004, h8km±4km, Error ellipse: s-maj=6.1km s-min=3.3km az=144.3*
ISC 10 17:35:33.4±0.4, **4326N**±003×**4351E**±005, **h16**km±5km, **n12**, σ**0ˢ60**/24, **4C-1D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNR	**Lesken**	**0.23**	**85**⇑	*i*PG	**Pg**	**17 35 38.2**	**-0.4**
LSNR				*e*S	**Sg**	**17 35 42.3**	**+0.2**
DIGR	**Digorskoe uzhe**	**0.36**	**171**⇓	*i*PG	**Pg**	**17 35 41.1**	**+0.2**
DIGR				*i* S	**Sg**	**17 35 46.4**	**+0.6**
KORR	**Kora**	**0.45**	**112**⇑	*i*PG	**Pg**	**17 35 42.1**	**-0.3**
KORR				*e*S	**Sg**	**17 35 48.2**	**-0.2**
KUBR	**Kubataba**	**0.55**	**353**	PG	**Pg**	**17 35 45.3**	**+1.0**
KUBR				S	**Sg**	**17 35 51.3**	**-0.4**
KUBR				pmax	pmax		
	comp=Z,3.0nm,0.1s						
KUBR				smax			
	comp=N,8.0nm,0.1s						
ZEI	**Tsey**	**0.56**	**149**⇑	*i*PG	**Pg**	**17 35 43.9**	**-0.7**
ZEI				*i* S	**Sg**	**17 35 51.2**	**-0.9**
KMSR	**Komsomolskaya**	**0.59**	**78**	*e*PG	**Pg**	**17 35 45.6**	**+0.6**
KMSR				*e*S	**Sg**	**17 35 54.1**	**+1.3**
ONI	**Oni**	**0.68**	**183**	P	**Pb**	**17 35 47.0**	**+0.2**
ONI				S	**Sb**	**17 35 57.3**	**+1.4**
LACR	**Lac**	**0.72**	**126**⇑	*i*PG	**Pg**	**17 35 46.8**	**-0.7**
LACR				*i* S	**Sb**	**17 35 56.3**	**-0.9**
SHAR	**Shatzhatmas**	**0.78**	**309**	PG	**Pg**	**17 35 48.2**	**-0.4**
SHAR				S	**Sb**	**17 35 58.7**	**-0.2**
SHAR				pmax	pmax		
	comp=Z,4.0nm,0.1s						
BEYR	**Belyy Ugol+**	**0.91**	**327**	PG	**Pg**	**17 35 51.0**	**0.0**
BEYR				S	**Sb**	**17 36 02.2**	**-0.3**
BEYR				pmax	pmax		
	comp=Z,64nm,0.1s						
BEYR				smax			
	comp=N,228nm,0.2s						
KIV0	**Kislovodsk Arr**	**0.91**	**320**	PG	**Pg**	**17 35 51.1**	**-0.1**
KIV0				S	**Sb**	**17 36 02.9**	**+0.1**
KIV	**Kislovodsk**	**0.92**	**320**	PG	**Pg**	**17 35 51.0**	**-0.2**
KIV				S	**Sb**	**17 36 03.0**	**+0.1**
KIV				pmax	pmax		
	comp=Z,37nm,0.2s						
KIV				smax			
	comp=N,9.0nm,0.5s						

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*ISK **10** 17:49:31.9, 3908N×4041E, h6km, MD2.6*
*ISCJB **10** 17:49:32.5±0.9, 39.10N±006×4039E±007, h6km, Error ellipse: s-maj=8.2km s-min=7.3km az=168.1*
ISC 10 17:49:32.7±1.1, **3911N**±006×**4042E**±007, **h3**km±15km, **n5**, σ**1ˢ08**/7, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.24**	**167**	*i* PG	**Pg**	**17 49 36.8**	**-0.5**
BINT				*i* SG	**Sg**	**17 49 40.2**	**-0.1**
PTK	**Pertek**	**0.83**	**255**	PG	**Pg**	**17 49 48.0**	**-0.6**
PTK				SG	**Sg**	**17 49 59.7**	**+0.4**
EZM	**Erzurum**	**1.08**	**42**	PN	**Pn**	**17 49 53.5**	**-1.2**
ERZM	**Erzurum**	**1.08**	**42**	*i* P	**Pg**	**17 49 54.4**	**+1.0**
MARD	**Mardin**	**1.81**	**171**	*i* P	**Pn**	**17 50 05.8**	**+1.0**

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*ISCJB **10** 17:51:44.4±0.5, 2168N±006×1206E±01, h3km, mb4.0/18, Error ellipse: s-maj=15.0km s-min=8.3km az=165.5*
*BJI **10** 17:51:44.2, 2123N×12000E, h7km, mB4.7, mb4.0, ML3.9*
*IDC **10** 17:51:45.6±0.7, 2169N×12053E, h0km, mb3.9/11, mb1 4.1/11, mb1mx4.1/18, mbtmp3.9/11, Error ellipse: s-maj=33.8km s-min=15.8km az=68.0*
*NEIC **10** 17:51:45.9±6.6, 2171N×12061E, h3km±41km, mb4.5/7, Error ellipse: s-maj=18.6km s-min=9.1km az=69.0*
ISC 10 17:51:48.5±5.6, **2173N**±008×**1207E**±01, **h18**km±35km, **n30**, σ**0ˢ92**/31, **mb4.0**/18, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**2.58**	**19**	*e*Pn	**Pn**	**17 52 27.8**	**-1.6**
YHNB	**Yeheng**	**3.00**	**12**	*e*Pn	**Pn**	**17 52 35.4**	**+0.3**
TATO	**Taipei**	**3.32**	**13**	Pn	**Pn**	**17 52 31.7**	**-7.8**
QZH	**Quanzhou**	**3.72**	**330**	P	**Pn**	**17 52 45.1**	**0.0**
QZH				S	**Sn**	**17 53 24.5**	**-3.9**
QZH				Smax			
	comp=N,340nm,1.1s						
QZH				Smax			
	comp=E,350nm,0.8s						
HHC	**Hu-ho-hao-te**	**20.56**	**340**	*e*P	**P**	**17 56 26.8**	**+0.7**
HHC				AP		17 56 31.4	
HHC				XP	sP	17 56 34.3	+0.5
HHC				AMB	AMB		
	comp=Z,7.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,290nm,9.2s						
MJAR	**Matsushiro Arr**	**21.23**	**42**	P	**P**	**17 56 34.9**	**+1.6**
	comp=Z,0.7nm,0.8s,mb3.1,baz=235,slow=9.9,SNR=4.8						
GTA	**Gaotai**	**25.05**	**319**	*e*P	**P**	**17 57 12.7**	**+1.0**
GTA				AP	pP	17 57 20.8	+3.5
GTA				XP	sP	17 57 24.0	+4.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb3.8						
HIA	**Hailar**	**27.49**	**359**	P	**P**	**17 57 34.3**	**+0.7**
	comp=Z,19nm,1.4s,mb4.4						
ULN	**Ulaanbaatar**	**28.28**	**340**	*e*P	**P**	**17 57 40.9**	**+0.2**
SONM	**Songino Array**	**28.46**	**340**	P	**P**	**17 57 42.2**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.4,baz=158,slow=8.0,SNR=7.0						
MKAR	**Makanchi Array**	**39.80**	**318**	P	**P**	**17 59 20.2**	**-0.3**
MKAR	**Makanchi Array**	**39.80**	**318**	P	**P**	**17 59 20.2**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=111,slow=8.6,SNR=7.7						
ZALV	**Zalesovo Beam**	**42.06**	**329**	P	**P**	**17 59 39.0**	**0.0**
ZALV	**Zalesovo Beam**	**42.06**	**329**	P	**P**	**17 59 39.0**	**0.0**
	comp=Z,1.5nm,0.8s,mb3.7,baz=110,slow=8.5,SNR=9.1						
WRA	**Warramunga Arr**	**43.52**	**161**	P	**P**	**17 59 50.5**	**-0.6**
	comp=Z,5.1nm,0.5s,mb4.5,baz=344,slow=9.0,SNR=71						
WB2	**Warramunga Arr**	**43.52**	**161**	*e*P	**P**	**17 59 51.1**	**-0.1**
ASAR	**Alice Springs**	**46.93**	**163**	P	**P**	**18 00 17.9**	**-0.2**
	comp=Z,0.9nm,0.5s,mb4.0,baz=345,slow=7.1,SNR=22						
CTAO	**Charters Tower**	**48.51**	**147**	*e*P	**P**	**18 00 30.7**	**+0.2**
	comp=Z,4.2nm,0.9s,mb4.5						
ARU	**Arti**	**56.79**	**324**	P	**P**	**18 01 29.1**	**-2.2**
	comp=Z,2.3nm,0.9s,mb4.2						
STKA	**Stephens Creek**	**56.95**	**159**	*e*P	**P**	**18 01 31.8**	**-0.9**
	comp=Z,3.3nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**56.95**	**159**	P	**P**	**18 01 33.2**	**+0.5**
	comp=Z,2.9nm,0.8s,mb4.4,baz=350,slow=6.1,SNR=6.7						
TNA	**Tin City**	**62.74**	**26**	*e*P	**P**	**18 02 09.9**	**-2.3**
	comp=Z,1.9nm,0.9s,mb4.2						
KIV	**Kislovodsk**	**66.77**	**310**	P	**P**	**18 02 39.2**	**+0.4**
	comp=Z,4.0nm,0.8s,mb4.5						
MALT	**Malatya**	**70.97**	**304**	*e*P	**P**	**18 03 05.8**	**+0.7**
	comp=Z,4.4nm,0.9s,mb4.4						
AKASG	**Malin Array Be**	**74.38**	**319**	P	**P**	**18 03 23.5**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=60,slow=5.8,SNR=4.4						
INK	**Inuvik**	**75.67**	**22**	*e*P	**P**	**18 03 32.6**	**+0.4**
	comp=Z,103nm,0.9s						
RES	**Resolute Bay**	**81.15**	**9**	*e*P	**P**	**18 04 03.0**	**+0.6**
	comp=Z,112nm,0.8s						
KMBO	**Kilima Mbogo**	**84.29**	**267**	P	**P**	**18 04 20.8**	**+0.9**
	comp=Z,1.7nm,0.9s,mb4.2,baz=50,slow=7.0,SNR=4.7						
GERES	**GERESS Array B**	**84.43**	**321**	P	**P**	**18 04 19.9**	**0.0**
	comp=Z,0.3nm,0.4s,mb3.8,baz=57,slow=4.9,SNR=6.3						
YKA	**Yellowknife Ar**	**85.41**	**23**	P	**P**	**18 04 25.2**	**+0.7**
	comp=Z,1.2nm,0.8s,mb4.1,baz=315,slow=4.6,SNR=24						

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*TEH **10** 18:14:57.1, 2640N×5572E, h5km, ML4.2*
*MOS **10** 18:15:12.5±0.9, 2524N×5601E, h10km, mb4.5/4, Error ellipse: s-maj=13.8km s-min=8.8km az=98.9*
*IDC **10** 18:15:12.7±0.7, 2524N×56.10E, h0km, mb4.1/17, mb1 4.2/20, mb1mx4.1/28, mbtmp4.1/20, ML4.1/3, Error ellipse: s-maj=17.8km s-min=16.0km az=169.0*
*CSEM **10** 18:15:13.3±0.1, 2532N×56.12E, h10km, mb4.2/11, Error ellipse: s-maj=2.2km s-min=1.3km az=84.0*
*ISCJB **10** 18:15:14.4±0.5, 2530N±002×5602E±004, h20km±4km, mb4.2/30, Error ellipse: s-maj=5.4km s-min=3.8km az=170.4*
*NEIC **10** 18:15:14.4±0.4, 2522N×5607E, h10km, mb4.2/13, ML4.1(THR), MN4.1(TEH), Error ellipse: s-maj=6.6km s-min=5.7km az=221.0*
NEIC Felt at Adhan, Al Fujayrah, Al Manamah, Bidiya, Kalba, Masafi, Ra's al Khaymah and Siji, United Arab Emirates.
*THR **10** 18:15:31.0±0.3, 2652N×5569E, h15km, ML4.1*
ISC 10 18:15:14.6±0.5, **2529N**±002×**5608E**±004, **h7**km±4km, **n127**, σ**1ˢ09**/140, **mb4.2**/30, **10C-5D, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATD	**Hatta, Dubai**	**0.46**	**174**	P	**Pg**	**18 15 22.9**	**-0.6**
	SNR=1381						
HATD				⇓S	**Sg**	**18 15 30.5**	**+1.0**
HATD	**Hatta, Dubai**	**0.46**	**174**	Pg	**Pg**	**18 15 22.8**	**-0.6**
	SNR=378						
HATD				Sg	**Sg**	**18 15 29.5**	**0.0**
NAZ	**Nazwa, Dubai**	**0.48**	**232**	Pg	**Pg**	**18 15 24.9**	**+1.0**
	SNR=234						
ASHO	**Ashiyiah**	**0.60**	**182**	⇓P	**Pg**	**18 15 25.8**	**-0.3**
	SNR=1272						
ASHO	**Ashiyiah**	**0.60**	**182**	Pg	**Pg**	**18 15 25.6**	**-0.5**
	SNR=127						
BANOM	**Banah**	**0.67**	**17**	⇑P	**Pg**	**18 15 25.6**	**-1.7**
	SNR=762						
BANOM				⇑S	**Sg**	**18 15 35.5**	**-0.6**
FAQ	**Al Faqa, Dubai**	**0.70**	**220**	Pg	**Pg**	**18 15 28.5**	**+0.5**
	SNR=207						
ASUD	**Al Ashush, Dub**	**0.95**	**226**	P	**Pg**	**18 15 33.3**	**+0.6**
	SNR=375						
ARQ	**Araqi**	**1.98**	**168**	⇑P	**Pn**	**18 15 50.3**	**+1.8**
	SNR=22						
HOQ	**Hoqain**	**2.03**	**146**	⇑P	**Pn**	**18 15 46.7**	**-2.5**
IBND		**2.19**	**11**	*e*Pg	**Pg**	**18 15 54.5**	**-2.1**
BIDO	**Bidbid**	**2.56**	**133**	⇑P	**Pn**	**18 15 56.1**	**-0.4**
BSY	**Bisya**	**2.73**	**158**	⇑P	**Pn**	**18 16 02.5**	**+3.8**
SMDO	**Samad**	**2.85**	**141**	⇑P	**Pn**	**18 16 01.4**	**+0.9**
	SNR=49						
JMDO	**Jabal Madar**	**3.44**	**147**	⇓P	**Pn**	**18 16 11.0**	**+2.4**
WBK	**Wadi Bani Khal**	**3.75**	**135**	⇑P	**Pn**	**18 16 14.5**	**+1.6**
	SNR=30						
KRBR	**Kerman**	**4.72**	**7**	Pn	**Pn**	**18 16 28.0**	**+1.9**
KRBR				Sg	**Sn**	**18 17 22.0**	**+0.9**
KRBR	**Kerman**	**4.72**	**7**	*e*Pn	**Pn**	**18 16 28.3**	**+2.2**
KRBR				*e*Sg	**Sn**	**18 17 22.5**	**+1.4**
KRBR				AML	AML	18 17 28.3	
	comp=N,319nm,0.6s						
IMOK	**Mook**	**4.80**	**322**	Pn	**Pn**	**18 16 29.4**	**+2.2**
IMOK				Lg		18 17 28.7	
IMOK	**Mook**	**4.80**	**322**	*e*Sg	**Sn**	**18 17 25.0**	**+1.9**
IMOK				*e*		18 17 30.5	
	comp=Z,3µm,0.2s						
ISRV	**Sarvestan**	**4.86**	**328**	*e*	**Pb**	**18 16 41.0**	**+1.0**
	comp=Z,2µm,0.1s						
ISRV				*e*Sn	**Sn**	**18 17 13.3**	**-11**
ISRV	**Sarvestan**	**4.86**	**328**	Pn	**Pn**	**18 16 29.8**	**+1.7**
ISRV				*e*Sn	**Sn**	**18 17 13.3**	**-11**
BTHS		**4.92**	**257**	P	**Pn**	**18 16 27.9**	**-1.0**
SLWS		**4.96**	**266**	P	**Pn**	**18 16 29.2**	**-0.2**
SHI	**Shiraz**	**5.37**	**325**	*e*Sn	**Sn**	**18 17 25.9**	**-11**
BOQSS		**6.08**	**277**	P	**Pn**	**18 16 42.9**	**-2.1**
IMEH	**Mehriz**	**6.22**	**348**	*e*	**Pn**	**18 16 54.7**	**+8.0**
	comp=Z,2µm,0.2s						
IMEH	**Mehriz**	**6.22**	**348**	Pn	**Pn**	**18 16 47.9**	**+1.2**
IBAF	**Bafgh**	**6.30**	**356**	Pn	**Pn**	**18 16 48.6**	**+0.8**
IBAF				Sn	**Sn**	**18 17 46.9**	**-13**
IBAF	**Bafgh**	**6.30**	**356**	*e*	**Pb**	**18 17 01.8**	**-2.7**
	comp=Z,798nm,0.1s						
IBAF				*e*Sn	**Sn**	**18 17 46.9**	**-13**
HRDDS		**6.49**	**250**	P	**Pn**	**18 16 49.9**	**-0.6**
ISAD	**Sadrabad**	**6.93**	**343**	*e*Sn	**Sn**	**18 18 00.6**	**-15**
SHAO	**Shalim**	**7.24**	**183**	⇓P	**Pn**	**18 17 01.2**	**+0.4**
	SNR=12						
IGAR	**Garneh**	**7.72**	**335**	*e*Sn	**Sn**	**18 18 25.1**	**-10**
IGAR				*e*		18 18 41.6	
	comp=Z,7µm,0.2s						
KFJS		**7.83**	**293**	P	**Pn**	**18 17 07.7**	**-1.2**
NASN	**Na'in**	**8.02**	**340**	Pn	**Pn**	**18 17 12.0**	**+0.6**
NASN	**Na'in**	**8.02**	**340**	*e*Pn	**Pn**	**18 17 12.3**	**+0.9**
NASN				AML	AML	18 18 43.4	
	comp=N,51nm,0.5s						
IZEF	**Zefreh**	**8.26**	**337**	*e*	**Pn**	**18 17 18.7**	**+3.9**
	comp=Z,468nm,0.1s						
IZEF	**Zefreh**	**8.26**	**337**	Pn	**Pn**	**18 17 14.5**	**-0.3**
IKLH	**Kalahroud**	**8.92**	**335**	Pn	**Pn**	**18 17 24.2**	**+0.4**
IKLH				Sn	**Sn**	**18 18 48.3**	**-16**
IKLH	**Kalahroud**	**8.92**	**335**	*e*Sn	**Sn**	**18 18 48.3**	**-16**
IKLH				*e*		18 19 08.9	
	comp=Z,650nm,0.2s						
SHGR	**Shooshtar-Gavs**	**9.33**	**318**	*e*Pn	**Pn**	**18 17 31.8**	**+2.4**
SHGR	**Shooshtar-Gavs**	**9.33**	**318**	Pn	**Pn**	**18 17 31.0**	**+1.6**
GHVR	**GHOM**	**10.06**	**337**	*e*Pn	**Pn**	**18 17 40.3**	**+0.9**
ASAO	**Ashtian**	**10.62**	**332**	*e*Pn	**Pn**	**18 17 48.1**	**+1.0**
ASAO	**Ashtian**	**10.62**	**332**	Pn	**Pn**	**18 17 48.0**	**+0.9**
IDMV	**Damavand**	**10.84**	**342**	*e*Pn	**Pn**	**18 17 50.3**	**+0.2**
IDMV				*e*		18 17 58.7	
	comp=Z,185nm,0.2s						
DAMV	**Damavand**	**10.90**	**342**	Pn	**Pn**	**18 17 51.0**	**0.0**
DAMV	**Damavand**	**10.90**	**342**	*e*Pn	**Pn**	**18 17 51.8**	**+0.8**
IAFJ	**Afjeh**	**11.19**	**341**	Pn	**Pn**	**18 17 55.3**	**+0.4**
IAFJ	**Afjeh**	**11.19**	**341**	*e*Pn	**Pn**	**18 17 55.5**	**+0.6**
IAFJ				*e*		18 17 58.2	
	comp=Z,418nm,0.2s						
IRAZ	**Razeghan**	**11.40**	**334**	*e*Pn	**Pn**	**18 17 57.1**	**-0.6**
IRAZ				*e*		18 20 17.7	
	comp=Z,284nm,0.3s						
CHTH	**Charan**	**11.41**	**339**	Pn	**Pn**	**18 17 58.0**	**0.0**
CHTH	**Charan**	**11.41**	**339**	*e*Pn	**Pn**	**18 17 58.7**	**+0.7**
IKOM	**Komasi**	**11.57**	**322**	*e*	**Pn**	**18 18 01.9**	**+1.8**
	comp=Z,2µm,0.3s						
IKOM	**Komasi**	**11.57**	**322**	Pn	**Pn**	**18 17 59.8**	**-0.3**
IGHG	**Ghaleghazi**	**12.22**	**320**	Pn	**Pn**	**18 18 07.9**	**-1.1**
ASF	**Jabal al Asfar**	**18.16**	**297**	P	**Pn**	**18 19 27.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=352,slow=10,SNR=8.7						
EIL	**Elat**	**19.25**	**288**	P	**Pn**	**18 19 40.5**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=98,slow=7.0,SNR=7.4						
EIL	**Elat**	**19.25**	**288**	P	**Pn**	**18 19 40.5**	**0.0**
MMAI	**Mount Meron Ar**	**19.61**	**298**	P	**Pn**	**18 19 44.7**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=94,slow=13,SNR=9.2						
MALT	**Malatya**	**19.80**	**315**	*e*P	**Pn**	**18 19 46.7**	**-0.3**
	comp=Z,4.6nm,0.6s						
MALT				*e*S	**Sn**	**18 23 20.9**	**-8.8**
MALT	**Malatya**	**19.80**	**315**	*e*P	**Pn**	**18 19 46.7**	**-0.3**
MALT				*e*S	**Sn**	**18 23 20.9**	**-8.8**
MALT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MALT	**Malatya**	**19.80**	**315**	*e*P	**Pn**	**18 19 46.7**	**-0.3**
	comp=Z,4.6nm,0.6s						
MALT				*e*S	**Sn**	**18 23 20.9**	**-8.8**
KIV	**Kislovodsk**	**21.59**	**333**	*e*P	**P**	**18 20 06.2**	**+1.3**
	comp=Z,22nm,1.1s,mb4.5						
KIV	**Kislovodsk**	**21.59**	**333**	*e*P	**P**	**18 20 04.4**	**-0.4**
KIV				pmax	pmax		
	comp=N,10.0nm,1.1s						
KIV	**Kislovodsk**	**21.59**	**333**	*e*P	**P**	**18 20 06.2**	**+1.4**
	comp=N,22nm,1.1s,mb4.5						
CSS	**Prodhromos**	**21.87**	**302**	*e*P	**P**	**18 20 08.4**	**+0.5**
	comp=N,9.7nm,0.8s,mb4.3						
CSS	**Prodhromos**	**21.87**	**302**	*e*P	**P**	**18 20 08.4**	**+0.4**
	comp=N,9.7nm,0.8s,mb4.3						
AML	**Almayashu**	**22.22**	**37**	*e*P	**P**	**18 20 11.6**	**-0.1**
	comp=N,4.1nm,0.7s,mb4.0						
AML	**Almayashu**	**22.22**	**37**	*e*P	**P**	**18 20 11.6**	**0.0**
	comp=N,4.1nm,0.7s,mb4.0						
EKS2	**Erkin-Say**	**22.63**	**36**	*e*P	**P**	**18 20 18.6**	**+2.6**
	comp=N,3.9nm,0.8s,mb3.9						
EKS2	**Erkin-Say**	**22.63**	**36**	*e*P	**P**	**18 20 18.6**	**+2.6**
	comp=N,3.9nm,0.8s,mb3.9						
UCH	**Uchtor**	**22.73**	**37**	*e*P	**P**	**18 20 18.2**	**+1.2**
	comp=N,3.4nm,0.8s,mb3.8						
UCH	**Uchtor**	**22.73**	**37**	*e*P	**P**	**18 20 18.2**	**+1.2**
	comp=N,3.4nm,0.8s,mb3.8						
AAK	**Ala-Archa**	**23.00**	**37**	*e*P	**P**	**18 20 20.8**	**+0.9**
	comp=N,15nm,1.5s,mb4.2						
AAK	**Ala-Archa**	**23.00**	**37**	*e*P	**P**	**18 20 20.8**	**+1.0**
AAK				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.2						
AAK	**Ala-Archa**	**23.00**	**37**	*e*P	**P**	**18 20 20.8**	**+1.0**
	comp=Z,15nm,1.5s,mb4.2						
TKM2	**Tokmak 2**	**23.79**	**37**	P	**P**	**18 20 28.8**	**+1.0**
	comp=Z,1.6nm,0.6s,mb3.6						
TKM2	**Tokmak 2**	**23.79**	**37**	P	**P**	**18 20 28.8**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
TKM2	**Tokmak 2**	**23.79**	**37**	P	**P**	**18 20 28.8**	**+0.9**
	comp=Z,1.6nm,0.6s,mb3.6						
AKTK	**Aktyubinsk**	**25.15**	**3**	P	**P**	**18 20 40.5**	**+0.2**
AKTK	**Aktyubinsk**	**25.15**	**3**	P	**P**	**18 20 40.5**	**+0.3**
AKTO	**Aktyubinsk**	**25.15**	**3**	P	**P**	**18 20 40.5**	**+0.2**
	comp=Z,8.6nm,0.6s,mb4.5,baz=172,slow=10,SNR=18						
BRVK	**Borovoye**	**29.73**	**17**	*e*P	**P**	**18 21 20.2**	**-1.0**
	comp=Z,2.3nm,0.7s,mb4.0						
BRVK	**Borovoye**	**29.73**	**17**	*e*P	**P**	**18 21 20.2**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
BRVK	**Borovoye**	**29.73**	**17**	*e*P	**P**	**18 21 20.2**	**-1.0**
	comp=Z,2.3nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**29.92**	**37**	P	**P**	**18 21 23.0**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.6,baz=224,slow=8.0,SNR=12						
KURK	**Kurchatov**	**30.75**	**28**	P	**P**	**18 21 29.3**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.2						
KURK	**Kurchatov**	**30.75**	**28**	P	**P**	**18 21 29.3**	**-0.9**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
KURK	**Kurchatov**	**30.75**	**28**	P	**P**	**18 21 29.3**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.2						
MLR	**Muntele Rosu**	**31.50**	**317**	P	**P**	**18 21 37.7**	**+0.7**
	comp=Z,1.7nm,0.5s,mb4.1,baz=165,slow=6.7,SNR=6.9						
MLR	**Muntele Rosu**	**31.50**	**317**⇑	*i*P	**P**	**18 21 39.0**	**+2.0**
AKASG	**Malin Array Be**	**32.71**	**328**	P	**P**	**18 21 46.3**	**-1.2**
	comp=Z,0.5nm,0.5s,mb3.7,baz=136,slow=8.2,SNR=4.9						
BURAR	**Bucovina Array**	**33.01**	**320**⇓	*i*P	**P**	**18 21 50.4**	**+0.2**
BZS	**Buzias**	**34.27**	**315**⇑	*i*P	**P**	**18 22 00.1**	**-1.1**
KWP	**Kalwaria**	**35.48**	**322**	*e*P	**P**	**18 22 10.8**	**-0.8**
	comp=Z,4.2nm,0.5s,mb4.6						
KWP	**Kalwaria**	**35.48**	**322**	*e*P	**P**	**18 22 10.8**	**-0.8**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
KWP	**Kalwaria**	**35.48**	**322**	*e*P	**P**	**18 22 10.8**	**-0.8**
	comp=Z,4.2nm,0.5s,mb4.6						
NVS	**Novosibirsk**	**35.66**	**27**	*e*P	**P**	**18 22 12.6**	**-0.5**
ZAL	**Zalesovo**	**35.71**	**29**	P	**P**	**18 22 13.1**	**-0.4**
ZALV	**Zalesovo Beam**	**35.72**	**29**	P	**P**	**18 22 13.1**	**-0.6**
	comp=Z,2.0nm,0.3s,mb4.5,baz=238,slow=9.4,SNR=15						
GERES	**GERESS Array B**	**40.48**	**317**	P	**P**	**18 22 52.2**	**-1.6**
	comp=Z,0.3nm,0.5s,mb3.3,baz=106,slow=8.4,SNR=6.4						
FINES	**FINESS Array B**	**41.48**	**339**	P	**P**	**18 23 01.2**	**-0.7**
	comp=Z,1.3nm,0.6s,mb3.7,baz=120,slow=8.2,SNR=7.9						
SONM	**Songino Array**	**45.30**	**47**	P	**P**	**18 23 33.4**	**+0.5**
	comp=Z,0.6nm,0.7s,mb3.5,baz=263,slow=8.4,SNR=6.6						
HFS	**Hagfors**	**45.38**	**332**	P	**P**	**18 23 33.0**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.2,baz=128,slow=12,SNR=5.3						
NOA	**NORSAR Array B**	**46.89**	**332**	P	**P**	**18 23 44.2**	**-1.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=116,slow=7.8,SNR=3.3						
KEV	**Kevo**	**47.65**	**347**	*e*P	**P**	**18 23 50.1**	**-0.9**
	comp=Z,40nm,1.2s,mb5.3						
KEV	**Kevo**	**47.65**	**347**	*e*P	**P**	**18 23 50.1**	**-1.0**
KEV				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.3						
KEV	**Kevo**	**47.65**	**347**	*e*P	**P**	**18 23 50.1**	**-1.0**
	comp=Z,40nm,1.2s,mb5.3						
ARCES	**ARCESS Array B**	**47.80**	**346**	P	**P**	**18 23 51.4**	**-0.8**
	comp=Z,1.9nm,0.5s,mb4.4,baz=134,slow=10,SNR=3.9						
TOA0	**Torodi Ar. Sit**	**52.45**	**267**	*e*P	**P**	**18 24 26.5**	**-1.7**
TOA0	**Torodi Ar. Sit**	**52.45**	**267**	*e*P	**P**	**18 24 26.5**	**-1.7**
TORD	**Torodi Ar. Bea**	**52.45**	**267**	P	**P**	**18 24 27.3**	**-1.0**
TORD	**Torodi Ar. Bea**	**52.45**	**267**	P	**P**	**18 24 27.3**	**-1.0**
	comp=Z,3.5nm,0.8s,mb4.3,baz=55,slow=8.9,SNR=11						
TSUM	**Tsumeb**	**57.95**	**224**	P	**P**	**18 25 08.9**	**+1.1**
	comp=Z,3.8nm,1.2s,mb4.3						
TSUM	**Tsumeb**	**57.95**	**224**	P	**P**	**18 25 08.9**	**+1.1**
	comp=Z,3.8nm,1.2s,mb4.3						
DBIC	**Dimbokro**	**60.93**	**263**	P	**P**	**18 25 28.2**	**-0.4**
	comp=Z,3.3nm,0.5s,mb4.8,baz=48,slow=7.5,SNR=9.2						
DBIC	**Dimbokro**	**60.93**	**263**	P	**P**	**18 25 28.2**	**-0.5**
BOSA	**Boshof**	**61.24**	**211**	P	**P**	**18 25 29.9**	**-0.5**
	comp=Z,2.2nm,0.5s,mb4.5,baz=23,slow=8.1,SNR=7.6						
FITZ	**Fitzroy Crossi**	**80.24**	**115**	*e*P	**P**	**18 27 25.6**	**-0.7**
	comp=Z,9.9nm,1.9s,mb4.4						
WRA	**Warramunga Arr**	**88.32**	**113**	P	**P**	**18 28 06.3**	**-1.0**
	comp=Z,2.0nm,0.7s,mb4.4,baz=308,slow=3.9,SNR=21						
WB2	**Warramunga Arr**	**88.33**	**113**	*e*P	**P**	**18 28 06.3**	**-1.1**
ASAR	**Alice Springs**	**89.68**	**116**	P	**P**	**18 28 12.7**	**-1.0**
	comp=Z,1.2nm,0.6s,mb4.4,baz=303,slow=4.7,SNR=22						
YKA	**Yellowknife Ar**	**92.21**	**356**	P	**P**	**18 28 23.8**	**-0.9**
YKA	**Yellowknife Ar**	**92.21**	**356**	P	**P**	**18 28 23.8**	**-0.9**
	comp=Z,0.4nm,0.7s,mb3.9,baz=1.6,slow=5.0,SNR=8.3						
YKA	**Yellowknife Ar**	**92.21**	**356**	P	**P**	**18 28 23.8**	**-1.0**

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*CSEM **10** 18:18:50.7±0.1, 74.11N×835E, h10km, mb4.3/11, Error ellipse: s-maj=3.1km s-min=2.0km az=68.0*
*IDC **10** 18:18:51.7±0.7, 74.14N×879E, h0km, mb3.7/12, mb1 3.8/16, mb1mx3.8/24, mbtmp3.7/16, ML3.4/4, MS3.8/10, Ms1 3.8/10, ms1mx3.6/36, Error ellipse: s-maj=19.1km s-min=11.5km az=50.0*
*ISCJB **10** 18:18:51.5±0.4, 74.11N±004×88E±02, h10km, mb4.1/30, MS3.8/8, Error ellipse: s-maj=8.8km s-min=5.1km az=154.5*
*MOS **10** 18:18:51.9±1.8, 74.19N×891E, h10km, mb4.4/14, Error ellipse: s-maj=33.7km s-min=6.7km az=96.6*
*NEIC **10** 18:18:53.1±0.4, 74.19N×889E, h10km, mb4.4/13, Error ellipse: s-maj=9.9km s-min=5.9km az=69.0*
*HEL **10** 18:18:54.0±0.5, 7430N×963E, h10km, mb4.4(NEIC), ML2.7(BER), ML3.3(NAO)*
*NAO **10** 18:18:55.4±7.1, 74.16N×927E, h27km±77km, ML3.3*
*BER **10** 18:18:56.2±4.8, 7423N×922E, h15km±36km, ML2.7, ML3.3(NAO)*
ISC 10 18:18:53.5±0.3, **7417N**±004×**88E**±02, **h10**km, **n118**, σ**1ˢ26**/130, **mb4.1**/30, **MS3.8**/8, **3C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**4.42**	**21**	*e*P	**Pn**	**18 19 58.7**	**-1.6**
	baz=191,slow=16						
SPA0				*e*S	**Sn**	**18 20 47.0**	**-4.7**
	baz=212,slow=18						
KBS	**Kingsbay**	**4.84**	**7**	Pn	**Pn**	**18 20 03.7**	**-2.5**
KBS				Sn	**Sn**	**18 20 56.5**	**-5.7**
KBS	**Kingsbay**	**4.84**	**7**	*e*P	**Pn**	**18 20 03.6**	**-2.6**
KBS				*e*S	**Sn**	**18 20 57.6**	**-4.6**
KBS	**Kingsbay**	**4.84**	**7**	*e*Pn	**Pn**	**18 20 03.3**	**-2.9**
KBS	**Kingsbay**	**4.84**	**7**	*i* P	**Pn**	**18 20 03.4**	**-2.8**
KBS	**Kingsbay**	**4.84**	**7**	*e*Pn	**Pn**	**18 20 03.3**	**-2.9**
KBS				Sn	**Sn**	**18 20 56.5**	**-5.7**
TRO	**Tromso**	**5.53**	**140**	*e*P	**Pn**	**18 20 14.5**	**-1.2**
TRO				*e*S	**Sn**	**18 21 12.1**	**-7.1**
TRO				AML	AML	18 21 16.4	
	comp=Z,22nm,0.4s						
TRO	**Tromso**	**5.53**	**140**	*e*P	**Pn**	**18 20 14.5**	**-1.1**

TRO				eS	Sn	18 21 12.1	-7.0
JMIC	Jan Mayen	6.09	247	LR	LR	18 22 12.0	
	comp=Z,480nm,20.2s,baz=60,slow=33						
LOF	Lofoten	6.25	164	eP	Pn	18 20 26.4	+0.9
LOF				eS	Sn	18 21 31.6	-5.4
KIF	Kilpisjarvi	6.41	138	eP	Pn	18 20 27.1	-0.6
KIF	Kilpisjarvi	6.41	138	P	Pn	18 20 27.0	-0.7
KTK1	Kautokeino	6.88	132	eP	Pn	18 20 35.3	+1.1
KTK1				eS	Sn	18 21 47.5	-4.8
KTK1				AML	AML	18 21 55.0	
	comp=Z,12nm,0.4s						
KTK1	Kautokeino	6.88	132	eP	Pn	18 20 35.3	+1.2
KTK1				eS	Sn	18 21 47.9	-4.5
KTK1	Kautokeino	6.88	132	P	Pn	18 20 35.2	+1.1
ARA0	ARCESS Array S	6.96	124	Pn	Pn	18 20 32.7	-2.5
	baz=335,slow=14						
ARA0				Sn	Sn	18 21 41.3	-13
	baz=319,slow=22						
ARA0	ARCESS Array S	6.96	124	eP	Pn	18 20 32.7	-2.5
	baz=335,slow=14						
ARCES	ARCESS Array B	6.96	124	Pn	Pn	18 20 32.6	-2.6
	comp=Z,1.8nm,0.3s,baz=324,slow=11,SNR=51						
ARCES				Sn	Sn	18 21 46.1	-8.1
	comp=Z,6.0nm,0.3s,baz=327,slow=22,SNR=11						
ARCES				LR	LR	18 24 06.8	
	comp=Z,566nm,19.9s,baz=259,slow=45						
ARCES	ARCESS Array B	6.96	124	Pn	Pn	18 20 32.7	-2.5
ARCES				Sn	Sn	18 21 46.2	-8.0
NIKU	Nikkaluokta	7.14	147	eP	Pn	18 20 37.5	-0.2
NIKU	Nikkaluokta	7.14	147	P	Pn	18 20 37.4	-0.3
KEV	Kevo	7.14	119	eP	Pn	18 20 35.2	-2.6
KEV	Kevo	7.14	119	ePn	Pn	18 20 35.9	-1.9
	comp=Z,18nm,0.4s						
KEV				eSn	Sn	18 21 47.3	-12
KEV	Kevo	7.14	119	eP	Pn	18 20 35.9	-1.9
KEV				pmax	pmax		
	comp=Z,18nm,0.4s						
KEV	Kevo	7.14	119	ePn	Pn	18 20 35.9	-1.9
	comp=Z,18nm,0.4s						
KUA	Kurravaara	7.26	143	eP	Pn	18 20 39.0	-0.4
LANU	Lannavaara	7.46	139	eP	Pn	18 20 42.1	0.0
LANU	Lannavaara	7.46	139	P	Pn	18 20 42.0	-0.1
HEF	Hetta	7.47	133	eP	Pn	18 20 41.6	-0.7
HEF	Hetta	7.47	133	P	Pn	18 20 41.5	-0.7
SALU	Saltoluokta	7.51	150	eP	Pn	18 20 42.5	-0.4
STOK	Stokkvaagen	8.00	168	eP	Pn	18 20 49.2	-0.3
STOK				eS	Sn	18 22 10.1	-10
MOR8	Moi Rana	8.25	164	eP	Pn	18 20 52.8	-0.2
MOR8				eS	Sn	18 22 16.9	-9.2
MOR8	Moi Rana	8.25	164	eP	Pn	18 20 52.8	-0.2
MOR8				eS	Sn	18 22 16.9	-9.2
MOR8				AML	AML	18 22 27.5	
	comp=Z,9.6nm,0.5s						
SGF	Sodankyl	8.87	131	eP	Pn	18 20 59.4	-2.0
NB2	NORSAR Subarra	13.22	175	eP	Pn	18 22 01.0	+0.1
NB2	NORSAR Subarra	13.22	175	P	Pn	18 22 00.9	0.0
NOA	NORSAR Array B	13.22	175	Pn	Pn	18 22 00.5	-0.3
	comp=Z,0.2nm,0.3s,baz=355,slow=10,SNR=3.4						
HFS	Hagfors	14.21	170	Pn	Pn	18 22 14.6	+0.2
	comp=Z,0.2nm,0.3s,baz=359,slow=12,SNR=3.2						
FIA0	FINESS Array S	14.24	145	eP	Pn	18 22 12.7	-2.0
	baz=1.0,slow=14						
FINES	FINESS Array B	14.24	145	Pn	Pn	18 22 12.5	-2.2
FINES	FINESS Array B	14.24	145	Pn	Pn	18 22 12.5	-2.2
	comp=Z,0.2nm,0.3s,baz=354,slow=10,SNR=10						
SFJD	Kangerlussuaq	20.11	280	LR	LR	18 30 56.3	
	comp=Z,50nm,19.1s,MS2.9,baz=33,slow=36						
MOS	Moscow	21.70	133	eP	P	18 23 45.0	+0.9
MOS				e		18 27 29.9	
MOS				pmax	pmax		
	comp=Z,51nm,1.0s,mb4.9						
MOS	Moscow	21.70	133	eP	P	18 23 45.0	+0.9
	comp=Z,51nm,1.0s,mb4.9						
OBN	Obninsk	22.08	135	P	P	18 23 50.6	+2.4
	comp=Z,63nm,1.3s,mb4.9						
OBN	Obninsk	22.08	135⇑	eP	P	18 23 49.6	+1.4
OBN				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
OBN	Obninsk	22.08	135	eP	P	18 23 49.6	+1.4
	comp=Z,14nm,0.8s,mb4.4						
CLL	Collm	23.01	173	eP	P	18 24 06.0	+7.9
	comp=Z,35nm,1.6s,mb4.5						
CLL				i		18 24 15.4	
CLL	Collm	23.01	173	eP	P	18 24 06.0	+7.9
CLL				pmax	pmax		
	comp=Z,35nm,1.6s,mb4.5						
CLL	Collm	23.01	173	esP	sP	18 24 02.0	-0.2
CLL				ex	x	18 24 11.0	
	comp=Z,35nm,1.6s						
CLL				ePP		18 24 23.0	
MOX	Moxa	23.64	176	eP	P	18 24 07.1	+2.6
	comp=Z,44nm,1.9s,mb4.6						
MOX	Moxa	23.64	176	eP	P	18 24 07.1	+2.6
MOX				pmax	pmax		
	comp=Z,44nm,1.9s,mb4.6						
PVCC	Panska Ves	23.85	171	eP	P	18 24 13.2	+6.7
UPC	Upice	23.94	169	eP	P	18 24 06.8	-0.5
NKC	Novy Kostel	24.07	174	eP	P	18 24 10.5	+2.0
PRU	Pruhonice	24.39	171	eP	P	18 24 19.5	+8.1
PRU				ex	x	18 24 31.0	
RES	Resolute Bay	24.54	322	P	P	18 24 13.2	+0.6
RES				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.3						
RES	Resolute Bay	24.54	322	P	P	18 24 13.2	+0.6
	comp=Z,94nm,1.0s,mb5.3						
AKASG	Malin Array Be	25.07	148	P	P	18 24 16.9	-0.7
	comp=Z,0.7nm,0.5s,mb3.5,baz=341,slow=9.5,SNR=5.4						
VRAC	Vranov	25.17	168	P	P	18 24 20.8	+2.3
	comp=Z,3.0nm,0.7s,mb3.9,baz=12,slow=8.2,SNR=4.2						
VRAC				LR	LR	18 35 19.3	
	comp=Z,275nm,18.3s,MS3.8,baz=353,slow=39						
KHC	Kasperske Hory	25.21	173	eP	P	18 24 22.3	+3.5
GERES	GERESS Array B	25.50	173	P	P	18 24 22.2	+0.8
	comp=Z,0.4nm,0.5s,mb3.2,baz=349,slow=10,SNR=5.9						
ARU	Arti	26.09	105	eP	P	18 24 27.4	+0.7
	comp=Z,12nm,0.8s,mb4.5						
ARU	Arti	26.09	105c	iP	P	18 24 29.5	+2.8
ARU				e		18 25 06.9	
ARU				S	S	18 29 05.4	+7.9
ARU				SS		18 30 07.3	
ARU				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.2						
ARU	Arti	26.09	105	eP	P	18 24 27.5	+0.8
	comp=Z,12nm,0.8s,mb4.5						
TIXI	Tiksi	29.71	34	eP	P	18 24 60.0	+1.0
	comp=Z,18nm,1.6s,mb4.5						
TIXI	Tiksi	29.71	34	iP	P	18 25 00.2	+1.2
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.8s,mb4.1						
TIXI	Tiksi	29.71	34	iP	P	18 25 00.2	+1.2
	comp=Z,7.0nm,1.8s,mb4.1						
MLR	Muntele Rosu	29.77	155	LR	LR	18 37 31.7	
	comp=Z,320nm,20.1s,MS4.0,baz=144,slow=38						
AKTK	Aktyubinsk	31.35	112	P	P	18 25 14.0	+0.4
AKTK				LR	LR	18 40 16.3	
AKTK	Aktyubinsk	31.35	112	P	P	18 25 14.0	+0.4
AKTO	Aktyubinsk	31.35	112	P	P	18 25 14.0	+0.4
	comp=Z,0.8nm,0.4s,mb3.9,baz=318,slow=9.1,SNR=5.3						
AKTO				LR	LR	18 40 16.3	
	comp=Z,203nm,18.0s,MS3.8,baz=350,slow=41						
BRVK	Borovoye	32.23	96	P	P	18 25 21.9	+0.5
	comp=Z,3.7nm,0.9s,mb4.2						
BRVK	Borovoye	32.23	96	P	P	18 25 21.9	+0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
BRVK	Borovoye	32.23	96	P	P	18 25 21.9	+0.5
	comp=Z,3.7nm,0.9s,mb4.2						
KIV	Kislovodsk	33.92	134	eP	P	18 25 38.4	+2.2
KIV				e		18 26 48.8	
KIV				eS	S	18 31 06.1	+5.7
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
KIV	Kislovodsk	33.92	134	eP	P	18 25 38.4	+2.2
	comp=Z,3.0nm,1.0s,mb4.2						
SCHQ	Schefferville	34.55	279	LR	LR	18 39 13.7	
	comp=Z,202nm,18.2s,MS3.9,baz=331,slow=35						
TIP	Timpagrande	35.28	169	P	P	18 25 45.5	-2.4
TIP	Timpagrande	35.28	169	P	P	18 25 45.5	-2.4
ZALV	Zalesovo Beam	35.42	82	P	P	18 25 49.7	+0.7
	comp=Z,0.6nm,0.6s,mb3.7,baz=323,slow=9.3,SNR=3.5						
ZALV				LR	LR	18 43 28.7	
	comp=Z,173nm,19.3s,MS3.8,baz=187,slow=42						
ZAL	Zalesovo	35.43	82	P	P	18 25 49.7	+0.6
INK	Inuvik	35.73	337	P	P	18 25 51.2	-0.3
INK	Inuvik	35.73	337	P	P	18 25 51.2	-0.3
	comp=Z,0.9nm,0.4s,mb4.0,baz=15,slow=15,SNR=4.0						
KURK	Kurchatov	36.62	90	eP	P	18 26 00.1	+0.8
	comp=Z,3.8nm,0.8s,mb4.3						
KURK	Kurchatov	36.62	90⇑	eP	P	18 26 00.4	+1.1
KURK	Kurchatov	36.62	90	eP	P	18 26 00.2	+0.8
	comp=Z,3.8nm,0.8s,mb4.3						
BILL	Bilibino	37.29	14⇓	eP	P	18 26 06.0	+1.2
BILL				e		18 28 22.6	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.3						
BILL	Bilibino	37.29	14	eP	P	18 26 06.0	+1.2
	comp=Z,5.0nm,0.9s,mb4.3						
FCC	Fort Churchill	37.94	304	eP	P	18 26 08.2	-2.2
	comp=Z,4.9nm,1.3s,mb4.1						
FCC	Fort Churchill	37.94	304	eP	P	18 26 08.2	-2.2
FCC				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.1						
FCC	Fort Churchill	37.94	304	eP	P	18 26 08.2	-2.2
	comp=Z,4.9nm,1.3s,mb4.1						
YKA	Yellowknife Ar	38.61	322	P	P	18 26 15.7	-0.3
YKA	Yellowknife Ar	38.61	322	P	P	18 26 15.7	-0.3
	comp=Z,0.8nm,0.8s,mb3.5,baz=10.0,slow=8.4,SNR=11						
YKA	Yellowknife Ar	38.61	322	P	P	18 26 15.7	-0.3
MKAR	Makanchi Array	41.20	89	iP	P	18 26 41.2	+3.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	Makanchi Array	41.20	89	P	P	18 26 38.2	+0.5
	comp=Z,1.4nm,0.8s,mb3.6,baz=5.7,slow=8.6,SNR=7.5						
MKAR				LR	LR	18 47 03.2	
	comp=Z,208nm,20.9s,MS4.0,baz=330,slow=41						
EKS2	Erkin-Say	42.69	100	P	P	18 26 55.9	+6.0
	comp=Z,3.1nm,0.7s,mb4.2						
AAK	Ala-Archa	42.91	99	iP	P	18 26 52.2	+0.5
AAK				pmax	pmax		
	comp=Z,6.0nm,2.1s,mb4.0						
AAK	Ala-Archa	42.91	99	iP	P	18 26 52.2	+0.5
	comp=Z,6.0nm,2.1s,mb4.0						
TKM2	Tokmak 2	42.94	98	P	P	18 26 55.3	+3.3
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
TKM2	Tokmak 2	42.94	98	P	P	18 26 55.3	+3.3
	comp=Z,1.8nm,0.7s,mb3.9						
MMAI	Mount Meron Ar	43.30	147	P	P	18 26 54.0	-1.0
	comp=Z,0.8nm,0.3s,mb3.9,baz=329,slow=43,SNR=8.6						
FFC	Flin Flon	43.39	308	eP	P	18 26 54.4	-1.1
FFC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
FFC	Flin Flon	43.39	308	eP	P	18 26 54.4	-1.1
	comp=Z,2.7nm,0.7s,mb4.1						
ULM	Lac du Bonnet	46.17	301	P	P	18 27 17.0	-0.6
ULM	Lac du Bonnet	46.17	301	P	P	18 27 17.0	-0.6
	comp=Z,1.4nm,0.8s,mb3.9,baz=14,slow=4.2,SNR=4.1						
SONM	Songino Array	46.67	67	P	P	18 27 22.7	+1.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=326,slow=7.0,SNR=10						
SONM				LR	LR	18 50 01.3	
	comp=Z,137nm,18.5s,MS3.9,baz=182,slow=40						
ULN	Ulaanbaatar	46.80	66	eP	P	18 27 23.9	+1.3
	comp=Z,3.7nm,1.0s,mb4.3						
ULN				e		18 27 29.8	
ULN	Ulaanbaatar	46.80	66	eP	P	18 27 23.9	+1.3
ULN				e		18 27 29.8	
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
ULN	Ulaanbaatar	46.80	66	eP	P	18 27 23.9	+1.3
PONG	Pong	53.33	102	eP	P	18 28 20.5	+8.2
TOA0	Torodi Ar. Sit	61.14	188	eP	P	18 29 08.1	+0.4
TOA0	Torodi Ar. Sit	61.14	188	eP	P	18 29 08.1	+0.5
TORD	Torodi Ar. Bea	61.14	188	P	P	18 29 07.8	+0.2
	comp=Z,1.1nm,0.5s,mb4.3,baz=356,slow=6.4,SNR=6.5						
TXAR	Lajitas Array	67.86	299	P	P	18 29 50.8	-0.7
	comp=Z,0.1nm,0.5s,mb3.1,baz=41,slow=6.2,SNR=4.2						
ASAR	Alice Springs	121.90	62	PKP	PKPdf	18 37 45.9	-1.2
	comp=Z,0.3nm,0.6s,baz=355,slow=1.5,SNR=8.5						

IDC 10 18:41:05.8±4.3**, 7448N**×**1020E, h0^{km}, mb4.0**/2**, mb1 3.9**/4**, mb1mx3.4**/20**, mbtmp3.8**/4**, ML2.8**/2**, Error ellipse: s-maj=84.1km s-min=21.8km az=17.0, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	6.84	129	Pn	Pn	18 42 46.8	-0.4
	0.9nm,0.3s,baz=327,slow=11,SNR=28						
ARCES				Sn	Sn	18 44 01.0	-4.6
	0.7nm,0.3s,baz=326,slow=19,SNR=7.9						
FINES	FINESS Array B	14.29	148	Pn	Pn	18 44 27.8	-1.2
	0.0nm,0.3s,baz=339,slow=10,SNR=3.9						
VRAC	Vranov	25.41	170	P	P	18 46 35.3	+0.9
	2.4nm,0.3s,baz=166,slow=8.3,SNR=3.6						
TORD	Torodi Ar. Bea	61.50	189	P	P	18 51 22.7	-1.3
	0.7nm,0.7s,baz=2.0,slow=6.5,SNR=4.6						

MAN 10 18:42:32, 616N×12606E, h148^{km}, mb4.9, ML3.8, MS3.8, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DMPH	Davao City--Mi	1.07	329⇑	eP	Pn	18 42 58.7	+1.5
DMPH				eS	Sn	18 43 29.0	+13
GSPH	General Santos	1.10	266⇑	eP	Pn	18 42 57.0	-0.5
GSPH				eS	Sn	18 43 15.3	-1.6
KCP	Kidapawan	1.28	311⇑	eP	Pn	18 42 60.0	+0.8
KCP				iS	Sn	18 43 21.9	+2.0

IDC 10 18:50:35.9±1.3**, 087N**×**12609E, h0^{km}, mb3.4**/4**, mb1 3.7**/5**, mb1mx3.6**/16**, mbtmp3.6**/5**, ML4.0**/1**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx3.0**/15**, Error ellipse: s-maj=84.3km s-min=19.9km az=73.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	11.26	192	Pn	Pn	18 53 19.3	+1.1
	1.1nm,0.3s,baz=90,slow=9.1,SNR=4.3						
BATI				LR	LR	18 57 49.7	
	comp=Z,225nm,18.3s,baz=67,slow=38						
WRA	Warramunga Arr	22.21	159	P	P	18 55 32.7	-1.4
	1.3nm,0.7s,baz=338,slow=11,SNR=10						
ASAR	Alice Springs	25.54	163	P	P	18 56 07.3	+0.9
	0.6nm,0.4s,baz=345,slow=11,SNR=15						
SONM	Songino Array	49.81	343	P	P	18 59 31.5	+1.1
	0.4nm,0.9s,baz=103,slow=6.4,SNR=2.8						
MKAR	Makanchi Array	59.55	327	P	P	19 00 40.2	-1.0
	0.2nm,0.4s,baz=120,slow=8.3,SNR=4.8						

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*NEIC **10** 19:04:51.0, 2470S×7048W, h48^{km}, MG3.7(GUC), After GUC.*

GUC 10 19:04:51.0±0.7**, 2470S**×**7048W, h48^{km}, ML3.7, 3C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	Antofagasta	1.01	4⇑	iP	Pn	19 05 09.8	+0.9
ANCH				iS	Sn	19 05 23.0	+1.0
ANCH	Antofagasta	1.01	4⇑	iP	Pn	19 05 09.8	+0.9
ANCH				iS	Sn	19 05 23.0	+1.0
ANCH				AML	AML	19 05 24.1	
	comp=N,7μm,0.1s						
CEN1	Los Morros	1.32	11⇓	iP	Pn	19 05 11.1	-2.0
CEN1				iS	Sn	19 05 25.8	-3.8
CEN1				AML	AML	19 05 28.3	
	comp=N,2μm,0.2s						
CDCH	Caldera	2.39	187⇑	iP	Pn	19 05 28.5	+0.9
CDCH				AML	AML	19 06 10.8	
	comp=E,293nm,0.2s						
CPCH	Copiapo	2.65	178	eP	Pn	19 05 32.7	+1.4
LCO	Las Campanas	4.30	183	ePn	Pn	19 05 55.2	+1.2
TLL	Tololo Astrono	5.46	183	eP	Pn	19 06 11.8	+2.1

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*IDC **10** 19:07:39.4±1.5, 168N×12631E, h0^{km}, mb3.8/3, mb1 3.9/4, mb1mx3.6/16, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=107.7km s-min=22.2km az=68.0*

*ISCJB **10** 19:07:47.5±1.2, 16N±0.1×1263E±0.1, h87^{km}±12^{km}, mb3.9/5, Error ellipse: s-maj=26.3km s-min=11.2km az=135.5*

*NEIC **10** 19:07:50.2±4.2, 162N×12626E, h101^{km}±38^{km}, mb4.2/3, Error ellipse: s-maj=47.4km s-min=12.2km az=63.0*

ISC 10 19:07:49.0±1.1**, 15N**±01×**1263E**±01**, h82^{km}**±12^{km}**, n14, σ0^{s}92**/15**, mb3.9**/5**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNE	Ternate	1.34	124⇓	eP	Pn	19 08 08.0	-4.4
TNE				eS	Sn	19 08 30.0	0.0
KKM	Kota Kinabalu	10.97	294	P	Pn	19 10 23.9	+0.9
KSM	Kuching	15.94	270	P	Pn	19 11 28.3	-0.3
FITZ	Fitzroy Crossi	19.53	182	eP	Pn	19 12 10.0	-2.1
	6.4nm,1.2s						
FITZ	Fitzroy Crossi	19.53	182	P	Pn	19 12 09.9	-2.1
	0.3nm,0.3s,baz=4.4,slow=14,SNR=8.4						
WRA	Warramunga Arr	22.77	160	P	P	19 12 44.5	-0.3
	1.6nm,0.3s,mb3.8,baz=340,slow=11,SNR=70						
WB2	Warramunga Arr	22.78	160	eP	P	19 12 44.4	-0.4
ASAR	Alice Springs	26.14	164	P	P	19 13 16.6	+1.0
	0.5nm,0.4s,mb3.3,baz=341,slow=7.8,SNR=23						
ASAR				PcP	PcP	19 16 43.9	+2.7
	0.3nm,0.4s,baz=349,slow=2.2,SNR=4.7						
KLBR	Kellerberrin	33.92	193	eP	P	19 14 25.2	+0.8
	693nm,4.2s						
STKA	Stephens Creek	36.28	158	eP	P	19 14 46.0	+1.4
	8.5nm,2.0s,mb4.3						
MK31	Makanchi Array	59.09	326	eP	P	19 17 40.8	0.0
MKAR	Makanchi Array	59.09	326	P	P	19 17 40.7	-0.1
MKAR	Makanchi Array	59.09	326	P	P	19 17 40.7	-0.1
	0.6nm,0.4s,mb3.9,baz=120,slow=7.3,SNR=12						
KURK	Kurchatov	63.33	328	eP	P	19 18 08.2	-1.1
	3.1nm,0.8s,mb4.3						

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*ISCJB **10** 19:10:26.7±0.4, 4373N±003×10521W±005, h0^{km}, mb3.8/5, Error ellipse: s-maj=5.1km s-min=4.8km az=40.2*

*NEIC **10** 19:10:28.2±0.4, 4377N×105.19W, h0^{km}, ML3.3, Error ellipse: s-maj=5.1km s-min=4.6km az=160.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **10** 19:10:30.2±1.0, 44.17N×10560W, h0^{km}, mb3.8/5, mb1 3.8/7, mb1mx3.6/20, mbtmp3.7/7, ML2.7/2, Error ellipse: s-maj=33.1km s-min=14.1km az=98.0*

ISC 10 19:10:28.3±0.3**, 4377N**±003×**10520W**±004**, h0^{km}, n52, σ0^{s}88**/56**, mb3.8**/5**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	67	ePg	Pg	19 10 46.9	+1.2
PHWY	Pilot Hill	2.48	185	ePn	Pn	19 11 09.3	-0.6
RWWY	Rawlins	2.56	216	ePn	Pn	19 11 10.9	-0.1
LAO	LASA Array	3.00	346	ePn	Pn	19 11 17.1	-0.1
RLMT	Red Lodge	3.21	296	ePn	Pn	19 11 19.6	-0.3
BW06	Boulder Array	3.34	254	ePn	Pn	19 11 21.3	-0.5
LKWY	Lake	3.83	284	ePn	Pn	19 11 29.2	+0.8
LOHW	Long Hollow	3.92	270	ePn	Pn	19 11 29.9	+0.1
ISCO	Idaho Springs	3.98	185	ePn	Pn	19 11 30.9	+0.3
MOOW	Moose Ponds	4.02	272	ePn	Pn	19 11 31.0	0.0
YNR	Norris Junctio	4.05	285	ePn	Pn	19 11 32.4	+0.9
YFT	Old Faithful	4.12	281	ePn	Pn	19 11 34.1	+1.7
REDW	Red Top Meadow	4.13	266	ePn	Pn	19 11 27.8	-4.8
IMW	Indian Meadow	4.16	274	ePn	Pn	19 11 33.1	+0.1
TPAW	Teton Pass	4.19	268	ePn	Pn	19 11 33.3	-0.1
YMR	Madison River	4.24	284	ePn	Pn	19 11 34.6	+0.4
AHID	Auburn Hatcher	4.43	259	ePn	Pn	19 11 38.0	+1.3
QLMT	Earthquake Lak	4.60	285	ePn	Pn	19 11 44.0	+5.0
DGMT	Dagmar	4.75	8	ePn	Pn	19 11 43.4	+2.3
BOZ	Bozeman (W)	4.95	294	ePn	Pn	19 11 42.4	-1.5
HWUT	Hardware Ranch	5.17	247	ePn	Pn	19 11 45.8	-1.1
	14nm,0.5s						
EGMT	Eagleton	5.31	325	ePn	Pn	19 11 47.9	-0.8
	20nm,0.6s						
DLMT	Dillon	5.52	289	ePn	Pn	19 11 52.0	+0.3
	4.7nm,0.4s						
MCMT	McKenzie Canyo	5.59	284	ePn	Pn	19 11 53.2	+0.5
DAU	Daniels Canyon	5.62	235	ePn	Pn	19 11 53.5	+0.4
JLU	Jordanelle	5.62	238	ePn	Pn	19 11 51.5	-1.6
CTU	Camp Tracy	5.76	240	ePn	Pn	19 11 53.2	-1.7
	9.7nm,0.4s						
HVU	Hansel Valley	5.92	253	ePn	Pn	19 11 52.4	-4.8
	6.4nm,0.5s						
SDCO	Great Sand Dun	6.03	182	ePn	Pn	19 11 59.0	+0.4
	4.7nm,0.6s						
PV10	Paradox Valley	6.12	210	ePn	Pn	19 12 00.9	+0.9
SRU	San Rafael	6.14	222	ePn	Pn	19 11 59.2	-1.1
	16nm,0.5s						
PV01	Paradox Valley	6.18	206	ePn	Pn	19 12 01.2	+0.3
ECSD	EROS,Sioux Fal	6.22	87	ePn	Pn	19 12 02.2	+0.9
	8.4nm,0.5s						
TMUT	Trail Mountain	6.35	227	ePn	Pn	19 12 03.5	+0.4
NLU	North Lily Min	6.40	236	ePn	Pn	19 12 03.2	-0.5
CBKS	Cedar Bluff	6.44	138	Pn	Pn	19 12 04.4	+0.1
	16nm,0.4s						
BGU	Big Grassy Mou	6.46	247	ePn	Pn	19 12 03.5	-1.2
CHMT	Chamberlain Mo	6.49	302	ePn	Pn	19 12 05.0	0.0
HLID	Hailey	6.69	271	ePn	Pn	19 12 08.5	+0.8
	2.1nm,0.6s						
MVCO	Mesa Verde	7.02	202	ePn	Pn	19 12 13.9	+1.6
	6.8nm,0.6s						
MSU	Marysvale	7.44	227	ePn	Pn	19 12 17.6	-0.5
AGMN	Agassiz Refuge	7.91	52	ePn	Pn	19 12 20.8	-3.8
	11nm,0.5s						
KSU1	Kansas State U	7.96	123	Pn	Pn	19 12 24.7	-0.5
	16nm,0.7s						
KSU1				ePg	Pg	19 12 54.0	-6.8
ULM	Lac du Bonnet	9.08	41	Pn	Pn	19 12 39.0	-1.5
	0.5nm,0.3s,baz=222,slow=12,SNR=8.5						
ULM				Pg	Pg	19 13 14.3	-7.8
	0.9nm,0.3s,baz=222,slow=16,SNR=6.1						
ULM				Sn	Sn	19 14 22.1	-1.2
	0.2nm,0.3s,baz=282,slow=13,SNR=3.2						
ULM				Lg		19 15 15.4	
	0.1nm,0.3s,baz=146,slow=21,SNR=3.3						
WUAZ	Wupatki	9.52	212	Pn	Pn	19 12 46.7	+0.1
	8.2nm,0.5s						
TXAR	Lajitas Array	14.46	175	Pn	Pn	19 14 01.8	+7.6
	0.0nm,0.3s,baz=357,slow=8.9,SNR=4.0						
TXAR				Pg	Pn	19 14 59.6	+65
	0.1nm,0.3s,baz=5.2,slow=15,SNR=5.5						
TXAR				Sn	Sn	19 16 46.5	+11
	0.2nm,0.3s,baz=276,slow=12,SNR=5.8						
TXAR				Lg		19 18 13.7	
	0.0nm,0.3s,baz=358,slow=22,SNR=3.8						
YKA	Yellowknife Ar	19.55	347	P	Pn	19 14 58.4	0.0
	0.1nm,0.3s,baz=208,slow=21,SNR=4.5						
ARCES	ARCESS Array B	61.37	18	P	P	19 20 45.6	+0.2
	1.0nm,0.7s,mb4.1,baz=308,slow=6.0,SNR=4.3						
FINES	FINESS Array B	67.98	23	P	P	19 21 29.1	+0.4
	0.7nm,0.7s,mb4.0,baz=325,slow=7.0,SNR=2.8						
ZALV	Zalesovo Beam	82.28	354	P	P	19 22 50.5	-0.7
	0.3nm,0.4s,mb3.8,baz=5.0,slow=6.1,SNR=4.0						
SONM	Songino Array	84.62	339	P	P	19 23 03.9	+0.5
	0.2nm,0.6s,mb3.6,baz=11,slow=4.2,SNR=5.0						
MKAR	Makanchi Array	89.58	355	P	P	19 23 27.0	-0.5
	0.4nm,0.6s,mb3.8,baz=10.0,slow=4.7,SNR=5.4						

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*IDC **10** 19:21:49.8±1.3, 1359N×12369E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.4/18, mbtmp3.4/5, Error ellipse: s-maj=163.0km s-min=20.1km az=69.0*

*MAN **10** 19:21:49, 1359N×12297E, h1^{km}, mb4.8, ML3.7, MS3.7*

*ISCJB **10** 19:21:52.1±0.5, 1360N±005×12289E±004, h10^{km}, mb3.4/5, Error ellipse: s-maj=7.2km s-min=4.9km az=34.8*

ISC 10 19:21:52.5±0.5**, 1355N**±005×**12288E**±004**, h10^{km}, n23, σ1^{s}27**/27**, mb3.4**/5**, 4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	0.55	310⇓	iP	Pg	19 22 01.4	-1.8
GQP				iS	Sg	19 22 09.8	-0.7
PVCP	Virac	1.24	88⇓	iP	Pn	19 22 12.2	-3.7
PVCP				iS	Sb	19 22 32.3	+0.2
PVCP	Virac	1.24	88	eP	Pn	19 22 12.2	-3.6
LQP	Lukban	1.42	294⇓	eP	Pn	19 22 18.6	+0.3
OTRP	Odiongan	1.44	216	eP	Pn	19 22 18.3	-0.4
POLP	Polilio Island	1.49	322	eP	Pn	19 22 17.2	-2.1
TGY	Tagaytay City	1.97	287⇓	iP	Pn	19 22 26.9	+1.1
TGY				iS	Sn	19 22 56.6	+6.0
RCP	Roxas	1.98	184	eP	Pn	19 22 26.0	-0.1
RCP				eS	Sn	19 22 55.1	+4.2
CNP	Catarman	2.02	120	eP	Pn	19 22 26.3	-0.3
BALP	Baler	2.52	330	eP	Pn	19 22 33.4	-0.1
LUBP	Lubang	2.57	275	eP	Pn	19 22 35.2	+1.1
GUIM	Jordan	2.92	186	eP	Pn	19 22 34.7	-4.2
BUSP	Coron	3.03	240	eP	Pn	19 22 41.9	+1.4
CUYO	Cuyo Island	3.24	214	eP	Pn	19 22 43.6	+0.2
SCZP	Santa Cruz	3.63	308	eP	Pg	19 22 59.9	-2.2
MSLP	Maasin	3.91	150	eP	Pn	19 22 56.8	+4.2
APYP	Conner	4.57	340	eP	Pn	19 23 03.1	+1.4
ABRA	Dolores	4.58	333	eP	Pn	19 23 03.0	+1.1

WRA	**Warramunga Arr**	**35.13**	**161**	P	**P**	**19 28 43.1**	**-3.3**
	0.3nm,0.7s,mb3.3,baz=347,slow=9.0,SNR=4.3						
SONM	**Songino Array**	**36.84**	**341**	P	**P**	**19 29 01.8**	**+1.1**
	0.3nm,0.7s,mb3.2,baz=153,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**38.52**	**164**	P	**P**	**19 29 12.9**	**-2.3**
	0.2nm,0.6s,mb3.0,baz=341,slow=7.2,SNR=7.2						
MKAR	**Makanchi Array**	**47.43**	**323**	P	**P**	**19 30 28.6**	**+1.5**
	0.2nm,0.4s,mb3.4,baz=115,slow=8.1,SNR=4.2						
ARCES	**ARCESS Array B**	**79.98**	**339**	P	**P**	**19 34 02.3**	**+0.7**
	1.0nm,0.6s,mb3.9,baz=80,slow=8.8,SNR=5.0						

IDC 10 19:27:22.6±6.9**,732S×12902E,h178**^{km}±74^{km}**,mb2.8**/1**, mb1 3.2**/5**,mb1mx3.1**/15**,mbtmp3.1**/5**,Error ellipse: s-maj=68.5km s-min=25.0km az=38.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.02**	**241**	P	Pn	19 28 49.5	-0.2
	5.2nm,0.3s,baz=98,slow=4.0,SNR=17						
BATI				S	Sn	19 29 58.5	+0.1
	1.4nm,0.3s,baz=39,slow=21,SNR=3.9						
FITZ	**Fitzroy Crossi**	**11.21**	**197**	P	Pn	19 29 56.3	-1.5
	0.1nm,0.3s,baz=25,slow=14,SNR=7.9						
FITZ				S	Sn	19 31 53.1	-9.3
	0.2nm,0.3s,baz=254,slow=20,SNR=4.4						
WRA	**Warramunga Arr**	**13.57**	**158**	P	Pn	19 30 29.6	+1.7
	0.4nm,0.3s,baz=342,slow=12,SNR=26						
ASAR	**Alice Springs**	**16.91**	**164**	P	Pn	19 31 08.4	-0.6
	0.2nm,0.3s,baz=339,slow=9.7,SNR=23						
MKAR	**Makanchi Array**	**67.96**	**327**	P	P	19 38 02.6	+0.4
	0.1nm,0.3s,baz=132,slow=4.1,SNR=3.6						

IDC ***10*** *20:11:40.0±3.5,875S×12404E,h45^{km}±34^{km},mb3.8/9, mb1 4.1/12,mb1mx4.0/18,mbtmp3.9/12,ML4.4/3,MS3.2/3, Ms1 3.2/3,ms1mx3.0/25,Error ellipse: s-maj=33.8km s-min=15.6km az=70.0*

NEIC ***10*** *20:11:40.9±1.7,876S×124.11E,h54^{km}±16^{km},mb4.2/6, Error ellipse: s-maj=12.3km s-min=11.8km az=112.0*

ISCJB ***10*** *20:11:43.0±1.3,881S±008×12431E±007,h93^{km}±13^{km}, mb4.0/12,Error ellipse: s-maj=15.5km s-min=9.2km az=37.3*

ISC 10 20:11:43.3±1.4**,879S**±008×**12432E**±007**,h76**^{km}±13^{km}**, n31,**σ1^{s}**18**/36**,mb4.0**/12**,1D,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.55**	**205**	P	**Pn**	**20 12 14.0**	**+4.9**
	351nm,0.3s,baz=38,slow=1.8,SNR=956						
BATI				S	**Sn**	**20 12 32.2**	**+3.6**
	476nm,0.3s,baz=47,slow=6.2,SNR=14						
WSI	**Waingapu**	**4.07**	**257**	⇓eP	**Pn**	**20 12 45.3**	**+2.2**
WSI				eS	**Sn**	**20 13 29.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**9.34**	**172**	eP	**Pn**	**20 13 54.8**	**-0.4**
	15nm,0.3s						
FITZ	**Fitzroy Crossi**	**9.34**	**172**	P	**Pn**	**20 13 54.8**	**-0.4**
	2.5nm,0.3s,baz=5.4,slow=12,SNR=50						
FITZ				S	**Sn**	**20 15 30.8**	**-7.8**
	26nm,0.3s,baz=157,slow=8.1,SNR=28						
MBWA	**Marble Bar**	**13.07**	**199**	ePn	**Pn**	**20 14 44.4**	**-1.5**
MBWA				eSn	**Sn**	**20 16 58.4**	**-11**
WRA	**Warramunga Arr**	**14.72**	**140**	P	**Pn**	**20 15 06.4**	**-1.2**
WRA				S	**Sn**	**20 17 39.3**	**-10**
WRA				LR	LR	20 20 51.9	
WRA	**Warramunga Arr**	**14.72**	**140**	P	**Pn**	**20 15 06.4**	**-1.2**
	1.5nm,0.3s,baz=313,slow=12,SNR=48						
WRA				S	**Sn**	**20 17 39.3**	**-10**
	3.4nm,0.3s,baz=312,slow=23,SNR=19						
WRA				LR	LR	20 20 51.9	
	comp=Z,69nm,18.5s,baz=200,slow=37						
WB2	**Warramunga Arr**	**14.73**	**140**	eP	**Pn**	**20 15 06.5**	**-1.2**
WB2				eS	**Sn**	**20 17 37.8**	**-12**
ASAR	**Alice Springs**	**17.41**	**149**	P	**Pn**	**20 15 41.0**	**-0.2**
	1.3nm,0.3s,baz=319,slow=12,SNR=69						
ASAR				S	**S**	**20 18 45.5**	**-13**
	1.1nm,0.3s,baz=324,slow=20,SNR=16						
COEN	**Coen**	**19.18**	**107**	eP	**Pn**	**20 16 02.6**	**-0.1**
	1.5nm,0.5s						
FORT	**Forrest**	**22.15**	**171**	eP	**P**	**20 16 34.3**	**+1.4**
	22nm,0.7s,mb4.6						
PMG	**Port Moresby**	**22.56**	**93**	ePn	**P**	**20 16 40.8**	**+3.4**
	13nm,1.1s,mb4.2						
PMG	**Port Moresby**	**22.56**	**93**	P	**P**	**20 16 44.5**	**+7.2**
	10nm,0.7s,mb4.2,baz=262,slow=7.0,SNR=6.1						
KLBR	**Kellerberrin**	**23.50**	**194**	eP	**P**	**20 16 45.9**	**-0.5**
CTA	**Charters Tower**	**23.99**	**120**	P	**P**	**20 16 53.3**	**+2.3**
	6.2nm,0.5s,mb4.2,baz=294,slow=12,SNR=14						
CTA				LR	LR	20 26 13.5	
	comp=Z,76nm,20.8s,baz=151,slow=36						
CTAO	**Charters Tower**	**23.99**	**120**	eP	**P**	**20 16 52.6**	**+1.6**
	8.2nm,0.8s,mb4.1						
MUN	**Mundaring**	**24.27**	**197**	eP	**P**	**20 16 52.8**	**-0.6**
NWAO	**Narrogin (SRO)**	**24.90**	**194**	eP	**P**	**20 16 56.7**	**-2.4**
NWAO	**Narrogin (SRO)**	**24.90**	**194**	P	**P**	**20 16 58.0**	**-1.1**
	2.7nm,0.3s,mb4.1,baz=28,slow=7.1,SNR=9.6						
PSI	**Prapat**	**27.82**	**293**	LR	LR	20 30 47.6	
	comp=Z,61nm,19.7s,baz=196,slow=42						
STKA	**Stephens Creek**	**28.02**	**147**	eP	**P**	**20 17 28.7**	**+1.4**
	2.6nm,0.8s,mb3.8						
STKA	**Stephens Creek**	**28.02**	**147**	P	**P**	**20 17 28.6**	**+1.3**
	2.6nm,0.5s,mb4.0,baz=323,slow=11,SNR=9.8						
MJAR	**Matsushiro Arr**	**46.94**	**15**	P	**P**	**20 20 06.1**	**-0.4**
	1.4nm,0.9s,mb3.7,baz=188,slow=9.8,SNR=4.5						
RPZ	**Rata Peaks**	**53.43**	**139**	P	**P**	**20 20 57.6**	**+2.1**
	5.5nm,1.0s,mb4.5,baz=3.5,slow=16,SNR=3.5						
SONM	**Songino Array**	**58.57**	**346**	P	**P**	**20 21 31.9**	**-0.1**
	0.3nm,0.7s,mb3.4,baz=159,slow=8.7,SNR=5.1						
MKAR	**Makanchi Array**	**66.79**	**330**	P	**P**	**20 22 26.1**	**-0.6**
	0.8nm,0.7s,mb3.6,baz=131,slow=7.6,SNR=14						
ZALV	**Zalesovo Beam**	**70.83**	**337**	P	**P**	**20 22 50.4**	**-1.2**
	0.3nm,0.4s,mb3.5,baz=133,slow=8.0,SNR=3.1						
VNDA	**Vanda**	**71.42**	**172**	P	**P**	**20 22 55.6**	**+0.7**
	0.5nm,0.6s,mb3.5,baz=317,slow=8.2,SNR=4.9						
QSPA	**South Pole Qui**	**81.20**	**180**	eP	**P**	**20 23 50.6**	**+0.4**
	3.7nm,1.0s,mb4.2						
LPAZ	**La Paz**	**152.20**	**154**	PKPbc	PKPbc	20 31 32.2	+1.0
LPAZ				PKPab	PKPab	20 31 43.4	+2.4
LPAZ	**La Paz**	**152.20**	**154**	PKPbc	PKPbc	20 31 32.2	+1.0
	0.4nm,0.4s,baz=136,slow=12,SNR=2.7						
LPAZ				PKPab	PKPab	20 31 43.4	+2.4
	1.2nm,0.5s,baz=207,slow=3.4,SNR=7.5						

IDC 10 20:19:37.7±10.0**,3101S×17859W,h133**^{km}±107^{km}**, mb3.0**/2**,mb1 3.3**/3**,mb1mx3.2**/12**,mbtmp3.1**/3**,ML3.7**/1**, Error ellipse: s-maj=93.5km s-min=52.0km az=175.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.06**	**205**	P	Pn	20 21 31.9	+0.1
	1.1nm,0.3s,baz=4.2,slow=15,SNR=3.9						
URZ				S	Sn	20 23 01.6	+0.3
	0.8nm,0.3s,baz=129,slow=20,SNR=6.1						
ASAR	**Alice Springs**	**42.58**	**268**	P	P	20 27 20.6	-0.1
	0.2nm,0.5s,baz=105,slow=7.6,SNR=4.2						
WRA	**Warramunga Arr**	**43.62**	**273**	P	P	20 27 29.0	0.0
	0.3nm,0.3s,baz=111,slow=8.1,SNR=12						
FINES	**FINESS Array B**	**145.54**	**339**	PKPbc	PKPbc	20 38 58.9	-0.8
	0.5nm,0.4s,baz=56,slow=3.4,SNR=14						

DDA ***10*** *20:43:48.1,3592N×3541E,h7^{km},Md2.8*

ISCJB ***10*** *20:43:50.9±1.5,3601N±003×3559E±009,h13^{km}±6^{km}, Error ellipse: s-maj=12.2km s-min=5.6km az=174.1*

CSEM ***10*** *20:43:51.7±0.3,3601N×3583E,h17^{km}±1^{km},Mc1.6,Error ellipse: s-maj=8.7km s-min=3.2km az=88.0*

NSSC ***10*** *20:43:51.9,3602N×3567E,h17^{km}±2^{km}*

ISC 10 20:43:49.8±1.6**,3602N**±004×**3554E**±009**,h3**^{km}±8^{km}**,n16,** σ**0**^{s}**67**/30**,16D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNB	**Al Arnab**	**0.39**	**114**	⇓P	**Pg**	**20 43 58.1**	**+0.9**
ARNB				⇓S	**Sg**	**20 44 03.6**	**+1.4**
SLNF	**Slenfeh**	**0.70**	**127**	⇓P	**Pg**	**20 44 03.2**	**+0.1**
SLNF				⇓S	**Sg**	**20 44 12.7**	**+0.5**
SLNF	**Slenfeh**	**0.70**	**127**	⇓iP	**Pg**	**20 44 03.2**	**0.0**
SLNF				⇓iS	**Sg**	**20 44 12.7**	**+0.5**
BTCH	**Batrach**	**0.75**	**88**	⇓P	**Pg**	**20 44 04.9**	**+0.8**
BTCH				⇓S	**Sg**	**20 44 13.2**	**-0.6**
BTCH	**Batrach**	**0.75**	**88**	⇓iP	**Pg**	**20 44 04.9**	**+0.8**
BTCH				⇓iS	**Sg**	**20 44 13.2**	**-0.6**
COBT	**Iskenderun**	**0.77**	**49**	iP	**Pg**	**20 44 04.8**	**+0.4**
COBT				iS	**Sg**	**20 44 14.3**	**-0.1**
WRDH	**Warideh**	**0.88**	**125**	⇑P	**Pg**	**20 44 06.8**	**+0.3**
WRDH				⇑S	**Sg**	**20 44 17.5**	**-0.4**
WRDH	**Warideh**	**0.88**	**125**	⇑iP	**Pg**	**20 44 06.8**	**+0.2**
WRDH				⇑iS	**Sg**	**20 44 17.5**	**-0.4**
DRWC	**Darouich**	**1.09**	**56**	⇑P	**Pg**	**20 44 10.3**	**-0.4**
DRWC				⇑S	**Sg**	**20 44 23.8**	**-1.1**
DRWC	**Darouich**	**1.09**	**56**	⇑iP	**Pg**	**20 44 10.3**	**-0.4**
DRWC				⇑iS	**Sg**	**20 44 23.8**	**-1.1**
BIDA	**Albida**	**1.19**	**147**	⇓P	**Pg**	**20 44 12.4**	**-0.2**
BIDA				⇓S	**Sg**	**20 44 26.8**	**-1.2**
BIDA	**Albida**	**1.19**	**147**	⇓iP	**Pg**	**20 44 12.4**	**-0.2**
BIDA				⇓iS	**Sg**	**20 44 26.8**	**-1.2**
ANDN	**Andirin**	**1.69**	**22**	iP	**Pn**	**20 44 19.9**	**-0.3**
ANDN				iS	**Sn**	**20 44 43.1**	**+0.9**
SLMH	**Al Salmeh**	**1.94**	**84**	⇓P	**Pn**	**20 44 22.9**	**-0.8**
SLMH	**Al Salmeh**	**1.94**	**84**	⇓iP	**Pn**	**20 44 22.9**	**-0.8**
GZT	**Gaziantep**	**2.10**	**50**	iP	**Pn**	**20 44 25.7**	**-0.2**
GZT				iS	**Sn**	**20 44 52.8**	**+0.2**

BJI 10 20:44:53.4,3900N×12011E,h17^{km}**,ML3.5,2D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DL2	**Dalian**	**1.19**	**94**	⇓iPG	Pg	20 45 12.9	-3.4
DL2				SG	Sg	20 45 27.4	-4.5
DL2				Smax			
	comp=N,2μm,0.5s						
DL2				Smax			
	comp=E,1μm,0.5s						
TIA	**Tai'an**	**3.66**	**221**	PG	Pg	20 46 01.0	-2.4
TIA				SG	Sg	20 46 52.0	+1.2
TIA				Smax			
	comp=N,60nm,0.6s						
TIA				Smax			
	comp=E,59nm,0.8s						
SNY	**Shenyang**	**3.87**	**42**	⇓PG	Pg	20 46 03.9	-3.6
SNY				SG	Sg	20 46 55.9	-1.8
SNY				Smax			
	comp=N,110nm,0.6s						
SNY				Smax			
	comp=E,84nm,0.4s						

GUC 10 20:48:16.8±0.9**,2465S×7062W,h49**^{km}**,ML3.5,2C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.98**	**11**	⇓iP	Pn	20 48 36.2	+1.9
ANCH				iS	Sn	20 48 49.5	+2.4
ANCH				AML	AML	20 48 49.8	
	comp=N,3μm,0.1s						
ANCH				AML	AML	20 48 50.5	
	comp=E,4μm,0.4s						
CEN1	**Los Morros**	**1.31**	**17**	⇑iP	Pn	20 48 36.8	-2.0
CEN1				iS	Sn	20 48 51.2	-4.0
CEN1				AML	AML	20 48 53.5	
	comp=N,502nm,0.4s						
CEN1				AML	AML	20 48 54.0	
	comp=E,611nm,0.4s						
CDCH	**Caldera**	**2.42**	**184**	eP	Pn	20 48 54.4	+0.5
CDCH				AML	AML	20 49 35.2	
	comp=E,141nm,0.5s						
CDCH				AML	AML	20 49 37.1	
	comp=N,153nm,0.3s						
CPCH	**Copiapo**	**2.71**	**175**	⇑iP	Pn	20 48 59.4	+1.6
CPCH				iS	Sn	20 49 30.9	+1.6
CPCH				AML	AML	20 49 42.0	
	comp=E,1μm,0.1s						
CPCH				AML	AML	20 49 43.6	
	comp=N,1μm,0.1s						

IDC 10 21:10:03.3±2.5**,042S×12843E,h0**^{km}**,mb3.1**/3**,mb1 3.4**/3**, mb1mx3.2**/15**,mbtmp3.2**/3**,Error ellipse: s-maj=201.7km s-min=25.6km az=68.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.25**	**164**	P	P	21 14 40.3	0.0
	0.2nm,0.6s,baz=347,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**23.71**	**167**	P	P	21 15 17.2	0.0
	0.6nm,0.8s,baz=344,slow=11,SNR=7.8						
MKAR	**Makanchi Array**	**61.92**	**326**	P	P	21 20 24.8	+0.1
	0.2nm,0.3s,baz=119,slow=8.1,SNR=3.7						

BJI ***10*** *21:12:54.6,5526N×16197E,h40^{km},mB5.6,mb5.5,Ms5.8, Msz5.6*

BGS ***10*** *21:12:55.4,5476N×161.14E,h33^{km},mb5.9,MS5.2*

IDC ***10*** *21:12:55.3±1.9,5530N×16195E,h16^{km}±11^{km},mb5.7/35, mb1 5.7/36,mb1mx5.7/37,mbtmp5.7/36,ML4.9/1,MS5.4/29, Ms1 5.3/29,ms1mx5.2/40,Error ellipse: s-maj=12.2km s-min=7.9km az=121.0*

ISCJB ***10*** *21:12:56.3±0.1,5523N±002×16190E±002,h33^{km}, mb5.9/375,MS5.5/228,Error ellipse: s-maj=2.7km s-min=1.8km az=153.6*

MOS ***10*** *21:12:56.9±0.9,5528N×16175E,h43^{km},mb6.2/137, MS5.5/91,Error ellipse: s-maj=7.7km s-min=4.9km az=77.5*

MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.

NEIC ***10*** *21:12:57.5±0.1,5521N×16186E,h31^{km},mb5.9/265, ME5.7,MS5.5/164,MW5.8,Error ellipse: s-maj=2.8km s-min=1.8km az=176.0,Moment Tensor Solution. s62 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.74; M$_{\theta\theta}$0.98; M$_{\phi\phi}$-4.72; M$_{r\theta}$2.03; M$_{\theta\phi}$-1.87; M$_{\phi r}$2.48; Best double couple: M$_0$5.60000×10^{17} NP1:φ$_s$175.00000°,δ32.00000°, λ56.00000°. NP2:φ$_s$34.00000°,δ64.00000°,λ109.00000°. Principal axes: T 5.0300, Plg65.0000°, Azm338.0000°; N 1.1500, Plg17.0000°, Azm205.0000°; P -6.1800, Plg17.0000°, Azm109.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [III] at Petropavlovsk-Kamchatskiy.

GCMT ***10*** *21:12:58.5±0.1,5507N×16257E,h45^{km},MW5.8/102, Moment Tensor Solution. s102,c226; s93,c280; Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.48±.07; M$_{\theta\theta}$-0.95±.06; M$_{\phi\phi}$-4.53±.06; M$_{r\theta}$2.45±.07; M$_{\theta\phi}$-3.33±.04; M$_{\phi r}$2.30±.07; Best double couple: M$_0$6.89200×10^{17} NP1:φ$_s$200.00000°,δ32.00000°, λ73.00000°. NP2:φ$_s$40.00000°,δ60.00000°,λ100.00000°. Principal axes: T 6.4430, Plg73.0000°, Azm335.0000°; N 0.8980, Plg9.0000°, Azm215.0000°; P -7.3420, Plg14.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

CSEM ***10*** *21:12:58.9,5522N×16204E,h60^{km},ML5.9*

KRSC ***10*** *21:13:00.4±0.1,55.15N×16193E,h42^{km}±32^{km},ML5.8*

SZGRF ***10*** *21:13:02.5,5583N×16233E,h46^{km},mb6.3,Near east coast of Kamchatka Peninsula, Russia*

ISC 10 21:12:59.6±0.1**,5525N**±002×**16189E**±002**,h46**^{km}**, h46**^{km}±1.7^{km}**:pP-P,n1462,**σ**0**^{s}**92**/1444**,mb5.9**/375**, MS5.5**/228**,422C-38D,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**0.98**	**322**	iP	**Pn**	**21 13 20.1**	**+3.2**
TUMR	**Tumrok**	**1.00**	**273**	iP	**Pn**	**21 13 20.1**	**+3.0**
BZMR	**Bezymyannaya**	**1.05**	**311**	iP	**Pn**	**21 13 21.0**	**+3.2**
KMNR	**Kamenistaya**	**1.07**	**299**	iP	**Pn**	**21 13 21.3**	**+3.2**
LGNR	**Loginova**	**1.08**	**321**	iP	**Pn**	**21 13 21.8**	**+3.6**
CIRR	**Tsirk**	**1.08**	**324**	iP	**Pn**	**21 13 21.2**	**+3.0**
KBTR	**Krutoberegovo**	**1.10**	**28**	iP	**Pn**	**21 13 17.4**	**-1.1**
KIRR	**Kirishev**	**1.12**	**309**	iP	**Pn**	**21 13 22.0**	**+3.2**
KPT	**Kopyto**	**1.19**	**308**	iP	**Pn**	**21 13 22.9**	**+3.2**
KRSR	**Krestovskiy**	**1.22**	**323**	iP	**Pn**	**21 13 22.9**	**+2.7**
KLY	**Klyuchi**	**1.27**	**327**	iP	**Pn**	**21 13 22.5**	**+1.6**
BDR	**Baidarnaya**	**1.38**	**344**	iP	**Pn**	**21 13 25.0**	**+2.7**
KOZR	**Kozyr**	**1.39**	**307**	PN	**Pn**	**21 13 26.5**	**+4.0**
KOZ	**Kozyrevsk**	**1.40**	**306**	iP	**Pn**	**21 13 26.5**	**+3.9**
SRKR	**Sorokina**	**1.47**	**344**	iP	**Pn**	**21 13 26.3**	**+2.8**
SRDR	**Sredinnyy**	**1.63**	**312**	iP	**Pn**	**21 13 29.2**	**+3.5**
SPN	**Mys Shipunski**	**2.42**	**208**	iP	**Pn**	**21 13 34.5**	**-2.0**
AVH	**Avacha**	**2.71**	**224**	iP	**Pn**	**21 13 42.0**	**+1.4**
GNL	**Ganaly**	**2.78**	**238**	iP	**Pn**	**21 13 43.8**	**+2.3**
INSR	**Institute**	**2.92**	**223**	eP	**Pn**	**21 13 45.9**	**+2.5**
INSR				iS	**Sn**	**21 14 17.8**	**+0.7**
PET	**Petropavlovsk**	**2.93**	**222**	iPndr		21 13 44.6	
PET				eS	**Sn**	**21 14 20.0**	**+2.5**
PET	**Petropavlovsk**	**2.93**	**222**	κ iPN	**Pn**	**21 13 44.6**	**+1.0**
PET				eS	**Sn**	**21 14 20.0**	**+2.5**
PET				pmax	pmax		
	comp=Z,3μm,2.0s						
PET				pmax	pmax		
	comp=Z,23μm,2.0s						
PET				pmax	pmax		
	comp=Z,16μm,1.0s						
PET				smax			
	comp=E,167μm,1.4s						
PET				smax			
	comp=E,61μm,5.7s						
PET				smax			
	comp=E,117μm,0.9s						
PET				smax			
	comp=N,128μm,0.9s						
PET				smax			
	comp=N,131μm,0.8s						
PET				MLR	MLR		
	comp=Z,74μm,20.0s						
PET	**Petropavlovsk**	**2.93**	**222**	iP	**Pn**	**21 13 44.7**	**+1.1**
PET				iS	**Sn**	**21 14 18.4**	**+0.9**
RUS	**Russkaya**	**3.46**	**217**	iP	**Pn**	**21 13 51.2**	**+0.4**
RUS				iS	**Sn**	**21 14 29.7**	**-0.7**
GRL	**Gorelyy**	**3.52**	**221**	iP	**Pn**	**21 13 53.8**	**+2.1**
MIPR	**Malaya Ipel'ka**	**4.26**	**228**	iP	**Pn**	**21 14 05.5**	**+3.7**
SKR	**Severo-Kuril's**	**5.75**	**220**	ePn	**Pn**	**21 14 22.5**	**+0.3**
	comp=Z,1μm,1.0s						
SKR				iS	**Sn**	**21 15 32.0**	**+5.2**
SKR	**Severo-Kuril's**	**5.75**	**220**	ePN	**Pn**	**21 14 22.5**	**+0.3**
SKR				iS	**Sn**	**21 15 32.0**	**+5.2**
SKR				pmax	pmax		
	comp=N,3μm,1.0s						
SKR				pmax	pmax		
	comp=E,2μm,1.0s						
SKR				pmax	pmax		
	comp=Z,1μm,1.0s						
SKR				smax			
	comp=E,55nm,2.0s						
SKR				MLR	MLR		
	comp=N,25μm,16.0s						
SKR				MLR	MLR		
	comp=E,36μm,16.0s						
SKR				MLR	MLR		
	comp=Z,34μm,16.0s						
MA2	**Magadan**	**7.40**	**310**	iPnr		21 14 48.5	
MA2				eS	**Sn**	**21 16 13.1**	**+5.7**
MA2	**Magadan**	**7.40**	**310**	d iPN	**Pn**	**21 14 48.5**	**+3.7**
MA2				eS	**Sn**	**21 16 13.1**	**+5.7**
MA2				pmax	pmax		
	comp=Z,900nm,1.1s						
MA2				pmax	pmax		
	comp=E,700nm,1.4s						
MA2				MLR	MLR		
	comp=Z,51μm,11.7s						
SMY	**Shemya**	**7.63**	**104**	ePn	**Pn**	**21 14 42.1**	**-5.9**
SMY				eSn	**Sn**	**21 16 02.4**	**-11**
SMY	**Shemya**	**7.63**	**104**	ePN	**Pn**	**21 14 42.7**	**-5.3**
AMKA	**Amchitka**	**11.11**	**103**	ePn	**Pn**	**21 15 30.0**	**-5.6**
BILL	**Bilibino**	**13.00**	**7**	⇑ePn	**Pn**	**21 16 05.7**	**+4.5**
	comp=Z,305nm,0.8s						
BILL				eS	**Sn**	**21 18 29.8**	**+5.7**
BILL	**Bilibino**	**13.00**	**7**	c ePN	**Pn**	**21 16 05.7**	**+4.5**
BILL				eS	**Sn**	**21 18 29.8**	**+5.7**
BILL				pmax	pmax		
	comp=Z,305nm,0.8s						
KUR	**Kuril'sk**	**13.43**	**227**	ePn	**Pn**	**21 16 04.5**	**-2.7**
	comp=Z,860nm,0.8s						
KUR	**Kuril'sk**	**13.43**	**227**	ePN	**Pn**	**21 16 04.5**	**-2.7**
KUR				pmax	pmax		
	comp=Z,2μm,2.0s						
KUR				pmax	pmax		
	comp=N,320nm,0.8s						
KUR				pmax	pmax		
	comp=E,220nm,0.8s						
KUR				pmax	pmax		
	comp=Z,860nm,0.8s						
UGL	**Uglegorsk**	**13.62**	**251**	iP	**Pn**	**21 16 14.7**	**+4.9**
	comp=Z,2μm,0.9s						
UGL	**Uglegorsk**	**13.62**	**251**	α iP	**Pn**	**21 16 14.7**	**+4.9**
UGL				pmax	pmax		
	comp=Z,6μm,4.0s						
UGL				pmax	pmax		
	comp=Z,2μm,0.9s						
UGL				MLR	MLR		
	comp=N,9μm,15.0s						
UGL				MLR	MLR		
	comp=E,18μm,15.0s						
UGL				MLR	MLR		
	comp=Z,17μm,15.0s						
YSS	**Yuzh-Sakhalins**	**14.57**	**243**	iP	**Pn**	**21 16 25.0**	**+2.3**
	comp=Z,600nm,1.0s						
YSS				eS	**Sn**	**21 19 07.0**	**+4.4**
YSS	**Yuzh-Sakhalins**	**14.57**	**243**	α iP	**Pn**	**21 16 25.0**	**+2.3**
YSS				eS	**Sn**	**21 19 07.0**	**+4.4**
YSS				pmax	pmax		
	comp=N,440nm,1.0s						
YSS				pmax	pmax		
	comp=E,600nm,1.0s						
YSS				pmax	pmax		
	comp=Z,600nm,1.0s						
YSS				pmax	pmax		
	comp=N,2μm,8.0s						
YSS				pmax	pmax		
	comp=E,3μm,8.0s						
YSS				pmax	pmax		
	comp=Z,2μm,8.0s						
YSS				smax			
	comp=E,2μm,10.0s						
YSS				smax			
	comp=N,1μm,12.0s						
YSS				MLR	MLR		
	comp=E,11μm,15.0s						
YSS				MLR	MLR		
	comp=Z,13μm,15.0s						
YSS				MLR	MLR		
	comp=N,13μm,16.0s						
YUK	**Yuzh-Kuril'sk**	**15.24**	**229**	eP	**Pn**	**21 16 29.6**	**-1.9**
	comp=N,2μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**15.24**	**229**	eP	**Pn**	**21 16 29.6**	**-1.9**
YUK				pmax	pmax		
	comp=N,880nm,0.5s						
YUK				pmax	pmax		
	comp=E,1μm,0.5s						
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				pmax	pmax		
	comp=E,4μm,1.0s						
YUK				pmax	pmax		
	comp=Z,7μm,1.0s						
YUK				MLR	MLR		
	comp=Z,15μm,17.0s						
YUK				MLR	MLR		
	comp=N,8μm,15.0s						
YUK				MLR	MLR		
	comp=E,18μm,18.0s						
GAMB	**Gambell**	**15.78**	**47**	ePn	**Pn**	**21 16 36.8**	**-1.5**
ASAJ	**Asahikawa**	**16.67**	**236**	P	**Pn**	**21 16 50.3**	**+0.7**
ASAJ						21 19 53.3	
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,16μm,20.5s						
ASAJ	**Asahikawa**	**16.67**	**236**	Pn	**Pn**	**21 16 50.2**	**+0.6**
	comp=Z,6.8nm,0.3s,baz=36,slow=7.3,SNR=78						
ASAJ				Sn	**Sn**	**21 19 53.3**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=339,slow=4.0,SNR=1.7						
ASAJ				LR	LR	21 22 44.9	
	comp=Z,16μm,20.5s,baz=209,slow=35						
HABR	**Khabarovsk**	**17.83**	**259**	⇓iP	**Pn**	**21 17 07.6**	**+3.6**
HABR				pmax	pmax		
	comp=Z,2.0nm,1.5s						
HABR				MLR	MLR		
	comp=Z,14μm,15.3s						
TNA	**Tin City**	**17.93**	**43**	eP	**Pn**	**21 17 05.7**	**+0.6**
YAK	**Yakutsk**	**17.93**	**305**	eP	**Pn**	**21 17 06.6**	**+1.5**
	comp=Z,1μm,1.2s						
YAK				eS	**S**	**21 20 26.2**	**-2.2**
YAK	**Yakutsk**	**17.93**	**305**	eP	**Pn**	**21 17 06.6**	**+1.5**

YAK eS S 21 20 26.2 -2.2
YAK pmax pmax
comp=Z,1μm,1.2s
YAK pmax pmax
comp=N,366nm,1.1s
YAK pmax pmax
comp=E,816nm,1.1s
YAK smax
comp=E,472nm,1.7s
YAK smax
comp=Z,1μm,4.5s
YAK smax
comp=N,811nm,3.2s
YAK MLR MLR
comp=Z,20μm,13.0s
YAK MLR MLR
comp=N,8μm,17.0s
YAK MLR MLR
comp=E,26μm,18.0s
ERM Erimo 18.05 231 Pn **Pn 21 17 05.5 -1.2**
comp=E,6μm,0.5s,SNR=24
ERM Erimo 18.05 231 *i* P **Pn 21 17 05.6 -1.1**
UNV Unalaska Valle 18.31 81⇑ *e*Pn **Pn 21 17 06.5 -3.3**
comp=E,803nm,1.2s
AKUT Akutan 18.64 80 *e*P **Pn 21 17 11.7 -2.1**
comp=E,994nm,1.7s
KLR Kul'dur 19.31 264 *e*P **Pn 21 17 17.0 -4.9**
KLR pmax pmax
comp=N,100nm,1.8s
KLR pmax pmax
comp=E,500nm,1.8s
KLR pmax pmax
comp=Z,560nm,1.8s
KLR pmax pmax
comp=N,2μm,11.0s
KLR pmax pmax
comp=E,2μm,11.0s
KLR pmax pmax
comp=Z,4μm,11.0s
KLR MLR MLR
comp=Z,52μm,13.0s
FALS False Pass 19.76 77 *e*Pn **Pn 21 17 25.9 -1.3**
CLNS Chul'man 20.57 290 *e*P **P 21 17 34.8 +0.7**
CLNS *e* 21 17 50.1
CLNS *e*S **S 21 21 30.6 +9.3**
CLNS *e* 21 21 35.7
CLNS *e*SS 21 22 11.8
CLNS Chul'man 20.57 290 *e*P **P 21 17 34.8 +0.7**
CLNS *e* 21 17 50.1
CLNS *e*S **S 21 21 30.6 +9.3**
CLNS *e* 21 21 35.7
CLNS *e*SS 21 22 11.8
CLNS pmax pmax
comp=Z,558nm,0.8s
CLNS pmax pmax
comp=N,223nm,0.7s
CLNS pmax pmax
comp=E,589nm,0.9s
CLNS smax
comp=N,255nm,1.8s
CLNS smax
comp=E,164nm,1.1s
CLNS MLR MLR
comp=E,10μm,13.0s,MS5.3
CLNS MLR MLR
comp=Z,14μm,13.0s,MS5.5
CLNS MLR MLR
comp=N,3μm,14.0s,MS5.3
NRGR Nerungri 20.69 289 *i* P **P 21 17 36.5 +1.1**
NRGR S **S 21 21 22.3 -1.5**
NRGR smax
comp=E,559nm,1.6s
SDPT Sand Point 21.26 74 *e*P **P 21 17 38.3 -3.2**
comp=E,682nm,1.4s,mb5.8
TIXI Tiksi 21.61 332⇑ *i*P **P 21 17 46.4 +1.2**
comp=E,2μm,1.1s,mb6.3
TIXI *i* S **S 21 21 44.8 +3.2**
TIXI *e*sS sS 21 22 05.5 +6.2
TIXI *e*SS 21 22 14.6
TIXI LR LR
comp=Z,26μm,16.0s,MS5.7
TIXI Tiksi 21.61 332*c i*P **P 21 17 46.4 +1.2**
TIXI *i* S **S 21 21 44.8 +3.2**
TIXI *e**SS sS 21 22 05.5 +6.2
TIXI *e*SS 21 22 14.6
TIXI pmax pmax
comp=Z,1μm,7.2s
TIXI pmax pmax
comp=Z,2μm,1.1s,mb6.3
TIXI pmax pmax
comp=N,646nm,1.1s
TIXI pmax pmax
comp=E,974nm,1.1s
TIXI smax
comp=N,1μm,10.2s
TIXI MLR MLR
comp=N,11μm,16.0s,MS5.7
TIXI MLR MLR
comp=Z,26μm,16.0s,MS5.7
TIXI MLR MLR
comp=E,20μm,17.0s,MS5.7
CHGN Chignik 22.14 71 *e*P **P 21 17 50.5 -0.5**
TTA Tatalina 22.58 53⇑ *e*P **P 21 17 54.9 -0.6**
comp=E,457nm,1.2s,mb5.8
TTA *e*ScP ScP 21 25 21.7 +1.1
TTA Tatalina 22.58 53 *e*P **P 21 17 55.0 -0.5**
SVW2 Sparrevohn 22.84 58⇑ *e*P **P 21 17 57.1 -1.2**
SVW2 *e*PcP PcP 21 21 47.9 +0.2
VLA Vladivostok 22.86 250 *e*P **P 21 17 55.0 -3.6**
comp=E,113nm,1.6s,mb5.0
VLA *e*pP 21 18 10.6
VLA *e*S **S 21 22 02.3 -2.4**
VLA LR LR
comp=Z,16μm,17.8s,MS5.5
VLA Vladivostok 22.86 250 *e*P **P 21 17 55.0 -3.6**
VLA *e**PP 21 18 10.6
VLA *e*S **S 21 22 02.3 -2.4**
VLA pmax pmax
comp=Z,113nm,1.6s,mb5.0
VLA MLR MLR
comp=Z,16μm,17.8s,MS5.5
MDJ Mudanjiang 23.14 256 P **P 21 17 59.7 -1.9**
MDJ AP 21 18 11.1
MDJ XP sP 21 18 16.3 -2.1
MDJ S **S 21 22 09.3 0.0**
MDJ PCS PcS 21 25 28.0 +0.4
MDJ SCS ScS 21 29 09.4 +1.1
MDJ AMB AMB
comp=Z,112nm,1.3s,mb5.1
MDJ LR LR
comp=N,8μm,18.1s,MS5.4
MDJ LR LR
comp=E,10μm,19.7s,MS5.4
MDJ LR LR
comp=Z,13μm,21.9s,MS5.3
MDJ Mudanjiang 23.14 256⇑ *i*P **P 21 17 58.0 -3.6**
comp=Z,322nm,1.4s,mb5.6
MDJ *e*PcP PcP 21 21 48.9 +0.3
MDJ LR LR
comp=Z,14μm,21.0s,MS5.4
IMA2 Indian Mountai 23.75 45⇑ *i*P **P 21 18 06.1 -1.0**
IMA2 *e*PcP PcP 21 21 49.8 +0.4
IMA2 *e*S **S 21 22 24.4 +5.6**
IMA2 *e*ScP ScP 21 25 23.6 0.0
MAJO Matsushiro 24.73 231⇑ *i*P **P 21 18 15.9 -0.4**
comp=Z,1μm,0.9s,mb6.5
MAJO *e*PcP PcP 21 21 51.8 -0.3
MAJO LR LR
comp=Z,7μm,22.0s,MS5.1
MAJO Matsushiro 24.73 231 *e*P **P 21 18 16.4 +0.1**
MAT Matsushiro 24.73 231 P **P 21 18 16.1 -0.2**
MAT S **S 21 22 36.0 +1.0**
MJAR Matsushiro Arr 24.73 231 P **P 21 18 16.9 +0.6**
comp=Z,528nm,0.9s,mb6.1,baz=31,slow=7.2,SNR=651
MJAR S **S 21 22 41.3 +6.3**
comp=Z,2.5nm,0.8s,baz=27,slow=11,SNR=3.1
MJAR ScS ScS 21 29 13.7 -1.1
comp=Z,2.7nm,1.0s,baz=298,slow=5.5,SNR=4.3
KDAK Kodiak Island 24.88 65 P **P 21 18 16.6 -1.0**
comp=Z,1μm,0.9s,mb6.4,SNR=11
KDAK Kodiak Island 24.88 65 *e*P **P 21 18 16.2 -1.4**
KDAK LR LR
comp=Z,2μm,21.0s,MS4.7
KDAK Kodiak Island 24.88 65 P **P 21 18 16.1 -1.4**
comp=Z,82nm,0.8s,mb5.3,baz=289,slow=1.2,SNR=30
KDAK LR LR 21 27 34.4
comp=Z,9μm,21.8s,MS5.2,baz=280,slow=35
SLKM Skilak Lake 25.52 58 *e*P **P 21 18 22.8 -0.6**
SLKM *e*PcP PcP 21 21 52.8 -0.7
MCK McKinley 25.74 51⇑ *i*P **P 21 18 24.0 -1.3**
comp=Z,234nm,1.1s,mb5.6
MCK *e*PcP PcP 21 21 52.7 -1.1
MCK LR LR
comp=Z,3μm,19.0s,MS4.9
MCK McKinley 25.74 51 *e*P **P 21 18 24.5 -0.8**
MCK pmax pmax
comp=E,660nm,2.2s,mb5.8
PMR Palmer 25.88 56 *e*P **P 21 18 25.1 -1.5**
comp=Z,121nm,1.1s,mb5.3
PMR *e*PcP PcP 21 21 53.9 -0.4
PMR Palmer 25.88 56 *e*P **P 21 18 25.7 -0.9**
CN2 Changchun 25.97 259 *e*P **P 21 18 25.3 -2.3**
CN2 *e*XP sP 21 18 42.5 -2.5
CN2 *e*S **S 21 22 50.3 -4.4**
CN2 AMB AMB
comp=Z,30nm,0.7s,mb4.9
CN2 AMB AMB
comp=Z,700nm,4.0s
CN2 LR LR
comp=N,7μm,14.0s,MS5.7
CN2 LR LR
comp=E,13μm,14.0s,MS5.7
CN2 LR LR
comp=Z,6μm,19.0s,MS5.1
BOD Bodaibo 26.09 296 *e*P **P 21 18 26.9 -1.6**
comp=Z,134nm,1.1s,mb5.4
BOD Bodaibo 26.09 296 *e*P **P 21 18 26.9 -1.6**
BOD pmax pmax
comp=Z,134nm,1.1s,mb5.4
COLA College 26.15 48⇑ *i*P **P 21 18 28.2 -0.8**
comp=Z,280nm,1.2s,mb5.7
COLA *e*PcP PcP 21 21 52.8 -2.0
COLA LR LR
comp=Z,8μm,20.0s,MS5.2
COLA College 26.15 48⇑ *i*P **P 21 18 28.3 -0.7**
HIA Hailar 26.16 274 *i* P **P 21 18 28.8 -0.4**
HIA LR LR
comp=Z,15μm,19.0s,MS5.5
HIA Hailar 26.16 274 *i* P **P 21 18 28.7 -0.5**
SML Sawmill 26.22 55 *e*P **P 21 18 28.0 -1.7**
SML *e* pP 21 18 36.6 -5.0
SML Sawmill 26.22 55 *e*P **P 21 18 29.2 -0.5**
JHJ Hachijo jima 2 27.00 224 P **P 21 18 35.9 -1.0**
comp=Z,832nm,1.0s,mb6.2,baz=109,slow=4.5,SNR=7.2
EYAK Cordova Ski Ar 27.68 57 *e*P **P 21 18 41.1 -1.7**
comp=Z,200nm,1.2s,mb5.6
EYAK *e* pP 21 18 53.8 -1.1
MENT Mentasta 28.17 52 *e*P **P 21 18 46.7 -0.4**
SNY Shenyang 28.30 258⇑ P **P 21 18 45.8 -2.6**
SNY AP pP 21 18 59.1 -1.4
SNY XP sP 21 19 07.4 +1.4
SNY S **S 21 23 24.1 -7.3**
SNY AMB AMB
comp=Z,43nm,1.1s,mb5.0
SNY LR LR
comp=N,10μm,14.4s,MS5.7
SNY LR LR
comp=E,11μm,15.6s,MS5.7
SNY LR LR
comp=Z,11μm,17.2s,MS5.5
CIT Chita 28.38 284 *e*P **P 21 18 47.4 -1.7**
CIT *e* pP 21 19 01.8 +0.6
CIT *e* 21 19 43.9
EGAK Eagle 29.01 48 *e*P **P 21 18 52.9 -1.6**
EGAK LR LR
comp=Z,7μm,21.0s,MS5.2
KSRS Korea Array 29.03 246 P **P 21 18 54.6 -0.4**
comp=Z,38nm,0.7s,mb5.2,baz=39,slow=8.8,SNR=62
KSRS PcP PcP 21 22 03.5 +1.2
comp=Z,69nm,1.0s,baz=11,slow=1.9,SNR=26
KSRS LR LR 21 30 03.4
comp=Z,7μm,20.4s,MS5.2,baz=51,slow=35
INCN Inchon 29.69 248 *e*P **P 21 18 59.3 -1.5**
comp=Z,126nm,1.2s,mb5.5
INCN LR LR
comp=Z,5μm,19.0s,MS5.2
DAWY Dawson 29.88 49 *e*P **P 21 19 01.3 -0.9**
JNU Nakatsue 30.94 237 P **P 21 19 13.2 +1.2**
comp=Z,146nm,0.9s,mb5.8,baz=34,slow=9.9,SNR=33
JNU LR LR 21 32 22.9
comp=Z,5μm,21.9s,MS5.2,baz=31,slow=38
DL2 Dalian 31.38 256 P **P 21 19 14.6 -1.1**
DL2 AP pP 21 19 24.1 -3.8
DL2 PCP PcP 21 22 09.0 +0.6
DL2 S **S 21 24 16.6 -3.1**
DL2 XS sS 21 24 36.6 -3.5
DL2 AMB AMB
comp=Z,70nm,0.9s,mb5.5
DL2 AMB AMB
comp=Z,190nm,6.5s
DL2 LR LR
comp=N,4μm,19.5s,MS5.3
DL2 LR LR
comp=E,5μm,19.9s,MS5.3
DL2 LR LR
comp=Z,5μm,17.2s,MS5.3
INK Inuvik 31.53 40 *e*P **P 21 19 16.4 -0.3**
comp=Z,18μm,1.5s
INK *e*PP PP 21 20 28.9 +0.7
INK *e*PcP PcP 21 22 08.1 -0.2
INK *e*ScP ScP 21 25 49.7 +2.3
INK Inuvik 31.53 40 P **P 21 19 16.8 +0.1**
comp=Z,122nm,1.0s,mb5.7,baz=282,slow=7.5,SNR=190
INK PcP PcP 21 22 08.2 -0.1
comp=Z,46nm,1.0s,baz=278,slow=8.2,SNR=5.0
INK ScP ScP 21 25 48.4 +1.1
comp=Z,12nm,1.1s,baz=95,slow=28,SNR=6.7
CBIJ Chichi jima 31.57 215 P **P 21 19 18.0 +0.5**
comp=Z,531nm,0.9s,mb6.4,baz=33,slow=6.9,SNR=14
CBIJ LR LR 21 34 02.0
comp=Z,978nm,18.3s,MS4.5,baz=319,slow=40
SKAG Skagway 33.01 56 *e*P **P 21 19 30.5 +0.7**
comp=Z,330nm,1.4s,mb6.1
IRK Irkutsk 33.37 289 *e*P **P 21 19 29.9 -3.1**
comp=Z,132nm,2.2s,mb5.5
IRK *e* 21 20 49.0
IRK *e* 21 22 08.2
IRK Irkutsk 33.37 289 *e*P **P 21 19 29.9 -3.1**
IRK *e* 21 20 49.0
IRK *e* 21 22 08.2
IRK pmax pmax
comp=Z,132nm,2.2s,mb5.5
BJI Beijing 33.66 262 P **P 21 19 34.2 -1.5**
BJI XP sP 21 19 51.2 -2.1
BJI PP PP 21 20 51.2 -1.1
BJI PCP PcP 21 22 15.2 +0.6
BJI S **S 21 24 55.1 -0.2**
BJI XS sS 21 25 14.6 -1.1
BJI PCS PcS 21 25 59.5 -1.0
BJI SCS ScS 21 29 57.4 +0.9
BJI AMB AMB
comp=Z,18nm,1.1s,mb4.9
BJI AMB AMB
comp=Z,615nm,10.8s
BJI LR LR
comp=N,7μm,18.2s,MS5.8
BJI LR LR
comp=E,13μm,17.4s,MS5.8
BJI LR LR
comp=Z,12μm,16.8s,MS5.7
BJI Beijing 33.66 262 P **P 21 19 34.2 -1.5**
comp=Z,18nm,1.1s,mb4.9
BJI sP sP 21 19 51.2 -2.1
BJI PP PP 21 20 51.2 -1.1
BJI PcP PcP 21 22 15.2 +0.6
BJI S **S 21 24 55.1 -0.2**
BJI sS sS 21 25 14.6 -1.1
BJI PcS PcS 21 25 59.5 -1.0
BJI SS SS 21 27 21.5 -0.2
BJI ScS ScS 21 29 57.4 +0.9
BJI LR LR
comp=Z,12μm,16.8s,MS5.7
BJI Beijing 33.66 262 P **P 21 19 34.2 -1.5**
BJI *SP sP 21 19 51.2 -2.1
BJI 21 20 51.2
BJI 21 22 15.2
BJI S **S 21 24 55.1 -0.2**
BJI *SS sS 21 25 14.6 -1.1
BJI SS SS 21 27 21.5 -0.2
BJI 21 29 57.4
BJT Baijiatuau 33.68 262 *e*P **P 21 19 33.5 -2.3**
comp=Z,40nm,1.1s,mb5.3
BJT *e*PcP PcP 21 22 14.4 -0.3
BJT LR LR
comp=Z,13μm,19.0s,MS5.7
BJT Baijiatuau 33.68 262 *e*P **P 21 19 33.6 -2.3**
BJT *e* 21 22 14.4
BJT pmax pmax
comp=Z,40nm,1.1s
BJT MLR MLR
comp=Z,13μm,19.0s
SIT Sitka 33.93 61 *e*P **P 21 19 38.5 +0.7**
comp=Z,446nm,1.3s,mb6.2
SIT LR LR
comp=Z,6μm,22.0s,MS5.3
SIT Sitka 33.93 61 *e*P **P 21 19 39.3 +1.5**
TLY Talaya 33.98 289 P **P 21 19 38.5 +0.1**
comp=Z,234nm,0.9s,mb6.1,SNR=13
TLY Talaya 33.98 289 *e*P **P 21 19 35.7 -2.7**
TLY *e* 21 21 09.0
TLY *e*SS SS 21 27 37.7 +10
TLY Talaya 33.98 289 *e*P **P 21 19 35.7 -2.7**
TLY *e* 21 21 09.0
TLY *e*SS SS 21 27 37.7 +10
TLY pmax pmax
comp=Z,55nm,1.2s,mb5.4
TLY MLR MLR
comp=Z,16μm,17.0s,MS5.8
TLY Talaya 33.98 289 P **P 21 19 38.5 +0.1**
SNR=23
ULN Ulaanbaatar 34.09 281⇑ *e*P **P 21 19 38.0 -1.3**
comp=Z,24nm,0.8s,mb5.2
ULN *e*ScP ScP 21 25 59.3 +2.8
ULN LR LR
comp=Z,6μm,19.0s,MS5.4
ULN Ulaanbaatar 34.09 281 *i* P **P 21 19 38.2 -1.1**
ULN Ulaanbaatar 34.09 281 P **P 21 19 38.8 -0.5**
SNR=8.1
SONM Songino Array 34.47 281 P **P 21 19 42.7 +0.1**
SONM 21 21 03.1
SONM 21 22 17.3
SONM Songino Array 34.47 281 P **P 21 19 42.7 0.0**
comp=Z,13nm,0.7s,mb5.0,baz=62,slow=8.0,SNR=73
SONM PP PP 21 21 03.1 +2.0
comp=Z,10nm,1.1s,baz=83,slow=12,SNR=1.7
SONM PcP PcP 21 22 17.3 +0.5
comp=Z,53nm,0.9s,baz=73,slow=1.8,SNR=14
SONM ScP ScP 21 26 00.9 +3.0
comp=Z,9.8nm,1.0s,baz=101,slow=1.5,SNR=7.0
SONM LR LR 21 35 16.6
comp=Z,8μm,18.7s,MS5.5,baz=56,slow=39
ZAK Zakamensk 34.84 287 *e*P **P 21 19 45.2 -0.6**
comp=Z,31nm,1.2s,mb5.1
ZAK *e* 21 22 18.0
ZAK Zakamensk 34.84 287 *e*P **P 21 19 45.2 -0.6**
ZAK *e* 21 22 18.0
ZAK pmax pmax
comp=Z,31nm,1.2s,mb5.1
MOY Mondy 35.42 290 *e*P **P 21 19 50.6 -0.2**
comp=Z,76nm,1.4s,mb5.4
MOY *e* 21 21 16.0
MOY Mondy 35.42 290 *e*P **P 21 19 50.6 -0.2**
MOY *e* 21 21 16.0
MOY pmax pmax
comp=Z,76nm,1.4s,mb5.4
WRAK Wrangell Islan 35.69 60⇑ *e*P **P 21 19 54.1 +1.2**
comp=Z,178nm,1.3s,mb5.8
WRAK LR LR
comp=Z,6μm,19.0s,MS5.4
HHC Hu-ho-hao-te 35.76 268 *e*P **P 21 19 52.6 -1.2**
HHC AP pP 21 20 04.8 -1.2
HHC XP sP 21 20 10.1 -1.3
HHC PP PP 21 21 14.3 -1.1
HHC PCP PcP 21 22 20.9 +0.2
HHC S **S 21 25 25.2 -2.2**
HHC XS sS 21 25 44.7 -3.2
HHC SCP ScP 21 26 02.0 -0.7
HHC PCS PcS 21 26 06.6 -1.3
HHC SS SS 21 27 45.9 -18
HHC SCS ScS 21 30 04.7 -3.0
HHC AMB AMB
comp=Z,43nm,1.1s,mb5.3
HHC AMB AMB
comp=Z,369nm,5.2s
HHC LR LR
comp=N,6μm,11.9s,MS5.7
HHC LR LR
comp=E,8μm,16.7s,MS5.7
HHC LR LR
comp=Z,11μm,15.8s,MS5.7
TIA Tai'an 35.81 257 *e*P **P 21 19 51.9 -2.3**
TIA AMB AMB
comp=Z,74nm,1.0s,mb5.6
DLBC Dease Lake 35.94 56 *e*P **P 21 19 56.6 +1.5**
BTO Baotou 36.80 269 *e*P **P 21 20 01.9 -0.8**
TIY Taiyuan 37.38 263 P **P 21 20 04.2 -3.4**
TIY S **S 21 25 44.6 -7.7**
TIY LR LR
comp=N,5μm,12.4s,MS5.5
TIY LR LR
comp=E,3μm,15.1s,MS5.5
TIY LR LR
comp=Z,6μm,14.3s,MS5.5
JOW Kunigami 37.42 234 P **P 21 20 08.9 +0.8**
comp=Z,306nm,0.7s,mb6.2,baz=36,slow=8.0,SNR=30
JOW PcP PcP 21 22 26.1 +0.2
comp=Z,146nm,1.0s,baz=139,slow=3.7,SNR=4.9
SSE Sheshan 37.47 247 P **P 21 20 08.1 -0.3**
SSE XP sP 21 20 26.8 +0.7
SSE PCP PcP 21 22 26.9 +0.9
SSE S **S 21 25 54.3 +0.6**
SSE AMB AMB
comp=Z,58nm,0.9s,mb5.4
SSE AMB AMB
comp=Z,478nm,7.1s
SSE LR LR
comp=N,3μm,19.8s,MS5.2
SSE LR LR
comp=E,3μm,19.8s,MS5.2
SSE LR LR
comp=Z,5μm,17.8s,MS5.3
SSE Sheshan 37.47 247 P **P 21 20 08.1 -0.3**
comp=Z,58nm,0.9s,mb5.4
SSE sP sP 21 20 26.8 +0.7
SSE PcP PcP 21 22 26.9 +0.9
SSE S **S 21 25 54.3 +0.6**
SSE sS sS 21 26 17.1 +2.9
SSE LR LR
comp=Z,5μm,17.8s,MS5.3
NJ2 Nanjing 37.97 250 *e*P **P 21 20 11.2 -1.4**
NJ2 AP pP 21 20 25.7 +0.8
NJ2 XP sP 21 20 29.8 -0.5
NJ2 PP PP 21 21 39.8 0.0
NJ2 S **S 21 25 58.5 -2.7**
NJ2 XS sS 21 26 18.0 -3.8
NJ2 AMB AMB
comp=Z,160nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,600nm,5.6s
NJ2 LR LR
comp=N,10μm,15.1s,MS5.9
NJ2 LR LR
comp=E,7μm,14.1s,MS5.9
NJ2 LR LR
comp=Z,7μm,14.1s,MS5.6
ALE Alert 40.64 8 P **P 21 20 34.0 -0.4**
comp=Z,626nm,1.1s,mb6.2,SNR=26
YKW3 Yellowknife Ar 40.84 45 *e*P **P 21 20 35.5 -0.6**
YKA Yellowknife Ar 40.87 45 P **P 21 20 36.3 -0.2**
YKA PcP PcP 21 22 36.1 -0.1
YKA ScP ScP 21 26 22.2 +0.5
YKA Yellowknife Ar 40.87 45 P **P 21 20 36.3 -0.2**
YKA 21 22 36.1
YKA Yellowknife Ar 40.87 45 P **P 21 20 36.3 -0.2**
comp=Z,100nm,0.8s,mb5.5,baz=299,slow=8.0,SNR=796
YKA PcP PcP 21 22 36.1 -0.1
comp=Z,26nm,0.9s,baz=306,slow=3.1,SNR=11
YKA ScP ScP 21 26 22.2 +0.5
comp=Z,4.1nm,1.0s,baz=292,slow=3.7,SNR=5.1
YKA PKiKP PKiKP 21 29 42.9 -1.4
comp=Z,2.5nm,0.9s,baz=271,slow=0.9,SNR=10.0
YKA LR LR 21 38 25.6
comp=Z,1μm,20.4s,MS4.8,baz=220,slow=38
RES Resolute Bay 40.92 23⇑ *i*P **P 21 20 36.4 -0.4**
RES *e*PcP PcP 21 22 35.8 -0.4
RES Resolute Bay 40.92 23 *e*P **P 21 20 36.8 0.0**

WHN **Wuhan** 41.58 254⇓*i*P **P** 21 20 41.0 -1.6
WHN S **S** 21 26 55.9 +0.6
WHN AMB AMB
comp=Z,166nm,0.9s,mb5.7
WHN LR LR
comp=Z,10µm,15.4s,MS5.8
XAN Xi'an 42.00 262 P **P** 21 20 43.8 -2.2
XAN PP PP 21 22 24.7 +1.0
XAN S **S** 21 27 07.2 +5.8
XAN AMB AMB
comp=Z,27nm,1.4s,mb4.7
XAN LR LR
comp=N,5µm,14.2s,MS5.8
XAN LR LR
comp=E,8µm,15.2s,MS5.8
XAN LR LR
comp=Z,7µm,15.2s,MS5.7
TATO Taipei 42.27 241 *e*P **P** 21 20 51.4 +3.1
comp=Z,63nm,0.8s,mb5.3
TATO LR LR
comp=Z,4µm,22.0s,MS5.2
ZALV Zalesovo Beam 42.52 302 P **P** 21 20 48.2 -1.8
comp=Z,25nm,1.0s,mb4.9,baz=59,slow=6.1,SNR=42
ZALV PP PP 21 22 29.3 +0.4
comp=Z,24nm,0.9s,baz=67,slow=8.2,SNR=5.8
ZALV PcP PcP 21 22 40.1 -1.7
comp=Z,97nm,1.0s,baz=67,slow=3.9,SNR=11
ZALV ScP ScP 21 26 31.4 +2.9
comp=Z,10.0nm,0.9s,baz=28,slow=6.7,SNR=4.7
ZALV LR LR 21 40 08.3
comp=Z,7µm,19.8s,MS5.6,baz=44,slow=38
YHNB Yeheng 42.58 241 *e*P **P** 21 20 49.9 -1.0
comp=Z,53nm,0.8s,mb5.3
NVS Novosibirsk 42.78 303⇑*i*P **P** 21 20 50.8 -1.4
comp=Z,224nm,1.2s,mb5.8
NVS *e*pP pP 21 21 07.1 +2.5
NVS *e* 21 22 34.5
NVS *e*S **S** 21 27 06.6 -5.9
NVS *e*SSS 21 30 53.0
NVS Novosibirsk 42.78 303⇑*i*P **P** 21 20 50.8 -1.4
NVS *e*PP pP 21 21 07.1 +2.5
NVS *e* 21 22 34.5
NVS *e*S **S** 21 27 06.6 -5.9
NVS *e*SSS 21 30 53.0
NVS pmax pmax
comp=Z,224nm,1.2s,mb5.8
NVS pmax pmax
comp=N,116nm,1.5s
NVS pmax pmax
comp=E,213nm,1.3s
NVS pmax pmax
comp=Z,395nm,1.9s,mb5.8
NVS pmax pmax
comp=E,340nm,2.1s
NVS smax
comp=N,107nm,2.0s
NACB Ninganchiao 42.88 240 *e*P **P** 21 20 52.9 -0.4
comp=N,48nm,0.8s,mb5.3
NACB *e*PcP PcP 21 22 44.5 +1.0
GTA Gaotai 43.44 275⇑*i*P **P** 21 20 56.7 -0.9
GTA AP pP 21 21 08.9 -1.2
GTA XP sP 21 21 14.3 -1.1
GTA PP PP 21 22 40.5 +1.5
GTA PCP PcP 21 22 45.8 +0.7
GTA PCS PcS 21 26 37.0 -0.8
GTA S **S** 21 27 20.0 -2.4
GTA XS sS 21 27 40.5 -2.8
GTA SS SS 21 30 27.1 -10
GTA SCS ScS 21 30 51.1 -1.8
GTA AMB AMB
comp=Z,99nm,1.2s,mb5.4
GTA AMB AMB
comp=Z,601nm,8.7s
GTA LR LR
comp=N,11µm,16.4s,MS6.0
GTA LR LR
comp=E,9µm,14.5s,MS6.0
GTA LR LR
comp=Z,15µm,13.7s,MS6.0
GUMO Guam 43.63 204 PFAKE 21 21 10.0 +11
GUMO LR LR
comp=Z,3µm,19.0s,MS5.2
QZH Quanzhou 43.77 244 P **P** 21 21 01.7 +1.3
QZH S **S** 21 27 28.5 +0.9
QZH AMB AMB
comp=Z,1µm,9.9s
QZH LR LR
comp=N,3µm,12.8s,MS5.8
QZH LR LR
comp=E,6µm,12.8s,MS5.8
QZH LR LR
comp=Z,5µm,21.7s
KBS Kingsbay 44.88 352 *e*P **P** 21 21 09.4 +0.7
comp=Z,271nm,1.1s,mb6.0
KBS LR LR
comp=Z,6µm,20.0s,MS5.5
KBS Kingsbay 44.88 352 *e*P **P** 21 21 09.5 +0.8
KBS AMb AMB 21 21 17.9
comp=Z,252nm,1.4s,mb5.9
KBS AMS AMS 21 40 03.3
comp=Z,3µm,20.9s,MS5.3
KBS Kingsbay 44.88 352 *e*P **P** 21 21 09.4 +0.7
KBS pmax pmax
comp=Z,271nm,1.1s,mb6.0
KBS MLR MLR
comp=Z,6µm,20.0s,MS5.5
NLWA Neilton Lookou 44.99 68 *e*P **P** 21 21 10.0 +0.1
comp=Z,52nm,1.1s,mb5.3
NLWA LR LR
comp=Z,3µm,20.0s,MS5.2
KIP Kipapa 45.11 122 *e*P **P** 21 21 11.1 0.0
KIP LR LR
comp=Z,5µm,20.0s,MS5.5
MBW Mount Baker 45.16 65 P **P** 21 21 11.9 +0.7
GNW Green Mountain 45.44 67 *e*P **P** 21 21 13.5 0.0
LON Longmire 46.49 67 *e*P **P** 21 21 21.8 0.0
EDM Edmonton 46.65 55 *e*P **P** 21 21 22.8 -0.1
WTV Waterville 46.85 65 P **P** 21 21 24.8 +0.2
COR Corvallis 47.10 70 PFAKE 21 21 40.0 +13
COR LR LR
comp=Z,4µm,22.0s,MS5.3
CD2 Chengdu 47.24 264 P **P** 21 21 27.1 -0.7
CD2 AP pP 21 21 40.3 -0.1
CD2 XP sP 21 21 44.8 -1.0
CD2 PP PP 21 23 17.5 -1.5
CD2 S **S** 21 28 15.9 -1.6
CD2 XS sS 21 28 36.8 -1.8
CD2 SS SS 21 31 36.8 -8.1
CD2 AMB AMB
comp=Z,80nm,0.9s,mb5.7
CD2 AMB AMB
comp=Z,330nm,9.2s
CD2 LR LR
comp=N,4µm,14.4s,MS5.6
CD2 LR LR
comp=E,3µm,15.6s,MS5.6
CD2 LR LR
comp=Z,3µm,14.4s,MS5.5
EPH Ephrata 47.26 65 P **P** 21 21 27.9 +0.1
WMQ Urumqi 47.27 289⇓*i*P **P** 21 21 27.2 -0.7
WMQ AP pP 21 21 39.7 -0.8
WMQ XP sP 21 21 45.0 -0.8
WMQ PCP PcP 21 22 58.5 +0.1
WMQ PP PP 21 23 17.9 -1.0
WMQ SCP ScP 21 26 47.3 -0.9
WMQ PCS PcS 21 26 52.7 -0.8
WMQ S **S** 21 28 15.9 -1.7
WMQ XS sS 21 28 37.2 -1.4
WMQ SCS ScS 21 31 14.7 -2.8
WMQ SS SS 21 31 37.2 -7.7
WMQ AMB AMB
comp=Z,224nm,0.8s,mb6.2
WMQ AMB AMB
comp=Z,2µm,6.8s
WMQ LR LR
comp=N,8µm,24.0s,MS5.7
WMQ LR LR
comp=E,7µm,22.9s,MS5.7
WMQ LR LR
comp=Z,11µm,22.9s,MS5.8
HOOD Mount Hood Mea 47.50 68 *e*P **P** 21 21 29.8 +0.2
KURK Kurchatov 47.51 301 P **P** 21 21 28.6 -1.0
comp=Z,1µm,0.8s
KURK Kurchatov 47.51 301 *e*P **P** 21 21 28.2 -1.4
KURK *e* 21 22 58.4

KURK Kurchatov 47.51 301 *e*P **P** 21 21 28.2 -1.4
KURK *e* 21 22 58.4
KURK pmax pmax
comp=Z,236nm,1.0s,mb6.2
KURK MLR MLR
comp=Z,14µm,19.0s,MS5.9
KURK Kurchatov 47.51 301 P **P** 21 21 28.7 -0.9
SNR=104
VFP Flag Point 47.60 68 P **P** 21 21 30.4 -0.1
OD2 Odessa Site #2 47.70 65 P **P** 21 21 31.1 -0.1
SGCP Mt. Cagua 47.71 235 *e*P **P** 21 21 31.8 +0.3
HAWA Hanford 47.92 66 *e*P **P** 21 21 32.7 -0.2
HAWA LR LR
comp=Z,3µm,19.0s,MS5.2
NEW Newport 47.94 63 *e*P **P** 21 21 33.0 -0.1
NEW LR LR
comp=Z,4µm,22.0s,MS5.3
GZH Guangzhou 48.03 248 P **P** 21 21 28.0 -6.0
GZH S **S** 21 28 18.1 -11
GZH LR LR
comp=N,4µm,15.2s,MS5.6
GZH LR LR
comp=E,3µm,15.2s,MS5.6
GZH LR LR
comp=Z,4µm,16.8s,MS5.5
BJO Bjornoya 48.15 347 AMS AMS 21 39 23.2
comp=Z,3µm,21.5s,MS5.3
MK31 Makanchi Array 48.19 295⇑*e*P **P** 21 21 33.0 -2.0
MK31 *e* 21 23 00.9
MKAR Makanchi Array 48.19 295 P **P** 21 21 33.2 -1.8
MKAR *e* 21 23 00.7
MKAR Makanchi Array 48.19 295 P **P** 21 21 33.2 -1.7
comp=Z,42nm,0.9s,mb5.5,baz=56,slow=6.1,SNR=159
MKAR PcP PcP 21 23 00.7 -0.9
comp=Z,20nm,0.8s,baz=60,slow=7.2,SNR=3.6
MKAR ScP ScP 21 26 55.4 +3.4
comp=Z,8.5nm,1.0s,baz=61,slow=6.0,SNR=3.9
MKAR LR LR 21 43 25.8
comp=Z,12µm,18.5s,MS5.9,baz=43,slow=38
DAG Danmarks Havn 48.25 0⇓*i*P **P** 21 21 35.0 -0.1
DAG pmax pmax
comp=Z,82nm,0.9s,mb5.8
DAG Danmarks Havn 48.25 0⇓*i*P **P** 21 21 35.0 -0.1
comp=Z,82nm,0.9s,mb5.8
CVP Callao Caves 48.28 235 *e*P **P** 21 21 35.8 -0.2
APYP Conner 48.42 236 *e*P **P** 21 21 35.8 -1.2
PALP Palanan 48.55 234 *e*P **P** 21 21 38.4 +0.3
PALP Palanan 48.55 234 *e*P **P** 21 21 38.7 +0.6
KTRM Thompson Ridge 48.85 73 P **P** 21 21 41.0 +0.9
ABRA Dolores 48.85 236 *e*P **P** 21 21 39.9 -0.5
CAUP Cauayan 48.94 235 *e*P **P** 21 21 42.5 +1.4
GYA Guiyang 49.00 257⇑*i*P **P** 21 21 40.2 -1.2
GYA AP pP 21 21 55.4 +1.3
GYA XP sP 21 22 00.3 +0.9
GYA PCP PcP 21 23 06.6 +1.8
GYA PP PP 21 23 36.5 +1.4
GYA SCP ScP 21 26 56.3 +0.5
GYA PCS PcS 21 27 02.4 +1.1
GYA S **S** 21 28 42.0 -0.4
GYA XS sS 21 29 03.7 +0.2
GYA SCS ScS 21 31 28.0 -1.5
GYA SS SS 21 32 08.9 -4.6
GYA AMB AMB
comp=Z,50nm,0.9s,mb5.5
GYA LR LR
comp=N,5µm,20.0s,MS5.7
GYA LR LR
comp=E,6µm,20.2s,MS5.7
GYA LR LR
comp=Z,6µm,24.5s,MS5.5
WALA Waterton Lakes 49.04 60 *e*P **P** 21 21 41.4 -0.1
comp=Z,178nm,1.1s,mb6.0
YBH Yreka Blue Hor 49.33 73 *e*P **P** 21 21 44.5 +0.7
YBH LR LR
comp=Z,2µm,19.0s,MS5.1
KHMM Horse Mountain 49.36 74 *e*P **P** 21 21 45.4 +1.4
BSMT Bassoo Peak 49.40 62 *e*P **P** 21 21 44.4 +0.1
BRVK Borovoye 49.91 308 P **P** 21 21 47.6 -0.5
comp=Z,867nm,0.8s,mb6.8,SNR=77
BRVK Borovoye 49.91 308⇑*i*P **P** 21 21 46.8 -1.3
comp=Z,114nm,0.8s,mb6.0
BRVK *e* 21 23 06.8
BRVK LR LR
comp=Z,10µm,19.0s,MS5.8
BRVK Borovoye 49.91 308⇑*i*P **P** 21 21 46.8 -1.3
BRVK *e* 21 23 06.8
BRVK pmax pmax
comp=Z,114nm,0.8s,mb6.0
BRVK MLR MLR
comp=Z,10µm,19.0s,MS5.8
BRVK Borovoye 49.91 308 P **P** 21 21 47.5 -0.6
SNR=43
BCPH Baguio City Da 50.01 236⇑*i*P **P** 21 21 49.0 -0.2
BALP Baler 50.10 234 *e*P **P** 21 21 50.4 +0.5
BMO Blue Mountains 50.11 66 *e*P **P** 21 21 49.4 -0.3
BMO LR LR
comp=Z,3µm,21.0s,MS5.2
WDC Whiskeytown Da 50.22 74⇑*e*P **P** 21 21 50.6 +0.1
comp=Z,70nm,1.2s,mb5.6
WDC LR LR
comp=Z,2µm,19.0s,MS5.1
WDC Whiskeytown Da 50.22 74⇑*e*P **P** 21 21 50.6 +0.1
WDC pmax pmax
comp=Z,70nm,1.2s,mb5.6
WDC MLR MLR
comp=Z,2µm,19.0s,MS5.1
KIPM Iron Peak 50.23 75 *e*P **P** 21 21 51.9 +1.2
BOLP Bolinao 50.33 237 *e*P **P** 21 21 52.1 +0.5
MSO Missoula 50.51 62 *e*P **P** 21 21 52.5 -0.2
MSO LR LR
comp=Z,3µm,21.0s,MS5.2
MOD Modoc 50.52 71 *e*P **P** 21 21 53.2 +0.3
MOD LR LR
comp=Z,3µm,22.0s,MS5.3
FFC Flin Flon 50.78 48 P **P** 21 21 54.5 -0.1
comp=Z,761nm,1.1s,mb6.5,SNR=69
FFC Flin Flon 50.78 48⇑*i*P **P** 21 21 54.1 -0.5
comp=Z,238nm,1.3s,mb6.0
FFC *e*ScP ScP 21 27 03.2 +0.2
FFC LR LR
comp=Z,3µm,20.0s,MS5.3
FFC Flin Flon 50.78 48⇑*i*P **P** 21 21 54.1 -0.5
FFC pmax pmax
comp=Z,238nm,1.3s,mb6.0
FFC MLR MLR
comp=Z,3µm,20.0s,MS5.3
CHMT Chamberlain Mo 50.80 62 *e*P **P** 21 21 54.5 -0.3
POLP Polilio Island 50.81 233 *e*P **P** 21 21 56.6 +1.4
PVCP Virac 50.81 230 *e*P **P** 21 21 56.6 +1.3
SCZP Santa Cruz 50.85 236 *e*P **P** 21 21 55.7 +0.1
SOKR Solikamsk 50.97 321⇑*i*P **P** 21 21 55.1 -0.8
comp=Z,140nm,0.9s,mb5.9
SOKR LR LR
comp=Z,3µm,12.0s,MS5.5
SOKR Solikamsk 50.97 321*c i*P **P** 21 21 55.1 -0.8
SOKR pmax pmax
comp=Z,140nm,0.9s,mb5.9
SOKR MLR MLR
comp=Z,3µm,12.0s,MS5.5
HOPS Hopland 51.03 76 PFAKE 21 22 10.0 +13
HOPS LR LR
comp=Z,4µm,19.0s,MS5.4
WVOR Wild Horse Val 51.06 69⇑*i*P **P** 21 21 56.8 -0.1
comp=Z,43nm,1.1s,mb5.3
WVOR LR LR
comp=Z,1µm,19.0s,MS5.0
WVOR Wild Horse Val 51.06 69⇑*i*P **P** 21 21 56.8 -0.1
WVOR pmax pmax
comp=Z,43nm,1.1s,mb5.3
WVOR MLR MLR
comp=Z,1µm,19.0s,MS5.0
KEV Kevo 51.10 342 *e*P **P** 21 21 54.3 -2.5
comp=Z,50nm,1.0s,mb5.4
KEV LR LR
comp=Z,4µm,20.0s,MS5.5
KEV Kevo 51.10 342 *e*P **P** 21 21 54.3 -2.5
KEV pmax pmax
comp=Z,50nm,1.0s,mb5.4
KEV MLR MLR
comp=Z,4µm,20.0s,MS5.5
LVZ Lovozero 51.12 337 P **P** 21 21 56.8 -0.2
comp=Z,725nm,0.9s,mb6.6,SNR=8.2
LVZ Lovozero 51.12 337⇓*e*P **P** 21 21 55.6 -1.4
LVZ pmax pmax
comp=Z,105nm,1.7s,mb5.5
LVZ MLR MLR
comp=Z,5µm,18.0s,MS5.6
FCC Fort Churchill 51.14 40⇑*i*P **P** 21 21 56.9 -0.4
comp=Z,396nm,1.0s,mb6.3
FCC *e*ScP ScP 21 27 06.5 +2.0
FCC Fort Churchill 51.14 40 *e*P **P** 21 21 57.0 -0.3
CNP Catarman 51.56 229 *e*P **P** 21 22 02.7 +1.8
ARCES ARCESS Array B 51.56 342 P **P** 21 21 59.5 -0.7
ARCES PcP PcP 21 23 13.0 -0.6
ARCES LR LR 21 46 38.4
ARCES ARCESS Array B 51.56 342 P **P** 21 21 59.6 -0.7
ARCES 21 23 13.0
ARCES ARCESS Array B 51.56 342 P **P** 21 21 59.5 -0.7
comp=Z,89nm,1.0s,mb5.7,baz=28,slow=6.2,SNR=75
ARCES PcP PcP 21 23 13.0 -0.5
comp=Z,54nm,0.9s,baz=46,slow=5.2,SNR=6.7
ARCES LR LR 21 46 38.4
comp=Z,3µm,19.9s,MS5.3,baz=26,slow=39
NSHM Saint Helena R 51.62 76 *e*P **P** 21 22 01.3 +0.2
APA Apatity 51.66 337⇑*i*P **P** 21 22 04.4 +3.4
comp=Z,90nm,1.2s,mb5.6
APA LR LR
comp=Z,7µm,17.0s,MS5.8
APA Apatity 51.66 337⇑*i*P **P** 21 22 04.4 +3.4
APA pmax pmax
comp=Z,90nm,1.2s,mb5.6
APA MLR MLR
comp=Z,7µm,17.0s,MS5.8
OHCM Honcut 51.66 74 *e*P **P** 21 22 01.0 -0.4
MCCM Marconi Confer 51.73 76 PFAKE 21 22 10.0 +8.0
MCCM LR LR
comp=Z,3µm,20.0s,MS5.3
EGMT Eagleton 51.78 59 *e*P **P** 21 22 01.8 -0.4
comp=Z,135nm,1.1s,mb5.8
EGMT LR LR
comp=Z,6µm,19.0s,MS5.6
LRM Limekiln Ridge 51.95 62 *e*P **P** 21 22 03.3 -0.2
DLMT Dillon 52.20 63 *e*P **P** 21 22 05.2 -0.1
comp=Z,137nm,1.4s,mb5.7
LCCM Lewis and Clar 52.23 62 P **P** 21 22 05.4 -0.2
KMI Kunming 52.24 260 ⇑P **P** 21 22 05.0 -0.9
KMI AP pP 21 22 18.8 +0.2
KMI XP sP 21 22 26.0 +2.1
KMI PCP PcP 21 23 17.4 +0.6
KMI PP PP 21 24 05.1 +0.6
KMI S **S** 21 29 25.8 -1.6
KMI XS sS 21 29 49.5 +0.8
KMI SS SS 21 33 03.8 -1.3
KMI AMB AMB
comp=Z,76nm,0.8s,mb5.7
KMI AMB AMB
comp=Z,530nm,6.6s
KMI LR LR
comp=N,8µm,21.8s,MS5.8
KMI LR LR
comp=E,7µm,19.2s,MS5.8
KMI LR LR
comp=Z,6µm,20.5s,MS5.6
KMI Kunming 52.24 260 ⇑P **P** 21 22 05.0 -0.9
comp=Z,76nm,0.8s,mb5.7
KMI pP pP 21 22 18.8 +0.2
KMI sP sP 21 22 26.0 +2.1
KMI PcP PcP 21 23 17.4 +0.6
KMI PP PP 21 24 05.1 +0.6
KMI PPP 21 25 09.7
KMI ScP ScP 21 27 12.9 +3.1
KMI S **S** 21 29 25.8 -1.6
KMI sS sS 21 29 49.5 +0.8
KMI SS SS 21 33 03.8 -1.3
KMI LR LR
comp=Z,6µm,20.5s,MS5.6
KMI Kunming 52.24 260 ⇑P **P** 21 22 05.0 -0.9
KMI *PP pP 21 22 18.8 +0.2
KMI *SP sP 21 22 26.0 +2.1
KMI 21 23 17.4
KMI 21 24 05.1
KMI PPP 21 25 09.7
KMI S **S** 21 29 25.8 -1.6
KMI *SS sS 21 29 49.5 +0.8
KMI SS SS 21 33 03.8 -1.3
KTK1 Kautokeino 52.42 343⇑*i*P **P** 21 22 07.1 +0.5
comp=Z,452nm,1.5s,mb6.2
KTK1 Kautokeino 52.42 343⇑*i*P **P** 21 22 07.1 +0.5
KTK1 AMb AMB 21 22 09.5
comp=Z,452nm,1.6s,mb6.2
MCMT McKenzie Canyo 52.44 63 *e*P **P** 21 22 06.7 -0.4
LUBP Lubang 52.47 235 *e*P **P** 21 22 07.4 -0.2
BOZ Bozeman (W) 52.49 62 *e*P **P** 21 22 07.7 +0.2
BOZ LR LR
comp=Z,3µm,21.0s,MS5.3
HLID Hailey 52.51 66 *e*P **P** 21 22 07.7 +0.1
HLID LR LR
comp=Z,2µm,20.0s,MS5.2
ARU Arti 52.53 317 P **P** 21 22 06.7 -0.9
comp=Z,858nm,0.8s,mb6.7,SNR=54
ARU Arti 52.53 317⇑*i*P **P** 21 22 06.7 -0.9
comp=Z,165nm,1.0s,mb5.9
ARU *e* 21 23 14.8
ARU *e* 21 24 03.7
ARU *ePPP 21 25 09.5
ARU S **S** 21 29 30.1 -0.5
ARU *e* 21 31 55.4
ARU LR LR
comp=Z,17µm,20.0s,MS6.1
ARU Arti 52.53 317*c i*P **P** 21 22 06.7 -0.9
ARU *e* 21 23 14.8
ARU *e* 21 24 03.7
ARU *ePPP 21 25 09.5
ARU S **S** 21 29 30.1 -0.5
ARU *e* 21 31 55.4
ARU pmax pmax
comp=Z,165nm,1.0s,mb5.9
ARU MLR MLR
comp=Z,17µm,20.0s,MS6.1
ARU MLR MLR
comp=N,10µm,20.0s,MS6.0
ARU MLR MLR
comp=E,9µm,20.0s,MS6.0
PAHR Pah Rah Range 52.55 72 *e*P **P** 21 22 08.7 +0.7
TRO Tromso 52.56 345⇑*i*P **P** 21 22 06.3 -1.4
TRO AMb AMB 21 22 19.4
comp=Z,216nm,1.4s,mb5.9
TRO AMS AMS 21 46 02.0
comp=Z,1µm,20.5s,MS5.0
TRO Tromso 52.56 345 *e*P **P** 21 22 06.3 -1.4
TRO MLR MLR
comp=Z,1µm,20.5s,MS5.0
PLP Palo 52.63 228 *e*P **P** 21 22 09.3 +0.5
OTRP Odiongan 52.85 232 *e*P **P** 21 22 12.1 +1.6
OCLP Ormoc 52.88 228 *e*P **P** 21 22 11.6 +0.8
QLMT Earthquake Lak 53.16 63 *e*P **P** 21 22 12.8 +0.3
CMB Columbia Colle 53.19 75⇑*i*P **P** 21 22 12.8 0.0
comp=Z,99nm,1.4s,mb5.5
CMB *e*PcP PcP 21 23 19.9 -0.3
CMB *e*ScP ScP 21 27 13.3 -0.4
CMB LR LR
comp=Z,4µm,21.0s,MS5.4
CMB Columbia Colle 53.19 75⇑*i*P **P** 21 22 12.8 0.0
CMB *e* 21 23 19.9
CMB pmax pmax
comp=Z,99nm,1.4s,mb5.5
CMB MLR MLR
comp=Z,4µm,21.0s,MS5.4
QIZ Qiongzhong 53.21 249 P **P** 21 22 13.6 +0.5
QIZ PP PP 21 24 14.9 +1.5
QIZ S **S** 21 29 42.2 +1.5
QIZ SS SS 21 33 21.6 +1.0
QIZ AMB AMB
comp=Z,66nm,0.8s,mb5.6
QIZ AMB AMB
comp=Z,711nm,12.4s
QIZ LR LR
comp=E,4µm,17.5s
QIZ LR LR
comp=Z,3µm,22.3s,MS5.3
QIZ Qiongzhong 53.21 249⇑*i*P **P** 21 22 13.6 +0.5
comp=Z,74nm,1.0s,mb5.6
QIZ *ePcP PcP 21 23 21.3 +0.8
QIZ LR LR
comp=Z,3µm,19.0s,MS5.4
RCP Roxas 53.24 231⇑*e*P **P** 21 22 14.6 +1.3
TMCR Tamitsa 53.33 333 *i* P **P** 21 22 12.8 -0.6
TMCR pmax pmax
comp=Z,293nm,1.2s,mb6.1

GCMT **Greycliff** 53.37 61 *eP* **P** **21 22 14.3 +0.3**
WAKR **Walker** 53.38 73 *eP* **P** **21 22 14.9 +0.8**
YMR **Madison River** 53.51 62⇑ *iP* **P** **21 22 15.1 +0.1**
comp=Z,126nm,1.0s,mb5.8
YMR *eScP* ScP 21 27 16.1 +1.1
YMR LR LR
comp=Z,3μm,20.0s,MS5.3
SAO **San Andreas Ge** 53.52 76 *eP* **P** **21 22 15.7 +0.6**
comp=Z,45nm,1.2s,mb5.3
SAO LR LR
comp=Z,2μm,21.0s,MS5.2
SAO **San Andreas Ge** 53.52 76 *eP* **P** **21 22 15.7 +0.5**
SAO pmax pmax
comp=Z,45nm,1.2s,mb5.3
SAO MLR MLR
comp=Z,2μm,21.0s,MS5.2
MSLP **Maasin** 53.60 227 *eP* **P** **21 22 16.5 +0.5**
YNR **Norris Junctio** 53.62 62 *eP* **P** **21 22 17.4 +1.5**
SCPH **Surigao** 53.65 227 *eP* **P** **21 22 16.9 +0.5**
YFT **Old Faithful** 53.73 63 *eP* **P** **21 22 18.5 +1.9**
LKWY **Lake** 53.87 62 *eP* **P** **21 22 19.4 +1.8**
comp=Z,116nm,1.0s,mb5.8
LKWY LR LR
comp=Z,4μm,20.0s,MS5.5
LKWY **Lake** 53.87 62 *eP* **P** **21 22 19.4 +1.8**
LKWY pmax pmax
comp=Z,116nm,1.0s,mb5.8
LKWY MLR MLR
comp=Z,4μm,20.0s,MS5.5
BUSP **Coron** 54.00 234 *eP* **P** **21 22 19.7 +0.8**
RLMT **Red Lodge** 54.05 61 *eP* **P** **21 22 19.7 +0.8**
RLMT LR LR
comp=Z,3μm,21.0s,MS5.4
ELK **Elko** 54.06 69 *eP* **P** **21 22 19.9 +0.9**
ELK LR LR
comp=Z,3μm,20.0s,MS5.3
IMW **Indian Meadow** 54.07 63 *eP* **P** **21 22 20.0 +0.9**
comp=Z,138nm,1.1s,mb5.8
DGMT **Dagmar** 54.13 55 *eP* **P** **21 22 19.5 0.0**
DGMT LR LR
comp=Z,3μm,19.0s,MS5.4
GUIM **Jordan** 54.14 230 *eP* **P** **21 22 21.0 +1.0**
DCID1 **Drake Creek** 54.15 64 *eP* **P** **21 22 21.1 +1.4**
MOOW **Moose Ponds** 54.27 63 *eP* **P** **21 22 21.1 +0.6**
TKM2 **Tokmak 2** 54.30 295⇑ *eP* **P** **21 22 19.8 -1.0**
comp=Z,62nm,0.9s,mb5.5
TKM2 *e* 21 23 24.1
TKM2 LR LR
comp=Z,8μm,19.0s,MS5.8
TKM2 **Tokmak 2** 54.30 295⇑ *eP* **P** **21 22 19.8 -1.0**
TKM2 *e* 21 23 24.1
TKM2 pmax pmax
comp=Z,62nm,0.9s,mb5.5
TKM2 MLR MLR
comp=Z,8μm,19.0s,MS5.8
TKM2 **Tokmak 2** 54.30 295 P **P** **21 22 22.6 +1.7**
SNR=40
TPAW **Teton Pass** 54.35 63 *eP* **P** **21 22 22.1 +0.9**
comp=Z,93nm,1.0s,mb5.7
LAO **LASA Array** 54.43 58 *eP* **P** **21 22 22.2 +0.5**
LAO LR LR
comp=Z,5μm,19.0s,MS5.6
LOHW **Long Hollow** 54.44 63 *eP* **P** **21 22 22.8 +1.0**
comp=Z,116nm,1.0s,mb5.8
REDW **Red Top Meadow** 54.49 64 *eP* **P** **21 22 22.9 +0.7**
comp=Z,110nm,1.1s,mb5.7
HVU **Hansel Valley** 54.62 66 *eP* **P** **21 22 23.8 +0.6**
USP **Ospenovka** 54.62 296 P **P** **21 22 22.3 -0.8**
SNR=95
CUYO **Cuyo Island** 54.64 232 *eP* **P** **21 22 24.5 +1.0**
CHMS **Chumysh** 54.68 296 P **P** **21 22 22.8 -0.8**
SNR=44
MTUM **Tungsten Hills** 54.69 74 *eP* **P** **21 22 24.5 +0.8**
LOF **Lofoten** 54.72 346⇑ *iP* **P** **21 22 25.1 +1.6**
comp=Z,562nm,1.3s,mb6.4
LOF **Lofoten** 54.72 346⇑ *iP* **P** **21 22 25.1 +1.6**
LOF AMb AMB 21 22 27.4
comp=Z,562nm,1.3s,mb6.4
AHID **Auburn Hatcher** 54.79 64 *eP* **P** **21 22 24.9 +0.6**
AHID LR LR
comp=Z,2μm,19.0s,MS5.1
KBK **Karagaybulak** 54.83 296 P **P** **21 22 23.9 -0.7**
SNR=53
FRU **Bishkek** 54.87 296 *eP* **P** **21 22 23.5 -1.4**
comp=Z,193nm,1.2s,mb6.0
FRU **Bishkek** 54.87 296 *eP* **P** **21 22 23.5 -1.4**
FRU pmax pmax
comp=Z,193nm,1.2s,mb6.0
ENPP **El Nido** 55.06 234 *eP* **P** **21 22 27.6 +1.0**
AAK **Ala-Archa** 55.08 296 P **P** **21 22 24.4 -2.0**
comp=Z,1μm,0.9s,mb6.9,SNR=47
AAK **Ala-Archa** 55.08 296⇑ *iP* **P** **21 22 24.6 -1.8**
comp=Z,164nm,0.9s,mb6.1
AAK LR LR
comp=Z,5μm,19.0s,MS5.6
AAK **Ala-Archa** 55.08 296⇑ *iP* **P** **21 22 24.6 -1.8**
AAK pmax pmax
comp=Z,164nm,0.9s,mb6.1
AAK MLR MLR
comp=Z,5μm,19.0s,MS5.6
AAK **Ala-Archa** 55.08 296 P **P** **21 22 25.2 -1.2**
SNR=34
AAK **Ala-Archa** 55.08 296 P **P** **21 22 25.2 -1.2**
SNR=61
KZA **Kyzart** 55.09 295 P **P** **21 22 26.4 -0.2**
SNR=20
BGU **Big Grassy Mou** 55.10 67⇑ *iP* **P** **21 22 26.8 +0.2**
SPUT **South Promonto** 55.13 66 *eP* **P** **21 22 27.6 +0.7**
CGP **Cagayan de Oro** 55.18 227⇓ *iP* **P** **21 22 27.4 -0.1**
LSA **Lhasa** 55.35 273 P **P** **21 22 28.0 -0.6**
LSA AP pP 21 22 36.7 -4.8
LSA XP sP 21 22 41.0 -5.7
LSA AMB AMB
comp=Z,60nm,0.9s,mb5.6
LSA LR LR
comp=N,2μm,22.5s,MS5.4
LSA LR LR
comp=E,2μm,21.6s,MS5.4
LSA LR LR
comp=Z,3μm,21.2s,MS5.4
LSA **Lhasa** 55.35 273⇑ *iP* **P** **21 22 28.0 -0.6**
comp=Z,5.3nm,1.0s,mb4.5
LSA *eScP* ScP 21 27 28.3 +5.0
LSA LR LR
comp=Z,2μm,19.0s,MS5.2
LSA **Lhasa** 55.35 273⇑ *iP* **P** **21 22 28.0 -0.6**
LSA pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
LSA MLR MLR
comp=Z,2μm,19.0s,MS5.2
UCH **Uchtor** 55.36 296⇑ *eP* **P** **21 22 27.6 -0.8**
comp=Z,65nm,1.0s,mb5.6
UCH *e*PcP PcP 21 23 29.1 +0.6
UCH LR LR
comp=Z,5μm,19.0s,MS5.6
UCH **Uchtor** 55.36 296 P **P** **21 22 28.5 +0.1**
SNR=26
HWUT **Hardware Ranch** 55.38 65 *eP* **P** **21 22 29.0 +0.4**
comp=Z,153nm,1.0s,mb6.0
HWUT LR LR
comp=Z,2μm,19.0s,MS5.3
EKS2 **Erkin-Say** 55.42 296⇑ *eP* **P** **21 22 28.1 -0.8**
comp=Z,196nm,0.8s,mb6.2
EKS2 *e*PcP PcP 21 23 28.8 0.0
EKS2 LR LR
comp=Z,5μm,20.0s,MS5.6
EKS2 **Erkin-Say** 55.42 296 P **P** **21 22 28.1 -0.9**
SNR=50
BUKP **Musuan** 55.55 226 *eP* **P** **21 22 31.1 +1.0**
BW06 **Boulder Array** 55.58 63 *eP* **P** **21 22 30.4 +0.4**
comp=Z,158nm,1.0s,mb6.0
BW06 LR LR
comp=Z,2μm,21.0s,MS5.1
TRCR **Troy Canyon** 55.59 71⇑ *iP* **P** **21 22 30.5 +0.3**
SFJD **Kangerlussuaq** 55.66 15 *i* P **P** **21 22 29.1 -1.2**
SFJD *i* 21 23 29.3
SFJD pmax pmax
comp=Z,182nm,1.4s,mb5.9
SFJD **Kangerlussuaq** 55.66 15 *i* P **P** **21 22 29.1 -1.2**
comp=Z,182nm,1.4s,mb5.9
SFJD *i* 21 23 29.3
DUG **Dugway** 55.74 67 *eP* **P** **21 22 32.0 +0.8**
comp=Z,143nm,1.0s,mb6.0
DUG LR LR
comp=Z,2μm,20.0s,MS5.1
DUG **Dugway** 55.74 67 *eP* **P** **21 22 32.0 +0.8**
comp=Z,143nm,1.0s,mb6.0
DUG pmax pmax
comp=Z,143nm,1.0s,mb6.0
DUG MLR MLR
comp=Z,2μm,20.0s,MS5.1
NOQ **North Oquirrh** 55.77 67 *eP* **P** **21 22 32.4 +1.0**
AML **Almayashu** 55.85 296⇑ *eP* **P** **21 22 31.0 -1.0**
comp=Z,99nm,0.8s,mb5.9
AML *e*PcP PcP 21 23 31.0 +0.6
AML LR LR
comp=Z,6μm,19.0s,MS5.7
AML **Almayashu** 55.85 296 P **P** **21 22 32.2 +0.2**
SNR=24
CTU **Camp Tracy** 55.94 66 *eP* **P** **21 22 33.3 +0.6**
JOF **Joensuu** 56.05 335 *ep* **P** **21 22 32.1 -1.0**
comp=Z,87nm,0.7s,mb5.9
DAV **Davao City (W)** 56.07 225 *eP* **P** **21 22 34.9 +1.1**
comp=Z,638nm,1.3s,mb6.5
DAV LR LR
comp=Z,2μm,19.0s,MS5.1
DAV **Davao City (W)** 56.07 225 P **P** **21 22 35.2 +1.4**
SNR=13
JLU **Jordanelle** 56.16 66 *eP* **P** **21 22 35.1 +0.8**
TPNV **Topopah Spring** 56.25 73 *eP* **P** **21 22 35.4 +0.5**
comp=Z,119nm,1.1s,mb5.8
TPNV LR LR
comp=Z,3μm,22.0s,MS5.4
TPNV **Topopah Spring** 56.25 73 *eP* **P** **21 22 35.4 +0.5**
TPNV pmax pmax
comp=Z,119nm,1.1s,mb5.8
TPNV MLR MLR
comp=Z,3μm,22.0s,MS5.4
NLU **North Lily Min** 56.30 67 *eP* **P** **21 22 36.0 +0.8**
DAU **Daniels Canyon** 56.40 66 *eP* **P** **21 22 37.3 +1.3**
MOR8 **Moi Rana** 56.42 345⇑ *iP* **P** **21 22 33.8 -1.9**
comp=Z,240nm,1.3s,mb6.1
MOR8 **Moi Rana** 56.42 345⇑ *iP* **P** **21 22 33.8 -1.9**
MOR8 AMb AMB 21 22 36.1
comp=Z,240nm,1.3s,mb6.1
MPU **Maple Canyon** 56.49 67 *eP* **P** **21 22 37.6 +1.0**
MPU LR LR
comp=Z,2μm,20.0s,MS5.1
KSH **Kashi** 56.55 292⇑ *iP* **P** **21 22 37.1 0.0**
KSH AP pP 21 22 47.4 -2.5
KSH *e*XP sP 21 22 51.7 -3.5
KSH PCP PcP 21 23 34.1 +0.9
KSH *e*PP PP 21 24 45.3 +2.4
KSH *e*PCS PcS 21 27 32.7 -1.1
KSH *e*S **S** **21 30 23.2 -2.0**
KSH *e*XS sS 21 30 40.7 -5.9
KSH *e*SCS ScS 21 32 18.9 -3.2
KSH *e*SS SS 21 34 08.8 -3.6
KSH AMB AMB
comp=Z,4μm,5.5s
KSH LR LR
comp=N,11μm,11.5s,MS6.5
KSH LR LR
comp=E,19μm,13.0s,MS6.5
KSH LR LR
comp=Z,25μm,24.5s
ULM **Lac du Bonnet** 56.59 49 P **P** **21 22 37.0 -0.1**
ULM LR LR 21 48 23.7
ULM P'P' 21 52 25.7
ULM **Lac du Bonnet** 56.59 49 P **P** **21 22 37.0 -0.1**
comp=Z,125nm,0.8s,mb6.0,baz=316,slow=7.3,SNR=188
ULM LR LR 21 48 23.7
comp=Z,3μm,19.7s,MS5.4,baz=319,slow=38
ULM PKPPKP 21 52 25.7
comp=Z,1.6nm,0.7s,baz=175,slow=1.8,SNR=3.3
AKTK **Aktyubinsk** 57.15 312 P **P** **21 22 40.3 -0.8**
AKTK PcP PcP 21 23 35.1 -0.2
AKTK LR LR 21 51 07.2
AKTO **Aktyubinsk** 57.15 312 P **P** **21 22 40.3 -0.8**
AKTO 21 23 35.1
AKTO **Aktyubinsk** 57.15 312 P **P** **21 22 40.3 -0.8**
comp=Z,64nm,0.8s,mb5.7,baz=47,slow=7.7,SNR=179
AKTO PcP PcP 21 23 35.1 -0.2
comp=Z,91nm,0.7s,baz=65,slow=3.3,SNR=7.8
AKTO LR LR 21 51 07.3
comp=Z,6μm,18.9s,MS5.7,baz=238,slow=40
ARUT **Antelope Range** 57.16 70 *eP* **P** **21 22 41.4 0.0**
SHPR **Sheep Range** 57.17 72 *eP* **P** **21 22 42.0 +0.6**
TMUT **Trail Mountain** 57.24 67 *eP* **P** **21 22 43.0 +1.1**
MSU **Marysvale** 57.30 68 *eP* **P** **21 22 43.5 +1.1**
RSSD **Black Hills** 57.35 59 *eP* **P** **21 22 43.2 +0.6**
RSSD LR LR
comp=Z,2μm,20.0s,MS5.1
CCUT **Cedar City** 57.37 70⇑ *eP* **P** **21 22 43.4 +0.5**
RWWY **Rawlins** 57.56 63 *eP* **P** **21 22 44.4 +0.3**
SRU **San Rafael** 57.74 67 *eP* **P** **21 22 46.2 +0.8**
KAF **Kangasniemi** 57.91 337 *ep* **P** **21 22 44.4 -1.9**
comp=Z,122nm,1.0s,mb5.9,baz=26,slow=6.6
KAF **Kangasniemi** 57.91 337 *eP* **P** **21 22 44.4 -1.9**
KAF pmax pmax
comp=Z,122nm,1.0s,mb5.9
BATP **Bataraza** 57.92 234 *eP* **P** **21 22 48.7 +1.8**
CHRT **Chiangrai** 58.05 259 ⇓P **P** **21 22 48.0 +0.2**
comp=Z,763nm,1.0s,mb6.7
AGMN **Agassiz Refuge** 58.05 50 *eP* **P** **21 22 47.3 -0.2**
AGMN LR LR
comp=Z,8μm,21.0s,MS5.8
SHL **Shillong** 58.08 269 *eP* **P** **21 22 47.0 -1.0**
SHL *e*S **S** **21 30 51.0 +5.5**
NSS **Namsos** 58.33 345 *eP* **P** **21 22 47.5 -1.7**
NSS **Namsos** 58.33 345 *eP* **P** **21 22 47.5 -1.7**
NSS *eP* 21 22 47.5
FINES **FINESS Array B** 58.55 337 P **P** **21 22 50.4 -0.4**
FINES LR LR 21 49 54.0
FINES **FINESS Array B** 58.55 337 P **P** **21 22 50.4 -0.3**
comp=Z,89nm,1.0s,mb5.8,baz=38,slow=9.6,SNR=110
FINES LR LR 21 49 54.0
comp=Z,3μm,21.5s,MS5.4,baz=23,slow=38
GTK **Gangtok** 58.60 273 *ex* x 21 24 16.6
PFO **Pinyon Flat Ob** 58.60 75 P **P** **21 22 51.2 -0.3**
comp=Z,184nm,1.1s,mb6.0,SNR=10
PFO **Pinyon Flat Ob** 58.60 75 *eP* **P** **21 22 51.2 -0.3**
PFO MLR MLR
comp=Z,3μm,20.0s,MS5.4
PHWY **Pilot Hill** 58.73 62 *eP* **P** **21 22 52.4 +0.1**
PV10 **Paradox Valley** 59.06 66 *eP* **P** **21 22 55.4 +0.8**
TAPN **Taplejung** 59.10 274 *eP* **P** **21 22 53.6 -1.5**
comp=Z,426nm,1.0s,mb6.4
KKTK **Khon Kaen** 59.22 253 P **P** **21 22 56.0 0.0**
comp=Z,2μm,0.5s
CHG **Chiang Mai** 59.37 259 ⇑P **P** **21 22 56.6 -0.4**
comp=Z,150nm,0.9s,mb6.0
CHTO **Chiang Mai** 59.37 259⇑ *iP* **P** **21 22 56.1 -0.9**
comp=Z,162nm,0.8s,mb6.1
CHTO LR LR
comp=Z,5μm,20.0s,MS5.7
CHTO **Chiang Mai** 59.37 259⇑ *iP* **P** **21 22 56.1 -0.9**
CHTO pmax pmax
comp=Z,162nm,0.8s,mb6.1
CHTO MLR MLR
comp=Z,5μm,20.0s,MS5.7
CHTO **Chiang Mai** 59.37 259 P **P** **21 22 56.6 -0.4**
SNR=68
PV01 **Paradox Valley** 59.49 66 *eP* **P** **21 22 57.7 +0.1**
PV01 *eS* **S** **21 31 02.8 -0.7**
SMCO **Snowmass** 59.54 64 *eP* **P** **21 22 53.8 -4.1**
comp=Z,108nm,1.0s,mb5.8
ODAN **Odare** 59.66 274 *eP* **P** **21 22 57.3 -1.6**
comp=Z,83nm,0.6s,mb5.9
JIRN **Jiri** 59.73 276 *eP* **P** **21 22 58.1 -1.3**
comp=Z,186nm,0.9s,mb6.1
ISCO **Idaho Springs** 59.77 63 *eP* **P** **21 23 00.8 +1.3**
comp=Z,208nm,1.1s,mb6.1
ISCO LR LR
comp=Z,3μm,20.0s,MS5.5
ISCO **Idaho Springs** 59.77 63 *eP* **P** **21 23 00.8 +1.3**
ISCO pmax pmax
comp=Z,208nm,1.1s,mb6.1
ISCO MLR MLR
comp=Z,3μm,20.0s,MS5.5
WUAZ **Wupatki** 59.95 70⇑ *iP* **P** **21 23 02.1 +1.3**
comp=Z,155nm,1.3s,mb5.9
WUAZ LR LR
comp=Z,2μm,20.0s,MS5.2
KDM **Kudat** 60.02 234 ⇑P **P** **21 23 03.7 +2.2**
MEF **Metsahovi** 60.02 337 P **P** **21 23 00.5 -0.4**
BAKI **Biak** 60.09 210 P **P** **21 23 02.1 +0.1**
KKN **Kakani** 60.15 276 *eP* **P** **21 23 00.9 -1.4**
comp=Z,256nm,0.9s,mb6.2
KKN **Kakani** 60.15 276 *eP* **P** **21 23 00.9 -1.4**
KKN pmax pmax
comp=Z,256nm,0.9s,mb6.2
EYMN **Ely** 60.21 48 *eP* **P** **21 23 02.1 -0.3**
EYMN LR LR
comp=Z,2μm,20.0s,MS5.3
MVCO **Mesa Verde** 60.22 67 *eP* **P** **21 23 03.0 +0.4**
MVCO LR LR
comp=Z,1μm,19.0s,MS5.1
GKN **Gorkha** 60.35 277 *eP* **P** **21 23 02.2 -1.5**
comp=Z,385nm,1.0s,mb6.4
MOS **Moscow** 60.41 327 *eP* **P** **21 23 02.2 -1.4**
comp=Z,359nm,1.2s,mb6.3
MOS *e* pP 21 23 15.2 -1.4
MOS *e* 21 23 43.6
MOS *e* 21 25 14.0
MOS *eS* **S** **21 31 21.2 +6.4**
MOS LR LR
comp=Z,8μm,19.0s,MS5.8
MOS **Moscow** 60.41 327 *eP* **P** **21 23 02.2 -1.4**
MOS *e* pP 21 23 15.2 -1.4
MOS *e* 21 23 43.6
MOS *e* 21 25 14.0
MOS *eS* **S** **21 31 21.2 +6.4**
MOS pmax pmax
comp=Z,500nm,1.4s,mb6.3
MOS pmax pmax
comp=Z,359nm,1.2s,mb6.3
MOS MLR MLR
comp=N,6μm,19.0s,MS5.8
MOS MLR MLR
comp=E,3μm,19.0s,MS5.8
MOS MLR MLR
comp=Z,8μm,19.0s,MS5.8
BDT **Bhumibol Dam** 60.60 258 P **P** **21 23 05.5 +0.1**
MYLDM **Lahad Datu** 60.79 232 ⇓P **P** **21 23 08.7 +1.9**
MOL **Molde** 60.82 347 *eP* **P** **21 23 06.8 +0.4**
SDKM **Sandakan** 60.98 233 ⇓P **P** **21 23 08.7 +0.7**
VSU **Vasula** 61.05 335⇑ *iP* **P** **21 23 08.0 +0.1**
KKM **Kota Kinabalu** 61.08 234⇑ *iP* **P** **21 23 10.0 +1.3**
KKM **Kota Kinabalu** 61.08 234 ⇓P **P** **21 23 10.5 +1.8**
DOMB **Dombas** 61.12 346⇑ *iP* **P** **21 23 07.9 -0.5**
comp=Z,177nm,1.5s,mb6.0
DOMB **Dombas** 61.12 346⇑ *iP* **P** **21 23 07.9 -0.5**
DOMB AMb AMB 21 23 10.2
comp=Z,177nm,1.5s,mb6.0
ECSD **EROS,Sioux Fal** 61.18 54 *eP* **P** **21 23 08.5 -0.6**
ECSD LR LR
comp=Z,5μm,19.0s,MS5.7
NST **Nakhon Sawan** 61.24 255 P **P** **21 23 09.5 -0.3**
comp=Z,188nm,0.6s,mb6.4
OBN **Obninsk** 61.26 328⇑ *eP* **P** **21 23 08.6 -0.8**
comp=Z,233nm,1.1s,mb6.2
OBN *e* 21 25 26.2
OBN *eSS* SS 21 35 20.2 -5.3
OBN LR LR
comp=Z,7μm,18.0s,MS5.8
OBN **Obninsk** 61.26 328⇑ *eP* **P** **21 23 08.6 -0.8**
OBN *e* 21 25 26.2
OBN *eSS* SS 21 35 20.2 -5.3
OBN pmax pmax
comp=Z,233nm,1.1s,mb6.2
OBN MLR MLR
comp=Z,7μm,18.0s,MS5.8
SDCO **Great Sand Dun** 61.38 64 *eP* **P** **21 23 11.3 +0.8**
comp=Z,117nm,1.1s,mb5.9
SDCO LR LR
comp=Z,3μm,20.0s,MS5.4
NB2 **NORSAR Subarra** 61.76 344 P **P** **21 23 12.5 -0.2**
comp=Z,457nm,1.4s,mb6.4,baz=19,slow=6.9
NOA **NORSAR Array B** 61.76 344 P **P** **21 23 12.3 -0.4**
NOA 21 23 53.0
NOA **NORSAR Array B** 61.76 344 P **P** **21 23 12.2 -0.4**
comp=Z,110nm,0.9s,mb6.0,baz=19,slow=6.8,SNR=149
NOA PcP PcP 21 23 53.0 -0.5
comp=Z,39nm,0.9s,baz=19,slow=2.8,SNR=6.9
NOA LR LR 21 53 16.7
comp=Z,2μm,18.5s,MS5.3,baz=20,slow=39
TSM **Tawau** 61.86 232 ⇓P **P** **21 23 14.9 +0.9**
THN **Thein Dam** 61.97 287 *eP* **P** **21 23 13.1 -1.5**
HFS **Hagfors** 62.21 343 PKP2bc 21 52 21.7
comp=Z,6.4nm,0.7s,baz=9.8,slow=9.6,SNR=12
DDI **Dehra Dun** 62.29 284 *eP* **P** **21 23 16.0 -0.7**
HYA **Hoyanger** 62.35 347⇑ *iP* **P** **21 23 17.6 +0.9**
comp=Z,258nm,1.3s,mb6.2
HYA **Hoyanger** 62.35 347⇑ *iP* **P** **21 23 17.6 +0.9**
HYA AMb AMB 21 23 19.8
comp=Z,258nm,1.3s,mb6.2
COWI **Conover** 62.66 48 *eP* **P** **21 23 18.2 -0.8**
COWI LR LR
comp=Z,3μm,21.0s,MS5.4
TUC **Tucson** 62.70 72 *eP* **P** **21 23 19.8 +0.3**
TUC LR LR
comp=Z,1μm,19.0s,MS5.1
BOK **Bokaro** 62.88 273 *eP* **P** **21 23 19.2 -1.6**
BOK *eP* 21 23 19.8
BOK AMb AMB 21 23 21.8
comp=Z,92nm,1.0s,mb5.9
VRHR **Novokhopersk** 62.98 322 *eP* **P** **21 23 19.6 -1.4**
VRHR *eS* **S** **21 31 59.6 +12**
VRHR pmax pmax
comp=Z,90nm,0.9s,mb5.9
VRHR pmax pmax
comp=N,40nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
ANMO **Albuquerque** 63.00 67 *eP* **P** **21 23 22.0 +0.6**
ANMO LR LR
comp=Z,2μm,21.0s,MS5.3
ANMO **Albuquerque** 63.00 67 *c iP* **P** **21 23 21.9 +0.5**
ANMO **Albuquerque** 63.00 67 PKP2bc 21 52 19.4
comp=Z,8.5nm,1.2s,baz=139,slow=5.0,SNR=4.4
RUND **Rundenannen** 63.18 347⇑ *iP* **P** **21 23 24.3 +2.1**
comp=Z,306nm,1.4s,mb6.2
RUND **Rundenannen** 63.18 347⇑ *iP* **P** **21 23 24.3 +2.1**
RUND AMb AMB 21 23 26.7
comp=Z,306nm,1.4s,mb6.2
BER **Bergen** 63.22 347 *eP* **P** **21 23 22.9 +0.4**
BER AMS AMS 21 49 56.1
comp=Z,3μm,21.0s,MS5.4
SCHQ **Schefferville** 63.25 29 P **P** **21 23 21.9 -0.8**
SCHQ ⇑*e* 21 52 18.0
SCHQ LR LR 21 52 39.1
SCHQ **Schefferville** 63.25 29 P **P** **21 23 21.9 -0.8**
comp=Z,80nm,0.9s,mb5.8,baz=345,slow=6.8,SNR=119
SCHQ PKP2bc 21 52 18.0
comp=Z,7.1nm,0.9s,baz=102,slow=2.5,SNR=4.8
SCHQ LR LR 21 52 39.1
comp=Z,2μm,21.5s,MS5.2,baz=328,slow=38
VOR **Voronezh** 63.28 324 *eP* **P** **21 23 24.0 +1.0**
VOR pmax pmax
comp=Z,300nm,2.0s,mb6.1
KONO **Kongsberg** 63.33 345 *eP* **P** **21 23 23.4 +0.2**
KONO **Kongsberg** 63.33 345 *eP* **P** **21 23 23.7 +0.5**
KONO MLR MLR
comp=Z,4μm,21.0s,MS5.5
CBKS **Cedar Bluff** 63.47 60 *eP* **P** **21 23 23.9 -0.5**
comp=Z,152nm,1.0s,mb6.1
CBKS LR LR
comp=Z,4μm,20.0s,MS5.6
CBKS **Cedar Bluff** 63.47 60 *eP* **P** **21 23 24.0 -0.5**
CBKS pmax pmax
comp=Z,152nm,1.0s,mb6.1
CBKS MLR MLR
comp=Z,4μm,20.0s,MS5.6
ODD1 **Odda** 63.50 346 *eP* **P** **21 23 23.0 -1.3**
comp=Z,176nm,1.1s,mb6.0
ODD1 **Odda** 63.50 346 *eP* **P** **21 23 23.7 -0.6**
ODD1 AMb AMB 21 23 25.7
comp=Z,176nm,1.1s,mb6.0
VRSR **Storozhevoye** 63.72 324 *eP* **P** **21 23 25.2 -0.7**
comp=Z,30nm,1.0s,mb5.3
VRSR **Storozhevoye** 63.72 324 *eP* **P** **21 23 25.2 -0.7**
VRSR pmax pmax
comp=N,50nm,1.0s
VRSR pmax pmax
comp=Z,30nm,1.0s,mb5.3
VRSR pmax pmax
comp=E,20nm,1.3s
VORD **Divnogorie** 63.89 324 *eP* **P** **21 23 26.0 -1.0**
VORD pmax pmax
comp=N,120nm,1.0s
VORD pmax pmax
comp=E,60nm,1.0s
VORD pmax pmax
comp=Z,120nm,1.0s,mb5.9
VORD MLR MLR
comp=Z,8μm,18.0s,MS5.9

VORD MLR MLR
comp=N,5µm,16.0s
VORD MLR MLR
comp=E,4µm,22.0s
NNT Nongplab 63.98 254 P **P** **21 23 29.8 +1.7**
BLS5 Blasjo 64.00 346 *e*P **P** **21 23 29.1 +1.5**
comp=E,66nm,2.4s,mb5.2
BLS5 Blasjo 64.00 346 *e*P **P** **21 23 29.1 +1.5**
BLS5 AMb AMB 21 23 34.5
comp=Z,66nm,2.4s,mb5.2
NDI New Delhi 64.01 283 *e*P **P** **21 23 28.1 -0.1**
NDI AMb AMB 21 23 29.1
comp=Z,201nm,1.1s,mb6.1
NDI *ex* x 21 32 10.0
MNK Minsk 64.30 332 *e*P **P** **21 23 28.0 -1.6**
KMY Karmoy 64.36 347 *e*P **P** **21 23 30.8 +0.8**
HNR Honiara 64.46 182 P **P** **21 23 30.7 -0.4**
comp=E,88nm,1.1s,mb5.7
HNR LR LR
comp=Z,7µm,21.0s,MS5.8
HNR Honiara 64.46 182 P **P** **21 23 30.7 -0.4**
HNR pmax pmax
comp=Z,88nm,1.1s,mb5.7
HNR MLR MLR
comp=Z,7µm,21.0s,MS5.8
HNR Honiara 64.46 182 P **P** **21 23 30.3 -0.8**
comp=Z,22nm,0.3s,mb5.6,baz=258,slow=4.6,SNR=4.8
JFWS Jewell Farm 64.71 51 *e*P **P** **21 23 31.2 -1.3**
JFWS LR LR
comp=Z,6µm,21.0s,MS5.8
KSU1 Kansas State U 64.78 57 *e*P **P** **21 23 31.7 -1.4**
comp=Z,118nm,0.9s,mb5.9
KSU1 LR LR
comp=Z,5µm,22.0s,MS5.6
AAI Ambon 64.97 218 P **P** **21 23 34.2 -0.3**
BTM Bintulu 65.04 236 ⇓P **P** **21 23 35.7 +0.7**
FUNA Funafuti 65.17 161 PFAKE 21 23 50.0 +14
FUNA LR LR
comp=Z,6µm,19.0s,MS5.8
AMTX Amarillo 65.54 64⇑*e*P **P** **21 23 37.5 -0.5**
comp=Z,48nm,1.0s,mb5.5
AMTX LR LR
comp=Z,2µm,22.0s,MS5.4
GLMI Grayling 65.57 46 *e*P **P** **21 23 37.3 -0.8**
GLMI LR LR
comp=Z,991nm,21.0s,MS5.0
PMG Port Moresby 65.59 196⇑*i*P **P** **21 23 38.2 -0.2**
comp=Z,109nm,0.9s,mb5.9
PMG *e* pP 21 23 47.8 -3.7
PMG LR LR
comp=Z,2µm,20.0s,MS5.2
PMG Port Moresby 65.59 196 P **P** **21 23 38.3 -0.1**
PMG pmax pmax
comp=Z,62nm,0.9s
PMG Port Moresby 65.59 196 P **P** **21 23 38.3 -0.1**
comp=Z,62nm,0.8s,mb5.7,baz=10,slow=6.1,SNR=33
PCI Palu 65.65 227 P **P** **21 23 37.9 -1.0**
SUW Suwalki 65.93 335 *e*P **P** **21 23 39.5 -0.7**
SUW *ep*P pP 21 23 54.7 +1.3
SUW *e*PcP PcP 21 24 09.0 -1.7
SUW *e*S S 21 32 16.5 -7.2
SUW LMZ 21 52 40.2
comp=Z,6µm,24.6s
SUW Suwalki 65.93 335⇑*e*P **P** **21 23 39.5 -0.7**
SUW *e**PP pP 21 23 54.7 +1.4
SUW *e* 21 24 09.0
SUW *e*S S 21 32 16.5 -7.2
MNTX Cornudas Mount 66.08 69 *e*P **P** **21 23 41.9 +0.3**
comp=Z,150nm,1.1s,mb5.9
MNTX LR LR
comp=Z,954nm,20.0s,MS5.0
SBUM Sibu 66.10 236 ⇓P **P** **21 23 43.9 +2.0**
RSC Scourie 66.28 353⇑*e*P **P** **21 23 42.1 -0.3**
RTO Tolsta 66.32 353 *e*P **P** **21 23 42.5 -0.2**
BLSP Bilaspur 66.33 275 *e*P **P** **21 23 41.8 -1.5**
BLSP AMb AMB 21 23 42.9
comp=Z,71nm,0.8s,mb5.7
MUD Monsted U'grnd 66.46 344 *i* P **P** **21 23 44.1 +0.5**
comp=Z,274nm,1.2s,mb6.2
MUD
comp=Z,2µm,18.0s
MVH1 Achvaich 66.62 352⇑*i*P **P** **21 23 44.4 -0.2**
COP Copenhagen 66.65 342 *e*P **P** **21 23 44.7 -0.1**
comp=Z,95nm,1.0s,mb5.8
COP LR LR
comp=Z,2µm,22.0s,MS5.2
COP Copenhagen 66.65 342 *e*P **P** **21 23 44.7 -0.1**
COP pmax pmax
comp=Z,95nm,1.0s,mb5.8
COP MLR MLR
comp=Z,2µm,22.0s,MS5.2
COP Copenhagen 66.65 342 *i* P **P** **21 23 44.7 -0.1**
comp=Z,95nm,1.0s,mb5.8
COP
comp=Z,2µm,22.0s
BSD Bornholm Skovb 66.72 340⇑*i*P **P** **21 23 44.8 -0.5**
comp=Z,228nm,1.2s,mb6.1
BSD
comp=Z,2µm,19.0s
ABKT Ailbek 66.79 303 P **P** **21 23 45.9 -0.1**
comp=Z,881nm,0.9s,mb6.8,SNR=56
RRH Rhenigidale 66.81 353⇑*i*P **P** **21 23 45.7 -0.1**
RRR Rubha Reidh 66.81 353⇑*e*P **P** **21 23 45.5 -0.3**
MCD Coleburn Disti 66.88 351⇑*e*P **P** **21 23 46.2 -0.1**
HDIL Hopedale 67.03 52 *e*P **P** **21 23 46.4 -1.1**
HDIL LR LR
comp=Z,4µm,20.0s,MS5.6
MDO Dochfour 67.12 352⇑*i*P **P** **21 23 47.5 -0.2**
KAC Achnashellach 67.13 353⇑*i*P **P** **21 23 47.5 -0.3**
WMOK Wichita Mounta 67.14 62 *e*P **P** **21 23 47.8 -0.5**
comp=Z,176nm,1.0s,mb6.0
WMOK LR LR
comp=Z,2µm,20.0s,MS5.3
WMOK Wichita Mounta 67.14 62 *e*P **P** **21 23 47.8 -0.4**
WMOK pmax pmax
comp=Z,177nm,1.0s,mb6.0
WMOK MLR MLR
comp=Z,2µm,20.0s,MS5.3
AJM Ajmer 67.15 284 *e*P **P** **21 23 46.0 -2.5**
AJM *e*P 21 23 47.2
AJM AMb AMB 21 23 49.5
comp=Z,250nm,0.9s,mb6.2
AKASG Malin Array Be 67.30 330 P **P** **21 23 48.0 -1.0**
comp=Z,40nm,0.5s,mb5.7,baz=28,slow=6.1,SNR=93
AKASG LR LR 21 58 47.0
comp=Z,3µm,18.4s,MS5.5,baz=20,slow=41
KIEV Kiev 67.31 330⇑*e*P **P** **21 23 47.6 -1.5**
comp=Z,129nm,1.0s,mb5.9
KIEV LR LR
comp=Z,4µm,19.0s,MS5.7
KIEV Kiev 67.31 330⇑*e*P **P** **21 23 47.6 -1.5**
KIEV pmax pmax
comp=Z,129nm,1.0s,mb5.9
KIEV MLR MLR
comp=Z,4µm,19.0s,MS5.7
KSB Sheil Bridge 67.43 353⇑*i*P **P** **21 23 49.5 -0.2**
MAK Makhachkala 67.47 314⇑*i*P **P** **21 23 49.9 -0.3**
comp=Z,198nm,1.9s,mb5.8
MAK *i* pP pP 21 24 03.3 -0.1
MAK *i* 21 24 14.8
MAK *e* 21 26 18.8
MAK *e*S S 21 32 45.2 +2.5
MAK *i* 21 32 59.0
MAK *e*sS sS 21 33 09.4 +4.7
MAK *e* 21 33 40.6
MAK LR LR
comp=Z,8µm,18.0s,MS6.0
MAK Makhachkala 67.47 314*c i*P **P** **21 23 49.9 -0.3**
MAK *i* *PP pP 21 24 03.3 -0.1
MAK *i* 21 24 14.8
MAK *e* 21 26 18.8
MAK *e*S S 21 32 45.2 +2.5
MAK *i* 21 32 59.0
MAK *e**SS sS 21 33 09.4 +4.7
MAK *e* 21 33 40.6
MAK pmax pmax
comp=Z,198nm,1.9s,mb5.8
MAK MLR MLR
comp=Z,8µm,18.0s,MS6.0
RGN Rugen 67.56 341⇑*e*P **P** **21 23 50.9 +0.3**
comp=Z,581nm,1.1s,mb6.5
KAR1 Arisaig 67.75 353⇑*e*P **P** **21 23 51.7 0.0**
KSM Kuching 67.87 238⇑*i*P **P** **21 23 54.1 +1.0**
KSM Kuching 67.87 238 ⇑P **P** **21 23 54.3 +1.2**
AAM Ann Arbor 68.05 47 *e*P **P** **21 23 53.3 -0.5**
comp=Z,233nm,1.1s,mb6.1
AAM LR LR
comp=Z,2µm,19.0s,MS5.4
AAM Ann Arbor 68.05 47 *e*P **P** **21 23 53.3 -0.6**
AAM pmax pmax
comp=Z,233nm,1.1s,mb6.1
AAM MLR MLR
comp=Z,2µm,19.0s,MS5.4
WAR Warsaw 68.07 335 *e*P **P** **21 23 54.9 +1.0**
WAR *ep*P pP 21 24 05.6 -1.4
WAR *e*S S 21 32 44.1 -5.5
WAR *e*SKS 21 33 40.2
WAR LMZ 21 53 15.2
comp=Z,6µm,27.5s
WAR Warsaw 68.07 335⇑*e*P **P** **21 23 54.9 +1.0**
WAR *ep*P pP 21 24 05.6 -1.4
WAR *e*S S 21 32 44.1 -5.5
WAR *e*SKS 21 33 40.2
WAR LR LR
comp=Z,6µm,27.5s,MS5.7
WAR Warsaw 68.07 335⇑*e*P **P** **21 23 54.9 +1.0**
WAR *e**PP pP 21 24 05.6 -1.4
WAR *e*S S 21 32 44.1 -5.5
WAR *e* 21 33 40.2
BHPL Bhopal 68.13 279 *i* P **P** **21 23 53.0 -1.6**
BHPL *e*P 21 23 53.8
SLM Saint Louis 68.15 53 *e*P **P** **21 23 53.6 -1.0**
KTGM Kuala Trenggan 68.20 246⇑P **P** **21 23 56.5 +1.3**
EBH Black Hill 68.23 351⇑*i*P **P** **21 23 54.2 -0.6**
EAB Aberfoyle 68.36 352⇑*i*P **P** **21 23 54.9 -0.6**
ESY Stoneypath 68.47 351⇑*i*P **P** **21 23 56.0 -0.3**
EDI Edinburgh 68.52 351⇑*e*P **P** **21 23 56.1 -0.5**
EDI AMb AMB 21 23 58.7
comp=Z,111nm,1.5s,mb5.6
EDI AMS AMS 21 50 29.4
comp=Z,1µm,23.1s,MS5.0
EDI Edinburgh 68.52 351 P **P** **21 23 56.1 -0.5**
EDI AMb AMB 21 23 58.7
comp=Z,111nm,1.5s,mb5.6
KIV Kislovodsk 68.57 317 P **P** **21 23 57.1 0.0**
comp=Z,355nm,0.8s,mb6.3,SNR=18
KIV Kislovodsk 68.57 317⇑*i*P **P** **21 23 57.0 -0.1**
comp=Z,179nm,2.3s,mb5.6
KIV *e* 21 26 30.0
KIV *e*S S 21 32 55.7 -0.1
KIV *e*SS SS 21 37 24.5 +5.0
KIV LR LR
comp=Z,7µm,24.0s,MS5.8
KIV Kislovodsk 68.57 317*c i*P **P** **21 23 57.0 -0.1**
KIV *e* 21 26 30.0
KIV *e*S S 21 32 55.7 -0.1
KIV *e*SS SS 21 37 24.5 +5.0
KIV pmax pmax
comp=Z,179nm,2.3s,mb5.6
KIV MLR MLR
comp=Z,7µm,24.0s,MS5.8
FVM French Village 68.59 54 *e*P **P** **21 23 56.6 -0.8**
EAU Auchinoon 68.62 351⇑*i*P **P** **21 23 57.3 +0.1**
EBL Broad Law 68.66 351⇑*i*P **P** **21 23 56.6 -0.8**
BSEG Bad Segeberg 68.69 342 *e*P **P** **21 23 58.0 +0.3**
comp=Z,242nm,1.2s,mb6.0
PGBU Glenifferbraes 68.74 352⇑*e*P **P** **21 23 57.5 -0.5**
PGBU AMb AMB 21 23 59.6
comp=Z,634nm,1.4s,mb6.4
LTX Lajitas 68.85 69 *e*P **P** **21 23 59.3 +0.2**
comp=Z,119nm,1.0s,mb5.8
LTX LR LR
comp=Z,2µm,22.0s,MS5.3
LTX Lajitas 68.85 69 *e*P **P** **21 23 59.3 +0.2**
LTX pmax pmax
comp=Z,119nm,1.0s,mb5.8
LTX MLR MLR
comp=Z,2µm,22.0s,MS5.3
TXAR Lajitas Array 68.85 69 P **P** **21 23 59.1 +0.1**
TXAR ⇑*e* 21 52 09.2
TXAR LR LR 21 56 15.3
TXAR Lajitas Array 68.85 69 P **P** **21 23 59.1 +0.1**
comp=Z,69nm,0.9s,mb5.6,baz=296,slow=4.6,SNR=406
TXAR PKP2bc 21 52 09.2
comp=Z,2.4nm,0.9s,baz=134,slow=3.6,SNR=10
TXAR LR LR 21 56 15.3
comp=Z,1µm,20.4s,MS5.2,baz=0.0,slow=38
NGP Nagpur 68.86 277 *e*P **P** **21 23 56.2 -3.0**
NGP AMb AMB 21 23 57.0
comp=Z,131nm,0.9s,mb5.9
NGP *ex* x 21 33 09.9
XSO Sourhope Farm 68.86 350⇑*e*P **P** **21 23 58.4 -0.3**
ZEI Tsey 69.09 316 *e*P **P** **21 24 00.4 0.0**
ZEI *e* 21 24 18.9
ZEI *e* 21 26 34.5
ZEI Tsey 69.09 316 *e*P **P** **21 24 00.4 0.0**
ZEI *e* 21 24 18.9
ZEI *e* 21 26 34.5
ZEI pmax pmax
comp=Z,57nm,1.1s,mb5.4
ESK Eskdalemuir 69.12 351 P **P** **21 24 00.5 +0.2**
comp=Z,762nm,1.0s,mb6.6,SNR=9.9
ESK Eskdalemuir 69.12 351⇑*e*P **P** **21 23 59.3 -1.0**
ESK AMb AMB 21 24 01.9
comp=Z,229nm,1.3s,mb6.0
ESK AMS AMS 22 03 40.0
comp=Z,1µm,17.2s,MS5.2
ESK Eskdalemuir 69.12 351 P **P** **21 23 59.3 -1.0**
ESK AMb AMB 21 24 01.9
comp=Z,229nm,1.3s,mb6.0
ESK Eskdalemuir 69.12 351 *e*P **P** **21 24 00.2 -0.1**
comp=Z,175nm,1.1s,mb5.9
ESK LR LR
comp=Z,2µm,19.0s,MS5.5
ESK Eskdalemuir 69.12 351 *e*P **P** **21 24 00.2 -0.1**
ESK pmax pmax
comp=Z,175nm,1.1s,mb5.9
ESK MLR MLR
comp=Z,2µm,19.0s,MS5.5
VIS Vishakhapatnam 69.13 271 *e*P **P** **21 24 00.2 -0.7**
VIS AMb AMB 21 24 01.1
comp=Z,123nm,0.8s,mb5.9
ECK Cauldkaine Hil 69.25 351⇑*i*P **P** **21 24 00.8 -0.3**
GMK Mull of Kintyr 69.29 352⇑*e*P **P** **21 24 01.1 -0.3**
BWH Wardlaw 69.30 351⇑*e*P **P** **21 24 01.6 +0.1**
BHH Howats Hill 69.34 351⇑*e*P **P** **21 24 01.3 -0.4**
SIUC Southern Illin 69.37 53 *e*P **P** **21 24 01.3 -0.9**
comp=Z,218nm,1.0s,mb6.0
BLO Bloomington 69.39 51 *e*P **P** **21 24 00.7 -1.6**
comp=Z,113nm,1.0s,mb5.8
BLO Bloomington 69.39 51 *e*P **P** **21 24 00.7 -1.6**
BLO pmax pmax
comp=Z,113nm,1.0s,mb5.8
KAPI Kappang 69.40 226 P **P** **21 24 02.5 -0.1**
comp=Z,862nm,1.4s,mb6.5,SNR=26
ONI Oni 69.43 316 P **P** **21 24 02.7 +0.2**
RUE Ruedersdorf 69.44 340⇑*e*P **P** **21 24 01.8 -0.5**
comp=Z,447nm,1.3s,mb6.2
XAL Allendale 69.48 350⇑*e*P **P** **21 24 02.3 -0.2**
LVV L'vov 69.54 332*d i*P **P** **21 24 02.6 -0.4**
LVV *e*S S 21 33 10.0 +3.0
LVV MLR MLR
comp=Z,4µm,17.0s,MS5.8
KULM Kulim 69.55 249⇑*i*P **P** **21 24 04.1 +0.5**
KULM Kulim 69.55 249 ⇓P **P** **21 24 04.3 +0.8**
GCL Cushendall 69.60 353⇑*i*P **P** **21 24 03.3 0.0**
DGRG David-gareji 69.61 314 P **P** **21 24 03.7 +0.1**
TBLG Delisi 69.63 315 P **P** **21 24 04.3 +0.6**
LONY Lake Ozonia 69.64 39 *e*P **P** **21 24 02.0 -1.7**
LONY LR LR
comp=Z,2µm,19.0s,MS5.3
GCD Castle Douglas 69.64 351⇑*e*P **P** **21 24 03.1 -0.4**
MTA Mtatsminda 69.64 315 P **P** **21 24 04.7 +0.9**
ERPA Erie 69.70 44 *e*P **P** **21 24 03.1 -1.0**
comp=Z,245nm,1.0s,mb6.1
ERPA LR LR
comp=Z,3µm,20.0s,MS5.5
GAL1 Galloway 69.70 352⇑*e*P **P** **21 24 02.6 -1.3**
GAL1 AMb AMB 21 24 05.2
comp=Z,232nm,1.5s,mb5.9
GAL1 AMS AMS 21 51 49.0
comp=Z,1µm,22.2s,MS5.1
GAL1 Galloway 69.70 352 P **P** **21 24 02.6 -1.3**
GAL1 AMb AMB 21 24 05.2
comp=Z,232nm,1.5s,mb5.9
FRNY Flat Rock 69.81 39 *e*P **P** **21 24 02.9 -1.8**
ANN Anapa 69.81 321⇑*i*P **P** **21 24 03.8 -1.0**
comp=Z,112nm,1.7s,mb5.5
ANN *ep*P pP 21 24 23.1 +5.1
ANN *e* 21 26 40.1
ANN *e*PPP 21 28 23.9
ANN *e*S S 21 33 10.1 -0.3
ANN *es*S sS 21 33 46.8 +14
ANN LR LR
comp=Z,3µm,21.0s,MS5.5
ANN Anapa 69.81 321*c i*P **P** **21 24 03.8 -1.0**
ANN *e**PP pP 21 24 23.1 +5.1
ANN *e* 21 26 40.1
ANN *e*PPP 21 28 23.9
ANN *e*S S 21 33 10.1 -0.3
ANN *e**SS sS 21 33 46.8 +14
ANN pmax pmax
comp=Z,112nm,1.7s,mb5.5
ANN MLR MLR
comp=N,2µm,21.0s,MS5.5
ANN MLR MLR
comp=E,1µm,21.0s,MS5.5
ANN MLR MLR
comp=Z,3µm,21.0s,MS5.5
CKE Keswick 69.83 351⇑*i*P **P** **21 24 04.4 -0.3**
USIN University of 69.87 52 *e*P **P** **21 24 04.6 -0.7**
MIAR Mount Ida 69.87 58 *e*P **P** **21 24 04.6 -0.7**
comp=Z,142nm,1.1s,mb5.8
MIAR LR LR
comp=Z,3µm,22.0s,MS5.5
MIAR Mount Ida 69.87 58 *e*P **P** **21 24 04.6 -0.7**
MIAR pmax pmax
comp=Z,142nm,1.1s,mb5.8
MIAR MLR MLR
comp=Z,3µm,22.0s,MS5.5
PARMO Parma 69.98 54⇑*e*P **P** **21 24 05.3 -0.7**
JCT Junction City 69.98 65 *e*P **P** **21 24 05.3 -0.7**
comp=Z,191nm,1.0s,mb6.0
JCT LR LR
comp=Z,2µm,21.0s,MS5.4
JCT Junction City 69.98 65 *e*P **P** **21 24 05.3 -0.8**
JCT pmax pmax
comp=Z,191nm,1.0s,mb6.0
JCT MLR MLR
comp=Z,2µm,21.0s,MS5.4
SOC Sochi 70.02 319⇑*i*P **P** **21 24 05.7 -0.4**
comp=Z,133nm,1.6s,mb5.6
SOC *e* pP 21 24 17.1 -2.2
SOC *e*PPP 21 28 16.2
SOC *e*S S 21 33 04.1 -8.8
SOC *e* 21 33 53.6
SOC LR LR
comp=Z,5µm,18.0s,MS5.8
SOC Sochi 70.02 319*c i*P **P** **21 24 05.7 -0.4**
SOC *e* pP 21 24 17.1 -2.2
SOC *e*PPP 21 28 16.2
SOC *e*S S 21 33 04.1 -8.8
SOC *e* 21 33 53.6
SOC pmax pmax
comp=Z,515nm,2.4s,mb6.0
SOC pmax pmax
comp=Z,133nm,1.6s,mb5.6
SOC MLR MLR
comp=Z,5µm,18.0s,MS5.8
IPM Ipoh 70.03 248 ⇓P **P** **21 24 06.7 +0.2**
ALLY Alegheny Colle 70.03 45 *e*P **P** **21 23 58.3 -7.9**
ACSO Alum Creek Sta 70.05 48 *e*P **P** **21 24 05.3 -1.0**
ACSO LR LR
comp=Z,3µm,20.0s,MS5.5
KWP Kalwaria 70.06 333 *e*P **P** **21 24 06.8 +0.6**
KWP *ep*P pP 21 24 20.5 +1.1
KWP *e*PcP PcP 21 24 24.3 -3.8
KWP *e*S S 21 33 05.6 -7.5
KWP *e*SKS 21 34 02.3
KWP LMZ 21 58 25.6
comp=Z,8µm,19.1s
KWP Kalwaria 70.06 333⇑*e*P **P** **21 24 06.8 +0.6**
KWP *e**PP pP 21 24 20.5 +1.1
KWP *e* pP 21 24 24.3 +4.9
KWP *e*S S 21 33 05.6 -7.5
KWP *e* 21 34 02.3
KWP Kalwaria 70.06 333⇑*i*P **P** **21 24 06.7 +0.5**
OJC Ojcow 70.24 335 *i* P **P** **21 24 07.6 +0.3**
OJC *ep*P pP 21 24 20.6 +0.1
OJC *e*S S 21 33 11.9 -3.3
OJC L 21 58 48.7
comp=Z,5.0nm,18.1s
WCI Wyandotte Cave 70.27 51 *e*P **P** **21 24 06.5 -1.2**
WCI LR LR
comp=Z,4µm,20.0s,MS5.7
UALR University of 70.28 57 *e*P **P** **21 24 06.8 -1.0**
comp=Z,342nm,2.3s,mb5.9
HPK Haverah Park 70.31 350⇑*e*P **P** **21 24 07.5 -0.2**
HPK AMb AMB 21 24 09.3
comp=Z,422nm,1.2s,mb6.2
HPK AMS AMS 22 04 04.2
comp=Z,1µm,16.8s,MS5.3
HPK Haverah Park 70.31 350 P **P** **21 24 07.5 -0.2**
HPK AMb AMB 21 24 09.3
comp=Z,422nm,1.2s,mb6.2
NCB Newcomb 70.33 40 *e*P **P** **21 24 06.6 -1.3**
NCB LR LR
comp=Z,2µm,19.0s,MS5.4
AKL Akola 70.36 278 *e*P **P** **21 24 08.2 -0.3**
AKL *ex* x 21 24 09.3
comp=Z,319nm,1.0s
AKL *i* S S 21 33 17.4 -0.1
GMM Mts of Mourne 70.42 352⇑*i*P **P** **21 24 07.8 -0.5**
HBAR Harrisburg 70.46 56 *e*P **P** **21 24 08.3 -0.6**
KSP Ksiaz 70.46 338 *e*P **P** **21 24 09.1 +0.5**
KSP *ep*P pP 21 24 22.5 +0.6
KSP *e*SKS 21 33 56.7
KSP LMZ 21 55 46.1
comp=Z,6µm,24.6s
KSP Ksiaz 70.46 338⇑*e*P **P** **21 24 08.9 +0.3**
KSP *e**PP pP 21 24 21.7 -0.2
KSP MLR MLR
comp=Z,7µm,24.6s,MS5.8
GLAT Glass 70.52 54 *e*P **P** **21 24 09.2 0.0**
STHS Stebnicka Huta 70.63 334 *i* P **P** **21 24 10.6 +0.9**
comp=Z,117nm,1.3s,mb5.7
STHS Stebnicka Huta 70.63 334 *i* P **P** **21 24 10.6 +0.9**
STHS pmax pmax
comp=Z,117nm,1.3s,mb5.7
UTMT University of 70.65 54 *e*P **P** **21 24 10.3 +0.3**
IBBN Ibbenburen 70.69 344 *e*P **P** **21 24 10.0 0.0**
comp=Z,293nm,1.2s,mb6.1
CLZ Clausthal 70.69 342 *e*P **P** **21 24 10.4 +0.4**
CLZ pmax pmax
comp=Z,428nm,1.2s,mb6.2
CLZ Clausthal 70.69 342 *e*P **P** **21 24 10.4 +0.4**
comp=Z,428nm,1.2s,mb6.2
CLL Collm 70.70 340⇑*i*P **P** **21 24 10.0 -0.1**
comp=Z,466nm,1.2s,mb6.3
CLL *ep*P pP 21 24 24.0 +0.7
CLL *e*S S 21 33 22.0 +1.4
CLL LR LR
comp=Z,3µm,21.4s,MS5.5
CLL Collm 70.70 340⇑*i*P **P** **21 24 10.0 -0.1**
CLL *e**PP pP 21 24 24.0 +0.7
CLL *e*S S 21 33 22.0 +1.4
CLL pmax pmax
comp=Z,466nm,1.2s,mb6.3
CLL MLR MLR
comp=Z,3µm,21.4s,MS5.5
CLL Collm 70.70 340⇑*i*P **P** **21 24 10.0 -0.1**
comp=Z,466nm,1.2s,mb6.3
CLL *es*P sP 21 24 24.0 -4.5
CLL *e*PP PP 21 26 42.0 -4.4
CLL *e*S S 21 33 22.0 +1.4
CLL *e*PS 21 33 49.0
CLL *e*ScS ScS 21 34 09.0 -0.4
CLL *e*(SS) 21 38 29.0
CLL *ex* x 21 39 15.0
CLL *ex* x 21 42 00.0
CLL LmV 21 58 00.0
comp=Z,3µm,21.4s
CLL Collm 70.70 340⇑*i*P **P** **21 24 10.0 -0.1**
comp=Z,468nm,1.2s,mb6.3
CLL *es*P sP 21 24 23.8 -4.7
CLL *e*PP PP 21 26 45.5 -0.9
CLL *e*S S 21 33 24.3 +3.7
CLL *e*ScS ScS 21 34 10.6 +1.2
CLL *e*SS SS 21 38 03.1 +11
CLL *e*LR LR 21 47 38.8
COEN Coen 70.73 199 *e*P **P** **21 24 10.6 0.0**
comp=Z,76nm,1.0s,mb5.6
COEN *e* pP 21 24 21.5 -2.3

KIS Kishinev 70.73 328 *i* P **P 21 24 08.0 -2.3**
comp=Z,500nm,1.4s,mb6.2
KIS *eS* S 21 33 14.0 -7.0
KIS LR LR
comp=Z,5μm,17.0s,MS5.8
KIS Kishinev 70.73 328α *i* P **P 21 24 08.0 -2.3**
KIS *eS* S 21 33 14.0 -7.0
KIS pmax pmax
comp=Z,500nm,1.4s,mb6.2
KIS pmax pmax
comp=Z,1μm,2.0s,mb6.4
KIS MLR MLR
comp=N,5μm,17.0s
KIS MLR MLR
comp=Z,5μm,17.0s,MS5.8
KIS MLR MLR
comp=Z,6μm,18.0s
KIS Kishinev 70.73 328⇑ *i* P **P 21 24 08.0 -2.3**
comp=Z,500nm,1.4s,mb6.2
KIS *eS* S 21 33 14.0 -7.0
KIS LRM 21 58 16.0
comp=Z,6μm,18.0s
LHO Holmfirth 70.74 350⇑ *i* P **P 21 24 09.9 -0.4**
RAC Raciborz 70.74 336 *eP* **P 21 24 11.3 +0.9**
RAC LR LR
comp=Z,5μm,24.3s,MS5.7
FRIM Kepong 70.76 247 ⇓ P **P 21 24 11.5 +0.5**
HALT Halls 70.78 54 *eP* **P 21 24 10.4 -0.5**
KOLS Kolonicke sedl 70.81 333 *eP* **P 21 24 11.0 +0.2**
MYKOM Kota Tinggi 70.83 244 ⇑ P **P 21 24 12.5 +1.1**
UPC Upice 70.84 338⇑ *i* P **P 21 24 11.4 +0.5**
SIM Simferopol' 70.84 324⇑ *i* P **P 21 24 11.6 +0.5**
comp=Z,45nm,1.0s,mb5.3
SIM LR LR
comp=Z,8μm,16.0s,MS6.0
SIM Simferopol' 70.84 324*c i* P **P 21 24 11.6 +0.5**
SIM pmax pmax
comp=Z,45nm,1.0s,mb5.3
SIM MLR MLR
comp=Z,8μm,16.0s,MS6.0
NIE Niedzica 70.86 335 *i* P **P 21 24 11.9 +0.8**
NIE *ep* P pP 21 24 25.4 +1.1
KGM Kluang 70.91 244 ⇑ P **P 21 24 12.9 +1.0**
LBNH Lisbon 70.91 38 *eP* **P 21 24 11.2 -0.3**
comp=Z,138nm,1.0s,mb5.8
LBNH LR LR
comp=Z,3μm,22.0s,MS5.5
LBNH Lisbon 70.91 38 *eP* **P 21 24 11.2 -0.3**
LBNH pmax pmax
comp=Z,138nm,1.0s,mb5.8
LBNH MLR MLR
comp=Z,3μm,22.0s,MS5.5
DPC Dobruska-Polom 70.92 337⇑ *i* P **P 21 24 12.1 +0.7**
DPC AMS AMS 22 01 20.0
comp=Z,4μm,14.4s
PKME Peaks-Kenny Pk 70.92 36 *eP* **P 21 24 11.1 -0.4**
PKME LR LR
comp=Z,3μm,19.0s,MS5.6
BRG Berggiesshubel 70.93 339⇑ *i* P **P 21 24 11.6 +0.1**
BRG *i* pP 21 24 25.3 +0.6
BRG pmax pmax
comp=Z,161nm,1.2s,mb5.8
BRG Berggiesshubel 70.93 339 *eP* **P 21 24 11.3 -0.2**
comp=Z,268nm,1.2s,mb6.0
BRG Berggiesshubel 70.93 339⇑ *i* P **P 21 24 11.6 +0.1**
comp=Z,269nm,1.2s,mb6.0
BRG *i* pP 21 24 25.3 +0.6
comp=Z,90nm,1.1s
BRG PKPPKP 21 52 02.2
comp=Z,3.8nm,1.1s
BRG *e* 21 52 09.2
comp=Z,15nm,1.6s
IAS Iasi 70.93 329 P **P 21 24 11.2 -0.4**
OKC Ostrava-Krasne 70.98 336⇑ *i* P **P 21 24 12.4 +0.5**
OKC AMS AMS 21 58 50.0
comp=Z,3μm,14.5s
KBI1 Birley Grange 71.00 350⇑ *i* P **P 21 24 11.5 -0.4**
ACCN Adirondack Com 71.03 39 *eP* **P 21 24 11.1 -1.2**
CRVS Cervenica-Dubn 71.05 334 *eP* **P 21 24 12.3 +0.1**
UZH Uzhgorod 71.08 333*d i* P **P 21 24 12.0 -0.5**
UZH *i* pP 21 24 26.6 +0.9
UZH *i* 21 24 37.6
UZH *eS* S 21 33 23.0 -2.1
UZH MLR MLR
comp=Z,6μm,18.0s,MS5.9
BCA Borcka 71.12 317 *eP* **P 21 24 11.4 -1.4**
PVCC Panska Ves 71.12 339⇑ *i* P **P 21 24 13.0 +0.3**
PVCC *ex* x 21 24 22.8
PVCC AMS AMS 22 00 30.0
comp=Z,4μm,14.2s
MET Memphis--Engin 71.15 55 *eP* **P 21 24 12.2 -0.9**
MORC Moravsky Berou 71.18 336⇑ *i* P **P 21 24 13.4 +0.4**
comp=Z,262nm,1.1s,mb6.1
MORC Moravsky Berou 71.18 336⇑ *i* P **P 21 24 13.4 +0.4**
MORC pmax pmax
comp=Z,262nm,1.1s,mb6.1
MORC Moravsky Berou 71.18 336⇑ *i* P **P 21 24 13.6 +0.6**
BINY Binghamton 71.19 42 *eP* **P 21 24 11.8 -1.5**
comp=Z,108nm,1.1s,mb5.7
BINY LR LR
comp=Z,3μm,19.0s,MS5.5
ARTV Artvin 71.22 316 *i* P **P 21 24 14.0 +0.6**
BURAR Bucovina Array 71.22 331 ⇑ P **P 21 24 13.0 -0.3**
BURAR Bucovina Array 71.22 331⇑ *i* P **P 21 24 13.0 -0.3**
KARS Kars 71.24 315 *eP* **P 21 24 13.9 +0.3**
HNH Hanover 71.25 38 *eP* **P 21 24 13.0 -0.6**
KWE Weaver Farm 71.27 350⇑ *eP* **P 21 24 12.9 -0.6**
DIGO Kars 71.29 315 *i* P **P 21 24 14.8 +0.9**
DLF Lyons Farm 71.40 353⇑ *i* P **P 21 24 13.7 -0.6**
DCN Croghan 71.40 353⇑ *i* P **P 21 24 13.7 -0.6**
WVL Waterville 71.41 36 *eP* **P 21 24 14.4 -0.2**
comp=Z,138nm,1.4s,mb5.7
DSB Dublin 71.44 353⇑ *eP* **P 21 24 13.8 -0.7**
comp=Z,139nm,1.1s,mb5.8
DSB *e* pP 21 24 29.3 +1.5
TRPA Tarpa 71.48 333⇑ *i* P **P 21 24 15.3 +0.4**
CWF Charnwood Fore 71.48 349⇑ *eP* **P 21 24 14.2 -0.7**
CWF AMb AMB 21 24 16.9
comp=Z,196nm,1.5s,mb5.8
LIKS Likavka 71.49 335 *eP* **P 21 24 15.7 +0.8**
comp=Z,141nm,1.1s,mb5.8
LIKS Likavka 71.49 335 *eP* **P 21 24 15.7 +0.8**
LIKS pmax pmax
comp=Z,141nm,1.1s,mb5.8
SBD1 Bryn Du 71.51 351⇑ *i* P **P 21 24 14.9 0.0**
NATX Nacogdoches 71.58 61 *eP* **P 21 24 15.5 -0.2**
comp=Z,135nm,1.0s,mb5.8
NATX LR LR
comp=Z,3μm,19.0s,MS5.5
PRA Prague 71.58 339 ⇑ P **P 21 24 16.0 +0.5**
MOX Moxa 71.60 341 *eP* **P 21 24 15.7 +0.1**
comp=Z,370nm,1.4s,mb6.1
MOX
comp=Z,2μm,22.0s
MOX Moxa 71.60 341 *eP* **P 21 24 15.7 +0.1**
MOX pmax pmax
comp=Z,370nm,1.4s,mb6.1
MOX MLR MLR
comp=Z,2μm,22.0s,MS5.3
PRU Pruhonice 71.64 338⇑ *i* P **P 21 24 16.2 +0.4**
PRU AMS AMS 22 00 40.0
comp=Z,4μm,18.0s
TANN Tannenbergstha 71.66 340 *eP* **P 21 24 16.3 +0.4**
FFD Franklin Falls 71.68 38 *eP* **P 21 24 15.4 -0.7**
comp=Z,60nm,0.9s,mb5.5
KECS Kecovo 71.68 334 *eP* **P 21 24 16.2 +0.1**
comp=Z,48nm,1.2s,mb5.3
KECS Kecovo 71.68 334 *eP* **P 21 24 16.2 +0.1**
KECS pmax pmax
comp=Z,48nm,1.2s,mb5.3
UBBA Unterbreizbach 71.73 342 *eP* **P 21 24 16.4 0.0**
SSPA Standing Stone 71.79 44 *eP* **P 21 24 15.6 -1.3**
SSPA LR LR
comp=Z,2μm,21.0s,MS5.5
MCWV Mont Chateau 71.83 46 *eP* **P 21 24 16.3 -0.8**
comp=Z,192nm,1.1s,mb5.9
MCWV LR LR
comp=Z,4μm,21.0s,MS5.6
NKC Novy Kostel 71.83 340⇑ *i* P **P 21 24 17.4 +0.4**
NKC *e* pP 21 24 26.1 -4.1
NKC Novy Kostel 71.83 340⇑ *i* P **P 21 24 17.4 +0.4**
NKC *ex* x 21 24 26.1
NKC AMS AMS 22 01 30.0
comp=Z,5μm,10.9s
VRAC Vranov 71.84 337 P **P 21 24 17.8 +0.8**

VRAC Vranov 71.84 337 P **P 21 24 17.8 +0.8**
comp=Z,139nm,1.0s,mb5.8,baz=22,slow=6.3,SNR=128
VRAC LR LR 22 00 53.7
comp=Z,5μm,18.5s,MS5.8,baz=20,slow=40
VRAC Vranov 71.84 337⇑ *i* P **P 21 24 17.9 +0.9**
HLM1 Long Mynd 71.86 350⇑ *i* P **P 21 24 16.9 -0.2**
OXF Oxford 71.90 55 *eP* **P 21 24 17.1 -0.5**
OXF LR LR
comp=Z,4μm,21.0s,MS5.6
DYDN Diyadin 71.90 314 *i* P **P 21 24 19.2 +1.7**
JAVC Velka Javorina 72.01 336 P **P 21 24 19.5 +1.5**
EMMW East Machias 72.01 35 *eP* **P 21 24 17.7 -0.5**
comp=Z,148nm,1.0s,mb5.9
VYHS Vyhne 72.08 335 *i* P **P 21 24 19.1 +0.7**
comp=Z,96nm,1.3s,mb5.6
VYHS LR LR
comp=Z,3μm,26.2s,MS5.5
VYHS Vyhne 72.08 335 *i* P **P 21 24 19.1 +0.7**
VYHS pmax pmax
comp=Z,96nm,1.3s,mb5.6
VYHS MLR MLR
comp=Z,3μm,26.2s,MS5.5
TREC Trest 72.09 338⇑ *i* P **P 21 24 19.0 +0.5**
TREC AMS AMS 21 58 00.0
comp=Z,5μm,21.9s
HYB Hyderabad 72.10 275 *eP* **P 21 24 18.5 -0.5**
comp=Z,215nm,1.0s,mb6.0
HYB *e* 21 24 37.0
HYB *eS* ScS 21 34 32.0 +11
HYB Hyderabad 72.10 275 *eP* **P 21 24 18.5 -0.5**
HYB *e* 21 24 37.0
HYB *eS* ScS 21 34 32.0 +11
HYB pmax pmax
comp=Z,215nm,1.0s,mb6.0
HYB Hyderabad 72.10 275 *i* P **P 21 24 18.5 -0.5**
comp=Z,215nm,1.0s,mb6.0
HYB *e*PcP PcP 21 24 37.0 -0.2
HYB *eS* S 21 33 40.0 +2.4
KOLL Kolacno 72.10 335 *i* P **P 21 24 19.3 +0.7**
KRUC Moravsky 72.11 337 P **P 21 24 19.2 +0.6**
PLAL Pickwick Lake 72.13 54 *eP* **P 21 24 17.7 -1.3**
comp=Z,227nm,1.0s,mb6.1
PLAL LR LR
comp=Z,3μm,20.0s,MS5.6
CLDR Caldiran 72.15 314 *eP* **P 21 24 20.0 +1.0**
AGRB Hanur-Agry 72.16 315 *eP* **P 21 24 19.8 +0.7**
TSI Tuntungan 72.16 250⇓ *eP* **P 21 24 19.0 -0.4**
TSI Tuntungan 72.16 250⇓ *eP* **P 21 24 20.0 +0.6**
TSI Tuntungan 72.16 250⇑ *eP* pP 21 24 36.0 +3.3
TSI Tuntungan 72.16 250⇑ *eP* **P 21 24 23.5 +4.1**
MAIG Mazatlaan 72.22 75 *i* P **P 21 24 19.6 -0.1**
BHV Bhavnagar 72.28 283 *eP* **P 21 24 20.0 0.0**
SSW Stow on the Wo 72.30 350⇑ *eP* **P 21 24 19.4 -0.3**
ROTZ Rotzenmuhle 72.33 340⇑ *i* P **P 21 24 20.3 +0.4**
comp=Z,316nm,1.2s,mb6.1
HTR Trewern Hill 72.33 350⇑ *i* P **P 21 24 19.6 -0.3**
PSZ Piszkesteto 72.35 334⇑ *eP* **P 21 24 20.8 +0.7**
PSZ Piszkesteto 72.35 334 P **P 21 24 21.0 +0.9**
PSZ Piszkesteto 72.35 334⇑ *eP* **P 21 24 20.6 +0.5**
PSZ Piszkesteto 72.35 334⇑ *i* P **P 21 24 20.2 +0.1**
VRI Vrincioaia 72.38 329 P **P 21 24 20.4 +0.1**
VRI Vrincioaia 72.38 329⇑ *i* P **P 21 24 20.1 -0.2**
TUTA Tutak 72.38 315 *i* P **P 21 24 21.8 +1.4**
MCH1 Michaelchurch 72.39 350⇑ *i* P **P 21 24 19.8 -0.4**
MCH1 AMb AMB 21 24 22.1
comp=Z,191nm,2.3s,mb5.6
SMOL Smolenice 72.39 336 *eP* **P 21 24 22.0 +1.7**
PLOR Plostina 72.41 329 P **P 21 24 20.9 +0.4**
SKP1 Kophill 72.43 349⇑ *eP* **P 21 24 19.7 -0.8**
HKT Hockley 72.45 63⇑ *eP* **P 21 24 20.0 -1.0**
comp=Z,144nm,1.6s,mb5.7
HKT LR LR
comp=Z,2μm,19.0s,MS5.5
HKT Hockley 72.45 63⇑ *eP* **P 21 24 20.0 -1.0**
HKT pmax pmax
comp=Z,144nm,1.6s,mb5.7
HKT MLR MLR
comp=Z,2μm,19.0s,MS5.5
BHJ Bhuj 72.46 285 *eP* **P 21 24 20.0 -1.2**
BHJ AMb AMB 21 24 21.6
comp=Z,125nm,0.8s,mb5.9
BEBN Eben Emael 72.48 344 P **P 21 24 20.6 -0.2**
comp=Z,50nm,1.6s,mb5.2
ERZM Erzurum 72.53 316 *i* P **P 21 24 23.2 +1.9**
EZM Erzurum 72.53 316 *eP* **P 21 24 22.2 +0.9**
PSI Prapat 72.56 249 P **P 21 24 21.9 +0.1**
comp=Z,258nm,1.0s,mb6.1,baz=6.8,slow=5.2,SNR=234
PSI LR LR 22 00 22.9
comp=Z,2μm,20.4s,MS5.4,baz=219,slow=39
MODS Modra-Piesok 72.56 336 *i* P **P 21 24 22.5 +1.2**
HRV Harvard--Oak R 72.56 39 *eP* **P 21 24 20.7 -0.7**
HRV LR LR
comp=Z,2μm,19.0s,MS5.5
TNS Taunus Mts 72.58 342 *eP* **P 21 24 21.6 +0.2**
TNS pmax pmax
comp=Z,184nm,1.4s,mb5.8
TNS Taunus Mts 72.58 342 *eP* **P 21 24 21.6 +0.2**
comp=Z,184nm,1.4s,mb5.8
GRA1 Grafenberg Arr 72.59 341 *eP* **P 21 24 22.0 +0.5**
comp=Z,513nm,1.2s,mb6.3
GRA1 *ep* pP 21 24 35.1 +0.4
GRF Grafenberg Arr 72.59 341 *eP* **P 21 24 22.0 +0.5**
GRF *e**PP pP 21 24 35.1 +0.4
GRF pmax pmax
comp=Z,513nm,1.2s,mb6.3
GRF Grafenberg Arr 72.59 341 *eP* **P 21 24 22.0 +0.5**
GRF *e**PP pP 21 24 35.1 +0.4
GRF pmax pmax
comp=Z,513nm,1.2s,mb6.3
GRF Grafenberg Arr 72.59 341 *eP* **P 21 24 22.0 +0.5**
comp=Z,513nm,1.2s,mb6.3
GRF *ep* pP 21 24 35.1 +0.4
GRFO Grafenberg 72.59 341⇑ *i* P **P 21 24 22.0 +0.5**
comp=Z,528nm,1.3s,mb6.3
GRFO LR LR
comp=Z,3μm,21.0s,MS5.5
GRFO Grafenberg 72.59 341⇑ *i* P **P 21 24 22.0 +0.5**
GRFO pmax pmax
comp=Z,528nm,1.3s,mb6.3
GRFO MLR MLR
comp=Z,3μm,21.0s,MS5.5
MEM Membach 72.61 344 P **P 21 24 21.7 +0.1**
comp=Z,228nm,1.2s,mb6.0
PENC Penc 72.62 335⇓ *eP* **P 21 24 23.1 +1.4**
BATI Kupang 72.63 220 P **P 21 24 21.8 -0.3**
comp=Z,359nm,1.1s,mb6.2,baz=1.9,slow=0.7,SNR=44
KHC Kasperske Hory 72.65 339*c i* P **P 21 24 22.6 +0.7**
KHC Kasperske Hory 72.65 339⇑ *i* P **P 21 24 22.5 +0.6**
KHC AMS AMS 22 01 20.0
comp=Z,6μm,16.3s
DRGR 72.67 332 P **P 21 24 22.1 +0.1**
DRGR 72.67 332⇓ *i* P **P 21 24 21.7 -0.3**
UCC Uccle 72.67 345 P **P 21 24 21.6 -0.3**
comp=Z,100nm,1.8s,mb5.4
ESPY Espiye-Giresun 72.69 318 *eP* **P 21 24 20.1 -2.1**
HGH Gray Hill 72.72 350⇑ *i* P **P 21 24 21.9 -0.3**
SWN1 Swindon 72.75 349 *eP* **P 21 24 21.9 -0.5**
SWN1 AMb AMB 21 24 24.1
comp=Z,476nm,1.3s,mb6.3
WES Weston 72.75 38 *eP* **P 21 24 21.9 -0.6**
comp=Z,150nm,0.9s,mb5.9
WES LR LR
comp=Z,1μm,19.0s,MS5.2
WES Weston 72.75 38 *eP* **P 21 24 21.9 -0.7**
WES pmax pmax
comp=Z,150nm,0.9s,mb5.9
WES MLR MLR
comp=Z,1μm,19.0s,MS5.2
ZST Bratislava 72.77 336 *i* P **P 21 24 24.1 +1.5**
comp=Z,142nm,1.1s,mb5.8
ZST *e* 21 54 35.5
ZST LR LR
comp=Z,3μm,19.6s,MS5.6
ZST Bratislava 72.77 336 *i* P **P 21 24 24.1 +1.5**
ZST pmax pmax
comp=Z,142nm,1.1s,mb5.8
ZST MLR MLR
comp=Z,3μm,19.6s,MS5.6
ZST Bratislava 72.77 336 *i* P **P 21 24 24.0 +1.4**
ZST *ep* pP 21 24 35.5 -0.3
WET Wettzell 72.78 339 *eP* **P 21 24 23.3 +0.6**
WET pmax pmax
comp=Z,376nm,1.2s,mb6.2
WET Wettzell 72.78 339 *eP* **P 21 24 23.3 +0.6**
comp=Z,376nm,1.2s,mb6.2

GUMT Gumushane 72.80 318 *eP* **P 21 24 23.8 +0.9**
VANB Van 72.83 314 *eP* **P 21 24 22.1 -1.0**
GRSN GIRESUNGRSN 72.86 319 *i* P **P 21 24 25.1 +1.9**
TVAN Van 72.88 314 *i* P **P 21 24 25.7 +2.3**
WOL Wolverton 72.88 349⇑ *eP* **P 21 24 22.2 -1.0**
TZTN Tazewell 72.88 50 *eP* **P 21 24 23.0 -0.5**
comp=Z,124nm,1.0s,mb5.8
TZTN LR LR
comp=Z,4μm,20.0s,MS5.7
GEC2 GERESS Array S 72.90 339 *eP* **P 21 24 23.6 +0.3**
GEC2 pmax pmax
comp=Z,239nm,1.2s,mb6.0
GEC2 GERESS Array S 72.90 339 *eP* **P 21 24 23.6 +0.3**
comp=Z,239nm,1.2s,mb6.0
GERES GERESS Array B 72.90 339 P **P 21 24 23.7 +0.4**
GERES 21 27 07.0
GERES GERESS Array B 72.90 339 P **P 21 24 23.7 +0.3**
comp=Z,98nm,1.1s,mb5.7,baz=44,slow=4.1,SNR=262
GERES PP PP 21 27 07.0 +1.8
comp=Z,12nm,1.1s,baz=23,slow=7.2,SNR=4.2
GERES LR LR 22 01 45.2
comp=Z,3μm,20.2s,MS5.5,baz=16,slow=40
BCLA Clavier 72.90 345 P **P 21 24 23.3 0.0**
comp=Z,84nm,1.6s,mb5.4
SWET Sewanee 72.92 52 *eP* **P 21 24 22.7 -1.0**
MVL Millersville 72.94 43 *eP* **P 21 24 22.7 -1.0**
MLR Muntele Rosu 72.95 329 P **P 21 24 23.9 +0.3**
MLR Muntele Rosu 72.95 329 LR LR 22 00 50.3
comp=Z,7μm,18.1s,MS6.0,baz=216,slow=39
MLR Muntele Rosu 72.95 329⇑ *i* P **P 21 24 24.0 +0.3**
SNF Seneffe 72.97 345 P **P 21 24 23.6 -0.1**
comp=Z,45nm,1.4s,mb5.2
BUD Budapest 72.97 335⇑ *eP* **P 21 24 24.7 +0.9**
PAL Palisades 73.01 41 *eP* **P 21 24 22.8 -1.4**
comp=Z,121nm,0.9s,mb5.8
PAL Palisades 73.01 41 *eP* **P 21 24 22.8 -1.3**
PAL pmax pmax
comp=Z,121nm,0.9s,mb5.8
ABH Alteburg 73.06 343⇑ *eP* **P 21 24 24.4 +0.1**
HARR Harsova 73.08 328 P **P 21 24 24.6 +0.1**
HARR Harsova 73.08 328⇓ *i* P **P 21 24 24.5 0.0**
BRYW Bryant College 73.08 39 *eP* **P 21 24 23.7 -0.8**
comp=Z,119nm,0.9s,mb5.8
TOD Tromm 73.11 342⇑ *eP* **P 21 24 24.8 +0.2**
TIRR Tirgusor 73.14 327 P **P 21 24 25.1 +0.2**
TIRR Tirgusor 73.14 327⇑ *i* P **P 21 24 24.5 -0.3**
KELT Kelkit 73.15 318 *i* P **P 21 24 26.3 +1.3**
CPNY Central Park 73.17 41 *eP* **P 21 24 24.0 -1.1**
PKSG 73.21 335⇑ *eP* **P 21 24 26.0 +0.8**
SIND Sindeldorf 73.22 341 P **P 21 24 25.4 +0.2**
SWS Schriesheim-Wi 73.25 342 P **P 21 24 25.8 +0.4**
SDMD Soldier's Deli 73.25 44 *eP* **P 21 24 24.8 -0.9**
VOIR 73.26 330 P **P 21 24 25.9 +0.4**
VOIR 73.26 330⇑ *i* P **P 21 24 26.1 +0.6**
EZC Erzincan 73.28 317 *eP* **P 21 24 26.5 +0.8**
GIVF Givet 73.28 345⇑ *i* P **P 21 24 25.4 -0.2**
comp=Z,209nm,1.2s,mb5.6
GIVF Givet 73.28 345⇑ *i* P **P 21 24 25.4 -0.2**
comp=Z,104nm,1.2s,mb5.6
GIVF Givet 73.28 345⇑ *i* P **P 21 24 25.4 -0.2**
GIVF pmax pmax
comp=Z,104nm,1.2s,mb5.6
CONA Conrad Observa 73.30 337 *i* P **P 21 24 26.7 +1.0**
SNR=94
PKSN Nyarlorinc 73.31 334⇑ *eP* **P 21 24 26.9 +1.1**
RUP Ruppelstein 73.32 343⇑ *eP* **P 21 24 25.7 -0.1**
DOU Dourbes 73.32 345 P **P 21 24 25.5 -0.3**
comp=Z,48nm,1.3s,mb5.3
KVTX Kingsville 73.33 66 PFAKE 21 24 40.0 +14
KVTX LR LR
comp=Z,2μm,19.0s,MS5.3
DIKM Dikmen 73.34 321 *eP* **P 21 24 25.3 -0.8**
PKS7 Kunszentmiklos 73.35 334⇑ *eP* **P 21 24 26.9 +0.9**
CPCT Cooper Cave 73.37 51 *eP* **P 21 24 25.5 -0.9**
SOP Sopron 73.37 336⇑ *eP* **P 21 24 27.4 +1.3**
HEX Exmoor 73.39 351⇑ *i* P **P 21 24 25.6 -0.6**
BAIF Baives 73.42 345⇑ *i* P **P 21 24 26.3 -0.1**
comp=Z,300nm,1.3s,mb5.8
BAIF Baives 73.42 345⇑ *i* P **P 21 24 26.3 -0.1**
comp=Z,150nm,1.3s,mb5.8
BAIF Baives 73.42 345⇑ *i* P **P 21 24 26.3 -0.1**
BAIF pmax pmax
comp=Z,150nm,1.3s,mb5.8
WLF Walferdange 73.50 344 *eP* **P 21 24 27.2 +0.4**
WLF Walferdange 73.50 344 P **P 21 24 27.6 +0.7**
comp=Z,88nm,1.6s,mb5.4
WLF Walferdange 73.50 344 *eP* **P 21 24 27.0 +0.1**
ELN Prospectdale 73.51 48 *eP* **P 21 24 25.9 -1.3**
KTD Kalmit 73.52 342⇑ *eP* **P 21 24 27.1 +0.1**
HTL Hartland 73.52 351⇑ *eP* **P 21 24 26.9 -0.1**
HTL AMb AMB 21 24 28.4
comp=Z,180nm,1.3s,mb5.8
HTL AMS AMS 22 06 09.1
comp=Z,1μm,17.0s,MS5.3
HTL Hartland 73.52 351 P **P 21 24 26.9 -0.1**
HTL AMb AMB 21 24 28.4
comp=Z,180nm,1.3s,mb5.8
TKL Tuckaleechee C 73.52 51 LR LR 21 58 38.6
comp=Z,4μm,19.2s,MS5.7,baz=314,slow=37
HKR Hakkari 73.55 313 *eP* **P 21 24 26.9 -0.4**
KVT Kavak 73.55 320 *eP* **P 21 24 27.5 +0.2**
HAKT HAKKARI 73.58 313 *i* P **P 21 24 27.8 +0.3**
PKS6 Bocsa 73.66 334⇓ *eP* **P 21 24 28.8 +0.9**
BOYT Boyabat 73.66 321 *i* P **P 21 24 29.8 +1.8**
BLA Blacksburg 73.67 47⇑ *i* P **P 21 24 27.0 -1.1**
comp=Z,186nm,1.0s,mb6.0
BLA LR LR
comp=Z,2μm,22.0s,MS5.3
BLA Blacksburg 73.67 47⇑ *i* P **P 21 24 27.0 -1.1**
BLA pmax pmax
comp=Z,186nm,1.0s,mb6.0
BLA MLR MLR
comp=Z,2μm,22.0s,MS5.3
MOA Molln 73.72 338 *i* P **P 21 24 28.8 +0.6**
comp=Z,302nm,1.6s,mb6.0,SNR=43
BINT Bingol 73.76 316 *eP* **P 21 24 29.4 +0.8**
HDH Heidenheim-Cha 73.84 341 P **P 21 24 29.5 +0.6**
STU Stuttgart 73.85 342 *eP* **P 21 24 28.8 -0.1**
comp=Z,242nm,1.3s,mb6.0
CUKT Cukurca 73.88 313 *eP* **P 21 24 28.3 -1.0**
POO Poona 73.89 279⇑ *i* P **P 21 24 27.0 -2.6**
comp=Z,380nm,1.0s,mb6.3
POO *ex* x 21 25 28.6
POO AMb AMB 21 25 29.7
comp=Z,279nm,1.0s,mb6.1
LANF Langenberg 73.89 343⇑ *eP* **P 21 24 29.4 +0.2**
PSN Preselentsi 73.91 327 P **P 21 24 29.9 +0.5**
GZR Gura Zlata 73.94 331 P **P 21 24 29.8 +0.3**
GZR Gura Zlata 73.94 331⇑ *i* P **P 21 24 29.4 -0.1**
BTMT Batman 73.95 315 *eP* **P 21 24 30.6 +0.9**
BUC1 Bucharest 73.96 329 P **P 21 24 29.4 -0.3**
ARSA Arzberg 74.02 337 *i* P **P 21 24 30.8 +0.9**
comp=Z,410nm,1.6s,mb6.1,SNR=71
DYA Yadsworthy 74.02 351⇑ *eP* **P 21 24 29.5 -0.4**
DYA AMb AMB 21 24 31.1
comp=Z,295nm,1.3s,mb6.0
DYA AMS AMS 22 06 30.3
comp=Z,1μm,17.5s,MS5.2
DYA Yadsworthy 74.02 351 P **P 21 24 29.5 -0.4**
DYA AMb AMB 21 24 31.1
comp=Z,295nm,1.3s,mb6.0
LBG Lerchenberg 74.02 342 P **P 21 24 30.3 +0.3**
FUR Furstenfeldbru 74.04 340 *eP* **P 21 24 30.2 +0.2**
FUR pmax pmax
comp=Z,358nm,1.2s,mb6.2
FUR Furstenfeldbru 74.04 340 *eP* **P 21 24 30.2 +0.2**
comp=Z,358nm,1.2s,mb6.2
BZS Buzias 74.04 332 P **P 21 24 30.2 0.0**
BZS Buzias 74.04 332⇓ *i* P **P 21 24 29.7 -0.4**
CBN Corbin 74.08 45 *eP* **P 21 24 29.8 -0.6**
comp=Z,237nm,1.1s,mb6.0
CBN LR LR
comp=Z,4μm,20.0s,MS5.7
BALT Daday 74.10 322 *i* P **P 21 24 31.8 +1.3**
BUCH Bad Urach 74.13 341 P **P 21 24 31.4 +0.8**
SIRT Sirnak 74.15 314 *eP* **P 21 24 30.8 -0.1**
BOM Bombay 74.18 280 *eP* **P 21 24 30.1 -1.2**
BOM *ex* x 21 24 31.7
comp=Z,290nm,1.0s
BOM *ex* x 21 34 11.2
PTK Pertek 74.18 317 *eP* **P 21 24 31.5 +0.4**
LRAL Lakeview Retre 74.24 55 *eP* **P 21 24 30.1 -1.4**
LRAL LR LR
comp=Z,3μm,21.0s,MS5.6

PKSM Moragy 74.26 334⇑eP P 21 24 31.1 -0.2
PKSM Moragy 74.26 334 P P 21 24 31.2 -0.1
PKSM Moragy 74.26 334⇓iP P 21 24 31.0 -0.3
STR Strasbourg 74.28 342⇑eP P 21 24 32.3 +0.8
TOS Tosya 74.32 322 eP P 21 24 31.8 0.0
CCA1 Carnmenellis 74.39 351⇑eP P 21 24 31.2 -0.8
CRQ2 Rosemanowes 2 74.40 351⇑eP P 21 24 31.4 -0.7
CTKT Corum 74.41 321 iP P 21 24 33.7 +1.4
BFO Black Forest 74.43 342 P P 21 24 32.8 +0.5
comp=Z,670nm,1.1s,mb6.5,SNR=39
BFO Black Forest 74.43 342 eP P 21 24 32.1 -0.2
comp=Z,219nm,1.3s,mb5.9
BFO LR LR
comp=Z,4μm,20.0s,MS5.7
BFO Black Forest 74.43 342 eP P 21 24 32.1 -0.2
BFO pmax pmax
comp=Z,219nm,1.3s,mb5.9
BFO MLR MLR
comp=Z,4μm,20.0s,MS5.7
BFO Black Forest 74.43 342 eP P 21 24 32.1 -0.2
comp=Z,219nm,1.3s,mb5.9
CDF Champ du Feu 74.53 343⇑iP P 21 24 33.2 +0.3
comp=Z,519nm,1.2s,mb6.0
CDF Champ du Feu 74.53 343⇑iP P 21 24 33.2 +0.3
comp=Z,260nm,1.2s,mb6.0
CDF Champ du Feu 74.53 343⇑iP P 21 24 33.2 +0.3
CDF pmax pmax
comp=Z,260nm,1.2s,mb6.0
GUT Gutenstein 74.54 341 P P 21 24 33.3 +0.4
URVA University of 74.56 45⇑eP P 21 24 32.2 -1.0
SPAK Spaichingen-Ko 74.57 342⇑eP P 21 24 33.5 +0.4
SAFT Safranbolu 74.61 323 eP P 21 24 33.6 +0.1
KOGS Kog 74.61 336 eP P 21 24 33.7 +0.3
MDRS Chennai 74.61 271⇑eP P 21 24 32.5 -1.4
MDRS eP 21 24 32.8
MDRS AMb AMB 21 24 33.9
comp=Z,205nm,0.5s,mb6.3
CRAR CRAIOVA 74.63 330 P P 21 24 33.4 -0.2
KBA Koelnbreinsper 74.65 338 iP P 21 24 34.9 +1.3
comp=Z,816nm,1.4s,mb6.5,SNR=233
KBA Koelnbreinsper 74.65 338 iP P
KBA pmax pmax
comp=Z,816nm,1.4s,mb6.5
RHK3 Tenkes 74.65 335⇑eP P 21 24 33.6 -0.1
ZAIG Zacatecas 74.67 72 iP P 21 24 34.6 +0.5
KAD Karad 74.67 278 eP P 21 24 32.6 -1.6
KAD eP 21 24 33.0
KAD AMb AMB 21 24 33.6
comp=Z,392nm,1.1s,mb6.2
ELZG Elazig 74.68 317 iP P 21 24 36.0 +2.0
PERS Pernice 74.69 337 iP P 21 24 34.5 +0.7
UBR Ueberruh 74.73 341 P P 21 24 34.8 +0.7
ECH Echery 74.74 343⇑eP P 21 24 34.3 +0.2
WATA Walderalm 74.77 340⇑iP P 21 24 35.0 +0.7
comp=Z,297nm,1.3s,mb6.1,SNR=94
WATA Walderalm 74.77 340⇑iP P 21 24 35.0 +0.7
WATA pmax pmax
comp=Z,297nm,1.3s,mb6.1
RETA Reutte 74.79 340⇑iP P 21 24 34.8 +0.4
SNR=35
MEZF Maizieres J'vi 74.81 344⇑iP P 21 24 34.7 +0.2
comp=Z,470nm,1.4s,mb5.9
MEZF Maizieres J'vi 74.81 344⇑iP P 21 24 34.7 +0.2
comp=Z,470nm,1.4s,mb6.2
WTTA Wattenberg 74.83 340 iP P 21 24 35.6 +1.0
comp=Z,825nm,1.6s,mb6.4,SNR=78
WTTA Wattenberg 74.83 340 iP P 21 24 35.7 +1.0
WTTA pmax pmax
comp=Z,825nm,1.6s,mb6.4
CANT Cankiri 74.84 322 eP P 21 24 35.7 +0.9
CORM Corum 74.86 321 eP P 21 24 36.0 +1.1
MOTA Moosalm 74.86 340 iP P 21 24 35.4 +0.6
comp=Z,269nm,1.2s,mb6.1,SNR=94
MOTA Moosalm 74.86 340 iP P 21 24 35.4 +0.6
MOTA pmax pmax
comp=Z,269nm,1.2s,mb6.0
KIZ Kirchzarten 74.86 342 P P 21 24 34.8 0.0
MSL Mosul 74.91 313 ix x 21 24 36.5
MSL ix x 21 24 56.5
MSL ex x 21 34 15.0
FELD Feldberg im Sc 74.92 342⇑eP P 21 24 35.4 +0.2
THEF They Montfort 74.92 344⇑eP P 21 24 35.4 +0.2
OBKA Obir 74.93 337 iP P 21 24 36.1 +0.9
comp=Z,852nm,1.5s,mb6.5,SNR=89
SISB Singen-Schiene 74.94 341 P P 21 24 35.8 +0.5
SLE Schleitheim 74.95 342⇑P P 21 24 35.1 -0.2
SQTA Sankt Quirin 74.96 340⇑iP P 21 24 36.3 +0.9
comp=Z,349nm,1.2s,mb6.2,SNR=135
SQTA Sankt Quirin 74.96 340⇑iP P 21 24 36.3 +0.9
SQTA pmax pmax
comp=Z,349nm,1.2s,mb6.2
SZH Strazhica 74.97 328 P P 21 24 35.1 -0.5
MARD Mardin 74.99 315 iP P 21 24 36.8 +1.1
ELDT Eldivan 75.01 322 iP P 21 24 37.3 +1.5
MYKA Terra Mystica 75.02 338⇑iP P 21 24 36.1 +0.3
comp=Z,1μm,1.7s,mb6.6
MALT Malatya 75.06 317 eP P 21 24 36.1 -0.1
MALT Malatya 75.06 317⇑iP P 21 24 36.5 +0.4
MALT Malatya 75.06 317⇑iP P 21 24 36.9 +0.8
HAU Haudompre 75.08 343⇑iP P 21 24 36.1 0.0
comp=Z,448nm,1.2s,mb6.0
HAU eMLR MLR
comp=Z,3μm,21.2s,MS5.3
HAU Haudompre 75.08 343⇑iP P 21 24 36.1 0.0
comp=Z,224nm,1.2s,mb6.0
HAU LR LR
comp=Z,3μm,21.3s,MS5.6
HAU Haudompre 75.08 343⇑iP P 21 24 36.1 0.0
HAU pmax pmax
comp=Z,224nm,1.2s,mb6.0
HAU MLR MLR
comp=Z,3μm,21.3s,MS5.6
BEO Belgrade 75.09 333 P P 21 24 36.1 -0.1
MOF Molkenrain 75.10 343⇑eP P 21 24 36.3 +0.1
ABTA Abfaltersbach 75.14 339⇑iP P 21 24 37.0 +0.5
comp=Z,377nm,1.3s,mb6.2,SNR=85
DAVA Damuels 75.15 341 iP P 21 24 37.1 +0.6
comp=Z,552nm,1.9s,mb6.2,SNR=34
HINF Hinteralfeld 75.18 343⇑iP P 21 24 36.4 -0.3
comp=Z,306nm,1.3s,mb5.8
HINF Hinteralfeld 75.18 343⇑iP P 21 24 36.4 -0.3
comp=Z,153nm,1.3s,mb5.8
HINF Hinteralfeld 75.18 343⇑iP P 21 24 36.4 -0.3
HINF pmax pmax
comp=Z,153nm,1.3s,mb5.8
PVL Pavlikeni 75.20 329 P P 21 24 37.3 +0.4
SEST Monte Rota 75.20 339 P P 21 24 36.9 +0.1
WILA Wila 75.21 341 ⇑P P 21 24 37.2 +0.4
FVI Forni Avoltri 75.23 339 P P 21 24 37.2 +0.2
FETA Feichten 75.24 340 iP P 21 24 37.9 +0.9
comp=Z,422nm,1.3s,mb6.2,SNR=164
SULZ Cheisacher 75.24 342 ⇑P P 21 24 37.1 +0.1
PTCC Patocco-Chiusa 75.29 338 P P 21 24 37.3 0.0
FLN La Foliniere 75.31 348⇑iP P 21 24 36.9 -0.5
comp=Z,268nm,1.0s,mb5.8
FLN eMLR MLR
comp=Z,2μm,21.8s,MS5.1
FLN La Foliniere 75.31 348⇑iP P 21 24 36.9 -0.5
comp=Z,134nm,1.0s,mb5.8
FLN LR LR
comp=Z,2μm,21.8s,MS5.4
FLN La Foliniere 75.31 348⇑iP P 21 24 36.9 -0.5
FLN pmax pmax
comp=Z,134nm,1.0s,mb5.8
FLN MLR MLR
comp=Z,2μm,21.8s,MS5.4
ZUR Degenried 75.31 342 ⇑P P 21 24 37.7 +0.3
CRES Cresnjev 75.38 336 P P 21 24 38.4 +0.6
LJU Ljubljana 75.38 337 iP P 21 24 37.8 -0.1
BBS Basel-Blauen 75.41 342⇑eP P 21 24 38.3 +0.3
SGKT Sivrigoynuk 75.42 323 iP P 21 24 38.7 +0.6
LDF La Druitiere 75.43 348⇑iP P 21 24 37.6 -0.5
comp=Z,225nm,1.2s,mb5.7
LDF La Druitiere 75.43 348⇑iP P 21 24 37.6 -0.5
comp=Z,113nm,1.2s,mb5.7
LDF La Druitiere 75.43 348⇑iP P 21 24 37.6 -0.5
LDF pmax pmax
comp=Z,113nm,1.2s,mb5.7
CDAG Cicekdag 75.44 321 iP P 21 24 38.4 +0.1
GMNA Gemona 75.44 338 P P 21 24 38.1 -0.1
SISC Sisak 75.50 336 P P 21 24 39.1 +0.6
SISC Sisak 75.50 336 iP P 21 24 39.1 +0.6
JMB Yambol 75.50 327 P P 21 24 39.2 +0.6
VOY Vojsko 75.53 338 eP P 21 24 38.2 -0.5
VOY e pP 21 24 50.1 -1.9
GOGA Godfrey 75.55 52 eP P 21 24 38.0 -1.0
GOGA LR LR
comp=Z,5μm,20.0s,MS5.8
BNN Bunyan 75.57 319 eP P 21 24 38.0 -1.1
HENT Hendek 75.59 324 iP P 21 24 40.4 +1.2
JAVS Javornik 75.62 337 iP P 21 24 38.9 -0.3
LOMF Lomont 75.64 343⇑eP P 21 24 39.7 +0.4
DAVOX Davos/Dischmat 75.64 341 P P 21 24 40.3 +1.0
comp=Z,134nm,1.0s,mb5.8,baz=356,slow=4.6,SNR=76
DAVOX LR LR 22 04 45.1
comp=Z,3μm,19.6s,MS5.6,baz=11,slow=41
URFA Urfa 75.66 316 eP P 21 24 39.5 -0.1
MUO Muotathal 75.69 341 ⇑P P 21 24 40.2 +0.6
CEY Cerknica 75.69 337 P P 21 24 40.2 +0.6
GRR Gorron 75.72 348⇑iP P 21 24 39.5 -0.3
comp=Z,418nm,1.1s,mb6.0
GRR Gorron 75.72 348⇑iP P 21 24 39.5 -0.3
comp=Z,209nm,1.1s,mb6.0
GRR Gorron 75.72 348⇑iP P 21 24 39.5 -0.3
GRR pmax pmax
comp=Z,209nm,1.1s,mb6.0
BOJS Bojanci 75.73 336 iP P 21 24 39.4 -0.5
LLS Linth-Limmern 75.74 341 ⇑P P 21 24 40.3 +0.4
STRS Struganik 75.75 333⇑eP P 21 24 32.3 -7.7
LOD Lodumlu 75.78 322 eP P 21 24 40.7 +0.5
ANTO Ankara 75.78 322 eP P 21 24 40.0 -0.3
ANTO Ankara 75.78 322 P P 21 24 41.2 +0.9
ANTO Ankara 75.78 322⇑iP P 21 24 40.5 +0.2
JSC Jenkinsville 75.79 50 eP P 21 24 39.3 -1.1
LHS Liberty Hill 75.82 49 eP P 21 24 39.3 -1.3
BRMO Bormio 75.83 340 P P 21 24 41.5 +1.1
ATAB Bozova 75.84 317 iP P 21 24 42.4 +1.8
DIVS Divcibare 75.88 333 eP P 21 24 40.6 -0.1
BRAL Brewton 75.90 56 eP P 21 24 40.8 -0.3
BRAL LR LR
comp=Z,3μm,20.0s,MS5.6
CTI Castel Tesino 75.99 339 P P 21 24 41.3 0.0
HRT Hereke 76.00 325 eP P 21 24 41.0 -0.6
VDL Val di Lei 76.00 341 ⇑P P 21 24 42.3 +0.9
AVNT Avonos 76.00 320 iP P 21 24 42.0 +0.5
YOGI Yogyakarta 76.01 233⇓iP P 21 24 43.7 +1.9
YOGI eS pP 21 24 54.9 -0.3
EDRB Edirne 76.02 327 eP P 21 24 41.2 -0.4
TUE Stuetta 76.03 341 P P 21 24 42.7 +1.1
ROSF Rostrenen 76.04 350⇑iP P 21 24 41.5 0.0
comp=Z,444nm,1.2s,mb6.0
ROSF Rostrenen 76.04 350⇑iP P 21 24 41.5 0.0
comp=Z,222nm,1.2s,mb6.0
ROSF Rostrenen 76.04 350⇑iP P 21 24 41.5 0.0
ROSF pmax pmax
comp=Z,222nm,1.2s,mb6.0
SGMF Saint Gilles 76.04 349⇑iP P 21 24 41.5 -0.1
comp=Z,341nm,1.1s,mb5.9
SGMF Saint Gilles 76.04 349⇑iP P 21 24 41.5 -0.1
comp=Z,170nm,1.1s,mb5.9
SGMF Saint Gilles 76.04 349⇑iP P 21 24 41.5 -0.1
SGMF pmax pmax
comp=Z,170nm,1.1s,mb5.9
GULT Gulveren 76.07 324 eP P 21 24 41.6 -0.3
PGB Panagyurishte 76.15 329 P P 21 24 42.5 +0.2
LOR Lormes 76.19 345⇑iP P 21 24 42.2 -0.2
comp=Z,417nm,1.3s,mb5.9
LOR eMLR MLR
comp=Z,3μm,22.5s,MS5.3
LOR Lormes 76.19 345⇑iP P 21 24 42.2 -0.2
comp=Z,208nm,1.3s,mb5.9
LOR LR LR
comp=Z,3μm,22.5s,MS5.6
LOR Lormes 76.19 345⇑iP P 21 24 42.2 -0.2
LOR pmax pmax
comp=Z,208nm,1.3s,mb5.9
LOR MLR MLR
comp=Z,3μm,22.5s,MS5.6
DIM Dimitrovgrad 76.20 328 P P 21 24 43.1 +0.5
CTA Charters Tower 76.21 195⇑iP P 21 24 42.5 -0.2
comp=Z,96nm,1.0s,mb5.7
CTA Charters Tower 76.21 195⇑iP P 21 24 42.5 -0.2
CTA pmax pmax
comp=Z,96nm,1.0s
CTA Charters Tower 76.21 195 P P 21 24 42.5 -0.2
comp=Z,108nm,0.9s,mb5.8,baz=5.9,slow=6.8,SNR=133
CTAO Charters Tower 76.21 195⇑iP P 21 24 42.2 -0.5
comp=Z,202nm,1.1s,mb6.0
CTAO ePP PP 21 27 33.1 -1.5
CTAO LR LR
comp=Z,1μm,19.0s,MS5.3
CTAO Charters Tower 76.21 195 eP P 21 24 42.4 -0.3
CTAO pmax pmax
comp=Z,200nm,1.1s,mb6.0
GZT Gaziantep 76.23 317 iP P 21 24 44.2 +1.3
SFJM Santa Fe 76.25 74 iP P 21 24 42.9 -0.3
ADVT Abdulvahap 76.33 324 eP P 21 24 42.5 -0.8
YLV Yalova 76.33 325 eP P 21 24 41.7 -1.7
GOA Goa 76.33 277 eP P 21 24 43.2 -0.5
GOA AMb AMB 21 24 44.3
comp=Z,443nm,1.1s,mb6.3
KMRS Kahramanmaras 76.35 318 eP P 21 24 43.6 +0.1
VTS Vitosha 76.39 330 eP P 21 24 42.8 -0.9
VTS Vitosha 76.39 330 P P 21 24 43.5 -0.2
VTS Vitosha 76.39 330⇓iP P 21 24 43.8 +0.1
PLD Plovdiv 76.40 329 eP P 21 24 42.9 -0.8
PLD Plovdiv 76.40 329 P P 21 24 42.8 -0.9
CNNC Cliffs of the 76.41 47 eP P 21 24 43.8 -0.2
CNNC LR LR
comp=Z,2μm,19.0s,MS5.5
LKBD Leukerbad 76.43 342 ⇑P P 21 24 44.4 +0.6
QUIF Quistinic 76.44 350⇑iP P 21 24 43.7 -0.1
comp=Z,304nm,1.2s,mb5.8
QUIF Quistinic 76.44 350⇑iP P 21 24 43.7 -0.1
comp=Z,152nm,1.2s,mb5.8
QUIF Quistinic 76.44 350⇑iP P 21 24 43.7 -0.1
QUIF pmax pmax
comp=Z,152nm,1.2s,mb5.8
SSF Saint Saulge 76.44 345⇑iP P 21 24 43.6 -0.3
comp=Z,171nm,1.2s,mb5.5
SSF Saint Saulge 76.44 345⇑iP P 21 24 43.6 -0.3
comp=Z,85nm,1.2s,mb5.5
SSF Saint Saulge 76.44 345⇑iP P 21 24 43.6 -0.3
SSF pmax pmax
comp=Z,85nm,1.2s,mb5.5
MAGA Magasa 76.46 340 P P 21 24 44.7 +0.7
CABF La Chapelle 76.48 343⇑iP P 21 24 44.3 +0.2
comp=Z,495nm,1.2s,mb6.0
CABF La Chapelle 76.48 343⇑iP P 21 24 44.3 +0.2
comp=Z,247nm,1.2s,mb6.0
CABF La Chapelle 76.48 343⇑iP P 21 24 44.3 +0.2
CABF pmax pmax
comp=Z,247nm,1.2s,mb6.0
ANDN Andirin 76.50 318 iP P 21 24 45.6 +1.2
IZI Iznik 76.50 325 eP P 21 24 44.0 -0.4
GEMT Gemlik 76.51 325 eP P 21 24 44.2 -0.1
GAZ Gaziantep 76.53 318 eP P 21 24 43.6 -1.0
BORA Eskisehir 76.59 324 iP P 21 24 45.2 +0.4
OG01 Vacheresse 76.65 343⇑eP P 21 24 45.5 +0.4
NIG Nigde 76.69 320 eP P 21 24 45.5 0.0
MMK Mattmark 76.69 342 ⇑P P 21 24 46.4 +1.1
NVLJ Novalja 76.70 336 P P 21 24 44.8 -0.6
NVLJ Novalja 76.70 336 iP P 21 24 44.8 -0.6
VAI Varese 76.72 341 P P 21 24 45.7 +0.2
AVF Avril sur Loir 76.73 345⇑iP P 21 24 45.5 0.0
comp=Z,375nm,1.2s,mb5.9
AVF Avril sur Loir 76.73 345⇑iP P 21 24 45.5 0.0
comp=Z,187nm,1.2s,mb5.9
AVF Avril sur Loir 76.73 345⇑iP P 21 24 45.5 0.0
AVF pmax pmax
comp=Z,187nm,1.2s,mb5.9
PLE Pljevlja 76.76 333⇑iP P 21 24 47.2 +1.5
DIX Grande Dixence 76.77 342⇓P P 21 24 45.9 +0.2
ESKT Eskisehir 76.77 323 eP P 21 24 45.1 -0.8
ESKT Eskisehir 76.77 323 iP P 21 24 45.8 -0.1
KOZT Kozan 76.78 319 eP P 21 24 46.1 +0.1
COW Cow Castle Cre 76.80 50 eP P 21 24 45.2 -0.9
SMF Signal de Mont 76.80 345⇑iP P 21 24 45.7 -0.2
comp=Z,390nm,1.2s,mb5.9
SMF Signal de Mont 76.80 345⇑iP P 21 24 45.7 -0.2
comp=Z,195nm,1.2s,mb5.9
SMF Signal de Mont 76.80 345⇑iP P 21 24 45.7 -0.2
SMF pmax pmax
comp=Z,195nm,1.2s,mb5.9
EMV Vieux Emosson 76.87 342 ⇑P P 21 24 47.0 +0.7
BHD Baghdad 76.93 310 ex x 21 24 46.0
BHD ex x 21 24 54.0
BHD ex x 21 34 30.0
BHD ex x 21 35 11.0
BHD ex x 21 35 41.0
KIZT Kizilcal 76.99 322 eP P 21 24 47.0 -0.1
UPM Unac-Piva 77.00 333⇑iP P 21 24 47.0 -0.1
RDO Rodhopi 77.03 328 eP P 21 24 46.8 -0.5
BGF Bois d'Agland 77.03 345⇑iP P 21 24 47.1 -0.1
comp=Z,143nm,1.1s,mb5.5
BGF Bois d'Agland 77.03 345⇑iP P 21 24 47.1 -0.1
comp=Z,72nm,1.1s,mb5.5
BGF Bois d'Agland 77.03 345⇑iP P 21 24 47.1 -0.1
BGF pmax pmax
comp=Z,72nm,1.1s,mb5.5
IVA Berane 77.05 332⇑iP P 21 24 47.9 +0.5
KKB Krupnik 77.10 330 P P 21 24 47.9 +0.2
ALN Alexandroupoli 77.10 327 eP P 21 24 45.8 -1.9
ORO Oropa 77.10 342 P P 21 24 47.7 +0.1
DZM Mont Dzumac 77.10 176 eP P 21 24 48.8 +1.1
DZM Mont Dzumac 77.10 176 eP P 21 24 48.8 +1.1
DZM Mont Dzumac 77.10 176 P P 21 24 48.9 +1.2
comp=Z,45nm,1.0s,mb5.4,baz=34,slow=6.5,SNR=28
OG05 Jujurieux 77.14 343 eP P 21 24 48.2 +0.4
MMB Musomiste 77.17 329 P P 21 24 48.6 +0.6
ENEZ Enez 77.21 327 eP P 21 24 48.0 -0.4
CEYT Ceyhan 77.23 318 eP P 21 24 49.6 +1.1
NHSC New Hope 77.26 49 eP P 21 24 48.7 0.0
comp=Z,196nm,1.1s,mb6.0
NHSC LR LR
comp=Z,3μm,20.0s,MS5.6
KARA Karaisali 77.27 319 eP P 21 24 48.6 -0.1
RSL Roselend 77.28 342⇑eP P 21 24 49.4 +0.8
PVY Plav 77.29 332⇑iP P 21 24 48.6 -0.1
NKY Niksic 77.34 333⇑iP P 21 24 48.1 -0.9
NVR Nevrokopi 77.35 329 eP P 21 24 48.9 -0.2
LPK Lapseki 77.35 326 eP P 21 24 49.7 +0.6
BRY Bratogost 77.38 333⇑iP P 21 24 48.1 -1.1
TCF Toulx Ste Croi 77.39 346⇑iP P 21 24 49.3 +0.1
comp=Z,190nm,1.2s,mb5.6
TCF Toulx Ste Croi 77.39 346⇑iP P 21 24 49.3 +0.1
comp=Z,95nm,1.2s,mb5.6
TCF Toulx Ste Croi 77.39 346⇑iP P 21 24 49.3 +0.1
TCF pmax pmax
comp=Z,95nm,1.2s,mb5.6
MFF Saint Martin d 77.39 347⇑iP P 21 24 49.3 +0.1
comp=Z,216nm,1.1s,mb5.7
MFF Saint Martin d 77.39 347⇑iP P 21 24 49.3 +0.1
comp=Z,108nm,1.1s,mb5.7
MFF Saint Martin d 77.39 347⇑iP P 21 24 49.3 +0.1
MFF pmax pmax
comp=Z,108nm,1.1s,mb5.7
LPL La Plagne 77.43 342⇑iP P 21 24 50.7 +1.2
comp=Z,518nm,1.1s,mb6.1
LPL La Plagne 77.43 342⇑iP P 21 24 50.7 +1.2
comp=Z,259nm,1.1s,mb6.1
LPL La Plagne 77.43 342⇑iP P 21 24 50.7 +1.2
LPL pmax pmax
comp=Z,259nm,1.1s,mb6.1
DST Dursunbey 77.44 325 eP P 21 24 49.9 +0.2
LPG La Plagne 77.44 342⇑iP P 21 24 50.9 +1.4
comp=Z,873nm,1.2s,mb6.3
LPG La Plagne 77.44 342⇑iP P 21 24 50.9 +1.4
comp=Z,437nm,1.2s,mb6.3
LPG La Plagne 77.44 342⇑iP P 21 24 50.9 +1.4
LPG pmax pmax
comp=Z,437nm,1.2s,mb6.3
COBT Iskenderun 77.47 318 iP P 21 24 51.0 +1.2
SKO Skopje 77.47 331⇑iP P 21 24 50.5 +0.8
AGO Saint Agoulin 77.49 345 eP P 21 24 50.5 +0.7
PLDF La Plantade 77.49 345⇑eP P 21 24 50.4 +0.6
BTOK Tokmak 77.50 325 iP P 21 24 50.1 +0.2
STIP Stip 77.51 330 iP P 21 24 49.7 -0.3
STON Ston 77.62 334 P P 21 24 49.0 -1.5
STON Ston 77.62 334 iP P 21 24 49.0 -1.5
GDZ Gediz 77.62 324 iP P 21 24 50.1 -0.6
TTG Podgorica 77.63 333⇑iP P 21 24 49.8 -0.8
KONT Konya--Tatoy 77.65 321 eP P 21 24 50.5 -0.3
BOB Bobbio (Coli) 77.66 340 P P 21 24 51.9 +1.2
BALB Balikesir 77.66 325 eP P 21 24 50.6 -0.2
RSP Reno Superiore 77.69 342 P P 21 24 51.3 +0.4
SHUT Suhut-Afyon 77.74 323 eP P 21 24 50.4 -0.9
VAY Valandovo 77.75 330 eP P 21 24 49.4 -1.9
VAY Valandovo 77.75 330⇑iP P 21 24 50.7 -0.6
KRTS Karatas 77.75 319 eP P 21 24 51.5 +0.1
ERBM Eremo 77.80 340 P P 21 24 53.1 +1.6
PYM Petit Puy Mans 77.80 345 eP P 21 24 52.4 +0.9
KNT Kendrikon 77.80 330 eP P 21 24 51.7 +0.1
HCY Herceg Novi 77.81 333⇑iP P 21 24 50.9 -0.8
MERS Mersin 77.81 319 eP P 21 24 50.9 -1.0
MNGI Mangalore 77.82 275 iP P 21 24 50.9 -1.1
MNGI AMb AMB 21 24 52.1
comp=Z,414nm,1.3s,mb6.2
GDM Grand'Maison 77.84 343⇑eP P 21 24 53.0 +1.3
RSM Repubblica di 77.84 338 P P 21 24 53.4 +1.6
BUM Brajici-Budva 77.85 333⇑iP P 21 24 51.8 0.0
HTY Hatay 77.86 318 eP P 21 24 52.3 +0.3
GRN Grenoble 77.86 343⇑eP P 21 24 53.0 +1.1
BNI Bardonecchia 77.89 342 eP P 21 24 52.9 +0.8
comp=Z,180nm,1.2s,mb5.9
BNI Bardonecchia 77.89 342 eP P 21 24 52.9 +0.9
BNI pmax pmax
comp=Z,180nm,1.2s,mb5.9
FNVD Fontana Vidola 77.90 339 P P 21 24 53.7 +1.6
COLF Collangettes 77.92 345⇑eP P 21 24 52.9 +0.7
SEI Scarperia 77.96 339 P P 21 24 54.3 +1.9
SOH Sokhos 77.98 329 eP P 21 24 52.2 -0.4
SFI Santa Sofia 78.00 338 P P 21 24 54.1 +1.4
FSSB Fossombrone 78.00 338 P P 21 24 53.6 +0.9
VLC Villacollemand 78.06 339 eP P 21 24 53.8 +0.8
OG22 Abries 78.06 342⇑eP P 21 24 53.9 +0.9
ULC Ulcinj 78.07 332⇑iP P 21 24 52.8 -0.3
KRUS Krusevo 78.08 331⇑iP P 21 24 53.5 +0.4
BDI Bagni Di Lucca 78.11 339 P P 21 24 53.7 +0.5
GRG Griva 78.13 330 eP P 21 24 53.4 -0.1
ORIF Oris-en-Rattie 78.16 343⇑iP P 21 24 54.5 +1.0
comp=Z,308nm,1.0s,mb5.9
ORIF eMLR MLR
comp=Z,5μm,22.0s,MS5.5
ORIF Oris-en-Rattie 78.16 343⇑iP P 21 24 54.5 +1.0
comp=Z,154nm,1.0s,mb5.9
ORIF Oris-en-Rattie 78.16 343⇑iP P 21 24 54.5 +1.0
ORIF pmax pmax
comp=Z,154nm,1.0s,mb5.9
MBDF Montbardon 78.19 342⇑iP P 21 24 54.4 +0.7
comp=Z,138nm,1.0s,mb5.5
MBDF Montbardon 78.19 342⇑iP P 21 24 54.4 +0.7
comp=Z,69nm,1.0s,mb5.5
MBDF Montbardon 78.19 342⇑iP P 21 24 54.4 +0.7
MBDF pmax pmax
comp=Z,69nm,1.0s,mb5.5
OLEF Ile d'Oleron 78.19 348 eP P 21 24 54.0 +0.3
FRNF Fournols 78.22 345⇑eP P 21 24 54.7 +0.8
CRE Caprese Michel 78.25 338 P P 21 24 55.2 +1.2
LBL Lubilhac 78.27 345⇑eP P 21 24 55.0 +0.9
BADI Badiali 78.29 338 P P 21 24 55.6 +1.3
KHL Karahalli 78.30 324 eP P 21 24 54.5 +0.1
CDCA Citt' di Caste 78.34 338 P P 21 24 55.7 +1.1
PLG Polygyros 78.37 329 eP P 21 24 54.0 -0.8
AKS Akhisar 78.37 325 eP P 21 24 54.1 -0.7
SNTG Esanatoglia 78.38 337 P P 21 24 55.7 +0.9
BIA Bitola 78.38 331 eP P 21 24 53.3 -1.6
BIA Bitola 78.38 331 iP P 21 24 54.2 -0.6
ISP Isparta 78.39 323 eP P 21 24 53.2 -1.7
ISP Isparta 78.39 323 P P 21 24 54.7 -0.2
HATD Hatta, Dubai 78.40 297 ⇑P P 21 24 54.0 -1.2
SNR=6.8
VIVF Saint-Julien-l 78.42 344⇑iP P 21 24 55.6 +0.7
comp=Z,307nm,1.1s,mb5.8
VIVF Saint-Julien-l 78.42 344⇑iP P 21 24 55.6 +0.7
comp=Z,154nm,1.1s,mb5.8
VIVF Saint-Julien-l 78.42 344⇑iP P 21 24 55.6 +0.7
VIVF pmax pmax
comp=Z,154nm,1.1s,mb5.8
KULA Kula-Manisa 78.42 324 eP P 21 24 54.4 -0.7
SURF Saint Ours 78.42 342 eP P 21 24 56.3 +1.3
FIN Finale Ligure 78.43 341 P P 21 24 54.6 -0.4
BIDO Bidbid 78.44 294 P P 21 24 55.4 0.0
SNR=6.7
OHR Ohrid 78.44 331 P P 21 24 54.7 -0.5
OHR Ohrid 78.44 331⇑iP P 21 24 54.3 -0.8
RJF Les Rejaudoux 78.45 346⇑iP P 21 24 55.2 +0.1
comp=Z,277nm,1.2s,mb5.8
RJF eMLR MLR
comp=Z,3μm,19.8s,MS5.3
RJF Les Rejaudoux 78.45 346⇑iP P 21 24 55.2 +0.1

comp=Z,138nm,1.2s,mb5.8
RJF LR LR
comp=Z,3µm,19.8s,MS5.6
RJF Les Rejaudoux 78.45 346⇑ *i*P **P 21 24 55.2 +0.1**
RJF pmax pmax
comp=Z,138nm,1.2s,mb5.8
RJF MLR MLR
comp=Z,3µm,19.8s,MS5.6
MURB Monte Urbino 78.47 338 P **P 21 24 56.7 +1.5**
WB2 Warramunga Arr 78.48 206⇑ *i*P **P 21 24 55.4 0.0**
WB2 *e* pP 21 25 06.5 -2.3
WB2 *e*S S 21 34 47.1 -0.8
WB2 *e* 21 35 06.0
WRA Warramunga Arr 78.48 206 P **P 21 24 54.9 -0.5**
comp=Z,153nm,0.9s,mb5.9,baz=20,slow=5.9,SNR=365
WRA PKKPbc PKKPbc 21 43 51.5 +0.9
comp=Z,2.7nm,0.9s,baz=216,slow=2.1,SNR=10
WRA PKPPKP 21 51 54.2
comp=Z,4.0nm,1.0s,baz=202,slow=2.4,SNR=12
WRA LR LR 21 55 39.5
comp=Z,874nm,20.9s,MS5.1,baz=30,slow=33
KOD Kodaikanal 78.49 271 *e*P **P 21 24 56.1 +0.3**
KOD AMb AMB 21 24 57.0
comp=Z,458nm,1.3s,mb6.2
CSNT Castellina Chi 78.53 339 P **P 21 24 55.5 -0.1**
MIB Mutribah 78.54 306 *e*P **P 21 24 54.5 -1.4**
MIB AMb AMB 21 24 57.3
comp=Z,383nm,0.7s,mb6.4
ASHO Ashiyiah 78.56 297⇑P **P 21 24 54.9 -1.2**
SNR=5.5
UMR Umm Al-Rimmam 78.58 306 *e*P **P 21 24 54.7 -1.4**
UMR AML AML 21 24 56.9
comp=Z,85nm,0.4s
OCF Saint Nazaire 78.58 343⇑ *e*P **P 21 24 57.0 +1.1**
OG26 St.-Nazaire-De 78.58 343⇑ *e*P **P 21 24 57.0 +1.1**
FNA Florina 78.59 330 *e*P **P 21 24 55.4 -0.6**
ASS Assisi 78.63 338 P **P 21 24 56.9 +0.8**
IKL Isikli 78.68 320 *e*P **P 21 24 54.9 -1.7**
BCK Bucak 78.71 322 *e*P **P 21 24 55.7 -1.0**
PAIG Paliouri 78.71 328 *e*P **P 21 24 53.1 -3.6**
CAF Calviac 78.74 346⇑ *i*P **P 21 24 57.5 +0.8**
comp=Z,319nm,1.2s,mb5.8
CAF Calviac 78.74 346⇑ *i*P **P 21 24 57.5 +0.8**
comp=Z,160nm,1.2s,mb5.8
CAF Calviac 78.74 346⇑ *i*P **P 21 24 57.5 +0.8**
CAF pmax pmax
comp=Z,160nm,1.2s,mb5.8
NRCA Norcia 78.75 337 P **P 21 24 58.0 +1.2**
WBK Wadi Bani Khal 78.75 293⇑P **P 21 24 56.6 -0.6**
SNR=8.3
SAOF Saorge 78.77 341⇑ *e*P **P 21 24 57.0 +0.1**
IMI Imperia 78.78 341 P **P 21 24 57.0 +0.1**
AUTN L'Aution 78.78 342 *e*P **P 21 24 57.1 +0.1**
TOUF Mont Tournerai 78.79 342 *e*P **P 21 24 56.9 -0.1**
HOQ Hoqain 78.82 295⇓P **P 21 24 56.2 -1.3**
SNR=12
TERO Teramo 78.84 337 P **P 21 24 59.2 +1.9**
SMDO Samad 78.86 294⇑P **P 21 24 56.8 -0.9**
SNR=11
LUCF Luceram 78.89 342⇑ *e*P **P 21 24 57.9 +0.3**
LIT Litokhoron 78.90 329 *e*P **P 21 24 57.0 -0.7**
GRFL Gerfalco 78.91 339 P **P 21 24 57.9 +0.2**
SBF Sospel 78.91 341⇑ *i*P **P 21 24 57.8 +0.1**
comp=Z,594nm,1.3s,mb6.1
SBF Sospel 78.91 341⇑ *i*P **P 21 24 57.8 +0.1**
comp=Z,297nm,1.3s,mb6.1
SBF Sospel 78.91 341⇑ *i*P **P 21 24 57.8 +0.1**
SBF pmax pmax
comp=Z,297nm,1.3s,mb6.1
LFF La Frestale 78.91 346⇑ *i*P **P 21 24 58.2 +0.5**
comp=Z,545nm,1.3s,mb6.0
LFF La Frestale 78.91 346⇑ *i*P **P 21 24 58.2 +0.5**
comp=Z,272nm,1.3s,mb6.0
LFF La Frestale 78.91 346⇑ *i*P **P 21 24 58.2 +0.5**
LFF pmax pmax
comp=Z,272nm,1.3s,mb6.0
KZN Kozani 78.92 330 *e*P **P 21 24 57.2 -0.6**
MVIF Mont Vial 78.92 342 *e*P **P 21 24 58.0 +0.2**
RST Umm Al-Ruwaisa 78.96 306 *e*P **P 21 24 56.6 -1.6**
RST AML AML 21 24 59.4
comp=Z,123nm,0.6s
DENT Denizli 78.98 324 *e*P **P 21 24 58.3 +0.2**
IZM Izmir 78.99 325 *e*P **P 21 24 56.5 -1.7**
REVF Revere 79.04 341 *e*P **P 21 24 58.8 +0.4**
PALK Pallekele 79.04 267 P **P 21 24 58.2 -0.6**
comp=Z,2µm,1.0s,SNR=52
PALK Pallekele 79.04 267⇑ *i*P **P 21 24 58.0 -0.8**
comp=Z,491nm,1.2s,mb6.3
PALK LR LR
comp=Z,2µm,20.0s,MS5.4
PALK Pallekele 79.04 267 P **P 21 24 59.0 +0.2**
SNR=30
NAY Al-Naaiem 79.06 306 *e*P **P 21 24 57.2 -1.5**
NAY AML AML 21 25 02.2
comp=Z,79nm,0.7s
BLCB Balcova 79.07 325 *e*P **P 21 24 55.2 -3.4**
BLCB Balcova 79.07 325 *e*P **P 21 24 57.6 -1.1**
CALN Calern 79.11 342 *e*P **P 21 24 59.0 +0.2**
SMRF Simiane la Rot 79.12 343⇑ *i*P **P 21 24 59.8 +1.0**
comp=Z,413nm,1.5s,mb5.8
SMRF Simiane la Rot 79.12 343⇑ *i*P **P 21 24 59.8 +1.0**
comp=Z,413nm,1.5s,mb6.1
AQU L'Aquila 79.14 337 *e*P **P 21 25 00.3 +1.4**
AQU L'Aquila 79.14 337 P **P 21 25 00.5 +1.5**
AQU L'Aquila 79.14 337⇓ *i*P **P 21 24 59.7 +0.7**
QRN Al-Qurain 79.17 305 *e*P **P 21 24 58.1 -1.2**
QRN AML AML 21 25 00.9
comp=Z,204nm,0.5s
RDF Al-Radifah 79.19 306 *e*P **P 21 24 58.3 -1.1**
RDF AML AML 21 25 01.2
comp=Z,158nm,0.7s
RGNG Rignano Grg 79.27 335 P **P 21 24 59.5 -0.2**
FITZ Fitzroy Crossi 79.28 215⇑ *i*P **P 21 25 00.2 +0.4**
comp=Z,234nm,0.8s,mb6.2
FITZ *e*S S 21 34 58.0 +1.5
FITZ Fitzroy Crossi 79.28 215 P **P 21 24 59.7 -0.2**
comp=Z,130nm,0.9s,mb5.9,baz=20,slow=6.9,SNR=168
LASF Ste Croix 79.31 344⇑ *i*P **P 21 25 00.8 +1.0**
comp=Z,233nm,1.4s,mb5.6
IIO Organos 79.33 71 *i*P **P 21 25 00.8 +0.5**
FRF La Foret Royal 79.34 342⇑ *i*P **P 21 25 00.1 +0.1**
comp=Z,391nm,1.5s,mb5.8
FRF La Foret Royal 79.34 342⇑ *i*P **P 21 25 00.1 +0.1**
comp=Z,196nm,1.5s,mb5.8
FRF La Foret Royal 79.34 342⇑ *i*P **P 21 25 00.1 +0.1**
FRF pmax pmax
comp=Z,196nm,1.5s,mb5.8
INTR Introdacqua 79.35 336 P **P 21 24 59.4 -0.7**
PRAF Pradon 79.36 343 *e*P **P 21 25 00.3 +0.2**
TAVF Tavernes 79.39 342 *e*P **P 21 24 59.9 -0.4**
JMDO Jabal Madar 79.40 294⇑P **P 21 24 59.7 -1.0**
SNR=22
AYDN Tasoluk 79.45 325 *i*P **P 21 25 00.9 +0.2**
CIGN Sant'Elia a Pi 79.45 335 P **P 21 25 01.5 +0.8**
PTQR Pietraquaria 79.45 337 P **P 21 25 01.4 +0.7**
BSY Bisya 79.56 295⇓P **P 21 25 00.6 -1.0**
SNR=28
ELL Elmali 79.58 323 *e*P **P 21 25 00.2 -1.2**
LMR La Mourre 79.58 342⇑ *i*P **P 21 25 01.7 +0.3**
comp=Z,292nm,1.1s,mb5.8
LMR La Mourre 79.58 342⇑ *i*P **P 21 25 01.7 +0.3**
comp=Z,146nm,1.1s,mb5.8
LMR La Mourre 79.58 342⇑ *i*P **P 21 25 01.7 +0.3**
LMR pmax pmax
comp=Z,146nm,1.1s,mb5.8
RNI2 Rionero Sannit 79.58 336 P **P 21 25 02.5 +1.1**
MTCE Montecelio 79.60 337 P **P 21 25 01.5 0.0**
PHNC Paralimni 79.65 319 P **P 21 25 04.8 +2.9**
comp=Z,2.5nm,1.0s
SDI San Donato 79.66 336 P **P 21 25 02.0 +0.2**
FG5 Orsara di Pugl 79.72 335 P **P 21 25 02.8 +0.7**
GELF Grande-Etoile 79.72 343 *e*P **P 21 25 02.5 +0.4**
TOLF Tolfa 79.72 338 P **P 21 25 02.6 +0.4**
JAN Janina 79.78 330 *e*P **P 21 25 02.8 +0.3**
YER Yerkesik 79.79 324 *e*P **P 21 25 01.7 -0.9**
FG4 Candela 79.80 335 P **P 21 25 03.2 +0.6**
MAMC Mammari 79.81 319 P **P 21 25 02.1 -0.6**
MLSB Milas 79.82 324 *e*P **P 21 25 02.2 -0.6**
SGG Gregorio Mates 79.83 336 P **P 21 25 03.2 +0.5**
RDP Rocca di Papa 79.86 337 P **P 21 25 03.1 +0.2**
MA9 Marino 79.86 337 P **P 21 25 03.7 +0.8**
PLIG Platanillo 79.88 72 *i*P **P 21 25 02.9 -0.5**
PSB1 Pescosannita 79.88 335 P **P 21 25 03.5 +0.5**
LCI Lecce 79.89 333 P **P 21 25 03.6 +0.5**

MRB1 Monte Rocchett 79.94 335 P **P 21 25 04.0 +0.7**
CSS Prodhromos 79.95 319⇑P **P 21 25 02.8 -0.7**
comp=Z,2.7nm,1.3s
CSS Prodhromos 79.95 319⇑ *e*P **P 21 25 02.8 -0.7**
FETY Fethiye 79.97 323 *e*P **P 21 25 02.2 -1.4**
BHL Bhannes 80.00 317 *e*P **P 21 25 03.0 -0.8**
DALT Dalyan (Mudla) 80.00 324 *e*P **P 21 25 01.7 -2.1**
RFI Roccamonfina 80.01 336 P **P 21 25 04.3 +0.6**
KEK Kerkira 80.02 331 *e*P **P 21 25 00.5 -3.3**
IGT Igoumenitsa 80.04 331 *e*P **P 21 25 03.1 -0.8**
LKR Lokris 80.09 328 *e*P **P 21 25 02.0 -2.2**
CORF Corte 80.09 340⇑ *e*P **P 21 25 04.6 +0.5**
BDRM Kayabasi 80.11 325 *i*P **P 21 24 59.9 -4.6**
CSSN Cassano Irpino 80.18 335 P **P 21 25 04.6 0.0**
TRD Trivandrum 80.18 271 *e*P **P 21 25 04.6 -0.4**
TRD AMb AMB 21 25 05.7
comp=Z,451nm,1.1s,mb6.3
TRD ⇑ *e*P 21 25 06.0
EVR Evrytania 80.19 329 *e*P **P 21 24 56.5 -8.2**
AKMC Akamas 80.26 320 P **P 21 25 04.1 -1.1**
MTLF Montolieu 80.27 345⇑ *i*P **P 21 25 05.9 +0.8**
comp=Z,324nm,1.2s,mb5.8
MTLF Montolieu 80.27 345⇑ *i*P **P 21 25 05.9 +0.8**
comp=Z,162nm,1.2s,mb5.8
MTLF Montolieu 80.27 345⇑ *i*P **P 21 25 05.9 +0.8**
MTLF pmax pmax
comp=Z,162nm,1.2s,mb5.8
SZAC Souni-Zanaja 80.30 320 P **P 21 25 04.8 -0.6**
RCY Rachaya 80.30 317 *e*P **P 21 25 05.2 -0.2**
PTL Pentelí 80.38 328 *e*P **P 21 25 04.0 -1.8**
PPCY Paphos 80.38 320⇑P **P 21 25 04.4 -1.4**
PPCY Paphos 80.38 320⇑ *e*P **P 21 25 04.4 -1.4**
SGO Sicignano 80.39 335 P **P 21 25 04.9 -0.9**
XMIS Christmas Isla 80.51 236⇑ *e*P **P 21 25 05.4 -1.2**
CAIG El Cayaco 80.56 74 *i*P **P 21 25 07.0 +0.1**
ORI Oriolo Calabro 80.58 334 P **P 21 25 07.9 +1.1**
LRDF Laroque-de-Fa 80.62 345 *e*P **P 21 25 07.9 +0.9**
ARG Arkhangelos 80.68 324 *e*P **P 21 25 06.5 -0.9**
MGR Morigerati 80.73 334 P **P 21 25 07.3 -0.3**
MLS Moulis 80.81 346⇑ *e*P **P 21 25 08.7 +0.7**
EIDS Eidsvold 80.82 190⇑ *i*P **P 21 25 08.0 0.0**
comp=Z,146nm,1.5s,mb5.7
EIDS *e* pP 21 25 17.8 -3.6
OSSF Osses 80.83 348⇑ *e*P **P 21 25 08.0 -0.1**
EPF Esparros 80.84 346⇑ *i*P **P 21 25 08.2 +0.1**
comp=Z,262nm,1.2s,mb5.7
EPF Esparros 80.84 346⇑ *i*P **P 21 25 08.2 +0.1**
comp=Z,131nm,1.2s,mb5.7
EPF Esparros 80.84 346⇑ *i*P **P 21 25 08.2 +0.1**
EPF pmax pmax
comp=Z,131nm,1.2s,mb5.7
CARF Carcanieres 80.90 345 *e*P **P 21 25 09.3 +0.8**
ELIZ Elizondo 80.95 348 P **P 21 25 09.5 +0.8**
comp=Z,78nm,0.9s,mb5.6
ELIZ Elizondo 80.95 348 P **P 21 25 09.5 +0.8**
ELIZ pmax pmax
comp=Z,78nm,0.9s,mb5.6
DWPF Disney 80.96 53 *e*P **P 21 25 09.2 +0.1**
DWPF LR LR
comp=Z,4µm,20.0s,MS5.8
SJPF Ste Jean 80.96 348 *e*P **P 21 25 09.7 +0.9**
comp=Z,132nm,1.0s,mb5.5
SJPF Ste Jean 80.96 348 *e*P **P 21 25 09.7 +0.9**
comp=Z,66nm,1.0s,mb5.5
SJPF Ste Jean 80.96 348 *e*P **P 21 25 09.7 +0.9**
SJPF pmax pmax
comp=Z,66nm,1.0s,mb5.5
TDS Terranova Siba 80.99 334 P **P 21 25 09.8 +0.8**
SALF Salau 80.99 346 *e*P **P 21 25 09.9 +1.0**
VIEF Viey 81.03 347⇑ *e*P **P 21 25 10.3 +1.2**
EJON La Jonquera 81.05 344 P **P 21 25 10.3 +1.1**
comp=Z,76nm,1.0s,mb5.6
RESF Ens 81.06 346 *e*P **P 21 25 10.3 +1.0**
ETSF Etsaut 81.09 347⇑ *i*P **P 21 25 10.4 +0.9**
comp=Z,627nm,1.6s,mb6.0
ETSF Etsaut 81.09 347⇑ *i*P **P 21 25 10.4 +0.9**
comp=Z,314nm,1.6s,mb6.0
ETSF Etsaut 81.09 347⇑ *i*P **P 21 25 10.4 +0.9**
ETSF pmax pmax
comp=Z,313nm,1.6s,mb6.0
ELAN Lanestosa 81.10 349 P **P 21 25 10.0 +0.5**
comp=Z,203nm,0.9s,mb6.0
EBIE Belsa 81.21 346 P **P 21 25 11.5 +1.4**
comp=Z,197nm,1.7s,mb5.8
EARI Arriondas 81.21 351 P **P 21 25 10.3 +0.2**
comp=Z,149nm,0.9s,mb5.9
VALF Valcebollere 81.22 345 *e*P **P 21 25 11.5 +1.3**
VLS Valsamata 81.23 330 *e*P **P 21 25 09.5 -0.8**
TIP Timpagrande 81.33 333⇑ *i*P **P 21 25 10.9 +0.1**
comp=Z,530nm,1.3s,mb6.3
EPON Pontenova 81.36 352 P **P 21 25 11.4 +0.5**
comp=Z,105nm,1.0s,mb5.7
ECRI Cripan 81.61 348 P **P 21 25 12.6 +0.3**
comp=Z,50nm,1.0s,mb5.4
ECRI Cripan 81.61 348 P **P 21 25 12.6 +0.4**
ECRI pmax pmax
comp=Z,50nm,1.0s,mb5.4
GRI Girifalco 81.76 333 P **P 21 25 13.4 +0.3**
ITM Ithomi 81.77 329 *e*P **P 21 25 10.0 -3.2**
PMOR Pomariorio Ree 81.77 131 *e*P **P 21 25 13.4 +0.1**
comp=Z,97nm,1.5s,mb5.5
EMIR Miracle 81.77 345 P **P 21 25 14.5 +1.4**
comp=Z,111nm,1.0s,mb5.7
EMAZ Mazaricos 81.87 353 P **P 21 25 13.8 +0.2**
comp=Z,36nm,1.1s,mb5.2
STS Santiago 81.90 353 P **P 21 25 13.9 +0.2**
comp=Z,59nm,0.8s,mb5.6
STS Santiago 81.90 353 P **P 21 25 13.9 +0.2**
STS pmax pmax
comp=Z,59nm,0.8s,mb5.6
VAH Vaihoa 82.09 131 *e*P **P 21 25 15.1 +0.2**
comp=Z,60nm,1.1s,mb5.4
ASAR Alice Springs 82.16 206 P **P 21 25 15.7 +0.5**
comp=Z,163nm,0.8s,mb6.0,baz=14,slow=5.1,SNR=777
ASAR PKiKP PKiKP 21 30 36.1 -0.8
comp=Z,4.7nm,1.1s,baz=359,slow=2.2,SNR=4.5
ASAR PKP2bc 21 51 37.4
comp=Z,1.3nm,1.0s,baz=141,slow=2.2,SNR=5.6
ESAC San Caprasio 82.24 347 P **P 21 25 17.3 +1.7**
comp=Z,341nm,1.0s,mb6.2
ERUA La Rua 82.28 352 P **P 21 25 16.7 +1.0**
comp=Z,70nm,0.8s,mb5.6
ERUA La Rua 82.28 352 P **P 21 25 16.7 +0.9**
ERUA pmax pmax
comp=Z,70nm,0.8s,mb5.6
NPS Neapolis 82.38 325 *e*P **P 21 25 13.5 -2.9**
EPOB Poblet 82.39 346 P **P 21 25 17.2 +0.9**
comp=Z,66nm,0.8s,mb5.6
VHO Vista Hermosa 82.47 71 *i*P **P 21 25 17.4 +0.4**
LAST Lasithi 82.52 325 *e*P **P 21 25 15.8 -1.4**
SOI Samo 82.56 333 P **P 21 25 17.3 0.0**
EZAM Zamans 82.64 353 P **P 21 25 17.7 0.0**
comp=Z,135nm,0.9s,mb6.0
EZAM Zamans 82.64 353 P **P 21 25 17.7 +0.1**
EZAM pmax pmax
comp=Z,135nm,0.9s,mb6.0
ECAL Calabor 82.70 351 P **P 21 25 18.1 +0.2**
comp=Z,52nm,0.9s,mb5.6
XRY Khrisi 82.71 325 *e*P **P 21 25 16.0 -2.1**
MTTG Motta San Giov 82.72 334 P **P 21 25 17.5 -0.6**
VSL Villasalto 82.74 339 *e*P **P 21 25 18.4 +0.2**
comp=Z,240nm,1.1s,mb6.1
VSL *e* pP 21 25 31.9 +0.2
PBRG Braganca 82.83 351 *e*P **P 21 25 19.0 +0.4**
comp=Z,101nm,2.1s,mb5.5
ELOB Lobios 82.88 352 P **P 21 25 19.8 +1.0**
comp=Z,62nm,0.9s,mb5.6
ERTA Horta de San J 82.88 346 P **P 21 25 20.3 +1.4**
comp=Z,70nm,1.0s,mb5.7
PCAB Cabril 83.03 352 *e*P **P 21 25 20.1 +0.4**
comp=Z,99nm,1.0s,mb5.8
ETOR Torete 83.33 348 P **P 21 25 22.4 +1.2**
comp=Z,84nm,0.7s,mb5.9
ETOR Torete 83.33 348 P **P 21 25 22.4 +1.2**
ETOR pmax pmax
comp=Z,84nm,0.7s,mb5.9
PPT Papeete 83.35 134 *e*S S 21 35 36.6 -2.2
comp=Z,794nm,26.5s
PPT *e*SS SS 21 41 06.8 +1.5
comp=Z,842nm,27.0s
PPT *e*LR LR 21 51 18.7
comp=Z,8µm,30.8s,baz=339
PPT Papeete 83.35 134 *e*P **P 21 25 21.6 +0.1**
comp=Z,116nm,1.5s,mb5.7
PPT *e*S S 21 35 36.6 -2.2
PPT *e*SS SS 21 41 06.8 +1.5
PPT Papeete 83.35 134 *e*P **P 21 25 21.6 +0.1**
PPT *e*S S 21 35 36.6 -2.2
PPT *e*SS SS 21 41 06.8 +1.5
PPT pmax pmax
comp=Z,116nm,1.5s
PPT Papeete 83.35 134 LR LR 21 57 30.9
comp=Z,2µm,18.0s,MS5.6,baz=318,slow=32
PAE Paea 83.44 134 *e*P **P 21 25 21.9 0.0**
comp=Z,158nm,1.3s,mb5.9
PAE Paea 83.44 134 *e*P **P 21 25 21.9 0.0**
PAE pmax pmax
comp=Z,159nm,1.3s,mb5.9
PVRL Vila Real 83.44 352 *i*P **P 21 25 22.3 +0.5**
comp=Z,201nm,1.7s,mb5.9
CMIG Matias Romero 83.45 70 *i*P **P 21 25 22.0 -0.2**
MVO Moncorvo 83.49 352 *i*P **P 21 25 22.6 +0.5**
comp=Z,208nm,1.3s,mb6.0
EMOS Mosqueruela 83.57 347 P **P 21 25 23.8 +1.3**
comp=Z,117nm,0.9s,mb6.0
PTO Porto 83.64 353 *e*P **P 21 25 23.6 +0.8**
comp=Z,197nm,1.3s,mb6.1
ETOS Mallorca 83.68 344 P **P 21 25 24.3 +1.3**
comp=Z,156nm,1.2s,mb6.0
CLTB Caltabellotta 83.73 335 P **P 21 25 24.3 +1.0**
GUD Guadarrama 83.74 349 P **P 21 25 22.9 -0.4**
comp=Z,39nm,0.9s,mb5.5
GUD Guadarrama 83.74 349 P **P 21 25 23.0 -0.3**
GUD pmax pmax
comp=Z,39nm,0.9s,mb5.5
PVIS Viseu 84.01 352 *i*P **P 21 25 25.2 +0.5**
comp=Z,273nm,1.5s,mb6.2
BBSR BB Station 84.04 38 PFAKE 21 25 30.0 +5.0
BBSR LR LR
comp=Z,2µm,20.0s,MS5.4
MBWA Marble Bar 84.14 219⇑ *i*P **P 21 25 24.9 -0.5**
comp=Z,158nm,0.9s,mb6.2
MTE Manteigas 84.30 352 *i*P **P 21 25 26.7 +0.5**
comp=Z,355nm,1.3s,mb6.3
MTE Manteigas 84.30 352 *e*P **P 21 25 26.7 +0.5**
TEIG Tepich 84.30 63⇑ *i*P **P 21 25 25.6 -0.9**
comp=Z,117nm,1.4s,mb5.8
TEIG LR LR
comp=Z,2µm,20.0s,MS5.4
TEIG Tepich 84.30 63 LR LR 22 08 39.8
comp=Z,1µm,19.9s,MS5.4,baz=124,slow=40
ECHE Chera 84.40 347 P **P 21 25 27.4 +0.7**
comp=Z,198nm,1.1s,mb6.2
ECHE Chera 84.40 347 P **P 21 25 27.4 +0.7**
ECHE pmax pmax
comp=Z,198nm,1.1s,mb6.2
EIBI Ibiza 84.63 345 P **P 21 25 28.4 +0.5**
comp=Z,402nm,1.2s,mb6.4
ESDC Sonseca Array 84.68 349 P **P 21 25 28.6 +0.5**
comp=Z,181nm,0.8s,mb6.2,baz=3.1,slow=4.8,SNR=552
ESDC PKKPbc PKKPbc 21 43 36.1 +1.2
comp=Z,0.5nm,0.8s,baz=225,slow=2.3,SNR=5.3
ESDC PKPPKP 21 51 35.5
comp=Z,1.6nm,0.9s,baz=186,slow=1.4,SNR=5.4
PAB San Pablo 84.84 349⇑ *i*P **P 21 25 29.2 +0.3**
comp=Z,202nm,1.0s,mb6.2
PAB LR LR
comp=Z,2µm,19.0s,MS5.6
PAB San Pablo 84.84 349⇑ *i*P **P 21 25 29.2 +0.3**
PAB pmax pmax
comp=Z,202nm,1.0s,mb6.2
PAB MLR MLR
comp=Z,2µm,19.0s,MS5.6
PCBR Castelo Branco 84.85 352 *i*P **P 21 25 29.3 +0.3**
comp=Z,419nm,1.3s,mb6.4
EBEN Beniarda 85.17 346 P **P 21 25 30.7 +0.1**
comp=Z,618nm,1.2s,mb6.6
WHFO Wadi Hawf 85.34 295 P **P 21 25 30.4 -1.3**
SNR=26
ETOB Tobarra 85.41 347 P **P 21 25 31.2 -0.6**
comp=Z,330nm,1.1s,mb6.4
RBK Rabkut 85.46 294 P **P 21 25 31.2 -1.1**
SNR=8.2
EVIA Vianos 85.53 348 P **P 21 25 32.4 0.0**
comp=Z,151nm,0.9s,mb6.2
EVIA Vianos 85.53 348 P **P 21 25 32.4 0.0**
EVIA pmax pmax
comp=Z,151nm,0.9s,mb6.2
CCIG Comitan 85.58 68 *i*P **P 21 25 33.6 +0.7**
ARMA Armidale 85.77 189 *e*P **P 21 25 34.4 +1.0**
PESTR Estremoz 85.82 352 *i*P **P 21 25 33.9 +0.1**
comp=Z,279nm,1.5s,mb6.3
PMAFR Mafra 85.86 353 *i*P **P 21 25 34.2 +0.2**
comp=Z,397nm,1.3s,mb6.5
EBAD Badajoz 85.88 351 P **P 21 25 32.7 -1.4**
comp=Z,251nm,1.2s,mb6.3
ABTO Aybut 86.06 295 P **P 21 25 34.3 -1.0**
SNR=29
EBAN Banos Encina 86.15 349 P **P 21 25 36.2 +0.7**
comp=Z,110nm,0.8s,mb6.1
EBAN Banos Encina 86.15 349 P **P 21 25 36.2 +0.7**
EBAN pmax pmax
comp=Z,110nm,0.8s,mb6.1
EMUR La Murta 86.16 347 P **P 21 25 34.3 -1.2**
comp=Z,96nm,1.1s,mb5.9
EVO Evora 86.19 352 *i*P **P 21 25 35.7 0.0**
comp=Z,194nm,1.7s,mb6.1
MOE Montemor 86.22 352 *e*P **P 21 25 37.2 +1.4**
EADA Adamuz 86.23 349 P **P 21 25 33.2 -2.6**
comp=Z,184nm,1.4s,mb6.1
KEST Kesra 86.37 338 P **P 21 25 36.7 +0.1**
comp=Z,15nm,0.8s,mb5.2,baz=300,slow=2.0,SNR=24
KEST PP PP 21 28 58.6 +1.3
comp=Z,7.2nm,1.0s,baz=339,slow=6.4,SNR=3.7
KEST LR LR 22 07 32.0
comp=Z,1µm,21.9s,MS5.2,baz=236,slow=38
EQES Quesada 86.42 348 P **P 21 25 35.0 -1.8**
comp=Z,136nm,1.4s,mb6.0
PBAR Barrancos 86.46 351 *i*P **P 21 25 37.1 +0.1**
comp=Z,258nm,1.1s,mb6.4
PBEJ Beja 86.68 352 *i*P **P 21 25 38.3 +0.2**
comp=Z,133nm,1.7s,mb5.9
ELUQ Luque 86.80 349 P **P 21 25 38.7 +0.1**
comp=Z,40nm,1.2s,mb5.5
ELUQ Luque 86.80 349 P **P 21 25 38.7 0.0**
ELUQ pmax pmax
comp=Z,40nm,1.2s,mb5.5
EMIN Mina Concepcio 86.83 351 P **P 21 25 37.4 -1.4**
comp=Z,171nm,1.2s,mb6.2
ECOG Cogollos-Vega 87.00 348 P **P 21 25 39.8 +0.2**
comp=Z,40nm,0.8s,mb5.7
ECOG Cogollos-Vega 87.00 348 P **P 21 25 39.8 +0.1**
ECOG pmax pmax
comp=Z,40nm,0.8s,mb5.7
EGRO El Granado 87.14 352 P **P 21 25 38.5 -1.8**
comp=Z,130nm,1.2s,mb6.0
ENIJ Nijar 87.14 347 P **P 21 25 39.3 -1.0**
comp=Z,48nm,0.9s,mb5.7
ENIJ Nijar 87.14 347 P **P 21 25 39.3 -1.0**
ENIJ pmax pmax
comp=Z,48nm,0.9s,mb5.7
ELOJ Sierra Loja 87.19 349 P **P 21 25 40.4 -0.2**
comp=Z,63nm,0.8s,mb5.9
ELOJ Sierra Loja 87.19 349 P **P 21 25 40.4 -0.2**
ELOJ pmax pmax
comp=Z,63nm,0.8s,mb5.9
PTEO Sao Teotonio 87.22 353 *e*P **P 21 25 40.4 -0.3**
comp=Z,78nm,1.7s,mb5.7
ERON Agron 87.28 349 P **P 21 25 40.3 -0.7**
comp=Z,44nm,0.8s,mb5.7
PVAQ Vaqueiros 87.28 352 *i*P **P 21 25 41.3 +0.3**
comp=Z,127nm,1.7s,mb5.9
EBER Berja 87.30 348 P **P 21 25 39.9 -1.2**
comp=Z,58nm,1.0s,mb5.8
EGUA Guajares 87.44 348 P **P 21 25 41.2 -0.6**
comp=Z,16nm,0.7s,mb5.4
EGUA Guajares 87.44 348 P **P 21 25 41.2 -0.6**
EGUA pmax pmax
comp=Z,16nm,0.7s,mb5.4
MORF Marmelete 87.45 352 *i*P **P 21 25 41.9 0.0**
comp=Z,112nm,1.1s,mb6.0
PBDV Barranco-do-Ve 87.46 352 *i*P **P 21 25 42.3 +0.4**
comp=Z,158nm,1.8s,mb5.9
PFVI Vila Bisbo 87.64 353 *e*P **P 21 25 42.2 -0.5**
comp=Z,99nm,0.9s,mb6.0
ESPR Espera 87.65 350 P **P 21 25 41.7 -1.1**
comp=Z,100nm,1.1s,mb6.0
EMIJ Mijas 87.84 349 P **P 21 25 42.5 -1.2**
comp=Z,54nm,0.8s,mb5.8
EJIF Jimena Fronter 88.02 350 P **P 21 25 43.6 -1.0**
comp=Z,112nm,0.8s,mb6.2
EJIF Jimena Fronter 88.02 350 P **P 21 25 43.6 -1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EJIF				pmax	pmax		
	comp=Z,112nm,0.8s,mb6.2						
EALB	**Alboran**	**88.26**	**348**	P	**P**	**21 25 44.8**	**-0.9**
	comp=Z,42nm,1.0s,mb5.6						
STKA	**Stephens Creek**	**88.51**	**197**	⇑*i*P	**P**	**21 25 46.8**	**+0.2**
	comp=Z,51nm,0.9s,mb5.9						
STKA	**Stephens Creek**	**88.51**	**197**	P	**P**	**21 25 46.9**	**+0.3**
	comp=Z,52nm,0.8s,mb5.9,baz=347,slow=6.2,SNR=58						
STKA				LR	LR	22 01 37.1	
	comp=Z,2µm,21.4s,MS5.4,baz=14,slow=33						
TBI	**Tubuai**	**88.59**	**136**	*e*SKSac	SKSac	21 36 11.1	-1.1
	comp=Z,771nm,29.8s						
TBI				*e*SS	SS	21 42 30.8	+8.7
	comp=Z,722nm,27.5s						
TBI				*e*LR	LR	21 53 47.6	
	comp=Z,4µm,30.8s,baz=332						
RIV	**Riverview**	**89.20**	**189**	⇑*i*P	**P**	**21 25 50.9**	**+1.1**
TGUH	**Tegucigalpa,Un**	**89.99**	**65**	*e*P	**P**	**21 25 54.9**	**+0.8**
TGUH				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
FORT	**Forrest**	**90.46**	**209**	*e*P	**P**	**21 25 56.0**	**+0.3**
	comp=Z,194nm,0.8s,mb6.5						
MUKL	**Al Mukalla**	**90.67**	**297**	*e*P	**P**	**21 25 56.1**	**-1.2**
CNB	**Canberra Magne**	**90.84**	**190**	*e*P	**P**	**21 25 58.0**	**+0.6**
	comp=Z,49nm,1.1s,mb5.8						
MDT	**Midelt**	**91.53**	**349**	PKKPbc	PKKPbc	21 43 19.1	+0.8
	comp=Z,2.7nm,0.9s,baz=229,slow=4.9,SNR=4.2						
PMAR	**Madeira**	**92.38**	**359**	*e*P	**P**	**21 26 05.5**	**+0.5**
	comp=Z,239nm,1.2s,mb6.4						
DHBB	**Dhamar BB**	**92.92**	**301**	*e*P	**P**	**21 26 08.0**	**+0.3**
SDDR	**Presa de Saban**	**93.42**	**49**	⇑*i*P	**P**	**21 26 09.3**	**-0.6**
	comp=Z,36nm,1.1s,mb5.7						
SDDR				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
JTS	**JuntasAbangare**	**94.37**	**65**	PFAKE		21 26 20.0	+5.7
JTS				LR	LR		
	comp=Z,836nm,22.0s,MS5.2						
JTS	**JuntasAbangare**	**94.37**	**65**	LR	LR	22 10 01.4	
	comp=Z,757nm,21.0s,MS5.1,baz=140,slow=36						
KLBR	**Kellerberrin**	**94.40**	**217**	⇑*i*P	**P**	**21 26 12.6**	**-1.3**
	comp=Z,104nm,1.3s,mb6.1						
RKT	**Rikitea**	**94.70**	**125**	*e*PP	PP	21 30 05.3	+0.7
	comp=Z,227nm,36.5s						
RKT	**Rikitea**	**94.70**	**125**	*e*PS	PS	21 38 41.2	-5.6
	comp=Z,792nm,29.0s						
RKT	**Rikitea**	**94.70**	**125**	*e*SKSac	SKSac	21 36 46.9	+0.1
	comp=Z,568nm,25.5s						
RKT				*e*SS	SS	21 43 49.6	-0.4
	comp=Z,930nm,31.0s						
RKT				*e*LR	LR	21 56 27.6	
	comp=Z,3µm,33.0s,baz=330						
NWAO	**Narrogin (SRO)**	**95.79**	**216**	*e*P	**P**	**21 26 18.7**	**-1.5**
	comp=Z,24nm,1.0s,mb5.6						
NWAO				LR	LR		
	comp=Z,894nm,19.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**95.79**	**216**	*e*P	**P**	**21 26 18.7**	**-1.6**
NWAO				pmax	pmax		
	comp=Z,24nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,894nm,19.0s						
SJG	**San Juan**	**96.36**	**45**	PFAKE		21 26 30.0	+6.6
SJG				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
CPD	**Cerro la Pandu**	**96.53**	**45**	⇑*e*P	**P**	**21 26 23.4**	**-0.7**
	comp=Z,24nm,0.8s,mb5.7						
CPD	**Cerro la Pandu**	**96.53**	**45**	⇑*e*P	**P**	**21 26 23.5**	**-0.7**
CPD				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.7						
SNZO	**South Karori**	**96.81**	**170**	PFAKE		21 26 30.0	+5.4
SNZO				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
TAU	**Tasmania Unive**	**98.57**	**191**	PFAKE		21 26 40.0	+7.5
TAU				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PAYG	**Puerto Ayora**	**100.65**	**76**	PFAKE		21 26 50.0	+7.3
PAYG				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
SDV	**Santo Domingo**	**102.62**	**53**	PFAKE		21 27 00.0	+8.6
SDV				LR	LR		
	comp=Z,501nm,20.0s,MS5.0						
BBGH	**Gun Hill**	**103.47**	**42**	PFAKE		21 27 10.0	+15
BBGH				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
OTAV	**Otavalo**	**106.26**	**65**	PFAKE		21 31 30.0	+11
OTAV				LR	LR		
	comp=Z,475nm,20.0s,MS5.0						
TORD	**Torodi Ar. Bea**	**109.85**	**339**	Pdif	Pdif	21 27 21.4	-2.1
TORD				PKKPbc	PKKPbc	21 42 27.4	+1.3
TORD	**Torodi Ar. Bea**	**109.85**	**339**	Pdiff	Pdif	21 27 21.4	-2.1
	comp=Z,1.2nm,0.9s,baz=338,slow=3.2,SNR=3.7						
TORD				PKKPbc	PKKPbc	21 42 27.4	+1.3
	comp=Z,1.6nm,0.8s,baz=240,slow=1.5,SNR=6.1						
KMBO	**Kilima Mbogo**	**109.96**	**299**	PFAKE		21 31 40.0	+14
KMBO				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
DBIC	**Dimbokro**	**117.32**	**345**	PKP	PKPdf	21 31 39.3	-0.6
	comp=Z,18nm,0.8s,baz=360,slow=2.8,SNR=14						
TIC	**Toumodi**	**117.37**	**345**	*e*P	PKPdf	21 31 38.1	-1.9
	comp=Z,39nm,1.4s						
NNA	**Nana**	**117.39**	**70**	PFAKE		21 31 50.0	+10
NNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
KIC	**Kosan Boka**	**117.61**	**345**	*e*P	PKPdf	21 31 39.8	-0.7
	comp=Z,100nm,0.9s						
LIC	**Lamto**	**117.79**	**345**	⇑*i*PKIKP	PKPdf	21 31 40.3	-0.5
	comp=Z,62nm,1.0s						
LIC				*e*MLR	MLR		
	comp=Z,1µm,20.5s,MS5.2						
LIC	**Lamto**	**117.79**	**345**	*e*P	PKPdf	21 31 39.9	-0.9
	comp=Z,79nm,1.0s						
LIC	**Lamto**	**117.79**	**345**	⇑*i*PKPdf	PKPdf	21 31 40.3	-0.5
LIC				LR	LR		
	comp=Z,570nm,20.5s,MS5.2						
DRV	**Dumont d'Urvil**	**122.70**	**190**	PP	PP	21 33 37.0	+9.2
DRV				SS	SS	21 50 09.0	+2.6
DRV				L		22 04 00.0	
DRV				R		22 10 00.0	
LPAZ	**La Paz**	**125.58**	**65**	PKP	PKPdf	21 31 55.9	+0.3
LPAZ				PKKPab		21 41 34.7	
LPAZ	**La Paz**	**125.58**	**65**	PKP	PKPdf	21 31 55.9	+0.3
	comp=Z,6.6nm,0.9s,baz=12,slow=7.6,SNR=21						
LPAZ				PKKPab		21 41 34.7	
	comp=Z,2.3nm,1.0s,baz=80,slow=8.8,SNR=5.4						
LSZ	**Lusaka**	**126.62**	**300**	*e*PKPdf	PKPdf	21 31 57.8	+0.2
LSZ				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
LSZ	**Lusaka**	**126.62**	**300**	PKIKP	PKPdf	21 31 58.2	+0.6
LSZ				pmax	pmax		
	comp=Z,19nm,0.8s						
LSZ	**Lusaka**	**126.62**	**300**	PKP	PKPdf	21 31 58.2	+0.6
	comp=Z,19nm,0.8s,baz=42,slow=3.1,SNR=6.2						
RCBR	**Riachuelo**	**128.69**	**23**	⇑*e*P	PKPdf	21 32 01.2	-0.5
RCBR				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
VNDA	**Vanda**	**132.50**	**180**	PKhKP		21 31 57.1	
	comp=Z,3.5nm,1.1s,baz=334,slow=6.2,SNR=4.7						
VNDA				PKP	PKPdf	21 32 08.0	+1.0
	comp=Z,11nm,0.9s,baz=322,slow=4.4,SNR=30						
SBA	**Scott Base**	**132.87**	**179**	*e*PKPpre		21 32 00.1	
SBA				*e*PKPdf	PKPdf	21 32 07.9	+0.2
SBA				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
LCO	**Las Campanas**	**134.45**	**77**	PFAKE		21 32 20.0	+7.9
LCO				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
TSUM	**Tsumeb**	**135.03**	**309**	*e*PKPpre		21 32 03.0	
TSUM				PKP	PKPdf	21 32 12.4	-1.1
TSUM				*e*PKPdf	PKPdf	21 32 13.4	-0.1
TSUM				*e*SKP		21 35 32.3	
TSUM				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
TSUM	**Tsumeb**	**135.03**	**309**	PKhKP		21 32 01.6	
	comp=Z,4.9nm,1.0s,baz=99,slow=5.2,SNR=2.9						
TSUM				PKP	PKPdf	21 32 12.4	-1.1
	comp=Z,13nm,0.9s,baz=100,slow=2.1,SNR=6.5						
LBTB	**Lobatse**	**136.08**	**295**	PKP	PKPdf	21 32 16.2	+0.9
LBTB	**Lobatse**	**136.08**	**295**	PKP	PKPdf	21 32 16.2	+0.9
	baz=42,slow=2.1						
MDZ	**Mendoza**	**138.41**	**79**	*e*P	PKPdf	21 32 20.3	+1.0
BOSA	**Boshof**	**139.16**	**293**	PKP		21 32 10.3	
BOSA				PKP	PKPdf	21 32 22.5	+1.7
BOSA	**Boshof**	**139.16**	**293**	PKhKP		21 32 10.3	
	comp=Z,8.5nm,0.9s,baz=36,slow=4.9,SNR=6.7						
BOSA				PKP	PKPdf	21 32 22.5	+1.7
	comp=Z,14nm,0.7s,baz=45,slow=1.9,SNR=22						
MAW	**Mawson**	**142.34**	**218**	PKP	PKPdf	21 32 22.6	-2.7
	comp=Z,25nm,0.9s,baz=49,slow=3.8,SNR=9.8						
PLCA	**Paso Flores**	**142.96**	**89**	*e*PKPpre		21 32 23.3	
PLCA				*e*PKPdf	PKPdf	21 32 27.6	+0.4
PLCA				*e*SKP		21 35 58.8	
PLCA				LR	LR		
	comp=Z,542nm,20.0s,MS5.3						
SUR	**Sutherland**	**144.47**	**294**	*e*PKPdf	PKPdf	21 32 29.0	-1.2
SUR				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
SUR	**Sutherland**	**144.47**	**294**	PKP	PKPdf	21 32 29.1	-1.1
	comp=Z,103nm,1.1s,baz=24,slow=3.6,SNR=17						
QSPA	**South Pole Qui**	**145.00**	**180**	*e*PKPdf	PKPdf	21 32 28.0	-1.7
QSPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
QSPA	**South Pole Qui**	**145.00**	**180**	PKPbc	PKPdf	21 32 28.3	-1.4
	comp=Z,391nm,1.0s,baz=359,slow=1.2,SNR=690						
TRQA	**Tornquist**	**146.01**	**78**	*e*PKPdf	PKPdf	21 32 32.7	+0.1
TRQA				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
SYO	**Syowa Base**	**151.04**	**219**	⇓*e*X	PKPdf	21 32 37.0	-2.8
SYO	**Syowa Base**	**151.04**	**219**	⇓*i*X	PKPdf	21 32 44.0	+4.2
SYO	**Syowa Base**	**151.04**	**219**	⇑*i*PKiKP	PKiKP	21 32 46.2	0.0
USHA	**Ushuaia**	**151.67**	**110**	PKP	PKPdf	21 32 39.7	-1.5
	comp=Z,5.5nm,0.9s,baz=242,slow=9.8,SNR=3.6						
USHA				PKPbc	PKPbc	21 32 47.1	-0.4
	comp=Z,39nm,0.8s,baz=240,slow=3.5,SNR=22						
PMSA	**Palmer Station**	**155.70**	**132**	PFAKE		21 33 00.0	+13
PMSA				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
MAIT	**Maitri**	**159.73**	**208**	*e*PKPdf	PKPab	21 33 29.8	-0.8
SNAA	**Sanae**	**162.27**	**196**	PKP	PKPdf	21 32 52.5	-1.6
	comp=Z,3.0nm,1.1s,baz=143,slow=3.9,SNR=4.5						
SNAA				PKPab	PKPab	21 33 41.1	-0.7
	comp=Z,13nm,1.1s,baz=107,slow=2.7,SNR=8.3						
SNAA				PP	PP	21 37 27.7	+1.1
	comp=Z,2.1nm,1.0s,baz=135,slow=6.9,SNR=4.0						
VNA3	**Neumayer Olymp**	**163.53**	**190**	*e*PKPdf	PKPdf	21 32 53.7	-1.7
VNA3				*e*		21 32 59.8	
VNA3				*e*		21 33 13.3	
VNA3				*e*		21 33 45.1	
VNA3				*e*		21 33 52.9	
VNA3				*e*		21 34 01.4	
VNA3				*e*		21 34 07.0	
VNA3				*e*		21 37 35.8	
VNA3				*e*		21 37 44.5	
VNA2	**Neumayer--Watz**	**163.58**	**192**	*e*PKPdf	PKPdf	21 32 53.8	-1.7
VNA2				*e*		21 32 59.3	
VNA2				*e*		21 33 13.2	
VNA2				*e*		21 33 45.8	
VNA2				*e*		21 33 53.3	
VNA2				*e*		21 34 01.2	
VNA2				*e*		21 34 07.0	
VNA2				*e*		21 37 34.0	
VNA2				*e*		21 37 41.5	
HOPE	**Hope Point**	**169.34**	**92**	PFAKE		21 33 10.0	+10
HOPE				LR	LR		
	comp=Z,3.0nm,19.0s						

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*IDC **10** 21:16:02.3±1.5, 32.68S×178.79W, h0km, mb4.2/4, mb1 4.4/5, mb1mx4.1/13, mbtmp4.2/5, ML4.4/1, Error ellipse: s-maj=37.5km s-min=28.9km az=56.0*

*NEIC **10** 21:16:31.7±3.1, 34.63S×179.63E, h198km±16km, mb4.0/1, Error ellipse: s-maj=46.8km s-min=18.5km az=62.0*

ISC 10 21:16:09.5±2.2**, 33.4S**±0.1×**178.5W**±0.3**, h83**km±22km**, n32, σ1s25**/31**, mb4.1**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.87**	**211**	P	**Pn**	**21 17 22.6**	**+2.3**
MXZ	**Matakaoa Point**	**4.87**	**211**	*e*PN	**Pn**	**21 17 20.5**	**+0.2**
MXZ				*e*SN	**Sn**	**21 18 16.3**	**+0.9**
PUZ	**Puketiti**	**5.33**	**209**	*e*P	**Pn**	**21 17 28.0**	**+1.5**
PUZ	**Puketiti**	**5.33**	**209**	*e*PN	**Pn**	**21 17 27.1**	**+0.6**
PUZ				*e*SN	**Sn**	**21 18 25.8**	**-0.7**
MWZ	**Matawai**	**5.86**	**212**	*e*P	**Pn**	**21 17 35.4**	**+1.7**
MWZ	**Matawai**	**5.86**	**212**	*e*PN	**Pn**	**21 17 33.9**	**+0.2**
MWZ				*e*SN	**Sn**	**21 18 39.5**	**+0.1**
URZ	**Urewera**	**5.99**	**215**	P	**Pn**	**21 17 35.6**	**+0.1**
URZ	**Urewera**	**5.99**	**215**	Pn	**Pn**	**21 17 36.9**	**+1.4**
	8.2nm,0.3s,baz=281,slow=2.7,SNR=52						
URZ				Sn	**Sn**	**21 18 47.5**	**+4.8**
	5.1nm,0.3s,baz=153,slow=23,SNR=8.1						
URZ	**Urewera**	**5.99**	**215**	*e*PN	**Pn**	**21 17 34.9**	**-0.6**
URZ				SN	**Sn**	**21 18 42.8**	**+0.1**
KNZ	**Kokohu**	**6.38**	**208**	*e*P	**Pn**	**21 17 42.2**	**+1.5**
KNZ	**Kokohu**	**6.38**	**208**	*e*PN	**Pn**	**21 17 41.7**	**+1.0**
OUZ	**Omahuta**	**6.77**	**253**	*e*P	**Pn**	**21 17 45.8**	**-0.4**
OUZ	**Omahuta**	**6.77**	**253**	*e*PN	**Pn**	**21 17 45.8**	**-0.4**
BFZ	**Birch Farm**	**8.36**	**209**	*e*P	**Pn**	**21 18 05.6**	**-2.2**
BFZ	**Birch Farm**	**8.36**	**209**	*e*SN	Sx	21 19 38.5	
MRZ	**Mangatainoka R**	**8.62**	**211**	*e*SN	Sx	21 19 42.6	
KIW	**Kapiti Island**	**9.09**	**213**	P	**Pn**	**21 18 15.1**	**-2.6**
KIW	**Kapiti Island**	**9.09**	**213**	*e*PN	**Pn**	**21 18 15.0**	**-2.7**
SNZO	**South Karori**	**9.54**	**212**	Pn	**Pn**	**21 18 19.8**	**-4.1**
SNZO				*e*Sn	Sx	21 20 00.5	
TCW	**Tory Channel**	**9.66**	**214**	*e*SN	Sx	21 20 05.9	
NNZ	**Nelson**	**10.10**	**217**	*e*SN	Sx	21 20 17.5	
THZ	**Tophouse**	**10.74**	**217**	*e*P	**Pn**	**21 18 36.4**	**-3.9**
THZ	**Tophouse**	**10.74**	**217**	*e*PN	**Pn**	**21 18 35.7**	**-4.7**
THZ				*e*SN	Sx	21 20 30.2	
KHZ	**Kahutara**	**10.95**	**213**	*e*P	**Pn**	**21 18 40.0**	**-3.0**
KHZ	**Kahutara**	**10.95**	**213**	*e*PN	**Pn**	**21 18 40.0**	**-3.0**
CTA	**Charters Tower**	**33.98**	**284**	P	**P**	**21 22 46.1**	**+0.8**
	2.6nm,0.5s,mb4.3,baz=111,slow=12,SNR=9.8						
CTAO	**Charters Tower**	**33.98**	**284**	*e*P	**P**	**21 22 45.7**	**+0.4**
	2.3nm,0.6s,mb4.2						
ASAR	**Alice Springs**	**42.61**	**270**	P	**P**	**21 23 57.8**	**+0.1**
	2.6nm,0.6s,mb4.1,baz=110,slow=7.3,SNR=43						
WRA	**Warramunga Arr**	**43.87**	**276**	P	**P**	**21 24 07.5**	**-0.3**
	1.7nm,0.6s,mb4.0,baz=114,slow=8.1,SNR=27						
QSPA	**South Pole Qui**	**56.69**	**180**	P	**P**	**21 25 53.2**	**+10**
	1.3nm,0.6s,mb4.1,baz=91,slow=2.9,SNR=11						
FINES	**FINESS Array B**	**147.81**	**338**	PKPbc	PKPbc	21 35 46.1	+2.1
	1.4nm,0.6s,baz=73,slow=2.6,SNR=11						
NOA	**NORSAR Array B**	**151.66**	**350**	PKPbc	PKPbc	21 35 54.4	+0.9
	0.8nm,0.7s,baz=15,slow=4.2,SNR=3.4						

KRSC 10 21:28:55.4±0.2**, 55.11N×162.40E, h44**km±43km**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.13**	**12**	*e*P	Pn	21 29 16.3	+1.6
KBTR				*i* S	Sn	21 29 31.9	+3.0
ZLN	**Zelenaya**	**1.28**	**316**	P	Pn	21 29 18.0	+1.2
TUMR	**Tumrok**	**1.30**	**279**	*e*P	Pn	21 29 18.9	+1.8
TUMR				*i* S	Sn	21 29 36.1	+2.8
KMNR	**Kamenistaya**	**1.39**	**299**	*e*P	Pn	21 29 20.1	+1.8
KMNR				*i* S	Sn	21 29 39.1	+3.6
KPT	**Kopyto**	**1.51**	**306**	P	Pn	21 29 21.3	+1.4
KPT				*i* S	Sn	21 29 40.9	+2.6
KRSR	**Krestovskiy**	**1.52**	**318**	P	Pn	21 29 21.5	+1.4
KLY	**Klyuchi**	**1.56**	**321**	*e*P	Pn	21 29 20.9	+0.3
KLY				*i* S	Sn	21 29 40.3	+0.7
SRKR	**Sorokina**	**1.70**	**336**	*e*P	Pn	21 29 25.1	+2.6
SRKR				*e*S	Sn	21 29 47.0	+4.1
KOZ	**Kozyrevsk**	**1.72**	**305**	P	Pn	21 29 24.5	+1.7
KOZ				*i* S	Sn	21 29 46.0	+2.5
SRDR	**Sredinnyy**	**1.94**	**310**	*e*P	Pn	21 29 27.6	+1.8
SRDR				*e*S	Sn	21 29 51.7	+2.8
SPN	**Mys Shipunski**	**2.45**	**216**	P	Pn	21 29 34.1	+1.2
SPN				*i* S	Sn	21 30 01.4	-0.2
NLC	**Nalytchevo**	**2.65**	**224**	*e*P	Pn	21 29 37.5	+2.0
NLC				*i* S	Sn	21 30 08.0	+1.7
AVH	**Avacha**	**2.84**	**231**	P	Pn	21 29 41.6	+3.5
AVH				*i* S	Sn	21 30 15.2	+4.2
GNL	**Ganaly**	**2.97**	**243**	*e*P	Pn	21 29 42.8	+2.9
GNL				*i* S	Sn	21 30 18.0	+3.8
PET	**Petropavlovsk**	**3.04**	**228**	P	Pn	21 29 42.9	+2.0
PET				*i* S	Sn	21 30 18.0	+2.0
RUS	**Russkaya**	**3.54**	**222**	P	Pn	21 29 50.8	+3.1
GRL	**Gorelyy**	**3.62**	**227**	*e*P	Pn	21 29 52.5	+3.6

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*ISCJB **10** 21:30:31.9±0.4, 63.12N±0.04×150.7W±0.1, h127km±5km, mb3.6/3, Error ellipse: s-maj=8.2km s-min=6.2km az=15.1*

*NEIC **10** 21:30:33.7, 63.12N×150.64W, h114km, MG3.2(AEIC), After AEIC.*

*IDC **10** 21:30:39.2±7.6, 62.37N×150.22W, h227km±127km, mb3.1/3, mb1 3.1/5, mb1mx2.9/19, mbtmp3.0/5, Error ellipse: s-maj=123.7km s-min=33.6km az=164.0*

ISC 10 21:30:33.1±0.4**, 63.11N**±0.04×**150.7W**±0.1**, h120**km±5km**, n32, σ0s46**/36**, mb3.6**/3**, Central Alaska**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.39**	**27**	P	**Pn**	**21 30 50.7**	**+0.3**
TRF				S	**Sn**	**21 31 03.4**	**-0.1**
MCK	**McKinley**	**1.00**	**51**	P	**Pn**	**21 30 55.3**	**+0.2**
MCK				S	**Sn**	**21 31 11.6**	**-0.2**
GHO	**Glory Hole Cre**	**1.57**	**148**	P	**Pn**	**21 31 01.7**	**+0.4**
PMR	**Palmer**	**1.69**	**154**	*e*P	**Pn**	**21 31 02.4**	**-0.3**
SML	**Sawmill**	**1.70**	**139**	*e*Pn	**Pn**	**21 31 02.2**	**-0.6**
SML				*e*Sn	**Sn**	**21 31 25.7**	**+0.1**
FIB	**Fire Island**	**1.97**	**173**	P	**Pn**	**21 31 06.8**	**+0.8**
RC01	**Rabbit Creek A**	**2.08**	**167**	P	**Pn**	**21 31 07.5**	**0.0**
COLA	**College**	**2.17**	**34**	P	**Pn**	**21 31 08.4**	**-0.1**
IL1	**Eielson Array**	**2.37**	**43**	P	**Pn**	**21 31 10.8**	**-0.2**
PAX	**Paxson**	**2.38**	**91**	P	**Pn**	**21 31 11.8**	**+0.5**
TTA	**Tatalina**	**2.44**	**268**	*e*P	**Pn**	**21 31 11.9**	**-0.1**
SLKM	**Skilak Lake**	**2.62**	**175**	P	**Pn**	**21 31 14.8**	**+0.4**
DOT	**Dot Lake**	**3.03**	**77**	P	**Pn**	**21 31 19.4**	**-0.3**
SVW2	**Sparrevohn**	**3.06**	**231**	*e*P	**Pn**	**21 31 20.0**	**-0.1**
SEW	**Seward**	**3.07**	**168**	P	**Pn**	**21 31 20.1**	**-0.2**
MENT	**Mentasta**	**3.18**	**90**	*e*P	**Pn**	**21 31 21.8**	**+0.2**
IMA2	**Indian Mountai**	**3.24**	**338**	*e*P	**Pn**	**21 31 22.3**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.48**	**135**	*e*Pn	**Pn**	**21 31 25.6**	**+0.1**
BCA3	**Beaver Creek A**	**4.05**	**87**	P	**Pn**	**21 31 32.6**	**-0.5**
COLD	**Coldfoot**	**4.14**	**3**	P	**Pn**	**21 31 34.6**	**+0.3**
EGAK	**Eagle**	**4.52**	**64**	P	**Pn**	**21 31 39.6**	**+0.2**
BM3	**Burnt Mountain**	**5.02**	**28**	P	**Pn**	**21 31 46.2**	**+0.1**
DAWY	**Dawson**	**5.13**	**74**	P	**Pn**	**21 31 47.4**	**-0.3**
KDAK	**Kodiak Island**	**5.43**	**191**	P	**Pn**	**21 31 51.1**	**-0.5**
KDAK	**Kodiak Island**	**5.43**	**191**	P	**Pn**	**21 31 50.6**	**-1.0**
	4.4nm,0.3s,baz=328,slow=2.3,SNR=60						
KDAK				S	**Sn**	**21 32 48.7**	**-4.2**
	4.2nm,0.3s,baz=160,slow=23,SNR=13						
CHGN	**Chignik**	**7.86**	**213**	*e*P	**Pn**	**21 32 24.5**	**-0.1**
YKA	**Yellowknife Ar**	**16.37**	**76**	P	**Pn**	**21 34 15.7**	**+0.3**
YKA	**Yellowknife Ar**	**16.37**	**76**	P	**Pn**	**21 34 15.7**	**+0.3**
	0.1nm,0.3s,baz=286,slow=9.7,SNR=4.2						
SONM	**Songino Array**	**53.87**	**306**	P	**P**	**21 39 44.7**	**+1.5**
	0.1nm,0.5s,mb3.1,baz=23,slow=5.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**55.52**	**324**	P	**P**	**21 39 54.4**	**-0.6**
ZALV	**Zalesovo Beam**	**55.52**	**324**	P	**P**	**21 39 54.4**	**-0.6**
	0.7nm,0.5s,mb3.9,baz=38,slow=7.5,SNR=4.1						
MKAR	**Makanchi Array**	**62.68**	**322**	P	**P**	**21 40 43.7**	**-0.7**
	0.6nm,0.6s,mb3.7,baz=38,slow=6.3,SNR=12						

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*CSEM **10** 21:48:49.0±0.1, 74.20N×8.96E, h2km, mb4.8/17, Ms4.8, Error ellipse: s-maj=3.6km s-min=3.0km az=74.0*

*BJI **10** 21:48:50.1, 74.20N×8.70E, h10km, mB5.6, mb4.6, Ms4.7, Msz4.3*

*ISCJB **10** 21:48:50.6±0.2, 74.15N±0.03×8.8E±0.1, h10km, mb4.4/52, MS4.2/4, Error ellipse: s-maj=5.2km s-min=4.1km az=156.7*

*HEL **10** 21:48:51.3±0.3, 74.24N×8.67E, h10km, mb4.7(NEIC), ML2.9(BER), MS4.8(NEIC)*

*IDC **10** 21:48:51.1±0.6, 74.17N×8.72E, h0km, mb4.0/14, mb1 4.2/19, mb1mx4.1/26, mbtmp4.1/19, ML3.6/5, MS4.3/1, Ms1 4.3/1, ms1mx3.7/33, Error ellipse: s-maj=15.6km s-min=10.2km az=48.0*

*MOS **10** 21:48:51.2±1.5, 74.10N×8.93E, h10km, mb4.7/25, MS4.3/4, Error ellipse: s-maj=24.8km s-min=4.9km az=95.3*

*NEIC **10** 21:48:52.1±0.3, 74.20N×8.66E, h10km, mb4.7/35, MS4.8/1, Error ellipse: s-maj=6.4km s-min=5.1km az=61.0*

*BER **10** 21:48:53.6±4.4, 74.19N×9.01E, h10km, ML2.9, ML3.3(NAO)*

*NAO **10** 21:48:54.0±1.6, 74.20N×10.56E, ML3.3*

ISC 10 21:48:52.6±0.2**, 74.14N**±0.03×**8.7E**±0.1**, h10**km**, (h20**km±2.0km**:pP-P), n188, σ1s20**/205**, mb4.4**/52**, MS4.2**/4**, 5C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.82**	**78**	AML	AML	21 47 19.2	
	comp=Z,192nm,0.4s						
SPB4	**Spitsbergen Ar**	**4.45**	**21**	*e*Pn	**Pn**	**21 49 58.1**	**-1.8**
SPB4				*e*Sn	**Sn**	**21 50 46.8**	**-4.9**
SPB4	**Spitsbergen Ar**	**4.45**	**21**	*e*Pn	**Pn**	**21 49 58.1**	**-1.9**
SPA0	**Spitsbergen Ar**	**4.45**	**21**	*e*P	**Pn**	**21 49 58.4**	**-1.6**
	baz=199,slow=16						
SPA0				*e*S	**Sn**	**21 50 46.6**	**-5.1**
	baz=207,slow=28						
SPA0	**Spitsbergen Ar**	**4.45**	**21**	P	**Pn**	**21 49 58.3**	**-1.7**
SPA0				S	**Sn**	**21 50 46.5**	**-5.2**
KBS	**Kingsbay**	**4.87**	**7**	Pn	**Pn**	**21 50 03.1**	**-2.7**
KBS				Sn	**Sn**	**21 50 55.4**	**-6.7**
KBS	**Kingsbay**	**4.87**	**7**	*e*P	**Pn**	**21 50 03.0**	**-2.7**
KBS				*e*S	**Sn**	**21 50 57.3**	**-4.7**
KBS				AML	AML	21 51 03.5	
	comp=Z,50nm,0.5s						
KBS	**Kingsbay**	**4.87**	**7**	*e*Pn	**Pn**	**21 50 02.8**	**-2.9**
KBS				*e*Sn	**Sn**	**21 50 56.9**	**-5.1**
KBS	**Kingsbay**	**4.87**	**7**	*i* P	**Pn**	**21 50 02.7**	**-3.0**
KBS	**Kingsbay**	**4.87**	**7**	*e*Pn	**Pn**	**21 50 02.8**	**-2.9**
KBS				Sn	**Sn**	**21 50 55.4**	**-6.6**
TRO	**Tromso**	**5.53**	**140**	*e*P	**Pn**	**21 50 12.4**	**-2.4**
TRO				*e*S	**Sn**	**21 51 11.3**	**-7.0**
TRO				AML	AML	21 51 14.7	
	comp=Z,45nm,0.3s						
TRO	**Tromso**	**5.53**	**140**	*e*P	**Pn**	**21 50 12.4**	**-2.4**
TRO				*e*S	**Sn**	**21 51 11.3**	**-7.1**
JNW	**Jan Mayen West**	**6.00**	**247**	*e*P	**Pn**	**21 50 20.1**	**-1.2**
JMIC	**Jan Mayen**	**6.05**	**247**	Pn	**Pn**	**21 50 20.5**	**-1.4**
	comp=Z,22nm,0.3s,baz=18,slow=2.6,SNR=3.5						
JMI	**Jan Mayen**	**6.14**	**247**	*e*P	**Pn**	**21 50 21.1**	**-2.1**
LOF	**Lofoten**	**6.24**	**163**	*e*P	**Pn**	**21 50 25.7**	**+1.2**
LOF				AML	AML	21 50 38.0	
	comp=Z,16nm,0.5s						
LOF	**Lofoten**	**6.24**	**163**	*e*P	**Pn**	**21 50 25.7**	**+1.2**
LOF				AML	AML	21 50 38.0	
	comp=Z,16nm,0.5s						
LOF				*e*S	**Sn**	**21 51 30.2**	**-5.6**
KIF	**Kilpisjarvi**	**6.42**	**137**	*e*P	**Pn**	**21 50 25.6**	**-1.4**
KIF	**Kilpisjarvi**	**6.42**	**137**	P	**Pn**	**21 50 25.5**	**-1.4**
KTK1	**Kautokeino**	**6.89**	**131**	*e*P	**Pn**	**21 50 34.2**	**+0.7**
KTK1				*e*S	**Sn**	**21 51 47.2**	**-4.5**
KTK1				AML	AML	21 51 54.9	
	comp=Z,16nm,0.6s						
KTK1	**Kautokeino**	**6.89**	**131**	*e*P	**Pn**	**21 50 34.2**	**+0.7**
KTK1				*e*S	**Sn**	**21 51 47.2**	**-4.5**
KTK1	**Kautokeino**	**6.89**	**131**	*e*P	**Pn**	**21 50 34.1**	**+0.7**
KTK1				*e*S	**Sn**	**21 51 47.2**	**-4.5**
KTK1				AML	AML	21 51 54.9	
	comp=Z,16nm,0.6s						
ARA0	**ARCESS Array S**	**6.97**	**123**	Pn	**Pn**	**21 50 31.8**	**-2.8**
	baz=335,slow=14						
ARA0				Sn	**Sn**	**21 51 43.8**	**-10**
	baz=323,slow=22						
ARA0	**ARCESS Array S**	**6.97**	**123**	*e*P	**Pn**	**21 50 31.8**	**-2.8**
	baz=335,slow=14						
ARCES	**ARCESS Array B**	**6.97**	**123**	Pn	**Pn**	**21 50 32.8**	**-1.7**
	comp=Z,2.4nm,0.3s,baz=326,slow=11,SNR=69						
ARCES				Sn	**Sn**	**21 51 45.7**	**-8.1**
	comp=Z,7.0nm,0.3s,baz=320,slow=19,SNR=11						
NIKU	**Nikkaluokta**	**7.13**	**147**	*e*P	**Pn**	**21 50 36.5**	**-0.3**
KEV	**Kevo**	**7.16**	**119**	*e*P	**Pn**	**21 50 34.4**	**-2.8**
KEV	**Kevo**	**7.16**	**119**	*e*Pn	**Pn**	**21 50 34.3**	**-2.9**
	comp=Z,14nm,0.7s						
KEV				*e*Sn	**Sn**	**21 51 43.6**	**-15**
KEV	**Kevo**	**7.16**	**119**	*e*P	**Pn**	**21 50 34.3**	**-2.9**
KEV				pmax	pmax		
	comp=Z,14nm,0.7s						
KUA	**Kurravaara**	**7.26**	**143**	*e*P	**Pn**	**21 50 37.7**	**-0.8**
DAG	**Danmarks Havn**	**7.32**	**304**	*e*P	**Pn**	**21 50 35.0**	**-4.3**
DAG	**Danmarks Havn**	**7.32**	**304**	*i* P	**Pn**	**21 50 35.0**	**-4.3**
LANU	**Lannavaara**	**7.46**	**138**	*e*P	**Pn**	**21 50 41.2**	**-0.1**
HEF	**Hetta**	**7.48**	**133**	*e*P	**Pn**	**21 50 40.5**	**-1.0**
STOK	**Stokkvaagen**	**7.98**	**167**	*e*P	**Pn**	**21 50 47.9**	**-0.5**
STOK				*e*S	**Sn**	**21 52 09.0**	**-10**
DUNU	**Dundret**	**8.06**	**145**	*e*P	**Pn**	**21 50 49.1**	**-0.3**
MOR8	**Moi Rana**	**8.24**	**164**	*e*P	**Pn**	**21 50 50.0**	**-1.9**
MOR8				AML	AML	21 52 21.0	
	comp=Z,6.0nm,0.6s						
PAJU	**Pajala**	**8.58**	**139**	*e*P	**Pn**	**21 50 55.5**	**-1.1**
PAJU	**Pajala**	**8.58**	**139**	P	**Pn**	**21 50 55.4**	**-1.2**
APA0	**Apatity Array**	**10.23**	**117**	Pn	**Pn**	**21 51 14.2**	**-5.0**
	baz=325,slow=14						

APA0				Sn	Sn	21 52 58.8	-15
	baz=312,slow=22						
APA0	Apatity Array	10.23	117	eP	Pn	21 51 14.2	-5.0
	baz=325,slow=14						
APA0	Apatity Array	10.23	117	Pn	Pn	21 51 14.1	-5.1
	SNR=3.9						
APA	Apatity	10.36	117⇑	eP	Pn	21 51 19.4	-1.5
APA				pmax	pmax		
	comp=Z,11nm,0.9s						
APA	Apatity	10.36	117	eP	Pn	21 51 19.4	-1.5
	comp=Z,11nm,0.9s						
LVZ	Lovozero	10.42	114	i P	Pn	21 51 20.0	-1.7
NB2	NORSAR Subarra	13.20	175	Pn	Pn	21 51 57.7	-2.0
	comp=Z,7.9nm,1.2s,baz=357,slow=14						
NB2	NORSAR Subarra	13.20	175	Pn	Pn	21 51 57.7	-2.0
	comp=Z,7.9nm,1.2s						
NB2				Pn	Pn	21 52 01.1	+1.4
NB2	NORSAR Subarra	13.20	175	Pn	Pn	21 52 01.1	+1.4
NB2	NORSAR Subarra	13.20	175	P	Pn	21 51 57.7	-2.0
NB2				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NOA	NORSAR Array B	13.20	175	Pn	Pn	21 52 00.8	+1.0
	comp=Z,0.2nm,0.3s,baz=233,slow=1.1,SNR=2.9						
HFS	Hagfors	14.20	170	Pn	Pn	21 52 14.8	+1.5
	baz=354,slow=14						
HFS	Hagfors	14.20	170	Pn	Pn	21 52 13.9	+0.5
	comp=Z,0.3nm,0.3s,baz=353,slow=11,SNR=7.3						
HFS	Hagfors	14.20	170	P	Pn	21 52 13.9	+0.6
FIA0	FINESS Array S	14.24	144	Pn	Pn	21 52 11.6	-2.4
	baz=358,slow=14						
FINES	FINESS Array B	14.24	144	Pn	Pn	21 52 12.1	-1.8
	comp=Z,0.3nm,0.3s,baz=353,slow=14,SNR=14						
FINES				Sn	Sn	21 54 41.6	-10
	comp=Z,0.2nm,0.3s,baz=353,slow=21,SNR=4.1						
VSU	Vasula	17.19	147	i P	Pn	21 52 50.5	-1.9
EKA	Eskdalemuir Ar	19.47	201	P	Pn	21 53 26.2	+5.8
	comp=Z,0.2nm,0.3s,baz=6.0,slow=11,SNR=7.5						
SFJD	Kangerlussuaq	20.08	280	P	P	21 53 26.7	+1.1
	comp=Z,42nm,1.3s						
SFJD	Kangerlussuaq	20.08	280	P	P	21 53 26.7	+1.0
SFJD				pmax	pmax		
	comp=Z,42nm,1.3s						
SFJD	Kangerlussuaq	20.08	280	LR	LR	22 01 09.7	
	comp=Z,878nm,21.3s,MS4.1,baz=327,slow=37						
SFJD	Kangerlussuaq	20.08	280	P	P	21 53 26.7	+1.0
	comp=Z,42nm,1.3s						
MOS	Moscow	21.72	132	eP	P	21 53 42.1	-1.3
MOS				e		21 53 48.2	
MOS				e		21 57 36.6	
MOS				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.0						
MOS	Moscow	21.72	132	eP	P	21 53 42.1	-1.3
	comp=Z,80nm,1.3s,mb5.0						
RUE	Ruedersdorf	21.85	172	P	P	21 53 47.9	+3.1
	comp=Z,84nm,1.4s,mb5.0						
RUE	Ruedersdorf	21.85	172	P	P	21 53 47.9	+3.1
	comp=Z,84nm,1.4s,mb5.0						
OBN	Obninsk	22.09	134	eP	P	21 53 45.7	-1.7
	comp=Z,119nm,1.6s,mb5.1						
OBN	Obninsk	22.09	134⇑	eP	P	21 53 46.8	-0.6
OBN				e		21 57 45.2	
OBN				eS	S	21 57 52.4	+1.8
OBN				pmax	pmax		
	comp=Z,60nm,1.8s,mb4.7						
OBN				MLR	MLR		
	comp=Z,600nm,15.0s,MS4.1						
OBN	Obninsk	22.09	134	eP	P	21 53 46.8	-0.6
	comp=Z,60nm,1.8s,mb4.7						
CLL	Collm	22.99	173	P	sP	21 54 03.7	+2.6
CLL	Collm	22.99	173	i (sP)	sP	21 54 03.7	+2.6
	comp=Z,49nm,1.9s						
CLL				ex	x	21 54 09.0	
BRG	Berggiesshubel	23.46	172	eP	P	21 54 08.2	+6.2
	comp=Z,9.7nm,1.3s,mb4.1						
BRG							
	comp=Z,5µm,19.2s						
BRG							
	comp=N,4µm,19.8s						
BRG							
	comp=E,1µm,19.8s						
MOX	Moxa	23.62	175	eP	P	21 54 04.5	+1.0
	comp=E,17nm,1.3s,mb4.3						
MOX	Moxa	23.62	175	eP	P	21 54 04.5	+1.0
MOX				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.3						
BAIF	Baives	24.25	187	eP	P	21 54 08.9	-0.3
	comp=Z,30nm,1.2s,mb4.3						
BAIF	Baives	24.25	187	eP	P	21 54 08.9	-0.3
BAIF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.3						
BAIF	Baives	24.25	187	eP	P	21 54 08.9	-0.3
	comp=Z,15nm,1.2s,mb4.3						
RES	Resolute Bay	24.54	322	P	P	21 54 08.0	-3.6
	comp=Z,198nm,1.0s						
RES	Resolute Bay	24.54	322	P	P	21 54 08.0	-3.7
	comp=Z,198nm,1.0s						
GRA1	Grafenberg Arr	24.56	176	eP	P	21 54 12.3	+0.2
	comp=Z,39nm,1.8s,mb4.6						
GRF	Grafenberg Arr	24.56	176	eP	P	21 54 12.3	+0.2
GRF				pmax	pmax		
	comp=Z,39nm,1.8s,mb4.6						
GRF	Grafenberg Arr	24.56	176	eP	P	21 54 12.3	+0.2
GRF				pmax	pmax		
	comp=Z,39nm,1.8s,mb4.6						
GRF	Grafenberg Arr	24.56	176	eP	P	21 54 12.3	+0.2
	comp=Z,39nm,1.8s,mb4.6						
MORC	Moravsky Berou	24.75	166	eP	P	21 54 14.2	+0.5
	comp=Z,7.9nm,1.1s,mb4.2						
MORC	Moravsky Berou	24.75	166	eP	P	21 54 14.3	+0.6
MORC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
MORC	Moravsky Berou	24.75	166	eP	P	21 54 14.2	+0.5
	comp=Z,7.9nm,1.1s,mb4.2						
AKASG	Malin Array Be	25.07	148	P	P	21 54 16.0	-0.7
	comp=Z,1.3nm,0.5s,mb3.7,baz=344,slow=9.5,SNR=8.2						
VRAC	Vranov	25.15	168	P	P	21 54 18.8	+1.3
	comp=Z,3.2nm,0.6s,mb4.1,baz=86,slow=22,SNR=6.5						
VRAC	Vranov	25.15	168	eP	P	21 54 18.8	+1.3
KHC	Kasperske Hory	25.19	172	eP	P	21 54 18.0	+0.2
KHC				epP	pP	21 54 24.5	+3.7
KHC	Kasperske Hory	25.19	172	i P	P	21 54 18.2	+0.4
NIE	Niedzica	25.31	162	eP	P	21 54 20.1	+1.2
KWP	Kalwaria	25.32	158	eP	P	21 54 18.2	-0.8
	comp=Z,23nm,1.2s,mb4.6						
KWP	Kalwaria	25.32	158	eP	P	21 54 18.2	-0.8
KWP				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.6						
KWP	Kalwaria	25.32	158	eP	P	21 54 18.2	-0.8
	comp=Z,23nm,1.2s,mb4.6						
STHS	Stebnicka Huta	25.39	161	eP	P	21 54 21.4	+1.8
	comp=Z,8.4nm,0.9s,mb4.3						
STHS				e		21 54 26.6	
STHS	Stebnicka Huta	25.39	161	eP	P	21 54 21.4	+1.8
STHS				e		21 54 26.6	
STHS				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
GERES	GERESS Array B	25.48	172	P	P	21 54 22.0	+1.6
	comp=Z,1.2nm,0.8s,mb3.5,baz=11,slow=7.5,SNR=9.2						
FLN	La Foliniere	25.78	194	eP	P	21 54 21.6	-1.5
MEZF	Maizieres J'vi	25.78	186	eP	P	21 54 23.2	+0.1
	comp=Z,34nm,1.2s,mb4.5						
MEZF	Maizieres J'vi	25.78	186	eP	P	21 54 23.2	+0.1
	comp=Z,34nm,1.2s,mb4.8						
CDF	Champ du Feu	25.83	182	eP	P	21 54 24.4	+0.8
	comp=Z,36nm,1.4s,mb4.4						
CDF	Champ du Feu	25.83	182	eP	P	21 54 24.4	+0.8
CDF				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.4						
CDF	Champ du Feu	25.83	182	eP	P	21 54 24.4	+0.8
	comp=Z,18nm,1.4s,mb4.4						
BFO	Black Forest	25.90	181	eP	P	21 54 24.5	+0.3
	comp=Z,29nm,1.3s,mb4.7						
BFO	Black Forest	25.90	181	eP	P	21 54 24.5	+0.2
BFO				pmax	pmax		
	comp=Z,29nm,1.3s,mb4.7						
BFO	Black Forest	25.90	181	eP	P	21 54 24.5	+0.2
	comp=Z,29nm,1.3s,mb4.7						
CRVS	Cervenica-Dubn	25.92	161	eP	P	21 54 29.1	+4.7
LDF	La Druitiere	25.92	193	eP	P	21 54 23.0	-1.4
KOLS	Kolonicke sedl	25.97	159	eP	P	21 54 28.8	+4.0
KOLL	Kolacno	26.00	165	eP	P	21 54 26.1	+1.0
VYHS	Vyhne	26.11	165	eP	P	21 54 29.1	+3.0
ARU	Arti	26.11	105	eP	P	21 54 26.5	+0.4
	comp=Z,76nm,1.4s,mb5.0						
ARU				e		21 54 38.6	
ARU	Arti	26.11	105d	iP	P	21 54 26.4	+0.3
ARU				e		21 55 03.7	
ARU				eS	S	21 59 00.4	+3.3
ARU				SS		21 59 59.8	
ARU				pmax	pmax		
	comp=Z,26nm,1.7s,mb4.5						
GRR	Gorron	26.18	195	eP	P	21 54 27.2	+0.5
	comp=Z,149nm,1.8s,mb4.9						
GRR	Gorron	26.18	195	eP	P	21 54 27.2	+0.5
	comp=Z,75nm,1.8s,mb4.9						
GRR	Gorron	26.18	195	eP	P	21 54 27.2	+0.5
GRR				pmax	pmax		
	comp=Z,75nm,1.8s,mb4.9						
HAU	Haudompre	26.25	184	eP	P	21 54 27.4	0.0
	comp=Z,33nm,1.2s,mb4.4						
HAU	Haudompre	26.25	184	eP	P	21 54 27.4	0.0
	comp=Z,17nm,1.2s,mb4.4						
HAU	Haudompre	26.25	184	eP	P	21 54 27.4	0.0
HAU				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
KECS	Kecovo	26.25	162	eP	P	21 54 31.8	+4.4
UZH	Uzhgorod	26.27	159	eP	P	21 54 28.2	+0.6
PSZ	Piszkesteto	26.77	163	P	P	21 54 33.2	+1.2
	comp=Z,15nm,1.4s,mb4.3						
PSZ	Piszkesteto	26.77	163	P	P	21 54 33.2	+1.2
PSZ				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.3						
LPG	La Plagne	28.75	183	eP	P	21 54 50.5	+0.7
TIXI	Tiksi	29.75	33	eP	P	21 54 59.4	+0.9
	comp=Z,13nm,1.3s,mb4.5						
TIXI				e		21 55 05.5	
TIXI	Tiksi	29.75	33⇑	eP	P	21 54 59.9	+1.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.8s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.2						
AKTK	Aktyubinsk	31.37	111	P	P	21 55 13.1	+0.1
AKTO	Aktyubinsk	31.37	111	P	P	21 55 13.1	+0.1
	comp=Z,4.2nm,0.8s,mb4.3,baz=325,slow=7.6,SNR=11						
AQU	L'Aquila	31.95	173	P	P	21 55 21.0	+2.9
	comp=Z,38nm,1.2s,mb5.1						
AQU	L'Aquila	31.95	173	P	P	21 55 21.0	+2.9
AQU				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.1						
BRVK	Borovoye	32.27	96	eP	P	21 55 21.5	+0.8
	comp=Z,5.8nm,0.9s,mb4.4						
BRVK	Borovoye	32.27	96	eP	P	21 55 21.5	+0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
KIV	Kislovodsk	33.94	134	P	P	21 55 35.7	+0.3
	comp=Z,6.0nm,1.0s,mb4.5						
KIV	Kislovodsk	33.94	134	i P	P	21 55 37.0	+1.6
KIV				e		21 58 14.2	
KIV				pmax	pmax		
	comp=Z,13nm,2.5s,mb4.4						
KIV				MLR	MLR		
	comp=Z,700nm,16.0s,MS4.5						
ESDC	Sonseca Array	35.08	197	P	P	21 55 45.8	+0.5
	comp=Z,0.2nm,0.5s,baz=360,slow=7.6,SNR=3.5						
ZALV	Zalesovo Beam	35.46	82	P	P	21 55 48.6	+0.2
	comp=Z,1.2nm,0.5s,mb4.1,baz=334,slow=9.9,SNR=8.4						
ZALV				PcP	PcP	21 58 17.6	0.0
	comp=Z,0.8nm,0.5s,baz=304,slow=4.4,SNR=3.8						
ZAL	Zalesovo	35.47	82	P	P	21 55 48.7	+0.2
ZAL						21 58 17.6	
INK	Inuvik	35.73	337	eP	P	21 55 50.2	-0.5
	comp=Z,169nm,0.8s						
INK	Inuvik	35.73	337	P	P	21 55 50.5	-0.2
INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
INK	Inuvik	35.73	337	P	P	21 55 50.5	-0.2
	comp=Z,3.9nm,0.8s,mb4.4,baz=29,slow=12,SNR=12						
KURK	Kurchatov	36.66	90	eP	P	21 55 58.9	+0.1
	comp=Z,4.9nm,0.8s,mb4.4						
KURK	Kurchatov	36.66	90⇑	eP	P	21 55 59.5	+0.7
FCC	Fort Churchill	37.92	304	eP	P	21 56 08.6	-0.8
	comp=Z,1.7nm,0.7s,mb3.9						
FCC	Fort Churchill	37.92	304	eP	P	21 56 08.6	-0.8
FCC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MALT	Malatya	38.61	141	P	P	21 56 17.2	+1.8
	comp=Z,2.3nm,0.8s,mb4.0						
MALT	Malatya	38.61	141	P	P	21 56 17.2	+1.8
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
YKA	Yellowknife Ar	38.61	322	P	P	21 56 14.8	-0.3
YKA				PcP	PcP	21 58 27.4	+0.4
YKA	Yellowknife Ar	38.61	322	P	P	21 56 14.8	-0.3
	comp=Z,1.7nm,0.8s,mb3.9,baz=14,slow=8.5,SNR=25						
YKA				PcP	PcP	21 58 27.4	+0.4
	comp=Z,0.6nm,0.7s,baz=16,slow=2.9,SNR=9.5						
DAWY	Dawson	40.46	339	eP	P	21 56 30.1	-0.4
MK31	Makanchi Array	41.24	89	eP	P	21 56 37.5	+0.3
MKAR	Makanchi Array	41.24	89	P	P	21 56 37.6	+0.5
	comp=Z,1.1nm,0.7s,mb3.6,baz=350,slow=6.3,SNR=14						
MKAR				PP	PP	21 58 11.2	-0.9
	comp=Z,0.4nm,0.3s,baz=346,slow=9.3,SNR=3.5						
MOY	Mondy	41.81	69	eP	P	21 56 43.6	+1.9
MOY				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.5						
EKS2	Erkin-Say	42.72	100	eP	P	21 56 50.6	+1.3
	comp=Z,5.3nm,0.9s,mb4.3						
AAK	Ala-Archa	42.94	99	P	P	21 56 50.0	-1.1
	comp=Z,5.5nm,1.2s,mb4.2						
AAK	Ala-Archa	42.94	99	P	P	21 56 50.0	-1.1
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
UCH	Uchtor	43.33	99	eP	P	21 56 56.6	+2.4
	comp=Z,20nm,1.7s,mb4.6						
ZAK	Zakamensk	43.57	68	eP	P	21 56 57.0	+0.9
ZAK				e		21 58 36.4	
WMQ	Urumqi	45.46	85	eP	P	21 57 12.5	+1.3
ULM	Lac du Bonnet	46.15	301	P	P	21 57 15.7	-1.0
	comp=Z,1.6nm,0.9s,mb4.0,baz=9.2,slow=8.9,SNR=6.7						
SONM	Songino Array	46.71	67	P	P	21 57 22.1	+1.1
	comp=Z,2.6nm,0.9s,mb4.1,baz=327,slow=7.1,SNR=18						
ULN	Ulaanbaatar	46.85	66	eP	P	21 57 21.8	-0.3
	comp=Z,11nm,1.3s,mb4.6						
ULN	Ulaanbaatar	46.85	66⇑	eP	P	21 57 23.5	+1.4
EYMN	Ely	47.23	296	P	P	21 57 24.5	-0.6
	comp=Z,5.7nm,0.8s,mb4.5						
PET	Petropavlovsk	51.51	23	eP	P	21 57 47.8	-10
NEW	Newport	52.57	317	eP	P	21 58 05.7	+0.1
NEW	Newport	52.57	317	eP	P	21 58 05.7	+0.1
GTA	Gaotai	52.86	76	eP	P	21 58 09.3	+1.4
GTA				AP	pP	21 58 15.0	+4.0
GTA				XP	sP	21 58 18.1	+5.8
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.3						
HHC	Hu-ho-hao-te	54.55	65	eP	P	21 58 26.3	+6.1
HHC				AP	pP	21 58 30.3	+6.9
HHC				XP	sP	21 58 33.9	+9.3
HHC				AMB	AMB		
	comp=Z,7.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,639nm,6.2s						
YSS	Yuzh-Sakhalins	55.29	37	i P	P	21 58 28.1	+2.6
HLID	Hailey	56.56	313	P	P	21 58 34.8	+0.1
GKN	Gorkha	59.46	95	eP	P	21 58 55.0	-0.2
	comp=Z,9.2nm,0.8s,mb4.8						
KKN	Kakani	59.84	95	eP	P	21 58 58.0	+0.2
	comp=Z,15nm,1.0s,mb5.0						
KKN	Kakani	59.84	95	eP	P	21 58 58.0	+0.2
KKN				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
JIRN	Jiri	60.21	94	eP	P	21 59 00.8	+0.5
	comp=Z,9.3nm,0.7s,mb4.9						
XAN	Xi'an	60.32	70	P	P	21 59 00.1	-0.9
XAN				AP	pP	21 59 06.9	+2.7
XAN				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb4.1						
TAPN	Taplejung	60.92	92	eP	P	21 59 05.4	+0.2
TOA0	Torodi Ar. Sit	61.11	188	eP	P	21 59 06.7	+0.1
TOA0	Torodi Ar. Sit	61.11	188	eP	P	21 59 06.7	+0.1
TORD	Torodi Ar. Bea	61.11	188	P	P	21 59 07.0	+0.5
	comp=Z,4.0nm,0.5s,mb4.8,baz=360,slow=7.4,SNR=23						
ODAN	Odare	61.30	93	eP	P	21 59 08.6	+0.8
	comp=Z,38nm,1.1s,mb5.4						
WMOK	Wichita Mounta	61.49	297	eP	P	21 59 09.1	+0.2
	comp=Z,4.7nm,1.0s,mb4.6						
WMOK	Wichita Mounta	61.49	297	eP	P	21 59 09.1	+0.1
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
WMOK	Wichita Mounta	61.49	297	eP	P	21 59 09.1	+0.1
	comp=Z,4.7nm,1.0s,mb4.6						
ANMO	Albuquerque	63.11	304	P	P	21 59 21.1	+1.2
	comp=Z,1.5nm,0.9s,mb4.1,baz=340,slow=2.4,SNR=3.3						
ANMO	Albuquerque	63.11	304	P	P	21 59 21.0	+1.2
NJ2	Nanjing	64.70	62	eP	P	21 59 30.2	-0.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
TXAR	Lajitas Array	67.84	299	P	P	21 59 50.0	-0.5
	comp=Z,0.4nm,0.7s,mb3.6,baz=34,slow=4.7,SNR=5.0						
ASAR	Alice Springs	121.94	62	PKP	PKPdf	22 07 45.3	-1.0
	comp=Z,0.5nm,0.6s,baz=356,slow=1.6,SNR=12						

KRSC 10 21:57:00.4±0.4, 5509N×16225E, h42^{km}±42^{km}, ML3.6,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.17	16	eP	Pn	21 57 20.2	0.0
KBTR				i S	Sn	21 57 35.7	+0.8
TUMR	Tumrok	1.22	280	eP	Pn	21 57 23.1	+2.1
TUMR				i S	Sn	21 57 39.1	+2.9
ZLN	Zelenaya	1.24	319	P	Pn	21 57 23.1	+1.9
ZLN				i S	Sn	21 57 38.7	+2.0
KMNR	Kamenistaya	1.33	301	eP	Pn	21 57 24.1	+1.7
KMNR				eS	Sn	21 57 41.4	+2.6
KPT	Kopyto	1.45	308	P	Pn	21 57 26.0	+1.9
KRSR	Krestovskiy	1.48	320	P	Pn	21 57 26.0	+1.5
KLY	Klyuchi	1.52	324	eP	Pn	21 57 25.3	+0.2
KLY				i S	Sn	21 57 43.3	-0.4
KOZ	Kozyrevsk	1.66	307	P	Pn	21 57 28.8	+1.8
KOZ				i S	Sn	21 57 50.1	+3.0
SRKR	Sorokina	1.68	339	eP	Pn	21 57 27.9	+0.6
SRKR				i S	Sn	21 57 48.1	+0.5
SRDR	Sredinnyy	1.89	312	eP	Pn	21 57 30.8	+0.7
SPN	Mys Shipunski	2.39	214	eP	Pn	21 57 37.2	+0.2
SPN				i S	Sn	21 58 04.5	-0.4
NLC	Nalytchevo	2.57	223	eP	Pn	21 57 41.1	+1.6
NLC				i S	Sn	21 58 11.3	+1.8
AVH	Avacha	2.76	230	eP	Pn	21 57 44.8	+2.8
AVH				i S	Sn	21 58 17.4	+3.4
GNL	Ganaly	2.88	243	eP	Pn	21 57 46.6	+2.9
GNL				eS	Sn	21 58 20.0	+2.9
PET	Petropavlovsk	2.96	227	P	Pn	21 57 46.9	+2.1
PET				i S	Sn	21 58 21.2	+2.1
RUS	Russkaya	3.46	221	P	Pn	21 57 53.1	+1.4
GRL	Gorelyy	3.55	226	P	Pn	21 57 56.2	+3.3

*ISCJB **10** 21:58:20.7±1.4, 479N±0.1×1538E±02, h67^{km}±12^{km}, mb3.7/7, Error ellipse: s-maj=26.0km s-min=7.7km az=44.0*

*MOS **10** 21:58:21.4±1.8, 4786N×15375E, h75^{km}, mb4.1/7, Error ellipse: s-maj=23.5km s-min=14.8km az=61.6*

*IDC **10** 21:58:28.5±5.3, 4785N×15352E, h121^{km}±46^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.3/21, mbtmp3.5/7, Error ellipse: s-maj=34.6km s-min=20.6km az=88.0*

ISC 10 21:58:22.5±1.3, **479N**±01×**1538E**±02, **h68**^{km}±11^{km}, **n18,**
σ1§**21**/20, **mb3.7**/7, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.20	27	ePN	Pn	21 59 09.7	-0.6
SKR				eS	Sn	21 59 46.7	-0.5
SKR				smax			
	comp=N,100nm,0.2s						
SKR				smax			
	comp=E,140nm,0.2s						
KUR	Kuril'sk	4.88	240	ePN	Pn	21 59 31.0	-2.3
KUR				eS	Sn	22 00 28.5	+0.1
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,130nm,0.8s						
KUR				smax			
	comp=E,110nm,0.8s						
YSS	Yuzh-Sakhalins	7.57	267	i PN	Pn	22 00 11.6	+1.6
ASAJ	Asahikawa	8.67	249	PN	Pn	22 00 28.4	+3.3
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	8.67	249	P	Pn	22 00 28.4	+3.3
	comp=Z,1.2nm,0.3s,baz=80,slow=10,SNR=11						
BILL	Bilibino	21.20	13	eP	P	22 03 04.4	+2.3
BILL				e		22 07 03.2	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
MKAR	Makanchi Array	46.87	297	P	P	22 06 44.5	-1.0
	comp=Z,0.3nm,0.3s,mb3.5,baz=74,slow=6.7,SNR=6.1						
KURK	Kurchatov	47.16	303	i P	P	22 06 46.6	-1.1
FINES	FINESS Array B	63.24	335	P	P	22 08 42.9	-0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	63.24	335	P	P	22 08 42.9	-0.4
	comp=Z,2.6nm,1.0s,mb4.1,baz=35,slow=6.9,SNR=12						
HFS	Hagfors	67.58	340	P	P	22 09 11.4	+0.1
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HFS	Hagfors	67.58	340	P	P	22 09 11.4	+0.1
	comp=Z,2.6nm,0.7s,mb4.2,baz=59,slow=3.8,SNR=8.8						
WRA	Warramunga Arr	69.72	200	P	P	22 09 24.4	-0.6
WRA	Warramunga Arr	69.72	200	P	P	22 09 23.9	-1.1
	comp=Z,0.3nm,0.7s,mb3.2,baz=16,slow=6.6,SNR=4.7						
ASAR	Alice Springs	73.42	199	P	P	22 09 47.6	+0.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	73.42	199	P	P	22 09 47.5	+0.4
	comp=Z,0.6nm,0.6s,mb3.6,baz=11,slow=5.2,SNR=9.7						
TXAR	Lajitas Array	76.53	61	P	P	22 10 06.5	+1.2
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	76.53	61	P	P	22 10 06.5	+1.2
	comp=Z,0.5nm,0.6s,mb3.4,baz=309,slow=4.1,SNR=7.2						

*IDC **10** 22:05:11.3±4.2, 090N×12591E, h22^{km}±26^{km}, mb4.1/10, mb1 4.1/11, mb1mx4.0/18, mbtmp4.0/11, ML3.7/1, MS4.4/1, Ms1 4.3/1, ms1mx3.4/30, Error ellipse: s-maj=65.3km s-min=12.3km az=71.0*

*NEIC **10** 22:05:12.3±0.7, 1.14N×12668E, h35^{km}, mb4.6/6, Error ellipse: s-maj=21.0km s-min=9.4km az=63.0*

*ISCJB **10** 22:05:14.0±2.9, 1.10N±0.08×1265E±02, h66^{km}±25^{km}, mb4.2/14, Error ellipse: s-maj=27.2km s-min=9.5km az=159.3*

ISC 10 22:05:18.2±2.1, **097N**±008×**1264E**±01, **h89**^{km}±18^{km}, **n24,**
σ1§**23**/27, **mb4.2**/14, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	11.33	297	ePn	Pn	22 07 56.6	-0.5
KSM	Kuching	16.08	272	eP	Pn	22 09 00.5	+1.4
FITZ	Fitzroy Crossi	18.96	182	eP	Pn	22 09 32.4	-1.7
	4.9nm,1.0s						
FITZ	Fitzroy Crossi	18.96	182	P	Pn	22 09 31.3	-2.8
	0.2nm,0.3s,baz=8.3,slow=16,SNR=4.9						
WRA	Warramunga Arr	22.20	160	P	P	22 10 06.5	-0.8
	5.4nm,0.4s,mb4.3,baz=335,slow=11,SNR=108						
WRA				S	S	22 14 04.1	-2.0
	1.6nm,0.9s,baz=329,slow=19,SNR=5.2						
WB2	Warramunga Arr	22.20	160	eP	P	22 10 06.6	-0.7
WB2				eS	S	22 14 05.3	-0.9
MBWA	Marble Bar	22.93	196	eP	P	22 10 15.8	+0.8
	15nm,1.0s,mb4.3						
ASAR	Alice Springs	25.55	164	P	P	22 10 39.0	+0.2
	2.3nm,0.5s,mb3.9,baz=348,slow=7.2,SNR=32						
ASAR				S	S	22 15 07.3	+7.2
	0.4nm,0.6s,baz=347,slow=12,SNR=3.9						
KULM	Kulim	26.04	280	eP	P	22 10 40.6	-2.8
KLBR	Kellerberrin	33.40	193	eP	P	22 11 49.0	+0.7
	36nm,1.1s,mb5.1						
MUN	Mundaring	34.15	196	eP	P	22 11 56.2	+1.4
STKA	Stephens Creek	35.70	158	eP	P	22 12 09.1	+0.9
	4.3nm,0.9s,mb4.4						
STKA	Stephens Creek	35.70	158	P	P	22 12 08.9	+0.7
	7.4nm,1.0s,mb4.6,baz=331,slow=5.3,SNR=4.9						
STKA				LR	LR	22 26 23.9	
	comp=Z,486nm,18.4s,baz=250,slow=36						
KSRS	Korea Array	36.34	2	P	P	22 12 14.3	+0.9
	1.0nm,0.6s,mb3.9,baz=135,slow=32,SNR=3.3						
PALK	Pallekele	45.96	279	eP	P	22 13 32.2	-0.5
	11nm,1.1s,mb4.5						
SONM	Songino Array	49.80	342	P	P	22 14 02.7	+0.8
	1.1nm,0.8s,mb3.8,baz=162,slow=7.9,SNR=9.5						
MKAR	Makanchi Array	59.63	326	P	P	22 15 11.8	-1.1
	2.5nm,0.6s,mb4.5,baz=123,slow=8.8,SNR=39						
ZALV	Zalesovo Beam	62.89	334	P	P	22 15 33.4	-1.4
	0.8nm,0.5s,mb4.0,baz=116,slow=6.8,SNR=7.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KURK	**Kurchatov**	**63.88**	**328**	*e*P	**P**	**22 15 40.6**	**-0.8**
	5.8nm,0.5s,mb4.7						
AKTK	**Aktyubinsk**	**75.60**	**322**	P	**P**	**22 16 52.9**	**-0.5**
AKTO	**Aktyubinsk**	**75.60**	**322**	P	**P**	**22 16 52.9**	**-0.5**
	2.2nm,0.7s,mb4.0,baz=99,slow=7.7,SNR=12						
VNDA	**Vanda**	**80.75**	**173**	P	**P**	**22 17 23.7**	**+2.5**
	0.9nm,0.9s,mb3.6,baz=349,slow=8.1,SNR=4.1						
FINES	**FINESS Array B**	**94.09**	**332**	P	**P**	**22 18 28.7**	**+2.3**
FINES	**FINESS Array B**	**94.09**	**332**	P	**P**	**22 18 28.7**	**+2.3**
	1.2nm,0.9s,mb4.2,baz=194,slow=31,SNR=2.3						

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*CSEM **10** 22:11:59.6±0.6, 4130N×44.12E, h1km±4km, MD2.9, Error ellipse: s-maj=5.1km s-min=3.9km az=167.0*
*TIF **10** 22:11:59.0, 4135N×44.13E, h14km±1km*
*ISCJB **10** 22:12:00.7±0.6, 4141N±002×44.12E±003, h4km±5km, Error ellipse: s-maj=4.0km s-min=3.4km az=24.7*
*MOS **10** 22:12:00.3±1.8, 4135N×4430E, h9km, mb3.7/1, Error ellipse: s-maj=97.6km s-min=12.6km az=93.0*
*DDA **10** 22:12:07.2, 41.18N×4371E, h11km, Md2.9*
ISC 10 22:12:01.8±0.5**, 4140N**±002×**4414E**±004**, h12**km±5km**, n17,** σ1ˢ**01**/34**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**0.56**	**53**	P	**Pg**	**22 12 11.6**	**-1.0**
TBLG				S	**Sg**	**22 12 20.0**	**+0.1**
MTA	**Mtatsminda**	**0.57**	**59**	P	**Pg**	**22 12 11.7**	**-1.2**
MTA				S	**Sg**	**22 12 20.1**	**-0.3**
GOR	**Gori**	**0.58**	**357**	P	**Pg**	**22 12 12.4**	**-0.8**
GOR				S	**Sg**	**22 12 21.1**	**+0.2**
DGRG	**David-gareji**	**0.93**	**87**	P	**Pg**	**22 12 18.9**	**-0.8**
DGRG				S	**Sg**	**22 12 33.3**	**+1.6**
DIGO	**Kars**	**1.15**	**211**	*i* P	**Pb**	**22 12 21.4**	**-2.0**
DIGO				*i* S	**Sb**	**22 12 36.5**	**-1.7**
ONI	**Oni**	**1.29**	**337**	P	**Pn**	**22 12 24.2**	**-1.3**
ONI				S	**Sb**	**22 12 42.0**	**-0.3**
ZEI	**Tsey**	**1.38**	**352**	*i* Pg	**Pg**	**22 12 27.0**	**-1.3**
ZEI				*i* Sg	**Sg**	**22 12 46.9**	**+0.7**
LACR	**Lac**	**1.43**	**4**	*i* Pg	**Pn**	**22 12 27.1**	**-0.3**
LACR				*i* Sg	**Sg**	**22 12 47.0**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.55**	**345**	*i* Pn	**Pn**	**22 12 29.9**	**+0.7**
DIGR				*i* Sg	**Sg**	**22 12 51.9**	**+0.1**
ARTV	**Artvin**	**1.68**	**263**	*i* P	**Pn**	**22 12 30.8**	**-0.1**
ARTV				*i* S	**Sn**	**22 12 53.3**	**+0.9**
KORR	**Kora**	**1.69**	**358**	*i* Pn	**Pn**	**22 12 32.8**	**+1.8**
KORR				*e*Sg	**Sg**	**22 12 56.4**	**+0.5**
SNJR	**Sundja**	**1.74**	**16**	*e*Pn	**Pg**	**22 12 35.3**	**+0.2**
SNJR				*e*Sg	**Sg**	**22 12 58.8**	**+1.1**
ARNR	**Ardon**	**1.79**	**3**	*e*Pn	**Pg**	**22 12 35.4**	**-0.7**
ARNR				*e*Sg	**Sg**	**22 12 59.9**	**+0.6**
GANJ	**Ganja**	**1.81**	**114**	P	**Pn**	**22 12 32.4**	**-0.3**
	SNR=3.6						
GANJ				S	**Sn**	**22 12 55.7**	**+0.1**
DYDN	**Diyadin**	**1.89**	**191**	*i* P	**Pb**	**22 12 35.9**	**-0.2**
DYDN				*i* S	**Sg**	**22 13 04.3**	**+1.9**
SEKA	**Sheki**	**2.31**	**94**	P	**Pn**	**22 12 39.7**	**+0.2**
	SNR=56						
SEKA				S	**Sn**	**22 13 11.4**	**+3.6**
ERZM	**Erzurum**	**2.59**	**236**	*i* P	**Pb**	**22 12 48.1**	**+0.1**
ERZM				*i* S	**Sg**	**22 13 27.2**	**+2.4**

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*IDC **10** 22:30:50.5±0.6, 1330N×14503E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.4/21, mbtmp4.3/16, MS3.9/1, Ms1 3.9/1, ms1mx3.3/30, Error ellipse: s-maj=27.0km s-min=11.9km az=79.0*
*BJI **10** 22:30:54.6, 1330N×14500E, h35km, mB5.3, mb4.7*
*NEIC **10** 22:30:55.6±0.3, 1329N×14497E, h35km, mb4.8/12, Error ellipse: s-maj=12.4km s-min=6.1km az=78.0*
*ISCJB **10** 22:30:56.9±0.7, 1324N±006×1448E±01, h58km±6km, mb4.4/26, Error ellipse: s-maj=19.1km s-min=9.0km az=169.4*
ISC 10 22:30:57.9±0.7**, 1326N**±006×**1449E**±01**, h54**km±6km**, n50,** σ0ˢ**64**/40**, mb4.4**/26**, 1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.33**	**350**	⇓*i*Pg	**Pn**	**22 31 07.4**	**-0.2**
GUMO				*e*Sg	**Sn**	**22 31 14.8**	**+0.2**
JOW	**Kunigami**	**20.63**	**313**	P	**P**	**22 35 32.4**	**-0.6**
	12nm,0.6s,baz=130,slow=16,SNR=2.7						
PMG	**Port Moresby**	**22.63**	**174**	*e*P	**P**	**22 35 54.1**	**-0.4**
	13nm,0.9s,mb4.4						
JNU	**Nakatsue**	**23.56**	**329**	P	**P**	**22 36 03.9**	**+0.2**
	17nm,0.7s,mb4.6,baz=110,slow=13,SNR=12						
MJAR	**Matsushiro Arr**	**23.95**	**347**	P	**P**	**22 36 07.1**	**-0.1**
	1.9nm,0.8s,mb3.6,baz=104,slow=12,SNR=4.8						
MAJO	**Matsushiro**	**23.95**	**347**	*e*P	**P**	**22 36 08.0**	**+0.8**
HNR	**Honiara**	**27.03**	**146**	LR	LR	22 46 19.1	
	comp=Z,238nm,19.8s,baz=0.6,slow=34						
KSRS	**Korea Array**	**28.48**	**331**	P	**P**	**22 36 48.5**	**+0.5**
	3.6nm,0.7s,mb4.1,baz=143,slow=9.4,SNR=10						
WB2	**Warramunga Arr**	**34.60**	**198**	*e*P	**P**	**22 37 41.6**	**-0.3**
WB2				*e*		22 40 17.0	
WRA	**Warramunga Arr**	**34.60**	**198**	P	**P**	**22 37 41.6**	**-0.4**
	6.2nm,0.8s,mb4.6,baz=20,slow=9.5,SNR=33						
WRA				PcP	PcP	22 40 17.1	+1.4
	2.9nm,0.7s,baz=11,slow=3.4,SNR=14						
FITZ	**Fitzroy Crossi**	**36.52**	**212**	*e*P	**P**	**22 37 58.8**	**+0.4**
	12nm,0.8s,mb4.8						
FITZ				*e*		22 40 22.7	
FITZ	**Fitzroy Crossi**	**36.52**	**212**	P	**P**	**22 37 58.4**	**0.0**
	8.0nm,0.9s,mb4.5,baz=32,slow=11,SNR=12						
FITZ				PcP	PcP	22 40 22.5	+1.2
	4.0nm,0.8s,baz=346,slow=1.6,SNR=3.5						
BJT	**Baijiatuau**	**36.73**	**322**	*e*P	**P**	**22 37 59.1**	**-0.9**
	4.5nm,0.5s,mb4.5						
ASAR	**Alice Springs**	**38.25**	**196**	P	**P**	**22 38 13.1**	**0.0**
	2.8nm,0.6s,mb4.2,baz=20,slow=11,SNR=47						
ASAR				PcP	PcP	22 40 27.2	+0.7
	2.9nm,0.8s,baz=36,slow=2.8,SNR=13						
DZM	**Mont Dzumac**	**40.97**	**149**	P	**P**	**22 38 36.2**	**+0.6**
	3.3nm,0.5s,mb4.2,baz=8.7,slow=7.2,SNR=14						
HIA	**Hailar**	**41.46**	**335**	*e*P	**P**	**22 38 39.2**	**-0.2**
	5.1nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**44.99**	**184**	*e*P	**P**	**22 39 08.2**	**+0.1**
	2.9nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**44.99**	**184**	P	**P**	**22 39 07.7**	**-0.4**
	4.7nm,1.0s,mb4.3,baz=345,slow=13,SNR=5.4						
STKA				PcP	PcP	22 40 48.9	+0.4
	3.3nm,0.8s,baz=27,slow=2.3,SNR=3.5						
MA2	**Magadan**	**46.43**	**4**	*e*P	**P**	**22 39 13.3**	**-5.8**
	30nm,1.2s,mb5.1						
SONM	**Songino Array**	**47.03**	**325**	P	**P**	**22 39 24.4**	**+0.4**
	1.8nm,0.8s,mb4.1,baz=137,slow=7.6,SNR=15						
KLBR	**Kellerberrin**	**51.66**	**210**	*e*P	**P**	**22 39 59.1**	**-0.3**
LSA	**Lhasa**	**52.20**	**297**	*e*P	**P**	**22 40 05.2**	**+1.5**
	5.8nm,0.6s,mb4.7						
MUN	**Mundaring**	**52.73**	**211**	*e*P	**P**	**22 40 07.5**	**+0.1**
TAPN	**Taplejung**	**55.03**	**294**	*e*P	**P**	**22 40 25.4**	**+1.0**
	10nm,0.7s,mb5.0						
ODAN	**Odare**	**55.30**	**294**	*e*P	**P**	**22 40 26.7**	**+0.3**
	5.4nm,0.5s,mb4.8						
JIRN	**Jiri**	**56.40**	**294**	*e*P	**P**	**22 40 34.4**	**+0.2**
	7.2nm,0.4s,mb5.1						
KKN	**Kakani**	**57.21**	**295**	*e*P	**P**	**22 40 40.2**	**+0.2**
WMQ	**Urumqi**	**57.40**	**314**	*e*P	**P**	**22 40 41.5**	**+0.5**
GKN	**Gorkha**	**57.78**	**295**	*e*P	**P**	**22 40 43.5**	**-0.5**
	18nm,0.8s,mb5.2						
MKAR	**Makanchi Array**	**61.76**	**316**	P	**P**	**22 41 11.0**	**0.0**
	1.8nm,0.5s,mb4.5,baz=93,slow=8.5,SNR=49						
ZALV	**Zalesovo Beam**	**61.92**	**324**	P	**P**	**22 41 11.0**	**-1.0**
ZALV				PcP	PcP	22 41 52.5	+0.2
ZALV	**Zalesovo Beam**	**61.92**	**324**	P	**P**	**22 41 11.0**	**-1.0**
	0.6nm,0.5s,mb4.0,baz=72,slow=4.7,SNR=3.3						
ZALV				PcP	PcP	22 41 52.5	+0.2
	0.9nm,0.4s,baz=124,slow=5.0,SNR=6.5						
KURK	**Kurchatov**	**64.87**	**320**	*e*P	**P**	**22 41 30.7**	**-0.7**
	6.4nm,1.1s,mb4.6						
INK	**Inuvik**	**74.64**	**22**	P	**P**	**22 42 31.1**	**-0.2**
	1.3nm,0.9s,mb3.9,baz=276,slow=2.7,SNR=3.5						
YKA	**Yellowknife Ar**	**83.12**	**27**	P	**P**	**22 43 17.5**	**-0.3**
	0.8nm,0.6s,mb4.0,baz=287,slow=5.2,SNR=16						
ARCES	**ARCESS Array B**	**87.41**	**342**	P	**P**	**22 43 38.8**	**-0.3**
	2.2nm,0.8s,mb4.4,baz=58,slow=7.5,SNR=7.0						
ARUT	**Antelope Range**	**90.94**	**51**	*e*P	**P**	**22 43 57.1**	**+0.7**
VNDA	**Vanda**	**91.14**	**176**	P	**P**	**22 43 57.2**	**+0.9**
	1.8nm,1.0s,mb4.4,baz=322,slow=2.9,SNR=5.5						
FINES	**FINESS Array B**	**91.48**	**335**	P	**P**	**22 43 55.7**	**-2.6**
FINES	**FINESS Array B**	**91.48**	**335**	P	**P**	**22 43 55.7**	**-2.6**
	1.5nm,0.9s,mb4.3,baz=48,slow=4.1,SNR=8.8						
VNA2	**Neumayer--Watz**	**119.92**	**190**	*e*	PKPdf	22 49 42.0	+0.2
	baz=331,slow=0.8						
VNA2				*e*		22 49 46.6	
VNA3	**Neumayer Olymp**	**120.02**	**189**	*e*	PKPdf	22 49 41.9	0.0
VNA3				*e*		22 49 46.5	
BOSA	**Boshof**	**122.17**	**244**	PKP	PKPdf	22 49 47.9	+0.5
	0.8nm,0.5s,baz=108,slow=6.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**135.09**	**304**	PKP	PKPdf	22 50 12.3	0.0
	3.0nm,0.6s,baz=33,slow=1.6,SNR=11						
DBIC	**Dimbokro**	**144.04**	**302**	PKP	PKPdf	22 50 26.6	-2.0
	13nm,0.6s,baz=41,slow=3.2,SNR=38						
KIC	**Kosan Boka**	**144.12**	**301**	*e*PKP1	PKPdf	22 50 26.9	-1.9
	48nm,0.5s						
TIC	**Toumodi**	**144.19**	**302**	*e*PKP1	PKPdf	22 50 27.0	-1.9
	8.3nm,0.4s						
LIC	**Lamto**	**144.43**	**301**	*e*PKP1	PKPdf	22 50 27.9	-1.4
	90nm,0.5s						
LPAZ	**La Paz**	**147.91**	**100**	PKPbc	PKPbc	22 50 37.2	-1.0
LPAZ	**La Paz**	**147.91**	**100**	PKPbc	PKPbc	22 50 37.2	-1.0
	1.6nm,0.4s,baz=252,slow=1.3,SNR=9.4						

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*IDC **10** 22:45:47.7±2.3, 305S×12823E, h0km, mb3.8/2, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML3.7/2, Error ellipse: s-maj=147.0km s-min=25.9km az=70.0*
*ISCJB **10** 22:45:51.9±1.1, 32S±0.1×1283E±03, h33km, mb3.9/4, Error ellipse: s-maj=52.7km s-min=12.5km az=161.1*
*NEIC **10** 22:45:54.8±1.0, 334S×12821E, h35km, mb4.2/1, Error ellipse: s-maj=48.0km s-min=12.2km az=72.0*
ISC 10 22:45:54.2±1.1**, 33S**±01×**1283E**±03**, h35**km**, n8,** σ1ˢ**25**/8**, mb3.9**/4**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.97**	**190**	Pn	**Pn**	**22 49 23.2**	**-0.1**
	3.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**14.97**	**190**	Pn	**Pn**	**22 49 24.2**	**+0.9**
	0.1nm,0.3s,baz=359,slow=18,SNR=3.4						
WRA	**Warramunga Arr**	**17.61**	**161**	P	**Pn**	**22 49 56.1**	**-0.7**
	0.4nm,0.3s,baz=334,slow=12,SNR=20						
WB2	**Warramunga Arr**	**17.61**	**161**	*e*Pn	**Pn**	**22 49 56.4**	**-0.5**
ASAR	**Alice Springs**	**21.00**	**165**	P	**P**	**22 50 35.8**	**+1.0**
	12nm,0.8s,mb4.2,baz=344,slow=12,SNR=75						
QIZ	**Qiongzhong**	**28.62**	**321**	*e*P	**P**	**22 51 47.4**	**-0.1**
	5.1nm,0.9s,mb4.2						
SONM	**Songino Array**	**54.37**	**342**	P	**P**	**22 55 19.7**	**+2.3**
	0.4nm,0.8s,mb3.4,baz=158,slow=6.1,SNR=4.3						
MKAR	**Makanchi Array**	**64.17**	**327**	P	**P**	**22 56 22.9**	**-2.3**
	0.3nm,0.6s,mb3.5,baz=119,slow=6.7,SNR=5.6						

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*CSEM **10** 23:13:48.1, 3579N×2735E, h5km, MD3.5/3, After ATH*
ATH 10 23:13:48.1, 3579N×**2735E, h5**km**, MD3.5**/3**, 1C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.29**	**212**	⇑*i*PG	Pg	23 13 53.6	-0.1
KARP				*e*SG	Sg	23 13 58.8	+1.4
ARG	**Arkhangelos**	**0.76**	**56**	*e*PB	Pb	23 14 03.0	-0.8
NPS	**Neapolis**	**1.51**	**250**	*e*PB	Pb	23 14 16.6	0.0

IDC 10 23:37:49.2±3.5**, 1662S**×**17713W, h0**km**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.9**/12**, mbtmp4.3**/3**, Error ellipse: s-maj=160.0km s-min=72.2km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.88**	**259**	*e*P	P	23 44 46.6	+4.0
	0.8nm,0.4s						
CTA				*e*		23 44 53.1	
CNB	**Canberra Magne**	**35.18**	**232**	*e*P	P	23 44 46.5	+1.5
	22nm,1.7s						
CNB				*e*		23 44 53.2	
STKA	**Stephens Creek**	**40.32**	**240**	*e*P	P	23 45 29.3	+0.8
	6.1nm,1.2s						
STKA				*e*		23 45 36.0	
STKA	**Stephens Creek**	**40.32**	**240**	P	P	23 45 28.4	-0.2
	1.2nm,0.5s,baz=74,slow=6.2,SNR=5.2						
WB2	**Warramunga Arr**	**46.07**	**258**	*e*P	P	23 46 15.3	+0.1
WB2				*e*		23 46 22.2	
WRA	**Warramunga Arr**	**46.08**	**258**	P	P	23 46 15.4	+0.1
	1.1nm,0.3s,baz=94,slow=7.3,SNR=80						
WRA				PcP	PcP	23 47 51.7	-0.1
	0.4nm,0.4s,baz=90,slow=3.4,SNR=3.8						
ASAR	**Alice Springs**	**46.33**	**253**	P	P	23 46 17.1	-0.1
	5.0nm,0.6s,baz=86,slow=9.0,SNR=78						
ASAR				PcP	PcP	23 47 52.1	-0.5
	0.9nm,0.5s,baz=104,slow=3.8,SNR=4.9						

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*IDC **10** 23:45:31.6±1.3, 4769N×156.10E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=41.2km s-min=39.4km az=79.0*
*ISCJB **10** 23:45:36.0±1.3, 480N±0.1×156.1E±0.4, h33km, mb3.5/4, Error ellipse: s-maj=36.2km s-min=14.6km az=4.1*
*MOS **10** 23:45:57.2±0.1, 4773N×15568E, h132km, mb3.9/1, Error ellipse: s-maj=95.5km s-min=42.6km az=90.3*
ISC 10 23:45:36.9±1.2**, 480N**±01×**1557E**±05**, h35**km**, n6,** σ1ˢ**20**/6**, mb3.5**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.69**	**6**	*e*PN	**Sn**	**23 46 48.5**	**-0.6**
MKAR	**Makanchi Array**	**47.90**	**297**	P	**P**	**23 54 15.9**	**+4.5**
	0.2nm,0.3s,mb3.6,baz=66,slow=7.8,SNR=5.7						
ASAR	**Alice Springs**	**73.97**	**201**	P	**P**	**23 57 07.2**	**-1.3**
	0.4nm,0.6s,mb3.5,baz=12,slow=5.6,SNR=5.5						
TXAR	**Lajitas Array**	**75.37**	**62**	P	**P**	**23 57 17.4**	**+0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**75.37**	**62**	P	**P**	**23 57 17.4**	**+0.6**
	comp=Z,0.4nm,0.9s,mb3.3,baz=249,slow=2.5,SNR=3.6						
GERES	**GERESS Array B**	**78.06**	**335**	P	**P**	**23 57 32.4**	**+0.7**
	comp=Z,0.4nm,0.6s,mb3.5,baz=26,slow=4.9,SNR=4.7						

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*NAO **10** 23:47:14.0, 3579N×2249E, h33km, mb4.2*
*NEIC **10** 23:47:36.8, 3857N×2157E, h5km, mb4.0/10, ML4.2(THE), ML3.6(ATH), After ATH.*
*ATH **10** 23:47:36.8, 3857N×2157E, h5km, MD3.9/15, ML3.6*
*IDC **10** 23:47:37.2±0.9, 3863N×2159E, h0km, mb3.9/10, mb1 3.8/19, mb1mx3.8/29, mbtmp3.7/19, ML3.6/9, Error ellipse: s-maj=14.7km s-min=14.5km az=33.0*
*CSEM **10** 23:47:39.3±0.1, 3858N×2157E, h5km, ML3.6, Error ellipse: s-maj=2.8km s-min=1.6km az=50.0*
*THE **10** 23:47:40.4, 3859N×2158E, h3km, ML4.2*
*ISCJB **10** 23:47:41.8±0.2, 3864N±002×2194E±003, h10km, mb3.8/10, Error ellipse: s-maj=3.8km s-min=2.7km az=138.5*
*MOS **10** 23:47:44.8±0.8, 3875N×2200E, h31km, mb4.2/3, Error ellipse: s-maj=6.3km s-min=3.7km az=110.4*
ISC 10 23:47:42.9±0.2**, 3858N**±002×**2196E**±003**, h10**km**, n158,** σ1ˢ**28**/177**, mb3.8**/10**, 8C-11D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.35**	**340**	⇑*i*PB	**Pg**	**23 47 45.1**	**-4.8**
EVR				*e*SB	**Sg**	**23 47 51.0**	**-3.7**
AGG	**Agios Georgios**	**0.52**	**33**	*e*Pg	**Pg**	**23 47 54.2**	**+1.1**
AGG				*e*Sg	**Sg**	**23 48 05.5**	**+5.5**
RLS	**Riolos of Patr**	**0.65**	**217**	*e*PB	**Pb**	**23 47 47.5**	**-8.9**
RLS				*e*SB	**Sb**	**23 47 55.0**	**-11**
LKR	**Lokris**	**0.81**	**85**	*e*PN	**Pn**	**23 47 58.0**	**-2.4**
LKR				*e*SB	**Sb**	**23 48 14.0**	**+3.9**
LTK	**Loutraki**	**0.97**	**125**	*e*Pg	**Pg**	**23 48 03.8**	**+2.3**
LTK				*e*Sg	**Sg**	**23 48 22.8**	**+8.7**
LKD	**Levkas**	**1.04**	**277**	*e*Pg	**Pg**	**23 47 54.5**	**-8.3**
KFL	**Anninata**	**1.04**	**243**	*e*Pg	**Pg**	**23 47 54.8**	**-8.1**
VLS	**Valsamata**	**1.15**	**250**	⇓*i*PG	**Pg**	**23 47 53.4**	**-12**
VLS				*e*SB	**Sb**	**23 48 06.9**	**-13**
XOR	**Xorichti**	**1.24**	**50**	*e*Pg	**Pg**	**23 48 06.7**	**+0.1**
VLX	**Vlachokerasia**	**1.25**	**165**	*e*Pg	**Pg**	**23 48 06.4**	**-0.6**
MEV	**Metsovon**	**1.33**	**335**	*e*Pg	**Pg**	**23 48 02.9**	**-5.5**
JAN	**Janina**	**1.38**	**321**	*e*PB	**Pn**	**23 48 00.9**	**-7.3**
JAN				*e*SB	**Sn**	**23 48 17.0**	**-9.5**
ITM	**Ithomi**	**1.40**	**181**	*e*PB	**Pn**	**23 48 03.8**	**-4.7**
ITM				*e*SB	**Sn**	**23 48 23.0**	**-4.0**
NAIG	**Nisos Aigina**	**1.46**	**124**	*e*PN	**Pn**	**23 48 09.0**	**-0.2**
DID	**Didima**	**1.47**	**137**	*e*Pb	**Pb**	**23 48 09.9**	**-0.4**
ATH	**Athens Observa**	**1.51**	**113**	*e*PN	**Pn**	**23 48 11.3**	**+1.4**
LIT	**Litokhoron**	**1.57**	**15**	*e*Pb	**Pn**	**23 48 09.8**	**-1.0**
LIT				*e*Sb	**Sb**	**23 48 34.1**	**+2.2**
IGT	**Igoumenitsa**	**1.58**	**307**	*e*Pg	**Pn**	**23 48 04.8**	**-6.2**
PTL	**Penteli**	**1.59**	**109**	*e*PN	**Pn**	**23 48 12.0**	**+1.0**
AOS	**Alonnisos**	**1.61**	**68**	*e*Pb	**Pb**	**23 48 12.4**	**-0.2**
KVR	**Kavouri**	**1.61**	**117**	*e*PN	**Pn**	**23 48 12.5**	**+1.2**
PYL	**PYLOS**	**1.69**	**186**	*e*Pb	**Pb**	**23 48 11.0**	**-3.1**
PYL				*e*Sb	**Sb**	**23 48 34.5**	**-1.0**
KZN	**Kozani**	**1.73**	**355**	⇓*i*PN	**Pn**	**23 48 10.0**	**-3.0**
SRN	**Sarande**	**2.00**	**311**	*e*PN	**Pn**	**23 48 12.8**	**-3.9**
SRN				*i* SN	**Sn**	**23 48 39.2**	**-2.6**
VLI	**Veliai**	**2.02**	**157**	*e*PG	**Pn**	**23 48 16.6**	**-0.3**
KEK	**Kerkira**	**2.03**	**305**	*e*PN	**Pn**	**23 48 10.8**	**-6.3**
PLG	**Polygyros**	**2.12**	**32**	*e*Pn	**Pn**	**23 48 18.4**	**0.0**
PLG	**Polygyros**	**2.12**	**32**	*e*Pn	**Pn**	**23 48 17.5**	**-0.9**
KBN	**Korca**	**2.23**	**336**	*e*PN	**Pn**	**23 48 19.2**	**-0.7**
KBN				*i* SN	**Sn**	**23 48 50.0**	**+2.5**
FNA	**Florina**	**2.24**	**349**	*e*Pn	**Pn**	**23 48 17.9**	**-2.2**
OUR	**Ouranopolis**	**2.34**	**41**	*e*Pn	**Pn**	**23 48 22.0**	**+0.5**
GRG	**Griva**	**2.40**	**8**	*e*Pn	**Pn**	**23 48 20.8**	**-1.3**
SOH	**Sokhos**	**2.48**	**25**	*e*Pn	**Pn**	**23 48 23.4**	**+0.1**
SOH				*e*Sn	**Sn**	**23 48 57.5**	**+3.9**
BIA	**Bitola**	**2.48**	**349**	*e*Pn	**Pn**	**23 48 20.3**	**-3.0**
BIA	**Bitola**	**2.48**	**349**	*i* Pn	**Pn**	**23 48 20.1**	**-3.2**
KNT	**Kendrikon**	**2.67**	**15**	*e*Pn	**Pn**	**23 48 25.8**	**-0.2**
OHR	**Ohrid**	**2.68**	**341**	*e*Pn	**Pn**	**23 48 23.7**	**-2.4**
OHR	**Ohrid**	**2.68**	**341**	*i* Pn	**Pn**	**23 48 25.3**	**-0.8**
VAY	**Valandovo**	**2.77**	**9**	*e*Pn	**Pn**	**23 48 27.0**	**-0.4**
VAY	**Valandovo**	**2.77**	**9**	*i* Pn	**Pn**	**23 48 25.8**	**-1.5**
SRS	**Serrai**	**2.82**	**26**	*e*Pn	**Pn**	**23 48 28.5**	**+0.4**
SRS				*e*Sn	**Sn**	**23 49 04.9**	**+2.8**
KRUS	**Krusevo**	**2.84**	**349**	*i* Pn	**Pn**	**23 48 26.7**	**-1.5**
KRUS				*i* Sn	**Sn**	**23 49 06.7**	**+4.3**
STIP	**Stip**	**3.11**	**3**	*i* Pn	**Pn**	**23 48 29.6**	**-2.4**
STIP				*i* Sn	**Sn**	**23 49 13.4**	**+4.2**
STIP	**Stip**	**3.11**	**3**	*e*Pn	**Pn**	**23 48 30.7**	**-1.3**
NVR	**Nevrokopi**	**3.12**	**27**	*e*PB	**Pn**	**23 48 31.5**	**-0.7**
TIR	**Tirane**	**3.20**	**330**	*e*PN	**Pn**	**23 48 36.4**	**+3.2**
TIR				*i* SN	**Sg**	**23 49 24.0**	**-1.6**
APE	**Apeiranthos**	**3.20**	**117**	*i* P	**Pn**	**23 48 33.8**	**+0.5**
APE	**Apeiranthos**	**3.20**	**117**	*e*PN	**Pn**	**23 48 34.0**	**+0.7**
APE	**Apeiranthos**	**3.20**	**117**	⇓*i*P	**Pn**	**23 48 35.5**	**+2.2**
SKO	**Skopje**	**3.41**	**353**	*i* Pn	**Pn**	**23 48 35.5**	**-0.6**
IDI	**Anoyia**	**4.04**	**144**	Pn	**Pn**	**23 48 44.7**	**0.0**
	0.7nm,0.3s,baz=308,slow=19,SNR=5.3						
IDI				Sn	**Sn**	**23 49 35.3**	**+3.2**
	2.2nm,0.3s,baz=285,slow=19,SNR=2.9						
TIP	**Timpagrande**	**4.11**	**280**	*e*Pn	**Pn**	**23 48 37.2**	**-8.5**
VTS	**Vitosha**	**4.12**	**13**	*e*Pn	**Pn**	**23 48 46.2**	**+0.4**
VTS	**Vitosha**	**4.12**	**13**	⇓*i*P	**Pn**	**23 48 44.4**	**-1.4**
VTS	**Vitosha**	**4.12**	**13**	*e*Pn	**Pn**	**23 48 46.2**	**+0.4**
BARS	**Barje**	**4.23**	**359**	Pn	**Pn**	**23 48 43.1**	**-4.3**
VAE	**Valguarnera**	**6.06**	**262**	Pn	**Pn**	**23 49 07.1**	**-5.5**
	0.5nm,0.3s,baz=80,slow=18,SNR=2.4						
VAE				Sn	**Sn**	**23 50 13.5**	**-8.5**
	0.5nm,0.3s,baz=318,slow=16,SNR=2.2						
GZR	**Gura Zlata**	**6.83**	**5**	⇑P	**Pn**	**23 49 22.5**	**-0.6**
GZR	**Gura Zlata**	**6.83**	**5**	⇑*i*P	**Pn**	**23 49 22.5**	**-0.6**
BZS	**Buzias**	**7.03**	**358**	⇓P	**Pn**	**23 49 25.1**	**-0.7**
BZS	**Buzias**	**7.03**	**358**	⇓*i*P	**Pn**	**23 49 25.1**	**-0.8**
VOIR		**7.22**	**18**	⇑P	**Pn**	**23 49 27.8**	**-0.7**
VOIR		**7.22**	**18**	⇑*i*P	**Pn**	**23 49 27.8**	**-0.7**
MLR	**Muntele Rosu**	**7.51**	**22**	⇑P	**Pn**	**23 49 31.6**	**-0.8**
MLR	**Muntele Rosu**	**7.51**	**22**	P	**Pn**	**23 49 31.1**	**-1.3**
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR	**Muntele Rosu**	**7.51**	**22**	Pn	**Pn**	**23 49 31.1**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=169,slow=8.5,SNR=16						
MLR	**Muntele Rosu**	**7.51**	**22**	⇑*i*P	**Pn**	**23 49 31.6**	**-0.8**
PLOR	**Plostina**	**8.05**	**24**	⇓*i*P	**Pn**	**23 49 39.8**	**0.0**
PLOR	**Plostina**	**8.05**	**24**	P	**Pn**	**23 49 39.9**	**+0.1**
VRI	**Vrincioaia**	**8.09**	**24**	⇓P	**Pn**	**23 49 40.9**	**+0.6**
VRI	**Vrincioaia**	**8.09**	**24**	⇓*i*P	**Pn**	**23 49 40.9**	**+0.6**
BURAR	**Bucovina Array**	**9.33**	**14**	⇓P	**Pn**	**23 49 56.4**	**-1.0**
BURAR	**Bucovina Array**	**9.33**	**14**	⇓*i*P	**Pn**	**23 49 56.4**	**-1.0**
PSZ	**Piszkesteto**	**9.45**	**351**	*e*Pn	**Pn**	**23 49 53.1**	**-5.9**
PSZ	**Piszkesteto**	**9.45**	**351**	⇑*i*P	**Pn**	**23 49 57.1**	**-1.9**
KECS	**Kecovo**	**9.95**	**354**	*e*PN	**Pn**	**23 50 06.4**	**+0.5**
VYHS	**Vyhne**	**10.16**	**348**	*e*PN	**Pn**	**23 50 08.2**	**-0.5**
VRAC	**Vranov**	**11.39**	**342**	Pn	**Pn**	**23 50 19.5**	**-6.1**
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=3.3						
GERES	**GERESS Array B**	**11.86**	**332**	Pn	**Pn**	**23 50 25.9**	**-6.1**
	comp=Z,0.2nm,0.3s,baz=159,slow=15,SNR=5.5						
DAVOX	**Davos/Dischmat**	**12.08**	**317**	Pn	**Pn**	**23 50 28.9**	**-6.1**
	comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=2.6						
SBF	**Sospel**	**12.14**	**300**	*e*P	**Pn**	**23 50 38.1**	**+2.3**
	comp=Z,40nm,0.9s						
SBF	**Sospel**	**12.14**	**300**	*e*P	**Pn**	**23 50 38.1**	**+2.3**
	comp=Z,20nm,0.9s						
KHC	**Kasperske Hory**	**12.15**	**333**	*e*P	**Pn**	**23 50 30.5**	**-5.4**
KHC				*e*x	x	23 50 44.5	
MMAI	**Mount Meron Ar**	**12.24**	**113**	Pn	**Pn**	**23 50 37.6**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=264,slow=14,SNR=3.8						
FRF	**La Foret Royal**	**12.58**	**298**	*e*P	**Pn**	**23 50 43.8**	**+2.0**
	comp=Z,14nm,0.9s						
FRF	**La Foret Royal**	**12.58**	**298**	*e*P	**Pn**	**23 50 43.8**	**+2.0**
	comp=Z,6.8nm,0.9s						
LMR	**La Mourre**	**12.61**	**297**	*e*P	**Pn**	**23 50 44.3**	**+2.1**
MBDF	**Montbardon**	**12.91**	**303**	*e*P	**Pn**	**23 50 48.4**	**+2.1**
AKASG	**Malin Array Be**	**13.16**	**21**	Pn	**Pn**	**23 50 47.0**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=3.1						
LPG	**La Plagne**	**13.24**	**306**	*e*P	**Pn**	**23 50 52.8**	**+2.0**
LPL	**La Plagne**	**13.26**	**306**	*e*P	**Pn**	**23 50 53.0**	**+1.9**
ORIF	**Oris-en-Rattie**	**13.56**	**303**	*e*P	**Pn**	**23 50 56.8**	**+1.5**
CABF	**La Chapelle**	**14.16**	**310**	*e*P	**Pn**	**23 51 04.8**	**+1.4**
	comp=Z,44nm,1.4s						
CABF	**La Chapelle**	**14.16**	**310**	*e*P	**Pn**	**23 51 04.8**	**+1.4**
CABF				pmax	pmax		
	comp=Z,22nm,1.4s						
CABF	**La Chapelle**	**14.16**	**310**	*e*P	**Pn**	**23 51 04.8**	**+1.4**
	comp=Z,22nm,1.4s						
VIVF	**Saint-Julien-l**	**14.34**	**301**	*e*P	**Pn**	**23 51 06.8**	**+0.9**
HINF	**Hinteralfeld**	**14.35**	**315**	*e*P	**Pn**	**23 51 07.0**	**+1.0**
CDF	**Champ du Feu**	**14.47**	**317**	*e*P	**Pn**	**23 51 08.8**	**+1.2**
LASF	**Ste Croix**	**14.66**	**298**	*e*P	**Pn**	**23 51 11.0**	**+0.8**
	comp=Z,252nm,1.7s						
LASF	**Ste Croix**	**14.66**	**298**	*e*P	**Pn**	**23 51 11.0**	**+0.8**
	comp=Z,126nm,1.7s						
HAU	**Haudompre**	**14.74**	**315**	*e*P	**Pn**	**23 51 11.9**	**+0.6**
SMF	**Signal de Mont**	**15.56**	**307**	*e*P	**Pn**	**23 51 22.3**	**+0.1**
	comp=Z,21nm,1.4s						
SMF	**Signal de Mont**	**15.56**	**307**	*e*P	**Pn**	**23 51 22.3**	**+0.1**
SMF				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SMF	**Signal de Mont**	**15.56**	**307**	*e*P	**Pn**	**23 51 22.3**	**+0.1**
	comp=Z,10nm,1.4s						
MTLF	**Montolieu**	**15.65**	**294**	*e*P	**Pn**	**23 51 24.0**	**+0.6**
MEZF	**Maizieres J'vi**	**15.74**	**314**	*e*P	**Pn**	**23 51 25.1**	**+0.6**
LOR	**Lormes**	**15.82**	**309**	*e*P	**Pn**	**23 51 26.0**	**+0.4**
AVF	**Avril sur Loir**	**15.93**	**307**	*e*P	**Pn**	**23 51 27.2**	**+0.2**
	comp=Z,6.0nm,0.8s						
AVF	**Avril sur Loir**	**15.93**	**307**	*e*P	**Pn**	**23 51 27.2**	**+0.2**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AVF	**Avril sur Loir**	**15.93**	**307**	*e*P	**Pn**	**23 51 27.2**	**+0.2**
	comp=Z,3.0nm,0.8s						
SSF	**Saint Saulge**	**15.95**	**308**	*e*P	**Pn**	**23 51 27.1**	**-0.1**
	comp=Z,7.3nm,0.9s						
SSF	**Saint Saulge**	**15.95**	**308**	*e*P	**Pn**	**23 51 27.1**	**-0.1**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SSF	**Saint Saulge**	**15.95**	**308**	*e*P	**Pn**	**23 51 27.1**	**-0.1**
	comp=Z,3.7nm,0.9s						
CAF	**Calviac**	**16.13**	**299**	*e*P	**Pn**	**23 51 29.9**	**+0.3**
BGF	**Bois d'Agland**	**16.16**	**306**	*e*P	**Pn**	**23 51 30.3**	**+0.4**
TCF	**Toulx Ste Croi**	**16.46**	**304**	*e*P	**Pn**	**23 51 34.0**	**+0.1**
	comp=Z,56nm,1.5s						
TCF	**Toulx Ste Croi**	**16.46**	**304**	*e*P	**Pn**	**23 51 34.0**	**+0.1**
TCF				pmax	pmax		
	comp=Z,28nm,1.5s						
TCF	**Toulx Ste Croi**	**16.46**	**304**	*e*P	**Pn**	**23 51 34.0**	**+0.1**
	comp=Z,28nm,1.5s						
RJF	**Les Rejaudoux**	**16.61**	**300**	*e*P	**Pn**	**23 51 36.3**	**+0.6**
EPF	**Esparros**	**16.95**	**292**	*e*P	**Pn**	**23 51 40.2**	**+0.1**
LFF	**La Frestale**	**17.04**	**299**	*e*P	**Pn**	**23 51 41.1**	**0.0**
BAIF	**Baives**	**17.07**	**318**	*e*P	**Pn**	**23 51 42.0**	**+0.5**
	comp=Z,12nm,1.0s						
BAIF	**Baives**	**17.07**	**318**	*e*P	**Pn**	**23 51 42.0**	**+0.5**
BAIF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BAIF	**Baives**	**17.07**	**318**	*e*P	**Pn**	**23 51 42.0**	**+0.5**
	comp=Z,6.2nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ETSF	**Etsaut**	**17.59**	**291**	eP	**Pn**	**23 51 48.5**	**+0.5**
	comp=Z,35nm,1.3s						
ETSF	**Etsaut**	**17.59**	**291**	eP	**Pn**	**23 51 48.5**	**+0.5**
ETSF				pmax	pmax		
	comp=Z,17nm,1.3s						
ETSF	**Etsaut**	**17.59**	**291**	eP	**Pn**	**23 51 48.5**	**+0.5**
	comp=Z,17nm,1.3s						
SJPF	**Ste Jean**	**18.10**	**292**	eP	**Pn**	**23 51 55.0**	**+0.7**
MFF	**Saint Martin d**	**18.10**	**303**	eP	**Pn**	**23 51 54.9**	**+0.6**
	comp=Z,30nm,1.3s						
MFF	**Saint Martin d**	**18.10**	**303**	eP	**Pn**	**23 51 54.9**	**+0.6**
MFF				pmax	pmax		
	comp=Z,15nm,1.3s						
MFF	**Saint Martin d**	**18.10**	**303**	eP	**Pn**	**23 51 54.9**	**+0.6**
	comp=Z,15nm,1.3s						
LDF	**La Druitiere**	**18.81**	**309**	eP	**Pn**	**23 52 02.4**	**-0.5**
FLN	**La Foliniere**	**19.09**	**309**	eP	**Pn**	**23 52 05.8**	**-0.6**
GRR	**Gorron**	**19.18**	**308**	eP	**Pn**	**23 52 06.7**	**-0.7**
OBN	**Obninsk**	**19.25**	**26**	eP	**Pn**	**23 52 07.1**	**-1.1**
OBN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	**Obninsk**	**19.25**	**26**	eP	**Pn**	**23 52 07.1**	**-1.1**
	comp=Z,1.0nm,0.5s						
ESDC	**Sonseca Array**	**20.13**	**281**	P	**P**	**23 52 10.6**	**-6.3**
	comp=Z,0.2nm,0.3s,baz=68,slow=10,SNR=5.7						
SGMF	**Saint Gilles**	**20.19**	**307**	eP	**P**	**23 52 18.4**	**+0.9**
	comp=Z,159nm,1.7s						
SGMF	**Saint Gilles**	**20.19**	**307**	eP	**P**	**23 52 18.4**	**+0.9**
SGMF				pmax	pmax		
	comp=Z,8.0nm,1.7s						
SGMF	**Saint Gilles**	**20.19**	**307**	eP	**P**	**23 52 18.4**	**+0.9**
	comp=Z,80nm,1.7s						
QUIF	**Quistinic**	**20.47**	**305**	eP	**P**	**23 52 21.0**	**+0.5**
	comp=Z,160nm,1.7s						
QUIF	**Quistinic**	**20.47**	**305**	eP	**P**	**23 52 21.0**	**+0.5**
QUIF				pmax	pmax		
	comp=Z,8.0nm,1.7s						
QUIF	**Quistinic**	**20.47**	**305**	eP	**P**	**23 52 21.0**	**+0.5**
	comp=Z,80nm,1.7s						
ROSF	**Rostrenen**	**20.67**	**306**	eP	**P**	**23 52 23.4**	**+0.7**
HFS	**Hagfors**	**22.20**	**349**	P	**P**	**23 52 34.5**	**-4.5**
	comp=Z,5.3nm,0.8s,mb4.0,baz=165,slow=12,SNR=5.9						
FINES	**FINESS Array B**	**23.03**	**5**	P	**P**	**23 52 43.1**	**-4.7**
	comp=Z,1.7nm,0.6s,mb3.6,baz=169,slow=11,SNR=7.1						
NB2	**NORSAR Subarra**	**23.46**	**347**	P	**P**	**23 52 45.7**	**-6.7**
	comp=Z,5.3nm,1.0s,mb3.9,baz=159,slow=9.3						
NB2	**NORSAR Subarra**	**23.46**	**347**	P	**P**	**23 52 45.7**	**-6.7**
NB2				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
NOA	**NORSAR Array B**	**23.46**	**347**	P	**P**	**23 52 46.7**	**-5.7**
NOA	**NORSAR Array B**	**23.46**	**347**	P	**P**	**23 52 46.7**	**-5.7**
	comp=Z,1.5nm,0.7s,mb3.5,baz=159,slow=9.6,SNR=6.0						
EKA	**Eskdalemuir Ar**	**23.77**	**323**	P	**P**	**23 52 48.3**	**-7.1**
	comp=Z,1.2nm,0.7s,mb3.4,baz=123,slow=10,SNR=3.2						
TORD	**Torodi Ar. Bea**	**31.07**	**221**	P	**P**	**23 53 54.6**	**-6.6**
	comp=Z,1.3nm,0.5s,mb4.0,baz=33,slow=11,SNR=8.2						
ARCES	**ARCESS Array B**	**31.07**	**2**	P	**P**	**23 53 55.4**	**-5.3**
	comp=Z,2.0nm,1.1s,mb3.9,baz=197,slow=7.6,SNR=5.4						
MKAR	**Makanchi Array**	**44.12**	**59**	P	**P**	**23 55 48.3**	**-3.0**
	comp=Z,1.1nm,0.5s,mb3.8,baz=285,slow=6.1,SNR=9.0						
ZAL	**Zalesovo**	**44.56**	**49**	P	**P**	**23 55 51.4**	**-3.3**
ZALV	**Zalesovo Beam**	**44.58**	**49**	P	**P**	**23 55 51.4**	**-3.4**
	comp=Z,1.7nm,0.6s,mb4.0,baz=276,slow=8.5,SNR=7.9						
SCHQ	**Schefferville**	**58.93**	**318**	P	**P**	**23 57 37.1**	**-4.9**
	comp=Z,2.0nm,0.9s,mb4.1,baz=68,slow=16,SNR=3.4						
SONM	**Songino Array**	**59.32**	**51**	P	**P**	**23 57 42.0**	**-2.7**
	comp=Z,0.2nm,0.6s,mb3.3,baz=110,slow=23,SNR=3.3						

*IDC **11** 00:05:17.6±3.2, 4682N×15540E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/19, mbtmp3.5/6, Error ellipse: s-maj=100.2km s-min=26.9km az=1.0*
*NEIC **11** 00:05:19.1±2.4, 4681N×15537E, h10km, Error ellipse: s-maj=77.0km s-min=18.7km az=177.0*
*ISCJB **11** 00:05:21.2±3.1, 469N±07×1553E±02, h33km, mb3.5/6, Error ellipse: s-maj=93.5km s-min=22.9km az=177.0*
ISC 11 00:05:23.1±3.1**, 469N**±07×**1554E**±02**, h35km, n7,** σ**0s49**/7**, mb3.5**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**32.74**	**290**	P	**P**	**00 11 51.6**	**-0.6**
	0.3nm,0.8s,mb3.3,baz=69,slow=7.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**43.78**	**306**	P	**P**	**00 13 24.8**	**-0.2**
	0.3nm,0.4s,mb3.4,baz=62,slow=6.8,SNR=2.2						
MKAR	**Makanchi Array**	**48.25**	**298**	P	**P**	**00 14 01.2**	**+1.0**
	0.3nm,0.7s,mb3.4,baz=73,slow=11,SNR=4.5						
YKA	**Yellowknife Ar**	**49.90**	**37**	P	**P**	**00 14 12.6**	**0.0**
	0.1nm,0.6s,mb3.0,baz=288,slow=6.4,SNR=3.1						
FINES	**FINESS Array B**	**64.58**	**336**	P	**P**	**00 15 56.1**	**-0.1**
	0.7nm,0.4s,mb4.0,baz=34,slow=8.4,SNR=10						
TXAR	**Lajitas Array**	**76.09**	**62**	P	**P**	**00 17 07.1**	**0.0**
TXAR	**Lajitas Array**	**76.09**	**62**	P	**P**	**00 17 07.1**	**0.0**
	0.7nm,0.6s,mb3.8,baz=298,slow=3.6,SNR=8.7						

*NEIC **11** 00:27:12.5, 3241S×7140W, h42km, MD4.1(GUC), After GUC.*
GUC 11 00:27:12.5±0.8**, 3241S×7140W, h42km**±2km**, MD4.1, ML3.7, 10C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.65**	**199**	⇓iP	Pn	00 27 25.6	+0.3
IHA				i S	Sn	00 27 35.2	+0.8
ROCH	**El Roble**	**0.65**	**150**	⇑iP	Pn	00 27 25.8	+0.6
ROCH				i S	Sn	00 27 35.9	+1.5
PEL	**Peldehue**	**0.94**	**141**	⇑iP	Pn	00 27 30.0	+0.7
PEL				i S	Sn	00 27 43.2	+1.6
PEL				AML	AML	00 27 44.0	
	comp=N,6µm,0.3s						
DSCH	**Colegio Aleman**	**1.21**	**145**	i P	Pn	00 27 33.0	+0.1
DSCH				i S	Sn	00 27 49.5	+1.5
SAN	**Santiago**	**1.21**	**149**	i S	Sn	00 27 50.2	+2.1
SAN				AML	AML	00 27 57.1	
	comp=E,2µm,0.6s						
CLCH	**Cerro Calan**	**1.22**	**144**	⇑iP	Pn	00 27 34.5	+1.5
CLCH				i S	Sn	00 27 51.0	+2.6
CLCH	**Cerro Calan**	**1.22**	**144**	⇑iP	Pn	00 27 34.5	+1.5
CLCH				i S	Sn	00 27 51.0	+2.6
CLCH				AML	AML	00 27 54.9	
	comp=E,3µm,1.2s						
FSR	**Penalolen**	**1.29**	**146**	eP	Pn	00 27 35.4	+1.3
FSR				i S	Sn	00 27 52.7	+2.6
FSR	**Penalolen**	**1.29**	**146**	eP	Pn	00 27 35.4	+1.3
FSR				i S	Sn	00 27 52.7	+2.6
FSR				AML	AML	00 27 59.6	
	comp=N,2µm,0.8s						
TACH	**Talagante**	**1.30**	**163**	⇑iP	Pn	00 27 34.9	+0.8
TACH				i S	Sn	00 27 52.3	+2.0
FCH	**Farellones**	**1.30**	**135**	⇓iP	Pn	00 27 35.1	+0.9
FCH				i S	Sn	00 27 53.0	+2.5
FCH				AML	AML	00 27 54.0	
	comp=E,2µm,0.2s						
ANTU	**Antumapu**	**1.32**	**151**	eP	Pn	00 27 35.5	+1.1
ANTU				i S	Sn	00 27 53.3	+2.5
ANTU	**Antumapu**	**1.32**	**151**	eP	Pn	00 27 35.5	+1.1
ANTU				i S	Sn	00 27 53.3	+2.5
ANTU				AML	AML	00 27 59.4	
	comp=E,3µm,0.3s						
PCH	**Pirque**	**1.42**	**149**	⇑iP	Pn	00 27 36.5	+0.7
PCH				i S	Sn	00 27 55.0	+1.8
LNV	**Longovilo**	**1.54**	**180**	⇑iP	Pn	00 27 37.8	+0.4
CHCH	**Chadas Angostu**	**1.64**	**158**	eP	Pn	00 27 39.9	+1.0
YECH	**El Yeso**	**1.67**	**139**	⇓iP	Pn	00 27 40.7	+1.5
YECH				i S	Sn	00 28 02.4	+3.0
YECH				AML	AML	00 28 13.4	
	comp=N,2µm,0.3s						
LMEL	**Las Melosas**	**1.75**	**145**	⇓iP	Pn	00 27 41.6	+1.3
LMEL				i S	Sn	00 28 03.7	+2.4
LMEL	**Las Melosas**	**1.75**	**145**	⇓iP	Pn	00 27 41.6	+1.3
LMEL				i S	Sn	00 28 03.7	+2.4
LMEL				AML	AML	00 28 09.7	
	comp=N,3µm,0.4s						
CACH	**El Canelo**	**1.83**	**159**	⇑iP	Pn	00 27 43.5	+2.1
CACH				i S	Sn	00 28 06.6	+3.3
CICH	**Cipreses**	**2.07**	**157**	⇑iP	Pn	00 27 46.7	+1.9
MDZ	**Mendoza**	**2.20**	**103**	eP	Pn	00 27 51.2	+4.7
MDZ				e		00 28 04.6	
MDZ				S	Sn	00 28 23.2	+11
SFDO	**San Fernando**	**2.22**	**172**	⇑iP	Pn	00 27 47.8	+1.0
TLL	**Tololo Astrono**	**2.29**	**13**	eP	Pn	00 27 48.5	+0.7
TLL				i S	Sn	00 28 16.5	+1.7
LCO	**Las Campanas**	**3.44**	**10**	ePn	Pn	00 28 02.9	-0.7
LCO				eSn	Sn	00 28 44.6	+1.5
TRQA	**Tornquist**	**9.54**	**129**	ePn	Pn	00 29 27.9	+0.7
	comp=N,5.2nm,0.7s						

GUC 11 00:35:45.5±0.9**, 3272S×7153W, h37km**±9km**, MD3.5, ML2.4, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.83**	**121**	⇑iP	Pn	00 36 01.5	+0.8
PEL				i S	Sn	00 36 12.7	+1.1
PEL				AML	AML	00 36 16.3	
	comp=E,269nm,0.3s						
TACH	**Talagante**	**1.06**	**152**	eP	Pn	00 36 04.8	+1.0
TACH				i S	Sn	00 36 18.9	+1.6
FCH	**Farellones**	**1.20**	**121**	⇓iP	Pn	00 36 07.0	+1.2
FCH				i S	Sn	00 36 23.7	+2.8
FCH				AML	AML	00 36 24.4	
	comp=N,88nm,0.2s						
PCH	**Pirque**	**1.24**	**137**	⇑iP	Pn	00 36 07.5	+1.2
PCH				eS	Sn	00 36 24.5	+2.7
LNV	**Longovilo**	**1.24**	**176**	⇑iP	Pn	00 36 06.8	+0.5
LNV				i S	Sn	00 36 23.7	+1.9
LMEL	**Las Melosas**	**1.58**	**136**	eP	Pn	00 36 12.8	+1.8
LMEL				AML	AML	00 36 35.6	
	comp=N,123nm,0.1s						

*SZGRF **11** 00:37:59.9, 2910N×14028E, h33km, mb5.2, Southeast of Honshu, Japan*
*NIED **11** 00:38:00, 2990N×14100E, h155km, Mw4.9 Best double couple: Mo2.32000×10^16 NP1:φs89.00000°, δ36.00000°, λ180.00000°. NP2:φs179.00000°, δ90.00000°, λ54.00000°.*
*JMA **11** 00:38:12.7, 2989N×14095E, h154km, M5.1*
*MOS **11** 00:38:12.2±0.9, 2989N×14031E, h122km, mb5.0/63, Error ellipse: s-maj=12.3km s-min=4.4km az=112.6*
*BJI **11** 00:38:13.1, 2998N×14069E, h155km, mB5.0, mb4.8*
*IDC **11** 00:38:14.3±0.7, 2989N×14027E, h127km±5km, mb4.3/18, mb1 4.4/20, mb1mx4.4/23, mbtmp4.3/20, MS3.2/1, Ms1 3.2/1, ms1mx2.7/34, Error ellipse: s-maj=15.9km s-min=8.1km az=79.0*
*ISCJB **11** 00:38:15.8±0.6, 3005N±003×14049E±004, h154km±3km, mb4.8/115, Error ellipse: s-maj=6.2km s-min=5.2km az=29.9*
*NEIC **11** 00:38:16.8±1.0, 2999N×14038E, h151km±8km, mb5.0/59, MW4.8(NIED), Error ellipse: s-maj=7.6km s-min=6.4km az=116.0*
ISC 11 00:38:17.6±0.6**, 3009N**±003×**14048E**±004**, h156km**±3km**, h140km**±4.9km**:pP-P, n322,** σ**1s07**/353**, mb4.8**/115**, 17C-22D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.06**	**349**	P	**Pn**	**00 39 05.7**	**-0.2**
JHJ2				S	**Sn**	**00 39 42.4**	**-1.1**
JHJ	**Hachijo jima 2**	**3.08**	**349**	P	**Pn**	**00 39 05.9**	**-0.2**
	172nm,0.3s,baz=166,slow=12,SNR=21						
JHJ				S	**Sn**	**00 39 42.2**	**-1.5**
	144nm,0.3s,baz=212,slow=23,SNR=3.7						
CBIJ	**Chichi jima**	**3.34**	**153**	P	**Pn**	**00 39 00.5**	**-9.0**
CBIJ				S	**Sn**	**00 39 36.2**	**-13**
CBIJ	**Chichi jima**	**3.34**	**153**	P	**Pn**	**00 39 00.7**	**-8.8**
	285nm,0.3s,baz=345,slow=4.9,SNR=101						
CBIJ				S	**Sn**	**00 39 36.2**	**-13**
	209nm,0.3s,baz=294,slow=22,SNR=6.5						
JHHJ	**Haha-jima-NKT**	**3.76**	**156**	P	**Pn**	**00 39 06.2**	**-8.6**
JHHJ				S	**Sn**	**00 39 47.8**	**-12**
JKO	**Kozu shima**	**4.24**	**345**	P	**Pn**	**00 39 20.6**	**-0.4**
TK01	**Tokai 1**	**4.41**	**327**	P	**Pn**	**00 39 24.2**	**+0.9**
BSO1	**Boso 1**	**4.57**	**5**	P	**Pn**	**00 39 23.4**	**-1.9**
BSO1				S	**Sn**	**00 40 14.1**	**-4.1**
BSO2	**Boso 2**	**4.65**	**3**	S	**Sn**	**00 40 18.3**	**-1.9**
JOD2	**Odawara 2**	**5.29**	**348**	P	**Pn**	**00 39 34.4**	**-0.4**
JOD2				S	**Sn**	**00 40 36.0**	**+0.7**
JWZ	**Kozaga**	**5.31**	**311**	P	**Pn**	**00 39 35.4**	**+0.3**
JIE	**Ise**	**5.35**	**324**	P	**Pn**	**00 39 36.7**	**+1.1**
JYN	**Shimob**	**5.63**	**344**	P	**Pn**	**00 39 39.9**	**+0.5**
JAO	**Obara**	**5.83**	**333**	⇓P	**Pn**	**00 39 43.1**	**+1.1**
JWY	**Kouya**	**5.84**	**316**	⇓P	**Pn**	**00 39 43.6**	**+1.5**
JRY	**Ryogami san**	**6.06**	**348**	P	**Pn**	**00 39 44.9**	**-0.1**
JRY				S	**Sn**	**00 40 52.5**	**-1.0**
JNT	**Takato**	**6.09**	**342**	P	**Pn**	**00 39 46.9**	**+1.4**
JNT				S	**Sn**	**00 41 00.3**	**+5.9**
JHE	**Heguri**	**6.10**	**320**	⇓P	**Pn**	**00 39 47.0**	**+1.5**
JEG	**Eigenji**	**6.10**	**327**	⇓P	**Pn**	**00 39 47.7**	**+2.1**
JAG	**Ashikaga**	**6.38**	**352**	P	**Pn**	**00 39 47.0**	**-2.2**
JHO	**Hitachi**	**6.50**	**1**	P	**Pn**	**00 39 48.9**	**-2.0**
JHO				S	**Sn**	**00 40 58.2**	**-5.9**
JMIK	**Miki**	**6.57**	**317**	P	**Pn**	**00 39 54.2**	**+2.4**
JNG	**Nsakai**	**6.61**	**343**	⇑P	**Pn**	**00 39 53.0**	**+0.7**
JNG				S	**Sn**	**00 41 07.8**	**+1.2**
MJAR	**Matsushiro Arr**	**6.71**	**344**	P	**Pn**	**00 39 53.5**	**-0.1**
MJAR				S	**Sn**	**00 41 07.7**	**-1.4**
MJAR	**Matsushiro Arr**	**6.71**	**344**	P	**Pn**	**00 39 53.6**	**0.0**
MJAR				S	**Sn**	**00 41 07.7**	**-1.4**
MJAR				pmax	pmax		
	comp=Z,13nm,0.3s						
MJAR				smax			
	comp=N,8.0nm,0.3s						
MJAR	**Matsushiro Arr**	**6.71**	**344**	P	**Pn**	**00 39 53.5**	**-0.1**
	comp=N,13nm,0.3s,baz=162,slow=12,SNR=79						
MJAR				S	**Sn**	**00 41 07.7**	**-1.3**
	comp=N,7.5nm,0.3s,baz=138,slow=15,SNR=5.6						
MAJO	**Matsushiro**	**6.71**	**344**	ePn	**Pn**	**00 39 53.3**	**-0.4**
MAJO				Sn	**Sn**	**00 41 08.7**	**-0.4**
MAT	**Matsushiro**	**6.71**	**344**	P	**Pn**	**00 39 52.9**	**-0.8**
MAT				S	**Sn**	**00 41 09.6**	**+0.5**
MAT	**Matsushiro**	**6.71**	**344**	P	**Pn**	**00 39 53.6**	**-0.1**
MAT				S	**Sn**	**00 41 09.3**	**+0.2**
JWT	**Wachi**	**6.72**	**322**	⇓P	**Pn**	**00 39 55.7**	**+1.9**
JKS	**Kasai**	**6.81**	**317**	⇓P	**Pn**	**00 39 56.9**	**+1.8**
JKU	**Kubokawa**	**7.09**	**299**	⇓P	**Pn**	**00 40 00.5**	**+1.8**
JTO	**Tosashimizu**	**7.12**	**295**	P	**Pn**	**00 40 00.3**	**+1.2**
JMM	**Marumori**	**7.76**	**2**	P	**Pn**	**00 40 05.2**	**-2.4**
JHM	**Kurahashi**	**7.86**	**303**	P	**Pn**	**00 40 11.4**	**+2.4**
JHS	**Saijyo**	**7.91**	**310**	P	**Pn**	**00 40 11.6**	**+1.9**
JNU	**Nakatsue**	**8.73**	**293**	P	**Pn**	**00 40 20.9**	**+0.3**
	comp=N,2.9nm,0.3s,baz=91,slow=15,SNR=22						
JNU				LR	LR	00 42 44.8	
	comp=N,163nm,21.3s,baz=269,slow=31						
JMK	**Ichinoseki**	**8.86**	**4**	P	**Pn**	**00 40 19.8**	**-2.4**
JMK				S	**Sn**	**00 41 53.2**	**-7.5**
JTU	**Tsushima**	**10.37**	**298**	P	**Pn**	**00 40 43.7**	**+1.5**
JOT	**Ohata**	**11.28**	**2**	P	**Pn**	**00 40 52.5**	**-1.6**
JKB	**Kayabe**	**11.78**	**2**	P	**Pn**	**00 40 57.9**	**-2.8**
ERM	**Erimo**	**12.09**	**10**	ePn	**Pn**	**00 41 03.4**	**-1.3**
	comp=N,168nm,0.9s						
ERM				eSn	**Sn**	**00 43 09.4**	**-9.0**
ERM	**Erimo**	**12.09**	**10**	eP	**Pn**	**00 41 03.4**	**-1.3**
ERM				e		00 43 09.4	
ERM				pmax	pmax		
	comp=Z,168nm,0.9s						
KSRS	**Korea Array**	**12.76**	**308**	P	**Pn**	**00 41 15.1**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=120,slow=12,SNR=11						
INCN	**Inchon**	**13.67**	**306**	ePn	**Pn**	**00 41 25.8**	**+0.9**
	comp=Z,42nm,0.8s						
ASAJ	**Asahikawa**	**14.10**	**6**	P	**Pn**	**00 41 28.7**	**-1.6**
ASAJ				S	**Sn**	**00 43 59.8**	**-6.8**
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ	**Asahikawa**	**14.10**	**6**	P	**Pn**	**00 41 28.6**	**-1.7**
	comp=N,5.8nm,0.3s,baz=218,slow=13,SNR=27						
ASAJ				S	**Sn**	**00 43 59.8**	**-6.9**
	comp=N,3.0nm,0.3s,baz=76,slow=26,SNR=6.2						
VLA	**Vladivostok**	**14.71**	**334**	i P	**Pn**	**00 41 36.0**	**-1.9**
MDJ	**Mudanjiang**	**16.86**	**332**	P	**Pn**	**00 42 03.2**	**-1.1**
MDJ				XP	sP	00 42 43.1	-7.0
MDJ				S	**S**	**00 45 10.6**	**-0.9**
MDJ				PCP	PcP	00 46 44.6	+2.7
MDJ				PCS	PcS	00 50 19.1	+1.3
MDJ				AMB	AMB		
	comp=Z,28nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,171nm,4.1s						
MDJ				LR	LR		
	comp=N,126nm,19.0s						
MDJ				LR	LR		
	comp=E,152nm,22.1s						
MDJ				LR	LR		
	comp=Z,109nm,29.3s						
MDJ	**Mudanjiang**	**16.86**	**332**	eP	**Pn**	**00 42 03.4**	**-0.9**
	comp=Z,18nm,0.6s						
YSS	**Yuzh-Sakhalins**	**16.93**	**5**	ePn	**Pn**	**00 42 06.1**	**+1.1**
	comp=Z,63nm,0.7s						
YSS	**Yuzh-Sakhalins**	**16.93**	**5**	⇓eP	**Pn**	**00 42 06.0**	**+0.9**
YSS				eS	**S**	**00 45 07.1**	**-5.8**
YSS				pmax	pmax		
	comp=N,60nm,0.9s						
YSS				pmax	pmax		
	comp=Z,80nm,0.9s						
YSS				smax			
	comp=N,30nm,1.0s						
TATO	**Taipei**	**17.60**	**258**	eP	**Pn**	**00 42 10.7**	**-2.6**
	comp=N,338nm,1.3s						
YHNB	**Yeheng**	**17.80**	**257**	eP	**Pn**	**00 42 14.1**	**-1.6**
CN2	**Changchun**	**18.17**	**323**	eP	**P**	**00 42 20.2**	**+2.1**
CN2				eXP	sP	00 43 02.0	-2.6
CN2				eS	**S**	**00 45 33.7**	**-4.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
NJ2	**Nanjing**	**18.63**	**282**	eP	**P**	**00 42 24.2**	**+1.0**
NJ2				XP	sP	00 43 05.0	-4.8
NJ2				S	**S**	**00 45 43.5**	**-3.9**
NJ2				AMB	AMB		
	comp=Z,190nm,1.1s						
NJ2				AMB	AMB		
	comp=Z,350nm,4.4s						
NJ2				LR	LR		
	comp=N,640nm,18.2s						
NJ2				LR	LR		
	comp=E,600nm,23.2s						
NJ2				LR	LR		
	comp=Z,590nm,23.2s						
HABR	**Khabarovsk**	**18.82**	**349**	eP	**P**	**00 42 25.1**	**0.0**
HABR				eS	**S**	**00 45 49.9**	**-0.9**
KLR	**Kul'dur**	**20.24**	**343**	eP	**P**	**00 42 36.8**	**-3.6**
KLR				eS	**S**	**00 46 23.1**	**+4.5**
KLR				pmax	pmax		
	comp=E,48nm,1.4s						
KLR				pmax	pmax		
	comp=Z,96nm,1.4s						
KLR				smax			
	comp=E,50nm,1.6s						
BJI	**Beijing**	**22.18**	**303**	P	**P**	**00 42 59.8**	**-1.2**
BJI				AP		00 43 28.9	
BJI				S	**S**	**00 46 53.1**	**-0.7**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.1						
WHN	**Wuhan**	**22.55**	**278**	⇓P	**P**	**00 43 04.1**	**-0.6**
WHN				AMB	AMB		
	comp=Z,45nm,0.8s,mb5.0						
HIA	**Hailar**	**24.79**	**326**	eP	**P**	**00 43 24.6**	**-0.2**
	comp=Z,20nm,1.0s,mb4.6						
HIA	**Hailar**	**24.79**	**326**	eP	**P**	**00 43 24.6**	**-0.2**
HIA				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC	**Hu-ho-hao-te**	**25.77**	**302**	eP	**P**	**00 43 33.3**	**-0.5**
HHC				AP	pP	00 44 02.2	-3.9
HHC				XP	sP	00 44 18.8	-5.5
HHC				PP		00 44 20.8	
HHC				PCP	PcP	00 47 00.3	+0.9
HHC				S	**S**	**00 47 48.9**	**-2.5**
HHC				SCP	ScP	00 50 25.4	+1.1
HHC				PCS	PcS	00 50 39.9	-0.2
HHC				SCS	ScS	00 54 13.4	-0.4
HHC				AMB	AMB		
	comp=Z,17nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,123nm,6.1s						
XAN	**Xi'an**	**26.98**	**287**	P	**P**	**00 43 43.5**	**-1.2**
XAN				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.7						
CLNS	**Chul'man**	**28.89**	**342**	eP	**P**	**00 44 01.7**	**+0.3**
CLNS				e		00 47 11.6	
CLNS				eS	**S**	**00 48 39.0**	**-1.0**
CLNS				pmax	pmax		
	comp=Z,67nm,0.6s,mb5.5						
CLNS				pmax	pmax		
	comp=N,70nm,0.9s						
CLNS				pmax	pmax		
	comp=E,29nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=E,11nm,0.8s						
CLNS				smax			
	comp=E,8.0nm,0.9s						
CLNS				smax			
	comp=Z,3.0nm,1.0s						
CLNS				smax			
	comp=N,5.0nm,0.6s						
CIT	**Chita**	**29.58**	**325**	eP	**P**	**00 44 08.1**	**+0.6**
GYA	**Guiyang**	**29.94**	**271**	P	**P**	**00 44 09.8**	**-1.3**
GYA				AP	pP	00 44 45.8	+1.9
GYA				XP	sP	00 45 03.3	+1.5
GYA				PP	PP	00 45 16.0	-5.7
GYA				PCP	PcP	00 47 12.2	+2.4
GYA				S	**S**	**00 48 56.5**	**-0.7**
GYA				XS	sS	00 49 53.9	-1.1
GYA				SCP	ScP	00 50 38.5	+1.1
GYA				SS	SS	00 50 44.2	-27
GYA				PCS	PcS	00 50 54.4	+0.9
GYA				SCS	ScS	00 54 32.4	-0.7
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,240nm,5.7s						
GYA				LR	LR		
	comp=N,460nm,15.8s						
GYA				LR	LR		
	comp=E,480nm,16.4s						
GYA				LR	LR		
	comp=Z,430nm,15.9s						
MA2	**Magadan**	**30.30**	**10**	eP	**P**	**00 44 15.9**	**+2.2**
	comp=Z,20nm,0.8s,mb4.9						
MA2	**Magadan**	**30.30**	**10**	eP	**P**	**00 44 15.7**	**+1.9**
MA2				e		00 44 56.1	
MA2				pmax	pmax		
	comp=Z,200nm,0.9s,mb5.8						
LZH	**Lanzhou**	**31.15**	**291**	⇑P	**P**	**00 44 21.0**	**-0.6**
LZH				AP	pP	00 44 51.2	-3.3
LZH				XP	sP	00 45 07.8	-4.6
LZH				PP	PP	00 45 29.1	-5.8
LZH				eS	**S**	**00 49 13.8**	**-2.0**
LZH				SS	SS	00 51 09.5	-26
LZH				AMB	AMB		
	comp=Z,31nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,157nm,4.5s						
LZH				LR	LR		
	comp=E,798nm,14.4s						
LZH				LR	LR		
	comp=Z,1µm,15.9s						
ULN	**Ulaanbaatar**	**31.15**	**314**	eP	**P**	**00 44 21.4**	**0.0**
	comp=Z,10nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**31.15**	**314**	⇑eP	**P**	**00 44 21.6**	**+0.2**
SONM	**Songino Array**	**31.55**	**314**	P	**P**	**00 44 25.1**	**+0.2**
SONM						00 47 15.0	
SONM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				pmax	pmax		
	comp=N,1.0nm,1.0s						
SONM	**Songino Array**	**31.55**	**314**	P	**P**	**00 44 25.1**	**+0.2**
	comp=N,8.4nm,1.0s,mb4.4,baz=116,slow=7.1,SNR=45						
SONM				PcP	PcP	00 47 15.0	+1.3
	comp=N,1.1nm,0.7s,baz=117,slow=2.7,SNR=3.9						
SONM				ScP	ScP	00 50 44.3	+2.0
	comp=N,1.1nm,0.9s,baz=135,slow=4.8,SNR=4.8						
CD2	**Chengdu**	**31.57**	**281**	eP	**P**	**00 44 24.4**	**-0.9**
CD2				AP	pP	00 44 54.4	-3.8
CD2				XP	sP	00 45 11.0	-5.2
CD2				PP	PP	00 45 34.6	-5.1
CD2				S	**S**	**00 49 20.3**	**-2.2**
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						

YAK Yakutsk 32.72 351 *e*P **P** **00 44 35.5 +0.5**
comp=Z,44nm,0.9s,mb5.2
YAK Yakutsk 32.72 351 *d i*P **P** **00 44 35.5 +0.5**
YAK pmax pmax
comp=Z,71nm,1.7s,mb5.1
BOD Bodaibo 33.22 334⇓ *i*P **P** **00 44 39.9 +0.5**
BOD pmax pmax
comp=Z,14nm,1.2s,mb4.6
KMI Kunming 33.71 271 P **P** **00 44 43.6 -0.4**
KMI AP pP 00 45 17.3 +0.1
KMI S **S** **00 49 56.2 +0.4**
KMI SS SS 00 52 10.1 -18
KMI AMB AMB
comp=Z,15nm,0.7s,mb4.8
KMI AMB AMB
comp=Z,90nm,6.7s
KMI LR LR
comp=N,251nm,21.2s
KMI LR LR
comp=E,131nm,17.9s
KMI LR LR
comp=Z,140nm,17.9s
ZAK Zakamensk 34.40 317 *e*P **P** **00 44 49.4 -0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
GTA Gaotai 34.44 297 *e*P **P** **00 44 49.2 -1.0**
GTA AP pP 00 45 18.9 -4.5
GTA PP PP 00 46 08.4 -2.9
GTA PCP PcP 00 47 23.4 +1.4
GTA S **S** **00 50 04.9 -1.9**
GTA SCP ScP 00 50 54.6 +2.1
GTA SS SS 00 52 23.7 -14
GTA AMB AMB
comp=Z,3.0nm,0.9s,mb4.0
GTA AMB AMB
comp=Z,220nm,6.1s
GTA LR LR
comp=N,229nm,14.4s
GTA LR LR
comp=E,224nm,16.0s
GTA LR LR
comp=Z,248nm,15.6s
TLY Talaya 34.69 319 *e*P **P** **00 44 53.1 +1.0**
TLY Talaya 34.69 319 *e*P **P** **00 44 53.1 +1.0**
TLY pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
MOY Mondy 36.21 318 *e*P **P** **00 45 05.6 +0.5**
KKTK Khon Kaen 37.04 257⇑ P **P** **00 45 12.3 -0.3**
comp=Z,56nm,4.0s
CHG Chiang Mai 39.25 263⇓ P **P** **00 45 30.2 -0.8**
comp=Z,2.3nm,19.9s
CHTO Chiang Mai 39.25 263 *e*P **P** **00 45 30.2 -0.9**
comp=Z,36nm,0.8s,mb5.0
CHTO Chiang Mai 39.25 263 *e*P **P** **00 45 30.2 -0.8**
CHTO pmax pmax
comp=Z,36nm,0.8s,mb5.0
BILL Bilibino 40.91 14⇑ *e*P **P** **00 45 46.0 +2.0**
BILL *e**PP pP 00 46 27.4 +9.3
BILL pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
TIXI Tiksi 42.09 355 *e*P **P** **00 45 54.5 +0.8**
TIXI Tiksi 42.09 355⇓ *e*P **P** **00 45 54.3 +0.7**
TIXI pmax pmax
comp=Z,12nm,1.1s,mb4.4
COEN Coen 43.87 176 *e*P **P** **00 46 08.4 -0.1**
comp=Z,8.8nm,0.9s,mb4.4
TAPN Taplejung 46.03 280 *e*P **P** **00 46 24.6 -1.0**
comp=Z,7.8nm,0.8s,mb4.4
ZALV Zalesovo Beam 46.27 318 P **P** **00 46 26.3 -0.7**
comp=Z,7.4nm,0.7s,mb4.4,baz=101,slow=7.7,SNR=46
ZALV PcP PcP 00 48 00.1 +0.3
comp=Z,15nm,0.8s,baz=108,slow=3.7,SNR=18
ZALV ScP ScP 00 51 39.8 +1.3
comp=Z,1.3nm,0.7s,baz=112,slow=3.5,SNR=6.5
ZAL Zalesovo 46.28 317 P **P** **00 46 26.3 -0.8**
ZAL 00 48 00.1
ODAN Odare 46.44 280 *e*P **P** **00 46 28.1 -0.7**
comp=Z,20nm,0.8s,mb4.8
JIRN Jiri 47.23 281 *e*P **P** **00 46 34.4 -0.6**
comp=Z,18nm,0.6s,mb4.9
NVS Novosibirsk 47.30 319 *e*P **P** **00 46 34.4 -0.7**
NVS *e* 00 48 03.6
NVS *e* 00 56 12.9
NVS pmax pmax
comp=Z,12nm,0.8s,mb4.6
NVS pmax pmax
comp=E,15nm,0.8s
TNA Tin City 47.34 26 *e*P **P** **00 46 33.3 -1.9**
MK31 Makanchi Array 47.45 308 *e*P **P** **00 46 35.2 -1.1**
MK31 *e*PcP PcP 00 48 04.8 +0.7
MKAR Makanchi Array 47.45 308 P **P** **00 46 35.4 -0.9**
MKAR PcP PcP 00 48 04.4 +0.2
MKAR ScP ScP 00 51 44.6 +1.0
MKAR Makanchi Array 47.45 308 *i* P **P** **00 46 35.4 -0.9**
MKAR pmax pmax
comp=Z,10.0nm,0.8s
MKAR Makanchi Array 47.45 308 P **P** **00 46 35.4 -0.9**
comp=Z,9.7nm,0.8s,mb4.5,baz=90,slow=8.9,SNR=103
MKAR PcP PcP 00 48 04.4 +0.2
comp=Z,5.2nm,0.9s,baz=98,slow=4.3,SNR=6.9
MKAR ScP ScP 00 51 44.6 +1.0
comp=Z,0.7nm,0.8s,baz=79,slow=5.3,SNR=5.7
PSI Prapat 47.78 243 P **P** **00 46 38.2 -1.1**
PSI Prapat 47.78 243 P **P** **00 46 38.2 -1.1**
PSI pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
PSI Prapat 47.78 243 P **P** **00 46 38.2 -1.1**
comp=Z,9.1nm,0.7s,mb4.5,baz=65,slow=4.6,SNR=9.1
KKN Kakani 47.97 282 *e*P **P** **00 46 38.7 -2.0**
GKN Gorkha 48.45 282 *e*P **P** **00 46 43.3 -1.1**
comp=Z,14nm,0.8s,mb4.7
KURK Kurchatov 49.84 313 *e*P **P** **00 46 53.3 -1.2**
comp=Z,21nm,1.0s,mb4.7
KURK Kurchatov 49.84 313 *d i*P **P** **00 46 53.4 -1.2**
WRA Warramunga Arr 50.09 188 P **P** **00 46 54.2 -2.5**
WRA *PP pP 00 47 24.2 -7.9
WRA pmax pmax
comp=Z,2.0nm,0.3s
WRA pmax pmax
comp=N,6.0nm,0.9s
WRA pmax pmax
comp=N,2.0nm,1.0s
WRA Warramunga Arr 50.09 188 P **P** **00 46 54.2 -2.5**
comp=N,1.5nm,0.3s,mb4.1,baz=6.7,slow=7.7,SNR=72
WRA pP pP 00 47 24.2 -7.9
comp=N,6.3nm,0.8s,baz=7.9,slow=8.3,SNR=8.6
WRA ScP ScP 00 51 54.7 -0.3
comp=N,2.3nm,0.9s,baz=4.0,slow=4.6,SNR=6.2
TKM2 Tokmak 2 52.51 303 P **P** **00 47 15.0 +0.5**
SNR=5.2
KDAK Kodiak Island 52.91 38 P **P** **00 47 18.7 +1.5**
comp=N,4.0nm,0.3s,mb4.6,baz=292,slow=21,SNR=14
KBK Karagaybulak 53.02 303 P **P** **00 47 19.2 +0.9**
SNR=17
AAK Ala-Archa 53.35 303 *e*P **P** **00 47 20.3 -0.5**
AAK Ala-Archa 53.35 303 *c i*P **P** **00 47 20.0 -0.7**
AAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
AAK Ala-Archa 53.35 303 P **P** **00 47 21.3 +0.6**
SNR=6.3
UCH Uchtor 53.41 302 *e*P **P** **00 47 21.8 +0.6**
comp=Z,11nm,0.9s,mb4.6
UCH *e*PcP PcP 00 48 27.7 +1.4
UCH Uchtor 53.41 302 P **P** **00 47 22.1 +1.0**
SNR=11
ASAR Alice Springs 53.82 187 P **P** **00 47 22.0 -2.2**
ASAR pmax pmax
comp=Z,1.0nm,0.3s
ASAR Alice Springs 53.82 187 P **P** **00 47 22.0 -2.2**
comp=Z,1.0nm,0.3s,mb4.0,baz=1.0,slow=4.3,SNR=22
AML Almayashu 54.02 302 *e*P **P** **00 47 26.0 +0.4**
comp=Z,28nm,1.0s,mb5.0
AML *e*PcP PcP 00 48 28.5 -0.1
AML Almayashu 54.02 302 P **P** **00 47 26.4 +0.8**
SNR=16
BRVK Borovoye 54.91 316 *e*P **P** **00 47 31.8 0.0**
COLA College 55.42 29 *i*P **P** **00 47 43.0 +7.7**
KK31 Karatay Array 56.15 304 *i*P **P** **00 47 40.1 -0.8**
KK31 pmax pmax
comp=Z,24nm,0.9s,mb5.0
DZM Mont Dzumac 57.56 151 P **P** **00 47 50.9 0.0**
comp=Z,1.9nm,0.4s,mb4.2,baz=119,slow=23,SNR=12
DZM pP pP 00 48 18.9 -8.3
comp=Z,4.9nm,0.9s,baz=299,slow=3.1,SNR=3.5
KBL Kabul 59.38 295 *e*P **P** **00 48 02.3 -1.3**
SVE Sverdlovsk 59.95 321⇑ *e*P **P** **00 48 07.9 +0.8**
SVE *e*S **S** **00 56 23.2 +16**
SVE pmax pmax
comp=Z,43nm,0.7s,mb5.4
INK Inuvik 60.95 25 P **P** **00 48 13.6 0.0**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 60.95 25 P **P** **00 48 13.6 -0.1**
comp=Z,3.0nm,0.8s,mb4.2,baz=312,slow=5.8,SNR=4.6
ARU Arti 61.16 321 *e*P **P** **00 48 15.6 +0.4**
ARU Arti 61.16 321 *d i*P **P** **00 48 15.4 +0.2**
ARU *e* 00 50 30.7
ARU *e*S **S** **00 56 23.1 +1.1**
ARU SS SS 01 00 21.1 -3.0
ARU pmax pmax
comp=Z,80nm,1.0s,mb5.5
SOKR Solikamsk 61.45 325⇑ *i*P **P** **00 48 18.3 +1.1**
SOKR pmax pmax
comp=Z,110nm,2.0s,mb5.3
STKA Stephens Creek 61.64 179 P **P** **00 48 17.4 -1.3**
comp=Z,2.4nm,0.5s,mb4.3,baz=327,slow=3.4,SNR=2.8
PRGR Permogore 66.22 329⇓ *i*P **P** **00 48 49.2 +0.9**
PRGR *e**PP pP 00 49 25.2 -0.3
PRGR *e*S S 00 57 21.8 -2.7
PRGR *e*SSS 01 04 52.1
PRGR pmax pmax
comp=Z,77nm,1.1s,mb5.5
APA Apatity 68.72 337⇑ *i*P **P** **00 49 05.0 +1.1**
APA pmax pmax
comp=Z,26nm,1.0s,mb4.9
RES Resolute Bay 69.51 14 *e*P **P** **00 49 10.7 +2.0**
KEV Kevo 69.67 340 *e*p **P** **00 49 10.6 +0.9**
comp=Z,20nm,0.9s,mb4.8
KEV Kevo 69.67 340 *e*P **P** **00 49 10.6 +0.9**
KEV pmax pmax
comp=Z,20nm,0.9s,mb4.8
ARCES ARCESS Array B 70.23 340 P **P** **00 49 14.8 +1.7**
ARCES ARCESS Array B 70.23 340 P **P** **00 49 14.8 +1.7**
ARCES pmax pmax
comp=Z,20nm,0.9s
ARCES ARCESS Array B 70.23 340 P **P** **00 49 14.8 +1.7**
comp=Z,20nm,0.9s,mb4.8,baz=69,slow=8.5,SNR=38
YKA Yellowknife Ar 70.23 28 P **P** **00 49 14.6 +1.4**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 70.23 28 P **P** **00 49 14.6 +1.4**
comp=Z,2.1nm,0.6s,mb4.1,baz=294,slow=6.3,SNR=37
JOF Joensuu 71.74 333 *e*p **P** **00 49 22.3 0.0**
comp=Z,36nm,0.7s,mb5.2
JOF Joensuu 71.74 333 *e*P **P** **00 49 22.3 0.0**
JOF pmax pmax
comp=Z,36nm,0.7s,mb5.2
VRHR Novokhopersk 72.36 319 *e*P **P** **00 49 26.2 0.0**
VRHR pmax pmax
comp=Z,40nm,0.6s,mb5.3
VRHR pmax pmax
comp=N,5.0nm,0.3s
VRHR pmax pmax
comp=E,20nm,0.6s
MOS Moscow 72.40 325 *e*P **P** **00 49 26.4 0.0**
MOS *e* 00 59 25.2
MOS pmax pmax
comp=Z,99nm,1.1s,mb5.5
OBN Obninsk 73.23 324⇓ *e*P **P** **00 49 31.8 +0.5**
OBN *e**PP pP 00 49 57.9 -11
OBN *e* 00 52 17.5
OBN *e*S S 00 58 48.2 +1.7
OBN pmax pmax
comp=Z,64nm,0.9s,mb5.3
VRSR Storozhevoye 73.68 320 *e*P **P** **00 49 34.8 +0.8**
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.5
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,0.9s
KAF Kangasniemi 74.14 334 *e*p **P** **00 49 36.4 0.0**
comp=E,26nm,0.6s,mb5.1,baz=53,slow=5.4
KAF Kangasniemi 74.14 334 *e*P **P** **00 49 36.4 0.0**
KAF pmax pmax
comp=Z,26nm,0.6s,mb5.1
FINES FINESS Array B 74.61 333 P **P** **00 49 40.0 +0.8**
FINES pmax pmax
comp=Z,15nm,0.7s
FINES FINESS Array B 74.61 333 P **P** **00 49 40.0 +0.9**
comp=Z,15nm,0.7s,mb4.8,baz=65,slow=6.1,SNR=112
ZEI Tsey 74.67 311 *e*P **P** **00 49 39.8 -0.1**
ZEI pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
KIV Kislovodsk 74.92 312 *e*P **P** **00 49 41.8 +0.5**
comp=Z,26nm,0.9s,mb4.9
KIV Kislovodsk 74.92 312⇑ *e*P **P** **00 49 42.5 +1.2**
KIV pmax pmax
comp=Z,23nm,0.8s,mb4.9
VSU Vasula 76.06 330 *d i*P **P** **00 49 48.5 +1.0**
RAR Rarotonga 76.82 124 P **P** **00 49 52.8 +0.5**
RAR pmax pmax
comp=Z,20nm,0.4s
RAR Rarotonga 76.82 124 P **P** **00 49 52.8 +0.5**
comp=Z,20nm,0.4s,mb5.1,baz=152,slow=7.5,SNR=3.0
SOC Sochi 77.00 313 *e*P **P** **00 49 52.1 -1.0**
SOC *e* 00 50 01.5
SOC *e**PP pP 00 50 19.9 -11
SOC *e**SP sP 00 50 37.4 -11
SOC *e*S S 00 59 27.5 -1.0
SOC *e* 00 59 54.8
SOC pmax pmax
comp=Z,18nm,1.1s,mb4.6
ANN Anapa 77.82 315 *e*P **P** **00 49 57.7 +0.1**
ANN pmax pmax
comp=Z,51nm,0.9s,mb5.2
UMR Umm Al-Rimmam 77.98 297 *e*P **P** **00 49 57.8 -1.0**
UMR AMb AMB 00 49 58.7
comp=Z,20nm,0.6s,mb4.9
MIB Mutribah 78.15 298 *e*P **P** **00 49 58.5 -1.3**
MIB AMb AMB 00 49 59.7
comp=Z,36nm,0.6s,mb5.2
QRN Al-Qurain 78.19 296 *e*P **P** **00 49 59.1 -0.9**
QRN AMb AMB 00 50 03.6
comp=Z,29nm,1.0s,mb4.8
RDF Al-Radifah 78.40 297 *e*P **P** **00 50 00.2 -0.9**
RDF AMb AMB 00 50 01.1
comp=Z,34nm,0.7s,mb5.1
NAY Al-Naaiem 78.48 297 *e*P **P** **00 50 00.4 -1.1**
NAY AMb AMB 00 50 01.5
comp=Z,22nm,0.7s,mb4.9
AKASG Malin Array Be 79.33 323 *i* P **P** **00 50 06.0 +0.2**
AKASG pmax pmax
comp=Z,20nm,0.7s
AKASG Malin Array Be 79.33 323 P **P** **00 50 06.0 +0.3**
comp=Z,20nm,0.7s,mb4.9,baz=50,slow=5.5,SNR=108
KIEV Kiev 79.34 323 *e*P **P** **00 50 05.6 -0.3**
comp=Z,29nm,0.7s,mb5.0
KIEV Kiev 79.34 323 *e*P **P** **00 50 05.6 -0.2**
KIEV pmax pmax
comp=Z,29nm,0.7s,mb5.0
SIM Simferopol' 79.76 316 *e*P **P** **00 50 08.1 -0.1**
SIM pmax pmax
comp=Z,21nm,0.9s,mb4.8
NB2 NORSAR Subarra 80.28 338 P **P** **00 50 11.3 +0.6**
comp=Z,14nm,0.9s,mb4.6,baz=44,slow=5.6
NB2 NORSAR Subarra 80.28 338 P **P** **00 50 11.3 +0.6**
NB2 pmax pmax
comp=Z,15nm,0.9s,mb4.6
NOA NORSAR Array B 80.28 338 P **P** **00 50 11.7 +1.0**
NOA 00 53 16.7
NOA pmax pmax
comp=Z,9.0nm,0.8s
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA NORSAR Array B 80.28 338 P **P** **00 50 11.7 +1.0**
comp=Z,9.4nm,0.8s,mb4.5,baz=42,slow=5.3,SNR=22
NOA PP PP 00 53 16.6 +1.9
comp=Z,2.0nm,0.8s,baz=46,slow=8.7,SNR=3.9
SUW Suwalki 80.33 328 *e*P **P** **00 50 11.7 +0.7**
MALT Malatya 80.47 309 P **P** **00 50 13.7 +1.5**
IAS Iasi 82.26 321 P **P** **00 50 22.1 +0.7**
IAS Iasi 82.26 321⇓ *i*P **P** **00 50 22.1 +0.7**
LVV L'vov 82.53 324 *e*P **P** **00 50 22.7 0.0**
HWUT Hardware Ranch 82.55 46 *e*P **P** **00 50 24.9 +1.9**
comp=Z,2.7nm,0.8s,mb4.0
KWP Kalwaria 83.32 325 *e*P **P** **00 50 28.0 +1.2**
ANTO Ankara 83.35 312 *e*P **P** **00 50 25.8 -1.3**
comp=Z,44nm,1.4s,mb5.0
ANTO Ankara 83.35 312 *e*P **P** **00 50 25.8 -1.4**
ANTO pmax pmax
comp=Z,44nm,1.4s,mb5.0
VRI Vrincioaia 83.52 320 P **P** **00 50 30.3 +2.4**
HARR Harsova 83.54 318 P **P** **00 50 29.2 +1.1**
PLOR Plostina 83.57 320 P **P** **00 50 29.4 +1.2**
KOLS Kolonicke sedl 83.98 324 *e*P **P** **00 50 31.1 +0.9**
MLR Muntele Rosu 84.18 320 P **P** **00 50 32.3 +1.0**
STHS Stebnicka Huta 84.19 325 *e*P **P** **00 50 32.5 +1.3**
comp=Z,9.9nm,0.9s,mb4.5
STHS Stebnicka Huta 84.19 325 *e*P **P** **00 50 32.5 +1.3**
STHS pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
OJC Ojcow 84.37 326 *e*P **P** **00 50 32.8 +0.7**
CRVS Cervenica-Dubn 84.41 325 *e*P **P** **00 50 33.5 +1.1**
NIE Niedzica 84.64 325 *e*P **P** **00 50 34.7 +1.2**
DRGR 85.13 322 P **P** **00 50 37.0 +1.0**
KECS Kecovo 85.18 325 *e*P **P** **00 50 37.1 +0.9**
comp=Z,4.0nm,1.0s,mb4.1
KECS Kecovo 85.18 325 *e*P **P** **00 50 37.1 +0.9**
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
OKC Ostrava-Krasne 85.41 327 *e*P **P** **00 50 37.8 +0.5**
RUE Ruedersdorf 85.54 331 *e*P **P** **00 50 38.7 +0.8**
comp=Z,29nm,1.1s,mb4.9
KSP Ksiaz 85.58 328 *e*P **P** **00 50 39.1 +1.0**
KSP Ksiaz 85.58 328 *e*P **P** **00 50 38.9 +0.7**
MORC Moravsky Berou 85.74 327 *e*P **P** **00 50 39.2 +0.3**
comp=Z,9.0nm,1.1s,mb4.4
MORC Moravsky Berou 85.74 327 *e*P **P** **00 50 39.2 +0.2**
MORC pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
BSEG Bad Segeberg 85.89 333 *e*P **P** **00 50 40.2 +0.6**
BSEG pmax pmax
comp=Z,28nm,1.3s,mb4.8
BSEG Bad Segeberg 85.89 333 *e*P **P** **00 50 40.2 +0.6**
comp=Z,28nm,1.3s,mb4.8
DPC Dobruska-Polom 85.91 328 *e*P **P** **00 50 40.6 +0.8**
UPC Upice 85.95 328 *e*P **P** **00 50 40.8 +0.8**
VYHS Vyhne 85.99 325 *i* P **P** **00 50 41.2 +1.0**
comp=Z,7.4nm,1.0s,mb4.4
VYHS Vyhne 85.99 325 *i* P **P** **00 50 41.2 +1.0**
VYHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
KOLL Kolacno 86.14 326 *i* P **P** **00 50 42.0 +1.0**
BZS Buzias 86.47 322 P **P** **00 50 42.8 +0.2**
PVCC Panska Ves 86.59 329 *e*P **P** **00 50 44.0 +0.9**
BRG Berggiesshubel 86.62 329 *i* P **P** **00 50 43.5 +0.3**
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.4
BRG Berggiesshubel 86.62 329 *e*P **P** **00 50 43.5 +0.3**
comp=Z,12nm,1.1s,mb4.6
BRG Berggiesshubel 86.62 329 *i* P **P** **00 50 43.5 +0.2**
comp=Z,12nm,1.1s,mb4.6
CLL Collm 86.72 330⇓ *i*P **P** **00 50 43.6 -0.1**
comp=Z,15nm,1.1s,mb4.7
CLL *es*P sP 00 51 36.0 -3.2
CLL Collm 86.72 330⇓ *i*P **P** **00 50 43.6 -0.1**
CLL pmax pmax
comp=Z,466nm,1.1s
CLL Collm 86.72 330⇓ *i*P **P** **00 50 43.6 -0.1**
comp=Z,15nm,1.1s,mb4.7
CLL *es*P sP 00 51 36.0 -3.2
CLL Collm 86.72 330 *e*P **P** **00 50 43.7 0.0**
comp=Z,15nm,1.1s,mb4.7
MODS Modra-Piesok 86.83 326 *e*P **P** **00 50 45.5 +1.2**
comp=Z,6.3nm,1.1s,mb4.4
MODS Modra-Piesok 86.83 326 *e*P **P** **00 50 45.5 +1.2**
MODS pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
FBE Freiberg 86.84 330 *e*P **P** **00 50 44.9 +0.6**
comp=Z,18nm,1.2s,mb4.8
PRU Pruhonice 86.98 328 *e*P **P** **00 50 45.3 +0.3**
ZST Bratislava 87.04 326 *e*P **P** **00 50 45.1 -0.2**
comp=Z,4.2nm,0.7s,mb4.4
ZST Bratislava 87.04 326 *e*P **P** **00 50 45.1 -0.2**
ZST pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
TREC Trest 87.04 328 *e*P **P** **00 50 46.0 +0.7**
CLZ Clausthal 87.43 332 *e*P **P** **00 50 48.2 +1.1**
CLZ pmax pmax
comp=Z,23nm,1.4s,mb4.8
CLZ Clausthal 87.43 332 *e*P **P** **00 50 48.2 +1.1**
comp=Z,23nm,1.4s,mb4.8
WERD Werda 87.64 330 *e*P **P** **00 50 47.9 -0.3**
comp=Z,13nm,1.3s,mb4.6
GUNZ Gunzen 87.70 330 *e*P **P** **00 50 48.2 -0.2**
comp=Z,8.0nm,1.0s,mb4.5
KHC Kasperske Hory 88.04 328 *i* P **P** **00 50 49.4 -0.6**
KHC Kasperske Hory 88.04 328 *e*P **P** **00 50 50.3 +0.3**
IBBN Ibbenburen 88.13 333 *e*P **P** **00 50 50.6 +0.2**
comp=Z,25nm,1.1s,mb5.0
GEC2 GERESS Array S 88.19 328 *e*P **P** **00 50 51.0 +0.2**
GEC2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
GEC2 GERESS Array S 88.19 328 *e*P **P** **00 50 51.0 +0.2**
comp=Z,9.0nm,0.9s,mb4.6
GERES GERESS Array B 88.19 328 P **P** **00 50 51.2 +0.4**
GERES 00 54 21.5
GERES pmax pmax
comp=Z,6.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 88.19 328 P **P** **00 50 51.2 +0.4**
comp=Z,5.7nm,0.7s,mb4.5,baz=44,slow=4.4,SNR=57
GERES PP PP 00 54 21.5 +2.3
comp=Z,0.9nm,0.7s,baz=46,slow=7.6,SNR=4.9
ROTZ Rotzenmuhle 88.19 329 *e*P **P** **00 50 50.7 0.0**
comp=Z,22nm,1.5s,mb4.8
GRA1 Grafenberg Arr 88.67 330 *e*P **P** **00 50 53.3 +0.3**
comp=Z,22nm,1.2s,mb5.0
GRF Grafenberg Arr 88.67 330 *e*P **P** **00 50 53.3 +0.3**
GRF pmax pmax
comp=Z,22nm,1.2s,mb5.0
GRF Grafenberg Arr 88.67 330 *e*P **P** **00 50 53.3 +0.3**
GRF pmax pmax
comp=Z,22nm,1.2s,mb5.0
GRF Grafenberg Arr 88.67 330 *e*P **P** **00 50 53.3 +0.3**
comp=Z,22nm,1.2s,mb5.0
KBA Koelnbreinsper 89.63 327⇑ *i*P **P** **00 50 57.7 +0.2**
comp=Z,9.9nm,0.9s,mb4.7
KBA Koelnbreinsper 89.63 327⇑ *i*PcP PcP 00 50 57.7 -1.1
comp=Z,9.9nm,0.9s
KBA Koelnbreinsper 89.63 327⇑ *i*P **P** **00 50 57.7 +0.1**
KBA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
FUR Furstenfeldbru 89.78 329 *e*P **P** **00 50 59.0 +0.7**
FUR pmax pmax
comp=Z,27nm,0.9s,mb5.2
FUR Furstenfeldbru 89.78 329 *e*P **P** **00 50 59.0 +0.7**
comp=Z,27nm,0.9s,mb5.2
STU Stuttgart 90.25 330 *e*P **P** **00 51 01.0 +0.6**
comp=Z,19nm,1.2s,mb4.9
ABTA Abfaltersbach 90.26 327⇑ *i*P **P** **00 50 59.1 -1.4**
comp=Z,21nm,0.9s,mb5.1
FETA Feichten 90.88 328⇑ *i*PcP PcP 00 51 03.9 -0.4
comp=Z,18nm,0.9s
BFO Black Forest 90.95 330 *e*P **P** **00 51 03.7 0.0**
BFO pmax pmax
comp=Z,21nm,1.1s,mb5.1
BFO Black Forest 90.95 330 *e*P **P** **00 51 03.7 0.0**
comp=Z,21nm,1.1s,mb5.1
DAVA Damuels 91.07 329⇑ *i*P **P** **00 51 05.0 +0.7**
comp=Z,30nm,1.0s,mb5.3
DAVA Damuels 91.07 329⇑ *i*PcP PcP 00 51 05.0 -0.2
comp=Z,30nm,1.0s
BAIF Baives 91.28 334 *e*P **P** **00 51 04.6 -0.6**
CDF Champ du Feu 91.34 331 *e*P **P** **00 51 05.0 -0.5**
comp=Z,40nm,1.2s,mb5.0
CDF Champ du Feu 91.34 331 *e*P **P** **00 51 05.0 -0.5**
comp=Z,20nm,1.2s,mb5.0
CDF Champ du Feu 91.34 331 *e*P **P** **00 51 05.0 -0.5**
CDF pmax pmax
comp=Z,20nm,1.2s,mb5.0
HINF Hinteralfeld 91.98 331 *e*P **P** **00 51 07.6 -0.9**
comp=Z,23nm,1.1s,mb4.8
HINF Hinteralfeld 91.98 331 *e*P **P** **00 51 07.6 -0.9**
comp=Z,12nm,1.1s,mb4.8
HINF Hinteralfeld 91.98 331 *e*P **P** **00 51 07.6 -0.9**
HINF pmax pmax
comp=Z,12nm,1.1s,mb4.8
HAU Haudompre 92.04 331 *e*P **P** **00 51 08.0 -0.7**
comp=Z,14nm,1.0s,mb4.6
HAU Haudompre 92.04 331 *e*P **P** **00 51 08.0 -0.7**
comp=Z,6.8nm,1.0s,mb4.6
HAU Haudompre 92.04 331 *e*P **P** **00 51 08.0 -0.7**
HAU pmax pmax
comp=Z,7.0nm,1.0s,mb4.7

MEZF	Maizieres J'vi	92.19	332	eP	P	00 51 09.2	-0.2
CABF	La Chapelle	93.25	330	eP	P	00 51 13.7	-0.6
LOR	Lormes	93.66	332	eP	P	00 51 15.6	-0.6
	comp=Z,36nm,1.1s,mb5.1						
LOR	Lormes	93.66	332	eP	P	00 51 15.6	-0.6
	comp=Z,18nm,1.1s,mb5.1						
LOR	Lormes	93.66	332	eP	P	00 51 15.6	-0.6
LOR				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
LPL	La Plagne	93.82	329	eP	P	00 51 15.7	-1.3
	comp=Z,19nm,0.9s,mb5.0						
LPL	La Plagne	93.82	329	eP	P	00 51 15.7	-1.3
	comp=Z,9.6nm,0.9s,mb4.9						
LPL	La Plagne	93.82	329	eP	P	00 51 15.7	-1.3
LPL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
LPG	La Plagne	93.83	329	eP	P	00 51 15.9	-1.1
	comp=Z,15nm,0.7s,mb4.9						
LPG	La Plagne	93.83	329	eP	P	00 51 15.9	-1.1
	comp=Z,7.6nm,0.7s,mb4.9						
LPG	La Plagne	93.83	329	eP	P	00 51 15.9	-1.1
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0						
SSF	Saint Saulge	93.97	332	eP	P	00 51 17.1	-0.5
	comp=Z,23nm,1.0s,mb5.0						
SSF	Saint Saulge	93.97	332	eP	P	00 51 17.1	-0.5
	comp=Z,12nm,1.0s,mb5.0						
SSF	Saint Saulge	93.97	332	eP	P	00 51 17.1	-0.5
SSF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
FLN	La Foliniere	94.10	335	eP	P	00 51 17.3	-0.9
LDF	La Druitiere	94.11	335	eP	P	00 51 17.6	-0.6
SMF	Signal de Mont	94.16	332	eP	P	00 51 18.0	-0.5
	comp=Z,14nm,0.8s,mb4.8						
SMF	Signal de Mont	94.16	332	eP	P	00 51 18.0	-0.5
	comp=Z,7.1nm,0.8s,mb4.8						
SMF	Signal de Mont	94.16	332	eP	P	00 51 18.0	-0.5
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
AVF	Avril sur Loir	94.25	332	eP	P	00 51 18.4	-0.5
	comp=Z,40nm,1.0s,mb5.2						
AVF	Avril sur Loir	94.25	332	eP	P	00 51 18.4	-0.5
	comp=Z,20nm,1.0s,mb5.2						
AVF	Avril sur Loir	94.25	332	eP	P	00 51 18.4	-0.5
AVF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
MBDF	Montbardon	94.42	329	eP	P	00 51 18.9	-0.8
	comp=Z,30nm,1.2s,mb5.0						
MBDF	Montbardon	94.42	329	eP	P	00 51 18.9	-0.8
	comp=Z,15nm,1.2s,mb5.0						
MBDF	Montbardon	94.42	329	eP	P	00 51 18.9	-0.8
MBDF				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.0						
GRR	Gorron	94.55	335	eP	P	00 51 20.0	-0.2
	comp=Z,19nm,1.0s,mb5.0						
GRR	Gorron	94.55	335	eP	P	00 51 20.0	-0.2
	comp=Z,9.6nm,1.0s,mb5.0						
GRR	Gorron	94.55	335	eP	P	00 51 20.0	-0.2
GRR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
BGF	Bois d'Agland	94.64	332	eP	P	00 51 20.2	-0.5
	comp=Z,20nm,1.1s,mb4.9						
BGF	Bois d'Agland	94.64	332	eP	P	00 51 20.2	-0.5
	comp=Z,9.9nm,1.1s,mb5.0						
BGF	Bois d'Agland	94.64	332	eP	P	00 51 20.2	-0.5
BGF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
ORIF	Oris-en-Rattie	94.67	330	eP	P	00 51 20.1	-0.8
	comp=Z,16nm,0.9s,mb4.9						
ORIF	Oris-en-Rattie	94.67	330	eP	P	00 51 20.1	-0.8
	comp=Z,7.9nm,0.9s,mb4.9						
ORIF	Oris-en-Rattie	94.67	330	eP	P	00 51 20.1	-0.8
ORIF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
SBF	Sospel	94.79	328	eP	P	00 51 20.1	-1.4
	comp=Z,21nm,0.7s,mb5.2						
SBF	Sospel	94.79	328	eP	P	00 51 20.1	-1.4
	comp=Z,10nm,0.7s,mb5.2						
SBF	Sospel	94.79	328	eP	P	00 51 20.1	-1.4
SBF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
TXAR	Lajitas Array	94.98	52	P	P	00 51 24.5	+1.9
TXAR				*PP	pP	00 51 56.4	-5.6
TXAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
TXAR	Lajitas Array	94.98	52	P	P	00 51 24.5	+1.9
	comp=N,0.4nm,0.5s,mb3.9,baz=315,slow=2.9,SNR=12						
TXAR				pP	pP	00 51 56.4	-5.6
	comp=N,0.9nm,0.8s,baz=301,slow=2.3,SNR=4.0						
TCF	Toulx Ste Croi	95.11	332	eP	P	00 51 22.6	-0.3
	comp=N,24nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	95.11	332	eP	P	00 51 22.6	-0.3
	comp=N,12nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	95.11	332	eP	P	00 51 22.6	-0.3
TCF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.0						
VIVF	Saint-Julien-l	95.24	330	eP	P	00 51 22.0	-1.5
	comp=Z,8.3nm,0.6s,mb4.8						
VIVF	Saint-Julien-l	95.24	330	eP	P	00 51 22.0	-1.5
	comp=Z,4.2nm,0.6s,mb4.8						
VIVF	Saint-Julien-l	95.24	330	eP	P	00 51 22.0	-1.5
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
SGMF	Saint Gilles	95.27	336	eP	P	00 51 22.5	-1.0
LMR	La Mourre	95.62	328	eP	P	00 51 24.8	-0.5
	comp=Z,158nm,1.7s,mb5.8						
LMR	La Mourre	95.62	328	eP	P	00 51 24.8	-0.5
	comp=Z,79nm,1.7s,mb5.8						
LMR	La Mourre	95.62	328	eP	P	00 51 24.8	-0.5
LMR				pmax	pmax		
	comp=Z,79nm,1.7s,mb5.8						
MFF	Saint Martin d	95.78	334	eP	P	00 51 25.3	-0.6
	comp=Z,43nm,1.5s,mb5.3						
MFF	Saint Martin d	95.78	334	eP	P	00 51 25.3	-0.6
	comp=Z,22nm,1.5s,mb5.3						
MFF	Saint Martin d	95.78	334	eP	P	00 51 25.3	-0.6
MFF				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.3						
TORD	Torodi Ar. Bea	121.49	311	PKP	PKPdf	00 56 53.1	0.0
	comp=Z,1.1nm,0.7s,baz=15,slow=3.5,SNR=4.6						
TORD				PP	PP	00 58 27.2	+1.1
	comp=Z,1.8nm,1.0s,baz=29,slow=3.4,SNR=3.7						
LPAZ	La Paz	150.43	69	PKIKP	PKPbc	00 57 54.4	+3.2
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPAZ	La Paz	150.43	69	PKPbc	PKPbc	00 57 54.4	+3.2
	comp=Z,2.5nm,0.8s,baz=292,slow=5.9,SNR=9.3						

IDC 11 00:41:16.6±1.8, 1780S×17817W, h582km±26km, mb3.5/4, mb1 3.6/6, mb1mx3.3/15, mbtmp3.4/6, Error ellipse: s-maj=99.0km s-min=19.3km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.27	59	P	P	00 43 07.2	-1.2
	5.0nm,0.3s,baz=287,slow=23,SNR=4.9						
DZM	Mont Dzumac	15.08	251	P	P	00 44 26.0	-0.3
	0.4nm,0.3s,baz=112,slow=18,SNR=9.5						
CTA	Charters Tower	33.69	260	eP	P	00 47 11.1	+0.3
	3.1nm,0.8s						
CTA	Charters Tower	33.69	260	P	P	00 47 11.3	+0.5
	3.2nm,0.6s,baz=77,slow=7.9,SNR=7.9						
STKA	Stephens Creek	38.88	241	eP	P	00 47 53.4	+0.1
	4.8nm,0.6s						
STKA	Stephens Creek	38.88	241	P	P	00 47 53.4	+0.1
	7.2nm,0.7s,baz=79,slow=8.9,SNR=6.9						
WRA	Warramunga Arr	44.88	259	P	P	00 48 40.4	-0.1
	2.9nm,0.4s,baz=95,slow=7.1,SNR=26						
ASAR	Alice Springs	45.04	254	P	P	00 48 41.7	0.0
	9.7nm,0.6s,baz=85,slow=8.5,SNR=64						
ASAR				S	S	00 54 38.3	-0.8
	0.7nm,0.8s,baz=91,slow=16,SNR=6.7						
MKAR	Makanchi Array	109.23	314	PKiKP	PKiKP	00 58 39.7	-1.5
	0.2nm,0.6s,baz=141,slow=1.9,SNR=3.3						
GERES	GERESS Array B	147.57	345	PKPbc	PKPbc	00 59 56.6	+0.5
	0.5nm,0.6s,baz=34,slow=3.6,SNR=5.6						

*LDG **11** 01:02:17.9±0.4, 1294S×17000E, h600km, Mb4.4/2, Error ellipse: s-maj=87.4km s-min=17.7km az=105.0*
*ISCJB **11** 01:02:19.1±1.0, 1281S±007×16882E±008, h617km±14km, mb4.5/34, Error ellipse: s-maj=12.2km s-min=9.8km az=164.0*
*NEIC **11** 01:02:19.7±0.9, 1277S×16884E, h608km±9km, mb4.5/17, Error ellipse: s-maj=9.3km s-min=8.3km az=76.0*
*IDC **11** 01:02:21.3±1.2, 1286S×16873E, h625km±15km, mb3.8/18, mb1 3.9/21, mb1mx3.9/22, mbtmp3.8/21, Error ellipse: s-maj=10.8km s-min=10.0km az=130.0*
*BJI **11** 01:02:21.8, 1230S×16844E, h608km, mB4.8, mb4.5*
ISC 11 01:02:20.7±0.9, 1279S±006×16881E±008, h618km±12km, n96, σ0.79/57, mb4.5/34, 2C, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	9.31	290	eP	P	01 04 32.5	-0.7
	571nm,0.9s						
HNR	Honiara	9.31	290	P	P	01 04 32.9	-0.3
	97nm,0.3s,baz=133,slow=1.5,SNR=14						
DZM	Mont Dzumac	9.50	193	eP	P	01 04 34.3	-0.6
DZM	Mont Dzumac	9.50	193	eP	P	01 04 34.3	-0.6
DZM	Mont Dzumac	9.50	193	P	P	01 04 34.6	-0.2
	11nm,0.3s,baz=208,slow=23,SNR=106						
DZM				S	S	01 06 26.9	+2.0
	baz=321,slow=18,SNR=4.2						
AFI	Afiamalu	18.92	96	eP	P	01 06 03.0	-1.0
	24nm,0.5s						
AFI	Afiamalu	18.92	96	P	P	01 06 03.5	-0.5
	5.2nm,0.3s,baz=229,slow=14,SNR=3.6						
PMG	Port Moresby	21.51	277	eP	P	01 06 26.7	-0.6
	12nm,0.8s,mb4.6						
CTA	Charters Tower	22.80	248	⇑iP	P	01 06 38.5	-0.2
	3.8nm,0.4s,mb4.4						
CTA	Charters Tower	22.80	248	P	P	01 06 38.6	0.0
	6.8nm,0.7s,mb4.4,baz=78,slow=10,SNR=15						
CTAO	Charters Tower	22.80	248	eP	P	01 06 38.4	-0.3
	4.5nm,0.4s,mb4.5						
ARMA	Armidale	23.67	219	eP	P	01 06 46.8	+0.6
URZ	Urewera	26.42	165	P	P	01 07 08.8	-1.6
	6.8nm,0.4s,mb4.7,baz=278,slow=2.4,SNR=9.0						
QRZ	Quartz Range	28.12	174	eP	P	01 07 25.5	+0.4
CNB	Canberra Magne	28.50	215	eP	P	01 07 28.5	+0.1
	18nm,0.6s,mb4.9						
RPZ	Rata Peaks	30.88	177	P	P	01 07 47.8	-0.9
	16nm,0.6s,mb4.8,baz=313,slow=2.3,SNR=21						
STKA	Stephens Creek	31.39	228	eP	P	01 07 53.8	+0.5
	6.6nm,0.4s,mb4.6						
STKA	Stephens Creek	31.39	228	P	P	01 07 54.2	+1.0
	8.5nm,0.5s,mb4.7,baz=50,slow=8.2,SNR=32						
STKA				PcP	PcP	01 10 27.4	+0.3
	3.1nm,0.5s,baz=344,slow=2.0,SNR=4.9						
WB2	Warramunga Arr	33.77	253	⇑iP	P	01 08 12.7	-0.8
WRA	Warramunga Arr	33.78	253	P	P	01 08 12.9	-0.7
	14nm,0.3s,mb5.0,baz=84,slow=8.7,SNR=261						
WRA				PcP	PcP	01 10 34.6	+0.4
	1.0nm,0.5s,baz=90,slow=5.8,SNR=4.3						
WRA				S	S	01 12 52.2	-3.3
	4.6nm,0.7s,baz=84,slow=14,SNR=14						
ASAR	Alice Springs	34.78	247	P	P	01 08 21.4	-0.5
	19nm,0.6s,mb4.9,baz=71,slow=9.6,SNR=377						
ASAR				PcP	PcP	01 10 37.8	+0.7
	1.2nm,0.5s,baz=86,slow=3.2,SNR=4.7						
ASAR				S	S	01 13 07.8	-2.6
	3.4nm,0.7s,baz=76,slow=15,SNR=17						
TAU	Tasmania Unive	35.30	208	eP	P	01 08 26.2	+0.4
	14nm,0.7s,mb4.7						
FORT	Forrest	41.58	238	eP	P	01 09 16.6	+0.1
	18nm,0.5s,mb4.9						
FITZ	Fitzroy Crossi	41.87	257	eP	P	01 09 19.3	+0.3
	9.4nm,1.4s,mb4.1						
FITZ	Fitzroy Crossi	41.87	257	eP	P	01 09 18.6	-0.4
	2.8nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	41.87	257	P	P	01 09 18.7	-0.4
	1.1nm,0.3s,mb3.9,baz=71,slow=8.2,SNR=4.9						
BATI	Kupang	44.27	268	P	P	01 09 37.9	+0.2
	20nm,0.5s,mb5.0,baz=126,slow=1.1,SNR=4.9						
CBIJ	Chichi jima	47.33	327	P	P	01 10 00.3	-0.1
	101nm,0.6s,mb5.5,baz=277,slow=18,SNR=6.2						
MBWA	Marble Bar	47.52	253	eP	P	01 10 01.9	-0.2
	5.0nm,0.4s,mb4.4						
KLBR	Kellerberrin	50.36	240	eP	P	01 10 22.2	-0.6
	89nm,1.6s,mb5.0						
NWAO	Narrogin (SRO)	51.03	238	eP	P	01 10 26.7	-1.0
	2.5nm,0.5s,mb3.9						
NWAO	Narrogin (SRO)	51.03	238	P	P	01 10 27.3	-0.3
	4.5nm,0.5s,mb4.2,baz=84,slow=5.8						
MJAR	Matsushiro Arr	56.92	331	P	P	01 11 08.7	0.0
	8.6nm,0.7s,mb4.1,baz=168,slow=7.8,SNR=18						
MAJO	Matsushiro	56.92	331	eP	P	01 11 08.6	-0.1
	12nm,0.7s,mb4.2						
MAT	Matsushiro	56.92	331	P	P	01 11 08.7	0.0
KSRS	Korea Array	63.02	324	P	P	01 11 49.8	+0.9
	3.4nm,0.9s,mb3.7,baz=141,slow=6.4,SNR=6.5						
VNDA	Vanda	64.83	182	P	P	01 11 59.9	+0.1
	2.5nm,0.6s,mb3.8,baz=0.6,slow=5.7,SNR=38						
SBA	Scott Base	65.07	180	eP	P	01 12 02.0	+0.8
	3.4nm,0.6s,mb4.0						
WHN	Wuhan	67.79	311	eP	P	01 12 18.5	-0.3
CN2	Changchun	68.79	328	eP	P	01 12 24.9	+0.4
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.7						
HHC	Hu-ho-hao-te	75.10	319	eP	P	01 13 02.0	+1.0
HHC				AMB	AMB		
	comp=Z,13nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,89nm,5.0s						
CHTO	Chiang Mai	75.67	293	eP	P	01 13 05.3	+0.7
	comp=Z,5.9nm,0.7s,mb4.1						
QSPA	South Pole Qui	77.23	180	eP	P	01 13 12.0	+0.1
	comp=Z,50nm,0.6s,mb5.1						
GAMB	Gambell	77.79	9	eP	P	01 13 14.7	-0.4
LZH	Lanzhou	78.15	311	eP	P	01 13 19.5	+1.8
LZH				AMB	AMB		
	comp=Z,26nm,1.1s,mb4.6						
LZH				AMB	AMB		
	comp=Z,119nm,4.2s						
SONM	Songino Array	81.85	323	P	P	01 13 37.0	+0.4
	comp=Z,3.1nm,0.5s,mb4.1,baz=137,slow=5.4,SNR=49						
GTA	Gaotai	82.42	313	P	P	01 13 41.4	+1.7
GTA				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.5						
MCK	McKinley	82.86	18	eP	P	01 13 40.8	-0.5
	comp=Z,2.7nm,0.3s,mb4.2						
MAW	Mawson	84.23	202	P	P	01 13 48.6	+0.4
	comp=Z,6.0nm,0.6s,mb4.3,baz=103,slow=4.3,SNR=11						
TXAR	Lajitas Array	94.04	61	P	P	01 14 34.9	+0.3
	comp=Z,0.3nm,0.7s,mb3.5,baz=223,slow=6.4,SNR=4.4						
YKA	Yellowknife Ar	95.15	27	P	P	01 14 37.9	-0.9
YKA	Yellowknife Ar	95.15	27	P	P	01 14 37.9	-0.9
	comp=Z,1.8nm,0.8s,mb4.2,baz=256,slow=4.6,SNR=27						
ZALV	Zalesovo Beam	96.72	324	P	P	01 14 45.0	-1.1
	comp=Z,1.4nm,0.7s,mb4.3,baz=126,slow=4.6,SNR=10.0						
MKAR	Makanchi Array	96.84	316	P	P	01 14 47.1	+0.4
	comp=Z,2.6nm,0.6s,mb4.6,baz=84,slow=6.2,SNR=53						
ARCES	ARCESS Array B	118.75	346	PKP	PKPdf	01 19 58.8	-0.5
	comp=Z,2.3nm,0.5s,baz=58,slow=2.2,SNR=58						
JOF	Joensuu	121.65	339	ep	PKPdf	01 20 03.7	-1.3
	comp=Z,3.3nm,0.6s						
KAF	Kangasniemi	123.92	340	ep	PKPdf	01 20 05.5	-3.9
FINES	FINESS Array B	124.47	339	PKP	PKPdf	01 20 10.0	-0.4
FINES	FINESS Array B	124.47	339	PKP	PKPdf	01 20 10.0	-0.4
	comp=Z,0.3nm,0.4s,baz=103,slow=2.1,SNR=9.2						
NOA	NORSAR Array B	129.13	346	PKP	PKPdf	01 20 19.5	+0.1
NOA	NORSAR Array B	129.13	346	PKP	PKPdf	01 20 19.5	+0.1
	comp=Z,1.0nm,0.7s,baz=36,slow=2.6,SNR=3.0						
GERES	GERESS Array B	138.56	335	PKhKP		01 20 30.6	
	comp=Z,0.1nm,0.3s,baz=14,slow=1.7,SNR=4.9						
BAIF	Baives	140.75	344	ePKP1	PKPdf	01 20 40.5	-0.8
CDF	Champ du Feu	141.31	340	ePKP1	PKPdf	01 20 38.2	-4.1
	comp=Z,5.9nm,0.7s						
MEZF	Maizieres J'vi	141.92	342	ePKP1	PKPdf	01 20 40.7	-2.7
HAU	Haudompre	141.96	341	ePKP1	PKPdf	01 20 39.4	-4.1
HINF	Hinteralfeld	141.97	340	ePKP1	PKPdf	01 20 39.3	-4.2
FLN	La Foliniere	143.05	348	ePKP1	PKPdf	01 20 43.1	-2.3
	comp=Z,24nm,0.7s						
LDF	La Druitiere	143.14	348	ePKP1	PKPdf	01 20 43.3	-2.3
CABF	La Chapelle	143.27	340	ePKP1	PKPdf	01 20 44.8	-1.1
	comp=Z,18nm,0.7s						
LOR	Lormes	143.38	343	ePKP1	PKPdf	01 20 44.6	-1.4
	comp=Z,6.2nm,0.6s						
GRR	Gorron	143.48	348	ePKP1	PKPdf	01 20 44.9	-1.3
	comp=Z,28nm,0.6s						
SSF	Saint Saulge	143.67	343	ePKP1	PKPdf	01 20 45.9	-0.6
	comp=Z,29nm,0.7s						
SGMF	Saint Gilles	143.92	350	ePKP1	PKPdf	01 20 46.3	-0.6
	comp=Z,32nm,0.6s						
SMF	Signal de Mont	143.95	342	ePKP1	PKPdf	01 20 46.5	-0.5
	comp=Z,28nm,0.8s						
ROSF	Rostrenen	143.95	351	ePKP1	PKPdf	01 20 46.3	-0.7
	comp=Z,42nm,0.8s						
AVF	Avril sur Loir	143.96	343	ePKP1	PKPdf	01 20 46.4	-0.6
	comp=Z,15nm,0.7s						
LPL	La Plagne	144.00	338	ePKP1	PKPdf	01 20 47.4	+0.2
LPG	La Plagne	144.01	338	ePKP1	PKPdf	01 20 47.5	+0.3
	comp=Z,12nm,0.7s						
BGF	Bois d'Agland	144.32	343	ePKP1	PKPdf	01 20 47.7	0.0
	comp=Z,10nm,0.5s						
QUIF	Quistinic	144.34	351	ePKP1	PKPdf	01 20 47.5	-0.2
	comp=Z,20nm,0.7s						
MBDF	Montbardon	144.66	338	ePKP1	PKPdf	01 20 49.3	+1.0
	comp=Z,8.4nm,0.6s						
TCF	Toulx Ste Croi	144.74	344	ePKP1	PKPdf	01 20 49.0	+0.6
	comp=Z,13nm,0.9s						
ORIF	Oris-en-Rattie	144.82	339	ePKP1	PKPdf	01 20 49.5	+0.9
	comp=Z,14nm,0.8s						
MFF	Saint Martin d	145.03	347	ePKP1	PKPbc	01 20 49.8	-0.1
	comp=Z,27nm,0.7s						
FRF	La Foret Royal	145.70	337	ePKP1	PKPbc	01 20 51.6	-0.3
	comp=Z,52nm,1.1s						
RJF	Les Rejaudoux	145.83	344	ePKP1	PKPbc	01 20 52.2	0.0
	comp=Z,16nm,0.9s						
LMR	La Mourre	145.95	337	ePKP1	PKPbc	01 20 52.3	-0.3
	comp=Z,11nm,0.6s						
LFF	La Frestale	146.38	345	ePKP1	PKPbc	01 20 53.8	+0.1
	comp=Z,24nm,0.6s						
MTLF	Montolieu	147.43	342	ePKP1	PKPbc	01 20 56.7	+0.2
	comp=Z,38nm,1.1s						
SJPF	Ste Jean	148.58	346	ePKP1	PKPbc	01 21 00.0	+0.6
ETSF	Etsaut	148.62	345	ePKP1	PKPbc	01 21 00.1	+0.6
KEST	Kesra	150.59	324	PKPbc	PKPbc	01 21 05.0	+0.6
	comp=Z,2.2nm,0.7s,baz=262,slow=1.1,SNR=11						
ESDC	Sonseca Array	152.47	348	PKPbc	PKPbc	01 21 08.5	0.0
	comp=Z,0.5nm,0.6s,baz=8.4,slow=5.5,SNR=6.5						
ESDC				PKPab	PKPab	01 21 22.0	+0.2
	comp=Z,0.3nm,0.5s,baz=13,slow=4.1,SNR=6.4						
TORD	Torodi Ar. Bea	167.44	273	PKP	PKPdf	01 21 16.8	-1.2
TORD				PKPab	PKPab	01 22 27.4	-0.7
TORD	Torodi Ar. Bea	167.44	273	PKP	PKPdf	01 21 16.8	-1.2
	comp=Z,0.9nm,0.7s,baz=222,slow=2.0,SNR=4.1						
TORD				PKPab	PKPab	01 22 27.4	-0.7
	comp=Z,0.8nm,0.8s,baz=85,slow=3.5,SNR=4.1						

*NEIC **11** 01:04:48.8, 1965N×6564W, h35km, MD3.6(RSPR), After RSPR.*
RSPR 11 01:04:48.8, 1965N×6564W, h35km±29km, MD3.6/8, MD3.6/8, 6C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	1.38	189⇓	eP	Pn	01 05 10.2	-1.4
CBYP				eS	Sn	01 05 27.4	-1.3
HUMP	Col San Antoni	1.51	188⇑	eP	Pn	01 05 12.0	-1.4
HUMP				eS	Sn	01 05 29.8	-2.1
MTP	Monte Pirata	1.54	177⇑	eP	Pn	01 05 12.9	-0.9
MTP				eS	Sn	01 05 31.7	-1.0
SJG	San Juan	1.60	198⇑	eP	Pn	01 05 13.4	-1.2
SJG				eS	Sn	01 05 33.6	-0.6
SJG	San Juan	1.60	198⇓	eP	Pn	01 05 13.7	-1.0
SJG				eS	Sn	01 05 33.0	-1.1
CPD	Cerro la Pandu	1.62	189⇓	eP	Pn	01 05 13.8	-1.2
CPD				eS	Sn	01 05 33.7	-0.9
AOPR	Arecibo Observ	1.67	219⇓	eP	Pn	01 05 14.2	-1.4
AOPR				eS	Sn	01 05 34.1	-1.7
CELP	Cerrillos	1.80	210⇑	eP	Pn	01 05 16.8	-0.6
CELP				eS	Sn	01 05 37.9	-1.1
AGPR	Aguadilla, PR	1.82	230	eS	Sn	01 05 37.9	-1.7
LSP	Las Mesas	2.01	223⇑	eP	Pn	01 05 20.0	-0.2
LSP				eS	Sn	01 05 43.1	-1.0
CRPR	Cabo Rojo, PR	2.15	221⇑	eP	Pn	01 05 21.4	-0.8
CRPR				eS	Sn	01 05 47.0	-0.6
SDDR	Presa de Saban	5.38	264	ePn	Pn	01 06 06.4	-0.2
	11nm,0.5s						

*NEIC **11** 01:14:01.2, 3792S×177.14E, h74km, ML3.7(WEL), After WEL.*
WEL 11 01:14:00.9±0.2, 3791S×17712E, h78km±1km, ML3.7/9, Error ellipse: s-maj=1.2km s-min=1.2km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.35	181	P	Pn	01 14 13.0	-0.3
URZ	Urewera	0.35	181	P*	Pn	01 14 13.0	-0.3
URZ				S*	Sn	01 14 22.1	-0.3
MARZ	Manawahe	0.36	257	P	Pn	01 14 13.3	0.0
MARZ				S	Sn	01 14 22.9	+0.4
MARZ	Manawahe	0.36	257	P*	Pn	01 14 13.3	0.0
MARZ				S*	Sn	01 14 22.9	+0.4
EDRZ	Edgecumbe	0.36	236	P	Pn	01 14 13.4	0.0
EDRZ				S	Sn	01 14 22.5	-0.1
EDRZ	Edgecumbe	0.36	236	P*	Pn	01 14 13.4	+0.1
EDRZ				S*	Sn	01 14 22.5	-0.1
OPRZ	Ohinepanea	0.45	278	P*	Pn	01 14 13.8	-0.2
OPRZ				S*	Sn	01 14 23.7	-0.1
MWZ	Matawai	0.53	143	P	Pn	01 14 14.8	0.0
MWZ	Matawai	0.53	143	P*	Pn	01 14 14.8	0.0
MWZ				S*	Sn	01 14 25.8	+0.7
MKRZ	Makatiti	0.57	246	P	Pn	01 14 15.6	+0.6
MKRZ	Makatiti	0.57	246	P*	Pn	01 14 15.6	+0.5
TAZ	Tarawera	0.58	236	P	Pn	01 14 15.6	+0.4
TAZ	Tarawera	0.58	236	P*	Pn	01 14 15.6	+0.4
LIRZ	Lichensteins R	0.59	260	P	Pn	01 14 15.3	0.0
LIRZ	Lichensteins R	0.59	260	P*	Pn	01 14 15.3	+0.1
KARZ	Kaharoa	0.70	260	P*	Pn	01 14 16.3	-0.1
TGRZ	Tauranga	0.70	284	P*	Pn	01 14 16.3	-0.1
PATZ	Paeroa	0.83	235	P	Pn	01 14 17.9	+0.1
PATZ	Paeroa	0.83	235	P*	Pn	01 14 17.9	+0.2
PUZ	Puketiti	0.91	101	eP	Pn	01 14 19.1	+0.3
PUZ	Puketiti	0.91	101	PN	Pn	01 14 19.1	+0.3
MYRZ	Mayor Island	0.94	312	P*	Pn	01 14 19.3	+0.3
MXZ	Matakaoa Point	1.00	70	P	Pn	01 14 21.3	+1.5
MXZ	Matakaoa Point	1.00	70	P*	Pn	01 14 21.3	+1.4
KNZ	Kokohu	1.19	159	P	Pn	01 14 21.7	-0.5
KNZ	Kokohu	1.19	159	PN	Pn	01 14 21.7	-0.5
BKZ	Black Stump Fm	1.35	201	P	Pn	01 14 24.2	0.0
BKZ	Black Stump Fm	1.35	201	P*	Pn	01 14 24.2	0.0
RITZ	Rihia Road	1.46	222	P	Pn	01 14 26.0	+0.4
KATZ	Kakaramea	1.55	226	P	Pn	01 14 28.0	+1.3
KUZ	Kuaotunu	1.61	316	P	Pn	01 14 27.4	-0.1
KUZ	Kuaotunu	1.61	316	PN	Pn	01 14 27.4	-0.1
KRVZ	Karewarewa	1.66	224	P*	Pn	01 14 28.8	+0.6
OTVZ	Oturere	1.70	222	P*	Pn	01 14 29.0	+0.4
WTVZ	West Tongariro	1.70	224	P	Pn	01 14 29.0	+0.2
WTVZ	West Tongariro	1.70	224	P*	Pn	01 14 29.0	+0.2
NGZ	Ngauruhoe	1.74	223	P	Pn	01 14 29.8	+0.6
NGZ	Ngauruhoe	1.74	223	P*	Pn	01 14 29.8	+0.6
TWVZ	Taurewa	1.76	228	P	Pn	01 14 29.8	+0.3
TWVZ	Taurewa	1.76	228	P*	Pn	01 14 29.8	+0.3
TUVZ	Tukino	1.78	220	P	Pn	01 14 30.1	+0.3
TUVZ	Tukino	1.78	220	P*	Pn	01 14 30.1	+0.3
WPVZ	Whakapapa	1.79	223	P*	Pn	01 14 30.7	+0.8
FWVZ	Far West T-bar	1.82	222	eP	Pn	01 14 30.9	+0.5
FWVZ	Far West T-bar	1.82	222	PN	Pn	01 14 30.9	+0.5
MOVZ	Moawhango	1.84	215	P	Pn	01 14 30.3	-0.3
MOVZ	Moawhango	1.84	215	PN	Pn	01 14 30.3	-0.3
WNVZ	Wahianoa	1.85	220	P	Pn	01 14 31.1	+0.3
WNVZ	Wahianoa	1.85	220	PN	Pn	01 14 31.1	+0.3
TRVZ	Turoa	1.86	221	PN	Pn	01 14 31.3	+0.5
MTVZ	Mangateitei	1.96	221	PN	Pn	01 14 32.7	+0.5
PXZ	Pawanui	2.13	185	PN	Pn	01 14 33.0	-1.5
TSZ	Takapari Road	2.33	202	P	Pn	01 14 38.6	+1.5
WAZ	Wanganui	2.49	221	P	Pn	01 14 39.9	+0.7
BFZ	Birch Farm	2.85	193	eP	Pn	01 14 42.8	-1.4
BFZ	Birch Farm	2.85	193	PN	Pn	01 14 42.8	-1.4
MRZ	Mangatainoka R	3.00	203	eP	Pn	01 14 43.6	-2.6
KIW	Kapiti Island	3.41	209	P	Pn	01 14 48.8	-2.9
KIW	Kapiti Island	3.41	209	PN	Pn	01 14 48.8	-3.0
MTW	Mount Morrison	3.48	201	PN	Pn	01 14 49.0	-3.7
MRW	Makara Radio	3.81	209	P	Pn	01 15 02.0	+4.9
QRZ	Quartz Range	4.60	229	eP	Pn	01 15 05.4	-2.5
QRZ	Quartz Range	4.60	229	PN	Pn	01 15 05.4	-2.5
THZ	Tophouse	5.04	219	eP	Pn	01 15 10.8	-3.0
THZ	Tophouse	5.04	219	PN	Pn	01 15 10.8	-3.1
DSZ	Denniston Nort	5.61	225	eP	Pn	01 15 17.3	-4.4

*MOS **11** 01:25:35.6±0.8, 5503N×16240E, h15km, mb4.3/1, Error ellipse: s-maj=32.4km s-min=14.4km az=80.4*
KRSC 11 01:25:35.6±0.5, 5506N×16249E, h21km±21km, ML4.2, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.17	9	eP	Pn	01 25 57.8	+1.2
KBTR				iS	Sb	01 26 13.4	+1.7
ZLN	Zelenaya	1.36	316	eP	Pn	01 26 00.7	+1.5
ZLN				iS	Sn	01 26 18.5	+1.9
TUMR	Tumrok	1.36	280	eP	Pn	01 26 00.2	+0.9
TUMR				iS	Sn	01 26 17.6	+0.9
BZMR	Bezymyannaya	1.44	308	eP	Pn	01 26 01.3	+0.9
CIRR	Tsirk	1.45	318	eP	Pn	01 26 02.2	+1.7
KMNR	Kamenistaya	1.46	299	eP	Pn	01 26 01.5	+0.8
KMNR				iS	Sn	01 26 21.0	+1.8
KPT	Kopyto	1.58	306	eP	Pn	01 26 03.4	+1.1
KPT				iS	Sn	01 26 23.2	+1.2
KRSR	Krestovskiy	1.59	318	eP	Pn	01 26 03.3	+0.8
KLY	Klyuchi	1.63	321	eP	Pn	01 26 02.8	-0.2
KLY				iS	Sn	01 26 22.2	-1.2
SMKR	Semkarok	1.63	340	eP	Pn	01 26 04.5	+1.5
BDR	Baidarnaya	1.68	335	eP	Pn	01 26 05.5	+1.9
BDR				iS	Sn	01 26 27.1	+2.6
SRKR	Sorokina	1.76	336	eP	Pn	01 26 06.4	+1.6
SRKR				iS	Sn	01 26 28.8	+2.2
KOZR	Kozyr	1.79	305	PN	Pn	01 26 06.3	+1.2
KOZ	Kozyrevsk	1.79	305	eP	Pn	01 26 06.3	+1.1
SRDR	Sredinnyy	2.01	310	eP	Pn	01 26 09.5	+1.2
SPN	Mys Shipunski	2.44	217	eP	Pn	01 26 14.3	+0.1
SPN				iS	Sn	01 26 42.1	-1.3
NLC	Nalytchevo	2.65	226	eP	Pn	01 26 18.5	+1.5
NLC				iS	Sn	01 26 49.0	+0.6
AVH	Avacha	2.85	232	eP	Pn	01 26 22.1	+2.4
AVH				iS	Sn	01 26 56.8	+3.5
GNL	Ganaly	2.99	245	eP	Pn	01 26 23.9	+2.2
PET	Petropavlovsk	3.05	230	eP	Pn	01 26 24.7	+2.2
PET				iS	Sn	01 27 00.6	+2.4
RUS	Russkaya	3.54	224	eP	Pn	01 26 31.4	+2.2
RUS				iS	Sn	01 27 11.8	+1.5
GRL	Gorelyy	3.63	228	eP	Pn	01 26 33.9	+3.4
GRL				iS	Sn	01 27 17.0	+4.4

IDC 11 01:31:10.7±1.8, 237N×12672E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.6/17, mbtmp3.7/5, Error ellipse: s-maj=105.7km s-min=24.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.37	183	P	P	01 35 50.2	+1.1
	2.2nm,0.9s,baz=47,slow=14,SNR=7.5						
WRA	Warramunga Arr	23.40	162	P	P	01 36 21.3	-0.2
	0.9nm,0.4s,baz=340,slow=11,SNR=42						
ASAR	Alice Springs	26.81	165	P	P	01 36 52.2	-0.6
	0.4nm,0.4s,baz=341,slow=7.6,SNR=6.5						
STKA	Stephens Creek	36.87	159	P	P	01 38 21.3	+0.3
	2.2nm,0.6s,baz=346,slow=9.7,SNR=5.9						
MKAR	Makanchi Array	58.66	326	P	P	01 41 09.8	-0.1
	0.3nm,0.6s,baz=112,slow=8.9,SNR=4.6						

NEIC 11 01:38:59.7±0.5, 580S×15138E, h35^{km}, mb4.5/4, Error ellipse: s-maj=14.8km s-min=8.9km az=107.0
ISCJB 11 01:39:03.2±2.8, 60S±0.1×1513E±0.1, h78^{km}±23^{km}, mb4.4/11, Error ellipse: s-maj=19.4km s-min=18.1km az=163.3
IDC 11 01:39:03.2±2.4, 589S×15128E, h62^{km}±19^{km}, mb4.0/8, mb1 4.2/9, mb1mx4.0/15, mbtmp4.0/9, MS3.5/8, Ms1 3.5/8, ms1mx3.4/21, Error ellipse: s-maj=22.0km s-min=13.7km az=124.0
ISC 11 01:39:03.8±1.9, 60S±01×15130E±010, h68^{km}±16^{km}, n32, $\sigma 0^{s}88$/29, mb4.4/11, 2C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.34	230	ePn	Pn	01 40 21.9	+0.9
PMG				eSn	Sn	01 41 21.3	+0.2
PMG				S	Sn	01 41 22.1	+1.0
PMG				LR	LR	01 41 57.4	
PMG	Port Moresby	5.34	230	P	Pn	01 40 22.1	+1.2
	182nm,0.3s,baz=55,slow=6.3,SNR=216						
PMG				S	Sn	01 41 22.1	+1.0
	154nm,0.3s,baz=350,slow=23,SNR=9.9						
PMG				LR	LR	01 41 57.4	
	comp=Z,161nm,21.7s,baz=78,slow=32						
HNR	Honiara	9.23	112	LR	LR	01 44 34.3	
	comp=Z,179nm,19.1s,baz=357,slow=36						
COEN	Coen	11.27	225	ePn	Pn	01 41 41.5	-0.5
	7.4nm,0.6s						
COEN				eSn	Sn	01 43 44.4	-2.0
CTA	Charters Tower	14.87	199	eP	Pn	01 42 29.6	-0.6
	3.5nm,0.6s						
CTA	Charters Tower	14.87	199	P	Pn	01 42 29.6	-0.6
	0.2nm,0.3s,baz=24,slow=15,SNR=3.8						
CTA				LR	LR	01 47 20.8	
	comp=Z,151nm,18.9s,baz=47,slow=33						
CTAO	Charters Tower	14.87	199	ePn	Pn	01 42 30.0	-0.3
	4.5nm,0.7s						
WB2	Warramunga Arr	21.55	228⇑	iP	P	01 43 47.5	-0.1
WRA	Warramunga Arr	21.56	228	P	P	01 43 47.8	0.0
	16nm,0.7s,mb4.5,baz=54,slow=10,SNR=81						
WRA				S	S	01 47 43.5	+0.7
	4.7nm,1.1s,baz=55,slow=18,SNR=6.2						
WRA				PcP	PcP	01 47 48.3	+0.4
	3.3nm,0.9s,baz=44,slow=1.8,SNR=5.5						
WRA				ScP	ScP	01 51 21.5	+2.3
	1.7nm,0.9s,baz=52,slow=2.9,SNR=6.8						
WRA				LR	LR	01 52 09.6	
	comp=Z,102nm,18.1s,baz=190,slow=36						
DZM	Mont Dzumac	21.69	139	P	P	01 43 49.3	+0.1
	1.8nm,0.5s,mb3.7,baz=315,slow=10.0,SNR=9.4						
DZM				LR	LR	01 50 47.9	
	comp=Z,213nm,19.2s,baz=212,slow=32						
ASAR	Alice Springs	24.29	222	P	P	01 44 15.4	+0.5
	8.5nm,0.7s,mb4.2,baz=55,slow=9.6,SNR=101						
STKA	Stephens Creek	27.33	198	eP	P	01 44 43.1	+0.8
STKA				LR	LR	01 54 16.4	
STKA	Stephens Creek	27.33	198	P	P	01 44 43.9	+1.6
	2.7nm,0.7s,mb3.9,baz=0.0,slow=10,SNR=3.7						
STKA				LR	LR	01 54 16.4	
	comp=Z,113nm,19.3s,baz=24,slow=33						
BATI	Kupang	27.68	259	P	P	01 44 47.1	+1.5
	80nm,0.5s,mb5.5,baz=132,slow=6.9,SNR=12						
FITZ	Fitzroy Crossi	27.80	242⇑	iP	P	01 44 46.6	0.0
	24nm,0.5s,mb5.0						
FITZ				i		01 44 50.4	
FITZ	Fitzroy Crossi	27.80	242	iP	P	01 44 50.4	+3.8
FITZ	Fitzroy Crossi	27.80	242	P	P	01 44 46.7	+0.1
	26nm,0.6s,mb4.9,baz=66,slow=8.2,SNR=90						
FITZ				LR	LR	01 56 43.9	
	comp=Z,110nm,19.0s,baz=85,slow=38						
CBIJ	Chichi jima	34.03	345	LR	LR	01 57 06.8	
	comp=Z,267nm,20.9s,baz=120,slow=32						
MBWA	Marble Bar	34.10	241	eP	P	01 45 41.8	-0.3
	14nm,0.6s,mb5.0						
KLBR	Kellerberrin	40.42	227	eP	P	01 46 34.7	-0.8
	92nm,1.9s,mb5.3						
KSM	Kuching	41.59	279	eP	P	01 46 45.6	+0.2
MUN	Mundaring	41.75	227	eP	P	01 46 46.1	-0.3
SONM	Songino Array	66.53	329	P	P	01 49 46.3	0.0
	1.2nm,0.5s,mb4.0,baz=150,slow=4.4,SNR=9.1						
MKAR	Makanchi Array	80.23	319	P	P	01 51 07.2	+0.2
	0.5nm,0.4s,mb3.7,baz=102,slow=7.3,SNR=26						
ZALV	Zalesovo Beam	81.30	327	P	P	01 51 10.6	-1.9
ZALV	Zalesovo Beam	81.30	327	P	P	01 51 10.6	-1.9
	1.2nm,0.6s,mb3.9,baz=109,slow=5.8,SNR=9.0						
KHC	Kasperske Hory	124.14	328	ePKPdf	PKPdf	01 57 55.0	+0.4
GERES	GERESS Array B	124.25	327	PKP	PKPdf	01 57 55.0	+0.2
	2.2nm,0.6s,baz=67,slow=1.8,SNR=26						
GRA1	Grafenberg Arr	125.03	329	ePKP	PKPdf	01 57 56.7	+0.4
GRF	Grafenberg Arr	125.03	329	ePKP	PKPdf	01 57 56.7	+0.4
TORD	Torodi Ar. Bea	149.22	286	PKPbc	PKPbc	01 58 45.2	-0.4
	11nm,0.6s,baz=69,slow=3.1,SNR=42						
TORD				PKPab	PKPab	01 58 50.1	-0.1
	5.8nm,0.5s,baz=72,slow=3.7,SNR=13						
DBIC	Dimbokro	156.29	273	PKPab	PKPab	01 59 19.9	-0.3
	3.8nm,0.6s,baz=63,slow=4.0,SNR=9.3						

KRSC 11 02:03:07.9±0.1, 5505N×16259E, h20^{km}±20^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.17	6	eP	Pn	02 03 30.3	+1.2
KBTR				iS	Sb	02 03 46.2	+2.2
ZLN	Zelenaya	1.40	314	eP	Pn	02 03 33.4	+1.1
ZLN				iS	Sn	02 03 51.4	+1.2
TUMR	Tumrok	1.42	280	eP	Pn	02 03 33.5	+1.0
TUMR				iS	Sn	02 03 51.3	+0.7
BZMR	Bezymyannaya	1.49	307	eP	Pn	02 03 34.4	+0.9
KMNR	Kamenistaya	1.52	299	eP	Pn	02 03 34.7	+0.9
KMNR				iS	Sn	02 03 53.6	+0.6
KIRR	Kirishev	1.57	306	eP	Pn	02 03 35.5	+1.0
KPT	Kopyto	1.63	305	eP	Pn	02 03 36.6	+1.2
KPT				iS	Sn	02 03 57.4	+1.6
KRSR	Krestovskiy	1.64	316	eP	Pn	02 03 36.5	+1.0
SMKR	Semkarok	1.66	338	eP	Pn	02 03 37.5	+1.7
SMKR				iS	Sn	02 03 58.7	+2.2
KLY	Klyuchi	1.68	320	eP	Pn	02 03 35.7	-0.3
KLY				iS	Sn	02 03 55.8	-1.1
BDR	Baidarnaya	1.71	333	eP	Pn	02 03 37.7	+1.2
SRKR	Sorokina	1.80	334	eP	Pn	02 03 39.4	+1.7
SRKR				iS	Sn	02 04 03.2	+3.3
KOZ	Kozyrevsk	1.84	304	eP	Pn	02 03 39.8	+1.4
KOZ				iS	Sn	02 04 04.0	+2.9
SRDR	Sredinnyy	2.06	309	eP	Pn	02 03 42.3	+0.9
SRDR				iS	Sn	02 04 07.6	+1.1
SPN	Mys Shipunski	2.47	219	eP	Pn	02 03 48.0	+1.0
SPN				iS	Sn	02 04 17.0	+0.5
NLC	Nalytchevo	2.68	227	eP	Pn	02 03 51.7	+1.8
NLC				iS	Sn	02 04 22.7	+1.0
AVH	Avacha	2.89	233	eP	Pn	02 03 55.1	+2.4
AVH				iS	Sn	02 04 30.3	+3.6
GNL	Ganaly	3.04	245	eP	Pn	02 03 56.9	+2.1
PET	Petropavlovsk	3.08	230	eP	Pn	02 03 57.6	+2.2
PET				iS	Sn	02 04 34.3	+2.7
RUS	Russkaya	3.57	224	eP	Pn	02 04 03.9	+1.9
RUS				eS	Sn	02 04 44.5	+1.0
GRL	Gorelyy	3.67	229	eP	Pn	02 04 06.8	+3.4
GRL				iS	Sn	02 04 49.2	+3.3

IDC 11 02:47:02.0±7.1, 677S×15438E, h150^{km}±62^{km}, mb2.9/3, mb1 3.2/5, mb1mx3.1/14, mbtmp3.1/5, Error ellipse: s-maj=38.5km s-min=31.7km az=14.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	15.41	210	P	Pn	02 50 33.5	+1.9
	0.2nm,0.3s,baz=40,slow=13,SNR=4.7						
DZM	Mont Dzumac	19.16	144	P	P	02 51 13.6	-0.4
	0.3nm,0.3s,baz=326,slow=18,SNR=6.8						
WRA	Warramunga Arr	23.45	234	P	P	02 51 57.6	-0.4
	0.6nm,0.7s,baz=57,slow=9.9,SNR=8.9						
WRA				PcP	PcP	02 55 40.7	+0.7
	0.5nm,0.7s,baz=55,slow=2.8,SNR=6.5						
ASAR	Alice Springs	25.87	227	P	P	02 52 19.9	-0.1
	0.3nm,0.6s,baz=58,slow=9.3,SNR=4.1						
ASAR				PcP	PcP	02 55 45.9	+0.6
	0.2nm,0.5s,baz=58,slow=2.3,SNR=3.6						
SONM	Songino Array	68.81	328	P	P	02 57 50.9	+0.9
	0.2nm,0.4s,baz=151,slow=5.2,SNR=4.5						
TORD	Torodi Ar. Bea	152.38	285	PKPbc	PKPbc	03 06 39.8	-1.6
	0.6nm,0.3s,baz=92,slow=1.5,SNR=6.4						

NSSP 11 03:01:13.8, 4092N×4407E, h24^{km}, ML3.1
MOS 11 03:01:14.8±2.9, 4101N×4403E, h2^{km}, mb3.8/1, Error ellipse: s-maj=90.9km s-min=9.8km az=88.3
TIF 11 03:01:14.2, 4088N×4404E, h8^{km}±1^{km}
ISK 11 03:01:15.8, 4084N×4394E, h5^{km}, MD2.9
ISCJB 11 03:01:16.1±0.3, 4081N±002×4408E±004, h10^{km}, Error ellipse: s-maj=4.0km s-min=2.1km az=12.5
CSEM 11 03:01:16.6±0.1, 4071N×4392E, h2^{km}, ML3.1, Error ellipse: s-maj=2.4km s-min=1.6km az=90.0
DDA 11 03:01:25.0, 4049N×43.18E, h14^{km}, Md3.6
ISC 11 03:01:16.5±0.3, 4082N±002×4410E±004, h10^{km}, n34, $\sigma 1^{s}22$/54, 8D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMZ	Kamo	0.11	274	⇓P	Pg	03 01 17.0	-2.2
HNAZ	Hnaberd	0.19	168	⇓P	Pg	03 01 19.9	-0.6
STE	Stepanavan	0.28	49	P	Pg	03 01 21.4	-0.7
AMBZ	Amberd	0.45	164	⇓P	Pg	03 01 25.4	+0.2
ARUZ	Aruch	0.53	180	⇓P	Pg	03 01 26.6	-0.3
AKSZ	Araks	0.65	194	⇓P	Pg	03 01 28.0	-1.0
KAPZ	Kaputan	0.68	137	P	Pg	03 01 29.4	-0.2
DIGO	Kars	0.68	234	iP	Pg	03 01 28.8	-0.9
DIGO				iS	Sg	03 01 38.7	+0.1
PAAR	P'arak'ar	0.70	162	⇓P	Pg	03 01 29.5	-0.5
ERE	Yerevan	0.71	156	P	Pg	03 01 29.0	-1.2
VNNZ	Vanand	0.74	196	⇓P	Pg	03 01 29.8	-1.0
VNNZ				S	Sg	03 01 42.3	+1.8
VRNZ	Vardanashen	0.77	174	⇓P	Pg	03 01 31.3	-0.1
VRNZ				S	Sg	03 01 42.7	+1.3
KARS	Kars	0.79	255	PG	Pg	03 01 29.9	-1.8
KARS				SG	Sg	03 01 40.8	-1.2
MTA	Mtatsminda	1.02	31	P	Pg	03 01 33.8	-2.4
MTA				S	Sg	03 01 47.6	-1.8
TBLG	Delisi	1.03	28	P	Pg	03 01 34.0	-2.4
TBLG				S	Sg	03 01 48.0	-1.9
DGRG	David-gareji	1.16	56	P	Pb	03 01 38.3	-0.3
DGRG				S	Sb	03 01 55.8	+2.2
GOR	Gori	1.17	1	P	Pb	03 01 36.5	-2.3
GOR				S	Sb	03 01 52.1	-1.8
DYDN	Diyadin	1.31	194	iP	Pg	03 01 43.1	+1.4
DYDN				iS	Sg	03 02 03.7	+5.1
AGRB	Hanur-Agry	1.50	215	ePN	Pn	03 01 44.0	+0.5
CLDR	Caldiran	1.68	185	ePN	Pg	03 01 48.0	-0.7
ARTV	Artvin	1.68	283	iP	Pn	03 01 45.7	-0.2
ARTV				iS	Sn	03 02 08.1	+0.6
TUTA	Tutak	1.72	215	iP	Pg	03 01 49.4	-0.1
TUTA				iS	Sg	03 02 17.6	+5.8
ONI	Oni	1.83	345	P	Pn	03 01 47.6	-0.4
ONI				S	Sn	03 02 11.5	+0.4
ZEI	Tsey	1.96	356	iPn	Pn	03 01 50.6	+0.8
ZEI				iSg	Sb	03 02 16.9	+0.2
BCA	Borcka	1.97	289	ePN	Pn	03 01 50.2	+0.3
LACR	Lac	2.01	4	iPn	Pn	03 01 51.3	+0.8
LACR				iSg	Sb	03 02 18.1	-0.2
DIGR	Digorskoe uzhe	2.12	350	iPn	Pn	03 01 52.9	+1.0
DIGR				iSg	Sb	03 02 20.8	-0.5
KORR	Kora	2.27	359	ePN	Pn	03 01 54.8	+0.8
KORR				eS	Sn	03 02 24.1	+2.1
VLKR	Vladikavkaz	2.27	11	ePN	Pn	03 01 55.2	+1.1
VLKR				eS	Sn	03 02 24.3	+2.2
EZM	Erzurum	2.28	247	ePN	Pn	03 01 54.4	+0.3
VANB	Van	2.29	194	ePN	Pn	03 01 56.1	+1.9
SNJR	Sundja	2.31	13	ePN	Pn	03 01 55.7	+1.1
SNJR				eS	Sb	03 02 25.9	-1.0
ARNR	Ardon	2.38	3	ePN	Pn	03 01 56.3	+0.8
ARNR				eS	Sn	03 02 27.0	+2.3
LSNR	Lesken	2.46	355	ePN	Pn	03 01 57.6	+0.9
LSNR				eS	Sn	03 02 28.9	+2.0

ISCJB 11 03:06:46.9±1.4, 168S±03×6968W±008, h203^{km}±6^{km}, mb3.5/3, Error ellipse: s-maj=44.4km s-min=11.5km az=3.6
NEIC 11 03:06:49.5±1.2, 1655S×6957W, h201^{km}±8^{km}, mb3.6/2, Error ellipse: s-maj=36.4km s-min=12.5km az=204.0
IDC 11 03:06:50.9±3.0, 1656S×6931W, h204^{km}±11^{km}, mb3.5/2, mb1 3.4/2, mb1mx3.0/15, mbtmp3.5/2, Error ellipse: s-maj=140.9km s-min=51.7km az=174.0
ISC 11 03:06:47.9±1.4, 168S±03×6968W±007, h197^{km}±6^{km}, n11, $\sigma 0^{s}54$/12, mb3.5/3, 1C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.58	70	P	Pn	03 07 23.4	+1.3
LPAZ				S	Sn	03 07 47.9	-0.7
LPAZ	La Paz	1.58	70	P	Pn	03 07 23.4	+1.3
	19nm,0.3s,baz=306,slow=7.7,SNR=460						
LPAZ				S	Sn	03 07 47.9	-0.7
	6.2nm,0.3s,baz=222,slow=25,SNR=15						
ARE	Arequipa	1.77	282⇑	iP	Pn	03 07 23.8	-0.1
ARE				iS	Sn	03 07 51.5	-0.3
NNA	Nana	8.44	304	ePn	Pn	03 08 47.5	+0.4
OTAV	Otavalo	19.04	332	eP	P	03 10 55.2	-0.1
	1.4nm,0.7s						
HKT	Hockley	52.91	331	eP	P	03 15 43.8	0.0
	1.0nm,0.7s,mb3.4						
DBIC	Dimbokro	68.20	76	P	P	03 17 27.5	-0.1
DBIC	Dimbokro	68.20	76	P	P	03 17 27.5	-0.1
	2.4nm,1.0s,mb3.8,baz=218,slow=7.6,SNR=6.4						
TORD	Torodi Ar. Bea	76.53	72	P	P	03 18 16.5	-0.4
	0.4nm,0.4s,mb3.4,baz=261,slow=6.0,SNR=4.0						
WRA	Warramunga Arr	136.50	214	PKP	PKPdf	03 25 49.1	+1.9
	0.3nm,0.9s,baz=139,slow=1.6,SNR=6.5						
SONM	Songino Array	148.92	5	PKPbc	PKPbc	03 26 13.4	+1.1
	0.4nm,0.6s,baz=345,slow=1.6,SNR=3.6						

MAN 11 03:36:40, 4.17N×12694E, h60^{km}, mb4.9, ML3.9, MS4.0
MOS 11 03:36:42.4±0.9, 471N×12661E, h33^{km}, mb4.6/13, Error ellipse: s-maj=33.7km s-min=9.4km az=116.8
ISCJB 11 03:36:48.7±0.7, 467N±006×1267E±0.1, h91^{km}±6^{km}, mb4.4/36, Error ellipse: s-maj=18.6km s-min=6.3km az=157.4
BJI 11 03:36:48.8, 487N×12644E, h74^{km}, mB5.0, mb4.7
IDC 11 03:36:49.8±9.8, 471N×12671E, h87^{km}±91^{km}, mb4.1/11, mb1 4.2/11, mb1mx4.0/19, mbtmp4.1/11, Error ellipse: s-maj=81.3km s-min=17.9km az=68.0
NEIC 11 03:36:50.4±1.0, 476N×12677E, h93^{km}±9^{km}, mb4.5/21, Error ellipse: s-maj=12.5km s-min=4.7km az=62.0
ISC 11 03:36:49.9±0.7, 467N±005×1267E±01, h86^{km}±6^{km}, n72, $\sigma 0^{s}80$/72, mb4.4/36, 6C-3D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	2.22	309	eP	Pn	03 37 22.2	-2.7
MATI	Mati	2.30	350	eP	Pn	03 37 24.6	-1.3
DAV	Davao City (W)	2.62	335	ePn	Pn	03 37 29.9	-0.3
DAV				eSn	Sn	03 38 02.6	+1.4
DAV	Davao City (W)	2.62	335	eP	Pn	03 37 30.0	-0.3
KCP	Kidapawan	2.81	326⇑	eP	Pn	03 37 31.8	-0.9
KCP				eS	Sn	03 38 11.7	+5.9
BUKP	Musuan	3.57	333	eP	Pn	03 37 43.1	0.0
TNE	Ternate	3.92	170⇓	eP	Pn	03 37 47.0	-0.9
CGP	Cagayan de Oro	4.24	332⇓	eP	Pn	03 37 54.5	+2.2
CGP				iS	Sn	03 38 46.3	+5.7
PAGZ	Pagadian	4.55	314	eP	Pn	03 37 56.2	-0.2
MSLP	Maasin	5.72	342	eP	Pn	03 38 13.2	+0.9
BATI	Kupang	15.08	191	P	Pn	03 40 23.7	+5.3
	3.9nm,0.3s,baz=331,slow=3.5,SNR=3.4						
KSM	Kuching	16.65	260	eP	Pn	03 40 41.4	+3.3
FITZ	Fitzroy Crossi	22.65	183	eP	P	03 41 44.1	0.0
	6.4nm,0.9s,mb4.0						
FITZ	Fitzroy Crossi	22.65	183	P	P	03 41 44.9	+0.8
	2.3nm,0.5s,mb3.8,baz=47,slow=12,SNR=16						
COEN	Coen	24.71	139	eP	P	03 42 02.9	-0.4
	3.4nm,0.7s,mb3.9						
WRA	Warramunga Arr	25.59	163	P	P	03 42 10.6	-0.6
	6.9nm,0.6s,mb4.3,baz=344,slow=10,SNR=55						
WB2	Warramunga Arr	25.60	163	eP	P	03 42 11.4	+0.1
MBWA	Marble Bar	26.56	195	eP	P	03 42 20.5	+0.5
	16nm,0.9s,mb4.6						
ASAR	Alice Springs	29.04	166	P	P	03 42 42.3	+0.3
	0.8nm,0.6s,mb3.6,baz=5.6,slow=8.6,SNR=16						
CHTO	Chiang Mai	30.50	300	eP	P	03 42 55.2	+0.1
	2.3nm,0.6s,mb4.1						
CHTO	Chiang Mai	30.50	300	eP	P	03 42 55.2	+0.1
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
CTA	Charters Tower	31.24	143	eP	P	03 43 02.2	+0.7
	comp=Z,1.8nm,0.6s,mb4.0						
CTA	Charters Tower	31.24	143	eP	P	03 43 02.2	+0.7
CTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CTAO	Charters Tower	31.24	143	eP	P	03 43 02.4	+0.9
	comp=Z,2.6nm,0.7s,mb4.1						
CTAO	Charters Tower	31.24	143	eP	P	03 43 02.4	+0.9
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
BJT	Baijiatuau	36.44	346	eP	P	03 43 46.7	+0.3
	comp=Z,7.3nm,0.6s,mb4.8						
BJT	Baijiatuau	36.44	346	eP	P	03 43 46.7	+0.3
BJT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI	Beijing	36.46	346	P	P	03 43 47.0	+0.4
BJI				AMB	AMB		
	comp=Z,16nm,0.5s,mb5.2						
LZH	Lanzhou	37.67	329	eP	P	03 43 58.0	+1.1
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,113nm,4.3s						
STKA	Stephens Creek	39.02	160	eP	P	03 44 08.4	+0.2
	comp=Z,11nm,0.6s,mb4.8						
STKA	Stephens Creek	39.02	160	P	P	03 44 08.3	+0.1
	comp=Z,14nm,0.6s,mb5.0,baz=337,slow=8.6,SNR=29						
SHL	Shillong	39.28	306	eP	P	03 44 10.0	-0.6
ARMA	Armidale	42.28	147	eP	P	03 44 36.2	+1.1
TAPN	Taplejung	43.42	306	eP	P	03 44 44.5	+0.1
	comp=Z,14nm,0.5s,mb4.9						
ODAN	Odare	43.49	305	eP	P	03 44 44.9	-0.1
	comp=Z,16nm,0.5s,mb5.0						
JIRN	Jiri	44.78	305	eP	P	03 44 55.4	+0.1
	comp=Z,15nm,0.5s,mb4.9						
GKN	Gorkha	46.19	305	eP	P	03 45 05.8	-0.6
	comp=Z,7.3nm,0.4s,mb4.7						
ULN	Ulaanbaatar	46.21	342	eP	P	03 45 06.6	+0.4
	comp=Z,8.1nm,0.5s,mb4.7						
ULN				epP	pP	03 45 28.5	+1.5
ULN	Ulaanbaatar	46.21	342	eP	P	03 45 06.6	+0.4
ULN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.7						
SONM	Songino Array	46.39	341	P	P	03 45 07.7	0.0
	comp=Z,1.5nm,0.5s,mb4.0,baz=155,slow=8.6,SNR=21						
SONM				PcP	PcP	03 46 42.0	+0.7
	comp=Z,0.5nm,0.5s,baz=153,slow=4.4,SNR=2.2						
BOD	Bodaibo	53.93	352	eP	P	03 46 04.4	0.0
BOD				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
MKAR	Makanchi Array	56.76	325	P	P	03 46 24.6	-0.3
	comp=Z,2.5nm,0.5s,mb4.5,baz=118,slow=8.2,SNR=69						
TKM2	Tokmak 2	59.01	318	eP	P	03 46 40.4	-0.4
	comp=Z,3.0nm,0.7s,mb4.4						
TKM2	Tokmak 2	59.01	318	eP	P	03 46 40.4	-0.4
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
UCH	Uchtor	59.45	317	eP	P	03 46 44.3	+0.4
	comp=Z,2.4nm,0.8s,mb4.3						
ZALV	Zalesovo Beam	59.73	333	P	P	03 46 45.1	-0.4
	comp=Z,0.7nm,0.4s,mb4.0,baz=117,slow=6.5,SNR=5.2						
ZAL	Zalesovo	59.73	333	P	P	03 46 45.1	-0.4
EKS2	Erkin-Say	60.12	317	eP	P	03 46 48.2	-0.3
	comp=Z,2.0nm,0.6s,mb4.3						
KURK	Kurchatov	60.92	327	eP	P	03 46 52.8	-1.0
	comp=Z,5.2nm,0.6s,mb4.7						
KURK	Kurchatov	60.92	327c	iP	P	03 46 52.9	-0.8
BRVK	Borovoye	66.58	327	eP	P	03 47 30.2	-0.6
	comp=Z,3.4nm,0.6s,mb4.3						
BRVK	Borovoye	66.58	327	eP	P	03 47 30.2	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TIXI	Tiksi	66.91	1⇑	eP	P	03 47 32.5	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
BILL	Bilibino	68.66	15⇓	eP	P	03 47 44.5	+0.8
BILL				eS	sS	03 57 24.3	+6.9
BILL				eSS	SS	04 01 08.3	+2.8
BILL				pmax	pmax		
	comp=Z,6.0nm,2.0s,mb4.1						
AKTK	Aktyubinsk	72.89	321	P	P	03 48 09.4	-0.2
AKTO	Aktyubinsk	72.89	321	P	P	03 48 09.4	-0.2
	comp=Z,3.0nm,0.6s,mb4.3,baz=100,slow=9.5,SNR=11						
ARU	Arti	74.12	328	eP	P	03 48 15.7	-1.0
	comp=Z,3.2nm,0.6s,mb4.2						
ARU	Arti	74.12	328c	iP	P	03 48 16.1	-0.6
ARU				eS	S	03 57 46.0	+3.2
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
MALT	Malatya	85.76	308	eP	P	03 49 21.8	+1.9
	comp=Z,1.7nm,0.7s,mb4.1						
MALT	Malatya	85.76	308	eP	P	03 49 21.8	+1.9
MALT				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
OBN	Obninsk	86.27	325⇑	eP	P	03 49 22.6	+0.6
OBN				e		03 52 44.9	
OBN				eS	S	03 59 46.0	-4.2
OBN				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.0						
JOF	Joensuu	88.32	333	ep	P	03 49 30.9	-0.8
	comp=Z,4.3nm,0.4s,mb4.8						
ARCES	ARCESS Array B	89.55	340	P	P	03 49 36.7	-0.7
ARCES	ARCESS Array B	89.55	340	P	P	03 49 36.7	-0.7

	comp=Z,2.5nm,0.7s,mb4.5,baz=82,slow=6.6,SNR=15						
KAF	Kangasniemi	90.74	332	ep	P	03 49 42.4	-0.7
	comp=Z,1.8nm,0.4s,mb4.5						
KAF	Kangasniemi	90.74	332	eP	P	03 49 42.4	-0.7
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
FINES	FINESS Array B	90.98	332⇑	eP	P	03 49 44.7	+0.5
FINES	FINESS Array B	90.98	332	P	P	03 49 43.9	-0.4
	comp=Z,0.7nm,0.4s,mb4.1,baz=64,slow=4.7,SNR=13						
AKASG	Malin Array Be	91.13	321	P	P	03 49 44.3	-0.8
	comp=Z,0.8nm,0.4s,mb4.2,baz=66,slow=4.6,SNR=8.0						
VNA2	Neumayer--Watz	107.72	194	ePdiff	Pdif	03 50 58.1	-1.6
VNA2				e		03 51 01.4	
VNA2				e		03 51 03.1	
VNA2				e		03 51 07.6	
VNA2				e		03 51 11.6	
VNA3	Neumayer Olymp	108.05	194	ePdiff	Pdif	03 50 59.5	-1.7
VNA3				e		03 51 03.1	
VNA3				e		03 51 05.0	
VNA3				e		03 51 10.2	
VNA3				e		03 51 13.8	
VNA1	Neumayer--Stat	108.12	194	ePdiff	Pdif	03 50 59.3	-2.2
VNA1				e		03 51 03.3	
VNA1				e		03 51 04.9	
VNA1				e		03 51 09.8	

*ISCJB **11** 03:49:18.0±2.4, 47.08N±0.08×155.67E±0.08, h10km±15km, mb4.1/28, MS3.1/4, Error ellipse: s-maj=14.4km s-min=8.7km az=157.9*

*IDC **11** 03:49:17.9±0.9, 47.11N×155.68E, h0km, mb3.9/13, mb1 4.1/14, mb1mx3.9/23, mbtmp3.9/14, ML3.3/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/29, Error ellipse: s-maj=26.5km s-min=16.7km az=163.0*

*NEIC **11** 03:49:20.0±0.5, 47.13N×155.61E, h10km, mb4.2/11, Error ellipse: s-maj=14.6km s-min=7.2km az=161.0*

*MOS **11** 03:49:20.7±0.8, 47.01N×155.68E, h34km, mb4.3/12, Error ellipse: s-maj=13.4km s-min=10.2km az=88.3*

*BJI **11** 03:49:23.1, 48.07N×155.66E, h26km, mB4.8, mb4.4, Ms4.4, Msz4.1*

ISC 11 03:49:20.0±2.9, **47.11N**±0.09×**155.65E**±0.09, **h9**km±18km, **n53**, σ**0.91**/54, **mb4.1**/28, **MS3.1**/4, **2C-2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.59	5	ePN	Pn	03 50 15.7	-0.1
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
KUR	Kuril'sk	5.72	254	ePN	Pn	03 50 44.5	-0.5
YSS	Yuzh-Sakhalins	8.81	274	i PN	Pn	03 51 31.2	+3.8
ERM	Erimo	10.26	245	ePn	Pn	03 51 49.0	+1.7
ERM	Erimo	10.26	245	i PN	Pn	03 51 48.2	+0.9
MJAR	Matsushiro Arr	16.71	237	Pn	Pn	03 53 11.9	-2.3
	comp=Z,0.1nm,0.3s,baz=34,slow=14,SNR=4.7						
YAK	Yakutsk	20.99	325	i P	P	03 54 04.1	+0.8
BILL	Bilibino	21.68	11⇑	eP	P	03 54 09.9	-0.7
BILL				eS	S	03 58 05.1	-5.2
BILL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
KSRS	Korea Array	22.56	255	P	P	03 54 20.9	+0.5
	comp=Z,3.2nm,0.8s,mb3.8,baz=55,slow=9.4,SNR=5.6						
KSRS				LR	LR	04 02 55.4	
	comp=Z,22nm,21.1s,MS2.6,baz=55,slow=36						
JNU	Nakatsue	23.41	242	LR	LR	04 02 52.7	
	comp=Z,33nm,21.7s,MS2.8,baz=145,slow=35						
TIXI	Tiksi	27.64	342	i P	P	03 55 08.8	+1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
TIXI				MLR	MLR		
	comp=Z,100nm,27.0s,MS3.3						
SONM	Songino Array	32.85	290	P	P	03 55 53.8	+0.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	32.85	290	P	P	03 55 53.8	+0.1
	comp=Z,0.6nm,0.7s,mb3.7,baz=64,slow=8.5,SNR=5.3						
EGAK	Eagle	37.64	39	eP	P	03 56 33.8	-0.9
	comp=Z,3.3nm,1.0s,mb4.0						
LZH	Lanzhou	39.61	273	eP	P	03 56 54.0	+2.4
LZH				AMB	AMB		
	comp=Z,17nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,81nm,4.3s						
INK	Inuvik	40.41	33	P	P	03 56 57.2	-0.7
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	Inuvik	40.41	33	P	P	03 56 57.2	-0.7
	comp=Z,1.5nm,0.5s,mb4.0,baz=257,slow=6.0,SNR=9.3						
ZALV	Zalesovo Beam	43.80	306	P	P	03 57 24.9	-0.9
	comp=Z,0.9nm,0.6s,mb3.7,baz=68,slow=7.0,SNR=4.6						
ZAL	Zalesovo	43.82	306	P	P	03 57 24.9	-1.0
MKAR	Makanchi Array	48.31	298	P	P	03 58 01.1	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	48.31	298	P	P	03 58 01.1	-0.3
	comp=Z,0.9nm,0.7s,mb3.9,baz=67,slow=7.8,SNR=13						
KURK	Kurchatov	48.60	304	eP	P	03 58 03.5	-0.1
	comp=Z,4.1nm,0.7s,mb4.6						
KURK	Kurchatov	48.60	304⇓	eP	P	03 58 03.6	0.0
YKA	Yellowknife Ar	49.59	38	P	P	03 58 09.8	-1.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	49.59	38	P	P	03 58 09.9	-1.0
	comp=Z,1.4nm,0.5s,mb4.2,baz=296,slow=7.3,SNR=20						
BRVK	Borovoye	52.00	310	eP	P	03 58 29.4	+0.2
	comp=Z,2.1nm,0.5s,mb4.3						
BRVK	Borovoye	52.00	310	eP	P	03 58 29.4	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AAK	Ala-Archa	55.22	297	eP	P	03 58 52.5	-0.5
	comp=Z,2.3nm,0.8s,mb4.3						
AAK	Ala-Archa	55.22	297⇓	eP	P	03 58 53.0	0.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
AAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.0						
EKS2	Erkin-Say	55.64	298	eP	P	03 58 56.7	+0.7
	comp=Z,2.1nm,0.9s,mb4.2						
ARU	Arti	55.91	318c	i P	P	03 58 58.1	+0.4
ARU						04 00 59.5	
ARU				S	S	04 06 45.5	+0.4
ARU				eSS	SS	04 10 27.4	-2.8
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
MOD	Modoc	57.40	62	eP	P	03 59 09.5	+1.0
	comp=Z,1.9nm,0.7s,mb4.2						
BMO	Blue Mountains	57.43	57	eP	P	03 59 09.2	+0.5
	comp=Z,0.7nm,0.5s,mb4.0						
ARCES	ARCESS Array B	58.07	342	P	P	03 59 12.5	-0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	58.07	342	P	P	03 59 12.5	-0.4
	comp=Z,2.3nm,0.8s,mb4.3,baz=40,slow=7.4,SNR=12						
WVOR	Wild Horse Val	58.08	60	eP	P	03 59 14.0	+0.7
	comp=Z,1.5nm,0.5s,mb4.3						
WVOR	Wild Horse Val	58.08	60	eP	P	03 59 14.0	+0.7
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
AKTK	Aktyubinsk	59.77	313	P	P	03 59 24.6	-0.3
AKTO	Aktyubinsk	59.77	313	P	P	03 59 24.7	-0.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
AKTO	Aktyubinsk	59.77	313	P	P	03 59 24.6	-0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=73,slow=5.5,SNR=4.7						
NVAR	Mina Array Bea	60.72	64	P	P	03 59 32.5	+0.8
	comp=Z,0.8nm,0.7s,mb4.0,baz=291,slow=7.6,SNR=7.9						
TPAW	Teton Pass	61.88	55	eP	P	03 59 40.2	+0.8
	comp=Z,3.8nm,1.2s,mb4.4						
LOHW	Long Hollow	61.99	55	eP	P	03 59 41.1	+0.9
	comp=Z,0.9nm,0.7s,mb4.0						
DUG	Dugway	62.91	59	eP	P	03 59 47.0	+0.7
	comp=Z,1.1nm,0.6s,mb4.2						
DUG	Dugway	62.91	59	eP	P	03 59 47.0	+0.7
DUG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
FINES	FINESS Array B	64.44	336	P	P	03 59 55.5	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	64.44	336	P	P	03 59 55.5	-0.6
	comp=Z,0.6nm,0.5s,mb3.9,baz=25,slow=6.5,SNR=8.6						
ASAR	Alice Springs	73.13	201	P	P	04 00 49.1	-1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	73.13	201	P	P	04 00 50.1	-0.5
	comp=Z,0.5nm,0.8s,mb3.5,baz=9.9,slow=5.2,SNR=5.3						
TXAR	Lajitas Array	75.80	62	P	P	04 01 05.0	-1.3
TXAR	Lajitas Array	75.80	62	P	P	04 01 05.0	-1.2
	comp=Z,1.0nm,0.5s,mb4.0,baz=306,slow=3.6,SNR=16						
GERES	GERESS Array B	78.87	335	P	P	04 01 21.8	-1.4
GERES	GERESS Array B	78.87	335	P	P	04 01 21.8	-1.3
	comp=Z,0.2nm,0.5s,mb3.3,baz=31,slow=4.6,SNR=2.0						

*ISK **11** 04:08:22.8, 39.07N×40.40E, h5km, MD3.5*

*CSEM **11** 04:08:23.0±0.1, 39.05N×40.38E, h2km, MD3.5, Error ellipse: s-maj=2.4km s-min=1.7km az=37.0*

*ISCJB **11** 04:08:24.2±0.4, 39.06N±0.03×40.40E±0.04, h5km, Error ellipse: s-maj=4.5km s-min=4.1km az=148.8*

*DDA **11** 04:08:25.1, 39.04N×40.43E, h10km, Md3.0*

ISC 11 04:08:24.6±0.7, **39.05N**±0.03×**40.43E**±0.04, **h3**km±6km, **n24**, σ**1.22**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.18	165	i PG	Pg	04 08 27.9	-0.2
BINT				i SG	Sg	04 08 30.9	+0.4
PTK	Pertek	0.82	259	i PG	Pg	04 08 38.6	-1.8
PTK				i SG	Sg	04 08 51.8	+0.7
EZC	Erzincan	0.84	326	PG	Pg	04 08 44.3	+3.5
EZM	Erzurum	1.12	40	PN	Pn	04 08 44.9	-2.2
ERZM	Erzurum	1.12	40	i P	Pg	04 08 44.7	-1.4
ERZM				i S	Sg	04 09 02.7	+2.1
DIY	Diyarbakir	1.17	188	PN	Pn	04 08 46.9	-0.8
BTMT	Batman	1.19	136	PN	Pn	04 08 46.5	-1.6
ELZG	Elazig	1.26	244	i P	Pg	04 08 46.7	-2.0
ELZG				i S	Sg	04 09 08.1	+3.1
KELT	Kelkit	1.42	321	i P	Pn	04 08 50.8	-0.5
KELT				i S	Sg	04 09 13.1	+2.7
GUMT	Gumushane	1.58	333	PN	Pn	04 08 53.2	-0.3
MYA	Malataya	1.73	246	PN	Pn	04 08 55.5	0.0
MALT	Malatya	1.73	245	PN	Pn	04 08 54.6	-0.9
MARD	Mardin	1.76	171	i P	Pn	04 08 55.8	-0.1
MARD				i S	Sn	04 09 20.3	+1.6
TUTA	Tutak	1.89	79	i P	Pn	04 08 57.4	-0.3
TUTA				i S	Sn	04 09 26.2	+4.3
URFA	Urfa	2.05	219	PN	Pn	04 08 58.7	-1.2
AGRB	Hanur-Agry	2.06	74	ePN	Pn	04 09 00.6	+0.6
SIRT	Sirnak	2.21	134	ePN	Pn	04 09 02.8	+0.6
ESPY	Espiye-Giresun	2.28	325	ePN	Pn	04 09 02.7	-0.3
BCA	Borcka	2.56	21	ePN	Pn	04 09 06.1	-0.8
CLDR	Caldiran	2.72	87	ePN	Pn	04 09 09.8	+0.7
CUKT	Cukurca	3.09	125	ePN	Pn	04 09 15.4	+1.2
GAZ	Gaziantep	3.16	235	ePN	Pn	04 09 16.1	+1.0
KMRS	Kahramanmaras	3.18	242	ePN	Pn	04 09 16.1	+0.7
BNN	Bunyan	3.58	268	ePN	Pn	04 09 22.1	+1.2

*IDC **11** 04:09:23.0±0.8, 6.26S×103.26E, h0km, mb4.2/12, mb1 4.2/12, mb1mx4.1/21, mbtmp4.2/12, Error ellipse: s-maj=29.2km s-min=15.1km az=47.0*

*ISCJB **11** 04:09:26.3±0.6, 6.2S±0.1×103.4E±0.1, h33km, mb4.2/15, Error ellipse: s-maj=21.2km s-min=10.5km az=138.0*

*NEIC **11** 04:09:28.6±0.4, 6.24S×103.33E, mb4.4/5, Error ellipse: s-maj=18.3km s-min=8.4km az=50.0*

ISC 11 04:09:28.5±0.6, **6.2S**±0.1×**103.3E**±0.1, **h35**km, **n21**, σ**0.65**/19, **mb4.2**/15, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	20.49	102	P	P	04 14 03.4	-0.2
	23nm,0.4s,baz=234,slow=15,SNR=7.8						
FITZ	Fitzroy Crossi	24.74	120	P	P	04 14 47.1	+0.2
	5.2nm,0.9s,mb4.0,baz=257,slow=5.3,SNR=7.8						
WRA	Warramunga Arr	33.04	117	P	P	04 15 59.8	-1.0
	0.6nm,0.6s,mb3.7,baz=306,slow=8.7,SNR=11						
WB2	Warramunga Arr	33.05	117	eP	P	04 16 00.7	-0.2
ASAR	Alice Springs	34.11	124	P	P	04 16 10.1	0.0
	0.5nm,0.7s,mb3.5,baz=296,slow=7.4,SNR=6.9						
STKA	Stephens Creek	43.87	131	eP	P	04 17 32.6	+0.9
	4.1nm,0.6s,mb4.3						
STKA	Stephens Creek	43.87	131	P	P	04 17 32.4	+0.7
	4.7nm,0.6s,mb4.4,baz=306,slow=6.6,SNR=16						
KSRS	Korea Array	49.15	26	P	P	04 18 13.2	+0.3
	1.8nm,0.6s,mb4.3,baz=222,slow=8.2,SNR=5.8						
SONM	Songino Array	53.90	3	P	P	04 18 48.6	+0.3
	4.2nm,0.8s,mb4.4,baz=181,slow=9.2,SNR=40						
SONM				ScP	ScP	04 23 54.6	+5.6
	0.5nm,0.8s,baz=180,slow=2.9,SNR=3.9						
ULN	Ulaanbaatar	53.97	3	eP	P	04 18 48.8	+0.1
	3.9nm,1.1s,mb4.2						
ULN				epP	pP	04 19 00.3	+1.0
EKS2	Erkin-Say	55.60	334	eP	P	04 19 02.1	+1.5
	4.4nm,0.8s,mb4.5						
EKS2				epP	pP	04 19 12.6	+1.3
OPO	Ambohidratompo	55.99	252	P	P	04 19 03.2	-0.7
	1.2nm,0.3s,mb4.4,baz=116,slow=5.4,SNR=6.7						
MKAR	Makanchi Array	56.01	343	P	P	04 19 03.2	-0.3
	0.8nm,0.4s,mb4.1,baz=151,slow=9.2,SNR=38						
KURK	Kurchatov	60.61	342	eP	P	04 19 34.8	-0.7
	3.1nm,1.1s,mb4.3						
ZALV	Zalesovo Beam	61.95	348	P	P	04 19 43.7	-0.9
ZALV	Zalesovo Beam	61.95	348	P	P	04 19 43.7	-0.9
	1.9nm,0.4s,mb4.6,baz=145,slow=5.4,SNR=10						
QSPA	South Pole Qui	83.75	180	eP	P	04 21 54.2	+0.8
	6.6nm,1.2s,mb4.6						
AKASG	Malin Array Be	84.85	322	P	P	04 21 59.0	-0.5
	0.7nm,0.6s,mb4.0,baz=87,slow=4.6,SNR=5.8						
FINES	FINESS Array B	89.39	332	P	P	04 22 21.9	+0.7
	0.5nm,0.6s,mb4.0,baz=134,slow=5.5,SNR=3.8						
ULM	Lac du Bonnet	133.27	17	PKP	PKPdf	04 28 40.5	-0.2
	0.9nm,0.7s,baz=248,slow=5.4,SNR=3.1						
TXAR	Lajitas Array	145.69	45	PKPbc	PKPbc	04 29 05.2	+0.9
	1.5nm,0.5s,baz=299,slow=1.1,SNR=27						

WEL 11 04:14:31.8±0.2, **39.61S**×**176.71E**, **h12**km, **ML3.5**/32, **Error ellipse: s-maj=2.3km s-min=1.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	Pawanui	0.44	165	P*	Pg	04 14 41.3	+0.9
PXZ				S*	Sg	04 14 45.7	-0.5
BKZ	Black Stump Fm	0.47	339	P*	Pg	04 14 40.9	-0.2
BKZ				S*	Sg	04 14 48.1	+0.7
TSZ	Takapari Road	0.73	232	P*	Pb	04 14 45.5	-1.0
TSZ				S*	Sb	04 14 56.1	-0.4
MOVZ	Moawhango	0.77	285	P*	Pb	04 14 45.9	-1.2
HATZ	Hinemaiaia	0.86	326	P*	Pb	04 14 47.8	-0.9
TUVZ	Tukino	0.89	292	P*	Pb	04 14 48.4	-0.7
WNVZ	Wahianoa	0.91	288	P*	Pb	04 14 48.7	-0.8
RITZ	Rihia Road	0.92	313	P*	Pb	04 14 49.0	-0.6
OTVZ	Oturere	0.93	298	P*	Pb	04 14 49.1	-0.7
DRZ	Dome Shelter	0.95	290	P*	Pb	04 14 49.4	-0.8
KNZ	Kokohu	0.95	52	P*	Pb	04 14 49.4	-0.8
TRVZ	Turoa	0.95	289	P*	Pb	04 14 49.5	-0.8
NGZ	Ngauruhoe	0.96	296	P*	Pb	04 14 49.8	-0.7
FWVZ	Far West T-bar	0.97	291	P*	Pb	04 14 49.6	-0.8
KRVZ	Karewarewa	0.98	301	P*	Pb	04 14 49.8	-0.8
MTVZ	Mangateitei	0.99	283	P*	Pb	04 14 49.6	-1.2
WPVZ	Whakapapa	0.99	294	P*	Pb	04 14 50.2	-0.7
WTVZ	West Tongariro	1.00	299	P*	Pb	04 14 50.3	-0.8
KATZ	Kakaramea	1.01	308	P*	Pb	04 14 50.6	-0.7
RATZ	Rangitukua	1.04	315	P*	Pb	04 14 51.2	-0.5
PKVZ	Pokaka	1.10	286	P*	Pb	04 14 52.0	-0.8
WHTZ	Whakaora	1.11	328	P*	Pb	04 14 52.9	0.0
TWVZ	Taurewa	1.13	298	P*	Pb	04 14 52.2	-0.9
BFZ	Birch Farm	1.13	198	P*	Pb	04 14 51.5	-1.7
WATZ	Wairara	1.18	319	P*	Pb	04 14 53.0	-1.1
WAZ	Wanganui	1.34	263	PN	Pn	04 14 56.0	-0.3
MRZ	Mangatainoka R	1.36	219	PN	Pn	04 14 54.7	-1.9
URZ	Urewera	1.38	13	PN	Pn	04 14 55.8	-1.2
MWZ	Matawai	1.42	27	PN	Pn	04 14 56.1	-1.3
VRZ	Vera Road	1.59	287	PN	Pn	04 14 59.4	-0.3

GUC 11 04:33:16.6±0.7, **33.80S**×**72.01W**, **h35**km±11km, **MD3.5**, **ML2.3**, **4C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	Longovilo	0.52	108⇑	i P	Pn	04 33 27.4	-0.2
LNV				i S	Sn	04 33 35.5	+0.3
TACH	Talagante	0.91	81⇑	i P	Pn	04 33 32.8	0.0
TACH				i S	Sn	04 33 45.4	+0.8
CHCH	Chadas Angostu	1.14	97⇓	i P	Pn	04 33 36.9	+0.9
CHCH				i S	Sn	04 33 52.1	+1.8
SFDO	San Fernando	1.16	135⇓	i P	Pn	04 33 36.8	+0.5
SFDO				i S	Sn	04 33 53.3	+2.4
ANTU	Antumapu	1.17	79	eP	Pn	04 33 37.7	+1.2
ANTU				i S	Sn	04 33 53.3	+2.1
ANTU				AML	AML	04 33 56.5	
	comp=E,63nm,0.5s						
CACH	El Canelo	1.21	105⇑	i P	Pn	04 33 38.8	+1.7
CACH				i S	Sn	04 33 55.4	+3.1
PCH	Pirque	1.26	82	eP	Pn	04 33 38.8	+1.1
PCH				i S	Sn	04 33 57.0	+3.7
PEL	Peldehue	1.29	60⇓	i P	Pn	04 33 39.5	+1.4
PEL				i S	Sn	04 33 56.5	+2.5
PEL				AML	AML	04 34 03.7	
	comp=N,143nm,0.9s						
CICH	Cipreses	1.42	112	eP	Pn	04 33 41.6	+1.8
LMEL	Las Melosas	1.50	92⇑	i P	Pn	04 33 43.1	+2.0
LMEL				i S	Sn	04 34 02.8	+3.4
LMEL				AML	AML	04 34 08.5	
	comp=N,118nm,0.2s						
FCH	Farellones	1.51	72	eP	Pn	04 33 42.9	+1.8
FCH				i S	Sn	04 34 03.4	+3.9
FCH				AML	AML	04 34 08.9	
	comp=N,65nm,0.3s						

*IDC **11** 05:17:02.4±1.3, 9.75S×159.44E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.6/13, mbtmp3.6/5, ML3.5/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/20, Error ellipse: s-maj=56.7km s-min=8.4km az=151.0*

NEIC 11 05:17:03.7±0.7, **9.75S**×**159.46E**, **h10**km, **mb3.8**/1, **Error ellipse: s-maj=30.6km s-min=8.8km az=143.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.57	57	Pg	Pg	05 17 14.8	-0.1
	1μm,0.3s,baz=262,slow=3.1,SNR=206						
HNR				Lg		05 17 20.9	
	3μm,0.3s,baz=270,slow=23,SNR=62						
CTA	Charters Tower	16.37	230	Pn	Pn	05 20 55.0	+1.2
	0.1nm,0.3s,baz=270,slow=2.0,SNR=2.0						
CTA				LR	LR	05 25 06.8	
	comp=Z,56nm,19.1s,baz=226,slow=30						
CTAO	Charters Tower	16.37	230	eP	Pn	05 20 53.7	-0.1
	8.9nm,1.2s						
WRA	Warramunga Arr	26.27	244	P	P	05 22 38.7	-0.8
	0.6nm,0.8s,baz=72,slow=9.7,SNR=9.5						
WRA				LR	LR	05 31 45.8	
	comp=Z,43nm,18.2s,baz=180,slow=34						
STKA	Stephens Creek	27.55	214	LR	LR	05 34 03.1	
	comp=Z,98nm,19.8s,baz=25,slow=37						
ASAR	Alice Springs	28.05	237	P	P	05 22 55.0	-0.4
	0.3nm,0.6s,baz=59,slow=11,SNR=4.2						
KSM	Kuching	50.19	280	eP	P	05 25 59.6	-0.6
SONM	Songino Array	74.05	326	P	P	05 28 40.7	+1.0
	0.5nm,1.1s,baz=138,slow=5.9,SNR=4.1						
MKAR	Makanchi Array	88.38	318	P	P	05 29 56.3	+0.4
	0.2nm,0.6s,baz=101,slow=6.5,SNR=3.8						

*NIED **11** 05:17:00, 45.70N×143.30E, h380km, Mw4.9 Best double couple: $M_0$2.79000×10^{16} NP1: ϕ_s280.00000°, δ63.00000°, λ10.00000°. NP2: ϕ_s185.00000°, δ81.00000°, λ152.00000°.*

*IDC **11** 05:17:33.9±0.7, 45.95N×143.15E, h316km±9km, mb3.6/13, mb1 3.7/16, mb1mx3.5/24, mbtmp3.6/16, Error ellipse: s-maj=15.9km s-min=12.2km az=150.0*

*ISCJB **11** 05:17:33.5±0.2, 45.81N±0.05×143.15E±0.07, h329km±3km, mb3.9/33, Error ellipse: s-maj=8.2km s-min=7.0km az=139.7*

*MOS **11** 05:17:33.2±1.0, 45.92N×143.09E, h325km, mb3.9/15, Error ellipse: s-maj=14.9km s-min=9.5km az=81.1*

*NEIC **11** 05:17:34.4±0.4, 45.85N×143.14E, h324km±5km, mb3.9/19, Error ellipse: s-maj=7.8km s-min=5.8km az=156.0*

*BJI **11** 05:17:34.3, 45.62N×143.02E, h317km, mB4.4, mb4.2*

*JMA **11** 05:17:34.3±0.3, 45.69N×143.32E, h330km±3km, M4.2*

ISC 11 05:17:34.3±0.2, **45.81N**±0.05×**143.19E**±0.07, **h323**km±3km, **n94**, σ**0.84**/106, **mb3.9**/33, **10C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSE	Soyaes	0.95	207	⇑P	Pn	05 18 17.4	+0.4
JSE				eS	S	05 18 51.3	+0.3
JWK2	Keihoku	1.03	242	⇑P	Pn	05 18 18.4	+1.1
JWK2				eS	S	05 18 52.3	+0.7
YSS	Yuzh-Sakhalins	1.19	346	ePn	Pn	05 18 19.2	+1.3
YSS				eS	S	05 18 52.7	0.0
YSS	Yuzh-Sakhalins	1.19	346⇑	i PN	Pn	05 18 18.9	+1.0
YSS				i S	S	05 18 53.0	+0.3
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS				smax			
	comp=N,310nm,1.0s						
YSS				smax			
	comp=E,470nm,1.0s						
JSS	Shosan	1.69	214	⇑P	Pn	05 18 21.8	+0.8
ASAJ	Asahikawa	1.74	194	⇑P	Pn	05 18 22.0	+0.6
ASAJ	Asahikawa	1.74	194	PN	Pn	05 18 22.2	+0.8
ASAJ				S	S	05 18 59.1	+0.2
ASAJ				pmax	pmax		
	comp=Z,40nm,0.3s						
ASAJ	Asahikawa	1.74	194	P	Pn	05 18 22.1	+0.8
	comp=Z,40nm,0.3s,baz=22,slow=4.7,SNR=191						
ASAJ				S	S	05 18 59.0	+0.1
	baz=56,slow=32,SNR=2.6						
JYG	Yagishiri	1.86	223	P	Pn	05 18 22.6	+0.5
JTKR	Abashiri--Toko	1.91	164	⇑P	Pn	05 18 22.8	+0.3
JTKR				eS	S	05 19 01.0	0.0
JKK2	Kamakawa 2	1.96	189	⇑P	Pn	05 18 23.4	+0.5
JHR	Hokuryu	2.31	207	P	Pn	05 18 26.1	+0.5
JAR	Ashorobuto	2.54	170	⇑P	Pn	05 18 27.7	+0.1
JFR	Furan	2.68	189	P	Pn	05 18 29.1	+0.3
JAK	Akkeshi	3.01	158	P	Pn	05 18 30.6	-1.2
JAK				eS	S	05 19 14.2	-3.7
NEM2	Nemuro 2	3.05	142	eS	S	05 19 13.3	-5.2
JCH	Churui	3.19	178	⇑P	Pn	05 18 32.0	-1.6
JCH				eS	S	05 19 16.4	-4.7
JEW	Eniwo	3.22	203	⇑P	Pn	05 18 34.4	+0.6
JEW				eS	S	05 19 20.1	-1.4
JNBK	Urakawa-nobuka	3.54	185	P	Pn	05 18 36.2	-0.8
ERM	Erimo	3.79	180	ePn	Pn	05 18 39.7	0.0
JKB	Kayabe	4.21	202	P	Pn	05 18 43.0	-1.1
JKB				eS	S	05 19 34.8	-5.4
JOT	Ohata	4.69	200	P	Pn	05 18 47.9	-1.4
JOT				eS	S	05 19 43.3	-6.3
KLR	Kul'dur	8.46	298	ePN	Pn	05 19 31.6	-2.0
SKR	Severo-Kuril's	9.91	56	ePN	Pn	05 19 50.0	-1.0
MAJO	Matsushiro	9.98	204	ePn	Pn	05 19 52.1	0.0
MJAR	Matsushiro Arr	9.98	204	PN	Pn	05 19 52.2	0.0
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	9.98	204	P	Pn	05 19 52.2	0.0
	comp=Z,1.7nm,0.3s,baz=14,slow=14,SNR=20						
CN2	Changchun	12.76	267	eP	Pn	05 20 25.0	-0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
KSRS	Korea Array	14.12	239	P	P	05 20 41.5	+0.9
	comp=Z,0.2nm,0.3s,baz=51,slow=10,SNR=10						
JNU	Nakatsue	15.81	221	P	P	05 20 59.0	0.0
	comp=Z,0.3nm,0.3s,baz=27,slow=16,SNR=3.1						
HIA	Hailar	16.19	291	eP	P	05 21 01.9	-1.0
	comp=Z,6.4nm,0.6s						
HIA	Hailar	16.19	291	eP	P	05 21 02.0	-1.0
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	24.67	288	eP	P	05 22 26.9	+0.4
	comp=Z,2.7nm,0.8s,mb3.5						
ULN	Ulaanbaatar	24.67	288	eP	P	05 22 26.9	+0.5
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.6						
SONM	Songino Array	25.11	288	P	P	05 22 30.9	+0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	25.11	288	P	P	05 22 30.9	+0.5
	comp=Z,1.4nm,0.5s,mb3.4,baz=81,slow=8.1,SNR=15						
GTA	Gaotai	32.24	274	eP	P	05 23 34.9	+1.6
GTA				AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.3						
IMA2	Indian Mountai	38.61	36	eP	P	05 24 25.4	-1.2
KDAK	Kodiak Island	39.97	49	P	P	05 24 37.4	-0.5
KDAK	Kodiak Island	39.97	49	P	P	05 24 37.4	-0.5
	comp=Z,5.1nm,0.5s,mb4.0,baz=184,slow=14,SNR=7.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MCK	McKinley	40.78	39	eP	P	05 24 44.1	-0.4
MKAR	Makanchi Array	41.15	294	P	P	05 24 47.8	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	41.15	294	P	P	05 24 47.8	+0.2
	comp=Z,0.5nm,0.4s,mb3.1,baz=79,slow=8.8,SNR=10						
KURK	Kurchatov	42.05	301	eP	P	05 24 53.9	-0.9
	comp=Z,1.3nm,0.6s,mb3.2						
KURK	Kurchatov	42.05	301	eP	P	05 24 53.9	-0.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.1						
INK	Inuvik	46.07	31	P	P	05 25 25.1	-1.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
INK	Inuvik	46.07	31	P	P	05 25 25.1	-1.2
	comp=Z,2.3nm,0.4s,mb3.6,baz=296,slow=5.9,SNR=10.0						
TKM2	Tokmak 2	47.10	292	eP	P	05 25 35.5	+1.0
	comp=Z,2.9nm,0.9s,mb3.5						
TKM2	Tokmak 2	47.10	292	eP	P	05 25 35.5	+1.0
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.5						
EKS2	Erkin-Say	48.40	293	eP	P	05 25 44.5	+0.2
	comp=Z,1.4nm,0.5s,mb3.5						
RES	Resolute Bay	53.80	16	eP	P	05 26 22.4	-1.3
	comp=Z,229nm,0.6s						
RES	Resolute Bay	53.80	16	eP	P	05 26 22.4	-1.3
RES				pmax	pmax		
	comp=Z,229nm,0.6s						
YKA	Yellowknife Ar	55.65	33	P	P	05 26 36.6	-0.4
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YKA	Yellowknife Ar	55.65	33	P	P	05 26 36.6	-0.5
	comp=Z,4.0nm,0.6s,mb4.0,baz=306,slow=6.8,SNR=88						
ARCES	ARCESS Array B	56.31	338	P	P	05 26 40.4	-1.2
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	56.31	338	P	P	05 26 40.4	-1.2
	comp=Z,3.6nm,1.0s,mb3.7,baz=32,slow=7.1,SNR=4.1						
FINES	FINESS Array B	61.74	331	P	P	05 27 17.6	-1.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	61.74	331	P	P	05 27 17.6	-1.1
	comp=Z,1.5nm,0.5s,mb3.8,baz=51,slow=8.1,SNR=25						
NEW	Newport	63.06	48	eP	P	05 27 27.5	-0.1
	comp=Z,2.4nm,0.8s,mb3.8						
NEW	Newport	63.06	48	eP	P	05 27 27.5	-0.1
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FCC	Fort Churchill	65.62	29	eP	P	05 27 43.4	-0.4
	comp=Z,16nm,1.6s,mb4.5						
FCC	Fort Churchill	65.62	29	eP	P	05 27 43.4	-0.4
FCC				pmax	pmax		
	comp=Z,16nm,1.6s,mb4.5						
FFC	Flin Flon	65.69	35	eP	P	05 27 44.1	-0.2
	comp=Z,5.1nm,0.7s,mb4.4						
FFC	Flin Flon	65.69	35	eP	P	05 27 44.1	-0.3
FFC				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
NOA	NORSAR Array B	66.64	337	P	P	05 27 49.1	-1.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	66.64	337	P	P	05 27 49.1	-1.1
	comp=Z,1.7nm,0.8s,mb3.8,baz=25,slow=6.4,SNR=3.7						
EGMT	Eagleton	66.93	44	eP	P	05 27 53.0	+0.7
	comp=Z,102nm,3.0s						
HLID	Hailey	67.57	50	eP	P	05 27 56.9	+0.5
	comp=Z,1.0nm,0.8s,mb3.6						
GCMT	Greycliff	68.51	46	eP	P	05 28 02.9	+0.8
NVAR	Mina Array Bea	68.83	56	P	P	05 28 05.5	+1.3
	comp=Z,2.1nm,0.7s,mb4.0,baz=309,slow=4.2,SNR=24						
MOOW	Moose Ponds	69.38	48	eP	P	05 28 08.1	+0.6
	comp=Z,1.7nm,0.9s,mb3.8						
TPAW	Teton Pass	69.46	48	eP	P	05 28 09.3	+1.3
	comp=Z,2.8nm,0.9s,mb4.0						
ASAR	Alice Springs	69.65	189	P	P	05 28 10.3	+1.1
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR	Alice Springs	69.65	189	P	P	05 28 10.3	+1.1
	comp=Z,1.8nm,0.6s,mb4.0,baz=0.5,slow=5.2,SNR=31						
HWUT	Hardware Ranch	70.44	50	eP	P	05 28 14.7	+0.7
	comp=Z,1.5nm,0.7s,mb3.8						
BW06	Boulder Array	70.69	48	eP	P	05 28 15.6	+0.2
	comp=Z,2.3nm,0.6s,mb4.1						
DUG	Dugway	70.75	52	eP	P	05 28 16.4	+0.6
	comp=Z,2.6nm,0.7s,mb4.1						
DUG	Dugway	70.75	52	eP	P	05 28 16.4	+0.6
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
TPNV	Topopah Spring	71.04	56	eP	P	05 28 18.4	+0.8
	comp=Z,5.0nm,0.8s,mb4.3						
TPNV	Topopah Spring	71.04	56	eP	P	05 28 18.4	+0.8
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ULM	Lac du Bonnet	71.52	35	P	P	05 28 19.1	-1.1
	comp=Z,2.4nm,0.5s,mb4.2,baz=323,slow=6.2,SNR=11						
SRU	San Rafael	72.76	51	eP	P	05 28 29.1	+1.3
CLL	Collm	74.16	330	eP	P	05 28 36.0	+0.4
PV01	Paradox Valley	74.53	51	eP	P	05 28 38.3	+0.4
SMCO	Snowmass	74.63	49	eP	P	05 28 34.0	-4.5
	comp=Z,1.9nm,0.6s,mb4.0						
SDCO	Great Sand Dun	76.46	49	eP	P	05 28 49.4	+0.5
	comp=Z,1.6nm,0.9s,mb3.8						
SCHQ	Schefferville	76.56	17	P	P	05 28 48.2	-0.9
	comp=Z,2.4nm,0.6s,mb4.1,baz=306,slow=6.7,SNR=17						
CBKS	Cedar Bluff	78.62	45	eP	P	05 28 59.5	-1.1
	comp=Z,14nm,0.4s,mb5.0						
CBKS	Cedar Bluff	78.62	45	eP	P	05 28 59.5	-1.2
CBKS				pmax	pmax		
	comp=Z,14nm,0.4s,mb5.0						
MNTX	Cornudas Mount	81.04	53	eP	P	05 29 13.8	+0.1
	comp=Z,1.0nm,0.4s,mb3.9						
LTX	Lajitas	83.79	54	eP	P	05 29 28.0	+0.1
	comp=Z,2.1nm,0.8s,mb4.0						
LTX	Lajitas	83.79	54	eP	P	05 29 28.0	+0.1
LTX				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
TXAR	Lajitas Array	83.79	54	P	P	05 29 28.6	+0.7
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	83.79	54	P	P	05 29 28.6	+0.7
	comp=Z,1.0nm,0.4s,mb4.0,baz=290,slow=3.8,SNR=19						

CASC 11 05:19:09.5±2.1**, 850N**×**8295W, h20**km±8km**, MD3.8, 2C-3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.39	41	⇓iP	Pb	05 19 17.9	+0.1
BRU2				eS	Sb	05 19 25.2	+1.8
TBS2		0.41	45	⇓eP	Pb	05 19 24.8	+6.6
TBS2				eS	Sb	05 19 31.9	+7.8
CTCR	Cotoan	0.44	26	⇓iP	Pb	05 19 18.5	-0.1
DVD	David	0.50	97	eP	Pb	05 19 18.4	-1.3
DVD				eS	Sb	05 19 26.4	-0.1
BAR1		0.82	334	⇑eP	Pb	05 19 24.0	-1.2
BAR1				eS	Sb	05 19 34.9	-0.9
CNI	Changuinola	1.01	25	i P	Pb	05 19 27.6	-0.7
BUS	Buena Vista	1.32	323	eP	Pn	05 19 33.6	+0.9
BUS				eS	Sn	05 19 50.4	+0.6
QCR	Quepos	1.51	308	eP	Pn	05 19 35.3	-0.1
QCR				eS	Sn	05 19 55.8	+1.3
URSC	Urasca	1.56	329	eP	Pn	05 19 35.6	-0.5
URSC				eS	Sn	05 19 56.4	+0.7
LCR2	La Lucha 2	1.62	320	eP	Pn	05 19 36.2	-0.7
LAJ	Bijagual	1.78	320	eP	Pn	05 19 42.2	+3.1
PRS1	Puriscal	2.00	318	eP	Pn	05 19 41.5	-0.6
PRS1				eS	Sn	05 20 07.0	+0.5
CGA2	Cerro Gallo 2	2.12	315	eP	Pn	05 19 45.6	+1.8
JCR	Jicaral	2.52	302	eP	Pn	05 19 50.8	+1.5
AZU	Azuero	2.74	105	eP	Pn	05 19 53.0	+0.7
BCIP	Isla Barro Col	3.15	78	eP	Pn	05 19 58.4	+0.5
PTP	Ponta Puerca	19.43	58	⇑iP		05 19 15.3	

IDC 11 05:34:06.6±1.2**, 952S**×**15937E, h0**km**, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.6**/14**, mbtmp3.6**/4**, ML3.5**/1**, Error ellipse: s-maj=48.5km s-min=8.8km az=169.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.58	81	Pg	Pg	05 34 18.3	+0.7
	1µm,0.3s,baz=248,slow=9.9,SNR=217						
HNR				Lg		05 34 25.0	
	6µm,0.3s,baz=93,slow=23,SNR=107						
CTA	Charters Tower	16.45	229	Pn	Pn	05 38 00.4	+1.5
	0.1nm,0.3s,baz=68,slow=15,SNR=6.4						
WRA	Warramunga Arr	26.29	244	P	P	05 39 43.5	-0.5
	0.6nm,0.6s,baz=70,slow=9.2,SNR=5.6						
ASAR	Alice Springs	28.10	237	P	P	05 39 59.5	-0.8
	0.2nm,0.4s,baz=67,slow=10,SNR=3.4						
SONM	Songino Array	73.81	326	P	P	05 45 43.6	+0.7
	0.2nm,0.5s,baz=142,slow=6.5,SNR=2.4						

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*MOS **11** 05:58:26.1±0.9, 3653N×7088E, h197km, mb4.0/15, Error ellipse: s-maj=14.7km s-min=8.4km az=86.0*
*ISCJB **11** 05:58:27.0±0.4, 3654N±002×7100E±005, h204km±5km, mb3.7/16, Error ellipse: s-maj=7.1km s-min=3.8km az=172.4*
*NEIC **11** 05:58:27.0±1.2, 3653N×7085E, h189km±11km, mb4.3/12, Error ellipse: s-maj=13.0km s-min=6.5km az=54.0*
*BJI **11** 05:58:27.1, 3673N×7080E, h187km, mb4.1*
*IDC **11** 05:58:27.7±4.2, 3643N×7097E, h200km±40km, mb3.6/12, mb1 3.8/15, mb1mx3.6/24, mbtmp3.7/15, Error ellipse: s-maj=16.8km s-min=14.1km az=11.0*
*NNC **11** 05:58:35.0±1.7, 37.14N×7109E, h190km±19km, mb3.1, mpv3.9, Error ellipse: s-maj=17.1km s-min=11.7km az=32.0*
ISC 11 05:58:27.6±0.4**, 3658N**±002×**7090E**±006**, h194**km±4km**, n88, σ1?13**/109**, mb3.7**/16**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.87	163	⇑P	Pn	05 59 16.9	+1.4
CEP				S	Sn	05 59 53.0	+0.2
CHCP	Chirah Chowk	3.50	146	P	Pn	05 59 24.5	+1.5
CHCP				S	Sn	06 00 04.0	-2.3
THW	Thamme Wali	3.84	169	P	Pn	05 59 28.1	+0.9
DRP	Derazinda	4.86	187	P	Pn	05 59 40.5	+0.4
DRP				S	Sn	06 00 34.0	-3.2
KSH	Kashi	4.96	52	⇓iP	Pn	05 59 43.0	+1.8
KSH				S	Sn	06 00 40.1	+0.9
KSH				Smax			
	comp=N,1µm,0.6s						
KSH				Smax			
	comp=E,1µm,0.5s						
THN	Thein Dam	5.74	135	eP	Pn	05 59 51.2	-0.2
THN				eS	Sn	06 00 51.6	-5.9
AML	Almayashu	5.95	20	ePn	Pn	05 59 54.6	+0.6
	comp=E,155nm,0.5s						
AML				eSn	Sn	06 01 00.3	-1.9
AML	Almayashu	5.95	20	P	Pn	05 59 54.8	+0.9
	SNR=148						
UCH	Uchtor	6.29	25	ePn	Pn	05 59 59.1	+0.7
	comp=E,44nm,0.4s						
UCH				eSn	Sn	06 01 08.3	-2.0
UCH	Uchtor	6.29	25	P	Pn	05 59 59.4	+0.9
	SNR=82						
KZA	Kyzart	6.44	30	P	Pn	06 00 00.6	+0.3
	SNR=16						
EKS2	Erkin-Say	6.46	19	ePn	Pn	06 00 01.1	+0.4
	comp=E,22nm,0.4s						
EKS2				eSn	Sn	06 01 03.0	-11
EKS2	Erkin-Say	6.46	19	P	Pn	06 00 01.5	+0.8
	SNR=60						
KK31	Karatay Array	6.52	357	P	Pn	06 00 01.6	+0.2
	comp=E,4.0nm,0.3s,baz=190,slow=14,SNR=144						
KK31				⇓S	Sn	06 01 10.2	-5.5
	comp=E,46nm,0.5s,baz=185,slow=21,SNR=25						
AAK	Ala-Archa	6.65	24	ePn	Pn	06 00 02.6	-0.5
	comp=E,22nm,0.3s						
AAK				eSn	Sn	06 01 16.1	-2.6
AAK	Ala-Archa	6.65	24	ePN	Pn	06 00 02.6	-0.5
AAK				pmax	pmax		
	comp=Z,22nm,0.3s						
AAK	Ala-Archa	6.65	24	P	Pn	06 00 04.0	+1.0
	SNR=42						
KBK	Karagaybulak	6.82	26	P	Pn	06 00 06.5	+1.1
	SNR=26						
ULHL	Ulahol	7.00	35	P	Pn	06 00 08.0	+0.3
	SNR=5.2						
CHMS	Chumysh	7.06	24	P	Pn	06 00 08.6	+0.2
	SNR=11						
SDNR	Sundarnagar	7.14	133	eP	Pn	06 00 09.4	-0.3
SDNR				eS	Sn	06 01 24.4	-6.2
USP	Ospenovka	7.22	21	P	Pn	06 00 10.5	-0.1
	SNR=14						
TKM2	Tokmak 2	7.29	28	⇑P	Pn	06 00 11.9	+0.4
	comp=Z,5.5nm,0.6s						
TKM2				⇑S	Sn	06 01 28.7	-5.1
	comp=Z,6.5nm,0.9s						
TKM2	Tokmak 2	7.29	28	ePn	Pn	06 00 11.9	+0.5
	comp=Z,73nm,0.6s						
TKM2				eSn	Sn	06 01 27.6	-6.2
TKM2	Tokmak 2	7.29	28	ePN	Pn	06 00 11.9	+0.5
TKM2				pmax	pmax		
	comp=Z,73nm,0.6s						
TKM2	Tokmak 2	7.29	28	P	Pn	06 00 12.1	+0.7
	SNR=77						
JOSI	Joshimath	9.39	127	eP	Pn	06 00 38.9	-0.2
JOSI				AMb	AMB	06 00 42.4	
	comp=Z,58nm,1.2s						
JOSI				eS	Sn	06 02 16.3	-7.7
KHET	Khetri	9.44	153	eP	Pn	06 00 36.1	-3.6
KHET				AMb	AMB	06 00 38.6	
	comp=Z,4.0nm,0.4s						
KHET				eS	Sn	06 02 15.0	-10
NDI	New Delhi	9.50	144	eS	Sn	06 02 18.0	-8.8
KUDL	Kundal	9.65	149	eP	Pn	06 00 39.1	-3.3
KUDL				AMb	AMB	06 00 42.9	
	comp=Z,9.9nm,0.7s						
KUDL				eS	Sn	06 02 19.7	-10
MK31	Makanchi Array	13.27	36	⇓P	Pn	06 01 27.6	-0.9
	comp=Z,12nm,0.8s,baz=180,slow=6.9,SNR=110						
MKAR	Makanchi Array	13.27	36	P	Pn	06 01 28.4	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	13.27	36	P	Pn	06 01 28.4	-0.1
	comp=Z,0.6nm,0.3s,baz=219,slow=9.4,SNR=62						
GKN	Gorkha	14.41	123	eP	Pn	06 01 42.4	-0.5
GKN				eS	Sn	06 04 12.5	-11
WMQ	Urumqi	14.71	55	P	Pn	06 01 46.0	-0.4
AB31	Akbulak array	14.97	331	P	Pn	06 01 51.5	+1.9
	comp=Z,4.5nm,0.8s,baz=145,slow=16,SNR=32						
AB31				⇑S	Sn	06 04 34.6	-2.3
	comp=Z,2.1nm,0.6s,baz=151,slow=24,SNR=6.6						
KKN	Kakani	14.99	122	eP	Pn	06 01 49.5	-0.4
	comp=Z,33nm,0.5s						
KKN	Kakani	14.99	122	eP	Pn	06 01 49.5	-0.4
KKN				pmax	pmax		
	comp=Z,33nm,0.5s						
KURK	Kurchatov	15.18	19	eP	Pn	06 01 50.9	-1.1
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	15.18	19	eP	Pn	06 01 50.9	-1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JIRN	Jiri	15.70	120	eP	Pn	06 01 58.1	-0.5
	comp=Z,23nm,0.4s						
JIRN				eS	S	06 04 43.2	-10
BVA0	Borovoye Array	16.44	359	⇓P	Pn	06 02 08.1	+0.8
	comp=Z,0.4nm,0.7s						
BVA0				⇓S	S	06 05 06.3	-2.2
	comp=Z,0.8nm,1.1s						
BRVK	Borovoye	16.48	359	eP	Pn	06 02 07.3	-0.4
	comp=Z,2.5nm,0.7s						
BRVK	Borovoye	16.48	359	eP	Pn	06 02 07.4	-0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTK	Aktyubinsk	16.67	330	P	Pn	06 02 10.5	+0.5
AKTO	Aktyubinsk	16.67	330	P	Pn	06 02 10.5	+0.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	16.67	330	P	Pn	06 02 10.5	+0.5
	comp=Z,0.7nm,0.3s,baz=141,slow=10,SNR=37						
TAPN	Taplejung	16.95	118	eP	Pn	06 02 13.5	-0.1
	comp=Z,11nm,0.4s						
ODAN	Odare	17.03	120	eP	Pn	06 02 15.8	+1.3
	comp=Z,11nm,0.4s						
LSA	Lhasa	18.28	106	eP	P	06 02 27.6	+0.7
	comp=Z,4.6nm,0.4s						
LSA	Lhasa	18.28	106	eP	P	06 02 27.6	+0.8
LSA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZAL	Zalesovo	19.86	25	P	P	06 02 44.1	+0.5
ZALV	Zalesovo Beam	19.87	25	P	P	06 02 44.1	+0.4
	comp=Z,1.4nm,0.3s,baz=220,slow=11,SNR=83						
NVS	Novosibirsk	20.13	21	eP	P	06 02 46.7	+0.2
NVS				eS	S	06 06 19.9	-1.7
NVS				pmax	pmax		
	comp=Z,15nm,1.3s						
NVS				pmax	pmax		
	comp=N,23nm,1.7s						
NVS				smax			
	comp=N,39nm,2.5s						
GTA	Gaotai	22.92	74	eP	P	06 03 17.6	+3.0
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.0						
ZAK	Zakamensk	26.99	49	eP	P	06 03 47.1	-4.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.0s,mb3.4						
SONM	Songino Array	28.35	55	P	P	06 04 04.5	+1.2
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	Songino Array	28.35	55	P	P	06 04 04.5	+1.2
	comp=Z,1.7nm,0.8s,mb3.8,baz=263,slow=10.0,SNR=12						
ULN	Ulaanbaatar	28.79	56	eP	P	06 04 08.3	+1.1
	comp=Z,1.3nm,0.7s,mb3.7						
ULN	Ulaanbaatar	28.79	56	eP	P	06 04 08.3	+1.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
AKASG	Malin Array Be	32.83	309	P	P	06 04 43.3	+0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	32.83	309	P	P	06 04 43.2	+0.6
	comp=Z,2.4nm,0.8s,mb3.8,baz=79,slow=7.3,SNR=10						
JOF	Joensuu	35.76	330	ep	P	06 05 06.3	-1.3
	comp=Z,1.7nm,0.3s,mb4.0						
JOF	Joensuu	35.76	330	eP	P	06 05 06.3	-1.3
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.1						
FINES	FINESS Array B	37.37	326	P	P	06 05 22.1	+0.9
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	37.37	326	P	P	06 05 22.1	+0.9
	comp=Z,2.2nm,0.8s,mb3.7,baz=125,slow=10,SNR=8.0						
ARCES	ARCESS Array B	41.04	338	P	P	06 05 52.7	+1.2
ARCES	ARCESS Array B	41.04	338	P	P	06 05 52.7	+1.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	41.04	338	P	P	06 05 52.7	+1.2
	comp=Z,1.9nm,0.6s,mb3.7,baz=115,slow=8.3,SNR=19						
NB2	NORSAR Subarra	44.27	323	P	P	06 06 17.0	-0.5
	comp=Z,2.6nm,0.7s,mb3.7,baz=95,slow=7.9						
NB2	NORSAR Subarra	44.27	323	P	P	06 06 17.0	-0.5
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.7						
NOA	NORSAR Array B	44.27	323	P	P	06 06 17.8	+0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	44.27	323	P	P	06 06 17.8	+0.3
	comp=Z,2.2nm,0.7s,mb3.6,baz=96,slow=7.7,SNR=6.5						
KMBO	Kilima Mbogo	48.83	227	eP	P	06 06 54.3	+0.7
	comp=Z,1.6nm,0.7s,mb3.5						
KMBO	Kilima Mbogo	48.83	227	P	P	06 06 54.3	+0.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	Kilima Mbogo	48.83	227	P	P	06 06 54.2	+0.7
	comp=Z,1.2nm,0.5s,mb3.5,baz=32,slow=14,SNR=7.1						
TORD	Torodi Ar. Bea	65.64	269	P	P	06 08 49.1	-2.1
	comp=Z,0.4nm,0.5s,mb3.3,baz=44,slow=5.4,SNR=3.5						
INK	Inuvik	73.84	9	eP	P	06 09 41.4	+1.0
INK	Inuvik	73.84	9	P	P	06 09 40.8	+0.4
	comp=Z,0.7nm,0.4s,mb3.7,baz=266,slow=2.0						
BOSA	Boshof	77.76	220	P	P	06 10 02.4	-0.7
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
BOSA	Boshof	77.76	220	P	P	06 10 02.4	-0.7
	comp=Z,2.7nm,0.8s,mb3.9,baz=53,slow=5.3,SNR=4.2						
YKA	Yellowknife Ar	81.17	3	P	P	06 10 21.6	+0.5
YKA	Yellowknife Ar	81.17	3	P	P	06 10 21.6	+0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	81.17	3	P	P	06 10 21.6	+0.5
	comp=Z,1.2nm,0.4s,mb3.9,baz=351,slow=5.5,SNR=26						
WRA	Warramunga Arr	82.10	122	P	P	06 10 25.1	-1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	82.10	122	P	P	06 10 25.1	-1.5
	comp=Z,1.3nm,0.5s,mb3.8,baz=324,slow=5.0,SNR=45						
ASAR	Alice Springs	84.36	125	P	P	06 10 36.6	-1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	84.36	125	P	P	06 10 36.6	-1.5
	comp=Z,1.4nm,0.6s,mb3.9,baz=311,slow=5.0,SNR=27						

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*ISCJB **11** 06:08:54.3±5.9, 128N±02×9350E±0.10, h5km±34km, mb4.2/15, Error ellipse: s-maj=28.7km s-min=13.4km az=21.0*
*IDC **11** 06:08:56.2±1.1, 1290N×9334E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.9/22, mbtmp4.0/10, MS3.9/2, Ms1 3.9/2, ms1mx3.2/33, Error ellipse: s-maj=49.3km s-min=23.9km az=60.0*
*NEIC **11** 06:09:00.3±0.8, 1301N×9359E, mb4.4/4, Error ellipse: s-maj=18.8km s-min=9.6km az=215.0*
ISC 11 06:08:57.7±5.8**, 129N**±02×**9353E**±010**, h13**km±34km**, n26, σ0?87**/26**, mb4.2**/15**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.46	212	eP	x	06 09 37.7	
PBA				eS	x	06 09 59.8	
PBA				ex	x	06 10 03.8	
	comp=N,1µm,0.9s						
PBA				ex	x	06 10 08.5	
	comp=E,729nm,1.1s						
VIS	Vishakhapatnam	10.94	297	i P	Pn	06 11 32.8	-1.3
VIS				i S	Sn	06 13 21.4	-15
VIS				i S	Sn	06 13 21.9	-14
VIS				ex	x	06 13 25.9	
	comp=N,40nm,0.5s						
VIS				ex	x	06 13 26.1	
	comp=E,25nm,0.5s						
PSI	Prapat	11.37	152	LR	LR	06 16 22.8	
	comp=E,67nm,19.1s,baz=44,slow=39						
ODAN	Odare	15.03	338	eP	Pn	06 12 29.9	0.0
	comp=E,11nm,0.5s						
TAPN	Taplejung	15.37	340	eP	Pn	06 12 34.8	+0.5
	comp=E,15nm,0.9s						
JIRN	Jiri	16.20	336	eP	Pn	06 12 45.7	+0.5
QIZ	Qiongzhong	16.82	67	ePn	Pn	06 12 53.1	0.0
	comp=E,4.9nm,0.8s						
GKN	Gorkha	17.16	332	eP	Pn	06 12 57.8	+0.5
NACB	Ninganchiao	28.82	63	eP	P	06 14 54.6	-1.2
NACB				epP	pP	06 15 02.8	+3.0
MK31	Makanchi Array	35.08	347	Pn	P	06 15 50.2	-0.2
	comp=E,1.3nm,0.7s,mb4.0,baz=192,slow=14,SNR=18						
MK31				⇑Lg		06 16 37.0	
	comp=E,1.5nm,1.1s,baz=186,slow=24,SNR=6.3						
MKAR	Makanchi Array	35.08	347	P	P	06 15 49.7	-0.7
MKAR	Makanchi Array	35.08	347	P	P	06 15 49.7	-0.7
	comp=E,1.7nm,0.7s,mb4.1,baz=160,slow=8.7,SNR=24						
SONM	Songino Array	36.45	15	P	P	06 16 03.5	+1.3
	comp=E,0.8nm,0.9s,mb3.6,baz=194,slow=7.9,SNR=5.0						
ZALV	Zalesovo Beam	41.52	352	P	P	06 16 45.6	+1.1
	comp=E,1.7nm,0.6s,mb3.9,baz=171,slow=9.5,SNR=9.8						
AKTK	Aktyubinsk	47.30	330	P	P	06 17 31.0	+0.2
AKTO	Aktyubinsk	47.30	330	P	P	06 17 31.0	+0.2
	comp=E,0.8nm,0.5s,mb3.9,baz=121,slow=18,SNR=5.0						
GUMO	Guam	49.91	83	eP	P	06 17 51.1	-0.3
	comp=E,54nm,0.8s,mb5.6						
GUMO				epP	pP	06 17 59.5	+3.9
STKA	Stephens Creek	64.04	135	P	P	06 19 32.9	+1.5
	comp=E,0.8nm,0.6s,mb4.0,baz=180,slow=20,SNR=2.3						
JOF	Joensuu	66.09	334	ep	P	06 19 42.6	-1.6
	comp=E,4.3nm,0.6s,mb4.7						
FINES	FINESS Array B	68.02	331	P	P	06 19 56.8	+0.3
	comp=E,2.4nm,0.7s,mb4.3,baz=134,slow=5.5,SNR=8.6						
KEV	Kevo	69.92	340	eP	P	06 20 08.0	-0.2
	comp=E,4.2nm,0.8s,mb4.4						
ARCES	ARCESS Array B	70.36	340	P	P	06 20 11.4	+0.5
	comp=E,0.5nm,0.4s,mb3.8,baz=91,slow=6.1,SNR=8.3						
BILL	Bilibino	71.68	22	eP	P	06 20 16.3	-2.6
	comp=E,8.4nm,0.9s,mb4.7						
GERES	GERESS Array B	73.72	317	P	P	06 20 32.0	+0.6
	comp=E,1.6nm,0.7s,mb4.0,baz=90,slow=5.3,SNR=15						
NOA	NORSAR Array B	75.09	330	P	P	06 20 38.9	-0.2
	comp=E,1.7nm,1.0s,mb3.9,baz=266,slow=19,SNR=3.1						
ESDC	Sonseca Array	87.53	310	P	P	06 21 45.8	+0.2
	comp=E,0.1nm,0.3s,mb3.5,baz=74,slow=9.6,SNR=4.6						

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*ISCJB **11** 06:09:27.5±0.5, 5188N±009×1797W±0.1, h9km, mb3.8/10,*

Error ellipse: s-maj=15.3km s-min=6.6km az=145.8
*IDC **11** 06:09:27.6±1.7, 51.83N×179.72W, h0^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.9/23, mbtmp3.9/11, ML4.2/1, Error ellipse: s-maj=51.6km s-min=18.8km az=4.0*
*NEIC **11** 06:09:28.8±1.8, 51.75N×179.64W, h9^{km}±16^{km}, ML3.9(AEIC), Error ellipse: s-maj=19.6km s-min=12.0km az=169.0*
ISC 11 06:09:28.8±2.0, **51.8N**±0.1×**179.7W**±0.1, **h8**^{km}±16^{km}, **n18**, σ**0.47**/18, **mb3.8**/10, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.77**	**238**	P	**Pg**	**06 09 43.4**	**-0.2**
AMKA				S	**Sg**	**06 09 53.7**	**+0.1**
ADK	**Adak**	**1.85**	**86**	P	**Pn**	**06 10 00.7**	**0.0**
GAMB	**Gambell**	**12.73**	**16**	*e*Pn	**Pn**	**06 12 30.6**	**+0.7**
KDAK	**Kodiak Island**	**16.65**	**58**	Pn	**Pn**	**06 13 21.8**	**-0.5**
KDAK	**Kodiak Island**	**16.65**	**58**	Pn	**Pn**	**06 13 21.8**	**-0.5**
	0.9nm,0.3s,baz=135,slow=9.9,SNR=18						
YKA	**Yellowknife Ar**	**35.34**	**47**	P	**P**	**06 16 24.1**	**0.0**
YKA	**Yellowknife Ar**	**35.34**	**47**	P	**P**	**06 16 24.1**	**0.0**
	0.8nm,0.5s,mb3.9,baz=282,slow=8.1,SNR=13						
MCMT	**McKenzie Canyo**	**43.56**	**72**	*e*P	**P**	**06 17 32.4**	**-0.5**
NVAR	**Mina Array Bea**	**44.03**	**83**	P	**P**	**06 17 37.7**	**+1.0**
	0.5nm,0.6s,mb3.4,baz=304,slow=6.1,SNR=6.2						
SONM	**Songino Array**	**45.99**	**296**	P	**P**	**06 17 52.4**	**+0.2**
	0.8nm,0.6s,mb3.9,baz=73,slow=6.4,SNR=11						
TXAR	**Lajitas Array**	**59.12**	**81**	P	**P**	**06 19 30.2**	**+0.5**
	0.2nm,0.4s,mb3.5,baz=310,slow=6.0,SNR=6.2						
MKAR	**Makanchi Array**	**59.36**	**308**	P	**P**	**06 19 31.1**	**-0.1**
	0.9nm,0.6s,mb4.0,baz=47,slow=6.4,SNR=11						
SCHQ	**Schefferville**	**60.01**	**38**	P	**P**	**06 19 34.5**	**-0.9**
	2.0nm,0.9s,mb4.2,baz=294,slow=4.0,SNR=5.7						
FINES	**FINESS Array B**	**65.26**	**347**	P	**P**	**06 20 10.0**	**-0.4**
	1.4nm,0.9s,mb4.0,baz=37,slow=7.1,SNR=3.4						
NOA	**NORSAR Array B**	**67.19**	**354**	P	**P**	**06 20 23.2**	**+0.4**
	1.2nm,0.9s,mb3.9,baz=12,slow=6.0,SNR=2.6						
AKASG	**Malin Array Be**	**74.99**	**341**	P	**P**	**06 21 09.9**	**-0.3**
	0.5nm,0.4s,mb3.8,baz=19,slow=6.4,SNR=3.7						
GERES	**GERESS Array B**	**79.10**	**351**	P	**P**	**06 21 33.4**	**0.0**
	0.2nm,0.3s,mb3.5,baz=0.0,slow=3.9,SNR=3.5						
BOSA	**Boshof**	**150.30**	**312**	PKPbc	PKPbc	06 29 19.0	-1.3
	2.0nm,0.9s,baz=56,slow=4.4,SNR=3.7						

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*ISCJB **11** 06:18:26.6±0.9, 11.45N±0.04×61.50W±0.05, h88^{km}±9^{km}, Error ellipse: s-maj=8.2km s-min=6.7km az=174.5*
*TRN **11** 06:18:27.5, 11.47N×61.46W, h16^{km}, MD2.8*
*NEIC **11** 06:18:27.5, 11.47N×61.46W, h16^{km}, MD2.8(TRN), After TRN.*
*FUNV **11** 06:18:28.8, 11.46N×61.45W, h57^{km}, MW2.9*
ISC 11 06:18:28.0±0.9, **11.44N**±0.04×**61.51W**±0.05, **h78**^{km}±10^{km}, **n17**, σ**0.69**/27, **1C**, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRW	**Mount Saint Ca**	**0.73**	**349**	*e*P	**Pn**	**06 18 43.0**	**-0.9**
GRW				*e*S	**Sn**	**06 18 54.7**	**-0.9**
TPR	**Prospect**	**0.77**	**109**	*e*P	**Pn**	**06 18 43.9**	**-0.3**
TPR				*e*S	**Sn**	**06 18 55.7**	**-0.6**
GRHS	**Sauteurs**	**0.79**	**351**	*e*P	**Pn**	**06 18 44.5**	**0.0**
GRHS				*e*S	**Sn**	**06 18 56.6**	**-0.1**
TRN	**Trinidad (W)**	**0.80**	**172**	*e*P	**Pn**	**06 18 45.5**	**+0.9**
TRN				*e*S	**Sn**	**06 18 57.7**	**+0.8**
GRSS	**Sisters**	**0.86**	**353**	*e*P	**Pn**	**06 18 45.9**	**+0.7**
GRSS				*e*S	**Sn**	**06 18 59.0**	**+0.9**
GUIV	**Guiria**	**1.05**	**222**	⇑*i*P	**Pn**	**06 18 47.9**	**+0.3**
GUIV				*e*S	**Sn**	**06 19 02.6**	**+0.4**
ITEV	**Isla Los Testi**	**1.59**	**267**	*e*P	**Pn**	**06 18 54.2**	**-0.2**
ITEV				*e*S	**Sn**	**06 19 13.9**	**-0.5**
CRUV	**Carupano**	**1.85**	**246**	*e*P	**Pn**	**06 18 58.2**	**+0.3**
CRUV				*e*S	**Sn**	**06 19 19.8**	**-0.8**
GUNV	**Guanoco**	**1.90**	**228**	*e*P	**Pn**	**06 18 59.0**	**+0.5**
GUNV				*e*S	**Sn**	**06 19 21.5**	**-0.1**
PCRV	**Puerto La Cruz**	**3.32**	**248**	*e*P	**Pn**	**06 19 17.4**	**-0.2**
RIOV	**Rio Grande**	**3.36**	**185**	*e*P	**Pn**	**06 19 18.1**	**-0.2**
GURV	**El Guri**	**3.97**	**203**	*e*P	**Pn**	**06 19 27.1**	**+0.6**
GURV				*e*S	**Sn**	**06 20 08.9**	**-3.1**
CUPV	**Cœpira**	**4.42**	**252**	*e*P	**Pn**	**06 19 33.4**	**+0.7**
BIRV	**Birongo**	**4.77**	**259**	*e*P	**Pn**	**06 19 38.2**	**+0.8**
LUEV	**Luepa**	**5.56**	**179**	*e*P	**Pn**	**06 19 47.3**	**-0.9**
CAOV	**Caicara del Or**	**6.26**	**230**	*e*P	**Pn**	**06 19 58.0**	**+0.2**
BAUV	**El Baul**	**6.89**	**249**	*e*P	**Pn**	**06 20 06.1**	**-0.3**

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*ISCJB **11** 06:42:07.0±1.0, 32.21N±0.04×104.69E±0.06, h15^{km}±7^{km}, mb4.0/14, Error ellipse: s-maj=8.2km s-min=5.6km az=20.5*
*BJI **11** 06:42:08.7, 32.18N×104.88E, h17^{km}, mb4.6, ML4.0*
*IDC **11** 06:42:11.6±8.0, 32.20N×104.57E, h33^{km}±61^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.8/23, mbtmp3.7/14, ML3.1/2, Error ellipse: s-maj=35.3km s-min=14.7km az=55.0*
*NEIC **11** 06:42:11.8±2.1, 32.25N×104.66E, h36^{km}±18^{km}, mb4.3/3, Error ellipse: s-maj=17.3km s-min=8.0km az=57.0*
ISC 11 06:42:08.6±1.0, **32.24N**±0.03×**104.60E**±0.06, **h12**^{km}±6^{km}, **n28**, σ**0.95**/35, **mb4.0**/14, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.51**	**209**	PG	**Pg**	**06 42 37.2**	**-0.4**
CD2				SG	**Sg**	**06 42 58.4**	**+1.1**
CD2				Smax			
	comp=N,8μm,0.6s						
CD2				Smax			
	comp=E,5μm,0.6s						
LZH	**Lanzhou**	**3.88**	**351**	P	**Pn**	**06 43 11.5**	**+3.4**
LZH				PG	**Pg**	**06 43 17.9**	**-5.1**
LZH				S	**Sn**	**06 43 56.4**	**+2.7**
LZH				SG	**Sg**	**06 44 10.7**	**-2.7**
LZH				Smax			
	comp=N,490nm,1.0s						
LZH				Smax			
	comp=E,567nm,0.8s						
XAN	**Xi'an**	**4.04**	**63**	P	**Pn**	**06 43 11.3**	**+1.0**
XAN				SG	**Sg**	**06 44 19.0**	**+0.6**
XAN				Smax			
	comp=N,672nm,0.6s						
XAN				Smax			
	comp=E,601nm,0.5s						
GYA	**Guiyang**	**6.04**	**162**	P	**Pn**	**06 43 37.5**	**-0.3**
GYA				S	**Sn**	**06 44 47.1**	**+0.3**
GYA				SG	**Sg**	**06 45 08.6**	**-14**
GYA				Smax			
	comp=N,190nm,0.9s						
GYA				Smax			
	comp=E,210nm,0.7s						
SONM	**Songino Array**	**15.63**	**4**	Pn	**Pn**	**06 45 49.4**	**+0.8**
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=5.7						
SONM				Lg		06 50 29.8	
	comp=E,0.1nm,0.3s,baz=188,slow=26,SNR=4.0						
ULN	**Ulaanbaatar**	**15.71**	**6**	*e*Pn	**Pn**	**06 45 49.6**	**-0.1**
	comp=E,2.1nm,0.6s						
KSRS	**Korea Array**	**19.81**	**68**	P	**Pn**	**06 46 39.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=256,slow=8.7,SNR=3.0						
MKAR	**Makanchi Array**	**22.42**	**317**	P	**P**	**06 47 08.3**	**+1.3**
MKAR	**Makanchi Array**	**22.42**	**317**	P	**P**	**06 47 08.3**	**+1.3**
	comp=E,0.8nm,0.6s,mb3.3,baz=108,slow=12,SNR=10.0						
ZAA0	**Zalesovo Array**	**25.89**	**333**	*e*P	**P**	**06 47 40.6**	**+0.4**
ZALV	**Zalesovo Beam**	**25.89**	**333**	P	**P**	**06 47 41.0**	**+0.8**
	comp=E,3.2nm,0.7s,mb4.0,baz=130,slow=9.9,SNR=21						
JOF	**Joensuu**	**54.30**	**327**	*e*p	**P**	**06 51 34.1**	**-0.3**
	comp=E,1.6nm,0.5s,mb4.2						
ARCES	**ARCESS Array B**	**56.40**	**336**	P	**P**	**06 51 49.6**	**+0.2**
	comp=E,1.5nm,0.5s,mb4.2,baz=78,slow=7.9,SNR=14						
KAF	**Kangasniemi**	**56.67**	**327**	*e*p	**P**	**06 51 48.3**	**-3.2**
	comp=E,1.9nm,0.4s,mb4.5						
FINES	**FINESS Array B**	**56.86**	**326**	P	**P**	**06 51 53.0**	**+0.2**
	comp=E,1.3nm,0.4s,mb4.3,baz=90,slow=7.6,SNR=22						
AKASG	**Malin Array Be**	**56.92**	**313**	P	**P**	**06 51 53.0**	**-0.4**
	comp=E,0.5nm,0.4s,mb3.9,baz=67,slow=6.8,SNR=3.3						
WRA	**Warramunga Arr**	**59.19**	**147**	P	**P**	**06 52 09.3**	**-0.2**
	comp=E,1.4nm,0.3s,mb4.4,baz=328,slow=9.0,SNR=16						
WB2	**Warramunga Arr**	**59.19**	**147**	*e*P	**P**	**06 52 09.1**	**-0.5**
ASAR	**Alice Springs**	**62.25**	**150**	P	**P**	**06 52 30.1**	**-0.3**
	comp=E,1.2nm,0.8s,mb4.1,baz=343,slow=7.5,SNR=8.6						
NB2	**NORSAR Subarra**	**63.93**	**327**	P	**P**	**06 52 40.3**	**-0.9**
	comp=Z,3.8nm,1.1s,mb4.3,baz=73,slow=6.5						
NOA	**NORSAR Array B**	**63.93**	**327**	P	**P**	**06 52 40.3**	**-0.9**
	comp=Z,1.2nm,0.9s,mb3.9,baz=71,slow=5.4,SNR=3.2						
NWAO	**Narrogin (SRO)**	**65.91**	**168**	P	**P**	**06 52 54.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**65.91**	**168**	P	**P**	**06 52 54.0**	**-0.3**
	comp=Z,8.7nm,1.1s,mb4.7,baz=0.0,slow=2.0,SNR=4.1						
GERES	**GERESS Array B**	**67.06**	**314**	P	**P**	**06 53 00.4**	**-1.2**
	comp=Z,0.1nm,0.4s,mb3.2,baz=70,slow=4.4,SNR=4.3						
INK	**Inuvik**	**70.94**	**20**	*e*P	**P**	**06 53 24.9**	**-0.5**
	comp=Z,24nm,0.3s						
DAWY	**Dawson**	**71.73**	**25**	*e*P	**P**	**06 53 30.0**	**-0.2**
YKA	**Yellowknife Ar**	**80.48**	**17**	P	**P**	**06 54 20.0**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.8,baz=329,slow=5.3,SNR=21						
ESDC	**Sonseca Array**	**82.57**	**312**	P	**P**	**06 54 31.7**	**+0.2**
	comp=Z,0.1nm,0.3s,mb3.3,baz=80,slow=10,SNR=2.7						

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*CSEM **11** 06:42:41.9±0.0, 40.24N×33.39E, h2^{km}, MD3.3, Error ellipse: s-maj=1.2km s-min=1.0km az=143.0*
*ISK **11** 06:42:42.9, 40.25N×33.38E, h9^{km}, MD3.4*
*ISCJB **11** 06:42:43.1±0.5, 40.23N±0.02×33.39E±0.03, h7^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=139.4*
*DDA **11** 06:42:44.0, 40.26N×33.41E, h8^{km}, Md3.3*
ISC 11 06:42:43.8±0.4, **40.25N**±0.02×**33.40E**±0.03, **h7**^{km}±4^{km}, **n37**, σ**0.82**/47, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	**Eldivan**	**0.24**	**5**	*i* P	**Pg**	**06 42 47.9**	**-0.7**
ELDT				*i* S	**Sg**	**06 42 54.4**	**+2.5**
CANT	**Cankiri**	**0.40**	**25**	*i* PG	**Pg**	**06 42 51.2**	**-0.3**
CANT				*i* SG	**Sg**	**06 42 57.5**	**+0.8**
ANTO	**Ankara**	**0.60**	**231**	PG	**Pg**	**06 42 54.8**	**-0.5**
LOD	**Lodumlu**	**0.60**	**234**	PG	**Pg**	**06 42 55.0**	**-0.4**
LOD				SG	**Sg**	**06 43 04.2**	**+0.9**
TOS	**Tosya**	**0.92**	**31**	PG	**Pg**	**06 43 00.2**	**-1.3**
TOS				SG	**Sg**	**06 43 14.7**	**+1.3**
CORM	**Corum**	**0.95**	**94**	PG	**Pg**	**06 43 01.2**	**-0.8**
CDAG	**Cicekdag**	**0.98**	**129**	*i* P	**Pg**	**06 43 01.4**	**-1.1**
CDAG				*i* S	**Sg**	**06 43 14.9**	**-0.2**
CTKT	**Corum**	**1.13**	**70**	*i* P	**Pg**	**06 43 04.1**	**-1.3**
CTKT				*i* S	**Sg**	**06 43 19.6**	**-0.4**
SAFT	**Safranbolu**	**1.13**	**332**	PN	**Pn**	**06 43 04.3**	**-1.7**
BALT	**Daday**	**1.28**	**360**	*i* P	**Pn**	**06 43 07.3**	**-0.9**
BALT				*i* S	**Sb**	**06 43 25.3**	**+0.3**
YOZ	**Yozgat**	**1.60**	**112**	PN	**Pn**	**06 43 12.6**	**+0.2**
BYBT	**Boyabat**	**1.60**	**40**	PN	**Pn**	**06 43 12.0**	**-0.5**
BOYT	**Boyabat**	**1.64**	**44**	*i* P	**Pn**	**06 43 12.7**	**-0.3**
BOYT				*i* S	**Sn**	**06 43 36.6**	**+2.3**
BZK	**Bozkurt**	**1.77**	**15**	*e*PN	**Pn**	**06 43 14.6**	**-0.2**
KIZT	**Kizilcal**	**1.80**	**221**	*e*PN	**Pn**	**06 43 14.9**	**-0.3**
KDZE	**Karadeniz Ereo**	**1.82**	**306**	*e*PN	**Pn**	**06 43 15.4**	**-0.2**
AVNT	**Avonos**	**1.85**	**142**	*i* P	**Pn**	**06 43 16.4**	**+0.5**
AVNT				*i* S	**Sg**	**06 43 44.0**	**+0.8**
DIKM	**Dikmen**	**1.99**	**45**	*e*PN	**Pn**	**06 43 17.8**	**0.0**
ESKT	**Eskisehir**	**2.09**	**250**	*e*PN	**Pn**	**06 43 19.2**	**0.0**
KVT	**Kavak**	**2.18**	**67**	*e*PN	**Pn**	**06 43 20.3**	**-0.1**
GULT	**Gulveren**	**2.21**	**276**	*e*PN	**Pn**	**06 43 20.6**	**-0.3**
BORA	**Eskisehir**	**2.29**	**262**	*i* P	**Pn**	**06 43 21.7**	**-0.2**
BORA				*i* S	**Sg**	**06 43 59.7**	**+2.4**
NIG	**Nigde**	**2.33**	**156**	*e*PN	**Pn**	**06 43 22.9**	**+0.3**
BNN	**Bunyan**	**2.35**	**126**	*e*PN	**Pn**	**06 43 22.9**	**+0.1**
TOKT	**Tokat**	**2.41**	**87**	*e*PN	**Pn**	**06 43 23.7**	**+0.1**
KONT	**Konya--Tatoy**	**2.44**	**200**	*e*PN	**Pn**	**06 43 24.0**	**0.0**
SHUT	**Suhut-Afyon**	**2.78**	**233**	*e*PN	**Pn**	**06 43 28.7**	**0.0**
ADVT	**Abdulvahap**	**2.80**	**275**	*e*PN	**Pn**	**06 43 28.7**	**-0.3**
GEDT	**Gedikpinar**	**2.83**	**266**	*e*PN	**Pn**	**06 43 28.5**	**-0.9**
HRT	**Hereke**	**2.90**	**283**	*e*PN	**Pn**	**06 43 30.4**	**+0.1**
IZI	**Iznik**	**3.00**	**273**	*e*PN	**Pn**	**06 43 31.4**	**-0.3**
YLV	**Yalova**	**3.09**	**277**	*e*PN	**Pn**	**06 43 32.3**	**-0.6**
KARA	**Karaisali**	**3.25**	**156**	*e*PN	**Pn**	**06 43 35.8**	**+0.6**
KOZT	**Kozan**	**3.35**	**145**	*e*PN	**Pn**	**06 43 37.5**	**+0.9**
ISK	**Istanbul-Kandi**	**3.40**	**285**	*e*PN	**Pn**	**06 43 37.4**	**+0.2**
MERS	**Mersin**	**3.49**	**165**	*e*PN	**Pn**	**06 43 38.8**	**+0.4**
KMRS	**Kahramanmaras**	**3.87**	**134**	*e*PN	**Pn**	**06 43 44.6**	**+0.9**

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*IDC **11** 06:44:18.6±2.2, 6.26S×129.70E, h0^{km}, mb3.3/1, mb1 3.6/4, mb1mx3.4/14, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=89.0km s-min=28.5km az=76.0*
NEIC 11 06:44:20.4±1.1, **6.24S**×**129.92E**, **h15**^{km}, **mb3.4**/1, **Error ellipse: s-maj=23.7km s-min=13.6km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.51**	**199**	Pn	Pn	06 47 18.1	+0.1
	0.1nm,0.3s,baz=18,slow=16,SNR=7.8						
FITZ				Sn	Sn	06 49 24.0	-13
	0.2nm,0.3s,baz=156,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**14.28**	**163**	Pn	Pn	06 47 42.2	+0.1
	0.1nm,0.3s,baz=340,slow=14,SNR=5.0						
WRA				Sn	Sn	06 50 05.6	-15
	0.2nm,0.3s,baz=337,slow=22,SNR=6.1						
WB2	**Warramunga Arr**	**14.28**	**163**	*e*Pn	Pn	06 47 41.8	-0.4
ASAR	**Alice Springs**	**17.74**	**168**	P	Pn	06 48 27.2	+0.3
	0.2nm,0.3s,baz=344,slow=9.2,SNR=20						
ASAR				S	Sn	06 51 29.6	-15
	0.1nm,0.3s,baz=4.9,slow=27,SNR=2.8						
CTAO	**Charters Tower**	**21.00**	**132**	*e*P	P	06 49 03.7	+0.2
	1.0nm,0.6s						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	06 55 16.2	0.0
	0.1nm,0.3s,baz=118,slow=7.8,SNR=5.2						

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*ISK **11** 06:49:03.5, 37.41N×43.91E, h5^{km}, ML3.6*
*CSEM **11** 06:49:04.5±0.3, 37.48N×43.88E, h2^{km}, MD3.6, Error ellipse: s-maj=6.4km s-min=3.2km az=126.0*
*ISCJB **11** 06:49:05.4±1.3, 37.45N±0.05×43.9E±0.1, h10^{km}, Error ellipse: s-maj=13.2km s-min=5.8km az=21.3*
*DDA **11** 06:49:07.5, 37.53N×43.74E, h5^{km}, Md3.6*
ISC 11 06:49:07.4±1.2, **37.52N**±0.05×**43.84E**±0.10, **h10**^{km}, **n23**, σ**1.37**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.10**	**309**	*i* PG	**Pg**	**06 49 08.5**	**-1.5**
HAKT	**HAKKARI**	**0.11**	**292**	*i* P	**Pg**	**06 49 08.1**	**-2.1**
HAKT				*i* S	**Sg**	**06 49 13.5**	**+1.3**
CUKT	**Cukurca**	**0.33**	**215**	PG	**Pg**	**06 49 10.1**	**-3.8**
CUKT				SG	**Sg**	**06 49 15.9**	**-2.3**
VANT	**Van**	**0.99**	**339**	PN	**Pn**	**06 49 25.7**	**-1.7**
TVAN	**Van**	**1.07**	**341**	*i* P	**Pg**	**06 49 26.5**	**-1.5**
TVAN				*i* S	**Sg**	**06 49 40.6**	**-1.3**
SIRT	**Sirnak**	**1.11**	**270**	PN	**Pn**	**06 49 27.1**	**-2.0**
MSL	**Mosul**	**1.36**	**206**	*i* x	x	06 49 28.5	
MSL				*i* x	x	06 49 45.5	
CLDR	**Caldiran**	**1.63**	**2**	PN	**Pn**	**06 49 35.9**	**-0.2**
BTMT	**Batman**	**1.98**	**291**	PN	**Pn**	**06 49 42.5**	**+1.5**
AGRB	**Hanur-Agry**	**2.16**	**342**	PN	**Pn**	**06 49 44.1**	**+0.6**
MARD	**Mardin**	**2.44**	**266**	*i* P	**Pn**	**06 49 47.4**	**+0.1**
MARD				*i* S	**Sg**	**06 50 24.3**	**-1.7**
DIY	**Diyarbakir**	**2.89**	**279**	*e*PN	**Pn**	**06 49 53.9**	**+0.4**
BINT	**Bingol**	**2.97**	**298**	*e*PN	**Pn**	**06 49 54.9**	**+0.3**
EZM	**Erzurum**	**3.07**	**322**	*e*PN	**Pn**	**06 49 56.6**	**+0.6**
PTK	**Pertek**	**3.76**	**293**	*e*PN	**Pn**	**06 50 07.0**	**+1.5**
EZC	**Erzincan**	**3.86**	**307**	*e*PN	**Pn**	**06 50 12.1**	**+5.3**
URFA	**Urfa**	**3.99**	**270**	*e*PN	**Pn**	**06 50 09.0**	**+0.4**
BHD	**Baghdad**	**4.26**	**174**	*e*x	x	06 50 06.5	
BHD				*e*x	x	06 50 58.5	
MALT	**Malatya**	**4.35**	**282**	*e*PN	**Pn**	**06 50 14.7**	**+1.1**
MYA	**Malataya**	**4.36**	**282**	*e*PN	**Pn**	**06 50 14.8**	**+1.1**
GAZ	**Gaziantep**	**5.29**	**268**	*e*PN	**Pn**	**06 50 27.8**	**+1.3**
KMRS	**Kahramanmaras**	**5.52**	**272**	*e*PN	**Pn**	**06 50 31.2**	**+1.6**
KOZT	**Kozan**	**6.37**	**272**	*e*PN	**Pn**	**06 50 43.6**	**+2.3**

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*IDC **11** 07:07:28.0±0.8, 17.43S×172.99W, h0^{km}, mb4.5/8, mb1 4.6/9, mb1mx4.4/19, mbtmp4.4/9, MS3.5/2, Ms1 3.5/2, ms1mx3.1/26, Error ellipse: s-maj=41.5km s-min=16.8km az=142.0*
*ISCJB **11** 07:07:30.6±0.7, 17.1S±0.1×173.1W±0.2, h33^{km}, mb4.4/8, Error ellipse: s-maj=24.6km s-min=7.9km az=34.2*
ISC 11 07:07:32.5±0.7, **17.1S**±0.1×**173.1W**±0.1, **h35**^{km}, **n26**, σ**1.26**/12, **mb4.4**/8, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.47**	**22**	Pn	**Pn**	**07 08 21.2**	**-2.9**
	11nm,0.3s,baz=194,slow=22,SNR=13						
AFI				Sn	**Sn**	**07 09 03.0**	**-0.9**
	23nm,0.3s,baz=277,slow=21,SNR=6.3						
AFI				T		07 12 28.9	
	16nm,0.3s,baz=101,slow=10,SNR=4.3						
RAR	**Rarotonga**	**13.26**	**110**	LR	LR	07 14 01.5	
	comp=Z,100nm,20.4s,baz=168,slow=30						
DZM	**Mont Dzumac**	**19.85**	**252**	P	**Pn**	**07 12 02.1**	**-0.2**
	0.1nm,0.3s,baz=78,slow=19,SNR=4.7						
PPT	**Papeete**	**22.49**	**95**	*e*LR	LR	07 17 13.7	
	386nm,26.8s,baz=272						
PPT	**Papeete**	**22.49**	**95**	LR	LR	07 19 31.6	
	comp=Z,294nm,19.7s,baz=88,slow=32						
URZ	**Urewera**	**22.71**	**200**	P	**P**	**07 12 29.4**	**-1.9**
	61nm,0.9s,mb5.0,baz=358,slow=8.2,SNR=19						
TBI	**Tubuai**	**23.04**	**109**	*e*LR	LR	07 17 31.3	
	434nm,30.2s,baz=280						
RPZ	**Rata Peaks**	**29.68**	**204**	P	**P**	**07 13 33.6**	**-1.4**
	6.3nm,0.9s,mb4.4,baz=346,slow=14,SNR=2.7						
RKT	**Rikitea**	**36.24**	**106**	*e*LR	LR	07 23 38.7	
	302nm,28.0s						
STKA	**Stephens Creek**	**43.41**	**242**	P	**P**	**07 15 32.1**	**+0.1**
	4.0nm,0.8s,mb4.2,baz=93,slow=11,SNR=4.4						
WB2	**Warramunga Arr**	**49.71**	**258**	*e*P	**P**	**07 16 21.8**	**+0.2**
WRA	**Warramunga Arr**	**49.72**	**258**	P	**P**	**07 16 22.1**	**+0.5**
	1.9nm,0.5s,mb4.4,baz=98,slow=7.4,SNR=42						
ASAR	**Alice Springs**	**49.84**	**253**	P	**P**	**07 16 23.5**	**+1.0**
	10nm,0.8s,mb4.9,baz=89,slow=8.9,SNR=155						
NVAR	**Mina Array Bea**	**75.45**	**42**	P	**P**	**07 19 15.2**	**+2.2**
	2.3nm,0.9s,mb4.1,baz=216,slow=7.0,SNR=12						
TXAR	**Lajitas Array**	**81.37**	**56**	P	**P**	**07 19 46.7**	**+0.8**
	3.8nm,1.2s,mb4.2,baz=220,slow=7.5,SNR=8.8						
ANMO	**Albuquerque**	**81.72**	**50**	P	**P**	**07 19 49.1**	**+1.5**
	2.3nm,0.9s,mb4.1,baz=215,slow=6.6,SNR=7.5						
KMBO	**Kilima Mbogo**	**144.98**	**242**	PKP	PKPdf	07 27 09.1	+2.0
	3.2nm,0.9s,baz=27,slow=1.7,SNR=8.4						
CLL	**Collm**	**145.56**	**353**	*i* (P)	PKPdf	07 27 10.5	+3.6
	comp=Z,14nm,1.0s						
CLL				*i* x	x	07 27 16.1	
CLL				*i* x	x	07 27 22.4	
	comp=Z,31nm,1.3s						
UPC	**Upice**	**145.91**	**350**	*e*P	PKPdf	07 27 10.6	+3.0
DPC	**Dobruska-Polom**	**146.01**	**349**	*e*P	PKPbc	07 27 13.6	+5.1
PVCC	**Panska Ves**	**146.12**	**351**	*e*P	PKPbc	07 27 13.1	+4.3
OKC	**Ostrava-Krasne**	**146.13**	**347**	*e*P	PKPbc	07 27 13.6	+4.7
TREC	**Trest**	**147.17**	**350**	*e*P	PKPbc	07 27 16.5	+4.6
KHC	**Kasperske Hory**	**147.63**	**352**	*e*P	PKPbc	07 27 17.8	+4.6
GERES	**GERESS Array B**	**147.89**	**351**	PKPbc	PKPbc	07 27 16.4	+2.5
	comp=Z,3.2nm,0.9s,baz=62,slow=3.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**173.62**	**128**	PKP	PKPdf	07 27 39.8	+0.5
	comp=Z,1.0nm,1.0s,baz=354,slow=4.6,SNR=3.6						

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*NIED **11** 07:09:00, 43.70N×147.80E, h53^{km}, Mw5.7 Best double couple: M₀4.51000×10^{17} NP1:φs205.00000°, δ16.00000°, λ48.00000°. NP2:φs68.00000°, δ78.00000°, λ101.00000°.*
*PDG **11** 07:09:20.1, 44.00N×147.90E, h10^{km}, mb6.1/10*
*BJI **11** 07:09:21.1, 44.00N×148.04E, h27^{km}, mB5.8, mb5.6, Ms5.3, Msz5.1*
*ISCJB **11** 07:09:24.9±0.1, 43.94N±0.02×147.93E±0.02, h50^{km}, mb5.9/387, MS5.2/207, Error ellipse: s-maj=2.9km s-min=1.7km az=163.5*
*JMA **11** 07:09:25.9±0.2, 43.67N×147.77E, h13^{km}, M5.6*
JMA Felt III J1.
*MOS **11** 07:09:25.4±0.8, 43.98N×147.91E, h53^{km}, mb6.2/134, MS5.2/90, Error ellipse: s-maj=6.1km s-min=3.3km az=106.7*
MOS Felt (V) at Gorny, (III-IV) at Kuril'sk, (III) at Kitovy, Yuzhno-Kuril'sk, Malokuril'skoye.
*GCMT **11** 07:09:26.4±0.1, 43.97N×148.18E, h58^{km}, MW5.7/101, Moment Tensor Solution. s84,c164; s101,c248; Duration: 1.7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.57±.05; $M_{\theta\theta}$0.27±.04; $M_{\phi\phi}$-2.84±.05; $M_{r\theta}$2.47±.04; $M_{\theta\phi}$-2.11±.04; $M_{\phi r}$0.92±.04; Best double couple: $M_0$4.32300×10^{17} NP1:φs177.00000°, δ38.00000°, λ39.00000°. NP2:φs55.00000°, δ67.00000°, λ122.00000°. Principal axes: T 4.1650, Plg56.0000°, Azm6.0000°; N 0.3130, Plg29.0000°, Azm221.0000°; P -4.4810, Plg16.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **11** 07:09:26.1±1.7, 43.99N×147.88E, h49^{km}±16^{km}, mb5.2/29, mb1 5.3/33, mb1mx5.3/34, mbtmp5.2/33, ML4.7/4, MS5.1/24, Ms1 5.1/24, ms1mx5.0/27 Error ellipse: s-maj=10.6km s-min=10.3km az=154.0*
*NEIC **11** 07:09:26.7±0.1, 43.99N×147.89E, h52^{km}, mb6.0/280, ME5.7, MW5.8, Error ellipse: s-maj=2.8km s-min=2.0km az=166.0 Broadband fault plane solution: P waves. NP1:φs175.00000°, δ35.00000°, λ60.00000°. NP2: φs30.00000°, δ60.00000°, λ109.00000°. Principal axes: T Plg69.0000°, Azm340.0000°; N Plg0.0000°, Azm0.0000°; P Plg13.0000°, Azm106.0000°; Moment Tensor Solution. s58 Moment tensor: Scale 10^{17} Nm; M_{rr}2.82; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-3.62; $M_{r\theta}$3.24; $M_{\theta\phi}$-2.63; $M_{\phi r}$0.83; Best double couple: $M_0$5.40000×10^{17} NP1:φs172.00000°, δ42.00000°, λ32.00000°. NP2:φs57.00000°, δ69.00000°, λ127.00000°. Principal axes: T 5.3100, Plg51.0000°, Azm10.0000°; N 0.1500, Plg35.0000°, Azm222.0000°; P -5.4600, Plg16.0000°, Azm121.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [V] at Gornyy, [IV] at Kuril'sk and [III] at Kitovyy, Yuzhno-Kuril'sk and on Shikotan. Recorded [3 JMA] in the Nemuro area, [2 JMA] in eastern Hokkaido and [1 JMA] in south-central and southwestern Hokkaido. Also recorded [1 JMA] in Aomori, Iwate and Miyagi Prefectures, Honshu.
*BGS **11** 07:09:27.6, 44.43N×148.15E, h40^{km}, mb6.1, MS5.3*
*SKHL **11** 07:09:28.7±0.6, 44.19N×147.71E, h65^{km}±29^{km}, mb6.3/7, mbh6.2/4, Ms5.2/4, msh5.9/4*
SKHL Felt (V) at Gorny, (III-IV) at Kurilsk, (III) at Kitovy, Yushno-Kurilsk.
*SZGRF **11** 07:09:31.5, 44.82N×147.27E, h49^{km}, mb6.2, MS5.5, Kuril Islands, Russia*
ISC 11 07:09:26.8±0.1, **43.98N**±0.02×**147.90E**±0.02, **h52**^{km}, **h52**^{km}±1.1^{km}**:pP-P**, **n1335**, σ**0.84**/1314, **mb5.9**/386, **MS5.2**/207, **341C-40D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.26**	**359**	⇓*i*PN	**Pn**	**07 09 47.8**	**-0.2**
KUR				*e*S	**Sn**	**07 10 02.0**	**-1.8**
KUR				pmax	pmax		
	comp=N,4μm,0.5s						
KUR				pmax	pmax		
	comp=E,4μm,0.5s						
KUR				pmax	pmax		
	comp=Z,4μm,0.5s						
KUR				pmax	pmax		
	comp=N,45μm,1.6s						
KUR				pmax	pmax		
	comp=E,15μm,1.6s						
KUR				pmax	pmax		
	comp=Z,78μm,1.6s						
KUR				smax			
	comp=N,170μm,1.6s						
KUR				smax			
	comp=E,420nm,1.6s						
KUR	**Kuril'sk**	**1.26**	**359**	⇑*i*P	**Pn**	**07 09 47.8**	**-0.2**
KUR				⇑*i*P		07 09 47.8	
KUR				⇓*i*P		07 09 47.8	
KUR				AMB	AMB	07 09 49.0	
	comp=E,4μm,0.5s						
KUR				AMB	AMB	07 09 49.0	
	comp=E,4μm,0.5s						
KUR				AMB	AMB	07 09 49.0	
	comp=E,4μm,0.5s						
KUR				AMB	AMB	07 09 52.0	
	comp=E,78μm,1.6s						
KUR				AMB	AMB	07 09 52.0	
	comp=E,45μm,1.6s						
KUR				AMB	AMB	07 09 52.0	
	comp=E,15μm,1.6s						
KUR				AMB	AMB	07 09 54.0	
	comp=E,50μm,1.0s						
KUR				AMB	AMB	07 09 54.0	
	comp=E,30μm,1.0s						
KUR				AMB	AMB	07 09 54.0	
	comp=E,25μm,1.0s						
KUR				*e*S	**Sn**	**07 10 02.0**	**-1.8**
KUR				A		07 10 17.6	
	comp=E,170μm,1.6s						
KUR				A		07 10 17.6	
	comp=E,420μm,1.6s						
YUK	**Yuzh-Kuril'sk**	**1.48**	**273**	⇓*i*PN	**Pn**	**07 09 52.0**	**+1.1**
YUK				*e*S	**Sn**	**07 10 10.0**	**+0.9**
YUK				pmax	pmax		

comp=Z,141µm,1.8s
YUK pmax pmax
comp=N,115µm,1.2s
YUK pmax pmax
comp=E,185µm,2.8s
YUK Yuzh-Kuril'sk 1.48 273 ⇓ *i*P **Pn 07 09 52.0 +1.1**
YUK ⇓ *i*P 07 09 52.0
YUK AMB AMB 07 09 56.0
comp=E,141µm,1.8s
YUK AMB AMB 07 09 56.0
comp=E,185µm,2.8s
YUK AMB AMB 07 09 56.0
comp=E,115µm,1.2s
YUK *e*S **Sn 07 10 10.0 +0.9**
NEM2 Nemuro 2 1.68 249 ⇑P **Pn 07 09 52.9 -0.8**
NEM2 *e*S **Sn 07 10 12.4 -1.7**
JRA Rausu 2.01 270 ⇓P **Pn 07 09 59.1 +0.9**
JRA *e*S **Sn 07 10 23.6 +1.5**
JNK Nakash 2.34 262 ⇓P **Pn 07 10 02.9 +0.2**
JNK *e*S **Sn 07 10 30.0 -0.2**
JAK Akkeshi 2.53 248 P **Pn 07 10 04.7 -0.7**
JAK *e*S **Sn 07 10 33.5 -1.4**
JTKR Abashiri--Toko 2.88 271 ⇓P **Pn 07 10 11.7 +1.5**
JAR Ashorobuto 3.08 259 ⇓P **Pn 07 10 13.7 +0.9**
JAR *e*S **Sn 07 10 48.6 +0.2**
JOB Onbets 3.15 252 P **Pn 07 10 13.9 0.0**
JOB *e*S **Sn 07 10 49.2 -1.0**
JMP Maruseppu 3.28 272 P **Pn 07 10 17.5 +1.9**
JCH Churui 3.58 249 P **Pn 07 10 19.1 -0.7**
JCH *e*S **Sn 07 10 58.6 -2.2**
JKK2 Kamakawa 2 3.73 270 P **Pn 07 10 23.9 +2.2**
ASAJ Asahikawa 3.83 274 PN **Pn 07 10 25.4 +2.3**
ASAJ S **Sn 07 11 08.5 +1.7**
ASAJ pmax pmax
comp=Z,149nm,0.3s
ASAJ smax
comp=N,170nm,0.3s
ASAJ MLR MLR
comp=Z,46µm,21.6s
ASAJ Asahikawa 3.83 274 P **Pn 07 10 25.4 +2.3**
comp=Z,149nm,0.3s,baz=87,slow=16,SNR=342
ASAJ S **Sn 07 11 08.4 +1.6**
comp=Z,170nm,0.3s,baz=58,slow=33,SNR=3.6
ASAJ LR LR 07 12 03.3
comp=Z,46µm,21.6s,baz=270,slow=41
ERM Erimo 4.00 242 Pn **Pn 07 10 26.4 +1.0**
comp=Z,22µm,0.5s
ERM Erimo 4.00 242 *e*PN **Pn 07 10 26.7 +1.3**
YSS Yuzh-Sakhalins 4.69 311 *e*Pn **Pn 07 10 37.6 +2.7**
YSS Yuzh-Sakhalins 4.69 311ĸ *i*PN **Pn 07 10 37.1 +2.2**
YSS *i* S **Sn 07 11 28.0 0.0**
YSS pmax pmax
comp=N,340nm,0.6s
YSS pmax pmax
comp=E,570nm,0.6s
YSS pmax pmax
comp=Z,900nm,0.6s
YSS smax
comp=E,2.0nm,1.0s
YSS MLR MLR
comp=N,23µm,20.0s
YSS MLR MLR
comp=Z,36µm,20.0s
YSS MLR MLR
comp=E,25µm,16.0s
YSS Yuzh-Sakhalins 4.69 311 ⇓ *i*P **Pn 07 10 37.1 +2.2**
YSS ⇓ *i*P 07 10 37.1
YSS ⇓ *i*P 07 10 37.1
YSS AMB AMB 07 10 39.0
comp=E,340nm,0.6s
YSS AMB AMB 07 10 39.0
comp=E,570nm,0.6s
YSS AMB AMB 07 10 39.0
comp=E,900nm,0.6s
YSS *i* S **Sn 07 11 28.0 0.0**
YSS A 07 11 30.9
comp=E,2µm,1.0s
YSS AMS AMS 07 12 20.0
comp=E,23µm,20.0s
YSS AMS AMS 07 12 20.0
comp=E,25µm,16.0s
YSS AMS AMS 07 12 20.0
comp=E,30µm,22.0s
YSS AMS AMS 07 12 20.0
comp=E,25µm,16.0s
YSS AMS AMS 07 12 20.0
comp=E,47µm,21.0s
YSS AMS AMS 07 12 20.0
comp=E,36µm,20.0s
UGL Uglegorsk 6.50 324 ⇑ *i*PN **Pn 07 11 02.0 +2.3**
UGL *e*S **Sn 07 12 17.0 +4.6**
UGL pmax pmax
comp=N,2µm,4.0s
UGL pmax pmax
comp=E,1µm,4.0s
UGL pmax pmax
comp=Z,3µm,4.0s
UGL pmax pmax
comp=N,99nm,0.9s
UGL pmax pmax
comp=E,181nm,0.9s
UGL pmax pmax
comp=Z,541nm,0.9s
UGL smax
comp=N,713nm,1.2s
UGL smax
comp=E,971nm,1.2s
UGL smax
comp=Z,2µm,1.2s
UGL smax
comp=N,23µm,6.0s
UGL smax
comp=E,17µm,6.0s
UGL smax
comp=Z,15µm,7.0s
UGL MLR MLR
comp=Z,26µm,18.0s
UGL MLR MLR
comp=N,17µm,19.0s
UGL MLR MLR
comp=E,15µm,19.0s
UGL Uglegorsk 6.50 324 *e*P **Pn 07 11 02.0 +2.3**
UGL ⇓ *i*P 07 11 02.0
UGL AMB AMB 07 11 06.0
comp=E,2µm,4.0s
UGL AMB AMB 07 11 06.0
comp=E,1µm,4.0s
UGL AMB AMB 07 11 06.0
comp=E,3µm,4.0s
UGL AMB AMB 07 11 06.0
comp=E,99nm,0.9s
UGL AMB AMB 07 11 06.0
comp=E,181nm,0.9s
UGL AMB AMB 07 11 06.0
comp=E,541nm,0.9s
UGL *e*S **Sn 07 12 17.0 +4.6**
UGL A 07 12 18.0
comp=E,713nm,1.2s
UGL A 07 12 18.0
comp=E,871nm,1.2s
UGL A 07 12 28.0
comp=E,23µm,6.0s
UGL A 07 12 28.0
comp=E,17µm,6.0s
UGL A 07 12 28.0
comp=E,15µm,7.0s
UGL AMS AMS 07 13 45.0
comp=E,17µm,19.0s
UGL AMS AMS 07 13 45.0
comp=E,15µm,19.0s
UGL AMS AMS 07 13 45.0
comp=E,26µm,18.0s
TYV Tymovskoe 7.75 335 *e*P **Pn 07 11 18.5 +1.6**
TYV AMB AMB 07 11 25.0
comp=E,4µm,5.0s
TYV AMB AMB 07 11 25.0
comp=E,1µm,5.0s
TYV AMB AMB 07 11 25.0
comp=E,3µm,6.0s
TEY Ternei 8.15 281 *e*P **Pn 07 11 22.0 -0.3**
TEY AMB AMB 07 11 26.0
comp=E,2µm,5.0s
TEY *e*S **Sn 07 12 54.0 +1.1**
TEY A 07 13 00.0
comp=E,5µm,8.0s
TEY A 07 13 00.0
comp=E,5µm,7.0s
TEY AMS AMS 07 14 33.0
comp=E,10µm,17.0s
TEY AMS AMS 07 14 33.0
comp=E,22µm,17.0s
TEY AMS AMS 07 14 33.0
comp=E,15µm,19.0s
SKR Severo-Kuril's 8.72 37 *e*P **Pn 07 11 28.5 -1.6**
SKR AMB AMB 07 11 33.4
comp=E,1µm,2.0s
SKR AMB AMB 07 11 33.4
comp=E,1µm,2.0s
SKR AMB AMB 07 11 33.4
comp=E,5µm,2.0s
SKR AMB AMB 07 11 33.4
comp=E,1µm,0.9s
SKR AMB AMB 07 11 33.4
comp=E,2µm,0.9s
SKR *e*S **Sn 07 13 03.0 -3.9**
SKR A 07 13 11.0
comp=E,370nm,0.4s
SKR A 07 13 11.0
comp=E,2µm,1.0s
SKR A 07 13 11.0
comp=E,630nm,1.0s
SKR A 07 13 18.0
comp=E,4µm,10.0s
SKR A 07 13 18.0
comp=E,5µm,10.0s
SKR A 07 13 18.0
comp=E,10µm,8.0s
SKR AMS AMS 07 15 23.0
comp=E,11µm,20.0s
SKR AMS AMS 07 15 23.0
comp=E,17µm,22.0s
SKR AMS AMS 07 15 23.0
comp=E,24µm,22.0s
HABR Khabarovsk 9.98 301 *e*PN **Pn 07 11 45.7 -1.6**
HABR *e*S **Sn 07 13 46.8 +9.1**
HABR pmax pmax
comp=Z,45nm,1.6s
HABR pmax pmax
comp=Z,475nm,1.8s
OKH Okha 10.12 343 ⇑ *i*P **Pn 07 11 52.0 +2.7**
OKH *e*P 07 11 52.0
OKH AMB AMB 07 11 53.8
comp=Z,5µm,6.0s
OKH AMB AMB 07 11 53.8
comp=Z,4µm,4.4s
OKH AMB AMB 07 11 53.8
comp=Z,7µm,5.0s
OKH AMB AMB 07 11 54.2
comp=Z,5µm,1.8s
OKH A 07 13 46.2
comp=Z,4µm,2.4s
OKH *e*LQ 07 14 45.0
OKH AMS AMS 07 16 16.0
comp=Z,14µm,17.0s
OKH AMS AMS 07 16 16.0
comp=Z,13µm,18.0s
OKH AMS AMS 07 16 16.0
comp=Z,18µm,18.0s
NKL Nikolayevsk 10.35 335 *i* P **Pn 07 11 49.0 -3.3**
NKL AMB AMB 07 11 51.0
comp=Z,2µm,6.0s
NKL AMB AMB 07 11 51.0
comp=Z,1µm,6.0s
NKL AMB AMB 07 11 51.0
comp=Z,2µm,6.0s
NKL AMB AMB 07 11 51.0
comp=Z,730nm,2.0s
NKL AMB AMB 07 11 51.0
comp=Z,1µm,2.0s
NKL A 07 14 01.0
comp=Z,2µm,1.0s
NKL A 07 14 01.0
comp=Z,4µm,1.0s
NKL *e*L 07 14 45.0
NKL AMS AMS 07 16 03.0
comp=Z,9µm,17.0s
NKL AMS AMS 07 16 03.0
comp=Z,4µm,17.0s
NKL AMS AMS 07 16 03.0
comp=Z,14µm,17.0s
MJAR Matsushiro Arr 10.48 228 PN **Pn 07 11 52.3 -2.0**
MJAR S **Sn 07 13 54.4 +4.2**
MJAR pmax pmax
comp=Z,6.0nm,0.3s
MJAR smax
comp=N,13nm,0.3s
MJAR MLR MLR
comp=Z,6µm,22.0s
MJAR Matsushiro Arr 10.48 228 P **Pn 07 11 52.3 -2.0**
comp=Z,6.4nm,0.3s,baz=30,slow=14,SNR=41
MJAR S **Sn 07 13 54.4 +4.2**
comp=Z,13nm,0.3s,baz=350,slow=14,SNR=4.5
MJAR LR LR 07 16 14.5
comp=Z,6µm,22.0s,baz=55,slow=39
MAJO Matsushiro 10.48 228 *e*Pn **Pn 07 11 52.2 -2.1**
MAT Matsushiro 10.48 228 P **Pn 07 11 51.8 -2.5**
MAT S **Sn 07 13 55.0 +4.8**
PET Petropavlovsk 11.51 34 *e*Pn **Pn 07 12 05.5 -2.7**
PET Petropavlovsk 11.51 34 *e*PN **Pn 07 12 05.4 -2.8**
PET pmax pmax
comp=N,3µm,7.7s
PET pmax pmax
comp=N,2µm,6.7s
PET pmax pmax
comp=Z,2µm,6.2s
PET pmax pmax
comp=Z,307nm,1.0s
PET pmax pmax
comp=E,151nm,1.0s
PET pmax pmax
comp=E,1µm,6.2s
PET pmax pmax
comp=N,262nm,0.9s
PET pmax pmax
comp=Z,3µm,5.3s
PET MLR MLR
comp=Z,10µm,19.0s
PET MLR MLR
comp=Z,10µm,20.0s
VLA Vladivostok 11.65 271 *i* P **Pn 07 12 13.1 +2.8**
VLA Vladivostok 11.65 271 *i* PN **Pn 07 12 13.0 +2.7**
VLA pmax pmax
comp=Z,111nm,1.2s
KLR Kul'dur 12.28 301 *e*PN **Pn 07 12 18.9 +0.1**
KLR *e*S **Sn 07 14 38.5 +4.5**
KLR pmax pmax
comp=E,2µm,3.6s
KLR pmax pmax
comp=Z,2µm,3.6s
KLR pmax pmax
comp=N,2µm,9.0s
KLR pmax pmax
comp=E,5µm,9.0s
KLR pmax pmax
comp=Z,6µm,9.0s
KLR smax
comp=N,3µm,12.5s
KLR smax
comp=E,1µm,12.5s
KLR MLR MLR
comp=Z,41µm,13.0s
JHJ Hachijo jima 2 12.56 213 P **Pn 07 12 20.7 -1.9**
comp=Z,64nm,0.3s,baz=62,slow=23,SNR=6.2
JHJ S **Sn 07 14 28.9 -12**
comp=Z,496nm,0.3s,baz=107,slow=23,SNR=13
JHJ LR LR 07 17 53.0
comp=Z,3µm,18.1s,baz=82,slow=40
MDJ Mudanjiang 13.14 279 P **Pn 07 12 26.8 -3.7**
MDJ S **Sn 07 14 53.5 -1.4**
MDJ PCP PcP 07 18 03.0 +4.5
MDJ SCP ScP 07 21 34.3 +7.0
MDJ SCS ScS 07 25 09.8 +6.1
MDJ AMB AMB
comp=Z,2µm,7.9s
MDJ LR LR
comp=N,3µm,22.2s
MDJ LR LR
comp=E,6µm,19.3s
MDJ LR LR
comp=Z,11µm,22.7s
MDJ Mudanjiang 13.14 279 *e*Pn **Pn 07 12 30.2 -0.3**
comp=Z,594nm,1.4s
MA2 Magadan 15.72 5 *e*P **Pn 07 13 04.0 -0.6**
comp=Z,3µm,1.6s
MA2 Magadan 15.72 5c *i*P **Pn 07 13 03.5 -1.0**
MA2 pmax pmax
comp=Z,1µm,1.5s
CN2 Changchun 16.19 277 *e*P **Pn 07 13 10.0 -0.6**
CN2 *e*XP sP 07 13 18.9 -12
CN2 *e*S **S 07 16 06.8 -13**
CN2 AMB AMB
comp=Z,90nm,1.2s
CN2 AMB AMB
comp=Z,2µm,9.0s
CN2 LR LR
comp=N,5µm,19.0s
CN2 LR LR
comp=E,7µm,19.0s
CN2 LR LR
comp=Z,9µm,19.0s
KSRS Korea Array 16.47 254 P **Pn 07 13 13.0 -1.2**
comp=Z,1.2nm,0.3s,baz=63,slow=13,SNR=38
KSRS S **S 07 16 21.5 -4.2**
comp=Z,1.3nm,0.3s,baz=69,slow=24,SNR=4.7
KSRS PcP PcP 07 18 04.3 +1.1
comp=Z,0.0nm,0.3s,baz=62,slow=0.2,SNR=6.3
KSRS LR LR 07 20 14.4
comp=Z,5µm,19.4s,baz=65,slow=39
ZEA Zeya 16.68 313 ⇑ *e*P **Pn 07 13 13.4 -3.3**
ZEA AMB AMB 07 13 17.2
comp=Z,370nm,1.4s
ZEA AMB AMB 07 13 17.2
comp=Z,350nm,1.4s
ZEA AMB AMB 07 13 17.2
comp=Z,550nm,1.4s
ZEA AMB AMB 07 13 27.0
comp=Z,2µm,3.0s
ZEA AMB AMB 07 13 27.0
comp=Z,4µm,3.0s
ZEA AMB AMB 07 13 27.0
comp=Z,5µm,3.0s
ZEA A 07 16 24.0
comp=Z,3µm,10.0s
JNU Nakatsue 17.14 237 P **Pn 07 13 21.9 -0.6**
comp=Z,1.9nm,0.3s,baz=53,slow=12,SNR=18
JNU LR LR 07 20 04.7
comp=Z,6µm,22.0s,baz=33,slow=37
INCN Inchon 17.36 255 *e*Pn **Pn 07 13 23.7 -1.5**
comp=Z,63nm,0.7s
CBIJ Chichi jima 17.47 197 P **Pn 07 13 22.8 -3.9**
comp=Z,14nm,0.3s,baz=310,slow=18,SNR=5.1
CBIJ S S 07 16 20.1 -26
comp=Z,86nm,0.3s,baz=72,slow=23,SNR=14
CBIJ LR LR 07 19 00.4
comp=Z,4µm,21.5s,baz=336,slow=33
SNY Shenyang 17.94 272 ⇑ P **Pn 07 13 33.1 +0.8**
SNY AP pP 07 13 36.6 -7.3
SNY XP sP 07 13 39.8 -11
SNY PP 07 13 43.4
SNY S **S 07 16 42.1 -13**
SNY AMB AMB
comp=Z,116nm,0.6s
SNY AMB AMB
comp=Z,583nm,5.0s
SNY LR LR
comp=N,4µm,16.7s
SNY LR LR
comp=E,5µm,19.0s
SNY LR LR
comp=Z,7µm,19.9s
NRGR Nerungri 19.38 319 *i* P **Pn 07 13 47.9 -1.6**
NRGR S **S 07 17 19.9 -4.3**
NRGR smax
comp=E,635nm,1.4s
CLNS Chul'man 19.39 320 ⇑ *i*P **Pn 07 13 46.3 -3.4**
CLNS *e*S **S 07 17 20.2 -4.2**
CLNS pmax pmax
comp=E,107nm,1.5s
CLNS pmax pmax
comp=Z,193nm,1.5s
CLNS pmax pmax
comp=N,197nm,1.4s
CLNS smax
comp=N,255nm,1.3s
CLNS smax
comp=E,212nm,1.3s
CLNS smax
comp=Z,61nm,1.1s
CLNS MLR MLR
comp=Z,9µm,22.0s
CLNS MLR MLR
comp=N,2µm,17.0s
CLNS MLR MLR
comp=E,4µm,15.0s
SMY Shemya 19.40 54 *e*P **Pn 07 13 49.1 -0.7**
comp=E,3µm,1.8s
SMY Shemya 19.40 54 *e*P **Pn 07 13 49.1 -0.7**
SMY pmax pmax
comp=Z,3µm,1.8s
HIA Hailar 19.99 295 ⇑ *i*P **Pn 07 13 52.5 -4.3**
HIA Hailar 19.99 295c *i*P **Pn 07 13 52.4 -4.4**
DL2 Dalian 20.30 265 ⇑ *i*P **P 07 13 58.7 +0.5**
DL2 AP 07 14 08.3
DL2 PP 07 14 22.4
DL2 S **S 07 17 43.0 +0.2**
DL2 XS sS 07 17 51.3 -11
DL2 SS 07 18 11.1
DL2 AMB AMB
comp=Z,90nm,1.0s
DL2 AMB AMB
comp=Z,300nm,3.7s
DL2 LR LR
comp=N,880nm,16.5s,MS4.5
DL2 LR LR
comp=E,2µm,17.0s,MS4.5
DL2 LR LR
comp=Z,2µm,17.0s,MS4.5
YAK Yakutsk 21.01 336 *e*Pn **P 07 14 02.9 -2.8**
comp=Z,1µm,0.9s,mb6.2
YAK LR LR
comp=Z,9µm,20.0s,MS5.2
YAK Yakutsk 21.01 336c *i*P **P 07 14 02.2 -3.4**
YAK pmax pmax
comp=Z,874nm,0.7s,mb6.2
YAK Yakutsk 21.01 336 P **P 07 14 02.2 -3.5**
YAK pP 07 14 21.3
YAK ScS ScS 07 25 22.4 -3.7
AMKA Amchitka 22.27 59 *e*P **P 07 14 18.0 -1.2**
JOW Kunigami 23.32 229 P **P 07 14 30.6 +0.3**
comp=Z,87nm,1.0s,mb5.2,baz=81,slow=5.7,SNR=5.3
JOW LR LR 07 23 11.8
comp=Z,2µm,20.0s,MS4.7,baz=76,slow=35
BJI Beijing 23.82 272 P **P 07 14 34.4 -0.4**
BJI S **S 07 18 43.3 -3.6**
BJI AMB AMB
comp=Z,232nm,0.8s,mb5.7
BJI AMB AMB
comp=Z,2µm,3.1s
BJI LR LR
comp=N,3µm,18.2s,MS5.1
BJI LR LR
comp=E,5µm,19.2s,MS5.1
BJI LR LR
comp=Z,6µm,26.6s
BJI Beijing 23.82 272 P **P 07 14 34.4 -0.4**
comp=Z,232nm,0.8s,mb5.7
BJI sP sP 07 14 38.5 -16
BJI S **S 07 18 43.3 -3.6**
BJI sS sS 07 18 54.2 -15
BJI LR LR
comp=Z,6µm,26.6s,MS4.9
BJT Baijiatuau 23.83 271 *e*P **P 07 14 34.1 -0.8**
comp=Z,1µm,1.5s,mb6.0
BJT LR LR
comp=Z,8µm,20.0s,MS5.2
BJT Baijiatuau 23.83 271 *e*P **P 07 14 34.2 -0.8**
BJT pmax pmax
comp=Z,1µm,1.5s
BJT MLR MLR
comp=Z,8µm,20.0s
CIT Chita 24.17 302 *e*P **P 07 14 35.1 -2.8**
CIT *e* 07 14 53.5
CIT *e* 07 15 24.2
CIT *e* 07 18 51.6
SSE Sheshan 24.66 248 P **P 07 14 43.2 +0.6**
SSE S **S 07 18 57.2 -3.3**
SSE AMB AMB
comp=Z,83nm,1.4s,mb5.1
SSE AMB AMB

comp=Z,652nm,4.9s
SSE LR LR
comp=N,1μm,21.0s,MS4.8
SSE LR LR
comp=E,3μm,20.8s,MS4.8
SSE LR LR
comp=Z,3μm,20.0s,MS4.8
SSE Sheshan 24.66 248 P **P** **07 14 43.2 +0.6**
comp=Z,83nm,1.4s,mb5.1
SSE S **S** **07 18 57.2 -3.3**
SSE sS sS 07 19 03.6 -19
SSE LR LR
comp=Z,3μm,20.0s,MS4.8
TIA Tai'an 24.69 262 *e*P **P** **07 14 42.8 0.0**
TIA S **S** **07 19 03.5 +2.7**
TIA AMB AMB
comp=Z,134nm,1.3s,mb5.3
TIA AMB AMB
comp=Z,673nm,4.0s
TIA LR LR
comp=E,797nm,8.0s
BOD Bodaibo 25.15 315 *e*P **P** **07 14 42.9 -3.8**
BOD *e* 07 15 25.8
BOD pmax pmax
comp=Z,86nm,1.9s,mb5.0
BOD pmax pmax
comp=Z,127nm,1.5s,mb5.2
NJ2 Nanjing 25.66 252 *e*P **P** **07 14 52.4 +0.8**
NJ2 S **S** **07 19 10.0 -6.4**
NJ2 AMB AMB
comp=Z,270nm,0.9s,mb5.8
NJ2 AMB AMB
comp=Z,2μm,5.2s
NJ2 LR LR
comp=N,9μm,20.9s,MS5.4
NJ2 LR LR
comp=E,7μm,20.4s,MS5.4
NJ2 LR LR
comp=Z,7μm,20.4s,MS5.2
BILL Bilibino 25.99 16 *e*P **P** **07 14 52.3 -2.0**
comp=Z,125nm,0.5s,mb5.7
BILL Bilibino 25.99 16⇓*e*P **P** **07 14 52.6 -1.7**
BILL *e* 07 15 32.3
BILL *e*S **S** **07 19 14.7 -6.3**
BILL pmax pmax
comp=Z,219nm,0.7s,mb5.8
BILL MLR MLR
comp=Z,29μm,21.0s,MS5.8
HHC Hu-ho-hao-te 26.88 276 ⇑P **P** **07 15 03.3 +0.8**
HHC AP pP 07 15 07.2 -8.4
HHC XP sP 07 15 10.0 -12
HHC PP 07 15 45.7
HHC PCP PcP 07 18 26.2 +2.6
HHC S **S** **07 19 32.2 -3.2**
HHC SS 07 20 50.4
HHC PCS PcS 07 22 06.8 +1.8
HHC AMB AMB
comp=Z,81nm,1.3s,mb5.1
HHC AMB AMB
comp=Z,2μm,3.9s
HHC LR LR
comp=N,3μm,15.3s,MS5.1
HHC LR LR
comp=E,4μm,17.4s,MS5.1
HHC LR LR
comp=Z,5μm,19.6s,MS5.1
TIY Taiyuan 27.40 269⇑*i*P **P** **07 15 07.3 0.0**
TIY XP sP 07 15 19.7 -6.9
TIY S **S** **07 19 46.4 +2.6**
TIY AMB AMB
comp=Z,2μm,2.4s,mb6.2
TIY LR LR
comp=N,1μm,9.9s
TIY LR LR
comp=E,1μm,12.1s
TIY LR LR
comp=Z,2μm,15.1s,MS4.8
BTO Baotou 28.06 276 *e*P **P** **07 15 12.2 -0.9**
BTO S **S** **07 19 55.2 +1.1**
BTO LR LR
comp=N,1μm,16.7s,MS4.8
BTO LR LR
comp=E,2μm,19.6s,MS4.8
ULN Ulaanbaatar 28.45 292 *e*P **P** **07 15 16.3 -0.2**
comp=E,164nm,1.1s,mb5.6
ULN LR LR
comp=Z,6μm,22.0s,MS5.2
ULN Ulaanbaatar 28.45 292*c i*P **P** **07 15 16.7 +0.2**
ULN Ulaanbaatar 28.45 292 P **P** **07 15 17.6 +1.2**
SNR=68
TATO Taipei 28.67 237 PFAKE 07 15 30.0 +11
TATO LR LR
comp=Z,3μm,20.0s,MS4.9
SONM Songino Array 28.89 292 P **P** **07 15 20.8 +0.4**
SONM pmax pmax
comp=Z,53nm,0.7s
SONM MLR MLR
comp=Z,7μm,19.7s
SONM Songino Array 28.89 292 P **P** **07 15 20.8 +0.4**
comp=Z,53nm,0.7s,mb5.4,baz=79,slow=8.9,SNR=369
SONM LR LR 07 28 00.8
comp=Z,7μm,19.7s,MS5.3,baz=84,slow=39
YHNB Yeheng 28.97 237 *e*P **P** **07 15 22.6 +1.2**
TIXI Tiksi 29.25 348 *e*P **P** **07 15 19.8 -3.6**
comp=Z,102nm,1.5s,mb5.3
TIXI LR LR
comp=Z,2μm,22.0s,MS4.8
TIXI Tiksi 29.25 348 *e*P **P** **07 15 19.2 -4.2**
TIXI *e*S **S** **07 20 05.2 -7.0**
TIXI pmax pmax
comp=Z,53nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,3μm,17.0s,MS5.0
WHN Wuhan 29.66 254 ⇑P **P** **07 15 27.0 -0.4**
WHN AP pP 07 15 40.4 -0.3
WHN S **S** **07 20 17.0 -2.4**
WHN AMB AMB
comp=Z,97nm,0.6s,mb5.7
WHN AMB AMB
comp=Z,1μm,5.7s
WHN LR LR
comp=Z,9μm,19.3s,MS5.4
IRK Irkutsk 29.89 302 *e*P **P** **07 15 27.7 -1.5**
IRK *e* 07 16 40.1
IRK *e* 07 26 03.6
IRK pmax pmax
comp=Z,159nm,1.3s,mb5.6
GAMB Gambell 30.21 35 *e*P **P** **07 15 31.6 -0.3**
TLY Talaya 30.30 301 *e*P **P** **07 15 32.0 -0.8**
TLY LR LR
comp=Z,7μm,19.0s,MS5.3
TLY Talaya 30.30 301 *e*P **P** **07 15 30.7 -2.2**
TLY *e*PPP 07 16 32.8
TLY *e* 07 16 46.2
TLY *e*S **S** **07 20 23.4 -5.6**
TLY pmax pmax
comp=Z,55nm,1.8s,mb5.0
TLY MLR MLR
comp=Z,6μm,17.0s,MS5.3
TLY Talaya 30.30 301 P **P** **07 15 32.6 -0.3**
SNR=17
GUMO Guam 30.39 186 *e*P **P** **07 15 29.1 -4.9**
comp=Z,338nm,1.2s,mb6.0
GUMO LR LR
comp=Z,3μm,21.0s,MS5.0
GUMO Guam 30.39 186 P **P** **07 15 37.5 +3.5**
ZAK Zakamensk 30.63 298 *e*P **P** **07 15 35.5 -0.2**
ZAK *e* 07 18 31.7
ZAK pmax pmax
comp=Z,21nm,1.7s,mb4.7
UNV Unalaska Valle 31.05 55 PFAKE 07 15 50.0 +11
UNV LR LR
comp=Z,8μm,22.0s,MS5.3
XAN Xi'an 31.62 265 P **P** **07 15 44.5 -0.2**
XAN S **S** **07 20 47.1 -2.9**
XAN AMB AMB
comp=Z,48nm,1.0s,mb5.3
XAN LR LR
comp=E,2μm,16.6s
XAN LR LR
comp=Z,3μm,17.4s,MS5.0
MOY Mondy 31.95 301 *e*P **P** **07 15 46.3 -1.1**
MOY pmax pmax
comp=Z,142nm,1.9s,mb5.5
TNA Tin City 32.37 33 *e*P **P** **07 15 51.3 +0.4**
TNA LR LR
comp=Z,1μm,20.0s,MS4.6
ENH Enshi 33.24 259 PFAKE 07 16 10.0 +11
ENH LR LR
comp=Z,4.0nm,19.0s
LZH Lanzhou 34.31 272⇑*i*P **P** **07 16 09.5 +1.4**
LZH AP pP 07 16 13.3 -8.2
LZH XP sP 07 16 15.8 -12
LZH PCP PcP 07 18 44.7 +1.4
LZH *e*S **S** **07 21 31.0 -0.7**
LZH SS SS 07 23 47.0 -15
LZH AMB AMB
comp=Z,195nm,1.1s,mb6.0
LZH AMB AMB
comp=Z,451nm,4.6s
LZH LR LR
comp=E,3μm,14.4s
LZH LR LR
comp=Z,5μm,15.6s,MS5.4
LZH Lanzhou 34.31 272⇑*i*P **P** **07 16 09.5 +1.4**
comp=Z,195nm,1.1s,mb6.0
LZH pP pP 07 16 13.3 -8.2
LZH sP sP 07 16 15.8 -12
LZH PP PP 07 17 17.5 -9.0
LZH PcP PcP 07 18 44.7 +1.4
LZH *e*S **S** **07 21 31.0 -0.7**
LZH sS sS 07 21 39.1 -15
LZH SS SS 07 23 47.0 -15
LZH LR LR
comp=Z,5μm,15.6s,MS5.4
GTA Gaotai 35.79 280⇑*i*P **P** **07 16 21.9 +1.0**
GTA AP pP 07 16 25.8 -8.4
GTA XP sP 07 16 28.9 -11
GTA PP PP 07 17 43.1 +0.3
GTA PCP PcP 07 18 48.2 +0.6
GTA S **S** **07 21 59.0 +4.5**
GTA XS sS 07 22 08.1 -8.9
GTA SS SS 07 24 21.6 -10
GTA SCS ScS 07 26 34.2 -0.1
GTA AMB AMB
comp=Z,117nm,1.4s,mb5.6
GTA AMB AMB
comp=Z,1μm,5.7s
GTA LR LR
comp=N,2μm,19.0s,MS5.1
GTA LR LR
comp=E,2μm,19.8s,MS5.1
GTA LR LR
comp=Z,3μm,17.5s,MS5.2
BALP Baler 35.94 227 *e*P **P** **07 16 24.1 +1.8**
BOLP Bolinao 36.30 230 *e*P **P** **07 16 22.4 -3.0**
PCPH Palayan 36.34 227⇓*e*P **P** **07 16 25.9 +0.1**
PVCP Virac 36.47 221 *e*P **P** **07 16 22.2 -4.6**
SCZP Santa Cruz 36.80 229 *e*P **P** **07 16 29.4 -0.2**
TTA Tatalina 36.91 39 *e*P **P** **07 16 31.3 +1.2**
TTA Tatalina 36.91 39 *e*P **P** **07 16 30.6 +0.5**
CD2 Chengdu 36.97 264 P **P** **07 16 31.0 0.0**
CD2 AP pP 07 16 35.5 -8.9
CD2 XP sP 07 16 39.3 -11
CD2 PP PP 07 17 55.2 -0.7
CD2 S **S** **07 22 10.8 -1.8**
CD2 AMB AMB
comp=Z,190nm,0.8s,mb6.0
CD2 AMB AMB
comp=Z,290nm,2.9s,mb5.6
CD2 LR LR
comp=N,1μm,14.4s
CD2 LR LR
comp=Z,1μm,18.0s,MS4.7
GYA Guiyang 37.51 256⇑*i*P **P** **07 16 35.3 -0.3**
GYA AP pP 07 16 40.4 -8.6
GYA PP PP 07 18 05.0 +3.2
GYA PCP PcP 07 18 53.2 +0.3
GYA S **S** **07 22 16.8 -4.0**
GYA SCP ScP 07 22 41.5 +5.8
GYA SCS ScS 07 26 49.2 +5.0
GYA AMB AMB
comp=Z,90nm,1.2s,mb5.4
GYA LR LR
comp=N,3μm,22.8s,MS5.1
GYA LR LR
comp=E,3μm,24.6s,MS5.1
GYA LR LR
comp=Z,3μm,25.2s,MS4.9
IMA2 Indian Mountai 38.19 34 *e*P **P** **07 16 41.3 +0.5**
PLP Palo 38.22 218 *e*P pP 07 16 53.9 -1.2
LUBP Lubang 38.31 227 *e*P pP 07 16 56.4 +0.5
OTRP Odiongan 38.57 223 *e*P **P** **07 16 42.7 -1.9**
KDAK Kodiak Island 38.70 48 *e*P **P** **07 16 44.6 -0.6**
KDAK LR LR
comp=Z,758nm,21.0s,MS4.5
KDAK Kodiak Island 38.70 48 P **P** **07 16 45.0 -0.2**
comp=Z,139nm,0.8s,mb5.8,baz=284,slow=3.7,SNR=85
MSLP Maasin 39.19 218 *e*P pP 07 17 01.5 -1.8
SCPH Surigao 39.23 216⇓*e*P pP 07 17 02.6 -1.0
SLKM Skilak Lake 39.67 43 *e*P **P** **07 16 53.1 -0.2**
BUSP Coron 39.79 225 *e*P **P** **07 16 55.3 +0.5**
MCK McKinley 40.12 38 *e*P **P** **07 16 57.1 +0.1**
MCK LR LR
comp=Z,609nm,20.0s,MS4.5
PMR Palmer 40.13 41 *e*P **P** **07 16 57.4 +0.3**
comp=Z,262nm,1.3s,mb5.8
PMR LR LR
comp=Z,2μm,20.0s,MS4.8
PMR Palmer 40.13 41 *e*P **P** **07 16 56.5 -0.6**
PMR pmax pmax
comp=Z,210nm,1.1s,mb5.8
QIZ Qiongzhong 40.36 244 ⇑P **P** **07 17 00.0 +0.5**
QIZ S **S** **07 23 03.4 -0.4**
QIZ AMB AMB
comp=Z,37nm,1.9s,mb4.8
QIZ AMB AMB
comp=Z,257nm,8.5s
QIZ LR LR
comp=E,2μm,21.6s
QIZ LR LR
comp=Z,3μm,22.7s,MS5.0
QIZ Qiongzhong 40.36 244 *e*P **P** **07 17 00.4 +1.0**
comp=Z,108nm,1.8s,mb5.3
QIZ LR LR
comp=Z,3μm,20.0s,MS5.1
SML Sawmill 40.49 41 *e*P **P** **07 17 00.0 -0.1**
COLA College 40.57 36 *e*P **P** **07 17 00.9 +0.2**
comp=Z,261nm,0.9s,mb5.9
COLA LR LR
comp=Z,2μm,21.0s,MS4.9
COLA College 40.57 36*c i*P **P** **07 17 01.1 +0.4**
CGP Cagayan de Oro 40.76 217 *e*P **P** **07 17 12.0 +9.2**
KMI Kunming 41.10 258 P **P** **07 17 05.9 +0.4**
KMI AP pP 07 17 19.1 0.0
KMI PP PP 07 18 43.6 +2.6
KMI S **S** **07 23 13.2 -1.5**
KMI XS sS 07 23 35.6 -2.0
KMI SS SS 07 26 10.0 -8.7
KMI AMB AMB
comp=Z,136nm,1.6s,mb5.3
KMI AMB AMB
comp=Z,896nm,3.9s
KMI LR LR
comp=N,2μm,21.9s,MS5.0
KMI LR LR
comp=E,1μm,23.6s,MS5.0
KMI LR LR
comp=Z,2μm,25.3s,MS4.9
KMI Kunming 41.10 258 P **P** **07 17 05.9 +0.4**
comp=Z,136nm,1.6s,mb5.3
KMI pP pP 07 17 19.1 0.0
KMI sP sP 07 17 24.9 -0.2
KMI PP PP 07 18 43.6 +2.6
KMI PPP 07 19 11.7
KMI S **S** **07 23 13.2 -1.5**
KMI sS sS 07 23 35.6 -2.0
KMI SS SS 07 26 10.0 -8.7
KMI SSS 07 26 50.6
KMI LR LR
comp=Z,2μm,25.3s,MS4.9
BUKP Musuan 41.12 216 *e*P **P** **07 17 06.0 +0.3**
ZALV Zalesovo Beam 41.30 307 P **P** **07 17 06.1 -0.7**
ZALV PcP PcP 07 19 04.6 +0.1
ZALV LR LR 07 35 27.2
ZALV Zalesovo Beam 41.30 307 P **P** **07 17 06.1 -0.7**
comp=Z,14nm,0.4s,mb5.0,baz=73,slow=5.8,SNR=88
ZALV PcP PcP 07 19 04.6 +0.1
comp=Z,34nm,0.6s,baz=85,slow=2.9,SNR=13
ZALV LR LR 07 35 27.2
comp=Z,2μm,19.0s,MS5.1,baz=71,slow=38
ZAL Zalesovo 41.31 307 P **P** **07 17 06.1 -0.8**
ZAL 07 19 04.6
EYAK Cordova Ski Ar 41.87 43 *e*P **P** **07 17 12.1 +0.7**
comp=Z,347nm,1.3s,mb5.8
NVS Novosibirsk 42.00 309⇑*i*P **P** **07 17 10.5 -2.1**
NVS *e* 07 18 52.9
NVS pmax pmax
comp=E,129nm,1.2s
NVS pmax pmax
comp=Z,140nm,1.2s,mb5.5
WMQ Urumqi 42.52 292⇑*i*P **P** **07 17 18.1 +1.2**
WMQ AP pP 07 17 22.6 -7.9
WMQ XP sP 07 17 25.1 -11
WMQ PP PP 07 18 59.5 +3.5
WMQ PCP PcP 07 19 11.7 +3.0
WMQ SCP ScP 07 23 00.7 +5.7
WMQ PCS PcS 07 23 02.6 +2.0
WMQ S **S** **07 23 39.1 +3.7**
WMQ SS SS 07 26 42.1 -4.0
WMQ SCS ScS 07 27 17.4 +4.0
WMQ AMB AMB
comp=Z,268nm,1.0s,mb5.9
WMQ AMB AMB
comp=Z,2μm,4.0s
WMQ LR LR
comp=N,2μm,19.5s,MS5.5
WMQ LR LR
comp=E,5μm,19.2s,MS5.5
WMQ LR LR
comp=Z,6μm,18.1s,MS5.5
MENT Mentasta 42.52 39 *e*P **P** **07 17 18.7 +2.0**
EGAK Eagle 43.43 36 *e*P **P** **07 17 23.9 -0.1**
EGAK LR LR
comp=Z,1μm,21.0s,MS4.9
BATP Bataraza 43.74 226 *e*P **P** **07 17 24.2 -2.9**
DAWY Dawson 44.29 37 *e*P **P** **07 17 31.1 +0.2**
MK31 Makanchi Array 44.96 298 *i*P **P** **07 17 36.5 0.0**
MK31 pmax pmax
comp=Z,310nm,1.0s,mb6.1
MKAR Makanchi Array 44.96 298 *i*P **P** **07 17 36.7 +0.2**
MKAR pmax pmax
comp=Z,73nm,0.6s
MKAR Makanchi Array 44.96 298 P **P** **07 17 36.8 +0.3**
comp=Z,73nm,0.6s,mb5.7,baz=78,slow=9.1,SNR=869
MKAR S **S** **07 24 12.0 +1.1**
comp=Z,3.2nm,0.9s,baz=58,slow=14,SNR=4.0
MKAR LR LR 07 37 50.0
comp=Z,8μm,19.2s,MS5.6,baz=64,slow=38
MKAR PKPPKP 07 49 20.6
comp=Z,1.1nm,1.1s,baz=222,slow=1.6,SNR=4.4
KURK Kurchatov 45.86 304 P **P** **07 17 43.8 +0.3**
comp=Z,1μm,0.4s,SNR=78
KURK Kurchatov 45.86 304⇑*e*P **P** **07 17 42.5 -1.0**
KURK LR LR
comp=Z,4μm,20.0s,MS5.4
KURK Kurchatov 45.86 304 P **P** **07 17 42.8 -0.7**
SNR=116
INK Inuvik 45.93 30 *e*P **P** **07 17 44.8 +0.9**
LSA Lhasa 46.73 272 P **P** **07 17 51.6 +1.0**
LSA AP pP 07 18 05.8 +1.4
LSA PP PP 07 19 42.5 +1.5
LSA AMB AMB
comp=Z,90nm,1.0s,mb5.7
LSA AMB AMB
comp=Z,340nm,6.0s
LSA LR LR
comp=N,540nm,17.0s,MS5.1
LSA LR LR
comp=E,2μm,18.0s,MS5.1
LSA LR LR
comp=Z,2μm,18.0s,MS5.2
LSA Lhasa 46.73 272 *e*P **P** **07 17 52.1 +1.5**
comp=Z,391nm,1.3s,mb6.2
LSA LR LR
comp=Z,2μm,20.0s,MS5.2
LSA Lhasa 46.73 272 *e*P **P** **07 17 52.1 +1.5**
LSA pmax pmax
comp=Z,391nm,1.3s,mb6.2
LSA MLR MLR
comp=Z,2μm,20.0s,MS5.2
KKM Kota Kinabalu 46.90 226 P **P** **07 17 52.9 +0.8**
KKTK Khon Kaen 46.93 249 PN **P** **07 17 52.8 +0.5**
KKTK SG pP 07 18 06.0 -0.1
KKTK Khon Kaen 46.93 249 PG **P** **07 17 56.8 +4.5**
comp=Z,4μm,1.0s
SKAG Skagway 47.21 43 *e*P **P** **07 17 55.9 +1.9**
comp=Z,226nm,1.4s,mb5.9
SKAG LR LR
comp=Z,2μm,20.0s,MS5.0
CHG Chiang Mai 47.87 254 ⇑P **P** **07 17 50.0 -10**
CHG Chiang Mai 47.87 254 ⇑P **P** **07 17 59.5 -0.1**
comp=Z,35nm,1.0s,mb5.3
CHTO Chiang Mai 47.87 254 *e*P **P** **07 18 00.0 +0.4**
comp=Z,425nm,1.2s,mb6.3
CHTO LR LR
comp=Z,2μm,20.0s,MS5.1
CHTO Chiang Mai 47.87 254 P **P** **07 18 00.2 +0.6**
SNR=100
SIT Sitka 47.95 46 *e*P **P** **07 18 01.5 +1.8**
comp=Z,280nm,1.3s,mb6.1
SIT LR LR
comp=Z,2μm,21.0s,MS5.2
SHL Shillong 48.59 267 *i*P **P** **07 18 05.0 -0.1**
SHL AMb AMB 07 18 16.7
comp=Z,2μm,0.9s
SHL *e*S **S** **07 25 03.0 -0.2**
BDT Bhumibol Dam 48.90 253 P **P** **07 18 08.0 +0.5**
comp=Z,41nm,1.3s,mb5.3
NST Nakhon Sawan 49.22 250 P **P** **07 18 11.1 +1.1**
comp=Z,75nm,1.0s,mb5.7
CRAG Craig 49.65 47 *e*P **P** **07 18 11.5 -1.3**
comp=Z,91nm,1.0s,mb5.8
WRAK Wrangell Islan 49.71 46 *e*P **P** **07 18 14.4 +1.2**
comp=Z,200nm,1.4s,mb6.0
WRAK LR LR
comp=Z,2μm,19.0s,MS5.1
KIP Kipapa 49.77 99 *e*P **P** **07 18 15.2 +1.0**
BRVK Borovoye 49.83 310 P **P** **07 18 13.8 -0.4**
comp=Z,1μm,1.0s,SNR=24
BRVK Borovoye 49.83 310⇓*e*P **P** **07 18 13.2 -1.0**
BRVK MLR MLR
comp=Z,7μm,19.0s,MS5.7
BRVK Borovoye 49.83 310 P **P** **07 18 13.5 -0.7**
SNR=85
AGT Agartala 50.07 266 *ex* x 07 18 09.0
AGT *ex* x 07 18 22.0
DLBC Dease Lake 50.14 43 *e*P **P** **07 18 18.1 +1.6**
TAPN Taplejung 50.55 272 *e*P **P** **07 18 20.7 +0.7**
comp=Z,1μm,1.3s
ULHL Ulahol 50.79 295 P **P** **07 18 22.9 +1.2**
SNR=47
TKM2 Tokmak 2 50.90 296 *e*P **P** **07 18 23.4 +1.0**
comp=Z,402nm,1.2s,mb6.2
TKM2 LR LR
comp=Z,2μm,19.0s,MS5.1
TKM2 Tokmak 2 50.90 296 *i*P **P** **07 18 23.4 +0.9**
TKM2 pmax pmax
comp=Z,481nm,1.6s,mb6.2
TKM2 Tokmak 2 50.90 296 P **P** **07 18 23.4 +0.9**
SNR=203
ODAN Odare 51.07 271 *e*P **P** **07 18 24.1 +0.2**
comp=Z,1μm,1.4s,mb6.6
CHMS Chumysh 51.41 296 P **P** **07 18 26.9 +0.6**
SNR=46
KBK Karagaybulak 51.45 296 P **P** **07 18 27.6 +1.1**
SNR=65
USP Ospenovka 51.45 296 P **P** **07 18 27.4 +0.8**
SNR=184
JIRN Jiri 51.47 273 *e*P **P** **07 18 27.6 +0.7**
comp=Z,1μm,1.3s
KZA Kyzart 51.52 295 P **P** **07 18 29.2 +2.0**
SNR=205
FRU Bishkek 51.58 296⇑*i*P **P** **07 18 28.0 +0.5**
FRU *i* pP 07 18 41.0 -0.5
FRU *i* S **S** **07 25 46.0 +1.6**
FRU pmax pmax
comp=Z,740nm,2.1s,mb6.2
FRU smax
comp=N,620nm,2.6s
AAK Ala-Archa 51.75 296 P **P** **07 18 28.2 -0.6**
comp=N,749nm,1.1s,mb6.5
AAK Ala-Archa 51.75 296 *e*P **P** **07 18 28.6 -0.2**
comp=N,269nm,1.3s,mb6.0
AAK LR LR
comp=Z,2μm,19.0s,MS5.1

AAK Ala-Archa 51.75 296 *e*P P **07 18 28.6 -0.2**
AAK pmax pmax
comp=Z,269nm,1.3s,mb6.0
AAK MLR MLR
comp=Z,2μm,19.0s,MS5.1
AAK Ala-Archa 51.75 296 P P **07 18 29.8 +1.0**
SNR=10
UCH Uchtor 51.93 295 PFAKE 07 18 40.0 +10
UCH LR LR
comp=Z,2μm,19.0s,MS5.2
UCH Uchtor 51.93 295 P P **07 18 31.4 +1.2**
SNR=38
KKN Kakani 52.05 274 *e*P P **07 18 31.6 +0.4**
comp=Z,2μm,1.5s
KKN Kakani 52.05 274 *e*P P **07 18 31.6 +0.4**
KKN pmax pmax
comp=Z,2μm,1.5s
EKS2 Erkin-Say 52.20 296 *e*P P **07 18 32.8 +0.6**
comp=Z,304nm,1.3s,mb6.1
EKS2 LR LR
comp=Z,2μm,20.0s,MS5.2
EKS2 Erkin-Say 52.20 296 P P **07 18 33.0 +0.9**
SNR=145
KSH Kashi 52.29 292 P P **07 18 34.6 +1.8**
KSH *e*AP pP 07 18 38.9 -7.9
KSH *e*XP sP 07 18 41.7 -11
KSH *e*PCP PcP 07 19 45.0 +1.5
KSH *e*PP PP 07 20 34.7 +3.2
KSH *e*SCP ScP 07 23 40.9 +4.8
KSH PCS PcS 07 23 43.7 +1.9
KSH S **S** **07 25 57.8 +3.6**
KSH *e*SS SS 07 29 34.8 +2.9
KSH AMB AMB
comp=Z,414nm,0.7s,mb6.5
KSH AMB AMB
comp=Z,7μm,2.8s
KSH LR LR
comp=N,4μm,9.4s
KSH LR LR
comp=E,5μm,9.7s
KSH LR LR
comp=Z,9μm,19.0s,MS5.8
GKN Gorkha 52.39 274 *e*P P **07 18 34.0 +0.3**
comp=Z,1μm,1.3s
AML Almayashu 52.51 296 *e*P P **07 18 35.7 +1.2**
comp=Z,306nm,1.3s,mb6.1
AML LR LR
comp=Z,2μm,22.0s,MS5.0
AML Almayashu 52.51 296 P P **07 18 36.0 +1.6**
SNR=112
POHA Pohakuloa 52.61 98 *e*P P **07 18 36.7 +1.2**
comp=Z,508nm,1.1s,mb6.4
POHA LR LR
comp=Z,4μm,21.0s,MS5.5
ALE Alert 52.84 5 P P **07 18 35.0 -1.4**
comp=Z,1μm,1.2s,SNR=79
KDI Kendari 52.85 212⇓ *e*P P **07 18 41.3 +4.1**
KDI *e*S S **07 26 10.2 +7.9**
PMG Port Moresby 53.13 181 *e*P P **07 18 39.1 -0.1**
comp=Z,18nm,1.0s,mb5.0
PMG LR LR
comp=Z,1μm,20.0s,MS5.0
PMG Port Moresby 53.13 181 *e*P P **07 18 39.1 -0.1**
PMG pmax pmax
comp=Z,18nm,1.0s
PMG MLR MLR
comp=Z,1μm,20.0s
SVE Sverdlovsk 53.35 317⇑ *e*P P **07 18 39.9 -0.5**
SVE *e* 07 19 46.1
SVE *e* 07 20 37.1
SVE *e*S S **07 26 05.1 -3.1**
SVE *e*SS SS 07 29 49.8 +1.9
KSM Kuching 53.88 229 *e*P P **07 18 45.0 +0.2**
SOKR Solikamsk 53.95 321*c i*P P **07 18 43.2 -1.6**
SOKR pmax pmax
comp=Z,380nm,1.5s,mb6.1
SOKR MLR MLR
comp=Z,4μm,18.0s,MS5.5
BOK Bokaro 53.99 269 *e*P P **07 18 44.6 -1.0**
KK31 Karatay Array 54.09 298 *i* P P **07 18 45.0 -1.0**
KK31 Karatay Array 54.09 298 *i* P P **07 18 45.9 -0.1**
KK31 pmax pmax
comp=Z,144nm,1.0s,mb5.9
HNR Honiara 54.27 165 *e*P P **07 18 48.8 +1.2**
comp=Z,200nm,0.9s,mb6.0
HNR LR LR
comp=Z,3μm,22.0s,MS5.2
HNR Honiara 54.27 165 *e*P P **07 18 48.8 +1.3**
HNR pmax pmax
comp=Z,200nm,0.9s,mb6.0
HNR MLR MLR
comp=Z,3μm,22.0s,MS5.2
ARU Arti 54.55 317 P P **07 18 48.3 -0.9**
comp=Z,1μm,0.5s,SNR=39
ARU Arti 54.55 317 *e*P P **07 18 47.8 -1.4**
comp=Z,327nm,1.0s,mb6.3
ARU LR LR
comp=Z,3μm,19.0s,MS5.4
ARU Arti 54.55 317*d i*P P **07 18 48.6 -0.6**
ARU *e* 07 19 47.2
ARU *e*S S **07 26 26.5 +2.1**
ARU SS SS 07 30 08.3 +1.4
ARU pmax pmax
comp=N,95nm,1.2s
ARU pmax pmax
comp=E,192nm,1.7s
ARU pmax pmax
comp=Z,378nm,1.2s,mb6.3
ARU MLR MLR
comp=E,3μm,20.0s,MS5.5
ARU MLR MLR
comp=Z,4μm,20.0s,MS5.5
ARU MLR MLR
comp=N,3μm,20.0s,MS5.5
RES Resolute Bay 54.59 17 *e*P P **07 18 48.5 -0.7**
RES Resolute Bay 54.59 17 P P **07 18 48.3 -1.0**
RES pmax pmax
comp=Z,8μm,0.8s
KBS Kingsbay 54.65 351 *e*P P **07 18 47.4 -2.2**
comp=Z,48nm,0.8s,mb5.6
KBS LR LR
comp=Z,2μm,20.0s,MS5.1
KBS Kingsbay 54.65 351⇑ *i*P P **07 18 47.4 -2.3**
KBS AMb AMB 07 18 50.2
comp=Z,70nm,1.2s,mb5.5
KBS *e* 07 23 24.7
KBS *e*S S **07 26 37.5 +12**
KBS AMS AMS 07 42 28.4
comp=Z,802nm,20.3s,MS4.8
KBS Kingsbay 54.65 351*d i*P P **07 18 46.8 -2.9**
LGTI Lohaghat 54.70 279 *e*P P **07 18 50.5 -0.2**
LGTI *ex* x 07 19 29.0
SNG Songkhla 55.12 243 P P **07 18 55.0 +1.1**
YKA Yellowknife Ar 55.31 34 P P **07 18 54.9 +0.3**
YKA PcP PcP 07 19 55.2 +0.6
YKA S S **07 26 35.0 +0.6**
YKA LR LR 07 47 11.6
YKA P'P' 07 48 57.7
YKA ⇑ *e* 07 49 12.4
YKA Yellowknife Ar 55.31 34 P P **07 18 54.8 +0.2**
YKA 07 19 55.2
YKA S S **07 26 35.0 +0.6**
YKA pmax pmax
comp=Z,48nm,0.5s
YKA smax
comp=N,1.0nm,1.0s
YKA MLR MLR
comp=Z,497nm,18.9s
YKA Yellowknife Ar 55.31 34 P P **07 18 54.8 +0.3**
comp=Z,48nm,0.5s,mb5.7,baz=301,slow=7.4,SNR=102
YKA PcP PcP 07 19 55.2 +0.6
comp=Z,9.0nm,0.6s,baz=291,slow=5.8,SNR=3.7
YKA S S **07 26 35.0 +0.6**
comp=Z,0.7nm,1.0s,baz=297,slow=14,SNR=2.6
YKA LR LR 07 47 11.6
comp=Z,497nm,18.9s,MS4.6,baz=220,slow=41
YKA PKPPKP 07 48 57.7
comp=Z,0.5nm,0.9s,baz=152,slow=2.6,SNR=5.0
YKA PKP2bc 07 49 12.4
comp=Z,1.7nm,0.9s,baz=129,slow=2.2,SNR=7.2
DDI Dehra Dun 55.76 281 *e*P P **07 18 58.0 -0.3**
SDNR Sundarnagar 55.86 283 *e*P P **07 19 00.0 +1.0**
THN Thein Dam 56.22 284 *e*P P **07 19 00.8 -0.7**
KULM Kulim 56.54 241 *e*P P **07 19 04.4 +0.4**
BJO Bjornoya 56.97 346 AMS AMS 07 43 23.8
comp=Z,1μm,24.6s,MS4.9
NDI New Delhi 57.30 280 *e*P P **07 19 08.6 -0.7**
NDI AMb AMB 07 19 25.1
comp=Z,486nm,1.3s,mb6.4
NDI *ex* x 07 26 58.0
AB31 Akbulak array 57.35 309 *i* P P **07 19 09.6 +0.3**
PRGR Permogore 57.68 326⇓ *i*P P **07 19 10.3 -1.1**
PRGR *i* 07 20 02.0
PRGR *e*S S **07 27 03.9 -1.9**
BLSP Bilaspur 57.73 270 *e*P P **07 19 10.4 -2.0**
AKTK Aktyubinsk 57.80 311 P P **07 19 12.2 -0.3**
AKTK S S **07 27 06.4 -1.3**
AKTO Aktyubinsk 57.80 311 P P **07 19 12.2 -0.3**
AKTO S S **07 27 06.4 -1.3**
AKTO pmax pmax
comp=Z,56nm,0.4s,mb6.0
AKTO smax
comp=N,1.0nm,0.9s
AKTO Aktyubinsk 57.80 311 P P **07 19 12.2 -0.3**
comp=N,56nm,0.4s,mb6.0,baz=69,slow=7.5,SNR=182
AKTO S S **07 27 06.4 -1.3**
comp=N,1.1nm,0.8s,baz=352,slow=21,SNR=6.0
COEN Coen 57.81 185 *e*P P **07 19 12.5 -0.3**
comp=N,66nm,1.1s,mb5.6
LVZ Lovozero 57.82 336 P P **07 19 10.3 -2.0**
comp=N,580nm,1.1s,mb6.5,SNR=27
LVZ Lovozero 57.82 336⇑ *i*P P **07 19 10.2 -2.1**
LVZ LR LR
comp=Z,3μm,22.0s,MS5.4
LVZ Lovozero 57.82 336*c i*P P **07 19 10.2 -2.1**
PGC Sidney 58.05 51 *e*P P **07 19 13.7 -0.6**
comp=Z,204nm,1.3s,mb6.0
APA Apatity 58.40 336⇓ *i*P P **07 19 14.3 -2.0**
APA *e* 07 27 10.0
APA pmax pmax
comp=Z,170nm,1.3s,mb5.9
APA MLR MLR
comp=Z,2μm,17.0s,MS5.4
NLWA Neilton Lookou 58.48 53 *e*P P **07 19 18.1 +0.9**
comp=Z,134nm,1.1s,mb5.9
KEV Kevo 58.69 340 *ep* P **07 19 15.8 -2.6**
comp=Z,45nm,0.3s,mb6.0
KEV Kevo 58.69 340 *e*P P **07 19 15.8 -2.6**
KEV pmax pmax
comp=Z,45nm,0.3s,mb6.0
TPI Tanjungpandan 58.84 229 P P **07 19 19.9 -0.3**
ARCES ARCESS Array B 59.23 340 P P **07 19 20.9 -1.2**
ARCES PcP PcP 07 20 10.1 +0.2
ARCES LR LR 07 48 32.0
ARCES ARCESS Array B 59.23 340 P P **07 19 20.9 -1.2**
ARCES 07 20 10.1
ARCES pmax pmax
comp=Z,23nm,0.3s
ARCES MLR MLR
comp=Z,3μm,19.6s
ARCES ARCESS Array B 59.23 340 P P **07 19 20.9 -1.2**
comp=Z,23nm,0.3s,mb5.6,baz=50,slow=7.7,SNR=484
ARCES PcP PcP 07 20 10.1 +0.2
comp=Z,14nm,0.7s,baz=46,slow=5.2,SNR=4.9
ARCES LR LR 07 48 32.0
comp=Z,3μm,19.6s,MS5.4,baz=40,slow=40
DAG Danmarks Havn 59.23 356⇓ *i*P P **07 19 20.2 -1.8**
DAG pmax pmax
comp=Z,300nm,1.4s,mb6.1
DAG Danmarks Havn 59.23 356⇓ *i*P P **07 19 20.2 -1.8**
comp=Z,302nm,1.4s,mb6.1
TSI Tuntungan 59.23 242 P P **07 19 23.1 +0.2**
VIS Vishakhapatnam 59.68 266 *i* P P **07 19 26.1 +0.1**
VIS *e*S S **07 27 32.9 0.0**
KTK1 Kautokeino 60.16 340⇑ *i*P P **07 19 27.9 -0.7**
comp=Z,232nm,1.6s,mb6.0
KTK1 Kautokeino 60.16 340⇑ *i*P P **07 19 27.9 -0.7**
KTK1 AMb AMB 07 19 30.2
comp=Z,232nm,1.6s,mb6.0
COR Corvallis 60.34 55 *e*P P **07 19 31.9 +1.8**
comp=Z,237nm,1.3s,mb6.1
COR LR LR
comp=Z,2μm,20.0s,MS5.2
COR Corvallis 60.34 55 *e*P P **07 19 31.9 +1.8**
COR pmax pmax
comp=Z,237nm,1.3s,mb6.1
COR MLR MLR
comp=Z,2μm,20.0s,MS5.2
BHPL Bhopal 60.44 275 *e*P P **07 19 30.3 -0.8**
BHPL AMb AMB 07 19 31.6
comp=Z,229nm,1.4s,mb6.0
AJM Ajmer 60.45 279 *e*P P **07 19 30.3 -0.8**
AJM AMb AMB 07 19 33.0
comp=Z,328nm,1.3s,mb6.2
AJM *ex* x 07 19 49.0
WTV Waterville 60.53 51 P P **07 19 31.0 -0.4**
NGP Nagpur 60.57 272 *e*P P **07 19 28.9 -3.1**
NGP *e*S S **07 27 42.8 -1.4**
EBG Ellensburg 60.63 52 P P **07 19 32.4 +0.4**
TRO Tromso 60.72 342⇑ *i*P P **07 19 28.8 -3.5**
comp=Z,306nm,1.2s,mb6.3
TRO LR LR
comp=Z,2μm,17.2s,MS5.4
TRO Tromso 60.72 342⇑ *i*P P **07 19 28.8 -3.5**
TRO AMb AMB 07 19 32.1
comp=Z,306nm,1.2s,mb6.3
TRO AMS AMS 07 48 38.5
comp=Z,2μm,17.2s,MS5.4
EDM Edmonton 60.87 43 *e*P P **07 19 33.2 -0.4**
EPH Ephrata 60.92 51 P P **07 19 33.6 -0.4**
MDW Midway 61.25 52 P P **07 19 37.2 +1.0**
OD2 Odessa Site #2 61.40 51 P P **07 19 37.4 +0.1**
HAWA Hanford 61.51 52 *e*P P **07 19 38.6 +0.6**
comp=Z,246nm,1.4s,mb6.2
HAWA LR LR
comp=Z,1μm,21.0s,MS5.0
BBOR Butler Butte 61.67 57 P P **07 19 39.7 +0.6**
KRMB Red Mountain 61.70 58 *e*P P **07 19 40.3 +0.9**
NEW Newport 61.77 49 *e*P P **07 19 39.3 -0.4**
comp=Z,116nm,1.1s,mb5.9
NEW LR LR
comp=Z,794nm,20.0s,MS4.9
NEW Newport 61.77 49 *e*P P **07 19 39.3 -0.5**
NEW pmax pmax
comp=Z,116nm,1.1s
NEW MLR MLR
comp=Z,794nm,20.0s
KTRM Thompson Ridge 61.80 58 P P **07 19 41.0 +0.9**
JOF Joensuu 62.14 332 *ep* P **07 19 39.9 -2.1**
comp=Z,83nm,0.5s,mb6.1
JOF Joensuu 62.14 332 *e*P P **07 19 39.9 -2.1**
JOF pmax pmax
comp=Z,83nm,0.5s,mb6.1
LEM Lembang 62.28 226 P P **07 19 43.2 -0.3**
YBH Yreka Blue Hor 62.31 58 *e*P P **07 19 44.1 +0.6**
comp=Z,144nm,1.2s,mb6.0
YBH LR LR
comp=Z,1μm,22.0s,MS5.0
YBH Yreka Blue Hor 62.31 58 *e*P P **07 19 44.1 +0.6**
YBH pmax pmax
comp=Z,144nm,1.2s
YBH MLR MLR
comp=Z,1μm,22.0s
AKL Akola 62.32 273⇓ *i*P P **07 19 43.9 0.0**
AKL *ex* x 07 19 46.1
comp=Z,155nm,1.5s
AKL *i* x 07 22 55.5
KIPM Iron Peak 62.96 60 *e*P P **07 19 48.4 +0.6**
KCPM Cahto Peak 62.97 60 *e*P P **07 19 47.6 -0.3**
WALA Waterton Lakes 63.03 47 *e*P P **07 19 48.2 0.0**
comp=Z,212nm,1.3s,mb6.1
WDC Whiskeytown Da 63.09 59 *e*P P **07 19 48.9 +0.2**
comp=Z,128nm,1.1s,mb6.0
WDC LR LR
comp=Z,831nm,19.0s,MS4.9
WDC Whiskeytown Da 63.09 59 *e*P P **07 19 48.9 +0.2**
WDC pmax pmax
comp=Z,128nm,1.1s,mb6.0
WDC MLR MLR
comp=Z,831nm,19.0s,MS4.9
LOF Lofoten 63.10 343 *e*P P **07 19 49.2 +0.9**
comp=Z,254nm,1.4s,mb6.2
LOF Lofoten 63.10 343 *e*P P **07 19 49.2 +0.9**
LOF AMb AMB 07 19 52.5
comp=Z,254nm,1.4s,mb6.2
HYB Hyderabad 63.33 269⇑ *e*P P **07 19 49.5 -1.0**
HYB *e* 07 20 04.5 -0.4
HYB *e* 07 20 10.0
HYB *e*S S **07 28 18.0 -1.1**
HYB Hyderabad 63.33 269⇑ *i*P P **07 19 49.5 -1.0**
HYB *e*pP pP 07 20 04.5 -0.4
HYB *e*sP sP 07 20 12.0 +1.3
HYB *e*S S **07 28 18.0 -1.1**
MOD Modoc 63.67 56 *e*P P **07 19 52.9 +0.3**
comp=Z,128nm,1.0s,mb5.9
MOD LR LR
comp=Z,945nm,21.0s,MS5.0
BMO Blue Mountains 63.67 52 *e*P P **07 19 52.7 +0.2**
comp=Z,123nm,1.4s,mb5.8
BMO LR LR
comp=Z,1μm,19.0s,MS5.0
BMO Blue Mountains 63.67 52 *e*P P **07 19 52.7 +0.2**
BMO pmax pmax
comp=Z,123nm,1.4s,mb5.7
BMO MLR MLR
comp=Z,1μm,19.0s,MS5.0
HOPS Hopland 63.69 60 *e*P P **07 19 53.2 +0.5**
comp=Z,116nm,1.3s,mb5.8
HOPS LR LR
comp=Z,1μm,19.0s,MS5.2
CTA Charters Tower 63.76 182 *e*P P **07 19 52.5 -0.7**
comp=Z,6.9nm,0.6s,mb4.9
CTA *i* pP 07 20 10.9 +3.4
CTA Charters Tower 63.76 182 *e*P P **07 19 52.5 -0.7**
CTA *i* pP 07 20 10.9 +3.4
CTA pmax pmax
comp=Z,7.0nm,0.6s
CTAO Charters Tower 63.76 182 *e*P P **07 19 52.6 -0.6**
comp=Z,51nm,0.9s,mb5.5
CTAO LR LR
comp=Z,1μm,22.0s,MS5.1
CTAO Charters Tower 63.76 182 *e*P P **07 19 52.6 -0.6**
CTAO pmax pmax
comp=Z,51nm,0.9s,mb5.5
CTAO MLR MLR
comp=Z,1μm,22.0s,MS5.1
LATR Latur 64.12 271 *e*P P **07 19 55.8 0.0**
NSHM Saint Helena R 64.27 61 *e*P P **07 19 56.6 +0.1**
MCCM Marconi Confer 64.32 61 PFAKE 07 20 10.0 +13
MCCM LR LR
comp=Z,932nm,22.0s,MS4.9
WVOR Wild Horse Val 64.35 55 *e*P P **07 19 56.9 -0.1**
comp=Z,142nm,1.2s,mb5.9
WVOR LR LR
comp=Z,988nm,21.0s,MS5.0
WVOR Wild Horse Val 64.35 55 *e*P P **07 19 56.9 0.0**
WVOR pmax pmax
comp=Z,141nm,1.2s,mb5.9
WVOR MLR MLR
comp=Z,988nm,21.0s,MS5.0
MSO Missoula 64.36 49 *e*P P **07 19 56.8 -0.2**
comp=Z,130nm,1.1s,mb5.9
MSO LR LR
comp=Z,525nm,22.0s,MS4.7
OHCM Honcut 64.48 59 *e*P P **07 19 57.4 -0.5**
MOR8 Moi Rana 64.50 341⇑ *i*P P **07 19 55.0 -2.6**
comp=Z,374nm,0.8s,mb6.5
MOR8 Moi Rana 64.50 341⇑ *i*P P **07 19 55.0 -2.6**
MOR8 AMb AMB 07 19 58.1
comp=Z,374nm,0.8s,mb6.5
MOS Moscow 64.59 324*c i*P P **07 19 58.4 +0.1**
MOS *e* 07 20 30.1
MOS *i* S S **07 28 31.7 -2.0**
MOS *e* 07 29 11.5
MOS pmax pmax
comp=Z,2μm,2.3s
MOS pmax pmax
comp=N,700nm,2.0s
MOS pmax pmax
comp=Z,597nm,1.7s,mb6.3
MOS pmax pmax
comp=N,265nm,1.3s
MOS smax
comp=N,1μm,3.0s
MOS MLR MLR
comp=N,1μm,15.0s
MOS MLR MLR
comp=Z,1μm,15.0s,MS5.3
CHMT Chamberlain Mo 64.68 49 *e*P P **07 19 59.2 +0.1**
STOK Stokkvaagen 64.70 342 *e*P P **07 19 57.8 -1.0**
comp=Z,230nm,1.4s,mb6.0
STOK Stokkvaagen 64.70 342 *e*P P **07 19 57.8 -1.0**
STOK AMb AMB 07 20 01.9
comp=Z,230nm,1.4s,mb6.0
WB2 Warramunga Arr 64.81 194 *e*P P **07 19 58.0 -2.0**
WB2 *e* pP 07 20 14.7 +0.3
ABKT Ailbek 64.81 299 P P **07 20 00.1 +0.1**
comp=Z,489nm,0.5s,SNR=24
WRA Warramunga Arr 64.81 194 P P **07 19 58.6 -1.4**
WRA LR LR 07 45 30.5
WRA ⇑ *e* 07 48 48.3
WRA Warramunga Arr 64.81 194 P P **07 19 58.6 -1.4**
comp=Z,11nm,0.6s,mb5.1,baz=12,slow=6.6,SNR=63
WRA LR LR 07 45 30.5
comp=Z,596nm,21.2s,MS4.8,baz=5.0,slow=33
WRA PKP2bc 07 48 48.3
comp=Z,9.5nm,1.0s,baz=198,slow=2.3,SNR=16
FINES FINESS Array B 64.92 333 *i* P P **07 19 59.0 -1.3**
FINES pmax pmax
comp=Z,78nm,0.4s
FINES FINESS Array B 64.92 333 P P **07 19 59.1 -1.3**
comp=Z,78nm,0.4s,mb6.1,baz=46,slow=5.6,SNR=1490
FINES PKP2ab 07 48 59.8
comp=Z,2.9nm,1.1s,baz=226,slow=7.7,SNR=3.7
FINES LR LR 07 51 41.9
comp=Z,2μm,18.2s,MS5.4,baz=46,slow=39
MDRS Chennai 64.98 264 *e*P P **07 20 01.1 -0.3**
MDRS AMb AMB 07 20 04.3
comp=Z,134nm,1.0s,mb5.9
MDRS *ex* x 07 20 10.5
FITZ Fitzroy Crossi 65.05 203 *e*P P **07 20 00.9 -0.7**
comp=Z,44nm,0.9s,mb5.5
BHV Bhavnagar 65.17 277 *e*P P **07 20 02.0 -0.6**
FFC Flin Flon 65.19 37 P P **07 20 02.3 +0.1**
comp=Z,1μm,1.1s
FFC Flin Flon 65.19 37 *e*P P **07 20 02.2 0.0**
comp=Z,42μm,1.5s
FFC LR LR
comp=Z,2μm,21.0s
OBN Obninsk 65.45 324 P P **07 20 03.1 -0.8**
comp=Z,2μm,1.5s,SNR=13
OBN Obninsk 65.45 324 *e*P P **07 20 03.4 -0.5**
comp=Z,912nm,1.4s,mb6.6
OBN LR LR
comp=Z,2μm,20.0s,MS5.4
OBN Obninsk 65.45 324⇑ *e*P P **07 20 03.1 -0.8**
OBN *e* 07 22 26.8
OBN *e*S S 07 28 39.0 -5.3
OBN pmax pmax
comp=Z,900nm,2.1s,mb6.4
OBN MLR MLR
comp=Z,3μm,22.0s,MS5.5
PAHR Pah Rah Range 65.55 58 *e*P P **07 20 05.0 +0.2**
comp=Z,215nm,1.1s,mb6.1
FCC Fort Churchill 65.55 30 *e*P P **07 20 04.0 -0.5**
comp=Z,296nm,1.2s,mb6.2
FCC Fort Churchill 65.55 30 P P **07 20 04.0 -0.5**
FCC pmax pmax
comp=Z,300nm,1.1s,mb6.2
VRHR Novokhopersk 65.83 318 *e*P P **07 20 05.7 -0.7**
VRHR pmax pmax
comp=Z,180nm,0.7s,mb6.2
VRHR pmax pmax
comp=N,280nm,1.4s
VRHR pmax pmax
comp=E,260nm,1.3s
VRHR MLR MLR
comp=Z,2μm,19.0s,MS5.4
VRHR MLR MLR
comp=N,2μm,23.0s,MS5.4
VRHR MLR MLR
comp=E,2μm,25.0s,MS5.4
EGMT Eagleton 65.84 46 *e*P P **07 20 06.3 -0.2**
comp=E,212nm,1.0s,mb6.1
EGMT LR LR
comp=Z,1μm,20.0s,MS5.1
CMB Columbia Colle 65.95 60 *e*P P **07 20 07.3 -0.1**
comp=Z,194nm,1.3s,mb6.0
CMB LR LR
comp=Z,1μm,22.0s,MS5.1
BHJ Bhuj 65.99 280 *e*P P **07 20 07.7 -0.2**
POO Poona 66.00 273 *e*P P **07 20 07.6 -0.3**
DLMT Dillon 66.00 50 *e*P P **07 20 08.0 +0.4**
comp=Z,180nm,1.3s,mb5.9
SAO San Andreas Ge 66.06 61 *e*P P **07 20 08.2 +0.1**
comp=Z,62nm,1.2s,mb5.5

SAO LR LR
comp=Z,841nm,21.0s,MS4.9
SAO San Andreas Ge 66.06 61 *eP* **P 07 20 08.2 +0.1**
SAO pmax pmax
comp=Z,62nm,1.2s,mb5.5
SAO MLR MLR
comp=Z,841nm,21.0s,MS4.9
HLID Hailey 66.11 52 *eP* **P 07 20 08.4 +0.1**
comp=Z,2.8nm,1.0s
HLID LR LR
comp=Z,1μm,22.0s
MCMT McKenzie Canyo 66.20 50 *eP* **P 07 20 09.2 +0.4**
BOZ Bozeman (W) 66.35 49 *eP* **P 07 20 10.0 +0.2**
comp=Z,97nm,0.8s,mb5.9
BOZ LR LR
comp=Z,635nm,21.0s,MS4.8
BOZ Bozeman (W) 66.35 49 *eP* **P 07 20 10.0 +0.2**
BOZ pmax pmax
comp=Z,97nm,0.8s,mb5.9
BOZ MLR MLR
comp=Z,635nm,21.0s,MS4.8
XMIS Christmas Isla 66.39 226 P **P 07 20 10.6 +0.2**
MEF Metsahovi 66.39 333 P **P 07 20 08.4 -1.4**
NSS Namsos 66.45 341 *eP* **P 07 20 07.7 -2.5**
NSS LR LR
comp=Z,4μm,18.3s,MS5.7
NSS Namsos 66.45 341 *eP* **P 07 20 08.4 -1.7**
NSS AMS AMS 07 53 02.7
comp=Z,4μm,18.3s,MS5.7
BOM Bombay 66.51 274 *ex* x 07 17 56.8
BOM *ex* x 07 20 08.8
KAD Karad 66.55 272 *eP* **P 07 20 10.7 -0.8**
KAD AMb AMB 07 20 13.3
comp=Z,154nm,0.8s,mb6.1
VOR Voronezh 66.56 320⇑ *iP* **P 07 20 09.0 -2.0**
VOR pmax pmax
comp=Z,1μm,1.5s
VRSR Storozhevoye 66.91 320 *c iP* **P 07 20 13.1 -0.2**
VRSR pmax pmax
comp=Z,60nm,0.9s,mb5.6
VRSR pmax pmax
comp=N,90nm,1.3s
VRSR pmax pmax
comp=E,70nm,1.2s
VRSR pmax pmax
comp=Z,390nm,19.0s
VRSR pmax pmax
comp=N,330nm,20.0s
VRSR pmax pmax
comp=E,340nm,20.0s
VSU Vasula 66.91 331 *c iP* **P 07 20 12.9 -0.2**
QLMT Earthquake Lak 66.98 49 *eP* **P 07 20 14.7 +0.8**
NVAR Mina Array Bea 67.00 58 P **P 07 20 14.5 +0.4**
NVAR P'P' 07 48 41.5
NVAR Mina Array Bea 67.00 58 P **P 07 20 14.5 +0.4**
comp=E,123nm,1.0s,mb5.9,baz=304,slow=4.7,SNR=194
NVAR PKPPKP 07 48 41.5
comp=E,0.9nm,0.9s,baz=133,slow=3.9,SNR=4.7
VORD Divnogorie 67.03 319 *eP* **P 07 20 12.2 -1.8**
VORD *eS* S 07 28 56.8 -6.7
VORD pmax pmax
comp=Z,840nm,1.5s,mb6.5
VORD pmax pmax
comp=N,380nm,1.2s
VORD pmax pmax
comp=E,390nm,1.4s
VORD smax
comp=Z,10.0nm,0.8s
VORD smax
comp=N,30nm,0.6s
VORD smax
comp=E,40nm,0.6s
GCMT Greycliff 67.32 48 *eP* **P 07 20 16.4 +0.4**
YMR Madison River 67.34 49 *eP* **P 07 20 16.5 +0.4**
comp=E,127nm,1.0s,mb5.9
YMR LR LR
comp=Z,1μm,22.0s,MS5.2
ELK Elko 67.40 55 *eP* **P 07 20 17.2 +0.7**
comp=Z,41nm,1.1s,mb5.4
ELK LR LR
comp=Z,1μm,22.0s,MS5.1
ELK Elko 67.40 55 *eP* **P 07 20 17.3 +0.7**
ELK pmax pmax
comp=Z,41nm,1.1s
ELK MLR MLR
comp=Z,1μm,22.0s
YNR Norris Junctio 67.46 49 *eP* **P 07 20 18.1 +1.2**
MTUM Tungsten Hills 67.51 59 *eP* **P 07 20 18.0 +0.7**
PTRM Twissleman Ran 67.53 62 *eP* **P 07 20 17.8 +0.2**
YFT Old Faithful 67.55 49 *eP* **P 07 20 19.1 +1.6**
LKWY Lake 67.71 49 *eP* **P 07 20 20.0 +1.5**
comp=Z,2.3nm,0.8s
LKWY LR LR
comp=Z,1μm,20.0s,MS5.1
LKWY Lake 67.71 49 *eP* **P 07 20 20.0 +1.5**
LKWY pmax pmax
comp=Z,2.0nm,0.8s
LKWY MLR MLR
comp=Z,1μm,20.0s,MS5.1
IMW Indian Meadow 67.85 50 *eP* **P 07 20 20.0 +0.7**
comp=Z,152nm,1.1s,mb5.9
DZM Mont Dzumac 67.89 161 *eP* **P 07 20 19.8 +0.1**
DZM Mont Dzumac 67.89 161 *eP* **P 07 20 19.8 +0.1**
DZM Mont Dzumac 67.89 161 P **P 07 20 20.5 +0.9**
comp=Z,14nm,0.8s,mb5.1,baz=24,slow=6.7,SNR=23
DCID1 Drake Creek 67.91 50 *eP* **P 07 20 20.6 +0.9**
comp=Z,272nm,1.1s,mb6.2
RLMT Red Lodge 67.97 48 *eP* **P 07 20 20.0 -0.1**
comp=Z,495nm,1.0s,mb6.5
RLMT LR LR
comp=Z,807nm,22.0s,MS4.9
GOA Goa 68.00 271 *eP* **P 07 20 20.4 -0.3**
GOA AMb AMB 07 20 37.3
comp=Z,312nm,1.7s,mb6.1
MAK Makhachkala 68.03 309 *eP* **P 07 20 21.0 +0.5**
MAK *e* 07 20 49.3
MAK *i* 07 22 47.3
MAK *eP*PP 07 24 27.5
MAK *eS* S 07 29 17.6 +1.8
MAK pmax pmax
comp=Z,348nm,1.5s,mb6.2
MAK MLR MLR
comp=Z,3μm,21.0s,MS5.4
MOOW Moose Ponds 68.05 50 *eP* **P 07 20 21.5 +0.9**
comp=Z,159nm,1.1s,mb6.0
TPAW Teton Pass 68.10 50 *eP* **P 07 20 21.8 +0.8**
comp=Z,257nm,1.1s,mb6.2
HVU Hansel Valley 68.17 53 *eP* **P 07 20 21.8 +0.4**
comp=Z,76nm,1.0s,mb5.7
HVU Hansel Valley 68.17 53 *eP* **P 07 20 21.8 +0.4**
HVU pmax pmax
comp=Z,76nm,1.0s,mb5.7
LOHW Long Hollow 68.22 50 *eP* **P 07 20 22.0 +0.3**
comp=Z,229nm,1.4s,mb6.0
REDW Red Top Meadow 68.24 50 *eP* **P 07 20 22.4 +0.6**
comp=Z,234nm,1.3s,mb6.0
AFI Afiamalu 68.33 137 PFAKE 07 20 30.0 +7.4
AFI LR LR
comp=Z,3μm,19.0s,MS5.5
DGMT Dagmar 68.36 43 *eP* **P 07 20 22.2 -0.3**
comp=Z,321nm,1.1s,mb6.3
DGMT LR LR
comp=Z,2μm,22.0s,MS5.2
SFJD Kangerlussuaq 68.46 8⇑ *iP* **P 07 20 22.3 -0.5**
comp=Z,308nm,1.1s,mb6.2
SFJD *e* 07 46 51.6
SFJD LR LR
comp=Z,2μm,23.0s,MS5.2
SFJD Kangerlussuaq 68.46 8⇑ *iP* **P 07 20 22.3 -0.5**
SFJD pmax pmax
comp=Z,310nm,1.1s,mb6.2
SFJD MLR MLR
comp=Z,2μm,23.0s,MS5.2
SFJD Kangerlussuaq 68.46 8 P **P 07 20 22.4 -0.4**
comp=Z,132nm,0.8s,mb6.0,baz=326,slow=8.0,SNR=47
SFJD Kangerlussuaq 68.46 8⇑ *iP* **P 07 20 22.3 -0.5**
comp=Z,308nm,1.1s,mb6.2
SFJD
comp=Z,2μm,23.0s
AHID Auburn Hatcher 68.49 51 *eP* **P 07 20 21.2 -2.2**
comp=Z,82nm,1.0s,mb5.7
AHID LR LR
comp=Z,869nm,22.0s,MS4.9
ASAR Alice Springs 68.52 194 P **P 07 20 23.2 -0.4**
comp=Z,4.1nm,0.6s,baz=15,slow=6.7,SNR=49
ASAR PKP2ab 07 48 40.6

comp=Z,10nm,1.1s,baz=179,slow=3.7,SNR=25
LAO LASA Array 68.53 45 *eP* **P 07 20 23.8 +0.2**
comp=Z,378nm,1.4s,mb6.1
LAO LR LR
comp=Z,1μm,20.0s,MS5.1
BGU Big Grassy Mou 68.57 53 *eP* **P 07 20 24.3 +0.3**
PALK Pallekele 68.62 259 *eP* **P 07 20 24.7 +0.1**
comp=Z,223nm,1.4s,mb5.9
PALK LR LR
comp=Z,861nm,21.0s,MS5.0
SPUT South Promonto 68.66 53 *eP* **P 07 20 24.9 +0.3**
TRCR Troy Canyon 68.71 57 *eP* **P 07 20 24.9 +0.1**
KOD Kodaikanal 68.89 264 *eP* **P 07 20 26.2 -0.1**
KOD AMb AMB 07 20 43.6
comp=Z,221nm,1.5s,mb5.9
MNGI Mangalore 68.97 268 *eP* **P 07 20 26.1 -0.7**
MNGI AMb AMB 07 20 41.4
comp=Z,258nm,1.3s,mb6.0
MNGI *i* S S 07 29 26.8 -0.9
HWUT Hardware Ranch 68.98 52 *eP* **P 07 20 26.9 +0.4**
comp=Z,127nm,1.1s,mb5.8
HWUT LR LR
comp=Z,1μm,22.0s,MS5.1
EIDS Eidsvold 69.06 177 *eP* **P 07 20 27.2 +0.2**
comp=Z,41nm,1.2s,mb5.2
IZAR Zarasai 69.12 329 *eP* **P 07 20 27.4 +0.3**
MOL Molde 69.16 342 *eP* **P 07 20 27.0 -0.2**
DUG Dugway 69.17 54 *eP* **P 07 20 27.9 +0.2**
comp=Z,155nm,1.1s,mb5.8
DUG LR LR
comp=Z,807nm,22.0s,MS4.9
DUG Dugway 69.17 54 *eP* **P 07 20 27.9 +0.2**
DUG pmax pmax
comp=Z,155nm,1.1s,mb5.8
DUG MLR MLR
comp=Z,807nm,22.0s,MS4.9
TPNV Topopah Spring 69.19 58 *eP* **P 07 20 28.1 +0.2**
comp=Z,220nm,1.2s,mb6.0
TPNV LR LR
comp=Z,1μm,22.0s,MS5.1
TPNV Topopah Spring 69.19 58 *eP* **P 07 20 28.1 +0.2**
TPNV pmax pmax
comp=Z,220nm,1.2s,mb6.0
TPNV MLR MLR
comp=Z,1μm,22.0s,MS5.1
IDID Didziasalis 69.26 328 *eP* **P 07 20 28.1 +0.1**
IDID AMb AMB 07 20 30.7
comp=Z,123nm,1.5s,mb5.6
DOMB Dombas 69.26 341 *eP* **P 07 20 27.9 0.0**
NOQ North Oquirrh 69.28 53 *eP* **P 07 20 29.1 +0.8**
comp=Z,497nm,1.5s,mb6.2
BW06 Boulder Array 69.35 50 *eP* **P 07 20 28.6 -0.1**
comp=Z,122nm,1.1s,mb5.7
BW06 LR LR
comp=Z,867nm,20.0s,MS5.0
IIGN Ignalina 69.43 329 *eP* **P 07 20 29.2 +0.3**
IIGN AMb AMB 07 20 31.9
comp=Z,156nm,1.6s,mb5.7
MNK Minsk 69.45 327⇑ *iP* **P 07 20 28.0 -1.1**
MNK pmax pmax
comp=Z,2μm,1.0s
MNK pmax pmax
comp=N,2μm,1.0s
MNK pmax pmax
comp=E,2μm,1.0s
CTU Camp Tracy 69.47 53 *eP* **P 07 20 29.9 +0.4**
comp=E,90nm,1.1s,mb5.6
NB2 NORSAR Subarra 69.59 339 P **P 07 20 29.2 -0.7**
comp=Z,280nm,1.0s,mb6.2,baz=30,slow=6.5
NOA NORSAR Array B 69.59 339 P **P 07 20 29.1 -0.8**
NOA pmax pmax
comp=Z,33nm,0.4s
NOA MLR MLR
comp=Z,2μm,21.9s
NOA NORSAR Array B 69.59 339 P **P 07 20 29.1 -0.8**
comp=Z,33nm,0.4s,mb5.6,baz=31,slow=6.3,SNR=226
NOA LR LR 07 54 45.7
comp=Z,2μm,21.9s,MS5.3,baz=15,slow=39
NLU North Lily Min 69.76 54 *eP* **P 07 20 31.6 +0.3**
MBWA Marble Bar 69.77 208 P **P 07 20 31.3 -0.1**
DAU Daniels Canyon 69.93 53 *eP* **P 07 20 32.9 +0.5**
DAU Daniels Canyon 69.93 53 P **P 07 20 33.0 +0.6**
MPU Maple Canyon 69.97 53 *eP* **P 07 20 32.9 +0.3**
comp=Z,127nm,1.0s,mb5.8
MPU LR LR
comp=Z,695nm,19.0s,MS4.9
KIV Kislovodsk 70.02 312 P **P 07 20 33.7 +0.9**
comp=Z,3μm,0.8s,SNR=70
KIV Kislovodsk 70.02 312 *eP* **P 07 20 33.8 +0.9**
comp=Z,252nm,0.7s,mb6.3
KIV LR LR
comp=Z,5μm,22.0s,MS5.7
KIV Kislovodsk 70.02 312 *c iP* **P 07 20 33.8 +1.0**
KIV *e* 07 20 55.1
KIV *eS* S 07 29 40.8 +1.5
KIV *eSS* SS 07 34 17.3 +8.8
KIV pmax pmax
comp=Z,255nm,0.7s,mb6.3
KIV pmax pmax
comp=Z,549nm,5.7s
KIV MLR MLR
comp=Z,3μm,17.0s,MS5.7
KIV Kislovodsk 70.02 312 P **P 07 20 34.2 +1.3**
SNR=122
ZEI Tsey 70.16 311 *eP* **P 07 20 33.9 +0.2**
ZEI *i* pP 07 20 44.7 -3.5
ZEI *e* 07 20 54.5
ZEI *eS* S 07 29 42.6 +1.7
ZEI pmax pmax
comp=Z,66nm,0.6s,mb5.7
DGRG David-gareji 70.21 309 P **P 07 20 35.2 +1.2**
MTA Mtatsminda 70.38 309 P **P 07 20 36.0 +1.0**
MTA S S 07 29 44.3 +0.8
TBLG Delisi 70.38 309 P **P 07 20 36.1 +1.0**
TBLG S S 07 29 47.5 +3.9
TRD Trivandrum 70.44 263 *ex* x 07 20 31.0
TRD AMb AMB 07 20 51.5
comp=Z,370nm,0.5s,mb6.6
ONI Oni 70.53 311 P **P 07 20 37.3 +1.3**
ONI S S 07 29 47.0 +1.7
CCUT Cedar City 70.56 56 *eP* **P 07 20 36.5 +0.2**
MSU Marysvale 70.64 55 *eP* **P 07 20 37.4 +0.7**
TMUT Trail Mountain 70.69 54 *eP* **P 07 20 37.7 +0.7**
HYA Hoyanger 70.70 341⇑ *iP* **P 07 20 37.3 +0.6**
comp=Z,420nm,1.7s,mb6.1
HYA Hoyanger 70.70 341⇑ *iP* **P 07 20 37.3 +0.6**
HYA AMb AMB 07 20 39.5
comp=Z,420nm,1.7s,mb6.1
ULM Lac du Bonnet 70.99 38 P **P 07 20 37.8 -0.8**
comp=Z,38nm,0.7s,mb5.4,baz=314,slow=6.8,SNR=98
ULM LR LR 07 56 13.2
comp=Z,738nm,19.4s,MS5.0,baz=94,slow=40
SUE Sulen 71.12 342⇑ *iP* **P 07 20 39.5 +0.2**
comp=Z,464nm,1.8s,mb6.1
SUE Sulen 71.12 342⇑ *iP* **P 07 20 39.5 +0.2**
SUE AMb AMB 07 20 41.7
comp=Z,464nm,1.8s,mb6.1
SUE *ep*P pP 07 20 53.1 -0.7
KONO Kongsberg 71.20 339 *eP* **P 07 20 39.3 -0.4**
comp=Z,628nm,1.8s,mb6.2
KONO LR LR
comp=Z,6μm,22.0s,MS5.8
KONO Kongsberg 71.20 339⇑ *iP* **P 07 20 39.5 -0.2**
KONO Kongsberg 71.20 339 *eP* **P 07 20 39.3 -0.4**
KONO pmax pmax
comp=Z,628nm,1.8s,mb6.2
KONO MLR MLR
comp=Z,6μm,22.0s,MS5.8
SRU San Rafael 71.22 54 *eP* **P 07 20 40.4 +0.2**
comp=Z,169nm,1.0s,mb5.9
SRU San Rafael 71.22 54 P **P 07 20 40.4 +0.2**
SRU pmax pmax
comp=Z,170nm,1.0s,mb5.9
PFO Pinyon Flat Ob 71.22 61 P **P 07 20 40.0 -0.3**
comp=Z,308nm,1.1s,mb6.2,SNR=20
PFO Pinyon Flat Ob 71.22 61 *eP* **P 07 20 39.6 -0.7**
comp=Z,87nm,1.2s,mb5.6
PFO LR LR
comp=Z,1μm,21.0s,MS5.2
PFO Pinyon Flat Ob 71.22 61 *eP* **P 07 20 39.6 -0.7**
PFO pmax pmax
comp=Z,87nm,1.2s,mb5.6
PFO MLR MLR
comp=Z,1μm,21.0s,MS5.2
BORG Borgarnes 71.29 355 *eP* **P 07 20 40.1 -0.1**
comp=Z,429nm,1.3s,mb6.2

RWWY Rawlins 71.36 50 *eP* **P 07 20 41.0 -0.1**
comp=Z,170nm,1.1s,mb5.9
RSSD Black Hills 71.41 46 *eP* **P 07 20 41.7 +0.4**
comp=Z,60nm,1.3s,mb5.4
RSSD LR LR
comp=Z,1μm,22.0s,MS5.1
RSSD Black Hills 71.41 46 *eP* **P 07 20 41.7 +0.4**
RSSD pmax pmax
comp=Z,60nm,1.3s,mb5.4
RSSD MLR MLR
comp=Z,1μm,22.0s,MS5.1
ASK Askoy 71.54 342 *eP* **P 07 20 42.1 +0.3**
comp=Z,712nm,1.8s,mb6.3
ASK Askoy 71.54 342 *eP* **P 07 20 42.1 +0.3**
ASK AMb AMB 07 20 44.5
comp=Z,712nm,1.8s,mb6.3
RUND Rundenannen 71.56 341 *eP* **P 07 20 44.5 +2.6**
comp=Z,606nm,1.5s,mb6.3
RUND Rundenannen 71.56 341 *eP* **P 07 20 44.5 +2.6**
RUND AMb AMB 07 20 46.6
comp=Z,606nm,1.5s,mb6.3
SUW Suwalki 71.59 329 *eP* **P 07 20 41.7 -0.5**
SUW *ep*P pP 07 20 43.3 -13
SUW *eS* S 07 29 55.0 -2.2
SUW LMZ 07 51 36.2
comp=Z,3μm,28.1s
SUW Suwalki 71.59 329 *eP* **P 07 20 41.7 -0.5**
SUW *ep*P pP 07 20 43.3 -13
SUW *eS* S 07 29 55.0 -2.2
BER Bergen 71.59 341 *eP* **P 07 20 42.0 0.0**
comp=Z,447nm,3.2s
BER LR LR
comp=Z,2μm,24.2s,MS5.3
BER Bergen 71.59 341 *eP* **P 07 20 42.0 -0.1**
BER *eP* 07 20 42.0
BER AMb AMB 07 20 45.6
comp=Z,540nm,2.0s,mb6.1
BER AMb AMB 07 20 45.8
comp=Z,447nm,3.2s
BER AMS AMS 07 56 21.9
comp=Z,2μm,24.2s,MS5.3
BER Bergen 71.59 341 *eP* **P 07 20 42.1 0.0**
BER pmax pmax
comp=Z,447nm,3.2s
BER MLR MLR
comp=Z,2μm,24.2s,MS5.3
ODD1 Odda 71.71 341 *eP* **P 07 20 41.2 -1.5**
comp=Z,580nm,1.8s,mb6.2
ODD1 Odda 71.71 341 *eP* **P 07 20 41.2 -1.5**
ODD1 AMb AMB 07 20 44.5
comp=Z,580nm,1.8s,mb6.2
EGD Espegrend 71.72 341 *eP* **P 07 20 43.1 +0.3**
comp=Z,697nm,1.8s,mb6.3
EGD Espegrend 71.72 341 *eP* **P 07 20 43.1 +0.3**
EGD AMb AMB 07 20 45.6
comp=Z,697nm,1.8s,mb6.3
AKASG Malin Array Be 71.72 324 P **P 07 20 42.7 -0.4**
AKASG LR LR 07 54 51.8
AKASG Malin Array Be 71.72 324 *i* P **P 07 20 42.7 -0.3**
AKASG pmax pmax
comp=Z,77nm,0.4s
AKASG Malin Array Be 71.72 324 P **P 07 20 42.7 -0.4**
comp=Z,77nm,0.4s,mb6.0,baz=38,slow=6.1,SNR=589
AKASG LR LR 07 54 51.8
comp=Z,1μm,18.6s,MS5.3,baz=35,slow=38
KIEV Kiev 71.73 324 *eP* **P 07 20 42.7 -0.4**
comp=Z,1μm,1.4s,mb6.6
KIEV LR LR
comp=Z,2μm,21.0s,MS5.2
KIEV Kiev 71.73 324 *eP* **P 07 20 42.7 -0.4**
KIEV pmax pmax
comp=Z,1μm,1.4s,mb6.6
KIEV MLR MLR
comp=Z,2μm,21.0s,MS5.2
SOC Sochi 71.85 313 *i* P **P 07 20 44.1 +0.2**
SOC Sochi 71.85 313 *c iP* **P 07 20 44.5 +0.6**
SOC *e**SP sP 07 20 57.1 -7.2
SOC *e* 07 21 04.0
SOC *eP*PP 07 25 04.9
SOC *eS* S 07 30 00.6 +0.1
SOC *e* 07 30 48.1
SOC pmax pmax
comp=Z,126nm,0.6s,mb6.0
SOC MLR MLR
comp=Z,5μm,20.0s,MS5.8
KARS Kars 72.05 309 *eP* **P 07 20 47.3 +2.1**
ANN Anapa 72.17 316 *c iP* **P 07 20 45.6 -0.3**
ANN *eP*PP 07 25 09.5
ANN *eS* S 07 30 05.4 +1.2
ANN pmax pmax
comp=Z,536nm,1.8s,mb6.2
BLS5 Blasjo 72.18 340 *eP* **P 07 20 46.4 +0.8**
comp=Z,202nm,1.6s,mb5.8
BLS5 Blasjo 72.18 340 *eP* **P 07 20 46.4 +0.8**
BLS5 AMb AMB 07 20 48.8
comp=Z,202nm,1.6s,mb5.8
BCA Borcka 72.30 311 *eP* **P 07 20 46.4 -0.3**
ARTV Artvin 72.31 310 *i* P **P 07 20 47.7 +1.0**
ARTV *i* P 07 20 48.4
AGMN Agassiz Refuge 72.43 39 *eP* **P 07 20 46.3 -1.0**
comp=Z,266nm,1.3s,mb6.0
AGMN LR LR
comp=Z,1μm,21.0s,MS5.2
DYDN Diyadin 72.44 308 *i* P **P 07 20 50.0 +2.4**
PV10 Paradox Valley 72.57 53 *eP* **P 07 20 48.5 +0.2**
CLDR Caldiran 72.58 308 *eP* **P 07 20 50.2 +1.8**
PHWY Pilot Hill 72.59 49 *eP* **P 07 20 48.3 -0.1**
comp=Z,165nm,1.6s,mb5.7
KMY Karmoy 72.66 341 *eP* **P 07 20 48.9 +0.4**
comp=Z,458nm,2.0s,mb6.1
KMY Karmoy 72.66 341 *eP* **P 07 20 48.9 +0.4**
KMY AMb AMB 07 20 51.1
comp=Z,458nm,2.0s,mb6.1
KMY *ep*P pP 07 21 03.0 0.0
AGRB Hanur-Agry 72.81 309 *eP* **P 07 20 50.6 +0.9**
PZAR Pazar-Rize 72.88 311 *eP* **P 07 20 50.3 +0.2**
SNART Snartemo 72.95 340⇑ *iP* **P 07 20 50.2 0.0**
SNART AMb AMB 07 20 52.7
comp=Z,507nm,1.4s,mb6.3
PV01 Paradox Valley 73.00 53 *eP* **P 07 20 50.8 -0.1**
TUTA Tutak 73.03 309 *i* P **P 07 20 51.8 +0.7**
WAL1 Walls 73.17 345⇑ *eP* **P 07 20 51.3 -0.2**
LRW Lerwick 73.20 344⇑ *eP* **P 07 20 51.3 -0.3**
LRW AMb AMB 07 20 54.1
comp=Z,476nm,1.4s,mb6.2
SMCO Snowmass 73.21 52 *eP* **P 07 20 47.3 -4.7**
comp=Z,84nm,1.0s,mb5.6
VANB Van 73.26 308 *eP* **P 07 20 53.5 +1.1**
TVAN Van 73.29 308 *i* P **P 07 20 54.2 +1.6**
ERZM Erzurum 73.50 310 *i* P **P 07 20 56.2 +2.4**
EZM Erzurum 73.50 310 *eP* **P 07 20 55.5 +1.7**
BSD Bornholm Skovb 73.53 334⇑ *iP* **P 07 20 53.3 -0.4**
BSD pmax pmax
comp=Z,790nm,1.3s,mb6.5
BSD MLR MLR
comp=Z,2μm,19.0s,MS5.5
BSD Bornholm Skovb 73.53 334⇑ *iP* **P 07 20 53.3 -0.4**
comp=Z,787nm,1.3s,mb6.5
BSD
comp=Z,2μm,19.0s
ISCO Idaho Springs 73.54 50 *eP* **P 07 20 54.6 +0.6**
comp=Z,201nm,1.4s,mb5.9
ISCO LR LR
comp=Z,1μm,21.0s,MS5.1
ISCO Idaho Springs 73.54 50 *eP* **P 07 20 54.6 +0.6**
ISCO pmax pmax
comp=Z,201nm,1.4s,mb5.9
ISCO MLR MLR
comp=Z,1μm,21.0s,MS5.1
BANOM Banah 73.58 290⇑ P **P 07 20 54.7 +0.2**
KTUT Trabzon 73.62 311 *eP* **P 07 20 52.2 -2.3**
MVCO Mesa Verde 73.67 54 *eP* **P 07 20 54.9 0.0**
comp=Z,112nm,1.0s,mb5.8
MVCO LR LR
comp=Z,898nm,21.0s,MS5.0
SIM Simferopol' 73.72 317 *d iP* **P 07 20 54.2 -0.8**
SIM *i* pP 07 21 08.0 -1.6
SIM *eS* S 07 30 21.4 -0.3
SIM pmax pmax
comp=Z,76nm,1.2s,mb5.5
SIM MLR MLR
comp=Z,2μm,15.5s,MS5.4
HKR Hakkari 73.75 307 *eP* **P 07 20 56.1 +0.8**
HAKT HAKKARI 73.78 307 *i* P **P 07 20 56.5 +1.0**
WAR Warsaw 73.79 329 *eP* **P 07 20 56.0 +0.8**

WAR epP pP 07 20 57.6 -12
WAR LMZ 07 53 20.1
comp=Z,3μm,26.6s
WAR Warsaw 73.79 329 *e*P **P** **07 20 56.0 +0.7**
WAR epP pP 07 20 57.6 -12
WAR LR LR
comp=Z,3μm,26.6s,MS5.5
COP Copenhagen 73.81 336⇑ *i*P **P** **07 20 55.4 +0.1**
COP pmax pmax
comp=Z,380nm,1.0s,mb6.3
COP MLR MLR
comp=Z,1μm,18.0s,MS5.2
COP Copenhagen 73.81 336⇑ *i*P **P** **07 20 55.4 +0.1**
comp=Z,385nm,1.0s,mb6.3
COP
comp=Z,1μm,18.0s
BIDO Bidbid 73.91 287 ⇓P **P** **07 20 56.5 +0.1**
WBK Wadi Bani Khal 73.92 286 ⇑P **P** **07 20 57.7 +1.2**
CUKT Cukurca 74.05 306 *e*P **P** **07 20 57.8 +0.7**
MUD Monsted U'grnd 74.08 338⇑ *i*P **P** **07 20 56.9 0.0**
MUD pmax pmax
comp=Z,310nm,1.1s,mb6.2
MUD MLR MLR
comp=Z,2μm,22.0s,MS5.4
MUD Monsted U'grnd 74.08 338⇑ *i*P **P** **07 20 56.9 0.0**
comp=Z,310nm,1.1s,mb6.2
MUD
comp=Z,2μm,22.0s
ARMA Armidale 74.11 177 *e*P **P** **07 20 58.4 +1.2**
ARMA *e* pP 07 21 17.1 +5.2
GUMT Gumushane 74.15 311 *e*P **P** **07 20 58.9 +1.3**
ESPY Espiye-Giresun 74.23 312 *e*P **P** **07 20 57.3 -0.8**
SMDO Samad 74.27 287 ⇑P **P** **07 20 59.0 +0.4**
HATD Hatta, Dubai 74.42 289 ⇓P **P** **07 20 59.7 +0.3**
SNR=22
HOQ Hoqain 74.43 288 ⇑P **P** **07 20 59.6 +0.1**
EZC Erzincan 74.46 310 *e*P **P** **07 21 01.9 +2.5**
KELT Kelkit 74.49 311 *i* P **P** **07 21 00.6 +1.0**
RGN Rugen 74.51 334 *e*P **P** **07 20 59.8 +0.4**
comp=Z,2μm,1.4s
RGN Rugen 74.51 334 *e*P **P** **07 20 59.8 +0.4**
LVV L'vov 74.54 326⇓ *i*P **P** **07 20 59.9 +0.2**
LVV *e* pP 07 21 13.9 -0.5
LVV *e* 07 23 47.9
LVV *e* 07 25 39.9
LVV eS S 07 30 31.7 +0.9
LVV MLR MLR
comp=N,600nm,18.0s,MS5.1
LVV MLR MLR
comp=E,700nm,18.0s,MS5.1
LVV MLR MLR
comp=Z,800nm,18.0s,MS5.1
SIRT Sirnak 74.55 307 *e*P **P** **07 21 00.9 +0.9**
ASHO Ashiyiah 74.56 289 ⇑P **P** **07 21 00.5 +0.3**
BTMT Batman 74.62 308 *e*P **P** **07 20 60.0 -0.4**
EYMN Ely 74.63 37 *e*P **P** **07 20 59.4 -0.8**
comp=Z,293nm,1.2s,mb6.1
EYMN LR LR
comp=Z,1μm,22.0s,MS5.1
KIS Kishinev 74.68 322α *i*P **P** **07 20 59.0 -1.6**
KIS *i* pP 07 21 13.0 -2.2
KIS *i* 07 21 20.0
KIS *e* 07 23 49.0
KIS *i* S S 07 30 30.0 -2.5
KIS ePS 07 30 57.0
KIS eSS SS 07 35 22.0 +2.5
KIS smax
comp=N,1μm,5.0s
KIS smax
comp=E,2μm,2.8s
KIS MLR MLR
comp=N,3μm,22.0s,MS5.7
KIS MLR MLR
comp=Z,4μm,22.0s,MS5.6
KIS MLR MLR
comp=E,2μm,19.0s,MS5.7
KIS MLR MLR
comp=Z,4μm,22.0s
KIS Kishinev 74.68 322 *i* P **P** **07 20 59.0 -1.6**
KIS Kishinev 74.68 322 *i* PcP PcP 07 21 13.0 -1.6
KIS Kishinev 74.68 322 *e*PP PP 07 23 49.0 +1.6
KIS *i* S S 07 30 30.0 -2.5
comp=Z,2μm,2.8s
KIS *i* ScS ScS 07 30 48.0 -20
JMDO Jabal Madar 74.68 286 P **P** **07 21 01.5 +0.5**
BINT Bingol 74.70 309 *e*P **P** **07 21 02.0 +1.2**
MSL Mosul 75.01 306 *i* x x 07 21 03.0
MSL *e* x x 07 21 16.5
MSL *e* x x 07 30 36.0
SDCO Great Sand Dun 75.03 52 *e*P **P** **07 21 03.0 +0.3**
comp=Z,119nm,1.4s,mb5.6
SDCO LR LR
comp=Z,1μm,21.0s,MS5.2
KWP Kalwaria 75.22 327 *e*P **P** **07 21 04.5 +0.9**
KWP epP pP 07 21 06.4 -12
KWP *e*PcP PcP 07 21 17.2 +0.3
KWP eS S 07 30 41.0 +2.6
KWP LMZ 07 54 15.6
comp=Z,3μm,26.1s
KWP Kalwaria 75.22 327 *e*P **P** **07 21 04.5 +0.9**
KWP epP pP 07 21 06.4 -12
KWP *e*PcP PcP 07 21 17.2 +0.3
KWP eS S 07 30 41.0 +2.6
PTK Pertek 75.30 310 *e*P **P** **07 21 05.8 +1.5**
MLA1 Latheron 75.32 345⇑ *i*P **P** **07 21 03.7 -0.4**
ECSD EROS,Sioux Fal 75.44 43 *e*P **P** **07 21 04.4 -0.6**
comp=Z,388nm,1.4s,mb6.1
ECSD LR LR
comp=Z,1μm,20.0s,MS5.1
DIKM Dikmen 75.54 314 *e*P **P** **07 20 59.9 -5.6**
KVT Kavak 75.54 314 *e*P **P** **07 21 06.5 +0.9**
MARD Mardin 75.63 308 *i* P **P** **07 21 07.4 +1.2**
TUC Tucson 75.63 59 *e*P **P** **07 21 06.3 0.0**
comp=Z,57nm,1.2s,mb5.4
TUC LR LR
comp=Z,739nm,20.0s,MS5.0
TUC Tucson 75.63 59 *e*P **P** **07 21 06.4 +0.1**
TUC pmax pmax
comp=Z,57nm,1.2s,mb5.4
TUC MLR MLR
comp=Z,739nm,20.0s,MS5.0
STKA Stephens Creek 75.71 186 *e*P **P** **07 21 07.5 +1.1**
comp=Z,16nm,1.6s,mb4.7
STKA *e* pP 07 21 21.4 +0.3
STKA Stephens Creek 75.71 186 P **P** **07 21 06.7 +0.3**
comp=Z,12nm,1.0s,mb4.8,baz=347,slow=5.6,SNR=6.7
STKA LR LR 07 50 50.4
comp=Z,1μm,22.0s,MS5.1,baz=2.5,slow=33
RTO Tolsta 75.77 346⇑ *i*P **P** **07 21 06.4 -0.2**
BURAR Bucovina Array 75.78 324 P **P** **07 21 07.3 +0.5**
BURAR Bucovina Array 75.78 324 ⇑P **P** **07 21 07.1 +0.3**
ELZG Elazig 75.80 310 *i* P **P** **07 21 08.9 +1.7**
MVH1 Achvaich 75.83 345⇑ *i*P **P** **07 21 06.7 -0.3**
OJC Ojcow 75.87 329 *i* P **P** **07 21 07.7 +0.4**
OJC *e*PcP PcP 07 21 21.4 +1.7
OJC eS S 07 30 44.5 -1.1
OJC L 07 55 22.1
comp=Z,3.2nm,24.2s
BOYT Boyabat 75.89 314 *i* P **P** **07 21 08.9 +1.3**
BYBT Boyabat 75.92 315 *e*P **P** **07 21 06.9 -0.8**
BSEG Bad Segeberg 75.95 336 *e*P **P** **07 21 07.7 0.0**
BSEG pmax pmax
comp=Z,786nm,1.3s,mb6.5
BSEG Bad Segeberg 75.95 336 *e*P **P** **07 21 07.7 0.0**
comp=Z,786nm,1.3s,mb6.5
KOLS Kolonicke sedl 75.95 326 *e*P **P** **07 21 09.0 +1.2**
KOLS *e*PP PP 07 24 05.7 +7.7
KOLS Kolonicke sedl 75.95 326 *e*P **P** **07 21 09.0 +1.2**
KOLS *e*PP PP 07 24 05.6 +7.6
BZK Bozkurt 75.95 315 *e*P **P** **07 21 06.9 -1.0**
STHS Stebnicka Huta 75.97 327 *e*P **P** **07 21 08.8 +0.9**
comp=Z,98nm,0.9s,mb5.7
STHS *e* 07 21 29.7
STHS eS S 07 30 46.0 -0.6
STHS Stebnicka Huta 75.97 327 *e*P **P** **07 21 08.8 +0.9**
STHS *e* 07 21 29.7
STHS eS S 07 30 46.0 -0.6
STHS pmax pmax
comp=Z,98nm,0.9s,mb5.7
STHS Stebnicka Huta 75.97 327 *e*P **P** **07 21 08.8 +0.9**
STHS epP pP 07 21 29.6 +7.0
STHS eS S 07 30 46.0 -0.6
MCD Coleburn Disti 75.98 344⇑ *e*P **P** **07 21 07.7 -0.1**
RUE Ruedersdorf 76.11 333 *e*P **P** **07 21 08.8 +0.2**
comp=Z,1μm,1.4s,mb6.6
RUE Ruedersdorf 76.11 333 *e*P **P** **07 21 08.7 0.0**
comp=Z,1μm,1.5s,mb6.6
MME1 Meikle Cairn 76.17 344⇑ *e*P **P** **07 21 08.3 -0.6**
UZH Uzhgorod 76.18 326⇓ *i*P **P** **07 21 09.0 -0.1**
UZH *i* pP 07 21 24.4 +0.6
UZH *e* 07 21 30.6
UZH *e* 07 24 09.4
UZH eS S 07 30 53.0 +4.0
UZH MLR MLR
comp=Z,2μm,17.0s,MS5.5
RRR Rubha Reidh 76.19 346⇑ *e*P **P** **07 21 08.8 -0.2**
MYA Malataya 76.23 310 *e*P **P** **07 21 11.0 +1.4**
MALT Malatya 76.24 310 *e*P **P** **07 21 10.7 +1.0**
MALT Malatya 76.24 310 *e*P **P** **07 21 11.3 +1.6**
comp=Z,162nm,1.3s,mb5.8
MALT Malatya 76.24 310 ⇓P **P** **07 21 11.0 +1.3**
RRH Rhenigidale 76.28 346⇑ *e*P **P** **07 21 09.2 -0.3**
CRVS Cervenica-Dubn 76.30 327 *e*P **P** **07 21 10.2 +0.4**
MDO Dochfour 76.32 345⇑ *i*P **P** **07 21 09.4 -0.4**
NIE Niedzica 76.33 328 *i* P **P** **07 21 10.9 +1.0**
BHD Baghdad 76.33 303 *i* x x 07 21 09.5
BHD *ex* x 07 21 23.0
BHD *ex* x 07 30 48.0
BHD *ex* x 07 31 13.0
BHD *ex* x 07 31 24.0
ANMO Albuquerque 76.42 54 *e*P **P** **07 21 11.1 +0.3**
comp=Z,113nm,1.4s,mb5.6
ANMO LR LR
comp=Z,631nm,21.0s,MS4.9
ANMO Albuquerque 76.42 54 *e*P **P** **07 21 11.1 +0.3**
ANMO pmax pmax
comp=Z,113nm,1.4s
ANMO MLR MLR
comp=Z,631nm,21.0s
ANMO Albuquerque 76.42 54 P **P** **07 21 11.2 +0.5**
comp=Z,38nm,1.0s,mb5.3,baz=313,slow=7.8,SNR=61
KAC Achnashellach 76.44 346⇑ *i*P **P** **07 21 09.7 -0.7**
VRI Vrincioaia 76.48 322 P **P** **07 21 11.6 +0.7**
VRI Vrincioaia 76.48 322 ⇓P **P** **07 21 11.3 +0.4**
PLOR Plostina 76.52 322 ⇓P **P** **07 21 11.9 +0.8**
FORT Forrest 76.58 197 *e*P **P** **07 21 10.0 -1.4**
comp=Z,45nm,0.7s,mb5.5
BALT Daday 76.58 315 *i* P **P** **07 21 12.8 +1.3**
RAC Raciborz 76.58 329 *e*P **P** **07 21 12.2 +0.8**
RAC LR LR
comp=Z,2μm,22.5s,MS5.5
TOS Tosya 76.62 315 *e*P **P** **07 21 12.6 +0.8**
KSP Ksiaz 76.64 331 *e*P **P** **07 21 12.2 +0.6**
KSP epP pP 07 21 13.9 -12
KSP eS S 07 30 53.9 -0.1
KSP LMZ 07 55 48.4
comp=Z,4μm,24.4s
KSP Ksiaz 76.64 331⇑ *e*P **P** **07 21 12.0 +0.3**
KSP MLR MLR
comp=Z,4μm,24.4s,MS5.7
URFA Urfa 76.64 309 *e*P **P** **07 21 13.8 +1.9**
KPL Plockton 76.65 346⇑ *e*P **P** **07 21 11.6 0.0**
KPL AMb AMB 07 21 14.1
comp=Z,634nm,1.6s,mb6.3
KPL AMS AMS 07 57 49.8
comp=Z,879nm,22.1s,MS5.0
KPL Plockton 76.65 346 P **P** **07 21 11.6 0.0**
KPL AMb AMB 07 21 14.1
comp=Z,634nm,1.6s,mb6.3
KSB Sheil Bridge 76.73 345⇑ *i*P **P** **07 21 11.5 -0.6**
TIRR Tirgusor 76.80 320 P **P** **07 21 13.1 +0.4**
TIRR Tirgusor 76.80 320 ⇑P **P** **07 21 12.8 +0.1**
OKC Ostrava-Krasne 76.80 329⇑ *i*P **P** **07 21 13.0 +0.4**
OKC *ex* x 07 21 31.3
OKC eS S 07 30 55.8 +0.1
UMR Umm Al-Rimmam 76.81 298 *e*P **P** **07 21 12.5 -0.5**
UMR AMb AMB 07 21 15.1
comp=Z,374nm,0.9s,mb6.3
HARR Harsova 76.84 321 P **P** **07 21 13.8 +0.9**
HARR Harsova 76.84 321 ⇓P **P** **07 21 13.2 +0.3**
MUB Mutribah 76.87 299 *e*P **P** **07 21 13.1 -0.3**
MIB AMb AMB 07 21 15.5
comp=Z,407nm,1.0s,mb6.3
CORM Corum 76.93 314 *e*P **P** **07 21 15.2 +1.7**
UPC Upice 77.02 331⇑ *i*P **P** **07 21 14.2 +0.4**
UPC *ex* x 07 21 24.6
KECS Kecovo 77.02 327 *i* P **P** **07 21 14.3 +0.5**
comp=Z,36nm,1.3s,mb5.1
KECS *e* pP 07 21 25.7 -2.9
KECS eS S 07 30 57.5 -0.6
KECS Kecovo 77.02 327 *i* P **P** **07 21 14.3 +0.5**
KECS *e* pP 07 21 25.7 -2.9
KECS eS S 07 30 57.5 -0.6
KECS pmax pmax
comp=Z,36nm,1.3s,mb5.1
DPC Dobruska-Polom 77.04 331⇑ *i*P **P** **07 21 14.7 +0.8**
DPC *e* pP 07 21 29.1 +0.5
DPC eS S 07 30 58.6 +0.3
DPC eS S 07 30 59.1 +0.8
DPC LR LR
comp=Z,2μm,18.3s,MS5.4
DPC Dobruska-Polom 77.04 331⇑ *i*P **P** **07 21 14.7 +0.8**
DPC epP pP 07 21 29.1 +0.5
DPC eS S 07 30 58.6 +0.3
DPC AMS AMS 07 57 30.0
comp=Z,2μm,18.3s
MORC Moravsky Berou 77.07 330 *e*P **P** **07 21 14.1 -0.1**
comp=Z,936nm,1.8s,mb6.4
MORC Moravsky Berou 77.07 330 ⇓P **P** **07 21 14.5 +0.4**
COWI Conover 77.08 37 *e*P **P** **07 21 13.4 -0.9**
comp=Z,244nm,1.4s,mb5.9
COWI LR LR
comp=Z,1μm,20.0s,MS5.3
KAR1 Arisaig 77.08 346⇑ *e*P **P** **07 21 13.8 -0.3**
LIKS Likavka 77.09 328 *e*P **P** **07 21 14.9 +0.7**
LIKS *e*PP PP 07 24 10.5 +2.9
MLR Muntele Rosu 77.11 322 P **P** **07 21 15.0 +0.5**
MLR Muntele Rosu 77.11 322 ⇑P **P** **07 21 14.7 +0.2**
MLR Muntele Rosu 77.11 322 P **P** **07 21 15.0 +0.5**
comp=Z,29nm,0.5s,mb5.5,baz=352,slow=6.5,SNR=89
CANT Cankiri 77.14 315 *e*P **P** **07 21 15.5 +0.8**
SAFT Safranbolu 77.15 316 *e*P **P** **07 21 15.6 +0.9**
QRN Al-Qurain 77.23 298 *e*P **P** **07 21 15.2 -0.1**
QRN AMb AMB 07 21 16.5
comp=Z,487nm,0.4s
SCHQ Schefferville 77.23 20 P **P** **07 21 14.4 -0.5**
comp=Z,58nm,0.7s,mb5.7,baz=348,slow=5.4,SNR=247
SCHQ LR LR 07 58 46.7
comp=Z,2μm,20.2s,MS5.4,baz=341,slow=38
BNN Bunyan 77.26 312 *e*P **P** **07 21 15.8 +0.4**
EBH Black Hill 77.28 344⇑ *i*P **P** **07 21 14.8 -0.3**
RST Umm Al-Ruwaisa 77.30 299 *e*P **P** **07 21 15.0 -0.8**
RST AML AML 07 21 17.2
comp=Z,83nm,0.7s
NAY Al-Naaiem 77.31 298 *e*P **P** **07 21 15.5 -0.3**
NAY AMb AMB 07 21 17.9
comp=Z,216nm,1.1s,mb6.0
ELDT Eldivan 77.33 315 *i* P **P** **07 21 16.7 +1.0**
RDF Al-Radifah 77.34 298 *e*P **P** **07 21 15.8 -0.2**
RDF AMb AMB 07 21 18.3
comp=Z,550nm,0.9s,mb6.5
CLL Collm 77.36 333⇑ *i*P **P** **07 21 15.5 -0.2**
comp=Z,477nm,1.2s,mb6.3
CLL *i* S S 07 31 00.6 -1.2
CLL LR LR
comp=Z,3μm,20.4s,MS5.6
CLL Collm 77.36 333⇑ *i*P **P** **07 21 15.5 -0.2**
CLL *i* S S 07 31 00.6 -1.2
CLL pmax pmax
comp=Z,15nm,1.2s,mb4.8
CLL MLR MLR
comp=Z,3μm,20.4s,MS5.6
CLL Collm 77.36 333⇑ *i*P **P** **07 21 15.5 -0.2**
comp=Z,477nm,1.2s,mb6.3
CLL *e*sPP 07 24 30.0
CLL *i* S S 07 31 00.6 -1.2
CLL *e*SP 07 31 37.0
CLL *e*(sPPS) 07 32 23.0
CLL *e*(SS) 07 37 05.0
CLL LmV 07 59 00.0
comp=Z,3μm,20.4s
CLL Collm 77.36 333⇑ *i*P **P** **07 21 15.6 -0.1**
comp=Z,494nm,1.2s,mb6.3
CLL epP pP 07 21 29.7 -0.8
CLL *e*PP PP 07 24 21.1 +11
CLL *e*PPP 07 26 00.5
CLL eS S 07 30 59.7 -2.1
CLL *e*SP 07 31 36.4
CLL *e*SS SS 07 36 08.0 +8.2
CLL *e*LR LR 07 46 32.8
GZT Gaziantep 77.40 310 *i* P **P** **07 21 18.0 +1.8**
ESY Stoneypath 77.41 344⇑ *i*P **P** **07 21 15.5 -0.4**
BRG Berggiesshubel 77.42 332⇑ *i*P **P** **07 21 16.2 +0.1**
comp=Z,335nm,1.8s,mb6.0
BRG *e* 07 21 25.2
BRG LR LR
comp=Z,2μm,19.4s,MS5.4
BRG Berggiesshubel 77.42 332⇑ *i*P **P** **07 21 16.2 +0.1**
BRG *e* 07 21 25.2
BRG pmax pmax
comp=Z,335nm,1.9s,mb6.0
BRG MLR MLR
comp=Z,2μm,19.4s,MS5.4
BRG MLR MLR
comp=N,1μm,16.0s,MS5.4
BRG MLR MLR
comp=E,1μm,16.0s,MS5.4
BRG Berggiesshubel 77.42 332 *e*P **P** **07 21 15.9 -0.2**
comp=Z,561nm,1.9s,mb6.2
BRG Berggiesshubel 77.42 332⇑ *i*P **P** **07 21 16.2 +0.1**
comp=Z,559nm,1.9s,mb6.2
BRG *e* 07 21 25.2
comp=Z,91nm,1.5s
BRG
comp=Z,3μm,19.4s
BRG
comp=N,2μm,16.0s
BRG
comp=E,2μm,16.0s
CBKS Cedar Bluff 77.45 48 *e*P **P** **07 21 15.7 -0.7**
comp=E,222nm,1.4s,mb5.9
CBKS LR LR
comp=Z,900nm,21.0s,MS5.1
CBKS Cedar Bluff 77.45 48 *e*P **P** **07 21 15.7 -0.7**
CBKS pmax pmax
comp=Z,222nm,1.4s,mb5.9
CBKS MLR MLR
comp=Z,900nm,21.0s,MS5.1
CDAG Cicekdag 77.47 313 *i* P **P** **07 21 17.4 +0.8**
DRGR 77.48 325 P **P** **07 21 16.7 +0.3**
PSN Preselentsi 77.50 320 *i* P **P** **07 21 17.6 +1.0**
EAB Aberfoyle 77.50 345⇑ *i*P **P** **07 21 16.2 -0.1**
PVCC Panska Ves 77.50 332⇑ *i*P **P** **07 21 17.0 +0.5**
PVCC epP pP 07 21 35.0 +3.8
PVCC eS S 07 31 03.5 +0.2
PVCC AMS AMS 07 58 50.0
comp=Z,5μm,20.4s
VOIR 77.55 323 P **P** **07 21 17.6 +0.7**
VOIR 77.55 323 ⇑P **P** **07 21 17.5 +0.6**
FBE Freiberg 77.58 332 *e*P **P** **07 21 16.8 -0.1**
comp=Z,405nm,1.2s,mb6.2
EBL Broad Law 77.63 344⇑ *i*P **P** **07 21 16.9 -0.2**
VYHS Vyhne 77.65 328 *i* P **P** **07 21 18.0 +0.6**
comp=Z,360nm,2.3s,mb5.9
VYHS LR LR
comp=Z,2μm,25.2s,MS5.3
KMRS Kahramanmaras 77.66 311 *e*P **P** **07 21 19.0 +1.3**
PSZ Piszkesteto 77.71 327 *e*P **P** **07 21 18.4 +0.7**
comp=Z,286nm,1.5s,mb6.0
PSZ Piszkesteto 77.71 327 P **P** **07 21 18.3 +0.6**
PSZ pmax pmax
comp=Z,290nm,1.5s,mb6.0
PSZ Piszkesteto 77.71 327⇑ *e*P **P** **07 21 18.5 +0.8**
KDZE Karadeniz Ereo 77.72 316 *e*P **P** **07 21 17.5 -0.4**
XSO Sourhope Farm 77.73 343⇑ *e*P **P** **07 21 17.7 +0.1**
GAZ Gaziantep 77.73 310 *e*P **P** **07 21 18.2 +0.1**
KOLL Kolacno 77.74 328 *e*P **P** **07 21 18.5 +0.6**
CLZ Clausthal 77.75 335 *e*P **P** **07 21 18.1 +0.2**
CLZ pmax pmax
comp=Z,585nm,1.1s,mb6.4
CLZ Clausthal 77.75 335 *e*P **P** **07 21 18.1 +0.2**
comp=Z,585nm,1.1s,mb6.4
VRAC Vranov 77.81 330 P **P** **07 21 19.0 +0.8**
VRAC Vranov 77.81 330 P **P** **07 21 18.9 +0.7**
comp=Z,48nm,0.5s,mb5.7,baz=38,slow=5.2,SNR=106
AVNT Avonos 77.84 313 *i* P **P** **07 21 19.7 +1.0**
PGBU Glenifferbraes 77.88 344⇑ *e*P **P** **07 21 18.6 +0.1**
PGBU AMb AMB 07 21 21.2
comp=Z,916nm,1.6s,mb6.5
ANDN Andirin 77.91 311 *i* P **P** **07 21 20.0 +1.0**
PRA Prague 77.93 331 ⇑P **P** **07 21 19.0 +0.1**
SGKT Sivrigoynuk 77.96 315 *i* P **P** **07 21 20.1 +0.8**
PRU Pruhonice 77.97 331⇑ *i*P **P** **07 21 19.5 +0.4**
PRU *e*pP pP 07 21 33.6 -0.2
PRU eS S 07 31 08.5 +0.1
PRU AMS AMS 07 59 00.0
comp=Z,4μm,17.9s
BUC1 Bucharest 77.97 321 P **P** **07 21 20.0 +0.8**
KRUC Moravsky 78.08 330 P **P** **07 21 20.2 +0.4**
ESK Eskdalemuir 78.09 344 P **P** **07 21 20.3 +0.6**
comp=Z,741nm,1.2s,mb6.5,SNR=20
ESK Eskdalemuir 78.09 344⇑ *e*P **P** **07 21 19.4 -0.3**
ESK AMb AMB 07 21 22.2
comp=Z,305nm,1.7s,mb6.0
ESK AMS AMS 07 56 25.5
comp=Z,852nm,20.7s,MS5.1
ESK Eskdalemuir 78.09 344 P **P** **07 21 19.4 -0.3**
ESK AMb AMB 07 21 22.2
comp=Z,305nm,1.7s,mb6.0
ESK Eskdalemuir 78.09 344 *e*P **P** **07 21 19.7 0.0**
comp=Z,278nm,1.4s,mb6.0
ESK LR LR
comp=Z,2μm,20.0s,MS5.5
ESK Eskdalemuir 78.09 344 P **P** **07 21 20.3 +0.6**
ESK pmax pmax
comp=Z,280nm,1.3s,mb6.0
ANTO Ankara 78.11 315 *e*P **P** **07 21 21.2 +1.1**
ANTO Ankara 78.11 315 *e*P **P** **07 21 21.0 +0.9**
comp=Z,340nm,1.3s,mb6.1
ANTO LR LR
comp=Z,1μm,19.0s,MS5.3
ANTO Ankara 78.11 315 P **P** **07 21 21.4 +1.2**
SNR=31
LOD Lodumlu 78.11 315 *e*P **P** **07 21 20.3 +0.2**
IBBN Ibbenburen 78.12 336 *e*P **P** **07 21 19.8 -0.1**
comp=Z,497nm,1.1s,mb6.3
SMOL Smolenice 78.16 329 *e*P **P** **07 21 21.2 +1.0**
ECK Cauldkaine Hil 78.20 344⇑ *i*P **P** **07 21 20.2 -0.1**
TREC Trest 78.22 330⇑ *i*P **P** **07 21 20.9 +0.4**
TREC *e*pP pP 07 21 34.5 -0.8
TREC eS S 07 31 12.0 +0.9
TREC AMS AMS 07 58 20.0
comp=Z,3μm,22.4s
PRD Provadia 78.23 320 *i* P **P** **07 21 21.5 +0.8**
KOZT Kozan 78.27 311 *e*P **P** **07 21 20.9 -0.1**
BHH Howats Hill 78.30 344⇑ *e*P **P** **07 21 20.5 -0.4**
BWH Wardlaw 78.31 344⇑ *e*P **P** **07 21 20.9 -0.1**
WERD Werda 78.33 333 *e*P **P** **07 21 21.0 -0.1**
comp=Z,431nm,1.8s,mb6.1
MODS Modra-Piesok 78.33 329 *i* P **P** **07 21 22.2 +1.0**
MODS *e* pP 07 21 35.4 -0.5
MODS Modra-Piesok 78.33 329 *i* P **P** **07 21 22.1 +0.9**
MODS *e*pP pP 07 21 35.4 -0.5
MOX Moxa 78.39 333 *e*P **P** **07 21 21.4 0.0**
comp=Z,523nm,1.8s,mb6.2
MOX *e* pP 07 21 35.9 -0.3
MOX
comp=Z,2μm,19.0s
MOX Moxa 78.39 333 *e*P **P** **07 21 21.3 -0.1**
comp=Z,416nm,1.6s,mb6.1
GUNZ Gunzen 78.39 333 *e*P **P** **07 21 21.5 0.0**
comp=Z,122nm,0.9s,mb5.8
BUD Budapest 78.40 327⇑ *e*P **P** **07 21 22.3 +0.7**
WERN Wernitzgruen 78.44 333 *e*P **P** **07 21 21.7 -0.1**
comp=Z,123nm,0.9s,mb5.8
NKC Novy Kostel 78.47 333⇑ *i*P **P** **07 21 21.9 0.0**
NKC *e* pP 07 21 35.4 -1.2
NKC Novy Kostel 78.47 333⇑ *i*P **P** **07 21 21.9 0.0**
NKC epP pP 07 21 35.4 -1.2
NKC AMS AMS 07 59 50.0
comp=Z,3μm,18.4s
GMK Mull of Kintyr 78.53 345⇑ *e*P **P** **07 21 22.6 +0.5**
ZST Bratislava 78.55 329 *e*P **P** **07 21 23.1 +0.7**
comp=Z,52nm,1.0s,mb5.4
ZST *e* pP 07 21 37.2 +0.1
ZST *e*PP PP 07 24 19.0 -0.8
ZST eS S 07 31 16.6 +2.0
ZST LR LR
comp=Z,1μm,23.4s,MS5.2
ZST Bratislava 78.55 329 *e*P **P** **07 21 23.1 +0.7**
ZST *e* pP 07 21 37.2 +0.1

ZST *e* 07 24 19.0
ZST *eS* S 07 31 16.6 +2.0
ZST pmax pmax
comp=Z,52nm,1.0s,mb5.4
ZST MLR MLR
comp=Z,1µm,23.4s,MS5.2
ZST Bratislava 78.55 329 *eP* **P 07 21 23.1 +0.7**
ZST *epP* pP 07 21 37.2 +0.1
ZST *ePP* PP 07 24 19.0 -0.8
ZST *eS* S 07 31 16.6 +2.0
GZR Gura Zlata 78.56 324 *P* **P 07 21 22.8 +0.3**
GZR Gura Zlata 78.56 324 ⇓*P* **P 07 21 22.5 0.0**
CEYT Ceyhan 78.65 311 *eP* **P 07 21 24.2 +1.0**
GCD Castle Douglas 78.66 344⇑*eP* **P 07 21 22.7 -0.2**
WTSB Winterswijk 78.70 337⇑*iP* **P 07 21 23.1 0.0**
comp=Z,386nm,1.7s,mb6.0
CKE Keswick 78.75 343⇑*iP* **P 07 21 23.1 -0.3**
MANZ Manzenberg 78.79 333 *eP* **P 07 21 23.6 -0.1**
comp=Z,162nm,1.5s,mb5.7
ZIMR 78.81 321 *P* **P 07 21 24.1 +0.2**
GAL1 Galloway 78.81 344⇑*eP* **P 07 21 23.7 0.0**
GAL1 AMb AMB 07 21 26.0
comp=Z,341nm,1.6s,mb6.0
GAL1 AMS AMS 07 50 45.5
comp=Z,5µm,19.4s,MS5.9
GAL1 Galloway 78.81 344 *P* **P 07 21 23.7 0.0**
GAL1 AMb AMB 07 21 26.0
comp=Z,341nm,1.6s,mb6.0
KARA Karaisali 78.84 311 *eP* **P 07 21 25.4 +1.2**
SZH Strazhica 78.85 321 *iP* **P 07 21 24.1 0.0**
BZS Buzias 78.87 325 *P* **P 07 21 24.3 +0.1**
BZS Buzias 78.87 325⇑*P* **P 07 21 23.8 -0.4**
KSU1 Kansas State U 78.88 46 *eP* **P 07 21 23.0 -1.3**
comp=Z,140nm,0.9s,mb5.9
KSU1 LR LR
comp=Z,991nm,20.0s,MS5.1
CNB Canberra Magne 78.93 179 *eP* pP 07 21 37.1 -2.0
comp=Z,120nm,1.3s
ROTZ Rotzenmuhle 78.95 333 *eP* **P 07 21 24.8 +0.3**
comp=Z,435nm,1.7s,mb6.1
ROTZ *epP* pP 07 21 38.7 -0.6
HRT Hereke 78.97 317 *eP* **P 07 21 25.2 +0.4**
CRAR CRAIOVA 78.97 323 *P* **P 07 21 25.5 +0.7**
HPK Haverah Park 79.02 342⇑*eP* **P 07 21 25.3 +0.4**
HPK AMb AMB 07 21 27.6
comp=Z,530nm,1.8s,mb6.2
HPK AMS AMS 08 01 19.3
comp=Z,2µm,20.4s,MS5.4
HPK Haverah Park 79.02 342 *P* **P 07 21 25.3 +0.4**
HPK AMb AMB 07 21 27.6
comp=Z,530nm,1.8s,mb6.2
KHC Kasperske Hory 79.03 331⇑*iP* **P 07 21 25.4 +0.4**
KHC *ePCP* PcP 07 21 31.5 -1.9
KHC *epP* pP 07 21 39.1 -0.6
KHC *eS* S 07 31 19.8 +0.1
KHC AMS AMS 07 59 40.0
comp=Z,5µm,20.3s
JFWS Jewell Farm 79.07 39 *eP* **P 07 21 24.5 -0.9**
comp=Z,152nm,1.4s,mb5.7
JFWS LR LR
comp=Z,2µm,20.0s,MS5.3
JFWS Jewell Farm 79.07 39 *eP* **P 07 21 24.5 -0.9**
JFWS pmax pmax
comp=Z,152nm,1.4s,mb5.7
JFWS MLR MLR
comp=Z,2µm,20.0s,MS5.3
PVL Pavlikeni 79.17 321 *iP* **P 07 21 26.5 +0.6**
SOP Sopron 79.18 329⇑*eP* **P 07 21 26.7 +0.9**
JMB Yambol 79.18 320 *eP* **P 07 21 26.0 +0.1**
JMB Yambol 79.18 320 *iP* **P 07 21 26.5 +0.6**
GEC2 GERESS Array S 79.23 331 *eP* **P 07 21 26.0 -0.1**
GEC2 pmax pmax
comp=Z,116nm,1.3s,mb5.7
GEC2 GERESS Array S 79.23 331 *eP* **P 07 21 26.0 -0.1**
comp=Z,116nm,1.3s,mb5.7
GERES GERESS Array B 79.23 331 *P* **P 07 21 26.1 0.0**
GERES pmax pmax
comp=Z,34nm,0.4s
GERES MLR MLR
comp=Z,4µm,20.2s
GERES GERESS Array B 79.23 331 *P* **P 07 21 26.1 0.0**
comp=Z,34nm,0.4s,mb5.7,baz=40,slow=5.5,SNR=311
GERES LR LR 08 00 17.8
comp=Z,4µm,20.1s,MS5.7,baz=27,slow=38
CONA Conrad Observa 79.23 329⇑*iP* **P 07 21 27.0 +0.9**
comp=Z,1µm,3.2s
ADVT Abdulvahap 79.23 317 *eP* **P 07 21 26.7 +0.5**
WET Wettzell 79.25 332 *eP* **P 07 21 26.6 +0.4**
WET *e**PP pP 07 21 40.5 -0.5
WET pmax pmax
comp=Z,383nm,1.6s,mb6.1
WET Wettzell 79.25 332 *eP* **P 07 21 26.6 +0.4**
comp=Z,383nm,1.6s,mb6.1
WET *epP* pP 07 21 40.5 -0.5
BORA Eskisehir 79.29 316 *iP* **P 07 21 27.4 +0.7**
YLV Yalova 79.31 317 *eP* **P 07 21 26.8 +0.2**
KIZT Kizilcal 79.32 314 *eP* **P 07 21 26.9 +0.2**
GRA1 Grafenberg Arr 79.34 333 *eP* **P 07 21 27.0 +0.3**
comp=Z,746nm,1.6s,mb6.4
GRA1 *epP* pP 07 21 40.8 -0.6
GRA1 LR LR
comp=Z,2µm,19.5s,MS5.6
GRF Grafenberg Arr 79.34 333 *eP* **P 07 21 27.0 +0.3**
GRF *e**PP pP 07 21 40.8 -0.6
GRF pmax pmax
comp=Z,746nm,1.6s,mb6.4
GRF MLR MLR
comp=Z,2µm,19.5s,MS5.6
GRF Grafenberg Arr 79.34 333 *eP* **P 07 21 27.0 +0.3**
comp=Z,746nm,1.6s,mb6.4
GRF *epP* pP 07 21 40.8 -0.6
GRF *eL* 08 01 08.5
comp=Z,2µm,19.5s
MNTX Cornudas Mount 79.35 56 *eP* **P 07 21 27.0 -0.1**
comp=Z,91nm,1.1s,mb5.6
MNTX LR LR
comp=Z,543nm,19.0s,MS4.9
ESKT Eskisehir 79.37 316 *eP* **P 07 21 27.0 0.0**
MERS Mersin 79.42 312 *eP* **P 07 21 28.2 +0.8**
IZI Iznik 79.43 317 *eP* **P 07 21 27.6 +0.3**
LHO Holmfirth 79.46 342⇑*iP* **P 07 21 27.2 0.0**
GEMT Gemlik 79.50 317 *eP* **P 07 21 27.4 -0.3**
PKSM Moragy 79.60 327 *P* **P 07 21 27.9 -0.2**
PKSM Moragy 79.60 327⇑*P* **P 07 21 27.4 -0.7**
GMM Mts of Mourne 79.65 345⇑*iP* **P 07 21 28.0 -0.2**
KBI1 Birley Grange 79.66 342⇑*iP* **P 07 21 28.1 -0.2**
TNS Taunus Mts 79.75 335 *eP* **P 07 21 28.8 -0.1**
TNS pmax pmax
comp=Z,174nm,1.3s,mb5.8
TNS Taunus Mts 79.75 335 *eP* **P 07 21 28.8 -0.1**
comp=Z,174nm,1.3s,mb5.8
KONT Konya--Tatoy 79.77 314 *eP* **P 07 21 29.1 -0.2**
MOA Mollin 79.87 330⇑*iP* **P 07 21 29.8 +0.2**
comp=Z,1µm,4.3s
ARSA Arzberg 79.92 329⇑*iP* **P 07 21 30.2 +0.4**
comp=Z,559nm,3.4s
KWE Weaver Farm 79.95 342⇑*iP* **P 07 21 29.9 +0.1**
DIM Dimitrovgrad 79.99 320 *iP* **P 07 21 31.2 +0.9**
GLMI Grayling 80.01 35 PFAKE 07 21 40.0 +10
GLMI LR LR
comp=Z,699nm,19.0s,MS5.0
HGN Heimansgroeve 80.02 337⇑*iP* **P 07 21 30.3 0.0**
comp=Z,251nm,1.9s,mb5.8
BEBN Eben Emael 80.06 337 *P* **P 07 21 30.4 -0.1**
CWF Charnwood Fore 80.08 342⇑*eP* **P 07 21 30.4 -0.2**
CWF AMb AMB 07 21 33.3
comp=Z,335nm,1.6s,mb6.0
KLBR Kellerberrin 80.09 206 *eP* **P 07 21 32.5 +1.7**
comp=Z,18nm,1.0s,mb5.0
MEM Membach 80.14 336 *P* **P 07 21 30.7 -0.2**
comp=Z,96nm,1.5s,mb5.5
TOD Tromm 80.19 334⇑*eP* **P 07 21 31.5 +0.2**
PGB Panagyurishte 80.22 321 *iP* **P 07 21 31.8 +0.2**
SHUT Suhut-Afyon 80.25 315 *eP* **P 07 21 33.0 +1.1**
KOGS Kog 80.32 328 *eP* **P 07 21 31.7 -0.3**
SWS Schriesheim-Wi 80.33 334 *P* **P 07 21 32.3 +0.3**
ABH Alteburg 80.33 335⇑*eP* **P 07 21 32.1 +0.1**
PLD Plovdiv 80.33 321 *eP* **P 07 21 32.0 -0.2**

PLD Plovdiv 80.33 321 *iP* **P 07 21 32.4 +0.2**
IKL Isikli 80.34 312 *eP* **P 07 21 31.9 -0.5**
KDZ Kurdzhali 80.36 320 *iP* **P 07 21 33.2 +0.9**
SBD1 Bryn Du 80.36 343⇑*iP* **P 07 21 32.2 +0.1**
GDZ Gediz 80.38 316 *iP* **P 07 21 33.0 +0.5**
TCR Colchester 80.39 340⇑*eP* **P 07 21 32.3 0.0**
DST Dursunbey 80.41 317 *eP* **P 07 21 31.5 -1.1**
UCC Uccle 80.43 338 *P* **P 07 21 32.3 -0.2**
comp=Z,180nm,2.3s,mb5.6
BCLA Clavier 80.51 337 *P* **P 07 21 32.9 -0.1**
comp=Z,64nm,1.2s,mb5.4
HWQ Hawqa 80.54 309 *eP* **P 07 21 33.4 0.0**
GROS Grobnik 80.59 329 *eP* **P 07 21 33.5 0.0**
GROS *iP* pP 07 21 47.6 -0.7
VTS Vitosha 80.61 322 *eP* **P 07 21 34.4 +0.7**
VTS Vitosha 80.61 322 ⇓*P* **P 07 21 34.3 +0.6**
VTS Vitosha 80.61 322 *iP* **P 07 21 34.1 +0.4**
RAR Rarotonga 80.63 132 PFAKE 07 21 40.0 +6.1
RAR LR LR
comp=Z,1.0nm,21.0s
RAR Rarotonga 80.63 132 LR LR 07 58 10.3
comp=Z,782nm,18.2s,MS5.1,baz=26,slow=36
HDH Heidenheim-Cha 80.63 333 *P* **P 07 21 33.8 +0.1**
RUP Ruppelstein 80.64 335⇑*eP* **P 07 21 33.7 0.0**
FUR Furstenfeldbru 80.64 332 *eP* **P 07 21 33.9 +0.2**
FUR *e**PP pP 07 21 47.9 -0.6
FUR pmax pmax
comp=Z,301nm,1.1s,mb6.1
FUR Furstenfeldbru 80.64 332 *eP* **P 07 21 33.9 +0.2**
comp=Z,301nm,1.1s,mb6.1
FUR *epP* pP 07 21 47.9 -0.6
HLM1 Long Mynd 80.64 342⇑*eP* **P 07 21 33.7 +0.1**
DLF Lyons Farm 80.65 345⇑*iP* **P 07 21 33.7 0.0**
RZN Rozhen 80.65 321 *iP* **P 07 21 34.1 +0.2**
ALN Alexandroupoli 80.66 319 *eP* **P 07 21 31.3 -2.7**
KTD Kalmit 80.66 335⇑*eP* **P 07 21 33.9 +0.1**
RDO Rodhopi 80.70 320 *eP* **P 07 21 35.0 +0.8**
SNF Seneffe 80.71 337 *P* **P 07 21 33.8 -0.3**
DCN Croghan 80.75 345⇑*iP* **P 07 21 34.0 -0.2**
BALB Balikesir 80.75 317 *eP* **P 07 21 34.0 -0.5**
DIVS Divcibare 80.78 325 *eP* **P 07 21 32.3 -2.3**
STU Stuttgart 80.79 334 *eP* **P 07 21 34.4 -0.1**
comp=Z,200nm,1.2s,mb5.9
ISP Isparta 80.81 315 *eP* **P 07 21 33.1 -1.7**
ISP Isparta 80.81 315 *eP* **P 07 21 34.1 -0.7**
ISP Isparta 80.81 315⇑*P* **P 07 21 34.9 +0.1**
KBA Koelnbreinsper 80.86 330⇑*iP* **P 07 21 35.2 +0.3**
comp=Z,398nm,1.6s,mb6.1
KBA Koelnbreinsper 80.86 330⇑*iP* **P 07 21 35.2 +0.3**
KBA pmax pmax
comp=Z,399nm,1.6s,mb6.1
OBKA Obir 80.91 329⇑*iP* **P 07 21 35.0 -0.1**
comp=Z,965nm,3.6s
SKP1 Kophill 80.91 341⇑*eP* **P 07 21 34.6 -0.5**
GIVF Givet 80.93 337⇑*iP* **P 07 21 35.0 -0.2**
comp=Z,278nm,1.2s,mb5.8
GIVF Givet 80.93 337⇑*iP* **P 07 21 35.0 -0.2**
comp=Z,139nm,1.2s,mb5.8
GIVF Givet 80.93 337⇑*iP* **P 07 21 35.0 -0.2**
GIVF pmax pmax
comp=Z,139nm,1.2s,mb5.8
WLF Walferdange 80.94 336 *eP* **P 07 21 35.1 -0.2**
comp=Z,412nm,1.7s,mb6.1
WLF Walferdange 80.94 336 *eP* **P 07 21 35.1 -0.2**
WLF pmax pmax
comp=Z,412nm,1.7s,mb6.1
WLF Walferdange 80.94 336 *P* **P 07 21 35.5 +0.2**
comp=Z,155nm,2.1s,mb5.6
WLF Walferdange 80.94 336 *eP* **P 07 21 35.7 +0.4**
comp=Z,447nm,1.8s,mb6.1
WLF *epP* pP 07 21 50.0 -0.1
MUN Mundaring 80.94 207 *eP* **P 07 21 40.0 +4.7**
WMOK Wichita Mounta 80.96 50 *eP* **P 07 21 35.2 -0.5**
comp=Z,156nm,1.4s,mb5.8
WMOK LR LR
comp=Z,784nm,20.0s,MS5.1
BHL Bhannes 80.98 309 *eP* **P 07 21 35.9 +0.1**
TFO1 Folkestone 81.00 340⇑*eP* **P 07 21 35.7 +0.1**
DOU Dourbes 81.00 337 *P* **P 07 21 35.3 -0.3**
comp=Z,46nm,1.2s,mb5.3
LBG Lerchenberg 81.02 334 *P* **P 07 21 35.8 +0.1**
BUCH Bad Urach 81.03 334 *P* **P 07 21 36.2 +0.4**
LANF Langenberg 81.05 335⇑*eP* **P 07 21 36.0 +0.1**
SISC Sisak 81.09 328 *P* **P 07 21 36.4 +0.2**
MYKA Terra Mystica 81.13 330⇑*iP* **P 07 21 35.9 -0.5**
comp=Z,909nm,1.7s,mb6.4
HTR Trewern Hill 81.14 342⇑*eP* **P 07 21 36.9 +0.6**
BAIF Baives 81.14 337⇑*iP* **P 07 21 36.2 -0.1**
comp=Z,164nm,1.1s,mb5.6
BAIF Baives 81.14 337⇑*iP* **P 07 21 36.2 -0.1**
comp=Z,82nm,1.1s,mb5.6
BAIF Baives 81.14 337⇑*iP* **P 07 21 36.2 -0.1**
BAIF pmax pmax
comp=Z,82nm,1.1s,mb5.6
CRES Cresnjev 81.15 329 *eP* **P 07 21 36.2 -0.2**
MCH1 Michaelchurch 81.15 342⇑*eP* **P 07 21 36.5 +0.1**
MCH1 AMb AMB 07 21 40.1
comp=Z,265nm,2.3s,mb5.8
MMB Musomiste 81.18 321 *iP* **P 07 21 37.4 +0.7**
RCY Rachaya 81.19 308 *eP* **P 07 21 37.7 +0.8**
MENF Mencas 81.24 339⇑*eP* **P 07 21 36.8 -0.1**
KKB Krupnik 81.25 322 *iP* **P 07 21 37.9 +0.8**
WATA Walderalm 81.25 332⇑*iP* **P 07 21 37.3 +0.3**
comp=Z,175nm,1.2s,mb5.9
WATA Walderalm 81.25 332⇑*iP* **P 07 21 37.3 +0.3**
WATA pmax pmax
comp=Z,175nm,1.2s,mb5.9
WTTA Wattenberg 81.30 332⇑*iP* **P 07 21 37.8 +0.6**
comp=Z,482nm,1.5s,mb6.2
WTTA Wattenberg 81.30 332⇑*iP* **P 07 21 37.8 +0.6**
WTTA pmax pmax
comp=Z,482nm,1.5s,mb6.2
MANT Manisa 81.30 316 *iP* **P 07 21 37.8 +0.4**
LJU Ljubljana 81.31 329 *eP* **P 07 21 36.8 -0.6**
LJU *epP* pP 07 21 51.0 -1.2
NVR Nevrokopi 81.31 321 *eP* **P 07 21 37.0 -0.4**
SWN1 Swindon 81.34 341⇑*eP* **P 07 21 37.6 +0.2**
SWN1 AMb AMB 07 21 42.3
comp=Z,968nm,1.9s,mb6.4
HDIL Hopedale 81.37 40 *eP* **P 07 21 37.2 -0.6**
comp=Z,621nm,1.2s,mb6.4
HDIL LR LR
comp=Z,1µm,21.0s,MS5.2
RETA Reutte 81.40 332⇑*iP* **P 07 21 38.0 +0.2**
comp=Z,498nm,1.6s,mb6.2
MOTA Moosalm 81.41 332⇑*iP* **P 07 21 38.1 +0.3**
comp=Z,344nm,1.3s,mb6.1
MOTA Moosalm 81.41 332⇑*iP* **P 07 21 38.1 +0.3**
MOTA pmax pmax
comp=Z,344nm,1.3s,mb6.1
STR Strasbourg 81.41 335 *eP* **P 07 21 38.4 +0.6**
PTCC Patocco-Chiusa 81.43 330 *P* **P 07 21 37.0 -1.0**
ABTA Abfaltersbach 81.44 331⇑*iP* **P 07 21 37.4 -0.6**
comp=Z,290nm,2.1s,mb5.8
HGH Gray Hill 81.45 342⇑*iP* **P 07 21 38.0 +0.1**
UBR Ueberruh 81.45 333 *P* **P 07 21 38.3 +0.3**
BFO Black Forest 81.46 334 *P* **P 07 21 37.7 -0.4**
comp=Z,571nm,1.4s,mb6.3,SNR=45
BFO Black Forest 81.46 334 *eP* **P 07 21 37.9 -0.2**
BFO *e**PP pP 07 21 52.7 -0.2
BFO pmax pmax
comp=Z,139nm,1.1s,mb5.8
BFO Black Forest 81.46 334 *eP* **P 07 21 37.9 -0.2**
comp=Z,139nm,1.1s,mb5.8
BFO *epP* pP 07 21 52.7 -0.2
FVI Forni Avoltri 81.47 331 *P* **P 07 21 37.3 -0.9**
SQTA Sankt Quirin 81.48 332⇑*iP* **P 07 21 38.7 +0.5**
comp=Z,142nm,1.0s,mb5.8
SQTA Sankt Quirin 81.48 332⇑*iP* **P 07 21 38.7 +0.5**
SQTA pmax pmax
comp=Z,142nm,1.0s,mb5.8
CSS Prodhromos 81.48 311 *P* **P 07 21 38.7 +0.2**
CSS Prodhromos 81.48 311 *eP* **P 07 21 36.3 -2.2**
NWAO Narrogin (SRO) 81.49 206 *eP* **P 07 21 38.4 +0.2**
comp=Z,83nm,1.1s,mb5.6
NWAO LR LR
comp=Z,677nm,19.0s,MS5.0
NWAO Narrogin (SRO) 81.49 206 *eP* **P 07 21 38.4 +0.2**
NWAO pmax pmax
comp=Z,83nm,1.1s
NWAO MLR MLR
comp=Z,677nm,19.0s
SPAK Spaichingen-Ko 81.51 334⇑*eP* **P 07 21 38.6 +0.2**
SEST Monte Rota 81.54 331 *P* **P 07 21 38.9 +0.4**

VOY Vojsko 81.55 330 *eP* **P 07 21 37.3 -1.3**
GMNA Gemona 81.58 330 *P* **P 07 21 38.0 -0.8**
CEY Cerknica 81.61 329 *iP* **P 07 21 38.3 -0.6**
SRS Serrai 81.62 321 *eP* **P 07 21 39.0 0.0**
PLE Pljevlja 81.66 325⇑*iP* **P 07 21 40.0 +0.8**
CDF Champ du Feu 81.71 335⇑*iP* **P 07 21 39.5 +0.1**
comp=Z,473nm,1.3s,mb6.0
CDF Champ du Feu 81.71 335⇑*iP* **P 07 21 39.5 +0.1**
comp=Z,237nm,1.3s,mb6.0
CDF Champ du Feu 81.71 335⇑*iP* **P 07 21 39.5 +0.1**
CDF pmax pmax
comp=Z,237nm,1.3s,mb6.0
ALFC Alevga 81.73 312⇑*P* **P 07 21 39.3 -0.5**
comp=Z,1.9nm,0.8s
ALFC Alevga 81.73 312⇑*iP* **P 07 21 39.3 -0.5**
GOLH Golhisar 81.76 315 *iP* **P 07 21 39.9 +0.1**
STIP Stip 81.79 322⇑*eP* **P 07 21 39.4 -0.6**
FETA Feichten 81.82 332⇑*iP* **P 07 21 40.4 +0.4**
comp=Z,269nm,1.6s,mb5.9
SISB Singen-Schiene 81.82 333 *P* **P 07 21 40.4 +0.4**
IVA Berane 81.82 324 *eP* **P 07 21 39.9 -0.2**
PRK Paraskevi 81.84 318 *eP* **P 07 21 40.0 -0.3**
DAVA Damuels 81.87 333⇑*iP* **P 07 21 40.6 +0.3**
comp=Z,384nm,1.5s,mb6.1
SKO Skopje 81.89 323⇑*iP* **P 07 21 41.6 +1.1**
KNT Kendrikon 81.90 321 *eP* **P 07 21 40.2 -0.3**
SLE Schleitheim 81.90 334⇑*P* **P 07 21 40.0 -0.4**
VAY Valandovo 81.92 322 *eP* **P 07 21 40.3 -0.4**
VAY Valandovo 81.92 322⇑*iP* **P 07 21 40.4 -0.3**
KIZ Kirchzarten 81.92 334 *P* **P 07 21 40.7 +0.2**
SKDS Skadanscina 81.92 329 *eP* **P 07 21 39.5 -1.1**
ECH Echery 81.92 335⇑*eP* **P 07 21 40.5 0.0**
ELL Elmali 81.95 314 *eP* **P 07 21 40.2 -0.7**
FELD Feldberg im Sc 81.96 334⇑*eP* **P 07 21 40.7 0.0**
UPM Unac-Piva 81.96 325 ⇓*P* **P 07 21 40.0 -0.8**
KDAG Bornova 82.01 317 *iP* **P 07 21 41.7 +0.6**
PVY Plav 82.02 324⇑*iP* **P 07 21 40.5 -0.6**
LTX Lajitas 82.07 57 *eP* **P 07 21 41.7 +0.1**
comp=Z,122nm,0.9s,mb5.8
LTX LR LR
comp=Z,824nm,20.0s,MS5.1
LTX Lajitas 82.07 57 *eP* **P 07 21 41.7 +0.1**
LTX pmax pmax
comp=Z,121nm,0.9s,mb5.8
LTX MLR MLR
comp=Z,824nm,20.0s,MS5.1
TXAR Lajitas Array 82.07 57 *P* **P 07 21 41.5 -0.1**
comp=Z,45nm,0.5s,mb5.6,baz=298,slow=3.8,SNR=531
TXAR PKKPbc PKKPbc 07 40 09.4 +1.0
comp=Z,1.3nm,0.9s,baz=154,slow=4.4,SNR=9.9
TXAR PKPPKP 07 48 15.2
comp=Z,1.1nm,1.1s,baz=186,slow=5.9,SNR=4.5
PPCY Paphos 82.08 312⇑*P* **P 07 21 41.3 -0.3**
PPCY Paphos 82.08 312⇑*iP* **P 07 21 41.3 -0.3**
WILA Wila 82.08 333⇑*P* **P 07 21 40.4 -0.9**
APPI Appiano 82.12 331 *P* **P 07 21 40.5 -1.1**
BLCB Balcova 82.14 317 *eP* **P 07 21 41.2 -0.6**
HEX Exmoor 82.20 342⇑*iP* **P 07 21 41.9 0.0**
ZUR Degenried 82.22 333⇑*P* **P 07 21 42.2 +0.1**
SADO Sadowa 82.23 32 *P* **P 07 21 41.2 -0.9**
baz=329,slow=8.2
SULZ Cheisacher 82.23 334⇑*P* **P 07 21 42.1 -0.1**
NKY Niksic 82.25 325⇑*iP* **P 07 21 41.4 -0.9**
MOF Molkenrain 82.25 335⇑*eP* **P 07 21 42.2 -0.1**
THEF They Montfort 82.27 335⇑*eP* **P 07 21 42.4 +0.1**
PLG Polygyros 82.28 321 *eP* **P 07 21 41.7 -0.8**
PLG Polygyros 82.28 321 *eP* **P 07 21 42.0 -0.5**
GRG Griva 82.28 322 *eP* **P 07 21 41.9 -0.6**
MEZF Maizieres J'vi 82.30 336⇑*iP* **P 07 21 42.6 +0.1**
comp=Z,527nm,1.2s,mb6.0
MEZF Maizieres J'vi 82.30 336⇑*iP* **P 07 21 42.6 +0.1**
comp=Z,527nm,1.2s,mb6.3
CTI Castel Tesino 82.34 331 *P* **P 07 21 41.9 -0.9**
HAU Haudompre 82.36 335⇑*iP* **P 07 21 42.5 -0.3**
comp=Z,194nm,1.2s,mb5.6
HAU *e*MLR MLR
comp=Z,3µm,21.8s,MS5.3
HAU Haudompre 82.36 335⇑*iP* **P 07 21 42.5 -0.3**
comp=Z,97nm,1.2s,mb5.6
HAU LR LR
comp=Z,3µm,21.8s,MS5.7
HAU Haudompre 82.36 335⇑*iP* **P 07 21 42.5 -0.3**
HAU pmax pmax
comp=Z,97nm,1.2s,mb5.6
HAU MLR MLR
comp=Z,3µm,21.8s,MS5.7
BRY Bratogost 82.36 325 ⇓*iP* **P 07 21 41.6 -1.3**
HINF Hinteralfeld 82.37 335⇑*iP* **P 07 21 42.4 -0.5**
comp=Z,62nm,0.8s,mb5.3
HINF Hinteralfeld 82.37 335⇑*iP* **P 07 21 42.4 -0.5**
comp=Z,31nm,0.8s,mb5.3
HINF Hinteralfeld 82.37 335⇑*iP* **P 07 21 42.4 -0.5**
HINF pmax pmax
comp=Z,31nm,0.8s,mb5.3
BRMO Bormio 82.41 332 *P* **P 07 21 43.7 +0.6**
HTL Hartland 82.42 343⇑*eP* **P 07 21 43.4 +0.3**
HTL AMb AMB 07 21 45.7
comp=Z,519nm,1.5s,mb6.2
HTL AMS AMS 08 03 12.9
comp=Z,2µm,20.6s,MS5.3
HTL Hartland 82.42 343 *P* **P 07 21 43.4 +0.3**
HTL AMb AMB 07 21 45.7
comp=Z,519nm,1.5s,mb6.2
SLM Saint Louis 82.43 42 *eP* **P 07 21 43.1 -0.2**
comp=Z,454nm,1.4s,mb6.2
SLM Saint Louis 82.43 42 *eP* **P 07 21 43.1 -0.3**
SLM pmax pmax
comp=Z,454nm,1.4s,mb6.2
NVLJ Novalja 82.43 328 *P* **P 07 21 40.9 -2.4**
TTG Podgorica 82.45 324⇑*iP* **P 07 21 42.8 -0.6**
FETY Fethiye 82.46 315 *eP* **P 07 21 42.3 -1.3**
KRUS Krusevo 82.46 322⇑*iP* **P 07 21 44.0 +0.5**
AAM Ann Arbor 82.47 36 *eP* **P 07 21 43.5 0.0**
comp=Z,269nm,1.2s,mb6.0
AAM LR LR
comp=Z,1µm,20.0s,MS5.3
AAM Ann Arbor 82.47 36 *eP* **P 07 21 43.5 0.0**
AAM pmax pmax
comp=Z,269nm,1.2s,mb6.0
AAM MLR MLR
comp=Z,1µm,20.0s,MS5.3
YER Yerkesik 82.49 316 *eP* **P 07 21 43.8 +0.1**
LLS Linth-Limmern 82.54 333⇑*P* **P 07 21 43.9 +0.1**
MUO Muotathal 82.56 333⇑*P* **P 07 21 44.1 +0.2**
MLSB Milas 82.62 316 *eP* **P 07 21 42.6 -1.8**
BUM Brajici-Budva 82.71 324⇑*iP* **P 07 21 44.1 -0.7**
BIA Bitola 82.72 322⇑*eP* **P 07 21 43.7 -1.1**
VDL Val di Lei 82.72 332⇑*P* **P 07 21 45.0 +0.3**
MABI Malga Bissina 82.73 332 *P* **P 07 21 44.5 -0.3**
STON Ston 82.74 326 *P* **P 07 21 43.4 -1.5**
HCY Herceg Novi 82.76 325⇑*iP* **P 07 21 44.0 -1.0**
TUE Stuetta 82.76 333 *P* **P 07 21 45.5 +0.6**
SMG Samos 82.77 317 *eP* **P 07 21 45.0 -0.1**
PMOR Pomariorio Ree 82.78 119 *eP* **P 07 21 45.6 +0.2**
comp=Z,73nm,1.2s,mb5.6
LOMF Lomont 82.80 334⇑*eP* **P 07 21 45.2 +0.1**
DYA Yadsworthy 82.82 342⇑*eP* **P 07 21 44.7 -0.4**
DYA AMb AMB 07 21 47.5
comp=Z,671nm,1.4s,mb6.5
ULC Ulcinj 82.84 324⇑*iP* **P 07 21 45.0 -0.4**
FVM French Village 82.85 43 *eP* **P 07 21 45.1 -0.4**
comp=Z,282nm,1.4s,mb6.1
FVM French Village 82.85 43 *eP* **P 07 21 45.1 -0.4**
FVM pmax pmax
comp=Z,282nm,1.4s,mb6.1
OHR Ohrid 82.87 323⇑*iP* **P 07 21 44.9 -0.7**
FNA Florina 82.88 322 *eP* **P 07 21 44.7 -0.9**
MAGA Magasa 82.93 331 *P* **P 07 21 45.2 -0.6**
BDRM Kayabasi 82.96 316 *iP* **P 07 21 46.6 +0.5**
BODT Bodrum 83.03 316 *eP* **P 07 21 44.6 -1.9**
CSA1 St Austell 83.13 343⇑*eP* **P 07 21 46.3 -0.3**
VAH Vaihoa 83.13 119 *eP* **P 07 21 47.2 +0.1**
comp=Z,63nm,1.3s,mb5.5
XOR Xorichti 83.20 320 *eP* **P 07 21 46.6 -0.7**
NEO Neokhori 83.23 320 *eP* **P 07 21 47.0 -0.5**
CCA1 Carnmenellis 83.34 343⇑*iP* **P 07 21 47.7 -0.1**
CRQ2 Rosemanowes 2 83.34 343⇑*eP* **P 07 21 47.7 -0.2**
LKBD Leukerbad 83.40 334⇑*P* **P 07 21 48.4 +0.2**
VAI Varese 83.48 333 *P* **P 07 21 48.3 -0.4**
JCT Junction City 83.53 54 *eP* **P 07 21 48.9 -0.3**
comp=Z,369nm,1.4s,mb6.3
JCT LR LR
comp=Z,820nm,20.0s,MS5.1
JCT Junction City 83.53 54 *eP* **P 07 21 48.9 -0.3**

JCT pmax pmax
comp=Z,369nm,1.4s,mb6.3
JCT MLR MLR
comp=Z,820nm,20.0s,MS5.1
JRS Jersey 83.57 341⇑ *eP* **P 07 21 49.4 +0.4**
FLN La Foliniere 83.57 340⇑ *iP* **P 07 21 48.9 -0.2**
comp=Z,243nm,0.7s,mb6.1
FLN *e*MLR MLR
comp=Z,2µm,22.0s,MS5.2
FLN La Foliniere 83.57 340⇑ *iP* **P 07 21 48.9 -0.2**
comp=Z,122nm,0.7s,mb6.1
FLN LR LR
comp=Z,2µm,22.0s,MS5.5
FLN La Foliniere 83.57 340⇑ *iP* **P 07 21 48.9 -0.2**
FLN pmax pmax
comp=Z,122nm,0.7s,mb6.1
FLN MLR MLR
comp=Z,2µm,22.0s,MS5.5
MMK Mattmark 83.59 333 ⇑P P 07 21 49.7 +0.5
JSA Saint Aubin 83.59 341⇑ *eP* **P 07 21 48.9 -0.2**
MSNY Massena 83.60 29 *eP* **P 07 21 48.5 -0.8**
LDF La Druitiere 83.64 339⇑ *iP* **P 07 21 49.3 -0.1**
comp=Z,220nm,0.9s,mb6.0
LDF La Druitiere 83.64 339⇑ *iP* **P 07 21 49.3 -0.1**
comp=Z,110nm,0.9s,mb6.0
LDF La Druitiere 83.64 339⇑ *iP* **P 07 21 49.3 -0.1**
LDF pmax pmax
comp=Z,110nm,0.9s,mb6.0
SIUC Southern Illin 83.65 42 *eP* **P 07 21 49.3 -0.3**
comp=Z,420nm,1.1s,mb6.5
PPT Papeete 83.67 122 *eS* S 07 32 07.5 -1.0
comp=Z,1µm,30.2s
PPT *e*SS SS 07 37 41.0 +4.3
comp=Z,472nm,27.5s
PPT *e*LR LR 07 47 40.0
comp=Z,8µm,32.0s,baz=322
PPT Papeete 83.67 122 *eP* **P 07 21 50.1 +0.2**
comp=Z,41nm,1.4s,mb5.4
PPT *e*S S 07 32 07.5 -1.0
PPT *e*SS SS 07 37 41.0 +4.3
PPT Papeete 83.67 122 *eP* **P 07 21 50.1 +0.2**
PPT *e*S S 07 32 07.5 -1.0
PPT *e*SS SS 07 37 41.0 +4.3
PPT pmax pmax
comp=Z,41nm,1.4s
PPT Papeete 83.67 122 LR LR 07 52 17.4
comp=Z,1µm,20.1s,MS5.3,baz=312,slow=31
CABF La Chapelle 83.69 335⇑ *iP* **P 07 21 49.8 +0.1**
comp=Z,94nm,0.8s,mb5.7
CABF La Chapelle 83.69 335⇑ *iP* **P 07 21 49.8 +0.1**
comp=Z,47nm,0.8s,mb5.7
CABF La Chapelle 83.69 335⇑ *iP* **P 07 21 49.8 +0.1**
CABF pmax pmax
comp=Z,47nm,0.8s,mb5.7
DIX Grande Dixence 83.74 334 ⇑P P 07 21 50.6 +0.6
PAE Paea 83.74 122 *eP* **P 07 21 50.5 +0.2**
comp=Z,53nm,1.1s,mb5.6
PAE Paea 83.74 122 *eP* **P 07 21 50.5 +0.2**
PAE pmax pmax
comp=Z,53nm,1.1s,mb5.6
OG01 Vacheresse 83.75 334⇑ *eP* **P 07 21 50.0 0.0**
BLO Bloomington 83.75 39 *eP* **P 07 21 49.7 -0.5**
comp=Z,175nm,1.3s,mb6.0
BLO Bloomington 83.75 39 *eP* **P 07 21 49.7 -0.5**
BLO pmax pmax
comp=Z,175nm,1.3s,mb6.0
LOR Lormes 83.76 336⇑ *iP* **P 07 21 49.9 -0.2**
comp=Z,116nm,0.6s,mb5.9
LOR *e*MLR MLR
comp=Z,3µm,19.5s,MS5.3
LOR Lormes 83.76 336⇑ *iP* **P 07 21 49.9 -0.2**
comp=Z,58nm,0.6s,mb5.9
LOR LR LR
comp=Z,3µm,19.5s,MS5.6
LOR Lormes 83.76 336⇑ *iP* **P 07 21 49.9 -0.2**
LOR pmax pmax
comp=Z,58nm,0.6s,mb5.9
LOR MLR MLR
comp=Z,3µm,19.5s,MS5.6
EMV Vieux Emosson 83.92 334 ⇑P P 07 21 51.2 +0.3
ORO Oropa 83.95 333 P *eP* **P 07 21 50.4 -0.7**
FSSB Fossombrone 83.96 329 P *eP* **P 07 21 51.4 +0.2**
GRR Gorron 84.01 340⇑ *iP* **P 07 21 51.6 +0.3**
comp=Z,2µm,1.4s
GRR Gorron 84.01 340⇑ *iP* **P 07 21 51.6 +0.3**
comp=Z,949nm,1.4s
GRR Gorron 84.01 340⇑ *iP* **P 07 21 51.6 +0.3**
GRR pmax pmax
comp=Z,949nm,1.4s
LONY Lake Ozonia 84.02 29 *eP* **P 07 21 50.8 -0.7**
comp=Z,236nm,1.7s,mb6.0
LONY LR LR
comp=Z,1µm,20.0s,MS5.4
JAN Janina 84.03 322 *eP* **P 07 21 51.5 -0.1**
TVO Taravao 84.03 122 *eP* **P 07 21 51.8 +0.1**
comp=Z,152nm,1.4s,mb5.9
TVO Taravao 84.03 122 *eP* **P 07 21 51.8 +0.1**
TVO pmax pmax
comp=Z,152nm,1.4s,mb5.9
SSF Saint Saulge 84.05 336⇑ *iP* **P 07 21 51.5 -0.1**
SFI Santa Sofia 84.12 330 P **P 07 21 52.9 +0.9**
ERPA Erie 84.14 34 *eP* **P 07 21 51.8 -0.3**
comp=Z,429nm,1.3s,mb6.4
ERPA LR LR
comp=Z,1µm,19.0s,MS5.3
FNVD Fontana Vidola 84.16 330 P **P 07 21 53.1 +1.0**
SEI Scarperia 84.17 330 *i* Pu **P 07 21 53.8 +1.6**
comp=Z,2µm,1.5s
FRNY Flat Rock 84.18 28 *eP* **P 07 21 51.2 -1.1**
comp=Z,51nm,1.1s,mb5.6
VMG Vicchio 84.18 330 P **P 07 21 53.5 +1.2**
USIN University of 84.19 41 *eP* **P 07 21 52.4 0.0**
comp=Z,401nm,1.4s,mb6.4
EVR Evrytania 84.20 321 *eP* **P 07 21 51.0 -1.5**
PARMO Parma 84.22 43 *eP* **P 07 21 52.3 -0.3**
BOB Bobbio (Coli) 84.22 332 P **P 07 21 52.9 +0.4**
SNTG Esanatoglia 84.28 329 P **P 07 21 53.0 +0.2**
KARP Karpathos 84.29 315 *eP* **P 07 21 53.0 0.0**
SMF Signal de Mont 84.33 336⇑ *iP* **P 07 21 53.0 0.0**
comp=Z,994nm,1.4s,mb6.4
SMF Signal de Mont 84.33 336⇑ *iP* **P 07 21 53.0 0.0**
comp=Z,497nm,1.4s,mb6.5
SMF Signal de Mont 84.33 336⇑ *iP* **P 07 21 53.0 0.0**
SMF pmax pmax
comp=Z,497nm,1.4s,mb6.5
RSL Roselend 84.34 334⇑ *eP* **P 07 21 53.2 +0.2**
AVF Avril sur Loir 84.34 336⇑ *iP* **P 07 21 53.1 +0.1**
comp=Z,884nm,1.6s,mb6.3
AVF Avril sur Loir 84.34 336⇑ *iP* **P 07 21 53.1 +0.1**
comp=Z,442nm,1.6s,mb6.3
AVF Avril sur Loir 84.34 336⇑ *iP* **P 07 21 53.1 +0.1**
AVF pmax pmax
comp=Z,442nm,1.6s,mb6.3
IGT Igoumenitsa 84.36 322 *eP* **P 07 21 52.3 -1.0**
UALR University of 84.38 46 *eP* **P 07 21 53.1 -0.4**
comp=Z,107nm,1.5s,mb5.8
OG05 Jujurieux 84.39 335⇑ *eP* **P 07 21 53.5 +0.2**
VLC Villacollemand 84.43 331 *eP* **P 07 21 53.9 +0.4**
comp=Z,310nm,1.4s,mb6.2
BDI Bagni Di Lucca 84.44 331 P **P 07 21 52.7 -0.9**
PVMO Portageville 84.44 43 *eP* **P 07 21 53.9 +0.2**
comp=Z,119nm,0.4s,mb6.4
KEK Kerkira 84.45 322 *eP* **P 07 21 52.0 -1.7**
LPL La Plagne 84.46 334⇑ *iP* **P 07 21 54.2 +0.6**
comp=Z,148nm,0.8s,mb5.8
LPL La Plagne 84.46 334⇑ *iP* **P 07 21 54.2 +0.6**
comp=Z,74nm,0.8s,mb5.9
LPL La Plagne 84.46 334⇑ *iP* **P 07 21 54.2 +0.6**
LPL pmax pmax
comp=Z,74nm,0.8s,mb5.9
ACSO Alum Creek Sta 84.47 37 *eP* **P 07 21 53.4 -0.4**
comp=Z,206nm,1.0s,mb6.2
ACSO LR LR
comp=Z,1µm,19.0s,MS5.3
LPG La Plagne 84.47 334⇑ *iP* **P 07 21 54.4 +0.7**
comp=Z,217nm,0.8s,mb6.0
LPG La Plagne 84.47 334⇑ *iP* **P 07 21 54.4 +0.7**
comp=Z,109nm,0.8s,mb6.0
LPG La Plagne 84.47 334⇑ *iP* **P 07 21 54.4 +0.7**
LPG pmax pmax
comp=Z,109nm,0.8s,mb6.0
SANT Santorini 84.50 317 *eP* **P 07 21 53.0 -1.0**
comp=Z,4µm,0.9s
SGMF Saint Gilles 84.55 341⇑ *iP* **P 07 21 54.2 +0.1**
comp=Z,759nm,1.1s,mb6.5
SGMF Saint Gilles 84.55 341⇑ *iP* **P 07 21 54.2 +0.1**
comp=Z,380nm,1.1s,mb6.4
SGMF Saint Gilles 84.55 341⇑ *iP* **P 07 21 54.2 +0.1**
SGMF pmax pmax
comp=Z,380nm,1.1s,mb6.4
NRCA Norcia 84.57 328 P **P 07 21 54.7 +0.4**
RGNG Rignano Grg 84.59 326 P **P 07 21 54.1 -0.3**
WCI Wyandotte Cave 84.62 40 *eP* **P 07 21 54.2 -0.4**
comp=Z,246nm,1.3s,mb6.2
WCI LR LR
comp=Z,1µm,22.0s,MS5.3
WCI Wyandotte Cave 84.62 40 *eP* **P 07 21 54.2 -0.4**
WCI pmax pmax
comp=Z,246nm,1.3s,mb6.2
WCI MLR MLR
comp=Z,1µm,22.0s,MS5.3
HBAR Harrisburg 84.64 44 *eP* **P 07 21 54.4 -0.3**
ROSF Rostrenen 84.65 341⇑ *iP* **P 07 21 54.6 +0.1**
comp=Z,957nm,1.2s,mb6.5
ROSF Rostrenen 84.65 341⇑ *iP* **P 07 21 54.6 +0.1**
comp=Z,478nm,1.2s,mb6.5
ROSF Rostrenen 84.65 341⇑ *iP* **P 07 21 54.6 +0.1**
ROSF pmax pmax
comp=Z,479nm,1.2s,mb6.5
BGF Bois d'Agland 84.70 337⇑ *iP* **P 07 21 55.0 +0.2**
comp=Z,224nm,1.1s,mb5.9
BGF Bois d'Agland 84.70 337⇑ *iP* **P 07 21 55.0 +0.2**
comp=Z,112nm,1.1s,mb5.9
CSNT Castellina Chi 84.70 330 P **P 07 21 54.6 -0.3**
NCB Newcomb 84.72 29 *eP* **P 07 21 54.6 -0.3**
comp=Z,168nm,1.3s,mb6.0
NCB LR LR
comp=Z,1µm,20.0s,MS5.4
GLAT Glass 84.76 43 *eP* **P 07 21 55.8 +0.4**
AQU L'Aquila 84.88 328 *eP* **P 07 21 56.0 +0.2**
comp=Z,152nm,1.1s,mb6.0
AQU L'Aquila 84.88 328 ⇑P P 07 21 56.3 +0.5
BNI Bardonecchia 84.89 334 *eP* **P 07 21 56.0 +0.2**
comp=Z,96nm,1.1s,mb5.8
UTMT University of 84.91 43 *eP* **P 07 21 56.0 -0.1**
comp=Z,488nm,1.2s,mb6.5
GDM Grand'Maison 84.93 334⇑ *eP* **P 07 21 56.6 +0.6**
QLNO Quiliano 84.98 332 P **P 07 21 55.7 -0.6**
OG22 Abries 85.01 333⇑ *eP* **P 07 21 56.6 +0.2**
PLDF La Plantade 85.01 336⇑ *eP* **P 07 21 57.0 +0.6**
HALT Halls 85.01 43 *eP* **P 07 21 56.2 -0.4**
QUIF Quistinic 85.01 341⇑ *iP* **P 07 21 56.5 +0.1**
comp=Z,213nm,0.8s,mb6.0
QUIF Quistinic 85.01 341⇑ *iP* **P 07 21 56.5 +0.1**
comp=Z,106nm,0.8s,mb6.0
QUIF Quistinic 85.01 341⇑ *iP* **P 07 21 56.5 +0.1**
QUIF pmax pmax
comp=Z,106nm,0.8s,mb6.0
GRN Grenoble 85.02 334⇑ *eP* **P 07 21 57.1 +0.6**
AGO Saint Agoulin 85.08 336 *eP* **P 07 21 57.6 +0.9**
TCF Toulx Ste Croi 85.13 337⇑ *iP* **P 07 21 57.3 +0.3**
comp=Z,336nm,1.0s,mb6.1
TCF Toulx Ste Croi 85.13 337⇑ *iP* **P 07 21 57.3 +0.3**
comp=Z,168nm,1.0s,mb6.1
TCF Toulx Ste Croi 85.13 337⇑ *iP* **P 07 21 57.3 +0.3**
TCF pmax pmax
comp=Z,168nm,1.0s,mb6.1
FIN Finale Ligure 85.13 332 P **P 07 21 56.4 -0.7**
MBDF Montbardon 85.15 333⇑ *iP* **P 07 21 57.1 0.0**
comp=Z,116nm,0.8s,mb5.8
MBDF Montbardon 85.15 333⇑ *iP* **P 07 21 57.1 0.0**
comp=Z,58nm,0.8s,mb5.8
MBDF Montbardon 85.15 333⇑ *iP* **P 07 21 57.1 0.0**
MBDF pmax pmax
comp=Z,58nm,0.8s,mb5.8
MIDA Miranda 85.15 327 P **P 07 21 57.3 +0.1**
PKME Peaks-Kenny Pk 85.20 25 PFAKE 07 22 10.0 +13
PKME LR LR
comp=Z,2µm,21.0s,MS5.5
ORIF Oris-en-Rattie 85.26 334⇑ *iP* **P 07 21 58.1 +0.4**
comp=Z,184nm,0.9s,mb5.9
ORIF *e*MLR MLR
comp=Z,2µm,19.2s,MS5.2
ORIF Oris-en-Rattie 85.26 334⇑ *iP* **P 07 21 58.1 +0.4**
comp=Z,92nm,0.9s,mb5.9
ORIF Oris-en-Rattie 85.26 334⇑ *iP* **P 07 21 58.1 +0.4**
ORIF pmax pmax
comp=Z,92nm,0.9s,mb5.9
LBNH Lisbon 85.27 28 *eP* **P 07 21 57.8 +0.1**
comp=Z,369nm,1.8s,mb6.2
LBNH LR LR
comp=Z,2µm,21.0s,MS5.4
LBNH Lisbon 85.27 28 *eP* **P 07 21 57.8 +0.1**
LBNH pmax pmax
comp=Z,369nm,1.8s,mb6.2
LBNH MLR MLR
comp=Z,2µm,21.0s,MS5.4
MET Memphis--Engin 85.34 44 *eP* **P 07 21 58.6 +0.3**
SURF Saint Ours 85.36 333⇑ *eP* **P 07 21 58.4 +0.2**
VLS Valsamata 85.36 321 *eP* **P 07 21 58.5 +0.2**
PYM Petit Puy Mans 85.39 336 *eP* **P 07 21 59.1 +0.8**
COLF Collangettes 85.40 336⇑ *eP* **P 07 21 59.1 +0.8**
ACCN Adirondack Com 85.42 29 *eP* **P 07 21 57.9 -0.6**
comp=Z,164nm,1.2s,mb6.0
LAST Lasithi 85.44 316 *eP* **P 07 21 58.1 -0.7**
NATX Nacogdoches 85.47 49 *eP* **P 07 21 59.0 0.0**
comp=Z,573nm,1.5s,mb6.5
NATX LR LR
comp=Z,956nm,20.0s,MS5.2
MFF Saint Martin d 85.48 339⇑ *iP* **P 07 21 58.9 +0.1**
comp=Z,449nm,0.9s,mb6.3
MFF Saint Martin d 85.48 339⇑ *iP* **P 07 21 58.9 +0.1**
comp=Z,224nm,0.9s,mb6.3
MFF Saint Martin d 85.48 339⇑ *iP* **P 07 21 58.9 +0.1**
MFF pmax pmax
comp=Z,225nm,0.9s,mb6.3
IMI Imperia 85.50 332 P **P 07 21 58.5 -0.4**
VERF Verneugheol 85.54 337⇑ *eP* **P 07 21 58.9 -0.2**
ITM Ithomi 85.55 320 *eP* **P 07 21 58.0 -1.3**
SAOF Saorge 85.55 332⇑ *eP* **P 07 21 58.7 -0.4**
XRY Khrisi 85.56 316 *eP* **P 07 21 59.0 -0.4**
LCHF La Chataignera 85.58 339⇑ *eP* **P 07 21 59.8 +0.6**
WVT Waverly 85.58 42 PFAKE 07 22 10.0 +11
WVT LR LR
comp=Z,7.0nm,20.0s
AUTN L'Aution 85.58 333 *eP* **P 07 21 59.3 0.0**
AUTN L'Aution 85.58 333 *eP* **P 07 21 59.6 +0.3**
AUTN L'Aution 85.58 333 *eP* **P 07 21 59.6 +0.3**
BINY Binghamton 85.62 31 *eP* **P 07 21 59.4 -0.2**
comp=Z,98nm,1.1s,mb6.0
BINY LR LR
comp=Z,2µm,19.0s,MS5.4
HNH Hanover 85.62 28 *eP* **P 07 21 59.6 +0.1**
comp=Z,275nm,1.3s,mb6.3
TOUF Mont Tournerai 85.63 333 *eP* **P 07 21 59.6 +0.1**
VIVF Saint-Julien-l 85.70 335⇑ *iP* **P 07 22 00.3 +0.4**
comp=Z,698nm,1.4s,mb6.4
VIVF Saint-Julien-l 85.70 335⇑ *iP* **P 07 22 00.3 +0.4**
comp=Z,349nm,1.4s,mb6.4
VIVF Saint-Julien-l 85.70 335⇑ *iP* **P 07 22 00.3 +0.4**
VIVF pmax pmax
comp=Z,349nm,1.4s,mb6.4
SBF Sospel 85.70 333⇑ *iP* **P 07 21 59.4 -0.5**
comp=Z,210nm,0.8s,mb6.1
SBF Sospel 85.70 333⇑ *iP* **P 07 21 59.4 -0.5**
comp=Z,105nm,0.8s,mb6.1
SBF Sospel 85.70 333⇑ *iP* **P 07 21 59.4 -0.5**
SBF pmax pmax
comp=Z,105nm,0.8s,mb6.1
LUCF Luceram 85.70 333 *eP* **P 07 21 59.7 -0.2**
OCF Saint Nazaire 85.75 334⇑ *eP* **P 07 22 00.8 +0.7**
OG26 St.-Nazaire-De 85.75 334⇑ *eP* **P 07 22 00.8 +0.7**
MVIF Mont Vial 85.76 333 *eP* **P 07 21 59.4 -0.8**
LBL Lubilhac 85.79 336⇑ *eP* **P 07 22 01.3 +1.0**
REVF Revere 85.83 332⇑ *eP* **P 07 22 00.1 -0.4**
FRNF Fournols 85.85 336⇑ *eP* **P 07 22 01.3 +0.7**
SIVA Sivas 85.89 316 *eP* **P 07 22 01.0 0.0**
CALN Calern 85.98 333⇑ *eP* **P 07 22 01.3 0.0**
URZ Urewera 86.02 157 P **P 07 21 59.2 -2.0**
comp=Z,4.9nm,0.8s,mb4.8,baz=143,slow=5.1,SNR=2.9
FFD Franklin Falls 86.04 28 *eP* **P 07 22 02.1 +0.5**
comp=Z,356nm,1.2s,mb6.5
STOF St-Étienne Org 86.08 334 *eP* **P 07 21 58.9 -2.9**
OXF Oxford 86.09 44 *eP* **P 07 22 01.1 -0.9**
comp=Z,413nm,1.3s,mb6.5
OXF LR LR
comp=Z,966nm,22.0s,MS5.2
OXF Oxford 86.09 44 *eP* **P 07 22 01.1 -0.9**
OXF pmax pmax
comp=Z,413nm,1.3s,mb6.5
OXF MLR MLR
comp=Z,966nm,22.0s,MS5.2
HKT Hockley 86.19 51 *eP* **P 07 22 01.9 -0.6**
comp=Z,138nm,1.6s,mb5.9
HKT LR LR
comp=Z,917nm,21.0s,MS5.2
HKT Hockley 86.19 51 *eP* **P 07 22 02.0 -0.6**
HKT pmax pmax
comp=Z,138nm,1.6s,mb5.9
HKT MLR MLR
comp=Z,917nm,21.0s,MS5.2
SMRF Simiane la Rot 86.20 334⇑ *iP* **P 07 22 02.7 +0.3**
comp=Z,479nm,1.6s,mb6.2
SMRF Simiane la Rot 86.20 334⇑ *iP* **P 07 22 02.7 +0.3**
comp=Z,479nm,1.6s,mb6.5
TIP Timpagrande 86.21 324 *eP* **P 07 22 02.5 0.0**
comp=Z,379nm,1.5s,mb6.4
RJF Les Rejaudoux 86.22 337⇑ *iP* **P 07 22 02.9 +0.5**
comp=Z,858nm,1.5s,mb6.5
RJF *e*MLR MLR
comp=Z,2µm,19.8s,MS5.2
RJF Les Rejaudoux 86.22 337⇑ *iP* **P 07 22 02.9 +0.5**
comp=Z,429nm,1.5s,mb6.5
RJF LR LR
comp=Z,2µm,19.8s,MS5.5
RJF Les Rejaudoux 86.22 337⇑ *iP* **P 07 22 02.9 +0.5**
RJF pmax pmax
comp=Z,429nm,1.5s,mb6.5
RJF MLR MLR
comp=Z,2µm,19.8s,MS5.5
FRF La Foret Royal 86.23 333⇑ *iP* **P 07 22 02.4 -0.1**
comp=Z,690nm,1.5s,mb6.4
FRF La Foret Royal 86.23 333⇑ *iP* **P 07 22 02.4 -0.1**
comp=Z,345nm,1.5s,mb6.4
FRF La Foret Royal 86.23 333⇑ *iP* **P 07 22 02.4 -0.1**
FRF pmax pmax
comp=Z,345nm,1.5s,mb6.4
SSPA Standing Stone 86.23 33 *eP* **P 07 22 02.4 -0.2**
comp=Z,365nm,1.5s,mb6.4
SSPA LR LR
comp=Z,779nm,19.0s,MS5.1
MCWV Mont Chateau 86.27 35 *eP* **P 07 22 03.0 +0.3**
comp=Z,389nm,1.3s,mb6.5
MCWV LR LR
comp=Z,2µm,20.0s,MS5.4
MUKL Al Mukalla 86.33 286⇑ *eP* **P 07 22 03.2 -0.3**
TAVF Tavernes 86.37 333 *eP* **P 07 22 02.7 -0.5**
PLAL Pickwick Lake 86.38 43 *eP* **P 07 22 02.5 -0.9**
comp=Z,228nm,1.5s,mb6.2
PLAL LR LR
comp=Z,1µm,22.0s,MS5.2
GVD Gavdhos 86.39 317 *eP* **P 07 22 03.6 +0.2**
comp=Z,245nm,1.2s,mb6.3
OLEF Ile d'Oleron 86.41 339 *eP* **P 07 22 04.7 +1.4**
CAF Calviac 86.41 336⇑ *iP* **P 07 22 04.2 +0.8**
comp=Z,1µm,1.4s,mb6.6
CAF Calviac 86.41 336⇑ *iP* **P 07 22 04.2 +0.8**
comp=Z,564nm,1.4s,mb6.6
CAF Calviac 86.41 336⇑ *iP* **P 07 22 04.2 +0.8**
CAF pmax pmax
comp=Z,565nm,1.4s,mb6.6
LMR La Mourre 86.48 333⇑ *iP* **P 07 22 03.6 -0.1**
comp=Z,1µm,1.5s,mb6.5
LMR La Mourre 86.48 333⇑ *iP* **P 07 22 03.6 -0.1**
comp=Z,504nm,1.5s,mb6.5
LMR La Mourre 86.48 333⇑ *iP* **P 07 22 03.6 -0.1**
LMR pmax pmax
comp=Z,504nm,1.5s,mb6.5
CORF Corte 86.49 331 *eP* **P 07 22 03.6 -0.2**
TAU Tasmania Unive 86.50 180 *eP* **P 07 22 04.1 +0.7**
TAU LR LR
comp=Z,2µm,21.0s,MS5.5
LASF Ste Croix 86.65 335⇑ *iP* **P 07 22 05.2 +0.6**
comp=Z,724nm,1.5s,mb6.4
LFF La Frestale 86.78 337⇑ *iP* **P 07 22 05.7 +0.5**
comp=Z,509nm,1.0s,mb6.4
LFF La Frestale 86.78 337⇑ *iP* **P 07 22 05.7 +0.5**
comp=Z,254nm,1.0s,mb6.4
LFF La Frestale 86.78 337⇑ *iP* **P 07 22 05.7 +0.5**
LFF pmax pmax
comp=Z,255nm,1.0s,mb6.4
GELF Grande-Etoile 86.78 334 *eP* **P 07 22 05.0 -0.2**
KVTX Kingsville 86.82 54 *eP* **P 07 22 06.7 +1.0**
comp=Z,76nm,0.9s,mb5.9
KVTX LR LR
comp=Z,829nm,21.0s,MS5.1
QUA2 Belchertown 86.86 29 *eP* **P 07 22 06.3 +0.7**
comp=Z,181nm,1.4s,mb6.1
HRV Harvard--Oak R 86.93 28 *eP* **P 07 22 06.1 +0.1**
comp=Z,176nm,1.4s,mb6.1
HRV LR LR
comp=Z,1µm,20.0s,MS5.3
HRV Harvard--Oak R 86.93 28 *eP* **P 07 22 06.1 +0.2**
HRV pmax pmax
comp=Z,176nm,1.4s,mb6.1
HRV MLR MLR
comp=Z,1µm,20.0s,MS5.3
OSPF L'Ospedale 87.03 330⇑ *eP* **P 07 22 06.4 -0.1**
WES Weston 87.11 28 *eP* **P 07 22 07.2 +0.3**
comp=Z,477nm,1.3s,mb6.6
WES LR LR
comp=Z,2µm,20.0s,MS5.5
WES Weston 87.11 28 *eP* **P 07 22 07.2 +0.3**
WES pmax pmax
comp=Z,477nm,1.3s,mb6.6
WES MLR MLR
comp=Z,2µm,20.0s,MS5.5
SWET Sewanee 87.23 41 *eP* **P 07 22 07.1 -0.5**
TZTN Tazewell 87.25 39 *eP* **P 07 22 07.1 -0.6**
comp=Z,238nm,1.3s,mb6.3
TZTN LR LR
comp=Z,1µm,21.0s,MS5.4
PAL Palisades 87.42 30 *eP* **P 07 22 08.1 -0.2**
comp=Z,320nm,1.5s,mb6.3
PAL Palisades 87.42 30 *eP* **P 07 22 08.1 -0.3**
PAL pmax pmax
comp=Z,320nm,1.5s,mb6.3
BRYW Bryant College 87.45 28 *eP* **P 07 22 07.9 -0.7**
comp=Z,1µm,1.9s
BRNJ Basking Ridge 87.46 31 *eP* **P 07 22 08.3 -0.2**
comp=Z,45nm,0.7s,mb5.8
ZAIG Zacatecas 87.51 61 *i* P **P 07 22 08.8 -0.2**
CPNY Central Park 87.59 30 *eP* **P 07 22 08.7 -0.5**
comp=Z,287nm,1.3s,mb6.3
SDMD Soldier's Deli 87.69 33 *eP* **P 07 22 09.6 -0.1**
comp=Z,218nm,1.4s,mb6.2
CPCT Cooper Cave 87.70 40 *eP* **P 07 22 09.4 -0.4**
MTLF Montolieu 87.81 336⇑ *iP* **P 07 22 10.8 +0.6**
comp=Z,662nm,1.7s,mb6.3
MTLF Montolieu 87.81 336⇑ *iP* **P 07 22 10.8 +0.6**
comp=Z,331nm,1.7s,mb6.3
MTLF Montolieu 87.81 336⇑ *iP* **P 07 22 10.8 +0.6**
MTLF pmax pmax
comp=Z,331nm,1.7s,mb6.3
ELN Prospectdale 87.93 37 *eP* **P 07 22 10.2 -0.7**
BLA Blacksburg 88.09 37 *eP* **P 07 22 11.6 0.0**
comp=Z,288nm,1.4s,mb6.3
BLA LR LR
comp=Z,1µm,20.0s,MS5.3
LRDF Laroque-de-Fa 88.09 335 *eP* **P 07 22 12.1 +0.6**
TBI Tubuai 88.15 125 *e*SKSac SKSac 07 32 35.0 -1.1
comp=Z,647nm,32.8s
TBI *e*SS SS 07 38 41.3 -1.0
comp=Z,256nm,27.8s
TBI *e*LR LR 07 49 29.0
comp=Z,4µm,30.8s,baz=320
SNZO South Karori 88.25 160 PFAKE 07 22 20.0 +8.1
SNZO LR LR
comp=Z,1µm,19.0s,MS5.4
CARF Carcanieres 88.42 336 *eP* **P 07 22 13.0 -0.1**
FILF Fillols 88.42 335 *eP* **P 07 22 13.3 +0.2**
EJON La Jonquera 88.42 335 P **P 07 22 13.1 -0.1**
comp=Z,25nm,1.6s,mb5.2
LRAL Lakeview Retre 88.47 43 *eP* **P 07 22 12.3 -1.2**
comp=Z,19nm,0.7s,mb5.4
LRAL LR LR
comp=Z,931nm,21.0s,MS5.2
MLS Moulis 88.50 336 *eP* **P 07 22 13.8 +0.4**
CBN Corbin 88.52 34 *eP* **P 07 22 13.8 +0.1**
comp=Z,262nm,1.3s,mb6.4
CBN LR LR
comp=Z,1µm,20.0s,MS5.3
EPF Esparros 88.64 337⇑ *iP* **P 07 22 13.7 -0.4**
comp=Z,79nm,1.0s,mb5.7
EPF Esparros 88.64 337⇑ *iP* **P 07 22 13.7 -0.4**
comp=Z,39nm,1.0s,mb5.7
EPF Esparros 88.64 337⇑ *iP* **P 07 22 13.7 -0.4**
EPF pmax pmax

comp=Z,39nm,1.0s,mb5.7
RESF Ens 88.85 337 *e*P **P** 07 22 15.8 **+0.7**
VIEF Viey 88.87 337 *e*P **P** 07 22 15.7 **+0.5**
URVA University of 88.99 34 *e*P **P** 07 22 15.4 **-0.4**
SJPF Ste Jean 89.00 338 *e*P **P** 07 22 16.1 **+0.3**
comp=Z,64nm,1.2s,mb5.5
SJPF Ste Jean 89.00 338 *e*P **P** 07 22 16.1 **+0.3**
comp=Z,32nm,1.3s,mb5.5
SJPF Ste Jean 89.00 338 *e*P **P** 07 22 16.1 **+0.3**
SJPF pmax pmax
comp=Z,32nm,1.3s,mb5.5
EBIE Bielsa 89.02 337 P **P** 07 22 16.6 **+0.7**
comp=Z,42nm,1.1s,mb5.7
ETSF Etsaut 89.02 337⇑ *i*P **P** 07 22 16.3 **+0.4**
comp=Z,48nm,0.7s,mb5.7
ETSF Etsaut 89.02 337⇑ *i*P **P** 07 22 16.3 **+0.4**
comp=Z,24nm,0.6s,mb5.7
ETSF Etsaut 89.02 337⇑ *i*P **P** 07 22 16.3 **+0.4**
ETSF pmax pmax
comp=Z,24nm,0.6s,mb5.7
ELIZ Elizondo 89.04 338 P **P** 07 22 15.9 **-0.1**
comp=Z,27nm,1.0s,mb5.5
ELIZ PcP PcP 07 22 30.7 +13
ELIZ Elizondo 89.04 338 P **P** 07 22 15.9 **-0.1**
ELIZ pP 07 22 30.7 -0.3
ELIZ pmax pmax
comp=Z,27nm,1.0s,mb5.5
DHBB Dhamar BB 89.45 290⇑ *e*P **P** 07 22 19.1 **+0.8**
ELAN Lanestosa 89.47 339 P **P** 07 22 17.7 **-0.3**
comp=Z,23nm,0.9s,mb5.5
EARI Arriondas 89.84 341 P **P** 07 22 19.2 **-0.5**
comp=Z,27nm,1.0s,mb5.5
GOGA Godfrey 89.87 41 *e*P **P** 07 22 20.2 **+0.1**
comp=Z,157nm,1.5s,mb6.1
GOGA *e*pP pP 07 22 34.5 -0.6
GOGA LR LR
comp=Z,1μm,21.0s,MS5.3
GOGA Godfrey 89.87 41 *e*P **P** 07 22 20.2 **+0.1**
GOGA *e**PP pP 07 22 34.5 -0.6
GOGA pmax pmax
comp=Z,157nm,1.5s,mb6.1
GOGA MLR MLR
comp=Z,1μm,21.0s,MS5.3
EPOB Poblet 89.97 336 P **P** 07 22 20.2 **-0.2**
comp=Z,69nm,1.2s,mb5.9
BRAL Brewton 90.07 45 PFAKE 07 22 30.0 +9.0
BRAL LR LR
comp=Z,1μm,21.0s,MS5.2
ESAC San Caprasio 90.08 337 P **P** 07 22 21.5 **+0.6**
comp=Z,178nm,0.9s,mb6.4
JSC Jenkinsville 90.17 39 *e*P **P** 07 22 21.9 **+0.4**
JSC *e*pP pP 07 22 38.0 +1.5
LHS Liberty Hill 90.21 38 *e*P **P** 07 22 21.7 **+0.1**
EPON Pontenova 90.27 342 P **P** 07 22 20.0 **-1.7**
comp=Z,49nm,1.2s,mb5.7
ERTA Horta de San J 90.56 336 P **P** 07 22 22.9 **-0.2**
comp=Z,75nm,1.3s,mb5.9
EMAZ Mazaricos 91.02 343 P **P** 07 22 24.1 **-1.1**
comp=Z,31nm,1.2s,mb5.5
COW Cow Castle Cre 91.18 39 *e*P **P** 07 22 26.8 **+0.6**
EMOS Mosqueruela 91.34 336 P **P** 07 22 26.9 **+0.1**
comp=Z,56nm,0.9s,mb5.9
ETOR Torete 91.36 338 P **P** 07 22 27.1 **+0.2**
comp=Z,37nm,0.8s,mb5.8
ETOR Torete 91.36 338 P **P** 07 22 27.1 **+0.2**
ETOR pmax pmax
comp=Z,37nm,0.8s,mb5.8
ECAL Calabor 91.49 341 P **P** 07 22 27.1 **-0.4**
comp=Z,8.5nm,0.9s,mb5.1
PBRG Braganca 91.62 341 *e*P **P** 07 22 27.5 **-0.5**
comp=Z,53nm,1.9s,mb5.5
NHSC New Hope 91.64 39 PFAKE 07 22 40.0 +12
NHSC LR LR
comp=Z,1μm,22.0s,MS5.4
ELOB Lobios 91.86 342 P **P** 07 22 27.7 **-1.4**
comp=Z,18nm,1.0s,mb5.3
GUD Guadarrama 92.09 339 P **P** 07 22 29.4 **-0.8**
comp=Z,2.6nm,0.6s,mb4.7
GUD Guadarrama 92.09 339 P **P** 07 22 29.4 **-0.8**
GUD pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
KEST Kesra 92.18 327 P **P** 07 22 29.8 **-1.0**
comp=Z,3.2nm,0.7s,mb4.8,baz=82,slow=0.2,SNR=18
KEST LR LR 08 10 27.2
comp=Z,1μm,19.9s,MS5.4,baz=153,slow=40
ECHE Chera 92.20 336 P **P** 07 22 31.9 **+1.1**
comp=Z,6.6nm,0.8s,mb5.0
ECHE Chera 92.20 336 P **P** 07 22 31.9 **+1.1**
ECHE pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
MVO Moncorvo 92.30 341 *e*P **P** 07 22 30.1 **-1.1**
comp=Z,87nm,1.4s,mb5.6
PVRL Vila Real 92.35 342 *e*P **P** 07 22 30.4 **-1.0**
comp=Z,101nm,1.7s,mb5.9
PVIS Viseu 92.92 342 *e*P **P** 07 22 33.2 **-0.9**
comp=Z,80nm,1.4s,mb6.0
ESDC Sonseca Array 92.95 339 P **P** 07 22 33.2 **-1.0**
comp=Z,30nm,1.5s,mb5.5
ESDC PcP PcP 07 22 48.0 +13
ESDC Sonseca Array 92.95 339 P **P** 07 22 33.4 **-0.8**
comp=Z,13nm,1.0s,mb5.3,baz=15,slow=3.7,SNR=50
ESDC LR LR 08 08 45.9
comp=Z,2μm,21.2s,MS5.5,baz=20,slow=38
MTE Manteigas 93.14 341 *e*P **P** 07 22 33.6 **-1.5**
comp=Z,73nm,1.9s,mb5.8
MTE Manteigas 93.14 341 *e*P **P** 07 22 33.8 **-1.3**
comp=Z,46nm,1.2s,mb5.8
ETOB Tobarra 93.24 337 P **P** 07 22 36.4 **+0.8**
comp=Z,35nm,0.9s,mb5.8
EVIA Vianos 93.52 337 P **P** 07 22 37.4 **+0.5**
comp=Z,55nm,1.2s,mb5.9
EVIA Vianos 93.52 337 P **P** 07 22 37.4 **+0.5**
EVIA pmax pmax
comp=Z,55nm,1.2s,mb5.9
EMUR La Murta 93.90 336 P **P** 07 22 37.9 **-0.7**
comp=Z,32nm,1.5s,mb5.5
EBAN Banos Encina 94.32 338 P **P** 07 22 40.7 **+0.1**
comp=Z,24nm,0.9s,mb5.6
EBAN Banos Encina 94.32 338 P **P** 07 22 40.7 **+0.2**
EBAN pmax pmax
comp=Z,24nm,0.9s,mb5.6
EQES Quesada 94.46 337 P **P** 07 22 40.9 **-0.3**
comp=Z,33nm,1.1s,mb5.7
EADA Adamuz 94.53 339 P **P** 07 22 40.7 **-0.8**
comp=Z,24nm,1.2s,mb5.5
EBAD Badajoz 94.58 341 P **P** 07 22 40.5 **-1.3**
comp=Z,9.4nm,1.0s,mb5.2
PESTR Estremoz 94.61 341 *e*P **P** 07 22 40.5 **-1.4**
comp=Z,44nm,1.8s,mb5.6
PESTR Estremoz 94.61 341 *e*LR LR 07 58 32.9
comp=Z,1μm,16.0s
ENIJ Nijar 94.99 336 P **P** 07 22 42.7 **-0.9**
comp=Z,11nm,0.9s,mb5.3
ENIJ Nijar 94.99 336 P **P** 07 22 42.7 **-0.9**
ENIJ pmax pmax
comp=Z,11nm,0.9s,mb5.3
ELUQ Luque 95.01 338 P **P** 07 22 43.9 **+0.1**
comp=Z,18nm,0.8s,mb5.5
ELUQ Luque 95.01 338 P **P** 07 22 43.9 **+0.2**
ELUQ pmax pmax
comp=Z,18nm,0.8s,mb5.5
EVO Evora 95.03 341 *e*P **P** 07 22 42.8 **-1.0**
comp=Z,54nm,2.1s,mb5.6
ECOG Cogollos-Vega 95.09 338 P **P** 07 22 43.4 **-0.7**
comp=Z,18nm,0.9s,mb5.5
ECOG Cogollos-Vega 95.09 338 P **P** 07 22 43.4 **-0.7**
ECOG pmax pmax
comp=Z,18nm,0.9s,mb5.5
PBAR Barrancos 95.14 340 *e*P **P** 07 22 43.2 **-1.1**
comp=Z,43nm,1.6s,mb5.6
PBAR Barrancos 95.14 340 *e*LR LR 07 58 52.2
comp=Z,1μm,18.0s
DWPF Disney 95.24 42 PFAKE 07 22 50.0 +5.1
DWPF LR LR
comp=Z,1μm,21.0s,MS5.4
ELOJ Sierra Loja 95.37 338 P **P** 07 22 44.8 **-0.5**
comp=Z,12nm,0.8s,mb5.4
ELOJ Sierra Loja 95.37 338 P **P** 07 22 44.8 **-0.6**
ELOJ pmax pmax
comp=Z,12nm,0.8s,mb5.4
ERON Agron 95.40 338 P **P** 07 22 44.6 **-0.9**
comp=Z,10nm,0.6s,mb5.4
EMIN Mina Concepcio 95.44 340 P **P** 07 22 44.6 **-1.1**
comp=Z,16nm,1.4s,mb5.2
PBEJ Beja 95.48 341 *e*P **P** 07 22 44.8 **-1.1**
comp=Z,61nm,2.0s,mb5.7
EGUA Guajares 95.50 337 P **P** 07 22 44.3 **-1.6**
comp=Z,5.0nm,0.8s,mb5.0
EGUA Guajares 95.50 337 P **P** 07 22 44.3 **-1.7**
EGUA pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
EGRO El Granado 95.86 341 P **P** 07 22 46.6 **-0.9**
comp=Z,15nm,1.4s,mb5.2
PVAQ Vaqueiros 96.04 341 *e*LR LR 07 58 31.6
comp=Z,1μm,16.0s
ESPR Espera 96.08 339 P **P** 07 22 47.2 **-1.4**
comp=Z,23nm,1.1s,mb5.5
EMIJ Mijas 96.08 338 P **P** 07 22 44.6 **-4.0**
comp=Z,7.8nm,0.7s,mb5.2
PTEO Sao Teotonio 96.14 342 *e*P **P** 07 22 48.3 **-0.6**
comp=Z,102nm,1.7s,mb6.0
PBDV Barranco-do-Ve 96.24 341 *e*LR LR 07 58 47.3
comp=Z,984nm,20.0s
MORF Marmelete 96.35 341 *e*P **P** 07 22 48.7 **-1.1**
comp=Z,146nm,1.4s,mb6.2
MORF Marmelete 96.35 341 *e*LR LR 07 59 05.2
comp=Z,1μm,20.0s
EJIF Jimena Fronter 96.38 339 P **P** 07 22 48.6 **-1.4**
comp=Z,15nm,0.7s,mb5.5
EJIF Jimena Fronter 96.38 339 P **P** 07 22 48.6 **-1.4**
EJIF pmax pmax
comp=Z,15nm,0.7s,mb5.5
CMIG Matias Romero 96.53 59 P **P** 07 22 49.1 **-1.8**
comp=Z,5.0nm,1.0s,mb4.9,baz=279,slow=7.4,SNR=3.8
PFVI Vila Bisbo 96.56 341 *e*LR LR 07 58 34.7
comp=Z,1μm,24.0s
RKT Rikitea 97.01 115 *e*SKSac SKSac 07 33 25.4 -0.1
comp=Z,252nm,25.4s
RKT *e*SP SP 07 35 31.1 -2.1
comp=Z,454nm,34.2s
RKT *e*SS SS 07 40 48.8 -0.7
comp=Z,481nm,29.0s
RKT *e*LR LR 07 53 42.6
comp=Z,3μm,34.2s,baz=316
TEIG Tepich 98.02 52 PFAKE 07 23 10.0 +12
TEIG LR LR
comp=Z,570nm,21.0s,MS5.0
BBSR BB Station 98.40 27 PFAKE 07 23 10.0 +11
BBSR LR LR
comp=Z,1μm,22.0s,MS5.3
MDT Midelt 99.56 337 P Pdif 07 23 03.4 -0.9
comp=Z,2.6nm,0.7s,baz=18,slow=5.9,SNR=7.0
TGUH Tegucigalpa,Un 103.48 55 PFAKE 07 23 30.0 +8.2
TGUH LR LR
comp=Z,448nm,20.0s,MS5.0
KMBO Kilima Mbogo 105.55 284 Pdif Pdif 07 23 31.6 +0.6
KMBO LR LR
comp=Z,1μm,20.0s,MS5.5
KMBO Kilima Mbogo 105.55 284 Pdiff Pdif 07 23 31.6 +0.6
comp=Z,1.0nm,0.7s,baz=216,slow=23,SNR=6.1
SDDR Presa de Saban 107.81 39 PFAKE 07 28 00.0 +11
SDDR LR LR
comp=Z,818nm,19.0s,MS5.3
JTS JuntasAbangare 107.83 55 *e*PKP PKiKP 07 27 48.3 -0.4
JTS LR LR
comp=Z,603nm,22.0s,MS5.1
SJG San Juan 110.80 35 PFAKE 07 28 00.0 +5.8
SJG LR LR
comp=Z,681nm,22.0s,MS5.2
TORD Torodi Ar. Bea 115.35 323 PKP PKPdf 07 28 01.4 -1.5
TORD PP PP 07 29 00.5 -2.9
TORD Torodi Ar. Bea 115.35 323 PKP PKPdf 07 28 01.4 -1.5
comp=Z,3.5nm,0.4s,baz=14,slow=2.6,SNR=44
TORD PP PP 07 29 00.5 -2.9
comp=Z,6.6nm,1.0s,baz=26,slow=6.5,SNR=6.3
SDV Santo Domingo 116.86 44 *e*PKPdf PKPdf 07 28 05.8 -0.1
SDV LR LR
comp=Z,235nm,21.0s,MS4.8
SDV Santo Domingo 116.86 44 PKP PKPdf 07 28 05.1 -0.8
comp=Z,5.0nm,0.8s,baz=252,slow=2.8,SNR=5.7
BBGH Gun Hill 117.89 31 PFAKE 07 28 20.0 +12
BBGH LR LR
comp=Z,2μm,20.0s,MS5.8
OTAV Otavalo 119.70 56 PFAKE 07 28 20.0 +8.6
OTAV LR LR
comp=Z,298nm,21.0s,MS4.9
VNDA Vanda 121.53 176 PKP PKPdf 07 28 12.7 -0.2
comp=Z,1.3nm,0.6s,baz=300,slow=4.2,SNR=11
VNDA PKKPbc PKKPbc 07 38 13.2 -1.0
comp=Z,7.8nm,1.1s,baz=206,slow=3.9,SNR=13
LSZ Lusaka 121.77 280 *e*PKPdf PKPdf 07 28 15.4 +0.3
LSZ LR LR
comp=Z,1μm,19.0s,MS5.6
LSZ Lusaka 121.77 280 PKIKP PKPdf 07 28 15.0 -0.2
LSZ 07 29 45.6
LSZ pmax pmax
comp=Z,4.0nm,0.6s
LSZ pmax pmax
comp=Z,1.0nm,0.5s
LSZ Lusaka 121.77 280 PKP PKPdf 07 28 15.0 -0.2
comp=Z,3.7nm,0.6s,baz=32,slow=2.9,SNR=7.7
LSZ PP PP 07 29 45.6 -3.2
comp=Z,1.0nm,0.5s,baz=43,slow=7.4,SNR=6.2
SBA Scott Base 122.11 175 *e*PKPdf PKPdf 07 28 14.9 +0.8
DBIC Dimbokro 123.90 327 PKP PKPdf 07 28 18.6 -0.9
DBIC PP PP 07 29 58.7 -3.5
DBIC Dimbokro 123.90 327 PKP PKPdf 07 28 18.6 -0.9
comp=Z,13nm,0.5s,baz=40,slow=1.9,SNR=34
DBIC PP PP 07 29 58.7 -3.5
comp=Z,6.3nm,0.7s,baz=10,slow=7.7,SNR=3.8
TIC Toumodi 123.99 327 *e*PKP1 PKPdf 07 28 18.1 -1.5
comp=Z,41nm,1.4s
KIC Kosan Boka 124.14 327 *e*PKP1 PKPdf 07 28 19.0 -0.9
comp=Z,154nm,1.2s
LIC Lamto 124.38 327 *e*PKIKP PKPdf 07 28 18.9 -1.4
comp=Z,29nm,0.7s
LIC Lamto 124.38 327 *e*PKP1 PKPdf 07 28 19.0 -1.4
comp=Z,114nm,1.3s
MATP Matopo 124.92 275 PKP PKPdf 07 28 20.5 -0.6
comp=Z,7.1nm,0.6s,baz=28,slow=1.2,SNR=19
MATP PKKPbc 07 38 03.5
comp=Z,1.3nm,0.5s,baz=200,slow=5.4,SNR=4.3
LBTB Lobatse 129.87 272 PKIKP PKPdf 07 28 31.4 +1.0
LBTB pmax pmax
comp=Z,8.0nm,0.6s
LBTB Lobatse 129.87 272 PKP PKPdf 07 28 31.4 +0.9
comp=Z,7.5nm,0.6s,baz=61,slow=1.2,SNR=18
NNA Nana 130.13 64 *e*PKPdf PKPdf 07 28 31.3 +0.1
NNA LR LR
comp=Z,481nm,19.0s,MS5.2
NNA Nana 130.13 64 PKP PKPdf 07 28 30.9 -0.3
comp=Z,17nm,0.9s,baz=297,slow=4.5,SNR=3.5
TSUM Tsumeb 131.89 285 PKP PKPdf 07 28 34.1 -0.3
TSUM LR LR
comp=Z,759nm,21.0s,MS5.4
TSUM Tsumeb 131.89 285 PKP PKPdf 07 28 34.1 -0.3
comp=Z,2.4nm,0.8s,baz=60,slow=5.7,SNR=4.8
BOSA Boshof 132.23 269 PKIKP PKPdf 07 28 32.0 -2.8
BOSA 07 30 55.2
BOSA pmax pmax
comp=Z,8.0nm,1.1s
BOSA pmax pmax
comp=Z,11nm,1.2s
BOSA Boshof 132.23 269 PKP PKPdf 07 28 31.9 -2.8
comp=Z,8.0nm,1.1s,baz=263,slow=13,SNR=4.2
BOSA PP PP 07 30 55.1 -2.9
comp=Z,11nm,1.2s,baz=38,slow=12,SNR=3.4
QSPA South Pole Qui 133.71 180 *e*PKPdf PKPdf 07 28 37.0 +1.0
QSPA LR LR
comp=Z,1μm,22.0s,MS5.6
SYO Syowa Base 136.65 210⇑ *i*X 07 28 40.3
LPAZ La Paz 138.90 59 PKP PKPdf 07 28 46.8 -0.8
LPAZ PP PP 07 31 45.8 +6.2
LPAZ La Paz 138.90 59 *i* PKHKP 07 28 40.4
LPAZ pmax pmax
comp=Z,1.0nm,0.5s
LPAZ La Paz 138.90 59 PKhKP 07 28 40.4
comp=Z,0.9nm,0.5s,baz=6.4,slow=4.0,SNR=4.9
LPAZ PKP PKPdf 07 28 46.8 -0.8
comp=Z,3.1nm,0.6s,baz=337,slow=6.8,SNR=9.1
LPAZ PP PP 07 31 45.8 +6.2
comp=Z,8.8nm,1.2s,baz=343,slow=6.1,SNR=4.9
RCBR Riachuelo 141.86 6 PFAKE 07 29 00.0 +7.0
RCBR LR LR
comp=Z,718nm,21.0s,MS5.4
SIV San Ignacio 142.84 50 PKhKP 07 28 49.5
comp=Z,12nm,0.9s,baz=286,slow=5.2,SNR=38
SIV PP PP 07 32 06.4 +2.9
comp=Z,14nm,1.1s,baz=342,slow=4.9,SNR=4.9
MAIT Maitri 145.63 204 *e*PKPdf PKPdf 07 28 58.1 +0.3
LCO Las Campanas 145.90 77 *e*PKPdf PKPdf 07 29 00.4 +0.8
LCO LR LR
comp=Z,946nm,20.0s,MS5.6
TLL Tololo Astrono 146.50 79⇑ *i*P PKPdf 07 29 02.5 +1.9
FCH Farellones 148.59 83 *e*P PKPdf 07 29 03.5 -0.5
SNAA Sanae 148.83 197 PKP2 PKPbc 07 29 06.7 -0.4
SNAA pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 148.83 197 PKPbc PKPbc 07 29 06.7 -0.5
comp=Z,4.9nm,0.9s,baz=26,slow=5.2,SNR=18
LMEL Las Melosas 148.91 84 *i* P PKPdf 07 29 03.9 -0.6
CFAA Coronel Fontan 149.13 79 PKP PKPdf 07 29 04.7 -0.2
CFAA PKPbc PKPbc 07 29 08.3 -0.8
CFAA Coronel Fontan 149.13 79 PKP PKPdf 07 29 04.7 -0.2
comp=Z,4.3nm,0.6s,baz=318,slow=14,SNR=28
CFAA PKPbc PKPbc 07 29 08.3 -0.8
comp=Z,4.3nm,0.6s,baz=289,slow=2.0,SNR=109
MDZ Mendoza 149.39 81 *e*P PKPbc 07 29 10.4 +0.7
VNA2 Neumayer--Watz 150.35 196 *e*PKPdf PKPbc 07 29 10.2 -0.7
baz=121,slow=1.4
VNA2 *e* 07 29 26.9
VNA2 *e* 07 29 29.8
VNA2 *e* 07 29 38.4
VNA3 Neumayer Olymp 150.53 195 *e*PKPdf PKPbc 07 29 10.4 -0.9
VNA3 *e* 07 29 26.9
VNA3 *e* 07 29 30.4
VNA3 *e* 07 29 37.7
VNA1 Neumayer--Stat 150.75 196 *e*PKPdf PKPbc 07 29 11.4 -0.4
VNA1 *e* 07 29 28.7
VNA1 *e* 07 29 31.7
PMSA Palmer Station 152.58 150 PFAKE 07 29 20.0 +11
PMSA LR LR
comp=Z,1μm,20.0s,MS5.7
TRQA Tornquist 156.77 86 PFAKE 07 29 30.0 +14
TRQA LR LR
comp=Z,658nm,21.0s,MS5.4
HOPE Hope Point 169.29 166 PFAKE 07 29 40.0 +13
HOPE LR LR
comp=Z,5.0nm,22.0s

MOS ***11*** *07:54:02.3±1.0, 4687N×1525.4E, h84km, mb4.2/6, Error ellipse: s-maj=18.3km s-min=12.7km az=48.3*
ISCJB ***11*** *07:54:05.5±1.2, 4655N±0.10×1523E±0.1, h113km±11km, mb3.6/13, Error ellipse: s-maj=18.2km s-min=10.4km az=143.9*
IDC ***11*** *07:54:05.7±4.4, 4685N×1524.8E, h92km±38km, mb3.3/12, mb1 3.5/13, mb1mx3.5/21, mbtmp3.4/13, Error ellipse: s-maj=24.7km s-min=20.2km az=97.0*
ISC 11 07:54:03.1±1.0, 4675N±0.10×1525E±0.1, h74km±9km, n45, σ1°28/56, mb3.6/13, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.59**	**247**⇓	*e*PN	**Pn**	**07 54 57.0**	**+0.7**
SKR	**Severo-Kuril's**	**4.59**	**30**	*e*PN	**Pn**	**07 55 08.4**	**-1.5**
SKR				*e*S	**Sn**	**07 55 55.0**	**-6.9**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.43**	**242**	PN	**Pn**	**07 55 24.3**	**+2.9**
NEM2	**Nemuro 2**	**5.88**	**237**	P	**Pn**	**07 55 26.2**	**-1.4**
NEM2				*e*S	**Sn**	**07 56 30.6**	**-2.9**
JNK	**Nakash**	**6.37**	**243**	P	**Pn**	**07 55 34.8**	**+0.6**
JNK				*e*S	**Sn**	**07 56 46.5**	**+1.1**
JTKR	**Abashiri--Toko**	**6.68**	**249**	P	**Pn**	**07 55 40.3**	**+1.8**
YSS	**Yuzh-Sakhalins**	**6.71**	**275**	*e*PN	**Pn**	**07 55 40.9**	**+2.0**
JAK	**Akkeshi**	**6.71**	**239**	P	**Pn**	**07 55 37.7**	**-1.2**
JAK				*e*S	**Sn**	**07 56 51.2**	**-2.7**
JAR	**Ashorobuto**	**7.11**	**244**	P	**Pn**	**07 55 45.2**	**+0.9**
JAR				*e*S	**Sn**	**07 57 05.0**	**+1.5**
JOB	**Onbets**	**7.28**	**241**	P	**Pn**	**07 55 47.2**	**+0.5**
JOB				*e*S	**Sn**	**07 57 06.8**	**-1.0**
ASAJ	**Asahikawa**	**7.47**	**253**	PN	**Pn**	**07 55 52.2**	**+3.0**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.47**	**253**	P	**Pn**	**07 55 52.1**	**+2.9**
	comp=Z,1.9nm,0.3s,baz=93,slow=17,SNR=8.7						
JKK2	**Kamakawa 2**	**7.47**	**251**	P	**Pn**	**07 55 51.6**	**+2.3**
JCH	**Churui**	**7.73**	**241**	P	**Pn**	**07 55 51.8**	**-1.1**
JCH				*e*S	**Sn**	**07 57 15.2**	**-3.6**
ERM	**Erimo**	**8.21**	**238**	*e*PN	**Pn**	**07 56 00.0**	**+0.6**
JBT2	**Biratori 2**	**8.25**	**245**	P	**Pn**	**07 56 00.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**8.29**	**241**	P	**Pn**	**07 55 59.4**	**-1.1**
JNBK				*e*S	**Sn**	**07 57 27.7**	**-4.9**
JNB	**Noboribetsu**	**9.25**	**247**	P	**Pn**	**07 56 13.5**	**0.0**
JNB				*e*S	**Sn**	**07 57 55.2**	**-0.7**
JKB	**Kayabe**	**9.57**	**244**	P	**Pn**	**07 56 16.5**	**-1.4**
JKB				*e*S	**Sn**	**07 57 57.6**	**-6.1**
JYM2	**Yakumo 2**	**9.86**	**246**	P	**Pn**	**07 56 21.3**	**-0.5**
JTM	**Tenmabayashi**	**10.21**	**238**	*e*S	**Sn**	**07 58 11.0**	**-8.3**
JANG	**Nango**	**10.22**	**235**	P	**Pn**	**07 56 22.9**	**-3.9**
JTH	**Tanohata**	**10.33**	**233**	*e*S	**Sn**	**07 58 11.0**	**-11**
MJAR	**Matsushiro Arr**	**14.77**	**231**	P	**Pn**	**07 57 33.5**	**+5.6**
	comp=Z,0.4nm,0.3s,baz=43,slow=8.9,SNR=8.2						
YAK	**Yakutsk**	**20.11**	**328**	*e*P	**P**	**07 58 34.8**	**+4.3**
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
KSRS	**Korea Array**	**20.42**	**252**	P	**P**	**07 58 37.0**	**+2.9**
	comp=Z,2.3nm,0.7s,baz=75,slow=39,SNR=3.6						
BILL	**Bilibino**	**22.48**	**14**⇑	*e*P	**P**	**07 59 00.7**	**+4.9**
BILL				*e**PP		07 59 34.9	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.5						
SONM	**Songino Array**	**30.96**	**289**	P	**P**	**08 00 12.7**	**-0.2**
	comp=Z,0.2nm,0.6s,mb3.0,baz=67,slow=4.8,SNR=2.1						
SONM				PcP		08 03 08.8	+1.5
	comp=Z,0.3nm,0.7s,baz=66,slow=1.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.29**	**306**	P	**P**	**08 01 48.2**	**-0.8**
	comp=Z,0.5nm,0.4s,mb3.6,baz=76,slow=7.6,SNR=3.5						
ZALV				PcP	PcP	08 03 42.0	+0.6
	comp=Z,0.5nm,0.4s,baz=339,slow=3.6,SNR=2.9						
MKAR	**Makanchi Array**	**46.59**	**297**	*i* P	**P**	**08 02 23.0**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**46.59**	**297**	P	**P**	**08 02 23.0**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=74,slow=7.0,SNR=7.4						
MKAR				PcP	PcP	08 03 56.2	0.0
	comp=Z,0.4nm,0.6s,baz=61,slow=4.3,SNR=4.0						
YKA	**Yellowknife Ar**	**51.16**	**37**	*e*P	**P**	**08 03 02.2**	**+4.1**
YKA	**Yellowknife Ar**	**51.16**	**37**	P	**P**	**08 02 58.2**	**+0.1**
	comp=Z,0.2nm,0.7s,mb3.3,baz=296,slow=7.2,SNR=3.7						
ARU	**Arti**	**54.74**	**317**	*c i*P	**P**	**08 03 22.9**	**-1.6**
ARU				*PP	pP	08 03 55.5	+12
ARU						08 05 28.1	
ARU				S	**S**	**08 10 53.6**	**-5.5**
ARU				SS	SS	08 14 46.6	+4.3
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
FINES	**FINESS Array B**	**63.87**	**335**	*i* P	**P**	**08 04 27.3**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.87**	**335**	P	**P**	**08 04 27.1**	**-0.2**
	comp=Z,1.3nm,0.4s,mb4.1,baz=36,slow=7.1,SNR=25						
NB2	**NORSAR Subarra**	**68.10**	**341**	P	**P**	**08 04 54.5**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.8,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**68.10**	**341**	P	**P**	**08 04 54.8**	**+0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**68.10**	**341**	P	**P**	**08 04 54.8**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.9,baz=27,slow=6.4,SNR=5.2						
WRA	**Warramunga Arr**	**68.39**	**198**	P	**P**	**08 04 56.5**	**-0.1**
	comp=Z,0.3nm,0.8s,mb3.2,baz=22,slow=6.6,SNR=3.1						
AKASG	**Malin Array Be**	**71.32**	**326**	*i* P	**P**	**08 05 14.5**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.32**	**326**	P	**P**	**08 05 14.4**	**0.0**
	comp=Z,1.3nm,0.3s,mb4.2,baz=33,slow=5.9,SNR=9.5						
ASAR	**Alice Springs**	**72.08**	**198**	P	**P**	**08 05 20.4**	**+1.3**
	comp=Z,0.4nm,0.5s,mb3.5,baz=14,slow=5.4,SNR=6.9						
TXAR	**Lajitas Array**	**77.84**	**60**	P	**P**	**08 05 53.1**	**+0.6**
	comp=Z,0.2nm,0.5s,mb3.1,baz=294,slow=4.8,SNR=7.1						
GERES	**GERESS Array B**	**78.28**	**334**	P	**P**	**08 05 54.4**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=9.8,slow=6.4,SNR=3.3						

ISCJB ***11*** *08:02:15.5±0.9, 35.13N±0.04×135.65E±0.07, h6km, Error ellipse: s-maj=8.8km s-min=4.9km az=156.9*
JMA ***11*** *08:02:15.6, 35.15N×135.67E, h6km±1km, M2.7*
JMA Felt II J1.
ISC 11 08:02:16.0±0.9, 3514N±0.04×13564E±0.07, h6km, n8,

σ0§31/13, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.24**	**307**	P	**Pg**	**08 02 20.9**	**+0.1**
JWT				S	**Sg**	**08 02 24.3**	**+0.3**
JHE	**Heguri**	**0.48**	**176**	P	**Pg**	**08 02 25.3**	**0.0**
JKY	**Yasaka**	**0.66**	**318**	P	**Pg**	**08 02 28.5**	**-0.2**
JKS	**Kasai**	**0.67**	**257**	P	**Pg**	**08 02 28.8**	**-0.1**
JWY	**Kouya**	**0.92**	**182**	P	**Pg**	**08 02 33.2**	**-0.3**
JWY				S	**Sg**	**08 02 45.2**	**-0.2**
JKSM	**Kasumi**	**0.92**	**300**	P	**Pg**	**08 02 33.2**	**-0.4**
JKSM				S	**Sg**	**08 02 45.3**	**-0.2**
JAJ2	**Tsuna**	**0.95**	**221**	P	**Pg**	**08 02 34.0**	**-0.1**
JAJ2				S	**Sg**	**08 02 47.1**	**+0.7**
MAT	**Matsushiro**	**2.51**	**55**	P	**Pn**	**08 02 57.8**	**+0.4**
MAT				S	**Sn**	**08 03 34.1**	**+5.8**

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*ISCJB **11** 08:18:04.6±0.9, 1082N±006×6229W±005, h80km±7km, Error ellipse: s-maj=10.9km s-min=6.2km az=27.8*
*FUNV **11** 08:18:06.4, 1086N×6224W, h66km, MW3.2*
ISC 11 08:18:05.7±0.9**, 1083N**±006×**6229W**±005**, h72**km±8km**, n15, σ0§88**/22**, 1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.19**	**161**	*e*P	**Pn**	**08 18 16.9**	**+0.3**
GUIV				*e*S	**Sn**	**08 18 24.3**	**-0.2**
TRN	**Trinidad (W)**	**0.89**	**101**	*e*P	**Pn**	**08 18 24.2**	**+1.2**
TRN				*e*S	**Sn**	**08 18 34.8**	**-0.9**
GUNV	**Guanoco**	**0.92**	**224**	⇓*e*P	**Pn**	**08 18 24.7**	**+1.3**
GUNV				*e*S	**Sn**	**08 18 38.1**	**+1.5**
CRUV	**Carupano**	**0.95**	**261**	⇑*i*P	**Pn**	**08 18 23.9**	**+0.2**
CRUV				*e*S	**Sn**	**08 18 36.5**	**-0.6**
ITEV	**Isla Los Testi**	**0.98**	**302**	*e*P	**Pn**	**08 18 24.0**	**-0.1**
ITEV				*e*S	**Sn**	**08 18 37.1**	**-0.7**
PCRV	**Puerto La Cruz**	**2.40**	**255**	*e*P	**Pn**	**08 18 43.6**	**+0.7**
PCRV				*e*S	**Sn**	**08 19 09.9**	**-1.3**
IBAV	**Isla La Blanqu**	**2.46**	**294**	*e*S	**Sn**	**08 19 12.0**	**-0.7**
RIOV	**Rio Grande**	**2.78**	**170**	*e*P	**Pn**	**08 18 48.7**	**+0.7**
RIOV				*e*S	**Sn**	**08 19 18.9**	**-1.6**
PRGV	**PARIAGUAN**	**3.10**	**229**	*e*P	**Pn**	**08 18 52.8**	**+0.4**
GURV	**El Guri**	**3.15**	**195**	*e*P	**Pn**	**08 18 52.6**	**-0.4**
CUPV	**Cœpira**	**3.53**	**258**	*e*P	**Pn**	**08 18 59.5**	**+1.3**
BIRV	**Birongo**	**3.93**	**265**	*e*P	**Pn**	**08 19 04.5**	**+0.8**
LUEV	**Luepa**	**5.02**	**171**	⇓*i*P	**Pn**	**08 19 17.6**	**-0.9**
CAOV	**Caicara del Or**	**5.29**	**229**	*e*P	**Pn**	**08 19 21.9**	**-0.4**
BAUV	**El Baul**	**5.97**	**252**	*e*P	**Pn**	**08 19 30.9**	**-0.7**

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*ISCJB **11** 09:39:39.8±1.4, 3496N±007×2527E±004, h11km±9km, mb3.4/3, Error ellipse: s-maj=11.3km s-min=5.9km az=1.7*
*IDC **11** 09:39:39.5±1.2, 3495N×2534E, h0km, mb3.8/1, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, ML3.7/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/37, Error ellipse: s-maj=15.1km s-min=9.4km az=34.0*
*CSEM **11** 09:39:40.4±0.7, 3498N×2528E, h5km, MD3.6, Error ellipse: s-maj=20.7km s-min=8.7km az=5.0*
*ATH **11** 09:39:40.9, 3506N×2530E, h15km±1km, MD3.3/6*
*NEIC **11** 09:39:40.9, 3506N×2530E, h16km, MD3.6(ATH), After ATH.*
ISC 11 09:39:40.3±1.1**, 3498N**±006×**2526E**±004**, h5**km±6km**, n25, σ1§07**/33**, mb3.4**/3**, 1C-6D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.37**	**106**	*e*PB	**Pg**	**09 39 48.5**	**+1.1**
NPS	**Neapolis**	**0.41**	**45**	⇓*i*PB	**Pg**	**09 39 47.3**	**-0.8**
NPS				*e*SB	**Sg**	**09 39 51.8**	**-1.6**
NPS	**Neapolis**	**0.41**	**45**	⇓*e*Pb	**Pg**	**09 39 47.3**	**-0.8**
NPS				*e*Sb	**Sg**	**09 39 51.8**	**-1.6**
IDI	**Anoyia**	**0.43**	**316**	Pg	**Pg**	**09 39 49.4**	**+0.7**
	76nm,0.3s,baz=133,slow=16,SNR=622						
IDI				Lg		09 39 55.6	
	388nm,0.3s,baz=0.0,slow=20,SNR=96						
VAM	**Vamos**	**0.97**	**297**	⇓*i*PN	**Pn**	**09 39 59.8**	**-0.7**
VAM				*e*SN	**Sn**	**09 40 12.6**	**-2.0**
VAM	**Vamos**	**0.97**	**297**	⇓*e*Pn	**Pn**	**09 39 59.8**	**-0.7**
VAM				*e*Sn	**Sn**	**09 40 12.6**	**-2.0**
KARP	**Karpathos**	**1.66**	**69**	⇓*e*PN	**Pn**	**09 40 10.8**	**+0.9**
KARP				*e*SN	**Sn**	**09 40 32.0**	**+0.4**
KARP	**Karpathos**	**1.66**	**69**	P	**Pn**	**09 40 11.4**	**+1.5**
KAP	**Karpathos**	**1.67**	**69**	⇓*e*Pn	**Pn**	**09 40 10.8**	**+0.7**
KAP				*e*Sn	**Sn**	**09 40 32.0**	**+0.1**
APE	**Apeiranthos**	**2.10**	**6**	*e*PN	**Pn**	**09 40 17.0**	**+1.0**
VLI	**Veliai**	**2.57**	**313**	⇑*i*PN	**Pn**	**09 40 23.3**	**+0.9**
VLI	**Veliai**	**2.57**	**313**	*e*Pn	**Pn**	**09 40 23.3**	**+0.9**
SMG	**Samos**	**3.01**	**25**	P	**Pn**	**09 40 28.4**	**-0.1**
MMAI	**Mount Meron Ar**	**8.65**	**100**	Pn	**Pn**	**09 41 44.9**	**-1.1**
	1.2nm,0.3s,baz=225,slow=51,SNR=2.9						
MMAI				Sn	**Sn**	**09 43 19.0**	**-4.8**
	4.2nm,0.3s,baz=272,slow=21,SNR=5.7						
VAE	**Valguarnera**	**9.11**	**289**	Pn	**Pn**	**09 41 56.0**	**+3.7**
	1.3nm,0.3s,baz=63,slow=2.3,SNR=3.3						
EIL	**Elat**	**9.76**	**120**	Pn	**Pn**	**09 41 59.4**	**-1.8**
	0.5nm,0.3s,baz=2.7,slow=23,SNR=2.4						
EIL				Sn	**Sn**	**09 43 44.8**	**-6.3**
	0.5nm,0.3s,baz=330,slow=12,SNR=2.6						
EIL	**Elat**	**9.76**	**120**	Pn	**Pn**	**09 41 59.3**	**-1.9**
EIL				Sn	**Sn**	**09 43 44.8**	**-6.3**
MLR	**Muntele Rosu**	**10.52**	**3**	Pn	**Pn**	**09 42 13.5**	**+2.0**
	0.1nm,0.3s,baz=115,slow=15,SNR=3.0						
VRAC	**Vranov**	**15.68**	**339**	LR	LR	09 50 04.1	
	comp=Z,150nm,19.7s,baz=64,slow=40						
AKASG	**Malin Array Be**	**15.98**	**9**	Pn	**Pn**	**09 43 26.1**	**+0.5**
	1.0nm,0.3s,baz=201,slow=11,SNR=17						
AKASG	**Malin Array Be**	**15.98**	**9**	Pn	**Pn**	**09 43 26.0**	**+0.4**
GERES	**GERESS Array B**	**16.28**	**332**	Pn	**Pn**	**09 43 28.8**	**-0.7**
	0.1nm,0.3s,baz=141,slow=13,SNR=2.8						
ESDC	**Sonseca Array**	**23.65**	**290**	P	**P**	**09 44 52.0**	**-0.6**
	0.3nm,0.6s,mb2.9,baz=81,slow=9.6,SNR=4.5						
TORD	**Torodi Ar. Bea**	**30.43**	**230**	P	**P**	**09 45 54.5**	**+0.8**
	0.6nm,0.5s,mb3.6,baz=33,slow=8.5,SNR=8.1						
MKAR	**Makanchi Array**	**43.81**	**56**	P	**P**	**09 47 46.3**	**-0.6**
	0.8nm,0.5s,mb3.7,baz=277,slow=6.1,SNR=10						

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*MOS **11** 10:05:24.4±1.8, 4821N×15471E, h45km, mb3.9/4, Error ellipse: s-maj=27.7km s-min=12.8km az=62.5*
*ISCJB **11** 10:05:25.2±1.5, 483N±01×1548E±02, h47km±13km, mb3.6/9, Error ellipse: s-maj=24.9km s-min=6.7km az=43.2*
*IDC **11** 10:05:31.3±4.8, 4824N×15461E, h87km±44km, mb3.2/9, mb1 3.5/10, mb1mx3.4/20, mbtmp3.3/10, Error ellipse: s-maj=29.0km s-min=20.1km az=142.0*
ISC 11 10:05:26.7±1.4**, 483N**±01×**1547E**±02**, h42**km±13km**, n19, σ1§10**/22**, mb3.6**/9**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.58**	**20**	*e*PN	**Pn**	**10 06 05.5**	**-0.3**
SKR				*e*S	**Sn**	**10 06 34.9**	**-0.9**
SKR				pmax	pmax		
	comp=Z,150nm,0.4s						
SKR				pmax	pmax		
	comp=N,120nm,0.2s						
SKR				pmax	pmax		
	comp=E,90nm,0.2s						
SKR				smax			
	comp=N,180nm,0.5s						
SKR				smax			
	comp=E,180nm,0.5s						
SKR				smax			
	comp=Z,110nm,0.5s						
PET	**Petropavlovsk**	**5.37**	**26**	*e*PN	**Pn**	**10 06 44.2**	**+0.1**
PET				*e*S	**Sn**	**10 07 48.2**	**+3.6**
PET				pmax	pmax		
	comp=Z,35nm,0.5s						
PET				smax			
	comp=N,61nm,0.8s						
PET				smax			
	comp=E,55nm,0.6s						
KUR	**Kuril'sk**	**5.61**	**240**	*e*PN	**Pn**	**10 06 46.5**	**-1.0**
KUR				*e*S	**Sn**	**10 07 54.0**	**+3.3**
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
KUR				smax			
	comp=E,240nm,0.9s						
ASAJ	**Asahikawa**	**9.39**	**248**	PN	**Pn**	**10 07 42.4**	**+3.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.39**	**248**	P	**Pn**	**10 07 42.4**	**+3.1**
	comp=Z,1.3nm,0.3s,baz=115,slow=28,SNR=10						
MJAR	**Matsushiro Arr**	**16.88**	**232**	P	**Pn**	**10 09 15.4**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=3.4						
KSRS	**Korea Array**	**22.32**	**251**	P	**P**	**10 10 20.4**	**-0.1**
	comp=Z,1.6nm,0.7s,mb3.6,baz=46,slow=10,SNR=4.6						
SONM	**Songino Array**	**31.89**	**288**	P	**P**	**10 11 49.4**	**+1.7**
	comp=Z,0.4nm,0.8s,mb3.3,baz=95,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**47.23**	**297**	P	**P**	**10 13 53.9**	**-1.2**
	comp=Z,0.3nm,0.2s,mb3.8,baz=71,slow=9.3,SNR=3.6						
YKA	**Yellowknife Ar**	**49.05**	**38**	P	**P**	**10 14 09.6**	**+0.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**49.05**	**38**	P	**P**	**10 14 09.6**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=297,slow=7.4,SNR=8.2						
NVAR	**Mina Array Bea**	**60.77**	**64**	P	**P**	**10 15 34.7**	**+0.7**
	comp=Z,0.2nm,0.5s,mb3.5,baz=287,slow=3.5,SNR=3.1						
FINES	**FINESS Array B**	**63.13**	**335**	P	**P**	**10 15 48.7**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**63.13**	**335**	P	**P**	**10 15 48.7**	**-0.8**
	comp=Z,2.2nm,1.0s,mb4.2,baz=38,slow=6.3,SNR=3.6						
WRA	**Warramunga Arr**	**70.32**	**200**	P	**P**	**10 16 34.9**	**-0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
WRA	**Warramunga Arr**	**70.32**	**200**	P	**P**	**10 16 34.9**	**-0.8**
	comp=Z,0.5nm,1.1s,mb3.4,baz=16,slow=6.3,SNR=3.0						
ASAR	**Alice Springs**	**74.01**	**200**	P	**P**	**10 16 57.2**	**-0.4**
	comp=Z,0.2nm,0.6s,mb3.2,baz=16,slow=5.1,SNR=4.5						
TXAR	**Lajitas Array**	**75.80**	**62**	P	**P**	**10 17 08.4**	**+0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**75.80**	**62**	P	**P**	**10 17 08.4**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=303,slow=4.4,SNR=8.3						

IDC 11 10:35:13.3±1.2**, 654S**×**9921W, h0**km**, mb3.8**/6**, mb1 4.1**/6**, mb1mx4.0**/11**, mbtmp3.8**/6**, MS3.3**/4**, Ms1 3.3**/4**, ms1mx2.9**/24**, Error ellipse: s-maj=34.7km s-min=23.2km az=64.0, Southwest of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**20.67**	**92**	P	P	10 39 55.9	+0.8
	4.6nm,0.7s,baz=273,slow=19,SNR=3.9						
JTS	**JuntasAbangare**	**21.94**	**40**	LR	LR	10 46 01.8	
	comp=Z,128nm,20.9s,baz=77,slow=30						
RPN	**Rapa Nui**	**22.62**	**204**	P	P	10 40 15.7	-0.2
	30nm,0.5s,baz=9.8,slow=14,SNR=3.4						
NNA	**Nana**	**22.72**	**105**	LR	LR	10 46 57.8	
	comp=Z,62nm,20.2s,baz=312,slow=31						
CMIG	**Matias Romero**	**23.87**	**10**	LR	LR	10 47 34.4	
	comp=Z,52nm,21.3s,baz=277,slow=31						
LPAZ	**La Paz**	**31.92**	**110**	P	P	10 41 42.0	+1.0
	0.5nm,0.4s,baz=286,slow=7.5,SNR=4.0						
LPAZ				LR	LR	10 53 11.9	
	comp=Z,44nm,20.4s,baz=297,slow=34						
TXAR	**Lajitas Array**	**35.93**	**353**	P	P	10 42 16.6	+1.0
	0.8nm,0.7s,baz=182,slow=10,SNR=13						
NVAR	**Mina Array Bea**	**48.14**	**340**	P	P	10 43 56.1	+0.9
	0.5nm,0.6s,baz=155,slow=8.8,SNR=6.1						
ULM	**Lac du Bonnet**	**56.63**	**3**	P	P	10 44 56.7	-1.4
	1.6nm,0.6s,baz=189,slow=9.6,SNR=5.3						
SCHQ	**Schefferville**	**66.85**	**20**	P	P	10 46 04.0	-2.9
	1.4nm,1.0s,baz=243,slow=6.8,SNR=4.1						
YKA	**Yellowknife Ar**	**69.85**	**352**	P	P	10 46 25.1	-0.4
	0.5nm,0.7s,baz=156,slow=6.2,SNR=6.7						

IDC 11 10:38:34.8±8.1**, 3196S**×**17971E, h339**km±91km**, mb2.7**/2**, mb1 3.0**/3**, mb1mx2.9**/12**, mbtmp2.7**/3**, Error ellipse: s-maj=99.6km s-min=41.5km az=3.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.63**	**198**	P	Pn	10 40 14.0	+1.5
	0.6nm,0.3s,baz=272,slow=6.9,SNR=15						
URZ				S	S	10 41 30.4	-1.4
	1.3nm,0.3s,baz=74,slow=20,SNR=17						
ASAR	**Alice Springs**	**41.10**	**270**	P	P	10 45 46.9	+0.1
	0.2nm,0.4s,baz=109,slow=8.0,SNR=4.9						
WRA	**Warramunga Arr**	**42.23**	**275**	P	P	10 45 55.8	-0.1
	0.3nm,0.3s,baz=114,slow=8.1,SNR=15						
FINES	**FINESS Array B**	**145.89**	**338**	PKPbc	PKPbc	10 57 32.9	-1.0
	1.1nm,0.9s,baz=75,slow=5.9,SNR=3.1						

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*BJI **11** 10:50:44.9, 786S×12955E, h104km, mB5.1, mb4.9*
*MOS **11** 10:50:51.8±1.1, 722S×12894E, h110km, mb4.7/11, Error ellipse: s-maj=16.4km s-min=8.5km az=120.9*
*NEIC **11** 10:50:52.6±1.5, 731S×12899E, h104km±14km, mb4.7/20, Error ellipse: s-maj=10.9km s-min=7.1km az=47.0*
*ISCJB **11** 10:50:53.7±1.1, 739S±004×129.13E±006, h137km±10km, mb4.8/46, Error ellipse: s-maj=10.1km s-min=6.0km az=148.1*
*IDC **11** 10:50:53.6±2.0, 733S×12901E, h115km±17km, mb4.3/13, mb1 4.4/15, mb1mx4.4/18, mbtmp4.4/15, MS3.3/4, Ms1 3.3/4, ms1mx2.9/26, Error ellipse: s-maj=20.9km s-min=11.4km az=80.0*
ISC 11 10:50:54.5±1.0**, 739S**±005×**12914E**±006**, h127**km±10km**, n139, σ1§14**/129**, mb4.9**/46**, 15C-9D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.09**	**242**	P	**Pn**	**10 52 23.3**	**+1.0**
	466nm,0.3s,baz=106,slow=3.2,SNR=465						
BATI				S	**Sn**	**10 53 28.7**	**-2.1**
	282nm,0.3s,baz=96,slow=22,SNR=28						
BATI				LR	LR	10 54 29.0	
	comp=Z,269nm,18.6s,baz=10.0,slow=36						
KDI	**Kendari**	**7.32**	**297**	⇓*e*P	**Pn**	**10 52 41.2**	**+2.2**
KDI				*e*S	**Sn**	**10 54 06.0**	**+5.4**
WSI	**Waingapu**	**9.03**	**255**	⇓*e*P	**Pn**	**10 53 01.0**	**-1.0**
WSI				*e*S	**Sn**	**10 54 31.0**	**-11**
FITZ	**Fitzroy Crossi**	**11.18**	**197**	*e*P	**Pn**	**10 53 27.7**	**-3.0**
	180nm,0.4s						
FITZ				*e*S	**Sn**	**10 55 24.0**	**-10**
FITZ	**Fitzroy Crossi**	**11.18**	**197**	P	**Pn**	**10 53 28.6**	**-2.1**
	20nm,0.3s,baz=30,slow=12,SNR=332						
FITZ				S	**Sn**	**10 55 23.9**	**-10**
	27nm,0.3s,baz=93,slow=20,SNR=10						
FITZ				LR	LR	10 57 39.5	
	comp=Z,40nm,22.0s,baz=24,slow=36						
WRA	**Warramunga Arr**	**13.46**	**159**	P	**Pn**	**10 53 58.5**	**-2.1**
	6.6nm,0.3s,baz=341,slow=12,SNR=282						
WRA				S	**Sn**	**10 56 21.2**	**-8.1**
	29nm,0.3s,baz=333,slow=23,SNR=13						
COEN	**Coen**	**15.26**	**117**	*e*P	**Pn**	**10 54 22.7**	**-0.6**
	7.1nm,0.6s						
COEN				*e*S	**S**	**10 57 02.1**	**-18**
TSM	**Tawau**	**16.15**	**316**	⇑P	**Pn**	**10 54 38.7**	**+4.3**
MYLDM	**Lahad Datu**	**16.38**	**319**	⇓P	**Pn**	**10 54 39.7**	**+2.4**
MBWA	**Marble Bar**	**16.44**	**213**	*e*P	**Pn**	**10 54 36.8**	**-1.1**
	27nm,0.4s						
MBWA				*e*S	**S**	**10 57 25.4**	**-16**
ASAR	**Alice Springs**	**16.82**	**165**	P	**Pn**	**10 54 43.0**	**+0.5**
	7.1nm,0.3s,baz=337,slow=9.6,SNR=219						
ASAR				S	**S**	**10 57 42.4**	**-7.7**
	7.0nm,0.3s,baz=350,slow=24,SNR=9.3						
SDKM	**Sandakan**	**17.59**	**317**	⇓P	**Pn**	**10 54 54.8**	**+3.0**
PMG	**Port Moresby**	**17.94**	**98**	*e*P	**Pn**	**10 54 58.8**	**+2.7**
	6.4nm,0.4s						
PMG	**Port Moresby**	**17.94**	**98**	*e*P	**Pn**	**10 54 58.8**	**+2.7**
PMG				pmax	pmax		
	comp=Z,6.0nm,0.4s						
PMG	**Port Moresby**	**17.94**	**98**	P	**Pn**	**10 55 00.9**	**+4.8**
	comp=Z,1.4nm,0.3s,baz=308,slow=12,SNR=5.9						
KKM	**Kota Kinabalu**	**18.55**	**316**	*e*P	**P**	**10 55 02.2**	**+0.6**
KKM	**Kota Kinabalu**	**18.55**	**316**	⇓P	**P**	**10 55 05.2**	**+3.6**
KDM	**Kudat**	**18.77**	**319**	⇑P	**P**	**10 55 07.3**	**+3.3**
BTM	**Bintulu**	**19.16**	**303**	⇓P	**P**	**10 55 11.2**	**+2.9**
SBUM	**Sibu**	**19.50**	**299**	⇓P	**P**	**10 55 15.2**	**+3.2**
KSM	**Kuching**	**20.74**	**294**	*e*P	**P**	**10 55 25.0**	**-0.3**
KSM	**Kuching**	**20.74**	**294**	⇑P	**P**	**10 55 25.9**	**+0.5**
CTA	**Charters Tower**	**20.85**	**129**	*e*P	**P**	**10 55 31.0**	**+4.6**
	comp=Z,3.7nm,0.6s						
CTA	**Charters Tower**	**20.85**	**129**	*e*P	**P**	**10 55 31.0**	**+4.6**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTA	**Charters Tower**	**20.85**	**129**	P	**P**	**10 55 31.2**	**+4.7**
	comp=Z,1.5nm,0.5s,baz=302,slow=15,SNR=4.7						
CTAO	**Charters Tower**	**20.85**	**129**	*e*P	**P**	**10 55 29.8**	**+3.3**
	comp=Z,11nm,0.9s						
CTAO				*e*S	S	10 59 34.1	+22
CTAO	**Charters Tower**	**20.85**	**129**	*e*P	**P**	**10 55 29.8**	**+3.4**
CTAO				*e*S	S	10 59 34.1	+22
CTAO				pmax	pmax		
	comp=Z,11nm,0.9s						
FORT	**Forrest**	**23.30**	**182**	*e*P	**P**	**10 55 52.5**	**+1.4**
	comp=Z,82nm,0.5s,mb5.3						
FORT				*e*S	**S**	**11 00 06.7**	**+13**
KLBR	**Kellerberrin**	**26.32**	**202**	*e*P	**P**	**10 56 19.5**	**+1.0**
	comp=Z,35nm,1.1s,mb4.7						
KLBR				*e*S	S	11 01 19.3	+37
MYKOM	**Kota Tinggi**	**26.82**	**289**	⇑P	**P**	**10 56 23.8**	**+0.6**
STKA	**Stephens Creek**	**27.00**	**156**	*e*P	**P**	**10 56 26.1**	**+1.5**
	comp=Z,4.6nm,0.4s,mb4.4						
STKA				*e*S	S	11 01 37.4	+45
STKA	**Stephens Creek**	**27.00**	**156**	P	**P**	**10 56 26.4**	**+1.8**
	comp=Z,4.9nm,0.4s,mb4.4,baz=338,slow=6.8,SNR=9.5						
MUN	**Mundaring**	**27.27**	**205**	*e*P	**P**	**10 56 28.3**	**+1.3**
MUN				*e*		10 57 02.3	
MUN				*e*S	S	11 01 36.7	+40
MUN	**Mundaring**	**27.27**	**205**	*e*P	**P**	**10 56 28.3**	**+1.3**
MUN				*e*		10 57 02.3	
KGM	**Kluang**	**27.40**	**289**	⇑P	**P**	**10 56 29.5**	**+1.1**
NWAO	**Narrogin (SRO)**	**27.71**	**202**	*e*P	**P**	**10 56 32.1**	**+1.2**
	comp=Z,8.3nm,0.3s,mb4.7						
NWAO	**Narrogin (SRO)**	**27.71**	**202**	*e*P	**P**	**10 56 32.1**	**+1.2**
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
NWAO	**Narrogin (SRO)**	**27.71**	**202**	P	**P**	**10 56 30.3**	**-0.7**
	comp=Z,11nm,0.3s,mb4.9,baz=41,slow=8.4,SNR=50						
KTGM	**Kuala Trenggan**	**28.85**	**295**	⇑P	**P**	**10 56 42.8**	**+1.4**
FRIM	**Kepong**	**29.41**	**290**	⇓P	**P**	**10 56 46.2**	**0.0**
IPM	**Ipoh**	**30.43**	**292**	⇓P	**P**	**10 56 55.9**	**+0.7**
HNR	**Honiara**	**30.54**	**96**	LR	LR	11 09 33.8	
	comp=Z,68nm,19.0s,baz=2.7,slow=36						
KULM	**Kulim**	**31.09**	**293**	*e*P	**P**	**10 56 59.6**	**-1.4**
KULM	**Kulim**	**31.09**	**293**	⇑P	**P**	**10 57 01.8**	**+0.8**
PSI	**Prapat**	**31.80**	**287**	P	**P**	**10 57 06.1**	**-1.2**
	comp=Z,12nm,0.7s,mb4.7,baz=118,slow=6.7,SNR=11						
DZM	**Mont Dzumac**	**38.79**	**116**	LR	LR	11 11 50.8	
	comp=Z,80nm,18.6s,baz=15,slow=32						
CHTO	**Chiang Mai**	**39.55**	**312**	*e*P	**P**	**10 58 12.9**	**-0.4**
	comp=Z,6.3nm,0.6s,mb4.6						
CHTO	**Chiang Mai**	**39.55**	**312**	*e*P	**P**	**10 58 13.0**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
GYA	**Guiyang**	**40.09**	**328**	P	**P**	**10 58 17.6**	**-0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
WHN	**Wuhan**	**40.29**	**340**	*e*P	**P**	**10 58 19.3**	**0.0**
NJ2	**Nanjing**	**40.42**	**346**	*e*P	**P**	**10 58 19.5**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
KMI	**Kunming**	**41.28**	**322**	P	**P**	**10 58 28.7**	**+1.1**
KMI				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.8						
MJAR	**Matsushiro Arr**	**44.52**	**10**	P	**P**	**10 58 51.9**	**-1.5**
MJAR	**Matsushiro Arr**	**44.52**	**10**	P	**P**	**10 58 51.9**	**-1.5**
	comp=Z,5.0nm,0.8s,mb4.3,baz=185,slow=9.5,SNR=11						
KSRS	**Korea Array**	**44.62**	**359**	P	**P**	**10 58 54.4**	**+0.1**
	comp=Z,2.8nm,0.6s,mb4.2,baz=174,slow=8.6,SNR=17						
KSRS				PcP	PcP	11 00 35.3	+0.4
	comp=Z,1.7nm,0.7s,baz=192,slow=3.5,SNR=5.4						
XAN	**Xi'an**	**45.43**	**336**	P	**P**	**10 58 59.2**	**-1.5**
XAN				AMB	AMB		
	comp=Z,15nm,0.8s,mb4.8						
BJI	**Beijing**	**48.68**	**347**	P	**P**	**10 59 24.9**	**-0.9**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
SHL	**Shillong**	**48.83**	**313**	*e*P	**P**	**10 59 27.0**	**-0.3**
LZH	**Lanzhou**	**49.34**	**333**	*e*P	**P**	**10 59 31.0**	**0.0**
LZH				AMB	AMB		
	comp=Z,38nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,151nm,5.4s						
RPZ	**Rata Peaks**	**51.46**	**142**	P	**P**	**10 59 50.2**	**+3.3**
	comp=Z,8.9nm,0.8s,mb4.8,baz=312,slow=5.1,SNR=5.9						
LSA	**Lhasa**	**51.89**	**317**	*e*P	**P**	**10 59 51.0**	**+0.8**
	comp=Z,60nm,0.8s,mb5.7						
LSA	**Lhasa**	**51.89**	**317**	*e*P	**P**	**10 59 51.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.7						
ASAJ	**Asahikawa**	**52.69**	**12**	P	**P**	**10 59 55.9**	**0.0**
	comp=Z,11nm,0.8s,mb4.9,baz=181,slow=7.8,SNR=6.3						
ODAN	**Odare**	**52.87**	**312**	*e*P	**P**	**10 59 57.2**	**-0.3**
	comp=Z,71nm,0.5s,mb6.0						
TAPN	**Taplejung**	**52.91**	**312**	*e*P	**P**	**10 59 57.7**	**-0.1**
	comp=Z,87nm,0.3s						
GTA	**Gaotai**	**53.90**	**332**	P	**P**	**11 00 04.8**	**0.0**
GTA				PCP	PcP	11 01 10.4	+1.7
GTA				PP	PP	11 02 08.5	+1.0
GTA				S	**S**	**11 07 33.6**	**+3.3**
GTA				SS	SS	11 11 14.1	+0.6
GTA				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.4						
GTA				AMB	AMB		
	comp=Z,180nm,6.5s						
GTA				LR	LR		
	comp=N,213nm,12.9s						
GTA				LR	LR		
	comp=E,178nm,13.3s						
GTA				LR	LR		
	comp=Z,213nm,15.2s						
JIRN	**Jiri**	**54.20**	**312**	*e*P	**P**	**11 00 07.1**	**-0.1**
	comp=Z,60nm,0.5s,mb5.9						
KKN	**Kakani**	**54.94**	**311**	*e*P	**P**	**11 00 12.1**	**-0.5**
	comp=Z,53nm,0.4s,mb5.9						
GKN	**Gorkha**	**55.53**	**311**	*e*P	**P**	**11 00 16.5**	**-0.3**
	comp=Z,151nm,0.4s						
HABR	**Khabarovsk**	**55.86**	**5**	P	**P**	**11 00 14.5**	**-4.2**
HABR				*e*		11 01 13.2	
HABR				*e*		11 02 19.9	
AFI	**Afiamalu**	**58.31**	**102**	P	**P**	**11 00 37.3**	**+0.6**
	comp=Z,32nm,0.9s,mb5.3,baz=294,slow=12,SNR=2.5						
ULN	**Ulaanbaatar**	**58.37**	**343**	*e*P	**P**	**11 00 35.9**	**-0.5**
	comp=Z,13nm,1.9s,mb4.6						
ULN	**Ulaanbaatar**	**58.37**	**343**	⇑*e*P	**P**	**11 00 35.4**	**-1.0**
SONM	**Songino Array**	**58.54**	**342**	P	**P**	**11 00 38.0**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.5,baz=164,slow=7.7,SNR=27						
SONM				ScP	ScP	11 05 15.7	+0.5
	comp=Z,0.5nm,0.8s,baz=153,slow=4.8,SNR=4.5						
ZAK	**Zakamensk**	**61.75**	**342**	*e*P	**P**	**11 00 59.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MOY	**Mondy**	**63.59**	**341**	*e*P	**P**	**11 01 12.2**	**+0.6**
THN	**Thein Dam**	**64.42**	**311**	*e*P	**P**	**11 01 15.8**	**-1.7**
BOD	**Bodaibo**	**66.14**	**351**	*e*P	**P**	**11 01 27.3**	**-0.7**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MK31	**Makanchi Array**	**68.08**	**327**	*i* P	**P**	**11 01 40.5**	**0.0**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.8						
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**11 01 40.5**	**0.0**
MKAR	**Makanchi Array**	**68.08**	**327**	⇑*e*P	**P**	**11 01 40.4**	**-0.1**
MKAR	**Makanchi Array**	**68.08**	**327**	P	**P**	**11 01 40.5**	**0.0**
	comp=Z,12nm,0.5s,mb5.0,baz=123,slow=7.8,SNR=213						
YAK	**Yakutsk**	**69.21**	**0**	*e*P	**P**	**11 01 46.7**	**-0.5**
	comp=Z,26nm,0.6s,mb5.2						
YAK	**Yakutsk**	**69.21**	**0**	*e*P	**P**	**11 01 46.7**	**-0.4**
YAK				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.2						
KZA	**Kyzart**	**69.52**	**320**	P	**P**	**11 01 50.8**	**+1.3**
	SNR=19						
TKM2	**Tokmak 2**	**69.74**	**321**	*e*P	**P**	**11 01 51.1**	**+0.3**
	comp=Z,15nm,0.7s,mb4.9						
TKM2	**Tokmak 2**	**69.74**	**321**	*e*P	**P**	**11 01 51.1**	**+0.3**
TKM2				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
TKM2	**Tokmak 2**	**69.74**	**321**	P	**P**	**11 01 51.4**	**+0.6**
	SNR=19						
KBK	**Karagaybulak**	**70.01**	**320**	P	**P**	**11 01 53.4**	**+0.9**
	SNR=7.2						
UCH	**Uchtor**	**70.06**	**320**	P	**P**	**11 01 54.0**	**+1.2**
	SNR=13						
AAK	**Ala-Archa**	**70.28**	**320**	*e*P	**P**	**11 01 53.4**	**-0.7**
	comp=Z,11nm,0.7s,mb4.8						
AAK	**Ala-Archa**	**70.28**	**320**	⇑*e*P	**P**	**11 01 53.7**	**-0.4**
AAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
AAK	**Ala-Archa**	**70.28**	**320**	P	**P**	**11 01 55.3**	**+1.2**
	SNR=12						
KBL	**Kabul**	**70.36**	**311**	*e*P	**P**	**11 01 54.1**	**-0.7**
AML	**Almayashu**	**70.54**	**319**	P	**P**	**11 01 56.6**	**+0.9**
	SNR=22						
USP	**Ospenovka**	**70.60**	**321**	P	**P**	**11 01 56.5**	**+0.4**
	SNR=22						

EKS2	**Erkin-Say**	**70.75**	**320**	eP	**P**	**11 01 57.3**	**+0.3**
	comp=Z,9.0nm,0.6s,mb4.8						
EKS2	**Erkin-Say**	**70.75**	**320**	P	**P**	**11 01 57.5**	**+0.5**
	SNR=13						
VNDA	**Vanda**	**72.17**	**173**	P	**P**	**11 02 06.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=298,slow=9.2,SNR=7.3						
KURK	**Kurchatov**	**72.40**	**329**	eP	**P**	**11 02 06.1**	**-0.6**
	comp=Z,19nm,0.8s,mb5.0						
KURK	**Kurchatov**	**72.40**	**329**	⇑eP	**P**	**11 02 06.4**	**-0.3**
NVS	**Novosibirsk**	**72.84**	**334**	i P	**P**	**11 02 07.6**	**-1.6**
KK31	**Karatay Array**	**73.06**	**319**	i P	**P**	**11 02 09.6**	**-1.2**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.3						
BRVK	**Borovoye**	**78.00**	**328**	eP	**P**	**11 02 37.4**	**-1.4**
	comp=Z,2.3nm,0.6s,mb4.1						
BRVK	**Borovoye**	**78.00**	**328**	eP	**P**	**11 02 37.4**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
BILL	**Bilibino**	**79.68**	**13**	⇑eP	**P**	**11 02 44.3**	**-3.3**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
QSPA	**South Pole Qui**	**82.59**	**180**	eP	**P**	**11 03 04.6**	**+1.7**
	comp=Z,1.9nm,0.6s,mb4.1						
QSPA	**South Pole Qui**	**82.59**	**180**	P	**P**	**11 03 04.3**	**+1.4**
	comp=Z,1.0nm,0.6s,mb3.9,baz=304,slow=7.3,SNR=16						
AKTK	**Aktyubinsk**	**83.85**	**323**	P	**P**	**11 03 09.7**	**-0.2**
AKTO	**Aktyubinsk**	**83.85**	**323**	P	**P**	**11 03 09.7**	**-0.2**
	comp=Z,7.9nm,0.7s,mb4.7,baz=110,slow=7.6,SNR=34						
ARU	**Arti**	**85.58**	**328**	eP	**P**	**11 03 17.3**	**-1.0**
	comp=Z,6.1nm,0.8s,mb4.6						
ARU	**Arti**	**85.58**	**328**	eP	**P**	**11 03 16.6**	**-1.8**
KBD	**Kabd**	**86.15**	**300**	eP	**P**	**11 03 20.7**	**-1.1**
KBD				AMb	AMB	11 03 24.3	
	comp=Z,82nm,1.0s,mb5.6						
UMR	**Umm Al-Rimmam**	**86.20**	**300**	eP	**P**	**11 03 21.2**	**-0.8**
UMR				AMb	AMB	11 03 22.3	
	comp=Z,35nm,0.4s,mb5.6						
RDF	**Al-Radifah**	**86.23**	**300**	eP	**P**	**11 03 21.6**	**-0.6**
RDF				AMb	AMB	11 03 22.4	
	comp=Z,37nm,0.5s,mb5.6						
NAY	**Al-Naaiem**	**86.55**	**300**	eP	**P**	**11 03 23.1**	**-0.7**
NAY				AMb	AMB	11 03 24.3	
	comp=Z,32nm,0.7s,mb5.3						
RST	**Umm Al-Ruwaisa**	**86.81**	**300**	eP	**P**	**11 03 24.0**	**-1.0**
RST				AMb	AMB	11 03 25.3	
	comp=Z,65nm,0.5s,mb5.8						
KMBO	**Kilima Mbogo**	**91.72**	**269**	⇑eP	**P**	**11 03 52.2**	**+3.7**
KMBO	**Kilima Mbogo**	**91.72**	**269**	P	**P**	**11 03 48.9**	**+0.4**
	comp=Z,0.9nm,0.3s,mb4.4,baz=93,slow=4.3,SNR=4.0						
OBN	**Obninsk**	**97.47**	**325**	⇑eP	**P**	**11 04 12.5**	**-1.3**
OBN				ePS	PS	11 16 51.6	-15
OBN				eSS	SS	11 22 14.9	+5.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9						
ARCES	**ARCESS Array B**	**101.64**	**340**	P	Pdif	11 04 32.0	-0.4
	comp=Z,0.7nm,0.5s,baz=61,slow=6.1,SNR=12						
AKASG	**Malin Array Be**	**101.95**	**320**	P	Pdif	11 04 33.4	-0.5
	comp=Z,0.3nm,0.5s,baz=84,slow=3.2,SNR=3.5						
AKASG				PKiKP	PKiKP	11 08 54.9	-1.1
	comp=Z,0.3nm,0.4s,baz=108,slow=4.4,SNR=4.5						
FINES	**FINESS Array B**	**102.69**	**331**	i P	Pdif	11 04 37.9	+0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**102.69**	**331**	P	Pdif	11 04 36.4	-0.8
	comp=Z,1.6nm,0.9s,baz=72,slow=6.2,SNR=3.3						
YKA	**Yellowknife Ar**	**108.47**	**26**	PKPdf	PKiKP	11 09 07.6	-0.1
YKA				PKKPbc	PKKPbc	11 20 18.4	-2.3
YKA	**Yellowknife Ar**	**108.47**	**26**	PKiKP	PKiKP	11 09 07.6	-0.1
	comp=Z,0.6nm,0.7s,baz=297,slow=2.0,SNR=8.1						
YKA				PKKPbc	PKKPbc	11 20 18.4	-2.3
	comp=Z,0.4nm,0.5s,baz=113,slow=3.4,SNR=7.3						
GERES	**GERESS Array B**	**112.16**	**320**	PKiKP	PKiKP	11 09 15.1	-0.1
	comp=Z,1.0nm,0.5s,baz=54,slow=1.7,SNR=12						
KEST	**Kesra**	**118.37**	**307**	PKP	PKPdf	11 09 27.7	+0.2
	comp=Z,4.0nm,1.1s,baz=89,slow=8.1,SNR=4.1						
ANMO	**Albuquerque**	**122.22**	**53**	⇑iPKIKP	PKPdf	11 09 35.8	+0.9
ANMO	**Albuquerque**	**122.22**	**53**	PKP	PKPdf	11 09 36.3	+1.4
	comp=Z,1.0nm,0.7s,baz=276,slow=2.0,SNR=3.4						
ULM	**Lac du Bonnet**	**123.23**	**33**	PKP	PKPdf	11 09 35.6	-0.8
	comp=Z,0.6nm,0.4s,baz=293,slow=3.7,SNR=6.1						
TXAR	**Lajitas Array**	**125.86**	**59**	PKP	PKPdf	11 09 43.2	+1.1
TXAR	**Lajitas Array**	**125.86**	**59**	PKP	PKPdf	11 09 43.2	+1.1
	comp=Z,0.4nm,0.3s,baz=270,slow=1.4,SNR=10.0						
ESDC	**Sonseca Array**	**127.17**	**315**	PKP	PKPdf	11 09 44.6	+0.3
	comp=Z,0.1nm,0.3s,baz=85,slow=2.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**128.04**	**281**	PKP	PKPdf	11 09 46.6	+0.1
	comp=Z,1.5nm,0.7s,baz=69,slow=1.8,SNR=12						
SCHQ	**Schefferville**	**130.98**	**12**	PKP	PKPdf	11 09 51.5	+0.5
	comp=Z,1.8nm,0.8s,baz=339,slow=4.5,SNR=6.4						
SCHQ				SKPbc	SKPbc	11 13 03.5	-0.3
	comp=Z,1.1nm,0.6s,baz=330,slow=5.8,SNR=6.3						
DBIC	**Dimbokro**	**134.35**	**272**	PKP	PKPdf	11 09 59.4	+0.9
DBIC	**Dimbokro**	**134.35**	**272**	PKP	PKPdf	11 09 59.4	+0.9
	comp=Z,1.3nm,0.5s,baz=114,slow=3.9,SNR=5.9						
LPAZ	**La Paz**	**150.93**	**144**	PKPbc	PKPbc	11 10 35.9	+2.6
	comp=Z,1.9nm,0.5s,baz=222,slow=2.8,SNR=11						

*IDC **11** 10:57:33.8±0.7, 51.72N×175.43W, h0km, mb3.9/14, mb1 4.1/15, mb1mx4.0/23, mbtmp3.9/15, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/41, Error ellipse: s-maj=27.1km s-min=15.3km az=160.0*
*ISCJB **11** 10:57:39.2±1.5, 51.6N±0.1×175.24W±0.09, h51km±13km, mb4.2/20, MS3.9/3, Error ellipse: s-maj=20.5km s-min=7.4km az=160.1*
*NEIC **11** 10:57:39.9±1.5, 51.46N×175.17W, h44km±15km, mb4.1/4, ML4.3(AEIC), Error ellipse: s-maj=21.1km s-min=12.3km az=157.0*
*BJI **11** 10:57:40.1, 52.11N×175.90W, h12km, mB5.0, mb4.7, Ms4.9, Msz4.6*
ISC 11 10:57:41.1±1.3**, 51.6N**±0.1×**175.26W**±0.09**, h55km**±11km**, n38, σ0.99**/35**, mb4.2**/20**, MS3.9**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**3.41**	**268**	P	**Pn**	**10 58 30.9**	**-0.8**
AMKA				S	**Sn**	**10 59 10.8**	**0.0**
SDPT	**Sand Point**	**9.58**	**61**	eP	**Pn**	**10 59 56.2**	**+0.1**
	99nm,1.0s						
GAMB	**Gambell**	**12.35**	**7**	ePn	**Pn**	**11 00 34.5**	**+0.6**
KDAK	**Kodiak Island**	**14.46**	**56**	Pn	**Pn**	**11 01 00.1**	**-2.2**
	0.7nm,0.3s,baz=303,slow=5.3,SNR=10						
TNA	**Tin City**	**14.49**	**12**	ePn	**Pn**	**11 01 05.5**	**+2.8**
	3.9nm,0.5s						
PMR	**Palmer**	**17.39**	**45**	eP	**Pn**	**11 01 39.6**	**0.0**
	12nm,1.4s						
IMA2	**Indian Mountai**	**18.14**	**29**	eP	**Pn**	**11 01 50.2**	**+1.5**
COLA	**College**	**19.39**	**36**	eP	**Pn**	**11 02 02.2**	**-1.5**
	6.2nm,0.9s						
EGAK	**Eagle**	**21.94**	**40**	eP	**P**	**11 02 29.0**	**-0.6**
	7.1nm,0.6s,mb4.3						
DAWY	**Dawson**	**22.44**	**42**	eP	**P**	**11 02 35.3**	**+0.4**
INK	**Inuvik**	**26.01**	**34**	P	**P**	**11 03 08.5**	**0.0**
	0.8nm,0.3s,mb3.7,baz=225,slow=6.9,SNR=8.4						
YKA	**Yellowknife Ar**	**33.46**	**47**	P	**P**	**11 04 14.4**	**-0.1**
YKA				PcP	PcP	11 06 55.2	+1.0
YKA	**Yellowknife Ar**	**33.46**	**47**	P	**P**	**11 04 14.4**	**-0.1**
	0.2nm,0.4s,mb3.4,baz=277,slow=8.4,SNR=6.6						
YKA				PcP	PcP	11 06 55.2	+1.0
	0.3nm,0.4s,baz=286,slow=3.3,SNR=7.2						
MJAR	**Matsushiro Arr**	**36.01**	**264**	LR	LR	11 19 53.9	
	comp=Z,70nm,18.6s,MS3.5,baz=295,slow=37						
NEW	**Newport**	**36.72**	**72**	eP	**P**	**11 04 43.5**	**+0.9**
	2.1nm,0.5s,mb4.2						
NEW	**Newport**	**36.72**	**72**	P	**P**	**11 04 44.0**	**+1.4**
	2.6nm,0.5s,mb4.3,baz=309,slow=8.5,SNR=17						
EDM	**Edmonton**	**36.76**	**62**	eP	**P**	**11 04 43.6**	**+0.8**
NVAR	**Mina Array Bea**	**41.33**	**86**	P	**P**	**11 05 21.9**	**+0.7**
NVAR	**Mina Array Bea**	**41.33**	**86**	P	**P**	**11 05 21.9**	**+0.7**
	0.2nm,0.5s,mb3.0,baz=294,slow=6.8,SNR=2.8						
KSRS	**Korea Array**	**41.84**	**273**	P	**P**	**11 05 25.9**	**+0.5**
	2.6nm,0.8s,mb3.9,baz=66,slow=8.2,SNR=5.5						
BJI	**Beijing**	**47.48**	**284**	P	**P**	**11 06 11.6**	**+1.3**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.6						
ULM	**Lac du Bonnet**	**47.69**	**59**	P	**P**	**11 06 11.3**	**-0.5**
	comp=Z,1.3nm,0.4s,mb4.3,baz=282,slow=8.2,SNR=5.1						
SONM	**Songino Array**	**48.51**	**298**	PcP	PcP	11 07 43.9	+0.6
	comp=Z,1.0nm,0.8s,baz=65,slow=2.3,SNR=7.0						
NJ2	**Nanjing**	**51.01**	**274**	eP	**P**	**11 06 42.5**	**+5.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
TXAR	**Lajitas Array**	**56.43**	**84**	P	**P**	**11 07 17.3**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=305,slow=5.4,SNR=6.4						
LZH	**Lanzhou**	**57.43**	**288**	eP	**P**	**11 07 31.0**	**+7.0**
LZH				XP	sP	11 07 33.5	-11
LZH				AP	pP	11 07 33.0	-5.7
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
ARCES	**ARCESS Array B**	**58.22**	**352**	P	**P**	**11 07 28.2**	**-0.8**
	comp=Z,3.6nm,0.9s,mb4.4,baz=13,slow=10,SNR=3.6						
SCHQ	**Schefferville**	**58.43**	**40**	P	**P**	**11 07 30.1**	**-0.6**
	comp=Z,1.2nm,0.7s,mb4.0,baz=328,slow=9.5,SNR=3.6						
MKAR	**Makanchi Array**	**61.60**	**310**	P	**P**	**11 07 50.8**	**-1.8**
	comp=Z,0.3nm,0.3s,mb3.9,baz=40,slow=6.2,SNR=4.1						
GYA	**Guiyang**	**62.49**	**279**	P	**P**	**11 08 02.4**	**+3.6**
GYA				AP	pP	11 08 07.6	-6.1
GYA				XP	sP	11 08 10.2	-10
GYA				PCP	PcP	11 08 41.8	+4.2
GYA				PP	PP	11 10 21.9	+5.4
GYA				SCP	ScP	11 12 41.9	+7.2
GYA				S	**S**	**11 16 27.2**	**+5.2**
GYA				SKS		11 17 50.5	
GYA				SS	SS	11 20 32.4	+6.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.9						
GYA				AMB	AMB		
	comp=Z,90nm,5.8s						
GYA				LR	LR		
	comp=N,410nm,20.8s,MS4.7						
GYA				LR	LR		
	comp=E,390nm,21.6s,MS4.7						
GYA				LR	LR		
	comp=Z,470nm,20.2s,MS4.7						
KMI	**Kunming**	**65.87**	**280**	P	**P**	**11 08 26.1**	**+5.1**
KMI				XP	sP	11 08 34.3	-7.8
KMI				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
KMI				LR	LR		
	comp=Z,44nm,22.3s,MS3.6						
NOA	**NORSAR Array B**	**67.59**	**357**	P	**P**	**11 08 31.0**	**-0.3**
	comp=Z,1.5nm,0.9s,mb4.0,baz=5.1,slow=6.2,SNR=3.1						
AKASG	**Malin Array Be**	**75.97**	**344**	P	**P**	**11 09 20.8**	**-1.0**
	comp=Z,0.5nm,0.5s,mb3.7,baz=18,slow=6.5,SNR=2.7						
WRA	**Warramunga Arr**	**83.75**	**227**	P	**P**	**11 10 03.5**	**-0.5**
	comp=Z,0.6nm,0.4s,mb4.1,baz=32,slow=5.6,SNR=4.7						
ASAR	**Alice Springs**	**87.19**	**225**	P	**P**	**11 10 21.6**	**+0.5**
	comp=Z,1.2nm,0.8s,mb4.2,baz=26,slow=5.3,SNR=6.6						
TORD	**Torodi Ar. Bea**	**115.47**	**3**	PKP	PKPdf	11 16 15.8	-1.1
	comp=Z,0.5nm,0.7s,baz=352,slow=1.4,SNR=4.8						
MAW	**Mawson**	**148.02**	**218**	PKPbc	PKPbc	11 17 19.6	+0.7
	comp=Z,2.8nm,0.5s,baz=85,slow=4.3,SNR=6.8						
BOSA	**Boshof**	**152.37**	**318**	PKPbc	PKPbc	11 17 31.2	+0.6
	comp=Z,2.6nm,0.5s,baz=23,slow=2.8,SNR=15						
BOSA				PKPab	PKPab	11 17 40.7	-0.1
	comp=Z,1.8nm,0.5s,baz=125,slow=2.4,SNR=4.6						

IDC 11 10:59:24.5±27.0**, 22.33S**×**173.01W, h0km, mb4.2**/4**, mb1 4.4**/4**, mb1mx3.9**/15**, mbtmp4.2**/4**, Error ellipse: s-maj=506.3km s-min=149.9km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.96**	**266**	P	P	11 06 44.9	+0.7
	4.7nm,0.5s,baz=105,slow=10,SNR=10						
STKA	**Stephens Creek**	**41.26**	**247**	P	P	11 07 10.5	-1.1
	2.4nm,0.6s,baz=77,slow=10,SNR=5.5						
ASAR	**Alice Springs**	**48.65**	**258**	P	P	11 08 10.3	-0.2
	0.7nm,0.5s,baz=89,slow=7.3,SNR=5.8						
WRA	**Warramunga Arr**	**48.96**	**263**	P	P	11 08 13.2	+0.2
	1.9nm,0.4s,baz=99,slow=8.3,SNR=14						

*NEIC **11** 11:00:12.9, 18.23N×100.87W, h55km, MD4.1(MEX), After MEX.*
MEX 11 11:00:12.9±1.0**, 18.24N**×**100.86W, h53km**±17km**, MD4.1, 3C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.85**	**223**	⇑iP	Pn	11 00 27.1	-1.6
ZIIG				i S	Sn	11 00 38.2	-2.2
MEIG	**Mezcala**	**1.22**	**105**	i P	Pn	11 00 32.7	-0.9
MEIG				i S	Sn	11 00 46.8	-2.3
PLIG	**Platanillo**	**1.30**	**83**	⇑iP	Pn	11 00 33.8	-0.9
PLIG				i S	Sn	11 00 49.8	-1.3
CAIG	**El Cayaco**	**1.31**	**154**	⇑iP	Pn	11 00 33.0	-1.9
CAIG				i S	Sn	11 00 50.8	-0.6
MOIG	**Morelia**	**1.47**	**348**	i P	Pn	11 00 35.1	-1.9
MOIG				i S	Sn	11 00 54.2	-0.9
ACX	**Acapulco**	**1.63**	**146**	i P	Pn	11 00 37.0	-2.3
SZVM	**Salazar**	**1.77**	**52**	eP	Pn	11 00 38.4	-2.7
SZVM				i S	Sn	11 00 59.6	-2.8
YAIG	**Yautepec**	**1.81**	**70**	i P	Pn	11 00 41.0	-0.7
YAIG				i S	Sn	11 01 02.5	-1.0
PTVM	**Pico Tres Padr**	**2.13**	**51**	i P	Pn	11 00 44.8	-1.3
PTVM				i S	Sn	11 01 10.0	-1.4
PPM	**Popocatepetl**	**2.27**	**68**	i P	Pn	11 00 48.5	+0.5
PPM				i S	Sn	11 01 12.8	-2.0
MMIG	**Aquila**	**2.36**	**272**	i P	Pn	11 00 48.8	-0.4
MMIG				i S	Sn	11 01 16.5	-0.6
IIO	**Organos**	**2.43**	**56**	i P	Pn	11 00 49.7	-0.4
IIO				i S	Sn	11 01 19.3	+0.6
UTMO	**Huajuapan**	**2.94**	**97**	i P	Pn	11 00 57.4	+0.3
UTMO				i S	Sn	11 01 28.4	-2.7
SFJM	**Santa Fe**	**3.04**	**318**	eP	Pn	11 00 58.0	-0.5
TPIG	**Tehuac#an**	**3.33**	**86**	i P	Pn	11 01 02.6	+0.2
TPIG				i S	Sn	11 01 39.1	-1.6
VHO	**Vista Hermosa**	**4.10**	**106**	i P	Pn	11 01 14.2	+1.1
VHO				i S	Sn	11 01 58.5	-1.3
OXX	**Oaxaca**	**4.11**	**106**	eP	Pn	11 01 15.5	+2.3
ANIG	**Ahuacatlan**	**4.44**	**310**	i P	Pn	11 01 22.5	+4.7
ANIG				i S	Sn	11 02 06.0	-2.2
LVIG	**Laguna Verde**	**4.46**	**70**	i P	Pn	11 01 21.8	+3.9
ZAIG	**Zacatecas**	**4.78**	**341**	i P	Pn	11 01 23.7	+1.2
ZAIG				i S	Sn	11 02 17.9	+1.3
CMIG	**Matias Romero**	**5.81**	**100**	i P	Pn	11 01 36.7	+0.2
LNIG	**Linares**	**6.75**	**11**	eP	Pn	11 01 45.3	-4.1

BJI 11 11:07:02.1, 47.89N×**122.32E, h18km, ML3.7, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CN2	**Changchun**	**4.64**	**151**	ePG	Pg	11 08 23.6	-7.2
CN2				eSG	Sg	11 09 23.6	-7.3
CN2				Smax			
	comp=N,50nm,0.6s						
CN2				Smax			
	comp=E,40nm,0.6s						

*ISCJB **11** 11:14:22.1±3.4, 2.7N±0.1×128.5E±0.3, h65km±34km, mb3.9/7, Error ellipse: s-maj=54.3km s-min=14.4km az=168.7*
*IDC **11** 11:14:23.4±2.4, 2.67N×128.58E, h58km±21km, mb3.6/8, mb1 3.8/8, mb1mx3.7/16, mbtmp3.6/8, MS3.3/1, Ms1 3.3/1, ms1mx2.8/30, Error ellipse: s-maj=54.4km s-min=13.7km az=81.0*
ISC 11 11:14:22.5±3.5**, 2.7N**±0.1×**128.6E**±0.3**, h50km**±37km**, n11, σ0.33**/10**, mb3.9**/7**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	**Ternate**	**2.24**	**213**	⇓eP	**Pn**	**11 14 57.0**	**-0.2**
BATI	**Kupang**	**13.70**	**201**	LR	LR	11 23 13.5	
	comp=Z,123nm,18.0s,baz=61,slow=39						
FITZ	**Fitzroy Crossi**	**20.85**	**188**	P	**P**	**11 19 00.9**	**+0.7**
	2.2nm,1.0s,baz=356,slow=18,SNR=3.1						
WRA	**Warramunga Arr**	**23.17**	**166**	P	**P**	**11 19 25.1**	**0.0**
	2.1nm,0.6s,mb3.8,baz=344,slow=10,SNR=29						
WRA				PcP	PcP	11 23 11.7	-0.4
	0.3nm,0.7s,baz=340,slow=2.4,SNR=2.9						
WRA				ScP	ScP	11 26 44.7	-1.4
	0.2nm,0.8s,baz=306,slow=5.3,SNR=3.6						
WB2	**Warramunga Arr**	**23.18**	**166**	eP	**P**	**11 19 25.0**	**-0.1**
ASAR	**Alice Springs**	**26.69**	**169**	P	**P**	**11 19 57.0**	**0.0**
	0.6nm,0.5s,mb3.4,baz=354,slow=8.3,SNR=13						
ASAR				PcP	PcP	11 23 19.8	-0.1
	0.6nm,0.6s,baz=356,slow=2.3,SNR=10.0						
ASAR				ScP	ScP	11 26 54.5	-1.4
	0.5nm,0.7s,baz=342,slow=1.5,SNR=5.2						
KSRS	**Korea Array**	**34.62**	**359**	P	**P**	**11 21 07.4**	**+0.5**
	3.8nm,0.7s,mb4.4,baz=177,slow=9.2,SNR=13						
MJAR	**Matsushiro Arr**	**34.85**	**14**	P	**P**	**11 21 08.8**	**-0.1**
	2.4nm,0.8s,mb4.2,baz=184,slow=7.6,SNR=3.6						
STKA	**Stephens Creek**	**36.51**	**161**	P	**P**	**11 21 22.7**	**-0.5**
	1.1nm,0.4s,mb4.1,baz=327,slow=16,SNR=6.3						
SONM	**Songino Array**	**48.90**	**340**	P	**P**	**11 23 03.1**	**-0.2**
	0.5nm,0.5s,mb3.8,baz=146,slow=9.3,SNR=4.8						
MKAR	**Makanchi Array**	**59.48**	**325**	P	**P**	**11 24 20.2**	**-0.2**
	0.4nm,0.4s,mb3.8,baz=105,slow=8.0,SNR=7.2						

*NNC **11** 11:31:35.3±2.7, 42.17N×79.14E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=29.9km s-min=8.5km az=144.0*
*BJI **11** 11:31:36.9, 42.07N×79.41E, h6km, ML2.9*
*ISCJB **11** 11:31:37.5±1.0, 42.25N±0.06×79.16E±0.08, h10km, Error ellipse: s-maj=10.3km s-min=6.3km az=42.4*
ISC 11 11:31:39.2±1.0**, 42.24N**±0.06×**79.07E**±0.08**, h10km, n15, σ0.97**/18**, 5C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**1.83**	**303**	⇓P	**Pn**	**11 32 09.5**	**-1.3**
	71nm,0.5s						
KNDC				⇑S	**Sn**	**11 32 35.5**	**+1.4**
	79nm,0.4s						
ULHL	**Ulahol**	**2.10**	**271**	P	**Pn**	**11 32 12.7**	**-1.8**
	SNR=71						
TKM2	**Tokmak 2**	**2.66**	**286**	⇑Pn	**Pn**	**11 32 21.7**	**-0.3**
	1.4nm,0.5s						
TKM2				⇑Lg		11 32 57.8	
	11nm,0.6s						
TKM2	**Tokmak 2**	**2.66**	**286**	P	**Pn**	**11 32 21.9**	**-0.2**
	SNR=38						
KZA	**Kyzart**	**2.85**	**268**	P	**Pn**	**11 32 25.2**	**+0.5**
	SNR=22						
KBK	**Karagaybulak**	**3.08**	**279**	P	**Pn**	**11 32 27.9**	**0.0**
	SNR=15						
CHMS	**Chumysh**	**3.28**	**285**	P	**Sb**	**11 33 17.5**	**+0.1**
	SNR=6.5						
UCH	**Uchtor**	**3.39**	**271**	P	**Pn**	**11 32 32.5**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**3.41**	**278**	P	**Pn**	**11 32 32.5**	**0.0**
	SNR=13						
USP	**Ospenovka**	**3.52**	**289**	P	**Pn**	**11 32 33.2**	**-0.7**
	SNR=8.4						
KSH	**Kashi**	**3.59**	**222**	eP	**Pn**	**11 32 35.7**	**+0.7**
KSH				S	**Sb**	**11 33 27.1**	**+0.6**
KSH				Smax			
	comp=N,89nm,0.2s						
KSH				Smax			
	comp=E,100nm,0.2s						
EKS2	**Erkin-Say**	**3.94**	**278**	P	**Pb**	**11 32 47.0**	**-1.8**
	SNR=5.7						
AML	**Almayashu**	**4.00**	**270**	P	**Pn**	**11 32 46.3**	**+5.7**
	SNR=10						
MK31	**Makanchi Array**	**5.10**	**26**	Pn	**Pn**	**11 32 55.1**	**-0.6**
	comp=E,1.2nm,0.2s,baz=208,slow=13,SNR=52						
MK31				Sn	**Sn**	**11 33 55.6**	**+1.0**
	comp=E,2.1nm,0.4s,baz=194,slow=13,SNR=11						
MK31				⇑Lg		11 34 17.2	
	comp=E,5.9nm,0.7s,baz=200,slow=24,SNR=4.0						
KK31	**Karatay Array**	**6.37**	**281**	Pg	**Pb**	**11 33 31.6**	**+1.5**
	comp=E,3.6nm,0.8s,baz=91,slow=15,SNR=14						
KK31				⇑Lg		11 34 52.6	
	comp=E,3.4nm,0.4s,baz=91,slow=32,SNR=9.4						

*NIED **11** 11:35:00, 46.50N×153.10E, h5km, Mw4.4 Best double couple: $M_0$4.80000×10^{15} NP1:ϕ_s270.00000°, δ24.00000°, λ108.00000°. NP2:ϕ_s71.00000°, δ68.00000°, λ82.00000°.*
*JMA **11** 11:35:28.8±0.7, 46.49N×153.09E, h30km, M4.5*
*ISCJB **11** 11:35:29.5±1.1, 46.4N±0.1×152.8E±0.1, h34km±10km, mb4.2/21, MS3.2/2, Error ellipse: s-maj=20.8km s-min=7.0km az=147.4*
*MOS **11** 11:35:31.4±1.1, 46.73N×152.74E, h37km, mb4.3/13, Error ellipse: s-maj=14.2km s-min=9.6km az=96.0*
*IDC **11** 11:35:34.8±4.0, 46.30N×152.88E, h71km±38km, mb3.8/12, mb1 4.0/13, mb1mx3.8/21, mbtmp3.8/13, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/29, Error ellipse: s-maj=36.6km s-min=17.0km az=173.0*
ISC 11 11:35:31.6±0.8**, 46.4N**±0.1×**152.9E**±0.1**, h39km**±7km**, n84, σ1.15**/97**, mb4.2**/21**, MS3.2**/2**, 3C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.71**	**253**	i PN	**Pn**	**11 36 21.0**	**-5.3**
KUR				i S	**Sn**	**11 37 11.0**	**+2.3**
KUR				pmax	pmax		
	comp=N,240nm,0.4s						
KUR				pmax	pmax		
	comp=E,100nm,0.4s						
KUR				pmax	pmax		
	comp=Z,830nm,0.4s						
KUR				smax			
	comp=N,1μm,1.0s						
KUR				smax			
	comp=E,340nm,1.0s						
SKR	**Severo-Kuril's**	**4.78**	**25**	ePN	**Pn**	**11 36 39.4**	**-1.6**
SKR				eS	**Sn**	**11 37 30.9**	**-4.1**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=N,210nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.51**	**247**	ePN	**Pn**	**11 36 53.7**	**+2.7**
YUK				pmax	pmax		
	comp=Z,240nm,0.5s						
NEM2	**Nemuro 2**	**5.92**	**242**	P	**Pn**	**11 36 55.6**	**-1.1**
NEM2				eS	**Sn**	**11 38 00.3**	**-3.0**
JRA	**Rausu**	**6.03**	**249**	P	**Pn**	**11 37 00.2**	**+2.1**
JRA				eS	**Sn**	**11 38 08.4**	**+2.6**
JNK	**Nakash**	**6.45**	**247**	P	**Pn**	**11 37 05.0**	**+1.1**
JNK				eS	**Sn**	**11 38 17.0**	**+0.8**
JAK	**Akkeshi**	**6.77**	**243**	P	**Pn**	**11 37 07.3**	**-1.0**
JAK				eS	**Sn**	**11 38 20.9**	**-3.1**
JTKR	**Abashiri--Toko**	**6.80**	**252**	P	**Pn**	**11 37 10.9**	**+2.1**
JAR	**Ashorobuto**	**7.20**	**248**	P	**Pn**	**11 37 15.5**	**+1.3**
JAR				eS	**Sn**	**11 38 34.6**	**+0.1**
JOB	**Onbets**	**7.35**	**245**	P	**Pn**	**11 37 16.8**	**+0.5**
JOB				eS	**Sn**	**11 38 36.7**	**-1.7**
PET	**Petropavlovsk**	**7.59**	**27**	ePN	**Pn**	**11 37 18.3**	**-1.3**
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
JKK2	**Kamakawa 2**	**7.61**	**254**	P	**Pn**	**11 37 22.6**	**+2.7**
ASAJ	**Asahikawa**	**7.62**	**256**	PN	**Pn**	**11 37 23.5**	**+3.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.62**	**256**	P	**Pn**	**11 37 23.5**	**+3.5**
	comp=Z,1.8nm,0.3s,baz=97,slow=16,SNR=13						
JCH	**Churui**	**7.80**	**244**	P	**Pn**	**11 37 22.3**	**-0.2**
JCH				eS	**Sn**	**11 38 45.5**	**-3.9**
JAB	**Ashibetsu**	**8.11**	**253**	P	**Pn**	**11 37 30.1**	**+3.4**
JBT2	**Biratori 2**	**8.35**	**248**	P	**Pn**	**11 37 31.1**	**+1.1**
JBT2				eS	**Sn**	**11 39 03.2**	**+0.3**
JNBK	**Urakawa-nobuka**	**8.36**	**244**	P	**Pn**	**11 37 29.5**	**-0.6**
JNBK				eS	**Sn**	**11 39 00.3**	**-2.9**
JNB	**Noboribetsu**	**9.35**	**249**	P	**Pn**	**11 37 44.3**	**+0.6**
JNB				eS	**Sn**	**11 39 26.5**	**-1.0**
JKB	**Kayabe**	**9.65**	**246**	P	**Pn**	**11 37 47.0**	**-0.8**
JKB				eS	**Sn**	**11 39 29.0**	**-5.9**
JYM2	**Yakumo 2**	**9.96**	**249**	P	**Pn**	**11 37 52.4**	**+0.4**
JANG	**Nango**	**10.24**	**238**	P	**Pn**	**11 37 52.4**	**-3.5**
JANG				eS	**Sn**	**11 39 40.0**	**-9.4**
JTM	**Tenmabayashi**	**10.25**	**241**	eS	**Sn**	**11 39 42.4**	**-7.2**
JTH	**Tanohata**	**10.33**	**235**	eS	**Sn**	**11 39 40.8**	**-11**
OFUJ	**Ofunato**	**11.03**	**232**	eS	**Sn**	**11 39 58.6**	**-10**
JIO	**Ouri**	**11.65**	**231**	eS	**Sn**	**11 40 11.2**	**-13**
MJAR	**Matsushiro Arr**	**14.76**	**233**	P	**Pn**	**11 38 54.2**	**-3.3**
	comp=Z,0.2nm,0.3s,baz=27,slow=11,SNR=4.9						
YAK	**Yakutsk**	**20.53**	**328**	⇑eP	**P**	**11 40 06.4**	**+0.2**
KSRS	**Korea Array**	**20.55**	**253**	P	**P**	**11 40 06.7**	**0.0**
	comp=Z,2.4nm,0.9s,baz=46,slow=11,SNR=4.5						
JNU	**Nakatsue**	**21.42**	**239**	LR	LR	11 49 54.3	
	comp=Z,47nm,18.2s,MS2.9,baz=142,slow=40						
BOD	**Bodaibo**	**26.09**	**310**	eP	**P**	**11 41 00.5**	**-0.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.7						
TIXI	**Tiksi**	**27.75**	**344**	eP	**P**	**11 41 14.7**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
ULN	**Ulaanbaatar**	**30.87**	**290**	⇑eP	**P**	**11 41 43.1**	**-0.8**
SONM	**Songino Array**	**31.31**	**290**	P	**P**	**11 41 48.2**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=89,slow=8.4,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM				PcP	PcP	11 44 40.7	-0.3
	comp=Z,0.4nm,0.7s,baz=101,slow=4.6,SNR=3.6						
SONM				LR	LR	11 55 18.4	
	comp=Z,92nm,18.6s,MS3.5,baz=353,slow=38						
ZAK	**Zakamensk**	**32.69**	**295**	*e*P	**P**	**11 41 59.3**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s,mb3.8						
INK	**Inuvik**	**42.02**	**32**	P	**P**	**11 43 19.4**	**+0.9**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	**Inuvik**	**42.02**	**32**	P	**P**	**11 43 19.4**	**+0.9**
	comp=Z,1.5nm,0.7s,mb3.7,baz=262,slow=7.9,SNR=6.6						
MKAR	**Makanchi Array**	**46.96**	**298**	P	**P**	**11 43 57.8**	**-0.5**
MKAR						11 45 30.2	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**46.96**	**298**	P	**P**	**11 43 57.8**	**-0.5**
	comp=Z,3.4nm,0.8s,mb4.3,baz=67,slow=7.8,SNR=24						
MKAR				PcP	PcP	11 45 30.2	0.0
	comp=Z,0.2nm,0.3s,baz=52,slow=2.8,SNR=2.6						
KURK	**Kurchatov**	**47.43**	**304**⇑	*e*P	**P**	**11 44 00.9**	**-0.9**
YKA	**Yellowknife Ar**	**51.28**	**36**	P	**P**	**11 44 31.5**	**+0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**51.28**	**36**	P	**P**	**11 44 31.5**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=299,slow=7.6,SNR=12						
AAK	**Ala-Archa**	**53.85**	**296**	*e*P	**P**	**11 44 49.6**	**-0.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ARU	**Arti**	**55.16**	**318**d	*i*P	**P**	**11 44 58.4**	**-1.3**
ARU				*e*		11 45 59.8	
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
ARCES	**ARCESS Array B**	**58.12**	**341**	P	**P**	**11 45 21.1**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**58.12**	**341**	P	**P**	**11 45 21.1**	**+0.6**
	comp=Z,1.5nm,0.9s,mb4.0,baz=20,slow=6.7,SNR=4.5						
NVAR	**Mina Array Bea**	**62.72**	**62**	P	**P**	**11 45 52.9**	**+0.5**
	comp=Z,2.0nm,0.9s,mb4.3,baz=303,slow=5.3,SNR=14						
FINES	**FINESS Array B**	**64.28**	**335**	*i* P	**P**	**11 46 02.5**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**64.28**	**335**	P	**P**	**11 46 02.5**	**+0.2**
	comp=Z,2.2nm,0.5s,mb4.4,baz=48,slow=6.6,SNR=17						
NB2	**NORSAR Subarra**	**68.50**	**341**	P	**P**	**11 46 29.6**	**+0.3**
	comp=Z,1.6nm,0.6s,mb4.2,baz=29,slow=6.2						
NOA	**NORSAR Array B**	**68.50**	**341**	P	**P**	**11 46 29.6**	**+0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**68.50**	**341**	P	**P**	**11 46 29.6**	**+0.3**
	comp=Z,2.0nm,0.6s,mb4.3,baz=28,slow=6.3,SNR=7.2						
KIV	**Kislovodsk**	**70.93**	**314**	*e*P	**P**	**11 46 45.7**	**+1.2**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
AKASG	**Malin Array Be**	**71.74**	**326**	*i* P	**P**	**11 46 49.7**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKASG	**Malin Array Be**	**71.74**	**326**	P	**P**	**11 46 49.6**	**+0.3**
	comp=Z,7.4nm,0.5s,mb4.8,baz=34,slow=6.2,SNR=29						
STHS	**Stebnicka Huta**	**75.73**	**330**	*e*P	**P**	**11 47 14.5**	**+1.8**
KOLS	**Kolonicke sedl**	**75.78**	**329**	*e*P	**P**	**11 47 13.6**	**+0.6**
KOLS	**Kolonicke sedl**	**75.78**	**329**	*e*P	**P**	**11 47 13.5**	**+0.5**
CRVS	**Cervenica-Dubn**	**76.09**	**329**	*e*P	**P**	**11 47 15.8**	**+1.0**
DPC	**Dobruska-Polom**	**76.56**	**333**	*e*P	**P**	**11 47 20.2**	**+2.8**
KECS	**Kecovo**	**76.79**	**330**	*e*P	**P**	**11 47 18.6**	**-0.1**
TXAR	**Lajitas Array**	**77.79**	**60**	P	**P**	**11 47 24.5**	**-0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**77.79**	**60**	P	**P**	**11 47 24.5**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=302,slow=4.2,SNR=24						
KHC	**Kasperske Hory**	**78.48**	**334**	*e*P	**P**	**11 47 29.0**	**+0.9**
KHC	**Kasperske Hory**	**78.48**	**334**	*e*P	**P**	**11 47 29.6**	**+1.5**
GERES	**GERESS Array B**	**78.69**	**334**	P	**P**	**11 47 30.3**	**+1.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**78.69**	**334**	P	**P**	**11 47 30.3**	**+1.0**
	comp=Z,1.1nm,0.7s,mb3.9,baz=40,slow=5.6,SNR=9.4						
GIVF	**Givet**	**79.97**	**340**	*e*P	**P**	**11 47 36.4**	**+0.2**
BAIF	**Baives**	**80.15**	**340**	*e*P	**P**	**11 47 36.6**	**-0.6**
CDF	**Champ du Feu**	**80.91**	**338**	*e*P	**P**	**11 47 41.0**	**-0.4**
	comp=Z,10nm,0.9s,mb4.4						
MEZF	**Maizieres J'vi**	**81.40**	**339**	*e*P	**P**	**11 47 43.9**	**0.0**
LDF	**La Druitiere**	**82.50**	**342**	*e*P	**P**	**11 47 48.8**	**-0.9**
	comp=Z,121nm,1.8s,mb5.2						
LOR	**Lormes**	**82.84**	**339**	*e*P	**P**	**11 47 50.9**	**-0.6**
GRR	**Gorron**	**82.84**	**343**	*e*P	**P**	**11 47 50.9**	**-0.6**
CABF	**La Chapelle**	**82.89**	**338**	*e*P	**P**	**11 47 51.6**	**-0.2**
SSF	**Saint Saulge**	**83.12**	**339**	*e*P	**P**	**11 47 52.9**	**-0.1**
AVF	**Avril sur Loir**	**83.41**	**339**	*e*P	**P**	**11 47 55.5**	**+1.0**
SMF	**Signal de Mont**	**83.43**	**339**	*e*P	**P**	**11 47 55.6**	**+1.0**
	comp=Z,64nm,1.5s,mb5.1						
LPG	**La Plagne**	**83.73**	**337**	*e*P	**P**	**11 47 55.8**	**-0.4**
	comp=Z,17nm,1.0s,mb4.8						
BGF	**Bois d'Agland**	**83.75**	**340**	*e*P	**P**	**11 47 55.8**	**-0.4**
TCF	**Toulx Ste Croi**	**84.16**	**340**	*e*P	**P**	**11 47 57.8**	**-0.5**
ORIF	**Oris-en-Rattie**	**84.51**	**337**	*e*P	**P**	**11 47 59.6**	**-0.5**
SMRF	**Simiane la Rot**	**85.46**	**337**	*e*P	**P**	**11 48 04.5**	**-0.4**
FRF	**La Foret Royal**	**85.55**	**336**	*e*P	**P**	**11 48 04.4**	**-1.0**

IDC 11 11:37:26.2±61.0**, 1617S**×**17516W, h0**km**, mb4.2**/3**, mb1 4.3**/3**, mb1mx3.8**/13**, mbtmp4.2**/3**, Error ellipse: s-maj=1159.0km s-min=170.6km az=79.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.19**	**240**	P	P	11 45 21.8	+0.8
	1.5nm,0.7s,baz=88,slow=7.5,SNR=6.3						
WRA	**Warramunga Arr**	**48.03**	**258**	P	P	11 46 07.0	-0.5
	0.6nm,0.5s,baz=96,slow=8.0,SNR=28						
ASAR	**Alice Springs**	**48.27**	**253**	P	P	11 46 09.2	-0.3
	4.2nm,0.4s,baz=89,slow=7.6,SNR=142						

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*KRSC **11** 12:10:02.9±0.4, 55.11N×162.29E, h35km±34km, ML4.5*
*ISCJB **11** 12:10:04.0±0.7, 55.13N±0.03×162.29E±0.10, h61km±6km, mb3.8/11, Error ellipse: s-maj=9.7km s-min=4.2km az=18.2*
*MOS **11** 12:10:04.0±1.2, 55.21N×162.11E, h60km, mb4.1/5, Error ellipse: s-maj=22.5km s-min=9.4km az=81.4*
*IDC **11** 12:10:08.2±12.0, 55.28N×161.92E, h75km±115km, mb3.5/10, mb1 3.7/10, mb1mx3.5/21, mbtmp3.5/10, Error ellipse: s-maj=26.7km s-min=18.2km az=125.0*
ISC 11 12:10:05.0±0.7**, 55.15N**±0.03×**162.31E**±0.10**, h52**km±7km**, n46,** σ0s91/60**, mb3.8**/11**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.10**	**15**	*e*P	**Pn**	**12 10 22.9**	**-1.1**
KBTR				*i* S	**Sn**	**12 10 38.9**	**+0.8**
ZLN	**Zelenaya**	**1.21**	**316**	*e*P	**Pn**	**12 10 25.6**	**0.0**
ZLN				*i* S	**Sn**	**12 10 41.5**	**+0.6**
TUMR	**Tumrok**	**1.24**	**277**	*e*P	**Pn**	**12 10 25.5**	**-0.5**
TUMR				*i* S	**Sn**	**12 10 43.2**	**+1.6**
BZMR	**Bezymyannaya**	**1.29**	**308**	*e*P	**Pn**	**12 10 26.4**	**-0.3**
CIRR	**Tsirk**	**1.31**	**318**	*e*P	**Pn**	**12 10 27.3**	**+0.5**
KMNR	**Kamenistaya**	**1.32**	**298**	*e*P	**Pn**	**12 10 26.8**	**-0.3**
KMNR				*i* S	**Sn**	**12 10 44.1**	**+0.5**
KIRR	**Kirishev**	**1.37**	**306**	*e*P	**Pn**	**12 10 27.5**	**-0.2**
KPT	**Kopyto**	**1.44**	**305**	*e*P	**Pn**	**12 10 28.6**	**0.0**
KRSR	**Krestovskiy**	**1.45**	**318**	*e*P	**Pn**	**12 10 28.4**	**-0.4**
KRSR				*i* S	**Sn**	**12 10 47.3**	**+0.6**
KLY	**Klyuchi**	**1.49**	**322**	*e*P	**Pn**	**12 10 28.0**	**-1.3**
KLY				*i* S	**Sn**	**12 10 45.6**	**-2.1**
SMKR	**Semkarok**	**1.51**	**342**	*e*P	**Pn**	**12 10 29.7**	**+0.1**
BDR	**Baidarnaya**	**1.55**	**337**	*e*P	**Pn**	**12 10 30.6**	**+0.5**
SRKR	**Sorokina**	**1.63**	**337**	*e*P	**Pn**	**12 10 31.7**	**+0.4**
KOZR	**Kozyr**	**1.64**	**305**	PN	**Pn**	**12 10 31.7**	**+0.3**
KOZ	**Kozyrevsk**	**1.65**	**304**	*e*P	**Pn**	**12 10 31.7**	**+0.2**
SRDR	**Sredinnyy**	**1.87**	**310**	*e*P	**Pn**	**12 10 34.8**	**+0.3**
SRDR				*i* S	**Sn**	**12 10 57.3**	**+0.4**
SPN	**Mys Shipunski**	**2.46**	**214**	*e*P	**Pn**	**12 10 40.5**	**-2.1**
SPN				*i* S	**Sn**	**12 11 07.6**	**-3.8**
NLC	**Nalytchevo**	**2.64**	**222**	*e*P	**Pn**	**12 10 44.6**	**-0.5**
NLC				*i* S	**Sn**	**12 11 14.6**	**-1.2**
AVH	**Avacha**	**2.82**	**229**	*e*P	**Pn**	**12 10 48.0**	**+0.4**
AVH				*i* S	**Sn**	**12 11 21.4**	**+1.1**
GNL	**Ganaly**	**2.94**	**242**	*e*P	**Pn**	**12 10 49.4**	**+0.3**
PET	**Petropavlovsk**	**3.03**	**227**⇓	*i*PN	**Pn**	**12 10 50.6**	**+0.2**
PET				*e*S	**Sn**	**12 11 25.8**	**+0.4**
PET				pmax	pmax		
	comp=Z,122nm,0.5s						
PET				smax			
	comp=E,345nm,0.5s						
PET				smax			
	comp=N,392nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
PET	**Petropavlovsk**	**3.03**	**227**	*e*P	**Pn**	**12 10 50.4**	**0.0**
PET				*i* S	**Sn**	**12 11 24.7**	**-0.7**
RUS	**Russkaya**	**3.53**	**221**	*e*P	**Pn**	**12 10 57.6**	**+0.3**
RUS				*i* S	**Sn**	**12 11 37.1**	**-0.7**
GRL	**Gorelyy**	**3.62**	**226**	*e*P	**Pn**	**12 10 59.4**	**+1.0**
GRL				*i* S	**Sn**	**12 11 39.9**	**+0.1**
ASAJ	**Asahikawa**	**16.81**	**237**	P	**Pn**	**12 13 59.9**	**+3.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**16.81**	**237**	P	**Pn**	**12 13 59.9**	**+3.3**
	comp=Z,0.5nm,0.3s,baz=47,slow=19,SNR=3.7						
TIXI	**Tiksi**	**21.81**	**332**	*e*P	**P**	**12 14 50.7**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.5						
TIXI				MLR	MLR		
	comp=Z,100nm,18.0s						
MJAR	**Matsushiro Arr**	**24.85**	**231**	P	**P**	**12 15 22.4**	**+0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	**Matsushiro Arr**	**24.85**	**231**	P	**P**	**12 15 22.4**	**+0.1**
	comp=Z,1.8nm,0.7s,mb3.7,baz=34,slow=8.3,SNR=4.0						
YKA	**Yellowknife Ar**	**40.77**	**45**	*e*P	**P**	**12 17 41.6**	**+1.1**
YKA	**Yellowknife Ar**	**40.77**	**45**	P	**P**	**12 17 41.6**	**+1.2**
	comp=Z,0.9nm,0.6s,mb3.6,baz=300,slow=7.8,SNR=17						
MKAR	**Makanchi Array**	**48.44**	**295**	P	**P**	**12 18 41.0**	**-0.8**
	comp=Z,0.2nm,0.2s,mb3.7,baz=36,slow=8.5,SNR=2.9						
ARCES	**ARCESS Array B**	**51.73**	**342**	P	**P**	**12 19 06.9**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ARCES	**ARCESS Array B**	**51.73**	**342**	P	**P**	**12 19 06.9**	**+0.5**
	comp=Z,3.4nm,1.1s,mb4.2,baz=31,slow=9.5,SNR=3.9						
FINES	**FINESS Array B**	**58.73**	**337**	*e*P	**P**	**12 19 55.6**	**-1.2**
FINES	**FINESS Array B**	**58.73**	**337**	P	**P**	**12 19 56.0**	**-0.8**
	comp=Z,2.3nm,0.9s,mb4.2,baz=22,slow=6.2,SNR=5.4						
NOA	**NORSAR Array B**	**61.91**	**345**	P	**P**	**12 20 17.5**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**61.91**	**345**	P	**P**	**12 20 17.5**	**-1.1**
	comp=Z,1.0nm,0.8s,mb4.0,baz=20,slow=6.8,SNR=2.8						
HFS	**Hagfors**	**62.37**	**343**	P	**P**	**12 20 20.3**	**-1.3**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**62.37**	**343**	P	**P**	**12 20 20.3**	**-1.3**
	comp=Z,1.4nm,0.6s,mb4.3,baz=67,slow=11,SNR=4.4						
TXAR	**Lajitas Array**	**68.66**	**69**	*e*P	**P**	**12 21 04.6**	**+1.9**
TXAR	**Lajitas Array**	**68.66**	**69**	P	**P**	**12 21 04.7**	**+2.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=296,slow=5.0,SNR=9.2						
WRA	**Warramunga Arr**	**78.50**	**207**	*e*P	**P**	**12 22 01.0**	**+0.7**
WRA	**Warramunga Arr**	**78.50**	**207**	P	**P**	**12 22 00.5**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.5,baz=20,slow=6.0,SNR=6.8						
ASAR	**Alice Springs**	**82.18**	**206**	*e*P	**P**	**12 22 21.2**	**+1.2**
ASAR	**Alice Springs**	**82.18**	**206**	P	**P**	**12 22 21.2**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.7,baz=17,slow=4.5,SNR=15						

IDC 11 12:10:15.8±4.2**, 5818S**×**14027W, h0**km**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.6**/11**, mbtmp3.5**/2**, Error ellipse: s-maj=1418.0km s-min=101.3km az=170.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**68.05**	**260**	P	P	12 21 17.2	+0.4
	0.4nm,0.8s,baz=144,slow=6.8,SNR=6.0						
WRA	**Warramunga Arr**	**70.88**	**263**	P	P	12 21 34.2	-0.2
	0.5nm,1.0s,baz=164,slow=4.3,SNR=4.7						
MKAR	**Makanchi Array**	**152.18**	**265**	PKPbc	PKPbc	12 30 12.1	0.0
	0.1nm,0.3s,baz=116,slow=3.4,SNR=2.7						

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*IDC **11** 12:29:05.5±1.1, 59.50S×26.15W, h0km, mb4.3/5, mb1 4.3/5, mb1mx4.1/14, mbtmp4.3/5, Error ellipse: s-maj=50.0km s-min=38.5km az=82.0*
*ISCJB **11** 12:29:06.6±0.8, 59.3S±0.1×26.2W±0.5, h10km, mb4.2/5, Error ellipse: s-maj=38.7km s-min=12.0km az=161.2*
ISC 11 12:29:08.7±0.8**, 59.2S**±0.1×**26.2W**±0.5**, h10**km**, n12,** σ0s85/8**, mb4.2**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.66**	**154**	*e*P	**Pn**	**12 32 23.1**	**+1.0**
VNA1				*e*		12 32 24.2	
VNA1				*e*		12 32 24.9	
VNA1				*e*		12 32 26.1	
VNA1				*e*		12 32 29.1	
VNA3	**Neumayer Olymp**	**13.83**	**157**	*e*P	**Pn**	**12 32 24.3**	**0.0**
VNA3				*e*		12 32 25.2	
VNA3				*e*		12 32 26.3	
VNA3				*e*		12 32 27.6	
VNA3				*e*		12 32 30.9	
VNA3				*e*		12 32 34.6	
VNA2	**Neumayer--Watz**	**14.06**	**154**	*e*P	**Pn**	**12 32 27.5**	**-0.1**
	baz=305,slow=16						
VNA2				*e*		12 32 28.4	
VNA2				*e*		12 32 29.6	
VNA2				*e*		12 32 30.8	
VNA2				*e*		12 32 33.4	
VNA2				*e*		12 32 37.3	
LPAZ	**La Paz**	**52.68**	**306**	P	**P**	**12 38 23.6**	**+0.5**
	0.6nm,0.5s,mb3.8,baz=180,slow=10,SNR=2.3						
DBIC	**Dimbokro**	**67.85**	**23**	P	**P**	**12 40 06.8**	**0.0**
	3.3nm,1.0s,mb4.3,baz=186,slow=10,SNR=2.4						
TORD	**Torodi Ar. Bea**	**75.57**	**28**	P	**P**	**12 40 53.3**	**+0.1**
	1.3nm,0.4s,mb4.2,baz=199,slow=6.3,SNR=19						
MDT	**Midelt**	**93.42**	**18**	P	**P**	**12 42 23.7**	**+0.1**
	1.8nm,0.5s,mb4.8,baz=254,slow=7.9,SNR=5.8						
ASAR	**Alice Springs**	**95.80**	**162**	P	**P**	**12 42 32.2**	**-2.7**
	0.5nm,0.7s,mb4.1,baz=178,slow=3.7,SNR=8.9						
FINES	**FINESS Array B**	**126.92**	**28**	PKP	PKPdf	12 48 08.9	-2.2
	1.5nm,0.9s,baz=166,slow=0.8,SNR=3.9						
ARCES	**ARCESS Array B**	**133.68**	**22**	PKP	PKPdf	12 48 22.7	-1.0
	3.7nm,1.0s,baz=205,slow=3.2,SNR=12						
YKA	**Yellowknife Ar**	**138.86**	**315**	PKP	PKPdf	12 48 31.5	-1.9
	0.2nm,0.5s,baz=127,slow=2.6,SNR=7.1						
SONM	**Songino Array**	**150.23**	**91**	PKPbc	PKPbc	12 48 57.4	-1.3
	1.5nm,0.8s,baz=219,slow=3.3,SNR=10						

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*IDC **11** 12:30:25.7±1.1, 51.52N×156.91E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/20, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/37, Error ellipse: s-maj=40.3km s-min=33.7km az=147.0*
*MOS **11** 12:30:38.8±0.6, 51.63N×156.52E, h122km, mb3.9/1, Error ellipse: s-maj=79.2km s-min=34.1km az=68.9*
*ISCJB **11** 12:30:39.5±0.6, 51.32N±0.07×157.3E±0.1, h113km±6km, mb3.3/4, Error ellipse: s-maj=18.3km s-min=6.1km az=35.7*
*KRSC **11** 12:30:39.8±0.4, 51.35N×157.46E, h89km±88km, ML3.6*
ISC 11 12:30:40.5±0.6**, 51.31N**±0.07×**157.3E**±0.2**, h107**km±7km**, n23,** σ0s82/34**, mb3.3**/4**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.99**	**232**	PN	**Pn**	**12 31 01.2**	**-0.2**
SKR				*i* S	**Sn**	**12 31 16.9**	**-0.2**
SKR				pmax	pmax		
	comp=E,410nm,0.4s						
SKR				pmax	pmax		
	comp=Z,390nm,0.4s						
SKR				pmax	pmax		
	comp=N,590nm,0.2s						
SKR				smax			
	comp=N,1μm,0.5s						
SKR				smax			
	comp=E,420nm,0.5s						
SKR				smax			
	comp=N,3μm,1.0s						
SKR				smax			
	comp=E,2μm,1.0s						
MIPR	**Malaya Ipel'ka**	**1.04**	**340**	*e*P	**Pn**	**12 31 01.4**	**-0.4**
MIPR				*i* S	**Sn**	**12 31 17.3**	**-0.6**
GRL	**Gorelyy**	**1.33**	**20**	P	**Pn**	**12 31 05.0**	**-0.1**
GRL				*i* S	**Sn**	**12 31 22.8**	**-0.9**
RUS	**Russkaya**	**1.34**	**32**	P	**Pn**	**12 31 05.8**	**+0.6**
RUS				*i* S	**Sn**	**12 31 24.3**	**+0.3**
PET	**Petropavlovsk**	**1.90**	**25**	*e*PN	**Pn**	**12 31 12.3**	**+0.2**
PET				*e*S	**Sn**	**12 31 37.2**	**+1.1**
PET				pmax	pmax		
	comp=Z,45nm,0.4s						
PET				smax			
	comp=N,75nm,0.7s						
PET	**Petropavlovsk**	**1.90**	**25**	*e*P	**Pn**	**12 31 12.2**	**+0.1**
PET				*i* S	**Sn**	**12 31 35.1**	**-1.0**
AVH	**Avacha**	**2.14**	**23**	P	**Pn**	**12 31 16.2**	**+1.1**
AVH				*i* S	**Sn**	**12 31 42.5**	**+0.9**
NLC	**Nalytchevo**	**2.24**	**33**	P	**Pn**	**12 31 16.4**	**0.0**
NLC				*i* S	**Sn**	**12 31 43.1**	**-0.7**
GNL	**Ganaly**	**2.42**	**8**	*e*P	**Pn**	**12 31 19.1**	**+0.4**
GNL				*e*S	**Sn**	**12 31 47.3**	**-0.8**
SPN	**Mys Shipunski**	**2.44**	**42**	P	**Pn**	**12 31 19.2**	**+0.2**
SPN				*i* S	**Sn**	**12 31 47.4**	**-1.1**
TUMR	**Tumrok**	**4.33**	**22**	P	**Pn**	**12 31 45.2**	**+1.1**
KMNR	**Kamenistaya**	**4.78**	**20**	P	**Pn**	**12 31 51.8**	**+1.6**
SRDR	**Sredinnyy**	**5.21**	**15**	P	**Pn**	**12 31 56.8**	**+0.7**
KLY	**Klyuchi**	**5.39**	**20**	P	**Pn**	**12 32 00.0**	**+1.6**
KLY				*i* S	**Sn**	**12 32 58.8**	**-0.2**
KBTR	**Krutoberegovo**	**5.89**	**31**	P	**Pn**	**12 32 05.0**	**-0.2**
KBTR				*i* S	**Sn**	**12 33 09.3**	**-1.9**
ASAJ	**Asahikawa**	**12.25**	**240**	LR	LR	12 38 08.7	
	comp=N,61nm,19.1s,baz=353,slow=38						
MKAR	**Makanchi Array**	**47.40**	**296**	P	**P**	**12 38 58.7**	**-4.9**
MKAR	**Makanchi Array**	**47.40**	**296**	P	**P**	**12 38 58.7**	**-4.9**
	comp=N,0.2nm,0.3s,mb3.4,baz=60,slow=10,SNR=3.3						
TXAR	**Lajitas Array**	**72.92**	**64**	P	**P**	**12 41 57.6**	**-0.3**
	comp=N,0.5nm,0.7s,mb3.5,baz=291,slow=4.4,SNR=7.2						
WRA	**Warramunga Arr**	**73.76**	**203**	*i* P	**P**	**12 42 01.6**	**-1.2**
WRA	**Warramunga Arr**	**73.76**	**203**	P	**P**	**12 42 01.6**	**-1.1**
	comp=N,0.3nm,0.6s,mb3.2,baz=17,slow=6.1,SNR=4.8						
ASAR	**Alice Springs**	**77.45**	**202**	*e*P	**P**	**12 42 23.5**	**-0.2**
ASAR	**Alice Springs**	**77.45**	**202**	P	**P**	**12 42 23.6**	**-0.2**
	comp=N,0.2nm,0.5s,mb3.1,baz=15,slow=5.2,SNR=7.6						

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*GCMT **11** 12:38:32.0±0.3, 55.62S×1.44W, h12km±1km, MW5.0/74, Moment Tensor Solution. s25,c30; s74,c100; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.35±.21; Mθθ0.05±.15; Mφφ3.30±.15; Mrθ-0.90±.53; Mθφ-1.01±.11; Mφr-1.19±.36; Best double couple: M0 3.77900×10^16 NP1:φs147.00000°, δ40.00000°, λ-118.00000°. NP2: φs2.00000°, δ55.00000°, λ-68.00000°. Principal axes: T 3.7090, Plg8.0000°, Azm76.0000°; N 0.1450, Plg18.0000°, Azm169.0000°; P -3.8500, Plg71.0000°, Azm324.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **11** 12:38:35.4±9.2, 55.3S±0.1×1.6W±0.3, h3km±58km, mb4.5/9, MS4.3/12 Error ellipse: s-maj=25.1km s-min=20.0km az=162.4*
*IDC **11** 12:38:36.5±0.8, 55.38S×1.54W, h0km, mb4.4/8, mb1 4.5/8, mb1mx4.2/16, mbtmp4.4/8, MS4.3/12, Ms1 4.3/12, ms1mx4.2/18, Error ellipse: s-maj=28.9km s-min=24.3km az=70.0*
*NEIC **11** 12:38:38.1±0.6, 55.34S×1.56W, h10km, mb5.0/1, Error ellipse: s-maj=22.6km s-min=16.0km az=82.0*
ISC 11 12:38:39.1±9.2**, 55.4S**±0.1×**1.5W**±0.3**, h15**km±57km**, n27,** σ1s11/15**, mb4.5**/9**, MS4.3**/12**, 1C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**15.85**	**187**	*e*	**Pn**	**12 42 22.3**	**+1.0**
	baz=355,slow=15						
VNA2				*e*		12 42 24.9	
VNA2				*e*		12 42 28.9	
VNA2				*e*		12 42 30.5	
VNA2				*e*		12 42 34.1	
VNA2				*e*		12 42 37.2	
VNA2				*e*		12 45 03.2	
VNA3	**Neumayer Olymp**	**16.35**	**189**	*e*	**Pn**	**12 42 27.8**	**+0.1**
VNA3				*e*		12 42 30.6	
VNA3				*e*		12 42 34.4	
VNA3				*e*		12 42 36.7	
VNA3				*e*		12 42 39.9	
VNA3				*e*		12 42 42.5	
VNA3				*e*		12 45 13.9	
MAIT	**Maitri**	**16.53**	**165**	*e*P	**Pn**	**12 42 27.7**	**-2.2**
SYO	**Syowa Base**	**22.94**	**143**⇑	*e*P	**P**	**12 43 43.0**	**+0.8**
SUR	**Sutherland**	**27.78**	**43**	LR	LR	12 52 48.2	
	comp=Z,720nm,22.0s,MS4.2,baz=192,slow=31						
MAW	**Mawson**	**31.46**	**139**	LR	LR	12 55 22.8	
	comp=Z,427nm,18.2s,MS4.2,baz=262,slow=32						
BOSA	**Boshof**	**32.89**	**47**	LR	LR	12 55 54.5	
	comp=Z,502nm,19.0s,MS4.2,baz=208,slow=32						
QSPA	**South Pole Qui**	**34.90**	**180**	P	**P**	**12 45 30.3**	**+1.0**
	22nm,1.0s,mb5.0						
MATP	**Matopo**	**41.50**	**45**	P	**P**	**12 46 25.9**	**+0.5**
	12nm,1.3s,mb4.4,baz=198,slow=8.1,SNR=5.3						
VNDA	**Vanda**	**46.99**	**175**	P	**P**	**12 47 08.8**	**0.0**
VNDA	**Vanda**	**46.99**	**175**	P	**P**	**12 47 08.8**	**0.0**
	5.9nm,1.0s,mb4.5,baz=220,slow=9.5,SNR=13						
VNDA				LR	LR	13 05 51.1	
	comp=Z,340nm,19.7s,MS4.3,baz=166,slow=35						
SIV	**San Ignacio**	**59.83**	**286**	P	**P**	**12 48 42.6**	**-1.2**
	1.7nm,1.1s,mb4.0,baz=130,slow=16,SNR=3.8						
DBIC	**Dimbokro**	**61.86**	**356**	P	**P**	**12 48 56.2**	**-1.3**
	6.6nm,1.1s,mb4.7,baz=196,slow=7.4,SNR=3.2						
DBIC				LR	LR	13 08 27.5	
	comp=Z,87nm,18.7s,MS3.9,baz=248,slow=29						
KMBO	**Kilima Mbogo**	**62.50**	**45**	LR	LR	13 14 00.2	
	comp=Z,592nm,19.0s,MS4.8,baz=97,slow=34						
LPAZ	**La Paz**	**63.52**	**280**	P	**P**	**12 49 09.3**	**+0.7**
	3.4nm,1.0s,mb4.3,baz=151,slow=7.7,SNR=9.4						
LPAZ				LR	LR	13 14 45.6	
	comp=Z,239nm,19.6s,MS4.4,baz=139,slow=34						
TORD	**Torodi Ar. Bea**	**68.28**	**3**	LR	LR	13 12 09.8	
	comp=Z,182nm,20.0s,MS4.3,baz=355,slow=30						
ROSC	**El Rosal**	**84.35**	**287**	LR	LR	13 27 22.6	
	comp=Z,206nm,20.8s,MS4.5,baz=216,slow=35						
URZ	**Urewera**	**86.75**	**179**	LR	LR	13 24 14.3	
	comp=Z,228nm,21.6s,MS4.5,baz=332,slow=32						
STKA	**Stephens Creek**	**87.53**	**149**	P	**P**	**12 51 24.9**	**-1.2**
STKA	**Stephens Creek**	**87.53**	**149**	P	**P**	**12 51 24.9**	**-1.2**
	3.6nm,0.9s,mb4.6,baz=199,slow=8.6,SNR=3.7						
MDT	**Midelt**	**87.85**	**357**	P	**P**	**12 51 29.3**	**+2.1**
	2.5nm,0.9s,mb4.5,baz=252,slow=4.7,SNR=4.0						
EIL	**Elat**	**90.23**	**31**	LR	LR	13 28 31.1	
	comp=Z,234nm,21.8s,MS4.6,baz=21,slow=33						
ASAR	**Alice Springs**	**92.58**	**140**	P	**P**	**12 51 49.6**	**-0.2**
	1.2nm,1.0s,mb4.3,baz=202,slow=3.4,SNR=5.9						
ASF	**Jabal al Asfar**	**93.15**	**32**	LR	LR	13 30 18.7	
	comp=Z,96nm,21.3s,MS4.2,baz=177,slow=33						
MKAR	**Makanchi Array**	**123.61**	**55**	PKP	PKPdf	12 57 35.1	+0.2
	0.1nm,0.2s,baz=204,slow=3.2,SNR=3.6						
YKA	**Yellowknife Ar**	**146.23**	**310**	PKPbc	PKPbc	12 58 16.2	-1.2
YKA	**Yellowknife Ar**	**146.23**	**310**	PKPbc	PKPbc	12 58 16.2	-1.2
	3.4nm,0.9s,baz=106,slow=2.8,SNR=33						

IDC 11 12:49:35.5±1.9**, 186N**×**12742E, h0**km**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.6**/15**, mbtmp3.8**/4**, ML3.5**/1**, Error ellipse: s-maj=106.3km s-min=22.8km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.91**	**185**	P	Pn	12 54 08.9	-1.5
	0.1nm,0.3s,baz=13,slow=18,SNR=4.4						
WRA	**Warramunga Arr**	**22.70**	**163**	P	P	12 54 39.0	+0.1
	1.2nm,0.4s,baz=342,slow=10,SNR=33						
WB2	**Warramunga Arr**	**22.71**	**163**	*e*P	P	12 54 39.4	+0.5
ASAR	**Alice Springs**	**26.14**	**166**	P	P	12 55 11.2	-0.3
	0.7nm,0.5s,baz=346,slow=7.2,SNR=34						
MKAR	**Makanchi Array**	**59.48**	**326**	P	P	12 59 40.6	+0.3
	0.4nm,0.3s,baz=117,slow=8.0,SNR=9.4						

IDC 11 13:13:23.5±6.4**, 1674S**×**16818E, h200**km±64km**, mb3.2**/4**, mb1 3.3**/5**, mb1mx3.2**/15**, mbtmp3.2**/5**, Error ellipse: s-maj=66.6km s-min=34.0km az=174.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.55**	**197**	P	Pn	13 14 44.4	-0.5
	0.7nm,0.3s,baz=29,slow=18,SNR=15						
DZM				S	Sn	13 15 50.2	+0.9
	1.5nm,0.3s,baz=153,slow=24,SNR=6.4						
CTA	**Charters Tower**	**21.07**	**258**	P	P	13 17 53.4	+1.1
	0.8nm,0.4s,baz=70,slow=15,SNR=3.5						
WRA	**Warramunga Arr**	**32.25**	**259**	P	P	13 19 32.6	-0.7
	0.1nm,0.3s,baz=83,slow=8.3,SNR=13						

ASAR	**Alice Springs**	**32.84**	**252**	P	P	13 19 38.2	-0.2
	1.9nm,0.4s,baz=78,slow=9.3,SNR=83						
SONM	**Songino Array**	**84.63**	**323**	P	P	13 25 36.2	+1.9
	0.2nm,0.5s,baz=145,slow=5.3,SNR=4.0						
ARCES	**ARCESS Array B**	**122.41**	**345**	PKP	PKPdf	13 31 53.4	-0.7
	2.2nm,0.9s,baz=58,slow=3.0,SNR=10						

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*GUC **11** 13:14:17.4±0.8, 3447S×7220W, h35km±3km, ML5.0*
*NEIC **11** 13:14:17.4, 3447S×7220W, h35km, mb5.0/45, ML5.0(GUC), After GUC.*
NEIC Felt [III] at Iloca, Licanten, Pichilemu, San Antonio, Vina del Mar and Valparaiso; [II] at Curico, Rancagua, San Fernando, Santiago and Talca.
*ISCJB **11** 13:14:17.7±0.2, 3450S±0.03×7225W±0.03, h33km, mb4.9/58, MS4.3/5, Error ellipse: s-maj=3.9km s-min=3.1km az=152.7*
*MOS **11** 13:14:17.8±0.9, 3445S×7232W, h33km, mb5.2/15, Error ellipse: s-maj=16.2km s-min=8.5km az=85.4*
*IDC **11** 13:14:22.0±3.1, 3445S×7196W, h58km±26km, mb4.5/14, mb1 4.6/16, mb1mx4.5/18, mbtmp4.5/16, ML4.1/2, MS4.1/6, Ms1 4.1/6, ms1mx3.8/19, Error ellipse: s-maj=23.9km s-min=13.7km az=79.0*
*BJI **11** 13:14:22.0, 3451S×7184W, h64km, mB5.0, Ms5.2, Msz4.8*
ISC 11 13:14:16.9±1.2**, 3447S**±0.02×**7221W**±0.03**, h15**km±7km**, n200, σ0.92**/165**, mb4.9**/58**, MS4.3**/5**, 21C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.84**	**53**⇓	*i*P	**Pb**	**13 14 32.9**	**-0.3**
NICH	**Los Niches**	**0.97**	**123**⇓	*i*P	**Pb**	**13 14 34.9**	**-0.5**
NICH				*i* S	**Sb**	**13 14 48.3**	**+0.3**
SFDO	**San Fernando**	**1.00**	**99**⇑	*i*P	**Pb**	**13 14 35.4**	**-0.5**
TALC	**Talca**	**1.04**	**153**⇑	*i*P	**Pb**	**13 14 36.2**	**-0.4**
TALC				*i* S	**Sb**	**13 14 49.4**	**-0.6**
LCCH	**Las Cruces**	**1.13**	**29**⇑	*i*P	**Pb**	**13 14 37.5**	**-0.6**
TACH	**Talagante**	**1.34**	**53**⇑	*i*P	**Pn**	**13 14 40.3**	**-0.7**
CACH	**El Canelo**	**1.38**	**76**⇓	*i*P	**Pn**	**13 14 41.5**	**0.0**
CHCH	**Chadas Angostu**	**1.40**	**68**⇑	*i*P	**Pn**	**13 14 41.5**	**-0.3**
CICH	**Cipreses**	**1.49**	**85**⇑	*i*P	**Pn**	**13 14 43.0**	**-0.1**
ANTU	**Antumapu**	**1.59**	**56**	*e*P	**Pn**	**13 14 44.7**	**+0.2**
ANTU				*i* S	**Sn**	**13 15 04.9**	**+0.1**
ANTU	**Antumapu**	**1.59**	**56**	*e*P	**Pn**	**13 14 44.7**	**+0.2**
ANTU				*i* S	**Sn**	**13 15 04.9**	**+0.1**
ANTU				AML	AML	13 15 09.2	
	comp=E,39μm,0.5s						
SAN	**Santiago**	**1.64**	**52**	*e*P	**Pn**	**13 14 45.5**	**+0.3**
SAN				*i* S	**Sn**	**13 15 06.0**	**0.0**
SAN	**Santiago**	**1.64**	**52**	*e*P	**Pn**	**13 14 45.5**	**+0.3**
SAN				*i* S	**Sn**	**13 15 06.0**	**0.0**
SAN				AML	AML	13 15 14.8	
	comp=N,18μm,0.4s						
PCH	**Pirque**	**1.65**	**59**⇓	*i*P	**Pn**	**13 14 45.3**	**+0.1**
FSR	**Penalolen**	**1.72**	**55**	*e*P	**Pn**	**13 14 46.5**	**+0.4**
FSR				*i* S	**Sn**	**13 15 08.0**	**+0.2**
FSR	**Penalolen**	**1.72**	**55**	*e*P	**Pn**	**13 14 46.5**	**+0.4**
FSR				*i* S	**Sn**	**13 15 08.0**	**+0.2**
FSR				AML	AML	13 15 14.8	
	comp=E,25μm,0.3s						
DSCH	**Colegio Aleman**	**1.74**	**52**⇓	*i*P	**Pn**	**13 14 46.3**	**-0.2**
DSCH				*i* S	**Sn**	**13 15 08.3**	**0.0**
CLCH	**Cerro Calan**	**1.76**	**53**⇑	*i*P	**Pn**	**13 14 47.6**	**+0.8**
CLCH				*i* S	**Sn**	**13 15 09.3**	**+0.5**
CLCH	**Cerro Calan**	**1.76**	**53**⇑	*i*P	**Pn**	**13 14 47.6**	**+0.8**
CLCH				*i* S	**Sn**	**13 15 09.3**	**+0.5**
CLCH				AML	AML	13 15 18.0	
	comp=E,53μm,0.6s						
LMEL	**Las Melosas**	**1.78**	**70**⇑	*i*P	**Pn**	**13 14 47.5**	**+0.4**
LMEL				*i* S	**Sn**	**13 15 10.0**	**+0.6**
LMEL	**Las Melosas**	**1.78**	**70**⇑	*i*P	**Pn**	**13 14 47.5**	**+0.4**
LMEL				*i* S	**Sn**	**13 15 10.0**	**+0.6**
LMEL				AML	AML	13 15 14.5	
	comp=N,28μm,0.3s						
ROCH	**El Roble**	**1.80**	**34**⇓	*i*P	**Pn**	**13 14 47.6**	**+0.3**
PEL	**Peldehue**	**1.84**	**44**⇓	*i*P	**Pn**	**13 14 48.0**	**+0.1**
PEL				*i* S	**Sn**	**13 15 11.5**	**+0.7**
PEL				AML	AML	13 15 19.8	
	comp=N,68μm,0.5s						
YECH	**El Yeso**	**1.94**	**66**⇑	*i*P	**Pn**	**13 14 50.1**	**+0.8**
YECH				*i* S	**Sn**	**13 15 14.9**	**+1.5**
YECH				AML	AML	13 15 23.4	
	comp=N,20μm,0.6s						
FCH	**Farellones**	**1.96**	**55**⇑	*i*P	**Pn**	**13 14 49.9**	**+0.3**
FCH				*i* S	**Sn**	**13 15 15.0**	**+1.0**
FCH				AML	AML	13 15 22.4	
	comp=E,15μm,0.4s						
CCHI	**Chillan**	**2.13**	**177**⇓	*i*P	**Pn**	**13 14 53.7**	**+1.9**
CCHI				*i* S	**Sn**	**13 15 20.0**	**+2.0**
CCHI	**Chillan**	**2.13**	**177**⇓	*i*P	**Pn**	**13 14 53.7**	**+1.9**
CCHI				*i* S	**Sn**	**13 15 20.0**	**+2.0**
CCHI				AML	AML	13 15 30.1	
	comp=E,7μm,0.4s						
MDZ	**Mendoza**	**3.22**	**61**	*e*P	**Pn**	**13 15 09.6**	**+2.7**
MDZ				*e*		13 15 48.9	
MDZ				*i* S	**Sn**	**13 15 53.4**	**+8.4**
CFAA	**Coronel Fontan**	**4.40**	**51**	P	**Pn**	**13 15 23.8**	**+0.8**
	comp=E,1.8nm,0.3s,baz=224,slow=12,SNR=151						
CFAA				S	**Sn**	**13 16 21.9**	**+8.0**
	comp=E,12nm,0.3s,baz=19,slow=16,SNR=9.3						
CFAA				LR	LR	13 17 16.5	
	comp=E,340nm,20.5s,baz=211,slow=41						
TLL	**Tololo Astrono**	**4.45**	**16**⇑	*i*P	**Pn**	**13 15 24.0**	**+0.1**
TLL				*i* S	**Sn**	**13 16 15.1**	**-0.3**
LCO	**Las Campanas**	**5.59**	**14**⇑	*i*Pn	**Pn**	**13 15 38.9**	**-0.6**
	comp=E,134nm,0.4s						
LCO				*e*Sn	**Sn**	**13 16 41.3**	**-2.2**
TRQA	**Tornquist**	**9.01**	**116**	*e*Pn	**Pn**	**13 16 26.0**	**-0.3**
	comp=E,155nm,1.2s						
ARE	**Arequipa**	**17.95**	**2**	*e*P	**Pn**	**13 18 27.0**	**+1.1**
LPAZ	**La Paz**	**18.47**	**12**	P	**Pn**	**13 18 33.7**	**+1.3**
	comp=E,1.1nm,0.3s,baz=185,slow=8.0,SNR=110						
USHA	**Ushuaia**	**20.53**	**174**	P	**P**	**13 18 55.0**	**+0.6**
	comp=E,12nm,0.8s,baz=303,slow=5.1,SNR=6.3						
SIV	**San Ignacio**	**20.95**	**31**	P	**P**	**13 18 57.7**	**-1.5**
	comp=E,34nm,0.9s,baz=221,slow=11,SNR=121						
NNA	**Nana**	**22.77**	**348**	P	**P**	**13 19 20.9**	**+2.1**
	comp=E,305nm,0.8s,mb5.8,SNR=5.4						
NNA	**Nana**	**22.77**	**348**	*e*P	**P**	**13 19 19.8**	**+1.0**
	comp=E,44nm,0.8s,mb4.9						
NNA	**Nana**	**22.77**	**348**	P	**P**	**13 19 20.2**	**+1.5**
	comp=E,40nm,0.8s,mb4.9,baz=190,slow=11,SNR=21						
PMSA	**Palmer Station**	**30.74**	**173**	LR	LR	13 32 33.1	
	comp=E,424nm,18.3s,MS4.1,baz=153,slow=36						
RPN	**Rapa Nui**	**32.58**	**273**	LR	LR	13 30 12.4	
	comp=E,658nm,18.8s,MS4.4,baz=131,slow=29						
SDV	**Santo Domingo**	**43.14**	**2**	*e*P	**P**	**13 22 16.1**	**-0.8**
	comp=E,17nm,0.9s,mb4.8						
RCBR	**Riachuelo**	**44.01**	**58**	*e*P	**P**	**13 22 22.0**	**-2.0**
	comp=E,4.9nm,0.6s,mb4.4						
VNA3	**Neumayer Olymp**	**48.98**	**158**	*e*P	**P**	**13 23 01.3**	**-0.9**
VNA3				*e*	pP	13 23 05.6	-1.4
VNA3				*e*		13 23 08.6	
VNA3				*e*		13 23 11.0	
VNA3				*e*		13 23 15.9	
VNA3				*e*		13 23 20.2	
VNA3				*e*		13 30 57.2	
VNA3				*e*		13 31 04.6	
VNA3				*e*		13 31 15.9	
VNA3				*e*		13 31 24.3	
VNA2	**Neumayer--Watz**	**49.64**	**157**	*e*P	**P**	**13 23 06.3**	**-1.0**
	baz=289,slow=9.1						
VNA2				*e*	pP	13 23 09.9	-2.2
VNA2				*e*		13 23 13.6	
VNA2				*e*		13 23 15.5	
VNA2				*e*		13 23 20.8	
VNA2				*e*		13 23 25.6	
VNA2				*e*		13 31 00.4	
VNA2				*e*		13 31 06.7	
VNA2				*e*		13 31 19.0	
VNA2				*e*		13 31 27.7	
SNAA	**Sanae**	**51.21**	**158**⇑	*e*P	**P**	**13 23 19.1**	**0.0**
SNAA	**Sanae**	**51.21**	**158**	P	**P**	**13 23 19.0**	**-0.1**
	comp=E,8.1nm,0.8s,mb4.7,baz=280,slow=7.0,SNR=15						
RKT	**Rikitea**	**55.38**	**264**	*e*LR	LR	13 40 07.3	
	comp=E,213nm,27.8s						
RKT	**Rikitea**	**55.38**	**264**	*e*T		14 23 42.4	
	comp=E,2.5nm,0.2s						
QSPA	**South Pole Qui**	**55.77**	**180**	*e*P	**P**	**13 23 53.4**	**+0.9**
	comp=E,28nm,0.9s,mb5.3						
MAIT	**Maitri**	**55.91**	**157**	*e*P	**P**	**13 23 52.8**	**-0.8**
VNDA	**Vanda**	**63.61**	**191**	P	**P**	**13 24 47.2**	**+0.7**
	comp=E,1.1nm,1.0s,baz=111,slow=5.5,SNR=2.5						
SYO	**Syowa Base**	**65.48**	**158**⇓	*e*P	**P**	**13 24 56.0**	**-2.8**
TBI	**Tubuai**	**67.07**	**257**	*e*LR	LR	13 45 33.7	
	comp=E,372nm,28.2s,baz=116						
TBI	**Tubuai**	**67.07**	**257**	*e*T		14 38 17.3	
	comp=E,6.0nm,0.3s						
LRAL	**Lakeview Retre**	**68.57**	**347**	*e*P	**P**	**13 25 18.3**	**-0.5**
	comp=E,11nm,0.9s,mb4.8						
JSC	**Jenkinsville**	**68.92**	**352**	*e*P	**P**	**13 25 20.2**	**-0.7**
JCT	**Junction City**	**69.65**	**335**	*e*P	**P**	**13 25 25.9**	**+0.3**
	comp=E,20nm,1.1s,mb5.0						
JCT	**Junction City**	**69.65**	**335**	*e*P	**P**	**13 25 25.9**	**+0.4**
JCT				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
PPT	**Papeete**	**70.03**	**262**	*e*LR	LR	13 46 53.0	
	comp=Z,266nm,25.0s,baz=113						
TXAR	**Lajitas Array**	**70.07**	**331**	P	**P**	**13 25 29.0**	**+0.8**
	comp=Z,2.9nm,0.7s,mb4.3,baz=151,slow=8.7,SNR=44						
OXF	**Oxford**	**70.49**	**345**	*e*P	**P**	**13 25 29.5**	**-1.1**
	comp=Z,49nm,1.0s,mb5.4						
OXF				*e*		13 25 39.0	
OXF	**Oxford**	**70.49**	**345**	*e*P	**P**	**13 25 29.5**	**-1.1**
OXF				*e*		13 25 39.0	
OXF				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.4						
SWET	**Sewanee**	**70.50**	**348**	*e*P	**P**	**13 25 30.1**	**-0.6**
CPCT	**Cooper Cave**	**70.50**	**349**	*e*P	**P**	**13 25 29.7**	**-1.0**
PLAL	**Pickwick Lake**	**70.67**	**346**	*e*P	**P**	**13 25 30.5**	**-1.2**
	comp=Z,21nm,0.7s,mb5.2						
TZTN	**Tazewell**	**71.44**	**350**	*e*P	**P**	**13 25 35.3**	**-1.0**
	comp=Z,8.6nm,0.8s,mb4.7						
ELN	**Prospectdale**	**71.78**	**353**	*e*P	**P**	**13 25 37.9**	**-0.5**
URVA	**University of**	**71.85**	**356**	*e*P	**P**	**13 25 38.4**	**-0.3**
MAW	**Mawson**	**72.77**	**164**	P	**P**	**13 25 43.5**	**-0.6**
	comp=Z,7.3nm,0.8s,mb4.7,baz=209,slow=7.0,SNR=6.4						
MAW				LR	LR	13 56 00.7	
	comp=Z,210nm,19.1s,MS4.4,baz=339,slow=34						
MNTX	**Cornudas Mount**	**72.85**	**331**	*e*P	**P**	**13 25 44.2**	**-0.7**
	comp=Z,8.9nm,0.9s,mb4.7						
WMOK	**Wichita Mounta**	**73.20**	**337**	*e*P	**P**	**13 25 46.0**	**-1.0**
	comp=Z,5.6nm,1.0s,mb4.5						
WMOK	**Wichita Mounta**	**73.20**	**337**	*e*P	**P**	**13 25 46.0**	**-0.9**
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
WCI	**Wyandotte Cave**	**73.50**	**348**	*e*P	**P**	**13 25 47.2**	**-1.4**
	comp=Z,8.8nm,0.9s,mb4.7						
WCI	**Wyandotte Cave**	**73.50**	**348**	*e*P	**P**	**13 25 47.2**	**-1.4**
WCI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
SIUC	**Southern Illin**	**73.54**	**346**	*e*P	**P**	**13 25 48.0**	**-0.8**
	comp=Z,22nm,0.9s,mb5.1						
FVM	**French Village**	**74.05**	**345**	*e*P	**P**	**13 25 51.3**	**-0.5**
	comp=Z,26nm,0.9s,mb5.2						
FVM	**French Village**	**74.05**	**345**	*e*P	**P**	**13 25 51.3**	**-0.5**
FVM				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
BLO	**Bloomington**	**74.46**	**348**	*e*P	**P**	**13 25 52.9**	**-1.3**
	comp=Z,12nm,0.7s,mb4.9						
BLO	**Bloomington**	**74.46**	**348**	*e*P	**P**	**13 25 52.9**	**-1.3**
BLO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
SUR	**Sutherland**	**74.73**	**119**	P	**P**	**13 25 56.7**	**+0.5**
	comp=Z,205nm,0.9s,SNR=5.4						
SUR	**Sutherland**	**74.73**	**119**	*e*P	**P**	**13 25 56.4**	**+0.1**
	comp=Z,29nm,0.9s,mb5.2						
ACSO	**Alum Creek Sta**	**74.99**	**351**	*e*P	**P**	**13 25 56.4**	**-0.9**
	comp=Z,41nm,0.8s,mb5.4						
LIC	**Lamto**	**75.06**	**72**	*e*P	**P**	**13 25 56.9**	**-1.4**
	comp=Z,46nm,0.7s,mb5.5						
TIC	**Toumodi**	**75.32**	**71**	*e*P	**P**	**13 25 58.4**	**-1.4**
	comp=Z,15nm,0.7s,mb5.1						
KIC	**Kosan Boka**	**75.37**	**72**	*e*P	**P**	**13 25 58.9**	**-1.2**
	comp=Z,167nm,0.6s						
DBIC	**Dimbokro**	**75.47**	**71**	P	**P**	**13 25 59.5**	**-1.2**
DBIC				LR	LR	13 57 27.2	
DBIC	**Dimbokro**	**75.47**	**71**	P	**P**	**13 25 59.5**	**-1.2**
	comp=Z,25nm,0.6s,mb5.3,baz=208,slow=6.3,SNR=56						
DBIC				LR	LR	13 57 27.2	
	comp=Z,128nm,18.5s,MS4.3,baz=153,slow=34						
TUC	**Tucson**	**75.68**	**327**	*e*P	**P**	**13 26 02.7**	**+1.3**
	comp=Z,5.4nm,1.3s,mb4.3						
TUC	**Tucson**	**75.68**	**327**	*e*P	**P**	**13 26 02.7**	**+1.3**
TUC				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
ANMO	**Albuquerque**	**76.13**	**332**	*e*P	**P**	**13 26 05.1**	**+1.2**
	comp=Z,8.2nm,1.0s,mb4.6						
ANMO	**Albuquerque**	**76.13**	**332**⇑	*e*P	**P**	**13 26 03.9**	**0.0**
HDIL	**Hopedale**	**76.30**	**347**	*e*P	**P**	**13 26 03.7**	**-1.0**
	comp=Z,16nm,0.5s,mb5.2						
KSU1	**Kansas State U**	**76.61**	**341**	*e*P	**P**	**13 26 05.8**	**-0.7**
	comp=Z,12nm,0.6s,mb5.0						
SDCO	**Great Sand Dun**	**78.23**	**334**	*e*P	**P**	**13 26 16.5**	**+0.9**
	comp=Z,6.3nm,0.8s,mb4.6						
JFWS	**Jewell Farm**	**78.76**	**347**	*e*P	**P**	**13 26 17.6**	**-0.8**
	comp=Z,12nm,0.5s,mb5.1						
JFWS	**Jewell Farm**	**78.76**	**347**	*e*P	**P**	**13 26 17.7**	**-0.7**
JFWS				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.1						
MVCO	**Mesa Verde**	**78.90**	**331**	*e*P	**P**	**13 26 20.4**	**+1.0**
	comp=Z,14nm,1.2s,mb4.8						
TSUM	**Tsumeb**	**79.23**	**106**	*e*P	**P**	**13 26 21.4**	**-0.3**
	comp=Z,30nm,1.3s,mb5.1						
PFO	**Pinyon Flat Ob**	**79.42**	**324**	P	**P**	**13 26 24.0**	**+1.7**
	comp=Z,49nm,0.9s,mb5.4,SNR=5.6						
PV01	**Paradox Valley**	**79.73**	**332**	*e*P	**P**	**13 26 25.0**	**+1.2**
BOSA	**Boshof**	**79.98**	**118**	P	**P**	**13 26 24.9**	**-0.8**
	comp=Z,37nm,0.8s,mb5.4,baz=233,slow=5.5,SNR=48						
SMCO	**Snowmass**	**80.03**	**333**	*e*P	**P**	**13 26 22.2**	**-3.3**
	comp=Z,13nm,1.0s,mb4.8						
PV10	**Paradox Valley**	**80.13**	**331**	*e*P	**P**	**13 26 26.5**	**+0.5**
ECSD	**EROS,Sioux Fal**	**80.95**	**342**⇑	*i*P	**P**	**13 26 29.9**	**-0.4**
	comp=Z,28nm,0.8s,mb5.2						
CCUT	**Cedar City**	**81.22**	**328**	*e*P	**P**	**13 26 33.5**	**+1.6**
MSU	**Marysvale**	**81.52**	**329**	*e*P	**P**	**13 26 34.4**	**+0.9**
TMUT	**Trail Mountain**	**81.78**	**330**	*e*P	**P**	**13 26 35.6**	**+0.8**
MPU	**Maple Canyon**	**82.57**	**331**	*e*P	**P**	**13 26 39.6**	**+0.7**
	comp=Z,7.7nm,1.0s,mb4.7						
DUG	**Dugway**	**83.20**	**330**	*e*P	**P**	**13 26 42.8**	**+0.6**
	comp=Z,7.7nm,1.0s,mb4.7						
DUG	**Dugway**	**83.20**	**330**	*e*P	**P**	**13 26 42.8**	**+0.6**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
HWUT	**Hardware Ranch**	**83.89**	**331**	*e*P	**P**	**13 26 46.0**	**+0.3**
	comp=Z,13nm,1.0s,mb5.0						
SPUT	**South Promonto**	**83.99**	**331**	*e*P	**P**	**13 26 46.6**	**+0.3**
NVAR	**Mina Array Bea**	**84.19**	**325**	P	**P**	**13 26 48.6**	**+1.3**
	comp=Z,3.0nm,0.8s,mb4.5,baz=141,slow=6.3,SNR=23						
TORD	**Torodi Ar. Bea**	**84.51**	**70**	P	**P**	**13 26 48.1**	**-1.4**
TORD				LR	LR	14 03 31.3	
TORD	**Torodi Ar. Bea**	**84.51**	**70**	P	**P**	**13 26 48.1**	**-1.4**
	comp=Z,19nm,0.9s,mb5.2,baz=265,slow=4.7,SNR=67						
TORD				LR	LR	14 03 31.3	
	comp=Z,134nm,18.7s,MS4.4,baz=230,slow=35						
HVU	**Hansel Valley**	**84.52**	**331**	*e*P	**P**	**13 26 49.2**	**+0.3**
	comp=Z,10nm,0.9s,mb5.0						
HVU	**Hansel Valley**	**84.52**	**331**	*e*P	**P**	**13 26 49.2**	**+0.3**
HVU				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
AGMN	**Agassiz Refuge**	**85.07**	**344**	*e*P	**P**	**13 26 50.8**	**-0.6**
	comp=Z,12nm,0.6s,mb5.2						
REDW	**Red Top Meadow**	**85.11**	**333**	*e*P	**P**	**13 26 51.9**	**+0.1**
	comp=Z,12nm,1.3s,mb4.9						
LOHW	**Long Hollow**	**85.23**	**333**	*e*P	**P**	**13 26 52.8**	**+0.3**
	comp=Z,2.4nm,0.6s,mb4.5						
TPAW	**Teton Pass**	**85.26**	**333**	*e*P	**P**	**13 26 52.9**	**+0.4**
	comp=Z,7.9nm,0.8s,mb4.9						
DCID1	**Drake Creek**	**85.44**	**333**	*e*P	**P**	**13 26 54.3**	**+0.9**
IMW	**Indian Meadow**	**85.60**	**333**	*e*P	**P**	**13 26 54.6**	**+0.4**
	comp=Z,8.9nm,1.0s,mb5.0						
RLMT	**Red Lodge**	**86.05**	**335**	*e*P	**P**	**13 26 56.6**	**+0.1**
	comp=Z,6.9nm,0.5s,mb5.1						
YMR	**Madison River**	**86.27**	**333**	*e*P	**P**	**13 26 58.6**	**+1.1**
	comp=Z,23nm,0.9s,mb5.4						
LAO	**LASA Array**	**86.40**	**337**	*e*P	**P**	**13 26 58.1**	**0.0**
	comp=Z,26nm,1.0s,mb5.4						
OHCM	**Honcut**	**86.42**	**324**	*e*P	**P**	**13 26 59.1**	**+0.6**
QLMT	**Earthquake Lak**	**86.58**	**333**	*e*P	**P**	**13 27 00.3**	**+1.3**
HLID	**Hailey**	**86.67**	**331**	*e*P	**P**	**13 27 00.3**	**+0.7**
	comp=Z,7.2nm,1.1s,mb4.8						
ULM	**Lac du Bonnet**	**86.91**	**345**	P	**P**	**13 26 59.6**	**-1.0**
	comp=Z,10nm,0.9s,mb5.1,baz=163,slow=3.2,SNR=28						
MCMT	**McKenzie Canyo**	**87.11**	**332**	*e*P	**P**	**13 27 03.1**	**+1.4**
DGMT	**Dagmar**	**87.37**	**339**	*e*P	**P**	**13 27 03.0**	**+0.2**
	comp=Z,66nm,1.0s,mb5.8						
LBCM	**Butte Creek Ri**	**87.53**	**325**	P	**P**	**13 27 04.7**	**+0.9**
LTIM	**Timbered Crate**	**87.86**	**325**	P	**P**	**13 27 06.3**	**+0.9**
WDC	**Whiskeytown Da**	**87.90**	**324**	*e*P	**P**	**13 27 05.4**	**-0.2**
	comp=Z,5.3nm,0.7s,mb4.9						
WDC				*e*		13 27 13.6	
WDC	**Whiskeytown Da**	**87.90**	**324**	*e*P	**P**	**13 27 05.4**	**-0.2**
WDC				*e*		13 27 13.6	
WDC				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
LASM	**Arnica Sink**	**88.23**	**325**	P	**P**	**13 27 08.3**	**+1.2**
LHEM	**Herd Peak**	**88.55**	**325**	P	**P**	**13 27 09.7**	**+1.1**
CHMT	**Chamberlain Mo**	**89.02**	**333**	*e*P	**P**	**13 27 11.2**	**+0.4**
SCHQ	**Schefferville**	**89.06**	**3**	P	**P**	**13 27 09.8**	**-0.9**
SCHQ	**Schefferville**	**89.06**	**3**	P	**P**	**13 27 09.8**	**-0.9**
	comp=Z,2.3nm,0.6s,mb4.7,baz=305,slow=4.0,SNR=13						
LSZ	**Lusaka**	**89.80**	**108**	*e*P	**P**	**13 27 15.1**	**-0.2**
	comp=Z,7.2nm,1.0s,mb5.0						
LSZ	**Lusaka**	**89.80**	**108**	*e*P	**P**	**13 27 15.1**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
FFC	**Flin Flon**	**92.46**	**343**	*e*P	**P**	**13 27 25.6**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.5						
FFC	**Flin Flon**	**92.46**	**343**	*e*P	**P**	**13 27 25.6**	**-0.9**
FFC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
EDM	**Edmonton**	**94.36**	**337**	*e*P	**P**	**13 27 33.3**	**-2.0**
FCC	**Fort Churchill**	**94.66**	**349**	*e*P	**P**	**13 27 35.9**	**-0.7**
	comp=Z,6.7nm,0.9s,mb5.1						
FCC	**Fort Churchill**	**94.66**	**349**	*e*P	**P**	**13 27 35.9**	**-0.7**
FCC				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
ESDC	**Sonseca Array**	**97.01**	**46**	P	**P**	**13 27 46.8**	**-0.9**
	comp=Z,0.6nm,0.7s,mb4.1,baz=247,slow=4.9,SNR=4.7						
YKA	**Yellowknife Ar**	**102.45**	**341**	P	Pdif	13 28 09.9	-2.4
	comp=Z,0.7nm,0.7s,baz=139,slow=4.3,SNR=16						
GERES	**GERESS Array B**	**112.59**	**46**	PKiKP	PKiKP	13 32 50.2	-1.9
	comp=Z,0.5nm,0.5s,baz=197,slow=2.2,SNR=5.8						
ASAR	**Alice Springs**	**117.08**	**207**	PKP	PKPdf	13 33 00.1	-1.6
	comp=Z,0.7nm,0.7s,baz=134,slow=1.7,SNR=9.5						
ASAR				PKKPbc	PKKPbc	13 43 25.1	-0.5
	comp=Z,0.8nm,0.7s,baz=335,slow=3.3,SNR=12						
HFS	**Hagfors**	**117.27**	**34**	PKP	PKPdf	13 32 58.8	-1.9
	comp=Z,4.2nm,1.0s,baz=226,slow=10,SNR=4.2						
WB2	**Warramunga Arr**	**120.28**	**209**	*e*P	PKPdf	13 33 06.4	-1.5
WRA	**Warramunga Arr**	**120.28**	**209**	PKP	PKPdf	13 33 06.6	-1.3
	comp=Z,2.1nm,0.6s,baz=159,slow=1.7,SNR=44						
WRA				PKKPbc	PKKPbc	13 43 12.2	-1.9
	comp=Z,0.3nm,0.5s,baz=340,slow=4.5,SNR=6.5						
AKASG	**Malin Array Be**	**122.61**	**48**	PKP	PKPdf	13 33 09.4	-1.9
	comp=Z,1.4nm,0.5s,baz=258,slow=2.8,SNR=13						
FINES	**FINESS Array B**	**123.46**	**35**	PKP	PKPdf	13 33 11.7	-0.9
	comp=Z,1.3nm,0.8s,baz=233,slow=1.0,SNR=6.8						
KAF	**Kangasniemi**	**123.70**	**34**	*e*pkp	PKPdf	13 33 10.9	-2.1
ARCES	**ARCESS Array B**	**124.50**	**25**	PKP	PKPdf	13 33 13.4	-0.9
	comp=Z,2.4nm,1.0s,baz=51,slow=2.3,SNR=4.8						
FITZ	**Fitzroy Crossi**	**125.03**	**201**	*e*P	PKPdf	13 33 15.8	-1.2
	comp=Z,12nm,1.5s						
MALT	**Malatya**	**125.24**	**64**	*e*PKPdf	PKPdf	13 33 16.2	-0.6
JOF	**Joensuu**	**126.11**	**33**	*e*pkp	PKPdf	13 33 15.7	-1.9
OBN	**Obninsk**	**127.88**	**44**⇑	*i*PKIKP	PKPdf	13 33 19.6	-1.6
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV	**Kislovodsk**	**129.86**	**59**	*e*PKPdf	PKPdf	13 33 25.2	-0.2
KIV	**Kislovodsk**	**129.86**	**59**	*e*PKIKP	PKPdf	13 33 24.4	-1.0
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BILL	**Bilibino**	**133.19**	**334**⇑	*i*PKIKP	PKPdf	13 33 25.5	-5.4
BILL				pmax	pmax		
	comp=Z,15nm,2.0s						
TIXI	**Tiksi**	**141.13**	**350**⇑	*i*PKIKP	PKPdf	13 33 43.9	-1.6
BRVK	**Borovoye**	**147.65**	**43**	*e*PKPdf	PKPdf	13 33 56.7	-0.7
BRVK				*e*PKPbc	PKPbc	13 33 59.7	-0.4
HYB	**Hyderabad**	**148.86**	**116**	*e*P	PKPbc	13 34 03.5	-0.9
HYB	**Hyderabad**	**148.86**	**116**	*i* PKP	PKPbc	13 34 03.5	-0.9
KULM	**Kulim**	**150.22**	**166**	*e*PKPbc	PKPbc	13 34 06.1	-1.8
YSS	**Yuzh-Sakhalins**	**150.95**	**306**	*e*PKPbc	PKPbc	13 34 07.3	-1.2
YSS	**Yuzh-Sakhalins**	**150.95**	**306**⇑	*i*PKIKP	PKPbc	13 34 07.5	-1.1
AML	**Almayashu**	**152.31**	**64**	*e*PKPdf	PKPdf	13 34 06.6	+1.6
AML				*e*PKPbc	PKPbc	13 34 11.6	-0.2
AML	**Almayashu**	**152.31**	**64**	P	PKPbc	13 34 12.3	+0.5
	SNR=9.6						
EKS2	**Erkin-Say**	**152.32**	**63**	*e*PKPdf	PKPdf	13 34 04.8	-0.3
EKS2				*e*PKPbc	PKPbc	13 34 11.3	-0.6
EKS2	**Erkin-Say**	**152.32**	**63**	P	PKPbc	13 34 11.8	-0.1
	SNR=12						
USP	**Ospenovka**	**152.78**	**61**	P	PKPbc	13 34 12.5	-0.4
	SNR=9.8						
AAK	**Ala-Archa**	**152.85**	**63**	*e*PKPdf	PKPdf	13 34 05.2	-0.7
AAK				*e*PKPbc	PKPbc	13 34 11.8	-1.3
AAK	**Ala-Archa**	**152.85**	**63**	P	PKPbc	13 34 13.2	+0.1
	SNR=13						
UCH	**Uchtor**	**152.91**	**63**	P	PKPbc	13 34 13.9	+0.7
	SNR=13						
KURK	**Kurchatov**	**153.32**	**44**	*e*PKPdf	PKPdf	13 34 05.6	-0.6
KURK				*e*PKPbc	PKPbc	13 34 11.8	-2.0
NVS	**Novosibirsk**	**153.41**	**32**	*i* PKIKP	PKPbc	13 34 12.7	-1.2
TKM2	**Tokmak 2**	**153.62**	**62**	*e*PKPdf	PKPdf	13 34 06.0	-1.0
TKM2				*e*PKPbc	PKPbc	13 34 14.1	-0.6
BOD	**Bodaibo**	**156.27**	**352**	*e*PKIKP	PKPdf	13 34 21.4	+11
BOD				*e*		13 34 37.3	
BOD				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MKAR	**Makanchi Array**	**157.18**	**50**	PKP	PKPdf	13 34 10.8	-0.9
	comp=Z,1.4nm,0.9s,baz=303,slow=1.3,SNR=14						
MKAR				PKPab	PKPab	13 34 41.4	-1.1
	comp=Z,4.6nm,0.8s,baz=298,slow=4.0,SNR=17						
MDJ	**Mudanjiang**	**160.42**	**308**	PKP	PKPdf	13 34 15.7	+0.2
WMQ	**Urumqi**	**161.87**	**53**	PKP	PKPdf	13 34 15.2	-1.9
WMQ				APKP		13 34 29.2	
WMQ				PKP2	PKPab	13 35 02.6	-0.4
WMQ				PP	PP	13 38 47.2	+0.1
WMQ				PP	PP		
	comp=Z,110nm,6.2s						
WMQ				LR	LR		
	comp=N,108nm,23.6s						
WMQ				LR	LR		
	comp=E,64nm,22.4s						
WMQ				LR	LR		
	comp=Z,86nm,22.4s						
TLY	**Talaya**	**162.54**	**9**	*e*PKP2	PKPab	13 35 05.7	+0.2
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZAK	**Zakamensk**	**163.76**	**10**	*e*PKP2	PKPab	13 35 10.0	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	**Ulaanbaatar**	**166.61**	**2**	*e*PKPab	PKPab	13 35 23.5	0.0
SONM	**Songino Array**	**166.61**	**4**	PKP	PKPdf	13 34 19.8	-1.4
	comp=Z,0.7nm,0.8s,baz=177,slow=0.5,SNR=6.0						
SONM				PKPab	PKPab	13 35 23.1	-0.4
	comp=Z,3.2nm,0.9s,baz=335,slow=4.2,SNR=17						
SONM				PP	PP	13 39 09.2	-1.6
	comp=Z,0.9nm,1.0s,baz=5.2,slow=4.8,SNR=4.4						
KMI	**Kunming**	**169.71**	**153**	PKP	PKPdf	13 34 21.8	-2.3
KMI				APKP		13 34 38.7	
KMI				XPKP		13 34 45.6	
KMI				LR	LR		
	comp=Z,58nm,32.4s						
NJ2	**Nanjing**	**170.42**	**258**	*e*PKP	PKPdf	13 34 25.5	+1.2
GTA	**Gaotai**	**171.94**	**50**	*e*PKP	PKPdf	13 34 24.6	-0.2
GTA				PKP2	PKPab	13 35 47.5	0.0
GTA				PP	PP	13 39 40.2	+1.5
GTA				PP	PP		
	comp=Z,155nm,7.2s						
GYA	**Guiyang**	**171.96**	**173**	PKP	PKPdf	13 34 24.7	-0.5
GYA				APKP		13 34 40.0	
GYA				XPKP		13 34 45.5	
GYA				PKP2	PKPab	13 35 50.2	+2.5
GYA				PKS		13 37 55.8	
GYA				PP	PP	13 39 42.0	+4.2
GYA				SKS	SKSdf	13 41 21.2	-6.9
GYA				SKKS	SKKSac	13 46 22.3	-2.6
GYA				PP	PP		
	comp=Z,130nm,8.9s						
GYA				LR	LR		
	comp=N,210nm,22.8s						
GYA				LR	LR		
	comp=E,390nm,23.6s						
GYA				LR	LR		
	comp=Z,270nm,22.2s						
HHC	**Hu-ho-hao-te**	**172.96**	**336**	*e*PKP	PKPdf	13 34 22.8	-2.4
HHC				PKP2	PKPab	13 35 50.4	-1.5
HHC				PKS		13 37 52.9	
HHC				PP	PP	13 39 45.9	+2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HHC				SKS	SKSdf	13 41 19.8	-7.9
HHC				SKKS	SKKSac	13 46 26.7	-2.7
HHC				SS	SS	14 00 49.7	-5.9
HHC				PP	PP		
	comp=Z,101nm,9.3s						
HHC				LR	LR		
	comp=N,244nm,13.1s						
HHC				LR	LR		
	comp=E,259nm,13.1s						
HHC				LR	LR		
	comp=Z,172nm,16.7s						
CD2	**Chengdu**	**175.09**	**135**	*e*PKP	PKPdf	13 34 24.5	-1.8
CD2				APKP		13 34 40.0	
CD2				XPKP		13 34 49.5	
CD2				PKP2	PKPab	13 36 02.1	+0.4
CD2				PP	PP	13 39 55.4	+1.4
CD2				SKS	SKSdf	13 41 22.3	-6.5
CD2				SKKS	SKKSac	13 46 36.3	-3.8
CD2				SS	SS	14 01 12.4	-4.9
CD2				PP	PP		
	comp=Z,160nm,10.2s						
CD2				LR	LR		
	comp=N,180nm,24.2s						
CD2				LR	LR		
	comp=Z,150nm,22.2s						
LZH	**Lanzhou**	**176.40**	**62**	*e*PKP	PKPdf	13 34 29.0	+2.6

*ISCJB **11** 13:18:55.6±2.0, 3070S±006×1763W±0.1, h6km±14km, mb4.3/6, MS3.9/6, Error ellipse: s-maj=22.4km s-min=8.0km az=19.3*

*IDC **11** 13:19:04.0±5.3, 3072S×17642W, h54km±47km, mb4.0/6, mb1 4.3/9, mb1mx4.1/15, mbtmp4.1/9, ML4.3/3, MS3.9/6, Ms1 3.9/6, ms1mx3.5/27, Error ellipse: s-maj=33.2km s-min=25.1km az=8.0*

ISC 11 13:18:56.6±2.4**, 3064S**±006×**1760W**±02**, h16**km±20km**, n36,** σ**1ˢ22**/31**, mb4.3**/6**, MS3.9**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	8.39	213	SN	Sn	13 22 33.5	+1.7
PUZ	Puketiti	8.83	211	PN	Pn	13 21 05.2	+1.7
PUZ				SN	Sn	13 22 43.5	+0.9
MWZ	Matawai	9.38	213	PN	Pn	13 21 12.2	+1.2
MWZ				SN	Sn	13 22 56.3	+0.2
URZ	Urewera	9.52	215	P	Pn	13 21 14.1	+1.2
	1.4nm,0.3s,baz=82,slow=7.6,SNR=25						
URZ				S	Sn	13 22 57.6	-2.0
	15nm,0.3s,baz=196,slow=21,SNR=14						
URZ	Urewera	9.52	215	PN	Pn	13 21 14.3	+1.3
URZ				SN	Sn	13 22 58.0	-1.6
KNZ	Kokohu	9.87	210	PN	Pn	13 21 16.0	-1.7
KNZ				SN	Sn	13 23 07.8	-0.3
PXZ	Pawanui	11.06	210	PN	Pn	13 21 33.0	-1.0
MRZ	Mangatainoka R	12.14	212	PN	Pn	13 21 47.4	-1.4
MRZ				*e*SN	Sn	13 23 57.5	-6.3
THZ	Tophouse	14.28	216	PN	Pn	13 22 16.5	-1.5
THZ				*e*SN	Sn	13 24 45.9	-10
KHZ	Kahutara	14.46	213	PN	Pn	13 22 18.7	-1.8
DSZ	Denniston Nort	14.84	218	PN	Pn	13 22 27.0	+1.3
LTZ	Lake Taylor	15.35	215	PN	Pn	13 22 33.5	+1.1
RPZ	Rata Peaks	16.64	215	P	Pn	13 22 49.4	+0.4
	4.1nm,0.3s,baz=41,slow=0.7,SNR=26						
RPZ				S	Sn	13 25 42.2	-11
	2.1nm,0.3s,baz=302,slow=21,SNR=10						
AFI	Afiamalu	17.09	14	P	Pn	13 22 55.1	+0.3
	1.4nm,0.3s,baz=7.6,slow=15,SNR=3.2						
DZM	Mont Dzumac	17.92	294	P	Pn	13 23 06.5	+1.3
	0.7nm,0.3s,baz=108,slow=14,SNR=16						
TBI	Tubuai	24.65	79	*e*LR	LR	13 30 28.4	
	335nm,26.2s						
PPT	Papeete	27.28	68	*e*LR	LR	13 31 22.6	
	333nm,26.8s						
PPT	Papeete	27.28	68	LR	LR	13 32 25.1	
	comp=Z,169nm,19.9s,MS3.6,baz=117,slow=29						
CTA	Charters Tower	35.59	278	P	P	13 25 53.5	0.0
	1.5nm,0.3s,mb4.4,baz=122,slow=10,SNR=6.4						
CTA				LR	LR	13 38 18.3	
	comp=Z,175nm,18.2s,MS3.9,baz=304,slow=33						
STKA	Stephens Creek	36.15	257	*e*P	P	13 25 59.1	+0.9
	4.1nm,0.9s,mb4.4						
STKA	Stephens Creek	36.15	257	P	P	13 25 58.0	-0.2
	2.0nm,0.6s,mb4.2,baz=48,slow=6.3,SNR=4.9						
STKA				LR	LR	13 38 24.9	
	comp=Z,133nm,18.5s,MS3.7,baz=23,slow=32						
RKT	Rikitea	37.15	88	*e*LR	LR	13 36 03.3	
	216nm,31.8s						
ASAR	Alice Springs	44.87	266	P	P	13 27 09.8	-0.5
	1.0nm,0.6s,mb3.9,baz=105,slow=7.5,SNR=22						
WB2	Warramunga Arr	45.87	271	*e*P	P	13 27 17.2	-1.1
WRA	Warramunga Arr	45.88	271	P	P	13 27 16.8	-1.6
	5.4nm,0.7s,mb4.6,baz=110,slow=8.0,SNR=50						
WRA				LR	LR	13 44 40.9	
	comp=Z,93nm,19.7s,MS3.7,baz=165,slow=34						
FITZ	Fitzroy Crossi	54.13	269	LR	LR	13 49 31.5	
	comp=Z,95nm,19.2s,MS3.9,baz=106,slow=34						
BATI	Kupang	59.44	276	LR	LR	13 52 07.3	
	comp=Z,236nm,19.5s,MS4.3,baz=141,slow=34						
NVAR	Mina Array Bea	87.22	42	P	P	13 31 45.7	+3.7
	2.0nm,0.9s,mb4.4,baz=205,slow=6.8,SNR=11						
TXAR	Lajitas Array	91.03	56	P	P	13 32 04.7	+4.4
	1.1nm,1.0s,mb4.1,baz=209,slow=7.0,SNR=7.4						
ARCES	ARCESS Array B	139.18	349	PKP	PKPdf	13 38 24.9	+3.2
	1.8nm,0.9s,baz=337,slow=5.8,SNR=4.9						
KAF	Kangasniemi	145.35	342	*e*pkp	PKPdf	13 38 33.0	+0.2
FINES	FINESS Array B	145.96	341	PKPbc	PKPbc	13 38 35.9	+1.3
	4.5nm,0.7s,baz=60,slow=4.6,SNR=15						
NB2	NORSAR Subarra	149.22	353	PKP	PKPbc	13 38 45.4	+1.8
	comp=Z,2.0nm,0.7s,baz=9.7,slow=2.8						
NOA	NORSAR Array B	149.22	353	PKPbc	PKPbc	13 38 45.6	+2.1
	comp=Z,4.4nm,0.8s,baz=14,slow=4.3,SNR=8.4						
AKASG	Malin Array Be	152.55	324	PKPbc	PKPbc	13 38 53.0	+1.2
	comp=Z,1.5nm,0.6s,baz=48,slow=2.2,SNR=9.8						
AKASG				PKPab	PKPab	13 39 03.9	+1.6
	comp=Z,1.4nm,0.6s,baz=47,slow=2.6,SNR=7.4						
TORD	Torodi Ar. Bea	162.46	172	PKPab	PKPab	13 39 48.0	+2.3
	comp=Z,0.8nm,0.8s,baz=180,slow=4.0,SNR=5.0						

*ISCJB **11** 13:27:15.8±3.4, 203S±02×1758W±02, h65km±37km, mb4.1/6, Error ellipse: s-maj=45.8km s-min=23.4km az=137.7*

*IDC **11** 13:27:18.3±4.0, 2031S×17576W, h75km±39km, mb4.0/6, mb1 4.1/7, mb1mx3.8/16, mbtmp4.0/7, ML2.2/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/26, Error ellipse: s-maj=40.0km s-min=20.5km az=140.0*

ISC 11 13:27:18.0±2.9**, 203S**±02×**1758W**±02**, h69**km±32km**, n10,** σ**0ˢ66**/11**, mb4.1**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.44	31	P	Pn	13 29 03.9	-0.1
	2.2nm,0.3s,baz=348,slow=6.7,SNR=5.4						
AFI				S	Sn	13 30 21.1	-5.8
	4.6nm,0.3s,baz=79,slow=23,SNR=4.5						
DZM	Mont Dzumac	16.68	261	*e*P	Pn	13 31 15.3	+8.0
DZM	Mont Dzumac	16.68	261	P	Pn	13 31 14.8	+7.4
	0.7nm,0.3s,baz=78,slow=18,SNR=17						
DZM				LR	LR	13 36 19.5	
	comp=Z,174nm,18.1s,baz=148,slow=32						
RPZ	Rata Peaks	25.78	202	P	P	13 32 42.4	+0.2
	22nm,0.6s,mb4.8,baz=344,slow=1.5,SNR=29						
CTA	Charters Tower	35.59	264	P	P	13 34 10.5	+1.4
	0.9nm,0.3s,mb4.1,baz=101,slow=14,SNR=4.9						
STKA	Stephens Creek	39.75	244	*e*P	P	13 34 43.7	-0.3
	3.0nm,0.6s,mb4.3						
STKA	Stephens Creek	39.75	244	P	P	13 34 43.7	-0.3
	3.1nm,0.6s,mb4.3,baz=79,slow=12,SNR=8.3						
ASAR	Alice Springs	46.60	256	P	P	13 35 38.9	-0.4
	1.7nm,0.7s,mb3.9,baz=96,slow=8.1,SNR=21						
ASAR				PcP	PcP	13 37 11.3	-1.2
	0.9nm,0.8s,baz=115,slow=3.2,SNR=6.0						
WRA	Warramunga Arr	46.70	261	P	P	13 35 39.3	-0.9
	1.9nm,0.7s,mb3.9,baz=96,slow=7.7,SNR=22						
NVAR	Mina Array Bea	79.48	42	P	P	13 39 17.1	+0.1
	0.5nm,0.6s,mb3.6,baz=207,slow=7.0,SNR=6.3						

*ISCJB **11** 13:29:15.6±0.8, 3428N±006×2444E±008, h26km, Error ellipse: s-maj=11.6km s-min=6.0km az=143.3*

*CSEM **11** 13:29:15.6±0.3, 3432N×2445E, h30km, MD3.5, Error ellipse: s-maj=13.2km s-min=5.4km az=60.0*

*NEIC **11** 13:29:21.5, 3487N×2464E, h20km, MD3.5(ATH), After ATH.*

*ATH **11** 13:29:23.6, 3496N×2461E, h26km, MD3.5/5*

*HLW **11** 13:29:28.3, 3390N×2502E, h33km, Mb3.8*

ISC 11 13:29:16.5±1.7**, 3437N**±006×**245E**±01**, h8**km±19km**, n16,** σ**0ˢ94**/19**, 2C-3D, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.59	323	*e*P	Pg	13 29 27.5	-0.4
GVD				*e*S	Sg	13 29 35.9	+0.3
VAM	Vamos	1.07	346	⇓*i*PN	Pn	13 29 35.3	-2.5
VAM	Vamos	1.07	346	*e*Pn	Pn	13 29 34.0	-3.8
XRY	Khrisi	1.09	62	*e*PN	Pn	13 29 41.0	+2.9
XRY	Khrisi	1.09	62	*e*Pn	Pn	13 29 38.0	-0.1
NPS	Neapolis	1.27	45	*e*PN	Pn	13 29 40.2	-0.3
NPS	Neapolis	1.27	45	*e*Pn	Pn	13 29 39.0	-1.5
KARP	Karpathos	2.46	61	⇓*i*PN	Pn	13 30 00.1	+3.1
KARP				*e*SN	Sn	13 30 27.0	-0.3
KARP	Karpathos	2.46	61	*e*Pb	Pn	13 29 58.0	+1.0
VLI	Veliai	2.68	332	*e*PN	Pn	13 30 01.0	+1.1
GLL	Jalalah	7.75	126	⇑P	Pn	13 31 09.4	-0.3
HHAG	Hagoal	7.79	122	P	Pn	13 31 10.9	+0.8
HFRF	Wahat Farafira	7.90	155	⇓P	Pn	13 31 11.5	-0.2
SUZ		8.37	120	⇑P	Pn	13 31 17.9	-0.2
SUZ				S	Sn	13 32 39.6	-13
ZAF		8.50	124	P	Pn	13 31 19.6	-0.4
ZAF		8.50	124	P	Pn	13 31 19.5	-0.5

*IDC **11** 13:42:17.7±1.0, 4674N×15579E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/19, mbtmp3.6/5, MS3.9/1, Ms1 3.9/1, ms1mx2.8/30, Error ellipse: s-maj=35.6km s-min=28.4km az=97.0*

*ISCJB **11** 13:42:21.0±0.9, 468N±0.1×1557E±03, h33km, mb3.6/5, Error ellipse: s-maj=33.8km s-min=17.1km az=8.2*

*MOS **11** 13:42:21.6±0.7, 4684N×15558E, h40km, mb3.9/2, Error ellipse: s-maj=74.8km s-min=27.0km az=88.2*

ISC 11 13:42:23.1±0.9**, 468N**±01×**1558E**±03**, h35**km**, n9,** σ**0ˢ51**/8**, mb3.6**/5**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.87	3	*e*PN	Pn	13 43 19.4	-0.6
INK	Inuvik	40.60	33	LR	LR	14 06 13.6	
	comp=Z,141nm,18.4s,baz=187,slow=35						
MKAR	Makanchi Array	48.52	298	P	P	13 51 02.6	+0.3
	0.4nm,0.8s,mb3.5,baz=71,slow=7.8,SNR=3.5						
FINES	FINESS Array B	64.73	336	P	P	13 52 57.7	+0.4
	3.2nm,1.2s,mb4.2,baz=54,slow=7.8,SNR=5.6						
WRA	Warramunga Arr	69.22	202	P	P	13 53 25.3	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	69.22	202	P	P	13 53 25.3	-0.8
	comp=Z,0.5nm,0.9s,mb3.4,baz=20,slow=6.9,SNR=3.6						
ASAR	Alice Springs	72.90	201	P	P	13 53 48.6	+0.3
	comp=Z,0.4nm,1.0s,mb3.3,baz=12,slow=6.2,SNR=4.7						
TXAR	Lajitas Array	75.85	62	P	P	13 54 06.2	+0.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	Lajitas Array	75.85	62	P	P	13 54 06.2	+0.4
	comp=Z,0.6nm,0.6s,mb3.7,baz=312,slow=4.7,SNR=9.1						

*IDC **11** 13:45:09.8±3.7, 3503N×14441E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=69.4km s-min=29.9km az=28.0*

*ISCJB **11** 13:45:11.9±1.6, 3537N±008×1444E±0.1, h52km±18km, mb3.5/2, Error ellipse: s-maj=15.3km s-min=13.8km az=2.9*

*JMA **11** 13:45:12.5±0.5, 3552N×14438E, h93km, M3.3*

ISC 11 13:45:12.7±1.7**, 3538N**±008×**1445E**±01**, h36**km±20km**, n15,** σ**1ˢ05**/19**, mb3.5**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	2.94	257	P	Pn	13 45 57.2	+0.3
CHOJ	Chosi	2.95	277	P	Pn	13 45 58.1	+1.1
BSO3	Boso 3	3.28	261	P	Pn	13 46 02.8	+1.2
JHO	Hitachi	3.38	293	P	Pn	13 46 02.3	-0.7
JHO				S	Sn	13 46 40.8	-1.1
JFK	Kawauchi	3.51	306	P	Pn	13 46 03.6	-1.1
JYT	Yasato	3.57	285	P	Pn	13 46 05.3	-0.2
JAG	Ashikaga	4.19	286	P	Pn	13 46 14.2	+0.1
JOD2	Odawara 2	4.39	270	P	Pn	13 46 17.2	+0.4
JOD2				S	Sn	13 47 06.0	-0.7
JMK	Ichinoseki	4.41	325	P	Pn	13 46 15.5	-1.5
JHJ2	Mitsune	4.46	241	P	Pn	13 46 18.3	+0.6
JHJ	Hachijo jima 2	4.47	241	Pn	Pn	13 46 16.6	-1.4
	17nm,0.3s,baz=86,slow=19,SNR=3.5						
JHJ				Sn	Sn	13 47 07.3	-1.5
	19nm,0.3s,baz=72,slow=19,SNR=2.1						
JRY	Ryogami san	4.56	280	P	Pn	13 46 20.2	+1.0
MJAR	Matsushiro Arr	5.20	285	Pn	Pn	13 46 30.2	+2.2
	1.0nm,0.3s,baz=106,slow=8.1,SNR=16						
MJAR				Sn	Sn	13 47 28.5	+1.9
	0.5nm,0.3s,baz=62,slow=5.5,SNR=3.1						
WRA	Warramunga Arr	55.84	192	P	P	13 54 46.5	0.0
	0.4nm,0.7s,mb3.6,baz=12,slow=7.3,SNR=5.6						
ASAR	Alice Springs	59.56	191	P	P	13 55 12.6	0.0
	0.3nm,0.8s,mb3.4,baz=6.7,slow=7.4,SNR=4.2						

*TEH **11** 13:48:23.6, 3123N×4887E, h14km, ML3.8*

*IDC **11** 13:48:32.2±2.5, 31.17N×4900E, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/37, Error ellipse: s-maj=47.5km s-min=24.8km az=148.0*

*SGS **11** 13:48:36.0, 31.11N×4883E, h2km*

*CSEM **11** 13:48:37.0±0.1, 3125N×4888E, h25km, ML4.0, Error ellipse: s-maj=1.4km s-min=1.1km az=114.0*

*ISCJB **11** 13:48:38.0±0.3, 3124N±002×4888E±003, h53km±6km, mb3.6/8, Error ellipse: s-maj=4.6km s-min=3.8km az=31.0*

*NEIC **11** 13:48:38.0, 3123N×4887E, h14km, ML4.0(THR), MN3.9(TEH), After TEH.*

*THR **11** 13:48:42.7±0.3, 3167N×4931E, h14km±5km, ML4.0*

ISC 11 13:48:39.2±0.3**, 3121N**±002×**4885E**±003**, h48**km±7km**, n71,** σ**0ˢ82**/94**, mb3.6**/8**, Western Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.90	357	Pg	Pn	13 48 54.0	-1.5
SHGR				Sg	Sn	13 49 03.0	-4.5
SHGR	Shooshtar-Gavs	0.90	357	*e*Pg	Pn	13 48 54.5	-1.0
SHGR				*e*Sg	Sn	13 49 03.3	-4.1
SHGR				AML	AML	13 49 14.0	
	comp=N,5µm,0.6s						
SHGR				AML	AML	13 49 18.3	
	comp=E,6µm,0.6s						
MIB	Mutribah	1.92	223	*e*P	Pn	13 49 10.1	+0.7
MIB				AML	AML	13 49 36.6	
	comp=Z,198nm,0.5s						
UMR	Umm Al-Rimmam	1.92	211	*e*P	Pn	13 49 09.9	+0.5
UMR				AML	AML	13 49 38.6	
	comp=Z,335nm,0.4s						
KBD	Kabd	2.26	207	*e*P	Pn	13 49 14.3	+0.2
KBD				AML	AML	13 49 43.7	
	comp=Z,241nm,0.3s						
IPIR	Pirpir	2.27	49	*e*Pn	Pn	13 49 15.1	+0.8
IPIR				*e*Sn	Sn	13 49 42.5	+1.4
IPIR				*e*		13 50 01.8	
	comp=Z,9µm,0.4s						
IPIR	Pirpir	2.27	49	*e*Pn	Pn	13 49 15.1	+0.8
IPIR				*e*Sn	Sn	13 49 42.5	+1.4
RST	Umm Al-Ruwaisa	2.34	224	*e*P	Pn	13 49 15.1	-0.1
RST				AML	AML	13 49 47.5	
	comp=Z,126nm,0.5s						
NAY	Al-Naaiem	2.40	216	*e*P	Pn	13 49 16.9	+0.8
NAY				AML	AML	13 49 50.9	
	comp=Z,87nm,0.5s						
RDF	Al-Radifah	2.54	207	*e*P	Pn	13 49 18.7	+0.8
RDF				AML	AML	13 49 52.3	
	comp=Z,132nm,0.5s						
QRN	Al-Qurain	2.59	199	*e*P	Pn	13 49 19.0	+0.4
QRN				AML	AML	13 49 51.0	
	comp=Z,81nm,0.5s						
IGAR	Garneh	3.03	69	*e*Pn	Pn	13 49 24.2	-0.4
IGAR				*e*Sn	Sn	13 49 58.7	-1.0
IGAR				*e*		13 50 17.3	
	comp=Z,3µm,0.3s						
IGAR	Garneh	3.03	69	*e*Pn	Pn	13 49 24.2	-0.4
IGAR				*e*Sn	Sn	13 49 58.7	-1.0
KFJS		3.11	195	S	Sn	13 50 13.9	+12
KFJS		3.11	195	P	Pn	13 49 25.7	-0.1
IKLH	Kalahroud	3.12	47	*e*Pn	Pn	13 49 26.7	+0.8
IKLH				*e*		13 49 29.1	
	comp=Z,3µm,0.2s						
IKLH				*e*Sn	Sn	13 50 02.5	+0.5
IKOM	Komasi	3.17	339	*e*Pn	Pn	13 49 27.1	+0.6
IKOM				*e*		13 50 45.9	
	comp=Z,6µm,0.4s						
IKOM	Komasi	3.17	339	Pn	Pn	13 49 27.0	+0.5
IZEF	Zefreh	3.40	59	*e*Pn	Pn	13 49 30.0	+0.3
IZEF				*e*Sn	Sn	13 50 09.1	+0.4
IZEF				*e*		13 50 36.7	
	comp=Z,1µm,0.3s						
IZEF	Zefreh	3.40	59	*e*Pn	Pn	13 49 30.0	+0.3
IZEF				*e*Sn	Sn	13 50 09.1	+0.4
ASAO	Ashtian	3.47	16	Pn	Pn	13 49 31.0	+0.3
ASAO				Sg	Sn	13 50 14.0	+3.4
ASAO	Ashtian	3.47	16	*e*Pn	Pn	13 49 31.1	+0.4
ASAO				*e*Sg	Sn	13 50 14.3	+3.7
ASAO				AML	AML	13 50 28.2	
	comp=N,158nm,0.5s						
ASAO				AML	AML	13 50 42.5	
	comp=E,208nm,0.6s						
IGHG	Ghaleghazi	3.66	329	*e*Pn	Pn	13 49 34.0	+0.7
IGHG				*e*Sn	Sn	13 50 15.3	+0.1
IGHG				*e*		13 50 41.7	
	comp=Z,3µm,0.3s						
IGHG	Ghaleghazi	3.66	329	Pn	Pn	13 49 33.9	+0.6
IGHG				*e*Sn	Sn	13 50 15.3	+0.1
IVIS	Veys	3.71	334	*e*Pn	Pn	13 49 34.5	+0.5
IVIS				*e*Sn	Sn	13 50 16.5	+0.1
IVIS				*e*		13 50 45.2	
	comp=Z,1µm,0.4s						
IVIS	Veys	3.71	334	Pn	Pn	13 49 34.3	+0.3
IVIS				*e*Sn	Sn	13 50 16.5	+0.1
NASN	Na'in	3.71	64	Pn	Pn	13 49 34.0	0.0
NASN	Na'in	3.71	64	*e*Pn	Pn	13 49 34.5	+0.4
GHVR	GHOM	3.86	32	*e*Pn	Pn	13 49 35.1	-0.9
GHVR				AML	AML	13 50 44.0	
	comp=N,956nm,0.6s						
GHVR				AML	AML	13 50 54.8	
	comp=E,1µm,0.6s						
IMOK	Mook	3.98	122	*e*Pn	Pn	13 49 38.6	+0.9
IMOK				*e*		13 51 20.1	
	comp=Z,1µm,0.4s						
IMOK	Mook	3.98	122	Pn	Pn	13 49 38.5	+0.8
ILIN	Laeen	4.03	337	*e*Pn	Pn	13 49 38.9	+0.6
ILIN				*e*Sn	Sn	13 50 24.1	-0.1
ILIN				*e*		13 50 35.4	
	comp=Z,1µm,0.2s						
ILIN	Laeen	4.03	337	Pn	Pn	13 49 38.8	+0.5
ILIN				Sn	Sn	13 50 24.0	-0.2
ISRV	Sarvestan	4.11	115	Pn	Pn	13 49 40.0	+0.5
ISRV				Sn	Sn	13 50 26.3	0.0
ISRV	Sarvestan	4.11	115	*e*Pn	Pn	13 49 40.1	+0.6
ISRV				*e*Sn	Sn	13 50 26.3	0.0
ISRV				*e*		13 51 18.7	
	comp=Z,2µm,0.6s						
ISRV	Sarvestan	4.11	115	*e*Pn	Pn	13 49 40.1	+0.6
ISRV				*e*Sn	Sn	13 50 26.3	0.0
ISAD	Sadrabad	4.18	79	*e*Sn	Sn	13 50 27.7	-0.4
ISFB	Sefidab	4.24	41	Pn	Pn	13 49 41.3	+0.1
ISFB	Sefidab	4.24	41	*e*Pn	Pn	13 49 41.4	+0.2
ISFB				*e*		13 50 39.1	
	comp=Z,931nm,0.2s						
IRAZ	Razeghan	4.28	12	Pn	Pn	13 49 42.1	+0.3
IRAZ				Sn	Sn	13 50 29.7	-0.7
IRAZ	Razeghan	4.28	12	*e*Pn	Pn	13 49 42.2	+0.4
IRAZ				*e*		13 49 58.0	
	comp=Z,1µm,0.2s						
IRAZ				*e*Sn	Sn	13 50 29.7	-0.7
BHD	Baghdad	4.31	300	*e*x	x	13 49 47.0	
BHD				*e*x	x	13 50 02.0	
BHD				*e*x	x	13 50 37.5	
BHD				*e*x	x	13 50 59.5	
IMHD	Mahdasht	4.71	18	*e*Pn	Pn	13 49 48.1	+0.3
IMEH	Mehriz	4.93	86	*e*Pn	Pn	13 49 50.4	-0.4
IMEH				*e*		13 49 52.5	
	comp=Z,300nm,0.2s						
CHTH	Charan	5.06	21	Pn	Pn	13 49 52.0	-0.4
CHTH	Charan	5.06	21	*e*Pn	Pn	13 49 52.8	+0.3
IDMV	Damavand	5.10	31	Pn	Pn	13 49 53.3	+0.2
IDMV	Damavand	5.10	31	*e*Pn	Pn	13 49 53.4	+0.3
IDMV				*e*		13 51 45.4	
	comp=Z,817nm,0.6s						
DAMV	Damavand	5.12	30	Pn	Pn	13 49 53.0	-0.3
DAMV	Damavand	5.12	30	*e*Pn	Pn	13 49 53.2	-0.1
DAMV	Damavand	5.12	30	*e*Pn	Pn	13 49 53.2	-0.1
	SNR=52						
IAFJ	Afjeh	5.21	26	*e*Pn	Pn	13 49 55.3	+0.7
IAFJ				*e*Sn	Sn	13 50 51.9	-1.5
IAFJ				*e*		13 51 47.2	
	comp=Z,690nm,0.4s						
IAFJ	Afjeh	5.21	26	Pn	Pn	13 49 55.2	+0.6
IAFJ				*e*Sn	Sn	13 50 51.9	-1.5
BOQSS		5.34	175	P	Pn	13 49 55.0	-1.3
ASYS		5.40	228	P	Pn	13 49 55.0	-2.2
IFIR	Firoozkooh	5.49	35	*e*Pn	Pn	13 49 58.8	+0.4
IFIR				*e*Sn	Sn	13 50 58.6	-1.7
BTHS		7.35	166	P	Pn	13 50 21.6	-2.3
ASF	Jabal al Asfar	10.23	279	Pn	Pn	13 51 01.5	-1.9
	comp=Z,1.2nm,0.3s,baz=327,slow=8.3,SNR=6.5						
ASF				Lg		13 54 04.3	
	comp=Z,0.6nm,0.3s,baz=150,slow=20,SNR=4.0						
ASF				LR	LR	13 55 18.7	
	comp=Z,67nm,18.9s,baz=106,slow=39						
EIL	Elat	12.10	266	Lg		13 55 08.8	
	comp=Z,0.4nm,0.3s,baz=3.0,slow=20,SNR=2.9						
EIL				LR	LR	13 57 07.4	
	comp=Z,76nm,19.1s,baz=63,slow=42						
AKTO	Aktyubinsk	20.39	17	P	P	13 53 11.5	-0.3
	comp=Z,0.7nm,0.5s,baz=172,slow=14,SNR=2.4						
IDI	Anoyia	20.44	288	P	P	13 53 12.0	-0.4
	comp=Z,11nm,0.8s,baz=84,slow=10,SNR=4.6						
MLR	Muntele Rosu	22.83	315	P	P	13 53 39.2	+1.3
	comp=Z,2.1nm,0.7s,mb3.7,baz=176,slow=6.6,SNR=4.6						
AKASG	Malin Array Be	24.34	329	P	P	13 53 51.3	-1.0
	comp=Z,0.3nm,0.4s,mb3.1,baz=134,slow=8.9,SNR=5.4						
FINES	FINESS Array B	33.72	340	P	P	13 55 15.4	-0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=160,slow=6.1,SNR=8.5						
NOA	NORSAR Array B	38.68	332	P	P	13 55 57.3	-0.6
NOA	NORSAR Array B	38.68	332	P	P	13 55 57.3	-0.6
	comp=Z,0.5nm,0.6s,mb3.4,baz=122,slow=8.3,SNR=2.5						
ARCES	ARCESS Array B	40.59	348	P	P	13 56 13.9	+0.2
	comp=Z,2.5nm,1.1s,mb3.8,baz=160,slow=11,SNR=4.4						
ARCES	ARCESS Array B	40.59	348	P	P	13 56 13.9	+0.2
ESDC	Sonseca Array	43.32	296	P	P	13 56 36.9	+0.5
	comp=Z,0.2nm,0.5s,mb3.1,baz=72,slow=8.6,SNR=2.3						
TORD	Torodi Ar. Bea	46.84	258	P	P	13 57 05.2	+0.6
	comp=Z,1.3nm,0.8s,mb3.9,baz=49,slow=8.1,SNR=8.1						
YKA	Yellowknife Ar	85.68	352	P	P	14 01 12.9	+0.5
	comp=Z,0.7nm,1.0s,mb3.9,baz=14,slow=4.8,SNR=5.3						

*ISCJB **11** 13:54:25.9±3.1, 467N±0.1×1550E±02, h16km±21km, mb3.7/10, Error ellipse: s-maj=25.1km s-min=12.6km az=33.1*

*IDC **11** 13:54:25.6±0.9, 4653N×155.19E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/20, mbtmp3.7/9, ML3.2/1, Error ellipse: s-maj=28.2km s-min=23.0km az=115.0*

*MOS **11** 13:54:29.4±1.4, 4674N×15496E, h43km, mb3.9/5, Error ellipse: s-maj=27.4km s-min=12.7km az=82.3*

ISC 11 13:54:25.7±6.3**, 466N**±01×**1552E**±02**, h1**km±38km**, n20,** σ**1ˢ43**/21**, mb3.8**/10**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.11	9	*e*PN	Pn	13 55 29.0	-0.6
PET	Petropavlovsk	6.80	18	*e*PN	Pn	13 56 08.4	+2.0
ASAJ	Asahikawa	9.19	259	Pn	Pn	13 56 39.4	+0.2
	0.3nm,0.3s,baz=79,slow=16,SNR=3.1						
BILL	Bilibino	22.22	11	⇓*e*P	P	13 59 20.5	-2.7
BILL				*e*S	S	14 03 20.6	-7.8
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
TIXI	Tiksi	28.00	343	*e*P	P	14 00 14.9	-2.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.8						
MKAR	Makanchi Array	48.24	298	*e*P	P	14 03 09.9	+2.1
MKAR	Makanchi Array	48.24	298	P	P	14 03 08.3	+0.5
	comp=Z,0.4nm,0.7s,mb3.7,baz=72,slow=8.1,SNR=6.7						
KURK	Kurchatov	48.60	304	*e*P	P	14 03 09.8	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	50.18	37	P	P	14 03 21.7	-0.7
	comp=Z,0.2nm,0.6s,mb3.2,baz=296,slow=7.1,SNR=2.7						
FINES	FINESS Array B	64.74	336	eP	P	14 05 04.4	-0.7
FINES	FINESS Array B	64.74	336	P	P	14 05 04.4	-0.6
	comp=Z,0.8nm,0.5s,mb4.2,baz=28,slow=8.6,SNR=12						
NOA	NORSAR Array B	68.79	342	P	P	14 05 32.8	+1.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	68.79	342	P	P	14 05 32.8	+2.0
	comp=Z,0.5nm,0.7s,mb3.9,baz=25,slow=6.4,SNR=2.9						
WRA	Warramunga Arr	68.87	201	P	P	14 05 30.7	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	68.87	201	P	P	14 05 30.7	-1.0
	comp=Z,0.5nm,0.9s,mb3.8,baz=26,slow=6.9,SNR=3.7						
AKASG	Malin Array Be	72.42	327	P	P	14 05 55.8	+2.6
	comp=Z,0.3nm,0.3s,mb4.0,baz=34,slow=5.1,SNR=2.5						
ASAR	Alice Springs	72.55	200	P	P	14 05 54.2	+0.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	72.55	200	P	P	14 05 54.1	0.0
	comp=Z,0.6nm,0.7s,mb3.9,baz=27,slow=4.8,SNR=9.3						
TXAR	Lajitas Array	76.33	62	eP	P	14 06 17.3	+1.0
TXAR	Lajitas Array	76.33	62	P	P	14 06 17.2	+1.0
	comp=Z,0.6nm,0.5s,mb4.0,baz=302,slow=4.5,SNR=12						

IDC 11 13:59:54.9±2.6**, 1584S×17393W, h0^{km}, mb3.9**/5**, mb1 4.2**/5**, mb1mx4.0**/13**, mbtmp3.9**/5**, MS4.0**/7**, Ms1 3.9**/7**, ms1mx3.6**/26**, Error ellipse: s-maj=177.9km s-min=24.1km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.83	48	Pn	Pn	14 00 35.1	-6.3
	34nm,0.3s,baz=72,slow=1.1,SNR=69						
AFI				Sn	Sn	14 01 01.6	-15
	88nm,0.3s,baz=9.6,slow=21,SNR=22						
RAR	Rarotonga	14.45	114	LR	LR	14 07 33.9	
	comp=Z,563nm,20.4s,baz=289,slow=32						
PPT	Papeete	23.39	98	eLQ		14 09 48.9	
	313nm,25.2s						
PPT				eLR	LR	14 10 49.5	
	685nm,26.5s						
PPT	Papeete	23.39	98	LR	LR	14 12 05.7	
	comp=Z,274nm,20.8s,baz=87,slow=31						
TBI	Tubuai	24.21	112	eLQ		14 10 13.9	
	204nm,28.0s						
TBI				eLR	LR	14 11 12.5	
	764nm,27.0s,baz=289						
RKT	Rikitea	37.35	107	eLR	LR	14 17 10.1	
	467nm,29.8s,baz=282						
WRA	Warramunga Arr	49.25	257	P	P	14 08 44.9	-0.7
	1.2nm,0.9s,baz=91,slow=7.4,SNR=6.0						
WRA				LR	LR	14 27 19.2	
	comp=Z,168nm,19.1s,baz=90,slow=33						
ASAR	Alice Springs	49.49	252	P	P	14 08 47.9	+0.5
	3.9nm,0.7s,baz=85,slow=8.0,SNR=38						
NVAR	Mina Array Bea	75.00	42	P	P	14 11 39.3	+1.0
	1.6nm,0.9s,baz=221,slow=6.4,SNR=8.5						
TXAR	Lajitas Array	81.28	56	P	P	14 12 12.9	-0.4
	0.1nm,0.4s,baz=234,slow=11,SNR=2.3						
MAW	Mawson	87.21	199	LR	LR	14 46 25.8	
	comp=Z,146nm,20.3s,baz=64,slow=32						
YKA	Yellowknife Ar	90.70	24	P	P	14 12 58.5	-0.7
	0.7nm,0.9s,baz=242,slow=4.5,SNR=11						
YKA				LR	LR	14 51 41.1	
	comp=Z,51nm,18.4s,baz=90,slow=34						
ULM	Lac du Bonnet	94.59	39	LR	LR	14 52 10.1	
	comp=Z,125nm,19.5s,baz=26,slow=33						
CFAA	Coronel Fontan	94.63	124	LR	LR	14 45 53.6	
	comp=Z,19nm,21.4s,baz=175,slow=29						
KHC	Kasperske Hory	146.24	351	eP	PKPdf	14 19 37.0	+0.7
KHC				ex	x	14 19 49.5	
GERES	GERESS Array B	146.50	351	PKPbc	PKPbc	14 19 37.8	-0.2
	0.7nm,0.8s,baz=9.5,slow=3.2,SNR=5.9						

*BJI **11** 14:29:25.0, 4659N×15328E, h7^{km}, mB4.7, mb4.3, Ms4.5, Msz4.1*
*NEIC **11** 14:29:26.6±0.8, 4654N×15335E, h10^{km}, mb4.1/4, Error ellipse: s-maj=20.7km s-min=14.3km az=124.0*
*ISCJB **11** 14:29:28.1±2.3, 4660N±008×1533E±01, h28^{km}±15^{km}, mb4.3/28, MS4.8/2, Error ellipse: s-maj=17.2km s-min=6.8km az=139.9*
*MOS **11** 14:29:29.9±1.5, 4670N×153.17E, h42^{km}, mb4.3/10, Error ellipse: s-maj=15.4km s-min=9.9km az=77.2*
*IDC **11** 14:29:34.8±4.0, 4657N×153.14E, h77^{km}±36^{km}, mb3.6/12, mb1 3.8/14, mb1mx3.7/21, mbtmp3.6/14, Error ellipse: s-maj=20.5km s-min=18.1km az=124.0*
ISC 11 14:29:31.2±1.2**, 4668N**±008×**1533E**±01**, h37^{km}**±9^{km}**, n67, σ1§16**/70**, mb4.3**/28**, MS4.8**/2**, 5C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.06	251	ePN	Pn	14 30 29.0	-1.8
KUR				eS	Sn	14 31 16.5	-0.6
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,40nm,0.5s						
KUR				smax			
	comp=E,230nm,0.5s						
SKR	Severo-Kuril's	4.42	24	ePN	Pn	14 30 34.5	-1.1
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,100nm,0.4s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
YUK	Yuzh-Kuril'sk	5.88	246	PN	Pn	14 31 05.3	+10
YUK				eS	Sn	14 32 01.8	0.0
YUK				smax			
	comp=N,670nm,0.8s						
YSS	Yuzh-Sakhalins	7.25	276	ePN	Pn	14 31 19.4	+4.9
ASAJ	Asahikawa	7.96	255	PN	Pn	14 31 26.1	+1.7
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	7.96	255	P	Pn	14 31 26.1	+1.7
	comp=Z,1.6nm,0.3s,baz=158,slow=15,SNR=9.4						
ERM	Erimo	8.64	241	ePN	Pn	14 31 33.8	+0.2
HABR	Khabarovsk	12.46	285	ePN	Pn	14 32 21.9	-4.0
MA2	Magadan	13.01	354	P	Pn	14 32 35.8	+2.5
MJAR	Matsushiro Arr	15.15	233	P	Pn	14 33 02.4	+0.1
	comp=Z,0.3nm,0.3s,baz=32,slow=12,SNR=5.9						
KSRS	Korea Array	20.91	253	P	P	14 34 10.4	+0.2
	comp=Z,1.8nm,0.7s,baz=59,slow=9.2,SNR=5.7						
BILL	Bilibino	22.43	13	eP	P	14 34 26.3	-0.1
	comp=Z,3.8nm,0.5s,mb4.1						
BILL	Bilibino	22.43	13	eP	P	14 34 28.1	+1.8
BILL				eS	S	14 38 27.6	-2.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
BILL				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.0						
TIXI	Tiksi	27.57	344	eP	P	14 35 11.6	-2.7
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.3s,mb3.3						
ULN	Ulaanbaatar	31.05	289	P	P	14 35 47.6	+2.2
	comp=Z,1.7nm,0.8s,mb3.9						
ULN	Ulaanbaatar	31.05	289	P	P	14 35 47.6	+2.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
SONM	Songino Array	31.49	290	P	P	14 35 47.4	-1.7
	comp=Z,0.3nm,0.6s,mb3.3,baz=60,slow=8.5,SNR=2.6						
WHN	Wuhan	34.05	256	eP	P	14 36 10.0	-1.7
LZH	Lanzhou	38.03	272	eP	P	14 36 47.0	+1.3
LZH				AP	pP	14 36 51.0	-5.3
LZH				XP	sP	14 36 54.0	-6.7
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,89nm,4.1s						
GTA	Gaotai	39.12	279	eP	P	14 36 56.1	+1.3
GTA				AP	pP	14 37 01.9	-3.5
GTA				XP	sP	14 37 04.2	-5.6
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
MKAR	Makanchi Array	47.10	298	P	P	14 37 58.2	-1.0
MKAR				PcP	PcP	14 39 30.3	-0.3
MKAR	Makanchi Array	47.10	298	iP	P	14 37 58.2	-1.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	47.10	298	P	P	14 37 58.2	-1.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=66,slow=7.6,SNR=29						
MKAR				PcP	PcP	14 39 30.3	-0.3
	comp=Z,0.6nm,0.8s,baz=69,slow=5.5,SNR=3.5						
YKA	Yellowknife Ar	50.90	37	iP	P	14 38 28.2	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	50.90	37	P	P	14 38 28.3	+0.2
	comp=Z,1.2nm,0.6s,mb4.0,baz=296,slow=7.1,SNR=17						
BRVK	Borovoye	51.05	310	eP	P	14 38 28.2	-1.1
	comp=Z,1.8nm,0.7s,mb4.1						
BRVK	Borovoye	51.05	310	eP	P	14 38 28.3	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TAPN	Taplejung	54.24	273	eP	P	14 38 54.3	+1.0
	comp=Z,6.0nm,0.7s,mb4.7						
JIRN	Jiri	55.09	275	eP	P	14 39 00.2	+0.8
	comp=Z,9.5nm,0.5s,mb5.1						
KKN	Kakani	55.63	275	eP	P	14 39 04.2	+0.9
	comp=Z,10nm,0.6s,mb5.0						
GKN	Gorkha	55.94	276	eP	P	14 39 06.1	+0.6
	comp=Z,9.8nm,0.5s,mb5.1						
NVAR	Mina Array Bea	62.35	62	P	P	14 39 52.0	+2.2
	comp=Z,0.2nm,0.5s,mb3.5,baz=282,slow=4.2,SNR=3.8						
FINES	FINESS Array B	64.16	335	iP	P	14 40 01.0	-0.4
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	64.16	335	P	P	14 40 00.9	-0.5
	comp=Z,2.5nm,0.6s,mb4.4,baz=37,slow=6.5,SNR=20						
OBN	Obninsk	65.45	326	⇓eP	P	14 40 09.0	-0.9
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
OBN				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.7						
NB2	NORSAR Subarra	68.34	341	P	P	14 40 28.0	-0.2
	comp=Z,1.9nm,0.6s,mb4.3,baz=28,slow=6.5						
NOA	NORSAR Array B	68.34	341	P	P	14 40 28.4	+0.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	NORSAR Array B	68.34	341	P	P	14 40 28.4	+0.2
	comp=Z,2.9nm,0.7s,mb4.4,baz=28,slow=6.4,SNR=8.9						
WRA	Warramunga Arr	68.49	199	iP	P	14 40 30.1	+0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	68.49	199	P	P	14 40 27.2	-2.3
	comp=Z,0.5nm,0.7s,mb3.6,baz=23,slow=7.0,SNR=4.6						
AKASG	Malin Array Be	71.68	326	iP	P	14 40 48.2	-0.6
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	71.68	326	P	P	14 40 48.1	-0.7
	comp=Z,2.5nm,0.5s,mb4.4,baz=33,slow=6.2,SNR=11						
ASAR	Alice Springs	72.18	199	P	P	14 40 50.5	-1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	72.18	199	P	P	14 40 50.5	-1.6
	comp=Z,0.6nm,0.6s,mb3.7,baz=13,slow=5.8,SNR=11						
BURAR	Bucovina Array	75.72	327	⇑iP	P	14 41 12.8	+0.2
TRPA	Tarpa	76.28	329	⇓iP	P	14 41 16.7	+1.0
MORC	Moravsky Berou	76.57	332	⇑iP	P	14 41 16.2	-1.1
CLL	Collm	76.59	336	⇑iP	P	14 41 17.2	-0.2
	comp=Z,5.0nm,0.7s,mb4.5						
CLL	Collm	76.59	336	⇑iP	P	14 41 17.2	-0.2
CLL				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
CLL	Collm	76.59	336	⇑iP	P	14 41 17.2	-0.2
	comp=Z,5.0nm,0.7s,mb4.5						
TIRR	Tirgusor	77.05	323	⇓iP	P	14 41 21.8	+1.6
MLR	Muntele Rosu	77.20	325	⇓iP	P	14 41 22.2	+1.2
MALT	Malatya	77.30	313	⇓iP	P	14 41 23.3	+1.6
TXAR	Lajitas Array	77.41	61	P	P	14 41 21.7	-0.8
TXAR	Lajitas Array	77.41	61	eP	P	14 41 24.3	+1.9
TXAR	Lajitas Array	77.41	61	P	P	14 41 21.7	-0.8
	comp=Z,0.5nm,0.5s,mb3.7,baz=305,slow=4.4,SNR=12						
KHC	Kasperske Hory	78.36	334	eP	P	14 41 28.0	+0.6
GERES	GERESS Array B	78.58	334	P	P	14 41 27.5	-1.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	78.58	334	P	P	14 41 27.5	-1.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=28,slow=6.0,SNR=7.9						
BZS	Buzias	78.75	328	⇓iP	P	14 41 30.0	+0.4
CDF	Champ du Feu	80.78	338	eP	P	14 41 40.2	-0.3
	comp=Z,8.8nm,1.0s,mb4.3						
LDF	La Druitiere	82.33	343	eP	P	14 41 49.0	+0.3
GRR	Gorron	82.68	343	eP	P	14 41 50.1	-0.4
CABF	La Chapelle	82.75	338	eP	P	14 41 49.4	-1.5
	comp=Z,15nm,1.0s,mb4.7						
SSF	Saint Saulge	82.97	340	eP	P	14 41 51.8	-0.3
	comp=Z,22nm,1.2s,mb4.8						
AVF	Avril sur Loir	83.26	340	eP	P	14 41 53.4	-0.2
	comp=Z,12nm,1.0s,mb4.6						
SMF	Signal de Mont	83.28	339	eP	P	14 41 53.5	-0.2
	comp=Z,13nm,1.0s,mb4.6						

*ISCJB **11** 14:44:24.7±1.9, 488N±02×1548E±02, h69^{km}±18^{km}, mb3.4/6, Error ellipse: s-maj=37.2km s-min=11.0km az=135.3*
*MOS **11** 14:44:25.4±1.6, 4879N×15466E, h77^{km}, mb4.1/1, Error ellipse: s-maj=50.0km s-min=17.7km az=65.5*
*IDC **11** 14:44:30.0±5.2, 4866N×15457E, h102^{km}±48^{km}, mb3.1/6, mb1 3.4/7, mb1mx3.2/20, mbtmp3.2/7, Error ellipse: s-maj=40.7km s-min=20.6km az=131.0*
ISC 11 14:44:26.4±1.7**, 488N**±02×**1547E**±03**, h68^{km}**±17^{km}**, n11, σ1§38**/13**, mb3.4**/6**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.10	25	ePN	Pn	14 44 57.5	-1.8
SKR				eS	Sn	14 45 22.5	-1.9
SKR				pmax	pmax		
	comp=Z,90nm,0.3s						
SKR				smax			
	comp=N,400nm,0.5s						
SKR				smax			
	comp=E,200nm,0.3s						
SKR				smax			
	comp=Z,90nm,0.5s						
PET	Petropavlovsk	4.92	29	ePN	Pn	14 45 39.8	+2.2
PET				eS	Sn	14 46 33.9	+0.8
PET				smax			
	comp=N,44nm,0.5s						
PET				smax			
	comp=E,36nm,0.5s						
ASAJ	Asahikawa	9.58	245	PN	Pn	14 46 43.3	+1.9
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	9.58	245	P	Pn	14 46 43.2	+1.8
	comp=Z,1.3nm,0.3s,baz=78,slow=12,SNR=11						
KSRS	Korea Array	22.49	250	P	P	14 49 18.7	-1.2
	comp=Z,4.5nm,1.2s,mb3.7,baz=44,slow=9.7,SNR=4.6						
MKAR	Makanchi Array	46.99	296	P	P	14 52 50.4	+0.1
	comp=Z,0.3nm,0.7s,mb3.1,baz=62,slow=9.3,SNR=3.1						
YKA	Yellowknife Ar	48.64	38	P	P	14 53 04.1	+1.2
YKA	Yellowknife Ar	48.64	38	P	P	14 53 04.1	+1.3
	comp=Z,0.3nm,0.6s,mb3.4,baz=298,slow=7.9,SNR=6.0						
WRA	Warramunga Arr	70.80	200	P	P	14 55 33.6	-1.7
	comp=Z,0.4nm,0.6s,mb3.5,baz=18,slow=6.4,SNR=6.5						
ASAR	Alice Springs	74.49	200	P	P	14 55 57.0	-0.3
	comp=Z,0.3nm,0.5s,mb3.3,baz=12,slow=4.9,SNR=9.4						
TXAR	Lajitas Array	75.56	62	P	P	14 56 04.2	+0.6
	comp=Z,0.2nm,0.5s,mb3.1,baz=312,slow=6.5,SNR=8.3						

*IDC **11** 14:44:36.0±1.7, 3983N×5351E, h0^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.9/24, mbtmp3.9/12, ML4.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/39, Error ellipse: s-maj=30.4km s-min=15.5km az=136.0*
*NEIC **11** 14:44:38.2±4.5, 3995N×5365E, h15^{km}±29^{km}, mb3.9/7, Error ellipse: s-maj=16.6km s-min=6.5km az=186.0*
*MOS **11** 14:44:38.9±1.6, 3992N×5355E, h33^{km}, mb4.0/9, Error ellipse: s-maj=11.2km s-min=7.5km az=109.5*
*CSEM **11** 14:44:39.4±0.2, 3998N×5356E, h40^{km}, mb4.0/7*
*ISCJB **11** 14:44:39.8±1.7, 4023N±007×5365E±005, h30^{km}±13^{km}, mb3.8/13, Error ellipse: s-maj=11.1km s-min=5.8km az=1.4*
*NNC **11** 14:44:46.1±3.2, 4041N×5494E, h0^{km}, mb3.8, Error ellipse: s-maj=35.4km s-min=27.9km az=166.0*
ISC 11 14:44:42.7±0.9**, 4022N**±006×**5367E**±004**, h37^{km}**±8^{km}**, n71, σ1§13**/89**, mb3.8**/13**, 10C-4D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEI	Tsey	7.76	292	eP	Pn	14 46 35.6	+2.5
ZEI				e		14 48 06.1	
ZEI				pmax	pmax		
	comp=Z,1.0nm,0.1s						
ZEI				smax			
	comp=N,8.0nm,0.2s						
KIV	Kislovodsk	8.98	298	ePn	Pn	14 46 50.3	+0.5
	comp=N,11nm,0.4s						
KIV				eSn	Sn	14 48 27.6	-2.0
KIV	Kislovodsk	8.98	298	eP	Pn	14 46 50.5	+0.7
KIV				eS	Sn	14 48 29.4	-0.1
KIV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KIV				MLR	MLR		
	comp=Z,86nm,11.0s						
KIV	Kislovodsk	8.98	298	eP	Pn	14 46 50.5	+0.7
	comp=Z,8.0nm,0.7s						
KIV				eS	Sn	14 48 29.4	-0.1
	comp=Z,86nm,11.0s						
AB31	Akbulak array	10.07	24	Pn	Pn	14 47 04.8	0.0
	comp=Z,1.7nm,0.3s,baz=198,slow=15,SNR=90						
AB31				⇓Sn	Sn	14 48 54.7	-1.6
	comp=Z,3.7nm,0.3s,baz=144,slow=22,SNR=7.4						
AKTK	Aktyubinsk	10.66	15	Pn	Pn	14 47 14.3	+1.6
AKTK				Sn	Sn	14 49 11.1	+0.3
AKTK	Aktyubinsk	10.66	15	Pn	Pn	14 47 14.3	+1.5
AKTO	Aktyubinsk	10.66	15	P	Pn	14 47 14.3	+1.5
AKTO						14 49 11.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,6.0nm,0.3s						
AKTO	Aktyubinsk	10.66	15	Pn	Pn	14 47 14.3	+1.6
	comp=N,1.2nm,0.3s,baz=206,slow=9.9,SNR=19						
AKTO				Sn	Sn	14 49 11.1	+0.3
	comp=N,5.8nm,0.3s,baz=216,slow=16,SNR=10.0						
ANN	Anapa	12.82	296	eP	Pn	14 47 41.5	-0.8
ANN				eS	Sn	14 50 03.8	+0.2
ANN				pmax	pmax		
	comp=Z,50nm,1.4s						
ANN				MLR	MLR		
	comp=Z,314nm,7.0s						
ANN	Anapa	12.82	296	eP	Pn	14 47 41.5	-0.8
	comp=Z,50nm,1.4s						
ANN				eS	Sn	14 50 03.8	+0.2
	comp=Z,314nm,7.0s						
KK31	Karatay Array	12.92	72	Pn	Pn	14 47 42.0	-1.7
	comp=Z,1.4nm,0.5s,baz=260,slow=14,SNR=43						
KK31				⇑Sn	Sn	14 49 59.5	-6.6
	comp=Z,7.2nm,0.7s,baz=268,slow=24,SNR=7.4						
VRSR	Storozhevoye	14.91	322	eP	Pn	14 48 09.3	-1.3
VRSR				pmax	pmax		
	comp=N,6.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,7.0nm,1.0s						
AML	Almayashu	15.20	76	ePn	Pn	14 48 13.1	-1.4
	comp=E,6.3nm,0.9s						
AML				eSn	Sn	14 50 47.8	-14
EKS2	Erkin-Say	15.28	74	eP	Pn	14 48 15.1	-0.4
AAK	Ala-Archa	15.80	74	eP	Pn	14 48 20.6	-1.8
	comp=E,3.0nm,0.6s						
AAK	Ala-Archa	15.80	74	⇑eP	Pn	14 48 21.7	-0.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AAK	Ala-Archa	15.80	74	eP	Pn	14 48 21.7	-0.7
	comp=Z,2.0nm,1.1s						
ARU	Arti	16.54	10	ePn	Pn	14 48 31.1	-0.5
	comp=Z,36nm,0.8s						
ARU				eP		14 48 36.4	
ARU	Arti	16.54	10c	iP	Pn	14 48 36.2	+4.6
ARU				S	S	14 51 42.3	-2.3
ARU				pmax	pmax		
	comp=Z,52nm,1.2s						
TKM2	Tokmak 2	16.62	73	⇓Pn	Pn	14 48 28.3	-4.5
	comp=Z,0.8nm,0.8s						
TKM2				⇓Sn	Sn	14 51 23.1	-13
	comp=Z,1.3nm,0.9s						
TKM2	Tokmak 2	16.62	73	ePn	Pn	14 48 32.3	-0.5
	comp=Z,3.4nm,1.0s						
TKM2	Tokmak 2	16.62	73	eP	Pn	14 48 32.3	-0.5
TKM2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TKM2	Tokmak 2	16.62	73	eP	Pn	14 48 32.3	-0.5
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	17.12	36	eP	Pn	14 48 38.9	0.0
	comp=Z,6.6nm,0.9s						
BRVK				eSn	Sn	14 51 38.4	-10
BRVK	Borovoye	17.12	36	eP	Pn	14 48 38.9	0.0
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRVK	Borovoye	17.12	36	eP	Pn	14 48 38.9	0.0
	comp=Z,6.6nm,0.9s						
SVE	Sverdlovsk	17.23	13	⇓iP	Pn	14 48 45.0	+4.7
SVE				pmax	pmax		
	comp=Z,21nm,0.9s						
EIL	Elat	18.57	241	LR	LR	14 57 49.9	
	comp=Z,48nm,20.0s,baz=93,slow=43						
OBN	Obninsk	18.75	328	⇑eP	Pn	14 48 57.6	-1.3
OBN				eS	S	14 52 26.0	-3.5
OBN				pmax	pmax		
	comp=Z,12nm,1.2s						
OBN	Obninsk	18.75	328	eP	Pn	14 48 57.6	-1.3
	comp=Z,12nm,1.2s						
OBN				eS	S	14 52 26.0	-3.5
MOS	Moscow	18.80	331	eP	Pn	14 48 59.8	+0.3
MOS				e		14 52 33.9	
AKASG	Malin Array Be	20.00	310	iP	P	14 49 13.0	+1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	Malin Array Be	20.00	310	P	P	14 49 12.7	+0.7
	comp=Z,2.8nm,0.3s,baz=102,slow=9.4,SNR=31						
AKASG	Malin Array Be	20.00	310	P	P	14 49 12.6	+0.7
KIEV	Kiev	20.01	310	eP	P	14 49 12.0	0.0
	comp=Z,9.4nm,0.4s						
KIEV	Kiev	20.01	310	eP	P	14 49 12.0	0.0
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KIEV	Kiev	20.01	310	eP	P	14 49 12.0	0.0
	comp=Z,9.4nm,0.4s						
KURK	Kurchatov	20.31	51	⇑Pn	P	14 49 16.7	+1.4
	comp=Z,4.6nm,1.3s						
KURK				⇑Sn	S	14 52 54.2	-6.6
	comp=Z,3.7nm,1.1s						
KURK	Kurchatov	20.31	51	eP	P	14 49 16.8	+1.6
	comp=Z,7.2nm,1.1s						
KURK	Kurchatov	20.31	51	⇑eP	P	14 49 16.2	+0.9
KURK	Kurchatov	20.31	51	eP	P	14 49 16.8	+1.5
	comp=Z,7.2nm,1.1s						
MLR	Muntele Rosu	20.94	294	P	P	14 49 20.7	-1.5
MLR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MLR	Muntele Rosu	20.94	294	P	P	14 49 20.7	-1.4
	comp=Z,2.2nm,0.6s,baz=184,slow=11,SNR=3.4						
MK31	Makanchi Array	21.70	63	Pn	P	14 49 31.1	+0.8
	comp=Z,2.3nm,0.7s,mb3.7,baz=254,slow=7.8,SNR=27						
MK31				⇑Sn	S	14 53 29.4	+1.2
	comp=Z,4.7nm,1.2s						
MKAR	Makanchi Array	21.70	63	P	P	14 49 31.2	+0.9
MKAR	Makanchi Array	21.70	63	P	P	14 49 31.2	+0.9
	comp=Z,3.1nm,0.9s,mb3.7,baz=256,slow=9.9,SNR=24						
MKAR	Makanchi Array	21.70	63	eP	P	14 49 31.2	+0.9
PRGR	Permogore	22.00	350	eP	P	14 49 36.6	+3.3
PRGR				eS	S	14 53 39.8	+6.0
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
FINES	FINESS Array B	27.11	331	iP	P	14 50 22.2	+0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	27.11	331	P	P	14 50 22.3	+0.6
	comp=Z,0.9nm,0.5s,mb3.6,baz=145,slow=10,SNR=15						
FINES	FINESS Array B	27.11	331	iP	P	14 50 22.2	+0.5
	comp=Z,1.0nm,0.5s,mb3.6						
GERES	GERESS Array B	29.48	300	P	P	14 50 42.4	-0.6
	comp=Z,0.2nm,0.5s,mb3.1,baz=109,slow=7.8,SNR=3.4						
HFS	Hagfors	31.73	322	P	P	14 51 02.6	-0.1
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	Hagfors	31.73	322	P	P	14 51 02.6	-0.2
	comp=Z,1.1nm,0.3s,mb4.1,baz=111,slow=10,SNR=15						
ARCES	ARCESS Array B	32.91	342	P	P	14 51 14.1	+1.1
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	32.91	342	P	P	14 51 14.1	+1.1
	comp=Z,1.1nm,0.8s,mb3.8,baz=143,slow=9.5,SNR=14						
NOA	NORSAR Array B	33.19	323	P	P	14 51 16.9	+1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NOA	NORSAR Array B	33.19	323	P	P	14 51 16.9	+1.4
	comp=Z,0.8nm,0.8s,mb3.7,baz=111,slow=8.6,SNR=2.9						
ULN	Ulaanbaatar	38.46	60	eP	P	14 52 01.3	+0.5
ULN	Ulaanbaatar	38.46	60	eP	P	14 52 01.2	+0.4
EKA	Eskdalemuir Ar	39.89	312	P	P	14 52 12.7	0.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	Eskdalemuir Ar	39.89	312	P	P	14 52 12.7	0.0
	comp=Z,0.8nm,0.4s,mb3.9,baz=94,slow=8.4,SNR=5.5						
TIXI	Tiksi	47.78	24⇑	eP	P	14 53 16.8	+1.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
TIXI	Tiksi	47.78	24	eP	P	14 53 16.8	+1.1
	comp=Z,2.0nm,1.1s,mb4.1						
TORD	Torodi Ar. Bea	52.78	254	P	P	14 53 51.9	-2.5
	comp=Z,0.3nm,0.5s,mb3.5,baz=35,slow=6.3,SNR=8.7						
BILL	Bilibino	60.97	23⇑	eP	P	14 54 52.2	+0.6
BILL				e		14 57 09.4	
BILL				eS	S	15 03 06.3	-0.6
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.5						
BILL	Bilibino	60.97	23	eP	P	14 54 52.2	+0.6
	comp=Z,5.0nm,1.2s,mb4.5						
YKA	Yellowknife Ar	77.20	354	P	P	14 56 32.2	0.0
YKA	Yellowknife Ar	77.20	354	P	P	14 56 32.2	0.0
	comp=Z,0.2nm,0.4s,mb3.4,baz=4.9,slow=6.1,SNR=6.6						
YKA	Yellowknife Ar	77.20	354	i P	P	14 56 32.2	-0.1

NEIC ***11*** *15:02:06.1, 3447S×72.10W, h30km, ML2.6(GUC), After GUC.*

GUC 11 15:02:06.1±0.8**, 3447S**×**7210W, h30**km±5km**, MD3.5, ML2.6, 3C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LNV	Longovilo	0.76	48⇓	iP	Pn	15 02 20.1	-0.7
LNV				i S	Sb	15 02 30.8	-0.1
NICH	Los Niches	0.89	127⇓	iP	Pn	15 02 21.1	-1.5
NICH				i S	Sn	15 02 34.1	-0.3
SFDO	San Fernando	0.90	100⇑	iP	Pn	15 02 22.6	-0.1
SFDO				i S	Sn	15 02 34.8	0.0
TACH	Talagante	1.26	50	eP	Pn	15 02 28.0	+0.4
TACH				i S	Sn	15 02 43.9	+0.4
CACH	El Canelo	1.29	75⇓	iP	Pn	15 02 28.9	+1.0
CACH				i S	Sn	15 02 46.5	+2.3
CHCH	Chadas Angostu	1.31	66⇓	iP	Pn	15 02 29.2	+0.9
CHCH				i S	Sn	15 02 46.6	+1.8
CICH	Cipreses	1.39	84	eP	Pn	15 02 30.4	+1.0
ANTU	Antumapu	1.51	54	i P	Pn	15 02 31.8	+0.8
ANTU				i S	Sn	15 02 52.2	+2.5
ANTU	Antumapu	1.51	54	i P	Pn	15 02 31.8	+0.8
ANTU				i S	Sn	15 02 52.2	+2.5
ANTU				AML	AML	15 02 58.4	
	comp=E,114nm,0.5s						
PCH	Pirque	1.56	58	eP	Pn	15 02 32.9	+1.1
PCH				i S	Sn	15 02 53.6	+2.6
LMEL	Las Melosas	1.69	69⇑	iP	Pn	15 02 35.1	+1.6
LMEL				i S	Sn	15 02 56.7	+2.6
LMEL	Las Melosas	1.69	69⇑	iP	Pn	15 02 35.1	+1.6
LMEL				i S	Sn	15 02 56.7	+2.6
LMEL				AML	AML	15 03 01.1	
	comp=N,117nm,0.2s						
PEL	Peldehue	1.77	42	eP	Pn	15 02 36.3	+1.7
PEL				i S	Sn	15 02 59.0	+2.9
PEL				AML	AML	15 03 07.6	
	comp=N,119nm,1.0s						
FCH	Farellones	1.88	53	eP	Pn	15 02 37.2	+1.0
FCH				i S	Sn	15 03 01.5	+2.6
FCH				AML	AML	15 03 10.1	
	comp=N,65nm,0.2s						

ISCJB ***11*** *15:04:03.2±0.4, 31.13N±0.04×130.35E±0.09, h167km±3km, mb3.3/9, Error ellipse: s-maj=12.3km s-min=6.7km az=17.2*
IDC ***11*** *15:04:04.8±2.0, 31.12N×130.19E, h168km±20km, mb3.2/9, mb1 3.3/11, mb1mx3.3/20, mbtmp3.1/11, Error ellipse: s-maj=32.0km s-min=17.8km az=69.0*
NEIC ***11*** *15:04:04.4±1.4, 3108N×13009E, h163km±13km, MG3.5(JMA), Error ellipse: s-maj=21.3km s-min=13.6km az=66.0*
JMA ***11*** *15:04:05.3±0.1, 31.13N×130.39E, h157km±1km, M3.5*

ISC 11 15:04:04.3±0.4**, 3114N**±004×**13035E**±008**, h163**km±3km**, n22,** σ**0ˢ49**/34**, mb3.3**/9**, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.38	14	P	Pn	15 04 27.0	+0.4
JSU				eS	Sn	15 04 43.4	-0.4
JTSR	Tashiro 2	0.49	87	P	Pn	15 04 27.2	+0.1
JTSR				S	Sn	15 04 43.7	-0.7
JKC	Kuchinoerabu	0.69	191	P	Pn	15 04 28.3	+0.1
JKC				eS	Sn	15 04 45.9	-0.5
JTN	Tanegashima 3	0.73	132	P	Pn	15 04 28.6	+0.2
JTN				S	Sn	15 04 46.3	-0.4
JSJ	Shimokoshiki	0.76	315	P	Pn	15 04 28.9	+0.3
JSJ				S	Sn	15 04 47.2	0.0
JNAR	Kushima--Naru	0.88	64	P	Pn	15 04 29.9	+0.5
JNAR				S	Sn	15 04 48.7	+0.1
JTZ	Takazaki	0.99	40	P	Pn	15 04 30.6	+0.4
JTZ				S	Sn	15 04 49.0	-1.1
JZO	Okuchi	1.02	12	P	Pn	15 04 30.8	+0.3
JZO				S	Sn	15 04 50.3	-0.3
JNN	Nakanoshima	1.36	198	P	Pn	15 04 33.9	+0.4
JNN				eS	Sn	15 04 56.4	+0.5
JIU2	Izumi 2	1.46	16	P	Pn	15 04 35.1	+0.7
JIU2				S	Sn	15 04 57.9	+0.3
JNU	Nakatsue	2.02	13	P	Pn	15 04 41.4	+0.8
	4.8nm,0.3s,baz=195,slow=12,SNR=48						
JNU				S	Sn	15 05 08.2	-0.3
	4.3nm,0.3s,baz=67,slow=9.8,SNR=6.8						
MJAR	Matsushiro Arr	8.47	48	P	Pn	15 06 07.7	+3.9
	0.4nm,0.3s,baz=236,slow=14,SNR=5.0						
MJAR				S	Sn	15 07 38.3	+0.1
	0.4nm,0.3s,baz=181,slow=30,SNR=5.5						
SONM	Songino Array	24.74	319	P	P	15 09 10.8	+0.2
	0.4nm,0.4s,mb3.3,baz=142,slow=9.2,SNR=5.5						
MKAR	Makanchi Array	39.86	307	P	P	15 11 21.2	-0.6
	0.2nm,0.6s,mb2.9,baz=90,slow=11,SNR=5.7						
WRA	Warramunga Arr	50.93	175	P	P	15 12 48.5	-0.6
	0.3nm,0.9s,mb2.9,baz=354,slow=8.1,SNR=3.0						
ASAR	Alice Springs	54.60	176	P	P	15 13 16.2	+0.3
	0.1nm,0.6s,mb2.7,baz=359,slow=6.9,SNR=4.7						
ARCES	ARCESS Array B	66.14	338	P	P	15 14 33.0	-0.6
	2.0nm,0.8s,mb4.0,baz=58,slow=6.8,SNR=4.1						
FINES	FINESS Array B	69.53	330	P	P	15 14 54.5	-0.5
FINES	FINESS Array B	69.53	330	P	P	15 14 54.5	-0.5
	1.4nm,0.4s,mb4.0,baz=68,slow=5.3,SNR=21						
AKASG	Malin Array Be	73.03	319	P	P	15 15 15.7	-0.5
	0.8nm,0.3s,mb3.9,baz=57,slow=6.4,SNR=3.3						
YKA	Yellowknife Ar	73.31	26	P	P	15 15 17.8	+0.2
	0.2nm,0.6s,mb3.0,baz=303,slow=5.3,SNR=4.3						
GERES	GERESS Array B	82.40	323	P	P	15 16 08.3	+0.3
	0.2nm,0.4s,mb3.1,baz=46,slow=9.5,SNR=3.7						

ATH ***11*** *15:05:12.6, 3660N×2590E, h26km±1km, MD3.3/7*
NEIC ***11*** *15:05:12.7, 3658N×2594E, h4km, ML3.5(ATH), After ATH.*
ISCJB ***11*** *15:05:13.5±0.4, 3655N±0.03×2595E±0.04, h10km, Error ellipse: s-maj=4.8km s-min=4.0km az=160.2*
ISK ***11*** *15:05:14.4, 3648N×2593E, h24km, MD3.4*
CSEM ***11*** *15:05:15.2±0.3, 3653N×2603E, h16km±3km, ML3.5, Error ellipse: s-maj=4.1km s-min=3.3km az=27.0*

ISC 11 15:05:13.8±0.4**, 3654N**±003×**2596E**±004**, h10**km**, n20,** σ**1ˢ11**/27**, 2C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SANT	Santorini	0.44	247	eP	Pg	15 05 21.4	-1.0
SANT				eS	Sg	15 05 28.2	0.0
SANT	Santorini	0.44	247	eP	Pg	15 05 21.4	-1.0
APE	Apeiranthos	0.63	327⇑	ePg	Pg	15 05 23.5	-2.5
APE				eSg	Sg	15 05 32.8	-1.4
APE	Apeiranthos	0.63	327⇑	iPN	Pg	15 05 23.5	-2.5
APE				eSN	Sg	15 05 32.8	-1.4
NISR	Nisiros	0.94	85	ePN	Pn	15 05 31.5	-1.6
BODT	Bodrum	1.20	64	ePN	Pn	15 05 36.2	-0.5
BODT				eSN	Sn	15 05 52.7	-0.3
NPS	Neapolis	1.31	193	ePN	Pn	15 05 37.8	-0.3
NPS				eSN	Sn	15 05 55.2	-0.4
DAT	Datca	1.31	81	ePN	Pn	15 05 38.9	+0.7
DAT				eSN	Sn	15 05 56.7	+0.9
SMG	Samos	1.36	31	ePN	Pn	15 05 37.7	-1.1
SMG				eSN	Sn	15 05 55.7	-1.2
KARP	Karpathos	1.39	135	ePN	Pn	15 05 39.6	+0.4
KAP	Karpathos	1.40	135	ePb	Pb	15 05 39.6	-0.3
ARG	Arkhangelos	1.78	100	ePN	Pn	15 05 45.0	+0.4
VAM	Vamos	1.82	232	ePN	Pn	15 05 44.4	-0.8
YER	Yerkesik	1.96	72	ePN	Pn	15 05 46.7	-0.3
BLCB	Balcova	2.03	25	ePN	Pn	15 05 49.3	+1.2
IZM	Izmir	2.12	29	ePN	Pn	15 05 51.0	+1.7
KVR	Kavouri	2.17	307	ePn	Pn	15 05 51.0	+1.0
PTL	Penteli	2.25	313	ePn	Pn	15 05 52.5	+1.5
ATH	Athens Observa	2.29	309	ePn	Pn	15 05 53.4	+1.8
NAIG	Nisos Aigina	2.32	302	ePn	Pn	15 05 54.0	+2.0

ISCJB ***11*** *15:08:17.7±8.1, 175S±0.1×1733W±0.1, h14km±51km, mb4.3/13, MS4.1/14, Error ellipse: s-maj=27.1km s-min=13.9km az=138.1*
IDC ***11*** *15:08:17.1±0.7, 1756S×173.19W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.3/18, mbtmp4.2/10, MS4.0/17, Ms1 4.0/17, ms1mx3.8/37, Error ellipse: s-maj=33.6km s-min=17.6km az=142.0*
NEIC ***11*** *15:08:18.9±0.5, 1752S×17321W, h10km, mb4.4/2, Error ellipse: s-maj=21.0km s-min=10.5km az=134.0*
SZGRF ***11*** *15:08:31.2, 1666S×17872W, h33km, Fiji Islands region*

ISC 11 15:08:18.9±8.0**, 175S**±01×**1732W**±01**, h11**km±50km**, n59,** σ**0ˢ78**/18**, mb4.3**/13**, MS4.1**/14**, 2C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.85	22	ePn	Pn	15 09 17.2	-0.9
AFI				eSn	Sx	15 09 47.4	
AFI				LR	LR	15 10 11.2	
AFI	Afiamalu	3.85	22	Pn	Pn	15 09 10.6	-7.5
	4.4nm,0.3s,baz=120,slow=20,SNR=1.9						
AFI				Sn	Sx	15 09 52.0	
	36nm,0.3s,baz=204,slow=23,SNR=9.1						
AFI				LR	LR	15 10 11.2	
	comp=Z,328nm,18.8s,baz=172,slow=29						
RAR	Rarotonga	13.23	108	LR	LR	15 15 18.3	
	comp=Z,391nm,21.1s,baz=283,slow=32						
DZM	Mont Dzumac	19.64	253	P	Pn	15 12 50.6	+1.5
	0.1nm,0.3s,baz=71,slow=18,SNR=4.5						
DZM				LR	LR	15 19 09.6	
	comp=Z,419nm,18.9s,baz=90,slow=33						
URZ	Urewera	22.33	200	P	P	15 13 16.9	+0.2
	11nm,0.5s,mb4.6,baz=352,slow=5.1,SNR=14						
PPT	Papeete	22.56	94	eLQ		15 17 23.3	
	509nm,26.0s						
PPT				eLR	LR	15 18 26.9	
	473nm,25.5s,baz=256						
PPT	Papeete	22.56	94	LR	LR	15 19 00.7	
	comp=Z,233nm,20.6s,MS3.6,baz=244,slow=29						
TBI	Tubuai	23.01	109	eLQ		15 17 41.4	
	322nm,26.0s						
TBI				eLR	LR	15 18 31.7	
	547nm,29.2s,baz=285						
HNR	Honiara	27.26	284	LR	LR	15 23 25.5	
	comp=Z,628nm,18.2s,MS4.2,baz=179,slow=33						
RPZ	Rata Peaks	29.30	204	P	P	15 14 27.7	+6.3
	5.4nm,0.6s,mb4.5,baz=0.0,slow=4.0,SNR=4.5						
RKT	Rikitea	36.24	105	eLR	LR	15 24 35.0	
	389nm,30.2s,baz=278						
CTA	Charters Tower	38.37	260	LR	LR	15 29 44.0	
	comp=Z,242nm,20.1s,MS4.0,baz=51,slow=34						
CTAO	Charters Tower	38.37	260	eP	P	15 15 39.6	-0.8
	3.2nm,0.7s,mb4.2						
STKA	Stephens Creek	43.15	242	P	P	15 16 19.0	-0.8
	2.9nm,0.9s,mb4.0,baz=100,slow=6.1,SNR=3.9						
STKA				LR	LR	15 33 46.5	
	comp=Z,177nm,18.2s,MS4.0,baz=26,slow=35						
WB2	Warramunga Arr	49.53	258	eP	P	15 17 09.3	-0.8
WRA	Warramunga Arr	49.55	258	P	P	15 17 09.5	-0.7
	3.2nm,0.7s,mb4.4,baz=96,slow=7.8,SNR=51						
WRA				LR	LR	15 36 38.2	
	comp=Z,183nm,19.2s,MS4.1,baz=85,slow=34						
ASAR	Alice Springs	49.64	254	P	P	15 17 10.8	0.0
	15nm,0.9s,mb5.0,baz=88,slow=8.4,SNR=133						
FITZ	Fitzroy Crossi	57.95	259	P	P	15 18 12.6	+0.8
	14nm,1.4s,mb4.8,baz=118,slow=15,SNR=3.1						
FITZ				LR	LR	15 41 42.5	
	comp=Z,113nm,20.9s,MS4.0,baz=100,slow=35						
VNDA	Vanda	61.30	186	P	P	15 18 33.9	-0.1
	1.3nm,0.9s,mb4.1,baz=6.3,slow=6.8,SNR=4.2						
BATI	Kupang	61.47	268	LR	LR	15 45 39.9	
	comp=Z,130nm,18.0s,MS4.1,baz=273,slow=36						
JHJ	Hachijo jima 2	67.44	318	LR	LR	15 46 09.6	
	comp=Z,886nm,18.6s,MS5.0,baz=308,slow=34						
MJAR	Matsushiro Arr	70.65	320	LR	LR	15 45 43.9	
	comp=Z,112nm,18.8s,MS4.1,baz=325,slow=32						
QSPA	South Pole Qui	72.54	180	P	P	15 19 45.3	-0.2
	7.8nm,1.1s,mb4.5						
JNU	Nakatsue	73.35	314	LR	LR	15 48 14.0	
	comp=Z,114nm,18.2s,MS4.2,baz=226,slow=33						
ASAJ	Asahikawa	73.41	328	LR	LR	15 50 06.9	
	comp=Z,77nm,18.1s,MS4.0,baz=6.9,slow=34						
NVAR	Mina Array Bea	75.79	42	P	P	15 20 04.9	-0.1
	1.2nm,1.0s,mb3.8,baz=210,slow=8.2,SNR=6.4						
KSRS	Korea Array	77.77	316	LR	LR	15 54 02.2	
	comp=Z,100nm,18.2s,MS4.2,baz=96,slow=35						
TXAR	Lajitas Array	81.66	56	P	P	15 20 37.2	-0.4
TXAR	Lajitas Array	81.66	56	P	P	15 20 37.2	-0.4
	1.6nm,1.0s,mb3.9,baz=219,slow=5.8,SNR=9.2						
ANMO	Albuquerque	82.04	50	P	P	15 20 39.5	+0.1
	0.6nm,0.5s,mb3.8,baz=252,slow=6.4,SNR=3.6						
JTS	JuntasAbangare	91.43	80	LR	LR	15 56 16.3	
	comp=Z,79nm,19.5s,MS4.2,baz=145,slow=32						
YKA	Yellowknife Ar	91.96	23	P	P	15 21 29.0	+1.8
	0.4nm,0.8s,mb3.8,baz=236,slow=4.2,SNR=5.1						
SONM	Songino Array	96.51	318	LR	LR	15 59 30.7	
	comp=Z,87nm,20.7s,MS4.2,baz=353,slow=32						
KMBO	Kilima Mbogo	144.71	241	PKP	PKPdf	15 27 58.5	+1.6
	2.8nm,0.8s,baz=60,slow=4.3,SNR=7.5						
MALT	Malatya	145.44	313	ePKP	PKPdf	15 27 59.3	+1.9
CLZ	Clausthal	145.63	356	ePKPbc	PKPbc	15 28 00.7	+3.2
KSP	Ksiaz	145.89	349	eP	PKPdf	15 28 00.3	+2.6
CLL	Collm	145.92	353⇑	iP	PKPdf	15 27 58.9	+1.2
CLL				i		15 28 04.9	
CLL	Collm	145.92	353⇑	iPKPbc	PKPbc	15 27 58.9	+0.5
	comp=Z,15nm,1.3s						
CLL				i sPKPbc		15 28 04.9	
CLL	Collm	145.92	353	ePKPbc	PKPbc	15 27 59.0	+0.6
BRG	Berggiesshubel	146.23	352	eP	PKPbc	15 28 00.5	+1.2
BRG				e		15 28 07.3	
BRG	Berggiesshubel	146.23	352	ePKPbc	PKPbc	15 28 00.7	+1.4
BRG	Berggiesshubel	146.23	352	eP	PKPdf	15 28 00.5	+2.3
	comp=Z,19nm,1.6s						
BRG				e		15 28 07.3	
	comp=Z,12nm,1.3s						
FBE	Freiberg	146.26	352	ePKPbc	PKPbc	15 28 00.5	+1.1
UPC	Upice	146.26	349	ePKP	PKPbc	15 28 00.8	+1.4
DPC	Dobruska-Polom	146.35	349	ePKP	PKPbc	15 28 00.4	+0.7
PVCC	Panska Ves	146.47	351	ePKP	PKPbc	15 28 01.4	+1.3
MOX	Moxa	146.72	354	e(P)	PKPbc	15 28 02.1	+1.3
MOX	Moxa	146.72	354	ePKPbc	PKPbc	15 28 01.7	+0.9
WERD	Werda	146.84	354	ePKPbc	PKPbc	15 28 04.0	+2.9
WERN	Wernitzgruen	147.00	353	ePKPbc	PKPbc	15 28 03.9	+2.3
PRU	Pruhonice	147.00	351	ePKP	PKPdf	15 27 58.4	-1.2
ROTZ	Rotzenmuhle	147.53	353	ePKPbc	PKPbc	15 28 06.3	+3.2
GRA1	Grafenberg Arr	147.70	355	ePKPbc	PKPbc	15 28 07.1	+3.5
GRF	Grafenberg Arr	147.70	355	ePKPbc	PKPbc	15 28 07.1	+3.5
KHC	Kasperske Hory	147.98	352	ePKP	PKPbc	15 28 06.7	+2.4
KHC				ex	x	15 28 21.5	
GERES	GERESS Array B	148.24	351	PKPbc	PKPbc	15 28 05.3	+0.3
	comp=Z,0.6nm,0.7s,baz=354,slow=2.7,SNR=5.2						
BFO	Black Forest	149.24	358	ePKPbc	PKPbc	15 28 12.3	+4.7
TORD	Torodi Ar. Bea	173.46	131	PKPab	PKPab	15 29 56.5	-1.5
	comp=Z,1.8nm,1.0s,baz=251,slow=3.0,SNR=5.5						

IDC 11 15:11:09.7±2.2**, 1745S**×**17340W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.9**/15**, mbtmp4.3**/3**, 1D, Error ellipse: s-maj=60.8km s-min=42.0km az=111.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.85	24	Pn	Pn	15 12 02.6	-7.6
	5.5nm,0.3s,baz=112,slow=19,SNR=4.5						
AFI				Sn	Sn	15 12 41.6	-15
	12nm,0.3s,baz=18,slow=20,SNR=5.5						
URZ	Urewera	22.34	200	P	P	15 16 09.3	+0.1
	8.0nm,0.6s,baz=349,slow=16,SNR=5.9						
WRA	Warramunga Arr	49.41	258	P	P	15 20 01.6	-0.1
	1.2nm,0.8s,baz=95,slow=7.2,SNR=8.5						
ASAR	Alice Springs	49.51	254	P	P	15 20 02.5	+0.1
	5.3nm,0.7s,baz=88,slow=8.5,SNR=13						
KMBO	Kilima Mbogo	144.61	242	PKP	PKPdf	15 30 47.9	-1.5
	0.8nm,0.3s,baz=65,slow=14,SNR=3.7						
CLL	Collm	145.84	353⇓	iP	PKPdf	15 30 50.7	+0.4
	comp=Z,10.0nm,1.1s						
CLL				i x	x	15 31 09.6	
GERES	GERESS Array B	148.16	351	PKPbc	PKPbc	15 30 57.4	-0.1
	comp=Z,0.7nm,0.8s,baz=358,slow=4.0,SNR=4.3						

IDC 11 15:18:35.7±8.9**, 287S**×**14276E, h0**km**, mb3.4**/2**, mb1 3.7**/3**, mb1mx3.5**/12**, mbtmp3.5**/3**, ML3.9**/1**, Error ellipse: s-maj=324.1km s-min=30.3km az=92.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.86	205	P	Pn	15 22 57.5	-0.4
	0.4nm,0.3s,baz=33,slow=13,SNR=20						
ASAR	Alice Springs	22.38	202	P	P	15 23 35.9	+0.2
	0.5nm,0.5s,baz=28,slow=11,SNR=11						
MKAR	Makanchi Array	72.42	321	P	P	15 30 03.9	+0.1
	0.3nm,0.5s,baz=101,slow=7.5,SNR=6.3						

IDC 11 15:28:29.8±6.6**, 764S**×**12885E, h156**km±68km**, mb2.9**/1**, mb1 3.1**/5**, mb1mx3.0**/14**, mbtmp3.0**/5**, Error ellipse: s-maj=62.6km s-min=21.8km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	5.72	243	P	Pn	15 29 54.0	+1.0
	5.5nm,0.3s,baz=90,slow=4.1,SNR=17						
BATI				S	Sn	15 30 58.0	0.0
	4.6nm,0.3s,baz=153,slow=22,SNR=11						
FITZ	Fitzroy Crossi	10.86	196	P	Pn	15 31 00.6	-0.4
	0.3nm,0.3s,baz=43,slow=15,SNR=18						
FITZ				S	Sn	15 32 56.0	-5.3
	0.4nm,0.3s,baz=122,slow=21,SNR=7.5						
WRA	Warramunga Arr	13.34	157	P	Pn	15 31 32.5	-0.7
	0.3nm,0.3s,baz=339,slow=14,SNR=19						
WRA				S	Sn	15 33 54.5	-6.4
	0.3nm,0.3s,baz=329,slow=24,SNR=9.9						
ASAR	Alice Springs	16.66	164	P	Pn	15 32 15.8	+1.6
	0.1nm,0.3s,baz=335,slow=10,SNR=7.4						
ASAR				S	S	15 35 19.1	-0.3
	0.1nm,0.3s,baz=20,slow=18,SNR=4.8						
MKAR	Makanchi Array	68.14	327	P	P	15 39 12.9	0.0
	0.1nm,0.4s,baz=122,slow=8.0,SNR=5.6						

MAN 11 15:28:37, 1710N×**11986E, h28**km**, mb4.5, ML3.4, MS3.3, 2C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.71	176	eP	Pb	15 28 51.5	+0.6
BOLP				eS	Sb	15 29 00.8	+0.5
ABRA	Dolores	0.98	56	eP	Pn	15 28 54.4	-0.5
ABRA				eS	Sn	15 29 03.1	-4.8
BCPH	Baguio City Da	0.99	136⇓	eP	Pn	15 28 53.8	-1.2
BCPH				i S	Sn	15 29 05.8	-2.3
SCZP	Santa Cruz	1.31	178	eP	Pn	15 29 00.0	+0.5
SCZP				eS	Sn	15 29 16.5	+0.4
PIP	Pasuquin	1.42	30⇓	iP	Pn	15 29 01.2	+0.2
PIP				eS	Sn	15 29 18.3	-0.5
APYP	Conner	1.52	60	eP	Pn	15 29 02.2	-0.2
CAUP	Cauayan	1.88	94	eP	Pn	15 29 09.2	+1.8
PCPH	Palayan	1.93	142⇑	eP	Pn	15 29 08.7	+0.7
PCPH				eS	Sn	15 29 29.8	-1.6
CVP	Callao Caves	1.97	72	eP	Pn	15 29 09.1	+0.6
CVP				i S	Sn	15 29 32.7	+0.4
BALP	Baler	2.13	129	eP	Pn	15 29 11.4	+0.7
PALP	Palanan	2.45	90⇑	iP	Pn	15 29 16.5	+1.3
PALP				i S	Sn	15 29 46.4	+2.2
PALP	Palanan	2.45	90	eP	Pn	15 29 16.4	+1.3
BUSP	Coron	5.07	176	eP	Pn	15 29 53.5	+2.2
ENPP	El Nido	5.87	184	eP	Pn	15 30 03.9	+1.7

ISCJB ***11*** *15:37:30.1±2.9, 116S±0.1×166.1E±0.2, h74km±25km, mb3.8/5, Error ellipse: s-maj=32.9km s-min=14.7km az=137.9*
IDC ***11*** *15:37:31.6±3.8, 1158S×166.10E, h74km±30km, mb3.6/5, mb1 3.8/7, mb1mx3.6/15, mbtmp3.7/7, MS3.3/3, Ms1 3.3/3, ms1mx2.9/24, Error ellipse: s-maj=31.9km s-min=24.0km az=55.0*
NEIC ***11*** *15:37:31.3±1.9, 1157S×166.13E, h73km±16km, Error ellipse: s-maj=23.8km s-min=14.5km az=57.0*

ISC 11 15:37:31.5±2.3**, 116S**±01×**1661E**±02**, h74**km±20km**, n10,** σ**0ˢ36**/12**, mb3.8**/5**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.43	289	eP	Pn	15 39 03.4	-0.2
HNR				S	Sn	15 40 15.4	-0.1
HNR				LR	LR	15 41 07.0	
HNR	Honiara	6.43	289	P	Pn	15 39 03.9	+0.4
	15nm,0.3s,baz=103,slow=3.4,SNR=19						
HNR				S	Sn	15 40 15.4	-0.1
	1.1nm,0.3s,baz=94,slow=19,SNR=3.1						
HNR				LR	LR	15 41 07.0	
	comp=Z,111nm,18.5s,baz=173,slow=34						
DZM	Mont Dzumac	10.45	178	P	Pn	15 39 58.5	+0.1
	0.1nm,0.3s,baz=99,slow=24,SNR=7.2						
DZM				S	Sn	15 41 48.5	-5.3
	0.1nm,0.3s,baz=14,slow=12,SNR=2.5						
DZM				LR	LR	15 42 53.7	
	comp=Z,87nm,20.5s,baz=290,slow=31						
WRA	Warramunga Arr	31.65	251	P	P	15 43 48.0	0.0
	1.6nm,0.9s,mb3.8,baz=84,slow=8.9,SNR=8.2						
ASAR	Alice Springs	32.88	244	P	P	15 43 58.6	-0.1
	0.9nm,0.7s,mb3.7,baz=66,slow=9.8,SNR=15						
ASAR				PcP	PcP	15 46 41.5	-0.4
	0.6nm,0.9s,baz=66,slow=2.2,SNR=5.8						
JHJ	Hachijo jima 2	51.05	331	LR	LR	16 06 17.0	
	comp=Z,88nm,18.6s,baz=342,slow=34						
SONM	Songino Array	79.30	324	P	P	15 49 29.8	+0.8
	0.4nm,0.7s,mb3.4,baz=136,slow=4.6,SNR=3.8						
MKAR	Makanchi Array	94.15	317	P	P	15 50 42.0	-0.1
MKAR	Makanchi Array	94.15	317	P	P	15 50 42.0	-0.1
	1.0nm,0.6s,mb4.3,baz=100,slow=5.4,SNR=14						
YKA	Yellowknife Ar	95.27	27	P	P	15 50 46.3	-0.5
	0.1nm,0.3s,mb3.7,baz=280,slow=4.9,SNR=3.2						

ISCJB ***11*** *15:46:17.0±2.5, 23.1S±0.1×177.3W±0.2, h321km±39km, mb3.6/5, Error ellipse: s-maj=26.9km s-min=20.8km az=30.7*
IDC ***11*** *15:46:19.9±3.7, 2309S×17723W, h340km±66km, mb3.4/4, mb1 3.5/7, mb1mx3.3/16, mbtmp3.5/7, Error ellipse: s-maj=53.6km s-min=33.5km az=105.0*
NEIC ***11*** *15:46:19.7±1.7, 2309S×17737W, h325km±29km, mb4.3/2, Error ellipse: s-maj=19.8km s-min=17.7km az=79.0*

ISC 11 15:46:19.5±2.2**, 231S**±02×**1774W**±02**, h324**km±37km**, n10,** σ**0ˢ62**/12**, mb3.6**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.55	31	ePn	Pn	15 48 44.6	+0.3
AFI				eS	S	15 50 34.8	-8.2
AFI	Afiamalu	10.55	31	P	Pn	15 48 43.8	-0.5
	1.7nm,0.3s,baz=195,slow=19,SNR=5.5						
AFI				S	S	15 50 34.6	-8.3
	4.1nm,0.3s,baz=195,slow=22,SNR=6.6						
DZM	Mont Dzumac	15.01	271	P	P	15 49 36.5	+1.0
	0.6nm,0.3s,baz=77,slow=16,SNR=15						
URZ	Urewera	15.85	196	P	P	15 49 44.0	-0.5
	2.2nm,0.3s,baz=117,slow=2.3,SNR=22						
CTA	Charters Tower	33.92	268	P	P	15 52 32.9	-0.3
	4.4nm,0.4s,mb4.1,baz=91,slow=11,SNR=17						
CTAO	Charters Tower	33.92	268	eP	P	15 52 32.8	-0.3
	4.4nm,0.4s,mb4.0						
STKA	Stephens Creek	37.28	247	P	P	15 53 00.8	-0.5
	0.9nm,0.5s,mb3.3,baz=88,slow=14,SNR=4.0						
ASAR	Alice Springs	44.57	259	P	P	15 54 00.8	+0.3
	1.7nm,0.7s,mb3.3,baz=91,slow=6.9,SNR=34						
WRA	Warramunga Arr	44.90	264	P	P	15 54 02.4	-0.7
	0.9nm,0.3s,mb3.4,baz=90,slow=6.0,SNR=115						
SBA	Scott Base	55.34	184	eP	P	15 55 20.9	+0.9

	7.4nm,0.7s,mb4.1						

IGQ 11 15:52:09.2,028S×8023W,h12km±6km,Mb4.1,Ms3.9, 14C-7D,Error ellipse: s-maj=9.8km s-min=3.4km az=57.1,Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAG1	**Magdalena**	**0.50**	**66**	⇓S	Sg	15 52 32.5	+6.7
CHIS	**Cerro-Chispas-**	**0.91**	**213**	P	Pg	15 52 26.8	0.0
CHIS	**Cerro-Chispas-**	**0.91**	**213**	S	Sg	15 52 40.0	+1.3
JUA2	**San Juan 2**	**1.63**	**88**	⇑P	Pn	15 52 38.7	+1.0
JUA2	**San Juan 2**	**1.63**	**88**	⇑S	Sn	15 53 00.3	+1.7
PINO	**Pino**	**1.63**	**86**	P	Pn	15 52 38.3	+0.6
PINO	**Pino**	**1.63**	**86**	S	Sn	15 53 00.1	+1.4
TERV	**Terraza Guagua**	**1.63**	**86**	⇑P	Pn	15 52 38.4	+0.7
TERV	**Terraza Guagua**	**1.63**	**86**	⇑S	Sn	15 53 00.9	+2.1
GGP	**Refugio Guagua**	**1.64**	**86**	⇑P	Pn	15 52 38.5	+0.7
YANA	**Yana**	**1.67**	**85**	⇓P	Pn	15 52 39.1	+0.8
YANA	**Yana**	**1.67**	**85**	⇓S	Sn	15 53 00.9	+1.3
CAMI	**Rancho Maria**	**1.77**	**103**	⇑P	Pn	15 52 42.1	+2.4
CAMI	**Rancho Maria**	**1.77**	**103**	⇑S	Sn	15 53 08.8	+6.6
VC1	**Cotopaxi 1**	**1.87**	**101**	⇓P	Pn	15 52 44.0	+3.1
VC1	**Cotopaxi 1**	**1.87**	**101**	⇓S	Sn	15 53 08.4	+3.9
TAMB	**Tambo**	**1.91**	**102**	P	Pn	15 52 44.3	+2.7
TAMB	**Tambo**	**1.91**	**102**	S	Sn	15 53 11.8	+6.2
COTA	**Cotacachi**	**1.99**	**72**	P	Pn	15 52 44.1	+1.4
COTA	**Cotacachi**	**1.99**	**72**	S	Sn	15 53 10.8	+3.2
ANTI	**Antisana**	**2.08**	**95**	⇓P	Pn	15 52 46.5	+2.6
ANTI	**Antisana**	**2.08**	**95**	⇓S	Sn	15 53 15.5	+5.7
RUN5	**Runtun**	**2.13**	**122**	⇑P	Pn	15 52 45.6	+0.9
ULBA	**Ulba**	**2.17**	**123**	⇑P	Pn	15 52 48.5	+3.4
ULBA	**Ulba**	**2.17**	**123**	⇑S	Sn	15 53 15.4	+3.5
PATA	**Patacocha**	**2.17**	**124**	P	Pn	15 52 49.3	+4.1
CAYR	**Refugio Cayamb**	**2.25**	**83**	⇑P	Pn	15 52 49.0	+2.8
CAYR	**Refugio Cayamb**	**2.25**	**83**	⇑S	Sn	15 53 19.8	+6.0
CAYA	**Cayambe**	**2.27**	**81**	⇑P	Pn	15 52 49.3	+2.8
CAYA	**Cayambe**	**2.27**	**81**	⇑S	Sn	15 53 18.2	+3.8

IDC 11 16:01:26.7±9.3**,531S**×**14965E,h60**km±71km**,mb2.7**/2**, mb1 3.1**/3**,mb1mx3.0**/13**,mbtmp3.0**/3**,ML2.2**/1**,Error ellipse: s-maj=135.4km s-min=59.8km az=117.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.76**	**211**	P	Pn	16 02 36.0	-0.1
	0.7nm,0.3s,baz=48,slow=8.8,SNR=4.8						
PMG				S	Sn	16 03 31.2	+1.2
	1.7nm,0.3s,baz=3.5,slow=19,SNR=3.3						
WRA	**Warramunga Arr**	**20.82**	**224**	P	P	16 06 03.3	-0.2
	0.2nm,0.3s,baz=50,slow=10,SNR=6.5						
ASAR	**Alice Springs**	**23.74**	**218**	P	P	16 06 33.2	-0.4
	0.4nm,0.8s,baz=52,slow=9.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**147.46**	**286**	PKPbc	PKPbc	16 21 04.7	-0.4
	0.7nm,0.6s,baz=55,slow=2.1,SNR=5.9						

*ISCJB **11** 16:13:38.0±0.4,5148N±002×649E±005,h0km,Error ellipse: s-maj=4.5km s-min=2.5km az=30.0*
*BUG **11** 16:13:38.4,5142N×661E,h1km,ML1.7*
*NEIC **11** 16:13:39.4,5153N×658E,h1km,ML2.7(LDG),After LDG.*
*LDG **11** 16:13:39.4±0.1,5153N×658E,h1km,Md3.1/2,Ml2.7/8, Error ellipse: s-maj=2.1km s-min=1.5km az=24.0, Suspected Mining induced.*
*CSEM **11** 16:13:39.3±0.1,5153N×658E,h1km,ML2.7/8,Error ellipse: s-maj=2.5km s-min=1.3km az=109.0*
*BGR **11** 16:13:39.9±0.8,5145N×655E,h1km,ML2.2/2,Error ellipse: s-maj=12.2km s-min=5.6km az=113.0*
*BNS **11** 16:13:41.2±0.6,5143N×659E,h1km,ML2.1*
ISC 11 16:13:38.9±0.4**,5149N**±002×**651E**±004**,h0**km**,n43, σ1§04**/77**,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.05**	**60**	Pg	**Pg**	**16 13 39.3**	**-0.5**
BRHE				Sg	**Sg**	**16 13 40.1**	**-0.3**
WTSB	**Winterswijk**	**0.51**	**21**	*e*Pg	**Pg**	**16 13 49.6**	**+1.0**
WTSB				*e*x	**Sg**	**16 13 55.8**	**+0.6**
WTSB	**Winterswijk**	**0.51**	**21**	*e*Pg	**Pg**	**16 13 49.6**	**+0.9**
BNS	**Bensberg**	**0.68**	**141**	*e*Pg	**Pg**	**16 13 52.4**	**+0.5**
HOBG	**Hohbusch**	**0.73**	**134**	*e*Pg	**Pg**	**16 13 53.2**	**+0.3**
HGN	**Heimansgroeve**	**0.81**	**207**	*e*Pg	**Pg**	**16 13 56.6**	**+2.1**
HGN				*e*Sg	**Sg**	**16 14 06.5**	**+1.4**
HGN				*e*Sg	**Sg**	**16 14 06.5**	**+1.5**
HGN				*e*x	**Sb**	**16 14 08.7**	**+1.3**
HGN	**Heimansgroeve**	**0.81**	**207**	*e*Pg	**Pg**	**16 13 56.6**	**+2.1**
DREG	**Dreilaegerbach**	**0.85**	**192**	*e*Pg	**Pg**	**16 13 56.5**	**+1.4**
DREG				*e*Sg	**Sg**	**16 14 08.0**	**+1.8**
	79nm,0.3s						
KLL	**Kalltalsperre**	**0.86**	**188**	*e*Pg	**Pg**	**16 13 56.6**	**+1.3**
KLL				*e*Sg	**Sg**	**16 14 07.7**	**+1.3**
	77nm,0.2s						
STB	**Steinbach**	**0.92**	**167**	*e*Pg	**Pg**	**16 13 57.6**	**+1.0**
STB				*e*Sg	**Sg**	**16 14 09.3**	**+0.8**
	62nm,0.2s						
MEM	**Membach**	**0.94**	**200**	P	**Pg**	**16 13 57.4**	**+0.5**
MEM	**Membach**	**0.94**	**200**	P	**Pg**	**16 13 57.3**	**+0.4**
IBBN	**Ibbenburen**	**1.12**	**43**	*e*Sg	**Sg**	**16 14 15.6**	**+0.6**
HILG	**Hillesheim**	**1.21**	**175**	*e*Pg	**Pg**	**16 14 02.4**	**+0.4**
HILG				*e*Sg	**Sg**	**16 14 18.6**	**+1.0**
	58nm,0.4s						
BGG	**Burgeitz**	**1.39**	**157**	*e*Pg	**Pg**	**16 14 05.2**	**-0.4**
SNF	**Seneffe**	**1.72**	**236**	P	**Pn**	**16 14 10.0**	**0.0**
GIVF	**Givet**	**1.75**	**218**	*e*Pn	**Pn**	**16 14 10.0**	**-0.5**
GIVF				*e*Sn	**Sn**	**16 14 32.1**	**-1.5**
GIVF				*e*Sg	**Sg**	**16 14 36.0**	**+0.7**
	30nm,0.3s						
GIVF	**Givet**	**1.75**	**218**	*e*Pn	**Pn**	**16 14 10.0**	**-0.5**
GIVF				*e*Sn	**Sn**	**16 14 32.1**	**-1.5**
GIVF				*e*Sg	**Sg**	**16 14 36.0**	**+0.7**
	15nm,0.3s						
TNS	**Taunus Mts**	**1.77**	**135**	*e*Pn	**Pn**	**16 14 11.2**	**+0.4**
TNS				*e*Pg	**Pg**	**16 14 12.2**	**-0.6**
TNS				*e*Sg	**Sg**	**16 14 34.4**	**-1.3**
WLF	**Walferdange**	**1.84**	**187**	*e*Pg	**Pg**	**16 14 14.1**	**-0.2**
WLF				*e*Sg	**Sg**	**16 14 36.9**	**-1.2**
WLF	**Walferdange**	**1.84**	**187**	*e*Pn	**Pn**	**16 14 12.7**	**+0.9**
WLF				*e*Sn	**Sn**	**16 14 36.6**	**+0.9**
WLF	**Walferdange**	**1.84**	**187**	P	**Pn**	**16 14 12.5**	**+0.7**
WLF	**Walferdange**	**1.84**	**187**	*e*Pn	**Pn**	**16 14 12.6**	**+0.8**
WLF				*e*Sn	**Sn**	**16 14 36.6**	**+0.8**
DOU	**Dourbes**	**1.85**	**222**	P	**Pn**	**16 14 11.8**	**-0.1**
DOU	**Dourbes**	**1.85**	**222**	P	**Pn**	**16 14 11.7**	**-0.2**
BAIF	**Baives**	**2.05**	**226**	*e*Pn	**Pn**	**16 14 13.5**	**-1.1**
BAIF				*e*Sn	**Sn**	**16 14 39.1**	**-1.7**
BAIF				*e*S	**Sn**	**16 14 43.3**	**+2.5**
BAIF				*e*Sg	**Sg**	**16 14 45.9**	**+1.3**
	15nm,0.4s						
BAIF	**Baives**	**2.05**	**226**	*e*Pn	**Pn**	**16 14 13.5**	**-1.1**
BAIF				*e*Sn	**Sn**	**16 14 39.1**	**-1.7**
BAIF				*e*S	**Sn**	**16 14 43.3**	**+2.5**
BAIF				*e*Sg	**Sg**	**16 14 45.9**	**+1.3**
	7.3nm,0.4s						
CDF	**Champ du Feu**	**3.12**	**171**	*e*Pn	**Pn**	**16 14 28.5**	**-0.8**
CDF				*e*Sg	**Sg**	**16 15 18.2**	**-1.0**
	3.7nm,0.4s						
CDF	**Champ du Feu**	**3.12**	**171**	*e*Pn	**Pn**	**16 14 28.5**	**-0.8**
CDF				*e*Sg	**Sg**	**16 15 18.2**	**-1.0**
	1.9nm,0.4s						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg	**Sg**	**16 15 19.6**	**-0.1**
	6.1nm,0.3s						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Sg	**Sg**	**16 15 19.6**	**-0.1**
	3.0nm,0.3s						
HAU	**Haudompre**	**3.49**	**182**	*e*Sg	**Sg**	**16 15 30.3**	**-0.7**
	5.9nm,0.4s						
HAU	**Haudompre**	**3.49**	**182**	*e*Sg	**Sg**	**16 15 30.3**	**-0.7**
	3.0nm,0.4s						
HINF	**Hinteralfeld**	**3.69**	**176**	*e*Sg	**Sg**	**16 15 36.1**	**-1.2**
	1.5nm,0.2s						
HINF	**Hinteralfeld**	**3.69**	**176**	*e*Sg	**Sg**	**16 15 36.1**	**-1.2**
	0.8nm,0.2s						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**16 14 48.3**	**-0.9**
	baz=24						
LOR				*e*Sn	**Sn**	**16 15 39.2**	**-3.7**
LOR				*e*Sg	**Sg**	**16 16 04.2**	**-1.4**
	3.2nm,0.3s						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**16 14 48.3**	**-0.9**
LOR				*e*Sn	**Sn**	**16 15 39.2**	**-3.7**
LOR				*e*Sg	**Sg**	**16 16 04.2**	**-1.4**
	1.6nm,0.3s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**16 14 52.1**	**-1.0**
SSF				*e*Sg	**Sg**	**16 16 13.0**	**-1.6**
	5.1nm,0.4s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**16 14 52.1**	**-1.0**
SSF				*e*Sg	**Sg**	**16 16 13.0**	**-1.6**
	2.5nm,0.4s						
SMF	**Signal de Mont**	**5.16**	**201**	*e*Pn	**Pn**	**16 14 55.9**	**-1.4**
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**16 14 56.5**	**-0.9**
LDF				*e*Sn	**Sn**	**16 15 53.2**	**-4.4**
FLN	**La Foliniere**	**5.26**	**241**	*e*Pn	**Pn**	**16 14 57.9**	**-0.8**
	baz=52						
GRR	**Gorron**	**5.68**	**240**	*e*Pn	**Pn**	**16 15 03.4**	**-1.1**
GRR				*e*Sn	**Sn**	**16 16 04.6**	**-5.7**

*IDC **11** 16:16:38.5±3.9,3653N×6921E,h0km,mb3.5/2,mb1 3.6/4, mb1mx3.3/22,mbtmp3.5/4,ML3.0/2,Error ellipse: s-maj=72.9km s-min=39.0km az=8.0*
ISC 11 16:16:44.1±2.7**,367N**±03×**690E**±02**,h35**km**,n9,**σ**0§78**/9**, mb3.4**/2**,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.55**	**33**	P	**Pn**	**16 18 18.1**	**+0.3**
	SNR=12						
UCH	**Uchtor**	**7.00**	**36**	P	**Pn**	**16 18 24.6**	**+0.6**
	SNR=9.6						
AAK	**Ala-Archa**	**7.30**	**34**	P	**Pn**	**16 18 28.6**	**+0.4**
	SNR=7.4						
CHMS	**Chumysh**	**7.71**	**34**	P	**Pn**	**16 18 34.2**	**+0.5**
	SNR=7.0						
USP	**Ospenovka**	**7.82**	**31**	P	**Pn**	**16 18 35.1**	**-0.2**
	SNR=5.4						
MKAR	**Makanchi Array**	**14.15**	**40**	Pn	**Pn**	**16 19 59.1**	**-2.8**
	0.0nm,0.3s,baz=234,slow=14,SNR=7.0						
AKTO	**Aktyubinsk**	**15.83**	**334**	Pn	**Pn**	**16 20 23.9**	**-0.3**
	0.1nm,0.3s,baz=151,slow=13,SNR=3.8						
SONM	**Songino Array**	**29.58**	**56**	P	**P**	**16 22 45.5**	**0.0**
	0.4nm,0.8s,mb3.2,baz=251,slow=9.2,SNR=3.7						
YKA	**Yellowknife Ar**	**81.11**	**2**	P	**P**	**16 28 55.6**	**+0.3**
	0.6nm,0.8s,mb3.6,baz=351,slow=5.3,SNR=11						

*IDC **11** 16:25:38.9±7.0,745S×12852E,h140km±69km,mb3.3/2, mb1 3.6/6,mb1mx3.4/14,mbtmp3.4/6,Error ellipse: s-maj=64.6km s-min=21.7km az=44.0*
*ISCJB **11** 16:25:42.6±2.3,78S±0.1×1284E±0.1,h198km±27km, mb3.4/2,Error ellipse: s-maj=25.2km s-min=12.7km az=136.5*
ISC 11 16:25:43.1±2.1**,79S**±01×**1284E**±01**,h183**km±22km**,n8, **σ**1§45**/12**,mb3.4**/2**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.25**	**243**	P	**Pn**	**16 27 00.0**	**-0.5**
	18nm,0.3s,baz=93,slow=3.3,SNR=37						
BATI				S	**Sn**	**16 28 02.1**	**+0.8**
	5.5nm,0.3s,baz=63,slow=9.0,SNR=3.2						
FITZ	**Fitzroy Crossi**	**10.54**	**195**	*e*P	**Pn**	**16 28 11.6**	**+1.9**
	9.4nm,1.7s						
FITZ				*e*S	Sx	16 30 01.6	
FITZ	**Fitzroy Crossi**	**10.54**	**195**	P	**Pn**	**16 28 11.6**	**+2.0**
	0.3nm,0.3s,baz=36,slow=11,SNR=12						
FITZ				S	**Sn**	**16 30 04.2**	**-2.7**
	0.8nm,0.3s,baz=114,slow=22,SNR=10						
WRA	**Warramunga Arr**	**13.31**	**155**	P	**Pn**	**16 28 45.1**	**-0.1**
	0.4nm,0.3s,baz=332,slow=14,SNR=19						
WRA				S	**Sn**	**16 31 08.3**	**-5.0**
	0.7nm,0.3s,baz=328,slow=22,SNR=8.8						
WB2	**Warramunga Arr**	**13.31**	**155**	*e*P	**Pn**	**16 28 44.2**	**-1.0**
WB2				*e*S	Sx	16 31 05.2	
ASAR	**Alice Springs**	**16.57**	**162**	P	**Pn**	**16 29 28.9**	**+3.7**
	0.9nm,0.3s,baz=337,slow=10,SNR=100						
ASAR				S	**S**	**16 32 28.5**	**+0.1**
	0.2nm,0.3s,baz=321,slow=20,SNR=5.5						
STKA	**Stephens Creek**	**26.86**	**155**	P	**P**	**16 31 09.5**	**+2.7**
	1.7nm,0.5s,mb3.9,baz=323,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**68.10**	**328**	P	**P**	**16 36 21.7**	**-1.4**
	0.1nm,0.4s,mb2.9,baz=122,slow=7.1,SNR=4.2						

*CSEM **11** 17:07:19.6,3468N×2526E,h33km,MD3.5/4,After ATH*
ATH 11 17:07:20.0,3478N×**2525E,h31**km±5km**,MD3.4**/5**,1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.38**	**75**	*e*PB	Pb	17 07 29.0	+0.4
NPS	**Neapolis**	**0.57**	**32**	*e*PN	Pn	17 07 32.3	+0.4
NPS				*e*SN	Sn	17 07 39.6	-0.6
NPS	**Neapolis**	**0.57**	**32**	*e*Pn	Pn	17 07 32.5	+0.6
VAM	**Vamos**	**1.06**	**306**	⇓*i*PB	Pb	17 07 39.3	-0.6
VAM				*e*SN	Sn	17 07 55.5	+3.0
KARP	**Karpathos**	**1.74**	**63**	*e*PN	Pn	17 07 50.0	+1.9
VLI	**Veliai**	**2.70**	**316**	*e*PN	Pn	17 08 04.0	+2.8

*BJI **11** 17:19:08.0,1452N×14788E,h10km,mb4.8*
*ISCJB **11** 17:19:13.3±0.9,1481N±009×1471E±0.1,h10km,mb4.3/16, Error ellipse: s-maj=18.9km s-min=9.3km az=35.2*
*IDC **11** 17:19:13.6±1.2,1478N×147.14E,h0km,mb3.8/8, mb1 3.9/9,mb1mx3.9/18,mbtmp3.8/9,ML4.4/1,Error ellipse: s-maj=34.1km s-min=18.2km az=100.0*
*NEIC **11** 17:19:15.0±0.8,1482N×147.15E,h10km,mb4.9/8,Error ellipse: s-maj=20.9km s-min=11.1km az=101.0*
ISC 11 17:19:15.2±0.9**,1479N**±009×**1471E**±01**,h10**km**,n22, **σ**0§90**/23**,mb4.3**/16**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.49**	**242**	*e*Pn	**Pn**	**17 19 55.8**	**0.0**
GUMO				Sn	**Sn**	**17 20 25.9**	**-0.4**
GUMO	**Guam**	**2.49**	**242**	Pn	**Pn**	**17 19 55.4**	**-0.4**
	76nm,0.3s,baz=36,slow=3.0,SNR=33						
GUMO				Sn	**Sn**	**17 20 25.9**	**-0.4**
	37nm,0.3s,baz=17,slow=19,SNR=5.8						
MJAR	**Matsushiro Arr**	**23.07**	**341**	P	**P**	**17 24 19.0**	**-2.0**
	1.6nm,0.8s,mb3.5,baz=159,slow=7.8,SNR=4.5						
MAJO	**Matsushiro**	**23.08**	**341**	P	**P**	**17 24 19.3**	**-1.8**
KSRS	**Korea Array**	**28.29**	**326**	P	**P**	**17 25 09.1**	**+0.3**
	1.4nm,0.7s,mb3.7,baz=146,slow=9.4,SNR=5.7						
WRA	**Warramunga Arr**	**36.73**	**200**	P	**P**	**17 26 22.5**	**-0.4**
	0.3nm,0.7s,mb3.2,baz=20,slow=8.9,SNR=7.4						
ASAR	**Alice Springs**	**40.35**	**199**	P	**P**	**17 26 52.8**	**-0.5**
	0.3nm,0.7s,mb3.1,baz=22,slow=9.4,SNR=6.0						
ULN	**Ulaanbaatar**	**46.68**	**323**	*e*P	**P**	**17 27 44.6**	**+0.5**
	2.4nm,0.6s,mb4.3						
SONM	**Songino Array**	**47.05**	**323**	P	**P**	**17 27 47.7**	**+0.8**
	1.3nm,0.6s,mb4.1,baz=138,slow=9.1,SNR=13						
LSA	**Lhasa**	**53.41**	**296**	P	**P**	**17 28 37.0**	**+1.5**
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LSA	**Lhasa**	**53.41**	**296**	*e*P	**P**	**17 28 37.3**	**+1.8**
	comp=Z,7.5nm,0.6s,mb4.8						
TAPN	**Taplejung**	**56.37**	**293**	*e*P	**P**	**17 28 57.7**	**+0.7**
	comp=Z,13nm,0.7s,mb5.1						
ODAN	**Odare**	**56.66**	**293**	*e*P	**P**	**17 28 58.0**	**-1.0**
	comp=Z,7.5nm,0.6s,mb4.9						
JIRN	**Jiri**	**57.72**	**294**	*e*P	**P**	**17 29 07.1**	**+0.6**
	comp=Z,13nm,0.7s,mb5.1						
KKN	**Kakani**	**58.53**	**294**	*e*P	**P**	**17 29 12.6**	**+0.4**
	comp=Z,4.3nm,0.6s,mb4.7						
GKN	**Gorkha**	**59.09**	**294**	*e*P	**P**	**17 29 16.8**	**+0.7**
	comp=Z,12nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**62.16**	**315**	P	**P**	**17 29 37.5**	**+0.8**
	comp=Z,1.6nm,0.4s,mb4.5,baz=91,slow=8.0,SNR=26						
KURK	**Kurchatov**	**65.09**	**319**	*e*P	**P**	**17 29 55.2**	**-0.7**
	comp=Z,7.9nm,0.8s,mb4.8						
YKA	**Yellowknife Ar**	**80.79**	**28**	P	**P**	**17 31 29.6**	**+0.8**
YKA	**Yellowknife Ar**	**80.79**	**28**	P	**P**	**17 31 29.6**	**+0.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=291,slow=6.0,SNR=4.5						
FINES	**FINESS Array B**	**90.98**	**336**	P	**P**	**17 32 18.7**	**-0.7**
	comp=Z,0.8nm,0.6s,mb4.2,baz=27,slow=6.4,SNR=5.1						
DBIC	**Dimbokro**	**144.97**	**306**	PKPbc	PKPdf	17 38 53.0	-0.8
	comp=Z,3.0nm,0.8s,baz=75,slow=3.9,SNR=6.4						

*SZGRF **11** 17:24:40.7,2260S×17333W,h10km,Tonga Islands region*
*BJI **11** 17:24:41.3,2096S×17360W,h10km,mB5.4,mb5.1,Ms5.1, Msz4.7*
*IDC **11** 17:24:43.7±0.6,2068S×17403W,h0km,mb4.4/11, mb1 4.6/12,mb1mx4.5/16,mbtmp4.4/12,ML4.6/1,MS3.9/2, Ms1 3.9/2,ms1mx3.2/34,Error ellipse: s-maj=25.2km s-min=18.0km az=142.0*
*NEIC **11** 17:24:45.4±0.2,2062S×17408W,h10km,mb4.8/17,Error ellipse: s-maj=11.0km s-min=6.1km az=141.0*
*ISCJB **11** 17:24:47.4±0.3,2073S±008×174.10W±007,h33km, mb4.8/36,MS4.6/5,Error ellipse: s-maj=12.4km s-min=7.9km az=142.4*
*MOS **11** 17:24:50.5±3.0,2059S×17432W,h33km,mb5.0/10,Error ellipse: s-maj=15.7km s-min=13.6km az=56.0*
ISC 11 17:24:49.3±0.3**,2071S**±008×**17406W**±007**,h35**km**, (h12**km±3.4km**:pP-P),n176,**σ**0§95**/68**,mb4.8**/36**,MS4.6**/5**, 24C-15D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.11**	**18**	*e*Pn	**Pn**	**17 26 24.6**	**-6.2**
	104nm,0.4s						
AFI				*e*Sn	**Sn**	**17 27 35.5**	**-15**
AFI	**Afiamalu**	**7.11**	**18**	*e*P	**Pn**	**17 26 24.7**	**-6.1**
AFI				pmax	pmax		
	comp=Z,104nm,0.4s						
AFI	**Afiamalu**	**7.11**	**18**	Pn	**Pn**	**17 26 24.6**	**-6.2**
	comp=Z,27nm,0.3s,baz=103,slow=2.5,SNR=39						
AFI				Sn	**Sn**	**17 27 35.7**	**-15**
	comp=Z,49nm,0.3s,baz=192,slow=22,SNR=8.6						
AFI				LR	LR	17 28 50.5	
	comp=Z,385nm,21.5s,baz=141,slow=35						
RAR	**Rarotonga**	**13.36**	**95**	Pn	**Pn**	**17 27 45.1**	**-11**
	comp=Z,6.2nm,0.3s,baz=353,slow=14,SNR=10						
RAR				Sn	Sn	17 29 57.5	-26
	comp=Z,4.3nm,0.3s,baz=49,slow=19,SNR=6.0						
DZM	**Mont Dzumac**	**18.20**	**262**	Pn	**Pn**	**17 29 02.3**	**+3.0**
	comp=Z,0.7nm,0.3s,baz=72,slow=18,SNR=18						
URZ	**Urewera**	**19.08**	**202**	Pn	**Pn**	**17 29 09.2**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=317,slow=6.3,SNR=11						
URZ				Sn	**Sn**	**17 32 24.8**	**-18**
	comp=Z,0.5nm,0.3s,baz=198,slow=20,SNR=5.3						
TBI	**Tubuai**	**22.95**	**101**	*e*LQ		17 33 53.2	
	comp=Z,454nm,25.0s						
TBI				*e*LR	LR	17 35 02.2	
	comp=Z,159nm,22.5s						
PPT	**Papeete**	**23.34**	**86**	*e*LQ		17 34 08.9	
	comp=Z,360nm,26.0s						
PPT				*e*LR	LR	17 35 26.2	
	comp=Z,175nm,21.8s,baz=247						
EIDS	**Eidsvold**	**32.35**	**255**	*e*P	**P**	**17 31 16.1**	**+0.6**
RKT	**Rikitea**	**36.27**	**101**	*e*LR	LR	17 41 19.0	
	comp=Z,117nm,22.0s						
CTA	**Charters Tower**	**37.14**	**264**	*e*P	**P**	**17 31 56.5**	**-0.4**
	comp=Z,3.4nm,0.6s,mb4.3						
CTA	**Charters Tower**	**37.14**	**264**	*e*P	**P**	**17 31 56.5**	**-0.4**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CTAO	**Charters Tower**	**37.14**	**264**	*e*P	**P**	**17 31 56.5**	**-0.4**
	comp=Z,5.7nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**37.14**	**264**	*e*P	**P**	**17 31 56.5**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
PMG	**Port Moresby**	**39.00**	**281**	*e*P	**P**	**17 32 11.6**	**-1.0**
PMG	**Port Moresby**	**39.00**	**281**	P	**P**	**17 32 12.5**	**-0.1**
	comp=Z,7.7nm,0.8s,mb4.5,baz=52,slow=9.8,SNR=3.8						
STKA	**Stephens Creek**	**41.03**	**245**	*e*P	**P**	**17 32 29.1**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**41.03**	**245**	P	**P**	**17 32 29.2**	**-0.1**
	comp=Z,5.2nm,1.0s,mb4.1,baz=102,slow=13,SNR=6.2						
COEN	**Coen**	**41.28**	**272**	*e*P	**P**	**17 32 31.3**	**-0.2**
	comp=Z,6.7nm,0.8s,mb4.3						
ASAR	**Alice Springs**	**48.06**	**256**	P	**P**	**17 33 24.8**	**-0.7**
	comp=Z,8.1nm,0.8s,mb4.8,baz=91,slow=8.3,SNR=63						
ASAR				PcP	PcP	17 34 53.6	+0.5
	comp=Z,2.9nm,0.8s,baz=104,slow=4.3,SNR=7.5						
WB2	**Warramunga Arr**	**48.21**	**261**	*e*P	**P**	**17 33 25.3**	**-1.4**
WRA	**Warramunga Arr**	**48.22**	**261**	P	**P**	**17 33 25.5**	**-1.3**
	comp=Z,3.8nm,0.8s,mb4.5,baz=99,slow=7.7,SNR=59						
WRA				PcP	PcP	17 34 54.4	+0.7
	comp=Z,2.4nm,0.6s,baz=96,slow=3.5,SNR=8.0						
FITZ	**Fitzroy Crossi**	**56.65**	**262**	*e*P	**P**	**17 34 29.1**	**-0.3**
	comp=Z,4.3nm,0.4s,mb4.8						
SBA	**Scott Base**	**57.93**	**185**	*e*P	**P**	**17 34 40.0**	**+2.4**
VNDA	**Vanda**	**58.06**	**186**	P	**P**	**17 34 39.7**	**+1.3**
	comp=Z,1.3nm,1.0s,mb3.9,baz=57,slow=8.9,SNR=3.6						
KLBR	**Kellerberrin**	**61.30**	**245**	*e*P	**P**	**17 35 01.3**	**-0.2**
	comp=Z,10.0nm,0.6s,mb5.1						
MBWA	**Marble Bar**	**61.40**	**257**	*e*P	**P**	**17 35 01.7**	**-0.6**
	comp=Z,13nm,0.6s,mb5.2						
QSPA	**South Pole Qui**	**69.36**	**180**	*e*P	**P**	**17 35 53.9**	**+1.1**
	comp=Z,16nm,1.2s,mb4.8						
MJAR	**Matsushiro Arr**	**72.62**	**321**	P	**P**	**17 36 13.7**	**+0.6**
	comp=Z,6.1nm,0.6s,mb4.7,baz=156,slow=6.0,SNR=28						
MAT	**Matsushiro**	**72.62**	**321**	P	**P**	**17 36 13.8**	**+0.6**
YSS	**Yuzh-Sakhalins**	**77.79**	**331**	⇑*e*P	**P**	**17 36 43.2**	**+0.5**
YSS				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
NVAR	**Mina Array Bea**	**78.69**	**41**	P	**P**	**17 36 48.0**	**+0.1**
	comp=Z,7.6nm,0.7s,mb4.7,baz=213,slow=7.3,SNR=76						
KSRS	**Korea Array**	**79.53**	**317**	P	**P**	**17 36 53.0**	**+0.5**
	comp=Z,0.8nm,0.5s,mb3.9,baz=122,slow=6.5,SNR=5.8						
MAW	**Mawson**	**82.59**	**199**	P	**P**	**17 37 08.7**	**+0.4**
	comp=Z,4.4nm,0.8s,mb4.6,baz=108,slow=6.4,SNR=3.8						
MSU	**Marysvale**	**82.64**	**44**	*e*P	**P**	**17 37 10.0**	**+0.9**
MDJ	**Mudanjiang**	**82.85**	**323**	P	**P**	**17 37 11.3**	**+1.3**
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,99nm,3.8s						
NJ2	**Nanjing**	**82.89**	**308**	*e*P	**P**	**17 37 10.5**	**0.0**
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.5						
SLKM	**Skilak Lake**	**83.21**	**12**	*e*P	**P**	**17 37 10.7**	**-0.8**
BMO	**Blue Mountains**	**83.23**	**37**	*e*P	**P**	**17 37 11.3**	**-0.7**
	comp=Z,10.0nm,1.6s,mb4.6						
TMUT	**Trail Mountain**	**83.70**	**44**	*e*P	**P**	**17 37 15.3**	**+0.8**
MNTX	**Cornudas Mount**	**83.90**	**53**	*e*P	**P**	**17 37 15.0**	**-0.7**
	comp=Z,19nm,2.0s,mb4.9						
HVU	**Hansel Valley**	**84.09**	**41**	*e*P	**P**	**17 37 16.4**	**-0.1**
	comp=Z,4.9nm,0.8s,mb4.7						
HVU	**Hansel Valley**	**84.09**	**41**	*e*P	**P**	**17 37 16.4**	**0.0**
HVU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
LTX	**Lajitas**	**84.09**	**56**	P	**P**	**17 37 16.4**	**-0.3**
	comp=Z,3.3nm,1.0s,mb4.4						
LTX	**Lajitas**	**84.09**	**56**	P	**P**	**17 37 16.4**	**-0.3**
LTX				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
TXAR	**Lajitas Array**	**84.09**	**56**	P	**P**	**17 37 16.5**	**-0.3**
	comp=Z,1.1nm,0.8s,mb4.1,baz=220,slow=8.5,SNR=12						
HLID	**Hailey**	**84.12**	**39**	*e*P	**P**	**17 37 16.6**	**+0.1**
	comp=Z,8.4nm,0.8s,mb4.9						
GAMB	**Gambell**	**84.23**	**1**	*e*P	**P**	**17 37 17.5**	**+0.9**
TTA	**Tatalina**	**84.57**	**8**	*e*P	**P**	**17 37 19.0**	**+0.6**
	comp=Z,16nm,1.1s,mb5.1						
TTA	**Tatalina**	**84.57**	**8**	*e*P	**P**	**17 37 19.0**	**+0.7**
TTA				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
ANMO	**Albuquerque**	**84.69**	**50**	⇑*e*P	**P**	**17 37 18.5**	**-1.1**
HWUT	**Hardware Ranch**	**84.74**	**42**	*e*P	**P**	**17 37 19.1**	**-0.6**
	comp=Z,5.6nm,1.3s,mb4.5						
CN2	**Changchun**	**84.76**	**321**	*e*P	**P**	**17 37 21.0**	**+1.3**
PV01	**Paradox Valley**	**84.83**	**46**	*e*P	**P**	**17 37 20.1**	**-0.2**
NEW	**Newport**	**85.43**	**34**	LR	LR	18 07 26.5	
	comp=Z,158nm,19.5s,MS4.4,baz=51,slow=30						
MCK	**McKinley**	**86.43**	**11**	*e*P	**P**	**17 37 27.2**	**-0.4**
	comp=Z,21nm,0.9s,mb5.4						
MCK	**McKinley**	**86.43**	**11**	*e*P	**P**	**17 37 27.2**	**-0.4**
MCK				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.4						
BW06	**Boulder Array**	**86.62**	**42**	*e*P	**P**	**17 37 28.3**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.4						
SYO	**Syowa Base**	**87.30**	**192**	⇑*e*P	**P**	**17 37 30.6**	**-1.4**
COLA	**College**	**87.67**	**11**	*e*P	**P**	**17 37 33.0**	**-0.5**
	comp=Z,9.0nm,0.9s,mb5.0						
COLA	**College**	**87.67**	**11**	*d i*P	**P**	**17 37 33.4**	**-0.2**
BILL	**Bilibino**	**89.67**	**353**	⇓*e*P	**P**	**17 37 45.6**	**+2.7**
BILL				*e*		17 41 16.8	
BILL				*e*S	S	17 48 05.8	-26
BILL				*e*PS	PS	17 49 39.3	-2.2
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.9						
GYA	**Guiyang**	**89.98**	**298**	P	**P**	**17 37 46.2**	**+0.8**
GYA				PP	PP	17 41 21.9	+3.0
GYA				SKS		17 48 15.7	
GYA				S	S	17 48 37.4	+1.4
GYA				SS	SS	17 54 38.8	+3.7
GYA				AMB	AMB		

comp=Z,10.0nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,6.2s
GYA LR LR
comp=N,460nm,20.6s,MS5.0
GYA LR LR
comp=E,410nm,21.0s,MS5.0
GYA LR LR
comp=Z,420nm,20.4s,MS4.9
HHC Hu-ho-hao-te 92.17 313 *e*P **P 17 37 54.2 -1.0**
HHC AP pP 17 37 58.5 -7.9
HHC XP sP 17 38 01.3 -9.1
HHC PP PP 17 41 39.0 +3.0
HHC AMB AMB
comp=Z,17nm,0.7s,mb5.5
HHC AMB AMB
comp=Z,164nm,5.3s
HHC LR LR
comp=N,222nm,17.8s,MS4.8
HHC LR LR
comp=E,255nm,16.6s,MS4.8
HHC LR LR
comp=Z,200nm,15.5s,MS4.7
KMI Kunming 92.75 296 P **P 17 37 56.8 -1.5**
KMI AP pP 17 38 02.7 -6.7
KMI XP sP 17 38 05.2 -8.2
KMI AMB AMB
comp=Z,4.0nm,0.9s,mb4.8
KMI AMB AMB
comp=Z,105nm,4.9s
KMI LR LR
comp=Z,56nm,19.3s,MS4.0
CD2 Chengdu 94.03 301 *e*P **P 17 38 04.2 +0.1**
CD2 AP pP 17 38 09.0 -6.2
CD2 XP sP 17 38 11.3 -7.9
CD2 PP PP 17 41 53.2 +2.4
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,5.4s
CD2 LR LR
comp=N,260nm,12.8s,MS4.9
CD2 LR LR
comp=E,130nm,16.2s,MS4.9
CD2 LR LR
comp=Z,110nm,14.6s,MS4.5
YKA Yellowknife Ar 95.19 24 P **P 17 38 08.0 -0.6**
comp=Z,2.0nm,0.7s,mb4.7,baz=237,slow=4.4,SNR=36
LZH Lanzhou 95.85 306 *e*P **P 17 38 09.5 -2.8**
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.4
ULN Ulaanbaatar 97.96 318 *e*P **P 17 38 22.6 +1.1**
MKAR Makanchi Array 114.03 313 PKP PKiKP 17 43 24.1 -0.4
comp=Z,1.6nm,0.6s,baz=79,slow=0.7,SNR=18
KURK Kurchatov 116.65 317⇑*i*PKIKP PKPdf 17 43 28.5 -1.0
ARU Arti 127.45 326 *i* PKIKP PKPdf 17 43 50.2 +0.2
ARU 17 50 53.0
ARU SS SS 18 02 55.7 -2.6
ARCES ARCESS Array B 129.75 351 PKP PKPdf 17 43 53.8 -0.2
comp=Z,1.9nm,0.6s,baz=29,slow=0.6,SNR=16
JOF Joensuu 134.41 344 *e*p PKPdf 17 43 58.1 -4.9
comp=Z,4.8nm,0.7s
FINES FINESS Array B 136.94 346 PKP PKPdf 17 44 06.8 -1.0
comp=Z,1.3nm,0.6s,baz=75,slow=2.8,SNR=9.0
OBN Obninsk 138.64 334⇑*i*PKIKP PKPdf 17 44 20.7 +10
OBN *e* 17 47 08.1
OBN pmax pmax
comp=Z,4.0nm,0.6s
KIV Kislovodsk 141.71 316 *e*PKIKP PKPdf 17 44 18.2 +1.2
KIV pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 142.44 238 PKP PKPdf 17 44 17.0 -2.3
KMBO Kilima Mbogo 142.44 238 PKP PKPdf 17 44 17.0 -2.3
comp=Z,1.4nm,0.8s,baz=90,slow=1.0,SNR=5.2
AKASG Malin Array Be 144.90 334 PKP PKPdf 17 44 21.3 -1.1
comp=Z,13nm,0.6s,baz=40,slow=4.2,SNR=99
KIEV Kiev 144.91 334 *e*PKPdf PKPdf 17 44 20.9 -1.5
SIM Simferopol' 146.46 323 *i* PKP2 PKPab 17 44 27.4 -0.3
SIM pmax pmax
comp=Z,16nm,0.9s
BSEG Bad Segeberg 146.66 355 *e*PKPbc PKPbc 17 44 27.3 +0.3
MALT Malatya 146.96 309 *e*PKPbc PKPbc 17 44 30.0 +1.6
MALT Malatya 146.96 309⇓*i*P PKPbc 17 44 30.1 +1.8
LVV L'vov 147.59 338 *e*PKIKP PKPbc 17 44 29.7 0.0
RUE Ruedersdorf 147.71 351 *e*PKPbc PKPbc 17 44 30.4 +0.5
KIS Kishinev 147.85 330 *e*PKIKP PKPdf 17 44 30.0 +2.4
KIS Kishinev 147.85 330 *e*UNK 17 44 30.0
KWP Kalwaria 148.21 339 *e*PKPbc PKPbc 17 44 31.8 +0.4
IBBN Ibbenburen 148.43 358 *e*PKPbc PKPbc 17 44 32.2 +0.3
OJC Ojcow 148.57 343 *e*PKP PKPbc 17 44 32.7 +0.4
CLZ Clausthal 148.74 355 *e*PKPbc PKPbc 17 44 32.9 +0.2
STHS Stebnicka Huta 148.87 341 *e*PKP PKPbc 17 44 34.2 +1.1
KOLS Kolonicke sedl 148.95 339 *e*PKP PKPbc 17 44 35.8 +2.5
KOLS *e* 17 44 40.8
KOLS Kolonicke sedl 148.95 339 *e*PKP PKPbc 17 44 35.8 +2.5
KOLS *e* 17 44 40.8
BURAR Bucovina Array 148.96 334 ⇑P PKPbc 17 44 34.6 +1.2
BURAR Bucovina Array 148.96 334⇑*i*P PKPbc 17 44 34.6 +1.2
CLL Collm 148.97 351⇓*i*PKP PKPbc 17 44 33.5 +0.2
CLL ⇑*i*PKP PKPab 17 44 37.1 -0.2
CLL Collm 148.97 351⇓*i*PKPbc PKPbc 17 44 33.5 +0.2
comp=Z,15nm,0.9s
CLL ⇑*i*PKPab PKPab 17 44 37.1 -0.2
comp=Z,7.0nm,0.9s
CLL Collm 148.97 351 *e*PKPbc PKPbc 17 44 33.6 +0.3
UZH Uzhgorod 149.21 339⇓*i*PKP2 PKPbc 17 44 35.0 +1.0
UPC Upice 149.22 347 *e*PKPbc PKPbc 17 44 34.5 +0.6
UPC *e*PKPab PKPab 17 44 39.4 +1.0
BRG Berggiesshubel 149.25 350 *e*PKPbc PKPbc 17 44 34.6 +0.6
BRG Berggiesshubel 149.25 350 *i* PKP PKPbc 17 44 34.8 +0.8
comp=Z,11nm,0.9s
BRG *i* 17 44 38.6
comp=Z,6.8nm,0.9s
CRVS Cervenica-Dubn 149.25 340 *e*PKP PKPbc 17 44 34.8 +0.8
FBE Freiberg 149.29 351 *e*PKPbc PKPbc 17 44 35.1 +1.0
DPC Dobruska-Polom 149.30 347 *e*PKPbc PKPbc 17 44 34.8 +0.7
DPC *e*PKPab PKPab 17 44 39.9 +1.2
OKC Ostrava-Krasne 149.36 344 *e*PKPbc PKPbc 17 44 34.6 +0.3
PVCC Panska Ves 149.47 349 *e*PKPbc PKPbc 17 44 35.1 +0.5
PVCC *e*PKPab PKPab 17 44 40.1 +0.7
TRPA Tarpa 149.55 338⇑*i*P PKPbc 17 44 35.4 +0.6
MORC Moravsky Berou 149.56 345 *e*PKPbc PKPbc 17 44 35.4 +0.6
MORC Moravsky Berou 149.56 345⇓*i*P PKPbc 17 44 35.3 +0.5
VRI Vrincioaia 149.66 331 ⇓P PKPbc 17 44 35.9 +0.7
VRI Vrincioaia 149.66 331⇓*i*P PKPbc 17 44 35.9 +0.7
MOX Moxa 149.79 353 *e*PKPbc PKPbc 17 44 35.5 +0.2
WERD Werda 149.90 352 *e*PKPbc PKPbc 17 44 35.7 +0.1
KECS Kecovo 149.93 341 *e*PKP PKPbc 17 44 36.5 +0.8
HARR Harsova 149.95 328 ⇑P PKPbc 17 44 36.1 +0.2
HARR Harsova 149.95 328⇑*i*P PKPbc 17 44 36.1 +0.2
UCC Uccle 149.95 2 PKPbc PKPbc 17 44 36.0 +0.3
UCC PKPab PKPab 17 44 42.1 +0.7
GUNZ Gunzen 149.98 352 *e*PKPbc PKPbc 17 44 36.6 +0.8
PRU Pruhonice 150.00 349 *e*PKPbc PKPbc 17 44 36.4 +0.5
PRU *e*PKPab PKPab 17 44 41.5 -0.1
WERN Wernitzgruen 150.05 352 *e*PKPbc PKPbc 17 44 36.4 +0.4
NKC Novy Kostel 150.09 352 *e*PKPbc PKPbc 17 44 36.7 +0.6
NKC *e*PKPab PKPab 17 44 42.4 +0.4
ANTO Ankara 150.14 316 *e*PKPbc PKPbc 17 44 37.8 +1.2
ANTO Ankara 150.14 316⇓*i*P PKPbc 17 44 37.8 +1.2
VRAC Vranov 150.22 346⇓*i*P PKPbc 17 44 37.1 +0.7
SNF Seneffe 150.24 2 PKPbc PKPbc 17 44 36.2 -0.2
SNF PKPab PKPab 17 44 41.4 -1.1
MLR Muntele Rosu 150.31 331 ⇓P PKPbc 17 44 37.7 +1.0
MLR Muntele Rosu 150.31 331⇓*i*P PKPbc 17 44 37.7 +1.0
MANZ Manzenberg 150.38 352 *e*PKPbc PKPbc 17 44 37.4 +0.6
VYHS Vyhne 150.41 343 *e*PKP PKPbc 17 44 37.4 +0.5
TREC Trest 150.48 347 *e*PKPbc PKPbc 17 44 37.4 +0.4
TNS Taunus Mts 150.49 357 *e*PKPbc PKPbc 17 44 36.8 -0.2
ROTZ Rotzenmuhle 150.58 352 *e*PKPbc PKPbc 17 44 37.4 +0.1
PSZ Piszkesteto 150.61 341 ⇑P PKPbc 17 44 38.2 +0.8
PSZ ⇑P 17 44 38.6
PSZ Piszkesteto 150.61 341⇑*i*P PKPbc 17 44 38.2 +0.8
PSZ Piszkesteto 150.61 341⇑*i*P PKPbc 17 44 38.6 +1.2
DRGR 150.61 336 ⇑P PKPbc 17 44 37.9 +0.4
DRGR 150.61 336⇑*i*P PKPbc 17 44 37.9 +0.5
DOU Dourbes 150.66 2 PKPbc PKPbc 17 44 37.8 +0.4
DOU PKPab PKPab 17 44 44.0 -0.3
GIVF Givet 150.66 1 *e*PKP1 PKPbc 17 44 37.5 +0.1
comp=Z,44nm,0.9s
BAIF Baives 150.68 2 *e*PKP1 PKPbc 17 44 37.7 +0.2
comp=Z,35nm,1.1s
VOIR 150.75 332 ⇑P PKPbc 17 44 38.0 +0.2
VOIR 150.75 332⇑*i*P PKPbc 17 44 38.0 +0.2
GRA1 Grafenberg Arr 150.78 353 *e*PKPbc PKPbc 17 44 38.1 +0.4
GRF Grafenberg Arr 150.78 353 *e*PKPbc PKPbc 17 44 38.1 +0.4
MODS Modra-Piesok 150.93 344 *e*PKP PKPbc 17 44 38.7 +0.6
KHC Kasperske Hory 150.99 350 *e*PKPbc PKPbc 17 44 38.7 +0.4
KHC *e*PKPab PKPab 17 44 46.2 +0.5
WET Wettzell 151.09 351 *e*PKPbc PKPbc 17 44 37.8 -0.7
WLF Walferdange 151.11 360 PKPbc PKPbc 17 44 38.8 +0.3
WLF PKPab PKPab 17 44 46.5 +0.3
WLF Walferdange 151.11 360 *e*PKPbc PKPbc 17 44 38.9 +0.4
GEC2 GERESS Array S 151.25 349 *e*PKPbc PKPbc 17 44 39.0 +0.1
GERES GERESS Array B 151.25 349 PKP PKPdf 17 44 32.5 -0.4
comp=Z,0.5nm,0.8s,baz=31,slow=3.1,SNR=4.5
GERES PKPbc PKPbc 17 44 39.4 +0.6
comp=Z,5.1nm,0.9s,baz=38,slow=2.4,SNR=30
FLN La Foliniere 151.54 9 *e*PKP1 PKPbc 17 44 39.1 -0.4
comp=Z,17nm,0.6s
SGMF Saint Gilles 151.68 12 *e*PKP1 PKPbc 17 44 39.1 -0.8
comp=Z,34nm,1.0s
GZR Gura Zlata 151.74 334 ⇑P PKPbc 17 44 39.2 -0.9
GZR Gura Zlata 151.74 334⇑*i*P PKPbc 17 44 39.2 -0.9
LDF La Druitiere 151.76 9 *e*PKP1 PKPbc 17 44 39.4 -0.6
comp=Z,36nm,1.1s
GRR Gorron 151.85 10 *e*PKP1 PKPbc 17 44 39.8 -0.5
comp=Z,28nm,0.8s
STU Stuttgart 151.88 355 *e*PKPbc PKPbc 17 44 40.6 +0.3
BZS Buzias 152.01 336 ⇑P PKPbc 17 44 41.1 +0.4
BZS Buzias 152.01 336⇑*i*P PKPbc 17 44 41.1 +0.4
MEZF Maizieres J'vi 152.27 1 *e*PKP1 PKPbc 17 44 41.3 +0.1
comp=Z,16nm,0.9s
CDF Champ du Feu 152.34 358 *e*PKP1 PKPbc 17 44 41.4 0.0
comp=Z,22nm,1.1s
BFO Black Forest 152.38 357 *e*PKPbc PKPbc 17 44 41.2 -0.3
PKSM Moragy 152.52 341 ⇓P PKPbc 17 44 41.8 0.0
PKSM Moragy 152.52 341⇓*i*P PKPbc 17 44 41.8 0.0
HAU Haudompre 152.77 359 *e*PKP1 PKPbc 17 44 42.2 -0.1
comp=Z,16nm,0.9s
HINF Hinteralfeld 152.95 359 *e*PKP1 PKPbc 17 44 42.4 -0.3
comp=Z,6.2nm,0.7s
LOR Lormes 153.46 3 *e*PKP1 PKPbc 17 44 43.8 -0.1
comp=Z,6.3nm,0.7s
SSF Saint Saulge 153.64 4 *e*PKP1 PKPbc 17 44 44.2 -0.1
comp=Z,19nm,1.0s
AVF Avril sur Loir 153.90 4 *e*PKP1 PKPbc 17 44 44.4 -0.4
comp=Z,7.6nm,0.8s
BGF Bois d'Agland 154.10 5 *e*PKP1 PKPbc 17 44 45.1 -0.2
comp=Z,7.8nm,0.6s
TORD Torodi Ar. Bea 171.45 151 PKP PKPdf 17 44 53.5 -1.5
comp=Z,1.1nm,0.9s,baz=182,slow=1.1,SNR=4.6
TORD PKPab PKPab 17 46 14.6 -0.9
comp=Z,0.5nm,0.6s,baz=213,slow=3.5,SNR=3.2

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*IDC **11** 17:32:19.1±0.6, 24.31S×176.53W, h0km, mb4.4/12, mb1 4.6/14, mb1mx4.6/17, mbtmp4.5/14, ML3.6/2, MS3.9/9, Ms1 3.9/9, ms1mx3.6/26, Error ellipse: s-maj=22.8km s-min=17.5km az=142.0*
*NEIC **11** 17:32:20.0±4.6, 24.22S×176.43W, h9km±28km, mb4.7/6, Error ellipse: s-maj=15.5km s-min=10.0km az=146.0*
*BJI **11** 17:32:19.9, 24.20S×176.40W, h15km, mB5.1, mb4.7, Ms4.7, Msz4.3*
*ISCJB **11** 17:32:22.4±0.5, 24.27S±0.08×176.50W±0.10, h33km, mb4.5/20, MS4.0/9, Error ellipse: s-maj=14.2km s-min=10.0km az=39.5*
ISC 11 17:32:24.7±0.5**, 24.28S**±0.08×**176.53W**±0.10**, h35km, n100, σ1s25**/37**, mb4.5**/20**, MS4.0**/9**, 4C-7D, South of Fiji Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
AFI Afiamalu 11.25 24 *e*Pn **Pn 17 35 00.8 -2.2**
AFI Afiamalu 11.25 24 Pn **Pn 17 35 01.1 -2.0**
8.9nm,0.3s,baz=83,slow=12,SNR=4.3
AFI Sn **Sn 17 36 57.1 -10**
4.8nm,0.3s,baz=225,slow=20,SNR=3.7
AFI T 17 46 45.2
5.1nm,0.3s,baz=18,slow=23,SNR=5.8
URZ Urewera 14.95 200 Pn **Pn 17 35 53.4 0.0**
0.7nm,0.3s,baz=274,slow=5.7,SNR=5.4
URZ Sn **Sn 17 38 22.0 -16**
0.6nm,0.3s,baz=6.3,slow=18,SNR=4.4
RAR Rarotonga 15.76 82 Pn **Pn 17 35 58.1 -5.9**
RAR Sn **Sn 17 38 36.9 -21**
RAR LR LR 17 39 45.8
RAR Rarotonga 15.76 82 Pn **Pn 17 35 58.1 -5.9**
11nm,0.3s,baz=246,slow=7.0,SNR=16
RAR Sn **Sn 17 38 36.9 -21**
5.0nm,0.3s,baz=357,slow=18,SNR=4.5
RAR LR LR 17 39 45.8
comp=Z,174nm,19.4s,baz=247,slow=28
RAR T 17 51 59.9
68nm,0.3s,baz=180,slow=4.7,SNR=7.6
DZM Mont Dzumac 15.81 275 Pn **Pn 17 36 11.5 +6.8**
0.5nm,0.3s,baz=92,slow=17,SNR=14
DZM Sn Sn 17 38 28.6 -30
0.1nm,0.3s,baz=18,slow=22,SNR=8.0
DZM LR LR 17 39 48.7
comp=Z,187nm,19.7s,baz=289,slow=28
RPZ Rata Peaks 21.90 205 LR LR 17 44 23.2
comp=Z,375nm,19.2s,MS3.8,baz=17,slow=33
TBI Tubuai 24.77 93 *e*LR LR 17 43 39.5
505nm,26.0s,baz=259
TBI Tubuai 24.77 93 *e*T 18 02 44.9
45nm,0.4s
PAE Paea 25.99 80 *e*T 18 04 11.7
125nm,0.3s
PPT Papeete 26.02 80 *e*LR LR 17 44 21.3
582nm,25.5s,baz=249
PPT Papeete 26.02 80 *e*T 18 04 14.3
18nm,0.3s
PPT Papeete 26.02 80 LR LR 17 44 49.3
comp=Z,363nm,21.6s,MS3.9,baz=287,slow=29
PPT T 18 04 42.5
22nm,0.3s,baz=47,slow=18,SNR=5.7
TVO Taravao 26.24 81 *e*T 18 04 31.0
21nm,0.3s
HNR Honiara 26.85 299 LR LR 17 46 48.3
comp=Z,264nm,20.1s,MS3.8,baz=184,slow=32
VAH Vaihoa 28.60 77 *e*T 18 07 26.5
15nm,0.3s
EIDS Eidsvold 29.38 261 *e*P **P 17 38 26.1 +1.4**
CTA Charters Tower 34.64 269 *e*P **P 17 39 11.5 +0.6**
6.8nm,0.4s,mb4.9
CTA Charters Tower 34.64 269 P **P 17 39 11.6 +0.7**
7.5nm,0.4s,mb5.0,baz=96,slow=11,SNR=19
CTAO Charters Tower 34.64 269 *e*P **P 17 39 11.5 +0.6**
7.4nm,0.4s,mb5.0
STKA Stephens Creek 37.53 249 P **P 17 39 34.8 -0.7**
1.3nm,0.5s,mb3.9,baz=98,slow=15,SNR=5.1
STKA LR LR 17 53 29.3
comp=Z,349nm,19.4s,MS4.2,baz=156,slow=34
PMG Port Moresby 37.62 287 *e*P **P 17 39 36.6 +0.2**
PMG Port Moresby 37.62 287 P **P 17 39 36.9 +0.5**
10nm,0.8s,mb4.6,baz=134,slow=10,SNR=7.9
RKT Rikitea 37.97 97 *e*LR LR 17 49 40.1
277nm,29.5s
RKT Rikitea 37.97 97 *e*T 18 19 15.6
18nm,0.3s
ASAR Alice Springs 45.10 260 P **P 17 40 36.6 -1.1**
13nm,0.9s,mb4.8,baz=93,slow=6.4,SNR=69
WB2 Warramunga Arr 45.53 265 *e*P **P 17 40 39.5 -1.7**
WRA Warramunga Arr 45.54 265 P **P 17 40 39.7 -1.5**
8.7nm,0.6s,mb4.9,baz=102,slow=8.1,SNR=131
WRA PcP PcP 17 42 19.8 +0.2
1.8nm,0.8s,baz=106,slow=3.2,SNR=5.0
WRA LR LR 17 58 58.8
comp=Z,172nm,18.5s,MS4.0,baz=100,slow=35
FITZ Fitzroy Crossi 53.95 265 *e*P **P 17 41 44.8 -0.5**
7.3nm,0.6s,mb4.8
SBA Scott Base 54.22 184 *e*P **P 17 41 48.0 +1.6**
5.4nm,0.8s,mb4.5
VNDA Vanda 54.29 186 P **P 17 41 46.6 -0.3**
1.5nm,1.0s,mb3.9,baz=335,slow=12,SNR=4.1
VNDA LR LR 18 01 47.1
comp=Z,82nm,18.0s,MS3.8,baz=116,slow=33
MJAR Matsushiro Arr 74.04 323 P **P 17 43 55.8 -1.1**
2.3nm,0.7s,mb4.2,baz=152,slow=5.8,SNR=7.1
MAW Mawson 78.48 200 P **P 17 44 21.6 -0.1**
7.1nm,0.7s,mb4.7,baz=128,slow=11,SNR=10
KSRS Korea Array 80.60 318 P **P 17 44 35.7 +2.0**
1.3nm,0.8s,mb3.9,baz=112,slow=5.6,SNR=4.1
KSRS LR LR 18 17 41.3
comp=Z,59nm,18.2s,MS4.0,baz=99,slow=34
NVAR Mina Array Bea 82.86 42 P **P 17 44 46.8 +1.2**
1.4nm,0.7s,mb4.1,baz=213,slow=6.3,SNR=14
SYO Syowa Base 83.35 192⇑*e*sP **P 17 44 45.2 -2.5**
MDJ Mudanjiang 84.37 325 P **P 17 44 55.7 +2.6**
MDJ AMB AMB
comp=Z,8.0nm,1.4s,mb4.7
MDJ AMB AMB
comp=Z,334nm,5.4s
MNTX Cornudas Mount 87.85 54 P **P 17 45 10.7 +0.1**
comp=Z,1.8nm,0.7s,mb4.4
TXAR Lajitas Array 87.97 57 P **P 17 45 11.8 +0.6**
TXAR Lajitas Array 87.97 57 P **P 17 45 11.8 +0.6**
comp=Z,1.0nm,0.9s,mb4.0,baz=212,slow=4.4,SNR=8.5
BW06 Boulder Array 90.79 43 *e*P **P 17 45 24.1 0.0**
comp=Z,2.7nm,1.2s,mb4.5
KMI Kunming 92.25 296 P **P 17 45 34.1 +2.7**
KMI AP pP 17 45 39.3 -3.2
KMI XP sP 17 45 42.2 -4.3
KMI AMB AMB
comp=Z,3.0nm,0.7s,mb4.7
KMI LR LR
comp=Z,59nm,17.9s,MS4.1
HHC Hu-ho-hao-te 92.94 314 *e*P **P 17 45 35.2 +1.0**
HHC AP pP 17 45 46.0 +0.7
HHC XP sP 17 45 49.7 +0.4
HHC PP PP 17 49 16.4 -1.1
HHC SKS 17 56 04.2
HHC S S 17 56 35.4 -2.2
HHC XS sS 17 56 53.1 -3.0
HHC SS SS 18 02 55.4 +2.7
HHC AMB AMB
comp=Z,13nm,0.9s,mb5.4
HHC LR LR
comp=N,176nm,15.5s,MS4.8
HHC LR LR
comp=E,194nm,14.3s,MS4.8
HHC LR LR
comp=Z,200nm,15.5s,MS4.7
CD2 Chengdu 93.95 302 *e*P **P 17 45 39.5 +0.4**
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,8.4s
YKA Yellowknife Ar 99.37 25 P **P 17 46 01.9 -0.9**
comp=Z,0.2nm,0.6s,mb3.8,baz=242,slow=4.6,SNR=5.4
MKAR Makanchi Array 114.75 312 PKP PKiKP 17 50 59.7 -1.6
comp=Z,0.2nm,0.2s,baz=94,slow=2.7,SNR=3.8
ARCES ARCESS Array B 132.87 350 PKP PKPdf 17 51 34.8 -0.5
comp=Z,3.0nm,0.8s,baz=0.0,slow=2.4,SNR=11
FINES FINESS Array B 139.76 343 PKP 17 51 38.2
FINES FINESS Array B 139.76 343 PKhKP 17 51 38.2
comp=Z,0.7nm,0.7s,baz=66,slow=4.8,SNR=5.7
NB2 NORSAR Subarra 142.87 354 PKP 17 51 49.5
comp=Z,1.2nm,0.6s,baz=9.2,slow=3.7
NOA NORSAR Array B 142.87 354 PKhKP 17 51 49.6
comp=Z,1.1nm,0.6s,baz=24,slow=3.9,SNR=5.3
AKASG Malin Array Be 146.95 330 PKPbc PKPbc 17 52 02.4 -0.9
comp=Z,9.1nm,0.6s,baz=42,slow=3.9,SNR=48
MALT Malatya 147.22 304 ⇓P PKPbc 17 52 05.6 +1.2
MALT Malatya 147.22 304⇓*i*P PKPbc 17 52 05.6 +1.2
BURAR Bucovina Array 151.00 329 P PKPbc 17 52 14.3 +0.7
BURAR Bucovina Array 151.00 329⇓*i*P PKPbc 17 52 14.3 +0.7
OJC Ojcow 151.16 338 *e*PX PKPbc 17 52 14.1 +0.2
KOLS Kolonicke sedl 151.29 334 *e*PKP PKPbc 17 52 14.6 +0.3
STHS Stebnicka Huta 151.30 335 *e*PKP PKPdf 17 52 10.8 +2.5
CLL Collm 152.03 347 *e*P PKPdf 17 52 08.0 -1.3
CLL *i* 17 52 15.4
CLL *i* 17 52 25.1
CLL Collm 152.03 347 *e*PKPdf PKPdf 17 52 08.0 -1.3
CLL ⇑*i*PKPbc PKPbc 17 52 15.4 -0.5
comp=Z,9.0nm,0.8s
CLL *i* PKPab PKPab 17 52 25.1 -0.2
comp=Z,7.0nm,0.8s
CLL *e*sPKPab 17 52 30.0
MLR Muntele Rosu 152.10 325 ⇑P PKPbc 17 52 15.4 -0.9
MLR Muntele Rosu 152.10 325⇑*i*P PKPbc 17 52 15.4 -0.9
BRG Berggiesshubel 152.24 346 *i* P PKPbc 17 52 16.3 -0.1
comp=Z,5.7nm,0.7s
BRG *e* PKPab 17 52 26.6 +0.3
comp=Z,5.2nm,0.8s
MORC Moravsky Berou 152.28 340 ⇓P PKPbc 17 52 16.8 +0.3
MORC Moravsky Berou 152.28 340⇓*i*P PKPbc 17 52 16.8 +0.3
VYHS Vyhne 152.95 337 *e*PKP PKPab 17 52 30.0 +0.7
MODS Modra-Piesok 153.59 339 *e*PKP PKPab 17 52 29.4 -2.6
KHC Kasperske Hory 153.95 345 *e*PKPbc PKPbc 17 52 20.0 -0.2
KHC *e*PKPab PKPab 17 52 34.0 +0.5
BZS Buzias 154.14 330 ⇓P PKPbc 17 52 20.5 -0.2
BZS Buzias 154.14 330⇓*i*P PKPbc 17 52 20.5 -0.2
GERES GERESS Array B 154.19 344 PKP PKPdf 17 52 11.9 -0.6
comp=Z,0.1nm,0.3s,baz=345,slow=2.2,SNR=3.0
GERES PKPbc PKPbc 17 52 20.5 -0.2
comp=Z,0.5nm,0.6s,baz=4.1,slow=1.9,SNR=5.4
GERES PKPab PKPab 17 52 35.1 +0.6
comp=Z,0.5nm,0.5s,baz=347,slow=1.3,SNR=5.0
GIVF Givet 154.20 358 *e*PKP2 PKPab 17 52 34.3 -0.2
BAIF Baives 154.26 359 *e*PKP2 PKPab 17 52 34.1 -0.6
FLN La Foliniere 155.37 6 *e*PKP2 PKPab 17 52 39.0 -0.5
comp=Z,7.3nm,0.6s
LDF La Druitiere 155.57 6 *e*PKP2 PKPab 17 52 39.7 -0.7
comp=Z,9.4nm,0.7s
CDF Champ du Feu 155.73 354 *e*PKP2 PKPab 17 52 41.0 -0.1
MEZF Maizieres J'vi 155.79 357 *e*PKP2 PKPab 17 52 42.1 +0.8
HAU Haudompre 156.21 355 *e*PKP2 PKPab 17 52 43.0 -0.1
comp=Z,12nm,0.7s
HINF Hinteralfeld 156.36 354 *e*PKP2 PKPab 17 52 43.3 -0.5
LOR Lormes 157.06 359 *e*PKP2 PKPab 17 52 46.5 -0.3
comp=Z,4.7nm,0.5s
SSF Saint Saulge 157.27 360 *e*PKP2 PKPab 17 52 47.7 0.0
comp=Z,11nm,0.8s
AVF Avril sur Loir 157.54 0 *e*PKP2 PKPab 17 52 48.6 -0.3
comp=Z,5.1nm,0.6s
MFF Saint Martin d 157.54 7 *e*PKP2 PKPab 17 52 48.7 -0.2
comp=Z,21nm,1.0s
CABF La Chapelle 157.62 355 *e*PKP2 PKPab 17 52 49.5 +0.3
SMF Signal de Mont 157.68 359 *e*PKP2 PKPab 17 52 49.4 -0.1
comp=Z,16nm,0.9s
BGF Bois d'Agland 157.76 1 *e*PKP2 PKPab 17 52 49.7 -0.2
comp=Z,9.7nm,0.6s
TCF Toulx Ste Croi 158.02 2 *e*PKP2 PKPab 17 52 50.7 -0.3
LPL La Plagne 158.65 354 *e*PKP2 PKPab 17 52 54.6 +0.9
comp=Z,7.4nm,0.8s
LPG La Plagne 158.66 354 *e*PKP2 PKPab 17 52 54.8 +1.0
comp=Z,5.1nm,0.8s
RJF Les Rejaudoux 158.96 4 *e*PKP2 PKPab 17 52 54.7 -0.4
LFF La Frestale 159.27 5 *e*PKP2 PKPab 17 52 56.4 0.0
comp=Z,10nm,0.7s
ORIF Oris-en-Rattie 159.32 355 *e*PKP2 PKPab 17 52 57.2 +0.6
comp=Z,16nm,1.0s
CAF Calviac 159.37 3 *e*PKP2 PKPab 17 52 56.9 0.0
SBF Sospel 160.19 352 *e*PKP2 PKPab 17 53 00.8 +0.3
LIC Lamto 160.28 154 *e*PKP2 PKPab 17 53 00.1 -1.6
MTLF Montolieu 160.96 3 *e*PKP2 PKPab 17 53 04.1 +0.3
ETSF Etsaut 161.13 9 *e*PKP2 PKPab 17 53 05.7 +1.1
comp=Z,6.0nm,0.8s
TORD Torodi Ar. Bea 168.80 171 PKP PKPdf 17 52 26.4 -2.3
TORD PKPab PKPab 17 53 38.7 -0.3
TORD Torodi Ar. Bea 168.80 171 PKP PKPdf 17 52 26.4 -2.3
comp=Z,0.7nm,0.9s,baz=94,slow=0.1,SNR=3.7
TORD PKPab PKPab 17 53 38.7 -0.3
comp=Z,1.9nm,0.8s,baz=188,slow=2.7,SNR=8.0

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*IDC **11** 17:49:27.7±4.2, 60.72S×24.59W, h0km, mb4.1/2, mb1 4.2/2, mb1mx3.8/12, mbtmp4.1/2, Error ellipse: s-maj=327.3km s-min=33.9km az=102.0*
*ISCJB **11** 17:49:28.5±1.7, 60.8S±0.2×23.4W±0.9, h10km, mb4.0/2, Error ellipse: s-maj=63.0km s-min=18.6km az=168.8*
ISC 11 17:49:29.8±1.7**, 60.8S**±0.2×**23.9W**±0.9**, h10km, n6, σ0s94**/5**, mb4.0**/2**, South Sandwich Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
VNA1 Neumayer--Stat 11.74 154 *e*P **Pn 17 52 18.1 +1.1**
VNA1 *e* 17 52 19.4
VNA1 *e* 17 52 21.5
VNA1 *e* 17 52 24.1
VNA3 Neumayer Olymp 11.92 157 *e*P **Pn 17 52 19.5 0.0**
VNA3 *e* 17 52 21.1
VNA3 *e* 17 52 22.9
VNA3 *e* 17 52 25.3
VNA2 Neumayer--Watz 12.14 154 *e*P **Pn 17 52 21.4 -1.1**
baz=316,slow=15
VNA2 *e* 17 52 22.5
VNA2 *e* 17 52 24.0
VNA2 *e* 17 52 27.0
VNDA Vanda 41.87 182 P **P 17 57 19.4 0.0**
1.8nm,1.0s,mb3.7,baz=208,slow=5.9,SNR=4.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**76.49**	**26**	P	**P**	**18 01 19.6**	**0.0**
	3.2nm,0.8s,mb4.3,baz=194,slow=6.9,SNR=15						
SONM	**Songino Array**	**149.07**	**92**	PKPbc	PKPbc	18 09 17.1	+0.2
	1.6nm,1.0s,baz=220,slow=2.3,SNR=9.2						

*IDC **11** 17:53:13.0±1.9, 3957N×14474E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/20, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=45.0km s-min=26.5km az=84.0*
*ISCJB **11** 17:53:15.6±0.8, 3965N±004×14461E±007, h33km, mb3.5/2, Error ellipse: s-maj=9.2km s-min=4.5km az=32.1*
*JMA **11** 17:53:18.1±0.3, 3971N×14445E, h50km, M3.6*
ISC 11 17:53:17.8±0.8**, 3966N**±004×**14456E**±008**, h35km, n14, σ1.07**/24**, mb3.5**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**2.12**	**269**	P	**Pn**	**17 53 51.0**	**+0.3**
MIYJ				S	**Sn**	**17 54 14.9**	**-0.9**
OFUJ	**Ofunato**	**2.31**	**256**	P	**Pn**	**17 53 53.5**	**+0.1**
OFUJ				S	**Sn**	**17 54 19.7**	**-0.9**
JANG	**Nango**	**2.44**	**288**	P	**Pn**	**17 53 55.1**	**-0.1**
JOM	**Ohasama**	**2.53**	**267**	P	**Pn**	**17 53 57.1**	**+0.7**
JOM				eS	**Sn**	**17 54 25.7**	**-0.3**
JMK	**Ichinoseki**	**2.69**	**256**	P	**Pn**	**17 53 58.8**	**+0.3**
JMK				eS	**Sn**	**17 54 29.2**	**-0.6**
JCH	**Churui**	**3.09**	**343**	P	**Pn**	**17 54 03.9**	**-0.1**
JCH				eS	**Sn**	**17 54 39.2**	**-0.5**
JKB	**Kayabe**	**3.48**	**311**	P	**Pn**	**17 54 11.1**	**+1.6**
NEM2	**Nemuro 2**	**3.81**	**13**	P	**Pn**	**17 54 12.4**	**-1.5**
NEM2				eS	**Sn**	**17 54 55.1**	**-2.4**
JTKR	**Abashiri--Toko**	**4.34**	**354**	P	**Pn**	**17 54 21.7**	**+0.5**
JTKR				eS	**Sn**	**17 55 09.9**	**-0.6**
ASAJ	**Asahikawa**	**4.69**	**342**	Pn	**Pn**	**17 54 27.6**	**+1.6**
	0.9nm,0.3s,baz=277,slow=23,SNR=12						
ASAJ				Sn	**Sn**	**17 55 21.7**	**+2.5**
	0.4nm,0.3s,baz=143,slow=20,SNR=3.5						
JRY	**Ryogami san**	**5.77**	**233**	P	**Pn**	**17 54 40.6**	**-0.3**
JRY				eS	**Sn**	**17 55 43.3**	**-2.5**
MJAR	**Matsushiro Arr**	**5.89**	**240**	Pn	**Pn**	**17 54 44.0**	**+1.3**
	0.7nm,0.3s,baz=56,slow=10,SNR=10.0						
MJAR				Sn	**Sn**	**17 55 50.0**	**+1.1**
	0.3nm,0.3s,baz=338,slow=16,SNR=3.3						
WRA	**Warramunga Arr**	**60.05**	**191**	P	**P**	**18 03 21.2**	**0.0**
	0.7nm,0.8s,mb3.8,baz=8.6,slow=6.9,SNR=12						
ASAR	**Alice Springs**	**63.78**	**191**	P	**P**	**18 03 46.5**	**+0.3**
	0.2nm,0.7s,mb3.3,baz=14,slow=6.8,SNR=4.1						

*NEIC **11** 17:53:25.2, 3448S×72.16W, h31km, ML3.7(GUC), After GUC.*
GUC 11 17:53:25.2±0.8**, 3448S**×**7216W, h31**km±2km**, MD4.0, ML3.7, 12C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNV	**Longovilo**	**0.81**	**50**	⇓iP	Pn	17 53 40.2	-0.2
LNV				i S	Sn	17 53 51.1	-0.2
NICH	**Los Niches**	**0.93**	**125**	⇓iP	Pn	17 53 42.2	+0.2
NICH				i S	Sn	17 53 54.5	+0.3
SFDO	**San Fernando**	**0.95**	**99**	⇑iP	Pn	17 53 42.7	+0.3
TALC	**Talca**	**1.02**	**155**	⇓iP	Pn	17 53 43.3	+0.1
TALC				i S	Sn	17 53 56.9	+0.4
TALC	**Talca**	**1.02**	**155**	⇓iP	Pn	17 53 43.3	+0.1
TALC				i S	Sn	17 53 56.9	+0.4
TALC				AML	AML	17 54 00.2	
	comp=N,8μm,0.5s						
LCCH	**Las Cruces**	**1.11**	**26**	i P	Pn	17 53 44.9	+0.4
LCCH				i S	Sn	17 53 59.8	+1.0
TACH	**Talagante**	**1.30**	**51**	⇑iP	Pn	17 53 47.5	+0.3
TACH				i S	Sn	17 54 04.1	+0.6
CACH	**El Canelo**	**1.34**	**75**	⇓iP	Pn	17 53 48.9	+1.2
CACH				i S	Sn	17 54 07.0	+2.6
CHCH	**Chadas Angostu**	**1.36**	**67**	⇑iP	Pn	17 53 48.9	+0.9
CHCH				i S	Sn	17 54 07.0	+2.1
CICH	**Cipreses**	**1.44**	**84**	⇑iP	Pn	17 53 50.3	+1.2
CICH				i S	Sn	17 54 09.3	+2.3
IHA	**Instituto Hidr**	**1.51**	**17**	⇑iP	Pn	17 53 50.6	+0.6
ANTU	**Antumapu**	**1.55**	**55**	⇑iP	Pn	17 53 52.1	+1.4
ANTU				i S	Sn	17 54 12.0	+2.3
ANTU	**Antumapu**	**1.55**	**55**	⇑iP	Pn	17 53 52.1	+1.4
ANTU				i S	Sn	17 54 12.0	+2.3
ANTU				AML	AML	17 54 19.0	
	comp=E,2μm,0.9s						
PCH	**Pirque**	**1.61**	**58**	⇑iP	Pn	17 53 52.8	+1.4
PCH				i S	Sn	17 54 13.4	+2.4
FSR	**Penalolen**	**1.68**	**54**	i P	Pn	17 53 54.1	+1.7
FSR				i S	Sn	17 54 15.9	+3.1
FSR	**Penalolen**	**1.68**	**54**	i P	Pn	17 53 54.1	+1.7
FSR				i S	Sn	17 54 15.9	+3.1
FSR				AML	AML	17 54 24.4	
	comp=E,836nm,0.6s						
DSCH	**Colegio Aleman**	**1.70**	**51**	i P	Pn	17 53 53.6	+0.9
DSCH				i S	Sn	17 54 15.6	+2.2
CLCH	**Cerro Calan**	**1.72**	**52**	⇑iP	Pn	17 53 55.4	+2.4
CLCH				i S	Sn	17 54 17.8	+3.9
CLCH	**Cerro Calan**	**1.72**	**52**	⇑iP	Pn	17 53 55.4	+2.4
CLCH				i S	Sn	17 54 17.8	+3.9
CLCH				AML	AML	17 54 26.8	
	comp=N,1μm,0.7s						
LMEL	**Las Melosas**	**1.74**	**69**	eP	Pn	17 53 54.8	+1.7
LMEL				i S	Sn	17 54 17.1	+2.8
LMEL	**Las Melosas**	**1.74**	**69**	eP	Pn	17 53 54.8	+1.7
LMEL				i S	Sn	17 54 17.1	+2.8
LMEL				AML	AML	17 54 24.7	
	comp=N,1μm,0.2s						
ROCH	**El Roble**	**1.78**	**33**	⇓iP	Pn	17 53 55.6	+1.8
PEL	**Peldehue**	**1.81**	**43**	eP	Pn	17 53 55.3	+1.2
PEL				i S	Sn	17 54 19.1	+3.2
PEL				AML	AML	17 54 27.1	
	comp=N,2μm,0.9s						
YECH	**El Yeso**	**1.90**	**65**	⇑iP	Pn	17 53 57.3	+1.9
YECH				i S	Sn	17 54 22.1	+3.8
YECH				AML	AML	17 54 29.7	
	comp=N,891nm,0.3s						
FCH	**Farellones**	**1.93**	**54**	⇑iP	Pn	17 53 57.2	+1.4
FCH				i S	Sn	17 54 22.7	+3.8
FCH				AML	AML	17 54 26.6	
	comp=N,658nm,0.2s						
CCHI	**Chillan**	**2.12**	**178**	P	Pn	17 54 02.0	+3.5
CCHI				i S	Sn	17 54 26.4	+2.6
CCHI	**Chillan**	**2.12**	**178**	eP	Pn	17 54 02.0	+3.5
CCHI				i S	Sn	17 54 26.4	+2.6
CCHI				AML	AML	17 54 43.6	
	comp=N,1μm,0.7s						

*CSEM **11** 18:05:02.9±0.3, 3580N×3979E, h2km, MD4.0, Error ellipse: s-maj=6.9km s-min=2.9km az=173.0*
*ISCJB **11** 18:05:03.3±1.8, 3577N±010×3983E±005, h5km±10km, Error ellipse: s-maj=16.6km s-min=6.4km az=176.0*
*ISK **11** 18:05:03.5, 3579N×3976E, h5km, MD4.0*
ISC 11 18:05:04.6±1.9**, 3576N**±010×**3982E**±005**, h8**km±11km**, n23, σ1.04**/26**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARD	**Mardin**	**1.73**	**26**	i P	**Pn**	**18 05 34.1**	**-0.9**
URFA	**Urfa**	**1.86**	**335**	ePN	**Pn**	**18 05 35.6**	**-1.2**
URFA				eSN	**Sn**	**18 05 59.9**	**-0.6**
GZT	**Gaziantep**	**2.42**	**312**	i P	**Pn**	**18 05 40.4**	**-4.0**
GAZ	**Gaziantep**	**2.53**	**305**	ePN	**Pn**	**18 05 45.6**	**-0.4**
SIRT	**Sirnak**	**2.73**	**50**	ePN	**Pn**	**18 05 49.6**	**+0.9**
BTMT	**Batman**	**2.77**	**28**	ePN	**Pn**	**18 05 47.5**	**-1.8**
MALT	**Malatya**	**2.78**	**337**	ePN	**Pn**	**18 05 48.6**	**-0.8**
MYA	**Malataya**	**2.79**	**337**	ePN	**Pn**	**18 05 49.5**	**-0.1**
ELZG	**Elazig**	**2.81**	**347**	i P	**Pg**	**18 05 59.1**	**+0.7**
KMRS	**Kahramanmaras**	**2.92**	**307**	ePN	**Pn**	**18 05 50.3**	**-1.1**
COBT	**Iskenderun**	**2.98**	**286**	i P	**Pn**	**18 05 48.8**	**-3.4**
COBT	**Iskenderun**	**2.98**	**286**	i P	**Pn**	**18 05 48.8**	**-3.4**
COBT				i S	**Sn**	**18 06 29.8**	**+1.6**
HTY	**Hatay**	**3.01**	**278**	ePN	**Pn**	**18 05 52.6**	**0.0**
PTK	**Pertek**	**3.15**	**354**	ePN	**Pn**	**18 05 54.6**	**+0.2**
BINT	**Bingol**	**3.16**	**10**	ePN	**Pn**	**18 05 55.9**	**+1.3**
ANDN	**Andirin**	**3.33**	**304**	i P	**Pb**	**18 06 03.1**	**-0.8**
CUKT	**Cukurca**	**3.39**	**63**	ePN	**Pn**	**18 05 58.5**	**+0.7**
HAKT	**HAKKARI**	**3.60**	**59**	i P	**Pn**	**18 05 59.7**	**-1.0**
HAKT	**HAKKARI**	**3.60**	**59**	i P	**Pn**	**18 05 59.7**	**-1.0**
HAKT				i S	**Sn**	**18 06 43.3**	**-0.2**
KOZT	**Kozan**	**3.64**	**299**	ePN	**Pn**	**18 06 01.7**	**+0.4**
EZC	**Erzincan**	**3.98**	**360**	ePN	**Pn**	**18 06 07.2**	**+1.3**
BNN	**Bunyan**	**4.42**	**315**	ePN	**Pn**	**18 06 13.3**	**+1.3**
AGRB	**Hanur-Agry**	**4.56**	**33**	ePN	**Pn**	**18 06 15.5**	**+1.6**

IDC 11 18:22:13.6±1.7**, 201N**×**12510E, h0km, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.6**/17**, mbtmp3.8**/4**, ML3.5**/1**, Error ellipse: s-maj=127.0km s-min=21.9km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.99**	**178**	eP	Pn	18 26 48.9	-0.6
	13nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.99**	**178**	P	Pn	18 26 48.5	-1.0
	0.1nm,0.3s,baz=14,slow=14,SNR=3.9						
WRA	**Warramunga Arr**	**23.63**	**158**	P	P	18 27 27.0	+0.3
	2.1nm,0.3s,baz=336,slow=10,SNR=46						
WB2	**Warramunga Arr**	**23.63**	**158**	eP	P	18 27 27.1	+0.3
ASAR	**Alice Springs**	**26.92**	**162**	P	P	18 27 56.0	-0.6
	0.4nm,0.5s,baz=334,slow=7.7,SNR=12						
MKAR	**Makanchi Array**	**58.05**	**327**	P	P	18 32 08.7	+0.1
	0.5nm,0.4s,baz=123,slow=7.7,SNR=16						

*JMA **11** 18:28:52.8±0.4, 3404N×14190E, h26km±4km, M3.3*
*IDC **11** 18:28:54.2±1.9, 3424N×14175E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/19, mbtmp3.3/5, ML3.1/1, Error ellipse: s-maj=39.2km s-min=22.2km az=66.0*
*ISCJB **11** 18:28:55.6±1.5, 3425N±006×14187E±009, h28km±9km, mb3.3/4, Error ellipse: s-maj=13.2km s-min=8.9km az=152.1*
ISC 11 18:28:56.0±1.6**, 3423N**±006×**14180E**±009**, h15**km±8km**, n14, σ0.62**/20**, mb3.3**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.80**	**302**	P	**Pg**	**18 29 10.5**	**-1.0**
BSO1				eS	**Sg**	**18 29 23.4**	**+1.3**
BSO3	**Boso 3**	**1.21**	**299**	P	**Pn**	**18 29 17.3**	**-1.0**
BSO3				eS	**Sb**	**18 29 33.9**	**-0.1**
JHJ	**Hachijo jima 2**	**2.01**	**237**	Pn	**Pn**	**18 29 29.4**	**+0.1**
	8.4nm,0.3s,baz=60,slow=21,SNR=2.3						
JHJ				Sn	**Sn**	**18 29 54.0**	**-0.4**
	32nm,0.3s,baz=25,slow=21,SNR=4.3						
JOD2	**Odawara 2**	**2.46**	**296**	P	**Pn**	**18 29 34.6**	**-0.9**
JHU	**Hanno**	**2.63**	**309**	P	**Pn**	**18 29 38.2**	**+0.4**
JHU				eS	**Sn**	**18 30 10.2**	**+0.8**
JAG	**Ashikaga**	**2.91**	**319**	P	**Pn**	**18 29 41.3**	**-0.5**
JRY	**Ryogami san**	**2.97**	**308**	P	**Pn**	**18 29 42.6**	**0.0**
JFT	**Otama**	**3.49**	**341**	P	**Pn**	**18 29 49.4**	**-0.3**
JNG	**Nsakai**	**3.73**	**307**	P	**Pn**	**18 29 53.4**	**+0.5**
JNG				eS	**Sn**	**18 30 36.7**	**+0.2**
MJAR	**Matsushiro Arr**	**3.73**	**309**	Pn	**Pn**	**18 29 53.2**	**+0.2**
	1.6nm,0.3s,baz=144,slow=12,SNR=17						
MJAR				Sn	**Sn**	**18 30 36.1**	**-0.6**
	0.7nm,0.3s,baz=340,slow=14,SNR=5.0						
SONM	**Songino Array**	**29.69**	**308**	P	**P**	**18 35 01.5**	**+0.5**
	0.5nm,0.8s,mb3.3,baz=105,slow=6.9,SNR=3.4						
MKAR	**Makanchi Array**	**45.92**	**304**	P	**P**	**18 37 17.6**	**-0.3**
	0.2nm,0.7s,mb3.2,baz=87,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**54.34**	**189**	P	**P**	**18 38 22.4**	**+0.5**
	0.3nm,0.6s,mb3.4,baz=5.0,slow=7.5,SNR=7.3						
ASAR	**Alice Springs**	**58.06**	**189**	P	**P**	**18 38 49.3**	**+0.8**
	0.2nm,0.7s,mb3.3,baz=9.3,slow=6.7,SNR=2.0						

*NEIC **11** 18:33:47.6, 2743S×6762W, h150km, MG4.4(GUC), After GUC.*
GUC 11 18:33:47.6±0.7**, 2743S**×**6762W, h150km, ML4.4, 6C-1D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**2.43**	**271**	⇑iP	Pn	18 34 28.5	+0.6
CPCH				i S	Sn	18 34 59.7	+0.8
CPCH	**Copiapo**	**2.43**	**271**	⇑iP	Pn	18 34 28.5	+0.6
CPCH				i S	Sn	18 34 59.7	+0.8
CPCH				AML	AML	18 35 02.0	
	comp=E,3μm,0.1s						
CDCH	**Caldera**	**2.88**	**276**	⇓iP	Pn	18 34 34.3	+0.9
CDCH				i S	Sn	18 35 08.8	0.0
VACH	**Vallenar**	**3.00**	**247**	⇑iP	Pn	18 34 35.4	+0.4
VACH				i S	Sn	18 35 12.1	+0.5
VACH	**Vallenar**	**3.00**	**247**	⇑iP	Pn	18 34 35.4	+0.4
VACH				i S	Sn	18 35 12.1	+0.5
VACH				AML	AML	18 35 13.4	
	comp=N,683nm,0.4s						
TLL	**Tololo Astrono**	**3.91**	**225**	⇑iP	Pn	18 34 46.1	-0.5
TLL				i S	Sn	18 35 32.2	-0.2
TLL	**Tololo Astrono**	**3.91**	**225**	⇑iP	Pn	18 34 46.1	-0.5
TLL				i S	Sn	18 35 32.2	-0.2
TLL				AML	AML	18 35 35.0	
	comp=N,119nm,0.3s						

IDC 11 18:40:30.9±1.2**, 2194N**×**14320E, h0km, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.6**/18**, mbtmp3.6**/5**, Error ellipse: s-maj=46.9km s-min=22.9km az=87.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.17**	**320**	P	P	18 48 00.6	+0.3
	0.6nm,0.7s,baz=131,slow=7.5,SNR=5.9						
WRA	**Warramunga Arr**	**42.51**	**192**	P	P	18 48 28.3	+0.1
	1.1nm,1.0s,baz=15,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**46.22**	**192**	P	P	18 48 57.8	-0.1
	0.5nm,0.6s,baz=16,slow=9.7,SNR=12						
MKAR	**Makanchi Array**	**54.55**	**313**	P	P	18 50 00.3	-0.4
	0.3nm,0.6s,baz=101,slow=6.3,SNR=4.5						
YKA	**Yellowknife Ar**	**76.24**	**28**	P	P	18 52 21.1	+0.1
	0.4nm,0.5s,baz=292,slow=5.8,SNR=9.0						

*CSEM **11** 19:10:18.6±0.1, 3897N×4043E, h20km, MD3.2, Error ellipse: s-maj=4.4km s-min=2.8km az=168.0*
*ISCJB **11** 19:10:19.5±0.5, 3901N±003×4049E±004, h15km, Error ellipse: s-maj=5.0km s-min=4.2km az=169.9*
*ISK **11** 19:10:19.0, 3896N×4042E, h23km, MD3.2*
*DDA **11** 19:10:21.6, 3906N×4046E, h15km, Md2.9*
ISC 11 19:10:19.9±0.6**, 3907N**±003×**4048E**±004**, h6**km±6km**, n16, σ1.31**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.20**	**178**	i PG	**Pg**	**19 10 24.1**	**+0.3**
BINT				i SG	**Sg**	**19 10 27.0**	**+0.6**
EZC	**Erzincan**	**0.85**	**323**	PN	**Pn**	**19 10 40.3**	**+1.9**
PTK	**Pertek**	**0.87**	**258**	PG	**Pg**	**19 10 34.9**	**-1.7**
PTK				SG	**Sg**	**19 10 46.9**	**-0.9**
EZM	**Erzurum**	**1.08**	**39**	PN	**Pn**	**19 10 40.4**	**-1.2**
ERZM	**Erzurum**	**1.08**	**39**	i P	**Pg**	**19 10 40.3**	**-0.3**
ERZM				i S	**Sg**	**19 10 54.4**	**-0.2**
BTMT	**Batman**	**1.18**	**138**	PN	**Pn**	**19 10 39.3**	**-3.7**
ELZG	**Elazig**	**1.30**	**244**	i P	**Pn**	**19 10 43.6**	**-1.1**
ELZG				i S	**Sg**	**19 11 03.2**	**+1.5**
KELT	**Kelkit**	**1.43**	**319**	i P	**Pn**	**19 10 46.7**	**+0.2**
KELT				i S	**Sg**	**19 11 08.6**	**+2.6**
GUMT	**Gumushane**	**1.59**	**331**	ePN	**Pn**	**19 10 48.4**	**-0.2**
MARD	**Mardin**	**1.77**	**172**	eP	**Pn**	**19 10 51.6**	**+0.5**
MARD				i S	**Sn**	**19 11 15.4**	**+1.5**
MALT	**Malatya**	**1.77**	**245**	ePN	**Pn**	**19 10 48.4**	**-2.8**
TUTA	**Tutak**	**1.84**	**79**	eP	**Pn**	**19 10 53.5**	**+1.4**
TUTA				i S	**Sg**	**19 11 20.1**	**+0.9**
TUTA	**Tutak**	**1.84**	**79**	eP	**Pn**	**19 10 53.5**	**+1.4**
TUTA				i S	**Sg**	**19 11 20.0**	**+0.9**
AGRB	**Hanur-Agry**	**2.01**	**75**	ePN	**Pn**	**19 10 53.7**	**-0.7**
SIRT	**Sirnak**	**2.20**	**135**	ePN	**Pn**	**19 10 54.0**	**-3.0**
HAKT	**HAKKARI**	**2.96**	**120**	i P	**Pn**	**19 11 11.3**	**+3.9**
HAKT				i S	**Pg**	**19 11 15.4**	**-1.1**

*ISCJB **11** 19:40:54.6±0.3, 32.13S±006×57.11E±008, h10km, mb4.4/31, MS3.9/20, Error ellipse: s-maj=9.9km s-min=9.1km az=6.9*
*IDC **11** 19:40:54.8±0.5, 3207S×57.13E, h0km, mb4.2/18, mb1 4.3/19, mb1mx4.2/25, mbtmp4.3/19, ML5.3/1, MS3.9/20, Ms1 3.9/20, ms1mx3.8/41, Error ellipse: s-maj=20.0km s-min=13.7km az=30.0*
*MOS **11** 19:40:54.5±0.9, 32.12S×57.11E, h10km, mb4.6/15, Error ellipse: s-maj=19.7km s-min=14.4km az=90.0*
*BJI **11** 19:40:55.3, 32.10S×57.10E, h10km, mB5.1, mb4.7*
*NEIC **11** 19:40:56.4±0.3, 3209S×5709E, h10km, mb5.0/11, Error ellipse: s-maj=9.0km s-min=7.5km az=20.0*
ISC 11 19:40:56.6±0.3**, 3211S**±006×**5709E**±008**, h10km, (h12**km±2.0km**:pP-P), n75, σ0.81**/64**, mb4.4**/31**, MS3.9**/20**, 1D, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.17**	**324**	Pn	**Pn**	**19 44 44.0**	**+0.1**
OPO				Sn	**Sn**	**19 47 29.7**	**-14**
OPO	**Ambohidratompo**	**16.17**	**324**	Pn	**Pn**	**19 44 44.0**	**+0.1**
	12nm,0.3s,baz=137,slow=11,SNR=110						
OPO				Sn	**Sn**	**19 47 29.7**	**-14**
	5.7nm,0.3s,baz=22,slow=22,SNR=5.9						
OPO				T		19 59 14.1	
	2.6nm,0.3s,baz=128,slow=13,SNR=3.8						
BOSA	**Boshof**	**27.64**	**269**	LR	LR	19 56 03.8	
	comp=Z,154nm,18.7s,MS3.6,baz=109,slow=33						
MATP	**Matopo**	**28.07**	**287**	P	**P**	**19 46 46.9**	**-1.4**
	1.0nm,0.5s,mb3.7,baz=115,slow=21,SNR=5.5						
MATP				LR	LR	19 56 07.0	
	comp=Z,185nm,21.5s,MS3.6,baz=123,slow=32						
LBTB	**Lobatse**	**28.48**	**276**	P	**P**	**19 46 50.8**	**-1.2**
LBTB				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
LBTB				MLR	MLR		
	comp=Z,147nm,19.4s,MS3.6						
LBTB	**Lobatse**	**28.48**	**276**	P	**P**	**19 46 50.8**	**-1.2**
	comp=Z,1.0nm,0.5s,mb3.7,baz=101,slow=14,SNR=3.6						
LBTB				LR	LR	19 55 43.2	
	comp=Z,147nm,19.4s,MS3.6,baz=127,slow=31						
SUR	**Sutherland**	**30.59**	**260**	LR	LR	19 56 23.0	
	comp=Z,178nm,20.1s,MS3.7,baz=343,slow=30						
LSZ	**Lusaka**	**31.18**	**296**	P	**P**	**19 47 15.0**	**-1.0**
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
LSZ	**Lusaka**	**31.18**	**296**	P	**P**	**19 47 15.0**	**-1.0**
	comp=Z,1.2nm,0.5s,mb4.0,baz=152,slow=10,SNR=4.0						
MAW	**Mawson**	**35.69**	**176**	LR	LR	19 58 15.5	
	comp=Z,120nm,21.6s,MS3.6,baz=79,slow=29						
KMBO	**Kilima Mbogo**	**36.06**	**325**	P	**P**	**19 47 59.5**	**+1.1**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO				MLR	MLR		
	comp=Z,135nm,18.5s						
KMBO	**Kilima Mbogo**	**36.06**	**325**	P	**P**	**19 47 59.5**	**+1.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=48,slow=23,SNR=2.2						
KMBO				LR	LR	20 03 28.0	
	comp=Z,135nm,18.5s,MS3.8,baz=92,slow=38						
TSUM	**Tsumeb**	**37.65**	**280**	eP	**P**	**19 48 11.8**	**-0.2**
	comp=Z,4.5nm,0.8s,mb4.2						
TSUM	**Tsumeb**	**37.65**	**280**	P	**P**	**19 48 11.9**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.1,baz=119,slow=8.3,SNR=6.1						
SYO	**Syowa Base**	**38.27**	**190**	⇓eP	**P**	**19 48 15.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**50.10**	**108**	LR	LR	20 06 32.5	
	comp=Z,113nm,19.6s,MS3.9,baz=108,slow=31						
SNAA	**Sanae**	**50.48**	**201**	P	**P**	**19 49 54.6**	**+0.4**
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SNAA	**Sanae**	**50.48**	**201**	P	**P**	**19 49 54.6**	**+0.4**
	comp=Z,4.1nm,0.8s,mb4.5,baz=66,slow=3.7,SNR=8.2						
VNA2	**Neumayer--Watz**	**51.70**	**202**	e	**P**	**19 50 03.8**	**+0.4**
	baz=68,slow=6.2						
VNA2				e	pP	19 50 07.1	+0.6
VNA2				e		19 50 09.2	
VNA2				e		19 50 14.7	
VNA2				e		19 50 21.7	
VNA2				e		19 50 28.6	
VNA2				e		19 50 36.2	
VNA3	**Neumayer Olymp**	**52.49**	**202**	e	**P**	**19 50 09.6**	**+0.4**
VNA3				e	pP	19 50 11.9	-0.5
VNA3				e		19 50 14.9	
VNA3				e		19 50 19.8	
VNA3				e		19 50 27.3	
VNA3				e		19 50 33.9	
VNA3				e		19 50 39.8	
PSI	**Prapat**	**52.71**	**57**	P	**P**	**19 50 10.5**	**-1.1**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.5						
PSI				MLR	MLR		
	comp=Z,134nm,19.9s,MS4.0						
PSI	**Prapat**	**52.71**	**57**	P	**P**	**19 50 10.5**	**-1.1**
	comp=Z,1.6nm,0.3s,mb4.4,baz=304,slow=11,SNR=3.4						
PSI				LR	LR	20 06 09.7	
	comp=Z,134nm,19.9s,MS4.0,baz=224,slow=29						
HYB	**Hyderabad**	**53.37**	**26**	eP	**P**	**19 50 17.0**	**+0.7**
HYB	**Hyderabad**	**53.37**	**26**	i P	**P**	**19 50 17.0**	**+0.7**
QSPA	**South Pole Qui**	**58.06**	**180**	eP	**P**	**19 50 49.8**	**+0.5**
	comp=Z,14nm,0.6s,mb5.2						
QSPA				LR	LR	20 14 41.2	
QSPA	**South Pole Qui**	**58.06**	**180**	P	**P**	**19 50 49.9**	**+0.6**
	comp=Z,14nm,0.7s,mb5.1,baz=271,slow=2.9,SNR=82						
QSPA				LR	LR	20 14 41.2	
	comp=Z,132nm,19.7s,MS4.0,baz=133,slow=35						
VNDA	**Vanda**	**62.01**	**166**	P	**P**	**19 51 16.8**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNDA				MLR	MLR		
	comp=Z,136nm,21.1s						
VNDA	**Vanda**	**62.01**	**166**	P	**P**	**19 51 16.8**	**+0.3**
	comp=Z,2.2nm,1.0s,mb4.3,baz=254,slow=9.8,SNR=3.8						
VNDA				LR	LR	20 15 37.4	
	comp=Z,136nm,21.1s,MS4.1,baz=256,slow=34						
EIL	**Elat**	**64.94**	**339**	LR	LR	20 17 56.7	
	comp=Z,67nm,18.1s,MS3.9,baz=285,slow=34						
GKN	**Gorkha**	**65.28**	**27**	eP	**P**	**19 51 37.8**	**-0.7**
	comp=Z,9.1nm,0.6s,mb5.0						
KKN	**Kakani**	**65.33**	**27**	eP	**P**	**19 51 38.3**	**-0.6**
	comp=Z,13nm,0.8s,mb5.0						
KKN	**Kakani**	**65.33**	**27**	eP	**P**	**19 51 38.3**	**-0.6**
KKN				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ODAN	**Odare**	**65.37**	**30**	eP	**P**	**19 51 39.0**	**-0.1**
	comp=Z,25nm,0.9s,mb5.3						
JIRN	**Jiri**	**65.58**	**28**	eP	**P**	**19 51 40.4**	**-0.1**
TAPN	**Taplejung**	**65.93**	**30**	eP	**P**	**19 51 42.7**	**-0.1**
	comp=Z,39nm,1.4s,mb5.2						
SHL	**Shillong**	**66.27**	**34**	eP	**P**	**19 51 46.0**	**+1.0**
ASF	**Jabal al Asfar**	**66.73**	**341**	LR	LR	20 19 52.9	
	comp=Z,53nm,21.0s,MS3.7,baz=250,slow=35						
ASAR	**Alice Springs**	**67.13**	**104**	P	**P**	**19 51 50.4**	**-0.3**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASAR	**Alice Springs**	**67.13**	**104**	P	**P**	**19 51 50.4**	**-0.4**
	comp=Z,2.6nm,0.7s,mb4.4,baz=240,slow=5.8,SNR=50						
MMAI	**Mount Meron Ar**	**67.94**	**340**	LR	LR	20 21 21.0	
	comp=Z,49nm,19.5s,MS3.7,baz=90,slow=36						
WRA	**Warramunga Arr**	**69.17**	**101**	P	**P**	**19 52 03.4**	**-0.2**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRA				MLR	MLR		
	comp=Z,91nm,18.6s						
WRA	**Warramunga Arr**	**69.17**	**101**	P	**P**	**19 52 03.4**	**-0.2**
	comp=Z,3.8nm,0.7s,mb4.4,baz=240,slow=5.3,SNR=35						
WRA				LR	LR	20 18 12.0	
	comp=Z,90nm,18.6s,MS4.0,baz=145,slow=32						
WB2	**Warramunga Arr**	**69.18**	**101**	eP	**P**	**19 52 03.3**	**-0.4**
LSA	**Lhasa**	**69.46**	**31**	P	**P**	**19 52 05.0**	**0.0**
LSA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
LSA	**Lhasa**	**69.46**	**31**	eP	**P**	**19 52 06.0**	**+1.0**
	comp=Z,3.6nm,0.8s,mb4.3						
LSA	**Lhasa**	**69.46**	**31**	eP	**P**	**19 52 06.0**	**+1.0**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TORD	**Torodi Ar. Bea**	**69.52**	**301**	P	**P**	**19 52 06.1**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.1,baz=130,slow=4.4,SNR=6.3						
TORD				LR	LR	20 21 04.7	
	comp=Z,208nm,20.3s,MS4.4,baz=340,slow=35						
STKA	**Stephens Creek**	**69.69**	**115**	eP	**P**	**19 52 06.9**	**+0.3**
	comp=Z,3.2nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**69.69**	**115**	P	**P**	**19 52 06.2**	**-0.4**
	comp=Z,3.5nm,0.6s,mb4.5,baz=291,slow=15,SNR=13						
STKA				LR	LR	20 15 45.9	
	comp=Z,147nm,20.1s,MS4.2,baz=206,slow=30						
DBIC	**Dimbokro**	**70.40**	**291**	P	**P**	**19 52 12.7**	**+1.5**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DBIC				MLR	MLR		
	comp=Z,121nm,20.5s						
DBIC	**Dimbokro**	**70.40**	**291**	P	**P**	**19 52 12.7**	**+1.5**
	comp=Z,3.3nm,0.8s,mb4.3,baz=80,slow=11,SNR=3.2						
DBIC				LR	LR	20 19 27.8	
	comp=Z,121nm,20.5s,MS4.1,baz=122,slow=33						
ZEI	**Tsey**	**75.49**	**350**	eP	**P**	**19 52 41.6**	**+0.9**
AAK	**Ala-Archa**	**76.08**	**13**	eP	**P**	**19 52 42.7**	**-1.3**

AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
KIV	Kislovodsk	76.84	349	eP	P	19 52 51.6	+3.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
LZH	Lanzhou	80.75	37	eP	P	19 53 10.5	+0.5
LZH				AP	pP	19 53 15.3	+2.0
LZH				XP	sP	19 53 17.1	+2.6
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,83nm,4.1s						
KEST	Kesra	80.98	322	LR	LR	20 31 46.6	
	comp=Z,43nm,21.6s,MS3.8,baz=305,slow=38						
GTA	Gaotai	81.46	32	P	P	19 53 14.7	+1.0
GTA				AMB	AMB		
	comp=Z,8.0nm,0.9s,mb4.7						
MKAR	Makanchi Array	81.77	17	P	P	19 53 14.4	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	81.77	17	P	P	19 53 14.3	-0.8
	comp=Z,1.2nm,0.6s,mb4.0,baz=217,slow=5.4,SNR=16						
XAN	Xi'an	81.91	41	P	P	19 53 20.3	+4.1
XAN				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.3						
RPZ	Rata Peaks	83.43	138	LR	LR	20 22 35.7	
	comp=Z,131nm,18.4s,MS4.3,baz=252,slow=30						
KURK	Kurchatov	84.64	14	eP	P	19 53 30.0	+0.1
	comp=Z,8.1nm,0.9s,mb4.8						
KURK	Kurchatov	84.64	14	eP	P	19 53 30.0	+0.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
BRVK	Borovoye	85.59	8	eP	P	19 53 34.6	+0.1
	comp=Z,12nm,1.1s,mb5.0						
BRVK	Borovoye	85.59	8	eP	P	19 53 34.7	+0.1
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
AKASG	Malin Array Be	86.05	343	P	P	19 53 36.0	-1.0
	comp=Z,0.4nm,0.4s,mb4.0,baz=163,slow=5.0,SNR=3.5						
ARU	Arti	88.20	1	eP	P	19 53 47.0	-0.2
	comp=Z,3.3nm,0.6s,mb4.7						
ARU	Arti	88.20	1	eP	P	19 53 47.0	-0.2
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
GERES	GERESS Array B	89.41	333	P	P	19 53 54.5	+1.4
	comp=Z,0.4nm,0.6s,mb4.0,baz=134,slow=3.9,SNR=5.1						
SONM	Songino Array	91.04	31	P	P	19 53 59.9	-0.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	91.04	31	P	P	19 53 59.9	-0.8
	comp=Z,0.5nm,0.8s,mb3.9,baz=198,slow=3.9,SNR=3.8						
KSRS	Korea Array	95.66	49	LR	LR	20 38 07.5	
	comp=Z,29nm,18.4s,MS3.8,baz=350,slow=36						
YKA	Yellowknife Ar	149.14	352	PKPbc	PKPbc	20 00 43.6	-0.7
	comp=Z,2.1nm,0.7s,baz=2.3,slow=3.1,SNR=18						
ULM	Lac du Bonnet	152.98	320	PKPbc	PKPbc	20 00 54.7	+1.0
ULM	Lac du Bonnet	152.98	320	PKPbc	PKPbc	20 00 54.7	+1.0
	comp=Z,1.3nm,0.6s,baz=16,slow=7.4,SNR=4.6						

IDC 11 19:50:41.9±8.4, 2205N×14370E, h268km±84km, mb2.9/8, mb1 3.1/8, mb1mx3.1/18, mbtmp2.9/8, Error ellipse: s-maj=37.7km s-min=15.7km az=83.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.53	322	P	P	19 54 59.7	-0.6
	0.8nm,0.6s,baz=146,slow=8.5,SNR=5.3						
SONM	Songino Array	39.38	320	P	P	19 57 47.2	+1.4
	0.2nm,0.4s,baz=122,slow=8.9,SNR=2.8						
WRA	Warramunga Arr	42.73	193	P	P	19 58 12.9	-0.3
	0.3nm,0.3s,baz=13,slow=9.3,SNR=8.0						
ASAR	Alice Springs	46.43	192	P	P	19 58 42.5	+0.2
	0.1nm,0.3s,baz=13,slow=6.9,SNR=4.6						
MKAR	Makanchi Array	54.82	312	P	P	19 59 44.4	-0.1
	0.2nm,0.2s,baz=93,slow=8.9,SNR=3.5						
YKA	Yellowknife Ar	75.92	28	P	P	20 01 58.6	-0.3
	0.4nm,0.4s,baz=297,slow=5.9,SNR=2.5						
NVAR	Mina Array Bea	82.55	52	P	P	20 02 36.2	+1.1
	0.7nm,0.6s,baz=299,slow=4.7,SNR=5.7						
FINES	FINESS Array B	83.07	335	P	P	20 02 36.2	-1.2
	0.5nm,0.7s,baz=95,slow=4.0,SNR=5.2						

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*NEIC **11** 19:50:43.4±3.2, 797S×14766E, h72km±19km, mb4.1/1, Error ellipse: s-maj=34.9km s-min=22.6km az=191.0*
*IDC **11** 19:50:44.7±4.3, 809S×14779E, h81km±27km, mb3.4/5, mb1 3.5/6, mb1mx3.3/13, mbtmp3.4/6, Error ellipse: s-maj=39.8km s-min=36.5km az=54.0*
ISC 11 19:50:43.3±5.1, 80S±03×1477E±02, h68km±30km, n11, σ0^{s}41/12, mb3.7/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.51	200	ePn	Pn	19 51 08.8	+0.4
PMG				Sn	Sn	19 51 26.6	-0.6
PMG	Port Moresby	1.51	200	P	Pn	19 51 08.0	-0.4
	103nm,0.3s,baz=37,slow=6.1,SNR=228						
PMG				S	Sn	19 51 28.1	+0.9
	183nm,0.3s,baz=149,slow=22,SNR=27						
WB2	Warramunga Arr	17.55	226	eP	Pn	19 54 43.0	-0.4
WRA	Warramunga Arr	17.56	226	P	Pn	19 54 43.2	-0.3
	0.3nm,0.3s,baz=52,slow=11,SNR=20						
ASAR	Alice Springs	20.43	219	P	P	19 55 15.2	0.0
	0.4nm,0.5s,baz=56,slow=9.7,SNR=11						
FITZ	Fitzroy Crossi	23.68	243	eP	P	19 55 49.4	+0.5
	10nm,1.4s,mb4.0						
FITZ	Fitzroy Crossi	23.68	243	P	P	19 55 49.7	+0.8
	1.4nm,0.7s,mb3.4,baz=57,slow=8.2,SNR=7.8						
STKA	Stephens Creek	24.44	193	P	P	19 55 55.9	+0.1
	1.3nm,0.4s,mb3.6,baz=355,slow=12,SNR=5.6						
VNDA	Vanda	69.91	177	P	P	20 01 46.5	-0.1
	1.1nm,0.7s,mb3.8,baz=334,slow=6.9,SNR=4.9						
QSPA	South Pole Qui	82.00	180	P	P	20 02 55.3	-0.1
	0.8nm,0.5s,mb3.8,baz=332,slow=5.4,SNR=7.3						
TORD	Torodi Ar. Bea	146.18	282	PKPbc	PKPbc	20 10 16.8	-0.1
	0.5nm,0.6s,baz=87,slow=3.7,SNR=7.7						

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*INMG **11** 19:51:17.0±1.2, 4138N×850W, h27km±2km, ML2.2, Error ellipse: s-maj=3.5km s-min=1.5km az=109.0*
*CSEM **11** 19:51:17.8±0.2, 4135N×841W, h30km, ML2.7/7, Error ellipse: s-maj=5.1km s-min=2.9km az=91.0*
MDD 11 19:51:16.4±0.5, 4135N×856W, h20km±2km, mbLg2.5/12, 1C-1D, Error ellipse: s-maj=4.4km s-min=2.7km az=85.0, PRXIMO, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTO	Porto	0.21	190	i Pg	Pb	19 51 23.3	+1.6
PTO				eSg	Sb	19 51 27.6	+2.3
PTO				A		19 51 27.8	
	471nm,0.1s						
PTO	Porto	0.21	190	eSg	Sb	19 51 27.6	+2.3
	471nm,0.1s						
PCAB	Cabril	0.54	47	ePg	Pb	19 51 26.8	-0.4
PCAB				eSg	Sb	19 51 33.9	-0.6
PCAB				A		19 51 35.0	
	284nm,0.1s						
PCAB	Cabril	0.54	47	ePg	Pb	19 51 26.8	-0.4
PCAB				eSg	Sb	19 51 33.9	-0.6
	284nm,0.1s						
PVRL	Vila Real	0.64	96	ePg	Pb	19 51 28.5	-0.3
PVRL				eSg	Sb	19 51 37.2	-0.1
PVRL				A		19 51 38.2	
	318nm,0.1s						
PVRL	Vila Real	0.64	96	ePg	Pb	19 51 28.5	-0.3
PVRL				eSg	Sb	19 51 37.2	-0.1
	318nm,0.1s						
ELOB	Lobios	0.64	35	⇑Pg	Pb	19 51 28.5	-0.4
	43nm,0.1s,SNR=18						
ELOB				Lg		19 51 36.9	
	63nm,0.1s,SNR=7.9						
ELOB	Lobios	0.64	35	Pg	Pb	19 51 28.5	-0.4
	43nm,0.1s,SNR=18						
PVIS	Viseu	0.80	141	i P	Pb	19 51 31.3	-0.4
PVIS				eS	Sb	19 51 42.7	+0.6
PVIS				A		19 51 43.7	
	227nm,0.1s						
PVIS	Viseu	0.80	141	⇓P	Pb	19 51 31.3	-0.4
PVIS				S	Sb	19 51 42.7	+0.6
	114nm,0.1s						
EZAM	Zamans	0.81	353	Pg	Pb	19 51 31.1	-0.7
	2.8nm,0.1s,SNR=18						
EZAM				Lg		19 51 41.7	
	33nm,0.1s,SNR=7.9						
MVO	Moncorvo	1.17	98	eP	Pn	19 51 35.7	-1.9
MVO				eS	Sb	19 51 49.4	-3.1
MVO				A		19 51 52.9	
	55nm,0.3s						
MVO	Moncorvo	1.17	98	eP	Pn	19 51 35.7	-1.9
MVO				eS	Sb	19 51 49.4	-3.1
	55nm,0.3s						
MTE	Manteigas	1.22	141	eP	Pn	19 51 37.6	-0.7
MTE				eS	Sb	19 51 52.0	-2.0
MTE				A		19 52 01.9	
	22nm,0.3s						
MTE	Manteigas	1.22	141	eP	Pn	19 51 37.6	-0.7
MTE				eS	Sb	19 51 52.0	-2.0
	22nm,0.3s						
PBRG	Braganca	1.44	71	eP	Pn	19 51 41.1	-0.2
PBRG				eS	Sn	19 51 55.6	-3.9
PBRG				A		19 52 01.9	
	13nm,0.1s						
PBRG	Braganca	1.44	71	eP	Pn	19 51 41.1	-0.2
PBRG				eS	Sn	19 51 55.6	-3.9
	13nm,0.1s						
ERUA	La Rua	1.48	45	Sn	Sn	19 51 59.3	-1.5
	SNR=7.9						
ERUA	La Rua	1.48	45	Sn	Sn	19 52 02.2	+1.4
	SNR=7.9						
ECAL	Calabor	1.49	66	Pn	Pn	19 51 39.9	-2.1
	SNR=7.9						
ECAL				Pg	Pn	19 51 44.0	+2.0
	1.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	19 51 57.4	-3.4
	9.0nm,0.2s,SNR=11						
ECAL				Lg		19 52 02.5	
	3.6nm,0.1s,SNR=10						
ECAL	Calabor	1.49	66	Pn	Pn	19 51 39.9	-2.1
	SNR=7.9						
ECAL	Calabor	1.49	66	Pg	Pn	19 51 44.0	+2.0
	1.1nm,0.1s,SNR=7.9						
ECAL				Sn	Sn	19 51 57.4	-3.4
	9.0nm,0.2s,SNR=11						
STS	Santiago	1.54	0	Sn	Sn	19 52 00.2	-1.9
	12nm,0.2s,SNR=8.7						
STS	Santiago	1.54	0	Sn	Sn	19 52 03.1	+1.0
	12nm,0.2s,SNR=8.7						
EMAZ	Mazaricos	1.63	349	Pn	Pn	19 51 43.5	-0.4
	1.6nm,0.3s,SNR=19						
EMAZ				Pg	Pn	19 51 45.9	+2.0
	SNR=7.9						
EMAZ				Sn	Sn	19 52 03.0	-1.4
	6.6nm,0.2s,SNR=10						
EMAZ				Lg		19 52 06.9	
	SNR=7.9						
EMAZ	Mazaricos	1.63	349	Pn	Pn	19 51 43.5	-0.5
	1.6nm,0.3s,SNR=19						
EMAZ	Mazaricos	1.63	349	Pg	Pn	19 51 45.9	+1.9
	SNR=7.9						
EMAZ				Sn	Sn	19 52 05.2	+0.8
	6.6nm,0.2s,SNR=10						
EPON	Pontenova	2.24	27	Pn	Pn	19 51 50.5	-1.8
	1.6nm,0.3s,SNR=12						
EPON				Pg	Pn	19 51 55.5	+3.2
	1.3nm,0.2s,SNR=7.9						
EPON				Sn	Sn	19 52 16.0	-3.3
	SNR=7.9						
EPON				Lg		19 52 27.0	
	0.5nm,0.1s,SNR=7.9						
EPON	Pontenova	2.24	27	Pn	Pn	19 51 50.5	-1.8
	1.6nm,0.3s,SNR=12						
EPON	Pontenova	2.24	27	Pg	Pn	19 51 55.5	+3.2
	1.3nm,0.2s,SNR=7.9						
PMAFR	Mafra	2.45	193	ePn	Pn	19 51 54.8	-0.5
PMAFR				eSn	Sn	19 52 21.9	-2.7
PESTR	Estremoz	2.58	163	eSn	Sn	19 52 24.8	-3.1
PESTR				A		19 52 39.1	
	3.8nm,0.1s						
PESTR	Estremoz	2.58	163	eSn	Sn	19 52 24.8	-3.1
	3.8nm,0.1s						
MOE	Montemor	2.83	177	eSn	Sn	19 52 30.5	-3.3
EVO	Evora	2.84	171	ePn	Pn	19 52 00.1	-0.5
EVO				eSn	Sn	19 52 31.0	-3.2
EVO				A		19 52 55.7	
	4.1nm,0.3s						
EVO	Evora	2.84	171	ePn	Pn	19 52 00.1	-0.5
EVO				eSn	Sn	19 52 31.0	-3.2
	4.1nm,0.3s						
EBAD	Badajoz	2.85	155	Pn	Pn	19 52 00.1	-0.6
	3.8nm,1.1s,SNR=8.0						
EBAD				Sn	Sn	19 52 31.2	-3.1
	1.2nm,0.3s,SNR=9.0						
EBAD				Lg		19 52 43.6	
	3.1nm,0.1s,SNR=7.9						
EBAD	Badajoz	2.85	155	Pn	Pn	19 52 00.1	-0.6
	3.8nm,1.1s,SNR=8.0						
EBAD				Sn	Sn	19 52 31.2	-3.1
	1.2nm,0.3s,SNR=9.0						
EARI	Arriondas	3.16	51	Pn	Pn	19 52 04.6	-0.4
	0.8nm,0.2s,SNR=9.1						
EARI				Sn	Sn	19 52 39.7	-2.3
	0.5nm,0.2s,SNR=7.9						
EARI				Lg		19 52 55.5	
	0.9nm,0.2s,SNR=4.0						
EARI	Arriondas	3.16	51	Pn	Pn	19 52 04.6	-0.3
	0.8nm,0.2s,SNR=9.1						
EARI				Sn	Sn	19 52 39.7	-2.3
	0.5nm,0.2s,SNR=7.9						
PBEJ	Beja	3.36	171	eSn	Sn	19 52 42.7	-4.3
PBAR	Barrancos	3.38	159	eSn	Sn	19 52 43.2	-4.2
PBAR				A		19 53 10.1	
	2.9nm,0.3s						
PBAR	Barrancos	3.38	159	Sn	Sn	19 52 43.2	-4.2
	1.4nm,0.3s						
GUD	Guadarrama	3.41	100	Lg		19 53 02.1	
	2.3nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	3.86	157	Pn	Pn	19 52 14.8	+0.2
	SNR=7.9						
EMIN				Sn	Sn	19 52 54.9	-4.4
	SNR=7.9						
EMIN				Lg		19 53 16.8	
	0.3nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.86	157	Pn	Pn	19 52 14.8	+0.2
	SNR=7.9						
EMIN				Sn	Sn	19 52 54.9	-4.4
	SNR=7.9						
ESDC	Sonseca Array	3.88	114	Pn	Pn	19 52 13.6	-1.2
	0.8nm,0.2s,baz=301,slow=13,SNR=22						
ESDC				Sn	Sn	19 52 55.8	-4.0
	0.9nm,0.2s,baz=289,slow=23,SNR=7.9						
ESDC				Lg		19 53 17.3	
	0.9nm,0.3s,baz=298,slow=29,SNR=7.9						
ESDC	Sonseca Array	3.88	114	Pn	Pn	19 52 13.6	-1.3
	0.8nm,0.2s,SNR=22						
ESDC				Sn	Sn	19 52 55.8	-4.0
	0.9nm,0.2s,SNR=7.9						
EGRO	El Granado	3.90	167	Pn	Pn	19 52 14.5	-0.6
	SNR=7.9						
EGRO				Sn	Sn	19 52 55.4	-4.9
	SNR=7.9						
EGRO				Lg		19 53 16.9	
	1.8nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	3.99	170	ePn	Pn	19 52 15.7	-0.7
PVAQ				eSn	Sn	19 52 58.3	-4.3
PVAQ				A		19 53 28.6	
	2.4nm,0.7s						
PVAQ	Vaqueiros	3.99	170	Pn	Pn	19 52 15.7	-0.7
PVAQ				Sn	Sn	19 52 58.3	-4.3
	1.2nm,0.7s						
MORF	Marmelete	4.04	181	ePn	Pn	19 52 16.5	-0.5
MORF				eSn	Sn	19 52 59.1	-4.6
MORF	Marmelete	4.04	181	P	Pn	19 52 16.4	-0.6
MORF				Pn	Pn	19 52 16.5	-0.5
MORF				Sn	Sn	19 52 59.1	-4.6
MORF				S	Sn	19 52 59.2	-4.5
PBDV	Barranco-do-Ve	4.13	173	eSn	Sn	19 53 01.6	-4.3
PFVI	Vila Bisbo	4.21	183	ePn	Pn	19 52 18.7	-0.8
PFVI				eSn	Sn	19 53 03.5	-4.6
EADA	Adamuz	4.41	135	Pn	Pn	19 52 20.4	-1.8
	SNR=7.9						
EADA				Sn	Sn	19 53 09.2	-3.8
	SNR=7.9						
EADA				Lg		19 53 33.5	
	0.9nm,0.2s,SNR=7.9						
EADA	Adamuz	4.41	135	Pn	Pn	19 52 20.4	-1.8
	SNR=7.9						
EADA				Sn	Sn	19 53 09.2	-3.8
	SNR=7.9						
ETOR	Torete	4.94	94	Pn	Pn	19 52 28.3	-1.2
	SNR=4.0						
ETOR				Lg		19 53 47.6	
	3.9nm,0.4s,SNR=4.0						

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*DDA **11** 20:11:47.6, 3631N×3583E, h6km, Md3.8, Ml4.1*
*NEIC **11** 20:11:47.8, 3656N×3588E, h6km, MD3.8(ISK), After ISK.*
*ISCJB **11** 20:11:48.3±0.4, 3652N±001×3587E±002, h6km±3km, mb3.6/6, Error ellipse: s-maj=2.8km s-min=2.4km az=19.2*
*CSEM **11** 20:11:48.1±0.1, 3652N×3589E, h10km, mb3.9/2, Mw3.6, Error ellipse: s-maj=1.5km s-min=1.3km az=170.0*
*MOS **11** 20:11:48.4±1.9, 3652N×3593E, h10km, mb3.9/3, Error ellipse: s-maj=12.5km s-min=10.4km az=96.0*
*ISK **11** 20:11:48.0, 3654N×3588E, h7km, MD3.9*
*NSSC **11** 20:11:49.4, 3650N×3590E, h8km±3km*
*GRAL **11** 20:11:49.6±3.5, 3661N×3592E, h0km±21km, MD3.7*
*IDC **11** 20:11:49.2±0.9, 3647N×3566E, h0km, mb3.8/7, mb1 3.9/11, mb1mx3.7/22, mbtmp3.8/11, ML3.4/4, Error ellipse: s-maj=22.7km s-min=13.3km az=98.0*
*NIC **11** 20:11:50.4±0.4, 3788N×3426E, h36km, mb4.1, ML3.7, MW3.6*
ISC 11 20:11:49.0±0.4, 3652N±001×3587E±002, h3km±3km, n117, σ1^{s}21/158, mb3.6/6, 8D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COBT	Iskenderun	0.31	90	i P	Pg	20 11 54.9	-0.1
COBT				i S	Sg	20 11 59.3	+0.3
KRTS	Karatas	0.40	278	PG	Pg	20 11 57.3	+0.6
HTY	Hatay	0.45	151	PG	Pg	20 11 56.9	-0.8
HTY				SG	Sg	20 12 04.7	+1.1
HTY	Hatay	0.45	151	Pg	Pg	20 11 57.2	-0.5
HTY				Sg	Sg	20 12 04.2	+0.6
CEYT	Ceyhan	0.50	349	PG	Pg	20 11 58.6	0.0
CEYT	Ceyhan	0.50	349	Pg	Pg	20 11 58.1	-0.5
CEYT	Ceyhan	0.50	349	Pg	Pg	20 11 58.1	-0.5
DRWC	Darouich	0.65	81	⇑P	Pg	20 12 01.4	-0.1
DRWC				⇑S	Sg	20 12 10.8	+0.9
DRWC	Darouich	0.65	81	⇑i P	Pg	20 12 01.4	-0.1
DRWC				⇑i S	Sg	20 12 10.8	+0.9
ARNB	Al Arnab	0.66	173	⇑P	Pg	20 12 02.4	+0.7
ARNB				⇑S	Sg	20 12 11.2	+1.0
BTCH	Batrach	0.68	135	⇑P	Pg	20 12 02.4	+0.4
BTCH				⇑S	Sg	20 12 11.2	+0.5
BTCH	Batrach	0.68	135	⇑i P	Pg	20 12 02.4	+0.4
BTCH				⇑i S	Sg	20 12 11.2	+0.4
KOZT	Kozan	0.96	358	PG	Pg	20 12 05.7	-1.7
SLNF	Slenfeh	0.97	163	⇓P	Pg	20 12 06.4	-1.1
SLNF				⇓S	Sg	20 12 19.2	-0.8
SLNF	Slenfeh	0.97	163	⇓i P	Pg	20 12 06.4	-1.1
SLNF				⇓i S	Sg	20 12 19.2	-0.8
KARA	Karaisali	0.99	319	PG	Pg	20 12 06.5	-1.4
WRDH	Warideh	1.10	156	⇓P	Pg	20 12 09.2	-0.9
WRDH				⇓S	Sg	20 12 23.6	-0.7
WRDH	Warideh	1.10	156	⇓i P	Pg	20 12 09.2	-0.9
WRDH				⇓i S	Sg	20 12 23.6	-0.8
ANDN	Andirin	1.12	20	i P	Pg	20 12 11.2	+0.6
ANDN				i S	Sg	20 12 26.9	+1.8
MERS	Mersin	1.14	288	PN	Pn	20 12 09.5	-2.3
GAZ	Gaziantep	1.26	58	PN	Pn	20 12 12.6	-0.9
GAZ	Gaziantep	1.26	58	Pn	Pn	20 12 11.6	-1.9
KMRS	Kahramanmaras	1.28	40	PN	Pn	20 12 12.5	-1.4
BIDA	Albida	1.55	166	⇑P	Pn	20 12 16.4	-1.1
BIDA				⇑S	Sn	20 12 35.9	-2.2
BIDA	Albida	1.55	166	⇑i P	Pn	20 12 16.4	-1.1
BIDA				⇑i S	Sn	20 12 35.8	-2.2
GZT	Gaziantep	1.59	58	i P	Pn	20 12 18.6	+0.5
GZT				i S	Sn	20 12 41.6	+2.3
SLMH	Al Salmeh	1.69	100	⇑P	Pn	20 12 18.6	-0.9
SLMH				⇑S	Sn	20 12 39.1	-2.4
SLMH	Al Salmeh	1.69	100	⇑i P	Pn	20 12 18.6	-0.8
SLMH				⇑i S	Sn	20 12 39.2	-2.4
IKL	Isikli	1.78	262	PN	Pn	20 12 20.3	-0.4
NIG	Nigde	1.88	328	PN	Pn	20 12 20.6	-1.4
NIG	Nigde	1.88	328	Pn	Pn	20 12 20.6	-1.4
PHNC	Paralimni	2.12	225	P	Pn	20 12 28.1	+2.7
	11nm,0.9s						
PHNC				S	Sg	20 13 00.8	+3.5
ATAB	Bozova	2.16	63	eP	Pn	20 12 24.9	-1.0
ATAB				i S	Sg	20 12 58.4	-0.1
HWQ	Hawqa	2.24	178	ePn	Pn	20 12 27.6	+0.6
HWQ				Sn	Sn	20 12 57.4	+2.3
HWQ	Hawqa	2.24	178	ePn	Pn	20 12 27.5	+0.6
HWQ				Sn	Sn	20 12 57.4	+2.3
FKH	Fakeheh	2.32	169	ePn	Pn	20 12 27.6	-0.5
FKH				Sn	Sn	20 12 57.8	+0.7
FKH	Fakeheh	2.32	169	ePn	Pn	20 12 27.5	-0.6
FKH				Sn	Sn	20 12 57.8	+0.7
BNN	Bunyan	2.33	360	ePN	Pn	20 12 26.6	-1.6
BNN	Bunyan	2.33	360	Pn	Pn	20 12 26.6	-1.6
AVNT	Avonos	2.40	341	eP	Pn	20 12 30.0	+0.8
URFA	Urfa	2.54	68	ePN	Pn	20 12 30.4	-0.7
URFA	Urfa	2.54	68	Pn	Pn	20 12 31.0	-0.1
MAMC	Mammari	2.54	239	P	Pn	20 12 33.2	+2.1
CSS	Prodhromos	2.58	234	P	Pb	20 12 35.9	-0.1
	3.5nm,0.5s						
CSS				S	Sg	20 13 12.5	+0.5
CSS	Prodhromos	2.58	234	ePn	Pn	20 12 29.8	-1.9
CSS				eSn	Sn	20 13 02.5	-1.1
CSS	Prodhromos	2.58	234	ePn	Pn	20 12 29.8	-1.9
CSS				eSn	Sn	20 13 02.5	-1.1
BHL	Bhannes	2.62	184	ePn	Pn	20 12 31.5	-0.6
BHL				Sn	Sn	20 13 08.1	+3.7
ROOS	tl_alroos	2.62	153	⇑P	Pn	20 12 30.6	-1.6
ROOS				⇑S	Sn	20 13 02.3	-2.1
ROOS	tl_alroos	2.62	153	⇑i P	Pn	20 12 30.6	-1.6
ROOS				⇑i S	Sn	20 13 02.3	-2.1
BEYL	Beyrouth	2.66	187	ePn	Pn	20 12 32.8	0.0
MALT	Malatya	2.71	48	ePn	Pn	20 12 30.5	-3.0
MALT				eSn	Sn	20 13 06.5	-0.3
MALT	Malatya	2.71	48	ePn	Pn	20 12 33.3	-0.2
MALT				eSn	Sn	20 13 06.5	-0.3
MYA	Malataya	2.72	48	ePN	Pn	20 12 32.8	-0.8
ALFC	Alevga	2.98	244	P	Pn	20 12 36.9	-0.3
	3.8nm,0.4s						
ALFC				S	Sn	20 13 12.2	-1.3
SZAC	Souni-Zanaja	3.00	235	P	Pn	20 12 40.7	+3.2
	0.5nm,0.4s						
SZAC				S	Sn	20 13 18.9	+5.0
RCY	Rachaya	3.03	181	ePn	Pn	20 12 37.3	-0.5
RCY				Sn	Sn	20 13 16.7	+2.1
KONT	Konya--Tatoy	3.14	298	ePN	Pn	20 12 40.0	+0.6
KONT	Konya--Tatoy	3.14	298	Pn	Pn	20 12 38.8	-0.6
ELZG	Elazig	3.17	51	eP	Pn	20 12 40.3	+0.5
PPCY	Paphos	3.30	241	P	Pn	20 12 44.9	+3.3
MMAI	Mount Meron Ar	3.52	186	Pn	Pn	20 12 44.2	-0.3
	19nm,0.3s,baz=0.4,slow=14,SNR=110						
MMAI				Sn	Sn	20 13 26.9	+0.3
	22nm,0.3s,baz=349,slow=26,SNR=10.0						
MMAI				Lg		20 13 40.4	
	17nm,0.3s,baz=9.9,slow=30,SNR=5.4						
PTK	Pertek	3.66	49	ePN	Pn	20 12 47.2	+0.6
PTK	Pertek	3.66	49	Pn	Pn	20 12 46.2	-0.3
DIY	Diyarbakir	3.74	67	ePN	Pn	20 12 47.6	0.0
DIY	Diyarbakir	3.74	67	Pn	Pn	20 12 47.6	0.0
CORM	Corum	3.78	345	ePN	Pn	20 12 48.7	+0.5
MARD	Mardin	4.01	77	eP	Pn	20 12 50.9	-0.5
MARD				i S	Sb	20 13 53.2	+3.9
ANTO	Ankara	4.13	325	ePN	Pn	20 12 53.3	+0.3
ANTO	Ankara	4.13	325	P	Pn	20 12 53.8	+0.8
LOD	Lodumlu	4.16	325	ePN	Pn	20 12 53.7	+0.3
LOD	Lodumlu	4.16	325	Pn	Pn	20 12 53.8	+0.4
LOD	Lodumlu	4.16	325	Pn	Pn	20 12 53.8	+0.4
CTKT	Corum	4.18	349	i P	Pn	20 12 57.9	+4.2
ANTB	Antalya	4.21	277	ePN	Pn	20 12 54.7	+0.7
BCK	Bucak	4.33	284	ePN	Pn	20 12 55.9	+0.2
ASF	Jabal al Asfar	4.42	169	Pn	Pn	20 12 57.3	+0.4
	0.5nm,0.3s,baz=213,slow=23,SNR=14						
ASF				Lg		20 14 05.2	
	3.3nm,0.3s,baz=30,slow=22,SNR=7.5						
ISP	Isparta	4.48	289	ePN	Pn	20 12 58.3	+0.5
ISP	Isparta	4.48	289	eP	Pn	20 12 56.7	-1.1
EZC	Erzincan	4.48	43	ePN	Pn	20 12 54.0	-3.8
EZC	Erzincan	4.48	43	P	Pn	20 12 54.1	-3.7
KELT	Kelkit	4.50	35	i P	Pn	20 12 59.5	+1.5
KELT	Kelkit	4.50	35	i P	Pn	20 12 59.5	+1.5
BTMT	Batman	4.78	68	ePN	Pn	20 12 59.8	-2.1
ELL	Elmali	4.80	274	ePN	Pn	20 13 03.8	+1.6
ELL	Elmali	4.80	274	Pn	Pn	20 13 03.1	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMT	Gumushane	4.85	35	ePN	Pn	20 13 02.8	0.0
GUMT	Gumushane	4.85	35	Pn	Pn	20 13 02.8	0.0
DIKM	Dikmen	5.14	355	ePN	Pn	20 13 07.1	+0.2
SIRT	Sirnak	5.35	77	ePN	Pn	20 13 10.5	+0.8
FETY	Fethiye	5.46	273	ePN	Pn	20 13 12.9	+1.6
FETY	Fethiye	5.46	273	Pn	Pn	20 13 13.0	+1.7
EZM	Erzurum	5.49	50	PN	Pn	20 13 06.8	-4.9
EZM				SN	Pb	20 13 23.8	-1.7
EZM	Erzurum	5.49	50	Pn	Pn	20 13 12.2	+0.6
TUTA	Tutak	6.20	60	iP	Pn	20 13 22.3	+1.0
CUKT	Cukurca	6.25	81	ePN	Pn	20 13 23.8	+1.8
HAKT	HAKKARI	6.36	78	eP	Pn	20 13 28.7	+5.2
AGRB	Hanur-Agry	6.40	59	ePN	Pn	20 13 25.2	+1.1
EIL	Elat	6.87	187	Pn	Pn	20 13 31.0	+0.3
EIL				Sn	Sn	20 14 52.4	+3.0
EIL	Elat	6.87	187	Pn	Pn	20 13 31.0	+0.3
	0.4nm,0.3s,baz=354,slow=16,SNR=3.5						
EIL				Sn	Sn	20 14 52.4	+3.0
	0.5nm,0.3s,baz=162,slow=21,SNR=2.5						
ANN	Anapa	8.36	8	eP	Pn	20 13 46.7	-4.3
ANN				pmax	pmax		
	comp=Z,11nm,0.2s						
IDI	Anoyia	8.99	265	Pn	Pn	20 13 58.9	-0.9
	comp=Z,0.8nm,0.3s,baz=44,slow=12,SNR=3.4						
IDI				Sn	Sn	20 15 38.4	-3.1
	comp=Z,0.7nm,0.3s,baz=209,slow=18,SNR=4.3						
MLR	Muntele Rosu	11.68	323	Pn	Pn	20 14 41.9	+5.4
	comp=Z,0.1nm,0.3s,baz=136,slow=9.7,SNR=2.5						
AKASG	Malin Array Be	14.96	343	P	Pn	20 15 26.7	+5.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	14.96	343	Pn	Pn	20 15 26.7	+5.4
	comp=Z,0.7nm,0.3s,baz=162,slow=10,SNR=9.2						
GERES	GERESS Array B	20.34	314	P	P	20 16 25.9	-0.4
	comp=Z,0.4nm,0.5s,baz=121,slow=11,SNR=8.3						
AKTK	Aktyubinsk	21.15	42	P	P	20 16 38.6	+3.6
AKTO	Aktyubinsk	21.15	42	P	P	20 16 38.6	+3.6
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.8						
AKTO	Aktyubinsk	21.15	42	P	P	20 16 38.6	+3.6
	comp=Z,3.9nm,0.9s,mb3.7,baz=243,slow=12,SNR=11						
FINES	FINESS Array B	25.70	349	P	P	20 17 21.4	+1.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	FINESS Array B	25.70	349	P	P	20 17 21.4	+1.3
	comp=Z,1.5nm,0.7s,mb3.6,baz=160,slow=11,SNR=8.1						
ARCES	ARCESS Array B	33.55	353	P	P	20 18 32.1	+2.4
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	33.55	353	P	P	20 18 32.1	+2.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=169,slow=6.8,SNR=6.6						
MKAR	Makanchi Array	35.70	59	P	P	20 18 49.4	+0.8
	comp=Z,0.3nm,0.3s,mb3.7,baz=266,slow=9.1,SNR=3.6						
TORD	Torodi Ar. Bea	38.45	242	P	P	20 19 10.9	-1.3
	comp=Z,0.6nm,0.8s,mb3.4,baz=31,slow=11,SNR=6.4						
YKA	Yellowknife Ar	78.50	346	P	P	20 23 50.9	-0.2
YKA	Yellowknife Ar	78.50	346	P	P	20 23 50.9	-0.2
	comp=Z,0.2nm,0.5s,mb3.3,baz=25,slow=5.5,SNR=6.4						
YKA	Yellowknife Ar	78.50	346	P	P	20 23 50.9	-0.2

*KRSC **11** 20:17:55.0±0.4, 5507N×16240E, h21km±21km, ML4.5*
*MOS **11** 20:17:57.7±1.3, 5522N×16201E, h61km, mb4.1/10, Error ellipse: s-maj=12.6km s-min=6.4km az=84.7*
*ISCJB **11** 20:17:58.5±0.6, 55.15N±003×162.15E±008, h73km±4km, mb3.9/23, Error ellipse: s-maj=8.1km s-min=3.8km az=21.8*
*NEIC **11** 20:18:00.8±1.1, 5523N×16188E, h72km±10km, mb4.2/7, Error ellipse: s-maj=9.2km s-min=6.7km az=152.0*
*IDC **11** 20:18:01.6±6.8, 5525N×16195E, h78km±63km, mb3.4/15, mb1 3.7/16, mb1mx3.6/23, mbtmp3.5/16, ML4.0/1, Error ellipse: s-maj=20.3km s-min=16.2km az=126.0*
ISC 11 20:17:59.5±0.5, **5516N**±003×**16217E**±008, **h65**km±4km, **n83**, σ**1s14**/100, **mb3.9**/23, **2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.11	19	eP	Pn	20 18 16.8	-2.3
KBTR				iS	Sn	20 18 33.9	+0.1
ZLN	Zelenaya	1.16	318	eP	Pn	20 18 19.4	-0.3
ZLN				iS	Sn	20 18 37.3	+2.5
TUMR	Tumrok	1.17	277	eP	Pn	20 18 18.9	-1.0
TUMR				iS	Sn	20 18 36.1	+1.1
KMNR	Kamenistaya	1.25	299	eP	Pn	20 18 20.3	-0.7
KMNR				iS	Sn	20 18 38.3	+1.2
KIRR	Kirishev	1.31	308	eP	Pn	20 18 21.3	-0.4
KIRR				iS	Sn	20 18 40.7	+2.4
KPT	Kopyto	1.37	307	eP	Pn	20 18 22.2	-0.3
KPT				iS	Sn	20 18 41.6	+1.8
KRSR	Krestovskiy	1.40	320	eP	Pn	20 18 22.0	-0.9
KRSR				iS	Sn	20 18 41.1	+0.7
KLY	Klyuchi	1.44	324	eP	Pn	20 18 21.8	-1.7
KLY				iS	Sn	20 18 41.1	-0.4
KOZR	Kozyr	1.58	306	PN	Pn	20 18 25.9	+0.6
KOZ	Kozyrevsk	1.58	306	eP	Pn	20 18 25.9	+0.5
SRKR	Sorokina	1.60	340	eP	Pn	20 18 25.5	-0.1
SRDR	Sredinnyy	1.81	311	eP	Pn	20 18 28.3	-0.1
SPN	Mys Shipunski	2.42	212	eP	Pn	20 18 33.1	-3.6
NLC	Nalytchevo	2.60	221	eP	Pn	20 18 37.1	-2.0
NLC				iS	Sn	20 19 08.4	-1.1
AVH	Avacha	2.77	228	eP	Pn	20 18 40.8	-0.7
AVH				iS	Sn	20 19 14.8	+1.1
GNL	Ganaly	2.88	241	eP	Pn	20 18 42.8	-0.1
GNL				iS	Sn	20 19 18.1	+1.8
PET	Petropavlovsk	2.98	226	ePn	Pn	20 18 43.4	-0.9
PET				eSn	Sn	20 19 20.4	+1.5
PET	Petropavlovsk	2.98	226⇓	iPN	Pn	20 18 43.5	-0.8
PET				eS	Sn	20 19 18.1	-0.7
PET				pmax	pmax		
	comp=Z,285nm,0.7s						
PET				smax			
	comp=N,860nm,0.8s						
PET				smax			
	comp=E,1μm,0.8s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
PET	Petropavlovsk	2.98	226	eP	Pn	20 18 43.3	-1.0
PET				iS	Sn	20 19 18.9	+0.1
RUS	Russkaya	3.49	220	eP	Pn	20 18 50.3	-1.0
RUS				iS	Sn	20 19 31.0	-0.3
GRL	Gorelyy	3.57	225	eP	Pn	20 18 52.6	+0.3
GRL				iS	Sn	20 19 34.5	+1.3
SKR	Severo-Kuril's	5.79	222	ePN	Pn	20 19 22.0	-0.7
SKR				eS	Sn	20 20 26.9	-0.8
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,90nm,0.5s						
SKR				smax			
	comp=E,80nm,0.6s						
SKR				smax			
	comp=Z,60nm,0.5s						
MA2	Magadan	7.58	310	P	Pn	20 19 47.1	-0.1
	comp=Z,15nm,1.1s						
MA2	Magadan	7.58	310	PN	Pn	20 19 47.1	-0.1
MA2				pmax	pmax		
	comp=Z,15nm,1.1s						
BILL	Bilibino	13.06	7⇓	ePN	Pn	20 21 00.1	-1.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ASAJ	Asahikawa	16.75	237	P	Pn	20 21 51.5	+1.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	16.75	237	P	Pn	20 21 51.5	+1.7
	comp=Z,1.0nm,0.3s,baz=74,slow=18,SNR=4.0						
YAK	Yakutsk	18.12	305	P	Pn	20 22 04.8	-1.5
TIXI	Tiksi	21.77	332	eP	P	20 22 45.5	+0.1
	comp=Z,3.0nm,0.6s,mb3.9						
TIXI	Tiksi	21.77	332	eP	P	20 22 43.8	-1.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
IMA2	Indian Mountai	23.69	45	eP	P	20 23 06.6	+1.7
MAJO	Matsushiro	24.80	231	eP	P	20 23 15.7	+0.5
	comp=Z,58nm,1.7s,mb4.8						
MAJO	Matsushiro	24.80	231	eP	P	20 23 15.7	+0.5
MAJO				pmax	pmax		
	comp=Z,58nm,1.7s,mb4.8						
MJAR	Matsushiro Arr	24.80	231	P	P	20 23 15.9	+0.7
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	24.80	231	P	P	20 23 15.9	+0.7
	comp=Z,1.4nm,0.5s,mb3.7,baz=26,slow=7.8,SNR=6.3						
COLA	College	26.09	48	eP	P	20 23 27.4	+0.8
	comp=Z,1.9nm,0.9s,mb3.6						
COLA	College	26.09	48	eP	P	20 23 27.4	+0.8
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
HIA	Hailar	26.33	275	P	P	20 23 28.8	-0.1
INK	Inuvik	31.49	40	P	P	20 24 16.9	+2.3
TLY	Talaya	34.17	289	P	P	20 24 37.7	-0.4
ULN	Ulaanbaatar	34.27	281	P	P	20 24 37.7	-1.3
YKA	Yellowknife Ar	40.82	45	eP	P	20 25 35.4	+1.3
YKA	Yellowknife Ar	40.82	45	P	P	20 25 34.9	+0.8
	comp=Z,0.5nm,0.5s,mb3.4,baz=300,slow=7.9,SNR=8.5						
RES	Resolute Bay	40.94	23	eP	P	20 25 35.7	+0.7
	comp=Z,17nm,0.5s,mb4.9						
RES	Resolute Bay	40.94	23	eP	P	20 25 35.7	+0.7
RES				pmax	pmax		
	comp=Z,17nm,0.5s,mb4.9						
GUMO	Guam	43.62	205	P	P	20 25 58.7	+1.4
KURK	Kurchatov	47.69	301	eP	P	20 26 27.5	-1.6
	comp=Z,1.5nm,0.4s,mb4.4						
KURK	Kurchatov	47.69	301	eP	P	20 26 27.5	-1.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
MKAR	Makanchi Array	48.37	295	P	P	20 26 33.4	-1.0
	comp=Z,0.2nm,0.3s,mb3.7,baz=46,slow=4.2,SNR=2.9						
BRVK	Borovoye	50.09	308	eP	P	20 26 46.5	-1.0
	comp=Z,1.2nm,0.4s,mb4.3						
BRVK	Borovoye	50.09	308	eP	P	20 26 46.5	-1.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FCC	Fort Churchill	51.10	41	eP	P	20 26 55.8	+0.8
	comp=Z,0.8nm,0.5s,mb3.9						
FCC	Fort Churchill	51.10	41	eP	P	20 26 55.8	+0.8
FCC				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ARCES	ARCESS Array B	51.70	342	P	P	20 27 00.5	+1.3
	comp=Z,3.9nm,0.9s,mb4.3,baz=20,slow=8.6,SNR=4.0						
ARU	Arti	52.70	317	eP	P	20 27 05.8	-1.1
ARU	Arti	52.70	317	eP	P	20 27 05.8	-1.1
NVAR	Mina Array Bea	53.92	73	P	P	20 27 17.7	+1.6
	comp=Z,0.2nm,0.4s,mb3.4,baz=293,slow=7.6,SNR=3.6						
TKM2	Tokmak 2	54.49	296	eP	P	20 27 20.0	-0.2
AAK	Ala-Archa	55.26	296	eP	P	20 27 24.2	-1.6
LSA	Lhasa	55.52	274	P	P	20 27 29.0	+1.2
UCH	Uchtor	55.54	296	P	P	20 27 26.1	-1.7
EKS2	Erkin-Say	55.61	297	P	P	20 27 27.8	-0.5
AML	Almayashu	56.04	296	P	P	20 27 31.3	0.0
JOF	Joensuu	56.20	335	ep	P	20 27 30.6	-1.6
	comp=Z,0.8nm,0.4s,mb4.1						
JOF	Joensuu	56.20	335	eP	P	20 27 30.6	-1.6
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
KAF	Kangasniemi	58.05	337	ep	P	20 27 43.2	-2.0
	baz=28,slow=6.5						
FINES	FINESS Array B	58.70	337	iP	P	20 27 49.9	+0.2
FINES	FINESS Array B	58.70	337	P	P	20 27 49.2	-0.5
	comp=Z,0.4nm,0.4s,mb3.8,baz=42,slow=6.4,SNR=9.1						
NOA	NORSAR Array B	61.89	344	P	P	20 28 11.2	-0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	61.89	344	P	P	20 28 11.2	-0.3
	comp=Z,0.8nm,0.7s,mb4.0,baz=19,slow=6.8,SNR=3.0						
HFS	Hagfors	62.34	343	P	P	20 28 13.9	-0.7
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HFS	Hagfors	62.34	343	P	P	20 28 13.9	-0.7
	comp=Z,0.7nm,0.5s,mb4.0,baz=44,slow=4.5,SNR=5.6						
SCHQ	Schefferville	63.25	29	P	P	20 28 20.8	+0.1
SCHQ	Schefferville	63.25	29	P	P	20 28 20.8	+0.1
	comp=Z,0.9nm,0.7s,mb4.0,baz=292,slow=12,SNR=3.3						
AKASG	Malin Array Be	67.46	330	iP	P	20 28 48.0	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	67.46	330	P	P	20 28 46.8	-1.2
	comp=Z,0.5nm,0.3s,mb4.0,baz=28,slow=7.2,SNR=8.7						
TXAR	Lajitas Array	68.73	69	P	P	20 28 57.8	+1.6
	comp=Z,0.3nm,0.6s,mb3.4,baz=247,slow=4.6,SNR=3.1						
GERES	GERESS Array B	73.04	339	P	P	20 29 22.5	+0.5
	comp=Z,0.3nm,0.7s,mb3.3,baz=15,slow=4.1,SNR=3.0						
WRA	Warramunga Arr	78.48	207	eP	P	20 29 54.8	+1.6
WRA	Warramunga Arr	78.48	207	P	P	20 29 54.0	+0.8
	comp=Z,0.5nm,0.9s,mb3.4,baz=20,slow=5.9,SNR=5.1						
ASAR	Alice Springs	82.15	206	eP	P	20 30 14.4	+1.5
ASAR	Alice Springs	82.15	206	P	P	20 30 13.7	+0.8
	comp=Z,0.6nm,0.6s,mb3.7,baz=17,slow=5.2,SNR=8.1						
ESDC	Sonseca Array	84.79	349	P	P	20 30 27.7	+1.2
	comp=Z,1.0nm,0.6s,mb4.1,baz=7.5,slow=4.0,SNR=7.0						

*ISCJB **11** 20:34:40.1±0.5, 685N±005×7292W±005, h176km±4km, mb4.0/15, Error ellipse: s-maj=8.5km s-min=7.4km az=41.0*
*IDC **11** 20:34:40.1±0.6, 677N×7290W, h166km±6km, mb3.7/10, mb1 3.8/14, mb1mx3.6/23, mbtmp3.8/14, Error ellipse: s-maj=12.6km s-min=9.7km az=119.0*
*FUNV **11** 20:34:40.4, 677N×73.17W, h163km, MW3.6*
*NEIC **11** 20:34:40.7±0.5, 676N×7290W, h172km±5km, mb4.2/7, Error ellipse: s-maj=6.8km s-min=6.6km az=115.0*
ISC 11 20:34:41.0±0.5, **684N**±005×**7293W**±005, **h168**km±4km, **n54**, σ**0s85**/57, **mb4.0**/15, **2C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.19	31⇓	iP	Pn	20 35 09.5	+0.4
CAPV				eS	Sn	20 35 30.7	-0.1
ROSC	El Rosal	2.41	215	P	Pn	20 35 21.2	-0.9
	76nm,0.3s,baz=95,slow=21,SNR=169						
ROSC				S	Sn	20 35 48.5	-5.2
	40nm,0.3s,baz=101,slow=17,SNR=6.2						
SOCV	Socops	2.51	55⇑	eP	Pn	20 35 24.1	+0.9
SOCV				eS	Sn	20 35 55.9	+0.1
VIGV	El Vigia	2.52	38	eP	Pn	20 35 23.8	+0.4
VIGV				eS	Sn	20 35 55.4	-0.8
SDV	Santo Domingo	3.05	48	P	Pn	20 35 30.8	+1.0
	52nm,0.3s,baz=245,slow=8.2,SNR=343						
SDV				S	Sn	20 36 07.3	-0.3
	64nm,0.3s,baz=97,slow=17,SNR=41						
ELOV	Elorza	3.42	87	eP	Pn	20 35 35.4	+1.0
ELOV				eS	Sn	20 36 16.5	+0.5
VIRV	Villa del Rosa	3.68	8	eP	Pn	20 35 36.1	-1.6
VIRV				eS	Sn	20 36 19.2	-2.7
QARV	Quebrada Arrib	4.11	35⇓	iP	Pn	20 35 43.7	+0.5
QARV				eS	Sn	20 36 30.5	-1.1
SANV	Sanarito	4.28	52⇓	iP	Pn	20 35 45.8	+0.5
CURV	Curarigua	4.31	43	eP	Pn	20 35 46.2	+0.4
DABV	Dabajuro	4.65	29	eP	Pn	20 35 50.9	+0.7
TEPV	Terepaima	4.83	50⇑	iP	Pn	20 35 52.8	+0.2
SIQV	Siquisique	4.88	39	eP	Pn	20 35 53.2	-0.1
OTAV	Otavalo	8.56	220	ePn	Pn	20 36 41.8	-0.1
	4.8nm,0.9s						
PCRV	Puerto La Cruz	8.85	67	P	Pn	20 36 45.9	+0.3
	0.7nm,0.3s,baz=270,slow=9.1,SNR=4.0						
JTS	JuntasAbangare	12.38	287	Pn	Pn	20 37 31.6	-0.1
SJG	San Juan	13.01	30	ePn	Pn	20 37 39.6	-0.2
SJG	San Juan	13.01	30	P	Pn	20 37 40.2	+0.4
	1.2nm,0.3s,baz=317,slow=14,SNR=3.3						
TEIG	Tepich	19.97	313	P	P	20 39 00.8	+0.4
	5.6nm,0.5s,baz=202,slow=22,SNR=6.1						
LPAZ	La Paz	23.46	168	P	P	20 39 34.6	-0.8
LPAZ				pP		20 40 06.6	
LPAZ	La Paz	23.46	168	P	P	20 39 34.6	-0.8
	0.5nm,0.3s,mb3.4,baz=338,slow=5.4,SNR=2.8						
LPAZ				pP		20 40 06.6	
	2.3nm,0.7s,baz=344,slow=16,SNR=6.3						
SIV	San Ignacio	25.54	153	P	P	20 39 53.1	-1.2
	1.0nm,0.8s,mb3.5,baz=320,slow=8.7,SNR=4.5						
SIV				pP	pP	20 40 26.1	-2.7
	2.1nm,0.8s,baz=320,slow=11,SNR=4.6						
PLAL	Pickwick Lake	31.29	336	eP	P	20 40 46.5	+1.3
	5.0nm,0.8s,mb4.3						
MET	Memphis--Engin	32.21	333	eP	P	20 40 50.6	-2.7
BRNJ	Basking Ridge	33.73	358	P	P	20 41 06.1	-0.3
WMOK	Wichita Mounta	36.58	323	eP	P	20 41 30.1	-0.8
	1.8nm,0.5s,mb4.0						
TXAR	Lajitas Array	36.59	312	P	P	20 41 31.1	0.0
	1.2nm,0.7s,mb3.7,baz=122,slow=8.9,SNR=8.2						
JFWS	Jewell Farm	39.05	340	eP	P	20 41 51.4	0.0
MNTX	Cornudas Mount	39.10	314	eP	P	20 41 52.3	+0.3
	3.8nm,0.8s,mb4.1						
SDCO	Great Sand Dun	42.66	321	eP	P	20 42 22.6	+1.5
ISCO	Idaho Springs	44.01	323	eP	P	20 42 32.6	+0.8
PV01	Paradox Valley	44.84	319	eP	P	20 42 39.6	+1.1
ULM	Lac du Bonnet	47.34	340	P	P	20 42 55.9	-1.9
	3.4nm,0.5s,mb4.2,baz=150,slow=6.9,SNR=11						
MSU	Marysvale	47.42	318	eP	P	20 42 59.7	+1.1
SCHQ	Schefferville	48.11	5	P	P	20 43 03.9	+0.3
	3.2nm,0.7s,mb4.1,baz=180,slow=7.5,SNR=9.3						
BW06	Boulder Array	48.18	324	eP	P	20 43 04.9	+0.5
	50nm,2.8s,mb4.7						
REDW	Red Top Meadow	49.30	324	eP	P	20 43 13.7	+0.8
	4.0nm,0.6s,mb4.2						
LOHW	Long Hollow	49.30	324	eP	P	20 43 14.1	+1.2
MOOW	Moose Ponds	49.46	324	eP	P	20 43 14.7	+0.6
	50nm,2.8s,mb4.7						
NVAR	Mina Array Bea	51.61	315	P	P	20 43 30.3	-0.1
NVAR	Mina Array Bea	51.61	315	P	P	20 43 30.3	-0.1
	0.6nm,0.6s,mb3.4,baz=125,slow=8.6,SNR=5.2						
FCC	Fort Churchill	54.30	347	eP	P	20 43 49.6	-0.1
EDM	Edmonton	56.70	332	eP	P	20 44 06.7	-0.2
YKA	Yellowknife Ar	63.32	340	P	P	20 44 51.6	-0.1
	3.2nm,0.6s,mb4.3,baz=131,slow=6.7,SNR=86						
YKA				pP	pP	20 45 30.9	-0.4
	0.3nm,0.5s,baz=138,slow=6.3,SNR=1.7						
YKW3	Yellowknife Ar	63.37	340	eP	P	20 44 51.8	-0.2
DLBC	Dease Lake	67.40	331	P	P	20 45 16.8	-1.3
DBIC	Dimbokro	67.54	86	P	P	20 45 18.8	-1.1
	2.3nm,0.8s,mb4.0,baz=271,slow=7.5,SNR=3.4						
INK	Inuvik	73.08	340	eP	P	20 45 52.2	-0.2
TORD	Torodi Ar. Bea	73.55	78	P	P	20 45 55.4	-0.8
	0.3nm,1.1s,mb3.0,baz=298,slow=3.1,SNR=3.3						
MKAR	Makanchi Array	122.24	20	PKP	PKPdf	20 53 15.7	-0.4
MKAR	Makanchi Array	122.24	20	PKP	PKPdf	20 53 15.7	-0.4
	0.2nm,0.2s,baz=344,slow=1.6,SNR=2.0						
SONM	Songino Array	125.56	1	PKP	PKPdf	20 53 22.5	0.0
	0.2nm,0.5s,baz=247,slow=0.8,SNR=2.9						
ASAR	Alice Springs	149.28	234	PKP	PKPdf	20 54 05.8	-0.4
	0.6nm,1.0s,baz=108,slow=3.0,SNR=3.3						
ASAR				PKPbc	PKPbc	20 54 09.4	-1.2
	0.7nm,0.6s,baz=120,slow=3.4,SNR=9.4						
WRA	Warramunga Arr	150.51	241	PKP	PKPdf	20 54 07.4	-0.8
	0.5nm,0.9s,baz=105,slow=2.9,SNR=3.7						
WRA				PKPbc	PKPbc	20 54 12.9	-0.9
	0.6nm,0.4s,baz=107,slow=2.7,SNR=28						
WRA				pPKPbc	pPKPbc	20 54 56.1	-1.6
	0.5nm,0.7s,baz=108,slow=2.7,SNR=2.2						

MEX 11 20:49:49.6±0.6, **1729N**×**9515W**, **h77**km±7km, **MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.32	128	iP	Pn	20 50 00.3	-1.3
CMIG				iS	Sn	20 50 08.8	-1.7
OXX	Oaxaca	1.52	262	iS	Sn	20 50 32.5	-1.8
VHO	Vista Hermosa	1.53	262	iP	Pn	20 50 14.4	-0.8
VHO				iS	Sn	20 50 33.0	-1.6
HUIG	Huatulco	1.77	212	iP	Pn	20 50 16.7	-1.7
HUIG				iS	Sn	20 50 38.8	-1.4

*ISCJB **11** 20:53:45.1±0.5, 934S±006×12555E±007, h10km, mb4.2/9, MS3.5/2, Error ellipse: s-maj=9.6km s-min=8.2km az=151.5*
*NEIC **11** 20:53:47.8±0.5, 936S×12524E, h10km, mb4.3/6, Error ellipse: s-maj=17.7km s-min=9.8km az=81.0*
*IDC **11** 20:53:47.7±1.1, 9.11S×12524E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/12, mbtmp4.0/4, MS3.5/3, Ms1 3.5/3, ms1mx3.1/26, Error ellipse: s-maj=25.4km s-min=23.2km az=58.0*
ISC 11 20:53:47.3±0.5, **934S**±006×**12547E**±006, **h10**km, **n28**, σ**1s04**/29, **mb4.2**/9, **MS3.5**/2, **1C, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	1.98	244	Pn	Pn	20 54 22.2	+1.3
	43nm,0.3s,baz=88,slow=1.7,SNR=53						
BATI				Sn	Sn	20 54 46.1	+0.4
	137nm,0.3s,baz=266,slow=23,SNR=12						
BATI				LR	LR	20 55 13.8	
	comp=Z,556nm,19.4s,baz=109,slow=45						
FITZ	Fitzroy Crossi	8.71	179	eP	Pn	20 55 53.1	-0.4
	31nm,0.5s						
FITZ				eS	Sn	20 57 25.7	-6.2
FITZ	Fitzroy Crossi	8.71	179	Pn	Pn	20 55 53.8	+0.3
	3.0nm,0.3s,baz=8.8,slow=14,SNR=66						
FITZ				Sn	Sn	20 57 25.2	-6.6
	6.7nm,0.3s,baz=152,slow=10,SNR=9.2						
FITZ				LR	LR	20 59 59.1	
	comp=Z,167nm,18.6s,baz=168,slow=42						
MBWA	Marble Bar	12.99	205	ePn	Pn	20 56 50.7	-1.4
MBWA				eSn	Sx	20 59 03.5	
WRA	Warramunga Arr	13.59	142	Pn	Pn	20 56 59.4	-0.9
	0.7nm,0.3s,baz=321,slow=14,SNR=40						
WRA				Sn	Sx	20 59 24.8	
	0.9nm,0.3s,baz=309,slow=23,SNR=7.3						
WB2	Warramunga Arr	13.59	142⇑	iP	Pn	20 56 59.8	-0.5
WB2				eS	Sx	20 59 21.6	
ASAR	Alice Springs	16.37	152	Pn	Pn	20 57 36.9	-0.5
	0.7nm,0.3s,baz=318,slow=11,SNR=40						
ASAR				Sn	Sx	21 00 30.4	
	0.5nm,0.3s,baz=318,slow=21,SNR=12						
CTA	Charters Tower	22.74	120	P	P	20 58 55.6	+5.8
	2.8nm,0.7s,mb3.8,baz=289,slow=11,SNR=5.2						
CTAO	Charters Tower	22.74	120	eP	P	20 58 56.2	+6.4
NWAO	Narrogin (SRO)	24.68	197	LR	LR	21 10 19.5	
	comp=Z,104nm,18.5s,MS3.4,baz=171,slow=40						
STKA	Stephens Creek	26.96	149	eP	P	20 59 33.1	+3.9
	9.4nm,1.9s,mb4.0						
STKA	Stephens Creek	26.96	149	P	P	20 59 32.9	+3.7
	1.5nm,0.6s,mb3.7,baz=309,slow=10,SNR=3.9						
STKA				LR	LR	21 11 34.0	
	comp=Z,139nm,18.7s,MS3.5,baz=24,slow=39						
KULM	Kulim	28.69	299	P	P	20 59 44.0	-0.9
HNR	Honiara	34.01	93	P	P	21 00 34.2	+2.5
LSA	Lhasa	50.97	321	eP	P	21 02 47.8	-1.6
	1.2nm,0.6s,mb4.0						
SONM	Songino Array	59.38	345	P	P	21 03 50.8	+1.0
	0.4nm,0.5s,mb3.7,baz=164,slow=9.8,SNR=4.0						
MKAR	Makanchi Array	67.83	329	P	P	21 04 45.0	-0.6
	2.2nm,0.8s,mb4.2,baz=136,slow=7.6,SNR=20						
TKM2	Tokmak 2	69.03	323	P	P	21 04 54.1	+0.8
AAK	Ala-Archa	69.52	322	eP	P	21 04 56.4	+0.1
	0.8nm,0.5s,mb3.9						
EKS2	Erkin-Say	69.97	322	P	P	21 04 58.7	-0.4
KURK	Kurchatov	72.26	331	eP	P	21 05 12.6	-0.1
	2.4nm,0.8s,mb4.2						
BRVK	Borovoye	77.79	330	P	P	21 05 44.0	-0.7
QSPA	South Pole Qui	80.66	180	eP	P	21 06 03.0	+3.0
	61nm,2.5s,mb5.1						
KMBO	Kilima Mbogo	88.06	269	P	P	21 06 40.1	+1.3
KIV	Kislovodsk	91.26	314	P	P	21 06 52.7	-0.4
MALT	Malatya	93.41	308	eP	P	21 07 03.4	+0.2
	4.4nm,1.4s,mb4.7						
OBN	Obninsk	96.95	325	P	P	21 07 18.1	-0.9
TORD	Torodi Ar. Bea	124.81	280	PKP	PKPdf	21 12 50.6	+2.1
	0.6nm,1.0s,baz=61,slow=0.9,SNR=2.6						

*ISCJB **11** 20:56:29.0±0.5, 3653N±002×3585E±004, h8km±5km, Error ellipse: s-maj=5.2km s-min=3.9km az=161.3*
*CSEM **11** 20:56:28.7±0.1, 3654N×3592E, h20km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.7km az=65.0*
*DDA **11** 20:56:28.5, 3641N×3588E, h3km, Md3.0*
*ISK **11** 20:56:28.7, 3652N×3590E, h20km, MD3.3*
*NSSC **11** 20:56:30.5, 3651N×3595E, h18km±2km*
ISC 11 20:56:29.5±0.5, **3653N**±002×**3587E**±004, **h14**km±4km, **n24**, σ**0s87**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COBT	Iskenderun	0.31	91	iP	Pg	20 56 35.5	-0.5
COBT				iS	Sg	20 56 40.0	-0.3
KRTS	Karatas	0.40	277	PG	Pg	20 56 38.1	+0.7
HTY	Hatay	0.46	151	PG	Pg	20 56 38.2	-0.3
HTY				SG	Sg	20 56 45.1	+0.4
CEYT	Ceyhan	0.49	349	PG	Pg	20 56 39.1	-0.1
DRWC	Darouich	0.65	81	⇑P	Pg	20 56 41.9	-0.3
DRWC				⇑S	Sg	20 56 50.2	-0.6
DRWC	Darouich	0.65	81⇑	iP	Pg	20 56 41.9	-0.3
DRWC				⇑iS	Sg	20 56 50.2	-0.6
ARNB	Al Arnab	0.67	173	⇑P	Pg	20 56 43.4	+1.0
ARNB				⇑S	Sg	20 56 51.6	+0.3
BTCH	Batrach	0.68	135	⇑P	Pg	20 56 43.0	+0.2
BTCH				⇑S	Sg	20 56 52.0	+0.3
BTCH	Batrach	0.68	135⇑	iP	Pg	20 56 43.0	+0.2
BTCH				⇑iS	Sg	20 56 52.0	+0.2

KOZT	Kozan	0.95	358	ePG	Pg	20 56 48.4	+0.5
SLNF	Slenfeh	0.97	163	⇑P	Pb	20 56 47.9	-0.2
SLNF				⇑S	Sb	20 57 00.9	+0.2
SLNF	Slenfeh	0.97	163	⇑iP	Pb	20 56 47.9	-0.2
SLNF				⇑iS	Sb	20 57 00.9	+0.2
KARA	Karaisali	0.98	319	ePG	Pg	20 56 47.3	-1.1
WRDH	Warideh	1.11	156	⇑P	Pb	20 56 50.3	0.0
WRDH				⇑S	Sb	20 57 04.3	-0.3
WRDH	Warideh	1.11	156	⇑iP	Pb	20 56 50.3	-0.1
WRDH				⇑iS	Sb	20 57 04.3	-0.3
ANDN	Andirin	1.12	20	iP	Pb	20 56 52.3	+1.7
ANDN				iS	Sb	20 57 08.3	+3.2
MERS	Mersin	1.13	288	ePN	Pn	20 56 49.7	-1.2
GAZ	Gaziantep	1.26	59	ePN	Pn	20 56 51.2	-1.4
KMRS	Kahramanmaras	1.28	40	ePN	Pn	20 56 52.8	-0.1
GZT	Gaziantep	1.59	58	iP	Pn	20 57 00.5	+3.3
GZT				iS	Sn	20 57 21.0	+3.4
IKL	Isikli	1.78	261	ePN	Pn	20 56 59.7	-0.1
NIG	Nigde	1.87	328	ePN	Pn	20 57 01.3	+0.2
URFA	Urfa	2.54	68	ePN	Pn	20 57 09.4	-0.8
MALT	Malatya	2.71	48	ePN	Pn	20 57 11.6	-1.0

*ISCJB **11** 21:09:51.2±2.2, 18.1S±02×69.72W±007, h134km±12km, mb4.0/3, Error ellipse: s-maj=36.1km s-min=10.9km az=4.5*
*NEIC **11** 21:09:56.2±1.3, 17.92S×69.40W, h156km±9km, mb4.4/1, Error ellipse: s-maj=21.7km s-min=10.0km az=199.0*
*IDC **11** 21:09:57.2±4.1, 17.81S×69.37W, h160km±27km, mb4.1/2, mb1 4.3/3, mb1mx3.6/16, mbtmp4.1/3, Error ellipse: s-maj=53.7km s-min=34.5km az=23.0*
ISC 11 21:09:51.8±2.1**, 18.2S**±02×**69.72W**±007**, h124**km±11km**, n17, σ1s15**/18**, mb4.2**/3**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.40	315	⇑iP	Pn	21 10 31.1	+0.6
ARE				eS	Sn	21 10 59.0	-1.1
LPAZ	La Paz	2.42	39	P	Pn	21 10 33.1	+2.5
	22nm,0.3s,baz=240,slow=5.8,SNR=426						
LPAZ				S	Sn	21 11 00.4	-0.1
	4.5nm,0.3s,baz=37,slow=16,SNR=5.1						
SIV	San Ignacio	8.55	77	P	Pn	21 11 51.8	-0.9
	11nm,0.3s,baz=267,slow=9.2,SNR=94						
NNA	Nana	9.23	311	Pn	Pn	21 12 07.1	+5.2
NNA				S	Sn	21 13 34.2	-10
NNA	Nana	9.23	311	P	Pn	21 11 59.3	-2.6
	2.3nm,0.3s,baz=137,slow=15,SNR=4.9						
NNA				S	Sn	21 13 34.2	-10
	1.5nm,0.3s,baz=209,slow=19,SNR=3.7						
PAYG	Puerto Ayora	26.66	308	P	P	21 15 20.5	+1.2
JTS	JuntasAbangare	32.03	331	eP	P	21 16 08.7	+1.9
	4.5nm,0.7s,mb4.3						
SJG	San Juan	36.23	6	P	P	21 16 41.9	-1.0
HBAR	Harrisburg	57.01	340	eP	P	21 19 24.3	-0.3
BRNJ	Basking Ridge	58.73	356	eP	P	21 19 35.8	-0.6
WMOK	Wichita Mounta	59.43	332	P	P	21 19 42.4	+0.9
TORD	Torodi Ar. Bea	76.99	71	P	P	21 21 30.6	-0.8
	1.5nm,0.6s,mb3.9,baz=252,slow=5.4,SNR=29						
YKA	Yellowknife Ar	87.81	341	P	P	21 22 26.1	-0.4
YKA	Yellowknife Ar	87.81	341	P	P	21 22 26.1	-0.4
	1.5nm,0.5s,mb4.3,baz=134,slow=4.9,SNR=36						
ASAR	Alice Springs	132.45	210	PKP	PKPdf	21 28 53.6	+1.3
	0.3nm,0.6s,baz=127,slow=2.4,SNR=3.9						
WRA	Warramunga Arr	135.36	213	PKP	PKPdf	21 28 59.5	+1.6
	0.4nm,0.6s,baz=144,slow=1.5,SNR=9.7						
SONM	Songino Array	150.25	5	PKPbc	PKPbc	21 29 29.0	+0.8
	0.5nm,0.5s,baz=329,slow=1.5,SNR=6.3						

*NEIC **11** 21:12:16.1, 31.60S×69.65W, h158km, mb4.4/2, After GUC.*
GUC 11 21:12:16.1±0.7**, 31.60S**×**69.65W, h158**km±10km**, ML3.2, 9C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.74	325	⇑iP	Pn	21 12 49.7	+1.0
TLL				iS	Sn	21 13 14.8	+1.0
TLL	Tololo Astrono	1.74	325	⇑iP	Pn	21 12 49.7	+1.0
TLL				iS	Sn	21 13 14.8	+1.0
TLL				AML	AML	21 13 20.6	
	comp=N,154nm,0.2s						
PEL	Peldehue	1.77	209	⇑iP	Pn	21 12 49.7	+0.6
PEL				iS	Sn	21 13 15.1	+0.6
PEL				AML	AML	21 13 19.1	
	comp=E,322nm,0.4s						
FCH	Farellones	1.81	197	⇑iP	Pn	21 12 50.2	+0.7
FCH				iS	Sn	21 13 17.1	+1.8
FCH				AML	AML	21 13 19.7	
	comp=N,140nm,0.3s						
PCH	Pirque	2.14	200	⇑iP	Pn	21 12 54.3	+1.0
PCH				iS	Sn	21 13 24.7	+2.7
LSCH	La Serena	2.17	320	⇑iP	Pn	21 12 54.4	+0.7
LSCH				iS	Sn	21 13 23.0	+0.4
LMEL	Las Melosas	2.29	192	eP	Pn	21 12 56.1	+1.1
LMEL				iS	Sn	21 13 26.6	+1.4
LMEL	Las Melosas	2.29	192	eP	Pn	21 12 56.1	+1.1
LMEL				iS	Sn	21 13 26.6	+1.4
LMEL				AML	AML	21 13 37.1	
	comp=N,81nm,0.2s						
TACH	Talagante	2.32	208	⇑iP	Pn	21 12 56.1	+0.8
TACH				iS	Sn	21 13 26.1	+0.3
CHCH	Chadas Angostu	2.48	200	⇑iP	Pn	21 12 58.1	+0.8
CACH	El Canelo	2.64	197	⇓iP	Pn	21 13 00.5	+1.3
LCO	Las Campanas	2.73	340	ePn	Pn	21 13 00.8	+0.3
LCO				eSn	Sn	21 13 29.4	-5.4
LNV	Longovilo	2.78	212	iP	Pn	21 13 01.1	+0.2
CICH	Cipreses	2.79	193	⇑iP	Pn	21 13 02.0	+0.9
SFDO	San Fernando	3.22	200	eP	Pn	21 13 06.9	+0.4
TRQA	Tornquist	9.01	138	eP	Pn	21 14 18.1	-4.7
	comp=N,10nm,0.8s						
WUAZ	Wupatki	77.41	326	P	P	21 23 53.8	+0.2
	comp=N,2.9nm,0.4s						

IDC 11 21:13:27.6±1.8**, 1.38N**×**126.09E, h0**km**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/15**, mbtmp3.9**/4**, Error ellipse: s-maj=171.3km s-min=23.0km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.68	160	P	P	21 18 31.7	+0.8
	3.3nm,0.7s,baz=338,slow=11,SNR=36						
WB2	Warramunga Arr	22.69	159	eP	P	21 18 31.7	+0.8
ASAR	Alice Springs	26.03	164	P	P	21 19 03.2	+0.6
	0.8nm,0.6s,baz=344,slow=11,SNR=7.8						
STKA	Stephens Creek	36.20	157	P	P	21 20 30.7	-1.4
	3.0nm,0.7s,baz=337,slow=11,SNR=4.7						
MKAR	Makanchi Array	59.12	326	P	P	21 23 30.1	+0.1
	0.6nm,0.6s,baz=118,slow=8.9,SNR=8.4						

*IDC **11** 21:22:00.3±1.3, 35.10N×23.98E, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.4/19, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=27.5km s-min=9.8km az=172.0*
*ISCJB **11** 21:22:02.0±0.8, 35.03N±005×24.06E±007, h21km±6km, mb3.6/6, Error ellipse: s-maj=10.1km s-min=9.1km az=178.8*
*CSEM **11** 21:22:02.2±0.2, 35.03N×23.92E, h2km, ML3.3, Error ellipse: s-maj=6.9km s-min=3.0km az=51.0*
*ATH **11** 21:22:02.4, 35.09N×24.00E, h17km±4km, MD3.6/5*
*NEIC **11** 21:22:04.0, 35.01N×24.15E, h10km, ML3.3(ATH), After ATH.*
ISC 11 21:22:02.5±0.9**, 35.03N**±005×**24.08E**±007**, h11**km±6km**, n26, σ1s42**/27**, mb3.6**/6**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.19	178	P	Pg	21 22 07.4	+0.8
VAM	Vamos	0.39	15	ePB	Pg	21 22 09.5	-0.7
VAM				eSB	Sg	21 22 15.8	+0.3
VAM	Vamos	0.39	15	P	Pg	21 22 09.3	-0.9
IDI	Anoyia	0.71	69	Pg	Pg	21 22 15.1	-1.3
	17nm,0.3s,baz=254,slow=16,SNR=122						
IDI				Lg		21 22 25.7	
	85nm,0.3s,baz=345,slow=20,SNR=34						
NPS	Neapolis	1.28	79	ePN	Pn	21 22 27.2	+1.0
NPS	Neapolis	1.28	79	ePb	Pb	21 22 27.5	+1.0
VLI	Veliai	1.92	332	ePN	Pn	21 22 35.7	+0.6
VLI	Veliai	1.92	332	ePn	Pn	21 22 35.0	-0.1
APE	Apeiranthos	2.35	30	ePB	Pb	21 22 42.1	-2.7
APE	Apeiranthos	2.35	30	ePn	Pn	21 22 44.0	+3.0
KARP	Karpathos	2.57	78	ePB	Pb	21 22 47.0	-1.6
ITM	Ithomi	2.76	322	P	Pn	21 22 52.5	+5.8
SMG	Samos	3.48	39	P	Pn	21 22 57.1	+0.6
ARG	Arkhangelos	3.50	69	ePN	Pn	21 22 59.2	+2.4
LKR	Lokris	3.72	347	P	Pn	21 23 01.4	+1.6
NEO	Neokhori	4.32	351	P	Pn	21 23 10.6	+2.5
BRTR	Keskin Array B	8.94	56	Pn	Pn	21 24 11.3	-0.1
	0.0nm,0.3s,baz=235,slow=14,SNR=2.7						
GERES	GERESS Array B	15.79	334	Pn	Pn	21 25 46.7	+2.0
	0.2nm,0.3s,baz=141,slow=11,SNR=7.3						
KHC	Kasperske Hory	16.08	334	eP	Pn	21 25 52.6	+4.3
KHC				ex	x	21 25 57.0	
AKASG	Malin Array Be	16.10	12	Pn	Pn	21 25 47.5	-1.1
	0.8nm,0.3s,baz=202,slow=11,SNR=7.4						
ESDC	Sonseca Array	22.73	290	P	P	21 27 02.3	-2.0
	0.1nm,0.4s,mb2.6,baz=82,slow=9.2,SNR=3.2						
HFS	Hagfors	26.01	348	P	P	21 27 34.3	-0.8
	2.5nm,0.8s,mb3.8,baz=140,slow=9.5,SNR=5.7						
FINES	FINESS Array B	26.46	2	P	P	21 27 37.2	-2.0
	0.6nm,0.8s,mb3.2,baz=159,slow=12,SNR=2.8						
TORD	Torodi Ar. Bea	29.73	228	P	P	21 28 08.4	-0.4
	7.9nm,0.5s,mb4.7,baz=25,slow=8.0,SNR=9.5						
ARCES	ARCESS Array B	34.57	1	P	P	21 28 49.2	-1.5
	1.7nm,0.9s,mb4.0,baz=180,slow=7.3,SNR=5.4						
MKAR	Makanchi Array	44.59	56	P	P	21 30 14.3	-0.1
	0.3nm,0.3s,mb3.6,baz=286,slow=6.1,SNR=6.1						

*NEIC **11** 21:41:34.4, 37.82S×176.74E, h5km, ML3.7(WEL), After WEL.*
NEIC Felt in the Bay of Plenty area.
WEL 11 21:41:34.2±0.1**, 37.82S**×**176.74E, h5**km**, ML3.6**/11**, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.15	259	PG	Pg	21 41 37.6	+0.3
OPRZ				SG	Sg	21 41 40.0	+0.8
OPRZ				SG	Sg	21 41 40.1	+0.8
MARZ	Manawahe	0.18	197	P	Pg	21 41 38.1	+0.3
MARZ				S	Sg	21 41 41.2	+1.0
MARZ	Manawahe	0.18	197	PG	Pg	21 41 38.1	+0.4
MARZ				SG	Sg	21 41 41.2	+1.0
EDRZ	Edgecumbe	0.29	180	P	Pg	21 41 40.3	+0.4
EDRZ	Edgecumbe	0.29	180	PG	Pg	21 41 40.3	+0.4
LIRZ	Lichensteins R	0.34	236	P	Pg	21 41 41.4	+0.6
LIRZ				S	Sg	21 41 46.6	+1.3
LIRZ	Lichensteins R	0.34	236	PG	Pg	21 41 41.4	+0.6
LIRZ				SG	Sg	21 41 46.4	+1.2
MKRZ	Makatiti	0.39	214	PG	Pg	21 41 42.7	+0.9
TGRZ	Tauranga	0.39	283	P	Pg	21 41 42.4	+0.6
TGRZ				S	Sg	21 41 47.6	+0.7
TGRZ	Tauranga	0.39	283	PG	Pg	21 41 42.4	+0.6
TGRZ				SG	Sg	21 41 47.6	+0.7
KARZ	Kaharoa	0.44	242	P	Pg	21 41 43.3	+0.5
KARZ				S	Sg	21 41 49.1	+0.5
KARZ	Kaharoa	0.44	242	PG	Pg	21 41 43.3	+0.5
KARZ				SG	Sg	21 41 49.1	+0.6
TAZ	Tarawera	0.45	204	P	Pg	21 41 44.2	+1.2
TAZ	Tarawera	0.45	204	PG	Pg	21 41 44.2	+1.2
WIZ	White Island	0.46	51	PG	Pg	21 41 43.6	+0.5
WIZ				SG	Sg	21 41 49.9	+0.9
URZ	Urewera	0.53	147	P	Pg	21 41 44.1	-0.4
URZ	Urewera	0.53	147	PG	Pg	21 41 44.1	-0.4
UTU	Utuhina	0.56	230	PG	Pg	21 41 45.9	+0.8
MYRZ	Mayor Island	0.67	323	P*	Pb	21 41 47.7	-0.6
PATZ	Paeroa	0.68	214	P	Pg	21 41 48.6	+1.3
PATZ	Paeroa	0.68	214	P*	Pb	21 41 48.6	0.0
MWZ	Matawai	0.81	130	P	Pg	21 41 49.6	-0.2
MWZ	Matawai	0.81	130	P*	Pb	21 41 49.6	-1.2
TOZ	Tahuroa Road	0.99	275	P	Pg	21 41 51.9	-1.3
TOZ	Tahuroa Road	0.99	275	P*	Pb	21 41 51.9	-1.9
PUZ	Puketiti	1.23	103	eP*	Pb	21 41 57.1	-0.8
KUZ	Kuaotunu	1.34	322	PN	Pn	21 41 58.3	-1.4
KNZ	Kokohu	1.41	149	ePN	Pn	21 42 00.2	-0.4

IDC 11 21:54:23.4±19.0**, 22.25S**×**174.76W, h0**km**, mb4.2**/5**, mb1 4.3**/5**, mb1mx4.0**/15**, mbtmp4.2**/5**, Error ellipse: s-maj=352.5km s-min=149.4km az=81.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.35	266	P	P	22 01 29.8	+0.5
	2.9nm,0.3s,baz=91,slow=11,SNR=6.5						
STKA	Stephens Creek	39.81	247	P	P	22 01 58.8	+0.4
	1.3nm,0.3s,baz=63,slow=4.5,SNR=3.9						
ASAR	Alice Springs	47.08	258	P	P	22 02 56.9	-0.3
	1.1nm,0.5s,baz=98,slow=6.8,SNR=16						
WRA	Warramunga Arr	47.37	263	P	P	22 02 58.9	-0.6
	1.0nm,0.3s,baz=103,slow=8.4,SNR=68						
FITZ	Fitzroy Crossi	55.80	263	P	P	22 04 02.8	+0.2
	1.5nm,0.8s,baz=105,slow=20,SNR=3.9						

*ISCJB **11** 21:57:35.0±0.6, 39.08N±003×23.16E±005, h11km±6km, Error ellipse: s-maj=7.1km s-min=4.3km az=14.8*
*ATH **11** 21:57:34.8, 39.10N×23.12E, h21km±4km, MD3.1/7, ML3.1*
*NEIC **11** 21:57:34.6, 39.10N×23.10E, h23km, MD3.1(ATH), After ATH.*
*CSEM **11** 21:57:35.8±0.1, 39.09N×23.13E, h15km, MD3.1, Error ellipse: s-maj=3.0km s-min=1.3km az=92.0*
*THE **11** 21:57:35.3, 39.05N×23.16E, h8km, ML3.1*
ISC 11 21:57:35.5±0.5**, 39.07N**±003×**23.17E**±005**, h14**km±5km**, n17, σ0s93**/25**, 1C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.24	11	ePB	Pg	21 57 40.9	+0.2
NEO				eSB	Sg	21 57 44.4	+0.2
XOR	Xorichti	0.29	4	ePg	Pg	21 57 41.9	+0.3
LKR	Lokris	0.44	197	⇑iPB	Pg	21 57 44.2	-0.1
LKR				eSB	Sg	21 57 50.8	+0.6
LKR	Lokris	0.44	197	ePb	Pg	21 57 44.2	-0.1
LKR				eSb	Sg	21 57 50.8	+0.6
AOS	Alonnisos	0.56	80	ePg	Pg	21 57 46.6	0.0
AGG	Agios Georgios	0.65	266	ePg	Pg	21 57 47.3	-0.9
AGG				eSg	Sg	21 57 57.0	+0.1
PAIG	Paliouri	0.94	25	ePg	Pg	21 57 53.7	0.0
PAIG				eSg	Sg	21 58 07.7	+1.6
LIT	Litokhoron	1.15	333	ePg	Pg	21 57 56.7	-1.0
LIT				eSg	Sg	21 58 14.4	+1.7
PTL	Penteli	1.16	152	ePN	Pn	21 57 58.0	+0.8
ATH	Athens Observa	1.18	158	ePB	Pb	21 57 57.0	-0.6
PLG	Polygyros	1.32	9	⇓iPN	Pn	21 57 59.7	+0.3
PLG				eSN	Sn	21 58 16.1	-0.6
PLG	Polygyros	1.32	9	ePg	Pg	21 57 59.2	-1.6
PLG	Polygyros	1.32	9	⇓ePn	Pn	21 57 59.7	+0.3
PLG				eSn	Sn	21 58 16.1	-0.6
KVR	Kavouri	1.33	159	ePN	Pn	21 58 01.0	+1.4
NAIG	Nisos Aigina	1.34	169	ePB	Pb	21 57 59.5	-0.8
OUR	Ouranopolis	1.41	26	ePg	Pg	21 58 00.5	-2.0
KNT	Kendrikon	2.10	354	ePn	Pn	21 58 10.5	+0.4

*ISCJB **11** 22:01:19.9±0.8, 34.80N±005×136.85E±005, h13km, Error ellipse: s-maj=7.2km s-min=5.5km az=147.8*
*JMA **11** 22:01:19.2, 34.87N×136.88E, h13km±1km, M2.6*
JMA Felt I J1.
ISC 11 22:01:20.4±0.8**, 34.80N**±005×**136.85E**±005**, h13**km**, n5, σ0s53**/9**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAA	Atsumi	0.29	124	P	Pg	22 01 25.7	-0.7
JAA				S	Sg	22 01 30.4	0.0
TSUJ	Tsu 2	0.36	256	P	Pg	22 01 27.2	-0.5
TSUJ				S	Sg	22 01 32.8	+0.2
JIE	Ise	0.42	196	P	Pg	22 01 28.7	0.0
JIE				S	Sg	22 01 35.4	+1.1
JKN2	Miekihoku	0.73	221	P	Pg	22 01 33.9	-0.7
MAT	Matsushiro	2.06	32	P	Pn	22 01 54.9	+0.2
MAT				S	Sn	22 02 20.8	+0.5

IDC 11 22:09:23.1±13.0**, 14.27N**×**145.27E, h170**km±130km**, mb3.2**/7**, mb1 3.4**/7**, mb1mx3.3**/17**, mbtmp3.2**/7**, Error ellipse: s-maj=44.8km s-min=22.3km az=72.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.65	198	P	P	22 16 04.7	-0.3
	0.6nm,0.5s,baz=21,slow=9.6,SNR=12						
ASAR	Alice Springs	39.30	197	P	P	22 16 35.8	+0.2
	0.5nm,0.8s,baz=19,slow=12,SNR=4.4						
SONM	Songino Array	46.41	324	P	P	22 17 33.1	+0.7
	0.7nm,0.7s,baz=131,slow=7.4,SNR=7.5						
SONM				PcP	PcP	22 19 05.2	+0.7
	0.3nm,0.6s,baz=134,slow=2.2,SNR=2.8						
MKAR	Makanchi Array	61.27	316	P	P	22 19 20.7	+0.3
	0.3nm,0.5s,baz=90,slow=8.1,SNR=4.6						
YKA	Yellowknife Ar	82.08	27	P	P	22 21 23.0	-1.3
	0.2nm,0.5s,baz=287,slow=5.1,SNR=4.6						
NVAR	Mina Array Bea	86.20	51	P	P	22 21 47.1	+1.6
	0.2nm,0.4s,baz=272,slow=4.4,SNR=3.5						
FINES	FINESS Array B	90.71	335	P	P	22 22 04.7	-1.7
	1.3nm,0.7s,baz=60,slow=8.2,SNR=9.7						

*ISCJB **11** 22:09:53.7±0.5, 45.03N±002×14.96E±004, h10km±3km, Error ellipse: s-maj=4.3km s-min=3.7km az=173.6*
*VIE **11** 22:09:53.1±0.5, 45.01N×15.07E, h10km±1km, mb2.4/2, ML3.0/3, Error ellipse: s-maj=3.2km s-min=2.3km az=165.0 64 km SE of Rijeka*
*NEIC **11** 22:09:54.3±1.0, 45.03N×15.00E, h5km, ML2.6(LJU), Error ellipse: s-maj=11.1km s-min=4.3km az=130.0*
*CSEM **11** 22:09:54.2±0.1, 45.01N×15.13E, h0km, ML3.3/6, Error ellipse: s-maj=2.6km s-min=1.8km az=91.0*
*LDG **11** 22:09:55.0±0.4, 45.04N×15.19E, h10km, Ml2.8/5, Error ellipse: s-maj=10.1km s-min=4.7km az=139.0*
*PRU **11** 22:09:58.2, 45.27N×15.09E, h0km*
ISC 11 22:09:54.7±0.5**, 45.02N**±002×**15.01E**±004**, h6**km±3km**, n60, σ1s12**/97**, 10C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	0.47	192	ePg	Pg	22 10 03.7	+0.1
NVLJ				Sg	Sg	22 10 11.3	+1.5
BOJS	Bojanci	0.51	19	⇓iPg	Pg	22 10 04.2	-0.4
BOJS				iSg	Sg	22 10 11.0	-0.2
BOJS	Bojanci	0.51	19	⇓iPg	Pg	22 10 04.2	-0.4
BOJS				iSg	Sg	22 10 11.0	-0.2
BOJS							
	comp=Z,160nm,0.2s						
BOJS	Bojanci	0.51	19	⇓iPg	Pg	22 10 04.2	-0.4
BOJS				iSg	Sg	22 10 11.0	-0.2
	comp=Z,160nm,0.2s						
VISS	Visnje	0.79	351	iPg	Pg	22 10 08.9	-1.0
VISS				eSg	Sg	22 10 20.2	0.0
VISS	Visnje	0.79	351	iPg	Pg	22 10 08.9	-1.0
VISS				eSg	Sg	22 10 20.2	0.0
VISS							
	comp=Z,76nm,0.1s						
VISS	Visnje	0.79	351	iPg	Pg	22 10 08.9	-1.0
VISS				eSg	Sg	22 10 20.2	0.0
	comp=Z,76nm,0.1s						
CEY	Cerknica	0.83	330	ePg	Pg	22 10 09.9	-0.7
CEY				eSg	Sg	22 10 22.7	+1.4
CEY	Cerknica	0.83	330	ePg	Pg	22 10 09.9	-0.7
CEY				eSg	Sg	22 10 22.7	+1.4
CEY							
	comp=Z,246nm,0.3s						
CEY	Cerknica	0.83	330	ePg	Pg	22 10 09.9	-0.7
CEY				eSg	Sg	22 10 22.7	+1.4
	comp=Z,246nm,0.3s						
CRES	Cresnjev	0.86	21	ePg	Pg	22 10 10.8	-0.4
SKDS	Skadanscina	0.88	307	⇓iPg	Pg	22 10 10.3	-1.2
LEGS	Legarje	0.95	13	ePg	Pg	22 10 12.0	-1.0
PDKS	Podkum	1.04	360	iPg	Pg	22 10 13.7	-0.9
SISC	Sisak	1.06	64	ePg	Pg	22 10 15.5	+0.5
SISC				Sg	Sg	22 10 30.8	+1.9
LJU	Ljubljana	1.08	342	ePg	Pg	22 10 15.5	+0.1
LJU				eSg	Sg	22 10 29.3	0.0
JAVS	Javornik	1.10	323	ePg	Pg	22 10 14.0	-1.8
VNDS	Vrh nad Dolski	1.10	349	iPg	Pg	22 10 14.9	-1.0
VOJS	Vojsko	1.28	322	iPg	Pg	22 10 17.6	-1.7
GORS	Gorjuse	1.48	332	iPg	Pg	22 10 22.0	-1.0
DRE	Drenchia	1.50	321	⇑iPn	Pn	22 10 22.9	+0.8
DRE				iSn	Sn	22 10 44.2	+2.2
OBKA	Obir	1.52	348	⇓ePg	Pg	22 10 22.9	-0.9
OBKA				iSg	Sg	22 10 44.2	+0.6
OBKA	Obir	1.52	348	⇓ePg	Pg	22 10 22.9	-0.9
	SNR=38						
OBKA				⇑iSg	Sg	22 10 44.2	+0.6
	comp=Z,106nm,0.5s						
COLI	Coloredo	1.60	315	ePn	Pn	22 10 23.9	+0.5
COLI				eSn	Sg	22 10 47.2	+1.2
ROBS	Robic	1.61	320	iPn	Pn	22 10 24.7	+1.1
BAD	Bernadia	1.74	315	⇓iPn	Pn	22 10 26.0	+0.7
BAD				iSn	Sn	22 10 50.1	+2.3
GMNA	Gemona	1.77	316	Pn	Pn	22 10 26.9	+1.2
BUA	Buia	1.79	313	⇓iPn	Pn	22 10 26.9	+0.9
BUA				iSn	Sg	22 10 52.6	+0.5
LSR	Lussari	1.79	325	⇓iPn	Pn	22 10 27.5	+1.5
LSR				iSn	Sg	22 10 53.1	+1.0
PTCC	Patocco-Chiusa	1.81	321	Pn	Pn	22 10 27.6	+1.3
MPRI	Monte Prat	1.87	311	⇑iPn	Pn	22 10 27.9	+0.7
MPRI				iSn	Sg	22 10 55.2	+0.4
MYKA	Terra Mystica	1.87	330	⇓iPg	Pg	22 10 29.5	-1.0
MYKA				⇑iSn	Sn	22 10 50.8	-0.3
MYKA				⇑iSg	Sg	22 10 56.3	+1.5
	comp=Z,19nm,0.3s						
MLNI	Malnisio	2.03	305	⇑ePn	Pn	22 10 29.7	+0.3
MLNI				eSn	Sg	22 10 60.0	+0.2
FVI	Forni Avoltri	2.22	316	Pn	Pn	22 10 34.1	+2.2
ARSA	Arzberg	2.26	9	⇑iPn	Pn	22 10 30.9	-1.6
ARSA				⇑iPg	Pg	22 10 36.2	-1.7
ARSA	Arzberg	2.26	9	⇑iPn	Pn	22 10 30.9	-1.6
ARSA				⇑iPg	Pg	22 10 36.2	-1.7
ARSA				⇓iSn	Sn	22 10 59.0	-1.6
CTI	Castel Tesino	2.58	295	Pn	Pn	22 10 36.7	-0.1
STON	Ston	2.90	137	ePn	Pn	22 10 43.9	+2.7
STON				Sn	Sn	22 11 21.1	+4.7
APPI	Appiano	3.02	300	Pn	Pn	22 10 44.3	+1.3
WTTA	Wattenberg	3.25	315	⇓iPn	Pn	22 10 46.1	+0.1
KHC	Kasperske Hory	4.23	347	ePN	Pn	22 10 59.9	+0.4
KHC				ex	x	22 11 22.5	
KHC				eSN	Sn	22 11 47.6	-1.5
KHC				eSG	Sg	22 12 11.1	+0.8
KHC	Kasperske Hory	4.23	347	ePn	Pn	22 10 59.9	+0.4
KHC				eSn	Sn	22 11 47.6	-1.5
PRU	Pruhonice	4.98	357	eSN	Sn	22 12 04.4	-3.3
SBF	Sospel	5.55	261	ePn	Pn	22 11 17.2	-0.5
LPG	La Plagne	5.85	278	ePn	Pn	22 11 22.1	+0.3
LPG				eSn	Sn	22 12 26.0	-3.2
	comp=Z,2.7nm,0.5s						
MBDF	Montbardon	5.86	270	ePn	Pn	22 11 21.0	-1.0
MBDF				eSn	Sn	22 12 26.1	-3.4
	comp=Z,2.0nm,0.4s						
FRF	La Foret Royal	6.18	259	ePn	Pn	22 11 26.1	-0.2
HINF	Hinteralfeld	6.29	299	ePn	Pn	22 11 27.4	-0.5
HINF				eSn	Sn	22 12 35.5	-4.6
	comp=Z,3.1nm,0.4s						
HINF	Hinteralfeld	6.29	299	ePn	Pn	22 11 27.4	-0.5
HINF				eSn	Sn	22 12 35.5	-4.6
	comp=Z,1.5nm,0.4s						
CDF	Champ du Feu	6.31	305	ePn	Pn	22 11 27.8	-0.3
CDF				eSn	Sn	22 12 35.6	-4.8
	comp=Z,0.6nm,0.3s						
CDF	Champ du Feu	6.31	305	ePn	Pn	22 11 27.8	-0.3
CDF				eSn	Sn	22 12 35.6	-4.8
	comp=Z,0.3nm,0.3s						
LMR	La Mourre	6.34	258	ePn	Pn	22 11 27.7	-0.9
CLL	Collm	6.43	349	eSg	Sg	22 13 24.0	+2.9
CABF	La Chapelle	6.44	287	ePn	Pn	22 11 29.4	-0.5
ORIF	Oris-en-Rattie	6.48	272	ePn	Pn	22 11 29.8	-0.7
ORIF				eSn	Sn	22 12 40.7	-3.9
	comp=Z,1.1nm,0.3s						
HAU	Haudompre	6.68	300	ePn	Pn	22 11 32.7	-0.5
VIVF	Saint-Julien-l	7.34	272	ePn	Pn	22 11 41.7	-0.6
SMF	Signal de Mont	7.97	286	ePn	Pn	22 11 50.4	-0.5
LOR	Lormes	8.06	290	ePn	Pn	22 11 51.3	-0.9
	baz=111						
AVF	Avril sur Loir	8.32	286	ePn	Pn	22 11 55.0	-0.7

*ORF **11** 22:13:37.9, 3877N×2394E, h30km, mb3.7, ML4.6*
*NAO **11** 22:14:14.4, 4067N×2283E, h33km, mb3.4*
*LDG **11** 22:14:24.3±0.2, 4164N×2024E, h10km, Mb4.8/13, Error ellipse: s-maj=11.1km s-min=5.4km az=32.0*
*SKO **11** 22:14:25.8, 4170N×2043E, h15km, M3.3, ML3.8*
*BEO **11** 22:14:25.1±0.9, 4152N×2047E, h8km±6km, ML3.6/8*
*ISCJB **11** 22:14:26.3±0.2, 4173N±001×2045E±002, h7km±2km, mb3.7/6, Error ellipse: s-maj=2.3km s-min=1.4km az=44.6*
*TIR **11** 22:14:26.4±5.8, 4172N×2051E, h45km±62km*
*PDG **11** 22:14:26.8±0.8, 4174N×2047E, h0km±11km, MD3.7/9, ML3.7/8, Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
*NEIC **11** 22:14:26.8, 4174N×2047E, h0km, MD3.9(ATH), ML4.2(THE), ML3.7(PDG), After PDG.*
*CSEM **11** 22:14:27.0±0.0, 4180N×2055E, h8km, ML3.6, Error ellipse: s-maj=1.2km s-min=0.9km az=43.0*
*THE **11** 22:14:28.3, 4171N×2055E, h3km, ML4.2*
*ATH **11** 22:14:28.9, 4171N×2052E, h29km±10km, MD3.9/12*
*PRU **11** 22:14:28.6, 4178N×2065E, h0km*
*IDC **11** 22:14:31.3±2.4, 4174N×2041E, h35km±23km, mb3.4/8, mb1 3.7/14, mb1mx3.6/25, mbtmp3.6/14, ML3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/31, Error ellipse: s-maj=13.7km s-min=11.0km az=170.0*

ISC 11 22:14:27.2±0.3, 4170N±001×2047E±001, h1km±2km, n273, σ1.24/368, mb3.7/6, 42C-15D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.03	231	ePg	Pg	22 14 27.6	-0.1
PUK	Puka	0.55	309	ePG	Pg	22 14 36.3	-1.5
PUK				iSG	Sg	22 14 45.8	+0.9
TIR	Tirane	0.57	232	ePg	Pg	22 14 40.0	+1.7
TIR				eSg	Sg	22 14 49.1	+3.5
TIR	Tirane	0.57	232	ePG	Pg	22 14 37.9	-0.3
TIR				iSG	Sg	22 14 48.8	+3.2
OHR	Ohrid	0.64	157	⇑iPg	Pg	22 14 38.3	-1.2
OHR				iSg	Sg	22 14 48.5	+0.8
OHR				eLg		22 14 49.1	
	comp=E,4µm,0.6s						
OHR				eLg		22 14 49.6	
	comp=N,3µm,0.4s						
OHR	Ohrid	0.64	157	ePg	Pg	22 14 40.5	+1.0
OHR				eSg	Sg	22 14 48.9	+1.2
KRUS	Krusevo	0.67	119	⇑iPg	Pg	22 14 40.0	-0.1
KRUS				iSg	Sg	22 14 50.9	+2.0
SKO	Skopje	0.78	69	ePg	Pg	22 14 43.5	+1.4
SKO				eSg	Sg	22 14 54.1	+1.9
SKO	Skopje	0.78	69	⇑iPg	Pg	22 14 41.8	-0.3
SKO				iSg	Sg	22 14 53.5	+1.3
SKO				eLg		22 14 53.8	
	comp=E,2µm,0.3s						
SKO				eLg		22 14 54.0	
	comp=N,2µm,0.3s						
SKO	Skopje	0.78	69	⇑iPg	Pg	22 14 41.7	-0.4
SKO				iSg	Sg	22 14 53.5	+1.3
SDA	Shkodra	0.80	296	ePG	Pg	22 14 41.5	-1.1
SDA				iSG	Sg	22 14 53.6	+0.5
BIA	Bitola	0.94	136	ePg	Pg	22 14 45.1	-0.1
BIA				eSg	Sg	22 14 58.9	+1.6
BIA	Bitola	0.94	136	iPg	Pg	22 14 43.8	-1.4
BIA				iSg	Sg	22 14 59.0	+1.7
BIA				iSg	Sg	22 14 59.2	+1.8
BIA	Bitola	0.94	136	ePg	Pg	22 14 45.1	-0.1
BIA				iSg	Sg	22 14 59.1	+1.8
ULC	Ulcinj	0.95	287	⇑iPg	Pg	22 14 43.7	-1.7
ULC				eSg	Sg	22 14 58.9	+1.3
ULC	Ulcinj	0.95	287	iPG	Pg	22 14 43.6	-1.8
ULC				iSG	Sg	22 14 58.9	+1.3
PVY	Plav	0.97	338	⇑iPg	Pg	22 14 43.8	-2.0
PVY				eSg	Sg	22 14 58.3	0.0
PVY	Plav	0.97	338	iPG	Pg	22 14 43.6	-2.2
PVY				iSG	Sg	22 14 58.3	0.0
KBN	Korca	1.10	167	ePG	Pg	22 14 47.8	-0.6
KBN				iSG	Sg	22 15 05.0	+2.4
FNA	Florina	1.14	143	ePg	Pg	22 14 48.9	-0.2
FNA				eSg	Sg	22 15 05.6	+1.6
PDG	Podgorica	1.16	309	⇑iPg	Pg	22 14 47.2	-2.2
PDG				eSg	Sg	22 15 05.2	+0.8
TTG	Podgorica	1.16	309	⇑iPg	Pg	22 14 47.2	-2.2
TTG				eSg	Sg	22 15 05.2	+0.8
BEY	Berane	1.24	340	iPG	Pg	22 14 49.3	-1.8
BEY				iSG	Sg	22 15 08.0	+0.8
BEY	Berane	1.24	340	⇑iPg	Pg	22 14 49.3	-1.8
BEY				eSg	Sg	22 15 08.0	+0.8
IVA	Berane	1.24	340	⇑iPg	Pg	22 14 49.3	-1.8
IVA				eSg	Sg	22 15 08.0	+0.8
STIP	Stip	1.29	90	ePg	Pg	22 14 50.5	-1.4
STIP				eSg	Sg	22 15 09.7	+1.0
STIP	Stip	1.29	90	⇑iPg	Pg	22 14 50.1	-1.8
STIP	Stip	1.29	90	⇑iPg	Pg	22 14 50.0	-1.9
STIP				eSg	Sg	22 15 09.6	+1.0
BUM	Brajici-Budva	1.31	298	⇓iPg	Pg	22 14 50.3	-2.1
BUM				eSg	Sg	22 15 10.7	+1.3
BUM	Brajici-Budva	1.31	298	iPG	Pg	22 14 50.3	-2.1
BUM				iSG	Sg	22 15 10.7	+1.3
TPE	Tepelena	1.45	194	ePN	Pn	22 14 56.1	+1.6
BARS	Barje	1.51	42	ePn	Pn	22 14 54.5	-0.8
BARS				eSn	Sn	22 15 15.3	-0.3
BARS	Barje	1.51	42	Pn	Pn	22 14 54.5	-0.8
BARS				Sn	Sn	22 15 15.3	-0.3
NKY	Niksic	1.56	316	⇑iPg	Pg	22 14 54.9	-2.2
NKY				eSg	Sg	22 15 18.6	+1.3
SJES	Sjenica	1.61	346	ePn	Pn	22 14 55.8	-1.0
SJES				eSn	Sn	22 15 18.4	+0.1
SJES	Sjenica	1.61	346	Pn	Pn	22 14 55.8	-1.0
SJES				Sn	Sn	22 15 18.4	+0.1
VAY	Valandovo	1.62	103	ePg	Pg	22 14 56.2	-2.2
VAY				eSg	Sg	22 15 19.3	-0.1
VAY	Valandovo	1.62	103	iPn	Pn	22 14 56.2	-0.7
GRG	Griva	1.64	116	ePg	Pg	22 14 57.0	-1.6
GRG				eSg	Sg	22 15 19.1	-0.6
HCY	Herceg Novi	1.65	298	ePn	Pn	22 14 55.9	-1.3
HCY				eSn	Sg	22 15 21.8	+1.7
HCY	Herceg Novi	1.65	298	iPG	Pn	22 14 55.9	-1.3
HCY				iSG	Sg	22 15 21.8	+1.7
KZN	Kozani	1.71	144	ePN	Pn	22 14 58.9	+0.8
KZN	Kozani	1.71	144	Pb	Pb	22 14 58.7	-0.7
KZN				Sb	Sb	22 15 21.2	-0.1
PLE	Pljevlja	1.81	334	⇑iPn	Pn	22 14 59.9	+0.4
PLE				eSn	Sn	22 15 25.5	+2.4
SRN	Sarande	1.85	191	ePN	Pn	22 15 01.4	+1.3
SRN	Sarande	1.85	191	ePg	Pn	22 15 01.4	+1.3
SRN				iSg	Sg	22 15 32.0	+5.3
BRY	Bratogost	1.86	311	⇑iPn	Pn	22 15 00.7	+0.5
BRY				eSn	Sn	22 15 27.1	+2.7
UPM	Unac-Piva	1.89	323	⇓iPn	Pn	22 15 01.4	+0.8
UPM				eSn	Sn	22 15 28.2	+3.1
KNT	Kendrikon	1.91	106	ePb	Pb	22 15 00.7	-2.0
MEV	Metsovon	2.00	163	ePn	Pn	22 15 02.7	+0.7
KEK	Kerkira	2.05	195	ePN	Pn	22 15 03.5	+0.7
KEK	Kerkira	2.05	195	Pn	Pn	22 15 03.7	+0.9
JAN	Janina	2.06	172	ePB	Pb	22 15 04.7	-0.7
JAN	Janina	2.06	172	P	Pg	22 15 07.4	+0.7
THE	Thessaloniki	2.17	119	ePn	Pn	22 15 04.0	-0.4
THE				eSn	Sn	22 15 31.4	-0.5
IGT	Igoumenitsa	2.17	183	ePn	Pn	22 15 05.9	+1.5
IGT				eSn	Sn	22 15 33.7	+1.8
GRUS	Gruza	2.19	5	ePn	Pn	22 15 03.7	-1.1
GRUS				eSn	Sn	22 15 33.8	+1.2
GRUS	Gruza	2.19	5	Pn	Pn	22 15 03.7	-1.1
GRUS				Sn	Sn	22 15 33.9	+1.3
LIT	Litokhoron	2.21	136	ePn	Pn	22 15 05.4	+0.3
LIT				eSn	Sn	22 15 33.8	+0.8
VTS	Vitosha	2.23	65	ePn	Pn	22 15 05.1	-0.1
LCI	Lecce	2.24	233	Pn	Pn	22 15 04.6	-0.9
HORT	Hortiatis	2.27	118	ePn	Pn	22 15 05.9	0.0
HORT				eSn	Sn	22 15 35.7	+1.2
BBLS	Bajina Basta -	2.30	341	ePn	Pn	22 15 06.5	+0.2
BBLS				eSg	Sg	22 15 43.6	+2.4
SOH	Sokhos	2.35	111	ePn	Pn	22 15 06.9	0.0
STON	Ston	2.36	301	ePn	Pn	22 15 07.6	+0.5
STON				Sn	Sg	22 15 43.6	+0.4
STON	Ston	2.36	301	ePn	Pn	22 15 07.5	+0.4
BOLS	Boljevac	2.40	27	Pn	Pn	22 15 09.9	+2.3
DIVS	Divcibare	2.42	352	ePn	Pn	22 15 08.8	+0.8
DIVS				eSn	Sn	22 15 40.5	+2.4
DIVS	Divcibare	2.42	352	ePn	Pn	22 15 07.4	-0.5
DIVS				eSn	Sn	22 15 39.5	+1.3
DIVS	Divcibare	2.42	352	ePn	Pn	22 15 08.8	+0.9
DIVS				Sn	Sn	22 15 39.5	+1.3
PE1	Pezze di Greco	2.46	250	ePn	Pn	22 15 07.3	-1.2
NVR	Nevrokopi	2.57	97	⇑iPN	Pn	22 15 10.9	+0.9
NVR				eSN	Sn	22 15 40.4	-1.5
PLG	Polygyros	2.61	119	Pn	Pn	22 15 11.1	+0.6
PLG	Polygyros	2.61	119	⇑iPN	Pn	22 15 11.4	+0.9
PLG				eSN	Sn	22 15 41.2	-1.7
PLG	Polygyros	2.61	119	ePn	Pn	22 15 10.3	-0.2
SVIS	Svilajnac	2.65	12	ePn	Pn	22 15 10.2	-0.9
SVIS				eSn	Sn	22 15 45.1	+1.2
SVIS	Svilajnac	2.65	12	Pn	Pn	22 15 10.2	-0.9
SVIS				Sn	Sn	22 15 45.1	+1.2
BAI	Bari	2.76	259	ePn	Pn	22 15 11.5	-1.1
EVR	Evrytania	2.96	159	ePN	Pn	22 15 16.7	+1.3
EVR	Evrytania	2.96	159	ePb	Pb	22 15 18.2	-2.6
SG1	Sgolgore (BA)	2.98	254	ePn	Pn	22 15 14.6	-1.0
LKD	Levkas	2.99	177	ePn	Pn	22 15 16.9	+1.2
LKD				eSn	Sn	22 15 54.8	+2.6
PAIG	Paliouri	3.01	125	ePn	Pn	22 15 16.0	-0.1
AGG	Agios Georgios	3.03	151	ePn	Pn	22 15 17.0	+0.7
BEO	Belgrade	3.12	360	⇑iPn	Pn	22 15 16.5	-1.0
NEO	Neokhori	3.18	138	ePN	Pn	22 15 18.6	+0.2
NEO				eSN	Sn	22 15 56.0	-0.9
NEO	Neokhori	3.18	138	Pn	Pn	22 15 18.4	0.0
CDT	Castel del Mon	3.21	260	ePn	Pn	22 15 17.9	-0.9
DJES	Djerdap	3.30	26	⇑iPn	Pn	22 15 20.5	+0.6
FGMS	Monte Sant'Ang	3.38	272	Pn	Pn	22 15 20.2	-0.9
MS1	Monte Sant'Ang	3.39	272	ePn	Pn	22 15 20.5	-0.7
FGSL	Fruska Gora	3.49	352	ePn	Pn	22 15 22.0	-0.6
FGSL				eSn	Sn	22 16 04.8	+0.3
FGSL	Fruska Gora	3.49	352	Pn	Pn	22 15 22.1	-0.5
FGSL				Sn	Sn	22 16 04.8	+0.3
VLS	Valsamata	3.52	178	⇓iPN	Pn	22 15 23.3	+0.3
VLS				eSN	Sn	22 16 05.5	+0.3
VLS	Valsamata	3.52	178	Pn	Pn	22 15 23.1	+0.1
LKR	Lokris	3.61	147	ePN	Pn	22 15 24.4	+0.1
LKR	Lokris	3.61	147	P	Pn	22 15 25.6	+1.3
RGNG	Rignano Grg	3.66	271	Pn	Pn	22 15 23.7	-1.2
RLS	Riolos of Patr	3.72	168	ePN	Pn	22 15 27.0	+1.3
RLS	Riolos of Patr	3.72	168	P	Pn	22 15 29.4	+3.7
FG4	Candela	3.77	263	Pn	Pn	22 15 25.8	-0.6
TIP	Timpagrande	3.79	230	P	Pn	22 15 26.6	-0.1
RDO	Rodhopi	3.85	97	ePN	Pn	22 15 27.5	-0.1
RDO	Rodhopi	3.85	97	ePn	Pn	22 15 28.0	+0.4
FG5	Orsara di Pugl	3.93	266	Pn	Pn	22 15 28.6	0.0
BZS	Buzias	4.00	12	P	Pn	22 15 28.9	-0.7
BZS	Buzias	4.00	12	P	Pn	22 15 29.0	-0.6
MGR	Morigerati	4.04	249	Pn	Pn	22 15 29.9	-0.2
GZR	Gura Zlata	4.06	24	P	Pn	22 15 30.8	+0.4
GZR	Gura Zlata	4.06	24	P	Pn	22 15 30.8	+0.4
SGO	Sicignano	4.06	255	Pn	Pn	22 15 30.0	-0.4
CSSN	Cassano Irpino	4.19	260	Pn	Pn	22 15 31.8	-0.4
RHK3	Tenkes	4.48	340	⇑eP	Pn	22 15 35.4	-0.8
RHK3				eS	Sn	22 16 26.4	-2.6
SGG	Gregorio Mates	4.58	268	Pn	Pn	22 15 37.9	+0.3
JMB	Yambol	4.62	78	ePn	Pn	22 15 38.0	-0.1
ITM	Ithomi	4.65	165	P	Pn	22 15 42.1	+3.5
MIDA	Miranda	4.65	271	Pn	Pn	22 15 38.5	-0.1
PKSM	Moragy	4.70	344	⇓P	Pn	22 15 38.6	-0.6
RFI	Roccamonfina	4.88	267	Pn	Pn	22 15 41.9	+0.2
INTR	Introdacqua	4.91	276	Pn	Pn	22 15 40.9	-1.2
PKS6	Bocsa	4.94	353	⇑eP	Pn	22 15 42.2	-0.3
PKS6				eS	Sn	22 16 40.9	+0.6
	comp=N,1.1nm,0.6s						
SDI	San Donato	4.98	272	Pn	Pn	22 15 43.1	0.0
VOIR		5.00	40	⇓iP	Pn	22 15 43.8	+0.4
PRK	Paraskevi	5.06	117	P	Pn	22 15 50.2	+6.0
PRK	Paraskevi	5.06	117	ePN	Pn	22 15 45.4	+1.2
VVLD	Villa Vallelon	5.12	274	Pn	Pn	22 15 44.9	-0.1
TERO	Teramo	5.18	283	Pn	Pn	22 15 46.0	+0.1
	comp=N,78nm,0.4s						
PTQR	Pietraquaria	5.29	276	Pn	Pn	22 15 47.9	+0.6
	comp=N,41nm,0.4s						
AQU	L'Aquila	5.30	279	ePn	Pn	22 15 47.1	-0.4
AQU				⇑P		22 15 47.7	
AQU				eSn	Sn	22 16 49.3	+0.2
AQU	L'Aquila	5.30	279	ePn	Pn	22 15 47.1	-0.4
BOJS	Bojanci	5.37	317	iPn	Pn	22 15 49.2	+0.9
PKS7	Kunszentmiklos	5.43	351	eP	Pn	22 15 50.4	+1.2
PKS7				S	Sn	22 16 51.5	-0.7
	comp=N,1.4nm,0.8s						
CRES	Cresnjev	5.49	320	ePn	Pn	22 15 50.6	+0.5
MLR	Muntele Rosu	5.49	45	Pn	Pn	22 15 51.6	+1.5
	comp=N,2.4nm,0.3s,baz=172,slow=5.8,SNR=16						
MLR				Sn	Sn	22 16 52.8	-1.1
	comp=N,0.5nm,0.3s,baz=285,slow=20,SNR=2.2						
MLR	Muntele Rosu	5.49	45	P	Pn	22 15 52.2	+2.1
FIAM	Fiamignano	5.51	278	Pn	Pn	22 15 51.1	+0.8
	comp=N,94nm,0.6s						
NRCA	Norcia	5.57	284	Pn	Pn	22 15 51.3	+0.1
	comp=N,78nm,0.6s						
CERT	Cerreto	5.60	275	Pn	Pn	22 15 52.2	+0.7
SNTG	Esanatoglia	5.78	288	Pn	Pn	22 15 53.9	-0.1
	comp=N,56nm,1.0s						
MNS	Montasola	5.84	279	Pn	Pn	22 15 55.1	+0.3
	comp=N,53nm,0.8s						
BUD	Budapest	5.87	350	⇓ePn	Pn	22 15 57.8	+2.5
BUD				eSn	Sn	22 17 05.0	+1.8
PKSG		5.88	346	⇑eP	Pn	22 15 57.8	+2.4
PKSG				eS	Sn	22 17 04.6	+1.2
FSSB	Fossombrone	6.00	292	Pn	Pn	22 15 56.7	-0.4
	comp=N,23nm,0.5s						
SKDS	Skadanscina	6.06	312	ePn	Pn	22 15 57.4	-0.5
MURB	Monte Urbino	6.08	288	Pn	Pn	22 15 58.9	+0.8
	comp=N,92nm,0.4s						
PENC	Penc	6.15	353	eP	Pn	22 15 58.8	-0.3
VRI	Vrincioaia	6.15	45	⇑P	Pn	22 16 00.6	+1.4
VRI	Vrincioaia	6.15	45	⇑P	Pn	22 16 00.6	+1.4
HARR	Harsova	6.22	59	P	Pn	22 16 00.9	+0.8
HARR	Harsova	6.22	59	P	Pn	22 16 00.9	+0.8
PSZ	Piszkesteto	6.23	356	ePn	Pn	22 15 58.9	-1.4
PSZ				⇑P		22 15 59.8	
PSZ				eSn	Sn	22 17 10.5	-1.5
PSZ	Piszkesteto	6.23	356	⇓ePn	Pn	22 16 00.0	-0.2
PSZ				eSn	Sn	22 17 11.6	-0.4
PSZ	Piszkesteto	6.23	356	ePn	Pn	22 15 58.9	-1.3
PSZ				eS	Sn	22 17 11.6	-0.4
PERS	Pernice	6.26	324	iPn	Pn	22 16 01.6	+1.0
PERS	Pernice	6.26	324	iPn	Pn	22 16 01.5	+0.9
BADI	Badiali	6.33	289	Pn	Pn	22 16 03.0	+1.4
OBKA	Obir	6.42	320	⇑iSn	Sn	22 17 18.1	+1.3
OBKA	Obir	6.42	320	⇓iPn	Pn	22 16 04.4	+1.6
	SNR=8.4						
OBKA				⇑iSn	Sn	22 17 18.1	+1.3
OBKA	Obir	6.42	320	Pn	Pn	22 16 04.4	+1.5
	comp=N,8.0nm,4.0s						
VOY	Vojsko	6.43	315	ePn	Pn	22 16 03.4	+0.5
VOY				eSn	Sn	22 17 17.8	+0.9
CRE	Caprese Michel	6.56	290	Pn	Pn	22 16 05.8	+1.0
	comp=N,18nm,1.0s						
ARSA	Arzberg	6.58	329	⇑iPn	Pn	22 16 05.5	+0.5
ARSA				⇑iSn	Sn	22 17 22.8	+2.2
SOP	Sopron	6.60	336	⇑ePn	Pn	22 16 07.7	+2.4
SOP				eSn	Sn	22 17 24.3	+3.2
CADS	Cadrg	6.64	315	iPn	Pn	22 16 06.0	+0.2
CADS				eSn	Sn	22 17 21.5	-0.6
KECS	Kecovo	6.78	0	ePN	Pn	22 16 08.3	+0.5
KECS				eSN	Sn	22 17 22.0	-3.6
VYHS	Vyhne	6.89	351	ePN	Pn	22 16 09.8	+0.5
VYHS				eSN	Sn	22 17 24.7	-3.6
PTCC	Patocco-Chiusa	6.95	315	Pn	Pn	22 16 10.2	0.0
	comp=N,56nm,1.4s						
KOLL	Kolacno	7.03	349	ePN	Pn	22 16 14.3	+3.1
KOLL				eSN	Sn	22 17 28.6	-3.1
MODS	Modra-Piesok	7.04	342	ePN	Pn	22 16 11.7	+0.3
MODS				eSN	Sn	22 17 31.6	-0.4
CRVS	Cervenica-Dubn	7.24	5	ePn	Pn	22 16 13.7	-0.3
CRVS				ePn	Pn	22 16 14.0	0.0
IDI	Anoyia	7.28	150	Pn	Pn	22 16 15.1	+0.4
	comp=N,0.6nm,0.3s,baz=30,slow=20,SNR=3.1						
IDI				Sn	Sn	22 17 34.0	-4.0
	comp=N,0.9nm,0.3s,baz=301,slow=19,SNR=3.5						
KOLS	Kolonicke sedl	7.34	9	ePN	Pn	22 16 16.4	+0.9
KBA	Koelnbreinsper	7.41	319	iPn	Pn	22 16 17.3	+0.9
	SNR=12						
KBA	Koelnbreinsper	7.41	319	Pn	Pn	22 16 17.3	+0.9
	comp=N,12nm,4.0s						
MOA	Molln	7.56	326	⇑iSn	Sn	22 17 47.2	+2.4
MOA	Molln	7.56	326	iP	Pn	22 16 20.9	+2.4
MOA				iSn	Sn	22 17 47.2	+2.4
MOA	Molln	7.56	326		Pn	22 16 20.9	+2.4
MOA	Molln	7.56	326	iP	Pn	22 16 20.9	+2.4
ABTA	Abfaltersbach	7.62	314	⇓iPn	Pn	22 16 19.6	+0.3
	SNR=22						
CTI	Castel Tesino	7.71	307	Pn	Pn	22 16 19.8	-0.7
	comp=N,32nm,0.9s						
STHS	Stebnicka Huta	7.74	4	ePN	Pn	22 16 21.8	+0.9
STHS				eSN	Sn	22 17 46.2	-2.9
MORC	Moravsky Berou	8.33	347	⇓P	Pn	22 16 28.8	-0.2
MORC				ePn	Pn	22 16 29.7	+0.7
MORC				eSn	Sn	22 18 02.5	-1.2
MORC	Moravsky Berou	8.33	347	⇓P	Pn	22 16 28.8	-0.2
MORC	Moravsky Berou	8.33	347	ePn	Pn	22 16 29.7	+0.7
WTTA	Wattenberg	8.41	314	⇑iPn	Pn	22 16 30.3	+0.2
	SNR=8.7						
WTTA	Wattenberg	8.41	314	⇓iSn	Sn	22 18 10.2	+4.6
WTTA	Wattenberg	8.41	314	⇑iPn	Pn	22 16 30.3	+0.1
WTTA				iSn	Sn	22 18 10.2	+4.6
WTTA	Wattenberg	8.41	314	⇑iPn	Pn	22 16 30.1	0.0
	SNR=8.7						
WTTA				⇑iSn	Sn	22 18 07.8	+2.1
WTTA	Wattenberg	8.41	314	Pn	Pn	22 16 30.3	+0.2
	comp=N,8.0nm,7.0s						
WATA	Walderalm	8.49	315	⇓iPn	Pn	22 16 32.6	+1.5
	SNR=8.3						
WATA	Walderalm	8.49	315	⇑iPn	Pn	22 16 32.0	+0.8
	SNR=8.3						
WATA	Walderalm	8.49	315	Pn	Pn	22 16 32.6	+1.4
	comp=N,8.0nm,3.0s						
GERES	GERESS Array B	8.59	329	Pn	Pn	22 16 33.7	+1.1
	comp=N,0.4nm,0.3s,baz=150,slow=14,SNR=15						
GERES				Sn	Sn	22 18 05.8	-4.2
	baz=150,slow=20,SNR=2.4						
SQTA	Sankt Quirin	8.62	313	⇑iSn	Sn	22 18 13.5	+2.8
SQTA	Sankt Quirin	8.62	313	⇑iPn	Pn	22 16 34.3	+1.3
	SNR=8.3						
SQTA				⇑iSn	Sn	22 18 13.5	+2.8
SQTA	Sankt Quirin	8.62	313	Pn	Pn	22 16 34.3	+1.4
	comp=N,8.0nm,3.0s						
VSL	Villasalto	8.72	259	ePn	Pn	22 16 34.0	-0.4
MOTA	Moosalm	8.75	313	⇑iSn	Sn	22 18 17.6	+3.6
MOTA	Moosalm	8.75	313	⇓iPn	Pn	22 16 35.4	+0.6
	SNR=9.2						
MOTA				⇑iSn	Sn	22 18 17.6	+3.6
MOTA	Moosalm	8.75	313	Pn	Pn	22 16 35.4	+0.6
	comp=N,9.0nm,2.0s						
FETA	Feichten	8.77	311	⇓iPn	Pn	22 16 35.4	+0.4
KHC	Kasperske Hory	8.87	329	ePN	Pn	22 16 38.2	+1.8
KHC				ex	x	22 16 44.0	
KHC				eSN	Sn	22 18 15.3	-1.5
DAVOX	Davos/Dischmat	9.14	307	Pn	Pn	22 16 40.5	+0.4
	comp=N,0.9nm,0.3s,baz=118,slow=20,SNR=14						
DAVOX				Sn	Sn	22 18 24.3	+0.8
	comp=N,0.4nm,0.3s,baz=308,slow=19,SNR=3.5						
SBF	Sospel	9.82	287	eP	Pn	22 16 44.0	-5.5
FRF	La Foret Royal	10.35	285	eP	Pn	22 16 51.3	-5.5
	comp=N,5.8nm,0.4s						
FRF	La Foret Royal	10.35	285	eP	Pn	22 16 51.3	-5.5
	comp=N,2.9nm,0.4s						
LMR	La Mourre	10.44	284	eP	Pn	22 16 56.4	-1.5
MBDF	Montbardon	10.45	291	eP	Pn	22 16 55.7	-2.3
	comp=N,5.0nm,0.5s						
MBDF	Montbardon	10.45	291	eP	Pn	22 16 55.7	-2.3
	comp=N,2.5nm,0.5s						
KEST	Kesra	10.53	239	Pn	Pn	22 17 04.2	+4.9
	comp=N,0.0nm,0.3s,baz=322,slow=12,SNR=3.0						
BNI	Bardonecchia	10.58	293	ePn	Pn	22 17 01.8	+1.9
BNI				Sn	Sn	22 18 59.1	+0.2
BNI	Bardonecchia	10.58	293	ePn	Pn	22 17 01.8	+1.9
LPG	La Plagne	10.65	295	eP	Pn	22 16 59.3	-1.5
	comp=N,5.6nm,0.4s						
LPG	La Plagne	10.65	295	eP	Pn	22 16 59.3	-1.5
	comp=N,2.8nm,0.4s						
LPL	La Plagne	10.66	296	eP	Pn	22 16 59.7	-1.3
	comp=N,5.4nm,0.4s						
LPL	La Plagne	10.66	296	eP	Pn	22 16 59.7	-1.3
	comp=N,2.7nm,0.4s						
AKASG	Malin Array Be	10.85	31	Pn	Pn	22 17 04.3	+0.8
	comp=N,0.5nm,0.3s,baz=219,slow=13,SNR=4.5						
ORIF	Oris-en-Rattie	11.11	292	eP	Pn	22 17 03.5	-3.5
	comp=N,4.2nm,0.5s						
ORIF	Oris-en-Rattie	11.11	292	eP	Pn	22 17 03.5	-3.5
	comp=N,2.1nm,0.5s						
SMRF	Simiane la Rot	11.17	287	eP	Pn	22 17 02.9	-5.1
CABF	La Chapelle	11.43	300	eP	Pn	22 17 09.6	-1.9
	comp=N,20nm,1.0s						
CABF	La Chapelle	11.43	300	eP	Pn	22 17 09.6	-1.9
	comp=N,10.0nm,1.0s						
HINF	Hinteralfeld	11.44	307	eP	Pn	22 17 09.6	-2.0
	comp=N,5.9nm,0.6s						
HINF	Hinteralfeld	11.44	307	eP	Pn	22 17 09.6	-2.0
	comp=N,3.0nm,0.6s						
CDF	Champ du Feu	11.48	310	eP	Pn	22 17 10.3	-1.9
	comp=N,2.6nm,0.5s						
CDF	Champ du Feu	11.48	310	eP	Pn	22 17 10.3	-1.9
	comp=N,1.3nm,0.5s						
HAU	Haudompre	11.83	307	eP	Pn	22 17 14.9	-2.0
	comp=N,8.6nm,0.7s						
HAU	Haudompre	11.83	307	eP	Pn	22 17 14.9	-2.0
	comp=N,4.3nm,0.7s						
MEZF	Maizieres J'vi	12.83	307	eP	Pn	22 17 28.1	-2.5
SMF	Signal de Mont	12.91	298	eP	Pn	22 17 29.0	-2.7
	comp=N,6.2nm,0.6s						
SMF	Signal de Mont	12.91	298	eP	Pn	22 17 29.0	-2.7
	comp=N,3.1nm,0.6s						
LOR	Lormes	13.09	301	eP	Pn	22 17 31.6	-2.6
	comp=N,3.3nm,0.5s						
LOR	Lormes	13.09	301	eP	Pn	22 17 31.6	-2.6
	comp=N,1.6nm,0.5s						
SSF	Saint Saulge	13.26	300	eP	Pn	22 17 33.9	-2.5
AVF	Avril sur Loir	13.28	298	eP	Pn	22 17 34.2	-2.5
	comp=N,7.0nm,0.8s						
AVF	Avril sur Loir	13.28	298	eP	Pn	22 17 34.2	-2.5
	comp=N,3.5nm,0.8s						
BGF	Bois d'Agland	13.55	297	eP	Pn	22 17 37.5	-2.9
TCF	Toulx Ste Croi	13.91	295	eP	Pn	22 17 42.3	-3.1
MMAI	Mount Meron Ar	14.69	121	LR	LR	22 24 38.2	
	comp=N,44nm,19.5s,baz=235,slow=41						
KIV	Kislovodsk	16.45	75	ePn	Pn	22 18 18.9	-0.2
KIV	Kislovodsk	16.45	75	ePn	Pn	22 18 18.9	-0.3
HFS	Hagfors	18.93	350	P	Pn	22 18 48.0	-1.7
	comp=N,0.4nm,0.3s,baz=158,slow=12,SNR=11						
KONO	Kongsberg	19.20	343	P	Pn	22 18 51.8	-1.3
KONO	Kongsberg	19.20	343	P	Pn	22 18 51.8	-1.2
FINES	FINESS Array B	20.06	8	P	P	22 19 00.2	-1.3
	comp=N,0.1nm,0.3s,baz=208,slow=11,SNR=5.4						
NB2	NORSAR Subarra	20.17	347	P	P	22 19 01.2	-1.6
	comp=Z,1.3nm,0.7s,baz=155,slow=11						
NOA	NORSAR Array B	20.17	347	P	P	22 19 01.3	-1.5
NOA	NORSAR Array B	20.17	347	P	P	22 19 01.3	-1.5
	comp=Z,1.4nm,0.7s,baz=155,slow=10,SNR=4.1						
EKA	Eskdalemuir Ar	20.62	319	P	P	22 19 06.8	-0.9
	comp=Z,5.3nm,0.7s,baz=114,slow=9.6,SNR=12						
ESK	Eskdalemuir	20.64	319	eP	P	22 19 07.4	-0.4
ESK	Eskdalemuir	20.64	319	eP	P	22 19 07.4	-0.5
SFS	San Fernando	21.31	265	P	P	22 19 13.7	-1.7
MDT	Midelt	21.78	254	P	P	22 19 19.1	-1.4
	comp=Z,1.6nm,0.8s,mb3.5,baz=70,slow=12,SNR=3.9						
ARU	Arti	28.54	46	P	P	22 20 24.2	+0.1
ARU	Arti	28.54	46	P	P	22 20 24.2	+0.1
TORD	Torodi Ar. Bea	32.81	215	P	P	22 21 01.9	-0.2
TORD	Torodi Ar. Bea	32.81	215	P	P	22 21 01.9	-0.2
	comp=Z,0.7nm,0.7s,mb3.7,baz=25,slow=9.4,SNR=8.8						
BRVK	Borovoye	34.91	54	P	P	22 21 18.7	-1.4
BRVK	Borovoye	34.91	54	P	P	22 21 18.7	-1.4
EKS2	Erkin-Say	38.97	70	eP	P	22 21 52.6	-2.1
EKS2	Erkin-Say	38.97	70	eP	P	22 21 52.6	-2.1
AAK	Ala-Archa	39.48	70	P	P	22 21 59.3	+0.3
AAK	Ala-Archa	39.48	70	P	P	22 21 59.3	+0.3
KURK	Kurchatov	40.29	57	P	P	22 22 04.0	-1.7
KURK	Kurchatov	40.29	57	P	P	22 22 04.0	-1.7
DBIC	Dimbokro	41.51	220	P	P	22 22 15.2	-0.9
DBIC	Dimbokro	41.51	220	P	P	22 22 15.2	-0.9
	comp=Z,4.1nm,0.9s,mb4.1,baz=44,slow=19,SNR=4.0						
DBIC	Dimbokro	41.51	220	P	P	22 22 15.1	-1.0
MKAR	Makanchi Array	43.58	61	P	P	22 22 32.4	-0.1
	comp=Z,0.7nm,0.6s,mb3.5,baz=306,slow=2.3,SNR=11						
SCHQ	Schefferville	55.88	316	P	P	22 24 04.6	-1.6
SCHQ	Schefferville	55.88	316	P	P	22 24 04.6	-1.5
	comp=Z,1.1nm,0.7s,mb4.0,baz=17,slow=3.3,SNR=5.2						
LSZ	Lusaka	57.13	171	eP	P	22 24 12.7	-2.8
SONM	Songino Array	58.30	52	P	P	22 24 22.6	-0.8
	comp=Z,0.3nm,0.6s,mb3.5,baz=302,slow=6.6,SNR=3.2						

*IDC **11** 22:19:31.6±4.9, 3593N×14072E, h85km±34km, mb3.0/3,*

mb1 3.2/5, mb1mx3.0/21, mbtmp3.1/5, MS2.9/1, Ms1 2.9/1, ms1mx2.5/7, Error ellipse: s-maj=56.4km s-min=9.3km az=63.0
*ISCJB **11** 22:19:32.8±0.8, 3585N±005×14046E±009, h102km±6km, mb3.2/3, Error ellipse: s-maj=12.2km s-min=6.5km az=157.2*
*JMA **11** 22:19:33.9±0.1, 3592N×14037E, h96km±2km, M3.1*
*NEIC **11** 22:19:34.0, 3592N×14037E, h96km, MG3.1(JMA), After JMA.*
ISC 11 22:19:33.9±0.8, 3585N±005×14046E±008, h95km±6km, n17, σ0s52/25, mb3.2/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.43	330	P	Pn	22 19 48.5	-0.1
JYT				S	Sn	22 19 59.4	-0.1
JAG	Ashikaga	0.99	305	P	Pn	22 19 53.2	-0.6
BSO3	Boso 3	1.05	178	P	Pn	22 19 55.0	+0.6
JOD2	Odawara 2	1.26	243	P	Pn	22 19 56.6	-0.3
JOD2				S	Sn	22 20 13.2	-1.0
BSO1	Boso 1	1.27	160	P	Pn	22 19 57.4	+0.4
JRY	Ryogami san	1.27	278	P	Pn	22 19 57.0	0.0
JRY				S	Sn	22 20 14.1	-0.4
JKT	Katashina	1.34	313	P	Pn	22 19 57.9	+0.1
JKT				S	Sn	22 20 15.0	-0.9
JIM2	Oshima 3	1.41	217	P	Pn	22 19 58.4	-0.3
JIM2				S	Sn	22 20 17.0	-0.4
JYN	Shimob	1.60	258	P	Pn	22 20 01.0	0.0
MJAR	Matsushiro Arr	1.94	291	P	Pn	22 20 05.4	-0.1
	5.6nm,0.3s,baz=94,slow=14,SNR=34						
MJAR				S	Sn	22 20 30.7	+1.1
	6.8nm,0.3s,baz=14,slow=41,SNR=8.8						
MAJO	Matsushiro	1.95	291	*e*Pn	Pn	22 20 06.0	+0.5
MAJO				*e*Sn	Sn	22 20 29.9	+0.3
MAT	Matsushiro	1.95	291	P	Pn	22 20 05.8	+0.3
MAT				S	Sn	22 20 30.7	+1.1
JHJ	Hachijo jima 2	2.78	192	P	Pn	22 20 16.9	+0.4
	12nm,0.3s,baz=349,slow=19,SNR=7.6						
JHJ				S	Sn	22 20 49.8	+0.4
	43nm,0.3s,baz=95,slow=22,SNR=9.7						
CBIJ	Chichi jima	8.85	170	LR	LR	22 24 04.4	
	comp=Z,84nm,21.5s,baz=323,slow=31						
SONM	Songino Array	27.83	306	P	P	22 25 13.5	-0.6
	0.2nm,0.5s,mb3.0,baz=107,slow=8.2,SNR=3.9						
MKAR	Makanchi Array	44.10	303	P	P	22 27 32.5	-0.1
	0.4nm,0.6s,mb3.3,baz=87,slow=9.7,SNR=5.9						
WRA	Warramunga Arr	55.79	187	P	P	22 29 00.7	-0.4
	0.2nm,0.6s,mb3.4,baz=7.6,slow=6.7,SNR=3.0						

*ISCJB **11** 22:22:32.4±1.3, 1043S±010×1614E±01, h119km±10km, mb3.8/5, Error ellipse: s-maj=25.8km s-min=11.0km az=149.8*
*IDC **11** 22:22:33.1±2.1, 1046S×16136E, h111km±14km, mb3.6/5, mb1 3.8/6, mb1mx3.6/14, mbtmp3.6/6, Error ellipse: s-maj=28.9km s-min=17.5km az=67.0*
ISC 11 22:22:32.7±1.3, 1041S±010×1615E±01, h110km±10km, n8, σ1s03/10, mb3.8/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.77	303	P	Pn	22 23 02.9	+0.1
	161nm,0.3s,baz=197,slow=1.6,SNR=27						
HNR				S	Sn	22 23 25.4	-0.4
	447nm,0.3s,baz=146,slow=3.3,SNR=13						
DZM	Mont Dzumac	12.55	158	P	Pn	22 25 29.2	+1.8
	0.5nm,0.3s,baz=9.0,slow=16,SNR=7.2						
DZM				S	Sn	22 27 44.3	-1.2
	0.4nm,0.3s,baz=338,slow=19,SNR=5.5						
CTA	Charters Tower	17.53	235	P	Pn	22 26 31.6	+1.4
	0.4nm,0.3s,baz=43,slow=11,SNR=6.5						
WRA	Warramunga Arr	27.79	247	P	P	22 28 11.4	-0.3
	1.5nm,0.5s,mb3.8,baz=77,slow=8.9,SNR=18						
ASAR	Alice Springs	29.38	240	P	P	22 28 24.6	-1.1
	0.7nm,0.7s,mb3.4,baz=63,slow=9.7,SNR=7.2						
SONM	Songino Array	75.70	325	P	P	22 34 07.4	+1.3
	1.3nm,0.7s,mb3.8,baz=142,slow=6.1,SNR=13						
MKAR	Makanchi Array	90.19	318	P	P	22 35 19.9	-0.9
	0.4nm,0.6s,mb3.8,baz=90,slow=5.7,SNR=6.5						
YKA	Yellowknife Ar	96.36	28	P	P	22 35 48.4	-0.4
	0.9nm,1.1s,mb4.1,baz=266,slow=4.6,SNR=4.0						

IDC 11 22:25:00.2±8.0, 388N×9507E, h61km±64km, mb3.2/4, mb1 3.4/5, mb1mx3.2/22, mbtmp3.2/5, ML3.0/1, Error ellipse: s-maj=104.6km s-min=26.9km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	4.00	106	P	Pn	22 25 59.3	+0.3
	0.9nm,0.3s,baz=309,slow=13,SNR=6.7						
MKAR	Makanchi Array	44.16	347	P	P	22 33 03.3	+0.5
	0.4nm,0.4s,baz=164,slow=8.4,SNR=20						
MKAR				pP	pP	22 33 13.0	-5.5
	0.2nm,0.5s,baz=163,slow=8.7,SNR=4.6						
SONM	Songino Array	44.86	11	P	P	22 33 08.0	-0.3
	0.1nm,0.4s,baz=181,slow=8.1,SNR=2.5						
WRA	Warramunga Arr	45.26	123	P	P	22 33 12.1	+0.1
	0.8nm,0.7s,baz=301,slow=9.0,SNR=6.6						
FINES	FINESS Array B	76.65	333	P	P	22 36 43.9	-0.3
	0.4nm,0.4s,baz=109,slow=4.3,SNR=7.9						

*ISCJB **11** 22:25:52.2±0.4, 773N±005×7281W±005, h182km±4km, mb3.6/10, Error ellipse: s-maj=9.0km s-min=5.8km az=43.7*
*IDC **11** 22:25:53.0±0.7, 764N×7280W, h175km±7km, mb3.5/7, mb1 3.7/10, mb1mx3.5/21, mbtmp3.6/10, Error ellipse: s-maj=14.6km s-min=8.1km az=127.0*
*FUNV **11** 22:25:52.7, 768N×7303W, h175km, MW3.6*
*NEIC **11** 22:25:53.5±0.5, 767N×7278W, h183km±5km, mb3.8/4, Error ellipse: s-maj=7.8km s-min=6.3km az=93.0*
ISC 11 22:25:53.3±0.4, 772N±005×7280W±005, h176km±4km, n34, σ0s90/42, mb3.6/10, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.50	73	⇓*i*P	Pn	22 26 17.5	-0.2
CAPV				*e*S	Sn	22 26 36.0	-0.3
VIGV	El Vigia	1.81	52	*e*P	Pn	22 26 29.0	+0.9
VIGV				*e*S	Sn	22 26 55.0	0.0
SOCV	Socops	2.01	74	*e*P	Pn	22 26 31.4	+1.2
SOCV				*e*S	Sn	22 27 00.1	+1.4
SDV	Santo Domingo	2.44	61	*e*Pn	Pn	22 26 36.3	+1.2
SDV				*e*Sn	Sn	22 27 08.2	+0.8
SDV	Santo Domingo	2.44	61	P	Pn	22 26 36.5	+1.4
	24nm,0.3s,baz=189,slow=4.6,SNR=153						
SDV				S	Sn	22 27 08.3	+0.8
	64nm,0.3s,baz=75,slow=23,SNR=21						
VIRV	Villa del Rosa	2.79	8	*e*P	Pn	22 26 38.2	-1.1
VIRV				*e*S	Sn	22 27 12.4	-2.7
ROSC	El Rosal	3.22	208	P	Pn	22 26 44.2	-0.4
	6.0nm,0.3s,baz=80,slow=4.4,SNR=22						
ROSC				S	Sn	22 27 23.4	-1.1
	22nm,0.3s,baz=302,slow=19,SNR=6.0						
QARV	Quebrada Arrib	3.34	42	*e*P	Pn	22 26 47.1	+1.1
QARV				*e*S	Sn	22 27 25.8	-1.3
CURV	Curarigua	3.62	51	*e*P	Pn	22 26 50.2	+0.7
CURV				*e*S	Sn	22 27 32.0	-1.3
TEPV	Terepaima	4.21	58	*e*P	Pn	22 26 58.1	+1.1
TEPV				*e*S	Sn	22 27 46.2	-0.5
BAUV	El Baul	4.86	75	*e*P	Pn	22 27 05.4	-0.1
BAUV				*e*S	Sn	22 28 00.8	-1.2
CAOV	Caicara del Or	6.43	93	*e*P	Pn	22 27 25.9	-0.2
OTAV	Otavalo	9.32	217	Pn	Pn	22 28 05.8	+1.7
SJG	San Juan	12.19	31	Pn	Pn	22 28 41.1	-0.2
JTS	JuntasAbangare	12.27	283	*e*P	Pn	22 28 42.4	-0.1
TEIG	Tepich	19.47	311	*e*P	P	22 30 07.0	+0.2
	5.6nm,0.4s						
TEIG	Tepich	19.47	311	P	P	22 30 07.8	+1.0
	1.2nm,0.3s,baz=168,slow=2.2,SNR=7.1						
LPAZ	La Paz	24.29	169	P	P	22 30 54.6	0.0
	0.9nm,0.7s,mb3.4,baz=350,slow=15,SNR=4.4						
SIV	San Ignacio	26.26	154	P	P	22 31 11.7	-0.7
	0.3nm,0.3s,mb3.4,baz=312,slow=14,SNR=3.7						
WMOK	Wichita Mounta	35.96	322	*e*P	P	22 32 36.6	-0.6
	1.3nm,0.5s,mb3.8						
WMOK				*e*PcP	PcP	22 34 58.3	-1.7
TXAR	Lajitas Array	36.12	311	P	P	22 32 38.6	+0.1
	1.0nm,0.6s,mb3.6,baz=126,slow=9.4,SNR=15						
TXAR				PcP	PcP	22 35 01.9	+1.3
	0.3nm,0.5s,baz=125,slow=6.3,SNR=3.6						
SDCO	Great Sand Dun	42.06	320	*e*P	P	22 33 28.5	+0.8
	1.3nm,0.6s,mb3.7						
PV01	Paradox Valley	44.26	319	*e*P	P	22 33 45.2	-0.2
ULM	Lac du Bonnet	46.56	340	P	P	22 34 02.8	-0.4
	1.4nm,0.4s,mb3.9,baz=137,slow=8.1,SNR=7.6						
TRQA	Tornquist	46.64	168	P	P	22 34 02.0	-2.0
SCHQ	Schefferville	47.23	5	P	P	22 34 09.1	+0.8
	1.3nm,0.6s,mb3.8,baz=199,slow=9.0,SNR=8.2						
FCC	Fort Churchill	53.48	346	*e*P	P	22 34 55.8	+0.7
NEW	Newport	55.04	325	*e*P	P	22 35 06.8	+0.2
	0.6nm,0.4s,mb3.7						
YKA	Yellowknife Ar	62.54	340	P	P	22 35 58.1	+0.2
	2.0nm,0.6s,mb4.2,baz=131,slow=6.8,SNR=52						
DLBC	Dease Lake	66.69	331	P	P	22 36 24.7	-0.3
TORD	Torodi Ar. Bea	73.25	79	P	P	22 37 05.3	-0.5
	0.1nm,0.3s,mb3.0,baz=286,slow=6.7,SNR=6.9						
SONM	Songino Array	124.69	1	PKP	PKPdf	22 44 32.1	+0.1
	0.2nm,0.5s,baz=348,slow=1.4,SNR=3.0						
ASAR	Alice Springs	149.88	235	PKPbc	PKPbc	22 45 22.7	-0.7
	0.5nm,0.5s,baz=117,slow=3.2,SNR=4.1						
WRA	Warramunga Arr	151.04	242	PKPbc	PKPbc	22 45 25.7	-0.6
	0.8nm,0.4s,baz=105,slow=2.9,SNR=41						
WRA				PKPab	PKPab	22 45 33.2	-1.2
	0.5nm,0.8s,baz=103,slow=3.0,SNR=5.0						

IDC 11 22:48:01.7±8.9, 357N×12608E, h54km±82km, mb3.4/7, mb1 3.6/7, mb1mx3.5/18, mbtmp3.4/7, Error ellipse: s-maj=109.9km s-min=21.2km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.54	181	P	P	22 52 47.0	+0.5
	1.2nm,0.6s,baz=15,slow=16,SNR=4.4						
WRA	Warramunga Arr	24.74	161	P	P	22 53 17.6	-0.6
	1.2nm,0.4s,baz=345,slow=11,SNR=39						
WB2	Warramunga Arr	24.74	161	*e*P	P	22 53 17.7	-0.5
ASAR	Alice Springs	28.13	165	P	P	22 53 48.8	+0.1
	0.5nm,0.6s,baz=350,slow=7.2,SNR=8.8						
STKA	Stephens Creek	38.22	158	P	P	22 55 16.4	0.0
	3.1nm,0.6s,baz=334,slow=7.0,SNR=7.9						
SONM	Songino Array	47.24	342	P	P	22 56 30.2	+0.9
	0.2nm,0.4s,baz=169,slow=5.8,SNR=2.0						
MKAR	Makanchi Array	57.32	326	P	P	22 57 43.5	-0.5
	0.1nm,0.3s,baz=126,slow=7.8,SNR=4.2						
VNDA	Vanda	83.35	173	P	P	23 00 23.3	+0.9
	0.4nm,0.4s,baz=301,slow=5.9,SNR=4.1						
TORD	Torodi Ar. Bea	122.35	288	PKP	PKPdf	23 06 51.2	-0.6
	3.4nm,0.4s,baz=116,slow=1.6,SNR=3.0						

*ISCJB **11** 23:00:21.9±0.7, 3107N±008×1392E±02, h411km±11km, mb3.0/3, Error ellipse: s-maj=30.8km s-min=10.0km az=165.3*
*IDC **11** 23:00:23.5±2.4, 3154N×14008E, h450km±79km, mb2.8/3, mb1 2.9/4, mb1mx2.6/19, mbtmp2.7/4, Error ellipse: s-maj=227.7km s-min=24.9km az=65.0*
*JMA **11** 23:00:23.2±0.6, 3120N×13899E, h413km, M3.3*
ISC 11 23:00:23.6±0.8, 312N±01×1392E±02, h409km±12km, n14, σ0s85/17, mb3.0/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.00	15	S	S	23 02 05.8	-0.4
	30nm,0.3s,baz=259,slow=23,SNR=5.1						
TK02	Tokai 2	3.01	337	P	Pn	23 01 27.7	+0.3
BSO1	Boso 1	3.77	23	P	Pn	23 01 35.3	+1.3
JIE	Ise	3.82	328	P	Pn	23 01 33.9	-0.5
BSO4	Boso 4	3.92	14	*e*S	S	23 02 34.4	+0.7
JHU	Hanno	4.66	1	P	Pn	23 01 44.1	+1.7
JHU				*e*S	S	23 02 46.0	-0.7
JRY	Ryogami san	4.83	357	P	Pn	23 01 45.0	+0.9
CBIJ	Chichi jima	4.85	146	S	S	23 02 45.1	-5.2
	20nm,0.3s,baz=272,slow=23,SNR=6.3						
JAG	Ashikaga	5.23	2	P	Pn	23 01 47.7	-0.6
JAG				*e*S	S	23 02 52.9	-4.4
MJAR	Matsushiro Arr	5.41	352	P	Pn	23 01 49.8	-0.3
	1.2nm,0.3s,baz=168,slow=10,SNR=8.0						
JHO	Hitachi	5.54	12	P	Pn	23 01 51.9	+0.5
JHO				*e*S	S	23 03 01.1	-2.0
MKAR	Makanchi Array	45.89	307	P	P	23 08 07.0	-0.1
	0.2nm,0.2s,mb3.0,baz=88,slow=7.8,SNR=4.8						
WRA	Warramunga Arr	51.04	186	P	P	23 08 46.0	-0.1
	0.4nm,0.4s,mb3.0,baz=6.3,slow=7.5,SNR=12						
ASAR	Alice Springs	54.77	186	P	P	23 09 12.6	-0.3
	0.5nm,0.7s,mb2.9,baz=359,slow=6.0,SNR=5.2						

*ISK **11** 23:01:04.8, 3958N×4118E, h5km, MD3.0*
*DDA **11** 23:01:05.0, 3957N×4101E, h5km, Md3.0*
*ISCJB **11** 23:01:06.7±1.1, 3960N±006×4113E±007, h10km, Error ellipse: s-maj=9.2km s-min=7.7km az=154.8*
*CSEM **11** 23:01:06.8±0.4, 3973N×4118E, h20km, MD3.0, Error ellipse: s-maj=14.4km s-min=8.7km az=170.0*
ISC 11 23:01:06.7±1.1, 3957N±006×4111E±007, h10km, n7, σ0s95/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZM	Erzurum	0.38	30	PG	Pg	23 01 13.0	-1.3
ERZM	Erzurum	0.39	30	*i* P	Pg	23 01 13.1	-1.2
ERZM				*i* S	Sg	23 01 20.6	+1.2
EZC	Erzincan	1.02	280	*e*PN	Pn	23 01 33.0	+6.0
TUTA	Tutak	1.33	97	*i* P	Pn	23 01 30.1	-1.2
TUTA				*i* S	Sb	23 01 48.7	0.0
AGRB	Hanur-Agry	1.45	89	*e*PN	Pn	23 01 32.3	-0.7
AGRB				*e*SN	Sn	23 01 52.9	+0.8
PTK	Pertek	1.50	244	*e*PN	Pn	23 01 34.6	+0.9
DIGO	Kars	1.93	63	*i* P	Pn	23 01 40.6	+1.0
DIGO				*i* S	Sg	23 02 09.0	+0.3

*ISCJB **11** 23:31:47.7±2.5, 205S±02×1783W±01, h442km±38km, mb3.8/5, Error ellipse: s-maj=34.8km s-min=20.1km az=175.9*
*IDC **11** 23:31:49.2±3.7, 2041S×17811W, h451km±31km, mb3.4/3, mb1 3.7/4, mb1mx3.3/14, mbtmp3.6/4, Error ellipse: s-maj=136.7km s-min=18.8km az=145.0*
*NEIC **11** 23:31:50.3±1.6, 2032S×17816W, h469km±20km, mb3.9/2, Error ellipse: s-maj=24.7km s-min=15.4km az=161.0*
ISC 11 23:31:49.3±2.2, 204S±02×1782W±01, h450km±36km, n16, σ0s57/13, mb3.9/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.88	45	P	P	23 33 54.9	+0.5
	4.8nm,0.3s,baz=52,slow=19,SNR=12						
AFI				S	S	23 35 36.6	-0.5
	1.7nm,0.3s,baz=61,slow=19,SNR=2.8						
DZM	Mont Dzumac	14.44	261	P	P	23 34 59.4	+4.9
	0.3nm,0.3s,baz=78,slow=18,SNR=4.5						
CTAO	Charters Tower	33.33	264	*e*P	P	23 37 47.5	-1.0
	3.0nm,0.7s,mb3.8						
STKA	Stephens Creek	37.69	244	P	P	23 38 24.2	-0.6
	1.8nm,0.8s,mb3.5,baz=24,slow=12,SNR=3.4						
ASAR	Alice Springs	44.38	257	P	P	23 39 19.1	+0.5
	3.4nm,0.5s,mb4.0,baz=93,slow=8.0,SNR=50						
WB2	Warramunga Arr	44.44	262	*e*P	P	23 39 19.4	+0.4
WRA	Warramunga Arr	44.45	262	P	P	23 39 19.4	+0.3
	1.5nm,0.3s,mb3.9,baz=97,slow=7.3,SNR=98						
GUMO	Guam	49.60	310	P	P	23 39 57.9	-0.3
FITZ	Fitzroy Crossi	52.87	262	*e*P	P	23 40 22.6	+0.4
	2.1nm,0.3s,mb4.0						
MBWA	Marble Bar	57.71	257	*e*P	P	23 40 56.1	0.0
SBA	Scott Base	57.97	184	P	P	23 40 56.1	-0.8
TRQA	Tornquist	96.57	135	P	P	23 44 30.7	+0.7
AKASG	Malin Array Be	142.83	331	PKhKP		23 50 26.9	
	1.5nm,0.4s,baz=39,slow=4.0,SNR=12						
BRTR	Keskin Array B	146.64	312	PKPbc	PKPbc	23 50 39.3	-0.4
	0.3nm,0.5s,baz=153,slow=5.4,SNR=4.1						
CLL	Collm	147.91	347	*e*PKPbc	PKPbc	23 50 43.0	+0.3
GERES	GERESS Array B	150.05	344	PKPbc	PKPbc	23 50 47.7	-0.3
	0.4nm,0.6s,baz=20,slow=2.0,SNR=3.9						

*NEIC **11** 23:35:27.1, 3835N×3930E, h4km, ML3.7(ISK), After ISK.*
*CSEM **11** 23:35:27.5±0.0, 3838N×3929E, h5km, ML4.0, Error ellipse: s-maj=1.2km s-min=1.1km az=150.0*
*ISK **11** 23:35:27.4, 3836N×3930E, h5km, MD3.9, ML3.9*
*IDC **11** 23:35:28.5±1.2, 3835N×3927E, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/20, mbtmp3.6/8, ML3.5/3, Error ellipse: s-maj=20.8km s-min=15.9km az=123.0*
*DDA **11** 23:35:28.4, 3833N×3929E, h17km, Md3.9, Ml4.0*
*NSSC **11** 23:35:28.3, 3848N×3935E, h15km±7km*
*ISCJB **11** 23:35:29.1±0.4, 3836N±002×3932E±002, h16km±4km, mb3.5/6, Error ellipse: s-maj=3.1km s-min=2.6km az=155.1*
ISC 11 23:35:28.1±0.4, 3834N±002×3936E±002, h0km±3km, n132, σ1s00/159, mb3.6/6, 1C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.33	299	⇑*i*P	Pg	23 35 33.9	-0.5
ELZG				*i* S	Sg	23 35 41.2	+2.5
PTK	Pertek	0.56	3	*i* PG	Pg	23 35 38.0	-0.7
PTK				*i* SG	Sg	23 35 46.1	+0.2
PTK	Pertek	0.56	3	Pg	Pg	23 35 38.0	-0.7
PTK				Sg	Sg	23 35 47.0	+1.1
MALT	Malatya	0.73	268	PG	Pg	23 35 41.2	-0.9
MALT	Malatya	0.73	268	*e*P	Pg	23 35 41.4	-0.6
MALT				*e*S	Sg	23 35 51.4	-0.1
MALT	Malatya	0.73	268	*e*P	Pg	23 35 41.4	-0.7
MALT				*e*S	Sg	23 35 51.4	-0.1
MYA	Malataya	0.73	269	PG	Pg	23 35 41.3	-0.8
MYA	Malataya	0.73	269	Pg	Pg	23 35 41.3	-0.8
DIY	Diyarbakir	0.82	122	PG	Pg	23 35 44.7	+1.0
DIY	Diyarbakir	0.82	122	Pg	Pg	23 35 44.7	+1.0
URFA	Urfa	0.99	205	PG	Pg	23 35 47.5	+0.5
URFA	Urfa	0.99	205	Pg	Pg	23 35 47.5	+0.4
BINT	Bingol	1.04	58	PG	Pg	23 35 47.7	-0.3
BINT	Bingol	1.04	58	Pg	Pg	23 35 47.8	-0.2
BINT	Bingol	1.04	58	Pg	Pg	23 35 47.8	-0.2
ATAB	Bozova	1.21	224	*i* P	Pg	23 35 51.5	+0.3
ATAB				*i* S	Sg	23 36 08.2	+1.4
ATAB	Bozova	1.21	224	*i* P	Pg	23 35 51.5	+0.3
ATAB				*i* S	Sg	23 36 08.1	+1.3
EZC	Erzincan	1.45	14	PN	Pn	23 35 53.6	-2.0
EZC	Erzincan	1.45	14	Pn	Pn	23 35 54.0	-1.5
MARD	Mardin	1.52	132	*i* P	Pn	23 35 55.7	-0.8
MARD				*i* S	Sn	23 36 15.2	-1.8
DRBT	Darb Altahta	1.53	166	⇑P	Pg	23 36 02.7	+5.4
DRBT				⇑S	Sg	23 36 29.9	+13
DRBT	Darb Altahta	1.53	166	⇑*i*P	Pg	23 36 02.7	+5.4
KBSD	Kabsdagh	1.63	144	⇑P	Pn	23 35 58.3	+0.3
KBSD				⇑S	Sn	23 36 21.0	+1.3
KBSD	Kabsdagh	1.63	144	⇑*i*P	Pn	23 35 58.3	+0.3
KBSD				⇑*i*S	Sn	23 36 21.0	+1.3
BTMT	Batman	1.69	94	PN	Pn	23 35 57.1	-1.6
GZT	Gaziantep	1.72	236	*i* P	Pn	23 35 58.7	-0.5
GZT				*i* S	Sn	23 36 21.6	-0.3
KELT	Kelkit	1.81	358	*i* P	Pn	23 36 00.9	+0.4
KELT				*i* S	Sn	23 36 20.9	-3.2
SFNV	Sufian	2.01	162	⇓P	Pn	23 36 03.8	+0.7
SFNV				⇑S	Sn	23 36 30.7	+1.7
SFNV	Sufian	2.01	162	⇓*i*P	Pn	23 36 03.8	+0.6
SFNV				⇑*i*S	Sn	23 36 30.7	+1.8
GAZ	Gaziantep	2.06	236	PN	Pn	23 36 02.5	-1.4
GAZ	Gaziantep	2.06	236	Pn	Pn	23 36 03.0	-0.8
GAZ	Gaziantep	2.06	236	Pn	Pn	23 36 03.0	-0.9
KMRS	Kahramanmaras	2.11	248	PN	Pn	23 36 03.7	-0.9
GUMT	Gumushane	2.12	3	PN	Pn	23 36 04.6	-0.1
GUMT	Gumushane	2.12	3	Pn	Pn	23 36 04.7	-0.1
EZM	Erzurum	2.21	44	PN	Pn	23 36 06.5	+0.5
EZM	Erzurum	2.21	44	Pn	Pn	23 36 06.8	+0.9
ERZM	Erzurum	2.21	44	*i* P	Pn	23 36 07.2	+1.2
ERZM				*i* S	Sg	23 36 38.3	-0.9
SLMH	Al Salmeh	2.41	209	⇓P	Pn	23 36 08.4	-0.2
SLMH	Al Salmeh	2.41	209	⇓*i*P	Pn	23 36 08.4	-0.2
KSRV	Kasrt alli	2.48	187	⇑P	Pg	23 36 18.1	+2.4
ANDN	Andirin	2.50	253	*i* P	Pn	23 36 09.3	-0.6
ANDN				*i* S	Sb	23 36 45.2	+0.2
SIRT	Sirnak	2.58	108	PN	Pn	23 36 10.7	-0.3
ESPY	Espiye-Giresun	2.62	350	PN	Pn	23 36 11.4	-0.2
MACK	Trabzon	2.62	7	*i* P	Pn	23 36 12.7	+1.1
MACK				*i* S	Sb	23 36 48.1	-0.5
KTUT	Trabzon	2.67	7	*e*PN	Pn	23 36 12.2	0.0
BSHR	Al Beshri	2.69	172	⇑P	Pn	23 36 16.0	+3.5
BSHR				⇑S	Sg	23 36 53.1	-1.4
BSHR	Al Beshri	2.69	172	⇑*i*P	Pn	23 36 16.0	+3.5
GRSN	GIRESUNGRSN	2.72	342	*i* P	Pn	23 36 13.4	+0.5
DRWC	Darouich	2.74	232	⇑P	Pn	23 36 12.5	-0.7
DRWC				⇑S	Sn	23 36 47.6	+0.6
DRWC	Darouich	2.74	232	⇑*i*P	Pn	23 36 12.5	-0.7
DRWC				⇑*i*S	Sn	23 36 47.6	+0.6
DYDN	Diyadin	2.74	232	*e*S	Sn	23 36 32.8	-14
JHLN	Al Jahlan	2.76	196	⇑*i*P	Pn	23 36 13.8	+0.3
BNN	Bunyan	2.80	282	*e*PN	Pn	23 36 13.9	-0.1
BNN	Bunyan	2.80	282	Pn	Pn	23 36 14.0	0.0
TUTA	Tutak	2.90	67	*i* P	Pn	23 36 16.6	+1.1
TUTA				*i* S	Sb	23 36 55.9	-0.7
KOZT	Kozan	2.92	254	*e*PN	Pn	23 36 15.3	-0.4
TOKT	Tokat	2.94	313	*e*PN	Pn	23 36 15.6	-0.5
TOKT	Tokat	2.94	313	Pn	Pn	23 36 15.6	-0.4
COBT	Iskenderun	3.06	235	*i* P	Pn	23 36 16.5	-1.2
COBT				*i* S	Sb	23 37 00.2	-1.1
PZAR	Pazar-Rize	3.08	22	*e*PN	Pn	23 36 18.3	+0.4
AGRB	Hanur-Agry	3.09	65	*e*PN	Pn	23 36 19.0	+0.9
CEYT	Ceyhan	3.15	246	*e*PN	Pn	23 36 18.6	-0.3
CEYT	Ceyhan	3.15	246	Pn	Pn	23 36 18.7	-0.3
CEYT	Ceyhan	3.15	246	Pn	Pn	23 36 18.7	-0.2
VANT	Van	3.17	87	*e*PN	Pn	23 36 18.8	-0.4
VANT	Van	3.17	87	Pn	Pn	23 36 18.9	-0.3
VANB	Van	3.18	84	*e*PN	Pn	23 36 20.2	+1.0
VANB	Van	3.18	84	Pn	Pn	23 36 20.2	+1.0
TVAN	Van	3.19	85	*i* P	Pn	23 36 24.6	+5.2
TVAN				*i* S	Sg	23 37 08.3	-2.2
BTCH	Batrach	3.26	226	⇑P	Pn	23 36 20.8	+0.4
BTCH	Batrach	3.26	226	⇑*i*P	Pn	23 36 20.8	+0.4
HTY	Hatay	3.39	230	*e*PN	Pn	23 36 21.9	-0.3
YOZ	Yozgat	3.40	294	*e*PN	Pn	23 36 22.9	+0.6
YOZ	Yozgat	3.40	294	Pn	Pn	23 36 22.2	-0.2
YOZ	Yozgat	3.40	294	Pn	Pn	23 36 22.2	-0.1
HAKT	HAKKARI	3.53	101	*i* P	Pn	23 36 23.9	-0.2
HAKT				*i* S	Sb	23 37 13.7	-1.0
HKR	Hakkari	3.55	101	*e*PN	Pn	23 36 24.5	+0.2
HKR	Hakkari	3.55	101	Pn	Pn	23 36 24.5	+0.2
AVNT	Avonos	3.56	279	*i* P	Pn	23 36 24.9	+0.4
AVNT				*i* S	Sg	23 37 25.4	+3.1
BCA	Borcka	3.56	29	*e*PN	Pn	23 36 25.0	+0.5
BCA	Borcka	3.56	29	Pn	Pn	23 36 25.1	+0.6
KARA	Karaisali	3.57	254	*e*PN	Pn	23 36 24.5	-0.2
MSL	Mosul	3.61	123	*e*x	x	23 36 25.5	
MSL				*e*x	x	23 36 38.5	
MSL				*i* x	x	23 37 08.0	
MSL				*i* x	x	23 37 25.0	
KRTS	Karatas	3.62	242	*e*PN	Pn	23 36 25.1	-0.3
CLDR	Caldiran	3.66	76	*e*PN	Pn	23 36 27.2	+1.4
CLDR	Caldiran	3.66	76	Pn	Pn	23 36 27.2	+1.4
KARS	Kars	3.68	51	*e*PN	Pn	23 36 26.9	+0.8
KARS	Kars	3.68	51	Pn	Pn	23 36 27.0	+0.8
KARS	Kars	3.68	51	Pn	Pn	23 36 27.0	+0.9
SLNF	Slenfeh	3.71	223	⇑P	Pn	23 36 27.0	+0.4
SLNF	Slenfeh	3.71	223	⇑*i*P	Pn	23 36 27.0	+0.4
DIGO	Kars	3.74	55	*i* P	Pn	23 36 28.4	+1.4
KVT	Kavak	3.74	318	*e*PN	Pn	23 36 27.9	+0.9
KVT	Kavak	3.74	318	Pn	Pn	23 36 27.7	+0.6
KVT	Kavak	3.74	318	Pn	Pn	23 36 27.7	+0.7
NIG	Nigde	3.74	268	*e*PN	Pn	23 36 26.7	-0.3
NIG	Nigde	3.74	268	Pn	Pn	23 36 26.8	-0.3
NIG	Nigde	3.74	268	Pn	Pn	23 36 26.8	-0.2
CDAG	Cicekdag	4.09	290	*i* P	Pn	23 36 32.4	+0.6
CORM	Corum	4.10	298	*e*PN	Pn	23 36 32.0	0.0
CTKT	Corum	4.21	304	*i* P	Pn	23 36 35.4	+2.0
CTKT	Corum	4.21	304	*i* P	Pn	23 36 35.3	+1.9
ROOS	tl_alroos	4.48	202	⇑P	Pn	23 36 38.1	+0.9
ROOS	tl_alroos	4.48	202	⇑*i*P	Pn	23 36 38.1	+0.9
DIKM	Dikmen	4.57	318	*e*PN	Pn	23 36 38.7	+0.4
BR131	Keskin Array S	4.66	289	*e*Pn	Pn	23 36 39.7	0.0
BR131				*e*Pg	Pg	23 36 55.6	-1.8
BR131				Sn	Sn	23 37 33.4	-1.0
BR131	Keskin Array S	4.66	289	*e*Pn	Pn	23 36 39.7	0.0
BR131	Keskin Array S	4.66	289	*e*Pg	Pg	23 36 55.6	-1.8
BRTR	Keskin Array B	4.66	289	Pn	Pn	23 36 40.6	+1.0
	1.6nm,0.3s,baz=108,slow=14,SNR=73						
BRTR				Lg		23 37 53.5	
	baz=112,slow=25,SNR=1.7						
BYBT	Boyabat	4.71	313	*e*PN	Pn	23 36 40.9	+0.5
BYBT	Boyabat	4.71	313	Pn	Pn	23 36 40.8	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BYBT	**Boyabat**	**4.71**	**313**	Pn	**Pn**	**23 36 40.8**	**+0.4**
HWQ	**Hawqa**	**4.90**	**215**	*e*Pn	**Pn**	**23 36 42.5**	**-0.4**
ELDT	**Eldivan**	**5.07**	**297**	*i* P	**Pn**	**23 36 46.5**	**+1.3**
ANTO	**Ankara**	**5.33**	**289**	*e*Pn	**Pn**	**23 36 49.2**	**+0.4**
	5.0nm,0.6s						
ANTO				*e*Pg	**Pg**	**23 37 07.4**	**-2.8**
ANTO				*e*Sn	**Sn**	**23 37 49.3**	**-1.5**
ANTO	**Ankara**	**5.33**	**289**	*e*Pn	**Pn**	**23 36 49.2**	**+0.4**
ANTO	**Ankara**	**5.33**	**289**	*e*Pg	**Pg**	**23 37 07.4**	**-2.8**
BHL	**Bhannes**	**5.34**	**215**	*e*Pn	**Pn**	**23 36 47.1**	**-1.9**
MMAI	**Mount Meron Ar**	**6.21**	**212**	Pn	**Pn**	**23 37 01.8**	**+0.9**
	2.9nm,0.3s,baz=63,slow=15,SNR=16						
MMAI				Lg		23 38 45.5	
	3.6nm,0.3s,baz=12,slow=32,SNR=5.1						
ASF	**Jabal al Asfar**	**6.47**	**199**	Pn	**Pn**	**23 37 04.9**	**+0.4**
	0.6nm,0.3s,baz=235,slow=20,SNR=11						
ASF				Lg		23 38 53.9	
	1.2nm,0.3s,baz=107,slow=19,SNR=3.1						
BHD	**Baghdad**	**6.50**	**140**	*e*x	x	23 37 44.0	
BHD				*e*x	x	23 39 04.0	
BHD				*e*x	x	23 39 30.0	
BHD				*e*x	x	23 39 43.0	
EIL	**Elat**	**9.38**	**204**	Lg		23 40 31.6	
	0.2nm,0.3s,baz=67,slow=15,SNR=3.0						
MIB	**Mutribah**	**10.78**	**140**	*e*P	**Pn**	**23 38 03.0**	**-0.6**
MIB				AMb	AMB	23 38 04.5	
	comp=Z,7.9nm,0.6s						
UMR	**Umm Al-Rimmam**	**11.17**	**139**	*e*P	**Pn**	**23 38 06.4**	**-2.6**
UMR				AML	AML	23 38 09.8	
	comp=Z,4.5nm,0.4s						
NAY	**Al-Naaiem**	**11.18**	**142**	*e*P	**Pn**	**23 38 03.4**	**-5.8**
NAY				AML	AML	23 38 15.6	
	comp=Z,0.8nm,0.5s						
GERES	**GERESS Array B**	**21.25**	**308**	P	**P**	**23 40 15.7**	**+0.2**
	comp=Z,0.9nm,0.8s,mb3.2,baz=101,slow=11,SNR=7.4						
FINES	**FINESS Array B**	**24.56**	**345**	P	**P**	**23 40 49.5**	**+0.3**
	comp=Z,1.9nm,0.8s,mb3.9,baz=146,slow=9.4,SNR=10						
JOF	**Joensuu**	**25.09**	**351**	*e*p	**P**	**23 40 52.6**	**-1.4**
	comp=Z,3.7nm,0.9s,mb4.1						
MKAR	**Makanchi Array**	**32.39**	**61**	P	**P**	**23 42 00.4**	**+1.2**
	comp=Z,0.2nm,0.2s,mb3.6,baz=267,slow=7.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**41.75**	**243**	P	**P**	**23 43 18.4**	**-0.7**
	comp=Z,0.4nm,0.9s,mb3.2,baz=65,slow=6.6,SNR=3.2						
SONM	**Songino Array**	**48.46**	**56**	P	**P**	**23 44 12.7**	**+0.6**
	comp=Z,0.2nm,0.6s,mb3.5,baz=284,slow=10,SNR=2.9						

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*IDC **12** 00:01:27.9±1.1, 0.33S×125.61E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/17, mbtmp4.0/6, ML3.6/1, Error ellipse: s-maj=99.9km s-min=18.0km az=69.0*
*ISCJB **12** 00:01:30.6±0.9, 0.3S±0.1×125.5E±0.2, h33km, mb4.0/5, Error ellipse: s-maj=28.6km s-min=12.4km az=147.0*
*NEIC **12** 00:01:33.0±0.8, 0.38S×125.49E, h35km, mb4.0/2, Error ellipse: s-maj=25.4km s-min=10.9km az=57.0*
ISC 12 00:01:33.1±0.9**, 0.4S**±0.1×**125.5E**±0.2**, h35km, n11, σ0.74**/11**, mb4.0**/5**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	**Kuching**	**15.29**	**277**	Pn	**Pn**	**00 05 06.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**17.60**	**180**	*e*P	**Pn**	**00 05 36.8**	**+1.2**
	7.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**17.60**	**180**	P	**Pn**	**00 05 36.5**	**+0.8**
	0.1nm,0.3s,baz=11,slow=16,SNR=4.2						
WRA	**Warramunga Arr**	**21.27**	**156**	P	**P**	**00 06 15.5**	**-1.1**
	4.2nm,0.6s,mb3.9,baz=336,slow=11,SNR=61						
WB2	**Warramunga Arr**	**21.28**	**156**	*e*P	**P**	**00 06 15.9**	**-0.7**
ASAR	**Alice Springs**	**24.53**	**161**	P	**P**	**00 06 50.1**	**+0.6**
	2.7nm,0.9s,mb3.8,baz=346,slow=12,SNR=12						
STKA	**Stephens Creek**	**34.82**	**156**	*e*P	**P**	**00 08 21.5**	**+0.8**
	1.1nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**34.82**	**156**	P	**P**	**00 08 20.5**	**-0.2**
	1.7nm,0.6s,mb4.2,baz=326,slow=11,SNR=3.5						
SONM	**Songino Array**	**50.83**	**343**	P	**P**	**00 10 30.9**	**+0.8**
	1.7nm,0.7s,mb4.1,baz=161,slow=8.2,SNR=15						
MKAR	**Makanchi Array**	**60.27**	**327**	P	**P**	**00 11 37.5**	**-0.5**
MKAR	**Makanchi Array**	**60.27**	**327**	P	**P**	**00 11 37.5**	**-0.5**
	0.5nm,0.3s,mb4.0,baz=120,slow=8.7,SNR=10						

IDC 12 00:15:30.4±7.4**, 18.29S×69.72W, h138km**±48km**, mb3.5**/2**, mb1 3.5**/3**, mb1mx3.1**/17**, mbtmp3.3**/3**, Error ellipse: s-maj=82.0km s-min=51.8km az=12.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.50**	**38**	P	Pn	00 16 11.7	+0.7
	0.7nm,0.3s,baz=218,slow=9.4,SNR=16						
LPAZ				S	Sn	00 16 43.8	+1.6
	0.4nm,0.3s,baz=80,slow=23,SNR=4.4						
TORD	**Torodi Ar. Bea**	**77.03**	**71**	P	P	00 27 08.8	+0.1
	0.5nm,0.5s,baz=253,slow=4.4,SNR=15						
YKA	**Yellowknife Ar**	**87.92**	**341**	P	P	00 28 04.0	0.0
	0.2nm,0.5s,baz=134,slow=5.1,SNR=4.4						

IDC 12 00:28:14.7±11.0**, 45.90N×154.18E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.4**/3**, Error ellipse: s-maj=297.2km s-min=42.1km az=170.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**47.99**	**298**	P	P	00 36 55.3	+0.3
	0.2nm,0.5s,baz=66,slow=8.6,SNR=4.5						
YKA	**Yellowknife Ar**	**51.17**	**37**	P	P	00 37 19.1	+0.1
	0.1nm,0.4s,baz=292,slow=6.6,SNR=4.2						
FINES	**FINESS Array B**	**65.13**	**335**	P	P	00 38 56.4	-0.3
	0.4nm,0.5s,baz=48,slow=5.5,SNR=5.5						

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*CSEM **12** 00:38:05.2, 40.16N×44.65E, h6km, MD3.5, After ERD*
*DDA **12** 00:38:05.2, 40.16N×44.65E, h6km±1km, Md3.5*
*ISCJB **12** 00:38:08.1±0.9, 40.16N±0.05×44.45E±0.08, h10km, Error ellipse: s-maj=10.8km s-min=4.2km az=33.6*
ISC 12 00:38:07.0±1.6**, 40.13N**±0.05×**44.51E**±0.10**, h2km**±10km**, n7, σ0.81**/14**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.86**	**228**	*i* P	**Pg**	**00 38 23.0**	**-0.6**
DYDN				*i* S	**Sg**	**00 38 36.2**	**+1.4**
DIGO	**Kars**	**0.92**	**289**	*i* P	**Pg**	**00 38 23.6**	**-1.0**
DIGO				*i* S	**Sg**	**00 38 37.6**	**+1.1**
DGRG	**David-gareji**	**1.47**	**26**	P	**Pn**	**00 38 34.7**	**+0.1**
DGRG				S	**Sb**	**00 38 56.2**	**+1.9**
TUTA	**Tutak**	**1.50**	**242**	*i* P	**Pn**	**00 38 34.3**	**-0.6**
TUTA				*i* S	**Sb**	**00 38 54.8**	**-0.2**
MTA	**Mtatsminda**	**1.58**	**8**	P	**Pn**	**00 38 35.5**	**-0.5**
MTA				S	**Sn**	**00 38 56.8**	**-0.2**
TBLG	**Delisi**	**1.61**	**6**	P	**Pn**	**00 38 36.1**	**-0.4**
TBLG				S	**Sn**	**00 38 57.9**	**+0.1**
ONI	**Oni**	**2.58**	**342**	P	**Pg**	**00 38 55.7**	**-0.7**
ONI				S	**Sg**	**00 39 29.6**	**-0.2**

MAN 12 00:51:09, 7.92N×124.10E, h1km, mb4.4, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.71**	**168**	*i* S	Sg	00 51 28.9	-2.8
PAGZ	**Pagadian**	**0.71**	**265**	*e*P	Pg	00 51 23.2	+0.5
PAGZ				*e*S	Sg	00 51 33.4	+1.5
CGP	**Cagayan de Oro**	**0.80**	**48**	*e*P	Pg	00 51 25.1	+0.8
CGP				*i* S	Sg	00 51 37.5	+2.8
BUKP	**Musuan**	**0.96**	**92**	*e*P	Pg	00 51 27.4	+0.1
BUKP				*e*S	Sg	00 51 45.0	+5.2
DCPH	**Dipolog City**	**0.99**	**312**	*e*P	Pg	00 51 29.2	+1.2
DCPH				*e*S	Sg	00 51 44.9	+4.0
SNPH	**Sibulan**	**1.65**	**329**	*e*P	Pn	00 51 40.5	+1.3
TBP	**Tagbilaran**	**1.78**	**352**	*e*P	Pn	00 51 40.8	-0.1
TBP				*e*S	Sn	00 52 05.5	+1.3
MSLP	**Maasin**	**2.33**	**19**	*e*P	Pg	00 52 01.6	+7.9
GUIM	**Jordan**	**3.08**	**331**	*e*P	Pn	00 52 00.4	+1.6

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*ISCJB **12** 00:54:19.9±2.0, 28.93S±0.04×177.02W±0.05, h10km±12km, mb5.3/51, MS5.3/175, Error ellipse: s-maj=8.7km s-min=4.2km az=39.2*
*BJI **12** 00:54:23.7, 28.29S×176.31W, h40km, mB5.8, mb5.6, Ms5.4, Msz5.2*
*SZGRF **12** 00:54:23.6, 28.59S×176.99W, h34km, mb5.5, Kermadec Islands region*
*NEIC **12** 00:54:24.8±0.2, 28.84S×177.01W, h35km, mb5.3/28, MS5.3/147, Error ellipse: s-maj=9.0km s-min=4.7km az=130.0*
*GCMT **12** 00:54:24.8±0.1, 28.61S×176.56W, h28km, MW5.6/90, Moment Tensor Solution. s86,c175; s90,c221; Duration: 1.6s Moment tensor: Scale 10^{17}Nm; M_{rr}2.24±.04; $M_{\theta\theta}$-0.03±.03; $M_{\phi\phi}$-2.21±.03; $M_{r\theta}$0.41±.07; $M_{\theta\phi}$-0.66±.02; $M_{\phi r}$2.21±.07; Best double couple: $M_0$3.22900×10^{17} NP1:ϕ_s200.00000°, δ23.00000°, λ97.00000°. NP2:ϕ_s12.00000°, δ67.00000°, λ87.00000°. Principal axes: T 3.1570, Plg68.0000°, Azm276.0000°; N 0.1480, Plg3.0000°, Azm13.0000°; P -3.3010, Plg22.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*MOS **12** 00:54:25.0±1.9, 28.34S×177.19W, h33km, mb5.5/13, MS5.2/24 Error ellipse: s-maj=13.3km s-min=10.3km az=75.8*
*IDC **12** 00:54:25.6±2.3, 28.46S×177.08W, h34km±16km, mb4.9/13, mb1 5.1/13, mb1mx5.0/15, mbtmp4.9/13, MS5.2/17, Ms1 5.2/17, ms1mx5.0/20, Error ellipse: s-maj=19.1km s-min=14.1km az=162.0*
ISC 12 00:54:21.4±2.1**, 28.87S**±0.04×**177.00W**±0.05**, h10km**±13km**, h34km**±1.0km**:pP-P, n749, σ0.69**/368**, mb5.3**/51**, MS5.3**/176**, 76C-79D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**10.00**	**202**	*e*P	**Pn**	**00 56 44.8**	**-0.3**
PUZ				S	**Sn**	**00 58 35.9**	**-1.5**
PUZ	**Puketiti**	**10.00**	**202**	*e*PN	**Pn**	**00 56 44.8**	**-0.4**
PUZ				SN	**Sn**	**00 58 35.9**	**-1.5**
MWZ	**Matawai**	**10.48**	**204**	*e*P	**Pn**	**00 56 50.9**	**-0.9**
MWZ	**Matawai**	**10.48**	**204**	*e*PN	**Pn**	**00 56 51.0**	**-0.8**
MWZ				SN	**Sn**	**00 58 49.5**	**+0.2**
URZ	**Urewera**	**10.57**	**206**	Pn	**Pn**	**00 56 52.9**	**-0.1**
	2.3nm,0.3s,baz=1.5,slow=21,SNR=8.9						
URZ				Sn	**Sn**	**00 58 49.8**	**-1.7**
	16nm,0.3s,baz=241,slow=10,SNR=8.1						
URZ	**Urewera**	**10.57**	**206**	PN	**Pn**	**00 56 53.5**	**+0.4**
PXZ	**Pawanui**	**12.23**	**203**	SN	**Sn**	**00 59 25.2**	**-7.0**
BFZ	**Birch Farm**	**13.02**	**203**	*e*PN	**Pn**	**00 57 25.2**	**-1.3**
BFZ				SN	**Sn**	**00 59 45.2**	**-6.2**
MRZ	**Mangatainoka R**	**13.25**	**205**	*e*PN	**Pn**	**00 57 29.9**	**+0.3**
SNZO	**South Karori**	**14.14**	**206**	*e*Pn	**Pn**	**00 57 47.5**	**+5.7**
NNZ	**Nelson**	**14.61**	**210**	*e*PN	**Pn**	**00 57 51.5**	**+3.3**
NNZ				SN	**Sn**	**01 00 22.0**	**-8.2**
QRZ	**Quartz Range**	**14.69**	**213**	SN	**Sn**	**01 00 24.1**	**-8.1**
THZ	**Tophouse**	**15.26**	**210**	*e*P	**Pn**	**00 57 56.6**	**-0.4**
THZ				S	**Sn**	**01 00 37.1**	**-9.0**
THZ	**Tophouse**	**15.26**	**210**	PN	**Pn**	**00 57 56.6**	**-0.4**
THZ				SN	**Sn**	**01 00 37.1**	**-9.0**
KHZ	**Kahutara**	**15.54**	**207**	*e*P	**Pn**	**00 57 59.7**	**-0.9**
KHZ				S	**Sn**	**01 00 40.2**	**-13**
KHZ	**Kahutara**	**15.54**	**207**	*e*PN	**Pn**	**00 57 57.7**	**-2.9**
KHZ				SN	**Sn**	**01 00 40.2**	**-13**
AFI	**Afiamalu**	**15.65**	**19**	*e*Pn	**Pn**	**00 57 55.5**	**-6.7**
	135nm,1.0s						
AFI	**Afiamalu**	**15.65**	**19**	*e*P	**Pn**	**00 57 55.5**	**-6.7**
AFI				pmax	pmax		
	comp=Z,135nm,1.0s						
AFI	**Afiamalu**	**15.65**	**19**	Pn	**Pn**	**00 57 52.6**	**-10**
	comp=Z,2.6nm,0.3s,baz=70,slow=15,SNR=6.6						
AFI				Sn	Sn	01 00 35.7	-20
	comp=Z,4.8nm,0.3s,baz=52,slow=19,SNR=4.1						
LTZ	**Lake Taylor**	**16.37**	**209**	*e*P	**Pn**	**00 58 12.9**	**+1.6**
LTZ	**Lake Taylor**	**16.37**	**209**	*e*PN	**Pn**	**00 58 10.9**	**-0.3**
DZM	**Mont Dzumac**	**16.40**	**291**	*e*P	**Pn**	**00 58 16.9**	**+5.0**
DZM	**Mont Dzumac**	**16.40**	**291**	Pn	**Pn**	**00 58 17.4**	**+5.6**
	comp=Z,0.7nm,0.3s,baz=89,slow=16,SNR=27						
DZM				LR	LR	01 03 25.0	
	comp=Z,18μm,19.0s,baz=153,slow=33						
MQZ	**McQueen's Vall**	**16.98**	**206**	SN	**Sn**	**01 01 13.2**	**-14**
RAR	**Rarotonga**	**17.36**	**68**	P	**Pn**	**00 58 16.0**	**-8.0**
	comp=Z,3.1nm,0.3s,baz=252,slow=9.6,SNR=6.0						
RAR				S	Sn	01 01 08.5	-29
	comp=Z,2.5nm,0.3s,baz=76,slow=19,SNR=3.5						
RAR				LR	LR	01 03 27.5	
	comp=Z,6μm,19.0s,baz=166,slow=31						
RPZ	**Rata Peaks**	**17.64**	**210**	P	**Pn**	**00 58 28.3**	**+1.0**
	comp=Z,6.7nm,0.3s,baz=288,slow=2.0,SNR=16						
RPZ				S	**Sn**	**01 01 29.5**	**-14**
	comp=Z,2.0nm,0.3s,baz=221,slow=20,SNR=4.2						
FOZ	**Fox Glacier**	**18.14**	**213**	*e*PN	**Pn**	**00 58 31.6**	**-1.9**
ODZ	**Otahua Downs**	**18.89**	**208**	*e*P	**Pn**	**00 58 42.7**	**+0.1**
ODZ	**Otahua Downs**	**18.89**	**208**	PN	**Pn**	**00 58 42.7**	**+0.2**
FUNA	**Funafuti**	**20.55**	**349**	PFAKE		00 59 10.0	+10
FUNA				LR	LR		
	comp=Z,5μm,20.0s,MS4.9						
TBI	**Tubuai**	**25.30**	**84**	*e*S	**S**	**01 04 19.2**	**+4.7**
	comp=Z,2μm,28.5s						
TBI				*e*LR	LR	01 05 59.6	
	comp=Z,11μm,27.8s,baz=250						
ARMA	**Armidale**	**27.27**	**259**	*e*P	**P**	**01 00 09.5**	**+3.5**
	comp=Z,1.0nm,0.8s						
PPT	**Papeete**	**27.53**	**72**	*e*LR	LR	01 06 56.2	
	comp=Z,12μm,26.0s,baz=237						
PPT	**Papeete**	**27.53**	**72**	LR	LR	01 08 09.7	
	comp=Z,4μm,19.9s,MS4.9,baz=249,slow=30						
EIDS	**Eidsvold**	**28.57**	**269**	*e*P	**P**	**01 00 19.0**	**+1.3**
	comp=Z,19nm,1.0s,mb4.8						
EIDS				*e*PcP	PcP	01 03 24.2	-4.8
HNR	**Honiara**	**29.01**	**307**	PFAKE		01 00 30.0	+8.3
HNR				LR	LR		
	comp=Z,4μm,19.0s,MS5.1						
HNR	**Honiara**	**29.01**	**307**	LR	LR	01 10 06.6	
	comp=Z,2μm,20.8s,MS4.7,baz=176,slow=33						
CNB	**Canberra Magne**	**29.12**	**249**	*e*P	**P**	**01 00 26.6**	**+4.1**
	comp=Z,39nm,1.1s,mb5.0						
TAU	**Tasmania Unive**	**31.87**	**234**	*e*P	**P**	**01 00 48.5**	**+1.8**
	comp=Z,90nm,1.3s,mb5.4						
TAU				LR	LR		
	comp=Z,5μm,20.0s,MS5.2						
TAU	**Tasmania Unive**	**31.87**	**234**	*e*P	**P**	**01 00 48.5**	**+1.8**
TAU				pmax	pmax		
	comp=Z,90nm,1.3s,mb5.4						
TAU				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.2						
CTA	**Charters Tower**	**34.45**	**276**	*e*P	**P**	**01 01 10.6**	**+1.1**
	comp=Z,8.2nm,0.2s,mb5.3						
CTA	**Charters Tower**	**34.45**	**276**	*e*P	**P**	**01 01 10.6**	**+1.1**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.2s						
CTA	**Charters Tower**	**34.45**	**276**	P	**P**	**01 01 10.3**	**+0.8**
	comp=Z,42nm,0.9s,mb5.4,baz=104,slow=11,SNR=30						
CTA				LR	LR	01 14 14.8	
	comp=Z,12μm,18.2s,MS5.7,baz=120,slow=35						
CTAO	**Charters Tower**	**34.45**	**276**	*e*P	**P**	**01 01 10.8**	**+1.3**
	comp=Z,35nm,0.7s,mb5.4						
CTAO				LR	LR		
	comp=Z,11μm,19.0s,MS5.6						
CTAO	**Charters Tower**	**34.45**	**276**	*e*P	**P**	**01 01 10.8**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,11μm,19.0s,MS5.6						
STKA	**Stephens Creek**	**35.70**	**255**	*e*P	**P**	**01 01 22.3**	**+2.2**
	comp=Z,29nm,0.8s,mb5.3						
STKA				*e*PCP	PcP	01 03 49.7	+1.3
STKA	**Stephens Creek**	**35.70**	**255**	P	**P**	**01 01 22.2**	**+2.1**
	comp=Z,44nm,0.9s,mb5.4,baz=90,slow=8.7,SNR=44						
STKA				PcP	PcP	01 03 49.5	+1.1
	comp=Z,18nm,0.9s,baz=53,slow=3.1,SNR=4.4						
STKA				ScP	ScP	01 07 34.4	-0.2
	comp=Z,4.1nm,1.0s,baz=117,slow=9.0,SNR=2.6						
STKA				LR	LR	01 14 48.4	
	comp=Z,6μm,18.4s,MS5.4,baz=86,slow=34						
RKT	**Rikitea**	**38.06**	**91**	*e*S	**S**	**01 07 40.8**	**+7.6**
	comp=Z,970nm,31.4s						
RKT				*e*LR	LR	01 11 54.9	
	comp=Z,7μm,28.0s,baz=257						
PMG	**Port Moresby**	**38.77**	**293**	*e*P	**P**	**01 01 47.2**	**+0.8**
PMG				LR	LR		
	comp=Z,811nm,21.0s,MS4.5						
PMG	**Port Moresby**	**38.77**	**293**	P	**P**	**01 01 46.9**	**+0.4**
	comp=Z,28nm,0.8s,mb5.0,baz=122,slow=6.6,SNR=13						
PMG				PcP	PcP	01 03 58.1	+0.1
	comp=Z,24nm,1.0s,baz=180,slow=5.6,SNR=4.6						
PMG				LR	LR	01 15 16.9	
	comp=Z,4μm,19.8s,MS5.2,baz=121,slow=32						
COEN	**Coen**	**39.72**	**283**	*e*P	**P**	**01 01 55.0**	**+0.6**
	comp=Z,9.8nm,0.8s,mb4.6						
PTCN	**Pitcairn Islan**	**41.77**	**96**	PFAKE		01 02 20.0	+8.8
PTCN				LR	LR		
	comp=Z,7μm,22.0s,MS5.5						
ASAR	**Alice Springs**	**44.08**	**265**	P	**P**	**01 02 30.0**	**0.0**
ASAR						01 04 15.4	
ASAR	**Alice Springs**	**44.08**	**265**	P	**P**	**01 02 30.0**	**0.0**
	comp=Z,34nm,0.9s,mb5.1,baz=113,slow=7.9,SNR=182						
ASAR				PcP	PcP	01 04 15.4	+0.1
	comp=Z,6.9nm,0.8s,baz=105,slow=4.2,SNR=6.0						
ASAR				ScP	ScP	01 08 06.9	-0.4
	comp=Z,3.1nm,0.8s,baz=129,slow=4.5,SNR=6.2						
WB2	**Warramunga Arr**	**44.92**	**270**	⇑*i*P	**P**	**01 02 36.2**	**-0.5**
WB2				*e*		01 02 53.5	
WB2				*e*PCP	PcP	01 04 18.2	0.0
WB2				*e*S	**S**	**01 09 10.0**	**-5.0**
WRA	**Warramunga Arr**	**44.94**	**270**	P	**P**	**01 02 36.5**	**-0.3**
WRA						01 04 18.3	
WRA				S	**S**	**01 09 09.0**	**-6.2**
WRA	**Warramunga Arr**	**44.94**	**270**	P	**P**	**01 02 36.5**	**-0.3**
	comp=Z,62nm,0.9s,mb5.4,baz=107,slow=7.8,SNR=177						
WRA				PcP	PcP	01 04 18.3	+0.1
	comp=Z,22nm,0.9s,baz=111,slow=3.4,SNR=9.2						
WRA				ScP	ScP	01 08 10.2	-0.6
	comp=Z,4.0nm,1.0s,baz=112,slow=4.3,SNR=5.6						
WRA				S	**S**	**01 09 08.9**	**-6.2**
	comp=Z,1.4nm,0.7s,baz=108,slow=14,SNR=3.4						
WRA				LR	LR	01 20 30.5	
	comp=Z,2μm,18.4s,MS5.2,baz=105,slow=35						
DRV				SS	SS	01 12 44.0	-8.1
DRV				L		01 14 00.0	
DRV				R		01 16 00.0	
DRV	**Dumont d'Urvil**	**45.88**	**202**	S	**S**	**01 09 28.0**	**+0.3**
FORT	**Forrest**	**47.30**	**253**	*e*P	**P**	**01 02 55.2**	**-0.1**
	comp=Z,98nm,0.8s,mb5.8						
SBA	**Scott Base**	**49.63**	**184**	*e*P	**P**	**01 03 18.0**	**+5.4**
	comp=Z,73nm,0.9s,mb5.7						
SBA				LR	LR		
	comp=Z,1μm,19.0s,MS4.9						
SBA	**Scott Base**	**49.63**	**184**	*e*P	**P**	**01 03 18.0**	**+5.4**
SBA				pmax	pmax		
	comp=Z,73nm,0.9s,mb5.7						
SBA				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.9						
VNDA	**Vanda**	**49.70**	**186**	P	**P**	**01 03 17.6**	**+4.3**
	comp=Z,3.0nm,0.7s,mb4.5,baz=10,slow=7.9,SNR=13						
VNDA				LR	LR	01 21 36.4	
	comp=Z,902nm,19.0s,MS4.8,baz=7.7,slow=33						
KIP	**Kipapa**	**53.25**	**22**	*e*P	**P**	**01 03 39.5**	**-0.8**
	comp=Z,120nm,1.0s,mb5.8						
KIP	**Kipapa**	**53.25**	**22**	*e*P	**P**	**01 03 39.5**	**-0.8**
KIP				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
FITZ	**Fitzroy Crossi**	**53.25**	**268**	*e*P	**P**	**01 03 39.9**	**-0.7**
	comp=Z,48nm,0.9s,mb5.4						
FITZ				*e*		01 03 58.8	
FITZ	**Fitzroy Crossi**	**53.25**	**268**	LR	LR	01 26 07.4	
	comp=Z,5μm,18.4s,MS5.6,baz=272,slow=36						
KLBR	**Kellerberrin**	**55.68**	**250**	*e*P	**P**	**01 03 57.3**	**-0.8**
	comp=Z,77nm,1.0s,mb5.7						
NWAO	**Narrogin (SRO)**	**55.76**	**248**	*e*P	**P**	**01 03 57.3**	**-1.4**
	comp=Z,30nm,1.1s,mb5.2						
NWAO				LR	LR		
	comp=Z,3μm,20.0s,MS5.3						
NWAO	**Narrogin (SRO)**	**55.76**	**248**	*e*P	**P**	**01 03 57.3**	**-1.4**
NWAO				pmax	pmax		
	comp=Z,30nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,3μm,20.0s						
NWAO	**Narrogin (SRO)**	**55.76**	**248**	LR	LR	01 26 59.1	
	comp=Z,3μm,19.3s,MS5.4,baz=112,slow=35						
GUMO	**Guam**	**56.03**	**314**	PFAKE		01 04 10.0	+9.3
GUMO				LR	LR		
	comp=Z,1μm,20.0s,MS5.0						
CASY	**Casey**	**56.90**	**207**	*e*P	**P**	**01 04 06.2**	**0.0**
	comp=Z,61nm,0.8s,mb5.7						
MBWA	**Marble Bar**	**57.27**	**262**	*e*P	**P**	**01 04 06.7**	**-2.9**
	comp=Z,114nm,1.1s,mb5.8						
MBWA				LR	LR		
	comp=Z,6μm,21.0s,MS5.6						
QSPA	**South Pole Qui**	**61.24**	**180**	*e*P	**P**	**01 04 38.8**	**+2.7**
QSPA				LR	LR		
	comp=Z,3μm,20.0s,MS5.4						
DAV	**Davao City (W)**	**65.79**	**294**	PFAKE		01 05 20.0	+13
DAV				LR	LR		
	comp=Z,53μm,20.0s,MS6.7						
KKM	**Kota Kinabalu**	**72.92**	**287**	*e*P	**P**	**01 05 50.8**	**-0.6**
PMSA	**Palmer Station**	**73.30**	**156**	PFAKE		01 06 00.0	+7.2
PMSA				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
MAW	**Mawson**	**74.04**	**200**	P	**P**	**01 05 59.2**	**+2.1**
	comp=Z,41nm,1.0s,mb5.3,baz=116,slow=6.0,SNR=17						
MAW				LR	LR	01 38 24.2	
	comp=Z,2μm,19.1s,MS5.4,baz=118,slow=36						
KSM	**Kuching**	**75.60**	**280**	*e*P	**P**	**01 06 06.4**	**-0.7**
MJAR	**Matsushiro Arr**	**77.49**	**324**	P	**P**	**01 06 15.2**	**-2.0**
	comp=Z,32nm,0.9s,mb5.3,baz=158,slow=5.4,SNR=46						
MAJO	**Matsushiro**	**77.49**	**324**	*e*P	**P**	**01 06 15.9**	**-1.2**
MAJO				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
MAT	**Matsushiro**	**77.49**	**324**	P	**P**	**01 06 15.7**	**-1.5**
MAT				S	S	01 15 57.0	-11
SYO	**Syowa Base**	**78.80**	**193**	⇓*e*P	**P**	**01 06 23.6**	**-0.5**
SYO	**Syowa Base**	**78.80**	**193**	⇓*i*P	**P**	**01 06 25.0**	**+0.9**
ERM	**Erimo**	**79.53**	**331**	PFAKE		01 06 40.0	+12
ERM				LR	LR		
	comp=Z,2μm,22.0s,MS5.5						
SNAA	**Sanae**	**79.66**	**178**	*e*P	**P**	**01 06 31.4**	**+2.7**
SNAA				*e*		01 06 39.8	
SNAA				*e*		01 06 42.9	
SNAA				*e*		01 06 45.7	
SNAA				*e*		01 06 50.2	
SNAA				*e*		01 06 54.5	
SNAA				*e*		01 07 02.5	
TATO	**Taipei**	**79.74**	**306**	PFAKE		01 06 40.0	+10
TATO				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
VNA3	**Neumayer Olymp**	**79.77**	**176**	*e*P	**P**	**01 06 30.1**	**+0.8**
VNA3				*e*		01 06 38.2	
VNA3				*e*		01 06 42.3	
VNA3				*e*		01 06 46.9	
VNA3				*e*		01 06 58.2	
VNA2	**Neumayer--Watz**	**80.22**	**177**	*e*P	**P**	**01 06 33.0**	**+1.2**
	baz=162,slow=4.0						
VNA2				*e*		01 06 41.3	
VNA2				*e*		01 06 45.8	
VNA2				*e*		01 06 49.0	
VNA2				*e*		01 06 52.9	
VNA2				*e*		01 06 56.9	
VNA2				*e*		01 07 00.0	
VNA2				*e*		01 07 04.2	
ADK	**Adak**	**80.40**	**0**	*e*P	**P**	**01 06 30.7**	**-2.1**
SMY	**Shemya**	**81.62**	**355**	PFAKE		01 06 50.0	+11
SMY				LR	LR		
	comp=Z,3μm,21.0s,MS5.6						
QZH	**Quanzhou**	**81.80**	**304**	⇑*i*P	**P**	**01 06 41.9**	**+1.0**
QZH				*e*S	S	01 16 51.3	-3.0
QZH				AMB	AMB		
	comp=Z,980nm,9.6s						
QZH				LR	LR		
	comp=N,4μm,24.7s,MS6.0						
QZH				LR	LR		
	comp=E,7μm,27.0s,MS6.0						
QZH				LR	LR		
	comp=Z,2μm,16.8s						
SCI	**San Clemente I**	**82.79**	**46**	⇑P	**P**	**01 06 45.8**	**0.0**
	baz=83						
CIS	**Catalina Islan**	**83.16**	**46**	⇓P	**P**	**01 06 47.7**	**-0.1**
	baz=83						
HAST	**UC Hastings Re**	**83.24**	**42**	⇓P	**P**	**01 06 48.4**	**+0.3**
	baz=83						
PKM	**Peak Mountain**	**83.27**	**44**	⇓P	**P**	**01 06 48.8**	**+0.5**
	baz=83						
BNLO	**Ben Lomond (Sa**	**83.39**	**41**	⇓P	**P**	**01 06 49.4**	**+0.6**
	baz=83						
PKD	**Parkfield**	**83.54**	**43**	⇓P	**P**	**01 06 50.2**	**+0.5**
	baz=84						
SAO	**San Andreas Ge**	**83.56**	**42**	PFAKE		01 07 00.0	+10
SAO				LR	LR		
	comp=Z,3μm,19.0s,MS5.7						
U04C	**Hernandez Rese**	**83.68**	**42**	⇓P	**P**	**01 06 51.0**	**+0.7**
	baz=84						
MCCM	**Marconi Confer**	**83.69**	**40**	PFAKE		01 07 00.0	+10
MCCM				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
KSRS	**Korea Array**	**83.75**	**319**	P	**P**	**01 06 50.0**	**-0.7**
	comp=Z,21nm,1.0s,mb5.2,baz=144,slow=5.5,SNR=31						

KSRS LR LR 01 42 22.3
comp=Z,895nm,19.7s,MS5.2,baz=127,slow=34
YSS Yuzh-Sakhalins 83.75 334 *eP* **P 01 06 50.0 -0.5**
comp=Z,137nm,1.2s,mb6.0
YSS LR LR
comp=Z,2µm,22.0s,MS5.4
YSS Yuzh-Sakhalins 83.75 334 ⇑ *iP* **P 01 06 50.3 -0.2**
YSS *PP pP 01 06 59.0 +5.3
YSS *e* 01 07 04.0
YSS pmax pmax
comp=Z,90nm,1.0s,mb5.8
YSS pmax pmax
comp=E,70nm,1.2s
YSS MLR MLR
comp=Z,600nm,19.0s,MS5.0
SSE Sheshan 83.76 310 *eP* **P 01 06 51.8 +0.9**
SSE AP pP 01 07 04.3 +10
SSE XP sP 01 07 08.1 +13
SSE PP PP 01 10 05.6 +1.2
SSE S S 01 17 13.6 -0.5
SSE XS sS 01 17 34.2 +15
SSE AMB AMB
comp=Z,29nm,0.7s,mb5.5
SSE AMB AMB
comp=Z,330nm,11.4s
SSE LR LR
comp=N,535nm,23.1s,MS5.0
SSE LR LR
comp=E,605nm,23.2s,MS5.0
SSE LR LR
comp=Z,993nm,24.0s,MS5.1
PACP Pacheco Peak 83.82 42 P **P 01 06 51.6 +0.5**
baz=84,SNR=6.1
ARVC Arvin 84.03 44 ⇓P **P 01 06 52.4 +0.2**
baz=84
MURC Murrieta 84.05 46 P **P 01 06 52.4 +0.1**
baz=84,SNR=6.5
U05C Westside ANR, 84.05 43 ⇑P **P 01 06 52.8 +0.5**
baz=84
MONP Monument Peak 84.09 47 P **P 01 06 52.6 0.0**
baz=84,SNR=7.8
S04C Ingram Canyon, 84.14 41 ⇑P **P 01 06 53.1 +0.4**
baz=84
DVTC Desert V Tower 84.15 48 P **P 01 06 53.2 +0.3**
baz=84,SNR=5.8
BFSC Mount Baldy St 84.17 46 ⇓P **P 01 06 53.4 +0.5**
baz=84
HOPS Hopland 84.18 39 PFAKE 01 07 00.0 +7.1
HOPS LR LR
comp=Z,2µm,19.0s,MS5.6
FALS False Pass 84.19 8 *eP* **P 01 06 44.6 -8.0**
PET Petropavlovsk 84.26 346 PFAKE 01 07 00.0 +7.1
PET LR LR
comp=Z,1µm,19.0s,MS5.3
PET Petropavlovsk 84.26 346 *c iP* **P 01 06 51.9 -1.0**
PET *eS* S 01 17 14.8 -3.3
PET pmax pmax
comp=Z,21nm,0.9s,mb5.3
PET pmax pmax
comp=Z,500nm,15.7s
PET MLR MLR
comp=Z,1µm,18.0s,MS5.2
EDW2 Edwards Air Fo 84.38 45 P **P 01 06 54.0 0.0**
baz=84,SNR=14
MNRC McLaughlin Nat 84.45 40 ⇓P **P 01 06 54.6 +0.3**
baz=84
Q03C Winters 84.52 40 ⇑P **P 01 06 55.2 +0.6**
baz=84
INCN Inchon 84.52 318 PFAKE 01 07 10.0 +15
INCN LR LR
comp=Z,613nm,20.0s,MS5.0
SWSC Sam W. Stewart 84.53 48 ⇓P **P 01 06 54.8 0.0**
baz=84
PFO Pinyon Flat Ob 84.53 47 P **P 01 06 54.3 -0.5**
PFO LR LR
comp=Z,2µm,19.0s,MS5.5
PFO Pinyon Flat Ob 84.53 47 P **P 01 06 54.3 -0.5**
comp=Z,9.9nm,1.0s,mb4.9,baz=226,slow=2.4,SNR=12
PFO Pinyon Flat Ob 84.53 47 P **P 01 06 54.9 +0.1**
baz=84,SNR=8.0
O01C Eel River Cons 84.57 38 ⇑P **P 01 06 54.9 +0.1**
baz=85
ISA Isabella 84.60 44 P **P 01 06 55.3 +0.2**
baz=85,SNR=12
S05C Merced 84.61 42 ⇓P **P 01 06 55.4 +0.3**
baz=85
BBRC Big Bear Sol-O 84.65 46 ⇑P **P 01 06 56.1 +0.7**
baz=85
T06C Millerton Lake 84.75 43 P **P 01 06 55.2 -0.6**
baz=85,SNR=12
GASB Alder Springs 84.83 39 P **P 01 06 56.8 +0.6**
baz=85,SNR=8.9
HELL Mitchell Peak, 84.94 43 P **P 01 06 56.3 -0.5**
baz=85,SNR=5.6
LRMC Laurel Mountai 84.96 45 P **P 01 06 57.1 +0.2**
baz=85,SNR=7.1
CMB Columbia Colle 85.04 41 *eP* **P 01 06 56.0 -1.3**
comp=Z,15nm,1.1s,mb5.0
CMB *e* 01 07 07.9
CMB LR LR
comp=Z,2µm,19.0s,MS5.6
CMB Columbia Colle 85.04 41 *eP* **P 01 06 56.0 -1.3**
CMB *e* 01 07 07.9
CMB pmax pmax
comp=Z,15nm,1.1s,mb5.0
CMB MLR MLR
comp=Z,2µm,19.0s,MS5.6
CMB Columbia Colle 85.04 41 P **P 01 06 57.1 -0.2**
baz=85,SNR=10
SUTB Sutter Butte 85.06 40 ⇑P **P 01 06 56.9 -0.4**
baz=85
BELC Belle Mtn. 85.07 47 P **P 01 06 57.4 -0.1**
baz=85,SNR=17
QIZ Qiongzhong 85.13 295 ⇑P **P 01 06 58.7 +0.5**
QIZ AP pP 01 07 08.2 +6.8
QIZ XP sP 01 07 12.0 +10
QIZ S S 01 17 24.3 -4.0
QIZ XS sS 01 17 43.0 +9.5
QIZ AMB AMB
comp=Z,483nm,4.5s
QIZ LR LR
comp=E,405nm,19.5s
QIZ LR LR
comp=Z,433nm,30.9s
QIZ Qiongzhong 85.13 295 PFAKE 01 07 10.0 +12
QIZ LR LR
comp=Z,488nm,20.0s,MS4.9
KHMM Horse Mountain 85.14 38 *eP* **P 01 06 59.3 +1.6**
O02C Red Bluff 85.16 39 P **P 01 06 58.0 +0.3**
baz=85,SNR=16
KCC Kaiser Creek 85.19 43 ⇓P **P 01 06 58.3 +0.3**
baz=85
BC3 Big Chuckw Mtn 85.20 47 P **P 01 06 58.8 +0.6**
baz=85,SNR=12
GLA Glamis 85.23 48 P **P 01 06 58.6 +0.3**
baz=85,SNR=6.3
OHCM Honcut 85.30 40 *eP* **P 01 06 58.2 -0.3**
LAVA Lava Cap Winer 85.33 41 P **P 01 06 58.4 -0.3**
baz=85,SNR=5.8
N02C Big Bar 85.33 38 ⇓P **P 01 06 58.7 +0.1**
baz=85
CWC Cottonwood Cre 85.35 44 ⇑P **P 01 06 59.0 +0.1**
baz=85
HEC Hector,Ludlow 85.39 46 ⇓P **P 01 06 59.0 -0.1**
baz=85
GSC Goldstone 85.39 45 P **P 01 06 58.9 -0.2**
baz=85,SNR=16
ORV Oroville 85.44 40 P **P 01 06 58.9 -0.3**
baz=85,SNR=5.2
O03C Acorn Hollow, 85.45 39 ⇓P **P 01 06 59.1 -0.2**
baz=85
MPMC Manual Prospec 85.46 44 P **P 01 06 59.7 +0.3**
baz=86,SNR=28
WDC Whiskeytown Da 85.58 38 PFAKE 01 07 10.0 +10
WDC LR LR
comp=Z,1µm,19.0s,MS5.4
WDC Whiskeytown Da 85.58 38 P **P 01 06 60.0 +0.1**
baz=86,SNR=7.1
MTUM Tungsten Hills 85.66 43 *eP* **P 01 07 00.6 +0.3**
R05C Kirkwood Meado 85.67 41 P **P 01 06 60.0 -0.4**
baz=86,SNR=8.8
IRM Iron Mountain 85.72 47 P **P 01 07 00.9 +0.1**
baz=86,SNR=14
P05C Yuba Gap, Truc 85.77 40 P **P 01 07 00.9 0.0**
baz=86,SNR=7.6
GMRC Granite Mounta 85.78 46 P **P 01 07 01.0 0.0**
baz=86,SNR=9.1
R07C Lee Vining 85.86 42 P **P 01 07 01.0 -0.4**
baz=86,SNR=7.3
Y12C Blythe 85.86 48 ⇑P **P 01 07 01.5 0.0**
baz=86
WAKR Walker 85.91 42 *eP* **P 01 07 01.9 +0.3**
R06C Coleville 85.91 42 P **P 01 07 01.9 +0.3**
baz=86,SNR=6.2
M02C Callahan 85.98 38 P **P 01 07 02.0 +0.2**
baz=86,SNR=12
S08C White Mtn Res 85.99 43 P **P 01 07 02.5 +0.5**
baz=86,SNR=12
TUQ Turquoise Mtn. 86.03 46 ⇑P **P 01 07 02.3 +0.1**
baz=86
SHOC Shoshone 86.11 45 P **P 01 07 02.7 +0.1**
baz=86,SNR=13
FURC Furnace Creek, 86.11 44 ⇓P **P 01 07 02.7 +0.1**
baz=86
GRAC Grapevine Rang 86.15 44 P **P 01 07 03.1 +0.3**
baz=86,SNR=7.3
PSI Prapat 86.15 275 LR LR 01 49 09.7
comp=Z,2µm,18.1s,MS5.5,baz=252,slow=38
O04C Chester 86.20 39 ⇑P **P 01 07 02.9 -0.1**
baz=86
WCN Washoe City 86.26 41 P **P 01 07 03.4 +0.2**
baz=86,SNR=6.9
M03C McCloud 86.29 38 ⇑P **P 01 07 03.3 0.0**
baz=86
YBH Yreka Blue Hor 86.29 38 PFAKE 01 07 10.0 +6.6
YBH LR LR
comp=Z,1µm,22.0s,MS5.3
YBH Yreka Blue Hor 86.29 38 P **P 01 07 03.6 +0.3**
baz=86,SNR=6.0
BEKR Beckwourth 86.30 40 P **P 01 07 03.2 -0.2**
baz=86,SNR=6.2
Y13A Salome 86.36 48 P **P 01 07 04.5 +0.6**
baz=86,SNR=7.4
U10A Ash Meadows, A 86.41 45 P **P 01 07 04.7 +0.6**
baz=86,SNR=14
PDMCI Parker Dam,Lak 86.46 48 ⇓P **P 01 07 04.6 +0.2**
baz=86
NVAR Mina Array Bea 86.52 42 P **P 01 07 03.4 -1.2**
comp=Z,6.8nm,0.9s,mb4.9,baz=207,slow=6.6,SNR=38
NVAR PKKPbc PKKPbc 01 25 03.8 +1.8
comp=Z,0.7nm,0.8s,baz=109,slow=4.0,SNR=5.9
NVAR PKPPKP 01 33 12.9
comp=Z,0.8nm,0.8s,baz=96,slow=3.5,SNR=5.4
V11A Goodsprings 86.60 46 ⇓P **P 01 07 05.6 +0.6**
baz=87
K02A Glendale 86.61 36 ⇑P **P 01 07 05.0 +0.1**
baz=87
W12A Cal Nev Ari 86.61 46 ⇓P **P 01 07 05.6 +0.4**
baz=87
Z14A Wintersburg 86.66 49 ⇑P **P 01 07 05.8 +0.4**
baz=87
115A Sonoran Desert 86.73 50 ⇑P **P 01 07 05.8 0.0**
baz=87
M04C Macdoel 86.79 38 ⇓P **P 01 07 06.2 +0.3**
baz=87
TPNV Topopah Spring 86.80 44 *eP* **P 01 07 05.3 -0.7**
TPNV LR LR
comp=Z,2µm,19.0s,MS5.5
TPNV Topopah Spring 86.80 44 ⇑P **P 01 07 06.0 0.0**
baz=87
O06A Flanigan 86.80 40 ⇑P **P 01 07 05.7 -0.2**
baz=87
PAYG Puerto Ayora 86.80 89 PFAKE 01 07 20.0 +13
PAYG LR LR
comp=Z,1µm,22.0s,MS5.3
216A Three Points, 86.83 51 ⇓P **P 01 07 06.5 +0.2**
baz=87
X13A Yucca 86.84 48 P **P 01 07 06.8 +0.6**
baz=87,SNR=9.6
V12A Nelson 86.89 46 P **P 01 07 06.9 +0.4**
baz=87,SNR=7.1
Y14A Wickenburg 86.97 48 P **P 01 07 07.3 +0.4**
baz=87,SNR=9.6
116A Eloy 87.00 50 ⇑P **P 01 07 07.1 0.0**
baz=87
Q08A Gabbs 87.03 42 P **P 01 07 06.7 -0.3**
baz=87,SNR=8.2
W13A Hualapai Mount 87.12 47 P **P 01 07 07.9 +0.3**
baz=87,SNR=11
R09A Tonopah 87.13 43 P **P 01 07 06.9 -0.7**
baz=87,SNR=9.5
217A Green Valley 87.14 51 P **P 01 07 08.4 +0.6**
baz=87,SNR=18
M06C Likely Place G 87.14 39 ⇓P **P 01 07 07.4 -0.2**
baz=87
N06A Buffalo Meadow 87.19 40 P **P 01 07 07.5 -0.3**
baz=87,SNR=5.6
SHPR Sheep Range 87.19 45 *eP* **P 01 07 07.8 -0.1**
S10A Tonopah Range, 87.21 44 P **P 01 07 07.7 -0.3**
baz=87,SNR=20
O07A Toulon 87.34 41 P **P 01 07 08.2 -0.3**
baz=87,SNR=8.1
TUC Tucson 87.48 51 *eP* **P 01 07 10.0 +0.6**
TUC LR LR
comp=Z,745nm,20.0s,MS5.1
318A Bisbee 87.51 52 P **P 01 07 09.6 0.0**
baz=88,SNR=19
L05A Lakeview 87.52 38 ⇓P **P 01 07 09.3 -0.1**
baz=88
U12A Valley of Fire 87.53 46 P **P 01 07 10.3 +0.7**
baz=88,SNR=6.7
S11A Rachel 87.55 44 ⇓P **P 01 07 09.5 -0.2**
baz=88
T11A Corn Creek, Al 87.62 45 P **P 01 07 10.2 +0.2**
baz=88,SNR=26
R10A Warm Springs 87.62 43 P **P 01 07 10.4 +0.4**
baz=88,SNR=9.8
N07B Gerlach 87.70 40 ⇓P **P 01 07 09.8 -0.5**
baz=88
W14A Seligman 87.70 47 ⇑P **P 01 07 11.0 +0.5**
baz=88,SNR=12
MOD Modoc 87.71 39 *eP* **P 01 07 09.1 -1.2**
comp=Z,9.1nm,1.0s,mb5.0
MOD LR LR
comp=Z,1µm,19.0s,MS5.4
MOD Modoc 87.71 39 ⇑P **P 01 07 10.1 -0.2**
baz=88
218A Dragoon 87.78 52 P **P 01 07 11.6 +0.7**
baz=88,SNR=22
X15A Humboldt 87.81 48 ⇓P **P 01 07 11.2 +0.3**
baz=88,SNR=11
MDJ Mudanjiang 87.86 325 P **P 01 07 10.9 0.0**
MDJ AP pP 01 07 20.4 +6.3
MDJ XP sP 01 07 24.1 +8.8
MDJ PP PP 01 10 35.1 -2.3
MDJ S S 01 17 50.4 -3.3
MDJ XS sS 01 18 06.7 +7.7
MDJ AMB AMB
comp=Z,46nm,1.1s,mb5.6
MDJ AMB AMB
comp=Z,361nm,5.9s
MDJ LR LR
comp=N,642nm,21.1s,MS5.0
MDJ LR LR
comp=E,402nm,24.3s,MS5.0
MDJ LR LR
comp=Z,1µm,21.1s,MS5.2
MDJ Mudanjiang 87.86 325 *eP* **P 01 07 10.8 -0.1**
comp=Z,49nm,1.2s,mb5.6
MDJ LR LR
comp=Z,1µm,20.0s,MS5.3
U13A Pakoon Wash 87.88 46 P **P 01 07 11.4 +0.2**
baz=88,SNR=13
I04A Tendick Farm, 87.89 36 ⇑P **P 01 07 11.8 +0.7**
baz=88
Q10A Clear Creek Ra 87.91 43 ⇑P **P 01 07 11.7 +0.4**
baz=88
K05A Summer Lake 87.95 38 ⇓P **P 01 07 12.0 +0.6**
baz=88
319A Douglas 87.96 52 P **P 01 07 12.4 +0.6**
baz=88,SNR=12
COR Corvallis 87.99 35 PFAKE 01 07 20.0 +8.5
COR LR LR
comp=Z,2µm,19.0s,MS5.5
M07A Soldier Meadow 87.99 40 ⇑P **P 01 07 11.5 -0.1**
baz=88
S12A Delamar Landin 88.08 45 P **P 01 07 13.1 +1.0**
baz=88,SNR=8.3
R11A Troy Canyon, C 88.10 44 ⇑P **P 01 07 11.5 -0.7**
baz=88
WHN Wuhan 88.13 306 ⇓P **P 01 07 13.1 +0.5**
WHN LR LR
comp=Z,2µm,22.6s,MS5.5
J05A Fort Rock 88.15 37 ⇑P **P 01 07 12.0 -0.3**
baz=88
N08A GE Springer Mi 88.17 41 P **P 01 07 11.9 -0.6**
baz=88,SNR=7.9
T13A Saint George 88.30 46 ⇓P **P 01 07 13.2 +0.1**
baz=88,SNR=5.3
L07A Adell 88.32 39 P **P 01 07 13.3 +0.1**
baz=88,SNR=7.8
K06A Valley Falls 88.35 38 P **P 01 07 13.2 0.0**
baz=88,SNR=5.9
Q11A Duckwater 88.37 43 ⇓P **P 01 07 13.3 -0.2**
baz=88
U14A Mt Trumbull 88.38 46 ⇓P **P 01 07 14.0 +0.4**
baz=88,SNR=13
P10A Eureka 88.39 42 ⇑P **P 01 07 13.5 0.0**
baz=88
DL2 Dalian 88.42 317 P **P 01 07 14.0 +0.3**
DL2 S S 01 17 59.3 0.0
DL2 AMB AMB
comp=Z,40nm,0.7s,mb5.8
DL2 AMB AMB
comp=Z,170nm,5.0s
DL2 LR LR
comp=N,300nm,16.5s,MS5.0
DL2 LR LR
comp=E,400nm,17.3s,MS5.0
DL2 LR LR
comp=Z,430nm,15.7s,MS5.0
M08A Happy Creek Ra 88.47 40 ⇓P **P 01 07 13.8 -0.1**
baz=88
H04A Detroit Lake 88.63 36 ⇓P **P 01 07 14.2 -0.4**
baz=89
S13A Holt Ranch, En 88.67 45 P **P 01 07 15.6 +0.6**
baz=89,SNR=12
R12A Pony Springs, 88.68 44 P **P 01 07 15.3 +0.4**
baz=89,SNR=6.7
J06A Christmas Vall 88.71 38 P **P 01 07 14.5 -0.4**
baz=89,SNR=5.9
KDAK Kodiak Island 88.72 13 PFAKE 01 07 30.0 +15
KDAK LR LR
comp=Z,304nm,19.0s,MS4.7
I05A Bend 88.74 37 ⇓P **P 01 07 15.2 +0.1**
baz=89
P11A Circle Ranch, 88.76 43 ⇓P **P 01 07 15.6 +0.2**
baz=89
K07A Rock Creek Ran 88.82 39 P **P 01 07 15.5 0.0**
baz=89,SNR=5.2
T14A Hurricane 88.84 46 ⇓P **P 01 07 16.3 +0.6**
baz=89
M09A Marrel Ranch, 88.98 40 ⇓P **P 01 07 16.9 +0.5**
baz=89
WVOR Wild Horse Val 88.98 39 PFAKE 01 07 30.0 +14
WVOR LR LR
comp=Z,2µm,19.0s,MS5.5
Q12A Willow Creek R 88.99 44 ⇓P **P 01 07 16.9 +0.5**
baz=89
WUAZ Wupatki 89.00 48 *eP* **P 01 07 17.2 +0.7**
comp=Z,12nm,1.0s,mb5.2
WUAZ LR LR
comp=Z,1µm,22.0s,MS5.3
LCO Las Campanas 89.08 123 PFAKE 01 07 30.0 +13
LCO LR LR
comp=Z,1µm,22.0s,MS5.3
H05A Madras 89.09 36 ⇑P **P 01 07 17.2 +0.5**
baz=89
I06A Prineville 89.15 37 ⇓P **P 01 07 17.2 +0.2**
baz=89
O11A Cowboy Ranch, 89.19 42 P **P 01 07 17.3 0.0**
baz=89,SNR=7.8
S14A Cedar City 89.22 45 ⇓P **P 01 07 18.0 +0.4**
baz=89
P12A McGill 89.22 43 P **P 01 07 17.0 -0.4**
baz=89,SNR=6.0
J07A Hines 89.24 38 ⇓P **P 01 07 17.6 +0.1**
baz=89
T15A Red Dirt Ranch 89.25 46 P **P 01 07 18.3 +0.6**
baz=89,SNR=9.0
K08A Mann Creek Ran 89.27 39 ⇑P **P 01 07 17.5 -0.1**
baz=89
F04A Amboy 89.38 35 ⇓P **P 01 07 18.1 0.0**
baz=89
Q13A Wheeler Ranch, 89.43 44 P **P 01 07 18.6 +0.1**
baz=89,SNR=7.3
CN2 Changchun 89.45 322 ⇑P **P 01 07 17.7 -0.8**
CN2 *eAP pP 01 07 28.8 +7.1
CN2 *eS S 01 18 03.5 -5.3
CN2 AMB AMB
comp=Z,60nm,1.2s,mb5.8
CN2 AMB AMB
comp=Z,500nm,4.0s
CN2 LR LR
comp=N,600nm,17.0s,MS5.2
CN2 LR LR
comp=E,500nm,17.0s,MS5.2
CN2 LR LR
comp=Z,600nm,18.0s,MS5.1
KKTK Khon Kaen 89.46 289 P **P 01 07 20.0 +0.9**
M10A I.L. Ranch, Tu 89.57 41 ⇓P **P 01 07 19.6 +0.5**
baz=90
TIA Tai'an 89.57 312 P **P 01 07 19.2 0.0**
TIA AMB AMB
comp=Z,90nm,1.0s,mb6.0
I07A Izee 89.62 37 ⇓P **P 01 07 19.7 +0.5**
baz=90
H06A Lindquist Farm 89.62 37 ⇑P **P 01 07 19.3 +0.1**
baz=90
K09A Rome 89.67 39 P **P 01 07 19.3 -0.2**
baz=90,SNR=7.1
J08A Circle Bar Ran 89.69 38 ⇑P **P 01 07 19.5 -0.1**
baz=90
NLWA Neilton Lookou 89.70 33 PFAKE 01 07 30.0 +10
NLWA LR LR
comp=Z,2µm,20.0s,MS5.5
P13A Bates Ranch, G 89.74 44 P **P 01 07 20.1 +0.2**
baz=90,SNR=8.0
G06A Carlson Farm, 89.80 36 P **P 01 07 19.8 -0.3**
baz=90,SNR=6.2
ELK Elko 89.83 42 PFAKE 01 07 30.0 +10
ELK LR LR
comp=Z,3µm,19.0s,MS5.7
TRQA Tornquist 89.89 134 PFAKE 01 07 30.0 +9.1
TRQA LR LR
comp=Z,1µm,22.0s,MS5.3
H07A Lands Inn, Kim 89.93 37 ⇓P **P 01 07 20.7 +0.1**
baz=90
M11A Holland Ranch, 89.94 41 ⇑P **P 01 07 20.7 -0.1**
baz=90
L10A Juniper Basin 89.97 40 P **P 01 07 20.8 -0.1**
baz=90,SNR=7.5
N12A Clover Valley, 90.01 42 ⇑P **P 01 07 21.3 +0.1**
baz=90
J09A Fry Pan Ranch, 90.08 39 ⇓P **P 01 07 20.9 -0.5**
baz=90
F06A Goldendale 90.09 36 P **P 01 07 21.5 +0.1**
baz=90,SNR=6.3
E05A Randle 90.15 35 ⇑P **P 01 07 21.2 -0.4**
baz=90
KLR Kul'dur 90.16 329 *eP* **P 01 07 17.9 -3.7**
KLR *e* 01 19 46.0
KLR pmax pmax
comp=E,40nm,1.6s
KLR pmax pmax
comp=Z,80nm,1.6s,mb5.8
KLR MLR MLR
comp=N,900nm,18.0s,MS5.4
KLR MLR MLR
comp=E,1µm,18.0s,MS5.4
K10A MacKenzie Ranc 90.19 40 ⇑P **P 01 07 21.6 -0.3**
baz=90
MSU Marysvale 90.29 45 *eP* **P 01 07 23.5 +1.0**
G07A Ruggs Ranch, H 90.33 36 P **P 01 07 22.3 -0.2**
baz=90,SNR=8.4
C04A Brinnon 90.36 33 ⇓P **P 01 07 23.1 +0.5**
baz=90
M12A Wells 90.44 42 ⇓P **P 01 07 23.1 0.0**
baz=90
HOPE Hope Point 90.45 158 PFAKE 01 07 30.0 +6.8
HOPE LR LR
comp=Z,5.0nm,22.0s
D05A Enumclaw 90.47 34 ⇑P **P 01 07 23.9 +0.8**
baz=90
N13A Wendover, West 90.50 42 ⇑P **P 01 07 23.7 +0.2**
baz=90
E06A Yakima 90.53 35 ⇑P **P 01 07 23.6 +0.2**
baz=90
F07A Phinny Hill Vi 90.62 36 ⇓P **P 01 07 23.7 -0.2**
baz=91
K11A Parker Ranch, 90.66 40 ⇑P **P 01 07 24.2 0.0**
baz=91

G08A Pilot Rock 90.71 37 P P 01 07 24.3 0.0
baz=91,SNR=20
LTX Lajitas 90.83 57 PFAKE 01 07 40.0 +15
LTX LR LR
comp=Z,1μm,20.0s,MS5.3
TXAR Lajitas Array 90.83 57 P P 01 07 24.7 -0.5
comp=Z,5.2nm,1.1s,mb4.8,baz=217,slow=7.9,SNR=9.1
TXAR LR LR 01 42 44.0
comp=Z,670nm,18.9s,MS5.1,baz=275,slow=32
L12A House Creek Ra 90.84 41 ⇑P P 01 07 24.9 -0.1
baz=91
M13A Montello 90.84 42 P P 01 07 24.7 -0.3
baz=91,SNR=7.2
MNTX Cornudas Mount 90.88 54 eP P 01 07 24.7 -0.7
comp=Z,5.6nm,1.0s,mb4.8
MNTX *e*pP pP 01 07 35.8 +7.1
MNTX LR LR
comp=Z,617nm,19.0s,MS5.1
DUG Dugway 90.93 44 PFAKE 01 07 40.0 +15
DUG LR LR
comp=Z,1μm,19.0s,MS5.4
DUG Dugway 90.93 44 ⇑P P 01 07 25.4 0.0
baz=91
C05A Tolt Reservoir 90.97 34 ⇑P P 01 07 25.2 -0.2
baz=91
H09A Durkee 90.99 38 P P 01 07 25.6 -0.1
baz=91,SNR=5.4
D06A Cle Elum 91.04 35 ⇓P P 01 07 25.6 -0.1
baz=91
I10A Payette 91.08 39 ⇓P P 01 07 25.8 -0.2
baz=91
N14A Grayback Hills 91.11 43 ⇓P P 01 07 25.7 -0.5
baz=91
F08A Pendleton 91.15 37 ⇓P P 01 07 26.3 0.0
baz=91
HAWA Hanford 91.16 36 eP P 01 07 26.1 -0.3
HAWA LR LR
comp=Z,2μm,20.0s,MS5.5
B05A Bryant 91.17 33 ⇓P P 01 07 25.6 -0.7
baz=91
MFID Camas Ranch 91.19 40 P P 01 07 26.3 -0.3
baz=91,SNR=6.3
K12A Draper Farm, C 91.22 41 ⇑P P 01 07 26.2 -0.5
baz=91
BMO Blue Mountains 91.31 38 eP P 01 07 26.0 -1.1
comp=Z,4.2nm,0.8s,mb4.8
BMO LR LR
comp=Z,1μm,19.0s,MS5.3
BMO Blue Mountains 91.31 38 eP P 01 07 26.0 -1.1
BMO pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
BMO MLR MLR
comp=Z,1μm,19.0s,MS5.3
TMUT Trail Mountain 91.37 45 eP P 01 07 28.2 +0.7
NST Nakhon Sawan 91.37 287 P P 01 07 29.5 +1.4
M14A Sheep Mountain 91.41 42 P P 01 07 27.4 -0.2
baz=91,SNR=12
H10A Noah's Angus R 91.44 38 P P 01 07 26.7 -1.0
baz=91,SNR=7.2
ENH Enshi 91.46 304 PFAKE 01 07 40.0 +12
ENH LR LR
comp=Z,6.0nm,19.0s
J12A Stokes Ranch, 91.49 40 P P 01 07 28.1 +0.1
baz=92,SNR=7.7
N15A Stansbury Isla 91.53 43 ⇑P P 01 07 28.1 -0.2
baz=92
MPU Maple Canyon 91.54 44 PFAKE 01 07 40.0 +12
MPU LR LR
comp=Z,3μm,19.0s,MS5.8
F09A S2 Ranch, Elgi 91.54 37 ⇓P P 01 07 27.9 -0.3
baz=92
GYA Guiyang 91.55 299 ⇑*i*P P 01 07 30.8 +2.1
GYA AP pP 01 07 41.8 +10
GYA XP sP 01 07 45.2 +12
GYA PP PP 01 11 10.7 +3.6
GYA SKS 01 17 58.0
GYA S S 01 18 24.7 -4.2
GYA XS sS 01 18 42.8 +8.6
GYA SS SS 01 24 34.8 -1.1
GYA AMB AMB
comp=Z,20nm,1.2s,mb5.3
GYA AMB AMB
comp=Z,140nm,7.0s
GYA LR LR
comp=N,410nm,20.8s,MS5.1
GYA LR LR
comp=E,590nm,21.6s,MS5.1
GYA LR LR
comp=Z,470nm,20.2s,MS4.9
SRU San Rafael 91.68 46 eP P 01 07 28.9 -0.1
K13A Stover Farm, H 91.69 41 ⇓P P 01 07 28.9 0.0
baz=92
SPUT South Promonto 91.83 43 eP P 01 07 30.1 +0.5
MVCO Mesa Verde 91.87 48 PFAKE 01 07 40.0 +10
MVCO LR LR
comp=Z,1μm,22.0s,MS5.2
H11A Donnelly 91.91 39 P P 01 07 29.5 -0.4
baz=92,SNR=12
D08A Wollman Farm, 91.91 35 P P 01 07 29.8 -0.1
baz=92,SNR=7.6
M15A Larsen Ranch, 91.92 43 P P 01 07 29.9 -0.1
baz=92,SNR=12
ANMO Albuquerque 91.94 51 eP P 01 07 29.7 -0.6
comp=Z,9.4nm,1.2s,mb5.0
ANMO *e* 01 07 40.3
ANMO LR LR
comp=Z,1μm,19.0s,MS5.3
ANMO Albuquerque 91.94 51 eP P 01 07 29.7 -0.6
ANMO *e* 01 07 40.3
ANMO pmax pmax
comp=Z,9.0nm,1.2s
ANMO MLR MLR
comp=Z,1μm,19.0s
E09A Wood Farm, Sta 91.95 36 P P 01 07 29.4 -0.6
baz=92,SNR=8.5
JLU Jordanelle 92.00 44 eP P 01 07 36.3 +5.9
MA2 Magadan 92.05 344 eP P 01 07 29.1 -1.0
MA2 *e*S S 01 18 24.2 -7.6
MA2 *e*PS PS 01 19 41.9 -1.5
MA2 pmax pmax
comp=Z,20nm,0.8s,mb5.5
MA2 MLR MLR
comp=Z,900nm,20.0s,MS5.2
F10A Beach Ranch, E 92.08 37 ⇑P P 01 07 29.7 -0.9
baz=92,SNR=16
HLID Hailey 92.08 40 eP P 01 07 30.4 -0.2
comp=Z,5.5nm,0.9s,mb4.9
HLID LR LR
comp=Z,1μm,19.0s,MS5.4
HLID Hailey 92.08 40 ⇑P P 01 07 30.6 -0.1
baz=92,SNR=9.7
J13A Cove Ranch, Pi 92.11 40 P P 01 07 30.7 -0.1
baz=92,SNR=14
K14A Jones Ranch, D 92.16 42 ⇓P P 01 07 30.9 -0.1
baz=92
PV10 Paradox Valley 92.19 47 eP P 01 07 30.6 -0.8
PV10 *e*pP pP 01 07 42.0 +7.5
G11A Walters Elk Ra 92.22 38 ⇑P P 01 07 30.7 -0.6
baz=92
D09A Jones Farm, Ri 92.23 36 ⇑P P 01 07 30.9 -0.4
baz=92
B07A Winthrop 92.26 34 ⇑P P 01 07 31.4 0.0
baz=92
PV01 Paradox Valley 92.35 47 eP P 01 07 31.3 -0.8
GAMB Gambell 92.42 2 eP P 01 07 24.6 -7.1
BJT Baijiatuau 92.44 315 eP P 01 07 32.7 +0.2
comp=Z,36nm,0.8s,mb5.8
BJT LR LR
comp=Z,616nm,19.0s,MS5.1
BJT Baijiatuau 92.44 315 eP P 01 07 32.7 +0.3
BJT pmax pmax
comp=Z,36nm,0.8s
BJT MLR MLR
comp=Z,616nm,19.0s
BJI Beijing 92.45 315 P P 01 07 32.5 0.0
BJI AP pP 01 07 42.2 +6.5
BJI XP sP 01 07 45.8 +9.0
BJI S S 01 18 30.2 -6.1
BJI XS sS 01 18 48.9 +7.2
BJI SS SS 01 24 41.3 -7.0
BJI AMB AMB
comp=Z,45nm,1.1s,mb5.7
BJI AMB AMB
comp=Z,274nm,4.3s
BJI LR LR
comp=N,512nm,20.1s,MS5.1
BJI LR LR
comp=E,443nm,20.8s,MS5.1
BJI LR LR
comp=Z,811nm,28.0s
H12A Diamond D Ranc 92.45 39 P P 01 07 32.1 -0.3
baz=92,SNR=12
I13A Wildhorse Cree 92.47 40 ⇓P P 01 07 32.5 0.0
baz=92
E10A Myers Farm, Un 92.47 37 ⇓P P 01 07 32.1 -0.3
baz=92
HWUT Hardware Ranch 92.54 43 PFAKE 01 07 40.0 +7.1
HWUT LR LR
comp=Z,2μm,19.0s,MS5.5
B08A Colville Reser 92.58 34 ⇑P P 01 07 32.1 -0.8
baz=93
F11A Grangeville 92.59 38 ⇓P P 01 07 32.0 -1.0
baz=93
D10A Wagner Farm, O 92.76 36 ⇑P P 01 07 32.7 -1.1
baz=93
H13A Challis 92.79 40 P P 01 07 33.8 -0.1
baz=93,SNR=5.1
E11A Bogner Ranch, 92.86 37 ⇓P P 01 07 34.3 +0.1
baz=93
PMR Palmer 92.92 13 PFAKE 01 07 40.0 +5.9
PMR LR LR
comp=Z,884nm,20.0s,MS5.2
F12A Elk City 92.99 38 P P 01 07 34.3 -0.6
baz=93,SNR=12
NNA Nana 93.00 105 PFAKE 01 07 50.0 +14
NNA LR LR
comp=Z,704nm,21.0s,MS5.1
TTA Tatalina 93.00 9 eP P 01 07 34.0 -0.5
WRAK Wrangell Islan 93.01 23 PFAKE 01 07 50.0 +15
WRAK LR LR
comp=Z,874nm,22.0s,MS5.2
G13A Cobalt 93.14 39 P P 01 07 35.1 -0.4
baz=93,SNR=5.3
B09A Rice 93.21 35 ⇑P P 01 07 35.4 -0.4
baz=93
AHID Auburn Hatcher 93.51 42 PFAKE 01 07 50.0 +13
AHID LR LR
comp=Z,1μm,19.0s,MS5.5
F13A Darby 93.52 39 ⇑P P 01 07 36.8 -0.5
baz=94
NEW Newport 93.62 35 PFAKE 01 07 50.0 +12
NEW LR LR
comp=Z,1μm,20.0s,MS5.3
D12A Red Ives Fores 93.76 37 ⇓P P 01 07 37.1 -1.2
baz=94
CHG Chiang Mai 93.89 289 P P 01 07 40.9 +1.2
CHTO Chiang Mai 93.89 289 PFAKE 01 07 50.0 +10
CHTO LR LR
comp=Z,669nm,20.0s,MS5.1
KMI Kunming 93.91 296 P P 01 07 41.3 +1.7
KMI AP pP 01 07 52.5 +10
KMI XP sP 01 07 56.2 +12
KMI PP PP 01 11 30.2 +4.4
KMI SKS 01 18 09.3
KMI S S 01 18 43.2 -6.8
KMI XS sS 01 19 03.0 +7.7
KMI SS SS 01 25 11.9 +2.1
KMI AMB AMB
comp=Z,10.0nm,0.7s,mb5.3
KMI AMB AMB
comp=Z,278nm,6.0s
KMI LR LR
comp=N,297nm,16.6s,MS5.1
KMI LR LR
comp=E,527nm,16.6s,MS5.1
KMI LR LR
comp=Z,697nm,17.8s,MS5.2
SMCO Snowmass 93.97 47 eP P 01 07 34.5 -5.1
REDW Red Top Meadow 94.01 42 eP P 01 07 39.4 -0.2
TPAW Teton Pass 94.03 42 eP P 01 07 39.6 0.0
SDCO Great Sand Dun 94.14 49 PFAKE 01 07 50.0 +10
SDCO LR LR
comp=Z,1μm,19.0s,MS5.3
G15A Dillon 94.15 40 P P 01 07 40.1 -0.1
baz=94,SNR=9.4
KVTX Kingsville 94.23 61 PFAKE 01 07 50.0 +9.0
KVTX LR LR
comp=Z,1μm,19.0s,MS5.4
MOOW Moose Ponds 94.30 42 eP P 01 07 40.6 -0.3
LOHW Long Hollow 94.30 42 eP P 01 07 40.8 -0.1
E14A Clinton 94.36 38 ⇑P P 01 07 40.9 -0.2
baz=94
MSO Missoula 94.38 38 PFAKE 01 07 50.0 +8.8
MSO LR LR
comp=Z,863nm,19.0s,MS5.2
TNA Tin City 94.38 4 eP P 01 07 39.5 -1.2
comp=Z,16nm,0.9s,mb5.4
TNA LR LR
comp=Z,691nm,21.0s,MS5.1
BW06 Boulder Array 94.42 43 eP P 01 07 40.8 -0.7
BW06 LR LR
comp=Z,1μm,20.0s,MS5.4
PDAR Pinedale Array 94.43 43 P P 01 07 40.2 -1.3
comp=Z,2.3nm,0.9s,mb4.6,baz=219,slow=3.7,SNR=21
PDAR PKKPbc PKKPbc 01 24 42.0 +0.1
comp=Z,1.9nm,0.7s,baz=80,slow=4.3,SNR=19
PDAR LR LR 01 46 23.2
comp=Z,1μm,18.0s,MS5.4,baz=245,slow=33
A11A Hall Mountain, 94.46 35 ⇑P P 01 07 41.7 +0.2
baz=94
QLMT Earthquake Lak 94.55 41 eP P 01 07 42.6 +0.5
F15A Butte 94.56 39 ⇓P P 01 07 42.3 +0.3
baz=94
YMR Madison River 94.72 41 PFAKE 01 07 50.0 +7.2
YMR LR LR
comp=Z,2μm,19.0s,MS5.6
MCK McKinley 94.92 12 PFAKE 01 07 50.0 +6.7
MCK LR LR
comp=Z,534nm,21.0s,MS5.0
BOZ Bozeman (W) 94.93 40 PFAKE 01 07 50.0 +6.2
BOZ LR LR
comp=Z,1μm,19.0s,MS5.4
BOZ Bozeman (W) 94.93 40 ⇓P P 01 07 43.5 -0.3
baz=95
LKWY Lake 94.98 41 PFAKE 01 08 00.0 +16
LKWY LR LR
comp=Z,2μm,19.0s,MS5.7
ISCO Idaho Springs 95.19 47 PFAKE 01 08 00.0 +15
ISCO LR LR
comp=Z,880nm,20.0s,MS5.2
HHC Hu-ho-hao-te 95.80 314 eP P 01 07 48.7 +0.8
HHC AP pP 01 07 58.8 +7.7
HHC XP sP 01 08 03.2 +11
HHC PP PP 01 11 42.1 +1.9
HHC SKS 01 18 20.5
HHC S S 01 18 59.7 -6.0
HHC SS SS 01 25 33.4 -2.8
HHC AMB AMB
comp=Z,13nm,0.7s,mb5.5
HHC AMB AMB
comp=Z,222nm,6.1s
HHC LR LR
comp=N,502nm,16.7s,MS5.2
HHC LR LR
comp=E,532nm,17.8s,MS5.2
HHC LR LR
comp=Z,900nm,25.0s
HIA Hailar 95.99 324 PFAKE 01 08 00.0 +12
HIA LR LR
comp=Z,1μm,20.0s,MS5.3
CD2 Chengdu 96.01 302 P P 01 07 50.6 +1.5
CD2 AP pP 01 08 01.2 +8.9
CD2 XP sP 01 08 05.2 +12
CD2 PP PP 01 11 45.7 +3.7
CD2 SKS 01 18 23.1
CD2 S S 01 19 03.5 -4.5
CD2 XS sS 01 19 21.3 +8.0
CD2 SS SS 01 25 39.3 -0.2
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.3
CD2 AMB AMB
comp=Z,140nm,6.0s
CD2 LR LR
comp=N,670nm,21.6s,MS5.3
CD2 LR LR
comp=E,990nm,20.4s,MS5.3
CD2 LR LR
comp=Z,880nm,20.4s,MS5.2
COLA College 96.16 12 eP P 01 07 46.4 -2.5
comp=Z,14nm,1.3s,mb5.2
COLA LR LR
comp=Z,878nm,19.0s,MS5.3
COLA College 96.16 12 eP P 01 07 46.4 -2.5
COLA pmax pmax
comp=Z,14nm,1.3s,mb5.2
COLA MLR MLR
comp=Z,878nm,19.0s,MS5.3
IMA2 Indian Mountai 96.31 9 eP P 01 07 48.4 -1.2
TGUH Tegucigalpa,Un 96.42 78 PFAKE 01 08 00.0 +8.7
TGUH LR LR
comp=Z,1μm,21.0s,MS5.3
JTS JuntasAbangare 96.67 82 PFAKE 01 08 00.0 +7.5
JTS LR LR
comp=Z,1μm,20.0s,MS5.4
HKT Hockley 96.99 60 PFAKE 01 08 00.0 +6.4
HKT LR LR
comp=Z,613nm,20.0s,MS5.1
WMOK Wichita Mounta 97.18 54 PFAKE 01 08 00.0 +5.7
WMOK LR LR
comp=Z,721nm,19.0s,MS5.2
EGMT Eagleton 97.37 39 PFAKE 01 08 10.0 +15
EGMT LR LR
comp=Z,1μm,20.0s,MS5.4
BILL Bilibino 97.41 354 eP P 01 07 52.7 -1.8
BILL LR LR
comp=Z,1μm,22.0s,MS5.4
BILL Bilibino 97.41 354 eP P 01 07 52.6 -1.9
BILL *e* 01 11 50.3
BILL pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
BILL MLR MLR
comp=Z,1μm,19.0s,MS5.4
EGAK Eagle 97.43 15 PFAKE 01 08 10.0 +15
EGAK LR LR
comp=Z,889nm,19.0s,MS5.3
OTAV Otavalo 97.61 94 PFAKE 01 08 10.0 +13
OTAV LR LR
comp=Z,584nm,19.0s,MS5.1
LPAZ La Paz 97.97 113 LR LR 01 43 31.8
comp=Z,222nm,18.5s,MS4.7,baz=158,slow=30
TEIG Tepich 98.44 72 PFAKE 01 08 10.0 +10
TEIG LR LR
comp=Z,431nm,21.0s,MS4.9
LZH Lanzhou 98.51 306 eP P 01 08 01.2 +1.0
LZH AP pP 01 08 10.5 +7.0
LZH XP sP 01 08 14.0 +9.4
LZH PP PP 01 12 04.1 +3.0
LZH *e*S S 01 19 24.0 -5.1
LZH XS sS 01 19 47.0 +13
LZH SS SS 01 26 09.0 -5.6
LZH AMB AMB
comp=Z,26nm,1.4s,mb5.6
LZH AMB AMB
comp=Z,149nm,8.1s
LZH LR LR
comp=E,781nm,17.4s
LZH LR LR
comp=Z,1μm,18.9s,MS5.4
RSSD Black Hills 98.52 44 PFAKE 01 08 10.0 +10
RSSD LR LR
comp=Z,1μm,19.0s,MS5.4
CBKS Cedar Bluff 98.55 50 PFAKE 01 08 10.0 +10
CBKS LR LR
comp=Z,929nm,20.0s,MS5.3
LAO LASA Array 98.60 41 PFAKE 01 08 10.0 +10
LAO LR LR
comp=Z,1μm,19.0s,MS5.5
NATX Nacogdoches 98.74 59 PFAKE 01 08 10.0 +8.6
NATX LR LR
comp=Z,896nm,19.0s,MS5.3
YAK Yakutsk 100.17 337 PFAKE 01 08 20.0 +12
YAK LR LR
comp=Z,703nm,21.0s,MS5.2
DGMT Dagmar 100.71 40 PFAKE 01 08 20.0 +10
DGMT LR LR
comp=Z,1μm,20.0s,MS5.4
KSU1 Kansas State U 100.82 51 PFAKE 01 08 20.0 +9.5
KSU1 LR LR
comp=Z,841nm,20.0s,MS5.2
MIAR Mount Ida 100.85 57 PFAKE 01 08 20.0 +9.4
MIAR LR LR
comp=Z,841nm,19.0s,MS5.3
ULN Ulaanbaatar 102.22 318 eP Pdif 01 08 13.0 -3.7
ULN LR LR
comp=Z,636nm,21.0s,MS5.1
ULN Ulaanbaatar 102.22 318 eP Pdif 01 08 13.9 -2.8
SONM Songino Array 102.59 318 P Pdif 01 08 17.4 -1.0
comp=Z,1.0nm,1.0s,baz=40,slow=7.9,SNR=6.1
SONM PP PP 01 12 25.1 -6.7
comp=Z,0.5nm,0.9s,baz=108,slow=4.7,SNR=2.5
GTA Gaotai 102.89 308 eP Pdif 01 08 20.6 +0.9
GTA AP 01 08 32.9
GTA XP 01 08 36.4
GTA PP PP 01 12 37.0 +2.8
GTA SKS 01 18 56.5
GTA S Sdif 01 20 01.1 -4.6
GTA XS 01 20 18.6
GTA SS SS 01 27 11.9 -3.6
GTA LR LR
comp=N,415nm,20.9s,MS5.2
GTA LR LR
comp=E,590nm,21.7s,MS5.2
GTA LR LR
comp=Z,855nm,19.8s,MS5.3
ECSD EROS,Sioux Fal 102.98 47 PFAKE 01 08 30.0 +10
ECSD LR LR
comp=Z,922nm,19.0s,MS5.3
YKA Yellowknife Ar 103.69 25 Pdiff Pdif 01 08 21.3 -2.0
comp=Z,0.1nm,0.6s,baz=229,slow=4.1,SNR=3.7
YKA PP PP 01 12 32.3 -7.3
comp=Z,0.8nm,1.1s,baz=241,slow=7.2,SNR=4.1
YKA PKKPbc PKKPbc 01 24 11.1 -5.2
comp=Z,1.0nm,0.8s,baz=36,slow=2.9,SNR=12
OXF Oxford 103.91 58 PFAKE 01 08 40.0 +16
OXF LR LR
comp=Z,944nm,19.0s,MS5.3
BRAL Brewton 104.21 62 PFAKE 01 08 40.0 +14
BRAL LR LR
comp=Z,533nm,19.0s,MS5.1
PALK Pallekele 104.22 271 PFAKE 01 08 40.0 +14
PALK LR LR
comp=Z,1μm,20.0s,MS5.5
FFC Flin Flon 105.05 35 PFAKE 01 12 50.0 +6.6
FFC LR LR
comp=Z,1μm,19.0s,MS5.4
PLAL Pickwick Lake 105.11 58 PFAKE 01 13 00.0 +16
PLAL LR LR
comp=Z,1μm,19.0s,MS5.4
LRAL Lakeview Retre 105.11 60 PFAKE 01 13 00.0 +16
LRAL LR LR
comp=Z,950nm,20.0s,MS5.3
LSA Lhasa 105.15 296 PFAKE 01 13 00.0 +16
LSA LR LR
comp=Z,554nm,20.0s,MS5.1
AGMN Agassiz Refuge 105.50 43 PFAKE 01 13 00.0 +16
AGMN LR LR
comp=Z,2μm,19.0s,MS5.6
ZAK Zakamensk 105.59 319 eP Pdif 01 08 31.7 0.0
ZAK pmax pmax
comp=Z,2.0nm,2.3s
WVT Waverly 105.76 57 PFAKE 01 13 00.0 +15
WVT LR LR
comp=Z,7.0nm,21.0s
TLY Talaya 105.96 320 PFAKE 01 13 00.0 +15
TLY LR LR
comp=Z,607nm,21.0s,MS5.1
HDIL Hopedale 106.52 53 PFAKE 01 13 00.0 +13
HDIL LR LR
comp=Z,849nm,20.0s,MS5.3
JFWS Jewell Farm 106.82 50 PFAKE 01 13 00.0 +13
JFWS LR LR
comp=Z,1μm,19.0s,MS5.4
TIXI Tiksi 107.02 344 PFAKE 01 13 00.0 +13
TIXI LR LR
comp=Z,473nm,19.0s,MS5.1
DWPF Disney 107.48 67 PFAKE 01 13 00.0 +11
DWPF LR LR
comp=Z,466nm,20.0s,MS5.0
WCI Wyandotte Cave 107.73 56 PFAKE 01 13 00.0 +11
WCI LR LR
comp=Z,1μm,19.0s,MS5.4
GOGA Godfrey 107.97 61 PFAKE 01 13 00.0 +10
GOGA LR LR
comp=Z,718nm,21.0s,MS5.2
EYMN Ely 108.02 45 PFAKE 01 13 00.0 +11
EYMN LR LR
comp=Z,1μm,19.0s,MS5.6

SDV Santo Domingo 108.54 90 PFAKE 01 13 00.0 +8.8
SDV LR LR
comp=Z,199nm,20.0s,MS4.7
COWI Conover 108.80 47 PFAKE 01 13 00.0 +9.3
COWI LR LR
comp=Z,1µm,20.0s,MS5.5
TZTN Tazewell 109.10 58 PFAKE 01 13 00.0 +8.4
TZTN LR LR
comp=Z,628nm,19.0s,MS5.2
NHSC New Hope 110.40 63 PFAKE 01 13 10.0 +16
NHSC LR LR
comp=Z,445nm,19.0s,MS5.1
ACSO Alum Creek Sta 110.86 55 PFAKE 01 13 10.0 +15
ACSO LR LR
comp=Z,1µm,20.0s,MS5.4
GLMI Grayling 111.31 50 PFAKE 01 13 10.0 +15
GLMI LR LR
comp=Z,945nm,19.0s,MS5.4
BLA Blacksburg 111.68 59 PFAKE 01 13 10.0 +14
BLA LR LR
comp=Z,485nm,19.0s,MS5.1
SDDR Presa de Saban 112.34 80 PFAKE 01 13 10.0 +12
SDDR LR LR
comp=Z,417nm,20.0s,MS5.0
CNNC Cliffs of the 112.93 61 PFAKE 01 13 10.0 +11
CNNC LR LR
comp=Z,932nm,19.0s,MS5.4
MCWV Mont Chateau 112.93 56 PFAKE 01 13 10.0 +11
MCWV LR LR
comp=Z,1µm,20.0s,MS5.5
WMQ Urumqi 112.96 308 PKP PKiKP 01 12 57.5 -1.1
WMQ XPKP 01 13 12.0
WMQ PP PP 01 13 50.0 +2.2
WMQ PP PP
comp=Z,333nm,5.0s
WMQ LR LR
comp=N,137nm,22.6s,MS5.1
WMQ LR LR
comp=E,547nm,25.0s,MS5.1
WMQ LR LR
comp=Z,752nm,23.8s,MS5.2
ERPA Erie 113.61 54 PFAKE 01 13 10.0 +10
ERPA LR LR
comp=Z,757nm,19.0s,MS5.3
CBN Corbin 114.29 58 PFAKE 01 13 10.0 +8.6
CBN LR LR
comp=Z,612nm,20.0s,MS5.2
SSPA Standing Stone 114.66 56 PFAKE 01 13 10.0 +8.0
SSPA LR LR
comp=Z,876nm,19.0s,MS5.4
SJG San Juan 116.45 83 PFAKE 01 13 20.0 +14
SJG LR LR
comp=Z,582nm,21.0s,MS5.2
BINY Binghamton 116.48 55 PFAKE 01 13 20.0 +15
BINY LR LR
comp=Z,901nm,20.0s,MS5.4
SUR Sutherland 116.78 197 PFAKE 01 13 20.0 +13
SUR LR LR
comp=Z,1µm,20.0s,MS5.5
MKAR Makanchi Array 117.44 310 PKP PKPdf 01 13 04.8 -2.4
comp=Z,7.1nm,0.8s,baz=66,slow=3.0,SNR=50
MKAR PKKPbc PKKPbc 01 23 33.6 +2.9
comp=Z,0.1nm,0.3s,baz=305,slow=4.3,SNR=3.5
LONY Lake Ozonia 118.09 52 PFAKE 01 13 20.0 +12
LONY LR LR
comp=Z,1µm,19.0s,MS5.5
NCB Newcomb 118.19 53 PFAKE 01 13 20.0 +11
NCB LR LR
comp=Z,713nm,19.0s,MS5.3
NVS Novosibirsk 118.54 320 *i* PKIKP PKPdf 01 13 07.0 -2.0
NVS pmax pmax
comp=N,3.0nm,1.1s
NVS pmax pmax
comp=Z,15nm,1.1s
NVS pmax pmax
comp=E,10.0nm,1.4s
BOSA Boshof 119.01 202 PKP PKPdf 01 13 11.7 +0.8
comp=E,4.9nm,0.9s,baz=123,slow=6.6,SNR=5.4
HRV Harvard--Oak R 119.74 55 PFAKE 01 13 20.0 +8.3
HRV LR LR
comp=Z,972nm,19.0s,MS5.5
LBNH Lisbon 119.86 53 PFAKE 01 13 20.0 +8.1
LBNH LR LR
comp=Z,690nm,19.0s,MS5.3
WES Weston 119.88 55 PFAKE 01 13 20.0 +8.0
WES LR LR
comp=Z,3µm,22.0s,MS5.9
KSH Kashi 120.20 301 *e*PKP PKPdf 01 13 13.0 +0.3
KSH XPKP 01 13 28.6
KSH PP PP 01 14 37.4 -1.2
KSH PKS 01 16 49.6
KSH SKS SKSdf 01 20 21.2 -3.6
KSH SKKS SKKSac 01 21 28.9 -9.3
KSH SS SS 01 31 01.1 -5.3
KSH PP PP
comp=Z,2µm,6.3s
KSH LR LR
comp=N,1µm,6.1s
KSH LR LR
comp=E,588nm,5.3s
KSH LR LR
comp=Z,2µm,6.7s
KURK Kurchatov 120.61 314 *e*PKP PKPdf 01 13 10.5 -2.6
KURK LR LR
comp=Z,778nm,21.0s,MS5.3
KURK Kurchatov 120.61 314 *i* PKIKP PKPdf 01 13 10.5 -2.6
TKM2 Tokmak 2 121.23 305 *e*PKPdf PKPdf 01 13 13.6 -0.9
TKM2 *e*pPKPdf pPKPdf 01 13 23.6 +5.8
TKM2 LR LR
comp=Z,467nm,19.0s,MS5.2
TKM2 Tokmak 2 121.23 305 P PKPdf 01 13 13.8 -0.8
SNR=9.9
KZA Kyzart 121.31 304 P PKPdf 01 13 15.2 +0.5
SNR=8.7
KBK Karagaybulak 121.65 305 P PKPdf 01 13 15.2 -0.2
SNR=5.6
CHMS Chumysh 121.86 305 P PKPdf 01 13 14.7 -1.1
SNR=7.5
UCH Uchtor 121.88 304 *e*PKPdf PKPdf 01 13 15.6 -0.2
UCH *e*pPKPdf pPKPdf 01 13 25.7 +6.6
UCH LR LR
comp=Z,653nm,20.0s,MS5.3
UCH Uchtor 121.88 304 P PKPdf 01 13 16.5 +0.6
SNR=15
PKME Peaks-Kenny Pk 121.90 52 PFAKE 01 13 30.0 +14
PKME LR LR
comp=Z,812nm,19.0s,MS5.4
AAK Ala-Archa 121.97 304 PFAKE 01 13 30.0 +14
AAK LR LR
comp=Z,738nm,20.0s,MS5.3
AAK Ala-Archa 121.97 304 *i* PKIKP PKPdf 01 13 12.3 -3.7
USP Ospenovka 122.09 305 P PKPdf 01 13 15.2 -1.0
SNR=12
AML Almayashu 122.46 304 *e*PKPdf PKPdf 01 13 16.4 -0.5
AML LR LR
comp=Z,674nm,19.0s,MS5.3
AML Almayashu 122.46 304 P PKPdf 01 13 17.0 +0.1
SNR=13
EKS2 Erkin-Say 122.50 304 *e*PKPdf PKPdf 01 13 16.5 -0.5
EKS2 LR LR
comp=Z,716nm,19.0s,MS5.3
EKS2 Erkin-Say 122.50 304 P PKPdf 01 13 16.8 -0.2
SNR=6.5
BRVK Borovoye 125.97 317 *i* PKP PKPdf 01 13 22.0 -1.3
BRVK LR LR
comp=Z,855nm,20.0s,MS5.4
RCBR Riachuelo 129.10 126 PFAKE 01 13 40.0 +9.4
RCBR LR LR
comp=Z,2µm,21.0s,MS5.7
KBS Kingsbay 129.70 358 PFAKE 01 13 40.0 +10
KBS LR LR
comp=Z,690nm,20.0s,MS5.3
LSZ Lusaka 129.81 212 *e*PKPdf PKPdf 01 13 33.9 +2.1
LSZ *e*pPKPdf pPKPdf 01 13 43.9 +8.8
LSZ LR LR
comp=Z,636nm,19.0s,MS5.3
TSUM Tsumeb 130.18 198 PFAKE 01 13 40.0 +7.5
TSUM LR LR
comp=Z,929nm,19.0s,MS5.5
SVE Sverdlovsk 131.24 322⇑*i*PKIKP PKPdf 01 13 31.5 -1.8
SVE *e* 01 20 44.0
SVE pmax pmax
comp=Z,15nm,0.9s
ARU Arti 132.44 322 *e*PKPdf PKPdf 01 13 34.5 -1.1
ARU *e*pPKPdf pPKPdf 01 13 46.8 +8.0
ARU *e*sPKPdf 01 13 50.5
ARU *e*SKP 01 17 00.9
ARU LR LR
comp=Z,1µm,19.0s,MS5.6
ARU Arti 132.44 322 *i* PKIKP PKPdf 01 13 35.2 -0.3
ARU 01 15 55.7
ARU SS SS 01 33 26.3 -12
ARU MLR MLR
comp=Z,1µm,23.0s,MS5.5
ARU MLR MLR
comp=N,503nm,21.0s,MS5.5
ARU MLR MLR
comp=E,766nm,22.0s,MS5.5
KMBO Kilima Mbogo 135.68 234 PKP PKPdf 01 13 42.3 -0.7
KMBO LR LR
comp=Z,622nm,20.0s,MS5.3
KMBO Kilima Mbogo 135.68 234 PKP PKPdf 01 13 42.3 -0.7
comp=Z,6.5nm,1.0s,baz=26,slow=2.4,SNR=15
LVZ Lovozero 136.64 343 PFAKE 01 13 50.0 +6.9
LVZ LR LR
comp=Z,537nm,19.0s,MS5.3
KEV Kevo 136.81 348 PFAKE 01 13 50.0 +6.6
KEV LR LR
comp=Z,712nm,20.0s,MS5.4
PRGR Permogore 136.90 332 *e*PKIKP PKPdf 01 13 41.7 -2.0
ARCES ARCESS Array B 137.27 349 PKP PKPdf 01 13 35.7 -8.5
ARCES PKP PKPdf 01 13 42.8 -1.4
ARCES ARCESS Array B 137.27 349 PKhKP 01 13 35.7
comp=Z,3.1nm,0.8s,baz=12,slow=1.1,SNR=9.7
ARCES PKP PKPdf 01 13 42.8 -1.4
comp=Z,6.2nm,0.7s,baz=17,slow=1.6,SNR=9.7
UMR Umm Al-Rimmam 141.14 282 *e*P PKPdf 01 13 45.8 -6.7
UMR AMb AMB 01 13 56.5
comp=Z,58nm,1.0s
RDF Al-Radifah 141.17 281 *e*P PKPdf 01 13 46.2 -6.4
RDF AMb AMB 01 13 56.6
comp=Z,75nm,1.0s
JOF Joensuu 141.30 340 *e*pkp PKPdf 01 13 50.5 -1.2
NAY Al-Naaiem 141.50 282 *e*P PKPdf 01 13 47.0 -6.2
NAY AMb AMB 01 13 56.9
comp=Z,18nm,1.1s
MIB Mutribah 141.51 283 *e*P PKPdf 01 13 47.2 -6.0
MIB AMb AMB 01 13 58.1
comp=Z,44nm,0.9s
KAF Kangasniemi 143.38 342 *e*pkp PKPdf 01 13 50.8 -4.7
baz=33,slow=3.3
DGRG David-gareji 143.50 302 P PKPdf 01 13 51.2 -5.1
MTA Mtatsminda 143.90 302 P PKPdf 01 13 53.7 -3.4
TBLG Delisi 143.94 302 P PKPdf 01 13 54.9 -2.1
FINES FINESS Array B 143.99 341 PKP PKPdf 01 13 52.7 -3.9
FINES PKP PKPdf 01 13 55.9 -0.7
FINES FINESS Array B 143.99 341 PKhKP 01 13 52.7
comp=Z,10nm,0.7s,baz=56,slow=3.6,SNR=62
FINES PKP PKPdf 01 13 55.9 -0.7
comp=Z,8.7nm,0.7s,baz=60,slow=3.4,SNR=17
OBN Obninsk 144.39 327 *e*PKP PKPdf 01 13 52.8 -4.6
OBN LR LR
comp=Z,798nm,19.0s,MS5.5
OBN Obninsk 144.39 327⇓*i*PKIKP PKPdf 01 13 54.9 -2.5
OBN pmax pmax
comp=Z,57nm,1.1s
ZEI Tsey 144.40 304 *e*PKIKP PKPdf 01 13 56.8 -1.1
BHD Baghdad 144.45 288 *i* x x 01 13 56.0
ONI Oni 144.76 304 P PKPdf 01 13 57.4 -1.1
CLDR Caldiran 144.82 298 *e*P PKPdf 01 13 56.6 -2.2
VRSR Storozhevoye 144.94 320 *e*PKIKP PKPdf 01 13 56.8 -1.7
VRSR pmax pmax
comp=Z,10.0nm,0.9s
VRSR pmax pmax
comp=N,6.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,0.9s
DYDN Diyadin 144.96 299 *i* P PKPdf 01 13 58.7 -0.2
HKR Hakkari 145.05 295 *e*P PKPbc 01 13 58.7 +0.1
KIV Kislovodsk 145.05 306 *e*PKP PKPdf 01 13 57.7 -1.2
KIV LR LR
comp=Z,725nm,20.0s,MS5.5
KIV Kislovodsk 145.05 306*c* *i*PKIKP PKPdf 01 13 57.7 -1.2
KIV *e* 01 17 12.8
KIV *e*SS SS 01 35 54.7 -13
KIV *e*SSS 01 41 28.0
KIV pmax pmax
comp=Z,44nm,1.2s
HAKT HAKKARI 145.07 295 *i* P PKPbc 01 13 58.7 +0.1
DIGO Kars 145.12 300 *i* P PKPbc 01 13 58.1 -0.6
CUKT Cukurca 145.16 295 *e*P PKPbc 01 13 58.3 -0.7
TVAN Van 145.26 297 *i* P PKPbc 01 13 60.0 +0.7
VANB Van 145.27 297 *e*P PKPbc 01 14 00.6 +1.3
VANT Van 145.28 297 *e*P PKPbc 01 14 00.7 +1.4
KARS Kars 145.31 301 *e*P PKPbc 01 13 55.3 -4.0
AGRB Hanur-Agry 145.50 299 *e*P PKPdf 01 13 58.6 -1.3
MSL Mosul 145.60 293 *i* x x 01 14 01.5
TUTA Tutak 145.65 298 *i* P PKPdf 01 14 00.8 +0.6
SIRT Sirnak 146.08 295 *e*P PKPdf 01 14 02.0 +1.1
BCA Borcka 146.29 302 *e*P PKPdf 01 14 01.2 0.0
ERZM Erzurum 146.71 300 *i* P PKPbc 01 14 04.4 +0.8
EZM Erzurum 146.71 300 *e*P PKPdf 01 14 02.7 +0.8
BTMT Batman 146.79 296 *e*P PKPdf 01 14 03.3 +1.2
PZAR Pazar-Rize 146.87 302 *e*P PKPdf 01 14 02.9 +0.8
SOC Sochi 147.23 307*c* *i*PKP2 PKPab 01 14 04.0 -2.7
SOC *e* 01 17 25.4
SOC *e*SS SS 01 36 21.8 -11
SOC pmax pmax
comp=Z,34nm,0.8s
NB2 NORSAR Subarra 147.36 353 PKPab PKPab 01 14 03.2 -3.4
NOA NORSAR Array B 147.36 353 PKPbc PKPbc 01 14 03.1 -1.7
comp=Z,30nm,0.8s,baz=14,slow=4.5,SNR=81
MARD Mardin 147.41 295 *i* P PKPdf 01 14 05.4 +2.2
BINT Bingol 147.50 298 *e*P PKPdf 01 14 05.6 +2.3
KTUT Trabzon 147.75 302 *e*P PKPdf 01 14 03.5 -0.1
MACK Trabzon 147.75 302 *i* P PKPbc 01 14 06.6 +0.1
DIY Diyarbakir 147.81 296 *e*P PKPbc 01 14 06.7 0.0
EZC Erzincan 147.91 300 *e*P PKPdf 01 14 04.0 +0.1
GUMT Gumushane 148.05 301 *e*P PKPbc 01 14 06.8 -0.5
KELT Kelkit 148.27 300 *i* P PKPbc 01 14 08.5 +0.6
PTK Pertek 148.35 298 *e*P PKPdf 01 14 06.5 +1.9
IZAR Zarasai 148.41 335 *e*P PKPbc 01 14 07.1 -0.6
IZAR AMb AMB 01 14 08.7
comp=Z,34nm,1.0s
ANN Anapa 148.46 310 *i* PKP2 PKPbc 01 14 06.6 -1.6
ANN pmax pmax
comp=Z,113nm,1.0s
ESPY Espiye-Giresun 148.53 302 *e*P PKPdf 01 14 03.2 -1.7
IDID Didziasalis 148.54 334 *e*P PKPbc 01 14 07.5 -0.6
IDID AMb AMB 01 14 08.9
comp=Z,20nm,1.0s
MNK Minsk 148.69 332⇓*e*PKIKP PKPdf 01 14 06.0 +1.3
MNK pmax pmax
comp=Z,1µm,1.0s
IIGN Ignalina 148.71 334 *e*P PKPbc 01 14 08.1 -0.4
IIGN AMb AMB 01 14 09.5
comp=Z,25nm,1.1s
ELZG Elazig 148.72 297 *i* P PKPbc 01 14 10.1 +1.0
GRSN GIRESUNGRSN 148.87 302 *i* P PKPdf 01 14 07.8 +2.4
KONO Kongsberg 148.89 354 *e*PKPbc PKPbc 01 14 07.1 -1.7
URFA Urfa 148.96 295 *e*P PKPdf 01 14 07.6 +1.9
MALT Malatya 149.17 297 *e*P PKPdf 01 14 06.8 +0.8
MALT Malatya 149.17 297 *e*PKIKP PKPdf 01 14 05.8 -0.2
MALT *e* 01 14 10.6
MALT Malatya 149.17 297⇑*i*P PKPbc 01 14 10.4 +0.1
MYA Malataya 149.17 297 *e*P PKPbc 01 14 10.4 +0.1
ATAB Bozova 149.37 296 *i* P PKPab 01 14 15.4 -0.1
JAWL J.Aulia 149.59 250 *i* PKPbc 01 14 12.7 +0.8
MRKH Merkhyat 149.93 251 *i* PKPbc 01 14 13.8 +1.1
GZT Gaziantep 149.96 295 *i* P PKPbc 01 14 12.3 +0.1
GAZ Gaziantep 150.26 295 *e*P PKPbc 01 14 11.7 -1.3
KMRS Kahramanmaras 150.47 296 *e*P PKPdf 01 14 11.0 +2.9
KVT Kavak 150.48 303 *e*P PKPbc 01 14 11.9 -1.5
AKASG Malin Array Be 150.57 325 PKPbc PKPbc 01 14 11.4 -1.9
comp=Z,56nm,0.8s,baz=44,slow=2.7,SNR=26
AKASG PKPab PKPab 01 14 19.1 -0.9
comp=Z,32nm,0.7s,baz=45,slow=3.5,SNR=15
KIEV Kiev 150.59 325 *e*PKPdf PKPdf 01 14 07.5 -0.3
KIEV *e*PKPbc PKPbc 01 14 12.0 -1.3
KIEV LR LR
comp=Z,903nm,20.0s,MS5.6
SIM Simferopol' 150.62 312*c* *i*PKIKP PKPbc 01 14 12.6 -0.9
SIM *e* 01 14 25.0
SIM pmax pmax
comp=Z,51nm,0.9s
SUW Suwalki 150.88 335 *e*PKP PKPbc 01 14 13.3 -0.6
ANDN Andirin 150.90 296 *i* P PKPbc 01 14 14.7 +0.3
DIKM Dikmen 150.91 305 *e*P PKPdf 01 14 10.9 +2.2
COBT Iskenderun 151.09 294 *i* P PKPbc 01 14 15.1 +0.2
BNN Bunyan 151.09 299 *e*P PKPdf 01 14 12.3 +3.3
HTY Hatay 151.22 293 *e*P PKPbc 01 14 14.6 -0.6
BOYT Boyabat 151.23 304 *i* P PKPbc 01 14 14.6 -0.5
BYBT Boyabat 151.31 304 *e*P PKPbc 01 14 14.4 -0.8
KOZT Kozan 151.32 296 *e*P PKPbc 01 14 13.9 -1.5
YOZ Yozgat 151.34 301 *e*P PKPbc 01 14 13.4 -2.0
CEYT Ceyhan 151.44 295 *e*P PKPbc 01 14 14.8 -0.9
CTKT Corum 151.51 303 *i* P PKPbc 01 14 14.9 -0.9
BZK Bozkurt 151.72 306 *e*P PKPdf 01 14 12.0 +2.1
CORM Corum 151.74 302 *e*P PKPbc 01 14 14.4 -1.9
BHL Bhannes 151.74 289 *e*P PKPbc 01 14 16.4 -0.1
KRTS Karatas 151.79 294 *e*P PKPbc 01 14 15.1 -1.5
AVNT Avonos 151.87 299 *i* P PKPbc 01 14 15.7 -1.0
KARA Karaisali 151.96 296 *e*P PKPbc 01 14 15.4 -1.5
TOS Tosya 151.97 304 *e*P PKPdf 01 14 10.1 -0.2
CDAG Cicekdag 152.06 301 *i* P PKPbc 01 14 16.6 -0.4
MUD Monsted U'grnd 152.08 353 *e*PKIKP PKPab 01 14 22.9 -3.1
MUD pmax pmax
comp=Z,50nm,1.1s
MUD Monsted U'grnd 152.08 353 *i* P PKPab 01 14 22.9 -3.1
comp=Z,50nm,1.1s
NIG Nigde 152.18 298 *e*P PKPab 01 14 25.9 -1.2
BALT Daday 152.29 305 *i* P PKPbc 01 14 17.3 -0.2
COP Copenhagen 152.35 348 *e*PKIKP PKPbc 01 14 16.4 -0.8
COP pmax pmax
comp=Z,32nm,0.9s
COP Copenhagen 152.35 348 *i* P PKPbc 01 14 16.4 -0.8
comp=Z,32nm,0.9s
CANT Cankiri 152.38 303 *e*P PKPdf 01 14 13.3 +2.4
BSD Bornholm Skovb 152.40 345 *i* PKIKP PKPbc 01 14 16.5 -0.8
BSD pmax pmax
comp=Z,46nm,1.0s
BSD Bornholm Skovb 152.40 345 *i* P PKPbc 01 14 16.5 -0.8
comp=Z,46nm,1.0s
MERS Mersin 152.44 295 *e*P PKPbc 01 14 16.4 -1.6
ELDT Eldivan 152.55 303 *i* P PKPbc 01 14 17.5 -0.7
BRTR Keskin Array B 152.59 301 PKP PKPdf 01 14 10.5 -0.8
comp=Z,1.3nm,0.8s,baz=143,slow=2.5,SNR=7.2
BRTR PKPbc PKPbc 01 14 17.4 -0.8
comp=Z,14nm,1.0s,baz=111,slow=2.8,SNR=36
BRTR PKPab PKPab 01 14 26.6 -2.2
comp=Z,17nm,0.8s,baz=110,slow=3.2,SNR=19
SAFT Safranbolu 152.88 305 *e*P PKPbc 01 14 17.4 -1.5
KIS Kishinev 152.94 319 *e*PKIKP PKPbc 01 14 16.0 -2.8
KIS *e* 01 14 28.0
KIS Kishinev 152.94 319 *e*PKP PKPbc 01 14 16.0 -2.8
KIS *e*L 02 17 40.0
KIS LRM 02 27 00.0
comp=Z,800nm,20.0s
ANTO Ankara 153.18 302 *e*P PKPbc 01 14 17.1 -2.5
ANTO Ankara 153.18 302 *e*PKIKP PKPdf 01 14 11.8 -0.3
ANTO *e* 01 14 19.2
ANTO MLR MLR
comp=Z,448nm,19.0s,MS5.3
ANTO Ankara 153.18 302⇑*i*P PKPbc 01 14 19.2 -0.4
IKL Isikli 153.19 294 *e*P PKPbc 01 14 18.4 -1.3
LOD Lodumlu 153.20 302 *e*P PKPbc 01 14 17.9 -1.7
SGKT Sivrigoynuk 153.53 304 *i* P PKPbc 01 14 17.6 -2.7
CSS Prodhromos 153.60 291 *e*PKPbc PKPbc 01 14 20.1 -0.6
LVV L'vov 153.66 328 *e*PKIKP PKPbc 01 14 19.2 -1.1
KWP Kalwaria 154.39 330 *e*PKP PKPbc 01 14 21.8 0.0
KWP Kalwaria 154.39 330 *e*PKP PKPbc 01 14 21.8 0.0
KWP Kalwaria 154.39 330⇑*i*P PKPab 01 14 35.2 -0.8
HARR Harsova 154.68 315⇑*i*P PKPbc 01 14 22.8 +0.2
ESKT Eskisehir 154.72 302 *i* P PKPbc 01 14 22.3 -0.6
VRI Vrincioaia 154.77 319⇑*i*P PKPab 01 14 37.6 -0.2
PLOR Plostina 154.83 319⇑*i*P PKPab 01 14 38.1 +0.1
KOLS Kolonicke sedl 155.10 329 *e*PKP PKPdf 01 14 13.9 -0.6
KOLS *e* 01 14 22.9
KOLS *e* 01 14 35.9
KOLS Kolonicke sedl 155.10 329 *e*PKP PKPdf 01 14 13.9 -0.6
KOLS *e* 01 14 22.8
KOLS *e* 01 14 35.9
OJC Ojcow 155.16 334 *e*PKP PKPdf 01 14 22.8 +8.3
STHS Stebnicka Huta 155.19 331 *e*PKP PKPab 01 14 38.6 -0.8
UZH Uzhgorod 155.31 328 *e*PKIKP PKPdf 01 14 23.0 +8.2
UZH *i* 01 14 38.5
ISP Isparta 155.41 299 *e*PKPbc PKPdf 01 14 23.7 +8.4
ISP *e*PKPab PKPab 01 14 40.1 -0.7
ISP Isparta 155.41 299⇑*i*P PKPab 01 14 39.9 -0.9
MLR Muntele Rosu 155.44 319⇑*i*P PKPab 01 14 40.2 -0.4
CRVS Cervenica-Dubn 155.48 330 *e*PKP PKPdf 01 14 14.7 -0.3
CRVS *e* 01 14 39.8
TRPA Tarpa 155.55 327⇓*i*P PKPab 01 14 41.3 +0.3
NIE Niedzica 155.58 332 *e*PKP PKPdf 01 14 15.3 +0.2
NIE e 01 14 23.8
NIE Niedzica 155.58 332 *e*PKIKP PKPdf 01 14 15.3 +0.2
NIE *e* 01 14 23.8
PRD Provadia 155.74 313 *i* P PKPab 01 14 42.1 +0.1
KSP Ksiaz 155.87 339 *e*PKP PKPab 01 14 41.6 -0.6
KSP Ksiaz 155.87 339 *e*PKPdf PKPdf 01 14 16.0 +0.5
KSP *e*PKPab PKPab 01 14 41.3 -0.9
KSP LR LR
comp=Z,2µm,23.1s,MS5.8
KSP Ksiaz 155.87 339 *e*PKP2 PKPab 01 14 41.3 -0.9
VOIR 155.98 319⇓*i*P PKPab 01 14 43.3 +0.3
OKC Ostrava-Krasne 156.09 335 *e*PKPAB PKPab 01 14 42.3 -0.9
KECS Kecovo 156.23 330 *e*PKP PKPab 01 14 43.0 -0.9
KECS *e* 01 14 51.3
UPC Upice 156.25 339 *e*PKPDF PKPdf 01 14 15.2 -0.8
UPC *e*PKPAB PKPab 01 14 43.0 -0.9
DPC Dobruska-Polom 156.28 338 *e*PKPDF PKPdf 01 14 15.5 -0.5
DPC *e*PKPAB PKPab 01 14 42.8 -1.3
IBBN Ibbenburen 156.32 353 *e*PKPab PKPab 01 14 43.1 -1.0
CLL Collm 156.36 344⇓*e*PKIKP PKPdf 01 14 17.0 +0.9
CLL *i* 01 14 42.8
CLL pmax pmax
comp=Z,22nm,2.1s
CLL pmax pmax
comp=Z,17nm,0.9s
CLL MLR MLR
comp=Z,800nm,20.5s,MS5.5
CLL Collm 156.36 344 *e*PKPdf PKPdf 01 14 17.0 +0.9
comp=Z,22nm,2.1s
CLL *i* PKPdif 01 14 24.9
comp=Z,11nm,1.2s
CLL *i* x x 01 14 27.9
comp=Z,10.0nm,0.9s
CLL ⇓*i*PKPab PKPab 01 14 42.8 -1.5
comp=Z,17nm,0.9s
CLL *i* pPKPab pPKPab 01 14 52.3 +4.8
CLL Lm 02 32 00.0
comp=N,700nm,20.9s
CLL Lm 02 32 00.0
comp=E,200nm,21.5s
CLL Lm 02 32 00.0
comp=Z,800nm,20.5s
CLL Collm 156.36 344 *e*PKPdf PKPdf 01 14 16.5 +0.4
CLL *i* PKPdif 01 14 24.9
CLL *i* 01 14 28.0
CLL *e*PKPab PKPab 01 14 42.8 -1.5
comp=Z,17nm,0.9s
CLL *e*pPKPab pPKPab 01 14 52.3 +4.8
MORC Moravsky Berou 156.36 336 ⇓P PKPab 01 14 43.1 -1.3
MORC Moravsky Berou 156.36 336⇓*i*P PKPab 01 14 43.1 -1.3
DRGR 156.39 325⇓*i*P PKPab 01 14 42.9 -1.8
CLZ Clausthal 156.40 349 *e*PKPab PKPab 01 14 43.6 -0.9
BRG Berggiesshubel 156.52 342 *e*PKP PKPdf 01 14 15.5 -0.9
BRG *i* 01 14 25.4
BRG *i* 01 14 43.9
BRG *i* 01 14 48.0
BRG *i* 01 14 53.2
BRG Berggiesshubel 156.52 342 *e*PKIKP PKPdf 01 14 15.5 -0.8
BRG *i* 01 14 25.4
BRG *i* 01 14 43.9
BRG pmax pmax
comp=Z,4.0nm,1.5s
BRG pmax pmax
comp=Z,9.0nm,1.3s
BRG pmax pmax
comp=Z,10.0nm,1.1s
BRG pmax pmax
comp=Z,19nm,1.6s
BRG pmax pmax
comp=Z,10.0nm,1.3s
BRG Berggiesshubel 156.52 342 *e*PKPab PKPab 01 14 43.9 -1.1
BRG Berggiesshubel 156.52 342 *e*PKP PKPdf 01 14 15.5 -0.9
comp=Z,6.5nm,1.5s
BRG *i* 01 14 25.4
comp=Z,15nm,1.3s
BRG *i* 01 14 43.9
comp=Z,17nm,1.1s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRG				*i*		01 14 48.0	
	comp=Z,32nm,1.6s						
BRG				*i*		01 14 53.2	
	comp=Z,17nm,1.3s						
JMB	**Yambol**	**156.61**	**312**	*i* P	PKPab	01 14 45.5	-0.3
FBE	**Freiberg**	**156.63**	**343**	*e*PKPab	PKPab	01 14 44.3	-1.2
SZH	**Strazhica**	**156.64**	**314**	*i* P	PKPab	01 14 45.2	-0.7
PVCC	**Panska Ves**	**156.66**	**341**	*e*PKPDF	PKPdf	01 14 15.3	-1.2
PVCC				*e*PKPAB	PKPab	01 14 44.9	-0.8
VYHS	**Vyhne**	**156.91**	**332**	*e*PKP	PKPdf	01 14 16.7	-0.2
VYHS				*e*		01 14 46.2	
VYHS				*e*		01 14 53.0	
PSZ	**Piszkesteto**	**156.91**	**330**	⇑P	PKPab	01 14 46.2	-0.7
PSZ	**Piszkesteto**	**156.91**	**330**	⇓*e*PKP	PKPab	01 14 46.5	-0.4
PSZ	**Piszkesteto**	**156.91**	**330**	⇑*i*P	PKPab	01 14 46.2	-0.7
KOLL	**Kolacno**	**157.02**	**333**	*e*PKP	PKPab	01 14 46.7	-0.6
PVL	**Pavlikeni**	**157.04**	**315**	*i* P	PKPab	01 14 47.9	+0.3
VRAC	**Vranov**	**157.09**	**337**	⇑*i*P	PKPab	01 14 46.5	-1.0
PRU	**Pruhonice**	**157.15**	**341**	*e*PKPAB	PKPab	01 14 46.9	-0.9
MOX	**Moxa**	**157.29**	**346**	*e*PKP	PKPab	01 14 47.4	-1.0
	comp=Z,21nm,1.4s						
MOX				*e*		01 14 56.4	
MOX	**Moxa**	**157.29**	**346**	*e*PKP2	PKPab	01 14 47.4	-1.0
MOX				pmax	pmax		
	comp=Z,21nm,1.4s						
MOX	**Moxa**	**157.29**	**346**	*e*PKPab	PKPab	01 14 47.0	-1.4
WERD	**Werda**	**157.32**	**344**	*e*PKPab	PKPab	01 14 47.1	-1.4
GUNZ	**Gunzen**	**157.39**	**344**	*e*PKPab	PKPab	01 14 47.9	-0.9
SMOL	**Smolenice**	**157.45**	**334**	*e*PKP	PKPab	01 14 48.9	-0.2
WERN	**Wernitzgruen**	**157.45**	**344**	*e*PKPab	PKPab	01 14 48.1	-1.0
TREC	**Trest**	**157.47**	**338**	*e*PKPAB	PKPab	01 14 48.3	-0.9
NKC	**Novy Kostel**	**157.49**	**344**	*e*PKPAB	PKPab	01 14 47.8	-1.4
DIM	**Dimitrovgrad**	**157.50**	**312**	*i* P	PKPab	01 14 48.3	-1.3
MODS	**Modra-Piesok**	**157.62**	**334**	*e*PKP	PKPdf	01 14 16.7	-1.1
MODS				*e*		01 14 49.8	
MODS				*e*		01 15 03.1	
BZS	**Buzias**	**157.74**	**324**	⇓*i*P	PKPab	01 14 49.2	-1.3
KDZ	**Kurdzhali**	**157.76**	**311**	*i* P	PKPab	01 14 49.7	-1.1
MANZ	**Manzenberg**	**157.80**	**344**	*e*PKPab	PKPab	01 14 49.4	-1.2
ZST	**Bratislava**	**157.83**	**334**	*e*PKP	PKPab	01 14 50.3	-0.5
ROTZ	**Rotzenmuhle**	**157.98**	**344**	*e*PKPab	PKPab	01 14 50.6	-0.7
PGB	**Panagyurishte**	**158.12**	**314**	*i* P	PKPab	01 14 51.0	-1.3
KHC	**Kasperske Hory**	**158.20**	**341**	*e*PKPDF	PKPdf	01 14 17.4	-1.1
KHC				*e*PKPAB	PKPab	01 14 51.7	-0.6
RZN	**Rozhen**	**158.21**	**312**	*i* P	PKPab	01 14 51.6	-1.1
TNS	**Taunus Mts**	**158.27**	**351**	*e*PKPab	PKPab	01 14 51.1	-1.5
GRF	**Grafenberg Arr**	**158.28**	**345**	*e*PKPab	PKPab	01 14 51.2	-1.4
GRF				*e*pPKPab	pPKPab	01 15 01.3	+5.4
GRF				*e*L		02 17 46.6	
	comp=Z,660nm,18.0s						
GRFO	**Grafenberg**	**158.28**	**345**	PFAKE		01 14 30.0	+11
GRFO				LR	LR		
	comp=Z,614nm,21.0s,MS5.4						
WET	**Wettzell**	**158.38**	**342**	*e*PKPab	PKPab	01 14 52.0	-1.1
GEC2	**GERESS Array S**	**158.42**	**341**	*e*PKPab	PKPab	01 14 52.0	-1.3
GERES	**GERESS Array B**	**158.42**	**341**	PKP	PKPdf	01 14 17.9	-0.8
	comp=Z,0.9nm,0.9s,baz=121,slow=5.1,SNR=6.1						
GERES				PKPab	PKPab	01 14 52.8	-0.5
	comp=Z,4.3nm,0.8s,baz=30,slow=3.7,SNR=15						
SOP	**Sopron**	**158.46**	**334**	⇓*e*PKP	PKPab	01 14 53.1	-0.4
VTS	**Vitosha**	**158.70**	**315**	PKP2	PKPab	01 14 56.0	+1.2
VTS	**Vitosha**	**158.70**	**315**	*i* P	PKPab	01 14 53.5	-1.3
GIVF	**Givet**	**158.75**	**357**	*e*PKP2	PKPab	01 14 52.4	-2.2
BAIF	**Baives**	**158.81**	**358**	*e*PKP2	PKPab	01 14 52.9	-2.0
	comp=Z,30nm,1.1s						
MMB	**Musomiste**	**158.90**	**312**	*i* P	PKPab	01 14 54.9	-0.8
MOA	**Molln**	**159.13**	**338**	⇑*i*P	PKPab	01 14 55.0	-1.4
	comp=Z,28nm,1.6s						
KKB	**Krupnik**	**159.17**	**314**	*i* P	PKPab	01 14 52.3	-4.6
FUR	**Furstenfeldbru**	**159.69**	**344**	*e*PKPab	PKPab	01 14 57.6	-1.2
VAY	**Valandovo**	**159.78**	**313**	*i* PKP	PKPab	01 14 57.7	-1.9
PERS	**Pernice**	**159.88**	**335**	*i* PKPdf	PKPab	01 14 55.2	-4.6
FLN	**La Foliniere**	**159.95**	**7**	*e*PKP2	PKPab	01 14 57.4	-2.5
	comp=Z,56nm,1.0s						
FLN				*e*MLR	MLR		
	comp=Z,872nm,22.8s,MS5.2						
SKO	**Skopje**	**160.13**	**316**	*i* PKP	PKPab	01 15 01.6	+0.5
BFO	**Black Forest**	**160.13**	**349**	*e*PKPab	PKPab	01 14 59.7	-1.0
LDF	**La Druitiere**	**160.15**	**6**	*e*PKP2	PKPab	01 14 58.2	-2.6
	comp=Z,48nm,1.4s						
CDF	**Champ du Feu**	**160.20**	**352**	*e*PKP2	PKPab	01 14 58.8	-2.2
	comp=Z,16nm,1.0s						
GRR	**Gorron**	**160.28**	**8**	*e*PKP2	PKPab	01 14 59.1	-2.3
	comp=Z,13nm,0.9s						
MEZF	**Maizieres J'vi**	**160.33**	**356**	*e*PKP2	PKPab	01 14 59.5	-2.1
	comp=Z,33nm,1.0s						
WATA	**Walderalm**	**160.39**	**342**	⇓*i*P	PKPab	01 15 01.3	-0.6
	comp=Z,16nm,1.2s,SNR=5.2						
RETA	**Reutte**	**160.45**	**344**	⇑*i*PKPab	PKPab	01 15 00.8	-1.4
	comp=Z,14nm,1.1s						
KRUS	**Krusevo**	**160.59**	**315**	*i* PKP	PKPab	01 15 03.5	+0.4
LJU	**Ljubljana**	**160.60**	**335**	*i* PKPbc	PKPab	01 15 01.4	-1.5
HAU	**Haudompre**	**160.71**	**353**	*e*PKP2	PKPab	01 15 01.0	-2.3
	comp=Z,17nm,0.9s						
HAU				*e*MLR	MLR		
	comp=Z,1µm,19.8s						
BOJS	**Bojanci**	**160.77**	**333**	*i* PKPdf	PKPab	01 14 58.0	-5.6
BOJS				*e*PKPbc	PKPab	01 15 01.2	-2.4
HINF	**Hinteralfeld**	**160.84**	**352**	*e*PKP2	PKPab	01 15 01.4	-2.4
	comp=Z,16nm,1.1s						
JAVS	**Javornik**	**160.90**	**336**	*i* PKPdf	PKPab	01 15 02.6	-1.6
LOR	**Lormes**	**161.61**	**358**	*e*PKP2	PKPab	01 15 04.8	-2.4
	comp=Z,49nm,1.4s						
LOR				*e*MLR	MLR		
	comp=Z,1µm,20.2s						
SSF	**Saint Saulge**	**161.83**	**359**	*e*PKP2	PKPab	01 15 05.8	-2.4
	comp=Z,22nm,0.9s						
AVF	**Avril sur Loir**	**162.10**	**359**	*e*PKP2	PKPab	01 15 07.0	-2.4
	comp=Z,20nm,1.2s						
CABF	**La Chapelle**	**162.12**	**353**	*e*PKP2	PKPab	01 15 07.5	-1.9
MFF	**Saint Martin d**	**162.12**	**7**	*e*PKP2	PKPab	01 15 07.2	-2.3
	comp=Z,23nm,0.9s						
SMF	**Signal de Mont**	**162.24**	**358**	*e*PKP2	PKPab	01 15 07.6	-2.4
	comp=Z,41nm,1.1s						
BGF	**Bois d'Agland**	**162.34**	**0**	*e*PKP2	PKPab	01 15 07.7	-2.7
	comp=Z,41nm,1.2s						
TCF	**Toulx Ste Croi**	**162.60**	**2**	*e*PKP2	PKPab	01 15 09.0	-2.5
	comp=Z,21nm,1.2s						
LPL	**La Plagne**	**163.12**	**351**	*e*PKP2	PKPab	01 15 12.7	-1.2
	comp=Z,9.7nm,0.9s						
LPG	**La Plagne**	**163.13**	**351**	*e*PKP2	PKPab	01 15 12.4	-1.5
	comp=Z,18nm,0.9s						
RJF	**Les Rejaudoux**	**163.55**	**4**	*e*PKP2	PKPab	01 15 13.2	-2.5
RJF				*e*MLR	MLR		
	comp=Z,1µm,23.0s						
ORIF	**Oris-en-Rattie**	**163.81**	**353**	*e*PKP2	PKPab	01 15 15.3	-1.6
	comp=Z,24nm,1.0s						
ORIF				*e*MLR	MLR		
	comp=Z,1µm,21.5s						
LFF	**La Frestale**	**163.86**	**6**	*e*PKP2	PKPab	01 15 14.9	-2.2
	comp=Z,57nm,1.3s						
VIVF	**Saint-Julien-l**	**163.98**	**356**	*e*PKP2	PKPab	01 15 15.8	-1.9
TOA0	**Torodi Ar. Sit**	**164.31**	**175**	*e*PKPdf	PKPdf	01 14 25.2	-0.8
TORD	**Torodi Ar. Bea**	**164.31**	**175**	PKP	PKPdf	01 14 25.9	-0.1
TORD				PKPab	PKPab	01 15 20.6	+0.7
TORD	**Torodi Ar. Bea**	**164.31**	**175**	PKP	PKPdf	01 14 25.9	-0.1
	comp=Z,2.0nm,0.8s,baz=318,slow=1.8,SNR=9.5						
TORD				PKPab	PKPab	01 15 20.6	+0.7
	comp=Z,6.9nm,0.9s,baz=195,slow=3.1,SNR=8.9						
SBF	**Sospel**	**164.62**	**348**	*e*PKP2	PKPab	01 15 18.0	-2.5
	comp=Z,54nm,1.0s						
FRF	**La Foret Royal**	**165.04**	**350**	*e*PKP2	PKPab	01 15 20.7	-1.7
LMR	**La Mourre**	**165.29**	**350**	*e*PKP2	PKPab	01 15 21.3	-2.1
	comp=Z,38nm,1.2s						
MTLF	**Montolieu**	**165.54**	**2**	*e*PKP2	PKPab	01 15 21.5	-3.1
	comp=Z,14nm,1.1s						
PAB	**San Pablo**	**167.74**	**28**	PFAKE		01 14 40.0	+12
PAB				LR	LR		
	comp=Z,792nm,20.0s						
ESDC	**Sonseca Array**	**167.78**	**26**	PKP	PKPdf	01 14 28.6	+0.5
	comp=Z,0.8nm,0.8s,baz=329,slow=2.4,SNR=6.0						
ESDC				PKPab	PKPab	01 15 33.8	-0.9
	comp=Z,1.8nm,0.8s,baz=320,slow=3.2,SNR=6.8						

IDC 12 01:02:31.8±2.2**, 2268S**×**6895W, h0**km**, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.8**/14**, mbtmp3.9**/3**, ML2.9**/1**, Error ellipse: s-maj=72.1km s-min=34.6km az=27.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.40**	**7**	Pn	Pn	01 04 08.3	+0.9
	0.1nm,0.3s,baz=177,slow=10,SNR=2.4						
LPAZ				Sn	Sn	01 05 15.0	-6.2
	0.2nm,0.3s,baz=116,slow=7.4,SNR=4.5						
DBIC	**Dimbokro**	**69.11**	**73**	P	P	01 13 39.3	-1.0
	2.9nm,1.0s,baz=201,slow=8.0,SNR=5.8						
PDAR	**Pinedale Array**	**75.11**	**330**	P	P	01 14 15.1	-0.5
	0.3nm,0.6s,baz=130,slow=8.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.79**	**70**	P	P	01 14 31.9	+0.6
	1.2nm,0.4s,baz=257,slow=5.4,SNR=46						
YKA	**Yellowknife Ar**	**92.28**	**341**	P	P	01 15 44.2	+0.9
	0.6nm,0.6s,baz=133,slow=4.4,SNR=14						
MKAR	**Makanchi Array**	**146.60**	**37**	PKPbc	PKPbc	01 22 15.2	0.0
	0.2nm,0.2s,baz=326,slow=0.5,SNR=3.8						

KNET ***12*** *01:37:54.8±0.5, 42.14N×75.98E, h14km±3km, ml2.7, Error ellipse: s-maj=4.2km s-min=1.8km az=152.0*
ISCJB ***12*** *01:37:55.8±0.9, 42.11N±0.06×76.01E±0.04, h10km, Error ellipse: s-maj=8.7km s-min=3.8km az=161.3*
NNC ***12*** *01:37:58.7±2.6, 42.26N×76.01E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=16.8km s-min=9.4km az=11.0*
ISC 12 01:37:56.1±0.9**, 42.12N**±0.05×**76.00E**±0.04**, h10**km**, n15, σ0s.93**/26**, 16C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.22**	**55**	⇑P	**Pg**	**01 38 00.0**	**-0.7**
	556nm,0.1s,SNR=867						
ULHL				⇓S	**Sg**	**01 38 03.5**	**-0.3**
	647nm,0.1s						
KZA	**Kyzart**	**0.56**	**266**	⇑P	**Pg**	**01 38 06.2**	**-0.8**
	64nm,0.2s,SNR=134						
KZA				⇑S	**Sg**	**01 38 14.2**	**-0.1**
	353nm,0.3s						
TKM2	**Tokmak 2**	**0.85**	**340**	⇓P	**Pg**	**01 38 11.6**	**-1.0**
	0.9nm,0.2s						
TKM2				⇑S	**Sg**	**01 38 23.5**	**-0.2**
	26nm,0.6s						
TKM2	**Tokmak 2**	**0.85**	**340**	⇓P	**Pg**	**01 38 11.8**	**-0.8**
	94nm,0.2s,SNR=145						
TKM2				⇑S	**Sg**	**01 38 23.6**	**-0.2**
	222nm,0.1s						
KBK	**Karagaybulak**	**0.95**	**305**	⇓P	**Pg**	**01 38 13.6**	**-0.7**
	43nm,0.1s,SNR=115						
KBK				⇑S	**Sg**	**01 38 27.1**	**+0.4**
	250nm,0.2s						
UCH	**Uchtor**	**1.11**	**276**	⇑P	**Pb**	**01 38 15.8**	**-1.6**
	20nm,0.3s,SNR=29						
UCH				⇓S	**Sg**	**01 38 31.3**	**-0.6**
	50nm,0.2s						
AAK	**Ala-Archa**	**1.23**	**295**	⇓P	**Pn**	**01 38 18.3**	**-1.1**
	64nm,0.3s,SNR=68						
AAK				⇓S	**Sb**	**01 38 34.6**	**-0.7**
	114nm,0.2s						
CHMS	**Chumysh**	**1.27**	**314**	⇓P	**Pn**	**01 38 19.2**	**-0.8**
	20nm,0.2s,SNR=17						
CHMS				⇑S	**Sb**	**01 38 36.1**	**-0.5**
	112nm,0.3s						
KNDC	**Almaty**	**1.31**	**33**	⇑P	**Pn**	**01 38 20.1**	**-0.3**
	30nm,0.2s						
KNDC				⇑S	**Sb**	**01 38 38.4**	**+0.8**
	310nm,0.3s						
USP	**Ospenovka**	**1.59**	**317**	⇓P	**Pn**	**01 38 24.7**	**+0.4**
	40nm,0.2s,SNR=88						
USP				⇑S	**Sn**	**01 38 46.3**	**+1.4**
	27nm,0.2s						
AML	**Almayashu**	**1.71**	**271**	⇓P	**Pn**	**01 38 27.1**	**+1.0**
	28nm,0.2s,SNR=48						
AML				⇑S	**Sn**	**01 38 50.2**	**+2.3**
	266nm,0.5s						
EKS2	**Erkin-Say**	**1.73**	**289**	⇓P	**Pn**	**01 38 27.5**	**+1.3**
	22nm,0.2s,SNR=44						
KK31	**Karatay Array**	**4.17**	**285**	⇑Pn	**Pb**	**01 39 10.6**	**+1.1**
	2.4nm,0.5s,baz=102,slow=15,SNR=46						
KK31				⇑Lg		01 40 04.3	
	3.6nm,0.3s,baz=100,slow=28,SNR=8.0						
MK31	**Makanchi Array**	**6.49**	**42**	⇑Pn	**Pn**	**01 39 37.0**	**+5.4**
	0.8nm,0.6s,baz=220,slow=15,SNR=5.0						
MK31				⇓Lg		01 41 16.6	
	2.7nm,0.7s,baz=224,slow=28,SNR=3.9						
KURK	**Kurchatov**	**8.79**	**11**	⇑Pn	**Pn**	**01 40 04.2**	**+1.1**
	5.4nm,2.3s						
KURK				⇓Lg		01 42 29.3	
	5.6nm,1.0s						

CSEM ***12*** *01:48:26.5±0.1, 41.54N×28.48E, h12km, MD3.1, Error ellipse: s-maj=3.8km s-min=2.0km az=43.0*
ISK ***12*** *01:48:26.2, 41.51N×28.44E, h5km, MD3.1*
ISCJB ***12*** *01:48:27.7±1.0, 41.49N±0.06×28.49E±0.06, h13km±7km, Error ellipse: s-maj=10.9km s-min=5.4km az=32.3*
SOF ***12*** *01:48:27.3, 41.85N×28.74E, h13km, MD2.5*
ISC 12 01:48:28.1±1.1**, 41.49N**±0.06×**28.49E**±0.06**, h15**km±7km**, n25, σ1s.02**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTT	**Catalca**	**0.34**	**188**	PG	**Pg**	**01 48 34.1**	**-1.1**
ISK	**Istanbul-Kandi**	**0.60**	**134**	PG	**Pg**	**01 48 39.7**	**-0.2**
ISK				SG	**Sg**	**01 48 48.5**	**+0.6**
HRT	**Hereke**	**1.11**	**126**	PN	**Pn**	**01 48 48.8**	**-0.3**
HRT				SN	**Sn**	**01 49 02.8**	**-1.4**
MRMT	**Marmara Adasi**	**1.11**	**218**	*e*PN	**Pn**	**01 48 47.6**	**-1.6**
YLV	**Yalova**	**1.14**	**144**	PN	**Pn**	**01 48 48.8**	**-0.7**
GEMT	**Gemlik**	**1.18**	**153**	PN	**Pn**	**01 48 49.9**	**-0.2**
KCT	**Karacabey**	**1.23**	**185**	PN	**Pn**	**01 48 50.2**	**-0.5**
EDC	**Edincik**	**1.23**	**203**	PN	**Pn**	**01 48 49.7**	**-1.2**
RKY	**Sarkoy-Tekirda**	**1.27**	**232**	*e*PN	**Pn**	**01 48 50.8**	**-0.6**
EDRB	**Edirne**	**1.36**	**286**	PN	**Pn**	**01 48 51.3**	**-1.3**
IZI	**Iznik**	**1.37**	**147**	PN	**Pn**	**01 48 53.0**	**+0.3**
ADVT	**Abdulvahap**	**1.42**	**138**	PN	**Pn**	**01 48 53.0**	**-0.3**
JMB	**Yambol**	**1.73**	**305**	*i* P	**Pn**	**01 48 59.4**	**+1.8**
GPA	**Golpazari**	**1.83**	**130**	*e*PN	**Pn**	**01 49 00.4**	**+1.4**
GULT	**Gulveren**	**1.86**	**124**	*e*PN	**Pn**	**01 49 00.6**	**+1.1**
DST	**Dursunbey**	**1.88**	**177**	*e*PN	**Pn**	**01 49 00.5**	**+0.7**
PRD	**Provadia**	**1.89**	**335**	*i* P	**Pn**	**01 48 58.5**	**-1.4**
BALB	**Balikesir**	**1.90**	**194**	*e*PN	**Pn**	**01 49 00.6**	**+0.5**
ENEZ	**Enez**	**1.92**	**248**	*e*PN	**Pn**	**01 49 00.3**	**0.0**
DIM	**Dimitrovgrad**	**2.28**	**285**	*i* P	**Pn**	**01 49 07.9**	**+2.6**
EZN	**Ezine**	**2.34**	**225**	*e*PN	**Pn**	**01 49 06.7**	**+0.7**
SZH	**Strazhica**	**2.60**	**314**	*i* P	**Pn**	**01 49 08.8**	**-0.8**
AKS	**Akhisar**	**2.66**	**191**	*e*PN	**Pn**	**01 49 11.1**	**+0.7**
KULA	**Kula-Manisa**	**2.97**	**177**	*e*PN	**Pn**	**01 49 16.2**	**+1.4**
MMB	**Musomiste**	**3.58**	**273**	*i* P	**Pb**	**01 49 31.8**	**+0.7**

IDC ***12*** *01:57:04.5±0.6, 28.41S×177.02W, h0km, mb4.6/9, mb1 4.8/9, mb1mx4.7/11, mbtmp4.5/9, MS4.4/12, Ms1 4.4/12, ms1mx4.2/17, Error ellipse: s-maj=24.1km s-min=20.5km az=118.0*
ISCJB ***12*** *01:57:07.5±0.3, 28.94S±0.05×177.00W±0.07, h33km, mb4.9/30, MS4.5/15, Error ellipse: s-maj=9.7km s-min=5.9km az=36.7*
MOS ***12*** *01:57:08.9±1.6, 28.31S×177.18W, h33km, mb5.0/8, Error ellipse: s-maj=17.1km s-min=12.9km az=70.7*
NEIC ***12*** *01:57:09.0±0.4, 28.86S×176.97W, h35km, mb4.9/12, Error ellipse: s-maj=18.0km s-min=9.2km az=147.0*
GCMT ***12*** *01:57:09.0±0.3, 28.58S×176.57W, h32km, MW5.2/64, Moment Tensor Solution. s57,c77; s64,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr6.03±.29; Mθθ-0.13±.20; Mφφ-5.90±.19; Mrθ0.19±.33; Mθφ-0.87±.15; Mφr3.96±.23; Best double couple: M0 7.21600×10¹⁶ NP1:φs191.00000°, δ28.00000°, λ95.00000°. NP2: φs5.00000°, δ62.00000°, λ87.00000°. Principal axes: T 7.2250, Plg73.0000°, Azm268.0000°; N -0.0190, Plg3.0000°, Azm7.0000°; P -7.2060, Plg17.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***12*** *01:57:20.8, 28.16S×176.98W, h130km, mB5.5, mb5.1*
ISC 12 01:57:09.3±0.3**, 28.93S**±0.05×**176.98W**±0.07**, h35**km**, (h128**km±2.6km**:pP-P), n173, σ1s.10**/81**, mb4.9**/30**, MS4.5**/15**, 2C-7D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**9.95**	**202**	SN	**Sn**	**02 01 18.3**	**-1.8**
URZ	**Urewera**	**10.53**	**206**	Pn	**Pn**	**01 59 35.9**	**-1.8**
	0.6nm,0.3s,baz=342,slow=19,SNR=3.7						
URZ				Sn	**Sn**	**02 01 36.8**	**+2.5**
	9.2nm,0.3s,baz=162,slow=20,SNR=8.6						
URZ	**Urewera**	**10.53**	**206**	SN	**Sn**	**02 01 36.1**	**+1.8**
QRZ	**Quartz Range**	**14.65**	**213**	*e*PN	**Pn**	**02 00 35.1**	**+1.1**
THZ	**Tophouse**	**15.22**	**210**	*e*PN	**Pn**	**02 00 40.7**	**-0.9**
THZ				SN	**Sn**	**02 03 21.1**	**-7.8**
KHZ	**Kahutara**	**15.49**	**207**	*e*PN	**Pn**	**02 00 43.1**	**-2.0**
KHZ				SN	**Sn**	**02 03 25.5**	**-10**
AFI	**Afiamalu**	**15.70**	**19**	*e*Pn	**Pn**	**02 00 40.2**	**-7.8**
AFI	**Afiamalu**	**15.70**	**19**	Pn	**Pn**	**02 00 38.0**	**-10**
	3.4nm,0.3s,baz=94,slow=19,SNR=5.1						
AFI				Sn	Sn	02 03 13.6	-27
	0.8nm,0.3s,baz=221,slow=20,SNR=2.0						
DZM	**Mont Dzumac**	**16.44**	**291**	*e*P	**Pn**	**02 01 02.3**	**+5.0**
DZM	**Mont Dzumac**	**16.44**	**291**	Pn	**Pn**	**02 00 59.8**	**+2.5**
	0.3nm,0.3s,baz=110,slow=13,SNR=10						
DZM				LR	LR	02 05 58.4	
	comp=Z,3µm,20.3s,baz=201,slow=33						
MQZ	**McQueen's Vall**	**16.93**	**207**	*e*SN	**Sn**	**02 03 57.0**	**-13**
RAR	**Rarotonga**	**17.37**	**68**	P	**Pn**	**02 01 00.2**	**-8.7**
	1.0nm,0.3s,baz=105,slow=19,SNR=3.4						
RAR				S	S	02 03 56.8	-32
	1.2nm,0.3s,baz=311,slow=17,SNR=3.0						
RPZ	**Rata Peaks**	**17.60**	**210**	P	**Pn**	**02 01 12.4**	**+0.7**
	4.3nm,0.3s,baz=78,slow=0.7,SNR=17						
RPZ				S	**S**	**02 04 14.0**	**-19**
	1.6nm,0.3s,baz=234,slow=22,SNR=3.6						
TBI	**Tubuai**	**25.29**	**84**	*e*S	**S**	**02 06 50.8**	**-5.5**
	410nm,27.2s						
TBI				*e*LR	LR	02 08 45.6	
	2µm,27.2s,baz=250						
ARMA	**Armidale**	**27.27**	**259**	*e*P	**P**	**02 02 54.8**	**+4.4**
PPT	**Papeete**	**27.53**	**72**	*e*LR	LR	02 09 42.4	
	2µm,25.8s,baz=236						
PPT	**Papeete**	**27.53**	**72**	LR	LR	02 10 44.2	
	comp=Z,885nm,19.8s,MS4.3,baz=253,slow=30						
EIDS	**Eidsvold**	**28.59**	**270**	*e*P	**P**	**02 03 03.7**	**+1.4**
	8.0nm,1.4s,mb4.3						
HNR	**Honiara**	**29.06**	**307**	LR	LR	02 11 20.4	
	comp=Z,282nm,19.2s,MS3.9,baz=177,slow=30						
CTA	**Charters Tower**	**34.48**	**276**	*e*P	**P**	**02 03 55.6**	**+1.5**
	8.2nm,0.6s,mb4.8						
CTA	**Charters Tower**	**34.48**	**276**	*e*P	**P**	**02 03 55.6**	**+1.5**
CTA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CTAO	**Charters Tower**	**34.48**	**276**	*e*P	**P**	**02 03 53.6**	**-0.5**
	comp=Z,12nm,0.7s,mb4.9						
CTAO	**Charters Tower**	**34.48**	**276**	*e*P	**P**	**02 03 53.6**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**35.70**	**255**	*e*P	**P**	**02 04 06.4**	**+1.9**
	comp=Z,8.6nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**35.70**	**255**	P	**P**	**02 04 06.5**	**+2.1**
	comp=Z,14nm,0.9s,mb4.9,baz=79,slow=8.8,SNR=16						
STKA				LR	LR	02 17 12.2	
	comp=Z,1µm,18.6s,MS4.7,baz=68,slow=34						
RKT	**Rikitea**	**38.04**	**91**	*e*S	**S**	**02 10 11.7**	**-3.1**
	comp=Z,631nm,31.6s						
RKT				*e*LR	LR	02 14 40.4	
	comp=Z,1µm,27.8s,baz=257						
COEN	**Coen**	**39.76**	**283**	*e*P	**P**	**02 04 38.6**	**-0.3**
	comp=Z,6.2nm,1.0s,mb4.3						
ASAR	**Alice Springs**	**44.10**	**265**	P	**P**	**02 05 13.8**	**-0.5**
	comp=Z,7.3nm,0.8s,mb4.5,baz=113,slow=7.8,SNR=53						
ASAR				ScP	ScP	02 10 52.0	+3.6
	comp=Z,1.0nm,0.9s,baz=116,slow=4.2,SNR=3.7						
WB2	**Warramunga Arr**	**44.94**	**270**	⇓*i*P	**P**	**02 05 21.2**	**+0.1**
WB2				*e*S	**S**	**02 11 55.6**	**-1.5**
WRA	**Warramunga Arr**	**44.95**	**270**	P	**P**	**02 05 21.4**	**+0.2**
WRA						02 07 02.8	
WRA	**Warramunga Arr**	**44.95**	**270**	P	**P**	**02 05 21.4**	**+0.2**
	comp=Z,17nm,0.9s,mb4.9,baz=107,slow=7.9,SNR=55						
WRA				PcP	PcP	02 07 02.8	+0.7
	comp=Z,7.0nm,1.0s,baz=116,slow=3.4,SNR=4.6						
WRA				LR	LR	02 22 14.4	
	comp=Z,498nm,18.3s,MS4.5,baz=105,slow=34						
FORT	**Forrest**	**47.30**	**254**	*e*P	**P**	**02 05 39.7**	**+0.2**
	comp=Z,26nm,0.6s,mb5.3						
SBA	**Scott Base**	**49.57**	**184**	*e*P	**P**	**02 06 02.4**	**+6.0**
	comp=Z,38nm,1.1s,mb5.3						
SBA	**Scott Base**	**49.57**	**184**	*e*P	**P**	**02 06 02.4**	**+6.0**
SBA				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.3						
VNDA	**Vanda**	**49.65**	**186**	P	**P**	**02 06 02.4**	**+5.4**
	comp=Z,1.9nm,0.6s,mb4.3,baz=42,slow=7.4,SNR=15						
VNDA				LR	LR	02 21 43.7	
	comp=Z,230nm,20.1s,MS4.2,baz=22,slow=30						
FITZ	**Fitzroy Crossi**	**53.27**	**268**	*e*P	**P**	**02 06 24.9**	**0.0**
	comp=Z,16nm,1.0s,mb4.9						
FITZ	**Fitzroy Crossi**	**53.27**	**268**	*e*P	**P**	**02 06 24.3**	**-0.6**
	comp=Z,33nm,1.1s,mb5.2						
KLBR	**Kellerberrin**	**55.68**	**250**	*e*P	**P**	**02 06 41.8**	**-0.4**
MBWA	**Marble Bar**	**57.28**	**262**	*e*P	**P**	**02 06 54.8**	**+1.0**
MAW	**Mawson**	**74.00**	**200**	P	**P**	**02 08 44.6**	**+3.7**
	comp=Z,8.1nm,0.7s,mb4.8,baz=137,slow=10,SNR=7.2						
MAW				LR	LR	02 41 08.1	
	comp=Z,447nm,18.3s,MS4.8,baz=321,slow=36						
MJAR	**Matsushiro Arr**	**77.55**	**324**	P	**P**	**02 09 00.4**	**-1.1**
	comp=Z,9.2nm,0.8s,mb4.7,baz=157,slow=5.7,SNR=12						
MJAR				LR	LR	02 36 05.0	
	comp=Z,302nm,20.7s,MS4.6,baz=125,slow=30						
MAT	**Matsushiro**	**77.55**	**324**	P	**P**	**02 09 00.1**	**-1.4**
SNAA	**Sanae**	**79.60**	**178**	*e*P	**P**	**02 09 20.7**	**+8.3**
SNAA				*e*		02 09 23.2	
SNAA				*e*		02 09 27.8	
SNAA				*e*		02 09 36.9	
SNAA				*e*		02 09 50.3	
VNA3	**Neumayer Olymp**	**79.71**	**176**	*e*P	**P**	**02 09 14.0**	**+1.0**
VNA3				*e*		02 09 19.4	
VNA3				*e*	pP	02 09 25.1	+1.1
VNA3				*e*		02 09 35.4	
VNA3				*e*		02 09 46.5	
VNA3				*e*		02 09 50.2	
VNA2	**Neumayer--Watz**	**80.16**	**177**	*e*P	**P**	**02 09 16.4**	**+1.0**
VNA2				*e*		02 09 21.4	
VNA2				*e*	pP	02 09 26.4	0.0
VNA2				*e*	pP	02 09 29.8	+3.4
VNA2				*e*		02 09 39.4	
VNA2				*e*		02 09 51.4	
VNA1	**Neumayer--Stat**	**80.38**	**176**	*e*P	**P**	**02 09 17.1**	**+0.5**
VNA1				*e*		02 09 21.3	
VNA1				*e*	pP	02 09 27.2	-0.4
VNA1				*e*		02 09 37.4	
VNA1				*e*		02 09 49.8	
VNA1				*e*		02 09 55.0	
QZH	**Quanzhou**	**81.85**	**304**	⇑*i*P	**P**	**02 09 25.2**	**+0.1**
KSRS	**Korea Array**	**83.81**	**319**	P	**P**	**02 09 35.4**	**+0.4**
	comp=Z,5.8nm,1.0s,mb4.7,baz=149,slow=5.9,SNR=12						
KSRS				LR	LR	02 45 14.4	
	comp=Z,151nm,18.6s,MS4.4,baz=100,slow=35						
YSS	**Yuzh-Sakhalins**	**83.82**	**334**	*e*P	**P**	**02 09 32.7**	**-2.1**
	comp=Z,22nm,0.8s,mb5.3						
YSS	**Yuzh-Sakhalins**	**83.82**	**334**	⇑*i*P	**P**	**02 09 35.0**	**+0.2**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
WDC	**Whiskeytown Da**	**85.61**	**38**	*e*P	**P**	**02 09 44.4**	**+0.4**
	comp=Z,7.2nm,1.0s,mb4.9						
WDC	**Whiskeytown Da**	**85.61**	**38**	*e*P	**P**	**02 09 44.4**	**+0.4**
WDC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
NJ2	**Nanjing**	**85.97**	**310**	*e*P	**P**	**02 09 46.3**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.5						
TPNV	**Topopah Spring**	**86.83**	**44**	*e*Pdif	**P**	**02 09 50.8**	**+0.7**
	comp=Z,7.5nm,0.9s,mb4.9						
TPNV	**Topopah Spring**	**86.83**	**44**	*e*P	**P**	**02 09 50.8**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
TUC	**Tucson**	**87.50**	**51**	*e*Pdif	**P**	**02 09 54.8**	**+1.3**
MOD	**Modoc**	**87.75**	**39**	*e*Pdif	**P**	**02 09 55.5**	**+1.1**
	comp=Z,12nm,1.8s,mb4.8						
MDJ	**Mudanjiang**	**87.92**	**325**	P	**P**	**02 09 55.1**	**-0.1**
MDJ				AP	pP	02 10 28.3	+22
MDJ				XP	sP	02 10 42.1	+32
MDJ				PP	PP	02 13 21.5	-0.6
MDJ				S	S	02 20 25.8	-10
MDJ				XS	sS	02 21 23.5	+29
MDJ				AMB	AMB		
	comp=Z,11nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,241nm,3.7s						
CN2	**Changchun**	**89.51**	**322**	*e*P	**P**	**02 10 02.2**	**-0.5**
CN2				*e*AP	pP	02 10 37.0	+23
CN2				*e*S	S	02 20 38.5	-12
CN2				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.3						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
TXAR	**Lajitas Array**	**90.84**	**57**	P	**P**	**02 10 10.1**	**+0.8**

comp=Z,0.5nm,0.7s,mb4.0,baz=209,slow=9.7,SNR=3.9
TXAR LR LR 02 46 03.8
comp=Z,208nm,19.1s,MS4.6,baz=5.0,slow=32
HAWA Hanford 91.19 36 *e*Pdif **P** **02 10 10.7 +0.3**
GYA Guiyang 91.59 299 P **P** **02 10 13.0 +0.2**
GYA AP pP 02 10 47.9 +24
GYA XP sP 02 11 01.9 +34
GYA PP PP 02 13 54.5 +2.8
GYA SKS 02 20 31.4
GYA S S 02 20 57.7 -13
GYA XS sS 02 21 57.9 +29
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,80nm,5.2s
GYA LR LR
comp=N,210nm,22.8s,MS4.8
GYA LR LR
comp=E,390nm,22.6s,MS4.8
GYA LR LR
comp=Z,370nm,21.2s,MS4.8
SRU San Rafael 91.71 46 *e*Pdif **P** **02 10 14.1 +1.1**
SPUT South Promonto 91.86 43 *e*Pdif **P** **02 10 14.7 +1.0**
ANMO Albuquerque 91.96 51 P **P** **02 10 12.7 -1.6**
HLID Hailey 92.11 40 *e*Pdif **P** **02 10 15.4 +0.6**
MA2 Magadan 92.11 344 P **P** **02 10 13.5 -0.9**
MA2 Magadan 92.11 344 *e*P **P** **02 10 13.4 -1.0**
MA2 pmax pmax
comp=Z,14nm,1.3s,mb5.1
BJI Beijing 92.50 315 P **P** **02 10 16.5 -0.2**
BJI AP pP 02 10 48.8 +21
BJI XP sP 02 11 02.8 +31
BJI S S 02 21 04.0 -14
BJI XS sS 02 22 05.8 +29
BJI AMB AMB
comp=Z,11nm,0.9s,mb5.3
BJI AMB AMB
comp=Z,73nm,4.5s
KMI Kunming 93.95 296 P **P** **02 10 24.8 +1.1**
KMI AP pP 02 10 58.7 +24
KMI XP sP 02 11 12.8 +34
KMI S S 02 21 16.7 -15
KMI SS SS 02 27 40.9 -11
KMI AMB AMB
comp=Z,8.0nm,0.7s,mb5.3
KMI AMB AMB
comp=Z,179nm,6.1s
KMI LR LR
comp=Z,125nm,17.0s,MS4.4
REDW Red Top Meadow 94.04 42 *e*Pdif **P** **02 10 24.0 +0.3**
IMW Indian Meadow 94.31 41 *e*Pdif **P** **02 10 25.1 +0.2**
PDAR Pinedale Array 94.46 43 P **P** **02 10 24.7 -0.9**
comp=Z,0.8nm,0.9s,mb4.1,baz=219,slow=3.8,SNR=5.8
PDAR PKKPbc PKKPbc 02 27 26.2 +0.5
comp=Z,0.6nm,0.7s,baz=76,slow=6.3,SNR=6.1
PDAR LR LR 02 49 08.4
comp=Z,286nm,18.4s,MS4.8,baz=154,slow=33
HHC Hu-ho-hao-te 95.85 314 *e*P **P** **02 10 31.2 -0.8**
HHC AP pP 02 11 06.9 +24
HHC XP sP 02 11 22.6 +35
HHC PP PP 02 14 27.1 +2.3
HHC SKS 02 20 52.7
HHC S S 02 21 32.0 -15
HHC XS sS 02 22 35.2 +29
HHC SS SS 02 28 10.5 -8.3
HHC AMB AMB
comp=Z,8.0nm,0.7s,mb5.3
HHC AMB AMB
comp=Z,182nm,6.0s
CD2 Chengdu 96.06 302 *e*P **P** **02 10 33.2 0.0**
CD2 XP sP 02 11 21.2 +33
CD2 PP PP 02 14 28.8 +2.2
CD2 SKS 02 20 56.3
CD2 S S 02 21 36.7 -13
CD2 XS sS 02 22 33.8 +26
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb5.2
CD2 AMB AMB
comp=Z,30nm,9.2s
COLA College 96.21 12 P **P** **02 10 30.2 -2.9**
BILL Bilibino 97.47 354 P **P** **02 10 36.6 -2.1**
BILL Bilibino 97.47 354 *e*P **P** **02 10 36.5 -2.2**
BILL pmax pmax
comp=Z,2.0nm,1.5s,mb4.3
BILL MLR MLR
comp=Z,200nm,17.0s,MS4.7
LPAZ La Paz 97.93 113 LR LR 02 47 28.0
comp=Z,51nm,19.1s,MS4.0,baz=322,slow=31
LZH Lanzhou 98.56 306 *e*P **P** **02 10 43.0 -1.4**
LZH AP pP 02 11 15.0 +19
LZH XP sP 02 11 29.5 +30
LZH AMB AMB
comp=Z,16nm,1.0s,mb5.5
LZH AMB AMB
comp=Z,79nm,4.1s
SONM Songino Array 102.64 318 P Pdif 02 11 00.9 -1.7
comp=Z,0.1nm,0.3s,baz=108,slow=3.2,SNR=2.5
YKA Yellowknife Ar 103.73 25 Pdif Pdif 02 11 09.2 +1.8
YKA PKKPbc PKKPbc 02 26 58.5 -1.5
YKA Yellowknife Ar 103.73 25 Pdiff Pdif 02 11 09.2 +1.8
comp=Z,0.1nm,0.3s,baz=267,slow=5.5,SNR=3.1
YKA PKKPbc PKKPbc 02 26 58.5 -1.5
comp=Z,0.7nm,0.8s,baz=41,slow=2.8,SNR=9.9
MDRS Chennai 107.27 276 *ex* x 02 11 51.5
MDRS *ex* x 02 16 21.5
MDRS *ex* x 02 51 04.5
LHS Liberty Hill 110.43 61 *e*PKPdf PKiKP 02 15 38.4 +0.4
WMQ Urumqi 113.01 308 PKP PKiKP 02 15 43.1 +0.5
WMQ XPKP 02 16 32.1
WMQ PP PP 02 16 35.1 +2.8
WMQ PP PP
comp=Z,187nm,5.2s
WMQ LR LR
comp=N,202nm,21.5s,MS4.9
WMQ LR LR
comp=E,262nm,24.0s,MS4.9
WMQ LR LR
comp=Z,161nm,24.8s,MS4.5
MKAR Makanchi Array 117.50 310 PKP PKPdf 02 15 50.2 -0.8
comp=Z,2.6nm,0.9s,baz=67,slow=3.2,SNR=15
NVS Novosibirsk 118.60 320 *i* PKIKP PKPdf 02 15 51.7 -1.2
BOSA Boshof 118.96 202 PKP PKPdf 02 15 56.4 +1.7
comp=Z,4.1nm,0.9s,baz=252,slow=3.8,SNR=4.1
KURK Kurchatov 120.66 314 *e*P PKPdf 02 15 56.3 -0.8
KURK Kurchatov 120.66 314 *i* PKIKP PKPdf 02 15 54.9 -2.1
UCH Uchtor 121.93 304 *e*PKPdf PKPdf 02 16 00.0 +0.2
AAK Ala-Archa 122.02 304 *e*PKP PKPdf 02 15 58.5 -1.4
AAK Ala-Archa 122.02 304 *i* PKIKP PKPdf 02 15 58.4 -1.5
AML Almayashu 122.50 304 *e*PKPdf PKPdf 02 16 01.2 +0.3
BRVK Borovoye 126.02 317 P PKPdf 02 16 06.9 -0.4
ARU Arti 132.50 322 P PKPdf 02 16 20.0 +0.5
ARU Arti 132.50 322 *i* PKIKP PKPdf 02 16 18.6 -0.9
ARU 02 18 41.2
KMBO Kilima Mbogo 135.66 234 PKP PKPdf 02 16 29.4 +2.6
ARCES ARCESS Array B 137.33 349 PKP 02 16 20.1
ARCES PKP PKPdf 02 16 28.9 +0.8
ARCES ARCESS Array B 137.33 349 PKhKP 02 16 20.1
comp=Z,2.5nm,0.9s,baz=313,slow=4.3,SNR=3.9
ARCES PKP PKPdf 02 16 28.9 +0.8
comp=Z,4.6nm,0.9s,baz=104,slow=1.5,SNR=4.4
JOF Joensuu 141.36 340 *e*pkp PKPdf 02 16 30.8 -4.9
KAF Kangasniemi 143.44 342 epkp PKPdf 02 16 34.9 -4.5
DGRG David-gareji 143.54 302 P PKPdf 02 16 38.7 -1.5
FINES FINESS Array B 144.05 341 PKP PKPdf 02 16 37.4 -3.0
FINES FINESS Array B 144.05 341 PKhKP 02 16 37.4
comp=Z,1.7nm,0.4s,baz=61,slow=3.7,SNR=23
OBN Obninsk 144.45 327 *i* PKP PKPdf 02 16 38.1 -3.2
OBN Obninsk 144.45 327 *i* PKIKP PKPdf 02 16 38.8 -2.5
OBN pmax pmax
comp=Z,19nm,1.4s
ZEI Tsey 144.45 304 *e*PKIKP PKPdf 02 16 41.0 -0.8
BHD Baghdad 144.48 288 *ex* x 02 16 40.5
ONI Oni 144.81 304 P PKPdf 02 16 41.6 -0.8
VRSR Storozhevoye 145.00 320 *e*PKIKP PKPdf 02 16 41.2 -1.2
VRSR pmax pmax
comp=Z,2.0nm,0.9s
VRSR pmax pmax
comp=N,1.0nm,1.0s
VRSR pmax pmax
comp=E,5.0nm,0.9s
DYDN Diyadin 145.01 299 *i* P PKPbc 02 16 43.2 +1.0
KIV Kislovodsk 145.10 306 *e*PKPdf PKPdf 02 16 42.6 -0.2
KIV Kislovodsk 145.10 306 *e*PKIKP PKPdf 02 16 41.5 -1.3
KIV pmax pmax
comp=Z,19nm,1.0s
HAKT HAKKARI 145.12 295 *i* P PKPbc 02 16 43.2 +0.5
DIGO Kars 145.16 300 *i* P PKPbc 02 16 42.7 0.0
TVAN Van 145.31 297 *i* P PKPbc 02 16 39.7 -3.5
MEF Metsahovi 145.53 341 PKP PKPdf 02 16 41.7 -1.4
MSL Mosul 145.64 293 *ex* x 02 16 44.5
TUTA Tutak 145.70 298 *i* P PKPdf 02 16 45.0 +1.0
ERZM Erzurum 146.75 299 *i* P PKPbc 02 16 48.0 +0.5
NB2 NORSAR Subarra 147.42 353 PKPab PKPbc 02 16 47.5 -1.2
NOA NORSAR Array B 147.42 353 PKPbc PKPbc 02 16 47.8 -1.0
comp=Z,11nm,0.9s,baz=14,slow=4.5,SNR=25
MARD Mardin 147.46 295 *i* P PKPbc 02 16 49.2 -0.5
ANN Anapa 148.51 310 *i* PKP2 PKPab 02 16 55.3 -0.4
ANN pmax pmax
comp=Z,74nm,1.4s
ELZG Elazig 148.76 297 *i* P PKPab 02 16 58.9 +2.0
MALT Malatya 149.22 297 *e*PKPbc PKPbc 02 16 55.1 +0.9
MALT Malatya 149.22 297 ⇓*i*P PKPbc 02 16 53.1 -1.1
GZT Gaziantep 150.01 295 *i* P PKPbc 02 16 56.0 -0.2
AKASG Malin Array Be 150.63 325 PKPbc PKPbc 02 16 55.9 -1.4
comp=Z,26nm,0.9s,baz=47,slow=2.3,SNR=15
AKASG PKPab PKPab 02 17 03.9 -0.3
comp=Z,10nm,0.6s,baz=43,slow=3.0,SNR=14
KIEV Kiev 150.65 325 *e*PKPbc PKPbc 02 16 56.3 -0.9
SIM Simferopol' 150.67 312 *i* PKIKP PKPbc 02 16 57.9 +0.4
SIM *e* 02 17 09.0
SIM pmax pmax
comp=Z,16nm,0.9s
SUW Suwalki 150.94 335 *e*PKP PKPbc 02 16 57.4 -0.4
COBT Iskenderun 151.13 294 *i* P PKPbc 02 16 58.8 0.0
BOYT Boyabat 151.28 304 *i* P PKPbc 02 16 59.9 +0.9
CTKT Corum 151.56 303 *i* P PKPbc 02 17 01.9 +2.2
AVNT Avonos 151.91 299 *i* P PKPbc 02 17 01.1 +0.5
BALT Daday 152.34 305 *i* P PKPbc 02 17 01.2 -0.2
ELDT Eldivan 152.60 303 *i* P PKPab 02 17 10.2 -2.6
BRTR Keskin Array B 152.63 301 PKPbc PKPbc 02 17 02.1 0.0
comp=Z,3.4nm,0.9s,baz=100,slow=3.0,SNR=15
BRTR PKPab PKPab 02 17 11.0 -1.9
comp=Z,7.9nm,0.8s,baz=110,slow=3.5,SNR=13
ANTO Ankara 153.23 302 *e*PKPdf PKPdf 02 16 55.7 -0.3
ANTO Ankara 153.23 302 ⇓*i*P PKPbc 02 17 03.9 +0.4
KWP Kalwaria 154.46 329 *e*PKP PKPbc 02 17 06.1 +0.3
UZH Uzhgorod 155.37 328 *e*PKIKP PKPdf 02 17 08.3 +10
UZH *e* 02 17 23.5
ISP Isparta 155.45 298 *e*PKPbc PKPdf 02 17 06.7 +7.6
KSP Ksiaz 155.93 339 *e*PKP pPKPdf 02 17 15.9 +5.0
OKC Ostrava-Krasne 156.15 335 *e*PKPab PKPab 02 17 33.6 +6.2
UPC Upice 156.31 339 *e*PKPab PKPab 02 17 27.7 -0.4
UPC *ep*PKP pPKPab 02 17 39.5 +0.2
DPC Dobruska-Polom 156.35 338 *e*PKPab PKPab 02 17 27.6 -0.6
DPC *ep*PKP pPKPab 02 17 36.2 -3.2
CLL Collm 156.42 344 *i* PKP PKPdf 02 17 09.3 +9.3
CLL ⇓*i*PKP PKPab 02 17 27.1 -1.4
CLL *e* 02 44.0
CLL Collm 156.42 344 *i* PKIKP PKPdf 02 17 09.3 +9.3
CLL *i* 02 17 27.1
CLL Collm 156.42 344 *i* PKPdif PKPdf 02 17 09.3 +9.3
comp=Z,5.0nm,1.2s
CLL *i* x x 02 17 22.2
CLL ⇓*i*PKPab PKPab 02 17 27.1 -1.4
comp=Z,6.0nm,0.9s
CLL *ex* x 02 17 44.0
DRGR 156.45 325 ⇓*i*P PKPab 02 17 28.7 -0.1
BRG Berggiesshubel 156.58 342 *e*PKP2 PKPab 02 17 27.8 -1.4
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,1.4s
BRG Berggiesshubel 156.58 342 *e*PKP PKPab 02 17 27.8 -1.4
comp=Z,8.7nm,1.1s
BRG *e* 02 17 35.3
comp=Z,8.7nm,1.4s
PSZ Piszkesteto 156.97 330 ⇓*i*P PKPab 02 17 30.3 -0.7
PRU Pruhonice 157.21 341 *e*PKPab PKPab 02 17 31.4 -0.6
PRU *ep*PKP pPKPab 02 17 38.1 -5.1
NKC Novy Kostel 157.55 344 *e*PKPab PKPab 02 17 32.5 -0.9
BZS Buzias 157.80 324 ⇑*i*P PKPab 02 17 41.3 +6.6
KHC Kasperske Hory 158.26 341 *e*PKPab PKPab 02 17 35.9 -0.6
KHC *ep*PKP pPKPab 02 17 44.8 -2.9
GERES GERESS Array B 158.48 340 PKP PKPdf 02 17 01.6 -1.0
comp=Z,0.1nm,0.3s,baz=148,slow=4.4,SNR=2.3
GERES PKPab PKPab 02 17 35.4 -2.1
comp=Z,0.9nm,0.9s,baz=46,slow=5.8,SNR=4.7
BAIF Baives 158.87 358 *e*PKP2 PKPab 02 17 37.5 -1.6
FLN La Foliniere 160.01 7 *e*PKP2 PKPab 02 17 41.4 -2.7
HAU Haudompre 160.78 353 *e*PKP2 PKPab 02 17 44.7 -2.7
SSF Saint Saulge 161.89 359 *e*PKP2 PKPab 02 17 49.4 -2.9
comp=Z,13nm,1.1s
MFF Saint Martin d 162.18 7 *e*PKP2 PKPab 02 17 51.5 -2.1
comp=Z,22nm,1.1s
CABF La Chapelle 162.18 353 *e*PKP2 PKPab 02 17 51.9 -1.7
SMF Signal de Mont 162.30 358 *e*PKP2 PKPab 02 17 51.7 -2.4
comp=Z,15nm,1.1s
BGF Bois d'Agland 162.40 0 *e*PKP2 PKPab 02 17 51.5 -3.1
comp=Z,7.0nm,0.8s
TCF Toulx Ste Croi 162.66 2 *e*PKP2 PKPab 02 17 53.9 -1.8
TORD Torodi Ar. Bea 164.25 175 PKP PKPdf 02 17 09.4 -0.4
comp=Z,1.3nm,1.0s,baz=154,slow=1.6,SNR=5.8
TORD PKPab PKPab 02 18 05.1 +1.6
comp=Z,4.1nm,1.0s,baz=189,slow=3.2,SNR=8.0
ESDC Sonseca Array 167.83 26 PKPab PKPab 02 18 17.5 -1.2
comp=Z,1.5nm,1.0s,baz=322,slow=3.9,SNR=4.9

*NEIC **12** 02:09:49.5, 3228S×71.16W, h50km, MD3.5(GUC), After GUC.*
GUC 12 02:09:49.5±0.8, 3228S×7116W, h50km±95km, MD3.5, ML2.7, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PEL	**Peldehue**	**0.95**	**155**	⇑*i*P	Pn	02 10 07.6	+1.0
PEL				*i* S	Sn	02 10 20.5	+1.4
PEL				AML	AML	02 10 22.2	
	comp=E,306nm,0.2s						
FCH	**Farellones**	**1.28**	**145**	⇓*i*P	Pn	02 10 11.8	+0.8
FCH				*i* S	Sn	02 10 29.2	+2.2
FCH				AML	AML	02 10 31.1	
	comp=E,167nm,0.2s						
ANTU	**Antumapu**	**1.36**	**161**	*i* S	Sn	02 10 30.1	+1.0
ANTU				AML	AML	02 10 30.6	
	comp=E,216nm,0.5s						
TACH	**Talagante**	**1.39**	**172**	⇑*i*P	Pn	02 10 13.3	+0.9
TACH				*i* S	Sn	02 10 30.7	+1.1
PCH	**Pirque**	**1.45**	**158**	⇓*i*P	Pn	02 10 13.3	0.0
PCH				*i* S	Sn	02 10 32.1	+1.0
LNV	**Longovilo**	**1.69**	**187**	⇓*i*P	Pn	02 10 16.7	+0.1
CHCH	**Chadas Angostu**	**1.71**	**166**	*e*P	Pn	02 10 17.8	+1.0
CHCH				*i* S	Sn	02 10 39.1	+1.6
LMEL	**Las Melosas**	**1.76**	**153**	⇑*i*P	Pn	02 10 18.6	+1.1
LMEL				*i* S	Sn	02 10 40.6	+1.8
LMEL	**Las Melosas**	**1.76**	**153**	⇑*i*P	Pn	02 10 18.6	+1.1
LMEL				*i* S	Sn	02 10 40.6	+1.8
LMEL				AML	AML	02 10 41.9	
	comp=N,201nm,0.2s						
CICH	**Cipreses**	**2.13**	**163**	*e*P	Pn	02 10 23.5	+0.9
CICH				*i* S	Sn	02 10 49.6	+1.8
SFDO	**San Fernando**	**2.33**	**177**	*e*P	Pn	02 10 25.7	+0.3

*DHMR **12** 02:10:27.7±1.3, 1477N×51.19E, h10km, ML3.6*
CSEM 12 02:10:19.0±1.9, 1510N×5165E, h15km, ML3.6, 3C-2D, Error ellipse: s-maj=148.0km s-min=11.0km az=147.0, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUKL	**Al Mukalla**	**2.60**	**257**	⇓*i*P	Pn	02 11 03.4	+2.9
MUKL				AML	AML	02 11 03.9	
	comp=Z,582nm,0.2s						
MUKL				*i* S	Sn	02 11 33.3	+1.4
ABTO	**Aybut** SNR=46	**2.74**	**35**	⇑P	Pn	02 11 04.0	+1.5
RBK	**Rabkut** SNR=23	**3.42**	**45**	⇓P	Pn	02 11 12.4	+0.5
WHFO	**Wadi Hawf** SNR=12	**3.46**	**36**	⇑P	Pn	02 11 14.1	+1.6
BDHA	**Al Bayda'**	**6.00**	**260**	*i* P	Pn	02 11 52.5	+5.2
LBOS		**6.32**	**260**	⇑*i*P	Pn	02 11 56.6	+4.9

IDC 12 02:11:05.8±1.5, 2865S×17683W, h0km, mb3.4/2, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=45.8km s-min=41.4km az=125.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**10.83**	**206**	Pn	Pn	02 13 41.4	-0.7
	0.3nm,0.3s,baz=111,slow=8.7,SNR=2.2						
URZ				Sn	Sn	02 15 37.0	-7.0
	1.3nm,0.3s,baz=240,slow=16,SNR=9.2						
ASAR	**Alice Springs**	**44.25**	**265**	P	P	02 19 17.8	+0.6
	0.5nm,0.7s,baz=99,slow=7.0,SNR=3.2						
WRA	**Warramunga Arr**	**45.09**	**270**	P	P	02 19 23.5	-0.4
	0.4nm,0.5s,baz=108,slow=7.8,SNR=4.9						
FINES	**FINESS Array B**	**143.84**	**342**	PKhKP		02 30 39.7	
	0.9nm,0.7s,baz=84,slow=4.3,SNR=2.8						
NOA	**NORSAR Array B**	**147.17**	**353**	PKPbc	PKPbc	02 30 49.5	-0.7
	0.9nm,0.6s,baz=14,slow=4.5,SNR=3.5						
AKASG	**Malin Array Be**	**150.49**	**325**	PKPbc	PKPbc	02 30 58.8	-0.2
	0.8nm,0.6s,baz=37,slow=2.2,SNR=5.8						
TORD	**Torodi Ar. Bea**	**164.51**	**175**	PKPab	PKPab	02 32 06.3	-0.4
	0.3nm,1.0s,baz=171,slow=10,SNR=2.4						

IDC 12 02:38:21.0±8.3, 257S×14098E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/12, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=321.8km s-min=30.8km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.45**	**200**	P	Pn	02 42 37.6	-0.7
	0.2nm,0.3s,baz=21,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**22.06**	**198**	P	P	02 43 18.1	+0.5
	1.2nm,0.7s,baz=27,slow=11,SNR=13						
MKAR	**Makanchi Array**	**71.08**	**322**	P	P	02 49 41.2	+0.1
	0.2nm,0.2s,baz=125,slow=5.8,SNR=5.0						

IDC 12 02:39:35.9±2.0, 2691S×17706W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.7/12, mbtmp3.6/2, MS3.8/1, Ms1 3.8/1, ms1mx3.2/15, Error ellipse: s-maj=76.8km s-min=45.6km az=14.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBI	**Tubuai**	**25.22**	**88**	*e*LR	LR	02 51 22.9	
	106nm,28.5s						
PPT	**Papeete**	**27.03**	**76**	*e*LR	LR	02 52 07.6	
	118nm,25.5s						
PPT	**Papeete**	**27.03**	**76**	LR	LR	02 54 21.3	
	comp=Z,182nm,19.7s,baz=136,slow=33						
ASAR	**Alice Springs**	**44.24**	**263**	P	P	02 47 48.1	+0.9
	0.5nm,0.5s,baz=98,slow=7.3,SNR=11						
WRA	**Warramunga Arr**	**44.92**	**268**	P	P	02 47 51.5	-1.2
	0.4nm,0.4s,baz=110,slow=7.9,SNR=5.9						
AKASG	**Malin Array Be**	**148.93**	**327**	PKPbc	PKPbc	02 59 24.6	-0.7
	0.3nm,0.6s,baz=42,slow=2.5,SNR=4.9						
TORD	**Torodi Ar. Bea**	**166.26**	**175**	PKPab	PKPab	03 00 44.3	-0.2
	0.3nm,0.5s,baz=170,slow=2.8,SNR=7.3						

JMA 12 02:57:58.9±0.4, 4367N×14803E, h20km, M3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.69**	**260**	P	Pn	02 58 28.2	+0.9
NEM2				*e*S	Sn	02 58 48.8	+0.5
JRA	**Rausu**	**2.12**	**278**	P	Pn	02 58 34.1	+0.9
JRA				*e*S	Sn	02 59 00.1	+1.2
JNK	**Nakash**	**2.41**	**269**	P	Pn	02 59 38.2	+1.1
JNK				*e*S	Sn	02 59 07.4	+1.5
JTKR	**Abashiri--Toko**	**3.00**	**277**	P	Pn	02 58 46.9	+1.7

IDC 12 03:02:28.1±7.1, 147S×9937E, h55km±49km, mb3.1/4, mb1 3.3/5, mb1mx3.1/20, mbtmp3.2/5, ML3.7/1, Error ellipse: s-maj=113.6km s-min=21.0km az=62.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.26**	**354**	P	Pn	03 03 29.6	-0.9
	4.6nm,0.3s,baz=144,slow=14,SNR=14						
PSI				S	Sn	03 04 17.1	-2.0
	3.9nm,0.3s,baz=204,slow=2.4,SNR=4.7						
WRA	**Warramunga Arr**	**38.80**	**121**	P	P	03 09 46.6	-1.2
	0.3nm,0.6s,baz=297,slow=8.3,SNR=6.1						
ASAR	**Alice Springs**	**40.07**	**126**	P	P	03 09 59.3	+0.9
	0.4nm,0.5s,baz=303,slow=8.3,SNR=5.6						
SONM	**Songino Array**	**49.48**	**6**	P	P	03 11 13.5	+0.7
	0.3nm,0.6s,baz=208,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**50.35**	**345**	P	P	03 11 18.9	-0.6
	0.2nm,0.4s,baz=150,slow=6.1,SNR=3.3						

*ISCJB **12** 03:29:11.8±0.5, 3842N×004×3936E×004, h5km, Error ellipse: s-maj=5.6km s-min=4.6km az=17.8*
*CSEM **12** 03:29:11.7±0.2, 3847N×3931E, h5km, MD3.0, Error ellipse: s-maj=6.3km s-min=2.7km az=119.0*
*ISK **12** 03:29:11.2, 3846N×3929E, h2km, MD3.0*
*DDA **12** 03:29:13.2, 3850N×3931E, h24km±3km, Md2.6*
ISC 12 03:29:12.3±0.8, 3843N±004×3936E±005, h6km±9km, n11, σ0s79/16, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.30**	**283**	*i* P	**Pg**	**03 29 18.1**	**-0.1**
ELZG				*i* S	**Sg**	**03 29 24.2**	**+2.0**
PTK	**Pertek**	**0.46**	**3**	PG	**Pg**	**03 29 20.5**	**-0.7**
PTK				SG	**Sg**	**03 29 27.9**	**+0.6**
MALT	**Malatya**	**0.74**	**261**	PG	**Pg**	**03 29 24.8**	**-1.8**
MALT				SG	**Sg**	**03 29 35.8**	**-0.4**
MYA	**Malataya**	**0.74**	**262**	PG	**Pg**	**03 29 25.9**	**-0.7**
DIY	**Diyarbakir**	**0.86**	**128**	PG	**Pg**	**03 29 29.4**	**+0.5**
URFA	**Urfa**	**1.07**	**204**	PG	**Pg**	**03 29 33.2**	**+0.3**
EZC	**Erzincan**	**1.36**	**15**	PN	**Pn**	**03 29 37.3**	**-0.5**
MARD	**Mardin**	**1.58**	**134**	*i* P	**Pn**	**03 29 41.0**	**+0.2**
MARD				*i* S	**Sn**	**03 30 01.6**	**+0.1**
BTMT	**Batman**	**1.69**	**97**	PN	**Pn**	**03 29 42.1**	**-0.2**
GZT	**Gaziantep**	**1.78**	**234**	*i* P	**Pn**	**03 29 43.5**	**0.0**
GZT				*i* S	**Sn**	**03 30 11.7**	**+5.3**
KMRS	**Kahramanmaras**	**2.15**	**245**	*e*PN	**Pn**	**03 29 49.5**	**+0.8**

IDC 12 04:03:53.7±27.0, 471S×12804E, h550km±134km, mb2.9/1, mb1 2.8/4, mb1mx2.6/17, mbtmp2.7/4, Error ellipse: s-maj=363.6km s-min=126.0km az=164.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.52**	**190**	P	P	04 06 48.5	+0.7
	0.4nm,0.3s,baz=4.8,slow=13,SNR=9.3						
WRA	**Warramunga Arr**	**16.34**	**158**	P	P	04 07 17.3	+1.0
	0.1nm,0.3s,baz=336,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**19.68**	**164**	P	P	04 07 47.4	+0.5
	0.1nm,0.3s,baz=340,slow=7.1,SNR=6.1						
STKA	**Stephens Creek**	**29.87**	**156**	P	P	04 09 15.8	-1.1
	1.7nm,0.8s,baz=342,slow=6.4,SNR=2.4						

IDC 12 04:04:09.8±5.5, 552S×14729E, h212km±56km, mb3.2/2, mb1 3.3/4, mb1mx3.0/14, mbtmp3.1/4, Error ellipse: s-maj=86.2km s-min=41.5km az=133.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.86**	**182**	P	Pn	04 05 11.6	+1.3
	1.5nm,0.3s,baz=284,slow=10,SNR=6.6						
PMG				S	S	04 05 57.9	-0.2
	6.2nm,0.3s,baz=227,slow=21,SNR=10						
WRA	**Warramunga Arr**	**19.08**	**220**	P	P	04 08 16.6	0.0
	0.3nm,0.3s,baz=38,slow=11,SNR=10						
ASAR	**Alice Springs**	**22.17**	**214**	P	P	04 08 49.4	+0.7
	0.4nm,0.5s,baz=49,slow=8.4,SNR=5.0						
FITZ	**Fitzroy Crossi**	**24.56**	**238**	P	P	04 09 10.5	0.0
	2.8nm,0.4s,baz=53,slow=14,SNR=20						
TORD	**Torodi Ar. Bea**	**145.25**	**285**	PKPbc	PKPbc	04 23 22.2	-1.2
	0.2nm,0.4s,baz=81,slow=3.4,SNR=7.1						

*MOS **12** 04:18:35.2±1.4, 5600N×16477E, h40km, mb4.3/1, Error ellipse: s-maj=37.8km s-min=24.1km az=138.3*
KRSC 12 04:18:35.2±0.6, 5600N×16477E, h40km±40km, ML4.1,

Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.11	282	eP	Pn	04 18 53.7	-0.5
KBTR				iS	Sn	04 19 07.5	-0.8
SMKR	Semkarok	1.93	289	eP	Pn	04 19 07.2	+1.7
SMKR				iS	Sn	04 19 30.5	+2.0
BDR	Baidarnaya	2.07	287	eP	Pn	04 19 09.3	+2.0
BDR				iS	Sn	04 19 34.5	+2.7
SRKR	Sorokina	2.11	290	eP	Pn	04 19 09.8	+1.9
SRKR				iS	Sn	04 19 34.5	+1.6
ZLN	Zelenaya	2.23	272	eP	Pn	04 19 12.2	+2.7
KLY	Klyuchi	2.33	279	eP	Pn	04 19 11.5	+0.6
KLY				iS	Sn	04 19 38.7	+0.5
KRSR	Krestovskiy	2.37	277	eP	Pn	04 19 14.6	+3.2
BZMR	Bezymyannaya	2.41	270	eP	Pn	04 19 14.9	+2.9
KIRR	Kirishev	2.49	271	eP	Pn	04 19 16.2	+3.1
KIRR				iS	Sn	04 19 46.4	+4.2
KPT	Kopyto	2.56	271	eP	Pn	04 19 17.1	+3.1
KPT				eS	Sn	04 19 47.2	+3.3
KMNR	Kamenistaya	2.57	266	eP	Pn	04 19 17.8	+3.6
TUMR	Tumrok	2.72	257	eP	Pn	04 19 19.6	+3.3
TUMR				iS	Sn	04 19 52.0	+4.1
KOZR	Kozyr	2.74	273	PN	Pn	04 19 20.3	+3.8
KOZR				S	Sn	04 19 52.9	+4.6
KOZ	Kozyrevsk	2.75	273	eP	Pn	04 19 20.3	+3.6
KOZ				eS	Sn	04 19 52.9	+4.3
SRDR	Sredinnyy	2.84	279	eP	Pn	04 19 20.9	+2.9
SRDR				iS	Sn	04 19 54.5	+3.5
SPN	Mys Shipunski	4.01	226	P	Pn	04 19 35.6	+1.6
SPN				iS	Sn	04 20 19.2	-0.5
NLC	Nalytchevo	4.24	230	eP	Pn	04 19 40.3	+3.1
NLC				iS	Sn	04 20 26.3	+0.9
AVH	Avacha	4.45	234	eP	Pn	04 19 43.7	+3.7
AVH				iS	Sn	04 20 33.6	+3.1
GNL	Ganaly	4.57	242	eP	Pn	04 19 45.9	+4.2
PET	Petropavlovsk	4.65	233	ePN	Pn	04 19 45.9	+3.1
PET				eS	Sn	04 20 37.9	+2.5
PET				smax			
	comp=N,49nm,0.7s						
PET				smax			
	comp=E,85nm,0.8s						

MAN 12 04:28:14,1648N×12032E,h11km,mb3.7,ML2.4,MS1.9, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.27	111	⇓iP	Pg	04 28 21.3	+1.7
BCPH				iS	Sg	04 28 26.2	+2.9
BOLP	Bolinao	0.40	256	eP	Pg	04 28 23.1	+1.2
BOLP				eS	Sg	04 28 31.2	+4.0
BALP	Baler	1.42	121	eP	Pn	04 28 39.5	-0.1
BALP				eS	Sn	04 28 59.0	+0.7

IDC 12 04:41:42.5±3.2,255S×14062E,h0km,mb3.7/3,mb1 4.0/4, mb1mx3.7/12,mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=109.7km s-min=25.8km az=94.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	Warramunga Arr	18.34	199	eP	Pn	04 45 57.7	-0.8
WRA	Warramunga Arr	18.35	199	P	Pn	04 45 57.5	-1.1
	0.4nm,0.3s,baz=19,slow=12,SNR=15						
FITZ	Fitzroy Crossi	21.33	223	P	P	04 46 31.6	+0.3
	3.2nm,0.9s,baz=54,slow=14,SNR=3.9						
ASAR	Alice Springs	21.98	197	P	P	04 46 38.5	+0.3
	2.4nm,0.6s,baz=30,slow=11,SNR=20						
MKAR	Makanchi Array	70.83	322	P	P	04 53 01.1	0.0
	0.4nm,0.3s,baz=106,slow=8.5,SNR=9.4						
DBIC	Dimbokro	145.36	278	PKPbc	PKPbc	05 01 22.8	-0.6
	1.5nm,0.5s,baz=90,slow=5.1,SNR=4.6						

IDC 12 04:45:14.2±2.8,660S×13257E,h0km,mb3.4/1,mb1 3.7/4, mb1mx3.6/12,mbtmp3.5/4,ML3.4/1,Error ellipse: s-maj=110.7km s-min=29.5km az=82.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.28	210	Pn	Pn	04 48 23.3	-0.9
	0.2nm,0.3s,baz=46,slow=15,SNR=10						
FITZ				Sn	Sn	04 50 43.5	-9.2
	0.4nm,0.3s,baz=125,slow=14,SNR=5.1						
WRA	Warramunga Arr	13.37	173	Pn	Pn	04 48 26.0	+0.6
	0.3nm,0.3s,baz=357,slow=13,SNR=8.0						
WRA				Sn	Sn	04 50 50.1	-4.8
	0.2nm,0.3s,baz=358,slow=23,SNR=3.8						
ASAR	Alice Springs	17.02	176	P	Pn	04 49 14.1	+0.3
	0.1nm,0.3s,baz=0.0,slow=12,SNR=4.5						
ASAR				S	Sn	04 52 31.1	+7.4
	0.1nm,0.3s,baz=2.2,slow=27,SNR=3.7						
MKAR	Makanchi Array	69.32	326	P	P	04 56 23.6	+0.1
	0.1nm,0.3s,baz=108,slow=8.2,SNR=2.4						

IDC 12 04:51:34.0±15.0,2212N×14352E,h227km±155km, mb3.2/7,mb1 3.4/7,mb1mx3.2/19,mbtmp3.2/7,Error ellipse: s-maj=47.1km s-min=20.0km az=71.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	39.21	320	P	P	04 58 40.0	-0.1
	0.3nm,0.4s,baz=134,slow=8.1,SNR=6.9						
WRA	Warramunga Arr	42.76	193	P	P	04 59 09.1	-0.1
	0.5nm,0.7s,baz=9.3,slow=8.5,SNR=23						
MKAR	Makanchi Array	54.64	312	P	P	05 00 40.1	+0.8
	0.2nm,0.3s,baz=85,slow=8.3,SNR=3.6						
YKA	Yellowknife Ar	75.94	28	P	P	05 02 55.1	-0.3
	0.3nm,0.4s,baz=292,slow=5.8,SNR=6.5						
ARCES	ARCESS Array B	78.62	342	P	P	05 03 10.1	-0.1
	3.0nm,0.8s,baz=76,slow=7.5,SNR=4.5						
NVAR	Mina Array Bea	82.64	52	P	P	05 03 33.1	+1.0
	0.3nm,0.5s,baz=290,slow=3.7,SNR=4.7						
FINES	FINESS Array B	82.93	335	P	P	05 03 32.9	-0.3
	0.4nm,0.3s,baz=68,slow=3.6,SNR=6.1						

IDC 12 04:53:14.0±3.0,541N×9308E,h0km,mb3.6/4,mb1 3.7/5, mb1mx3.5/22,mbtmp3.6/5,ML3.1/1,Error ellipse: s-maj=104.8km s-min=22.5km az=59.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	6.38	114	Pn	Pn	04 54 50.7	+1.5
	0.4nm,0.3s,baz=299,slow=10,SNR=2.8						
MKAR	Makanchi Array	42.27	349	P	P	05 01 09.3	+0.2
	0.8nm,0.4s,baz=172,slow=8.7,SNR=11						
SONM	Songino Array	43.78	13	P	P	05 01 21.2	-0.2
	0.7nm,0.8s,baz=194,slow=6.7,SNR=7.6						
WRA	Warramunga Arr	47.75	123	P	P	05 01 53.1	-0.1
	0.9nm,0.9s,baz=301,slow=9.4,SNR=5.2						
ASAR	Alice Springs	49.20	128	P	P	05 02 04.1	-0.2
	0.3nm,0.7s,baz=300,slow=7.4,SNR=4.0						

KRSC 12 05:22:59.6±0.6,5515N×16202E,h33km±32km,ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMR	Tumrok	1.08	278	eP	Pn	05 23 20.1	+1.7
TUMR				iS	Sn	05 23 34.3	+2.1
ZLN	Zelenaya	1.11	322	eP	Pn	05 23 20.7	+1.9
ZLN				iS	Sn	05 23 35.7	+2.8
KBTR	Krutoberegovo	1.15	23	eP	Pn	05 23 21.7	+2.3
KBTR				iS	Sn	05 23 38.0	+4.0
BZMR	Bezymyannaya	1.17	313	eP	Pn	05 23 21.2	+1.6
BZMR				iS	Sn	05 23 36.2	+1.7
KMNR	Kamenistaya	1.18	302	eP	Pn	05 23 21.3	+1.5
KMNR				iS	Sn	05 23 36.6	+1.9
CIRR	Tsirk	1.21	324	eP	Pn	05 23 22.0	+1.9
CIRR				iS	Sn	05 23 38.0	+2.7
KIRR	Kirishev	1.25	311	eP	Pn	05 23 22.6	+1.9
KIRR				iS	Sn	05 23 38.6	+2.3
KPT	Kopyto	1.31	309	eP	Pn	05 23 23.2	+1.7
KRSR	Krestovskiy	1.35	323	eP	Pn	05 23 23.6	+1.5
KRSR				iS	Sn	05 23 40.5	+1.7
KLY	Klyuchi	1.40	327	eP	Pn	05 23 23.4	+0.7
KLY				iS	Sn	05 23 40.7	+0.7
SMKR	Semkarok	1.47	348	eP	Pn	05 23 26.0	+2.3
SMKR				iS	Sn	05 23 45.0	+3.2
BDR	Baidarnaya	1.49	342	eP	Pn	05 23 26.3	+2.3
BDR				iS	Sn	05 23 46.2	+3.8
KOZ	Kozyrevsk	1.52	308	eP	Pn	05 23 26.1	+1.7
KOZ				iS	Sn	05 23 45.2	+2.2
SRKR	Sorokina	1.58	343	eP	Pn	05 23 27.3	+2.0
SRKR				iS	Sn	05 23 47.6	+3.0
SRDR	Sredinnyy	1.75	313	eP	Pn	05 23 28.9	+1.3
SRDR				iS	Sn	05 23 49.8	+1.1
SPN	Mys Shipunski	2.37	211	eP	Pn	05 23 37.6	+1.5
SPN				iS	Sn	05 24 05.3	+1.4
NLC	Nalytchevo	2.53	220	eP	Pn	05 23 40.3	+2.0
NLC				iS	Sn	05 24 09.9	+2.0
AVH	Avacha	2.70	227	eP	Pn	05 23 43.4	+2.8
AVH				iS	Sn	05 24 16.2	+4.1
GNL	Ganaly	2.79	240	eP	Pn	05 23 44.3	+2.4
PET	Petropavlovsk	2.91	224	eP	Pn	05 23 45.9	+2.4
PET				iS	Sn	05 24 20.1	+2.8
RUS	Russkaya	3.43	219	eP	Pn	05 23 53.7	+3.1
RUS				iS	Sn	05 24 33.7	+3.7
GRL	Gorelyy	3.50	224	eP	Pn	05 23 55.2	+3.6
GRL				iS	Sn	05 24 36.2	+4.4

ISCJB 12 05:23:49.3±0.5,3649N±002×3586E±004,h7km±4km, Error ellipse: s-maj=5.2km s-min=3.7km az=169.4
CSEM 12 05:23:49.4±0.1,3644N×3573E,h16km±1km,MD3.4,Error ellipse: s-maj=3.0km s-min=1.7km az=72.0
DDA 12 05:23:49.1,3636N×3598E,h7km±1km,Md3.4
ISK 12 05:23:49.6,3640N×3574E,h24km,MD3.4
NSSC 12 05:23:50.3,3648N×3597E,h10km±2km
ISC 12 05:23:49.8±0.5,3648N±002×3586E±004,h7km±4km,n28, σ1s10/43,3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COBT	Iskenderun	0.32	83	iP	Pg	05 23 54.8	-1.3
COBT				iS	Sg	05 23 58.9	-1.5
KRTS	Karatas	0.40	284	PG	Pg	05 23 57.7	+0.2
HTY	Hatay	0.42	148	PG	Pg	05 23 59.2	+1.2
CEYT	Ceyhan	0.54	351	PG	Pg	05 24 01.3	+1.1
CEYT				SG	Sg	05 24 12.3	+5.1
ARNB	Al Arnab	0.62	171	⇑P	Pg	05 24 02.9	+1.1
ARNB				⇓S	Sg	05 24 11.1	+1.1
BTCH	Batrach	0.66	132	⇑P	Pg	05 24 02.2	-0.3
BTCH				⇑S	Sg	05 24 11.3	+0.3
BTCH	Batrach	0.66	132	⇑iP	Pg	05 24 02.2	-0.2
BTCH				⇑iS	Sg	05 24 11.3	+0.3
DRWC	Darouich	0.67	78	⇑P	Pg	05 24 01.3	-1.4
DRWC				⇑S	Sg	05 24 10.1	-1.2
DRWC	Darouich	0.67	78	⇑iP	Pg	05 24 01.3	-1.3
SLNF	Slenfeh	0.93	161	⇑P	Pg	05 24 07.0	-0.7
SLNF				⇑S	Sg	05 24 20.4	+0.7
SLNF	Slenfeh	0.93	161	⇑iP	Pg	05 24 07.0	-0.7
SLNF				⇑iS	Sg	05 24 20.4	+0.6
KOZT	Kozan	1.00	359	PG	Pg	05 24 08.7	-0.3
KARA	Karaisali	1.01	321	ePG	Pg	05 24 08.7	-0.5
WRDH	Warideh	1.07	155	⇓P	Pg	05 24 09.7	-0.6
WRDH				⇑S	Sg	05 24 24.2	0.0
WRDH	Warideh	1.07	155	⇓iP	Pg	05 24 09.7	-0.6
WRDH				⇑iS	Sg	05 24 24.2	0.0
MERS	Mersin	1.14	290	ePN	Pn	05 24 08.8	-3.3
ANDN	Andirin	1.17	19	iP	Pg	05 24 12.6	+0.4
ANDN				iS	Sg	05 24 30.7	+3.4
GAZ	Gaziantep	1.29	57	ePN	Pn	05 24 14.0	-0.1
KMRS	Kahramanmaras	1.32	39	ePN	Pn	05 24 14.3	-0.3
KMRS				eSN	Sn	05 24 30.1	-2.3
BIDA	Albida	1.51	165	⇑P	Pn	05 24 16.4	-0.8
BIDA				⇑S	Sn	05 24 36.6	-0.5
BIDA	Albida	1.51	165	⇑iP	Pn	05 24 16.4	-0.8
BIDA				⇑iS	Sn	05 24 36.6	-0.5
GZT	Gaziantep	1.62	57	iP	Pn	05 24 19.6	+0.8
GZT				iS	Sn	05 24 40.8	+0.9
IKL	Isikli	1.77	263	ePN	Pn	05 24 18.8	-1.9
NIG	Nigde	1.91	329	ePN	Pn	05 24 22.2	-0.4
BNN	Bunyan	2.37	360	ePN	Pn	05 24 29.8	+0.8
URFA	Urfa	2.56	67	ePN	Pn	05 24 33.2	+1.6
MALT	Malatya	2.75	47	ePN	Pn	05 24 35.9	+1.7
MYA	Malataya	2.75	47	ePN	Pn	05 24 35.8	+1.5

MOS 12 05:29:32.5±1.0,1496S×17431W,h33km,mb5.0/5,Error ellipse: s-maj=18.4km s-min=14.0km az=56.0
BJI 12 05:29:35.5,15.10S×174.10W,h99km,mB5.4,mb4.9
ISCJB 12 05:29:39.0±1.6,15.11S±008×17428W±008,h92km±13km, mb4.6/33,Error ellipse: s-maj=16.7km s-min=8.1km az=137.9
IDC 12 05:29:41.6±2.3,1529S×17394W,h102km±20km,mb4.3/13, mb1 4.5/15,mb1mx4.3/20,mbtmp4.3/15,MS3.5/4, Ms1 3.5/4,ms1mx3.2/22,Error ellipse: s-maj=24.8km s-min=11.2km az=136.0
NEIC 12 05:29:41.6±1.4,15.15S×17406W,h99km±12km,mb4.5/12, Error ellipse: s-maj=16.7km s-min=7.9km az=137.0
ISC 12 05:29:40.7±1.4,1512S±008×17425W±007,h90km±12km, n302,σ0s58/284,mb4.6/33,60C-63D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.67	64	⇓iPn	Pn	05 30 20.9	-1.0
AFI				eSn	Sn	05 30 46.5	-7.0
AFI	Afiamalu	2.67	64	P	Pn	05 30 21.0	-0.8
	393nm,0.3s,baz=44,slow=2.8,SNR=556						
AFI				S	Sn	05 30 48.3	-5.2
	331nm,0.3s,baz=38,slow=22,SNR=8.4						
AFI				LR	LR	05 30 54.5	
	comp=Z,397nm,19.9s,baz=138,slow=29						
RAR	Rarotonga	15.03	116	P	Pn	05 33 07.8	-0.4
	1.1nm,0.3s,baz=230,slow=17,SNR=3.0						
RAR				S	Sn	05 35 37.9	-16
	1.0nm,0.3s,baz=351,slow=19,SNR=2.8						
DZM	Mont Dzumac	19.55	246	P	Pn	05 34 05.3	+1.8
	0.2nm,0.3s,baz=72,slow=19,SNR=4.2						
DZM				LR	LR	05 39 37.6	
	comp=Z,85nm,19.3s,baz=58,slow=30						
URZ	Urewera	24.29	197	P	P	05 34 48.4	-1.1
	16nm,0.5s,mb4.6,baz=100,slow=0.4,SNR=10						
RPZ	Rata Peaks	31.14	201	P	P	05 35 51.1	+0.3
	9.4nm,0.7s,mb4.6,baz=17,slow=11,SNR=3.8						
RPZ				LR	LR	05 46 23.4	
	comp=Z,787nm,18.2s,baz=231,slow=32						
STKA	Stephens Creek	43.47	239	P	P	05 37 35.4	+0.3
STKA	Stephens Creek	43.47	239	P	P	05 37 35.4	+0.3
	2.0nm,0.7s,mb4.0,baz=60,slow=16,SNR=4.4						
WB2	Warramunga Arr	49.10	257	eP	P	05 38 19.8	+0.4
WRA	Warramunga Arr	49.12	257	P	P	05 38 20.3	+0.8
	6.3nm,0.7s,mb4.7,baz=91,slow=7.2,SNR=106						
WRA				LR	LR	05 55 22.5	
	comp=Z,20nm,18.6s,baz=165,slow=31						
ASAR	Alice Springs	49.42	252	P	P	05 38 22.6	+0.8
	34nm,0.7s,mb5.4,baz=85,slow=8.4,SNR=283						
SBA	Scott Base	63.47	184	eP	P	05 40 01.4	+0.9
	552nm,3.2s						
SBA	Scott Base	63.47	184	eP	P	05 40 01.4	+0.8
SBA				pmax	pmax		
	comp=Z,552nm,3.2s						
VNDA	Vanda	63.58	186	P	P	05 40 00.3	-1.0
	comp=Z,6.5nm,0.9s,mb4.5,baz=5.6,slow=6.5,SNR=19						
FARB	Farallon Islan	71.23	41	⇓P	P	05 40 51.4	+1.3
	baz=73						
BSC	Santa Cruz Isl	71.31	46	⇓P	P	05 40 51.2	+0.5
	baz=73						
HAST	UC Hastings Re	71.38	43	⇑P	P	05 40 51.5	+0.4
	baz=73						
V04C	Ramage Ranch,	71.39	44	⇑P	P	05 40 51.6	+0.5
	baz=73						
PKM	Peak Mountain	71.68	45	⇑P	P	05 40 53.2	+0.3
	baz=73						
PKD	Parkfield	71.79	44	⇓P	P	05 40 54.3	+0.8
	baz=73						
SMMC	Simmler	71.79	44	⇓P	P	05 40 54.1	+0.5
	baz=73						
U04C	Hernandez Rese	71.87	43	P	P	05 40 55.2	+1.2
	baz=74,SNR=7.0						
PACP	Pacheco Peak	71.92	42	P	P	05 40 55.2	+1.0
	baz=74,SNR=7.1						
CVS	Carmenet Viney	71.96	41	⇑P	P	05 40 55.0	+0.5
	baz=74						
HOPS	Hopland	71.97	40	⇑P	P	05 40 55.6	+1.0
	baz=74						
S04C	Ingram Canyon,	72.18	42	P	P	05 40 56.5	+0.7
	baz=74,SNR=6.4						
MNRC	McLaughlin Nat	72.29	40	P	P	05 40 57.6	+1.2
	baz=74,SNR=5.3						
Q03C	Winters	72.41	41	⇑P	P	05 40 58.4	+1.2
	baz=74						
ARVC	Arvin	72.49	45	⇓P	P	05 40 58.0	+0.3
	baz=74						
GASB	Alder Springs	72.59	39	P	P	05 40 59.8	+1.5
	baz=74,SNR=6.5						
S05C	Merced	72.73	42	⇑P	P	05 40 59.7	+0.6
	baz=74						
MURC	Murrieta	72.80	47	⇑P	P	05 40 58.8	-0.8
	baz=74						
BFSC	Mount Baldy St	72.81	46	⇓P	P	05 40 59.3	-0.4
	baz=74						
YSS	Yuzh-Sakhalins	72.84	331	eP	P	05 40 57.6	-1.9
O02C	Red Bluff	72.87	39	⇓P	P	05 41 00.4	+0.5
	baz=74,SNR=5.5						
SUTB	Sutter Butte	72.91	40	⇑P	P	05 40 60.0	-0.1
	baz=74						
EDW2	Edwards Air Fo	72.93	46	P	P	05 41 00.2	-0.1
	baz=74,SNR=5.9						
Q04C	Lincoln	72.93	41	⇑P	P	05 41 00.1	-0.2
	baz=74						
T06C	Millerton Lake	72.95	43	P	P	05 41 00.2	-0.2
	baz=74,SNR=12						
MONP	Monument Peak	72.98	48	⇑P	P	05 41 00.5	-0.2
	baz=74						
ISA	Isabella	73.02	45	P	P	05 41 00.9	+0.1
	baz=75,SNR=8.6						
DVTC	Desert V Tower	73.09	48	⇓P	P	05 41 00.9	-0.5
	baz=75						
CMB	Columbia Colle	73.09	42	eP	P	05 41 00.8	-0.4
	comp=Z,9.4nm,0.9s,mb4.6						
CMB	Columbia Colle	73.09	42	eP	P	05 41 00.8	-0.4
CMB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
CMB	Columbia Colle	73.09	42	P	P	05 41 01.1	-0.2
	baz=75,SNR=13						
HELL	Mitchell Peak,	73.22	44	P	P	05 41 01.3	-0.7
	baz=75,SNR=7.5						
WDC	Whiskeytown Da	73.26	39	⇓P	P	05 41 02.3	+0.1
	baz=75,SNR=5.0						
ORV	Oroville	73.28	40	⇑P	P	05 41 02.3	0.0
	baz=75						
LAVA	Lava Cap Winer	73.29	41	⇓P	P	05 41 02.1	-0.3
	baz=75						
KCC	Kaiser Creek	73.38	43	⇓P	P	05 41 02.7	-0.3
	baz=75						
LRMC	Laurel Mountai	73.46	45	⇑P	P	05 41 03.3	-0.1
	baz=75,SNR=6.0						
M02C	Callahan	73.58	38	⇑P	P	05 41 04.9	+0.9
	baz=75						
R05C	Kirkwood Meado	73.68	41	⇑P	P	05 41 05.0	+0.4
	baz=75						
P05C	Yuba Gap, Truc	73.69	41	P	P	05 41 04.7	0.0
	baz=75,SNR=6.1						
BELC	Belle Mtn.	73.86	47	⇑P	P	05 41 05.2	-0.6
	baz=75						
YBH	Yreka Blue Hor	73.87	38	P	P	05 41 06.8	+1.1
	baz=76,SNR=9.3						
MLAC	Mammoth Lakes	73.87	43	⇑P	P	05 41 05.8	0.0
	baz=76						
O05C	Quincy	73.89	40	⇑P	P	05 41 06.1	+0.3
	baz=76						
MTUM	Tungsten Hills	73.90	43	eP	P	05 41 06.5	+0.5
MPMC	Manual Prospec	73.91	45	P	P	05 41 05.9	-0.2
	baz=76,SNR=15						
M03C	McCloud	73.94	38	⇑P	P	05 41 07.3	+1.2
	baz=76						
TIN	Tinemaha	73.95	44	⇓P	P	05 41 06.4	+0.1
	baz=76						
GSC	Goldstone	73.97	46	P	P	05 41 06.2	-0.3
	baz=76,SNR=6.4						
R06C	Coleville	73.98	42	P	P	05 41 06.8	+0.4
	baz=76,SNR=6.3						
R07C	Lee Vining	73.99	42	P	P	05 41 07.2	+0.6
	baz=76,SNR=8.0						
O04C	Chester	73.99	40	P	P	05 41 06.7	+0.2
	baz=76,SNR=6.8						
HEC	Hector,Ludlow	74.06	46	P	P	05 41 06.7	-0.2
	baz=76,SNR=7.3						
HATC	Hat Creek Radi	74.06	39	⇑P	P	05 41 06.8	0.0
	baz=76						
BC3	Big Chuckw Mtn	74.07	48	⇓P	P	05 41 06.3	-0.7
	baz=76						
BEKR	Beckwourth	74.18	40	P	P	05 41 08.0	+0.5
	baz=76,SNR=11						
GLA	Glamis	74.22	49	⇓P	P	05 41 07.3	-0.6
	baz=76						
WCN	Washoe City	74.23	41	P	P	05 41 08.2	+0.4
	baz=76,SNR=13						
S08C	White Mtn Res	74.24	43	P	P	05 41 08.6	+0.6
	baz=76,SNR=10						
P06A	Stead Airport,	74.36	41	⇓P	P	05 41 09.9	+1.3
	baz=76						
ELFS	Eagle Lake Fie	74.39	39	P	P	05 41 09.5	+0.7
	baz=76,SNR=6.0						
M04C	Macdoel	74.42	38	P	P	05 41 09.3	+0.4
	baz=76,SNR=5.8						
GRAC	Grapevine Rang	74.50	44	P	P	05 41 09.7	+0.3
	baz=76,SNR=7.0						
GMRC	Granite Mounta	74.50	47	⇓P	P	05 41 09.1	-0.5
	baz=76						
IRM	Iron Mountain	74.54	48	⇓P	P	05 41 09.3	-0.5
	baz=76						
FURC	Furnace Creek,	74.56	45	P	P	05 41 09.9	0.0
	baz=76,SNR=6.7						
M05C	Lookout	74.58	39	P	P	05 41 10.5	+0.7
	baz=76,SNR=7.3						
SHOC	Shoshone	74.65	46	P	P	05 41 10.3	-0.1
	baz=76,SNR=5.6						
NVAR	Mina Array Bea	74.67	42	P	P	05 41 10.5	+0.1
	comp=Z,9.5nm,0.8s,mb4.6,baz=216,slow=8.1,SNR=64						
O06A	Flanigan	74.68	40	P	P	05 41 10.6	+0.1
	baz=76,SNR=12						
R08A	Mina	74.75	43	P	P	05 41 11.1	+0.2
	baz=76,SNR=8.4						
Y12C	Blythe	74.78	48	⇑P	P	05 41 10.4	-0.8
	baz=76						
M06C	Likely Place G	74.89	39	P	P	05 41 12.2	+0.6
	baz=76,SNR=8.9						
U10A	Ash Meadows, A	74.89	45	⇑P	P	05 41 11.6	-0.1
	baz=76						
P07A	Fallon	74.92	41	⇓P	P	05 41 12.2	+0.4
	baz=76						
S09A	Goldfield	74.99	44	P	P	05 41 11.8	-0.4
	baz=77,SNR=8.4						
N06A	Buffalo Meadow	75.02	40	P	P	05 41 12.6	+0.2
	baz=77,SNR=10						
J04A	Umpqua Nationa	75.15	37	⇓P	P	05 41 13.7	+0.6
	baz=77						
Q08A	Gabbs	75.15	42	P	P	05 41 13.0	-0.2
	baz=77,SNR=9.0						
L05A	Lakeview	75.17	38	⇓P	P	05 41 14.1	+0.8
	baz=77						
V11A	Goodsprings	75.21	46	⇓P	P	05 41 13.1	-0.5
	baz=77						
TPNV	Topopah Spring	75.23	45	⇑P	P	05 41 13.5	-0.2
	baz=77						
O07A	Toulon	75.28	41	P	P	05 41 14.2	+0.3
	baz=77,SNR=17						
Y13A	Salome	75.32	48	⇓P	P	05 41 13.5	-0.8
	baz=77						
PDMCI	Parker Dam,Lak	75.34	48	⇑P	P	05 41 14.1	-0.3
	baz=77						
R09A	Tonopah	75.37	43	P	P	05 41 14.8	+0.3
	baz=77,SNR=5.2						
H03A	Soap Creek Ran	75.37	35	⇓P	P	05 41 14.3	-0.1
	baz=77						
MOD	Modoc	75.41	39	eP	P	05 41 14.5	0.0
	comp=Z,11nm,1.0s,mb4.5						
MOD	Modoc	75.41	39	P	P	05 41 14.8	+0.2
	baz=77,SNR=13						
S10A	Tonopah Range,	75.52	44	P	P	05 41 15.3	0.0
	baz=77,SNR=8.8						
P08A	Dixie Valley	75.52	41	⇓P	P	05 41 15.8	+0.5
	baz=77						
K05A	Summer Lake	75.54	38	P	P	05 41 16.4	+1.0
	baz=77,SNR=6.4						
U11A	Corn Creek	75.54	45	⇓P	P	05 41 15.4	-0.1
	baz=77						
V12A	Nelson	75.55	46	⇓P	P	05 41 15.4	-0.2
	baz=77						
N07B	Gerlach	75.57	40	P	P	05 41 15.8	+0.2
	baz=77,SNR=7.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
J05A	**Fort Rock**	**75.68**	**37**	P	**P**	**05 41 17.1**	**+0.9**
	baz=77,SNR=5.7						
X13A	**Yucca**	**75.70**	**48**	⇑P	**P**	**05 41 16.1**	**-0.4**
	baz=77						
Z14A	**Wintersburg**	**75.74**	**49**	⇑P	**P**	**05 41 16.0**	**-0.7**
	baz=77						
M07A	**Soldier Meadow**	**75.80**	**40**	P	**P**	**05 41 17.2**	**+0.4**
	baz=77,SNR=13						
R10A	**Warm Springs**	**75.91**	**43**	P	**P**	**05 41 17.9**	**+0.3**
	baz=78,SNR=10.0						
W13A	**Hualapai Mount**	**75.92**	**47**	⇑P	**P**	**05 41 17.7**	**0.0**
	baz=77						
S11A	**Rachel**	**75.94**	**44**	⇑P	**P**	**05 41 17.9**	**+0.2**
	baz=78						
K06A	**Valley Falls**	**75.97**	**38**	P	**P**	**05 41 18.4**	**+0.7**
	baz=78,SNR=6.1						
Y14A	**Wickenburg**	**75.98**	**49**	P	**P**	**05 41 17.8**	**-0.2**
	baz=78,SNR=6.3						
H04A	**Detroit Lake**	**75.99**	**35**	⇑P	**P**	**05 41 18.2**	**+0.4**
	baz=78						
P09A	**Austin**	**76.04**	**42**	⇓P	**P**	**05 41 18.3**	**0.0**
	baz=78						
L07A	**Adell**	**76.06**	**39**	P	**P**	**05 41 18.9**	**+0.6**
	baz=78,SNR=5.9						
T11A	**Corn Creek, Al**	**76.08**	**45**	P	**P**	**05 41 18.7**	**+0.2**
	baz=78,SNR=13						
N08A	**GE Springer Mi**	**76.09**	**40**	P	**P**	**05 41 18.4**	**-0.1**
	baz=78,SNR=6.8						
Q10A	**Clear Creek Ra**	**76.13**	**43**	⇓P	**P**	**05 41 18.9**	**+0.1**
	baz=78						
U12A	**Valley of Fire**	**76.13**	**46**	P	**P**	**05 41 19.4**	**+0.5**
	baz=78,SNR=5.8						
I05A	**Bend**	**76.19**	**36**	⇑P	**P**	**05 41 19.7**	**+0.7**
	baz=78						
116A	**Eloy**	**76.27**	**50**	⇑P	**P**	**05 41 19.4**	**-0.4**
	baz=78						
J06A	**Christmas Vall**	**76.29**	**38**	⇑P	**P**	**05 41 19.8**	**+0.2**
	baz=78						
M08A	**Happy Creek Ra**	**76.32**	**40**	⇓P	**P**	**05 41 20.1**	**+0.3**
	baz=78						
O09A	**Fish Creek Ran**	**76.35**	**41**	P	**P**	**05 41 20.0**	**0.0**
	baz=78,SNR=7.9						
R11A	**Troy Canyon, C**	**76.42**	**44**	P	**P**	**05 41 20.6**	**+0.1**
	baz=78,SNR=5.2						
K07A	**Rock Creek Ran**	**76.50**	**38**	P	**P**	**05 41 21.4**	**+0.6**
	baz=78,SNR=6.7						
N09A	**Rock Creek Ran**	**76.52**	**41**	P	**P**	**05 41 21.2**	**+0.3**
	baz=78,SNR=7.3						
P10A	**Eureka**	**76.52**	**42**	P	**P**	**05 41 21.1**	**+0.2**
	baz=78,SNR=5.3						
U13A	**Pakoon Wash**	**76.52**	**46**	P	**P**	**05 41 21.4**	**+0.3**
	baz=78,SNR=15						
S12A	**Delamar Landin**	**76.53**	**45**	P	**P**	**05 41 21.6**	**+0.5**
	baz=78,SNR=9.5						
W14A	**Seligman**	**76.54**	**48**	P	**P**	**05 41 21.6**	**+0.4**
	baz=78,SNR=5.2						
217A	**Green Valley**	**76.58**	**52**	⇓P	**P**	**05 41 21.1**	**-0.3**
	baz=78						
Q11A	**Duckwater**	**76.63**	**43**	P	**P**	**05 41 22.0**	**+0.4**
	baz=78,SNR=10						
I06A	**Prineville**	**76.67**	**37**	⇑P	**P**	**05 41 22.4**	**+0.7**
	baz=78						
WVOR	**Wild Horse Val**	**76.72**	**39**	*e*P	**P**	**05 41 21.4**	**-0.7**
	comp=Z,8.3nm,1.0s,mb4.4						
WVOR	**Wild Horse Val**	**76.72**	**39**	*e*P	**P**	**05 41 21.4**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
L08A	**Fields**	**76.76**	**39**	P	**P**	**05 41 22.5**	**+0.2**
	baz=78,SNR=10.0						
X15A	**Humboldt**	**76.80**	**49**	⇓P	**P**	**05 41 22.8**	**+0.2**
	baz=78						
J07A	**Hines**	**76.86**	**38**	⇑P	**P**	**05 41 23.1**	**+0.2**
	baz=78						
T13A	**Saint George**	**76.87**	**46**	P	**P**	**05 41 22.9**	**-0.1**
	baz=78,SNR=8.3						
M09A	**Marrel Ranch,**	**76.88**	**40**	⇑P	**P**	**05 41 23.4**	**+0.4**
	baz=78						
E04A	**Onalaska**	**76.89**	**34**	⇑P	**P**	**05 41 22.9**	**0.0**
	baz=79						
P11A	**Circle Ranch,**	**76.94**	**43**	⇓P	**P**	**05 41 23.2**	**-0.2**
	baz=78						
K08A	**Mann Creek Ran**	**76.98**	**39**	P	**P**	**05 41 24.0**	**+0.5**
	baz=79,SNR=8.7						
318A	**Bisbee**	**77.05**	**52**	⇑P	**P**	**05 41 23.3**	**-0.8**
	baz=78						
R12A	**Pony Springs,**	**77.06**	**44**	P	**P**	**05 41 24.2**	**+0.1**
	baz=79,SNR=12						
U14A	**Mt Trumbull**	**77.07**	**46**	P	**P**	**05 41 24.6**	**+0.4**
	baz=79,SNR=18						
H06A	**Lindquist Farm**	**77.07**	**36**	⇓P	**P**	**05 41 23.9**	**0.0**
	baz=79						
L09A	**Wilkinson Ranc**	**77.08**	**40**	P	**P**	**05 41 24.5**	**+0.4**
	baz=79,SNR=6.7						
I07A	**Izee**	**77.16**	**37**	⇓P	**P**	**05 41 24.6**	**+0.1**
	baz=79						
S13A	**Holt Ranch, En**	**77.19**	**45**	⇑P	**P**	**05 41 24.9**	**+0.1**
	baz=79,SNR=7.3						
G06A	**Carlson Farm,**	**77.20**	**36**	⇑P	**P**	**05 41 24.9**	**+0.2**
	baz=79						
O11A	**Cowboy Ranch,**	**77.32**	**42**	⇓P	**P**	**05 41 25.2**	**-0.2**
	baz=79						
J08A	**Circle Bar Ran**	**77.35**	**38**	P	**P**	**05 41 26.0**	**+0.4**
	baz=79,SNR=5.5						
E05A	**Randle**	**77.39**	**34**	⇓P	**P**	**05 41 25.8**	**+0.1**
	baz=79						
K09A	**Rome**	**77.43**	**39**	P	**P**	**05 41 26.1**	**+0.1**
	baz=79,SNR=13						
H07A	**Lands Inn, Kim**	**77.43**	**37**	⇑P	**P**	**05 41 26.0**	**+0.1**
	baz=79						
P12A	**McGill**	**77.46**	**43**	⇑P	**P**	**05 41 26.1**	**-0.1**
	baz=79						
T14A	**Hurricane**	**77.46**	**46**	⇓P	**P**	**05 41 26.1**	**-0.2**
	baz=79						
M10A	**I.L. Ranch, Tu**	**77.51**	**41**	P	**P**	**05 41 27.1**	**+0.7**
	baz=79,SNR=6.3						
319A	**Douglas**	**77.56**	**53**	⇑P	**P**	**05 41 26.5**	**-0.6**
	baz=79						
I08A	**Drewsey**	**77.61**	**38**	⇓P	**P**	**05 41 27.1**	**+0.1**
	baz=79						
N11A	**Elko Archery C**	**77.63**	**41**	⇑P	**P**	**05 41 26.8**	**-0.4**
	baz=79						
S14A	**Cedar City**	**77.75**	**45**	⇓P	**P**	**05 41 27.7**	**-0.2**
	baz=79						
G07A	**Ruggs Ranch, H**	**77.77**	**36**	⇑P	**P**	**05 41 27.5**	**-0.3**
	baz=79						
J09A	**Fry Pan Ranch,**	**77.78**	**38**	P	**P**	**05 41 28.1**	**+0.2**
	baz=79,SNR=7.6						
Q13A	**Wheeler Ranch,**	**77.78**	**44**	P	**P**	**05 41 27.9**	**-0.1**
	baz=79,SNR=14						
L10A	**Juniper Basin**	**77.85**	**40**	P	**P**	**05 41 28.5**	**+0.1**
	baz=80,SNR=11						
T15A	**Red Dirt Ranch**	**77.92**	**46**	P	**P**	**05 41 29.5**	**+0.6**
	baz=80,SNR=10						
M11A	**Holland Ranch,**	**77.93**	**41**	P	**P**	**05 41 29.4**	**+0.6**
	baz=80,SNR=5.8						
O12A	**Currie**	**77.98**	**42**	⇑P	**P**	**05 41 28.8**	**-0.3**
	baz=80						
K10A	**MacKenzie Ranc**	**77.99**	**39**	P	**P**	**05 41 29.4**	**+0.2**
	baz=80,SNR=10						
P13A	**Bates Ranch, G**	**78.04**	**43**	P	**P**	**05 41 29.4**	**-0.1**
	baz=80,SNR=8.0						
N12A	**Clover Valley,**	**78.10**	**42**	P	**P**	**05 41 30.1**	**+0.4**
	baz=80,SNR=9.2						
G08A	**Pilot Rock**	**78.19**	**36**	⇑P	**P**	**05 41 30.5**	**+0.3**
	baz=80						
B05A	**Bryant**	**78.28**	**33**	⇓P	**P**	**05 41 31.2**	**+0.6**
	baz=80						
D06A	**Cle Elum**	**78.28**	**34**	⇓P	**P**	**05 41 30.7**	**+0.1**
	baz=80						
MDJ	**Mudanjiang**	**78.30**	**323**	P	**P**	**05 41 28.6**	**-2.2**
MDJ				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,92nm,3.2s						
M12A	**Wells**	**78.48**	**41**	P	**P**	**05 41 32.2**	**+0.4**
	baz=80,SNR=10						
K11A	**Parker Ranch,**	**78.50**	**40**	P	**P**	**05 41 32.0**	**+0.1**
	baz=80,SNR=6.7						
F08A	**Pendleton**	**78.59**	**36**	⇓P	**P**	**05 41 32.5**	**+0.1**
	baz=80						
N13A	**Wendover, West**	**78.64**	**42**	P	**P**	**05 41 33.0**	**+0.3**
	baz=80,SNR=5.8						
I10A	**Payette**	**78.76**	**38**	⇑P	**P**	**05 41 33.6**	**+0.3**
	baz=80						
MSU	**Marysvale**	**78.80**	**45**	*e*P	**P**	**05 41 33.9**	**+0.2**
L12A	**House Creek Ra**	**78.80**	**41**	P	**P**	**05 41 34.1**	**+0.5**
	baz=80,SNR=5.2						
E08A	**Dider Farm, El**	**78.84**	**35**	⇑P	**P**	**05 41 33.6**	**0.0**
	baz=80						
M13A	**Montello**	**78.93**	**42**	P	**P**	**05 41 34.1**	**-0.2**
	baz=80,SNR=5.6						
MFID	**Camas Ranch**	**78.98**	**39**	P	**P**	**05 41 34.6**	**+0.1**
	baz=81,SNR=6.6						
H10A	**Noah's Angus R**	**79.08**	**38**	P	**P**	**05 41 34.9**	**-0.2**
	baz=81,SNR=15						
K12A	**Draper Farm, C**	**79.13**	**40**	⇑P	**P**	**05 41 34.9**	**-0.5**
	baz=81						
DUG	**Dugway**	**79.21**	**43**	*e*P	**P**	**05 41 35.8**	**-0.1**
	comp=Z,6.7nm,1.1s,mb4.4						
DUG	**Dugway**	**79.21**	**43**	*e*P	**P**	**05 41 35.8**	**-0.1**
DUG				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
DUG	**Dugway**	**79.21**	**43**	⇓P	**P**	**05 41 35.5**	**-0.4**
	baz=81						
D08A	**Wollman Farm,**	**79.25**	**35**	⇑P	**P**	**05 41 35.6**	**-0.3**
	baz=81						
N14A	**Grayback Hills**	**79.30**	**43**	⇓P	**P**	**05 41 36.0**	**-0.3**
	baz=81						
J12A	**Stokes Ranch,**	**79.34**	**40**	P	**P**	**05 41 36.4**	**-0.1**
	baz=81,SNR=5.3						
NJ2	**Nanjing**	**79.34**	**307**	*e*P	**P**	**05 41 33.2**	**-3.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
E09A	**Wood Farm, Sta**	**79.36**	**36**	⇓P	**P**	**05 41 36.0**	**-0.5**
	baz=81						
B07A	**Winthrop**	**79.44**	**33**	⇑P	**P**	**05 41 37.1**	**+0.2**
	baz=81						
L13A	**Double Diamond**	**79.45**	**41**	P	**P**	**05 41 37.5**	**+0.4**
	baz=81,SNR=5.8						
M14A	**Sheep Mountain**	**79.53**	**42**	P	**P**	**05 41 37.4**	**-0.2**
	baz=81,SNR=17						
F10A	**Beach Ranch, E**	**79.57**	**37**	⇓P	**P**	**05 41 37.3**	**-0.4**
	baz=81						
H11A	**Donnelly**	**79.58**	**38**	P	**P**	**05 41 37.7**	**-0.1**
	baz=81,SNR=7.3						
D09A	**Jones Farm, Ri**	**79.59**	**35**	P	**P**	**05 41 37.5**	**-0.2**
	baz=81,SNR=5.0						
A07A	**Ashnola River,**	**79.65**	**33**	⇑P	**P**	**05 41 37.9**	**-0.2**
	baz=81						
K13A	**Stover Farm, H**	**79.65**	**41**	P	**P**	**05 41 38.4**	**+0.2**
	baz=81,SNR=8.7						
N15A	**Stansbury Isla**	**79.75**	**43**	⇑P	**P**	**05 41 38.2**	**-0.6**
	baz=81						
G11A	**Walters Elk Ra**	**79.81**	**37**	⇑P	**P**	**05 41 38.3**	**-0.7**
	baz=82						
HLID	**Hailey**	**79.93**	**40**	*e*P	**P**	**05 41 39.7**	**0.0**
	comp=Z,8.7nm,0.9s,mb4.6						
HLID	**Hailey**	**79.93**	**40**	P	**P**	**05 41 39.9**	**+0.2**
	baz=82,SNR=17						
E10A	**Myers Farm, Un**	**79.93**	**36**	⇓P	**P**	**05 41 39.4**	**-0.3**
	baz=82						
J13A	**Cove Ranch, Pi**	**79.99**	**40**	P	**P**	**05 41 40.2**	**+0.2**
	baz=82,SNR=10						
HVU	**Hansel Valley**	**80.04**	**42**	*e*P	**P**	**05 41 40.0**	**-0.4**
	comp=Z,5.8nm,0.8s,mb4.5						
HVU	**Hansel Valley**	**80.04**	**42**	*e*P	**P**	**05 41 40.0**	**-0.3**
HVU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
C09A	**Chrisman Ranch**	**80.04**	**35**	⇑P	**P**	**05 41 40.2**	**0.0**
	baz=82						
M15A	**Larsen Ranch,**	**80.09**	**42**	P	**P**	**05 41 40.6**	**0.0**
	baz=82,SNR=9.7						
F11A	**Grangeville**	**80.15**	**37**	⇓P	**P**	**05 41 39.3**	**-1.5**
	baz=82						
K14A	**Jones Ranch, D**	**80.17**	**41**	⇑P	**P**	**05 41 41.1**	**0.0**
	baz=82						
H12A	**Diamond D Ranc**	**80.19**	**39**	P	**P**	**05 41 41.1**	**0.0**
	baz=82,SNR=5.2						
I13A	**Wildhorse Cree**	**80.30**	**39**	P	**P**	**05 41 41.7**	**0.0**
	baz=82,SNR=6.7						
JLU	**Jordanelle**	**80.32**	**43**	*e*P	**P**	**05 41 41.3**	**-0.5**
CN2	**Changchun**	**80.35**	**320**	*e*P	**P**	**05 41 40.5**	**-1.4**
E11A	**Bogner Ranch,**	**80.38**	**37**	⇓P	**P**	**05 41 41.3**	**-0.8**
	baz=82						
B09A	**Rice**	**80.47**	**34**	⇓P	**P**	**05 41 41.9**	**-0.6**
	baz=82						
H13A	**Challis**	**80.56**	**39**	P	**P**	**05 41 43.0**	**0.0**
	baz=82,SNR=7.0						
A09A	**Danville**	**80.56**	**33**	⇓P	**P**	**05 41 42.6**	**-0.4**
	baz=82						
F12A	**Elk City**	**80.60**	**37**	P	**P**	**05 41 43.2**	**0.0**
	baz=82,SNR=14						
G13A	**Cobalt**	**80.85**	**38**	⇓P	**P**	**05 41 44.4**	**-0.2**
	baz=82						
PV10	**Paradox Valley**	**80.90**	**46**	*e*P	**P**	**05 41 44.6**	**-0.4**
NEW	**Newport**	**80.94**	**35**	P	**P**	**05 41 43.3**	**-1.7**
	comp=Z,1.0nm,0.7s,mb3.8,baz=198,slow=2.9,SNR=5.0						
MCK	**McKinley**	**81.00**	**11**	*e*P	**P**	**05 41 45.2**	**+0.3**
	comp=Z,15nm,1.0s,mb4.8						
MCK	**McKinley**	**81.00**	**11**	*e*P	**P**	**05 41 45.2**	**+0.2**
MCK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
A10A	**Northport**	**81.11**	**34**	⇓P	**P**	**05 41 44.8**	**-1.1**
	baz=83						
PV01	**Paradox Valley**	**81.12**	**47**	*e*P	**P**	**05 41 46.1**	**-0.1**
TXAR	**Lajitas Array**	**81.13**	**56**	P	**P**	**05 41 45.2**	**-1.3**
	comp=Z,1.2nm,0.8s,mb3.8,baz=218,slow=7.4,SNR=14						
F13A	**Darby**	**81.16**	**38**	⇓P	**P**	**05 41 45.5**	**-0.8**
	baz=83						
ANMO	**Albuquerque**	**81.25**	**50**	*e*P	**P**	**05 41 46.5**	**-0.5**
	comp=Z,2.8nm,1.0s,mb4.0						
ANMO	**Albuquerque**	**81.25**	**50**	*e*P	**P**	**05 41 46.5**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANMO	**Albuquerque**	**81.25**	**50**	P	**P**	**05 41 47.0**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.0,baz=239,slow=6.2,SNR=10						
D12A	**Red Ives Fores**	**81.25**	**36**	⇑P	**P**	**05 41 46.0**	**-0.7**
	baz=83						
B11A	**Sandpoint**	**81.45**	**35**	⇓P	**P**	**05 41 46.9**	**-0.8**
	baz=83						
MCMT	**McKenzie Canyo**	**81.55**	**39**	*e*P	**P**	**05 41 48.4**	**+0.1**
E13A	**Victor**	**81.59**	**37**	P	**P**	**05 41 47.6**	**-0.9**
	baz=83,SNR=6.6						
A11A	**Hall Mountain,**	**81.75**	**34**	⇓P	**P**	**05 41 48.4**	**-0.8**
	baz=83						
F14A	**Wisdom**	**81.75**	**38**	⇑P	**P**	**05 41 49.0**	**-0.3**
	baz=83						
D13A	**Huson**	**81.79**	**37**	⇑P	**P**	**05 41 48.9**	**-0.6**
	baz=83						
G15A	**Dillon**	**81.94**	**39**	P	**P**	**05 41 50.6**	**+0.3**
	baz=84,SNR=8.4						
DCID1	**Drake Creek**	**81.96**	**41**	*e*P	**P**	**05 41 49.3**	**-1.2**
E14A	**Clinton**	**81.99**	**38**	P	**P**	**05 41 50.2**	**-0.3**
	baz=84,SNR=6.4						
C13A	**Hot Springs**	**82.04**	**36**	⇓P	**P**	**05 41 50.6**	**-0.2**
	baz=84						
TPAW	**Teton Pass**	**82.06**	**41**	*e*P	**P**	**05 41 50.9**	**-0.1**
	comp=Z,10nm,1.1s,mb4.6						
A12A	**Yaak River Ran**	**82.12**	**35**	⇓P	**P**	**05 41 51.1**	**-0.1**
	baz=84						
COLA	**College**	**82.24**	**11**	*e*P	**P**	**05 41 51.0**	**-0.4**
	comp=Z,26nm,1.3s,mb4.9						
COLA	**College**	**82.24**	**11**	*e*P	**P**	**05 41 51.8**	**+0.3**
F15A	**Butte**	**82.28**	**38**	⇓P	**P**	**05 41 51.7**	**-0.4**
	baz=84						
D14A	**Greenough**	**82.33**	**37**	P	**P**	**05 41 51.6**	**-0.8**
	baz=84,SNR=5.4						
LOHW	**Long Hollow**	**82.34**	**41**	*e*P	**P**	**05 41 52.0**	**-0.5**
	comp=Z,12nm,1.5s,mb4.5						
B13A	**Whitefish**	**82.47**	**36**	⇑P	**P**	**05 41 52.6**	**-0.5**
	baz=84						
E15A	**Deer Lodge**	**82.50**	**38**	⇓P	**P**	**05 41 52.4**	**-0.8**
	baz=84						
PDAR	**Pinedale Array**	**82.60**	**42**	P	**P**	**05 41 53.0**	**-0.9**
	comp=Z,4.7nm,0.8s,mb4.4,baz=213,slow=3.0,SNR=37						
SMCO	**Snowmass**	**82.70**	**46**	*e*P	**P**	**05 41 49.7**	**-4.8**
	comp=Z,7.4nm,1.0s,mb4.5						
A13A	**Flathead Natio**	**82.80**	**35**	⇓P	**P**	**05 41 54.5**	**-0.3**
	baz=84						
D15A	**Lincoln**	**82.89**	**37**	⇓P	**P**	**05 41 55.1**	**-0.1**
	baz=84,SNR=5.3						
BILL	**Bilibino**	**84.12**	**353**	*e*P	**P**	**05 41 59.9**	**-1.2**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
BJI	**Beijing**	**84.68**	**314**	P	**P**	**05 42 00.4**	**-4.2**
BJI				PP	PP	05 45 20.4	-1.5
BJI				S	S	05 52 17.4	-7.4
BJI				AMB	AMB		
	comp=Z,4.0nm,0.4s,mb4.7						
BJI				AMB	AMB		
	comp=Z,284nm,4.5s						
BJI				LR	LR		
	comp=N,86nm,22.4s						
BJI				LR	LR		
	comp=E,148nm,22.4s						
BJI				LR	LR		
	comp=Z,86nm,18.3s						
GYA	**Guiyang**	**87.19**	**298**	P	**P**	**05 42 11.8**	**-5.5**
GYA				PP	PP	05 45 40.4	-2.1
GYA				S	S	05 52 36.3	-14
GYA				SS	SS	05 58 28.7	-7.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,5.4s						
GYA				LR	LR		
	comp=N,310nm,21.8s						
GYA				LR	LR		
	comp=E,290nm,23.6s						
GYA				LR	LR		
	comp=Z,270nm,22.2s						
MAW	**Mawson**	**87.80**	**199**	P	**P**	**05 42 19.1**	**-0.3**
	comp=Z,13nm,1.0s,mb4.9,baz=117,slow=10,SNR=4.2						
INK	**Inuvik**	**88.19**	**14**	*e*P	**P**	**05 42 20.4**	**-0.7**
	comp=Z,49nm,0.6s						
INK	**Inuvik**	**88.19**	**14**	*e*P	**P**	**05 42 20.4**	**-0.7**
INK				pmax	pmax		
	comp=Z,49nm,0.6s						
HHC	**Hu-ho-hao-te**	**88.24**	**313**	*e*P	**P**	**05 42 18.4**	**-3.5**
HHC				PP	PP	05 45 51.5	+0.9
HHC				SKS		05 52 29.2	
HHC				S	S	05 52 48.9	-10
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,204nm,4.9s						
YKA	**Yellowknife Ar**	**90.16**	**24**	P	**P**	**05 42 30.2**	**-0.2**
YKA	**Yellowknife Ar**	**90.16**	**24**	P	**P**	**05 42 30.2**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.3,baz=237,slow=4.4,SNR=28						
KMI	**Kunming**	**90.17**	**296**	P	**P**	**05 42 26.7**	**-4.6**
KMI				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb5.1						
CD2	**Chengdu**	**90.97**	**302**	*e*P	**P**	**05 42 29.6**	**-5.3**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
CD2				AMB	AMB		
	comp=Z,30nm,8.8s						
LZH	**Lanzhou**	**92.40**	**307**	*e*P	**P**	**05 42 33.0**	**-8.4**
LZH				AMB	AMB		
	comp=Z,22nm,1.0s,mb5.3						
LZH				AMB	AMB		
	comp=Z,86nm,4.0s						
WMQ	**Urumqi**	**106.07**	**312**	PDIF	Pdif	05 43 37.7	-4.9
WMQ				PP	PP	05 48 07.7	+0.2
WMQ				PP	PP		
	comp=Z,514nm,6.2s						
WMQ				LR	LR		
	comp=N,124nm,15.0s						
WMQ				LR	LR		
	comp=E,91nm,16.8s						
WMQ				LR	LR		
	comp=Z,150nm,19.1s						
ARCES	**ARCESS Array B**	**124.22**	**352**	PKP	PKPdf	05 48 27.4	-0.8
ARCES	**ARCESS Array B**	**124.22**	**352**	PKP	PKPdf	05 48 27.4	-0.8
	comp=Z,1.9nm,0.9s,baz=64,slow=6.9,SNR=3.7						
KECS	**Kecovo**	**144.58**	**343**	*e*PKP	PKPdf	05 49 06.6	-0.1
KMBO	**Kilima Mbogo**	**144.92**	**245**	PKPbc	PKPdf	05 49 07.2	-1.2
	comp=Z,1.3nm,0.6s,baz=228,slow=24,SNR=5.2						
GIVF	**Givet**	**145.10**	**1**	*e*PKP1	PKPbc	05 49 07.0	-0.1
BAIF	**Baives**	**145.13**	**2**	*e*PKP1	PKPbc	05 49 07.3	+0.1
BRTR	**Keskin Array B**	**145.42**	**321**	PKPbc	PKPbc	05 49 09.4	+0.9
	comp=Z,3.0nm,0.8s,baz=121,slow=3.5,SNR=13						
KHC	**Kasperske Hory**	**145.48**	**351**	*e*P	PKPdf	05 49 08.5	+0.3
KHC	**Kasperske Hory**	**145.48**	**351**	*i* PKHKP		05 49 01.9	
MODS	**Modra-Piesok**	**145.50**	**346**	*e*PKP	PKPdf	05 49 08.0	-0.2
GERES	**GERESS Array B**	**145.74**	**351**	PKPbc	PKPbc	05 49 09.8	+0.6
	comp=Z,0.7nm,0.5s,baz=46,slow=3.9,SNR=6.3						
CDF	**Champ du Feu**	**146.78**	**358**	*e*PKP1	PKPbc	05 49 12.0	-0.3
	comp=Z,9.5nm,0.9s						
HAU	**Haudompre**	**147.20**	**359**	*e*PKP1	PKPbc	05 49 13.5	0.0
	comp=Z,6.9nm,0.8s						
HINF	**Hinteralfeld**	**147.38**	**359**	*e*PKP1	PKPbc	05 49 13.7	-0.3
SSF	**Saint Saulge**	**148.10**	**3**	*e*PKP1	PKPbc	05 49 15.4	-0.5
	comp=Z,28nm,1.3s						
CABF	**La Chapelle**	**148.60**	**360**	*e*PKP1	PKPbc	05 49 17.6	+0.4
LPG	**La Plagne**	**149.70**	**359**	*e*PKP1	PKPbc	05 49 21.2	+1.2
ETSF	**Etsaut**	**151.79**	**10**	*e*PKP1	PKPbc	05 49 25.1	+0.1
	comp=Z,8.7nm,0.8s						
ESDC	**Sonseca Array**	**154.09**	**17**	PKPbc	PKPbc	05 49 29.9	-0.3
	comp=Z,0.1nm,0.3s,baz=13,slow=2.4,SNR=3.1						
ESDC				PKPab	PKPab	05 49 44.7	+0.7
	comp=Z,0.1nm,0.3s,baz=333,slow=3.4,SNR=5.9						
TORD	**Torodi Ar. Bea**	**175.60**	**116**	PKPab	PKPab	05 51 15.7	-3.5
	comp=Z,1.3nm,1.1s,baz=286,slow=4.3,SNR=3.7						

IDC 12 05:30:58.3±1.8**, 2515N×10921W, h0**km**, mb1 3.5**/3**, mb1mx3.3**/18**, mbtmp3.0**/3**, ML3.5**/3**, Error ellipse: s-maj=42.3km s-min=12.4km az=131.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.44**	**224**	Pg	Pg	05 31 24.9	-1.0
	3.3nm,0.3s,baz=185,slow=2.1,SNR=7.1						
LPIG				Lg		05 31 44.0	
	14nm,0.3s,baz=138,slow=19,SNR=10						
TXAR	**Lajitas Array**	**6.46**	**49**	Pn	Pn	05 32 35.8	+1.1
	0.2nm,0.3s,baz=229,slow=14,SNR=10						
TXAR				Pg	Pg	05 33 02.1	-0.1
	0.4nm,0.3s,baz=234,slow=16,SNR=6.1						
TXAR				Lg		05 34 21.6	
	1.0nm,0.3s,baz=228,slow=30,SNR=4.2						
NVAR	**Mina Array Bea**	**15.32**	**332**	Pn	Pn	05 34 39.8	+3.9
	0.0nm,0.3s,baz=158,slow=15,SNR=4.6						
PDAR	**Pinedale Array**	**17.58**	**359**	P	Pn	05 35 04.0	-0.6
	0.1nm,0.3s,baz=167,slow=12,SNR=4.2						

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*ISCJB **12** 05:31:46.2±0.6, 539N±008×7375W±008, h159km±6km, mb3.8/8, Error ellipse: s-maj=16.4km s-min=8.0km az=43.7*

*IDC **12** 05:31:46.5±0.5, 532N×7371W, h148km±4km, mb3.6/6, mb1 3.7/8, mb1mx3.4/21, mbtmp3.6/8, Error ellipse: s-maj=20.1km s-min=11.3km az=130.0*

*NEIC **12** 05:31:47.0±0.6, 532N×7376W, h156km±6km, mb4.1/3, Error ellipse: s-maj=12.5km s-min=9.8km az=137.0*

ISC 12 05:31:47.2±0.6**, 538N**±008×**7374W**±008**, h154**km±6km**, n21, σ0ˢ86**/23**, mb3.8**/8**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**0.79**	**229**	P	**Pn**	**05 32 11.8**	**+1.0**
	288nm,0.3s,baz=90,slow=6.1,SNR=1418						
ROSC				S	**Sn**	**05 32 28.0**	**-0.8**
	266nm,0.3s,baz=100,slow=18,SNR=12						
SDV	**Santo Domingo**	**4.65**	**41**	P	**Pn**	**05 32 56.6**	**+0.5**
SDV				S	**Sn**	**05 33 49.8**	**0.0**
SDV	**Santo Domingo**	**4.65**	**41**	P	**Pn**	**05 32 56.6**	**+0.5**
	14nm,0.3s,baz=258,slow=8.2,SNR=249						
SDV				S	**Sn**	**05 33 49.8**	**0.0**
	19nm,0.3s,baz=249,slow=24,SNR=15						
OTAV	**Otavalo**	**6.95**	**223**	*e*Pn	**Pn**	**05 33 25.1**	**-1.5**
	5.9nm,1.1s						
OTAV				*e*Sn	**Sn**	**05 34 46.2**	**+1.5**
BCIP	**Isla Barro Col**	**7.12**	**302**	Pn	**Pn**	**05 33 28.2**	**-0.8**
	55nm,1.2s						
PCRV	**Puerto La Cruz**	**10.20**	**62**	P	**Pn**	**05 34 10.0**	**+0.2**
	0.9nm,0.3s,baz=304,slow=3.6,SNR=9.7						
NNA	**Nana**	**17.53**	**190**	*e*Pn	**Pn**	**05 35 34.2**	**-8.1**
	7.3nm,0.8s						
SIV	**San Ignacio**	**24.66**	**150**	P	**P**	**05 36 53.6**	**-0.3**
SIV	**San Ignacio**	**24.66**	**150**	P	**P**	**05 36 53.6**	**-0.3**
	0.6nm,0.8s,mb3.2,baz=315,slow=14,SNR=2.9						
ECSD	**EROS,Sioux Fal**	**43.19**	**336**	*e*P	**P**	**05 39 32.4**	**-0.3**
	1.4nm,0.3s,mb4.1						
ULM	**Lac du Bonnet**	**48.43**	**341**	P	**P**	**05 40 13.7**	**-0.1**
	0.6nm,0.4s,mb3.6,baz=172,slow=7.1,SNR=4.0						
SCHQ	**Schefferville**	**49.62**	**5**	P	**P**	**05 40 23.2**	**+0.5**
SCHQ	**Schefferville**	**49.62**	**5**	P	**P**	**05 40 23.2**	**+0.5**
	1.7nm,1.0s,mb3.6,baz=210,slow=8.8,SNR=5.9						
RRI2	**Red Ridge**	**50.26**	**325**	*e*P	**P**	**05 40 32.1**	**+4.4**
	14nm,1.1s,mb4.5						
YKA	**Yellowknife Ar**	**64.40**	**340**	P	**P**	**05 42 06.9**	**+0.4**
YKA	**Yellowknife Ar**	**64.40**	**340**	P	**P**	**05 42 06.9**	**+0.4**
	1.5nm,0.5s,mb4.1,baz=133,slow=6.4,SNR=34						
TORD	**Torodi Ar. Bea**	**74.63**	**78**	P	**P**	**05 43 08.7**	**-1.5**
	0.4nm,0.9s,mb3.0,baz=282,slow=6.5,SNR=6.0						
ARCES	**ARCESS Array B**	**88.22**	**20**	P	**P**	**05 44 21.4**	**+0.9**
ARCES	**ARCESS Array B**	**88.22**	**20**	P	**P**	**05 44 21.4**	**+0.9**
	3.4nm,1.0s,mb4.1,baz=282,slow=4.5,SNR=3.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	147.77	233	PKPbc	PKPbc	05 51 15.3	+0.6
	0.1nm,0.3s,baz=132,slow=3.7,SNR=4.2						
WRA	Warramunga Arr	149.10	240	PKPbc	PKPbc	05 51 16.8	-1.3
	0.2nm,0.3s,baz=108,slow=3.2,SNR=11						
WRA				pPKPbc	pPKPbc	05 51 58.1	-0.6
	0.3nm,0.7s,baz=111,slow=2.6,SNR=4.0						

IDC 12 05:41:28.3±3.8, 594S×15391E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.6/13, mbtmp3.6/4, Error ellipse: s-maj=124.5km s-min=29.3km az=110.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.57	232	P	P	05 46 42.5	+1.6
	0.7nm,0.9s,baz=58,slow=11,SNR=4.7						
ASAR	Alice Springs	26.10	225	P	P	05 47 03.4	-0.7
	0.9nm,0.8s,baz=59,slow=9.3,SNR=9.4						
SONM	Songino Array	67.87	328	P	P	05 52 28.8	+0.3
	0.2nm,0.5s,baz=141,slow=5.1,SNR=6.8						
MKAR	Makanchi Array	81.90	319	P	P	05 53 49.9	+0.1
	1.0nm,0.7s,baz=99,slow=5.5,SNR=10						
TORD	Torodi Ar. Bea	151.70	287	PKPbc	PKPbc	06 01 25.4	-0.5
	0.9nm,0.8s,baz=63,slow=1.8,SNR=5.5						

IDC 12 05:51:03.1±2.1, 129N×12693E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.4/15, mbtmp3.4/3, Error ellipse: s-maj=180.7km s-min=24.8km az=66.0
ISCJB 12 05:51:06.7±1.5, 10N±02×1263E±02, h33^{km}, mb3.3/3, Error ellipse: s-maj=34.9km s-min=23.9km az=42.9
ISC 12 05:51:09.0±1.5, 10N±02×1264E±02, h35^{km}, n4, σ0^{s}30/4, mb3.3/3, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNE	Ternate	0.96	104	⇓eP	Pn	05 51 26.0	0.0
WRA	Warramunga Arr	22.23	160	P	P	05 56 02.5	-0.2
	1.2nm,0.6s,mb3.5,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	25.59	164	P	P	05 56 35.2	+0.2
	0.2nm,0.5s,mb2.9,baz=347,slow=7.6,SNR=5.0						
MKAR	Makanchi Array	59.61	326	P	P	06 01 09.4	0.0
	0.2nm,0.3s,mb3.6,baz=110,slow=11,SNR=2.9						

ISCJB 12 06:29:11.9±1.1, 162S±0.1×730W±0.1, h99^{km}±11^{km}, mb3.5/3, Error ellipse: s-maj=23.7km s-min=12.9km az=41.4
NEIC 12 06:29:12.9±1.1, 16.18S×72.85W, h93^{km}±11^{km}, MG4.0(LIM), Error ellipse: s-maj=20.4km s-min=11.5km az=48.0
NEIC Felt [III] at Caraveli.
IDC 12 06:29:13.6±2.6, 1629S×7307W, h106^{km}±21^{km}, mb3.8/4, mb1 3.8/6, mb1mx3.5/19, mbtmp3.7/6, Error ellipse: s-maj=41.0km s-min=22.1km az=47.0
ISC 12 06:29:12.8±1.1, 162S±01×730W±01, h93^{km}±11^{km}, n13, σ1^{s}22/16, mb3.5/3, 1C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.42	101	⇑iP	Pn	06 29 37.3	-0.5
ARE				i S	Sn	06 29 56.9	+0.3
LPAZ	La Paz	4.63	92	P	Pn	06 30 23.6	+3.1
	2.1nm,0.3s,baz=268,slow=11,SNR=37						
NNA	Nana	5.64	317	P	Pn	06 30 34.4	+0.2
NNA				S	Sn	06 31 31.1	-6.6
NNA				eS	Sn	06 31 34.8	-2.9
NNA	Nana	5.64	317	P	Pn	06 30 34.4	+0.2
	2.3nm,0.3s,baz=157,slow=8.3,SNR=17						
NNA				S	Sn	06 31 31.1	-6.6
	1.2nm,0.3s,baz=215,slow=15,SNR=3.6						
SIV	San Ignacio	11.42	91	P	Pn	06 31 51.1	-1.8
	1.0nm,0.3s,baz=276,slow=11,SNR=19						
CFAA	Coronel Fontan	15.92	165	P	Pn	06 32 52.2	+0.7
CFAA	Coronel Fontan	15.92	165	P	Pn	06 32 52.2	+0.7
	0.0nm,0.3s,baz=324,slow=10,SNR=4.4						
ROSC	El Rosal	20.97	356	P	P	06 33 49.6	+1.0
	7.1nm,0.6s,baz=102,slow=11,SNR=8.8						
SDV	Santo Domingo	25.03	5	P	P	06 34 30.0	+1.6
	1.8nm,0.7s,mb3.6,baz=308,slow=5.5,SNR=4.4						
TORD	Torodi Ar. Bea	79.33	73	P	P	06 41 08.1	-0.8
TORD	Torodi Ar. Bea	79.33	73	P	P	06 41 08.1	-0.8
	0.2nm,0.4s,mb3.3,baz=261,slow=4.4,SNR=4.8						
YKA	Yellowknife Ar	84.97	342	P	P	06 41 36.1	-1.1
	0.7nm,0.7s,mb3.7,baz=134,slow=4.9,SNR=20						
SONM	Songino Array	148.45	1	PKPbc	PKPbc	06 48 49.0	+0.3
	0.8nm,0.7s,baz=323,slow=1.7,SNR=5.5						

IDC 12 06:32:11.6±1.7, 3703N×10452W, h0^{km}, mb3.2/1, mb1 3.3/3, mb1mx3.2/21, mbtmp2.8/3, ML3.3/2, Error ellipse: s-maj=66.9km s-min=10.9km az=73.0
ISCJB 12 06:32:13.0±0.5, 37.12N±0.03×104.74W±0.03, h10^{km}, Error ellipse: s-maj=4.8km s-min=4.0km az=179.7
NEIC 12 06:32:14.6±1.6, 3706N×10494W, h5^{km}, ML3.4, Error ellipse: s-maj=23.5km s-min=12.8km az=174.0
ISC 12 06:32:14.8±0.4, 3708N±003×10484W±003, h10^{km}, n33, σ1^{s}49/52, 10C-8D, Colorado

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDCO	Great Sand Dun	0.85	322	ePg	Pg	06 32 28.8	-2.3
SDCO				eSg	Sg	06 32 41.6	-0.6
SMCO	Snowmass	2.69	322	ePn	Pn	06 32 53.7	-4.3
SMCO				eSg	Sg	06 33 38.1	-3.0
ISCO	Idaho Springs	2.78	348	ePn	Pn	06 33 01.4	+2.1
ISCO				eSg	Sg	06 33 44.2	0.0
MVCO	Mesa Verde	2.93	274	ePn	Pn	06 32 59.7	-1.6
MVCO				eSg	Sn	06 33 38.5	+2.0
MVCO	Mesa Verde	2.93	274	⇑P	Pn	06 33 02.4	+1.1
	baz=2.8						
MVCO				⇓S	Sn	06 33 38.0	+1.5
	baz=2.8						
PV01	Paradox Valley	3.14	291	ePn	Pn	06 33 04.0	-0.3
PV01				eSg	Sg	06 33 50.3	-5.4
PV10	Paradox Valley	3.57	293	Pn	Pn	06 33 11.3	+1.1
PV10				eSg	Sg	06 34 03.7	-5.7
CBKS	Cedar Bluff	4.39	65	ePn	Pn	06 33 22.6	+1.1
CBKS				eSg	Sg	06 34 35.9	+0.2
SRU	San Rafael	4.92	296	ePn	Pn	06 33 29.2	+0.5
SRU				eSg	Sg	06 34 49.7	-3.0
MNTX	Cornudas Mount	5.39	185	ePn	Pn	06 33 35.9	+0.7
	18nm,0.8s						
MNTX				eSg	Sb	06 34 53.8	+0.1
WMOK	Wichita Mounta	5.44	114	Pn	Pn	06 33 42.2	+6.3
	17nm,0.6s						
WMOK				eSg	Sg	06 35 07.4	-2.2
TMUT	Trail Mountain	5.48	296	ePn	Pn	06 33 38.6	+2.1
TMUT				eSg	Sg	06 35 07.7	-3.0
WUAZ	Wupatki	5.50	255	ePn	Pn	06 33 33.7	-3.0
	64nm,0.6s						
MSU	Marysvale	5.98	286	ePn	Pn	06 33 45.4	+2.0
MSU				eSg	Sg	06 35 16.8	-10
T15A	Red Dirt Ranch	6.03	272	⇓Pb	Pb	06 33 58.2	-1.7
	baz=5.9						
T15A				⇓Sb	Sb	06 35 12.8	+0.6
	baz=5.9						
W15A	Williams	6.30	255	⇑Sb	Sb	06 35 16.0	-3.9
	baz=5.9						
X15A	Humboldt	6.54	249	⇓Sb	Sb	06 35 21.6	-5.3
	baz=6.1						
R14A	James Farms, M	6.60	283	⇓Pb	Pb	06 34 10.5	+0.9
	baz=6.6						
S14A	Cedar City	6.66	278	⇓Pb	Pb	06 34 10.7	0.0
	baz=6.6,SNR=31						
S14A				⇑Sb	Sb	06 35 34.1	+3.8
	baz=6.6						
U14A	Mt Trumbull	6.73	267	⇑Sb	Sb	06 35 32.2	0.0
	baz=6.5						
PDAR	Pinedale Array	6.74	329	Pn	Pn	06 33 57.0	+3.3
	0.1nm,0.3s,baz=140,slow=10,SNR=3.8						
PDAR				Pg	Pb	06 34 12.9	+1.0
	0.1nm,0.3s,baz=154,slow=11,SNR=4.0						
PDAR				Lg		06 35 49.2	
	0.4nm,0.3s,baz=128,slow=28,SNR=8.3						
DUG	Dugway	6.97	299	⇓Sb	Sg	06 35 50.5	-8.0
	baz=7.1						
N15A	Stansbury Isla	7.09	305	⇑Sb	Sg	06 35 55.3	-6.9
	baz=7.3						
S13A	Holt Ranch, En	7.21	277	⇑Sb	Sb	06 35 50.0	+4.2
	baz=7.1						
T13A	Saint George	7.25	272	⇑Pb	Pb	06 34 19.7	-1.0
	baz=7.1,SNR=5.2						
T13A				⇑Sb	Sb	06 35 50.2	+2.9
	baz=7.1						
O13A	Hicks Ranch, I	7.78	296	⇑Sb	Sb	06 36 15.8	+13
	baz=7.9						
TXAR	Lajitas Array	7.79	172	Pn	Pn	06 34 05.9	-2.2
TXAR				Pg	Pb	06 34 24.2	-5.7
TXAR				Lg		06 36 11.0	
TXAR	Lajitas Array	7.79	172	Pn	Pn	06 34 05.9	-2.2
	0.1nm,0.3s,baz=357,slow=11,SNR=7.9						
TXAR				Pg	Pb	06 34 24.2	-5.6
	0.3nm,0.3s,baz=9.2,slow=12,SNR=9.0						
TXAR				Lg		06 36 11.0	
	0.8nm,0.3s,baz=0.8,slow=28,SNR=12						
R12A	Pony Springs,	7.84	282	⇑Sb	Sb	06 36 12.9	+8.7
	baz=7.8						
S12A	Delamar Landin	7.99	277	⇓Sb	Sb	06 36 15.2	+6.7
	baz=7.9						
MIAR	Mount Ida	9.49	102	ePn	Pn	06 34 31.2	-0.3
	11nm,1.0s						
NVAR	Mina Array Bea	10.75	281	Pn	Pn	06 34 49.8	+1.1
	0.1nm,0.3s,baz=279,slow=8.1,SNR=2.4						
NVAR				Pg	Pn	06 35 31.2	+43
	0.2nm,0.3s,baz=99,slow=15,SNR=5.5						
YKA	Yellowknife Ar	26.15	350	P	P	06 37 48.7	-0.1
	0.3nm,0.8s,baz=153,slow=9.3,SNR=5.5						

CSEM 12 06:33:28.6, 3244N×330W, h30^{km}, MD3.6, After CNRM
CNRM 12 06:33:28.6, 3244N×330W, h30^{km}, MD3.6, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFT	Errachidia	0.98	246	i P	Pn	06 33 44.5	-1.8
ZFT				i S	Sn	06 33 57.5	-1.6
CZD	Col de Zad	1.58	292	i P	Pn	06 33 53.0	-1.6
CZD				i S	Sn	06 34 12.0	-2.1
KIB	El Ksiba	2.32	274	eP	Pn	06 34 04.5	-0.2
KIB				i S	Sn	06 34 30.0	-2.2

IDC 12 06:36:55.4±0.6, 866S×11653E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx4.1/18, mbtmp4.2/9, ML4.2/2, MS3.6/3, Ms1 3.6/3, ms1mx3.1/32, Error ellipse: s-maj=30.9km s-min=16.1km az=51.0
NEIC 12 06:36:57.4±0.5, 862S×11676E, h10^{km}, mb4.3/1, Error ellipse: s-maj=31.6km s-min=10.7km az=47.0
NEIC Felt [IV] at Mataram. Felt [III] at Sumbawa Besar, Sumbawa and [II] at Denpasar, Bali.
ISCJB 12 06:37:02.5±2.0, 86S±0.1×1169E±0.1, h67^{km}±18^{km}, mb4.0/8, Error ellipse: s-maj=28.0km s-min=11.3km az=42.7
ISC 12 06:37:04.0±1.9, 87S±01×1168E±01, h64^{km}±19^{km}, n27, σ0^{s}86/20, mb4.1/8, 1D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	3.56	107	⇓eP	Pn	06 37 57.0	+0.1
WSI				eS	Sn	06 38 37.0	-0.8
BATI	Kupang	6.91	103	Pn	Pn	06 38 44.2	+1.5
	16nm,0.3s,baz=320,slow=1.8,SNR=13						
BATI				Sn	Sn	06 40 06.0	+6.1
	4.1nm,0.3s,baz=7.5,slow=20,SNR=3.5						
FITZ	Fitzroy Crossi	12.70	139	eP	Pn	06 39 58.6	-3.2
	2.7nm,0.3s						
FITZ				eS	Sn	06 42 13.6	-8.0
FITZ	Fitzroy Crossi	12.70	139	Pn	Pn	06 39 58.6	-3.2
	0.4nm,0.3s,baz=300,slow=18,SNR=11						
FITZ				Sn	Sn	06 42 13.9	-7.7
	0.6nm,0.3s,baz=204,slow=18,SNR=8.1						
WRA	Warramunga Arr	20.31	125	P	P	06 41 35.1	+0.2
	2.2nm,0.4s,baz=300,slow=12,SNR=57						
WRA				S	S	06 45 15.8	-3.4
	1.2nm,0.8s,baz=293,slow=24,SNR=4.7						
WRA				PcP	PcP	06 45 47.2	+0.9
	0.6nm,0.3s,baz=315,slow=1.5,SNR=7.3						
WB2	Warramunga Arr	20.32	125	eP	P	06 41 35.7	+0.7
PSI	Prapat	21.18	302	P	P	06 41 44.4	+0.1
PSI	Prapat	21.18	302	P	P	06 41 44.4	+0.1
	1.4nm,0.4s,mb3.7,baz=138,slow=10,SNR=3.6						
ASAR	Alice Springs	22.13	134	P	P	06 41 55.0	+0.7
	1.8nm,0.5s,mb3.8,baz=313,slow=9.8,SNR=28						
ASAR				PcP	PcP	06 45 50.8	+1.0
	1.3nm,0.3s,baz=316,slow=1.6,SNR=13						
NWAO	Narrogin (SRO)	24.15	179	LR	LR	06 50 07.6	
	comp=Z,94nm,18.6s,baz=219,slow=33						
PMG	Port Moresby	29.95	94	LR	LR	06 55 17.7	
	comp=Z,78nm,18.9s,baz=58,slow=36						
STKA	Stephens Creek	32.59	139	P	P	06 43 29.9	+0.3
	0.7nm,0.3s,mb4.0,baz=179,slow=7.1,SNR=4.0						
STKA				PcP	PcP	06 46 15.6	+0.9
	1.0nm,0.4s,baz=342,slow=6.4,SNR=4.3						
KSRS	Korea Array	47.03	12	P	P	06 45 28.7	-0.4
	3.2nm,0.9s,mb4.2,baz=198,slow=9.0,SNR=6.2						
ULN	Ulaanbaatar	56.94	352	eP	P	06 46 42.9	+0.3
	1.5nm,0.5s,mb4.3						
SONM	Songino Array	57.00	352	P	P	06 46 43.2	+0.2
	2.4nm,0.5s,mb4.5,baz=169,slow=8.5,SNR=26						
MKAR	Makanchi Array	63.20	334	P	P	06 47 24.2	-1.2
	0.6nm,0.6s,mb3.9,baz=150,slow=7.4,SNR=9.2						
ATD	Arta Tunnel	76.26	284	LR	LR	07 21 46.4	
	comp=Z,58nm,19.8s,baz=321,slow=35						
BOSA	Boshof	87.29	242	P	P	06 49 44.3	+0.1
	2.6nm,1.0s,mb4.4,baz=39,slow=6.6,SNR=6.4						
YKA	Yellowknife Ar	114.75	24	PKP	PKiKP	06 55 36.4	-0.4
YKA	Yellowknife Ar	114.75	24	PKP	PKiKP	06 55 36.4	-0.4
	0.3nm,0.5s,baz=305,slow=1.9,SNR=8.9						
TORD	Torodi Ar. Bea	116.30	280	PKP	PKPdf	06 55 40.4	-0.8
	0.8nm,0.5s,baz=49,slow=1.8,SNR=15						
DBIC	Dimbokro	122.22	272	PKP	PKPdf	06 55 51.7	-1.0
	11nm,1.4s,baz=355,slow=1.4,SNR=4.1						
NVAR	Mina Array Bea	122.44	50	PKP	PKPdf	06 55 53.5	+1.1
	0.2nm,0.6s,baz=232,slow=1.0,SNR=3.2						
SCHQ	Schefferville	133.86	3	PKP	PKPdf	06 56 15.0	+1.3
	2.3nm,1.0s,baz=309,slow=18,SNR=2.5						
TXAR	Lajitas Array	136.84	56	PKP	PKPdf	06 56 22.5	+2.5
TXAR	Lajitas Array	136.84	56	PKP	PKPdf	06 56 22.5	+2.5
	0.3nm,0.7s,baz=204,slow=2.7,SNR=4.3						
LPAZ	La Paz	154.73	169	PKPab	PKPab	06 57 16.8	+3.1
	0.9nm,0.6s,baz=186,slow=0.7,SNR=3.6						

IDC 12 06:55:17.1±2.0, 798S×12684E, h0^{km}, mb3.6/1, mb1 3.9/3, mb1mx3.6/13, mbtmp3.7/3, ML4.0/1, Error ellipse: s-maj=281.7km s-min=31.4km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.13	186	eP	Pn	06 57 51.4	+7.5
	23nm,1.8s						
WRA	Warramunga Arr	13.94	149	Pn	Pn	06 58 34.8	-1.3
	0.8nm,0.3s,baz=327,slow=14,SNR=42						
WRA				Sn	Sn	07 00 59.7	-12
	0.7nm,0.3s,baz=332,slow=22,SNR=7.9						
WB2	Warramunga Arr	13.95	149	eP	Pn	06 58 34.8	-1.3
WB2				eS	Sn	07 00 59.6	-12
ASAR	Alice Springs	17.01	157	P	Pn	06 59 17.7	+1.2
	0.3nm,0.3s,baz=330,slow=9.5,SNR=16						
ASAR				S	Sn	07 02 16.8	-10
	0.2nm,0.3s,baz=346,slow=26,SNR=5.0						
MKAR	Makanchi Array	67.37	329	P	P	07 06 14.2	+0.1
	0.2nm,0.3s,baz=125,slow=8.1,SNR=19						

IDC 12 07:04:14.9±1.5, 4847N×15464E, h0^{km}, mb3.7/7, mb1 4.0/7, mb1mx3.7/22, mbtmp3.7/7, Error ellipse: s-maj=65.8km s-min=22.8km az=162.0
ISCJB 12 07:04:21.0±2.2, 483N±02×1547E±02, h63^{km}±19^{km}, mb3.8/7, Error ellipse: s-maj=39.9km s-min=9.4km az=141.2
MOS 12 07:04:22.5±1.5, 4853N×15454E, h76^{km}, mb4.1/3, Error ellipse: s-maj=37.6km s-min=17.3km az=59.2
ISC 12 07:04:23.1±1.9, 483N±02×1547E±02, h66^{km}±17^{km}, n15, σ1^{s}18/16, mb3.6/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.53	21	ePN	Pn	07 05 01.2	-0.7
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR				pmax	pmax		
	comp=N,100nm,0.4s						
SKR				pmax	pmax		
	comp=E,70nm,0.4s						
PET	Petropavlovsk	5.33	27	ePN	Pn	07 05 37.9	-2.1
PET				eS	Sn	07 06 41.7	+1.7
PET				pmax	pmax		
	comp=Z,30nm,0.6s						
PET				smax			
	comp=N,51nm,0.6s						
PET				smax			
	comp=E,75nm,0.6s						
YSS	Yuzh-Sakhalins	8.19	265	ePN	Pn	07 06 21.0	+1.9
ASAJ	Asahikawa	9.39	248	PN	Pn	07 06 35.3	-0.2
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	9.39	248	Pn	Pn	07 06 35.3	-0.2
	comp=Z,0.8nm,0.3s,baz=79,slow=16,SNR=2.0						
KSRS	Korea Array	22.32	251	P	P	07 09 14.4	-0.6
	comp=Z,1.9nm,0.7s,mb3.6,baz=52,slow=9.4,SNR=4.9						
INK	Inuvik	39.74	34	P	P	07 11 46.7	-2.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
INK	Inuvik	39.74	34	P	P	07 11 46.6	-2.0
	comp=Z,1.4nm,0.5s,mb4.1,baz=232,slow=7.0,SNR=3.7						
MKAR	Makanchi Array	47.19	297	P	P	07 12 48.0	-0.8
	comp=Z,0.2nm,0.2s,mb3.4,baz=72,slow=9.4,SNR=3.3						
YKA	Yellowknife Ar	49.02	38	P	P	07 13 03.3	+0.6
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	49.02	38	P	P	07 13 03.3	+0.6
	comp=Z,0.6nm,0.6s,mb3.7,baz=297,slow=7.4,SNR=8.8						
NVAR	Mina Array Bea	60.76	64	P	P	07 14 28.3	+0.5
	comp=Z,0.2nm,0.4s,mb3.5,baz=289,slow=5.6,SNR=3.3						
PDAR	Pinedale Array	62.95	55	P	P	07 14 43.4	+0.9
	comp=Z,0.8nm,0.8s,mb3.7,baz=293,slow=1.1,SNR=8.0						
TXAR	Lajitas Array	75.79	62	P	P	07 16 02.4	+0.5
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	75.79	62	P	P	07 16 02.4	+0.5
	comp=Z,0.5nm,0.5s,mb3.5,baz=300,slow=4.9,SNR=9.4						

ISCJB 12 07:05:32.1±1.0, 7420N±004×97E±05, h10^{km}, Error ellipse: s-maj=18.1km s-min=5.4km az=172.2
NEIC 12 07:05:34.5±0.8, 74.18N×9.36E, h10^{km}, MD3.3(BER), Error ellipse: s-maj=18.0km s-min=7.5km az=82.0
IDC 12 07:05:35.0±4.5, 7403N×9.11E, h0^{km}, mb4.3/1, mb1 3.8/4, mb1mx3.4/22, mbtmp3.8/4, ML3.2/3, Error ellipse: s-maj=72.0km s-min=29.0km az=180.0
CSEM 12 07:05:36.5±0.5, 7409N×905E, h20^{km}, ML2.9, Error ellipse: s-maj=17.5km s-min=6.2km az=78.0
HEL 12 07:05:36.2±0.7, 7423N×965E, h10^{km}, ML3.5, MD3.3(BER), ML2.4(BER)
BER 12 07:05:37.2±3.4, 74.19N×1037E, h0^{km}±48^{km}, MD3.3, ML2.4, ML2.9(NAO)
NAO 12 07:05:38.2±2.0, 7427N×1076E, ML2.9
ISC 12 07:05:34.4±1.0, 7421N±004×96E±05, h10^{km}, n30, σ0^{s}86/37, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	4.31	19	Pn	Pn	07 06 41.3	+1.4
	baz=195,slow=16						
SPA0				Sn	Sn	07 07 30.2	+0.2
	baz=211,slow=22						
SPA0	Spitsbergen Ar	4.31	19	eP	Pn	07 06 41.3	+1.4
SPA0				eS	Sn	07 07 30.2	+0.2
KBS	Kingsbay	4.78	6	eP	Pn	07 06 46.1	-0.2
KBS				eS	Sn	07 07 40.7	-0.9
KBS				AML	AML	07 07 47.2	
	comp=Z,13nm,0.6s						
KBS	Kingsbay	4.78	6	ePn	Pn	07 06 46.1	-0.2
KBS				eSn	Sn	07 07 39.9	-1.7
KBS	Kingsbay	4.78	6	Pn	Pn	07 06 46.2	-0.1
KBS				Sn	Sn	07 07 40.3	-1.2
KIF	Kilpisjarvi	6.32	140	eP	Pn	07 07 08.8	+1.4
KIF				MPN		07 07 11.8	
	comp=Z,5.3nm,0.3s						
KIF	Kilpisjarvi	6.32	140	P	Pn	07 07 08.7	+1.3
	comp=Z,5.3nm,0.3s						
ARA0	ARCESS Array S	6.82	125	Pn	Pn	07 07 15.2	+0.8
	baz=322,slow=12						
ARA0				Sn	Sn	07 08 24.8	-7.1
	baz=320,slow=22						
ARA0	ARCESS Array S	6.82	125	eP	Pn	07 07 15.2	+0.8
ARCES	ARCESS Array B	6.82	125	Pn	Pn	07 07 15.2	+0.9
	comp=Z,1.5nm,0.3s,baz=323,slow=9.8,SNR=40						
ARCES				Sn	Sn	07 08 24.7	-7.1
	comp=Z,0.8nm,0.3s,baz=322,slow=21,SNR=3.2						
KEV	Kevo	7.00	121	eP	Pn	07 07 17.0	+0.2
KEV				MPN		07 07 22.5	
	comp=Z,4.5nm,0.4s						
KEV	Kevo	7.00	121	P	Pn	07 07 16.9	+0.2
	comp=Z,4.5nm,0.4s						
HEF	Hetta	7.36	135	eP	Pn	07 07 22.1	+0.4
SGF	Sodankyl	8.75	132	eP	Pn	07 07 40.4	-0.4
SGF				MPN		07 07 45.0	
	comp=Z,1.9nm,0.3s						
SGF	Sodankyl	8.75	132	P	Pn	07 07 40.3	-0.5
	comp=Z,1.9nm,0.3s						
MSF	Maaselka	10.59	132	eP	Pn	07 08 05.8	-0.1
MSF	Maaselka	10.59	132	P	Pn	07 08 05.8	-0.1
KU6	Riekki	10.66	130	eP	Pn	07 08 06.1	-0.9
KU6				MPN		07 08 10.6	
	comp=Z,1.4nm,0.4s						
KU6	Riekki	10.66	130	P	Pn	07 08 06.0	-1.0
	comp=Z,1.4nm,0.4s						
OUL	Oulu	10.73	140	eP	Pn	07 08 06.7	-1.2
OUL				MPN		07 08 11.1	
	comp=Z,1.4nm,0.3s						
OUL	Oulu	10.73	140	P	Pn	07 08 06.6	-1.2
	comp=Z,1.4nm,0.3s						
KJN	Kajaani	11.97	139	eP	Pn	07 08 23.3	-1.5
KJN	Kajaani	11.97	139	P	Pn	07 08 23.2	-1.5
NOA	NORSAR Array B	13.25	176	Pn	Pn	07 08 41.8	-0.4
	comp=Z,0.1nm,0.3s,baz=25,slow=5.3,SNR=3.3						
FIA0	FINESS Array S	14.16	146	Pn	Pn	07 08 54.5	-0.2
	baz=354,slow=14						
FIA0	FINESS Array S	14.16	146	Pn	Pn	07 08 54.5	-0.2
FINES	FINESS Array B	14.16	146	Pn	Pn	07 08 54.5	-0.2
	comp=Z,0.1nm,0.3s,baz=354,slow=13,SNR=3.4						
HFS	Hagfors	14.23	172	Pn	Pn	07 09 01.4	+5.8
	baz=347,slow=8.6						
TORD	Torodi Ar. Bea	61.21	189	P	P	07 15 50.0	+0.9
TORD	Torodi Ar. Bea	61.21	189	P	P	07 15 50.0	+0.9
	comp=Z,0.7nm,0.5s,baz=0.9,slow=7.1,SNR=11						

NEIC 12 07:10:12.1±1.8, 3620N×7120E, h88^{km}±19^{km}, mb4.4/2, Error ellipse: s-maj=22.7km s-min=8.2km az=222.0
IDC 12 07:10:13.1±6.5, 3625N×7129E, h100^{km}±57^{km}, mb3.6/10, mb1 3.7/12, mb1mx3.5/25, mbtmp3.5/12, Error ellipse: s-maj=32.7km s-min=18.9km az=13.0
ISCJB 12 07:10:15.0±0.5, 3648N±003×7152E±007, h129^{km}±7^{km}, mb3.6/10, Error ellipse: s-maj=10.1km s-min=4.8km az=169.2
NNC 12 07:10:22.2±12.0, 3746N×7108E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=96.6km s-min=90.1km az=31.0
ISC 12 07:10:16.1±0.5, 3647N±003×7152E±008, h126^{km}±7^{km}, n41, σ1^{s}02/53, mb3.7/10, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.66	173	⇓P	Pn	07 10 59.4	+1.2
CEP				S	Sn	07 11 39.0	+8.5
CHCP	Chirah Chowk	3.15	152	⇑P	Pn	07 11 06.6	+2.1
THW	Thamme Wali	3.67	177	⇑P	Pn	07 11 12.0	+0.6
SARP	Sargodha	4.63	168	P	Pn	07 11 24.2	0.0
DRP	Derazinda	4.83	193	P	Pn	07 11 27.8	+0.8
THN	Thein Dam	5.31	138	eP	Pn	07 11 33.6	+0.3
THN				eS	Sn	07 12 32.3	-1.1
AML	Almayashu	5.90	16	P	Pn	07 11 41.2	0.0
	SNR=60						
UCH	Uchtor	6.20	21	P	Pn	07 11 45.5	+0.3
	SNR=21						
KZA	Kyzart	6.31	26	P	Pn	07 11 46.8	+0.2
	SNR=7.2						
EKS2	Erkin-Say	6.43	15	P	Pn	07 11 48.2	-0.1
	SNR=6.8						
AAK	Ala-Archa	6.57	20	P	Pn	07 11 50.6	+0.3
	SNR=8.6						
KK31	Karatay Array	6.67	354	⇓Pn	Pn	07 11 50.3	-1.3
	6.3nm,0.3s,baz=173,slow=12,SNR=262						
KK31				⇑Sn	Sn	07 12 59.4	-6.9
	7.5nm,0.3s,baz=164,slow=25,SNR=8.7						

SDNR	Sundarnagar	6.71	136	eP	Pn	07 11 54.0	+1.8
SDNR				eS	Sn	07 13 02.2	-5.0
CHMS	Chumysh	6.98	20	P	Pn	07 11 56.1	+0.4
	SNR=6.8						
USP	Ospenovka	7.17	18	P	Pn	07 11 58.6	+0.3
	SNR=8.6						
TKM2	Tokmak 2	7.17	25	⇓Pn	Pn	07 11 58.4	+0.1
	0.4nm,0.6s						
TKM2				⇓Sn	Sn	07 13 18.1	-0.1
	1.2nm,1.0s						
TKM2	Tokmak 2	7.17	25	P	Pn	07 11 58.5	+0.2
	SNR=7.6						
KHET	Khetri	9.12	155	eP	Pn	07 12 24.0	-0.7
KHET				eS	Sn	07 13 56.8	-8.7
NDI	New Delhi	9.13	147	eS	Sn	07 13 55.0	-11
KUDL	Kundal	9.30	152	eP	Pn	07 12 25.4	-1.7
KUDL				AMb	AMB	07 12 27.6	
	comp=Z,4.0nm,0.4s						
KUDL				eS	Sn	07 14 00.5	-9.4
SONA	Sohna	9.44	149	eP	Pn	07 12 29.1	0.0
SONA				AMb	AMB	07 12 39.0	
	comp=Z,6.8nm,0.3s						
SONA				eS	Sn	07 14 04.5	-8.9
MKAR	Makanchi Array	13.08	35	P	Pn	07 13 17.2	+0.3
	comp=Z,0.1nm,0.3s,baz=217,slow=10,SNR=4.6						
GKN	Gorkha	13.93	124	eP	Pn	07 13 26.8	-1.3
	comp=Z,23nm,0.3s						
KKN	Kakani	14.51	123	eP	Pn	07 13 33.8	-1.6
	comp=Z,11nm,0.2s						
JIRN	Jiri	15.21	121	eP	Pn	07 13 43.0	-1.2
JIRN				eS	S	07 16 23.4	-17
AB31	Akbulak array	15.32	330	⇑Pn	Pn	07 13 42.9	-2.4
	comp=Z,0.8nm,0.3s,baz=171,slow=9.7,SNR=42						
AB31				⇑Sn	Sn	07 16 20.2	-15
	comp=Z,3.8nm,0.6s,baz=145,slow=22,SNR=9.2						
TAPN	Taplejung	16.46	119	eP	Pn	07 13 59.5	-0.2
	comp=Z,23nm,0.6s						
ODAN	Odare	16.54	121	eP	Pn	07 14 00.8	+0.1
AKTK	Aktyubinsk	17.02	329	P	Pn	07 14 05.2	-1.1
AKTK				S	S	07 17 03.7	-12
AKTO	Aktyubinsk	17.02	329	P	Pn	07 14 05.2	-1.1
	comp=Z,0.9nm,0.3s,baz=151,slow=9.7,SNR=9.7						
AKTO				S	S	07 17 03.7	-12
	comp=Z,0.2nm,0.3s,baz=46,slow=20,SNR=6.0						
SONM	Songino Array	28.01	55	P	P	07 15 57.6	+2.6
	comp=Z,0.3nm,0.5s,mb3.1,baz=285,slow=10,SNR=3.6						
AKASG	Malin Array Be	33.29	309	P	P	07 16 42.3	+0.9
	comp=Z,0.7nm,0.6s,mb3.7,baz=106,slow=9.0,SNR=4.5						
FINES	FINESS Array B	37.75	326	P	P	07 17 20.2	+0.9
	comp=Z,0.7nm,0.3s,mb3.9,baz=123,slow=11,SNR=8.4						
ARCES	ARCESS Array B	41.34	337	P	P	07 17 49.6	+0.7
	comp=Z,1.1nm,0.6s,mb3.9,baz=120,slow=9.4,SNR=16						
HFS	Hagfors	43.35	322	P	P	07 18 05.8	+0.4
	comp=Z,3.9nm,0.5s,mb4.4,baz=99,slow=9.2,SNR=28						
NB2	NORSAR Subarra	44.66	323	P	P	07 18 15.9	+0.1
	comp=Z,1.8nm,0.4s,mb4.2						
NOA	NORSAR Array B	44.66	323	P	P	07 18 15.9	+0.1
	comp=Z,2.0nm,0.4s,mb4.2,baz=97,slow=7.7,SNR=9.9						
TORD	Torodi Ar. Bea	66.14	269	P	P	07 20 47.8	-2.4
	comp=Z,0.3nm,0.4s,mb3.4,baz=48,slow=6.1,SNR=8.3						
INK	Inuvik	73.87	9	P	P	07 21 37.1	+0.6
	comp=Z,0.7nm,0.3s,mb3.8,baz=147,slow=9.6,SNR=4.4						
YKA	Yellowknife Ar	81.26	3	P	P	07 22 18.1	+0.5
	comp=Z,0.3nm,0.5s,mb3.4,baz=351,slow=5.4,SNR=16						
WRA	Warramunga Arr	81.62	122	P	P	07 22 21.3	+1.1
	comp=Z,0.3nm,0.7s,mb3.2,baz=316,slow=6.8,SNR=4.1						

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*CSEM **12** 07:21:47.2±0.1, 37.44N×9.30W, h30km, ML2.7, Error ellipse: s-maj=2.8km s-min=1.8km az=81.0*
*NEIC **12** 07:21:48.7±2.0, 37.60N×9.12W, h5km, MN2.8(MDD), Error ellipse: s-maj=27.0km s-min=6.7km az=56.0*
*INMG **12** 07:21:51.0±1.2, 37.46N×9.24W, h28km±4km, MD2.9, ML2.7, Error ellipse: s-maj=5.1km s-min=2.7km az=52.0*
*IGIL **12** 07:21:51.0, 37.46N×9.24W, h26km, ML2.9*
*CNRM **12** 07:21:51.0, 37.30N×9.09W, h11km, MD3.7*
MDD 12 07:21:50.5±0.7, **37.47N**×**9.26W, h29**km±4km, **mbLg2.8**/22, **1C-3D, Error ellipse: s-maj=6.1km s-min=3.8km az=70.0, PRXIMO, Portugal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	0.43	79	i Pg	Pb	07 21 59.7	0.0
PTEO				eSg	Sb	07 22 06.2	+0.1
PTEO				A		07 22 07.5	
	394nm,0.2s						
PTEO	Sao Teotonio	0.43	79	⇓Pg	Pb	07 21 59.7	0.0
PTEO				Lg		07 22 06.2	
	197nm,0.2s						
PTEO	Sao Teotonio	0.43	79	eSg	Sb	07 22 06.2	+0.1
	394nm,0.2s						
PFVI	Vila Bisbo	0.48	134	i Pg	Pb	07 22 00.0	-0.5
PFVI				eSg	Sb	07 22 06.9	-0.4
PFVI				A		07 22 08.5	
	326nm,0.2s						
PFVI	Vila Bisbo	0.48	134	⇓Pg	Pb	07 22 00.0	-0.5
PFVI				Lg		07 22 06.9	
	163nm,0.2s						
PFVI	Vila Bisbo	0.48	134	eSg	Sb	07 22 06.9	-0.4
	326nm,0.2s						
MORF	Marmelete	0.51	108	i Pg	Pb	07 22 00.6	-0.4
MORF				eSg	Sb	07 22 07.8	-0.3
MORF				A		07 22 09.9	
	427nm,0.2s						
MORF	Marmelete	0.51	108	P	Pb	07 22 00.5	-0.5
MORF				⇓Pg	Pb	07 22 00.6	-0.4
MORF				S	Sb	07 22 07.3	-0.8
MORF				Lg		07 22 07.8	
	427nm,0.2s						
MORF	Marmelete	0.51	108	eSg	Sb	07 22 07.8	-0.3
	427nm,0.2s						
PBDV	Barranco-do-Ve	1.08	101	eP	Pn	07 22 09.1	-0.6
PBDV				eS	Sn	07 22 22.2	-1.5
PBDV				A		07 22 24.2	
	70nm,0.3s						
PBDV	Barranco-do-Ve	1.08	101	eP	Pn	07 22 09.1	-0.6
PBDV				eS	Sn	07 22 22.2	-1.5
	70nm,0.3s						
PVAQ	Vaqueiros	1.23	92	eP	Pn	07 22 10.8	-0.9
PVAQ				eS	Sn	07 22 25.4	-1.9
PVAQ				A		07 22 36.8	
	89nm,0.3s						
PVAQ	Vaqueiros	1.23	92	eP	Pn	07 22 10.8	-0.9
PVAQ				eS	Sn	07 22 25.4	-1.9
	89nm,0.3s						
PBEJ	Beja	1.24	63	eP	Pn	07 22 10.7	-1.1
PBEJ				A		07 22 36.9	
	43nm,0.3s						
PBEJ	Beja	1.24	63	eP	Pn	07 22 10.7	-1.1
	43nm,0.3s						
LIS	Lisbon	1.25	4	eS	Sn	07 22 25.9	-1.9
LIS				eS	Sn	07 22 26.0	-1.9
LIS				AML	AML	07 22 26.8	
	comp=E,323nm,0.1s						
LIS	Lisbon	1.25	4	S	Sn	07 22 25.9	-2.0
LIS				S	Sn	07 22 25.9	-2.0
LIS	Lisbon	1.25	4	eS	Sn	07 22 25.9	-2.0
MOE	Montemor	1.28	34	eP	Pn	07 22 11.6	-0.8
MOE				eS	Sn	07 22 27.1	-1.4
EGRO	El Granado	1.41	87	P	Pn	07 22 13.3	-0.9
	comp=E,2.4nm,0.1s,SNR=18						
EGRO				S	Sn	07 22 29.8	-2.1
	comp=E,35nm,0.2s,SNR=32						
EGRO	El Granado	1.41	87	P	Pn	07 22 13.3	-0.9
	comp=E,2.4nm,0.1s,SNR=18						
EGRO				S	Sn	07 22 29.9	-2.0
EVO	Evora	1.45	42	eP	Pn	07 22 13.4	-1.3
EVO				eS	Sn	07 22 31.5	-1.3
EVO				A		07 22 39.7	
	comp=E,59nm,0.2s						
EVO	Evora	1.45	42	eP	Pn	07 22 13.4	-1.3
EVO				eS	Sn	07 22 31.5	-1.3
	comp=E,59nm,0.2s						
PMAFR	Mafra	1.49	359	i P	Pn	07 22 14.6	-0.7
PMAFR				eS	Sn	07 22 32.2	-1.5
PMAFR				A		07 22 34.0	
	comp=E,162nm,0.2s						
PMAFR	Mafra	1.49	359	⇑P	Pn	07 22 14.6	-0.7
PMAFR				S	Sn	07 22 32.2	-1.5
	comp=E,81nm,0.2s						
ALMR	Almeirim	1.77	17	eP	Pn	07 22 18.5	-0.7
ALMR				eS	Sn	07 22 38.5	-2.2
ALMR				eS	Sn	07 22 38.5	-2.2
ALMR				AML	AML	07 22 41.3	
	comp=N,84nm,0.2s						
ALMR	Almeirim	1.77	17	P	Pn	07 22 18.4	-0.7
ALMR				P		07 22 18.5	
ALMR				S	Sn	07 22 38.5	-2.2
ALMR				S	Sn	07 22 38.5	-2.2
ALMR	Almeirim	1.77	17	eP	Pn	07 22 18.5	-0.6
ALMR				eS	Sn	07 22 38.5	-2.2
PBAR	Barrancos	1.90	67	ePn	Pn	07 22 19.7	-1.2
PBAR				eSn	Sn	07 22 41.4	-2.4
PBAR				A		07 23 01.5	
	comp=N,34nm,0.2s						
PBAR	Barrancos	1.90	67	Pn	Pn	07 22 19.7	-1.2
PBAR				Sn	Sn	07 22 41.4	-2.4
	comp=N,17nm,0.2s						
PESTR	Estremoz	1.92	43	ePn	Pn	07 22 20.1	-1.1
PESTR				eSn	Sn	07 22 42.5	-1.9
PESTR				A		07 22 55.4	
	comp=N,23nm,0.4s						
EMIN	Mina Concepcio	2.08	81	P	Pn	07 22 22.7	-0.7
	comp=N,0.9nm,0.3s,SNR=12						
EMIN				S	Sn	07 22 44.8	-3.4
	comp=N,10nm,0.2s,SNR=9.2						
EMIN	Mina Concepcio	2.08	81	P	Pn	07 22 22.7	-0.6
	comp=N,0.9nm,0.3s,SNR=12						
EMIN				S	Sn	07 22 44.8	-3.4
	comp=N,10nm,0.2s,SNR=9.2						
EBAD	Badajoz	2.19	53	P	Pn	07 22 23.4	-1.5
	comp=N,0.8nm,0.2s,SNR=8.1						
EBAD				S	Sn	07 22 48.0	-3.1
	comp=N,20nm,0.2s,SNR=6.8						
EBAD	Badajoz	2.19	53	P	Pn	07 22 23.4	-1.5
	comp=N,0.8nm,0.2s,SNR=8.1						
EBAD				S	Sn	07 22 48.0	-3.0
	comp=N,20nm,0.2s,SNR=6.8						
PCBR	Castelo Branco	2.75	30	ePn	Pn	07 22 32.5	-0.1
PCBR				eSn	Sn	07 23 02.2	-2.7
PCBR				A		07 23 03.7	
	comp=N,10nm,0.3s						
PCBR	Castelo Branco	2.75	30	Pn	Pn	07 22 32.5	-0.1
PCBR				Sn	Sn	07 23 02.2	-2.7
	comp=N,5.2nm,0.3s						
ESPR	Espera	2.78	101	P	Pn	07 22 33.2	+0.1
	comp=N,4.7nm,0.1s,SNR=9.3						
ESPR				S	Sn	07 23 04.5	-1.2
	comp=N,30nm,0.2s						
ESPR	Espera	2.78	101	P	Pn	07 22 33.2	+0.1
	comp=N,4.7nm,0.1s,SNR=9.3						
ESPR				S	Sn	07 23 04.5	-1.2
	comp=N,30nm,0.2s						
EJIF	Jimena Fronter	3.20	107	P	Pn	07 22 39.3	+0.5
EJIF				S	Sn	07 23 15.4	-0.5
EJIF	Jimena Fronter	3.20	107	P	Pn	07 22 39.3	+0.5
	comp=N,2.8nm,0.2s,SNR=7.9						
EJIF				S	Sn	07 23 13.0	-2.9
	comp=N,3.6nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	3.20	107	P	Pn	07 22 39.3	+0.5
	comp=N,2.8nm,0.2s,SNR=7.9						
EJIF				S	Sn	07 23 15.4	-0.6
	comp=N,3.6nm,0.2s,SNR=7.9						
MTE	Manteigas	3.22	24	ePn	Pn	07 22 38.3	-0.8
MTE				eSn	Sn	07 23 13.9	-2.6
MTE				A		07 23 15.2	
	comp=N,20nm,0.3s						
MTE	Manteigas	3.22	24	Pn	Pn	07 22 38.3	-0.8
MTE				Sn	Sn	07 23 13.9	-2.6
	comp=N,10nm,0.3s						
PVIS	Viseu	3.41	18	ePn	Pn	07 22 40.9	-0.8
PVIS				eSn	Sn	07 23 17.3	-3.9
EMIJ	Mijas	3.70	103	P	Pn	07 22 45.3	-0.4
EMIJ				S	Sn	07 23 27.9	-0.5
EMIJ	Mijas	3.70	103	P	Pn	07 22 45.3	-0.4
	comp=N,3.9nm,0.3s,SNR=7.9						
EMIJ				S	Sn	07 23 26.6	-1.8
	comp=N,4.7nm,0.2s,SNR=7.9						
EMIJ	Mijas	3.70	103	P	Pn	07 22 45.3	-0.4
	comp=N,3.9nm,0.3s,SNR=7.9						
EMIJ				S	Sn	07 23 27.9	-0.5
	comp=N,4.7nm,0.2s,SNR=7.9						
EADA	Adamuz	3.77	78	P	Pn	07 22 45.2	-1.5
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA				S	Sn	07 23 27.6	-2.5
	comp=N,8.3nm,0.2s,SNR=7.9						
EADA	Adamuz	3.77	78	P	Pn	07 22 45.2	-1.5
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA				S	Sn	07 23 27.6	-2.5
	comp=N,8.3nm,0.2s,SNR=7.9						
PVRL	Vila Real	3.99	17	ePn	Pn	07 22 48.6	-1.0
PVRL				eSn	Sn	07 23 31.1	-4.3
PVRL				A		07 23 33.6	
	comp=N,43nm,0.1s						
PVRL	Vila Real	3.99	17	Pn	Pn	07 22 48.6	-1.0
PVRL				Sn	Sn	07 23 31.1	-4.3
	comp=N,22nm,0.1s						
MVO	Moncorvo	4.08	24	ePn	Pn	07 22 50.0	-0.9
MVO				eSn	Sn	07 23 33.6	-4.0
MVO				A		07 23 37.5	
	comp=N,16nm,0.2s						
MVO	Moncorvo	4.08	24	Pn	Pn	07 22 50.0	-0.9
MVO				Sn	Sn	07 23 33.6	-4.0
	comp=N,7.8nm,0.2s						
ELOJ	Sierra Loja	4.08	93	S	Sn	07 23 34.4	-3.4
	SNR=7.9						
ELOJ	Sierra Loja	4.08	93	S	Sn	07 23 37.3	-0.5
	SNR=7.9						
PCAB	Cabril	4.34	12	ePn	Pn	07 22 53.2	-1.3
PCAB				eSn	Sn	07 23 39.0	-5.2
PCAB				A		07 23 42.9	
	comp=N,8.1nm,0.1s						
PCAB	Cabril	4.34	12	Pn	Pn	07 22 53.2	-1.3
PCAB				Sn	Sn	07 23 39.0	-5.2
	comp=N,4.1nm,0.1s						
EBAN	Banos Encina	4.39	79	P	Pn	07 22 55.1	0.0
	SNR=7.9						
EBAN				S	Sn	07 23 41.1	-4.2
	comp=N,5.8nm,0.2s,SNR=7.9						
ELOB	Lobios	4.49	12	P	Pn	07 22 55.4	-1.2
	comp=N,2.9nm,0.1s,SNR=9.9						
ELOB				S	Sn	07 23 42.8	-5.0
	comp=N,8.5nm,0.1s						
ELOB	Lobios	4.49	12	P	Pn	07 22 55.4	-1.1
	comp=N,2.9nm,0.1s,SNR=9.9						
ELOB				S	Sn	07 23 42.8	-5.0
	comp=N,8.5nm,0.1s						
EQUE	Quentar	4.64	91	S	Sn	07 23 49.9	-1.7
	comp=N,3.2nm,0.2s,SNR=7.9						
EZAM	Zamans	4.70	5	S	Sn	07 23 48.7	-4.2
	SNR=7.9						
ESDC	Sonseca Array	4.70	60	P	Pn	07 22 58.4	-1.1
	comp=N,3.1nm,0.1s,baz=247,slow=13,SNR=7.9						
ESDC				S	Sn	07 23 49.5	-3.5
	comp=N,8.6nm,0.2s,baz=247,slow=23,SNR=15						
ESDC	Sonseca Array	4.70	60	P	Pn	07 22 58.3	-1.1
	comp=N,3.1nm,0.1s,SNR=7.9						
ESDC				S	Sn	07 23 49.5	-3.4
	comp=N,8.6nm,0.2s,SNR=15						
PBRG	Braganca	4.75	23	ePn	Pn	07 22 59.3	-0.8
PBRG				eSn	Sn	07 23 49.3	-4.8
PBRG				A		07 23 51.9	
	comp=N,8.5nm,0.3s						
PBRG	Braganca	4.75	23	Pn	Pn	07 22 59.3	-0.8
PBRG				Sn	Sn	07 23 49.3	-4.8
	comp=N,4.2nm,0.3s						
ECAL	Calabor	4.87	23	P	Pn	07 23 01.2	-0.6
	comp=N,1.1nm,0.1s,SNR=8.7						
ECAL				S	Sn	07 23 53.6	-3.6
	comp=N,36nm,0.4s						
ECAL	Calabor	4.87	23	P	Pn	07 23 01.2	-0.6
	comp=N,1.1nm,0.1s,SNR=8.7						
ECAL				S	Sn	07 23 53.6	-3.6
	comp=N,36nm,0.4s						
EQES	Quesada	4.92	84	P	Pn	07 23 01.8	-0.7
	comp=N,1.0nm,0.1s,SNR=7.9						
EQES				S	Sn	07 23 56.0	-2.4
	comp=N,1.2nm,0.1s,SNR=4.8						
EQES	Quesada	4.92	84	P	Pn	07 23 01.8	-0.7
	comp=N,1.0nm,0.1s,SNR=7.9						
EQES				S	Sn	07 23 56.0	-2.5
	comp=N,1.2nm,0.1s,SNR=4.8						
GUD	Guadarrama	5.08	50	S	Sn	07 23 58.3	-4.1
	comp=N,5.9nm,0.3s,SNR=7.9						
EBER	Berja	5.12	94	P	Pn	07 23 04.5	-0.7
	comp=N,3.8nm,0.5s,SNR=7.9						
EBER				S	Sn	07 24 03.5	+0.2
	comp=N,5.8nm,0.3s,SNR=7.9						
EBER	Berja	5.12	94	P	Pn	07 23 04.5	-0.7
	comp=N,3.8nm,0.5s,SNR=7.9						
EBER				S	Sn	07 24 03.5	+0.2
	comp=N,5.8nm,0.3s,SNR=7.9						
EMAZ	Mazaricos	5.48	2	P	Pn	07 23 08.8	-1.3
	comp=N,14nm,0.2s,SNR=9.8						
EMAZ				S	Sn	07 24 04.7	-7.5
	comp=N,13nm,0.3s						
EMAZ	Mazaricos	5.48	2	P	Pn	07 23 08.8	-1.3
	comp=N,14nm,0.2s,SNR=9.8						
KIB	El Ksiba	5.55	151	P	Pn	07 23 10.0	-1.1
KIB				S	Sn	07 24 08.0	-5.9
KIB	El Ksiba	5.55	151	i P	Pn	07 23 10.0	-1.1
CZD	Col de Zad	5.61	141	P	Pn	07 23 11.0	-0.9
CZD				S	Sn	07 24 09.0	-6.4
CZD	Col de Zad	5.61	141	i P	Pn	07 23 11.0	-0.9
CIA	Chichaoua	5.90	176	P	Pn	07 23 15.0	-0.9
CIA				S	Sn	07 24 17.5	-5.1
CIA	Chichaoua	5.90	176	eP	Pn	07 23 15.0	-0.9
EPON	Pontenova	6.07	15	S	Sn	07 24 21.8	-4.9
	comp=N,1.5nm,0.2s,SNR=7.9						
ETOR	Torete	6.52	57	S	Sn	07 24 31.0	-6.9
	comp=N,8.9nm,0.2s,SNR=7.9						
ZFT	Errachidia	6.76	142	P	Pn	07 23 26.0	-1.7
ZFT				S	Sn	07 24 38.0	-5.7
ZFT	Errachidia	6.76	142	eP	Pn	07 23 26.0	-1.7

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*IDC **12** 07:51:13.6±2.9, 1.07N×126.38E, h15km±17km, mb4.8/20, mb1 4.8/21, mb1mx4.8/23, mbtmp4.8/21, ML4.4/1, MS4.6/3, Ms1 4.6/3, ms1mx3.9/24, Error ellipse: s-maj=20.6km s-min=9.3km az=75.0*
*NEIC **12** 07:51:13.0±0.2, 1.06N×126.32E, h10km, mb5.2/42, Error ellipse: s-maj=9.8km s-min=5.5km az=67.0*
*MOS **12** 07:51:21.7±1.6, 1.04N×126.15E, h92km, mb5.1/32, Error ellipse: s-maj=12.8km s-min=6.1km az=109.0*
*ISCJB **12** 07:51:22.3±1.2, 1.08N±0.04×126.23E±0.05, h101km±11km, mb5.0/93, Error ellipse: s-maj=9.1km s-min=6.0km az=164.0*
*BJI **12** 07:51:34.1, 1.28N×126.04E, h210km, mB5.0, mb4.7*
ISC 12 07:51:23.6±1.0, **1.06N**±0.04×**126.23E**±0.05, **h96**km±9km, **h208**km±2.8km**:pP-P, n202,** σ1^{s}**20**/200, **mb5.0**/93, **8C-6D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	5.11	157	P	Pn	07 52 38.9	+1.1
	224nm,0.9s						
CTBH	Cotabato--PC H	6.43	342	eP	Pn	07 52 49.6	-6.2
PCI	Palu	6.68	253	P	Pn	07 53 04.5	+5.4
	183nm,1.0s						
BUKP	Musuan	6.87	350	eP	Pn	07 52 56.8	-5.1
KKM	Kota Kinabalu	11.15	297	eP	Pn	07 54 00.1	0.0
KKM				eS	Sn	07 56 12.3	+10
BATI	Kupang	11.48	193	Pn	Pn	07 54 06.4	+1.9
	2.8nm,0.3s,baz=284,slow=5.8,SNR=3.0						
KMMI	Kalianget	14.64	236	P	Pn	07 54 55.5	+9.4
	265nm,1.3s						
KSM	Kuching	15.92	272	P	Pn	07 55 06.4	+4.3
KRKI	Karangkates	16.50	236	P	Pn	07 55 15.9	+6.5
	329nm,1.4s						
BJII	Banjamegara	18.46	243	P	P	07 55 35.1	+3.1
	97nm,1.4s						
TPI	Tanjungpandan	18.95	258	P	P	07 55 41.2	+3.9
	27nm,1.2s						
FITZ	Fitzroy Crossi	19.05	182	eP	P	07 55 35.0	-3.3
	37nm,1.2s						
FITZ	Fitzroy Crossi	19.05	182	P	P	07 55 35.7	-2.5
	0.8nm,0.3s,baz=17,slow=9.9,SNR=19						
WRA	Warramunga Arr	22.34	160	P	P	07 56 10.0	-3.6
	49nm,0.5s,mb5.1,baz=339,slow=10,SNR=225						
WRA				PcP	PcP	08 00 08.0	+2.2
	2.4nm,0.8s,baz=324,slow=2.0,SNR=4.2						
WRA				S	S	08 00 14.0	+1.4
	5.0nm,0.9s,baz=348,slow=18,SNR=12						
WB2	Warramunga Arr	22.34	160	⇑iP	P	07 56 10.1	-3.5
WB2				eS	S	08 00 11.8	-0.9
COEN	Coen	22.46	132	P	P	07 56 12.1	-2.9
	12nm,0.9s,mb4.2						
MBWA	Marble Bar	22.98	196	eP	P	07 56 20.3	+0.2
	25nm,1.3s,mb4.4						
NACB	Ninganchiao	23.41	349	eP	P	07 56 24.9	+0.8
YHNB	Yeheng	23.94	349	eP	P	07 56 29.1	+0.2
QIZ	Qiongzhong	24.02	319	P	P	07 56 28.5	-1.2
QIZ				AP		07 57 08.2	
QIZ				S	S	08 00 30.1	-10
QIZ				XS	sS	08 01 35.8	+19
QIZ				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.4						
QIZ				AMB	AMB		
	comp=Z,183nm,5.8s						
QIZ				LR	LR		
	comp=N,472nm,21.6s						
QIZ				LR	LR		
	comp=E,443nm,22.5s						
QIZ				LR	LR		
	comp=Z,737nm,22.1s						
QIZ	Qiongzhong	24.02	319	eP	P	07 56 28.5	-1.1
QZH	Quanzhou	24.86	343	P	P	07 56 38.7	+1.4
ASAR	Alice Springs	25.68	164	P	P	07 56 42.7	-2.0
ASAR						08 00 14.0	
ASAR				S	S	08 01 13.6	+7.2
ASAR	Alice Springs	25.68	164	P	P	07 56 42.7	-2.0
	comp=Z,20nm,0.7s,mb4.6,baz=342,slow=7.1,SNR=138						
ASAR				PcP	PcP	08 00 13.9	+1.0
	comp=Z,3.0nm,0.7s,baz=358,slow=2.5,SNR=5.8						
ASAR				S	S	08 01 13.6	+7.3
	comp=Z,3.1nm,0.7s,baz=353,slow=19,SNR=6.0						
ASAR				ScP	ScP	08 03 54.3	+10
	comp=Z,2.5nm,1.0s,baz=336,slow=2.1,SNR=6.1						
JOW	Kunigami	25.70	4	P	P	07 56 43.9	-1.0
	comp=Z,25nm,0.6s,mb4.8,baz=201,slow=8.6,SNR=9.1						
PPI	Padang Panjang	25.87	267	P	P	07 56 51.7	+5.1
	comp=Z,51nm,1.1s,mb4.9						
KULM	Kulim	25.87	280	eP	P	07 56 46.2	-0.4
PSI	Prapat	27.34	274	P	P	07 56 59.6	-0.1
	comp=Z,35nm,1.0s,mb4.9,baz=97,slow=4.4,SNR=25						
CTA	Charters Tower	28.76	138	eP	P	07 57 10.4	-1.9
	comp=Z,7.6nm,0.8s,mb4.4						
CTA	Charters Tower	28.76	138	eP	P	07 57 10.4	-1.9
CTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CTA	Charters Tower	28.76	138	P	P	07 57 10.5	-1.8
	comp=Z,12nm,0.8s,mb4.5,baz=327,slow=11,SNR=13						
CTA				PcP	PcP	08 00 22.3	+1.9
	comp=Z,5.5nm,0.7s,baz=295,slow=6.0,SNR=4.1						
CTAO	Charters Tower	28.76	138	eP	P	07 57 10.8	-1.6
	comp=Z,17nm,1.0s,mb4.6						
CTAO	Charters Tower	28.76	138	eP	P	07 57 10.8	-1.5
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
SSE	Sheshan	30.25	351	eP	P	07 57 26.9	+1.5
SSE				XP	sP	07 58 34.0	+36
SSE				S	S	08 02 08.7	-9.5
SSE				XS	sS	08 03 25.7	+30
SSE				AMB	AMB		
	comp=Z,33nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,156nm,5.5s						
SSE				LR	LR		
	comp=N,232nm,25.9s						
SSE				LR	LR		
	comp=E,93nm,25.9s						
SSE				LR	LR		
	comp=Z,308nm,24.3s						
GYA	Guiyang	31.49	325	⇑iP	P	07 57 38.6	+2.2
GYA				AP	pP	07 58 24.2	+26
GYA				PP	PP	07 58 51.8	+2.4
GYA				PCP	PcP	08 00 29.0	+1.6
GYA				S	S	08 02 28.2	-9.5
GYA				XS	sS	08 03 46.7	+31
GYA				SCP	ScP	08 03 50.4	-12
GYA				PCS	PcS	08 04 12.3	+0.3
GYA				SS	SS	08 04 32.8	-24
GYA				SCS	ScS	08 07 46.4	-14
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,180nm,6.0s						
GYA				LR	LR		
	comp=N,410nm,17.8s						
GYA				LR	LR		
	comp=E,490nm,17.6s						
GYA				LR	LR		
	comp=Z,470nm,18.2s						
NJ2	Nanjing	31.60	348	eP	P	07 57 40.2	+2.9

NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.0
FORT Forrest 31.71 177 *eP* **P 07 57 35.1 -3.1**
comp=Z,77nm,0.9s,mb5.4
CHTO Chiang Mai 32.05 305 *eP* **P 07 57 40.8 -0.6**
comp=Z,21nm,1.0s,mb4.8
CHTO Chiang Mai 32.05 305 *eP* **P 07 57 40.8 -0.6**
CHTO pmax pmax
comp=Z,21nm,1.0s,mb4.8
KMI Kunming 32.97 318 P **P 07 57 49.5 +0.2**
KMI AP pP 07 58 32.9 +22
KMI XP sP 07 59 00.3 +38
KMI S **S 08 02 50.2 -10**
KMI SS SS 08 05 06.3 -20
KMI AMB AMB
comp=Z,21nm,1.3s,mb4.8
KMI AMB AMB
comp=Z,153nm,4.4s
KMI LR LR
comp=N,405nm,15.4s
KMI LR LR
comp=E,420nm,17.2s
KMI LR LR
comp=Z,603nm,15.5s
KLBR Kellerberrin 33.45 193 *eP* **P 07 57 52.6 -0.8**
comp=Z,17nm,0.5s,mb5.1
MUN Mundaring 34.20 195 *eP* **P 07 58 00.1 +0.2**
NWAO Narrogin (SRO) 34.85 193 P **P 07 58 06.1 +0.6**
NWAO *eP* 07 58 06.4
NWAO Narrogin (SRO) 34.85 193 P **P 07 58 06.1 +0.6**
comp=Z,12nm,0.5s,mb5.0,baz=23,slow=7.9,SNR=23
EIDS Eidsvold 35.62 139 *eP* **P 07 58 09.3 -2.9**
comp=Z,14nm,1.4s,mb4.7
STKA Stephens Creek 35.85 157⇑ *iP* **P 07 58 12.2 -1.9**
comp=Z,34nm,0.8s,mb5.3
STKA Stephens Creek 35.85 157 P **P 07 58 12.4 -1.6**
comp=Z,43nm,0.8s,mb5.4,baz=331,slow=8.6,SNR=63
STKA PcP PcP 08 00 41.4 +1.8
comp=Z,2.6nm,0.5s,baz=301,slow=8.6,SNR=3.0
KSRS Korea Array 36.25 2 P **P 07 58 16.9 -0.6**
comp=Z,2.8nm,0.6s,mb4.4,baz=181,slow=9.8,SNR=8.3
CD2 Chengdu 36.53 327⇑ *iP* **P 07 58 18.4 -1.6**
CD2 AP pP 07 59 01.4 +19
CD2 XP sP 07 59 24.8 +32
CD2 PP PP 07 59 48.9 +3.9
CD2 S **S 08 03 42.7 -13**
CD2 SS SS 08 06 21.4 -15
CD2 AMB AMB
comp=Z,50nm,0.9s,mb5.4
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,600nm,21.6s
CD2 LR LR
comp=E,710nm,22.8s
CD2 LR LR
comp=Z,510nm,19.2s
MJAR Matsushiro Arr 37.01 16 P **P 07 58 21.2 -2.7**
comp=Z,4.3nm,0.4s,mb4.7,baz=182,slow=9.8,SNR=13
MAJO Matsushiro 37.01 16 P **P 07 58 26.4 +2.5**
comp=Z,12nm,0.6s,mb5.0
MAJO Matsushiro 37.01 16 P **P 07 58 26.4 +2.5**
MAJO pmax pmax
comp=Z,12nm,0.6s,mb5.0
MAT Matsushiro 37.01 16 P **P 07 58 22.1 -1.8**
DL2 Dalian 37.90 354 P **P 07 58 31.1 -0.3**
DL2 AMB AMB
comp=Z,30nm,0.7s,mb5.2
ARMA Armidale 39.56 144 *eP* **P 07 58 44.1 -1.3**
BJT Baijiatuau 39.84 348 *eP* **P 07 58 46.3 -1.3**
comp=Z,41nm,1.1s,mb5.2
BJT Baijiatuau 39.84 348 *eP* **P 07 58 46.3 -1.3**
BJT pmax pmax
comp=Z,41nm,1.1s
BJI Beijing 39.86 348 P **P 07 58 45.9 -1.9**
BJI AP pP 07 59 29.2 +19
BJI XP sP 07 59 53.8 +33
BJI S **S 08 04 30.0 -15**
BJI XS sS 08 05 48.8 +25
BJI SS SS 08 07 28.1 -17
BJI AMB AMB
comp=Z,13nm,1.1s,mb4.7
BJI AMB AMB
comp=Z,342nm,3.7s
BJI LR LR
comp=N,339nm,19.8s
BJI LR LR
comp=E,400nm,16.1s
BJI LR LR
comp=Z,338nm,24.4s
LZH Lanzhou 40.57 332 *eP* **P 07 58 52.4 -1.3**
LZH AP pP 07 59 38.0 +22
LZH PP PP 08 00 30.2 +1.2
LZH PCP PcP 08 00 49.3 -4.9
LZH *eS* **S 08 04 39.0 -17**
LZH XS sS 08 06 05.0 +30
LZH SS SS 08 07 44.2 -15
LZH AMB AMB
comp=Z,42nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,169nm,4.5s
LZH LR LR
comp=E,488nm,15.1s
LZH LR LR
comp=Z,810nm,16.6s
SHL Shillong 41.10 309 *eP* **P 07 58 57.0 -1.2**
HHC Hu-ho-hao-te 41.78 343 *eP* **P 07 59 03.6 +0.1**
HHC AP pP 07 59 50.6 +25
HHC XP sP 08 00 14.4 +37
HHC PP PP 08 00 46.5 +4.5
HHC PCP PcP 08 00 56.0 -2.0
HHC PCS PcS 08 04 47.7 -1.9
HHC S **S 08 05 00.4 -13**
HHC XS sS 08 06 24.3 +32
HHC SS SS 08 08 08.9 -15
HHC SCS ScS 08 08 39.8 -17
HHC AMB AMB
comp=Z,9.0nm,1.1s,mb4.4
HHC AMB AMB
comp=Z,258nm,4.9s
CN2 Changchun 42.56 359 *eP* **P 07 59 10.9 +1.1**
CN2 *eAP* pP 07 59 56.0 +24
CN2 *eS* **S 08 05 15.0 -10**
CN2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
CN2 AMB AMB
comp=Z,300nm,4.0s
MDJ Mudanjiang 43.48 3 P **P 07 59 16.5 -0.7**
MDJ SCP ScP 08 04 37.0 -10
MDJ PCS PcS 08 04 57.9 +1.6
MDJ S **S 08 05 33.3 -5.2**
MDJ XS sS 08 06 49.3 +32
MDJ AMB AMB
comp=Z,24nm,1.3s,mb4.8
MDJ AMB AMB
comp=Z,231nm,4.5s
MDJ Mudanjiang 43.48 3 *eP* **P 07 59 17.1 0.0**
comp=Z,35nm,1.0s,mb5.0
LSA Lhasa 43.86 314 P **P 07 59 20.8 +0.2**
LSA AMB AMB
comp=Z,20nm,1.0s,mb4.8
LSA Lhasa 43.86 314 *eP* **P 07 59 21.0 +0.5**
comp=Z,24nm,0.7s,mb5.0
LSA Lhasa 43.86 314 *eP* **P 07 59 21.0 +0.4**
LSA pmax pmax
comp=Z,24nm,0.7s,mb5.0
GTA Gaotai 45.14 331 *eP* **P 07 59 29.4 -1.2**
GTA AP pP 08 00 11.9 +19
GTA XP sP 08 00 36.6 +32
GTA PCP PcP 08 01 11.9 +2.4
GTA PP PP 08 01 16.9 -1.1
GTA S **S 08 05 46.6 -16**
GTA XS sS 08 07 05.3 +23
GTA AMB AMB
comp=Z,5.0nm,1.0s,mb4.2
GTA AMB AMB
comp=Z,189nm,5.7s
GTA LR LR
comp=N,261nm,16.4s
GTA LR LR
comp=E,485nm,15.6s
GTA LR LR
comp=Z,459nm,19.0s
TAPN Taplejung 45.23 309 *eP* **P 07 59 30.3 -1.2**
comp=Z,20nm,0.6s,mb5.0

ODAN Odare 45.25 308 *eP* **P 07 59 30.4 -1.2**
comp=Z,27nm,0.7s,mb5.1
ASAJ Asahikawa 45.28 17 P **P 07 59 31.0 -0.5**
comp=Z,15nm,0.8s,mb4.8,baz=228,slow=33,SNR=5.3
PALK Pallekele 45.79 279 P **P 07 59 35.9 -0.2**
JIRN Jiri 46.57 308 *eP* **P 07 59 41.3 -0.7**
comp=Z,46nm,0.8s,mb5.2
KKN Kakani 47.34 308 *eP* **P 07 59 46.3 -1.7**
YSS Yuzh-Sakhalins 47.94 15⇓ *eP* **P 07 59 54.3 +2.1**
YSS pmax pmax
comp=Z,60nm,2.2s,mb5.0
GKN Gorkha 47.95 308 *eP* **P 07 59 51.3 -1.4**
comp=Z,21nm,0.5s,mb5.2
KLR Kul'dur 48.22 5 *eP* **P 07 59 55.7 +1.3**
HIA Hailar 48.35 354 *eP* **P 07 59 55.7 +0.4**
comp=Z,52nm,1.3s,mb5.2
HIA Hailar 48.35 354 *eP* **P 07 59 55.7 +0.3**
HIA pmax pmax
comp=Z,52nm,1.3s
ULN Ulaanbaatar 49.50 343 *eP* **P 08 00 04.0 -0.2**
comp=Z,27nm,1.3s,mb5.0
ULN Ulaanbaatar 49.50 343 *dP* **P 08 00 03.1 -1.1**
HYB Hyderabad 49.59 292 *eP* **P 08 00 04.0 -1.4**
comp=Z,85nm,1.0s,mb5.6
HYB Hyderabad 49.59 292 *eP* **P 08 00 04.0 -1.4**
HYB pmax pmax
comp=Z,85nm,1.0s,mb5.6
HYB Hyderabad 49.59 292 *i P* **P 08 00 04.0 -1.4**
comp=Z,85nm,1.0s,mb5.6
SONM Songjin Array 49.66 343 P **P 08 00 04.7 -0.7**
comp=Z,6.6nm,0.8s,mb4.6,baz=163,slow=7.5,SNR=25
SONM LR LR 08 21 36.0
comp=Z,293nm,19.2s,baz=171,slow=37
CIT Chita 51.89 350 *eP* **P 08 00 22.0 -0.1**
CIT pmax pmax
comp=Z,121nm,1.3s,mb5.8
ZAK Zakamensk 52.88 342 *eP* **P 08 00 28.1 -1.3**
ZAK *e* 08 01 38.5
ZAK pmax pmax
comp=Z,3.0nm,1.2s,mb4.2
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb4.2
TLY Talaya 53.90 343 *eP* **P 08 00 37.6 +0.7**
comp=Z,9.5nm,0.8s,mb4.9
TLY Talaya 53.90 343 *eP* **P 08 00 37.2 +0.3**
TLY *e* 08 10 17.4
TLY pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
TLY MLR MLR
comp=Z,283nm,19.0s
POO Poona 54.20 292 *ex* x 08 00 37.0
WMQ Urumqi 54.63 326⇑ *iP* **P 08 00 42.1 -0.3**
WMQ AP pP 08 01 28.6 +23
WMQ PCP PcP 08 01 44.1 -0.1
WMQ XP sP 08 01 50.9 +34
WMQ PP PP 08 02 48.1 +2.3
WMQ SCP ScP 08 05 20.6 -13
WMQ PCS PcS 08 05 41.9 -1.9
WMQ S **S 08 08 01.6 -13**
WMQ XS sS 08 09 22.1 +27
WMQ AMB AMB
comp=Z,367nm,6.0s
WMQ LR LR
comp=N,303nm,23.5s
WMQ LR LR
comp=E,370nm,23.5s
WMQ LR LR
comp=Z,408nm,18.1s
MOY Mondy 54.72 341 *eP* **P 08 00 43.0 +0.2**
CLNS Chul'man 55.62 359 *eP* **P 08 00 45.6 -3.6**
CLNS pmax pmax
comp=Z,13nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS pmax pmax
comp=E,5.0nm,0.9s
THN Thein Dam 56.80 309 *ex* **P 08 00 56.1 -2.0**
BOD Bodaibo 57.42 352 *eP* **P 08 01 01.6 -0.3**
BOD pmax pmax
comp=Z,23nm,0.9s,mb5.2
MK31 Makanchi Array 59.47 326 *i P* **P 08 01 15.7 -0.7**
MK31 pmax pmax
comp=Z,3.0nm,0.3s,mb4.8
MKAR Makanchi Array 59.47 326 P **P 08 01 15.8 -0.6**
MKAR LR LR 08 28 13.5
MKAR Makanchi Array 59.47 326 *i P* **P 08 01 15.8 -0.6**
MKAR pmax pmax
comp=Z,6.0nm,0.4s
MKAR Makanchi Array 59.47 326 P **P 08 01 15.8 -0.6**
comp=Z,5.9nm,0.4s,mb5.0,baz=123,slow=7.6,SNR=83
MKAR LR LR 08 28 13.5
comp=Z,432nm,21.1s,baz=247,slow=37
KSH Kashi 59.59 316 *eP* **P 08 01 18.7 +1.3**
KSH *e*PCP PcP 08 02 03.9 +0.1
KSH *e*AP pP 08 02 05.4 +24
KSH *e*XP sP 08 02 28.5 +37
KSH *e*PP PP 08 03 33.5 +3.4
KSH *e*SCP ScP 08 05 40.4 -16
KSH *e*PCS PcS 08 06 06.1 +0.2
KSH S **S 08 09 05.5 -15**
KSH *e*XS sS 08 10 30.5 +29
KSH *e*SCS ScS 08 10 43.7 -15
KSH *e*SS SS 08 13 10.5 -6.8
KSH LR LR
comp=N,888nm,5.4s
KSH LR LR
comp=E,2μm,5.4s
KSH LR LR
comp=Z,1μm,7.6s
RPZ Rata Peaks 59.90 144 P **P 08 01 20.6 +1.2**
comp=Z,10nm,0.7s,mb5.0,baz=354,slow=8.5,SNR=4.8
ULHL Ulahol 60.68 319 P **P 08 01 25.6 +0.8**
SNR=7.5
YAK Yakutsk 60.88 2⇑ *eP* **P 08 01 26.9 +1.2**
YAK pmax pmax
comp=Z,17nm,0.7s,mb5.2
KZA Kyzart 61.25 319 P **P 08 01 29.6 +0.9**
SNR=18
MA2 Magadan 61.40 14 *eP* **P 08 01 30.5 +1.2**
comp=Z,13nm,0.9s,mb5.0
MA2 Magadan 61.40 14 *eP* **P 08 01 30.4 +1.1**
MA2 pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
TKM2 Tokmak 2 61.42 320 *eP* **P 08 01 29.3 -0.5**
comp=Z,27nm,1.1s,mb5.2
TKM2 Tokmak 2 61.42 320 *i P* **P 08 01 29.3 -0.5**
TKM2 pmax pmax
comp=Z,20nm,1.0s,mb5.1
TKM2 Tokmak 2 61.42 320 P **P 08 01 29.9 +0.1**
SNR=12
UCH Uchtor 61.81 319 *eP* **P 08 01 33.0 +0.6**
comp=Z,20nm,0.8s,mb5.2
UCH Uchtor 61.81 319 P **P 08 01 32.8 +0.4**
SNR=24
AAK Ala-Archa 62.01 319 *eP* **P 08 01 32.9 -0.8**
comp=Z,9.5nm,0.9s,mb4.8
AAK Ala-Archa 62.01 319 *eP* **P 08 01 32.9 -0.8**
AAK pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
AAK Ala-Archa 62.01 319 P **P 08 01 33.5 -0.3**
SNR=6.7
FRU Bishkek 62.02 319 *eP* **P 08 01 33.0 -0.8**
FRU *e* 08 02 02.0
USP Ospenovka 62.29 320 P **P 08 01 35.4 -0.3**
SNR=24
AML Almayashu 62.31 318 *eP* **P 08 01 36.3 +0.6**
comp=Z,38nm,1.0s,mb5.4
AML Almayashu 62.31 318 P **P 08 01 36.4 +0.6**
SNR=28
EKS2 Erkin-Say 62.49 319 *eP* **P 08 01 37.2 +0.2**
comp=Z,23nm,1.0s,mb5.2
EKS2 Erkin-Say 62.49 319 P **P 08 01 37.3 +0.4**
SNR=9.3
KURK Kurchatov 63.72 328 *eP* **P 08 01 44.5 -0.4**
comp=Z,60nm,0.9s,mb5.4
KURK Kurchatov 63.72 328 *dP* **P 08 01 43.9 -1.0**
KK31 Karatay Array 64.85 318 *i P* **P 08 01 51.3 -1.1**
KK31 pmax pmax
comp=Z,14nm,0.8s,mb4.8
BRVK Borovoye 69.35 328 *eP* **P 08 02 20.7 0.0**
comp=Z,14nm,0.9s,mb4.8
BRVK Borovoye 69.35 328 *eP* **P 08 02 20.7 0.0**
BRVK pmax pmax
comp=Z,14nm,0.9s,mb4.8
TIXI Tiksi 70.50 1 *eP* **P 08 02 27.3 -0.1**
comp=Z,19nm,1.2s,mb4.8

TIXI Tiksi 70.50 1 *i P* **P 08 02 27.8 +0.4**
TIXI pmax pmax
comp=Z,19nm,1.3s,mb4.8
BILL Bilibino 72.25 15 *eP* **P 08 02 38.3 +0.3**
comp=Z,5.0nm,0.4s,mb4.7
BILL Bilibino 72.25 15 *eP* **P 08 02 37.7 -0.3**
BILL pmax pmax
comp=Z,16nm,1.6s,mb4.6
AKTK Aktyubinsk 75.44 322 P **P 08 02 57.4 +0.4**
AKTO Aktyubinsk 75.44 322 P **P 08 02 57.4 +0.4**
comp=Z,16nm,0.6s,mb4.9,baz=108,slow=8.7,SNR=45
RAR Rarotonga 75.49 112 LR LR 08 29 38.6
comp=Z,1μm,21.1s,baz=167,slow=31
SVE Sverdlovsk 75.97 329⇓ *eP* **P 08 03 00.3 +0.5**
SVE *e* 08 13 14.7
SVE pmax pmax
comp=Z,116nm,1.0s,mb5.6
ARU Arti 76.92 328 *eP* **P 08 03 04.8 -0.4**
comp=Z,59nm,0.8s,mb5.4
ARU Arti 76.92 328 P **P 08 03 04.8 -0.4**
GAMB Gambell 77.03 24 *eP* **P 08 03 06.9 +1.2**
SOKR Solikamsk 78.78 331⇑ *iP* **P 08 03 15.8 +0.3**
SOKR pmax pmax
comp=Z,60nm,1.2s,mb5.3
KBD Kabd 79.47 299 *eP* **P 08 03 19.2 -0.7**
KBD AMb AMB 08 03 20.8
comp=Z,102nm,0.7s,mb5.7
UMR Umm Al-Rimmam 79.48 300 *eP* **P 08 03 19.3 -0.7**
UMR AMb AMB 08 03 20.8
comp=Z,49nm,0.7s,mb5.4
RDF Al-Radifah 79.58 299 *eP* **P 08 03 20.2 -0.3**
RDF AMb AMB 08 03 23.9
comp=Z,48nm,0.7s,mb5.5
NAY Al-Naaiem 79.87 299 *eP* **P 08 03 21.6 -0.5**
NAY AMb AMB 08 03 22.7
comp=Z,30nm,0.8s,mb5.2
OPO Ambohidratompo 79.95 251 P **P 08 03 24.7 +2.0**
comp=Z,6.9nm,0.9s,mb4.5,baz=93,slow=7.3,SNR=6.0
RST Umm Al-Ruwaisa 80.10 300 *eP* **P 08 03 22.9 -0.4**
RST AMb AMB 08 03 23.8
comp=Z,108nm,0.6s,mb5.8
VNDA Vanda 80.86 173 P **P 08 03 26.5 +0.1**
VNDA Vanda 80.86 173 P **P 08 03 26.5 +0.1**
comp=Z,4.5nm,0.7s,mb4.4,baz=303,slow=5.3,SNR=18
MAK Makhachkala 81.02 313 *eP* **P 08 03 26.6 -1.4**
MAK pmax pmax
comp=Z,21nm,0.3s,mb5.5
SBA Scott Base 81.78 172 *eP* **P 08 03 33.6 +2.4**
comp=Z,11nm,1.1s,mb4.6
SBA Scott Base 81.78 172 *eP* **P 08 03 33.6 +2.4**
SBA pmax pmax
comp=Z,11nm,1.1s,mb4.6
TTA Tatalina 83.50 27 *eP* **P 08 03 42.1 +1.7**
ZEI Tsey 83.64 313 *eP* **P 08 03 43.3 +1.7**
ZEI pmax pmax
comp=Z,46nm,1.0s,mb5.3
PRGR Permogore 84.60 332⇑ *iP* **P 08 03 46.6 +0.6**
KIV Kislovodsk 84.61 314 *eP* **P 08 03 47.4 +0.9**
comp=Z,21nm,0.8s,mb5.1
KIV Kislovodsk 84.61 314 *eP* **P 08 03 46.9 +0.4**
KIV pmax pmax
comp=Z,21nm,0.9s,mb5.1
PPT Papeete 84.78 108 *e*SS SS 08 20 10.2 +27
comp=Z,157nm,29.2s
PPT *e*LR LR 08 31 20.7
comp=Z,263nm,26.0s
IMA2 Indian Mountai 85.01 24 *eP* **P 08 03 49.6 +1.6**
TBI Tubuai 85.19 113 *e*SS SS 08 20 12.8 +24
comp=Z,79nm,28.8s
TBI *e*LR LR 08 31 29.3
comp=Z,177nm,27.8s
VRHR Novokhopersk 85.78 321 *eP* **P 08 03 52.7 +0.5**
VRHR pmax pmax
comp=Z,30nm,0.5s,mb5.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.4s
SLKM Skilak Lake 85.90 30 *eP* **P 08 03 53.3 +0.7**
MCK McKinley 86.77 26 *eP* **P 08 03 57.6 +0.9**
comp=E,14nm,1.5s,mb4.7
MCK McKinley 86.77 26 *eP* **P 08 03 57.6 +0.9**
MCK pmax pmax
comp=Z,14nm,1.5s,mb4.7
VRSR Storozhevoye 87.32 321 *eP* **P 08 04 00.7 +1.0**
VRSR pmax pmax
comp=N,1.0nm,0.9s
VRSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
VRSR pmax pmax
comp=E,5.0nm,0.8s
MALT Malatya 87.62 308 *eP* **P 08 04 03.0 +1.5**
comp=E,34nm,1.3s,mb5.2
MALT Malatya 87.62 308 *eP* **P 08 04 03.0 +1.6**
MALT pmax pmax
comp=Z,34nm,1.3s,mb5.2
MOS Moscow 88.34 326 *eP* **P 08 04 07.2 +2.8**
ANN Anapa 88.40 315 *eP* **P 08 04 03.9 -1.1**
ANN *e*PPP 08 09 29.7
ANN *e* 08 14 18.3
ANN pmax pmax
comp=Z,77nm,1.1s,mb5.7
OBN Obninsk 88.94 325 *eP* **P 08 04 06.1 -1.2**
OBN pmax pmax
comp=Z,24nm,1.2s,mb5.1
KMBO Kilima Mbogo 88.99 269 *eP* **P 08 04 10.2 +1.8**
comp=Z,14nm,1.1s,mb4.9
KMBO Kilima Mbogo 88.99 269 *eP* **P 08 04 10.2 +1.8**
KMBO pmax pmax
comp=Z,14nm,1.1s
KMBO Kilima Mbogo 88.99 269 P **P 08 04 09.6 +1.2**
comp=Z,2.9nm,0.6s,mb4.5,baz=78,slow=6.8,SNR=9.8
SYO Syowa Base 89.77 201⇓ *eX* **P 08 04 10.0 -0.8**
SIM Simferopol' 90.76 315 *eP* **P 08 04 17.0 +1.0**
SIM pmax pmax
comp=Z,25nm,0.7s,mb5.5
DAWY Dawson 90.98 26 *eP* **P 08 04 17.9 +1.3**
QSPA South Pole Qui 90.98 180 *eP* **P 08 04 19.2 +2.9**
comp=Z,74nm,2.1s,mb5.5
JOF Joensuu 91.31 333 *ep* **P 08 04 22.2 +4.1**
comp=Z,11nm,0.5s,mb5.2
JOF Joensuu 91.31 333 *eP* **P 08 04 22.2 +4.1**
JOF pmax pmax
comp=Z,11nm,0.5s,mb5.2
BRTR Keskin Array B 91.33 310 P **P 08 04 18.9 +0.1**
comp=Z,3.5nm,0.8s,mb4.5,baz=118,slow=4.6,SNR=14
ARCES ARCESS Array B 92.77 340 P **P 08 04 25.0 +0.2**
comp=Z,5.9nm,1.0s,mb4.9,baz=82,slow=6.9,SNR=13
INK Inuvik 92.82 21 *eP* **P 08 04 25.0 0.0**
comp=Z,66nm,0.9s,mb6.0
INK Inuvik 92.82 21 *eP* **P 08 04 25.0 0.0**
INK pmax pmax
comp=Z,66nm,0.9s
AKASG Malin Array Be 93.63 321 *i P* **P 08 04 32.0 +2.9**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 93.63 321 P **P 08 04 29.2 +0.1**
comp=Z,2.1nm,0.6s,mb4.6,baz=75,slow=4.2,SNR=8.2
KAF Kangasniemi 93.72 332 *ep* **P 08 04 32.8 +3.5**
comp=Z,7.5nm,0.5s,mb5.3,baz=77,slow=4.2
KAF Kangasniemi 93.72 332 *eP* **P 08 04 32.8 +3.5**
KAF pmax pmax
comp=Z,8.0nm,0.5s,mb5.3
FINES FINESS Array B 93.93 332 *i P* **P 08 04 31.1 +0.8**
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES FINESS Array B 93.93 332 P **P 08 04 30.1 -0.1**
comp=Z,4.0nm,0.5s,mb5.0,baz=58,slow=7.2,SNR=19
UZH Uzhgorod 98.39 319 *eP* **P 08 04 43.0 -7.8**
RKT Rikitea 98.51 113 *e*LR LR 08 37 39.6
comp=Z,261nm,33.5s
NOA NORSAR Array B 100.94 333 P Pdif 08 05 02.1 +0.1
comp=Z,0.7nm,0.7s,baz=222,slow=13,SNR=2.8
YKA Yellowknife Ar 102.12 24 *i P* Pdif 08 05 08.0 +0.7
YKA Yellowknife Ar 102.12 24 P Pdif 08 05 07.4 +0.2
comp=Z,0.4nm,0.6s,baz=297,slow=4.5,SNR=9.1
BRG Berggiesshubel 103.06 323 *eP* Pdif 08 05 16.2 +4.8
BRG pmax pmax
comp=Z,2.0nm,0.8s
BRG Berggiesshubel 103.06 323 *eP* Pdif 08 05 16.2 +4.8
comp=Z,2.8nm,0.8s
NVAR Mina Array Bea 109.05 49 Pdiff Pdif 08 05 40.4 +2.3
comp=Z,0.1nm,0.3s,baz=335,slow=4.0,SNR=3.4
ULM Lac du Bonnet 117.53 29 PKP PKPdf 08 09 58.6 +0.4
comp=Z,1.3nm,0.8s,baz=341,slow=3.1,SNR=3.0
ANMO Albuquerque 119.17 48⇓ *i*PKIKP PKPdf 08 10 04.0 +2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECSD	EROS,Sioux Fal	121.25	35	ePKPdf	PKPdf	08 10 06.3	+0.6
TORD	Torodi Ar. Bea	123.22	286	PKP	PKPdf	08 10 11.0	+0.8
	comp=Z,3.2nm,0.7s,baz=40,slow=1.8,SNR=18						
SCHQ	Schefferville	123.27	9	PKP	PKPdf	08 10 09.2	0.0
	comp=Z,3.0nm,0.8s,baz=250,slow=11,SNR=8.4						
TXAR	Lajitas Array	123.61	53	PKP	PKPdf	08 10 10.9	+0.3
	comp=Z,1.0nm,0.8s,baz=258,slow=0.4,SNR=9.1						
JCT	Junction City	126.16	50	ePKPdf	PKPdf	08 10 17.3	+1.8
LCO	Las Campanas	147.85	151	ePKPdf	PKPdf	08 10 56.0	+0.8
LCO				ePKPbc	PKPbc	08 10 59.6	+1.5
LCO				ePKPab	PKPab	08 11 03.7	+2.9
LPAZ	La Paz	159.28	138	PKP	PKPdf	08 11 14.1	+2.4
	comp=Z,0.7nm,0.7s,baz=321,slow=3.3,SNR=4.0						

MOS **12** *08:07:57.9±1.0, 41.27S×85.60E, h10km, mb5.0/8, Error ellipse: s-maj=23.0km s-min=16.7km az=81.0*

IDC **12** *08:07:57.9±0.5, 41.16S×85.51E, h0km, mb4.6/17, mb1 4.7/17, mb1mx4.6/19, mbtmp4.6/17, MS4.8/23, Ms1 4.8/23, ms1mx4.8/26, Error ellipse: s-maj=18.5km s-min=14.0km az=172.0*

BJI **12** *08:07:57.4, 41.11S×85.13E, h10km, mB5.4, mb5.0, Ms5.3, Msz5.0*

ISCJB **12** *08:07:58.0±0.3, 41.21S±0.06×85.50E±0.07, h10km, mb4.8/39, MS5.1/95, Error ellipse: s-maj=8.8km s-min=7.5km az=154.1*

NEIC **12** *08:07:59.7±0.2, 41.20S×85.53E, h10km, mb4.9/16, MS5.2/69, Error ellipse: s-maj=7.7km s-min=6.7km az=170.0*

GCMT **12** *08:07:59.7±0.2, 41.17S×85.67E, h15km, MW5.5/94, Moment Tensor Solution. s73,c107; s94,c181; Duration: 1.3s Moment tensor: Scale 10^{17}Nm; M_{rr}-0.20±.03; $M_{\theta\theta}$1.98±.04; $M_{\phi\phi}$-1.78±.03; $M_{r\theta}$-0.03±.08; $M_{\theta\phi}$0.16±.03; $M_{\phi r}$-0.26±.08; Best double couple: $M_0$1.90800×10^{17} NP1:ϕ_s312.00000°,δ83.00000°, λ-6.00000°. NP2:ϕ_s43.00000°,δ84.00000°,λ-173.00000°. Principal axes: T 1.9880, Plg1.0000°, Azm177.0000°; N -0.1560, Plg81.0000°, Azm80.0000°; P -1.8290, Plg9.0000°, Azm268.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 08:07:59.9±0.3**, 41.22S**±0.06×**85.51E**±0.07**, h10km, (h15km**±.7km**:pP-P), n234,** σ**0.96**/86**, mb4.8**/39**, MS5.1**/95**, 6C-2D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	26.52	82	PFAKE		08 13 50.0	+12
NWAO				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
NWAO	Narrogin (SRO)	26.52	82	LR	LR	08 21 33.4	
	comp=Z,4μm,21.9s,MS4.9,baz=245,slow=31						
CASY	Casey	28.74	159	PFAKE		08 14 10.0	+13
CASY				LR	LR		
	comp=Z,3μm,20.0s,MS4.9						
MAW	Mawson	29.18	198	P	P	08 14 01.4	+0.5
	comp=Z,9.2nm,1.1s,mb4.4,baz=34,slow=13,SNR=4.1						
MAW				LR	LR	08 22 58.4	
	comp=Z,2μm,21.5s,MS4.8,baz=36,slow=31						
MBWA	Marble Bar	35.13	66	eP	P	08 14 53.5	-0.1
MBWA				LR	LR		
	comp=Z,2μm,19.0s,MS4.8						
SYO	Syowa Base	36.73	206⇑	eP	P	08 15 05.6	-1.2
SYO	Syowa Base	36.73	206⇓	eP	P	08 15 09.8	+3.0
FITZ	Fitzroy Crossi	41.29	68	eP	P	08 15 45.4	-0.1
	comp=Z,14nm,1.2s,mb4.5						
FITZ				eS	S	08 21 59.2	-0.5
FITZ	Fitzroy Crossi	41.29	68	eP	P	08 15 46.1	+0.5
FITZ	Fitzroy Crossi	41.29	68	LR	LR	08 31 09.2	
	comp=Z,1μm,18.4s,MS4.8,baz=239,slow=34						
ASAR	Alice Springs	43.84	82	P	P	08 16 05.5	-0.7
	comp=Z,4.1nm,0.9s,mb4.2,baz=230,slow=6.8,SNR=25						
ASAR				PcP	PcP	08 17 51.4	-1.2
	comp=Z,2.0nm,0.8s,baz=227,slow=2.7,SNR=6.4						
TAU	Tasmania Unive	45.00	114	PFAKE		08 16 30.0	+15
TAU				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
STKA	Stephens Creek	45.33	97	eP	P	08 16 17.3	-0.7
	comp=Z,9.7nm,0.8s,mb4.7						
STKA				eS	S	08 23 00.2	+1.6
STKA	Stephens Creek	45.33	97	eP	P	08 16 17.7	-0.3
STKA	Stephens Creek	45.33	97	P	P	08 16 17.5	-0.5
	comp=Z,9.1nm,0.8s,mb4.7,baz=271,slow=7.4,SNR=9.7						
STKA				LR	LR	08 31 36.8	
	comp=Z,1μm,21.3s,MS4.9,baz=238,slow=31						
PSI	Prapat	45.48	19	P	P	08 16 18.7	-0.7
PSI	Prapat	45.48	19	P	P	08 16 18.7	-0.7
	comp=Z,17nm,1.1s,mb4.8,baz=180,slow=10,SNR=9.5						
WRA	Warramunga Arr	46.39	78	P	P	08 16 25.9	-0.6
	comp=Z,11nm,1.1s,mb4.7,baz=232,slow=7.1,SNR=18						
WRA				LR	LR	08 32 14.4	
	comp=Z,902nm,20.1s,MS4.7,baz=235,slow=31						
WB2	Warramunga Arr	46.40	78	eP	P	08 16 25.3	-1.3
WB2				iS	S	08 23 14.5	+0.2
VNDA	Vanda	47.20	163	P	P	08 16 31.5	-0.7
	comp=Z,3.0nm,0.7s,mb4.3,baz=290,slow=6.8,SNR=5.6						
KSM	Kuching	48.10	34	P	P	08 16 40.8	+1.0
SBA	Scott Base	48.25	164	P	P	08 16 40.2	-0.1
	comp=Z,17nm,1.1s,mb5.0						
SBA				LR	LR		
	comp=Z,2μm,20.0s,MS5.1						
SBA	Scott Base	48.25	164	P	P	08 16 40.2	-0.1
SBA				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
SBA				MLR	MLR		
	comp=Z,2μm,20.0s,MS5.1						
PALK	Pallekele	48.45	354	eP	P	08 16 42.1	-0.4
PALK				LR	LR		
	comp=Z,4μm,22.0s,MS5.3						
QSPA	South Pole Qui	48.94	180	eP	P	08 16 45.4	-0.1
	comp=Z,105nm,1.1s,mb5.8						
QSPA	South Pole Qui	48.94	180	P	P	08 16 45.6	+0.1
	comp=Z,61nm,1.0s,mb5.6,baz=299,slow=4.1,SNR=44						
BOSA	Boshof	50.07	265	P	P	08 16 54.9	0.0
BOSA				LR	LR	08 34 29.3	
BOSA	Boshof	50.07	265	P	P	08 16 54.9	0.0
	comp=Z,13nm,1.0s,mb4.9,baz=119,slow=8.1,SNR=8.3						
BOSA				LR	LR	08 34 29.3	
	comp=Z,3μm,18.3s,MS5.3,baz=126,slow=32						
SNAA	Sanae	50.98	204	eP	P	08 17 03.6	+2.4
SNAA				e	pP	08 17 07.5	+3.2
SNAA				e		08 17 11.3	
SNAA				e		08 17 15.9	
SNAA				e		08 17 22.6	
SNAA				e		08 17 31.1	
SNAA	Sanae	50.98	204⇑	eP	P	08 16 59.6	-1.6
SUR	Sutherland	51.49	258	eP	P	08 17 06.7	+1.1
	comp=Z,86nm,1.3s,mb5.5						
SUR				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
SUR	Sutherland	51.49	258	P	P	08 17 06.0	+0.4
	comp=Z,25nm,0.8s,mb5.2,baz=121,slow=5.4,SNR=10						
LBTB	Lobatse	51.75	269	P	P	08 17 06.6	-0.9
	comp=Z,14nm,0.9s,mb4.9,baz=150,slow=8.2,SNR=13						
VNA2	Neumayer--Watz	52.60	204	eP	P	08 17 09.2	-4.1
VNA2				e	pP	08 17 14.0	-2.4
VNA2				e		08 17 19.1	
VNA2				e		08 17 23.2	
VNA2				e		08 17 28.3	
VNA2				e		08 17 36.1	
VNA2				e		08 17 45.4	
VNA3	Neumayer Olymp	53.20	204	eP	P	08 17 13.3	-4.3
VNA3				e	pP	08 17 17.9	-2.9
VNA3				e		08 17 23.1	
VNA3				e		08 17 26.3	
VNA3				e		08 17 33.0	
VNA3				e		08 17 39.7	
VNA3				e		08 17 48.3	
CTA	Charters Tower	55.20	87	eP	P	08 17 32.6	-0.4
	comp=Z,6.7nm,0.9s,mb4.7						
CTA				iS	S	08 25 19.1	+2.7
CTA	Charters Tower	55.20	87	eP	P	08 17 32.6	-0.4
CTA				iS	S	08 25 19.1	+2.7
CTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTA	Charters Tower	55.20	87	P	P	08 17 32.6	-0.4
	comp=Z,9.5nm,0.9s,mb4.8,baz=235,slow=11,SNR=7.2						
CTA				LR	LR	08 39 06.3	
	comp=Z,743nm,19.1s,MS4.8,baz=235,slow=34						
CTAO	Charters Tower	55.20	87	eP	P	08 17 33.1	+0.1
	comp=Z,8.5nm,0.8s,mb4.8						
CTAO				LR	LR		
	comp=Z,858nm,19.0s,MS4.8						
CTAO	Charters Tower	55.20	87	eP	P	08 17 32.3	-0.7
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
LSZ	Lusaka	55.60	280	eP	P	08 17 36.3	+0.4
	comp=Z,27nm,1.3s,mb5.1						
LSZ				LR	LR		
	comp=Z,1μm,21.0s,MS5.0						
LSZ	Lusaka	55.60	280	eP	P	08 17 36.1	+0.2
LSZ				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.1						
EIDS	Eidsvold	55.81	95	eP	P	08 17 39.0	+1.7
	comp=Z,6.9nm,1.2s,mb4.6						
HYB	Hyderabad	58.69	352	iP	P	08 17 58.0	+0.5
KMBO	Kilima Mbogo	59.00	300	eP	P	08 18 01.9	+2.0
	comp=Z,4.1nm,1.0s,mb4.4						
KMBO				LR	LR		
	comp=Z,535nm,22.0s,MS4.6						
KMBO	Kilima Mbogo	59.00	300	P	P	08 18 01.5	+1.6
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	59.00	300	P	P	08 17 58.7	-1.2
	comp=Z,0.4nm,0.4s,mb3.8,baz=126,slow=7.6,SNR=2.3						
RPZ	Rata Peaks	60.36	124	LR	LR	08 40 31.2	
	comp=Z,674nm,18.4s,MS4.8,baz=65,slow=32						
POO	Poona	60.42	347	ex	P	08 18 09.0	-0.4
DAV	Davao City (W)	60.48	47	PFAKE		08 18 20.0	+10
DAV				LR	LR		
	comp=Z,577nm,22.0s,MS4.7						
CHTO	Chiang Mai	61.01	15	PFAKE		08 18 30.0	+17
CHTO				LR	LR		
	comp=Z,556nm,20.0s,MS4.7						
TSUM	Tsumeb	61.15	269	eP	P	08 18 14.7	+0.1
	comp=Z,20nm,1.2s,mb5.1						
TSUM				LR	LR		
	comp=Z,2μm,22.0s,MS5.2						
PMG	Port Moresby	62.61	78	PFAKE		08 18 40.0	+16
PMG				LR	LR		
	comp=Z,1μm,19.0s,MS5.0						
PMG	Port Moresby	62.61	78	LR	LR	08 44 19.7	
	comp=Z,1μm,18.1s,MS5.1,baz=208,slow=35						
SNZO	South Karori	63.92	123	PFAKE		08 18 40.0	+7.2
SNZO				LR	LR		
	comp=Z,589nm,19.0s,MS4.8						
QIZ	Qiongzhong	64.05	26	P	P	08 18 35.4	+1.6
QIZ				XP	sP	08 18 39.8	+1.6
QIZ				S	S	08 27 13.9	+3.6
QIZ				XS	sS	08 27 20.6	+5.0
QIZ				LR	LR		
	comp=N,511nm,21.0s						
QIZ				LR	LR		
	comp=Z,772nm,19.8s,MS4.9						
QIZ	Qiongzhong	64.05	26	PFAKE		08 18 50.0	+16
QIZ				LR	LR		
	comp=Z,819nm,20.0s,MS4.9						
SHL	Shillong	66.71	6	eP	P	08 18 51.0	+0.1
URZ	Urewera	67.16	121	LR	LR	08 44 06.0	
	comp=Z,478nm,18.6s,MS4.7,baz=275,slow=32						
ODAN	Odare	67.75	2	eP	P	08 18 56.7	-0.8
KMI	Kunming	67.91	17	P	P	08 19 01.4	+2.9
KMI				AP	pP	08 19 04.9	+3.1
KMI				S	S	08 28 01.1	+4.0
KMI				AMB	AMB		
	comp=Z,19nm,0.7s,mb5.2						
KMI				AMB	AMB		
	comp=Z,127nm,4.3s						
KMI				LR	LR		
	comp=N,794nm,18.5s,MS5.1						
KMI				LR	LR		
	comp=E,460nm,15.7s,MS5.1						
KMI				LR	LR		
	comp=Z,1μm,21.6s						
TAPN	Taplejung	68.25	2	eP	P	08 19 00.2	-0.4
	comp=Z,46nm,1.0s,mb5.5						
JIRN	Jiri	68.53	1	eP	P	08 19 02.5	+0.1
	comp=Z,19nm,1.0s,mb5.0						
GKN	Gorkha	68.87	359	eP	P	08 19 03.8	-0.7
DZM	Mont Dzumac	69.18	101	LR	LR	08 44 24.8	
	comp=Z,834nm,21.4s,MS5.0,baz=60,slow=32						
GYA	Guiyang	70.13	20⇑	iP	P	08 19 12.2	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
LSA	Lhasa	70.75	5	eP	P	08 19 16.2	+0.2
	comp=Z,5.6nm,0.3s,mb5.0						
LSA				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
LSA	Lhasa	70.75	5	eP	P	08 19 16.2	+0.2
LSA				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.0						
LSA				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.4						
PMSA	Palmer Station	71.68	193	PFAKE		08 19 30.0	+8.7
PMSA				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
HNR	Honiara	72.15	87	PFAKE		08 19 40.0	+15
HNR				LR	LR		
	comp=Z,680nm,22.0s,MS4.9						
HNR	Honiara	72.15	87	LR	LR	08 47 46.4	
	comp=Z,472nm,19.8s,MS4.8,baz=186,slow=33						
HOPE	Hope Point	72.70	211	PFAKE		08 19 40.0	+12
HOPE				LR	LR		
	comp=Z,4.0nm,19.0s						
CD2	Chengdu	73.72	16	eP	P	08 19 33.6	-0.2
CD2				AP	pP	08 19 38.3	+1.3
CD2				XP	sP	08 19 41.0	+2.8
CD2				PP	PP	08 22 20.5	+1.9
CD2				S	S	08 29 04.3	-0.2
CD2				XS	sS	08 29 12.1	+2.2
CD2				SS	SS	08 33 51.0	+2.2
CD2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
CD2				AMB	AMB		
	comp=Z,40nm,6.8s						
CD2				LR	LR		
	comp=N,1μm,24.0s,MS5.2						
CD2				LR	LR		
	comp=E,780nm,20.4s,MS5.2						
CD2				LR	LR		
	comp=Z,860nm,18.0s,MS5.1						
ENH	Enshi	74.51	21	PFAKE		08 19 50.0	+12
ENH				LR	LR		
	comp=Z,4.0nm,21.0s						
JOW	Kunigami	78.45	38	LR	LR	08 49 16.5	
	comp=Z,441nm,21.8s,MS4.8,baz=264,slow=32						
LZH	Lanzhou	78.75	15	eP	P	08 20 05.5	+3.3
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,67nm,4.0s						
NJ2	Nanjing	79.13	28	eP	P	08 20 05.6	+1.2
NJ2				AP	pP	08 20 10.3	+2.6
NJ2				XP	sP	08 20 12.0	+3.1
NJ2				PP	PP	08 23 05.0	+0.7
NJ2				S	S	08 30 03.0	-0.8
NJ2				XS	sS	08 30 10.0	+0.7
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,170nm,6.5s						
NJ2				LR	LR		
	comp=N,2μm,23.6s,MS5.4						
NJ2				LR	LR		
	comp=E,1μm,23.0s,MS5.4						
NJ2				LR	LR		
	comp=Z,1μm,24.5s,MS5.2						
SSE	Sheshan	79.14	31	eP	P	08 20 03.4	-1.1
SSE				PCP	PcP	08 20 11.6	-1.3
SSE				XP	sP	08 20 16.8	+7.8
SSE				S	S	08 30 02.8	-1.2
SSE				XS	sS	08 30 20.0	+11
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,123nm,6.3s						
SSE				LR	LR		
	comp=N,285nm,20.3s,MS4.6						
SSE				LR	LR		
	comp=E,113nm,20.3s,MS4.6						
SSE				LR	LR		
	comp=Z,351nm,26.1s						
GTA	Gaotai	81.30	11	eP	P	08 20 15.7	-0.2
GTA				AP	pP	08 20 21.0	+1.8
GTA				XP	sP	08 20 25.1	+4.7
GTA				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,337nm,6.8s						
GTA				LR	LR		
	comp=N,507nm,20.5s						
GTA				LR	LR		
	comp=E,456nm,14.8s						
GTA				LR	LR		
	comp=Z,564nm,19.0s,MS4.9						
TIA	Tai'an	82.33	25	eP	P	08 20 20.1	-1.3
AML	Almayashu	83.65	351	eP	P	08 20 28.7	+0.6
	comp=Z,6.5nm,1.0s,mb4.7						
AML				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
UCH	Uchtor	83.66	352	eP	P	08 20 29.4	+1.2
	comp=Z,3.8nm,1.0s,mb4.5						
UCH				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
AAK	Ala-Archa	84.06	352	eP	P	08 20 29.2	-0.9
	comp=Z,2.5nm,0.9s,mb4.3						
AAK				LR	LR		
	comp=Z,2μm,22.0s,MS5.3						
AAK	Ala-Archa	84.06	352⇑	eP	P	08 20 28.8	-1.4
AAK				pmax	pmax		
	comp=Z,12nm,2.8s,mb4.5						
EKS2	Erkin-Say	84.17	351	eP	P	08 20 31.6	+0.9
	comp=Z,3.9nm,0.8s,mb4.6						
EKS2				LR	LR		
	comp=Z,2μm,22.0s,MS5.4						
TKM2	Tokmak 2	84.23	353	PFAKE		08 20 40.0	+8.9
TKM2				LR	LR		
	comp=Z,885nm,21.0s,MS5.1						
JNU	Nakatsue	84.96	37	LR	LR	08 59 48.4	
	comp=Z,414nm,18.5s,MS4.8,baz=37,slow=37						
HHC	Hu-ho-hao-te	85.04	20	eP	P	08 20 35.2	0.0
HHC				AP	pP	08 20 39.4	+0.9
HHC				XP	sP	08 20 41.5	+1.8
HHC				PP	PP	08 23 55.9	+3.1
HHC				SKS		08 30 56.9	
HHC				S	S	08 31 04.0	-0.2
HHC				XS	sS	08 31 12.4	+2.7
HHC				SS	SS	08 36 42.5	+4.1
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,204nm,7.5s						
HHC				LR	LR		
	comp=N,985nm,17.8s,MS5.3						
HHC				LR	LR		
	comp=E,488nm,19.0s,MS5.3						
HHC				LR	LR		
	comp=Z,1μm,21.4s,MS5.3						
BJT	Baijiatuau	85.53	23	PFAKE		08 20 50.0	+12
BJT				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
CBIJ	Chichi jima	85.86	48	LR	LR	08 55 43.2	
	comp=Z,265nm,18.9s,MS4.7,baz=39,slow=33						
DL2	Dalian	86.28	27	eP	P	08 20 42.5	+1.1
DL2				S	S	08 31 17.8	+1.4
DL2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.1						
DL2				LR	LR		
	comp=N,310nm,17.0s,MS4.9						
DL2				LR	LR		
	comp=E,280nm,16.2s,MS4.9						
DL2				LR	LR		
	comp=Z,380nm,17.5s,MS4.8						
INCN	Inchon	86.89	32	PFAKE		08 21 00.0	+16
INCN				LR	LR		
	comp=Z,485nm,20.0s,MS4.9						
FUNA	Funafuti	87.21	99	PFAKE		08 21 00.0	+13
FUNA				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
KSRS	Korea Array	87.38	33	LR	LR	09 00 17.8	
	comp=Z,164nm,19.5s,MS4.5,baz=97,slow=36						
MKAR	Makanchi Array	87.67	358	P	P	08 20 46.9	-1.1
	comp=Z,0.6nm,0.7s,mb3.9,baz=134,slow=6.9,SNR=6.0						
MKAR				LR	LR	08 57 18.3	
	comp=Z,1μm,19.1s,MS5.3,baz=184,slow=34						
SONM	Songino Array	90.58	14	P	P	08 21 00.4	-1.3
	comp=Z,2.2nm,0.9s,mb4.5,baz=197,slow=4.8,SNR=10						
SONM				LR	LR	09 00 09.1	
	comp=Z,715nm,20.1s,MS5.1,baz=180,slow=35						
ULN	Ulaanbaatar	90.73	14	eP	P	08 21 02.3	0.0
ULN				LR	LR		
	comp=Z,726nm,20.0s,MS5.1						
ULN	Ulaanbaatar	90.73	14⇓	eP	P	08 21 01.2	-1.2
MJAR	Matsushiro Arr	91.20	40	P	P	08 21 03.5	-1.4
	comp=Z,1.7nm,0.7s,mb4.5,baz=238,slow=8.7,SNR=4.5						
MJAR				LR	LR	09 04 48.6	
	comp=Z,270nm,18.7s,MS4.7,baz=275,slow=37						
KURK	Kurchatov	91.75	356	PFAKE		08 21 20.0	+13
KURK				LR	LR		
	comp=Z,952nm,19.0s,MS5.3						
KURK	Kurchatov	91.75	356⇑	eP	P	08 21 06.7	-0.3
KIV	Kislovodsk	93.12	331	PFAKE		08 21 20.0	+6.5
KIV				LR	LR		
	comp=Z,624nm,19.0s,MS5.1						
KIV	Kislovodsk	93.12	331	eP	P	08 21 13.4	-0.1
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.7						
KIV				MLR	MLR		
	comp=Z,383nm,21.0s,MS4.8						
RAR	Rarotonga	93.34	122	PFAKE		08 21 30.0	+15
RAR				LR	LR		
	comp=Z,1.0nm,20.0s						
RAR	Rarotonga	93.34	122	LR	LR	08 54 06.2	
	comp=Z,264nm,21.2s,MS4.7,baz=176,slow=30						
BRTR	Keskin Array B	93.36	323	P	P	08 21 14.8	+0.1
	comp=Z,1.5nm,0.9s,mb4.4,baz=163,slow=4.8,SNR=4.7						
TLY	Talaya	93.86	11	PFAKE		08 21 30.0	+13
TLY				LR	LR		
	comp=Z,419nm,21.0s,MS4.9						
ANTO	Ankara	93.86	322	PFAKE		08 21 30.0	+13
ANTO				LR	LR		
	comp=Z,516nm,20.0s,MS5.0						
TOA0	Torodi Ar. Sit	93.97	284	eP	P	08 21 18.8	+0.7
TORD	Torodi Ar. Bea	93.97	284	P	P	08 21 18.1	-0.1
	comp=Z,3.4nm,1.0s,mb4.7,baz=113,slow=4.1,SNR=8.6						
TORD				LR	LR	08 59 58.9	
	comp=Z,644nm,21.6s,MS5.0,baz=130,slow=33						
MDJ	Mudanjiang	94.15	30	P	P	08 21 20.1	+1.8
MDJ				AP	pP	08 21 23.5	+1.9
MDJ				XP	sP	08 21 24.6	+1.8
MDJ				PP	PP	08 25 07.0	+1.6
MDJ				S	S	08 32 32.2	+3.3
MDJ				XS	sS	08 32 37.9	+3.5
MDJ				SS	SS	08 38 55.7	+5.1
MDJ				AMB	AMB		
	comp=Z,247nm,3.7s						
MDJ				LR	LR		
	comp=N,388nm,6.0s						
MDJ				LR	LR		
	comp=E,674nm,6.4s						
MDJ				LR	LR		
	comp=Z,625nm,6.4s						
MDJ	Mudanjiang	94.15	30	eP	P	08 21 19.2	+1.0
DBIC	Dimbokro	94.62	275	LR	LR	09 00 19.9	
	comp=Z,1μm,18.7s,MS5.4,baz=135,slow=33						
BRVK	Borovoye	94.82	351	PFAKE		08 21 30.0	+8.9
BRVK				LR	LR		
	comp=Z,2μm,21.0s,MS5.5						
HIA	Hailar	95.01	22	PFAKE		08 21 30.0	+7.9
HIA				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
HIA	Hailar	95.01	22⇑	eP	P	08 21 21.5	-0.6
TRQA	Tornquist	95.70	205	PFAKE		08 21 40.0	+14
TRQA				LR	LR		
	comp=Z,5μm,20.0s,MS6.0						
TBI	Tubuai	98.01	131	eLR	LR	08 53 30.3	
	comp=Z,474nm,26.2s,baz=218						
ASAJ	Asahikawa	99.21	38	LR	LR	09 00 03.7	
	comp=Z,293nm,20.6s,MS4.8,baz=346,slow=32						
ARU	Arti	99.92	345	PFAKE		08 22 00.0	+15
ARU				LR	LR		
	comp=Z,2μm,21.0s,MS5.5						
PPT	Papeete	102.41	127	eLQ		08 51 07.8	
	comp=Z,721nm,29.5s						
PPT				eLR	LR	08 55 21.0	
	comp=Z,777nm,24.0s,baz=215						
KIEV	Kiev	103.91	327	PFAKE		08 22 10.0	+7.4
KIEV				LR	LR		
	comp=Z,549nm,20.0s,MS5.1						
OBN	Obninsk	104.63	333	PFAKE		08 22 20.0	+14
OBN				LR	LR		
	comp=Z,813nm,20.0s,MS5.3						
RKT	Rikitea	105.78	142	eSS	SS	08 41 37.7	+6.3
	comp=Z,209nm,38.5s						

RKT eLQ 08 52 13.7
comp=Z,615nm,34.0s
RKT eLR LR 08 57 03.4
comp=Z,459nm,27.0s,baz=210
RKT Rikitea 105.78 142 *eT* 10 20 26.3
comp=Z,24nm,0.2s
LCO Las Campanas 106.73 202 PFAKE 08 26 40.0 +14
LCO LR LR
comp=Z,856nm,21.0s,MS5.3
YAK Yakutsk 108.89 20 PFAKE 08 26 40.0 +12
YAK LR LR
comp=Z,951nm,20.0s,MS5.4
RCBR Riachuelo 108.96 244 PFAKE 08 26 40.0 +10
RCBR LR LR
comp=Z,296nm,21.0s,MS4.8
BFO Black Forest 112.16 315 PFAKE 08 26 50.0 +15
BFO LR LR
comp=Z,587nm,20.0s,MS5.2
PET Petropavlovsk 113.01 39 PFAKE 08 26 50.0 +14
PET LR LR
comp=Z,468nm,19.0s,MS5.1
MA2 Magadan 113.85 30 PFAKE 08 26 50.0 +12
MA2 LR LR
comp=Z,353nm,20.0s,MS5.0
PAB San Pablo 114.51 302 PFAKE 08 26 50.0 +10
PAB LR LR
comp=Z,497nm,19.0s,MS5.1
LVZ Lovozero 115.30 341 PFAKE 08 26 50.0 +10
LVZ LR LR
comp=Z,765nm,22.0s,MS5.3
TIXI Tiksi 116.67 14 PFAKE 08 26 50.0 +7.1
TIXI LR LR
comp=Z,874nm,20.0s,MS5.4
KEV Kevo 118.56 340 PFAKE 08 27 00.0 +13
KEV LR LR
comp=Z,1μm,20.0s,MS5.5
BILL Bilibino 124.24 27 PFAKE 08 27 10.0 +12
BILL LR LR
comp=Z,516nm,20.0s,MS5.2
NNA Nana 124.61 201 PFAKE 08 27 10.0 +10
NNA LR LR
comp=Z,289nm,19.0s,MS5.0
KBS Kingsbay 127.07 347 PFAKE 08 27 10.0 +7.3
KBS LR LR
comp=Z,851nm,19.0s,MS5.4
TNA Tin City 133.34 33 PFAKE 08 27 30.0 +15
TNA LR LR
comp=Z,306nm,20.0s,MS5.0
OTAV Otavalo 136.70 204 PFAKE 08 27 40.0 +17
OTAV LR LR
comp=Z,345nm,20.0s,MS5.1
SDV Santo Domingo 141.49 220 PFAKE 08 27 40.0 +8.4
SDV LR LR
comp=Z,214nm,20.0s,MS4.9
MCK McKinley 141.54 36 PFAKE 08 27 40.0 +10
MCK LR LR
comp=Z,404nm,21.0s,MS5.2
PMR Palmer 141.75 39 PFAKE 08 27 40.0 +9.5
PMR LR LR
comp=Z,597nm,19.0s,MS5.4
COLA College 141.79 34 PFAKE 08 27 40.0 +9.5
COLA LR LR
comp=Z,602nm,19.0s,MS5.4
EGAK Eagle 144.58 33 PFAKE 08 27 50.0 +15
EGAK LR LR
comp=Z,468nm,21.0s,MS5.2
DAWY Dawson 145.54 33 *e*PKPdf PKPdf 08 27 37.2 +0.1
INK Inuvik 145.82 25 *e*PKPdf PKPdf 08 27 37.0 -0.4
INK Inuvik 145.82 25 PKPbc PKPbc 08 27 36.9 -1.1
comp=Z,15nm,0.9s,baz=337,slow=5.4,SNR=25
RES Resolute Bay 146.44 0 *e*PKPdf PKPdf 08 27 38.6 +0.2
RES *e*PKPbc PKPbc 08 27 40.0 +0.2
RES *e*PKPab PKPab 08 27 40.6 -0.1
SJG San Juan 146.54 235 PFAKE 08 27 50.0 +10
SJG LR LR
comp=Z,294nm,21.0s,MS5.0
JTS JuntasAbangare 148.07 198 PFAKE 08 27 50.0 +7.1
JTS LR LR
comp=Z,590nm,20.0s,MS5.4
SDDR Presa de Saban 150.27 229 PFAKE 08 28 00.0 +14
SDDR LR LR
comp=Z,331nm,20.0s,MS5.1
TGUH Tegucigalpa,Un 152.22 195 PFAKE 08 28 00.0 +11
TGUH LR LR
comp=Z,329nm,20.0s,MS5.1
YKA Yellowknife Ar 155.54 23 PKP PKPdf 08 27 52.4 -0.2
YKA Yellowknife Ar 155.54 23 PKP PKPdf 08 27 52.4 -0.2
comp=Z,0.4nm,0.8s,baz=317,slow=1.7,SNR=6.1
HOPS Hopland 158.06 86 PFAKE 08 28 10.0 +13
HOPS LR LR
comp=Z,418nm,20.0s,MS5.3
NLWA Neilton Lookou 158.17 64 PFAKE 08 28 10.0 +14
NLWA LR LR
comp=Z,615nm,19.0s,MS5.5
TEIG Tepich 158.42 196 PFAKE 08 28 10.0 +12
TEIG LR LR
comp=Z,377nm,19.0s,MS5.2
SAO San Andreas Ge 158.62 93 PFAKE 08 28 10.0 +13
SAO LR LR
comp=Z,542nm,19.0s,MS5.4
WDC Whiskeytown Da 158.82 82 PFAKE 08 28 10.0 +13
WDC LR LR
comp=Z,560nm,20.0s,MS5.4
YBH Yreka Blue Hor 158.88 79 PFAKE 08 28 10.0 +12
YBH LR LR
comp=Z,611nm,19.0s,MS5.5
CMB Columbia Colle 159.82 91 PFAKE 08 28 10.0 +11
CMB LR LR
comp=Z,613nm,20.0s,MS5.4
MOD Modoc 160.69 79 PFAKE 08 28 10.0 +10
MOD LR LR
comp=Z,635nm,21.0s
PFO Pinyon Flat Ob 161.00 106 PFAKE 08 28 10.0 +10
PFO LR LR
comp=Z,302nm,20.0s
PKME Peaks-Kenny Pk 161.23 291 PFAKE 08 28 10.0 +10
PKME LR LR
comp=Z,663nm,19.0s
HAWA Hanford 161.23 66 PFAKE 08 28 10.0 +10
HAWA LR LR
comp=Z,557nm,20.0s
NVAR Mina Array Bea 161.51 91 PKP PKPdf 08 28 01.1 +0.5
comp=Z,0.2nm,0.8s,baz=205,slow=4.0,SNR=2.3
NVAR PKPab PKPab 08 28 46.6 +1.3
comp=Z,0.8nm,0.9s,baz=207,slow=4.2,SNR=3.7
WVOR Wild Horse Val 161.97 78 PFAKE 08 28 10.0 +9.1
WVOR LR LR
comp=Z,476nm,20.0s
NEW Newport 162.48 59 PFAKE 08 28 10.0 +8.8
NEW LR LR
comp=Z,802nm,21.0s
TPNV Topopah Spring 162.59 97 PFAKE 08 28 10.0 +8.3
TPNV LR LR
comp=Z,620nm,21.0s
HRV Harvard--Oak R 162.87 282 PFAKE 08 28 10.0 +8.2
HRV LR LR
comp=Z,519nm,20.0s
BMO Blue Mountains 162.94 70 PFAKE 08 28 10.0 +8.2
BMO LR LR
comp=Z,698nm,20.0s
DWPF Disney 163.10 223 PFAKE 08 28 10.0 +7.5
DWPF LR LR
comp=Z,496nm,20.0s
LBNH Lisbon 163.16 288 PFAKE 08 28 10.0 +8.0
LBNH LR LR
comp=Z,572nm,21.0s
TUC Tucson 164.22 119 PFAKE 08 28 10.0 +6.6
TUC LR LR
comp=Z,345nm,22.0s
ELK Elko 164.32 85 PFAKE 08 28 10.0 +6.8
ELK LR LR
comp=Z,496nm,21.0s
NCB Newcomb 164.82 287 PFAKE 08 28 10.0 +6.5
NCB LR LR
comp=Z,538nm,20.0s
MSO Missoula 164.94 62 PFAKE 08 28 10.0 +6.5
MSO LR LR
comp=Z,469nm,21.0s
LONY Lake Ozonia 165.03 290 PFAKE 08 28 10.0 +6.3
LONY LR LR
comp=Z,515nm,21.0s
HLID Hailey 165.09 74 PFAKE 08 28 10.0 +6.2
HLID LR LR
comp=Z,668nm,20.0s
WUAZ Wupatki 165.59 108 PFAKE 08 28 20.0 +16
WUAZ LR LR
comp=Z,606nm,19.0s
FFC Flin Flon 165.60 18 PFAKE 08 28 10.0 +6.2
FFC LR LR
comp=Z,711nm,20.0s
CNNC Cliffs of the 165.66 251 PFAKE 08 28 20.0 +15
CNNC LR LR
comp=Z,567nm,20.0s
LTX Lajitas 165.99 145 PFAKE 08 28 20.0 +15
LTX LR LR
comp=Z,697nm,22.0s
TXAR Lajitas Array 165.99 145 PKP PKPdf 08 28 03.5 -1.6
comp=Z,0.2nm,1.0s,baz=240,slow=3.6,SNR=2.6
TXAR PKPab PKPab 08 29 04.3 -0.7
comp=Z,0.4nm,0.9s,baz=225,slow=11,SNR=2.3
NHSC New Hope 166.02 239 PFAKE 08 28 20.0 +15
NHSC LR LR
comp=Z,361nm,21.0s
DUG Dugway 166.06 88 PFAKE 08 28 20.0 +15
DUG LR LR
comp=Z,648nm,21.0s
KVTX Kingsville 166.08 167 PFAKE 08 28 20.0 +15
KVTX LR LR
comp=Z,702nm,19.0s
BINY Binghamton 166.14 280 PFAKE 08 28 20.0 +15
BINY LR LR
comp=Z,556nm,20.0s
CBN Corbin 166.48 263 PFAKE 08 28 20.0 +15
CBN LR LR
comp=Z,510nm,20.0s
BOZ Bozeman (W) 166.78 65 PFAKE 08 28 20.0 +15
BOZ LR LR
comp=Z,659nm,21.0s
MPU Maple Canyon 166.92 90 PFAKE 08 28 20.0 +15
MPU LR LR
comp=Z,1μm,22.0s
MNTX Cornudas Mount 167.08 134 PFAKE 08 28 20.0 +14
MNTX LR LR
comp=Z,655nm,19.0s
HWUT Hardware Ranch 167.17 83 PFAKE 08 28 20.0 +14
HWUT LR LR
comp=Z,625nm,20.0s
EGMT Eagleton 167.18 53 PFAKE 08 28 20.0 +15
EGMT LR LR
comp=Z,685nm,22.0s
SSPA Standing Stone 167.43 273 PFAKE 08 28 20.0 +14
SSPA LR LR
comp=Z,437nm,20.0s
YMR Madison River 167.44 69 PFAKE 08 28 20.0 +14
YMR LR LR
comp=Z,777nm,20.0s
AHID Auburn Hatcher 167.54 77 PFAKE 08 28 20.0 +14
AHID LR LR
comp=Z,622nm,21.0s
LKWY Lake 167.86 69 PFAKE 08 28 20.0 +14
LKWY LR LR
comp=Z,889nm,19.0s
BRAL Brewton 168.18 213 PFAKE 08 28 20.0 +13
BRAL LR LR
comp=Z,632nm,20.0s
GOGA Godfrey 168.27 232 PFAKE 08 28 20.0 +13
GOGA LR LR
comp=Z,520nm,20.0s
BLA Blacksburg 168.38 254 PFAKE 08 28 20.0 +13
BLA LR LR
comp=Z,468nm,21.0s
MVCO Mesa Verde 168.42 106 PFAKE 08 28 20.0 +13
MVCO LR LR
comp=Z,617nm,20.0s
JCT Junction City 168.45 156 PFAKE 08 28 20.0 +13
JCT LR LR
comp=Z,529nm,19.0s
BW06 Boulder Array 168.68 77 PFAKE 08 28 20.0 +13
BW06 LR LR
comp=Z,877nm,20.0s
PDAR Pinedale Array 168.68 77 PKP PKPdf 08 28 07.3 +0.8
comp=Z,0.6nm,0.8s,baz=119,slow=1.9,SNR=6.5
PDAR PKPab PKPab 08 29 16.6 -0.1
comp=Z,1.3nm,0.8s,baz=240,slow=2.7,SNR=6.3
ANMO Albuquerque 168.69 120 PFAKE 08 28 20.0 +13
ANMO LR LR
comp=Z,631nm,19.0s
HKT Hockley 168.70 174 PFAKE 08 28 20.0 +13
HKT LR LR
comp=Z,552nm,19.0s
MCWV Mont Chateau 168.73 267 PFAKE 08 28 20.0 +13
MCWV LR LR
comp=Z,536nm,19.0s
ERPA Erie 169.11 280 PFAKE 08 28 20.0 +13
ERPA LR LR
comp=Z,455nm,20.0s
LRAL Lakeview Retre 169.88 219 PFAKE 08 28 20.0 +12
LRAL LR LR
comp=Z,534nm,19.0s
LAO LASA Array 169.93 53 PFAKE 08 28 20.0 +13
LAO LR LR
comp=Z,735nm,21.0s
DGMT Dagmar 170.00 40 PFAKE 08 28 20.0 +13
DGMT LR LR
comp=Z,770nm,21.0s
TZTN Tazewell 170.28 245 PFAKE 08 28 20.0 +12
TZTN LR LR
comp=Z,570nm,21.0s
NATX Nacogdoches 170.56 179 PFAKE 08 28 20.0 +12
NATX LR LR
comp=Z,527nm,21.0s
SDCO Great Sand Dun 170.81 109 PFAKE 08 28 20.0 +12
SDCO LR LR
comp=Z,838nm,20.0s
ACSO Alum Creek Sta 171.21 267 PFAKE 08 28 20.0 +12
ACSO LR LR
comp=Z,622nm,20.0s
ISCO Idaho Springs 171.41 96 PFAKE 08 28 20.0 +12
ISCO LR LR
comp=Z,701nm,21.0s
GLMI Grayling 171.92 300 PFAKE 08 28 20.0 +12
GLMI LR LR
comp=Z,611nm,20.0s
PLAL Pickwick Lake 171.98 221 PFAKE 08 28 20.0 +11
PLAL LR LR
comp=Z,631nm,19.0s
OXF Oxford 172.19 213 PFAKE 08 28 20.0 +11
OXF LR LR
comp=Z,474nm,20.0s
RSSD Black Hills 172.39 64 PFAKE 08 28 20.0 +12
RSSD LR LR
comp=Z,1μm,22.0s
WMOK Wichita Mounta 172.70 151 PFAKE 08 28 20.0 +11
WMOK LR LR
comp=Z,579nm,22.0s
WVT Waverly 172.72 228 PFAKE 08 28 20.0 +11
WVT LR LR
comp=Z,4.0nm,21.0s
AGMN Agassiz Refuge 172.85 7 PFAKE 08 28 20.0 +11
AGMN LR LR
comp=Z,678nm,19.0s
EYMN Ely 172.94 343 PFAKE 08 28 20.0 +11
EYMN LR LR
comp=Z,760nm,21.0s
WCI Wyandotte Cave 173.01 247 PFAKE 08 28 20.0 +11
WCI LR LR
comp=Z,450nm,21.0s
MIAR Mount Ida 173.30 186 PFAKE 08 28 20.0 +11
MIAR LR LR
comp=Z,460nm,20.0s
COWI Conover 173.76 323 PFAKE 08 28 20.0 +11
COWI LR LR
comp=Z,663nm,20.0s
CBKS Cedar Bluff 175.31 119 PFAKE 08 28 20.0 +10
CBKS LR LR
comp=Z,734nm,21.0s
HDIL Hopedale 176.01 262 PFAKE 08 28 20.0 +10
HDIL LR LR
comp=Z,618nm,21.0s
JFWS Jewell Farm 176.42 300 PFAKE 08 28 20.0 +10
JFWS LR LR
comp=Z,738nm,21.0s
ECSD EROS,Sioux Fal 177.03 31 PFAKE 08 28 20.0 +10
ECSD LR LR
comp=Z,704nm,21.0s
KSU1 Kansas State U 177.33 142 PFAKE 08 28 20.0 +10
KSU1 LR LR
comp=Z,668nm,21.0s

ISK **12** *08:17:09.6,3708N×3721E,h5km,MD2.8*
CSEM **12** *08:17:11.3±0.3,3714N×3724E,h5km,MD2.8,Error ellipse: s-maj=7.9km s-min=5.2km az=166.0*
ISCJB **12** *08:17:12.5±0.7,3714N±005×3724E±004,h5km,Error ellipse: s-maj=7.3km s-min=4.4km az=170.4*
DDA **12** *08:17:12.9,3714N×3725E,h7km±5km,Md3.1*
ISC 12 08:17:12.6±1.0,3713N±005×3727E±006,h2km±9km,n9,σ1°26/16,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GAZ	**Gaziantep**	**0.06**	**314**	PG	**Pg**		**08 17 11.8**	**-2.0**
GZT	**Gaziantep**	**0.33**	**47**	*i* P	**Pg**		**08 17 18.8**	**-0.2**
GZT				*i* S	**Sg**		**08 17 25.6**	**+2.4**
KMRS	**Kahramanmaras**	**0.47**	**322**	*e*PG	**Pg**		**08 17 20.1**	**-1.6**
KMRS				*e*SG	**Sg**		**08 17 28.4**	**+0.5**
ANDN	**Andirin**	**0.86**	**302**	*i* P	**Pg**		**08 17 29.1**	**+0.1**
ANDN				*i* S	**Sg**		**08 17 41.4**	**+1.2**
ANDN	**Andirin**	**0.86**	**302**	*i* P	**Pg**		**08 17 29.1**	**0.0**
ANDN				*i* S	**Sg**		**08 17 41.4**	**+1.2**
COBT	**Iskenderun**	**1.01**	**233**	*i* P	**Pg**		**08 17 31.6**	**-0.5**
COBT				*i* S	**Sg**		**08 17 47.6**	**+2.4**
URFA	**Urfa**	**1.28**	**76**	*e*PN	**Pn**		**08 17 37.1**	**-0.4**
URFA				*e*SN	**Sn**		**08 17 55.3**	**+0.1**
MALT	**Malatya**	**1.50**	**38**	*e*PN	**Pn**		**08 17 38.7**	**-1.8**
MYA	**Malataya**	**1.51**	**37**	*e*PN	**Pn**		**08 17 40.1**	**-0.5**
MYA				*e*SN	**Sn**		**08 18 01.9**	**+1.1**

IDC 12 08:19:30.6±35.0,2521S×17970W,h510km±322km,mb3.2/4,mb1 3.4/4,mb1mx3.1/13,mbtmp3.2/4,Error ellipse: s-maj=232.4km s-min=95.9km az=90.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CTA	**Charters Tower**	**31.78**	**272**	P	P		08 25 13.9	+1.1
	4.3nm,0.6s,baz=101,slow=13,SNR=8.2							
STKA	**Stephens Creek**	**34.51**	**250**	P	P		08 25 34.9	-0.9
	2.1nm,0.9s,baz=94,slow=10.0,SNR=4.1							
ASAR	**Alice Springs**	**42.11**	**262**	P	P		08 26 37.5	-0.3
	1.1nm,0.4s,baz=92,slow=7.5,SNR=18							
WRA	**Warramunga Arr**	**42.61**	**267**	P	P		08 26 41.5	-0.3
	1.0nm,0.3s,baz=101,slow=8.1,SNR=12							
AKASG	**Malin Array Be**	**146.22**	**326**	PKPbc	PKPbc		08 38 12.2	-1.2
	1.3nm,0.6s,baz=47,slow=4.2,SNR=5.5							
BRTR	**Keskin Array B**	**148.57**	**306**	PKPbc	PKPbc		08 38 20.1	+0.2
	0.8nm,0.7s,baz=101,slow=3.3,SNR=2.9							

IDC **12** *08:38:29.4±1.1,663N×12654E,h0km,mb3.9/6,mb1 4.2/7, mb1mx4.0/20,mbtmp4.1/7,ML5.1/1,MS4.1/2,Ms1 4.1/2, ms1mx3.4/26,Error ellipse: s-maj=92.6km s-min=16.9km az=73.0*
MAN **12** *08:38:34,657N×12655E,h42km,mb4.7,ML3.6,MS3.6*
ISCJB **12** *08:38:35.8±0.8,644N±007×12635E±007,h53km±9km, mb3.8/6,MS4.1/2,Error ellipse: s-maj=11.4km s-min=10.5km az=37.4*
NEIC **12** *08:38:37.8±3.5,652N×12634E,h64km±28km,Error ellipse: s-maj=95.4km s-min=14.8km az=69.0*
ISC 12 08:38:36.7±0.9,645N±007×12634E±007,h45km±11km,n17,σ1°10/20,mb3.8/6,MS4.1/2,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MATI	**Mati**	**0.50**	**351**	*e*P	**Pn**		**08 38 46.7**	**-1.1**
MATI				*e*S	**Sn**		**08 38 55.7**	**+0.1**
DAV	**Davao City (W)**	**0.97**	**310**	*e*P	**Pn**		**08 38 55.1**	**+1.1**
DAV	**Davao City (W)**	**0.97**	**310**	‖ *i*P	**Pn**		**08 38 55.0**	**+1.0**
KCP	**Kidapawan**	**1.36**	**294**	‖ *e*P	**Pn**		**08 38 59.2**	**-0.1**
KCP				*e*S	**Sn**		**08 39 16.2**	**+0.1**
GSPH	**General Santos**	**1.42**	**256**	‖ *e*P	**Pn**		**08 38 58.8**	**-1.4**
GSPH				*e*S	**Sn**		**08 39 15.8**	**-2.0**
BUKP	**Musuan**	**1.90**	**318**	*e*P	**Pn**		**08 39 06.5**	**-0.3**
BUKP				*e*S	**Sn**		**08 39 30.1**	**+0.6**
CTBH	**Cotabato--PC H**	**2.21**	**290**	‖ *i*P	**Pn**		**08 39 12.2**	**+1.2**
CTBH				*i* S	**Sn**		**08 39 38.3**	**+1.1**
BATI	**Kupang**	**16.76**	**189**	Pn	**Pn**		**08 42 30.1**	**+1.8**
	7.1nm,0.3s,baz=3.1,slow=3.8,SNR=4.5							
FITZ	**Fitzroy Crossi**	**24.40**	**182**	P	**P**		**08 43 52.1**	**+1.1**
	1.5nm,0.4s,mb3.8,baz=355,slow=14,SNR=6.8							
WRA	**Warramunga Arr**	**27.38**	**163**	P	**P**		**08 44 16.0**	**-1.9**
	1.0nm,0.5s,mb3.6,baz=346,slow=8.7,SNR=11							
WRA				LR	LR		08 55 56.1	
	comp=Z,119nm,18.3s,MS3.5,baz=0.0,slow=38							
ASAR	**Alice Springs**	**30.83**	**166**	P	**P**		**08 44 49.0**	**+0.5**
	1.0nm,0.5s,mb3.9,baz=344,slow=7.0,SNR=21							
STKA	**Stephens Creek**	**40.80**	**160**	P	**P**		**08 46 14.3**	**+0.5**
STKA	**Stephens Creek**	**40.80**	**160**	P	**P**		**08 46 14.3**	**+0.5**
	3.4nm,0.9s,mb4.0,baz=320,slow=6.2,SNR=4.0							
SONM	**Songino Array**	**44.62**	**341**	P	**P**		**08 46 44.4**	**-0.1**
	0.8nm,0.9s,mb3.6,baz=149,slow=5.9,SNR=5.4							
SONM				PcP	PcP		08 48 26.1	-0.7
	0.9nm,0.8s,baz=158,slow=4.9,SNR=6.6							
MKAR	**Makanchi Array**	**55.12**	**324**	P	**P**		**08 48 02.6**	**-1.8**
	0.9nm,0.5s,mb4.0,baz=131,slow=7.3,SNR=13							
YKA	**Yellowknife Ar**	**97.20**	**24**	LR	LR		09 39 06.7	
	comp=Z,236nm,20.5s,MS4.7,baz=190,slow=38							
TORD	**Torodi Ar. Bea**	**121.67**	**290**	PKP	PKPdf		08 57 25.0	-1.6
	0.2nm,0.5s,baz=73,slow=3.4,SNR=2.7							

KRSC 12 08:58:29.7±1.7,5397N×15847E,h272km±52km,ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GNL	**Ganaly**	**0.42**	**229**	*e*P	Pn		08 59 05.8	+0.9
AVH	**Avacha**	**0.72**	**167**	P	Pn		08 59 06.3	+0.5
NLC	**Nalytchevo**	**0.96**	**147**	*e*S	S		08 59 36.5	+0.3
SPN	**Mys Shipunski**	**1.27**	**133**	*e*P	Pn		08 59 09.8	+1.2
SPN				*e*S	S		08 59 39.1	-0.2
RUS	**Russkaya**	**1.54**	**179**	*e*P	Pn		08 59 12.0	+1.6
RUS				*e*S	S		08 59 42.9	+0.3
TUMR	**Tumrok**	**1.64**	**36**	*e*P	Pn		08 59 12.6	+1.6
KMNR	**Kamenistaya**	**2.06**	**29**	P	Pn		08 59 16.0	+1.6
KBTR	**Krutoberegovo**	**3.36**	**46**	*e*P	Pn		08 59 28.1	+0.9

CSEM **12** *09:03:55.4±0.4,4063N×3486E,h8km,MD2.9,Error ellipse: s-maj=8.1km s-min=4.4km az=46.0*
DDA **12** *09:03:55.5,4063N×3493E,h4km,Md2.9*
ISCJB **12** *09:03:56.7±0.7,4064N±003×3487E±007,h10km,Error ellipse: s-maj=8.1km s-min=4.6km az=9.0*
ISK **12** *09:03:56.0,4062N×3475E,h5km,MD2.7*
ISC 12 09:03:56.7±0.7,4064N±003×3485E±007,h10km,n8,σ0°71/15,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CTKT	**Corum**	**0.05**	**250**	*i* P	**Pg**		**09 03 58.1**	**-0.6**
CTKT				*i* S	**Sg**		**09 03 59.8**	**-0.3**
CORM	**Corum**	**0.49**	**200**	PG	**Pg**		**09 04 05.6**	**-0.7**
CORM				SG	**Sg**		**09 04 13.4**	**+0.7**
BOYT	**Boyabat**	**0.78**	**3**	*i* P	**Pg**		**09 04 11.3**	**-0.4**
BOYT				*i* S	**Sg**		**09 04 22.1**	**+0.2**
DIKM	**Dikmen**	**1.05**	**17**	*e*PN	**Pn**		**09 04 18.4**	**+0.9**
YOZ	**Yozgat**	**1.06**	**160**	*e*PN	**Pn**		**09 04 17.0**	**-0.6**
YOZ				*e*SN	**Sn**		**09 04 33.8**	**+1.4**
CDAG	**Cicekdag**	**1.08**	**200**	*i* P	**Pg**		**09 04 16.5**	**-1.0**
CDAG				*i* S	**Sg**		**09 04 31.4**	**-0.1**
ELDT	**Eldivan**	**1.10**	**263**	*i* P	**Pb**		**09 04 17.5**	**-0.3**
ELDT				*i* S	**Sg**		**09 04 33.0**	**+1.0**
ELDT	**Eldivan**	**1.10**	**263**	*i* P	**Pb**		**09 04 17.5**	**-0.2**
ELDT				*i* S	**Sg**		**09 04 33.0**	**+1.0**

ISCJB **12** *09:17:17.7±0.4,396N±005×7469W±006,h54km,mb4.2/18, MS5.4/1,Error ellipse: s-maj=8.6km s-min=6.6km az=27.3*
IDC **12** *09:17:18.6±0.5,377N×7466W,h52km±4km,mb3.8/9, mb1 4.0/10,mb1mx3.9/18,mbtmp3.8/10,Error ellipse: s-maj=14.4km s-min=12.9km az=64.0*
NEIC **12** *09:17:19.4±0.4,389N×7473W,mb4.6/11,Error ellipse: s-maj=9.3km s-min=7.9km az=96.0*
BJI **12** *09:17:19.4,390N×7470W,h54km,mB5.0,Ms5.2,Msz4.9*
ISC 12 09:17:19.9±0.4,393N±005×7472W±006,h56km,h56km±1.6km:pP-P,n56,σ1°06/49,mb4.2/18,MS5.4/1,Colombia

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

ROSC	**El Rosal**	**0.99**	**23**	P	**Pn**	**09 17 39.9**	**+2.1**
	1μm,0.3s,baz=285,slow=16,SNR=1692						
ROSC				S	**Sn**	**09 17 57.7**	**+6.8**
	1μm,0.3s,baz=91,slow=23,SNR=40						
OTAV	**Otavalo**	**5.24**	**226**	*e*Pn	**Pn**	**09 18 36.6**	**+0.9**
SDV	**Santo Domingo**	**6.38**	**39**	*e*Pn	**Pn**	**09 18 51.9**	**+0.5**
SDV				*e*Sn	**Sn**	**09 20 04.0**	**+1.2**
SDV	**Santo Domingo**	**6.38**	**39**	P	**Pn**	**09 18 51.9**	**+0.6**
	34nm,0.3s,baz=237,slow=6.0,SNR=112						
SDV				S	**Sn**	**09 20 03.2**	**+0.3**
	15nm,0.3s,baz=293,slow=16,SNR=3.3						
ATAH	**Atahualpa**	**11.47**	**199**	P	**Pn**	**09 20 02.5**	**+1.5**
	0.5nm,0.3s,baz=72,slow=16,SNR=2.5						
PCRV	**Puerto La Cruz**	**11.77**	**58**	P	**Pn**	**09 20 04.3**	**-0.8**
	1.4nm,0.3s,baz=225,slow=2.3,SNR=5.9						
SDDR	**Presa de Saban**	**15.33**	**12**	*e*P	**Pn**	**09 20 55.1**	**+2.3**
	15nm,0.7s						
NNA	**Nana**	**15.96**	**188**	*e*P	**Pn**	**09 21 07.5**	**+6.6**
	43nm,1.6s						
PAYG	**Puerto Ayora**	**16.22**	**254**	*e*P	**Pn**	**09 21 03.6**	**-0.7**
	12nm,1.0s						
TEIG	**Tepich**	**20.90**	**322**	P	**P**	**09 21 57.0**	**-0.8**
LPAZ	**La Paz**	**21.12**	**162**	P	**P**	**09 22 01.2**	**+1.1**
	0.5nm,0.4s,mb3.2,baz=268,slow=8.1,SNR=3.1						
SIV	**San Ignacio**	**23.96**	**146**	P	**P**	**09 22 27.4**	**-1.9**
	3.8nm,0.7s,mb3.9,baz=322,slow=10,SNR=20						
SIV				pP		09 22 40.7	
	7.7nm,0.8s,baz=333,slow=11,SNR=15						
DWPF	**Disney**	**24.88**	**346**	*e*P	**P**	**09 22 40.4**	**+2.8**
BBSR	**BB Station**	**29.81**	**17**	*e*P	**P**	**09 23 18.4**	**-3.3**
	34nm,1.0s,mb5.0						
CNNC	**Cliffs of the**	**31.29**	**355**	*e*PcP	PcP	09 26 28.2	+0.3
OXF	**Oxford**	**33.35**	**338**	*e*P	**P**	**09 23 50.3**	**-2.4**
	15nm,1.0s,mb4.9						
URVA	**University of**	**33.58**	**356**	*e*P	**P**	**09 23 55.6**	**+0.9**
WVT	**Waverly**	**34.25**	**341**	P	**P**	**09 24 00.5**	**0.0**
	0.1nm,0.6s						
MIAR	**Mount Ida**	**35.13**	**332**	*e*P	**P**	**09 24 07.2**	**-1.0**
	1.8nm,0.9s,mb4.0						
WCI	**Wyandotte Cave**	**35.73**	**344**	*e*P	**P**	**09 24 13.7**	**+0.4**
LTX	**Lajitas**	**37.30**	**316**	*e*P	**P**	**09 24 26.3**	**-0.5**
	27nm,2.3s,mb4.7						
LTX				*e*PcP	PcP	09 26 55.0	+10
TXAR	**Lajitas Array**	**37.30**	**316**	P	**P**	**09 24 27.3**	**+0.5**
TXAR				pP	pP	09 24 41.5	+0.4
TXAR				PcP	PcP	09 26 46.3	+0.9
TXAR				pPcP		09 27 01.5	
TXAR	**Lajitas Array**	**37.30**	**316**	P	**P**	**09 24 27.3**	**+0.5**
	0.3nm,0.5s,mb3.3,baz=131,slow=9.0,SNR=13						
TXAR				pP	pP	09 24 41.5	+0.4
	0.5nm,0.8s,baz=134,slow=10,SNR=3.8						
TXAR				PcP	PcP	09 26 46.3	+0.9
	0.4nm,0.8s,baz=122,slow=8.6,SNR=3.6						
TXAR				pPcP		09 27 01.5	
	0.4nm,0.7s,baz=134,slow=6.4,SNR=4.4						
WMOK	**Wichita Mounta**	**37.92**	**327**	P	**P**	**09 24 31.4**	**-0.5**
HDIL	**Hopedale**	**38.76**	**342**	*e*P	**P**	**09 24 39.0**	**0.0**
MNTX	**Cornudas Mount**	**39.90**	**317**	*e*P	**P**	**09 24 48.6**	**0.0**
	30nm,2.6s,mb4.6						
KSU1	**Kansas State U**	**40.26**	**333**	*e*P	**P**	**09 24 50.7**	**-0.7**
JFWS	**Jewell Farm**	**41.20**	**343**	*e*P	**P**	**09 24 59.1**	**-0.1**
ANMO	**Albuquerque**	**42.62**	**320**	*e*P	**P**	**09 25 10.5**	**-0.4**
ANMO				*e*P		09 25 12.4	
SDCO	**Great Sand Dun**	**43.86**	**324**	*e*P	**P**	**09 25 20.0**	**-0.9**
PV01	**Paradox Valley**	**45.95**	**322**	*e*P	**P**	**09 25 39.3**	**+1.8**
EYMN	**Ely**	**46.16**	**344**	*e*P	**P**	**09 25 38.8**	**-0.2**
	12nm,0.9s,mb4.8						
AGMN	**Agassiz Refuge**	**47.77**	**341**	*e*P	**P**	**09 25 51.5**	**0.0**
ULM	**Lac du Bonnet**	**49.49**	**342**	P	**P**	**09 26 04.1**	**-0.6**
ULM	**Lac du Bonnet**	**49.49**	**342**	P	**P**	**09 26 04.1**	**-0.6**
	4.0nm,0.7s,mb4.6,baz=152,slow=8.2,SNR=16						
PDAR	**Pinedale Array**	**49.53**	**326**	P	**P**	**09 26 05.8**	**+0.7**
	0.5nm,0.6s,mb3.7,baz=116,slow=9.2,SNR=6.0						
PDAR				pP	pP	09 26 19.7	-0.1
	0.5nm,0.6s,baz=104,slow=9.5,SNR=3.8						
IMW	**Indian Meadow**	**51.03**	**327**	*e*P	**P**	**09 26 17.2**	**+0.8**
IMW				*e*pP	pP	09 26 31.3	+0.1
SCHQ	**Schefferville**	**51.14**	**6**	P	**P**	**09 26 16.4**	**-0.6**
	2.9nm,0.7s,mb4.3,baz=148,slow=5.4,SNR=16						
NVAR	**Mina Array Bea**	**52.43**	**317**	P	**P**	**09 26 28.3**	**+1.4**
	1.0nm,0.7s,mb3.9,baz=125,slow=6.8,SNR=11						
NVAR				pP	pP	09 26 41.7	-0.1
	1.1nm,0.7s,baz=128,slow=5.8,SNR=6.7						
NVAR				PcP	PcP	09 27 38.1	+0.9
	0.5nm,0.6s,baz=134,slow=5.1,SNR=2.9						
NVAR				pPcP		09 27 52.5	
	0.8nm,0.6s,baz=128,slow=4.8,SNR=5.1						
HLID	**Hailey**	**52.78**	**324**	*e*P	**P**	**09 26 30.3**	**+0.8**
FFC	**Flin Flon**	**55.25**	**341**	*e*P	**P**	**09 26 46.7**	**-0.5**
FCC	**Fort Churchill**	**56.72**	**348**	*e*P	**P**	**09 26 57.1**	**-0.6**
	2.5nm,0.7s,mb4.3						
FCC				*e*P		09 26 57.4	
YKA	**Yellowknife Ar**	**65.43**	**341**	P	**P**	**09 27 55.4**	**-1.2**
	1.1nm,0.4s,mb4.2,baz=135,slow=6.2,SNR=73						
YKA				pP	pP	09 28 12.4	+0.4
	1.2nm,0.6s,baz=133,slow=6.4,SNR=9.3						
PMSA	**Palmer Station**	**68.99**	**175**	*e*P	**P**	**09 28 19.8**	**+0.7**
	36nm,1.0s,mb5.3						
DBIC	**Dimbokro**	**69.57**	**84**	P	**P**	**09 28 22.5**	**-1.3**
	2.1nm,0.6s,mb4.2,baz=252,slow=9.6,SNR=5.2						
DBIC				pP	pP	09 28 37.1	-2.1
	8.4nm,1.1s,baz=260,slow=3.1,SNR=3.5						
INK	**Inuvik**	**75.20**	**341**	*e*P	**P**	**09 28 55.5**	**-0.7**
TORD	**Torodi Ar. Bea**	**75.89**	**78**	P	**P**	**09 29 00.3**	**-1.0**
	0.3nm,0.6s,mb3.4,baz=284,slow=6.8,SNR=3.8						
TORD				pP	pP	09 29 15.5	-1.4
	0.4nm,0.5s,baz=278,slow=6.1,SNR=3.1						
KMBO	**Kilima Mbogo**	**111.99**	**90**	*e*PKPdf	PKiKP	09 35 52.4	+2.4
MDJ	**Mudanjiang**	**126.99**	**338**	PKP	PKPdf	09 36 18.3	+0.3
HHC	**Hu-ho-hao-te**	**135.06**	**353**	*e*PKP	PKPdf	09 36 31.8	-1.6
HHC				PP	PP	09 39 11.4	+4.0
HHC				PKS		09 40 06.1	
HHC				SKS	SKSdf	09 43 37.4	-2.6
HHC				SKKS	SKKSac	09 45 57.0	-2.2
HHC				SS	SS	09 56 59.0	+2.5
HHC				PP	PP		
	comp=Z,297nm,7.7s						
HHC				LR	LR		
	comp=N,477nm,17.8s,MS5.4						
HHC				LR	LR		
	comp=E,544nm,19.0s,MS5.4						
HHC				LR	LR		
	comp=Z,701nm,19.0s,MS5.4						
LZH	**Lanzhou**	**140.17**	**2**	*e*PKP	PKPdf	09 36 39.5	-3.4
CD2	**Chengdu**	**145.32**	**2**	*e*PKP	PKPdf	09 36 53.2	+1.0
ASAR	**Alice Springs**	**146.12**	**232**	PKPbc	PKPbc	09 36 52.5	-2.3
	comp=Z,0.4nm,0.6s,baz=116,slow=3.7,SNR=5.6						
ASAR				pPKPbc	pPKPbc	09 37 07.7	-3.4
	comp=Z,1.3nm,0.6s,baz=118,slow=3.8,SNR=8.5						
WRA	**Warramunga Arr**	**147.52**	**238**	PKPbc	PKPbc	09 36 57.4	-1.4
	comp=Z,1.2nm,0.7s,baz=113,slow=2.3,SNR=16						
WRA				pPKPbc	pPKPbc	09 37 11.6	-3.7
	comp=Z,3.1nm,0.7s,baz=109,slow=2.4,SNR=15						
GYA	**Guiyang**	**149.76**	**358**	*e*PKP	PKPdf	09 36 59.9	+0.2
GYA				PKP2	PKPab	09 37 11.4	+1.7
GYA				APKP		09 37 13.2	
GYA				XPKP		09 37 18.0	
GYA				PKS		09 40 33.2	
GYA				PP	PP	09 40 40.0	+3.7
GYA				SKS	SKSdf	09 44 01.5	-1.9
GYA				SKKS	SKKSac	09 47 23.5	-0.9
GYA				SS	SS	09 59 47.5	+0.9
GYA				PP	PP		
	comp=Z,80nm,8.4s						
KMI	**Kunming**	**151.01**	**5**	PKP	PKPdf	09 37 02.2	+0.5

*IDC **12** 09:39:02.7±1.0, 4694N×15581E, h0^{km}, mb3.8/8, mb1 4.1/9, mb1mx3.9/22, mbtmp3.8/9, ML3.3/1, Error ellipse: s-maj=34.0km s-min=19.3km az=166.0*

*NEIC **12** 09:39:04.4±0.7, 4697N×15582E, h10^{km}, Error ellipse: s-maj=23.0km s-min=13.9km az=172.0*

*ISCJB **12** 09:39:05.9±0.9, 470N±02×1558E±02, h33^{km}, mb3.8/8, Error ellipse: s-maj=30.8km s-min=18.3km az=170.5*

ISC 12 09:39:07.9±0.9**, 469N**±02×**1557E**±02**, h35^{km}, n11, σ0^{s}88**/11**, mb3.8**/8**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**9.60**	**258**	Pn	**Pn**	**09 41 21.6**	**-1.8**
	0.3nm,0.3s,baz=108,slow=16,SNR=2.3						
SONM	**Songino Array**	**32.93**	**290**	P	**P**	**09 45 39.0**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=60,slow=8.7,SNR=4.6						
MKAR	**Makanchi Array**	**48.42**	**298**	P	**P**	**09 47 47.2**	**+0.9**
MKAR	**Makanchi Array**	**48.42**	**298**	P	**P**	**09 47 47.2**	**+0.9**
	0.4nm,0.5s,mb3.7,baz=70,slow=4.6,SNR=7.5						
YKA	**Yellowknife Ar**	**49.74**	**37**	P	**P**	**09 47 55.1**	**-1.0**
	1.4nm,0.7s,mb4.1,baz=295,slow=7.3,SNR=22						
NVAR	**Mina Array Bea**	**60.80**	**64**	P	**P**	**09 49 16.0**	**-0.1**
NVAR	**Mina Array Bea**	**60.80**	**64**	P	**P**	**09 49 16.0**	**-0.1**
	0.1nm,0.3s,mb3.4,baz=293,slow=5.5,SNR=5.5						
PDAR	**Pinedale Array**	**63.22**	**55**	P	**P**	**09 49 32.4**	**0.0**
	1.0nm,0.9s,mb3.9,baz=307,slow=3.3,SNR=6.9						
FINES	**FINESS Array B**	**64.63**	**336**	P	**P**	**09 49 42.1**	**+0.8**
	1.0nm,0.9s,mb3.9,baz=28,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**72.95**	**201**	P	**P**	**09 50 34.5**	**+1.1**
	0.8nm,0.8s,mb3.7,baz=15,slow=5.8,SNR=5.2						
TXAR	**Lajitas Array**	**75.87**	**62**	P	**P**	**09 50 50.3**	**-0.4**
	2.3nm,0.8s,mb4.2,baz=296,slow=4.2,SNR=26						

CASC 12 09:49:04.6±2.3**, 1059N**×**8658W, h14^{km}**±10^{km}**, MD3.6, ML2.8, 6C-3D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**1.00**	**46**⇑	*e*P	Pb	09 49 23.0	-0.7
SSNN				*e*S	Sb	09 49 38.2	+1.4
LIM1	**Limonal**	**1.31**	**85**	*e*S	Sb	09 49 46.1	+0.5
MADN	**Villa Maderas**	**1.31**	**51**⇑	*e*P	Pn	09 49 27.8	-0.7
CONN	**Concepcion**	**1.35**	**44**⇑	*e*P	Pn	09 49 28.0	-1.0
CUI		**1.38**	**87**⇑	*i*P	Pn	09 49 27.6	-1.8
CUI				*e*S	Sn	09 49 47.4	-0.1
APON	**Apoyo**	**1.42**	**21**⇑	*e*P	Pn	09 49 29.2	-0.7
TICN	**Ticuantepe**	**1.48**	**13**	*e*P	Pn	09 49 30.8	+0.1
XAVN	**Gruta Xavier**	**1.57**	**9**⇓	*e*P	Pn	09 49 32.0	-0.1
XAVN				*e*S	Sn	09 49 51.3	-0.9
TISN	**Laguna Tiscapa**	**1.58**	**11**⇑	*e*P	Pn	09 49 32.0	-0.1
COPN	**Copaltepe**	**1.58**	**360**⇓	*e*P	Pn	09 49 31.9	-0.3
COPN				*e*S	Sn	09 49 53.1	+0.7
MGAN	**Managua**	**1.58**	**12**⇓	*e*P	Pn	09 49 32.0	-0.2
MGAN				*e*S	Sn	09 49 52.5	0.0
	comp=E,120nm,0.5s						
HUEN		**1.79**	**13**	*e*P	Pn	09 49 34.7	-0.3
HUEN				*e*S	Sn	09 49 57.2	-0.2
MOMJ	**Momotombo**	**1.81**	**1**	*i* P	Pn	09 49 35.2	-0.2
MOMJ				*e*S	Sn	09 49 58.7	+0.6
TEL3	**Telica 3**	**1.99**	**353**	*e*P	Pn	09 49 37.0	-0.8
TEL3				*e*S	Sn	09 50 03.2	+0.7
PRS1	**Puriscal**	**2.31**	**105**	*e*P	Pn	09 49 42.8	+0.6
LAJ	**Bijagual**	**2.52**	**106**	*e*P	Pn	09 49 39.3	-5.8
URSC	**Urasca**	**2.86**	**105**	*e*P	Pn	09 49 50.7	+0.9
BAR1		**3.49**	**112**	*e*P	Pn	09 49 58.9	+0.5
CHI2		**14.03**	**114**	*e*P		09 49 39.4	

*NEIC **12** 09:49:57.3, 1620N×9587W, h20^{km}, MD3.9(MEX), After MEX.*

MEX 12 09:49:56.4±0.5**, 1615N**×**9587W, h48^{km}**±12^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.44**	**211**	*i* P	Pn	09 50 05.3	-1.6
HUIG				*i* S	Sn	09 50 12.6	-1.7
VHO	**Vista Hermosa**	**1.23**	**318**	*i* P	Pn	09 50 15.8	-1.4
VHO				*i* S	Sn	09 50 30.7	-2.0
OXX	**Oaxaca**	**1.23**	**319**	*e*P	Pn	09 50 15.5	-1.7
OXX				*i* S	Sn	09 50 31.0	-1.7
CMIG	**Matias Romero**	**1.33**	**45**	*i* P	Pn	09 50 16.9	-1.7
CMIG				*i* S	Sn	09 50 33.4	-1.7
UTMO	**Huajuapan**	**2.49**	**312**	*e*P	Pn	09 50 33.8	-0.6
UTMO				*i* S	Sn	09 51 02.8	-0.8
TPIG	**Tehuac#an**	**2.67**	**328**	*e*P	Pn	09 50 35.8	-1.0
TPIG				*i* S	Sn	09 51 09.1	+1.2
PPM	**Popocatepetl**	**3.91**	**318**	*e*P	Pn	09 50 54.2	+0.2
PPM				*i* S	Sn	09 51 39.9	+1.3

*LDG **12** 09:58:53.9±0.1, 2071S×16995E, h10^{km}, Mb5.4/3, Ms5.1/9, Error ellipse: s-maj=20.1km s-min=12.7km az=33.0*

*SZGRF **12** 09:58:54.6, 2256S×16972E, h33^{km}, Southeast of Loyalty Islands*

*MOS **12** 09:58:58.4±1.5, 2087S×16980E, h33^{km}, mb5.5/37, MS5.2/34, Error ellipse: s-maj=9.1km s-min=8.6km az=51.6*

*ISCJB **12** 09:59:02.4±0.9, 21.12S±0.04×16977E±0.03, h73^{km}±8^{km}, mb5.2/83, Error ellipse: s-maj=6.2km s-min=4.2km az=172.0*

*NEIC **12** 09:59:03.2±0.1, 2105S×16983E, mb5.4/43, MW5.8, Error ellipse: s-maj=6.0km s-min=4.7km az=144.0, Moment Tensor Solution. s17 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.19; $M_{\theta\theta}$4.37; $M_{\phi\phi}$-1.19; $M_{r\theta}$-0.75; $M_{\theta\phi}$4.54; $M_{\phi r}$3.31; Best double couple: $M_0$6.90000×10^{17} NP1:ϕ_s97.00000°, δ56.00000°, λ-29.00000°. NP2:ϕ_s205.00000°, δ66.00000°, λ-143.00000°. Principal axes: T 7.0100, Plg6.0000°, Azm329.0000°; N -0.2500, Plg47.0000°, Azm233.0000°; P -6.7600, Plg43.0000°, Azm65.0000°;*

NEIC Felt at Noumea, New Caledonia.

*BGS **12** 09:59:03.2, 2105S×16988E, h70^{km}, mb5.4(NEIC)*

*GCMT **12** 09:59:03.2±0.1, 2107S×16973E, h61^{km}, MW5.8/106, Moment Tensor Solution. s98,c218; s106,c273; Duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.70±.06; $M_{\theta\theta}$2.34±.05; $M_{\phi\phi}$0.36±.06; $M_{r\theta}$-1.09±.05; $M_{\theta\phi}$4.57±.05; $M_{\phi r}$3.11±.05; Best double couple: $M_0$6.18000×10^{17} NP1:ϕ_s88.00000°, δ55.00000°, λ-28.00000°. NP2:ϕ_s194.00000°, δ68.00000°, λ-142.00000°. Principal axes: T 6.1830, Plg8.0000°, Azm318.0000°; N -0.0010, Plg46.0000°, Azm220.0000°; P -6.1770, Plg42.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **12** 09:59:04.0±1.0, 21.10S×16980E, h78^{km}±7^{km}, mb4.9/26, mb1 5.0/30, mb1mx5.0/31, mbtmp5.0/30, MS5.2/19, Ms1 5.2/19, ms1mx5.0/22 Error ellipse: s-maj=11.0km s-min=9.9km az=165.0*

*BJI **12** 09:59:04.0, 2099S×170.18E, h100^{km}, mB5.4, mb5.1*

ISC 12 09:59:05.0±1.0**, 2111S**±0.04×**16982E**±0.03**, h83^{km}**±8^{km}**, h106^{km}**±2.9^{km}**:pP-P, n936, σ0^{s}65**/536**, mb5.2**/83**, 167C-160D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.29**	**252**	*e*P	**Pn**	**09 59 51.0**	**-3.3**
DZM				*e*S	**Sn**	**10 00 27.1**	**-5.3**
DZM	**Mont Dzumac**	**3.29**	**252**	P	**Pn**	**09 59 51.1**	**-3.2**
	212nm,0.3s,baz=84,slow=11,SNR=1634						
DZM				S	**Sn**	**10 00 28.0**	**-4.3**
	995nm,0.3s,baz=131,slow=22,SNR=18						
OUZ	**Omahuta**	**14.45**	**168**	*e*P	**Pn**	**10 02 26.6**	**+1.3**
OUZ	**Omahuta**	**14.45**	**168**	*e*PN	**Pn**	**10 02 25.0**	**-0.3**
HNR	**Honiara**	**15.01**	**319**	*e*P	**Pn**	**10 02 33.5**	**+0.8**
	2μm,1.4s						
HNR				*e*S	**S**	**10 05 28.3**	**-2.3**
HNR	**Honiara**	**15.01**	**319**	*e*P	**Pn**	**10 02 33.5**	**+0.8**
HNR				pmax	pmax		
	comp=Z,2μm,1.4s						
HNR	**Honiara**	**15.01**	**319**	P	**Pn**	**10 02 31.1**	**-1.6**
	comp=Z,15nm,0.3s,baz=241,slow=1.6,SNR=11						
HNR				LR	LR	10 07 24.9	
	comp=Z,5μm,19.6s,baz=179,slow=33						
FUNA	**Funafuti**	**15.44**	**37**	*e*P	**Pn**	**10 02 38.5**	**+0.4**
	comp=Z,376nm,1.1s						
EIDS	**Eidsvold**	**17.73**	**253**	*e*P	**Pn**	**10 03 07.9**	**+1.4**
	comp=Z,25nm,0.8s						
URZ	**Urewera**	**18.21**	**161**	P	**Pn**	**10 03 12.8**	**+0.6**
	comp=Z,3.6nm,0.3s,baz=8.3,slow=11,SNR=13						
URZ				LR	LR	10 08 58.6	
	comp=Z,7μm,20.9s,baz=170,slow=33						
ARMA	**Armidale**	**18.80**	**237**	*e*P	**Pn**	**10 03 20.8**	**+1.5**
ARMA				*e*S	**S**	**10 06 53.8**	**+6.3**
AFI	**Afiamalu**	**18.94**	**71**	*e*P	**Pn**	**10 03 18.0**	**-3.1**
	comp=Z,566nm,0.9s						
AFI	**Afiamalu**	**18.94**	**71**	*e*P	**Pn**	**10 03 18.0**	**-3.1**
AFI				pmax	pmax		
	comp=Z,566nm,0.9s						
AFI	**Afiamalu**	**18.94**	**71**	P	**Pn**	**10 03 18.2**	**-2.9**
	comp=Z,6.3nm,0.3s,baz=64,slow=1.6,SNR=56						
QRZ	**Quartz Range**	**19.79**	**174**	*e*P	**Pn**	**10 03 28.9**	**-2.0**
QRZ	**Quartz Range**	**19.79**	**174**	*e*PN	**Pn**	**10 03 27.3**	**-3.5**
PXZ	**Pawanui**	**19.80**	**164**	*e*PN	**Pn**	**10 03 28.3**	**-2.7**
MRZ	**Mangatainoka R**	**20.10**	**167**	*e*P	**P**	**10 03 30.8**	**-1.1**
MRZ	**Mangatainoka R**	**20.10**	**167**	PN	**P**	**10 03 30.8**	**-1.1**
BFZ	**Birch Farm**	**20.26**	**166**	*e*P	**P**	**10 03 30.3**	**-3.4**
BFZ	**Birch Farm**	**20.26**	**166**	PN	**P**	**10 03 31.3**	**-2.4**
SNZO	**South Karori**	**20.56**	**169**	*e*P	**P**	**10 03 37.7**	**+0.8**
	comp=Z,112nm,1.0s						
SNZO				LR	LR		
	comp=Z,8μm,20.0s						
THZ	**Tophouse**	**20.76**	**173**	*e*P	**P**	**10 03 39.4**	**+0.4**
THZ	**Tophouse**	**20.76**	**173**	PN	**P**	**10 03 38.9**	**-0.1**
RIV	**Riverview**	**20.81**	**229**	*e*P	**P**	**10 03 43.3**	**+3.6**
KHZ	**Kahutara**	**21.48**	**172**	*e*P	**P**	**10 03 45.9**	**-0.8**
KHZ	**Kahutara**	**21.48**	**172**	PN	**P**	**10 03 45.9**	**-0.8**
LTZ	**Lake Taylor**	**21.71**	**175**	*e*P	**P**	**10 03 52.9**	**+3.7**
LTZ	**Lake Taylor**	**21.71**	**175**	PN	**P**	**10 03 49.0**	**-0.2**
CTA	**Charters Tower**	**22.08**	**268**	*e*P	**P**	**10 03 54.3**	**+0.9**
	comp=Z,68nm,0.9s,mb5.0						
CTA				*e*S	**S**	**10 07 53.8**	**+1.7**
CTA				*e*SCP	ScP	10 11 20.6	+2.3
CTA	**Charters Tower**	**22.08**	**268**	*e*P	**P**	**10 03 54.3**	**+0.9**
CTA				*e*S	**S**	**10 07 53.8**	**+1.7**
CTA				pmax	pmax		
	comp=Z,68nm,0.9s						
CTA	**Charters Tower**	**22.08**	**268**	P	**P**	**10 03 52.7**	**-0.7**
	comp=Z,88nm,0.9s,mb5.1,baz=92,slow=11,SNR=81						
CTAO	**Charters Tower**	**22.08**	**268**	*e*P	**P**	**10 03 53.7**	**+0.3**
	comp=Z,96nm,0.9s,mb5.1						
CTAO				LR	LR		
	comp=Z,8μm,20.0s						
CTAO	**Charters Tower**	**22.08**	**268**	*e*P	**P**	**10 03 53.7**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,96nm,0.9s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,8μm,20.0s						
RPZ	**Rata Peaks**	**22.57**	**178**	P	**P**	**10 03 59.6**	**+1.3**
	comp=Z,45nm,0.8s,mb4.9,baz=356,slow=5.5,SNR=11						
RPZ				LR	LR	10 11 60.0	
	comp=Z,9μm,19.0s,baz=346,slow=34						
CNB	**Canberra Magne**	**22.86**	**227**	*e*P	**P**	**10 04 03.4**	**+2.0**
	comp=Z,223nm,1.5s,mb5.3						
PMG	**Port Moresby**	**24.73**	**295**	*e*P	**P**	**10 04 19.1**	**+0.3**
PMG				LR	LR		
	comp=Z,5μm,20.0s						
PMG	**Port Moresby**	**24.73**	**295***c*	*i*P	**P**	**10 04 16.4**	**-2.4**
PMG	**Port Moresby**	**24.73**	**295**	P	**P**	**10 04 18.3**	**-0.5**
	comp=Z,319nm,1.0s,mb5.7,baz=106,slow=5.9,SNR=52						
PMG				LR	LR	10 13 13.0	
	comp=Z,6μm,18.2s,baz=234,slow=34						
COEN	**Coen**	**26.36**	**281**	*e*P	**P**	**10 04 34.2**	**+0.7**
	comp=Z,225nm,1.8s,mb5.3						
STKA	**Stephens Creek**	**27.37**	**241**	*e*P	**P**	**10 04 43.6**	**+1.1**
	comp=Z,30nm,1.0s,mb4.8						
STKA				*e*SCP	ScP	10 11 36.9	+4.0
STKA	**Stephens Creek**	**27.37**	**241**	*e*P	**P**	**10 04 43.0**	**+0.5**
STKA	**Stephens Creek**	**27.37**	**241**	P	**P**	**10 04 43.6**	**+1.2**
	comp=Z,20nm,0.8s,mb4.7,baz=87,slow=7.8,SNR=19						
STKA				PcP	PcP	10 07 58.7	-1.0
	comp=Z,6.5nm,0.5s,baz=73,slow=4.5,SNR=3.4						
STKA				ScP	ScP	10 11 37.2	+4.4
	comp=Z,6.0nm,0.9s,baz=359,slow=3.5,SNR=5.2						
STKA				LR	LR	10 14 34.5	
	comp=Z,10μm,21.7s,baz=68,slow=34						
RAR	**Rarotonga**	**28.34**	**96**	LR	LR	10 13 47.3	
	comp=Z,3μm,21.8s,baz=271,slow=31						
TAU	**Tasmania Unive**	**28.76**	**216**	PFAKE		10 05 10.0	+15
TAU				LR	LR		
	comp=Z,5μm,21.0s						
WB2	**Warramunga Arr**	**33.20**	**266**	*e*P	**P**	**10 05 33.0**	**-1.1**
WB2				*e*S	**S**	**10 10 39.9**	**-8.1**
WB2				*e*SCP	ScP	10 11 54.3	+2.2
WRA	**Warramunga Arr**	**33.21**	**266**	P	**P**	**10 05 33.2**	**-1.0**
WRA				S	**S**	**10 10 45.7**	**-2.5**
WRA	**Warramunga Arr**	**33.21**	**266**	P	**P**	**10 05 33.2**	**-1.0**
	comp=Z,67nm,0.8s,mb5.5,baz=92,slow=8.3,SNR=461						
WRA				S	**S**	**10 10 45.7**	**-2.5**
	comp=Z,3.3nm,1.0s,baz=99,slow=14,SNR=5.3						
WRA				ScP	ScP	10 11 54.1	+2.0
	comp=Z,14nm,1.0s,baz=90,slow=3.8,SNR=12						
WRA				LR	LR	10 19 26.6	
	comp=Z,7μm,18.7s,baz=100,slow=37						
ASAR	**Alice Springs**	**33.25**	**259**	P	**P**	**10 05 33.9**	**-0.6**
ASAR				S	**S**	**10 10 48.1**	**-0.7**
ASAR	**Alice Springs**	**33.25**	**259**	P	**P**	**10 05 33.9**	**-0.6**
	comp=Z,127nm,0.7s,mb5.8,baz=88,slow=9.1,SNR=950						
ASAR				S	**S**	**10 10 48.1**	**-0.7**
	comp=Z,3.1nm,1.1s,baz=91,slow=16,SNR=4.4						
ASAR				ScP	ScP	10 11 54.5	+2.2
	comp=Z,6.3nm,1.0s,baz=98,slow=4.4,SNR=8.2						
TBI	**Tubuai**	**37.67**	**101**	*e*S	**S**	**10 12 03.3**	**+6.7**
	comp=Z,1μm,32.0s						
TBI				*e*LQ		10 14 47.6	
	comp=Z,12μm,31.2s						
TBI				*e*LR	LR	10 16 23.0	
	comp=Z,10μm,28.8s,baz=265						
PPT	**Papeete**	**38.40**	**92**	*e*S	**S**	**10 12 13.8**	**+6.1**
	comp=Z,1μm,26.2s						
PPT				*e*LQ		10 15 05.9	
	comp=Z,17μm,31.0s						
PPT				*e*LR	LR	10 16 42.5	
	comp=Z,13μm,27.8s,baz=255						
PPT	**Papeete**	**38.40**	**92**	LR	LR	10 18 36.5	
	comp=Z,2μm,19.1s,baz=258,slow=30						
FORT	**Forrest**	**38.58**	**247**	*e*P	**P**	**10 06 19.8**	**-0.2**
	comp=Z,64nm,0.8s,mb5.5						
FITZ	**Fitzroy Crossi**	**41.63**	**266**	*e*P	**P**	**10 06 45.1**	**-0.2**
	comp=Z,189nm,0.9s,mb5.8						
FITZ	**Fitzroy Crossi**	**41.63**	**266**	P	**P**	**10 06 45.6**	**+0.3**
	comp=Z,108nm,0.9s,mb5.6,baz=116,slow=10.0						
FITZ				LR	LR	10 24 39.5	
	comp=Z,7μm,18.8s,baz=100,slow=37						
GUMO	**Guam**	**42.30**	**322**	*e*P	**P**	**10 06 50.7**	**0.0**
GUMO				LR	LR		
	comp=Z,2μm,20.0s						
BATI	**Kupang**	**45.60**	**276**	P	**P**	**10 07 18.3**	**+1.0**
	comp=Z,51nm,0.7s,mb5.4,baz=152,slow=3.3,SNR=13						
BATI				LR	LR	10 26 04.9	
	comp=Z,6μm,21.6s,baz=131,slow=36						
MBWA	**Marble Bar**	**46.56**	**260**	*e*P	**P**	**10 07 24.8**	**+0.1**
MBWA				LR	LR		
	comp=Z,3μm,19.0s						
KLBR	**Kellerberrin**	**47.43**	**246**	*e*P	**P**	**10 07 30.3**	**-1.1**
	comp=Z,103nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	**47.87**	**244**	*e*P	**P**	**10 07 34.8**	**0.0**
	comp=Z,58nm,1.0s,mb5.4						
NWAO				LR	LR		
	comp=Z,8μm,21.0s						
NWAO	**Narrogin (SRO)**	**47.87**	**244**	*e*P	**P**	**10 07 34.8**	**0.0**
NWAO				pmax	pmax		
	comp=Z,58nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,8μm,21.0s						
NWAO	**Narrogin (SRO)**	**47.87**	**244**	P	**P**	**10 07 34.9**	**+0.2**
	comp=Z,40nm,0.8s,mb5.3,baz=91,slow=6.7,SNR=17						
NWAO				LR	LR	10 26 54.3	
	comp=Z,10μm,21.8s,baz=94,slow=35						
MUN	**Mundaring**	**48.74**	**246**	*e*P	**P**	**10 07 41.4**	**-0.1**
MUN				*e*S	**S**	**10 14 38.5**	**+0.3**
DRV	**Dumont d'Urvil**	**49.37**	**195**	PP	PP	10 09 45.0	+4.7
DRV				S	**S**	**10 14 59.0**	**+13**
DRV				SS	SS	10 18 09.0	-9.4
DRV				L		10 20 00.0	
DRV				R		10 22 00.0	
DRV				L		01 29 00.0	
DRV				R		01 36 00.0	
RKT	**Rikitea**	**50.93**	**103**	*e*S	**S**	**10 15 15.7**	**+6.9**
	comp=Z,800nm,33.2s						
RKT				*e*LQ		10 20 08.3	
	comp=Z,3μm,30.2s						
RKT				*e*LR	LR	10 22 31.9	
	comp=Z,5μm,29.8s,baz=257						
DAV	**Davao City (W)**	**51.67**	**298**	PFAKE		10 08 20.0	+16
DAV				LR	LR		
	comp=Z,1μm,21.0s						
VNDA	**Vanda**	**56.59**	**182**	P	**P**	**10 08 37.5**	**-1.2**
VNDA				LR	LR	10 28 47.6	
VNDA	**Vanda**	**56.59**	**182**	P	**P**	**10 08 37.5**	**-1.2**
	comp=Z,3.5nm,0.8s,mb4.4,baz=4.4,slow=4.6,SNR=12						
VNDA				LR	LR	10 28 47.6	
	comp=Z,2μm,21.4s,baz=13,slow=32						
MYLDM	**Lahad Datu**	**56.70**	**292**	⇓P	**P**	**10 08 41.6**	**+1.3**
SBA	**Scott Base**	**56.81**	**181**	*e*P	**P**	**10 08 40.7**	**+0.5**
	comp=Z,34nm,0.8s,mb5.4						
SBA				*e*pP	pP	10 08 59.0	-2.1
SBA				LR	LR		
	comp=Z,2μm,21.0s						
SBA	**Scott Base**	**56.81**	**181**	*e*P	**P**	**10 08 40.7**	**+0.5**
SBA				*e**PP	pP	10 08 59.0	-2.1
SBA				pmax	pmax		

comp=Z,34nm,0.8s,mb5.4
SBA MLR MLR
comp=Z,2µm,21.0s
TSM Tawau 56.82 290 ⇓P **P 10 08 42.2 +1.0**
SDKM Sandakan 58.05 291 ⇓P **P 10 08 50.6 +0.7**
CASY Casey 58.64 204 PFAKE 10 09 10.0 +17
CASY LR LR
comp=Z,2µm,19.0s
KDM Kudat 58.99 292 ⇑P **P 10 08 58.2 +1.8**
KKM Kota Kinabalu 59.10 291 *e*P **P 10 08 54.4 -2.8**
KKM Kota Kinabalu 59.10 291 ⇑P **P 10 08 57.6 +0.4**
BTM Bintulu 60.56 287 ⇓P **P 10 09 08.8 +1.6**
SBUM Sibu 61.01 285 ⇓P **P 10 09 10.9 +0.6**
KSM Kuching 62.33 283 *e*P **P 10 09 19.1 0.0**
KSM *e*pP pP 10 09 37.5 -2.8
KSM *e*sP sP 10 09 44.0 -5.5
KSM Kuching 62.33 283 ⇑P **P 10 09 19.3 +0.2**
JOW Kunigami 62.38 318 P **P 10 09 19.2 +0.1**
comp=Z,18nm,0.5s,mb5.4,baz=144,slow=5.6,SNR=8.2
MJAR Matsushiro Arr 64.65 332 P **P 10 09 32.9 -1.0**
comp=Z,24nm,0.9s,mb5.0,baz=165,slow=6.8,SNR=32
MAJO Matsushiro 64.65 332 *e*P **P 10 09 33.3 -0.6**
comp=Z,48nm,1.1s,mb5.2
MAJO LR LR
comp=Z,2µm,22.0s
MAJO Matsushiro 64.65 332 *e*P **P 10 09 33.3 -0.6**
MAJO pmax pmax
comp=Z,48nm,1.1s,mb5.2
MAJO MLR MLR
comp=Z,2µm,22.0s
MAT Matsushiro 64.65 332 P **P 10 09 32.5 -1.4**
MAT S **S 10 18 05.0 -2.5**
YHNB Yeheng 65.49 312 *e*P **P 10 09 39.6 0.0**
JNU Nakatsue 65.50 325 P **P 10 09 38.9 -0.6**
comp=Z,65nm,0.9s,mb5.5,baz=78,slow=5.4,SNR=21
TATO Taipei 65.61 312 *e*P **P 10 09 40.2 -0.1**
TATO LR LR
comp=Z,890nm,19.0s
ERM Erimo 67.48 339 PFAKE 10 10 00.0 +8.1
ERM LR LR
comp=Z,2µm,20.0s
QZH Quanzhou 67.63 310 ⇑*i*P **P 10 09 54.6 +1.4**
QZH S S 10 18 49.8 +5.8
QZH XS sS 10 19 21.6 +0.9
QZH LR LR
comp=Z,3µm,34.6s
MYKOM Kota Tinggi 68.35 281 ⇑P **P 10 09 58.8 +0.7**
KGM Kluang 68.93 281 ⇓P **P 10 10 02.3 +0.7**
QSPA South Pole Qui 68.95 180 *e*P **P 10 10 00.6 -0.1**
comp=Z,42nm,0.9s,mb5.3
QSPA South Pole Qui 68.95 180 P **P 10 10 00.4 -0.3**
comp=Z,19nm,0.7s,mb5.0,baz=26,slow=1.6,SNR=80
ASAJ Asahikawa 69.53 339 P **P 10 10 05.5 +0.8**
comp=Z,10nm,0.7s,mb4.8,baz=62,slow=9.0,SNR=6.6
SSE Sheshan 69.80 317 *e*P **P 10 10 06.6 0.0**
SSE PCP PcP 10 10 29.1 +0.4
SSE AP pP 10 10 32.1 +3.9
SSE PP PP 10 12 42.7 +0.5
SSE S S 10 19 08.7 -0.8
SSE XS sS 10 19 52.3 +5.9
SSE SCS ScS 10 19 58.9 -2.3
SSE AMB AMB
comp=Z,24nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,120nm,6.4s
SSE LR LR
comp=N,141nm,25.7s
SSE LR LR
comp=E,609nm,25.7s
SSE LR LR
comp=Z,776nm,27.4s
KSRS Korea Array 70.35 326 P **P 10 10 09.7 -0.1**
comp=Z,9.7nm,0.9s,mb4.6,baz=145,slow=6.0,SNR=24
KSRS LR LR 10 38 59.3
comp=Z,617nm,21.1s,baz=140,slow=34
GZH Guangzhou 70.41 305 P **P 10 10 10.3 -0.2**
GZH S S 10 19 18.9 +1.9
GZH LR LR
comp=N,397nm,9.3s
GZH LR LR
comp=E,568nm,18.4s
GZH LR LR
comp=Z,765nm,21.9s
KTGM Kuala Trenggan 70.43 284 ⇑P **P 10 10 11.2 +0.3**
FRIM Kepong 70.96 281 ⇑P **P 10 10 14.1 -0.1**
QIZ Qiongzhong 70.98 300 PFAKE 10 10 30.0 +16
QIZ LR LR
comp=Z,470nm,20.0s
INCN Inchon 71.06 325 *e*P **P 10 10 14.0 -0.1**
comp=Z,70nm,1.1s,mb5.4
INCN LR LR
comp=Z,469nm,19.0s
NJ2 Nanjing 71.92 316 *e*P **P 10 10 19.8 +0.3**
NJ2 AP pP 10 10 47.0 +5.8
NJ2 XP sP 10 11 00.5 +10
NJ2 PP PP 10 13 04.5 +4.0
NJ2 S S 10 19 31.0 -3.1
NJ2 AMB AMB
comp=Z,50nm,1.2s,mb5.2
NJ2 AMB AMB
comp=Z,420nm,5.3s
NJ2 LR LR
comp=N,4µm,30.1s
NJ2 LR LR
comp=E,1µm,23.0s
NJ2 LR LR
comp=Z,1µm,23.0s
IPM Ipoh 72.00 282 ⇑P **P 10 10 20.7 +0.3**
YSS Yuzh-Sakhalins 72.02 341 ⇓*e*P **P 10 10 17.9 -1.8**
YSS pmax pmax
comp=Z,45nm,1.7s,mb5.0
KULM Kulim 72.67 283 *e*P **P 10 10 24.6 +0.2**
KULM Kulim 72.67 283 ⇑P **P 10 10 24.2 -0.2**
PSI Prapat 73.27 280 P **P 10 10 26.9 -1.0**
comp=Z,22nm,1.0s,mb4.9,baz=165,slow=5.0,SNR=17
SMY Shemya 73.62 3 PFAKE 10 10 40.0 +11
SMY LR LR
comp=Z,2µm,20.0s
PET Petropavlovsk 74.45 353 PFAKE 10 10 50.0 +16
PET LR LR
comp=Z,1µm,20.0s
PET Petropavlovsk 74.45 353 *e*P **P 10 10 35.3 +1.4**
PET *e*S S 10 19 56.1 -5.7
PET *e**SS sS 10 20 48.1 +9.0
PET *e*SS SS 10 24 50.2 -0.4
PET pmax pmax
comp=Z,42nm,1.6s,mb4.9
DL2 Dalian 74.83 323 P **P 10 10 36.2 -0.2**
DL2 S S 10 20 08.2 +1.5
DL2 AMB AMB
comp=Z,40nm,0.9s,mb5.2
DL2 AMB AMB
comp=Z,110nm,5.5s
MDJ Mudanjiang 75.02 331 P **P 10 10 38.5 +1.2**
MDJ AP pP 10 11 03.8 +4.6
MDJ XP sP 10 11 14.9 +6.6
MDJ PP PP 10 13 27.8 +1.2
MDJ S S 10 20 09.6 +1.1
MDJ XS sS 10 20 54.1 +8.3
MDJ SS SS 10 25 01.7 +2.2
MDJ AMB AMB
comp=Z,20nm,1.1s,mb4.8
MDJ AMB AMB
comp=Z,333nm,4.4s
MDJ LR LR
comp=N,714nm,21.8s
MDJ LR LR
comp=E,705nm,35.7s
MDJ LR LR
comp=Z,1µm,28.3s
MDJ Mudanjiang 75.02 331 *e*P **P 10 10 37.3 0.0**
comp=Z,20nm,1.0s,mb4.8
MDJ LR LR
comp=Z,1µm,22.0s
KKTK Khon Kaen 75.51 294 P **P 10 10 41.5 +0.7**
TIA Tai'an 75.70 318 ⇑P **P 10 10 41.0 -0.4**
TIA AMB AMB
comp=Z,36nm,1.0s,mb5.1
CN2 Changchun 76.33 329 ⇑P **P 10 10 44.6 -0.2**
CN2 *e*XP sP 10 11 25.2 +9.4
CN2 *e*S S 10 20 20.3 -2.7
CN2 AMB AMB
comp=Z,40nm,0.9s,mb5.2
CN2 AMB AMB
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,500nm,19.0s
CN2 LR LR
comp=E,600nm,19.0s
CN2 LR LR
comp=Z,1µm,19.0s
MAW Mawson 76.92 202 *e*P **P 10 10 47.6 -0.3**
comp=Z,12nm,0.8s,mb4.7
MAW Mawson 76.92 202 *e*P **P 10 10 47.6 -0.3**
MAW pmax pmax
comp=Z,12nm,0.8s
MAW Mawson 76.92 202 P **P 10 10 47.2 -0.7**
comp=Z,12nm,0.7s,mb4.7,baz=114,slow=8.8,SNR=15
MAW LR LR 10 40 55.9
comp=Z,1µm,19.2s,baz=100,slow=33
GYA Guiyang 77.33 305 ⇑*i*P **P 10 10 51.5 +0.6**
GYA PCP PcP 10 11 03.2 +2.1
GYA AP pP 10 11 21.7 +8.9
GYA XP sP 10 11 33.0 +11
GYA PP PP 10 13 50.3 +3.9
GYA S S 10 20 32.7 -2.0
GYA SKS 10 20 50.2
GYA SCS ScS 10 20 57.5 -4.2
GYA SS SS 10 25 36.6 +1.4
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.8
GYA AMB AMB
comp=Z,80nm,5.7s
GYA LR LR
comp=N,510nm,21.8s
GYA LR LR
comp=E,490nm,20.6s
GYA LR LR
comp=Z,670nm,22.2s
UNV Unalaska Valle 77.39 14 PFAKE 10 11 00.0 +9.4
UNV LR LR
comp=Z,6µm,22.0s
KLR Kul'dur 77.79 336 *e*P **P 10 10 49.0 -3.9**
BJT Baijiatuau 78.72 321 *e*P **P 10 10 58.0 -0.2**
comp=Z,17nm,0.6s,mb5.1
BJT LR LR
comp=Z,855nm,21.0s
BJT Baijiatuau 78.72 321 *e*P **P 10 10 58.1 -0.1**
BJT pmax pmax
comp=Z,17nm,0.6s
BJT MLR MLR
comp=Z,855nm,21.0s
BJI Beijing 78.73 321 P **P 10 10 57.9 -0.4**
BJI AP pP 10 11 25.9 +5.6
BJI XP sP 10 11 38.0 +8.7
BJI PP PP 10 13 57.1 -0.7
BJI S S 10 20 46.3 -2.8
BJI XS sS 10 21 35.0 +8.3
BJI SS SS 10 25 50.8 -4.9
BJI AMB AMB
comp=Z,27nm,0.9s,mb5.1
BJI AMB AMB
comp=Z,160nm,5.0s
BJI LR LR
comp=N,499nm,10.3s
BJI LR LR
comp=E,388nm,10.5s
BJI LR LR
comp=Z,1µm,36.8s
CHRT Chiangrai 79.69 296 ⇓P **P 10 11 04.5 +0.5**
comp=Z,32nm,8.5s
KMI Kunming 79.72 302 P **P 10 11 05.6 +1.5**
KMI PCP PcP 10 11 12.9 +1.3
KMI AP pP 10 11 34.7 +8.6
KMI XP sP 10 11 47.0 +12
KMI PP PP 10 14 10.5 +4.1
KMI S S 10 20 57.9 -2.3
KMI SKS 10 21 08.4
KMI SCS ScS 10 21 15.8 -5.4
KMI XS sS 10 21 48.7 +11
KMI SS SS 10 26 12.3 +1.2
KMI AMB AMB
comp=Z,44nm,1.1s,mb5.2
KMI AMB AMB
comp=Z,294nm,3.1s
KMI LR LR
comp=N,420nm,19.9s
KMI LR LR
comp=E,439nm,20.8s
KMI LR LR
comp=Z,637nm,21.1s
XAN Xi'an 79.77 312 P **P 10 11 03.6 -0.5**
XAN S S 10 21 00.5 +0.1
XAN AMB AMB
comp=Z,28nm,0.9s,mb5.1
XAN LR LR
comp=Z,574nm,19.8s
CHG Chiang Mai 79.92 295 ⇓P **P 10 11 05.9 +0.6**
comp=Z,34nm,0.7s,mb5.3
CHTO Chiang Mai 79.92 295 *e*P **P 10 11 05.5 +0.2**
comp=Z,40nm,1.0s,mb5.2
CHTO LR LR
comp=Z,427nm,21.0s
CHTO Chiang Mai 79.92 295 *e*P **P 10 11 05.5 +0.2**
CHTO pmax pmax
comp=Z,40nm,1.0s,mb5.2
CHTO MLR MLR
comp=Z,427nm,21.0s
CD2 Chengdu 81.80 307 *e*P **P 10 11 15.7 +0.7**
CD2 AP pP 10 11 43.9 +6.7
CD2 XP sP 10 11 56.0 +10
CD2 PP PP 10 14 26.0 +2.5
CD2 S S 10 21 18.8 -2.9
CD2 XS sS 10 22 08.4 +8.9
CD2 SS SS 10 26 42.9 +0.9
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
CD2 LR LR
comp=N,450nm,24.0s
CD2 LR LR
comp=E,560nm,25.2s
CD2 LR LR
comp=Z,720nm,24.0s
MA2 Magadan 81.89 350 PFAKE 10 11 30.0 +15
MA2 LR LR
comp=Z,2µm,22.0s
HHC Hu-ho-hao-te 81.99 319 *e*P **P 10 11 15.9 +0.1**
HHC AP pP 10 11 43.1 +5.2
HHC XP sP 10 11 54.9 +8.0
HHC PP PP 10 14 26.0 +1.1
HHC S S 10 21 19.9 -3.3
HHC SKS 10 21 22.2
HHC XS sS 10 22 10.4 +9.4
HHC SS SS 10 26 43.3 -1.1
HHC AMB AMB
comp=Z,29nm,1.0s,mb5.1
HHC AMB AMB
comp=Z,299nm,5.6s
HHC LR LR
comp=N,427nm,22.6s
HHC LR LR
comp=E,451nm,20.2s
HHC LR LR
comp=Z,818nm,26.2s
HIA Hailar 82.99 330 *e*P **P 10 11 20.8 0.0**
comp=Z,10nm,0.8s,mb4.7
HIA LR LR
comp=Z,745nm,22.0s
HIA Hailar 82.99 330 *e*P **P 10 11 20.8 0.0**
HIA pmax pmax
comp=Z,10.0nm,0.8s
HIA MLR MLR
comp=Z,745nm,22.0s
LZH Lanzhou 84.38 312 *e*P **P 10 11 29.4 +1.2**
LZH AP pP 10 11 58.5 +8.0
LZH XP sP 10 12 09.0 +10
LZH PP PP 10 14 46.1 +1.6
LZH *e*S S 10 21 46.2 -1.4
LZH XS sS 10 22 34.2 +8.6
LZH SS SS 10 27 18.0 -2.0
LZH AMB AMB
comp=Z,49nm,1.4s,mb5.1
LZH AMB AMB
comp=Z,307nm,5.6s
LZH LR LR
comp=E,692nm,15.7s
LZH LR LR
comp=Z,1µm,16.8s
KDAK Kodiak Island 84.61 19 P **P 10 11 28.6 -0.2**
KDAK LR LR
comp=Z,765nm,19.0s
KDAK Kodiak Island 84.61 19 P **P 10 11 28.6 -0.2**
comp=Z,19nm,0.8s,mb5.1,baz=219,slow=9.0,SNR=12
PMSA Palmer Station 84.98 160 P **P 10 11 30.5 -0.3**
comp=Z,26nm,0.8s,mb5.2,baz=179,slow=3.1,SNR=7.7
GAMB Gambell 85.83 8 *e*P **P 10 11 33.8 -1.0**
BNLO Ben Lomond (Sa 86.32 48 ⇑P **P 10 11 38.3 +0.5**
baz=86
CLNS Chul'man 86.32 337 *e*P **P 10 11 35.0 -2.3**
CLNS *e* 10 14 55.1
CLNS *e*S S 10 22 03.4 -2.3
CLNS *e*PS 10 23 17.7
CLNS pmax pmax
comp=Z,47nm,0.8s,mb5.5
CLNS pmax pmax
comp=N,17nm,0.6s
CLNS pmax pmax
comp=E,21nm,0.7s
CLNS pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
CLNS pmax pmax
comp=N,4.0nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS smax
comp=N,171nm,11.9s
CLNS smax
comp=Z,86nm,11.1s
CLNS smax
comp=E,163nm,15.5s
MCCM Marconi Confer 86.34 47 PFAKE 10 11 50.0 +12
MCCM LR LR
comp=Z,880nm,19.0s
HAST UC Hastings Re 86.38 49 ⇑P **P 10 11 38.6 +0.5**
baz=86,SNR=8.2
JRSC Jasper Ridge 86.41 48 ⇓P **P 10 11 38.2 -0.1**
baz=87
V03C Hunter Liggett 86.43 49 ⇓P **P 10 11 38.8 +0.4**
baz=87
V04C Ramage Ranch, 86.50 50 ⇑P **P 10 11 39.2 +0.4**
baz=87
HOPS Hopland 86.64 46 PFAKE 10 11 50.0 +11
HOPS LR LR
comp=Z,1µm,21.0s
HOPS Hopland 86.64 46 ⇓P **P 10 11 39.2 -0.2**
baz=87
SAO San Andreas Ge 86.64 49 *e*P **P 10 11 39.7 +0.3**
comp=Z,28nm,1.1s,mb5.1
SAO LR LR
comp=Z,1µm,21.0s
SAO San Andreas Ge 86.64 49 *e*P **P 10 11 39.7 +0.3**
SAO pmax pmax
comp=Z,28nm,1.1s,mb5.1
SAO MLR MLR
comp=Z,1µm,21.0s
KCPM Cahto Peak 86.65 45 *e*P **P 10 11 39.5 +0.1**
P01C Double 8 Ranch 86.70 45 ⇓P **P 10 11 40.0 +0.3**
baz=87,SNR=6.2
CVS Carmenet Viney 86.72 47 ⇓P **P 10 11 39.8 0.0**
baz=87
O01C Eel River Cons 86.72 45 ⇓P **P 10 11 40.3 +0.5**
baz=87,SNR=7.9
KIPM Iron Peak 86.78 45 *e*P **P 10 11 38.8 -1.3**
WENL Wente Brothers 86.85 48 ⇓P **P 10 11 41.1 +0.7**
baz=87
PACP Pacheco Peak 86.87 48 ⇑P **P 10 11 41.1 +0.6**
baz=87,SNR=12
PKD Parkfield 86.88 50 ⇑P **P 10 11 41.3 +0.6**
baz=87,SNR=14
PKM Peak Mountain 86.90 51 ⇓P **P 10 11 41.6 +0.9**
baz=87,SNR=6.0
U04C Hernandez Rese 86.91 49 ⇑P **P 10 11 41.7 +0.9**
baz=87,SNR=15
BDM Black Diamond 86.94 47 ⇑P **P 10 11 40.6 -0.2**
baz=87
SMMC Simmler 86.97 50 ⇑P **P 10 11 41.3 +0.2**
baz=87
MNRC McLaughlin Nat 87.00 46 ⇑P **P 10 11 41.8 +0.7**
baz=87,SNR=9.4
NVL N'lazarevskaya 87.08 187 *e*P **P 10 11 43.9 +2.8**
NVL pmax pmax
comp=N,34nm,1.8s
NVL pmax pmax
comp=Z,64nm,1.8s,mb5.2
NVL pmax pmax
comp=E,6.0nm,0.9s
MAIT Maitri 87.08 187 *e*P **P 10 11 39.7 -1.4**
S04C Ingram Canyon, 87.09 48 ⇑P **P 10 11 42.1 +0.5**
baz=87,SNR=8.6
KHMM Horse Mountain 87.16 44 *e*P **P 10 11 41.8 0.0**
Q03C Winters 87.17 47 ⇓P **P 10 11 42.8 +0.8**
baz=87,SNR=5.1
GASB Alder Springs 87.20 46 ⇑P **P 10 11 43.3 +1.2**
baz=87,SNR=15
V05C Boulder Hill, 87.30 50 ⇓P **P 10 11 43.2 +0.5**
baz=88
SNAA Sanae 87.33 182 *e*P **P 10 11 41.8 -0.4**
SNAA *e* 10 11 46.8
SNAA *e* 10 11 50.3
SNAA *e* 10 11 56.3
SNAA *e* pP 10 12 02.3 -2.3
SNAA *e* 10 12 14.1
U05C Westside ANR, 87.37 49 ⇓P **P 10 11 43.5 +0.5**
baz=88
KRMB Red Mountain 87.38 43 *e*P **P 10 11 42.8 -0.1**
N02C Big Bar 87.41 44 ⇑P **P 10 11 43.4 +0.4**
baz=88,SNR=10
M01C Crescent City 87.41 43 ⇑P **P 10 11 43.3 +0.2**
baz=88
O02C Red Bluff 87.42 45 ⇓P **P 10 11 43.9 +0.8**
baz=88,SNR=25
FMP Fort Macarthur 87.47 52 ⇑P **P 10 11 43.2 -0.3**
baz=88
SLKM Skilak Lake 87.53 19 *e*P **P 10 11 42.6 -0.6**
OSI Osito Adit 87.57 52 ⇓P **P 10 11 43.7 -0.3**
baz=88
SUTB Sutter Butte 87.62 46 ⇑P **P 10 11 43.7 -0.4**
baz=88
DECC Green Verdugo 87.69 52 ⇑P **P 10 11 44.3 -0.2**
baz=88
K01A Sixes 87.69 42 ⇓P **P 10 11 44.8 +0.4**
baz=88
S05C Merced 87.70 48 ⇓P **P 10 11 44.0 -0.5**
baz=88,SNR=17
Q04C Lincoln 87.70 47 ⇑P **P 10 11 44.3 -0.2**
baz=88
ARVC Arvin 87.73 51 ⇓P **P 10 11 44.5 -0.2**
baz=88
CIT Chita 87.77 329 *e*P **P 10 11 43.8 -0.7**
CIT *e* 10 11 49.8
CIT pmax pmax
comp=Z,85nm,2.7s,mb5.3
WDC Whiskeytown Da 87.79 45 *e*P **P 10 11 45.0 +0.1**
comp=Z,61nm,1.4s,mb5.4
WDC LR LR
comp=Z,1µm,20.0s
WDC Whiskeytown Da 87.79 45 *e*P **P 10 11 45.0 +0.1**
WDC pmax pmax
comp=Z,61nm,1.4s,mb5.4
WDC MLR MLR
comp=Z,1µm,20.0s
WDC Whiskeytown Da 87.79 45 ⇑P **P 10 11 44.9 +0.1**
baz=88,SNR=18
OHCM Honcut 87.88 46 *e*P **P 10 11 45.5 +0.2**
VNA3 Neumayer Olymp 87.89 180 *e*P **P 10 11 41.6 -3.4**
VNA3 *e* 10 11 47.3
VNA3 *e* 10 11 50.7
VNA3 *e* 10 11 57.3
VNA3 *e* pP 10 12 03.0 -4.4
VNA3 *e* 10 12 15.0
L02A Cave Junction 87.90 43 ⇑P **P 10 11 45.3 -0.1**
baz=88
ORV Oroville 87.97 46 ⇓P **P 10 11 45.6 -0.2**
baz=88,SNR=15
T06C Millerton Lake 87.98 49 ⇓P **P 10 11 45.2 -0.7**
baz=88,SNR=22
109C Camp Elliot, M 87.98 54 ⇑P **P 10 11 45.4 -0.5**
baz=88
RCTC Rector, Farmer 87.98 50 ⇓P **P 10 11 45.1 -0.8**
baz=88
TTA Tatalina 87.99 15 *e*P **P 10 11 46.5 +1.2**
comp=Z,16nm,1.1s,mb5.0
TTA Tatalina 87.99 15 *e*P **P 10 11 46.5 +1.2**
TTA pmax pmax
comp=Z,16nm,1.1s,mb5.0
CMB Columbia Colle 88.00 48 *e*P **P 10 11 45.2 -0.7**
comp=Z,33nm,1.1s,mb5.3

CMB LR LR
comp=Z,1µm,21.0s
CMB Columbia Colle 88.00 48 *e*P **P 10 11 45.2 -0.7**
CMB pmax pmax
comp=Z,33nm,1.1s,mb5.3
CMB MLR MLR
comp=Z,1µm,21.0s
CMB Columbia Colle 88.00 48 ⇓P **P 10 11 45.8 -0.1**
baz=88,SNR=30
M02C Callahan 88.00 44 P **P 10 11 46.2 +0.4**
baz=88,SNR=24
TNA Tin City 88.06 9 *e*P **P 10 11 45.5 0.0**
comp=Z,84nm,2.5s,mb5.3
TNA LR LR
comp=Z,527nm,19.0s
LAVA Lava Cap Winer 88.10 47 P **P 10 11 46.3 -0.1**
baz=88,SNR=12
BFSC Mount Baldy St 88.18 52 ⇓P **P 10 11 47.0 +0.2**
baz=88,SNR=5.9
VNA2 Neumayer--Watz 88.19 181 *e*P **P 10 11 44.8 -1.6**
baz=188,slow=5.0
VNA2 *e* 10 11 48.6
VNA2 *e* 10 11 51.6
VNA2 *e* 10 11 59.0
VNA2 *e* pP 10 12 04.1 -4.7
VNA2 *e* 10 12 16.9
EDW2 Edwards Air Fo 88.22 52 ⇑P **P 10 11 46.8 -0.3**
baz=88,SNR=10.0
MURC Murrieta 88.23 53 ⇑P **P 10 11 46.8 -0.3**
baz=88
ISA Isabella 88.23 51 ⇑P **P 10 11 47.1 0.0**
baz=88,SNR=29
YBH Yreka Blue Hor 88.26 44 *e*P **P 10 11 46.9 -0.1**
comp=Z,30nm,1.1s,mb5.2
YBH LR LR
comp=Z,896nm,19.0s
YBH Yreka Blue Hor 88.26 44 *e*P **P 10 11 46.9 -0.2**
YBH pmax pmax
comp=Z,30nm,1.1s
YBH MLR MLR
comp=Z,896nm,19.0s
YBH Yreka Blue Hor 88.26 44 ⇓P **P 10 11 47.3 +0.2**
baz=88,SNR=19
K02A Glendale 88.29 43 ⇓P **P 10 11 47.6 +0.4**
baz=88
HELL Mitchell Peak, 88.31 50 ⇓P **P 10 11 47.3 -0.1**
baz=88,SNR=20
KCC Kaiser Creek 88.40 49 ⇑P **P 10 11 47.5 -0.4**
baz=89,SNR=9.3
M03C McCloud 88.41 44 ⇓P **P 10 11 48.0 +0.2**
baz=89,SNR=22
P05C Yuba Gap, Truc 88.45 47 ⇓P **P 10 11 48.2 +0.2**
baz=89,SNR=25
MONP Monument Peak 88.50 54 ⇓P **P 10 11 48.4 0.0**
baz=89,SNR=9.6
R05C Kirkwood Meado 88.53 47 ⇑P **P 10 11 48.8 +0.3**
baz=89,SNR=23
J02A Umpqua 88.54 42 ⇑P **P 10 11 48.7 +0.3**
baz=89
O05C Quincy 88.56 46 ⇑P **P 10 11 48.7 +0.1**
baz=89,SNR=18
HATC Hat Creek Radi 88.62 45 ⇓P **P 10 11 48.7 -0.1**
baz=89,SNR=13
O04C Chester 88.62 46 ⇓P **P 10 11 48.7 -0.2**
baz=89,SNR=22
DVTC Desert V Tower 88.64 54 ⇑P **P 10 11 49.1 0.0**
baz=89,SNR=6.3
ULN Ulaanbaatar 88.68 323 PFAKE 10 12 00.0 +11
ULN LR LR
comp=Z,542nm,20.0s
ULN Ulaanbaatar 88.68 323 *d i*P **P 10 11 47.8 -1.1**
LBCM Butte Creek Ri 88.70 45 P **P 10 11 49.2 +0.1**
SHL Shillong 88.71 298 *e*P **P 10 11 50.0 +0.4**
I02A Mapleton 88.72 41 ⇓P **P 10 11 49.3 +0.2**
baz=89
LRMC Laurel Mountai 88.72 51 ⇑P **P 10 11 49.3 0.0**
baz=89,SNR=16
PMR Palmer 88.72 18 *e*P **P 10 11 48.5 -0.2**
comp=Z,25nm,1.3s,mb5.1
PMR LR LR
comp=Z,1µm,22.0s
PMR Palmer 88.72 18 *e*P **P 10 11 48.5 -0.2**
PMR pmax pmax
comp=Z,25nm,1.3s,mb5.1
PMR MLR MLR
comp=Z,1µm,22.0s
BBRC Big Bear Sol-O 88.73 52 ⇓P **P 10 11 49.1 -0.4**
baz=89
PFO Pinyon Flat Ob 88.79 53 *e*P **P 10 11 51.0 +1.3**
PFO *e*PP PP 10 15 19.6 -0.6
PFO LR LR
comp=Z,1µm,19.0s
PFO Pinyon Flat Ob 88.79 53 ⇓P **P 10 11 49.8 0.0**
baz=89,SNR=8.7
GTA Gaotai 88.80 313 *e*P **P 10 11 49.7 0.0**
GTA AP pP 10 12 16.7 +4.6
GTA XP sP 10 12 29.3 +8.2
GTA PP PP 10 15 22.4 +2.2
GTA SKS 10 22 07.4
GTA S S 10 22 25.2 -5.1
GTA XS sS 10 23 15.0 +6.4
GTA SS SS 10 28 22.7 -1.9
GTA AMB AMB
comp=Z,16nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,232nm,4.9s
GTA LR LR
comp=N,402nm,20.2s
GTA LR LR
comp=E,532nm,20.5s
GTA LR LR
comp=Z,853nm,23.2s
YAK Yakutsk 88.81 342 PFAKE 10 12 00.0 +11
YAK LR LR
comp=Z,781nm,19.0s
YAK Yakutsk 88.81 342 *c i*P **P 10 11 48.3 -0.8**
YAK pmax pmax
comp=Z,25nm,0.7s,mb5.3
BUOR Burton Butte 88.83 43 P **P 10 11 50.8 +1.0**
M04C Macdoel 88.85 44 ⇓P **P 10 11 50.1 +0.3**
baz=89,SNR=12
BBOR Butler Butte 88.86 43 P **P 10 11 49.6 -0.3**
CWC Cottonwood Cre 88.87 50 ⇑P **P 10 11 49.9 -0.2**
baz=89,SNR=6.3
WAKR Walker 88.88 48 *e*P **P 10 11 49.7 -0.3**
MLAC Mammoth Lakes 88.89 49 ⇓P **P 10 11 50.1 0.0**
baz=89,SNR=9.3
BEKR Beckwourth 88.89 46 ⇓P **P 10 11 50.2 +0.1**
baz=89,SNR=35
BILL Bilibino 88.92 359 *e*P **P 10 11 48.6 -0.9**
comp=Z,15nm,0.9s,mb5.0
BILL LR LR
comp=Z,527nm,19.0s
BILL Bilibino 88.92 359 *e*P **P 10 11 47.9 -1.7**
BILL *e*PS PS 10 23 42.0 -3.5
BILL pmax pmax
comp=Z,22nm,1.2s,mb5.1
BILL MLR MLR
comp=Z,200nm,19.0s
J03A Ideyld Park 88.93 42 ⇓P **P 10 11 50.7 +0.5**
baz=89
MTUM Tungsten Hills 88.95 49 *e*P **P 10 11 50.3 -0.1**
R07C Lee Vining 88.95 48 ⇓P **P 10 11 50.9 +0.5**
baz=89,SNR=23
SWSC Sam W. Stewart 88.99 54 ⇓P **P 10 11 51.1 +0.4**
baz=89,SNR=6.7
ELFS Eagle Lake Fie 89.01 45 ⇓P **P 10 11 51.2 +0.6**
baz=89,SNR=14
WCN Washoe City 89.03 47 ⇓P **P 10 11 51.3 +0.5**
baz=89,SNR=19
SONM Songino Array 89.03 323 P **P 10 11 49.9 -0.6**
comp=Z,15nm,0.9s,mb5.0,baz=137,slow=3.0,SNR=70
SONM PKKPbc PKKPbc 10 29 28.6 -1.8
comp=Z,1.1nm,0.8s,baz=280,slow=2.2,SNR=7.0
SONM LR LR 10 49 25.4
comp=Z,683nm,21.0s,baz=167,slow=34
I03A Eugene 89.04 42 ⇓P **P 10 11 50.8 +0.1**
baz=89
TIN Tinemaha 89.05 50 ⇑P **P 10 11 51.0 +0.1**
baz=89
M05C Lookout 89.09 45 ⇑P **P 10 11 50.8 -0.2**
baz=89,SNR=16
P06A Stead Airport, 89.11 47 ⇑P **P 10 11 51.1 0.0**
baz=89
MPMC Manual Prospec 89.12 51 ⇑P **P 10 11 51.3 0.0**
baz=89,SNR=21
GSC Goldstone 89.28 52 ⇓P **P 10 11 51.9 -0.1**
baz=89,SNR=10
S08C White Mtn Res 89.29 49 P **P 10 11 52.2 +0.2**
baz=89,SNR=43
BELC Belle Mtn. 89.30 53 ⇑P **P 10 11 52.0 -0.1**
baz=89,SNR=27
K04A Chilquin 89.33 43 ⇑P **P 10 11 52.3 +0.2**
baz=90,SNR=7.4
COR Corvallis 89.34 41 PFAKE 10 12 00.0 +7.9
COR LR LR
comp=Z,2µm,21.0s
H03A Soap Creek Ran 89.39 41 ⇑P **P 10 11 52.8 +0.5**
baz=90,SNR=5.7
O06A Flanigan 89.39 46 ⇑P **P 10 11 52.0 -0.5**
baz=90,SNR=32
J04A Umpqua Nationa 89.40 43 ⇓P **P 10 11 52.7 +0.3**
baz=90,SNR=8.7
HEC Hector Ludlow 89.42 52 ⇑P **P 10 11 52.1 -0.6**
baz=90,SNR=18
M06C Likely Place G 89.46 45 ⇓P **P 10 11 53.0 +0.2**
baz=90,SNR=19
I04A Tendick Farm, 89.49 42 P **P 10 11 53.0 +0.2**
baz=90,SNR=10
Q07A Schurz 89.51 48 ⇑P **P 10 11 52.7 -0.3**
baz=90,SNR=5.9
USHA Ushuaia 89.55 151 P **P 10 11 52.0 -1.1**
comp=Z,5.5nm,0.8s,mb4.7,baz=192,slow=6.6,SNR=3.8
BC3 Big Chuckw Mtn 89.56 54 ⇓P **P 10 11 53.2 -0.2**
baz=90,SNR=6.8
NVAR Mina Array Bea 89.63 48 P **P 10 11 53.4 -0.2**
NVAR Mina Array Bea 89.63 48 P **P 10 11 53.4 -0.2**
comp=Z,13nm,0.7s,mb5.2,baz=215,slow=5.8,SNR=102
L05A Lakeview 89.63 44 ⇓P **P 10 11 53.7 +0.2**
baz=90,SNR=13
GRAC Grapevine Rang 89.64 50 ⇑P **P 10 11 53.6 0.0**
baz=90,SNR=15
N06A Buffalo Meadow 89.67 46 ⇓P **P 10 11 53.5 -0.3**
baz=90,SNR=32
IRO Indian Ridge 89.69 42 P **P 10 11 54.2 +0.4**
BROR Big Rock Looko 89.70 42 P **P 10 11 54.0 +0.3**
G03A Yamhill 89.73 40 ⇓P **P 10 11 54.2 +0.3**
baz=90
R08A Mina 89.73 48 ⇑P **P 10 11 53.9 -0.2**
baz=90,SNR=21
LPIG La Paz 89.73 64 LR LR 10 43 15.0
comp=Z,914nm,21.5s,baz=334,slow=30
P07A Fallon 89.74 47 ⇑P **P 10 11 53.6 -0.5**
baz=90
FURC Furnace Creek, 89.76 51 ⇑P **P 10 11 54.1 -0.2**
baz=90,SNR=22
GLA Glamis 89.77 54 ⇑P **P 10 11 54.2 -0.2**
baz=90
GMRC Granite Mounta 89.89 52 ⇑P **P 10 11 54.6 -0.3**
baz=90,SNR=11
MOD Modoc 89.91 45 *e*P **P 10 11 54.3 -0.5**
comp=Z,30nm,1.0s,mb5.4
MOD LR LR
comp=Z,869nm,20.0s
MOD Modoc 89.91 45 ⇑P **P 10 11 55.2 +0.4**
baz=90,SNR=29
K05A Summer Lake 89.92 44 ⇓P **P 10 11 54.9 0.0**
baz=90,SNR=19
SHOC Shoshone 89.93 51 ⇓P **P 10 11 54.6 -0.4**
baz=90
J05A Fort Rock 89.98 43 P **P 10 11 55.2 +0.1**
baz=90,SNR=29
TUQ Turquoise Mtn. 89.99 52 ⇑P **P 10 11 55.0 -0.4**
baz=90
IRM Iron Mountain 90.01 53 ⇑P **P 10 11 55.6 +0.1**
baz=90,SNR=17
O07A Toulon 90.03 47 ⇑P **P 10 11 55.3 -0.1**
baz=90,SNR=36
S09A Goldfield 90.06 49 ⇓P **P 10 11 55.6 0.0**
baz=90,SNR=30
H04A Detroit Lake 90.08 41 ⇓P **P 10 11 55.5 0.0**
baz=90,SNR=12
Q08A Gabbs 90.08 48 P **P 10 11 55.3 -0.4**
baz=90,SNR=51
U10A Ash Meadows, A 90.12 51 ⇓P **P 10 11 56.1 +0.1**
baz=90,SNR=28
G04A Mulino 90.16 41 ⇓P **P 10 11 56.3 +0.4**
baz=90,SNR=11
E03A Lebam 90.19 39 ⇑P **P 10 11 55.9 -0.1**
baz=90
N07B Gerlach 90.26 46 ⇑P **P 10 11 56.1 -0.4**
baz=90,SNR=21
Y12C Blythe 90.30 54 ⇑P **P 10 11 56.9 0.0**
baz=90,SNR=9.7
BEND Bend 90.31 42 P **P 10 11 57.8 +1.2**
SIT Sitka 90.35 27 PFAKE 10 12 10.0 +14
SIT LR LR
comp=Z,2µm,22.0s
D03A Wishkah Elem. 90.36 39 ⇑P **P 10 11 57.3 +0.6**
baz=90
P08A Dixie Valley 90.36 47 ⇓P **P 10 11 57.1 +0.2**
baz=90
K06A Valley Falls 90.37 44 ⇓P **P 10 11 57.3 +0.4**
baz=90,SNR=21
I05A Bend 90.39 42 ⇑P **P 10 11 57.1 +0.2**
baz=91,SNR=15
R09A Tonopah 90.40 49 P **P 10 11 56.9 -0.4**
baz=91,SNR=27
M07A Soldier Meadow 90.41 45 ⇓P **P 10 11 57.3 +0.1**
baz=91
TPNV Topopah Spring 90.42 50 *e*P **P 10 11 56.6 -0.7**
comp=Z,22nm,0.8s,mb5.3
TPNV *e*PP PP 10 15 32.8 -0.3
TPNV LR LR
comp=Z,1µm,20.0s
TPNV Topopah Spring 90.42 50 *e*P **P 10 11 56.6 -0.7**
TPNV *e* 10 15 32.8
TPNV pmax pmax
comp=Z,22nm,0.8s,mb5.3
TPNV MLR MLR
comp=Z,1µm,20.0s
TPNV Topopah Spring 90.42 50 ⇑P **P 10 11 57.1 -0.2**
baz=91,SNR=42
NLWA Neilton Lookou 90.45 38 PFAKE 10 12 10.0 +13
NLWA LR LR
comp=Z,1µm,20.0s
NLWA Neilton Lookou 90.45 38 ⇑P **P 10 11 58.1 +0.9**
baz=91
MCK McKinley 90.47 17 *e*P **P 10 11 58.0 +1.1**
MCK LR LR
comp=Z,408nm,20.0s
V11A Goodsprings 90.52 52 ⇓P **P 10 11 57.8 0.0**
baz=91,SNR=16
F04A Amboy 90.56 40 ⇑P **P 10 11 57.7 -0.1**
baz=91,SNR=8.0
Q09A Carvers 90.59 48 ⇑P **P 10 11 57.6 -0.4**
baz=91
L07A Adell 90.60 45 P **P 10 11 58.1 +0.1**
baz=91,SNR=45
S10A Tonopah Range, 90.60 49 P **P 10 11 57.9 -0.3**
baz=91,SNR=58
H05A Madras 90.65 42 ⇓P **P 10 11 57.9 -0.3**
baz=91
J06A Christmas Vall 90.65 43 ⇓P **P 10 11 58.0 -0.3**
baz=91,SNR=17
E04A Onalaska 90.71 40 ⇑P **P 10 11 58.6 +0.1**
baz=91,SNR=5.1
U11A Corn Creek 90.81 51 ⇑P **P 10 11 59.1 -0.1**
baz=91
PDMCI Parker Dam,Lak 90.82 53 ⇑P **P 10 11 59.3 0.0**
baz=91,SNR=6.7
N08A GE Springer Mi 90.83 46 ⇓P **P 10 11 58.8 -0.3**
baz=91,SNR=23
Y13A Salome 90.85 54 ⇑P **P 10 11 59.0 -0.4**
baz=91,SNR=26
G05A Wamic 90.89 41 ⇓P **P 10 11 59.6 +0.3**
baz=91
V12A Nelson 90.90 52 ⇑P **P 10 11 59.7 +0.1**
baz=91,SNR=12
D04A Dobbs Creek Ra 90.93 39 ⇓P **P 10 11 59.8 +0.4**
baz=91
P09A Austin 90.94 48 ⇓P **P 10 11 59.4 -0.3**
baz=91,SNR=6.6
I06A Prineville 90.95 43 ⇑P **P 10 11 59.6 0.0**
baz=91,SNR=28
M08A Happy Creek Ra 90.97 46 ⇑P **P 10 12 00.0 +0.3**
baz=91,SNR=15
LSA Lhasa 90.97 301 P **P 10 12 01.0 +1.0**
LSA AMB AMB
comp=Z,30nm,0.9s,mb5.4
LSA Lhasa 90.97 301 PFAKE 10 12 10.0 +10
LSA LR LR
comp=Z,391nm,21.0s
R10A Warm Springs 90.97 49 ⇓P **P 10 12 00.5 +0.6**
baz=91,SNR=27
K07A Rock Creek Ran 90.97 44 ⇓P **P 10 12 00.3 +0.5**
baz=91,SNR=46
B04A Port Angeles 91.00 38 ⇑P **P 10 12 00.4 +0.7**
baz=91
SHPR Sheep Range 91.01 51 *e*P **P 10 12 00.1 0.0**
SHPR *e*PP PP 10 15 38.1 +0.3
S11A Rachel 91.08 50 ⇑P **P 10 12 00.4 +0.1**
baz=91,SNR=13
F05A White Salmon 91.12 41 ⇑P **P 10 11 59.8 -0.5**
baz=91,SNR=5.0
C04A Brinnon 91.14 39 ⇓P **P 10 12 00.7 +0.4**
baz=91
Q10A Clear Creek Ra 91.14 49 ⇓P **P 10 12 00.2 -0.4**
baz=91,SNR=15
GNW Green Mountain 91.14 39 *e*P **P 10 12 00.8 +0.4**
X13A Yucca 91.18 53 ⇓P **P 10 12 00.6 -0.3**
baz=91,SNR=16
IMA2 Indian Mountai 91.19 14 *e*P **P 10 12 00.1 0.0**
O09A Fish Creek Ran 91.19 47 ⇑P **P 10 12 00.7 -0.1**
baz=91,SNR=12
WRAK Wrangell Islan 91.23 28 *e*P **P 10 11 59.3 -1.3**
comp=Z,36nm,0.7s,mb5.6
WRAK pP pP 10 12 17.7 -5.3
WRAK LR LR
comp=Z,673nm,20.0s
BOD Bodaibo 91.24 334 *e*P **P 10 11 58.2 -2.4**
BOD *e* 10 22 22.5
BOD pmax pmax
comp=Z,9.0nm,1.5s,mb4.7
H06A Lindquist Farm 91.25 42 ⇓P **P 10 12 00.9 0.0**
baz=91,SNR=36
WVOR Wild Horse Val 91.25 45 *e*P **P 10 12 00.3 -0.7**
comp=Z,37nm,1.1s,mb5.4
WVOR LR LR
comp=Z,1µm,21.0s
WVOR Wild Horse Val 91.25 45 *e*P **P 10 12 00.3 -0.7**
WVOR pmax pmax
comp=Z,37nm,1.1s,mb5.4
WVOR MLR MLR
comp=Z,1µm,21.0s
J07A Hines 91.25 44 ⇓P **P 10 12 00.9 -0.1**
baz=91,SNR=19
N09A Rock Creek Ran 91.27 46 ⇓P **P 10 12 01.0 -0.2**
baz=91,SNR=9.2
E05A Randle 91.27 40 P **P 10 12 01.8 +0.8**
baz=92,SNR=7.7
T11A Corn Creek, Al 91.28 50 ⇓P **P 10 12 01.4 0.0**
baz=91,SNR=22
G06A Carlson Farm, 91.31 41 ⇑P **P 10 12 01.1 -0.1**
baz=92
L08A Fields 91.33 45 ⇓P **P 10 12 01.4 0.0**
baz=92,SNR=49
Z14A Wintersburg 91.33 55 ⇓P **P 10 12 01.5 -0.2**
baz=92
W13A Hualapai Mount 91.35 53 ⇓P **P 10 12 01.6 0.0**
baz=92,SNR=6.2
U12A Valley of Fire 91.43 51 ⇑P **P 10 12 02.0 0.0**
baz=92
D05A Enumclaw 91.45 39 ⇓P **P 10 12 02.2 +0.4**
baz=92
I07A Izee 91.46 43 P **P 10 12 02.1 +0.1**
baz=92,SNR=21
F06A Goldendale 91.47 41 ⇓P **P 10 12 02.3 +0.4**
baz=92,SNR=6.5
K08A Mann Creek Ran 91.49 44 P **P 10 12 02.2 +0.1**
baz=92,SNR=32
R11A Troy Canyon, C 91.50 49 ⇑P **P 10 12 01.9 -0.4**
baz=92,SNR=13
TRCR Troy Canyon 91.50 49 *e*P **P 10 12 02.2 -0.1**
Y14A Wickenburg 91.53 54 ⇑P **P 10 12 02.4 -0.2**
baz=92
M09A Marrel Ranch, 91.58 46 ⇑P **P 10 12 02.6 0.0**
baz=92,SNR=22
115A Sonoran Desert 91.61 56 ⇑P **P 10 12 02.8 -0.1**
baz=92
COLA College 91.66 17 *e*P **P 10 12 01.9 -0.5**
comp=Z,6.1nm,0.7s,mb4.9
COLA LR LR
comp=Z,482nm,20.0s
COLA College 91.66 17 ⇓*e*P **P 10 12 02.7 +0.3**
H07A Lands Inn, Kim 91.67 42 P **P 10 12 02.8 -0.1**
baz=92,SNR=34
Q11A Duckwater 91.67 49 ⇑P **P 10 12 02.7 -0.4**
baz=92,SNR=18
L09A Wilkinson Ranc 91.70 45 ⇓P **P 10 12 02.7 -0.4**
baz=92,SNR=21
S12A Delamar Landin 91.71 50 ⇓P **P 10 12 02.9 -0.3**
baz=92,SNR=33
O10A Cortez Mining, 91.72 47 ⇑P **P 10 12 03.2 0.0**
baz=92,SNR=6.7
E06A Yakima 91.73 40 ⇑P **P 10 12 03.5 +0.3**
baz=92
PALK Pallekele 91.76 277 PFAKE 10 12 20.0 +16
PALK LR LR
comp=Z,908nm,20.0s
J08A Circle Bar Ran 91.78 44 P **P 10 12 03.1 -0.4**
baz=92,SNR=39
U13A Pakoon Wash 91.84 52 ⇓P **P 10 12 04.1 +0.2**
baz=92,SNR=7.5
N10A Dunphy 91.90 47 ⇓P **P 10 12 04.0 -0.1**
baz=92
P11A Circle Ranch, 91.91 48 ⇓P **P 10 12 04.1 -0.1**
baz=92,SNR=6.0
SKAG Skagway 91.91 25 *e*P **P 10 12 02.3 -1.3**
B05A Bryant 91.92 38 ⇓P **P 10 12 04.3 +0.4**
baz=92
G07A Ruggs Ranch, H 91.92 42 ⇓P **P 10 12 03.7 -0.3**
baz=92,SNR=15
216A Three Points, 91.93 56 ⇑P **P 10 12 04.7 +0.3**
baz=92
116A Eloy 91.96 56 ⇑P **P 10 12 04.3 -0.2**
baz=92,SNR=8.8
K09A Rome 91.97 45 ⇓P **P 10 12 04.3 0.0**
baz=92
I08A Drewsey 91.98 43 P **P 10 12 04.2 -0.1**
baz=92,SNR=21
W14A Seligman 91.99 53 ⇓P **P 10 12 04.7 0.0**
baz=92,SNR=16
F07A Phinny Hill Vi 92.06 41 ⇑P **P 10 12 04.8 +0.1**
baz=92
ZAK Zakamensk 92.12 324 ⇑*i*P **P 10 12 03.5 -1.4**
ZAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.9
D06A Cle Elum 92.13 40 ⇑P **P 10 12 05.3 +0.3**
baz=92
T13A Saint George 92.14 51 ⇓P **P 10 12 05.0 -0.3**
baz=92,SNR=12
EBG Ellensburg 92.16 40 P **P 10 12 05.2 +0.1**
R12A Pony Springs, 92.19 50 ⇓P **P 10 12 05.6 +0.2**
baz=92,SNR=16
H08A Prairie City 92.20 43 ⇑P **P 10 12 05.5 +0.1**
baz=92,SNR=5.8
O11A Cowboy Ranch, 92.22 48 ⇓P **P 10 12 05.5 -0.2**
baz=92,SNR=6.0
M10A I.L. Ranch, Tu 92.23 46 ⇓P **P 10 12 05.6 0.0**
baz=92,SNR=19
J09A Fry Pan Ranch, 92.25 44 P **P 10 12 05.5 -0.1**
baz=92,SNR=31
X15A Humboldt 92.33 54 ⇓P **P 10 12 06.2 -0.1**
baz=92,SNR=15
217A Green Valley 92.34 57 ⇑P **P 10 12 06.3 -0.1**
baz=92,SNR=6.7
G08A Pilot Rock 92.37 42 ⇑P **P 10 12 06.4 +0.2**
baz=92,SNR=24
S13A Holt Ranch, En 92.41 51 ⇑P **P 10 12 06.4 -0.1**
baz=93,SNR=14
U14A Mt Trumbull 92.42 52 ⇓P **P 10 12 06.4 -0.2**
baz=93,SNR=17
P12A McGill 92.46 49 ⇑P **P 10 12 06.7 0.0**
baz=93,SNR=5.8
N11A Elko Archery C 92.47 47 ⇑P **P 10 12 06.6 -0.1**
baz=93
L10A Juniper Basin 92.52 46 ⇑P **P 10 12 06.8 -0.2**
baz=93,SNR=22
HAWA Hanford 92.54 41 *e*P **P 10 12 06.3 -0.6**
HAWA LR LR
comp=Z,1µm,22.0s
I09A Lost Marbles R 92.54 44 ⇑P **P 10 12 06.8 -0.2**
baz=93,SNR=11
K10A MacKenzie Ranc 92.57 45 ⇓P **P 10 12 06.8 -0.3**
baz=93,SNR=14
TUC Tucson 92.58 56 *e*P **P 10 12 07.6 +0.1**
TUC LR LR
comp=Z,683nm,19.0s
TLY Talaya 92.60 325 *e*P **P 10 12 07.0 0.0**
TLY LR LR
comp=Z,1µm,22.0s

TLY	Talaya	92.60	325	eP	P	10 12 06.3	-0.7
TLY				e		10 12 12.0	
TLY				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
TLY				MLR	MLR		
	comp=Z,372nm,19.0s						
ETW	Entiat	92.63	39	P	P	10 12 07.9	+0.6
D07A	Quincy	92.65	40	⇓P	P	10 12 07.7	+0.3
	baz=93						
M11A	Holland Ranch,	92.70	46	⇑P	P	10 12 07.5	-0.2
	baz=93,SNR=9.3						
CCUT	Cedar City	92.75	51	eP	P	10 12 09.8	+1.6
T14A	Hurricane	92.75	51	⇑P	P	10 12 07.9	-0.2
	baz=93,SNR=9.6						
ELK	Elko	92.78	47	PFAKE		10 12 20.0	+12
ELK				LR	LR		
	comp=Z,968nm,20.0s						
TAPN	Taplejung	92.84	298	eP	P	10 12 08.3	-0.5
	comp=Z,29nm,1.0s,mb5.6						
318A	Bisbee	92.86	57	⇓P	P	10 12 08.6	-0.1
	baz=93,SNR=7.3						
Q13A	Wheeler Ranch,	92.87	49	⇓P	P	10 12 10.3	+1.7
	baz=93,SNR=8.2						
E08A	Dider Farm, El	92.87	41	⇓P	P	10 12 07.8	-0.6
	baz=93						
H09A	Durkee	92.90	43	⇑P	P	10 12 08.9	+0.3
	baz=93,SNR=10						
O12A	Currie	92.91	48	⇓P	P	10 12 08.5	-0.3
	baz=93,SNR=6.7						
ODAN	Odare	92.92	298	eP	P	10 12 09.3	+0.1
	comp=Z,43nm,0.9s,mb5.8						
J10A	Berg Farm, Mel	92.93	44	⇑P	P	10 12 08.0	-0.8
	baz=93						
N12A	Clover Valley,	92.96	47	⇓P	P	10 12 08.5	-0.5
	baz=93,SNR=15						
S14A	Cedar City	92.98	51	⇑P	P	10 12 09.5	+0.4
	baz=93						
218A	Dragoon	93.02	57	⇓P	P	10 12 09.4	-0.1
	baz=93,SNR=10.0						
P13A	Bates Ranch, G	93.08	49	⇓P	P	10 12 09.4	-0.2
	baz=93						
K11A	Parker Ranch,	93.12	45	⇓P	P	10 12 09.4	-0.3
	baz=93						
B07A	Winthrop	93.17	39	⇑P	P	10 12 09.5	-0.2
	baz=93,SNR=7.0						
I10A	Payette	93.19	44	⇓P	P	10 12 09.6	-0.4
	baz=93						
BMO	Blue Mountains	93.22	43	eP	P	10 12 10.1	0.0
BMO				LR	LR		
	comp=Z,1µm,21.0s						
D08A	Wollman Farm,	93.22	40	⇑P	P	10 12 09.8	-0.2
	baz=93						
F09A	S2 Ranch, Elgi	93.22	42	⇓P	P	10 12 09.8	-0.2
	baz=93						
T15A	Red Dirt Ranch	93.25	52	⇑P	P	10 12 10.2	-0.2
	baz=93,SNR=6.6						
M12A	Wells	93.29	47	⇓P	P	10 12 10.6	+0.1
	baz=93,SNR=8.1						
A07A	Ashnola River,	93.29	38	⇑P	P	10 12 10.2	-0.1
	baz=94						
O13A	Hicks Ranch, I	93.39	48	⇑P	P	10 12 11.1	+0.1
	baz=94						
319A	Douglas	93.39	58	⇑P	P	10 12 10.9	-0.3
	baz=94						
WUAZ	Wupatki	93.39	53	eP	P	10 12 13.1	+2.0
WUAZ				LR	LR		
	comp=Z,784nm,20.0s						
E09A	Wood Farm, Sta	93.44	41	⇑P	P	10 12 11.6	+0.5
	baz=94						
DLBC	Dease Lake	93.44	27	eP	P	10 12 11.7	+0.9
C08A	Higginbotham F	93.48	40	⇓P	P	10 12 11.2	0.0
	baz=94						
EGAK	Eagle	93.50	19	eP	P	10 12 09.4	-1.5
EGAK				LR	LR		
	comp=Z,558nm,21.0s						
L12A	House Creek Ra	93.53	46	⇑P	P	10 12 11.5	0.0
	baz=94,SNR=15						
MFID	Camas Ranch	93.54	45	⇑P	P	10 12 11.5	-0.1
	baz=94,SNR=9.2						
N13A	Wendover, West	93.54	48	⇑P	P	10 12 11.6	-0.1
	baz=94,SNR=8.2						
DAWY	Dawson	93.56	20	eP	P	10 12 11.4	+0.3
B08A	Colville Reser	93.58	39	⇑P	P	10 12 11.8	+0.1
	baz=94,SNR=5.8						
D09A	Jones Farm, Ri	93.59	41	⇓P	P	10 12 11.8	+0.1
	baz=94,SNR=8.1						
F10A	Beach Ranch, E	93.77	42	P	P	10 12 12.8	+0.2
	baz=94,SNR=11						
M13A	Montello	93.77	47	⇓P	P	10 12 12.7	0.0
	baz=94						
K12A	Draper Farm, C	93.81	46	P	P	10 12 13.4	+0.6
	baz=94,SNR=11						
A08A	Turner Farm, O	93.89	39	⇓P	P	10 12 13.2	+0.1
	baz=94						
J12A	Stokes Ranch,	93.94	45	⇓P	P	10 12 13.5	0.0
	baz=94,SNR=8.6						
H11A	Donnelly	93.98	43	P	P	10 12 13.8	+0.2
	baz=94,SNR=20						
MSU	Marysvale	94.00	50	eP	P	10 12 14.2	+0.4
MOY	Mondy	94.02	324	eP	P	10 12 13.7	+0.1
G11A	Walters Elk Ra	94.12	43	P	P	10 12 14.0	-0.2
	baz=94,SNR=14						
JIRN	Jiri	94.21	298	eP	P	10 12 15.1	0.0
D10A	Wagner Farm, O	94.22	41	⇑P	P	10 12 14.3	-0.3
	baz=94						
L13A	Double Diamond	94.23	46	⇓P	P	10 12 14.7	-0.1
	baz=94						
DUG	Dugway	94.23	49	eP	P	10 12 14.0	-0.9
DUG				LR	LR		
	comp=Z,1µm,21.0s						
DUG	Dugway	94.23	49	⇓P	P	10 12 14.5	-0.3
	baz=94						
N14A	Grayback Hills	94.24	48	⇑P	P	10 12 14.9	0.0
	baz=94						
A09A	Danville	94.31	39	⇓P	P	10 12 14.8	-0.2
	baz=94						
B09A	Rice	94.31	39	⇑P	P	10 12 14.8	-0.2
	baz=94						
K13A	Stover Farm, H	94.37	46	⇓P	P	10 12 15.9	+0.5
	baz=94,SNR=5.2						
M14A	Sheep Mountain	94.39	47	P	P	10 12 15.7	+0.1
	baz=94,SNR=13						
F11A	Grangeville	94.40	42	⇓P	P	10 12 15.2	-0.3
	baz=95						
HLID	Hailey	94.53	45	eP	P	10 12 16.1	0.0
HLID				LR	LR		
	comp=Z,971nm,19.0s						
HLID	Hailey	94.53	45	⇑P	P	10 12 16.2	+0.1
	baz=95,SNR=12						
E11A	Bogner Ranch,	94.57	42	⇓P	P	10 12 15.9	-0.4
	baz=95						
J13A	Cove Ranch, Pi	94.62	45	⇑P	P	10 12 16.5	0.0
	baz=95,SNR=9.2						
H12A	Diamond D Ranc	94.66	44	P	P	10 12 16.6	-0.1
	baz=95,SNR=16						
N15A	Stansbury Isla	94.71	48	⇓P	P	10 12 17.1	+0.1
	baz=95,SNR=7.6						
NEW	Newport	94.85	40	eP	P	10 12 16.7	-0.7
NEW				LR	LR		
	comp=Z,679nm,22.0s						
I13A	Wildhorse Cree	94.87	45	⇑P	P	10 12 17.4	-0.3
	baz=95						
HVU	Hansel Valley	94.90	47	eP	P	10 12 18.5	+0.6
	comp=Z,4.4nm,0.7s,mb5.0						
HVU	Hansel Valley	94.90	47	eP	P	10 12 18.5	+0.6
HVU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb5.0						
A10A	Northport	94.91	39	⇓P	P	10 12 17.5	-0.2
	baz=95						
F12A	Elk City	94.91	43	P	P	10 12 18.0	+0.2
	baz=95,SNR=14						
SPUT	South Promonto	94.93	48	eP	P	10 12 18.1	+0.1
K14A	Jones Ranch, D	94.94	46	⇓P	P	10 12 18.2	+0.2
	baz=95,SNR=7.9						
MPU	Maple Canyon	94.99	49	eP	P	10 12 18.2	-0.1
MPU				LR	LR		
	comp=Z,1µm,20.0s						
M15A	Larsen Ranch,	94.99	47	⇑P	P	10 12 18.2	-0.1
	baz=95,SNR=5.4						
TMUT	Trail Mountain	95.00	50	eP	P	10 12 19.9	+1.5
KKN	Kakani	95.01	298	eP	P	10 12 18.4	-0.3
	comp=Z,29nm,0.9s,mb5.7						
KKN	Kakani	95.01	298	eP	P	10 12 18.4	-0.3
KKN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.7						
H13A	Challis	95.05	44	P	P	10 12 18.6	+0.1
	baz=95,SNR=6.1						

CTU	Camp Tracy	95.17	48	eP	P	10 12 19.4	+0.2
G13A	Cobalt	95.29	44	P	P	10 12 19.9	+0.3
	baz=95,SNR=6.8						
JLU	Jordanelle	95.34	49	eP	P	10 12 21.2	+1.3
B11A	Sandpoint	95.38	40	⇓P	P	10 12 19.8	0.0
	baz=96						
D12A	Red Ives Fores	95.40	42	⇑P	P	10 12 19.9	-0.1
	baz=96						
DAU	Daniels Canyon	95.41	49	eP	P	10 12 21.1	+0.9
SRU	San Rafael	95.42	50	eP	P	10 12 20.9	+0.6
F13A	Darby	95.51	43	P	P	10 12 20.2	-0.3
	baz=96,SNR=10						
A11A	Hall Mountain,	95.61	39	⇓P	P	10 12 21.2	+0.2
	baz=96						
GKN	Gorkha	95.62	298	eP	P	10 12 20.7	-0.8
HWUT	Hardware Ranch	95.66	48	eP	P	10 12 21.3	-0.1
HWUT				LR	LR		
	comp=Z,658nm,20.0s						
E13A	Victor	95.87	42	⇑P	P	10 12 21.7	-0.5
	baz=96						
C13A	Hot Springs	96.15	41	⇓P	P	10 12 23.2	-0.2
	baz=96						
MVCO	Mesa Verde	96.19	53	ePP	PP	10 16 18.1	-0.1
MVCO				LR	LR		
	comp=Z,916nm,20.0s						
MSO	Missoula	96.19	42	PFAKE		10 12 30.0	+6.4
MSO				LR	LR		
	comp=Z,709nm,22.0s						
PV10	Paradox Valley	96.22	51	eP	P	10 12 25.2	+1.2
E14A	Clinton	96.30	43	P	P	10 12 23.8	-0.3
	baz=96,SNR=8.1						
AHID	Auburn Hatcher	96.43	47	PFAKE		10 12 40.0	+15
AHID				LR	LR		
	comp=Z,434nm,21.0s						
G15A	Dillon	96.44	44	⇑P	P	10 12 24.8	0.0
	baz=97						
B13A	Whitefish	96.50	41	⇑P	P	10 12 24.5	-0.5
	baz=97						
D14A	Greenough	96.56	42	⇑P	P	10 12 25.1	-0.2
	baz=97						
MNTX	Cornudas Mount	96.61	59	eP	P	10 12 25.5	-0.4
	comp=Z,60nm,3.0s						
MNTX				LR	LR		
	comp=Z,771nm,21.0s						
TIXI	Tiksi	96.67	348	PFAKE		10 12 40.0	+15
TIXI				LR	LR		
	comp=Z,599nm,20.0s						
TIXI	Tiksi	96.67	348	eP	P	10 12 22.5	-2.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.8s,mb4.8						
DCID1	Drake Creek	96.69	46	eP	P	10 12 26.0	0.0
C14A	Swan Lake	96.69	41	⇓P	P	10 12 25.6	-0.2
	baz=97						
F15A	Butte	96.71	43	⇑P	P	10 12 25.6	-0.4
	baz=97						
A13A	Flathead Natio	96.76	40	⇑P	P	10 12 25.8	-0.4
	baz=97						
TPAW	Teton Pass	96.81	46	eP	P	10 12 26.4	-0.1
	comp=Z,13nm,1.4s,mb5.2						
TPAW				ePP	PP	10 16 23.2	+0.3
REDW	Red Top Meadow	96.83	46	eP	P	10 12 26.5	-0.1
	comp=Z,5.4nm,0.8s,mb5.0						
E15A	Deer Lodge	96.84	43	⇑P	P	10 12 26.1	-0.5
	baz=97						
ANMO	Albuquerque	96.91	55	eP	P	10 12 27.0	-0.2
ANMO				LR	LR		
	comp=Z,693nm,19.0s						
ANMO	Albuquerque	96.91	55	⇑eP	P	10 12 29.2	+2.0
ANMO	Albuquerque	96.91	55	LR	LR	10 49 12.8	
	comp=Z,603nm,19.4s,baz=76,slow=31						
IMW	Indian Meadow	96.97	46	eP	P	10 12 27.9	+0.6
	comp=Z,12nm,1.5s,mb5.1						
IMW				ePP	PP	10 16 24.2	+0.1
MOOW	Moose Ponds	97.04	46	ePP	PP	10 16 25.0	+0.3
LOHW	Long Hollow	97.09	46	eP	P	10 12 27.6	-0.2
WALA	Waterton Lakes	97.11	40	P	P	10 12 28.6	+0.8
D15A	Lincoln	97.17	42	⇓P	P	10 12 27.8	-0.3
	baz=97						
TXAR	Lajitas Array	97.18	61	P	P	10 12 29.9	+1.3
	comp=Z,1.1nm,0.8s,mb4.3,baz=218,slow=5.0,SNR=10.0						
TXAR				PKKPbc	PKKPbc	10 29 09.0	+0.8
	comp=Z,0.2nm,0.5s,baz=80,slow=3.2,SNR=6.5						
TXAR				LR	LR	10 47 14.3	
	comp=Z,1µm,21.1s,baz=300,slow=30						
BOZ	Bozeman (W)	97.19	44	ePP	PP	10 16 25.6	-0.2
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
YMR	Madison River	97.25	45	PFAKE		10 12 40.0	+12
YMR				LR	LR		
	comp=Z,1µm,20.0s						
HYB	Hyderabad	97.25	286	i P	P	10 12 29.0	-0.1
BW06	Boulder Array	97.48	47	eP	P	10 12 29.3	-0.2
BW06				LR	LR		
	comp=Z,636nm,22.0s						
PDAR	Pinedale Array	97.48	47	P	P	10 12 29.7	+0.1
	comp=Z,1.0nm,0.5s,mb4.5,baz=211,slow=4.7,SNR=10						
PDAR				PKKPbc	PKKPbc	10 29 06.2	-1.6
	comp=Z,0.4nm,0.8s,baz=76,slow=6.3,SNR=4.6						
PDAR				LR	LR	10 52 45.9	
	comp=Z,380nm,18.8s,baz=257,slow=33						
LKWY	Lake	97.58	45	PFAKE		10 12 40.0	+10
LKWY				LR	LR		
	comp=Z,980nm,19.0s						
SMCO	Snowmass	98.01	51	eP	P	10 12 31.6	-0.4
	comp=Z,22nm,2.1s,mb5.3						
SMCO				ePP	PP	10 16 27.0	-5.3
INK	Inuvik	98.14	18	eP	P	10 12 31.2	-0.7
INK	Inuvik	98.14	18	P	P	10 12 31.4	-0.5
	comp=Z,9.2nm,1.0s,mb5.3,baz=224,slow=7.2,SNR=16						
SDCO	Great Sand Dun	98.60	53	PFAKE		10 12 50.0	+15
SDCO				LR	LR		
	comp=Z,1µm,21.0s						
WMQ	Urumqi	98.88	313	⇑P	P	10 12 35.6	-0.2
WMQ				AP	pP	10 13 04.6	+6.2
WMQ				XP	sP	10 13 16.6	+9.3
WMQ				PP	PP	10 16 40.6	+1.8
WMQ				SKS		10 23 02.1	
WMQ				eS	S	10 23 51.9	-7.2
WMQ				AMB	AMB		
	comp=Z,4.0nm,0.7s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,448nm,6.6s						
WMQ				LR	LR		
	comp=N,402nm,26.0s						
WMQ				LR	LR		
	comp=E,807nm,29.5s						
WMQ				LR	LR		
	comp=Z,926nm,27.7s						
PAYG	Puerto Ayora	98.99	94	PFAKE		10 12 50.0	+13
PAYG				LR	LR		
	comp=Z,1µm,19.0s						
ISCO	Idaho Springs	99.22	51	PFAKE		10 12 50.0	+13
ISCO				LR	LR		
	comp=Z,632nm,21.0s						
EGMT	Eagleton	99.27	42	eP	P	10 12 37.4	0.0
EGMT				LR	LR		
	comp=Z,740nm,22.0s						
EGMT	Eagleton	99.27	42	⇑P	P	10 12 37.9	+0.5
	baz=99,SNR=6.2						
PHWY	Pilot Hill	99.83	50	ePP	PP	10 16 44.4	-1.7
JCT	Junction City	100.72	61	PFAKE		10 13 00.0	+16
JCT				LR	LR		
	comp=Z,1µm,22.0s						
LAO	LASA Array	101.07	44	PFAKE		10 13 00.0	+14
LAO				LR	LR		
	comp=Z,2µm,22.0s						
KVTX	Kingsville	101.41	65	PFAKE		10 13 00.0	+13
KVTX				LR	LR		
	comp=Z,1µm,20.0s						
RSSD	Black Hills	101.72	47	PFAKE		10 13 00.0	+12
RSSD				LR	LR		
	comp=Z,441nm,21.0s						
YKA	Yellowknife Ar	102.07	27	P	Pdif	10 12 48.6	-1.4
	comp=Z,1.0nm,0.6s,baz=252,slow=4.6,SNR=21						
YKA				PKiKP	PKiKP	10 17 11.1	-0.4
	comp=Z,0.6nm,0.7s,baz=241,slow=1.2,SNR=7.1						
YKA				PKKPbc	PKKPbc	10 28 52.7	-2.8
	comp=Z,0.2nm,0.5s,baz=59,slow=2.7,SNR=3.4						
YKW3	Yellowknife Ar	102.09	27	ePdif	Pdif	10 12 49.7	-0.4
WMOK	Wichita Mounta	102.82	58	PFAKE		10 13 00.0	+6.7
WMOK				LR	LR		
	comp=Z,678nm,20.0s						
DGMT	Dagmar	102.93	43	PFAKE		10 13 00.0	+6.2
DGMT				LR	LR		
	comp=Z,841nm,22.0s						
CBKS	Cedar Bluff	103.25	53	PFAKE		10 13 10.0	+15

CBKS				LR	LR		
	comp=Z,509nm,19.0s						
LCO	Las Campanas	103.28	128	PFAKE		10 13 10.0	+15
LCO				LR	LR		
	comp=Z,1µm,21.0s						
MKAR	Makanchi Array	103.44	315	Pdif	Pdif	10 12 55.9	-0.2
MKAR	Makanchi Array	103.44	315	i P	Pdif	10 12 58.0	+1.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR	Makanchi Array	103.44	315	Pdiff	Pdif	10 12 55.9	-0.2
	comp=Z,1.7nm,0.5s,baz=92,slow=5.9,SNR=13						
MKAR				PKiKP	PKiKP	10 17 12.3	-2.3
	comp=Z,3.1nm,1.0s,baz=147,slow=2.3,SNR=8.0						
MKAR				PKKPbc	PKKPbc	10 28 47.5	-3.4
	comp=Z,1.4nm,0.6s,baz=264,slow=3.3,SNR=12						
TRQA	Tornquist	103.65	140	PFAKE		10 13 10.0	+13
TRQA				LR	LR		
	comp=Z,570nm,22.0s						
HKT	Hockley	103.84	63	PFAKE		10 13 10.0	+12
HKT				LR	LR		
	comp=Z,1µm,20.0s						
NATX	Nacogdoches	105.31	62	PFAKE		10 17 30.0	+12
NATX				LR	LR		
	comp=Z,1µm,20.0s						
KSU1	Kansas State U	105.67	54	PFAKE		10 17 30.0	+11
KSU1				LR	LR		
	comp=Z,577nm,20.0s						
FFC	Flin Flon	105.94	37	PFAKE		10 17 30.0	+11
FFC				LR	LR		
	comp=Z,691nm,20.0s						
NNA	Nana	106.74	110	PFAKE		10 17 30.0	+8.4
NNA				LR	LR		
	comp=Z,318nm,19.0s						
ECSD	EROS,Sioux Fal	106.78	49	PFAKE		10 17 30.0	+9.2
ECSD				LR	LR		
	comp=Z,728nm,21.0s						
KURK	Kurchatov	106.79	318	PFAKE		10 17 30.0	+9.4
KURK				LR	LR		
	comp=Z,832nm,21.0s						
TGUH	Tegucigalpa,Un	106.79	81	PFAKE		10 17 30.0	+8.4
TGUH				LR	LR		
	comp=Z,680nm,21.0s						
MIAR	Mount Ida	106.90	59	PFAKE		10 17 30.0	+8.7
MIAR				LR	LR		
	comp=Z,632nm,21.0s						
TKM2	Tokmak 2	107.06	310	PFAKE		10 17 30.0	+8.7
TKM2				LR	LR		
	comp=Z,521nm,19.0s						
UCH	Uchtor	107.69	309	PFAKE		10 17 30.0	+7.5
UCH				LR	LR		
	comp=Z,693nm,19.0s						
TEIG	Tepich	107.69	75	PFAKE		10 17 30.0	+6.8
TEIG				LR	LR		
	comp=Z,763nm,22.0s						
JTS	JuntasAbangare	107.75	86	PFAKE		10 17 40.0	+17
JTS				LR	LR		
	comp=Z,960nm,20.0s						
AAK	Ala-Archa	107.79	309	PFAKE		10 17 30.0	+7.3
AAK				LR	LR		
	comp=Z,578nm,22.0s						
AML	Almayashu	108.27	309	PFAKE		10 17 40.0	+16
AML				LR	LR		
	comp=Z,865nm,22.0s						
AGMN	Agassiz Refuge	108.27	45	PFAKE		10 17 30.0	+6.6
AGMN				LR	LR		
	comp=Z,1µm,20.0s						
EKS2	Erkin-Say	108.32	309	PFAKE		10 17 40.0	+16
EKS2				LR	LR		
	comp=Z,736nm,22.0s						
ULM	Lac du Bonnet	108.63	42	PKiKP	PKiKP	10 17 22.9	-1.1
	comp=Z,1.3nm,0.5s,baz=261,slow=1.0,SNR=6.7						
OXF	Oxford	110.24	60	PFAKE		10 17 40.0	+12
OXF				LR	LR		
	comp=Z,868nm,19.0s						
OTAV	Otavalo	110.31	98	PFAKE		10 17 40.0	+12
OTAV				LR	LR		
	comp=Z,643nm,22.0s						
FCC	Fort Churchill	110.93	34	ePKPdf	PKiKP	10 17 24.9	-3.2
EYMN	Ely	111.09	45	PFAKE		10 17 40.0	+11
EYMN				LR	LR		
	comp=Z,1µm,22.0s						
JFWS	Jewell Farm	111.17	51	PFAKE		10 17 40.0	+11
JFWS				LR	LR		
	comp=Z,985nm,22.0s						
PLAL	Pickwick Lake	111.42	60	PFAKE		10 17 40.0	+10
PLAL				LR	LR		
	comp=Z,769nm,20.0s						
BRAL	Brewton	111.44	64	PFAKE		10 17 40.0	+10
BRAL				LR	LR		
	comp=Z,1µm,21.0s						
HDIL	Hopedale	111.48	54	PFAKE		10 17 40.0	+10
HDIL				LR	LR		
	comp=Z,742nm,20.0s						
RES	Resolute Bay	111.59	17	ePKPdf	PKiKP	10 17 27.2	-1.7
LRAL	Lakeview Retre	111.91	62	PFAKE		10 17 40.0	+9.2
LRAL				LR	LR		
	comp=Z,858nm,20.0s						
CHKZ	Chkalovo	112.13	321	ePKPdf	PKiKP	10 17 28.6	-1.9
BRVK	Borovoye	112.26	320	ePKPdf	PKiKP	10 17 30.2	-0.6
BRVK				LR	LR		
	comp=Z,832nm,19.0s						
COWI	Conover	112.43	48	PFAKE		10 17 40.0	+8.7
COWI				LR	LR		
	comp=Z,850nm,21.0s						
WCI	Wyandotte Cave	113.40	56	PFAKE		10 17 50.0	+17
WCI				LR	LR		
	comp=Z,890nm,21.0s						
GOGA	Godfrey	114.89	62	PFAKE		10 17 50.0	+14
GOGA				LR	LR		
	comp=Z,662nm,19.0s						
TZTN	Tazewell	115.31	59	PFAKE		10 17 50.0	+13
TZTN				LR	LR		
	comp=Z,663nm,19.0s						
GLMI	Grayling	115.45	49	PFAKE		10 17 50.0	+13
GLMI				LR	LR		
	comp=Z,1µm,22.0s						
DWPF	Disney	115.65	68	PFAKE		10 17 50.0	+12
DWPF				LR	LR		
	comp=Z,451nm,21.0s						
ACSO	Alum Creek Sta	116.21	55	PFAKE		10 17 50.0	+11
ACSO				LR	LR		
	comp=Z,703nm,20.0s						
NHSC	New Hope	117.56	63	PFAKE		10 17 50.0	+8.4
NHSC				LR	LR		
	comp=Z,873nm,22.0s						
BLA	Blacksburg	117.88	58	PFAKE		10 17 50.0	+7.9
BLA				LR	LR		
	comp=Z,871nm,21.0s						
MCWV	Mont Chateau	118.56	56	PFAKE		10 17 50.0	+6.7
MCWV				LR	LR		
	comp=Z,1µm,21.0s						
ERPA	Erie	118.62	53	PFAKE		10 17 50.0	+6.6
ERPA				LR	LR		
	comp=Z,647nm,21.0s						
ARU	Arti	119.06	324	ePKPdf	PKPdf	10 17 43.3	-0.5
ARU				LR	LR		
	comp=Z,1µm,20.0s						
ARU	Arti	119.06	324	i PKIKP	PKPdf	10 17 42.3	-1.4
ARU						10 19 04.0	
SUR	Sutherland	119.11	210	PFAKE		10 18 00.0	+15
SUR				LR	LR		
	comp=Z,744nm,20.0s						
CNNC	Cliffs of the	119.71	61	PFAKE		10 18 00.0	+14
CNNC				LR	LR		
	comp=Z,966nm,20.0s						
AKTK	Aktyubinsk	119.80	317	PKP	PKPdf	10 17 43.8	-1.5
AKTK				SKP		10 21 14.0	
AKTK				PKKPbc	PKKPbc	10 27 54.1	-2.5
AKTO	Aktyubinsk	119.80	317	PKP	PKPdf	10 17 43.8	-1.5
	comp=Z,4.1nm,0.7s,baz=91,slow=3.1,SNR=16						
AKTO				SKP		10 21 14.0	
	comp=Z,1.8nm,0.8s,baz=194,slow=2.1,SNR=4.2						
AKTO				PKKPbc	PKKPbc	10 27 54.1	-2.5
	comp=Z,3.3nm,0.8s,baz=252,slow=3.2,SNR=11						
BOSA	Boshof	119.89	216	PKP	PKPdf	10 17 44.9	-1.5
BOSA				LR	LR		
	comp=Z,711nm,22.0s						
BOSA	Boshof	119.89	216	PKP	PKPdf	10 17 44.9	-1.5
	comp=Z,2.5nm,0.4s,baz=156,slow=4.4,SNR=12						
SSPA	Standing Stone	120.12	54	PFAKE		10 18 00.0	+14
SSPA				LR	LR		
	comp=Z,627nm,22.0s						
CBN	Corbin	120.37	57	PFAKE		10 18 00.0	+13
CBN				LR	LR		
	comp=Z,869nm,22.0s						

SDV **Santo Domingo** 120.66 92 *e*PKPdf PKPdf 10 17 47.7 -0.4
SDV LR LR
comp=Z,151nm,21.0s
KBS **Kingsbay** 121.23 355 PFAKE 10 18 00.0 +13
KBS LR LR
comp=Z,631nm,20.0s
MVL **Millersville** 121.27 55 *e*PKPdf PKPdf 10 17 47.4 -1.1
BINY **Binghamton** 121.60 53 PFAKE 10 18 00.0 +11
BINY LR LR
comp=Z,696nm,20.0s
LONY **Lake Ozonia** 122.60 50 PFAKE 10 18 00.0 +9.1
LONY LR LR
comp=Z,875nm,20.0s
SDDR **Presa de Saban** 122.86 81 PFAKE 10 18 00.0 +7.8
SDDR LR LR
comp=Z,905nm,22.0s
NCB **Newcomb** 122.87 51 PFAKE 10 18 00.0 +8.5
NCB LR LR
comp=Z,889nm,20.0s
DAG **Danmarks Havn** 124.13 2 *e*PKIKP PKPdf 10 17 50.0 -3.0
DAG **Danmarks Havn** 124.13 2 *i* P PKPdf 10 17 50.0 -3.0
PRGR **Permogore** 124.41 331 *e*PKIKP PKPdf 10 17 51.4 -2.5
LBNH **Lisbon** 124.52 50 PFAKE 10 18 10.0 +15
LBNH LR LR
comp=Z,1μm,21.0s
HRV **Harvard--Oak R** 124.87 52 PFAKE 10 18 10.0 +15
HRV LR LR
comp=Z,711nm,21.0s
WES **Weston** 125.05 52 PFAKE 10 18 10.0 +14
WES LR LR
comp=Z,3μm,22.0s
SCHQ **Schefferville** 126.08 37 PKP PKPdf 10 17 55.0 -2.3
comp=Z,2.6nm,0.7s,baz=262,slow=3.1,SNR=10
APA **Apatity** 126.17 341 ⇓*i* PKIKP PKPdf 10 17 57.0 -0.1
APA pmax pmax
comp=Z,34nm,1.3s
PKME **Peaks-Kenny Pk** 126.30 49 *e*PKPdf PKPdf 10 17 57.2 -0.8
PKME LR LR
comp=Z,1μm,20.0s
KEV **Kevo** 126.48 345 *ep* PKPdf 10 17 55.6 -2.0
comp=Z,18nm,0.8s
KEV **Kevo** 126.48 345 *e*PKIKP PKPdf 10 17 55.6 -2.0
KEV pmax pmax
comp=Z,18nm,0.8s
ARCES **ARCESS Array B** 127.01 345 PKP PKPdf 10 17 57.2 -1.4
ARCES SKP 10 21 27.6
ARCES PKKPbc 10 27 28.4
ARCES **ARCESS Array B** 127.01 345 PKP PKPdf 10 17 57.2 -1.4
comp=Z,11nm,0.5s,baz=74,slow=1.9,SNR=62
ARCES SKP 10 21 27.6
comp=Z,3.7nm,0.6s,baz=82,slow=1.7,SNR=5.0
ARCES PKKPbc 10 27 28.4
comp=Z,1.6nm,0.9s,baz=180,slow=3.6,SNR=3.9
SJG **San Juan** 127.42 83 *e*PKPdf PKPdf 10 17 59.0 -1.9
SJG LR LR
comp=Z,487nm,22.0s
CPD **Cerro la Pandu** 127.62 83 *e*PKPdf PKPdf 10 17 59.2 -2.1
LSZ **Lusaka** 127.79 229 *e*PKPdf PKPdf 10 18 01.5 -0.2
LSZ LR LR
comp=Z,886nm,22.0s
MTP **Monte Pirata** 127.97 83 *e*PKPdf PKPdf 10 17 59.9 -2.0
KMBO **Kilima Mbogo** 128.65 251 *e*PKPdf PKPdf 10 18 04.8 +1.3
KMBO LR LR
comp=Z,790nm,21.0s
KMBO **Kilima Mbogo** 128.65 251 PKP PKPdf 10 18 03.6 +0.1
comp=Z,4.1nm,0.8s,baz=54,slow=2.3,SNR=8.7
JOF **Joensuu** 129.68 337 *ep* PKPdf 10 18 02.2 -1.7
comp=Z,18nm,0.7s
JOF **Joensuu** 129.68 337 *ep* SKPdf 10 21 18.3 -13
comp=Z,14nm,0.9s
JOF **Joensuu** 129.68 337 *e*PKIKP PKPdf 10 18 02.2 -1.7
JOF pmax pmax
comp=Z,18nm,0.7s
ZEI **Tsey** 130.21 309 *e*PKIKP PKPdf 10 18 08.5 +3.0
BHD **Baghdad** 130.47 296 *ex* x 10 21 22.0
DYDN **Diyadin** 130.75 304 *i* P SKPbc 10 21 25.7 +2.4
HAKT **HAKKARI** 130.89 302 *i* P SKPbc 10 21 25.6 +1.6
DIGO **Kars** 130.90 306 *i* P SKPbc 10 21 26.0 +2.2
KIV **Kislovodsk** 130.90 310 PFAKE 10 18 20.0 +13
KIV LR LR
comp=Z,472nm,19.0s
KIV **Kislovodsk** 130.90 310 *i* PKIKP PKPdf 10 18 07.6 +0.8
KIV pmax pmax
comp=Z,7.0nm,0.9s
OBN **Obninsk** 131.35 326 PFAKE 10 18 20.0 +13
OBN LR LR
comp=Z,616nm,20.0s
OBN **Obninsk** 131.35 326 *i* PKIKP PKPdf 10 18 09.5 +2.2
OBN pmax pmax
comp=Z,8.0nm,1.0s
MSL **Mosul** 131.46 300 *ex* x 10 21 28.0
TSUM **Tsumeb** 131.59 216 PFAKE 10 18 20.0 +11
TSUM LR LR
comp=Z,749nm,20.0s
KAF **Kangasniemi** 131.99 338 *ep* PKPdf 10 18 06.4 -1.9
comp=Z,10nm,0.5s
KAF **Kangasniemi** 131.99 338 *ep* SKPbc 10 21 25.5 -1.6
comp=Z,39nm,1.0s
KAF **Kangasniemi** 131.99 338 *e*PKIKP PKPdf 10 18 06.4 -1.9
KAF pmax pmax
comp=Z,10.0nm,0.5s
FINES **FINES Array B** 132.51 337 PKP PKPdf 10 18 08.2 -1.1
FINES SKPbc SKPbc 10 21 28.5 -0.4
FINES **FINES Array B** 132.51 337 PKhKP 10 17 59.7
comp=Z,0.4nm,0.4s,baz=64,slow=4.4,SNR=4.2
FINES PKP PKPdf 10 18 08.2 -1.1
comp=Z,7.6nm,0.8s,baz=105,slow=3.0,SNR=13
FINES SKPbc SKPbc 10 21 28.5 -0.4
comp=Z,16nm,0.9s,baz=64,slow=4.4,SNR=21
ELZG **Elazig** 134.51 304 *i* P SKPbc 10 21 39.0 +2.7
MALT **Malatya** 134.97 303 ⇑P PKPdf 10 18 19.0 +4.3
MALT **Malatya** 134.97 303 ⇑*i* P PKPdf 10 18 19.0 +4.3
GZT **Gaziantep** 135.78 302 *i* P SKPbc 10 21 42.2 +1.8
COBT **Iskenderun** 136.93 301 *i* P SKPbc 10 21 45.7 +1.8
CTKT **Corum** 137.31 307 *i* P SKPbc 10 21 42.1 -2.8
AKASG **Malin Array Be** 137.32 323 PKP PKPdf 10 18 16.5 -2.1
AKASG SKP 10 21 44.8
AKASG **Malin Array Be** 137.32 323 PKP PKPdf 10 18 16.5 -2.1
comp=Z,3.9nm,0.7s,baz=64,slow=2.1,SNR=12
AKASG SKP 10 21 44.8
comp=Z,12nm,0.9s,baz=48,slow=2.9,SNR=41
KIEV **Kiev** 137.33 323 *e*PKPdf PKPdf 10 18 17.6 -1.1
KIEV LR LR
comp=Z,1μm,21.0s
NB2 **NORSAR Subarra** 137.38 345 PKPdf PKPdf 10 18 17.8 -0.6
comp=Z,2.6nm,0.6s,baz=31,slow=1.9
NOA **NORSAR Array B** 137.38 345 PKP PKPdf 10 18 18.4 0.0
NOA SKP 10 21 44.0
NOA **NORSAR Array B** 137.38 345 PKP PKPdf 10 18 18.4 0.0
comp=Z,3.6nm,0.7s,baz=33,slow=2.0,SNR=12
NOA SKP 10 21 44.0
comp=Z,6.0nm,0.8s,baz=18,slow=4.3,SNR=11
BALT **Daday** 138.11 309 *i* P SKPbc 10 21 47.6 +0.4
BRTR **Keskin Array B** 138.37 306 PKHKP 10 18 14.8
BRTR 10 18 22.6
BRTR **Keskin Array B** 138.37 306 PKhKP 10 18 14.8
comp=Z,0.9nm,0.6s,baz=152,slow=5.6,SNR=3.6
BRTR PKP PKPdf 10 18 22.6 +1.7
comp=Z,1.7nm,0.7s,baz=90,slow=1.2,SNR=6.7
BRTR SKPbc SKPbc 10 21 49.1 +1.1
comp=Z,6.5nm,0.9s,baz=132,slow=3.5,SNR=11
ANTO **Ankara** 138.97 307 PFAKE 10 18 30.0 +8.0
ANTO LR LR
comp=Z,503nm,20.0s
KIS **Kishinev** 139.26 319 *e*UNK SKPbc 10 21 50.0 -0.2
SGKT **Sivrigoynuk** 139.34 308 *i* P SKPbc 10 21 51.8 +1.2
CSS **Prodhromos** 139.50 299 *e*PKPdf PKPdf 10 18 25.4 +2.3
LVV **L'vov** 140.62 325 *e*PKIKP PKPdf 10 18 23.6 -1.1
BURAR **Bucovina Array** 141.13 321 ⇑P PKPdf 10 18 28.2 +2.5
BURAR **Bucovina Array** 141.13 321 ⇑*i* P PKPdf 10 18 28.2 +2.5
KWP **Kalwaria** 141.43 326 *e*PKPdf PKPdf 10 18 25.5 -0.7
KOLS **Kolonicke sedl** 142.07 325 *e*PKP PKPdf 10 18 23.7 -3.6
KOLS *e*PP PP 10 21 59.2 +26
CRVS **Cervenica-Dubn** 142.52 325 *e*PKP PKPdf 10 18 25.9 -2.2
CRVS *e*PP PP 10 21 59.6 +23
DRGR 143.02 322 ⇓P PKPdf 10 18 27.1 -1.9
DRGR 143.02 322 ⇓*i* P PKPdf 10 18 27.1 -2.0
RCBR **Riachuelo** 143.21 134 *e*PKPdf PKPdf 10 18 25.4 -5.0
RCBR LR LR
comp=Z,1μm,21.0s
KECS **Kecovo** 143.29 325 *e*PKP PKPdf 10 18 25.3 -4.2
MDO **Dochfour** 143.46 355 *e*P PKPdf 10 18 25.7 -3.8
OKC **Ostrava-Krasne** 143.61 329 *e*SKP 10 22 01.4
KPL **Plockton** 143.66 356 *e*P PKPdf 10 18 25.6 -4.3
KPL AMb AMB 10 18 33.4
comp=Z,76nm,2.3s
BSEG **Bad Segeberg** 143.70 340 *e*PKPbc PKPdf 10 18 27.4 -2.6
BSEG *e*SKPbc SKPbc 10 22 01.8 +0.5
GZR **Gura Zlata** 143.72 320 ⇑P PKPdf 10 18 27.2 -3.2
GZR **Gura Zlata** 143.72 320 ⇑*i* P PKPdf 10 18 27.2 -3.1
KSP **Ksiaz** 143.78 331 *e*PKP PKPdf 10 18 29.3 -1.0
KSP *e*PKPdf PKPdf 10 18 32.8 +2.5
KSP *e*PKS 10 22 02.1
KSP **Ksiaz** 143.78 331 *i* PKIKP PKPdf 10 18 32.8 +2.5
MORC **Moravsky Berou** 143.94 329 ⇓P PKPdf 10 18 29.1 -1.5
MORC **Moravsky Berou** 143.94 329 ⇓*i* P PKPdf 10 18 29.1 -1.5
PSZ **Piszkesteto** 143.94 325 *e*PKPdf PKPdf 10 18 28.0 -2.8
PSZ **Piszkesteto** 143.94 325 ⇑*e*PKP PKPdf 10 18 28.4 -2.8
DPC **Dobruska-Polom** 144.12 331 *e*PKIKP PKPdf 10 18 28.2 -2.7
DPC *e* 10 18 33.4
DPC **Dobruska-Polom** 144.12 331 *e*PKP PKPdf 10 18 28.2 -2.7
DPC *ex* x 10 18 33.4
DPC *e*SKP 10 22 02.9
VYHS **Vyhne** 144.14 327 *e*PKP PKPdf 10 18 27.9 -3.1
VYHS *e*PP PP 10 22 03.3 +17
UPC **Upice** 144.15 331 *e*PKIKP PKPdf 10 18 28.3 -2.6
UPC *e* 10 18 33.7
UPC **Upice** 144.15 331 *e*PKP PKPdf 10 18 28.3 -2.6
UPC *ex* x 10 18 33.7
UPC *e*SKP 10 22 03.1
PGB **Panagyurishte** 144.18 315 *i* P PKPdf 10 18 29.0 -2.3
KOLL **Kolacno** 144.31 327 *e*PKP PKPdf 10 18 29.8 -1.5
KARP **Karpathos** 144.35 302 *e*P PKPdf 10 18 30.0 -1.8
BUD **Budapest** 144.68 325 ⇓*e*PKP PKPdf 10 18 30.3 -1.6
EAB **Aberfoyle** 144.70 354 *e*P PKPdf 10 18 30.8 -0.9
VRAC **Vranov** 144.72 329 ⇑P PKPdf 10 18 31.2 -0.7
VRAC **Vranov** 144.72 329 ⇑*i* P PKPdf 10 18 31.2 -0.8
PVCC **Panska Ves** 144.77 332 *e*PKIKP PKPdf 10 18 30.1 -1.9
PVCC *e* 10 18 36.2
PVCC **Panska Ves** 144.77 332 *e*PKP PKPdf 10 18 30.1 -1.9
PVCC *ex* x 10 18 36.2
PVCC *e*SKP 10 22 04.5
BRG **Berggiesshubel** 144.78 333 ⇓*i* PKIKP PKPdf 10 18 30.1 -1.9
BRG *i* 10 18 36.0
BRG pmax pmax
comp=Z,20nm,0.6s
BRG pmax pmax
comp=Z,26nm,0.8s
BRG pmax pmax
comp=N,56nm,1.5s
BRG **Berggiesshubel** 144.78 333 *e*PKPbc PKPdf 10 18 29.9 -2.1
BRG *e*SKPbc SKPbc 10 22 04.6 +0.7
BRG **Berggiesshubel** 144.78 333 ⇓*i* PKP PKPdf 10 18 30.1 -1.9
comp=N,33nm,0.6s
BRG *i* 10 18 36.0
comp=N,43nm,0.8s
BRG *i* SKP 10 22 04.7
comp=N,93nm,1.5s
ESY **Stoneypath** 144.78 353 *e*P PKPdf 10 18 29.6 -2.3
VTS **Vitosha** 144.80 315 *i* P PKPdf 10 18 31.0 -1.3
VTS **Vitosha** 144.80 315 ⇑*i* P PKPdf 10 18 31.6 -0.7
CLL **Collm** 144.83 335 ⇓*i* PKP PKPdf 10 18 30.0 -2.1
CLL *i* PKPdf PKPdf 10 18 35.6 +3.5
CLL *ep*PKP pPKPdf 10 19 04.0 +8.5
CLL *i* PKSdf 10 22 04.8
CLL **Collm** 144.83 335 ⇓*i* PKIKP PKPdf 10 18 30.0 -2.1
CLL *i* 10 18 35.6
CLL pmax pmax
comp=Z,29nm,0.7s
CLL pmax pmax
comp=Z,36nm,0.8s
CLL pmax pmax
comp=Z,86nm,1.6s
CLL **Collm** 144.83 335 ⇓*i* PKPdf PKPdf 10 18 30.0 -2.1
comp=Z,29nm,0.7s
CLL *i* PKiKP PKiKP 10 18 35.6 -0.3
comp=Z,36nm,0.8s
CLL *i* x x 10 18 39.2
CLL *es*PKiKP 10 19 04.0
CLL *i* SKPbc SKPbc 10 22 04.8 +0.7
comp=Z,86nm,1.6s
CLL *e*SS SS 10 40 36.0 +4.5
CLL *e*SSS 10 46 30.0
CLL *e*(SSSS) 10 50 36.0
CLL **Collm** 144.83 335 *e*PKPbc PKPdf 10 18 30.2 -1.9
CLL *e*SKPbc SKPbc 10 22 04.8 +0.7
MMB **Musomiste** 144.89 313 *i* P PKPdf 10 18 31.0 -1.5
NVR **Nevrokopi** 144.90 313 *e*P PKPdf 10 18 30.4 -2.1
EBL **Broad Law** 144.98 353 ⇑*e*P PKPdf 10 18 30.7 -1.5
FBE **Freiberg** 144.99 334 *e*PKPbc PKPdf 10 18 31.0 -1.4
MODS **Modra-Piesok** 145.01 328 *e*PKP PKPdf 10 18 31.7 -0.8
MODS *e*PP PP 10 22 05.7 +15
PRU **Pruhonice** 145.18 332 *e*PKIKP PKPdf 10 18 31.3 -1.4
PRU *e* 10 18 37.2
PRU MLR MLR
comp=Z,2μm,29.0s
PRU **Pruhonice** 145.18 332 *e*PKP PKPdf 10 18 31.3 -1.4
PRU *ex* x 10 18 37.2
PRU *e*SKP 10 22 05.0
PRU AMS AMS 11 18 30.0
comp=Z,2μm,29.0s
KKB **Krupnik** 145.21 314 *i* P PKPbc 10 18 32.0 -0.9
ZST **Bratislava** 145.22 327 *e*PKP PKPdf 10 18 32.5 -0.4
TREC **Trest** 145.25 330 *e*PKP PKPdf 10 18 31.4 -1.5
TREC *ex* x 10 18 37.0
TREC *e*SKP 10 22 00.0
CLZ **Clausthal** 145.41 337 *e*PKPbc PKPbc 10 18 32.5 -0.6
CLZ *e*SKPbc SKPbc 10 22 06.1 +0.7
ESK **Eskdalemuir** 145.44 353 *e*P PKPdf 10 18 30.1 -2.9
ESK AMb AMB 10 18 30.8
comp=Z,170nm,1.5s
ESK **Eskdalemuir** 145.44 353 *e*PKP2 PKPab 10 18 32.1 -1.3
SANT **Santorini** 145.47 304 *e*PKPdf PKPdf 10 18 32.7 -1.0
BBH **Bruntsheil** 145.59 353 ⇑*e*P PKPdf 10 18 32.1 -1.1
BWH **Wardlaw** 145.63 353 *e*P PKPdf 10 18 31.7 -1.6
GMK **Mull of Kintyr** 145.64 355 ⇑*e*P PKPdf 10 18 32.1 -1.2
NPS **Neapolis** 145.65 302 *e*P PKPdf 10 18 34.9 +0.9
PKSM **Moragy** 145.66 324 ⇑P PKPdf 10 18 33.4 -0.2
PKSM **Moragy** 145.66 324 ⇑*i* P PKPdf 10 18 33.4 -0.3
TANN **Tannenbergstha** 145.74 334 *e*PKPbc PKPbc 10 18 33.3 -0.9
TANN *e*SKPbc SKPbc 10 22 06.5 +0.3
XAL **Allendale** 145.77 352 ⇑*e*P PKPdf 10 18 33.2 -0.3
WERD **Werda** 145.78 334 *e*PKPbc PKPbc 10 18 33.2 -1.1
VAY **Valandovo** 145.79 314 *i* PKP PKPdf 10 18 32.7 -1.3
SOP **Sopron** 145.83 327 ⇓*e*PKP PKPdf 10 18 34.1 +0.2
NKC **Novy Kostel** 145.89 334 *e*PKP PKPdf 10 18 33.8 -0.1
NKC *e*SKP 10 22 07.6
IBBN **Ibbenburen** 145.90 340 *e*SKPbc SKPbc 10 22 07.7 +1.2
MOX **Moxa** 145.90 335 *e*PKP PKPdf 10 18 33.0 -0.9
MOX **Moxa** 145.90 335 *e*PKPbc PKPbc 10 18 33.0 -0.9
GCL **Cushendall** 145.95 356 *e*P PKPdf 10 18 33.2 -0.7
CONA **Conrad Observa** 146.01 328 *i* PKPab PKPab 10 18 34.7 -1.1
SNR=19
BBO1 **Bothel** 146.02 353 ⇑*e*P PKPdf 10 18 33.7 -0.3
GAL1 **Galloway** 146.04 354 *e*P PKPdf 10 18 34.1 +0.1
GAL1 *e*P 10 18 34.1
GAL1 AMb AMB 10 18 42.7
comp=Z,134nm,1.9s
GAL1 **Galloway** 146.04 354 P PKPdf 10 18 34.1 +0.1
GAL1 AMb AMB 10 18 42.7
comp=Z,134nm,1.9s
CKE **Keswick** 146.15 353 ⇑*e*P PKPdf 10 18 34.7 +0.5
MANZ **Manzenberg** 146.22 334 *e*PKPbc PKPbc 10 18 34.9 -0.8
MANZ *e*SKPbc SKPbc 10 22 07.8 +0.5
KHC **Kasperske Hory** 146.23 332 *e*PKP PKPdf 10 18 34.8 +0.2
KHC *ex* x 10 18 40.2
KHC *e*SKP 10 22 07.5
SKO **Skopje** 146.25 315 *i* PKP PKPbc 10 18 35.9 -0.2
ROTZ **Rotzenmuhle** 146.34 334 *e*PKPbc PKPbc 10 18 35.2 -0.9
ROTZ *e*SKPbc SKPbc 10 22 08.5 +1.0
GEC2 **GERESS Array S** 146.39 331 *e*PKPbc PKPbc 10 18 35.2 -1.0
GEC2 *e*SKPbc SKPbc 10 22 08.1 +0.4
GERES **GERESS Array B** 146.39 331 PKPbc PKPbc 10 18 35.1 -1.1
comp=Z,22nm,0.7s,baz=30,slow=2.5,SNR=73
WET **Wettzell** 146.53 332 *e*PKPbc PKPbc 10 18 35.8 -0.8
WET *e*SKPbc SKPbc 10 22 09.0 +1.0
GIM **North Isle of** 146.59 354 *e*P PKPbc 10 18 36.7 +0.1
KRUS **Krusevo** 146.66 314 *i* PKP PKPbc 10 18 35.9 +0.4
GMM **Mts of Mourne** 146.77 355 *e*P PKPdf 10 18 35.1 -0.2
IVA **Berane** 146.79 318 *e*PKP PKPbc 10 18 37.3 -0.3
GRA1 **Grafenberg Arr** 146.81 334 *e*PKPbc PKPbc 10 18 37.0 -0.4
GRF **Grafenberg Arr** 146.81 334 *e*PKPbc PKPbc 10 18 37.0 -0.4
GRFO **Grafenberg** 146.81 334 *e*PKPbc PKPbc 10 18 37.0 -0.4
MOA **Molln** 146.84 329 ⇑*i* P PKPdf 10 18 36.0 +0.4
comp=Z,18nm,0.7s,SNR=9.4
PLE **Pljevlja** 146.87 319 ⇓*i* PKP PKPbc 10 18 39.1 +1.3
PVY **Plav** 146.89 317 ⇓*i* PKP PKPbc 10 18 37.6 -0.3
LHO **Holmfirth** 147.00 351 ⇑*e*P PKPbc 10 18 37.5 -0.3
OHR **Ohrid** 147.08 314 *i* PKP PKPdf 10 18 37.0 +0.8
KBI1 **Birley Grange** 147.23 350 *e*P PKPdf 10 18 36.7 +0.6
UPM **Unac-Piva** 147.23 319 ⇓*i* PKP PKPdf 10 18 37.6 +1.2
PERS **Pernice** 147.26 327 *e*PKPdf PKPdf 10 18 37.8 +1.4
NKY **Niksic** 147.39 318 ⇓*i* PKP PKPdf 10 18 37.8 +1.1
TTG **Podgorica** 147.43 317 ⇓*i* PKP PKPdf 10 18 37.5 +0.7
TNS **Taunus Mts** 147.43 338 *e*PKPbc PKPbc 10 18 38.5 -0.6
TNS *e*SKPbc SKPbc 10 22 10.3 +0.4
KWE **Weaver Farm** 147.51 351 *e*P PKPdf 10 18 37.6 +1.1
BRY **Bratogost** 147.62 319 ⇓*i* PKP PKPdf 10 18 38.4 +1.3
ULC **Ulcinj** 147.67 317 ⇓*i* PKP PKPdf 10 18 38.4 +1.2
CWF **Charnwood Fore** 147.69 350 *e*P PKPbc 10 18 39.1 -0.6
CWF AMb AMB 10 18 41.1
comp=Z,76nm,1.4s
JAN **Janina** 147.70 312 *e*P PKPbc 10 18 41.1 +0.9
BUM **Brajici-Budva** 147.72 318 ⇓*i* PKP PKPdf 10 18 38.9 +1.6
DCN **Croghan** 147.74 357 *e*P PKPdf 10 18 38.0 +1.1
DCN **Croghan** 147.74 357 ⇑*i* P PKPab 10 18 45.2 +2.8
DLF **Lyons Farm** 147.75 356 *e*P PKPdf 10 18 38.0 +1.0
DLF **Lyons Farm** 147.75 356 ⇑*i* P PKPab 10 18 45.2 +2.8
HGN **Heimansgroeve** 147.81 341 *e*PKiKP PKPbc 10 18 42.5 +2.4
TOD **Tromm** 147.81 337 PKP PKPbc 10 18 39.3 -0.9
SBD1 **Bryn Du** 147.81 352 ⇓*e*P PKPdf 10 18 37.9 +0.8
KBA **Koelnbreinsper** 147.83 329 ⇑*i* P PKPdf 10 18 36.5 -0.8
comp=Z,40nm,0.8s,SNR=13
HCY **Herceg Novi** 147.89 318 ⇓*i* PKP PKPdf 10 18 38.5 +0.9
ITM **Ithomi** 147.90 307 *e*P PKPdf 10 18 39.7 +2.0
RLS **Riolos of Patr** 147.91 309 *e*P PKPbc 10 18 41.0 +0.2
MEM **Membach** 147.92 340 PKPbc PKPbc 10 18 39.4 -1.0
BOJS **Bojanci** 147.95 325 *i* PKPdf PKPdf 10 18 40.1 +2.5
BOJS *i* PKPbc PKPbc 10 18 45.5 +4.8
LJU **Ljubljana** 147.97 327 *e*PKPdf PKPdf 10 18 38.5 +0.9
MYKA **Terra Mystica** 148.00 328 ⇓*i* PKPbc PKPdf 10 18 38.8 +1.2
comp=Z,55nm,1.0s
ABH **Alteburg** 148.03 338 PKP PKPdf 10 18 39.1 +1.6
HLM1 **Long Mynd** 148.14 352 *e*P PKPdf 10 18 38.7 +1.0
VOY **Vojsko** 148.29 327 *e*PKPdf PKPbc 10 18 40.3 -1.3
VOY *e* 10 18 59.6
VOY *e* 10 19 12.9
BCLA **Clavier** 148.30 341 PKPbc PKPbc 10 18 42.1 +0.6
JAVS **Javornik** 148.30 327 *e*PKPdf PKPdf 10 18 39.8 +1.7
PTCC **Patocco-Chiusa** 148.30 328 PKP PKPbc 10 18 40.5 +1.1
STU **Stuttgart** 148.34 335 *e*PKPbc PKPbc 10 18 41.2 -0.4
RUP **Ruppelstein** 148.36 338 PKP PKPbc 10 18 41.3 -0.3
GMNA **Gemona** 148.45 328 PKP PKPbc 10 18 41.3 -0.7
ABTA **Abfaltersbach** 148.47 330 ⇓*i* PKPdf PKPdf 10 18 38.6 +0.3
comp=Z,59nm,0.9s,SNR=13
WTTA **Wattenberg** 148.49 331 ⇓*i* P PKPbc 10 18 40.7 -1.3
comp=Z,48nm,0.9s,SNR=8.9
VLS **Valsamata** 148.50 309 *e*P PKPbc 10 18 41.4 -1.0
SNF **Seneffe** 148.52 342 PKPbc PKPbc 10 18 42.2 +0.2
HTR **Trewern Hill** 148.62 352 *e*P PKPdf 10 18 39.1 +0.7
MCH1 **Michaelchurch** 148.67 351 *e*P PKPbc 10 18 40.6 -1.7
MCH1 AMb AMB 10 18 50.2
comp=Z,114nm,1.4s
MOTA **Moosalm** 148.67 332 *i* P PKPbc 10 18 41.2 -1.3
comp=Z,64nm,0.9s,SNR=19
WLF **Walferdange** 148.69 339 PKPbc PKPbc 10 18 42.0 -0.4
WLF **Walferdange** 148.69 339 PKPbc PKPbc 10 18 42.2 -0.2
LANF **Langenberg** 148.70 337 PKP PKPbc 10 18 43.0 +0.5
SQTA **Sankt Quirin** 148.72 331 ⇑*i* P PKPbc 10 18 41.4 -1.2
comp=Z,44nm,0.6s,SNR=19
GIVF **Givet** 148.73 341 *e*PKP1 PKPbc 10 18 40.7 -1.8
comp=Z,73nm,0.8s
DOU **Dourbes** 148.80 342 PKPbc PKPbc 10 18 41.7 -1.1
BAIF **Baives** 148.95 342 *e*PKP1 PKPbc 10 18 41.4 -1.7
SWN1 **Swindon** 148.96 350 *e*P PKPbc 10 18 41.4 -1.7
SWN1 AMb AMB 10 18 46.9
comp=Z,230nm,2.0s
HGH **Gray Hill** 148.99 351 *e*P PKPdf 10 18 38.9 -0.1
BFO **Black Forest** 149.04 336 *e*PKPdf PKPdf 10 18 39.2 0.0
BFO *e*PKPbc PKPbc 10 18 41.8 -1.6
BFO *e*PKPab PKPab 10 18 47.7 0.0
BFO LR LR
comp=Z,911nm,19.0s
BFO **Black Forest** 149.04 336 *e*SKPbc SKPbc 10 22 12.9 -0.5
MENF **Mencas** 149.04 345 PKP PKPbc 10 18 44.1 +0.8
SPAK **Spaichingen-Ko** 149.05 335 PKP PKPbc 10 18 43.4 0.0
FETA **Feichten** 149.08 332 ⇑*i* PKPbc PKPbc 10 18 40.9 -2.7
comp=Z,81nm,1.0s,SNR=11
DAVA **Damuels** 149.24 333 ⇑*i* P PKPbc 10 18 43.5 -0.4
comp=Z,37nm,0.7s,SNR=7.8
APPI **Appiano** 149.26 330 PKP PKPbc 10 18 42.3 -1.7
CDF **Champ du Feu** 149.37 337 *e*PKP1 PKPbc 10 18 42.3 -1.9
comp=Z,66nm,1.0s
CTI **Castel Tesino** 149.38 329 PKP PKPbc 10 18 43.7 -0.6
FELD **Feldberg im Sc** 149.54 336 PKP PKPbc 10 18 43.2 -1.4
ECH **Echery** 149.57 337 PKP PKPdf 10 18 42.1 +2.0
BRMO **Bormio** 149.65 331 PKP PKPbc 10 18 44.1 -0.9
MOF **Molkenrain** 149.89 336 PKP PKPbc 10 18 44.7 -0.8
THEF **They Montfort** 149.98 338 PKP PKPbc 10 18 44.9 -0.8
HINF **Hinteralfeld** 150.02 337 *e*PKP1 PKPbc 10 18 43.8 -2.0
comp=Z,43nm,0.8s
HAU **Haudompre** 150.04 338 *e*PKP1 PKPbc 10 18 44.0 -1.9
comp=Z,104nm,0.8s
HAU *e*MLR MLR
comp=Z,895nm,23.0s
HAU **Haudompre** 150.04 338 *e*PKHKP PKPbc 10 18 44.0 -1.9
HAU MLR MLR
comp=Z,890nm,23.0s
MEZF **Maizieres J'vi** 150.06 340 *e*PKP1 PKPbc 10 18 44.5 -1.4
comp=Z,195nm,0.9s
TUE **Stuetta** 150.11 332 PKP PKPbc 10 18 45.8 -0.3
RGNG **Rignano Grg** 150.12 319 PKP PKPbc 10 18 45.1 -1.2
DYA **Yadsworthy** 150.32 352 *e*P PKPdf 10 18 43.0 +1.8
DYA AMb AMB 10 18 43.1
comp=Z,87nm,1.2s
LOMF **Lomont** 150.42 336 PKP PKPbc 10 18 46.2 -0.6
CING **Cingoli** 150.46 324 PKP PKPbc 10 18 46.9 -0.1
FSSB **Fossombrone** 150.47 325 PKP PKPbc 10 18 46.8 -0.2
SNTG **Esanatoglia** 150.68 324 PKP PKPbc 10 18 47.2 -0.3
TIP **Timpagrande** 150.72 314 *e*PKPdf PKPdf 10 18 43.1 +0.9
TIP *e*PKPbc PKPbc 10 18 47.0 -0.8
SFI **Santa Sofia** 150.82 326 PKP PKPbc 10 18 47.3 -0.5
VAI **Varese** 150.83 332 PKP PKPbc 10 18 45.5 -2.3
ASCN **Ascension** 150.85 171 *e*PKPbc PKPbc 10 18 49.9 +1.0
NRCA **Norcia** 150.86 323 *i* PKPu PKPbc 10 18 47.1 -0.9
BADI **Badiali** 150.88 325 PKP PKPbc 10 18 47.4 -0.6
SGO **Sicignano** 150.93 318 PKP PKPbc 10 18 47.1 -1.1
VMG **Vicchio** 150.93 327 PKP PKPbc 10 18 47.8 -0.3
CSSN **Cassano Irpino** 150.94 318 PKP PKPbc 10 18 47.0 -1.2
ZCCA **Zocca** 150.94 328 PKP PKPbc 10 18 48.8 +0.7
CRE **Caprese Michel** 150.96 326 PKP PKPbc 10 18 49.2 +1.0
FNVD **Fontana Vidola** 151.00 327 PKP PKPbc 10 18 47.8 -0.5
AQU **L'Aquila** 151.00 322 *e*PKPdf PKPdf 10 18 41.9 -0.6
AQU *e*PKPbc PKPbc 10 18 48.2 -0.1
AQU *e*PKPab PKPab 10 18 57.0 +1.0
SDI **San Donato** 151.17 321 PKP PKPbc 10 18 47.2 -1.5
ERBM **Eremo** 151.17 328 PKP PKPbc 10 18 48.5 -0.2
VVLD **Villa Vallelon** 151.18 321 PKP PKPbc 10 18 47.6 -1.2
PTQR **Pietraquaria** 151.21 322 PKP PKPbc 10 18 48.0 -0.8
CABF **La Chapelle** 151.32 336 *e*PKP1 PKPbc 10 18 47.5 -1.4
comp=Z,117nm,0.9s
FLN **La Foliniere** 151.34 347 *e*PKP1 PKPbc 10 18 46.6 -2.3
comp=Z,156nm,0.6s
FLN *e*MLR MLR
comp=Z,844nm,20.2s
FLN **La Foliniere** 151.34 347 *e*PKIKP PKPbc 10 18 46.6 -2.3
FLN MLR MLR
comp=Z,840nm,20.3s
BDI **Bagni Di Lucca** 151.34 328 PKP PKPbc 10 18 46.7 -2.4
LDF **La Druitiere** 151.41 346 *e*PKP1 PKPbc 10 18 46.7 -2.4
comp=Z,67nm,0.5s
LOR **Lormes** 151.53 340 *e*PKP1 PKPbc 10 18 47.4 -2.0
comp=Z,98nm,0.9s
LOR *e*MLR MLR
comp=Z,1μm,23.0s
LOR **Lormes** 151.53 340 *e*PKIKP PKPbc 10 18 47.4 -2.0
LOR MLR MLR
comp=Z,1μm,23.0s
SOI **Samo** 151.75 313 PKP PKPbc 10 18 50.0 -0.2
GRR **Gorron** 151.77 347 *e*PKP1 PKPbc 10 18 47.7 -2.2
comp=Z,82nm,0.5s
GRFL **Gerfalco** 151.80 326 PKP PKPbc 10 18 49.6 -0.5
SSF **Saint Saulge** 151.83 340 *e*PKP1 PKPbc 10 18 48.2 -1.9
comp=Z,88nm,0.9s
LPL **La Plagne** 151.97 334 *e*PKP1 PKPbc 10 18 48.9 -1.6
comp=Z,65nm,0.8s
LPG **La Plagne** 151.98 334 *e*PKP1 PKPbc 10 18 49.0 -1.5
comp=Z,84nm,0.7s

SMF	Signal de Mont	152.08	339	ePKP1	PKPbc	10 18 48.4	-2.3
	comp=Z,52nm,1.0s						
AVF	Avril sur Loir	152.12	340	ePKP1	PKPbc	10 18 49.3	-1.4
	comp=Z,43nm,1.0s						
SGMF	Saint Gilles	152.23	349	ePKP1	PKPbc	10 18 48.5	-2.4
	comp=Z,92nm,0.8s						
ROSF	Rostrenen	152.27	350	ePKP1	PKPbc	10 18 48.4	-2.6
	comp=Z,39nm,0.5s						
BNI	Bardonecchia	152.37	334	ePKPdf	PKPdf	10 18 44.6	+0.2
BNI				ePKPbc	PKPbc	10 18 50.9	-0.5
BNI				ePKPab	PKPab	10 19 03.5	+1.9
BNI	Bardonecchia	152.37	334	ePKIKP	PKPdf	10 18 44.7	+0.2
BNI				e		10 18 50.9	
BGF	Bois d'Agland	152.48	340	ePKP1	PKPbc	10 18 49.4	-2.2
	comp=Z,51nm,0.6s						
DOI	San Damiano	152.57	332	PKP	PKPbc	10 18 49.7	-2.1
GRN	Grenoble	152.59	335	PKP	PKPbc	10 18 51.0	-0.8
MBDF	Montbardon	152.59	333	ePKP1	PKPbc	10 18 50.5	-1.4
	comp=Z,39nm,0.7s						
QUIF	Quistinic	152.66	350	ePKP1	PKPbc	10 18 49.3	-2.6
PLDF	La Plantade	152.75	339	PKP	PKPdf	10 18 44.7	-0.3
SURF	Saint Ours	152.77	333	PKP	PKPbc	10 18 50.9	-1.4
ORIF	Oris-en-Rattie	152.81	335	ePKP1	PKPbc	10 18 50.4	-1.9
	comp=Z,55nm,0.7s						
ORIF				eMLR	MLR		
	comp=Z,506nm,20.5s						
SAOF	Saorge	152.84	331	PKP	PKPbc	10 18 51.9	-0.5
AUTN	L'Aution	152.89	331	PKP	PKPbc	10 18 52.3	-0.3
TCF	Toulx Ste Croi	152.92	341	ePKP1	PKPbc	10 18 50.5	-2.0
	comp=Z,46nm,0.8s						
SBF	Sospel	152.99	331	ePKP1	PKPbc	10 18 50.4	-2.4
PGF	Pioggiola	153.24	327	ePKP1	PKPbc	10 18 51.1	-2.3
	comp=Z,92nm,0.7s						
MFF	Saint Martin d	153.29	344	ePKP1	PKPbc	10 18 51.1	-2.2
	comp=Z,61nm,1.0s						
VIVF	Saint-Julien-l	153.33	336	ePKP1	PKPbc	10 18 51.5	-2.0
	comp=Z,34nm,0.8s						
CORF	Corte	153.35	327	PKP	PKPbc	10 18 53.3	-0.3
LBL	Lubilhac	153.52	338	PKP	PKPdf	10 18 45.4	-0.8
FRF	La Foret Royal	153.58	332	ePKP1	PKPbc	10 18 51.6	-2.5
	comp=Z,36nm,0.9s						
SMRF	Simiane la Rot	153.70	334	ePKP1	PKPbc	10 18 52.7	-1.6
	comp=Z,36nm,0.9s						
LMR	La Mourre	153.82	332	ePKP1	PKPbc	10 18 52.3	-2.3
	comp=Z,49nm,0.9s						
RJF	Les Rejaudoux	154.02	341	ePKP1	PKPbc	10 18 52.9	-2.1
	comp=Z,27nm,0.9s						
RJF				eMLR	MLR		
	comp=Z,841nm,20.9s						
RJF	Les Rejaudoux	154.02	341	ePKIKP	PKPbc	10 18 52.9	-2.1
RJF				MLR	MLR		
	comp=Z,840nm,20.9s						
CAF	Calviac	154.19	340	ePKP1	PKPbc	10 18 53.3	-2.0
LASF	Ste Croix	154.30	336	ePKP1	PKPbc	10 18 53.8	-1.8
	comp=Z,25nm,0.8s						
LFF	La Frestale	154.58	342	ePKP1	PKPbc	10 18 54.2	-2.0
	comp=Z,38nm,0.9s						
KEST	Kesra	157.54	315	PKPab	PKPab	10 19 24.6	+0.5
	comp=Z,3.9nm,0.9s,baz=292,slow=10,SNR=3.6						
ESDC	Sonseca Array	160.75	345	PKPab	PKPab	10 19 35.9	-1.8
	comp=Z,1.3nm,0.5s,baz=9.6,slow=4.9,SNR=6.2						
PAB	San Pablo	160.96	346	PFAKE		10 19 10.0	+14
PAB				LR	LR		
	comp=Z,888nm,21.0s						
LIC	Lamto	164.38	199	ePKP2	PKPab	10 19 53.8	-0.5
	comp=Z,28nm,0.9s						
LIC				eMLR	MLR		
	comp=Z,1μm,22.8s						
LIC	Lamto	164.38	199	ePKP1	PKPab	10 19 53.7	-0.6
	comp=Z,108nm,1.5s						
KIC	Kosan Boka	164.42	201	ePKP1	PKPab	10 19 54.1	-0.4
	comp=Z,122nm,1.2s						
DBIC	Dimbokro	164.75	201	PKPab	PKPab	10 19 55.6	-0.3
	comp=Z,6.6nm,0.7s,baz=144,slow=5.4,SNR=5.6						
TIC	Toumodi	164.78	200	ePKP1	PKPab	10 19 54.8	-1.2
	comp=Z,42nm,1.5s						
TOA0	Torodi Ar. Sit	166.17	237	ePKPdf	PKPdf	10 19 01.4	+0.1
TORD	Torodi Ar. Bea	166.17	237	PKP	PKPdf	10 18 59.9	-1.4
TORD				PKPab	PKPab	10 20 02.0	-0.3
TORD	Torodi Ar. Bea	166.17	237	PKP	PKPdf	10 18 59.9	-1.3
	comp=Z,2.4nm,0.9s,baz=333,slow=0.7,SNR=9.8						
TORD				PKPab	PKPab	10 20 02.0	-0.3
	comp=Z,2.3nm,0.9s,baz=117,slow=3.8,SNR=2.8						

*MOS **12** 10:21:39.1±2.4, 4994N×15731E, h9^{km}, mb4.4/1, Error ellipse: s-maj=50.3km s-min=15.4km az=81.9*

KRSC 12 10:21:39.1±1.4**, 4994N×15731E, h9**^{km}±11^{km}**, ML4.3, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.07	315	ePN	Pn	10 21 54.0	-6.2
SKR				pmax	pmax		
	comp=N,200nm,0.5s						
SKR				pmax	pmax		
	comp=E,110nm,0.5s						
SKR				pmax	pmax		
	comp=Z,260nm,0.5s						
RUS	Russkaya	2.61	16	eP	Pn	10 22 23.0	+1.6
RUS				i S	Sn	10 22 54.7	+1.6
GRL	Gorelyy	2.66	10	eP	Pn	10 22 23.8	+1.7
GRL				i S	Sn	10 22 56.7	+2.3
PET	Petropavlovsk	3.20	15	eP	Pn	10 22 32.0	+2.5
PET				i S	Sn	10 23 10.8	+3.1
AVH	Avacha	3.45	14	eP	Pn	10 22 36.6	+3.7
AVH				i S	Sn	10 23 18.9	+5.1
NLC	Nalytchevo	3.48	21	eP	Pn	10 22 34.6	+1.3
SPN	Mys Shipunski	3.59	27	eP	Pn	10 22 37.7	+2.9
SPN				i S	Sn	10 23 20.9	+3.6
GNL	Ganaly	3.78	6	eP	Pn	10 22 38.6	+1.1
TUMR	Tumrok	5.62	17	eP	Pn	10 23 06.9	+4.1
KBTR	Krutoberegovo	7.10	26	eP	Pn	10 23 25.0	+2.0

*ISCJB **12** 10:44:09.9±0.6, 1652N±006×9390W±003, h142^{km}±5^{km}, mb3.4/3, Error ellipse: s-maj=10.7km s-min=4.3km az=1.7*
*IDC **12** 10:44:09.9±1.6, 1649N×9389W, h137^{km}±8^{km}, mb3.3/3, mb1 3.6/6, mb1mx3.4/20, mbtmp3.4/6, MS4.0/2, Ms1 4.0/2, ms1mx3.2/17, Error ellipse: s-maj=30.6km s-min=15.5km az=4.0*
*MEX **12** 10:44:12.3±1.0, 1647N×9393W, h136^{km}±13^{km}, MD4.2*
*NEIC **12** 10:44:12.2, 1653N×9392W, h139^{km}, MD4.2(MEX), After MEX.*

ISC 12 10:44:10.8±0.6**, 1650N**±006×**9390W**±003**, h138**^{km}±5^{km}**, n26,** σ1^{s}**21**/43**, mb3.4**/3**, 3C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.11	302	P	Pn	10 44 35.2	-0.3
CMIG				S	Sn	10 44 53.2	-1.1
CMIG	Matias Romero	1.11	302	P	Pn	10 44 35.2	-0.3
	52nm,0.3s,baz=108,slow=5.9,SNR=1432						
CMIG				S	Sn	10 44 53.2	-1.1
	107nm,0.3s,baz=314,slow=18,SNR=27						
CMIG	Matias Romero	1.11	302	⇑iP	Pn	10 44 35.3	-0.2
CMIG				i S	Sn	10 44 53.1	-1.2
SCX	San Cristobal	1.23	79	i P	Pn	10 44 37.0	+0.3
SCX				i S	Sn	10 44 57.0	+0.6
CCIG	Comitan	1.71	97	i P	Pn	10 44 42.5	+0.7
CCIG				i S	Sn	10 45 06.2	+0.7
HUIG	Huatulco	2.24	251	⇑iP	Pn	10 44 46.8	-1.4
HUIG				i S	Sn	10 45 16.6	-0.3
HUIG	Huatulco	2.24	251	i P	Pn	10 44 46.8	-1.4
HUIG				i S	Sn	10 45 16.6	-0.3
OXX	Oaxaca	2.77	282	eP	Pn	10 44 56.0	+1.3
VHO	Vista Hermosa	2.77	282	⇑iP	Pn	10 44 55.9	+1.1
VHO				i S	Sn	10 45 28.1	-0.7
SCIG	Sabancuy	3.56	46	i P	Pn	10 45 03.2	-1.9
SCIG				i S	Sn	10 45 46.5	-0.6
TPIG	Tehuac#an	3.82	301	i P	Pn	10 45 08.4	0.0
TPIG				i S	Sn	10 45 51.6	-1.3
UTMO	Huajuapan	3.96	290	i P	Pn	10 45 10.7	+0.4
UTMO				i S	Sn	10 45 56.7	+0.4
LVIG	Laguna Verde	4.00	324	eP	Pn	10 45 09.1	-1.7
LVIG				i S	Sn	10 45 52.4	-4.9
LVIG	Laguna Verde	4.00	324	eP	Pn	10 45 09.1	-1.7
LVIG				i S	Sn	10 45 52.9	-4.4
PPM	Popocatepetl	5.18	300	eP	Pn	10 45 27.9	+1.5
PPM				i S	Sn	10 46 28.0	+2.7
IIO	Organos	5.52	305	eP	Pn	10 45 31.6	+0.6
IIO				i S	Sn	10 46 39.9	+6.3
MEIG	Mezcala	5.65	285	eP	Pn	10 45 33.7	+1.1
MEIG				i S	Sn	10 46 34.3	-2.3
ACX	Acapulco	5.78	274	eP	Pn	10 45 29.0	-5.4
SZVM	Salazar	5.93	299	i P	Pn	10 45 37.9	+1.5
SZVM				i S	Sn	10 46 43.4	+0.2
TEIG	Tepich	6.50	54	P	Pn	10 45 41.6	-2.5
	2.0nm,0.3s,baz=14,slow=4.0,SNR=9.7						
TEIG				S	Sn	10 46 58.5	+1.5
	2.7nm,0.3s,baz=14,slow=21,SNR=3.8						
JTS	JuntasAbangare	10.67	124	P	Pn	10 46 39.2	-0.7
	1.6nm,0.3s,baz=312,slow=19,SNR=8.4						
JTS				LR	LR	10 51 19.5	
	comp=Z,851nm,20.8s,baz=244,slow=40						
TXAR	Lajitas Array	15.61	327	P	Pn	10 47 44.6	+1.3
	0.1nm,0.3s,baz=149,slow=14,SNR=14						
TKL	Tuckaleechee C	21.11	23	LR	LR	10 58 55.2	
	comp=Z,452nm,21.9s,baz=247,slow=42						
NVAR	Mina Array Bea	30.59	320	P	P	10 50 13.0	+1.5
	0.2nm,0.5s,mb3.1,baz=134,slow=10,SNR=3.5						
YKA	Yellowknife Ar	48.19	347	P	P	10 52 35.1	-1.7
	0.3nm,0.5s,mb3.2,baz=152,slow=7.2,SNR=8.3						
ARCES	ARCESS Array B	84.34	18	P	P	10 56 25.9	-1.0
	2.0nm,0.8s,mb3.9,baz=288,slow=4.7,SNR=7.7						

KRSC 12 10:46:08.7±1.1**, 5288N×16014E, h86**^{km}±36^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.23	342	i P	Pn	10 46 22.0	+0.7
SPN				i S	Sn	10 46 31.3	+0.7
NLC	Nalytchevo	0.56	302	i P	Pn	10 46 23.9	+0.4
NLC				i S	Sn	10 46 34.9	+0.4
PET	Petropavlovsk	0.91	280	eP	Pn	10 46 27.1	+0.1
PET				i S	Sn	10 46 40.6	-0.2
AVH	Avacha	0.93	295	eP	Pn	10 46 28.1	+0.8
AVH				i S	Sn	10 46 42.0	+0.8
RUS	Russkaya	1.09	246	eP	Pn	10 46 29.4	+0.3
RUS				i S	Sn	10 46 44.6	+0.2
GRL	Gorelyy	1.30	256	eP	Pn	10 46 32.7	+1.0
GRL				i S	Sn	10 46 50.0	+1.0
GNL	Ganaly	1.55	303	eP	Pn	10 46 35.1	+0.2
GNL				i S	Sn	10 46 54.5	-0.2
TUMR	Tumrok	2.41	0	i P	Pn	10 46 47.5	+1.4
TUMR				i S	Sn	10 47 15.8	+1.0
KMNR	Kamenistaya	2.88	1	eP	Pn	10 46 54.6	+2.1
KMNR				i S	Sn	10 47 28.7	+2.5
SRDR	Sredinnyy	3.45	356	eP	Pn	10 47 01.2	+1.0
KBTR	Krutoberegovo	3.68	24	eP	Pn	10 47 03.8	+0.6
KBTR				i S	Sn	10 47 43.8	-1.7

MEX 12 11:00:29.5±0.9**, 1772N×9479W, h154**^{km}±10^{km}**, MD4.0, 1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.63	188	⇓iP	Pn	11 00 50.7	-1.3
CMIG				i S	Sn	11 01 06.8	-2.3
OXX	Oaxaca	1.95	251	eP	Pn	11 01 03.5	-0.8
VHO	Vista Hermosa	1.96	251	i P	Pn	11 01 03.5	-0.9
VHO				i S	Sn	11 01 30.4	-0.9
HUIG	Huatulco	2.31	213	i P	Pn	11 01 06.0	-2.5
HUIG				i S	Sn	11 01 37.9	-0.8
TPIG	Tehuac#an	2.55	286	i P	Pn	11 01 09.8	-1.5
TPIG				i S	Sn	11 01 41.4	-2.3
UTMO	Huajuapan	2.88	273	eP	Pn	11 01 13.4	-2.0
UTMO				i S	Sn	11 01 49.4	-1.6
CCIG	Comitan	2.91	119	eP	Pn	11 01 14.8	-1.0
CCIG				i S	Sn	11 01 50.9	-0.8
PPM	Popocatepetl	3.88	291	eP	Pn	11 01 23.4	-4.9
PPM				i S	Sn	11 02 14.4	+0.4

*NIED **12** 11:32:00, 4270N×14160E, h135^{km}, Mw4.7 Best double couple: $M_0$1.25000×10^{16} NP1:ϕ_s161.00000°, δ46.00000°, λ-12.00000°. NP2:ϕ_s260.00000°, δ82.00000°, λ-136.00000°.*
*SZGRF **12** 11:32:02.9, 4159N×14326E, h149^{km}, mb5.0, Hokkaido, Japan, region*
*BJI **12** 11:32:07.8, 4293N×14168E, h136^{km}, mB5.4, mb4.7*
*ISCJB **12** 11:32:08.3±0.2, 4275N±002×14159E±002, h146^{km}±1^{km}, mb4.5/128, Error ellipse: s-maj=4.1km s-min=2.7km az=162.1*
*IDC **12** 11:32:08.7±0.5, 4272N×14163E, h140^{km}±4^{km}, mb4.3/27, mb1 4.4/32, mb1mx4.4/35, mbtmp4.3/32, Error ellipse: s-maj=11.1km s-min=6.7km az=111.0*
*MOS **12** 11:32:08.0±0.9, 4280N×14155E, h144^{km}, mb4.7/57, Error ellipse: s-maj=7.7km s-min=4.3km az=102.2*
*NEIC **12** 11:32:09.1±0.1, 4275N×14158E, mb4.7/81, MW4.7(NIED), Error ellipse: s-maj=3.9km s-min=3.2km az=149.0*
NEIC Recorded [2 JMA] in the Tomakomai area and [1 JMA] in south-central and southwestern Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures, Honshu.
*JMA **12** 11:32:09.4±0.1, 4272N×14162E, h145^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s158.00000°, δ51.00000°, λ-11.00000°. NP2: ϕ_s255.00000°, δ82.00000°, λ-141.00000°. Principal axes: T Plg20.0000°, Azm20.0000°; N Plg50.0000°, Azm264.0000°; P Plg33.0000°, Azm124.0000°;*
JMA Felt II J1.

ISC 12 11:32:09.4±0.2**, 4276N**±002×**14154E**±002**, h142**^{km}±1^{km}**, h144**^{km}±2.4^{km}**:pP-P, n561,** σ**0**^{s}**74**/588**, mb4.5**/128**, 80C-83D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEW	Eniwo	0.10	318	⇓P	Pn	11 32 29.1	+0.6
JEW				eS	Sn	11 32 43.8	+0.8
JNB	Noboribetsu	0.48	232	⇓P	Pn	11 32 30.1	+0.4
JNB				eS	Sn	11 32 45.8	+0.8
JBT2	Biratori 2	0.60	88	⇓P	Pn	11 32 30.6	+0.3
JBT2				eS	Sn	11 32 46.9	+0.6
JFR	Furan	0.87	62	⇓P	Pn	11 32 32.0	-0.2
JFR				eS	Sn	11 32 49.4	-0.2
JKB	Kayabe	0.95	204	⇑P	Pn	11 32 33.0	0.0
JKB				eS	Sn	11 32 50.6	-0.3
JSK	Shakotan	0.98	307	⇓P	Pn	11 32 34.3	+1.1
JSK				eS	Sn	11 32 53.5	+2.2
JHR	Hokuryu	0.99	8	⇓P	Pn	11 32 34.6	+1.4
JHR				eS	Sn	11 32 53.8	+2.3
JNBK	Urakawa-nobuka	1.02	118	⇑P	Pn	11 32 33.5	0.0
JCH	Churui	1.35	96	⇓P	Pn	11 32 35.6	-1.1
JCH				eS	Sn	11 32 55.6	-1.9
ERM	Erimo	1.41	122	ePn	Pn	11 32 35.9	-1.5
ERM	Erimo	1.41	122	d iPN	Pn	11 32 37.0	-0.3
JKK2	Kamakawa 2	1.41	38	⇑P	Pn	11 32 37.6	+0.2
JKK2				eS	Sn	11 32 58.8	0.0
JOT	Ohata	1.43	195	⇑P	Pn	11 32 37.3	-0.3
JOT				eS	Sn	11 32 58.8	-0.3
ASAJ	Asahikawa	1.55	29	PN	Pn	11 32 39.3	+0.4
ASAJ				S	Sn	11 33 00.7	-0.8
ASAJ				pmax	pmax		
	comp=Z,73nm,0.3s						
ASAJ				smax			
	comp=N,136nm,0.3s						
ASAJ	Asahikawa	1.55	29	P	Pn	11 32 39.2	+0.4
	comp=N,73nm,0.3s,baz=226,slow=12,SNR=238						
ASAJ				S	Sn	11 33 00.7	-0.8
	comp=N,136nm,0.3s,baz=102,slow=33,SNR=18						
JYG	Yagishiri	1.66	357	P	Pn	11 32 41.1	+1.0
JYG				eS	Sn	11 33 04.6	+0.9
JOSM	Okushiri--Mats	1.68	247	P	Pn	11 32 40.9	+0.7
JOSM				eS	Sn	11 33 04.6	+0.8
JAR	Ashorobuto	1.72	71	⇑P	Pn	11 32 40.1	-0.6
JAR				eS	Sn	11 33 03.0	-1.6
JTKR	Abashiri--Toko	2.10	54	P	Pn	11 32 45.5	+0.3
JTKR				eS	Sn	11 33 12.4	-0.3
YUK	Yuzh-Kuril'sk	3.39	67	ePN	Pn	11 33 01.9	+0.5
YUK				eS	Sn	11 33 40.6	-1.1
YUK				pmax	pmax		
	comp=Z,3μm,0.4s						
YUK				pmax	pmax		
	comp=Z,1μm,0.5s						
YUK				smax			
	comp=N,3μm,0.5s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK				smax			
	comp=N,10μm,1.0s						
YUK				smax			
	comp=E,8μm,2.0s						
YSS	Yuzh-Sakhalins	4.28	11	ePn	Pn	11 33 11.4	-1.6
YSS	Yuzh-Sakhalins	4.28	11	⇑iPN	Pn	11 33 13.8	+0.8
YSS				eS	Sn	11 34 02.8	+0.4
YSS				pmax	pmax		
	comp=Z,940nm,0.7s						
YSS				pmax	pmax		
	comp=N,690nm,0.8s						
YSS				pmax	pmax		
	comp=E,180nm,0.5s						
YSS				smax			
	comp=N,370nm,1.0s						
YSS				smax			
	comp=E,240nm,1.0s						
KUR	Kuril'sk	5.19	59	⇓iPN	Pn	11 33 23.4	-1.6
KUR				i S	Sn	11 34 23.0	-1.0
KUR				pmax	pmax		
	comp=N,220nm,0.8s						
KUR				pmax	pmax		
	comp=E,320nm,0.8s						
KUR				pmax	pmax		
	comp=Z,1μm,0.8s						
KUR				smax			
	comp=N,260nm,0.7s						
KUR				smax			
	comp=E,580nm,0.8s						
MAJO	Matsushiro	6.72	204	ePn	Pn	11 33 44.8	-1.0
MAT	Matsushiro	6.72	204	P	Pn	11 33 44.7	-1.0
MAT				eS	Sn	11 35 03.8	+2.7
MJAR	Matsushiro Arr	6.72	204	P	Pn	11 33 45.0	-0.8
	comp=E,22nm,0.3s,baz=23,slow=15,SNR=99						
HABR	Khabarovsk	7.30	324	ePN	Pn	11 33 53.9	+0.6
HABR				e		11 35 17.2	
HABR				pmax	pmax		
	comp=Z,125nm,1.4s						
HABR				pmax	pmax		
	comp=Z,125nm,1.4s						
MDJ	Mudanjiang	8.86	286	P	Pn	11 34 11.2	-3.0
MDJ				S	Sn	11 35 48.0	-4.3
MDJ				SCP	ScP	11 43 47.3	+3.2
MDJ				PCS	PcS	11 43 59.9	+1.4
MDJ				SCS	ScS	11 47 21.5	+3.4
MDJ				AMB	AMB		
	comp=Z,607nm,5.2s						
KLR	Kul'dur	9.39	317	ePN	Pn	11 34 19.0	-2.2
JHJ	Hachijo jima 2	9.73	189	P	Pn	11 34 20.5	-5.4
	comp=Z,202nm,0.3s,baz=72,slow=15,SNR=19						
JHJ				S	Sn	11 36 02.0	-12
	comp=Z,136nm,0.3s,baz=58,slow=23,SNR=8.1						
KSRS	Korea Array	11.70	248	P	Pn	11 34 52.6	+0.8
	comp=Z,0.4nm,0.3s,baz=62,slow=13,SNR=20						
KSRS				ScP	ScP	11 43 48.5	+0.6
	comp=Z,0.3nm,0.3s,baz=18,slow=2.2,SNR=10						
CN2	Changchun	11.78	281	eP	Pn	11 34 52.8	-0.1
CN2				eS	Sn	11 37 03.4	+0.5
CN2				AMB	AMB		
	comp=Z,20nm,0.7s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
SKR	Severo-Kuril's	12.74	47	ePN	Pn	11 35 03.5	-1.8
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
JNU	Nakatsue	12.78	225	P	Pn	11 35 05.1	-0.8
	comp=Z,1.5nm,0.3s,baz=30,slow=22,SNR=14						
PET	Petropavlovsk	15.36	42	eP	Pn	11 35 35.8	-2.5
	comp=Z,30nm,0.7s						
PET	Petropavlovsk	15.36	42	eP	Pn	11 35 34.9	-3.4
PET				eS	S	11 38 17.3	-17
PET				pmax	pmax		
	comp=Z,48nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
CBIJ	Chichi jima	15.64	178	P	Pn	11 35 39.6	-2.4
	comp=Z,48nm,0.3s,baz=264,slow=14,SNR=7.6						
HIA	Hailar	16.45	301	c iP	Pn	11 35 51.5	-0.3
CLNS	Chul'man	17.65	329	eP	Pn	11 36 04.0	-2.1
CLNS				pmax	pmax		
	comp=Z,42nm,0.7s						
CLNS				pmax	pmax		
	comp=N,17nm,0.9s						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
MA2	Magadan	17.77	16	eP	Pn	11 36 03.9	-3.6
	comp=E,151nm,0.8s						
MA2	Magadan	17.77	16	d iP	Pn	11 36 04.8	-2.7
MA2				pmax	pmax		
	comp=N,200nm,0.9s						
MA2				pmax	pmax		
	comp=E,80nm,0.9s						
MA2				pmax	pmax		
	comp=Z,300nm,0.9s						
BJI	Beijing	19.20	270	P	P	11 36 22.6	+0.4
BJI				S	S	11 39 56.4	+4.3
BJI				AMB	AMB		
	comp=Z,9.0nm,1.1s						
BJI				AMB	AMB		
	comp=Z,313nm,4.8s						
BJI				LR	LR		
	comp=N,557nm,16.0s						
BJI				LR	LR		
	comp=E,423nm,17.1s						
BJI				LR	LR		
	comp=Z,99nm,19.8s						
JOW	Kunigami	19.23	219	P	P	11 36 20.9	-1.7
	comp=Z,1.0nm,0.3s,baz=49,slow=17,SNR=4.8						
YAK	Yakutsk	20.55	344	eP	P	11 36 33.7	-2.6
	comp=Z,114nm,0.7s						
YAK	Yakutsk	20.55	344	eP	P	11 36 34.3	-2.1
YAK				e		11 37 00.6	
YAK				eS	S	11 40 15.1	-2.9
YAK				pmax	pmax		
	comp=Z,94nm,0.8s						
YAK				pmax	pmax		
	comp=N,30nm,1.0s						
YAK				pmax	pmax		
	comp=E,12nm,1.0s						
YAK				pmax	pmax		
	comp=N,358nm,4.9s						
YAK				pmax	pmax		
	comp=Z,421nm,4.9s						
YAK				pmax	pmax		
	comp=E,509nm,5.2s						
YAK				smax			
	comp=N,191nm,2.0s						
YAK				smax			
	comp=Z,126nm,2.5s						
YAK				smax			
	comp=E,220nm,2.2s						
NJ2	Nanjing	20.89	247	eP	P	11 36 41.2	+0.8
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
CIT	Chita	20.98	306	eP	P	11 36 38.7	-2.4
CIT				e		11 40 25.0	
HHC	Hu-ho-hao-te	22.38	275	eP	P	11 36 55.3	-0.7
HHC				eS	S	11 40 47.4	-3.7
HHC				AMB	AMB		
	comp=Z,15nm,0.9s,mb4.4						
HHC				AMB	AMB		
	comp=Z,308nm,8.2s						
HHC				LR	LR		
	comp=N,353nm,9.4s						
HHC				LR	LR		
	comp=E,550nm,10.2s						
BOD	Bodaibo	22.94	321	eP	P	11 36 58.9	-2.0
BOD				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.1						
ULN	Ulaanbaatar	24.65	294	eP	P	11 37 16.6	0.0
	comp=Z,82nm,2.8s,mb4.8						
ULN	Ulaanbaatar	24.65	294	⇑eP	P	11 37 18.0	+1.4
SONM	Songino Array	25.09	294	P	P	11 37 21.3	+0.7
	comp=Z,5.3nm,0.6s,mb4.3,baz=82,slow=8.5,SNR=45						
SONM				ScP	ScP	11 44 16.1	-0.6
	comp=Z,3.3nm,0.8s,baz=126,slow=2.3,SNR=19						
XAN	Xi'an	26.88	262	P	P	11 37 40.9	+4.1
XAN				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.4						
TLY	Talaya	26.98	303	eP	P	11 37 38.2	+0.8
	comp=Z,8.6nm,0.8s,mb4.4						
TLY	Talaya	26.98	303	eP	P	11 37 38.6	+1.1
TLY				e	pP	11 38 09.4	+2.0
TLY				ePPP		11 38 22.8	
TLY				eS	S	11 42 05.4	+1.3
TLY				pmax	pmax		

comp=Z,7.0nm,0.7s,mb4.4
TLY MLR MLR

comp=Z,100nm,13.0s
ZAK Zakamensk 27.14 300 *e*P **P 11 37 39.2 +0.2**
ZAK pmax pmax

comp=Z,3.0nm,1.8s,mb3.6
BILL Bilibino 28.55 19 *e*P **P 11 37 50.3 -0.9**
comp=Z,4.6nm,0.4s,mb4.6
BILL Bilibino 28.55 19 ⇓*i*P **P 11 37 49.9 -1.3**
BILL *e* 11 38 47.5
BILL pmax pmax

comp=Z,18nm,1.6s,mb4.5
MOY Mondy 28.62 302 *e*P **P 11 37 51.0 -1.1**
TIXI Tiksi 29.63 352 *e*P **P 11 37 58.7 -2.1**
comp=Z,6.5nm,0.6s,mb4.5
TIXI Tiksi 29.63 352 *e*P **P 11 37 58.3 -2.5**
TIXI pmax pmax

comp=Z,8.0nm,0.8s,mb4.5
LZH Lanzhou 29.69 270 *e*P **P 11 38 07.4 +5.6**
LZH AMB AMB

comp=Z,16nm,1.1s,mb4.7
GTA Gaotai 31.40 278 *e*P **P 11 38 21.9 +5.1**
GTA PP PP 11 39 29.0 -1.3
GTA SS SS 11 45 18.8 -15
GTA AMB AMB

comp=Z,2.0nm,0.9s,mb3.9
GTA AMB AMB

comp=Z,277nm,3.8s
GTA LR LR

comp=N,305nm,13.3s
GTA LR LR

comp=E,252nm,12.2s
GTA LR LR

comp=Z,296nm,11.0s
CD2 Chengdu 32.22 261 *e*P **P 11 38 24.4 +0.4**
CD2 AP pP 11 38 51.8 -2.6
CD2 XP sP 11 39 06.7 -4.0
CD2 PP PP 11 39 36.4 -3.1
CD2 S **S 11 43 27.0 +0.4**
CD2 SS SS 11 45 30.0 -21
CD2 AMB AMB

comp=Z,10.0nm,0.6s,mb4.7
CD2 LR LR

comp=N,260nm,15.6s
CD2 LR LR

comp=Z,320nm,16.8s
GYA Guiyang 32.72 252 P **P 11 38 32.7 +4.3**
GYA PP PP 11 39 44.8 -0.3
GYA PCP PcP 11 41 15.8 +5.2
GYA S **S 11 43 44.0 +10**
GYA PCS PcS 11 45 01.0 +4.9
GYA SS SS 11 45 47.2 -14
GYA AMB AMB

comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB

comp=Z,110nm,5.4s
GYA LR LR

comp=N,410nm,19.8s
GYA LR LR

comp=E,460nm,18.6s
GYA LR LR

comp=Z,370nm,18.2s
GAMB Gambell 33.88 35 *e*P **P 11 38 36.5 -1.5**
TNA Tin City 35.91 33 *e*P **P 11 38 53.7 -1.7**
comp=Z,14nm,0.7s,mb4.7
KMI Kunming 36.31 254 P **P 11 39 02.5 +3.2**
KMI S **S 11 44 39.2 +10**
KMI AMB AMB

comp=Z,10.0nm,1.1s,mb4.4
KMI LR LR

comp=Z,73nm,17.7s
WMQ Urumqi 38.63 291 ⇑*i*P **P 11 39 20.7 +2.1**
WMQ AP pP 11 39 48.8 -0.9
WMQ XP sP 11 40 03.2 -2.6
WMQ PP PP 11 40 55.9 +6.1
WMQ PCP PcP 11 41 31.2 +3.4
WMQ SCP ScP 11 45 06.2 +3.7
WMQ S **S 11 45 07.2 +3.0**
WMQ PCS PcS 11 45 19.2 +2.0
WMQ XS sS 11 45 56.2 -2.2
WMQ SS SS 11 47 55.2 -4.8
WMQ SCS ScS 11 49 15.2 +1.9
WMQ AMB AMB

comp=Z,14nm,0.9s,mb4.6
WMQ AMB AMB

comp=Z,453nm,6.8s
WMQ LR LR

comp=N,121nm,13.5s
WMQ LR LR

comp=E,157nm,16.5s
WMQ LR LR

comp=Z,123nm,15.0s
NVS Novosibirsk 39.14 309 *e*P **P 11 39 22.7 0.0**
NVS pmax pmax

comp=Z,12nm,1.1s,mb4.4
NVS pmax pmax

comp=N,4.0nm,1.2s
NVS pmax pmax

comp=E,10.0nm,1.1s
TTA Tatalina 40.76 38 *e*P **P 11 39 36.5 +0.5**
SVW2 Sparrevohn 41.02 41 *e*P **P 11 39 39.1 +0.9**
MK31 Makanchi Array 41.39 297 *i*P **P 11 39 41.5 +0.2**
MK31 pmax pmax

comp=Z,5.0nm,0.5s,mb4.4
MKAR Makanchi Array 41.39 297 P **P 11 39 41.8 +0.4**
comp=Z,5.0nm,0.6s,mb4.3,baz=81,slow=10.0,SNR=17
MKAR ScP ScP 11 45 13.1 -0.1
comp=Z,2.4nm,0.7s,baz=67,slow=4.1,SNR=12
IMA2 Indian Mountai 41.78 34 *e*P **P 11 39 43.4 -0.8**
KURK Kurchatov 42.67 303 *e*P **P 11 39 51.9 +0.3**
KURK Kurchatov 42.67 303 *c i*P **P 11 39 51.4 -0.2**
KURK pmax pmax

comp=Z,13nm,0.8s,mb4.6
KDAK Kodiak Island 42.90 46 P **P 11 39 52.6 -0.8**
comp=Z,11nm,0.4s,mb4.9,baz=299,slow=3.6,SNR=20
SLKM Skilak Lake 43.70 42 *e*P **P 11 39 59.1 -0.7**
MCK McKinley 43.91 37 *e*P **P 11 40 00.2 -1.2**
comp=Z,28nm,0.9s,mb4.9
MCK McKinley 43.91 37 *e*P **P 11 40 00.2 -1.2**
MCK pmax pmax

comp=Z,28nm,0.9s,mb4.9
PMR Palmer 44.07 40 *e*P **P 11 40 02.6 -0.1**
comp=Z,28nm,1.1s,mb4.8
PMR Palmer 44.07 40 *e*P **P 11 40 02.6 -0.1**
PMR pmax pmax

comp=Z,28nm,1.1s,mb4.8
COLA College 44.26 35 *e*P **P 11 40 03.5 -0.7**
comp=Z,36nm,0.9s,mb5.0
COLA College 44.26 35 *c i*P **P 11 40 03.8 -0.4**
SML Sawmill 44.42 40 *e*P **P 11 40 04.7 -0.8**
EYAK Cordova Ski Ar 45.87 41 *e*P **P 11 40 16.1 -0.8**
TAPN Taplejung 45.92 269 *e*P **P 11 40 21.9 +4.1**
comp=Z,11nm,0.5s,mb4.8
MENT Mentasta 46.35 38 *e*P **P 11 40 20.9 +0.2**
ODAN Odare 46.43 268 *e*P **P 11 40 27.4 +5.6**
comp=Z,16nm,0.7s,mb4.8
CHKZ Chkalovo 46.61 309 *e*P **P 11 40 22.8 0.0**
JIRN Jiri 46.86 270 *e*P **P 11 40 28.8 +3.6**
comp=Z,11nm,0.4s,mb4.9
BRVK Borovoye 46.99 309 *e*P **P 11 40 26.2 +0.4**
comp=Z,8.8nm,0.6s,mb4.6
BRVK Borovoye 46.99 309 *e*P **P 11 40 26.2 +0.4**
BRVK pmax pmax

comp=Z,9.0nm,0.6s,mb4.6
EGAK Eagle 47.11 35 *e*P **P 11 40 25.9 -0.7**
comp=Z,20nm,0.6s,mb4.9
KKN Kakani 47.46 271 *e*P **P 11 40 34.6 +4.8**
comp=Z,18nm,0.6s,mb4.8
KKN Kakani 47.46 271 *e*P **P 11 40 34.6 +4.8**
KKN pmax pmax

comp=Z,18nm,0.6s,mb4.9
GKN Gorkha 47.82 271 *e*P **P 11 40 37.3 +4.8**
DAWY Dawson 48.01 36 *e*P **P 11 40 32.5 -0.9**
AAK Ala-Archa 48.05 294 *e*P **P 11 40 33.9 -0.3**
comp=Z,3.2nm,0.5s,mb4.2
AAK Ala-Archa 48.05 294 ⇓*e*P **P 11 40 33.2 -1.0**
AAK pmax pmax

comp=Z,2.0nm,0.6s,mb3.9
AML Almayashu 48.80 294 *e*P **P 11 40 41.0 +1.1**
comp=Z,1.4nm,0.7s,mb3.7
INK Inuvik 49.29 29 *e*P **P 11 40 42.5 -0.8**
comp=Z,976nm,0.6s
INK Inuvik 49.29 29 *e*P **P 11 40 42.5 -0.7**
INK pmax pmax

comp=Z,976nm,0.6s
INK Inuvik 49.29 29 P **P 11 40 42.9 -0.4**
comp=Z,36nm,0.7s,mb5.1,baz=302,slow=7.0,SNR=160
KK31 Karatay Array 50.51 296 *i*P **P 11 40 52.6 -0.2**
KK31 pmax pmax

comp=Z,3.0nm,0.4s,mb4.3
SOKR Solikamsk 51.93 320 ⇑*i*P **P 11 41 03.1 0.0**
SOKR pmax pmax

comp=Z,40nm,1.1s,mb5.0
ARU Arti 52.23 316 *e*P **P 11 41 05.6 +0.2**
ARU Arti 52.23 316 *d i*P **P 11 41 05.2 -0.2**
ARU *e**PP pP 11 41 39.5 +1.4
ARU *e* 11 42 12.9
ARU 11 43 02.3
ARU S **S 11 48 18.6 -0.3**
ARU SS SS 11 52 01.8 +4.2
ARU pmax pmax

comp=Z,33nm,1.2s,mb4.8
DLBC Dease Lake 54.13 40 *e*P **P 11 41 18.4 -0.8**
AKTK Aktyubinsk 55.03 309 P **P 11 41 26.3 +0.5**
AKTK ScP ScP 11 46 09.7 -1.1
AKTO Aktyubinsk 55.03 309 P **P 11 41 26.3 +0.5**
AKTO pmax pmax

comp=Z,5.0nm,0.9s,mb4.2
AKTO pmax pmax

comp=N,3.0nm,0.8s
AKTO Aktyubinsk 55.03 309 P **P 11 41 26.3 +0.5**
comp=N,4.6nm,0.9s,mb4.2,baz=73,slow=9.2,SNR=12
AKTO ScP ScP 11 46 09.7 -1.1
comp=N,2.7nm,0.8s,baz=64,slow=5.5,SNR=6.0
KBS Kingsbay 55.04 350 *e*P **P 11 41 25.2 -0.3**
PRGR Permogore 56.07 325 *e*P **P 11 41 32.1 -1.0**
PRGR *e**PP pP 11 42 04.4 -1.9
PRGR *e* 11 42 26.5
PRGR *e*S **S 11 49 11.1 +0.8**
COEN Coen 56.46 178 *e*P **P 11 41 36.2 -0.1**
comp=N,12nm,0.9s,mb4.7
RES Resolute Bay 57.04 15 *e*P **P 11 41 39.0 -0.8**
comp=N,2μm,0.6s
RES Resolute Bay 57.04 15 *e*P **P 11 41 39.0 -0.8**
RES pmax pmax

comp=Z,2μm,0.6s
KEV Kevo 58.15 338 *e*p **P 11 41 46.3 -1.3**
comp=Z,8.7nm,0.6s,mb4.8
KEV Kevo 58.15 338 *e*P **P 11 41 46.3 -1.3**
KEV pmax pmax

comp=Z,9.0nm,0.6s,mb4.8
ARCES ARCESS Array B 58.70 338 P **P 11 41 51.1 -0.2**
comp=Z,2.9nm,0.5s,mb4.4,baz=49,slow=7.8,SNR=30
YKW3 Yellowknife Ar 58.81 32 *e*P **P 11 41 51.8 -0.4**
YKA Yellowknife Ar 58.85 32 P **P 11 41 51.9 -0.6**
YKA Yellowknife Ar 58.85 32 *i*P **P 11 41 51.9 -0.6**
YKA pmax pmax

comp=Z,11nm,0.7s
YKA Yellowknife Ar 58.85 32 P **P 11 41 51.9 -0.6**
comp=Z,11nm,0.7s,mb4.8,baz=309,slow=6.4,SNR=244
DAG Danmarks Havn 60.08 355 *e*P **P 11 42 01.0 +0.2**
DAG Danmarks Havn 60.08 355 *i*P **P 11 42 01.0 +0.2**
JOF Joensuu 60.99 331 *e*p **P 11 42 05.6 -1.5**
comp=Z,9.5nm,0.3s,mb5.1
JOF Joensuu 60.99 331 *e*P **P 11 42 05.6 -1.5**
JOF pmax pmax

comp=Z,10.0nm,0.3s,mb5.1
FITZ Fitzroy Crossi 62.31 197 *e*P **P 11 42 15.2 -1.2**
comp=Z,12nm,0.9s,mb4.7
CTA Charters Tower 62.69 175 *e*P **P 11 42 17.3 -1.6**
comp=Z,1.9nm,0.6s,mb4.1
CTA Charters Tower 62.69 175 *e*P **P 11 42 17.3 -1.6**
CTA pmax pmax

comp=Z,2.0nm,0.6s
CTA Charters Tower 62.69 175 P **P 11 42 17.9 -1.1**
comp=Z,2.5nm,0.5s,mb4.3,baz=14,slow=9.4,SNR=7.1
WB2 Warramunga Arr 62.74 188 ⇓*i*P **P 11 42 17.7 -1.6**
WRA Warramunga Arr 62.74 188 P **P 11 42 17.8 -1.5**
comp=Z,7.3nm,0.6s,mb4.7,baz=6.2,slow=7.1,SNR=141
WRA pP pP 11 42 51.2 -2.0
comp=Z,3.5nm,0.7s,baz=3.8,slow=7.0,SNR=4.5
A05A Maple Falls 62.92 47 ⇓P **P 11 42 19.8 -0.4**
baz=63
KAF Kangasniemi 63.29 332 *e*p **P 11 42 21.1 -1.4**
comp=Z,18nm,0.6s,mb5.1,baz=47,slow=6.2
KAF Kangasniemi 63.29 332 *e*P **P 11 42 21.1 -1.4**
KAF pmax pmax

comp=Z,18nm,0.6s,mb5.1
B05A Bryant 63.33 48 ⇑P **P 11 42 23.3 +0.3**
baz=63
E03A Lebam 63.50 50 ⇓P **P 11 42 24.1 0.0**
baz=63
OBN Obninsk 63.62 322 ⇓*i*P **P 11 42 24.6 -0.1**
OBN pmax pmax

comp=Z,20nm,0.6s,mb5.1
A07A Ashnola River, 63.81 47 ⇑P **P 11 42 25.7 -0.4**
baz=64
FINES FINESS Array B 63.82 331 P **P 11 42 25.5 -0.5**
FINES FINESS Array B 63.82 331 *i*P **P 11 42 25.5 -0.5**
FINES pmax pmax

comp=Z,21nm,0.6s
FINES FINESS Array B 63.82 331 P **P 11 42 25.5 -0.5**
comp=Z,21nm,0.6s,mb5.2,baz=50,slow=7.9,SNR=104
B07A Winthrop 64.29 47 ⇑P **P 11 42 29.2 0.0**
baz=64
A08A Turner Farm, O 64.45 46 ⇓P **P 11 42 29.6 -0.7**
baz=64
F04A Amboy 64.50 50 ⇑P **P 11 42 30.4 -0.3**
baz=64
D06A Cle Elum 64.64 48 ⇑P **P 11 42 31.3 -0.3**
baz=64
B08A Colville Reser 64.77 47 ⇑P **P 11 42 31.4 -1.0**
baz=64
C07A Waterville 64.78 48 ⇓P **P 11 42 32.8 +0.3**
baz=64
A09A Danville 64.80 46 P **P 11 42 33.1 +0.5**
baz=64,SNR=5.1
EDM Edmonton 64.84 40 *e*P **P 11 42 31.7 -1.0**
E06A Yakima 64.95 49 ⇓P **P 11 42 34.6 +1.0**
baz=65
D07A Quincy 65.12 48 ⇑P **P 11 42 35.0 +0.4**
baz=65
C08A Higginbotham F 65.27 47 ⇓P **P 11 42 35.3 -0.3**
baz=65
A10A Northport 65.34 45 P **P 11 42 36.3 +0.3**
baz=65,SNR=5.6
J02A Umpqua 65.34 53 ⇓P **P 11 42 36.3 +0.2**
baz=65
B09A Rice 65.37 46 ⇓P **P 11 42 36.2 0.0**
baz=65
H04A Detroit Lake 65.37 51 ⇓P **P 11 42 36.4 +0.1**
baz=65
F06A Goldendale 65.53 50 ⇑P **P 11 42 37.7 +0.4**
baz=65
G05A Wamic 65.54 50 ⇓P **P 11 42 38.1 +0.8**
baz=65
VSU Vasula 65.60 328 ⇑*i*P **P 11 42 37.3 -0.2**
C09A Chrisman Ranch 65.68 47 ⇑P **P 11 42 37.9 -0.3**
baz=65
I04A Tendick Farm, 65.77 52 ⇓P **P 11 42 39.4 +0.5**
baz=66
D08A Wollman Farm, 65.78 48 ⇑P **P 11 42 38.9 +0.1**
baz=66
HAWA Hanford 65.84 49 *e*P **P 11 42 39.8 +0.4**
comp=Z,7.9nm,0.8s,mb4.6
F07A Phinny Hill Vi 65.93 49 ⇑P **P 11 42 40.3 +0.4**
baz=66
G06A Carlson Farm, 65.93 50 ⇑P **P 11 42 39.3 -0.5**
baz=66
H05A Madras 65.94 51 ⇓P **P 11 42 40.1 +0.1**
baz=66
A11A Hall Mountain, 65.98 45 P **P 11 42 41.0 +0.8**
baz=66,SNR=6.4
NEW Newport 66.01 46 *e*P **P 11 42 40.5 +0.2**
comp=Z,6.9nm,0.8s,mb4.5
NEW Newport 66.01 46 *e*P **P 11 42 40.5 +0.2**
NEW pmax pmax

comp=Z,7.0nm,0.8s
E08A Dider Farm, El 66.05 48 ⇑P **P 11 42 40.7 +0.1**
baz=66
D09A Jones Farm, Ri 66.11 47 ⇑P **P 11 42 40.7 -0.3**
baz=66
J04A Umpqua Nationa 66.28 52 ⇓P **P 11 42 43.0 +0.9**
baz=66
B11A Sandpoint 66.30 45 ⇑P **P 11 42 42.2 0.0**
baz=66
H06A Lindquist Farm 66.40 50 ⇑P **P 11 42 43.0 +0.1**
baz=66
GOF Gofitskoye 66.42 310 *e*P **P 11 42 40.7 -2.3**
G07A Ruggs Ranch, H 66.45 50 ⇓P **P 11 42 43.0 -0.2**
baz=66
ASAR Alice Springs 66.47 188 P **P 11 42 42.9 -0.6**
comp=Z,3.6nm,0.5s,mb4.5,baz=9.7,slow=7.6,SNR=82
ASAR pP pP 11 43 17.6 0.0
comp=Z,1.8nm,0.7s,baz=8.0,slow=6.8,SNR=3.1
E09A Wood Farm, Sta 66.53 48 ⇑P **P 11 42 43.1 -0.6**
baz=66
D10A Wagner Farm, O 66.67 47 ⇓P **P 11 42 44.6 +0.1**
baz=66
J05A Fort Rock 66.76 52 ⇑P **P 11 42 45.7 +0.5**
baz=66
YBH Yreka Blue Hor 66.83 54 *e*P **P 11 42 45.7 0.0**
YBH Yreka Blue Hor 66.83 54 ⇑P **P 11 42 46.0 +0.3**
baz=66
G08A Pilot Rock 66.83 49 ⇓P **P 11 42 45.4 -0.2**
baz=66
I06A Prineville 66.95 51 ⇓P **P 11 42 46.2 -0.1**
baz=67
M02C Callahan 66.95 54 ⇓P **P 11 42 46.1 -0.4**
baz=67
A13A Flathead Natio 67.00 44 ⇑P **P 11 42 46.3 -0.3**
baz=67
N02C Big Bar 67.02 55 ⇓P **P 11 42 47.2 +0.3**
baz=67
E10A Myers Farm, Un 67.11 47 ⇓P **P 11 42 47.5 +0.1**
baz=67
WALA Waterton Lakes 67.18 44 *e*P **P 11 42 47.7 0.0**
comp=Z,10nm,1.0s,mb4.6
I07A Izee 67.27 51 ⇑P **P 11 42 48.3 -0.1**
baz=67
KIV Kislovodsk 67.29 309 ⇑*e*P **P 11 42 49.8 +1.2**
KIV *i* *PP pP 11 43 24.2 +1.4
KIV pmax pmax

comp=Z,20nm,1.0s,mb4.9
K05A Summer Lake 67.30 52 ⇓P **P 11 42 49.2 +0.6**
baz=67
M04C Macdoel 67.32 54 P **P 11 42 49.6 +0.9**
baz=67,SNR=5.7
B13A Whitefish 67.33 45 P **P 11 42 48.8 +0.1**
baz=67,SNR=9.0
F10A Beach Ranch, E 67.37 48 ⇓P **P 11 42 49.1 +0.1**
baz=67
J06A Christmas Vall 67.41 52 ⇓P **P 11 42 48.8 -0.4**
baz=67
H08A Prairie City 67.47 50 ⇑P **P 11 42 49.8 +0.2**
baz=67
K06A Valley Falls 67.63 52 ⇑P **P 11 42 50.9 +0.2**
baz=67
WDC Whiskeytown Da 67.63 55 ⇑P **P 11 42 50.8 0.0**
baz=67
E11A Bogner Ranch, 67.68 47 ⇑P **P 11 42 50.4 -0.5**
baz=67
D12A Red Ives Fores 67.70 46 ⇓P **P 11 42 50.5 -0.6**
baz=67
C13A Hot Springs 67.71 45 P **P 11 42 51.5 +0.3**
baz=67,SNR=6.1
O02C Red Bluff 67.73 55 ⇓P **P 11 42 51.7 +0.4**
baz=67
L05A Lakeview 67.75 53 ⇓P **P 11 42 51.7 +0.3**
baz=67
J07A Hines 67.82 51 P **P 11 42 52.5 +0.7**
baz=68,SNR=7.3
I08A Drewsey 67.91 50 P **P 11 42 53.3 +0.9**
baz=68,SNR=6.4
H09A Durkee 67.94 49 ⇓P **P 11 42 53.1 +0.5**
baz=68
M05C Lookout 67.99 54 ⇑P **P 11 42 52.3 -0.7**
baz=68
F11A Grangeville 68.00 47 P **P 11 42 53.2 +0.2**
baz=68,SNR=8.8
BMO Blue Mountains 68.02 49 *e*P **P 11 42 53.2 0.0**
C14A Swan Lake 68.08 45 ⇓P **P 11 42 53.2 -0.2**
baz=68
GASB Alder Springs 68.09 56 ⇑P **P 11 42 53.7 +0.1**
baz=68
HATC Hat Creek Radi 68.14 54 ⇓P **P 11 42 53.6 -0.3**
baz=68
D13A Huson 68.14 46 P **P 11 42 53.8 0.0**
baz=68,SNR=6.5
MOD Modoc 68.15 53 *e*P **P 11 42 54.1 +0.1**
comp=Z,38nm,2.6s,mb4.7
G11A Walters Elk Ra 68.25 48 P **P 11 42 54.5 0.0**
baz=68,SNR=12
K07A Rock Creek Ran 68.28 52 P **P 11 42 55.3 +0.6**
baz=68,SNR=5.8
J08A Circle Bar Ran 68.30 51 P **P 11 42 55.8 +0.9**
baz=68,SNR=6.7
F12A Elk City 68.57 47 P **P 11 42 57.1 +0.6**
baz=68,SNR=8.2
MSO Missoula 68.59 46 *e*P **P 11 42 56.8 +0.2**
L07A Adell 68.64 52 P **P 11 42 57.9 +0.8**
baz=68,SNR=9.8
D14A Greenough 68.65 45 P **P 11 42 56.9 -0.1**
baz=68,SNR=9.3
O04C Chester 68.67 54 P **P 11 42 58.0 +0.8**
baz=68,SNR=8.5
K08A Mann Creek Ran 68.69 51 P **P 11 42 57.8 +0.5**
baz=68,SNR=5.2
ELFS Eagle Lake Fie 68.69 54 ⇑P **P 11 42 57.4 0.0**
baz=68
E13A Victor 68.70 46 ⇑P **P 11 42 57.1 -0.2**
baz=68
J09A Fry Pan Ranch, 68.72 50 P **P 11 42 58.0 +0.5**
baz=68,SNR=7.9
MNRC McLaughlin Nat 68.73 56 ⇑P **P 11 42 57.4 -0.2**
baz=68
I10A Payette 68.79 49 ⇓P **P 11 42 57.8 -0.1**
baz=68
H11A Donnelly 68.83 48 P **P 11 42 57.8 -0.3**
baz=68,SNR=7.3
FCC Fort Churchill 68.86 27 *e*P **P 11 42 57.4 -0.7**
comp=Z,18nm,0.9s,mb4.8
FCC Fort Churchill 68.86 27 *e*P **P 11 42 57.4 -0.6**
FCC pmax pmax

comp=Z,18nm,0.9s,mb4.8
FFC Flin Flon 68.86 34 *e*P **P 11 42 57.5 -0.6**
comp=Z,15nm,0.9s,mb4.7
FFC Flin Flon 68.86 34 *e*P **P 11 42 57.5 -0.7**
FFC pmax pmax

comp=Z,15nm,0.9s,mb4.7
ORV Oroville 68.89 55 P **P 11 42 58.0 -0.6**
baz=69,SNR=6.1
HFS Hagfors 68.93 335 P **P 11 42 58.1 -0.4**
comp=Z,17nm,0.4s,mb5.2,baz=47,slow=6.5,SNR=134
NB2 NORSAR Subarra 68.96 337 P **P 11 42 58.3 -0.3**
comp=Z,28nm,0.9s,mb5.0,baz=36,slow=6.5
NB2 NORSAR Subarra 68.96 337 P **P 11 42 58.3 -0.3**
NB2 pmax pmax

comp=Z,28nm,0.9s,mb5.0
NOA NORSAR Array B 68.96 337 P **P 11 42 58.2 -0.4**
comp=Z,17nm,0.8s,mb4.9,baz=37,slow=6.2,SNR=54
O05C Quincy 68.99 55 P **P 11 42 59.6 +0.4**
baz=69,SNR=5.8
OHCM Honcut 69.04 56 *e*P **P 11 42 59.2 -0.3**
F13A Darby 69.05 47 ⇓P **P 11 42 59.0 -0.5**
baz=69
CVS Carmenet Viney 69.06 57 ⇓P **P 11 42 59.4 -0.2**
baz=69
E14A Clinton 69.09 46 ⇓P **P 11 42 59.2 -0.5**
baz=69
L08A Fields 69.11 52 P **P 11 43 00.7 +0.8**
baz=69,SNR=6.3
M07A Soldier Meadow 69.13 53 P **P 11 43 00.9 +0.9**
baz=69,SNR=13
K09A Rome 69.14 51 ⇓P **P 11 43 00.1 0.0**
baz=69
N06A Buffalo Meadow 69.14 53 ⇑P **P 11 43 00.2 0.0**
baz=69
Q03C Winters 69.15 56 ⇑P **P 11 43 00.3 +0.1**
baz=69
D15A Lincoln 69.19 45 ⇑P **P 11 43 00.1 -0.2**
baz=69
BEKR Beckwourth 69.39 54 ⇑P **P 11 43 01.4 -0.3**
baz=69
O06A Flanigan 69.52 54 ⇑P **P 11 43 02.5 +0.1**
baz=69
E15A Deer Lodge 69.53 45 P **P 11 43 02.4 0.0**
baz=69,SNR=9.4
G13A Cobalt 69.55 47 ⇓P **P 11 43 02.1 -0.5**
baz=69
M08A Happy Creek Ra 69.56 52 ⇓P **P 11 43 02.0 -0.7**
baz=69
H12A Diamond D Ranc 69.56 48 P **P 11 43 02.8 +0.1**
baz=69,SNR=11
K10A MacKenzie Ranc 69.58 50 P **P 11 43 03.5 +0.7**
baz=69,SNR=7.5
P05C Yuba Gap, Truc 69.59 55 ⇓P **P 11 43 03.0 +0.1**
baz=69
L09A Wilkinson Ranc 69.61 51 ⇓P **P 11 43 03.0 0.0**

baz=69
MFID **Camas Ranch** 69.76 49 ⇓P P 11 43 03.8 -0.1
baz=69
LAVA **Lava Cap Winer** 69.85 56 P P 11 43 04.5 0.0
baz=70,SNR=5.9
AKASG **Malin Array Be** 69.86 321 *i* P P 11 43 04.0 -0.4
AKASG pmax pmax
comp=Z,9.0nm,0.5s
AKASG **Malin Array Be** 69.86 321 P P 11 43 04.0 -0.4
comp=Z,9.1nm,0.5s,mb4.8,baz=43,slow=6.3,SNR=32
H13A **Challis** 69.88 48 P P 11 43 04.9 +0.3
baz=70,SNR=6.7
EGMT **Eagleton** 69.95 43 ⇓P P 11 43 05.1 +0.1
baz=70
F15A **Butte** 69.99 46 P P 11 43 05.8 +0.5
baz=70,SNR=7.1
LRM **Limekiln Ridge** 70.03 46 *e*P P 11 43 06.0 +0.6
O07A **Toulon** 70.08 53 P P 11 43 06.3 +0.4
baz=70,SNR=8.3
WCN **Washoe City** 70.10 55 P P 11 43 06.5 +0.5
baz=70,SNR=5.1
N08A **GE Springer Mi** 70.12 53 ⇑P P 11 43 06.2 0.0
baz=70
DLMT **Dillon** 70.25 46 *e*P P 11 43 07.5 +0.7
comp=Z,13nm,0.6s,mb4.8
L10A **Juniper Basin** 70.26 51 P P 11 43 07.5 +0.6
baz=70,SNR=5.4
J12A **Stokes Ranch,** 70.27 49 ⇓P P 11 43 07.3 +0.3
baz=70
R05C **Kirkwood Meado** 70.29 55 P P 11 43 07.7 +0.5
baz=70,SNR=6.0
I13A **Wildhorse Cree** 70.38 48 P P 11 43 08.2 +0.6
baz=70,SNR=11
G15A **Dillon** 70.44 46 P P 11 43 08.4 +0.4
baz=70,SNR=21
HLID **Hailey** 70.45 48 P P 11 43 08.5 +0.5
baz=70,SNR=6.3
CMB **Columbia Colle** 70.52 56 *e*P P 11 43 08.2 -0.4
comp=Z,7.0nm,1.0s,mb4.3
CMB **Columbia Colle** 70.52 56 *e*P P 11 43 08.2 -0.4
CMB pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
CMB **Columbia Colle** 70.52 56 P P 11 43 08.6 0.0
baz=70,SNR=10
BOZ **Bozeman (W)** 70.57 45 *e*P P 11 43 09.5 +0.7
comp=Z,7.5nm,0.8s,mb4.5
BOZ **Bozeman (W)** 70.57 45 *e*P P 11 43 09.5 +0.7
BOZ pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
BOZ **Bozeman (W)** 70.57 45 ⇑P P 11 43 09.0 +0.2
baz=70
M10A **I.L. Ranch, Tu** 70.57 51 P P 11 43 09.8 +0.9
baz=70,SNR=8.6
PACP **Pacheco Peak** 70.62 57 ⇓P P 11 43 09.8 +0.5
baz=70
J13A **Cove Ranch, Pi** 70.69 48 P P 11 43 10.2 +0.7
baz=70,SNR=11
K12A **Draper Farm, C** 70.78 49 P P 11 43 10.7 +0.6
baz=70,SNR=5.1
WAKR **Walker** 70.80 55 *e*P P 11 43 10.8 +0.5
HAST **UC Hastings Re** 70.84 58 ⇓P P 11 43 10.2 -0.4
baz=71
S05C **Merced** 70.99 57 ⇑P P 11 43 10.4 -1.1
baz=71
L12A **House Creek Ra** 71.04 50 P P 11 43 12.3 +0.6
baz=71,SNR=8.8
M11A **Holland Ranch,** 71.06 51 P P 11 43 13.2 +1.4
baz=71,SNR=13
O09A **Fish Creek Ran** 71.07 53 P P 11 43 12.6 +0.7
baz=71,SNR=5.7
N10A **Dunphy** 71.11 52 ⇑P P 11 43 12.5 +0.4
baz=71
K13A **Stover Farm, H** 71.23 49 ⇓P P 11 43 13.4 +0.7
baz=71
R07C **Lee Vining** 71.30 55 P P 11 43 14.0 +0.7
baz=71,SNR=16
O10A **Cortez Mining,** 71.39 52 P P 11 43 14.7 +0.9
baz=71,SNR=6.4
Q08A **Gabbs** 71.48 54 P P 11 43 14.8 +0.4
baz=71,SNR=8.7
P09A **Austin** 71.50 53 ⇑P P 11 43 14.9 +0.5
baz=71
NVAR **Mina Array Bea** 71.53 55 P P 11 43 15.1 +0.4
comp=Z,6.8nm,0.7s,mb4.5,baz=308,slow=4.3,SNR=78
M12A **Wells** 71.57 50 P P 11 43 15.9 +1.0
baz=71,SNR=8.2
YMR **Madison River** 71.58 46 *e*P P 11 43 15.3 +0.4
comp=Z,3.5nm,0.9s,mb4.1
T06C **Millerton Lake** 71.59 56 ⇑P P 11 43 15.0 -0.1
baz=71
KCC **Kaiser Creek** 71.63 56 ⇑P P 11 43 15.2 -0.1
baz=71
L13A **Double Diamond** 71.67 49 P P 11 43 16.6 +1.2
baz=71,SNR=6.8
MLAC **Mammoth Lakes** 71.72 56 ⇓P P 11 43 15.7 -0.1
baz=71
U05C **Westside ANR,** 71.77 57 ⇓P P 11 43 17.1 +0.9
baz=72
YFT **Old Faithful** 71.79 46 *e*P P 11 43 16.3 +0.2
K14A **Jones Ranch, D** 71.80 49 P P 11 43 17.2 +1.0
baz=72,SNR=6.5
P10A **Eureka** 71.85 53 ⇓P P 11 43 17.0 +0.5
baz=72
N12A **Clover Valley,** 71.87 51 P P 11 43 17.4 +0.7
baz=72,SNR=11
Q09A **Carvers** 71.94 54 ⇓P P 11 43 17.6 +0.5
baz=72
LKWY **Lake** 71.94 46 *e*P P 11 43 17.3 +0.3
O11A **Cowboy Ranch,** 71.99 52 ⇓P P 11 43 17.8 +0.4
baz=72
M13A **Montello** 72.03 50 ⇑P P 11 43 18.0 +0.4
baz=72
IMW **Indian Meadow** 72.11 46 *e*P P 11 43 18.3 +0.3
comp=Z,6.8nm,0.7s,mb4.5
DCID1 **Drake Creek** 72.18 47 *e*P P 11 43 18.7 +0.2
S08C **White Mtn Res** 72.21 55 P P 11 43 19.6 +0.9
baz=72,SNR=6.0
HELL **Mitchell Peak,** 72.22 56 P P 11 43 18.6 -0.3
baz=72,SNR=16
P11A **Circle Ranch,** 72.31 52 ⇑P P 11 43 19.1 -0.2
baz=72
MOOW **Moose Ponds** 72.31 46 *e*P P 11 43 19.3 0.0
DGMT **Dagmar** 72.33 40 *e*P P 11 43 19.2 0.0
comp=Z,20nm,1.0s,mb4.8
N13A **Wendover, West** 72.34 50 ⇑P P 11 43 20.2 +0.7
baz=72
TPAW **Teton Pass** 72.38 47 *e*P P 11 43 19.8 +0.1
comp=Z,17nm,1.4s,mb4.6
R09A **Tonopah** 72.39 54 P P 11 43 20.1 +0.3
baz=72,SNR=8.2
M14A **Sheep Mountain** 72.40 50 P P 11 43 20.7 +0.9
baz=72,SNR=9.9
Q10A **Clear Creek Ra** 72.41 53 P P 11 43 20.3 +0.4
baz=72,SNR=11
O12A **Currie** 72.42 51 P P 11 43 20.6 +0.6
baz=72,SNR=15
LOHW **Long Hollow** 72.48 46 *e*P P 11 43 20.3 +0.1
comp=Z,20nm,1.7s,mb4.6
REDW **Red Top Meadow** 72.52 47 *e*P P 11 43 20.6 +0.1
S09A **Goldfield** 72.64 55 P P 11 43 21.6 +0.3
baz=72,SNR=9.5
R10A **Warm Springs** 72.82 54 ⇓P P 11 43 22.9 +0.5
baz=72
Q11A **Duckwater** 72.83 53 ⇓P P 11 43 22.3 -0.2
baz=72
LVV **L'vov** 72.84 323 *e*P P 11 43 22.6 +0.3
P12A **McGill** 72.85 52 P P 11 43 23.1 +0.6
baz=72,SNR=9.2
PKM **Peak Mountain** 72.88 58 ⇑P P 11 43 23.2 +0.4
baz=73
S10A **Tonopah Range,** 72.88 54 P P 11 43 23.1 +0.4
baz=73,SNR=9.2
N14A **Grayback Hills** 72.92 50 P P 11 43 23.5 +0.6
baz=73,SNR=10
M15A **Larsen Ranch,** 72.93 49 P P 11 43 23.4 +0.5
baz=73,SNR=14
GRAC **Grapevine Rang** 73.02 55 P P 11 43 24.2 +0.7
baz=73,SNR=22
R11A **Troy Canyon, C** 73.20 53 P P 11 43 24.8 +0.2
baz=73,SNR=12
ISA **Isabella** 73.22 57 ⇑P P 11 43 23.8 -1.0
baz=73
N15A **Stansbury Isla** 73.27 50 ⇓P P 11 43 25.4 +0.4
baz=73
MIB **Mutribah** 73.29 295 *e*P P 11 43 23.7 -1.6
MIB AMb AMB 11 43 25.5
comp=Z,18nm,0.8s,mb4.9
HWUT **Hardware Ranch** 73.32 49 *e*P P 11 43 25.7 +0.5
comp=Z,5.0nm,0.8s,mb4.3
P13A **Bates Ranch, G** 73.38 51 P P 11 43 26.1 +0.4
baz=73,SNR=7.9
MPMC **Manual Prospec** 73.56 56 P P 11 43 27.0 +0.2
baz=73,SNR=10
S11A **Rachel** 73.57 54 P P 11 43 27.5 +0.8
baz=73,SNR=7.9
DUG **Dugway** 73.57 50 *e*P P 11 43 27.2 +0.5
comp=Z,14nm,1.1s,mb4.6
DUG **Dugway** 73.57 50 *e*P P 11 43 27.2 +0.5
DUG pmax pmax
comp=Z,14nm,1.1s,mb4.6
DUG **Dugway** 73.57 50 P P 11 43 27.3 +0.6
baz=73,SNR=9.9
QRN **Al-Qurain** 73.58 294 *e*P P 11 43 25.1 -1.8
QRN AMb AMB 11 43 27.0
comp=Z,30nm,0.5s,mb5.3
PDAR **Pinedale Array** 73.62 47 P P 11 43 26.8 -0.2
comp=Z,7.4nm,0.6s,mb4.6,baz=157,slow=0.2,SNR=95
FURC **Furnace Creek,** 73.68 55 P P 11 43 27.8 +0.3
baz=73,SNR=17
RDF **Al-Radifah** 73.71 294 *e*P P 11 43 25.5 -2.2
RDF AMb AMB 11 43 27.9
comp=Z,19nm,0.6s,mb5.0
RST **Umm Al-Ruwaisa** 73.71 295 *e*P P 11 43 26.1 -1.7
RST AMb AMB 11 43 28.1
comp=Z,13nm,0.9s,mb4.7
Q13A **Wheeler Ranch,** 73.71 52 P P 11 43 28.2 +0.6
baz=73,SNR=19
TPNV **Topopah Spring** 73.73 55 *e*P P 11 43 27.9 +0.2
comp=Z,10nm,0.7s,mb4.7
TPNV **Topopah Spring** 73.73 55 *e*P P 11 43 27.9 +0.2
TPNV pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
TPNV **Topopah Spring** 73.73 55 P P 11 43 28.1 +0.3
baz=73,SNR=19
R12A **Pony Springs,** 73.79 53 P P 11 43 28.5 +0.5
baz=74,SNR=10
LRMC **Laurel Mountai** 73.82 57 ⇓P P 11 43 28.3 0.0
baz=74
BURAR **Bucovina Array** 73.91 321 ⇑*i*P P 11 43 28.9 +0.3
EDW2 **Edwards Air Fo** 74.03 57 P P 11 43 29.6 +0.1
baz=74,SNR=5.9
U10A **Ash Meadows, A** 74.03 55 ⇑P P 11 43 29.8 +0.3
baz=74
JLU **Jordanelle** 74.06 49 *e*P P 11 43 30.2 +0.6
S12A **Delamar Landin** 74.13 53 P P 11 43 30.9 +0.9
baz=74,SNR=5.6
SNCC **San Nicolas Is** 74.14 59 ⇓P P 11 43 29.9 -0.2
baz=74
T11A **Corn Creek, Al** 74.15 54 P P 11 43 30.6 +0.5
baz=74,SNR=11
NLU **North Lily Min** 74.15 50 *e*P P 11 43 29.7 -0.4
FORT **Forrest** 74.22 192 *e*P P 11 43 30.7 +0.3
comp=Z,28nm,0.7s,mb5.1
KOLS **Kolonicke sedl** 74.27 323 *e*P P 11 43 30.7 +0.1
KOLS **Kolonicke sedl** 74.27 323 *e*P P 11 43 30.6 0.0
STKA **Stephens Creek** 74.28 180 P P 11 43 31.2 +0.6
comp=Z,3.8nm,0.7s,mb4.2,baz=316,slow=4.6,SNR=10
DAU **Daniels Canyon** 74.30 49 *e*P P 11 43 31.4 +0.4
STHS **Stebnicka Huta** 74.36 324 *e*P P 11 43 32.1 +1.0
comp=Z,6.8nm,0.5s,mb4.6
STHS **Stebnicka Huta** 74.36 324 *e*P P 11 43 32.1 +1.0
STHS pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
MPU **Maple Canyon** 74.36 50 *e*P P 11 43 31.8 +0.4
comp=Z,12nm,0.6s,mb4.8
OJC **Ojcow** 74.36 325 *e*P P 11 43 31.5 +0.4
SHOC **Shoshone** 74.41 55 ⇓P P 11 43 30.7 -1.0
baz=74
GSC **Goldstone** 74.48 56 ⇓P P 11 43 32.1 0.0
baz=74
CRVS **Cervenica-Dubn** 74.65 324 *e*P P 11 43 33.0 +0.2
SHPR **Sheep Range** 74.68 54 *e*P P 11 43 33.0 -0.2
ULM **Lac du Bonnet** 74.69 34 P P 11 43 31.9 -1.1
comp=Z,2.9nm,0.4s,mb4.2,baz=318,slow=6.3,SNR=16
S13A **Holt Ranch, En** 74.73 53 P P 11 43 34.1 +0.6
baz=74,SNR=8.0
NIE **Niedzica** 74.75 325 *e*P P 11 43 34.3 +0.9
TUQ **Turquoise Mtn.** 74.93 56 ⇑P P 11 43 34.7 0.0
baz=75
S14A **Cedar City** 75.01 52 ⇑P P 11 43 35.4 +0.3
baz=75
MSU **Marysvale** 75.07 51 *e*P P 11 43 36.3 +0.8
T13A **Saint George** 75.08 53 ⇓P P 11 43 35.5 0.0
baz=75
HEC **Hector,Ludlow** 75.09 56 P P 11 43 35.8 +0.2
baz=75,SNR=8.0
TMUT **Trail Mountain** 75.09 50 *e*P P 11 43 35.5 -0.1
U12A **Valley of Fire** 75.10 54 ⇑P P 11 43 36.0 +0.3
baz=75
BBRC **Big Bear Sol-O** 75.10 57 ⇑P P 11 43 35.8 +0.1
baz=75
MLR **Muntele Rosu** 75.11 319 P P 11 43 36.9 +1.4
comp=Z,1.2nm,0.4s,mb3.9,baz=109,slow=6.0,SNR=3.2
BRTR **Keskin Array B** 75.17 311 P P 11 43 36.5 +0.6
comp=Z,1.2nm,0.7s,mb3.6,baz=98,slow=2.5,SNR=5.3
KSP **Ksiaz** 75.30 328 *e*P P 11 43 36.5 0.0
OKC **Ostrava-Krasne** 75.34 326 *e*P P 11 43 37.3 +0.5
V12A **Nelson** 75.39 55 ⇓P P 11 43 37.6 +0.4
baz=75
KECS **Kecovo** 75.39 324 *e*P P 11 43 31.9 -5.2
U13A **Pakoon Wash** 75.45 54 P P 11 43 38.4 +0.7
baz=75,SNR=11
GMRC **Granite Mounta** 75.53 56 P P 11 43 38.4 +0.3
baz=75,SNR=6.8
T14A **Hurricane** 75.53 53 ⇑P P 11 43 38.1 0.0
baz=75
VOIR 75.58 319 ⇓*i*P P 11 43 38.4 +0.2
SRU **San Rafael** 75.60 50 *e*P P 11 43 38.8 +0.3
comp=Z,13nm,0.6s,mb4.7
SRU **San Rafael** 75.60 50 *e*P P 11 43 38.8 +0.3
SRU pmax pmax
comp=Z,13nm,0.6s,mb4.7
RWWY **Rawlins** 75.62 46 *e*P P 11 43 38.8 +0.3
comp=Z,12nm,0.8s,mb4.6
MORC **Moravsky Berou** 75.64 326 *e*P P 11 43 39.0 +0.6
comp=Z,9.9nm,0.7s,mb4.5
MORC **Moravsky Berou** 75.64 326 *e*P P 11 43 39.1 +0.7
MORC pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
MORC **Moravsky Berou** 75.64 326 ⇑*i*P P 11 43 38.8 +0.4
DPC **Dobruska-Polom** 75.68 327 *e*P P 11 43 39.0 +0.3
DPC *e*PCP PcP 11 43 53.1 +2.3
UPC **Upice** 75.68 328 *e*P P 11 43 39.2 +0.5
PFO **Pinyon Flat Ob** 75.82 57 *e*P P 11 43 39.0 -0.8
PFO **Pinyon Flat Ob** 75.82 57 ⇓P P 11 43 38.6 -1.2
baz=76
BELC **Belle Mtn.** 75.84 57 ⇓P P 11 43 38.1 -1.9
baz=76
U14A **Mt Trumbull** 75.91 53 P P 11 43 41.3 +1.0
baz=76,SNR=9.0
T15A **Red Dirt Ranch** 75.97 52 P P 11 43 41.4 +0.8
baz=76,SNR=5.8
PSZ **Piszkesteto** 76.08 324 ⇑*i*P P 11 43 40.8 -0.2
VYHS **Vyhne** 76.09 325 *e*P P 11 43 41.5 +0.5
AGMN **Agassiz Refuge** 76.19 35 *e*P P 11 43 40.6 -1.0
BRG **Berggiesshubel** 76.19 329 *e*P P 11 43 41.5 -0.1
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
BRG **Berggiesshubel** 76.19 329 *e*(P) P 11 43 41.5 0.0
comp=Z,3.0nm,0.7s,mb4.0
CLL **Collm** 76.20 330 *i* P P 11 43 41.7 +0.1
CLL *i* pP 11 44 17.9 +1.3
CLL pmax pmax
comp=Z,15nm,1.0s,mb4.6
CLL **Collm** 76.20 330 *i* P P 11 43 41.7 +0.1
comp=Z,15nm,1.0s,mb4.6
CLL *i* x x 11 43 48.0
CLL *i* pP pP 11 44 17.9 +1.3
comp=Z,10.0nm,0.9s
PVCC **Panska Ves** 76.23 328 *e*P P 11 43 42.4 +0.6
IRM **Iron Mountain** 76.26 56 P P 11 43 42.5 +0.2
baz=76,SNR=7.2
VRAC **Vranov** 76.39 326 P P 11 43 42.6 -0.1
comp=Z,5.9nm,0.7s,mb4.3,baz=51,slow=9.6,SNR=5.7
W13A **Hualapai Mount** 76.39 55 ⇑P P 11 43 42.7 -0.3
baz=76
BC3 **Big Chuckw Mtn** 76.41 57 ⇓P P 11 43 42.6 -0.5
baz=76
PRU **Pruhonice** 76.67 328 *e*P P 11 43 44.9 +0.6
X13A **Yucca** 76.77 55 P P 11 43 45.5 +0.3
baz=76,SNR=11
PDMCI **Parker Dam,Lak** 76.78 55 ⇑P P 11 43 45.0 -0.2
W14A **Seligman** 76.79 54 P P 11 43 46.0 +0.7
baz=76,SNR=9.9
MODS **Modra-Piesok** 76.84 326 *e*P P 11 43 42.8 -2.5
PV10 **Paradox Valley** 76.95 50 *e*P P 11 43 46.6 +0.5
KLBR **Kellerberrin** 77.15 201 *e*P P 11 43 46.7 -0.3
comp=Z,110nm,1.9s,mb5.2
GLA **Glamis** 77.20 57 ⇑P P 11 43 48.1 +0.5
baz=77
Y13A **Salome** 77.30 56 ⇓P P 11 43 48.2 +0.1
baz=77
W15A **Williams** 77.30 54 ⇓P P 11 43 49.2 +1.1
baz=77
PV01 **Paradox Valley** 77.38 49 *e*P P 11 43 48.1 -0.4
X14A **Yava** 77.42 55 ⇓P P 11 43 49.2 +0.4
baz=77
SMCO **Snowmass** 77.53 48 *e*P P 11 43 44.5 -4.8
comp=Z,3.8nm,0.6s,mb4.2
Y14A **Wickenburg** 77.71 55 P P 11 43 50.8 +0.3
baz=77,SNR=7.5
KHC **Kasperske Hory** 77.73 328⇑*e*P P 11 43 50.5 +0.3
KHC *i* *PP pP 11 44 27.0 +1.6
KHC **Kasperske Hory** 77.73 328 *e*P P 11 43 50.8 +0.6
KHC *e*pP pP 11 44 27.5 +2.1
EKA **Eskdalemuir Ar** 77.78 340 P P 11 43 50.1 -0.2
comp=Z,4.3nm,0.7s,mb4.2,baz=22,slow=4.4,SNR=12
X15A **Humboldt** 77.80 54 P P 11 43 51.8 +0.9
baz=78,SNR=9.4
ISCO **Idaho Springs** 77.81 47 *e*P P 11 43 50.6 -0.3
comp=Z,31nm,1.9s,mb4.6
ISCO **Idaho Springs** 77.81 47 *e*P P 11 43 50.6 -0.3
ISCO pmax pmax
comp=Z,31nm,1.9s,mb4.6
GERES **GERESS Array B** 77.91 328 P P 11 43 51.5 +0.2
comp=Z,1.3nm,0.6s,mb3.7,baz=31,slow=6.2,SNR=9.3
GERES pP pP 11 44 26.3 -0.1
comp=Z,1.0nm,0.7s,baz=15,slow=5.7,SNR=2.5
MVCO **Mesa Verde** 78.07 50 *e*P P 11 43 53.0 +0.6
comp=Z,5.8nm,0.5s,mb4.5
MVCO **Mesa Verde** 78.07 50 P P 11 43 52.8 +0.5
baz=78,SNR=8.1
GRA1 **Grafenberg Arr** 78.17 330 *e*P P 11 43 52.9 +0.2
comp=Z,16nm,0.8s,mb4.7
GRA1 *e*pP pP 11 44 30.0 +2.2
GRF **Grafenberg Arr** 78.17 330 *e*P P 11 43 52.9 +0.2
GRF *e**PP pP 11 44 30.0 +2.2
GRF pmax pmax
comp=Z,16nm,0.8s,mb4.7
GRF **Grafenberg Arr** 78.17 330 *e*P P 11 43 52.9 +0.2
GRF *e**PP pP 11 44 30.0 +2.2
GRF pmax pmax
comp=Z,16nm,0.8s,mb4.7
GRF **Grafenberg Arr** 78.17 330 *e*P P 11 43 52.9 +0.2
comp=Z,16nm,0.8s,mb4.7
GRF *e*pP pP 11 44 30.0 +2.2
EYMN **Ely** 78.28 33 *e*P P 11 43 52.5 -0.8
comp=Z,14nm,1.0s,mb4.5
115A **Sonoran Desert** 79.03 56 ⇑P P 11 43 57.2 -0.4
baz=79
SDCO **Great Sand Dun** 79.36 48 *e*P P 11 43 59.2 -0.2
comp=Z,3.8nm,0.7s,mb4.1
ECSD **EROS,Sioux Fal** 79.37 39 *e*P P 11 43 58.5 -0.8
comp=Z,6.8nm,0.6s,mb4.5
116A **Eloy** 79.45 55 ⇓P P 11 44 00.2 +0.2
baz=79
KBA **Koelnbreinsper** 79.48 327⇑*i*P P 11 44 01.2 +1.4
comp=Z,10nm,1.0s,mb4.4
KBA **Koelnbreinsper** 79.48 327⇑*i*P P 11 44 01.2 +1.4
KBA pmax pmax
comp=Z,10.0nm,1.0s,mb4.4
SCHQ **Schefferville** 79.81 16 P P 11 44 00.9 -0.6
comp=Z,1.9nm,0.4s,mb4.1,baz=353,slow=4.9,SNR=21
MOTA **Moosalm** 80.15 328⇑*i*P P 11 44 03.7 +0.3
comp=Z,12nm,1.1s,mb4.5
MOTA **Moosalm** 80.15 328⇑*i*P P 11 44 03.7 +0.3
MOTA pmax pmax
comp=Z,12nm,1.1s,mb4.4
TUC **Tucson** 80.18 55 *e*P P 11 44 04.3 +0.4
BAIF **Baives** 80.32 334 *e*P P 11 44 04.0 -0.3
217A **Green Valley** 80.54 55 P P 11 44 06.2 +0.4
baz=80,SNR=5.1
DAVA **Damuels** 80.66 329⇑*i*P P 11 44 06.3 +0.2
comp=Z,8.5nm,0.9s,mb4.4
CDF **Champ du Feu** 80.68 331 *e*P P 11 44 05.8 -0.4
comp=Z,12nm,0.9s,mb4.2
CDF **Champ du Feu** 80.68 331 *e*P P 11 44 05.8 -0.4
comp=Z,6.2nm,0.9s,mb4.2
CDF **Champ du Feu** 80.68 331 *e*P P 11 44 05.8 -0.4
CDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.2
ANMO **Albuquerque** 80.84 50⇓*e*P P 11 44 07.0 -0.4
218A **Dragoon** 80.86 55 ⇓P P 11 44 07.8 +0.3
baz=81
DAVOX **Davos/Dischmat** 81.08 329 P P 11 44 09.2 +0.8
comp=Z,3.4nm,0.5s,mb4.2,baz=196,slow=12,SNR=7.1
318A **Bisbee** 81.27 55 P P 11 44 10.4 +0.7
baz=81,SNR=7.2
HAU **Haudompre** 81.35 331 *e*P P 11 44 09.4 -0.4
319A **Douglas** 81.74 55 P P 11 44 12.8 +0.6
baz=81,SNR=5.1
CABF **La Chapelle** 82.63 331 *e*P P 11 44 16.4 -0.1
LOR **Lormes** 82.85 332 *e*P P 11 44 17.0 -0.6
comp=Z,5.5nm,1.0s,mb4.6
LOR **Lormes** 82.85 332 *e*P P 11 44 17.0 -0.6
comp=Z,13nm,1.0s,mb4.6
LOR **Lormes** 82.85 332 *e*P P 11 44 17.0 -0.6
LOR pmax pmax
comp=Z,13nm,1.0s,mb4.6
FLN **La Foliniere** 82.93 336 *e*P P 11 44 17.5 -0.5
LDF **La Druitiere** 82.97 335 *e*P P 11 44 17.0 -1.2
SSF **Saint Saulge** 83.15 333 *e*P P 11 44 18.6 -0.6
comp=Z,11nm,0.8s,mb4.3
SSF **Saint Saulge** 83.15 333 *e*P P 11 44 18.6 -0.6
comp=Z,5.3nm,0.8s,mb4.3
SSF **Saint Saulge** 83.15 333 *e*P P 11 44 18.6 -0.6
SSF pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
IDI **Anoyia** 83.18 313 P P 11 44 19.0 -0.5
comp=Z,7.2nm,0.4s,mb4.8,baz=342,slow=16,SNR=11
LPL **La Plagne** 83.33 330 *e*P P 11 44 20.2 +0.1
comp=Z,12nm,0.7s,mb4.5
LPL **La Plagne** 83.33 330 *e*P P 11 44 20.2 +0.1
comp=Z,6.1nm,0.7s,mb4.4
LPL **La Plagne** 83.33 330 *e*P P 11 44 20.2 +0.1
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
LPG **La Plagne** 83.34 330 *e*P P 11 44 20.1 -0.1
comp=Z,11nm,0.6s,mb4.5
LPG **La Plagne** 83.34 330 *e*P P 11 44 20.1 -0.1
comp=Z,5.6nm,0.6s,mb4.5
LPG **La Plagne** 83.34 330 *e*P P 11 44 20.1 -0.1
LPG pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
GRR **Gorron** 83.38 336 *e*P P 11 44 19.8 -0.5
comp=Z,29nm,1.0s,mb4.7
GRR **Gorron** 83.38 336 *e*P P 11 44 19.8 -0.5
comp=Z,15nm,1.0s,mb4.7
GRR **Gorron** 83.38 336 *e*P P 11 44 19.8 -0.5
GRR pmax pmax
comp=Z,15nm,1.0s,mb4.7
SMF **Signal de Mont** 83.39 332 *e*P P 11 44 19.9 -0.5
comp=Z,25nm,0.9s,mb4.6
SMF **Signal de Mont** 83.39 332 *e*P P 11 44 19.9 -0.5
comp=Z,12nm,0.9s,mb4.6
SMF **Signal de Mont** 83.39 332 *e*P P 11 44 19.9 -0.5
SMF pmax pmax
comp=Z,12nm,0.9s,mb4.6
AVF **Avril sur Loir** 83.43 333 *e*P P 11 44 20.2 -0.4
comp=Z,29nm,0.8s,mb4.8
AVF **Avril sur Loir** 83.43 333 *e*P P 11 44 20.2 -0.4
comp=Z,15nm,0.8s,mb4.8
AVF **Avril sur Loir** 83.43 333 *e*P P 11 44 20.2 -0.4
AVF pmax pmax
comp=Z,15nm,0.8s,mb4.8
MNTX **Cornudas Mount** 83.82 52 *e*P P 11 44 22.9 0.0
comp=Z,15nm,1.6s,mb4.5
MBDF **Montbardon** 83.99 329 *e*P P 11 44 23.2 -0.3
SGMF **Saint Gilles** 84.00 337 *e*P P 11 44 22.9 -0.6
comp=Z,12nm,0.7s,mb4.4
SGMF **Saint Gilles** 84.00 337 *e*P P 11 44 22.9 -0.6
comp=Z,6.2nm,0.7s,mb4.5
SGMF **Saint Gilles** 84.00 337 *e*P P 11 44 22.9 -0.6
SGMF pmax pmax
comp=Z,6.0nm,0.7s,mb4.4
ROSF **Rostrenen** 84.13 337 *e*P P 11 44 23.6 -0.6
comp=Z,8.0nm,0.6s,mb4.3
ROSF **Rostrenen** 84.13 337 *e*P P 11 44 23.6 -0.6
comp=Z,4.0nm,0.6s,mb4.3
ROSF **Rostrenen** 84.13 337 *e*P P 11 44 23.6 -0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
ORIF	Oris-en-Rattie	84.16	330	eP	P	11 44 23.5	-0.9
	comp=Z,9.2nm,0.9s,mb4.2						
ORIF	Oris-en-Rattie	84.16	330	eP	P	11 44 23.5	-0.9
	comp=Z,4.6nm,0.9s,mb4.2						
ORIF	Oris-en-Rattie	84.16	330	eP	P	11 44 23.5	-0.9
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
TCF	Toulx Ste Croi	84.26	333	eP	P	11 44 24.3	-0.5
	comp=Z,3.8nm,0.6s,mb4.0						
TCF	Toulx Ste Croi	84.26	333	eP	P	11 44 24.3	-0.5
	comp=Z,1.9nm,0.6s,mb4.0						
TCF	Toulx Ste Croi	84.26	333	eP	P	11 44 24.3	-0.5
TCF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
SBF	Sospel	84.47	329	eP	P	11 44 25.3	-0.7
	comp=Z,21nm,0.6s,mb4.7						
SBF	Sospel	84.47	329	eP	P	11 44 25.3	-0.7
	comp=Z,10nm,0.6s,mb4.7						
SBF	Sospel	84.47	329	eP	P	11 44 25.3	-0.7
SBF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.7						
QUIF	Quistinic	84.48	337	eP	P	11 44 25.3	-0.6
	comp=Z,14nm,0.7s,mb4.5						
QUIF	Quistinic	84.48	337	eP	P	11 44 25.3	-0.6
	comp=Z,7.2nm,0.7s,mb4.5						
QUIF	Quistinic	84.48	337	eP	P	11 44 25.3	-0.6
QUIF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
VIVF	Saint-Julien-l	84.65	331	eP	P	11 44 26.2	-0.6
	comp=Z,8.4nm,0.7s,mb4.3						
VIVF	Saint-Julien-l	84.65	331	eP	P	11 44 26.2	-0.6
	comp=Z,4.2nm,0.7s,mb4.3						
VIVF	Saint-Julien-l	84.65	331	eP	P	11 44 26.2	-0.6
VIVF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
MFF	Saint Martin d	84.75	335	eP	P	11 44 26.7	-0.6
	comp=Z,11nm,0.6s,mb4.5						
MFF	Saint Martin d	84.75	335	eP	P	11 44 26.7	-0.6
	comp=Z,5.4nm,0.6s,mb4.5						
MFF	Saint Martin d	84.75	335	eP	P	11 44 26.7	-0.6
MFF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
FRF	La Foret Royal	85.03	329	eP	P	11 44 27.8	-1.0
SMRF	Simiane la Rot	85.08	330	eP	P	11 44 28.0	-1.0
WMOK	Wichita Mounta	85.21	46	eP	P	11 44 29.6	-0.3
LMR	La Mourre	85.27	329	eP	P	11 44 29.4	-0.6
	comp=Z,14nm,0.7s,mb4.5						
LMR	La Mourre	85.27	329	eP	P	11 44 29.4	-0.6
	comp=Z,7.0nm,0.7s,mb4.5						
LMR	La Mourre	85.27	329	eP	P	11 44 29.4	-0.6
LMR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
RJF	Les Rejaudoux	85.35	333	eP	P	11 44 30.4	+0.1
CAF	Calviac	85.50	332	eP	P	11 44 31.4	+0.3
	comp=Z,27nm,0.9s,mb4.7						
CAF	Calviac	85.50	332	eP	P	11 44 31.4	+0.3
	comp=Z,13nm,0.9s,mb4.7						
CAF	Calviac	85.50	332	eP	P	11 44 31.4	+0.3
CAF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
LASF	Ste Croix	85.62	331	eP	P	11 44 30.8	-0.9
	comp=Z,18nm,1.1s,mb4.4						
LFF	La Frestale	85.94	333	eP	P	11 44 33.6	+0.4
TXAR	Lajitas Array	86.55	53	P	P	11 44 36.5	-0.1
	comp=Z,1.2nm,0.4s,mb4.1,baz=290,slow=3.4,SNR=43						
MTLF	Montolieu	86.84	332	eP	P	11 44 37.0	-0.7
	comp=Z,6.3nm,0.7s,mb4.3						
MTLF	Montolieu	86.84	332	eP	P	11 44 37.0	-0.7
	comp=Z,3.2nm,0.7s,mb4.3						
MTLF	Montolieu	86.84	332	eP	P	11 44 37.0	-0.7
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
EPF	Esparros	87.76	333	eP	P	11 44 41.6	-0.5
MIAR	Mount Ida	88.04	43	eP	P	11 44 43.6	0.0
	comp=Z,6.4nm,0.8s,mb4.5						
MIAR	Mount Ida	88.04	43	eP	P	11 44 43.6	0.0
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ETSF	Etsaut	88.18	333	eP	P	11 44 43.6	-0.5
VNDA	Vanda	120.67	175	PKP	PKPdf	11 50 39.9	-2.9
	comp=Z,1.0nm,0.8s,baz=72,slow=4.3,SNR=4.3						
DBIC	Dimbokro	122.09	320	PKP	PKPdf	11 50 46.7	-0.8
	comp=Z,1.5nm,0.5s,baz=52,slow=2.0,SNR=3.0						
SNAA	Sanae	146.22	199	ePKPdf	PKPdf	11 51 33.3	+2.9
SNAA				e		11 51 35.9	
SNAA				e		11 51 38.0	
SNAA				e		11 51 43.0	
SNAA				e		11 52 10.7	
SNAA				e		11 52 14.1	
SNAA	Sanae	146.22	199	PKP2	PKPab	11 51 31.8	-1.0
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SNAA	Sanae	146.22	199	PKPbc	PKPbc	11 51 31.8	+0.1
	comp=Z,2.8nm,0.4s,baz=188,slow=4.2,SNR=37						
VNA2	Neumayer--Watz	147.81	199	ePKPdf	PKPdf	11 51 34.9	+1.9
	baz=113,slow=1.8						
VNA2				e		11 51 38.6	
VNA2				e		11 51 40.9	
VNA2				e		11 51 44.8	
VNA2				e		11 52 11.8	
VNA2				e		11 52 14.5	
VNA3	Neumayer Olymp	148.10	197	ePKPdf	PKPdf	11 51 35.7	+2.2
VNA3				e		11 51 39.3	
VNA3				e		11 51 41.3	
VNA3				e		11 51 46.7	
VNA3				e		11 52 13.6	
VNA3				e		11 52 16.5	

IDC 12 11:43:11.9±5.7**,578S**×**15013E,h108**^{km}±41^{km}**,mb3.4**/5**, mb1 3.6**/6**,mb1mx3.4**/14**,mbtmp3.4**/6**,Error ellipse: s-maj=61.9km s-min=27.7km az=97.0,New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.65	219	P	Pn	11 44 20.1	0.0
	2.6nm,0.3s,baz=51,slow=14,SNR=12						
PMG				S	Sn	11 45 13.4	+0.4
	8.9nm,0.3s,baz=35,slow=15,SNR=12						
CTA	Charters Tower	14.71	195	P	Pn	11 46 38.5	+3.8
	0.2nm,0.3s,baz=18,slow=3.2,SNR=3.1						
WRA	Warramunga Arr	20.83	226	P	P	11 47 45.2	+0.2
	1.5nm,0.4s,baz=50,slow=11,SNR=16						
ASAR	Alice Springs	23.67	220	P	P	11 48 14.3	+0.7
	0.6nm,0.3s,baz=56,slow=9.3,SNR=21						
FITZ	Fitzroy Crossi	26.86	241	P	P	11 48 43.0	+0.3
	1.0nm,0.3s,baz=56,slow=11,SNR=8.5						
STKA	Stephens Creek	27.16	196	P	P	11 48 45.0	-0.2
	1.5nm,0.6s,baz=17,slow=11,SNR=3.8						
SONM	Songino Array	65.77	329	P	P	11 53 45.9	+0.6
	0.2nm,0.4s,baz=132,slow=8.6,SNR=3.4						
TORD	Torodi Ar. Bea	148.05	286	PKPbc	PKPbc	12 02 44.3	-1.7
	0.1nm,0.4s,baz=60,slow=2.3,SNR=3.2						

IDC 12 12:27:22.4±4.2**,249S**×**14078E,h0**^{km}**,mb3.1**/2**,mb1 3.4**/3**, mb1mx3.3**/11**,mbtmp3.2**/3**,ML3.4**/1**,Error ellipse: s-maj=153.7km s-min=29.3km az=88.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.45	199	P	Pn	12 31 38.9	-0.9
	0.1nm,0.3s,baz=21,slow=11,SNR=8.7						
ASAR	Alice Springs	22.08	197	P	P	12 32 18.9	-0.2
	0.5nm,0.7s,baz=29,slow=10,SNR=7.4						
MKAR	Makanchi Array	70.89	322	P	P	12 38 41.8	+0.5
	0.1nm,0.2s,baz=101,slow=7.5,SNR=2.8						

IDC 12 12:28:43.6±4.5**,2731S**×**17694W,h0**^{km}**,mb4.2**/6**, mb1 4.3**/6**,mb1mx4.0**/15**,mbtmp4.2**/6**,MS4.1**/9**,Ms1 4.1**/9**, ms1mx3.9**/21**,Error ellipse: s-maj=129.4km s-min=28.4km az=33.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.98	285	LR	LR	12 37 18.5	
	comp=Z,877nm,18.2s,baz=166,slow=32						
RPZ	Rata Peaks	19.03	208	LR	LR	12 38 47.2	
	comp=Z,681nm,21.2s,baz=329,slow=32						
HNR	Honiara	28.15	305	LR	LR	12 44 05.0	
	comp=Z,178nm,20.0s,baz=180,slow=33						
CTA	Charters Tower	34.37	274	P	P	12 35 34.0	+1.5
	2.9nm,0.9s,baz=111,slow=12,SNR=3.0						
CTA				LR	LR	12 47 05.3	
	comp=Z,420nm,20.5s,baz=23,slow=32						
STKA	Stephens Creek	36.19	253	P	P	12 35 49.6	+1.5
	5.4nm,0.9s,baz=99,slow=11,SNR=3.4						
ASAR	Alice Springs	44.30	263	P	P	12 36 53.6	-1.8
	1.7nm,0.6s,baz=98,slow=7.7,SNR=25						
WB2	Warramunga Arr	45.00	269	eP	P	12 37 00.7	-0.4
WRA	Warramunga Arr	45.01	269	P	P	12 37 01.0	-0.1
	6.8nm,0.8s,baz=108,slow=7.9,SNR=20						
WRA				LR	LR	12 54 33.9	
	comp=Z,134nm,18.1s,baz=135,slow=34						
VNDA	Vanda	51.25	186	LR	LR	12 56 50.3	
	comp=Z,129nm,19.6s,baz=169,slow=33						
FITZ	Fitzroy Crossi	53.38	267	eP	P	12 38 06.2	+1.0
	14nm,1.0s						
FITZ	Fitzroy Crossi	53.38	267	P	P	12 38 05.1	-0.2
	4.2nm,1.0s,baz=145,slow=13,SNR=3.0						
FITZ				LR	LR	13 00 31.9	
	comp=Z,155nm,18.6s,baz=53,slow=36						
BATI	Kupang	58.25	275	LR	LR	13 03 12.0	
	comp=Z,424nm,18.3s,baz=65,slow=36						
QSPA	South Pole Qui	62.79	180	P	P	12 39 10.2	-0.1
	1.9nm,0.8s,baz=27,slow=4.5,SNR=9.7						
MAW	Mawson	75.52	200	LR	LR	13 15 05.2	
	comp=Z,123nm,18.4s,baz=241,slow=37						
TORD	Torodi Ar. Bea	165.85	175	PKPab	PKPab	12 49 50.9	+0.5
	1.0nm,0.9s,baz=162,slow=2.2,SNR=2.9						

*CSEM **12** 12:33:17.4±0.3, 39.10N×40.39E, h1^{km}±1^{km}, mb4.2/3, Error ellipse: s-maj=1.8km s-min=1.4km az=175.0*
*ISK **12** 12:33:17.2, 39.09N×40.40E, h5^{km}, ML4.0*
*NEIC **12** 12:33:17.9, 39.10N×40.43E, h5^{km}, mb4.0/1, ML4.0(ISK), After ISK.*
*MOS **12** 12:33:18.7±1.7, 39.05N×40.49E, h14^{km}, mb4.1/3, Error ellipse: s-maj=11.5km s-min=9.2km az=86.0*
*ISCJB **12** 12:33:18.2±0.7, 39.09N±0.02×40.44E±0.02, h2^{km}±5^{km}, mb3.8/6, Error ellipse: s-maj=3.5km s-min=2.7km az=148.8*
*IDC **12** 12:33:18.5±1.2, 39.08N×40.47E, h0^{km}, mb3.8/4, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, ML3.4/3, MS3.6/2, Ms1 3.6/2, ms1mx3.0/36, Error ellipse: s-maj=23.4km s-min=16.0km az=145.0*
*DDA **12** 12:33:18.8, 39.07N×40.41E, h3^{km}, Md3.8, Ml3.7*
*NSSC **12** 12:33:23.6, 38.64N×40.74E, h5^{km}±4^{km}*
ISC 12 12:33:18.9±0.6**,3909N**±002×**4047E**±002**,h1**^{km}±4^{km}**,n114,** σ**1**^{s}**31**/136**,mb3.9**/6**,15D,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.21	176	i PG	Pg	12 33 22.2	-0.9
EZC	Erzincan	0.83	323	PG	Pg	12 33 37.9	+3.1
PTK	Pertek	0.86	257	PG	Pg	12 33 33.3	-2.2
PTK				SG	Sg	12 33 46.1	-0.6
PTK	Pertek	0.86	257	Pg	Pg	12 33 34.5	-1.0
PTK				Sg	Sg	12 33 48.5	+1.8
PTK	Pertek	0.86	257	Pg	Pg	12 33 34.5	-1.0
PTK				eSg	Sg	12 33 46.1	-0.6
EZM	Erzurum	1.07	40	PN	Pn	12 33 38.7	-2.3
EZM	Erzurum	1.07	40	Pn	Pn	12 33 38.7	-2.3
ERZM	Erzurum	1.07	40	i P	Pg	12 33 38.5	-0.9
ERZM				i S	Sg	12 33 44.0	-9.3
BTMT	Batman	1.20	138	PN	Pn	12 33 41.0	-1.8
DIY	Diyarbakir	1.21	189	PN	Pn	12 33 41.1	-1.8
DIY	Diyarbakir	1.21	189	Pn	Pn	12 33 41.3	-1.6
DIY	Diyarbakir	1.21	189	Pn	Pn	12 33 41.3	-1.6
ELZG	Elazig	1.30	243	i P	Pg	12 33 41.2	-2.7
ELZG				i S	Sg	12 34 00.6	-0.2
KELT	Kelkit	1.41	319	i P	Pn	12 33 43.6	-2.1
KELT				i S	Sg	12 34 04.9	+0.5
GUMT	Gumushane	1.57	331	PN	Pn	12 33 47.5	-0.4
GUMT	Gumushane	1.57	331	Pn	Pn	12 33 47.7	-0.2
MYA	Malataya	1.77	245	PN	Pn	12 33 49.8	-0.9
MYA	Malataya	1.77	245	P	Pn	12 33 50.5	-0.2
MALT	Malatya	1.78	245	PN	Pn	12 33 49.7	-1.1
MALT	Malatya	1.78	245	P	Pn	12 33 52.2	+1.4
MARD	Mardin	1.79	172	i P	Pn	12 33 48.9	-2.0
MARD				i S	Sn	12 34 11.6	-2.7
TUTA	Tutak	1.85	80	i P	Pn	12 33 51.1	-0.6
TUTA				i S	Sn	12 34 18.3	+2.6
MACK	Trabzon	1.93	344	i P	Pn	12 33 52.8	0.0
MACK				i S	Sg	12 34 21.6	+0.7
KTUT	Trabzon	1.97	344	PN	Pn	12 33 52.9	-0.5
AGRB	Hanur-Agry	2.02	75	PN	Pn	12 33 53.9	-0.1
KBSD	Kabsdagh	2.09	178	⇓P	Pn	12 33 54.5	-0.5
KBSD				⇓S	Sn	12 34 15.2	-6.4
KBSD	Kabsdagh	2.09	178	⇓iP	Pn	12 33 54.5	-0.5
URFA	Urfa	2.10	219	PN	Pn	12 33 54.1	-1.1
URFA	Urfa	2.10	219	Pn	Pn	12 33 54.4	-0.8
URFA	Urfa	2.10	219	Pn	Pn	12 33 54.3	-0.9
PZAR	Pazar-Rize	2.11	9	PN	Pn	12 33 55.0	-0.4
SIRT	Sirnak	2.22	135	PN	Pn	12 33 57.5	+0.7
ESPY	Espiye-Giresun	2.26	324	PN	Pn	12 33 56.9	-0.5
DRBT	Darb Altahta	2.29	193	⇑P	Pg	12 34 09.6	+6.6
DRBT				⇑S	Sg	12 34 43.0	+10
VANB	Van	2.33	101	PN	Pn	12 33 59.4	+1.0
VANB	Van	2.33	101	Pn	Pn	12 34 00.5	+2.1
ATAB	Bozova	2.35	227	eP	Pn	12 33 59.0	+0.3
ATAB				i S	Sn	12 34 27.4	-0.8
TVAN	Van	2.36	103	i P	Pn	12 33 59.6	+0.8
VANT	Van	2.37	105	PN	Pn	12 33 59.1	+0.2
BCA	Borcka	2.51	20	PN	Pn	12 34 00.0	-0.9
BCA	Borcka	2.51	20	Pn	Pn	12 34 00.9	0.0
KARS	Kars	2.53	52	PN	Pn	12 34 02.4	+1.3
DYDN	Diyadin	2.54	79	i P	Pn	12 34 03.7	+2.5
DYDN				i S	Sn	12 34 36.7	+3.9
DIGO	Kars	2.60	59	i P	Pn	12 34 02.4	+0.3
DIGO				i S	Sg	12 34 42.5	0.0
CLDR	Caldiran	2.68	88	PN	Pn	12 34 03.6	+0.4
CLDR	Caldiran	2.68	88	Pn	Pn	12 34 04.3	+1.1
CLDR	Caldiran	2.68	88	Pn	Pn	12 34 04.3	+1.1
SFNV	Sufian	2.68	186	⇑P	Pn	12 34 03.0	-0.2
SFNV				⇑S	Sn	12 34 30.7	-5.6
SFNV	Sufian	2.68	186	⇑iP	Pn	12 34 03.0	-0.2
GZT	Gaziantep	2.87	234	i P	Pn	12 34 04.3	-1.5
HAKT	HAKKARI	2.97	120	i P	Pn	12 34 07.3	+0.1
HAKT				i S	Sb	12 34 49.6	+0.2
HKR	Hakkari	2.98	119	PN	Pn	12 34 08.9	+1.6
HKR	Hakkari	2.98	119	Pn	Pn	12 34 09.4	+2.1
CUKT	Cukurca	3.08	126	PN	Pn	12 34 09.5	+0.8
GAZ	Gaziantep	3.21	234	ePN	Pn	12 34 10.9	+0.5
GAZ	Gaziantep	3.21	234	Pn	Pn	12 34 11.8	+1.4
KMRS	Kahramanmaras	3.22	242	PN	Pn	12 34 09.2	-1.5
TOKT	Tokat	3.27	293	PN	Pn	12 34 11.7	+0.5
TOKT	Tokat	3.27	293	Pn	Pn	12 34 12.3	+1.0
MSL	Mosul	3.48	143	i x	x	12 34 22.0	
MSL				i x	x	12 34 35.0	
MSL				i x	x	12 35 06.5	
MSL				i x	x	12 35 15.5	
MSL				i x	x	12 35 24.5	
SLMH	Al Salmeh	3.51	216	⇓P	Pn	12 34 17.4	+2.8
SLMH				⇓S	Sn	12 34 55.6	-1.1
SLMH	Al Salmeh	3.51	216	⇓iP	Pn	12 34 17.4	+2.8
SLMH				⇓iS	Sn	12 34 55.6	-1.1
ANDN	Andirin	3.58	246	eP	Pb	12 34 21.4	-1.6
ANDN				i S	Sg	12 35 15.1	+1.2
BNN	Bunyan	3.61	268	ePN	Pn	12 34 16.2	+0.2
BNN	Bunyan	3.61	268	Pn	Pn	12 34 16.9	+1.0
JHLN	Al Jahlan	3.77	206	⇓P	Pn	12 34 18.6	+0.3
JHLN				⇓S	Sn	12 35 01.0	-2.3
JHLN	Al Jahlan	3.77	206	⇓iP	Pn	12 34 18.6	+0.4
JHLN				⇓iS	Sn	12 35 01.0	-2.3
DRWC	Darouich	3.89	232	⇑P	Pn	12 34 24.1	+4.2
DRWC				⇑S	Sn	12 35 08.0	+1.9
KVT	Kavak	3.93	302	ePN	Pn	12 34 21.1	+0.7
KVT	Kavak	3.93	302	P	Pn	12 34 21.6	+1.2
KOZT	Kozan	3.99	248	ePN	Pn	12 34 21.3	+0.1
YOZ	Yozgat	4.03	279	ePN	Pn	12 34 21.2	-0.5
YOZ	Yozgat	4.03	279	Pn	Pn	12 34 23.1	+1.3
ONI	Oni	4.15	32	P	Pn	12 34 24.4	+1.0
ONI				S	Sg	12 35 30.3	-2.1
MTA	Mtatsminda	4.20	50	P	Pb	12 34 36.8	+3.2
COBT	Iskenderun	4.21	234	i P	Pb	12 34 36.0	+2.2
BTCH	Batrach	4.41	228	⇓P	Pn	12 34 29.9	+2.9
BTCH				⇓S	Sn	12 35 19.8	+0.9
BTCH	Batrach	4.41	228	⇓iP	Pn	12 34 29.9	+3.0
BTCH				⇓iS	Sn	12 35 19.8	+0.9
DGRG	David-gareji	4.43	56	P	Pn	12 34 28.3	+1.1
ZEI	Tsey	4.50	34	eP	Pn	12 34 30.1	+1.9
CTKT	Corum	4.63	291	i P	Pn	12 34 35.6	+5.6
CORM	Corum	4.64	285	ePN	Pn	12 34 30.8	+0.7
KARA	Karaisali	4.64	249	ePN	Pn	12 34 30.4	+0.3
DIKM	Dikmen	4.73	304	ePN	Pn	12 34 31.3	-0.1
CDAG	Cicekdag	4.76	278	i P	Pb	12 34 43.0	-0.1
CDAG				i S	Sg	12 35 47.5	-4.2
BOYT	Boyabat	4.85	300	i P	Pb	12 34 45.6	+0.9
SLNF	Slenfeh	4.86	225	⇑P	Pn	12 34 36.4	+3.3
BYBT	Boyabat	4.97	300	ePN	Pn	12 34 35.9	+1.3
KIV	Kislovodsk	5.14	18	eP	Pg	12 34 55.8	-1.6
KIV				pmax	pmax		
	comp=Z,28nm,1.1s						
TOS	Tosya	5.31	293	ePN	Pn	12 34 39.7	+0.3
TOS	Tosya	5.31	293	Pn	Pn	12 34 42.3	+2.9
BRTR	Keskin Array B	5.33	279	Pn	Pn	12 34 39.4	-0.2
	comp=Z,0.5nm,0.3s,baz=100,slow=15,SNR=8.5						
BRTR				Lg		12 36 09.1	
	baz=115,slow=27,SNR=2.0						
ROOS	tl_alroos	5.54	208	⇑P	Pn	12 34 44.2	+1.8
ROOS	tl_alroos	5.54	208	⇑iP	Pn	12 34 44.2	+1.7
HWQ	Hawqa	6.02	218	ePn	Pn	12 34 49.8	+0.7
GOF	Gofitskoye	6.26	17	eP	Pb	12 35 08.3	-0.4
BHL	Bhannes	6.47	218	ePn	Pn	12 34 58.9	+3.7
BHD	Baghdad	6.61	150	ex	x	12 34 55.0	
BHD				ex	x	12 36 13.0	
BHD				ex	x	12 36 50.0	
BHD				ex	x	12 36 57.0	
MMAI	Mount Meron Ar	7.32	216	Pn	Pn	12 35 08.5	+1.6
	baz=55,slow=18,SNR=2.9						
MMAI				Lg		12 37 14.4	
	comp=Z,2.6nm,0.3s,baz=48,slow=31,SNR=3.8						
EIL	Elat	10.44	208	Lg		12 38 46.5	
	comp=Z,0.4nm,0.3s,baz=64,slow=8.5,SNR=3.1						
EIL				LR	LR	12 40 43.6	
	comp=Z,77nm,19.9s,baz=281,slow=43						
AKASG	Malin Array Be	14.06	329	Pn	Pn	12 36 38.8	-0.3
	comp=Z,0.3nm,0.3s,baz=132,slow=12,SNR=8.8						
AKTK	Aktyubinsk	16.80	42	P	Pn	12 37 14.2	-1.1
AKTO	Aktyubinsk	16.80	42	Pn	Pn	12 37 14.2	-1.1
	comp=Z,0.2nm,0.3s,baz=231,slow=14,SNR=6.2						
FINES	FINESS Array B	24.08	343	P	P	12 38 33.8	-1.8
	comp=Z,2.2nm,0.7s,mb3.8,baz=140,slow=10.0,SNR=8.3						
JOF	Joensuu	24.50	350	ep	P	12 38 37.0	-2.3
	comp=Z,8.3nm,0.7s,mb4.4						
JOF	Joensuu	24.50	350	eP	P	12 38 37.0	-2.3
JOF				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
KAF	Kangasniemi	24.63	344	ep	P	12 38 38.1	-2.4
	comp=Z,2.4nm,0.7s,mb4.0						
KAF	Kangasniemi	24.63	344	eP	P	12 38 38.1	-2.4
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
MKAR	Makanchi Array	31.27	62	P	P	12 39 39.8	-0.3
	comp=Z,0.8nm,0.9s,mb3.7,baz=260,slow=8.6,SNR=6.4						
TORD	Torodi Ar. Bea	42.87	244	P	P	12 41 17.1	-1.8
	comp=Z,1.6nm,0.6s,mb4.0,baz=95,slow=1.7,SNR=4.1						
KSRS	Korea Array	65.93	61	LR	LR	13 14 27.1	
	comp=Z,157nm,18.4s,baz=80,slow=37						
YKA	Yellowknife Ar	76.79	348	P	P	12 45 11.5	-0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	76.79	348	P	P	12 45 11.5	-0.2
	comp=Z,0.5nm,0.8s,mb3.7,baz=20,slow=6.1,SNR=9.2						
YKA	Yellowknife Ar	76.79	348	P	P	12 45 11.5	-0.2
	comp=Z,1.0nm,0.8s,mb4.0						

*IDC **12** 12:41:32.2±3.9, 36.57N×69.16E, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=72.8km s-min=38.0km az=9.0*
*NEIC **12** 12:41:34.4±0.9, 36.74N×68.93E, h10^{km}, Error ellipse: s-maj=19.3km s-min=10.9km az=105.0*
*ISCJB **12** 12:41:35.7±0.7, 36.79N±0.05×68.9E±0.1, h33^{km}, mb3.3/2, Error ellipse: s-maj=14.5km s-min=6.4km az=14.2*
ISC 12 12:41:37.5±0.8**,3675N**±005×**688E**±01**,h35**^{km}**,n10,** σ**1**^{s}**08**/13**,mb3.3**/2**,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.21	175	ePn	Pn	12 42 11.4	-0.3
KBL				eSn	Sn	12 42 38.7	+0.8
AML	Almayashu	6.57	34	ePn	Pn	12 43 11.7	+0.2
	12nm,0.1s						
AML				eSn	Sn	12 44 27.6	+2.4
UCH	Uchtor	7.03	37	ePn	Pn	12 43 17.9	0.0
	7µm,1.5s						
UCH				eSn	Sn	12 44 36.9	+0.4
AAK	Ala-Archa	7.33	35	ePn	Pn	12 43 20.9	-1.1
	6.1nm,0.6s						
MKAR	Makanchi Array	14.19	41	Pn	Pn	12 44 53.5	-2.4
	0.0nm,0.3s,baz=226,slow=13,SNR=6.2						
AKTK	Aktyubinsk	15.73	334	Pn	Pn	12 45 16.1	0.0
AKTO	Aktyubinsk	15.73	334	Pn	Pn	12 45 16.1	0.0
	0.1nm,0.3s,baz=164,slow=18,SNR=3.3						
SONM	Songino Array	29.66	56	P	P	12 47 38.4	-1.2
	0.2nm,0.6s,mb3.0,baz=264,slow=11,SNR=2.4						
YKA	Yellowknife Ar	81.06	2	P	P	12 53 49.7	+1.2
YKA	Yellowknife Ar	81.06	2	P	P	12 53 49.7	+1.2
	0.5nm,0.7s,mb3.5,baz=352,slow=5.2,SNR=9.0						

*NNC **12** 12:44:07.3±3.8, 34.08N×68.12E, h0^{km}, mb4.4, Error ellipse: s-maj=49.0km s-min=27.0km az=86.0*
*IDC **12** 12:44:41.4±0.6, 36.38N×69.25E, h0^{km}, mb4.5/24, mb1 4.6/26, mb1mx4.6/28, mbtmp4.5/26, ML3.6/2, MS4.1/15, Ms1 4.1/15, ms1mx3.9/35, Error ellipse: s-maj=17.4km s-min=11.3km az=23.0*
*ISCJB **12** 12:44:43.8±1.0, 36.54N±0.03×69.22E±0.03, h21^{km}±7^{km}, mb4.6/82, MS4.3/27, Error ellipse: s-maj=4.7km s-min=3.4km az=33.6*
*BJI **12** 12:44:46.3, 36.88N×69.25E, h23^{km}, mB5.1, mb4.5, ML4.9, Ms4.8, Msz4.6*
*NEIC **12** 12:44:46.7±1.6, 36.52N×69.30E, h32^{km}±12^{km}, mb4.8/50, Error ellipse: s-maj=5.6km s-min=4.4km az=211.0*
*GCMT **12** 12:44:46.7±0.6, 36.75N×69.16E, h21^{km}±1^{km}, MW5.0/55, Moment Tensor Solution. s21,c23; s55,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.13±.27; $M_{\theta\theta}$-1.65±.19; $M_{\phi\phi}$-1.47±.17; $M_{r\theta}$0.33±.36; $M_{\theta\phi}$-1.75±.12; $M_{\phi r}$0.20±.31; Best double couple: $M_0$3.24400×10^{16} NP1:ϕ_s225.00000°, δ42.00000°, λ88.00000°. NP2: ϕ_s48.00000°, δ48.00000°, λ92.00000°. Principal axes: T 3.1540, Plg86.0000°, Azm342.0000°; N 0.1900, Plg2.0000°, Azm227.0000°; P -3.3340, Plg3.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **12** 12:44:46.4±0.9, 36.61N×69.30E, h41^{km}, mb4.9/41, MS4.5/9 Error ellipse: s-maj=7.0km s-min=4.5km az=119.1*
ISC 12 12:44:48.3±0.4**,3654N**±003×**6923E**±003**,h42**^{km}±4^{km}**, n268,** σ**1**^{s}**16**/287**,mb4.6**/82**,MS4.3**/27**,17C-11D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.00	184	ePn	Pn	12 45 22.1	+2.5
KBL				eSn	Sn	12 45 49.2	+5.8
CEP	Cherat	3.49	140	⇑P	Pn	12 45 44.0	+4.0
THW	Thamme Wali	4.27	150	⇑P	Pn	12 45 53.4	+2.6
CHCP	Chirah Chowk	4.38	130	⇓P	Pn	12 45 56.1	+3.8
DRP	Derazinda	4.85	170	P	Pn	12 46 02.3	+3.5
JMU	Jammu	6.03	128	ex	x	12 47 31.0	
KSH	Kashi	6.10	59	eP	Pn	12 46 16.5	+0.7
KSH				S	Sn	12 47 13.8	-10
KSH				Smax			
	comp=N,3µm,1.4s						
KSH				Smax			
	comp=E,5µm,1.5s						
AML	Almayashu	6.57	30	ePn	Pn	12 46 22.6	+0.3
AML	Almayashu	6.57	30	P	Pn	12 46 22.6	+0.4
	SNR=54						
KK31	Karatay Array	6.63	8	Pn	Pn	12 46 22.0	-1.1
	comp=E,11nm,0.4s,baz=183,slow=13,SNR=49						
KK31				⇓Sn	Sn	12 48 12.3	+35
	comp=E,151nm,0.8s,baz=197,slow=23						
KK31	Karatay Array	6.63	8	i PN	Pn	12 46 21.9	-1.2
KK31				pmax	pmax		
	comp=Z,31nm,0.4s						
THN	Thein Dam	6.74	126	eP	Pn	12 46 26.8	+2.1

THN eS Sn 12 47 28.9 -11
DLH Dalhousie 6.84 124 eP Pn 12 46 28.0 +1.9
DLH ex x 12 47 49.0
UCH Uchtor 7.00 34 ePn Pn 12 46 28.2 0.0
UCH Uchtor 7.00 34 P Pn 12 46 28.5 +0.3
SNR=39
EKS2 Erkin-Say 7.05 28 ePn Pn 12 46 28.5 -0.4
comp=Z,52nm,0.8s
EKS2 Erkin-Say 7.05 28 P Pn 12 46 29.2 +0.3
SNR=13
KZA Kyzart 7.24 38 P Pn 12 46 31.7 +0.3
SNR=29
AAK Ala-Archa 7.32 32 ePn Pn 12 46 31.8 -0.8
AAK Ala-Archa 7.32 32 ceP Pn 12 46 31.6 -0.9
AAK pmax pmax
comp=Z,73nm,0.8s
AAK Ala-Archa 7.32 32 P Pn 12 46 32.8 +0.3
SNR=55
KBK Karagaybulak 7.54 34 P Pn 12 46 36.1 +0.6
SNR=41
CHMS Chumysh 7.72 32 P Pn 12 46 37.8 -0.4
SNR=57
USP Ospenovka 7.84 29 P Pn 12 46 38.9 -0.9
SNR=33
ULHL Ulahol 7.87 41 P Pn 12 46 41.3 +1.2
SNR=11
TKM2 Tokmak 2 8.04 36 ⇑Pn Pn 12 46 41.8 -0.7
comp=Z,3.8nm,0.6s
TKM2 ⇑Sn Sn 12 48 41.4 +29
comp=Z,40nm,1.5s
TKM2 Tokmak 2 8.04 36 ePn Pn 12 46 42.0 -0.4
comp=Z,44nm,0.6s
TKM2 Tokmak 2 8.04 36 *i* P Pn 12 46 41.7 -0.8
TKM2 pmax pmax
comp=Z,26nm,0.8s
TKM2 Tokmak 2 8.04 36 P Pn 12 46 42.3 -0.2
SNR=23
SDNR Sundarnagar 8.16 126 eP Pn 12 46 46.2 +2.1
SDNR ex x 12 48 27.0
AAA Alma-Ata 8.96 39 *i* P Pn 12 46 49.3 -5.8
AAA *i* S Sn 12 48 26.8 -7.8
AAA pmax pmax
comp=Z,70nm,0.3s
AAA smax
comp=E,40nm,0.1s
AAA MLR MLR
comp=Z,10μm,7.5s
VAN Vannovskaya 8.98 282 eP Pn 12 46 57.3 +1.9
VAN S Sn 12 48 30.1 -5.0
DDI Dehra Dun 9.63 128 eP Pn 12 47 05.8 +1.5
DDI ex x 12 49 02.0
NDI New Delhi 10.33 137 eP Pn 12 47 13.9 0.0
NDI AMb AMB 12 47 21.3
NDI ex x 12 49 06.0
AJM Ajmer 11.04 154 eP Pn 12 47 22.9 -0.7
AJM AMb AMB 12 47 28.8
comp=Z,28nm,1.0s
AJM eS Sn 12 49 10.1 -16
LGTI Lohaghat 11.64 124 eP Pn 12 47 31.0 -0.8
LGTI ex x 12 49 37.0
MK31 Makanchi Array 14.13 39 Pn Pn 12 48 03.5 -2.2
comp=Z,9.0nm,0.7s,baz=226,slow=12,SNR=72
MK31 ⇑Lg 12 52 43.1
comp=Z,15nm,1.1s,baz=327,slow=26,SNR=4.2
MK31 Makanchi Array 14.13 39 *i* P Pn 12 48 03.4 -2.3
MK31 pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 14.13 39 Pn Pn 12 48 03.4 -2.3
MKAR LR LR 12 54 12.7
MKAR Makanchi Array 14.13 39 *i* P Pn 12 48 03.4 -2.3
MKAR pmax pmax
comp=Z,10.0nm,0.9s
MKAR Makanchi Array 14.13 39 Pn Pn 12 48 03.4 -2.3
comp=Z,0.2nm,0.3s,baz=229,slow=12,SNR=57
MKAR LR LR 12 54 12.7
comp=Z,975nm,21.6s,baz=238,slow=40
AB31 Akbulak array 14.40 335 ⇑Pn Pn 12 48 03.7 -5.6
comp=Z,17nm,0.6s
AB31 ⇓Sn Sn 12 50 55.8 +8.3
comp=Z,25nm,0.8s
BHPL Bhopal 15.03 150 eP Pn 12 48 15.3 -2.5
BHPL AMb AMB 12 48 26.2
comp=Z,88nm,1.2s
BHPL eS S 12 50 56.0 -23
GKN Gorkha 15.55 119 eP Pn 12 48 21.6 -3.0
comp=Z,174nm,0.6s
KURK Kurchatov 15.70 23 ⇑Pn Pn 12 48 21.7 -4.6
comp=Z,13nm,1.0s
KURK Lg 12 53 49.1
KURK Kurchatov 15.70 23 ePn Pn 12 48 23.8 -2.5
KURK Kurchatov 15.70 23 eP Pn 12 48 23.4 -2.9
AKTK Aktyubinsk 16.07 333 Pn Pn 12 48 27.4 -3.7
AKTK LR LR 12 54 49.2
AKTO Aktyubinsk 16.07 333 P Pn 12 48 27.4 -3.7
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO MLR MLR
comp=Z,599nm,19.1s
AKTO Aktyubinsk 16.07 333 Pn Pn 12 48 27.4 -3.7
comp=Z,0.5nm,0.3s,baz=152,slow=13,SNR=32
AKTO LR LR 12 54 49.2
comp=Z,599nm,19.1s,baz=149,slow=38
KKN Kakani 16.13 118 eP Pn 12 48 29.9 -2.2
comp=Z,216nm,0.6s
KKN Kakani 16.13 118 eP Pn 12 48 29.9 -2.2
KKN pmax pmax
comp=Z,216nm,0.6s
JBP Jabalpur 16.25 142 ⇑*i*P Pn 12 48 32.0 -1.6
JBP *ex* x 12 48 49.6
comp=Z,57nm,1.7s
JBP *i* S S 12 51 26.1 -18
BVA0 Borovoye Array 16.50 2 ⇑Pn Pn 12 48 32.8 -3.8
comp=Z,2.3nm,1.1s
BVA0 ⇑Sn Sn 12 52 05.8 +27
comp=Z,2.6nm,0.8s
BVA0 ⇑Lg 12 54 08.8
comp=Z,19nm,1.9s
BRVK Borovoye 16.53 2 eP Pn 12 48 34.0 -2.9
comp=Z,16nm,0.8s
BRVK Borovoye 16.53 2 eP Pn 12 48 34.0 -2.9
BRVK pmax pmax
comp=Z,16nm,0.8s
JIRN Jiri 16.86 117 eP Pn 12 48 38.1 -3.1
comp=Z,136nm,0.5s
CHKZ Chkalovo 17.16 3 ⇓Pn Pn 12 48 41.6 -3.2
comp=Z,15nm,0.9s
CHKZ ⇓Sn Sn 12 52 22.1 +28
comp=Z,17nm,1.1s
CHKZ Chkalovo 17.16 3 eP Pn 12 48 41.7 -3.1
comp=Z,7.1nm,0.6s
CHKZ Chkalovo 17.16 3 eP Pn 12 48 41.7 -3.1
CHKZ pmax pmax
comp=Z,7.0nm,0.6s
AKL Akola 17.18 155 eP Pn 12 48 44.5 -0.7
AKL ex x 12 48 56.7
comp=Z,121nm,1.1s
AKL *i* S S 12 51 47.0 -16
NGP Nagpur 17.56 148 ⇑*i*P Pn 12 48 51.8 +1.8
NGP ex x 12 48 52.5
comp=Z,21nm,1.1s
NGP ex x 12 51 55.3
TAPN Taplejung 18.14 115 eP Pn 12 48 54.1 -2.9
comp=Z,145nm,0.7s
ODAN Odare 18.19 117 eP Pn 12 48 55.3 -2.4
comp=Z,100nm,0.7s
ODAN eS S 12 52 16.0 -7.7
POO Poona 18.40 166 eP Pn 12 49 01.0 +0.8
POO ex x 12 53 18.0
BOK Bokaro 19.17 127 eP Pn 12 49 09.6 +0.2
BOK AMb AMB 12 49 10.8
comp=Z,24nm,0.7s
BOK eS S 12 52 37.3 -6.0
UMR Umm Al-Rimmam 19.31 255 eP Pn 12 49 09.0 -2.1
UMR AMb AMB 12 49 17.2
comp=Z,38nm,1.1s
MIB Mutribah 19.50 256 eP Pn 12 49 11.8 -1.5
MIB AMb AMB 12 49 19.4
comp=Z,105nm,0.9s
QRN Al-Qurain 19.53 253 eP Pn 12 49 12.4 -1.4
QRN AMb AMB 12 49 25.8
comp=Z,48nm,0.8s
LSA Lhasa 19.57 104 P Pn 12 49 15.0 +0.8
LSA XP sP 12 49 26.6 -1.5
LSA S S 12 52 41.8 -9.5
LSA XS sS 12 52 59.0 -8.6

LSA AMB AMB
comp=Z,10.0nm,0.8s
LSA AMB AMB
comp=Z,150nm,11.0s
LSA LR LR
comp=N,310nm,11.0s
LSA LR LR
comp=E,750nm,11.0s
LSA LR LR
comp=Z,1μm,10.0s
LSA Lhasa 19.57 104 eP Pn 12 49 15.1 +1.0
comp=Z,37nm,0.9s
LSA Lhasa 19.57 104 eP Pn 12 49 15.1 +0.9
LSA pmax pmax
comp=Z,37nm,0.9s
KAD Karad 19.65 166 eP Pn 12 49 14.1 -1.2
KAD ⇓*i*P 12 49 15.1
KAD AMb AMB 12 49 16.4
comp=Z,17nm,1.1s
KAD ex x 12 53 33.5
NAY Al-Naaiem 19.82 255 eP Pn 12 49 15.2 -2.0
NAY AMb AMB 12 49 29.4
comp=Z,23nm,0.9s
RST Umm Al-Ruwaisa 19.90 256 eP Pn 12 49 16.2 -1.9
RST AMb AMB 12 49 23.7
comp=Z,74nm,0.9s
ZEI Tsey 20.43 296 eP P 12 49 24.9 +3.0
ZEI pmax pmax
comp=Z,7.0nm,0.7s
BHD Baghdad 20.62 268 ex x 12 49 21.0
BHD ex x 12 53 15.0
NVS Novosibirsk 20.68 23 ⇑*i*P P 12 49 22.4 -2.1
NVS eS S 12 53 12.1 -0.9
NVS pmax pmax
comp=N,21nm,0.9s
NVS pmax pmax
comp=E,12nm,0.9s
NVS pmax pmax
comp=Z,27nm,0.9s
NVS smax
comp=N,9.0nm,2.0s
NVS smax
comp=E,24nm,2.0s
HYB Hyderabad 20.76 154 eP P 12 49 27.0 +1.4
comp=E,115nm,1.0s
HYB eS S 12 53 21.0 +5.9
HYB Hyderabad 20.76 154 eP P 12 49 27.0 +1.4
HYB eS S 12 53 21.0 +5.9
HYB pmax pmax
comp=Z,115nm,1.0s
HYB Hyderabad 20.76 154 *i* P P 12 49 27.0 +1.4
comp=Z,115nm,1.0s
HYB epP 12 49 36.0
HYB esP sP 12 49 41.0 -0.1
HYB e 12 49 52.5
HYB eS S 12 53 15.0 -0.1
HYB LR LR 12 57 00.0
comp=Z,3.5nm,12.0s
MSL Mosul 21.02 277 ex x 12 49 31.0
MSL ex x 12 53 28.0
SVE Sverdlovsk 21.10 347 ⇓eP P 12 49 29.5 +0.5
SVE e 12 49 44.0
SVE MLR MLR
comp=Z,4μm,12.0s,MS5.0
ARU Arti 21.16 343 eP P 12 49 27.7 -1.9
comp=Z,36nm,1.0s,mb4.7
ARU Arti 21.16 343 *d* iP P 12 49 29.4 -0.2
ARU e 12 50 00.5
ARU eS S 12 53 17.0 -5.4
ARU eSS 12 53 46.8
ARU pmax pmax
comp=Z,12nm,0.8s,mb4.3
KIV Kislovodsk 21.51 298 eP P 12 49 33.8 +0.3
comp=Z,35nm,0.9s,mb4.8
KIV Kislovodsk 21.51 298 eP P 12 49 35.1 +1.6
KIV eS S 12 53 29.1 -0.4
KIV pmax pmax
comp=Z,40nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,590nm,14.0s,MS4.1
SHL Shillong 22.23 113 eP P 12 49 41.5 +0.2
SHL AMb AMB 12 49 47.0
comp=Z,217nm,1.3s,mb5.4
SHL eS S 12 53 42.4 -1.3
VIS Vishakhapatnam 22.51 143 *i* P P 12 49 46.9 +2.6
VIS ex x 12 50 05.3
comp=Z,55nm,1.5s
VIS eS S 12 53 49.7 +0.7
GTA Gaotai 24.23 74 ⇑P P 12 50 02.0 +1.0
GTA PP 12 50 40.3
GTA S S 12 54 10.5 -6.2
GTA SS 12 55 10.2
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb3.8
GTA AMB AMB
comp=Z,140nm,4.6s
GTA LR LR
comp=N,1μm,11.4s,MS4.7
GTA LR LR
comp=E,1μm,15.6s,MS4.7
GTA LR LR
comp=Z,1μm,15.2s,MS4.5
VRHR Novokhopersk 24.48 315 eP P 12 50 10.0 +6.8
VRHR pmax pmax
comp=Z,10.0nm,0.9s,mb4.2
VRHR pmax pmax
comp=N,2.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.5s
ANN Anapa 25.36 299 eP P 12 50 12.6 +1.3
ANN pmax pmax
comp=Z,41nm,0.8s,mb5.0
VRSR Storozhevoye 25.93 314 eP P 12 50 16.6 +0.3
VRSR pmax pmax
comp=N,2.0nm,0.9s
VRSR pmax pmax
comp=E,7.0nm,0.9s
VRSR pmax pmax
comp=Z,3.0nm,0.9s,mb3.8
ASF Jabal al Asfar 26.97 270 LR LR 13 04 09.0
comp=Z,222nm,20.9s,MS3.7,baz=135,slow=43
MOY Mondy 27.10 46 eP P 12 50 33.7 +6.8
LZH Lanzhou 27.81 80 eP P 12 50 37.1 +3.6
LZH PP 12 51 27.0
LZH PCP PcP 12 53 54.2 +5.3
LZH eS S 12 55 23.0 +9.4
LZH AMB AMB
comp=Z,31nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,153nm,5.5s
LZH LR LR
comp=E,1μm,10.4s
LZH LR LR
comp=Z,1μm,11.4s,MS4.8
MMAI Mount Meron Ar 27.92 273 LR LR 13 04 42.5
comp=Z,197nm,18.6s,MS3.7,baz=95,slow=43
ZAK Zakamensk 28.05 50 eP P 12 50 38.2 +2.8
ZAK pmax pmax
comp=Z,4.0nm,1.4s,mb3.9
BR131 Keskin Array S 28.06 287 eP P 12 50 36.0 +0.3
comp=Z,3.4nm,0.7s,mb4.1
BRTR Keskin Array B 28.06 287 P P 12 50 36.4 +0.7
comp=Z,3.9nm,0.8s,mb4.1,baz=88,slow=9.3,SNR=12
TLY Talaya 28.65 47 eP P 12 50 46.7 +5.9
TLY pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
TLY MLR MLR
comp=Z,394nm,13.0s,MS4.2
MOS Moscow 28.74 322 eP P 12 50 42.7 +1.2
MOS e 12 56 53.7
MOS MLR MLR
comp=Z,800nm,12.0s,MS4.5
OBN Obninsk 28.99 320 eP P 12 50 44.7 +1.0
OBN e 12 51 38.4
OBN pmax pmax
comp=Z,27nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,700nm,16.0s,MS4.4
CD2 Chengdu 29.16 91 eP P 12 50 47.8 +2.3
CD2 PP PP 12 51 43.8 -8.0
CD2 S S 12 55 32.8 -2.1
CD2 SS SS 12 57 05.9 -34
CD2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.5
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,880nm,13.2s,MS4.7
CD2 LR LR
comp=E,880nm,14.4s,MS4.7
CD2 LR LR
comp=Z,880nm,12.0s,MS4.6
PRGR Permogore 29.16 337 eP P 12 50 44.3 -0.9
PRGR *e* 12 51 43.5
PRGR eS S 12 55 42.8 +8.5
PRGR pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
EIL Elat 29.41 267 LR LR 13 05 34.3
comp=Z,137nm,20.1s,MS3.6,baz=278,slow=43
SONM Songino Array 29.49 56 P P 12 50 49.4 +1.1
SONM LR LR 13 04 26.8
SONM Songino Array 29.49 56 P P 12 50 49.4 +1.1
comp=Z,5.6nm,0.9s,mb4.3,baz=263,slow=7.6,SNR=28
SONM LR LR 13 04 26.8
comp=Z,765nm,18.7s,MS4.3,baz=44,slow=40
ULN Ulaanbaatar 29.93 56 eP P 12 50 52.7 +0.5
comp=Z,8.3nm,1.0s,mb4.4
AKASG Malin Array Be 31.81 309 P P 12 51 08.0 -0.7
AKASG LR LR 13 05 23.8
AKASG Malin Array Be 31.81 309 *i* P P 12 51 08.0 -0.7
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 31.81 309 P P 12 51 08.0 -0.7
comp=Z,6.1nm,0.7s,mb4.6,baz=84,slow=7.4,SNR=17
AKASG LR LR 13 05 23.8
comp=Z,196nm,19.8s,MS3.8,baz=320,slow=39
XAN Xi'an 32.34 82 P P 12 51 14.6 +1.1
XAN AMB AMB
comp=Z,4.0nm,0.9s,mb4.2
HHC Hu-ho-hao-te 33.09 69 eP P 12 51 23.3 +3.3
HHC S S 12 56 32.3 -3.8
HHC SS SS 12 58 33.3 -26
HHC AMB AMB
comp=Z,7.0nm,0.6s,mb4.8
HHC AMB AMB
comp=Z,424nm,6.5s
HHC LR LR
comp=N,608nm,13.1s,MS4.6
HHC LR LR
comp=E,696nm,15.3s,MS4.6
HHC LR LR
comp=Z,752nm,13.1s,MS4.6
GYA Guiyang 33.28 97 ⇑*i*P P 12 51 28.2 +6.3
GYA PCP PcP 12 54 09.6 +6.2
GYA S S 12 56 41.8 +2.4
GYA SCP ScP 12 57 45.2 +0.9
GYA PCS PcS 12 57 54.1 +5.0
GYA SS SS 12 58 48.6 -15
GYA SCS ScS 13 01 44.0 -1.2
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,110nm,5.8s
GYA LR LR
comp=N,450nm,17.8s,MS4.3
GYA LR LR
comp=E,430nm,19.6s,MS4.3
GYA LR LR
comp=Z,390nm,18.2s,MS4.2
MLR Muntele Rosu 33.52 299 P P 12 51 25.4 +1.8
MLR Muntele Rosu 33.52 299 P P 12 51 25.5 +1.8
comp=Z,18nm,0.8s,mb5.0,baz=106,slow=8.7,SNR=20
CIT Chita 34.70 49 eP P 12 51 35.7 +1.8
LVV L'vov 34.99 307 eP P 12 51 37.4 +1.0
JOF Joensuu 35.13 331 ep P 12 51 37.6 +0.2
comp=Z,4.4nm,0.5s,mb4.6
JOF Joensuu 35.13 331 eP P 12 51 37.6 +0.2
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
KWP Kalwaria 35.84 306 eP P 12 51 45.4 +1.7
KWP Kalwaria 35.84 306 eP P 12 51 44.4 +0.7
comp=Z,33nm,1.3s,mb5.1
UZH Uzhgorod 36.06 305 eP P 12 51 49.7 +4.1
KOLS Kolonicke sedl 36.09 305 eP P 12 51 46.5 +0.7
BOD Bodaibo 36.22 40 eP P 12 51 46.7 -0.2
BOD pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BOD pmax pmax
comp=Z,12nm,1.2s,mb4.7
FINES FINESS Array B 36.66 327 P P 12 51 50.9 +0.3
comp=Z,3.3nm,0.7s,mb4.3,baz=111,slow=10,SNR=12
FINES LR LR 13 08 20.6
comp=Z,574nm,19.3s,MS4.4,baz=339,slow=39
BJI Beijing 36.68 70 P P 12 51 52.9 +1.9
BJI PP PP 12 53 15.4 +0.4
BJI S S 12 57 25.8 -5.7
BJI AMB AMB
comp=Z,3.0nm,0.6s,mb4.3
BJI AMB AMB
comp=Z,308nm,5.1s
BJI LR LR
comp=N,708nm,15.5s,MS4.9
BJI LR LR
comp=E,1μm,15.0s,MS4.9
BJI LR LR
comp=Z,783nm,15.5s,MS4.6
STHS Stebnicka Huta 36.78 306 eP P 12 51 52.3 +0.6
KAF Kangasniemi 36.83 328 ep P 12 51 50.8 -1.1
comp=Z,9.7nm,1.0s,mb4.6
KAF Kangasniemi 36.83 328 eP P 12 51 50.8 -1.1
KAF pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
KECS Kecovo 37.26 304 eP P 12 51 55.9 +0.1
comp=Z,3.2nm,1.3s,mb4.0
KECS Kecovo 37.26 304 eP P 12 51 55.9 +0.1
KECS pmax pmax
comp=Z,3.0nm,1.3s,mb4.0
VYHS Vyhne 38.36 304 eP P 12 52 10.3 +5.2
comp=Z,6.0nm,1.6s,mb4.1
VYHS Vyhne 38.36 304 eP P 12 52 10.3 +5.2
VYHS pmax pmax
comp=Z,6.0nm,1.6s,mb4.1
HIA Hailar 38.43 54 eP P 12 52 06.8 +1.1
comp=Z,6.7nm,0.8s,mb4.4
HIA Hailar 38.43 54 eP P 12 52 06.8 +1.1
HIA pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 39.19 306 eP P 12 52 12.2 +0.2
comp=Z,5.7nm,1.0s,mb4.3
MORC Moravsky Berou 39.19 306 eP P 12 52 12.3 +0.3
MORC pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
VRAC Vranov 39.82 306 P P 12 52 17.8 +0.6
comp=Z,1.8nm,0.3s,mb4.2,baz=79,slow=10,SNR=2.8
KEV Kevo 40.24 339 ep P 12 52 20.0 -0.5
comp=Z,17nm,1.0s,mb4.7
KEV Kevo 40.24 339 eP P 12 52 20.0 -0.5
KEV pmax pmax
comp=Z,17nm,1.0s,mb4.7
ARCES ARCESS Array B 40.57 338 P P 12 52 23.4 +0.2
comp=Z,5.8nm,0.8s,mb4.2,baz=128,slow=7.9,SNR=9.8
NJ2 Nanjing 40.88 81 eP P 12 52 32.2 +5.9
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
BRG Berggiesshubel 41.48 308 eP P 12 52 31.0 +0.1
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
BRG pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
BRG Berggiesshubel 41.48 308 eP P 12 52 31.0 +0.1
comp=Z,7.5nm,1.0s,mb4.3
BRG *i* 12 52 36.8
comp=Z,8.7nm,0.9s
GERES GERESS Array B 41.74 305 P P 12 52 32.8 -0.3
comp=Z,0.4nm,0.4s,mb3.4,baz=114,slow=9.8,SNR=2.8
CLL Collm 42.06 309 ⇓*i*P P 12 52 36.2 +0.6
comp=Z,11nm,1.2s,mb4.4
CLL *i* 12 52 42.3
CLL Collm 42.06 309 ⇓*i*P P 12 52 36.2 +0.6
CLL pmax pmax
comp=Z,11nm,1.2s,mb4.4
CLL Collm 42.06 309 ⇓*i*P P 12 52 36.2 +0.6
comp=Z,11nm,1.2s,mb4.4
CLL *i* (pP) pP 12 52 42.3 -5.0
CLL ePP PP 12 54 16.0 +2.7
CLL epPP 12 54 23.0
CLL ePPPP 12 54 55.0
HFS Hagfors 42.16 322 P P 12 52 36.1 -0.2
comp=Z,10nm,0.6s,mb4.7,baz=96,slow=9.1,SNR=29
PSI Prapat 43.32 134 P P 12 52 46.0 -0.3
comp=Z,11nm,0.6s,mb4.8,baz=310,slow=8.9,SNR=16

NB2 **NORSAR Subarra 43.49 323** P **P** **12 52 46.7 -0.4**
comp=Z,5.4nm,0.6s,mb4.5,baz=98,slow=8.6
NB2 NORSAR Subarra 43.49 323 P **P** **12 52 46.7 -0.4**
NB2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
NOA NORSAR Array B 43.49 323 P **P** **12 52 46.3 -0.9**
comp=Z,11nm,0.9s,mb4.6,baz=98,slow=8.1,SNR=20
NOA LR LR 13 12 19.8
comp=Z,241nm,19.1s,MS4.1,baz=45,slow=38
DAVOX Davos/Dischmat 44.54 303 LR LR 13 13 27.0
comp=Z,303nm,20.9s,MS4.2,baz=60,slow=39
YAK Yakutsk 44.76 36 *e*P **P** **12 52 56.6 -0.7**
comp=Z,30nm,0.8s,mb5.2
YAK Yakutsk 44.76 36 *e*P **P** **12 52 58.5 +1.2**
YAK *e**PP pP 12 53 19.1 +10
YAK *e* 12 54 44.4
YAK *e*S **S** **12 59 25.2 -5.9**
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=Z,29nm,1.0s,mb5.1
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK pmax pmax
comp=Z,575nm,4.6s
YAK pmax pmax
comp=N,449nm,4.5s
YAK pmax pmax
comp=E,320nm,4.8s
YAK smax
comp=N,337nm,5.0s
YAK smax
comp=Z,728nm,6.9s
YAK smax
comp=E,482nm,5.5s
YAK MLR MLR
comp=Z,860nm,13.0s,MS4.9
YAK MLR MLR
comp=N,186nm,9.0s
YAK MLR MLR
comp=E,615nm,11.0s
BFO Black Forest 45.34 305 *e*P **P** **12 53 04.2 +2.1**
comp=E,4.4nm,0.7s,mb4.4
BFO Black Forest 45.34 305 *e*P **P** **12 53 04.2 +2.1**
BFO pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
CDF Champ du Feu 46.02 305 *e*P **P** **12 53 07.5 0.0**
KSRS Korea Array 46.21 70 P **P** **12 53 08.9 -0.2**
comp=Z,3.2nm,0.8s,mb4.3,baz=283,slow=7.7,SNR=8.8
TIXI Tiksi 46.27 22 *e*P **P** **12 53 08.9 -0.3**
comp=Z,15nm,0.9s,mb4.9
TIXI Tiksi 46.27 22 *e*P **P** **12 53 08.5 -0.6**
TIXI pmax pmax
comp=Z,19nm,1.0s,mb5.0
TIXI MLR MLR
comp=Z,282nm,11.0s,MS4.5
HINF Hinteralfeld 46.40 304 *e*P **P** **12 53 10.6 +0.1**
HAU Haudompre 46.70 305 *e*P **P** **12 53 12.7 -0.1**
SBF Sospel 46.79 299 *e*P **P** **12 53 13.1 -0.5**
comp=Z,143nm,1.2s,mb5.5
SBF Sospel 46.79 299 *e*P **P** **12 53 13.1 -0.5**
comp=Z,72nm,1.2s,mb5.5
SBF Sospel 46.79 299 *e*P **P** **12 53 13.1 -0.5**
SBF pmax pmax
comp=Z,72nm,1.2s,mb5.5
LPG La Plagne 46.91 301 *e*P **P** **12 53 14.6 +0.1**
comp=Z,20nm,0.9s,mb4.8
LPG La Plagne 46.91 301 *e*P **P** **12 53 14.6 +0.1**
comp=Z,9.8nm,0.9s,mb4.7
LPG La Plagne 46.91 301 *e*P **P** **12 53 14.6 +0.1**
LPG pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
LPL La Plagne 46.92 301 *e*P **P** **12 53 14.6 0.0**
comp=Z,31nm,1.1s,mb4.9
LPL La Plagne 46.92 301 *e*P **P** **12 53 14.6 0.0**
comp=Z,16nm,1.1s,mb4.8
LPL La Plagne 46.92 301 *e*P **P** **12 53 14.6 0.0**
LPL pmax pmax
comp=Z,16nm,1.1s,mb4.9
MBDF Montbardon 47.06 300 *e*P **P** **12 53 15.1 -0.6**
comp=Z,27nm,0.9s,mb4.9
MBDF Montbardon 47.06 300 *e*P **P** **12 53 15.1 -0.6**
comp=Z,13nm,0.9s,mb4.9
MBDF Montbardon 47.06 300 *e*P **P** **12 53 15.1 -0.6**
MBDF pmax pmax
comp=Z,13nm,0.9s,mb4.9
CABF La Chapelle 47.14 303 *e*P **P** **12 53 16.4 +0.2**
comp=Z,53nm,1.3s,mb5.0
CABF La Chapelle 47.14 303 *e*P **P** **12 53 16.4 +0.2**
comp=Z,27nm,1.3s,mb5.0
CABF La Chapelle 47.14 303 *e*P **P** **12 53 16.4 +0.2**
CABF pmax pmax
comp=Z,27nm,1.3s,mb5.0
FRF La Foret Royal 47.42 299 *e*P **P** **12 53 18.0 -0.5**
comp=Z,43nm,1.1s,mb5.0
FRF La Foret Royal 47.42 299 *e*P **P** **12 53 18.0 -0.5**
comp=Z,22nm,1.1s,mb5.0
FRF La Foret Royal 47.42 299 *e*P **P** **12 53 18.0 -0.5**
FRF pmax pmax
comp=Z,22nm,1.1s,mb5.0
LMR La Mourre 47.57 299 *e*P **P** **12 53 19.6 0.0**
ORIF Oris-en-Rattie 47.64 301 *e*P **P** **12 53 20.1 -0.1**
KEST Kesra 47.67 288 P **P** **12 53 21.8 +1.3**
comp=Z,1.2nm,0.7s,mb4.0,baz=53,slow=16,SNR=4.3
BAIF Baives 47.74 308 *e*P **P** **12 53 21.2 +0.3**
VIVF Saint-Julien-l 48.49 301 *e*P **P** **12 53 26.7 0.0**
comp=Z,34nm,1.2s,mb5.0
VIVF Saint-Julien-l 48.49 301 *e*P **P** **12 53 26.7 0.0**
comp=Z,17nm,1.2s,mb5.0
VIVF Saint-Julien-l 48.49 301 *e*P **P** **12 53 26.7 0.0**
VIVF pmax pmax
comp=Z,17nm,1.2s,mb5.0
LOR Lormes 48.50 304 *e*P **P** **12 53 27.0 +0.2**
SMF Signal de Mont 48.64 303 *e*P **P** **12 53 27.7 -0.2**
comp=Z,34nm,0.9s,mb5.0
SMF Signal de Mont 48.64 303 *e*P **P** **12 53 27.7 -0.2**
comp=Z,17nm,0.9s,mb5.1
SMF Signal de Mont 48.64 303 *e*P **P** **12 53 27.7 -0.2**
SMF pmax pmax
comp=Z,17nm,0.9s,mb5.1
SSF Saint Saulge 48.78 304 *e*P **P** **12 53 29.0 +0.1**
AVF Avril sur Loir 48.94 304 *e*P **P** **12 53 30.1 -0.1**
comp=Z,33nm,1.1s,mb5.0
AVF Avril sur Loir 48.94 304 *e*P **P** **12 53 30.1 -0.1**
comp=Z,16nm,1.1s,mb5.0
AVF Avril sur Loir 48.94 304 *e*P **P** **12 53 30.1 -0.1**
AVF pmax pmax
comp=Z,16nm,1.1s,mb5.0
LASF Ste Croix 49.25 300 *e*P **P** **12 53 32.4 -0.1**
comp=Z,67nm,1.4s,mb5.2
BGF Bois d'Agland 49.33 304 *e*P **P** **12 53 33.4 +0.2**
TCF Toulx Ste Croi 49.82 303 *e*P **P** **12 53 37.3 +0.4**
comp=Z,29nm,0.9s,mb5.0
TCF Toulx Ste Croi 49.82 303 *e*P **P** **12 53 37.3 +0.4**
comp=Z,14nm,0.9s,mb5.0
TCF Toulx Ste Croi 49.82 303 *e*P **P** **12 53 37.3 +0.4**
TCF pmax pmax
comp=Z,15nm,0.9s,mb5.0
CAF Calviac 50.27 302 *e*P **P** **12 53 40.7 +0.4**
comp=Z,12nm,0.8s,mb4.6
CAF Calviac 50.27 302 *e*P **P** **12 53 40.7 +0.4**
comp=Z,5.8nm,0.8s,mb4.7
CAF Calviac 50.27 302 *e*P **P** **12 53 40.7 +0.4**
CAF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
RJF Les Rejaudoux 50.54 302 *e*P **P** **12 53 42.9 +0.6**
comp=Z,21nm,1.1s,mb4.7
RJF Les Rejaudoux 50.54 302 *e*P **P** **12 53 42.9 +0.6**
comp=Z,11nm,1.1s,mb4.7
RJF Les Rejaudoux 50.54 302 *e*P **P** **12 53 42.9 +0.6**
RJF pmax pmax
comp=Z,11nm,1.1s,mb4.7
MTLF Montolieu 50.59 300 *e*P **P** **12 53 42.4 -0.3**
comp=Z,12nm,0.9s,mb4.5
MTLF Montolieu 50.59 300 *e*P **P** **12 53 42.4 -0.3**
comp=Z,5.9nm,0.9s,mb4.5
MTLF Montolieu 50.59 300 *e*P **P** **12 53 42.4 -0.3**
MTLF pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
LDF La Druitiere 50.81 307 *e*P **P** **12 53 44.4 0.0**
FLN La Foliniere 51.01 307 *e*P **P** **12 53 45.6 -0.2**
MFF Saint Martin d 51.32 304 *e*P **P** **12 53 48.5 +0.3**
comp=Z,25nm,1.1s,mb4.8
MFF Saint Martin d 51.32 304 *e*P **P** **12 53 48.5 +0.3**
comp=Z,13nm,1.0s,mb4.8
MFF Saint Martin d 51.32 304 *e*P **P** **12 53 48.5 +0.3**
MFF pmax pmax
comp=Z,13nm,1.0s,mb4.8
GRR Gorron 51.34 307 *e*P **P** **12 53 48.5 +0.2**
comp=Z,46nm,1.2s,mb5.0
GRR Gorron 51.34 307 *e*P **P** **12 53 48.5 +0.2**
comp=Z,23nm,1.2s,mb5.0
GRR Gorron 51.34 307 *e*P **P** **12 53 48.5 +0.2**
GRR pmax pmax
comp=Z,23nm,1.2s,mb5.0
SGMF Saint Gilles 52.47 307 *e*P **P** **12 53 57.1 +0.4**
ETSF Etsaut 52.66 300 *e*P **P** **12 53 58.6 +0.4**
comp=Z,17nm,0.9s,mb4.7
ETSF Etsaut 52.66 300 *e*P **P** **12 53 58.6 +0.4**
comp=Z,8.4nm,0.9s,mb4.7
ETSF Etsaut 52.66 300 *e*P **P** **12 53 58.6 +0.4**
ETSF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ROSF Rostrenen 52.91 307 *e*P **P** **12 54 00.2 +0.2**
QUIF Quistinic 52.95 307 *e*P **P** **12 54 00.7 +0.4**
SJPF Ste Jean 53.06 300 *e*P **P** **12 54 01.4 +0.2**
MJAR Matsushiro Arr 54.26 68 P **P** **12 54 10.4 +0.4**
comp=Z,4.0nm,1.1s,mb4.3,baz=315,slow=11,SNR=3.7
ESDC Sonseca Array 56.17 297 P **P** **12 54 23.9 +0.1**
comp=Z,2.7nm,0.6s,mb4.5,baz=57,slow=8.1,SNR=8.8
BILL Bilibino 59.20 26 *e*P **P** **12 54 45.0 +0.4**
comp=Z,9.4nm,0.9s,mb4.8
BILL Bilibino 59.20 26 *e*P **P** **12 54 45.1 +0.5**
BILL pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.5
TOA0 Torodi Ar. Sit 64.29 268 *e*P **P** **12 55 17.9 -1.8**
TORD Torodi Ar. Bea 64.29 268 P **P** **12 55 18.0 -1.6**
TORD LR LR 13 25 58.6
TORD Torodi Ar. Bea 64.29 268 P **P** **12 55 18.0 -1.6**
comp=Z,5.1nm,0.9s,mb4.5,baz=48,slow=5.8,SNR=35
TORD LR LR 13 25 58.6
comp=Z,150nm,19.6s,MS4.2,baz=340,slow=38
SFJD Kangerlussuaq 67.20 338 LR LR 13 27 41.0
comp=Z,387nm,18.9s,MS4.7,baz=17,slow=38
TNA Tin City 69.06 22 *e*P **P** **12 55 49.8 +0.5**
comp=Z,4.9nm,0.8s,mb4.5
GAMB Gambell 69.07 25 *e*P **P** **12 55 50.0 +0.6**
IMA2 Indian Mountai 72.50 17 *e*P **P** **12 56 09.5 -0.7**
DBIC Dimbokro 73.28 266 P **P** **12 56 14.7 -0.9**
DBIC LR LR 13 32 49.0
DBIC Dimbokro 73.28 266 P **P** **12 56 14.7 -0.9**
comp=Z,3.9nm,0.9s,mb4.3,baz=0.9,slow=6.0,SNR=3.7
DBIC LR LR 13 32 49.0
comp=Z,187nm,18.6s,MS4.4,baz=121,slow=39
LIC Lamto 73.67 266 *e*P **P** **12 56 17.1 -0.9**
comp=Z,9.3nm,0.8s,mb4.5
LIC Lamto 73.67 266 *e*P **P** **12 56 17.1 -0.9**
comp=Z,4.7nm,0.8s,mb4.5
INK Inuvik 74.09 9 *e*P **P** **12 56 20.3 +0.8**
comp=Z,374nm,1.0s
INK Inuvik 74.09 9 *e*P **P** **12 56 20.3 +0.8**
INK pmax pmax
comp=Z,374nm,1.0s
COLA College 74.83 15 *e*P **P** **12 56 24.2 +0.3**
comp=Z,16nm,0.8s,mb5.0
COLA College 74.83 15⇑*e*P **P** **12 56 23.9 +0.1**
COLA *e**PP pP 12 56 45.7 +9.4
MCK McKinley 75.58 16 *e*P **P** **12 56 28.4 +0.2**
comp=Z,4.3nm,0.5s,mb4.6
MCK McKinley 75.58 16 *e*P **P** **12 56 28.4 +0.2**
MCK pmax pmax
comp=Z,4.0nm,0.5s,mb4.6
FITZ Fitzroy Crossi 76.07 125 P **P** **12 56 30.1 -1.5**
comp=Z,2.7nm,0.8s,mb4.2,baz=333,slow=4.5,SNR=3.7
EGAK Eagle 76.24 13 *e*P **P** **12 56 32.1 +0.2**
comp=Z,7.2nm,0.9s,mb4.6
BOSA Boshof 76.87 219 P **P** **12 56 35.0 -0.9**
comp=Z,3.1nm,0.8s,mb4.3,baz=312,slow=5.6,SNR=3.2
BOSA LR LR 13 33 13.0
comp=Z,116nm,18.4s,MS4.2,baz=37,slow=38
DAWY Dawson 77.20 12 *e*P **P** **12 56 38.1 +0.7**
PMR Palmer 77.37 18 *e*P **P** **12 56 37.9 -0.5**
comp=Z,8.8nm,0.7s,mb4.8
PMR Palmer 77.37 18 *e*P **P** **12 56 37.9 -0.5**
PMR pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SML Sawmill 77.38 17 *e*P **P** **12 56 38.1 -0.2**
YKA Yellowknife Ar 81.26 2 P **P** **12 56 59.5 -0.1**
YKA Yellowknife Ar 81.26 2 P **P** **12 56 59.5 0.0**
comp=Z,8.8nm,0.8s,mb4.7,baz=350,slow=5.5,SNR=147
SCHQ Schefferville 81.49 336 P **P** **12 57 00.7 -0.2**
comp=Z,4.0nm,1.0s,mb4.3,baz=35,slow=4.6,SNR=4.2
NWAO Narrogin (SRO) 82.39 141 LR LR 13 29 29.9
comp=Z,102nm,20.9s,MS4.2,baz=252,slow=33
WRA Warramunga Arr 83.23 121 P **P** **12 57 08.4 -2.0**
comp=Z,3.5nm,0.7s,mb4.5,baz=323,slow=4.8,SNR=38
WB2 Warramunga Arr 83.24 121 *e*P **P** **12 57 08.7 -1.8**
DLBC Dease Lake 84.02 10 *e*P **P** **12 57 14.2 +0.3**
FCC Fort Churchill 84.04 351 *e*P **P** **12 57 13.7 -0.3**
comp=Z,6.8nm,0.9s,mb4.8
FCC Fort Churchill 84.04 351 *e*P **P** **12 57 13.7 -0.3**
FCC pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ASAR Alice Springs 85.45 124 P **P** **12 57 19.9 -1.7**
comp=Z,2.9nm,0.7s,mb4.5,baz=311,slow=4.9,SNR=46
EDM Edmonton 90.58 2 *e*P **P** **12 57 46.7 +0.9**
ULM Lac du Bonnet 92.59 350 P **P** **12 57 54.1 -1.1**
comp=Z,1.3nm,0.7s,mb4.5,baz=308,slow=2.7,SNR=3.4

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*IDC **12** 13:04:36.9±0.5, 51.19N×179.48E, h0km, mb4.5/28, mb1 4.6/29, mb1mx4.6/33, mbtmp4.5/29, ML4.8/1, MS4.4/15, Ms1 4.4/15, ms1mx4.2/28, Error ellipse: s-maj=17.0km s-min=11.2km az=154.0*
*MOS **12** 13:04:40.6±1.0, 51.22N×179.40E, h33km, mb5.0/35, MS4.1/4, Error ellipse: s-maj=9.0km s-min=7.0km az=94.8*
*BJI **12** 13:04:40.1, 51.54N×178.93E, h13km, mB5.3, mb4.8, Ms4.9, Msz4.6*
*ISCJB **12** 13:04:41.6±0.6, 51.17N±0.05×179.38E±0.03, h41km±4km, mb4.8/113, MS4.5/26, Error ellipse: s-maj=8.7km s-min=2.8km az=6.4*
*NEIC **12** 13:04:43.0±0.7, 51.13N×179.39E, h41km±5km, mb4.8/63, ML4.5(AEIC), Error ellipse: s-maj=6.9km s-min=3.3km az=184.0*
*GCMT **12** 13:04:43.0±0.4, 51.10N×179.39E, h21km±1km, MW5.0/59, Moment Tensor Solution. s31,c40; s59,c88; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.52±.23; Mθθ-3.20±.16; Mφφ-0.32±.13; Mrθ2.51±.26; Mθφ-0.25±.08; Mφr0.90±.24; Best double couple: M0 4.29300×10^16 NP1:φs272.00000°, δ27.00000°, λ104.00000°. NP2: φs76.00000°, δ64.00000°, λ83.00000°. Principal axes: T 4.4800, Plg70.0000°, Azm332.0000°; N -0.3790, Plg6.0000°, Azm79.0000°; P -4.1060, Plg19.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 12 13:04:43.3±0.6**, 51.19N**±0.05×**179.39E**±0.03**, h39**km±4km**, h14**km±4.4km**:pP-P, n444,** σ0.69/446**, mb4.8**/113**, MS4.5**/26**, 87C-90D, Rat Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
AMKA Amchitka 0.20 344 P **Pn** **13 04 48.8 -1.7**
AMKA S **Sn** **13 04 53.9 -1.7**
ADK Adak 2.55 73 P **Pn** **13 05 22.3 +0.1**
ADK S **Sn** **13 05 53.4 +1.5**
ADK Adak 2.55 73 P **Pn** **13 05 22.2 +0.1**
ADK S **Sn** **13 05 53.4 +1.5**
SMY Shemya 3.62 297 *e*P **Pn** **13 05 40.8 +4.0**
UNV Unalaska Valle 9.01 67 P **Pn** **13 06 51.5 +0.8**
AKUT Akutan 9.49 66 *e*Pn **Pn** **13 06 55.0 -2.2**
203nm,1.1s
PET Petropavlovsk 12.87 286 *e*P **Pn** **13 07 46.2 +2.7**
PET *e*S **Sn** **13 10 08.1 +2.8**
PET pmax pmax
comp=Z,7.0nm,0.7s
GAMB Gambell 13.48 17 *e*Pn **Pn** **13 07 55.1 +3.3**
TNA Tin City 15.82 20 *e*P **Pn** **13 08 25.5 +2.7**
comp=Z,153nm,1.9s
SVW2 Sparrevohn 17.00 45 *e*P **Pn** **13 08 36.9 -0.9**
KDAK Kodiak Island 17.48 57 Pn **Pn** **13 08 40.0 -3.8**
comp=Z,3.0nm,0.3s,baz=199,slow=4.1,SNR=28
TTA Tatalina 17.67 39 *e*P **Pn** **13 08 47.9 +1.8**
BILL Bilibino 18.08 344 *e*P **Pn** **13 08 52.4 +1.3**
comp=Z,20nm,0.7s
BILL Bilibino 18.08 344 *e*P **Pn** **13 08 52.3 +1.2**
BILL pmax pmax
comp=Z,34nm,1.6s
BILL MLR MLR
comp=Z,700nm,18.0s
MA2 Magadan 18.17 309⇑*e*P **Pn** **13 08 48.2 -4.1**
MA2 pmax pmax
comp=Z,10.0nm,1.3s
SLKM Skilak Lake 19.28 49 *e*P **Pn** **13 09 05.8 +0.2**
PMR Palmer 20.09 47 *e*P **P** **13 09 11.7 -1.5**
comp=Z,63nm,1.8s
PMR Palmer 20.09 47 *e*P **P** **13 09 11.7 -1.4**
PMR pmax pmax
comp=Z,63nm,1.8s
IMA2 Indian Mountai 20.21 32 *e*P **P** **13 09 15.3 +0.9**
MCK McKinley 20.89 41 *e*P **P** **13 09 21.6 -0.1**
comp=Z,46nm,1.3s
MCK McKinley 20.89 41 *e*P **P** **13 09 21.6 -0.2**
MCK pmax pmax
comp=Z,46nm,1.3s
COLA College 21.77 39 *e*P **P** **13 09 31.4 +0.2**
comp=Z,14nm,0.8s,mb4.4
COLA College 21.77 39⇓*i*P **P** **13 09 31.5 +0.3**
MENT Mentasta 22.89 45 *e*P **P** **13 09 43.2 +0.1**
YSS Yuzh-Sakhalins 24.20 274 *e*P **P** **13 09 56.3 +0.4**
comp=Z,24nm,0.9s,mb4.6
YSS Yuzh-Sakhalins 24.20 274 *e*P **P** **13 09 56.0 +0.1**
YSS pmax pmax
comp=Z,50nm,1.2s,mb4.8
EGAK Eagle 24.44 41 *e*P **P** **13 09 57.0 -0.9**
comp=Z,23nm,0.8s,mb4.7
DAWY Dawson 25.03 43 *e*P **P** **13 10 01.5 -1.7**
ASAJ Asahikawa 25.56 268 P **P** **13 10 09.1 +0.8**
ASAJ pmax pmax
comp=Z,52nm,0.9s
ASAJ MLR MLR
comp=Z,352nm,20.3s
ASAJ Asahikawa 25.56 268 P **P** **13 10 09.1 +0.8**
comp=Z,52nm,0.9s,mb5.0,baz=71,slow=10,SNR=14
ASAJ LR LR 13 18 19.8
comp=Z,352nm,20.3s,MS3.9,baz=108,slow=32
INK Inuvik 28.27 35 *e*P **P** **13 10 30.9 -1.5**
comp=Z,544nm,1.0s
INK Inuvik 28.27 35 P **P** **13 10 31.6 -0.8**
INK 13 13 43.6
INK pmax pmax
comp=Z,1.0nm,0.3s
INK pmax pmax
comp=Z,2.0nm,0.7s
INK MLR MLR
comp=Z,442nm,18.7s
INK Inuvik 28.27 35 P **P** **13 10 31.6 -0.8**
comp=Z,1.2nm,0.3s,mb4.0,baz=247,slow=9.4,SNR=14
INK PcP PcP 13 13 43.6 -0.8
comp=Z,2.2nm,0.7s,baz=223,slow=2.1,SNR=5.9
INK LR LR 13 23 46.0
comp=Z,442nm,18.7s,MS4.1,baz=65,slow=41
YAK Yakutsk 28.69 311*c i*P **P** **13 10 34.8 -1.4**
YAK pmax pmax
comp=Z,35nm,1.3s,mb4.9
KLR Kul'dur 30.14 285⇓*i*P **P** **13 10 45.8 -3.3**
KLR pmax pmax
comp=E,43nm,1.2s
KLR pmax pmax
comp=Z,80nm,1.2s,mb5.3
TIXI Tiksi 30.25 331 *e*P **P** **13 10 48.0 -1.8**
comp=Z,53nm,2.8s,mb4.8
TIXI Tiksi 30.25 331 *e*P **P** **13 10 50.7 +0.9**
TIXI *i* 13 13 49.3
TIXI pmax pmax
comp=Z,4.0nm,1.2s,mb4.0
TIXI pmax pmax
comp=Z,6.0nm,1.3s,mb4.2
MJAR Matsushiro Arr 32.63 260 P **P** **13 11 11.6 +0.4**
comp=Z,3.1nm,0.9s,mb4.2,baz=60,slow=7.6,SNR=4.5
MJAR LR LR 13 21 34.9
comp=Z,280nm,21.1s,MS3.9,baz=320,slow=31
MDJ Mudanjiang 33.48 279 P **P** **13 11 18.4 -0.1**
MDJ AP pP 13 11 24.4 -5.0
MDJ XP sP 13 11 27.2 -7.0
MDJ PP PP 13 12 33.5 -1.0
MDJ S **S** **13 16 38.7 +1.5**
MDJ XS sS 13 16 49.3 -6.1
MDJ SCP ScP 13 17 43.0 +3.3
MDJ PCS PcS 13 17 45.5 +1.2
MDJ AMB AMB
comp=Z,11nm,0.9s,mb4.8
MDJ LR LR
comp=N,156nm,25.8s,MS3.9
MDJ LR LR
comp=E,229nm,22.2s,MS3.9
MDJ LR LR
comp=Z,319nm,22.2s,MS4.0
YKW3 Yellowknife Ar 36.17 46 *e*P **P** **13 11 40.4 -1.0**
YKA Yellowknife Ar 36.19 46 P **P** **13 11 40.6 -1.0**
YKA PcP PcP 13 14 06.3 +0.1
YKA ScP ScP 13 17 51.4 +2.2
YKA LR LR 13 28 07.7
YKA Yellowknife Ar 36.19 46 P **P** **13 11 40.6 -1.0**
YKA 13 14 06.3
YKA Yellowknife Ar 36.19 46 P **P** **13 11 40.6 -1.0**
comp=Z,4.6nm,0.6s,mb4.6,baz=282,slow=8.1,SNR=73
YKA PcP PcP 13 14 06.3 +0.1
comp=Z,1.5nm,0.8s,baz=296,slow=3.3,SNR=7.1
YKA ScP ScP 13 17 51.4 +2.2
comp=Z,0.5nm,0.6s,baz=294,slow=3.4,SNR=8.9
YKA LR LR 13 28 07.7
comp=Z,864nm,18.6s,MS4.5,baz=240,slow=39
A05A Maple Falls 36.76 70 ⇑P **P** **13 11 46.9 +0.3**
baz=37
C04A Brinnon 36.81 72 ⇓P **P** **13 11 47.4 +0.3**
baz=37
B05A Bryant 37.08 71 ⇑P **P** **13 11 49.6 +0.2**
baz=37
BOD Bodaibo 37.18 306 *e*P **P** **13 11 49.0 -1.1**
BOD pmax pmax
comp=Z,21nm,0.8s,mb5.0
HIA Hailar 37.30 291 *e*P **P** **13 11 50.0 -1.2**
comp=Z,32nm,1.2s,mb5.0
HIA Hailar 37.30 291 *e*P **P** **13 11 50.0 -1.2**
HIA pmax pmax
comp=Z,32nm,1.2s
D05A Enumclaw 37.65 72 ⇑P **P** **13 11 54.6 +0.4**
baz=38
A07A Ashnola River, 37.74 69 ⇓P **P** **13 11 55.3 +0.4**
baz=38
F04A Amboy 38.00 74 ⇓P **P** **13 11 57.2 +0.1**
baz=38
H03A Soap Creek Ran 38.10 77 ⇓P **P** **13 11 58.4 +0.3**
baz=38
B07A Winthrop 38.16 70 ⇑P **P** **13 11 58.7 +0.2**
baz=38
G04A Mulino 38.32 76 ⇓P **P** **13 12 00.2 +0.2**
baz=38
D06A Cle Elum 38.33 72 ⇑P **P** **13 12 00.1 +0.2**
baz=38
KSRS Korea Array 38.50 270 P **P** **13 12 02.0 +0.5**
comp=Z,6.0nm,0.9s,mb4.3,baz=57,slow=8.2,SNR=11
KSRS PcP PcP 13 14 14.2 +0.4
comp=Z,1.7nm,0.8s,baz=20,slow=2.0,SNR=4.9
KSRS LR LR 13 26 43.4
comp=Z,217nm,19.3s,MS4.0,baz=195,slow=34
C07A Waterville 38.56 71 ⇑P **P** **13 12 02.0 +0.2**
baz=38
E06A Yakima 38.56 73 ⇓P **P** **13 12 02.2 +0.3**
baz=38
B08A Colville Reser 38.67 69 ⇓P **P** **13 12 03.2 +0.4**
baz=39
H04A Detroit Lake 38.77 76 ⇓P **P** **13 12 04.0 +0.3**
baz=39
A09A Danville 38.82 68 ⇑P **P** **13 12 04.2 +0.2**
baz=39
D07A Quincy 38.85 71 P **P** **13 12 05.0 +0.6**
baz=39,SNR=5.1
J03A Ideyld Park 38.98 78 ⇓P **P** **13 12 05.7 +0.2**
baz=39
G05A Wamic 39.01 75 ⇑P **P** **13 12 05.8 +0.1**
baz=39
F06A Goldendale 39.07 74 ⇓P **P** **13 12 06.3 +0.1**
baz=39
M01C Crescent City 39.09 81 ⇑P **P** **13 12 06.7 +0.2**
baz=39
I04A Tendick Farm, 39.10 77 ⇓P **P** **13 12 06.6 +0.1**
baz=39
B09A Rice 39.34 69 ⇓P **P** **13 12 08.5 +0.2**
baz=39
A10A Northport 39.42 68 ⇑P **P** **13 12 09.0 0.0**
baz=39
G06A Carlson Farm, 39.43 74 ⇓P **P** **13 12 09.1 -0.1**
baz=39

HAWA	**Hanford**	**39.51**	**72**	eP	**P**	**13 12 10.2**	**+0.4**
	comp=Z,16nm,0.8s,mb4.8						
F07A	**Phinny Hill Vi**	**39.52**	**73**	⇑P	**P**	**13 12 09.8**	**-0.1**
	baz=39						
D08A	**Wollman Farm,**	**39.54**	**71**	⇑P	**P**	**13 12 10.0**	**-0.1**
	baz=39						
C09A	**Chrisman Ranch**	**39.56**	**70**	⇑P	**P**	**13 12 10.4**	**+0.2**
	baz=39						
J04A	**Umpqua Nationa**	**39.58**	**78**	⇓P	**P**	**13 12 10.2**	**-0.2**
	baz=40						
I05A	**Bend**	**39.60**	**76**	⇓P	**P**	**13 12 10.5**	**-0.1**
	baz=40						
CIT	**Chita**	**39.63**	**298**	eP	**P**	**13 12 10.9**	**+0.1**
CIT				e		13 12 17.7	
CIT				e		13 13 39.7	
CIT				e		13 18 12.3	
CIT				pmax	pmax		
	comp=Z,75nm,2.6s,mb5.0						
G07A	**Ruggs Ranch, H**	**40.00**	**74**	⇓P	**P**	**13 12 14.0**	**+0.1**
	baz=40						
NEW	**Newport**	**40.02**	**68**	eP	**P**	**13 12 13.8**	**-0.2**
	comp=Z,3.8nm,0.6s,mb4.3						
NEW	**Newport**	**40.02**	**68**	eP	**P**	**13 12 13.8**	**-0.2**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YBH	**Yreka Blue Hor**	**40.03**	**80**	eP	**P**	**13 12 14.6**	**+0.3**
YBH	**Yreka Blue Hor**	**40.03**	**80**	⇑P	**P**	**13 12 14.6**	**+0.3**
	baz=40						
J05A	**Fort Rock**	**40.09**	**77**	⇑P	**P**	**13 12 14.8**	**+0.1**
	baz=40						
A11A	**Hall Mountain,**	**40.12**	**67**	⇓P	**P**	**13 12 15.0**	**+0.1**
	baz=40,SNR=6.3						
E09A	**Wood Farm, Sta**	**40.28**	**71**	⇑P	**P**	**13 12 16.3**	**+0.1**
	baz=40						
I06A	**Prineville**	**40.37**	**76**	⇑P	**P**	**13 12 17.1**	**+0.1**
	baz=40						
B11A	**Sandpoint**	**40.37**	**68**	⇑P	**P**	**13 12 17.0**	**0.0**
	baz=40						
RES	**Resolute Bay**	**40.39**	**24**	eP	**P**	**13 12 16.9**	**+0.1**
	comp=Z,232nm,1.1s,mb5.8						
RES	**Resolute Bay**	**40.39**	**24**	eP	**P**	**13 12 16.9**	**+0.1**
RES				pmax	pmax		
	comp=Z,232nm,1.1s,mb5.8						
G08A	**Pilot Rock**	**40.41**	**73**	⇓P	**P**	**13 12 17.6**	**+0.2**
	baz=40						
D10A	**Wagner Farm, O**	**40.52**	**70**	P	**P**	**13 12 17.6**	**-0.6**
	baz=40,SNR=8.7						
M04C	**Macdoel**	**40.55**	**80**	⇓P	**P**	**13 12 19.1**	**+0.6**
	baz=40						
K05A	**Summer Lake**	**40.61**	**78**	⇓P	**P**	**13 12 19.5**	**+0.6**
	baz=40						
M03C	**McCloud**	**40.66**	**81**	⇓P	**P**	**13 12 19.5**	**+0.1**
	baz=40						
I07A	**Izee**	**40.72**	**75**	⇑P	**P**	**13 12 20.0**	**+0.1**
	baz=41						
J06A	**Christmas Vall**	**40.77**	**77**	⇑P	**P**	**13 12 20.4**	**+0.1**
	baz=41						
B12A	**Libby**	**40.81**	**67**	⇑P	**P**	**13 12 21.0**	**+0.4**
	baz=41						
F09A	**S2 Ranch, Elgi**	**40.83**	**72**	⇑P	**P**	**13 12 21.0**	**+0.2**
	baz=41						
E10A	**Myers Farm, Un**	**40.91**	**71**	P	**P**	**13 12 21.5**	**+0.1**
	baz=41,SNR=7.8						
P01C	**Double 8 Ranch**	**40.94**	**84**	⇓P	**P**	**13 12 21.9**	**+0.1**
	baz=41						
K06A	**Valley Falls**	**40.96**	**77**	⇓P	**P**	**13 12 22.0**	**+0.1**
	baz=41						
L05A	**Lakeview**	**41.02**	**79**	⇓P	**P**	**13 12 22.6**	**+0.2**
	baz=41						
F10A	**Beach Ranch, E**	**41.10**	**72**	⇑P	**P**	**13 12 23.2**	**+0.2**
	baz=41						
M05C	**Lookout**	**41.22**	**80**	⇓P	**P**	**13 12 24.7**	**+0.7**
	baz=41						
J07A	**Hines**	**41.22**	**76**	⇓P	**P**	**13 12 24.1**	**+0.1**
	baz=41,SNR=5.3						
A13A	**Flathead Natio**	**41.26**	**66**	⇓P	**P**	**13 12 24.5**	**+0.2**
	baz=41						
HATC	**Hat Creek Radi**	**41.33**	**81**	⇑P	**P**	**13 12 25.2**	**+0.2**
	baz=41						
I08A	**Drewsey**	**41.38**	**75**	⇑P	**P**	**13 12 25.4**	**+0.1**
	baz=41						
MOD	**Modoc**	**41.43**	**79**	eP	**P**	**13 12 26.0**	**+0.3**
	comp=Z,7.5nm,0.8s,mb4.4						
MOD	**Modoc**	**41.43**	**79**	⇓P	**P**	**13 12 26.1**	**+0.4**
	baz=41						
WALA	**Waterton Lakes**	**41.49**	**66**	eP	**P**	**13 12 25.2**	**-1.0**
	comp=Z,11nm,1.0s,mb4.4						
B13A	**Whitefish**	**41.51**	**67**	⇓P	**P**	**13 12 26.1**	**-0.2**
	baz=41						
E11A	**Bogner Ranch,**	**41.51**	**70**	⇓P	**P**	**13 12 25.8**	**-0.5**
	baz=41						
H09A	**Durkee**	**41.52**	**73**	⇑P	**P**	**13 12 26.6**	**+0.1**
	baz=41						
BSMT	**Bassoo Peak**	**41.58**	**68**	eP	**P**	**13 12 27.1**	**+0.2**
K07A	**Rock Creek Ran**	**41.64**	**77**	⇑P	**P**	**13 12 27.4**	**-0.1**
	baz=42,SNR=9.0						
BMO	**Blue Mountains**	**41.64**	**73**	eP	**P**	**13 12 27.9**	**+0.5**
	comp=Z,57nm,2.3s,mb4.8						
D12A	**Red Ives Fores**	**41.66**	**69**	⇓P	**P**	**13 12 27.6**	**+0.1**
	baz=42						
M06C	**Likely Place G**	**41.72**	**80**	⇑P	**P**	**13 12 28.3**	**+0.2**
	baz=42						
J08A	**Circle Bar Ran**	**41.74**	**76**	⇓P	**P**	**13 12 28.1**	**-0.2**
	baz=42						
F11A	**Grangeville**	**41.78**	**71**	⇓P	**P**	**13 12 28.4**	**-0.2**
	baz=42						
C13A	**Hot Springs**	**41.79**	**68**	⇓P	**P**	**13 12 28.3**	**-0.4**
	baz=42						
O04C	**Chester**	**41.85**	**81**	⇑P	**P**	**13 12 29.4**	**+0.2**
	baz=42,SNR=6.7						
ELFS	**Eagle Lake Fie**	**41.90**	**80**	⇓P	**P**	**13 12 30.1**	**+0.5**
	baz=42						
L07A	**Adell**	**41.96**	**78**	⇓P	**P**	**13 12 30.3**	**+0.2**
	baz=42,SNR=7.1						
G11A	**Walters Elk Ra**	**41.97**	**72**	P	**P**	**13 12 30.2**	**+0.1**
	baz=42,SNR=11						
K08A	**Mann Creek Ran**	**42.08**	**76**	⇓P	**P**	**13 12 31.3**	**+0.2**
	baz=42,SNR=6.1						
D13A	**Huson**	**42.16**	**69**	⇓P	**P**	**13 12 31.3**	**-0.4**
	baz=42						
O05C	**Quincy**	**42.16**	**81**	⇓P	**P**	**13 12 32.3**	**+0.5**
	baz=42						
J09A	**Fry Pan Ranch,**	**42.19**	**75**	⇑P	**P**	**13 12 31.8**	**-0.1**
	baz=42,SNR=5.8						
C14A	**Swan Lake**	**42.23**	**67**	⇓P	**P**	**13 12 32.0**	**-0.2**
	baz=42						
I10A	**Payette**	**42.36**	**74**	⇓P	**P**	**13 12 33.4**	**+0.1**
	baz=42						
N06A	**Buffalo Meadow**	**42.38**	**80**	⇑P	**P**	**13 12 33.3**	**-0.2**
	baz=42						
F12A	**Elk City**	**42.39**	**71**	P	**P**	**13 12 33.5**	**0.0**
	baz=42,SNR=20						
M07A	**Soldier Meadow**	**42.42**	**78**	⇓P	**P**	**13 12 34.5**	**+0.7**
	baz=42,SNR=15						
L08A	**Fields**	**42.47**	**77**	P	**P**	**13 12 35.0**	**+0.8**
	baz=42,SNR=7.6						
H11A	**Donnelly**	**42.50**	**72**	P	**P**	**13 12 34.8**	**+0.4**
	baz=42,SNR=5.6						
K09A	**Rome**	**42.56**	**76**	⇑P	**P**	**13 12 34.9**	**-0.1**
	baz=42						
BEKR	**Beckwourth**	**42.57**	**81**	⇓P	**P**	**13 12 34.7**	**-0.4**
	baz=42						
MSO	**Missoula**	**42.60**	**69**	eP	**P**	**13 12 35.4**	**+0.1**
	comp=Z,9.5nm,1.0s,mb4.5						
E13A	**Victor**	**42.66**	**69**	P	**P**	**13 12 35.7**	**0.0**
	baz=42,SNR=7.5						
D14A	**Greenough**	**42.72**	**68**	P	**P**	**13 12 36.0**	**-0.3**
	baz=43,SNR=7.8						
P05C	**Yuba Gap, Truc**	**42.75**	**82**	⇑P	**P**	**13 12 36.4**	**-0.1**
	baz=43						
M08A	**Happy Creek Ra**	**42.87**	**78**	⇑P	**P**	**13 12 37.4**	**-0.1**
	baz=43						
N07B	**Gerlach**	**42.89**	**79**	P	**P**	**13 12 38.9**	**+1.2**
	baz=43,SNR=5.2						
F13A	**Darby**	**42.92**	**70**	P	**P**	**13 12 37.6**	**-0.2**
	baz=43,SNR=9.8						
CHMT	**Chamberlain Mo**	**42.96**	**68**	eP	**P**	**13 12 37.8**	**-0.3**
L09A	**Wilkinson Ranc**	**42.98**	**77**	⇑P	**P**	**13 12 38.5**	**+0.1**
	baz=43						
K10A	**MacKenzie Ranc**	**43.04**	**75**	P	**P**	**13 12 39.4**	**+0.5**
	baz=43,SNR=8.0						
E14A	**Clinton**	**43.08**	**69**	⇑P	**P**	**13 12 39.3**	**+0.2**
	baz=43						
H12A	**Diamond D Ranc**	**43.28**	**72**	P	**P**	**13 12 40.5**	**-0.2**
	baz=43,SNR=9.2						
WCN	**Washoe City**	**43.28**	**81**	⇓P	**P**	**13 12 40.7**	**-0.1**
	baz=43						
O07A	**Toulon**	**43.31**	**80**	⇑P	**P**	**13 12 40.8**	**-0.2**
	baz=43						
MFID	**Camas Ranch**	**43.32**	**74**	⇓P	**P**	**13 12 40.7**	**-0.4**
	baz=43						
D15A	**Lincoln**	**43.32**	**68**	⇓P	**P**	**13 12 40.8**	**-0.3**
	baz=43						
G13A	**Cobalt**	**43.35**	**71**	P	**P**	**13 12 41.2**	**-0.1**
	baz=43,SNR=22						
N08A	**GE Springer Mi**	**43.41**	**79**	⇓P	**P**	**13 12 41.5**	**-0.4**
	baz=43,SNR=6.5						
R05C	**Kirkwood Meado**	**43.44**	**82**	⇑P	**P**	**13 12 42.2**	**+0.1**
	baz=43						
M09A	**Marrel Ranch,**	**43.46**	**77**	⇑P	**P**	**13 12 42.7**	**+0.5**
	baz=43						
F14A	**Wisdom**	**43.47**	**70**	P	**P**	**13 12 42.6**	**+0.3**
	baz=43,SNR=6.0						
E15A	**Deer Lodge**	**43.58**	**68**	P	**P**	**13 12 42.9**	**-0.2**
	baz=43,SNR=6.2						
H13A	**Challis**	**43.63**	**72**	P	**P**	**13 12 43.6**	**+0.1**
	baz=44,SNR=5.0						
L10A	**Juniper Basin**	**43.68**	**76**	P	**P**	**13 12 44.7**	**+0.7**
	baz=44,SNR=7.6						
G14A	**Jackson**	**43.73**	**70**	⇑P	**P**	**13 12 43.4**	**-1.0**
	baz=44						
N09A	**Rock Creek Ran**	**43.74**	**78**	⇓P	**P**	**13 12 44.9**	**+0.3**
	baz=44						
J12A	**Stokes Ranch,**	**43.85**	**74**	P	**P**	**13 12 46.0**	**+0.6**
	baz=44,SNR=7.0						
HAST	**UC Hastings Re**	**43.94**	**86**	⇓P	**P**	**13 12 46.1**	**-0.1**
	baz=44						
WAKR	**Walker**	**43.95**	**82**	eP	**P**	**13 12 46.5**	**+0.2**
M10A	**I.L. Ranch, Tu**	**43.96**	**77**	⇓P	**P**	**13 12 46.6**	**+0.3**
	baz=44,SNR=7.9						
F15A	**Butte**	**43.98**	**69**	⇓P	**P**	**13 12 46.1**	**-0.3**
	baz=44						
LRM	**Limekiln Ridge**	**44.01**	**69**	eP	**P**	**13 12 46.5**	**-0.1**
I13A	**Wildhorse Cree**	**44.07**	**72**	P	**P**	**13 12 47.4**	**+0.2**
	baz=44,SNR=21						
HLID	**Hailey**	**44.09**	**73**	eP	**P**	**13 12 47.5**	**+0.2**
	comp=Z,15nm,1.0s,mb4.7						
HLID	**Hailey**	**44.09**	**73**	P	**P**	**13 12 47.5**	**+0.3**
	baz=44,SNR=19						
BJI	**Beijing**	**44.30**	**281**	P	**P**	**13 12 45.9**	**-3.1**
BJI				PP	PP	13 14 28.4	-4.1
BJI				S	**S**	**13 19 18.8**	**-1.2**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.5						
BJI				AMB	AMB		
	comp=Z,350nm,4.8s						
BJI				LR	LR		
	comp=N,476nm,16.0s,MS4.8						
BJI				LR	LR		
	comp=E,887nm,15.0s,MS4.8						
BJI				LR	LR		
	comp=Z,299nm,20.3s						
K12A	**Draper Farm, C**	**44.32**	**74**	P	**P**	**13 12 49.7**	**+0.6**
	baz=44,SNR=9.0						
MCMT	**McKenzie Canyo**	**44.32**	**71**	eP	**P**	**13 12 48.5**	**-0.6**
J13A	**Cove Ranch, Pi**	**44.32**	**73**	P	**P**	**13 12 49.6**	**+0.4**
	baz=44,SNR=16						
G15A	**Dillon**	**44.35**	**70**	P	**P**	**13 12 49.1**	**-0.2**
	baz=44,SNR=12						
O09A	**Fish Creek Ran**	**44.35**	**79**	⇓P	**P**	**13 12 49.8**	**+0.3**
	baz=44						
EGMT	**Eagleton**	**44.40**	**65**	eP	**P**	**13 12 49.9**	**+0.2**
	comp=Z,10nm,0.7s,mb4.7						
EGMT	**Eagleton**	**44.40**	**65**	⇑P	**P**	**13 12 49.4**	**-0.3**
	baz=44						
R07C	**Lee Vining**	**44.45**	**82**	⇑P	**P**	**13 12 50.6**	**+0.3**
	baz=44						
M11A	**Holland Ranch,**	**44.47**	**76**	P	**P**	**13 12 51.6**	**+1.3**
	baz=44,SNR=8.1						
L12A	**House Creek Ra**	**44.53**	**75**	P	**P**	**13 12 51.6**	**+0.8**
	baz=44,SNR=11						
BOZ	**Bozeman (W)**	**44.59**	**69**	⇑P	**P**	**13 12 51.4**	**+0.2**
	baz=44						
Q08A	**Gabbs**	**44.68**	**81**	⇓P	**P**	**13 12 52.1**	**0.0**
	baz=44,SNR=7.5						
O10A	**Cortez Mining,**	**44.70**	**78**	⇑P	**P**	**13 12 52.6**	**+0.3**
	baz=45						
T06C	**Millerton Lake**	**44.71**	**84**	⇑P	**P**	**13 12 52.5**	**+0.2**
	baz=45						
NVAR	**Mina Array Bea**	**44.71**	**81**	P	**P**	**13 12 53.0**	**+0.7**
	comp=Z,2.6nm,0.8s,mb4.1,baz=298,slow=5.7,SNR=19						
P09A	**Austin**	**44.75**	**79**	⇓P	**P**	**13 12 52.8**	**+0.2**
	baz=45,SNR=6.4						
KCC	**Kaiser Creek**	**44.75**	**83**	⇓P	**P**	**13 12 52.6**	**-0.1**
	baz=45						
K13A	**Stover Farm, H**	**44.80**	**74**	⇓P	**P**	**13 12 53.2**	**+0.2**
	baz=45						
M12A	**Wells**	**45.01**	**76**	⇓P	**P**	**13 12 54.9**	**+0.2**
	baz=45,SNR=5.4						
P10A	**Eureka**	**45.13**	**79**	⇑P	**P**	**13 12 56.1**	**+0.5**
	baz=45						
QLMT	**Earthquake Lak**	**45.16**	**70**	eP	**P**	**13 12 56.0**	**+0.2**
Q09A	**Carvers**	**45.16**	**80**	⇓P	**P**	**13 12 56.2**	**+0.3**
	baz=45						
TLY	**Talaya**	**45.20**	**302**	eP	**P**	**13 12 56.1**	**0.0**
	comp=Z,4.3nm,0.6s,mb4.5						
TLY	**Talaya**	**45.20**	**302**	eP	**P**	**13 12 56.3**	**+0.3**
TLY				ePPP		13 14 45.4	
TLY				e		13 22 43.9	
TLY				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
TLY				MLR	MLR		
	comp=Z,691nm,18.0s,MS4.6						
MTUM	**Tungsten Hills**	**45.21**	**83**	eP	**P**	**13 12 56.4**	**+0.1**
ELK	**Elko**	**45.21**	**77**	eP	**P**	**13 12 56.9**	**+0.6**
	comp=Z,4.5nm,0.8s,mb4.3						
ELK	**Elko**	**45.21**	**77**	eP	**P**	**13 12 56.9**	**+0.6**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
L13A	**Double Diamond**	**45.21**	**74**	P	**P**	**13 12 56.9**	**+0.7**
	baz=45,SNR=14						
N12A	**Clover Valley,**	**45.27**	**76**	⇓P	**P**	**13 12 56.9**	**+0.2**
	baz=45,SNR=9.6						
O11A	**Cowboy Ranch,**	**45.32**	**78**	⇑P	**P**	**13 12 57.0**	**-0.1**
	baz=45						
ULN	**Ulaanbaatar**	**45.32**	**296**	eP	**P**	**13 12 57.5**	**+0.5**
	comp=Z,7.3nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**45.32**	**296**	c iP	**P**	**13 12 57.3**	**+0.3**
HELL	**Mitchell Peak,**	**45.34**	**84**	P	**P**	**13 12 57.2**	**-0.1**
	baz=45,SNR=9.1						
S08C	**White Mtn Res**	**45.36**	**82**	⇑P	**P**	**13 12 57.5**	**0.0**
	baz=45,SNR=5.9						
K14A	**Jones Ranch, D**	**45.41**	**73**	⇑P	**P**	**13 12 58.0**	**+0.2**
	baz=45						
M13A	**Montello**	**45.50**	**75**	P	**P**	**13 12 59.0**	**+0.5**
	baz=45,SNR=8.0						
YMR	**Madison River**	**45.52**	**70**	eP	**P**	**13 12 58.2**	**-0.5**
	comp=Z,25nm,1.0s,mb5.1						
R09A	**Tonopah**	**45.59**	**81**	P	**P**	**13 12 59.5**	**+0.3**
	baz=46,SNR=15						
P11A	**Circle Ranch,**	**45.60**	**78**	⇓P	**P**	**13 12 59.3**	**-0.1**
	baz=46						
Q10A	**Clear Creek Ra**	**45.65**	**80**	P	**P**	**13 13 00.7**	**+0.9**
	baz=46,SNR=7.8						
YNR	**Norris Junctio**	**45.66**	**69**	eP	**P**	**13 13 00.8**	**+1.0**
SONM	**Songino Array**	**45.71**	**296**	P	**P**	**13 13 00.8**	**+0.7**
	comp=Z,5.2nm,0.9s,mb4.5,baz=63,slow=7.9,SNR=36						
SONM				LR	LR	13 33 57.3	
	comp=Z,729nm,18.0s,MS4.7,baz=262,slow=38						
YFT	**Old Faithful**	**45.72**	**70**	eP	**P**	**13 13 00.9**	**+0.7**
N13A	**Wendover, West**	**45.78**	**76**	⇑P	**P**	**13 13 00.9**	**+0.2**
	baz=46						
O12A	**Currie**	**45.80**	**77**	P	**P**	**13 13 01.3**	**+0.4**
	baz=46,SNR=17						
S09A	**Goldfield**	**45.81**	**81**	P	**P**	**13 13 01.1**	**+0.1**
	baz=46,SNR=5.2						
LKWY	**Lake**	**45.91**	**69**	eP	**P**	**13 13 02.4**	**+0.7**
	comp=Z,12nm,0.8s,mb4.9						
LKWY	**Lake**	**45.91**	**69**	eP	**P**	**13 13 02.4**	**+0.6**
LKWY				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
M14A	**Sheep Mountain**	**45.92**	**75**	⇑P	**P**	**13 13 01.7**	**-0.1**
	baz=46,SNR=7.8						
IMW	**Indian Meadow**	**45.98**	**71**	eP	**P**	**13 13 02.6**	**+0.3**
	comp=Z,13nm,0.9s,mb4.9						
R10A	**Warm Springs**	**46.04**	**80**	⇑P	**P**	**13 13 02.7**	**-0.1**
	baz=46						
ZAK	**Zakamensk**	**46.07**	**300**	eP	**P**	**13 13 03.4**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.4						
CWC	**Cottonwood Cre**	**46.08**	**83**	⇑P	**P**	**13 13 02.9**	**-0.2**
	baz=46						
S10A	**Tonopah Range,**	**46.08**	**81**	⇓P	**P**	**13 13 02.9**	**-0.3**
	baz=46,SNR=8.5						
Q11A	**Duckwater**	**46.10**	**79**	⇓P	**P**	**13 13 03.3**	**0.0**
	baz=46,SNR=6.5						
HVU	**Hansel Valley**	**46.10**	**74**	eP	**P**	**13 13 03.7**	**+0.5**
	comp=Z,7.6nm,0.9s,mb4.6						
HVU	**Hansel Valley**	**46.10**	**74**	eP	**P**	**13 13 03.7**	**+0.4**
HVU				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
MOOW	**Moose Ponds**	**46.17**	**71**	eP	**P**	**13 13 04.0**	**+0.2**
	comp=Z,7.1nm,1.0s,mb4.5						
P12A	**McGill**	**46.17**	**78**	⇑P	**P**	**13 13 03.8**	**-0.1**
	baz=46,SNR=7.5						
TPAW	**Teton Pass**	**46.20**	**71**	eP	**P**	**13 13 04.2**	**+0.2**
	comp=Z,6.0nm,0.7s,mb4.6						
ISA	**Isabella**	**46.33**	**84**	⇑P	**P**	**13 13 04.7**	**-0.4**
	baz=46						
REDW	**Red Top Meadow**	**46.33**	**71**	eP	**P**	**13 13 05.5**	**+0.5**
LOHW	**Long Hollow**	**46.34**	**71**	eP	**P**	**13 13 05.6**	**+0.5**
	comp=Z,5.8nm,0.9s,mb4.5						
O13A	**Hicks Ranch, I**	**46.35**	**77**	⇓P	**P**	**13 13 05.7**	**+0.5**
	baz=46						
N14A	**Grayback Hills**	**46.40**	**75**	P	**P**	**13 13 06.3**	**+0.7**
	baz=46,SNR=8.8						
R11A	**Troy Canyon, C**	**46.44**	**80**	P	**P**	**13 13 06.1**	**+0.1**
	baz=46,SNR=13						
TRCR	**Troy Canyon**	**46.44**	**80**	eP	**P**	**13 13 06.1**	**+0.1**
BGU	**Big Grassy Mou**	**46.45**	**75**	eP	**P**	**13 13 06.0**	**-0.1**
M15A	**Larsen Ranch,**	**46.48**	**74**	P	**P**	**13 13 07.0**	**+0.7**
	baz=46,SNR=8.9						
SPUT	**South Promonto**	**46.58**	**74**	eP	**P**	**13 13 07.2**	**+0.1**
HHC	**Hu-ho-hao-te**	**46.64**	**285**	eP	**P**	**13 13 08.2**	**+0.7**
HHC				AP	pP	13 13 14.2	-4.6
HHC				XP	sP	13 13 16.7	-6.8
HHC				PCP	PcP	13 14 43.3	+2.5
HHC				PP	PP	13 14 56.4	-0.9
HHC				eS	**S**	**13 19 53.7**	**-0.1**
HHC				XS	sS	13 20 04.1	-8.4
HHC				SCS	ScS	13 22 59.2	+0.5
HHC				SS	SS	13 23 11.2	-8.6
HHC				AMB	AMB		
	comp=Z,27nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,395nm,7.4s						
HHC				LR	LR		
	comp=N,363nm,17.8s,MS4.6						
HHC				LR	LR		
	comp=E,373nm,15.5s,MS4.6						
HHC				LR	LR		
	comp=Z,284nm,13.1s,MS4.4						
MPMC	**Manual Prospec**	**46.69**	**83**	⇑P	**P**	**13 13 08.2**	**+0.2**
	baz=47						
P13A	**Bates Ranch, G**	**46.73**	**77**	P	**P**	**13 13 08.8**	**+0.6**
	baz=47,SNR=11						
S11A	**Rachel**	**46.78**	**80**	⇓P	**P**	**13 13 08.8**	**+0.2**
	baz=47						
N15A	**Stansbury Isla**	**46.78**	**75**	⇑P	**P**	**13 13 08.8**	**+0.2**
	baz=47						
FURC	**Furnace Creek,**	**46.82**	**82**	P	**P**	**13 13 09.4**	**+0.4**
	baz=47,SNR=5.9						
OSI	**Osito Adit**	**46.84**	**86**	⇓P	**P**	**13 13 09.4**	**+0.2**
	baz=47						
TPNV	**Topopah Spring**	**46.90**	**82**	eP	**P**	**13 13 09.7**	**0.0**
	comp=Z,13nm,0.8s,mb4.9						
TPNV	**Topopah Spring**	**46.90**	**82**	eP	**P**	**13 13 09.7**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
TPNV	**Topopah Spring**	**46.90**	**82**	⇑P	**P**	**13 13 09.4**	**-0.3**
	baz=47						
FCC	**Fort Churchill**	**46.91**	**45**	eP	**P**	**13 13 07.5**	**-1.9**
	comp=Z,3.1nm,0.7s,mb4.3						
FCC	**Fort Churchill**	**46.91**	**45**	eP	**P**	**13 13 07.5**	**-1.9**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
HWUT	**Hardware Ranch**	**46.93**	**73**	eP	**P**	**13 13 10.0**	**+0.2**
	comp=Z,8.0nm,1.1s,mb4.6						
LRMC	**Laurel Mountai**	**46.94**	**84**	⇑P	**P**	**13 13 09.5**	**-0.4**
	baz=47						
BLG	**Laguna Peak**	**46.96**	**87**	⇑P	**P**	**13 13 10.0**	**-0.1**
	baz=47						
DUG	**Dugway**	**47.02**	**76**	eP	**P**	**13 13 10.7**	**+0.2**
	comp=Z,18nm,1.1s,mb4.9						
DUG	**Dugway**	**47.02**	**76**	eP	**P**	**13 13 10.7**	**+0.2**
DUG				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
DUG	**Dugway**	**47.02**	**76**	P	**P**	**13 13 11.0**	**+0.5**
	baz=47,SNR=11						
Q13A	**Wheeler Ranch,**	**47.04**	**78**	P	**P**	**13 13 11.4**	**+0.8**
	baz=47,SNR=14						
R12A	**Pony Springs,**	**47.06**	**79**	P	**P**	**13 13 11.3**	**+0.5**
	baz=47,SNR=5.8						
EDW2	**Edwards Air Fo**	**47.13**	**85**	⇑P	**P**	**13 13 11.5**	**0.0**
	baz=47						
S12A	**Delamar Landin**	**47.36**	**80**	⇓P	**P**	**13 13 13.5**	**+0.3**
	baz=47						
T11A	**Corn Creek, Al**	**47.36**	**81**	P	**P**	**13 13 13.4**	**+0.3**
	baz=47,SNR=13						
BW06	**Boulder Array**	**47.45**	**71**	eP	**P**	**13 13 13.4**	**-0.4**
	comp=Z,22nm,0.8s,mb5.2						
PDAR	**Pinedale Array**	**47.45**	**71**	P	**P**	**13 13 13.7**	**-0.2**
	comp=Z,18nm,0.7s,mb5.1,baz=301,slow=3.7,SNR=161						
GSC	**Goldstone**	**47.60**	**84**	P	**P**	**13 13 14.9**	**-0.1**
	baz=48,SNR=6.0						
JLU	**Jordanelle**	**47.60**	**74**	eP	**P**	**13 13 15.9**	**+0.9**
NJ2	**Nanjing**	**47.68**	**271**	eP	**P**	**13 13 17.6**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
BTO	**Baotou**	**47.73**	**286**	eP	**P**	**13 13 16.8**	**+0.8**
BFSC	**Mount Baldy St**	**47.76**	**85**	⇑P	**P**	**13 13 16.1**	**-0.2**
	baz=48						
DAU	**Daniels Canyon**	**47.84**	**75**	eP	**P**	**13 13 17.0**	**+0.1**
S13A	**Holt Ranch, En**	**47.99**	**79**	P	**P**	**13 13 18.1**	**0.0**
	baz=48,SNR=10						
BBRC	**Big Bear Sol-O**	**48.20**	**85**	⇑P	**P**	**13 13 19.8**	**+0.1**
	baz=48						
HEC	**Hector,Ludlow**	**48.20**	**84**	⇓P	**P**	**13 13 19.8**	**0.0**
	baz=48						
U12A	**Valley of Fire**	**48.29**	**81**	⇓P	**P**	**13 13 20.5**	**0.0**
	baz=48						
CCUT	**Cedar City**	**48.31**	**79**	eP	**P**	**13 13 20.8**	**+0.2**
MSU	**Marysvale**	**48.44**	**77**	eP	**P**	**13 13 21.7**	**+0.2**
V12A	**Nelson**	**48.55**	**82**	⇓P	**P**	**13 13 22.1**	**-0.2**
	baz=48						
TMUT	**Trail Mountain**	**48.55**	**76**	eP	**P**	**13 13 21.8**	**-0.6**
GMRC	**Granite Mounta**	**48.66**	**83**	⇑P	**P**	**13 13 22.8**	**-0.4**
	baz=48						
U13A	**Pakoon Wash**	**48.66**	**81**	⇑P	**P**	**13 13 22.5**	**-0.7**
	baz=48,SNR=7.0						
T14A	**Hurricane**	**48.80**	**79**	⇓P	**P**	**13 13 23.7**	**-0.6**
	baz=49						
PFO	**Pinyon Flat Ob**	**48.92**	**85**	eP	**P**	**13 13 24.8**	**-0.5**
	comp=Z,6.8nm,1.0s,mb4.6						
PFO	**Pinyon Flat Ob**	**48.92**	**85**	eP	**P**	**13 13 24.8**	**-0.5**
PFO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
PFO	**Pinyon Flat Ob**	**48.92**	**85**	⇓P	**P**	**13 13 24.4**	**-0.9**
	baz=49						
BELC	**Belle Mtn.**	**48.95**	**84**	⇓P	**P**	**13 13 24.2**	**-1.3**
	baz=49						
SRU	**San Rafael**	**49.08**	**75**	eP	**P**	**13 13 26.4**	**0.0**
	comp=Z,7.2nm,0.8s,mb4.8						
SRU	**San Rafael**	**49.08**	**75**	eP	**P**	**13 13 26.5**	**+0.1**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
U14A	**Mt Trumbull**	**49.14**	**80**	⇓P	**P**	**13 13 26.8**	**-0.1**
	baz=49						
T15A	**Red Dirt Ranch**	**49.26**	**79**	⇑P	**P**	**13 13 27.7**	**-0.1**
	baz=49						
NEE2	**Needles Airpor**	**49.31**	**83**	⇑P	**P**	**13 13 27.6**	**-0.7**
	baz=49						
IRM	**Iron Mountain**	**49.38**	**84**	⇓P	**P**	**13 13 28.1**	**-0.6**
	baz=49						
MONP	**Monument Peak**	**49.42**	**86**	⇑P	**P**	**13 13 28.7**	**-0.4**
	baz=49						
RWWY	**Rawlins**	**49.49**	**71**	eP	**P**	**13 13 29.5**	**0.0**
	comp=Z,18nm,0.9s,mb5.1						
BC3	**Big Chuckw Mtn**	**49.52**	**84**	⇑P	**P**	**13 13 29.0**	**-0.8**
	baz=49						
W13A	**Hualapai Mount**	**49.55**	**82**	⇓P	**P**	**13 13 29.7**	**-0.4**
	baz=49						
DVTC	**Desert V Tower**	**49.77**	**86**	⇑P	**P**	**13 13 31.1**	**-0.7**
	baz=50						
SWSC	**Sam W. Stewart**	**49.78**	**85**	⇓P	**P**	**13 13 31.5**	**-0.4**
	baz=50						
PDMCI	**Parker Dam,Lak**	**49.92**	**83**	⇓P	**P**	**13 13 32.2**	**-0.7**
	baz=50						
X13A	**Yucca**	**49.92**	**82**	⇑P	**P**	**13 13 32.3**	**-0.5**
	baz=50						
KBS	**Kingsbay**	**49.93**	**357**	eP	**P**	**13 13 32.3**	**-0.1**
	comp=Z,17nm,0.7s,mb5.2						
KBS	**Kingsbay**	**49.93**	**357**	⇑eP	**P**	**13 13 32.1**	**-0.3**

W14A Seligman 49.98 81 ⇓P P 13 13 32.6 -0.7
baz=50
Y12C Blythe 50.04 84 ⇓P P 13 13 33.1 -0.7
baz=50
GLA Glamis 50.31 84 ⇓P P 13 13 35.5 -0.4
baz=50
Y13A Salome 50.43 83 ⇓P P 13 13 36.4 -0.4
baz=50
X14A Yava 50.59 82 ⇓P P 13 13 38.0 +0.1
baz=50
ULM Lac du Bonnet 50.74 56 P P 13 13 36.5 -2.4
comp=Z,1.2nm,0.5s,mb4.1,baz=315,slow=4.9,SNR=5.4
ULM LR LR 13 35 27.7
comp=Z,310nm,20.5s,MS4.3,baz=309,slow=36
WUAZ Wupatki 50.84 80 *eP* **P 13 13 40.7 +0.9**
comp=Z,22nm,1.1s,mb5.0
Y14A Wickenburg 50.86 82 ⇓P P 13 13 39.6 -0.4
baz=51
PV01 Paradox Valley 50.88 75 *eP* **P 13 13 39.2 -0.9**
X15A Humboldt 50.98 81 ⇓P P 13 13 40.8 -0.1
baz=51
SMCO Snowmass 51.19 73 *eP* **P 13 13 42.0 -0.4**
MVCO Mesa Verde 51.52 76 *eP* **P 13 13 45.2 +0.3**
comp=Z,7.4nm,1.0s,mb4.6
MVCO Mesa Verde 51.52 76 ⇓P P 13 13 44.3 -0.6
baz=51
ISCO Idaho Springs 51.61 72 *eP* **P 13 13 45.5 -0.1**
comp=Z,8.2nm,1.1s,mb4.6
ISCO Idaho Springs 51.61 72 *eP* **P 13 13 45.5 -0.1**
ISCO pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
115A Sonoran Desert 52.17 83 ⇑P P 13 13 49.3 -0.5
baz=52
XAN Xi'an 52.57 280 P P 13 13 52.2 -0.6
XAN AP pP 13 14 00.6 -3.6
XAN AMB AMB
comp=Z,9.0nm,0.9s,mb4.7
SDCO Great Sand Dun 52.99 74 *eP* **P 13 13 56.2 +0.3**
comp=Z,22nm,1.6s,mb4.8
NVS Novosibirsk 53.49 314 *eP* **P 13 13 57.7 -1.6**
NVS pmax pmax
comp=N,12nm,1.4s
NVS pmax pmax
comp=E,20nm,1.4s
NVS pmax pmax
comp=Z,23nm,1.4s,mb4.9
ANMO Albuquerque 54.24 77 *eP* **P 13 14 05.0 0.0**
comp=Z,2.4nm,0.9s,mb4.1
ANMO Albuquerque 54.24 77 *i*⇓*iP* **P 13 14 05.3 +0.3**
LZH Lanzhou 54.34 285 *eP* **P 13 14 07.1 +1.4**
LZH AP pP 13 14 08.6 -8.6
LZH PCP PcP 13 15 13.3 +4.0
LZH PP PP 13 16 12.0 +4.4
LZH *e*S **S 13 21 42.0 +1.2**
LZH XS sS 13 21 50.0 -10
LZH SS SS 13 25 24.0 +1.3
LZH AMB AMB
comp=Z,43nm,1.4s,mb5.2
LZH AMB AMB
comp=Z,102nm,4.2s
LZH LR LR
comp=N,623nm,15.5s
LZH LR LR
comp=Z,970nm,16.6s,MS5.0
318A Bisbee 54.42 82 ⇓P P 13 14 05.5 -0.8
baz=54
GTA Gaotai 54.58 291 ⇑P P 13 14 07.9 +0.5
GTA AP pP 13 14 12.5 -6.4
GTA XP sP 13 14 15.4 -8.1
GTA PP PP 13 16 13.4 +3.7
GTA S **S 13 21 52.2 +8.3**
GTA AMB AMB
comp=Z,13nm,1.1s,mb4.9
GTA LR LR
comp=N,381nm,13.7s,MS4.8
GTA LR LR
comp=E,457nm,18.3s,MS4.8
GTA LR LR
comp=Z,520nm,15.6s,MS4.7
319A Douglas 54.91 82 ⇑P P 13 14 09.2 -0.6
baz=55
MNTX Cornudas Mount 57.10 79 *eP* **P 13 14 25.4 -0.2**
comp=Z,6.9nm,1.1s,mb4.6
CD2 Chengdu 57.90 281 *eP* **P 13 14 31.2 0.0**
CD2 AP pP 13 14 39.7 -3.0
CD2 XP sP 13 14 43.2 -4.1
CD2 PP PP 13 16 41.0 +1.6
CD2 S **S 13 22 27.0 -1.1**
CD2 SS SS 13 26 19.3 +0.4
CD2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,320nm,19.2s,MS4.7
CD2 LR LR
comp=E,450nm,15.6s,MS4.7
CD2 LR LR
comp=Z,370nm,15.6s,MS4.6
ARCES ARCESS Array B 58.08 349 P P 13 14 30.6 -1.3
comp=Z,1.9nm,0.6s,mb4.3,baz=15,slow=7.8,SNR=9.3
ARCES LR LR 13 45 13.9
comp=Z,494nm,18.1s,MS4.7,baz=163,slow=42
KURK Kurchatov 58.32 313 *eP* **P 13 14 33.6 -0.2**
comp=Z,14nm,0.6s,mb5.2
KURK Kurchatov 58.32 313*c i*P **P 13 14 33.5 -0.3**
WMQ Urumqi 58.48 302⇑*iP* **P 13 14 35.4 +0.3**
WMQ AP pP 13 14 39.9 -6.8
WMQ XP sP 13 14 42.4 -8.8
WMQ PCP PcP 13 15 25.4 +0.1
WMQ PP PP 13 16 46.6 +2.3
WMQ SCP ScP 13 19 23.9 +1.7
WMQ PCS PcS 13 19 25.8 -1.0
WMQ S **S 13 22 36.6 +1.2**
WMQ XS sS 13 22 44.4 -10
WMQ AMB AMB
comp=Z,16nm,1.0s,mb5.0
WMQ AMB AMB
comp=Z,352nm,6.0s
WMQ LR LR
comp=N,530nm,20.6s,MS4.7
WMQ LR LR
comp=E,290nm,22.1s,MS4.7
WMQ LR LR
comp=Z,533nm,20.6s,MS4.7
WMOK Wichita Mounta 59.04 72 *eP* **P 13 14 38.9 -0.2**
comp=Z,8.5nm,0.8s,mb4.8
WMOK Wichita Mounta 59.04 72 *eP* **P 13 14 38.9 -0.2**
WMOK pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GYA Guiyang 59.21 275 P P 13 14 39.8 -0.5
GYA AP pP 13 14 43.8 -8.1
GYA XP sP 13 14 47.0 -10
GYA PCP PcP 13 15 28.7 +0.3
GYA PP PP 13 16 52.4 +1.2
GYA SCP ScP 13 19 28.0 +2.3
GYA S **S 13 22 44.8 -0.4**
GYA SCS ScS 13 24 26.4 -0.7
GYA SS SS 13 26 39.8 +0.1
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,90nm,6.2s
GYA LR LR
comp=N,350nm,19.8s,MS4.7
GYA LR LR
comp=E,430nm,20.6s,MS4.7
GYA LR LR
comp=Z,390nm,20.2s,MS4.5
MK31 Makanchi Array 59.26 308 *i* P **P 13 14 39.8 -0.6**
MK31 pmax pmax
comp=Z,2.0nm,0.3s,mb4.6
MKAR Makanchi Array 59.26 308 P P 13 14 39.7 -0.7
MKAR LR LR 13 41 52.6
MKAR Makanchi Array 59.26 308 P P 13 14 39.7 -0.7
comp=Z,5.4nm,0.5s,mb4.8,baz=50,slow=6.5,SNR=53
MKAR LR LR 13 41 52.6
comp=Z,320nm,19.6s,MS4.5,baz=27,slow=38
CHKZ Chkalovo 59.73 319 *eP* **P 13 14 43.1 -0.4**
comp=Z,14nm,0.7s,mb5.1
CHKZ Chkalovo 59.73 319 *i* P **P 13 14 43.1 -0.4**
CHKZ pmax pmax
comp=Z,41nm,1.6s,mb5.2
TXAR Lajitas Array 59.81 80 P P 13 14 43.8 -0.6
comp=Z,1.3nm,0.6s,mb4.2,baz=298,slow=5.2,SNR=14
BRVK Borovoye 60.31 319 *eP* **P 13 14 47.4 -0.1**
comp=Z,31nm,0.8s,mb5.4
BRVK pmax pmax
comp=Z,31nm,0.8s,mb5.4
SCHQ Schefferville 60.85 37 P P 13 14 49.9 -1.3
comp=Z,4.6nm,0.9s,mb4.6,baz=333,slow=8.4,SNR=8.0
SVE Sverdlovsk 61.14 327 *eP* **P 13 14 53.9 +0.8**
ARU Arti 62.16 327 *eP* **P 13 15 00.8 +0.8**
comp=Z,6.0nm,0.5s,mb5.0
ARU Arti 62.16 327*c i*P **P 13 14 59.7 -0.3**
ARU *e* 13 15 39.0
ARU *eS* **S 13 23 23.9 +1.8**
ARU SS SS 13 27 33.2 +8.7
ARU pmax pmax
comp=Z,24nm,1.2s,mb5.2
MIAR Mount Ida 62.26 69 *eP* **P 13 15 00.7 -0.4**
comp=Z,15nm,0.9s,mb5.1
MIAR Mount Ida 62.26 69 *eP* **P 13 15 00.7 -0.3**
MIAR pmax pmax
comp=Z,15nm,0.9s,mb5.1
KMI Kunming 62.62 277 P P 13 15 04.8 +1.3
KMI S **S 13 23 28.2 -0.6**
KMI AMB AMB
comp=Z,8.0nm,0.5s,mb5.1
KMI LR LR
comp=Z,119nm,20.0s,MS4.1
OXF Oxford 64.70 66 *eP* **P 13 15 16.3 -0.9**
comp=Z,81nm,1.2s,mb5.6
OXF Oxford 64.70 66 *eP* **P 13 15 16.3 -0.8**
OXF pmax pmax
comp=Z,81nm,1.2s,mb5.6
PLAL Pickwick Lake 65.12 65 *eP* **P 13 15 19.1 -0.8**
comp=Z,6.5nm,0.5s,mb4.9
TKM2 Tokmak 2 65.35 308 *eP* **P 13 15 21.5 +0.3**
comp=Z,12nm,1.1s,mb4.9
TKM2 Tokmak 2 65.35 308 *eP* **P 13 15 21.5 +0.3**
TKM2 pmax pmax
comp=Z,13nm,1.1s,mb4.9
TKM2 Tokmak 2 65.35 308 P P 13 15 22.0 +0.8
SNR=8.3
USP Ospenovka 65.63 309 P P 13 15 23.8 +0.8
SNR=20
FINES FINESS Array B 65.71 346 P P 13 15 22.0 -1.2
FINES LR LR 13 50 05.5
FINES FINESS Array B 65.71 346 P P 13 15 22.0 -1.2
comp=Z,1.5nm,0.6s,mb4.2,baz=20,slow=6.3,SNR=6.9
FINES LR LR 13 50 05.4
comp=Z,266nm,20.4s,MS4.4,baz=171,slow=42
KBK Karagaybulak 65.86 308 P P 13 15 25.4 +0.8
SNR=8.7
FRU Bishkek 65.90 309⇑*eP* **P 13 15 24.5 -0.2**
AAK Ala-Archa 66.11 309 *eP* **P 13 15 25.7 -0.4**
comp=Z,16nm,1.2s,mb4.9
AAK Ala-Archa 66.11 309*c iP* **P 13 15 25.7 -0.4**
AAK pmax pmax
comp=Z,16nm,1.3s,mb4.9
AAK Ala-Archa 66.11 309 P P 13 15 26.8 +0.7
SNR=8.4
KZA Kyzart 66.15 308 P P 13 15 27.6 +1.3
SNR=6.4
SWET Sewanee 66.17 63 *eP* **P 13 15 25.7 -0.9**
UCH Uchtor 66.40 308 *eP* **P 13 15 29.1 +1.1**
comp=Z,6.7nm,1.1s,mb4.6
UCH Uchtor 66.40 308 P P 13 15 29.6 +1.6
SNR=8.1
LSA Lhasa 66.43 288 *eP* **P 13 15 29.9 +1.5**
comp=Z,6.1nm,0.6s,mb4.8
LSA Lhasa 66.43 288 *eP* **P 13 15 29.9 +1.6**
LSA pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
EKS2 Erkin-Say 66.44 309 *eP* **P 13 15 28.8 +0.6**
comp=Z,14nm,0.9s,mb5.0
EKS2 Erkin-Say 66.44 309 P P 13 15 29.1 +0.9
SNR=19
AML Almayashu 66.87 309 *eP* **P 13 15 32.1 +1.1**
comp=Z,13nm,0.9s,mb5.0
AML Almayashu 66.87 309 P P 13 15 32.5 +1.5
SNR=13
AKTK Aktyubinsk 67.17 324 P P 13 15 33.0 +0.2
AKTO Aktyubinsk 67.17 324 P P 13 15 33.0 +0.2
AKTO pmax pmax
comp=Z,21nm,0.7s,mb5.3
AKTO Aktyubinsk 67.17 324 P P 13 15 33.0 +0.2
comp=Z,21nm,0.7s,mb5.3,baz=51,slow=6.8,SNR=69
KK31 Karatay Array 67.67 311 *i* **P P 13 15 35.9 -0.1**
KK31 pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
NB2 NORSAR Subarra 67.72 354 P P 13 15 35.2 -0.9
comp=Z,3.4nm,0.7s,mb4.5,baz=6.6,slow=6.5
NB2 NORSAR Subarra 67.72 354 P P 13 15 35.2 -0.9
NB2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
NOA NORSAR Array B 67.72 354 P P 13 15 35.6 -0.5
comp=Z,7.7nm,0.8s,mb4.8,baz=8.2,slow=6.3,SNR=16
HFS Hagfors 68.44 352 P P 13 15 39.3 -1.2
comp=Z,3.8nm,0.6s,mb4.6,baz=36,slow=5.5,SNR=10
SHL Shillong 69.00 285 *eP* **P 13 15 45.0 +0.4**
OBN Obninsk 69.64 338 *eP* **P 13 15 46.1 -2.0**
OBN *e* 13 16 11.3
OBN pmax pmax
comp=Z,17nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,500nm,18.0s,MS4.8
TAPN Taplejung 70.20 289 *eP* **P 13 15 52.7 +0.7**
comp=Z,110nm,1.1s,mb5.7
ODAN Odare 70.75 289 *eP* **P 13 15 55.9 +0.5**
comp=Z,16nm,0.5s,mb5.2
JIRN Jiri 70.87 290 *eP* **P 13 15 57.0 +0.9**
comp=Z,123nm,1.1s,mb5.7
KKN Kakani 71.31 291 *eP* **P 13 15 59.3 +0.6**
comp=Z,25nm,0.5s,mb5.4
KKN Kakani 71.31 291 *eP* **P 13 15 59.3 +0.6**
KKN pmax pmax
comp=Z,25nm,0.5s,mb5.4
GKN Gorkha 71.53 292 *eP* **P 13 16 00.3 +0.3**
comp=Z,70nm,0.9s,mb5.6
PMOR Pomariorio Ree 71.83 147 *e*T 14 34 31.4
comp=Z,4.1nm,0.3s
PPT Papeete 73.66 149 *e*LR LR 13 38 46.8
comp=Z,475nm,24.8s,baz=339
PPT Papeete 73.66 149 *eT* 14 36 48.1
comp=Z,5.4nm,0.2s
PPT Papeete 73.66 149 LR LR 13 40 21.2
comp=Z,319nm,20.1s,MS4.6,baz=340,slow=29
EKA Eskdalemuir Ar 73.83 2 P P 13 16 13.2 -0.1
comp=Z,3.1nm,0.8s,mb4.3,baz=358,slow=5.8,SNR=7.1
AKASG Malin Array Be 75.37 341 P P 13 16 20.8 -1.5
AKASG LR LR 13 51 35.3
AKASG Malin Array Be 75.37 341 P P 13 16 20.8 -1.5
comp=Z,4.5nm,0.7s,mb4.5,baz=22,slow=5.8,SNR=11
AKASG LR LR 13 51 35.3
comp=Z,464nm,18.3s,MS4.8,baz=325,slow=37
CTA Charters Tower 76.70 212 P P 13 16 29.7 -0.4
CTA Charters Tower 76.70 212 P P 13 16 29.7 -0.4
comp=Z,1.3nm,0.3s,mb4.3,baz=26,slow=5.7,SNR=4.7
CLL Collm 77.23 351 *eP* **P 13 16 32.0 -0.8**
KWP Kalwaria 77.61 345 *eP* **P 13 16 35.2 +0.3**
KWP Kalwaria 77.61 345⇓*iP* **P 13 16 34.9 0.0**
KIV Kislovodsk 78.07 330 *eP* **P 13 16 37.2 -0.4**
KIV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ZEI Tsey 78.74 328 *eP* **P 13 16 41.4 +0.1**
ZEI pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
BURAR Bucovina Array 79.11 343⇑*iP* **P 13 16 43.3 0.0**
TBI Tubuai 79.12 151 *e*LR LR 13 41 11.8
comp=Z,549nm,23.2s,baz=338
KHC Kasperske Hory 79.33 351⇑*eP* **P 13 16 43.8 -0.6**
KHC Kasperske Hory 79.33 351 *eP* **P 13 16 44.0 -0.4**
GERES GERESS Array B 79.60 350 P P 13 16 45.1 -0.8
comp=Z,0.3nm,0.2s,mb3.8,baz=316,slow=5.6,SNR=4.0
GERES LR LR 13 56 27.9
comp=Z,348nm,19.4s,MS4.7,baz=272,slow=39
PSZ Piszkesteto 79.72 346 *eP* **P 13 16 46.8 +0.3**
comp=Z,9.3nm,1.3s,mb4.5
PSZ Piszkesteto 79.72 346 *eP* **P 13 16 46.8 +0.2**
PSZ pmax pmax
comp=Z,9.0nm,1.3s,mb4.5
MLR Muntele Rosu 81.00 341 P P 13 16 55.0 +1.5
comp=Z,2.9nm,0.6s,mb4.4,baz=12,slow=8.7,SNR=5.5
MLR Muntele Rosu 81.00 341⇑*iP* **P 13 16 53.8 +0.3**
WB2 Warramunga Arr 81.09 222 *eP* **P 13 16 52.5 -1.6**
WRA Warramunga Arr 81.09 222 P P 13 16 52.7 -1.5
comp=Z,3.4nm,0.9s,mb4.3,baz=30,slow=5.8,SNR=19
WRA LR LR 13 51 29.5
comp=Z,99nm,18.6s,MS4.2,baz=70,slow=35
GZR Gura Zlata 81.70 344⇑*iP* **P 13 16 57.4 +0.2**
DAVOX Davos/Dischmat 82.00 353 P P 13 16 58.7 -0.1
comp=Z,3.2nm,0.8s,mb4.3,baz=323,slow=7.1,SNR=3.7
HYB Hyderabad 83.21 289 *eP* **P 13 17 05.0 -0.5**
HYB Hyderabad 83.21 289 *i* **P P 13 17 05.0 -0.5**
FITZ Fitzroy Crossi 83.45 231 *eP* **P 13 17 04.8 -1.8**
comp=Z,6.2nm,0.7s,mb4.8
FITZ Fitzroy Crossi 83.45 231 P P 13 17 06.4 -0.2
comp=Z,3.1nm,0.6s,mb4.5,baz=76,slow=6.3,SNR=12
RKT Rikitea 84.16 139 *eT* 13 18 10.5
comp=Z,1.5nm,0.4s
RKT Rikitea 84.16 139 *e*LR LR 13 43 39.7
comp=Z,359nm,24.8s,baz=333
ASAR Alice Springs 84.58 221 P P 13 17 11.3 -0.8
comp=Z,2.3nm,0.9s,mb4.3,baz=23,slow=5.3,SNR=18
BRTR Keskin Array B 84.64 334 P P 13 17 12.7 +0.2
comp=Z,3.7nm,0.8s,mb4.6,baz=62,slow=2.5,SNR=14
MIB Mutribah 88.97 320 *eP* **P 13 17 32.9 -0.9**
MIB AMb AMB 13 17 34.8
comp=Z,43nm,0.9s,mb5.8
STKA Stephens Creek 89.16 211 P P 13 17 33.1 -1.1
comp=Z,3.7nm,0.9s,mb4.7,baz=63,slow=12,SNR=3.0
STKA LR LR 13 53 41.9
comp=Z,217nm,18.0s,MS4.6,baz=26,slow=33
RST Umm Al-Ruwaisa 89.38 320 *eP* **P 13 17 33.5 -2.1**
RST AMb AMB 13 17 36.4
comp=Z,18nm,0.9s,mb5.4
NAY Al-Naaiem 89.50 320 *eP* **P 13 17 34.3 -2.0**
NAY AMb AMB 13 17 37.1
comp=Z,15nm,1.0s,mb5.3
RDF Al-Radifah 89.66 319 *eP* **P 13 17 34.8 -2.2**
RDF AMb AMB 13 17 38.2
comp=Z,30nm,1.1s,mb5.5
CPD Cerro la Pandu 90.63 60 *eP* **P 13 17 41.7 0.0**
MTP Monte Pirata 90.78 60 *eP* **P 13 17 42.4 +0.1**
QSPA South Pole Qui 140.94 180 *e*PKP PKPdf 13 24 01.5 -5.7
TSUM Tsumeb 144.99 329 *e*PKPbc PKPdf 13 24 15.4 -0.7
TSUM Tsumeb 144.99 329 PKPbc PKPdf 13 24 15.2 -0.9
comp=Z,12nm,1.0s,baz=347,slow=5.1,SNR=11
BOSA Boshof 150.24 309 PKIKP PKPbc 13 24 29.7 0.0
BOSA pmax pmax
comp=Z,10.0nm,0.9s
BOSA Boshof 150.24 309 PKPbc PKPbc 13 24 29.6 -0.1
comp=Z,9.6nm,0.9s,baz=15,slow=3.1,SNR=12

NIED **12** *13:35:00,24.20N×122.00E,h8km,Mw4.6 Best double couple: M0 7.83000×10 15 NP1:*ϕ*s 14.00000°,*δ*4.00000°,*λ*-146.00000°. NP2:*ϕ*s 250.00000°,*δ*88.00000°,*λ*-87.00000°.*

IDC **12** *13:35:49.4±0.7,24.07N×121.84E,h0km,mb4.0/10, mb1 4.1/11,mb1mx4.0/20,mbtmp4.0/11,ML3.7/1,MS4.2/3, Ms1 4.3/3,ms1mx3.4/32,Error ellipse: s-maj=32.3km s-min=15.8km az=63.0*

NEIC **12** *13:35:51.0±0.5,24.15N×121.85E,h10km,mb4.4/10,Error ellipse: s-maj=12.9km s-min=7.8km az=51.0*

NEIC Recorded [4 TAP] in Hua-lien, [3 TAP] in I-lan and [2 TAP] in Nan-t'ou Counties.

ISCJB **12** *13:35:51.1±0.7,24.10N±0.005×121.80E±0.002,h18km±4km, mb4.1/21,MS4.5/3,Error ellipse: s-maj=8.0km s-min=3.4km az=12.2*

BJI **12** *13:35:56.7,24.57N×121.54E,h15km,mB4.7,mb4.3,ML4.5, Ms4.5,Msz4.5*

JMA **12** *13:35:57.2±0.3,24.21N×122.04E,h61km,M4.4*

ISC 12 13:35:51.6±0.7,2413N±004×12180E±003,h10km±4km, n56,σ1s27/64,mb4.1/21,MS4.5/3,2C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.19**	**284**	*e*Pg	**Pg**	**13 35 54.7**	**-1.0**
NACB				*e*Sg	**Sg**	**13 35 57.3**	**-1.2**
YHNB	**Yeheng**	**0.66**	**325**	*e*P	**Pg**	**13 36 04.1**	**-0.4**
YHNB				*e*S	**Sg**	**13 36 12.7**	**-0.5**
TATO	**Taipei**	**0.89**	**342**	*e*Pn	**Pn**	**13 36 08.5**	**-1.7**
YOJ	**Yonaguni jima**	**1.16**	**73**	P	**Pb**	**13 36 14.4**	**+0.7**
YOJ				*e*S	**Sb**	**13 36 27.2**	**-1.5**
IRIF	**Iriomote-Funau**	**1.78**	**83**	P	**Pn**	**13 36 22.9**	**+0.5**
IRIF				*e*S	**Sn**	**13 36 41.3**	**-3.7**
HATJ	**Hateruma jima**	**1.84**	**92**	P	**Pn**	**13 36 24.2**	**+1.0**
HATJ				*e*S	**Sn**	**13 36 43.4**	**-3.1**
JKRS	**Kuro-shima**	**2.02**	**86**	P	**Pn**	**13 36 26.9**	**+1.1**
JKRS				*e*S	**Sn**	**13 36 48.8**	**-2.3**
JIJ	**Ishigaki jima**	**2.15**	**83**	P	**Pn**	**13 36 28.0**	**+0.4**
JIJ				*e*S	**Sn**	**13 36 52.3**	**-2.0**
JTJ	**Tarama**	**2.70**	**78**	P	**Pn**	**13 36 36.0**	**+1.0**
QZH	**Quanzhou**	**3.03**	**286**⇑	*i*P	**Pn**	**13 36 40.9**	**+1.3**
QZH				S	**Sn**	**13 37 15.7**	**-0.2**
QZH				Smax			
	comp=N,1μm,0.9s						
QZH				Smax			
	comp=E,810nm,0.8s						
JMJ	**Miyako jima 2**	**3.26**	**77**	P	**Pn**	**13 36 44.6**	**+1.8**
JOGS	**Gusukube**	**3.35**	**78**	P	**Pn**	**13 36 46.1**	**+2.1**
JKE	**Kume jima 2**	**5.02**	**63**	P	**Pn**	**13 37 08.2**	**+1.2**
JAGN	**Aguni-jima**	**5.50**	**62**	P	**Pn**	**13 37 15.3**	**+1.7**
JIH	**Iheya**	**6.28**	**61**	P	**Pn**	**13 37 24.5**	**+0.2**
JOW	**Kunigami**	**6.44**	**64**	P	**Pn**	**13 37 26.6**	**+0.1**
JOW	**Kunigami**	**6.44**	**64**	Pn	**Pn**	**13 37 26.6**	**+0.1**
	comp=E,3.8nm,0.3s,baz=196,slow=8.1,SNR=19						
JTK	**Tokunoshima**	**7.40**	**59**	P	**Pn**	**13 37 38.9**	**-0.7**
NJ2	**Nanjing**	**8.31**	**342**	*e*P	**Pn**	**13 37 53.2**	**+1.0**
NJ2				AP		13 37 55.0	
NJ2				XP		13 37 58.4	
NJ2				S	**Sn**	**13 39 26.5**	**+0.4**
NJ2				XS		13 39 35.0	
NJ2				PCP	PcP	13 44 27.4	+2.3
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s						
NJ2				Smax			
	comp=N,300nm,1.0s						
NJ2				Smax			
	comp=E,180nm,1.0s						
NJ2				LR	LR		
	comp=N,3μm,10.1s						
NJ2				LR	LR		
	comp=E,2μm,11.6s						
NJ2				LR	LR		
	comp=Z,2μm,11.6s						
WHN	**Wuhan**	**9.20**	**316**	P	**Pn**	**13 38 09.4**	**+5.0**
WHN				S	**Sn**	**13 39 44.0**	**-4.0**
WHN				Smax			
	comp=N,276nm,1.1s						
WHN				Smax			
	comp=E,260nm,1.2s						
WHN				LR	LR		
	comp=Z,6μm,9.7s						
GYA	**Guiyang**	**13.89**	**283**⇑	*i*P	**Pn**	**13 39 09.5**	**+1.0**
GYA				S	**Sn**	**13 41 37.1**	**-5.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GYA				AMB	AMB		
	comp=Z,60nm,5.4s						
GYA				LR	LR		
	comp=N,570nm,9.6s						
GYA				LR	LR		
	comp=E,1μm,9.6s						
GYA				LR	LR		
	comp=Z,2μm,10.2s						
KSRS	**Korea Array**	**14.28**	**20**	Pn	**Pn**	**13 39 18.4**	**+4.5**
	comp=Z,0.5nm,0.3s,baz=198,slow=12,SNR=12						
CD2	**Chengdu**	**17.36**	**297**	*e*P	**Pn**	**13 39 54.8**	**+0.8**
CD2				AP	pP	13 39 58.5	+0.3
CD2				XP	sP	13 40 02.1	+2.5
CD2				PP		13 40 09.3	
CD2				S	**Sn**	**13 43 06.7**	**-0.6**
CD2				XS	sS	13 43 10.5	-10
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,860nm,10.8s						
CD2				LR	LR		
	comp=E,1μm,9.6s						
CD2				LR	LR		
	comp=Z,2μm,9.6s						
MJAR	**Matsushiro Arr**	**18.78**	**45**	LR	LR	13 48 00.5	
	comp=Z,275nm,19.5s,baz=295,slow=39						
LZH	**Lanzhou**	**19.54**	**312**	*e*P	**Pn**	**13 40 24.0**	**+3.4**
LZH				AP	pP	13 40 27.7	+5.5
LZH				XP	sP	13 40 31.3	+7.7
LZH				*e*S	**Sn**	**13 43 56.8**	**-3.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZH				XS	sS	13 44 02.5	-2.1
LZH				AMB	AMB		
	comp=Z,30nm,1.5s						
LZH				AMB	AMB		
	comp=Z,141nm,4.5s						
LZH				LR	LR		
	comp=E,839nm,11.0s						
LZH				LR	LR		
	comp=Z,2µm,13.5s						
CN2	**Changchun**	**19.85**	**8**	*e*P	**Pn**	**13 40 26.1**	**+1.9**
GTA	**Gaotai**	**24.02**	**315**	*e*P	**P**	**13 41 07.9**	**+1.3**
GTA				AP		13 41 11.2	
GTA				XP	sP	13 41 14.0	+3.0
GTA				AMB	AMB		
	comp=Z,2.0nm,0.7s,mb3.7						
GTA				LR	LR		
	comp=N,449nm,10.3s,MS4.6						
GTA				LR	LR		
	comp=E,899nm,10.7s,MS4.6						
GTA				LR	LR		
	comp=Z,879nm,11.8s,MS4.5						
HIA	**Hailar**	**25.14**	**357**	*e*P	**P**	**13 41 15.0**	**-1.7**
	comp=Z,8.8nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**26.43**	**337**	*e*P	**P**	**13 41 28.4**	**0.0**
	comp=Z,11nm,1.2s,mb4.3						
SONM	**Songino Array**	**26.64**	**336**	P	**P**	**13 41 31.5**	**+1.2**
	comp=Z,3.6nm,1.0s,mb3.9,baz=149,slow=9.5,SNR=17						
LSA	**Lhasa**	**27.84**	**288**	*e*P	**P**	**13 41 44.0**	**+2.7**
LSA	**Lhasa**	**27.84**	**288**	*e*P	**P**	**13 41 44.1**	**+2.8**
	comp=Z,4.3nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**13 43 16.4**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.0,baz=103,slow=8.7,SNR=14						
KURK	**Kurchatov**	**42.50**	**320**	*e*P	**P**	**13 43 46.8**	**-0.1**
	comp=Z,5.1nm,1.2s,mb4.0						
UCH	**Uchtor**	**42.90**	**307**	*e*P	**P**	**13 43 53.1**	**+2.8**
	comp=Z,5.3nm,1.2s,mb4.2						
COEN	**Coen**	**43.23**	**149**	*e*P	**P**	**13 43 53.5**	**+0.3**
	comp=Z,12nm,1.0s,mb4.6						
AML	**Almayashu**	**43.49**	**306**	*e*P	**P**	**13 43 58.8**	**+3.8**
	comp=Z,5.3nm,1.1s,mb4.2						
WRA	**Warramunga Arr**	**45.47**	**163**	P	**P**	**13 44 09.6**	**-1.4**
	comp=Z,2.0nm,0.6s,mb4.1,baz=345,slow=8.8,SNR=27						
WB2	**Warramunga Arr**	**45.48**	**163**	*e*P	**P**	**13 44 10.0**	**-1.1**
TIXI	**Tiksi**	**47.72**	**3**	*e*P	**P**	**13 44 26.1**	**-2.0**
	comp=Z,7.2nm,0.9s,mb4.7						
CHKZ	**Chkalovo**	**48.13**	**322**	*e*P	**P**	**13 44 30.8**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.5						
ASAR	**Alice Springs**	**48.94**	**165**	P	**P**	**13 44 37.8**	**-0.3**
	comp=Z,0.8nm,0.7s,mb3.9,baz=341,slow=6.6,SNR=14						
CTAO	**Charters Tower**	**49.99**	**149**	*e*P	**P**	**13 44 46.5**	**+0.3**
	comp=Z,7.1nm,0.9s,mb4.7						
AKTK	**Aktyubinsk**	**55.21**	**316**	P	**P**	**13 45 25.1**	**+0.6**
AKTO	**Aktyubinsk**	**55.21**	**316**	P	**P**	**13 45 25.1**	**+0.6**
	comp=Z,1.0nm,0.8s,mb3.9,baz=59,slow=12,SNR=4.5						
STKA	**Stephens Creek**	**58.82**	**160**	P	**P**	**13 45 49.0**	**-1.2**
	comp=Z,2.0nm,0.7s,mb4.3,baz=314,slow=11,SNR=4.3						
FINES	**FINESS Array B**	**71.78**	**330**	P	**P**	**13 47 13.1**	**-0.9**
FINES	**FINESS Array B**	**71.78**	**330**	P	**P**	**13 47 13.1**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=28,slow=4.5,SNR=4.6						
INK	**Inuvik**	**73.07**	**22**	*e*P	**P**	**13 47 20.1**	**-1.4**
	comp=Z,150nm,0.8s						
AKASG	**Malin Array Be**	**73.28**	**318**	P	**P**	**13 47 21.5**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.7,baz=61,slow=5.4,SNR=3.0						
BRTR	**Keskin Array B**	**73.66**	**307**	P	**P**	**13 47 26.2**	**+0.7**
	comp=Z,0.8nm,0.7s,mb3.8,baz=101,slow=7.5,SNR=2.9						
NOA	**NORSAR Array B**	**78.54**	**332**	LR	LR	14 24 59.5	
	comp=Z,225nm,19.2s,MS4.5,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**82.81**	**23**	P	**P**	**13 48 14.7**	**-1.0**
	comp=Z,1.6nm,0.7s,mb4.2,baz=314,slow=5.0,SNR=42						
PPT	**Papeete**	**95.80**	**107**	LR	LR	14 24 38.7	
	comp=Z,171nm,20.8s,MS4.5,baz=170,slow=31						
SDV	**Santo Domingo**	**145.02**	**22**	*e*PKPdf	PKPdf	13 55 28.3	-1.7
SDV	**Santo Domingo**	**145.02**	**22**	PKPbc	PKPbc	13 55 28.9	-0.4
	comp=Z,12nm,0.9s,baz=53,slow=3.5,SNR=4.8						

*NEIC **12** 13:54:31.1,2209S×6921W,h100km,MG4.4(GUC),After GUC.*
NEIC Felt [II] at Maria Elena and Tocopilla.
*GUC **12** 13:54:31.1±0.3,2209S×6921W,h100km,ML4.4*
*IDC **12** 13:54:32.9±2.9,2184S×7045W,h40km±23km,mb3.6/5, mb1 3.9/9,mb1mx3.8/18,mbtmp3.7/9,ML3.9/4,Error ellipse: s-maj=32.4km s-min=24.8km az=49.0*
*ISCJB **12** 13:54:33.1±1.1,2173S±006×7059W±010,h56km±14km, mb3.7/5,Error ellipse: s-maj=15.3km s-min=10.0km az=19.4*
ISC 12 13:54:34.2±0.9**,2182S**±006×**7063W**±010**,h52**km±12km**, n17,**σ1s**16**/20**,mb3.7**/5**,2C-2D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**1.61**	**166**	⇓*i*P	**Pn**	**13 55 02.1**	**+1.9**
CEN1				*i* S	**Sn**	**13 55 25.4**	**+5.6**
CEN1				AML	AML	13 55 35.5	
	comp=E,4µm,0.8s						
ANCH	**Antofagasta**	**1.86**	**174**	⇑*i*P	**Pn**	**13 55 03.2**	**-0.5**
ANCH				*i* S	**Sn**	**13 55 27.9**	**+2.0**
ANCH	**Antofagasta**	**1.86**	**174**	⇑*i*P	**Pn**	**13 55 03.2**	**-0.5**
ANCH				*i* S	**Sn**	**13 55 27.9**	**+2.0**
ANCH				AML	AML	13 55 38.5	
	comp=N,4µm,0.3s						
LPAZ	**La Paz**	**5.99**	**24**	P	**Pn**	**13 56 00.6**	**+0.3**
	comp=N,2.2nm,0.3s,baz=197,slow=6.0,SNR=47						
LPAZ				S	**Sn**	**13 57 16.2**	**+8.6**
	baz=288,slow=16,SNR=1.2						
LCO	**Las Campanas**	**7.16**	**181**	*e*Pn	**Pn**	**13 56 14.5**	**-1.7**
TLL	**Tololo Astrono**	**8.31**	**181**	⇓*i*P	**Pn**	**13 56 31.1**	**-1.0**
CFAA	**Coronel Fontan**	**9.97**	**168**	P	**Pn**	**13 56 53.0**	**-1.8**
	comp=N,0.1nm,0.3s,baz=334,slow=12,SNR=3.8						
CFAA				S	**Sn**	**13 58 57.9**	**+13**
	comp=N,0.1nm,0.3s,baz=252,slow=9.6,SNR=2.3						
SIV	**San Ignacio**	**10.74**	**59**	P	**Pn**	**13 57 01.2**	**-4.2**
	comp=N,2.1nm,0.3s,baz=241,slow=12,SNR=26						
SIV				S	**Sn**	**13 59 04.4**	**+0.1**
	baz=316,slow=18,SNR=2.4						
NNA	**Nana**	**11.44**	**328**	P	**Pn**	**13 57 14.7**	**-0.3**
	comp=N,1.5nm,0.3s,baz=111,slow=8.6,SNR=2.9						
TXAR	**Lajitas Array**	**60.00**	**327**	P	**P**	**14 04 35.5**	**0.0**
	comp=N,0.3nm,0.6s,mb3.5,baz=146,slow=9.8,SNR=3.3						
PDAR	**Pinedale Array**	**73.61**	**331**	P	**P**	**14 06 02.1**	**+0.3**
	comp=N,0.3nm,0.5s,mb3.5,baz=115,slow=6.1,SNR=2.9						
NVAR	**Mina Array Bea**	**74.77**	**323**	P	**P**	**14 06 10.7**	**+1.9**
	comp=N,1.0nm,1.1s,mb3.7,baz=121,slow=6.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**78.97**	**71**	P	**P**	**14 06 31.9**	**-1.0**
	comp=N,1.5nm,0.5s,mb4.2,baz=252,slow=5.0,SNR=21						
YKA	**Yellowknife Ar**	**90.97**	**341**	P	**P**	**14 07 31.9**	**-0.1**
	comp=N,0.2nm,0.7s,mb3.5,baz=122,slow=4.6,SNR=5.4						
WRA	**Warramunga Arr**	**131.85**	**212**	PKP	PKPdf	14 13 43.0	+0.6
	comp=N,0.5nm,0.9s,baz=129,slow=1.1,SNR=2.8						
MKAR	**Makanchi Array**	**146.82**	**35**	PKPbc	PKPbc	14 14 10.1	-0.4
	comp=N,0.3nm,0.3s,baz=336,slow=3.2,SNR=5.6						
SONM	**Songino Array**	**153.94**	**5**	PKPab	PKPab	14 14 42.1	+1.1
	comp=N,0.2nm,0.3s,baz=343,slow=2.0,SNR=2.9						

IDC 12 14:08:15.8±1.2**,166N**×**9996E,h166**km±34km**,mb3.3**/3**, mb1 3.5**/3**,mb1mx3.1**/20**,mbtmp3.3**/3**,Error ellipse: s-maj=209.4km s-min=20.0km az=54.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.54**	**318**	P	Pn	14 08 46.7	-0.3
	10nm,0.3s,baz=135,slow=5.7,SNR=28						
PSI				S	Sn	14 09 09.8	-1.2
	1.3nm,0.3s,baz=263,slow=21,SNR=7.1						
WRA	**Warramunga Arr**	**39.97**	**124**	P	P	14 15 34.6	+0.2
	1.5nm,0.4s,baz=308,slow=9.3,SNR=33						
ASAR	**Alice Springs**	**41.51**	**129**	P	P	14 15 46.5	-0.4
	0.3nm,0.5s,baz=303,slow=7.5,SNR=8.4						
MKAR	**Makanchi Array**	**47.53**	**344**	P	P	14 16 34.3	0.0
	0.4nm,0.4s,baz=165,slow=7.6,SNR=3.4						

SKHL 12 14:22:41.2±0.4**,5397N**×**12742E,h7**km±1km**,mb3.8**/4**, 2C-1D,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZEA	**Zeya**	**0.25**	**203**	⇑*i*Pg	Pg	14 22 45.2	-1.0
ZEA				sPg		14 22 47.9	
ZEA				*i* Sg	Sg	14 22 48.4	-1.1
ZEA				A		14 22 48.5	
	1µm,0.2s						
ZEA				A		14 22 48.5	
	5µm,0.2s						
KROS	**Kirovskiy**	**0.53**	**331**	⇑*i*Pg	Pg	14 22 51.1	-0.4
KROS				AMB	AMB	14 22 51.7	
	100nm,0.2s						
KROS				AMB	AMB	14 22 51.7	
	38nm,0.2s						
KROS				AMB	AMB	14 22 51.7	
	76nm,0.2s						
KROS				sPg		14 22 54.4	
KROS				*i* Sg	Sg	14 22 58.0	-0.5
KROS				A		14 22 59.2	
	460nm,0.5s						
KROS				A		14 22 59.2	
	540nm,0.5s						
BMKR	**Bomnak**	**1.12**	**48**	⇓*i*Pg	Pg	14 23 01.6	-1.0
BMKR				AMB	AMB	14 23 02.0	
	15nm,0.5s						
BMKR				AMB	AMB	14 23 02.0	
	27nm,0.5s						
BMKR				AMB	AMB	14 23 02.0	
	31nm,0.5s						
BMKR				sPg		14 23 07.0	
BMKR				*e*Sg	Sg	14 23 16.6	-0.5
BMKR				A		14 23 19.3	
	120nm,0.4s						
BMKR				A		14 23 19.3	
	131nm,0.4s						
EKMR	**Ekimchan**	**3.42**	**103**	*e*Pn	Pn	14 23 34.3	-0.6
EKMR				*e*Pg	Pg	14 23 44.0	-2.7
EKMR				AMB	AMB	14 23 46.0	
	3.0nm,0.3s						
EKMR				AMB	AMB	14 23 46.0	
	8.0nm,0.3s						
EKMR				*e*Sn	Sn	14 24 16.3	+0.7
EKMR				*e*Sg	Sg	14 24 28.0	-3.0
EKMR				A		14 24 34.7	
	23nm,0.5s						
EKMR				A		14 24 34.7	
	27nm,0.5s						
EKMR				A		14 24 34.7	
	24nm,0.5s						
TUP	**Tupik**	**4.41**	**279**	*e*Pn	Pn	14 23 50.1	+1.7
TUP				*e*Pg	Pg	14 24 02.6	-3.0
TUP				AMB	AMB	14 24 05.5	
	7.0nm,0.3s						
TUP				*e*Sn	Sn	14 24 41.8	+1.9
TUP				*e*Sg	Sg	14 25 00.5	-2.1
TUP				A		14 25 04.2	
	24nm,0.5s						

IDC 12 14:42:26.4±7.2**,2042S**×**16930E,h62**km±61km**,mb3.6**/2**, mb1 3.9**/3**,mb1mx3.5**/13**,mbtmp3.6**/3**,ML3.3**/1**,Error ellipse: s-maj=115.9km s-min=48.0km az=152.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.13**	**238**	*e*P	Pn	14 43 13.6	+0.3
DZM				*e*S	Sn	14 43 49.0	-0.4
DZM	**Mont Dzumac**	**3.13**	**238**	P	Pn	14 43 13.6	+0.3
	3.9nm,0.3s,baz=62,slow=18,SNR=335						
DZM				S	Sn	14 43 50.0	+0.5
	30nm,0.3s,baz=136,slow=23,SNR=24						
WRA	**Warramunga Arr**	**32.78**	**265**	P	P	14 48 54.0	+0.1
	0.4nm,0.4s,baz=94,slow=8.3,SNR=19						
ASAR	**Alice Springs**	**32.91**	**258**	P	P	14 48 55.1	0.0
	1.5nm,0.5s,baz=81,slow=7.8,SNR=44						
GERES	**GERESS Array B**	**145.55**	**331**	PKPbc	PKPbc	15 01 57.0	-0.7
	0.3nm,0.2s,baz=18,slow=3.5,SNR=3.0						

IDC 12 15:22:30.5±1.0**,5431S**×**12126W,h0**km**,mb3.9**/3**, mb1 4.1**/3**,mb1mx3.8**/13**,mbtmp3.9**/3**,MS3.9**/15**, Ms1 3.9**/15**,ms1mx3.7**/29**,Error ellipse: s-maj=46.4km s-min=29.6km az=144.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
USHA	**Ushuaia**	**30.03**	**113**	LR	LR	15 37 03.9	
	comp=Z,769nm,18.9s,baz=175,slow=29						
RKT	**Rikitea**	**32.81**	**336**	*e*LR	LR	15 37 51.7	
	165nm,29.2s						
RKT	**Rikitea**	**32.81**	**336**	*e*T		16 03 53.4	
	1.4nm,0.3s						
VNDA	**Vanda**	**34.93**	**202**	LR	LR	15 41 08.8	
	comp=Z,136nm,19.0s,baz=109,slow=32						
QSPA	**South Pole Qui**	**35.88**	**180**	P	P	15 29 31.9	+0.5
	1.7nm,0.9s,baz=142,slow=18,SNR=10						
QSPA				LR	LR	15 42 38.6	
	comp=Z,140nm,20.2s,baz=187,slow=34						
TBI	**Tubuai**	**37.44**	**314**	*e*LR	LR	15 40 00.8	
	117nm,26.0s						
TBI	**Tubuai**	**37.44**	**314**	*e*T		16 09 43.0	
	8.8nm,0.3s						
PPT	**Papeete**	**42.67**	**318**	*e*LQ		15 40 33.7	
	406nm,25.5s						
RPZ	**Rata Peaks**	**44.00**	**255**	LR	LR	15 44 18.4	
	comp=Z,297nm,21.6s,baz=248,slow=30						
RAR	**Rarotonga**	**44.00**	**303**	LR	LR	15 44 42.2	
	comp=Z,211nm,19.0s,baz=236,slow=30						
URZ	**Urewera**	**44.04**	**265**	LR	LR	15 44 44.5	
	comp=Z,124nm,18.9s,baz=39,slow=30						
VAH	**Vaihoa**	**44.08**	**322**	*e*T		16 18 00.5	
	47nm,0.3s						
LPAZ	**La Paz**	**55.70**	**68**	P	P	15 32 09.4	+0.8
	0.8nm,0.6s,baz=184,slow=4.6,SNR=3.3						
LPAZ				LR	LR	15 48 33.0	
	comp=Z,45nm,19.1s,baz=316,slow=28						
AFI	**Afiamalu**	**56.26**	**296**	LR	LR	15 50 50.6	
	comp=Z,153nm,19.1s,baz=147,slow=30						
CMIG	**Matias Romero**	**74.61**	**26**	LR	LR	15 59 41.5	
	comp=Z,56nm,21.9s,slow=30						
CTA	**Charters Tower**	**75.36**	**256**	LR	LR	16 03 27.4	
	comp=Z,60nm,18.8s,baz=323,slow=33						
SDV	**Santo Domingo**	**75.94**	**52**	LR	LR	15 59 42.3	
	comp=Z,58nm,19.9s,slow=29						
LPIG	**La Paz**	**78.65**	**10**	LR	LR	15 59 48.6	
	comp=Z,24nm,20.6s,slow=28						
TEIG	**Tepich**	**79.45**	**31**	LR	LR	15 59 46.3	
	comp=Z,32nm,21.3s,slow=28						
NWAO	**Narrogin (SRO)**	**79.58**	**227**	LR	LR	15 59 24.0	
	comp=Z,238nm,20.1s,slow=28						
WRA	**Warramunga Arr**	**82.09**	**247**	P	P	15 34 52.3	-0.5
	1.0nm,0.7s,baz=144,slow=5.0,SNR=3.0						
TXAR	**Lajitas Array**	**84.67**	**15**	LR	LR	16 03 59.5	
	comp=Z,99nm,19.2s,baz=5.0,slow=29						
SONM	**Songino Array**	**149.85**	**277**	PKPbc	PKPbc	15 42 21.7	+0.3
	1.1nm,0.8s,baz=110,slow=1.3,SNR=6.8						
GERES	**GERESS Array B**	**151.87**	**82**	PKPbc	PKPbc	15 42 25.3	-0.8
	0.4nm,0.4s,baz=276,slow=2.5,SNR=3.9						
GERES				PKPab	PKPab	15 42 35.4	0.0
	0.7nm,0.7s,baz=256,slow=5.4,SNR=3.8						
MKAR	**Makanchi Array**	**163.31**	**253**	PKPab	PKPab	15 43 24.9	+0.1
	0.2nm,0.3s,baz=153,slow=2.9,SNR=4.2						

IDC 12 15:26:16.8±5.9**,352S**×**13988E,h59**km±48km**,mb3.0**/3**, mb1 3.3**/4**,mb1mx3.2**/11**,mbtmp3.1**/4**,ML3.7**/1**,Error ellipse: s-maj=107.1km s-min=18.0km az=93.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**17.20**	**198**	*e*P	Pn	15 30 13.3	+0.2
WRA	**Warramunga Arr**	**17.20**	**198**	P	Pn	15 30 12.4	-0.7
	0.3nm,0.3s,baz=18,slow=13,SNR=11						
WRA				S	S	15 33 11.7	-18
	0.1nm,0.3s,baz=13,slow=24,SNR=3.3						
FITZ	**Fitzroy Crossi**	**20.12**	**223**	P	P	15 30 47.1	+1.2
	3.2nm,1.1s,baz=60,slow=20,SNR=3.4						
FITZ				S	S	15 34 23.5	-5.3
	0.8nm,0.4s,baz=203,slow=15,SNR=5.7						
ASAR	**Alice Springs**	**20.85**	**196**	P	P	15 30 54.7	+0.9
	0.5nm,0.7s,baz=24,slow=9.3,SNR=12						
ASAR				S	S	15 34 43.3	+0.2
	0.7nm,1.0s,baz=6.8,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**71.14**	**322**	P	P	15 37 28.9	-0.2
	0.1nm,0.2s,baz=100,slow=7.9,SNR=2.3						

*CSEM **12** 16:09:38.9±0.1,3885N×4175E,h12km,MD3.1,Error ellipse: s-maj=2.9km s-min=2.2km az=33.0*
*ISK **12** 16:09:38.7,3879N×4177E,h5km,MD3.1*
*ISCJB **12** 16:09:39.8±0.7,3885N±003×4179E±003,h1km±6km, Error ellipse: s-maj=5.0km s-min=3.8km az=163.7*
*DDA **12** 16:09:41.7,3883N×4184E,h9km,Md3.3*
ISC 12 16:09:40.8±0.6**,3885N**±003×**4180E**±003**,h10**km±5km**,n20, σ1s10**/31**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BTMT	**Batman**	**0.70**	**201**	PG	**Pg**	**16 09 53.6**	**-0.7**
TUTA	**Tutak**	**0.96**	**55**	*i* P	**Pg**	**16 09 58.5**	**-0.7**
TUTA				*i* S	**Sg**	**16 10 12.7**	**+0.9**
TUTA	**Tutak**	**0.96**	**55**	*i* P	**Pg**	**16 09 58.5**	**-0.8**
TUTA				*i* S	**Sg**	**16 10 12.6**	**+0.8**
BINT	**Bingol**	**1.02**	**272**	PG	**Pg**	**16 09 58.6**	**-1.8**
ERZM	**Erzurum**	**1.11**	**342**	*i* P	**Pg**	**16 10 01.7**	**-0.3**
ERZM				*i* S	**Sg**	**16 10 15.6**	**-0.8**
EZM	**Erzurum**	**1.11**	**342**	PN	**Pn**	**16 10 01.5**	**-0.9**
EZM				SN	**Sn**	**16 10 17.3**	**-0.4**
AGRB	**Hanur-Agry**	**1.18**	**52**	PN	**Pn**	**16 10 02.3**	**-1.0**
AGRB				SN	**Sn**	**16 10 20.3**	**+0.9**
VANB	**Van**	**1.27**	**101**	PN	**Pn**	**16 10 04.0**	**-0.6**
TVAN	**Van**	**1.30**	**104**	*i* P	**Pn**	**16 10 04.5**	**-0.5**
TVAN				*i* S	**Sb**	**16 10 22.2**	**+0.3**
SIRT	**Sirnak**	**1.44**	**159**	PN	**Pn**	**16 10 05.6**	**-1.3**
DYDN	**Diyadin**	**1.62**	**64**	*i* P	**Pn**	**16 10 10.1**	**+0.6**
DYDN				*i* S	**Sg**	**16 10 35.6**	**+2.7**
CLDR	**Caldiran**	**1.68**	**79**	*e*PN	**Pn**	**16 10 10.6**	**+0.4**
MARD	**Mardin**	**1.73**	**208**	*i* P	**Pn**	**16 10 10.4**	**-0.5**
MARD				*i* S	**Sn**	**16 10 34.1**	**+1.0**
EZC	**Erzincan**	**1.78**	**301**	*e*PN	**Pg**	**16 10 16.0**	**+1.1**
PTK	**Pertek**	**1.88**	**272**	*e*PN	**Pn**	**16 10 12.3**	**-0.7**
HAKT	**HAKKARI**	**1.98**	**130**	*i* P	**Pn**	**16 10 15.3**	**+0.9**
HAKT				*i* S	**Sn**	**16 10 43.3**	**+4.0**
HKR	**Hakkari**	**1.99**	**129**	*e*PN	**Pn**	**16 10 12.9**	**-1.6**
CUKT	**Cukurca**	**2.14**	**138**	*e*PN	**Pn**	**16 10 15.8**	**-0.8**
ELZG	**Elazig**	**2.23**	**262**	*i* P	**Pn**	**16 10 20.4**	**+2.5**
ELZG				*i* S	**Sg**	**16 10 53.9**	**+1.4**
GZT	**Gaziantep**	**3.66**	**247**	*i* P	**Pb**	**16 10 47.0**	**+1.5**
GZT				*i* S	**Sn**	**16 11 25.2**	**+4.6**

*CSEM **12** 16:10:49.7±0.6,3933N×4068E,h0km±3km,MD2.9,Error ellipse: s-maj=9.1km s-min=4.8km az=132.0*
*ISCJB **12** 16:10:50.6±0.6,3917N±004×4100E±006,h10km,Error ellipse: s-maj=7.4km s-min=3.8km az=35.9*
*ISK **12** 16:10:50.6,3929N×4080E,h12km,MD2.9*
*DDA **12** 16:10:51.5,3936N×4074E,h8km,Md3.1*
ISC 12 16:10:51.3±0.6**,3920N**±004×**4092E**±006**,h10**km**,n8, σ1s38**/16**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.47**	**226**	*e*PG	**Pg**	**16 11 00.4**	**-0.1**
BINT				*e*SG	**Sg**	**16 11 08.1**	**+1.5**
EZM	**Erzurum**	**0.78**	**26**	PG	**Pg**	**16 11 05.4**	**-1.0**
EZM				SG	**Sg**	**16 11 16.8**	**+0.2**
ERZM	**Erzurum**	**0.78**	**26**	*i* P	**Pg**	**16 11 05.1**	**-1.3**
ERZM				*i* S	**Sg**	**16 11 18.7**	**+2.1**
EZC	**Erzincan**	**1.01**	**303**	*e*PN	**Pg**	**16 11 13.0**	**+2.2**
EZC				*e*SN	**Sg**	**16 11 31.1**	**+7.1**
PTK	**Pertek**	**1.23**	**256**	*e*PN	**Pn**	**16 11 13.0**	**-1.6**
PTK				*e*SN	**Sn**	**16 11 30.2**	**-1.0**
TUTA	**Tutak**	**1.48**	**82**	*i* P	**Pg**	**16 11 19.9**	**+0.1**
TUTA				*i* S	**Sg**	**16 11 44.5**	**+5.4**
ELZG	**Elazig**	**1.67**	**246**	*i* P	**Pg**	**16 11 19.9**	**-3.4**
ELZG				*i* S	**Sg**	**16 11 49.5**	**+4.6**
MARD	**Mardin**	**1.89**	**183**	*i* P	**Pg**	**16 11 26.1**	**-1.4**
MARD				*i* S	**Sg**	**16 11 53.6**	**+1.5**

IDC 12 16:18:07.6±0.9**,2191N**×**14305E,h0**km**,mb3.5**/6**, mb1 3.8**/6**,mb1mx3.6**/20**,mbtmp3.5**/6**,MS3.7**/3**,Ms1 3.7**/3**, ms1mx3.1**/20**,Error ellipse: s-maj=38.1km s-min=23.7km az=89.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**14.32**	**293**	LR	LR	16 26 20.4	
	comp=Z,164nm,18.6s,baz=175,slow=34						
SONM	**Songino Array**	**39.09**	**320**	P	P	16 25 36.1	-0.4
	0.3nm,0.6s,baz=122,slow=7.0,SNR=4.1						
WRA	**Warramunga Arr**	**42.46**	**192**	P	P	16 26 04.5	0.0
	0.7nm,0.9s,baz=13,slow=8.1,SNR=3.4						
WRA				LR	LR	16 43 41.9	
	comp=Z,56nm,19.5s,baz=115,slow=36						
ASAR	**Alice Springs**	**46.17**	**192**	P	P	16 26 34.1	0.0
	0.6nm,0.6s,baz=16,slow=9.4,SNR=14						
MKAR	**Makanchi Array**	**54.46**	**313**	P	P	16 27 37.2	+0.4
	0.2nm,0.2s,baz=89,slow=9.1,SNR=4.4						
YKA	**Yellowknife Ar**	**76.33**	**28**	P	P	16 29 58.5	+0.4
	0.1nm,0.4s,baz=291,slow=5.3,SNR=3.7						
NVAR	**Mina Array Bea**	**83.11**	**51**	P	P	16 30 35.9	+0.4
	0.1nm,0.4s,baz=238,slow=5.2,SNR=3.6						
TXAR	**Lajitas Array**	**98.03**	**54**	LR	LR	17 15 14.5	
	comp=Z,85nm,18.3s,baz=185,slow=35						
LPAZ	**La Paz**	**150.04**	**85**	PKPbc	PKPbc	16 38 01.1	+0.1
	0.5nm,0.6s,baz=315,slow=2.9,SNR=2.8						

*BYKL **12** 16:31:28.8±0.6,5058N×9693E*
*ASRS **12** 16:31:33.7±1.6,5064N×9659E,h15km,Ms3.5*
MOS 12 16:31:28.5±3.5**,5054N**×**9697E,h8**km**,mb4.0**/2**,10C-3D, Error ellipse: s-maj=14.3km s-min=9.8km az=149.9, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TDJR	**Todzha**	**1.94**	**344**	⇓*i*Pg	Pg	16 32 03.4	-2.3
TDJR				*e*		16 32 07.2	
TDJR				*e*Sg	Sg	16 32 28.6	-2.2
KZLR	**Kyzyl**	**1.97**	**307**	*e*Pg	Pg	16 32 03.5	-2.7
KZLR				*e*Sg	Sg	16 32 28.1	-3.6
ORL	**Orlik**	**2.67**	**40**	*e*PN	Pn	16 32 16.1	+4.3
ORL				*e*		16 32 51.6	
ORL				pmax	pmax		
	comp=Z,201nm,0.4s						
ORL				smax			
	comp=N,1µm,0.7s						
ORL	**Orlik**	**2.67**	**40**	*e*Pn	Pn	16 32 14.0	+2.2
ORL				⇓*i*Pg	Pg	16 32 17.1	-2.6
ORL				Pmax		16 32 17.5	
	comp=N,189nm,1.0s						
ORL				*e*Sg	Sg	16 32 51.7	-2.6
ORL				Smax		16 32 58.0	
	comp=N,752nm,1.1s						
MOY	**Mondy**	**2.78**	**64**	⇑*i*PN	Pn	16 32 17.6	+4.4
MOY				*e*		16 32 55.1	
MOY				pmax	pmax		
	comp=Z,306nm,0.4s						
MOY				smax			
	comp=N,1µm,0.6s						
MOY	**Mondy**	**2.78**	**64**	*e*Pn	Pn	16 32 15.0	+1.8
MOY				⇑*i*Pg	Pg	16 32 19.1	-2.5
MOY				Pmax		16 32 19.5	
	comp=N,305nm,0.5s						
MOY				*e*Sg	Sg	16 32 55.5	-2.1
MOY				Smax		16 32 57.4	
	comp=N,1µm,1.3s						
ARDR	**Aradan**	**3.01**	**314**	*e*Pn	Pn	16 32 17.1	+0.7
ARDR				*e*Pg	Pg	16 32 22.0	-4.1
ARDR				*e*Sg	Sg	16 32 59.3	-5.8
ARS	**Arshan**	**3.70**	**66**	*e*PN	Pn	16 32 27.5	+1.7
ARS				*e*		16 32 33.8	
ARS				*e*		16 33 22.8	
ARS				pmax	pmax		
	comp=Z,117nm,0.4s						
ARS				smax			
	comp=E,1µm,0.5s						
ARS	**Arshan**	**3.70**	**66**	*e*Pn	Pn	16 32 27.9	+2.1
ARS				*e*Pg	Pg	16 32 35.9	-3.4
ARS				Pmax		16 32 40.1	
	comp=E,116nm,0.6s						
ARS				*e*Sg	Sg	16 33 23.0	-4.1
ARS				Smax		16 33 29.0	
	comp=E,1µm,0.8s						
ZAK	**Zakamensk**	**4.04**	**90**	*e*PN	Pn	16 32 31.5	+1.0
ZAK				*e*		16 32 39.9	
ZAK				*e*		16 33 34.5	
ZAK				pmax	pmax		
	comp=Z,148nm,0.4s						
ZAK				smax			
	comp=N,1µm,1.2s						
ZAK	**Zakamensk**	**4.04**	**90**	*e*Pn	Pn	16 32 31.6	+1.1
ZAK				⇑*i*Pg	Pg	16 32 41.7	-4.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZAK				Pmax		16 32 43.6	
	comp=N,160nm,1.1s						
ZAK				eSg	Sg	16 33 34.7	-3.3
ZAK				Smax		16 33 41.2	
	comp=N,1μm,1.9s						
CERR	Cheremushki	4.16	306	ePN	Pg	16 32 45.5	-2.6
CERR				e		16 33 35.5	
CERR	Cheremushki	4.16	306	i Pg	Pg	16 32 45.5	-2.6
CERR				i Sg	Sg	16 33 35.5	-6.5
TLY	Talaya	4.36	72	ePN	Pn	16 32 34.1	-0.8
TLY				e		16 32 45.9	
TLY				eS	Sn	16 33 25.2	-0.6
TLY				e		16 33 42.9	
TLY				pmax	pmax		
	comp=Z,65nm,0.7s						
TLY				smax			
	comp=N,590nm,1.7s						
TLY	Talaya	4.36	72	⇑iPg	Pg	16 32 45.9	-6.0
TLY				Pmax		16 32 50.2	
	comp=N,64nm,0.7s						
TLY				eSg	Sg	16 33 42.6	-5.7
TLY				Smax		16 33 51.7	
	comp=N,592nm,1.7s						
IRK	Irkutsk	4.88	67	ePN	Pg	16 32 56.5	-5.4
IRK				e		16 33 59.6	
IRK				pmax	pmax		
	comp=Z,101nm,0.3s						
IRK				smax			
	comp=N,1μm,0.9s						
IRK	Irkutsk	4.88	67	ePg	Pg	16 32 57.5	-4.4
IRK				Pmax		16 32 57.9	
	comp=N,101nm,0.6s						
IRK				eSg	Sg	16 33 59.6	-5.5
IRK				Smax		16 34 01.6	
	comp=N,1μm,1.0s						
LSTR	Listvyanka	5.12	72	⇑iPN	Pg	16 33 00.7	-5.8
LSTR				e		16 34 06.2	
LSTR				pmax	pmax		
	comp=Z,43nm,1.0s						
LSTR				smax			
	comp=N,325nm,0.9s						
LSTR	Listvyanka	5.12	72	⇑iPg	Pg	16 33 00.7	-5.8
LSTR				Pmax		16 33 06.3	
	comp=N,17nm,0.5s						
LSTR				eSg	Sg	16 34 06.3	-6.4
LSTR				Smax		16 34 15.3	
	comp=N,324nm,1.3s						
AKAR	Aktash	5.98	271	ePN	Pg	16 33 17.4	-5.6
AKAR				e		16 34 32.4	
AKAR	Aktash	5.98	271	ePg	Pg	16 33 17.4	-5.6
AKAR				eSg	Sg	16 34 32.4	-8.0
STDB	Stepnoy Dvoret	6.11	71	ePg	Pg	16 33 18.9	-6.5
STDB				Pmax		16 33 31.6	
	comp=N,62nm,1.3s						
STDB				eSg	Sg	16 34 38.3	-6.2
STDB				Smax		16 34 42.0	
	comp=N,1μm,1.1s						
TRG	Tyrgan	6.25	66	ePN	Pg	16 33 20.9	-7.1
TRG				e		16 34 40.2	
TRG				pmax	pmax		
	comp=Z,25nm,0.8s						
TRG				smax			
	comp=N,161nm,0.8s						
TRG	Tyrgan	6.25	66	ePn	Pn	16 33 02.5	+1.7
TRG				ePg	Pg	16 33 21.3	-6.7
TRG				Pmax		16 33 33.5	
	comp=N,18nm,0.6s						
TRG				eSg	Sg	16 34 41.0	-7.9
TRG				Smax		16 34 47.8	
	comp=N,171nm,1.1s						
KAB	Kabansk	6.26	72	ePN	Pg	16 33 21.8	-6.5
KAB				pmax	pmax		
	comp=Z,139nm,0.4s						
KAB	Kabansk	6.26	72	eSg	Sg	16 34 43.2	-6.1
KAB				Smax		16 34 46.5	
	comp=Z,744nm,1.4s						
FFNB	Fofonovo	6.33	72	ePg	Pg	16 33 22.4	-7.2
FFNB				eSg	Sg	16 34 44.2	-7.2
FFNB				Smax		16 34 47.6	
	comp=Z,367nm,0.8s						
ZRHB	Zarechye	6.66	68	ePg	Pg	16 33 29.6	-6.4
ZRHB				Pmax		16 33 38.6	
	comp=Z,55nm,1.1s						
ZRHB				eSg	Sg	16 34 56.6	-5.6
ZRHB				Smax		16 35 13.2	
	comp=Z,709nm,1.3s						
TRTB	Turuntaevo	6.88	72	ePg	Pg	16 33 34.1	-6.1
TRTB				Pmax		16 33 40.6	
	comp=Z,15nm,0.7s						
TRTB				eSg	Sg	16 35 02.8	-6.5
TRTB				Smax		16 35 11.1	
	comp=Z,179nm,1.4s						
ELT	Yel'tsovka	7.18	296	eSg	Sg	16 35 08.9	-10
OGRR	Ongureny	7.25	61	eP	Pn	16 33 14.4	-0.1
OGRR				pmax	pmax		
	comp=Z,19nm,0.5s						
OGRR	Ongureny	7.25	61	⇑iPg	Pg	16 33 39.4	-7.7
OGRR				Pmax		16 33 46.7	
	comp=Z,19nm,0.5s						
OGRR				eSg	Sg	16 35 11.9	-9.0
OGRR				Smax		16 35 19.7	
	comp=Z,224nm,1.2s						
KELR	Kotokel	7.26	68	eSg	Sg	16 35 13.2	-8.2
KELR				Smax		16 35 16.8	
	comp=Z,184nm,2.0s						
MXMB	Maximikha	7.78	65	ePg	Pg	16 33 47.6	-10
MXMB				Pmax		16 33 56.4	
	comp=Z,10.0nm,0.7s						
MXMB				eSg	Sg	16 35 29.0	-8.9
MXMB				Smax		16 35 39.9	
	comp=Z,355nm,1.4s						
SYVR	Suvo	8.61	64	ePg	Pn	16 34 04.4	+31
SYVR				Pmax		16 34 10.2	
	comp=Z,3.0nm,0.5s						
SYVR				eSg	Sn	16 35 54.7	+44
SYVR				Smax		16 36 01.2	
	comp=Z,168nm,2.5s						
NIZ	Nizh Angarsk	9.19	50	eP	Pn	16 33 43.4	+2.2
NIZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NIZ	Nizh Angarsk	9.19	50	⇑iPn	Pn	16 33 43.2	+2.0
NIZ				e		16 33 59.0	
NIZ				ePg	Pn	16 34 15.6	+34
NIZ				Pmax		16 34 35.0	
	comp=Z,5.0nm,0.6s						
NIZ				eSg	Sn	16 36 13.2	+49
NIZ				Smax		16 36 18.2	
	comp=Z,289nm,1.7s						
NVS	Novosibirsk	9.38	303	eP	Pn	16 33 51.8	+8.0
NVS	Novosibirsk	9.38	303	eSg	Sn	16 35 16.3	-13
YLYR	Ulyunkhan	9.64	58	ePn	Pn	16 33 50.8	+3.4
YLYR				max		16 34 33.6	
	comp=Z,2.0nm,0.3s						
YLYR				eSn	Sn	16 35 31.7	-4.1
YLYR				eSg	Sn	16 36 26.0	+50
YLYR				Smax		16 36 31.2	
	comp=Z,177nm,1.9s						
KMO	Kumora	10.07	52	ePn	Pn	16 33 55.5	+2.3
KMO				e		16 34 11.7	
KMO				max		16 34 14.1	
	comp=Z,6.0nm,0.5s						
KMO				eSg	Sn	16 36 41.6	+55
KMO				Smax		16 37 13.8	
	comp=Z,151nm,1.3s						
YOA	Uoyan	10.44	52	eSg	Sn	16 36 54.0	+59
YOA				Smax		16 37 25.8	
	comp=Z,594nm,1.8s						
CIT	Chita	10.50	75	eSg	Sn	16 36 54.7	+58
CIT				Smax		16 37 14.8	
	comp=Z,119nm,1.8s						
UKT	Uakit	11.18	57	ePn	Pn	16 34 11.8	+3.4
UKT				eSg	Sn	16 37 14.4	+61
UKT				Smax		16 37 39.8	
	comp=Z,69nm,1.4s						
SVKR	Severomuysk	11.37	54	eSg	Sn	16 37 20.9	+63
SVKR				Smax		16 37 40.0	
	comp=Z,174nm,1.1s						
KURK	Kurchatov	11.66	278	⇑eP	Pn	16 34 12.3	-2.7
BOD	Bodaibo	12.33	47	eSg	Sx	16 37 50.3	
BOD				Smax		16 37 54.1	
	comp=Z,59nm,2.0s						
NLYR	Nelyaty	12.62	55	eSg	Sx	16 37 59.4	
CRS	Chara	14.09	55	eSg	Sx	16 38 44.6	
CRS				Smax		16 38 56.6	
	comp=Z,105nm,2.2s						
TUP	Tupik	14.51	66	eSg	Sx	16 38 56.0	
TUP				Smax		16 39 08.0	
	comp=Z,86nm,2.8s						
AAK	Ala-Archa	17.31	251	⇑eP	Pn	16 35 26.6	-3.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.7s						
TIXI	Tiksi	25.59	23	⇓eP	P	16 36 56.7	-0.9
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,100nm,16.0s						
FINES	FINESS Array B	39.14	314	i P	P	16 39 03.5	+7.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						

ISCJB **12** *16:51:05.4±1.7,3441N±007×2393E±006,h5^{km}±9^{km}, mb3.8/6,MS2.9/1,Error ellipse: s-maj=12.1km s-min=8.8km az=2.6*

IDC **12** *16:51:06.7±1.3,3457N×2382E,h0^{km},mb4.1/5,mb1 3.8/9, mb1mx3.6/25,mbtmp3.7/9,ML3.7/3,MS2.9/2,Ms1 2.9/2, ms1mx2.6/34,Error ellipse: s-maj=30.6km s-min=13.7km az=146.0*

CSEM **12** *16:51:06.5±0.2,3440N×2391E,h10^{km},MD3.6,Error ellipse: s-maj=4.9km s-min=4.0km az=156.0*

NEIC **12** *16:51:08.3±1.2,3452N×2392E,h10^{km},mb4.2/1, MD3.6(ATH),Error ellipse: s-maj=16.5km s-min=11.7km az=163.0*

ATH **12** *16:51:14.6,3494N×2406E,h20^{km}±3^{km},MD3.6/5*

ISC 12 16:51:08.3±1.6**,3450N**±008×**2394E**±006**,h6**^{km}±8^{km}**,n31,** σ**1§36**/34**,mb3.8**/6**,MS2.9**/1**,1C,Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.36	20	ePg	Pg	16 51 15.0	-0.3
GVD				eSg	Sg	16 51 19.4	-0.6
GVD	Gavdhos	0.36	20	ePg	Pg	16 51 15.0	-0.3
GVD				eSg	Sg	16 51 19.4	-0.6
SIVA	Sivas	0.89	54	P	Pg	16 51 26.5	+1.2
VAM	Vamos	0.93	13	⇑iPB	Pb	16 51 24.3	-2.5
VAM				eSB	Sb	16 51 31.5	-7.9
IDI	Anoyia	1.11	45	Pg	Pg	16 51 28.5	-1.0
	7.4nm,0.3s,baz=234,slow=16,SNR=43						
IDI				Lg		16 51 43.5	
	88nm,0.3s,baz=335,slow=18,SNR=31						
NPS	Neapolis	1.57	61	ePN	Pn	16 51 38.6	+1.9
NPS				eSN	Sn	16 51 57.5	+0.1
KYTH	Kithira	1.92	338	ePN	Pn	16 51 43.5	+1.9
VLI	Veliai	2.36	340	ePN	Pn	16 51 49.7	+2.2
KARP	Karpathos	2.84	68	ePN	Pn	16 51 58.0	+3.8
ARG	Arkhangelos	3.83	62	P	Pn	16 52 11.6	+3.9
LKR	Lokris	4.21	350	P	Pn	16 52 13.8	+0.8
TIP	Timpagrande	7.41	311	ePn	Pn	16 52 55.2	-1.7
TIP	Timpagrande	7.41	311	ePn	Pn	16 52 55.2	-1.7
BRTR	Keskin Array B	9.34	53	Pn	Pn	16 53 25.0	+1.6
	0.1nm,0.3s,baz=248,slow=9.2,SNR=4.1						
MMAI	Mount Meron Ar	9.66	96	Pn	Pn	16 53 27.4	-0.5
	0.5nm,0.3s,baz=304,slow=11,SNR=3.2						
MMAI				Sn	Sn	16 55 15.6	-1.1
	0.8nm,0.3s,baz=275,slow=22,SNR=3.9						
EIL	Elat	10.51	114	LR	LR	16 59 40.2	
	comp=Z,48nm,20.4s,baz=272,slow=48						
GERES	GERESS Array B	16.22	335	Pn	Pn	16 54 57.6	+0.9
	0.1nm,0.3s,baz=148,slow=13,SNR=8.6						
KHC	Kasperske Hory	16.51	335	eP	Pn	16 55 02.5	+2.2
AKASG	Malin Array Be	16.64	12	Pn	Pn	16 54 59.1	-2.9
	0.4nm,0.3s,baz=208,slow=11,SNR=3.5						
MIB	Mutribah	20.34	97	eP	P	16 55 46.6	+1.2
MIB				AMb	AMB	16 55 47.7	
	comp=Z,12nm,0.5s						
NAY	Al-Naaiem	20.46	98	eP	P	16 55 47.3	+0.7
NAY				AMb	AMB	16 55 49.0	
	comp=Z,5.0nm,0.7s						
HFS	Hagfors	26.51	348	P	P	16 56 43.7	-2.5
	comp=Z,3.0nm,0.8s,mb3.9,baz=178,slow=18,SNR=4.3						
ATD	Arta Tunnel	28.63	138	LR	LR	17 10 04.0	
	comp=Z,30nm,18.6s,MS2.9,baz=190,slow=40						
TORD	Torodi Ar. Bea	29.30	229	P	P	16 57 10.6	-1.0
	comp=Z,0.1nm,0.4s,mb2.9,baz=95,slow=37,SNR=3.7						
AKTK	Aktyubinsk	29.43	47	P	P	16 57 11.7	-0.9
AKTK	Aktyubinsk	29.43	47	P	P	16 57 11.6	-0.9
AKTO	Aktyubinsk	29.43	47	P	P	16 57 11.7	-0.9
	comp=Z,1.8nm,0.6s,mb4.0,baz=248,slow=9.8,SNR=8.7						
MKAR	Makanchi Array	44.98	56	P	P	16 59 24.1	0.0
	comp=Z,2.6nm,0.5s,mb4.4,baz=276,slow=7.1,SNR=50						
SONM	Songino Array	60.68	50	P	P	17 01 20.2	-0.1
	comp=Z,0.5nm,0.6s,mb3.8,baz=286,slow=7.7,SNR=8.8						
ULN	Ulaanbaatar	61.09	50	eP	P	17 01 22.6	-0.4
	comp=Z,1.2nm,0.6s,mb4.2						
ULN	Ulaanbaatar	61.09	50	eP	P	17 01 22.6	-0.4

IGQ 12 16:56:05.7,067S×7978W,h95^{km}±8^{km}**,Mb4.1,Ms3.9, 1C-27D,Error ellipse: s-maj=2.6km s-min=2.2km az=130.7,Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAG1	Magdalena	0.59	1	⇑P	Pn	16 56 21.6	-0.2
CHIS	Cerro-Chispas-	1.02	248	⇓P	Pn	16 56 25.2	-0.8
CHIS	Cerro-Chispas-	1.02	248	⇓S	Sn	16 56 42.9	+1.7
JUA2	San Juan 2	1.26	69	⇓P	Pn	16 56 29.4	+0.6
TERV	Terraza Guagua	1.28	67	⇓P	Pn	16 56 29.3	+0.3
CAMI	Rancho Maria	1.28	90	⇓P	Pn	16 56 29.9	+0.9
PINO	Pino	1.28	67	⇓P	Pn	16 56 29.2	+0.2
GGP	Refugio Guagua	1.28	68	⇓P	Pn	16 56 29.4	+0.3
YANA	Yana	1.33	66	⇓P	Pn	16 56 29.7	+0.1
VC1	Cotopaxi 1	1.38	89	⇓P	Pn	16 56 31.5	+1.3
IGUA	Igualata	1.40	126	⇓P	Pn	16 56 31.2	+0.7
IGUA	Igualata	1.40	126	⇓S	Sn	16 56 49.3	0.0
TAMB	Tambo	1.41	91	⇓P	Pn	16 56 31.9	+1.2
BILB	Tungurahua vol	1.49	121	⇓P	Pn	16 56 32.4	+0.8
BILB	Tungurahua vol	1.49	121	⇓S	Sn	16 56 52.2	+0.9
JUIV	Juive	1.52	120	⇓P	Pn	16 56 32.6	+0.7
JUIV	Juive	1.52	120	⇓S	Sn	16 56 51.1	-0.6
RETU	Refugio	1.54	120	P	Pn	16 56 33.3	+1.0
RETU	Refugio	1.54	120	S	Sn	16 56 53.6	+1.2
RUN5	Runtun	1.55	119	⇓P	Pn	16 56 33.3	+1.0
RUN5	Runtun	1.55	119	⇓S	Sn	16 56 53.4	+0.9
ARRY	Arrayan	1.57	122	⇓P	Pn	16 56 33.3	+0.8
ULBA	Ulba	1.58	119	⇓P	Pn	16 56 33.5	+0.8
PATA	Patacocha	1.58	122	⇓P	Pn	16 56 34.0	+1.2
PATA	Patacocha	1.58	122	⇓S	Sn	16 56 54.2	+0.9
ANTI	Antisana	1.64	82	⇓P	Pn	16 56 35.0	+1.6
COTA	Cotacachi	1.75	55	⇓P	Pn	16 56 36.3	+1.3
CAYR	Refugio Cayamb	1.90	69	⇓P	Pn	16 56 39.1	+2.2
CAYR	Refugio Cayamb	1.90	69	⇓S	Sn	16 57 04.0	+3.5
CAYA	Cayambe	1.94	68	⇓P	Pn	16 56 39.3	+2.0
CONE	Cono NE Rev Vo	2.22	74	P	Pn	16 56 43.1	+2.1
LAV3	Lava3-Reventad	2.22	75	P	Pn	16 56 43.4	+2.4

IDC **12** *17:38:41.1±1.6,4157N×7324E,h0^{km},mb3.8/7,mb1 3.9/9, mb1mx3.6/26,mbtmp3.8/9,ML3.4/2,Error ellipse: s-maj=35.4km s-min=12.3km az=156.0*

NEIC **12** *17:38:44.7±1.1,4188N×7311E,h10^{km},Error ellipse: s-maj=20.8km s-min=8.5km az=168.0*

ISCJB **12** *17:38:45.3±1.0,4209N±005×7294E±004,h18^{km}±7^{km}, mb3.7/7,Error ellipse: s-maj=8.5km s-min=5.6km az=4.1*

KNET **12** *17:38:47.4±0.6,4196N×7330E,h17^{km}±2^{km},ml3.2,Error ellipse: s-maj=3.4km s-min=2.6km az=60.0*

MOS **12** *17:38:48.6±0.8,4220N×7298E,h33^{km},mb3.6/1,Error ellipse: s-maj=18.6km s-min=16.0km az=81.8*

NNC **12** *17:38:49.1±2.2,4233N×7308E,h0^{km},mb3.8,mpv3.5, Error ellipse: s-maj=30.7km s-min=11.4km az=3.0*

ISC 12 17:38:44.6±0.9**,4197N**±005×**7305E**±004**,h2**^{km}±4^{km}**,n37,** σ**1§13**/53**,mb3.7**/7**,16C-18D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	0.51	71	ePg	Pg	17 38 54.5	+0.2
AML				eSn	Sg	17 39 01.3	+0.4
AML	Almayashu	0.51	71	P	Pg	17 38 54.7	+0.3
	581nm,0.2s,SNR=408						
AML				⇓S	Sg	17 39 01.1	+0.1
	3μm,0.3s						
EKS2	Erkin-Say	0.88	38	ePg	Pg	17 39 02.0	+0.5
EKS2	Erkin-Say	0.88	38	⇓P	Pg	17 39 02.2	+0.8
	42nm,0.1s,SNR=41						
EKS2				⇑S	Sg	17 39 13.5	+0.7
	103nm,0.1s						
UCH	Uchtor	1.12	76	ePn	Pn	17 39 05.2	-2.1
UCH				S	Sg	17 39 18.7	-1.9
UCH	Uchtor	1.12	76	⇑P	Pg	17 39 05.2	-0.9
	66nm,0.1s,SNR=90						
UCH				⇓S	Sg	17 39 19.4	-1.3
	274nm,0.1s						
AAK	Ala-Archa	1.26	58	ePn	Pn	17 39 07.2	-2.0
AAK	Ala-Archa	1.26	58	⇑P	Pg	17 39 08.4	-0.4
	48nm,0.1s,SNR=63						
AAK				⇓S	Sg	17 39 25.0	-0.2
	135nm,0.2s						
KBK	Karagaybulak	1.57	63	⇓P	Pn	17 39 13.8	+0.4
	87nm,0.1s,SNR=204						
KBK				⇑S	Sn	17 39 33.9	-0.4
	502nm,0.2s						
CHMS	Chumysh	1.63	50	⇓P	Pn	17 39 15.3	+1.1
	34nm,0.1s,SNR=38						
CHMS				⇓S	Sn	17 39 36.6	+0.9
	106nm,0.2s						
KZA	Kyzart	1.65	86	P	Pn	17 39 14.7	+0.2
	293nm,0.2s,SNR=933						
KZA				⇑S	Sn	17 39 35.5	-0.7
	975nm,0.3s						
USP	Ospenovka	1.68	39	⇑P	Pn	17 39 16.4	+1.4
	51nm,0.2s,SNR=64						
USP				⇓S	Sn	17 39 38.7	+1.6
	184nm,0.2s						
TKM2	Tokmak 2	2.11	62	⇓Pn	Pn	17 39 23.4	+2.5
	2.0nm,0.4s						
TKM2				⇓Lg		17 39 50.7	
	30nm,0.5s						
TKM2	Tokmak 2	2.11	62	ePn	Pn	17 39 23.2	+2.3
TKM2				eSg	Sg	17 39 49.9	-2.5
TKM2	Tokmak 2	2.11	62	⇑P	Pn	17 39 23.2	+2.3
	49nm,0.1s,SNR=118						
KK31	Karatay Array	2.19	302	⇑Pn	Pg	17 39 26.8	+0.3
	32nm,0.3s,baz=125,slow=14,SNR=549						
KK31				⇑Lg		17 39 57.1	
	82nm,0.2s,baz=124,slow=31,SNR=26						
ULHL	Ulahol	2.39	82	⇓P	Pn	17 39 26.5	+1.8
	86nm,0.3s,SNR=225						
KNDC	Almaty	3.15	65	⇑Pn	Pb	17 39 42.6	+1.4
	32nm,0.4s						
KNDC				⇓Lg		17 40 20.9	
	98nm,0.5s						
MK31	Makanchi Array	8.19	51	Pn	Pn	17 40 46.6	+2.3
	0.7nm,0.5s,baz=230,slow=14,SNR=8.5						
MK31				⇑Lg		17 43 02.2	
	3.5nm,0.6s						
MKAR	Makanchi Array	8.19	51	P	Pn	17 40 44.3	0.0
MKAR						17 42 17.4	
MKAR	Makanchi Array	8.19	51	Pn	Pn	17 40 44.3	0.0
	0.4nm,0.3s,baz=233,slow=14,SNR=10						
MKAR				Sn	Sn	17 42 17.4	0.0
	0.3nm,0.3s,baz=225,slow=24,SNR=2.0						
MKAR				Lg		17 43 03.3	
	0.4nm,0.3s,baz=239,slow=28,SNR=3.6						
KURK	Kurchatov	9.55	22	⇑Pn	Pn	17 41 02.5	-0.6
	3.1nm,1.8s						
KURK				⇓Sn	Sn	17 42 50.3	-0.6
	1.9nm,0.7s						
KURK				⇓Lg		17 43 43.8	
	13nm,1.5s						
BVA0	Borovoye Array	11.20	352	⇑Pn	Pn	17 41 25.9	+0.3
	0.6nm,0.9s						
BVA0				⇓Sn	Sn	17 43 27.8	-3.6
	0.3nm,0.6s						
BVA0				⇑Lg		17 44 35.3	
	3.8nm,1.3s						
AB31	Akbulak array	11.70	313	⇓Pn	Pn	17 41 32.8	+0.3
	1.9nm,0.5s,baz=116,slow=13,SNR=27						
AB31				⇓Sn	Sn	17 43 39.6	-4.1
	0.5nm,0.5s						
CHKZ	Chkalovo	11.82	353	⇓Pn	Pn	17 41 34.5	+0.4
	0.6nm,0.4s						
CHKZ				⇑Sn	Sn	17 43 44.7	-1.8
	1.1nm,0.5s						
CHKZ				⇑Lg		17 44 55.6	
	12nm,1.2s						
CHKZ	Chkalovo	11.82	353	ePn	Pn	17 41 34.6	+0.5
	1.4nm,0.4s						
CHKZ	Chkalovo	11.82	353	eP	Pn	17 41 34.6	+0.5
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTK	Aktyubinsk	13.40	314	Pn	Pn	17 41 55.4	-0.2
AKTO	Aktyubinsk	13.40	314	Pn	Pn	17 41 55.4	-0.2
	comp=Z,0.3nm,0.3s,baz=105,slow=12,SNR=6.3						
BRTR	Keskin Array B	29.72	279	P	P	17 44 52.6	+0.7
	comp=Z,0.7nm,0.7s,mb3.5,baz=284,slow=33,SNR=2.6						
ARCES	ARCESS Array B	36.80	334	P	P	17 45 53.6	+0.3
	comp=Z,1.1nm,0.6s,mb3.9,baz=104,slow=8.1,SNR=8.1						
HFS	Hagfors	39.91	318	P	P	17 46 19.5	0.0
	comp=Z,3.4nm,0.8s,mb4.1,baz=95,slow=12,SNR=3.7						
GERES	GERESS Array B	41.29	301	P	P	17 46 31.4	+0.3
	comp=Z,0.4nm,0.3s,mb3.5,baz=72,slow=7.6,SNR=5.4						
TORD	Torodi Ar. Bea	67.49	268	P	P	17 49 40.4	-1.8
TORD	Torodi Ar. Bea	67.49	268	P	P	17 49 40.4	-1.8
	comp=Z,0.4nm,0.5s,mb3.7,baz=49,slow=5.3,SNR=4.5						
YKA	Yellowknife Ar	75.70	4	P	P	17 50 29.8	-1.2
	comp=Z,0.2nm,0.6s,mb3.2,baz=353,slow=5.4,SNR=6.1						
DBIC	Dimbokro	76.58	267	P	P	17 50 33.1	-3.7
	comp=Z,2.7nm,0.9s,mb4.2,baz=84,slow=10,SNR=2.6						

IDC **12** *17:43:14.9±2.2,1595S×17363W,h0^{km},mb4.0/6, mb1 4.3/7,mb1mx4.1/16,mbtmp4.0/7,ML1.9/1,MS3.7/5, Ms1 3.7/5,ms1mx3.4/29,Error ellipse: s-maj=150.1km s-min=18.9km az=146.0*

ISCJB **12** *17:43:15.1±1.4,158S±05×1737W±04,h10^{km},mb4.0/7, MS3.9/3,Error ellipse: s-maj=87.6km s-min=9.3km az=142.8*

NEIC **12** *17:43:16.2±1.4,1599S×17354W,h10^{km},mb4.1/1,Error ellipse: s-maj=78.6km s-min=13.4km az=143.0*

ISC 12 17:43:15.6±6.6**,158S**±05×**1736W**±04**,h4**^{km}±42^{km}**,n20,** σ**1§09**/14**,mb4.0**/7**,MS3.9**/3**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.58	45	ePn	Pn	17 43 57.9	-0.3
AFI				eS	Sn	17 44 29.2	-0.9
AFI				LR	LR	17 44 50.6	
AFI	Afiamalu	2.58	45	Pn	Pn	17 43 58.3	0.0
	11nm,0.3s,baz=199,slow=2.2,SNR=34						
AFI				Sn	Sn	17 44 27.8	-2.3
	33nm,0.3s,baz=66,slow=22,SNR=6.8						
AFI				LR	LR	17 44 50.6	
	comp=Z,300nm,19.1s,baz=250,slow=35						
DZM	Mont Dzumac	19.85	249	P	Pn	17 47 54.2	+4.9
	0.3nm,0.3s,baz=86,slow=18,SNR=10.0						
DZM				LR	LR	17 53 56.1	
	comp=Z,162nm,19.2s,baz=85,slow=32						
PPT	Papeete	23.12	98	eLR	LR	17 53 50.6	
	126nm,23.8s						
PPT	Papeete	23.12	98	LR	LR	17 54 49.8	
	comp=Z,105nm,18.6s,MS3.3,baz=235,slow=30						
TBI	Tubuai	23.98	112	eLR	LR	17 54 03.1	
	183nm,26.8s						
TBI	Tubuai	23.98	112	eT		18 12 23.5	
	5.4nm,0.3s						
HNR	Honiara	26.52	281	LR	LR	17 58 11.4	
	comp=Z,174nm,18.8s,MS3.6,baz=177,slow=34						
RKT	Rikitea	37.10	108	eT		18 28 48.8	
	3.5nm,0.3s						
STKA	Stephens Creek	43.65	240	eP	P	17 51 21.2	-0.4
STKA	Stephens Creek	43.65	240	P	P	17 51 21.0	-0.6
	4.3nm,1.0s,mb4.1,baz=157,slow=18,SNR=4.5						
WRA	Warramunga Arr	49.53	257	P	P	17 52 07.1	-0.9
	0.6nm,0.7s,mb3.7,baz=94,slow=7.2,SNR=6.4						
ASAR	Alice Springs	49.78	252	P	P	17 52 08.6	-1.2
	3.9nm,0.7s,mb4.5,baz=88,slow=7.8,SNR=32						
CBIJ	Chichi jima	60.44	314	LR	LR	18 13 35.9	
	comp=Z,576nm,21.6s,MS4.7,baz=320,slow=30						
NVAR	Mina Array Bea	74.75	42	P	P	17 54 58.6	+1.7
	1.2nm,0.9s,mb3.8,baz=219,slow=8.2,SNR=6.8						
BW06	Boulder Array	82.69	42	eP	P	17 55 40.5	0.0
	1.2nm,0.8s,mb4.0						
PDAR	Pinedale Array	82.69	42	P	P	17 55 40.9	+0.4
	1.1nm,0.8s,mb3.9,baz=234,slow=2.7,SNR=9.3						
BILL	Bilibino	84.84	353	eP	P	17 55 53.1	+2.1
YKA	Yellowknife Ar	90.52	23	P	P	17 56 18.9	+0.4
	0.1nm,0.4s,mb3.5,baz=243,slow=3.9,SNR=5.5						
BRTR	Keskin Array B	146.29	320	PKPbc	PKPbc	18 02 59.5	+1.6
	3.1nm,0.8s,baz=124,slow=3.5,SNR=6.2						

ISCJB **12** *17:49:55.5±0.8, 1985N±002×12202E±003, h29km±6km, mb4.9/91, MS4.5/36, Error ellipse: s-maj=4.8km s-min=2.7km az=4.8*

MAN **12** *17:49:55, 1978N×12186E, h13km, mb4.9, ML3.8, MS3.9*

BJI **12** *17:49:55.8, 2003N×12165E, h6km, mB5.2, mb4.6, ML4.7, Ms4.9, Msz4.6*

MOS **12** *17:49:56.2±1.4, 1986N×12202E, h36km, mb5.1/39, MS4.6/8, Error ellipse: s-maj=10.1km s-min=5.2km az=113.4*

NEIC **12** *17:49:56.8±2.1, 1978N×12194E, h28km±14km, mb5.1/42, MS4.9/1, Error ellipse: s-maj=7.2km s-min=6.1km az=101.0*

GCMT **12** *17:49:56.8±0.2, 1988N×12174E, h16km±1km, MW5.1/92, Moment Tensor Solution. s43,c58; s92,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.07±.14; $M_{\theta\theta}$1.19±.11; $M_{\phi\phi}$-1.12±.16; $M_{r\theta}$0.01±.30; $M_{\theta\phi}$-5.34±.11; $M_{\phi r}$-2.09±.41; Best double couple: $M_0$5.84900×10^{16} NP1:ϕ_s84.00000°, δ69.00000°, λ-178.00000°. NP2: ϕ_s354.00000°, δ88.00000°, λ-21.00000°. Principal axes: T 5.8060, Plg13.0000°, Azm41.0000°; N 0.0820, Plg69.0000°, Azm168.0000°; P -5.8930, Plg16.0000°, Azm307.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC **12** *17:49:57.6±2.6, 1978N×12195E, h33km±19km, mb4.3/27, mb1 4.4/31, mb1mx4.4/35, mbtmp4.4/31, ML4.4/4, MS4.4/24, Ms1 4.4/24, ms1mx4.2/34 Error ellipse: s-maj=16.6km s-min=10.2km az=80.0*

ISC 12 17:49:58.1±0.9**, 1984N**±002×**12199E**±003**, h35**km±6km**, h32**km±3.5km**:pP-P, n295,** σ1§**31**/318**, mb4.9**/91**, MS4.5**/36**, 38C-20D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.59**	**178**	eP	**Pn**	**17 50 22.6**	**-1.1**
SGCP				eS	**Sn**	**17 50 42.4**	**-0.6**
PIP	**Pasuquin**	**1.99**	**221**	⇓iP	**Pn**	**17 50 25.7**	**-3.5**
PIP				eS	**Sn**	**17 50 51.6**	**-1.4**
APYP	**Conner**	**2.09**	**200**	eP	**Pn**	**17 50 28.4**	**-2.3**
APYP				eS	**Sn**	**17 50 54.3**	**-1.2**
CVP	**Callao Caves**	**2.13**	**184**	⇑iP	**Pn**	**17 50 30.5**	**-0.7**
CVP				iS	**Sn**	**17 50 58.2**	**+1.8**
ABRA	**Dolores**	**2.49**	**209**	eP	**Pn**	**17 50 33.2**	**-3.0**
ABRA				eS	**Sn**	**17 51 04.9**	**-0.5**
PALP	**Palanan**	**2.79**	**171**	⇑eP	**Pn**	**17 50 40.5**	**+0.2**
PALP				iS	**Sn**	**17 51 19.2**	**+6.5**
PALP	**Palanan**	**2.79**	**171**	eP	**Pn**	**17 50 40.8**	**+0.4**
PALP				eS	**Sn**	**17 51 18.1**	**+5.3**
CAUP	**Cauayan**	**2.88**	**183**	eP	**Pn**	**17 50 42.6**	**+1.0**
CAUP				eS	**Sn**	**17 51 22.6**	**+7.5**
BCPH	**Baguio City Da**	**3.69**	**202**	⇓eP	**Pn**	**17 50 51.5**	**-1.2**
BCPH				iS	**Sn**	**17 51 37.8**	**+2.8**
BOLP	**Bolinao**	**3.96**	**210**	eP	**Pn**	**17 50 56.2**	**-0.3**
BOLP				eS	**Sn**	**17 51 45.0**	**+3.2**
BALP	**Baler**	**4.09**	**186**	eP	**Pn**	**17 50 57.6**	**-0.6**
BALP				eS	**Sn**	**17 51 45.2**	**+0.3**
NACB	**Ninganchiao**	**4.33**	**355**	eP	**Pn**	**17 50 59.4**	**-2.1**
NACB				eS	**Sn**	**17 51 48.3**	**-2.5**
SCZP	**Santa Cruz**	**4.50**	**206**	eP	**Pn**	**17 51 03.4**	**-0.4**
YHNB	**Yeheng**	**4.84**	**353**	eP	**Pn**	**17 51 08.6**	**+0.1**
POLP	**Polilio Island**	**5.08**	**181**	eP	**Pn**	**17 51 11.9**	**+0.1**
POLP				eS	**Sn**	**17 52 09.3**	**-0.1**
TATO	**Taipei**	**5.14**	**355**	eP	**Pn**	**17 51 13.2**	**+0.7**
	415nm,0.7s						
TGY	**Tagaytay City**	**5.79**	**190**	⇑eP	**Pn**	**17 51 24.0**	**+2.4**
GQP	**Guinayangan**	**5.91**	**176**	⇓eP	**Pn**	**17 51 23.9**	**+0.6**
GQP				eS	**Sn**	**17 52 28.5**	**-1.4**
QZH	**Quanzhou**	**5.98**	**329**	⇑iP	**Pn**	**17 51 23.5**	**-0.6**
QZH				S	**Sn**	**17 52 25.2**	**-6.2**
QZH				Smax			
	comp=N,380nm,0.6s						
QZH				Smax			
	comp=E,600nm,0.9s						
QZH				LR	LR		
	comp=N,8µm,16.2s						
QZH				LR	LR		
	comp=E,4µm,11.7s						
QZH				LR	LR		
	comp=Z,6µm,12.3s						
LUBP	**Lubang**	**6.29**	**196**	eP	**Pn**	**17 51 30.8**	**+2.3**
PVCP	**Virac**	**6.54**	**161**	⇑eP	**Pn**	**17 51 32.9**	**+1.0**
PVCP				eS	**Sn**	**17 52 43.2**	**-2.1**
PVCP	**Virac**	**6.54**	**161**	eP	**Pn**	**17 51 32.8**	**+0.9**
PVCP				eS	**Sn**	**17 52 44.4**	**-0.9**
OTRP	**Odiongan**	**7.43**	**180**	eP	**Pn**	**17 51 45.2**	**+1.1**
CNP	**Catarman**	**7.72**	**160**	eP	**Pn**	**17 51 51.7**	**+3.6**
BUSP	**Coron**	**7.98**	**193**	eP	**Pn**	**17 51 50.5**	**-1.1**
GZH	**Guangzhou**	**8.68**	**293**	P	**Pn**	**17 51 56.4**	**-4.8**
GZH				S	**Sn**	**17 53 34.0**	**-3.9**
GZH				LR	LR		
	comp=N,4µm,13.9s						
GZH				LR	LR		
	comp=E,2µm,12.8s						
GZH				LR	LR		
	comp=Z,5µm,13.3s						
JOW	**Kunigami**	**9.04**	**38**	Pn	**Pn**	**17 52 05.7**	**-0.5**
	comp=Z,14nm,0.3s,baz=234,slow=11,SNR=58						
JOW				Sn	**Sn**	**17 53 42.6**	**-4.2**
	comp=Z,3.3nm,0.3s,baz=124,slow=27,SNR=2.5						
JOW				LR	LR	17 55 59.9	
	comp=Z,3µm,20.0s,baz=211,slow=40						
MSLP	**Maasin**	**10.04**	**164**	eP	**Pn**	**17 52 26.2**	**+6.4**
QIZ	**Qiongzhong**	**11.49**	**268**	P	**Pn**	**17 52 36.7**	**-3.1**
QIZ				S	**Sn**	**17 54 40.0**	**-7.0**
QIZ				AMB	AMB		
	comp=Z,27nm,0.7s						
QIZ				LR	LR		
	comp=N,4µm,14.7s						
QIZ				LR	LR		
	comp=Z,3µm,14.4s						
QIZ	**Qiongzhong**	**11.49**	**268**	ePn	**Pn**	**17 52 36.3**	**-3.5**
	comp=Z,94nm,0.8s						
NJ2	**Nanjing**	**12.49**	**348**	eP	**Pn**	**17 52 56.8**	**+3.5**
NJ2				AP		17 52 59.7	
NJ2				XP		17 53 02.6	
NJ2				PP		17 53 05.6	
NJ2				S	**Sn**	**17 55 17.0**	**+5.8**
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,140nm,5.2s						
NJ2				LR	LR		
	comp=N,3µm,18.0s						
NJ2				LR	LR		
	comp=E,5µm,22.0s						
NJ2				LR	LR		
	comp=Z,5µm,22.0s						
WHN	**Wuhan**	**12.70**	**329**	eP	**Pn**	**17 52 52.4**	**-3.9**
WHN				LR	LR		
	comp=Z,3µm,25.1s						
KDM	**Kudat**	**13.79**	**202**	⇑P	**Pn**	**17 53 12.0**	**+0.8**
KKM	**Kota Kinabalu**	**14.82**	**203**	P	**Pn**	**17 53 25.4**	**+0.1**
KKM	**Kota Kinabalu**	**14.82**	**203**	⇑P	**Pn**	**17 53 28.0**	**+2.8**
SDKM	**Sandakan**	**14.86**	**199**	⇓P	**Pn**	**17 53 25.5**	**-0.3**
MYLDM	**Lahad Datu**	**14.96**	**194**	⇑P	**Pn**	**17 53 28.1**	**+1.0**
JNU	**Nakatsue**	**15.43**	**29**	Pn	**Pn**	**17 53 33.1**	**0.0**
	comp=Z,1.1nm,0.3s,baz=202,slow=13,SNR=5.7						
JNU				LR	LR	18 00 11.5	
	comp=Z,1µm,18.2s,baz=28,slow=40						
GYA	**Guiyang**	**15.56**	**298**	⇑iP	**Pn**	**17 53 33.8**	**-1.1**
GYA				AP	pP	17 53 41.7	-6.2
GYA				PP		17 53 46.9	
GYA				S	**Sn**	**17 56 24.6**	**-1.6**
GYA				SS		17 56 43.2	
GYA				PCP	PcP	17 58 38.3	+2.3
GYA				AMB	AMB		
	comp=Z,20nm,1.0s						
GYA				AMB	AMB		
	comp=Z,100nm,5.4s						
GYA				LR	LR		
	comp=N,2µm,16.8s						
GYA				LR	LR		
	comp=E,2µm,15.3s						
GYA				LR	LR		
	comp=Z,2µm,14.7s						
TSM	**Tawau**	**15.96**	**195**	⇑P	**Pn**	**17 53 41.9**	**+1.7**
TIA	**Tai'an**	**16.86**	**346**	eP	**Pn**	**17 53 54.0**	**+2.5**
INCN	**Inchon**	**18.04**	**12**	eP	**Pn**	**17 54 08.2**	**+2.2**
	comp=Z,106nm,1.0s						
KSRS	**Korea Array**	**18.30**	**15**	P	**Pn**	**17 54 09.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=200,slow=13,SNR=28						
KSRS				LR	LR	18 01 53.5	
	comp=Z,2µm,18.2s,baz=199,slow=39						
KSRS				ScP	ScP	18 02 15.8	+2.9
	comp=Z,0.1nm,0.3s,baz=198,slow=3.6,SNR=4.4						
XAN	**Xi'an**	**18.30**	**323**	P	**Pn**	**17 54 08.0**	**-1.3**
XAN				S	**Sn**	**17 57 29.8**	**-2.8**
XAN				AMB	AMB		
	comp=Z,25nm,1.0s						
XAN				LR	LR		
	comp=N,2µm,13.8s						
XAN				LR	LR		
	comp=E,1µm,12.0s						
XAN				LR	LR		
	comp=Z,1µm,14.4s						
KMI	**Kunming**	**18.55**	**290**	P	**Pn**	**17 54 12.0**	**-0.3**
KMI				AP	pP	17 54 19.6	-1.4
KMI				XP	sP	17 54 24.1	-1.3
KMI				PP		17 54 27.8	
KMI				S	**Sn**	**17 57 32.9**	**-5.8**
KMI				XS	sS	17 57 44.6	-12
KMI				SS		17 57 57.0	
KMI				AMB	AMB		
	comp=Z,22nm,1.5s						
KMI				AMB	AMB		
	comp=Z,298nm,3.8s						
KMI				LR	LR		
	comp=N,3µm,14.0s						
KMI				LR	LR		
	comp=E,2µm,13.6s						
KMI				LR	LR		
	comp=Z,2µm,13.6s						
KKTK	**Khon Kaen**	**18.55**	**262**	P	**Pn**	**17 54 14.0**	**+1.6**
BTM	**Bintulu**	**18.68**	**209**	⇓P	**Pn**	**17 54 13.4**	**-0.6**
DL2	**Dalian**	**19.01**	**359**	P	**Pn**	**17 54 23.4**	**+5.7**
DL2				AMB	AMB		
	comp=Z,20nm,1.2s						
DL2				LR	LR		
	comp=N,630nm,14.2s						
DL2				LR	LR		
	comp=E,760nm,16.1s						
DL2				LR	LR		
	comp=Z,800nm,14.8s						
TIY	**Taiyuan**	**19.66**	**337**	P	**Pn**	**17 54 25.8**	**+0.2**
TIY				S	**Sn**	**17 58 00.2**	**-5.2**
TIY				AMB	AMB		
	comp=Z,570nm,3.5s						
TIY				LR	LR		
	comp=N,3µm,14.5s						
TIY				LR	LR		
	comp=E,2µm,12.4s						
TIY				LR	LR		
	comp=Z,1µm,13.3s						
SBUM	**Sibu**	**19.74**	**210**	⇓P	**Pn**	**17 54 25.4**	**-1.4**
CD2	**Chengdu**	**19.80**	**307**	P	**Pn**	**17 54 26.0**	**-1.3**
CD2				AP	pP	17 54 31.2	-3.5
CD2				XP	sP	17 54 34.7	-4.4
CD2				PP		17 54 44.8	
CD2				S	**Sn**	**17 58 02.7**	**-6.1**
CD2				XS	sS	17 58 10.3	-11
CD2				SS		17 58 30.3	
CD2				AMB	AMB		
	comp=Z,60nm,0.7s						
CD2				AMB	AMB		
	comp=Z,120nm,4.2s						
CD2				LR	LR		
	comp=N,2µm,10.8s						
CD2				LR	LR		
	comp=E,3µm,10.8s						
CD2				LR	LR		
	comp=Z,2µm,12.0s						
CBIJ	**Chichi jima**	**19.87**	**65**	P	**Pn**	**17 54 27.1**	**-1.0**
	comp=Z,2.6nm,0.3s,baz=279,slow=23,SNR=2.4						
CBIJ				LR	LR	18 00 21.1	
	comp=Z,648nm,18.8s,baz=265,slow=31						
JHJ	**Hachijo jima 2**	**20.66**	**47**	LR	LR	18 01 20.4	
	comp=Z,1µm,20.6s,MS4.3,baz=99,slow=33						
BJT	**Baijiatuau**	**20.73**	**347**	eP	**P**	**17 54 35.4**	**-0.2**
	comp=Z,37nm,0.6s						
BJT	**Baijiatuau**	**20.73**	**347**	eP	**P**	**17 54 35.4**	**-0.2**
BJT				pmax	pmax		
	comp=Z,37nm,0.6s						
BJI	**Beijing**	**20.75**	**347**	P	**P**	**17 54 35.7**	**-0.1**
BJI				AP		17 54 43.7	
BJI				XP	sP	17 54 47.8	-1.5
BJI				S	**S**	**17 58 26.2**	**+0.7**
BJI				SCP	ScP	18 02 18.7	+0.2
BJI				AMB	AMB		
	comp=Z,17nm,1.1s						
BJI				AMB	AMB		
	comp=Z,389nm,4.4s						
BJI				LR	LR		
	comp=N,749nm,11.0s						
BJI				LR	LR		
	comp=E,2µm,17.8s						
BJI				LR	LR		
	comp=Z,333nm,15.5s,MS3.8						
CHRT	**Chiangrai**	**20.89**	**274**	⇑P	**P**	**17 54 39.5**	**+2.0**
	comp=Z,171nm,0.9s						
NST	**Nakhon Sawan**	**21.22**	**262**	P	**P**	**17 54 41.3**	**+0.2**
KSM	**Kuching**	**21.53**	**213**	eP	**P**	**17 54 42.5**	**-2.0**
KSM	**Kuching**	**21.53**	**213**	⇑P	**P**	**17 54 46.3**	**+1.9**
CHG	**Chiang Mai**	**21.77**	**271**	⇓P	**P**	**17 54 46.5**	**-0.5**
	comp=Z,50nm,1.3s,mb4.8						
CHTO	**Chiang Mai**	**21.77**	**271**	eP	**P**	**17 54 46.6**	**-0.4**
	comp=Z,75nm,1.3s,mb5.0						
CHTO	**Chiang Mai**	**21.77**	**271**	eP	**P**	**17 54 46.6**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.0						
CHTO	**Chiang Mai**	**21.77**	**271**	P	**P**	**17 54 47.4**	**+0.4**
	SNR=29						
CHTO	**Chiang Mai**	**21.77**	**271**	P	**P**	**17 54 47.4**	**+0.4**
	SNR=29						
MAJO	**Matsushiro**	**21.88**	**37**	eP	**P**	**17 54 50.0**	**+2.0**
	comp=Z,34nm,0.9s,mb4.8						
MAJO	**Matsushiro**	**21.88**	**37**	eP	**P**	**17 54 50.0**	**+2.0**
MAJO				pmax	pmax		
	comp=Z,34nm,0.9s,mb4.8						
MAT	**Matsushiro**	**21.88**	**37**	P	**P**	**17 54 49.9**	**+1.9**
MAT				S	**S**	**17 58 51.0**	**+3.1**
MJAR	**Matsushiro Arr**	**21.88**	**37**	P	**P**	**17 54 49.7**	**+1.6**
MJAR				LR	LR	18 04 36.0	
MJAR	**Matsushiro Arr**	**21.88**	**37**	P	**P**	**17 54 49.7**	**+1.6**
	comp=Z,19nm,0.9s,mb4.5,baz=226,slow=9.5,SNR=23						
MJAR				LR	LR	18 04 36.0	
	comp=Z,654nm,18.2s,MS4.1,baz=210,slow=40						
BDT	**Bhumibol Dam**	**21.95**	**267**	P	**P**	**17 54 51.0**	**+2.1**
NNT	**Nongplab**	**22.54**	**255**	P	**P**	**17 54 56.0**	**+0.8**
LZH	**Lanzhou**	**22.72**	**319**	⇑iP	**P**	**17 54 57.9**	**+1.0**
LZH				AP		17 55 06.6	
LZH				XP	sP	17 55 09.8	-0.8
LZH				PP		17 55 23.5	
LZH				PCP	PcP	17 58 50.2	+1.9
LZH				eS	**S**	**17 59 00.0**	**-3.5**
LZH				SS		17 59 41.0	
LZH				AMB	AMB		
	comp=Z,54nm,1.1s,mb4.9						
LZH				AMB	AMB		
	comp=Z,447nm,5.1s						
LZH				LR	LR		
	comp=N,1µm,12.2s						
LZH				LR	LR		
	comp=Z,2µm,15.2s,MS4.6						
GUMO	**Guam**	**22.76**	**102**	P	**P**	**17 55 02.2**	**+4.6**
	comp=Z,366nm,1.1s,mb5.7						
GUMO	**Guam**	**22.76**	**102**	P	**P**	**17 55 02.2**	**+4.7**
GUMO				pmax	pmax		
	comp=Z,366nm,1.1s,mb5.7						
HHC	**Hu-ho-hao-te**	**22.76**	**339**	eP	**P**	**17 54 57.3**	**0.0**
HHC				AP		17 55 02.4	
HHC				XP	sP	17 55 06.2	-4.7
HHC				PP		17 55 26.6	
HHC				S	**S**	**17 59 00.8**	**-3.2**
HHC				XS	sS	17 59 08.7	-11
HHC				SS		17 59 41.9	
HHC				PCS	PcS	18 02 28.5	+1.3
HHC				AMB	AMB		
	comp=Z,67nm,1.3s,mb4.9						
HHC				AMB	AMB		
	comp=Z,399nm,4.3s						
HHC				LR	LR		
	comp=N,1µm,11.9s,MS4.8						
HHC				LR	LR		
	comp=E,1µm,11.9s,MS4.8						
HHC				LR	LR		
	comp=Z,2µm,13.5s,MS4.6						
BTO	**Baotou**	**23.10**	**336**	eP	**P**	**17 54 59.3**	**-1.6**
KTGM	**Kuala Trenggan**	**23.34**	**234**	⇓P	**P**	**17 55 04.5**	**+0.8**
CN2	**Changchun**	**24.07**	**6**	eP	**P**	**17 55 12.4**	**+2.3**
CN2				eS	**S**	**17 59 25.7**	**+0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,2µm,13.0s,MS4.9						
CN2				LR	LR		
	comp=E,2µm,13.0s,MS4.9						
CN2				LR	LR		
	comp=Z,2µm,17.0s,MS4.6						
KAPI	**Kappang**	**24.79**	**185**	P	**P**	**17 55 15.0**	**-2.0**
	comp=Z,227nm,0.7s,mb5.8,SNR=6.6						
MYKOM	**Kota Tinggi**	**25.23**	**227**	⇓P	**P**	**17 55 23.4**	**+2.4**
KULM	**Kulim**	**25.31**	**238**	eP	**P**	**17 55 21.4**	**-0.3**
KULM	**Kulim**	**25.31**	**238**	⇑P	**P**	**17 55 22.9**	**+1.2**
KGM	**Kluang**	**25.43**	**228**	⇓P	**P**	**17 55 24.1**	**+1.2**
IPM	**Ipoh**	**25.50**	**236**	⇑P	**P**	**17 55 26.0**	**+2.5**
MDJ	**Mudanjiang**	**25.51**	**13**	P	**P**	**17 55 24.6**	**+1.4**
MDJ				AP	pP	17 55 27.5	-5.6
MDJ				XP	sP	17 55 29.0	-8.3
MDJ				S	**S**	**17 59 52.9**	**+4.7**
MDJ				XS	sS	17 59 58.1	-6.5
MDJ				SCP	ScP	18 02 35.0	+4.0
MDJ				PCS	PcS	18 02 36.2	+1.6
MDJ				SCS	ScS	18 06 24.1	+4.3
MDJ				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,306nm,5.1s						
MDJ				LR	LR		
	comp=N,2µm,17.1s,MS4.9						
MDJ				LR	LR		
	comp=E,3µm,16.8s,MS4.9						
MDJ				LR	LR		
	comp=Z,2µm,12.0s,MS4.8						
MDJ	**Mudanjiang**	**25.51**	**13**	eP	**P**	**17 55 23.1**	**-0.1**
	comp=Z,16nm,0.9s,mb4.6						
FRIM	**Kepong**	**25.83**	**233**	⇑P	**P**	**17 55 27.2**	**+0.7**
GTA	**Gaotai**	**27.30**	**320**	eP	**P**	**17 55 39.5**	**+0.1**
GTA				AP	pP	17 55 49.3	-0.1
GTA				XP	sP	17 55 53.5	-0.1
GTA				PP		17 56 28.0	
GTA				S	**S**	**18 00 17.6**	**+0.9**
GTA				AMB	AMB		
	comp=Z,9.0nm,1.6s,mb4.0						
GTA				AMB	AMB		
	comp=Z,252nm,4.9s						
GTA				LR	LR		
	comp=N,1µm,21.7s,MS4.6						
GTA				LR	LR		
	comp=E,1µm,18.6s,MS4.6						
GTA				LR	LR		
	comp=Z,776nm,19.8s,MS4.3						
PSI	**Prapat**	**28.18**	**236**	P	**P**	**17 55 48.0**	**+0.4**
	comp=Z,11nm,0.8s,mb4.5,baz=55,slow=5.9,SNR=8.0						
PSI				LR	LR	18 06 18.4	
	comp=Z,616nm,20.4s,MS4.2,baz=56,slow=35						
SHL	**Shillong**	**28.32**	**287**	eP	**P**	**17 55 49.0**	**+0.3**
LSA	**Lhasa**	**29.60**	**295**	P	**P**	**17 56 02.1**	**+2.0**
LSA				S	**S**	**18 00 54.3**	**+1.2**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
LSA				AMB	AMB		
	comp=Z,30nm,5.0s						
LSA				LR	LR		
	comp=N,450nm,11.0s,MS4.6						
LSA				LR	LR		
	comp=E,640nm,12.0s,MS4.6						
LSA				LR	LR		
	comp=Z,490nm,14.0s,MS4.3						
LSA	**Lhasa**	**29.60**	**295**	eP	**P**	**17 56 00.1**	**+0.1**
	comp=Z,25nm,1.2s,mb4.8						
LSA	**Lhasa**	**29.60**	**295**	eP	**P**	**17 56 00.1**	**0.0**
LSA				pmax	pmax		
	comp=Z,25nm,1.2s,mb4.8						
ASAJ	**Asahikawa**	**29.70**	**31**	P	**P**	**17 56 01.8**	**+1.0**
	comp=Z,12nm,0.9s,mb4.6,baz=259,slow=5.2,SNR=3.8						
ASAJ				LR	LR	18 09 05.1	
	comp=Z,768nm,21.1s,MS4.3,baz=332,slow=38						
BATI	**Kupang**	**29.90**	**177**	P	**P**	**17 56 02.2**	**-0.6**
	comp=Z,11nm,0.6s,mb4.7,baz=323,slow=3.6,SNR=4.6						
BATI				LR	LR	18 09 37.5	
	comp=Z,475nm,20.2s,MS4.1,baz=183,slow=40						
KLR	**Kul'dur**	**30.35**	**13**	eP	**P**	**17 56 04.2**	**-2.3**
ULN	**Ulaanbaatar**	**30.48**	**340**	eP	**P**	**17 56 07.7**	**+0.1**
	comp=Z,34nm,1.2s,mb5.0						
ULN	**Ulaanbaatar**	**30.48**	**340**	⇓eP	**P**	**17 56 07.9**	**+0.3**
ULN	**Ulaanbaatar**	**30.48**	**340**	P	**P**	**17 56 08.3**	**+0.8**
	SNR=9.4						
ULN	**Ulaanbaatar**	**30.48**	**340**	P	**P**	**17 56 08.3**	**+0.8**
	SNR=9.4						
SONM	**Songino Array**	**30.66**	**339**	P	**P**	**17 56 09.4**	**+0.2**
SONM						18 02 46.4	
SONM	**Songino Array**	**30.66**	**339**	P	**P**	**17 56 09.4**	**+0.2**
	comp=Z,5.6nm,0.8s,mb4.5,baz=158,slow=9.3,SNR=44						
SONM				ScP	ScP	18 02 46.4	-0.4
	comp=Z,0.8nm,0.7s,baz=116,slow=5.0,SNR=4.5						
SONM				LR	LR	18 09 30.5	
	comp=Z,869nm,18.5s,MS4.4,baz=151,slow=38						
YSS	**Yuzh-Sakhalins**	**31.92**	**27**	P	**P**	**17 56 21.4**	**+1.0**
YSS	**Yuzh-Sakhalins**	**31.92**	**27**	⇑eP	**P**	**17 56 21.2**	**+0.9**
YSS				pmax	pmax		
	comp=Z,76nm,1.7s,mb5.2						
TAPN	**Taplejung**	**32.22**	**290**	eP	**P**	**17 56 23.8**	**+0.6**
	comp=Z,50nm,1.1s,mb5.2						
ODAN	**Odare**	**32.46**	**289**	eP	**P**	**17 56 25.9**	**+0.6**
	comp=Z,31nm,0.7s,mb5.2						
CIT	**Chita**	**32.79**	**350**	eP	**P**	**17 56 26.4**	**-1.5**
JIRN	**Jiri**	**33.59**	**290**	eP	**P**	**17 56 35.7**	**+0.5**
	comp=Z,125nm,1.4s,mb5.7						
ZAK	**Zakamensk**	**33.91**	**338**	eP	**P**	**17 56 36.5**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KKN	**Kakani**	**34.41**	**290**	eP	**P**	**17 56 42.4**	**+0.1**
	comp=Z,44nm,1.0s,mb5.4						
KKN	**Kakani**	**34.41**	**290**	eP	**P**	**17 56 42.4**	**+0.1**
KKN				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
TLY	**Talaya**	**34.89**	**340**	eP	**P**	**17 56 45.9**	**-0.2**
TLY				e		17 58 11.4	
TLY				ePPP		17 58 27.3	
TLY				e		18 04 31.3	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
TLY				MLR	MLR		
	comp=Z,510nm,14.0s,MS4.4						
GKN	**Gorkha**	**34.99**	**291**	eP	**P**	**17 56 47.1**	**-0.3**
	comp=Z,62nm,1.1s,mb5.4						
IRK	**Irkutsk**	**35.17**	**341**	eP	**P**	**17 56 47.2**	**-1.4**
IRK				e		17 58 10.6	
IRK				e		17 59 14.1	
IRK				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
MOY	**Mondy**	**35.78**	**338**	eP	**P**	**17 56 54.6**	**+0.8**
MOY				pmax	pmax		
	comp=Z,50nm,3.4s						
CLNS	**Chul'man**	**37.01**	**3**	eP	**P**	**17 57 03.7**	**-0.5**
CLNS				pmax	pmax		
	comp=N,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,1µm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,400nm,14.0s,MS4.8						
CLNS				MLR	MLR		
	comp=E,1µm,13.0s,MS4.8						
WMQ	**Urumqi**	**37.28**	**318**	⇑iP	**P**	**17 57 07.8**	**+1.1**
WMQ				AP	pP	17 57 12.8	-4.0
WMQ				XP	sP	17 57 15.1	-5.9
WMQ				PP	PP	17 58 35.1	+3.0
WMQ				PCP	PcP	17 59 32.8	+7.1
WMQ				S	**S**	**18 02 54.6**	**+2.8**
WMQ				XS	sS	18 03 01.6	-6.8
WMQ				SCP	ScP	18 03 12.9	+2.6
WMQ				PCS	PcS	18 03 14.8	+0.9
WMQ				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.6						
WMQ				AMB	AMB		

comp=Z,292nm,4.9s
WMQ LR LR
comp=N,697nm,25.5s,MS4.4
WMQ LR LR
comp=E,233nm,21.8s,MS4.4
WMQ LR LR
comp=Z,335nm,18.2s,MS4.2
FITZ Fitzroy Crossi 37.87 174 P **P** **17 57 10.5 -1.3**
comp=Z,2.6nm,0.8s,mb4.0,baz=330,slow=16,SNR=3.6
BOD Bodaibo 38.38 353 *e*P **P** **17 57 15.6 -0.2**
BOD pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
MBWA Marble Bar 40.80 183 P **P** **17 57 34.4 -1.9**
HYB Hyderabad 41.15 274 *e*P **P** **17 57 40.0 +0.6**
HYB Hyderabad 41.15 274 *i* P **P** **17 57 40.0 +0.6**
WRA Warramunga Arr 41.34 162 *i* P **P** **17 57 39.0 -1.8**
WRA pmax pmax
comp=Z,9.0nm,0.6s
WRA Warramunga Arr 41.34 162 P **P** **17 57 39.1 -1.6**
comp=Z,8.6nm,0.6s,mb4.6,baz=343,slow=9.1,SNR=59
WRA LR LR 18 14 40.2
comp=Z,229nm,21.8s,MS4.0,baz=295,slow=36
WB2 Warramunga Arr 41.34 162 *e*P **P** **17 57 39.2 -1.6**
MKAR Makanchi Array 42.04 319 P **P** **17 57 46.5 +0.3**
MKAR ScP ScP 18 03 28.3 -0.5
MKAR LR LR 18 17 36.7
MKAR Makanchi Array 42.04 319 P **P** **17 57 46.5 +0.3**
comp=Z,10nm,0.6s,mb4.6,baz=110,slow=10,SNR=65
MKAR ScP ScP 18 03 28.3 -0.5
comp=Z,3.4nm,1.1s,baz=116,slow=5.5,SNR=7.0
MKAR LR LR 18 17 36.7
comp=Z,472nm,18.3s,MS4.4,baz=215,slow=40
YAK Yakutsk 42.50 5 *e*P **P** **17 57 49.4 -0.3**
YAK pmax pmax
comp=N,4.0nm,0.8s
YAK pmax pmax
comp=Z,16nm,0.8s,mb4.7
YAK pmax pmax
comp=E,7.0nm,1.3s
PET Petropavlovsk 43.53 32 *e*P **P** **17 57 56.5 -1.7**
PET *e*S **S** **18 04 21.8 -3.0**
PET pmax pmax
comp=Z,17nm,0.7s,mb4.9
PET MLR MLR
comp=Z,500nm,21.0s,MS4.4
KSH Kashi 43.99 307 P **P** **17 58 05.3 +3.1**
KSH *e*PP PP 17 59 49.1 +4.1
KSH *e*PCP PcP 17 59 51.3 +3.8
KSH *e*SCP ScP 18 03 38.4 +1.6
KSH *e*PCS PcS 18 03 42.4 +1.9
KSH S **S** **18 04 35.2 +3.3**
KSH *e*SS SS 18 07 45.0 -4.4
KSH *e*SCS ScS 18 07 58.7 +0.2
KSH AMB AMB
comp=Z,1μm,3.9s
KSH LR LR
comp=Z,2μm,9.1s
MA2 Magadan 44.74 20|| *e*P **P** **17 58 05.7 -2.1**
MA2 pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
ASAR Alice Springs 44.77 164 P **P** **17 58 06.9 -1.6**
comp=Z,4.6nm,0.7s,mb4.4,baz=346,slow=7.3,SNR=63
TKM2 Tokmak 2 45.11 311 *e*P **P** **17 58 12.5 +1.5**
comp=Z,15nm,1.1s,mb4.7
TKM2 Tokmak 2 45.11 311 *e*P **P** **17 58 12.5 +1.5**
TKM2 pmax pmax
comp=Z,15nm,1.1s,mb4.7
POO Poona 45.37 277 *e*x x 17 58 16.0
NVS Novosibirsk 45.59 330⇑ *i*P **P** **17 58 14.8 +0.1**
NVS *e* 18 00 03.7
NVS *e*S **S** **18 04 53.2 -1.4**
NVS pmax pmax
comp=N,30nm,1.8s
NVS pmax pmax
comp=E,28nm,1.8s
NVS pmax pmax
comp=Z,41nm,1.8s,mb5.1
NVS smax
comp=N,11nm,1.5s
NVS smax
comp=E,22nm,1.5s
FRU Bishkek 45.78 311 *e*P **P** **17 58 21.0 +4.7**
FRU *e* pP 17 58 33.0 +6.4
FRU *e* 17 58 40.0
AAK Ala-Archa 45.81 311⇑ *e*P **P** **17 58 16.4 -0.2**
KURK Kurchatov 45.94 323 P **P** **17 58 18.5 +1.0**
comp=E,87nm,1.0s,mb5.6,SNR=8.1
KURK Kurchatov 45.94 323 *e*P **P** **17 58 17.7 +0.2**
comp=E,20nm,0.9s,mb5.0
KURK Kurchatov 45.94 323⇑ *e*P **P** **17 58 17.9 +0.4**
KURK Kurchatov 45.94 323 P **P** **17 58 18.6 +1.2**
SNR=9.6
KURK Kurchatov 45.94 323 P **P** **17 58 18.6 +1.2**
SNR=9.6
CTA Charters Tower 46.25 148 P **P** **17 58 21.1 +0.9**
comp=E,3.7nm,1.0s,mb4.3,baz=297,slow=11,SNR=3.9
CTA LR LR 18 16 57.5
comp=E,446nm,18.4s,MS4.5,baz=324,slow=35
CTAO Charters Tower 46.25 148 P **P** **17 58 21.7 +1.4**
comp=E,9.5nm,1.1s,mb4.6
CTAO Charters Tower 46.25 148 P **P** **17 58 21.7 +1.5**
CTAO pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
FORT Forrest 50.66 173 *e*P **P** **17 58 53.5 -0.5**
comp=Z,36nm,0.6s,mb5.5
BRVK Borovoye 51.61 323 P **P** **17 59 02.9 +1.9**
comp=Z,110nm,0.8s,mb5.8,SNR=6.5
BRVK Borovoye 51.61 323 *e*P **P** **17 59 00.5 -0.4**
comp=Z,24nm,1.0s,mb5.1
BRVK Borovoye 51.61 323 *e*P **P** **17 59 00.5 -0.5**
BRVK pmax pmax
comp=Z,24nm,1.0s,mb5.1
BRVK Borovoye 51.61 323 P **P** **17 59 02.6 +1.6**
SNR=8.9
BRVK Borovoye 51.61 323 P **P** **17 59 02.6 +1.6**
SNR=8.9
CHKZ Chkalovo 51.63 324 *e*P **P** **17 59 01.5 +0.4**
comp=Z,12nm,0.7s,mb4.9
CHKZ Chkalovo 51.63 324 *e*P **P** **17 59 01.5 +0.4**
CHKZ pmax pmax
comp=Z,12nm,0.7s,mb4.9
TIXI Tiksi 51.98 3 *e*P **P** **17 59 00.9 -2.5**
comp=Z,46nm,1.3s,mb5.2
TIXI Tiksi 51.98 3 *e*P **P** **17 59 01.5 -1.9**
TIXI pmax pmax
comp=Z,26nm,1.0s,mb5.1
TIXI MLR MLR
comp=Z,1μm,18.0s,MS5.0
NWAO Narrogin (SRO) 52.66 185 *e*P **P** **17 59 07.9 -1.0**
comp=Z,120nm,0.6s,mb6.0
NWAO Narrogin (SRO) 52.66 185 *e*P **P** **17 59 07.9 -1.0**
NWAO pmax pmax
comp=Z,120nm,0.6s
NWAO Narrogin (SRO) 52.66 185 P **P** **17 59 07.5 -1.4**
comp=Z,18nm,0.7s,mb5.2,baz=24,slow=6.1,SNR=16
STKA Stephens Creek 54.74 160 *e*P **P** **17 59 22.2 -2.0**
comp=Z,3.2nm,0.6s,mb4.5
STKA Stephens Creek 54.74 160 P **P** **17 59 23.4 -0.9**
comp=Z,2.4nm,0.5s,mb4.5,baz=161,slow=8.6,SNR=7.4
BILL Bilibino 55.52 19 *e*P **P** **17 59 29.5 0.0**
comp=Z,203nm,0.6s
BILL Bilibino 55.52 19 *e*P **P** **17 59 29.3 -0.1**
BILL *i* 18 00 29.7
BILL pmax pmax
comp=Z,14nm,0.8s,mb5.0
BILL MLR MLR
comp=Z,400nm,17.0s,MS4.6
ABKT Ailbek 57.70 303 P **P** **17 59 47.4 +1.9**
comp=Z,112nm,0.8s,mb6.0,SNR=8.5
SVE Sverdlovsk 58.00 325|| *e*P **P** **17 59 48.4 +1.2**
SVE *e*S **S** **18 07 34.8 -10**
SVE pmax pmax
comp=Z,57nm,1.2s,mb5.5
ARU Arti 59.04 325 P **P** **17 59 54.8 +0.3**
comp=Z,153nm,0.4s,SNR=8.6
ARU Arti 59.04 325 *e*P **P** **17 59 54.5 0.0**
comp=Z,31nm,0.9s,mb5.3
ARU Arti 59.04 325 *d i*P **P** **17 59 54.6 +0.1**
ARU *e* 18 02 00.9
ARU PPP 18 03 25.8
ARU *e*S **S** **18 08 01.5 +2.8**
ARU SS SS 18 11 53.9 +1.2
ARU pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
DZM Mont Dzumac 60.18 132 P **P** **18 00 04.2 +1.5**
comp=Z,3.3nm,0.6s,mb4.5,baz=304,slow=18,SNR=2.2
GAMB Gambell 61.95 27 *e*P **P** **18 00 14.8 +0.7**
TNA Tin City 63.89 26 *e*P **P** **18 00 27.7 +0.7**
comp=Z,36nm,1.6s,mb5.2
PRGR Permogore 66.28 330|| *i*P **P** **18 00 44.7 +2.1**
PRGR *e* 18 01 10.2
PRGR *e*S S 18 09 34.4 +5.1
PRGR pmax pmax
comp=Z,23nm,0.9s,mb5.2
ZEI Tsey 68.21 309 *e*P **P** **18 00 56.1 +0.9**
ZEI *e**PP pP 18 01 04.9 -1.0
ZEI *e* 18 01 19.9
ZEI pmax pmax
comp=Z,23nm,1.0s,mb5.2
ONI Oni 68.56 309 P **P** **18 00 59.5 +2.1**
VRHR Novokhopersk 68.83 318 *e*P **P** **18 00 59.8 +0.9**
VRHR pmax pmax
comp=Z,20nm,0.7s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.6s
TTA Tatalina 68.91 29 *e*P **P** **18 01 00.1 +0.9**
comp=E,26nm,1.1s,mb5.1
TTA Tatalina 68.91 29 *e*P **P** **18 01 00.1 +0.9**
TTA pmax pmax
comp=Z,26nm,1.1s,mb5.1
KIV Kislovodsk 68.93 310 P **P** **18 01 01.5 +1.8**
comp=Z,276nm,0.7s,SNR=8.4
KIV Kislovodsk 68.93 310 *e*P **P** **18 01 00.8 +1.1**
comp=Z,30nm,0.7s,mb5.3
KIV Kislovodsk 68.93 310 *e*P **P** **18 01 00.7 +1.0**
KIV pmax pmax
comp=Z,45nm,1.0s,mb5.3
KIV MLR MLR
comp=Z,322nm,18.0s,MS4.6
KIV Kislovodsk 68.93 310 P **P** **18 01 01.4 +1.7**
SNR=10
KIV Kislovodsk 68.93 310 P **P** **18 01 01.4 +1.7**
SNR=10
IMA2 Indian Mountai 69.76 26 *e*P **P** **18 01 05.0 +0.7**
VRSR Storozhevoye 70.34 318 *e*P **P** **18 01 08.7 +0.5**
VRSR pmax pmax
comp=N,3.0nm,0.9s
VRSR pmax pmax
comp=E,3.0nm,0.9s
VRSR pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MOS Moscow 70.70 323 *e*P **P** **18 01 08.4 -2.0**
MOS *e* pP 18 01 19.3 -1.8
KDAK Kodiak Island 71.03 34 P **P** **18 01 12.0 -0.3**
comp=Z,178nm,1.5s,mb5.8,SNR=5.2
APA Apatity 71.31 336⇑ *e*P **P** **18 01 12.7 -1.1**
APA pmax pmax
comp=Z,16nm,0.8s,mb5.0
OBN Obninsk 71.38 323 *e*P **P** **18 01 14.5 0.0**
comp=Z,25nm,0.9s,mb5.2
OBN Obninsk 71.38 323 *e*P **P** **18 01 14.4 -0.1**
OBN *i* 18 01 34.4
OBN pmax pmax
comp=Z,38nm,1.6s,mb5.1
OBN MLR MLR
comp=Z,400nm,18.0s,MS4.7
MCK McKinley 72.01 28 *e*P **P** **18 01 18.2 +0.1**
comp=Z,32nm,1.1s,mb5.2
MCK McKinley 72.01 28 *e*P **P** **18 01 18.2 +0.1**
MCK pmax pmax
comp=Z,32nm,1.1s,mb5.2
COLA College 72.31 27⇑ *e*P **P** **18 01 21.0 +1.1**
ANN Anapa 72.52 312 *e*P **P** **18 01 25.9 +4.4**
ANN pmax pmax
comp=Z,46nm,0.9s,mb5.4
JOF Joensuu 72.86 331 *ep* **P** **18 01 21.9 -1.3**
comp=Z,26nm,0.8s,mb5.2
MALT Malatya 73.07 305 *e*P **P** **18 01 26.1 +1.2**
comp=Z,32nm,1.3s,mb5.1
MALT Malatya 73.07 305|| *i*P **P** **18 01 26.9 +2.0**
KEV Kevo 73.28 339 *ep* **P** **18 01 24.2 -1.3**
comp=Z,5.3nm,0.5s,mb4.7
KEV Kevo 73.28 339 *e*P **P** **18 01 24.2 -1.3**
KEV pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
ARCES ARCESS Array B 73.84 339 P **P** **18 01 28.8 0.0**
comp=Z,0.9nm,0.3s,mb4.2,baz=289,slow=22,SNR=11
ARCES LR LR 18 39 05.3
comp=Z,86nm,21.6s,MS4.0,baz=330,slow=40
SIM Simferopol' 74.80 313 *e*P **P** **18 01 37.3 +2.4**
SIM pmax pmax
comp=Z,24nm,0.9s,mb5.1
EGAK Eagle 75.13 26 *e*P **P** **18 01 36.5 +0.1**
comp=Z,24nm,1.0s,mb5.1
KAF Kangasniemi 75.30 331 *ep* **P** **18 01 36.2 -1.2**
comp=Z,9.6nm,0.7s,mb4.8,baz=73,slow=5.2
KAF Kangasniemi 75.30 331 *e*P **P** **18 01 36.2 -1.2**
KAF pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
FINES FINESS Array B 75.57 330 P **P** **18 01 38.4 -0.6**
comp=Z,16nm,1.0s,mb4.9,baz=83,slow=6.0,SNR=17
FINES LR LR 18 40 06.7
comp=Z,303nm,18.4s,MS4.6,baz=87,slow=40
ASF Jabal al Asfar 75.70 299 P **P** **18 01 41.6 +1.3**
comp=Z,1.4nm,0.5s,mb4.1,baz=80,slow=7.2,SNR=2.7
DAWY Dawson 76.06 27 *eP* **P** **18 01 41.8 0.0**
BRTR Beskin Array B 76.38 P **P** **18 01 44.2 +0.2**
comp=Z,0.9nm,0.8s,mb3.8,baz=313,slow=46,SNR=4.4
MNK Minsk 76.46 323 *e*P **P** **18 01 42.0 -2.2**
AKASG Malin Array Be 76.62 319 P **P** **18 01 44.4 -0.8**
AKASG LR LR 18 41 57.9
AKASG Malin Array Be 76.62 319 P **P** **18 01 44.4 -0.8**
comp=Z,4.4nm,0.7s,mb4.5,baz=62,slow=5.5,SNR=25
AKASG LR LR 18 41 57.9
comp=Z,259nm,18.9s,MS4.6,baz=355,slow=41
KIEV Kiev 76.63 319 *e*P **P** **18 01 44.5 -0.8**
comp=Z,21nm,1.1s,mb5.0
KIEV Kiev 76.63 319 *e*P **P** **18 01 44.5 -0.8**
KIEV pmax pmax
comp=Z,21nm,1.1s,mb5.0
INK Inuvik 76.96 22 *e*P **P** **18 01 46.1 -0.7**
comp=Z,472nm,1.1s
INK Inuvik 76.96 22 *e*P **P** **18 01 46.1 -0.7**
INK pmax pmax
comp=Z,472nm,1.1s
INK Inuvik 76.96 22 LR LR 18 36 36.3
comp=Z,178nm,20.3s,MS4.4,baz=276,slow=36
URZ Urewera 77.54 139 LR LR 18 35 14.7
comp=Z,178nm,18.2s,MS4.4,baz=351,slow=35
CSS Prodhromos 77.85 303 *e*P **P** **18 01 52.4 0.0**
comp=Z,24nm,0.8s,mb5.2
EIL Elat 77.97 297 P **P** **18 01 54.3 +1.1**
comp=Z,3.5nm,0.8s,mb4.4,baz=50,slow=16,SNR=4.1
TIRR Tirgusor 78.85 313⇑ *i*P **P** **18 01 56.4 -1.3**
TIRR Tirgusor 78.85 313⇑ *i*P **P** **18 01 56.4 -1.4**
HARR Harsova 79.11 314⇑ *i*P **P** **18 02 01.4 +2.2**
HARR Harsova 79.11 314⇑ *i*P **P** **18 02 01.4 +2.2**
VRI Vrincioaia 79.58 315⇑ *i*P **P** **18 02 06.8 +5.1**
VRI Vrincioaia 79.58 315⇑ *i*P **P** **18 02 06.8 +5.1**
BURAR Bucovina Array 80.02 317⇑ *i*P **P** **18 02 04.5 +0.4**
BURAR Bucovina Array 80.02 317⇑ *i*P **P** **18 02 04.5 +0.4**
MLR Muntele Rosu 80.21 315⇑ *i*P **P** **18 02 09.9 +4.7**
MLR Muntele Rosu 80.21 315 P **P** **18 02 08.1 +3.0**
comp=Z,5.2nm,0.5s,mb4.7,baz=120,slow=1.3,SNR=10
MLR Muntele Rosu 80.21 315⇑ *i*P **P** **18 02 09.9 +4.8**
VOIR 80.83 315⇑ *i*P **P** **18 02 13.0 +4.6**
VOIR 80.83 315⇑ *i*P **P** **18 02 13.0 +4.6**
HFS Hagfors 81.72 331 P **P** **18 02 11.4 -1.5**
comp=Z,4.2nm,0.8s,mb4.4,baz=106,slow=3.7,SNR=8.7
DLBC Dease Lake 82.30 30 P **P** **18 02 17.1 +1.2**
NB2 NORSAR Subarra 82.41 333 P **P** **18 02 15.0 -1.5**
comp=Z,2.3nm,0.6s,mb4.3,baz=65,slow=4.8
NB2 NORSAR Subarra 82.41 333 P **P** **18 02 15.0 -1.5**
NB2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
NOA NORSAR Array B 82.41 333 P **P** **18 02 15.4 -1.1**
comp=Z,2.5nm,0.6s,mb4.3,baz=63,slow=4.9,SNR=9.9
NOA LR LR 18 39 30.7
comp=Z,371nm,18.2s,MS4.8,baz=15,slow=36
OJC Ojcow 82.49 321 *e*P **P** **18 02 17.3 +0.2**
OPO Ambohidratompo 82.69 247 P **P** **18 02 19.0 +0.4**
comp=Z,3.5nm,0.8s,mb4.5,baz=19,slow=4.9,SNR=4.9
VTS Vitosha 83.03 313⇑ *i*P **P** **18 02 20.8 +0.7**
PSZ Piszkesteto 83.29 319⇑ *e*PcP PcP 18 02 29.4 +3.7
OKC Ostrava-Krasne 83.62 321 *ep*P pP 18 02 25.3 -8.6
MORC Moravsky Berou 84.00 321 *e*P **P** **18 02 24.2 -0.7**
comp=Z,14nm,1.4s,mb4.9
MORC Moravsky Berou 84.00 321⇑ *i*P **P** **18 02 25.3 +0.4**
KSP Ksiaz 84.30 322 *e*P **P** **18 02 25.7 -0.7**
KSP *e*pP pP 18 02 33.8 -3.5
DPC Dobruska-Polom 84.48 322 *e*P **P** **18 02 28.2 +0.8**
UPC Upice 84.60 322 *ep*P pP 18 02 35.1 -3.8
PKSM Moragy 84.73 317|| *i*P **P** **18 02 36.1 +7.4**
PKSM Moragy 84.73 317|| *i*P **P** **18 02 36.2 +7.5**
VRAC Vranov 84.76 321|| *i*P **P** **18 02 28.8 0.0**
VRAC Vranov 84.76 321|| *i*P **P** **18 02 28.8 0.0**
TREC Trest 85.42 321 *e*P **P** **18 02 33.8 +1.7**
PVCC Panska Ves 85.43 322 *ep*P pP 18 02 37.5 -5.5
KMBO Kilima Mbogo 85.43 267 *e*P **P** **18 02 32.5 -0.3**
comp=Z,21nm,1.4s,mb5.1
KMBO Kilima Mbogo 85.43 267 *i* P **P** **18 02 34.7 +1.9**
KMBO pmax pmax
comp=Z,4.0nm,0.8s
KMBO Kilima Mbogo 85.43 267 P **P** **18 02 38.8 +6.0**
SNR=8.0
KMBO Kilima Mbogo 85.43 267 P **P** **18 02 38.8 +6.0**
SNR=8.0
KMBO Kilima Mbogo 85.43 267 P **P** **18 02 33.5 +0.7**
comp=Z,3.6nm,0.8s,mb4.5,baz=63,slow=20,SNR=8.4
KMBO LR LR 18 42 21.6
comp=Z,151nm,19.9s,MS4.4,baz=85,slow=37
BRG Berggiesshubel 85.63 323 *e*P **P** **18 02 33.5 +0.4**
BRG *e* 18 02 39.7
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.4
BRG Berggiesshubel 85.63 323 *e*P **P** **18 02 33.5 +0.4**
comp=Z,4.2nm,1.1s,mb4.6
BRG *e* 18 02 39.7
comp=Z,8.2nm,1.1s
PRU Pruhonice 85.68 322 *ep*P pP 18 02 40.3 -4.0
PRU *ex* x 18 03 00.6
CLL Collm 85.97 323 *e*P PcP 18 02 37.0 -0.5
comp=Z,4.0nm,0.8s
CLL *e* 18 02 59.0
CLL LR LR
comp=Z,500nm,19.6s,MS4.9
CLL Collm 85.97 323 *e*P PcP 18 02 37.0 -0.5
CLL pmax pmax
comp=Z,4.0nm,0.8s,mb4.7
CLL MLR MLR
comp=Z,500nm,19.6s,MS4.9
CLL Collm 85.97 323 *e*PcP PcP 18 02 37.0 -0.5
comp=Z,4.0nm,0.8s
CLL *i* pP pP 18 02 41.4 -4.3
KHC Kasperske Hory 86.62 321 *e*P **P** **18 02 39.3 +1.3**
KHC *ep*P pP 18 02 58.1 +9.1
YKA Yellowknife Ar 86.67 23 P **P** **18 02 37.4 -0.6**
comp=Z,5.9nm,0.7s,mb4.9,baz=309,slow=4.6,SNR=85
YKA PKKPbc PKKPbc 18 20 31.1 -3.4
comp=Z,0.2nm,0.6s,baz=124,slow=2.6,SNR=4.1
YKA LR LR 18 45 38.8
comp=Z,132nm,20.2s,MS4.3,baz=215,slow=38
GERES GERESS Array B 86.67 321 P **P** **18 02 37.8 -0.4**
GERES LR LR 18 43 18.2
GERES GERESS Array B 86.67 321 P **P** **18 02 37.8 -0.4**
comp=Z,0.7nm,0.6s,mb4.1,baz=99,slow=1.8,SNR=3.5
GERES LR LR 18 43 18.3
comp=Z,344nm,18.8s,MS4.8,baz=258,slow=37
MOX Moxa 87.05 323 *e*(P) **P** **18 02 36.5 -3.6**
CDF Champ du Feu 90.61 323 *e*P **P** **18 02 54.6 -2.4**
comp=Z,18nm,1.0s,mb5.0
CDF Champ du Feu 90.61 323 *e*P **P** **18 02 54.6 -2.4**
comp=Z,8.8nm,1.0s,mb5.0
CDF Champ du Feu 90.61 323 *e*P **P** **18 02 54.6 -2.4**
CDF pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
HINF Hinteralfeld 91.17 322 *e*P **P** **18 02 57.2 -2.3**
BAIF Baives 91.43 325 *e*P **P** **18 02 57.5 -3.2**
EKA Eskdalemuir Ar 91.88 332 P **P** **18 03 03.4 +0.7**
comp=Z,0.9nm,0.6s,mb4.3,baz=49,slow=2.5,SNR=4.5
LPG La Plagne 92.44 320 *e*P **P** **18 03 03.8 -1.7**
comp=Z,22nm,1.0s,mb5.2
LPG La Plagne 92.44 320 *e*P **P** **18 03 03.8 -1.7**
comp=Z,11nm,1.0s,mb5.1
LPG La Plagne 92.44 320 *e*P **P** **18 03 03.8 -1.7**
LPG pmax pmax
comp=Z,11nm,1.0s,mb5.1
LPL La Plagne 92.44 320 *e*P **P** **18 03 03.8 -1.7**
MBDF Montbardon 92.83 320 *e*P **P** **18 03 03.2 -4.1**
SSF Saint Saulge 93.49 323 *e*P **P** **18 03 07.8 -2.5**
comp=Z,15nm,1.1s,mb5.0
SSF Saint Saulge 93.49 323 *e*P **P** **18 03 07.8 -2.5**
comp=Z,7.4nm,1.1s,mb5.0
SSF Saint Saulge 93.49 323 *e*P **P** **18 03 07.8 -2.5**
SSF pmax pmax
comp=Z,7.0nm,1.1s,mb5.0
SMF Signal de Mont 93.53 323 *e*P **P** **18 03 08.1 -2.4**
AVF Avril sur Loir 93.72 323 *e*P **P** **18 03 08.9 -2.5**
TCF Toulx Ste Croi 94.66 323 *e*P **P** **18 03 12.7 -3.0**
CAF Calviac 95.52 322 *e*P **P** **18 03 17.1 -2.6**
KEST Kesra 95.67 311 LR LR 18 49 06.2
comp=Z,78nm,18.5s,MS4.2,baz=242,slow=37
MOD Modoc 95.87 42 *e*P **P** **18 03 22.0 +0.7**
NVAR Mina Array Bea 99.07 44 P **P** **18 03 36.7 +0.9**
NVAR Mina Array Bea 99.07 44 P **P** **18 03 36.7 +0.9**
comp=Z,0.8nm,0.7s,mb4.4,baz=279,slow=2.7,SNR=4.0
VNDA Vanda 99.91 172 LR LR 18 47 46.6
comp=Z,92nm,19.1s,MS4.3,baz=326,slow=35
TXAR Lajitas Array 114.21 43 PKP PKiKP 18 08 34.0 -0.5
comp=Z,0.4nm,0.7s,baz=240,slow=0.8,SNR=4.8
SDV Santo Domingo 148.87 25 *e*PKP PKPdf 18 09 39.3 +0.1
ROSC El Rosal 150.68 35 PKPbc PKPbc 18 09 49.4 +1.8
comp=Z,5.2nm,0.4s,baz=100,slow=19,SNR=3.5

NEIC ***12*** *17:55:05.7±4.5, 652S×12989E, h108km±46km, mb4.1/3, Error ellipse: s-maj=28.3km s-min=15.5km az=224.0*
ISCJB ***12*** *17:55:11.4±2.5, 68S±0.1×12987E±009, h191km±27km, mb3.9/4, Error ellipse: s-maj=21.2km s-min=9.7km az=31.4*
IDC ***12*** *17:55:13.7±3.8, 680S×12973E, h193km±39km, mb3.6/4, mb1 3.8/7, mb1mx3.6/15, mbtmp3.7/7, Error ellipse: s-maj=34.8km s-min=14.3km az=53.0*
ISC 12 17:55:08.2±1.7, 669S±008×13010E±007, h144km±18km, n14,σ1 9 05/19, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**7.26**	**241**	P	**Pn**	**17 56 53.0**	**+1.1**
	13nm,0.3s,baz=44,slow=2.2,SNR=66						
BATI				S	**Sn**	**17 58 11.3**	**-1.8**
	22nm,0.3s,baz=89,slow=12,SNR=7.5						
FITZ	**Fitzroy Crossi**	**12.15**	**201**	*e*P	**Pn**	**17 57 55.9**	**-0.8**
	15nm,1.0s						
FITZ				*e*S	**Sn**	**18 00 01.6**	**-9.3**
FITZ	**Fitzroy Crossi**	**12.15**	**201**	P	**Pn**	**17 57 56.5**	**-0.2**
	1.4nm,0.3s,baz=33,slow=11,SNR=31						
FITZ				S	**Sn**	**18 00 03.4**	**-7.5**
	2.8nm,0.3s,baz=175,slow=20,SNR=9.7						
WRA	**Warramunga Arr**	**13.80**	**163**	P	**Pn**	**17 58 18.4**	**+0.5**
	1.7nm,0.3s,baz=339,slow=13,SNR=13						
WRA				S	**Sn**	**18 00 46.4**	**-4.3**
	1.7nm,0.3s,baz=325,slow=24,SNR=7.0						
PMG	**Port Moresby**	**17.10**	**100**	S	**S**	**18 02 07.7**	**-1.4**
	0.2nm,0.3s,baz=89,slow=15,SNR=3.2						
ASAR	**Alice Springs**	**17.27**	**168**	P	**Pn**	**17 59 02.0**	**+1.3**
	2.2nm,0.3s,baz=341,slow=8.1,SNR=13						
ASAR				S	**S**	**18 02 11.4**	**-1.0**
	0.6nm,0.3s,baz=353,slow=26,SNR=5.0						
MBWA	**Marble Bar**	**17.54**	**214**	*e*P	**Pn**	**17 59 04.4**	**+0.5**
CTA	**Charters Tower**	**20.57**	**132**	P	**P**	**17 59 39.9**	**+4.0**
	5.4nm,0.7s,baz=294,slow=7.9,SNR=3.9						
STKA	**Stephens Creek**	**27.26**	**158**	*e*P	**P**	**18 00 41.2**	**+2.2**
	3.9nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**27.26**	**158**	P	**P**	**18 00 41.0**	**+1.9**
	1.7nm,0.3s,mb4.1,baz=329,slow=11,SNR=8.5						
ULN	**Ulaanbaatar**	**58.00**	**342**	*e*P	**P**	**18 04 45.6**	**-0.1**
	1.1nm,0.6s,mb3.9						
SONM	**Songino Array**	**58.18**	**341**	P	**P**	**18 04 46.9**	**-0.1**
	0.2nm,0.3s,mb3.4,baz=168,slow=6.8,SNR=4.4						
MK31	**Makanchi Array**	**68.02**	**327**	*e*P	**P**	**18 05 51.6**	**-0.3**
MKAR	**Makanchi Array**	**68.02**	**327**	P	**P**	**18 05 51.8**	**-0.1**
	3.0nm,0.5s,mb4.3,baz=112,slow=8.8,SNR=33						

ATH ***12*** *17:59:16.9, 3950N×26.13E, h3km, MD3.3/3*
ISK ***12*** *17:59:17.2, 3942N×26.18E, h9km, MD3.1*
ISCJB ***12*** *17:59:17.7±0.5, 3944N±002×26.16E±005, h8km±4km, Error ellipse: s-maj=6.8km s-min=3.0km az=167.6*
CSEM ***12*** *17:59:18.2±0.1, 3944N×2628E, h10km, MD3.0, Error ellipse: s-maj=2.7km s-min=1.5km az=79.0*
DDA ***12*** *17:59:18.9, 3942N×26.19E, h8km, Md3.0*

THE **12** *17:59:19.5, 3940N×26.14E, h12km, ML3.5*
ISC 12 17:59:18.3±0.4**, 3944N**±002×**2617E**±005**, h12**km±3km**, n27, σ0.77**/39**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.21	158	⇑*i*PG	Pg	17 59 22.9	+0.1
PRK				*e*SG	Sg	17 59 26.2	+0.3
EZN	Ezine	0.40	17	*i* PG	Pg	17 59 26.2	-0.1
EZN				*i* SG	Sg	17 59 32.3	+0.6
BOZC	Bozcaada	0.41	347	*i* P	Pg	17 59 26.8	+0.4
BOZC				*i* S	Sg	17 59 33.3	+1.3
AYVA	Ayvalik	0.42	108	*i* P	Pg	17 59 26.4	-0.2
AYVA				*i* S	Sg	17 59 32.5	+0.2
GADA	Gvkgeada	0.78	345	PG	Pg	17 59 32.6	-0.7
LOS	Limnos	0.97	301	*e*Pg	Pg	17 59 38.0	+0.9
LPK	Lapseki	1.04	26	PG	Pg	17 59 37.7	-0.5
CHOS	Chios island	1.06	185	*e*Pg	Pg	17 59 38.2	-0.3
CHOS				*e*Sg	Sg	17 59 52.7	+0.4
CHOS	Chios island	1.06	185	*e*Pg	Pg	17 59 38.2	-0.4
CHOS				*e*Sg	Sg	17 59 52.7	+0.4
URLA	Izmir	1.13	163	*i* P	Pb	17 59 39.0	-0.7
URLA				*i* S	Sb	17 59 55.0	+0.7
BLCB	Balcova	1.25	147	PN	Pn	17 59 41.8	+0.2
BLCB	Balcova	1.25	147	*e*Pg	Pg	17 59 41.8	-0.6
BLCB				*e*Sg	Sg	17 59 58.3	-0.4
ENEZ	Enez	1.29	359	PN	Pn	17 59 42.3	+0.2
BALB	Balikesir	1.34	81	PN	Pn	17 59 42.4	-0.3
KDAG	Bornova	1.34	140	*i* P	Pn	17 59 42.2	-0.6
KDAG				*i* S	Sb	18 00 02.9	+2.4
IZM	Izmir	1.35	140	PN	Pn	17 59 42.2	-0.6
AKHS	Akhisar	1.40	113	*i* P	Pn	17 59 43.3	-0.2
AKHS				*i* S	Sn	18 00 01.2	-0.7
AKS	Akhisar	1.40	113	PN	Pn	17 59 42.8	-0.7
ALN	Alexandroupoli	1.46	356	*e*Pg	Pg	17 59 44.7	-1.6
ALN				*e*Sg	Sg	18 00 05.2	0.0
SART	Tekirdag	1.47	32	*i* P	Pn	17 59 45.0	+0.5
SART				*i* S	Sn	18 00 05.1	+1.4
MFT	Murefte	1.59	32	*e*PN	Pn	17 59 46.9	+0.7
MRMT	Marmara Adasi	1.60	43	PN	Pn	17 59 46.1	-0.2
BNT	Bandirma	1.63	55	*e*PN	Pn	17 59 46.5	-0.2
RDO	Rodhopi	1.77	344	*e*PB	Pb	17 59 48.8	-1.8
SMG	Samos	1.81	163	*e*PB	Pb	17 59 52.2	+1.0
DST	Dursunbey	1.91	84	*e*PN	Pn	17 59 50.8	+0.2
KULA	Kula-Manisa	2.15	115	*e*PN	Pn	17 59 53.5	-0.4

ISCJB **12** *18:06:54.9±0.4, 4376N±003×10526W±005, h0km, mb4.0/3, Error ellipse: s-maj=5.3km s-min=4.6km az=28.9*
IDC **12** *18:06:55.4±1.2, 4373N×10548W, h0km, mb3.9/3, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, ML3.1/4, Error ellipse: s-maj=34.3km s-min=7.4km az=150.0*
NEIC **12** *18:06:56.4±0.3, 4375N×10525W, h0km, ML3.4, Error ellipse: s-maj=4.3km s-min=3.4km az=139.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISC 12 18:06:56.4±0.4**, 4378N**±003×**10524W**±005**, h0**km**, n54, σ0.89**/58**, mb4.0**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	68	*e*Pg	Pg	18 07 15.2	+0.9
PHWY	Pilot Hill	2.48	184	*e*Pn	Pn	18 07 37.4	-0.7
PHWY				*e*S	Sn	18 08 09.9	+0.8
RWWY	Rawlins	2.54	215	*e*Pn	Pn	18 07 39.2	+0.3
RWWY				*e*S	Sn	18 08 12.2	+1.6
LAO	LASA Array	2.99	347	*e*Pn	Pn	18 07 45.2	+0.2
PDAR	Pinedale Array	3.31	254	Pn	Pn	18 07 48.9	-0.6
	6.4nm,0.3s,baz=72,slow=16,SNR=102						
PDAR				Pg	Pg	18 07 55.7	-4.2
	17nm,0.3s,baz=70,slow=20,SNR=43						
PDAR				Lg		18 08 33.2	
	8.3nm,0.3s,baz=78,slow=28,SNR=11						
BW06	Boulder Array	3.31	254	*e*Pn	Pn	18 07 48.8	-0.7
BW06				*e*S	Sn	18 08 32.7	+3.2
GCMT	Greycliff	3.74	304	*e*Pn	Pn	18 07 55.9	+0.6
LKWY	Lake	3.79	284	*e*Pn	Pn	18 07 56.7	+0.6
LOHW	Long Hollow	3.89	269	*e*Pn	Pn	18 07 58.0	+0.5
MOOW	Moose Ponds	3.99	271	*e*P	Pn	18 07 59.3	+0.5
ISCO	Idaho Springs	3.99	184	*e*P	Pn	18 07 58.2	-0.6
YNR	Norris Junctio	4.02	285	*e*Pg	Pg	18 08 08.7	-4.7
YFT	Old Faithful	4.08	281	*e*Pn	Pn	18 08 01.3	+1.2
REDW	Red Top Meadow	4.10	266	Pn	Pn	18 07 60.0	-0.3
REDW				*e*		18 08 06.9	
IMW	Indian Meadow	4.12	274	*e*Pn	Pn	18 08 01.9	+1.2
IMW				*e*Pg	Pg	18 08 09.7	-5.8
TPAW	Teton Pass	4.16	268	*e*Pn	Pn	18 08 00.7	-0.3
YMR	Madison River	4.21	284	*e*Pn	Pn	18 08 03.2	+1.4
AHID	Auburn Hatcher	4.40	259	*e*Pn	Pn	18 08 05.2	+0.8
AHID				*e*Pg	Pg	18 08 16.2	-4.5
QLMT	Earthquake Lak	4.56	285	Pn	Pn	18 08 06.6	-0.1
QLMT				*e*Pg	Pg	18 08 17.5	-6.4
DGMT	Dagmar	4.75	8	*e*Pn	Pn	18 08 10.8	+1.6
SMCO	Snowmass	4.78	196	P	Pn	18 08 14.9	+5.2
BOZ	Bozeman (W)	4.92	294	*e*Pn	Pn	18 08 18.6	+7.1
HWUT	Hardware Ranch	5.14	247	*e*Pn	Pn	18 08 13.7	-0.9
	18nm,0.5s						
EGMT	Eagleton	5.28	325	*e*Pn	Pn	18 08 17.6	+1.1
	30nm,0.5s						
MCMT	McKenzie Canyo	5.56	283	Pn	Pn	18 08 20.2	-0.2
DAU	Daniels Canyon	5.60	235	*e*P	Pn	18 08 20.5	-0.4
JLU	Jordanelle	5.60	238	*e*P	Pn	18 08 20.5	-0.4
CTU	Camp Tracy	5.73	240	*e*Pn	Pn	18 08 22.0	-0.7
	12nm,0.4s						
SPUT	South Promonto	5.87	248	*e*Pn	Pn	18 08 24.3	-0.3
HVU	Hansel Valley	5.89	253	*e*Pn	Pn	18 08 24.3	-0.6
	8.1nm,0.5s						
SDCO	Great Sand Dun	6.03	182	*e*Pn	Pn	18 08 27.1	+0.3
	5.0nm,0.6s						
PV10	Paradox Valley	6.11	209	*e*Pn	Pn	18 08 28.3	+0.3
SRU	San Rafael	6.12	222	*e*Pn	Pn	18 08 27.1	-1.0
	21nm,0.4s						
PV01	Paradox Valley	6.18	205	*e*Pn	Pn	18 08 29.3	+0.4
ECSD	EROS,Sioux Fal	6.25	87	*e*Pn	Pn	18 08 30.1	+0.3
	11nm,0.4s						
TMUT	Trail Mountain	6.33	227	*e*Pn	Pn	18 08 30.7	-0.3
NLU	North Lily Min	6.37	235	*e*Pn	Pn	18 08 31.0	-0.5
BGU	Big Grassy Mou	6.44	246	*e*Pn	Pn	18 08 30.7	-1.7
DUG	Dugway	6.68	240	*e*Pn	Pn	18 08 35.5	-0.3
	6.7nm,0.4s						
MVCO	Mesa Verde	7.02	202	*e*Pn	Pn	18 08 41.4	+1.0
	3.2nm,0.5s						
MSU	Marysvale	7.42	227	*e*Pn	Pn	18 08 45.0	-1.0
CCUT	Cedar City	8.76	227	*e*P	Pn	18 09 04.5	+0.2
ANMO	Albuquerque	8.87	187	Lg		18 11 33.4	
	baz=264,slow=22,SNR=2.0						
ULM	Lac du Bonnet	9.09	41	Pn	Pn	18 09 07.8	-1.0
ULM				Pg	Pn	18 09 42.1	+33
ULM				Lg		18 11 43.1	
ULM	Lac du Bonnet	9.09	41	Pn	Pn	18 09 07.8	-1.0
	0.7nm,0.3s,baz=227,slow=12,SNR=11						
ULM				Pg	Pn	18 09 42.1	+33
	1.6nm,0.3s,baz=218,slow=15,SNR=8.2						
ULM				Lg		18 11 43.1	
	0.2nm,0.3s,baz=135,slow=19,SNR=3.1						
NEW	Newport	9.40	303	Lg		18 11 41.5	
	0.8nm,0.3s,baz=103,slow=7.1,SNR=2.8						
NVAR	Mina Array Bea	11.21	246	Pn	Pn	18 09 38.2	+0.3
	0.2nm,0.3s,baz=64,slow=37,SNR=5.5						
TXAR	Lajitas Array	14.47	174	Lg		18 14 31.1	
	0.1nm,0.3s,baz=9.6,slow=16,SNR=4.3						
TKL	Tuckaleechee C	18.36	109	P	Pn	18 11 13.3	+0.9
	0.3nm,0.3s,baz=206,slow=16,SNR=5.9						
YKA	Yellowknife Ar	19.53	347	P	Pn	18 11 24.3	-2.0
YKA	Yellowknife Ar	19.53	347	P	Pn	18 11 24.3	-2.0
	0.1nm,0.3s,baz=159,slow=12,SNR=5.4						
ARCES	ARCESS Array B	61.37	18	P	P	18 17 11.8	-1.7
	1.0nm,0.5s,mb4.2,baz=339,slow=6.5,SNR=9.8						
SONM	Songino Array	84.61	339	P	P	18 19 31.2	-0.2
	0.3nm,0.5s,mb3.8,baz=350,slow=4.8,SNR=8.5						
MKAR	Makanchi Array	89.56	355	P	P	18 19 54.5	-1.0
	0.5nm,0.6s,mb3.9,baz=7.9,slow=3.7,SNR=6.0						

JMA 12 18:21:43.4±0.1**, 3871N**×**14225E, h36**km±2km**, M3.6, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.58	309	⇓P	Pn	18 21 55.3	+0.1
OFUJ				S	Sn	18 22 03.4	-0.1
JIO	Ouri	0.75	250	⇓P	Pn	18 21 57.3	-0.2
JIO				S	Sn	18 22 06.9	-0.7
JMK	Ichinoseki	0.84	287	⇓P	Pn	18 21 58.9	+0.2
JMK				S	Sn	18 22 09.9	+0.1
JOM	Ohasama	1.07	316	⇓P	Pn	18 22 02.4	+0.6
JOM				S	Sn	18 22 16.0	+0.6
JTH	Tanohata	1.26	346	P	Pn	18 22 04.7	+0.2
JTH				S	Sn	18 22 21.0	+0.7
JOU	Okura	1.29	255	P	Pn	18 22 05.7	+0.8
JOU				S	Sn	18 22 22.2	+1.3
JMM	Marumori	1.42	234	P	Pn	18 22 06.8	+0.1
JMM				S	Sn	18 22 24.0	-0.2
JYK	Kaneyama	1.49	279	P	Pn	18 22 08.7	+1.0
JYK				*e*S	Sn	18 22 27.2	+1.3

ISCJB **12** *18:24:00.9±1.5, 557S±007×1484E±0.1, h144km±14km, mb4.1/13, Error ellipse: s-maj=19.3km s-min=10.5km az=23.8*
IDC **12** *18:24:03.2±1.9, 565S×14838E, h151km±18km, mb3.8/12, mb1 3.9/14, mb1mx3.9/17, mbtmp3.8/14, MS3.8/2, Ms1 3.8/2, ms1mx2.9/27, Error ellipse: s-maj=17.6km s-min=9.8km az=104.0*
NEIC **12** *18:24:05.1±1.8, 563S×14827E, h168km±17km, mb3.9/2, Error ellipse: s-maj=17.4km s-min=14.6km az=130.0*
ISC 12 18:24:05.8±1.4**, 568S**±007×**14828E**±009**, h172**km±14km**, n24, σ0.83**/28**, mb4.1**/13**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.86	197	*e*Pn	Pn	18 25 02.5	-2.5
PMG				S	Sn	18 25 46.2	-5.0
PMG	Port Moresby	3.86	197	P	Pn	18 25 02.7	-2.3
	32nm,0.3s,baz=9.0,slow=7.1,SNR=96						
PMG				S	Sn	18 25 46.2	-5.0
	21nm,0.3s,baz=32,slow=7.2,SNR=4.3						
HNR	Honiara	12.15	109	P	Pn	18 26 54.6	+1.1
	2.4nm,0.3s,baz=271,slow=10,SNR=2.5						
CTA	Charters Tower	14.46	188	*e*P	Pn	18 27 24.7	+2.2
	4.5nm,1.0s						
CTA	Charters Tower	14.46	188	P	Pn	18 27 25.6	+3.1
	0.4nm,0.3s,baz=7.5,slow=8.9,SNR=5.5						
CTA				S	Sn	18 30 03.8	+0.3
	0.4nm,0.3s,baz=351,slow=5.9,SNR=4.1						
CTA				LR	LR	18 32 20.0	
	comp=Z,107nm,20.3s,baz=146,slow=34						
CTAO	Charters Tower	14.46	188	P	Pn	18 27 22.7	+0.2
	9.0nm,1.1s						
WB2	Warramunga Arr	19.61	222	*e*P	P	18 28 21.7	+0.7
WB2				*e*S	S	18 31 52.8	-0.3
WRA	Warramunga Arr	19.61	222	P	P	18 28 21.7	+0.6
	1.5nm,0.3s,baz=50,slow=11,SNR=78						
WRA				S	S	18 31 52.9	-0.3
	0.1nm,0.3s,baz=43,slow=21,SNR=6.1						
ASAR	Alice Springs	22.61	216	P	P	18 28 52.8	+0.6
	1.6nm,0.5s,mb3.7,baz=45,slow=8.9,SNR=70						
ASAR				S	S	18 32 53.0	+6.1
	4.2nm,0.9s,baz=31,slow=21,SNR=12						
DZM	Mont Dzumac	23.96	135	P	P	18 29 03.3	-1.1
	7.0nm,0.6s,mb4.4,baz=112,slow=20,SNR=16						
BATI	Kupang	24.79	258	P	P	18 29 12.7	+0.7
	6.6nm,0.7s,mb4.3,baz=8.9,slow=9.6,SNR=3.5						
FITZ	Fitzroy Crossi	25.32	239	*e*P	P	18 29 17.0	+0.2
	9.8nm,0.5s,mb4.6						
FITZ	Fitzroy Crossi	25.32	239	P	P	18 29 17.0	+0.2
	4.6nm,0.4s,mb4.3,baz=77,slow=9.4,SNR=43						
STKA	Stephens Creek	26.80	193	P	P	18 29 30.7	+0.8
	1.8nm,0.7s,mb3.8,baz=147,slow=17,SNR=2.0						
KLBR	Kellerberrin	38.48	224	*e*P	P	18 31 10.9	-0.4
	6.6nm,0.3s,mb4.7						
AFI	Afiamalu	40.15	105	LR	LR	18 44 58.3	
	comp=Z,477nm,19.7s,baz=260,slow=31						
JNU	Nakatsue	41.98	338	P	P	18 31 40.4	+0.4
	5.1nm,0.5s,mb4.4,baz=106,slow=3.8,SNR=7.0						
KSRS	Korea Array	46.93	338	P	P	18 32 19.3	+0.2
	3.1nm,0.9s,mb4.0,baz=155,slow=10.0,SNR=9.1						
SONM	Songino Array	64.76	330	P	P	18 34 25.9	+0.2
	1.0nm,0.6s,mb3.8,baz=143,slow=4.9,SNR=15						
VNDA	Vanda	72.16	177	P	P	18 35 10.9	-0.2
	1.2nm,0.8s,mb3.6,baz=323,slow=6.2,SNR=6.6						
MKAR	Makanchi Array	78.07	320	P	P	18 35 44.7	-0.8
	0.9nm,0.4s,mb3.7,baz=100,slow=7.8,SNR=15						
MAW	Mawson	83.03	203	P	P	18 36 10.9	-0.7
	2.0nm,0.7s,mb4.0,baz=86,slow=18,SNR=4.8						
YKA	Yellowknife Ar	98.30	28	P	P	18 37 22.5	-0.9
	0.3nm,0.6s,mb3.9,baz=275,slow=5.3,SNR=4.3						
TORD	Torodi Ar. Bea	146.24	285	PKPbc	PKPbc	18 43 25.1	-2.0
	1.0nm,0.3s,baz=84,slow=2.7,SNR=29						

IDC 12 18:30:51.2±57.0**, 1506S**×**17237W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/16**, mbtmp4.1**/3**, Error ellipse: s-maj=1117.0km s-min=180.5km az=78.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	45.07	240	P	P	18 39 08.9	-0.3
	0.8nm,0.6s,baz=95,slow=12,SNR=5.5						
WRA	Warramunga Arr	50.89	256	P	P	18 39 54.4	-0.1
	0.6nm,0.5s,baz=93,slow=7.0,SNR=18						
ASAR	Alice Springs	51.16	252	P	P	18 39 56.5	+0.1
	5.6nm,0.6s,baz=88,slow=8.0,SNR=146						

CASC 12 18:41:28.0±1.6**, 864N**×**8320W, h17**km±8km**, MD3.7, 1C-3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTCR	Cotoan	0.51	59	⇓*i*P	Pg	18 41 37.9	-0.3
BRU2	Volcan	0.53	73	⇓*i*P	Pg	18 41 38.1	-0.4
BRU2				*e*S	Sg	18 41 46.9	+1.3
TBS2		0.56	74	*e*P	Pg	18 41 45.5	+6.4
TBS2				*e*S	Sg	18 41 54.1	+7.5
BAR1		0.61	350	*e*P	Pg	18 41 39.2	-0.8
CNI	Changuinola	1.03	41	⇓*i*P	Pb	18 41 46.4	-0.9
QCR	Quepos	1.23	309	*e*P	Pn	18 41 49.6	-0.9
QCR				*e*S	Sb	18 42 07.4	+1.0
URSC	Urasca	1.32	334	*e*P	Pn	18 41 50.7	-0.9
URSC				*e*S	Sn	18 42 09.5	+0.6
LCR2	La Lucha 2	1.35	324	*e*P	Pn	18 41 51.2	-1.0
LCR2				*e*S	Sn	18 42 11.7	+2.0
LAJ	Bijagual	1.52	323	*e*P	Pn	18 41 56.7	+2.3
PRS1	Puriscal	1.73	321	*e*P	Pn	18 41 56.5	-0.8
PRS1				*e*S	Sn	18 42 19.1	+0.1
CGA2	Cerro Gallo 2	1.85	318	*e*P	Pn	18 41 59.4	+0.3
PTP	Ponta Puerca	19.57	59	⇑*i*P		18 41 38.0	
PTP				*e*S		18 41 47.7	

ISK **12** *18:44:18.9, 3833N×3929E, h5km, MD3.5*
CSEM **12** *18:44:19.3±0.1, 3835N×3930E, h2km, MD3.4, Error ellipse: s-maj=2.3km s-min=1.8km az=155.0*
ISCJB **12** *18:44:20.0±0.3, 3834N±002×3931E±002, h2km, Error ellipse: s-maj=3.0km s-min=2.5km az=143.2*
DDA **12** *18:44:20.8, 3835N×3933E, h2km, Md3.4*
NSSC **12** *18:44:21.4, 3853N×3936E, h35km±10km*
ISC 12 18:44:20.7±0.6**, 3834N**±002×**3933E**±003**, h1**km±4km**, n49, σ0.87**/69**, 9D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.31	301	*i* P	Pg	18 44 26.2	-0.5
ELZG				*i* S	Sg	18 44 34.3	+3.6
PTK	Pertek	0.56	5	*i* PG	Pg	18 44 30.4	-1.0
PTK				*i* SG	Sg	18 44 40.3	+1.7
MALT	Malatya	0.71	269	PG	Pg	18 44 32.5	-1.7
MALT				SG	Sg	18 44 43.8	+0.4
MYA	Malataya	0.71	270	PG	Pg	18 44 33.3	-1.0
MYA				SG	Sg	18 44 44.0	+0.6
DIY	Diyarbakir	0.83	121	PG	Pg	18 44 36.5	-0.1
URFA	Urfa	0.98	204	PG	Pg	18 44 39.3	-0.1
BINT	Bingol	1.06	59	PN	Pg	18 44 40.5	-0.5
ATAB	Bozova	1.19	224	*i* P	Pg	18 44 43.5	0.0
ATAB				*i* S	Sg	18 45 00.1	+1.2
EZC	Erzincan	1.46	15	PN	Pn	18 44 46.5	-1.7
DRBT	Darb Altahta	1.53	165	⇑P	Pg	18 44 54.5	+4.5
DRBT				⇓S	Sg	18 45 21.3	+11
MARD	Mardin	1.54	131	*i* P	Pn	18 44 48.4	-0.9
MARD				*i* S	Sn	18 45 10.2	+0.3
KBSD	Kabsdagh	1.65	144	⇑P	Pn	18 44 50.6	-0.1
KBSD				⇑S	Sn	18 45 11.8	-0.7
KBSD	Kabsdagh	1.65	144	⇑*i*P	Pn	18 44 50.6	-0.1
KBSD				⇑*i*S	Sn	18 45 11.8	-0.7
GZT	Gaziantep	1.70	236	*i* P	Pn	18 44 50.5	-1.0
GZT				*i* S	Sg	18 45 17.0	+1.6
BTMT	Batman	1.71	94	PN	Pn	18 44 49.8	-1.8
KELT	Kelkit	1.81	358	*i* P	Pn	18 44 53.5	+0.5
KELT				*i* S	Sg	18 45 19.5	+0.6
KELT	Kelkit	1.81	358	*i* P	Pn	18 44 53.5	+0.5
SFNV	Sufian	2.01	162	⇑P	Pn	18 44 56.3	+0.5
SFNV				⇓S	Sn	18 45 22.2	+0.6
SFNV	Sufian	2.01	162	⇑*i*P	Pn	18 44 56.3	+0.5
SFNV				⇓*i*S	Sn	18 45 22.2	+0.6
GAZ	Gaziantep	2.04	236	PN	Pn	18 44 54.6	-1.5
KMRS	Kahramanmaras	2.09	247	PN	Pn	18 44 55.9	-0.9
GUMT	Gumushane	2.12	3	PN	Pn	18 44 57.7	+0.4
EZM	Erzurum	2.23	45	PN	Pn	18 44 59.3	+0.6
ERZM	Erzurum	2.23	45	*i* P	Pn	18 44 59.7	+0.9
SLMH	Al Salmeh	2.39	208	⇓P	Pn	18 45 01.2	+0.2
SLMH				⇑S	Sn	18 45 31.2	+0.2
SLMH	Al Salmeh	2.39	208	⇓*i*P	Pn	18 45 01.2	+0.2
SLMH				⇑*i*S	Sn	18 45 31.2	+0.2
SIRT	Sirnak	2.60	108	*e*PN	Pn	18 45 03.4	-0.4
ESPY	Espiye-Giresun	2.62	350	*e*PN	Pn	18 45 04.2	+0.1
DRWC	Darouich	2.72	232	⇑P	Pn	18 45 04.4	-1.1
DRWC				⇑S	Sn	18 45 39.7	+0.6
DRWC	Darouich	2.72	232	⇑*i*P	Pn	18 45 04.4	-1.1
DRWC				⇑*i*S	Sn	18 45 39.7	+0.6
JHLN	Al Jahlan	2.75	195	⇓P	Pn	18 45 06.7	+0.7
JHLN				⇓S	Sn	18 45 40.9	+1.1
JHLN	Al Jahlan	2.75	195	⇓*i*P	Pn	18 45 06.7	+0.8
JHLN				⇓*i*S	Sn	18 45 40.9	+1.1
BNN	Bunyan	2.78	282	*e*PN	Pn	18 45 06.4	+0.1
KOZT	Kozan	2.90	254	*e*PN	Pn	18 45 07.3	-0.6
TUTA	Tutak	2.92	68	*i* P	Pn	18 45 09.2	+0.9
AGRB	Hanur-Agry	3.11	65	*e*PN	Pn	18 45 11.7	+0.8
VANB	Van	3.20	84	*e*PN	Pn	18 45 12.3	+0.2
BTCH	Batrach	3.24	226	⇑P	Pn	18 45 12.0	-0.7
BTCH				⇑S	Sn	18 45 52.8	+0.9
BTCH	Batrach	3.24	226	⇑*i*P	Pn	18 45 12.0	-0.7
BTCH				⇑*i*S	Sn	18 45 52.8	+0.9
HTY	Hatay	3.37	230	*e*PN	Pn	18 45 13.6	-0.8
YOZ	Yozgat	3.38	294	*e*PN	Pn	18 45 14.6	0.0
HAKT	HAKKARI	3.55	101	*i* P	Pn	18 45 15.9	-1.0
CUKT	Cukurca	3.56	106	*e*PN	Pn	18 45 17.4	+0.3
HKR	Hakkari	3.57	101	*e*PN	Pn	18 45 18.6	+1.4
BCA	Borcka	3.57	29	*e*PN	Pn	18 45 17.4	+0.2
MSL	Mosul	3.63	123	*e*x	x	18 45 22.5	
MSL				*e*x	x	18 45 29.0	
MSL				*e*x	x	18 46 14.0	
CLDR	Caldiran	3.68	76	*e*PN	Pn	18 45 18.8	+0.1
NIG	Nigde	3.72	268	*e*PN	Pn	18 45 18.3	-1.0
DIGO	Kars	3.76	55	*i* P	Pn	18 45 20.4	+0.6

CASC **12** *18:44:08.0±2.6, 1595N×8960W, h20km±118km, MD4.5, mb4.5(NEIC)*
IDC **12** *18:44:12.5±0.6, 1354N×9051W, h0km, mb4.4/17, mb1 4.5/20, mb1mx4.4/26, mbtmp4.4/20, ML4.0/1, MS4.2/11, Ms1 4.1/11, ms1mx3.9/28, Error ellipse: s-maj=25.5km s-min=11.0km az=52.0*
ISCJB **12** *18:44:20.1±0.6, 1344N±004×9060W±004, h71km±5km, mb4.5/42, Error ellipse: s-maj=9.1km s-min=3.9km az=40.0*
NEIC **12** *18:44:21.6, 1325N×9066W, h79km, mb4.5/30, After CASC.*
BJI **12** *18:44:21.6, 1330N×9070W, h79km, mB5.5, Msz4.6*
ISC 12 18:44:21.9±0.5**, 1347N**±004×**9057W**±004**, h70**km±4km**, n310, σ0.80**/287**, mb4.5**/41**, 81C-74D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.92	358	*e*P	Pn	18 44 39.0	-0.4
FUG	Fuego 3	1.01	345	⇑*e*P	Pn	18 44 38.5	-2.0
SNJE	San Jose	1.02	67	⇑*e*P	x	18 44 53.6	
SNJE				*e*S	x	18 45 19.9	
FG6		1.13	344	⇑*e*P	Pn	18 44 40.0	-2.0
FG6				*e*S	Sn	18 45 03.4	+6.3
SNET	Serv Nac Est T	1.32	80	*e*P	x	18 44 45.1	
LBRS	Las Brisas	1.51	80	*e*P	x	18 45 00.6	
BLLM	Bellamira	2.27	90	⇓*e*P	x	18 45 10.6	
BLLM				*e*S	x	18 45 44.7	
CCIG	Comitan	3.18	332	⇑*i*P	Pn	18 45 07.6	-2.0
CCIG				*i* S	Sn	18 45 48.0	+1.6
TGUH	Tegucigalpa,Un	3.25	79	*e*Pn	Pn	18 45 11.9	+1.3
CMIG	Matias Romero	5.51	311	Pn	Pn	18 45 33.9	-7.5
	4.6nm,0.3s,baz=128,slow=10,SNR=25						
CMIG				Sn	Sn	18 46 41.8	-1.5
	8.2nm,0.3s,baz=123,slow=8.9,SNR=6.8						
JTS	JuntasAbangare	6.34	119	*e*Pn	Pn	18 45 51.0	-1.7
JTS	JuntasAbangare	6.34	119	Pn	Pn	18 45 50.1	-2.7
	2.4nm,0.3s,baz=310,slow=19,SNR=16						
JTS				Sn	Sn	18 46 58.2	-5.6
	baz=300,slow=16,SNR=1.3						
JTS				Lg		18 47 34.2	
	baz=338,slow=24,SNR=3.4						
JCR	Jicaral	6.44	123	*e*P	Pn	18 45 53.4	-0.8
CGA2	Cerro Gallo 2	6.89	119	*e*P	Pn	18 46 01.3	+1.0
VHO	Vista Hermosa	6.95	302	*i* P	Pn	18 45 57.5	-3.5
VHO				*i* S	Sn	18 47 23.6	+5.0
PRS1	Puriscal	7.04	119	*e*P	Pn	18 46 04.3	+2.0
TEIG	Tepich	7.07	18	*e*Pn	Pn	18 46 05.1	+2.4
	68nm,0.5s						
TEIG	Tepich	7.07	18	Pn	Pn	18 46 02.7	0.0
	11nm,0.3s,baz=169,slow=15,SNR=41						
TEIG				Sn	Sn	18 47 23.9	+2.3
	baz=208,slow=23,SNR=2.3						
TEIG				Lg		18 47 55.4	
	baz=159,slow=24,SNR=3.3						
LAJ	Bijagual	7.26	119	*e*P	Pn	18 46 02.0	-3.4
LCR2	La Lucha 2	7.42	119	*e*P	Pn	18 46 09.1	+1.5
QCR	Quepos	7.45	122	*e*P	Pn	18 46 08.3	+0.3
URSC	Urasca	7.57	118	*e*P	Pn	18 46 11.3	+1.8
BAR1		8.26	120	*e*P	Pn	18 46 19.5	+0.4
PLIG	Platanillo	9.89	301	*e*P	Pn	18 46 35.9	-5.4
IIO	Organos	9.91	309	*e*P	Pn	18 46 37.8	-3.7
IIO				*i* S	Sn	18 48 32.5	+1.3
SOR	Soroa	11.73	37	*e*P	Pn	18 47 10.8	+4.4
MGV	Manicaragua	13.24	48	*e*P	Pn	18 47 26.3	-0.7
ZAIG	Zacatecas	14.68	311	*e*P	Pn	18 47 45.4	-0.5
HKT	Hockley	17.11	344	*e*P	Pn	18 48 18.8	+2.3
	47nm,1.4s						
ROSC	El Rosal	18.16	117	P	Pn	18 48 28.5	-1.0
	0.9nm,0.3s,baz=269,slow=18,SNR=11						
JCT	Junction City	18.95	335	P	Pn	18 48 37.1	-1.7
	16nm,0.9s						
LRAL	Lakeview Retre	19.75	9	*e*P	Pn	18 48 52.0	+3.8
	38nm,1.1s						
TXAR	Lajitas Array	19.92	324	P	Pn	18 48 47.2	-3.0
	1.0nm,0.3s,baz=148,slow=12,SNR=38						
TXAR				LR	LR	18 58 03.4	
	comp=Z,182nm,19.8s,baz=0.0,slow=42						
LTX	Lajitas	19.92	324	*e*P	Pn	18 48 47.6	-2.6
	46nm,1.3s						
SDV	Santo Domingo	20.07	101	*e*P	P	18 48 49.7	-0.2
	13nm,0.8s						
SDV	Santo Domingo	20.07	101	P	P	18 48 48.4	-1.5
	16nm,0.8s,baz=294,slow=5.9,SNR=18						
GOGA	Godfrey	20.88	17	*e*P	P	18 49 01.9	+3.6
	14nm,0.8s						
OXF	Oxford	20.98	3	*e*P	P	18 49 00.6	+1.2
	41nm,1.0s						
MIAR	Mount Ida	21.16	353	*e*P	P	18 49 00.6	-0.7
	38nm,1.2s,mb4.6						
LPIG	La Paz	21.45	302	LR	LR	18 58 32.5	
	comp=Z,513nm,18.1s,baz=146,slow=40						
PLAL	Pickwick Lake	21.54	6	*e*P	P	18 49 07.3	+1.9
	15nm,1.0s,mb4.3						
WMOK	Wichita Mounta	22.44	342	*e*P	P	18 49 11.4	-3.6
	26nm,1.5s,mb4.3						
MNTX	Cornudas Mount	22.68	326	*e*P	P	18 49 15.0	-2.5
	30nm,0.8s,mb4.7						
TKL	Tuckaleechee C	22.93	14	P	P	18 49 19.1	-1.0
	8.7nm,0.6s,mb4.2,baz=187,slow=10,SNR=12						
TKL				LR	LR	18 59 11.7	
	comp=Z,2µm,20.0s,baz=207,slow=39						
ATAH	Atahualpa	23.66	149	P	P	18 49 29.6	+2.4
	9.0nm,0.8s,mb4.1,baz=69,slow=8.6,SNR=5.3						
ATAH				LR	LR	18 57 20.8	
	comp=Z,212nm,19.6s,baz=187,slow=33						
TZTN	Tazewell	23.82	14	*e*P	P	18 49 30.0	+1.5
	12nm,0.8s,mb4.3						
319A	Douglas	24.77	319	⇓P	P	18 49 36.5	-0.7
	baz=25,SNR=11						

BNM **Barren Site** 25.23 327 *e*P P 18 49 41.4 +0.1
318A **Bisbee** 25.27 318 P P 18 49 41.8 +0.1
baz=25,SNR=20
LPM **Los Pinos Moun** 25.35 328 *e*P P 18 49 42.5 +0.1
LENM **Lemitar** 25.42 327 *e*P P 18 49 43.3 +0.3
218A **Dragoon** 25.65 319 ⇑P P 18 49 45.0 -0.2
baz=26
LAZ **Ladron** 25.69 327 *e*P P 18 49 44.6 -0.9
ANMO **Albuquerque** 25.76 329 P P 18 49 45.8 -0.4
3.5nm,0.7s,mb3.9
ANMO **Albuquerque** 25.76 329 P P 18 49 46.0 -0.2
3.1nm,0.7s,mb3.9,baz=136,slow=7.6,SNR=3.4
ANMO LR LR 19 01 58.5
comp=Z,302nm,19.3s,baz=260,slow=41
217A **Green Valley** 26.02 318 ⇑P P 18 49 48.5 0.0
baz=26
TUC **Tucson** 26.34 319 *e*P P 18 49 51.0 -0.4
13nm,1.3s,mb4.2
216A **Three Points,** 26.58 317 ⇑P P 18 49 53.7 +0.1
baz=27
116A **Eloy** 27.10 318 ⇓P P 18 49 58.1 -0.1
baz=27
ACSO **Alum Creek Sta** 27.48 13 *e*P P 18 50 01.8 +0.3
9.9nm,0.6s,mb4.5
115A **Sonoran Desert** 27.53 318 ⇓P P 18 50 02.3 +0.2
baz=28
Z14A **Wintersburg** 28.41 318 ⇑P P 18 50 10.1 +0.1
baz=29
MVCO **Mesa Verde** 28.56 329 *e*P P 18 50 11.7 +0.5
6.9nm,0.8s,mb4.3
MVCO **Mesa Verde** 28.56 329 ⇓P P 18 50 11.4 +0.2
baz=29
X15A **Humboldt** 28.69 321 ⇓P P 18 50 12.2 -0.1
baz=29
NNA **Nana** 28.72 151 LR LR 18 59 36.2
comp=Z,145nm,21.1s,baz=68,slow=32
Y14A **Wickenburg** 28.81 319 ⇑P P 18 50 13.4 -0.1
baz=29
X14A **Yava** 29.08 320 ⇓P P 18 50 15.9 0.0
baz=29
Y13A **Salome** 29.27 318 ⇓P P 18 50 17.8 +0.3
baz=29
PV01 **Paradox Valley** 29.32 330 P P 18 50 19.7 +1.8
GLA **Glamis** 29.48 315 ⇑P P 18 50 19.9 +0.4
baz=30
W14A **Seligman** 29.69 321 ⇓P P 18 50 21.2 0.0
baz=30
X13A **Yucca** 29.76 319 ⇓P P 18 50 22.1 +0.3
baz=30
PDMCI **Parker Dam,Lak** 29.77 318 ⇓P P 18 50 22.1 +0.1
baz=30
W13A **Hualapai Mount** 30.11 320 ⇑P P 18 50 25.0 0.0
baz=30
DVTC **Desert V Tower** 30.14 314 ⇓P P 18 50 25.1 -0.2
baz=30
BC3 **Big Chuckw Mtn** 30.26 316 P P 18 50 26.4 +0.1
baz=30,SNR=11
IRM **Iron Mountain** 30.35 317 ⇓P P 18 50 27.2 +0.1
baz=30
MONP **Monument Peak** 30.49 314 ⇓P P 18 50 28.0 -0.4
baz=31
U14A **Mt Trumbull** 30.55 322 ⇑P P 18 50 29.3 +0.4
baz=31,SNR=7.8
BELC **Belle Mtn.** 30.83 316 ⇑P P 18 50 31.2 -0.2
baz=31
PFO **Pinyon Flat Ob** 30.92 315 P P 18 50 32.2 +0.1
1.5nm,0.6s,mb3.9,baz=101,slow=5.2,SNR=3.3
T14A **Hurricane** 30.93 323 ⇓P P 18 50 32.8 +0.6
baz=31
U13A **Pakoon Wash** 31.02 322 ⇑P P 18 50 33.4 +0.4
baz=31,SNR=7.7
SRU **San Rafael** 31.04 329 *e*P P 18 50 33.2 +0.2
3.7nm,0.9s,mb4.1
GMRC **Granite Mounta** 31.06 317 ⇓P P 18 50 33.3 -0.1
baz=31
V12A **Nelson** 31.12 320 ⇓P P 18 50 34.1 +0.2
baz=31,SNR=8.3
T13A **Saint George** 31.39 322 ⇑P P 18 50 36.0 -0.2
baz=32
CCUT **Cedar City** 31.43 324 *e*P P 18 50 37.1 +0.5
MSU **Marysvale** 31.45 326 *e*P P 18 50 37.1 +0.4
HEC **Hector,Ludlow** 31.53 317 ⇑P P 18 50 37.4 -0.1
baz=32
V11A **Goodsprings** 31.56 319 ⇑P P 18 50 37.8 +0.1
baz=32
TUQ **Turquoise Mtn.** 31.63 318 ⇑P P 18 50 38.5 +0.1
baz=32
RWWY **Rawlins** 31.63 336 *e*P P 18 50 38.4 +0.2
10nm,1.0s,mb4.5
S13A **Holt Ranch, En** 31.74 323 ⇑P P 18 50 40.1 +0.8
baz=32
GSC **Goldstone** 32.12 317 ⇑P P 18 50 42.7 0.0
baz=32
CIS **Catalina Islan** 32.17 313 ⇑P P 18 50 43.1 0.0
baz=32
T11A **Corn Creek, Al** 32.32 321 ⇑P P 18 50 44.9 +0.5
baz=32
S12A **Delamar Landin** 32.34 322 ⇑P P 18 50 44.7 +0.1
baz=32
DAU **Daniels Canyon** 32.40 330 *e*P P 18 50 45.4 +0.3
U10A **Ash Meadows, A** 32.49 319 ⇑P P 18 50 46.3 +0.4
baz=33
COWI **Conover** 32.55 2 *e*P P 18 50 45.2 -1.0
9.4nm,0.6s,mb4.8
EDW2 **Edwards Air Fo** 32.68 315 ⇓P P 18 50 47.8 +0.3
baz=33
R12A **Pony Springs,** 32.68 324 ⇑P P 18 50 48.3 +0.8
baz=33,SNR=12
TPNV **Topopah Spring** 32.77 320 ⇓P P 18 50 49.0 +0.7
baz=33
Q13A **Wheeler Ranch,** 32.78 325 ⇓P P 18 50 49.0 +0.6
baz=33,SNR=10
LRMC **Laurel Mountai** 32.81 317 ⇓P P 18 50 49.0 +0.3
baz=33
DUG **Dugway** 33.02 328 ⇑P P 18 50 50.5 0.0
baz=33
MPMC **Manual Prospec** 33.02 318 P P 18 50 50.5 0.0
baz=33,SNR=11
P13A **Bates Ranch, G** 33.12 326 ⇑P P 18 50 52.0 +0.6
baz=33,SNR=14
R11A **Troy Canyon, C** 33.26 323 ⇓P P 18 50 53.1 +0.4
baz=33,SNR=7.5
N15A **Stansbury Isla** 33.38 329 ⇑P P 18 50 53.8 +0.2
baz=34
ISA **Isabella** 33.45 316 ⇑P P 18 50 54.1 -0.1
baz=34
HWUT **Hardware Ranch** 33.47 331 *e*P P 18 50 54.5 +0.2
9.2nm,1.0s,mb4.6
PDAR **Pinedale Array** 33.49 334 P P 18 50 52.8 -1.7
1.6nm,1.0s,mb3.8,baz=132,slow=9.2,SNR=8.6
GRAC **Grapevine Rang** 33.50 319 ⇑P P 18 50 54.8 +0.1
baz=34,SNR=6.4
O13A **Hicks Ranch, I** 33.59 327 ⇑P P 18 50 56.2 +0.8
baz=34
S10A **Tonopah Range,** 33.59 321 ⇓P P 18 50 55.6 +0.1
baz=34,SNR=8.8
P12A **McGill** 33.63 325 ⇓P P 18 50 56.4 +0.6
baz=34,SNR=8.2
Q11A **Duckwater** 33.63 323 ⇓P P 18 50 56.2 +0.3
baz=34,SNR=7.7
R10A **Warm Springs** 33.65 322 ⇓P P 18 50 56.5 +0.5
baz=34
N14A **Grayback Hills** 33.69 328 P P 18 50 56.9 +0.6
baz=34,SNR=9.0
M15A **Larsen Ranch,** 33.78 330 P P 18 50 57.5 +0.4
baz=34,SNR=5.7
S09A **Goldfield** 33.86 320 P P 18 50 58.5 +0.7
baz=34,SNR=5.8
Q10A **Clear Creek Ra** 34.06 323 ⇓P P 18 51 00.2 +0.7
baz=34,SNR=9.6
R09A **Tonopah** 34.09 321 ⇑P P 18 51 00.2 +0.4
baz=34
O12A **Currie** 34.10 326 P P 18 51 01.0 +1.2
baz=34,SNR=8.3
P11A **Circle Ranch,** 34.16 324 ⇑P P 18 51 01.1 +0.7
baz=34
N13A **Wendover, West** 34.22 327 ⇓P P 18 51 01.1 +0.2
baz=34
M14A **Sheep Mountain** 34.26 329 P P 18 51 01.9 +0.7
baz=34,SNR=27
SMMC **Simmler** 34.30 314 ⇑P P 18 51 01.7 0.0
baz=34
S08C **White Mtn Res** 34.31 319 ⇓P P 18 51 02.1 +0.3
baz=34,SNR=10
EYMN **Ely** 34.38 359 *e*P P 18 51 00.4 -1.8
8.0nm,0.6s,mb4.7
HELL **Mitchell Peak,** 34.39 317 ⇓P P 18 51 02.1 -0.3
baz=34,SNR=7.5

MTUM **Tungsten Hills** 34.48 319 *e*P P 18 51 03.3 +0.2
O11A **Cowboy Ranch,** 34.50 325 P P 18 51 04.5 +1.2
baz=35,SNR=8.2
REDW **Red Top Meadow** 34.53 334 *e*P P 18 51 02.6 -0.9
26nm,1.1s,mb5.0
M13A **Montello** 34.57 328 P P 18 51 04.4 +0.5
baz=35,SNR=12
P10A **Eureka** 34.62 324 ⇓P P 18 51 04.9 +0.6
baz=35
LOHW **Long Hollow** 34.62 334 *e*P P 18 51 04.2 -0.1
4.5nm,0.8s,mb4.3
N12A **Clover Valley,** 34.66 326 ⇓P P 18 51 05.2 +0.5
baz=35
TPAW **Teton Pass** 34.67 334 *e*P P 18 51 05.5 +0.8
14nm,1.1s,mb4.7
R08A **Mina** 34.79 320 ⇑P P 18 51 06.4 +0.5
baz=35
KCC **Kaiser Creek** 34.95 318 P P 18 51 07.8 +0.5
baz=35,SNR=5.5
K14A **Jones Ranch, D** 34.95 330 P P 18 51 07.3 +0.1
baz=35,SNR=9.7
NVAR **Mina Array Bea** 34.96 320 P P 18 51 07.9 +0.6
16nm,0.9s,mb4.8,baz=129,slow=9.4,SNR=76
L13A **Double Diamond** 34.99 329 ⇑P P 18 51 07.4 -0.1
baz=35
M12A **Wells** 35.00 327 P P 18 51 08.3 +0.7
baz=35,SNR=8.5
AGMN **Agassiz Refuge** 35.00 354 *e*P P 18 51 05.8 -1.7
15nm,0.9s,mb4.8
PKD **Parkfield** 35.01 315 ⇑P P 18 51 07.5 -0.3
baz=35
T06C **Millerton Lake** 35.02 317 ⇑P P 18 51 06.9 -1.0
baz=35
O10A **Cortez Mining,** 35.09 324 ⇑P P 18 51 09.0 +0.7
baz=35
R07C **Lee Vining** 35.22 319 ⇑P P 18 51 10.1 +0.6
baz=35
U04C **Hernandez Rese** 35.39 315 ⇑P P 18 51 11.6 +0.6
baz=36
O09A **Fish Creek Ran** 35.40 324 ⇓P P 18 51 11.6 +0.6
baz=36
M11A **Holland Ranch,** 35.48 326 P P 18 51 12.6 +0.9
baz=36,SNR=8.1
V03C **Hunter Liggett** 35.52 315 ⇓P P 18 51 12.6 +0.4
baz=36
L12A **House Creek Ra** 35.58 328 ⇑P P 18 51 12.5 0.0
baz=36
S05C **Merced** 35.62 317 ⇑P P 18 51 12.8 -0.2
baz=36
K12A **Draper Farm, C** 35.87 329 ⇓P P 18 51 14.7 -0.4
baz=36,SNR=5.9
HAST **UC Hastings Re** 35.93 315 ⇓P P 18 51 15.5 -0.2
baz=36
M10A **I.L. Ranch, Tu** 35.94 326 ⇑P P 18 51 16.4 +0.7
baz=36,SNR=6.8
CMB **Columbia Colle** 36.05 318 *e*P P 18 51 16.6 -0.1
9.9nm,1.0s,mb4.7
CMB **Columbia Colle** 36.05 318 ⇓P P 18 51 16.9 +0.2
baz=36,SNR=5.7
J13A **Cove Ranch, Pi** 36.08 330 ⇓P P 18 51 16.4 -0.4
baz=36
PACP **Pacheco Peak** 36.08 316 ⇑P P 18 51 16.6 -0.3
baz=36
R05C **Kiwood Meado** 36.24 319 ⇑P P 18 51 18.1 -0.1
baz=36
L10A **Juniper Basin** 36.29 327 P P 18 51 19.1 +0.4
baz=36,SNR=5.8
HLID **Hailey** 36.32 330 P P 18 51 18.8 -0.1
baz=36,SNR=5.8
S04C **Ingram Canyon,** 36.38 317 ⇓P P 18 51 19.1 -0.4
baz=36
O07A **Toulon** 36.38 322 ⇓P P 18 51 19.0 -0.5
baz=37
WCN **Washoe City** 36.39 320 ⇑P P 18 51 20.4 +0.9
baz=36
J12A **Stokes Ranch,** 36.42 329 P P 18 51 19.9 +0.2
baz=37,SNR=6.4
I13A **Wildhorse Cree** 36.44 331 P P 18 51 20.7 +0.8
baz=37,SNR=9.9
K11A **Parker Ranch,** 36.55 328 ⇓P P 18 51 20.3 -0.6
baz=37
G15A **Dillon** 36.67 334 ⇓P P 18 51 22.5 +0.6
baz=37
LAVA **Lava Cap Winer** 36.69 319 ⇓P P 18 51 22.4 +0.3
baz=37
N07B **Gerlach** 36.83 323 ⇓P P 18 51 24.1 +0.8
baz=37
MFID **Camas Ranch** 36.91 329 ⇓P P 18 51 23.8 -0.1
baz=37
M08A **Happy Creek Ra** 36.92 324 ⇓P P 18 51 24.5 +0.5
baz=37
P05C **Yuba Gap, Truc** 36.92 320 ⇑P P 18 51 24.6 +0.5
baz=37
ULM **Lac du Bonnet** 36.93 354 P P 18 51 22.4 -1.6
18nm,1.0s,mb5.0,baz=172,slow=8.9,SNR=26
ULM LR LR 19 09 58.3
comp=Z,330nm,18.6s,baz=172,slow=42
O06A **Flanigan** 36.96 321 ⇓P P 18 51 25.2 +0.8
baz=37
LPAZ **La Paz** 36.96 142 P P 18 51 23.8 -0.8
1.6nm,0.3s,mb4.5,baz=3.4,slow=19,SNR=9.5
BDM **Black Diamond** 36.98 317 ⇓P P 18 51 24.8 +0.2
baz=37
H13A **Challis** 37.00 331 P P 18 51 25.3 +0.7
baz=37,SNR=13
BEKR **Beckwourth** 37.10 321 P P 18 51 26.1 +0.5
baz=37,SNR=11
Q04C **Lincoln** 37.15 319 ⇓P P 18 51 26.2 +0.2
baz=37
F15A **Butte** 37.21 334 P P 18 51 26.6 +0.2
baz=38,SNR=7.5
H12A **Diamond D Ranc** 37.27 331 P P 18 51 27.6 +0.6
baz=38,SNR=8.9
N06A **Buffalo Meadow** 37.32 322 ⇓P P 18 51 27.6 +0.2
baz=38,SNR=8.9
L08A **Fields** 37.39 325 P P 18 51 28.4 +0.4
baz=38,SNR=6.2
G13A **Cobalt** 37.39 332 ⇓P P 18 51 28.1 +0.1
baz=38
K09A **Rome** 37.39 326 ⇑P P 18 51 28.3 +0.3
baz=38,SNR=24
OHCM **Honcut** 37.50 319 *e*P P 18 51 29.0 +0.1
O05C **Quincy** 37.50 320 ⇑P P 18 51 29.7 +0.7
baz=38
SUTB **Sutter Butte** 37.63 319 ⇓P P 18 51 30.4 +0.3
baz=38
ORV **Oroville** 37.63 319 ⇑P P 18 51 30.2 +0.1
baz=38
WVOR **Wild Horse Val** 37.71 325 *e*P P 18 51 31.0 +0.3
10nm,0.8s,mb4.7
E15A **Deer Lodge** 37.74 335 ⇑P P 18 51 30.8 -0.1
baz=38
ELFS **Eagle Lake Fie** 37.78 321 P P 18 51 32.0 +0.7
baz=38,SNR=12
O04C **Chester** 37.82 321 ⇑P P 18 51 32.1 +0.5
baz=38
K08A **Mann Creek Ran** 37.83 326 P P 18 51 32.4 +0.7
baz=38,SNR=7.3
L07A **Adell** 37.84 324 P P 18 51 32.4 +0.6
baz=38,SNR=7.7
J09A **Fry Pan Ranch,** 37.85 327 P P 18 51 32.5 +0.6
baz=38,SNR=17
MNRC **McLaughlin Nat** 37.86 318 ⇓P P 18 51 32.0 0.0
baz=38
I10A **Payette** 37.88 329 ⇓P P 18 51 32.6 +0.5
baz=38
H11A **Donnelly** 37.94 330 P P 18 51 32.6 +0.1
baz=38,SNR=8.6
F13A **Darby** 37.97 333 ⇓P P 18 51 32.3 -0.6
baz=38
D15A **Lincoln** 38.19 336 ⇓P P 18 51 34.5 -0.1
baz=38
K07A **Rock Creek Ran** 38.22 325 P P 18 51 35.5 +0.6
baz=38,SNR=13
J08A **Circle Bar Ran** 38.24 327 P P 18 51 35.4 +0.2
baz=38,SNR=10
I09A **Lost Marbles R** 38.28 328 P P 18 51 35.8 +0.3
baz=38,SNR=6.2
MOD **Modoc** 38.31 323 ⇓P P 18 51 36.2 +0.4
baz=38
HATC **Hat Creek Radi** 38.34 321 ⇑P P 18 51 36.3 +0.2
baz=38
F12A **Elk City** 38.36 332 P P 18 51 36.2 +0.1
baz=39,SNR=18
CHMT **Chamberlain Mo** 38.39 335 *e*P P 18 51 35.4 -0.9
E13A **Victor** 38.41 334 P P 18 51 36.3 -0.2
baz=39,SNR=6.5
GASB **Alder Springs** 38.46 319 ⇑P P 18 51 37.9 +0.8
baz=39
M05C **Lookout** 38.48 322 ⇑P P 18 51 37.5 +0.3
baz=39
G11A **Walters Elk Ra** 38.57 331 ⇑P P 18 51 37.6 -0.3
baz=39
D14A **Greenough** 38.63 335 ⇑P P 18 51 37.9 -0.4
baz=39
I08A **Drewsey** 38.67 327 ⇑P P 18 51 38.6 -0.1
baz=39
BMO **Blue Mountains** 38.68 329 *e*P P 18 51 37.2 -1.6
4.9nm,1.1s,mb4.2
L05A **Lakeview** 38.72 323 ⇓P P 18 51 39.2 +0.1
baz=39
H09A **Durkee** 38.73 329 ⇓P P 18 51 38.5 -0.7
baz=39
O02C **Red Bluff** 38.80 319 ⇓P P 18 51 38.7 -1.2
baz=39
WDC **Whiskeytown Da** 38.87 320 ⇑P P 18 51 38.8 -1.7
baz=39
F11A **Grangeville** 38.88 331 ⇓P P 18 51 39.3 -1.2
baz=39
G10A **Bishop Farm, J** 38.90 330 ⇑P P 18 51 39.8 -0.9
baz=39
D13A **Huson** 39.04 334 ⇓P P 18 51 41.3 -0.4
baz=39
J06A **Christmas Vall** 39.09 325 ⇑P P 18 51 41.8 -0.5
baz=39
H08A **Prairie City** 39.14 328 ⇑P P 18 51 42.4 -0.2
baz=39
M04C **Macdoel** 39.15 322 ⇑P P 18 51 42.8 0.0
baz=39
G09A **Cove** 39.22 329 ⇑P P 18 51 42.4 -0.9
baz=39
E11A **Bogner Ranch,** 39.25 332 P P 18 51 42.5 -1.1
baz=40,SNR=7.8
I07A **Izee** 39.28 327 ⇑P P 18 51 43.8 0.0
baz=40
D12A **Red Ives Fores** 39.39 333 ⇑P P 18 51 43.7 -1.0
baz=40
F10A **Beach Ranch, E** 39.45 330 P P 18 51 44.8 -0.4
baz=40,SNR=16
N02C **Big Bar** 39.49 320 ⇑P P 18 51 43.9 -1.7
baz=40
I06A **Prineville** 39.57 326 ⇓P P 18 51 46.2 -0.1
baz=40
YBH **Yreka Blue Hor** 39.64 321 ⇓P P 18 51 45.4 -1.5
baz=40
H07A **Lands Inn, Kim** 39.66 327 P P 18 51 46.5 -0.5
baz=40,SNR=6.0
B13A **Whitefish** 40.05 335 ⇑P P 18 51 49.8 -0.4
baz=40
A13A **Flathead Natio** 40.47 336 ⇑P P 18 51 53.6 0.0
baz=41
B12A **Libby** 40.59 334 ⇑P P 18 51 54.7 +0.1
baz=41
I04A **Tendick Farm,** 40.71 324 ⇑P P 18 51 54.8 -0.9
baz=41
K02A **Glendale** 40.72 322 ⇑P P 18 51 55.5 -0.3
baz=41
D09A **Jones Farm, Ri** 40.75 331 ⇓P P 18 51 55.6 -0.4
baz=41
G05A **Wamic** 41.02 327 ⇑P P 18 51 58.7 +0.4
baz=41
D08A **Wollman Farm,** 41.04 330 ⇑P P 18 51 57.9 -0.4
baz=41
F06A **Goldendale** 41.08 328 ⇓P P 18 51 59.0 +0.3
baz=41
H04A **Detroit Lake** 41.13 325 ⇑P P 18 51 59.4 +0.2
baz=41
E07A **Sunnyside** 41.15 329 ⇓P P 18 51 59.0 -0.2
baz=41
C09A **Chrisman Ranch** 41.27 332 ⇓P P 18 52 00.3 +0.1
baz=42
A11A **Hall Mountain,** 41.29 334 P P 18 52 00.2 -0.1
baz=42,SNR=5.1
I03A **Eugene** 41.31 324 ⇓P P 18 52 00.6 0.0
baz=42
SIV **San Ignacio** 41.32 134 P P 18 51 59.9 -1.1
3.4nm,0.7s,mb4.3,baz=315,slow=9.4,SNR=16
F05A **White Salmon** 41.52 327 ⇑P P 18 52 02.5 +0.2
baz=42
C08A **Higginbotham F** 41.62 331 ⇑P P 18 52 03.5 +0.4
baz=42
D07A **Quincy** 41.65 330 ⇓P P 18 52 02.9 -0.4
baz=42
B09A **Rice** 41.67 332 ⇓P P 18 52 03.1 -0.4
baz=42
E06A **Yakima** 41.70 328 ⇑P P 18 52 03.8 0.0
baz=42
H03A **Soap Creek Ran** 41.75 325 ⇑P P 18 52 04.1 -0.1
baz=42
E05A **Randle** 42.12 328 ⇓P P 18 52 07.1 0.0
baz=42
A09A **Danville** 42.27 333 ⇑P P 18 52 07.8 -0.6
baz=42
D05A **Enumclaw** 42.65 328 ⇓P P 18 52 11.5 0.0
baz=43
A07A **Ashnola River,** 43.14 331 ⇓P P 18 52 15.6 +0.1
baz=43
EDM **Edmonton** 43.59 340 *e*P P 18 52 17.7 -1.3
RPN **Rapa Nui** 44.27 204 LR LR 19 06 13.8
comp=Z,246nm,18.7s,baz=67,slow=30
SCHQ **Schefferville** 45.25 19 P P 18 52 31.6 -0.6
6.9nm,0.4s,mb4.7,baz=214,slow=5.8,SNR=24
SCHQ LR LR 19 12 51.9
comp=Z,704nm,18.2s,baz=331,slow=38
CFAA **Coronel Fontan** 49.67 155 P P 18 53 07.7 +0.9
0.2nm,0.6s,baz=331,slow=9.0,SNR=4.3
YKA **Yellowknife Ar** 51.87 346 P P 18 53 21.4 -1.4
YKA PcP PcP 18 54 34.4 -0.4
YKA **Yellowknife Ar** 51.87 346 P P 18 53 21.4 -1.4
3.2nm,0.8s,mb4.4,baz=146,slow=7.8,SNR=32
YKA PcP PcP 18 54 34.4 -0.4
0.8nm,0.6s,baz=148,slow=4.2,SNR=5.9
RKT **Rikitea** 56.67 230 *e*LR LR 19 10 18.2
215nm,25.5s
RKT **Rikitea** 56.67 230 *e*T 19 54 23.9
7.5nm,0.3s
DAWY **Dawson** 60.69 338 *e*P P 18 54 24.9 -0.8
RES **Resolute Bay** 61.26 359 *e*P P 18 54 27.6 -1.7
106nm,0.4s
INK **Inuvik** 61.34 343 *e*P P 18 54 28.9 -1.1
182nm,1.1s
PMOR **Pomariorio Ree** 63.38 245 *e*T 20 02 48.1
2.8nm,0.2s
KDAK **Kodiak Island** 63.90 328 P P 18 54 46.4 -0.8
10nm,0.8s,mb4.7,baz=133,slow=3.0,SNR=6.1
PPT **Papeete** 65.89 244 *e*LR LR 19 14 28.3
266nm,24.8s
TBI **Tubuai** 68.24 238 *e*LR LR 19 15 41.5
206nm,27.5s
TBI **Tubuai** 68.24 238 *e*T 20 08 51.3
4.2nm,0.3s
RAR **Rarotonga** 76.17 244 LR LR 19 20 40.6
comp=Z,206nm,18.1s,baz=224,slow=29
ESDC **Sonseca Array** 78.95 52 P P 18 56 16.8 -1.5
0.6nm,0.6s,mb3.6,baz=292,slow=4.9,SNR=4.3
PMSA **Palmer Station** 80.56 169 LR LR 19 24 04.7
comp=Z,311nm,18.5s,baz=326,slow=30
BILL **Bilibino** 82.47 338 *e*P P 18 56 36.2 -0.3
7.3nm,0.9s,mb4.5
TIC **Toumodi** 84.17 85 *e*P P 18 56 46.2 0.0
3.8nm,0.6s,mb4.4
LIC **Lamto** 84.25 85 *e*P P 18 56 47.0 +0.3
64nm,1.4s,mb5.2
DBIC **Dimbokro** 84.32 85 P P 18 56 47.1 +0.1
4.5nm,0.6s,mb4.5,baz=251,slow=4.2,SNR=13
KIC **Kosan Boka** 84.50 85 *e*P P 18 56 48.1 +0.2
50nm,0.8s,mb5.5
ARCES **ARCESS Array B** 86.20 18 P P 18 56 54.5 -0.8
2.1nm,0.9s,mb4.1,baz=296,slow=4.9,SNR=3.2
CLL **Collm** 87.89 38 *e*P P 18 57 03.0 -0.8
comp=Z,3.0nm,1.0s,mb4.3
TORD **Torodi Ar. Bea** 89.15 77 P P 18 57 08.7 -1.8
comp=Z,0.7nm,0.8s,mb3.8,baz=311,slow=4.7,SNR=6.9
SONM **Songino Array** 117.12 347 PKP PKPdf 19 02 59.9 +0.8
comp=Z,0.2nm,0.5s,baz=90,slow=4.6,SNR=3.2
MKAR **Makanchi Array** 119.67 6 PKP PKPdf 19 03 03.0 -1.0
comp=Z,0.3nm,0.7s,baz=5.7,slow=1.2,SNR=3.7
BJI **Beijing** 121.25 336 PKP PKPdf 19 03 05.8 -1.5
HHC **Hu-ho-hao-te** 122.20 340 *e*PKP PKPdf 19 03 03.0 -6.1
HHC XPKP 19 03 40.1
HHC PP PP
comp=Z,236nm,5.7s
WMQ **Urumqi** 122.97 1 PKP PKPdf 19 03 10.5 0.0
WMQ XPKP 19 03 42.1
WMQ PP PP 19 04 56.0 +7.3
WMQ PP PP

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,317nm,6.8s						
WMQ				LR	LR		
	comp=Z,155nm,21.3s						
LZH	**Lanzhou**	**128.87**	**345**	*e*PKP	PKPdf	19 03 17.0	-5.0
CD2	**Chengdu**	**133.78**	**343**	*e*PKP	PKPdf	19 03 29.5	-2.0
WRA	**Warramunga Arr**	**136.61**	**255**	PKP	PKPdf	19 03 35.9	-1.1
	comp=Z,0.7nm,0.7s,baz=89,slow=3.4,SNR=5.8						
ASAR	**Alice Springs**	**136.79**	**250**	PKP	PKPdf	19 03 35.1	-2.0
	comp=Z,0.3nm,0.8s,baz=105,slow=2.2,SNR=3.4						
GYA	**Guiyang**	**136.92**	**337**	*e*PDIF	Pdif	19 00 41.2	-2.2
GYA				PKP	PKPdf	19 03 34.6	-2.8
GYA				XPKP		19 04 05.7	
GYA				PP	PP	19 06 22.4	+2.6
GYA				PP	PP		
	comp=Z,70nm,7.8s						
KMI	**Kunming**	**139.51**	**341**	PKP	PKPdf	19 03 42.2	0.0
FITZ	**Fitzroy Crossi**	**144.89**	**258**	PKP	PKPdf	19 03 52.5	+0.6
	comp=Z,3.3nm,1.0s,baz=90,slow=13,SNR=3.5						
CHTO	**Chiang Mai**	**146.58**	**343**	*e*PKPbc	PKPbc	19 03 55.7	-0.7
HYB	**Hyderabad**	**147.49**	**20**	*e*P	PKPdf	19 03 59.0	+2.6
HYB	**Hyderabad**	**147.49**	**20**	*i* PKP	PKPdf	19 03 59.0	+2.6

LDG ***12*** *18:46:18.8±0.9, 15.58S×167.09E, h10km, Mb4.4/2, Error ellipse: s-maj=106.5km s-min=58.4km az=30.0*
ISCJB ***12*** *18:46:32.0±2.1, 15.52S±0.08×167.6E±0.1, h130km±17km, mb4.1/11, Error ellipse: s-maj=25.2km s-min=9.1km az=157.8*
IDC ***12*** *18:46:32.5±3.0, 15.46S×167.61E, h122km±24km, mb3.9/8, mb1 4.0/10, mb1mx3.9/18, mbtmp4.0/10, MS4.4/1, Ms1 4.4/1, ms1mx2.8/36, Error ellipse: s-maj=26.5km s-min=15.7km az=70.0*
NEIC ***12*** *18:46:32.7±1.8, 15.43S×167.67E, h125km±14km, mb4.2/3, Error ellipse: s-maj=19.4km s-min=12.5km az=77.0*
ISC 12 18:46:32.4±1.9**, 15.47S**±0.07×**167.7E**±0.1**, h121**km±14km**, n48,** σ0s**92**/24**, mb4.1**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.67**	**190**	*e*P	**Pn**	**18 48 08.0**	**0.0**
DZM				*e*S	**Sn**	**18 49 21.6**	**-1.1**
DZM	**Mont Dzumac**	**6.67**	**190**	*e*P	**Pn**	**18 48 08.0**	**0.0**
DZM				*e*S	**Sn**	**18 49 21.6**	**-1.1**
DZM	**Mont Dzumac**	**6.67**	**190**	P	**Pn**	**18 48 08.5**	**+0.6**
	17nm,0.3s,baz=48,slow=18,SNR=211						
DZM				S	**Sn**	**18 49 22.1**	**-0.5**
	4.0nm,0.3s,baz=133,slow=23,SNR=7.1						
HNR	**Honiara**	**9.63**	**308**	*e*Pn	**Pn**	**18 48 48.8**	**+0.7**
HNR				Sn	**Sn**	**18 50 34.4**	**-0.1**
HNR	**Honiara**	**9.63**	**308**	P	**Pn**	**18 48 47.8**	**-0.3**
	2.6nm,0.3s,baz=85,slow=2.7,SNR=5.0						
HNR				S	**Sn**	**18 50 35.4**	**+0.9**
	3.7nm,0.3s,baz=66,slow=14,SNR=3.9						
EIDS	**Eidsvold**	**18.39**	**235**	P	**P**	**18 50 39.0**	**+0.9**
RPZ	**Rata Peaks**	**28.30**	**175**	P	**P**	**18 52 08.8**	**-5.7**
	5.5nm,0.4s,mb4.5,baz=96,slow=22,SNR=14						
STKA	**Stephens Creek**	**28.82**	**231**	P	**P**	**18 52 20.2**	**+0.9**
	2.0nm,0.8s,mb3.8,baz=5.1,slow=23,SNR=3.0						
RAR	**Rarotonga**	**31.39**	**105**	LR	LR	19 02 59.1	
	comp=Z,636nm,19.4s,baz=55,slow=31						
WRA	**Warramunga Arr**	**32.03**	**257**	P	**P**	**18 52 46.1**	**-1.6**
	0.8nm,0.8s,mb3.5,baz=79,slow=6.0,SNR=10						
ASAR	**Alice Springs**	**32.78**	**250**	P	**P**	**18 52 53.2**	**-1.0**
	1.6nm,0.4s,mb4.2,baz=76,slow=9.2,SNR=66						
ASAR				PcP	PcP	18 55 37.3	+0.5
	0.5nm,0.9s,baz=102,slow=3.0,SNR=5.2						
FITZ	**Fitzroy Crossi**	**40.27**	**260**	P	**P**	**18 53 57.5**	**-0.3**
	3.0nm,0.6s,mb4.3,baz=101,slow=12,SNR=12						
SBA	**Scott Base**	**62.41**	**180**	*e*P	**P**	**18 56 43.7**	**+1.7**
	1.8nm,0.7s,mb4.2						
QSPA	**South Pole Qui**	**74.57**	**180**	*e*P	**P**	**18 57 58.1**	**+0.6**
	4.7nm,0.5s,mb4.5						
QSPA	**South Pole Qui**	**74.57**	**180**	P	**P**	**18 57 58.4**	**+0.9**
	5.9nm,0.8s,mb4.4,baz=341,slow=1.5,SNR=18						
ULN	**Ulaanbaatar**	**82.95**	**324**	*e*P	**P**	**18 58 44.2**	**+0.4**
	2.6nm,0.8s,mb4.1						
SONM	**Songino Array**	**83.31**	**323**	P	**P**	**18 58 45.7**	**+0.1**
	0.9nm,0.5s,mb3.9,baz=143,slow=7.3,SNR=20						
MKAR	**Makanchi Array**	**98.00**	**316**	P	**P**	**18 59 54.1**	**-0.7**
	0.7nm,0.7s,mb4.3,baz=95,slow=5.9,SNR=10						
YKA	**Yellowknife Ar**	**98.02**	**27**	P	**P**	**18 59 53.3**	**-1.3**
YKA	**Yellowknife Ar**	**98.02**	**27**	P	**P**	**18 59 53.3**	**-1.3**
	0.2nm,0.3s,mb4.1,baz=257,slow=5.1,SNR=4.6						
ARCES	**ARCESS Array B**	**121.06**	**345**	PKP	PKPdf	19 05 09.4	-0.7
	1.3nm,0.4s,baz=94,slow=3.3,SNR=18						
FINES	**FINESS Array B**	**126.55**	**338**	PKP	PKPdf	19 05 20.8	-0.1
	0.3nm,0.3s,baz=96,slow=3.8,SNR=4.7						
CDF	**Champ du Feu**	**143.40**	**338**	*e*PKP1	PKPdf	19 05 49.9	-2.6
HINF	**Hinteralfeld**	**144.05**	**338**	*e*PKP1	PKPdf	19 05 51.7	-2.0
HAU	**Haudompre**	**144.07**	**338**	*e*PKP1	PKPdf	19 05 51.5	-2.2
CABF	**La Chapelle**	**145.35**	**337**	*e*PKP1	PKPbc	19 05 56.9	+0.8
	8.7nm,0.5s						
FLN	**La Foliniere**	**145.40**	**346**	*e*PKP1	PKPbc	19 05 56.1	-0.1
	16nm,0.7s						
LDF	**La Druitiere**	**145.47**	**346**	*e*PKP1	PKPbc	19 05 56.4	0.0
	18nm,0.8s						
LOR	**Lormes**	**145.56**	**340**	*e*PKP1	PKPbc	19 05 57.1	+0.4
	17nm,0.9s						
GRR	**Gorron**	**145.84**	**346**	*e*PKP1	PKPbc	19 05 57.8	+0.3
	8.1nm,0.5s						
SSF	**Saint Saulge**	**145.85**	**341**	*e*PKP1	PKPbc	19 05 58.2	+0.6
	8.4nm,0.6s						
LPL	**La Plagne**	**146.02**	**336**	*e*PKP1	PKPbc	19 05 57.5	-0.7
LPG	**La Plagne**	**146.03**	**336**	*e*PKP1	PKPbc	19 05 57.8	-0.4
	7.2nm,0.6s						
SMF	**Signal de Mont**	**146.11**	**340**	*e*PKP1	PKPbc	19 05 59.5	+1.1
	3.7nm,0.4s						
AVF	**Avril sur Loir**	**146.14**	**341**	*e*PKP1	PKPbc	19 05 59.5	+1.0
	8.1nm,0.6s						
SGMF	**Saint Gilles**	**146.32**	**348**	*e*PKP1	PKPbc	19 05 59.1	+0.1
	11nm,0.5s						
BGF	**Bois d'Agland**	**146.51**	**341**	*e*PKP1	PKPbc	19 05 59.9	+0.3
	11nm,0.6s						
MBDF	**Montbardon**	**146.65**	**335**	*e*PKP1	PKPbc	19 06 00.4	+0.4
QUIF	**Quistinic**	**146.77**	**349**	*e*PKP1	PKPbc	19 06 00.2	-0.1
ORIF	**Oris-en-Rattie**	**146.85**	**336**	*e*PKP1	PKPbc	19 06 00.6	0.0
	5.0nm,0.6s						
TCF	**Toulx Ste Croi**	**146.95**	**341**	*e*PKP1	PKPbc	19 06 01.1	+0.3
	4.2nm,0.5s						
MFF	**Saint Martin d**	**147.33**	**344**	*e*PKP1	PKPbc	19 06 02.2	+0.3
	9.4nm,0.5s						
FRF	**La Foret Royal**	**147.65**	**334**	*e*PKP1	PKPbc	19 06 02.7	-0.2
SMRF	**Simiane la Rot**	**147.76**	**335**	*e*PKP1	PKPbc	19 06 03.6	+0.5
MTLF	**Montolieu**	**149.56**	**339**	*e*PKP1	PKPbc	19 06 08.2	+0.5
	4.3nm,0.7s						
SJPF	**Ste Jean**	**150.85**	**343**	*e*PKP1	PKPbc	19 06 11.5	+0.7
ETSF	**Etsaut**	**150.86**	**342**	*e*PKP1	PKPbc	19 06 11.8	+0.9
	5.1nm,0.6s						
KEST	**Kesra**	**152.02**	**320**	PKPbc	PKPbc	19 06 14.3	+0.5
	0.7nm,0.6s,baz=90,slow=2.0,SNR=4.6						

NIED ***12*** *18:59:00, 45.90N×151.90E, h107km, Mw5.4 Best double couple: $M_0$1.63000×10^{17} NP1:ϕ_s152.00000°, δ46.00000°, λ-161.00000°. NP2:ϕ_s48.00000°, δ76.00000°, λ-46.00000°.*
ORF ***12*** *18:59:13.7, 46.59N×151.14E, h30km, mb6.1*
SZGRF ***12*** *18:59:19.3, 47.67N×151.07E, h33km, mb6.2, Kuril Islands, Russia*
MOS ***12*** *18:59:20.7±0.9, 46.86N×151.73E, h118km, mb5.7/130, MS4.5/18, Error ellipse: s-maj=6.4km s-min=3.3km az=104.3*
BJI ***12*** *18:59:22.8, 47.03N×151.75E, h139km, mB5.7, mb5.9*
ISCJB ***12*** *18:59:23.7±0.1, 46.81N±0.02×151.81E±0.02, h147km, mb5.5/373, Error ellipse: s-maj=2.6km s-min=1.4km az=162.0*
SKHL ***12*** *18:59:23.4±1.3, 46.84N×151.82E, h116km±34km, mb6.4/7, mbh6.3/5, Ms5.1/3, msh6.3/7*
CRAAG ***12*** *18:59:24.5, 46.93N×151.87E, Mb5.4*
IDC ***12*** *18:59:24.5±0.5, 46.94N×151.78E, h141km±4km, mb5.0/37, mb1 5.1/39, mb1mx5.1/40, mbtmp5.1/39, MS4.4/17, Ms1 4.4/17, ms1mx4.1/36, Error ellipse: s-maj=9.3km s-min=6.9km az=115.0*
BGS ***12*** *18:59:25.4, 47.12N×153.37E, h145km, mb5.6*
NEIC ***12*** *18:59:25.2±0.1, 46.90N×151.77E, mb5.5/239, MW5.6, Error ellipse: s-maj=3.2km s-min=2.2km az=171.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.58; $M_{\theta\theta}$-2.26; $M_{\phi\phi}$2.84; $M_{r\theta}$0.92; $M_{\theta\phi}$1.13; $M_{\phi r}$2.31; Best double couple: $M_0$3.50000×10^{17} NP1: ϕ_s322.00000°, δ55.00000°, λ176.00000°. NP2: ϕ_s54.00000°, δ87.00000°, λ35.00000°. Principal axes: T 4.3100, Plg27.0000°, Azm284.0000°; N -1.6400, Plg54.0000°, Azm59.0000°; P -2.6700, Plg22.0000°, Azm182.0000°;*
NEIC Recorded [1 JMA] in eastern Hokkaido and in the Wassamu area, Hokkaido. Also recorded [1 JMA] in Aomori Prefecture, Honshu.
GCMT ***12*** *18:59:25.2±0.1, 46.82N×152.09E, h136km±1km, MW5.6/93, Moment Tensor Solution. s83,c147; s93,c246; Duration: 1s5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27±.04; $M_{\theta\theta}$-1.40±.04; $M_{\phi\phi}$1.66±.04; $M_{r\theta}$1.33±.03; $M_{\theta\phi}$-0.29±.04; $M_{\phi r}$2.12±.03; Best double couple: $M_0$2.94700×10^{17} NP1:ϕ_s310.00000°, δ31.00000°, λ-174.00000°. NP2:ϕ_s214.00000°, δ87.00000°, λ-59.00000°. Principal axes: T 3.0800, Plg34.0000°, Azm278.0000°; N -0.2710, Plg31.0000°, Azm32.0000°; P -2.8140, Plg40.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
JMA ***12*** *18:59:27.3±0.6, 45.89N×151.92E, h163km, M5.4*
JMA Felt I J1.
ISC 12 18:59:25.8±0.1**, 46.88N**±0.02×**151.71E**±0.02**, h149**km**±**2.1km**:pP-P, n1625,** σ0s**82**/1658**, mb5.5**/373**, 259C-120D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.14**	**240***b*	*i*PN	**Pn**	**19 00 13.2**	**-1.7**
KUR				*i* S	**Sn**	**19 00 51.5**	**-1.4**
KUR				pmax	pmax		
	comp=N,13μm,2.0s						
KUR				pmax	pmax		
	comp=E,25μm,2.0s						
KUR				pmax	pmax		
	comp=Z,28μm,2.0s						
KUR				pmax	pmax		
	comp=N,2μm,0.8s						
KUR				pmax	pmax		
	comp=E,1μm,0.8s						
KUR				pmax	pmax		
	comp=Z,6μm,0.8s						
KUR				smax			
	comp=N,160μm,2.0s						
KUR				smax			
	comp=E,145nm,2.0s						
KUR	**Kuril'sk**	**3.14**	**240**	⇑*i*P	**Pn**	**19 00 13.2**	**-1.7**
KUR				⇓*i*P		19 00 13.2	
KUR				AMB	AMB	19 00 14.0	
	comp=E,28μm,2.0s						
KUR				AMB	AMB	19 00 14.0	
	comp=E,13μm,2.0s						
KUR				AMB	AMB	19 00 14.0	
	comp=E,25μm,2.0s						
KUR				AMB	AMB	19 00 15.2	
	comp=E,2μm,0.8s						
KUR				AMB	AMB	19 00 15.2	
	comp=E,1μm,0.8s						
KUR				AMB	AMB	19 00 15.2	
	comp=E,6μm,0.8s						
KUR				*i* S	**Sn**	**19 00 51.5**	**-1.4**
KUR				A		19 00 55.0	
	comp=E,88μm,2.0s						
KUR				A		19 00 55.0	
	comp=E,75μm,2.0s						
KUR				A		19 00 55.0	
	comp=E,160μm,2.0s						
KUR				A		19 00 55.0	
	comp=E,145μm,2.0s						
SKR	**Severo-Kuril's**	**4.79**	**36**	*e*P	**Pn**	**19 00 34.0**	**-2.3**
SKR	**Severo-Kuril's**	**4.79**	**36**	*e*PN	**Pn**	**19 00 33.5**	**-2.8**
SKR				*i* S	**Sn**	**19 01 25.1**	**-6.2**
SKR				pmax	pmax		
	comp=N,390nm,0.5s						
SKR				pmax	pmax		
	comp=E,250nm,0.5s						
SKR				pmax	pmax		
	comp=Z,710nm,0.5s						
SKR				smax			
	comp=N,8μm,2.0s						
SKR				smax			
	comp=E,16μm,6.0s						
SKR				smax			
	comp=Z,8μm,6.0s						
SKR				smax			
	comp=N,2μm,0.5s						
SKR				smax			
	comp=E,3μm,0.5s						
SKR				smax			
	comp=Z,1μm,0.5s						
SKR				MLR	MLR		
	comp=N,8μm,10.0s						
SKR				MLR	MLR		
	comp=E,8μm,10.0s						
SKR				MLR	MLR		
	comp=Z,8μm,10.0s						
SKR	**Severo-Kuril's**	**4.79**	**36**	*e*P	**Pn**	**19 00 33.5**	**-2.8**
SKR				AMB	AMB	19 00 36.5	
	comp=Z,390nm,0.5s						
SKR				AMB	AMB	19 00 36.5	
	comp=Z,250nm,0.5s						
SKR				AMB	AMB	19 00 36.5	
	comp=Z,710nm,0.5s						
SKR				*i* S	**Sn**	**19 01 25.1**	**-6.2**
SKR				A		19 01 31.0	
	comp=Z,8μm,2.0s						
SKR				A		19 01 31.0	
	comp=Z,8μm,2.0s						
SKR				A		19 01 31.0	
	comp=Z,16μm,6.0s						
SKR				A		19 01 31.0	
	comp=Z,10μm,6.0s						
SKR				A		19 01 31.0	
	comp=Z,16μm,6.0s						
SKR				A		19 01 31.0	
	comp=Z,8μm,6.0s						
SKR				A		19 01 31.5	
	comp=Z,2μm,0.5s						
SKR				A		19 01 31.5	
	comp=Z,3μm,0.5s						
SKR				A		19 01 31.5	
	comp=Z,1μm,0.5s						
SKR				AMS	AMS	19 02 50.0	
	comp=Z,8μm,10.0s						
SKR				AMS	AMS	19 02 50.0	
	comp=Z,8μm,10.0s						
SKR				AMS	AMS	19 02 50.0	
	comp=Z,8μm,10.0s						
SKR				AMS	AMS	19 02 50.0	
	comp=Z,8μm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.00**	**237**	⇑*i*P	**Pn**	**19 00 38.7**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**5.00**	**237**	⇑*i*PN	**Pn**	**19 00 38.8**	**-0.4**
YUK				*i* S	**Sn**	**19 01 33.1**	**-3.3**
YUK				pmax	pmax		
	comp=Z,12μm,0.5s						
YUK				pmax	pmax		
	comp=N,6μm,0.6s						
YUK				pmax	pmax		
	comp=E,7μm,0.6s						
YUK				pmax	pmax		
	comp=Z,18μm,0.8s						
YUK				pmax	pmax		
	comp=N,8μm,0.6s						
YUK				pmax	pmax		
	comp=E,15μm,0.6s						
YUK				smax			
	comp=E,32μm,2.0s						
YUK				smax			
	comp=N,44μm,3.0s						
YUK				smax			
	comp=N,14μm,0.5s						
YUK				smax			
	comp=E,7μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.00**	**237**	⇑*i*P	**Pn**	**19 00 38.8**	**-0.4**
YUK				AMB	AMB	19 00 39.8	
	comp=E,12μm,0.5s						
YUK				AMB	AMB	19 00 39.8	
	comp=E,6μm,0.6s						
YUK				AMB	AMB	19 00 39.8	
	comp=E,7μm,0.6s						
YUK				AMB	AMB	19 00 40.0	
	comp=E,18μm,0.8s						
YUK				AMB	AMB	19 00 40.0	
	comp=E,8μm,0.6s						
YUK				AMB	AMB	19 00 40.0	
	comp=E,15μm,0.6s						
YUK				*i* S	**Sn**	**19 01 33.1**	**-3.3**
YUK				A		19 01 40.0	
	comp=E,32μm,2.0s						
YUK				A		19 01 40.0	
	comp=E,44μm,3.0s						
YUK				A		19 01 41.9	
	comp=E,14μm,0.5s						
YUK				A		19 01 41.9	
	comp=E,7μm,0.5s						
YUK				AMS	AMS	19 02 37.0	
	comp=E,3μm,12.0s						
JRA	**Rausu**	**5.49**	**240**	P	**Pn**	**19 00 45.0**	**-0.7**
NEM2	**Nemuro 2**	**5.50**	**232**	P	**Pn**	**19 00 42.1**	**-3.6**
NEM2				*e*S	**Sn**	**19 01 41.5**	**-6.6**
JNK	**Nakash**	**5.94**	**239**	P	**Pn**	**19 00 50.0**	**-1.6**
YSS	**Yuzh-Sakhalins**	**6.14**	**274**	*e*Pn	**Pn**	**19 00 56.0**	**+1.8**
	comp=E,1μm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.14**	**274**	⇑*i*PN	**Pn**	**19 00 56.0**	**+1.8**
YSS				pmax	pmax		
	comp=N,720nm,0.9s						
YSS				pmax	pmax		
	comp=E,2μm,0.9s						
YSS				pmax	pmax		
	comp=Z,1μm,0.9s						
YSS				pmax	pmax		
	comp=E,5μm,6.0s						
YSS				pmax	pmax		
	comp=Z,5μm,6.0s						
YSS				pmax	pmax		
	comp=N,5μm,3.0s						
YSS				MLR	MLR		
	comp=Z,3μm,11.0s						
YSS	**Yuzh-Sakhalins**	**6.14**	**274**	⇑*i*P	**Pn**	**19 00 56.0**	**+1.8**
YSS				⇑*i*P		19 00 56.0	
YSS				AMB	AMB	19 00 58.0	
	comp=Z,1μm,0.9s						
YSS				AMB	AMB	19 00 58.0	
	comp=Z,720nm,0.9s						
YSS				AMB	AMB	19 00 58.0	
	comp=Z,2μm,0.9s						
YSS				AMB	AMB	19 00 59.2	
	comp=Z,5μm,6.0s						
YSS				AMB	AMB	19 00 59.2	
	comp=Z,5μm,6.0s						
YSS				A		19 02 13.5	
	comp=Z,400nm,1.0s						
YSS				A		19 02 13.5	
	comp=Z,470nm,1.0s						
YSS				A		19 02 14.0	
	comp=Z,5μm,3.0s						
YSS				A		19 02 14.0	
	comp=Z,5μm,4.0s						
YSS				AMS	AMS	19 03 46.0	
	comp=Z,3μm,11.0s						
JTKR	**Abashiri--Toko**	**6.21**	**245**	P	**Pn**	**19 00 54.8**	**-0.5**
JAK	**Akkeshi**	**6.31**	**235**	P	**Pn**	**19 00 53.4**	**-3.2**
JAK				*e*S	**Sn**	**19 02 01.1**	**-6.6**
JMP	**Maruseppu**	**6.54**	**247**	P	**Pn**	**19 00 59.5**	**-0.1**
JSE	**Soyaes**	**6.65**	**257**	P	**Pn**	**19 01 02.3**	**+1.2**
JAR	**Ashorobuto**	**6.67**	**240**	P	**Pn**	**19 00 59.9**	**-1.4**
UGL	**Uglegorsk**	**6.84**	**292**	⇑*i*P	**Pn**	**19 01 05.5**	**+1.9**
UGL				⇑*i*P		19 01 05.5	
UGL				AMB	AMB	19 01 07.5	
	comp=Z,1μm,1.0s						
UGL				AMB	AMB	19 01 08.0	
	comp=Z,8μm,4.0s						
UGL				AMB	AMB	19 01 08.0	
	comp=Z,5μm,4.0s						
UGL				AMB	AMB	19 01 08.0	
	comp=Z,8μm,4.0s						
UGL				A		19 02 32.0	
	comp=Z,14μm,6.0s						
UGL				A		19 02 32.0	
	comp=Z,18μm,6.0s						
UGL				A		19 02 32.0	
	comp=Z,14μm,6.0s						
JOB	**Onbets**	**6.86**	**237**	P	**Pn**	**19 01 01.4**	**-2.6**
JOB				*e*S	**Sn**	**19 02 15.1**	**-5.8**
ASAJ	**Asahikawa**	**6.98**	**250**	P	**Pn**	**19 01 06.4**	**+0.9**
ASAJ	**Asahikawa**	**6.98**	**250**	P	**Pn**	**19 01 06.0**	**+0.5**
	comp=Z,192nm,0.3s,baz=78,slow=14,SNR=781						
ASAJ				S	**Sn**	**19 02 31.6**	**+8.1**
	comp=Z,16nm,0.3s,baz=49,slow=26,SNR=1.8						
JKK2	**Kamakawa 2**	**6.99**	**248**	P	**Pn**	**19 01 06.0**	**+0.3**
JWK2	**Keihoku**	**7.00**	**261**	P	**Pn**	**19 01 08.6**	**+2.8**
TYV	**Tymovskoe**	**7.18**	**307**	*e*P	**Pn**	**19 01 09.5**	**+1.4**
TYV				AMB	AMB	19 01 14.0	
	comp=Z,3μm,4.0s						
TYV				AMB	AMB	19 01 14.0	
	comp=Z,4μm,9.0s						
TYV				AMB	AMB	19 01 14.0	
	comp=Z,4μm,9.0s						
TYV				AMB	AMB	19 01 16.5	
	comp=Z,152nm,0.8s						
TYV				AMB	AMB	19 01 16.5	
	comp=Z,330nm,0.8s						
TYV				AMS	AMS	19 02 44.0	
	comp=Z,6μm,8.0s						
TYV				AMS	AMS	19 02 44.0	
	comp=Z,12μm,8.0s						
TYV				AMS	AMS	19 02 44.0	
	comp=Z,14μm,9.0s						
JCH	**Churui**	**7.32**	**237**	P	**Pn**	**19 01 06.7**	**-3.3**
JCH				*e*S	**Sn**	**19 02 24.7**	**-7.0**
JSS	**Shosan**	**7.34**	**254**	P	**Pn**	**19 01 13.0**	**+2.7**
JFR	**Furan**	**7.45**	**243**	P	**Pn**	**19 01 11.5**	**-0.3**
JFR				*e*S	**Sn**	**19 02 32.4**	**-2.6**
JAB	**Ashibetsu**	**7.50**	**247**	P	**Pn**	**19 01 12.9**	**+0.4**
PET	**Petropavlovsk**	**7.60**	**33**	*e*Pn	**Pn**	**19 01 09.0**	**-4.7**
	comp=Z,155nm,0.5s						
PET				*e*Sn	**Sn**	**19 02 31.4**	**-7.1**
PET	**Petropavlovsk**	**7.60**	**33**	*e*PN	**Pn**	**19 01 09.8**	**-3.9**
PET				*e*S	**Sn**	**19 02 31.1**	**-7.4**
PET				pmax	pmax		
	comp=Z,214nm,0.5s						
PET				smax			
	comp=E,831nm,0.6s						
PET				smax			
	comp=N,638nm,0.5s						
PET				MLR	MLR		
	comp=Z,4μm,15.0s						
PET				MLR	MLR		
	comp=Z,3μm,18.0s						
JHR	**Hokuryu**	**7.71**	**250**	P	**Pn**	**19 01 16.0**	**+0.8**
JBT2	**Biratori 2**	**7.81**	**242**	P	**Pn**	**19 01 14.1**	**-2.5**
ERM	**Erimo**	**7.82**	**235**	Pn	**Pn**	**19 01 14.0**	**-2.7**
	comp=Z,9μm,0.7s,SNR=51						
ERM	**Erimo**	**7.82**	**235**	*e*Pn	**Pn**	**19 01 13.9**	**-2.8**
	comp=Z,935nm,0.6s						
ERM				*e*Sn	**Sn**	**19 02 33.1**	**-11**
JEM	**Erimo**	**7.82**	**235**	P	**Pn**	**19 01 14.2**	**-2.5**
JEM				*e*S	**Sn**	**19 02 36.9**	**-6.9**
JNBK	**Urakawa-nobuka**	**7.88**	**238**	P	**Pn**	**19 01 13.3**	**-4.2**
JNBK				*e*S	**Sn**	**19 02 36.1**	**-9.1**
JEW	**Eniwo**	**8.33**	**245**	P	**Pn**	**19 01 22.4**	**-1.2**
JEW				*e*S	**Sn**	**19 02 52.4**	**-3.8**
OKH	**Okha**	**8.73**	**323**	*e*PN	**Pn**	**19 01 29.8**	**+1.1**
OKH				*e*S	**Sn**	**19 03 05.8**	**+0.3**
OKH				pmax	pmax		
	comp=Z,3μm,4.4s						
OKH				smax			
	comp=N,6μm,9.0s						
OKH	**Okha**	**8.73**	**323**	⇑*i*P	**Pn**	**19 01 29.4**	**+0.7**
OKH				⇑*i*P		19 01 29.8	
OKH				AMB	AMB	19 01 30.3	
	comp=N,400nm,1.0s						
OKH				AMB	AMB	19 01 36.2	
	comp=N,3μm,4.4s						
OKH				*e*S	**Sn**	**19 03 05.8**	**+0.3**
OKH				A		19 03 11.6	
	comp=N,6μm,11.0s						
OKH				A		19 03 11.6	
	comp=N,4μm,9.0s						
OKH				*e*L		19 04 04.2	
OKH				AMS	AMS	19 06 10.2	
	comp=N,3μm,9.0s						
JNB	**Noboribetsu**	**8.79**	**244**	P	**Pn**	**19 01 26.7**	**-3.0**
JNB				*e*S	**Sn**	**19 03 01.4**	**-5.8**
JKB	**Kayabe**	**9.13**	**241**	P	**Pn**	**19 01 30.4**	**-3.8**
JKB				*e*S	**Sn**	**19 03 06.0**	**-9.4**
JSH	**Shimam**	**9.32**	**247**	P	**Pn**	**19 01 35.0**	**-1.7**
JYM2	**Yakumo 2**	**9.40**	**244**	P	**Pn**	**19 01 34.8**	**-3.0**
JYM2				*e*S	**Sn**	**19 03 14.5**	**-7.4**
NKL	**Nikolayevsk**	**9.47**	**316**	*i* P	**Pn**	**19 01 33.0**	**-5.6**

NKL AMB AMB 19 01 34.0
comp=N,65nm,1.0s
NKL AMB AMB 19 01 34.0
comp=N,190nm,1.0s
NKL AMB AMB 19 01 36.0
comp=N,2µm,5.0s
NKL AMB AMB 19 01 36.0
comp=N,2µm,10.0s
NKL AMB AMB 19 01 36.0
comp=N,2µm,10.0s
NKL eS **Sn** **19 03 24.0 +0.6**
NKL A 19 03 29.0
comp=N,2µm,10.0s
NKL A 19 03 29.0
comp=N,2µm,14.0s
NKL eL 19 04 54.0
NKL AMS AMS 19 06 45.0
comp=N,2µm,12.0s
NKL AMS AMS 19 06 45.0
comp=N,3µm,12.0s
NKL AMS AMS 19 06 45.0
comp=N,2µm,14.0s
JSR Shiriuchi 9.71 241 P **Pn** **19 01 38.3 -3.6**
JTM Tenmabayashi 9.81 235 P **Pn** **19 01 38.0 -5.2**
JTM eS **Sn** **19 03 19.7 -12**
JANG Nango 9.84 232 P **Pn** **19 01 37.8 -5.9**
JANG eS **Sn** **19 03 19.9 -13**
JTH Tanohata 9.97 229 P **Pn** **19 01 38.7 -6.7**
JTH eS **Sn** **19 03 23.6 -12**
JOSM Okushiri--Mats 9.97 246 P **Pn** **19 01 42.9 -2.5**
TEY Ternei 10.68 266 eP **Pn** **19 01 52.0 -2.7**
TEY AMB AMB 19 01 58.0
comp=N,270nm,0.7s
OFUJ Ofunato 10.71 227 P **Pn** **19 01 49.5 -5.7**
JRG Rokugo 11.01 231 P **Pn** **19 01 54.4 -4.7**
JRG eS **Sn** **19 03 50.6 -10**
JOG2 Oga 2 11.11 236 P **Pn** **19 01 56.2 -4.2**
HABR Khabarovsk 11.35 284⇑ *i*PN **Pn** **19 02 05.3 +1.9**
HABR S **Sn** **19 04 13.9 +5.2**
HABR pmax pmax
comp=Z,1µm,2.8s
JIO Ouri 11.35 226 P **Pn** **19 01 57.8 -5.8**
JIO eS **Sn** **19 03 55.9 -13**
JYA Atsumi 12.09 231 P **Pn** **19 02 08.8 -4.4**
JYA eS **Sn** **19 04 16.3 -10**
JFK Kawauchi 12.44 224 P **Pn** **19 02 12.7 -5.1**
MA2 Magadan 12.73 358 ePn **Pn** **19 02 20.1 -1.1**
comp=Z,61nm,0.8s
MA2 Magadan 12.73 358*c i*PN **Pn** **19 02 21.3 0.0**
MA2 eS **Sn** **19 04 41.3 -0.5**
MA2 pmax pmax
comp=Z,70nm,0.8s
JFY Yanaizu 12.98 228 P **Pn** **19 02 21.3 -3.5**
JFY eS **Sn** **19 04 39.2 -9.1**
JHK Hiroka 13.46 229 P **Pn** **19 02 27.3 -3.5**
KLR Kul'dur 13.56 287⇓ *i*P **Pn** **19 02 30.2 -1.7**
KLR pmax pmax
comp=E,880nm,1.6s
KLR pmax pmax
comp=Z,690nm,1.6s
KLR pmax pmax
comp=E,3µm,8.5s
KLR pmax pmax
comp=Z,5µm,8.5s
JAG Ashikaga 13.88 226 P **Pn** **19 02 32.7 -3.4**
MAJO Matsushiro 14.41 229 eP **Pn** **19 02 39.9 -3.0**
comp=Z,457nm,0.6s
MAJO *e* 19 02 45.2
MAJO Matsushiro 14.41 229 eP **Pn** **19 02 39.9 -3.0**
MAJO pmax pmax
comp=Z,457nm,0.6s
MJAR Matsushiro Arr 14.41 229 P **Pn** **19 02 40.2 -2.7**
MJAR S **Sn** **19 05 26.4 +3.7**
MJAR LR LR 19 09 01.7
MJAR ScP ScP 19 11 07.2 +0.2
MJAR Matsushiro Arr 14.41 229 P **Pn** **19 02 40.2 -2.7**
MJAR S **Sn** **19 05 26.4 +3.7**
MJAR Matsushiro Arr 14.41 229 P **Pn** **19 02 40.2 -2.7**
comp=Z,11nm,0.3s,baz=29,slow=14,SNR=182
MJAR S **Sn** **19 05 26.4 +3.7**
comp=Z,3.4nm,0.3s,baz=213,slow=6.5,SNR=4.5
MJAR LR LR 19 09 01.7
comp=Z,857nm,18.3s,baz=55,slow=40
MJAR ScP ScP 19 11 07.2 +0.3
comp=Z,0.1nm,0.3s,baz=18,slow=0.2,SNR=16
VLA Vladivostok 14.51 262⇑ eP **Pn** **19 02 42.6 -1.4**
JNG Nsakai 14.57 229 P **Pn** **19 02 42.5 -2.4**
SMY Shemya 15.56 60 eP **Pn** **19 02 57.9 +0.9**
comp=Z,504nm,0.7s
SMY Shemya 15.56 60 eP **Pn** **19 02 57.9 +0.9**
SMY pmax pmax
comp=Z,504nm,0.7s
MDJ Mudanjiang 15.60 270 P **Pn** **19 02 56.9 -0.6**
MDJ S **S** **19 05 49.1 -2.2**
MDJ SCP ScP 19 11 11.0 +2.0
MDJ PCS PcS 19 11 25.5 +1.3
MDJ SCS ScS 19 14 49.3 +2.0
MDJ AMB AMB
comp=Z,187nm,0.9s
MDJ AMB AMB
comp=Z,2µm,6.6s
MDJ Mudanjiang 15.60 270 eP **Pn** **19 02 56.5 -1.0**
comp=Z,264nm,0.8s
JHJ Hachijo jima 2 16.48 218 P **Pn** **19 03 07.2 -1.1**
comp=Z,11nm,0.3s,baz=76,slow=14,SNR=2.3
JHJ S **S** **19 05 59.9 -12**
comp=Z,40nm,0.3s,baz=262,slow=22,SNR=5.1
JKY Yasaka 16.77 234 P **Pn** **19 03 10.2 -1.6**
JWT Wachi 16.86 232 P **Pn** **19 03 11.3 -1.6**
ZEA Zeya 17.01 303 eP **Pn** **19 03 11.2 -3.4**
ZEA AMB AMB 19 03 15.2
comp=Z,350nm,1.4s
ZEA AMB AMB 19 03 15.2
comp=Z,460nm,1.4s
ZEA AMB AMB 19 03 15.2
comp=Z,620nm,1.4s
ZEA AMB AMB 19 03 19.0
comp=Z,4µm,7.0s
JWY Kouya 17.56 230 P **Pn** **19 03 21.4 0.0**
AMKA Amchitka 18.55 66 eP **P** **19 03 31.2 +0.3**
CN2 Changchun 18.69 270⇑⇑ P **P** **19 03 30.1 -2.3**
CN2 *e*XP sP 19 04 15.0 -2.0
CN2 eS **S** **19 06 48.5 -8.8**
CN2 AMB AMB
comp=Z,170nm,0.7s
CN2 AMB AMB
comp=Z,1µm,5.0s
JGT Gotsu 18.77 238 P **P** **19 03 34.8 +1.4**
MRT2 Murotomisaki 2 18.97 231 P **P** **19 03 36.4 +0.8**
CLNS Chul'man 19.21 311 eP **P** **19 03 38.1 +0.2**
CLNS eS **S** **19 07 10.2 +2.9**
CLNS pmax pmax
comp=Z,631nm,0.9s
CLNS pmax pmax
comp=N,225nm,1.0s
CLNS pmax pmax
comp=E,365nm,1.0s
CLNS smax
comp=N,101nm,1.0s
CLNS smax
comp=E,136nm,1.1s
CLNS smax
comp=Z,38nm,1.1s
CLNS MLR MLR
comp=Z,1µm,12.0s
CLNS MLR MLR
comp=N,500nm,13.0s
CLNS MLR MLR
comp=E,600nm,11.0s
NRGR Nerungri 19.23 310 *i*P **P** **19 03 38.2 0.0**
NRGR S **S** **19 07 12.2 +4.3**
NRGR smax
comp=E,309nm,1.1s
JET Tanbara 19.27 234 P **P** **19 03 39.9 +1.1**
JHM Kurahashi 19.29 236 P **P** **19 03 40.0 +0.9**
JKU Kubokawa 19.61 233 P **P** **19 03 43.8 +1.2**
YAK Yakutsk 19.70 328 eP **P** **19 03 42.4 -0.8**
YAK eS **S** **19 07 14.1 -2.9**
YAK pmax pmax
comp=N,50nm,0.9s
YAK pmax pmax
comp=E,65nm,0.9s
YAK pmax pmax
comp=Z,299nm,0.9s
YAK pmax pmax
comp=N,893nm,1.4s
YAK pmax pmax
comp=Z,902nm,1.4s
YAK pmax pmax
comp=E,978nm,1.6s
YAK smax
comp=E,1µm,2.6s
YAK smax
comp=Z,328nm,2.5s
YAK smax
comp=N,1µm,2.9s
YAK MLR MLR
comp=Z,2µm,24.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK MLR MLR
comp=E,2µm,26.0s
KSRS Korea Array 19.93 250 P **P** **19 03 46.8 +0.9**
comp=E,228nm,0.7s,baz=60,slow=9.9,SNR=438
KSRS ScP ScP 19 11 20.4 +2.1
comp=E,8.0nm,1.0s,baz=262,slow=0.8,SNR=15
UWA2 Uwa jima 2 19.93 234 P **P** **19 03 47.2 +1.3**
JTO Tosashimizu 20.10 233 P **P** **19 03 49.0 +1.2**
INCN Inchon 20.75 252 eP **P** **19 03 55.5 +0.8**
comp=E,329nm,0.8s
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
INCN Inchon 20.75 252 P **P** **19 03 56.0 +1.3**
SNR=41
JNU Nakatsue 20.98 236 P **P** **19 03 57.6 +0.5**
comp=E,187nm,0.8s,baz=139,slow=30,SNR=49
HIA Hailar 21.41 288 eP **P** **19 03 58.6 -3.0**
comp=E,165nm,0.9s,mb5.4
HIA Hailar 21.41 288 eP **P** **19 03 58.6 -3.0**
HIA pmax pmax
comp=Z,165nm,0.9s
BILL Bilibino 22.49 14 eP **P** **19 04 10.7 -1.8**
comp=Z,306nm,1.1s,mb5.7
BILL Bilibino 22.49 14*d i*P **P** **19 04 12.6 +0.1**
BILL *i* *PP 19 04 42.8
BILL *i* S **S** **19 08 06.4 -1.3**
BILL pmax pmax
comp=Z,39nm,1.0s,mb4.8
BILL MLR MLR
comp=Z,800nm,19.0s
DL2 Dalian 23.33 261⇑ *i*P **P** **19 04 21.1 +0.6**
DL2 S **S** **19 08 22.4 +0.6**
DL2 XS sS 19 09 10.3 -3.2
DL2 AMB AMB
comp=Z,240nm,0.7s,mb5.7
DL2 AMB AMB
comp=Z,1µm,4.3s
CIT Chita 25.13 296 eP **P** **19 04 35.2 -1.4**
CIT *e* 19 08 02.5
CIT pmax pmax
comp=Z,197nm,2.3s,mb5.2
BOD Bodaibo 25.16 310 eP **P** **19 04 34.4 -2.5**
BOD *e* 19 05 17.7
BOD pmax pmax
comp=Z,166nm,1.3s,mb5.4
GAMB Gambell 26.29 37 eP **P** **19 04 45.3 -1.7**
comp=Z,69nm,1.1s,mb5.2
BJI Beijing 26.52 268 P **P** **19 04 49.6 +0.3**
BJI AP pP 19 05 20.9 +0.5
BJI XP sP 19 05 38.6 +1.0
BJI PCP PcP 19 08 08.9 -1.1
BJI S **S** **19 09 12.9 +0.6**
BJI XS sS 19 10 09.1 +1.6
BJI AMB AMB
comp=Z,26nm,0.8s,mb4.9
BJI AMB AMB
comp=Z,1µm,3.5s
BJI LR LR
comp=N,2µm,18.3s
BJI LR LR
comp=E,1µm,15.8s
BJI LR LR
comp=Z,1µm,21.9s
BJT Baijiatuan 26.53 268 eP **P** **19 04 49.3 -0.2**
comp=Z,344nm,1.0s,mb5.9
BJT Baijiatuan 26.53 268 eP **P** **19 04 49.3 -0.1**
BJT pmax pmax
comp=Z,344nm,1.0s
TIXI Tiksi 27.08 344 eP **P** **19 04 51.3 -2.7**
comp=Z,241nm,1.4s,mb5.6
TIXI pP pP 19 05 25.0 -0.1
TIXI Tiksi 27.08 344*c i*P **P** **19 04 51.7 -2.3**
TIXI pmax pmax
comp=Z,89nm,1.7s,mb5.1
JOW Kunigami 27.25 231 P **P** **19 04 56.1 +0.2**
comp=Z,156nm,0.9s,mb5.7,baz=38,slow=6.9,SNR=37
JOW ScP ScP 19 11 39.5 +1.3
comp=Z,30nm,1.1s,baz=104,slow=6.1,SNR=3.6
TIA Tai'an 27.79 260 P **P** **19 05 01.2 +0.5**
TIA AMB AMB
comp=Z,71nm,0.7s,mb5.5
SSE Sheshan 28.26 247⇑ P **P** **19 05 05.9 +1.0**
SSE AP pP 19 05 40.0 +3.8
SSE S **S** **19 09 41.1 +1.2**
SSE SCS ScS 19 15 33.1 -1.2
SSE AMB AMB
comp=Z,123nm,0.8s,mb5.7
SSE AMB AMB
comp=Z,350nm,5.0s
SSE LR LR
comp=N,509nm,23.5s
SSE LR LR
comp=E,230nm,23.4s
SSE LR LR
comp=Z,712nm,36.6s
TNA Tin City 28.46 34 eP **P** **19 05 05.7 -0.6**
comp=Z,62nm,1.1s,mb5.2
NJ2 Nanjing 29.12 251 eP **P** **19 05 13.0 +0.5**
NJ2 AP pP 19 05 44.7 +0.7
NJ2 XP sP 19 06 00.9 -0.2
NJ2 PP PP 19 06 14.3 -6.8
NJ2 S **S** **19 09 54.5 +1.1**
NJ2 XS sS 19 10 49.0 +0.3
NJ2 AMB AMB
comp=Z,100nm,0.7s,mb5.7
NJ2 AMB AMB
comp=Z,1µm,6.3s
NJ2 LR LR
comp=N,4µm,19.3s
NJ2 LR LR
comp=E,1µm,14.4s
NJ2 LR LR
comp=Z,1µm,14.4s
HHC Hu-ho-hao-te 29.32 273⇑ P **P** **19 05 15.1 +0.9**
HHC AP pP 19 05 44.2 -1.5
HHC XP sP 19 06 01.5 -1.3
HHC PP PP 19 06 15.1 -8.1
HHC PCP PcP 19 08 18.2 +1.4
HHC S **S** **19 09 55.2 -1.2**
HHC XS sS 19 10 48.7 -3.0
HHC SS SS 19 11 38.6 -28
HHC AMB AMB
comp=Z,538nm,0.9s,mb6.3
HHC AMB AMB
comp=Z,706nm,5.7s
HHC LR LR
comp=N,3µm,15.5s
HHC LR LR
comp=E,1µm,11.9s
HHC LR LR
comp=Z,1µm,13.1s
ULN Ulaanbaatar 29.95 289 eP **P** **19 05 19.3 -0.4**
comp=Z,240nm,1.0s,mb5.9
ULN Ulaanbaatar 29.95 289 eP **P** **19 05 19.3 -0.3**
ULN pmax pmax
comp=Z,240nm,1.0s,mb5.9
ULN Ulaanbaatar 29.95 289 P **P** **19 05 19.3 -0.3**
SNR=90
SONM Songino Array 30.38 289 P **P** **19 05 23.1 -0.4**
SONM 19 08 19.2
SONM Songino Array 30.38 289 P **P** **19 05 23.1 -0.4**
comp=Z,14nm,0.5s,mb5.0,baz=68,slow=7.3,SNR=143
SONM PcP PcP 19 08 19.2 -0.3
comp=Z,11nm,0.9s,baz=96,slow=4.5,SNR=4.3
SONM ScP ScP 19 11 48.5 +0.8
comp=Z,6.4nm,0.9s,baz=104,slow=1.9,SNR=7.4
SONM LR LR 19 19 29.2
comp=Z,543nm,18.0s,baz=77,slow=40
BTO Baotou 30.49 274 eP **P** **19 05 24.1 -0.4**
IRK Irkutsk 30.79 298⇓ *i*P **P** **19 05 25.3 -1.7**
IRK pmax pmax
comp=Z,113nm,1.5s,mb5.4
TLY Talaya 31.26 297 P **P** **19 05 30.6 -0.6**
comp=Z,489nm,1.1s,mb6.2,SNR=19
TLY Talaya 31.26 297 eP **P** **19 05 30.0 -1.2**
comp=Z,134nm,1.3s,mb5.5
TLY pP pP 19 06 00.9 -1.8
TLY ePcP PcP 19 08 22.4 +0.7
TLY Talaya 31.26 297 eP **P** **19 05 30.3 -0.9**
TLY *e* 19 06 07.2
TLY ePPP 19 06 50.8
TLY *e* 19 08 22.9
TLY eSS SS 19 12 45.0 -1.3
TLY pmax pmax
comp=Z,129nm,1.2s,mb5.5
TLY MLR MLR
comp=Z,820nm,16.0s
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
TLY Talaya 31.26 297 P **P** **19 05 30.8 -0.4**
SNR=39
ZAK Zakamensk 31.75 294⇑ *i*P **P** **19 05 34.7 -0.8**
ZAK *e* 19 08 24.0
ZAK pmax pmax
comp=Z,66nm,1.2s,mb5.2
YHNB Yeheng 32.79 238 eP **P** **19 05 46.0 +1.2**
MOY Mondy 32.88 297 eP **P** **19 05 44.9 -0.4**
MOY pmax pmax
comp=Z,111nm,2.0s,mb5.2
TTA Tatalina 32.96 42 eP **P** **19 05 45.3 -0.6**
TTA Tatalina 32.96 42 eP **P** **19 05 45.0 -0.9**
TTA pmax pmax
comp=Z,58nm,1.0s,mb5.3
WHN Wuhan 33.04 254⇑ *i*P **P** **19 05 47.3 +0.4**
WHN S **S** **19 10 57.2 +2.7**
WHN LR LR
comp=Z,836nm,9.1s
SVW2 Sparrevohn 33.08 45 eP **P** **19 05 46.5 -0.4**
QZH Quanzhou 34.24 242⇑ *i*P **P** **19 06 00.9 +3.6**
QZH XP sP 19 06 46.3 +0.1
QZH PP PP 19 07 20.6 +2.7
QZH S **S** **19 11 16.0 +2.9**
QZH XS sS 19 12 10.0 +1.1
QZH AMB AMB
comp=Z,310nm,0.9s,mb6.0
IMA2 Indian Mountai 34.27 36 eP **P** **19 05 56.5 -0.6**
XAN Xi'an 34.57 264 P **P** **19 06 00.6 +0.5**
XAN PP PP 19 07 25.5 +4.1
XAN S **S** **19 11 17.2 -0.8**
XAN AMB AMB
comp=Z,283nm,0.8s,mb6.0
XAN LR LR
comp=N,371nm,11.8s
XAN LR LR
comp=E,595nm,11.6s
XAN LR LR
comp=Z,670nm,16.9s
KDAK Kodiak Island 34.77 51 P **P** **19 05 59.0 -2.5**
comp=Z,264nm,0.8s,mb5.9,SNR=11
KDAK Kodiak Island 34.77 51 eP **P** **19 05 59.4 -2.2**
comp=Z,49nm,0.9s,mb5.1
KDAK epP pP 19 06 31.1 -2.3
KDAK Kodiak Island 34.77 51 P **P** **19 05 59.0 -2.5**
comp=Z,29nm,0.7s,mb5.0,baz=301,slow=4.0,SNR=29
KDAK pP pP 19 06 30.8 -2.6
comp=Z,42nm,0.7s,baz=263,slow=4.6,SNR=5.6
MCK McKinley 36.17 40 eP **P** **19 06 12.3 -1.1**
comp=Z,799nm,1.0s,mb6.3
MCK epP pP 19 06 45.2 -0.3
MCK McKinley 36.17 40 eP **P** **19 06 12.4 -1.1**
MCK pmax pmax
comp=Z,799nm,1.0s,mb6.3
PMR Palmer 36.17 44 eP **P** **19 06 12.9 -0.6**
comp=Z,32nm,0.8s,mb5.0
PMR LR LR
comp=Z,500nm,19.0s
PMR Palmer 36.17 44 eP **P** **19 06 12.9 -0.6**
PMR pmax pmax
comp=Z,32nm,0.8s,mb5.0
PMR MLR MLR
comp=Z,500nm,19.0s
SML Sawmill 36.54 44 eP **P** **19 06 15.5 -1.1**
COLA College 36.63 38 eP **P** **19 06 16.8 -0.5**
comp=Z,111nm,0.8s,mb5.5
COLA College 36.63 38*d i*P **P** **19 06 16.8 -0.5**
LZH Lanzhou 36.92 271 eP **P** **19 06 21.8 +1.7**
LZH AP pP 19 06 56.4 +4.1
LZH PP PP 19 07 51.7 +4.5
LZH PCP PcP 19 08 40.0 +1.7
LZH eS **S** **19 11 56.0 +2.1**
LZH XS sS 19 12 50.0 -0.2
LZH SS SS 19 14 33.2 -8.4
LZH AMB AMB
comp=Z,317nm,1.0s,mb5.9
LZH AMB AMB
comp=Z,1µm,5.0s
LZH LR LR
comp=N,5µm,13.8s
LZH LR LR
comp=Z,6µm,14.8s
GTA Gaotai 38.00 278⇑ *i*P **P** **19 06 30.2 +1.0**
GTA AP pP 19 07 05.2 +3.7
GTA PP PP 19 08 04.6 +5.7
GTA PCP PcP 19 08 43.2 +1.7
GTA S **S** **19 12 08.4 -1.7**
GTA SCP ScP 19 12 16.0 +1.0
GTA PCS PcS 19 12 31.2 +0.7
GTA XS sS 19 13 09.2 +2.7
GTA SS SS 19 14 55.7 -7.4
GTA SCS ScS 19 16 24.2 -0.4
GTA AMB AMB
comp=Z,303nm,1.0s,mb5.9
GTA AMB AMB
comp=Z,437nm,5.3s
GTA LR LR
comp=N,947nm,16.0s
GTA LR LR
comp=E,510nm,14.4s
GTA LR LR
comp=Z,632nm,13.7s
APYP Conner 38.29 231 eP **P** **19 06 30.2 -1.6**
MENT Mentasta 38.58 41 eP **P** **19 06 33.5 -0.2**
GZH Guangzhou 38.83 246 P **P** **19 06 32.1 -4.2**
GZH S **S** **19 12 17.8 -5.1**
GZH LR LR
comp=N,364nm,12.3s
GZH LR LR
comp=E,408nm,12.0s
GZH LR LR
comp=Z,505nm,13.3s
EGAK Eagle 39.49 38 eP **P** **19 06 40.1 -1.2**
comp=Z,90nm,0.8s,mb5.5
EGAK epP pP 19 07 12.2 -1.5
BALP Baler 39.87 229 eP **P** **19 06 43.6 -1.3**
CD2 Chengdu 39.93 264 P **P** **19 06 45.8 +0.5**
CD2 AP pP 19 07 17.6 -0.3
CD2 XP sP 19 07 35.6 +0.9
CD2 PP PP 19 08 23.8 +3.7
CD2 PCP PcP 19 08 49.8 +2.0
CD2 S **S** **19 12 36.3 -2.9**
CD2 XS sS 19 13 31.7 -4.3
CD2 SCS ScS 19 16 35.9 -0.3

CD2 AMB AMB
comp=Z,640nm,1.1s,mb6.2
CD2 AMB AMB
comp=Z,1μm,4.5s
CD2 LR LR
comp=N,1μm,13.2s
CD2 LR LR
comp=E,920nm,14.4s
CD2 LR LR
comp=Z,1μm,13.8s
DAWY Dawson 40.35 39 *e*P **P 19 06 47.6 -0.7**
PVCP Virac 40.42 224 *e*P **P 19 06 49.6 +0.2**
SCZP Santa Cruz 40.72 231 *e*P **P 19 06 50.9 -1.0**
GYA Guiyang 40.81 256⇑ *i*P **P 19 06 53.0 +0.4**
GYA AP pP 19 07 29.4 +4.2
GYA PP PP 19 08 34.2 +4.6
GYA PCP PcP 19 08 53.0 +2.4
GYA SCP ScP 19 12 26.8 +0.7
GYA PCS PcS 19 12 42.7 +0.9
GYA S **S 19 12 52.8 +0.5**
GYA XS sS 19 13 53.7 +4.5
GYA SS SS 19 15 53.5 -5.8
GYA SCS ScS 19 16 40.0 -1.6
GYA AMB AMB
comp=Z,80nm,0.8s,mb5.4
GYA AMB AMB
comp=Z,630nm,4.8s
GYA LR LR
comp=N,710nm,19.8s
GYA LR LR
comp=E,990nm,18.6s
GYA LR LR
comp=Z,870nm,18.2s
INK Inuvik 42.06 32 *e*P **P 19 07 02.1 -0.1**
comp=Z,830nm,0.5s,mb6.6
INK Inuvik 42.06 32 P **P 19 07 02.2 0.0**
INK pmax pmax
comp=Z,830nm,0.5s
NVS Novosibirsk 42.34 307⇑ *i*P **P 19 07 03.2 -1.5**
NVS *e* pP 19 07 40.4 +2.8
NVS *e* 19 08 50.4
NVS pmax pmax
comp=E,229nm,2.1s
NVS pmax pmax
comp=Z,231nm,2.1s,mb5.4
NVS pmax pmax
comp=N,74nm,2.0s
OTRP Odiongan 42.52 226 *e*P **P 19 07 07.2 +0.7**
MSLP Maasin 43.13 221 *e*P **P 19 07 11.4 -0.1**
SCPH Surigao 43.17 220⇑ *e*P **P 19 07 11.8 0.0**
SKAG Skagway 43.26 45 *e*P **P 19 07 12.4 +0.4**
comp=N,18nm,1.0s,mb4.7
BUSP Coron 43.74 228 *e*P **P 19 07 15.9 -0.4**
WMQ Urumqi 43.98 290⇑ *i*P **P 19 07 18.4 +0.4**
WMQ AP pP 19 07 51.5 +0.4
WMQ XP sP 19 08 07.4 -0.4
WMQ PCP PcP 19 09 02.0 +1.0
WMQ PP PP 19 09 04.4 +1.2
WMQ SCP ScP 19 12 39.4 +0.8
WMQ PCS PcS 19 12 53.9 -0.2
WMQ S **S 19 13 39.4 +1.0**
WMQ XS sS 19 14 34.4 -1.5
WMQ SS SS 19 16 51.9 -8.6
WMQ SCS ScS 19 16 59.9 -0.8
WMQ AMB AMB
comp=Z,77nm,0.9s,mb5.3
WMQ AMB AMB
comp=Z,520nm,4.0s
WMQ LR LR
comp=N,970nm,22.6s
WMQ LR LR
comp=E,451nm,20.8s
WMQ LR LR
comp=Z,308nm,19.0s
QIZ Qiongzhong 44.02 245⇑ *i*P **P 19 07 20.3 +1.7**
QIZ AP pP 19 07 50.6 -1.1
QIZ PP PP 19 09 05.1 +1.0
QIZ S **S 19 13 42.6 +3.1**
QIZ XS sS 19 14 37.0 0.0
QIZ AMB AMB
comp=Z,104nm,1.3s,mb5.3
QIZ AMB AMB
comp=Z,614nm,3.5s
QIZ Qiongzhong 44.02 245 *e*P **P 19 07 20.0 +1.4**
comp=Z,193nm,1.4s,mb5.5
CUYO Cuyo Island 44.31 226 *e*P **P 19 07 21.7 +0.7**
KMI Kunming 44.32 258⇑P **P 19 07 21.9 +1.0**
KMI AP pP 19 07 57.6 +3.5
KMI PCP PcP 19 09 04.4 +2.0
KMI PP PP 19 09 09.1 +1.9
KMI S **S 19 13 42.8 -1.0**
KMI XS sS 19 14 45.3 +3.9
KMI SS SS 19 16 57.9 -9.3
KMI SCS ScS 19 17 01.3 -2.1
KMI AMB AMB
comp=Z,82nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,837nm,4.2s
KMI LR LR
comp=N,449nm,18.6s
KMI LR LR
comp=E,658nm,13.5s
KMI LR LR
comp=Z,627nm,41.1s
ENPP El Nido 44.81 228 *e*P **P 19 07 24.6 -0.2**
CRAG Craig 45.72 50 P **P 19 07 31.2 -0.4**
PAGZ Pagadian 45.82 221 *e*P **P 19 07 32.3 -0.5**
MK31 Makanchi Array 46.02 297 *i* P **P 19 07 33.2 -0.9**
MK31 pmax pmax
comp=Z,92nm,0.5s,mb5.7
MKAR Makanchi Array 46.02 297 P **P 19 07 33.3 -0.8**
MKAR 19 09 07.8
MKAR 19 17 14.1
MKAR Makanchi Array 46.02 297 P **P 19 07 33.3 -0.8**
comp=Z,100nm,0.7s,mb5.5,baz=69,slow=7.4,SNR=395
MKAR PcP PcP 19 09 07.8 -0.2
comp=Z,23nm,0.9s,baz=55,slow=3.5,SNR=4.5
MKAR ScP ScP 19 12 47.7 +0.7
comp=Z,21nm,0.9s,baz=57,slow=4.5,SNR=16
MKAR ScS ScS 19 17 14.1 +0.4
comp=Z,2.9nm,1.0s,baz=67,slow=9.3,SNR=6.5
DLBC Dease Lake 46.19 46 *e*P **P 19 07 36.0 +0.8**
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.8**
comp=Z,1μm,1.0s,mb6.5
KURK Kurchatov 46.49 303 *e*P **P 19 07 36.3 -1.4**
comp=Z,3.0nm,0.7s,mb4.0
KURK *ep*P pP 19 08 10.6 -0.4
KURK Kurchatov 46.49 303*c i*P **P 19 07 36.3 -1.3**
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
KURK Kurchatov 46.49 303 P **P 19 07 36.8 -0.9**
SNR=79
LSA Lhasa 49.31 272 P **P 19 08 02.0 +2.4**
LSA S **S 19 14 47.4 -7.1**
LSA AMB AMB
comp=Z,30nm,0.9s,mb4.9
LSA LR LR
comp=N,580nm,24.0s
LSA LR LR
comp=E,350nm,17.0s
LSA LR LR
comp=Z,340nm,17.0s
LSA Lhasa 49.31 272 *e*P **P 19 08 02.0 +2.4**
comp=Z,237nm,0.6s,mb6.0
LSA Lhasa 49.31 272 *e*P **P 19 08 02.0 +2.4**
LSA pmax pmax
comp=Z,237nm,0.6s,mb6.0
CHKZ Chkalovo 49.61 309 *e*P **P 19 08 00.1 -1.4**
comp=Z,206nm,0.6s,mb5.9
CHKZ Chkalovo 49.61 309 *e*P **P 19 08 00.1 -1.4**
CHKZ pmax pmax
comp=Z,206nm,0.6s,mb5.9
ALE Alert 49.71 6 P **P 19 08 01.0 -1.0**
comp=Z,472nm,0.8s,mb6.2,SNR=36
KDM Kudat 49.78 228⇓P **P 19 08 04.1 +0.8**
UBT Ubonrachathani 49.89 247⇓P **P 19 08 05.8 +1.7**
comp=Z,1μm,0.4s,mb6.9
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.5**
comp=Z,1μm,0.6s,mb6.7,SNR=96
BRVK Borovoye 50.07 309 *e*P **P 19 08 03.9 -1.1**
comp=Z,127nm,0.6s,mb5.7
BRVK Borovoye 50.07 309 *e*P **P 19 08 03.9 -1.1**
BRVK pmax pmax
comp=Z,127nm,0.6s,mb5.7
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
BRVK Borovoye 50.07 309 P **P 19 08 04.5 -0.6**
SNR=66
KKTK Khon Kaen 50.47 250⇑P **P 19 08 09.5 +1.0**
comp=Z,432nm,1.0s,mb6.0
IMP Imphal 50.52 265 *e*P **P 19 08 08.0 -0.8**
POHA Pohakuloa 50.54 104 *e*P **P 19 08 09.3 +0.3**
comp=Z,243nm,0.8s,mb5.9
SDKM Sandakan 50.69 227⇓P **P 19 08 11.3 +1.1**
KKM Kota Kinabalu 50.84 228⇓P **P 19 08 14.3 +3.0**
RES Resolute Bay 51.02 18 *e*P **P 19 08 11.0 -0.8**
comp=Z,1μm,0.9s,mb6.5
RES *e*ScP ScP 19 13 08.9 +1.2
CHTO Chiang Mai 51.22 255 *e*P **P 19 08 15.0 +0.9**
comp=Z,134nm,0.8s,mb5.6
CHTO Chiang Mai 51.22 255 *e*P **P 19 08 15.0 +0.9**
CHTO pmax pmax
comp=Z,134nm,0.8s,mb5.6
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
CHTO Chiang Mai 51.22 255 P **P 19 08 15.3 +1.3**
SNR=58
YKA Yellowknife Ar 51.39 36 P **P 19 08 14.4 -0.3**
YKA pP pP 19 08 46.0 -2.8
YKA ScP ScP 19 13 09.9 +0.4
YKA LR LR 19 33 53.8
YKA Yellowknife Ar 51.39 36 P **P 19 08 14.4 -0.4**
YKA *PP pP 19 08 46.0 -2.8
YKA Yellowknife Ar 51.39 36 P **P 19 08 14.4 -0.3**
comp=Z,31nm,0.7s,mb5.1,baz=298,slow=7.1,SNR=338
YKA pP pP 19 08 46.0 -2.8
comp=Z,7.7nm,0.7s,baz=296,slow=7.3,SNR=2.4
YKA ScP ScP 19 13 09.9 +0.4
comp=Z,0.4nm,0.6s,baz=314,slow=4.6,SNR=2.7
YKA LR LR 19 33 53.8
comp=Z,178nm,18.2s,baz=140,slow=40
SHL Shillong 51.41 267 *e*P **P 19 08 12.4 -3.0**
SHL *e*S **S 19 15 25.0 +1.3**
TSM Tawau 51.52 225⇓P **P 19 08 18.0 +1.7**
ULHL Ulahol 52.04 294 P **P 19 08 20.4 +0.5**
SNR=42
TKM2 Tokmak 2 52.08 295 *e*P **P 19 08 20.2 0.0**
comp=Z,99nm,1.0s,mb5.4
TKM2 Tokmak 2 52.08 295 *e*P **P 19 08 20.2 +0.1**
TKM2 pmax pmax
comp=Z,99nm,1.0s,mb5.4
TKM2 Tokmak 2 52.08 295 P **P 19 08 20.4 +0.3**
SNR=74
KBS Kingsbay 52.22 351 *e*P **P 19 08 19.8 -1.0**
comp=Z,47nm,0.9s,mb5.1
KBS Kingsbay 52.22 351 *e*P **P 19 08 20.3 -0.4**
KBS AMb AMB 19 08 23.0
comp=Z,72nm,1.5s,mb5.1
KBS Kingsbay 52.22 351 *e*P **P 19 08 19.8 -0.9**
KBS pmax pmax
comp=Z,47nm,0.9s,mb5.1
BDT Bhumibol Dam 52.30 254 P **P 19 08 23.5 +1.4**
comp=Z,22nm,0.8s,mb4.8
CHMS Chumysh 52.56 296 P **P 19 08 23.7 0.0**
SNR=48
USP Ospenovka 52.57 296 P **P 19 08 23.9 +0.2**
SNR=165
KBK Karagaybulak 52.62 295 P **P 19 08 24.5 +0.3**
SNR=105
NST Nakhon Sawan 52.70 252⇓P **P 19 08 26.5 +1.4**
FRU Bishkek 52.73 296⇑ *i*P **P 19 08 24.5 -0.5**
FRU *e* 19 09 32.0
FRU pmax pmax
comp=Z,252nm,1.5s,mb5.7
KZA Kyzart 52.75 295 P **P 19 08 26.4 +1.3**
SNR=26
AAK Ala-Archa 52.91 296 P **P 19 08 25.3 -1.0**
comp=Z,699nm,1.0s,mb6.3
AAK Ala-Archa 52.91 296 *e*P **P 19 08 25.2 -1.1**
comp=Z,115nm,0.9s,mb5.6
AAK Ala-Archa 52.91 296*c i*P **P 19 08 25.1 -1.2**
AAK pmax pmax
comp=Z,137nm,1.0s,mb5.6
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 25.8 -0.6**
SNR=45
AAK Ala-Archa 52.91 296 P **P 19 08 26.5 +0.2**
SNR=88
AGT Agartala 52.95 266 *e*P **P 19 08 28.0 +1.2**
AGT *ex* x 19 09 01.0
SVE Sverdlovsk 53.08 317⇑ *e*P **P 19 08 26.9 -0.4**
SVE *e* pP 19 09 03.5 +2.0
SVE *e*S **S 19 15 53.6 +8.1**
SVE *e*SS SS 19 19 24.1 -2.0
SVE *e*SSS 19 21 15.6
SVE pmax pmax
comp=Z,150nm,1.0s,mb5.7
UCH Uchtor 53.12 295 *e*P **P 19 08 28.1 +0.2**
comp=Z,27nm,1.1s,mb4.9
UCH Uchtor 53.12 295 P **P 19 08 28.5 +0.6**
SNR=24
TAPN Taplejung 53.13 272 *e*P **P 19 08 29.6 +1.5**
comp=Z,747nm,0.9s,mb6.4
EKS2 Erkin-Say 53.34 296 *e*P **P 19 08 29.6 +0.1**
comp=Z,130nm,0.9s,mb5.7
EKS2 Erkin-Say 53.34 296 P **P 19 08 29.7 +0.3**
SNR=146
SOKR Solikamsk 53.39 321*c i*P **P 19 08 28.8 -0.7**
SOKR pmax pmax
comp=Z,110nm,1.1s,mb5.5
SOKR MLR MLR
comp=Z,1μm,26.0s
ODAN Odare 53.66 272 *e*P **P 19 08 33.1 +1.1**
comp=Z,684nm,1.2s,mb6.2
AML Almayashu 53.69 295 *e*P **P 19 08 32.5 +0.5**
comp=Z,98nm,1.1s,mb5.5
AML Almayashu 53.69 295 P **P 19 08 32.8 +0.9**
SNR=71
KSH Kashi 53.71 292 P **P 19 08 33.2 +1.0**
KSH *e*AP pP 19 09 10.4 +3.9
KSH *e*XP sP 19 09 25.8 +2.9
KSH *e*PCP PcP 19 09 38.1 +1.7
KSH *e*PP PP 19 10 37.3 +3.0
KSH *e*PCS PcS 19 13 36.5 +0.8
KSH S **S 19 15 47.2 -7.4**
KSH *e*SCS ScS 19 18 01.1 -5.3
KSH *e*SS SS 19 19 31.8 -5.0
KSH AMB AMB
comp=Z,54nm,0.8s,mb5.3
KSH LR LR
comp=N,4μm,8.3s
KSH LR LR
comp=E,4μm,6.5s
KSH LR LR
comp=Z,2μm,7.3s
JIRN Jiri 53.98 273 *e*P **P 19 08 35.9 +1.6**
comp=Z,1μm,1.0s,mb6.7
ARU Arti 54.26 317 P **P 19 08 34.1 -1.8**
comp=Z,1μm,0.5s,mb6.8,SNR=88
ARU Arti 54.26 317 *e*P **P 19 08 34.5 -1.4**
comp=Z,85nm,0.6s,mb5.7
ARU Arti 54.26 317*c i*P **P 19 08 34.6 -1.3**
ARU *e* 19 09 37.9
ARU *e*S **S 19 16 02.0 +0.5**
ARU *SS sS 19 16 51.7 -9.2
ARU *e* 19 18 08.6
ARU *e*SS SS 19 19 43.8 -1.0
ARU SSS 19 21 49.8
ARU pmax pmax
comp=E,88nm,1.2s
ARU pmax pmax
comp=Z,236nm,1.2s,mb5.8
ARU pmax pmax
comp=N,73nm,1.2s
B04A Port Angeles 54.45 55⇓P **P 19 08 37.1 -0.3**
baz=54
KKN Kakani 54.52 274 *e*P **P 19 08 39.4 +1.2**
comp=N,774nm,0.8s,mb6.5
KKN Kakani 54.52 274 *e*P **P 19 08 39.4 +1.2**
KKN pmax pmax
comp=Z,774nm,0.8s,mb6.5
A04A Legoe Bay, Lum 54.53 54⇑P **P 19 08 37.5 -0.5**
baz=54
NLWA Neilton Lookou 54.60 56⇑P **P 19 08 38.5 0.0**
baz=54,SNR=5.3
A05A Maple Falls 54.73 54⇓P **P 19 08 38.6 -0.8**
baz=54
D03A Wishkah Elem. 54.81 56⇑P **P 19 08 39.9 -0.1**
baz=54
GKN Gorkha 54.82 275 *e*P **P 19 08 41.7 +1.3**
comp=Z,2μm,0.9s,mb6.8
BTM Bintulu 54.87 230⇑P **P 19 08 41.8 +1.0**
C04A Brinnon 54.94 55⇑P **P 19 08 40.7 -0.2**
baz=55
A06A Chilliwack 55.01 53⇑P **P 19 08 40.4 -1.0**
baz=55
KK31 Karatay Array 55.09 298 *i* P **P 19 08 40.0 -2.1**
KK31 Karatay Array 55.09 298 *i* P **P 19 08 40.9 -1.2**
KK31 pmax pmax
comp=Z,124nm,1.1s,mb5.5
B05A Bryant 55.12 54⇑P **P 19 08 41.7 -0.6**
baz=55,SNR=9.2
NNT Nongplab 55.24 249 P **P 19 08 45.5 +2.0**
E03A Lebam 55.25 57⇑P **P 19 08 42.8 -0.4**
baz=55
B06A Marblemount 55.32 54⇑P **P 19 08 42.7 -1.0**
baz=55
A07A Ashnola River, 55.63 53⇑P **P 19 08 45.4 -0.5**
baz=55,SNR=12
C05A Tolt Reservoir 55.67 55⇑P **P 19 08 45.8 -0.3**
baz=55,SNR=6.3
E04A Onalaska 55.70 56⇑P **P 19 08 46.6 +0.2**
baz=55
D05A Enumclaw 55.78 55⇑P **P 19 08 47.1 +0.2**
baz=56,SNR=6.6
SBUM Sibu 55.96 230⇓P **P 19 08 50.4 +1.8**
G03A Yamhill 56.10 58⇓P **P 19 08 49.1 -0.1**
baz=56
B07A Winthrop 56.11 53⇑P **P 19 08 48.7 -0.5**
baz=56,SNR=9.2
PMG Port Moresby 56.18 185 P **P 19 08 50.0 -0.1**
comp=Z,63nm,1.4s,mb5.3
PMG Port Moresby 56.18 185 P **P 19 08 49.8 -0.3**
PMG pmax pmax
comp=Z,40nm,1.1s
PMG MLR MLR
comp=Z,230nm,20.4s
PMG Port Moresby 56.18 185 P **P 19 08 49.8 -0.2**
comp=Z,40nm,1.1s,mb5.2,baz=339,slow=4.4,SNR=15
PMG LR LR 19 29 32.1
comp=Z,230nm,20.4s,baz=211,slow=32
F04A Amboy 56.25 57⇓P **P 19 08 50.1 -0.2**
baz=56,SNR=8.1
LVZ Lovozero 56.26 336⇓ *e*P **P 19 08 49.0 -1.0**
LVZ pmax pmax
comp=Z,95nm,1.3s,mb5.5
E05A Randle 56.27 56⇑P **P 19 08 49.8 -0.6**
baz=56
A08A Turner Farm, O 56.29 52 P **P 19 08 50.4 -0.2**
baz=56,SNR=9.6
D06A Cle Elum 56.42 55⇑P **P 19 08 51.3 -0.2**
baz=56,SNR=11
TWW Teanaway 56.44 55 P **P 19 08 51.9 +0.2**
H03A Soap Creek Ran 56.46 59⇑P **P 19 08 52.2 +0.4**
baz=56
DAG Danmarks Havn 56.47 357⇑ *i*P **P 19 08 51.2 -0.3**
DAG pmax pmax
comp=Z,97nm,1.2s,mb5.5
DAG Danmarks Havn 56.47 357⇑ *i*P **P 19 08 51.2 -0.3**
comp=Z,97nm,1.2s,mb5.5
COR Corvallis 56.50 59 *e*P **P 19 08 53.2 +1.0**
comp=Z,117nm,1.0s,mb5.7
COR Corvallis 56.50 59 *e*P **P 19 08 53.2 +1.1**
COR pmax pmax
comp=Z,117nm,1.0s,mb5.7
I02A Mapleton 56.53 59⇓P **P 19 08 52.8 +0.5**
baz=56,SNR=6.8
HNR Honiara 56.54 170 *e*P **P 19 08 51.6 -1.0**
comp=Z,85nm,0.9s,mb5.6
HNR Honiara 56.54 170 *e*P **P 19 08 51.7 -0.9**
HNR pmax pmax
comp=Z,85nm,0.9s,mb5.6
HNR Honiara 56.54 170 P **P 19 08 52.4 -0.2**
comp=Z,37nm,0.7s,mb5.3,baz=256,slow=3.0,SNR=5.9
C07A Waterville 56.58 54 P **P 19 08 52.0 -0.6**
baz=56,SNR=7.4
B08A Colville Reser 56.60 53⇓P **P 19 08 52.2 -0.5**
baz=56,SNR=13
G04A Mulino 56.63 58⇑P **P 19 08 53.0 0.0**
baz=56
A09A Danville 56.65 52⇑P **P 19 08 53.0 -0.1**
baz=56,SNR=31
BOK Bokaro 56.69 270 *e*P **P 19 08 54.3 +0.6**
BOK AMb AMB 19 08 57.8
comp=Z,254nm,1.7s,mb5.8
E06A Yakima 56.72 56⇓P **P 19 08 53.4 -0.2**
baz=56
PRGR Permogore 56.73 327⇑ *i*P **P 19 08 52.4 -1.1**
PRGR *e* 19 11 02.7
PRGR *e*S **S 19 16 47.9 +14**
PRGR *e*SS SS 19 20 27.0 +3.6
EBG Ellensburg 56.74 55 P **P 19 08 53.8 +0.1**
F05A White Salmon 56.83 56⇓P **P 19 08 54.2 -0.2**
baz=56
APA Apatity 56.83 336⇑ *i*P **P 19 08 53.0 -1.1**
APA *i* 19 09 50.0
APA pmax pmax
comp=Z,45nm,1.1s,mb5.2
K01A Sixes 56.84 61⇓P **P 19 08 54.8 +0.3**
baz=57
SSOR Sweet Springs 56.84 58 P **P 19 08 55.0 +0.5**
I03A Eugene 56.87 59 P **P 19 08 55.5 +0.8**
baz=57,SNR=7.5
KEV Kevo 56.90 340 *ep* **P 19 08 52.8 -1.7**
comp=Z,29nm,0.7s,mb5.2
KEV Kevo 56.90 340 *eP* **P 19 08 52.9 -1.6**
KEV pmax pmax
comp=Z,55nm,1.0s,mb5.3
LGTI Lohaghat 56.90 279 *eP* **P 19 08 56.0 +0.9**
LGTI *ex* x 19 09 31.2
D07A Quincy 56.91 54⇑P **P 19 08 55.5 +0.5**

baz=57,SNR=5.5
EDM Edmonton 56.91 46 eP P 19 08 54.4 -0.5
EDM Edmonton 56.91 46 P P 19 08 54.5 -0.4
J02A Umpqua 57.05 60 P P 19 08 57.0 +1.0
baz=57,SNR=25
C08A Higginbotham F 57.09 53 ⇓P P 19 08 55.5 -0.7
baz=57,SNR=8.2
H04A Detroit Lake 57.10 58 ⇑P P 19 08 56.6 +0.3
baz=57,SNR=32
VFP Flag Point 57.15 57 P P 19 08 57.0 +0.4
BROR Big Rock Looko 57.19 58 P P 19 08 57.3 +0.4
A10A Northport 57.20 52 P P 19 08 56.6 -0.4
baz=57,SNR=16
B09A Rice 57.21 52 ⇑P P 19 08 56.6 -0.4
baz=57,SNR=9.3
G05A Wamic 57.28 57 ⇑P P 19 08 57.9 +0.3
baz=57,SNR=16
F06A Goldendale 57.28 56 ⇑P P 19 08 57.7 +0.2
baz=57
J03A Ideyld Park 57.41 60 ⇑P P 19 08 59.1 +0.6
baz=57,SNR=9.7
ARCES ARCESS Array B 57.41 340 P P 19 08 56.9 -1.2
ARCES ARCESS Array B 57.41 340 P P 19 08 56.9 -1.2
comp=Z,89nm,1.1s,mb5.5,baz=40,slow=5.5,SNR=93
K02A Glendale 57.45 60 ⇓P P 19 08 59.2 +0.4
baz=57,SNR=7.6
I04A Tendick Farm, 57.48 59 ⇑P P 19 08 59.2 +0.2
baz=57,SNR=27
C09A Chrisman Ranch 57.50 53 ⇓P P 19 08 58.5 -0.6
baz=57,SNR=6.9
D08A Wollman Farm, 57.58 54 P P 19 08 59.1 -0.5
baz=57,SNR=11
AB31 Akbulak array 57.60 309 i P P 19 08 58.9 -0.9
WRD Warden 57.60 54 P P 19 08 58.5 -1.3
M01C Crescent City 57.61 62 ⇓P P 19 09 00.3 +0.3
baz=57
CROR Criterion Ridg 57.62 57 P P 19 09 00.3 +0.4
HAWA Hanford 57.62 55 eP P 19 08 59.5 -0.5
comp=Z,20nm,1.0s,mb4.9
G06A Carlson Farm, 57.67 57 P P 19 09 00.5 +0.2
baz=57,SNR=9.3
H05A Madras 57.68 58 ⇑P P 19 09 00.7 +0.3
baz=57,SNR=29
F07A Phinny Hill Vi 57.69 56 ⇑P P 19 09 00.5 +0.1
baz=57,SNR=14
L02A Cave Junction 57.74 61 ⇑P P 19 09 01.2 +0.4
baz=58,SNR=11
VTHM Trough 57.75 57 P P 19 09 01.1 +0.2
KSM Kuching 57.80 231 eP P 19 09 02.9 +1.3
KSM Kuching 57.80 231 ⇑P P 19 09 03.7 +2.2
SDNR Sundarnagar 57.82 283 eP P 19 09 01.0 -0.6
DDI Dehra Dun 57.83 281 eP P 19 09 01.5 -0.2
E08A Dider Farm, El 57.83 55 P P 19 09 01.2 -0.2
baz=58,SNR=6.5
DLH Dalhousie 57.85 285 eP P 19 09 01.0 -0.7
NEW Newport 57.86 52 eP P 19 09 00.9 -0.6
comp=Z,44nm,1.0s,mb5.2
NEW Newport 57.86 52 eP P 19 09 00.9 -0.7
NEW pmax pmax
comp=Z,44nm,1.0s
A11A Hall Mountain, 57.86 51 ⇑P P 19 09 01.9 +0.3
baz=58,SNR=16
BBOR Butler Butte 57.86 60 P P 19 09 02.3 +0.6
D09A Jones Farm, Ri 57.91 54 ⇑P P 19 09 01.3 -0.6
baz=58,SNR=8.7
AKTK Aktyubinsk 57.92 311 P P 19 09 00.8 -1.2
AKTO Aktyubinsk 57.92 311 P P 19 09 00.8 -1.2
AKTO pmax pmax
comp=Z,23nm,0.5s,mb5.3
AKTO Aktyubinsk 57.92 311 P P 19 09 00.8 -1.2
comp=Z,22nm,0.5s,mb5.3,baz=68,slow=7.5,SNR=63
KRMB Red Mountain 57.93 62 eP P 19 09 02.8 +0.6
I05A Bend 57.94 58 ⇓P P 19 09 02.5 +0.3
baz=58,SNR=10
J04A Umpqua Nationa 57.99 59 P P 19 09 03.4 +0.8
baz=58,SNR=24
C10A Spilker Farm, 58.02 53 ⇑P P 19 09 02.2 -0.4
baz=58,SNR=6.3
KTRM Thompson Ridge 58.02 61 P P 19 09 03.5 +0.7
THN Thein Dam 58.08 285 eP P 19 09 02.8 -0.6
VIPM Ingram Point 58.11 57 P P 19 09 03.8 +0.4
H06A Lindquist Farm 58.14 57 P P 19 09 03.8 +0.2
baz=58,SNR=26
B11A Sandpoint 58.16 52 P P 19 09 03.6 -0.1
baz=58,SNR=14
G07A Ruggs Ranch, H 58.21 56 P P 19 09 04.1 +0.1
baz=58,SNR=17
A12A Yaak River Ran 58.25 51 ⇓P P 19 09 04.7 +0.4
baz=58
JCC Jacoby Creek 58.27 63 ⇓P P 19 09 05.1 +0.5
baz=58
E09A Wood Farm, Sta 58.33 54 P P 19 09 04.7 -0.2
baz=58,SNR=18
KTK1 Kautokeino 58.33 341 eP P 19 09 04.4 -0.1
comp=Z,98nm,1.0s,mb5.6
KTK1 Kautokeino 58.33 341 eP P 19 09 04.4 -0.1
KTK1 AMb AMB 19 09 07.9
comp=Z,98nm,1.0s,mb5.6
J05A Fort Rock 58.48 59 ⇑P P 19 09 06.8 +0.9
baz=58,SNR=28
D10A Wagner Farm, O 58.49 53 ⇓P P 19 09 05.3 -0.7
baz=58
YBH Yreka Blue Hor 58.53 61 eP P 19 09 06.5 +0.2
comp=Z,37nm,0.7s,mb5.3
YBH Yreka Blue Hor 58.53 61 eP P 19 09 06.5 +0.2
YBH pmax pmax
comp=Z,37nm,0.7s
YBH Yreka Blue Hor 58.53 61 ⇑P P 19 09 07.1 +0.8
baz=58,SNR=35
K04A Chilquin 58.58 60 ⇑P P 19 09 07.1 +0.4
baz=58,SNR=9.5
G08A Pilot Rock 58.60 56 P P 19 09 06.8 0.0
baz=58,SNR=21
M02C Callahan 58.64 61 P P 19 09 08.0 +0.9
baz=58,SNR=24
H07A Lands Inn, Kim 58.67 57 P P 19 09 07.2 0.0
baz=58,SNR=21
I06A Prineville 58.68 58 ⇑P P 19 09 07.7 +0.4
baz=58,SNR=14
N02C Big Bar 58.71 62 ⇓P P 19 09 08.1 +0.5
baz=58,SNR=18
KTGM Kuala Trenggan 58.73 241 ⇓P P 19 09 10.1 +2.0
TRO Tromso 58.77 343 eP P 19 09 06.0 -1.6
comp=Z,194nm,1.4s,mb5.7
TRO Tromso 58.77 343 eP P 19 09 06.0 -1.6
TRO AMb AMB 19 09 10.2
comp=Z,194nm,1.4s,mb5.7
O01C Eel River Cons 58.81 63 ⇓P P 19 09 08.9 +0.6
baz=58,SNR=5.4
SNG Songkhla 58.82 245 P P 19 09 09.0 +0.4
comp=Z,200nm,0.9s,mb6.0
E10A Myers Farm, Un 58.92 54 ⇑P P 19 09 08.7 -0.3
baz=59,SNR=8.3
F09A S2 Ranch, Elgi 58.94 55 P P 19 09 09.4 +0.3
baz=59,SNR=9.9
I07A Izee 59.01 57 P P 19 09 09.9 +0.4
baz=59,SNR=15
K05A Summer Lake 59.01 59 ⇓P P 19 09 10.5 +0.8
baz=59,SNR=39
M04C Macdoel 59.02 61 P P 19 09 10.2 +0.6
baz=59,SNR=34
WALA Waterton Lakes 59.09 50 eP P 19 09 09.9 -0.2
comp=Z,68nm,0.9s,mb5.5
J06A Christmas Vall 59.13 58 P P 19 09 10.9 +0.5
baz=59,SNR=43
M03C McCloud 59.15 61 ⇑P P 19 09 10.9 +0.2
baz=59,SNR=18
F10A Beach Ranch, E 59.16 54 P P 19 09 10.6 0.0
baz=59,SNR=16
KIPM Iron Peak 59.22 63 eP P 19 09 11.4 +0.4
B13A Whitefish 59.22 51 ⇑P P 19 09 11.2 +0.3
baz=59,SNR=46
H08A Prairie City 59.22 56 ⇑P P 19 09 11.4 +0.3
baz=59,SNR=23
WDC Whiskeytown Da 59.32 62 eP P 19 09 11.9 +0.1
comp=Z,37nm,0.8s,mb5.3
WDC Whiskeytown Da 59.32 62 eP P 19 09 11.9 +0.1
WDC pmax pmax
comp=Z,37nm,0.8s,mb5.3
WDC Whiskeytown Da 59.32 62 ⇓P P 19 09 11.8 0.0
baz=59,SNR=32
K06A Valley Falls 59.34 59 P P 19 09 12.7 +0.8
baz=59,SNR=102
O02C Red Bluff 59.41 63 P P 19 09 13.2 +0.7
baz=59,SNR=23
NDI New Delhi 59.43 280 eP P 19 09 12.6 -0.2
L05A Lakeview 59.46 60 P P 19 09 13.6 +0.9
baz=59,SNR=46
E11A Bogner Ranch, 59.49 53 P P 19 09 12.5 -0.4
baz=59,SNR=12
P01C Double 8 Ranch 59.51 63 ⇓P P 19 09 13.2 +0.1
baz=59,SNR=9.2
J07A Hines 59.55 58 ⇑P P 19 09 13.8 +0.5
baz=59,SNR=11
C13A Hot Springs 59.58 51 P P 19 09 13.6 +0.1
baz=59,SNR=20
I08A Drewsey 59.65 57 ⇑P P 19 09 14.4 +0.4
baz=59,SNR=12
M05C Lookout 59.69 61 P P 19 09 14.6 +0.3
baz=59,SNR=46
H09A Durkee 59.71 56 P P 19 09 15.0 +0.6
baz=59,SNR=9.5
GASB Alder Springs 59.78 63 P P 19 09 15.8 +0.9
baz=60,SNR=21
BMO Blue Mountains 59.80 55 eP P 19 09 14.8 -0.2
comp=Z,24nm,0.9s,mb5.0
HATC Hat Creek Radi 59.83 61 ⇑P P 19 09 15.6 +0.3
baz=60,SNR=30
MOD Modoc 59.86 60 eP P 19 09 15.7 +0.3
comp=Z,75nm,0.8s,mb5.6
MOD Modoc 59.86 60 P P 19 09 15.7 +0.2
baz=60,SNR=73
HOPS Hopland 59.96 64 ⇓P P 19 09 16.1 -0.1
baz=60,SNR=5.4
O03C Acorn Hollow, 59.98 62 ⇓P P 19 09 16.1 -0.3
baz=60
K07A Rock Creek Ran 60.00 58 ⇓P P 19 09 16.8 +0.4
baz=60,SNR=42
D13A Huson 60.00 52 ⇑P P 19 09 15.9 -0.5
baz=60,SNR=18
J08A Circle Bar Ran 60.04 57 ⇑P P 19 09 17.2 +0.5
baz=60,SNR=34
I09A Lost Marbles R 60.09 56 P P 19 09 17.3 +0.3
baz=60,SNR=11
M06C Likely Place G 60.18 60 ⇓P P 19 09 18.0 +0.3
baz=60,SNR=8.7
KULM Kulim 60.27 243 eP P 19 09 19.6 +1.0
KULM Kulim 60.27 243 ⇓P P 19 09 20.0 +1.4
L07A Adell 60.35 59 ⇑P P 19 09 19.4 +0.6
baz=60,SNR=21
O04C Chester 60.36 61 P P 19 09 19.4 +0.5
baz=60,SNR=75
F12A Elk City 60.39 54 P P 19 09 19.2 +0.2
baz=60,SNR=44
ELFS Eagle Lake Fie 60.39 61 P P 19 09 19.8 +0.7
baz=60,SNR=54
K08A Mann Creek Ran 60.42 58 P P 19 09 19.7 +0.5
baz=60,SNR=69
MNRC McLaughlin Nat 60.42 64 ⇑P P 19 09 19.9 +0.6
baz=60,SNR=22
MSO Missoula 60.44 52 eP P 19 09 19.2 -0.2
comp=Z,40nm,0.9s,mb5.2
J09A Fry Pan Ranch, 60.46 57 ⇑P P 19 09 19.8 +0.3
baz=60,SNR=39
PBA Port Blair 60.50 255 ex x 19 09 28.0
PBA ex x 19 09 35.5
WVOR Wild Horse Val 60.51 58 eP P 19 09 19.7 -0.2
comp=Z,65nm,0.8s,mb5.5
WVOR Wild Horse Val 60.51 58 eP P 19 09 19.7 -0.2
WVOR pmax pmax
comp=Z,65nm,0.8s,mb5.5
D14A Greenough 60.52 51 ⇑P P 19 09 19.7 -0.1
baz=60,SNR=77
NSHM Saint Helena R 60.54 64 eP P 19 09 19.6 -0.5
E13A Victor 60.55 52 ⇓P P 19 09 19.6 -0.5
baz=60,SNR=12
I10A Payette 60.55 56 ⇓P P 19 09 20.7 +0.5
baz=60,SNR=17
ORV Oroville 60.58 62 P P 19 09 19.7 -0.7
baz=60,SNR=33
MCCM Marconi Confer 60.60 64 eP P 19 09 19.6 -1.0
MCCM Marconi Confer 60.60 64 ⇑P P 19 09 20.0 -0.6
baz=60
SUTB Sutter Butte 60.61 63 ⇑P P 19 09 19.7 -0.8
baz=60
H11A Donnelly 60.62 55 ⇓P P 19 09 20.1 -0.5
baz=60,SNR=14
IPM Ipoh 60.68 242 ⇓P P 19 09 22.8 +1.4
O05C Quincy 60.68 62 ⇑P P 19 09 21.0 -0.1
baz=60,SNR=14
OHCM Honcut 60.72 63 eP P 19 09 20.8 -0.6
CVS Carmenet Viney 60.74 64 ⇓P P 19 09 21.0 -0.5
baz=60
CHMT Chamberlain Mo 60.76 52 eP P 19 09 21.2 -0.3
JOF Joensuu 60.79 333 ep P 19 09 19.5 -1.9
comp=Z,34nm,0.6s,mb5.4
JOF Joensuu 60.79 333 eP P 19 09 19.5 -1.9
JOF pmax pmax
comp=Z,34nm,0.6s,mb5.3
FARB Farallon Islan 60.81 65 ⇓P P 19 09 21.3 -0.6
baz=61,SNR=5.4
L08A Fields 60.83 58 P P 19 09 22.5 +0.4
baz=60,SNR=56
Q03C Winters 60.84 64 ⇑P P 19 09 23.0 +0.9
baz=61
M07A Soldier Meadow 60.84 59 P P 19 09 22.9 +0.7
baz=61,SNR=158
N06A Buffalo Meadow 60.84 60 P P 19 09 22.4 +0.3
baz=61,SNR=85
K09A Rome 60.88 58 P P 19 09 22.6 +0.2
baz=61,SNR=18
E14A Clinton 60.94 52 P P 19 09 22.8 0.0
baz=61,SNR=28
J10A Berg Farm, Mel 60.98 56 ⇓P P 19 09 22.9 -0.1
baz=61
COEN Coen 61.04 189 eP P 19 09 23.8 +0.2
comp=Z,28nm,0.8s,mb5.2
D15A Lincoln 61.07 51 P P 19 09 23.6 0.0
baz=61,SNR=17
BEKR Beckwourth 61.08 61 ⇓P P 19 09 23.7 0.0
baz=61,SNR=73
Q04C Lincoln 61.10 63 ⇑P P 19 09 23.8 -0.1
baz=61
LOF Lofoten 61.11 343 eP P 19 09 25.2 +1.7
comp=Z,132nm,1.5s,mb5.5
LOF Lofoten 61.11 343 eP P 19 09 24.5 +0.9
LOF AMb AMB 19 09 27.8
comp=Z,132nm,1.5s,mb5.5
MYKOM Kota Tinggi 61.15 238 ⇑P P 19 09 26.3 +1.8
O06A Flanigan 61.21 61 P P 19 09 24.9 +0.3
baz=61,SNR=78
FFC Flin Flon 61.25 39 P P 19 09 24.5 -0.2
comp=Z,313nm,1.1s,mb6.0,SNR=30
KGM Kluang 61.27 238 ⇑P P 19 09 27.4 +2.0
M08A Happy Creek Ra 61.27 59 P P 19 09 25.6 +0.5
baz=61,SNR=42
P05C Yuba Gap, Truc 61.28 62 P P 19 09 25.0 -0.1
baz=61,SNR=11
FRIM Kepong 61.30 241 ⇑P P 19 09 26.6 +1.1
K10A MacKenzie Ranc 61.32 57 P P 19 09 25.9 +0.5
baz=61,SNR=7.6
L09A Wilkinson Ranc 61.33 58 ⇑P P 19 09 25.7 +0.3
baz=61,SNR=6.7
N07B Gerlach 61.34 60 P P 19 09 25.7 +0.2
baz=61,SNR=39
BDM Black Diamond 61.35 64 ⇓P P 19 09 25.5 -0.2
baz=61
H12A Diamond D Ranc 61.36 54 ⇓P P 19 09 25.2 -0.3
baz=61,SNR=20
G13A Cobalt 61.36 54 P P 19 09 25.3 -0.3
baz=61,SNR=56
F14A Wisdom 61.39 53 ⇑P P 19 09 25.3 -0.4
baz=61,SNR=8.6
E15A Deer Lodge 61.40 52 ⇑P P 19 09 25.4 -0.4
baz=61,SNR=33
JRSC Jasper Ridge 61.46 65 ⇓P P 19 09 25.9 -0.5
baz=61,SNR=6.9
P06A Stead Airport, 61.47 61 ⇓P P 19 09 26.6 +0.1
baz=61
MFID Camas Ranch 61.52 56 ⇓P P 19 09 26.7 0.0
baz=61,SNR=13
LAVA Lava Cap Winer 61.54 63 P P 19 09 26.7 -0.2
baz=61,SNR=19
WENL Wente Brothers 61.62 64 ⇓P P 19 09 27.5 +0.1
baz=61,SNR=9.1
BNLO Ben Lomond (Sa 61.67 65 ⇓P P 19 09 27.1 -0.7
baz=61,SNR=7.0
FCC Fort Churchill 61.68 33 eP P 19 09 26.5 -0.9
comp=Z,39nm,0.7s,mb5.3
FCC Fort Churchill 61.68 33 eP P 19 09 26.5 -1.0
FCC pmax pmax
comp=Z,39nm,0.7s,mb5.3
H13A Challis 61.68 54 P P 19 09 27.7 -0.1
baz=61,SNR=53
G14A Jackson 61.69 53 ⇑P P 19 09 27.0 -0.8
baz=61
R04C Big Horse Ranc 61.73 63 ⇓P P 19 09 27.7 -0.5
baz=62
O07A Toulon 61.78 60 ⇓P P 19 09 28.8 +0.3
baz=62,SNR=106
WCN Washoe City 61.79 62 P P 19 09 28.9 +0.3
baz=62,SNR=34
K11A Parker Ranch, 61.81 57 P P 19 09 28.8 +0.2
baz=62,SNR=22
N08A GE Springer Mi 61.83 59 ⇑P P 19 09 29.0 +0.2
baz=62,SNR=50
F15A Butte 61.84 52 P P 19 09 28.9 +0.1
baz=62,SNR=66
EGMT Eagleton 61.90 49 ⇓P P 19 09 29.0 -0.2
baz=62
S04C Ingram Canyon, 61.96 64 ⇑P P 19 09 29.5 -0.2
baz=62
R05C Kirkwood Meado 61.98 62 P P 19 09 29.9 +0.1
baz=62,SNR=31
L10A Juniper Basin 61.99 57 P P 19 09 30.2 +0.3
baz=62,SNR=35
J12A Stokes Ranch, 62.04 56 P P 19 09 30.4 +0.3
baz=62,SNR=29
BATI Kupang 62.10 212 P P 19 09 30.2 -0.6
comp=Z,12nm,0.4s,mb5.1,baz=102,slow=13,SNR=7.3
O08A Rochester Mine 62.13 60 ⇓P P 19 09 31.3 +0.5
baz=62
N09A Rock Creek Ran 62.15 59 P P 19 09 31.4 +0.5
baz=62,SNR=38
P07A Fallon 62.16 61 ⇑P P 19 09 31.3 +0.2
baz=62
I13A Wildhorse Cree 62.17 55 P P 19 09 31.4 +0.4
baz=62,SNR=28
CMB Columbia Colle 62.21 63 eP P 19 09 31.2 -0.2
comp=Z,40nm,0.9s,mb5.2
CMB Columbia Colle 62.21 63 P P 19 09 31.1 -0.3
CMB pmax pmax
comp=Z,42nm,0.9s,mb5.3
CMB Columbia Colle 62.21 63 P P 19 09 31.3 -0.1
baz=62,SNR=29
HLID Hailey 62.23 55 eP P 19 09 31.5 +0.1
comp=Z,21nm,1.0s,mb4.9
HLID Hailey 62.23 55 P P 19 09 31.6 +0.2
baz=62,SNR=22
G15A Dillon 62.27 53 P P 19 09 31.6 -0.1
baz=62,SNR=41
MCMT McKenzie Canyo 62.29 53 eP P 19 09 30.7 -1.1
PACP Pacheco Peak 62.30 65 ⇓P P 19 09 32.1 +0.1
baz=62,SNR=42
M10A I.L. Ranch, Tu 62.30 58 P P 19 09 32.5 +0.6
baz=62,SNR=62
SAO San Andreas Ge 62.36 65 eP P 19 09 31.8 -0.6
comp=Z,34nm,0.9s,mb5.2
SAO San Andreas Ge 62.36 65 eP P 19 09 31.8 -0.6
SAO pmax pmax
comp=Z,34nm,0.9s,mb5.2
BOZ Bozeman (W) 62.43 52 eP P 19 09 32.9 +0.2
comp=Z,28nm,0.8s,mb5.2
BOZ Bozeman (W) 62.43 52 eP P 19 09 32.9 +0.2
BOZ pmax pmax
comp=Z,28nm,0.8s,mb5.1
BOZ Bozeman (W) 62.43 52 ⇑P P 19 09 33.2 +0.5
baz=62,SNR=11
J13A Cove Ranch, Pi 62.47 55 P P 19 09 33.3 +0.3
baz=62,SNR=30
HAST UC Hastings Re 62.53 65 ⇓P P 19 09 33.2 -0.3
baz=62,SNR=27
K12A Draper Farm, C 62.54 56 ⇓P P 19 09 33.5 0.0
baz=62,SNR=12
VIS Vishakhapatnam 62.55 267 i P P 19 09 35.0 +1.1
VIS ex x 19 09 38.0
comp=Z,187nm,1.3s
VIS i S S 19 17 52.6 +2.8
P08A Dixie Valley 62.55 60 ⇑P P 19 09 34.3 +0.7
baz=62,SNR=10
AJM Ajmer 62.60 280 eP P 19 09 34.6 +0.5
AJM AMb AMB 19 09 36.4
comp=Z,411nm,1.1s,mb6.2
MOR8 Moi Rana 62.60 342 eP P 19 09 31.2 -2.3
comp=Z,141nm,1.4s,mb5.6
MOR8 Moi Rana 62.60 342 eP P 19 09 31.2 -2.3
MOR8 AMb AMB 19 09 36.1
comp=Z,141nm,1.4s,mb5.6
S05C Merced 62.68 64 P P 19 09 34.0 -0.5
baz=62,SNR=6.6
T05C Eagle Field, D 62.75 64 ⇓P P 19 09 35.2 +0.2
baz=62
STOK Stokkvaagen 62.76 343 eP P 19 09 34.4 -0.2
comp=Z,201nm,1.7s,mb5.7
STOK Stokkvaagen 62.76 343 eP P 19 09 34.4 -0.2
STOK AMb AMB 19 09 38.4
comp=Z,201nm,1.7s,mb5.7
O09A Fish Creek Ran 62.78 59 ⇑P P 19 09 35.7 +0.6
baz=62,SNR=9.1
L12A House Creek Ra 62.78 57 P P 19 09 35.6 +0.5
baz=62,SNR=27
M11A Holland Ranch, 62.79 58 ⇑P P 19 09 35.9 +0.7
baz=62,SNR=9.6
N10A Dunphy 62.83 59 ⇑P P 19 09 35.9 +0.4
baz=62,SNR=5.3
BHPL Bhopal 62.85 276 eP P 19 09 34.7 -1.1
BHPL AMb AMB 19 09 38.3
comp=Z,446nm,2.9s,mb5.8
WSI Waingapu 62.88 215 ⇓ eP P 19 09 36.5 +0.5
KAF Kangasniemi 62.92 335 ep P 19 09 33.4 -2.2
comp=Z,70nm,0.8s,mb5.5,baz=37,slow=6.3
KAF Kangasniemi 62.92 335 eP P 19 09 33.4 -2.2
KAF pmax pmax
comp=Z,70nm,0.8s,mb5.5
V03C Hunter Liggett 62.96 65 P P 19 09 36.6 +0.3
baz=63,SNR=14
R07C Lee Vining 62.99 62 ⇑P P 19 09 37.0 +0.5
baz=63,SNR=84
K13A Stover Farm, H 62.99 56 ⇑P P 19 09 36.7 +0.2
baz=63
U04C Hernandez Rese 63.02 65 P P 19 09 37.1 +0.3
baz=63,SNR=28
QLMT Earthquake Lak 63.07 52 eP P 19 09 37.2 +0.3
O10A Cortez Mining, 63.11 59 ⇓P P 19 09 38.0 +0.7
baz=63
NGP Nagpur 63.14 273 eP P 19 09 37.6 -0.1
NGP ex x 19 09 39.4
comp=Z,160nm,0.9s
NGP eS S 19 18 00.6 +3.5
Q08A Gabbs 63.17 61 P P 19 09 38.0 +0.3
baz=63,SNR=59
P09A Austin 63.20 60 ⇓P P 19 09 38.4 +0.4
baz=63
N11A Elko Archery C 63.22 58 ⇓P P 19 09 38.5 +0.5
baz=63,SNR=6.0
NVAR Mina Array Bea 63.22 62 P P 19 09 38.3 +0.2
comp=Z,71nm,0.8s,mb5.6,baz=304,slow=5.8,SNR=435
T06C Millerton Lake 63.27 64 P P 19 09 38.0 -0.4
baz=63,SNR=9.0
PSI Prapat 63.28 243 P P 19 09 39.1 +0.4
comp=Z,52nm,0.9s,mb5.4,baz=8,8,slow=4.4,SNR=48
M12A Wells 63.31 57 P P 19 09 39.3 +0.7
baz=63,SNR=32
KCC Kaiser Creek 63.31 63 ⇓P P 19 09 38.6 -0.1
baz=63,SNR=29
R08A Mina 63.39 62 ⇑P P 19 09 39.5 +0.3
baz=63
MLAC Mammoth Lakes 63.41 63 P P 19 09 40.1 +0.8
baz=63,SNR=12
L13A Double Diamond 63.43 56 P P 19 09 40.1 +0.7
baz=63,SNR=24
V04C Ramage Ranch, 63.43 65 ⇓P P 19 09 39.7 +0.2
baz=63
PKD Parkfield 63.44 65 P P 19 09 39.4 -0.1
baz=63,SNR=20
U05C Westside ANR, 63.45 64 ⇑P P 19 09 39.9 +0.3
baz=63
PUL Pulkovo 63.47 331 ⇓ iP P 19 09 38.3 -1.0
FINES FINESS Array B 63.51 334 i P P 19 09 38.4 -1.2
FINES pmax pmax
comp=Z,73nm,0.8s
FINES FINESS Array B 63.51 334 P P 19 09 38.4 -1.2
comp=Z,73nm,0.8s,mb5.6,baz=40,slow=7.6,SNR=299
YNR Norris Junctio 63.55 52 eP P 19 09 41.2 +1.1
ELK Elko 63.55 58 eP P 19 09 40.4 +0.2
comp=Z,19nm,0.8s,mb5.0
ELK Elko 63.55 58 eP P 19 09 40.4 +0.2
ELK pmax pmax
comp=Z,19nm,0.8s
P10A Eureka 63.56 60 ⇓P P 19 09 40.8 +0.5
baz=63
N12A Clover Valley, 63.60 58 ⇓P P 19 09 41.0 +0.4

baz=63
YFT Old Faithful 63.63 52 eP P 19 09 42.3 +1.6
Q09A Carvers 63.64 61 P P 19 09 41.2 +0.4
baz=63,SNR=33
O11A Cowboy Ranch, 63.70 59 ⇓P P 19 09 41.5 +0.3
baz=63,SNR=23
MTUM Tungsten Hills 63.75 63 eP P 19 09 41.6 0.0
M13A Montello 63.78 57 P P 19 09 42.0 +0.4
baz=64,SNR=28
MOS Moscow 63.78 325 eP P 19 09 37.6 -3.9
MOS e pP 19 10 15.7 -1.2
MOS e 19 19 14.5
MOS pmax pmax
comp=Z,300nm,1.6s,mb5.9
MOS pmax pmax
comp=Z,129nm,1.4s,mb5.6
PTRM Twissleman Ran 63.83 65 P P 19 09 42.6 +0.5
V05C Boulder Hill, 63.89 65 ⇑P P 19 09 42.8 +0.4
baz=64,SNR=7.8
S08C White Mtn Res 63.90 62 P P 19 09 43.1 +0.5
baz=64,SNR=44
HELL Mitchell Peak, 63.91 64 P P 19 09 42.1 -0.5
baz=64,SNR=117
IMW Indian Meadow 63.94 53 eP P 19 09 43.3 +0.6
comp=Z,34nm,0.9s,mb5.2
P11A Circle Ranch, 64.02 59 ⇓P P 19 09 43.6 +0.3
baz=64
N13A Wendover, West 64.08 57 ⇓P P 19 09 43.9 +0.3
baz=64,SNR=17
R09A Tonopah 64.09 61 P P 19 09 43.8 0.0
baz=64,SNR=142
Q10A Clear Creek Ra 64.11 60 ⇑P P 19 09 44.0 +0.1
baz=64,SNR=7.4
MOOW Moose Ponds 64.14 53 eP P 19 09 44.5 +0.5
comp=Z,33nm,1.0s,mb5.1
O12A Currie 64.15 58 ⇓P P 19 09 44.4 +0.2
baz=64,SNR=16
TIN Tinemaha 64.15 63 ⇑P P 19 09 44.4 +0.2
baz=64,SNR=9.4
M14A Sheep Mountain 64.15 56 P P 19 09 44.4 +0.3
baz=64,SNR=25
SMMC Simmler 64.19 65 ⇓P P 19 09 44.5 +0.1
baz=64
TPAW Teton Pass 64.20 53 eP P 19 09 45.2 +0.9
comp=Z,65nm,0.9s,mb5.5
HVU Hansel Valley 64.30 56 eP P 19 09 45.2 +0.1
comp=Z,28nm,0.8s,mb5.2
HVU Hansel Valley 64.30 56 eP P 19 09 45.2 +0.1
HVU pmax pmax
comp=Z,28nm,0.8s,mb5.1
LOHW Long Hollow 64.31 53 eP P 19 09 45.4 +0.3
comp=Z,38nm,1.1s,mb5.1
S09A Goldfield 64.33 62 P P 19 09 45.4 +0.1
baz=64,SNR=53
REDW Red Top Meadow 64.34 53 eP P 19 09 46.0 +0.8
comp=Z,59nm,1.0s,mb5.4
DGMT Dagmar 64.41 46 eP P 19 09 45.1 -0.5
comp=Z,63nm,0.6s,mb5.6
R10A Warm Springs 64.52 61 ⇓P P 19 09 46.5 -0.1
baz=64,SNR=9.8
Q11A Duckwater 64.54 60 ⇑P P 19 09 46.5 -0.2
baz=64,SNR=13
NSS Namsos 64.55 342 eP P 19 09 44.3 -2.0
NSS AMb AMB 19 09 51.0
comp=Z,129nm,1.9s,mb5.4
PKM Peak Mountain 64.57 65 ⇓P P 19 09 47.2 +0.2
baz=64,SNR=29
P12A McGill 64.57 59 P P 19 09 47.1 +0.2
baz=64,SNR=23
S10A Tonopah Range, 64.58 61 P P 19 09 47.0 +0.1
baz=64,SNR=54
AHID Auburn Hatcher 64.59 54 eP P 19 09 47.0 +0.1
comp=Z,7.4nm,0.6s,mb4.7
LAO LASA Array 64.59 48 eP P 19 09 47.1 +0.2
comp=Z,68nm,0.9s,mb5.5
CWC Cottonwood Cre 64.64 63 P P 19 09 47.4 0.0
baz=64,SNR=8.6
OBN Obninsk 64.65 325 P P 19 09 46.9 -0.2
comp=Z,852nm,1.1s,mb6.5,SNR=17
OBN Obninsk 64.65 325 eP P 19 09 45.5 -1.6
comp=Z,228nm,1.3s,mb5.8
OBN Obninsk 64.65 325 c iP P 19 09 45.5 -1.6
OBN i *PP pP 19 10 19.2 -3.4
OBN e 19 12 09.5
OBN pmax pmax
comp=Z,169nm,1.0s,mb5.8
N14A Grayback Hills 64.67 57 ⇑P P 19 09 47.4 -0.1
baz=64,SNR=11
O13A Hicks Ranch, I 64.68 58 ⇑P P 19 09 47.7 +0.1
baz=64,SNR=5.6
M15A Larsen Ranch, 64.69 56 ⇑P P 19 09 47.9 +0.3
baz=64,SNR=92
GRAC Grapevine Rang 64.71 62 P P 19 09 48.3 +0.5
baz=64,SNR=35
BGU Big Grassy Mou 64.71 57 eP P 19 09 47.6 -0.2
SPUT South Promonto 64.79 56 eP P 19 09 48.4 +0.2
AKL Akola 64.84 274 ⇓iP P 19 09 48.9 0.0
AKL ex x 19 09 51.8
comp=Z,169nm,1.6s
AKL i S S 19 18 19.8 +1.8
R11A Troy Canyon, C 64.90 60 ⇓P P 19 09 48.9 -0.1
baz=65,SNR=30
TRCR Troy Canyon 64.90 60 eP P 19 09 49.0 0.0
ISA Isabella 64.90 64 ⇓P P 19 09 47.9 -1.2
baz=65,SNR=40
SBC Santa Barbara 64.93 66 ⇓P P 19 09 49.2 -0.1
baz=65
N15A Stansbury Isla 65.03 56 P P 19 09 50.1 +0.3
baz=65,SNR=35
ARVC Arvin 65.03 65 ⇑P P 19 09 49.2 -0.8
baz=65,SNR=7.1
HWUT Hardware Ranch 65.09 55 eP P 19 09 50.4 +0.2
comp=Z,45nm,1.0s,mb5.2
P13A Bates Ranch, G 65.11 58 P P 19 09 50.4 +0.1
baz=65,SNR=20
SFJD Kangerlussuaq 65.19 9 i P P 19 09 49.4 -1.0
SFJD pmax pmax
comp=Z,71nm,0.9s,mb5.5
SFJD MLR MLR
comp=Z,740nm,18.0s
SFJD Kangerlussuaq 65.19 9 i P P 19 09 49.4 -1.0
comp=Z,71nm,0.9s,mb5.5
SFJD
comp=Z,730nm,18.0s
MPMC Manual Prospec 65.25 63 P P 19 09 51.3 0.0
baz=65,SNR=101
BSC Santa Cruz Isl 65.27 66 ⇓P P 19 09 50.9 -0.6
baz=65,SNR=7.5
DUG Dugway 65.31 57 eP P 19 09 51.7 +0.1
comp=Z,60nm,0.9s,mb5.4
DUG Dugway 65.31 57 eP P 19 09 51.7 0.0
DUG pmax pmax
comp=Z,60nm,0.9s,mb5.4
DUG Dugway 65.31 57 P P 19 09 52.0 +0.4
baz=65,SNR=48
FURC Furnace Creek, 65.36 62 ⇓P P 19 09 52.1 0.0
baz=65,SNR=42
VRHR Novokhopersk 65.41 319 eP P 19 09 51.6 -0.5
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.0
VRHR pmax pmax
comp=N,40nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.4s
NOQ North Oquirrh 65.41 56 eP P 19 09 52.2 -0.1
comp=E,52nm,0.8s,mb5.4
TPNV Topopah Spring 65.42 62 eP P 19 09 52.3 -0.1
comp=E,70nm,0.8s,mb5.5
TPNV Topopah Spring 65.42 62 eP P 19 09 49.5 -2.9
TPNV pmax pmax
comp=Z,70nm,0.8s,mb5.5
TPNV Topopah Spring 65.42 62 ⇑P P 19 09 52.4 0.0
baz=65
Q13A Wheeler Ranch, 65.43 59 ⇑P P 19 09 52.6 +0.2
baz=65,SNR=35
OSI Osito Adit 65.43 65 ⇓P P 19 09 52.4 -0.1
baz=65
PDAR Pinedale Array 65.44 53 P P 19 09 52.2 -0.2
comp=Z,34nm,0.8s,mb5.2,baz=294,slow=1.7,SNR=209
PDAR pP pP 19 10 26.4 -1.6
comp=Z,21nm,0.9s,baz=270,slow=2.2,SNR=6.0
R12A Pony Springs, 65.50 60 P P 19 09 52.9 +0.1
baz=65,SNR=29
LRMC Laurel Mountai 65.51 64 P P 19 09 52.7 -0.3
baz=65,SNR=44
BLG Laguna Peak 65.55 66 ⇓P P 19 09 52.5 -0.8
baz=65,SNR=9.4

CTU Camp Tracy 65.59 56 eP P 19 09 53.5 +0.1
comp=Z,31nm,1.0s,mb5.1
VSU Vasula 65.65 332 ⇑iP P 19 09 52.3 -1.2
VSU Vasula 65.65 332 c iP P 19 09 52.2 -1.3
VSU i *PP pP 19 10 24.5 -4.6
ABKT Ailbek 65.71 300 P P 19 09 54.6 +0.4
comp=Z,862nm,1.0s,mb6.5,SNR=91
EDW2 Edwards Air Fo 65.72 64 ⇓P P 19 09 54.1 -0.2
baz=66,SNR=91
JLU Jordanelle 65.83 56 eP P 19 09 55.0 0.0
S12A Delamar Landin 65.83 60 ⇓P P 19 09 55.5 +0.5
baz=66,SNR=16
SNCC San Nicolas Is 65.83 67 ⇓P P 19 09 54.7 -0.4
baz=66,SNR=15
T11A Corn Creek, Al 65.85 61 P P 19 09 55.2 +0.1
baz=66,SNR=64
NLU North Lily Min 65.90 57 eP P 19 09 55.3 -0.1
DECC Green Verdugo 65.92 65 ⇓P P 19 09 55.2 -0.4
baz=66
VOR Voronezh 66.02 321 eP P 19 09 54.0 -2.0
VOR pmax pmax
comp=Z,140nm,1.6s,mb5.5
HYB Hyderabad 66.03 270 eP P 19 09 56.5 -0.1
comp=Z,140nm,1.0s,mb5.8
HYB eS S 19 18 34.0 +1.3
HYB Hyderabad 66.03 270 eP P 19 09 56.5 -0.1
HYB eS S 19 18 34.0 +1.3
HYB pmax pmax
comp=Z,140nm,1.0s,mb5.8
HYB Hyderabad 66.03 270 i P P 19 09 56.5 -0.1
comp=Z,140nm,1.0s,mb5.8
HYB ePcP PcP 19 10 28.5 +2.5
HYB epP pP 19 10 32.5 +0.3
HYB esP sP 19 10 50.5 +2.2
HYB ePP PP 19 12 26.5 +2.9
HYB eS S 19 18 34.0 +1.3
DAU Daniels Canyon 66.06 56 eP P 19 09 57.0 +0.6
SHOC Shoshone 66.09 63 P P 19 09 56.6 -0.2
baz=66,SNR=26
MPU Maple Canyon 66.11 57 eP P 19 09 56.9 +0.1
comp=Z,57nm,1.0s,mb5.4
GSC Goldstone 66.17 63 P P 19 09 57.0 -0.2
baz=66,SNR=35
U11A Corn Creek 66.29 62 ⇓P P 19 09 58.2 +0.2
baz=66,SNR=12
FMP Fort Macarthur 66.30 66 ⇓P P 19 09 57.4 -0.7
baz=66
BFSC Mount Baldy St 66.34 65 P P 19 09 58.1 -0.2
baz=66,SNR=29
VRSR Storozhevoye 66.40 321 eP P 19 09 57.3 -1.1
VRSR pmax pmax
comp=N,40nm,0.9s
VRSR pmax pmax
comp=E,30nm,0.9s
VRSR pmax pmax
comp=Z,30nm,0.9s,mb5.1
CIS Catalina Islan 66.43 66 ⇓P P 19 09 58.3 -0.6
baz=66,SNR=25
S13A Holt Ranch, En 66.43 60 P P 19 09 59.1 +0.2
baz=66,SNR=28
R14A James Farms, M 66.45 59 ⇑P P 19 09 59.0 0.0
baz=66
T12A Moapa 66.49 61 ⇑P P 19 09 59.4 +0.1
baz=66,SNR=9.5
VORD Divnogorie 66.53 320 eP P 19 09 58.1 -1.1
VORD pmax pmax
comp=Z,120nm,0.8s,mb5.8
VORD pmax pmax
comp=N,110nm,0.6s
VORD pmax pmax
comp=E,100nm,1.0s
ARUT Antelope Range 66.54 59 eP P 19 09 59.6 0.0
ARUT Antelope Range 66.54 59 eP P 19 09 59.4 -0.2
TUQ Turquoise Mtn. 66.62 63 ⇑P P 19 10 00.0 -0.1
baz=66,SNR=75
SCI San Clemente I 66.62 66 ⇓P P 19 09 59.6 -0.5
baz=66,SNR=8.5
V11A Goodsprings 66.65 62 P P 19 10 00.4 +0.1
baz=66,SNR=23
LATR Latur 66.71 272 eP P 19 10 01.1 +0.3
S14A Cedar City 66.72 59 ⇑P P 19 10 00.8 +0.1
baz=66
CCUT Cedar City 66.75 60 eP P 19 10 01.1 +0.2
HEC Hector,Ludlow 66.77 63 P P 19 10 01.1 0.0
baz=66,SNR=24
T13A Saint George 66.78 60 ⇑P P 19 10 01.4 +0.4
baz=66,SNR=9.9
BBRC Big Bear Sol-O 66.78 64 ⇑P P 19 10 00.9 -0.2
baz=66,SNR=5.5
U12A Valley of Fire 66.79 61 ⇓P P 19 10 01.3 +0.2
baz=66,SNR=6.1
MSU Marysvale 66.80 58 eP P 19 10 01.5 +0.3
CTA Charters Tower 66.83 186 ⇓iP P 19 10 01.0 -0.4
comp=E,20nm,0.9s,mb4.9
CTA Charters Tower 66.83 186 ⇓iP P 19 10 01.0 -0.4
CTA pmax pmax
comp=Z,20nm,0.9s
CTA Charters Tower 66.83 186 P P 19 10 01.1 -0.3
comp=Z,34nm,1.0s,mb5.1,baz=1.2,slow=8.1,SNR=27
CTAO Charters Tower 66.83 186 eP P 19 10 01.1 -0.3
comp=Z,109nm,1.4s,mb5.5
CTAO Charters Tower 66.83 186 P P 19 10 01.1 -0.3
CTAO pmax pmax
comp=Z,110nm,1.4s,mb5.5
TMUT Trail Mountain 66.84 57 eP P 19 10 01.3 -0.1
ULM Lac du Bonnet 67.05 40 P P 19 10 01.5 -1.1
comp=Z,16nm,0.6s,mb5.0,baz=318,slow=7.0,SNR=50
ULM LR LR 19 41 59.3
comp=Z,267nm,19.2s,baz=10,slow=38
MURC Murrieta 67.05 65 P P 19 10 02.4 -0.4
baz=67,SNR=12
V12A Nelson 67.08 62 ⇑P P 19 10 02.9 0.0
baz=67,SNR=17
U13A Pakoon Wash 67.15 61 ⇓P P 19 10 03.6 +0.2
baz=67,SNR=97
GMRC Granite Mounta 67.22 63 P P 19 10 03.8 -0.1
baz=67,SNR=57
T14A Hurricane 67.24 60 P P 19 10 04.3 +0.4
baz=67,SNR=19
W12A Cal Nev Ari 67.35 62 ⇓P P 19 10 04.6 -0.1
baz=67,SNR=7.5
SRU San Rafael 67.35 57 eP P 19 10 04.4 -0.2
SRU San Rafael 67.35 57 eP P 19 10 04.6 -0.1
SRU pmax pmax
comp=Z,69nm,0.8s,mb5.5
DOMB Dombas 67.37 342 eP P 19 10 03.7 -0.7
comp=Z,166nm,0.9s,mb5.9
DOMB Dombas 67.37 342 eP P 19 10 03.7 -0.7
DOMB AMb AMB 19 10 06.6
comp=Z,166nm,0.9s,mb5.9
RWWY Rawlins 67.46 53 eP P 19 10 04.6 -0.6
comp=Z,44nm,1.0s,mb5.2
RSSD Black Hills 67.47 49 eP P 19 10 04.7 -0.6
comp=Z,31nm,0.9s,mb5.1
RSSD Black Hills 67.47 49 eP P 19 10 04.7 -0.6
RSSD pmax pmax
comp=Z,31nm,1.0s,mb5.1
PFO Pinyon Flat Ob 67.51 65 P P 19 10 05.0 -0.7
comp=Z,119nm,0.8s,mb5.7,SNR=9.8
PFO Pinyon Flat Ob 67.51 65 eP P 19 10 04.8 -0.9
comp=Z,18nm,0.9s,mb4.8
PFO Pinyon Flat Ob 67.51 65 eP P 19 10 04.8 -0.9
PFO pmax pmax
comp=Z,18nm,0.9s,mb4.8
PFO Pinyon Flat Ob 67.51 65 LR LR 19 37 20.4
comp=Z,224nm,19.1s,baz=33,slow=34
PFO Pinyon Flat Ob 67.51 65 P P 19 10 05.1 -0.6
baz=67,SNR=11
BELC Belle Mtn. 67.53 64 P P 19 10 05.2 -0.7
baz=67,SNR=27
109C Camp Elliot, M 67.58 66 ⇓P P 19 10 05.7 -0.6
baz=67,SNR=5.2
U14A Mt Trumbull 67.61 60 P P 19 10 06.6 +0.2
baz=67,SNR=73
T15A Red Dirt Ranch 67.68 59 P P 19 10 07.1 +0.3
baz=67,SNR=12
NB2 NORSAR Subarra 67.79 340 P P 19 10 06.3 -0.7
comp=Z,108nm,0.7s,mb5.7,baz=28,slow=6.5
NB2 NORSAR Subarra 67.79 340 P P 19 10 06.3 -0.7
NB2 pmax pmax
comp=Z,108nm,0.7s,mb5.7
NOA NORSAR Array B 67.79 340 P P 19 10 06.5 -0.5
comp=Z,128nm,0.9s,mb5.7,baz=29,slow=6.4,SNR=134
NOA LR LR 19 41 54.8
comp=Z,327nm,19.9s,baz=5.0,slow=38
MDRS Chennai 67.92 266 eP P 19 10 07.5 -1.0
MDRS AMb AMB 19 10 11.2

comp=Z,112nm,0.9s,mb5.6
IRM Iron Mountain 67.94 63 P P 19 10 08.1 -0.3
baz=68,SNR=100
IZAR Zarasai 67.97 330 eP P 19 10 07.4 -0.8
IZAR AMb AMB 19 10 08.1
comp=Z,13nm,0.5s,mb5.0
MONP Monument Peak 68.01 65 P P 19 10 08.5 -0.4
baz=68,SNR=20
W13A Hualapai Mount 68.08 62 P P 19 10 09.3 0.0
baz=68,SNR=36
BC3 Big Chuckw Mtn 68.09 64 P P 19 10 08.7 -0.7
baz=68,SNR=55
BHJ Bhuj 68.11 281 eP P 19 10 11.1 +1.4
IDID Didziasalis 68.15 330 eP P 19 10 08.6 -0.7
IDID AMb AMB 19 10 09.4
comp=Z,13nm,0.7s,mb4.8
IIGN Ignalina 68.30 330 eP P 19 10 09.7 -0.6
IIGN AMb AMB 19 10 10.3
comp=Z,18nm,0.4s,mb5.2
WB2 Warramunga Arr 68.33 198 ⇓iP P 19 10 10.2 -0.6
WRA Warramunga Ar 68.33 198 P P 19 10 09.7 -1.1
comp=Z,12nm,0.7s,mb4.8,baz=18,slow=6.7,SNR=41
WRA pP pP 19 10 45.1 -1.6
comp=Z,3.6nm,0.5s,baz=15,slow=6.4,SNR=1.8
WRA PKPPKP 19 38 25.9
comp=Z,2.2nm,1.0s,baz=206,slow=3.2,SNR=6.8
SWSC Sam W. Stewart 68.36 65 P P 19 10 10.3 -0.8
baz=68,SNR=11
DVTC Desert V Tower 68.36 65 ⇓P P 19 10 10.6 -0.5
baz=68,SNR=8.9
MNK Minsk 68.41 329 ⇑eP P 19 10 09.0 -2.0
MNK pmax pmax
comp=Z,560nm,1.0s,mb6.2
MNK pmax pmax
comp=N,350nm,1.0s
MNK pmax pmax
comp=E,260nm,1.0s
X13A Yucca 68.45 62 P P 19 10 11.5 -0.1
baz=68,SNR=75
PDMCI Parker Dam,Lak 68.47 63 P P 19 10 11.4 -0.2
baz=68,SNR=36
AGMN Agassiz Refuge 68.48 42 eP P 19 10 10.0 -1.5
comp=E,41nm,0.9s,mb5.2
W14A Seligman 68.49 61 P P 19 10 12.2 +0.5
baz=68,SNR=103
POO Poona 68.49 274 eP P 19 10 12.1 +0.1
POO AMb AMB 19 10 14.2
comp=Z,176nm,1.1s,mb5.7
BORG Borgarnes 68.58 357 eP P 19 10 13.3 +1.5
comp=Z,564nm,1.8s,mb6.0
BORG Borgarnes 68.58 357 LR LR 19 38 06.0
comp=Z,333nm,21.0s,baz=355,slow=34
Y12C Blythe 68.60 63 ⇑P P 19 10 12.2 -0.3
baz=68,SNR=36
PHWY Pilot Hill 68.67 52 eP P 19 10 11.7 -1.2
PV10 Paradox Valley 68.70 56 eP P 19 10 13.3 +0.2
HYA Hoyanger 68.76 343 eP P 19 10 13.7 +0.7
comp=Z,355nm,1.0s,mb6.0
HYA Hoyanger 68.76 343 eP P 19 10 13.7 +0.7
HYA AMb AMB 19 10 16.7
comp=Z,355nm,1.0s,mb6.1
AFI Afiamalu 68.80 142 P P 19 10 12.5 -1.3
comp=Z,46nm,0.8s,mb5.2,baz=204,slow=9.7,SNR=6.7
AFI LR LR 19 35 39.7
comp=Z,411nm,19.2s,baz=78,slow=32
FITZ Fitzroy Crossi 68.82 207 eP P 19 10 14.4 +0.5
comp=Z,21nm,0.6s,mb5.0
FITZ Fitzroy Crossi 68.82 207 P P 19 10 14.0 +0.2
comp=Z,9.7nm,0.5s,mb4.8,baz=24,slow=7.2,SNR=13
GLA Glamis 68.89 64 P P 19 10 14.3 0.0
baz=69,SNR=35
Y13A Salome 68.98 63 P P 19 10 14.9 0.0
baz=69,SNR=14
W15A Williams 69.00 61 P P 19 10 15.7 +0.7
baz=69,SNR=24
KAD Karad 69.11 273 eP P 19 10 15.7 -0.1
KAD eP 19 10 16.2
KAD AMb AMB 19 10 18.0
comp=Z,177nm,0.9s,mb5.8
X14A Yava 69.11 62 P P 19 10 16.2 +0.5
baz=69,SNR=28
PV01 Paradox Valley 69.14 56 eP P 19 10 15.5 -0.3
SUE Sulen 69.14 344 eP P 19 10 15.5 +0.1
comp=Z,281nm,1.1s,mb5.9
SUE Sulen 69.14 344 eP P 19 10 15.5 +0.1
SUE AMb AMB 19 10 18.2
comp=Z,281nm,1.1s,mb5.9
KONO Kongsberg 69.40 341 eP P 19 10 17.3 +0.3
comp=Z,153nm,1.0s,mb5.7
KONO Kongsberg 69.40 341 eP P 19 10 17.0 0.0
KONO Kongsberg 69.40 341 c iP P 19 10 17.5 +0.5
Y14A Wickenburg 69.40 62 P P 19 10 17.4 0.0
baz=69,SNR=59
X15A Humboldt 69.49 61 P P 19 10 18.5 +0.5
baz=69,SNR=45
ASK Askoy 69.58 343 eP P 19 10 18.1 -0.1
comp=Z,468nm,1.2s,mb6.1
ASK Askoy 69.58 343 eP P 19 10 18.1 -0.1
ASK AMb AMB 19 10 21.1
comp=Z,468nm,1.2s,mb6.1
RUND Rundenannen 69.61 343 eP P 19 10 20.8 +2.5
comp=Z,352nm,0.9s,mb6.1
RUND Rundenannen 69.61 343 eP P 19 10 20.8 +2.5
RUND AMb AMB 19 10 23.3
comp=Z,352nm,0.9s,mb6.1
ISCO Idaho Springs 69.64 53 eP P 19 10 19.0 +0.2
comp=Z,33nm,0.9s,mb5.1
ISCO Idaho Springs 69.64 53 eP P 19 10 19.0 +0.2
ISCO pmax pmax
comp=Z,33nm,0.9s,mb5.1
BER Bergen 69.65 343 eP P 19 10 18.7 +0.2
comp=Z,352nm,1.0s,mb6.0
BER Bergen 69.65 343 eP P 19 10 18.7 +0.2
BER AMb AMB 19 10 20.8
comp=Z,352nm,1.1s,mb6.0
EGD Espegrend 69.77 343 eP P 19 10 19.5 +0.3
ODD1 Odda 69.81 342 eP P 19 10 19.0 -0.6
comp=Z,220nm,1.2s,mb5.8
ODD1 Odda 69.81 342 eP P 19 10 19.0 -0.6
ODD1 AMb AMB 19 10 21.5
comp=Z,220nm,1.2s,mb5.8
MVCO Mesa Verde 69.82 57 eP P 19 10 19.8 -0.2
comp=Z,46nm,0.8s,mb5.3
MVCO Mesa Verde 69.82 57 ⇑P P 19 10 19.9 0.0
baz=70
Z14A Wintersburg 69.83 63 P P 19 10 19.9 -0.2
baz=70,SNR=14
DZM Mont Dzumac 69.91 165 eP P 19 10 17.1 -3.4
DZM Mont Dzumac 69.91 165 P P 19 10 21.3 +0.8
comp=Z,59nm,0.9s,mb5.3,baz=37,slow=9.0,SNR=24
KIV Kislovodsk 70.02 313 P P 19 10 21.6 +0.5
comp=Z,2μm,1.0s,mb6.7,SNR=27
KIV Kislovodsk 70.02 313 eP P 19 10 21.1 0.0
comp=Z,401nm,1.0s,mb6.1
KIV Kislovodsk 70.02 313 eP P 19 10 21.1 0.0
KIV pmax pmax
comp=Z,331nm,0.9s,mb6.1
KIV MLR MLR
comp=Z,291nm,18.0s
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
KIV Kislovodsk 70.02 313 P P 19 10 23.4 +2.4
SNR=56
ZEI Tsey 70.26 312 eP P 19 10 22.2 -0.4
ZEI e 19 10 42.5
ZEI e *PP pP 19 10 55.9 -2.7
ZEI pmax pmax
comp=Z,113nm,0.9s,mb5.6
BLS5 Blasjo 70.30 342 eP P 19 10 23.6 +1.2
comp=Z,116nm,1.3s,mb5.5
BLS5 Blasjo 70.30 342 eP P 19 10 23.6 +1.2
BLS5 AMb AMB 19 10 26.3
comp=Z,116nm,1.3s,mb5.5

SUW Suwalki 70.42 331 *e*P P **P** 19 10 22.4 -0.9
DGRG David-gareji 70.44 310 P P **P** 19 10 23.9 +0.2
MTA Mtatsminda 70.57 311 P P **P** 19 10 24.8 +0.3
TBLG Delisi 70.57 311 P P **P** 19 10 25.0 +0.6
GOA Goa 70.61 272 *e*P P **P** 19 10 25.7 +0.6
GOA AMb AMB 19 10 27.7
comp=Z,121nm,1.1s,mb5.6
ONI Oni 70.62 312 P P **P** 19 10 25.2 +0.4
EYMN Ely 70.69 39 *e*P P **P** 19 10 23.8 -1.3
comp=Z,69nm,1.0s,mb5.3
GOR Gori 70.72 311 P P **P** 19 10 26.7 +1.4
115A Sonoran Desert 70.72 63 P P **P** 19 10 25.9 +0.3
baz=70,SNR=38
KMY Karmoy 70.74 342 *e*P P **P** 19 10 25.8 +0.6
comp=Z,299nm,1.3s,mb5.9
KMY Karmoy 70.74 342 *e*P P **P** 19 10 25.8 +0.6
KMY AMb AMB 19 10 27.0
comp=Z,299nm,1.3s,mb5.9
AKASG Malin Array Be 70.90 325 P P **P** 19 10 25.2 -1.1
comp=Z,27nm,0.3s,mb5.4,baz=35,slow=6.2,SNR=260
AKASG LR LR 19 41 55.6
comp=Z,570nm,19.8s,baz=50,slow=36
KIEV Kiev 70.91 325 *e*P P **P** 19 10 25.0 -1.4
comp=Z,135nm,1.0s,mb5.6
KIEV Kiev 70.91 325 *e*P P **P** 19 10 25.0 -1.4
KIEV pmax pmax
comp=Z,135nm,1.0s,mb5.6
SNART Snartemo 71.12 341 *e*P P **P** 19 10 27.5 0.0
SNART AMb AMB 19 10 30.4
comp=Z,252nm,1.2s,mb5.8
116A Eloy 71.14 62 P P **P** 19 10 28.1 0.0
baz=71,SNR=12
SDCO Great Sand Dun 71.14 55 *e*P P **P** 19 10 27.8 -0.2
comp=Z,24nm,0.9s,mb4.9
ECSD EROS,Sioux Fal 71.48 45 *e*P P **P** 19 10 28.7 -1.2
comp=Z,82nm,0.9s,mb5.5
216A Three Points, 71.67 63 ⇓P P **P** 19 10 31.2 -0.1
baz=71,SNR=12
MNGI Mangalore 71.72 270 *e*P P **P** 19 10 32.3 +0.5
MNGI AMb AMB 19 10 33.8
comp=Z,117nm,1.3s,mb5.5
SOC Sochi 71.75 315 *e*P P **P** 19 10 31.5 0.0
SOC *e**PP pP 19 11 06.3 -1.4
SOC *e* 19 13 11.4
SOC *e*S S 19 19 39.2 -0.1
SOC *e* 19 20 20.4
SOC pmax pmax
comp=Z,145nm,1.0s,mb5.7
PALK Pallekele 71.76 261 P P **P** 19 10 32.1 +0.1
comp=Z,615nm,1.0s,mb6.3,SNR=16
PALK Pallekele 71.76 261 *e*P P **P** 19 10 32.3 +0.3
comp=Z,103nm,0.9s,mb5.6
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
PALK Pallekele 71.76 261 P P **P** 19 10 33.2 +1.2
SNR=7.9
KOD Kodaikanal 71.83 266 *e*P P **P** 19 10 33.4 +0.9
KOD AMb AMB 19 10 35.0
comp=Z,146nm,1.0s,mb5.7
EIDS Eidsvold 71.91 181 *e*P P **P** 19 10 33.1 +0.6
comp=Z,18nm,0.9s,mb4.8
ANN Anapa 71.93 317 *e*P P **P** 19 10 32.1 -0.5
ANN *e**PP pP 19 11 03.4 -5.4
ANN *e*S S 19 19 44.7 +3.4
ANN pmax pmax
comp=Z,152nm,1.5s,mb5.5
ASAR Alice Springs 72.04 197 P P **P** 19 10 34.0 +0.7
comp=Z,15nm,0.7s,mb4.8,baz=14,slow=5.7,SNR=53
ASAR pP pP 19 11 08.9 -0.6
comp=Z,8.0nm,0.7s,baz=9.2,slow=4.7,SNR=3.0
BSD Bornholm Skovb 72.05 336⇑ *i*P P **P** 19 10 32.3 -0.8
BSD pmax pmax
comp=Z,210nm,1.0s,mb5.8
BSD Bornholm Skovb 72.05 336⇑ *i*P P **P** 19 10 32.3 -0.8
comp=Z,207nm,1.0s,mb5.8
217A Green Valley 72.22 62 P P **P** 19 10 34.5 0.0
baz=72,SNR=30
COP Copenhagen 72.23 337⇓ *i*P P **P** 19 10 34.4 +0.3
COP pmax pmax
comp=Z,190nm,1.0s,mb5.8
COP Copenhagen 72.23 337⇓ *i*P P **P** 19 10 34.4 +0.3
comp=Z,188nm,1.0s,mb5.8
DIGO Kars 72.24 310 *i* P P **P** 19 10 35.3 +0.8
MUD Monsted U'grnd 72.37 339 *i* P P **P** 19 10 35.2 +0.2
MUD pmax pmax
comp=Z,100nm,0.9s,mb5.5
MUD Monsted U'grnd 72.37 339 *i* P P **P** 19 10 35.2 +0.2
comp=Z,103nm,0.9s,mb5.6
218A Dragoon 72.55 62 P P **P** 19 10 36.8 +0.3
baz=72,SNR=45
LAZ Ladron 72.57 58 *e*P P **P** 19 10 36.8 +0.3
ANMO Albuquerque 72.58 57 *e*P P **P** 19 10 36.2 -0.4
comp=Z,24nm,0.8s,mb5.0
ANMO Albuquerque 72.58 57 *e*P P **P** 19 10 36.2 -0.4
ANMO pmax pmax
comp=Z,24nm,0.8s
ANMO Albuquerque 72.58 57 P P **P** 19 10 36.6 +0.1
comp=Z,23nm,0.8s,mb5.0,baz=315,slow=7.2,SNR=37
ANMO LR LR 19 39 16.3
comp=Z,137nm,21.1s,baz=193,slow=33
WAR Warsaw 72.61 331 *e*P P **P** 19 10 37.8 +1.3
DYDN Diyadin 72.71 310 *i* P P **P** 19 10 38.2 +0.9
LENM Lemitar 72.83 58 *e*P P **P** 19 10 38.3 +0.1
LPM Los Pinos Moun 72.93 58 *e*P P **P** 19 10 38.6 -0.1
318A Bisbee 72.96 62 P P **P** 19 10 39.0 +0.1
baz=73,SNR=49
RGN Rugen 72.99 336 *e*P P **P** 19 10 39.0 +0.4
comp=Z,289nm,1.0s,mb6.0
BNM Barren Site 73.05 58 *e*P P **P** 19 10 39.5 +0.1
COWI Conover 73.14 39 *e*P P **P** 19 10 38.3 -1.4
comp=Z,39nm,0.8s,mb5.2
MLA1 Latheron 73.17 347⇑ *e*P P **P** 19 10 39.6 -0.1
TUTA Tutak 73.27 310 *i* P P **P** 19 10 40.7 +0.1
SIM Simferopol' 73.34 319 *e*P P **P** 19 10 40.8 -0.1
SIM pmax pmax
comp=Z,65nm,0.9s,mb5.4
TRD Trivandrum 73.42 265 *e*P P **P** 19 10 42.2 +0.4
TRD AMb AMB 19 10 44.3
comp=Z,131nm,1.0s,mb5.6
319A Douglas 73.43 62 P P **P** 19 10 41.9 +0.2
baz=73,SNR=66
CBKS Cedar Bluff 73.52 51 *e*P P **P** 19 10 40.4 -1.6
comp=Z,19nm,0.8s,mb4.9
CBKS Cedar Bluff 73.52 51 *e*P P **P** 19 10 40.4 -1.7
CBKS pmax pmax
comp=Z,19nm,0.8s,mb4.9
SCHQ Schefferville 73.56 22 P P **P** 19 10 41.0 -1.0
comp=Z,16nm,0.7s,mb4.9,baz=347,slow=5.4,SNR=66
SCHQ LR LR 19 47 38.4
comp=Z,145nm,21.0s,baz=147,slow=39
LVV L'vov 73.58 328⇑ *i*P P **P** 19 10 42.0 -0.2
LVV *i* 19 13 28.2
LVV *e*S S 19 19 51.4 -8.4
LVV MLR MLR
comp=Z,500nm,20.0s
TVAN Van 73.60 309 *i* P P **P** 19 10 42.9 +0.4
ERZM Erzurum 73.65 311 *i* P P **P** 19 10 44.2 +1.4
MVH1 Achvaich 73.67 347⇑ *e*P P **P** 19 10 42.4 -0.2
MCD Coleburn Disti 73.84 346⇑ *e*P P **P** 19 10 43.4 -0.2
KIS Kishinev 74.01 323*α* *i*P P **P** 19 10 43.0 -1.8
KIS *i* 19 10 58.0
KIS *e* 19 11 10.0
KIS *e* 19 11 29.0
KIS pmax pmax
comp=Z,500nm,2.0s,mb5.9
KIS Kishinev 74.01 323⇑ *i*UNK 19 10 43.0
KIS XM 19 10 45.0
comp=Z,500nm,2.0s
HAKT HAKKARI 74.15 308 *i* P P **P** 19 10 45.5 -0.2
MDO Dochfour 74.16 347⇑ *e*P P **P** 19 10 45.3 -0.1
KWP Kalwaria 74.21 328 *e*P P **P** 19 10 46.3 +0.4
KWP Kalwaria 74.21 328 P P **P** 19 10 45.8 -0.1
KWP pmax pmax
comp=Z,460nm,1.1s,mb6.1
KWP Kalwaria 74.21 328⇑ *i*P P **P** 19 10 46.0 +0.1
KAC Achnashellach 74.24 347⇑ *e*P P **P** 19 10 45.4 -0.6
BSEG Bad Segeberg 74.35 337 *e*P P **P** 19 10 46.7 +0.1
BSEG pmax pmax
comp=Z,141nm,1.0s,mb5.7
BSEG Bad Segeberg 74.35 337 *e*P P **P** 19 10 46.7 +0.1
comp=Z,141nm,1.0s,mb5.7
KPL Plockton 74.45 347 *e*P P **P** 19 10 47.3 +0.2
KPL AMb AMB 19 10 49.3
comp=Z,219nm,1.2s,mb5.8
KSB Sheil Bridge 74.54 347⇑ *e*P P **P** 19 10 47.9 +0.2
KELT Kelkit 74.55 313 *i* P P **P** 19 10 44.8 -3.2
RUE Ruedersdorf 74.68 335 *e*P P **P** 19 10 48.4 -0.1
comp=Z,284nm,1.1s,mb5.8
OJC Ojcow 74.74 330 *e*P P **P** 19 10 48.8 -0.1
KAR1 Arisaig 74.88 347⇑ *e*P P **P** 19 10 49.8 +0.1
STHS Stebnicka Huta 74.92 329 *e*P P **P** 19 10 50.4 +0.5
comp=Z,124nm,1.0s,mb5.5
STHS Stebnicka Huta 74.92 329 *e*P P **P** 19 10 50.4 +0.5
STHS pmax pmax
comp=Z,124nm,1.0s,mb5.5
KSU1 Kansas State U 74.94 48 *e*P P **P** 19 10 48.3 -2.0
comp=Z,28nm,0.6s,mb5.1
BURAR Bucovina Array 74.94 326 P P **P** 19 10 50.2 +0.1
BURAR Bucovina Array 74.94 326⇑ *i*P P **P** 19 10 50.1 -0.1
KOLS Kolonicke sedl 74.95 328 *e*P P **P** 19 10 50.1 -0.1
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
BANOM Banah 75.04 292 P P **P** 19 10 51.9 +0.8
SNR=51
JFWS Jewell Farm 75.12 42 P P **P** 19 10 49.3 -2.0
comp=Z,14nm,0.7s,mb4.7
JFWS Jewell Farm 75.12 42 P P **P** 19 10 49.3 -2.0
JFWS pmax pmax
comp=Z,13nm,0.7s,mb4.7
EBH Black Hill 75.16 346 *e*P P **P** 19 10 51.1 -0.1
UZH Uzhgorod 75.20 328⇓ *i*P P **P** 19 10 52.0 +0.4
UZH *e* 19 11 00.0
UZH *e* pP 19 11 26.3 -1.7
NIE Niedzica 75.24 330 *e*P P **P** 19 10 52.7 +0.9
CRVS Cervenica-Dubn 75.27 329 *e*P P **P** 19 10 52.1 +0.1
ESY Stoneypath 75.33 345 *e*P P **P** 19 10 52.0 -0.1
KSP Ksiaz 75.35 333 *e*P P **P** 19 10 52.2 -0.2
EAB Aberfoyle 75.36 346⇑ *e*P P **P** 19 10 52.5 +0.2
RAC Raciborz 75.39 331 *e*P P **P** 19 10 52.9 +0.2
EDI Edinburgh 75.42 346 *e*P P **P** 19 10 52.3 -0.4
EDI AMb AMB 19 10 56.3
comp=Z,132nm,1.4s,mb5.4
TRPA Tarpa 75.53 328⇑ *i*P P **P** 19 10 53.7 +0.2
MNTX Corudas Mount 75.53 59 *e*P P **P** 19 10 53.3 -0.5
comp=Z,30nm,0.8s,mb5.0
EAU Auchinoon 75.54 346⇑ *e*P P **P** 19 10 53.4 +0.1
EBL Broad Law 75.54 346 *e*P P **P** 19 10 53.4 0.0
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
BIDO Bidbid 75.56 289 P P **P** 19 10 56.0 +2.0
SNR=6.6
OKC Ostrava-Krasne 75.62 331⇑ *i*P P **P** 19 10 54.1 +0.1
XSO Sourhope Farm 75.67 345⇑ *e*P P **P** 19 10 53.8 -0.3
BOYT Boyabat 75.71 316 *i* P P **P** 19 10 55.0 +0.4
UPC Upice 75.73 333⇑ *i*P P **P** 19 10 54.7 +0.1
PGBU Glenifferbraes 75.74 346 *e*P P **P** 19 10 54.9 +0.4
PGBU AMb AMB 19 10 59.2
comp=Z,273nm,1.2s,mb5.8
CFR Carcaliu 75.76 323 P P **P** 19 10 57.7 +2.8
DPC Dobruska-Polom 75.77 332⇑ *i*P P **P** 19 10 55.2 +0.4
VRI Vrincioaia 75.78 324 P P **P** 19 10 55.8 +0.8
VRI Vrincioaia 75.78 324⇑ *i*P P **P** 19 10 54.7 -0.2
PLOR Plostina 75.82 324 P P **P** 19 10 56.1 +0.9
PLOR Plostina 75.82 324⇑ *i*P P **P** 19 10 55.7 +0.5
MORC Moravsky Berou 75.87 331 *e*P P **P** 19 10 55.4 0.0
comp=Z,258nm,1.1s,mb5.8
MORC Moravsky Berou 75.87 331 *e*P P **P** 19 10 55.4 0.0
MORC pmax pmax
comp=Z,258nm,1.1s,mb5.8
MORC Moravsky Berou 75.87 331⇑ *i*P P **P** 19 10 55.6 +0.2
MARD Mardin 75.89 310 *i* P P **P** 19 10 56.1 +0.3
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
HATD Hatta, Dubai 75.92 291 P P **P** 19 10 57.0 +0.8
SNR=60
ELZG Elazig 75.93 312 *i* P P **P** 19 10 58.8 +2.8
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
SMDO Samad 75.94 289 P P **P** 19 10 58.0 +1.8
SNR=7.1
CLL Collm 75.94 335⇑ *i*P P **P** 19 10 55.4 -0.4
comp=Z,273nm,1.0s,mb5.8
CLL LR LR
comp=Z,700nm,17.6s
CLL Collm 75.94 335⇑ *i*P P **P** 19 10 55.4 -0.4
CLL pmax pmax
comp=Z,273nm,1.0s,mb5.8
CLL MLR MLR
comp=Z,700nm,17.6s
CLL Collm 75.94 335 *i*P P **P** 19 10 55.4 -0.4
comp=Z,273nm,1.0s,mb5.8
CLL Collm 75.94 335 *e*P P **P** 19 10 55.3 -0.5
comp=Z,271nm,1.0s,mb5.8
LIKS Likavka 75.97 330 *e*P P **P** 19 10 56.7 +0.7
comp=Z,172nm,1.0s,mb5.6
LIKS Likavka 75.97 330 *e*P P **P** 19 10 56.7 +0.7
LIKS pmax pmax
comp=Z,172nm,1.0s,mb5.6
LIKS Likavka 75.97 330 *e*P P **P** 19 10 56.7 +0.7
LIKS *e* 16 53 17.8
KECS Kecovo 75.97 329 *e*P P **P** 19 10 56.0 0.0
comp=Z,69nm,1.0s,mb5.2
KECS Kecovo 75.97 329 *e*P P **P** 19 10 56.0 0.0
KECS pmax pmax
comp=Z,69nm,1.0s,mb5.2
ESK Eskdalemuir 76.00 346 P P **P** 19 10 56.4 +0.4
comp=Z,354nm,0.9s,mb6.0,SNR=9.7
ESK Eskdalemuir 76.00 346 *e*P P **P** 19 10 55.5 -0.5
ESK AMb AMB 19 10 59.8
comp=Z,112nm,1.4s,mb5.3
ESK Eskdalemuir 76.00 346 *e*P P **P** 19 10 56.0 -0.1
comp=Z,244nm,1.6s,mb5.6
ESK Eskdalemuir 76.00 346 *e*P P **P** 19 10 56.0 0.0
ESK pmax pmax
comp=Z,244nm,1.6s,mb5.6
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
HOQ Hoqain 76.05 290 P P **P** 19 10 57.9 +1.0
SNR=17
BRG Berggiesshubel 76.05 334⇑ *i*P P **P** 19 10 56.0 -0.4
BRG 19 13 45.8
BRG pmax pmax
comp=Z,70nm,1.1s,mb5.2
BRG pmax pmax
comp=Z,16nm,1.2s,mb4.5
BRG Berggiesshubel 76.05 334 *e*P P **P** 19 10 56.1 -0.3
comp=Z,116nm,1.1s,mb5.4
BRG Berggiesshubel 76.05 334⇑ *i*P P **P** 19 10 56.0 -0.4
comp=Z,117nm,1.1s,mb5.4
BRG PP PP 19 13 45.8 -2.5
comp=Z,26nm,1.2s
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ASHO Ashiyiah 76.07 291 P P **P** 19 10 57.8 +0.8
SNR=44
ECK Cauldkaine Hil 76.12 345 *e*P P **P** 19 10 56.7 0.0
PVCC Panska Ves 76.16 333⇑ *i*P P **P** 19 10 57.2 +0.2
CLZ Clausthal 76.21 336 *e*P P **P** 19 10 57.7 +0.4
CLZ pmax pmax
comp=Z,333nm,1.1s,mb5.9
CLZ Clausthal 76.21 336 *e*P P **P** 19 10 57.7 +0.4
comp=Z,333nm,1.1s,mb5.9
BWH Wardlaw 76.21 346 *e*P P **P** 19 10 57.5 +0.3
BHH Howats Hill 76.22 345 *e*P P **P** 19 10 57.0 -0.2
TIRR Tirgusor 76.22 322 P P **P** 19 10 58.3 +0.9
TIRR Tirgusor 76.22 322⇑ *i*P P **P** 19 10 56.8 -0.7
HARR Harsova 76.24 322 P P **P** 19 10 58.1 +0.5
HARR Harsova 76.24 322⇑ *i*P P **P** 19 10 57.6 0.0
XAL Allendale 76.26 345⇑ *e*P P **P** 19 10 57.5 0.0
BALT Daday 76.33 317 *i* P P **P** 19 10 59.3 +1.1
MALT Malatya 76.36 312 *e*P P **P** 19 10 59.5 +1.2
comp=Z,163nm,1.1s,mb5.6
MALT Malatya 76.36 312 *e*P P **P** 19 10 59.5 +1.2
MALT pmax pmax
comp=Z,163nm,1.1s,mb5.6
MALT Malatya 76.36 312⇑ *i*P P **P** 19 10 59.7 +1.4
GMK Mull of Kintyr 76.36 347⇑ *e*P P **P** 19 10 58.1 0.0
CTKT Corum 76.38 316 *i* P P **P** 19 10 58.0 -0.5
JMDO Jabal Madar 76.39 288 P P **P** 19 11 00.1 +1.3
SNR=12
JMDO Jabal Madar 76.39 288 P P **P** 19 11 00.1 +1.3
SNR=12
JMDO Jabal Madar 76.39 288 P P **P** 19 11 00.1 +1.3
SNR=12
JMDO Jabal Madar 76.39 288 P P **P** 19 11 00.1 +1.3
SNR=12
JMDO Jabal Madar 76.39 288 P P **P** 19 11 00.1 +1.3
SNR=12
MLR Muntele Rosu 76.40 324 P P **P** 19 10 59.0 +0.5
MLR Muntele Rosu 76.40 324⇑ *i*P P **P** 19 10 59.0 +0.5
ISR Istrita 76.46 323⇓ *i*P P **P** 19 11 00.4 +1.6
IBBN Ibbenburen 76.48 338 *e*P P **P** 19 10 58.7 -0.1
VYHS Vyhne 76.54 330 *i* P P **P** 19 10 59.6 +0.4
comp=Z,118nm,1.2s,mb5.4
VYHS Vyhne 76.54 330 *i* P P **P** 19 10 59.6 +0.4
VYHS pmax pmax
comp=Z,118nm,1.2s,mb5.4
GCD Castle Douglas 76.56 346⇑ *e*P P **P** 19 10 59.4 +0.2
DRGR 76.58 327 P P **P** 19 10 59.8 +0.3
DRGR 76.58 327⇑ *i*P P **P** 19 10 59.5 0.0
VRAC Vranov 76.59 332 P P **P** 19 10 60.0 +0.5
VRAC Vranov 76.59 332⇑ *i*P P **P** 19 10 59.8 +0.4
PRA Prague 76.61 333 ⇑P P **P** 19 11 00.0 +0.5
KOLL Kolacno 76.61 330 *e*P P **P** 19 11 00.0 +0.4
PRU Pruhonice 76.64 333⇑ *i*P P **P** 19 11 00.0 +0.3
PSZ Piszkesteto 76.66 329 *e*P P **P** 19 11 00.2 +0.4
comp=Z,170nm,1.1s,mb5.6
PSZ Piszkesteto 76.66 329 *e*P P **P** 19 11 00.2 +0.3
PSZ pmax pmax
comp=Z,170nm,1.1s,mb5.6
PSZ Piszkesteto 76.66 329⇑ *e*P P **P** 19 11 00.5 +0.6
CKE Keswick 76.68 345 *e*P P **P** 19 11 00.4 +0.5
SNX Sinaia 76.68 324 ⇑P P **P** 19 11 01.0 +0.9
SNX Sinaia 76.68 324⇑ *i*P P **P** 19 11 01.0 +0.9
GAL1 Galloway 76.69 346 *e*P P **P** 19 10 59.8 -0.1
GAL1 AMb AMB 19 11 02.5
comp=Z,172nm,1.4s,mb5.5
GCL Cushendall 76.71 347⇑ *e*P P **P** 19 10 59.3 -0.7
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
BSY Bisya 76.71 289 P P **P** 19 11 01.8 +1.3
SNR=14
VOIR 76.80 325 P P **P** 19 11 01.5 +0.8
VOIR 76.80 325⇑ *i*P P **P** 19 11 01.2 +0.5
TANN Tannenbergstha 76.89 335 *e*P P **P** 19 11 01.3 +0.2
MOX Moxa 76.94 335 *e*P P **P** 19 11 01.2 -0.2
comp=Z,187nm,1.3s,mb5.6
MOX Moxa 76.94 335 *e*P P **P** 19 11 01.2 -0.2
MOX pmax pmax
comp=Z,187nm,1.3s,mb5.6
MOX Moxa 76.94 335 *i* P P **P** 19 11 01.4 0.0
comp=Z,195nm,1.2s,mb5.6
ARMA Armidale 76.94 180 *e*P P **P** 19 11 02.7 +1.3
TREC Trest 76.95 332⇑ *i*P P **P** 19 11 01.7 +0.2
MTUR Matau 76.97 324 ⇓P P **P** 19 11 02.6 +0.9
MTUR Matau 76.97 324⇓ *i*P P **P** 19 11 02.6 +0.9
SMOL Smolenice 77.00 331 *e*P P **P** 19 11 02.8 +1.0
HPK Haverah Park 77.02 344 *e*P P **P** 19 11 02.2 +0.4
HPK AMb AMB 19 11 04.2
comp=Z,292nm,1.2s,mb5.8
WMOK Wichita Mounta 77.05 53 *e*P P **P** 19 11 01.1 -1.3
comp=Z,24nm,0.9s,mb4.8
WMOK Wichita Mounta 77.05 53 *e*P P **P** 19 11 01.1 -1.2
WMOK pmax pmax
comp=Z,24nm,0.9s,mb4.8
NKC Novy Kostel 77.06 335⇑ *i*P P **P** 19 11 02.2 +0.1
ELDT Eldivan 77.13 316 *i* P P **P** 19 11 02.9 +0.3
MODS Modra-Piesok 77.17 331 *e*P P **P** 19 11 03.5 +0.8
BUC1 Bucharest 77.30 323 P P **P** 19 11 05.7 +2.2
BUD Budapest 77.34 329⇑ *e*P P **P** 19 11 04.3 +0.6
CDAG Cicekdag 77.36 315 *i* P P **P** 19 11 04.3 +0.3
MANZ Manzenberg 77.38 335 *e*P P **P** 19 11 03.9 0.0
ZST Bratislava 77.38 331 *e*P P **P** 19 11 05.0 +1.1
comp=Z,176nm,1.0s,mb5.7
ZST LR LR
comp=Z,500nm,19.3s
HDIL Hopedale 77.41 43 *e*P P **P** 19 11 03.0 -1.2
comp=Z,107nm,0.9s,mb5.5
LHO Holmfirth 77.45 344 *e*P P **P** 19 11 04.3 +0.1
GMM Mts of Mourne 77.49 347⇑ *e*P P **P** 19 11 04.4 0.0
GZT Gaziantep 77.53 312 *i* P P **P** 19 11 06.0 +1.1
ROTZ Rotzenmuhle 77.55 334 *e*P P **P** 19 11 05.1 +0.3
BRTR Keskin Array B 77.63 316 *i* P P **P** 19 11 05.9 +0.4
BRTR pmax pmax
comp=Z,117nm,1.0s
BRTR Keskin Array B 77.63 316 P P **P** 19 11 05.9 +0.4
comp=Z,117nm,1.0s,mb5.5,baz=60,slow=4.1,SNR=199
BRTR PP PP 19 14 02.0 +0.2

comp=Z,16nm,1.1s,baz=62,slow=5.2,SNR=4.4
KBI1 Birley Grange 77.67 344⇑ *eP* **P 19 11 05.8 +0.4**
KHC Kasperske Hory 77.70 333 *c iP* **P 19 11 05.9 +0.3**
KHC Kasperske Hory 77.70 333⇑ *iP* **P 19 11 06.1 +0.5**
KHC *ePCP* PcP 19 11 13.0 -2.2
KHC *epP* pP 19 11 40.0 -2.3
GZR Gura Zlata 77.73 326 P P 19 11 06.1 +0.2
GZR Gura Zlata 77.73 326⇓ *iP* **P 19 11 05.8 -0.1**
MIB Mutribah 77.77 301 *eP* **P 19 11 06.8 +0.4**
MIB AMb AMB 19 11 07.6
comp=Z,610nm,0.7s,mb6.3
WET Wettzell 77.90 334 *eP* **P 19 11 07.3 +0.5**
WET pmax pmax
comp=Z,230nm,1.1s,mb5.7
WET Wettzell 77.90 334 *eP* **P 19 11 07.3 +0.5**
comp=Z,230nm,1.1s,mb5.7
GRA1 Grafenberg Arr 77.90 335 *eP* **P 19 11 07.3 +0.5**
comp=Z,302nm,1.0s,mb5.9
GRF Grafenberg Arr 77.90 335 *eP* **P 19 11 07.3 +0.5**
GRF pmax pmax
comp=Z,302nm,1.0s,mb5.9
GRF Grafenberg Arr 77.90 335 *eP* **P 19 11 07.3 +0.5**
GRF pmax pmax
comp=Z,302nm,1.0s,mb5.9
GRF Grafenberg Arr 77.90 335 *eP* **P 19 11 07.3 +0.5**
comp=Z,302nm,1.0s,mb5.9
GRFO Grafenberg 77.90 335 *eP* **P 19 11 06.8 +0.1**
comp=Z,314nm,1.1s,mb5.9
GRFO Grafenberg 77.90 335 P **P 19 11 07.2 +0.4**
GRFO pmax pmax
comp=Z,310nm,1.1s,mb5.8
GEC2 GERESS Array S 77.91 333 *eP* **P 19 11 06.9 +0.1**
GEC2 pmax pmax
comp=Z,169nm,1.5s,mb5.5
GEC2 GERESS Array S 77.91 333 *eP* **P 19 11 06.9 +0.1**
comp=Z,169nm,1.5s,mb5.5
GERES GERESS Array B 77.91 333 P **P 19 11 06.9 +0.1**
GERES 19 14 02.8
GERES GERESS Array B 77.91 333 P **P 19 11 06.9 0.0**
comp=Z,34nm,0.6s,mb5.1,baz=38,slow=5.1,SNR=241
GERES PP PP 19 14 02.8 -1.1
comp=Z,4.3nm,1.0s,baz=50,slow=8.9,SNR=3.8
GERES LR LR 19 50 25.7
comp=Z,301nm,20.2s,baz=190,slow=39
ANTO Ankara 77.92 316 *eP* **P 19 11 07.7 +0.6**
comp=Z,242nm,1.1s,mb5.7
ANTO Ankara 77.92 316 *eP* **P 19 11 07.7 +0.7**
ANTO pmax pmax
comp=Z,242nm,1.1s,mb5.7
ANTO Ankara 77.92 316 P **P 19 11 08.2 +1.2**
SNR=33
ANTO Ankara 77.92 316 P **P 19 11 08.2 +1.2**
SNR=33
ANTO Ankara 77.92 316 P **P 19 11 08.2 +1.2**
SNR=33
ANTO Ankara 77.92 316 P **P 19 11 08.2 +1.2**
SNR=33
ANTO Ankara 77.92 316 P **P 19 11 08.2 +1.2**
SNR=33
ANTO Ankara 77.92 316⇑ *iP* **P 19 11 07.9 +0.8**
KWE Weaver Farm 77.95 344⇑ *eP* **P 19 11 06.5 -0.5**
LPIG La Paz 77.97 68 LR LR 19 38 04.0
comp=Z,182nm,19.7s,baz=256,slow=30
BZS Buzias 77.98 327 P **P 19 11 07.2 0.0**
BZS Buzias 77.98 327⇓ *iP* **P 19 11 06.9 -0.4**
KBD Kabd 78.02 300 *eP* **P 19 11 08.1 +0.3**
KBD AMb AMB 19 11 09.9
comp=Z,1μm,0.9s,mb6.5
CONA Conrad Observa 78.03 331 *i P* **P 19 11 08.3 +0.8**
comp=Z,329nm,1.3s,mb5.8,SNR=153
HENT Hendek 78.04 318 *i P* **P 19 11 07.1 -0.6**
CWF Charnwood Fore 78.11 344 *eP* **P 19 11 08.3 +0.5**
CWF AMb AMB 19 11 11.6
comp=Z,201nm,1.7s,mb5.5
TNS Taunus Mts 78.20 337 *eP* **P 19 11 08.6 +0.2**
TNS pmax pmax
comp=Z,167nm,0.9s,mb5.7
TNS Taunus Mts 78.20 337 *eP* **P 19 11 08.6 +0.2**
comp=Z,167nm,0.9s,mb5.7
QRN Al-Qurain 78.20 299 *eP* **P 19 11 09.1 +0.3**
QRN AMb AMB 19 11 10.1
comp=Z,413nm,0.4s,mb6.4
CRAR CRAIOVA 78.22 325 P **P 19 11 09.5 +0.9**
CRAR CRAIOVA 78.22 325⇑ *iP* **P 19 11 09.8 +1.2**
SZH Strazhica 78.23 323 *i P* **P 19 11 08.5 -0.2**
NAY Al-Naaiem 78.23 300 *eP* **P 19 11 09.4 +0.4**
NAY AMb AMB 19 11 10.9
comp=Z,356nm,1.2s,mb5.9
LTX Lajitas 78.26 60 *eP* **P 19 11 08.6 -0.5**
comp=Z,61nm,0.7s,mb5.3
LTX Lajitas 78.26 60 *eP* **P 19 11 08.6 -0.5**
LTX pmax pmax
comp=Z,61nm,0.7s,mb5.3
TXAR Lajitas Array 78.26 60 P **P 19 11 08.8 -0.3**
TXAR pP pP 19 11 42.0 -3.9
TXAR Lajitas Array 78.26 60 P **P 19 11 08.8 -0.3**
comp=Z,66nm,0.7s,mb5.3,baz=297,slow=4.3,SNR=469
TXAR pP pP 19 11 42.0 -3.9
comp=Z,21nm,0.7s,baz=298,slow=4.2,SNR=4.3
RDF Al-Radifah 78.29 300 *eP* **P 19 11 09.7 +0.4**
RDF AMb AMB 19 11 12.6
comp=Z,1μm,0.8s,mb6.6
SBD1 Bryn Du 78.32 345⇑ *eP* **P 19 11 09.6 +0.6**
BEBN Eben Emael 78.39 339 P **P 19 11 09.4 0.0**
comp=Z,90nm,1.3s,mb5.2
MEM Membach 78.48 339 P **P 19 11 10.0 +0.1**
comp=Z,168nm,1.2s,mb5.5
DLF Lyons Farm 78.49 347⇓ *iP* **P 19 11 09.8 -0.1**
DSB Dublin 78.52 347 *eP* **P 19 11 10.5 +0.4**
comp=Z,42nm,1.0s,mb5.0
TCR Colchester 78.52 342 *eP* **P 19 11 10.5 +0.4**
PVL Pavlikeni 78.52 323 *i P* **P 19 11 11.0 +0.7**
DCN Croghan 78.56 347⇓ *iP* **P 19 11 10.3 0.0**
PKSM Moragy 78.56 329 P **P 19 11 10.2 -0.3**
PKSM Moragy 78.56 329⇑ *iP* **P 19 11 09.8 -0.7**
MOA Molln 78.61 332⇑ *iP* **P 19 11 11.0 +0.3**
comp=Z,166nm,1.4s,mb5.5,SNR=71
JMB Yambol 78.62 322 *eP* **P 19 11 10.8 0.0**
JMB Yambol 78.62 322 *i P* **P 19 11 11.0 +0.2**
HLM1 Long Mynd 78.62 344 *eP* **P 19 11 10.4 -0.2**
TOD Tromm 78.66 336⇑ *eP* **P 19 11 10.7 -0.2**
UCC Uccle 78.71 340 P **P 19 11 11.3 +0.1**
comp=Z,110nm,1.5s,mb5.3
ARSA Arzberg 78.73 331 *i P* **P 19 11 11.8 +0.5**
comp=Z,233nm,1.4s,mb5.6,SNR=50
ABH Alteburg 78.75 337⇑ *eP* **P 19 11 11.3 -0.1**
BCLA Clavier 78.83 339 P **P 19 11 11.9 0.0**
comp=Z,131nm,1.3s,mb5.4
COBT Iskenderun 78.84 312 *i P* **P 19 11 12.6 +0.4**
STKA Stephens Creek 78.92 189⇓ *iP* **P 19 11 12.6 +0.2**
comp=Z,11nm,1.3s,mb4.3
STKA Stephens Creek 78.92 189 P **P 19 11 12.3 0.0**
comp=Z,5.2nm,0.5s,mb4.4,baz=356,slow=5.3,SNR=11
STKA LR LR 19 45 27.0
comp=Z,210nm,20.9s,baz=16,slow=35
SSW Stow on the Wo 78.95 344⇑ *eP* **P 19 11 13.3 +0.8**
SKP1 Kophill 78.98 343⇑ *eP* **P 19 11 13.1 +0.5**
SNF Seneffe 79.00 340 P **P 19 11 13.0 +0.2**
comp=Z,86nm,1.5s,mb5.2
RUP Ruppelstein 79.04 338 *eP* **P 19 11 13.3 +0.3**
MCH1 Michaelchurch 79.14 344 *eP* **P 19 11 13.9 +0.4**
MCH1 AMb AMB 19 11 16.6
comp=Z,186nm,1.5s,mb5.5
TFO1 Folkestone 79.15 342 *eP* **P 19 11 14.0 +0.4**
GIVF Givet 79.24 339 *eP* **P 19 11 13.8 -0.3**
comp=Z,434nm,1.4s,mb5.6
GIVF Givet 79.24 339 *eP* **P 19 11 13.8 -0.3**
comp=Z,217nm,1.4s,mb5.6
GIVF Givet 79.24 339 *eP* **P 19 11 13.8 -0.3**
GIVF pmax pmax
comp=Z,217nm,1.4s,mb5.6
FUR Furstenfeldbru 79.25 334 *eP* **P 19 11 14.5 +0.3**
FUR pmax pmax
comp=Z,321nm,1.1s,mb5.9
FUR Furstenfeldbru 79.25 334 *eP* **P 19 11 14.5 +0.3**
comp=Z,321nm,1.1s,mb5.9
DOU Dourbes 79.30 339 P **P 19 11 14.6 +0.2**
comp=Z,68nm,1.5s,mb5.1
STU Stuttgart 79.31 336 *eP* **P 19 11 14.6 +0.1**
comp=Z,225nm,1.2s,mb5.7
WLF Walferdange 79.31 338 *eP* **P 19 11 14.5 +0.1**
comp=Z,96nm,1.2s,mb5.3
WLF Walferdange 79.31 338 *eP* **P 19 11 14.5 0.0**
WLF pmax pmax
comp=Z,96nm,1.2s,mb5.3
WLF Walferdange 79.31 338 P **P 19 11 15.1 +0.6**
comp=Z,78nm,1.9s,mb5.0
WLF Walferdange 79.31 338 *eP* **P 19 11 14.9 +0.4**
SWN1 Swindon 79.38 344 *eP* **P 19 11 15.2 +0.5**
SWN1 AMb AMB 19 11 18.1
comp=Z,533nm,1.2s,mb6.0
DIM Dimitrovgrad 79.40 322 *i P* **P 19 11 15.0 -0.1**
PERS Pernice 79.40 331 *i P* **P 19 11 15.2 +0.2**
GROS Grobnik 79.43 331 *i P* **P 19 11 15.2 0.0**
BAIF Baives 79.43 339 *eP* **P 19 11 15.0 -0.1**
comp=Z,331nm,1.3s,mb5.5
BAIF Baives 79.43 339 *eP* **P 19 11 15.0 -0.1**
comp=Z,166nm,1.3s,mb5.5
BAIF Baives 79.43 339 *eP* **P 19 11 15.0 -0.1**
BAIF pmax pmax
comp=Z,166nm,1.3s,mb5.5
MENF Mencas 79.45 341 *eP* **P 19 11 15.0 -0.2**
HGH Gray Hill 79.45 344⇑ *eP* **P 19 11 15.7 +0.5**
WOL Wolverton 79.45 343 *eP* **P 19 11 15.2 0.0**
WOL AMb AMB 19 11 17.4
comp=Z,199nm,1.2s,mb5.6
LANF Langenberg 79.50 337⇑ *eP* **P 19 11 15.9 +0.4**
PGB Panagyurishte 79.55 323 *i P* **P 19 11 16.5 +0.6**
KBA Koelnbreinsper 79.59 333⇑ *iP* **P 19 11 17.1 +1.1**
comp=Z,475nm,1.3s,mb6.0,SNR=119
KBA Koelnbreinsper 79.59 333⇑ *iP* **P 19 11 17.1 +1.1**
KBA pmax pmax
comp=Z,475nm,1.3s,mb6.0
ZAVS Zavodnje 79.61 331 *eP* **P 19 11 15.7 -0.4**
JCT Junction City 79.66 56 *eP* **P 19 11 15.5 -1.3**
comp=Z,47nm,0.8s,mb5.2
JCT Junction City 79.66 56 *eP* **P 19 11 15.5 -1.2**
JCT pmax pmax
comp=Z,47nm,0.8s,mb5.2
OBKA Obir 79.70 331 *i P* **P 19 11 16.7 +0.1**
comp=Z,224nm,1.9s,mb5.5,SNR=21
PLD Plovdiv 79.70 323 *i P* **P 19 11 18.0 +1.3**
KDZ Kurdzhali 79.78 322 *i P* **P 19 11 17.6 +0.4**
SART Tekirdag 79.81 320 *i P* **P 19 11 17.0 -0.3**
CESS Cesta pri Krsk 79.87 331 *i P* **P 19 11 17.4 -0.1**
DIVS Divcibare 79.88 327 *eP* **P 19 11 17.4 -0.3**
MYKA Terra Mystica 79.89 332⇑ *iP* **P 19 11 17.5 -0.2**
comp=Z,853nm,1.9s,mb6.1
VTS Vitosha 79.91 324 *eP* **P 19 11 18.3 +0.4**
VTS Vitosha 79.91 334⇑ *iP* **P 19 11 18.2 +0.4**
WATA Walderalm 79.91 334⇑ *iP* **P 19 11 18.4 +0.6**
comp=Z,262nm,1.1s,mb5.8,SNR=74
WATA Walderalm 79.91 334⇑ *iP* **P 19 11 18.4 +0.7**
WATA pmax pmax
comp=Z,262nm,1.1s,mb5.8
LEGS Legarje 79.94 331 *i P* **P 19 11 17.6 -0.3**
PDKS Podkum 79.95 331 *i P* **P 19 11 17.7 -0.3**
BFO Black Forest 79.95 336 P **P 19 11 18.7 +0.7**
comp=Z,858nm,1.1s,mb6.3,SNR=56
BFO Black Forest 79.95 336 *eP* **P 19 11 18.0 0.0**
WTTA Wattenberg 79.95 334 *i P* **P 19 11 18.8 +0.8**
comp=Z,449nm,1.2s,mb6.0,SNR=125
WTTA Wattenberg 79.95 334 *i P* **P 19 11 18.8 +0.8**
WTTA pmax pmax
comp=Z,449nm,1.2s,mb6.0
MIAR Mount Ida 79.98 50 *eP* **P 19 11 17.6 -0.8**
comp=Z,40nm,0.9s,mb5.0
MIAR Mount Ida 79.98 50 *eP* **P 19 11 17.6 -0.8**
MIAR pmax pmax
comp=Z,40nm,0.9s,mb5.0
SISC Sisak 80.00 330 P **P 19 11 18.6 +0.4**
CRES Cresnjev 80.00 331 *i P* **P 19 11 18.0 -0.3**
RETA Reutte 80.02 334 *i P* **P 19 11 18.8 +0.5**
comp=Z,225nm,1.3s,mb5.6,SNR=50
SPAK Spaichingen-Ko 80.03 336⇑ *eP* **P 19 11 18.5 +0.1**
MOTA Moosalm 80.04 334 *i P* **P 19 11 18.9 +0.5**
comp=Z,292nm,1.1s,mb5.8,SNR=128
MOTA Moosalm 80.04 334 *i P* **P 19 11 19.0 +0.5**
MOTA pmax pmax
comp=Z,292nm,1.1s,mb5.8
RZN Rozhen 80.04 323 *i P* **P 19 11 19.0 +0.4**
GDZ Gediz 80.08 318 *i P* **P 19 11 18.3 -0.5**
LJU Ljubljana 80.12 331 *eP* **P 19 11 18.8 -0.1**
SQTA Sankt Quirin 80.12 334 *i P* **P 19 11 19.6 +0.7**
comp=Z,225nm,1.1s,mb5.7,SNR=72
SQTA Sankt Quirin 80.12 334 *i P* **P 19 11 19.6 +0.7**
comp=Z,225nm,1.1s,mb5.7
SQTA Sankt Quirin 80.12 334 *i P* **P 19 11 19.6 +0.7**
SQTA pmax pmax
comp=Z,225nm,1.1s,mb5.7
ALN Alexandroupoli 80.13 321 *eP* **P 19 11 19.0 -0.1**
ABTA Abfaltersbach 80.14 333⇑ *iP* **P 19 11 19.1 +0.1**
comp=Z,137nm,1.3s,mb5.4,SNR=33
RDO Rodhopi 80.15 322 *eP* **P 19 11 19.5 +0.4**
LONY Lake Ozonia 80.16 32 *eP* **P 19 11 17.3 -1.9**
comp=Z,6.1nm,0.8s,mb4.3
CDF Champ du Feu 80.17 337 *eP* **P 19 11 19.1 0.0**
comp=Z,490nm,1.1s,mb5.7
CDF Champ du Feu 80.17 337 *eP* **P 19 11 19.1 0.0**
comp=Z,245nm,1.1s,mb5.8
CDF Champ du Feu 80.17 337 *eP* **P 19 11 19.1 0.0**
CDF pmax pmax
comp=Z,245nm,1.1s,mb5.8
HEX Exmoor 80.18 345 *eP* **P 19 11 18.9 -0.2**
PTCC Patocco-Chiusa 80.18 332 *i Pu* **P 19 11 18.6 -0.6**
comp=Z,231nm,1.5s,mb5.6
BTOK Tokmak 80.19 319 *i P* **P 19 11 19.9 +0.4**
FORT Forrest 80.19 201 *eP* **P 19 11 20.1 +0.8**
comp=Z,65nm,0.7s,mb5.4
CADS Cadrg 80.22 332 *i P* **P 19 11 18.3 -1.1**
ERPA Erie 80.22 36 *eP* **P 19 11 18.8 -0.8**
comp=Z,26nm,0.5s,mb5.1
VISS Visnje 80.23 331 *i P* **P 19 11 19.0 -0.5**
GMNA Gemona 80.33 332 *i Pu* **P 19 11 19.3 -0.7**
comp=Z,408nm,0.8s,mb6.1
VOY Vojsko 80.34 332 *eP* **P 19 11 19.1 -1.0**
VOY *e* 19 11 29.3
BOJS Bojanci 80.35 331 *i P* **P 19 11 19.9 -0.3**
ECH Echery 80.38 337⇑ *eP* **P 19 11 20.4 +0.2**
JAVS Javornik 80.40 331 *i P* **P 19 11 19.6 -0.8**
CEY Cerknica 80.42 331 *i P* **P 19 11 20.0 -0.5**
FETA Feichten 80.44 334 *i P* **P 19 11 21.2 +0.6**
comp=Z,157nm,1.2s,mb5.5,SNR=65
DAVA Damuels 80.46 335⇓ *iP* **P 19 11 21.1 +0.4**
comp=Z,253nm,1.3s,mb5.7,SNR=30
FELD Feldberg im Sc 80.46 336⇑ *eP* **P 19 11 20.6 -0.1**
ACSO Alum Creek Sta 80.53 39 *eP* **P 19 11 20.5 -0.7**
comp=Z,26nm,0.6s,mb5.0
MMB Musmiste 80.53 323 *i P* **P 19 11 21.7 +0.5**
KKB Krupnik 80.56 324 *i P* **P 19 11 21.7 +0.3**
ISP Isparta 80.61 317 *eP* **P 19 11 21.6 0.0**
ISP Isparta 80.61 317 *c iP* **P 19 11 21.1 -0.6**
ISP Isparta 80.61 317⇑ *iP* **P 19 11 21.6 -0.1**
MEZF Maizieres J'vi 80.67 338 *eP* **P 19 11 22.0 +0.2**
comp=Z,682nm,1.3s,mb5.8
MEZF Maizieres J'vi 80.67 338 *eP* **P 19 11 22.0 +0.2**
comp=Z,682nm,1.3s,mb6.1
WCI Wyandotte Cave 80.67 43 *eP* **P 19 11 21.0 -1.0**
comp=Z,60nm,1.1s,mb5.1
WCI Wyandotte Cave 80.67 43 P **P 19 11 21.0 -1.0**
WCI pmax pmax
comp=Z,60nm,1.1s,mb5.1
NVR Nevrokopi 80.68 323 *eP* **P 19 11 22.2 +0.2**
THEF They Montfort 80.68 338⇑ *eP* **P 19 11 22.1 +0.3**
MOF Molkenrain 80.72 337⇑ *eP* **P 19 11 22.1 0.0**
HWQ Hawqa 80.73 311 *eP* **P 19 11 22.5 +0.1**
PLE Pljevlja 80.76 327⇑ *iP* **P 19 11 22.9 +0.5**
APPI Appiano 80.78 334 *i Pu* **P 19 11 21.7 -0.7**
HAU Haudompre 80.79 337 *eP* **P 19 11 22.2 -0.2**
comp=Z,201nm,1.1s,mb5.4
HAU *e* MLR MLR
comp=Z,537nm,22.8s
HAU Haudompre 80.79 337 *eP* **P 19 11 22.2 -0.2**
comp=Z,101nm,1.1s,mb5.4
HAU LR LR
comp=Z,540nm,22.8s
HAU Haudompre 80.79 337 *eP* **P 19 11 22.2 -0.2**
HAU pmax pmax
comp=Z,101nm,1.1s,mb5.4
HAU MLR MLR
comp=Z,540nm,22.8s
DYA Yadsworthy 80.81 345 *eP* **P 19 11 22.6 +0.1**
DYA AMb AMB 19 11 27.3
comp=Z,229nm,1.6s,mb5.6
HINF Hinteralfeld 80.83 337 *eP* **P 19 11 22.2 -0.4**
comp=Z,171nm,1.2s,mb5.3
HINF Hinteralfeld 80.83 337 *eP* **P 19 11 22.2 -0.4**
comp=Z,86nm,1.2s,mb5.2
HINF Hinteralfeld 80.83 337 *eP* **P 19 11 22.2 -0.4**
HINF pmax pmax
comp=Z,86nm,1.2s,mb5.3
NCB Newcomb 80.85 32 *eP* **P 19 11 21.6 -1.2**
comp=Z,21nm,1.0s,mb4.7
IVA Berane 80.97 326⇑ *iP* **P 19 11 23.4 -0.1**
BBS Basel-Blauen 80.97 336 *eP* **P 19 11 23.6 +0.2**
SRS Serrai 80.98 323 *eP* **P 19 11 23.4 -0.2**
BOZC Bozcaada 81.00 321 *i P* **P 19 11 22.5 -1.2**
AKHS Akhisar 81.01 319 *i P* **P 19 11 23.4 -0.4**
CTI Castel Tesino 81.04 333 *i Pu* **P 19 11 23.1 -0.7**
UPM Unac-Piva 81.05 327⇑ *iP* **P 19 11 23.1 -0.8**
CSA1 St Austell 81.06 345⇑ *eP* **P 19 11 23.5 -0.3**
STIP Stip 81.07 324 *eP* **P 19 11 23.5 -0.6**
STIP Stip 81.07 324⇑ *iP* **P 19 11 23.5 -0.6**
STIP Stip 81.07 324⇑ *iP* **P 19 11 23.5 -0.6**
SKO Skopje 81.13 325 *eP* **P 19 11 25.4 +1.0**
SKO Skopje 81.13 325⇑ *iP* **P 19 11 25.1 +0.8**
SKO Skopje 81.13 325⇑ *iP* **P 19 11 25.2 +0.9**
PHNC Paralimni 81.15 313 P **P 19 11 28.3 +3.7**
comp=Z,1.2nm,0.7s
AYVA Ayvalik 81.16 320 *i P* **P 19 11 22.9 -1.7**
PVY Plav 81.17 326⇑ *iP* **P 19 11 23.7 -0.9**
BHL Bhannes 81.18 311 *eP* **P 19 11 25.1 +0.3**
VAY Valandovo 81.23 324 *eP* **P 19 11 24.7 -0.2**
VAY Valandovo 81.23 324⇑ *iP* **P 19 11 24.7 -0.2**
VAY Valandovo 81.23 324⇑ *iP* **P 19 11 24.7 -0.2**
KNT Kendrikon 81.23 323 *eP* **P 19 11 25.0 0.0**
LOMF Lomont 81.26 337⇑ *eP* **P 19 11 25.2 +0.3**
NVLJ Novalja 81.31 330 P **P 19 11 23.7 -1.5**
LIA Limnos Island 81.33 321 *eP* **P 19 11 28.5 +3.0**
SOH Sokhos 81.33 323 *eP* **P 19 11 25.0 -0.5**
TUE Stuetta 81.35 335 P **P 19 11 26.3 +0.9**
NKY Niksic 81.36 327⇑ *iP* **P 19 11 24.3 -1.2**
CMA1 Manaccan 81.36 345 *eP* **P 19 11 25.2 -0.3**
MABI Malga Bissina 81.38 334 P **P 19 11 25.3 -0.3**
PRK Paraskevi 81.40 320 *eP* **P 19 11 25.6 -0.2**
DNZL Cakiroluk 81.42 318 *i P* **P 19 11 25.5 -0.5**
RCY Rachaya 81.42 311 *eP* **P 19 11 26.2 +0.1**
MAMC Mammari 81.42 313⇑ *iP* **P 19 11 26.7 +0.7**
BRY Bratogost 81.45 327⇑ *iP* **P 19 11 25.0 -1.0**
OUR Ouranopolis 81.48 322 *eP* **P 19 11 26.1 -0.1**
CSS Prodhromos 81.53 313 P **P 19 11 27.0 +0.4**
comp=Z,2.2nm,0.9s
CSS Prodhromos 81.53 313 *eP* **P 19 11 26.9 +0.3**
GOLH Golhisar 81.54 317 *i P* **P 19 11 25.5 -1.1**
NATX Nacogdoches 81.55 52 *eP* **P 19 11 26.6 -0.2**
comp=Z,107nm,0.9s,mb5.5
ACCN Adirondack Com 81.56 32 *eP* **P 19 11 25.6 -1.0**
comp=Z,51nm,1.4s,mb5.0
TTG Podgorica 81.59 326⇑ *iP* **P 19 11 26.1 -0.7**
GRG Griva 81.61 324 *eP* **P 19 11 26.7 -0.2**
HORT Hortiatis 81.62 323 *eP* **P 19 11 26.4 -0.6**
KDAG Bornova 81.65 319 *i P* **P 19 11 26.0 -1.2**
THE Thessaloniki 81.65 323 *eP* **P 19 11 26.6 -0.5**
PLG Polygyros 81.67 323 *eP* **P 19 11 26.9 -0.3**
PLG Polygyros 81.67 323 *eP* **P 19 11 26.9 -0.3**
FLN La Foliniere 81.72 342 *eP* **P 19 11 27.1 -0.2**
comp=Z,296nm,1.3s,mb5.5
FLN *e* MLR MLR
comp=Z,505nm,21.0s
FLN La Foliniere 81.72 342 *eP* **P 19 11 27.1 -0.2**
comp=Z,148nm,1.3s,mb5.5
FLN LR LR
comp=Z,510nm,21.0s
FLN La Foliniere 81.72 342 *eP* **P 19 11 27.1 -0.2**
FLN pmax pmax
comp=Z,148nm,1.3s,mb5.5
FLN MLR MLR
comp=Z,510nm,21.0s
KRUS Krusevo 81.72 325⇑ *iP* **P 19 11 28.0 +0.5**
KRUS Krusevo 81.72 325⇑ *iP* **P 19 11 28.0 +0.5**
ALFC Alevga 81.74 314 P **P 19 11 27.3 -0.4**
comp=Z,3.1nm,0.8s,mb4.0
BLCB Balcova 81.76 319 *eP* **P 19 11 27.6 -0.1**
STON Ston 81.79 328 P **P 19 11 26.2 -1.6**
LDF La Druitiere 81.80 342 *eP* **P 19 11 27.7 0.0**
comp=Z,247nm,1.4s,mb5.3
LDF La Druitiere 81.80 342 *eP* **P 19 11 27.7 0.0**
comp=Z,123nm,1.4s,mb5.3
LDF La Druitiere 81.80 342 *eP* **P 19 11 27.7 0.0**
LDF pmax pmax
comp=Z,123nm,1.4s,mb5.3
BUM Brajici-Budva 81.83 327⇑ *iP* **P 19 11 27.4 -0.7**
HCY Herceg Novi 81.86 327⇑ *iP* **P 19 11 27.1 -1.1**
SZAC Souni-Zanaja 81.92 313 P **P 19 11 28.9 +0.3**
PMOR Pomariorio Ree 81.93 122 *eP* **P 19 11 28.7 -0.1**
comp=Z,66nm,1.0s,mb5.2
PAIG Paliouri 81.94 322 *eP* **P 19 11 28.3 -0.4**
AKMC Akamas 81.98 314 P **P 19 11 28.4 -0.6**
URLA Izmir 81.98 320 *i P* **P 19 11 27.6 -1.3**
BIA Tinaia 81.99 324 *eP* **P 19 11 28.0 -0.9**
ULC Ulcinj 81.99 326⇑ *iP* **P 19 11 28.3 -0.6**
PPCY Paphos 82.08 314⇑ P **P 19 11 29.3 -0.2**
LOR Lormes 82.11 339 *eP* **P 19 11 29.4 0.0**
comp=Z,416nm,1.3s,mb5.6
LOR *e* MLR MLR
comp=Z,731nm,21.2s
LOR Lormes 82.11 339 *eP* **P 19 11 29.4 0.0**
comp=Z,208nm,1.3s,mb5.6
LOR LR LR
comp=Z,730nm,21.3s
LOR Lormes 82.11 339 *eP* **P 19 11 29.4 0.0**
LOR pmax pmax
comp=Z,208nm,1.3s,mb5.6
LOR MLR MLR
comp=Z,730nm,21.3s
OHR Ohrid 82.12 325 *eP* **P 19 11 28.5 -1.1**
OHR Ohrid 82.12 325⇑ *iP* **P 19 11 28.7 -0.9**
OHR Ohrid 82.12 325⇑ *iP* **P 19 11 28.7 -0.9**
OXF Oxford 82.14 47 *eP* **P 19 11 28.7 -1.1**
comp=Z,82nm,1.0s,mb5.3
OXF Oxford 82.14 47 *eP* **P 19 11 28.7 -1.1**
OXF pmax pmax
comp=Z,82nm,1.0s,mb5.3
CABF La Chapelle 82.14 337 *eP* **P 19 11 29.6 0.0**
comp=Z,141nm,1.1s,mb5.2
CABF La Chapelle 82.14 337 *eP* **P 19 11 29.6 0.0**
comp=Z,70nm,1.1s,mb5.2
CABF La Chapelle 82.14 337 *eP* **P 19 11 29.6 0.0**
CABF pmax pmax
comp=Z,70nm,1.1s,mb5.2
GRR Gorron 82.15 342 *eP* **P 19 11 29.7 +0.1**
comp=Z,414nm,1.3s,mb5.6
GRR Gorron 82.15 342 *eP* **P 19 11 29.7 +0.1**
comp=Z,207nm,1.3s,mb5.6
GRR Gorron 82.15 342 *eP* **P 19 11 29.7 +0.1**
GRR pmax pmax
comp=Z,207nm,1.3s,mb5.6
FNA Florina 82.17 324 *eP* **P 19 11 29.3 -0.5**
CHOS Chios island 82.20 320 *eP* **P 19 11 30.1 +0.1**
VAH Vaihoa 82.27 122 *eP* **P 19 11 30.4 -0.2**
comp=Z,37nm,0.9s,mb5.0
TIR Tirana 82.28 326 *eP* **P 19 11 30.3 -0.1**
LIT Litokhoron 82.29 323 *eP* **P 19 11 29.5 -1.0**
SSPA Standing Stone 82.32 36 *eP* **P 19 11 29.6 -1.0**
comp=Z,18nm,0.9s,mb4.7
SSF Saint Saulge 82.39 339 *eP* **P 19 11 30.9 0.0**
comp=Z,133nm,1.0s,mb5.2
SSF Saint Saulge 82.39 339 *eP* **P 19 11 30.9 0.0**
comp=Z,67nm,1.0s,mb5.2
SSF Saint Saulge 82.39 339 *eP* **P 19 11 30.9 0.0**
SSF pmax pmax
comp=Z,67nm,1.0s,mb5.2
WHFO Wadi Hawf 82.40 288 P **P 19 11 31.8 +0.4**
SNR=24
WHFO Wadi Hawf 82.40 288 P **P 19 11 31.8 +0.4**
SNR=24
WHFO Wadi Hawf 82.40 288 P **P 19 11 31.8 +0.4**
SNR=24
WHFO Wadi Hawf 82.40 288 P **P 19 11 31.8 +0.4**
SNR=24
WHFO Wadi Hawf 82.40 288 P **P 19 11 31.8 +0.4**
SNR=24
HYF Humbligny 82.41 339 *eP* **P 19 11 31.5 +0.5**
KZN Kozani 82.41 324 *eP* **P 19 11 30.3 -0.8**
RBK Rabkut 82.42 287 P **P 19 11 32.4 +0.9**
SNR=6.4
RBK Rabkut 82.42 287 P **P 19 11 32.4 +0.9**
SNR=6.4
RBK Rabkut 82.42 287 P **P 19 11 32.4 +0.9**
SNR=6.4
RBK Rabkut 82.42 287 P **P 19 11 32.4 +0.9**
SNR=6.4
RBK Rabkut 82.42 287 P **P 19 11 32.4 +0.9**
SNR=6.4

PLAL **Pickwick Lake** 82.42 46 *e*P P 19 11 29.8 -1.4
comp=Z,31nm,0.9s,mb4.9
AOS **Alonnisos** 82.49 322 *e*P P 19 11 31.5 -0.1
XOR **Xorichti** 82.62 322 *e*P P 19 11 31.5 -0.7
SGMF **Saint Gilles** 82.63 343 *e*P P 19 11 32.0 -0.1
comp=Z,54nm,0.6s,mb5.2
SGMF **Saint Gilles** 82.63 343 *e*P P 19 11 32.0 -0.1
comp=Z,27nm,0.6s,mb5.2
SGMF **Saint Gilles** 82.63 343 *e*P P 19 11 32.0 -0.1
SGMF pmax pmax
comp=Z,27nm,0.6s,mb5.2
NEO **Neokhori** 82.66 322 *e*P P 19 11 31.4 -1.0
BDRM **Kayabasi** 82.66 318 *i*P P 19 11 31.7 -0.8
AVF **Avril sur Loir** 82.68 339 *e*P P 19 11 32.5 +0.1
comp=Z,691nm,1.5s,mb5.9
AVF **Avril sur Loir** 82.68 339 *e*P P 19 11 32.5 +0.1
comp=Z,346nm,1.5s,mb5.9
AVF **Avril sur Loir** 82.68 339 *e*P P 19 11 32.5 +0.1
AVF pmax pmax
comp=Z,346nm,1.5s,mb5.9
ROSF **Rostrenen** 82.69 343 *e*P P 19 11 32.3 -0.1
comp=Z,140nm,1.0s,mb5.4
ROSF **Rostrenen** 82.69 343 *e*P P 19 11 32.3 -0.1
comp=Z,70nm,1.0s,mb5.3
ROSF **Rostrenen** 82.69 343 *e*P P 19 11 32.3 -0.1
ROSF pmax pmax
comp=Z,70nm,1.0s,mb5.3
SMF **Signal de Mont** 82.69 338 *e*P P 19 11 32.7 +0.3
comp=Z,858nm,1.2s,mb6.0
SMF **Signal de Mont** 82.69 338 *e*P P 19 11 32.7 +0.3
comp=Z,429nm,1.2s,mb6.0
SMF **Signal de Mont** 82.69 338 *e*P P 19 11 32.7 +0.3
SMF pmax pmax
comp=Z,429nm,1.2s,mb6.0
BOB **Bobbio (Coli)** 82.86 334 P P 19 11 34.0 +0.6
ERBM **Eremo** 82.88 333 P P 19 11 35.0 +1.5
comp=Z,186nm,1.0s,mb5.8
FNVD **Fontana Vidola** 82.89 333 P P 19 11 35.3 +1.8
LPL **La Plagne** 82.97 336 *e*P P 19 11 34.7 +0.8
comp=Z,206nm,1.1s,mb5.5
LPL **La Plagne** 82.97 336 *e*P P 19 11 34.7 +0.8
comp=Z,103nm,1.1s,mb5.5
LPL **La Plagne** 82.97 336 *e*P P 19 11 34.7 +0.8
LPL pmax pmax
comp=Z,103nm,1.1s,mb5.5
LPG **La Plagne** 82.98 336 *e*P P 19 11 34.9 +1.0
comp=Z,330nm,1.3s,mb5.6
LPG **La Plagne** 82.98 336 *e*P P 19 11 34.9 +1.0
comp=Z,165nm,1.3s,mb5.6
LPG **La Plagne** 82.98 336 *e*P P 19 11 34.9 +1.0
LPG pmax pmax
comp=Z,165nm,1.3s,mb5.6
PPT **Papeete** 83.02 125 *e*PP PP 19 14 28.6 -19
comp=Z,260nm,24.8s
PPT **Papeete** 83.02 125 *e*S S 19 21 41.0 -0.2
comp=Z,482nm,25.2s
PPT *e*LR LR 19 37 33.9
comp=Z,819nm,31.0s
PPT **Papeete** 83.02 125 LR LR 19 42 35.4
comp=Z,464nm,19.0s,baz=349,slow=31
BGF **Bois d'Agland** 83.03 339 *e*P P 19 11 34.4 +0.3
ARG **Arkhangelos** 83.04 317 *e*P P 19 11 34.6 +0.2
QUIF **Quistinic** 83.07 343 *e*P P 19 11 34.0 -0.4
PAE **Paea** 83.09 125 *e*P P 19 11 34.5 -0.3
comp=Z,76nm,1.1s,mb5.3
PAE **Paea** 83.09 125 *e*P P 19 11 34.5 -0.3
PAE pmax pmax
comp=Z,76nm,1.1s,mb5.3
SNTG **Esanatoglia** 83.11 331 P P 19 11 35.0 +0.3
comp=Z,89nm,0.8s,mb5.5
ABTO **Aybut** 83.12 288 P P 19 11 36.2 +1.1
SNR=7.9
ABTO **Aybut** 83.12 288 P P 19 11 36.2 +1.1
SNR=7.9
ABTO **Aybut** 83.12 288 P P 19 11 36.2 +1.1
SNR=7.9
ABTO **Aybut** 83.12 288 P P 19 11 36.2 +1.1
SNR=7.9
VLC **Villacollemand** 83.13 333 *e*P P 19 11 35.0 +0.3
comp=Z,119nm,1.0s,mb5.6
BDI **Bagni Di Lucca** 83.15 333 P P 19 11 35.4 +0.6
MURB **Monte Urbino** 83.25 331 P P 19 11 36.7 +1.4
AGG **Agios Georgios** 83.27 323 *e*P P 19 11 33.9 -1.7
WES **Weston** 83.27 31 *e*P P 19 11 34.9 -0.6
comp=Z,10.0nm,0.7s,mb4.7
WES **Weston** 83.27 31 *e*P P 19 11 34.9 -0.6
WES pmax pmax
comp=Z,10.0nm,0.7s,mb4.7
LKR **Lokris** 83.30 322 *e*P P 19 11 34.4 -1.3
JAN **Janina** 83.34 324 *e*P P 19 11 36.0 +0.1
TVO **Taravao** 83.37 125 *e*P P 19 11 36.4 +0.2
comp=Z,42nm,0.8s,mb5.2
TVO **Taravao** 83.37 125 *e*P P 19 11 36.4 +0.2
TVO pmax pmax
comp=Z,42nm,0.8s,mb5.2
PLDF **La Plantade** 83.38 338 *e*P P 19 11 37.3 +1.3
BNI **Bardonecchia** 83.41 336 *e*P P 19 11 36.8 +0.7
comp=Z,73nm,1.4s,mb5.2
BNI **Bardonecchia** 83.41 336 *e*P P 19 11 36.8 +0.7
BNI pmax pmax
comp=Z,73nm,1.4s,mb5.2
AGO **Saint Agoulin** 83.43 339 *e*P P 19 11 38.2 +2.0
TCF **Toulx Ste Croi** 83.43 339 *e*P P 19 11 36.5 +0.3
comp=Z,126nm,1.1s,mb5.3
TCF **Toulx Ste Croi** 83.43 339 *e*P P 19 11 36.5 +0.3
comp=Z,63nm,1.1s,mb5.3
TCF **Toulx Ste Croi** 83.43 339 *e*P P 19 11 36.5 +0.3
TCF pmax pmax
comp=Z,63nm,1.1s,mb5.3
FGMS **Monte Sant'Ang** 83.44 328 *i*Pu P 19 11 36.1 -0.2
comp=Z,360nm,1.4s,mb5.9
PTL **Penteli** 83.44 321 *e*P P 19 11 35.5 -0.9
CSNT **Castellina Chi** 83.46 332 P P 19 11 36.7 +0.3
MVL **Millersville** 83.47 35 *e*P P 19 11 35.5 -1.1
comp=Z,14nm,0.8s,mb4.7
EVR **Evrytania** 83.57 323 *e*P P 19 11 36.4 -0.7
BRYW **Bryant College** 83.61 31 *e*P P 19 11 36.6 -0.6
comp=Z,17nm,0.8s,mb4.8
IGT **Igoumenitsa** 83.65 324 *e*P P 19 11 36.7 -0.8
MBDF **Montbardon** 83.68 336 *e*P P 19 11 37.9 +0.4
comp=Z,102nm,1.0s,mb5.2
MBDF **Montbardon** 83.68 336 *e*P P 19 11 37.9 +0.4
comp=Z,51nm,1.0s,mb5.2
MBDF **Montbardon** 83.68 336 *e*P P 19 11 37.9 +0.4
MBDF pmax pmax
comp=Z,51nm,1.0s,mb5.2
MFF **Saint Martin d** 83.69 341 *e*P P 19 11 37.6 +0.1
comp=Z,58nm,0.7s,mb5.1
MFF **Saint Martin d** 83.69 341 *e*P P 19 11 37.6 +0.1
comp=Z,29nm,0.7s,mb5.1
MFF **Saint Martin d** 83.69 341 *e*P P 19 11 37.6 +0.1
MFF pmax pmax
comp=Z,29nm,0.7s,mb5.1
KEK **Kerkira** 83.71 325 *e*P P 19 11 36.5 -1.3
PYM **Petit Puy Mans** 83.74 339 *e*P P 19 11 38.7 +0.9
ORIF **Oris-en-Rattie** 83.75 336 *e*P P 19 11 38.7 +0.8
comp=Z,257nm,1.2s,mb5.5
ORIF *e*MLR MLR
comp=Z,674nm,19.8s
ORIF **Oris-en-Rattie** 83.75 336 *e*P P 19 11 38.7 +0.8
comp=Z,128nm,1.2s,mb5.5
ORIF **Oris-en-Rattie** 83.75 336 *e*P P 19 11 38.7 +0.8
ORIF pmax pmax
comp=Z,129nm,1.2s,mb5.5
AQU **L'Aquila** 83.76 330 *e*P P 19 11 38.8 +0.8
comp=Z,224nm,1.1s,mb5.8
AQU **L'Aquila** 83.76 330 ‖*i*P P 19 11 38.4 +0.4
COLF **Collangettes** 83.78 338 *e*P P 19 11 39.5 +1.5
NAIG **Nisos Aigina** 83.84 321 *e*P P 19 11 35.0 -3.5
LTK **Loutraki** 83.84 322 *e*P P 19 11 37.4 -1.1
KLBR **Kellerberrin** 83.90 209 *e*P P 19 11 38.6 0.0
comp=Z,153µm,22.1s
ELN **Prospectdale** 83.99 40 *e*P P 19 11 38.1 -1.1
KARP **Karpathos** 84.04 318 *e*P P 19 11 39.2 -0.3
SELA **Sela** 84.08 323 *e*P P 19 11 40.0 +0.3
MIDA **Miranda** 84.10 329 P P 19 11 40.9 +1.2
IMI **Imperia** 84.11 335 P P 19 11 39.5 -0.2
SAOF **Saorge** 84.14 335 ‖*e*P P 19 11 40.4 +0.5
VIVF **Saint-Julien-l** 84.14 337 *e*P P 19 11 40.6 +0.7
comp=Z,331nm,1.2s,mb5.7
VIVF **Saint-Julien-l** 84.14 337 *e*P P 19 11 40.6 +0.7
comp=Z,165nm,1.2s,mb5.6
VIVF **Saint-Julien-l** 84.14 337 *e*P P 19 11 40.6 +0.7
VIVF pmax pmax
comp=Z,165nm,1.2s,mb5.6
BLA **Blacksburg** 84.15 39 *e*P P 19 11 39.4 -0.7
comp=Z,36nm,1.0s,mb5.1
BLA **Blacksburg** 84.15 39 *e*P P 19 11 39.4 -0.6
BLA pmax pmax
comp=Z,36nm,1.0s,mb5.1
LBL **Lubilhac** 84.16 338 ‖*e*P P 19 11 41.5 +1.5
AUTN **L'Aution** 84.17 335 ‖*e*P P 19 11 40.9 +0.9
FRNF **Fournols** 84.19 339 *e*P P 19 11 41.4 +1.3
TOUF **Mont Tournerai** 84.20 335 ‖*e*P P 19 11 40.7 +0.5
LKD **Levkas** 84.23 324 *e*P P 19 11 39.8 -0.6
OCF **Saint Nazaire** 84.23 337 *e*P P 19 11 41.3 +1.0
OG26 **St.-Nazaire-De** 84.23 337 *e*P P 19 11 41.3 +1.0
CERT **Cerreto** 84.26 330 P P 19 11 40.1 -0.4
LUCF **Luceram** 84.28 335 ‖*e*P P 19 11 41.5 +0.9
SBF **Sospel** 84.28 335 *e*P P 19 11 40.4 -0.2
comp=Z,396nm,1.2s,mb5.7
SBF **Sospel** 84.28 335 *e*P P 19 11 40.4 -0.2
comp=Z,198nm,1.2s,mb5.7
SBF **Sospel** 84.28 335 *e*P P 19 11 40.4 -0.2
SBF pmax pmax
comp=Z,198nm,1.2s,mb5.7
MVIF **Mont Vial** 84.33 335 ‖*e*P P 19 11 41.0 +0.1
REVF **Revere** 84.42 335 ‖*e*P P 19 11 42.0 +0.7
RLS **Riolos of Patr** 84.44 323 *e*P P 19 11 41.6 +0.1
TOLF **Tolfa** 84.49 331 P P 19 11 41.4 -0.3
RFI **Roccamonfina** 84.49 329 P P 19 11 43.3 +1.6
comp=Z,84nm,1.5s,mb5.2
LRAL **Lakeview Retre** 84.52 46 *e*P P 19 11 40.7 -1.3
comp=Z,13nm,0.8s,mb4.7
RJF **Les Rejaudoux** 84.52 339 *e*P P 19 11 41.7 -0.1
comp=Z,40nm,0.9s,mb4.8
RJF *e*MLR MLR
comp=Z,803nm,20.8s
RJF **Les Rejaudoux** 84.52 339 *e*P P 19 11 41.7 -0.1
comp=Z,20nm,0.9s,mb4.8
RJF LR LR
comp=Z,800nm,20.8s
RJF **Les Rejaudoux** 84.52 339 *e*P P 19 11 41.7 -0.1
RJF pmax pmax
comp=Z,20nm,0.9s,mb4.8
RJF MLR MLR
comp=Z,800nm,20.8s
CALN **Calern** 84.54 335 ‖*e*P P 19 11 42.8 +0.9
STOF **St-Etienne Org** 84.59 336 ‖*e*P P 19 11 43.3 +1.1
VLX **Viachokerasia** 84.64 322 *e*P P 19 11 41.7 -0.8
KFL **Anniata** 84.68 323 *e*P P 19 11 42.0 -0.7
ORI **Oriolo Calabro** 84.69 327 P P 19 11 43.4 +0.7
VLS **Valsamata** 84.70 323 *e*P P 19 11 42.0 -0.8
SMRF **Simiane la Rot** 84.71 336 *e*P P 19 11 43.6 +0.9
comp=Z,254nm,1.3s,mb5.5
SMRF **Simiane la Rot** 84.71 336 *e*P P 19 11 43.6 +0.9
comp=Z,254nm,1.3s,mb5.8
CAF **Calviac** 84.75 339 *e*P P 19 11 43.5 +0.6
comp=Z,20nm,0.6s,mb4.7
CAF **Calviac** 84.75 339 *e*P P 19 11 43.5 +0.6
comp=Z,10nm,0.6s,mb4.7
CAF **Calviac** 84.75 339 *e*P P 19 11 43.5 +0.6
CAF pmax pmax
comp=Z,10.0nm,0.6s,mb4.7
VILF **Villemus** 84.78 336 ‖*e*P P 19 11 44.3 +1.2
FRF **La Foret Royal** 84.79 335 *e*P P 19 11 43.0 -0.1
comp=Z,337nm,1.4s,mb5.6
FRF **La Foret Royal** 84.79 335 *e*P P 19 11 43.0 -0.1
comp=Z,168nm,1.4s,mb5.6
FRF **La Foret Royal** 84.79 335 *e*P P 19 11 43.0 -0.1
FRF pmax pmax
comp=Z,168nm,1.4s,mb5.6
ZKR **Zakros** 84.83 318 *e*P P 19 11 43.3 -0.2
TAVF **Tavernes** 84.90 336 ‖*e*P P 19 11 44.8 +1.1
VLI **Veliai** 84.95 321 *e*P P 19 11 35.5 -8.6
MGR **Morigerati** 84.96 328 P P 19 11 43.6 -0.5
PRAF **Pradon** 84.98 336 ‖*e*P P 19 11 45.7 +1.6
NPS **Neapolis** 84.98 318 *e*P P 19 11 43.2 -1.1
ITM **Ithomi** 85.00 322 *e*P P 19 11 43.6 -0.7
LMR **La Mourre** 85.04 335 *e*P P 19 11 44.4 0.0
comp=Z,471nm,1.2s,mb5.8
LMR **La Mourre** 85.04 335 *e*P P 19 11 44.4 0.0
comp=Z,236nm,1.2s,mb5.8
LMR **La Mourre** 85.04 335 *e*P P 19 11 44.4 0.0
LMR pmax pmax
comp=Z,236nm,1.2s,mb5.8
LFF **La Frestale** 85.05 340 *e*P P 19 11 44.0 -0.4
LASF **Ste Croix** 85.08 337 *e*P P 19 11 45.2 +0.6
comp=Z,68nm,1.0s,mb5.0
PUYF **Puyloubier** 85.08 336 ‖*e*P P 19 11 45.8 +1.2
TREF **Trevaresse** 85.09 336 *e*P P 19 11 46.3 +1.7
LAST **Lasithi** 85.13 318 *e*P P 19 11 45.1 +0.1
XRY **Khrisi** 85.27 318 *e*P P 19 11 45.0 -0.7
BERF **Bertagne** 85.29 336 ‖*e*P P 19 11 46.9 +1.3
GELF **Grande-Etoile** 85.30 336 ‖*e*P P 19 11 46.8 +1.1
NWAO **Narrogin (SRO)** 85.30 209 P P 19 11 45.8 +0.3
comp=Z,12nm,0.7s,mb4.7,baz=51,slow=6.4,SNR=8.1
PYL **PYLOS** 85.31 322 *e*P P 19 11 44.8 -1.1
TIP **Timpagrande** 85.35 327 *e*P P 19 11 45.7 -0.3
comp=Z,168nm,1.1s,mb5.7
SIVA **Sivas** 85.55 319 *e*P P 19 11 46.9 -0.2
KARN **Karanos** 85.63 320 *e*P P 19 11 47.4 -0.1
OSPF **L'Ospedale** 85.76 333 ‖*e*P P 19 11 48.0 0.0
GOGA **Godfrey** 85.92 44 *e*P P 19 11 48.2 -0.8
comp=Z,6.5nm,0.6s,mb4.5
GOGA **Godfrey** 85.92 44 *e*P P 19 11 48.2 -0.8
GOGA pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
MTLF **Montolieu** 86.19 338 *e*P P 19 11 50.0 -0.1
comp=Z,42nm,0.8s,mb4.9
MTLF **Montolieu** 86.19 338 *e*P P 19 11 50.0 -0.1
comp=Z,21nm,0.8s,mb4.9
MTLF **Montolieu** 86.19 338 *e*P P 19 11 50.0 -0.1
MTLF pmax pmax
comp=Z,21nm,0.8s,mb4.9
JSC **Jenkinsville** 86.22 41 *e*P P 19 11 49.7 -0.7
LRDF **Laroque-de-Fa** 86.49 338 *e*P P 19 11 53.1 +1.6
CARF **Carcanieres** 86.81 338 *e*P P 19 11 53.7 +0.6
MLS **Moulis** 86.83 339 *e*P P 19 11 53.4 +0.2
FILF **Fillols** 86.83 338 *e*P P 19 11 55.0 +1.8
EJON **La Junquera** 86.85 337 P P 19 11 55.2 +1.9
comp=Z,325nm,3.0s
EPF **Esparros** 86.95 339 *e*P P 19 11 52.7 -1.1
comp=Z,15nm,0.5s,mb4.7
EPF **Esparros** 86.95 339 *e*P P 19 11 52.7 -1.1
comp=Z,7.5nm,0.5s,mb4.8
EPF **Esparros** 86.95 339 *e*P P 19 11 52.7 -1.1
EPF pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
VALF **Valcebollere** 87.12 338 *e*P P 19 11 56.0 +1.4
RESF **Ens** 87.16 339 *e*P P 19 11 56.1 +1.3
VIEF **Viey** 87.17 340 *e*P P 19 11 55.5 +0.7
SJPF **Ste Jean** 87.24 341 *e*P P 19 11 55.7 +0.5
ELIZ **Elizondo** 87.26 341 P P 19 11 53.9 -1.3
comp=Z,18nm,0.9s,mb4.9
ELIZ **Elizondo** 87.26 341 P P 19 11 53.9 -1.4
ELIZ pmax pmax
comp=Z,18nm,0.9s,mb4.9
ETSF **Etsaut** 87.29 340 *e*P P 19 11 55.9 +0.5
comp=Z,31nm,0.7s,mb5.0
ETSF **Etsaut** 87.29 340 *e*P P 19 11 55.9 +0.5
comp=Z,16nm,0.7s,mb5.0
ETSF **Etsaut** 87.29 340 *e*P P 19 11 55.9 +0.5
ETSF pmax pmax
comp=Z,16nm,0.7s,mb5.0
EBIE **Bielsa** 87.32 339 P P 19 11 56.9 +1.3
comp=Z,76nm,1.5s,mb5.3
ELAN **Lanestosa** 87.61 342 P P 19 11 57.2 +0.3
comp=Z,28nm,1.1s,mb5.0
EMIR **Miracle** 87.71 338 P P 19 11 57.6 +0.2
comp=Z,12nm,0.8s,mb4.8
TBI **Tubuai** 87.73 128 *e*PP PP 19 15 28.5 +2.8
comp=Z,80nm,30.8s
TBI **Tubuai** 87.73 128 *e*S S 19 22 24.4 -2.8
comp=Z,172nm,27.5s
TBI *e*LR LR 19 39 11.4
comp=Z,698nm,37.2s
URZ **Urewera** 87.76 160 P P 19 11 55.5 -1.9
comp=Z,34nm,1.1s,mb5.1,baz=350,slow=11,SNR=3.8
ECRI **Cripan** 88.01 341 P P 19 11 59.3 +0.4
comp=Z,16nm,1.0s,mb4.8
ECRI **Cripan** 88.01 341 P P 19 11 59.3 +0.5
ECRI pmax pmax
comp=Z,16nm,1.0s,mb4.8
EPON **Pontenova** 88.25 345 P P 19 11 59.6 -0.3
comp=Z,57nm,1.1s,mb5.3
EPOB **Poblet** 88.35 338 P P 19 12 02.0 +1.5
comp=Z,18nm,0.9s,mb4.9
ESAC **San Caprasio** 88.38 340 P P 19 12 01.6 +1.0
comp=Z,14nm,0.4s,mb5.2
ERTA **Horta de San J** 88.91 339 P P 19 12 03.1 0.0
STS **Santiago** 88.92 346 P P 19 12 02.3 -0.8
comp=Z,46nm,1.2s,mb5.3
STS **Santiago** 88.92 346 P P 19 12 02.3 -0.8
STS pmax pmax
comp=Z,46nm,1.2s,mb5.3
ERUA **La Rua** 89.15 344 P P 19 12 03.8 -0.4
ETOS **Mallorca** 89.38 337 P P 19 12 10.2 +4.9
comp=Z,19nm,0.7s,mb5.1
ETOR **Torete** 89.61 340 P P 19 12 06.3 -0.1
comp=Z,16nm,1.2s,mb4.8
ETOR **Torete** 89.61 340 P P 19 12 06.3 -0.1
ETOR pmax pmax
comp=Z,16nm,1.2s,mb4.8
PBRG **Braganca** 89.65 344 *e*P P 19 12 06.0 -0.5
comp=Z,41nm,1.6s,mb5.1
EZAM **Zamans** 89.66 346 P P 19 12 05.5 -1.1
comp=Z,30nm,0.8s,mb5.3
EZAM **Zamans** 89.66 346 P P 19 12 05.5 -1.1
EZAM pmax pmax
comp=Z,30nm,0.8s,mb5.3
EMOS **Mosqueruela** 89.67 339 P P 19 12 09.2 +2.5
comp=Z,12nm,0.7s,mb4.9
ELOB **Lobios** 89.83 345 P P 19 12 06.4 -1.0
comp=Z,100nm,1.5s,mb5.5
PCAB **Cabril** 89.97 345 *e*P P 19 12 07.5 -0.6
comp=Z,43nm,1.4s,mb5.2
GUD **Guadarrama** 90.25 342 P P 19 12 08.7 -0.7
comp=Z,15nm,1.2s,mb4.8
GUD **Guadarrama** 90.25 342 P P 19 12 08.7 -0.7
GUD pmax pmax
comp=Z,15nm,1.2s,mb4.8
MVO **Moncorvo** 90.32 344 *e*P P 19 12 08.9 -0.8
comp=Z,48nm,1.5s,mb5.2
PVRL **Vila Real** 90.34 345 *e*P P 19 12 09.0 -0.8
comp=Z,68nm,1.4s,mb5.4
PVIS **Viseu** 90.91 345 *e*P P 19 12 11.2 -1.3
comp=Z,47nm,1.4s,mb5.3
KEST **Kesra** 91.09 330 P P 19 12 13.3 0.0
comp=Z,18nm,0.9s,mb5.1,baz=306,slow=0.6,SNR=38
KEST LR LR 19 58 42.6
comp=Z,108nm,18.3s,baz=169,slow=39
ESDC **Sonseca Array** 91.13 341 P P 19 12 13.3 -0.2
comp=Z,2.8nm,0.6s,mb4.5
ESDC **Sonseca Array** 91.13 341 P P 19 12 12.6 -0.9
comp=Z,14nm,1.1s,mb4.9,baz=9.7,slow=4.1,SNR=25
MTE **Manteigas** 91.16 344 *e*P P 19 12 12.8 -0.8
comp=Z,44nm,1.8s,mb5.2
CASM **Ain Smara** 91.54 333 P P 19 12 15.5 0.0
ETOB **Tobarra** 91.56 339 P P 19 12 19.4 +3.9
comp=Z,8.6nm,0.7s,mb4.9
PCBR **Castelo Branco** 91.69 344 *e*P P 19 12 14.8 -1.2
comp=Z,29nm,1.5s,mb5.1
EVIA **Vianos** 91.79 340 P P 19 12 17.2 +0.7
comp=Z,20nm,1.4s,mb5.0
EVIA **Vianos** 91.79 340 P P 19 12 17.2 +0.6
EVIA pmax pmax
comp=Z,20nm,1.4s,mb5.0
RPZ **Rata Peaks** 91.82 166 P P 19 12 17.3 +1.1
comp=Z,25nm,0.9s,mb5.2,baz=180,slow=5.8,SNR=5.5
SET **Setif** 91.94 333 P P 19 12 19.0 +1.7
CKHR **Kef el Ahmar** 92.07 333 P P 19 12 19.0 +1.1
EBAN **Banos Encina** 92.54 341 P P 19 12 19.7 -0.3
comp=Z,29nm,1.4s,mb5.2
EBAN **Banos Encina** 92.54 341 P P 19 12 19.7 -0.3
EBAN pmax pmax
comp=Z,29nm,1.4s,mb5.2
EBAD **Badajoz** 92.65 344 P P 19 12 19.8 -0.7
comp=Z,21nm,1.4s,mb5.1
PESTR **Estremoz** 92.65 344 *e*P P 19 12 20.1 -0.4
comp=Z,22nm,0.9s,mb5.3
EVO **Evora** 93.05 344 *e*P P 19 12 21.3 -1.1
comp=Z,17nm,1.5s,mb5.0
PBAR **Barrancos** 93.21 343 *e*P P 19 12 22.0 -1.1
comp=Z,19nm,1.3s,mb5.1
PBEJ **Beja** 93.52 344 *e*P P 19 12 24.1 -0.4
comp=Z,17nm,1.4s,mb5.0
EMIN **Mina Concepcio** 93.53 343 P P 19 12 24.2 -0.4
comp=Z,8.7nm,0.9s,mb4.9
ELOJ **Sierra Loja** 93.59 341 P P 19 12 24.3 -0.6
PVAQ **Vaqueiros** 94.09 344 *e*P P 19 12 26.2 -1.0
comp=Z,25nm,1.2s,mb5.2
ATD **Arta Tunnel** 94.18 292 P P 19 12 28.7 +0.8
comp=Z,19nm,0.9s,mb5.2,baz=328,slow=8.0,SNR=7.7
MORF **Marmelete** 94.36 344 *e*P P 19 12 27.8 -0.6
comp=Z,44nm,1.6s,mb5.3
RKT **Rikitea** 95.90 118 *e*SS SS 19 30 15.6 +0.5
comp=Z,284nm,34.2s
RKT *e*LR LR 19 43 27.0
comp=Z,674nm,32.8s
KMBO **Kilima Mbogo** 107.35 288 PP PP 19 17 52.0 -3.6
comp=Z,3.5nm,0.8s,baz=48,slow=23,SNR=4.4
TORD **Torodi Ar. Bea** 114.48 328 PKP PKiKP 19 17 47.4 -0.9
TORD PP PP 19 18 41.9 -4.0
TORD PKKPbc PKKPbc 19 28 24.3 -1.2
TORD **Torodi Ar. Bea** 114.48 328 PKP PKiKP 19 17 47.4 -0.9
comp=Z,2.0nm,0.6s,baz=18,slow=1.8,SNR=19
TORD PP PP 19 18 41.9 -4.0
comp=Z,7.2nm,0.9s,baz=10,slow=7.5,SNR=8.9
TORD PKKPbc PKKPbc 19 28 24.3 -1.2
comp=Z,0.8nm,0.5s,baz=205,slow=2.5,SNR=11
DBIC **Dimbokro** 122.77 332 PKP PKPdf 19 18 03.4 -0.9
comp=Z,14nm,1.0s,baz=349,slow=3.5,SNR=11
TIC **Toumodi** 122.84 332 *e*P PKPdf 19 18 02.9 -1.5
comp=Z,28nm,1.3s
KIC **Kosan Boka** 123.02 332 *e*P PKPdf 19 18 04.4 -0.4
comp=Z,179nm,1.5s
LIC **Lamto** 123.24 332 *e*PKIKP PKPdf 19 18 03.4 -1.8
comp=Z,27nm,0.8s
LIC *e*MLR MLR
comp=Z,288nm,22.2s
LIC **Lamto** 123.24 332 *e*P PKPdf 19 18 04.6 -0.6
comp=Z,59nm,1.2s
LIC **Lamto** 123.24 332 *e*PKPdf PKPdf 19 18 03.4 -1.8
LIC LR LR
comp=Z,140nm,22.3s
VNDA **Vanda** 124.28 177 PKP PKPdf 19 18 04.1 -1.1
comp=Z,4.0nm,0.8s,baz=315,slow=4.5,SNR=18
NNA **Nana** 126.47 66 *e*P PKPdf 19 18 10.4 -0.9
MAW **Mawson** 131.82 211 PKP PKPdf 19 18 17.7 -2.1
comp=Z,4.3nm,0.5s,baz=54,slow=14,SNR=20
MAW SKPbc SKPbc 19 21 32.3 +0.7
comp=Z,9.3nm,0.9s,baz=41,slow=6.8,SNR=7.5
BOSA **Boshof** 134.83 274 PKhKP 19 18 14.6
comp=Z,2.6nm,0.9s,baz=241,slow=2.1,SNR=3.9
BOSA SKPbc SKPbc 19 21 43.3 +0.2
comp=Z,9.7nm,0.8s,baz=29,slow=3.0,SNR=7.4
LPAZ **La Paz** 135.12 61 PKP 19 18 17.2
LPAZ PKP PKPdf 19 18 26.8 -0.8
LPAZ **La Paz** 135.12 61 PKhKP 19 18 17.2
comp=Z,1.9nm,0.8s,baz=287,slow=1.1,SNR=6.1
LPAZ PKP PKPdf 19 18 26.8 -0.8
comp=Z,4.9nm,0.8s,baz=12,slow=5.2,SNR=16
QSPA **South Pole Qui** 136.62 180 PKhKP 19 18 16.3
comp=Z,2.6nm,0.7s,baz=5.5,slow=0.8,SNR=11
QSPA PKP PKPdf 19 18 28.9 +0.4
comp=Z,7.0nm,0.5s,baz=269,slow=0.4,SNR=38
QSPA SKPbc SKPbc 19 21 45.9 -1.1
comp=Z,26nm,1.0s,baz=345,slow=1.5,SNR=11
LCO **Las Campanas** 142.62 77 *e*PKPpre 19 18 37.0
FCH **Farellones** 145.56 82 ‖*i*P PKPdf 19 18 46.2 +0.3
SNAA **Sanae** 152.40 197 *e*PKPdf PKPbc 19 19 01.7 -1.0
SNAA *e* 19 19 11.5
SNAA *e* 19 19 37.2
SNAA **Sanae** 152.40 197 PKPbc PKPbc 19 19 01.3 -1.4
comp=Z,5.6nm,0.8s,baz=144,slow=1.7,SNR=16
USHA **Ushuaia** 153.75 123 PKPbc PKPbc 19 19 04.4 -1.7
comp=Z,8.5nm,0.8s,baz=326,slow=1.8,SNR=4.1
VNA2 **Neumayer--Watz** 153.88 195 *e*PKPdf PKPbc 19 19 05.0 -0.9
VNA2 *e* 19 19 10.0
VNA2 *e* 19 19 19.2
VNA2 *e* 19 19 29.1
VNA2 *e* 19 19 36.7
VNA2 *e* 19 19 43.3
VNA2 *e* 19 19 46.0
VNA3 **Neumayer Olymp** 154.00 194 *e*PKPdf PKPbc 19 19 05.2 -1.0
VNA3 *e* 19 19 11.0
VNA3 *e* 19 19 19.4
VNA3 *e* 19 19 29.4
VNA3 *e* 19 19 37.9
VNA3 *e* 19 19 43.4
VNA3 *e* 19 19 47.3
VNA1 **Neumayer--Stat** 154.27 195 *e*PKPdf PKPab 19 19 21.5 0.0

IDC 12 19:01:49.3±17.0, 642N×12697E, h150km±194km, mb3.8/5, mb1 4.1/6, mb1mx3.7/19, mbtmp4.0/6, ML5.5/1, Error

ellipse: s-maj=107.1km s-min=18.7km az=93.0, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**16.84**	**191**	P	Pn	19 05 37.7	+1.4
	18nm,0.3s,baz=47,slow=2.8,SNR=52						
FITZ	**Fitzroy Crossi**	**24.40**	**183**	*e*P	P	19 06 55.0	+1.1
	7.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.40**	**183**	P	P	19 06 54.2	+0.3
	2.9nm,0.5s,baz=16,slow=11,SNR=21						
WRA	**Warramunga Arr**	**27.18**	**165**	P	P	19 07 17.4	-1.5
	2.9nm,0.3s,baz=343,slow=10,SNR=68						
WB2	**Warramunga Arr**	**27.18**	**165**	*e*P	P	19 07 18.2	-0.8
ASAR	**Alice Springs**	**30.66**	**167**	P	P	19 07 49.6	-0.1
	3.0nm,0.4s,baz=351,slow=7.6,SNR=199						
MJAR	**Matsushiro Arr**	**31.70**	**17**	P	P	19 07 58.8	0.0
	0.4nm,0.3s,baz=250,slow=15,SNR=2.5						
MUN	**Mundaring**	**39.53**	**194**	*e*P	P	19 09 14.1	+8.4
STKA	**Stephens Creek**	**40.55**	**161**	*e*P	P	19 09 15.2	+1.1
	1.4nm,0.3s						
STKA	**Stephens Creek**	**40.55**	**161**	P	P	19 09 15.0	+0.9
	1.9nm,0.3s,baz=348,slow=7.8,SNR=15						

NEIC ***12*** *19:13:09.6, 928N×8404W, h24^{km}, MD4.0(CASC), After CASC.*

CASC 12 19:13:08.5±1.9**, 921N×8407W, h19**^{km}±6^{km}**, MD3.8, 9C-9D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QCR	**Quepos**	**0.23**	**337**	⇑*e*P	Pg	19 13 15.6	+1.6
QCR	**Quepos**	**0.23**	**337**	⇑*i*P	Pg	19 13 15.7	+1.6
BUS	**Buena Vista**	**0.46**	**42**	⇓*e*P	Pg	19 13 18.2	+0.2
BUS				*e*S	Sg	19 13 26.1	+1.7
BUS	**Buena Vista**	**0.46**	**42**	⇓*i*P	Pg	19 13 18.3	+0.3
BUS				*e*S	Sg	19 13 26.3	+2.0
LCR2	**La Lucha 2**	**0.53**	**7**	⇑*i*P	Pg	19 13 19.2	0.0
LCR2	**La Lucha 2**	**0.53**	**7**	⇑*i*P	Pg	19 13 19.2	0.0
LAJ	**Bijagual**	**0.65**	**356**	⇓*e*P	Pb	19 13 22.1	+0.7
LAJ	**Bijagual**	**0.65**	**356**	⇓*e*P	Pb	19 13 22.1	+0.8
URSC	**Urasca**	**0.69**	**25**	⇓*i*P	Pb	19 13 21.5	-0.4
URSC	**Urasca**	**0.69**	**25**	⇓*i*P	Pb	19 13 21.5	-0.4
BAR1		**0.75**	**87**	⇑*i*P	Pb	19 13 21.8	-1.2
PRS1	**Puriscal**	**0.81**	**343**	⇑*e*P	Pb	19 13 22.4	-1.5
PRS1	**Puriscal**	**0.81**	**343**	⇑*i*P	Pb	19 13 22.4	-1.5
CGA2	**Cerro Gallo 2**	**0.89**	**334**	⇑*i*P	Pb	19 13 24.9	-0.4
CGA2				*e*S	Sb	19 13 37.4	+0.5
CGA2	**Cerro Gallo 2**	**0.89**	**334**	⇑*i*P	Pb	19 13 24.9	-0.5
CGA2				*e*S	Sb	19 13 37.2	+0.3
JCR	**Jicaral**	**1.21**	**302**	⇓*e*P	Pn	19 13 30.7	+0.3
JCR	**Jicaral**	**1.21**	**302**	⇓*e*P	Pn	19 13 28.6	-1.8
JTS	**JuntasAbangare**	**1.38**	**321**	*e*Pn	Pn	19 13 30.6	-2.2
JTS				*e*Sn	Sn	19 13 48.5	-2.0
FORC	**Fortuna**	**1.39**	**335**	*i* P	Pn	19 13 32.8	-0.1
FORC				*i* S	Sn	19 13 51.8	+1.2
CNI	**Changuinola**	**1.55**	**82**	⇓*e*P	Pn	19 13 34.1	-1.0
CNI				*e*S	Sn	19 13 54.5	-0.2
CNI	**Changuinola**	**1.55**	**82**	*e*P	Pn	19 13 34.0	-1.1
BCIP	**Isla Barro Col**	**4.18**	**90**	*e*Pn	Pn	19 14 10.2	-1.2

ISCJB ***12*** *19:29:12.5±0.8, 5135N±004×1614E±004, h0^{km}, Error ellipse: s-maj=5.6km s-min=3.0km az=19.0*
IPEC ***12*** *19:29:14.3±0.4, 5142N×1638E, h0^{km}, ML1.8/3, Error ellipse: s-maj=3.4km s-min=2.1km az=94.0*
WAR ***12*** *19:29:14.6, 5144N×1613E, ML2.4, Mining Induced*
PRU ***12*** *19:29:14.6, 5138N×1617E, h0^{km}*
VIE ***12*** *19:29:15.2±0.5, 5127N×1606E, h0^{km}, mb2.0/2, ML2.5/4, Error ellipse: s-maj=3.0km s-min=2.7km az=170.0 69 km WNW of Wroclaw Suspected Mining induced.*
CSEM ***12*** *19:29:15.5±0.2, 5137N×1615E, h1^{km}, ML2.8/8, Error ellipse: s-maj=3.9km s-min=2.6km az=18.0*

ISC 12 19:29:13.5±0.8**, 5141N**±004×**1617E**±004**, h0**^{km}**, n20,** σ**0**^{s}**90**/41**, 2C-2D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.57**	**172**	*e*Pg	**Pg**	**19 29 25.7**	**+1.2**
KSP				*e*Sg	**Sg**	**19 29 33.5**	**+1.7**
KSP	**Ksiaz**	**0.57**	**172**	*e*Pg	**Pg**	**19 29 25.6**	**+1.2**
KSP				*e*Sg	**Sg**	**19 29 32.7**	**+0.9**
UPC	**Upice**	**0.91**	**186**	*e*PG	**Pg**	**19 29 32.2**	**+1.3**
DPC	**Dobruska-Polom**	**1.06**	**175**	*e*PG	**Pg**	**19 29 34.6**	**+0.7**
DPC				*e*SG	**Sg**	**19 29 48.4**	**+0.8**
	18nm,0.3s						
DPC	**Dobruska-Polom**	**1.06**	**175**	*e*Pg	**Pg**	**19 29 34.5**	**+0.6**
DPC				*e*Sg	**Sg**	**19 29 48.2**	**+0.6**
PVCC	**Panska Ves**	**1.34**	**230**	*e*PG	**Pg**	**19 29 39.5**	**+0.3**
BRG	**Berggiesshubel**	**1.50**	**250**	PG	**Pg**	**19 29 42.1**	**-0.2**
BRG				SG	**Sg**	**19 30 02.2**	**+0.5**
	13nm,0.4s						
PRU	**Pruhonice**	**1.76**	**217**	*e*PN	**Pn**	**19 29 41.4**	**-3.8**
PRU				*e*PG	**Pg**	**19 29 46.4**	**-0.8**
PRU				*e*SG	**Sg**	**19 30 09.6**	**-0.3**
	9.3nm,0.5s						
PRU	**Pruhonice**	**1.76**	**217**	*e*Pg	**Pg**	**19 29 46.4**	**-0.8**
PRU				*e*Sg	**Sg**	**19 30 09.6**	**-0.3**
	9.3nm,0.5s						
MORC	**Moravsky Berou**	**1.85**	**151**	*e*Pn	**Pn**	**19 29 46.8**	**+0.3**
MORC				*e*Sg	**Sg**	**19 30 10.9**	**-2.1**
	6.9nm,0.3s						
CLL	**Collm**	**1.99**	**268**	*e*Pg	**Pg**	**19 29 50.0**	**-1.6**
CLL				*i* x	x	19 29 52.1	
CLL				*e*x	x	19 29 55.0	
CLL				*i* Sg	**Sg**	**19 30 17.0**	**-0.3**
	comp=Z,7.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.01**	**140**	*e*PG	**Pg**	**19 29 52.3**	**+0.2**
OKC				*e*SG	**Sg**	**19 30 18.2**	**0.0**
VRAC	**Vranov**	**2.12**	**172**	*e*Pn	**Pn**	**19 29 51.0**	**+0.9**
VRAC				*e*Sg	**Sg**	**19 30 20.3**	**-1.2**
	comp=Z,5.7nm,0.2s						
KRUC	**Moravsky**	**2.35**	**176**	*e*Sg	**Sg**	**19 30 28.1**	**-0.9**
	comp=Z,3.8nm,0.3s						
OJC	**Ojcow**	**2.59**	**116**	*e*Pg	**Pg**	**19 30 02.4**	**-0.8**
OJC				*e*Sg	**Sg**	**19 30 37.9**	**+1.2**
NKC	**Novy Kostel**	**2.63**	**245**	*e*PN	**Pn**	**19 29 57.5**	**+0.2**
NKC				*e*PG	**Pg**	**19 30 03.3**	**-0.7**
NKC				*e*SG	**Sg**	**19 30 39.2**	**+1.0**
	comp=Z,14nm,0.5s						
KHC	**Kasperske Hory**	**2.82**	**217**	*e*PN	**Pn**	**19 29 59.7**	**-0.1**
KHC				*e*PG	**Pg**	**19 30 05.9**	**-1.6**
KHC				*e*SN	**Sn**	**19 30 34.7**	**+0.3**
KHC				*e*SG	**Sg**	**19 30 43.2**	**-0.9**
	comp=Z,5.0nm,0.4s						
MOX	**Moxa**	**2.97**	**257**	*e*PG	**Pg**	**19 30 11.1**	**+0.6**
MOX				*e*SG	**Sg**	**19 30 50.2**	**+1.2**
CONA	**Conrad Observa**	**3.49**	**183**	⇓*i*Pn	**Pn**	**19 30 08.6**	**-0.4**
CONA				⇑*i*Sg	**Sg**	**19 31 05.4**	**-0.1**
	comp=Z,3.5nm,0.3s						
MOA	**Molln**	**3.77**	**200**	⇑*i*Pn	**Pn**	**19 30 12.1**	**-0.8**
MOA				⇓*i*Sg	**Sg**	**19 31 15.3**	**+0.7**
	comp=Z,3.5nm,0.5s						

NEIC ***12*** *19:29:21.6, 37.11S×17695E, h198^{km}, MG3.7(WEL), After WEL.*

WEL 12 19:29:21.5±0.5**, 3711S×17695E, h200**^{km}±4^{km}**, ML3.6**/6**, Error ellipse: s-maj=6.1km s-min=6.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.15**	**174**	P	Pn	19 29 52.4	+0.1
URZ	**Urewera**	**1.15**	**174**	PN	Pn	19 29 52.4	+0.1
URZ				SN	Sn	19 30 15.8	-0.5
MWZ	**Matawai**	**1.30**	**160**	*e*P	Pn	19 29 53.8	+0.4
MWZ				S	Sn	19 30 18.9	+0.5
MWZ	**Matawai**	**1.30**	**160**	PN	Pn	19 29 53.8	+0.3
MWZ				SN	Sn	19 30 18.9	+0.6
PUZ	**Puketiti**	**1.41**	**133**	*e*P	Pn	19 29 54.2	-0.1
PUZ				S	Sn	19 30 18.8	-1.1
PUZ	**Puketiti**	**1.41**	**133**	PN	Pn	19 29 54.2	-0.1
PUZ				SN	Sn	19 30 18.8	-1.1
KNZ	**Kokohu**	**1.99**	**164**	*e*P	Pn	19 30 00.1	+0.3
KNZ	**Kokohu**	**1.99**	**164**	PN	Pn	19 30 00.1	+0.3
BKZ	**Black Stump Fm**	**2.08**	**190**	P	Pn	19 30 00.7	-0.1
BKZ	**Black Stump Fm**	**2.08**	**190**	PN	Pn	19 30 00.7	-0.1
PXZ	**Pawanui**	**2.92**	**181**	PN	Pn	19 30 09.6	-0.5
TSZ	**Takapari Road**	**3.04**	**194**	*e*P	Pn	19 30 11.1	-0.5
TSZ	**Takapari Road**	**3.04**	**194**	PN	Pn	19 30 11.1	-0.5
BFZ	**Birch Farm**	**3.61**	**189**	*e*P	Pn	19 30 17.5	-0.8
BFZ	**Birch Farm**	**3.61**	**189**	PN	Pn	19 30 17.5	-0.8
MRZ	**Mangatainoka R**	**3.70**	**196**	P	Pn	19 30 18.0	-1.5
MRZ	**Mangatainoka R**	**3.70**	**196**	PN	Pn	19 30 18.0	-1.6
KIW	**Kapiti Island**	**4.07**	**202**	P	Pn	19 30 22.1	-1.9
KIW	**Kapiti Island**	**4.07**	**202**	PN	Pn	19 30 22.1	-1.9
MTW	**Mount Morrison**	**4.20**	**195**	P	Pn	19 30 23.7	-1.9
MTW	**Mount Morrison**	**4.20**	**195**	PN	Pn	19 30 23.7	-1.9
CAW	**Cannon Point**	**4.25**	**200**	P	Pn	19 30 24.2	-2.1
CAW	**Cannon Point**	**4.25**	**200**	PN	Pn	19 30 24.2	-2.2
TRWZ	**Traveller**	**4.39**	**193**	PN	Pn	19 30 26.4	-1.7
MRW	**Makara Radio**	**4.47**	**202**	P	Pn	19 30 26.9	-2.2
MRW	**Makara Radio**	**4.47**	**202**	PN	Pn	19 30 26.9	-2.1
MSWZ	**Moikau Station**	**4.50**	**197**	P	Pn	19 30 27.2	-2.2
MSWZ	**Moikau Station**	**4.50**	**197**	PN	Pn	19 30 27.2	-2.2
SNZO	**South Karori**	**4.54**	**202**	P	Pn	19 30 27.5	-2.5
SNZO	**South Karori**	**4.54**	**202**	PN	Pn	19 30 27.5	-2.4
BHW	**Baring Head**	**4.59**	**200**	P	Pn	19 30 28.2	-2.3
BHW	**Baring Head**	**4.59**	**200**	PN	Pn	19 30 28.2	-2.4
TCW	**Tory Channel**	**4.59**	**206**	P	Pn	19 30 28.4	-2.2
TCW	**Tory Channel**	**4.59**	**206**	PN	Pn	19 30 28.4	-2.2
TUWZ	**Tuamarina**	**4.91**	**208**	PN	Pn	19 30 32.3	-2.3
BSWZ	**Blackbirch Sta**	**5.18**	**206**	P	Pn	19 30 35.6	-2.5
BSWZ	**Blackbirch Sta**	**5.18**	**206**	PN	Pn	19 30 35.6	-2.5
THZ	**Tophouse**	**5.60**	**213**	*e*P	Pn	19 30 42.2	-1.3
THZ	**Tophouse**	**5.60**	**213**	PN	Pn	19 30 42.1	-1.4
KHZ	**Kahutara**	**5.92**	**205**	*e*P	Pn	19 30 44.9	-2.7
KHZ	**Kahutara**	**5.92**	**205**	PN	Pn	19 30 44.9	-2.7

MAN 12 20:22:08, 1885N×12127E, h70^{km}**, mb4.3, ML3.2, MS3.0, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.81**	**230**	⇓*i*P	Pn	20 22 26.6	+2.5
PIP				*e*S	Sn	20 22 40.2	+4.1
SGCP	**Mt. Cagua**	**0.95**	**129**	*e*P	Pn	20 22 28.1	+2.2
APYP	**Conner**	**0.98**	**182**	*e*P	Pn	20 22 28.1	+1.9
APYP				*e*S	Sn	20 22 41.7	+1.9
CVP	**Callao Caves**	**1.25**	**155**	⇓*i*P	Pn	20 22 31.8	+2.1
CVP				*i* S	Sn	20 22 47.5	+1.5
ABRA	**Dolores**	**1.30**	**204**	*e*P	Pn	20 22 31.9	+1.5
ABRA				*e*S	Sn	20 22 49.0	+1.8
CAUP	**Cauayan**	**1.96**	**164**	*e*P	Pn	20 22 42.1	+3.0
CAUP				*e*S	Sn	20 23 07.5	+4.7
PALP	**Palanan**	**2.08**	**148**	⇑*e*P	Pn	20 22 42.8	+2.0
PALP				*i* S	Sn	20 23 09.1	+3.3
PALP	**Palanan**	**2.08**	**148**	*e*P	Pn	20 22 42.8	+2.0
PALP				*e*S	Sn	20 23 08.6	+2.8
BCPH	**Baguio City Da**	**2.54**	**195**	⇑*i*P	Pn	20 22 49.1	+2.1
BCPH				*i* S	Sn	20 23 18.7	+1.9
BALP	**Baler**	**3.10**	**175**	*e*P	Pn	20 22 56.2	+1.6
BALP				*e*S	Sn	20 23 30.5	0.0
SCZP	**Santa Cruz**	**3.32**	**203**	*e*P	Pn	20 22 59.7	+2.2
POLP	**Polilio Island**	**4.14**	**171**	*e*P	Pn	20 23 10.2	+1.4

IDC 12 20:31:58.4±14.0**, 905S×12831E, h202**^{km}±105^{km}**, mb1 2.7**/3**, mb1mx2.6**/14**, mbtmp2.5**/3**, Error ellipse: s-maj=232.0km s-min=32.0km az=38.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.72**	**256**	P	Pn	20 33 09.3	0.0
	1.8nm,0.3s,baz=121,slow=17,SNR=4.1						
WRA	**Warramunga Arr**	**12.30**	**152**	P	Pn	20 34 47.5	+0.6
	0.1nm,0.3s,baz=333,slow=13,SNR=4.9						
ASAR	**Alice Springs**	**15.49**	**160**	P	Pn	20 35 25.9	-0.5
	0.1nm,0.3s,baz=341,slow=9.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**127.53**	**280**	PKP	PKPdf	20 50 40.0	-0.2
	0.6nm,0.8s,baz=64,slow=3.4,SNR=3.5						

IDC ***12*** *20:55:12.6±10.0, 2033S×17788W, h614^{km}±114^{km}, mb3.3/3, mb1 3.4/5, mb1mx3.1/15, mbtmp3.3/5, Error ellipse: s-maj=88.0km s-min=35.4km az=28.0*

NEIC 12 20:55:10.4±1.1**, 2019S×17775W, h600**^{km}**, mb4.3**/1**, Error ellipse: s-maj=29.9km s-min=24.1km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.87**	**260**	P	P	20 58 18.2	+0.8
	0.5nm,0.3s,baz=280,slow=20,SNR=5.7						
URZ	**Urewera**	**18.55**	**193**	P	P	20 58 50.9	+0.1
	2.5nm,0.3s,baz=24,slow=7.2,SNR=12						
CTAO	**Charters Tower**	**33.76**	**264**	*e*P	P	21 01 03.6	-0.5
	3.7nm,0.5s						
STKA	**Stephens Creek**	**38.13**	**244**	P	P	21 01 40.2	+0.2
STKA	**Stephens Creek**	**38.13**	**244**	P	P	21 01 40.2	+0.2
	2.2nm,0.8s,baz=150,slow=20,SNR=3.5						
ASAR	**Alice Springs**	**44.82**	**256**	P	P	21 02 32.8	+0.2
	4.6nm,0.8s,baz=91,slow=7.8,SNR=51						
WRA	**Warramunga Arr**	**44.88**	**262**	P	P	21 02 32.7	-0.4
	2.6nm,0.3s,baz=96,slow=7.6,SNR=175						
AKASG	**Malin Array Be**	**142.86**	**331**	PKP	PKPdf	21 13 34.6	-1.8
	0.8nm,0.4s,baz=45,slow=4.3,SNR=6.9						
BRTR	**Keskin Array B**	**146.81**	**313**	PKPbc	PKPbc	21 13 47.6	+1.1
BRTR	**Keskin Array B**	**146.81**	**313**	PKPbc	PKPbc	21 13 47.6	+1.1
	0.6nm,0.5s,baz=134,slow=5.3,SNR=3.9						
CLL	**Collm**	**147.82**	**347**	*e*PKPbc	PKPbc	21 13 50.0	+1.4
GERES	**GERESS Array B**	**149.97**	**345**	PKPbc	PKPbc	21 13 55.2	+1.2
	0.5nm,0.5s,baz=43,slow=4.4,SNR=5.6						

NEIC ***12*** *20:56:24.8, 2947S×7140W, h71^{km}, MD3.8(GUC), After GUC.*

GUC 12 20:56:24.8±0.8**, 2947S×7140W, h71**^{km}±6^{km}**, MD3.8, ML4.0, 3C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.46**	**163**	⇓*i*P	Pn	20 56 37.8	+0.5
LSCH				*i* S	Sn	20 56 46.7	+0.3
LSCH	**La Serena**	**0.46**	**163**	⇓*i*P	Pn	20 56 37.8	+0.5
LSCH				*i* S	Sn	20 56 46.7	+0.3
LSCH				AML	AML	20 56 47.2	
	comp=E,2μm,0.3s						
TLL	**Tololo Astrono**	**0.87**	**144**	*e*P	Pn	20 56 42.9	+1.2
TLL				*i* S	Sn	20 56 55.7	+1.5
TLL	**Tololo Astrono**	**0.87**	**144**	*e*P	Pn	20 56 42.9	+1.2
TLL				*i* S	Sn	20 56 55.7	+1.5
TLL				AML	AML	20 56 56.8	
	comp=E,2μm,0.4s						
VACH	**Vallenar**	**1.05**	**32**	⇑*i*P	Pn	20 56 45.2	+1.3
VACH				*i* S	Sn	20 57 00.1	+1.9
VACH	**Vallenar**	**1.05**	**32**	⇑*i*P	Pn	20 56 45.2	+1.3
VACH				*i* S	Sn	20 57 00.1	+1.9
VACH				AML	AML	20 57 01.9	
	comp=N,20μm,0.1s						
CPCH	**Copiapo**	**2.29**	**24**	*e*P	Pn	20 57 00.8	+0.3
CPCH				*i* S	Sn	20 57 28.6	+0.9
CPCH	**Copiapo**	**2.29**	**24**	*e*P	Pn	20 57 00.8	+0.3
CPCH				*i* S	Sn	20 57 28.6	+0.9
CPCH				AML	AML	20 57 31.1	
	comp=N,7μm,0.1s						
PEL	**Peldehue**	**3.71**	**171**	⇓*i*P	Pn	20 57 20.5	+0.7
PEL				*e*S	Sn	20 58 02.6	+0.4
FCH	**Farellones**	**3.96**	**166**	⇑*i*P	Pn	20 57 24.9	+1.8
FCH				*i* S	Sn	20 58 11.6	+3.3
TACH	**Talagante**	**4.19**	**175**	*e*P	Pn	20 57 26.4	+0.2
TACH				*i* S	Sn	20 58 13.2	-0.7
PCH	**Pirque**	**4.21**	**170**	⇓*i*P	Pn	20 57 27.4	+0.9
PCH				*e*S	Sn	20 58 14.6	+0.2
LMEL	**Las Melosas**	**4.48**	**167**	*e*P	Pn	20 57 32.0	+1.8
LMEL				*e*S	Sn	20 58 22.9	+1.9
CHCH	**Chadas Angostu**	**4.50**	**172**	⇓*i*P	Pn	20 57 30.9	+0.5
CHCH				*i* S	Sn	20 58 21.6	+0.2
CPN1	**Cerro Paranal**	**4.90**	**11**	*e*P	Pn	20 57 34.7	-1.3
CPN1				*i* S	Sn	20 58 29.0	-2.4
CICH	**Cipreses**	**4.91**	**171**	*e*P	Pn	20 57 37.2	+1.2
CICH				*i* S	Sn	20 58 31.7	+0.2
SFDO	**San Fernando**	**5.14**	**176**	⇓*i*P	Pn	20 57 39.6	+0.4

IDC 12 21:03:26.5±3.7**, 333S×15435E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/13**, mbtmp3.4**/3**, Error ellipse: s-maj=125.7km s-min=31.2km az=106.0, North of Solomon Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.57**	**228**	P	P	21 08 57.4	-0.1
	0.4nm,0.3s,baz=50,slow=9.9,SNR=17						
ASAR	**Alice Springs**	**28.27**	**223**	P	P	21 09 22.5	+0.7
	0.3nm,0.7s,baz=55,slow=8.9,SNR=4.3						
SONM	**Songino Array**	**65.93**	**327**	P	P	21 14 15.8	+1.4
	0.3nm,0.9s,baz=123,slow=5.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**151.27**	**291**	PKPbc	PKPbc	21 23 21.4	-1.8
	0.2nm,0.3s,baz=77,slow=1.6,SNR=10						

CASC ***12*** *21:10:51.6±3.2, 1310N×9099W, h9^{km}±45^{km}, MD4.1, mb4.2(NEIC)*
ISCJB ***12*** *21:10:53.9±0.9, 1314N±008×9084W±006, h57^{km}±7^{km}, mb4.2/18, MS4.1/5, Error ellipse: s-maj=15.1km s-min=5.9km az=36.1*
NEIC ***12*** *21:10:57.4±1.0, 1328N×9071W, h69^{km}±8^{km}, mb4.2/8, Error ellipse: s-maj=15.3km s-min=6.8km az=215.0*
IDC ***12*** *21:10:58.7±2.9, 1356N×9043W, h66^{km}±26^{km}, mb3.9/11, mb1 4.1/14, mb1mx3.9/22, mbtmp3.9/14, ML4.2/3, MS4.1/5, Ms1 4.1/5, ms1mx3.4/31, Error ellipse: s-maj=33.5km s-min=12.4km az=45.0*

ISC 12 21:10:56.3±0.8**, 1323N**±008×**9079W**±006**, h60**^{km}±6^{km}**, n57,** σ**1**^{s}**20**/54**, mb4.2**/18**, 6C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.17**	**9**	⇓*e*P	**Pn**	**21 11 16.2**	**-0.4**
FUG	**Fuego 3**	**1.21**	**358**	⇑*e*P	**Pn**	**21 11 15.8**	**-1.4**
FUG				*e*S	**Sn**	**21 11 34.3**	**+1.6**
SBLS	**San Blas**	**1.29**	**62**	⇑*e*P	x	21 11 31.9	
SBLS				*e*S	x	21 11 54.2	
RTR	**El Retiro**	**1.30**	**59**	⇑*e*P	x	21 11 32.3	
RTR				*e*S	x	21 11 54.0	
SNJE	**San Jose**	**1.32**	**61**	⇑*e*P	x	21 11 32.4	
SNJE				*e*S	x	21 11 54.3	
FG6		**1.32**	**356**	⇑*e*P	**Pn**	**21 11 17.4**	**-1.2**
JAT	**Jato**	**1.36**	**323**	⇑*e*P	**Pn**	**21 11 16.4**	**-2.7**
RBDL	**Robledal**	**1.39**	**51**	*e*P	x	21 11 33.7	
RBDL				*e*S	x	21 11 56.0	
SNET	**Serv Nac Est T**	**1.58**	**73**	*e*S	x	21 11 46.7	
VSM	**San Miguel**	**2.46**	**85**	*e*P	x	21 11 48.9	
VSM				*e*S	x	21 12 24.6	
CNCH	**Conchagua**	**2.88**	**89**	⇓*e*P	x	21 11 53.7	
CNCH				*e*S	x	21 12 29.4	
CCIG	**Comitan**	**3.30**	**337**	*i* P	**Pn**	**21 11 45.4**	**-0.1**
CCIG				*i* S	**Sn**	**21 12 31.4**	**+7.8**
TGUH	**Tegucigalpa,Un**	**3.52**	**76**	*e*Pn	**Pn**	**21 11 48.9**	**+0.4**
SCX	**San Cristobal**	**3.91**	**333**	*e*P	**Pn**	**21 11 55.3**	**+1.4**
SCX				*i* S	**Sn**	**21 12 55.5**	**+17**
CMIG	**Matias Romero**	**5.51**	**315**	P	**Pn**	**21 12 12.2**	**-3.6**
	1.4nm,0.3s,baz=120,slow=10.0,SNR=11						
CMIG				S	**Sn**	**21 13 18.6**	**+0.8**
	2.6nm,0.3s,baz=92,slow=14,SNR=3.7						
JTS	**JuntasAbangare**	**6.42**	**116**	*e*Pn	**Pn**	**21 12 28.2**	**-0.1**
	14nm,0.6s						
JTS				S	**Sn**	**21 13 40.0**	**-0.2**
JTS	**JuntasAbangare**	**6.42**	**116**	P	**Pn**	**21 12 27.9**	**-0.4**
	1.4nm,0.3s,baz=304,slow=20,SNR=7.6						
JTS				S	**Sn**	**21 13 40.0**	**-0.2**
	1.7nm,0.3s,baz=318,slow=20,SNR=2.5						
VHO	**Vista Hermosa**	**6.89**	**304**	*i* P	**Pn**	**21 12 32.5**	**-2.2**
VHO				*i* S	**Sn**	**21 14 04.6**	**+13**
TEIG	**Tepich**	**7.36**	**19**	*e*Pn	**Pn**	**21 12 42.7**	**+1.6**
	58nm,0.5s						
TEIG	**Tepich**	**7.36**	**19**	P	**Pn**	**21 12 42.8**	**+1.6**
	5.9nm,0.3s,baz=201,slow=9.2,SNR=12						
PPM	**Popocatepetl**	**9.50**	**309**	*i* P	**Pn**	**21 13 12.4**	**+1.9**
PPM				*i* S	**Sn**	**21 15 13.1**	**+17**
IIO	**Organos**	**9.89**	**311**	*e*P	**Pn**	**21 13 16.4**	**+0.7**
ROSC	**El Rosal**	**18.25**	**116**	P	**Pn**	**21 15 10.0**	**+4.5**
	0.4nm,0.3s,baz=102,slow=22,SNR=5.5						
JCT	**Junction City**	**19.08**	**336**	P	**Pn**	**21 15 13.7**	**-1.5**
	3.0nm,0.4s						
LTX	**Lajitas**	**19.99**	**325**	*e*P	**Pn**	**21 15 25.0**	**-1.1**
	6.7nm,0.9s						
TXAR	**Lajitas Array**	**19.99**	**325**	P	**Pn**	**21 15 25.1**	**-0.9**
	0.5nm,0.3s,baz=153,slow=13,SNR=28						
SDV	**Santo Domingo**	**20.25**	**100**	*e*P	**P**	**21 15 26.6**	**-0.2**
SDV	**Santo Domingo**	**20.25**	**100**	P	**P**	**21 15 27.3**	**+0.5**
	0.5nm,0.3s,baz=299,slow=7.9,SNR=10						
MIAR	**Mount Ida**	**21.37**	**354**	*e*P	**P**	**21 15 38.7**	**0.0**
	8.2nm,0.8s,mb4.1						
LPIG	**La Paz**	**21.39**	**303**	LR	LR	21 25 49.8	
	comp=Z,128nm,18.9s,baz=227,slow=41						
PLAL	**Pickwick Lake**	**21.80**	**6**	*e*P	**P**	**21 15 43.6**	**+0.3**
	13nm,0.5s,mb4.6						
SWET	**Sewanee**	**22.33**	**11**	*e*P	**P**	**21 15 49.6**	**+0.7**
MNTX	**Cornudas Mount**	**22.75**	**326**	*e*P	**P**	**21 15 52.4**	**-1.0**
	12nm,0.8s,mb4.4						
TKL	**Tuckaleechee C**	**23.21**	**15**	P	**P**	**21 15 57.6**	**-0.5**
	9.3nm,0.6s,mb4.4,baz=184,slow=11,SNR=3.7						
TKL				LR	LR	21 25 49.0	
	comp=Z,285nm,18.3s,baz=84,slow=39						
ANMO	**Albuquerque**	**25.86**	**329**	P	**P**	**21 16 23.6**	**+1.3**
	1.2nm,0.7s,mb3.5,baz=146,slow=13,SNR=2.7						
HWUT	**Hardware Ranch**	**33.57**	**331**	*e*P	**P**	**21 17 31.9**	**+1.5**
	4.0nm,0.9s,mb4.3						
BW06	**Boulder Array**	**33.61**	**335**	*e*P	**P**	**21 17 32.6**	**+1.8**
	2.1nm,1.0s,mb4.0						
PDAR	**Pinedale Array**	**33.61**	**335**	P	**P**	**21 17 31.0**	**+0.2**
	0.8nm,0.7s,mb3.8,baz=145,slow=9.2,SNR=7.3						
NVAR	**Mina Array Bea**	**35.01**	**321**	P	**P**	**21 17 46.0**	**+3.0**
NVAR				PcP	PcP	21 20 16.7	+2.6
NVAR	**Mina Array Bea**	**35.01**	**321**	P	**P**	**21 17 46.0**	**+3.0**
	10.0nm,0.9s,mb4.7,baz=129,slow=9.6,SNR=38						
NVAR				PcP	PcP	21 20 16.7	+2.6
	1.5nm,0.9s,baz=127,slow=4.8,SNR=4.2						
AGMN	**Agassiz Refuge**	**35.22**	**354**	P	**P**	**21 17 43.8**	**-0.8**
	4.4nm,0.7s,mb4.5						
ULM	**Lac du Bonnet**	**37.15**	**355**	P	**P**	**21 17 59.5**	**-1.6**
ULM				PcP	PcP	21 20 21.1	+0.9
ULM	**Lac du Bonnet**	**37.15**	**355**	P	**P**	**21 17 59.5**	**-1.6**
	9.0nm,0.8s,mb4.7,baz=174,slow=8.8,SNR=20						
ULM				PcP	PcP	21 20 21.1	+0.9
	1.0nm,0.7s,baz=289,slow=3.7,SNR=3.4						
SIV	**San Ignacio**	**41.31**	**134**	P	**P**	**21 18 36.8**	**+0.6**
	1.8nm,0.8s,mb3.8,baz=313,slow=11,SNR=6.9						
SCHQ	**Schefferville**	**45.55**	**19**	P	**P**	**21 19 07.7**	**-2.1**
SCHQ				LR	LR	21 39 00.1	
SCHQ	**Schefferville**	**45.55**	**19**	P	**P**	**21 19 07.7**	**-2.1**
	7.6nm,0.8s,mb4.7,baz=224,slow=4.3,SNR=21						
SCHQ				LR	LR	21 39 00.1	
	comp=Z,181nm,18.3s,baz=53,slow=37						
YKA	**Yellowknife Ar**	**52.04**	**346**	P	**P**	**21 19 59.1**	**-0.4**
	1.3nm,0.7s,mb4.0,baz=146,slow=7.9,SNR=21						
YKA				PcP	PcP	21 21 12.5	+1.6
	0.7nm,0.7s,baz=143,slow=4.0,SNR=8.8						
RES	**Resolute Bay**	**61.49**	**359**	*e*P	**P**	**21 21 05.0**	**-1.3**
ESDC	**Sonseca Array**	**79.27**	**52**	P	**P**	**21 22 54.5**	**-0.9**
	0.4nm,0.5s,mb3.6,baz=290,slow=5.6,SNR=4.2						
NOA	**NORSAR Array B**	**84.26**	**29**	LR	LR	22 00 08.4	
	comp=Z,127nm,18.4s,baz=350,slow=35						
TIC	**Toumodi**	**84.41**	**85**	*e*P	**P**	**21 23 23.6**	**+0.7**
	1.8nm,0.2s,mb4.8						
LIC	**Lamto**	**84.49**	**85**	*e*P	**P**	**21 23 24.2**	**+0.9**
	65nm,1.6s						
DBIC	**Dimbokro**	**84.56**	**84**	P	**P**	**21 23 24.8**	**+1.1**
	3.3nm,0.6s,mb4.6,baz=224,slow=3.2,SNR=7.3						
KIC	**Kosan Boka**	**84.74**	**85**	*e*P	**P**	**21 23 25.4**	**+0.8**
	49nm,0.8s						
TORD	**Torodi Ar. Bea**	**89.41**	**77**	P	**P**	**21 23 45.9**	**-1.3**
	0.5nm,0.7s,mb3.9,baz=298,slow=5.4,SNR=5.2						
MLR	**Muntele Rosu**	**98.43**	**39**	LR	LR	22 11 59.3	
	comp=Z,295nm,19.3s,baz=329,slow=37						
WRA	**Warramunga Arr**	**136.34**	**255**	PKP	PKPdf	21 30 12.9	+0.9
	0.4nm,0.7s,baz=91,slow=2.1,SNR=4.6						

ISCJB ***12*** *22:13:36.1±1.4, 2151S±007×685W±0.1, h108^{km}±15^{km}, mb4.0/3, Error ellipse: s-maj=21.2km s-min=11.1km az=177.0*
IDC ***12*** *22:13:37.1±2.1, 2155S×6854W, h99^{km}±19^{km}, mb3.9/3, mb1 3.9/6, mb1mx3.6/18, mbtmp3.9/6, Error ellipse: s-maj=30.1km s-min=19.1km az=95.0*
NEIC ***12*** *22:13:38.5±1.1, 2145S×6844W, h109^{km}±10^{km}, mb3.9/1, Error ellipse: s-maj=19.7km s-min=9.8km az=94.0*

ISC 12 22:13:37.3±1.1**, 2153S**±006×**685W**±01**, h102**^{km}±13^{km}**, n17,** σ**1**^{s}**06**/17**, mb4.0**/3**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.23**	**4**	P	**Pn**	**22 14 54.8**	**+1.5**
LPAZ				S	**Sn**	**22 15 42.7**	**-10**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.23**	**4**	P	**Pn**	**22 14 54.8**	**+1.5**
	1.5nm,0.3s,baz=177,slow=5.7,SNR=32						
LPAZ				S	**Sn**	**22 15 42.7**	**-10**
	0.7nm,0.3s,baz=226,slow=17,SNR=3.9						
SIV	**San Ignacio**	**8.96**	**53**	P	**Pn**	**22 15 42.8**	**-1.2**
	9.3nm,0.3s,baz=254,slow=11,SNR=165						
CFAA	**Coronel Fontan**	**10.03**	**179**	P	**Pn**	**22 15 59.5**	**+1.1**
	0.1nm,0.3s,baz=0.4,slow=11,SNR=8.2						
CFAA				S	**Sn**	**22 17 47.2**	**-1.8**
	0.1nm,0.3s,baz=171,slow=13,SNR=6.7						
ATAH	**Atahualpa**	**17.31**	**325**	P	**Pn**	**22 17 31.3**	**-1.4**
	0.4nm,0.3s,baz=25,slow=14,SNR=2.6						
PLCA	**Paso Flores**	**19.22**	**185**	*e*P	**Pn**	**22 17 57.3**	**+2.0**
	3.8nm,0.7s						
SDV	**Santo Domingo**	**30.30**	**356**	P	**P**	**22 19 39.3**	**+0.2**
JTS	**JuntasAbangare**	**35.50**	**331**	P	**P**	**22 20 24.9**	**+0.5**
BRNJ	**Basking Ridge**	**62.15**	**355**	P	**P**	**22 23 47.5**	**0.0**
WMOK	**Wichita Mounta**	**62.91**	**332**	P	**P**	**22 23 52.4**	**-0.5**
DBIC	**Dimbokro**	**68.41**	**73**	P	**P**	**22 24 28.9**	**+0.3**
	5.7nm,1.1s,mb4.3,baz=116,slow=2.1,SNR=3.2						
TORD	**Torodi Ar. Bea**	**77.03**	**70**	P	**P**	**22 25 20.1**	**+0.4**
	1.0nm,0.3s,mb4.0,baz=257,slow=5.4,SNR=12						
YKA	**Yellowknife Ar**	**91.33**	**340**	P	**P**	**22 26 30.3**	**-0.7**
YKA	**Yellowknife Ar**	**91.33**	**340**	P	**P**	**22 26 30.3**	**-0.7**
	0.2nm,0.5s,mb3.5,baz=131,slow=4.6,SNR=5.5						
ASAR	**Alice Springs**	**130.05**	**207**	PKP	PKPdf	22 32 35.4	-0.6
	0.8nm,1.0s,baz=168,slow=19,SNR=4.0						
WRA	**Warramunga Arr**	**133.10**	**210**	PKP	PKPdf	22 32 42.2	+0.4
	0.3nm,0.6s,baz=160,slow=1.9,SNR=6.0						
MKAR	**Makanchi Array**	**145.45**	**36**	PKPbc	PKPbc	22 33 04.0	+0.5
	0.1nm,0.3s,baz=302,slow=7.0,SNR=3.7						

MAN 12 22:33:47, 1075N×12435E, h1km, mb4.0, ML2.8, MS2.5, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.39**	**40**	*e*P	Pg	22 33 55.0	+0.5
OCLP				*e*S	Sg	22 34 01.2	+1.6
LLP	**Lapu-Lapu**	**0.57**	**222**	⇑*i*P	Pg	22 33 58.6	+0.6
LLP				*i* S	Sg	22 34 07.9	+2.4
MSLP	**Maasin**	**0.79**	**141**	*e*P	Pg	22 34 03.5	+1.4
MSLP				*e*S	Sg	22 34 17.2	+4.9
TBP	**Tagbilaran**	**1.16**	**205**	*e*P	Pg	22 34 10.0	+0.8

*ISCJB **12** 22:36:55.3±0.4, 4830N±003×659E±003, h14km±5km, Error ellipse: s-maj=5.0km s-min=3.4km az=170.3*
*STR **12** 22:36:56.6±0.2, 4832N×669E, h10km, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **12** 22:36:56.6±0.0, 4834N×666E, h10km, Md2.6/4, Ml2.2/9, Error ellipse: s-maj=0.9km s-min=0.6km az=159.0*
ISC 12 22:36:55.9±0.4**, 4833N**±003×**664E**±003**, h17**km±5km**, n23, σ0.s59**/37**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECH	**Echery**	**0.36**	**107**	Pg	**Pg**	**22 37 03.8**	**+0.3**
ECH				Sg	**Sg**	**22 37 08.2**	**-0.3**
HAU	**Haudompre**	**0.38**	**212**	*e*Pg	**Pg**	**22 37 04.5**	**+0.8**
HAU				*e*Sg	**Sg**	**22 37 09.4**	**+0.5**
	21nm,0.3s						
CDF	**Champ du Feu**	**0.43**	**78**	*e*Pg	**Pg**	**22 37 04.9**	**+0.2**
CDF				*e*Sg	**Sg**	**22 37 10.2**	**-0.4**
	6.5nm,0.2s						
THEF	**They Montfort**	**0.45**	**258**	Pg	**Pg**	**22 37 05.4**	**+0.4**
HINF	**Hinteralfeld**	**0.53**	**164**	*e*Pg	**Pg**	**22 37 06.9**	**+0.5**
HINF				*e*Sg	**Sg**	**22 37 13.8**	**+0.3**
	21nm,0.2s						
MOF	**Molkenrain**	**0.58**	**145**	Pg	**Pg**	**22 37 07.5**	**+0.2**
RFYF	**Reffroy**	**0.83**	**292**	*e*Pg	**Pg**	**22 37 12.7**	**+0.6**
	baz=109						
RFYF				*e*Sn	**Sn**	**22 37 25.0**	**+0.3**
	15nm,0.2s,baz=109						
LOMF	**Lomont**	**0.98**	**173**	Pg	**Pg**	**22 37 15.5**	**+0.5**
LOMF				Sg	**Sg**	**22 37 28.9**	**+1.0**
LANF	**Langenberg**	**1.01**	**49**	Pg	**Pg**	**22 37 15.7**	**+0.1**
MEZF	**Maizieres J'vi**	**1.07**	**280**	*e*Pg	**Pg**	**22 37 17.1**	**+0.4**
	baz=106						
MEZF				*e*Sg	**Sg**	**22 37 31.1**	**+0.4**
	5.0nm,0.2s						
SFTF	**Sexfontaines**	**1.08**	**264**	*e*Pg	**Pg**	**22 37 16.9**	**+0.2**
	baz=82						
SFTF				*e*Sg	**Sg**	**22 37 31.3**	**+0.5**
	4.9nm,0.2s						
BFO	**Black Forest**	**1.13**	**89**	*e*Pg	**Pg**	**22 37 18.1**	**+0.4**
	SNR=3.7						
BFO				*e*Sg	**Sg**	**22 37 30.3**	**-2.1**
	SNR=6.2						
CABF	**La Chapelle**	**1.76**	**193**	*e*Pn	**Pn**	**22 37 26.1**	**+0.6**
CABF	**La Chapelle**	**1.76**	**193**	*e*Pg	**Pg**	**22 37 29.7**	**+0.1**
CABF				*e*Sg	**Sg**	**22 37 52.3**	**-0.1**
	2.1nm,0.3s						
LOR	**Lormes**	**2.15**	**242**	*e*Pn	**Pn**	**22 37 31.0**	**+0.1**
	baz=57						
LOR	**Lormes**	**2.15**	**242**	*e*Pg	**Pg**	**22 37 36.8**	**-0.4**
LOR				*e*Sg	**Sg**	**22 38 04.4**	**-0.7**
	2.4nm,0.2s,baz=66						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pn	**Pn**	**22 37 35.5**	**+0.2**
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pg	**Pg**	**22 37 42.9**	**-0.3**
SSF				*e*Sg	**Sg**	**22 38 14.7**	**-0.4**
	1.3nm,0.2s						
SMF	**Signal de Mont**	**2.54**	**230**	*e*Pn	**Pn**	**22 37 36.1**	**-0.1**
SMF	**Signal de Mont**	**2.54**	**230**	*e*Pg	**Pg**	**22 37 43.7**	**-0.8**
SMF				*e*Sg	**Sg**	**22 38 16.8**	**-0.6**
	2.5nm,0.2s						
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Pn	**Pn**	**22 37 38.4**	**-0.1**
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Pg	**Pg**	**22 37 47.0**	**-0.7**
AVF				*e*Sg	**Sg**	**22 38 22.1**	**-0.7**
	0.6nm,0.2s						
BGF	**Bois d'Agland**	**3.12**	**237**	*e*Sg	**Sg**	**22 38 35.1**	**-1.1**
	2.3nm,0.3s						

*SZGRF **12** 22:39:50.4, 2233S×17736W, h33km, South of Fiji Islands*
*ORF **12** 22:40:05.7, 1779S×17943E, h30km, mb5.7*
*MOS **12** 22:40:41.8±2.9, 2062S×17864W, h411km, mb4.6/10, Error ellipse: s-maj=10.5km s-min=9.8km az=6.1*
*BJI **12** 22:40:45.5, 2082S×17798W, h494km, mB5.2, mb4.9*
*BGS **12** 22:40:46.9, 2078S×17849W, h476km, mb4.4(NEIC)*
*NEIC **12** 22:40:47.0±1.3, 2078S×17849W, h476km±15km, mb4.4/26, Error ellipse: s-maj=11.2km s-min=6.6km az=163.0*
*ISCJB **12** 22:40:49.4±1.0, 2095S±006×17851W±005, h521km±12km, mb4.4/46, Error ellipse: s-maj=10.4km s-min=6.9km az=157.4*
*IDC **12** 22:40:51.1±1.7, 2101S×17840W, h538km±18km, mb3.8/19, mb1 4.0/23, mb1mx4.0/25, mbtmp3.9/23, Error ellipse: s-maj=13.3km s-min=10.6km az=158.0*
ISC 12 22:40:50.3±1.0**, 2094S**±006×**17848W**±005**, h521**km±12km**, n310, σ0.s86**/107**, mb4.4**/46**, 35C-17D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.47**	**44**	P	**P**	**22 43 01.6**	**-0.9**
	32nm,0.3s,baz=33,slow=3.5,SNR=49						
DZM	**Mont Dzumac**	**14.08**	**263**	*e*P	**P**	**22 43 51.8**	**+1.2**
DZM	**Mont Dzumac**	**14.08**	**263**	P	**P**	**22 43 51.9**	**+1.3**
	3.3nm,0.3s,baz=87,slow=16,SNR=52						
RAR	**Rarotonga**	**17.46**	**94**	P	**P**	**22 44 24.5**	**-0.3**
	1.8nm,0.3s,baz=227,slow=8.3,SNR=5.8						
URZ	**Urewera**	**17.68**	**191**	P	**P**	**22 44 25.2**	**-1.4**
	1.1nm,0.3s,baz=4.0,slow=6.7,SNR=8.8						
SNZO	**South Karori**	**21.12**	**194**	*e*P	**P**	**22 44 58.6**	**+0.8**
HNR	**Honiara**	**23.72**	**296**	P	**P**	**22 45 21.1**	**-0.4**
PAE	**Paea**	**27.45**	**88**	*e*P	**P**	**22 45 54.2**	**-0.3**
	90nm,1.2s,mb5.3						
PAE	**Paea**	**27.45**	**88**	*e*P	**P**	**22 45 54.2**	**-0.3**
PAE				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.3						
PPT	**Papeete**	**27.48**	**88**	*e*P	**P**	**22 45 54.8**	**+0.1**
	comp=Z,45nm,1.3s,mb5.0						
PPT	**Papeete**	**27.48**	**88**	*e*P	**P**	**22 45 54.8**	**+0.1**
PPT				pmax	pmax		
	comp=Z,45nm,1.3s						
ARMA	**Armidale**	**28.47**	**245**	*e*P	**P**	**22 46 04.3**	**+1.1**
PMOR	**Pomariorio Ree**	**29.66**	**84**	*e*P	**P**	**22 46 12.9**	**-0.8**
	comp=Z,27nm,0.8s,mb4.8						
CNB	**Canberra Magne**	**31.61**	**236**	*e*P	**P**	**22 46 30.9**	**+0.7**
	comp=Z,11nm,0.5s,mb4.6						
CTA	**Charters Tower**	**33.00**	**265**	*e*P	**P**	**22 46 42.9**	**+0.6**
	comp=Z,4.6nm,0.4s,mb4.4						
CTA	**Charters Tower**	**33.00**	**265**	*e*P	**P**	**22 46 42.9**	**+0.6**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
CTA	**Charters Tower**	**33.00**	**265**	P	**P**	**22 46 42.9**	**+0.6**
	comp=Z,5.5nm,0.5s,mb4.4,baz=92,slow=11,SNR=14						
CTAO	**Charters Tower**	**33.00**	**265**	*e*P	**P**	**22 46 43.1**	**+0.8**
	comp=Z,6.1nm,0.5s,mb4.4						
CTAO	**Charters Tower**	**33.00**	**265**	*e*P	**P**	**22 46 43.1**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
PMG	**Port Moresby**	**35.00**	**284**	*e*P	**P**	**22 46 59.6**	**+0.4**
PMG	**Port Moresby**	**35.00**	**284**	*c i*P	**P**	**22 46 59.8**	**+0.6**
PMG	**Port Moresby**	**35.00**	**284**	P	**P**	**22 47 00.1**	**+0.9**
	comp=Z,41nm,0.8s,mb5.0,baz=96,slow=4.5,SNR=12						
TAU	**Tasmania Unive**	**36.00**	**225**	P	**P**	**22 47 07.3**	**+0.2**
STKA	**Stephens Creek**	**37.19**	**245**	*e*P	**P**	**22 47 17.2**	**+0.1**
	comp=Z,6.0nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**37.19**	**245**	P	**P**	**22 47 17.2**	**+0.1**
	comp=Z,6.8nm,0.8s,mb4.2,baz=101,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**43.98**	**257**	P	**P**	**22 48 11.1**	**-0.3**
	comp=Z,12nm,0.5s,mb4.6,baz=97,slow=7.8,SNR=161						
WB2	**Warramunga Arr**	**44.08**	**263**	*e*P	**P**	**22 48 11.3**	**-1.0**
WRA	**Warramunga Arr**	**44.09**	**263**	P	**P**	**22 48 11.5**	**-0.9**
	comp=Z,8.6nm,0.7s,mb4.4,baz=97,slow=7.3,SNR=127						
FITZ	**Fitzroy Crossi**	**52.52**	**263**	*e*P	**P**	**22 49 14.8**	**-0.4**
	comp=Z,12nm,1.0s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.52**	**263**	P	**P**	**22 49 15.2**	**0.0**
	comp=Z,3.2nm,0.5s,mb3.9,baz=91,slow=14,SNR=14						
BATI	**Kupang**	**56.49**	**271**	P	**P**	**22 49 44.1**	**+1.0**
	comp=Z,27nm,0.6s,mb4.7,baz=244,slow=5.0,SNR=6.3						
MBWA	**Marble Bar**	**57.32**	**258**	*e*P	**P**	**22 49 48.0**	**-0.8**
	comp=Z,15nm,0.5s,mb4.5						
SBA	**Scott Base**	**57.41**	**184**	*e*P	**P**	**22 49 50.2**	**+1.8**
	comp=Z,3.2nm,0.4s,mb3.9						
SBA	**Scott Base**	**57.41**	**184**	*e*P	**P**	**22 49 50.2**	**+1.8**
SBA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb3.9						
VNDA	**Vanda**	**57.44**	**185**	P	**P**	**22 49 48.2**	**-0.4**
	comp=Z,2.0nm,0.6s,mb3.5,baz=352,slow=6.4,SNR=10						
NWAO	**Narrogin (SRO)**	**57.77**	**244**	P	**P**	**22 49 52.2**	**+0.5**
QSPA	**South Pole Qui**	**69.14**	**180**	*e*P	**P**	**22 51 03.9**	**+0.2**
	comp=Z,30nm,0.6s,mb5.0						
QSPA				*e*PcP	PcP	22 51 22.7	-0.7
MJAR	**Matsushiro Arr**	**70.29**	**324**	P	**P**	**22 51 10.7**	**-0.5**
	comp=Z,1.6nm,0.6s,mb3.7,baz=155,slow=5.8,SNR=91						
MAJO	**Matsushiro**	**70.29**	**324**	*e*P	**P**	**22 51 11.2**	**0.0**
	comp=Z,5.2nm,0.4s,mb4.4						
MAJO	**Matsushiro**	**70.29**	**324**	*e*P	**P**	**22 51 11.2**	**0.0**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
TATO	**Taipei**	**74.06**	**305**	*e*P	**P**	**22 51 32.3**	**-1.0**
YSS	**Yuzh-Sakhalins**	**76.08**	**334**	⇓*e*P	**P**	**22 51 42.1**	**-2.0**
YSS				pmax	pmax		
	comp=Z,89nm,2.5s,mb4.8						
KSRS	**Korea Array**	**76.91**	**319**	P	**P**	**22 51 49.8**	**+0.9**
	comp=Z,3.1nm,0.7s,mb3.8,baz=128,slow=6.1,SNR=10.0						
CMB	**Columbia Colle**	**80.09**	**43**	*e*P	**P**	**22 52 06.5**	**+0.6**
	comp=Z,6.3nm,1.3s,mb3.8						
CMB	**Columbia Colle**	**80.09**	**43**	*e*P	**P**	**22 52 06.5**	**+0.7**
CMB				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb3.8						
HABR	**Khabarovsk**	**80.60**	**331**	*e*P	**P**	**22 52 07.5**	**-0.8**
HABR				*e*		23 01 39.3	
MDJ	**Mudanjiang**	**80.61**	**325**	P	**P**	**22 52 09.2**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,345nm,5.1s						
MDJ	**Mudanjiang**	**80.61**	**325**	*e*P	**P**	**22 52 09.2**	**+0.7**
	comp=Z,10nm,0.7s,mb4.4						
YBH	**Yreka Blue Hor**	**80.91**	**39**	*e*P	**P**	**22 52 11.4**	**+1.3**
	comp=Z,6.3nm,0.8s,mb4.1						
YBH	**Yreka Blue Hor**	**80.91**	**39**	*e*P	**P**	**22 52 11.4**	**+1.4**
YBH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WAKR	**Walker**	**80.97**	**43**	*e*P	**P**	**22 52 11.5**	**+1.1**
MAW	**Mawson**	**81.00**	**200**	P	**P**	**22 52 09.0**	**-1.1**
MAW	**Mawson**	**81.00**	**200**	P	**P**	**22 52 09.0**	**-1.1**
	comp=Z,7.4nm,1.2s,mb4.0,baz=106,slow=4.7,SNR=4.2						
TPNV	**Topopah Spring**	**82.17**	**46**	*e*P	**P**	**22 52 17.6**	**+1.0**
	comp=Z,5.4nm,0.8s,mb4.0						
TPNV	**Topopah Spring**	**82.17**	**46**	*e*P	**P**	**22 52 17.6**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
CN2	**Changchun**	**82.37**	**323**	*e*P	**P**	**22 52 17.1**	**-0.4**
MOD	**Modoc**	**82.44**	**40**	*e*P	**P**	**22 52 18.5**	**+0.6**
MA2	**Magadan**	**84.08**	**345**	*e*P	**P**	**22 52 24.0**	**-1.6**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
PSI	**Prapat**	**84.08**	**275**	P	**P**	**22 52 25.9**	**-0.9**
	comp=Z,15nm,0.8s,mb4.5,baz=169,slow=6.7						
ARUT	**Antelope Range**	**84.50**	**46**	*e*P	**P**	**22 52 33.7**	**+5.5**
GAMB	**Gambell**	**84.60**	**3**	*e*P	**P**	**22 52 28.2**	**+0.1**
TTA	**Tatalina**	**85.45**	**10**	*e*P	**P**	**22 52 32.4**	**+0.2**
HAWA	**Hanford**	**85.56**	**36**	*e*P	**P**	**22 52 34.2**	**+1.0**
	comp=Z,12nm,1.0s,mb4.5						
MSU	**Marysvale**	**85.73**	**46**	*e*P	**P**	**22 52 35.0**	**+0.9**
BJT	**Baijiatuau**	**85.88**	**316**	*e*P	**P**	**22 52 34.7**	**-0.1**
BMO	**Blue Mountains**	**85.94**	**39**	*e*P	**P**	**22 52 35.2**	**+0.2**
TNA	**Tin City**	**86.60**	**4**	*e*P	**P**	**22 52 37.6**	**-0.1**
MNTX	**Cornudas Mount**	**87.37**	**55**	*e*P	**P**	**22 52 42.9**	**+0.8**
	comp=Z,5.1nm,1.0s,mb4.1						
MCK	**McKinley**	**87.49**	**13**	*e*P	**P**	**22 52 41.0**	**-0.9**
	comp=Z,12nm,0.9s,mb4.5						
MCK	**McKinley**	**87.49**	**13**	*e*P	**P**	**22 52 41.0**	**-0.9**
MCK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5						
TXAR	**Lajitas Array**	**87.67**	**58**	P	**P**	**22 52 44.5**	**+0.9**
	comp=Z,2.8nm,0.9s,mb4.0,baz=215,slow=5.7,SNR=20						
HWUT	**Hardware Ranch**	**87.72**	**44**	*e*P	**P**	**22 52 43.2**	**-0.3**
VNA3	**Neumayer Olymp**	**87.74**	**176**	*e*P	**P**	**22 52 40.8**	**-2.3**
VNA3				*e*		22 52 45.2	
VNA3				*e*		22 52 54.8	
PV10	**Paradox Valley**	**87.80**	**47**	*e*P	**P**	**22 52 43.9**	**0.0**
NEW	**Newport**	**87.99**	**36**	*e*P	**P**	**22 52 44.2**	**-0.4**
NEW	**Newport**	**87.99**	**36**	P	**P**	**22 52 44.2**	**-0.4**
	comp=Z,2.1nm,0.7s,mb4.0,baz=291,slow=8.6,SNR=3.1						
ANMO	**Albuquerque**	**88.03**	**51**	*e*P	**P**	**22 52 45.2**	**+0.1**
ANMO	**Albuquerque**	**88.03**	**51**	⇓*i*P	**P**	**22 52 45.5**	**+0.4**
ANMO	**Albuquerque**	**88.03**	**51**	P	**P**	**22 52 45.6**	**+0.5**
	comp=Z,0.7nm,0.5s,mb3.6,baz=241,slow=3.3,SNR=3.7						
XAN	**Xi'an**	**88.04**	**308**	P	**P**	**22 52 45.5**	**+0.3**
XAN				AMB	AMB		
	comp=Z,22nm,0.9s,mb4.9						
VNA2	**Neumayer--Watz**	**88.17**	**177**	*e*P	**P**	**22 52 43.1**	**-2.1**
	baz=205,slow=3.0						
VNA2				*e*		22 52 47.7	
VNA2				*e*		22 52 57.5	
COLA	**College**	**88.73**	**13**	*e*P	**P**	**22 52 46.5**	**-1.2**
	comp=Z,4.4nm,0.6s,mb4.5						
COLA	**College**	**88.73**	**13**	*d i*P	**P**	**22 52 46.1**	**-1.5**
IMA2	**Indian Mountai**	**88.75**	**10**	*e*P	**P**	**22 52 47.3**	**-0.4**
HIA	**Hailar**	**88.79**	**325**	*e*P	**P**	**22 52 48.0**	**-0.3**
	comp=Z,7.9nm,0.8s,mb4.6						
HIA	**Hailar**	**88.79**	**325**	⇑*e*P	**P**	**22 52 47.8**	**-0.5**
REDW	**Red Top Meadow**	**89.06**	**42**	*e*P	**P**	**22 52 50.6**	**+0.9**
KMI	**Kunming**	**89.14**	**297**	P	**P**	**22 52 51.8**	**+1.3**
KMI				AMB	AMB		
	comp=Z,17nm,0.9s,mb4.9						
IMW	**Indian Meadow**	**89.27**	**42**	*e*P	**P**	**22 52 51.8**	**+1.1**
	comp=Z,7.0nm,0.8s,mb4.5						
BILL	**Bilibino**	**89.42**	**354**	*e*P	**P**	**22 52 50.6**	**-0.2**
	comp=Z,4.9nm,0.7s,mb4.5						
BILL	**Bilibino**	**89.42**	**354**	⇓*i*P	**P**	**22 52 50.0**	**-0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
QLMT	**Earthquake Lak**	**89.44**	**41**	*e*P	**P**	**22 52 52.5**	**+1.1**
BW06	**Boulder Array**	**89.59**	**43**	*e*P	**P**	**22 52 52.4**	**+0.3**
	comp=Z,4.4nm,0.7s,mb4.4						
PDAR	**Pinedale Array**	**89.59**	**43**	P	**P**	**22 52 52.3**	**+0.1**
	comp=Z,4.2nm,0.7s,mb4.4,baz=208,slow=3.3,SNR=39						
CHTO	**Chiang Mai**	**89.97**	**290**	*e*P	**P**	**22 52 55.3**	**+0.8**
	comp=Z,9.7nm,0.6s,mb4.8						
CHTO	**Chiang Mai**	**89.97**	**290**	*e*P	**P**	**22 52 55.3**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.8						
SDCO	**Great Sand Dun**	**89.98**	**49**	*e*P	**P**	**22 52 54.2**	**+0.1**
	comp=Z,2.9nm,1.3s,mb4.0						
DAWY	**Dawson**	**90.00**	**16**	*e*P	**P**	**22 52 53.8**	**+0.2**
EGAK	**Eagle**	**90.14**	**15**	*e*P	**P**	**22 52 53.8**	**-0.4**
WALA	**Waterton Lakes**	**90.20**	**36**	*e*P	**P**	**22 52 55.0**	**+0.2**
YAK	**Yakutsk**	**92.35**	**338**	*e*P	**P**	**22 53 03.7**	**-0.7**
LZH	**Lanzhou**	**92.67**	**308**	*e*P	**P**	**22 53 08.0**	**+1.4**
LZH				AMB	AMB		
	comp=Z,19nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,87nm,4.1s						
INK	**Inuvik**	**94.81**	**15**	*e*P	**P**	**22 53 14.2**	**-1.4**
INK	**Inuvik**	**94.81**	**15**	P	**P**	**22 53 13.7**	**-1.9**
	comp=Z,1.3nm,0.6s,mb4.2,baz=192,slow=4.1,SNR=6.1						
SONM	**Songino Array**	**95.78**	**319**	P	**P**	**22 53 19.8**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.9,baz=73,slow=2.3,SNR=5.0						
NNA	**Nana**	**96.39**	**105**	P	**P**	**22 53 23.9**	**0.0**
YKA	**Yellowknife Ar**	**97.09**	**25**	P	**P**	**22 53 25.1**	**-0.8**
	comp=Z,0.8nm,0.8s,mb4.0,baz=242,slow=4.4,SNR=10.0						
TLY	**Talaya**	**98.96**	**322**	⇑*e*P	Pdif	22 53 32.2	-2.5
RES	**Resolute Bay**	**108.34**	**16**	*e*PKiKP	PKiKP	22 58 16.9	-1.5
MKAR	**Makanchi Array**	**111.17**	**313**	Pdiff	Pdif	22 54 30.5	+1.5
	comp=Z,0.4nm,0.6s,baz=101,slow=5.6,SNR=5.3						
MKAR				PKiKP	PKiKP	22 58 22.6	-1.9
	comp=Z,1.5nm,0.7s,baz=69,slow=1.7,SNR=15						
KURK	**Kurchatov**	**114.01**	**317**	*e*PKiKP	PKiKP	22 58 28.0	-1.9
CHKZ	**Chkalovo**	**118.94**	**321**	*e*PKPdf	PKPdf	22 58 36.9	-2.3
BRVK	**Borovoye**	**119.18**	**320**	*e*PKPdf	PKPdf	22 58 37.4	-2.4
SCHQ	**Schefferville**	**119.29**	**38**	PKP	PKPdf	22 58 37.5	-2.4
	comp=Z,1.2nm,0.6s,baz=11,slow=17,SNR=3.6						
SFJD	**Kangerlussuaq**	**123.51**	**22**	PKP	PKPdf	22 58 45.9	-1.8
	comp=Z,6.0nm,0.7s,baz=59,slow=2.9,SNR=4.1						
SVE	**Sverdlovsk**	**124.09**	**325**	*e*PKIKP	PKPdf	22 58 46.7	-2.3
ARU	**Arti**	**125.30**	**325**	*e*PKPdf	PKPdf	22 58 49.4	-2.0
ARU				*e*PKPdf	PKPdf	22 58 50.4	-1.0
ARU	**Arti**	**125.30**	**325**	*i* PKIKP	PKPdf	22 58 49.9	-1.5
BOSA	**Boshof**	**125.67**	**206**	PKP	PKPdf	22 58 51.7	-1.4
	comp=Z,3.0nm,0.8s,baz=128,slow=4.1,SNR=5.0						
KEV	**Kevo**	**128.81**	**349**	*e*p	PKPdf	22 58 54.5	-3.2
	comp=Z,10nm,1.0s						
PRGR	**Permogore**	**129.24**	**335**	*e*PKIKP	PKPdf	22 58 56.1	-2.6
ARCES	**ARCESS Array B**	**129.26**	**349**	PKP	PKPdf	22 58 57.1	-1.5
	comp=Z,4.7nm,0.6s,baz=16,slow=1.2,SNR=26						
JOF	**Joensuu**	**133.40**	**342**	*e*p	PKPdf	22 59 04.4	-2.2
	comp=Z,7.4nm,0.5s						
KAF	**Kangasniemi**	**135.44**	**344**	*e*p	PKPdf	22 59 08.0	-2.4
	comp=Z,7.1nm,0.7s						
FINES	**FINESS Array B**	**136.06**	**343**	PKP	PKPdf	22 59 08.4	-3.2
FINES	**FINESS Array B**	**136.06**	**343**	PKhKP		22 59 00.4	
	comp=Z,3.5nm,1.1s,baz=262,slow=28,SNR=3.7						
FINES				PKP	PKPdf	22 59 08.4	-3.2
	comp=Z,2.0nm,0.6s,baz=20,slow=6.1,SNR=7.3						
OBN	**Obninsk**	**136.92**	**331**	*i* PKIKP	PKPdf	22 59 13.7	+0.4
OBN				pmax	pmax		
	comp=Z,12nm,1.5s						
KMBO	**Kilima Mbogo**	**138.74**	**242**	*e*PKPdf	PKPdf	22 59 19.7	+1.7
KIV	**Kislovodsk**	**138.93**	**314**	*e*PKIKP	PKPdf	22 59 16.3	-1.1
NB2	**NORSAR Subarra**	**139.36**	**353**	PKP	PKPdf	22 59 08.1	-10
	comp=Z,2.1nm,0.7s,baz=15,slow=3.3						
NOA	**NORSAR Array B**	**139.36**	**353**	PKhKP		22 59 09.1	
	comp=Z,3.3nm,0.7s,baz=17,slow=2.3,SNR=9.2						
NOA				PKP	PKPdf	22 59 16.6	-1.0
	comp=Z,2.0nm,0.7s,baz=14,slow=4.0,SNR=5.9						
ERZM	**Erzurum**	**141.17**	**308**	*i* P	PKPdf	22 59 17.1	-4.4
KELT	**Kelkit**	**142.63**	**309**	*i* P	PKPdf	22 59 21.7	-2.5
SUW	**Suwalki**	**143.08**	**339**	*e*PKP	PKPdf	22 59 21.4	-3.1
AKASG	**Malin Array Be**	**143.17**	**330**	PKhKP		22 59 21.1	
	comp=Z,29nm,0.5s,baz=42,slow=4.2,SNR=240						
KIEV	**Kiev**	**143.18**	**330**	*e*PKPdf	PKPdf	22 59 21.1	-3.6
ELZG	**Elazig**	**143.36**	**307**	*i* P	PKPdf	22 59 24.8	-0.7
MALT	**Malatya**	**143.83**	**307**	*e*PKPdf	PKPdf	22 59 25.2	-1.1
MALT	**Malatya**	**143.83**	**307**	⇓*i*P	PKPdf	22 59 25.3	-1.0
SIM	**Simferopol'**	**144.03**	**319**	*d i*PKHKP		22 59 24.2	
SIM				pmax	pmax		
	comp=Z,92nm,0.9s						
MUD	**Monsted U'grnd**	**144.08**	**353**	*i* P	PKPdf	22 59 24.7	-1.4
	comp=Z,75nm,1.2s						
COP	**Copenhagen**	**144.35**	**349**	*e*P	PKPdf	22 59 26.1	-0.5
COP	**Copenhagen**	**144.35**	**349**	*i* P	PKPdf	22 59 26.1	-0.5
	comp=Z,26nm,1.2s						
BSD	**Bornholm Skovb**	**144.41**	**347**	*i* P	PKPdf	22 59 25.4	-1.4
	comp=Z,58nm,1.1s						
EAB	**Aberfoyle**	**144.53**	**6**	*e*P	PKPdf	22 59 25.5	-1.5
GZT	**Gaziantep**	**144.77**	**306**	*i* P	PKPdf	22 59 28.1	+0.1
ESY	**Stoneypath**	**144.93**	**4**	*e*P	PKPdf	22 59 26.9	-0.7
EBL	**Broad Law**	**145.05**	**4**	*e*P	PKPdf	22 59 27.5	-0.3
BOYT	**Boyabat**	**145.20**	**314**	*i* P	PKPdf	22 59 29.2	+0.6
XSO	**Sourhope Farm**	**145.38**	**4**	*e*P	PKPdf	22 59 27.9	-0.5
BWH	**Wardlaw**	**145.59**	**5**	*e*P	PKPdf	22 59 29.0	+0.2
CTKT	**Corum**	**145.62**	**312**	*i* P	PKPdf	22 59 30.7	+1.4
KIS	**Kishinev**	**145.85**	**326**	⇓*i*PKHKP		22 59 29.0	
KIS				pmax	pmax		
	comp=Z,100nm,1.6s						
KIS	**Kishinev**	**145.85**	**326**	⇓*i*UNK	PKPdf	22 59 29.0	-0.5
KIS				XM		22 59 30.0	
	comp=Z,100nm,1.6s						
XAL	**Allendale**	**146.01**	**4**	*e*P	PKPdf	22 59 30.0	+0.5
LVV	**L'vov**	**146.10**	**334**	⇑*i*PKHKP	PKPdf	22 59 30.4	+0.6
IAS	**Iasi**	**146.36**	**327**	P	PKPbc	22 59 32.1	-0.5
BSEG	**Bad Segeberg**	**146.38**	**351**	*e*PKPbc	PKPbc	22 59 31.8	-0.6
ELDT	**Eldivan**	**146.61**	**313**	*i* P	PKPbc	22 59 33.2	-0.4
KWP	**Kalwaria**	**146.78**	**335**	*e*PKP	PKPbc	22 59 33.1	-0.6
KWP	**Kalwaria**	**146.78**	**335**	*e*PKP	PKPbc	22 59 33.1	-0.6
KWP	**Kalwaria**	**146.78**	**335**	⇓*i*P	PKPdf	22 59 32.9	+1.9
BRTR	**Keskin Array B**	**146.79**	**312**	PKPbc	PKPbc	22 59 33.0	-1.1
	comp=Z,10.0nm,0.7s,baz=123,slow=4.6,SNR=44						
HPK	**Haverah Park**	**146.94**	**3**	*e*P	PKPbc	22 59 33.2	-0.8
BURAR	**Bucovina Array**	**147.21**	**330**	⇑P	PKPbc	22 59 34.4	-0.5
BURAR	**Bucovina Array**	**147.21**	**330**	⇑*i*P	PKPbc	22 59 34.4	-0.5
ANTO	**Ankara**	**147.32**	**312**	⇓*i*P	PKPbc	22 59 37.7	+2.3
LHO	**Holmfirth**	**147.34**	**4**	*e*P	PKPbc	22 59 33.7	-1.4
OJC	**Ojcow**	**147.40**	**338**	*e*PKP	PKPbc	22 59 34.4	-0.9
SGKT	**Sivrigoynuk**	**147.50**	**314**	*i* P	PKPbc	22 59 35.1	-0.8
KOLS	**Kolonicke sedl**	**147.51**	**334**	*e*PKP	PKPbc	22 59 35.1	-0.5
STHS	**Stebnicka Huta**	**147.53**	**336**	*e*PKP	PKPbc	22 59 35.1	-0.6
STHS				*e*		22 59 40.0	
KBI1	**Birley Grange**	**147.65**	**3**	*e*P	PKPbc	22 59 34.1	-1.7
TIRR	**Tirgusor**	**147.67**	**323**	⇑P	PKPbc	22 59 35.4	-0.8
TIRR	**Tirgusor**	**147.67**	**323**	⇑*i*P	PKPbc	22 59 35.4	-0.8
VRI	**Vrincioaia**	**147.68**	**326**	⇑P	PKPbc	22 59 35.3	-0.9
VRI	**Vrincioaia**	**147.68**	**326**	⇑*i*P	PKPbc	22 59 35.3	-0.9
PLOR	**Plostina**	**147.73**	**326**	⇑*i*P	PKPbc	22 59 35.5	-0.8
UZH	**Uzhgorod**	**147.74**	**334**	⇑*i*PKIKP	PKPbc	22 59 35.5	-0.7
UZH				*e*		22 59 40.5	
UZH				*e*		23 01 18.3	
HARR	**Harsova**	**147.79**	**323**	P	PKPbc	22 59 35.9	-0.6
CRVS	**Cervenica-Dubn**	**147.86**	**335**	*e*PKP	PKPbc	22 59 36.3	-0.2
CRVS				*e*		22 59 41.0	
KWE	**Weaver Farm**	**147.87**	**4**	*e*P	PKPbc	22 59 34.7	-1.7
SBD1	**Bryn Du**	**147.88**	**5**	*e*P	PKPbc	22 59 35.0	-1.4
NIE	**Niedzica**	**147.88**	**337**	*e*PKP	PKPbc	22 59 36.3	-0.2
KSP	**Ksiaz**	**147.97**	**342**	*e*PKP	PKPbc	22 59 36.4	-0.3
KSP	**Ksiaz**	**147.97**	**342**	*e*PKIKP	PKPbc	22 59 36.1	-0.6
KSP				*e*		22 59 41.6	
TRPA	**Tarpa**	**148.03**	**333**	⇑*i*P	PKPbc	22 59 36.0	-1.0
HENT	**Hendek**	**148.16**	**315**	*i* P	PKPbc	22 59 36.6	-0.9
CWF	**Charnwood Fore**	**148.18**	**3**	*e*P	PKPbc	22 59 35.9	-1.3
OKC	**Ostrava-Krasne**	**148.28**	**339**	*e*PKP	PKPbc	22 59 36.6	-1.0
OKC				*e*		22 59 42.7	
OKC	**Ostrava-Krasne**	**148.28**	**339**	⇑*e*PKP	PKPbc	22 59 36.6	-1.0
OKC				*e*PKPAB	PKPab	22 59 42.7	+0.1
HLM1	**Long Mynd**	**148.29**	**5**	*e*P	PKPbc	22 59 36.1	-1.4
IBBN	**Ibbenburen**	**148.31**	**353**	*e*PKPbc	PKPbc	22 59 36.4	-1.1
IBBN				*e*PKPab	PKPab	22 59 41.7	-0.9
MLR	**Muntele Rosu**	**148.34**	**326**	P	PKPbc	22 59 37.0	-0.9
MLR	**Muntele Rosu**	**148.34**	**326**	⇑*i*P	PKPbc	22 59 36.6	-1.2
UPC	**Upice**	**148.35**	**342**	*e*PKP	PKPbc	22 59 36.9	-0.8
UPC				*e*		22 59 42.9	
UPC	**Upice**	**148.35**	**342**	⇑*e*PKP	PKPbc	22 59 36.9	-0.8
UPC				*e*PKPAB	PKPab	22 59 42.9	+0.1
CLL	**Collm**	**148.38**	**346**	*e*PKP	PKPdf	22 59 32.0	-1.5
CLL				⇓*i*PKP	PKPbc	22 59 36.9	-0.8
CLL				⇑*i*PKP	PKPab	22 59 42.3	-0.6
CLL	**Collm**	**148.38**	**346**	*e*PKPdf	PKPdf	22 59 32.0	-1.5
CLL				⇓*i*PKPbc	PKPbc	22 59 36.9	-0.8
	comp=Z,26nm,0.8s						
CLL				⇑*i*PKPab	PKPab	22 59 42.3	-0.6
	comp=Z,21nm,0.8s						
CLL	**Collm**	**148.38**	**346**	*e*PKPbc	PKPbc	22 59 37.0	-0.7
CLL				*e*PKPab	PKPab	22 59 42.4	-0.5
CLZ	**Clausthal**	**148.39**	**350**	*e*PKPbc	PKPbc	22 59 37.4	-0.3
DPC	**Dobruska-Polom**	**148.40**	**342**	*e*PKP	PKPbc	22 59 37.2	-0.6
DPC				*e*		22 59 43.6	
DPC	**Dobruska-Polom**	**148.40**	**342**	⇑*e*PKP	PKPbc	22 59 37.2	-0.6
DPC				*e*PKPAB	PKPab	22 59 43.6	+0.6
MORC	**Moravsky Berou**	**148.53**	**340**	P	PKPbc	22 59 37.7	-0.5
MORC	**Moravsky Berou**	**148.53**	**340**	⇓*i*P	PKPbc	22 59 37.4	-0.8
BRG	**Berggiesshubel**	**148.56**	**345**	*e*PKPbc	PKPbc	22 59 37.6	-0.6
BRG				*e*PKPab	PKPab	22 59 43.3	-0.4
BRG	**Berggiesshubel**	**148.56**	**345**	*e*PKP	PKPdf	22 59 33.8	0.0
	comp=Z,9.7nm,1.4s						
BRG				*i*		22 59 37.7	
	comp=Z,42nm,1.6s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRG				i		22 59 43.3	
	comp=Z,12nm,0.8s						
KECS	Kecovo	148.58	335	ePKP	PKPbc	22 59 37.8	-0.5
KECS				e		22 59 43.7	
PVCC	Panska Ves	148.72	344	ePKP	PKPbc	22 59 38.2	-0.4
PVCC	Panska Ves	148.72	344	⇑ePKP	PKPbc	22 59 38.2	-0.4
CSS	Prodhromos	148.77	303	eP	PKPbc	22 59 38.2	-1.0
MCH1	Michaelchurch	148.80	5	eP	PKPdf	22 59 35.8	+1.6
ESKT	Eskisehir	148.81	313	i P	PKPbc	22 59 38.2	-1.0
VOIR		148.84	327	⇑P	PKPbc	22 59 38.4	-0.7
VOIR		148.84	327	⇑iP	PKPbc	22 59 38.4	-0.7
DRGR		148.97	331	P	PKPbc	22 59 38.6	-0.8
DRGR		148.97	331	⇑iP	PKPbc	22 59 38.3	-1.1
VYHS	Vyhne	149.19	337	ePKP	PKPbc	22 59 39.1	-0.7
VYHS				e		22 59 46.1	
SKP1	Kophill	149.22	3	eP	PKPbc	22 59 37.8	-2.0
PRU	Pruhonice	149.22	343	ePKP	PKPbc	22 59 39.2	-0.7
PRU				e		22 59 46.0	
PRU	Pruhonice	149.22	343	⇑ePKP	PKPbc	22 59 39.2	-0.7
PRU				ePKPAB	PKPab	22 59 46.0	-0.5
VRAC	Vranov	149.24	341	P	PKPbc	22 59 39.4	-0.5
VRAC	Vranov	149.24	341	⇑iP	PKPbc	22 59 39.0	-0.9
PSZ	Piszkesteto	149.27	335	ePKPab	PKPbc	22 59 39.5	-0.5
KOLL	Kolacno	149.27	338	ePKP	PKPbc	22 59 39.5	-0.5
KOLL				e		22 59 47.1	
MOX	Moxa	149.30	347	ePKP	PKPbc	22 59 39.2	-0.8
	comp=Z,30nm,1.5s						
MOX	Moxa	149.30	347	ePKPbc	PKPbc	22 59 39.3	-0.7
TANN	Tannenbergstha	149.34	346	ePKPbc	PKPbc	22 59 39.5	-0.6
TANN				ePKPab	PKPab	22 59 46.4	-0.5
NKC	Novy Kostel	149.51	346	ePKP	PKPbc	22 59 39.9	-0.6
NKC				e		22 59 47.1	
NKC	Novy Kostel	149.51	346	⇑ePKP	PKPbc	22 59 39.9	-0.6
NKC				ePKPAB	PKPab	22 59 47.1	-0.5
TREC	Trest	149.59	342	ePKHKP	PKPbc	22 59 40.0	-0.7
TREC				e		22 59 47.8	
TREC	Trest	149.59	342	⇑ePKP	PKPbc	22 59 40.0	-0.7
TREC				ePKPAB	PKPab	22 59 47.8	-0.2
WOL	Wolverton	149.61	3	eP	PKPbc	22 59 39.5	-1.2
HEX	Exmoor	149.64	7	eP	PKPbc	22 59 39.5	-1.3
SMOL	Smolenice	149.66	339	ePKP	PKPbc	22 59 40.8	-0.2
SMOL				e		22 59 48.9	
SZH	Strazhica	149.81	323	eP	PKPbc	22 59 40.0	-1.5
MODS	Modra-Piesok	149.84	339	ePKP	PKPbc	22 59 41.2	-0.2
MODS				e		22 59 49.5	
JMB	Yambol	149.94	321	eP	PKPbc	22 59 40.8	-1.0
JMB	Yambol	149.94	321	eP	PKPbc	22 59 40.0	-1.8
GZR	Gura Zlata	149.99	329	P	PKPbc	22 59 40.8	-1.1
GZR	Gura Zlata	149.99	329	⇓iP	PKPbc	22 59 40.7	-1.1
ROTZ	Rotzenmuhle	150.00	346	ePKPbc	PKPbc	22 59 41.0	-0.7
ZST	Bratislava	150.05	339	ePKP	PKPbc	22 59 41.4	-0.5
ZST				e		22 59 50.6	
MEM	Membach	150.18	354	PKPbc	PKPbc	22 59 41.2	-0.9
DYA	Yadsworthy	150.25	7	eP	PKPbc	22 59 40.5	-1.8
KHC	Kasperske Hory	150.26	344	ePKP	PKPbc	22 59 41.8	-0.5
KHC				e		22 59 50.7	
KHC	Kasperske Hory	150.26	344	⇑ePKP	PKPbc	22 59 41.8	-0.5
KHC				ePKPAB	PKPab	22 59 50.7	-0.1
TNS	Taunus Mts	150.26	351	ePKPbc	PKPbc	22 59 41.8	-0.5
TNS				ePKPab	PKPab	22 59 50.2	-0.6
GRA1	Grafenberg Arr	150.29	347	ePKPbc	PKPbc	22 59 41.9	-0.5
GRA1				ePKPab	PKPab	22 59 50.4	-0.5
GRF	Grafenberg Arr	150.29	347	ePKPbc	PKPbc	22 59 41.9	-0.5
GRF				ePKPab	PKPab	22 59 50.4	-0.5
GRFO	Grafenberg	150.29	347	ePKPdf	PKPdf	22 59 35.6	-1.0
GRFO				ePKPbc	PKPbc	22 59 42.1	-0.3
GRFO				ePKPab	PKPab	22 59 50.7	-0.2
BZS	Buzias	150.36	331	P	PKPbc	22 59 41.6	-1.1
BZS	Buzias	150.36	331	⇑iP	PKPbc	22 59 41.5	-1.2
WET	Wettzell	150.43	345	ePKPbc	PKPbc	22 59 41.9	-0.8
WET				ePKPab	PKPab	22 59 51.5	0.0
GEC2	GERESS Array S	150.49	344	ePKPbc	PKPbc	22 59 42.1	-0.8
GEC2				ePKPab	PKPab	22 59 51.8	0.0
GERES	GERESS Array B	150.49	344	PKP	PKPdf	22 59 35.9	-1.0
	comp=Z,8.0nm,0.7s,baz=80,slow=3.0,SNR=3.9						
GERES				PKPbc	PKPbc	22 59 42.1	-0.8
	comp=Z,8.0nm,0.7s,baz=38,slow=2.4,SNR=52						
GERES				PKPab	PKPab	22 59 50.3	-1.4
	comp=Z,2.8nm,0.8s,baz=20,slow=4.3,SNR=7.7						
CONA	Conrad Observa	150.69	340	⇓iPKPbc	PKPbc	22 59 42.8	-0.5
	comp=Z,14nm,0.7s						
GIVF	Givet	150.78	356	ePKP1	PKPbc	22 59 42.1	-1.4
	comp=Z,32nm,0.7s						
DOU	Dourbes	150.80	356	PKPbc	PKPbc	22 59 42.8	-0.8
DIM	Dimitrovgrad	150.81	322	eP	PKPbc	22 59 43.0	-0.8
BAIF	Baives	150.86	356	ePKP1	PKPbc	22 59 42.4	-1.3
	comp=Z,32nm,1.0s						
DNZL	Cakiroluk	150.91	311	i P	PKPbc	22 59 43.8	-0.4
WLF	Walferdange	151.10	354	PKPdf	PKPdf	22 59 37.3	-0.5
WLF				ePKPbc	PKPbc	22 59 43.8	-0.4
WLF				ePKPab	PKPab	22 59 54.1	-0.2
WLF	Walferdange	151.10	354	PKPbc	PKPbc	22 59 43.9	-0.3
WLF	Walferdange	151.10	354	ePKPbc	PKPbc	22 59 44.0	-0.2
KDZ	Kurdzhali	151.13	321	eP	PKPbc	22 59 43.0	-1.6
PKSM	Moragy	151.16	335	P	PKPbc	22 59 43.4	-1.1
PKSM	Moragy	151.16	335	⇑iP	PKPbc	22 59 42.5	-2.0
MOA	Molln	151.24	342	⇑iP	PKPbc	22 59 43.4	-1.3
	comp=Z,5.5nm,0.6s						
PLD	Plovdiv	151.25	322	eP	PKPbc	22 59 43.0	-1.8
STU	Stuttgart	151.55	349	ePKPbc	PKPbc	22 59 44.5	-0.8
FUR	Furstenfeldbru	151.72	346	ePKPbc	PKPbc	22 59 44.6	-1.1
FUR				ePKPab	PKPab	22 59 56.7	-0.2
VTS	Vitosha	151.76	325	⇑iP	PKPdf	22 59 40.8	+1.7
BFO	Black Forest	152.12	350	ePKPdf	PKPdf	22 59 39.4	0.0
BFO				ePKPbc	PKPbc	22 59 45.5	-1.1
BFO				ePKPab	PKPab	22 59 56.9	-1.7
BFO	Black Forest	152.12	350	ePKPbc	PKPbc	22 59 45.5	-1.1
MMB	Musomiste	152.14	323	eP	PKPbc	22 59 45.0	-1.8
FLN	La Foliniere	152.19	3	ePKP1	PKPbc	22 59 44.9	-1.8
	comp=Z,19nm,0.8s						
CDF	Champ du Feu	152.20	352	ePKP1	PKPbc	22 59 45.2	-1.5
	comp=Z,11nm,0.7s						
KBA	Koelnbreinsper	152.21	343	⇑iP	PKPbc	22 59 44.7	-2.1
	comp=Z,7.9nm,0.9s						
MEZF	Maizieres J'vi	152.35	355	ePKP1	PKPbc	22 59 45.8	-1.3
	comp=Z,26nm,1.0s						
LDF	La Druitiere	152.37	2	ePKP1	PKPbc	22 59 45.2	-1.9
	comp=Z,11nm,0.7s						
ROSF	Rostrenen	152.39	7	ePKP1	PKPbc	22 59 45.1	-2.1
MOTA	Moosalm	152.53	346	⇓iP	PKPbc	22 59 46.2	-1.3
	comp=Z,6.8nm,1.0s						
MOTA				⇑i	PKPab	23 00 00.1	-0.3
	comp=Z,12nm,1.1s						
MOTA	Moosalm	152.53	346		PKPab	23 00 00.1	-0.3
	comp=Z,12nm,1.1s						
GRR	Gorron	152.54	3	ePKP1	PKPbc	22 59 45.8	-1.7
	comp=Z,14nm,0.7s						
SGMF	Saint Gilles	152.55	6	ePKP1	PKPbc	22 59 45.5	-2.0
	comp=Z,24nm,0.8s						
ABTA	Abfaltersbach	152.74	343	⇓iPKPbc	PKPbc	22 59 46.4	-1.6
	comp=Z,13nm,1.0s						
HINF	Hinteralfeld	152.84	352	ePKP1	PKPbc	22 59 46.3	-1.9
	comp=Z,8.8nm,0.8s						
KNT	Kendrikon	152.89	323	eP	PKPab	23 00 01.6	-0.6
FETA	Feichten	152.92	346	⇑iPKPbc	PKPbc	22 59 47.8	-0.6
	comp=Z,8.1nm,0.8s						
THE	Thessaloniki	153.20	322	eP	PKPab	23 00 02.8	-0.7
LOR	Lormes	153.66	356	ePKP1	PKPbc	22 59 48.4	-1.5
	comp=Z,7.1nm,0.7s						
LIT	Litokhoron	153.82	322	eP	PKPab	23 00 05.4	-0.8
SSF	Saint Saulge	153.89	357	ePKP1	PKPbc	22 59 48.9	-1.5
FNA	Florina	154.00	324	eP	PKPbc	22 59 49.1	-1.8
SANT	Santorini	154.06	312	ePKPdf	PKPdf	22 59 42.0	-0.6
CABF	La Chapelle	154.12	353	ePKP1	PKPbc	22 59 49.9	-1.0
	comp=Z,24nm,1.0s						
MFF	Saint Martin d	154.36	3	ePKP1	PKPbc	22 59 49.6	-1.8
	comp=Z,17nm,1.1s						
TCF	Toulx Ste Croi	154.71	359	ePKP1	PKPdf	22 59 50.4	+7.3
LPL	La Plagne	155.11	351	ePKP1	PKPdf	22 59 52.1	+8.4
	comp=Z,5.8nm,0.9s						
LPG	La Plagne	155.13	351	ePKP1	PKPdf	22 59 52.0	+8.3
IGT	Igoumenitsa	155.44	323	eP	PKPab	23 00 12.7	-0.5
BNI	Bardonecchia	155.57	351	ePKPab	PKPab	23 00 13.8	+0.3
LKD	Levkas	155.81	321	eP	PKPab	23 00 14.2	-0.6
MBDF	Montbardon	155.88	351	ePKP1	PKPdf	22 59 53.3	+8.6
	comp=Z,7.4nm,0.7s						
ESDC	Sonseca Array	160.74	13	PKPab	PKPab	23 00 35.2	-0.9
	comp=Z,2.8nm,1.0s,baz=341,slow=5.4,SNR=7.5						
KEST	Kesra	163.74	337	PKPab	PKPab	23 00 48.5	-1.0
	comp=Z,1.4nm,0.8s,baz=5.4,slow=10,SNR=4.8						
DBIC	Dimbokro	164.53	156	PKP	PKPdf	22 59 52.5	-2.6
	comp=Z,7.7nm,1.1s,baz=178,slow=4.9,SNR=5.7						
DBIC				PKPab	PKPab	23 00 51.4	-2.0
	comp=Z,6.2nm,1.0s,baz=165,slow=8.6,SNR=3.2						
TORD	Torodi Ar. Bea	172.25	181	PKP	PKPdf	22 59 58.0	-2.1
TORD				PKPab	PKPab	23 01 25.1	-2.4
TORD	Torodi Ar. Bea	172.25	181	PKP	PKPdf	22 59 58.0	-2.1
	comp=Z,2.6nm,0.9s,baz=313,slow=0.9,SNR=12						
TORD				PKPab	PKPab	23 01 25.1	-2.4
	comp=Z,2.0nm,0.8s,baz=184,slow=4.3,SNR=6.4						

MAN 12 22:43:09,746N×12483E,h8km,mb4.7,ML3.5,MS3.5, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.48	29	eP	Pg	22 43 19.3	+1.0
BUKP				eS	Sg	22 43 27.6	+3.0
KCP	Kidapawan	0.51	150	⇑eP	Pg	22 43 20.1	+1.1
KCP				i S	Sg	22 43 27.3	+1.6
CTBH	Cotabato--PC H	0.62	248	⇓iP	Pg	22 43 21.5	+0.4
CTBH				i S	Sg	22 43 30.6	+1.3
CGP	Cagayan de Oro	1.00	352	eP	Pg	22 43 28.2	0.0
PAGZ	Pagadian	1.49	285	eP	Pn	22 43 34.9	-1.2
PAGZ				eS	Sn	22 43 57.2	+1.5

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*ISCJB **12** 22:53:37.1±0.7,727S±006×12032E±008,h376km±8km, mb4.0/19,Error ellipse: s-maj=15.1km s-min=6.9km az=146.9*

*IDC **12** 22:53:38.8±1.1,731S×12041E,h376km±11km,mb3.7/7, mb1 3.8/10,mb1mx3.6/20,mbtmp3.7/10,Error ellipse: s-maj=26.4km s-min=8.6km az=55.0*

*NEIC **12** 22:53:38.8±0.8,730S×12038E,h381km±8km,mb4.1/14, Error ellipse: s-maj=8.0km s-min=4.0km az=61.0*

ISC 12 22:53:38.6±0.7,**731S**±006×**12042E**±008,**h379**km±8km, **n49,σ0.68**/47,**mb4.0**/19,**1D,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	4.31	132	P	**Pn**	**22 54 54.5**	**+2.0**
	21nm,0.3s,baz=305,slow=1.7,SNR=34						
BATI				S	**S**	**22 55 50.9**	**-1.3**
	48nm,0.3s,baz=310,slow=7.5,SNR=6.0						
FITZ	Fitzroy Crossi	11.87	155	eP	**Pn**	**22 56 18.8**	**+0.3**
	27nm,0.7s						
FITZ	Fitzroy Crossi	11.87	155	P	**Pn**	**22 56 18.2**	**-0.4**
	1.1nm,0.3s,baz=340,slow=9.2,SNR=31						
FITZ				S	**S**	**22 58 39.3**	**+10**
	0.2nm,0.3s,baz=306,slow=23,SNR=3.1						
KSM	Kuching	13.34	310	eP	**P**	**22 56 33.5**	**-0.5**
MBWA	Marble Bar	13.78	183	eP	**P**	**22 56 38.1**	**-0.6**
KKM	Kota Kinabalu	13.91	342	eP	**P**	**22 56 39.1**	**-1.1**
WRA	Warramunga Arr	18.44	134	P	**P**	**22 57 29.4**	**+0.6**
	1.9nm,0.3s,baz=315,slow=11,SNR=101						
WRA				S	**S**	**23 00 38.3**	**-1.1**
	0.1nm,0.3s,baz=306,slow=20,SNR=4.9						
WB2	Warramunga Arr	18.45	134	eP	**P**	**22 57 29.5**	**+0.6**
ASAR	Alice Springs	20.79	143	P	**P**	**22 57 52.6**	**+0.8**
	21nm,0.7s,baz=318,slow=8.9,SNR=114						
ASAR				S	**S**	**23 01 22.9**	**+4.4**
	2.1nm,0.9s,baz=332,slow=21,SNR=6.3						
ASAR				ScP	ScP	23 04 42.5	-2.2
	0.7nm,0.6s,baz=314,slow=1.9,SNR=5.6						
KULM	Kulim	23.36	302	eP	**P**	**22 58 15.5**	**+0.2**
PSI	Prapat	23.69	294	P	**P**	**22 58 18.4**	**+0.1**
	2.7nm,0.6s,mb3.7,baz=133,slow=7.2,SNR=4.6						
NWAO	Narrogin (SRO)	25.66	186	P	**P**	**22 58 35.2**	**-0.4**
NWAO	Narrogin (SRO)	25.66	186	P	**P**	**22 58 34.9**	**-0.7**
	4.6nm,0.9s,mb3.7,baz=321,slow=9.7,SNR=2.5						
NACB	Ninganchiao	31.31	2	eP	**P**	**22 59 25.6**	**+0.2**
STKA	Stephens Creek	31.42	144	⇓iP	**P**	**22 59 27.3**	**+1.0**
	5.2nm,0.4s,mb4.1						
STKA	Stephens Creek	31.42	144	P	**P**	**22 59 27.4**	**+1.1**
	6.3nm,0.4s,mb4.2,baz=318,slow=8.4,SNR=30						
YHNB	Yeheng	31.80	2	eP	**P**	**22 59 29.0**	**-0.7**
CHTO	Chiang Mai	33.50	321	eP	**P**	**22 59 45.2**	**+0.8**
	1.7nm,0.4s,mb3.6						
PALK	Pallekele	42.18	289	eP	**P**	**23 00 56.3**	**+0.1**
	5.5nm,0.9s,mb3.7						
LSA	Lhasa	46.32	324	eP	**P**	**23 01 29.5**	**+1.1**
	6.7nm,0.6s,mb4.0						
LSA				e	pP	23 02 46.3	+2.2
ODAN	Odare	46.67	318	eP	**P**	**23 01 31.2**	**+0.1**
MAJO	Matsushiro	46.70	20	eP	**P**	**23 01 30.3**	**-0.9**
MJAR	Matsushiro Arr	46.70	20	P	**P**	**23 01 31.3**	**+0.1**
	2.2nm,0.9s,mb3.4,baz=190,slow=8.7,SNR=3.0						
TAPN	Taplejung	46.79	319	eP	**P**	**23 01 32.5**	**+0.5**
	14nm,0.6s,mb4.4						
BJT	Baijiatuau	47.25	356	eP	**P**	**23 01 35.4**	**+0.1**
JIRN	Jiri	48.00	318	eP	**P**	**23 01 41.5**	**+0.3**
	16nm,0.7s,mb4.4						
KKN	Kakani	48.70	317	eP	**P**	**23 01 46.0**	**-0.5**
GKN	Gorkha	49.27	317	eP	**P**	**23 01 50.4**	**-0.4**
	16nm,0.6s,mb4.4						
MDJ	Mudanjiang	52.34	8	eP	**P**	**23 02 13.6**	**+0.5**
ULN	Ulaanbaatar	56.19	349	eP	**P**	**23 02 41.2**	**+0.7**
	1.0nm,0.3s,mb3.6						
ULN				PcP	PcP	23 03 29.4	-3.7
SONM	Songino Array	56.29	349	P	**P**	**23 02 42.1**	**+0.9**
	1.8nm,0.5s,mb3.6,baz=164,slow=8.5,SNR=28						
CASY	Casey	59.27	185	P	**P**	**23 03 01.2**	**-0.2**
TLY	Talaya	60.50	348	eP	**P**	**23 03 10.0**	**+0.2**
	3.3nm,0.7s,mb3.9						
MKAR	Makanchi Array	63.62	332	P	**P**	**23 03 30.8**	**+0.4**
	4.2nm,0.5s,mb4.3,baz=143,slow=7.4,SNR=64						
UCH	Uchtor	64.66	324	eP	**P**	**23 03 36.6**	**-0.6**
EKS2	Erkin-Say	65.35	324	P	**P**	**23 03 41.4**	**-0.3**
KURK	Kurchatov	68.13	333	eP	**P**	**23 03 58.1**	**-0.7**
	6.9nm,0.9s,mb4.4						
MA2	Magadan	70.92	16	eP	**P**	**23 04 15.1**	**-0.5**
MA2				ePcP	PcP	23 04 32.4	-1.0
BRVK	Borovoye	73.56	331	eP	**P**	**23 04 30.8**	**-0.3**
	2.3nm,0.7s,mb4.0						
CHKZ	Chkalovo	73.78	332	eP	**P**	**23 04 31.7**	**-0.6**
	2.4nm,0.5s,mb4.2						
QSPA	South Pole Qui	82.67	180	eP	**P**	**23 05 20.2**	**+0.1**
	0.9nm,0.5s,mb3.9						
MALT	Malatya	88.24	309	P	**P**	**23 05 47.7**	**-0.5**
BOSA	Boshof	91.05	241	eP	**P**	**23 05 57.0**	**-4.5**
	34nm,2.3s,mb4.9						
TORD	Torodi Ar. Bea	119.54	281	PKP	PKPdf	23 11 44.0	-0.9
	0.9nm,0.6s,baz=84,slow=1.8,SNR=5.1						
ELK	Elko	120.49	47	ePKPdf	PKPdf	23 11 46.8	+0.8
BW06	Boulder Array	123.73	43	PKPdf	PKPdf	23 11 52.6	+0.4
WMOK	Wichita Mounta	134.81	47	PKPdf	PKPdf	23 12 13.2	-0.2
TKL	Tuckaleechee C	144.12	35	PKP	PKPdf	23 12 29.2	-1.1
	4.1nm,0.5s,baz=199,slow=2.4,SNR=9.0						
CMIG	Matias Romero	144.21	71	PKP	PKPdf	23 12 30.6	-0.3
	2.2nm,0.7s,baz=333,slow=5.0,SNR=4.2						

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*OTT **12** 23:18:17.3±0.6,4133N×8139W,h5km,MN3.7/11*

OTT Felt in Ohio, U.S. 123km southeast from Blenheim, On Eastern Background Seismic Zone.

NEIC 12 23:18:16.4,4128N×8138W,h5km,MD3.5(LDO), **MN3.7**(OTT),**MN3.6**(OGSO),**2C-3D,After OGSO.,Ohio**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALLY	Alegheny Colle	1.00	68	PG	Pg	23 18 12.1	-23
ALLY				SG	Sg	23 18 24.4	-24
PLIO	Pelee Island,	1.05	297	⇑Pg	Pg	23 18 35.8	-0.7
PLIO				Sg	Sg	23 18 48.9	-1.3
PLIO	Pelee Island,	1.05	297	⇑PG	Pg	23 18 35.8	-0.7
PLIO				SG	Sg	23 18 48.9	-1.3
PLIO				Trac		23 18 49.6	
	comp=Z,218nm,0.1s						
ERPA	Erie	1.34	51	⇓iPn	Pn	23 18 41.2	-0.5
ERPA				eSn	Sn	23 18 57.4	-2.4
ERPA	Erie	1.34	51	⇓PG	Pg	23 18 41.2	-0.8
ERPA				SG	Sg	23 18 57.5	-1.8
ERPA				Trac		23 18 59.9	
	comp=Z,241nm,0.2s						
ACSO	Alum Creek Sta	1.60	230	⇓eP	Pn	23 18 45.8	+0.4
ACSO				eS	Sn	23 19 07.2	+0.7
ELFO	Elginfield	1.91	1	PG	Pg	23 18 50.3	-2.7
ELFO				SG	Sg	23 19 14.8	-3.0
ELFO				Trac		23 19 17.3	
	comp=Z,159nm,0.1s						
MCWV	Mont Chateau	2.00	144	ePn	Pn	23 18 48.5	-2.3
MCWV				ePg	Pg	23 18 53.4	-1.3
MCWV				eS	Sn	23 19 19.9	+3.7
TYNO	Tyneside	2.13	31	P	Pn	23 18 54.4	+1.7
TYNO				S	Sn	23 19 21.4	+1.9
TYNO	Tyneside	2.13	31	PG	Pg	23 18 54.4	-2.9
TYNO				SG	Sg	23 19 21.1	-3.8
TYNO				Trac		23 19 25.9	
	comp=Z,182nm,0.2s						
EFO	Effingham	2.38	40	Pn	Pn	23 18 57.0	+1.0
EFO				Pg	Pg	23 18 58.5	-3.4
EFO				Sg	Sg	23 19 28.1	-4.6
EFO	Effingham	2.38	40	PN	Pn	23 18 57.0	+1.0
EFO				PG	Pg	23 18 58.5	-3.4
EFO				SG	Sg	23 19 28.1	-4.6
EFO				Trac		23 19 30.6	
	comp=Z,147nm,0.2s						
ACTO	Acton	2.52	22	Pn	Pn	23 18 57.7	-0.3
ACTO				Pg	Pg	23 19 00.8	-4.0
ACTO				Sn	Sn	23 19 30.8	+1.6
ACTO				Sg	Sg	23 19 33.3	-4.2
ACTO	Acton	2.52	22	PN	Pn	23 18 57.7	-0.3
ACTO				PG	Pg	23 19 00.8	-4.0
ACTO				SN	Sn	23 19 30.8	+1.6
ACTO				SG	Sg	23 19 33.3	-4.2
ACTO				Trac		23 19 35.9	
	comp=Z,124nm,0.2s						
STCO	Saint Catharin	2.53	40	Pn	Pn	23 18 59.9	+1.8
STCO				Sg	Sg	23 19 32.8	-4.9
STCO	Saint Catharin	2.53	40	PN	Pn	23 18 59.9	+1.8
STCO				SG	Sg	23 19 32.8	-4.9
STCO				Trac		23 19 34.2	
	comp=Z,334nm,0.2s						
SSPA	Standing Stone	2.72	103	ePn	Pn	23 19 01.2	+0.4
SSPA				eSn	Sn	23 19 36.7	+2.7
TORO	Toronto--Lesli	2.78	32	SG	Sg	23 19 41.7	-3.9
TORO				Trac		23 19 43.8	
	comp=Z,1µm,0.3s						
MEDO	Medina	2.88	48	Pn	Pn	23 19 03.2	+0.3
MEDO				Pg	Pg	23 19 06.7	-4.8
MEDO				Sn	Sn	23 19 36.1	-1.7
MEDO				Sg	Sg	23 19 44.2	-4.5
MEDO	Medina	2.88	48	PN	Pn	23 19 03.2	+0.3
MEDO				PG	Pg	23 19 06.7	-4.8
MEDO				SN	Sn	23 19 36.1	-1.7
MEDO				SG	Sg	23 19 44.2	-4.5
MEDO				Trac		23 19 44.7	
	comp=Z,174nm,0.2s						
BRCO	Bruce Peninsul	2.96	359	Pn	Pn	23 19 03.6	-0.4
BRCO				Pg	Pg	23 19 07.9	-5.3
BRCO				Sg	Sg	23 19 45.4	-6.1
BRCO	Bruce Peninsul	2.96	359	PN	Pn	23 19 03.6	-0.4
BRCO				PG	Pg	23 19 07.9	-5.3
BRCO				SG	Sg	23 19 45.4	-6.1
BRCO				Trac		23 19 53.4	
	comp=Z,199nm,0.3s						
PKRO	Pickering	3.18	32	Pg	Pg	23 19 10.8	-6.5
PKRO				Sg	Sg	23 19 51.9	-6.6
PKRO	Pickering	3.18	32	PG	Pg	23 19 10.8	-6.5
PKRO				SG	Sg	23 19 51.9	-6.6
PKRO				Trac		23 20 03.3	
	comp=Z,510nm,0.3s						
CLWO	Collingwood	3.27	14	Pn	Pn	23 19 08.1	-0.2
CLWO				Pg	Pg	23 19 13.4	-5.6
CLWO				Sn	Sn	23 19 47.5	+0.1
CLWO				Sg	Sg	23 19 55.2	-6.0
CLWO	Collingwood	3.27	14	PN	Pn	23 19 08.1	-0.2
CLWO				PG	Pg	23 19 13.4	-5.6
CLWO				SN	Sn	23 19 47.5	+0.1
CLWO				SG	Sg	23 19 55.2	-6.0
CLWO				Trac		23 20 03.3	
	comp=Z,165nm,0.3s						
WLVO	Wesleyville	3.44	39	Pn	Pn	23 19 09.9	-0.7
WLVO				Pg	Pg	23 19 16.1	-6.2
WLVO				Sn	Sn	23 19 51.0	-0.7
WLVO				Sg	Sg	23 19 59.4	-7.5
WLVO	Wesleyville	3.44	39	PN	Pn	23 19 09.9	-0.7
WLVO				PG	Pg	23 19 16.1	-6.2
WLVO				SN	Sn	23 19 51.0	-0.7
WLVO				SG	Sg	23 19 59.4	-7.5
WLVO				Trac		23 20 02.8	
	comp=Z,96nm,0.2s						
PRNY	Paleo Inst,Ith	3.81	70	P	Pn	23 19 17.4	+1.7
PRNY				S	Sn	23 20 02.7	+1.9
SADO	Sadowa	3.85	24	Pn	Pn	23 19 14.5	-1.8
SADO				Pg	Pg	23 19 25.0	-5.3
SADO				Sn	Sn	23 20 01.9	0.0
SADO				Sg	Sg	23 20 11.8	-8.4
SADO	Sadowa	3.85	24	PN	Pn	23 19 14.5	-1.8
SADO				PG	Pg	23 19 25.0	-5.3
SADO				SN	Sn	23 20 01.9	0.0
SADO				SG	Sg	23 20 11.8	-8.4
SADO				Trac		23 20 19.4	
	comp=Z,72nm,0.3s						
SDMD	Soldier's Deli	3.94	117	ePn	Pn	23 19 13.6	-3.9
SDMD				S	Sn	23 20 07.2	+3.2
TOBO	Tobermory, Bru	3.94	359	Pn	Pn	23 19 17.7	+0.2
TOBO				Pg	Pg	23 19 26.2	-5.8
TOBO				Sn	Sn	23 20 04.9	+0.7
TOBO				Sg	Sg	23 20 18.8	-4.3
TOBO	Tobermory, Bru	3.94	359	PN	Pn	23 19 17.7	+0.2
TOBO				PG	Pg	23 19 26.2	-5.8
TOBO				SN	Sn	23 20 04.9	+0.7
TOBO				SG	Sg	23 20 18.8	-4.3
TOBO				Trac		23 20 21.8	
	comp=Z,55nm,0.3s						
MVL	Millersville	4.04	107	ePn	Pn	23 19 18.6	-0.2
MVL				eSn	Sn	23 20 08.2	+1.8
ELN	Prospectdale	4.08	173	ePn	Pn	23 19 20.3	+1.0
ELN				ePg	Pg	23 19 28.7	-5.8
ELN				eSn	Sn	23 20 04.2	-3.2
ELN				eSg	Sg	23 20 19.9	-7.4
BLA	Blacksburg	4.13	169	ePn	Pn	23 19 21.1	+1.0
BLA				ePg	Pg	23 19 30.4	-5.1
BLA				eSn	Sn	23 20 12.5	+3.8
BINY	Binghamton	4.14	75	ePn	Pn	23 19 18.9	-1.4
BINY				S	Sn	23 20 10.6	+1.6
KLBO	Killbear Provi	4.16	11	PN	Pn	23 19 19.8	-0.7
KLBO				SN	Sn	23 20 10.5	+0.9
KLBO				SG	Sg	23 20 22.6	-7.4
KLBO				Trac		23 20 30.3	
	comp=Z,84nm,0.3s						
DELO	Deloro Mine	4.25	39	Pg	Pg	23 19 32.8	-5.1
DELO				Sn	Sn	23 20 08.4	-3.4
DELO				Sg	Sg	23 20 23.4	-10
DELO	Deloro Mine	4.25	39	PG	Pg	23 19 32.8	-5.1
DELO				SN	Sn	23 20 08.4	-3.4
DELO				SG	Sg	23 20 23.4	-10
DELO				Trac		23 20 35.2	
	comp=Z,35nm,0.2s						
CBN	Corbin	4.36	134	ePn	Pn	23 19 20.9	-2.3
CBN				eSn	Sn	23 20 09.5	-4.8
CBN				eSg	Sg	23 20 30.5	-5.8
BUKO	Buck Lake	4.40	18	Pn	Pn	23 19 22.8	-1.1
BUKO				Pg	Pg	23 19 34.0	-6.7
BUKO				Sn	Sn	23 20 12.8	-2.7
BUKO				Sg	Sg	23 20 28.8	-9.0
BUKO	Buck Lake	4.40	18	PN	Pn	23 19 22.8	-1.1
BUKO				PG	Pg	23 19 34.0	-6.7
BUKO				SN	Sn	23 20 12.8	-2.7
BUKO				SG	Sg	23 20 28.8	-9.0
BUKO				Trac		23 20 37.1	
	comp=Z,74nm,0.3s						
BANO	Bancroft	4.51	33	Pn	Pn	23 19 25.0	-0.3
BANO				Pg	Pg	23 19 34.8	-8.0
BANO				Sn	Sn	23 20 16.6	-1.6
BANO				Sg	Sg	23 20 32.8	-8.4
BANO	Bancroft	4.51	33	PN	Pn	23 19 25.0	-0.3
BANO				PG	Pg	23 19 34.8	-8.0
BANO				SN	Sn	23 20 16.6	-1.6
BANO				SG	Sg	23 20 32.8	-8.4
BANO				Trac		23 20 37.4	
	comp=Z,80nm,0.2s						
KGNO	Kingston	4.65	49	Pn	Pn	23 19 22.9	-4.3
KGNO				Pg	Pg	23 19 30.8	-15
KGNO				Sn	Sn	23 20 15.2	-6.3
KGNO	Kingston	4.65	49	PN	Pn	23 19 22.9	-4.3
KGNO				PG	Pg	23 19 30.8	-15
KGNO				SN	Sn	23 20 15.2	-6.3
KGNO				Trac		23 20 33.4	
	comp=Z,27nm,0.2s						
URVA	University of	4.75	140	Pn	Pn	23 19 32.2	+3.5
WCI	Wyandotte Cave	4.86	233	ePn	Pn	23 19 32.5	+2.4
WCI				eSn	Sn	23 20 28.3	+1.6
RSPO	Restoule Provi	4.93	13	Pn	Pn	23 19 30.7	-0.4
RSPO				Pg	Pg	23 19 43.6	-7.3

RSPO				Sn	Sn	23 20 28.3	-0.3
RSPO				Sg	Sg	23 20 47.9	-6.9
RSPO	Restoule Provi	4.93	13	PN	Pn	23 19 30.7	-0.4
RSPO				PG	Pg	23 19 43.6	-7.3
RSPO				SN	Sn	23 20 28.3	-0.3
RSPO				SG	Sg	23 20 47.9	-6.9
RSPO				Trac		23 20 52.1	
	comp=Z,86nm,0.4s						
CTNY	Carthage	5.02	55	P	Pn	23 19 33.7	+1.3
CTNY				S	Sn	23 20 32.6	+1.9
CTNY	Carthage	5.02	55	SN	Sn	23 20 31.0	+0.3
CTNY				SG	Sg	23 20 49.4	-8.2
TZTN	Tazewell	5.02	200	ePn	Pn	23 19 33.6	+1.3
MPPO	Murphy's Point	5.12	45	Pn	Pn	23 19 31.0	-2.7
MPPO				Sn	Sn	23 20 29.4	-3.7
MPPO				Sg	Sg	23 20 50.0	-11
MPPO	Murphy's Point	5.12	45	PN	Pn	23 19 31.0	-2.7
MPPO				PG	Pg	23 19 46.3	-8.2
MPPO				SN	Sn	23 20 29.4	-3.7
MPPO				SG	Sg	23 20 50.0	-11
MPPO				Trac		23 21 04.4	
	comp=Z,45nm,0.3s						
ALGO	Algonquin Park	5.26	26	Pn	Pn	23 19 36.8	+1.2
ALGO				Sn	Sn	23 20 36.3	-0.3
ALGO				Sg	Sg	23 20 55.5	-10
ALGO	Algonquin Park	5.26	26	PN	Pn	23 19 36.8	+1.2
ALGO				SN	Sn	23 20 36.3	-0.3
ALGO				SG	Sg	23 20 55.5	-10
ALGO				Trac		23 21 04.2	
	comp=Z,76nm,0.2s						
PEMO	Pembroke	5.33	33	Pn	Pn	23 19 35.2	-1.3
PEMO				Pg	Pg	23 19 48.9	-9.5
PEMO				Sn	Sn	23 20 33.8	-4.4
PEMO				Sg	Sg	23 20 54.9	-12
PEMO	Pembroke	5.33	33	PN	Pn	23 19 35.2	-1.3
PEMO				PG	Pg	23 19 48.9	-9.5
PEMO				SN	Sn	23 20 33.8	-4.4
PEMO				SG	Sg	23 20 54.9	-12
PEMO				Trac		23 21 02.5	
	comp=Z,57nm,0.3s						
SUNO	Sudbury Onapin	5.36	0	SN	Sn	23 20 37.1	-2.0
SUNO				SG	Sg	23 20 58.6	-10
SUNO				Trac		23 21 05.1	
	comp=Z,26nm,0.2s						
HCNY	Howe Caverns	5.39	72	P	Pn	23 19 39.2	+1.8
HCNY				S	Sn	23 20 42.1	+2.3
CRLO	Chalk River	5.57	30	Pn	Pn	23 19 41.2	+1.3
CRLO				Pg	Pg	23 19 53.2	-10
CRLO				Sn	Sn	23 20 37.5	-6.7
CRLO				Sg	Sg	23 21 03.9	-11
CRLO	Chalk River	5.57	30	PN	Pn	23 19 41.2	+1.3
CRLO				PG	Pg	23 19 53.2	-10
CRLO				SN	Sn	23 20 37.5	-6.7
CRLO				SG	Sg	23 21 03.9	-11
CRLO				Trac		23 21 11.5	
	comp=Z,94nm,0.5s						
EEO	Eldee	5.61	16	Pn	Pn	23 19 40.0	-0.5
EEO				Sn	Sn	23 20 42.3	-3.0
EEO				eSg	Sg	23 21 07.8	-8.8
EEO	Eldee	5.61	16	PN	Pn	23 19 40.0	-0.5
EEO				SN	Sn	23 20 42.3	-3.0
EEO				SG	Sg	23 21 07.8	-8.8
EEO				Trac		23 21 08.1	
	comp=Z,98nm,0.5s						
PTN	Potsdam (NY)	5.73	53	P	Pn	23 19 44.1	+2.0
PTN				S	Sn	23 20 49.5	+1.2
PTN	Potsdam (NY)	5.73	53	PN	Pn	23 19 44.0	+1.9
PTN				SN	Sn	23 20 47.7	-0.5
PTN				SG	Sg	23 21 11.7	-8.8
WBO	Williamsburg	5.81	48	Sn	Sn	23 20 52.0	+1.8
WBO				Sg	Sg	23 21 14.8	-8.1
WBO	Williamsburg	5.81	48	SN	Sn	23 20 52.0	+1.8
WBO				SG	Sg	23 21 14.8	-8.1
WBO				Trac		23 21 23.3	
	comp=Z,33nm,0.3s						
OTT	Ottawa	5.83	43	SG	Sg	23 21 12.6	-11
OTT				Trac		23 21 18.1	
	comp=Z,9.6nm,0.1s						
NCB	Newcomb	5.92	61	ePn	Pn	23 19 45.6	+0.9
NCB				S	Sn	23 20 54.6	+1.7
NCB	Newcomb	5.92	61	PN	Pn	23 19 46.8	+2.1
NCB				SN	Sn	23 20 51.4	-1.6
NCB				SG	Sg	23 21 15.1	-12
LONY	Lake Ozonia	6.00	54	ePn	Pn	23 19 46.6	+0.8
LONY				eSn	Sn	23 20 54.4	-0.5
LONY	Lake Ozonia	6.00	54	PN	Pn	23 19 46.6	+0.9
LONY				PG	Pg	23 20 03.5	-7.8
LONY				SN	Sn	23 20 54.4	-0.4
LONY				SG	Sg	23 21 19.8	-9.3
ACCN	Adirondack Com	6.09	67	Pn	Pn	23 19 49.5	+2.4
ACCN				eSg	Sg	23 21 23.2	-8.7
HSMO	Haileybury Sch	6.21	11	SN	Sn	23 20 56.2	-3.9
HSMO				SG	Sg	23 21 25.2	-11
HSMO				Trac		23 21 27.1	
	comp=Z,2.3nm,0.0s						
CPCT	Cooper Cave	6.32	204	ePg	Pg	23 20 09.3	-8.2
CPCT				eSn	Sn	23 21 01.4	-1.4
CPCT				eSg	Sg	23 21 30.4	-9.0
ALFO	Alfred	6.42	45	Pn	Pn	23 19 51.7	+0.1
ALFO				Sn	Sn	23 21 02.1	-3.0
ALFO				Sg	Sg	23 21 27.5	-15
ALFO	Alfred	6.42	45	PN	Pn	23 19 51.7	+0.1
ALFO				SN	Sn	23 21 02.1	-3.0
ALFO				SG	Sg	23 21 27.5	-15
ALFO				Trac		23 21 39.5	
	comp=Z,54nm,0.5s						
GRQ	Grand Remous	6.65	35	Pn	Pn	23 19 53.5	-1.2
GRQ				Sn	Sn	23 21 07.8	-3.0
GRQ				Sg	Sg	23 21 35.5	-14
GRQ	Grand Remous	6.65	35	PN	Pn	23 19 53.5	-1.2
GRQ				SN	Sn	23 21 07.8	-3.0
GRQ				SG	Sg	23 21 35.5	-14
GRQ				Trac		23 21 44.8	
	comp=Z,100nm,0.6s						
FRNY	Flat Rock	6.72	56	ePg	Pg	23 20 14.5	-11
FRNY				eSn	Sn	23 21 12.0	-0.6
FRNY				eSg	Sg	23 21 42.1	-10
FRNY	Flat Rock	6.72	56	PN	Pn	23 19 56.3	+0.6
FRNY				SN	Sn	23 21 10.4	-2.2
FRNY				SG	Sg	23 21 41.5	-11
JFWS	Jewell Farm	6.80	287	Pn	Pn	23 19 52.7	-4.0
JFWS				eSg	Sg	23 21 47.1	-7.4
JFWS	Jewell Farm	6.80	287	PN	Pn	23 19 55.6	-1.1
JFWS				SN	Sn	23 21 10.0	-4.4
JFWS				SG	Sg	23 21 45.2	-9.3
LHS	Liberty Hill	6.81	176	Pn	Pn	23 20 07.5	+11
TRQ	Mont Tremblant	6.99	43	Pn	Pn	23 20 00.7	+1.3
TRQ				Sn	Sn	23 21 16.3	-2.7
TRQ				Sg	Sg	23 21 47.3	-13
TRQ	Mont Tremblant	6.99	43	PN	Pn	23 20 00.7	+1.3
TRQ				SN	Sn	23 21 16.3	-2.7
TRQ				SG	Sg	23 21 47.3	-13
TRQ				Trac		23 21 56.4	
	comp=Z,24nm,0.3s						
SWET	Sewanee	7.03	212	ePn	Pn	23 20 02.7	+2.7
MNT	Montreal	7.05	51	SG	Sg	23 21 49.4	-13
MNT				Trac		23 22 00.5	
	comp=Z,73nm,0.6s						
TIMO	Timmins Ontari	7.19	0	Pn	Pn	23 20 02.1	0.0
TIMO				Sn	Sn	23 21 19.0	-5.0
TIMO				Sg	Sg	23 21 57.5	-10
TIMO	Timmins Ontari	7.19	0	PN	Pn	23 20 02.1	0.0
TIMO				SN	Sn	23 21 19.0	-5.0
TIMO				SG	Sg	23 21 57.5	-10
TIMO				Trac		23 21 59.1	
	comp=Z,33nm,0.4s						
KILO	Kirkland Lake	7.31	9	Pn	Pn	23 20 01.8	-1.9
KILO				Sn	Sn	23 21 22.7	-4.4
KILO				Sg	Sg	23 21 59.5	-12
KILO	Kirkland Lake	7.31	9	PN	Pn	23 20 01.8	-1.9
KILO				SN	Sn	23 21 22.7	-4.4
KILO				SG	Sg	23 21 59.5	-12
KILO				Trac		23 22 10.2	
	comp=Z,35nm,0.5s						
VLDQ	Val d'Or	7.38	21	Pn	Pn	23 20 03.5	-1.2
VLDQ				Sn	Sn	23 21 23.8	-5.0
VLDQ				Sg	Sg	23 21 59.9	-13
VLDQ	Val d'Or	7.38	21	PN	Pn	23 20 03.5	-1.2
VLDQ				SN	Sn	23 21 23.8	-5.0
VLDQ				SG	Sg	23 21 59.9	-13
VLDQ				Trac		23 22 05.5	
	comp=Z,51nm,0.5s						
LBNH	Lisbon	7.56	64	Pn	Pn	23 20 08.0	+0.9
LBNH				eSn	Sn	23 21 32.8	-0.4
LBNH				eSg	Sg	23 22 07.2	-12
MOQ	Mont Orford	7.78	56	PN	Pn	23 20 12.2	+2.0
MOQ				SN	Sn	23 21 36.7	-2.0
MOQ				SG	Sg	23 22 08.2	-18
PNPO	Pukaskwa Natio	8.10	336	PN	Pn	23 20 14.2	-0.4
PNPO				SN	Sn	23 21 41.2	-5.3
KAPO	Kapuskasing	8.21	355	Pn	Pn	23 20 14.7	-1.4
KAPO				Sn	Sn	23 21 42.5	-6.6
KAPO				Sg	Sg	23 22 28.3	-11
KAPO	Kapuskasing	8.21	355	PN	Pn	23 20 14.7	-1.4
KAPO				SN	Sn	23 21 42.5	-6.6
KAPO				SG	Sg	23 22 28.3	-11
KAPO				Trac		23 22 30.7	
	comp=Z,31nm,0.6s						
DPQ	Saint Jean	8.22	46	Pn	Pn	23 20 13.6	-2.7
DPQ				Sn	Sn	23 21 44.4	-5.1
DPQ				Sg	Sg	23 22 21.7	-18
DPQ	Saint Jean	8.22	46	PN	Pn	23 20 13.6	-2.7
DPQ				SN	Sn	23 21 44.4	-5.1
DPQ				SG	Sg	23 22 21.7	-18
DPQ				Trac		23 22 33.5	
	comp=Z,22nm,0.4s						
MALO	McAlpine Lake	8.82	7	Pn	Pn	23 20 22.6	-1.9
MALO				Sn	Sn	23 22 01.0	-3.1
MALO				Sg	Sn	23 22 45.9	+42
MALO	McAlpine Lake	8.82	7	PN	Pn	23 20 22.6	-1.9
MALO				SN	Sn	23 22 01.0	-3.1
MALO				SG	Sn	23 22 45.9	+42
MALO				Trac		23 22 48.4	
	comp=Z,29nm,0.7s						
TBO	Thunder Bay	9.30	325	Pn	Pn	23 20 29.3	-1.8
TBO				Sn	Sn	23 22 11.2	-4.8
TBO				Lg		23 23 08.2	
TBO	Thunder Bay	9.30	325	PN	Pn	23 20 29.3	-1.8
TBO				SN	Sn	23 22 11.2	-4.8
TBO				LG		23 23 08.2	
TBO				Trac		23 23 19.3	
	comp=Z,2.8nm,0.3s						
EYMN	Ely	9.81	316	ePn	Pn	23 20 35.5	-2.6
EYMN	Ely	9.81	316	PN	Pn	23 20 35.9	-2.2
EYMN				SN	Sn	23 22 20.1	-8.5
DAQ	Lac Daran	9.84	44	Sn	Sn	23 22 26.1	-3.1
DAQ				Lg		23 23 14.1	
DAQ	Lac Daran	9.84	44	SN	Sn	23 22 26.1	-3.1
DAQ				LG		23 23 14.1	
DAQ				Trac		23 23 22.2	
	comp=Z,24nm,0.5s						
NANO	Nakina Ontario	9.88	339	SN	Sn	23 22 22.7	-7.4
VIMO	Victor Mine	11.65	353	PN	Pn	23 21 00.8	-2.5
VIMO				SN	Sn	23 23 01.7	-12
PKLO	Pickle Lake	11.94	332	PN	Pn	23 21 04.2	-2.9
LG4Q	La Grande 4	13.29	19	Pn	Pn	23 21 21.5	-4.0
LG4Q				Sn	Sn	23 23 42.0	-12
LG4Q				Lg		23 25 03.4	
LG4Q	La Grande 4	13.29	19	PN	Pn	23 21 21.5	-4.0
LG4Q				SN	Sn	23 23 42.0	-12
LG4Q				LG		23 25 03.4	
LG4Q				Trac		23 25 16.3	
	comp=Z,18nm,0.5s						
SILO	Sutton Inlier	13.42	351	PN	Pn	23 21 23.6	-3.7
ULM	Lac du Bonnet	13.50	317	Sn	Sn	23 23 46.5	-12
ULM	Lac du Bonnet	13.50	317	SN	Sn	23 23 46.5	-12

*LDG **12** 23:23:49.9±0.2, 11.06N×62.74W, h90km, Mb4.4/14, Ms3.3/1, Error ellipse: s-maj=13.7km s-min=6.1km az=100.0*
*ISCJB **12** 23:23:50.2±0.2, 10.87N±0.02×62.23W±0.02, h80km±2km, mb4.3/42, Error ellipse: s-maj=3.5km s-min=2.4km az=43.2*
*NEIC **12** 23:23:51.6, 10.85N×62.15W, h70km, mb4.5/19, MD4.1(TRN), MW4.5(CAR), After CAR.*
*TRN **12** 23:23:52.7, 10.89N×62.11W, h64km, MD4.1*
TRN Felt mainly in north-west Trinidad(II) & (III). Also felt in Grenada.
*IDC **12** 23:23:52.8±0.9, 11.12N×62.47W, h92km±7km, mb4.0/24, mb1 4.2/28, mb1mx4.1/31, mbtmp4.0/28, MS3.4/7, Ms1 3.4/7, ms1mx3.1/25, Error ellipse: s-maj=10.8km s-min=6.0km az=128.0*
*FUNV **12** 23:23:52.4, 10.85N×62.12W, h62km, MW4.4*
ISC 12 23:23:51.4±0.2, 10.86N±0.02×62.21W±0.02, h72km±2km, n181, σ1§11/222, mb4.3/42, 14C-9D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.22	184⇑	iP	Pn	23 24 02.5	+0.2
GUIV				eS	Sn	23 24 09.9	-0.3
GUIV	Guiria	0.22	184	eP	Pn	23 24 02.5	+0.1
GUIV				eS	Sn	23 24 09.8	-0.5
TCE	Chacachacare	0.48	110⇓	iP	Pn	23 24 04.2	0.0
TCE				eS	Sn	23 24 12.2	-1.4
TRN	Trinidad (W)	0.82	105⇑	iP	Pn	23 24 07.9	+0.1
TRN				eS	Sn	23 24 18.4	-1.5
TRN	Trinidad (W)	0.82	105	e	Pn	23 24 13.1	+5.3
TRN				eS	Sn	23 24 18.4	-1.5
ALNG	Atlantic LNG	0.85	143	eP	Pn	23 24 09.2	+1.1
ALNG				eS	Sn	23 24 21.5	+0.9
TPP	Pointe-a-Pierr	0.92	126	eP	Pn	23 24 09.1	+0.1
GUNV	Guanoco	1.00	226⇑	iP	Pn	23 24 11.1	+1.0
GUNV				eS	Sn	23 24 25.2	+1.3
GUNV	Guanoco	1.00	226	eP	Pn	23 24 11.0	+1.0
GUNV				eS	Sn	23 24 24.2	+0.3
CRUV	Carupano	1.03	260⇓	iP	Pn	23 24 10.7	+0.4
CRUV				eS	Sn	23 24 24.3	-0.1
CRUV	Carupano	1.03	260	eP	Pn	23 24 10.7	+0.3
CRUV				eS	Sn	23 24 24.3	-0.1
ITEV	Isla Los Testi	1.03	298⇑	iP	Pn	23 24 10.7	+0.3
ITEV				eS	Sn	23 24 24.9	+0.4
ITEV	Isla Los Testi	1.03	298	eP	Pn	23 24 10.7	+0.3
ITEV				eS	Sn	23 24 24.4	-0.1
TBH	Brigand Hill	1.18	109⇑	iP	Pn	23 24 12.5	+0.2
GRGR	Grenville	1.37	23	ePg	Pn	23 24 14.3	-0.5
GRW	Mount Saint Ca	1.40	23	eP	Pn	23 24 14.7	-0.4
TPR	Prospect	1.44	77	eP	Pn	23 24 15.4	-0.3
TPR				eS	Sn	23 24 32.3	-1.7
TPR	Prospect	1.44	77	eS	Sn	23 24 32.3	-1.7
GRHS	Sauteurs	1.46	22⇑	iP	Pn	23 24 16.4	+0.5
GRHS				eS	Sn	23 24 34.1	-0.3
GRIC	Isle de Caille	1.54	23	eP	Pn	23 24 17.6	+0.7
GRIC				eS	Sn	23 24 35.6	-0.6
GRSS	Sisters	1.54	22⇑	iP	Pn	23 24 17.7	+0.7
GRSS				eS	Sn	23 24 35.6	-0.7
ORIV	Oritupano	2.14	214⇓	iP	Pn	23 24 26.0	+1.0
ORIV				eS	Sn	23 24 50.2	-0.5
ORIV	Oritupano	2.14	214	eP	Pn	23 24 25.9	+0.9
ORIV				eS	Sn	23 24 48.5	-2.1
PCRV	Puerto La Cruz	2.48	254⇓	eP	Pn	23 24 30.9	+1.3
PCRV				eS	Sn	23 24 58.1	-0.8
PCRV	Puerto La Cruz	2.48	254	P	Pn	23 24 30.9	+1.2
	110nm,0.3s,baz=53,slow=4.3,SNR=812						
PCRV				S	Sn	23 24 57.5	-1.4
	122nm,0.3s,baz=308,slow=13,SNR=15						
IBAV	Isla La Blanqu	2.51	293⇑	iP	Pn	23 24 30.4	+0.3
IBAV				eS	Sn	23 24 59.5	-0.1
IBAV	Isla La Blanqu	2.51	293	eP	Pn	23 24 30.3	+0.3
IBAV				eS	Sn	23 24 58.1	-1.5
SVB	Belmont	2.57	21	eP	Pn	23 24 31.5	+0.7
SVB				eS	Sn	23 25 00.7	-0.3
SVV	Soufriere Volc	2.62	22	eP	Pn	23 24 32.5	+1.0
SVV				eS	Sn	23 25 01.6	-0.8
BHS	Barnard House	2.64	24	eP	Pn	23 24 33.1	+1.4
BHS				eS	Sn	23 25 02.1	-0.6
SSV	Crater Summit	2.64	22	eP	Pn	23 24 32.4	+0.6
SSV				eS	Sn	23 25 03.3	+0.6
RIOV	Rio Grande	2.81	172	eP	Pn	23 24 34.0	0.0
RIOV				eS	Sn	23 25 05.0	-1.8
RIOV	Rio Grande	2.81	172	eP	Pn	23 24 32.6	-1.4
RIOV				eS	Sn	23 25 03.8	-2.9
SLB	Belfond	3.16	21	eP	Pn	23 24 39.5	+0.7
PRGV	PARIAGUAN	3.19	229⇓	iP	Pn	23 24 39.5	+0.3
PRGV				eS	Sn	23 25 15.5	-0.6
GURV	El Guri	3.20	196⇑	eP	Pn	23 24 38.9	-0.5
GURV				eS	Sn	23 25 13.4	-3.1
GURV	El Guri	3.20	196	eP	Pn	23 24 38.7	-0.7
GURV				eS	Sn	23 25 13.0	-3.5
BBGH	Gun Hill	3.44	49	ePn	Pn	23 24 44.5	+1.8
CUPV	Cœpira	3.61	257⇓	iP	Pn	23 24 46.5	+1.5
CUPV				eS	Sn	23 25 25.5	-0.9
BIM	Bigot	3.80	17	eP	Pn	23 24 47.7	+0.1
MVM	Montagne Vaucl	3.88	19	eP	Pn	23 24 49.0	+0.3
MVM				eS	Sn	23 25 31.4	-1.7
FDF	Fort de France	3.98	15⇑	eP	Pn	23 24 50.2	+0.2
FDF				eS	Sn	23 25 31.6	-3.9
BIRV	Birongo	4.01	265	eP	Pn	23 24 51.6	+1.1
ORCV	Isla La Orchil	4.02	284⇑	eP	Pn	23 24 50.4	-0.1
TIOV	TMO PEDROTE	4.16	265	eP	Pn	23 24 54.7	+2.3
MERV	Las Mercedes	4.33	249⇓	eP	Pn	23 24 54.8	-0.1
FUNV	FUNVISIS	4.54	265	eP	Pn	23 24 59.4	+1.7
OCUV	OCUMARITO	4.58	261	eP	Pn	23 25 00.1	+1.9
FDCV	FORTIN DE LA C	4.67	266	eP	Pn	23 25 00.9	+1.4
BBL	Barber's Block	4.69	9	eP	Pn	23 24 57.8	-1.9
BOTV	Botiquin	4.95	265	eP	Pn	23 25 05.4	+2.2
TBG	Guadaloupe-3	4.99	6	eP	Pn	23 25 04.6	+0.8
PAUV	EL PAUJM	5.00	263	eP	Pn	23 25 05.3	+1.4
LUEV	Luepa	5.04	172	eP	Pn	23 25 03.1	-1.5
LUEV				eS	Sn	23 25 56.0	-5.6
LUEV	Luepa	5.04	172	eP	Pn	23 25 03.1	-1.4
LUEV				eS	Sn	23 25 55.3	-6.2
MGG	Marie-Galante	5.10	10	eP	Pn	23 25 06.8	+1.5
HMG	Houelmont	5.11	5	eP	Pn	23 25 06.3	+0.8
SCG	Saint Claude	5.16	6	eP	Pn	23 25 07.4	+1.2
SCG				eS	Sn	23 26 01.7	-2.6
DOG	Dongo Capester	5.17	6	eP	Pn	23 25 08.1	+1.8
CAOV	Caicara del Or	5.37	229	eP	Pn	23 25 07.6	-1.4
CAOV				eS	Sn	23 26 06.5	-3.2
DEG	La Desirade	5.53	12	eP	Pn	23 25 12.2	+1.0
DEG				eS	Sn	23 26 09.6	-3.8
TURV	Turiamo	5.55	266⇑	eP	Pn	23 25 11.8	+0.3
BAUV	El Baul	6.06	252⇓	eP	Pn	23 25 17.5	-0.9
BPA	Boggy Peak	6.15	3	eP	Pn	23 25 22.3	+2.5
BPA				eS	Sn	23 26 27.2	-1.5
BPA	Boggy Peak	6.15	3	eP	Pn	23 25 22.3	+2.5
BPA				eS	Sn	23 26 27.2	-1.5
NVRH	Round Hill, Ne	6.29	357	eP	Pn	23 25 25.1	+3.5
SKTB	Turtle Beach	6.32	356	eP	Pn	23 25 26.1	+4.1
SKI	Saint Kitts	6.45	355	eP	Pn	23 25 26.5	+2.7
SKI				eS	Sn	23 26 35.1	-0.9
JACV	Jacura	6.51	273⇑	iP	Pn	23 25 25.1	+0.6
TEPV	Terepaima	6.93	263⇑	eP	Pn	23 25 30.2	-0.2
SANV	Sanarito	7.34	260	eP	Pn	23 25 35.9	-0.1
SIQV	Siquisique	7.47	269	eP	Pn	23 25 37.8	+0.1
PAYV	Puerto Ayacuch	7.64	225	eP	Pn	23 25 39.6	-0.4
CURV	Curarigua	7.67	264	eP	Pn	23 25 41.2	+0.7
MTP	Monte Pirata	7.88	336	ePn	Pn	23 25 42.9	-0.5
CPD	Cerro la Pandu	7.98	334	ePn	Pn	23 25 43.8	-1.0
HUMP	Col San Antoni	8.05	334	ePn	Pn	23 25 44.9	-0.7
ELOV	Elorza	8.15	242⇓	iP	Pn	23 25 46.0	-1.1
SJG	San Juan	8.15	333	ePn	Pn	23 25 46.1	-0.9
SJG	San Juan	8.15	333	P	Pn	23 25 45.5	-1.6
	10nm,0.3s,baz=116,slow=14,SNR=17						
SJG				S	Sn	23 27 07.6	-10
	24nm,0.3s,baz=350,slow=17,SNR=4.3						
SJG				LR	LR	23 28 58.5	
	comp=Z,116nm,19.1s,baz=115,slow=39						
CBYP	Canovanas	8.17	335	ePn	Pn	23 25 46.9	-0.4
QARV	Quebrada Arrib	8.20	266	eP	Pn	23 25 47.9	+0.1
DABV	Dabajuro	8.28	271	eP	Pn	23 25 49.3	+0.5
SDV	Santo Domingo	8.53	257	ePn	Pn	23 25 51.0	-1.3
SDV	Santo Domingo	8.53	257	P	Pn	23 25 51.1	-1.1
	8.3nm,0.3s,baz=112,slow=8.2,SNR=35						
SDV				S	Sn	23 27 22.0	-5.0
	18nm,0.3s,baz=58,slow=18,SNR=11						
IMOV	Isla Los Monje	8.65	281	eP	Pn	23 25 53.1	-0.7
MPR	Mayaguez	8.72	327	ePn	Pn	23 25 54.9	0.0
SOCV	Socops	8.90	254	eP	Pn	23 25 55.9	-1.4
VIGV	El Vigia	9.24	258	eP	Pn	23 26 01.6	-0.4
VIRV	Villa del Rosa	10.03	269	eP	Pn	23 26 12.3	-0.4
CAPV	Capacho	10.41	254	eP	Pn	23 26 16.7	-1.2
SDDR	Presa de Saban	11.92	314	ePn	Pn	23 26 40.2	+1.7
ROSC	El Rosal	13.41	244	P	Pn	23 26 58.4	-0.2
ROSC				LR	LR	23 32 53.6	
ROSC	El Rosal	13.41	244	P	Pn	23 26 58.4	-0.2
	3.0nm,0.3s,baz=281,slow=23,SNR=4.6						
ROSC				LR	LR	23 32 53.6	
	comp=Z,45nm,19.8s,baz=357,slow=41						
OTAV	Otavalo	19.29	238	ePn	Pn	23 28 14.0	+1.6
	6.0nm,0.9s						
BBSR	BB Station	21.53	354	P	P	23 28 37.8	+3.2
ATAH	Atahualpa	23.97	223	P	P	23 29 00.4	+1.0
	33nm,0.9s,mb4.7,baz=51,slow=6.0,SNR=13						
ATAH				LR	LR	23 40 11.5	
	comp=Z,75nm,19.4s,baz=8.9,slow=41						
DWPF	Disney	24.89	316	P	P	23 29 06.9	-0.7
SIV	San Ignacio	26.71	178	P	P	23 29 25.0	+0.9
	14nm,0.6s,mb4.7,baz=8.6,slow=9.7,SNR=120						
TEIG	Tepich	26.75	294	P	P	23 29 29.1	+4.6
NNA	Nana	26.96	213	P	P	23 29 26.6	+0.2
	39nm,0.7s,mb5.0,baz=8.8,slow=8.6,SNR=21						
LPAZ	La Paz	27.61	192	P	P	23 29 33.9	+1.7
	5.7nm,0.7s,mb4.2,baz=8.9,slow=11,SNR=25						
LPAZ				LR	LR	23 40 21.6	
	comp=Z,67nm,18.1s,baz=253,slow=36						
RCBR	Riachuelo	31.00	121	eP	P	23 30 03.6	+1.3
ELN	Prospectdale	31.11	331	eP	P	23 30 02.5	-0.6
CMIG	Matias Romero	32.28	285	P	P	23 30 10.8	-2.7
CMIG	Matias Romero	32.28	285	P	P	23 30 10.8	-2.7
	0.7nm,0.3s,mb3.8,baz=107,slow=4.3,SNR=2.2						
SWET	Sewanee	32.45	322	P	P	23 30 18.7	+3.9
PLAL	Pickwick Lake	33.63	320	eP	P	23 30 23.8	-1.3
	4.3nm,0.5s,mb4.5						
PLAL				e	pP	23 30 43.4	+1.1
OXF	Oxford	34.20	318	eP	P	23 30 28.9	-1.2
MIAR	Mount Ida	37.05	315	P	P	23 31 01.3	+6.7
JFWS	Jewell Farm	40.18	328	eP	P	23 31 18.6	-2.1
	13nm,0.5s,mb5.0						
CFAA	Coronel Fontan	42.62	188	P	P	23 31 40.4	-0.3
	1.7nm,0.8s,mb3.8,baz=352,slow=8.3,SNR=20						
TXAR	Lajitas Array	42.77	302	P	P	23 31 36.9	-5.2
	0.4nm,0.6s,mb3.3,baz=85,slow=11,SNR=2.7						
TXAR				PcP	PcP	23 33 30.9	-1.5
	0.8nm,0.5s,baz=121,slow=5.4,SNR=10						
TXAR				ScP	ScP	23 37 13.5	-3.8
	0.4nm,0.6s,baz=117,slow=5.5,SNR=4.1						
SCHQ	Schefferville	44.01	356	P	P	23 31 49.6	-2.0
	3.4nm,0.5s,mb4.4,baz=178,slow=5.7,SNR=20						
SCHQ				LR	LR	23 48 54.5	
	comp=Z,67nm,18.6s,baz=159,slow=34						
ANMO	Albuquerque	46.78	308	P	P	23 32 10.7	-3.2
	2.6nm,0.8s,mb4.0,baz=120,slow=6.9,SNR=6.7						
ULM	Lac du Bonnet	48.05	331	P	P	23 32 19.9	-3.5
	3.1nm,0.3s,mb4.6,baz=134,slow=7.8,SNR=17						
ULM				PcP	PcP	23 33 46.9	-3.4
	1.9nm,0.5s,baz=178,slow=2.6,SNR=2.9						
ULM				ScP	ScP	23 37 31.8	-6.8
	0.8nm,0.6s,baz=193,slow=14,SNR=2.6						
TRQA	Tornquist	48.66	180	P	P	23 32 27.8	-0.5
PDAR	Pinedale Array	51.92	317	P	P	23 32 50.4	-2.5
	3.9nm,0.8s,mb4.5,baz=117,slow=9.9,SNR=11						
PDAR				ScP	ScP	23 37 49.2	-6.2
	0.4nm,0.5s,baz=122,slow=7.2,SNR=4.2						
LKWY	Lake	53.20	318	P	P	23 33 04.9	+2.5
	82nm,1.2s						
DBIC	Dimbokro	56.77	89	P	P	23 33 27.9	-0.8
	1.2nm,0.4s,mb4.3,baz=250,slow=15,SNR=8.3						
NVAR	Mina Array Bea	56.89	309	P	P	23 33 25.4	-3.7
	0.4nm,0.5s,mb3.8,baz=318,slow=26,SNR=3.3						
ESDC	Sonseca Array	58.80	50	P	P	23 33 43.1	+0.7
	2.0nm,0.8s,mb4.2,baz=259,slow=7.3,SNR=7.2						
NEW	Newport	58.90	320	P	P	23 33 38.6	-4.3
	2.4nm,0.4s,mb4.6,baz=100,slow=6.1,SNR=4.1						
SJPF	Ste Jean	61.55	47	eP	P	23 34 02.3	+1.2
ETSF	Etsaut	61.98	47	eP	P	23 34 04.7	+0.7
TORD	Torodi Ar. Bea	62.40	81	P	P	23 34 07.2	-0.2
	1.4nm,0.4s,mb4.4,baz=287,slow=6.8,SNR=16						
EPF	Esparros	62.65	47	eP	P	23 34 09.6	+1.1
	6.6nm,0.7s,mb4.4						
EPF	Esparros	62.65	47	eP	P	23 34 09.6	+1.1
	3.3nm,0.7s,mb4.4						
GRR	Gorron	63.03	41	eP	P	23 34 11.0	+0.1
	18nm,1.0s,mb4.7						
GRR	Gorron	63.03	41	eP	P	23 34 11.0	+0.1
	8.9nm,1.0s,mb4.7						
LFF	La Frestale	63.31	45	eP	P	23 34 14.1	+1.2
FLN	La Foliniere	63.37	41	eP	P	23 34 13.4	+0.3
	14nm,0.7s,mb4.7						
FLN	La Foliniere	63.37	41	eP	P	23 34 13.4	+0.3
	6.8nm,0.7s,mb4.7						
YKA	Yellowknife Ar	63.63	336	P	P	23 34 10.9	-3.7
	0.8nm,0.3s,mb4.0,baz=105,slow=7.3,SNR=14						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA				LR	LR	23 58 58.2	
	comp=Z,56nm,19.0s,baz=175,slow=33						
RJF	**Les Rejaudoux**	**63.92**	**45**	eP	**P**	**23 34 17.1**	**+0.2**
MTLF	**Montolieu**	**64.06**	**47**	eP	**P**	**23 34 18.0**	**+0.2**
	4.4nm,0.8s,mb4.1						
MTLF	**Montolieu**	**64.06**	**47**	eP	**P**	**23 34 18.0**	**+0.2**
	2.2nm,0.8s,mb4.0						
CAF	**Calviac**	**64.23**	**45**	eP	**P**	**23 34 19.1**	**+0.2**
	2.1nm,0.4s,mb4.0						
CAF	**Calviac**	**64.23**	**45**	eP	**P**	**23 34 19.1**	**+0.2**
	1.0nm,0.4s,mb4.0						
TCF	**Toulx Ste Croi**	**64.59**	**44**	eP	**P**	**23 34 21.3**	**+0.1**
	2.7nm,0.5s,mb4.0						
TCF	**Toulx Ste Croi**	**64.59**	**44**	eP	**P**	**23 34 21.3**	**+0.1**
	1.4nm,0.5s,mb4.0						
BGF	**Bois d'Agland**	**65.08**	**44**	eP	**P**	**23 34 24.4**	**0.0**
AVF	**Avril sur Loir**	**65.46**	**43**	eP	**P**	**23 34 26.5**	**-0.4**
SMF	**Signal de Mont**	**65.77**	**44**	eP	**P**	**23 34 28.3**	**-0.5**
	2.4nm,0.5s,mb4.0						
SMF	**Signal de Mont**	**65.77**	**44**	eP	**P**	**23 34 28.3**	**-0.5**
	1.2nm,0.5s,mb4.0						
LOR	**Lormes**	**65.89**	**43**	eP	**P**	**23 34 29.1**	**-0.5**
	6.4nm,0.8s,mb4.2						
LOR	**Lormes**	**65.89**	**43**	eP	**P**	**23 34 29.1**	**-0.5**
	3.2nm,0.8s,mb4.2						
RES	**Resolute Bay**	**66.41**	**351**	P	**P**	**23 34 29.7**	**-2.8**
SMRF	**Simiane la Rot**	**66.56**	**47**	eP	**P**	**23 34 32.8**	**-1.2**
	14nm,1.1s,mb4.4						
SMRF	**Simiane la Rot**	**66.56**	**47**	eP	**P**	**23 34 32.8**	**-1.2**
	14nm,1.1s,mb4.7						
MEZF	**Maizieres J'vi**	**66.90**	**42**	eP	**P**	**23 34 35.9**	**-0.1**
	12nm,0.7s,mb4.5						
MEZF	**Maizieres J'vi**	**66.90**	**42**	eP	**P**	**23 34 35.9**	**-0.1**
	12nm,0.7s,mb4.8						
GIVF	**Givet**	**67.04**	**40**	eP	**P**	**23 34 36.7**	**-0.2**
FRF	**La Foret Royal**	**67.28**	**47**	eP	**P**	**23 34 38.6**	**0.0**
LPL	**La Plagne**	**67.58**	**45**	eP	**P**	**23 34 41.5**	**+1.1**
	4.5nm,0.7s,mb4.1						
LPL	**La Plagne**	**67.58**	**45**	eP	**P**	**23 34 41.5**	**+1.1**
	2.3nm,0.7s,mb4.1						
LPG	**La Plagne**	**67.59**	**45**	eP	**P**	**23 34 41.7**	**+1.2**
HINF	**Hinteralfeld**	**67.98**	**43**	eP	**P**	**23 34 41.6**	**-1.3**
	2.1nm,0.5s,mb3.9						
HINF	**Hinteralfeld**	**67.98**	**43**	eP	**P**	**23 34 41.6**	**-1.3**
	1.0nm,0.5s,mb3.9						
CDF	**Champ du Feu**	**68.34**	**42**	eP	**P**	**23 34 44.6**	**-0.6**
KEST	**Kesra**	**68.79**	**56**	P	**P**	**23 34 49.4**	**+1.2**
	0.6nm,0.7s,mb3.5,baz=223,slow=18,SNR=5.2						
NB2	**NORSAR Subarra**	**72.54**	**29**	P	**P**	**23 35 10.8**	**+0.3**
	comp=Z,2.4nm,0.6s,mb4.2,baz=262,slow=6.2						
NOA	**NORSAR Array B**	**72.54**	**29**	P	**P**	**23 35 11.1**	**+0.6**
NOA	**NORSAR Array B**	**72.54**	**29**	P	**P**	**23 35 11.1**	**+0.6**
	comp=Z,3.7nm,0.7s,mb4.3,baz=262,slow=5.9,SNR=12						
GERES	**GERESS Array B**	**72.63**	**42**	P	**P**	**23 35 11.0**	**-0.2**
	comp=Z,1.0nm,0.8s,mb3.7,baz=274,slow=5.1,SNR=8.3						
INK	**Inuvik**	**73.09**	**338**	eP	**P**	**23 35 17.2**	**+3.6**
INK	**Inuvik**	**73.09**	**338**	P	**P**	**23 35 09.7**	**-3.9**
	comp=Z,0.6nm,0.3s,mb3.9,baz=143,slow=17,SNR=3.1						
TRO	**Tromso**	**76.80**	**21**	eP	**P**	**23 35 34.0**	**-1.0**
	comp=Z,61nm,2.1s,mb5.0						
TRO	**Tromso**	**76.80**	**21**	eP	**P**	**23 35 34.0**	**-1.0**
TRO				AMb	AMB	23 35 36.1	
	comp=Z,61nm,2.1s,mb5.0						
KTK1	**Kautokeino**	**78.30**	**22**	eP	**P**	**23 35 44.1**	**+0.8**
	comp=Z,27nm,1.8s,mb4.7						
KTK1	**Kautokeino**	**78.30**	**22**	eP	**P**	**23 35 44.1**	**+0.8**
KTK1				AMb	AMB	23 35 48.5	
	comp=Z,27nm,1.8s,mb4.7						
KTK1				epP	pP	23 36 04.2	+1.5
ARCES	**ARCESS Array B**	**79.10**	**21**	P	**P**	**23 35 47.1**	**-0.6**
	comp=Z,4.9nm,0.6s,mb4.5,baz=272,slow=6.0,SNR=19						
FINES	**FINESS Array B**	**79.73**	**29**	P	**P**	**23 35 51.0**	**-0.2**
	comp=Z,5.2nm,0.5s,mb4.6,baz=256,slow=2.6,SNR=61						
KAF	**Kangasniemi**	**79.79**	**29**	ep	**P**	**23 35 46.2**	**-5.4**
	comp=Z,5.5nm,0.5s,mb4.6,baz=4.2,slow=6.6						
TNA	**Tin City**	**86.58**	**336**	eP	**P**	**23 36 25.4**	**-1.1**
BRTR	**Keskin Array B**	**87.59**	**50**	P	**P**	**23 36 33.3**	**+1.3**
	comp=Z,1.6nm,0.8s,mb4.1,baz=283,slow=3.5,SNR=8.7						
BOSA	**Boshof**	**92.92**	**118**	P	**P**	**23 36 56.6**	**-0.4**
	comp=Z,3.2nm,0.8s,mb4.7,baz=188,slow=3.6,SNR=4.6						
BOSA				LR	LR	00 20 46.7	
	comp=Z,82nm,18.2s,baz=59,slow=37						
LSZ	**Lusaka**	**93.19**	**105**	P	**P**	**23 36 59.8**	**+1.3**
SONM	**Songino Array**	**120.69**	**9**	PKP	PKPdf	23 42 33.1	-2.1
	comp=Z,0.2nm,0.4s,baz=308,slow=1.0,SNR=8.5						
STKA	**Stephens Creek**	**149.66**	**223**	PKPbc	PKPbc	23 43 32.8	-0.7
	comp=Z,2.3nm,0.7s,baz=267,slow=1.9,SNR=3.1						
WRA	**Warramunga Arr**	**161.69**	**239**	PKPab	PKPab	23 44 27.5	-3.0
	comp=Z,0.5nm,0.6s,baz=105,slow=4.2,SNR=5.3						

BJI ***12*** *23:25:33.1, 5630N×15740W, h46km, mB5.1, mb4.6, Ms4.2, Msz4.1*
ISCJB ***12*** *23:25:37.0±0.4, 5662N±004×15759W±005, h69km±4km, mb4.3/33, Error ellipse: s-maj=6.8km s-min=3.9km az=146.3*
IDC ***12*** *23:25:37.5±2.5, 5670N×15761W, h63km±19km, mb3.8/18, mb1 4.0/20, mb1mx4.0/26, mbtmp3.8/20, MS3.3/6, Ms1 3.3/6, ms1mx3.0/33, Error ellipse: s-maj=18.9km s-min=12.6km az=23.0*
NEIC ***12*** *23:25:39.1, 5634N×15739W, h46km, mb4.8/11, ML3.9(AEIC), After AEIC.*
ISC 12 23:25:38.7±0.4**, 5658N**±004×**15758W**±005**, h68**km±4km**, n94,** $\sigma 1^{s}25$/100**, mb4.3**/33**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHGN	**Chignik**	**0.55**	**239**	P	**Pn**	**23 25 50.5**	**-1.1**
SDPT	**Sand Point**	**2.05**	**234**	P	**Pn**	**23 26 09.5**	**-1.3**
SDPT				S	**Sn**	**23 26 33.3**	**-2.0**
KDAK	**Kodiak Island**	**2.97**	**64**	P	**Pn**	**23 26 23.1**	**-0.2**
KDAK	**Kodiak Island**	**2.97**	**64**	P	**Pn**	**23 26 23.1**	**-0.2**
	27nm,0.3s,baz=238,slow=6.8,SNR=159						
KDAK				S	**Sn**	**23 26 54.9**	**-2.9**
	44nm,0.3s,baz=240,slow=10,SNR=8.3						
FALS	**False Pass**	**3.73**	**245**	ePn	**Pn**	**23 26 29.8**	**-3.9**
FALS				eSb	**Sn**	**23 27 17.7**	**+1.4**
SVW2	**Sparrevohn**	**4.64**	**12**	P	**Pn**	**23 26 48.7**	**+2.5**
SVW2				eSn	Sn	23 27 18.9	-20
AKUT	**Akutan**	**5.28**	**246**	ePb	**Pn**	**23 26 58.1**	**+3.3**
SLKM	**Skilak Lake**	**5.50**	**41**	P	**Pn**	**23 26 59.1**	**+1.2**
SEW	**Seward**	**5.55**	**47**	P	**Pn**	**23 26 57.9**	**-0.6**
UNV	**Unalaska Valle**	**5.80**	**246**	ePn	**Pn**	**23 27 00.4**	**-1.5**
	58nm,0.5s						
UNV				eSn	**Sn**	**23 28 06.4**	**-0.6**
RC01	**Rabbit Creek A**	**6.08**	**39**	P	**Pn**	**23 27 06.3**	**+0.6**
TTA	**Tatalina**	**6.42**	**6**	ePn	**Pn**	**23 27 11.5**	**+1.2**
PMR	**Palmer**	**6.64**	**37**	ePn	**Pn**	**23 27 14.7**	**+1.3**
GHO	**Glory Hole Cre**	**6.84**	**37**	P	**Pn**	**23 27 15.9**	**-0.2**
SML	**Sawmill**	**7.07**	**38**	ePn	**Pn**	**23 27 18.7**	**-0.5**
SML				eSn	**Sn**	**23 28 41.3**	**+3.3**
EYAK	**Cordova Ski Ar**	**7.35**	**52**	ePn	**Pn**	**23 27 22.5**	**-0.6**
EYAK				eSn	**Sn**	**23 28 39.8**	**-5.0**
KTH	**Kantishna Hill**	**7.74**	**23**	P	**Pn**	**23 27 28.9**	**+0.4**
TRF	**Thorofare Moun**	**7.79**	**25**	P	**Pn**	**23 27 30.3**	**+1.1**
MCK	**McKinley**	**8.36**	**27**	ePn	**Pn**	**23 27 36.7**	**-0.1**
MCK				eSn	**Sn**	**23 29 10.8**	**+1.2**
COLA	**College**	**9.57**	**26**	ePn	**Pn**	**23 27 52.5**	**-0.9**
COLA				eSn	**Sn**	**23 29 35.8**	**-3.3**
IM3	**Indian Mountai**	**9.61**	**9**	P	**Pn**	**23 27 54.1**	**+0.2**
IMA2	**Indian Mountai**	**9.70**	**9**	ePn	**Pn**	**23 27 58.4**	**+3.2**
IMA2				eSn	**Sn**	**23 29 40.7**	**-1.5**
IL1	**Eielson Array**	**9.73**	**28**	P	**Pn**	**23 27 54.1**	**-1.4**
GAMB	**Gambell**	**10.05**	**322**	ePn	**Pn**	**23 28 01.7**	**+1.7**
TNA	**Tin City**	**10.29**	**335**	ePn	**Pn**	**23 28 06.3**	**+3.1**
EGAK	**Eagle**	**11.46**	**38**	ePn	**Pn**	**23 28 18.1**	**-1.0**
DAWY	**Dawson**	**11.69**	**43**	ePn	**Pn**	**23 28 22.7**	**+0.5**
DLBC	**Dease Lake**	**14.88**	**71**	P	**Pn**	**23 29 04.8**	**0.0**
	baz=257,slow=14						
INK	**Inuvik**	**16.03**	**33**	ePn	**Pn**	**23 29 19.0**	**-0.5**
INK	**Inuvik**	**16.03**	**33**	P	**Pn**	**23 29 16.9**	**-2.6**
	1.1nm,0.3s,baz=213,slow=13,SNR=17						
INK				S	**S**	**23 32 19.6**	**-6.5**
	0.2nm,0.3s,baz=60,slow=32,SNR=6.8						
INK				LR	LR	23 35 42.7	
	comp=Z,72nm,21.5s,baz=260,slow=38						
SMY	**Shemya**	**16.78**	**269**	Pn	**Pn**	**23 29 31.4**	**+2.5**
BBB	**Bella Bella**	**17.64**	**92**	LR	LR	23 34 59.3	
	comp=Z,97nm,21.8s,baz=344,slow=32						
YKW3	**Yellowknife Ar**	**22.21**	**57**	eP	**P**	**23 30 27.8**	**-1.2**
YKA	**Yellowknife Ar**	**22.22**	**57**	P	**P**	**23 30 28.6**	**-0.5**
YKA				ScP	ScP	23 37 51.5	-2.3
YKA				LR	LR	23 39 59.4	
YKA	**Yellowknife Ar**	**22.22**	**57**	P	**P**	**23 30 28.6**	**-0.5**
	7.0nm,0.6s,mb4.2,baz=273,slow=10,SNR=119						
YKA				ScP	ScP	23 37 51.5	-2.3
	0.2nm,0.6s,baz=268,slow=2.5,SNR=4.3						
YKA				LR	LR	23 39 59.4	
	comp=Z,36nm,19.7s,baz=35,slow=39						
EDM	**Edmonton**	**25.31**	**79**	eP	**P**	**23 30 59.0**	**+0.4**
HAWA	**Hanford**	**25.47**	**97**	eP	**P**	**23 31 01.4**	**+1.4**
BMO	**Blue Mountains**	**27.65**	**98**	eP	**P**	**23 31 21.0**	**+1.3**
EGMT	**Eagleton**	**29.91**	**86**	P	**P**	**23 31 34.6**	**-5.1**
	21nm,0.7s,mb4.9						
HLID	**Hailey**	**30.07**	**97**	eP	**P**	**23 31 41.8**	**+0.7**
NVAR	**Mina Array Bea**	**31.57**	**108**	P	**P**	**23 31 55.8**	**+1.4**
NVAR				PcP	PcP	23 34 44.9	-0.3
NVAR	**Mina Array Bea**	**31.57**	**108**	P	**P**	**23 31 55.8**	**+1.4**
	1.6nm,0.8s,mb3.8,baz=317,slow=7.2,SNR=8.4						
NVAR				PcP	PcP	23 34 44.9	-0.3
	0.7nm,0.6s,baz=346,slow=2.3,SNR=4.6						
SPUT	**South Promonto**	**32.66**	**98**	eP	**P**	**23 32 05.4**	**+1.5**
FCC	**Fort Churchill**	**32.90**	**59**	eP	**P**	**23 32 05.9**	**+0.1**
	11nm,1.1s,mb4.6						
HWUT	**Hardware Ranch**	**32.94**	**97**	eP	**P**	**23 32 07.9**	**+1.5**
DUG	**Dugway**	**33.24**	**100**	eP	**P**	**23 32 10.2**	**+1.2**
PDAR	**Pinedale Array**	**33.27**	**94**	P	**P**	**23 32 09.5**	**+0.3**
	1.6nm,0.7s,mb4.0,baz=317,slow=6.1,SNR=4.3						
JLU	**Jordanelle**	**33.70**	**98**	eP	**P**	**23 32 14.2**	**+1.3**
TPNV	**Topopah Spring**	**33.76**	**108**	eP	**P**	**23 32 14.5**	**+1.0**
	8.1nm,1.0s,mb4.5						
DAU	**Daniels Canyon**	**33.94**	**98**	eP	**P**	**23 32 10.2**	**-4.8**
MSU	**Marysvale**	**34.78**	**102**	eP	**P**	**23 32 23.6**	**+1.3**
ULM	**Lac du Bonnet**	**36.19**	**73**	P	**P**	**23 32 34.2**	**-0.1**
ULM				LR	LR	23 48 31.4	
ULM	**Lac du Bonnet**	**36.19**	**73**	P	**P**	**23 32 34.2**	**-0.1**
	2.8nm,0.5s,mb4.4,baz=299,slow=9.9,SNR=6.0						
ULM				LR	LR	23 48 31.4	
	comp=Z,44nm,18.3s,baz=12,slow=38						
PFO	**Pinyon Flat Ob**	**36.22**	**112**	P	**P**	**23 32 34.7**	**0.0**
PFO	**Pinyon Flat Ob**	**36.22**	**112**	P	**P**	**23 32 34.7**	**0.0**
	8.3nm,1.0s,mb4.6,baz=303,slow=5.2,SNR=5.3						
PV01	**Paradox Valley**	**37.02**	**99**	P	**P**	**23 32 42.6**	**+1.1**
AGMN	**Agassiz Refuge**	**37.33**	**76**	eP	**P**	**23 32 43.9**	**-0.1**
EYMN	**Ely**	**39.88**	**73**	eP	**P**	**23 33 05.2**	**-0.1**
	14nm,0.6s,mb5.0						
ERM	**Erimo**	**39.99**	**275**	eP	**P**	**23 33 11.3**	**+5.0**
ANMO	**Albuquerque**	**40.51**	**100**	P	**P**	**23 33 10.0**	**-0.7**
ANMO				PcP	PcP	23 35 11.5	-0.4
ANMO	**Albuquerque**	**40.51**	**100**	P	**P**	**23 33 10.0**	**-0.7**
	0.9nm,0.4s,mb3.9,baz=297,slow=6.8,SNR=2.2						
ANMO				PcP	PcP	23 35 11.5	-0.4
	0.9nm,0.7s,baz=319,slow=5.2,SNR=3.7						
JFWS	**Jewell Farm**	**43.80**	**78**	eP	**P**	**23 33 35.8**	**-1.5**
	10nm,0.9s,mb4.6						
WMOK	**Wichita Mounta**	**44.88**	**93**	eP	**P**	**23 33 45.8**	**-0.3**
	9.6nm,0.7s,mb4.6						
SFJD	**Kangerlussuaq**	**45.37**	**32**	P	**P**	**23 33 43.5**	**-6.0**
	12nm,0.4s,mb5.0						
MDJ	**Mudanjiang**	**45.60**	**287**	P	**P**	**23 33 52.8**	**+1.2**
MDJ				AMB	AMB		
	comp=Z,7.0nm,2.1s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,178nm,5.2s						
HDIL	**Hopedale**	**45.93**	**80**	eP	**P**	**23 33 53.4**	**-0.9**
TXAR	**Lajitas Array**	**46.32**	**103**	P	**P**	**23 33 57.9**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.8,baz=320,slow=5.3,SNR=8.5						
TXAR				PcP	PcP	23 35 31.0	-0.7
	comp=Z,1.1nm,0.6s,baz=217,slow=0.5,SNR=6.3						
TXAR				LR	LR	23 50 41.6	
	comp=Z,79nm,20.8s,baz=5.0,slow=32						
HIA	**Hailar**	**47.50**	**298**	P	**P**	**23 34 08.4**	**+1.9**
SCHQ	**Schefferville**	**47.53**	**52**	P	**P**	**23 34 05.8**	**-0.8**
	comp=Z,2.6nm,0.5s,mb4.3,baz=320,slow=6.5,SNR=7.8						
SCHQ				PcP	PcP	23 35 34.1	-1.3
	comp=Z,1.5nm,0.6s,baz=18,slow=3.2,SNR=3.2						
JCT	**Junction City**	**47.54**	**98**	eP	**P**	**23 34 06.9**	**-0.1**
	comp=Z,11nm,0.9s,mb4.7						
MIAR	**Mount Ida**	**47.90**	**89**	eP	**P**	**23 34 09.2**	**-0.6**
	comp=Z,8.2nm,0.9s,mb4.6						
OXF	**Oxford**	**50.23**	**86**	eP	**P**	**23 34 26.8**	**-0.8**
PLAL	**Pickwick Lake**	**50.62**	**84**	eP	**P**	**23 34 29.3**	**-1.1**
	comp=Z,13nm,0.9s,mb5.0						
KSRS	**Korea Array**	**51.53**	**282**	P	**P**	**23 34 36.5**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.5,baz=41,slow=6.8,SNR=11						
ELN	**Prospectdale**	**52.95**	**77**	eP	**P**	**23 34 46.0**	**-1.8**
KEV	**Kevo**	**53.92**	**358**	ep	**P**	**23 34 51.5**	**-2.9**
	comp=Z,2.2nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**54.17**	**359**	P	**P**	**23 34 54.2**	**-2.0**
ARCES	**ARCESS Array B**	**54.17**	**359**	P	**P**	**23 34 54.2**	**-2.0**
	comp=Z,0.9nm,0.5s,mb4.0,baz=5.2,slow=6.2,SNR=14						
SONM	**Songino Array**	**54.80**	**305**	P	**P**	**23 35 00.9**	**-0.2**
	comp=Z,1.3nm,0.5s,mb4.2,baz=38,slow=5.6,SNR=21						
SONM				LR	LR	00 02 41.6	
	comp=Z,73nm,18.3s,baz=346,slow=41						
BJI	**Beijing**	**55.84**	**292**	P	**P**	**23 35 09.9**	**+1.2**
BJI				AMB	AMB		
	comp=Z,3.0nm,0.4s,mb4.7						
NOA	**NORSAR Array B**	**62.39**	**6**	P	**P**	**23 35 51.9**	**-1.7**
	comp=Z,0.9nm,0.9s,mb3.8,baz=153,slow=19,SNR=2.4						
KURK	**Kurchatov**	**63.43**	**324**	P	**P**	**23 36 01.2**	**+0.5**
LZH	**Lanzhou**	**65.06**	**298**	eP	**P**	**23 36 11.6**	**0.0**
LZH				AP	pP	23 36 26.5	-3.0
LZH				XP	sP	23 36 32.0	-5.1
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb4.8						
MKAR	**Makanchi Array**	**65.52**	**319**	P	**P**	**23 36 13.1**	**-1.3**
	comp=Z,0.5nm,0.4s,mb3.7,baz=36,slow=5.0,SNR=4.8						
GYA	**Guiyang**	**71.38**	**290**	P	**P**	**23 36 53.4**	**+2.2**
GYA				AP	pP	23 37 10.6	+1.2
GYA				PCP	PcP	23 37 14.4	+3.9
GYA				PP	PP	23 39 33.8	+3.9
GYA				S	S	23 46 03.8	-0.1
GYA				XS	sS	23 46 31.7	-3.0
GYA				SKS		23 46 46.8	
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
AKASG	**Malin Array Be**	**72.94**	**355**	P	**P**	**23 36 57.6**	**-2.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=351,slow=4.8,SNR=4.3						
GERES	**GERESS Array B**	**74.69**	**6**	P	**P**	**23 37 09.2**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.4,baz=37,slow=3.9,SNR=3.7						
LSA	**Lhasa**	**76.35**	**303**	P	**P**	**23 37 20.9**	**+0.7**
ESDC	**Sonseca Array**	**81.54**	**20**	P	**P**	**23 37 48.4**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.0,baz=344,slow=5.0,SNR=14						
BRTR	**Keskin Array B**	**83.59**	**351**	P	**P**	**23 37 58.5**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.6,baz=35,slow=4.5,SNR=3.2						
WRA	**Warramunga Arr**	**95.06**	**241**	P	**P**	**23 38 51.4**	**-2.3**
	comp=Z,0.3nm,0.5s,mb4.0,baz=35,slow=5.5,SNR=5.0						
QSPA	**South Pole Qui**	**146.37**	**180**	PKPbc	PKPbc	23 45 07.8	-2.0
	comp=Z,6.4nm,0.8s,baz=50,slow=0.9,SNR=50						
BOSA	**Boshof**	**151.97**	**355**	PKPbc	PKPbc	23 45 23.8	-1.7
BOSA				PKPab	PKPab	23 45 34.5	-0.5
BOSA	**Boshof**	**151.97**	**355**	PKPbc	PKPbc	23 45 23.8	-1.7
	comp=Z,2.8nm,0.7s,baz=158,slow=8.4,SNR=8.6						
BOSA				PKPab	PKPab	23 45 34.5	-0.5
	comp=Z,1.8nm,0.6s,baz=52,slow=6.5,SNR=5.1						

ISCJB ***12*** *23:46:33.7±1.0, 2436S±005×673W±0.1, h176km±20km, Error ellipse: s-maj=21.0km s-min=8.8km az=3.9*
NEIC ***12*** *23:46:33.8±1.0, 2431S×6723W, h149km±16km, mb4.0/2, Error ellipse: s-maj=19.5km s-min=11.2km az=97.0*
GUC ***12*** *23:46:35.9±0.8, 2454S×6765W, h190km, ML4.0*
IDC ***12*** *23:46:39.0±8.9, 2399S×6674W, h168km±67km, mb3.2/1, mb1 3.4/3, mb1mx3.1/17, mbtmp3.3/3, Error ellipse: s-maj=78.5km s-min=40.9km az=9.0*
ISC 12 23:46:34.4±0.9**, 2435S**±006×**673W**±01**, h166**km±20km**, n13,** $\sigma 1^{s}15$/20**, 3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**2.84**	**289**	⇓iP	**Pn**	**23 47 22.5**	**+2.1**
CEN1				i S	**Sn**	**23 47 57.1**	**+1.0**
CEN1				AML	AML	23 47 58.1	
	comp=N,337nm,0.3s						
CPN1	**Cerro Paranal**	**2.86**	**264**	⇓iP	**Pn**	**23 47 21.7**	**+1.1**
CPN1				i S	**Sn**	**23 47 56.3**	**-0.2**
CPN1				AML	AML	23 47 57.8	
	comp=E,233nm,0.3s						
ANCH	**Antofagasta**	**2.94**	**282**	i P	**Pn**	**23 47 22.0**	**+0.4**
ANCH				i S	**Sn**	**23 47 57.4**	**-0.8**
ANCH	**Antofagasta**	**2.94**	**282**	i P	**Pn**	**23 47 22.0**	**+0.4**
ANCH				i S	**Sn**	**23 47 57.4**	**-0.8**
ANCH				AML	AML	23 47 60.0	
	comp=N,481nm,0.3s						
CDCH	**Caldera**	**4.20**	**229**	⇓iP	**Pn**	**23 47 36.7**	**-0.9**
CDCH				i S	**Sn**	**23 48 23.7**	**-3.2**
LCO	**Las Campanas**	**5.56**	**213**	ePn	**Pn**	**23 47 54.9**	**-0.4**
	comp=N,18nm,0.4s						
LCO				eSn	**Sn**	**23 48 50.4**	**-8.5**
LPAZ	**La Paz**	**8.06**	**354**	P	**Pn**	**23 48 29.4**	**+0.8**
	comp=N,1.0nm,0.3s,baz=165,slow=6.9,SNR=20						
LPAZ				S	**Sn**	**23 49 58.3**	**-0.4**
	comp=N,0.1nm,0.3s,baz=280,slow=16,SNR=3.6						
SIV	**San Ignacio**	**10.15**	**36**	P	**Pn**	**23 48 54.2**	**-1.9**
	comp=N,1.0nm,0.3s,baz=230,slow=10,SNR=14						
SIV				S	**Sn**	**23 50 40.0**	**-8.9**
	comp=N,0.1nm,0.3s,baz=185,slow=12,SNR=3.4						
TRQA	**Tornquist**	**14.39**	**163**	ePn	**Pn**	**23 49 51.6**	**+1.2**
	comp=N,3.2nm,0.8s						
NNA	**Nana**	**15.28**	**322**	Pn	**Pn**	**23 50 00.3**	**-1.3**
	comp=N,14nm,1.0s						
TORD	**Torodi Ar. Bea**	**76.93**	**69**	P	**P**	**23 58 09.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**76.93**	**69**	P	**P**	**23 58 09.5**	**+0.7**
	comp=N,0.4nm,0.3s,baz=254,slow=5.0,SNR=5.3						
MKAR	**Makanchi Array**	**146.95**	**40**	PKPbc	PKPbc	00 05 59.8	+2.6
	comp=N,0.5nm,0.5s,baz=283,slow=3.3,SNR=8.0						

MOS ***12*** *23:51:51.1±0.9, 4349N×44.19E, h16km, mb3.8/1, Error ellipse: s-maj=17.3km s-min=8.6km az=85.0*
TIF ***12*** *23:51:51.6, 4350N×4420E, h18km±1km*
ISCJB ***12*** *23:51:52.7±0.6, 4349N±003×44.14E±005, h0km±5km, Error ellipse: s-maj=6.0km s-min=3.8km az=29.5*
ISC 12 23:51:53.1±0.6**, 4350N**±003×**4415E**±005**, h1**km±5km**, n16,** $\sigma 0^{s}92$/30**, 2C-5D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMSR	**Komsomolskaya**	**0.16**	**140**	⇓iPG	**Pg**	**23 51 55.6**	**-0.7**
KMSR				i S	**Sg**	**23 51 59.2**	**+0.8**
PRTR	**Priterechnaya**	**0.27**	**21**	⇑iPG	**Pg**	**23 51 58.0**	**-0.4**
PRTR				i S	**Sg**	**23 52 02.7**	**+0.8**
ARNR	**Ardon**	**0.32**	**163**	⇓iPG	**Pg**	**23 51 58.4**	**-0.9**
ARNR				i S	**Sg**	**23 52 03.3**	**-0.1**
LSNR	**Lesken**	**0.33**	**228**	⇓iPG	**Pg**	**23 51 59.5**	**0.0**
LSNR				i S	**Sg**	**23 52 05.5**	**+1.8**
KORR	**Kora**	**0.41**	**188**	⇑iPG	**Pg**	**23 52 00.4**	**-0.7**
KORR				i S	**Sg**	**23 52 06.9**	**+0.5**
TRKR	**Terskaya**	**0.48**	**62**	i PG	**Pg**	**23 52 02.7**	**+0.4**
TRKR				eS	**Sg**	**23 52 09.5**	**+0.9**
VLKR	**Vladikavkaz**	**0.59**	**139**	ePG	**Pg**	**23 52 04.1**	**-0.4**
VLKR				eS	**Sg**	**23 52 12.2**	**0.0**
LACR	**Lac**	**0.68**	**171**	i PG	**Pg**	**23 52 05.8**	**-0.3**
LACR				eS	**Sg**	**23 52 15.6**	**+0.7**
DIGR	**Digorskoe uzhe**	**0.73**	**215**	⇓iPG	**Pg**	**23 52 06.5**	**-0.6**
DIGR				i S	**Sg**	**23 52 17.4**	**+0.9**
ZEI	**Tsey**	**0.75**	**194**	⇓iPG	**Pg**	**23 52 06.2**	**-1.3**
ZEI				i S	**Sg**	**23 52 16.7**	**-0.5**
ONI	**Oni**	**1.05**	**209**	P	**Pg**	**23 52 12.1**	**-1.2**
ONI				S	**Sg**	**23 52 27.5**	**+0.6**
GOR	**Gori**	**1.51**	**181**	P	**Pn**	**23 52 20.4**	**-0.9**
GOR				S	**Sb**	**23 52 42.6**	**+1.0**
TBLG	**Delisi**	**1.82**	**166**	P	**Pn**	**23 52 24.4**	**-1.1**
TBLG				S	**Sn**	**23 52 50.1**	**+0.9**
MTA	**Mtatsminda**	**1.86**	**165**	P	**Pn**	**23 52 24.8**	**-1.4**
MTA				S	**Sn**	**23 52 50.2**	**-0.1**
DBC	**Dubki**	**2.02**	**103**	i PN	**Pn**	**23 52 24.5**	**-3.8**
DGRG	**David-gareji**	**2.24**	**156**	P	**Pn**	**23 52 33.9**	**+2.6**

NEIC ***12*** *23:52:58.7, 1585N×9870W, h17km, MD4.0(MEX), After MEX.*
MEX 12 23:52:58.9±0.7**, 1585N**×**9870W, h16**km±16km**, MD4.1, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.77**	**45**	i P	Pb	23 53 11.2	-2.7
PNIG				i S	Sg	23 53 20.2	-4.0
ACX	**Acapulco**	**1.54**	**311**	i P	Pn	23 53 25.0	-0.8
ACX				i S	Sn	23 53 44.0	-1.5
ACX	**Acapulco**	**1.54**	**311**	i P	Pn	23 53 20.5	-5.3
ACX				i S	Sn	23 53 40.0	-5.5
CAIG	**El Cayaco**	**1.92**	**309**	eP	Pn	23 53 27.4	-3.5
CAIG				i S	Sn	23 53 49.8	-5.0
UTMO	**Huajuapan**	**2.15**	**23**	eP	Pn	23 53 32.0	-2.1
UTMO				i S	Sn	23 53 56.6	-3.8
MEIG	**Mezcala**	**2.25**	**337**	i P	Pn	23 53 32.1	-3.3
MEIG				i S	Sn	23 53 58.5	-4.3
OXX	**Oaxaca**	**2.26**	**57**	i P	Pn	23 53 32.0	-3.6
OXX				i S	Sn	23 53 58.0	-5.1
PLIG	**Platanillo**	**2.64**	**343**	eP	Pn	23 53 39.9	-1.0
PLIG				i S	Sn	23 54 10.7	-1.9
TPIG	**Tehuac#an**	**2.86**	**26**	i P	Pn	23 53 42.2	-1.6
TPIG				i S	Sn	23 54 14.6	-3.4
PPM	**Popocatepetl**	**3.20**	**1**	eP	Pn	23 53 49.1	+0.5
SZVM	**Salazar**	**3.52**	**349**	i P	Pn	23 53 51.0	-1.9
SZVM				i S	Sn	23 54 33.7	-0.5
IIO	**Organos**	**3.72**	**360**	eP	Pn	23 53 55.1	-0.7
IIO				i S	Sn	23 54 36.2	-3.1
PTVM	**Pico Tres Padr**	**3.75**	**354**	eP	Pn	23 53 55.1	-1.0
PTVM				i S	Sn	23 54 36.6	-3.2
CMIG	**Matias Romero**	**3.87**	**71**	eP	Pn	23 54 00.8	+3.1
CMIG				i S	Sn	23 54 43.3	+0.5
CMIG	**Matias Romero**	**3.87**	**71**	i P	Pn	23 53 54.0	-3.7
CMIG				i S	Sn	23 54 40.1	-2.6

NEIC ***13*** *00:12:16.4±0.4, 1079N×9299E, h30km, mb4.4/6, Error ellipse: s-maj=15.0km s-min=7.3km az=53.0*
ISCJB ***13*** *00:12:18.9±1.8, 1077N±009×93.12E±009, h73km±19km, mb4.0/12, Error ellipse: s-maj=19.3km s-min=9.0km az=135.1*
IDC ***13*** *00:12:19.2±4.7, 1076N×9303E, h54km±43km, mb3.6/8, mb1 3.8/9, mb1mx3.5/22, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=34.4km s-min=17.7km az=63.0*
ISC 13 00:12:20.8±1.2**, 1080N**±009×**9313E**±009**, h72**km±13km**, n30,** $\sigma 0^{s}85$/29**, mb4.0**/12**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.93**	**336**	eP	x	00 12 46.7	
PBA				eS	x	00 13 01.3	
PBA				ex	x	00 13 08.4	
	comp=N,5μm,0.4s						
PBA				ex	x	00 13 11.0	
	comp=E,6μm,0.6s						
KULM	**Kulim**	**9.24**	**126**	ePn	**Pn**	**00 14 28.1**	**-3.2**
KULM				eSn	**Sn**	**00 16 14.2**	**+0.4**
PSI	**Prapat**	**9.81**	**144**	P	**Pn**	**00 14 40.2**	**+1.1**
PSI	**Prapat**	**9.81**	**144**	P	**Pn**	**00 14 40.2**	**+1.1**
	comp=E,0.7nm,0.3s,baz=296,slow=9.4,SNR=3.0						
VIS	**Vishakhapatnam**	**11.72**	**307**	i P	**Pn**	**00 15 05.7**	**+0.5**
VIS				i S	**Sn**	**00 17 02.0**	**-12**
VIS				i S	**Sn**	**00 17 02.4**	**-12**
VIS				ex	x	00 17 04.0	
	comp=N,27nm,0.6s						
VIS				ex	x	00 17 07.0	
	comp=E,30nm,0.4s						
ODAN	**Odare**	**16.87**	**342**	eP	pP	00 16 24.5	-3.4
	comp=E,11nm,0.4s						
TAPN	**Taplejung**	**17.24**	**344**	eP	**Pn**	**00 16 21.8**	**+5.0**
	comp=E,24nm,0.8s						
JIRN	**Jiri**	**18.00**	**340**	eP	**Pn**	**00 16 31.8**	**+5.7**
	comp=E,8.6nm,0.4s						
GKN	**Gorkha**	**18.88**	**336**	eP	**Pn**	**00 16 41.8**	**+5.1**
	comp=E,12nm,0.3s						
LSA	**Lhasa**	**18.90**	**355**	eP	**Pn**	**00 16 35.7**	**-1.2**
KSM	**Kuching**	**19.42**	**117**	eP	**Pn**	**00 16 41.6**	**-1.7**
YHNB	**Yeheng**	**30.15**	**59**	Pn	**P**	**00 18 24.8**	**+0.6**
MK31	**Makanchi Array**	**37.03**	**348**	eP	**P**	**00 19 23.5**	**0.0**
MKAR	**Makanchi Array**	**37.03**	**348**	P	**P**	**00 19 24.2**	**+0.6**
MKAR	**Makanchi Array**	**37.03**	**348**	P	**P**	**00 19 24.2**	**+0.6**
	comp=E,0.4nm,0.5s,mb3.6,baz=166,slow=8.7,SNR=6.0						
SONM	**Songino Array**	**38.57**	**14**	P	**P**	**00 19 37.3**	**+0.8**
	comp=E,1.9nm,0.8s,mb4.0,baz=203,slow=8.0,SNR=17						
SONM				PcP	PcP	00 21 49.3	+1.6
	comp=E,0.7nm,0.6s,baz=221,slow=3.5,SNR=6.6						
KURK	**Kurchatov**	**41.55**	**346**	P	**P**	**00 20 00.2**	**-0.9**
CHKZ	**Chkalovo**	**46.40**	**342**	eP	**P**	**00 20 40.5**	**+0.6**
	comp=E,1.8nm,0.5s,mb4.1						
WRA	**Warramunga Arr**	**50.78**	**127**	P	**P**	**00 21 13.5**	**-0.6**
	comp=E,1.0nm,0.5s,mb4.1,baz=306,slow=8.6,SNR=10						
ASAR	**Alice Springs**	**52.56**	**131**	P	**P**	**00 21 28.2**	**+1.0**
	comp=E,0.7nm,0.6s,mb3.9,baz=311,slow=7.1,SNR=9.3						
KIV	**Kislovodsk**	**54.50**	**317**	eP	**P**	**00 21 41.0**	**-0.2**
	comp=E,3.7nm,0.9s,mb4.4						
KMBO	**Kilima Mbogo**	**56.81**	**262**	P	**P**	**00 21 56.9**	**-1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OBN	**Obninsk**	**62.39**	**327**	*e*P	**P**	**00 22 36.2**	**+0.3**
	comp=E,3.6nm,0.4s,mb4.8						
TIXI	**Tiksi**	**64.59**	**12**	*e*P	**P**	**00 22 49.7**	**-0.3**
	comp=E,2.6nm,0.5s,mb4.3						
FINES	**FINESS Array B**	**69.68**	**332**	P	**P**	**00 23 22.2**	**-0.3**
	comp=E,0.5nm,0.5s,mb3.6,baz=113,slow=9.2,SNR=2.7						
ARCES	**ARCESS Array B**	**72.19**	**340**	P	**P**	**00 23 37.6**	**0.0**
	comp=E,2.7nm,1.0s,mb4.0,baz=98,slow=6.7,SNR=2.8						
GERES	**GERESS Array B**	**75.00**	**318**	P	**P**	**00 23 55.4**	**+0.9**
	comp=E,0.4nm,0.5s,mb3.4,baz=103,slow=4.2,SNR=5.3						
BOSA	**Boshof**	**76.31**	**237**	P	**P**	**00 24 02.4**	**+0.1**
	comp=E,1.7nm,0.7s,mb3.9,baz=79,slow=5.2,SNR=4.4						
NVAR	**Mina Array Bea**	**122.91**	**29**	PKP	PKPdf	00 31 10.6	+1.5
	comp=E,0.5nm,0.6s,baz=336,slow=2.0,SNR=3.7						
TXAR	**Lajitas Array**	**136.94**	**22**	PKP	PKPdf	00 31 38.5	+2.5
	comp=E,0.2nm,0.4s,baz=249,slow=1.1,SNR=5.0						

ISCJB ***13*** *00:14:24.5±0.3, 21.40S±0.08×174.41W±0.07, h35^{km}, mb4.8/33, MS4.2/9, Error ellipse: s-maj=12.9km s-min=6.9km az=148.1*

IDC ***13*** *00:14:25.6±3.3, 21.31S×174.45W, h33^{km}±24^{km}, mb4.4/13, mb1 4.6/13, mb1mx4.5/17, mbtmp4.4/13, MS4.1/9, Ms1 4.1/9, ms1mx3.8/35, Error ellipse: s-maj=20.7km s-min=14.0km az=145.0*

NEIC ***13*** *00:14:26.6±0.3, 21.19S×174.46W, h35^{km}, mb4.9/19, Error ellipse: s-maj=13.2km s-min=7.6km az=150.0*

BJI ***13*** *00:14:26.6, 21.20S×174.50W, h35^{km}, mB5.7, mb5.1, Ms5.0, Msz4.6*

ISC 13 00:14:23.6±3.7**, 21.37S**±0.08×**174.43W**±0.07**, h17**^{km}±22^{km}**, n158,** σ1^{s}10/70**, mb4.8**/33**, MS4.2**/9**, 17C-12D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.83**	**19**	Pn	**Pn**	**00 16 10.1**	**-6.7**
	18nm,0.3s,baz=182,slow=5.0,SNR=11						
AFI				Sn	**Sn**	**00 17 28.0**	**-17**
	7.5nm,0.3s,baz=19,slow=22,SNR=2.6						
RAR	**Rarotonga**	**13.66**	**92**	Pn	**Pn**	**00 17 24.6**	**-12**
	10nm,0.3s,baz=266,slow=7.3,SNR=12						
RAR				Sn	Sn	00 19 39.2	-29
	2.0nm,0.3s,baz=317,slow=24,SNR=3.0						
RAR				LR	LR	00 21 43.6	
	comp=Z,1μm,19.6s,baz=228,slow=32						
DZM	**Mont Dzumac**	**17.79**	**264**	P	**Pn**	**00 18 34.2**	**+3.7**
	0.7nm,0.3s,baz=79,slow=17,SNR=15						
URZ	**Urewera**	**18.35**	**202**	P	**Pn**	**00 18 35.3**	**-1.9**
	0.6nm,0.3s,baz=132,slow=8.5,SNR=4.2						
URZ				S	**Sn**	**00 21 49.1**	**-13**
	0.6nm,0.3s,baz=105,slow=23,SNR=2.9						
TBI	**Tubuai**	**23.17**	**100**	*e*LQ		00 23 26.2	
	301nm,27.2s						
TBI				*e*LR	LR	00 24 44.8	
	731nm,23.8s,baz=278						
PPT	**Papeete**	**23.72**	**85**	*e*LQ		00 23 58.0	
	622nm,26.5s						
PPT				*e*LR	LR	00 24 57.5	
	634nm,21.5s,baz=253						
PPT	**Papeete**	**23.72**	**85**	LR	LR	00 27 36.2	
	comp=Z,669nm,18.2s,MS4.2,baz=226,slow=33						
RPZ	**Rata Peaks**	**25.35**	**205**	P	**P**	**00 19 49.0**	**-0.5**
	24nm,0.8s,mb4.8,baz=91,slow=12,SNR=5.3						
HNR	**Honiara**	**27.36**	**292**	P	**P**	**00 20 08.7**	**+0.7**
HNR	**Honiara**	**27.36**	**292**	LR	LR	00 29 32.3	
	comp=Z,237nm,19.3s,MS3.8,baz=178,slow=33						
RKT	**Rikitea**	**36.48**	**100**	*e*LQ		00 29 02.9	
	182nm,37.0s						
RKT				*e*LR	LR	00 30 52.9	
	474nm,24.0s,baz=261						
CTAO	**Charters Tower**	**36.73**	**265**	*e*P	**P**	**00 21 30.2**	**+0.1**
PMG	**Port Moresby**	**38.79**	**282**	*e*P	**P**	**00 21 47.1**	**-0.5**
PMG				*e*pP	pP	00 21 58.7	+5.7
PMG	**Port Moresby**	**38.79**	**282**	P	**P**	**00 21 46.9**	**-0.7**
	22nm,0.8s,mb5.0,baz=101,slow=6.2,SNR=8.2						
STKA	**Stephens Creek**	**40.45**	**246**	⇑*i*P	**P**	**00 22 00.5**	**-0.7**
	8.3nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**40.45**	**246**	P	**P**	**00 22 00.9**	**-0.4**
	8.6nm,0.8s,mb4.5,baz=88,slow=10.0,SNR=11						
STKA				LR	LR	00 38 16.6	
	comp=Z,237nm,18.2s,MS4.1,baz=28,slow=35						
COEN	**Coen**	**40.97**	**273**	P	**P**	**00 22 06.8**	**+1.1**
	3.6nm,0.8s,mb4.0						
ASAR	**Alice Springs**	**47.58**	**257**	P	**P**	**00 22 58.0**	**-0.6**
	15nm,0.8s,mb5.1,baz=92,slow=8.2,SNR=103						
ASAR				PcP	PcP	00 24 26.7	-1.7
	3.0nm,0.8s,baz=113,slow=3.8,SNR=4.6						
ASAR				S	**S**	**00 29 50.6**	**-2.7**
	0.9nm,1.1s,baz=84,slow=18,SNR=3.6						
WB2	**Warramunga Arr**	**47.78**	**262**	⇓*i*P	**P**	**00 22 58.8**	**-1.4**
WRA	**Warramunga Arr**	**47.79**	**262**	P	**P**	**00 22 59.1**	**-1.2**
	7.6nm,0.8s,mb4.8,baz=91,slow=5.8,SNR=43						
WRA				PcP	PcP	00 24 27.7	-1.5
	4.1nm,0.8s,baz=96,slow=3.7,SNR=5.7						
WRA				S	**S**	**00 29 55.8**	**-0.6**
	0.4nm,0.8s,baz=98,slow=14,SNR=2.8						
SBA	**Scott Base**	**57.26**	**185**	*e*P	**P**	**00 24 13.9**	**+4.3**
	14nm,1.0s,mb5.0						
VNDA	**Vanda**	**57.37**	**186**	P	**P**	**00 24 12.1**	**+1.7**
	4.0nm,0.9s,mb4.4,baz=6.7,slow=6.8,SNR=14						
MBWA	**Marble Bar**	**60.92**	**257**	*e*P	**P**	**00 24 35.2**	**-0.7**
	24nm,1.0s,mb5.3						
QSPA	**South Pole Qui**	**68.71**	**180**	*e*P	**P**	**00 25 26.9**	**+1.2**
	15nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**72.92**	**322**	P	**P**	**00 25 51.5**	**-0.3**
	10nm,0.9s,mb4.8,baz=154,slow=5.7,SNR=11						
LPIG	**La Paz**	**77.01**	**58**	LR	LR	00 53 20.5	
	comp=Z,358nm,19.5s,MS4.7,baz=193,slow=30						
PFO	**Pinyon Flat Ob**	**77.70**	**46**	*e*pP	pP	00 26 33.3	+8.1
CMB	**Columbia Colle**	**77.88**	**41**	*e*P	**P**	**00 26 19.6**	**-0.7**
	13nm,1.3s,mb4.7						
MTUM	**Tungsten Hills**	**78.58**	**42**	*e*P	**P**	**00 26 24.6**	**+0.3**
WAKR	**Walker**	**78.75**	**41**	*e*P	**P**	**00 26 25.4**	**+0.2**
YBH	**Yreka Blue Hor**	**78.93**	**37**	*e*P	**P**	**00 26 26.0**	**0.0**
	13nm,1.0s,mb4.8						
NVAR	**Mina Array Bea**	**79.41**	**42**	P	**P**	**00 26 28.3**	**-0.4**
NVAR	**Mina Array Bea**	**79.41**	**42**	P	**P**	**00 26 28.3**	**-0.4**
	5.5nm,0.9s,mb4.5,baz=210,slow=6.9,SNR=20						
PAHR	**Pah Rah Range**	**79.54**	**40**	*e*P	**P**	**00 26 28.5**	**-0.9**
	13nm,1.1s,mb4.8						
KSRS	**Korea Array**	**79.77**	**317**	P	**P**	**00 26 32.0**	**+1.3**
	6.8nm,0.9s,mb4.6,baz=137,slow=6.3,SNR=16						
TPNV	**Topopah Spring**	**79.81**	**44**	*e*P	**P**	**00 26 30.7**	**-0.2**
MOD	**Modoc**	**80.40**	**38**	*e*P	**P**	**00 26 33.2**	**-0.8**
	7.1nm,0.8s,mb4.7						
MOD				*e*PcP	PcP	00 26 42.5	+1.5
MAW	**Mawson**	**81.86**	**199**	P	**P**	**00 26 42.5**	**+1.0**
	6.5nm,0.8s,mb4.6,baz=133,slow=10,SNR=4.4						
GNW	**Green Mountain**	**82.78**	**32**	*e*P	**P**	**00 26 48.0**	**+1.5**
MDJ	**Mudanjiang**	**83.17**	**323**	P	**P**	**00 26 49.3**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,449nm,4.8s						
MDJ	**Mudanjiang**	**83.17**	**323**	*e*P	**P**	**00 26 49.4**	**+0.9**
	comp=Z,16nm,1.0s,mb5.0						
MSU	**Marysvale**	**83.35**	**44**	*e*P	**P**	**00 26 49.9**	**+0.3**
SLKM	**Skilak Lake**	**83.92**	**12**	*e*P	**P**	**00 26 51.0**	**-1.1**
BMO	**Blue Mountains**	**83.95**	**37**	*e*P	**P**	**00 26 51.6**	**-0.9**
	comp=Z,16nm,1.5s,mb4.9						
TMUT	**Trail Mountain**	**84.41**	**44**	*e*P	**P**	**00 26 52.4**	**-2.7**
TXAR	**Lajitas Array**	**84.74**	**56**	P	**P**	**00 26 56.0**	**-1.0**
	comp=Z,1.0nm,1.0s,mb3.9,baz=233,slow=8.9,SNR=8.9						
SRU	**San Rafael**	**84.75**	**45**	*e*P	**P**	**00 26 56.7**	**-0.1**
SRU				*e*pP	pP	00 27 08.5	+5.9
HLID	**Hailey**	**84.84**	**39**	*e*P	**P**	**00 26 56.5**	**-0.6**
	comp=Z,8.4nm,1.2s,mb4.8						
GAMB	**Gambell**	**84.89**	**1**	*e*P	**P**	**00 26 57.0**	**+0.2**
LPM	**Los Pinos Moun**	**84.93**	**50**	*e*P	**P**	**00 26 59.3**	**+1.5**
PMR	**Palmer**	**85.13**	**12**	P	**P**	**00 27 00.4**	**+2.3**
TTA	**Tatalina**	**85.27**	**8**	*e*P	**P**	**00 26 59.0**	**+0.2**
	comp=Z,55nm,1.4s,mb5.5						
PV10	**Paradox Valley**	**85.34**	**46**	P	**P**	**00 27 00.4**	**+0.7**
ANMO	**Albuquerque**	**85.37**	**50**	*e*P	**P**	**00 26 59.9**	**-0.1**
	comp=Z,9.0nm,1.3s,mb4.7						
PV01	**Paradox Valley**	**85.53**	**46**	*e*P	**P**	**00 27 02.0**	**+1.3**
WHN	**Wuhan**	**85.66**	**305**	⇓P	**P**	**00 27 02.7**	**+1.2**
NEW	**Newport**	**86.16**	**34**	*e*P	**P**	**00 27 04.6**	**+1.0**
TNA	**Tin City**	**86.79**	**3**	*e*P	**P**	**00 27 06.3**	**0.0**
	comp=Z,12nm,0.9s,mb5.1						
SNAA	**Sanae**	**87.03**	**177**	LR	LR	01 02 12.0	
	comp=Z,76nm,18.3s,MS4.1,baz=22,slow=33						
MCK	**McKinley**	**87.13**	**11**	*e*P	**P**	**00 27 07.4**	**-0.5**
PDAR	**Pinedale Array**	**87.34**	**42**	P	**P**	**00 27 08.1**	**-1.4**
	comp=Z,1.0nm,0.8s,mb4.1,baz=168,slow=1.5,SNR=7.8						
SDCO	**Great Sand Dun**	**87.43**	**48**	P	**P**	**00 27 11.0**	**+1.0**
WALA	**Waterton Lakes**	**88.34**	**35**	*e*P	**P**	**00 27 14.2**	**+0.1**
COLA	**College**	**88.37**	**11**	*e*P	**P**	**00 27 12.2**	**-1.7**
	comp=Z,13nm,0.9s,mb5.2						
IMA2	**Indian Mountai**	**88.57**	**8**	*e*P	**P**	**00 27 14.3**	**-0.5**
DAWY	**Dawson**	**89.41**	**15**	*e*P	**P**	**00 27 19.0**	**+0.3**
EGAK	**Eagle**	**89.62**	**14**	*e*P	**P**	**00 27 19.5**	**-0.2**
	comp=Z,205nm,1.2s						
BILL	**Bilibino**	**90.27**	**353**	*e*P	**P**	**00 27 20.8**	**-1.9**
	comp=Z,8.5nm,1.0s,mb5.0						
XAN	**Xi'an**	**91.33**	**306**	P	**P**	**00 27 30.0**	**+1.6**
XAN				AMB	AMB		
	comp=Z,13nm,1.0s,mb5.2						
XAN				LR	LR		
	comp=Z,319nm,10.5s,MS5.0						
CFAA	**Coronel Fontan**	**91.88**	**125**	LR	LR	01 03 33.4	
	comp=Z,14nm,19.4s,MS3.4,baz=346,slow=32						
NNA	**Nana**	**92.61**	**104**	LR	LR	01 00 43.5	
	comp=Z,118nm,21.9s,MS4.3,baz=161,slow=30						
KMI	**Kunming**	**92.72**	**296**	P	**P**	**00 27 37.0**	**+1.9**
KMI				AMB	AMB		
	comp=Z,18nm,0.9s,mb5.5						
CHTO	**Chiang Mai**	**93.68**	**289**	*e*P	**P**	**00 27 41.1**	**+1.4**
	comp=Z,9.3nm,0.8s,mb5.3						
INK	**Inuvik**	**94.26**	**14**	*e*P	**P**	**00 27 40.3**	**-0.8**
	comp=Z,176nm,1.0s						
OTAV	**Otavalo**	**95.65**	**92**	*e*P	**P**	**00 27 51.9**	**+2.9**
	comp=Z,6.1nm,1.6s,mb4.8						
YKA	**Yellowknife Ar**	**95.93**	**24**	P	**P**	**00 27 46.9**	**-2.0**
	comp=Z,0.3nm,0.5s,mb4.0,baz=236,slow=4.3,SNR=9.2						
LPAZ	**La Paz**	**98.64**	**111**	LR	LR	01 05 15.1	
	comp=Z,150nm,18.9s,MS4.5,baz=60,slow=31						
KURK	**Kurchatov**	**116.90**	**317**	*e*PKPdf	PKPdf	00 33 06.1	-0.9
CHKZ	**Chkalovo**	**121.68**	**321**	*e*PKPdf	PKPdf	00 33 14.9	-1.2
BRVK	**Borovoye**	**121.95**	**320**	*e*PKPdf	PKPdf	00 33 16.4	-0.3
BOSA	**Boshof**	**126.80**	**202**	PKP	PKPdf	00 33 26.5	-0.3
BOSA	**Boshof**	**126.80**	**202**	PKP	PKPdf	00 33 26.5	-0.3
	comp=Z,4.1nm,1.1s,baz=129,slow=2.5,SNR=3.4						
AKTK	**Aktyubinsk**	**129.93**	**319**	PKP	PKPdf	00 33 32.5	+0.5
AKTO	**Aktyubinsk**	**129.93**	**319**	PKP	PKPdf	00 33 32.5	+0.5
	comp=Z,0.9nm,0.5s,baz=335,slow=4.0,SNR=5.9						
ARCES	**ARCESS Array B**	**130.34**	**351**	PKP	PKPdf	00 33 31.8	-0.4
	comp=Z,1.6nm,0.7s,baz=20,slow=3.9,SNR=5.0						
FINES	**FINESS Array B**	**137.49**	**346**	PKP	PKPdf	00 33 45.6	-0.2
	comp=Z,0.6nm,0.6s,baz=116,slow=3.2,SNR=4.4						
KMBO	**Kilima Mbogo**	**141.81**	**238**	PKP	PKPdf	00 33 52.5	-2.7
	comp=Z,1.7nm,0.9s,baz=52,slow=21,SNR=6.9						
ERZM	**Erzurum**	**144.39**	**309**	*i* P	PKPdf	00 33 58.5	-0.5
MUD	**Monsted U'grnd**	**144.86**	**357**	*i* P	PKPdf	00 33 59.1	-0.1
	comp=Z,32nm,1.2s						
AKASG	**Malin Array Be**	**145.34**	**333**	PKPbc	PKPbc	00 33 59.0	-1.1
	comp=Z,6.9nm,0.6s,baz=38,slow=3.6,SNR=34						
AKBB	**Malin Array Si**	**145.34**	**333**	*e*PKP	PKPdf	00 33 58.7	-1.5
COP	**Copenhagen**	**145.35**	**353**	*i* P	PKPbc	00 34 00.6	+0.7
	comp=Z,14nm,1.0s						
BSD	**Bornholm Skovb**	**145.58**	**351**	⇑*i*P	PKPdf	00 33 59.6	-0.9
	comp=Z,31nm,1.0s						
BSD				*i*		00 34 12.7	
MARD	**Mardin**	**145.68**	**305**	*i* P	PKPdf	00 34 02.0	+0.8
KELT	**Kelkit**	**145.81**	**311**	*i* P	PKPdf	00 34 02.9	+1.6
ELZG	**Elazig**	**146.62**	**308**	*i* P	PKPbc	00 34 05.9	+1.5
MALT	**Malatya**	**147.10**	**308**	⇓*i*P	PKPbc	00 34 07.2	+1.4
GZT	**Gaziantep**	**148.08**	**307**	*i* P	PKPbc	00 34 08.7	+0.3
KWP	**Kalwaria**	**148.69**	**338**	⇓P	PKPbc	00 34 09.8	+0.2
KWP	**Kalwaria**	**148.69**	**338**	⇑*i*P	PKPbc	00 34 09.4	-0.2
STHS	**Stebnicka Huta**	**149.36**	**340**	*e*PKP	PKPbc	00 34 10.6	-0.7
STHS				*e*		00 34 17.2	
BURAR	**Bucovina Array**	**149.39**	**333**	⇑P	PKPbc	00 34 12.5	+1.1
BURAR	**Bucovina Array**	**149.39**	**333**	⇑*i*P	PKPbc	00 34 13.6	+2.1
KOLS	**Kolonicke sedl**	**149.43**	**338**	*e*PKP	PKPbc	00 34 11.2	-0.3
KOLS				*e*		00 34 17.8	
CLL	**Collm**	**149.56**	**351**	*i* PKPbc	PKPbc	00 34 11.2	-0.6
	comp=Z,15nm,1.3s						
CLL				*i* PKPab	PKPab	00 34 16.4	-0.3
	comp=Z,21nm,1.0s						
ELDT	**Eldivan**	**149.63**	**315**	*i* P	PKPbc	00 34 12.9	+0.6
NIE	**Niedzica**	**149.65**	**341**	*e*PX	PKPbc	00 34 12.9	+0.8
CRVS	**Cervenica-Dubn**	**149.74**	**339**	*e*PKP	PKPbc	00 34 12.5	+0.2
UPC	**Upice**	**149.78**	**347**	*e*PKPbc	PKPbc	00 34 11.1	-1.2
UPC				*e*pPKP	pPKPdf	00 34 23.4	+10
BRG	**Berggiesshubel**	**149.83**	**349**	⇑*i*P	PKPbc	00 34 12.2	-0.3
	comp=Z,15nm,1.2s						
DPC	**Dobruska-Polom**	**149.86**	**346**	*e*PKPbc	PKPbc	00 34 12.9	+0.4
BRTR	**Keskin Array B**	**149.87**	**314**	PKPbc	PKPbc	00 34 12.7	-0.2
	comp=Z,4.4nm,1.0s,baz=77,slow=2.7,SNR=13						
OKC	**Ostrava-Krasne**	**149.89**	**344**	*e*PKPbc	PKPbc	00 34 13.0	+0.4
TRPA	**Tarpa**	**150.02**	**337**	⇓*i*P	PKPbc	00 34 13.8	+0.8
PVCC	**Panska Ves**	**150.05**	**348**	*e*PKPbc	PKPbc	00 34 12.8	-0.2
PVCC				*e*pPKP	pPKPdf	00 34 25.6	+12
VRI	**Vrincioaia**	**150.06**	**330**	⇓P	PKPbc	00 34 13.1	-0.1
VRI	**Vrincioaia**	**150.06**	**330**	⇓*i*P	PKPbc	00 34 13.3	+0.1
MORC	**Moravsky Berou**	**150.10**	**344**	⇑P	PKPbc	00 34 13.8	+0.6
MORC	**Moravsky Berou**	**150.10**	**344**	⇑*i*P	PKPbc	00 34 13.9	+0.8
ASF	**Jabal al Asfar**	**150.13**	**298**	PKPbc	PKPbc	00 34 11.9	-1.9
	comp=Z,4.4nm,1.1s,baz=55,slow=1.7,SNR=4.6						
HARR	**Harsova**	**150.31**	**327**	⇑*i*P	PKPbc	00 34 14.6	+0.8
ANTO	**Ankara**	**150.37**	**315**	⇑P	PKPbc	00 34 15.9	+1.8
ANTO	**Ankara**	**150.37**	**315**	⇑*i*P	PKPbc	00 34 13.9	-0.2
MOX	**Moxa**	**150.40**	**352**	*e*PKP	PKPbc	00 34 14.3	+0.5
	comp=Z,37nm,2.0s						
KECS	**Kecovo**	**150.42**	**340**	*e*PKP	PKPbc	00 34 14.2	+0.3
KECS				*e*		00 34 23.1	
SGKT	**Sivrigoynuk**	**150.48**	**316**	*i* P	PKPbc	00 34 14.6	+0.3
PRU	**Pruhonice**	**150.57**	**348**	*e*PKPbc	PKPbc	00 34 13.8	-0.4
PRU				*e*pPKP	pPKPdf	00 34 26.5	+12
NKC	**Novy Kostel**	**150.69**	**351**	*e*PKPab	PKPab	00 34 19.2	-2.2
NKC				*e*pPKP	pPKPdf	00 34 27.6	+13
MLR	**Muntele Rosu**	**150.70**	**330**	⇑P	PKPbc	00 34 14.9	+0.2
MLR	**Muntele Rosu**	**150.70**	**330**	⇑*i*P	PKPdf	00 34 13.4	+4.2
VRAC	**Vranov**	**150.77**	**345**	⇑*i*P	PKPbc	00 34 15.8	+1.1
VYHS	**Vyhne**	**150.92**	**342**	*e*PKP	PKPbc	00 34 15.3	+0.2
KOLL	**Kolacno**	**150.97**	**342**	*i* PKP	PKPbc	00 34 15.4	+0.2
TREC	**Trest**	**151.04**	**347**	*e*PKPbc	PKPbc	00 34 15.4	0.0
PSZ	**Piszkesteto**	**151.11**	**340**	⇓P	PKPab	00 34 24.1	+0.9
MMAI	**Mount Meron Ar**	**151.14**	**300**	PKPbc	PKPbc	00 34 17.0	+0.8
	comp=Z,4.7nm,0.7s,baz=77,slow=5.2,SNR=6.9						
VOIR		**151.16**	**331**	⇑P	PKPbc	00 34 17.2	+1.4
VOIR		**151.16**	**331**	⇓*i*P	PKPbc	00 34 16.8	+1.0
GIVF	**Givet**	**151.32**	**1**	*e*PKIKP	PKPbc	00 34 15.2	-0.8
BAIF	**Baives**	**151.35**	**2**	*e*PKIKP	PKPbc	00 34 15.4	-0.7
	comp=Z,35nm,1.2s						
GRA1	**Grafenberg Arr**	**151.38**	**352**	*e*PKP	PKPbc	00 34 16.8	+0.6
GRF	**Grafenberg Arr**	**151.38**	**352**	*e*PKP	PKPbc	00 34 16.8	+0.6
MODS	**Modra-Piesok**	**151.46**	**344**	*e*PKP	PKPbc	00 34 16.6	+0.2
MODS				*e*		00 34 25.3	
KHC	**Kasperske Hory**	**151.57**	**349**	*e*PKPbc	PKPbc	00 34 16.4	-0.2
KHC				*e*PKPab	PKPab	00 34 24.9	-0.2
WLF	**Walferdange**	**151.76**	**359**	*e*PKPdf	PKPdf	00 34 11.9	+1.2
WLF				*e*PKPbc	PKPbc	00 34 17.4	+0.4
GERES	**GERESS Array B**	**151.82**	**349**	PKPbc	PKPbc	00 34 17.2	0.0
	comp=Z,2.3nm,0.9s,baz=48,slow=2.0,SNR=14						
CONA	**Conrad Observa**	**152.23**	**345**	⇓*i*PKiKP	PKiKP	00 34 18.6	+0.2
	comp=Z,11nm,1.2s						
FLN	**La Foliniere**	**152.24**	**9**	*e*PKIKP	PKPbc	00 34 16.8	-1.3
	comp=Z,16nm,0.9s						
LDF	**La Druitiere**	**152.45**	**8**	*e*PKIKP	PKPbc	00 34 17.2	-1.4
	comp=Z,15nm,0.9s						
BZS	**Buzias**	**152.47**	**335**	⇓P	PKPbc	00 34 18.5	-0.3
BZS	**Buzias**	**152.47**	**335**	⇑*i*P	PKPbc	00 34 18.3	-0.5
GRR	**Gorron**	**152.55**	**9**	*e*PKIKP	PKPbc	00 34 17.6	-1.3
CDF	**Champ du Feu**	**152.98**	**358**	*e*PKIKP	PKPbc	00 34 17.6	-2.2
	comp=Z,22nm,1.1s						
BFO	**Black Forest**	**153.01**	**356**	*e*PKPdf	PKPdf	00 34 15.9	+3.3
BFO				*e*PKPab	PKPab	00 34 31.1	0.0
PKSM	**Moragy**	**153.02**	**340**	⇑*i*P	PKPbc	00 34 19.4	-0.6
FETA	**Feichten**	**154.07**	**352**	⇓*i*PKiKP	PKiKP	00 34 22.1	-0.2
	comp=Z,6.8nm,1.2s						
CABF	**La Chapelle**	**154.81**	**359**	*e*PKIKP	PKPbc	00 34 20.4	-3.4
TORD	**Torodi Ar. Bea**	**171.03**	**155**	PKP	PKPdf	00 34 28.7	-3.0
	comp=Z,1.4nm,1.1s,baz=320,slow=1.1,SNR=4.0						
TORD				PKPab	PKPab	00 35 49.9	-0.6
	comp=Z,1.8nm,1.1s,baz=207,slow=2.9,SNR=4.0						

DDA ***13*** *00:27:19.6, 38.75N×39.34E, h21^{km}, Md3.0*

CSEM ***13*** *00:27:20.6±0.3, 38.55N×39.01E, h40^{km}, MD3.0, Error ellipse: s-maj=14.8km s-min=6.2km az=139.0*

ISCJB ***13*** *00:27:21.0±0.8, 38.36N±0.04×39.28E±0.05, h2^{km}±11^{km}, Error ellipse: s-maj=7.2km s-min=5.8km az=39.0*

ISK ***13*** *00:27:21.0, 38.39N×39.22E, h5^{km}, MD3.0*

ISC 13 00:27:21.7±0.7**, 38.38N**±0.04×**39.28E**±0.05**, h7**^{km}±9^{km}**, n11,** σ**0^{s}72**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.26**	**298**	*i* P	**Pg**	**00 27 27.1**	**+0.3**
ELZG				*i* S	**Sg**	**00 27 31.5**	**+1.1**
PTK	**Pertek**	**0.52**	**9**	PG	**Pg**	**00 27 31.3**	**-0.5**
PTK				SG	**Sg**	**00 27 39.5**	**+0.9**
MALT	**Malatya**	**0.68**	**265**	PG	**Pg**	**00 27 32.9**	**-1.8**
MYA	**Malataya**	**0.68**	**266**	PG	**Pg**	**00 27 34.0**	**-0.7**
MYA				SG	**Sg**	**00 27 42.9**	**-0.6**
DIY	**Diyarbakir**	**0.89**	**122**	PG	**Pg**	**00 27 38.4**	**-0.3**
URFA	**Urfa**	**1.00**	**202**	PG	**Pg**	**00 27 41.3**	**+0.4**
BINT	**Bingol**	**1.07**	**62**	PN	**Pn**	**00 27 43.4**	**+0.3**
EZC	**Erzincan**	**1.43**	**17**	*e*PN	**Pn**	**00 27 47.4**	**-0.7**
MARD	**Mardin**	**1.59**	**131**	*i* P	**Pn**	**00 27 50.1**	**-0.1**
MARD				*i* S	**Sn**	**00 28 11.6**	**+0.6**
GZT	**Gaziantep**	**1.70**	**234**	*i* P	**Pn**	**00 27 52.2**	**+0.4**
GZT				*i* S	**Sg**	**00 28 17.3**	**+1.0**
BTMT	**Batman**	**1.75**	**95**	*e*PN	**Pn**	**00 27 52.0**	**-0.4**

ISCJB ***13*** *00:29:15.7±0.9, 33.13N±0.05×90.42E±0.06, h44^{km}±11^{km}, mb3.8/13, MS3.5/5, Error ellipse: s-maj=8.4km s-min=7.5km az=146.9*

MOS ***13*** *00:29:15.0±1.2, 33.20N×90.44E, h33^{km}, mb4.0/11, Error ellipse: s-maj=15.1km s-min=7.8km az=102.7*

BJI ***13*** *00:29:15.3, 33.17N×90.47E, h46^{km}, mB4.8, mb4.3, ML4.1, Ms3.7, Msz3.7*

IDC ***13*** *00:29:17.4±7.3, 33.09N×90.41E, h45^{km}±69^{km}, mb3.5/9, mb1 3.6/11, mb1mx3.5/22, mbtmp3.5/11, ML3.0/2, MS3.5/6, Ms1 3.5/6, ms1mx3.3/31, Error ellipse: s-maj=38.3km s-min=18.2km az=39.0*

NEIC ***13*** *00:29:17.6±0.7, 33.13N×90.40E, h45^{km}±8^{km}, mb3.8/7, Error ellipse: s-maj=8.2km s-min=5.8km az=75.0*

ISC 13 00:29:18.0±0.7**, 33.16N**±0.04×**90.38E**±0.06**, h46**^{km}±9^{km}**, n60,** σ**0^{s}97**/57**, mb3.8**/13**, MS3.5**/5**, Qinghai**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.51**	**169**	*e*Pn	**Pn**	**00 30 11.6**	**+1.6**
LSA				*e*Sn	**Sn**	**00 30 51.5**	**+1.1**
TAPN	**Taplejung**	**6.23**	**202**	*e*P	**Pn**	**00 30 46.1**	**-1.3**
	12nm,0.4s						
JIRN	**Jiri**	**6.57**	**214**	*e*P	**Pn**	**00 30 51.9**	**-0.1**
	26nm,0.5s						
ODAN	**Odare**	**6.79**	**203**	*e*P	**Pn**	**00 30 53.3**	**-1.8**
	29nm,0.6s						
KKN	**Kakani**	**6.93**	**221**	*e*P	**Pn**	**00 30 56.9**	**0.0**
	30nm,0.5s						
KKN	**Kakani**	**6.93**	**221**	*e*P	**Pn**	**00 30 56.9**	**0.0**
KKN				pmax	pmax		
	comp=Z,30nm,0.5s						
GKN	**Gorkha**	**7.13**	**225**	*e*P	**Pn**	**00 30 59.3**	**-0.4**
	comp=Z,24nm,0.4s						
LZH	**Lanzhou**	**11.47**	**72**	*e*P	**Pn**	**00 32 00.0**	**+0.9**
LZH				AP		00 32 08.3	
LZH				XP		00 32 12.2	
LZH				*e*S	**Sn**	**00 34 06.6**	**+0.8**
LZH				XS		00 34 18.3	
LZH				AMB	AMB		
	comp=Z,101nm,5.2s						
LZH				LR	LR		
	comp=E,259nm,9.2s						
LZH				LR	LR		
	comp=Z,360nm,10.6s						
MK31	**Makanchi Array**	**14.95**	**338**	*e*Pn	**Pn**	**00 32 45.8**	**-0.3**
MKAR	**Makanchi Array**	**14.95**	**338**	P	**Pn**	**00 32 45.0**	**-1.1**
MKAR	**Makanchi Array**	**14.95**	**338**	P	**Pn**	**00 32 45.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=145,slow=14,SNR=6.4						
TKM2	**Tokmak 2**	**15.16**	**314**	*e*Pn	**Pn**	**00 32 54.9**	**+6.0**
	comp=Z,9.6nm,0.8s						
TKM2	**Tokmak 2**	**15.16**	**314**	*e*P	**Pn**	**00 32 54.9**	**+6.0**
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TKM2	**Tokmak 2**	**15.16**	**314**	P	**Pn**	**00 32 55.1**	**+6.2**
	SNR=5.2						
KBK	**Karagaybulak**	**15.41**	**312**	P	**Pn**	**00 32 59.0**	**+6.9**
	SNR=8.8						
UCH	**Uchtor**	**15.46**	**310**	*e*Pn	**Pn**	**00 32 54.2**	**+1.5**
	comp=Z,6.7nm,0.9s						
UCH	**Uchtor**	**15.46**	**310**	P	**Pn**	**00 32 58.8**	**+6.0**
	SNR=6.6						
AAK	**Ala-Archa**	**15.68**	**312**	*e*Pn	**Pn**	**00 32 57.5**	**+1.8**
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**15.68**	**312**	*e*P	**Pn**	**00 32 57.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
CHMS	**Chumysh**	**15.72**	**313**	P	**Pn**	**00 33 01.4**	**+5.3**
	SNR=5.5						
USP	**Ospenovka**	**16.02**	**314**	P	**Pn**	**00 33 04.6**	**+4.6**
	SNR=7.2						
SONM	**Songino Array**	**19.00**	**35**	P	**Pn**	**00 33 36.4**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=210,slow=8.6,SNR=6.1						
SONM				LR	LR	00 40 53.1	
	comp=Z,89nm,21.9s,baz=168,slow=36						
ULN	**Ulaanbaatar**	**19.34**	**36**	*e*P	**Pn**	**00 33 39.0**	**-1.8**
	comp=Z,4.1nm,1.3s						
ULN	**Ulaanbaatar**	**19.34**	**36**	*e*P	**Pn**	**00 33 39.0**	**-1.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KURK	**Kurchatov**	**19.55**	**337**	*e*P	**Pn**	**00 33 41.4**	**-1.9**
	comp=Z,2.8nm,0.7s						
KURK	**Kurchatov**	**19.55**	**337**	*e*P	**Pn**	**00 33 41.4**	**-1.9**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAK	**Zakamensk**	**19.66**	**25**	*e*P	**Pn**	**00 33 43.3**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
NVS	**Novosibirsk**	**22.25**	**349**	*e*P	**P**	**00 34 12.2**	**+1.6**
NVS				pmax	pmax		
	comp=N,8.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.6s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb3.8						
BRVK	**Borovoye**	**24.56**	**330**	*e*P	**P**	**00 34 34.0**	**+0.8**
	comp=Z,2.0nm,0.7s,mb3.8						
BRVK	**Borovoye**	**24.56**	**330**	*e*P	**P**	**00 34 34.0**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
CHKZ	**Chkalovo**	**24.87**	**331**	*e*P	**P**	**00 34 36.5**	**+0.4**
	comp=Z,3.1nm,0.9s,mb3.8						
CHKZ	**Chkalovo**	**24.87**	**331**	*e*P	**P**	**00 34 36.5**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
YHNB	**Yeheng**	**28.34**	**99**	P	**P**	**00 35 07.6**	**0.0**
AKTO	**Aktyubinsk**	**29.35**	**316**	LR	LR	00 47 04.0	
	comp=Z,117nm,18.3s,MS3.5,baz=357,slow=36						
PSI	**Prapat**	**31.25**	**163**	LR	LR	00 51 28.7	
	comp=Z,77nm,18.7s,MS3.4,baz=170,slow=43						
YAK	**Yakutsk**	**38.17**	**29**	P	**P**	**00 36 32.5**	**-0.2**
MALT	**Malatya**	**42.03**	**292**	*e*P	**P**	**00 37 04.8**	**-0.1**
ASF	**Jabal al Asfar**	**44.62**	**284**	LR	LR	01 01 12.7	
	comp=Z,55nm,19.4s,MS3.5,baz=255,slow=43						
BRTR	**Keskin Array B**	**45.46**	**295**	P	**P**	**00 37 33.2**	**+0.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**45.46**	**295**	P	**P**	**00 37 33.2**	**+0.7**
	comp=Z,0.8nm,0.8s,mb3.6,baz=120,slow=7.3,SNR=4.7						
MMAI	**Mount Meron Ar**	**45.59**	**286**	LR	LR	01 01 41.3	
	comp=Z,55nm,18.4s,MS3.5,baz=350,slow=43						
EIL	**Elat**	**46.97**	**281**	LR	LR	01 00 59.6	
	comp=Z,96nm,18.5s,MS3.8,baz=283,slow=40						
AKASG	**Malin Array Be**	**47.35**	**311**	P	**P**	**00 37 47.2**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**47.35**	**311**	P	**P**	**00 37 47.1**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=79,slow=7.1,SNR=5.5						
FINES	**FINESS Array B**	**49.29**	**325**	P	**P**	**00 38 02.2**	**+0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**49.29**	**325**	P	**P**	**00 38 02.1**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=104,slow=6.9,SNR=4.3						
HFS	**Hagfors**	**55.39**	**324**	P	**P**	**00 38 47.4**	**+0.3**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	**55.39**	**324**	P	**P**	**00 38 47.4**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.1,baz=67,slow=11,SNR=3.0						
NOA	**NORSAR Array B**	**56.47**	**325**	P	**P**	**00 38 54.6**	**-0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**56.47**	**325**	P	**P**	**00 38 54.6**	**-0.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=82,slow=7.2,SNR=3.2						
GERES	**GERESS Array B**	**57.56**	**310**	P	**P**	**00 39 04.4**	**+1.7**
GERES				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**57.56**	**310**	P	**P**	**00 39 04.4**	**+1.7**
	comp=Z,0.6nm,0.7s,mb3.7,baz=64,slow=4.5,SNR=5.2						
TIP	**Timpagrande**	**58.23**	**299**	P	**P**	**00 39 08.4**	**+0.7**
WLF	**Walferdange**	**62.05**	**313**	P	**P**	**00 39 33.0**	**-0.6**
WRA	**Warramunga Arr**	**67.45**	**135**	P	**P**	**00 40 08.2**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**67.45**	**135**	P	**P**	**00 40 08.2**	**-0.9**
	comp=Z,1.3nm,0.9s,mb4.0,baz=330,slow=6.1,SNR=8.1						
ASAR	**Alice Springs**	**70.10**	**138**	P	**P**	**00 40 24.8**	**-0.7**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**70.10**	**138**	P	**P**	**00 40 24.8**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.8,baz=324,slow=6.5,SNR=8.8						
TORD	**Torodi Ar. Bea**	**81.84**	**280**	P	**P**	**00 41 32.1**	**-0.6**
	comp=Z,0.6nm,0.6s,mb3.7,baz=41,slow=7.8,SNR=2.8						
YKA	**Yellowknife Ar**	**82.58**	**11**	P	**P**	**00 41 35.4**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.4,baz=326,slow=4.9,SNR=4.7						

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*MOS **13** 00:34:53.9±1.1, 85.20N×12.23E, h10^{km}, mb3.8/5, Error ellipse: s-maj=99.9km s-min=12.9km az=91.5*
*CSEM **13** 00:34:53.4±0.1, 85.45N×15.36E, h10^{km}, mb3.9/6, Error ellipse: s-maj=10.9km s-min=4.1km az=58.0*
*ISCJB **13** 00:34:54.5±0.6, 85.17N±0.06×13E±, h10^{km}, mb3.6/9, MS3.5/5, Error ellipse: s-maj=15.5km s-min=8.2km az=165.6*
*IDC **13** 00:34:54.9±0.9, 85.31N×14.03E, h0^{km}, mb3.5/7, mb1 3.8/8, mb1mx3.6/22, mbtmp3.6/8, ML3.9/1, MS3.6/6, Ms1 3.5/6, ms1mx3.1/38, Error ellipse: s-maj=32.7km s-min=18.7km az=45.0*
*NEIC **13** 00:34:56.1±0.5, 85.27N×13.87E, h10^{km}, mb4.1/2, Error ellipse: s-maj=15.1km s-min=8.6km az=69.0*
*NAO **13** 00:35:01.4±7.3, 84.83N×13.04E, ML2.7*
ISC 13 00:34:56.3±0.6, **85.21N**±0.06×**14E**±, **h10**^{km}, **n40**, σ**1^{s}10**/44, **mb3.6**/9, **MS3.5**/5, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**6.33**	**183**	Pn	**Pn**	**00 36 29.4**	**-0.1**
KBS				Sn	**Sn**	**00 37 38.1**	**-3.5**
KBS	**Kingsbay**	**6.33**	**183**	*e*Pn	**Pn**	**00 36 29.5**	**0.0**
	25nm,0.4s						
KBS				*e*Sn	**Sn**	**00 37 40.7**	**-0.9**
KBS	**Kingsbay**	**6.33**	**183**	*e*P	**Pn**	**00 36 29.3**	**-0.2**
KBS				*e*S	**Sn**	**00 37 41.3**	**-0.4**
KBS				AML	AML	00 37 43.4	
	comp=Z,11nm,0.6s						
KBS	**Kingsbay**	**6.33**	**183**	*e*P	**Pn**	**00 36 29.5**	**0.0**
KBS				*e*		00 37 40.7	
KBS				pmax	pmax		
	comp=Z,25nm,0.4s						
KBS	**Kingsbay**	**6.33**	**183**	Pn	**Pn**	**00 36 29.4**	**-0.1**
KBS				*e*Sn	**Sn**	**00 37 40.7**	**-1.0**
SPA0	**Spitsbergen Ar**	**7.09**	**175**	Pn	**Pn**	**00 36 39.5**	**-0.3**
	baz=11,slow=14						
SPA0				Sn	**Sn**	**00 37 53.4**	**-6.9**
SPA0	**Spitsbergen Ar**	**7.09**	**175**	Pn	**Pn**	**00 36 39.5**	**-0.3**
	SNR=9.7						
KEV	**Kevo**	**15.72**	**163**	*e*Pn	**Pn**	**00 38 38.6**	**+1.2**
	comp=Z,24nm,1.2s						
KEV	**Kevo**	**15.72**	**163**	*e*P	**Pn**	**00 38 38.6**	**+1.3**
KEV				pmax	pmax		
	comp=Z,24nm,1.2s						
KEV	**Kevo**	**15.72**	**163**	*e*Pn	**Pn**	**00 38 38.6**	**+1.3**
ARA0	**ARCESS Array S**	**15.90**	**165**	Pn	**Pn**	**00 38 38.3**	**-1.4**
	baz=356,slow=12						
ARA0				Sn	**Sn**	**00 41 26.1**	**-10**
	baz=2.5,slow=22						
ARCES	**ARCESS Array B**	**15.90**	**165**	Pn	**Pn**	**00 38 37.6**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=356,slow=10,SNR=23						
ARCES				Sn	**Sn**	**00 41 24.5**	**-11**
	comp=Z,0.1nm,0.3s,baz=360,slow=21,SNR=3.7						
ARCES				LR	LR	00 44 03.9	
	comp=Z,190nm,20.8s,baz=158,slow=34						
SFJD	**Kangerlussuaq**	**21.47**	**255**	LR	LR	00 49 19.7	
	comp=Z,116nm,18.1s,MS3.3,baz=47,slow=40						
BORG	**Borgarnes**	**21.62**	**222**	P	**P**	**00 39 47.3**	**+1.3**
BORG	**Borgarnes**	**21.62**	**222**	P	**P**	**00 39 47.3**	**+1.3**
FINES	**FINESS Array B**	**24.03**	**165**	LR	LR	00 50 17.4	
	comp=Z,182nm,21.0s,MS3.5,baz=353,slow=38						
INK	**Inuvik**	**26.00**	**333**	*e*P	**P**	**00 40 34.4**	**+5.7**
	comp=Z,119nm,1.2s						
INK	**Inuvik**	**26.00**	**333**	P	**P**	**00 40 33.7**	**+5.0**
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	**Inuvik**	**26.00**	**333**	P	**P**	**00 40 33.7**	**+5.0**
	comp=Z,2.9nm,1.1s,mb3.7,baz=18,slow=9.9,SNR=4.3						
YKA	**Yellowknife Ar**	**30.87**	**315**	P	**P**	**00 41 11.4**	**-0.6**
YKA				LR	LR	00 52 34.2	
YKA	**Yellowknife Ar**	**30.87**	**315**	P	**P**	**00 41 11.4**	**-0.6**
YKA				MLR	MLR		
	comp=Z,39nm,19.3s						
YKA	**Yellowknife Ar**	**30.87**	**315**	P	**P**	**00 41 11.4**	**-0.6**
	comp=Z,0.1nm,0.4s,mb3.0,baz=7.1,slow=7.8,SNR=5.1						
YKA				LR	LR	00 52 34.2	
	comp=Z,39nm,19.3s,MS3.1,baz=160,slow=34						
YKA	**Yellowknife Ar**	**30.87**	**315**	P	**P**	**00 41 11.4**	**-0.6**
	comp=Z,39nm,19.3s						
PMR	**Palmer**	**33.20**	**345**	P	**P**	**00 41 30.7**	**-1.8**
PMR	**Palmer**	**33.20**	**345**	P	**P**	**00 41 30.7**	**-1.8**
AKASG	**Malin Array Be**	**34.87**	**163**	P	**P**	**00 41 47.9**	**+0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**34.87**	**163**	P	**P**	**00 41 47.9**	**+0.8**
	comp=Z,0.8nm,0.7s,mb3.8,baz=355,slow=9.3,SNR=3.8						
AKTO	**Aktyubinsk**	**36.44**	**131**	LR	LR	01 01 13.9	
	comp=Z,124nm,19.0s,MS3.7,baz=232,slow=43						
MKAR	**Makanchi Array**	**41.84**	**106**	P	**P**	**00 42 44.8**	**-0.9**
	comp=Z,0.2nm,0.2s,mb3.3,baz=353,slow=7.8,SNR=2.8						
MKAR				LR	LR	01 03 26.9	
	comp=Z,91nm,20.0s,MS3.6,baz=333,slow=41						
KIV	**Kislovodsk**	**42.07**	**148**	P	**P**	**00 42 48.3**	**+0.6**
KIV	**Kislovodsk**	**42.07**	**148**	P	**P**	**00 42 48.3**	**+0.6**
SONM	**Songino Array**	**42.81**	**82**	P	**P**	**00 42 54.5**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**42.81**	**82**	P	**P**	**00 42 54.5**	**+1.0**
	comp=Z,0.7nm,1.0s,mb3.4,baz=329,slow=4.3,SNR=3.8						
MALT	**Malatya**	**47.53**	**153**	*e*P	**P**	**00 43 32.3**	**+1.1**
	comp=Z,0.8nm,0.7s,mb3.9						
MALT	**Malatya**	**47.53**	**153**	*e*P	**P**	**00 43 32.3**	**+1.1**
MALT				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
MALT	**Malatya**	**47.53**	**153**	*e*P	**P**	**00 43 32.3**	**+1.1**
	comp=Z,0.8nm,0.7s,mb3.9						
PDAR	**Pinedale Array**	**50.19**	**307**	P	**P**	**00 43 51.8**	**+0.2**
	comp=Z,0.4nm,0.8s,mb3.5,baz=1.9,slow=4.5,SNR=3.5						
TXAR	**Lajitas Array**	**63.13**	**300**	P	**P**	**00 45 23.4**	**-0.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**63.13**	**300**	P	**P**	**00 45 23.4**	**-0.2**
	comp=Z,0.5nm,0.9s,mb3.7,baz=335,slow=5.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**72.22**	**192**	P	**P**	**00 46 22.7**	**+1.5**
	comp=Z,0.9nm,0.6s,mb3.9,baz=355,slow=5.8,SNR=5.0						

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*BJI **13** 00:51:40.2, 8.03S×128.85E, h146^{km}, mB5.1, mb4.8*
*MOS **13** 00:51:42.5±0.9, 7.45S×128.17E, h114^{km}, mb4.6/16, Error ellipse: s-maj=22.6km s-min=8.1km az=116.4*
*ISCJB **13** 00:51:45.9±1.1, 7.51S±0.05×128.39E±0.06, h153^{km}±12^{km}, mb4.4/41, Error ellipse: s-maj=10.6km s-min=6.8km az=138.5*
*NEIC **13** 00:51:47.4±1.0, 7.51S×128.19E, h146^{km}±9^{km}, mb4.5/24, Error ellipse: s-maj=8.5km s-min=5.5km az=51.0*
*IDC **13** 00:51:49.4±1.8, 7.47S×128.22E, h160^{km}±16^{km}, mb4.0/12, mb1 4.0/14, mb1mx4.0/19, mbtmp4.0/14, Error ellipse: s-maj=14.6km s-min=10.5km az=59.0*
ISC 13 00:51:47.3±1.1, **7.51S**±0.06×**128.37E**±0.06, **h147**^{km}±12^{km}, **n101**, σ**1^{s}05**/95, **mb4.4**/41, **5C-4D**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.37**	**240**	P	**Pn**	**00 53 08.0**	**+2.5**
	54nm,0.3s,baz=114,slow=1.7,SNR=54						
BATI				S	**Sn**	**00 54 07.0**	**+0.4**
	101nm,0.3s,baz=310,slow=20,SNR=26						
KAKA	**Kakadu**	**6.54**	**143**	*e*Pn	**Pn**	**00 53 22.3**	**+1.1**
	8.0nm,0.4s						
KAKA				*e*Sn	**Sn**	**00 54 28.3**	**-6.4**
FITZ	**Fitzroy Crossi**	**10.86**	**194**⇓	*i*P	**Pn**	**00 54 16.6**	**-2.1**
	86nm,0.8s						
FITZ				*e*S	**Sn**	**00 56 11.0**	**-7.7**
FITZ	**Fitzroy Crossi**	**10.86**	**194**	P	**Pn**	**00 54 16.7**	**-1.9**
	6.0nm,0.3s,baz=24,slow=11,SNR=170						
FITZ				S	**Sn**	**00 56 11.1**	**-7.6**
	6.0nm,0.3s,baz=60,slow=20,SNR=11						
WRA	**Warramunga Arr**	**13.64**	**156**	P	**Pn**	**00 54 52.4**	**-2.4**
	6.1nm,0.3s,baz=323,slow=14,SNR=100						
WRA				S	**Sn**	**00 57 14.8**	**-11**
	13nm,0.3s,baz=324,slow=24,SNR=18						
WB2	**Warramunga Arr**	**13.65**	**155**	*e*P	**Pn**	**00 54 52.0**	**-2.9**
WB2				*e*S	**Sn**	**00 57 15.6**	**-10**
COEN	**Coen**	**15.89**	**115**	*e*Pn	**Pn**	**00 55 25.5**	**+2.7**
	4.0nm,0.6s						
COEN				*e*Sn	**Sn**	**00 58 10.4**	**-9.4**
MBWA	**Marble Bar**	**15.93**	**211**	*e*Pn	**Pn**	**00 55 23.4**	**0.0**
MBWA				*e*Sn	**Sn**	**00 58 07.5**	**-13**
ASAR	**Alice Springs**	**16.92**	**162**	P	**Pn**	**00 55 34.5**	**-0.8**
	6.1nm,0.3s,baz=339,slow=10,SNR=528						
ASAR				S	**S**	**00 58 34.4**	**-9.1**
	1.7nm,0.3s,baz=345,slow=25,SNR=5.9						
KKM	**Kota Kinabalu**	**18.12**	**318**	*e*P	**P**	**00 55 48.7**	**+0.5**
PMG	**Port Moresby**	**18.68**	**97** *c*	*i*P	**P**	**00 56 01.3**	**+7.0**
PMG	**Port Moresby**	**18.68**	**97**	P	**P**	**00 55 58.9**	**+4.6**
	1.1nm,0.3s,baz=298,slow=5.4,SNR=8.6						
CTA	**Charters Tower**	**21.37**	**128**	P	**P**	**00 56 25.2**	**+2.1**
	2.2nm,0.4s,mb3.8,baz=294,slow=12,SNR=5.3						
CTAO	**Charters Tower**	**21.37**	**128**	*e*P	**P**	**00 56 24.8**	**+1.7**
	2.5nm,0.5s,mb3.8						
CTAO	**Charters Tower**	**21.37**	**128**	*e*P	**P**	**00 56 24.8**	**+1.7**
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**27.19**	**155**	*e*P	**P**	**00 57 18.2**	**+1.0**
	comp=Z,2.2nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**27.19**	**155**	P	**P**	**00 57 18.4**	**+1.2**
	comp=Z,2.6nm,0.5s,mb4.1,baz=331,slow=10,SNR=12						
NWAO	**Narrogin (SRO)**	**27.32**	**201**	P	**P**	**00 57 19.2**	**+0.9**
	comp=Z,4.9nm,0.7s,mb4.2,baz=232,slow=19,SNR=7.6						
PSI	**Prapat**	**31.12**	**288**	P	**P**	**00 57 50.9**	**-1.3**
	comp=Z,8.0nm,0.6s,mb4.6,baz=88,slow=5.0,SNR=8.9						
NACB	**Ninganchiao**	**32.18**	**348**	P	**P**	**00 58 01.0**	**-0.2**
YHNB	**Yeheng**	**32.71**	**348**	*e*P	**P**	**00 58 05.0**	**-0.9**
DZM	**Mont Dzumac**	**39.41**	**116**	P	**P**	**00 59 05.0**	**+2.0**
	comp=Z,3.4nm,0.8s,mb4.0,baz=240,slow=18,SNR=3.7						
WHN	**Wuhan**	**40.16**	**341**	⇓P	**P**	**00 59 10.0**	**+1.0**
NJ2	**Nanjing**	**40.38**	**347**	*e*P	**P**	**00 59 10.6**	**-0.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
KSRS	**Korea Array**	**44.73**	**359**	P	**P**	**00 59 46.7**	**+0.9**
	comp=Z,1.4nm,0.5s,mb3.9,baz=177,slow=8.9,SNR=6.0						
MJAR	**Matsushiro Arr**	**44.78**	**11**	P	**P**	**00 59 45.1**	**-1.2**
	comp=Z,5.1nm,0.8s,mb4.2,baz=186,slow=9.0,SNR=7.8						
XAN	**Xi'an**	**45.25**	**337**	P	**P**	**00 59 49.2**	**-0.8**
XAN				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.6						
BJT	**Baijiatuau**	**48.62**	**348**	*e*P	**P**	**01 00 16.2**	**+0.2**
	comp=Z,9.9nm,0.7s,mb4.5						
BJT	**Baijiatuau**	**48.62**	**348**	*e*P	**P**	**01 00 16.2**	**+0.2**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	**49.12**	**334**	*e*P	**P**	**01 00 22.0**	**+2.1**
LZH				AMB	AMB		
	comp=Z,26nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,108nm,4.2s						
PALK	**Pallekele**	**49.75**	**286**	P	**P**	**01 00 22.9**	**-2.2**
LSA	**Lhasa**	**51.47**	**318**	P	**P**	**01 00 37.5**	**-0.2**
MDJ	**Mudanjiang**	**51.90**	**1**	*e*P	**P**	**01 00 39.8**	**-0.8**
ODAN	**Odare**	**52.39**	**312**	*e*P	**P**	**01 00 44.7**	**+0.1**
	comp=Z,13nm,0.4s,mb4.9						
TAPN	**Taplejung**	**52.44**	**313**	*e*P	**P**	**01 00 44.7**	**-0.2**
	comp=Z,20nm,0.9s,mb4.7						
GTA	**Gaotai**	**53.66**	**333**	*e*P	**P**	**01 00 54.5**	**+0.8**
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
JIRN	**Jiri**	**53.72**	**312**	*e*P	**P**	**01 00 54.5**	**+0.2**
	comp=Z,16nm,0.7s,mb4.8						
KKN	**Kakani**	**54.46**	**312**	*e*P	**P**	**01 00 59.8**	**+0.1**
GKN	**Gorkha**	**55.05**	**312**	*e*P	**P**	**01 01 03.8**	**-0.2**
	comp=Z,34nm,0.7s,mb5.2						
HIA	**Hailar**	**57.04**	**353**	*e*P	**P**	**01 01 18.1**	**+0.5**
HIA	**Hailar**	**57.04**	**353**⇑	*i*P	**P**	**01 01 19.3**	**+1.7**
ULN	**Ulaanbaatar**	**58.27**	**343**	*e*P	**P**	**01 01 26.6**	**+0.3**
	comp=Z,7.7nm,1.1s,mb4.5						
ULN	**Ulaanbaatar**	**58.27**	**343**	*e*P	**P**	**01 01 26.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
SONM	**Songino Array**	**58.43**	**343**	P	**P**	**01 01 28.5**	**+1.1**
	comp=Z,4.1nm,0.8s,mb4.3,baz=167,slow=6.8,SNR=36						
SONM				ScP	ScP	01 06 02.7	-0.3
	comp=Z,0.3nm,0.8s,baz=145,slow=5.3,SNR=2.7						
ZAK	**Zakamensk**	**61.63**	**342**	*e*P	**P**	**01 01 49.4**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
TLY	**Talaya**	**62.67**	**343**	*e*P	**P**	**01 01 57.0**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.3						
TLY	**Talaya**	**62.67**	**343**⇑	*e*P	**P**	**01 01 56.8**	**+0.8**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
MIDW	**Midway**	**63.25**	**53**	*e*P	**P**	**01 01 59.5**	**-0.9**
BOD	**Bodaibo**	**66.15**	**352**	*e*P	**P**	**01 02 17.6**	**-0.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**67.78**	**328**	*i* P	**P**	**01 02 29.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	**Makanchi Array**	**67.78**	**328**	P	**P**	**01 02 29.3**	**+0.2**
	comp=Z,3.9nm,0.5s,mb4.4,baz=119,slow=7.8,SNR=57						
MA2	**Magadan**	**69.22**	**12**	P	**P**	**01 02 38.7**	**+0.9**
YAK	**Yakutsk**	**69.34**	**1**	*e*P	**P**	**01 02 37.8**	**-0.6**
	comp=Z,26nm,0.7s,mb5.1						
YAK	**Yakutsk**	**69.34**	**1**	*e*P	**P**	**01 02 38.2**	**-0.2**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
TKM2	**Tokmak 2**	**69.36**	**321**	*e*P	**P**	**01 02 39.2**	**+0.2**
	comp=E,4.2nm,1.0s,mb4.1						
TKM2	**Tokmak 2**	**69.36**	**321**	*e*P	**P**	**01 02 39.2**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
UCH	**Uchtor**	**69.67**	**320**	*e*P	**P**	**01 02 40.8**	**-0.1**
	comp=Z,1.8nm,0.7s,mb3.9						
AAK	**Ala-Archa**	**69.90**	**321**	*e*P	**P**	**01 02 42.4**	**+0.1**
	comp=Z,9.5nm,1.5s,mb4.3						
AAK	**Ala-Archa**	**69.90**	**321**⇓	*e*P	**P**	**01 02 42.3**	**0.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
AML	**Almayashu**	**70.15**	**320**	*e*P	**P**	**01 02 44.4**	**+0.6**
	comp=Z,3.5nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**70.36**	**320**	*e*P	**P**	**01 02 46.0**	**+0.8**
	comp=Z,6.0nm,1.1s,mb4.2						
KURK	**Kurchatov**	**72.12**	**329**	*e*P	**P**	**01 02 55.5**	**0.0**
	comp=Z,26nm,0.9s,mb5.0						
KURK	**Kurchatov**	**72.12**	**329**	*e*P	**P**	**01 02 55.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
VNDA	**Vanda**	**72.14**	**173**	P	**P**	**01 02 56.0**	**+0.7**
VNDA	**Vanda**	**72.14**	**173**	P	**P**	**01 02 56.0**	**+0.7**
	comp=Z,1.6nm,0.7s,mb3.9,baz=311,slow=6.3,SNR=8.6						
NVS	**Novosibirsk**	**72.62**	**335**	*e*P	**P**	**01 02 57.2**	**-1.2**
NVS				pmax	pmax		
	comp=N,7.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,11nm,1.3s						
NVS				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.5						
SBA	**Scott Base**	**73.05**	**172**	*e*P	**P**	**01 03 02.5**	**+1.9**
	comp=Z,1.8nm,0.7s,mb3.9						
SBA	**Scott Base**	**73.05**	**172**	*e*P	**P**	**01 03 02.5**	**+1.9**
SBA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
BRVK	**Borovoye**	**77.71**	**328**	*e*P	**P**	**01 03 27.4**	**-0.1**
	comp=Z,13nm,1.0s,mb4.5						
BRVK	**Borovoye**	**77.71**	**328**	*e*P	**P**	**01 03 27.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**77.86**	**329**	*e*P	**P**	**01 03 28.1**	**-0.2**
	comp=Z,11nm,0.9s,mb4.5						
CHKZ	**Chkalovo**	**77.86**	**329**	*e*P	**P**	**01 03 28.1**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
TIXI	**Tiksi**	**79.00**	**0**	*e*P	**P**	**01 03 33.0**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
BILL	**Bilibino**	**79.98**	**14**⇓	*e*P	**P**	**01 03 37.1**	**-2.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.0						
QSPA	**South Pole Qui**	**82.47**	**180**	P	**P**	**01 03 53.4**	**+0.7**
QSPA	**South Pole Qui**	**82.47**	**180**	P	**P**	**01 03 53.4**	**+0.7**
	comp=Z,4.7nm,0.7s,mb4.2,baz=311,slow=1.8,SNR=32						
AKTK	**Aktyubinsk**	**83.49**	**323**	P	**P**	**01 03 58.3**	**-0.1**
AKTO	**Aktyubinsk**	**83.49**	**323**	P	**P**	**01 03 58.3**	**-0.1**
	comp=Z,8.7nm,1.0s,mb4.4,baz=118,slow=4.0,SNR=28						
GAMB	**Gambell**	**84.01**	**23**	*e*P	**P**	**01 04 01.4**	**+0.6**
	comp=Z,6.4nm,1.0s,mb4.3						
SVE	**Sverdlovsk**	**84.37**	**329**⇑	*e*P	**P**	**01 04 02.9**	**+0.2**
SVE				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
ARU	**Arti**	**85.29**	**328**	*e*P	**P**	**01 04 06.0**	**-1.3**
	comp=Z,13nm,1.0s,mb4.6						
ARU	**Arti**	**85.29**	**328** *c*	*i*P	**P**	**01 04 06.9**	**-0.4**
ARU						01 07 30.9	
ARU				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
KIV	**Kislovodsk**	**92.06**	**314**	P	**P**	**01 04 39.3**	**-0.5**
KIV	**Kislovodsk**	**92.06**	**314**	P	**P**	**01 04 39.3**	**-0.4**
MALT	**Malatya**	**94.56**	**308**	P	**P**	**01 04 50.5**	**-0.8**
OBN	**Obninsk**	**97.14**	**325**	*e*P	**P**	**01 05 02.2**	**-0.4**
FINES	**FINESS Array B**	**102.44**	**331**	PKiKP	PKiKP	01 09 47.3	+0.5
	comp=Z,1.6nm,0.9s,baz=212,slow=28,SNR=2.4						
YKA	**Yellowknife Ar**	**108.92**	**26**	PKiKP	PKiKP	01 09 58.6	-0.2
	comp=Z,0.5nm,0.7s,baz=296,slow=1.5,SNR=12						
GERES	**GERESS Array B**	**111.77**	**320**	PKiKP	PKiKP	01 10 04.1	-0.5
	comp=Z,0.7nm,0.6s,baz=33,slow=3.2,SNR=6.7						
PDAR	**Pinedale Array**	**118.40**	**45**	PKP	PKPdf	01 10 17.9	+0.4
	comp=Z,0.6nm,0.6s,baz=220,slow=1.4,SNR=5.5						
ANMO	**Albuquerque**	**122.90**	**53**	PKP	PKPdf	01 10 27.9	+1.5
	comp=Z,0.4nm,0.4s,baz=217,slow=3.4,SNR=3.8						
ULM	**Lac du Bonnet**	**123.75**	**33**	PKP	PKPdf	01 10 26.3	-1.3
	comp=Z,0.2nm,0.3s,baz=173,slow=5.3,SNR=3.7						
TXAR	**Lajitas Array**	**126.58**	**59**	PKP	PKPdf	01 10 34.8	+1.1
	comp=Z,0.1nm,0.6s,baz=237,slow=4.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**127.32**	**281**	PKP	PKPdf	01 10 35.1	-0.3
	comp=Z,0.7nm,0.7s,baz=71,slow=1.6,SNR=6.4						
SCHQ	**Schefferville**	**131.26**	**12**	PKP	PKPdf	01 10 42.6	+0.9
	comp=Z,1.4nm,0.9s,baz=351,slow=8.0,SNR=3.4						
CFAA	**Coronel Fontan**	**137.99**	**159**	PKP	PKPdf	01 10 56.9	+1.8
CFAA	**Coronel Fontan**	**137.99**	**159**	PKP	PKPdf	01 10 56.9	+1.8
	comp=Z,0.1nm,0.4s,baz=209,slow=3.1,SNR=4.3						
ATAH	**Atahualpa**	**149.66**	**118**	PKPbc	PKPbc	01 11 23.4	+2.8
	comp=Z,9.8nm,0.8s,baz=198,slow=3.2,SNR=5.3						
LPAZ	**La Paz**	**151.26**	**145**	PKPbc	PKPbc	01 11 26.2	+1.9
LPAZ				PKPab	PKPab	01 11 34.9	+2.3
LPAZ	**La Paz**	**151.26**	**145**	PKPbc	PKPbc	01 11 26.2	+1.9
	comp=Z,3.0nm,0.4s,baz=52,slow=2.9,SNR=16						
LPAZ				PKPab	PKPab	01 11 34.9	+2.3
	comp=Z,4.4nm,0.7s,baz=197,slow=6.4,SNR=10						
SIV	**San Ignacio**	**154.84**	**158**	PKP	PKPdf	01 11 24.4	+0.9
	comp=Z,0.8nm,0.7s,baz=204,slow=4.8,SNR=4.6						
SIV				PKPbc	PKPbc	01 11 30.3	-1.9
	comp=Z,0.4nm,0.4s,baz=80,slow=5.2,SNR=4.0						
SIV				PKPab	PKPab	01 11 48.1	+0.4
	comp=Z,2.2nm,0.8s,baz=216,slow=6.6,SNR=8.0						

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*CASC **13** 00:52:55.9±2.6, 13.04N×90.85W, h0^{km}±10^{km}, MD4.2*
*IDC **13** 00:52:57.0±1.1, 13.47N×90.59W, h0^{km}, mb3.9/11, mb1 4.1/14, mb1mx4.0/24, mbtmp4.0/14, ML4.2/2, MS3.9/3, Ms1 3.9/3, ms1mx3.1/27, Error ellipse: s-maj=37.3km s-min=15.2km az=44.0*
*NEIC **13** 00:53:01.9±0.7, 13.45N×90.56W, h36^{km}±8^{km}, mb3.9/5, Error ellipse: s-maj=11.7km s-min=5.7km az=45.0*
*ISCJB **13** 00:53:02.1±0.8, 13.37N±0.06×90.69W±0.07, h61^{km}±7^{km}, mb3.9/13, Error ellipse: s-maj=13.6km s-min=6.3km az=136.4*
ISC 13 00:53:03.0±0.7, **13.39N**±0.06×**90.72W**±0.07, **h50**^{km}±7^{km}, **n64**, σ**1^{s}03**/56, **mb3.9**/13, **MS4.3**/2, **13C-2D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.01**	**6**⇓	*e*P	**Pn**	**00 53 22.3**	**+1.5**
PCG				*e*S	**Sn**	**00 53 44.0**	**+10**
FUG	**Fuego 3**	**1.06**	**354**⇑	*e*P	**Pn**	**00 53 21.9**	**+0.3**
FUG				*e*S	**Sn**	**00 53 43.9**	**+8.6**
SBLS	**San Blas**	**1.16**	**67**⇑	*e*P	x	00 53 22.4	
SBLS				*e*S	x	00 53 42.9	
RTR	**El Retiro**	**1.16**	**64**⇑	*e*P	x	00 53 22.5	
RTR				*e*S	x	00 53 43.4	
SNJE	**San Jose**	**1.19**	**66**⇑	*e*P	x	00 53 22.9	
SNJE				*e*S	x	00 53 45.5	
RBDL	**Robledal**	**1.24**	**54**⇑	*e*P	x	00 53 23.7	
JAT	**Jato**	**1.28**	**316**⇑	*e*P	**Pn**	**00 53 22.9**	**-1.6**
BOQS	**Boqueron**	**1.44**	**76**⇑	*e*P	x	00 53 26.6	
SNET	**Serv Nac Est T**	**1.48**	**78**⇑	*e*P	x	00 53 28.0	
SNET				*e*S	x	00 53 50.5	
LFU	**La Fuente**	**1.60**	**77**⇓	*e*P	x	00 53 29.6	
LFRS	**El Faro**	**1.63**	**82**⇑	*e*P	x	00 53 29.1	
LFRS				*e*S	x	00 53 54.3	
MTO2	**Montecristo 2**	**1.66**	**53**⇑	*e*P	x	00 53 30.2	
MTO2				*e*S	x	00 53 56.6	
LBRS	**Las Brisas**	**1.67**	**78**	*e*P	x	00 53 29.7	
LCBS	**La Ceiba**	**1.72**	**81**⇑	*e*P	x	00 53 30.3	
LCBS				*e*S	x	00 53 58.2	
BLLM	**Bellamira**	**2.42**	**88**⇑	*i*P	x	00 53 40.0	
BLLM				*e*S	x	00 54 13.5	
CAHU	**Cacacuatique**	**2.47**	**81**	*e*P	x	00 53 41.1	
CNCH	**Conchagua**	**2.81**	**92**⇑	*e*P	x	00 53 45.2	
CCIG	**Comitan**	**3.19**	**335**	*e*P	**Pn**	**00 53 51.7**	**+1.1**
CCIG				*i* S	**Sn**	**00 54 39.2**	**+12**
TGUH	**Tegucigalpa,Un**	**3.42**	**78**	*e*Pn	**Pn**	**00 53 49.6**	**-4.2**
SCX	**San Cristobal**	**3.81**	**331**	*i* P	**Pn**	**00 53 57.6**	**-1.5**
SCX				*i* S	**Sn**	**00 54 54.1**	**+11**
CMIG	**Matias Romero**	**5.45**	**313**	Pn	**Pn**	**00 54 19.5**	**-2.1**
CMIG				Sn	**Sn**	**00 55 18.8**	**-4.2**
CMIG	**Matias Romero**	**5.45**	**313**	Pn	**Pn**	**00 54 19.5**	**-2.1**
	3.4nm,0.3s,baz=118,slow=10,SNR=14						
CMIG				Sn	**Sn**	**00 55 18.8**	**-4.2**
	2.5nm,0.3s,baz=116,slow=13,SNR=3.8						
JTS	**JuntasAbangare**	**6.43**	**118**	*e*Pn	**Pn**	**00 54 31.6**	**-3.6**
JTS				Sn	**Sn**	**00 55 47.1**	**-0.2**
JTS				LR	LR	00 57 09.9	
JTS	**JuntasAbangare**	**6.43**	**118**	Pn	**Pn**	**00 54 35.4**	**+0.3**
	1.8nm,0.3s,baz=313,slow=21,SNR=11						
JTS				LR	LR	00 57 09.9	
	comp=Z,204nm,20.6s,baz=163,slow=40						
VHO	**Vista Hermosa**	**6.86**	**303**	*i* P	**Pn**	**00 54 44.1**	**+3.1**
VHO				*i* S	**Sn**	**00 56 05.8**	**+8.0**
TEIG	**Tepich**	**7.19**	**19**	*e*Pn	**Pn**	**00 54 49.4**	**+3.9**
TEIG	**Tepich**	**7.19**	**19**	Pn	**Pn**	**00 54 49.3**	**+3.7**
	12nm,0.3s,baz=9.8,slow=22,SNR=54						
PAYG	**Puerto Ayora**	**13.98**	**178**	*e*Pn	**Pn**	**00 56 17.4**	**-1.0**
ROSC	**El Rosal**	**18.26**	**116**	P	**Pn**	**00 57 13.3**	**+0.5**
	baz=93,slow=21,SNR=1.7						
LTX	**Lajitas**	**19.90**	**325**	*e*P	**Pn**	**00 57 31.8**	**-0.5**
	2.9nm,0.7s						
TXAR	**Lajitas Array**	**19.90**	**325**	P	**Pn**	**00 57 32.0**	**-0.3**
	0.2nm,0.3s,baz=150,slow=13,SNR=20						
SDV	**Santo Domingo**	**20.21**	**101**	*e*P	**P**	**00 57 33.3**	**-0.6**
	3.7nm,0.6s						
SDV	**Santo Domingo**	**20.21**	**101**	P	**P**	**00 57 34.3**	**+0.4**
	3.4nm,0.6s,baz=324,slow=6.5,SNR=7.4						
SWET	**Sewanee**	**22.16**	**10**	*e*P	**P**	**00 57 53.9**	**-0.7**
WMOK	**Wichita Mounta**	**22.47**	**342**	*e*P	**P**	**00 57 57.3**	**-0.7**
	0.7nm,0.6s,mb3.3						
MNTX	**Cornudas Mount**	**22.66**	**326**	*e*P	**P**	**00 57 59.1**	**-0.8**
	8.3nm,1.1s,mb4.1						
TKL	**Tuckaleechee C**	**23.04**	**15**	P	**P**	**00 58 04.7**	**+0.7**
	2.8nm,0.6s,mb3.9,baz=179,slow=10,SNR=6.3						
BNM	**Barren Site**	**25.21**	**328**	*e*P	**P**	**00 58 24.2**	**+0.1**
ANMO	**Albuquerque**	**25.76**	**329**	P	**P**	**00 58 30.9**	**+1.9**
	0.5nm,0.5s,mb3.3,baz=139,slow=10.0,SNR=3.2						
ACSO	**Alum Creek Sta**	**27.59**	**13**	P	**P**	**00 58 44.3**	**-1.1**
BBSR	**BB Station**	**30.39**	**47**	P	**P**	**00 59 10.1**	**-0.3**
HWUT	**Hardware Ranch**	**33.46**	**331**	*e*P	**P**	**00 59 38.9**	**+1.6**
	2.6nm,0.9s,mb4.2						
PDAR	**Pinedale Array**	**33.50**	**334**	P	**P**	**00 59 37.7**	**+0.2**
	0.2nm,0.4s,mb3.4,baz=129,slow=8.7,SNR=3.2						
PDAR				PcP	PcP	01 02 19.0	+1.4
	0.3nm,0.7s,baz=139,slow=4.3,SNR=3.0						
NVAR	**Mina Array Bea**	**34.93**	**321**	P	**P**	**00 59 52.7**	**+2.7**
	1.8nm,0.6s,mb4.2,baz=124,slow=9.1,SNR=17						
NVAR				PcP	PcP	01 02 22.7	+0.9
	0.8nm,0.7s,baz=130,slow=2.8,SNR=4.7						
CMB	**Columbia Colle**	**36.01**	**318**	*e*P	**P**	**00 59 60.0**	**+0.7**
HLID	**Hailey**	**36.31**	**330**	*e*P	**P**	**01 00 02.2**	**+0.5**
LPAZ	**La Paz**	**36.99**	**142**	*e*P	**P**	**01 00 08.0**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ULM	Lac du Bonnet	37.00	355	P	P	01 00 06.3	-1.2
	0.8nm,0.3s,mb4.0,baz=178,slow=9.7,SNR=9.6						
WALA	Waterton Lakes	40.38	336	P	P	01 00 34.6	-1.3
SIV	San Ignacio	41.37	134	P	P	01 00 44.6	+0.2
	1.2nm,0.7s,mb3.6,baz=334,slow=12,SNR=7.9						
FCC	Fort Churchill	45.36	358	P	P	01 01 15.6	-0.4
SCHQ	Schefferville	45.38	19	P	P	01 01 15.5	-0.7
SCHQ				LR	LR	01 21 50.2	
SCHQ	Schefferville	45.38	19	P	P	01 01 15.5	-0.7
	3.2nm,0.8s,mb4.2,baz=204,slow=6.0,SNR=12						
SCHQ				LR	LR	01 21 50.2	
	comp=Z,106nm,18.3s,MS3.8,baz=19,slow=38						
YKA	Yellowknife Ar	51.91	346	P	P	01 02 05.9	-0.3
	0.5nm,0.6s,mb3.6,baz=145,slow=7.5,SNR=8.3						
DLBC	Dease Lake	53.72	336	P	P	01 02 20.3	+0.6
RES	Resolute Bay	61.33	359	eP	P	01 03 12.0	-1.1
	52nm,0.5s						
INK	Inuvik	61.38	343	eP	P	01 03 13.3	-0.1
	33nm,0.6s						
INK	Inuvik	61.38	343	P	P	01 03 13.0	-0.4
	1.1nm,0.6s,mb4.1,baz=181,slow=7.1,SNR=11						
ESLA	Sonseca Array	79.12	52	eP	P	01 05 02.4	0.0
PMSA	Palmer Station	80.52	169	eP	P	01 05 10.2	+1.0
DBIC	Dimbokro	84.48	84	P	P	01 05 31.3	+0.1
DBIC	Dimbokro	84.48	84	P	P	01 05 31.3	+0.1
	4.9nm,0.8s,mb4.7,baz=280,slow=2.9,SNR=7.9						
URZ	Urewera	99.84	233	LR	LR	01 43 52.0	
	comp=Z,340nm,20.1s,MS4.8,baz=184,slow=31						
KMBO	Kilima Mbogo	127.10	81	PKPdf	PKPdf	01 12 04.2	+1.5

*IDC **13** 01:02:03.7±2.4, 6.41N×125.81E, h0km, mb4.1/4, mb1 4.1/4, mb1mx3.7/17, mbtmp4.1/4, MS4.6/7, Ms1 4.6/7, ms1mx4.1/27, Error ellipse: s-maj=304.5km s-min=19.6km az=66.0*

*MAN **13** 01:02:09, 6.98N×126.85E, h14km, mb4.3, ML3.1, MS2.9*

*ISCJB **13** 01:02:10.8±1.2, 6.74N±0.07×126.7E±0.1, h77km±11km, mb4.2/7, Error ellipse: s-maj=17.5km s-min=10.8km az=159.6*

*NEIC **13** 01:02:14.5±1.2, 6.45N×126.15E, h92km±11km, mb4.3/2, Error ellipse: s-maj=34.0km s-min=11.1km az=59.0*

ISC 13 01:02:12.1±1.2**, 6.72N**±0.07×**126.7E**±0.1**, h71**km±12km**, n31, σ1.37**/29**, mb4.2**/7**, 4C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.48	298	eP	Pn	01 02 21.5	-3.4
DAV	Davao City (W)	1.15	288	eP	Pn	01 02 32.8	+0.3
DAV				eS	Sn	01 02 44.1	-3.8
BIPH	Bislig	1.49	348	⇑iP	Pn	01 02 33.3	-3.7
BIPH				i S	Sn	01 02 50.0	-5.7
KCP	Kidapawan	1.61	280	⇓eP	Pn	01 02 41.3	+2.7
KCP				eS	Sn	01 03 02.8	+4.2
GSPH	General Santos	1.84	250	⇑eP	Pn	01 02 49.6	+8.0
GSPH				eS	Sn	01 03 03.5	-0.5
BUKP	Musuan	1.98	306	eP	Pn	01 02 43.4	-0.2
CGP	Cagayan de Oro	2.62	311	⇑iP	Pn	01 02 52.2	0.0
CGP				i S	Sn	01 03 23.8	+0.9
SCPH	Surigao	3.26	339	⇓eP	Sn	01 03 45.1	+6.5
PAGZ	Pagadian	3.46	289	eP	Pn	01 03 04.8	+1.1
QIZ	Qiongzhong	20.45	308	eP	P	01 06 42.4	-1.6
PMG	Port Moresby	25.94	128	P	P	01 07 39.8	+1.7
	3.8nm,0.5s,mb4.1						
PMG	Port Moresby	25.94	128	LR	LR	01 19 11.5	
	comp=Z,2μm,18.7s,baz=318,slow=39						
WRA	Warramunga Arr	27.55	164	P	P	01 07 52.2	-0.2
WRA				LR	LR	01 19 54.2	
WRA	Warramunga Arr	27.55	164	P	P	01 07 52.2	-0.2
	82nm,0.7s,mb5.4,baz=340,slow=11,SNR=218						
WRA				LR	LR	01 19 54.2	
	comp=Z,590nm,19.7s,baz=0.0,slow=39						
WB2	Warramunga Arr	27.55	164	⇑iP	P	01 07 56.2	+3.8
INCN	Inchon	30.62	360	P	P	01 08 22.3	+2.8
ASAR	Alice Springs	31.01	167	P	P	01 08 22.4	-0.7
	0.5nm,0.3s,mb3.8,baz=340,slow=6.8,SNR=12						
CTA	Charters Tower	32.87	145	LR	LR	01 22 08.0	
	comp=Z,1μm,19.9s,baz=326,slow=36						
NWAO	Narrogin (SRO)	40.44	192	LR	LR	01 26 32.6	
	comp=Z,229nm,20.4s,baz=58,slow=37						
LSA	Lhasa	40.49	309	P	P	01 09 40.3	-3.9
STKA	Stephens Creek	40.94	160	P	P	01 09 47.5	-0.3
STKA				LR	LR	01 28 38.3	
STKA	Stephens Creek	40.94	160	P	P	01 09 47.5	-0.3
	1.1nm,0.4s,mb4.1,baz=334,slow=9.5,SNR=6.2						
STKA				LR	LR	01 28 38.3	
	comp=Z,1μm,20.5s,baz=339,slow=39						
MKAR	Makanchi Array	55.10	324	P	P	01 11 35.3	-1.7
	1.3nm,0.5s,mb4.2,baz=114,slow=7.8,SNR=24						
MKAR				PcP	PcP	01 12 39.3	+1.7
	0.7nm,0.7s,baz=132,slow=3.9,SNR=4.9						
AAK	Ala-Archa	58.14	317	eP	P	01 11 58.6	0.0
KURK	Kurchatov	59.22	327	eP	P	01 12 07.0	+1.1
	2.7nm,0.9s,mb4.3						
BRVK	Borovoye	64.89	326	eP	P	01 12 40.8	-3.1
VNDA	Vanda	86.38	173	LR	LR	01 53 53.3	
	comp=Z,432nm,18.5s,baz=344,slow=36						
FINES	FINESS Array B	89.19	332	P	P	01 15 00.1	+0.3
	1.2nm,0.8s,mb4.0,baz=74,slow=5.9,SNR=4.5						
IDI	Anoyia	95.69	306	LR	LR	02 01 13.1	
	comp=Z,1μm,21.8s,baz=94,slow=37						
TORD	Torodi Ar. Bea	121.91	290	PKP	PKPdf	01 20 59.7	+0.3
	0.3nm,0.7s,baz=71,slow=0.7,SNR=2.3						
TZTN	Tazewell	128.47	31	ePKPdf	PKPdf	01 21 12.2	+0.9

*BJI **13** 01:02:55.0, 0.59N×126.26E, h39km, mB5.4, mb5.1, Ms4.8, Msz4.7*

*NEIC **13** 01:02:55.8±2.8, 1.19N×126.24E, h3km±17km, mb5.2/39, Error ellipse: s-maj=6.6km s-min=4.2km az=59.0*

NEIC Felt [III] on Ternate and at Bitung; [II] at Manado, Indonesia.

*GCMT **13** 01:02:55.8±0.2, 1.31N×126.19E, h34km, MW5.3/76, Moment Tensor Solution. s75,c121; s76,c129; Duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.90±.03; $M_{\theta\theta}$0.22±.02; $M_{\phi\phi}$-1.11±.02; $M_{r\theta}$-0.48±.03; $M_{\theta\phi}$-0.27±.02; $M_{\phi r}$-0.49±.03; Best double couple: $M_0$1.25500×10^{17} NP1:ϕ_s348.00000°, δ35.00000°, λ53.00000°. NP2:ϕ_s211.00000°, δ63.00000°, λ113.00000°. Principal axes: T 1.1930, Plg64.0000°, Azm160.0000°; N 0.1310, Plg20.0000°, Azm20.0000°; P -1.3180, Plg15.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **13** 01:02:59.1±1.2, 1.24N×126.23E, h33km, mb5.4/33, MS4.6/5 Error ellipse: s-maj=11.0km s-min=5.7km az=113.2*

*ISCJB **13** 01:02:59.7±0.2, 1.24N±0.02×126.35E±0.03, h38km, mb5.2/102, MS4.6/27, Error ellipse: s-maj=4.5km s-min=3.1km az=168.8*

*IDC **13** 01:03:01.0±2.0, 1.16N×126.30E, h37km±15km, mb4.8/25, mb1 4.8/26, mb1mx4.8/27, mbtmp4.8/26, ML4.9/1, MS4.5/8, Ms1 4.5/8, ms1mx4.2/23, Error ellipse: s-maj=15.7km s-min=7.8km az=68.0*

ISC 13 01:03:01.5±0.2**, 1.19N**±0.02×**126.37E**±0.03**, h41**km**, h41**km±2.3km**:pP-P, n339, σ1.17**/312**, mb5.2**/102**, MS4.6**/27**, 31C-25D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	5.07	344	⇑eP	Pn	01 04 14.5	-0.5
GSPH				i S	Sn	01 05 11.1	-1.2
AAI	Ambon	5.17	159	P	Pn	01 04 19.3	+2.8
	561nm,0.9s						
MATI	Mati	5.72	359	eP	Pn	01 04 24.5	+0.6
BUKP	Musuan	6.77	349	eP	Pn	01 04 40.0	+1.6
PCI	Palu	6.86	252	P	Pn	01 04 40.7	+1.1
	717nm,1.3s						
BIPH	Bislig	6.95	360	⇑eP	Pn	01 04 42.2	+1.4
BIPH				i S	Sn	01 06 02.5	+3.9
PAGZ	Pagadian	7.25	336	eP	Pn	01 04 44.1	-0.9
CGP	Cagayan de Oro	7.41	347	eP	Pn	01 04 48.1	+1.0
MYLDM	Lahad Datu	8.80	297	⇑P	Pn	01 05 08.3	+2.0
TSM	Tawau	9.03	290	⇓P	Pn	01 05 09.3	-0.2
KAPI	Kappang	9.04	227	Pn	Pn	01 05 11.9	+2.4
	1μm,0.5s,SNR=23						
SDKM	Sandakan	10.17	296	⇑P	Pn	01 05 25.7	+0.6
KDM	Kudat	11.08	301	⇑P	Pn	01 05 38.8	+1.3
KKM	Kota Kinabalu	11.22	296	ePn	Pn	01 05 41.1	+1.6
KKM	Kota Kinabalu	11.22	296	⇓P	Pn	01 05 42.0	+2.5
BATP	Bataraza	11.40	312	eP	Pn	01 05 43.5	+1.6
BATP	Bataraza	11.40	312	eP	Pn	01 05 43.5	+1.6
BATI	Kupang	11.64	193	Pn	Pn	01 05 48.2	+3.1
	3.6nm,0.3s,baz=316,slow=2.2,SNR=3.9						
ENPP	El Nido	12.11	326	eP	Pn	01 05 51.3	-0.3
BTM	Bintulu	13.43	279	⇑P	Pn	01 06 10.9	+1.3
LUBP	Lubang	13.86	334	eP	Pn	01 06 18.0	+2.5
SBUM	Sibu	14.20	275	⇑P	Pn	01 06 21.5	+1.3
KMMI	Kalianget	14.84	236	P	Pn	01 06 30.5	+1.8
	553nm,1.3s						
KAKA	Kakadu	15.06	157	ePn	Pn	01 06 29.5	-2.2
	710nm,0.9s						
KAKA				e		01 06 37.1	
NBBI	Negara	15.08	231	P	Pn	01 06 34.4	+2.5
	601nm,1.5s						
BALP	Baler	15.21	342	eP	Pn	01 06 33.3	-0.3
KSM	Kuching	16.06	271	ePn	Pn	01 06 42.0	-2.6
KSM				e		01 06 47.8	
KSM	Kuching	16.06	271	⇑P	Pn	01 06 45.4	+0.8
KRKI	Karangkates	16.70	236	P	Pn	01 06 54.4	+1.8
	803nm,1.5s						
BJII	Banjamegara	18.66	243	P	Pn	01 07 16.8	0.0
	219nm,1.9s						
TPI	Tanjungpandan	19.12	258	P	Pn	01 07 20.6	-1.8
	52nm,1.4s						
FITZ	Fitzroy Crossi	19.18	182	eP	Pn	01 07 21.6	-1.4
	74nm,0.9s						
FITZ				i S	S	01 10 55.0	-2.2
FITZ	Fitzroy Crossi	19.18	182	P	Pn	01 07 21.9	-1.2
	3.0nm,0.3s,baz=20,slow=11,SNR=51						
FITZ				LR	LR	01 15 33.8	
	comp=Z,496nm,21.0s,baz=0.0,slow=39						
LEM	Lembang	20.34	247	P	P	01 07 39.8	+5.2
	101nm,0.9s						
WRA	Warramunga Arr	22.41	160	P	P	01 07 55.9	-0.8
WRA	Warramunga Arr	22.41	160	P	P	01 07 55.9	-0.8
	148nm,0.6s,mb5.6,baz=342,slow=11,SNR=397						
WRA				S	S	01 11 58.9	-1.9
	20nm,1.1s,baz=334,slow=15,SNR=10						
WRA				ScP	ScP	01 15 26.4	+1.2
	1.1nm,0.8s,baz=336,slow=2.6,SNR=3.6						
WB2	Warramunga Arr	22.41	160	i S	S	01 11 58.9	-2.0
COEN	Coen	22.44	133	eP	P	01 07 55.6	-1.5
	22nm,0.8s,mb4.7						
COEN				eS	S	01 12 03.9	+2.2
MYKOM	Kota Tinggi	22.52	272	⇑P	P	01 07 58.2	+0.2
KGM	Kluang	23.06	272	⇑P	P	01 08 04.2	+0.5
MBWA	Marble Bar	23.14	196	eP	P	01 08 00.3	-4.1
	36nm,0.6s,mb5.0						
MBWA				ePcP	PcP	01 11 45.0	-7.2
PMG	Port Moresby	23.23	117	eP	P	01 08 05.8	+0.4
PMG	Port Moresby	23.23	117	⇓iP	P	01 08 05.0	-0.4
PMG	Port Moresby	23.23	117	P	P	01 08 05.5	+0.1
	28nm,1.0s,mb4.7,baz=317,slow=8.9,SNR=11						
NACB	Ninganchiao	23.31	349	P	P	01 08 04.8	-1.3
KTGM	Kuala Trenggan	23.56	281	⇑P	P	01 08 08.8	+0.2
XMIS	Christmas Isla	23.65	240	eP	P	01 08 06.8	-2.7
YHNB	Yeheng	23.84	349	eP	P	01 08 09.4	-1.6
QIZ	Qiongzhong	24.02	319	⇓P	P	01 08 11.8	-0.9
QIZ				S	S	01 12 27.7	+0.4
QIZ				AMB	AMB		
	comp=Z,31nm,1.8s,mb4.4						
QIZ				AMB	AMB		
	comp=Z,309nm,4.6s						
QIZ				LR	LR		
	comp=N,1μm,19.7s,MS4.4						
QIZ				LR	LR		
	comp=E,755nm,23.4s,MS4.4						
QIZ				LR	LR		
	comp=Z,2μm,24.4s,MS4.5						
QIZ	Qiongzhong	24.02	319	eP	P	01 08 10.0	-2.7
	comp=Z,14nm,0.8s,mb4.4						
QZH	Quanzhou	24.78	343	i P	P	01 08 19.3	-0.3
QZH				S	S	01 12 32.0	-7.5
QZH				AMB	AMB		
	comp=Z,900nm,5.3s						
QZH				LR	LR		
	comp=N,3μm,23.2s,MS4.8						
QZH				LR	LR		
	comp=E,2μm,18.5s,MS4.8						
QZH				LR	LR		
	comp=Z,3μm,18.2s,MS4.8						
FRIM	Kepong	24.81	275	⇑P	P	01 08 20.5	+0.5
GZH	Guangzhou	25.18	331	P	P	01 08 24.7	+1.4
GZH				S	S	01 12 52.5	+6.7
GZH				LR	LR		
	comp=N,581nm,15.0s,MS4.4						
GZH				LR	LR		
	comp=E,807nm,19.4s,MS4.4						
GZH				LR	LR		
	comp=Z,1μm,19.0s,MS4.3						
JOW	Kunigami	25.56	4	P	P	01 08 28.4	+1.7
	comp=Z,55nm,0.7s,mb5.2,baz=200,slow=7.6,SNR=18						
ASAR	Alice Springs	25.77	164	P	P	01 08 28.7	+0.1
ASAR				PcP	PcP	01 11 58.1	+0.2
ASAR				S	S	01 12 56.2	+1.0
ASAR				ScP	ScP	01 15 35.0	+0.6
ASAR	Alice Springs	25.77	164	P	P	01 08 28.7	+0.1
ASAR						01 11 58.1	
ASAR				S	S	01 12 56.2	+1.1
ASAR	Alice Springs	25.77	164	P	P	01 08 28.7	+0.1
	comp=Z,17nm,0.5s,mb4.8,baz=345,slow=6.8,SNR=126						
ASAR				PcP	PcP	01 11 58.1	+0.2
	comp=Z,5.0nm,0.7s,baz=352,slow=1.9,SNR=4.3						
ASAR				S	S	01 12 56.2	+1.0
	comp=Z,5.4nm,1.1s,baz=352,slow=18,SNR=4.8						
ASAR				ScP	ScP	01 15 35.0	+0.6
	comp=Z,1.6nm,1.0s,baz=345,slow=2.7,SNR=2.7						
KULM	Kulim	26.00	280	eP	P	01 08 29.5	-1.3
KULM				e		01 09 01.7	
KULM				ePcP	PcP	01 11 58.4	-0.2
KULM	Kulim	26.00	280	⇓P	P	01 08 29.7	-1.2
PPI	Padang Panjang	26.03	267	P	P	01 08 30.7	-0.4
	comp=Z,66nm,1.2s,mb5.0						
PSI	Prapat	27.48	274	P	P	01 08 42.4	-1.8
	comp=Z,48nm,0.9s,mb5.0,baz=95,slow=5.7,SNR=48						
CTA	Charters Tower	28.76	138	eP	P	01 08 55.7	+0.2
	comp=Z,17nm,1.0s,mb4.7						
CTA	Charters Tower	28.76	138	eP	P	01 08 55.7	+0.2
CTA				pmax	pmax		
	comp=Z,17nm,1.0s						
CTA	Charters Tower	28.76	138	P	P	01 08 55.8	+0.3
	comp=Z,23nm,1.1s,mb4.8,baz=319,slow=9.9,SNR=14						
CTAO	Charters Tower	28.76	138	eP	P	01 08 55.7	+0.3
	comp=Z,54nm,1.3s,mb5.1						
CTAO				ePcP	PcP	01 12 08.8	+3.7
CTAO	Charters Tower	28.76	138	eP	P	01 08 55.7	+0.2
CTAO				e		01 12 08.8	
CTAO				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.1						
CBIJ	Chichi jima	29.90	29	LR	LR	01 20 23.1	
	comp=Z,666nm,19.4s,MS4.3,baz=238,slow=35						
SSE	Sheshan	30.15	351	eP	P	01 09 08.7	+1.0
SSE				AP	pP	01 09 22.5	+3.7
SSE				XP	sP	01 09 28.0	+4.3
SSE				PCP	PcP	01 12 10.0	+1.6
SSE				S	S	01 14 06.5	+2.5
SSE				XS	sS	01 14 28.3	+5.8
SSE				SCS	ScS	01 19 42.4	-1.0
SSE				AMB	AMB		
	comp=Z,39nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,169nm,8.8s						
SSE				LR	LR		
	comp=N,505nm,20.6s,MS4.2						
SSE				LR	LR		
	comp=E,151nm,20.5s,MS4.2						
SSE				LR	LR		
	comp=Z,864nm,21.0s,MS4.4						
BDT	Bhumibol Dam	31.29	302	P	P	01 09 17.5	-0.5
GYA	Guiyang	31.47	325	⇑iP	P	01 09 22.9	+3.5
GYA				PP	PP	01 10 28.9	-2.2
GYA				S	S	01 14 27.2	+2.3
GYA				XS	sS	01 14 49.6	+6.1
GYA				SCP	ScP	01 15 52.4	+0.2
GYA				SS	SS	01 16 18.3	-23
GYA				SCS	ScS	01 19 48.8	-1.2
GYA				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
GYA				AMB	AMB		
	comp=Z,160nm,6.4s						
GYA				LR	LR		
	comp=N,710nm,17.8s,MS4.6						
GYA				LR	LR		
	comp=E,990nm,17.6s,MS4.6						
GYA				LR	LR		
	comp=Z,870nm,18.0s,MS4.5						
NJ2	Nanjing	31.51	348	eP	P	01 09 21.7	+2.0
NJ2				AP	pP	01 09 36.4	+5.6
NJ2				PP	PP	01 10 27.2	-4.2
NJ2				S	S	01 14 26.5	+1.2
NJ2				XS	sS	01 14 49.0	+5.1
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,340nm,4.9s						
NJ2				LR	LR		
	comp=N,980nm,17.7s						
NJ2				LR	LR		
	comp=E,1μm,25.4s						
NJ2				LR	LR		
	comp=Z,1μm,25.4s						
FORT	Forrest	31.83	177	eP	P	01 09 22.6	+0.1
	comp=Z,101nm,0.8s,mb5.7						
CHG	Chiang Mai	32.09	305	⇑P	P	01 09 24.5	-0.5
	comp=Z,16nm,0.8s,mb4.9						
CHTO	Chiang Mai	32.09	305	eP	P	01 09 23.4	-1.6
	comp=Z,14nm,1.0s,mb4.8						
CHTO				ePP	PP	01 10 37.3	-0.8
CHTO				ePcP	PcP	01 12 15.3	+1.5
CHTO	Chiang Mai	32.09	305	eP	P	01 09 23.4	-1.6
CHTO				e		01 10 37.3	
CHTO				e		01 12 15.3	
CHTO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
CHTO	Chiang Mai	32.09	305	P	P	01 09 24.7	-0.3
	SNR=8.9						
CHTO	Chiang Mai	32.09	305	P	P	01 09 24.7	-0.3
	SNR=8.9						
KMI	Kunming	32.97	318	P	P	01 09 32.9	+0.3
KMI				AP	pP	01 09 45.3	+1.5
KMI				XP	sP	01 09 50.9	+2.3
KMI				PP	PP	01 10 45.0	-2.7
KMI				S	S	01 14 47.9	-0.3
KMI				XS	sS	01 15 12.7	+5.9
KMI				PCS	PcS	01 16 00.3	-1.4
KMI				SS	SS	01 16 49.9	-22
KMI				SCS	ScS	01 19 55.5	-2.2
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
KMI				AMB	AMB		
	comp=Z,178nm,3.2s						
KMI				LR	LR		
	comp=N,1μm,22.4s,MS4.7						
KMI				LR	LR		
	comp=E,1μm,20.8s,MS4.7						
KMI				LR	LR		
	comp=Z,2μm,19.4s,MS4.9						
KLBR	Kellerberrin	33.61	193	⇑iP	P	01 09 38.1	0.0
	comp=Z,28nm,0.5s,mb5.5						
MUN	Mundaring	34.36	195	eP	P	01 09 44.4	-0.2
NWAO	Narrogin (SRO)	35.01	193	eP	P	01 09 50.8	+0.5
NWAO				e		01 11 02.7	
NWAO				ePcP	PcP	01 12 19.9	-1.9
NWAO	Narrogin (SRO)	35.01	193	P	P	01 09 50.7	+0.5
	comp=Z,18nm,0.4s,mb5.3,baz=19,slow=8.1,SNR=25						
HNR	Honiara	35.06	108	P	P	01 09 50.0	-0.9
	comp=Z,108nm,0.7s,mb5.9,baz=261,slow=2.4,SNR=6.0						
EIDS	Eidsvold	35.62	140	eP	P	01 09 55.4	-0.1
	comp=Z,36nm,1.5s,mb5.1						
STKA	Stephens Creek	35.91	158	⇑iP	P	01 09 58.1	+0.1
	comp=Z,54nm,1.1s,mb5.4						
STKA	Stephens Creek	35.91	158	P	P	01 09 58.1	+0.2
	comp=Z,42nm,0.7s,mb5.5,baz=335,slow=8.8,SNR=53						
KSRS	Korea Array	36.12	2	P	P	01 10 00.5	+0.9
	comp=Z,4.8nm,0.7s,mb4.6,baz=179,slow=9.0,SNR=14						
KSRS				PcP	PcP	01 12 25.5	+0.6
	comp=Z,2.1nm,0.7s,baz=195,slow=3.5,SNR=4.2						
CD2	Chengdu	36.51	326	P	P	01 10 01.5	-1.6
CD2				AP	pP	01 10 13.6	-0.8
CD2				XP	sP	01 10 19.0	-0.2
CD2				PP	PP	01 11 26.9	+0.1
CD2				PCP	PcP	01 12 24.4	-1.9
CD2				S	S	01 15 40.5	-2.1
CD2				XS	sS	01 16 00.9	-0.5
CD2				SS	SS	01 18 08.7	-15
CD2				SCS	ScS	01 20 11.3	-5.1
CD2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.4						
CD2				AMB	AMB		
	comp=Z,80nm,4.8s						
CD2				LR	LR		
	comp=N,1μm,20.4s,MS4.9						
CD2				LR	LR		
	comp=E,2μm,19.2s,MS4.9						
CD2				LR	LR		
	comp=Z,1μm,20.4s,MS4.6						
XAN	Xi’an	36.53	335	P	P	01 10 01.6	-1.7
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
XAN				LR	LR		
	comp=N,572nm,18.2s,MS4.5						
XAN				LR	LR		
	comp=E,350nm,14.1s,MS4.5						
XAN				LR	LR		
	comp=Z,1μm,19.4s						
MJAR	Matsushiro Arr	36.84	16	P	P	01 10 05.2	-0.7
MJAR						01 12 28.0	
MJAR	Matsushiro Arr	36.84	16	P	P	01 10 05.2	-0.7
	comp=Z,9.2nm,0.7s,mb4.7,baz=184,slow=9.4,SNR=14						
MJAR				PcP	PcP	01 12 28.0	+0.8
	comp=Z,2.3nm,0.6s,baz=179,slow=3.1,SNR=2.7						
MJAR				LR	LR	01 23 23.4	
	comp=Z,543nm,21.2s,MS4.3,baz=215,slow=33						
MAJO	Matsushiro	36.84	16	eP	P	01 10 05.3	-0.5
	comp=Z,16nm,0.8s,mb4.9						
MAJO	Matsushiro	36.84	16	eP	P	01 10 05.3	-0.6
MAJO				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
MAT	Matsushiro	36.84	16	P	P	01 10 05.1	-0.8
MAT				eS	S	01 15 54.6	+7.0
DL2	Dalian	37.79	354	P	P	01 10 13.7	-0.1
DL2				AP	pP	01 10 24.6	-0.5
DL2				S	S	01 16 02.6	+0.7
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
DL2				LR	LR		
	comp=N,350nm,14.4s,MS4.5						
DL2				LR	LR		
	comp=E,450nm,16.3s,MS4.5						
DL2				LR	LR		
	comp=Z,450nm,17.7s,MS4.3						
ARMA	Armidale	39.58	145	eP	P	01 10 29.6	+0.6
BJT	Baijiatuau	39.75	348	eP	P	01 10 29.2	-1.0
	comp=Z,32nm,0.9s,mb5.1						
BJT	Baijiatuau	39.75	348	eP	P	01 10 29.2	-1.0
BJT				pmax	pmax		
	comp=Z,32nm,0.9s						
BJI	Beijing	39.77	348	P	P	01 10 29.3	-1.1
BJI				AP	pP	01 10 40.5	-1.3
BJI				XP	sP	01 10 45.5	-1.1
BJI				PCP	PcP	01 12 36.3	+0.1
BJI				SS	SS	01 19 25.3	-3.5
BJI				AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.3						
BJI				AMB	AMB		
	comp=Z,537nm,4.9s						
BJI				LR	LR		
	comp=N,379nm,6.0s						
BJI				LR	LR		
	comp=E,461nm,5.7s						
BJI				LR	LR		
	comp=Z,731nm,25.9s,MS4.4						
LZH	Lanzhou	40.52	331	eP	P	01 10 36.3	-0.5
LZH				AP	pP	01 10 49.0	+0.9
LZH				XP	sP	01 10 54.0	+1.1
LZH				PP	PP	01 12 11.0	+0.3
LZH				PCP	PcP	01 12 40.7	+2.0
LZH				eS	S	01 16 42.3	-0.8
LZH				XS	sS	01 17 05.0	+2.9
LZH				SS	SS	01 19 40.0	-4.0
LZH				AMB	AMB		
	comp=Z,67nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,274nm,6.1s						
LZH				LR	LR		
	comp=E,721nm,14.1s						
LZH				LR	LR		
	comp=Z,1μm,15.6s,MS4.9						
SNY	Shenyang	40.53	357	⇑P	P	01 10 37.6	+0.9
SNY				AMB	AMB		

comp=Z,62nm,1.4s,mb5.0
SNY LR LR
comp=N,795nm,19.1s,MS4.8
SNY LR LR
comp=E,1µm,17.6s,MS4.8
SNY LR LR
comp=Z,1µm,23.7s
SHL Shillong 41.14 309 *e*P **P 01 10 42.0 0.0**
HHC Hu-ho-hao-te 41.70 343 *e*P **P 01 10 47.1 +0.8**
HHC AP pP 01 10 57.5 -0.2
HHC XP sP 01 11 03.1 +0.6
HHC PCP PcP 01 12 42.2 -0.2
HHC PCS PcS 01 16 33.0 -0.8
HHC S **S 01 17 00.3 -0.1**
HHC XS sS 01 17 21.2 +1.9
HHC SS SS 01 20 02.2 -4.9
HHC AMB AMB
comp=Z,10.0nm,1.2s,mb4.3
HHC AMB AMB
comp=Z,329nm,4.6s
HHC LR LR
comp=N,523nm,16.6s,MS4.6
HHC LR LR
comp=E,412nm,15.5s,MS4.6
HHC LR LR
comp=Z,984nm,22.6s
TURI Tura 42.34 308 *ex* x 01 10 23.0
MDJ Mudanjiang 43.34 3 P **P 01 11 00.6 +1.0**
MDJ AMB AMB
comp=Z,21nm,0.8s,mb4.9
MDJ AMB AMB
comp=Z,562nm,4.9s
MDJ Mudanjiang 43.34 3 *e*P **P 01 11 00.2 +0.6**
comp=Z,17nm,0.7s,mb4.9
LSA Lhasa 43.88 314 P **P 01 11 03.2 -1.0**
LSA AP pP 01 11 16.0 +0.3
LSA S **S 01 17 30.4 -2.5**
LSA AMB AMB
comp=Z,20nm,1.0s,mb4.8
LSA AMB AMB
comp=Z,210nm,6.0s
LSA LR LR
comp=N,350nm,16.0s
LSA LR LR
comp=E,320nm,24.0s
LSA LR LR
comp=Z,600nm,24.0s
LSA Lhasa 43.88 314 *e*P **P 01 11 04.2 0.0**
comp=Z,18nm,0.6s,mb5.0
LSA *e*PP PP 01 12 45.1 -1.9
LSA PcP PcP 01 12 51.5 +1.5
LSA Lhasa 43.88 314 *e*P **P 01 11 04.2 0.0**
LSA *e* 01 12 45.1
LSA 01 12 51.5
LSA pmax pmax
comp=Z,18nm,0.6s,mb5.0
GTA Gaotai 45.10 331 *e*P **P 01 11 12.9 -0.9**
GTA AP pP 01 11 25.5 +0.2
GTA XP sP 01 11 30.2 +0.1
GTA AMB AMB
comp=Z,6.0nm,1.2s,mb4.3
GTA AMB AMB
comp=Z,216nm,3.8s
GTA LR LR
comp=N,682nm,23.6s,MS4.6
GTA LR LR
comp=E,440nm,19.4s,MS4.6
GTA LR LR
comp=Z,1µm,22.4s,MS4.7
TAPN Taplejung 45.27 309 *e*P **P 01 11 14.0 -1.3**
comp=Z,154nm,1.5s,mb5.6
ODAN Odare 45.29 308 *e*P **P 01 11 14.3 -1.2**
comp=Z,56nm,0.8s,mb5.4
DZM Mont Dzumac 45.41 123 *e*P **P 01 11 17.1 +0.6**
DZM Mont Dzumac 45.41 123 *e*P **P 01 11 17.1 +0.6**
DZM Mont Dzumac 45.41 123 P **P 01 11 17.2 +0.6**
comp=Z,29nm,0.9s,mb5.1,baz=321,slow=5.3,SNR=20
PALK Pallekele 45.92 279 *e*P **P 01 11 20.1 -0.6**
comp=Z,29nm,1.4s,mb5.0
JIRN Jiri 46.60 308 *e*P **P 01 11 24.7 -1.2**
KKN Kakani 47.38 308 *e*P **P 01 11 30.4 -1.5**
comp=Z,40nm,0.7s,mb5.4
KKN Kakani 47.38 308 *e*P **P 01 11 30.4 -1.5**
KKN pmax pmax
comp=Z,40nm,0.7s,mb5.5
HABR Khabarovsk 47.69 8 P **P 01 11 30.0 -4.0**
HABR *e**PP pP 01 11 40.0 -5.5
HABR *e* 01 13 22.1
HABR S **S 01 18 25.3 -1.8**
HABR *e**SS sS 01 18 42.0 -4.3
YSS Yuzh-Sakhalins 47.77 15 P **P 01 11 33.6 -1.0**
YSS Yuzh-Sakhalins 47.77 15⇓ *e*P **P 01 11 35.1 +0.5**
YSS pmax pmax
comp=Z,105nm,2.7s,mb5.4
GKN Gorkha 47.99 308 *e*P **P 01 11 34.9 -1.7**
comp=Z,61nm,0.9s,mb5.6
KLR Kul'dur 48.08 5 *e*P **P 01 11 34.0 -2.9**
HIA Hailar 48.23 354⇓ *i*P **P 01 11 38.4 +0.3**
HIA Hailar 48.23 354⇓ *i*P **P 01 11 38.3 +0.2**
ULN Ulaanbaatar 49.42 343 *e*P **P 01 11 47.0 -0.2**
comp=Z,5.6nm,0.4s,mb5.0
ULN Ulaanbaatar 49.42 343⇑ *e*P **P 01 11 47.1 -0.1**
SONM Songino Array 49.59 342 P **P 01 11 47.5 -1.0**
SONM 01 13 09.4
SONM Songino Array 49.59 342 P **P 01 11 47.5 -1.1**
comp=Z,2.4nm,0.7s,mb4.4,baz=158,slow=8.0,SNR=21
SONM PcP PcP 01 13 09.4 -0.3
comp=Z,3.9nm,0.8s,baz=159,slow=4.1,SNR=2.6
SONM LR LR 01 33 28.1
comp=Z,685nm,21.6s,MS4.6,baz=164,slow=37
HYB Hyderabad 49.68 292 *e*P **P 01 11 49.0 -0.8**
comp=Z,65nm,1.0s,mb5.6
HYB Hyderabad 49.68 292 *e*P **P 01 11 49.0 -0.8**
HYB pmax pmax
comp=Z,65nm,1.0s,mb5.6
HYB Hyderabad 49.68 292 *i* P **P 01 11 49.0 -0.8**
comp=Z,65nm,1.0s,mb5.6
CIT Chita 51.78 350 *e*P **P 01 12 06.3 +1.3**
CIT *e* 01 12 14.4
CIT pmax pmax
comp=Z,170nm,1.8s,mb5.7
ZAK Zakamensk 52.80 342 *e*P **P 01 12 11.3 -1.3**
ZAK *e* 01 13 22.5
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb4.2
ZAK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
TLY Talaya 53.82 343 *e*P **P 01 12 23.1 +3.0**
TLY Talaya 53.82 343 *e*P **P 01 12 20.5 +0.4**
TLY *e*S **S 01 19 46.9 -5.1**
TLY *e* 01 22 09.0
TLY *e*SSS 01 25 16.6
TLY pmax pmax
comp=Z,16nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,584nm,21.0s,MS4.6
NDI New Delhi 54.24 305 *ex* x 01 12 19.0
WMQ Urumqi 54.61 326⇑ *i*P **P 01 12 25.7 -0.3**
WMQ AP pP 01 12 38.7 +1.0
WMQ XP sP 01 12 44.2 +1.7
WMQ PCP PcP 01 13 28.2 -0.5
WMQ PP PP 01 14 29.9 +1.1
WMQ SCP ScP 01 17 21.2 -2.9
WMQ PCS PcS 01 17 26.2 -2.0
WMQ S **S 01 20 00.2 -2.7**
WMQ XS sS 01 20 21.7 -0.7
WMQ AMB AMB
comp=Z,27nm,0.9s,mb5.3
WMQ AMB AMB
comp=Z,397nm,5.4s
WMQ LR LR
comp=N,817nm,25.2s,MS4.8
WMQ LR LR
comp=E,632nm,24.0s,MS4.8
WMQ LR LR
comp=Z,817nm,23.0s,MS4.7
MOY Mondy 54.64 341 *e*P **P 01 12 26.4 +0.4**
CLNS Chul'man 55.49 359 *e*P **P 01 12 32.5 +0.4**
CLNS pmax pmax
comp=Z,14nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.7s
THN Thein Dam 56.84 309 *ex* **P 01 12 40.8 -1.4**

BOD Bodaibo 57.31 352⇑ *i*P **P 01 12 45.1 +0.1**
BOD pmax pmax
comp=Z,22nm,0.8s,mb5.2
PET Petropavlovsk 58.20 22 *e*P **P 01 12 51.5 +0.2**
PET *e*S **S 01 20 52.7 +2.6**
MK31 Makanchi Array 59.44 326 *i* P **P 01 12 58.9 -1.2**
MKAR Makanchi Array 59.44 326 P **P 01 12 59.1 -1.0**
MKAR 01 13 46.5
MKAR Makanchi Array 59.44 326 P **P 01 12 59.1 -1.0**
comp=Z,16nm,0.6s,mb5.2,baz=121,slow=7.6,SNR=80
MKAR PcP PcP
comp=Z,12nm,0.8s,baz=115,slow=5.8,SNR=3.6
MKAR LR LR 01 39 15.2
comp=Z,979nm,21.7s,MS4.9,baz=120,slow=37
KSH Kashi 59.60 316 P **P 01 13 02.2 +0.8**
KSH AP pP 01 13 14.0 +0.8
KSH XP sP 01 13 19.2 +1.2
KSH PCP PcP 01 13 47.6 -0.7
KSH *e*PP PP 01 15 15.7 +2.4
KSH *e*SCP ScP 01 17 40.8 -5.4
KSH S **S 01 21 03.8 -5.0**
KSH XS sS 01 21 29.1 +0.6
KSH *e*SCS ScS 01 22 44.1 -4.5
KSH *e*SS SS 01 25 03.0 -1.9
KSH AMB AMB
comp=Z,472nm,1.8s,mb6.2
KSH LR LR
comp=Z,1µm,6.3s
YAK Yakutsk 60.74 2 *e*P **P 01 13 09.0 +0.3**
comp=Z,52nm,0.7s,mb5.8
YAK Yakutsk 60.74 2 *e*P **P 01 13 08.9 +0.2**
YAK *e**PP pP 01 13 17.2 -3.4
YAK *e* 01 13 52.8
YAK *e*S **S 01 21 23.5 +0.9**
YAK *e* 01 22 59.3
YAK *e*SSS 01 28 02.3
YAK pmax pmax
comp=Z,35nm,0.9s,mb5.5
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,23nm,0.8s,mb5.4
YAK pmax pmax
comp=N,9.0nm,0.7s
YAK smax
comp=N,210nm,3.2s
YAK smax
comp=E,279nm,5.5s
YAK MLR MLR
comp=Z,423nm,22.0s,MS4.5
YAK MLR MLR
comp=N,387nm,20.0s,MS4.6
YAK MLR MLR
comp=E,209nm,19.0s,MS4.6
URZ Urewera 60.96 136 P **P 01 13 10.9 +0.2**
comp=E,6.1nm,0.3s,mb5.2,baz=6.7,slow=7.3,SNR=6.2
MA2 Magadan 61.24 14 *e*P **P 01 13 13.5 +1.4**
comp=E,34nm,0.9s,mb5.5
MA2 Magadan 61.24 14 *d i*P **P 01 13 13.5 +1.3**
MA2 *e*S **S 01 21 31.3 +2.3**
MA2 *e*SS SS 01 25 37.4 +7.6
MA2 *e*SSS 01 28 04.0
MA2 pmax pmax
comp=Z,60nm,1.0s,mb5.7
MA2 MLR MLR
comp=Z,500nm,21.3s,MS4.6
KZA Kyzart 61.25 319 P **P 01 13 13.0 +0.4**
SNR=11
TKM2 Tokmak 2 61.42 320 P **P 01 13 09.1 -4.7**
comp=Z,18nm,0.8s,mb5.2
TKM2 PcP PcP 01 13 54.8 -0.8
TKM2 Tokmak 2 61.42 320 P **P 01 13 09.1 -4.6**
TKM2 01 13 54.8
TKM2 pmax pmax
comp=Z,18nm,0.8s,mb5.2
TKM2 Tokmak 2 61.42 320 P **P 01 13 13.7 0.0**
SNR=8.6
KBK Karagaybulak 61.72 319 P **P 01 13 16.4 +0.7**
SNR=15
UCH Uchtor 61.81 318 *e*P **P 01 13 16.6 +0.2**
comp=Z,28nm,1.0s,mb5.3
UCH Uchtor 61.81 318 P **P 01 13 16.9 +0.6**
SNR=28
AAK Ala-Archa 62.01 319 P **P 01 13 16.3 -1.4**
comp=Z,63nm,1.0s,mb5.7,SNR=8.7
AAK Ala-Archa 62.01 319 *i* P **P 01 13 16.5 -1.2**
AAK Ala-Archa 62.01 319 *d i*P **P 01 13 16.5 -1.2**
AAK pmax pmax
comp=Z,13nm,1.3s,mb4.9
AAK Ala-Archa 62.01 319 P **P 01 13 17.0 -0.7**
SNR=7.8
AAK Ala-Archa 62.01 319 P **P 01 13 17.0 -0.7**
SNR=7.8
AAK Ala-Archa 62.01 319 P **P 01 13 17.2 -0.5**
SNR=6.5
USP Ospenovka 62.29 320 P **P 01 13 18.9 -0.6**
SNR=24
AML Almayashu 62.31 318 *e*P **P 01 13 19.6 -0.2**
comp=Z,36nm,1.0s,mb5.5
AML *e*PcP PcP 01 14 00.6 +1.4
AML Almayashu 62.31 318 P **P 01 13 20.6 +0.9**
SNR=19
EKS2 Erkin-Say 62.49 319 *e*P **P 01 13 19.8 -1.1**
comp=Z,12nm,0.8s,mb5.1
EKS2 *e* 01 14 45.5
EKS2 *e*PP PP 01 15 39.6 +0.9
EKS2 Erkin-Say 62.49 319 P **P 01 13 20.9 0.0**
SNR=15
KURK Kurchatov 63.69 328 P **P 01 13 27.8 -0.9**
comp=Z,344nm,0.5s,SNR=30
KURK Kurchatov 63.69 328 *e*P **P 01 13 27.0 -1.7**
KURK Kurchatov 63.69 328 *d i*P **P 01 13 27.5 -1.2**
KURK Kurchatov 63.69 328 P **P 01 13 27.5 -1.2**
SNR=15
KURK Kurchatov 63.69 328 P **P 01 13 27.5 -1.2**
SNR=15
NVS Novosibirsk 63.97 334⇓ *i*P **P 01 13 28.8 -1.7**
NVS pmax pmax
comp=N,9.0nm,0.8s
NVS pmax pmax
comp=E,18nm,0.8s
NVS pmax pmax
comp=Z,28nm,0.8s,mb5.3
KK31 Karatay Array 64.85 318 *i* P **P 01 13 34.9 -1.6**
BRVK Borovoye 69.32 328 P **P 01 14 03.6 -1.1**
comp=Z,199nm,1.0s,mb6.0,SNR=16
BRVK Borovoye 69.32 328 *e*P **P 01 14 04.0 -0.7**
BRVK Borovoye 69.32 328 P **P 01 14 04.1 -0.5**
SNR=12
BRVK Borovoye 69.32 328 P **P 01 14 04.1 -0.5**
SNR=12
CHKZ Chkalovo 69.44 328 *e*P **P 01 14 04.3 -1.1**
comp=Z,27nm,1.1s,mb5.1
CHKZ Chkalovo 69.44 328 *e*P **P 01 14 04.3 -1.0**
CHKZ pmax pmax
comp=Z,27nm,1.1s,mb5.1
TIXI Tiksi 70.37 1 *e*P **P 01 14 10.7 -0.1**
comp=Z,24nm,1.1s,mb5.0
TIXI Tiksi 70.37 1 *e*P **P 01 14 10.2 -0.6**
TIXI pmax pmax
comp=Z,23nm,1.1s,mb5.0
BILL Bilibino 72.08 15⇑ *e*P **P 01 14 24.1 +2.9**
BILL Bilibino 72.08 15 P **P 01 14 24.0 +2.8**
BILL *e* 01 14 29.5
BILL *e* 01 14 40.2
BILL pmax pmax
comp=Z,18nm,1.8s,mb4.7
BILL MLR MLR
comp=Z,200nm,24.0s,MS4.3
ABKT Ailbek 72.21 310 P **P 01 14 23.7 +1.1**
comp=Z,82nm,0.6s,mb5.8,SNR=7.7
AB31 Akbulak array 73.89 321 *i* P **P 01 14 30.8 -1.4**
AKTK Aktyubinsk 75.42 322 P **P 01 14 40.5 -0.6**
AKTO Aktyubinsk 75.42 322 P **P 01 14 40.5 -0.6**
comp=Z,8.0nm,0.4s,mb5.0,baz=98,slow=6.7,SNR=33
SVE Sverdlovsk 75.93 329⇑ *e*P **P 01 14 43.6 -0.3**
SVE *e*S S 01 24 17.6 -6.0
SVE pmax pmax
comp=Z,56nm,0.8s,mb5.5
GAMB Gambell 76.85 24 *e*P **P 01 14 50.0 +1.1**
ARU Arti 76.89 328 P **P 01 14 48.4 -0.9**
comp=Z,270nm,0.8s,mb6.2,SNR=22
ARU Arti 76.89 328 *e*P **P 01 14 47.9 -1.4**

ARU Arti 76.89 328 *d i*P **P 01 14 48.1 -1.2**
ARU *e* pP 01 14 58.0 -3.5
ARU 01 17 39.9
ARU S S 01 24 34.2 +0.1
ARU pmax pmax
comp=Z,83nm,1.7s,mb5.4
SOKR Solikamsk 78.74 331⇑ *i*P **P 01 14 59.5 0.0**
SOKR pmax pmax
comp=Z,50nm,1.1s,mb5.4
QRN Al-Qurain 79.31 299 *e*P **P 01 15 02.7 -0.6**
QRN AMb AMB 01 15 04.0
comp=Z,70nm,0.4s,mb6.0
RDF Al-Radifah 79.64 299 *e*P **P 01 15 03.7 -1.5**
RDF AMb AMB 01 15 07.7
comp=Z,33nm,0.7s,mb5.4
MIB Mutribah 79.89 300 *e*P **P 01 15 05.0 -1.5**
MIB AMb AMB 01 15 08.0
comp=Z,64nm,0.8s,mb5.6
NAY Al-Naaiem 79.94 299 *e*P **P 01 15 05.4 -1.3**
NAY AMb AMB 01 15 08.1
comp=Z,27nm,0.6s,mb5.3
OPO Ambohidratompo 80.13 251 P **P 01 15 08.5 +0.6**
comp=Z,6.8nm,0.7s,mb4.7,baz=93,slow=2.2,SNR=6.3
VNDA Vanda 80.97 173 P **P 01 15 11.8 +0.5**
VNDA Vanda 80.97 173 P **P 01 15 11.8 +0.5**
comp=Z,7.8nm,0.6s,mb4.8,baz=314,slow=6.1,SNR=45
MAW Mawson 81.26 200 P **P 01 15 13.5 +0.5**
comp=Z,6.8nm,0.8s,mb4.6,baz=72,slow=9.4,SNR=7.6
SBA Scott Base 81.88 172 *e*P **P 01 15 17.1 +1.0**
comp=Z,28nm,1.1s,mb5.1
SBA Scott Base 81.88 172 *e*P **P 01 15 17.1 +1.0**
SBA pmax pmax
comp=Z,28nm,1.1s,mb5.1
DGRG David-gareji 82.46 312 P **P 01 15 21.3 +1.4**
BHD Baghdad 82.65 303 *ex* x 01 15 18.0
BHD Baghdad 82.65 303 *ex* x 01 25 39.0
MTA Mtatsminda 82.92 312 P **P 01 15 22.8 +0.5**
TBLG Delisi 82.96 312 P **P 01 15 23.8 +1.3**
SVW2 Sparrevohn 83.19 29 *e*P **P 01 15 24.8 +1.6**
TTA Tatalina 83.31 27 *e*P **P 01 15 24.9 +1.0**
GOR Gori 83.45 312 P **P 01 15 26.4 +1.4**
DYDN Diyadin 83.60 309 *i* P **P 01 15 26.7 +0.9**
ZEI Tsey 83.66 313 *e*P **P 01 15 26.3 +0.2**
ZEI *e**PP pP 01 15 35.9 -2.5
ZEI pmax pmax
comp=Z,49nm,1.0s,mb5.6
TVAN Van 83.75 308 *i* P **P 01 15 27.2 +0.5**
ONI Oni 83.98 313 P **P 01 15 29.1 +1.4**
KDAK Kodiak Island 84.22 32 P **P 01 15 29.9 +1.4**
comp=Z,17nm,0.8s,mb5.2,baz=197,slow=11,SNR=4.9
TUTA Tutak 84.27 309 *i* P **P 01 15 29.7 +0.5**
PRGR Permogore 84.56 332⇑ *i*P **P 01 15 27.8 -2.4**
PRGR *e*S S 01 25 48.2 -5.7
KIV Kislovodsk 84.63 314 P **P 01 15 31.5 +0.6**
comp=Z,123nm,1.0s,mb6.0,SNR=5.6
KIV Kislovodsk 84.63 314⇓ *i*P **P 01 15 31.2 +0.3**
KIV Kislovodsk 84.63 314 *e*P **P 01 15 30.9 0.0**
KIV *e* 01 25 51.7
KIV pmax pmax
comp=Z,15nm,0.7s,mb5.2
KIV Kislovodsk 84.63 314 P **P 01 15 31.7 +0.8**
SNR=7.3
KIV Kislovodsk 84.63 314 P **P 01 15 31.7 +0.8**
SNR=7.3
KIV Kislovodsk 84.63 314⇑ *i*P **P 01 15 32.8 +1.9**
PPT Papeete 84.68 108 *e*LR LR 01 42 25.6
comp=Z,499nm,24.8s
IMA2 Indian Mountai 84.83 24 *e*P **P 01 15 33.0 +1.5**
TBI Tubuai 85.11 113 *e*LR LR 01 42 21.8
comp=Z,473nm,32.0s
ERZM Erzurum 85.41 310 *i* P **P 01 15 36.4 +1.5**
SLKM Skilak Lake 85.72 30 *e*P **P 01 15 36.2 +0.2**
VRHR Novokhopersk 85.77 321 *e*P **P 01 15 36.1 -0.4**
VRHR pmax pmax
comp=N,20nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.6
VRHR pmax pmax
comp=E,110nm,0.9s
MARD Mardin 85.78 307 *i* P **P 01 15 37.1 +0.2**
PMR Palmer 86.33 28 P **P 01 15 40.8 +1.7**
comp=E,20nm,1.4s,mb5.2
PMR Palmer 86.33 28 P **P 01 15 40.8 +1.8**
PMR pmax pmax
comp=Z,20nm,1.4s,mb5.2
MCK McKinley 86.58 26 *e*P **P 01 15 40.2 0.0**
comp=Z,13nm,1.1s,mb5.1
MCK McKinley 86.58 26 *e*P **P 01 15 40.2 0.0**
MCK pmax pmax
comp=Z,13nm,1.1s,mb5.1
SML Sawmill 86.73 28 *e*P **P 01 15 42.5 +1.5**
SOC Sochi 86.76 313 *e*P **P 01 15 42.3 +0.8**
SOC *e**PP pP 01 15 52.6 -1.4
SOC *e* 01 19 02.3
SOC *e*S S 01 26 06.8 -10
KELT Kelkit 87.03 310 *i* P **P 01 15 43.9 +0.9**
COLA College 87.13 25 *e*P **P 01 15 40.4 -2.5**
COLA College 87.13 25⇓ *e*P **P 01 15 43.2 +0.3**
ELZG Elazig 87.22 308 *i* P **P 01 15 45.4 +1.5**
VORD Divnogorie 87.24 321 *e*P **P 01 15 43.4 -0.3**
VORD *e**PP pP 01 15 50.8 -5.3
VORD pmax pmax
comp=Z,30nm,0.9s,mb5.5
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VRSR Storozhevoye 87.31 321 *e*P **P 01 15 43.8 -0.2**
VRSR pmax pmax
comp=N,1.0nm,1.0s
VRSR pmax pmax
comp=E,4.0nm,1.0s
VRSR pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
VOR Voronezh 87.32 322 *e*P **P 01 15 43.0 -1.1**
VOR pmax pmax
comp=Z,100nm,1.4s,mb5.8
MALT Malatya 87.66 308⇓ P **P 01 15 46.9 +0.9**
MALT Malatya 87.66 308⇑ *i*P **P 01 15 46.6 +0.6**
GZT Gaziantep 88.34 307 *i* P **P 01 15 49.7 +0.5**
ANN Anapa 88.42 315 *e*P **P 01 15 50.5 +1.0**
ANN *e* 01 26 16.9
ANN pmax pmax
comp=Z,124nm,1.7s,mb5.9
OBN Obninsk 88.92 325 *e*P **P 01 15 50.4 -1.2**
comp=Z,30nm,1.0s,mb5.6
OBN Obninsk 88.92 325⇑ *e*P **P 01 15 50.4 -1.2**
OBN *e* 01 26 37.5
OBN pmax pmax
comp=Z,35nm,1.2s,mb5.6
OBN MLR MLR
comp=Z,600nm,24.0s,MS4.9
ASF Jabal al Asfar 88.93 302 P **P 01 15 53.3 +1.1**
comp=Z,24nm,1.0s,mb5.5,baz=324,slow=3.2,SNR=28
KMBO Kilima Mbogo 89.14 269 P **P 01 15 55.9 +2.4**
SNR=14
KMBO Kilima Mbogo 89.14 269 P **P 01 15 55.9 +2.4**
SNR=14
KMBO Kilima Mbogo 89.14 269 P **P 01 15 54.6 +1.0**
comp=Z,4.7nm,0.8s,mb4.8,baz=38,slow=8.7,SNR=13
SYO Syowa Base 89.94 201⇑ *e*pP pP 01 16 01.6 -6.9
EGAK Eagle 89.99 25 *e*P **P 01 15 56.4 0.0**
comp=Z,6.2nm,0.9s,mb4.9
DAWY Dawson 90.80 26 *e*P **P 01 16 00.9 +0.7**
QSPA South Pole Qui 91.11 180 *e*P **P 01 16 02.0 +0.6**
comp=Z,70nm,0.9s,mb6.0
JOF Joensuu 91.26 333 *e*p **P 01 16 00.3 -2.1**
comp=Z,6.1nm,0.7s,mb5.0
JOF Joensuu 91.26 333 *e*P **P 01 16 00.3 -2.1**
JOF pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
BRTR Keskin Array B 91.36 310 *i* P **P 01 16 01.7 -1.6**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 91.36 310 P **P 01 16 02.5 -0.8**
comp=Z,3.4nm,0.8s,mb4.7,baz=116,slow=5.6,SNR=18
CSS Prodhromos 91.82 305 *e*P **P 01 16 04.5 -1.1**
comp=Z,17nm,0.8s,mb5.4
KEV Kevo 92.14 340 *e*p **P 01 16 03.4 -2.9**
comp=Z,5.3nm,0.8s,mb4.9
KEV Kevo 92.14 340 *e*P **P 01 16 03.4 -2.9**
KEV pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
INK Inuvik 92.64 21 *e*P **P 01 16 08.8 +0.1**
comp=Z,561nm,1.3s

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	**Inuvik**	**92.64**	**21**	eP	**P**	**01 16 08.8**	**+0.2**
INK				pmax	pmax		
	comp=Z,561nm,1.3s						
ARCES	**ARCESS Array B**	**92.69**	**340**	P	**P**	**01 16 08.0**	**-0.9**
ARCES						01 33 22.1	
ARCES	**ARCESS Array B**	**92.69**	**340**	P	**P**	**01 16 08.0**	**-0.9**
	comp=Z,12nm,0.9s,mb5.3,baz=80,slow=6.4,SNR=19						
ARCES				PKKP	PKKPbc	01 33 22.1	-1.5
	comp=Z,4.4nm,1.1s,baz=277,slow=3.2,SNR=7.3						
ARCES				LR	LR	02 04 33.2	
	comp=Z,262nm,19.2s,MS4.7,baz=323,slow=40						
AKASG	**Malin Array Be**	**93.62**	**321**	iP	**P**	**01 16 12.6**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**93.62**	**321**	P	**P**	**01 16 11.7**	**-1.9**
	comp=Z,0.8nm,0.4s,mb4.5,baz=74,slow=4.2,SNR=8.3						
AKASG				LR	LR	02 01 19.2	
	comp=Z,281nm,21.8s,MS4.7,baz=320,slow=37						
KAF	**Kangasniemi**	**93.67**	**332**	ep	**P**	**01 16 11.4**	**-2.1**
	comp=Z,1.4nm,0.4s,mb4.7,baz=76,slow=4.2						
KAF	**Kangasniemi**	**93.67**	**332**	eP	**P**	**01 16 11.4**	**-2.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.6						
FINES	**FINESS Array B**	**93.89**	**332**	P	**P**	**01 16 13.3**	**-1.2**
FINES				LR	LR	02 00 18.1	
FINES	**FINESS Array B**	**93.89**	**332**	P	**P**	**01 16 13.3**	**-1.2**
	comp=Z,1.9nm,0.7s,mb4.7,baz=51,slow=6.1,SNR=7.9						
FINES				LR	LR	02 00 18.1	
	comp=Z,454nm,21.8s,MS4.9,baz=92,slow=37						
VRI	**Vrincioaia**	**95.87**	**316**	⇓P	**P**	**01 16 24.6**	**+0.6**
PLOR	**Plostina**	**95.93**	**316**	⇓P	**P**	**01 16 25.4**	**+1.2**
PLOR	**Plostina**	**95.93**	**316**	⇑iP	**P**	**01 16 25.1**	**+0.9**
MLR	**Muntele Rosu**	**96.47**	**316**	⇓P	**P**	**01 16 25.7**	**-1.0**
MLR	**Muntele Rosu**	**96.47**	**316**	⇓iP	**P**	**01 16 26.5**	**-0.2**
BURAR	**Bucovina Array**	**96.64**	**318**	⇓P	**P**	**01 16 27.4**	**0.0**
BURAR	**Bucovina Array**	**96.64**	**318**	⇓iP	**P**	**01 16 27.6**	**+0.2**
KWP	**Kalwaria**	**97.93**	**320**	⇓P	**P**	**01 16 33.5**	**+0.3**
KWP	**Kalwaria**	**97.93**	**320**	⇑iP	**P**	**01 16 33.4**	**+0.2**
SANT	**Santorini**	**98.08**	**307**	P	**P**	**01 16 33.7**	**-0.5**
UZH	**Uzhgorod**	**98.39**	**319**	⇓iP	**P**	**01 16 35.0**	**-0.3**
UZH				e	pP	01 16 45.0	-2.8
RKT	**Rikitea**	**98.43**	**113**	eSKSac	SKSac	01 27 09.1	-2.2
	comp=Z,106nm,38.8s						
RKT				eLR	LR	01 48 29.9	
	comp=Z,414nm,29.2s						
VTS	**Vitosha**	**98.87**	**313**	⇓iP	**P**	**01 16 37.2**	**-0.4**
RES	**Resolute Bay**	**100.36**	**10**	ePdif	Pdif	01 16 43.8	0.0
	comp=Z,88nm,0.8s						
RES	**Resolute Bay**	**100.36**	**10**	eP	Pdif	01 16 43.8	-0.1
RES				pmax	pmax		
	comp=Z,88nm,0.8s						
NB2	**NORSAR Subarra**	**100.89**	**333**	P	Pdif	01 16 44.1	-2.1
	comp=Z,3.0nm,0.9s,baz=68,slow=4.4						
NB2	**NORSAR Subarra**	**100.89**	**333**	P	Pdif	01 16 44.1	-2.1
NB2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**100.89**	**333**	P	Pdif	01 16 44.4	-1.9
	comp=Z,2.4nm,1.0s,baz=69,slow=4.6,SNR=3.8						
YKA	**Yellowknife Ar**	**101.94**	**25**	P	Pdif	01 16 51.1	+0.2
	comp=Z,0.7nm,0.6s,baz=296,slow=4.2,SNR=12						
YKA				PKiKP	PKiKP	01 21 13.1	-0.2
	comp=Z,0.2nm,0.4s,baz=294,slow=1.6,SNR=3.0						
YKA				PKKPbc	PKKPbc	01 32 55.3	-2.6
	comp=Z,0.2nm,0.5s,baz=117,slow=2.7,SNR=4.1						
GERES	**GERESS Array B**	**103.83**	**321**	Pdiff	Pdif	01 17 01.2	+1.8
	comp=Z,0.2nm,0.5s,baz=46,slow=3.9,SNR=4.1						
NVAR	**Mina Array Bea**	**108.85**	**49**	PKKP	PKKPbc	01 32 48.2	+12
	comp=Z,0.9nm,0.9s,baz=116,slow=5.9,SNR=5.5						
LPG	**La Plagne**	**109.45**	**320**	ePP	PP	01 21 54.8	-3.0
	comp=Z,34nm,1.5s						
LPL	**La Plagne**	**109.45**	**320**	ePP	PP	01 21 56.1	-1.8
	comp=Z,17nm,1.1s						
DAU	**Daniels Canyon**	**113.29**	**45**	ePdif	Pdif	01 17 43.0	+1.6
BW06	**Boulder Array**	**113.48**	**42**	PKiKP	PKiKP	01 21 35.4	-0.1
PDAR	**Pinedale Array**	**113.48**	**42**	PKKPbc	PKKPbc	01 32 20.1	-1.0
	comp=Z,0.5nm,0.6s,baz=105,slow=4.4,SNR=4.7						
PDAR				PKKPab	PKKPab	01 32 28.8	+1.0
	comp=Z,1.0nm,0.7s,baz=118,slow=6.6,SNR=7.3						
ULM	**Lac du Bonnet**	**117.34**	**29**	PKP	PKPdf	01 21 41.9	-0.8
	comp=Z,1.6nm,0.5s,baz=206,slow=1.4,SNR=6.7						
ISCO	**Idaho Springs**	**117.47**	**43**	ePKPdf	PKPdf	01 21 43.5	+0.2
SDCO	**Great Sand Dun**	**118.47**	**45**	ePKPdf	PKPdf	01 21 46.4	+1.2
ANMO	**Albuquerque**	**118.97**	**48**	⇑iPKIKP	PKPdf	01 21 46.6	+0.3
BNM	**Barren Site**	**119.17**	**49**	ePKPdf	PKPdf	01 21 47.6	+0.9
ECSD	**EROS,Sioux Fal**	**121.06**	**35**	ePKPdf	PKPdf	01 21 50.2	+0.2
MNTX	**Cornudas Mount**	**121.12**	**51**	ePKPdf	PKPdf	01 21 51.6	+1.1
SCHQ	**Schefferville**	**123.12**	**9**	PKP	PKPdf	01 21 54.0	+0.4
	comp=Z,3.1nm,0.7s,baz=9.6,slow=2.5,SNR=15						
TORD	**Torodi Ar. Bea**	**123.33**	**287**	PKP	PKPdf	01 21 55.1	-0.1
	comp=Z,4.2nm,0.7s,baz=63,slow=1.3,SNR=16						
TORD				PKKPbc	PKKPbc	01 31 45.4	+0.7
	comp=Z,1.4nm,0.7s,baz=196,slow=1.9,SNR=13						
LTX	**Lajitas**	**123.41**	**53**	PKPdf	PKPdf	01 21 54.8	-0.2
TXAR	**Lajitas Array**	**123.41**	**53**	PKP	PKPdf	01 21 55.8	+0.8
	comp=Z,1.5nm,0.8s,baz=258,slow=0.9,SNR=12						
TXAR				PKKPbc	PKKPbc	01 31 44.2	-0.5
	comp=Z,0.4nm,0.8s,baz=81,slow=7.7,SNR=4.1						
COWI	**Conover**	**123.47**	**29**	ePKPdf	PKPdf	01 21 54.5	-0.1
WMOK	**Wichita Mounta**	**124.68**	**45**	ePKPdf	PKPdf	01 21 56.8	-0.4
WMOK				ePP	PP	01 23 43.1	-1.1
JFWS	**Jewell Farm**	**125.14**	**32**	ePKPdf	PKPdf	01 21 57.7	-0.2
JCT	**Junction City**	**125.96**	**50**	ePKPdf	PKPdf	01 22 00.6	+0.7
MIAR	**Mount Ida**	**128.39**	**43**	ePKPdf	PKPdf	01 22 05.4	+1.0
DBIC	**Dimbokro**	**130.70**	**280**	PKP	PKPdf	01 22 09.7	+0.4
	comp=Z,2.4nm,0.8s,baz=26,slow=4.2,SNR=2.7						
PLAL	**Pickwick Lake**	**131.70**	**38**	ePKPdf	PKPdf	01 22 11.0	+0.3
LRAL	**Lakeview Retre**	**133.65**	**40**	ePKPdf	PKPdf	01 22 15.7	+1.3
TKL	**Tuckaleechee C**	**133.80**	**35**	PKP	PKPdf	01 22 15.3	+0.8
	comp=Z,6.2nm,0.7s,baz=149,slow=6.4,SNR=7.2						
MGV	**Manicaragua**	**145.39**	**46**	eP	PKPbc	01 22 38.4	+2.5
JTS	**JuntasAbangare**	**146.81**	**69**	ePKPdf	PKPdf	01 22 37.2	-1.4
JTS				PKPbc	PKPbc	01 22 40.1	-0.3
JTS	**JuntasAbangare**	**146.81**	**69**	PKPbc	PKPbc	01 22 40.1	-0.3
	comp=Z,5.7nm,0.4s,baz=189,slow=3.2,SNR=6.8						
CCCC	**Cccc**	**147.56**	**45**	eP	PKPbc	01 22 46.4	+4.1
LCO	**Las Campanas**	**147.89**	**151**	ePKPbc	PKPbc	01 22 44.3	+1.3
NNA	**Nana**	**154.60**	**116**	ePKPdf	PKPdf	01 22 51.6	+1.0
NNA	**Nana**	**154.60**	**116**	PKP	PKPdf	01 22 51.0	+0.4
	comp=Z,3.1nm,0.4s,baz=204,slow=19,SNR=2.0						
ATAH	**Atahualpa**	**154.64**	**104**	PKP	PKPdf	01 22 52.0	+1.3
	comp=Z,4.0nm,0.7s,baz=247,slow=18,SNR=2.7						
OTAV	**Otavalo**	**155.14**	**87**	ePKPdf	PKPdf	01 22 53.9	+2.5
LPAZ	**La Paz**	**159.28**	**137**	PKP	PKPdf	01 22 55.4	-1.2
	comp=Z,0.7nm,0.7s,baz=24,slow=14,SNR=2.9						
SDV	**Santo Domingo**	**160.32**	**59**	PKP	PKPdf	01 22 55.7	-2.1
SDV				ePKPdf	PKPdf	01 22 58.3	+0.5
SDV	**Santo Domingo**	**160.32**	**59**	PKP	PKPdf	01 22 55.7	-2.1
	comp=Z,1.1nm,0.4s,baz=354,slow=14,SNR=2.5						
SIV	**San Ignacio**	**163.56**	**154**	PKP	PKPdf	01 22 58.6	-2.4
	comp=Z,1.1nm,1.0s,baz=9.6,slow=8.8,SNR=2.7						
SIV				PKPab	PKPab	01 23 53.3	+1.0
	comp=Z,6.1nm,0.8s,baz=204,slow=2.7,SNR=13						

IDC 13 01:42:22.5±1.5**, 1667S**×**17359W, h0**km**, mb3.9**/4**, mb1 4.2**/5**, mb1mx3.9**/16**, mbtmp3.9**/5**, ML1.4**/1**, MS3.6**/4**, Ms1 3.6**/4**, ms1mx3.3**/22**, Error ellipse: s-maj=85.6km s-min=20.2km az=144.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.26**	**33**	Pn	Pn	01 43 14.8	0.0
	2.7nm,0.3s,baz=56,slow=15,SNR=2.1						
AFI				Sn	Sn	01 43 53.7	-0.6
	24nm,0.3s,baz=19,slow=23,SNR=7.2						
AFI				LR	LR	01 43 56.3	
	comp=Z,367nm,21.1s,baz=105,slow=29						
RAR	**Rarotonga**	**13.82**	**111**	LR	LR	01 49 37.7	
	comp=Z,356nm,18.0s,baz=48,slow=32						
DZM	**Mont Dzumac**	**19.58**	**251**	LR	LR	01 51 55.2	
	comp=Z,108nm,18.8s,baz=301,slow=29						
PPT	**Papeete**	**22.96**	**96**	eLR	LR	01 52 22.1	
	363nm,26.5s						
URZ	**Urewera**	**23.01**	**199**	P	P	01 47 21.9	-7.1
	5.4nm,0.5s,baz=285,slow=23,SNR=3.9						
TBI	**Tubuai**	**23.60**	**110**	eLR	LR	01 52 35.7	
	357nm,30.2s						
HNR	**Honiara**	**26.75**	**282**	LR	LR	01 57 48.0	
	comp=Z,251nm,18.5s,baz=177,slow=35						
WRA	**Warramunga Arr**	**49.39**	**258**	P	P	01 51 14.0	-0.3
	1.3nm,0.6s,baz=96,slow=8.2,SNR=11						
ASAR	**Alice Springs**	**49.56**	**253**	P	P	01 51 15.6	0.0
	8.2nm,0.9s,baz=87,slow=8.5,SNR=57						
NVAR	**Mina Array Bea**	**75.39**	**42**	P	P	01 54 09.2	+1.1
	0.3nm,0.6s,baz=207,slow=5.8,SNR=3.3						
TXAR	**Lajitas Array**	**81.47**	**56**	P	P	01 54 41.2	-0.7
	0.6nm,1.0s,baz=196,slow=9.4,SNR=3.6						
KMBO	**Kilima Mbogo**	**144.81**	**243**	PKP	PKPdf	02 02 02.7	+0.2
	1.7nm,0.9s,baz=84,slow=6.7,SNR=6.8						
CLL	**Collm**	**145.05**	**353**	iP	PKPbc	02 02 03.7	+2.6
	comp=Z,19nm,1.4s						
BRG	**Berggiesshubel**	**145.35**	**352**	iP	PKPbc	02 02 04.8	+2.7
	comp=Z,5.3nm,1.3s						

*CSEM **13** 01:57:23.8, 3908N×4041E, h6km, MD2.8, After ISK*

ISK 13 01:57:23.8, 3908N×4041E, h6km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.21**	**163**	iPG	Pg	01 57 28.6	+0.7
BINT				iSG	Sg	01 57 32.0	+1.3
EZC	**Erzincan**	**0.81**	**326**	ePG	Pg	01 57 44.7	+5.3
PTK	**Pertek**	**0.81**	**257**	PG	Pg	01 57 39.9	+0.5
PTK				SG	Sg	01 57 51.6	+1.6
EZM	**Erzurum**	**1.11**	**41**	ePN	Pn	01 57 45.4	-0.5
ERZM	**Erzurum**	**1.11**	**41**	iP	Pg	01 57 45.9	+0.8
MARD	**Mardin**	**1.78**	**170**	iP	Pg	01 57 59.3	+1.3

*IDC **13** 02:00:02.7±0.7, 3637N×69.13E, h0km, mb4.2/14, mb1 4.3/16, mb1mx4.2/24, mbtmp4.2/16, ML3.7/2, Error ellipse: s-maj=21.2km s-min=14.1km az=27.0*

*ISCJB **13** 02:00:03.0±1.2, 3655N±003×69.10E±005, h9km±8km, mb4.1/24, MS4.0/3, Error ellipse: s-maj=6.5km s-min=4.8km az=172.9*

*NEIC **13** 02:00:04.6±0.5, 3649N×69.14E, h10km, mb4.5/14, Error ellipse: s-maj=9.4km s-min=6.6km az=54.0*

*BJI **13** 02:00:05.6, 3695N×6923E, h9km, mb4.4*

*MOS **13** 02:00:06.7±1.3, 3659N×69.19E, h33km, mb4.4/19, Error ellipse: s-maj=12.0km s-min=6.8km az=85.5*

*NNC **13** 02:00:08.2±4.7, 3674N×6885E, h20km±37km, mb4.0, mpv3.8, Error ellipse: s-maj=36.9km s-min=27.1km az=2.0*

ISC 13 02:00:05.1±1.4**, 3654N**±003×**6902E**±005**, h9**km±9km**, n117, σ1§26**/136**, mb4.1**/24**, MS4.0**/3**, 12C-9D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.60**	**138**	⇑P	**Pn**	**02 01 04.9**	**+3.9**
CEP				S	**Sg**	**02 02 00.0**	**-0.6**
THW	**Thamme Wali**	**4.36**	**148**	⇑P	**Pn**	**02 01 14.9**	**+3.4**
SBDP	**Sheikh Budin**	**4.48**	**160**	⇑P	**Pn**	**02 01 17.3**	**+4.2**
CHCP	**Chirah Chowk**	**4.51**	**128**	⇓P	**Pn**	**02 01 17.3**	**+3.7**
DRP	**Derazinda**	**4.88**	**168**	⇓P	**Pn**	**02 01 23.9**	**+5.2**
AML	**Almayashu**	**6.66**	**32**	⇓iPn	**Pn**	**02 01 44.0**	**+1.0**
	69nm,0.5s						
AML				eSn	**Sn**	**02 02 58.8**	**-0.3**
AML	**Almayashu**	**6.66**	**32**	P	**Pn**	**02 01 44.1**	**+1.0**
	SNR=29						
KK31	**Karatay Array**	**6.66**	**9**	Pn	**Pn**	**02 01 43.5**	**+0.4**
	6.0nm,0.3s,baz=196,slow=13,SNR=71						
KK31				⇑Sn	**Sn**	**02 02 57.4**	**-1.7**
	14nm,0.3s,baz=202,slow=24						
KK31				⇑Lg		02 03 33.1	
	53nm,0.6s,baz=193,slow=28						
THN	**Thein Dam**	**6.88**	**125**	eP	**Pn**	**02 01 48.1**	**+2.0**
THN				ex	x	02 03 38.8	
DLH	**Dalhousie**	**6.98**	**123**	eP	**Pn**	**02 01 49.0**	**+1.5**
DLH				ex	x	02 03 11.0	
UCH	**Uchtor**	**7.10**	**35**	⇑ePn	**Pn**	**02 01 49.9**	**+0.8**
	49nm,0.8s						
UCH				eSn	**Sn**	**02 03 10.9**	**+1.0**
UCH	**Uchtor**	**7.10**	**35**	P	**Pn**	**02 01 50.0**	**+0.9**
	SNR=43						
EKS2	**Erkin-Say**	**7.13**	**30**	ePn	**Pn**	**02 01 50.0**	**+0.5**
	26nm,0.6s						
EKS2				eSn	**Sn**	**02 03 11.3**	**+0.6**
EKS2	**Erkin-Say**	**7.13**	**30**	P	**Pn**	**02 01 50.3**	**+0.7**
	SNR=13						
KZA	**Kyzart**	**7.34**	**39**	P	**Pn**	**02 01 53.2**	**+0.8**
	SNR=35						
AAK	**Ala-Archa**	**7.41**	**33**	ePn	**Pn**	**02 01 52.9**	**-0.5**
	63nm,0.6s						
AAK				eSn	**Sn**	**02 03 17.7**	**+0.2**
AAK	**Ala-Archa**	**7.41**	**33**	eP	**Pn**	**02 01 52.9**	**-0.5**
AAK				e		02 03 17.7	
AAK				pmax	pmax		
	comp=Z,63nm,0.6s						
AAK	**Ala-Archa**	**7.41**	**33**	P	**Pn**	**02 01 54.1**	**+0.8**
	SNR=48						
KBK	**Karagaybulak**	**7.63**	**35**	P	**Pn**	**02 01 57.6**	**+1.1**
	SNR=31						
CHMS	**Chumysh**	**7.82**	**33**	P	**Pn**	**02 01 59.4**	**+0.5**
	SNR=40						
USP	**Ospenovka**	**7.93**	**30**	P	**Pn**	**02 02 00.6**	**+0.1**
	SNR=13						
ULHL	**Ulahol**	**7.98**	**42**	P	**Pn**	**02 02 02.6**	**+1.3**
	SNR=11						
TKM2	**Tokmak 2**	**8.14**	**36**	⇓Pn	**Pn**	**02 02 03.6**	**+0.1**
	comp=Z,1.8nm,0.7s						
TKM2				⇓Sn	**Sn**	**02 03 34.7**	**-0.9**
	comp=Z,7.6nm,1.1s						
TKM2	**Tokmak 2**	**8.14**	**36**	ePn	**Pn**	**02 02 03.6**	**+0.2**
	comp=Z,17nm,0.5s						
TKM2				eSn	**Sn**	**02 03 34.0**	**-1.6**
TKM2	**Tokmak 2**	**8.14**	**36**	eP	**Pn**	**02 02 03.6**	**+0.2**
TKM2				e		02 03 34.0	
TKM2				pmax	pmax		
	comp=Z,17nm,0.5s						
TKM2	**Tokmak 2**	**8.14**	**36**	P	**Pn**	**02 02 03.8**	**+0.4**
	SNR=10						
SDNR	**Sundarnagar**	**8.29**	**125**	eP	**Pn**	**02 02 08.0**	**+2.5**
SDNR				ex	x	02 03 43.0	
DDI	**Dehra Dun**	**9.77**	**127**	ex	x	02 04 14.0	
KHET	**Khetri**	**10.20**	**144**	eP	**Pn**	**02 02 33.4**	**+1.7**
KHET				AMb	AMB	02 02 41.7	
	comp=Z,13nm,0.9s						
KHET				eS	**Sn**	**02 04 20.3**	**-6.0**
NDI	**New Delhi**	**10.44**	**136**	eP	**Pn**	**02 02 33.5**	**-1.5**
NDI				eS	**Sn**	**02 04 25.0**	**-7.1**
JOSI	**Joshimath**	**10.62**	**121**	eP	**Pn**	**02 02 37.4**	**-0.1**
JOSI				ex	x	02 04 34.7	
SONA	**Sohna**	**10.71**	**138**	eP	**Pn**	**02 02 38.6**	**0.0**
SONA				AMb	AMB	02 02 47.4	
	comp=Z,28nm,0.8s						
SONA				eS	**Sn**	**02 04 30.9**	**-7.8**
AJM	**Ajmer**	**11.11**	**153**	eP	**Pn**	**02 02 44.0**	**-0.2**
AJM				eS	**Sn**	**02 04 42.0**	**-6.6**
MK31	**Makanchi Array**	**14.24**	**40**	⇑P	**Pn**	**02 03 25.2**	**-1.7**
	comp=Z,4.5nm,0.7s,baz=226,slow=16,SNR=31						
MK31	**Makanchi Array**	**14.24**	**40**	eP	**Pn**	**02 03 24.5**	**-2.3**
MKAR	**Makanchi Array**	**14.24**	**40**	iP	**Pn**	**02 03 25.1**	**-1.7**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**14.24**	**40**	Pn	**Pn**	**02 03 25.1**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=230,slow=14,SNR=43						
AB31	**Akbulak array**	**14.33**	**335**	⇓P	**Pn**	**02 03 25.3**	**-2.7**
	comp=Z,14nm,0.7s,baz=155,slow=12,SNR=81						
GKN	**Gorkha**	**15.70**	**118**	eP	**Pn**	**02 03 42.8**	**-3.7**
	comp=Z,123nm,0.7s						
KURK	**Kurchatov**	**15.77**	**23**	⇓P	**Pn**	**02 03 48.4**	**+1.2**
	comp=Z,6.5nm,1.1s						
KURK	**Kurchatov**	**15.77**	**23**	ePn	**Pn**	**02 03 46.4**	**-0.7**
	comp=Z,14nm,1.1s						
KURK				Sn	**Sn**	**02 06 42.0**	**0.0**
KURK	**Kurchatov**	**15.77**	**23**	eP	**Pn**	**02 03 46.4**	**-0.8**
KURK						02 06 42.0	
KURK				pmax	pmax		
	comp=Z,14nm,1.1s						
AKTK	**Aktyubinsk**	**16.00**	**334**	Pn	**Pn**	**02 03 48.6**	**-1.5**
AKTK				Sn	**Sn**	**02 06 37.5**	**-10**
AKTO	**Aktyubinsk**	**16.00**	**334**	⇑P	**Pn**	**02 03 47.9**	**-2.2**
	comp=Z,0.2nm,0.9s						
AKTO	**Aktyubinsk**	**16.00**	**334**	P	**Pn**	**02 03 48.6**	**-1.6**
AKTO						02 06 37.6	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.00**	**334**	Pn	**Pn**	**02 03 48.6**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=146,slow=13,SNR=21						
AKTO				Sn	**Sn**	**02 06 37.5**	**-10**
	comp=Z,0.3nm,0.3s,baz=185,slow=22,SNR=5.2						
KKN	**Kakani**	**16.28**	**118**	eP	**Pn**	**02 03 50.4**	**-3.6**
	comp=Z,105nm,0.8s						
KKN	**Kakani**	**16.28**	**118**	eP	**Pn**	**02 03 50.4**	**-3.6**
KKN				pmax	pmax		
	comp=Z,105nm,0.8s						
BVA0	**Borovoye Array**	**16.52**	**3**	⇑P	**Pn**	**02 04 00.2**	**+3.4**
	comp=Z,2.4nm,1.4s						
BRVK	**Borovoye**	**16.54**	**3**	ePn	**Pn**	**02 03 55.7**	**-1.5**
	comp=Z,6.1nm,0.7s						
BRVK				eSn	**Sn**	**02 07 03.9**	**+3.1**
BRVK	**Borovoye**	**16.54**	**3**	eP	**Pn**	**02 03 55.7**	**-1.5**
BRVK				e		02 07 03.9	
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
JIRN	**Jiri**	**17.01**	**116**	eP	**Pn**	**02 04 00.2**	**-3.0**
	comp=Z,59nm,0.6s						
CHKZ	**Chkalovo**	**17.18**	**3**	⇑P	**Pn**	**02 04 04.3**	**-0.9**
	comp=Z,6.4nm,1.1s						
CHKZ	**Chkalovo**	**17.18**	**3**	ePn	**Pn**	**02 04 03.6**	**-1.5**
	comp=Z,3.6nm,0.6s						
CHKZ				eSn	**Sn**	**02 07 11.1**	**-5.0**
CHKZ	**Chkalovo**	**17.18**	**3**	eP	**Pn**	**02 04 03.6**	**-1.5**
CHKZ				e		02 07 11.1	
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TAPN	**Taplejung**	**18.29**	**115**	eP	**Pn**	**02 04 17.2**	**-1.9**
	comp=Z,69nm,0.7s						
ODAN	**Odare**	**18.34**	**117**	eP	**Pn**	**02 04 17.9**	**-1.9**
	comp=Z,79nm,0.9s						
LSA	**Lhasa**	**19.73**	**104**	P	**Pn**	**02 04 37.0**	**+0.5**
LSA				AMB	AMB		
	comp=Z,30nm,0.9s						
LSA	**Lhasa**	**19.73**	**104**	eP	**Pn**	**02 04 36.6**	**+0.2**
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**19.73**	**104**	eP	**Pn**	**02 04 36.7**	**+0.2**
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
ZEI	**Tsey**	**20.28**	**296**	eP	**P**	**02 04 48.0**	**+7.1**
NVS	**Novosibirsk**	**20.75**	**24**	eP	**P**	**02 04 43.3**	**-2.6**
NVS				eS	**S**	**02 08 32.2**	**-5.3**
NVS				pmax	pmax		
	comp=N,13nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,18nm,0.8s						
NVS				smax			
	comp=N,15nm,2.0s						
NVS				smax			
	comp=E,5.0nm,1.2s						
HYB	**Hyderabad**	**20.83**	**154**	eP	**P**	**02 04 48.5**	**+1.5**
HYB	**Hyderabad**	**20.83**	**154**	iP	**P**	**02 04 48.5**	**+1.5**
SVE	**Sverdlovsk**	**21.07**	**347**	eP	**P**	**02 04 51.3**	**+2.0**
SVE				MLR	MLR		
	comp=Z,767nm,13.0s,MS4.3						
ARU	**Arti**	**21.11**	**344**	eP	**P**	**02 04 50.1**	**+0.2**
	comp=Z,12nm,0.8s,mb4.3						
ARU				eS	**S**	**02 08 44.0**	**-0.7**
ARU	**Arti**	**21.11**	**344**	d iP	**P**	**02 04 51.5**	**+1.7**
ARU						02 05 17.2	
ARU				eS	**S**	**02 08 38.4**	**-6.2**
ARU				SS		02 09 11.5	
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
KIV	**Kislovodsk**	**21.36**	**298**	eP	**P**	**02 05 02.0**	**+9.4**
KIV				eS	**S**	**02 08 50.6**	**+0.8**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
KIV				MLR	MLR		
	comp=Z,167nm,15.0s,MS3.5						
SHL	**Shillong**	**22.38**	**113**	eP	**P**	**02 05 04.5**	**+0.8**
GTA	**Gaotai**	**24.39**	**74**	eP	**P**	**02 05 23.8**	**+0.2**
GTA				AP		02 05 28.3	
GTA				XP	sP	02 05 31.1	+3.7
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb3.9						
ZAK	**Zakamensk**	**28.18**	**50**	eP	**P**	**02 06 01.1**	**+3.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
SONM	**Songino Array**	**29.63**	**56**	P	**P**	**02 06 11.0**	**+0.4**
SONM						02 09 13.1	
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**29.63**	**56**	P	**P**	**02 06 11.0**	**+0.4**
	comp=Z,1.9nm,0.6s,mb4.0,baz=265,slow=8.3,SNR=22						
SONM				PcP	PcP	02 09 13.1	-1.8
	comp=Z,0.3nm,0.4s,baz=226,slow=5.8,SNR=3.0						
ULN	**Ulaanbaatar**	**30.07**	**56**	eP	**P**	**02 06 14.2**	**-0.4**
	comp=Z,6.4nm,1.0s,mb4.3						
ULN	**Ulaanbaatar**	**30.07**	**56**	⇑iP	**P**	**02 06 14.7**	**+0.2**
AKASG	**Malin Array Be**	**31.68**	**309**	P	**P**	**02 06 30.1**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**31.68**	**309**	P	**P**	**02 06 30.1**	**+1.4**
	comp=Z,0.8nm,0.5s,mb3.8,baz=85,slow=7.3,SNR=3.6						
JOF	**Joensuu**	**35.05**	**331**	ep	**P**	**02 06 57.9**	**0.0**
	comp=Z,0.7nm,0.3s,mb4.1						
JOF	**Joensuu**	**35.05**	**331**	eP	**P**	**02 06 57.9**	**0.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
BOD	**Bodaibo**	**36.34**	**40**	eP	**P**	**02 07 04.1**	**-4.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
FINES	**FINESS Array B**	**36.57**	**327**	P	**P**	**02 07 10.3**	**-0.7**
FINES	**FINESS Array B**	**36.57**	**327**	iP	**P**	**02 07 11.6**	**+0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**36.57**	**327**	P	**P**	**02 07 10.3**	**-0.7**
	comp=Z,1.9nm,1.0s,mb3.9,baz=77,slow=8.6,SNR=4.3						
KAF	**Kangasniemi**	**36.74**	**328**	ep	**P**	**02 07 19.5**	**+7.1**
HIA	**Hailar**	**38.57**	**54**	⇓iP	**P**	**02 07 29.4**	**+1.4**
ARCES	**ARCESS Array B**	**40.51**	**338**	P	**P**	**02 07 44.3**	**+0.4**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**40.51**	**338**	P	**P**	**02 07 44.3**	**+0.4**
	comp=Z,2.3nm,0.7s,mb3.9,baz=108,slow=8.8,SNR=7.9						
CLL	**Collm**	**41.93**	**309**	Lm		02 08 00.0	
	comp=N,300nm,20.8s						
CLL				Lm		02 08 00.0	
	comp=E,400nm,19.7s						
NB2	**NORSAR Subarra**	**43.39**	**323**	P	**P**	**02 08 08.6**	**+1.0**
	comp=Z,2.6nm,0.7s,mb4.1,baz=98,slow=7.9						
NB2	**NORSAR Subarra**	**43.39**	**323**	P	**P**	**02 08 08.6**	**+1.0**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
NOA	**NORSAR Array B**	**43.39**	**323**	P	**P**	**02 08 07.8**	**+0.2**
NOA	**NORSAR Array B**	**43.39**	**323**	P	**P**	**02 08 07.8**	**+0.2**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NOA	**NORSAR Array B**	**43.39**	**323**	P	**P**	**02 08 07.8**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.2,baz=98,slow=8.0,SNR=8.9						
PSI	**Prapat**	**43.44**	**134**	P	**P**	**02 08 07.5**	**-1.0**
PSI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
PSI	**Prapat**	**43.44**	**134**	P	**P**	**02 08 07.5**	**-1.1**
	comp=Z,5.3nm,0.6s,mb4.5,baz=340,slow=7.7,SNR=8.0						
TIXI	**Tiksi**	**46.34**	**22**	eP	**P**	**02 08 30.6**	**-0.4**
	comp=Z,7.6nm,0.9s,mb4.6						
TIXI	**Tiksi**	**46.34**	**22**	eP	**P**	**02 08 29.9**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
KSRS	**Korea Array**	**46.37**	**70**	P	**P**	**02 08 31.0**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.2,baz=275,slow=8.0,SNR=5.8						
MJAR	**Matsushiro Arr**	**54.42**	**68**	P	**P**	**02 09 32.2**	**-0.4**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	**Matsushiro Arr**	**54.42**	**68**	P	**P**	**02 09 32.2**	**-0.4**
	comp=Z,0.8nm,0.4s,mb4.0,baz=309,slow=7.9,SNR=3.8						
ESDC	**Sonseca Array**	**56.02**	**297**	P	**P**	**02 09 45.0**	**+0.9**
	comp=Z,0.9nm,0.6s,mb4.0,baz=51,slow=8.2,SNR=3.7						
BILL	**Bilibino**	**59.27**	**26**	⇑P	**P**	**02 10 07.0**	**+0.5**
BILL				e		02 10 17.3	
BILL				e		02 24 31.2	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.1						
TORD	**Torodi Ar. Bea**	**64.12**	**267**	P	**P**	**02 10 39.9**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=52,slow=5.9,SNR=14						
INK	**Inuvik**	**74.12**	**9**	eP	**P**	**02 11 41.5**	**+0.2**
	comp=Z,212nm,1.0s						
INK	**Inuvik**	**74.12**	**9**	eP	**P**	**02 11 41.5**	**+0.3**
INK				pmax	pmax		
	comp=Z,212nm,1.0s						
COLA	**College**	**74.88**	**15**	eP	**P**	**02 11 45.7**	**0.0**
	comp=Z,5.1nm,0.8s,mb4.5						
COLA	**College**	**74.88**	**15**	eP	**P**	**02 11 45.7**	**0.0**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DAWY	**Dawson**	**77.24**	**12**	eP	**P**	**02 11 59.5**	**+0.3**

YKA	Yellowknife Ar	81.27	2	P	P	02 12 21.3	+0.1
YKA	Yellowknife Ar	81.27	2	P	P	02 12 21.3	+0.1
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YKA	Yellowknife Ar	81.27	2	P	P	02 12 21.3	+0.1
	comp=Z,3.5nm,0.6s,mb4.5,baz=351,slow=5.5,SNR=88						
SCHQ	Schefferville	81.42	336	P	P	02 12 22.6	+0.4
	comp=Z,2.3nm,0.8s,mb4.1,baz=18,slow=6.6,SNR=5.0						
WRA	Warramunga Arr	83.37	121	P	P	02 12 30.1	-2.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	83.37	121	P	P	02 12 30.1	-2.7
	comp=Z,0.8nm,0.6s,mb3.9,baz=315,slow=5.3,SNR=8.8						
ASAR	Alice Springs	85.59	124	P	P	02 12 41.7	-2.3
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	85.59	124	P	P	02 12 41.6	-2.3
	comp=Z,1.0nm,0.6s,mb4.2,baz=310,slow=5.1,SNR=14						
WES	Weston	93.51	332	P	P	02 13 20.0	-1.3

*NEIC **13** 02:02:04.3, 3654S×17538E, h398km, MG4.0(WEL), After WEL.*

WEL 13 02:02:33.1±0.2**, 3785S×17615E, h191**km±2km**, ML3.5**/12**, Error ellipse: s-maj=3.2km s-min=3.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.86	119	eP	Pn	02 03 00.9	-0.1
URZ	Urewera	0.86	119	PN	Pn	02 03 00.9	0.0
URZ				SN	Sn	02 03 22.6	+0.1
MWZ	Matawai	1.19	114	eP	Pn	02 03 03.6	+0.3
MWZ	Matawai	1.19	114	PN	Pn	02 03 03.6	+0.3
MWZ				SN	Sn	02 03 26.8	+0.1
BKZ	Black Stump Fm	1.34	169	eP	Pn	02 03 04.6	0.0
BKZ	Black Stump Fm	1.34	169	PN	Pn	02 03 04.6	+0.1
WNVZ	Wahianoa	1.54	196	PN	Pn	02 03 06.6	+0.3
MOVZ	Moawhango	1.59	191	P	Pn	02 03 06.4	-0.3
MOVZ	Moawhango	1.59	191	PN	Pn	02 03 06.4	-0.3
KNZ	Kokohu	1.68	135	eP	Pn	02 03 07.8	+0.2
KNZ	Kokohu	1.68	135	PN	Pn	02 03 07.8	+0.2
PUZ	Puketiti	1.68	98	eP	Pn	02 03 07.7	0.0
PUZ	Puketiti	1.68	98	PN	Pn	02 03 07.7	0.0
PUZ				SN	Sn	02 03 33.6	-0.8
PXZ	Pawanui	2.25	166	PN	Pn	02 03 13.0	-0.5
PXZ				SN	Sn	02 03 43.4	-1.8
MRZ	Mangatainoka R	2.84	189	eP	Pn	02 03 18.2	-2.1
MRZ	Mangatainoka R	2.84	189	PN	Pn	02 03 18.2	-2.1
MRZ				SN	Sn	02 03 54.0	-3.3
KIW	Kapiti Island	3.16	197	P	Pn	02 03 21.4	-2.7
KIW	Kapiti Island	3.16	197	PN	Pn	02 03 21.4	-2.7
MTW	Mount Morrison	3.34	188	P	Pn	02 03 23.3	-3.0
MTW	Mount Morrison	3.34	188	PN	Pn	02 03 23.3	-3.1
CAW	Cannon Point	3.36	194	P	Pn	02 03 23.7	-2.8
CAW	Cannon Point	3.36	194	PN	Pn	02 03 23.7	-2.9
TRWZ	Traveller	3.56	186	PN	Pn	02 03 26.1	-2.9
MSWZ	Moikau Station	3.63	191	P	Pn	02 03 26.4	-3.4
MSWZ	Moikau Station	3.63	191	PN	Pn	02 03 26.4	-3.4
TCW	Tory Channel	3.66	203	P	Pn	02 03 27.1	-3.1
TCW	Tory Channel	3.66	203	PN	Pn	02 03 27.1	-3.1
THZ	Tophouse	4.64	212	eP	Pn	02 03 38.8	-3.8
THZ	Tophouse	4.64	212	PN	Pn	02 03 38.8	-3.7
KHZ	Kahutara	4.98	203	eP	Pn	02 03 43.1	-3.8
KHZ	Kahutara	4.98	203	PN	Pn	02 03 43.1	-3.8
LTZ	Lake Taylor	5.75	210	eP	Pn	02 03 52.1	-4.8
LTZ	Lake Taylor	5.75	210	PN	Pn	02 03 52.5	-4.4

IDC 13 02:02:35.6±3.4**, 3591N×7178E, h0**km**, mb3.8**/5**, mb1 3.9**/5**, mb1mx3.6**/21**, mbtmp3.8**/5**, Error ellipse: s-maj=77.5km s-min=46.2km az=124.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	FINESS Array B	38.33	326	P	P	02 09 57.6	-0.1
	1.2nm,0.9s,baz=120,slow=9.8,SNR=3.6						
ARCES	ARCESS Array B	41.93	338	P	P	02 10 27.8	+0.3
	1.2nm,0.7s,baz=117,slow=8.6,SNR=7.6						
NB2	NORSAR Subarra	45.23	323	P	P	02 10 53.6	-0.6
	comp=Z,0.8nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	45.23	323	P	P	02 10 53.8	-0.5
	comp=Z,1.2nm,0.5s,baz=97,slow=7.6,SNR=4.0						
TORD	Torodi Ar. Bea	66.34	269	P	P	02 13 26.5	+0.1
	comp=Z,0.3nm,0.5s,baz=49,slow=5.7,SNR=5.9						
YKA	Yellowknife Ar	81.81	3	P	P	02 14 56.0	0.0
	comp=Z,0.4nm,0.4s,baz=351,slow=5.4,SNR=6.9						

IDC 13 02:07:04.9±2.1**, 2064S×17473W, h0**km**, mb4.1**/4**, mb1 4.3**/5**, mb1mx4.0**/16**, mbtmp4.1**/5**, ML2.2**/1**, Error ellipse: s-maj=108.5km s-min=23.6km az=145.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.26	23	Pn	Pn	02 08 51.6	-0.8
	2.6nm,0.3s,baz=193,slow=14,SNR=2.7						
AFI				Sn	Sn	02 10 10.2	-5.4
	3.5nm,0.3s,baz=300,slow=19,SNR=2.3						
DZM	Mont Dzumac	17.59	262	P	Pn	02 11 18.0	+6.4
	0.2nm,0.3s,baz=77,slow=17,SNR=6.2						
STKA	Stephens Creek	40.49	245	P	P	02 14 45.0	-0.7
	2.8nm,0.9s,baz=85,slow=11,SNR=2.9						
ASAR	Alice Springs	47.47	256	P	P	02 15 41.6	-0.2
	3.3nm,0.9s,baz=93,slow=8.6,SNR=25						
WRA	Warramunga Arr	47.61	261	P	P	02 15 42.8	-0.2
	2.4nm,0.8s,baz=96,slow=8.2,SNR=25						
NVAR	Mina Array Bea	79.06	42	P	P	02 19 11.1	0.0
	1.0nm,0.9s,baz=211,slow=6.3,SNR=7.1						
AKASG	Malin Array Be	144.56	334	PKP	PKPdf	02 26 42.7	-0.5
	1.2nm,0.6s,baz=39,slow=3.4,SNR=8.0						
BRTR	Keskin Array B	149.17	314	PKPbc	PKPbc	02 26 56.9	+1.3
	0.9nm,0.9s,baz=69,slow=4.5,SNR=4.1						

*IDC **13** 02:22:57.8±0.9, 2669N×11767E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, MS3.6/1, Ms1 3.6/1, ms1mx2.8/37, Error ellipse: s-maj=42.0km s-min=19.5km az=65.0*
*ISCJB **13** 02:22:58.2±1.3, 2673N±004×11766E±004, h15km±9km, mb3.8/8, Error ellipse: s-maj=7.8km s-min=5.5km az=32.7*
*BJI **13** 02:22:58.9, 2671N×11759E, h16km, mB4.6, mb4.3, ML4.8, Ms4.2, Msz3.8*
*NEIC **13** 02:23:02.8±0.5, 2671N×11773E, h35km, mb3.9/1, Error ellipse: s-maj=24.6km s-min=7.6km az=224.0*

ISC 13 02:22:59.8±1.4**, 2676N**±004×**11771E**±004**, h13**km±10km**, n25, σ0s87**/32**, mb3.8**/8**, 2C-1D, Near coast of southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZH	Quanzhou	1.97	156	⇑iP	Pn	02 23 33.5	+0.7
QZH				PG	Pg	02 23 37.3	-0.4
QZH				Smax			
	comp=N,17μm,0.2s						
QZH				Smax			
	comp=E,43μm,0.4s						
TATO	Taipei	3.84	117	ePn	Pn	02 23 59.8	+1.3
TATO				eSn	Sn	02 24 43.9	+0.5
YHNB	Yeheng	3.90	121	ePn	Pn	02 23 58.9	-0.5
YHNB				eSn	Sn	02 24 33.7	-11
NACB	Ninganchiao	4.35	125	ePn	Pn	02 24 05.8	+0.2
NACB				eSn	Sn	02 24 54.8	-1.3
SSE	Sheshan	5.29	34	⇓P	Pn	02 24 18.2	-0.2
SSE				S	Sn	02 25 17.9	-1.2
SSE				Smax			
	comp=N,676nm,0.8s						
SSE				Smax			
	comp=E,677nm,0.8s						
SSE				LR	LR		
	comp=N,849nm,6.4s						
SSE				LR	LR		
	comp=E,738nm,6.3s						
SSE				LR	LR		
	comp=Z,565nm,5.9s						
GYA	Guiyang	9.89	271	⇑iP	Pn	02 25 21.8	+0.1
GYA				AMB	AMB		
	comp=Z,20nm,0.6s						
GYA				AMB	AMB		
	comp=Z,120nm,4.2s						
GYA				LR	LR		
	comp=N,1μm,8.7s						
GYA				LR	LR		
	comp=E,2μm,10.4s						
GYA				LR	LR		
	comp=Z,2μm,9.2s						
XAN	Xi'an	10.50	316	P	Pn	02 25 28.8	-1.1
XAN				LR	LR		
	comp=Z,514nm,4.5s						
QIZ	Qiongzhong	10.57	225	P	Pn	02 25 29.3	-1.6
QIZ				S	Sn	02 27 29.6	+0.4
QIZ				AMB	AMB		
	comp=Z,12nm,1.7s						
QIZ				LR	LR		
	comp=N,556nm,11.8s						
QIZ				LR	LR		
	comp=E,633nm,11.5s						
QIZ				LR	LR		
	comp=Z,261nm,9.0s						
CD2	Chengdu	12.91	292	eP	Pn	02 26 02.9	-0.1
CD2				XP		02 26 09.5	
CD2				PP		02 26 13.8	
CD2				AMB	AMB		
	comp=Z,20nm,1.0s						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,670nm,12.0s						
CD2				LR	LR		
	comp=E,710nm,10.8s						
CD2				LR	LR		
	comp=Z,390nm,13.2s						
BJI	Beijing	13.31	355	P	Pn	02 26 07.0	-1.3
BJI				LR	LR		
	comp=N,405nm,17.5s						
BJI				LR	LR		
	comp=E,323nm,12.9s						
KMI	Kunming	13.57	266	P	Pn	02 26 12.0	0.0
KMI				AMB	AMB		
	comp=Z,4.0nm,0.7s						
KMI				AMB	AMB		
	comp=Z,62nm,4.5s						
KMI				LR	LR		
	comp=N,982nm,7.5s						
KMI				LR	LR		
	comp=E,448nm,5.1s						
KMI				LR	LR		
	comp=Z,266nm,10.9s						
KSRS	Korea Array	13.72	36	Pn	Pn	02 26 16.1	+2.2
	comp=Z,0.4nm,0.3s,baz=216,slow=14,SNR=4.1						
LZH	Lanzhou	15.04	312	eP	Pn	02 26 31.9	0.0
LZH				AP	pP	02 26 34.9	-6.2
LZH				XP	sP	02 26 36.6	-6.2
LZH				AMB	AMB		
	comp=Z,22nm,1.2s						
LZH				AMB	AMB		
	comp=Z,98nm,4.6s						
LZH				LR	LR		
	comp=E,674nm,11.2s						
LZH				LR	LR		
	comp=Z,873nm,12.4s						
CN2	Changchun	18.12	18	eP	Pn	02 27 16.8	+5.7
CN2				ePP		02 27 31.2	
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
GTA	Gaotai	19.55	315	eP	Pn	02 27 28.9	+0.5
GTA				AP	pP	02 27 33.6	+2.7
GTA				XP	sP	02 27 36.5	+3.8
GTA				S	Sn	02 30 56.3	-11
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=N,300nm,9.5s						
GTA				LR	LR		
	comp=E,246nm,12.5s						
GTA				LR	LR		
	comp=Z,265nm,14.5s						
SONM	Songino Array	22.84	340	P	P	02 28 04.1	+1.7
	comp=Z,3.2nm,0.7s,mb3.9,baz=159,slow=11,SNR=23						
SONM				LR	LR	02 37 38.1	
	comp=Z,134nm,18.5s,baz=143,slow=38						
SHL	Shillong	23.20	273	eP	P	02 28 06.5	0.0
MKAR	Makanchi Array	34.31	315	P	P	02 29 46.8	+1.0
	comp=Z,2.4nm,0.8s,mb4.2,baz=110,slow=10,SNR=22						
CHKZ	Chkalovo	43.77	321	eP	P	02 31 04.4	-0.5
	comp=Z,1.3nm,0.5s,mb3.9						
WRA	Warramunga Arr	49.14	159	P	P	02 31 46.5	-0.8
	comp=Z,0.6nm,0.6s,mb3.8,baz=345,slow=8.7,SNR=3.6						
ASAR	Alice Springs	52.52	161	P	P	02 32 13.3	+0.7
	comp=Z,0.8nm,0.5s,mb3.9,baz=345,slow=7.0,SNR=13						
BRTR	Keskin Array B	69.13	305	P	P	02 34 05.7	-0.1
	comp=Z,1.2nm,0.9s,mb3.8,baz=100,slow=6.8,SNR=4.8						
GERES	GERESS Array B	78.86	319	P	P	02 35 02.7	+0.2
GERES	GERESS Array B	78.86	319	P	P	02 35 02.7	+0.2
	comp=Z,0.4nm,0.5s,mb3.6,baz=60,slow=6.3,SNR=6.1						
YKA	Yellowknife Ar	81.79	22	P	P	02 35 17.7	-0.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=321,slow=4.9,SNR=7.5						

BJI 13 02:23:21.1, 2670N×11755E, h21km**, mB4.5, mb4.3, ML4.7, Ms4.2, Msz3.8, Near coast of southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZH	Quanzhou	1.99	152	ePG	Pn	02 23 57.3	+3.8
QZH				SG	Sn	02 24 22.8	+5.1
TIA	Tai'an	9.49	358	P	Pn	02 25 42.2	+5.7
TIA				Smax			
	comp=E,191nm,1.0s						
CD2	Chengdu	12.80	292	eP	Pn	02 26 24.1	+2.2
CD2				XP		02 26 30.9	
CD2				PP		02 26 35.0	
CD2				S	Sn	02 28 50.0	+6.3
CD2				SS		02 29 04.7	
CD2				AMB	AMB		
	comp=Z,40nm,4.2s						
CD2				LR	LR		
	comp=N,560nm,16.4s						
CD2				LR	LR		
	comp=E,620nm,10.2s						
CD2				LR	LR		
	comp=Z,450nm,11.2s						
KMI	Kunming	13.42	267	P	Pn	02 26 32.7	+2.3
LZH	Lanzhou	14.97	312	eP	Pn	02 26 53.9	+2.5
LZH				AP	pP	02 26 57.2	-5.5
LZH				XP	sP	02 27 00.3	-5.1
LZH				PP		02 27 03.9	
LZH				eS	Sn	02 29 40.5	+3.9
LZH				XS	sS	02 29 46.1	-17
LZH				LR	LR		
	comp=E,574nm,11.2s						
CN2	Changchun	18.23	19	eP	Pn	02 27 37.0	+4.3
CN2				eS	Sn	02 30 57.1	+1.6
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LSA	Lhasa	23.44	283	eP	P	02 28 35.4	+6.2

*NEIC **13** 02:32:07.0, 4136S×17276E, h109km, MG3.7(WEL), After WEL.*

WEL 13 02:32:07.5±0.3**, 4138S×17276E, h105**km±3km**, ML2.6**/3**, Error ellipse: s-maj=1.9km s-min=1.6km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.40	165	eP	Pn	02 32 23.3	+0.1
THZ				S	Sn	02 32 35.5	+0.5
THZ	Tophouse	0.40	165	PN	Pn	02 32 23.3	+0.1
THZ				SN	Sn	02 32 35.1	+0.1
NNZ	Nelson	0.49	72	eP	Pn	02 32 23.4	-0.4
NNZ				S	Sn	02 32 36.0	+0.1
NNZ	Nelson	0.49	72	PN	Pn	02 32 23.4	-0.3
NNZ				SN	Sn	02 32 35.5	-0.5
QRZ	Quartz Range	0.57	342	P	Pn	02 32 24.5	+0.1
QRZ	Quartz Range	0.57	342	PN	Pn	02 32 24.5	+0.1
QRZ				SN	Sn	02 32 35.4	-1.6
DSZ	Denniston Nort	0.81	242	eP	Pn	02 32 25.9	-0.5
DSZ	Denniston Nort	0.81	242	PN	Pn	02 32 25.9	-0.5
TUWZ	Tuamarina	0.89	94	PN	Pn	02 32 27.2	+0.1
TUWZ				SN	Sn	02 32 42.0	0.0
TCW	Tory Channel	1.15	82	P	Pn	02 32 29.7	-0.3
TCW				S	Sn	02 32 46.5	-0.4
TCW	Tory Channel	1.15	82	PN	Pn	02 32 29.7	-0.2
TCW				SN	Sn	02 32 46.2	-0.7
KHZ	Kahutara	1.19	151	eP	Pn	02 32 30.4	0.0
KHZ				S	Sn	02 32 47.5	-0.2
KHZ	Kahutara	1.19	151	PN	Pn	02 32 30.4	-0.1
KHZ				SN	Sn	02 32 47.0	-0.7
LTZ	Lake Taylor	1.45	194	eP	Pn	02 32 32.0	-1.5
LTZ	Lake Taylor	1.45	194	PN	Pn	02 32 33.6	+0.2

*ISCJB **13** 02:42:53.0±0.5, 12S±0.1×1272E±02, h10km, mb4.3/12, MS3.6/2, Error ellipse: s-maj=26.9km s-min=8.2km az=152.1*
*IDC **13** 02:42:53.6±0.9, 1.14S×127.18E, h0km, mb4.2/7, mb1 4.2/8, mb1mx4.1/18, mbtmp4.2/8, ML3.6/1, MS3.7/2, Ms1 3.7/2, ms1mx3.0/32, Error ellipse: s-maj=41.2km s-min=15.7km az=64.0*
*BJI **13** 02:42:54.0, 1.10S×12730E, h10km, mB4.9, mb4.6*
*NEIC **13** 02:42:55.0±0.6, 1.10S×12726E, h10km, mb4.4/4, Error ellipse: s-maj=27.5km s-min=8.8km az=60.0*

ISC 13 02:42:55.1±0.5**, 12S**±01×**1272E**±02**, h10**km**, n19, σ1s02**/17**, mb4.3**/12**, MS3.6**/2**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.56	156	ePn	Pn	02 45 54.6	+0.6
	20nm,0.6s						
WRA	Warramunga Arr	19.89	160	P	Pn	02 47 26.6	-1.9
	0.2nm,0.3s,baz=342,slow=12,SNR=22						
WB2	Warramunga Arr	19.90	160	eP	Pn	02 47 26.2	-2.3
COEN	Coen	20.28	129	eP	P	02 47 31.9	+0.8
	7.5nm,0.8s						
ASAR	Alice Springs	23.26	164	P	P	02 48 03.4	+0.4
	3.3nm,0.5s,mb4.1,baz=345,slow=11,SNR=28						
CTA	Charters Tower	26.47	136	P	P	02 48 33.3	+0.7
	1.0nm,0.5s,mb3.6,baz=215,slow=10,SNR=2.3						
PSI	Prapat	28.51	278	P	P	02 48 51.6	+0.5
	4.9nm,0.8s,mb4.3,baz=94,slow=6.9,SNR=5.4						
CBIJ	Chichi jima	31.65	26	LR	LR	03 00 47.9	
	comp=Z,20nm,20.3s,MS2.8,baz=169,slow=34						
STKA	Stephens Creek	33.41	157	P	P	02 49 35.3	+1.3
	6.0nm,0.9s,mb4.5,baz=319,slow=7.4,SNR=5.8						
KSRS	Korea Array	38.48	1	P	P	02 50 16.7	-0.7
	0.7nm,0.4s,mb3.7,baz=177,slow=9.3,SNR=4.9						
LZH	Lanzhou	43.00	332	eP	P	02 50 56.1	+1.3
LZH				AP	pP	02 51 01.5	+3.6
LZH				XP	sP	02 51 03.6	+4.5
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,89nm,4.0s						
GTA	Gaotai	47.57	331	eP	P	02 51 31.9	+0.9
GTA				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6						
ULN	Ulaanbaatar	51.93	343	eP	P	02 52 02.8	-1.3
	comp=Z,3.2nm,0.8s,mb4.3						
SONM	Songino Array	52.10	342	P	P	02 52 05.4	0.0
	comp=Z,2.1nm,0.8s,mb4.1,baz=152,slow=9.0,SNR=11						
MKAR	Makanchi Array	61.87	327	P	P	02 53 14.0	-0.6
MKAR	Makanchi Array	61.87	327	P	P	02 53 14.0	-0.6
	comp=Z,3.4nm,0.6s,mb4.7,baz=121,slow=8.5,SNR=35						
AML	Almayashu	64.62	319	eP	P	02 53 33.0	+0.1
	comp=Z,4.6nm,1.0s,mb4.5						
KURK	Kurchatov	66.14	329	eP	P	02 53 41.9	-0.7
	comp=Z,9.3nm,0.8s,mb4.9						
RAR	Rarotonga	73.78	112	LR	LR	03 21 17.9	
	comp=Z,274nm,20.4s,MS4.5,baz=230,slow=31						

*NEIC **13** 02:43:58.9±0.9, 3273S×17945W, h35km, mb4.7/2, Error ellipse: s-maj=22.1km s-min=9.3km az=98.0*
*ISCJB **13** 02:44:01.6±1.3, 3296S±007×1798W±0.1, h61km±11km, mb4.6/10, Error ellipse: s-maj=16.0km s-min=11.1km az=21.8*
*IDC **13** 02:44:11.5±2.7, 3278S×17973W, h140km±24km, mb4.1/10, mb1 4.2/10, mb1mx4.1/16, mbtmp4.1/10, Error ellipse: s-maj=16.7km s-min=14.7km az=28.0*

ISC 13 02:44:02.7±1.2**, 3290S**±007×**1798W**±01**, h52**km±10km**, n82, σ1s31**/80**, mb4.6**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.91	198	P	Pn	02 45 18.0	+4.1
MXZ	Matakaoa Point	4.91	198	ePN	Pn	02 45 16.5	+2.6
MXZ				SN	Sn	02 46 10.8	+1.4
PUZ	Puketiti	5.41	197	P	Pn	02 45 23.7	+3.0
PUZ	Puketiti	5.41	197	PN	Pn	02 45 23.7	+3.0
PUZ				SN	Sn	02 46 22.6	+1.0
MWZ	Matawai	5.85	201	P	Pn	02 45 30.0	+3.2
MWZ	Matawai	5.85	201	PN	Pn	02 45 29.9	+3.1
MWZ				SN	Sn	02 46 34.3	+1.7
URZ	Urewera	5.92	205	P	Pn	02 45 31.1	+3.3
URZ	Urewera	5.92	205	P	Pn	02 45 32.3	+4.6
	15nm,0.3s,baz=284,slow=2.3,SNR=180						
URZ				S	Sn	02 46 35.5	+1.2
	60nm,0.3s,baz=111,slow=19,SNR=9.2						
URZ	Urewera	5.92	205	PN	Pn	02 45 30.5	+2.7
URZ				SN	Sn	02 46 35.2	+1.0
KNZ	Kokohu	6.45	198	eP	Pn	02 45 35.9	+0.9
KNZ	Kokohu	6.45	198	PN	Pn	02 45 35.9	+0.9
BKZ	Black Stump Fm	6.95	205	eP	Pn	02 45 44.0	+2.2
BKZ	Black Stump Fm	6.95	205	PN	Pn	02 45 44.0	+2.2
WNVZ	Wahianoa	7.43	209	PN	Pn	02 45 52.2	+3.8
MOVZ	Moawhango	7.43	208	P	Pn	02 45 50.9	+2.4
MOVZ	Moawhango	7.43	208	PN	Pn	02 45 50.7	+2.2
PXZ	Pawanui	7.62	200	PN	Pn	02 45 50.7	-0.3
TSZ	Takapari Road	7.93	204	PN	Pn	02 45 54.5	-0.8
BFZ	Birch Farm	8.40	201	PN	Pn	02 46 01.8	+0.2
MRZ	Mangatainoka R	8.60	204	eP	Pn	02 46 04.1	-0.3
MRZ	Mangatainoka R	8.60	204	PN	Pn	02 46 03.4	-1.0
KIW	Kapiti Island	9.02	207	P	Pn	02 46 09.7	-0.4
KIW	Kapiti Island	9.02	207	PN	Pn	02 46 09.7	-0.4
MTW	Mount Morrison	9.07	203	PN	Pn	02 46 10.0	-0.9
CAW	Cannon Point	9.17	205	P	Pn	02 46 11.0	-1.3
CAW	Cannon Point	9.17	205	PN	Pn	02 46 10.8	-1.5
TRWZ	Traveller	9.22	202	PN	Pn	02 46 11.0	-2.0
PAWZ	Paruwai Farm	9.29	203	P	Pn	02 46 12.7	-1.2
PAWZ	Paruwai Farm	9.29	203	PN	Pn	02 46 12.2	-1.7
DUWZ	D'Urville Isla	9.37	211	PN	Pn	02 46 15.1	+0.2
MSWZ	Moikau Station	9.38	204	P	Pn	02 46 13.9	-1.2
MSWZ	Moikau Station	9.38	204	PN	Pn	02 46 13.8	-1.3
MRW	Makara Radio	9.41	206	P	Pn	02 46 15.4	-0.2
MRW	Makara Radio	9.41	206	PN	Pn	02 46 15.4	-0.1
SNZO	South Karori	9.48	206	eP	Pn	02 46 15.2	-1.3
SNZO				ePn	Pn	02 46 15.8	-0.7
SNZO				eSn	Sn	02 47 57.8	-3.7
SNZO	South Karori	9.48	206	PN	Pn	02 46 15.2	-1.3
TCW	Tory Channel	9.56	208	P	Pn	02 46 16.4	-1.2
TCW	Tory Channel	9.56	208	PN	Pn	02 46 16.4	-1.2
TUWZ	Tuamarina	9.88	209	PN	Pn	02 46 22.4	+0.5
NNZ	Nelson	9.94	211	eP	Pn	02 46 22.2	-0.6
NNZ	Nelson	9.94	211	PN	Pn	02 46 22.2	-0.6
THZ	Tophouse	10.59	211	eP	Pn	02 46 30.7	-1.0
THZ	Tophouse	10.59	211	PN	Pn	02 46 30.2	-1.5
KHZ	Kahutara	10.88	207	eP	Pn	02 46 34.1	-1.5
KHZ	Kahutara	10.88	207	PN	Pn	02 46 34.1	-1.4
MQZ	McQueen's Vall	12.31	207	eP	Pn	02 46 51.1	-4.1
MQZ	McQueen's Vall	12.31	207	PN	Pn	02 46 51.1	-4.1
WVZ	Waitaha Valley	12.61	214	SN	Sn	02 49 09.6	-8.5
RPZ	Rata Peaks	12.97	211	P	Pn	02 47 02.9	-1.3
	1.9nm,0.3s,baz=42,slow=12,SNR=5.2						
RPZ				S	Sn	02 49 17.2	-10
	12nm,0.3s,baz=49,slow=22,SNR=13						
ODZ	Otahua Downs	14.22	209	eP	Pn	02 47 17.4	-3.7
ODZ	Otahua Downs	14.22	209	PN	Pn	02 47 17.4	-3.8
AFI	Afiamalu	20.26	23	P	P	02 48 35.5	+1.7
	15nm,0.5s,baz=60,slow=21,SNR=3.2						
CTA	Charters Tower	32.83	284	P	P	02 50 32.8	+1.4
	2.3nm,0.4s,mb4.5,baz=116,slow=9.5,SNR=7.3						
CTAO	Charters Tower	32.83	284	eP	P	02 50 32.4	+1.0
	4.5nm,0.5s,mb4.7						
ASAR	Alice Springs	41.55	271	P	P	02 51 46.0	+0.7
	5.3nm,0.5s,mb4.4,baz=110,slow=7.2,SNR=29						
ASAR				PcP	PcP	02 53 39.0	-2.9
	1.7nm,0.6s,baz=113,slow=4.4,SNR=6.4						
ASAR				S	S	02 57 52.5	-5.1
	0.6nm,0.9s,baz=116,slow=14,SNR=4.5						
WB2	Warramunga Arr	42.75	276	eP	P	02 51 54.8	-0.4
WRA	Warramunga Arr	42.76	276	P	P	02 51 55.4	+0.1
	4.6nm,0.3s,mb4.6,baz=115,slow=7.7,SNR=38						
WRA				pP	pP	02 52 20.9	+12
	2.0nm,0.5s,baz=116,slow=7.5,SNR=3.1						
WRA				PcP	PcP	02 53 43.0	-3.0
	1.2nm,0.7s,baz=117,slow=3.2,SNR=6.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA				S	**S**	**02 58 10.4**	**-5.2**
	0.8nm,1.1s,baz=118,slow=17,SNR=3.1						
FORT	**Forrest**	**44.00**	**258**	*e*P	**P**	**02 52 06.3**	**+1.2**
	33nm,0.6s,mb5.2						
VNDA	**Vanda**	**45.47**	**186**	P	**P**	**02 52 17.5**	**+1.4**
VNDA	**Vanda**	**45.47**	**186**	P	**P**	**02 52 17.5**	**+1.4**
	1.6nm,0.7s,mb4.0,baz=360,slow=7.9,SNR=9.0						
FITZ	**Fitzroy Crossi**	**50.91**	**273**	*e*P	**P**	**02 53 00.5**	**+1.6**
	8.3nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**50.91**	**273**	*e*P	**P**	**02 52 59.6**	**+0.7**
	6.9nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**50.91**	**273**	P	**P**	**02 52 58.6**	**-0.3**
	3.7nm,0.6s,mb4.5,baz=156,slow=9.2,SNR=16						
NWAO	**Narrogin (SRO)**	**52.14**	**252**	P	**P**	**02 53 07.2**	**-0.7**
	7.5nm,0.7s,mb4.8,baz=140,slow=14,SNR=5.2						
QSPA	**South Pole Qui**	**57.22**	**180**	P	**P**	**02 53 45.5**	**+1.5**
	16nm,0.8s,mb5.1,baz=51,slow=1.8,SNR=30						
MAW	**Mawson**	**69.44**	**201**	P	**P**	**02 55 04.0**	**-1.0**
	3.7nm,0.6s,mb4.5,baz=136,slow=6.0,SNR=10						
SNAA	**Sanae**	**75.70**	**179**	*e*	**P**	**02 55 41.9**	**-0.2**
VNA3	**Neumayer Olymp**	**75.91**	**177**	*e*	**P**	**02 55 41.6**	**-1.7**
VNA3				*e*		02 55 44.8	
VNA2	**Neumayer--Watz**	**76.33**	**177**	*e*	**P**	**02 55 42.3**	**-3.4**
	baz=186,slow=5.3						
VNA2				*e*		02 55 45.8	
NVAR	**Mina Array Bea**	**91.09**	**44**	P	**P**	**02 57 00.6**	**-0.9**
	0.7nm,0.7s,mb4.1,baz=214,slow=6.3,SNR=3.6						
MKAR	**Makanchi Array**	**118.21**	**309**	PKiKP	PKiKP	03 02 41.3	-2.3
	0.1nm,0.3s,baz=119,slow=1.9,SNR=2.6						
SPB4	**Spitsbergen Ar**	**134.08**	**355**	*e*PKPdf	PKPdf	03 03 10.7	-2.4
ARCES	**ARCESS Array B**	**140.68**	**346**	PKhKP		03 03 18.9	
	2.3nm,0.9s,baz=57,slow=1.9,SNR=11						
JOF	**Joensuu**	**144.14**	**336**	*e*pkp	PKPdf	03 03 27.7	-4.0
KAF	**Kangasniemi**	**146.35**	**338**	*e*pkp	PKPdf	03 03 33.5	-2.1
FINES	**FINESS Array B**	**146.92**	**337**	PKPbc	PKPbc	03 03 35.5	-3.1
	2.2nm,0.4s,baz=50,slow=4.4,SNR=23						
NB2	**NORSAR Subarra**	**150.95**	**349**	PKP	PKPbc	03 03 47.1	-1.7
	comp=Z,1.3nm,0.5s,baz=14,slow=2.5						
NOA	**NORSAR Array B**	**150.95**	**349**	PKPbc	PKPbc	03 03 46.0	-2.8
	comp=Z,1.6nm,0.5s,baz=14,slow=4.1,SNR=8.7						
AKASG	**Malin Array Be**	**152.27**	**319**	PKPbc	PKPbc	03 03 49.9	-2.3
	comp=Z,0.3nm,0.3s,baz=49,slow=2.9,SNR=4.5						
BRTR	**Keskin Array B**	**152.34**	**294**	PKPbc	PKPbc	03 03 50.6	-2.1
	comp=Z,0.9nm,0.5s,baz=157,slow=4.7,SNR=7.1						
DBIC	**Dimbokro**	**153.48**	**169**	PKPbc	PKPbc	03 03 55.3	-0.7
	comp=Z,1.5nm,0.5s,baz=121,slow=13,SNR=5.9						
TORD	**Torodi Ar. Bea**	**160.29**	**184**	PKPab	PKPab	03 04 35.5	-1.9
	comp=Z,1.4nm,0.5s,baz=162,slow=4.4,SNR=18						
TORD				pPKPab	pPKPab	03 05 05.1	+13
	comp=Z,1.0nm,0.8s,baz=173,slow=2.8,SNR=2.3						

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*ISCJB **13** 02:52:33.5±1.0, 3346N±004×1409E±0.1, h66km±9km, mb3.7/3, Error ellipse: s-maj=14.0km s-min=7.2km az=6.5*
*JMA **13** 02:52:33.9±0.2, 3357N×14083E, h16km, M3.0*
*NEIC **13** 02:52:33.9, 3358N×14083E, h16km, MG3.0(JMA), After JMA.*
*IDC **13** 02:52:34.6±3.4, 3339N×14089E, h57km±27km, mb3.4/3, mb1 3.6/4, mb1mx3.4/20, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=38.7km s-min=11.7km az=84.0*
ISC 13 02:52:34.3±1.1**, 3345N**±005×**1409E**±01**, h53**km±12km**, n15, σ0.82**/22**, mb3.8**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.98**	**250**	P	**Pn**	**02 52 51.9**	**+0.1**
JHJ2				S	**Sn**	**02 53 05.3**	**+0.5**
JHJ	**Hachijo jima 2**	**1.01**	**251**	P	**Pn**	**02 52 52.0**	**-0.2**
	291nm,0.3s,baz=80,slow=23,SNR=52						
JHJ				S	**Sn**	**02 53 04.9**	**-0.5**
	293nm,0.3s,baz=84,slow=22,SNR=35						
BSO1	**Boso 1**	**1.20**	**2**	P	**Pn**	**02 52 53.8**	**-1.0**
BSO3	**Boso 3**	**1.39**	**346**	P	**Pn**	**02 52 57.2**	**-0.1**
BSO3				S	**Sn**	**02 53 14.6**	**0.0**
BSO4	**Boso 4**	**1.61**	**343**	P	**Pn**	**02 53 00.3**	**0.0**
JIM2	**Oshima 3**	**1.77**	**316**	P	**Pn**	**02 53 02.2**	**-0.3**
JIZS	**Izushimoda**	**2.11**	**307**	P	**Pn**	**02 53 07.6**	**+0.4**
KTJJ	**Kamata 2**	**2.13**	**314**	P	**Pn**	**02 53 07.1**	**-0.3**
KTJJ				*e*S	**Sn**	**02 53 31.4**	**-1.2**
JOD2	**Odawara 2**	**2.36**	**321**	P	**Pn**	**02 53 10.3**	**-0.2**
JOD2				S	**Sn**	**02 53 37.2**	**-1.1**
JYN	**Shimob**	**2.83**	**317**	P	**Pn**	**02 53 18.3**	**+1.3**
MJAR	**Matsushiro Arr**	**3.80**	**325**	P	**Pn**	**02 53 31.8**	**+1.4**
	1.6nm,0.3s,baz=153,slow=12,SNR=8.9						
MJAR				S	**Sn**	**02 54 12.6**	**-1.2**
	0.6nm,0.3s,baz=158,slow=21,SNR=4.4						
MAT	**Matsushiro**	**3.81**	**325**	P	**Pn**	**02 53 31.7**	**+1.4**
MAT				*e*S	**Sn**	**02 54 15.3**	**+1.5**
MKAR	**Makanchi Array**	**45.76**	**305**	P	**P**	**03 00 51.1**	**+0.8**
	0.2nm,0.2s,mb3.6,baz=78,slow=8.0,SNR=2.5						
WRA	**Warramunga Arr**	**53.46**	**188**	P	**P**	**03 01 48.3**	**-0.8**
	1.0nm,0.5s,mb4.0,baz=6.0,slow=7.6,SNR=22						
ASAR	**Alice Springs**	**57.19**	**188**	P	**P**	**03 02 15.4**	**-0.4**
	0.3nm,0.4s,mb3.6,baz=4.8,slow=6.9,SNR=7.0						

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*MEX **13** 02:58:58.9±3.7, 2645N×11094W, h19km±22km, MD5.8*
*ISCJB **13** 02:58:59.7±0.1, 26.17N±0.02×11070W±0.02, h10km, mb5.3/140, MS5.8/177, Error ellipse: s-maj=3.2km s-min=1.2km az=138.9*
*IDC **13** 02:58:59.1±0.5, 26.10N×11069W, h0km, mb4.6/20, mb1 4.7/25, mb1mx4.7/27, mbtmp4.7/25, ML3.4/4, MS5.8/25, Ms1 5.8/25, ms1mx5.6/35, Error ellipse: s-maj=12.6km s-min=6.4km az=47.0*
*MOS **13** 02:59:00.4±1.6, 2626N×11058W, h10km, mb5.6/68, MS6.0/34, Error ellipse: s-maj=5.9km s-min=3.6km az=84.8*
*GCMT **13** 02:59:04.4±0.1, 2625N×11069W, h16km, MW5.9/106, Moment Tensor Solution. s98,c207; s106,c324; Duration: 2.3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05±.01; $M_{\theta\theta}$-0.94±.01; $M_{\phi\phi}$0.99±.01; $M_{r\theta}$0.06±.02; $M_{\theta\phi}$0.22±.01; $M_{\phi r}$0.00±.02; Best double couple: $M_0$0.99300×10^{18} NP1:ϕ_s322.00000°, δ87.00000°, λ-178.00000°. NP2:ϕ_s231.00000°, δ88.00000°, λ-3.00000°. Principal axes: T 1.0180, Plg0.0000°, Azm276.0000°; N -0.0510, Plg87.0000°, Azm13.0000°; P -0.9670, Plg3.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **13** 02:59:04.4±1.0, 2626N×11054W, h26km±7km, mb5.5/111, MS5.8/132, MW6.0 Error ellipse: s-maj=6.2km s-min=2.9km az=45.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$1.09; $M_{r\theta}$-0.18; $M_{\theta\phi}$0.15; $M_{\phi r}$-0.14; Best double couple: $M_0$1.10000×10^{18} NP1:ϕ_s139.00000°, δ78.00000°, λ-179.00000°. NP2:ϕ_s49.00000°, δ89.00000°, λ-12.00000°. Principal axes: T 1.1300, Plg8.0000°, Azm94.0000°; N 0.0100, Plg78.0000°, Azm226.0000°; P -1.1300, Plg9.0000°, Azm3.0000°;*
NEIC Felt [IV] at Loreto; felt at Ahome, Huatabampo, Obregon and Tijuana, Mexico.
*BJI **13** 02:59:04.4, 2630N×11050W, h26km, mB6.0, mb5.3, Ms6.0, Msz5.8*
*SZGRF **13** 02:59:06.3, 2633N×11171W, h20km, mb5.5, MS6.1, Gulf of California, Mexico*
ISC 13 02:59:01.3±0.1**, 2614N**±001×**11064W**±002**, h10**km**, (h17**km±2.3km**:pP-P), n945,** σ**1.26**/1152**, mb5.3**/140**, MS5.8**/177**, 318C-305D, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**2.05**	**172**	Pn	**Pn**	**02 59 33.8**	**-2.1**
LPIG				*i* S	**Sn**	**03 00 01.9**	**+0.4**
LPIG				LR	LR	03 00 20.6	
LPIG	**La Paz**	**2.05**	**172**	Pn	**Pn**	**02 59 33.8**	**-2.1**
	202nm,0.3s,baz=341,slow=3.7,SNR=61						
LPIG				LR	LR	03 00 20.7	
	comp=Z,104μm,21.7s,baz=349,slow=40						
LPIG	**La Paz**	**2.05**	**172**	*e*P	**Pn**	**02 59 33.8**	**-2.1**
LPIG				*i* S	**Sn**	**03 00 01.9**	**+0.4**
MAIG	**Mazatlaan**	**4.83**	**127**	*e*P	**Pn**	**03 00 15.7**	**+1.5**
MAIG				*i* S	**Sn**	**03 01 12.0**	**+1.9**
318A	**Bisbee**	**5.31**	**6**	⇓P	**Pn**	**03 00 17.5**	**-3.2**
	baz=5.2						
318A				⇑S	**Sn**	**03 01 19.8**	**-2.1**
	baz=5.2						
319A	**Douglas**	**5.35**	**13**	⇑P	**Pn**	**03 00 17.1**	**-4.2**
	baz=5.2						
319A				⇑S	**Sn**	**03 01 22.5**	**-0.5**
	baz=5.2						
217A	**Green Valley**	**5.62**	**358**	⇑P	**Pn**	**03 00 20.8**	**-4.1**
	baz=5.5						
217A				⇓S	**Sn**	**03 01 25.4**	**-4.2**
	baz=5.5						
218A	**Dragoon**	**5.84**	**5**	⇑P	**Pn**	**03 00 24.0**	**-4.0**
	baz=5.7						
218A				⇓S	**Sn**	**03 01 33.2**	**-1.7**
	baz=5.7						
216A	**Three Points,**	**5.89**	**353**	⇑P	**Pn**	**03 00 25.0**	**-3.7**
	baz=5.8						
216A				⇑S	**Sn**	**03 01 32.0**	**-4.1**
	baz=5.8						
TUC	**Tucson**	**6.15**	**359**	*e*Pn	**Pn**	**03 00 28.2**	**-4.0**
116A	**Eloy**	**6.47**	**352**	⇓P	**Pn**	**03 00 33.6**	**-3.0**
	baz=6.3						
116A				⇑S	**Sn**	**03 01 46.7**	**-3.7**
	baz=6.3						
115A	**Sonoran Desert**	**6.68**	**348**	⇓P	**Pn**	**03 00 36.9**	**-2.7**
	baz=6.6						
115A				⇓S	**Sn**	**03 01 52.1**	**-3.7**
	baz=6.6						
LTX	**Lajitas**	**6.95**	**61**	*e*Pn	**Pn**	**03 00 40.3**	**-2.9**
TXAR	**Lajitas Array**	**6.95**	**61**	Pn	**Pn**	**03 00 39.5**	**-3.7**
	3.9nm,0.3s,baz=232,slow=13,SNR=62						
TXAR				Pg	**Pg**	**03 01 10.7**	**-3.8**
	4.0nm,0.3s,baz=221,slow=18,SNR=5.8						
TXAR				Lg		03 02 39.0	
	18nm,0.3s,baz=252,slow=32,SNR=5.9						
TXAR				LR	LR	03 03 33.9	
	comp=Z,96μm,18.2s,baz=145,slow=39						
MNTX	**Cornudas Mount**	**7.20**	**39**	*e*Pn	**Pn**	**03 00 45.9**	**-0.8**
Z14A	**Wintersburg**	**7.47**	**345**	⇓P	**Pn**	**03 00 48.2**	**-2.3**
	baz=7.4						
Z14A				⇓S	**Sn**	**03 02 11.4**	**-3.8**
	baz=7.4						
ANIG	**Ahuacatlan**	**7.55**	**131**	*e*P	**Pn**	**03 00 52.4**	**+0.8**
ANIG				*i* S	**Sn**	**03 02 22.2**	**+4.9**
GLA	**Glamis**	**7.79**	**333**	⇑P	**Pn**	**03 00 52.0**	**-2.8**
	baz=7.7						
GLA				⇓S	**Sn**	**03 02 21.7**	**-1.5**
	baz=7.7						
Y14A	**Wickenburg**	**8.04**	**346**	⇑P	**Pn**	**03 00 54.5**	**-3.7**
	baz=7.9						
Y14A				⇑S	**Sn**	**03 02 23.6**	**-5.6**
	baz=7.9						
DVTC	**Desert V Tower**	**8.05**	**325**	⇑P	**Pn**	**03 00 57.3**	**-1.1**
	baz=8.0						
DVTC				⇑S	**Sn**	**03 02 29.0**	**-0.6**
	baz=8.0						
ZAIG	**Zacatecas**	**8.08**	**113**	*e*P	**Pn**	**03 01 00.2**	**+1.4**
ZAIG				*i* S	**Sn**	**03 02 34.9**	**+4.6**
SWSC	**Sam W. Stewart**	**8.13**	**328**	⇓P	**Pn**	**03 00 56.8**	**-2.6**
	baz=8.1						
SWSC				⇑S	**Sn**	**03 02 31.3**	**-0.1**
	baz=8.1						
Y13A	**Salome**	**8.13**	**341**	⇓P	**Pn**	**03 00 57.6**	**-1.8**
	baz=8.0						
Y13A				⇑S	**Sn**	**03 02 26.7**	**-4.8**
	baz=8.0						
Y12C	**Blythe**	**8.30**	**337**	⇓P	**Pn**	**03 00 59.8**	**-2.0**
	baz=8.2						
Y12C				⇓S	**Sn**	**03 02 32.5**	**-3.1**
	baz=8.2						
CJM	**Chamela**	**8.38**	**141**	*i* P	**Pn**	**03 01 05.7**	**+2.8**
MONP	**Monument Peak**	**8.40**	**325**	⇓P	**Pn**	**03 01 02.5**	**-0.7**
	baz=8.3						
MONP				⇑S	**Sn**	**03 02 34.4**	**-3.7**
	baz=8.3						
X15A	**Humboldt**	**8.43**	**351**	⇓P	**Pn**	**03 01 02.0**	**-1.6**
	baz=8.3						
X14A	**Yava**	**8.53**	**347**	⇓P	**Pn**	**03 01 02.6**	**-2.3**
	baz=8.4						
X14A				⇓S	**Sn**	**03 02 35.3**	**-5.9**
	baz=8.4						
Y22C	**IRIS PASSCAL I**	**8.54**	**21**	⇑P	**Pn**	**03 01 02.7**	**-2.3**
	baz=8.4						
Y22C				⇓S	**Sn**	**03 02 36.2**	**-5.2**
	baz=8.4						
BC3	**Big Chuckw Mtn**	**8.58**	**332**	⇓P	**Pn**	**03 01 03.7**	**-1.9**
	baz=8.5						
BC3				⇑S	**Sn**	**03 02 38.7**	**-3.7**
	baz=8.5						
LENM	**Lemitar**	**8.60**	**21**	*e*Pn	**Pn**	**03 01 04.8**	**-1.1**
PDMCI	**Parker Dam,Lak**	**8.68**	**340**	⇑P	**Pn**	**03 01 06.6**	**-0.4**
	baz=8.6						
PDMCI				⇓S	**Sn**	**03 02 39.3**	**-5.6**
	baz=8.6						
BNM	**Barren Site**	**8.71**	**23**	*e*Pn	**Pn**	**03 01 05.5**	**-1.8**
109C	**Camp Elliot, M**	**8.77**	**322**	⇓P	**Pn**	**03 01 07.6**	**-0.6**
	baz=8.7						
109C				⇓S	**Sn**	**03 02 47.3**	**+0.1**
	baz=8.7						
LAZ	**Ladron**	**8.77**	**19**	*e*Pn	**Pn**	**03 01 05.9**	**-2.3**
LPM	**Los Pinos Moun**	**8.85**	**22**	*e*Pn	**Pn**	**03 01 09.3**	**0.0**
X13A	**Yucca**	**8.87**	**343**	⇑P	**Pn**	**03 01 08.2**	**-1.3**
	baz=8.8						
IRM	**Iron Mountain**	**8.89**	**335**	⇑P	**Pn**	**03 01 07.4**	**-2.6**
	baz=8.8						
IRM				⇑S	**Sn**	**03 02 49.1**	**-1.1**
	baz=8.8						
SFJM	**Santa Fe**	**8.96**	**127**	*e*P	**Pn**	**03 01 10.2**	**-0.7**
SFJM				*i* S	**Sn**	**03 02 56.2**	**+4.2**
PFO	**Pinyon Flat Ob**	**8.99**	**327**	*e*Pn	**Pn**	**03 01 11.2**	**0.0**
PFO	**Pinyon Flat Ob**	**8.99**	**327**	Pn	**Pn**	**03 01 11.1**	**-0.2**
	0.2nm,0.3s,baz=147,slow=14,SNR=18						
PFO				Sn	**Sn**	**03 02 52.1**	**-0.5**
	baz=172,slow=15,SNR=1.5						
PFO				Lg		03 03 42.9	
	0.3nm,0.3s,baz=208,slow=5.2,SNR=3.0						
PFO				LR	LR	03 05 16.7	
	comp=Z,51μm,18.0s,baz=141,slow=42						
PFO	**Pinyon Flat Ob**	**8.99**	**327**	⇑P	**Pn**	**03 01 09.8**	**-1.5**
	baz=8.9						
PFO				⇓S	**Sn**	**03 02 52.9**	**+0.3**
	baz=8.9						
BELC	**Belle Mtn.**	**9.11**	**331**	⇓P	**Pn**	**03 01 11.1**	**-1.7**
	baz=9.0						
BELC				⇓S	**Sn**	**03 02 54.3**	**-1.1**
	baz=9.0						
W15A	**Williams**	**9.12**	**352**	⇓P	**Pn**	**03 01 12.0**	**-1.0**
	baz=9.0						
W15A				⇓S	**Sn**	**03 02 54.4**	**-1.3**
	baz=9.0						
NEE2	**Needles Airpor**	**9.26**	**339**	⇑P	**Pn**	**03 01 13.3**	**-1.6**
	baz=9.2						
W14A	**Seligman**	**9.29**	**347**	⇓P	**Pn**	**03 01 14.1**	**-1.2**
	baz=9.2						
W14A				⇑S	**Sn**	**03 02 55.2**	**-4.6**
	baz=9.2						
W13A	**Hualapai Mount**	**9.36**	**343**	⇑P	**Pn**	**03 01 14.9**	**-1.3**
	baz=9.3						
W13A				⇓S	**Sn**	**03 02 59.6**	**-2.0**
	baz=9.3						
MURC	**Murrieta**	**9.36**	**324**	⇓P	**Pn**	**03 01 14.5**	**-1.8**
	baz=9.3						
MURC				⇑S	**Sn**	**03 03 03.5**	**+1.8**
	baz=9.3						
ANMO	**Albuquerque**	**9.49**	**21**	*e*Pn	**Pn**	**03 01 18.0**	**-0.1**
ANMO	**Albuquerque**	**9.49**	**21**	⇓*e*P	**Pn**	**03 01 17.4**	**-0.7**
ANMO	**Albuquerque**	**9.49**	**21**	Pn	**Pn**	**03 01 17.0**	**-1.1**
	0.5nm,0.3s,baz=208,slow=12,SNR=34						
ANMO				Sn	**Sn**	**03 03 06.5**	**+1.6**
	0.7nm,0.3s,baz=259,slow=14,SNR=2.0						
ANMO				Lg		03 03 54.0	
	1.4nm,0.3s,baz=126,slow=23,SNR=3.1						
ANMO				LR	LR	03 04 36.4	
	comp=Z,65μm,19.7s,baz=342,slow=35						
GMRC	**Granite Mounta**	**9.64**	**335**	⇓P	**Pn**	**03 01 17.3**	**-2.8**
	baz=9.6						
GMRC				⇑S	**Sn**	**03 03 08.4**	**-0.1**
	baz=9.6						
SCI	**San Clemente I**	**9.69**	**317**	⇑P	**Pn**	**03 01 19.2**	**-1.5**
	baz=9.7						
SCI				⇓S	**Sn**	**03 03 08.9**	**-0.7**
	baz=9.7						
BBRC	**Big Bear Sol-O**	**9.75**	**328**	⇓P	**Pn**	**03 01 21.3**	**-0.3**
	baz=9.7						
BBRC				⇑S	**Sn**	**03 03 11.5**	**+0.3**
	baz=9.7						
W12A	**Cal Nev Ari**	**9.83**	**339**	⇑P	**Pn**	**03 01 21.2**	**-1.5**
	baz=9.7						
W12A				⇓S	**Sn**	**03 03 10.7**	**-2.5**
	baz=9.7						
CIS	**Catalina Islan**	**9.89**	**319**	⇑P	**Pn**	**03 01 22.1**	**-1.6**
	baz=9.9						
CIS				⇓S	**Sn**	**03 03 14.0**	**-0.8**
	baz=9.9						
HEC	**Hector,Ludlow**	**9.95**	**332**	⇓P	**Pn**	**03 01 22.9**	**-1.5**
	baz=9.9						
HEC				⇑S	**Sn**	**03 03 16.0**	**-0.2**
	baz=9.9						
FMP	**Fort Macarthur**	**10.05**	**320**	⇑P	**Pn**	**03 01 24.1**	**-1.6**
	baz=10.0						
FMP				⇑S	**Sn**	**03 03 17.7**	**-0.8**
	baz=10.0						
BFSC	**Mount Baldy St**	**10.10**	**325**	⇓P	**Pn**	**03 01 25.7**	**-0.7**
	baz=10.0						
BFSC				⇓S	**Sn**	**03 03 19.7**	**-0.1**
	baz=10.0						
LNIG	**Linares**	**10.17**	**95**	*e*P	**Pn**	**03 01 27.3**	**-0.1**
LNIG				*i* S	**Sn**	**03 03 21.6**	**+0.1**
V12A	**Nelson**	**10.22**	**340**	⇑P	**Pn**	**03 01 28.2**	**+0.2**
	baz=10						
V12A				⇑S	**Sn**	**03 03 20.4**	**-2.2**
	baz=10						
RRX	**Edison Barstow**	**10.29**	**329**	⇑P	**Pn**	**03 01 28.4**	**-0.7**
	baz=10						
RRX				⇑S	**Sn**	**03 03 25.0**	**+0.5**
	baz=10						
TUQ	**Turquoise Mtn.**	**10.32**	**335**	⇑P	**Pn**	**03 01 28.9**	**-0.5**
	baz=10						
TUQ				⇑S	**Sn**	**03 03 25.2**	**+0.1**
	baz=10						
MMIG	**Aquila**	**10.32**	**138**	*e*P	**Pn**	**03 01 30.4**	**+0.8**
MMIG				*e*S	**Sn**	**03 03 28.2**	**+2.7**
DECC	**Green Verdugo**	**10.47**	**322**	⇓P	**Pn**	**03 01 30.9**	**-0.6**
	baz=10						
DECC				⇑S	**Sn**	**03 03 28.5**	**-0.3**
	baz=10						
U14A	**Mt Trumbull**	**10.47**	**349**	⇑P	**Pn**	**03 01 30.9**	**-0.6**
	baz=10						
U14A				⇓S	**Sn**	**03 03 27.0**	**-1.9**
	baz=10						
SNCC	**San Nicolas Is**	**10.48**	**315**	⇓P	**Pn**	**03 01 30.1**	**-1.5**
	baz=10						
SNCC				⇑S	**Sn**	**03 03 27.6**	**-1.5**
	baz=10						
JCT	**Junction City**	**10.48**	**63**	*e*Pn	**Pn**	**03 01 32.9**	**+1.3**
V11A	**Goodsprings**	**10.50**	**338**	⇑P	**Pn**	**03 01 31.1**	**-0.9**
	baz=10						
V11A				⇓S	**Sn**	**03 03 26.6**	**-3.1**
	baz=10						
GSC	**Goldstone**	**10.56**	**331**	⇑P	**Pn**	**03 01 31.0**	**-1.7**
	baz=10						
GSC				⇑S	**Sn**	**03 03 29.8**	**-1.2**
	baz=10						
U13A	**Pakoon Wash**	**10.63**	**345**	⇑P	**Pn**	**03 01 31.8**	**-1.9**
	baz=10						
U13A				⇑S	**Sn**	**03 03 28.7**	**-4.1**
	baz=10						
EDW2	**Edwards Air Fo**	**10.77**	**326**	⇓P	**Pn**	**03 01 36.2**	**+0.6**
	baz=11						
EDW2				⇓S	**Sn**	**03 03 34.1**	**-2.2**
	baz=11						
BLG	**Laguna Peak**	**10.78**	**319**	⇑P	**Pn**	**03 01 34.1**	**-1.6**
	baz=11						
BLG				⇑S	**Sn**	**03 03 36.2**	**-0.2**
	baz=11						
U12A	**Valley of Fire**	**10.79**	**343**	⇓P	**Pn**	**03 01 35.9**	**+0.1**
	baz=11						
U12A				⇑S	**Sn**	**03 03 31.5**	**-5.2**
	baz=11						
MOIG	**Morelia**	**10.82**	**125**	*i* P	**Pn**	**03 01 38.3**	**+1.9**
SHOC	**Shoshone**	**10.86**	**335**	⇑P	**Pn**	**03 01 36.3**	**-0.6**
	baz=11						
SHOC				⇑S	**Sn**	**03 03 38.2**	**-0.3**
	baz=11						
T15A	**Red Dirt Ranch**	**10.95**	**353**	⇓P	**Pn**	**03 01 39.0**	**+0.9**
	baz=11						
T15A				⇓S	**Sn**	**03 03 37.3**	**-3.3**
	baz=11						
OSI	**Osito Adit**	**10.95**	**322**	⇑P	**Pn**	**03 01 38.0**	**-0.2**
	baz=11						
OSI				⇓S	**Sn**	**03 03 40.6**	**-0.1**
	baz=11						
U11A	**Corn Creek**	**11.02**	**340**	⇑P	**Pn**	**03 01 40.1**	**+1.0**
	baz=11						
U11A				⇓S	**Sn**	**03 03 39.8**	**-2.6**
	baz=11						
SHPR	**Sheep Range**	**11.03**	**341**	*e*Pn	**Pn**	**03 01 40.5**	**+1.3**
BSC	**Santa Cruz Isl**	**11.04**	**317**	⇑P	**Pn**	**03 01 38.5**	**-0.9**
	baz=11						
BSC				⇑S	**Sn**	**03 03 42.0**	**-0.9**
	baz=11						
T14A	**Hurricane**	**11.09**	**350**	⇑P	**Pn**	**03 01 39.5**	**-0.4**
	baz=11						
T14A				⇑S	**Sn**	**03 03 39.8**	**-4.1**
	baz=11						
LRMC	**Laurel Mountai**	**11.10**	**329**	⇓P	**Pn**	**03 01 40.1**	**-0.1**
	baz=11						
LRMC				⇓S	**Sn**	**03 03 45.9**	**+1.5**
	baz=11						
T12A	**Moapa**	**11.11**	**343**	⇓P	**Pn**	**03 01 40.4**	**+0.1**
	baz=11						
T12A				⇓S	**Sn**	**03 03 41.5**	**-3.1**
	baz=11						
MVCO	**Mesa Verde**	**11.19**	**9**	*e*Pn	**Pn**	**03 01 41.3**	**0.0**
T13A	**Saint George**	**11.20**	**346**	⇑P	**Pn**	**03 01 42.0**	**+0.5**
	baz=11						
T13A				⇑S	**Sn**	**03 03 43.7**	**-3.0**
	baz=11						
U10A	**Ash Meadows, A**	**11.34**	**336**	⇑P	**Pn**	**03 01 44.3**	**+0.9**
	baz=11						
U10A				⇑S	**Sn**	**03 03 48.2**	**-2.0**
	baz=11						
SBC	**Santa Barbara**	**11.39**	**319**	⇓P	**Pn**	**03 01 43.6**	**-0.6**
	baz=11						
SBC				⇑S	**Sn**	**03 03 52.3**	**+0.7**
	baz=11						
ARVC	**Arvin**	**11.40**	**324**	⇑P	**Pn**	**03 01 43.3**	**-0.9**
	baz=11						
ARVC				⇓S	**Sn**	**03 03 51.5**	**-0.1**
	baz=11						
MPMC	**Manual Prospec**	**11.50**	**331**	⇓P	**Pn**	**03 01 44.5**	**-1.0**
	baz=11						
MPMC				⇓S	**Sn**	**03 03 55.3**	**+1.3**
	baz=11						
FURC	**Furnace Creek,**	**11.59**	**334**	⇓P	**Pn**	**03 01 46.4**	**-0.4**
	baz=12						
FURC				⇑S	**Sn**	**03 03 57.2**	**+0.9**
	baz=12						
CCUT	**Cedar City**	**11.61**	**349**	*e*Pn	**Pn**	**03 01 48.1**	**+1.1**
ISA	**Isabella**	**11.63**	**327**	⇑P	**Pn**	**03 01 46.4**	**-1.0**
	baz=12						
ISA				⇑S	**Sn**	**03 03 58.7**	**+1.4**
	baz=12						
S13A	**Holt Ranch, En**	**11.73**	**347**	⇑P	**Pn**	**03 01 48.4**	**-0.3**
	baz=12						
S13A				⇓S	**Sn**	**03 03 57.7**	**-2.1**
	baz=12						
T11A	**Corn Creek, Al**	**11.73**	**342**	⇑P	**Pn**	**03 01 49.7**	**+1.0**
	baz=12						
T11A				⇑S	**Sn**	**03 03 56.2**	**-3.6**
	baz=12						
PKM	**Peak Mountain**	**11.78**	**320**	⇑P	**Pn**	**03 01 49.0**	**-0.4**
	baz=12						
PKM				⇑S	**Sn**	**03 04 02.2**	**+1.3**
	baz=12						
S14A	**Cedar City**	**11.78**	**350**	⇑P	**Pn**	**03 01 49.1**	**-0.4**
	baz=12						
S14A				⇓S	**Sn**	**03 03 58.9**	**-2.2**
	baz=12						
TPNV	**Topopah Spring**	**11.79**	**337**	*e*Pn	**Pn**	**03 01 50.8**	**+1.3**
ARUT	**Antelope Range**	**11.85**	**349**	*e*Pn	**Pn**	**03 01 53.3**	**+2.9**
ARUT				*e*Sn	Sn	03 04 32.0	+29
S12A	**Delamar Landin**	**11.98**	**344**	⇓P	**Pn**	**03 01 53.6**	**+1.5**
	baz=12						
S12A				⇓S	**Sn**	**03 04 04.5**	**-1.3**
	baz=12						
CWC	**Cottonwood Cre**	**12.07**	**330**	⇓P	**Pn**	**03 01 53.0**	**-0.4**
	baz=12						
CWC				⇓S	**Sn**	**03 04 08.2**	**0.0**
	baz=12						
PV01	**Paradox Valley**	**12.09**	**8**	*e*Pn	**Pn**	**03 01 53.0**	**-0.6**
SMMC	**Simmler**	**12.18**	**321**	⇓P	**Pn**	**03 01 54.2**	**-0.7**
	baz=12						
SMMC				⇑S	**Sn**	**03 04 12.6**	**+1.9**
	baz=12						
GRAC	**Grapevine Rang**	**12.25**	**334**	⇓P	**Pn**	**03 01 55.8**	**-0.1**
	baz=12						
GRAC				⇓S	**Sn**	**03 04 11.2**	**-1.2**
	baz=12						
S11A	**Rachel**	**12.26**	**341**	⇑P	**Pn**	**03 01 57.8**	**+1.8**
	baz=12						
S11A				⇓S	**Sn**	**03 04 11.8**	**-0.9**

baz=12
PV10 **Paradox Valley** 12.28 6 *e*Pn Pn 03 01 54.0 -2.2
R14A **James Farms, M** 12.29 351 ⇑P Pn 03 01 57.4 +1.0
baz=12
R14A ⇓S Sn 03 04 13.0 -0.4
baz=12
SDCO **Great Sand Dun** 12.36 19 *e*Pn Pn 03 01 57.8 +0.4
SZVM **Salazar** 12.40 121 *i* P Pn 03 01 59.2 +1.2
MSU **Marysvale** 12.41 354 *e*Pn Pn 03 01 59.3 +1.3
PTVM **Pico Tres Padr** 12.46 119 *e*P Pn 03 01 57.1 -1.7
RCTC **Rector, Farmer** 12.52 326 ⇓P Pn 03 01 59.4 -0.2
baz=12
RCTC ⇓S Sn 03 04 20.0 +0.9
baz=12
V05C **Boulder Hill,** 12.53 323 ⇑P Pn 03 02 00.4 +0.7
baz=12
V05C ⇓S Sn 03 04 21.0 +1.7
baz=12
PBVM **Pinon** 12.56 120 *e*P Pn 03 01 59.6 -0.7
R12A **Pony Springs,** 12.61 346 ⇓P Pn 03 02 02.1 +1.4
baz=12
R12A ⇓S Sn 03 04 19.7 -1.4
baz=12
TIN **Tinemaha** 12.65 331 ⇓P Pn 03 02 01.8 +0.4
baz=13
TIN ⇓S Sn 03 04 21.4 -1.0
baz=13
HELL **Mitchell Peak,** 12.71 328 ⇑P Pn 03 02 02.9 +0.8
baz=13
HELL ⇑S Sn 03 04 25.0 +1.3
baz=13
IIO **Organos** 12.77 118 *e*P Pn 03 02 02.5 -0.5
S10A **Tonopah Range,** 12.78 338 ⇑P Pn 03 02 04.8 +1.6
baz=13
S10A ⇓S Sn 03 04 25.7 +0.2
baz=13
S09A **Goldfield** 12.83 336 ⇓P Pn 03 02 04.1 +0.3
baz=13
S09A ⇓S Sn 03 04 26.4 -0.2
baz=13
PLIG **Platanillo** 12.87 125 *e*P Pn 03 02 05.5 +1.1
R11A **Troy Canyon, C** 12.87 342 ⇑P Pn 03 02 05.0 +0.7
baz=13
R11A ⇓S Sn 03 04 26.8 -0.8
baz=13
TRCR **Troy Canyon** 12.87 342 *e*Pn Pn 03 02 05.4 +1.0
SRU **San Rafael** 12.94 0 *e*Pn Pn 03 02 05.4 +0.2
PKD **Parkfield** 12.94 321 ⇓P Pn 03 02 04.1 -1.2
baz=13
PKD ⇓S Sn 03 04 29.5 +0.1
baz=13
U05C **Westside ANR,** 13.00 324 ⇓P Pn 03 02 05.3 -0.7
baz=13
U05C ⇑S Sn 03 04 33.0 +2.2
baz=13
S08C **White Mtn Res** 13.00 332 ⇑P Pn 03 02 07.4 +1.2
baz=13
S08C ⇑S Sn 03 04 30.6 -0.3
baz=13
R10A **Warm Springs** 13.02 340 ⇑P Pn 03 02 07.4 +1.0
baz=13
R10A ⇓S Sn 03 04 33.4 +2.0
baz=13
MTUM **Tungsten Hills** 13.05 331 *e*Pn Pn 03 02 07.6 +0.8
MEIG **Mezcala** 13.08 126 *e*P Pn 03 02 09.7 +2.4
Q13A **Wheeler Ranch,** 13.09 348 ⇑P Pn 03 02 09.0 +1.6
baz=13
Q13A ⇓S Sn 03 04 34.7 +1.6
baz=13
TMUT **Trail Mountain** 13.13 358 *e*Pn Pn 03 02 09.7 +1.8
PPM **Popocatepetl** 13.13 120 *i* P Pn 03 02 11.7 +3.7
PPM *i* S Sn 03 04 48.5 +14
CAIG **El Cayaco** 13.22 131 *i* P Pn 03 02 10.7 +1.5
R09A **Tonopah** 13.23 337 ⇓P Pn 03 02 10.6 +1.4
baz=13
R09A ⇑S Sn 03 04 37.4 +1.0
baz=13
T06C **Millerton Lake** 13.30 327 ⇓P Pn 03 02 10.0 -0.3
baz=13
T06C ⇓S Sn 03 04 39.3 +1.1
baz=13
WMOK **Wichita Mounta** 13.34 47 *e*Pn Pn 03 02 09.2 -1.5
Q11A **Duckwater** 13.35 343 ⇓P Pn 03 02 11.0 +0.1
baz=13
Q11A ⇑S Sn 03 04 39.0 -0.5
baz=13
SMCO **Snowmass** 13.36 12 *e*Pn Pn 03 02 07.2 -3.8
KCC **Kaiser Creek** 13.37 329 ⇓P Pn 03 02 12.2 +1.0
baz=13
KCC ⇑S Sn 03 04 41.7 +1.9
baz=13
U04C **Hernandez Rese** 13.38 322 ⇑P Pn 03 02 10.6 -0.7
baz=13
U04C ⇑S Sn 03 04 39.9 -0.1
baz=13
V03C **Hunter Liggett** 13.39 320 ⇓P Pn 03 02 10.2 -1.2
baz=13
V03C ⇓S Sn 03 04 39.5 -0.8
baz=13
MLAC **Mammoth Lakes** 13.40 331 ⇑P Pn 03 02 11.8 +0.3
baz=13
MLAC ⇑S Sn 03 04 39.9 -0.6
baz=13
Q10A **Clear Creek Ra** 13.55 340 ⇑P Pn 03 02 15.1 +1.6
baz=14
Q10A ⇑S Sn 03 04 43.3 -0.8
baz=14
P13A **Bates Ranch, G** 13.58 349 ⇓P Pn 03 02 15.0 +1.1
baz=14
P13A ⇓S Sn 03 04 42.9 -1.9
baz=14
ACX **Acapulco** 13.58 131 *e*P Pn 03 02 14.8 +0.6
ACX **Acapulco** 13.58 131 *e*P Pn 03 02 16.1 +1.9
HKT **Hockley** 13.61 70 *e*Pn Pn 03 02 13.2 -1.3
430nm,1.8s
HKT *e*Sn Sn 03 05 22.7 +37
HKT **Hockley** 13.61 70 *e*P Pn 03 02 13.2 -1.3
HKT pmax pmax
comp=Z,429nm,1.8s
R08A **Mina** 13.71 334 ⇓P Pn 03 02 17.2 +1.5
baz=14
R08A ⇓S Sn 03 04 48.5 +0.4
baz=14
T05C **Eagle Field, D** 13.71 324 ⇑P Pn 03 02 16.2 +0.4
baz=14
T05C ⇓S Sn 03 04 49.9 +1.8
baz=14
P12A **McGill** 13.77 346 ⇑P Pn 03 02 18.3 +1.7
baz=14
P12A ⇓S Sn 03 04 52.3 +2.8
baz=14
Q09A **Carvers** 13.80 338 ⇓P Pn 03 02 18.4 +1.4
baz=14
Q09A ⇓S Sn 03 04 53.6 +3.2
baz=14
HAST **UC Hastings Re** 13.83 320 ⇑P Pn 03 02 16.2 -1.2
baz=14
HAST ⇑S Sn 03 04 51.1 +0.1
baz=14
NLU **North Lily Min** 13.83 355 *e*Pn Pn 03 02 18.4 +1.0
NVAR **Mina Array Bea** 13.86 334 Pn Pn 03 02 18.3 +0.5
comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=39
NVAR Sn Sn 03 04 54.0 +2.3
comp=Z,0.0nm,0.3s,baz=131,slow=42,SNR=1.8
MPU **Maple Canyon** 13.86 357 *e*Pn Pn 03 02 19.5 +1.6
R07C **Lee Vining** 13.87 331 ⇓P Pn 03 02 19.3 +1.3
baz=14
R07C ⇑S Sn 03 04 53.6 +1.5
baz=14
S05C **Merced** 13.88 326 ⇑P Pn 03 02 17.5 -0.5
baz=14
S05C ⇑S Sn 03 04 54.4 +2.2
baz=14
SAO **San Andreas Ge** 14.03 322 *e*Pn Pn 03 02 20.9 +0.7
comp=Z,337nm,1.7s
SAO **San Andreas Ge** 14.03 322 *e*P Pn 03 02 20.9 +0.7
SAO pmax pmax
comp=Z,337nm,1.7s
P11A **Circle Ranch,** 14.05 343 ⇓P Pn 03 02 22.1 +1.8
baz=14
Q08A **Gabbs** 14.09 336 ⇑P Pn 03 02 21.8 +0.9
baz=14
Q08A ⇓S Sn 03 04 59.2 +1.8
baz=14
PACP **Pacheco Peak** 14.12 323 ⇑P Pn 03 02 20.8 -0.7
baz=14
PACP ⇓S Sn 03 05 01.7 +3.5
baz=14
DUG **Dugway** 14.13 353 *e*Pn Pn 03 02 22.6 +1.0
O13A **Hicks Ranch, I** 14.23 350 ⇑P Pn 03 02 23.1 +0.2
baz=14
O13A ⇓S Sn 03 05 01.9 +1.1
baz=14
DAU **Daniels Canyon** 14.24 358 *e*Pn Pn 03 02 24.2 +1.1
ISCO **Idaho Springs** 14.26 16 *e*Pn Pn 03 02 23.8 +0.5
P10A **Eureka** 14.30 341 ⇑P Pn 03 02 24.3 +0.4
baz=14
WAKR **Walker** 14.39 331 *e*Pn Pn 03 02 26.5 +1.4
JLU **Jordanelle** 14.44 358 *e*Pn Pn 03 02 27.1 +1.4
P09A **Austin** 14.44 339 ⇓P Pn 03 02 26.5 +0.8
baz=14
P09A ⇑S Sn 03 05 06.1 +0.2
baz=14
CMB **Columbia Colle** 14.44 328 *e*Pn Pn 03 02 26.3 +0.5
comp=Z,227nm,1.4s
CMB **Columbia Colle** 14.44 328 *e*P Pn 03 02 26.3 +0.5
CMB pmax pmax
comp=Z,227nm,1.4s
CMB **Columbia Colle** 14.44 328 ⇑P Pn 03 02 25.2 -0.5
baz=14
CMB ⇓S Sn 03 05 05.4 -0.6
baz=14
TPIG **Tehuac#an** 14.48 119 *e*P Pn 03 02 27.6 +1.2
UTMO **Huajuapan** 14.48 122 *e*P Pn 03 02 28.8 +2.3
Q07A **Schurz** 14.49 334 ⇓P Pn 03 02 28.2 +1.8
baz=14
O12A **Currie** 14.50 347 ⇑P Pn 03 02 27.7 +1.1
baz=14
O12A ⇓S Sn 03 05 08.4 +1.0
baz=14
S04C **Ingram Canyon,** 14.51 324 ⇓P Pn 03 02 26.3 -0.5
baz=14
S04C ⇓S Sn 03 05 09.2 +1.5
baz=14
NOQ **North Oquirrh** 14.53 356 *e*Pn Pn 03 02 28.6 +1.7
CTU **Camp Tracy** 14.54 357 *e*Pn Pn 03 02 28.0 +0.8
LVIG **Laguna Verde** 14.57 113 *e*P Pn 03 02 20.6 -7.0
O11A **Cowboy Ranch,** 14.57 345 ⇓P Pn 03 02 29.0 +1.5
baz=14
O11A ⇑S Sn 03 05 08.9 -0.2
baz=14
BNLO **Ben Lomond (Sa** 14.70 321 ⇓P Pn 03 02 27.5 -1.8
baz=15
BNLO ⇑S Sn 03 05 13.0 +0.6
baz=15
N15A **Stansbury Isla** 14.79 354 ⇑P Pn 03 02 31.4 +0.8
baz=15
N15A ⇓S Sn 03 05 16.1 +1.5
baz=15
N14A **Grayback Hills** 14.82 352 ⇑P Pn 03 02 31.6 +0.6
baz=15
N14A ⇑S Sn 03 05 16.5 +1.2
baz=15
WENL **Wente Brothers** 14.83 323 ⇑P Pn 03 02 29.7 -1.3
baz=15
WENL ⇑S Sn 03 05 20.3 +4.9
baz=15
R05C **Kirkwood Meado** 14.83 330 ⇑P Pn 03 02 32.3 +1.2
baz=15
R05C ⇑S Sn 03 05 20.6 +5.0
baz=15
BGU **Big Grassy Mou** 14.88 353 *e*Pn Pn 03 02 31.9 +0.1
BGU *e*PcP PcP 03 07 32.4 -9.5
P08A **Dixie Valley** 14.88 337 ⇓P Pn 03 02 32.8 +1.0
baz=15
R04C **Big Horse Ranc** 14.88 327 ⇑P Pn 03 02 31.4 -0.4
baz=15
R04C ⇑S Sn 03 05 20.2 +3.4
baz=15
JRSC **Jasper Ridge** 14.93 322 ⇑P Pn 03 02 30.5 -1.9
baz=15
JRSC ⇑S Sn 03 05 21.1 +3.1
baz=15
O10A **Cortez Mining,** 14.94 342 ⇓P Pn 03 02 33.6 +1.1
baz=15
O10A ⇑S Sn 03 05 19.4 +1.3
baz=15
N13A **Wendover, West** 14.97 349 ⇑P Pn 03 02 33.1 +0.1
baz=15
N13A ⇓S Sn 03 05 20.8 +1.9
baz=15
O09A **Fish Creek Ran** 15.02 340 ⇓P Pn 03 02 34.2 +0.5
baz=15
O09A ⇓S Sn 03 05 21.1 +1.0
baz=15
P07A **Fallon** 15.04 335 ⇓P Pn 03 02 34.4 +0.4
baz=15
ELK **Elko** 15.06 346 *e*Pn Pn 03 02 35.8 +1.6
NATX **Nacogdoches** 15.06 64 *e*Pn Pn 03 02 35.2 +1.0
N12A **Clover Valley,** 15.12 347 ⇑P Pn 03 02 35.6 +0.6
baz=15
N12A ⇑S Sn 03 05 22.8 +0.2
baz=15
BDM **Black Diamond** 15.13 324 ⇓P Pn 03 02 34.4 -0.7
baz=15
BDM ⇓S Sn 03 05 27.7 +5.0
baz=15
PNIG **Pinotepa** 15.15 127 *e*P Pn 03 02 28.3 -7.3
SAC **San Andreas** 15.16 322 *e*P Pn 03 02 42.6 +7.1
LAVA **Lava Cap Winer** 15.18 328 ⇑P Pn 03 02 35.8 0.0
baz=15
LAVA ⇓S Sn 03 05 28.0 +3.9
baz=15
WCN **Washoe City** 15.19 332 ⇓P Pn 03 02 36.4 +0.5
baz=15
WCN ⇓S Sn 03 05 27.4 +3.2
baz=15
SPUT **South Promonto** 15.21 355 *e*Pn Pn 03 02 36.3 +0.3
N11A **Elko Archery C** 15.24 345 ⇑P Pn 03 02 36.4 -0.2
baz=15
N11A ⇑S Sn 03 05 28.3 +2.9
baz=15
N10A **Dunphy** 15.34 343 ⇓P Pn 03 02 38.0 +0.2
baz=15
N10A ⇓S Sn 03 05 30.2 +2.4
baz=15
M15A **Larsen Ranch,** 15.36 355 ⇑P Pn 03 02 38.0 -0.1
baz=15
M15A ⇑S Sn 03 05 29.0 +0.7
baz=15
PAHR **Pah Rah Range** 15.38 334 *e*Pn Pn 03 02 38.2 -0.2
comp=Z,565nm,1.4s
O08A **Rochester Mine** 15.44 338 ⇑P Pn 03 02 39.7 +0.6
baz=15
O08A ⇓S Sn 03 05 32.2 +1.9
baz=15
HWUT **Hardware Ranch** 15.45 357 *e*Pn Pn 03 02 39.2 0.0
comp=Z,416nm,1.0s
M13A **Montello** 15.46 350 ⇓P Pn 03 02 40.2 +0.8
baz=15
M13A ⇓S Sn 03 05 31.6 +0.8
baz=15
M14A **Sheep Mountain** 15.49 352 ⇑P Pn 03 02 39.7 -0.1
baz=15
M14A ⇓S Sn 03 05 32.4 +1.0
baz=15
Q04C **Lincoln** 15.55 327 ⇓P Pn 03 02 40.9 +0.3
baz=16
Q04C ⇑S Sn 03 05 35.6 +2.6
baz=16
P05C **Yuba Gap, Truc** 15.56 330 ⇓P Pn 03 02 41.0 +0.2
baz=16
P05C ⇑S Sn 03 05 37.9 +4.6
baz=16
P06A **Stead Airport,** 15.57 332 ⇓P Pn 03 02 41.5 +0.7
baz=16
P06A ⇑S Sn 03 05 38.4 +5.1
baz=16
FARB **Farallon Islan** 15.57 321 ⇑P Pn 03 02 39.0 -1.9
baz=16
FARB ⇓S Sn 03 05 36.3 +2.8
baz=16
O07A **Toulon** 15.58 336 ⇑P Pn 03 02 42.2 +1.1
baz=16
O07A ⇑S Sn 03 05 36.9 +3.1
baz=16
CBKS **Cedar Bluff** 15.61 33 *e*Pn Pn 03 02 40.1 -1.4
comp=Z,815nm,1.6s
CBKS **Cedar Bluff** 15.61 33 *e*P Pn 03 02 40.1 -1.4
CBKS pmax pmax
comp=Z,810nm,1.6s
M12A **Wells** 15.64 348 ⇑P Pn 03 02 41.5 -0.3
baz=16
M12A ⇓S Sn 03 05 37.9 +2.7
baz=16
HVU **Hansel Valley** 15.70 354 *e*Pn Pn 03 02 42.4 -0.2
comp=Z,658nm,1.4s
HVU **Hansel Valley** 15.70 354 *e*P Pn 03 02 42.4 -0.2
HVU pmax pmax
comp=Z,658nm,1.4s
PHWY **Pilot Hill** 15.72 15 *e*Pn Pn 03 02 42.3 -0.5
CVS **Carmenet Viney** 15.73 324 ⇑P Pn 03 02 40.9 -2.1
baz=16
CVS ⇓S Sn 03 05 40.4 +3.0
baz=16
N09A **Rock Creek Ran** 15.75 340 ⇑P Pn 03 02 43.4 +0.2
baz=16
N09A ⇑S Sn 03 05 41.1 +3.3
baz=16
VHO **Vista Hermosa** 15.76 122 *i* P Pn 03 02 47.7 +4.3
VHO *i* S Sn 03 05 42.5 +4.3
OXX **Oaxaca** 15.76 122 *e*P Pn 03 02 47.5 +4.1
RWWY **Rawlins** 15.77 9 *e*Pn Pn 03 02 43.0 -0.4
MCCM **Marconi Confer** 15.82 322 *e*P Pn 03 02 49.8 +5.7
MCCM **Marconi Confer** 15.82 322 ⇑P Pn 03 02 41.7 -2.4
baz=16
MCCM ⇓S Sn 03 05 42.9 +3.4
baz=16
M11A **Holland Ranch,** 15.84 346 ⇓P Pn 03 02 44.7 +0.3
baz=16
N08A **GE Springer Mi** 15.88 339 ⇓P Pn 03 02 45.6 +0.8
baz=16
N08A ⇓S Sn 03 05 41.7 +0.8
baz=16
BEKR **Beckwourth** 15.92 332 ⇑P Pn 03 02 45.6 +0.2
baz=16
BEKR ⇑S Sn 03 05 44.1 +2.2
baz=16
NSHM **Saint Helena R** 15.94 324 *e*Pn Pn 03 02 45.3 -0.4
O06A **Flanigan** 15.95 334 ⇑P Pn 03 02 46.1 +0.3
baz=16
O06A ⇑S Sn 03 05 45.5 +2.9
baz=16
OHCM **Honcut** 15.99 328 *e*Pn Pn 03 02 47.8 +1.4
SUTB **Sutter Butte** 16.06 327 ⇓P Pn 03 02 45.8 -1.4
baz=16
SUTB ⇑S Sn 03 05 48.2 +2.9
baz=16
M10A **I.L. Ranch, Tu** 16.10 344 ⇓P Pn 03 02 47.5 -0.2
baz=16
M10A ⇑S Sn 03 05 46.7 +0.3
baz=16
MNRC **McLaughlin Nat** 16.12 325 ⇑P Pn 03 02 46.8 -1.2
baz=16
MNRC ⇑S Sn 03 05 50.2 +3.4
baz=16
L13A **Double Diamond** 16.14 351 ⇓P Pn 03 02 47.9 -0.4
baz=16
L13A ⇑S Sn 03 05 48.1 +0.8
baz=16
N07B **Gerlach** 16.16 337 ⇓P Pn 03 02 48.7 +0.2
baz=16
N07B ⇓S Sn 03 05 50.4 +2.6
baz=16
ORV **Oroville** 16.18 328 ⇓P Pn 03 02 48.3 -0.4
baz=16
ORV ⇑S Sn 03 05 57.0 +8.8
baz=16
O05C **Quincy** 16.24 331 ⇑P Pn 03 02 49.6 +0.1
baz=16
O05C ⇓S Sn 03 05 52.7 +3.0
baz=16
M09A **Marrel Ranch,** 16.25 341 ⇑P Pn 03 02 49.2 -0.5
baz=16
L12A **House Creek Ra** 16.37 348 ⇑P Pn 03 02 51.7 +0.5
baz=16
L12A ⇑S Sn 03 05 55.0 +2.2
baz=16
N06A **Buffalo Meadow** 16.45 335 ⇑P Pn 03 02 52.8 +0.5
baz=16
N06A ⇑S Sn 03 05 59.7 +4.9
baz=16
K14A **Jones Ranch, D** 16.50 353 ⇑P Pn 03 02 53.4 +0.6
baz=16
K14A ⇓S Sn 03 05 58.2 +2.2
baz=16
HOPS **Hopland** 16.54 324 *e*Pn Pn 03 02 55.8 +2.5
comp=Z,603nm,1.7s
HOPS **Hopland** 16.54 324 ⇓P Pn 03 02 51.4 -1.9
baz=16
HOPS ⇓S Sn 03 06 04.4 +7.5
baz=16
M08A **Happy Creek Ra** 16.56 339 ⇑P Pn 03 02 54.3 +0.7
baz=16
AHID **Auburn Hatcher** 16.59 359 *e*Pn Pn 03 02 54.7 +0.7
O04C **Chester** 16.61 331 ⇑P Pn 03 02 54.0 -0.2
baz=16
O04C ⇓S Sn 03 06 06.2 +7.6
baz=16
L10A **Juniper Basin** 16.61 345 ⇓P Pn 03 02 55.3 +1.1
baz=16
L10A ⇓S Sn 03 06 06.5 +7.8
baz=16
BW06 **Boulder Array** 16.61 3 *e*Pn Pn 03 02 52.6 -1.6
comp=Z,360nm,1.4s
PDAR **Pinedale Array** 16.61 3 Pn Pn 03 02 52.2 -2.0
comp=Z,0.1nm,0.3s,baz=181,slow=12,SNR=42
PDAR Sn Sn 03 06 02.9 +4.2
comp=Z,0.0nm,0.3s,baz=197,slow=1.9,SNR=2.1
PDAR LR LR 03 09 26.9
comp=Z,67µm,18.7s,baz=204,slow=38
ELFS **Eagle Lake Fie** 16.70 332 ⇓P Pn 03 02 56.0 +0.6
baz=17
ELFS ⇑S Sn 03 06 07.4 +6.5
baz=17
K13A **Stover Farm, H** 16.71 351 ⇑P Pn 03 02 54.8 -0.7
baz=17
K13A ⇓S Sn 03 06 08.1 +7.0
baz=17
M07A **Soldier Meadow** 16.77 337 ⇓P Pn 03 02 57.0 +0.7
baz=17
M07A ⇓S Sn 03 06 09.8 +7.2
baz=17
O03C **Acorn Hollow,** 16.78 328 ⇑P Pn 03 02 56.5 +0.1
baz=17
O03C ⇓S Sn 03 06 10.6 +7.9
baz=17
K12A **Draper Farm, C** 16.82 349 ⇓P Pn 03 02 58.2 +1.3
baz=17
K12A ⇓S Sn 03 06 11.3 +7.4
baz=17
GASB **Alder Springs** 16.84 326 ⇓P Pn 03 02 57.1 -0.1
baz=17
GASB ⇓S Sn 03 06 13.8 +9.4
baz=17
L09A **Wilkinson Ranc** 16.86 342 ⇓P Pn 03 02 58.3 +0.9
baz=17
L09A ⇓S Sn 03 06 11.4 +6.6
baz=17
P01C **Double 8 Ranch** 17.02 324 ⇑P Pn 03 02 59.4 -0.1
baz=17
P01C ⇓S Sn 03 06 15.5 +6.8
baz=17
HUIG **Huatulco** 17.03 124 *e*P Pn 03 03 01.6 +1.9
M06C **Likely Place G** 17.09 334 ⇑P Pn 03 03 01.1 +0.8
baz=17
M06C ⇑S Sn 03 06 19.5 +9.1
baz=17
K11A **Parker Ranch,** 17.17 346 ⇑P Pn 03 03 01.5 +0.2
baz=17
K11A ⇓S Sn 03 06 20.7 +8.4
baz=17
HATC **Hat Creek Radi** 17.18 331 ⇓P Pn 03 03 02.2 +0.8
baz=17
HATC ⇓S Sn 03 06 20.0 +7.6
baz=17
CMIG **Matias Romero** 17.18 118 P Pn 03 03 01.4 -0.2
comp=Z,0.5nm,0.3s,baz=304,slow=9.7,SNR=25
CMIG S Sn 03 06 13.6 +0.8
comp=Z,0.1nm,0.3s,baz=338,slow=12,SNR=1.9
CMIG **Matias Romero** 17.18 118 *e*P Pn 03 02 60.0 -1.6
CMIG *i* S Sn 03 06 19.7 +6.9
REDW **Red Top Meadow** 17.18 359 *e*Pn Pn 03 03 01.3 -0.1
comp=Z,314nm,1.3s
L08A **Fields** 17.22 340 ⇑P Pn 03 03 02.8 +0.9
baz=17
L08A ⇑S Sn 03 06 17.6 +4.1
baz=17
O02C **Red Bluff** 17.28 327 ⇑P Pn 03 03 03.9 +1.2
baz=17
O02C ⇑S Sn 03 06 20.9 +5.9
baz=17

KCPM **Cahto Peak** 17.31 324 *e*Pn Pn 03 03 04.2 +1.1
TPAW **Teton Pass** 17.31 359 *e*Pn Pn 03 03 02.3 -0.7
comp=Z,494nm,1.5s
KIPM **Iron Peak** 17.35 325 *e*Pn Pn 03 03 05.9 +2.3
K10A **MacKenzie Ranc** 17.37 344 ⇓P Pn 03 03 04.5 +0.8
baz=17
K10A ⇓S Sn 03 06 23.2 +6.2
baz=17
L07A **Adell** 17.39 338 ⇓P Pn 03 03 04.1 +0.1
baz=17
L07A ⇑S Sn 03 06 24.7 +7.2
baz=17
DCID1 **Drake Creek** 17.42 359 *e*Pn Pn 03 03 04.6 +0.2
LOHW **Long Hollow** 17.43 0 *e*Pn Pn 03 03 03.3 -1.3
comp=Z,886nm,2.5s
J12A **Stokes Ranch,** 17.45 349 ⇑P Pn 03 03 05.0 +0.1
baz=17
J12A ⇓S Sn 03 06 25.8 +6.7
baz=17
J13A **Cove Ranch, Pi** 17.46 351 ⇓P Pn 03 03 04.1 -0.8
baz=17
J13A ⇑S Sn 03 06 25.8 +6.6
baz=17
WDC **Whiskeytown Da** 17.48 328 *e*Pn Pn 03 03 04.8 -0.4
comp=Z,311nm,1.6s
WDC **Whiskeytown Da** 17.48 328 P Pn 03 03 04.8 -0.3
WDC pmax pmax
comp=Z,310nm,1.5s
WDC **Whiskeytown Da** 17.48 328 ⇑P Pn 03 03 04.8 -0.4
baz=17
WDC ⇑S Sn 03 06 26.6 +6.9
baz=17
KSU1 **Kansas State U** 17.48 39 *e*Pn Pn 03 03 03.9 -1.3
comp=Z,1μm,2.0s
M05C **Lookout** 17.49 333 ⇑P Pn 03 03 06.4 +1.0
baz=17
M05C ⇓S Sn 03 06 27.8 +7.7
baz=17
K09A **Rome** 17.51 342 ⇓P Pn 03 03 05.8 +0.3
baz=17
K09A ⇓S Sn 03 06 27.3 +6.7
baz=17
WVOR **Wild Horse Val** 17.53 340 *e*Pn Pn 03 03 07.7 +1.9
comp=Z,313nm,1.3s
WVOR **Wild Horse Val** 17.53 340 *e*P Pn 03 03 07.7 +1.9
WVOR pmax pmax
comp=Z,313nm,1.3s
MOOW **Moose Ponds** 17.57 360 *e*Pn Pn 03 03 06.0 -0.3
comp=Z,710nm,1.9s
MOD **Modoc** 17.63 336 *e*Pn Pn 03 03 07.5 +0.5
MOD **Modoc** 17.63 336 ⇓P Pn 03 03 06.2 -0.8
baz=18
MOD ⇑S Sn 03 06 30.8 +7.5
baz=18
HLID **Hailey** 17.65 351 *e*Pn Pn 03 03 07.7 +0.4
comp=Z,1μm,2.6s
IMW **Indian Meadow** 17.72 359 *e*Pn Pn 03 03 08.2 +0.1
comp=Z,347nm,1.1s
MFID **Camas Ranch** 17.75 348 ⇓P Pn 03 03 08.3 -0.1
baz=18
MFID ⇓S Sn 03 06 34.0 +7.7
baz=18
K08A **Mann Creek Ran** 17.76 341 ⇑P Pn 03 03 09.4 +0.8
baz=18
K08A ⇑S Sn 03 06 34.2 +7.8
baz=18
O01C **Eel River Cons** 17.77 325 ⇑P Pn 03 03 08.9 +0.1
baz=18
O01C ⇑S Sn 03 06 34.8 +8.0
baz=18
M03C **McCloud** 17.84 331 ⇓P Pn 03 03 09.8 +0.2
baz=18
M03C ⇑S Sn 03 06 37.1 +8.7
baz=18
L05A **Lakeview** 17.95 335 ⇓P Pn 03 03 11.4 +0.4
baz=18
L05A ⇓S Sn 03 06 40.1 +8.9
baz=18
K07A **Rock Creek Ran** 17.96 339 ⇑P Pn 03 03 11.7 +0.6
baz=18
K07A ⇓S Sn 03 06 39.5 +8.2
baz=18
J10A **Berg Farm, Mel** 17.96 345 ⇑P Pn 03 03 11.2 +0.2
baz=18
J10A ⇓S Sn 03 06 39.4 +8.1
baz=18
I13A **Wildhorse Cree** 17.96 352 ⇑P Pn 03 03 11.4 +0.3
baz=18
I13A ⇓S Sn 03 06 37.0 +5.7
baz=18
N02C **Big Bar** 18.03 327 ⇑P Pn 03 03 12.2 +0.3
baz=18
N02C ⇓S Sn 03 06 40.7 +7.6
baz=18
J09A **Fry Pan Ranch,** 18.12 343 ⇓P Pn 03 03 13.0 -0.1
baz=18
J09A ⇓S Sn 03 06 43.7 +8.4
baz=18
M04C **Macdoel** 18.13 332 ⇓P Pn 03 03 14.0 +0.7
baz=18
M04C ⇑S Sn 03 06 46.9 +11
baz=18
YFT **Old Faithful** 18.27 360 *e*Pn Pn 03 03 15.7 +0.8
KHMM **Horse Mountain** 18.27 327 *e*Pn Pn 03 03 17.3 +2.3
J08A **Circle Bar Ran** 18.33 342 ⇑P Pn 03 03 15.1 -0.5
baz=18
J08A ⇓S Sn 03 06 49.4 +9.1
baz=18
JCC **Jacoby Creek** 18.38 326 ⇑P Pn 03 03 15.1 -1.1
baz=18
JCC ⇓S Sn 03 06 47.0 +5.4
baz=18
LKWY **Lake** 18.39 1 *e*Pn Pn 03 03 17.0 +0.7
K06A **Valley Falls** 18.39 337 ⇓P Pn 03 03 16.2 -0.2
baz=18
K06A ⇑S Sn 03 06 49.6 +7.8
baz=18
YBH **Yreka Blue Hor** 18.47 330 *e*Pn Pn 03 03 17.1 -0.3
YBH **Yreka Blue Hor** 18.47 330 ⇓P Pn 03 03 16.6 -0.7
baz=18
YBH ⇓S Sn 03 06 47.1 +3.4
baz=18
YMR **Madison River** 18.49 359 *e*P Pn 03 03 18.4 +0.9
comp=Z,270nm,1.3s
YNR **Norris Junctio** 18.54 360 *e*Pn Pn 03 03 20.8 +2.7
K05A **Summer Lake** 18.56 336 ⇑P Pn 03 03 18.9 +0.5
baz=18
K05A ⇓S Sn 03 06 53.7 +7.9
baz=18
I10A **Payette** 18.59 346 ⇑P Pn 03 03 18.8 -0.1
baz=18
I10A ⇓S Sn 03 06 53.9 +7.2
baz=18
J07A **Hines** 18.59 340 ⇓P Pn 03 03 18.6 -0.2
baz=18
J07A ⇑S Sn 03 06 54.0 +7.3
baz=18
H13A **Challis** 18.62 352 ⇓P Pn 03 03 19.2 +0.1
baz=18
H13A ⇓S Sn 03 06 55.1 +7.9
baz=18
QLMT **Earthquake Lak** 18.66 358 *e*Pn Pn 03 03 20.3 +0.6
H12A **Diamond D Ranc** 18.68 351 ⇓P Pn 03 03 19.7 -0.3
baz=19
H12A ⇓S Sn 03 06 56.5 +7.6
baz=19
I09A **Lost Marbles R** 18.70 344 ⇓P Pn 03 03 20.1 -0.1
baz=19
I09A ⇓S Sn 03 06 55.7 +6.3
baz=19
RSSD **Black Hills** 18.72 15 *e*P Pn 03 03 12.6 -7.8
MCMT **McKenzie Canyo** 18.73 355 P Pn 03 03 21.5 +0.9
J06A **Christmas Vall** 18.75 338 ⇓P Pn 03 03 20.2 -0.6
baz=19
J06A ⇑S Sn 03 06 57.0 +6.3
baz=19
K04A **Chilquin** 18.78 334 ⇓P Pn 03 03 21.4 +0.2
baz=19
K04A ⇓S Sn 03 06 58.5 +7.2
baz=19
KRMB **Red Mountain** 18.86 328 *e*P Pn 03 03 21.5 -0.6
I08A **Drewsey** 18.86 342 ⇑P Pn 03 03 22.4 +0.3
baz=19
I08A ⇑S Sn 03 06 58.6 +5.4
baz=19
H11A **Donnelly** 19.03 348 ⇑P Pn 03 03 23.8 -0.3
baz=19
H11A ⇓S Sn 03 07 02.5 +5.4
baz=19
G15A **Dillon** 19.05 356 ⇑P Pn 03 03 24.4 +0.1
baz=19
G15A ⇓S Sn 03 07 02.5 +5.0
baz=19
G13A **Cobalt** 19.13 352 ⇓P Pn 03 03 25.7 +0.3
baz=19
G13A ⇑S Sn 03 07 05.8 +6.1
baz=19
J05A **Fort Rock** 19.17 336 ⇓P Pn 03 03 25.0 -0.8
baz=19
J05A ⇓S Sn 03 07 04.8 +4.3
baz=19
SCX **San Cristobal** 19.17 116 *e*P Pn 03 03 28.3 +2.3
G14A **Jackson** 19.20 354 ⇑P Pn 03 03 25.8 -0.3
baz=19
G14A ⇑S Sn 03 07 08.2 +6.9
baz=19
L02A **Cave Junction** 19.21 330 ⇑P Pn 03 03 25.9 -0.4
baz=19
L02A ⇑S Sn 03 07 03.8 +2.2
baz=19
M01C **Crescent City** 19.21 328 ⇓P Pn 03 03 25.6 -0.7
baz=19
M01C ⇑S Sn 03 07 05.5 +3.9
baz=19
DLMT **Dillon** 19.25 356 *e*Pn Pn 03 03 26.4 -0.3
comp=Z,557nm,1.6s
I07A **Izee** 19.29 340 ⇑P Pn 03 03 27.1 -0.2
baz=19
I07A ⇑S Sn 03 07 07.3 +3.7
baz=19
SCIG **Sabancuy** 19.32 108 *e*P Pn 03 03 23.7 -4.1
H09A **Durkee** 19.34 345 ⇓P Pn 03 03 26.4 -1.4
baz=19
H09A ⇑S Sn 03 07 07.6 +3.0
baz=19
I06A **Prineville** 19.39 339 ⇑P Pn 03 03 27.1 -1.4
baz=19
I06A ⇓S Sn 03 07 09.5 +3.5
baz=19
BMO **Blue Mountains** 19.43 346 *e*Pn Pn 03 03 27.8 -1.2
H08A **Prairie City** 19.46 343 ⇑P Pn 03 03 28.0 -1.2
baz=19
H08A ⇓S Sn 03 07 11.8 +4.3
baz=19
J04A **Umpqua Nationa** 19.46 334 ⇓P Pn 03 03 28.3 -1.1
baz=19
J04A ⇑S Sn 03 07 10.9 +3.2
baz=19
BOZ **Bozeman (W)** 19.48 358 *e*Pn Pn 03 03 28.1 -1.4
comp=Z,327nm,1.4s
BOZ **Bozeman (W)** 19.48 358 *e*P Pn 03 03 28.1 -1.5
BOZ pmax pmax
comp=Z,330nm,1.4s
HBAR **Harrisburg** 19.52 56 *e*P Pn 03 03 30.6 +0.4
GCMT **Greycliff** 19.63 2 *e*P Pn 03 03 29.2 -2.0
K02A **Glendale** 19.64 331 ⇓P Pn 03 03 29.2 -2.3
baz=20
K02A ⇑S Sn 03 07 13.5 +1.4
baz=20
LRM **Limekiln Ridge** 19.70 356 *e*Pn Pn 03 03 31.4 -0.7
F15A **Butte** 19.72 356 ⇓P Pn 03 03 30.3 -2.0
baz=20
F15A ⇑S Sn 03 07 14.9 +1.1
baz=20
F14A **Wisdom** 19.75 354 ⇓P Pn 03 03 31.3 -1.5
baz=20
F14A ⇓S Sn 03 07 15.9 +1.2
baz=20
G10A **Bishop Farm, J** 19.81 346 ⇓P Pn 03 03 32.4 -1.1
baz=20
G10A ⇓S Sn 03 07 17.2 +1.2
baz=20
CCIG **Comitan** 19.82 116 *i* P Pn 03 03 33.2 -0.6
CCIG *i* S Sn 03 07 20.7 +4.0
J03A **Ideyld Park** 19.91 333 ⇑P Pn 03 03 32.9 -1.8
baz=20
J03A ⇓S Sn 03 07 19.2 +0.6
baz=20
F12A **Elk City** 19.92 350 ⇓P Pn 03 03 33.0 -1.8
baz=20
F12A ⇓S Sn 03 07 16.7 -2.0
baz=20
I05A **Bend** 19.94 337 ⇑P Pn 03 03 33.4 -1.6
baz=20
I05A ⇓S Sn 03 07 21.1 +1.9
baz=20
I04A **Tendick Farm,** 20.05 334 ⇓P P 03 03 34.1 -0.4
baz=20
I04A ⇑S S 03 07 22.3 +2.5
baz=20
OXF **Oxford** 20.11 60 *e*Pn P 03 03 34.5 -0.7
comp=Z,204nm,1.3s
OXF **Oxford** 20.11 60 *e*P P 03 03 34.6 -0.7
OXF pmax pmax
comp=Z,200nm,1.3s
K01A **Sixes** 20.12 329 ⇓P P 03 03 35.5 +0.2
baz=20
K01A ⇓S S 03 07 22.6 +1.4
baz=20
H06A **Lindquist Farm** 20.14 340 ⇑P P 03 03 35.5 0.0
baz=20
H06A ⇓S S 03 07 23.7 +2.2
baz=20
J02A **Umpqua** 20.16 332 ⇑P P 03 03 36.2 +0.4
baz=20
J02A ⇑S S 03 07 24.2 +2.1
baz=20
F11A **Grangeville** 20.20 349 ⇑P P 03 03 35.7 -0.4
baz=20
F11A ⇓S S 03 07 23.1 +0.3
baz=20
G08A **Pilot Rock** 20.25 343 ⇓P P 03 03 35.8 -0.9
baz=20
G08A ⇑S S 03 07 23.7 0.0
baz=20
E15A **Deer Lodge** 20.31 356 ⇑P P 03 03 37.0 -0.3
baz=20
E15A ⇑S S 03 07 26.3 +1.4
baz=20
H05A **Madras** 20.35 338 ⇓P P 03 03 38.4 +0.6
baz=20
H05A ⇑S S 03 07 29.4 +3.6
baz=20
E14A **Clinton** 20.36 354 ⇓P P 03 03 37.7 -0.3
baz=20
E14A ⇑S S 03 07 30.9 +4.9
baz=20
F09A **S2 Ranch, Elgi** 20.38 345 ⇓P P 03 03 38.9 +0.7
baz=20
F09A ⇑S S 03 07 31.2 +4.9
baz=20
G07A **Ruggs Ranch, H** 20.42 341 ⇓P P 03 03 38.8 +0.3
baz=20
G07A ⇓S S 03 07 31.8 +4.6
baz=20
E13A **Victor** 20.46 353 ⇑P P 03 03 39.3 +0.3
baz=20
E13A ⇓S S 03 07 30.8 +2.9
baz=20
F10A **Beach Ranch, E** 20.48 347 ⇑P P 03 03 39.1 -0.1
baz=20
F10A ⇓S S 03 07 31.8 +3.4
baz=20
I03A **Eugene** 20.54 333 ⇑P P 03 03 40.0 +0.1
baz=20
I03A ⇓S S 03 07 32.1 +2.5
baz=20
VTHM **Trough** 20.61 340 P P 03 03 41.6 +1.0
PARMO **Parma** 20.64 54 *e*P P 03 03 41.4 +0.3
E11A **Bogner Ranch,** 20.66 349 ⇓P P 03 03 39.9 -1.3
baz=21
E11A ⇓S S 03 07 32.5 +0.6
baz=21
F08A **Pendleton** 20.67 344 ⇑P P 03 03 41.5 +0.2
baz=21
F08A ⇑S S 03 07 33.3 +1.2
baz=21
G06A **Carlson Farm,** 20.68 340 ⇑P P 03 03 40.9 -0.5
baz=21
G06A ⇑S S 03 07 35.8 +3.4
baz=21
H04A **Detroit Lake** 20.72 336 ⇓P P 03 03 41.6 -0.2
baz=21
H04A ⇑S S 03 07 34.6 +1.4
baz=21
I02A **Mapleton** 20.79 332 ⇑P P 03 03 42.5 -0.1
baz=21
I02A ⇑S S 03 07 38.2 +3.6
baz=21
LAO **LASA Array** 20.81 9 *e*P P 03 03 42.1 -0.6
LAO LR LR
comp=Z,34μm,21.0s,MS5.7
MSO **Missoula** 20.82 354 *e*P P 03 03 42.3 -0.5
comp=Z,189nm,1.1s
MSO LR LR
comp=Z,20μm,20.0s,MS5.5
GLAT **Glass** 20.83 56 *e*Pn P 03 03 40.3 -2.8
CHMT **Chamberlain Mo** 20.84 355 *e*P P 03 03 42.5 -0.6
G05A **Wamic** 20.91 338 ⇑P P 03 03 43.9 0.0
baz=21
G05A ⇑S S 03 07 40.4 +3.6
baz=21
D15A **Lincoln** 20.92 356 ⇓P P 03 03 44.4 +0.5
baz=21
D15A ⇑S S 03 07 36.8 -0.1
baz=21
ECSD **EROS,Sioux Fal** 20.93 29 *e*P P 03 03 42.7 -1.5
ECSD LR LR
comp=Z,31μm,21.0s,MS5.7
E10A **Myers Farm, Un** 20.95 347 ⇑P P 03 03 43.6 -0.7
baz=21
E10A ⇑S S 03 07 39.6 +2.0
baz=21
SSOR **Sweet Springs** 20.97 336 P P 03 03 43.0 -1.5
D14A **Greenough** 21.03 355 ⇑P P 03 03 44.8 -0.3
baz=21
D14A ⇑S S 03 07 40.8 +1.7
baz=21
COR **Corvallis** 21.06 334 *e*P P 03 03 46.4 +0.9
COR LR LR
comp=Z,22μm,19.0s,MS5.6
F07A **Phinny Hill Vi** 21.07 342 ⇑P P 03 03 45.0 -0.6
baz=21
F07A ⇓S S 03 07 38.8 -1.3
baz=21
HOOD **Mount Hood Mea** 21.09 338 *e*P P 03 03 44.6 -1.2
H03A **Soap Creek Ran** 21.13 334 ⇓P P 03 03 46.6 +0.4
baz=21
H03A ⇑S S 03 07 42.4 +1.1
baz=21
D13A **Huson** 21.13 353 ⇓P P 03 03 46.0 -0.2
baz=21
D13A ⇓S S 03 07 40.9 -0.3
baz=21
E09A **Wood Farm, Sta** 21.19 346 ⇓P P 03 03 46.8 -0.1
baz=21
E09A ⇑S S 03 07 42.8 +0.4
baz=21
F06A **Goldendale** 21.20 340 ⇑P P 03 03 46.5 -0.6
baz=21
F06A ⇓S S 03 07 43.0 +0.4
baz=21
BRAL **Brewton** 21.26 71 PFAKE 03 04 00.0 +12
BRAL LR LR
comp=Z,22μm,19.0s,MS5.6
G04A **Mulino** 21.27 336 ⇓P P 03 03 47.3 -0.5
baz=21
G04A ⇑S S 03 07 44.4 +0.3
baz=21
PLAL **Pickwick Lake** 21.30 60 *e*P P 03 03 46.8 -1.4
comp=Z,234nm,1.5s,mb5.3
PLAL LR LR
comp=Z,9μm,19.0s,MS5.2
TEIG **Tepich** 21.37 101 *e*P P 03 03 49.8 +0.7
TEIG LR LR
comp=Z,31μm,22.0s,MS5.7
TEIG **Tepich** 21.37 101 P P 03 03 48.9 -0.1
comp=Z,66nm,0.8s,mb5.0,baz=293,slow=14,SNR=11
TEIG S S 03 07 49.2 +2.8
comp=Z,23nm,1.2s,baz=87,slow=8.3,SNR=2.3
TEIG LR LR 03 13 16.0
comp=Z,28μm,21.5s,MS5.6,baz=336,slow=40
TEIG **Tepich** 21.37 101 *e*P P 03 03 45.9 -3.2
E08A **Dider Farm, El** 21.39 344 ⇓P P 03 03 48.1 -0.9
baz=21
E08A ⇑S S 03 07 46.6 +0.3
baz=21
H02A **Toledo** 21.41 333 ⇓P P 03 03 48.6 -0.7
baz=21
H02A ⇑S S 03 07 48.2 +1.4
baz=21
HAWA **Hanford** 21.42 343 *e*P P 03 03 47.4 -1.9
comp=Z,260nm,1.0s,mb5.5
HAWA LR LR
comp=Z,5μm,20.0s,MS4.9
F05A **White Salmon** 21.52 339 ⇑P P 03 03 49.6 -0.8
baz=21
F05A ⇓S S 03 07 50.4 +1.5
baz=21
D10A **Wagner Farm, O** 21.53 348 ⇓P P 03 03 49.5 -1.0
baz=21
D10A ⇑S S 03 07 46.9 -2.1
baz=21
LRAL **Lakeview Retre** 21.65 66 *e*P P 03 03 51.0 -1.0
LRAL LR LR
comp=Z,29μm,19.0s,MS5.7
G03A **Yamhill** 21.66 335 ⇓P P 03 03 51.2 -0.8
baz=22
G03A ⇑S S 03 07 50.9 -0.9
baz=22
C13A **Hot Springs** 21.72 353 ⇓P P 03 03 51.5 -1.1
baz=22
C13A ⇑S S 03 07 51.7 -1.1
baz=22
C14A **Swan Lake** 21.73 354 ⇓P P 03 03 51.5 -1.1
baz=22
C14A ⇑S S 03 07 53.4 +0.5
baz=22
D09A **Jones Farm, Ri** 21.75 346 ⇓P P 03 03 51.1 -1.8
baz=22
D09A ⇑S S 03 07 51.6 -1.8
baz=22
EGMT **Eagleton** 21.86 2 PFAKE 03 04 10.0 +16
EGMT LR LR
comp=Z,24μm,20.0s,MS5.6
WVT **Waverly** 21.87 57 PFAKE 03 04 10.0 +16
WVT LR LR
comp=Z,8.0nm,22.0s
F04A **Amboy** 21.88 338 ⇓P P 03 03 53.2 -1.1
baz=22
F04A ⇑S S 03 07 55.4 -0.6
baz=22
D08A **Wollman Farm,** 21.89 345 ⇓P P 03 03 53.1 -1.2
baz=22
D08A ⇑S S 03 07 54.2 -1.9
baz=22
BSMT **Bassoo Peak** 21.92 352 P P 03 03 54.9 +0.3
E06A **Yakima** 21.96 341 ⇓P P 03 03 54.3 -0.9
baz=22
E06A ⇑S S 03 07 56.7 -0.8
baz=22
OD2 **Odessa Site #2** 22.15 345 P P 03 03 55.3 -1.9
E05A **Randle** 22.22 339 ⇑P P 03 03 57.3 -0.6
baz=22
E05A ⇑S S 03 08 03.4 +0.9
baz=22
C10A **Spilker Farm,** 22.27 348 ⇓P P 03 03 57.7 -0.7
baz=22
C10A ⇓S S 03 08 02.6 -0.8
baz=22
D07A **Quincy** 22.28 343 ⇑P P 03 03 58.2 -0.4
baz=22
D07A ⇓S S 03 08 03.9 +0.3
baz=22
F03A **Seaside** 22.29 336 ⇑P P 03 03 58.7 0.0
baz=22
F03A ⇓S S 03 08 03.6 -0.2
baz=22
B13A **Whitefish** 22.40 353 ⇑P P 03 03 58.7 -1.1
baz=22
B13A ⇓S S 03 08 03.9 -2.0
baz=22
LON **Longmire** 22.40 340 P P 03 03 59.0 -0.8
C09A **Chrisman Ranch** 22.44 346 ⇑P P 03 03 58.7 -1.5
baz=22
C09A ⇑S S 03 08 05.6 -1.2
baz=22
D06A **Cle Elum** 22.51 342 ⇑P P 03 04 00.4 -0.6
baz=22
D06A ⇓S S 03 08 10.9 +2.7
baz=22
E04A **Onalaska** 22.56 338 ⇑P P 03 04 01.3 -0.3
baz=22
E04A ⇓S S 03 08 08.2 -1.0

baz=22
C08A Higginbotham F 22.60 345 ⇑P **P** **03 04 00.4 -1.5**
baz=22
C08A ⇑S **S** **03 08 08.4 -1.4**
baz=22
B12A Libby 22.63 351 ⇑P **P** **03 04 01.7 -0.5**
baz=22
B12A ⇑S **S** **03 08 09.1 -1.2**
baz=22
NEW Newport 22.66 349 *e*P **P** **03 04 01.3 -1.4**
NEW LR LR
comp=Z,35µm,19.0s,MS5.8
NEW Newport 22.66 349 P **P** **03 04 00.5 -2.1**
comp=Z,21nm,0.9s,mb4.6,baz=171,slow=12,SNR=20
NEW S **S** **03 08 13.3 +2.2**
comp=Z,3.8nm,1.0s,baz=141,slow=7.1,SNR=2.0
NEW LR LR 03 13 18.5
comp=Z,28µm,18.7s,MS5.7,baz=172,slow=38
B11A Sandpoint 22.71 350 ⇑P **P** **03 04 01.7 -1.3**
baz=23
B11A ⇓S **S** **03 08 11.1 -0.7**
baz=23
B10A Chitwood Farm, 22.72 349 ⇑P **P** **03 04 02.7 -0.5**
baz=23
B10A ⇓S **S** **03 08 09.6 -2.4**
baz=23
C07A Waterville 22.76 343 ⇓P **P** **03 04 02.7 -0.9**
baz=23
C07A ⇑S **S** **03 08 11.3 -1.4**
baz=23
E03A Lebam 22.81 337 ⇓P **P** **03 04 04.0 -0.3**
baz=23
E03A ⇓S **S** **03 08 14.2 +0.6**
baz=23
HDIL Hopedale 22.82 46 *e*P **P** **03 04 04.2 -0.3**
HDIL LR LR
comp=Z,18µm,19.0s,MS5.5
D05A Enumclaw 22.85 340 ⇑P **P** **03 04 04.6 0.0**
baz=23
D05A ⇓S **S** **03 08 14.5 +0.3**
baz=23
DGMT Dagmar 22.86 11 *e*P **P** **03 04 03.6 -1.0**
comp=Z,307nm,1.1s,mb5.7
DGMT LR LR
comp=Z,12µm,21.0s,MS5.3
B09A Rice 23.01 347 ⇑P **P** **03 04 05.0 -1.3**
baz=23
B09A ⇓S **S** **03 08 16.6 -0.1**
baz=23
WALA Waterton Lakes 23.02 354 *e*P **P** **03 04 04.9 -1.6**
D04A Dobbs Creek Ra 23.04 338 ⇓P **P** **03 04 06.3 -0.3**
baz=23
D04A ⇓S **S** **03 08 18.2 +0.9**
baz=23
SWET Sewanee 23.05 61 *e*P **P** **03 04 05.0 -1.8**
A12A Yaak River Ran 23.09 352 ⇑P **P** **03 04 06.0 -1.1**
baz=23
A12A ⇑S **S** **03 08 17.4 -0.7**
baz=23
C06A Tall Timber Ra 23.19 342 ⇑P **P** **03 04 07.3 -0.9**
baz=23
C06A ⇓S **S** **03 08 18.6 -1.1**
baz=23
B08A Colville Reser 23.20 345 ⇓P **P** **03 04 06.8 -1.5**
baz=23
B08A ⇓S **S** **03 08 18.1 -1.8**
baz=23
C05A Tolt Reservoir 23.21 341 ⇑P **P** **03 04 08.1 -0.3**
baz=23
C05A ⇑S **S** **03 08 20.0 -0.1**
baz=23
A11A Hall Mountain, 23.21 350 ⇑P **P** **03 04 07.6 -0.8**
baz=23
A11A ⇓S **S** **03 08 19.8 -0.3**
baz=23
D03A Wishkah Elem. 23.38 337 ⇓P **P** **03 04 08.5 -1.7**
baz=23
D03A ⇓S **S** **03 08 20.1 -2.7**
baz=23
A10A Northport 23.43 348 ⇑P **P** **03 04 09.1 -1.6**
baz=23
A10A ⇓S **S** **03 08 21.6 -2.1**
baz=23
GNW Green Mountain 23.45 339 *e*P **P** **03 04 09.3 -1.6**
B07A Winthrop 23.49 344 ⇑P **P** **03 04 10.0 -1.3**
baz=23
B07A ⇑S **S** **03 08 25.5 +1.0**
baz=23
JFWS Jewell Farm 23.61 40 *e*P **P** **03 04 12.5 -0.1**
A09A Danville 23.62 347 ⇑P **P** **03 04 11.5 -1.2**
baz=24
A09A ⇑S **S** **03 08 26.7 0.0**
baz=24
C04A Brinnon 23.63 339 ⇓P **P** **03 04 11.9 -0.8**
baz=24
C04A ⇑S **S** **03 08 28.0 +1.1**
baz=24
NLWA Neilton Lookou 23.65 337 *e*P **P** **03 04 14.4 +1.5**
NLWA LR LR
comp=Z,48µm,19.0s,MS6.0
A08A Turner Farm, O 23.75 346 ⇑P **P** **03 04 12.6 -1.1**
baz=24
A08A ⇓S **S** **03 08 29.0 +0.2**
baz=24
WCI Wyandotte Cave 23.79 54 *e*P **P** **03 04 15.0 +0.7**
WCI LR LR
comp=Z,15µm,20.0s,MS5.5
B05A Bryant 23.84 341 ⇓P **P** **03 04 13.3 -1.3**
baz=24
B05A ⇓S **S** **03 08 30.5 +0.2**
baz=24
B06A Marblemount 23.90 342 ⇑P **P** **03 04 14.6 -0.5**
baz=24
B06A ⇑S **S** **03 08 32.6 +1.4**
baz=24
A07A Ashnola River, 24.10 344 ⇑P **P** **03 04 16.4 -0.6**
baz=24
A07A ⇓S **S** **03 08 35.5 +1.1**
baz=24
B04A Port Angeles 24.10 339 ⇓P **P** **03 04 16.5 -0.5**
baz=24
B04A ⇑S **S** **03 08 34.5 +0.1**
baz=24
CPCT Cooper Cave 24.22 61 *e*P **P** **03 04 16.1 -2.1**
C03A Quillayute Air 24.37 337 ⇑P **P** **03 04 20.6 +1.2**
baz=24
A06A Chilliwack 24.43 343 ⇓P **P** **03 04 19.1 -0.8**
baz=24
A06A ⇑S **S** **03 08 41.4 +1.6**
baz=24
A04A Legoe Bay, Lum 24.43 340 ⇑P **P** **03 04 18.7 -1.3**
baz=24
A04A ⇑S **S** **03 08 40.9 +1.0**
baz=24
A05A Maple Falls 24.50 342 ⇑P **P** **03 04 19.8 -0.8**
baz=24
A05A ⇑S **S** **03 08 41.5 +0.5**
baz=24
PGC Sidney 24.60 339 *e*P **P** **03 04 21.3 -0.3**
GOGA Godfrey 24.63 66 *e*P **P** **03 04 20.6 -1.4**
GOGA LR LR
comp=Z,30µm,21.0s,MS5.8
TKL Tuckaleechee C 24.86 61 P **P** **03 04 22.4 -1.7**
TKL S **S** **03 08 51.4 +4.3**
TKL LR LR 03 13 51.3
TKL Tuckaleechee C 24.86 61 P **P** **03 04 22.4 -1.7**
TKL S **S** **03 08 51.4 +4.3**
TKL Tuckaleechee C 24.86 61 P **P** **03 04 22.4 -1.7**
comp=Z,5.8nm,0.6s,mb4.3,baz=200,slow=8.8,SNR=9.9
TKL S **S** **03 08 51.4 +4.4**
comp=Z,2.2nm,0.8s,baz=213,slow=11,SNR=1.5
TKL LR LR 03 13 51.3
comp=Z,16µm,18.6s,MS5.5,baz=250,slow=36
AGMN Agassiz Refuge 24.97 24 *e*P **P** **03 04 23.5 -1.4**
AGMN LR LR
comp=Z,29µm,19.0s,MS5.8
TGUH Tegucigalpa,Un 24.97 114 *e*P **P** **03 04 26.5 +1.3**
TGUH LR LR
comp=Z,32µm,22.0s,MS5.8
TZTN Tazewell 25.28 59 *e*P **P** **03 04 28.5 +0.7**
TZTN LR LR
comp=Z,14µm,21.0s,MS5.4
SOR Soroa 25.35 92 *e*PG **P** **03 04 30.3 +1.6**
baz=260
SOR *e*SG **S** **03 09 03.2 +8.1**
comp=N,26nm,9.6s
SOR *e*

comp=E,38nm,11.9s
DWPF Disney 26.04 79 PFAKE **03 04 50.0 +15**
DWPF LR LR
comp=Z,11µm,21.0s,MS5.4
COWI Conover 26.28 35 *e*P **P** **03 04 36.5 -0.3**
COWI LR LR
comp=Z,2µm,19.0s,MS4.6
EYMN Ely 26.46 30 *e*P **P** **03 04 38.1 -0.3**
comp=Z,135nm,1.5s,mb5.2
EYMN LR LR
comp=Z,8µm,20.0s,MS5.3
JSC Jenkinsville 26.59 65 *e*P **P** **03 04 41.7 +1.9**
ULM Lac du Bonnet 26.62 21 P **P** **03 04 36.6 -3.3**
comp=Z,6.5nm,0.8s,baz=218,slow=9.3,SNR=13
ULM S **S** **03 09 15.3 +0.7**
comp=Z,1.7nm,0.8s,baz=198,slow=11,SNR=2.1
ULM LR LR 03 14 34.5
comp=Z,14µm,19.0s,MS5.5,baz=208,slow=35
ACSO Alum Creek Sta 26.95 52 *e*P **P** **03 04 42.2 -0.8**
ACSO LR LR
comp=Z,20µm,19.0s,MS5.7
LHS Liberty Hill 26.99 65 *e*P **P** **03 04 44.0 +0.6**
LHS 03 04 49.8
EDM Edmonton 27.13 356 *e*P **P** **03 04 42.8 -1.6**
NHSC New Hope 27.31 68 *e*P **P** **03 04 47.2 +0.9**
comp=Z,146nm,1.3s,mb5.3
NHSC LR LR
comp=Z,11µm,21.0s,MS5.4
AAM Ann Arbor 27.37 47 PFAKE **03 05 00.0 +13**
AAM LR LR
comp=Z,24µm,22.0s,MS5.7
ELN Prospectdale 27.62 59 *e*P **P** **03 04 48.2 -0.8**
BLA Blacksburg 27.87 59 *e*P **P** **03 04 49.2 -2.1**
comp=Z,29nm,1.0s,mb4.9
BLA LR LR
comp=Z,17µm,20.0s,MS5.6
BLA Blacksburg 27.87 59 *e*P **P** **03 04 49.2 -2.1**
BLA pmax pmax
comp=Z,29nm,1.0s,mb4.9
BLA MLR MLR
comp=Z,17µm,20.0s,MS5.6
GLMI Grayling 28.03 42 PFAKE **03 05 00.0 +7.4**
GLMI LR LR
comp=Z,3µm,22.0s,MS4.9
MGV Manicaragua 28.23 92 *e*P **P** **03 04 58.3 +3.7**
MGV *e*S **S** **03 09 44.3 +3.7**
comp=N,21nm,2.1s
MGV *e*
comp=E,22nm,1.6s
JTS JuntasAbangare 28.96 118 *e*P **P** **03 05 00.4 -0.7**
comp=E,302nm,1.9s,mb5.7
JTS LR LR
comp=Z,18µm,20.0s,MS5.7
JTS JuntasAbangare 28.96 118 *e*P **P** **03 05 00.0 -1.1**
JTS JuntasAbangare 28.96 118 P **P** **03 04 59.8 -1.3**
comp=Z,6.8nm,0.8s,mb4.4,baz=312,slow=5.0,SNR=5.5
JTS PcP PcP 03 08 10.4 +0.4
comp=Z,6.0nm,0.9s,baz=198,slow=24,SNR=2.3
JTS S **S** **03 09 53.5 +1.4**
comp=Z,2.2nm,0.6s,baz=157,slow=24,SNR=1.6
MCWV Mont Chateau 29.00 55 *e*P **P** **03 05 00.5 -0.8**
MCWV LR LR
comp=Z,3µm,20.0s,MS4.9
BBB Bella Bella 29.17 338 P **P** **03 05 00.5 -2.2**
BBB S **S** **03 09 53.5 -1.2**
BBB LR LR 03 16 22.0
BBB Bella Bella 29.17 338 P **P** **03 05 00.5 -2.2**
comp=Z,13nm,0.9s,mb4.7,baz=0.5,slow=23,SNR=2.1
BBB S **S** **03 09 53.5 -1.2**
comp=Z,10nm,0.9s,baz=4.6,slow=22,SNR=1.6
BBB LR LR 03 16 22.0
comp=Z,17µm,19.9s,MS5.7,baz=163,slow=36
FFC Flin Flon 29.26 10 PFAKE **03 05 20.0 +17**
FFC LR LR
comp=Z,22µm,19.0s,MS5.8
ALLY Alegheny Colle 29.47 51 *e*P **P** **03 05 10.1 +4.7**
comp=Z,24nm,0.8s,mb5.0
CNNC Cliffs of the 29.48 64 *e*P **P** **03 05 12.2 +6.6**
CNNC LR LR
comp=Z,33µm,20.0s,MS6.0
ERPA Erie 29.76 50 PFAKE **03 05 20.0 +12**
ERPA LR LR
comp=Z,26µm,19.0s,MS5.9
URVA University of 30.19 60 *e*P **P** **03 05 11.0 -0.8**
CCCC Cccc 30.46 92 *e*P **P** **03 05 20.2 +5.9**
CBN Corbin 30.46 58 PFAKE **03 05 30.0 +16**
CBN LR LR
comp=Z,20µm,22.0s,MS5.7
SSPA Standing Stone 30.73 54 *e*P **P** **03 05 14.1 -2.5**
SSPA LR LR
comp=Z,37µm,19.0s,MS6.1
MVL Millersville 31.67 56 *e*P **P** **03 05 24.7 -0.2**
BINY Binghamton 32.58 52 *e*P **P** **03 05 33.1 +0.3**
comp=Z,81nm,1.4s,mb5.5
BINY LR LR
comp=Z,33µm,19.0s,MS6.0
RCC Rio Carpintero 32.66 93 *e*P **P** **03 05 32.5 -1.3**
PAYG Puerto Ayora 33.11 140 *e*P **P** **03 05 40.5 +2.8**
comp=Z,108nm,1.4s,mb5.6
PAYG LR LR
comp=Z,6µm,21.0s,MS5.3
BCIP Isla Barro Col 33.72 114 PFAKE **03 06 00.0 +17**
BCIP LR LR
comp=Z,11µm,20.0s,MS5.6
PAL Palisades 33.73 55 *e*P **P** **03 05 42.1 -0.8**
WRAK Wrangell Islan 34.07 338 *e*P **P** **03 05 43.4 -2.2**
comp=Z,61nm,1.2s,mb5.4
WRAK LR LR
comp=Z,11µm,20.0s,MS5.6
MSNY Massena 34.29 47 *e*P **P** **03 05 47.2 -0.5**
LONY Lake Ozonia 34.34 48 *e*P **P** **03 05 48.0 -0.2**
LONY LR LR
comp=Z,8µm,21.0s,MS5.4
NCB Newcomb 34.37 49 *e*P **P** **03 05 49.4 +1.0**
NCB LR LR
comp=Z,15µm,19.0s,MS5.7
ACCN Adirondack Com 34.56 51 *e*P **P** **03 05 51.1 +1.0**
FCC Fort Churchill 34.61 15 *e*P **P** **03 05 47.8 -2.5**
FRNY Flat Rock 35.08 48 *e*P **P** **03 05 46.9 -7.7**
QUA2 Belchertown 35.18 53 *e*P **P** **03 05 54.2 -1.3**
comp=Z,78nm,1.0s,mb5.6
SIT Sitka 35.59 337 *e*P **P** **03 06 01.2 +2.5**
SIT LR LR
comp=Z,11µm,20.0s,MS5.6
HRV Harvard--Oak R 35.81 53 *e*P **P** **03 06 04.0 +3.1**
HRV LR LR
comp=Z,17µm,20.0s,MS5.8
WES Weston 35.95 53 *e*P **P** **03 06 01.4 -0.7**
WES LR LR
comp=Z,15µm,19.0s,MS5.8
LBNH Lisbon 36.02 50 PFAKE **03 06 10.0 +7.3**
LBNH LR LR
comp=Z,18µm,19.0s,MS5.9
YKA Yellowknife Ar 36.45 357 P **P** **03 06 03.7 -2.3**
YKA 03 08 31.2
YKA S **S** **03 11 47.1 -0.4**
YKA Yellowknife Ar 36.45 357 P **P** **03 06 03.7 -2.3**
comp=Z,10nm,1.0s,mb4.7,baz=181,slow=7.8,SNR=65
YKA PcP PcP 03 08 31.1 +1.3
comp=Z,3.9nm,1.1s,baz=171,slow=1.6,SNR=2.5
YKA S **S** **03 11 47.0 -0.4**
comp=Z,0.2nm,0.6s,baz=134,slow=9.1,SNR=2.6
YKA LR LR 03 20 56.4
comp=Z,15µm,18.5s,MS5.8,baz=175,slow=36
YKW3 Yellowknife Ar 36.51 357 *e*P **P** **03 06 04.7 -1.9**
SDDR Presa de Saban 36.92 93 *e*P **P** **03 06 12.8 +2.1**
SDDR LR LR
comp=Z,10µm,19.0s,MS5.6
SKAG Skagway 37.46 339 *e*P **P** **03 06 16.1 +1.4**
comp=Z,124nm,1.6s,mb5.5
PKME Peaks-Kenny Pk 38.11 49 PFAKE **03 06 30.0 +10**
PKME LR LR
comp=Z,7µm,19.0s,MS5.5
OTAV Otavalo 40.31 125 *e*P **P** **03 06 39.5 +0.4**
comp=Z,155nm,1.4s,mb5.5
OTAV LR LR
comp=Z,3µm,19.0s,MS5.1
BBSR BB Station 40.32 70 PFAKE **03 06 50.0 +11**
BBSR LR LR
comp=Z,5µm,21.0s,MS5.4
ROSC El Rosal 40.65 115 P **P** **03 06 42.3 +0.3**
comp=Z,6.0nm,0.7s,mb4.3,baz=77,slow=6.2,SNR=17
ROSC S **S** **03 12 54.2 +2.0**
comp=Z,1.6nm,0.5s,baz=101,slow=23,SNR=1.6
ROSC LR LR 03 25 48.5
comp=Z,5µm,19.8s,MS5.4,baz=348,slow=40

MPR Mayaguez 40.90 92 *e*P **P** **03 06 44.4 +0.4**
SDV Santo Domingo 41.62 107 *e*P **P** **03 06 49.1 -0.8**
comp=Z,80nm,1.1s,mb5.3
SDV LR LR
comp=Z,3µm,20.0s,MS5.2
POHA Pohakuloa 41.67 271 PFAKE **03 07 00.0 +10**
POHA LR LR
comp=Z,16µm,22.0s,MS5.8
SJG San Juan 41.82 92 *e*P **P** **03 06 51.0 -0.5**
comp=Z,71nm,0.9s,mb5.3
SJG LR LR
comp=Z,7µm,20.0s,MS5.5
EYAK Cordova Ski Ar 41.90 335 *e*P **P** **03 06 51.4 -0.2**
comp=Z,168nm,1.2s,mb5.5
CPD Cerro la Pandu 42.05 92 *e*P **P** **03 06 54.3 +0.8**
CPD Cerro la Pandu 42.05 92 *e*P **P** **03 06 54.3 +0.8**
CPD 03 06 59.6
DAWY Dawson 42.26 342 *e*P **P** **03 06 54.5 0.0**
MTP Monte Pirata 42.36 91 *e*P **P** **03 06 55.1 -0.8**
SCHQ Schefferville 42.88 36 P **P** **03 07 00.6 +0.8**
SCHQ S **S** **03 13 25.2 +1.0**
SCHQ SS SS 03 16 27.9 -7.6
SCHQ LR LR 03 25 46.6
SCHQ Schefferville 42.88 36 P **P** **03 07 00.6 +0.8**
comp=Z,5.8nm,1.0s,mb4.3,baz=240,slow=11,SNR=7.5
SCHQ S **S** **03 13 25.2 +1.0**
comp=Z,0.9nm,0.8s,baz=19,slow=12,SNR=1.8
SCHQ SS SS 03 16 27.9 -7.6
comp=Z,1.8nm,1.1s,baz=26,slow=14,SNR=1.7
SCHQ LR LR 03 25 46.6
comp=Z,20µm,20.6s,MS6.0,baz=247,slow=37
KDAK Kodiak Island 43.27 329 *e*P **P** **03 07 07.5 +4.7**
KDAK LR LR
comp=Z,1µm,19.0s,MS4.9
KDAK Kodiak Island 43.27 329 P **P** **03 07 02.5 -0.3**
comp=Z,30nm,0.9s,mb5.0,baz=120,slow=7.2,SNR=5.1
KDAK S **S** **03 13 32.6 +2.8**
comp=Z,9.0nm,0.9s,baz=322,slow=13,SNR=1.8
EGAK Eagle 43.31 342 *e*P **P** **03 07 02.6 -0.5**
EGAK LR LR
comp=Z,6µm,21.0s,MS5.5
KIP Kipapa 43.42 274 *e*P **P** **03 07 06.4 +1.8**
KIP LR LR
comp=Z,17µm,20.0s,MS6.0
KIP Kipapa 43.42 274 *de*P **P** **03 07 05.6 +1.0**
SLKM Skilak Lake 43.65 333 *e*P **P** **03 07 04.6 -1.3**
SLKM Skilak Lake 43.65 333 P **P** **03 07 05.3 -0.6**
SML Sawmill 43.66 335 *e*P **P** **03 07 04.9 -1.0**
PMR Palmer 43.84 335 *e*P **P** **03 07 06.3 -1.0**
comp=Z,119nm,1.2s,mb5.5
PMR LR LR
comp=Z,6µm,19.0s,MS5.5
INK Inuvik 44.38 348 *e*P **P** **03 07 11.1 -0.5**
INK Inuvik 44.38 348 P **P** **03 07 10.8 -0.8**
comp=Z,17nm,1.1s,mb4.7,baz=144,slow=9.2,SNR=23
INK S **S** **03 13 46.1 +0.3**
comp=Z,1.3nm,1.1s,baz=329,slow=9.4,SNR=1.9
INK SS SS 03 17 08.5 +4.1
comp=Z,0.6nm,0.9s,baz=140,slow=22,SNR=3.3
MCK McKinley 45.06 337 *e*P **P** **03 07 16.5 -0.6**
comp=Z,95nm,1.0s,mb5.6
MCK LR LR
comp=Z,3µm,19.0s,MS5.2
MCK McKinley 45.06 337 *e*P **P** **03 07 16.5 -0.6**
MCK pmax pmax
comp=Z,95nm,1.0s,mb5.6
MCK MLR MLR
comp=Z,3µm,19.0s,MS5.2
COLA College 45.42 339 ⇑*e*P **P** **03 07 19.1 -0.8**
COLA LR LR
comp=Z,8µm,19.0s,MS5.7
CHGN Chignik 45.53 325 *e*P **P** **03 07 19.9 -1.0**
SVW2 Sparrevohn 46.20 332 *e*P **P** **03 07 24.1 -2.1**
SDPT Sand Point 46.31 323 *e*P **P** **03 07 26.4 -0.7**
TTA Tatalina 47.27 334 *e*P **P** **03 07 33.2 -1.3**
TTA Tatalina 47.27 334 *e*P **P** **03 07 32.5 -2.0**
GRGR Grenville 48.05 97 PFAKE **03 07 50.0 +8.7**
GRGR LR LR
comp=Z,7µm,21.0s,MS5.6
IMA2 Indian Mountai 48.09 338 *e*P **P** **03 07 39.0 -1.8**
AKUT Akutan 48.95 320 *e*P **P** **03 07 49.0 +1.4**
RES Resolute Bay 49.28 5 *e*P **P** **03 07 49.6 -0.2**
UNV Unalaska Valle 49.32 320 *e*P **P** **03 07 53.1 +2.6**
UNV LR LR
comp=Z,8µm,19.0s,MS5.7
BBGH Gun Hill 49.52 95 PFAKE **03 08 00.0 +7.4**
BBGH LR LR
comp=Z,10µm,19.0s,MS5.8
NNA Nana 50.17 135 *e*P **P** **03 07 57.9 +0.5**
comp=Z,74nm,1.3s,mb5.5
NNA LR LR
comp=Z,4µm,21.0s,MS5.4
RPN Rapa Nui 52.97 179 PFAKE **03 08 30.0 +12**
RPN LR LR
comp=Z,13µm,21.0s,MS5.9
RPN Rapa Nui 52.97 179 S **S** **03 15 51.9 +4.3**
comp=Z,26nm,0.7s,baz=72,slow=6.5,SNR=2.4
TNA Tin City 53.09 334 *e*P **P** **03 08 17.0 -1.6**
comp=Z,70nm,1.1s,mb5.5
TNA LR LR
comp=Z,2µm,20.0s,MS5.2
GAMB Gambell 54.14 331 *e*P **P** **03 08 24.1 -2.2**
PTCN Pitcairn Islan 54.27 202 PFAKE **03 08 40.0 +12**
PTCN LR LR
comp=Z,11µm,20.0s,MS5.9
RKT Rikitea 54.34 208 *e*S **S** **03 16 11.3 +4.9**
comp=Z,3µm,33.0s
RKT *e*SS SS 03 19 57.5 +8.5
comp=Z,1µm,27.0s
RKT *e*LR LR 03 24 17.2
comp=Z,15µm,27.0s,baz=25
SFJD Kangerlussuaq 54.59 25 PFAKE **03 08 40.0 +10**
SFJD LR LR
comp=Z,18µm,19.0s,MS6.2
SFJD Kangerlussuaq 54.59 25 *e*P **P** **03 08 30.9 +1.4**
SFJD *i* S **S** **03 16 14.6 +5.8**
SFJD *i* 03 16 20.2
SFJD pmax pmax
comp=Z,33nm,1.3s,mb5.2
SFJD MLR MLR
comp=Z,13µm,20.0s,MS6.0
SFJD Kangerlussuaq 54.59 25 *i* P **P** **03 08 30.9 +1.4**
comp=Z,33nm,1.3s,mb5.2
SFJD *i* S **S** **03 16 14.6 +5.8**
SFJD *i* 03 16 20.2
SFJD
comp=Z,13µm,20.0s
ADK Adak 55.25 316 *e*P **P** **03 08 34.9 +0.4**
ARE Arequipa 56.94 134 P **P** **03 08 49.0 +2.0**
PPT Papeete 57.62 225 *e*S **S** **03 16 55.0 +4.8**
comp=Z,1µm,30.8s
PPT *e*LQ 03 23 26.7
comp=Z,8µm,23.2s
PPT *e*LR LR 03 25 46.0
comp=Z,3µm,22.2s,baz=30
PPT Papeete 57.62 225 LR LR 03 27 16.0
comp=Z,3µm,18.1s,MS5.4,baz=37,slow=30
LPAZ La Paz 59.05 131 P **P** **03 09 01.5 -0.4**
comp=Z,7.3nm,0.9s,mb4.7,baz=336,slow=8.4,SNR=14
LPAZ S **S** **03 17 10.2 +1.2**
comp=Z,0.5nm,0.7s,baz=344,slow=18,SNR=1.8
ALE Alert 59.14 7 P **P** **03 09 00.0 -1.7**
comp=Z,148nm,1.6s,mb5.8,SNR=6.5
SMY Shemya 60.86 318 PFAKE **03 09 30.0 +16**
SMY LR LR
comp=Z,3µm,20.0s,MS5.5
TBI Tubuai 61.90 221 *e*S **S** **03 17 49.9 +4.6**
comp=Z,2µm,36.5s
TBI *e*SS SS 03 21 51.6 +3.6
comp=Z,805nm,29.8s
TBI *e*LQ 03 25 06.6
comp=Z,8µm,37.5s
TBI *e*LR LR 03 27 30.5
comp=Z,2µm,29.5s
BILL Bilibino 63.47 335 ⇑*e*P **P** **03 09 30.2 -0.9**
BILL LR LR
comp=Z,5µm,20.0s,MS5.7
BILL Bilibino 63.47 335 ⇓*e*P **P** **03 09 29.8 -1.3**
BILL pmax pmax
comp=Z,155nm,1.4s,mb5.9
BILL MLR MLR
comp=Z,3µm,13.0s,MS5.7
DAG Danmarks Havn 65.22 15 ⇑*i*P **P** **03 09 38.7 -3.7**
DAG pmax pmax
comp=Z,110nm,1.3s,mb5.7
DAG MLR MLR

comp=Z,37µm,18.0s,MS6.6
DAG MLR MLR
comp=N,14µm,17.0s,MS6.5
DAG MLR MLR
comp=E,27µm,20.0s,MS6.5
DAG Danmarks Havn 65.22 15⇑ *i*P P 03 09 38.7 -3.7
comp=E,113nm,1.3s,mb5.7
DAG
comp=Z,37µm,18.0s
LCO Las Campanas 66.90 142 PFAKE 03 10 10.0 +16
LCO LR LR
comp=Z,3µm,19.0s,MS5.5
RAR Rarotonga 66.97 230 PFAKE 03 10 10.0 +16
RAR LR LR
comp=Z,1.0nm,21.0s
RAR Rarotonga 66.97 230 S S 03 18 49.0 +1.0
comp=Z,14nm,0.7s,baz=23,slow=21,SNR=1.9
JMIC Jan Mayen 69.38 20 AMS AMS 03 41 13.5
comp=Z,5µm,16.6s,MS5.9
PET Petropavlovsk 69.97 320⇑ *e*P P 03 10 14.7 +1.8
PET LR LR
comp=Z,3µm,21.0s,MS5.6
PET Petropavlovsk 69.97 320 *e*P P 03 10 15.3 +2.4
PET *e*S S 03 19 20.7 -2.3
PET *e*SS SS 03 23 50.4 -1.2
PET *e*SSS 03 26 58.4
PET pmax pmax
comp=Z,100nm,8.5s
KBS Kingsbay 70.35 10⇑ *e*P P 03 10 13.7 -1.1
KBS LR LR
comp=Z,8µm,19.0s,MS6.0
KBS Kingsbay 70.35 10 *e*PP PP 03 12 48.4 -1.6
KBS *e*S S 03 19 27.9 +1.2
KBS AMS AMS 03 42 20.0
comp=Z,6µm,14.9s,MS6.0
PDA Ponta Delgada 70.76 57 *e*LR LR 03 33 20.0
MA2 Magadan 72.01 328 *e*P **P 03 10 30.7 +5.5**
MA2 LR LR
comp=Z,2µm,20.0s,MS5.4
MA2 Magadan 72.01 328 *e*P **P 03 10 25.0 -0.1**
MA2 *e* 03 10 41.6
MA2 *e*PPP 03 14 55.0
MA2 *e*S S 03 19 43.0 -3.5
MA2 *e* 03 20 16.0
MA2 pmax pmax
comp=E,60nm,1.4s
MA2 pmax pmax
comp=Z,100nm,1.4s,mb5.5
MA2 MLR MLR
comp=Z,3µm,13.4s,MS5.7
TIXI Tiksi 74.27 344⇑ *e*P P 03 10 35.0 -3.3
TIXI LR LR
comp=Z,4µm,20.0s,MS5.7
TIXI Tiksi 74.27 344 *e*P P 03 10 35.4 -2.9
TIXI *e*S S 03 20 06.9 -4.9
TIXI pmax pmax
comp=Z,127nm,1.5s,mb5.6
BJO Bjornoya 74.50 12 AMS AMS 03 40 53.7
comp=Z,10µm,24.5s,MS6.0
FUNA Funafuti 76.28 253 PFAKE 03 11 00.0 +9.2
FUNA LR LR
comp=Z,8µm,19.0s,MS6.0
TRO Tromso 77.88 16 *e*S S 03 20 49.9 -1.7
TRO AMS AMS 03 46 14.0
comp=Z,5µm,19.5s,MS5.8
ESK Eskdalemuir 78.14 34 PFAKE 03 11 10.0 +9.5
ESK LR LR
comp=Z,11µm,19.0s,MS6.2
TRQA Tornquist 78.48 143 PFAKE 03 11 10.0 +7.5
TRQA LR LR
comp=Z,3µm,20.0s,MS5.7
RCBR Riachuelo 78.97 102 PFAKE 03 11 20.0 +14
RCBR LR LR
comp=Z,5µm,21.0s,MS5.8
NSS Namsos 79.30 22 AMS AMS 03 48 21.9
comp=Z,5µm,16.9s,MS5.9
BER Bergen 79.35 27 *e*SS SS 03 26 11.9 -1.7
BER AMS AMS 03 45 07.3
comp=Z,5µm,20.5s,MS5.9
ARCES ARCESS Array B 79.50 14 P **P 03 11 09.3 +1.5**
comp=Z,12nm,0.9s,mb4.8,baz=323,slow=4.3,SNR=13
ARCES LR LR 03 47 23.1
comp=Z,10µm,19.2s,MS6.2,baz=334,slow=36
KEV Kevo 79.66 14 *e*p **P 03 11 09.2 +0.6**
comp=Z,8.0nm,0.8s,mb4.7
KEV Kevo 79.66 14 PFAKE 03 11 20.0 +11
KEV LR LR
comp=Z,8µm,19.0s,MS6.1
KEV Kevo 79.66 14 *e*P **P 03 11 09.2 +0.6**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
YAK Yakutsk 79.83 335 PFAKE 03 11 20.0 +10
YAK LR LR
comp=Z,4µm,19.0s,MS5.8
YAK Yakutsk 79.83 335 *e*P **P 03 11 09.3 -0.4**
YAK *e* 03 11 14.8
YAK *e**PP pP 03 11 20.2 +7.2
YAK *e* 03 14 08.5
YAK *e*S S 03 21 13.6 +1.0
YAK pmax pmax
comp=Z,30nm,1.1s,mb5.1
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=E,8.0nm,1.2s
YAK pmax pmax
comp=Z,24nm,1.3s,mb5.0
YAK pmax pmax
comp=N,43nm,1.5s
YAK pmax pmax
comp=E,66nm,2.1s
YAK smax
comp=E,1µm,10.7s
YAK smax
comp=N,870nm,9.5s
YAK MLR MLR
comp=Z,4µm,22.0s,MS5.7
YAK MLR MLR
comp=N,2µm,15.0s
YAK MLR MLR
comp=E,3µm,21.0s
STS Santiago 80.86 47 P **P 03 11 22.3 +6.7**
comp=E,20nm,0.9s,mb5.0
STS Santiago 80.86 47 P **P 03 11 22.3 +6.6**
STS pmax pmax
comp=Z,20nm,0.9s,mb5.0
NB2 NORSAR Subarra 81.26 25 P **P 03 11 18.2 +0.8**
comp=Z,68nm,1.4s,mb5.4,baz=308,slow=5.3
NB2 NORSAR Subarra 81.26 25 P **P 03 11 18.2 +0.8**
NB2 pmax pmax
comp=Z,69nm,1.4s,mb5.4
NOA NORSAR Array B 81.26 25 P **P 03 11 18.6 +1.2**
NOA S S 03 21 27.3 -0.4
NOA SS SS 03 26 43.1 +1.0
NOA LR LR 03 46 28.8
NOA NORSAR Array B 81.26 25 P **P 03 11 18.6 +1.2**
NOA S S 03 21 27.3 -0.4
NOA SS SS 03 26 43.1 +1.0
NOA NORSAR Array B 81.26 25 P **P 03 11 18.6 +1.2**
comp=Z,7.9nm,0.9s,mb4.7,baz=310,slow=5.2,SNR=13
NOA S S 03 21 27.3 -0.4
comp=Z,2.5nm,1.1s,baz=236,slow=8.9,SNR=2.7
NOA SS SS 03 26 43.1 +1.0
comp=Z,1.6nm,0.9s,baz=39,slow=8.5,SNR=2.4
NOA LR LR 03 46 28.8
comp=Z,6µm,19.3s,MS6.0,baz=295,slow=35
KONO Kongsberg 81.51 26 *e*P **P 03 11 19.5 +0.7**
comp=Z,100nm,1.4s,mb5.6
KONO LR LR
comp=Z,11µm,22.0s,MS6.2
KONO Kongsberg 81.51 26 *e*S S 03 21 26.0 -4.3
KONO *e*SS SS 03 26 44.5 -1.4
KONO Kongsberg 81.51 26 P **P 03 11 24.4 +5.6**
KONO pmax pmax
comp=Z,100nm,1.4s,mb5.5
ROSF Rostrenen 81.53 40 *e*P **P 03 11 19.1 0.0**
comp=Z,56nm,1.2s,mb5.1
ROSF Rostrenen 81.53 40 *e*P **P 03 11 19.1 0.0**
comp=Z,28nm,1.2s,mb5.1
ROSF Rostrenen 81.53 40 *e*P **P 03 11 19.1 0.0**
ROSF pmax pmax
comp=Z,28nm,1.2s,mb5.1
EPON Pontenova 81.57 46 P **P 03 11 27.0 +7.5**
comp=Z,104nm,1.6s,mb5.5
ELOB Lobios 81.66 47 P **P 03 11 26.9 +7.0**
comp=Z,74nm,2.0s,mb5.3

YSS Yuzh-Sakhalins 81.77 318 *e*P **P 03 11 23.2 +2.8**
comp=Z,23nm,0.8s,mb5.2
YSS LR LR
comp=Z,3µm,22.0s,MS5.6
YSS Yuzh-Sakhalins 81.77 318⇓ *e*P P 03 11 22.0 +1.6
YSS pmax pmax
comp=Z,50nm,1.1s,mb5.4
YSS MLR MLR
comp=Z,900nm,17.0s,MS5.2
QUIF Quistinic 81.80 40 *e*P **P 03 11 20.6 +0.1**
comp=Z,89nm,1.2s,mb5.3
QUIF Quistinic 81.80 40 *e*P **P 03 11 20.6 +0.1**
comp=Z,45nm,1.2s,mb5.3
QUIF Quistinic 81.80 40 *e*P **P 03 11 20.6 +0.1**
QUIF pmax pmax
comp=Z,45nm,1.2s,mb5.3
SGMF Saint Gilles 81.98 40 *e*P **P 03 11 21.4 -0.1**
comp=Z,216nm,1.8s,mb5.5
SGMF Saint Gilles 81.98 40 *e*P **P 03 11 21.4 -0.1**
comp=Z,108nm,1.8s,mb5.5
SGMF Saint Gilles 81.98 40 *e*P **P 03 11 21.4 -0.1**
SGMF pmax pmax
comp=Z,108nm,1.8s,mb5.5
ERUA La Rua 82.01 47 P **P 03 11 26.8 +5.0**
comp=Z,30nm,1.0s,mb5.2
ERUA La Rua 82.01 47 P **P 03 11 26.8 +5.0**
ERUA pmax pmax
comp=Z,31nm,1.0s,mb5.2
PVRL Vila Real 82.16 48 *e*P **P 03 11 26.6 +4.1**
comp=Z,26nm,0.9s,mb5.2
PMAFR Mafra 82.16 51 *e*SKS 03 21 44.0
PMAFR Mafra 82.16 51 *e*LR LR 03 39 42.5
comp=Z,8µm,20.0s
PVIS Viseu 82.30 48 *e*P **P 03 11 27.9 +4.6**
ECAL Calabor 82.49 47 P **P 03 11 32.9 +8.6**
comp=Z,141nm,2.3s,mb5.5
MVO Moncorvo 82.67 48 *e*P **P 03 11 27.9 +2.7**
comp=Z,37nm,2.1s,mb5.0
MVO Moncorvo 82.67 48 *e*SKS 03 21 46.6
MVO Moncorvo 82.67 48 *e*LR LR 03 40 03.6
comp=Z,6µm,20.0s
MTE Manteigas 82.68 49 *e*P **P 03 11 28.7 +3.4**
comp=Z,42nn,1.9s,mb5.2
MTE Manteigas 82.68 49 *e*SKS 03 21 48.9
MTE Manteigas 82.68 49 *e*LR LR 03 39 04.9
comp=Z,8µm,20.0s
MTE Manteigas 82.68 49 *e*P **P 03 11 25.8 +0.5**
comp=Z,33nn,0.9s,mb5.4
LVZ Lovozero 82.77 13⇑ *e*P P 03 11 24.6 -0.6
LVZ MLR MLR
comp=Z,10µm,21.0s,MS6.2
APA Apatity 82.80 13⇑ *i*P P 03 11 28.4 +3.0
APA *e*S S 03 21 50.0 +6.8
APA pmax pmax
comp=Z,81nm,1.4s,mb5.6
EARI Arriondas 82.83 45 P **P 03 11 33.0 +7.0**
comp=Z,170nm,2.4s,mb5.7
GRR Gorron 82.89 39 *e*P **P 03 11 26.6 +0.4**
comp=Z,303nn,1.7s,mb5.8
GRR Gorron 82.89 39 *e*P **P 03 11 26.6 +0.4**
comp=Z,151nn,1.7s,mb5.8
GRR Gorron 82.89 39 *e*P **P 03 11 26.6 +0.4**
GRR pmax pmax
comp=Z,151nn,1.7s,mb5.8
FLN La Foliniere 82.90 39 *e*P **P 03 11 26.7 +0.4**
comp=Z,602nn,1.7s,mb6.0
FLN *e*MLR MLR
comp=Z,12µm,19.5s,MS6.0
FLN La Foliniere 82.90 39 *e*P **P 03 11 26.7 +0.4**
comp=Z,301nn,1.7s,mb6.0
FLN LR LR
comp=Z,12µm,19.5s,MS6.3
FLN La Foliniere 82.90 39 *e*P **P 03 11 26.7 +0.4**
FLN pmax pmax
comp=Z,301nn,1.7s,mb6.0
FLN MLR MLR
comp=Z,12µm,19.5s,MS6.3
PCBR Castelo Branco 82.99 49 *e*P **P 03 11 30.5 +3.6**
LDF La Druitiere 83.19 39 *e*P **P 03 11 28.2 +0.4**
comp=Z,451nn,1.6s,mb5.9
LDF La Druitiere 83.19 39 *e*P **P 03 11 28.2 +0.4**
comp=Z,225nn,1.6s,mb6.0
LDF La Druitiere 83.19 39 *e*P **P 03 11 28.2 +0.4**
LDF pmax pmax
comp=Z,225nn,1.6s,mb6.0
PTEO Sao Teotonio 83.20 52 *e*P **P 03 11 29.2 +1.1**
EVO Evora 83.24 50 *e*P **P 03 11 32.7 +4.5**
MUD Monsted U'grnd 83.32 29 *i*P **P 03 11 31.4 +3.1**
MUD pmax pmax
comp=Z,72nm,1.3s,mb5.5
MUD MLR MLR
comp=Z,5µm,18.0s,MS5.9
MUD Monsted U'grnd 83.32 29 *i*P **P 03 11 31.4 +3.1**
comp=Z,72nm,1.3s,mb5.5
MUD *i*S S 03 22 03.5 +15
MUD
comp=Z,5µm,18.0s
PFVI Vila Bisbo 83.32 52 *e*SKS 03 21 53.5
PFVI Vila Bisbo 83.32 52 *e*LR LR 03 39 59.6
comp=Z,6µm,18.0s
MORF Marmelete 83.36 52 *e*SKS 03 21 55.2
MORF Marmelete 83.36 52 *e*LR LR 03 38 58.1
comp=Z,7µm,18.0s
PESTR Estremoz 83.37 50 *e*P **P 03 11 31.5 +2.6**
comp=Z,22nn,1.9s,mb4.9
PESTR Estremoz 83.37 50 *e*SKS 03 21 45.7
PESTR Estremoz 83.37 50 *e*LR LR 03 40 27.8
comp=Z,9µm,20.0s
MENF Mencas 83.38 36 *e*P **P 03 11 31.6 +2.9**
EBAD Badajoz 83.82 50 P **P 03 11 35.5 +4.2**
comp=Z,113nn,2.2s,mb5.6
PBDV Barranco-do-Ve 83.90 52 *e*SKS 03 22 03.1
PBDV Barranco-do-Ve 83.90 52 *e*LR LR 03 40 43.8
comp=Z,8µm,18.0s
ERM Erimo 83.96 314 PFAKE 03 11 40.0 +8.1
ERM LR LR
comp=Z,4µm,20.0s,MS5.8
PVAQ Vaqueiros 83.97 51 *e*SKS 03 21 55.9
PVAQ Vaqueiros 83.97 51 *e*LR LR 03 40 37.2
comp=Z,6µm,18.0s
ELAN Lanestosa 83.99 45 P **P 03 11 40.1 +8.1**
comp=Z,80nm,1.6s,mb5.6
EGRO El Granado 84.08 51 P **P 03 11 37.2 +4.7**
comp=Z,2.2nn,0.7s,mb4.4
PBAR Barrancos 84.08 50 *e*P **P 03 11 35.3 +2.7**
comp=Z,21nn,1.4s,mb5.1
PBAR Barrancos 84.08 50 *e*SKS 03 21 59.0
PBAR Barrancos 84.08 50 *e*LR LR 03 40 32.1
comp=Z,9µm,20.0s
MFF Saint Martin d 84.24 40 *e*P **P 03 11 33.4 +0.2**
comp=Z,349nn,1.7s,mb5.9
MFF Saint Martin d 84.24 40 *e*P **P 03 11 33.4 +0.2**
comp=Z,175nn,1.7s,mb5.9
MFF Saint Martin d 84.24 40 *e*P **P 03 11 33.4 +0.2**
MFF pmax pmax
comp=Z,175nn,1.7s,mb5.9
UCC Uccle 84.40 35 P **P 03 11 35.5 +1.6**
comp=Z,63nn,1.9s,mb5.4
SNF Seneffe 84.53 36 P **P 03 11 37.0 +2.4**
comp=Z,54nn,2.1s,mb5.3
EMIN Mina Concepcio 84.53 51 P **P 03 11 38.2 +3.4**
comp=Z,172nn,2.3s,mb5.8
BAIF Baives 84.75 36 *e*P **P 03 11 35.8 +0.1**
comp=Z,125nn,1.2s,mb5.6
BAIF Baives 84.75 36 *e*P **P 03 11 35.8 +0.1**
comp=Z,62nn,1.2s,mb5.6
BAIF Baives 84.75 36 *e*P **P 03 11 35.8 +0.1**
BAIF pmax pmax
comp=Z,63nn,1.2s,mb5.6
GUD Guadarrama 84.83 47 P **P 03 11 39.3 +3.0**
comp=Z,44nn,1.4s,mb5.4
GUD Guadarrama 84.83 47 P **P 03 11 39.3 +3.0**
GUD pmax pmax
comp=Z,44nn,1.4s,mb5.4
ECRI Cripan 84.89 45 P **P 03 11 40.9 +4.4**
comp=Z,16nn,1.6s,mb4.9
ECRI Cripan 84.89 45 P **P 03 11 40.9 +4.3**
ECRI pmax pmax
comp=Z,16nn,1.6s,mb4.9
DOU Dourbes 84.93 36 P **P 03 11 38.6 +2.0**
comp=Z,27nn,1.4s,mb5.2
CLNS Chul'man 85.04 333 *e*P **P 03 11 42.2 +5.2**
CLNS pmax pmax
comp=Z,20nn,1.1s,mb5.2
CLNS pmax pmax
comp=N,13nn,1.3s
CLNS pmax pmax

comp=E,16nm,1.7s
GIVF Givet 85.05 36 *e*P **P 03 11 37.5 +0.3**
comp=E,174nm,1.2s,mb5.8
GIVF Givet 85.05 36 *e*P **P 03 11 37.5 +0.3**
comp=E,87nm,1.2s,mb5.8
GIVF Givet 85.05 36 *e*P **P 03 11 37.5 +0.3**
GIVF pmax pmax
comp=Z,87nm,1.2s,mb5.8
BEBN Eben Emael 85.08 35 P **P 03 11 40.9 +3.5**
comp=Z,15nm,1.8s,mb4.8
BCLA Clavier 85.11 35 P **P 03 11 39.9 +2.4**
COP Copenhagen 85.22 28 *e*P **P 03 11 38.5 +0.6**
COP *e*S S 03 22 14.5 +6.5
COP pmax pmax
comp=Z,12nm,0.9s,mb5.0
COP MLR MLR
comp=Z,2µm,19.0s,MS5.5
COP Copenhagen 85.22 28 *i*P **P 03 11 38.5 +0.6**
comp=Z,12nm,0.9s,mb5.0
COP *e*S S 03 22 14.5 +6.5
COP
comp=Z,2µm,19.0s
PAB San Pablo 85.25 48 PFAKE 03 11 50.0 +12
PAB LR LR
comp=Z,5µm,20.0s,MS5.9
MEM Membach 85.36 35 P **P 03 11 41.9 +3.2**
comp=Z,30nn,1.6s,mb5.2
HABR Khabarovsk 85.37 323 *e*P **P 03 11 37.0 -1.8**
HABR pP 03 11 40.1 -2.0
HABR *e*S S 03 21 58.0 -12
HABR *e*SS SS 03 27 42.3 -1.1
HABR pmax pmax
comp=Z,229nm,4.3s
HABR MLR MLR
comp=Z,598nm,16.6s,MS5.1
SJPF Ste Jean 85.44 44 *e*P **P 03 11 39.7 +0.4**
comp=Z,41nn,1.3s,mb5.1
SJPF Ste Jean 85.44 44 *e*P **P 03 11 39.7 +0.4**
comp=Z,20nn,1.3s,mb5.1
SJPF Ste Jean 85.44 44 *e*P **P 03 11 39.7 +0.4**
SJPF pmax pmax
comp=Z,21nn,1.3s,mb5.1
ESDC Sonseca Array 85.44 48 P **P 03 11 42.4 +3.0**
comp=Z,22nn,1.7s,mb5.0
ESDC Sonseca Array 85.44 48 P **P 03 11 39.5 +0.2**
comp=Z,0.5nn,0.7s,baz=298,slow=35,SNR=6.2
ESDC S S 03 22 03.8 -7.0
comp=Z,0.7nn,0.8s,baz=240,slow=24,SNR=2.4
ESDC SS SS 03 27 47.9 +2.9
comp=Z,0.1nn,0.3s,baz=290,slow=14,SNR=2.1
KAF Kangasniemi 85.53 19 *e*p **P 03 11 36.8 -2.6**
comp=Z,19nn,0.9s,mb5.3,baz=317,slow=4.7
KAF Kangasniemi 85.53 19 *e*P **P 03 11 36.8 -2.6**
KAF pmax pmax
comp=Z,19nn,0.9s,mb5.3
ESPR Espera 85.54 51 P **P 03 11 49.1 +9.2**
comp=Z,83nn,1.8s,mb5.7
LFF La Frestale 85.66 42 *e*P **P 03 11 39.7 -0.6**
TCF Toulx Ste Croi 85.78 40 *e*P **P 03 11 40.9 0.0**
comp=Z,40nn,1.0s,mb5.3
TCF Toulx Ste Croi 85.78 40 *e*P **P 03 11 40.9 0.0**
comp=Z,20nn,1.0s,mb5.3
TCF Toulx Ste Croi 85.78 40 *e*P **P 03 11 40.9 0.0**
TCF pmax pmax
comp=Z,20nn,1.0s,mb5.3
EADA Adamuz 85.78 49 P **P 03 11 45.6 +4.6**
comp=Z,58nn,1.8s,mb5.5
RJF Les Rejaudoux 85.92 41 *e*P **P 03 11 41.9 +0.3**
comp=Z,50nn,1.0s,mb5.4
RJF *e*MLR MLR
comp=Z,7µm,21.5s,MS5.7
RJF Les Rejaudoux 85.92 41 *e*P **P 03 11 41.9 +0.3**
comp=Z,25nn,1.0s,mb5.4
RJF LR LR
comp=Z,7µm,21.5s,MS6.0
RJF Les Rejaudoux 85.92 41 *e*P **P 03 11 41.9 +0.3**
RJF pmax pmax
comp=Z,25nn,1.0s,mb5.4
RJF MLR MLR
comp=Z,7µm,21.5s,MS6.0
ETSF Etsaut 85.96 44 *e*P **P 03 11 41.5 -0.4**
comp=Z,13nn,0.9s,mb4.9
ETSF Etsaut 85.96 44 *e*P **P 03 11 41.5 -0.4**
comp=Z,6.6nn,0.9s,mb4.9
ETSF Etsaut 85.96 44 *e*P **P 03 11 41.5 -0.4**
ETSF pmax pmax
comp=Z,7.0nn,0.9s,mb4.9
BGF Bois d'Agland 85.99 39 *e*P **P 03 11 42.1 +0.1**
comp=Z,128nn,1.4s,mb5.7
BGF Bois d'Agland 85.99 39 *e*P **P 03 11 42.1 +0.1**
comp=Z,64nn,1.4s,mb5.7
BGF Bois d'Agland 85.99 39 *e*P **P 03 11 42.1 +0.1**
BGF pmax pmax
comp=Z,64nn,1.4s,mb5.7
FINES FINESS Array B 86.00 19 P **P 03 11 42.7 +1.0**
comp=Z,3.9nn,0.7s,mb4.8,baz=290,slow=7.9,SNR=9.7
FINES LR LR 03 50 20.6
comp=Z,8µm,18.6s,MS6.1,baz=316,slow=36
WLF Walferdange 86.00 36 *e*P **P 03 11 42.1 +0.2**
comp=Z,66nn,1.2s,mb5.7
WLF Walferdange 86.00 36 *e*P **P 03 11 42.1 +0.2**
WLF pmax pmax
comp=Z,66nn,1.2s,mb5.7
WLF Walferdange 86.00 36 P **P 03 11 43.3 +1.4**
comp=Z,46nn,1.5s,mb5.5
SSF Saint Saulge 86.08 39 *e*P **P 03 11 42.4 0.0**
comp=Z,115nn,1.4s,mb5.6
SSF Saint Saulge 86.08 39 *e*P **P 03 11 42.4 0.0**
comp=Z,58nn,1.4s,mb5.6
SSF Saint Saulge 86.08 39 *e*P **P 03 11 42.4 0.0**
SSF pmax pmax
comp=Z,58nn,1.4s,mb5.6
MEZF Maizieres J'vi 86.10 37 *e*P **P 03 11 42.7 +0.2**
comp=Z,157nn,1.6s,mb5.7
MEZF Maizieres J'vi 86.10 37 *e*P **P 03 11 42.7 +0.2**
comp=Z,157nn,1.6s,mb6.0
ETOR Torete 86.11 46 P **P 03 11 45.5 +2.8**
comp=Z,12nn,0.8s,mb5.2
ETOR Torete 86.11 46 P **P 03 11 45.5 +2.8**
ETOR pmax pmax
comp=Z,12nn,0.8s,mb5.2
AVF Avril sur Loir 86.15 39 *e*P **P 03 11 42.6 -0.1**
comp=Z,99nn,1.5s,mb5.5
AVF Avril sur Loir 86.15 39 *e*P **P 03 11 42.6 -0.1**
comp=Z,50nn,1.5s,mb5.5
AVF Avril sur Loir 86.15 39 *e*P **P 03 11 42.6 -0.1**
AVF pmax pmax
comp=Z,50nn,1.5s,mb5.5
LOR Lormes 86.16 38 *e*P **P 03 11 43.1 +0.3**
comp=Z,172nn,1.5s,mb5.8
LOR *e*MLR MLR
comp=Z,12µm,22.5s,MS5.9
LOR Lormes 86.16 38 *e*P **P 03 11 43.1 +0.3**
comp=Z,86nn,1.5s,mb5.8
LOR LR LR
comp=Z,12µm,22.5s,MS6.2
LOR Lormes 86.16 38 *e*P **P 03 11 43.1 +0.3**
LOR pmax pmax
comp=Z,86nn,1.5s,mb5.8
LOR MLR MLR
comp=Z,12µm,22.5s,MS6.2
JOF Joensuu 86.24 16 *e*p **P 03 11 41.8 -1.1**
comp=Z,3.3nn,0.6s,mb4.7
JOF Joensuu 86.24 16 *e*P **P 03 11 41.8 -1.1**
JOF pmax pmax
comp=Z,3.0nn,0.6s,mb4.7
RUP Ruppelstein 86.45 35 *e*P **P 03 11 47.5 +3.3**
EPF Esparros 86.45 43 *e*P **P 03 11 44.4 +0.1**
comp=Z,26nn,1.0s,mb5.1
EPF Esparros 86.45 43 *e*P **P 03 11 44.4 +0.1**
comp=Z,13nn,1.0s,mb5.1
EPF Esparros 86.45 43 *e*P **P 03 11 44.4 +0.1**
EPF pmax pmax
comp=Z,13nn,1.0s,mb5.1
CAF Calviac 86.45 41 *e*P **P 03 11 44.3 0.0**
comp=Z,41nn,1.3s,mb5.2
CAF Calviac 86.45 41 *e*P **P 03 11 44.3 0.0**
comp=Z,21nn,1.3s,mb5.2
CAF Calviac 86.45 41 *e*P **P 03 11 44.3 0.0**
CAF pmax pmax
comp=Z,21nn,1.3s,mb5.2
SMF Signal de Mont 86.50 39 *e*P **P 03 11 44.2 -0.3**
comp=Z,96nn,1.5s,mb5.5
SMF Signal de Mont 86.50 39 *e*P **P 03 11 44.2 -0.3**
comp=Z,48nn,1.5s,mb5.5
SMF Signal de Mont 86.50 39 *e*P **P 03 11 44.2 -0.3**
SMF pmax pmax

comp=Z,48nm,1.5s,mb5.5
EBIE Bielsa 86.51 44 P **P** **03 11 48.2 +3.6**
comp=Z,12nm,1.4s,mb5.0
ELOJ Sierra Loja 86.58 50 P **P** **03 11 50.6 +5.5**
comp=Z,10nm,0.9s,mb5.0
ELOJ Sierra Loja 86.58 50 P **P** **03 11 50.6 +5.5**
ELOJ pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
ABH Alteburg 86.59 35 *e*P **P** **03 11 49.7 +4.9**
BSD Bornholm Skovb 86.66 28 *i* S S 03 22 22.3 +0.2
BSD MLR MLR
comp=Z,4μm,19.0s,MS5.8
BSD MLR MLR
comp=Z,3μm,17.0s
BSD Bornholm Skovb 86.66 28 *i* S S 03 22 22.3 +0.2
BSD
comp=Z,4μm,19.0s
BSD
comp=Z,3μm,17.0s
KLR Kul'dur 86.69 324 *e*P **P** **03 11 49.4 +4.1**
KLR *e*S S 03 22 15.5 -7.1
KLR *e*SS SS 03 28 08.0 +5.3
KLR smax
comp=N,2μm,13.0s
KLR smax
comp=E,1μm,13.0s
THEF They Montfort 86.77 37 *e*P **P** **03 11 50.6 +4.9**
ERON Agron 86.89 50 P **P** **03 11 50.2 +3.6**
comp=E,1.3nm,0.5s,mb4.4
ECOG Cogollos-Vega 86.92 50 P **P** **03 11 49.9 +3.2**
comp=E,16nm,1.3s,mb5.1
ECOG Cogollos-Vega 86.92 50 P **P** **03 11 49.9 +3.2**
ECOG pmax pmax
comp=Z,16nm,1.3s,mb5.1
EVIA Vianos 86.94 48 P **P** **03 11 51.1 +4.3**
comp=Z,19nm,1.0s,mb5.3
EVIA Vianos 86.94 48 P **P** **03 11 51.1 +4.3**
EVIA pmax pmax
comp=Z,19nm,1.0s,mb5.3
LBL Lubilhac 86.97 40 *e*P **P** **03 11 51.8 +5.0**
EQES Quesada 86.99 49 P **P** **03 11 51.6 +4.5**
comp=Z,19nm,1.6s,mb5.1
HAU Haudompre 87.09 37 *e*P **P** **03 11 46.1 -1.2**
comp=Z,106nm,1.5s,mb5.5
HAU *e*MLR MLR
comp=Z,15μm,17.5s,MS6.1
HAU Haudompre 87.09 37 *e*P **P** **03 11 46.1 -1.2**
comp=Z,53nm,1.5s,mb5.5
HAU LR LR
comp=Z,15μm,17.5s,MS6.4
HAU Haudompre 87.09 37 *e*P **P** **03 11 46.1 -1.2**
HAU pmax pmax
comp=Z,53nm,1.5s,mb5.5
HAU MLR MLR
comp=Z,15μm,17.5s,MS6.4
CDF Champ du Feu 87.34 36 *e*P **P** **03 11 48.7 +0.2**
comp=Z,138nm,1.9s,mb5.6
CDF Champ du Feu 87.34 36 *e*P **P** **03 11 48.7 +0.2**
comp=Z,69nm,1.9s,mb5.6
CDF Champ du Feu 87.34 36 *e*P **P** **03 11 48.7 +0.2**
CDF pmax pmax
comp=Z,69nm,1.9s,mb5.6
TOD Tromm 87.40 35 *e*P **P** **03 11 51.4 +2.6**
MTLF Montolieu 87.42 42 *e*P **P** **03 11 49.4 +0.3**
comp=Z,40nm,1.3s,mb5.2
MTLF Montolieu 87.42 42 *e*P **P** **03 11 49.4 +0.3**
comp=Z,20nm,1.3s,mb5.2
MTLF Montolieu 87.42 42 *e*P **P** **03 11 49.4 +0.3**
MTLF pmax pmax
comp=Z,20nm,1.3s,mb5.2
HINF Hinteralfeld 87.48 37 *e*P **P** **03 11 49.5 +0.3**
comp=Z,136nm,1.8s,mb5.6
HINF Hinteralfeld 87.48 37 *e*P **P** **03 11 49.5 +0.3**
comp=Z,68nm,1.8s,mb5.6
HINF Hinteralfeld 87.48 37 *e*P **P** **03 11 49.5 +0.3**
HINF pmax pmax
comp=Z,68nm,1.8s,mb5.6
MOF Molkenrain 87.61 37 *e*P **P** **03 11 56.2 +6.4**
EPOB Poblet 87.82 44 P **P** **03 11 54.7 +3.7**
comp=Z,22nm,2.1s,mb5.0
BFO Black Forest 87.95 36 *e*P **P** **03 11 53.1 +1.6**
comp=Z,59nm,1.8s,mb5.5
BFO LR LR
comp=Z,6μm,20.0s,MS6.0
BFO Black Forest 87.95 36 *e*P **P** **03 11 53.1 +1.6**
BFO pmax pmax
comp=Z,59nm,1.8s,mb5.5
BFO MLR MLR
comp=Z,6μm,20.0s,MS6.0
LASF Ste Croix 87.99 41 *e*P **P** **03 11 50.8 -0.9**
comp=Z,46nm,1.3s,mb5.2
VIVF Saint-Julien-l 88.01 40 *e*P **P** **03 11 51.8 0.0**
comp=Z,100nm,1.8s,mb5.4
VIVF Saint-Julien-l 88.01 40 *e*P **P** **03 11 51.8 0.0**
comp=Z,50nm,1.8s,mb5.4
VIVF Saint-Julien-l 88.01 40 *e*P **P** **03 11 51.8 0.0**
VIVF pmax pmax
comp=Z,50nm,1.8s,mb5.4
FELD Feldberg im Sc 88.06 36 *e*P **P** **03 11 56.4 +4.4**
MOX Moxa 88.14 33 *e*P **P** **03 11 54.8 +2.5**
comp=Z,40nm,1.8s,mb5.3
MOX
comp=Z,12μm,19.0s
MOX Moxa 88.14 33 *e*P **P** **03 11 54.8 +2.5**
MOX pmax pmax
comp=Z,40nm,1.8s,mb5.3
MOX MLR MLR
comp=Z,12μm,19.0s,MS6.3
CLL Collm 88.37 32 *e*P **P** **03 11 56.0 +2.6**
comp=Z,29nm,2.0s,mb5.2
CLL *i* 03 12 02.0
CLL *e*S S 03 22 35.0 -3.6
CLL LR LR
comp=Z,8μm,19.1s,MS6.2
CLL Collm 88.37 32 *e*P **P** **03 11 56.0 +2.6**
CLL *i* 03 12 02.0
CLL *e*S S 03 22 35.0 -3.6
CLL pmax pmax
comp=Z,29nm,2.0s,mb5.2
CLL MLR MLR
comp=Z,8μm,19.1s,MS6.2
CLL Collm 88.37 32 *e*(P) **P** **03 11 56.0 +2.6**
comp=Z,29nm,2.0s,mb5.2
CLL *i* pP pP 03 12 02.0 +5.3
comp=Z,84nm,2.3s
CLL *e*x x 03 12 08.0
CLL *e*S S 03 22 35.0 -3.6
CLL *e*PS 03 23 41.0
CLL *e*PPS 03 24 08.0
CLL *e*SS SS 03 28 25.0 -2.0
CLL *e*SSSS 03 35 20.0
CLL Lm 03 50 00.0
comp=N,4μm,20.5s
CLL Lm 03 50 00.0
comp=E,5μm,20.3s
CLL Lm 03 50 00.0
comp=Z,8μm,19.1s
BOD Bodaibo 88.40 338 *e*P **P** **03 11 50.6 -2.8**
BOD pmax pmax
comp=Z,41nm,1.4s,mb5.5
VSU Vasula 88.56 21⇑ *e*P **P** **03 11 53.5 -0.6**
GRA1 Grafenberg Arr 88.56 33 *e*P **P** **03 11 56.6 +2.3**
comp=Z,49nm,1.6s,mb5.6
GRA1 *e*pP pP 03 12 02.4 +4.7
GRA1 *e*S S 03 22 46.0 +5.4
GRA1 LR LR
comp=Z,8μm,20.1s,MS6.1
GRF Grafenberg Arr 88.56 33 *e*P **P** **03 11 56.6 +2.3**
GRF *e**PP pP 03 12 02.4 +4.7
GRF *e*S S 03 22 46.0 +5.4
GRF pmax pmax
comp=Z,49nm,1.6s,mb5.6
GRF MLR MLR
comp=Z,8μm,20.1s,MS6.1
GRF Grafenberg Arr 88.56 33 *e*P **P** **03 11 56.6 +2.3**
GRF *e**PP pP 03 12 02.4 +4.7
GRF *e*S S 03 22 46.0 +5.4
GRF
comp=Z,49nm,1.6s,mb5.6
GRF *e*pP pP 03 12 02.4 +4.7
GRF *e*S S 03 22 46.0 +5.4
GRF *e*L 03 50 23.3
comp=Z,8μm,20.1s
GRFO Grafenberg 88.56 33 PFAKE 03 12 10.0 +16
GRFO LR LR
comp=Z,8μm,20.0s,MS6.1
ORIF Oris-en-Rattie 88.67 39 *e*P **P** **03 11 54.3 -0.6**
ORIF *e*MLR MLR
comp=Z,11μm,20.5s,MS6.0
LPL La Plagne 88.80 39 *e*P **P** **03 11 55.0 -0.5**
comp=Z,54nm,1.8s,mb5.3
LPL La Plagne 88.80 39 *e*P **P** **03 11 55.0 -0.5**
comp=Z,27nm,1.8s,mb5.3
LPL La Plagne 88.80 39 *e*P **P** **03 11 55.0 -0.5**
LPL pmax pmax
comp=Z,27nm,1.8s,mb5.3
LPG La Plagne 88.82 39 *e*P **P** **03 11 55.4 -0.2**
comp=Z,81nm,1.8s,mb5.4
LPG La Plagne 88.82 39 *e*P **P** **03 11 55.4 -0.2**
comp=Z,40nm,1.8s,mb5.5
LPG La Plagne 88.82 39 *e*P **P** **03 11 55.4 -0.2**
LPG pmax pmax
comp=Z,40nm,1.8s,mb5.5
SMRF Simiane la Rot 89.05 40 *e*P **P** **03 11 56.2 -0.6**
comp=Z,86nm,1.9s,mb5.5
SMRF Simiane la Rot 89.05 40 *e*P **P** **03 11 56.2 -0.6**
comp=Z,86nm,1.9s,mb5.8
BRG Berggiesshubel 89.10 31 *e*P **P** **03 11 57.8 +0.9**
comp=Z,29nm,2.6s,mb5.1
BRG *e* 03 12 05.8
BRG S S 03 22 53.0 +7.5
BRG SS SS 03 28 44.0 +6.3
BRG LR LR
comp=Z,5μm,15.6s,MS6.0
BRG Berggiesshubel 89.10 31 *e*P **P** **03 11 57.8 +1.0**
BRG *e* 03 12 05.8
BRG SS SS 03 28 44.0 +6.3
BRG pmax pmax
comp=Z,29nm,2.6s,mb5.2
BRG pmax pmax
comp=Z,9.0nm,1.3s,mb4.9
BRG MLR MLR
comp=Z,5μm,15.6s,MS6.0
BRG MLR MLR
comp=N,3μm,16.2s,MS6.0
BRG MLR MLR
comp=E,4μm,16.2s,MS6.0
BRG Berggiesshubel 89.10 31 *e*P **P** **03 11 57.8 +0.9**
comp=E,48nm,2.6s,mb5.4
BRG *e* 03 12 05.8
comp=E,16nm,1.2s
BRG S S 03 22 53.0 +7.5
BRG SS SS 03 28 44.0 +6.3
BRG
comp=Z,8μm,15.6s
BRG
comp=N,4μm,16.2s
BRG
comp=E,7μm,16.2s
MBDF Montbardon 89.29 39 *e*P **P** **03 11 57.6 -0.3**
comp=E,23nm,1.5s,mb5.0
MBDF Montbardon 89.29 39 *e*P **P** **03 11 57.6 -0.3**
comp=E,12nm,1.5s,mb5.0
MBDF Montbardon 89.29 39 *e*P **P** **03 11 57.6 -0.3**
MBDF pmax pmax
comp=Z,12nm,1.5s,mb5.0
PVCC Panska Ves 89.62 31 *e*P **P** **03 12 04.9 +5.6**
PVCC *e*x x 03 22 57.5
PVCC AMS AMS 03 52 30.0
comp=Z,9μm,16.5s
FRF La Foret Royal 89.92 40 *e*P **P** **03 11 59.6 -1.3**
comp=Z,87nm,1.7s,mb5.5
FRF La Foret Royal 89.92 40 *e*P **P** **03 11 59.6 -1.3**
comp=Z,44nm,1.7s,mb5.5
FRF La Foret Royal 89.92 40 *e*P **P** **03 11 59.6 -1.3**
FRF pmax pmax
comp=Z,44nm,1.7s,mb5.5
LMR La Mourre 89.98 40 *e*P **P** **03 12 00.2 -0.9**
comp=Z,93nm,1.7s,mb5.5
LMR La Mourre 89.98 40 *e*P **P** **03 12 00.2 -0.9**
comp=Z,46nm,1.7s,mb5.5
LMR La Mourre 89.98 40 *e*P **P** **03 12 00.2 -0.9**
LMR pmax pmax
comp=Z,46nm,1.7s,mb5.5
FETA Feichten 90.03 36⇓ *i*P **P** **03 11 59.9 -1.4**
comp=Z,16nm,1.6s,mb5.1
MJAR Matsushiro Arr 90.08 311 P **P** **03 12 00.8 -1.0**
MJAR S S 03 22 34.0 -21
MJAR SS SS 03 28 53.5 +0.5
MJAR Matsushiro Arr 90.08 311 P **P** **03 12 00.8 -0.9**
comp=Z,1.1nm,0.6s,mb4.4,baz=76,slow=31,SNR=3.1
MJAR S S 03 22 34.0 -21
comp=Z,0.7nm,0.4s,baz=270,slow=28,SNR=2.6
MJAR SS SS 03 28 53.5 +0.6
comp=Z,1.6nm,0.9s,baz=213,slow=39,SNR=3.4
MJAR LR LR 03 45 50.9
comp=Z,5μm,19.9s,MS5.9,baz=70,slow=31
MAJO Matsushiro 90.09 311 PFAKE 03 12 10.0 +8.2
MAJO LR LR
comp=Z,6μm,21.0s,MS6.0
KHC Kasperske Hory 90.09 33 *e*P **P** **03 12 06.0 +4.5**
KHC *e*pP pP 03 12 09.5 +4.6
VLA Vladivostok 90.30 319⇑ *e*P **P** **03 12 01.0 -1.6**
VLA Vladivostok 90.30 319⇓ *e*P **P** **03 12 01.5 -1.1**
VLA pmax pmax
comp=Z,58nm,0.7s,mb6.0
GERES GERESS Array B 90.35 33 P **P** **03 12 03.4 +0.7**
GERES S S 03 22 35.4 -22
GERES GERESS Array B 90.35 33 P **P** **03 12 03.4 +0.7**
comp=Z,0.7nm,0.7s,baz=320,slow=5.8,SNR=6.7
GERES S S 03 22 35.4 -22
comp=Z,0.1nm,0.4s,baz=147,slow=37,SNR=2.0
GERES LR LR 03 51 57.5
comp=Z,7μm,18.4s,MS6.1,baz=198,slow=35
PRGR Permogore 90.46 11 *e*P **P** **03 12 02.6 -0.4**
DPC Dobruska-Polom 90.56 31 *e*P **P** **03 12 04.7 +1.0**
DPC *e*x x 03 22 39.9
DPC AMS AMS 03 53 00.0
comp=Z,9μm,16.1s
MDJ Mudanjiang 90.69 322 P **P** **03 12 02.9 -1.5**
MDJ AP pP 03 12 15.1 +7.3
MDJ XP sP 03 12 19.8 +11
MDJ S S 03 22 54.3 -6.3
MDJ XS sS 03 23 14.3 +8.2
MDJ AMB AMB
comp=Z,12nm,1.2s,mb5.1
MDJ AMB AMB
comp=Z,397nm,4.7s
MDJ LR LR
comp=N,969nm,13.5s,MS5.7
MDJ LR LR
comp=E,2μm,16.4s,MS5.7
MDJ LR LR
comp=Z,2μm,17.9s,MS5.7
MDJ Mudanjiang 90.69 322 PFAKE 03 12 20.0 +16
MDJ LR LR
comp=Z,2μm,21.0s,MS5.6
ABTA Abfaltersbach 91.14 35⇓ *i*PcP PcP 03 12 05.9 -1.6
comp=Z,6.4nm,1.2s
KBA Koelnbreinsper 91.35 35⇓ *i*P **P** **03 12 05.0 -2.5**
comp=Z,9.7nm,1.4s,mb5.0
KBA Koelnbreinsper 91.35 35⇓ *i*P **P** **03 12 05.0 -2.4**
KBA pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
VRAC Vranov 91.42 31 LR LR 03 53 27.7
comp=Z,9μm,19.9s,MS6.2,baz=300,slow=36
PGF Pioggiola 91.91 40 *e*P **P** **03 12 08.8 -1.3**
comp=Z,84nm,1.6s,mb5.5
PGF Pioggiola 91.91 40 *e*P **P** **03 12 08.8 -1.3**
comp=Z,42nm,1.6s,mb5.5
PGF Pioggiola 91.91 40 *e*P **P** **03 12 08.8 -1.3**
PGF pmax pmax
comp=Z,42nm,1.6s,mb5.5
MNK Minsk 92.10 23 *e*P **P** **03 12 12.0 +1.3**
MNK MLR MLR
comp=N,7μm,16.0s,MS6.5
MNK MLR MLR
comp=Z,23μm,20.0s,MS6.6
MNK MLR MLR
comp=E,13μm,20.0s,MS6.5
HIA Hailar 92.55 330 PFAKE 03 12 20.0 +7.1
HIA LR LR
comp=Z,2μm,20.0s,MS5.7
CIT Chita 93.08 334 *e*P **P** **03 12 21.5 +6.2**
DZM Mont Dzumac 93.49 247 LR LR 03 48 06.1
comp=Z,3μm,18.5s,MS5.8,baz=177,slow=32
CN2 Changchun 93.49 323 *e*P **P** **03 12 16.8 -0.6**
CN2 *e*XP sP 03 12 34.8 +13
CN2 *e*PP PP 03 16 03.3 +2.2
CN2 *e*S S 03 23 17.4 -8.4
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.5
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,21.0s,MS5.5
CN2 LR LR
comp=E,2μm,21.0s,MS5.5
CN2 LR LR
comp=Z,2μm,21.0s,MS5.6
HNR Honiara 93.57 261 PFAKE 03 12 30.0 +12
HNR LR LR
comp=Z,8μm,21.0s,MS6.1
KWP Kalwaria 93.92 28 *e*P **P** **03 12 21.9 +2.7**
comp=Z,161nm,2.3s,mb6.0
KWP Kalwaria 93.92 28 *e*P **P** **03 12 21.9 +2.7**
KWP pmax pmax
comp=Z,161nm,2.3s,mb6.0
MOS Moscow 94.07 17 *e*P **P** **03 12 09.5 -10**
MOS *e* 03 16 14.9
MOS *e* 03 23 22.1
MOS MLR MLR
comp=Z,12μm,17.5s,MS6.4
MOS MLR MLR
comp=N,11μm,17.3s
LVV L'vov 94.33 28 *e*P **P** **03 12 20.2 -0.9**
LVV *i* 03 12 29.2
LVV MLR MLR
comp=Z,2μm,17.0s,MS5.5
LVV MLR MLR
comp=N,1μm,16.0s,MS5.6
LVV MLR MLR
comp=E,1μm,15.0s,MS5.6
OBN Obninsk 94.33 18⇑ *e*P **P** **03 12 20.8 -0.2**
OBN LR LR
comp=Z,9μm,16.0s,MS6.3
OBN Obninsk 94.33 18 *e* SKSac 03 22 54.8 -1.4
OBN *e*PS PS 03 24 55.9 +7.8
OBN MLR MLR
comp=Z,9μm,16.0s,MS6.3
UZH Uzhgorod 94.49 29 *e*P **P** **03 12 23.7 +1.8**
UZH *i* 03 12 30.0
UZH *e*S S 03 23 32.7 -1.6
UZH MLR MLR
comp=Z,5μm,14.0s,MS6.1
AKASG Malin Array Be 95.67 24 P **P** **03 12 25.5 -1.7**
AKASG S SKSac 03 23 05.1 +1.6
AKASG Malin Array Be 95.67 24 P **P** **03 12 25.5 -1.7**
comp=Z,1.6nm,0.8s,mb4.5,baz=308,slow=3.7,SNR=8.5
AKASG S SKSac 03 23 05.1 +1.6
comp=Z,0.1nm,0.2s,baz=216,slow=24,SNR=2.6
AKASG LR LR 03 57 11.2
comp=Z,7μm,18.7s,MS6.2,baz=310,slow=36
KIEV Kiev 95.67 24 PFAKE 03 12 40.0 +13
KIEV LR LR
comp=Z,7μm,20.0s,MS6.1
IRK Irkutsk 96.19 339 *e*P **P** **03 12 33.1 +3.6**
IRK pmax pmax
comp=Z,62nm,1.6s,mb5.8
KSRS Korea Array 96.19 317 P **P** **03 12 30.9 +1.0**
comp=Z,0.5nm,0.3s,mb4.3,baz=37,slow=14,SNR=2.6
KSRS S SKSac 03 23 08.9 +2.2
comp=Z,0.6nm,0.5s,baz=72,slow=40,SNR=2.5
KSRS LR LR 03 52 50.5
comp=Z,2μm,19.2s,MS5.5,baz=42,slow=34
SNZO South Karori 96.26 227 PFAKE 03 12 40.0 +10
SNZO LR LR
comp=Z,3μm,21.0s,MS5.8
KEST Kesra 96.36 45 LR LR 03 51 25.8
comp=Z,2μm,20.5s,MS5.6,baz=52,slow=33
GUMO Guam 96.69 289 PFAKE 03 12 40.0 +7.5
GUMO LR LR
comp=Z,5μm,21.0s,MS6.0
TLY Talaya 96.87 339 *e*P **P** **03 12 32.8 +0.2**
comp=Z,35nm,1.6s,mb5.5
TLY LR LR
comp=Z,3μm,20.0s,MS5.8
TLY Talaya 96.87 339 *e*P **P** **03 12 35.1 +2.5**
TLY *e* 03 23 12.8
TLY *e*PS PS 03 25 21.8 +5.8
TLY pmax pmax
comp=Z,23nm,1.6s,mb5.4
TLY MLR MLR
comp=Z,3μm,20.0s,MS5.8
INCN Inchon 96.96 318 PFAKE 03 12 40.0 +6.7
INCN LR LR
comp=Z,2μm,20.0s,MS5.5
ARU Arti 97.25 6 *e*P **P** **03 12 32.5 -1.7**
comp=Z,31nm,1.2s,mb5.6
ARU LR LR
comp=Z,5μm,19.0s,MS6.0
ARU Arti 97.25 6 *d i*P **P** **03 12 32.2 -2.0**
ARU 03 16 28.5
ARU S SKSac 03 23 05.8 -5.7
ARU PS PS 03 25 15.3 -4.6
ARU pmax pmax
comp=Z,38nm,5.0s
ARU MLR MLR
comp=Z,7μm,20.0s,MS6.1
ARU MLR MLR
comp=N,5μm,20.0s,MS6.1
ARU MLR MLR
comp=E,2μm,16.0s,MS6.1
PMSA Palmer Station 97.54 162 PFAKE 03 12 50.0 +15
PMSA LR LR
comp=Z,1μm,20.0s,MS5.3
ZAK Zakamensk 98.10 339 *e*P **P** **03 12 39.0 +0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.4s,mb4.8
NVS Novosibirsk 98.48 352 *e*P **P** **03 12 42.4 +2.6**
NVS pmax pmax
comp=Z,7.0nm,1.1s,mb5.1
NVS pmax pmax
comp=N,5.0nm,1.5s
KIS Kishinev 98.52 27 *e*P **P** **03 12 37.0 -3.2**
KIS *e* pP 03 12 42.0 -1.5
KIS MLR MLR
comp=Z,4μm,18.0s,MS6.0
KIS MLR MLR
comp=N,2μm,16.0s,MS5.8
KIS MLR MLR
comp=E,2μm,16.0s,MS5.8
KIS MLR MLR
comp=Z,5μm,20.0s
KIS Kishinev 98.52 27 *e*P **P** **03 12 37.0 -3.2**
KIS *e*LR LR 03 50 04.0
comp=Z,5μm,20.0s
ULN Ulaanbaatar 98.92 335⇓ *e*P **P** **03 12 42.9 +1.0**
ULN LR LR
comp=Z,3μm,21.0s,MS5.8
DL2 Dalian 98.93 321 *e*P **P** **03 12 45.0 +2.8**
DL2 PP PP 03 16 50.5 +7.3
DL2 S S 03 24 13.1 +0.3
DL2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.4
DL2 AMB AMB
comp=Z,110nm,5.8s
DL2 LR LR
comp=N,830nm,18.6s,MS5.5
DL2 LR LR
comp=E,930nm,16.3s,MS5.5
DL2 LR LR
comp=Z,1μm,18.2s,MS5.4
ASCN Ascension 99.06 94 PFAKE 03 12 50.0 +6.8
ASCN LR LR
comp=Z,2μm,19.0s,MS5.6
SONM Songino Array 99.19 336 P **P** **03 12 43.8 +0.7**
SONM 03 16 44.7
SONM Songino Array 99.19 336 P **P** **03 12 43.8 +0.7**
comp=Z,4.3nm,1.2s,mb4.9,baz=5.0,slow=4.0,SNR=7.9
SONM PP PP 03 16 44.7 -0.1
comp=Z,1.6nm,0.9s,baz=35,slow=6.2,SNR=6.0
SONM PKKP PKKPbc 03 29 10.2 +1.7
comp=Z,1.5nm,1.1s,baz=228,slow=2.3,SNR=5.7
SONM LR LR 04 00 03.4
comp=Z,2μm,19.6s,MS5.7,baz=24,slow=37
BJI Beijing 101.04 325 P Pdif 03 12 49.5 -1.8
BJI AMB AMB
comp=Z,5.0nm,0.3s
BJI AMB AMB
comp=Z,310nm,5.4s
BJI LR LR
comp=N,2μm,24.3s,MS5.7
BJI LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,2µm,21.8s,MS5.7						
BJI				LR	LR		
	comp=Z,3µm,25.0s,MS5.7						
BJT	**Baijiatuau**	**101.06**	**325**	PFAKE		03 13 00.0	+8.6
BJT				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
BRVK	**Borovoye**	**101.14**	**359**	PFAKE		03 13 00.0	+8.2
BRVK				LR	LR		
	comp=Z,6µm,19.0s,MS6.1						
HOPE	**Hope Point**	**102.18**	**145**	PFAKE		03 13 10.0	+14
HOPE				LR	LR		
	comp=Z,5.0nm,21.0s						
KURK	**Kurchatov**	**103.05**	**354**	PFAKE		03 13 10.0	+10
KURK				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
KURK	**Kurchatov**	**103.05**	**354**	⇑*e*P	Pdif	03 12 57.5	-2.8
ANN	**Anapa**	**103.62**	**23**	*e*P	Pdif	03 13 05.4	+2.6
ANN				*e*SP	SP	03 26 28.1	+1.2
ANN				pmax	pmax		
	comp=Z,93nm,1.4s						
ANN				MLR	MLR		
	comp=N,4µm,18.0s,MS6.1						
ANN				MLR	MLR		
	comp=E,2µm,18.0s,MS6.1						
ANN				MLR	MLR		
	comp=Z,7µm,18.0s,MS6.2						
PMG	**Port Moresby**	**104.99**	**267**	PFAKE		03 17 40.0	+15
PMG				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
ANTO	**Ankara**	**106.01**	**28**	PFAKE		03 17 40.0	+14
ANTO				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
KIV	**Kislovodsk**	**106.08**	**20**	PFAKE		03 17 40.0	+14
KIV				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
KIV	**Kislovodsk**	**106.08**	**20**	*e*P	Pdif	03 13 17.1	+3.3
KIV				*e*		03 23 57.1	
KIV				*e*PS	PS	03 26 53.3	-0.8
KIV				*e*SS	SS	03 32 39.6	+3.2
KIV				*e*SSS		03 36 37.0	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.2						
MKAR	**Makanchi Array**	**106.47**	**351**	Pdif	Pdif	03 13 16.5	+1.0
MKAR				PKKPbc	PKKPbc	03 28 45.5	-1.7
MKAR	**Makanchi Array**	**106.47**	**351**	Pdiff	Pdif	03 13 16.5	+1.0
	comp=Z,0.2nm,0.3s,baz=17,slow=5.1,SNR=5.7						
MKAR				PKKPbc	PKKPbc	03 28 45.5	-1.7
	comp=Z,0.1nm,0.3s,baz=186,slow=4.2,SNR=3.7						
WMQ	**Urumqi**	**108.38**	**346**	PDIF	Pdif	03 13 23.3	-0.7
WMQ				PP	PP	03 17 56.5	+3.4
WMQ				PP	PP		
	comp=Z,457nm,6.6s						
WMQ				LR	LR		
	comp=N,4µm,27.6s,MS6.0						
WMQ				LR	LR		
	comp=E,4µm,25.6s,MS6.0						
WMQ				LR	LR		
	comp=Z,2µm,21.3s,MS5.7						
TATO	**Taipei**	**108.47**	**311**	PFAKE		03 17 40.0	+9.2
TATO				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
CTAO	**Charters Tower**	**109.95**	**257**	PFAKE		03 17 50.0	+16
CTAO				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
TKM2	**Tokmak 2**	**111.05**	**355**	PFAKE		03 17 50.0	+15
TKM2				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
AAK	**Ala-Archa**	**111.41**	**356**	PFAKE		03 17 50.0	+14
AAK				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
EKS2	**Erkin-Say**	**111.42**	**357**	PFAKE		03 17 50.0	+14
EKS2				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
UCH	**Uchtor**	**111.81**	**356**	PFAKE		03 17 50.0	+13
UCH				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
AML	**Almayashu**	**111.96**	**357**	PFAKE		03 17 50.0	+13
AML				LR	LR		
	comp=Z,5µm,22.0s,MS6.1						
ENH	**Enshi**	**112.02**	**323**	PFAKE		03 17 50.0	+13
ENH				LR	LR		
	comp=Z,4.0nm,22.0s						
SBA	**Scott Base**	**113.81**	**193**	PFAKE		03 17 50.0	+11
SBA				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
CD2	**Chengdu**	**114.43**	**328**	*e*PKP	PKiKP	03 17 38.4	-3.6
CD2				PKS		03 21 13.8	
CD2				SKS	SKSdf	03 24 45.6	-8.8
CD2				PP	PP		
	comp=Z,570nm,6.5s						
CD2				LR	LR		
	comp=N,2µm,16.8s,MS6.0						
CD2				LR	LR		
	comp=E,3µm,21.6s,MS6.0						
CD2				LR	LR		
	comp=Z,3µm,15.6s						
TAU	**Tasmania Unive**	**115.79**	**233**	PFAKE		03 18 00.0	+16
TAU				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
QSPA	**South Pole Qui**	**116.00**	**180**	PFAKE		03 18 00.0	+17
QSPA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
DAV	**Davao City (W)**	**116.26**	**293**	PFAKE		03 18 00.0	+14
DAV				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
KMI	**Kunming**	**119.70**	**325**	PKP	PKPdf	03 17 51.0	-1.2
KMI				PP	PP	03 19 16.9	+3.0
KMI				PKS		03 21 26.4	
KMI				SKS	SKSdf	03 24 56.8	-7.9
KMI				SKKS	SKKSac	03 26 03.1	-12
KMI				PP	PP		
	comp=Z,95nm,4.3s						
KMI				LR	LR		
	comp=N,1µm,21.9s,MS5.8						
KMI				LR	LR		
	comp=E,2µm,19.4s,MS5.8						
KMI				LR	LR		
	comp=Z,2µm,17.3s,MS5.8						
QIZ	**Qiongzhong**	**120.32**	**315**	PKP	PKPdf	03 17 52.5	-1.1
QIZ				PP	PP	03 19 26.8	+8.2
QIZ				SKKS	SKKSac	03 26 16.0	-3.8
QIZ				SS	SS	03 35 48.8	+2.3
QIZ				PP	PP		
	comp=Z,278nm,4.7s						
QIZ				LR	LR		
	comp=N,849nm,25.8s,MS5.4						
QIZ				LR	LR		
	comp=E,820nm,24.6s,MS5.4						
QIZ				LR	LR		
	comp=Z,2µm,35.2s						
QIZ	**Qiongzhong**	**120.32**	**315**	PFAKE		03 18 10.0	+16
QIZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
WB2	**Warramunga Arr**	**120.40**	**261**	*e*P	PKPdf	03 17 52.0	-1.6
WRA	**Warramunga Arr**	**120.42**	**261**	PKP	PKPdf	03 17 50.5	-3.2
	comp=Z,1.4nm,0.9s,baz=66,slow=2.1,SNR=17						
LSA	**Lhasa**	**120.68**	**338**	PFAKE		03 18 10.0	+16
LSA				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
DRV	**Dumont d'Urvil**	**121.37**	**206**	Pdif	Pdif	03 14 25.0	+3.3
DRV				SKS	SKSdf	03 24 55.0	-11
DRV				SP	SP	03 29 24.0	+8.3
DRV				SS	SS	03 36 25.0	+25
DRV				L		03 50 00.0	
DRV				R		03 55 00.0	
ASAR	**Alice Springs**	**121.95**	**257**	PKP	PKPdf	03 17 53.9	-2.6
	comp=Z,1.0nm,0.6s,baz=133,slow=1.0,SNR=8.9						
ASAR				PKKPbc	PKKPbc	03 27 54.8	+1.2
	comp=Z,0.3nm,0.6s,baz=251,slow=2.8,SNR=3.4						
CHTO	**Chiang Mai**	**126.87**	**324**	PFAKE		03 18 20.0	+14
CHTO				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
CM31	**Chiang Mai Arr**	**127.17**	**324**	PFAKE		03 18 20.0	+13
CM31				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
TSUM	**Tsumeb**	**131.98**	**93**	PFAKE		03 18 30.0	+14
TSUM				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
CASY	**Casey**	**132.41**	**201**	PFAKE		03 18 30.0	+15
CASY				LR	LR		
	comp=Z,5µm,20.0s,MS6.2						
MBWA	**Marble Bar**	**133.82**	**265**	PFAKE		03 18 30.0	+11
MBWA				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
SUR	**Sutherland**	**137.48**	**110**	PFAKE		03 18 40.0	+14
SUR				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
NWAO	**Narrogin (SRO)**	**138.09**	**249**	PFAKE		03 18 40.0	+13
NWAO				LR	LR		
	comp=Z,4µm,20.0s,MS6.2						
PSI	**Prapat**	**139.44**	**311**	PKhKP		03 18 26.1	
	comp=Z,4.1nm,0.8s,baz=350,slow=23,SNR=1.7						
LSZ	**Lusaka**	**140.15**	**83**	PFAKE		03 18 40.0	+9.0
LSZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
KMBO	**Kilima Mbogo**	**140.34**	**56**	PKP	PKPdf	03 18 25.1	-6.4
KMBO				LR	LR		
	comp=Z,2µm,19.0s,MS6.0						
KMBO	**Kilima Mbogo**	**140.34**	**56**	PKhKP		03 18 25.1	
	comp=Z,0.4nm,0.4s,baz=60,slow=22,SNR=1.7						
BOSA	**Boshof**	**140.92**	**104**	PKP	PKPdf	03 18 29.9	-2.1
BOSA	**Boshof**	**140.92**	**104**	PKP	PKPdf	03 18 29.9	-2.1
	comp=Z,3.3nm,0.8s,baz=264,slow=5.1,SNR=6.5						
PALK	**Pallekele**	**145.01**	**340**	PFAKE		03 18 50.0	+11
PALK				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						

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*NEIC **13** 03:22:43.7±1.5, 4.03N×95.56E, h30km, Error ellipse: s-maj=52.1km s-min=13.4km az=224.0*
*ISCJB **13** 03:22:47.2±4.0, 4.1N±0.3×95.8E±0.3, h76km±34km, mb4.0/7, Error ellipse: s-maj=63.2km s-min=22.3km az=138.1*
*IDC **13** 03:22:47.4±5.5, 4.19N×95.89E, h57km±46km, mb3.7/6, mb1 3.8/7, mb1mx3.4/22, mbtmp3.7/7, ML3.2/1, Error ellipse: s-maj=68.1km s-min=22.2km az=52.0*
ISC 13 03:22:48.9±3.9**, 4.1N**±0.3×**95.9E**±0.3**, h74**km±34km**, n10, σ0.59**/12**, mb4.0**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.33**	**113**	P	**Pn**	**03 23 38.7**	**+0.1**
PSI				S	**Sn**	**03 24 17.0**	**0.0**
PSI	**Prapat**	**3.33**	**113**	P	**Pn**	**03 23 38.7**	**+0.1**
	2.2nm,0.3s,baz=315,slow=8.7,SNR=14						
PSI				S	**Sn**	**03 24 17.0**	**0.0**
	3.3nm,0.3s,baz=178,slow=21,SNR=4.2						
LSA	**Lhasa**	**25.83**	**351**	*e*P	**P**	**03 28 14.1**	**+0.8**
	91nm,0.7s,mb5.3						
MKAR	**Makanchi Array**	**44.10**	**347**	P	**P**	**03 30 48.1**	**-1.7**
	0.5nm,0.3s,mb3.7,baz=156,slow=8.1,SNR=7.7						
SONM	**Songino Array**	**44.48**	**10**	P	**P**	**03 30 52.9**	**+0.2**
	1.9nm,0.7s,mb3.9,baz=188,slow=8.8,SNR=14						
SONM				PcP	PcP	03 32 36.0	+1.0
	0.2nm,0.6s,baz=189,slow=4.2,SNR=4.4						
WRA	**Warramunga Arr**	**44.73**	**124**	P	**P**	**03 30 55.1**	**-0.1**
	1.4nm,0.7s,mb3.8,baz=302,slow=9.0,SNR=13						
AKTK	**Aktyubinsk**	**56.04**	**332**	P	**P**	**03 32 20.1**	**+0.1**
AKTO	**Aktyubinsk**	**56.04**	**332**	P	**P**	**03 32 20.1**	**+0.1**
	0.7nm,0.4s,mb4.1,baz=128,slow=7.9,SNR=5.3						
FINES	**FINESS Array B**	**76.81**	**332**	P	**P**	**03 34 32.4**	**0.0**
	1.2nm,0.7s,mb3.8,baz=104,slow=5.9,SNR=4.9						
ARCES	**ARCESS Array B**	**79.35**	**340**	P	**P**	**03 34 46.9**	**+0.5**
	0.8nm,0.7s,mb3.7,baz=98,slow=5.5,SNR=9.8						

IDC 13 03:36:17.6±4.0**, 14.54N**×**90.56W, h158**km±52km**, mb3.2**/2**, mb1 3.4**/5**, mb1mx3.1**/19**, mbtmp3.1**/5**, Error ellipse: s-maj=65.9km s-min=31.2km az=67.0, Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**6.06**	**21**	P	Pn	03 37 45.2	0.0
	3.1nm,0.3s,baz=71,slow=1.7,SNR=19						
JTS	**JuntasAbangare**	**6.91**	**127**	P	Pn	03 37 56.6	+0.1
	0.4nm,0.3s,baz=359,slow=14,SNR=4.0						
TXAR	**Lajitas Array**	**19.07**	**323**	P	P	03 40 28.1	+0.1
	0.0nm,0.3s,baz=144,slow=12,SNR=4.3						
NVAR	**Mina Array Bea**	**34.16**	**319**	P	P	03 42 48.0	+0.3
	0.4nm,0.6s,baz=127,slow=8.4,SNR=5.3						
ULM	**Lac du Bonnet**	**35.88**	**354**	P	P	03 43 02.1	-0.1
	0.8nm,0.6s,baz=170,slow=6.1,SNR=3.3						

IDC 13 03:51:16.5±2.0**, 12.13N**×**142.10E, h0**km**, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.5**/3**, Error ellipse: s-maj=208.7km s-min=31.6km az=108.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.78**	**194**	P	P	03 57 52.1	+0.6
	1.0nm,0.6s,baz=15,slow=9.5,SNR=12						
ASAR	**Alice Springs**	**36.47**	**193**	P	P	03 58 22.9	-0.5
	0.3nm,0.6s,baz=25,slow=13,SNR=4.1						
YKA	**Yellowknife Ar**	**85.38**	**27**	P	P	04 03 55.5	0.0
	0.1nm,0.4s,baz=289,slow=5.0,SNR=4.8						

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*LDG **13** 04:03:45.2±0.6, 14.98S×166.85E, h10km, Mb4.2/1, Error ellipse: s-maj=74.3km s-min=38.9km az=31.0*
*ISCJB **13** 04:04:01.6±3.4, 15.4S±0.2×167.1E±0.3, h162km±31km, mb4.0/3, Error ellipse: s-maj=53.7km s-min=29.8km az=175.1*
*IDC **13** 04:04:02.0±5.2, 15.36S×167.32E, h161km±42km, mb3.5/1, Error ellipse: s-maj=49.4km s-min=31.1km az=64.0*
ISC 13 04:04:02.0±3.5**, 15.3S**±0.2×**167.2E**±0.3**, h153**km±31km**, n34, σ0.19**/9**, mb4.0**/3**, 9C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.75**	**186**	*e*P	**Pn**	**04 05 38.4**	**-0.3**
DZM				*e*S	**Sn**	**04 06 54.6**	**0.0**
DZM	**Mont Dzumac**	**6.75**	**186**	P	**Pn**	**04 05 38.3**	**-0.4**
	9.5nm,0.3s,baz=45,slow=18,SNR=23						
DZM				S	**Sn**	**04 06 54.9**	**+0.3**
NOUC	**Port Laguerre**	**6.80**	**187**	*e*P	**Pn**	**04 05 39.5**	**+0.2**
ASAR	**Alice Springs**	**32.43**	**250**	P	**P**	**04 10 17.6**	**-0.1**
	2.2nm,0.5s,mb4.1,baz=88,slow=8.9,SNR=5.9						
QSPA	**South Pole Qui**	**74.71**	**180**	P	**P**	**04 15 24.2**	**-0.1**
	baz=11,slow=2.8						
SONM	**Songino Array**	**82.95**	**324**	P	**P**	**04 16 09.8**	**+0.2**
	0.6nm,0.5s,mb3.6,baz=113,slow=6.6,SNR=5.6						
MKAR	**Makanchi Array**	**97.60**	**316**	P	**P**	**04 17 18.9**	**0.0**
	0.9nm,0.7s,mb4.3,baz=105,slow=5.7,SNR=3.9						
ARCES	**ARCESS Array B**	**120.81**	**345**	PKP	PKPdf	04 22 34.3	-1.0
	1.9nm,0.7s,baz=74,slow=1.8,SNR=11						
CABF	**La Chapelle**	**145.06**	**337**	⇑*i*PKP1	PKPbc	04 23 21.1	+0.3
	22nm,0.9s						
FLN	**La Foliniere**	**145.16**	**346**	⇑*i*PKP1	PKPbc	04 23 20.3	-0.8
	14nm,0.5s						
LDF	**La Druitiere**	**145.23**	**345**	⇑*i*PKP1	PKPbc	04 23 20.6	-0.7
	9.2nm,0.7s						
LOR	**Lormes**	**145.28**	**340**	⇑*i*PKP1	PKPbc	04 23 21.3	-0.2
	10nm,0.8s						
SSF	**Saint Saulge**	**145.58**	**340**	⇑*i*PKP1	PKPbc	04 23 22.5	0.0
	15nm,0.7s						
GRR	**Gorron**	**145.60**	**346**	⇑*i*PKP1	PKPbc	04 23 22.1	-0.4
	12nm,0.7s						
LPL	**La Plagne**	**145.72**	**335**	*e*PKP1	PKPbc	04 23 23.6	+0.7
	4.0nm,0.6s						
LPG	**La Plagne**	**145.72**	**335**	*e*PKP1	PKPbc	04 23 23.8	+0.9
SMF	**Signal de Mont**	**145.83**	**339**	*e*PKP1	PKPbc	04 23 22.9	-0.3
	8.9nm,0.8s						
AVF	**Avril sur Loir**	**145.87**	**340**	*e*PKP1	PKPbc	04 23 23.6	+0.3
	32nm,1.3s						
SGMF	**Saint Gilles**	**146.10**	**348**	*e*PKP1	PKPbc	04 23 23.4	-0.6
	12nm,0.5s						
BGF	**Bois d'Agland**	**146.24**	**340**	⇑*i*PKP1	PKPbc	04 23 24.3	-0.1
	10nm,0.5s						
MBDF	**Montbardon**	**146.34**	**335**	*e*PKP1	PKPbc	04 23 24.6	-0.2
	8.5nm,0.9s						
QUIF	**Quistinic**	**146.54**	**348**	*e*PKP1	PKPbc	04 23 24.2	-1.1
ORIF	**Oris-en-Rattie**	**146.55**	**336**	*e*PKP1	PKPbc	04 23 25.6	+0.2
	4.5nm,0.7s						
TCF	**Toulx Ste Croi**	**146.68**	**341**	⇑*i*PKP1	PKPbc	04 23 25.5	-0.2
	3.3nm,0.5s						
SBF	**Sospel**	**146.75**	**333**	*e*PKP1	PKPbc	04 23 26.8	+0.8
	14nm,0.7s						
MFF	**Saint Martin d**	**147.08**	**344**	⇑*i*PKP1	PKPbc	04 23 26.5	-0.3
	17nm,0.6s						
RJF	**Les Rejaudoux**	**147.78**	**341**	*e*PKP1	PKPbc	04 23 28.6	-0.2
	3.5nm,0.5s						
CAF	**Calviac**	**147.94**	**340**	*e*PKP1	PKPbc	04 23 29.3	+0.1
LASF	**Ste Croix**	**148.04**	**337**	*e*PKP1	PKPbc	04 23 29.5	0.0
	8.1nm,0.9s						
LFF	**La Frestale**	**148.34**	**342**	*e*PKP1	PKPbc	04 23 30.1	-0.2
	11nm,0.8s						
MTLF	**Montolieu**	**149.28**	**338**	*e*PKP1	PKPbc	04 23 32.7	0.0
EPF	**Esparros**	**150.19**	**340**	*e*PKP1	PKPbc	04 23 35.2	+0.3
ETSF	**Etsaut**	**150.59**	**342**	*e*PKP1	PKPbc	04 23 36.2	+0.3
	3.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**165.81**	**263**	PKP	PKPdf	04 23 46.5	-2.9
	0.6nm,0.7s,baz=81,slow=1.6,SNR=4.7						

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*IDC **13** 04:04:25.1±1.0, 5.75S×130.44E, h0km, mb4.4/6, mb1 4.7/9, mb1mx4.5/15, mbtmp4.6/9, ML4.8/3, Error ellipse: s-maj=46.5km s-min=17.0km az=73.0*
*ISCJB **13** 04:04:27.7±2.0, 5.77S±0.07×130.77E±0.07, h36km±20km, mb4.4/7, Error ellipse: s-maj=13.8km s-min=9.4km az=142.7*
*NEIC **13** 04:04:29.6±0.7, 5.73S×130.76E, h35km, mb4.3/3, Error ellipse: s-maj=20.1km s-min=9.8km az=62.0*
ISC 13 04:04:27.5±3.8**, 5.71S**±0.06×**130.81E**±0.08**, h19**km±25km**, n21, σ1.05**/30**, mb4.4**/7**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.14**	**167**	*e*Pn	**Pn**	**04 06 15.1**	**+4.1**
	5.4nm,0.3s						
KAKA				*e*Sn	**Sn**	**04 07 30.9**	**-0.8**
BATI	**Kupang**	**8.37**	**237**	Pn	**Pn**	**04 06 32.9**	**+4.9**
	13nm,0.3s,baz=96,slow=2.3,SNR=13						
BATI				Sn	**Sn**	**04 08 02.6**	**+0.6**
	5.7nm,0.3s,baz=197,slow=4.7,SNR=2.2						
FITZ	**Fitzroy Crossi**	**13.31**	**202**	*e*P	**Pn**	**04 07 34.5**	**-1.1**
	17nm,0.2s						
FITZ				*e*S	**Sn**	**04 09 52.9**	**-10**
FITZ	**Fitzroy Crossi**	**13.31**	**202**	Pn	**Pn**	**04 07 35.0**	**-0.7**
	3.9nm,0.3s,baz=34,slow=12,SNR=68						
FITZ				Sn	**Sn**	**04 09 54.2**	**-9.0**
	6.6nm,0.3s,baz=258,slow=17,SNR=8.6						
WRA	**Warramunga Arr**	**14.55**	**167**	Pn	**Pn**	**04 07 52.6**	**0.0**
WRA				Sn	**Sn**	**04 10 25.6**	**-8.0**
WRA	**Warramunga Arr**	**14.55**	**167**	Pn	**Pn**	**04 07 52.6**	**0.0**
	3.0nm,0.3s,baz=344,slow=14,SNR=146						
WRA				Sn	**Sn**	**04 10 25.6**	**-8.0**
	6.1nm,0.3s,baz=350,slow=22,SNR=11						
WB2	**Warramunga Arr**	**14.56**	**167**	*e*P	**Pn**	**04 07 51.3**	**-1.4**
WB2				*e*S	**Sn**	**04 10 19.0**	**-15**
COEN	**Coen**	**14.67**	**125**	*e*Pn	**Pn**	**04 07 54.1**	**-0.1**
	5.3nm,0.4s						
COEN				*e*Sn	**Sn**	**04 10 24.5**	**-12**
ASAR	**Alice Springs**	**18.10**	**171**	P	**Pn**	**04 08 39.4**	**+1.4**
	7.5nm,0.3s,baz=344,slow=8.5,SNR=225						
ASAR				S	**Sn**	**04 11 53.9**	**-5.7**
	1.6nm,0.3s,baz=1.0,slow=26,SNR=7.2						
KKM	**Kota Kinabalu**	**18.67**	**308**	*e*Pn	**Pn**	**04 08 45.6**	**+0.4**
CTA	**Charters Tower**	**20.73**	**135**	P	**P**	**04 09 10.7**	**+3.5**
	6.8nm,0.8s,baz=322,slow=12,SNR=5.2						
CTAO	**Charters Tower**	**20.73**	**135**	*e*P	**P**	**04 09 08.4**	**+1.3**
	5.9nm,0.8s						
FORT	**Forrest**	**25.07**	**186**	*e*P	**P**	**04 09 53.1**	**+2.2**
	21nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**27.92**	**160**	⇓*i*P	**P**	**04 10 17.4**	**+0.7**
	10nm,0.3s,mb4.9						
STKA	**Stephens Creek**	**27.92**	**160**	P	**P**	**04 10 17.6**	**+0.9**
	11nm,0.3s,mb4.9,baz=338,slow=8.0,SNR=35						
NWAO	**Narrogin (SRO)**	**29.89**	**203**	P	**P**	**04 10 32.8**	**-1.3**
	2.4nm,0.6s,mb4.1,baz=70,slow=12,SNR=3.3						
SONM	**Songino Array**	**57.49**	**341**	P	**P**	**04 14 15.7**	**+0.3**
	1.2nm,0.6s,mb4.1,baz=166,slow=6.2,SNR=11						
MKAR	**Makanchi Array**	**67.60**	**326**	P	**P**	**04 15 22.5**	**-0.5**
	4.5nm,0.4s,mb4.9,baz=120,slow=8.1,SNR=80						
UCH	**Uchtor**	**69.89**	**319**	*e*P	**P**	**04 15 35.9**	**-1.5**
	2.9nm,1.1s,mb4.1						
VNDA	**Vanda**	**73.62**	**173**	P	**P**	**04 15 59.4**	**+0.1**
VNDA	**Vanda**	**73.62**	**173**	P	**P**	**04 15 59.4**	**+0.1**
	0.6nm,0.7s,mb3.6,baz=322,slow=8.1,SNR=2.9						

KRSC 13 04:13:32.7±1.6**, 50.14N**×**156.98E, h10**km±10km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.14**	**356**	*e*P	Pn	04 14 07.7	-0.8
RUS	**Russkaya**	**2.49**	**22**	*e*P	Pn	04 14 14.5	+1.3
RUS				*i* S	Sn	04 14 45.0	+1.4
GRL	**Gorelyy**	**2.51**	**15**	*e*P	Pn	04 14 15.5	+2.0
GRL				*i* S	Sn	04 14 46.7	+2.6
AVH	**Avacha**	**3.31**	**19**	*e*P	Pn	04 14 27.0	+2.4
SPN	**Mys Shipunski**	**3.52**	**31**	P	Pn	04 14 29.2	+1.9
SPN				*i* S	Sn	04 15 10.5	+1.6
GNL	**Ganaly**	**3.61**	**9**	*e*P	Pn	04 14 30.2	+1.6
KBTR	**Krutoberegovo**	**7.02**	**28**	*e*P	Pn	04 15 17.3	+1.9

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*ISCJB **13** 04:19:30.1±0.3, 18.66N±0.04×101.59W±0.03, h85km±4km, mb4.0/12, Error ellipse: s-maj=6.3km s-min=3.6km az=26.6*
*IDC **13** 04:19:32.1±1.4, 18.99N×101.32W, h79km±7km, mb3.8/10, mb1 3.9/14, mb1mx3.8/23, mbtmp3.8/14, MS3.9/1, Ms1 3.9/1, ms1mx2.9/37, Error ellipse: s-maj=28.3km s-min=13.5km az=31.0*
*MEX **13** 04:19:32.9±0.7, 18.70N×101.59W, h29km±10km, MD4.4*
*NEIC **13** 04:19:32.9, 18.70N×101.59W, h30km, mb4.3/11, MD4.4(MEX), After MEX.*
ISC 13 04:19:31.1±0.3**, 18.62N**±0.04×**101.60W**±0.03**, h84**km±4km**, h81**km±2.3km**:pP-P, n84, σ1.33**/98**, mb4.1**/13**, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**1.01**	**173**	*i* P	**Pn**	**04 19 49.4**	**-1.2**
ZIIG				*i* S	**Sn**	**04 20 03.7**	**-1.4**
MOIG	**Morelia**	**1.12**	**20**	*i* P	**Pn**	**04 19 48.6**	**-3.3**
MOIG				*i* S	**Sn**	**04 20 02.9**	**-4.6**
MMIG	**Aquila**	**1.69**	**259**	*i* S	**Sn**	**04 20 19.4**	**-0.8**
PLIG	**Platanillo**	**2.00**	**96**	*i* P	**Pn**	**04 20 03.0**	**-0.2**
PLIG				*i* S	**Sn**	**04 20 26.2**	**-1.3**
MEIG	**Mezcala**	**2.00**	**110**	*i* P	**Pn**	**04 20 03.2**	**+0.1**
MEIG				*i* S	**Sn**	**04 20 26.7**	**-0.8**
CAIG	**El Cayaco**	**2.01**	**141**	*i* P	**Pn**	**04 20 04.3**	**+1.0**
CAIG				*i* S	**Sn**	**04 20 27.4**	**-0.4**
SZVM	**Salazar**	**2.21**	**71**	*e*P	**Pn**	**04 20 05.5**	**-0.3**
SFJM	**Santa Fe**	**2.30**	**324**	*i* P	**Pn**	**04 20 06.0**	**-1.1**
ACX	**Acapulco**	**2.37**	**137**	*e*P	**Pn**	**04 20 07.8**	**-0.2**
UNM	**Universidad Na**	**2.40**	**72**	*e*P	**Pn**	**04 20 10.5**	**+2.1**
YAIG	**Yautepec**	**2.41**	**84**	*i* P	**Pn**	**04 20 08.7**	**+0.2**
YAIG				*i* S	**Sn**	**04 20 35.3**	**-2.0**
PBVM	**Pinon**	**2.52**	**71**	*e*P	**Pn**	**04 20 10.3**	**+0.3**
PTVM	**Pico Tres Padr**	**2.54**	**67**	*e*P	**Pn**	**04 20 04.9**	**-5.4**
PTVM	**Pico Tres Padr**	**2.54**	**67**	*i* P	**Pn**	**04 20 08.4**	**-1.9**
PPM	**Popocatepetl**	**2.85**	**81**	*e*P	**Pn**	**04 20 16.1**	**+1.7**
PPM				*i* S	**Sn**	**04 20 51.2**	**+3.4**
PPM	**Popocatepetl**	**2.85**	**81**	*e*P	**Pn**	**04 20 16.0**	**+1.6**
PPM				*e*P		04 20 16.1	
PPM				*i* S	**Sn**	**04 20 49.5**	**+1.7**
IIO	**Organos**	**2.89**	**70**	*e*P	**Pn**	**04 20 15.6**	**+0.7**
CJM	**Chamela**	**3.37**	**286**	*i* P	**Pn**	**04 20 22.6**	**+1.1**
CJM				*i* S	**Sn**	**04 20 59.6**	**-0.9**
ANIG	**Ahuacatlan**	**3.67**	**312**	*i* P	**Pn**	**04 20 25.7**	**+0.2**
ANIG				*i* S	**Sn**	**04 21 07.3**	**-0.4**
UTMO	**Huajuapan**	**3.69**	**102**	*i* P	**Pn**	**04 20 27.4**	**+1.5**
PNIG	**Pinotepa**	**3.98**	**123**	*i* S	**Sn**	**04 21 14.9**	**-0.5**
TPIG	**Tehuac#an**	**4.03**	**92**	*e*P	**Pn**	**04 20 31.8**	**+1.4**
TPIG				*i* S	**Sn**	**04 21 17.0**	**+0.6**
ZAIG	**Zacatecas**	**4.23**	**348**	*i* P	**Pn**	**04 20 32.3**	**-0.8**
ZAIG				*i* S	**Sn**	**04 21 20.5**	**-0.8**
VHO	**Vista Hermosa**	**4.88**	**108**	*e*P	**Pn**	**04 20 44.4**	**+2.3**
OXX	**Oaxaca**	**4.89**	**107**	*e*P	**Pn**	**04 20 44.5**	**+2.4**
LNIG	**Linares**	**6.55**	**17**	*i* P	**Pn**	**04 21 04.6**	**-0.3**
CMIG	**Matias Romero**	**6.57**	**102**	P	**Pn**	**04 21 05.8**	**+0.7**
CMIG				S	**Sn**	**04 22 15.0**	**-3.6**
CMIG	**Matias Romero**	**6.57**	**102**	P	**Pn**	**04 21 05.8**	**+0.7**
	18nm,0.3s,baz=275,slow=10.0,SNR=208						
CMIG				S	**Sn**	**04 22 15.0**	**-3.6**
	3.7nm,0.3s,baz=280,slow=7.1,SNR=5.5						
CMIG	**Matias Romero**	**6.57**	**102**	*i* P	**Pn**	**04 21 06.1**	**+1.0**
CMIG				*i* S	**Sn**	**04 22 18.4**	**-0.2**
LTX	**Lajitas**	**10.83**	**350**	*e*Pn	**Pn**	**04 22 05.7**	**+2.5**
TXAR	**Lajitas Array**	**10.83**	**350**	P	**Pn**	**04 22 04.5**	**+1.4**
	0.3nm,0.3s,baz=165,slow=17,SNR=27						
JCT	**Junction City**	**11.92**	**8**	*e*Pn	**Pn**	**04 22 20.8**	**+2.8**
MNTX	**Cornudas Mount**	**13.46**	**346**	*e*Pn	**Pn**	**04 22 41.9**	**+3.3**
NATX	**Nacogdoches**	**14.51**	**24**	*e*Pn	**Pn**	**04 22 52.8**	**+0.7**
LENM	**Lemitar**	**16.21**	**344**	*e*Pn	**Pn**	**04 23 15.2**	**+1.5**
WMOK	**Wichita Mounta**	**16.25**	**8**	*e*Pn	**Pn**	**04 23 13.1**	**-1.1**
	17nm,1.0s						
LAZ	**Ladron**	**16.48**	**344**	*e*P	**Pn**	**04 23 19.0**	**+2.0**

ANMO	**Albuquerque**	**16.83**	**346**	P	**Pn**	**04 23 20.8**	**-0.6**
ANMO				LR	LR	04 30 24.8	
ANMO	**Albuquerque**	**16.83**	**346**	P	**Pn**	**04 23 20.8**	**-0.6**
	0.1nm,0.3s,baz=148,slow=12,SNR=5.1						
ANMO				LR	LR	04 30 24.8	
	comp=Z,471nm,20.5s,baz=263,slow=40						
MIAR	**Mount Ida**	**17.40**	**23**	*e*Pn	**Pn**	**04 23 27.2**	**-1.1**
	12nm,1.0s						
JTS	**JuntasAbangare**	**18.11**	**115**	P	**Pn**	**04 23 38.8**	**+1.7**
	0.3nm,0.3s,baz=291,slow=18,SNR=1.9						
WUAZ	**Wupatki**	**18.93**	**335**	*e*P	**Pn**	**04 23 47.9**	**+1.2**
	12nm,1.0s						
OXF	**Oxford**	**19.19**	**32**	*e*P	**Pn**	**04 23 47.4**	**-2.5**
SDCO	**Great Sand Dun**	**19.36**	**351**	*e*Pn	**Pn**	**04 23 50.3**	**-1.5**
	13nm,1.1s						
LRAL	**Lakeview Retre**	**19.43**	**40**	*e*P	**Pn**	**04 23 50.4**	**-2.3**
	42nm,1.9s						
MVCO	**Mesa Verde**	**19.49**	**343**	*e*P	**Pn**	**04 23 52.9**	**-0.4**
PFO	**Pinyon Flat Ob**	**19.98**	**321**	P	**Pn**	**04 23 56.9**	**-2.3**
	0.1nm,0.3s,baz=124,slow=3.6,SNR=2.7						
CBKS	**Cedar Bluff**	**20.19**	**4**	*e*P	**P**	**04 23 58.8**	**-0.1**
	28nm,1.0s						
PLAL	**Pickwick Lake**	**20.24**	**34**	*e*P	**P**	**04 23 58.2**	**-1.3**
	34nm,1.5s						
PV10	**Paradox Valley**	**20.73**	**343**	*e*P	**P**	**04 24 04.5**	**-0.1**
KSU1	**Kansas State U**	**20.86**	**11**	*e*P	**P**	**04 24 06.0**	**-0.2**
	14nm,1.0s						
SMCO	**Snowmass**	**21.01**	**348**	*e*P	**P**	**04 24 04.0**	**-3.7**
	16nm,1.1s,mb4.2						
ISCO	**Idaho Springs**	**21.39**	**351**	*e*P	**P**	**04 24 12.7**	**+0.9**
	11nm,0.8s,mb4.2						
SHPR	**Sheep Range**	**21.45**	**329**	*e*P	**P**	**04 24 15.3**	**+2.8**
SHPR				*e*pP		04 24 30.4	
SRU	**San Rafael**	**21.84**	**341**	*e*P	**P**	**04 24 17.4**	**+0.8**
MSU	**Marysvale**	**21.86**	**337**	*e*P	**P**	**04 24 18.0**	**+1.3**
MSU				*e*		04 24 35.5	
TPNV	**Topopah Spring**	**22.34**	**328**	*e*P	**P**	**04 24 23.4**	**+1.5**
PHWY	**Pilot Hill**	**22.85**	**352**	*e*P	**P**	**04 24 27.1**	**-0.1**
PHWY				*e*		04 24 45.0	
TKL	**Tuckaleechee C**	**23.16**	**39**	P	**P**	**04 24 27.7**	**-2.5**
	1.0nm,0.4s,mb3.5,baz=198,slow=9.6,SNR=4.2						
RWWY	**Rawlins**	**23.49**	**349**	*e*P	**P**	**04 24 35.1**	**+2.0**
HDIL	**Hopedale**	**24.29**	**23**	*e*P	**P**	**04 24 39.1**	**-1.4**
HWUT	**Hardware Ranch**	**24.44**	**342**	*e*P	**P**	**04 24 43.0**	**+1.1**
HWUT				*e*pP		04 25 04.1	
NVAR	**Mina Array Bea**	**24.52**	**327**	P	**P**	**04 24 43.7**	**+1.1**
NVAR				pP		04 25 01.1	
NVAR	**Mina Array Bea**	**24.52**	**327**	P	**P**	**04 24 43.7**	**+1.1**
	3.5nm,0.7s,mb3.9,baz=143,slow=9.9,SNR=24						
NVAR				pP		04 25 01.1	
	2.2nm,0.9s,baz=137,slow=9.0,SNR=4.8						
BW06	**Boulder Array**	**25.00**	**346**	*e*P	**P**	**04 24 47.1**	**+0.2**
PDAR	**Pinedale Array**	**25.00**	**346**	P	**P**	**04 24 46.8**	**-0.1**
	7.8nm,0.7s,mb4.2,baz=152,slow=11,SNR=58						
PDAR				pP		04 25 05.2	
	1.2nm,0.6s,baz=144,slow=11,SNR=2.8						
PDAR				PcP	PcP	04 28 20.6	+0.7
	0.3nm,0.5s,baz=123,slow=5.3,SNR=5.7						
ECSD	**EROS,Sioux Fal**	**25.39**	**8**	*e*P	**P**	**04 24 49.7**	**-0.7**
REDW	**Red Top Meadow**	**25.88**	**344**	*e*P	**P**	**04 24 55.4**	**+0.6**
TPAW	**Teton Pass**	**26.02**	**344**	*e*P	**P**	**04 24 57.5**	**+1.3**
LOHW	**Long Hollow**	**26.05**	**345**	*e*P	**P**	**04 24 56.9**	**+0.5**
	5.9nm,0.7s,mb4.1						
MOOW	**Moose Ponds**	**26.21**	**345**	*e*P	**P**	**04 24 59.9**	**+2.1**
AGMN	**Agassiz Refuge**	**29.97**	**8**	*e*P	**P**	**04 25 29.6**	**-1.7**
ULM	**Lac du Bonnet**	**31.89**	**7**	P	**P**	**04 25 46.0**	**-2.1**
	4.7nm,0.8s,mb4.3,baz=192,slow=8.2,SNR=15						
ULM				pP	pP	04 26 03.6	-4.0
	4.1nm,0.8s,baz=198,slow=11,SNR=5.3						
ULM				PcP	PcP	04 28 36.0	-0.8
	1.2nm,0.7s,baz=198,slow=6.4,SNR=3.1						
SADO	**Sadowa**	**32.11**	**31**	P	**P**	**04 25 49.0**	**-1.2**
SADO	**Sadowa**	**32.11**	**31**	P	**P**	**04 25 49.0**	**-1.2**
	baz=252,slow=8.4						
EDM	**Edmonton**	**35.72**	**348**	*e*P	**P**	**04 26 20.3**	**-1.0**
YKA	**Yellowknife Ar**	**44.76**	**351**	P	**P**	**04 27 33.5**	**-2.3**
YKA				pP	pP	04 27 53.0	-3.2
YKA				PcP	PcP	04 29 17.1	+0.5
YKA	**Yellowknife Ar**	**44.76**	**351**	P	**P**	**04 27 33.5**	**-2.3**
	0.8nm,0.7s,mb3.6,baz=159,slow=7.4,SNR=17						
YKA				pP	pP	04 27 53.0	-3.1
	0.4nm,0.8s,baz=160,slow=7.5,SNR=2.8						
YKA				PcP	PcP	04 29 17.0	+0.5
	0.6nm,0.6s,baz=160,slow=3.2,SNR=9.5						
SCHQ	**Schefferville**	**44.80**	**28**	P	**P**	**04 27 33.5**	**-2.7**
	1.1nm,0.7s,mb3.7,baz=286,slow=7.4,SNR=6.8						
SCHQ				pP	pP	04 27 53.6	-3.0
	2.6nm,1.1s,baz=204,slow=20,SNR=2.1						
SCHQ				PcP	PcP	04 29 17.3	+0.4
	1.9nm,0.8s,baz=260,slow=6.1,SNR=3.0						
KDAK	**Kodiak Island**	**54.00**	**329**	P	**P**	**04 28 47.0**	**+0.8**
	11nm,1.0s,mb4.9,baz=114,slow=10.0,SNR=2.7						
NOA	**NORSAR Array B**	**84.36**	**27**	P	**P**	**04 31 54.3**	**+0.7**
	1.9nm,1.0s,mb3.9,baz=186,slow=9.3,SNR=2.6						
ARCES	**ARCESS Array B**	**84.50**	**16**	P	**P**	**04 31 53.0**	**-1.3**
	1.9nm,0.8s,mb4.0,baz=330,slow=7.0,SNR=8.1						
FINES	**FINESS Array B**	**90.01**	**22**	P	**P**	**04 32 20.1**	**-0.9**
	2.0nm,0.9s,mb4.2,baz=320,slow=26,SNR=2.5						
WRA	**Warramunga Arr**	**127.39**	**259**	PKP	PKPdf	04 38 28.7	+1.9
	0.2nm,0.5s,baz=80,slow=2.9,SNR=6.0						

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*NEIC **13** 04:41:34.4, 2934S×6892W, h16km, ML3.5(GUC), After GUC.*

GUC 13 04:41:34.4±0.9**, 2934S×6892W, h16**km±13km**, ML3.5, 1C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.59**	**281**	*e*Pn	Pn	04 42 00.7	-1.2
LCO				*e*Sn	Sn	04 42 19.0	-3.1
VACH	**Vallenar**	**1.78**	**295**	*e*P	Pn	04 42 04.4	-0.1
VACH				*i* S	Sn	04 42 27.2	+0.4
VACH	**Vallenar**	**1.78**	**295**	*e*P	Pn	04 42 04.4	-0.1
VACH				*i* S	Sn	04 42 27.2	+0.4
VACH				AML	AML	04 42 27.7	
	comp=N,1μm,0.1s						
TLL	**Tololo Astrono**	**1.83**	**243**	⇓*i*P	Pn	04 42 06.1	+0.9
TLL				*i* S	Sn	04 42 29.8	+1.7
TLL	**Tololo Astrono**	**1.83**	**243**	⇓*i*P	Pn	04 42 06.1	+0.9
TLL				*i* S	Sn	04 42 29.8	+1.7
TLL				AML	AML	04 42 37.9	
	comp=E,422nm,0.6s						
LSCH	**La Serena**	**2.10**	**254**	*e*P	Pn	04 42 10.4	+1.5
LSCH				*i* S	Sn	04 42 37.1	+2.4
LSCH	**La Serena**	**2.10**	**254**	*e*P	Pn	04 42 10.4	+1.5
LSCH				*i* S	Sn	04 42 37.1	+2.4
LSCH				AML	AML	04 42 40.4	
	comp=E,129nm,0.4s						
CPCH	**Copiapo**	**2.34**	**327**	*i* P	Pn	04 42 13.4	+1.1
CPCH				*i* S	Sn	04 42 42.4	+1.8
CPCH	**Copiapo**	**2.34**	**327**	*i* P	Pn	04 42 13.4	+1.1
CPCH				*i* S	Sn	04 42 42.4	+1.8
CPCH				AML	AML	04 42 49.5	
	comp=E,799nm,0.1s						
CDCH	**Caldera**	**2.82**	**323**	⇑*i*P	Pn	04 42 21.1	+2.4
CDCH				*i* S	Sn	04 42 56.3	+4.0
CDCH				AML	AML	04 42 56.8	
	comp=E,325nm,0.4s						

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*ISCJB **13** 04:47:19.4±0.4, 3952N±001×2622E±002, h6km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=155.6*
*ATH **13** 04:47:19.1, 3952N×2639E, h26km±1km, MD3.7/8, ML3.8*
*ISK **13** 04:47:19.4, 3952N×2622E, h11km, MD3.5*
*NEIC **13** 04:47:19.0, 3951N×2617E, h13km, ML3.8(ISK), ML3.8(ATH), After ISK.*
*THE **13** 04:47:20.4, 3950N×2625E, h3km, ML4.4*
*CSEM **13** 04:47:20.1±0.0, 3953N×2633E, h10km, ML3.8, Error ellipse: s-maj=1.1km s-min=0.9km az=52.0*
*DDA **13** 04:47:20.5, 3948N×2615E, h7km, Md3.3*
*SOF **13** 04:47:21.2, 3971N×2619E, h7km, MD3.2*

ISC 13 04:47:20.4±0.4**, 3952N**±001×**2624E**±002**, h8**km±3km**, n98, σ0s83**/117**, 14C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.27**	**175**	⇑*i*PB	**Pg**	**04 47 26.5**	**+0.7**
PRK				*e*SB	**Sg**	**04 47 31.0**	**+1.5**
EZN	**Ezine**	**0.31**	**12**	*i* PG	**Pg**	**04 47 25.8**	**-0.8**
EZN				*i* SG	**Sg**	**04 47 31.4**	**+0.6**
BOZC	**Bozcaada**	**0.35**	**336**	*i* P	**Pg**	**04 47 27.6**	**+0.3**
BOZC				*i* S	**Sg**	**04 47 32.5**	**+0.4**
AYVA	**Ayvalik**	**0.41**	**121**	*i* P	**Pg**	**04 47 28.9**	**+0.6**
AYVA				*i* S	**Sg**	**04 47 35.3**	**+1.5**
GADA	**Gvkgeada**	**0.72**	**339**	PG	**Pg**	**04 47 33.7**	**-0.6**
LIA	**Limnos Island**	**0.90**	**295**	P	**Pg**	**04 47 41.2**	**+3.5**
LPK	**Lapseki**	**0.94**	**25**	PG	**Pg**	**04 47 38.0**	**-0.5**
LOS	**Limnos**	**0.98**	**295**	*e*Pg	**Pg**	**04 47 39.4**	**+0.1**
CHOS	**Chios island**	**1.14**	**187**	*e*Pg	**Pg**	**04 47 41.6**	**-0.7**
CHOS				*e*Sg	**Sg**	**04 47 56.7**	**-0.3**
URLA	**Izmir**	**1.19**	**166**	*i* P	**Pb**	**04 47 42.1**	**-1.0**
URLA				*i* S	**Sg**	**04 47 59.1**	**+0.5**
ENEZ	**Enez**	**1.22**	**357**	PN	**Pn**	**04 47 42.9**	**-0.8**
BALB	**Balikesir**	**1.27**	**84**	PN	**Pn**	**04 47 43.8**	**-0.6**
BLCB	**Balcova**	**1.29**	**151**	PN	**Pn**	**04 47 44.0**	**-0.7**
BLCB	**Balcova**	**1.29**	**151**	*e*Pg	**Pg**	**04 47 44.3**	**-0.9**
BLCB				*e*Sg	**Sg**	**04 48 02.2**	**+0.3**
BLCB	**Balcova**	**1.29**	**151**	*e*Pg	**Pg**	**04 47 44.3**	**-0.9**
BLCB				*e*Sg	**Sg**	**04 48 02.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.37**	**31**	PN	**Pn**	**04 47 44.6**	**-1.2**
KDAG	**Bornova**	**1.37**	**144**	*i* P	**Pn**	**04 47 45.3**	**-0.4**
KDAG				*i* S	**Sb**	**04 48 04.1**	**+0.2**
SART	**Tekirdag**	**1.37**	**31**	*i* P	**Pn**	**04 47 45.5**	**-0.3**
SART				*i* S	**Sb**	**04 48 04.1**	**+0.1**
AKS	**Akhisar**	**1.38**	**117**	PN	**Pn**	**04 47 45.6**	**-0.3**
AKHS	**Akhisar**	**1.38**	**117**	*i* P	**Pn**	**04 47 45.7**	**-0.2**
AKHS				*i* S	**Sb**	**04 48 04.0**	**-0.1**
ALN	**Alexandroupoli**	**1.39**	**354**	*e*Pg	**Pg**	**04 47 45.5**	**-1.5**
ALN				*e*Sg	**Sg**	**04 48 04.6**	**-0.4**
BTOK	**Tokmak**	**1.41**	**79**	*i* P	**Pn**	**04 47 46.1**	**-0.2**
BTOK				*i* S	**Sb**	**04 48 05.6**	**+0.7**
MFT	**Murefte**	**1.50**	**32**	PN	**Pn**	**04 47 47.2**	**-0.3**
EDC	**Edincik**	**1.50**	**56**	PN	**Pn**	**04 47 47.5**	**0.0**
MRMT	**Marmara Adasi**	**1.50**	**43**	PN	**Pn**	**04 47 46.9**	**-0.7**
BNT	**Bandirma**	**1.54**	**57**	PN	**Pn**	**04 47 47.3**	**-0.8**
RDO	**Rodhopi**	**1.71**	**342**	*e*PN	**Pn**	**04 47 50.0**	**-0.5**
RDO				*e*SN	**Sn**	**04 48 12.0**	**-0.5**
DST	**Dursunbey**	**1.85**	**87**	PN	**Pn**	**04 47 52.6**	**+0.3**
AOS	**Alonnisos**	**1.86**	**260**	*e*Pb	**Pb**	**04 47 52.2**	**-2.4**
SMG	**Samos**	**1.87**	**165**	*e*PN	**Pn**	**04 47 52.0**	**-0.6**
SMG				*e*SN	**Sn**	**04 48 14.3**	**-2.0**
OUR	**Ouranopolis**	**1.92**	**296**	*e*Pb	**Pb**	**04 47 53.1**	**-2.4**
PAIG	**Paliouri**	**2.02**	**282**	*e*Pn	**Pn**	**04 47 54.5**	**-0.1**
KULA	**Kula-Manisa**	**2.14**	**117**	PN	**Pn**	**04 47 56.2**	**-0.1**
KDZ	**Kurdzhali**	**2.22**	**344**	P	**Pn**	**04 47 57.4**	**0.0**
KDZ				Pg	**Pg**	**04 48 01.2**	**-1.7**
PLG	**Polygyros**	**2.31**	**293**	*e*Pn	**Pn**	**04 47 59.3**	**+0.6**
PLG	**Polygyros**	**2.31**	**293**	*e*PN	**Pn**	**04 47 59.5**	**+0.8**
CTT	**Catalca**	**2.33**	**45**	*e*PN	**Pn**	**04 47 59.2**	**+0.2**
NEO	**Neokhori**	**2.34**	**266**	*e*PN	**Pn**	**04 48 00.0**	**+0.8**
EDRB	**Edirne**	**2.36**	**9**	*e*PN	**Pn**	**04 47 58.8**	**-0.5**
XOR	**Xorichti**	**2.36**	**267**	*e*Pn	**Pn**	**04 47 60.0**	**+0.6**
GEMT	**Gemlik**	**2.44**	**67**	*e*PN	**Pn**	**04 48 00.3**	**-0.2**
RZN	**Rozhen**	**2.46**	**332**	P	**Pn**	**04 48 00.8**	**+0.1**
ATH	**Athens Observa**	**2.50**	**233**	*e*PN	**Pn**	**04 48 02.0**	**+0.7**
APE	**Apeiranthos**	**2.51**	**193**	*e*Pn	**Pn**	**04 48 00.6**	**-0.9**
APE	**Apeiranthos**	**2.51**	**193**	⇓*i*P	**Pn**	**04 48 00.6**	**-0.8**
APE	**Apeiranthos**	**2.51**	**193**	*e*Pn	**Pn**	**04 48 00.7**	**-0.7**
MLSB	**Milas**	**2.53**	**151**	*e*PN	**Pn**	**04 48 02.0**	**+0.3**
GDZ	**Gediz**	**2.55**	**99**	*i* P	**Pn**	**04 48 05.1**	**+3.1**
GDZ				*i* S	**Sn**	**04 48 41.6**	**+8.4**
SOH	**Sokhos**	**2.56**	**301**	*e*Pn	**Pn**	**04 48 01.9**	**-0.2**
SOH				*e*Sn	**Sn**	**04 48 35.2**	**+1.7**
SOH	**Sokhos**	**2.56**	**301**	*e*Pn	**Pn**	**04 48 01.9**	**-0.3**
SOH				*e*Sn	**Sn**	**04 48 35.2**	**+1.7**
NVR	**Nevrokopi**	**2.58**	**316**	*e*PN	**Pn**	**04 48 01.9**	**-0.4**
DIM	**Dimitrovgrad**	**2.58**	**348**	P	**Pn**	**04 48 02.5**	**0.0**
BODT	**Bodrum**	**2.59**	**161**	*e*PN	**Pn**	**04 48 02.7**	**+0.1**
IZI	**Iznik**	**2.62**	**71**	*e*PN	**Pn**	**04 48 02.9**	**0.0**
YLV	**Yalova**	**2.62**	**65**	*e*PN	**Pn**	**04 48 02.1**	**-0.9**
BDRM	**Kayabasi**	**2.63**	**158**	*i* P	**Pn**	**04 48 02.0**	**-1.0**
BDRM	**Kayabasi**	**2.63**	**158**	*i* P	**Pn**	**04 48 02.0**	**-1.0**
HORT	**Hortiatis**	**2.64**	**295**	*e*Pn	**Pn**	**04 48 03.4**	**+0.2**
ISK	**Istanbul-Kandi**	**2.65**	**53**	*e*PN	**Pn**	**04 48 02.7**	**-0.7**
NAIG	**Nisos Aigina**	**2.78**	**232**	*e*PN	**Pn**	**04 48 06.0**	**+0.9**
DENT	**Denizli**	**2.81**	**128**	*e*PN	**Pn**	**04 48 05.5**	**0.0**
MMB	**Musomiste**	**2.82**	**318**	P	**Pn**	**04 48 05.0**	**-0.6**
ADVT	**Abdulvahap**	**2.84**	**70**	*e*PN	**Pn**	**04 48 06.1**	**+0.1**
DNZL	**Cakiroluk**	**2.86**	**129**	*i* P	**Pn**	**04 48 06.8**	**+0.6**
HRT	**Hereke**	**2.93**	**63**	*e*PN	**Pn**	**04 48 06.5**	**-0.7**
LIT	**Litokhoron**	**2.94**	**283**	*e*Pn	**Pn**	**04 48 07.9**	**+0.5**
JMB	**Yambol**	**2.96**	**5**	*e*Pn	**Pn**	**04 48 07.9**	**+0.3**
LTK	**Loutraki**	**2.96**	**241**	*e*Pn	**Pn**	**04 48 07.9**	**+0.3**
KNT	**Kendrikon**	**3.04**	**304**	*e*Pn	**Pn**	**04 48 09.0**	**+0.4**
DID	**Didima**	**3.10**	**230**	*e*Pn	**Pn**	**04 48 09.0**	**-0.5**
GPA	**Golpazari**	**3.22**	**75**	*e*PN	**Pn**	**04 48 11.4**	**+0.2**
GRG	**Griva**	**3.27**	**297**	*e*Pn	**Pn**	**04 48 12.7**	**+0.8**
KKB	**Krupnik**	**3.35**	**315**	P	**Pn**	**04 48 14.2**	**+1.2**
GULT	**Gulveren**	**3.41**	**73**	*e*PN	**Pn**	**04 48 14.5**	**+0.7**
SHUT	**Suhut-Afyon**	**3.49**	**105**	*e*PN	**Pn**	**04 48 15.6**	**+0.6**
ESKT	**Eskisehir**	**3.57**	**89**	*e*PN	**Pn**	**04 48 16.2**	**+0.2**
ISP	**Isparta**	**3.74**	**115**	⇑P	**Pn**	**04 48 19.4**	**+1.0**
ISP	**Isparta**	**3.74**	**115**	⇑*i*P	**Pn**	**04 48 19.4**	**+1.1**
SZH	**Strazhica**	**3.75**	**357**	P	**Pn**	**04 48 18.8**	**+0.3**
PVL	**Pavlikeni**	**3.76**	**350**	P	**Pn**	**04 48 18.9**	**+0.3**
VLI	**Veliai**	**3.82**	**224**	P	**Pn**	**04 48 18.9**	**-0.5**
VTS	**Vitosha**	**3.83**	**324**	*e*Pn	**Pn**	**04 48 20.2**	**+0.6**
VTS	**Vitosha**	**3.83**	**324**	P	**Pn**	**04 48 20.0**	**+0.4**
VTS	**Vitosha**	**3.83**	**324**	⇑*i*P	**Pn**	**04 48 21.0**	**+1.4**
NPS	**Neapolis**	**4.28**	**187**	P	**Pn**	**04 48 25.4**	**-0.3**
KIZT	**Kizilcal**	**4.43**	**96**	*e*PN	**Pn**	**04 48 28.0**	**+0.2**
TIRR	**Tirgusor**	**5.20**	**17**	⇑P	**Pn**	**04 48 39.1**	**+0.8**
TIRR	**Tirgusor**	**5.20**	**17**	⇑*i*P	**Pn**	**04 48 39.1**	**+0.8**
MLR	**Muntele Rosu**	**5.97**	**358**	⇑P	**Pn**	**04 48 50.7**	**+1.7**
MLR	**Muntele Rosu**	**5.97**	**358**	⇑*i*P	**Pn**	**04 48 50.7**	**+1.7**
VRI	**Vrincioaia**	**6.36**	**3**	⇑P	**Pn**	**04 48 56.2**	**+1.9**
VRI	**Vrincioaia**	**6.36**	**3**	⇑*i*P	**Pn**	**04 48 56.2**	**+2.0**
GZR	**Gura Zlata**	**6.40**	**338**	⇑P	**Pn**	**04 48 55.0**	**0.0**
GZR	**Gura Zlata**	**6.40**	**338**	⇑*i*P	**Pn**	**04 48 55.0**	**+0.1**
BZS	**Buzias**	**6.98**	**332**	⇑P	**Pn**	**04 49 02.8**	**-0.1**
BZS	**Buzias**	**6.98**	**332**	⇑*i*P	**Pn**	**04 49 02.8**	**-0.1**
BURAR	**Bucovina Array**	**8.13**	**355**	⇓P	**Pn**	**04 49 21.3**	**+2.7**
BURAR	**Bucovina Array**	**8.13**	**355**	⇓*i*P	**Pn**	**04 49 21.3**	**+2.8**

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*ISCJB **13** 04:51:48.0±0.3, 5733N±003×12107E±004, h10km, mb3.9/16, Error ellipse: s-maj=4.4km s-min=2.8km az=8.6*
*IDC **13** 04:51:49.7±0.8, 5765N×12084E, h0km, mb3.9/15, mb1 4.0/16, mb1mx3.9/26, mbtmp3.8/16, ML3.1/1, Error ellipse: s-maj=20.8km s-min=19.0km az=108.0*
*BYKL **13** 04:51:50.0±0.4, 5748N×12101E*
*NEIC **13** 04:51:50.7±0.5, 5754N×12092E, h10km, mb4.2/1, Error ellipse: s-maj=13.2km s-min=8.8km az=122.0*
*MOS **13** 04:51:51.0±1.4, 5772N×12087E, h18km, mb4.3/10, Error ellipse: s-maj=13.1km s-min=9.4km az=80.4*

ISC 13 04:51:50.5±0.3**, 5741N**±003×**12106E**±003**, h10**km**, n89, σ1s43**/114**, mb3.9**/16**, 10C-3D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHNR	**Khani**	**0.77**	**231**	⇑*i*Pg	**Pg**	**04 52 04.6**	**-0.6**
KHNR				*e*Sg	**Sg**	**04 52 14.5**	**-0.7**
CRS	**Chara**	**1.60**	**253**	*e*P	**Pn**	**04 52 19.2**	**+0.4**
CRS				*e*		04 52 39.4	
CRS				pmax	pmax		
	comp=Z,870nm,0.4s						
CRS				smax			
	comp=E,1μm,0.5s						
CRS	**Chara**	**1.60**	**253**	⇓*i*Pg	**Pn**	**04 52 19.2**	**+0.4**
CRS				*e*		04 52 20.8	
CRS				max		04 52 22.7	
	comp=E,902nm,1.0s						
CRS				*e*Sg	**Sg**	**04 52 39.5**	**-2.4**
CRS				Smax		04 52 42.9	
	comp=E,2μm,1.2s						
NRGR	**Nerungri**	**2.14**	**109**	*e*P	**Pn**	**04 52 28.0**	**+1.8**
NRGR				S	**Sg**	**04 52 58.7**	**-0.5**
NRGR				smax			
	comp=N,5μm,0.6s						
CLNS	**Chul'man**	**2.17**	**104**	*e*P	**Pg**	**04 52 30.7**	**-1.3**
CLNS				*e*		04 52 59.2	
CLNS				pmax	pmax		
	comp=Z,132nm,0.2s						
CLNS				pmax	pmax		
	comp=N,87nm,0.3s						
CLNS				pmax	pmax		
	comp=E,92nm,0.2s						
CLNS				smax			
	comp=N,2μm,0.4s						
CLNS				smax			
	comp=E,466nm,0.3s						
CLNS				smax			
	comp=Z,245nm,0.3s						
CLNS	**Chul'man**	**2.17**	**104**	*e*Pn	**Pn**	**04 52 29.2**	**+2.6**
CLNS				*e*Pg	**Pg**	**04 52 30.7**	**-1.3**
CLNS				*e*		04 52 33.4	
CLNS				*e*Sg	**Sg**	**04 52 58.7**	**-1.4**
IENR	**Iengra**	**2.41**	**118**	*e*Pn	**Pn**	**04 52 32.0**	**+2.2**
IENR				*e*Pg	**Pg**	**04 52 35.6**	**-0.9**
IENR				*e*Sn	**Sn**	**04 53 02.1**	**+2.8**
IENR				*e*Sg	**Sg**	**04 53 07.0**	**-0.7**
ALDR	**Aldan**	**2.61**	**61**	*e*Pg	**Pg**	**04 52 35.7**	**-4.7**
ALDR				*e*Sg	**Sg**	**04 53 09.4**	**-4.8**
TNDR	**Tynda**	**3.05**	**136**	⇓*i*Pn	**Pn**	**04 52 40.8**	**+2.1**
TNDR				*e*Pg	**Pg**	**04 52 47.0**	**-1.9**
TNDR				⇑*i*PgPg		04 52 50.8	
TNDR				*e*Sn	**Sn**	**04 53 17.6**	**+2.4**
TNDR				*e*Sg	**Sg**	**04 53 26.8**	**-1.6**
TUP	**Tupik**	**3.06**	**192**	*e*P	**Pg**	**04 52 46.6**	**-2.4**
TUP				*e*		04 53 25.4	
TUP				pmax	pmax		
	comp=Z,250nm,0.4s						
TUP				smax			
	comp=E,959nm,0.8s						
TUP	**Tupik**	**3.06**	**192**	*e*Pn	**Pn**	**04 52 40.4**	**+1.6**
TUP				⇑*i*Pg	**Pg**	**04 52 46.7**	**-2.3**
TUP				Pmax		04 52 47.7	
	comp=E,209nm,1.0s						
TUP				⇑*i*PgPg		04 52 50.8	
TUP				*e*Sn	**Sn**	**04 53 17.0**	**+1.7**
TUP				*e*Sg	**Sg**	**04 53 25.6**	**-2.9**
TUP				Smax		04 53 28.1	
	comp=E,965nm,0.9s						
NLYR	**Nelyaty**	**3.07**	**255**	*e*P	**Pn**	**04 52 40.0**	**+1.0**
NLYR				*e*		04 53 23.1	
NLYR	**Nelyaty**	**3.07**	**255**	*i* Pn	**Pn**	**04 52 40.4**	**+1.4**
NLYR				*e*Pg	**Pg**	**04 52 45.1**	**-4.2**
NLYR				*e*Sg	**Sg**	**04 53 23.6**	**-5.5**
NLYR				*e*SgSg		04 53 32.1	
BOD	**Bodaibo**	**3.82**	**279**	*e*P	**Pn**	**04 52 48.6**	**-0.6**
BOD				pmax	pmax		
	comp=Z,109nm,0.3s						
BOD	**Bodaibo**	**3.82**	**279**	*e*Pn	**Pn**	**04 52 49.5**	**+0.3**
BOD				*e*		04 52 52.0	
BOD				⇓*i*Pg	**Pg**	**04 52 57.8**	**-5.7**
BOD				*e*PgPg		04 53 00.0	
BOD				max		04 53 05.2	
	comp=Z,120nm,0.6s						
BOD				*e*Sn	**Sn**	**04 53 32.8**	**-1.2**
BOD				*e*Sg	**Sg**	**04 53 44.7**	**-8.2**
BOD				Smax		04 53 52.2	
	comp=Z,833nm,0.5s						
SVKR	**Severomuysk**	**4.33**	**256**	*e*P	**Pg**	**04 53 09.0**	**-4.2**
SVKR				pmax	pmax		
	comp=Z,234nm,1.5s						
SVKR	**Severomuysk**	**4.33**	**256**	*e*	**Pn**	**04 52 58.4**	**+2.2**
SVKR				⇑*i*Pg	**Pg**	**04 53 08.1**	**-5.1**
SVKR				Pmax		04 53 10.3	
	comp=Z,234nm,1.2s						
SVKR				*e*Sg	**Sg**	**04 54 01.9**	**-7.3**
SVKR				Smax		04 54 09.7	
	comp=Z,1μm,1.4s						
KROS	**Kirovskiy**	**4.47**	**129**	*e*Sg	**Sg**	**04 54 08.9**	**-4.9**
UKT	**Uakit**	**4.55**	**248**	*e*P	**Pg**	**04 53 11.1**	**-6.4**
UKT				pmax	pmax		
	comp=Z,92nm,0.4s						
UKT	**Uakit**	**4.55**	**248**	*e*Pn	**Pn**	**04 53 00.4**	**+1.1**
UKT				⇑*i*Pg	**Pg**	**04 53 12.2**	**-5.3**
UKT				Pmax		04 53 15.6	
	comp=Z,97nm,1.4s						
UKT				*e*Sg	**Sg**	**04 54 09.5**	**-6.9**
UKT				Smax		04 54 23.3	
	comp=Z,330nm,1.8s						
ZEA	**Zeya**	**5.09**	**134**	*e*Sg	**Sg**	**04 54 26.9**	**-6.8**
CGD	**Chagda**	**5.25**	**71**	*e*Pn	**Pn**	**04 53 10.5**	**+1.7**
CGD				*e*Pg	**Pg**	**04 53 24.4**	**-6.5**
CGD				*e*Sn	**Sn**	**04 54 07.1**	**-2.2**
CGD				*e*Sg	**Sg**	**04 54 30.0**	**-8.8**
YOA	**Uoyan**	**5.29**	**260**	*e*P	**Pg**	**04 53 25.3**	**-6.4**
YOA				pmax	pmax		
	comp=Z,260nm,0.3s						
YOA	**Uoyan**	**5.29**	**260**	*e*	**Pg**	**04 53 27.4**	**-4.3**
YOA				*e*Sg	**Sg**	**04 54 31.9**	**-8.2**
YOA				Smax		04 54 54.9	
	comp=Z,2μm,1.7s						
KMO	**Kumora**	**5.65**	**258**	*e*P	**Pb**	**04 53 28.8**	**-0.2**
KMO				*e*S	**Sn**	**04 54 15.8**	**-3.4**
KMO				pmax	pmax		
	comp=Z,28nm,0.4s						
KMO				smax			
	comp=E,524nm,1.2s						
KMO	**Kumora**	**5.65**	**258**	*e*Pn	**Pn**	**04 53 16.0**	**+1.7**
KMO				*e*Pg	**Pg**	**04 53 31.7**	**-6.8**
KMO				Pmax		04 53 39.9	
	comp=E,50nm,0.7s						
KMO				*e*Sg	**Sg**	**04 54 43.8**	**-7.8**
KMO				Smax		04 54 52.7	
	comp=E,507nm,1.7s						
YAK	**Yakutsk**	**6.36**	**40**	Pn	**Pn**	**04 53 24.1**	**0.0**
	comp=E,50nm,0.6s						
YAK				*e*Sn	**Sg**	**04 55 02.6**	**-12**
YAK	**Yakutsk**	**6.36**	**40**	*e*P	**Pn**	**04 53 22.5**	**-1.6**
YAK				*e*		04 54 34.5	
YAK				pmax	pmax		
	comp=Z,13nm,0.4s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.3s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.3s						
YAK				pmax	pmax		
	comp=Z,42nm,0.4s						
YAK				pmax	pmax		
	comp=N,15nm,0.3s						
YAK				pmax	pmax		
	comp=E,22nm,0.3s						
YAK				smax			
	comp=E,127nm,0.9s						
YAK				smax			
	comp=Z,30nm,0.4s						
YAK				smax			
	comp=N,47nm,0.5s						
YAK				smax			
	comp=E,631nm,0.8s						
YAK				smax			
	comp=Z,290nm,0.8s						
YAK				smax			
	comp=N,787nm,0.7s						
YAK				MLR	MLR		
	comp=Z,123nm,6.0s						
NIZ	**Nizh Angarsk**	**6.57**	**260**	*e*Pn	**Pn**	**04 53 29.0**	**+2.0**
NIZ				max		04 53 57.1	
	comp=Z,23nm,1.5s						
NIZ				*e*Sg	**Sg**	**04 55 12.6**	**-8.5**
NIZ				Smax		04 55 24.3	
	comp=Z,285nm,1.1s						
CIT	**Chita**	**6.93**	**222**	*e*Pg	**Pg**	**04 53 55.8**	**-7.2**
CIT				Pmax		04 53 57.6	
	comp=Z,32nm,1.5s						
CIT				*e*Sg	**Sg**	**04 55 25.1**	**-7.6**
CIT				Smax		04 55 34.8	
	comp=Z,487nm,1.5s						
SYVR	**Suvo**	**7.31**	**244**	*e*Pn	**Pn**	**04 53 38.9**	**+1.7**
SYVR				*e*Pg	**Pg**	**04 54 02.4**	**-7.9**
SYVR				Pmax		04 54 04.4	
	comp=Z,25nm,1.3s						
SYVR				*e*Sg	**Sg**	**04 55 34.9**	**-10**
SYVR				Smax		04 55 46.8	
	comp=Z,545nm,1.9s						
HIA	**Hailar**	**8.20**	**186**	*e*Pn	**Pn**	**04 53 49.1**	**-0.2**
	comp=Z,56nm,0.6s						
HIA				*e*Sn	Sn	04 56 04.4	+43
HIA	**Hailar**	**8.20**	**186**	*e*P	**Pn**	**04 53 49.1**	**-0.2**
HIA				pmax	pmax		
	comp=Z,56nm,0.6s						
HIA	**Hailar**	**8.20**	**186**	*e*Sg	Sx	04 56 04.9	
OGRR	**Ongureny**	**8.52**	**249**	*e*	**Pn**	**04 53 56.9**	**+3.2**
OGRR				*e*Pg	Pn	04 54 25.3	+32
OGRR				Pmax		04 54 30.2	
	comp=Z,6.0nm,0.8s						
OGRR				*e*Sg	Sn	04 56 12.8	+43
OGRR				Smax		04 56 25.0	
	comp=Z,105nm,1.6s						
KPC	**Khapcheranga**	**9.28**	**217**	*e*Pn	**Pn**	**04 54 06.0**	**+1.8**
KPC				max		04 54 45.9	
	comp=Z,3.0nm,0.7s						
KPC				*e*Sg	Sn	04 56 37.5	+49

KPC				Smax		04 56 49.2	
	comp=Z,267nm,1.5s						
TRG	**Tyrgan**	**9.63**	**247**	*e*	**Pn**	**04 54 13.4**	**+4.5**
TRG				*e*Sg	Sn	04 56 48.6	+52
TRG				Smax		04 57 02.9	
	comp=Z,52nm,1.4s						
KAB	**Kabansk**	**9.90**	**243**	*e*Sg	Sx	04 56 55.7	
KAB				Smax		04 57 23.1	
	comp=Z,1μm,1.6s						
STDB	**Stepnoy Dvoret**	**9.97**	**244**	*e*Sg	Sx	04 56 57.7	
STDB				Smax		04 57 47.8	
	comp=Z,851nm,2.1s						
KLR	**Kul'dur**	**10.38**	**138**	*e*P	**Pn**	**04 54 18.8**	**-0.5**
KLR				*e*		04 56 21.8	
LSTR	**Listvyanka**	**10.91**	**246**	*e*Sg	Sx	04 57 27.5	
LSTR				Smax		04 57 37.9	
	comp=Z,72nm,1.7s						
TLY	**Talaya**	**11.61**	**248**	⇑*e*P	**Pn**	**04 54 36.9**	**+0.9**
TLY	**Talaya**	**11.61**	**248**	*e*Sg	Sx	04 57 48.5	
TLY				Smax		04 58 13.2	
	comp=Z,118nm,1.9s						
ARS	**Arshan**	**12.09**	**251**	*e*Sg	Sx	04 58 02.3	
ARS				Smax		04 58 25.8	
	comp=Z,175nm,1.3s						
ZAK	**Zakamensk**	**12.60**	**244**	*e*P	**Pn**	**04 54 55.3**	**+5.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK	**Zakamensk**	**12.60**	**244**	*e*Sg	Sx	04 58 21.6	
ZAK				Smax		04 58 34.8	
	comp=Z,149nm,2.4s						
ULN	**Ulaanbaatar**	**12.77**	**228**	⇑*e*P	**Pn**	**04 54 50.5**	**-1.3**
ULN	**Ulaanbaatar**	**12.77**	**228**	*e*Sg	Sx	04 58 27.7	
MOY	**Mondy**	**12.97**	**252**	*e*Sg	Sx	04 58 32.0	
MOY				Smax		04 58 54.6	
	comp=Z,72nm,2.4s						
SONM	**Songino Array**	**13.06**	**229**	P	**Pn**	**04 54 59.1**	**+3.3**
SONM						04 57 27.1	
SONM	**Songino Array**	**13.06**	**229**	Pn	**Pn**	**04 54 59.1**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=36,slow=11,SNR=3.5						
SONM				Sn	**Sn**	**04 57 27.1**	**+6.2**
	comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=3.4						
SONM				Lg		04 58 38.0	
	comp=Z,0.8nm,0.3s,baz=40,slow=26,SNR=11						
ORL	**Orlik**	**13.12**	**257**	*e*Sg	Sx	04 58 34.5	
ORL				Smax		04 58 48.0	
	comp=Z,99nm,1.8s						
TIXI	**Tiksi**	**14.66**	**10**	*e*Pn	**Pn**	**04 55 11.4**	**-6.2**
	comp=Z,23nm,0.5s						
TIXI				*e*Sn	**Sn**	**04 57 46.9**	**-13**
TIXI	**Tiksi**	**14.66**	**10**	*e*P	**Pn**	**04 55 11.6**	**-5.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TDJR	**Todzha**	**15.16**	**261**	*e*Sg	Sx	04 59 38.7	
ARDR	**Aradan**	**16.51**	**265**	*e*Sg	Sx	05 00 21.3	
KSRS	**Korea Array**	**20.48**	**164**	P	**P**	**04 56 32.4**	**+4.2**
	comp=Z,0.5nm,0.4s,baz=220,slow=31,SNR=4.7						
NVS	**Novosibirsk**	**21.06**	**279**	*e*P	**P**	**04 56 35.8**	**+1.5**
BILL	**Bilibino**	**22.70**	**44**	⇑P	**P**	**04 56 53.0**	**+1.3**
BILL				*e*		04 57 04.3	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
KURK	**Kurchatov**	**25.44**	**273**	⇑*i*P	**P**	**04 57 17.0**	**-1.1**
MKAR	**Makanchi Array**	**25.72**	**262**	*i* P	**P**	**04 57 20.3**	**-0.3**
MKAR	**Makanchi Array**	**25.72**	**262**	P	**P**	**04 57 20.4**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.3,baz=52,slow=7.9,SNR=8.9						
IMA2	**Indian Mountai**	**38.19**	**41**	*e*P	**P**	**04 59 10.4**	**+0.8**
ARCES	**ARCESS Array B**	**39.76**	**327**	P	**P**	**04 59 21.4**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**39.76**	**327**	P	**P**	**04 59 21.4**	**-1.3**
	comp=Z,2.8nm,0.8s,mb4.0,baz=60,slow=9.9,SNR=5.5						
DDI	**Dehra Dun**	**40.12**	**246**	*e*x	x	04 59 25.0	
INK	**Inuvik**	**43.36**	**31**	P	**P**	**04 59 52.4**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	**Inuvik**	**43.36**	**31**	P	**P**	**04 59 52.4**	**+0.2**
	comp=Z,2.4nm,1.2s,mb3.8,baz=322,slow=9.7,SNR=5.6						
KAF	**Kangasniemi**	**43.86**	**317**	*e*p	**P**	**04 59 55.8**	**-0.5**
OBN	**Obninsk**	**44.10**	**305**	P	**P**	**04 59 58.0**	**-0.3**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**44.37**	**317**	*i* P	**P**	**05 00 00.2**	**-0.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**44.37**	**317**	P	**P**	**04 59 59.1**	**-1.2**
	comp=Z,1.2nm,0.5s,mb3.9,baz=48,slow=9.1,SNR=10.0						
HFS	**Hagfors**	**49.67**	**321**	P	**P**	**05 00 40.6**	**-1.2**
HFS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HFS	**Hagfors**	**49.67**	**321**	P	**P**	**05 00 40.6**	**-1.2**
	comp=Z,4.5nm,0.5s,mb4.8,baz=63,slow=7.2,SNR=32						
NB2	**NORSAR Subarra**	**49.82**	**323**	P	**P**	**05 00 42.1**	**-0.8**
	comp=Z,1.3nm,0.5s,mb4.2,baz=40,slow=7.4						
NB2	**NORSAR Subarra**	**49.82**	**323**	P	**P**	**05 00 42.1**	**-0.8**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
NOA	**NORSAR Array B**	**49.82**	**323**	P	**P**	**05 00 42.0**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**49.82**	**323**	P	**P**	**05 00 42.0**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.3,baz=43,slow=7.9,SNR=5.1						
AKASG	**Malin Array Be**	**50.36**	**304**	*i* P	**P**	**05 00 46.7**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**50.36**	**304**	P	**P**	**05 00 45.6**	**-1.5**
	comp=Z,1.0nm,0.3s,mb4.4,baz=41,slow=8.1,SNR=9.0						
YKA	**Yellowknife Ar**	**52.91**	**29**	*i* P	**P**	**05 01 05.5**	**-0.5**
YKA	**Yellowknife Ar**	**52.91**	**29**	P	**P**	**05 01 05.5**	**-0.5**
	comp=Z,0.4nm,0.5s,mb3.6,baz=328,slow=7.0,SNR=8.1						
GERES	**GERESS Array B**	**58.36**	**312**	P	**P**	**05 01 45.2**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=44,slow=7.8,SNR=4.9						
EKA	**Eskdalemuir Ar**	**58.92**	**327**	P	**P**	**05 01 48.8**	**-0.3**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**58.92**	**327**	P	**P**	**05 01 48.8**	**-0.3**
	comp=Z,1.4nm,0.6s,mb4.1,baz=26,slow=5.9,SNR=3.9						
SCHQ	**Schefferville**	**67.93**	**5**	P	**P**	**05 02 47.9**	**-0.9**
	comp=Z,1.2nm,0.7s,mb4.0,baz=20,slow=9.8,SNR=5.5						
PDAR	**Pinedale Array**	**71.58**	**37**	P	**P**	**05 03 11.8**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=11,slow=2.5,SNR=4.6						
WRA	**Warramunga Arr**	**77.85**	**167**	P	**P**	**05 03 49.9**	**+2.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=352,slow=6.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**93.92**	**302**	P	**P**	**05 05 07.1**	**-1.2**
	comp=Z,0.6nm,0.7s,mb4.1,baz=197,slow=4.5,SNR=3.5						

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*ISCJB **13** 05:02:25.4±0.8, 3835N±005×3926E±005, h3km±11km, Error ellipse: s-maj=8.4km s-min=6.1km az=170.7*
*CSEM **13** 05:02:25.2±0.1, 3839N×3922E, h10km, MD2.7, Error ellipse: s-maj=3.7km s-min=3.3km az=148.0*
*ISK **13** 05:02:25.4, 3838N×3921E, h6km, MD2.7*
*DDA **13** 05:02:26.2, 3832N×3919E, h11km, Md2.8*
ISC 13 05:02:26.0±0.7, **3836N**±005×**3924E**±006, **h11**km±9km, **n8**, σ0.**74**/13, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**304**	*i* P	**Pg**	**05 02 31.0**	**-0.1**
ELZG				*i* S	**Sg**	**05 02 35.2**	**+0.8**
PTK	**Pertek**	**0.54**	**13**	PG	**Pg**	**05 02 36.3**	**-0.3**
PTK				SG	**Sg**	**05 02 44.1**	**+0.3**
MALT	**Malatya**	**0.64**	**266**	PG	**Pg**	**05 02 38.0**	**-0.5**
MALT				SG	**Sg**	**05 02 46.8**	**-0.1**
MYA	**Malataya**	**0.64**	**267**	PG	**Pg**	**05 02 37.6**	**-0.9**
DIY	**Diyarbakir**	**0.91**	**121**	PG	**Pg**	**05 02 43.5**	**0.0**
URFA	**Urfa**	**0.98**	**200**	PG	**Pg**	**05 02 45.5**	**+0.6**
MARD	**Mardin**	**1.61**	**130**	*i* P	**Pn**	**05 02 54.1**	**-0.3**
MARD				*i* S	**Sn**	**05 03 15.3**	**+0.3**
GZT	**Gaziantep**	**1.67**	**233**	*i* P	**Pn**	**05 02 54.2**	**-1.0**
GZT				*i* S	**Sn**	**05 03 19.6**	**+3.1**

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*IDC **13** 05:06:22.2±0.8, 3641N×6913E, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.1/24, mbtmp4.1/15, ML3.4/2, Error ellipse: s-maj=22.3km s-min=14.7km az=27.0*
*MOS **13** 05:06:26.5±1.3, 3661N×6900E, h34km, mb4.5/15, Error ellipse: s-maj=11.7km s-min=7.6km az=89.6*
*BJI **13** 05:06:26.1, 3682N×6878E, h34km, mB5.0, mb4.3, ML4.4, Ms4.2, Msz4.0*
*ISCJB **13** 05:06:27.9±0.7, 3667N±002×6903E±005, h45km±7km, mb4.1/19, Error ellipse: s-maj=7.3km s-min=4.0km az=174.1*
*NNC **13** 05:06:28.1±5.0, 3659N×6892E, h29km±34km, mb4.1, mpv4.2, Error ellipse: s-maj=37.2km s-min=34.2km az=159.0*
*NEIC **13** 05:06:28.5±0.5, 3662N×6904E, h35km, mb4.3/13, Error ellipse: s-maj=9.1km s-min=7.6km az=65.0*
ISC 13 05:06:30.4±0.5, **3665N**±002×**6900E**±005, **h53**km±5km, **n102**, σ1.**33**/120, **mb4.1**/19, **10C-4D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.10**	**179**	*e*Pn	**Pn**	**05 07 03.3**	**+0.2**
KBL				*e*Sn	**Sn**	**05 07 30.6**	**+2.6**
CEP	**Cherat**	**3.69**	**139**	⇑P	**Pn**	**05 07 25.5**	**+0.7**
THW	**Thamme Wali**	**4.45**	**149**	⇓P	**Pn**	**05 07 35.5**	**+0.2**
SBDP	**Sheikh Budin**	**4.58**	**161**	P	**Pn**	**05 07 38.0**	**+0.9**
CHCP	**Chirah Chowk**	**4.59**	**129**	P	**Pn**	**05 07 37.9**	**+0.7**
DRP	**Derazinda**	**4.99**	**168**	P	**Pn**	**05 07 44.2**	**+1.5**
KSH	**Kashi**	**6.20**	**60**	P	**Pn**	**05 07 59.5**	**+0.3**
KSH				Smax			
	comp=N,341nm,0.5s						
KSH				Smax			
	comp=E,432nm,0.9s						
KK31	**Karatay Array**	**6.55**	**10**	⇑Pn	**Pn**	**05 08 03.3**	**-0.7**
	comp=E,9.2nm,0.6s,baz=186,slow=13,SNR=93						
KK31				⇑Pg	Pn	05 08 30.8	+27
	comp=E,10nm,0.6s,baz=186,slow=14						
KK31				⇑Sn	**Sn**	**05 09 18.2**	**+0.8**
	comp=E,14nm,0.5s,baz=211,slow=22						
KK31				⇑Lg		05 09 53.6	
	comp=E,91nm,0.8s,baz=190,slow=30						
AML	**Almayashu**	**6.57**	**32**	⇑*e*Pn	**Pn**	**05 08 03.5**	**-0.8**
	comp=E,61nm,0.6s						
AML				*e*Sn	**Sn**	**05 09 19.4**	**+1.6**
AML	**Almayashu**	**6.57**	**32**	P	**Pn**	**05 08 03.9**	**-0.4**
	SNR=48						
THN	**Thein Dam**	**6.95**	**125**	*e*P	**Pn**	**05 08 08.7**	**-0.9**
THN				*e*x	x	05 10 03.6	
UCH	**Uchtor**	**7.02**	**36**	⇑*e*Pn	**Pn**	**05 08 09.9**	**-0.5**
	comp=E,44nm,0.7s						
UCH				*e*Sn	**Sn**	**05 09 31.2**	**+2.4**
UCH	**Uchtor**	**7.02**	**36**	P	**Pn**	**05 08 09.9**	**-0.5**
	SNR=64						
EKS2	**Erkin-Say**	**7.05**	**30**	*e*Pn	**Pn**	**05 08 09.3**	**-1.5**
	comp=E,18nm,0.7s						
EKS2				*e*Sn	**Sn**	**05 09 31.2**	**+1.7**
EKS2	**Erkin-Say**	**7.05**	**30**	P	**Pn**	**05 08 10.7**	**-0.1**
	SNR=9.0						
DLH	**Dalhousie**	**7.05**	**123**	*e*P	**Pn**	**05 08 19.0**	**+8.1**
DLH				*e*S	**Sn**	**05 09 31.0**	**+1.3**
KZA	**Kyzart**	**7.27**	**40**	P	**Pn**	**05 08 14.2**	**+0.3**
	SNR=11						
AAK	**Ala-Archa**	**7.33**	**34**	*e*Pn	**Pn**	**05 08 13.1**	**-1.6**
	comp=E,59nm,0.6s						
AAK				*e*Sn	**Sn**	**05 09 37.2**	**+0.8**
AAK	**Ala-Archa**	**7.33**	**34**	*e*P	**Pn**	**05 08 13.1**	**-1.6**
AAK				*e*		05 09 37.2	
AAK				pmax	pmax		
	comp=Z,59nm,0.6s						
AAK	**Ala-Archa**	**7.33**	**34**	P	**Pn**	**05 08 14.4**	**-0.3**
	SNR=58						
KBK	**Karagaybulak**	**7.55**	**36**	P	**Pn**	**05 08 16.7**	**-1.1**
	SNR=16						
CHMS	**Chumysh**	**7.73**	**33**	P	**Pn**	**05 08 19.3**	**-0.9**
	SNR=34						
USP	**Ospenovka**	**7.84**	**31**	P	**Pn**	**05 08 21.8**	**+0.1**
	SNR=10						
ULHL	**Ulahol**	**7.91**	**43**	P	**Pn**	**05 08 23.7**	**+1.1**
	SNR=6.6						
TKM2	**Tokmak 2**	**8.06**	**37**	*e*Pn	**Pn**	**05 08 23.7**	**-1.0**
	comp=Z,15nm,0.5s						
TKM2	**Tokmak 2**	**8.06**	**37**	*e*P	**Pn**	**05 08 23.7**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,15nm,0.5s						
TKM2	**Tokmak 2**	**8.06**	**37**	P	**Pn**	**05 08 23.9**	**-0.9**
	SNR=13						
SDNR	**Sundarnagar**	**8.37**	**126**	*e*P	**Pn**	**05 08 28.0**	**-0.9**
SDNR				*e*x	x	05 10 28.1	
KHET	**Khetri**	**10.30**	**144**	*e*P	**Pn**	**05 08 55.6**	**+0.3**
KHET				AMb	AMB	05 08 58.7	
	comp=Z,16nm,0.8s						
KHET				*e*S	**Sn**	**05 10 41.7**	**-7.7**
NDI	**New Delhi**	**10.53**	**137**	*e*x	x	05 08 54.5	
NDI				*e*S	**Sn**	**05 10 48.0**	**-7.0**
JOSI	**Joshimath**	**10.69**	**122**	*e*P	**Pn**	**05 08 58.8**	**-1.9**
JOSI				*e*S	**Sn**	**05 10 50.9**	**-8.0**
SONA	**Sohna**	**10.79**	**139**	*e*P	**Pn**	**05 09 01.5**	**-0.7**
SONA				AMb	AMB	05 09 08.7	
	comp=Z,27nm,1.0s						
SONA				*e*S	**Sn**	**05 10 51.5**	**-10**
MK31	**Makanchi Array**	**14.17**	**40**	P	**Pn**	**05 09 44.9**	**-3.1**
	comp=Z,4.5nm,0.7s,baz=227,slow=14,SNR=39						
MKAR	**Makanchi Array**	**14.17**	**40**	Pn	**Pn**	**05 09 45.1**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=230,slow=14,SNR=46						
AB31	**Akbulak array**	**14.23**	**335**	P	**Pn**	**05 09 45.3**	**-3.5**
	comp=Z,7.4nm,0.6s,baz=152,slow=13,SNR=70						
AB31				⇓S	**Sn**	**05 12 22.4**	**-2.6**
	comp=Z,4.6nm,0.7s						
KURK	**Kurchatov**	**15.67**	**23**	⇑P	**Pn**	**05 10 09.5**	**+2.0**
	comp=Z,5.2nm,0.9s						
KURK	**Kurchatov**	**15.67**	**23**	*e*Pn	**Pn**	**05 10 07.6**	**+0.1**
	comp=Z,8.9nm,0.9s						
KURK	**Kurchatov**	**15.67**	**23**	*e*P	**Pn**	**05 10 07.6**	**+0.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKTK	**Aktyubinsk**	**15.89**	**334**	Pn	**Pn**	**05 10 08.8**	**-1.6**
AKTO	**Aktyubinsk**	**15.89**	**334**	⇑P	**Pn**	**05 10 08.7**	**-1.7**
	comp=Z,0.4nm,1.2s						
AKTO	**Aktyubinsk**	**15.89**	**334**	Pn	**Pn**	**05 10 08.8**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=147,slow=14,SNR=22						
WMQ	**Urumqi**	**15.95**	**58**	*e*P	**Pn**	**05 10 09.8**	**-1.4**
KKN	**Kakani**	**16.34**	**118**	*e*P	**Pn**	**05 10 17.2**	**+1.0**
	comp=Z,56nm,0.8s						
KKN	**Kakani**	**16.34**	**118**	*e*P	**Pn**	**05 10 17.2**	**+1.0**
KKN				pmax	pmax		
	comp=Z,57nm,0.8s						
BVA0	**Borovoye Array**	**16.41**	**3**	⇓P	**Pn**	**05 10 19.5**	**+2.6**
	comp=Z,1.6nm,1.2s						
BRVK	**Borovoye**	**16.44**	**3**	*e*Pn	**Pn**	**05 10 20.6**	**+3.4**
	comp=Z,3.3nm,0.6s						
BRVK	**Borovoye**	**16.44**	**3**	*e*P	**Pn**	**05 10 20.6**	**+3.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CHKZ	**Chkalovo**	**17.07**	**3**	⇑P	**Pn**	**05 10 23.0**	**-2.1**
	comp=Z,9.8nm,1.9s						
CHKZ	**Chkalovo**	**17.07**	**3**	*e*Pn	**Pn**	**05 10 22.7**	**-2.4**
	comp=Z,2.6nm,0.5s						
CHKZ				*e*S	**S**	**05 13 39.0**	**-2.0**
CHKZ	**Chkalovo**	**17.07**	**3**	*e*P	**Pn**	**05 10 22.7**	**-2.4**
CHKZ				*e*S	**S**	**05 13 39.0**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JIRN	**Jiri**	**17.07**	**117**	*e*P	**Pn**	**05 10 20.2**	**-5.1**
	comp=Z,43nm,0.6s						
TAPN	**Taplejung**	**18.35**	**115**	*e*P	**Pn**	**05 10 40.0**	**-1.0**
	comp=Z,48nm,0.8s						
ODAN	**Odare**	**18.40**	**117**	*e*P	**Pn**	**05 10 37.9**	**-3.7**
	comp=Z,49nm,0.9s						
LSA	**Lhasa**	**19.77**	**104**	*e*P	**Pn**	**05 10 58.4**	**+0.5**
LSA	**Lhasa**	**19.77**	**104**	*e*P	**Pn**	**05 10 55.6**	**-2.2**
	comp=Z,6.4nm,0.5s						
LSA	**Lhasa**	**19.77**	**104**	*e*P	**Pn**	**05 10 55.7**	**-2.2**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NVS	**Novosibirsk**	**20.66**	**24**	*e*P	**P**	**05 11 04.2**	**-1.2**
NVS				*e*S	**S**	**05 14 54.4**	**+1.3**
NVS				pmax	pmax		
	comp=N,17nm,0.9s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,18nm,0.9s						
NVS				smax			
	comp=N,12nm,1.3s						
HYB	**Hyderabad**	**20.93**	**154**	*e*P	**P**	**05 11 09.0**	**+0.3**
HYB				*e*S	**S**	**05 15 11.0**	**+12**
HYB	**Hyderabad**	**20.93**	**154**	*i* P	**P**	**05 11 09.0**	**+0.3**
HYB				*e*S	**S**	**05 14 57.0**	**-2.1**
ARU	**Arti**	**21.01**	**344**	*e*P	**P**	**05 11 10.8**	**+1.6**
ARU						05 11 24.8	
ARU				S	**S**	**05 15 00.2**	**+0.2**
ARU				SS		05 15 18.6	
SHL	**Shillong**	**22.43**	**113**	*e*P	**P**	**05 11 23.5**	**-1.2**
SHL				*e*S	**S**	**05 15 27.5**	**-0.4**
GTA	**Gaotai**	**24.37**	**74**	*e*P	**P**	**05 11 43.4**	**0.0**
GTA				AP		05 11 48.0	
GTA				AMB	AMB		
	comp=Z,3.0nm,1.1s						
GTA				AMB	AMB		
	comp=Z,142nm,4.9s						
GTA				LR	LR		
	comp=N,367nm,16.3s						
GTA				LR	LR		
	comp=E,317nm,15.2s						
GTA				LR	LR		
	comp=Z,297nm,12.9s						
BRTR	**Keskin Array B**	**27.86**	**287**	P	**P**	**05 12 12.7**	**-2.2**
	comp=Z,0.2nm,0.3s,mb3.2,baz=265,slow=30,SNR=2.8						
ZAK	**Zakamensk**	**28.12**	**50**	*e*P	**P**	**05 12 19.0**	**+2.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.4						
SONM	**Songino Array**	**29.58**	**56**	P	**P**	**05 12 30.2**	**+0.1**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	**Songino Array**	**29.58**	**56**	P	**P**	**05 12 30.2**	**+0.2**
	comp=Z,2.7nm,0.9s,mb4.0,baz=264,slow=8.1,SNR=22						
ULN	**Ulaanbaatar**	**30.02**	**56**	*e*P	**P**	**05 12 34.6**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**30.02**	**56**	*e*P	**P**	**05 12 34.6**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
AKASG	**Malin Array Be**	**31.61**	**309**	P	**P**	**05 12 49.1**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**31.61**	**309**	P	**P**	**05 12 49.1**	**+1.2**
	comp=Z,1.1nm,0.5s,mb4.0,baz=80,slow=7.9,SNR=6.5						
MLR	**Muntele Rosu**	**33.31**	**299**	P	**P**	**05 13 04.7**	**+1.9**
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MLR	**Muntele Rosu**	**33.31**	**299**	P	**P**	**05 13 04.7**	**+1.8**
	comp=Z,5.8nm,0.9s,mb4.5,baz=135,slow=4.8,SNR=6.4						
FINES	**FINESS Array B**	**36.47**	**327**	P	**P**	**05 13 30.4**	**+0.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	**FINESS Array B**	**36.47**	**327**	P	**P**	**05 13 30.4**	**+0.5**
	comp=Z,1.7nm,0.9s,mb4.0,baz=266,slow=24,SNR=4.5						
ARCES	**ARCESS Array B**	**40.40**	**338**	P	**P**	**05 14 01.9**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARCES	**ARCESS Array B**	**40.40**	**338**	P	**P**	**05 14 01.9**	**-1.0**
	comp=Z,5.8nm,0.9s,mb4.3,baz=81,slow=7.9,SNR=7.7						
GERES	**GERESS Array B**	**41.53**	**305**	P	**P**	**05 14 12.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=20,SNR=2.3						
NB2	**NORSAR Subarra**	**43.30**	**323**	P	**P**	**05 14 27.7**	**+1.2**
	comp=Z,1.3nm,0.5s,mb3.9,baz=98,slow=8.6						
NB2	**NORSAR Subarra**	**43.30**	**323**	P	**P**	**05 14 27.7**	**+1.2**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
NOA	**NORSAR Array B**	**43.30**	**323**	P	**P**	**05 14 27.4**	**+0.9**
NOA	**NORSAR Array B**	**43.30**	**323**	P	**P**	**05 14 27.4**	**+0.9**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**43.30**	**323**	P	**P**	**05 14 27.4**	**+0.9**
	comp=Z,2.2nm,0.7s,mb4.0,baz=98,slow=8.0,SNR=6.6						
PSI	**Prapat**	**43.52**	**134**	P	**P**	**05 14 27.8**	**-1.1**
PSI				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
PSI	**Prapat**	**43.52**	**134**	P	**P**	**05 14 27.8**	**-1.0**
	comp=Z,2.1nm,0.4s,mb4.2,baz=341,slow=6.0,SNR=5.0						
TIXI	**Tiksi**	**46.24**	**22**	*e*P	**P**	**05 14 50.0**	**+0.1**
	comp=Z,8.5nm,1.0s,mb4.6						
TIXI	**Tiksi**	**46.24**	**22**	*e*P	**P**	**05 14 49.9**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
KSRS	**Korea Array**	**46.35**	**70**	P	**P**	**05 14 49.4**	**-1.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=267,slow=8.8,SNR=4.3						
BILL	**Bilibino**	**59.18**	**26**	⇓*e*P	**P**	**05 16 27.1**	**+1.8**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
TORD	**Torodi Ar. Bea**	**64.12**	**267**	P	**P**	**05 16 59.4**	**0.0**
	comp=Z,1.4nm,0.7s,mb4.1,baz=49,slow=5.9,SNR=9.2						
IMA2	**Indian Mountai**	**72.46**	**17**	*e*P	**P**	**05 17 51.8**	**+1.0**
INK	**Inuvik**	**74.01**	**9**	*e*P	**P**	**05 18 00.4**	**+0.6**
	comp=Z,176nm,1.1s						
INK				*e*PP	PP	05 20 42.9	-2.0
INK	**Inuvik**	**74.01**	**9**	*e*P	**P**	**05 18 00.4**	**+0.6**
INK				*e*		05 20 42.9	
INK				pmax	pmax		
	comp=Z,177nm,1.1s						
COLA	**College**	**74.78**	**15**	*e*P	**P**	**05 18 05.7**	**+1.3**
	comp=Z,5.5nm,0.9s,mb4.5						
COLA	**College**	**74.78**	**15**	*e*P	**P**	**05 18 05.7**	**+1.4**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
EGAK	**Eagle**	**76.17**	**13**	*e*P	**P**	**05 18 13.6**	**+1.3**
	comp=Z,3.1nm,0.9s,mb4.2						
DAWY	**Dawson**	**77.14**	**12**	*e*P	**P**	**05 18 19.1**	**+1.3**
YKA	**Yellowknife Ar**	**81.16**	**2**	P	**P**	**05 18 41.1**	**+1.3**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**81.16**	**2**	P	**P**	**05 18 41.1**	**+1.4**
	comp=Z,2.5nm,0.6s,mb4.3,baz=350,slow=5.5,SNR=60						
WRA	**Warramunga Arr**	**83.44**	**121**	P	**P**	**05 18 49.7**	**-2.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	**Warramunga Arr**	**83.44**	**121**	P	**P**	**05 18 49.7**	**-2.6**
	comp=Z,0.9nm,1.0s,mb3.8,baz=321,slow=5.1,SNR=7.6						
ASAR	**Alice Springs**	**85.66**	**124**	P	**P**	**05 19 01.3**	**-2.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**85.66**	**124**	P	**P**	**05 19 01.3**	**-2.1**
	comp=Z,0.8nm,0.9s,mb3.9,baz=307,slow=5.2,SNR=6.1						

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*SZGRF **13** 05:13:52.4, 1734S×17723W, h33km, Fiji Islands region*
*ISCJB **13** 05:14:49.4±0.8, 177S±0.1×1788W±0.1, h560km±12km, mb4.0/15, Error ellipse: s-maj=22.8km s-min=10.3km az=147.6*
*IDC **13** 05:14:49.6±1.3, 1776S×17865W, h551km±15km, mb3.4/9, mb1 3.6/11, mb1mx3.6/15, mbtmp3.4/11, Error ellipse: s-maj=23.5km s-min=12.2km az=143.0*
*NEIC **13** 05:14:49.5±1.0, 1730S×17900W, h529km±11km, mb4.4/10, Error ellipse: s-maj=28.2km s-min=9.0km az=153.0*
ISC 13 05:14:49.8±0.8, **177S**±01×**17874W**±010, **h550**km±11km, **n82**, σ0.**82**/26, **mb4.0**/15, **7D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.67**	**62**	P	**P**	**05 16 44.1**	**-0.2**
	8.4nm,0.3s,baz=344,slow=6.4,SNR=11						
AFI				S	**S**	**05 18 18.8**	**+0.6**
	3.0nm,0.3s,baz=226,slow=21,SNR=4.4						
FUNA	**Funafuti**	**9.29**	**347**	*e*P	**P**	**05 16 59.7**	**-0.9**
	47nm,0.7s						
DZM	**Mont Dzumac**	**14.61**	**250**	P	**P**	**05 17 55.9**	**+0.7**
	1.6nm,0.3s,baz=81,slow=17,SNR=18						
URZ	**Urewera**	**20.85**	**189**	P	**P**	**05 18 50.9**	**-2.4**
	11nm,0.7s,baz=89,slow=7.5,SNR=6.7						
ARMA	**Armidale**	**29.80**	**239**	*e*P	**P**	**05 20 13.7**	**+1.3**
CTA	**Charters Tower**	**33.18**	**260**	⇓*i*P	**P**	**05 20 41.9**	**+0.5**
	7.4nm,0.9s,mb4.2						
CTAO	**Charters Tower**	**33.18**	**260**	*e*P	**P**	**05 20 41.6**	**+0.2**
	4.0nm,0.5s,mb4.2						
PMG	**Port Moresby**	**34.10**	**279**	*e*P	**P**	**05 20 49.0**	**-0.3**
	54nm,0.9s,mb5.1						
STKA	**Stephens Creek**	**38.48**	**241**	⇓*i*P	**P**	**05 21 26.1**	**+1.0**
	19nm,1.2s,mb4.5						
STKA	**Stephens Creek**	**38.48**	**241**	P	**P**	**05 21 26.2**	**+1.2**
	8.0nm,0.4s,mb4.6,baz=84,slow=8.9,SNR=27						
WB2	**Warramunga Arr**	**44.35**	**259**	⇓*i*P	**P**	**05 22 11.1**	**-0.6**
WRA	**Warramunga Arr**	**44.37**	**259**	P	**P**	**05 22 11.4**	**-0.4**
	8.2nm,0.7s,mb4.4,baz=90,slow=6.8,SNR=191						
WRA				PcP	PcP	05 23 43.5	-0.3
	1.2nm,0.5s,baz=89,slow=3.9,SNR=5.4						
WRA				ScP	ScP	05 26 43.8	+0.2
	0.4nm,0.5s,baz=90,slow=3.9,SNR=5.5						
ASAR	**Alice Springs**	**44.55**	**254**	P	**P**	**05 22 13.7**	**+0.4**
	46nm,0.5s,baz=88,slow=8.2,SNR=759						
ASAR				PcP	PcP	05 23 44.1	-0.3
	1.8nm,0.5s,baz=104,slow=3.8,SNR=5.7						
FORT	**Forrest**	**49.83**	**244**	*e*P	**P**	**05 22 52.4**	**-0.4**
	15nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.76**	**260**	⇓*i*P	**P**	**05 23 14.3**	**+0.2**
	3.3nm,0.3s,mb4.1						
MBWA	**Marble Bar**	**57.83**	**256**	*e*P	**P**	**05 23 49.0**	**-0.4**
	11nm,0.7s,mb4.2						
KLBR	**Kellerberrin**	**58.66**	**243**	*e*P	**P**	**05 23 54.1**	**-0.7**
	10nm,0.7s,mb4.2						
MJAR	**Matsushiro Arr**	**67.52**	**323**	P	**P**	**05 24 51.0**	**-0.5**
	3.0nm,0.5s,mb4.1,baz=151,slow=6.1,SNR=6.5						
KSM	**Kuching**	**72.34**	**277**	*e*P	**P**	**05 25 20.9**	**+0.3**
KSRS	**Korea Array**	**74.30**	**318**	P	**P**	**05 25 32.3**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.3nm,0.6s,mb3.5,baz=137,slow=6.8,SNR=4.9						
TNA	Tin City	83.37	5	eP	P	05 26 18.2	-0.5
	4.1nm,1.4s,mb3.8						
TXAR	Lajitas Array	86.13	58	P	P	05 26 34.8	+1.8
	0.6nm,0.7s,mb3.4,baz=217,slow=6.0,SNR=7.0						
PDAR	Pinedale Array	87.39	44	P	P	05 26 38.2	-0.4
	0.3nm,0.4s,mb3.3,baz=173,slow=2.0,SNR=6.9						
SONM	Songino Array	93.15	319	P	P	05 27 05.4	+0.2
	0.2nm,0.4s,mb3.5,baz=136,slow=3.8,SNR=3.4						
YKA	Yellowknife Ar	94.24	25	P	P	05 27 08.9	-0.9
	0.2nm,0.4s,mb3.6,baz=252,slow=4.6,SNR=5.9						
MKAR	Makanchi Array	108.73	314	PKiKP	PKiKP	05 32 14.4	-2.0
	0.3nm,0.3s,baz=213,slow=0.8,SNR=5.8						
ARCES	ARCESS Array B	126.01	350	PKP	PKPdf	05 32 47.5	-1.4
	2.8nm,0.9s,baz=111,slow=2.6,SNR=6.8						
BSEG	Bad Segeberg	143.12	351	ePKPbc	PKPdf	05 33 18.5	-2.5
BRTR	Keskin Array B	144.38	315	PKP	PKPdf	05 33 23.4	-0.3
	4.1nm,0.9s,baz=95,slow=2.9,SNR=14						
STHS	Stebnicka Huta	144.44	337	ePKP	PKPdf	05 33 23.5	0.0
KOLS	Kolonicke sedl	144.45	336	ePKP	PKPdf	05 33 23.6	+0.1
NIE	Niedzica	144.77	338	ePXd		05 33 24.8	
ASF	Jabal al Asfar	144.78	301	PKP	PKPdf	05 33 26.2	+1.6
	3.6nm,0.7s,baz=188,slow=1.8,SNR=6.6						
CRVS	Cervenica-Dubn	144.78	337	ePKP	PKPdf	05 33 24.6	+0.5
OKC	Ostrava-Krasne	145.13	341	ePKP	PKPbc	05 33 26.9	+1.3
CLZ	Clausthal	145.13	350	ePKPbc	PKPbc	05 33 25.3	-0.2
CLL	Collm	145.15	347	⇓iP	PKPdf	05 33 25.0	+0.4
CLL				i		05 33 26.5	
CLL	Collm	145.15	347	⇓iPKPdf	PKPdf	05 33 25.0	+0.4
	comp=Z,7.0nm,0.6s						
CLL				i (PKPab)	PKPab	05 33 26.5	-0.1
CLL	Collm	145.15	347	ePKPbc	PKPbc	05 33 25.2	-0.4
DPC	Dobruska-Polom	145.22	343	ePKP	PKPdf	05 33 26.0	+1.2
BRG	Berggiesshubel	145.35	346	ePKPbc	PKPbc	05 33 26.0	-0.2
BRG	Berggiesshubel	145.35	346	⇓iP	PKPdf	05 33 26.9	+1.9
	comp=Z,5.7nm,0.8s						
BRG				e		05 33 33.1	
	comp=Z,3.8nm,0.8s						
FBE	Freiberg	145.44	346	ePKPbc	PKPbc	05 33 26.6	+0.2
KECS	Kecovo	145.49	337	ePKP	PKPdf	05 33 26.4	+1.1
PVCC	Panska Ves	145.52	345	ePKP	PKPdf	05 33 26.6	+1.3
MMAI	Mount Meron Ar	145.74	303	PKPbc	PKPbc	05 33 27.7	-0.2
	comp=Z,5.7nm,0.6s,baz=72,slow=6.2,SNR=7.7						
MOX	Moxa	146.06	348	ePKP	PKPdf	05 33 27.9	+1.7
MOX	Moxa	146.06	348	ePKPbc	PKPbc	05 33 27.6	-0.6
VYHS	Vyhne	146.07	339	ePKP	PKPdf	05 33 28.0	+1.7
WERD	Werda	146.11	347	ePKPbc	PKPbc	05 33 28.4	+0.1
GUNZ	Gunzen	146.18	347	ePKPbc	PKPbc	05 33 29.4	+0.9
MODS	Modra-Piesok	146.69	340	ePKP	PKPdf	05 33 29.2	+1.9
ROTZ	Rotzenmuhle	146.77	347	ePKPbc	PKPbc	05 33 30.1	-0.1
TNS	Taunus Mts	147.00	352	ePKPbc	PKPbc	05 33 30.3	-0.5
GRA1	Grafenberg Arr	147.05	348	ePKPbc	PKPbc	05 33 31.1	+0.2
GRF	Grafenberg Arr	147.05	348	ePKPbc	PKPbc	05 33 31.1	+0.2
KHC	Kasperske Hory	147.05	345	ePKP	PKPbc	05 33 30.5	-0.4
GEC2	GERESS Array S	147.29	345	ePKPbc	PKPbc	05 33 31.2	-0.4
GERES	GERESS Array B	147.29	345	PKPbc	PKPbc	05 33 31.3	-0.2
	comp=Z,2.8nm,0.5s,baz=22,slow=3.1,SNR=29						
GIVF	Givet	147.51	356	ePKP1	PKPbc	05 33 31.5	-0.6
BAIF	Baives	147.59	356	ePKP1	PKPbc	05 33 31.8	-0.5
WLF	Walferdange	147.83	354	ePKPbc	PKPbc	05 33 33.4	+0.5
BFO	Black Forest	148.87	351	ePKPbc	PKPbc	05 33 35.3	-0.2
CDF	Champ du Feu	148.93	352	ePKP1	PKPbc	05 33 35.1	-0.6
FLN	La Foliniere	148.94	2	ePKP1	PKPbc	05 33 34.7	-1.0
LDF	La Druitiere	149.12	2	ePKP1	PKPbc	05 33 35.0	-1.2
	comp=Z,8.2nm,0.6s						
ROSF	Rostrenen	149.18	6	ePKP1	PKPbc	05 33 35.4	-0.9
GRR	Gorron	149.30	3	ePKP1	PKPbc	05 33 35.7	-0.9
	comp=Z,8.5nm,0.5s						
SGMF	Saint Gilles	149.32	5	ePKP1	PKPbc	05 33 35.9	-0.8
HAU	Haudompre	149.45	353	ePKP1	PKPbc	05 33 36.2	-0.8
CRES	Cresnjev	149.53	340	ePKPbc	PKPbc	05 33 36.7	-0.5
HINF	Hinteralfeld	149.57	353	ePKP1	PKPbc	05 33 35.6	-1.7
BOJS	Bojanci	149.88	340	i PKPbc	PKPbc	05 33 38.0	-0.1
LOR	Lormes	150.39	356	ePKP1	PKPbc	05 33 38.5	-0.7
	comp=Z,9.5nm,0.5s						
SSF	Saint Saulge	150.62	357	ePKP1	PKPbc	05 33 39.1	-0.6
	comp=Z,7.2nm,0.5s						
CABF	La Chapelle	150.85	353	ePKP1	PKPbc	05 33 40.1	-0.2
AVF	Avril sur Loir	150.90	357	ePKP1	PKPbc	05 33 39.3	-1.1
	comp=Z,2.4nm,0.5s						
MFF	Saint Martin d	151.11	2	ePKP1	PKPbc	05 33 39.9	-1.0
	comp=Z,8.0nm,0.6s						
BGF	Bois d'Agland	151.15	358	ePKP1	PKPbc	05 33 40.1	-0.9
	comp=Z,8.8nm,0.6s						
TCF	Toulx Ste Croi	151.44	359	ePKP1	PKPbc	05 33 40.6	-1.0
LPL	La Plagne	151.85	352	ePKP1	PKPbc	05 33 42.5	-0.1
	comp=Z,4.7nm,0.8s						
LPG	La Plagne	151.86	352	ePKP1	PKPbc	05 33 42.7	+0.1

*IDC **13** 05:26:24.8±1.3, 29.89N×140.60E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/18, mbtmp3.8/7, Error ellipse: s-maj=44.4km s-min=29.8km az=78.0*

*ISCJB **13** 05:26:27.9±1.1, 29.9N±0.2×140.6E±0.3, h33km, mb3.9/9, Error ellipse: s-maj=39.5km s-min=23.8km az=167.4*

ISC 13 05:26:30.1±1.1**, 29.9N**±0.2×**140.6E**±0.3**, h35**km**, n9,** σ0.62/9**, mb3.9**/9**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	31.75	314	P	P	05 32 52.0	+1.3
	0.4nm,0.7s,mb3.4,baz=104,slow=6.1,SNR=3.4						
MKAR	Makanchi Array	47.63	308	P	P	05 35 02.0	-0.6
	0.2nm,0.2s,mb3.7,baz=88,slow=9.8,SNR=4.4						
WRA	Warramunga Arr	49.90	188	P	P	05 35 20.4	+0.2
	0.2nm,0.5s,mb3.4,baz=5.5,slow=7.7,SNR=4.6						
YKA	Yellowknife Ar	70.37	28	P	P	05 37 40.3	+0.3
	0.2nm,0.5s,mb3.3,baz=298,slow=6.4,SNR=5.8						
ARCES	ARCESS Array B	70.45	340	P	P	05 37 41.0	+0.6
	2.0nm,0.8s,mb4.1,baz=78,slow=8.3,SNR=7.2						
JOF	Joensuu	71.97	333	ep	P	05 37 49.1	-0.6
	2.5nm,0.4s,mb4.5						
KAF	Kangasniemi	74.36	334	ep	P	05 38 03.3	-0.5
	2.1nm,0.4s,mb4.4,baz=53,slow=5.4						
FINES	FINESS Array B	74.83	333	P	P	05 38 06.6	0.0
	1.3nm,0.4s,mb4.2,baz=73,slow=4.9,SNR=21						
AKASG	Malin Array Be	79.55	323	P	P	05 38 32.6	-0.6
	1.2nm,0.3s,mb4.2,baz=52,slow=5.2,SNR=14						

*IDC **13** 05:50:05.5±0.4, 4.16N×126.76E, h0km, mb5.1/27, mb1 5.1/27, mb1mx5.1/28, mbtmp5.1/27, MS4.8/17, Ms1 4.8/17, ms1mx4.6/28, Error ellipse: s-maj=18.1km s-min=10.1km az=78.0*

*MAN **13** 05:50:07, 3.84N×126.57E, h14km, mb5.9, ML4.9, MS5.5*

*BJI **13** 05:50:09.9, 3.75N×126.88E, h81km, mB5.5, mb5.2, Ms5.1, Msz4.9*

*MOS **13** 05:50:10.3±1.0, 4.44N×126.63E, h33km, mb5.5/52, MS5.0/13, Error ellipse: s-maj=10.7km s-min=5.2km az=115.1*

*ISCJB **13** 05:50:12.9±0.5, 4.18N±0.02×126.83E±0.03, h71km±4km, mb5.2/124, Error ellipse: s-maj=5.7km s-min=4.1km az=176.9*

*GCMT **13** 05:50:15.0±0.2, 4.23N×126.95E, h21km, MW5.5/81, Moment Tensor Solution. s81,c126; s81,c143; Duration: 1.3s Moment tensor: Scale 10^{17}Nm; M_{rr}1.45±.04; $M_{\theta\theta}$0.25±.03; $M_{\phi\phi}$-1.70±.03; $M_{r\theta}$0.77±.06; $M_{\theta\phi}$-0.53±.02; $M_{\phi r}$0.11±.05; Best double couple: $M_0$1.84800×10^{17} NP1:ϕ_s170.00000°, δ46.00000°, λ52.00000°. NP2:ϕ_s38.00000°, δ56.00000°, λ122.00000°. Principal axes: T 1.8300, Plg63.0000°, Azm5.0000°; N 0.0360, Plg26.0000°, Azm199.0000°; P -1.8650, Plg5.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 05:50:15.0±1.1, 4.17N×126.76E, h72km±9km, mb5.4/41 Error ellipse: s-maj=7.4km s-min=5.5km az=66.0*

NEIC Felt [III] at Naha Tahuna and Talaud.

ISC 13 05:50:15.3±0.5**, 4.16N**±0.02×**126.82E**±0.03**, h79**km±3km**, h86**km±3.5km**:pP-P, n450,** σ1.18/407**, mb5.2**/124**, 48C-36D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	2.67	316	⇓eP	Pn	05 50 51.5	-4.7
GSPH				iS	Sn	05 51 26.3	-1.3
DAV	Davao City (W)	3.14	337	ePn	Pn	05 51 04.9	+2.3
DAV	Davao City (W)	3.14	337	P	Pn	05 51 02.3	-0.3
	SNR=28						
DAV	Davao City (W)	3.14	337	P	Pn	05 51 02.3	-0.3
	SNR=28						
DAV	Davao City (W)	3.14	337	eP	Pn	05 51 00.0	-2.6
KCP	Kidapawan	3.31	329	⇓eP	Pn	05 51 07.0	+2.1
KCP				iS	Sn	05 51 58.8	+16
CTBH	Cotabato--PC H	3.98	320	⇑eP	Pn	05 51 11.1	-2.8
BIPH	Bislig	4.03	354	⇑eP	Pn	05 51 09.8	-4.8
BIPH						04 16 22.7	
CGP	Cagayan de Oro	4.76	334	⇓eP	Pn	05 51 24.3	-0.3
CGP				iS	Sn	05 52 31.6	+13
DCPH	Dipolog City	5.58	322	⇓eP	Pn	05 51 37.8	+1.9
SCPH	Surigao	5.74	347	⇑eP	Pn	05 51 39.5	+1.5
TBP	Tagbilaran	6.23	332	eP	Pn	05 51 42.5	-2.2
TBP				eS	Sn	05 53 04.3	+10
LLP	Lapu-Lapu	6.74	335	eP	Pn	05 51 50.3	-1.3
LLP				eS	Sn	05 53 11.3	+4.3
PLP	Palo	7.20	345	eP	Pn	05 51 58.6	+0.7
AAI	Ambon	7.91	170	P	Pn	05 52 08.1	+0.4
	176nm,1.0s						
MYLDM	Lahad Datu	8.35	277	⇓P	Pn	05 52 13.3	-0.3
RCP	Roxas	8.39	332	⇑eP	Pn	05 52 13.7	-0.5
PCI	Palu	8.60	234	P	Pn	05 52 17.4	+0.3
	310nm,1.0s						
TSM	Tawau	8.92	271	⇓P	Pn	05 52 19.8	-1.7
TARAI	Tarakan	9.26	265	P	Pn	05 52 28.1	+2.0
	504nm,1.4s						
SDKM	Sandakan	9.70	279	⇑P	Pn	05 52 30.2	-1.9
KDM	Kudat	10.31	286	⇑P	Pn	05 52 45.5	+5.1
KKM	Kota Kinabalu	10.72	281	ePn	Pn	05 52 45.9	-0.2
KKM	Kota Kinabalu	10.72	281	⇓P	Pn	05 52 46.9	+0.8
TGY	Tagaytay City	11.46	330	⇓iP	Pn	05 53 03.1	+7.0
LUBP	Lubang	11.51	326	eP	Pn	05 53 02.5	+5.7
KAPI	Kappang	11.53	218	Pn	Pn	05 52 56.3	-0.7
	584nm,0.9s,SNR=19						
BALP	Baler	12.61	336	eP	Pn	05 53 15.5	+3.8
SCZP	Santa Cruz	13.39	330	eP	Pn	05 53 27.5	+5.3
BCPH	Baguio City Da	13.60	334	⇑eP	Pn	05 53 29.0	+4.1
BTM	Bintulu	13.74	266	⇑P	Pn	05 53 30.1	+3.4
BOLP	Bolinao	13.91	331	eP	Pn	05 53 32.0	+3.1
BATI	Kupang	14.61	192	Pn	Pn	05 53 38.0	-0.1
	10nm,0.3s,baz=231,slow=0.8,SNR=11						
SBUM	Sibu	14.67	264	⇑P	Pn	05 53 40.8	+2.0
APYP	Conner	14.67	339	eP	Pn	05 53 40.6	+1.8
KSM	Kuching	16.70	261	ePn	Pn	05 54 04.9	+0.4
KSM	Kuching	16.70	261	⇑P	Pn	05 54 06.2	+1.7
KMMI	Kalianget	16.98	229	P	Pn	05 54 07.7	-0.3
	166nm,1.1s						
DNP	Denpasar	17.22	222	P	Pn	05 54 15.0	+4.1
	701nm,1.4s						
NBBI	Negara	17.40	224	P	Pn	05 54 15.7	+2.6
	307nm,1.4s						
KRKI	Karangkates	18.84	230	P	Pn	05 54 32.6	+2.1
	291nm,1.3s						
TPI	Tanjungpandan	20.34	251	P	P	05 54 45.4	-0.1
	142nm,1.3s						
BJII	Banjamegara	20.54	236	P	P	05 54 47.6	0.0
	164nm,1.6s						
YHNB	Yeheng	21.05	346	eP	P	05 54 51.8	-1.2
HKC	Hong Kong Obse	21.80	327	P	P	05 55 08.0	+7.0
LEM	Lembang	22.05	240	P	P	05 55 05.3	+1.5
	210nm,1.0s,mb5.4						
QZH	Quanzhou	22.13	340	⇑iP	P	05 55 06.9	+2.4
QZH				S	S	05 59 06.0	+2.2
QZH				XS	sS	05 59 29.9	-0.9
QZH				AMB	AMB		
	comp=Z,50nm,0.6s,mb5.0						
QZH				AMB	AMB		
	comp=Z,1µm,3.5s						
QZH				LR	LR		
	comp=N,4µm,14.4s						
QZH				LR	LR		
	comp=E,5µm,19.6s						
QZH				LR	LR		
	comp=Z,7µm,18.6s						
FITZ	Fitzroy Crossi	22.15	183	⇓iP	P	05 55 02.6	-2.1
	comp=Z,104nm,0.7s,mb5.3						
FITZ				iS	S	05 58 56.5	-7.7
FITZ	Fitzroy Crossi	22.15	183	P	P	05 55 02.8	-1.9
	comp=Z,74nm,1.0s,mb5.0,baz=11,slow=11,SNR=55						
FITZ				S	S	05 59 02.8	-1.4
	comp=Z,15nm,1.0s,baz=211,slow=13,SNR=3.5						
QIZ	Qiongzhong	22.21	313	⇑P	P	05 55 05.8	+0.4
QIZ				AP		05 55 22.9	
QIZ				XP	sP	05 55 28.6	-2.8
QIZ				S	S	05 59 08.8	+3.5
QIZ				SS		05 59 50.8	
QIZ				AMB	AMB		
	comp=Z,52nm,1.3s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,730nm,11.6s						
QIZ				LR	LR		
	comp=N,2µm,15.2s						
QIZ				LR	LR		
	comp=Z,4µm,18.2s						
QIZ	Qiongzhong	22.21	313	eP	P	05 55 01.7	-3.7
	comp=Z,74nm,1.1s,mb4.9						
JOW	Kunigami	22.59	3	P	P	05 55 07.8	-1.6
	comp=Z,36nm,0.6s,mb4.9,baz=176,slow=9.7,SNR=12						
GZH	Guangzhou	22.89	327	P	P	05 55 13.0	+0.5
GZH				S	S	05 59 20.0	+3.7
GZH				LR	LR		
	comp=N,4µm,17.3s						
GZH				LR	LR		
	comp=E,4µm,18.3s						
GZH				LR	LR		
	comp=Z,5µm,16.0s						
SBJI	Serang	23.04	244	P	P	05 55 15.7	+1.5
	comp=Z,319nm,1.6s,mb5.4						
MYKOM	Kota Tinggi	23.05	265	⇑P	P	05 55 15.0	+0.8
KGM	Kluang	23.56	266	⇑P	P	05 55 20.2	+1.3
KTGM	Kuala Trenggan	23.63	274	⇓P	P	05 55 20.9	+1.3
COEN	Coen	24.23	138	eP	P	05 55 20.5	-4.5
	comp=Z,31nm,1.3s,mb4.5						
PMG	Port Moresby	24.34	124	eP	P	05 55 28.9	+2.9
	comp=Z,33nm,0.6s,mb4.8						
PMG	Port Moresby	24.34	124	⇓iP	P	05 55 29.3	+3.3
PMG	Port Moresby	24.34	124	P	P	05 55 28.8	+2.7
	comp=Z,12nm,0.9s,mb4.2,baz=86,slow=6.5,SNR=3.2						
WRA	Warramunga Arr	25.07	163	P	P	05 55 31.2	-1.3
WRA				S	S	05 59 55.7	+4.4
WRA				pmax	pmax		
	comp=Z,117nm,0.9s						
WRA				smax			
	comp=N,13nm,1.3s						
WRA	Warramunga Arr	25.07	163	P	P	05 55 31.2	-1.3
	comp=N,117nm,0.9s,mb5.3,baz=342,slow=11,SNR=171						
WRA				S	S	05 59 55.7	+4.4
	comp=N,13nm,1.3s,baz=344,slow=15,SNR=6.1						
WB2	Warramunga Arr	25.07	163	⇓iP	P	05 55 31.1	-1.4
WB2				iS	S	05 59 50.1	-1.3
FRIM	Kepong	25.16	269	⇑P	P	05 55 34.6	+1.2
KSI	Kapahiang	25.42	253	P	P	05 55 40.8	+5.0
	comp=N,203nm,0.8s,mb5.6						
XMIS	Christmas Isla	25.61	235	eP	P	05 55 34.0	-3.5
IPM	Ipoh	25.72	272	⇓P	P	05 55 40.2	+1.6
KULM	Kulim	26.10	274	eP	P	05 55 41.3	-0.7
KULM	Kulim	26.10	274	⇓P	P	05 55 44.6	+2.6
MBWA	Marble Bar	26.10	195	eP	P	05 55 39.6	-2.2
	comp=N,131nm,0.9s,mb5.4						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
MBWA	Marble Bar	26.10	195	P	P	05 55 47.0	+5.2
	SNR=7.8						
SNG	Songkhla	26.24	278	P	P	05 55 43.0	-0.3
KKTK	Khon Kaen	26.49	299	P	P	05 55 45.0	-0.5
PPI	Padang Panjang	26.79	261	P	P	05 55 55.7	+7.4
	comp=N,130nm,1.4s,mb5.3						
CBIJ	Chichi jima	27.13	31	P	P	05 55 50.3	-0.8
	comp=N,120nm,0.6s,mb5.6,baz=282,slow=16,SNR=3.8						
CBIJ				LR	LR	06 05 29.9	
	comp=N,1µm,18.9s,baz=207,slow=34						
SSE	Sheshan	27.32	349	⇑P	P	05 55 53.0	+0.3
SSE				AP	pP	05 56 10.1	-0.9
SSE				XP	sP	05 56 20.8	+0.6
SSE				S	S	06 00 29.9	+3.2
SSE				XS	sS	06 01 01.8	+3.5
SSE				AMB	AMB		
	comp=Z,72nm,1.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,752nm,7.1s						
SSE				LR	LR		
	comp=N,2µm,19.7s						
SSE				LR	LR		
	comp=E,407nm,19.7s						
SSE				LR	LR		
	comp=Z,2µm,20.1s						
PSI	Prapat	27.87	268	P	P	05 55 56.3	-1.6
PSI				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.8						
PSI	Prapat	27.87	268	P	P	05 55 56.2	-1.7
	comp=Z,30nm,0.9s,mb4.8,baz=102,slow=2.3,SNR=18						
ASAR	Alice Springs	28.50	166	P	P	05 56 03.0	-0.4
ASAR				S	S	06 00 52.4	+6.8
ASAR				pmax	pmax		
	comp=Z,11nm,0.8s						
ASAR				smax			
	comp=N,3.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,4.0nm,1.0s						
ASAR	Alice Springs	28.50	166	P	P	05 56 03.0	-0.4
	comp=N,11nm,0.8s,mb4.6,baz=348,slow=7.2,SNR=46						
ASAR				S	S	06 00 52.4	+6.9
	comp=N,2.5nm,0.8s,baz=357,slow=32,SNR=3.6						
ASAR				ScP	ScP	06 02 58.1	+10
	comp=N,4.2nm,1.0s,baz=4.1,slow=3.0,SNR=5.1						
NST	Nakhon Sawan	28.62	295	P	P	05 56 04.0	-0.5
	comp=N,67nm,0.8s,mb5.3						
NJ2	Nanjing	28.74	346	eP	P	05 56 08.8	+3.4
NJ2				AP	pP	05 56 26.0	+2.3
NJ2				XP	sP	05 56 35.6	+2.7
NJ2				S	S	06 00 51.5	+2.4
NJ2				XS	sS	06 01 21.0	+0.3
NJ2				AMB	AMB		
	comp=Z,640nm,4.6s						
NJ2				LR	LR		
	comp=N,430nm,20.7s						
NJ2				LR	LR		
	comp=E,2µm,17.6s						
NJ2				LR	LR		
	comp=Z,1µm,15.4s						
WHN	Wuhan	28.76	337	⇓P	P	05 56 05.5	-0.1
WHN				S	S	06 00 53.9	+4.4
WHN				LR	LR		
	comp=Z,11µm,20.2s						
JNU	Nakatsue	29.06	7	P	P	05 56 06.2	-2.0
	comp=Z,17nm,0.8s,mb4.7,baz=185,slow=1.9,SNR=7.3						
JNU				LR	LR	06 07 43.9	
	comp=Z,1µm,20.5s,baz=185,slow=36						
GYA	Guiyang	29.39	321	⇑iP	P	05 56 12.9	+1.7
GYA				AP	pP	05 56 34.6	+5.0
GYA				PP	PP	05 57 12.8	-6.2
GYA				PCP	PcP	05 59 16.8	+1.1
GYA				S	S	06 00 59.9	+0.4
GYA				XS	sS	06 01 37.0	+5.8
GYA				SS	SS	06 02 39.5	-28
GYA				SCP	ScP	06 02 48.5	-2.2
GYA				PCS	PcS	06 02 58.6	-0.3
GYA				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,870nm,4.9s						
GYA				LR	LR		
	comp=N,710nm,16.8s						
GYA				LR	LR		
	comp=E,690nm,18.6s						
GYA				LR	LR		
	comp=Z,770nm,17.4s						
BDT	Bhumibol Dam	30.20	298	P	P	05 56 18.0	-0.6
	comp=Z,13nm,0.8s,mb4.6						
CTA	Charters Tower	30.75	142	eP	P	05 56 27.8	+4.5
	comp=Z,16nm,1.0s,mb4.7						
CTA	Charters Tower	30.75	142	eP	P	05 56 27.8	+4.5
CTA				pmax	pmax		
	comp=Z,16nm,1.0s						
CTA	Charters Tower	30.75	142	ScP	ScP	06 03 03.8	+8.6
	comp=Z,13nm,1.0s,baz=250,slow=4.4,SNR=5.1						
CTAO	Charters Tower	30.75	142	eP	P	05 56 22.6	-0.6
CHG	Chiang Mai	30.88	300	⇓P	P	05 56 24.5	0.0
	comp=Z,14nm,0.9s,mb4.7						
CHTO	Chiang Mai	30.88	300	eP	P	05 56 23.7	-0.8
	comp=Z,26nm,0.8s,mb5.0						
CHTO	Chiang Mai	30.88	300	eP	P	05 56 23.7	-0.8
CHTO				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.0						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
CHTO	Chiang Mai	30.88	300	P	P	05 56 23.8	-0.7
	SNR=23						
KMI	Kunming	31.14	314	⇓P	P	05 56 27.6	+0.9
KMI				AP	pP	05 56 49.9	+4.7
KMI				PP	PP	05 57 34.9	-3.5
KMI				S	S	06 01 26.1	-0.9
KMI				XS	sS	06 02 02.9	+4.2
KMI				PCS	PcS	06 03 04.9	+0.2
KMI				SS	SS	06 03 19.6	-24
KMI				AMB	AMB		
	comp=Z,21nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,245nm,9.5s						
KMI				LR	LR		
	comp=N,2µm,15.9s						
KMI				LR	LR		
	comp=E,2µm,19.8s						
KMI				LR	LR		
	comp=Z,3µm,21.0s						
JHJ	Hachijo jima 2	31.26	21	LR	LR	06 08 47.5	
	comp=Z,2µm,20.2s,baz=80,slow=36						
TIA	Tai'an	33.12	346	eP	P	05 56 44.4	+0.5
KSRS	Korea Array	33.15	2	P	P	05 56 43.4	-0.8
	comp=Z,14nm,0.9s,mb4.8,baz=179,slow=9.6,SNR=49						
KSRS				PcP	PcP	05 59 26.9	+1.4
	comp=Z,3.3nm,0.9s,baz=176,slow=1.3,SNR=4.7						
KSRS				LR	LR	06 10 21.2	
	comp=Z,1µm,20.4s,baz=185,slow=37						
MAJO	Matsushiro	33.89	17	eP	P	05 56 51.5	+0.9
MAT	Matsushiro	33.89	17	P	P	05 56 48.1	-2.5
MAT				S	S	06 02 11.0	+1.6
MJAR	Matsushiro Arr	33.89	17	P	P	05 56 47.9	-2.7
	comp=Z,4.8nm,0.6s,mb4.5,baz=190,slow=9.9,SNR=13						
MJAR				LR	LR	06 08 11.1	
	comp=Z,1µm,21.6s,baz=195,slow=32						
XAN	Xi'an	34.08	333	P	P	05 56 50.3	-1.9
XAN				AMB	AMB		
	comp=Z,33nm,1.0s,mb5.1						
XAN				LR	LR		
	comp=N,509nm,7.6s						
XAN				LR	LR		
	comp=E,656nm,9.2s						
XAN				LR	LR		
	comp=Z,380nm,8.6s						
CD2	Chengdu	34.35	323	⇓iP	P	05 56 53.8	-0.9
CD2				AP	pP	05 57 11.8	-1.5
CD2				XP	sP	05 57 20.9	-1.5
CD2				PP	PP	05 58 11.4	-2.6
CD2				PCP	PcP	05 59 28.1	-1.0
CD2				S	S	06 02 15.3	-1.4
CD2				XS	sS	06 02 46.3	-2.4
CD2				AMB	AMB		
	comp=Z,40nm,0.5s,mb5.5						
CD2				AMB	AMB		
	comp=Z,220nm,12.0s						
CD2				LR	LR		
	comp=N,3µm,16.8s						
CD2				LR	LR		
	comp=E,4µm,18.0s						
CD2				LR	LR		
	comp=Z,3µm,18.0s						
FORT	Forrest	34.76	178	eP	P	05 56 57.8	-0.4
	comp=Z,160nm,0.8s,mb5.9						
DL2	Dalian	34.91	353	⇑P	P	05 57 00.1	+0.7
DL2				S	S	06 02 25.0	0.0
DL2				XS	sS	06 03 03.9	+6.9
DL2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
DL2				AMB	AMB		

comp=Z,210nm,4.1s
DL2 LR LR
comp=N,690nm,18.1s
DL2 LR LR
comp=E,810nm,17.7s
DL2 LR LR
comp=Z,690nm,18.3s
HNR Honiara 35.67 112 LR LR 06 10 36.3
comp=Z,799nm,19.0s,baz=359,slow=34
KLBR Kellerberrin 36.58 193 *eP* **P 05 57 14.3 +0.5**
comp=Z,38nm,0.8s,mb5.4
BJI Beijing 36.99 346 P **P 05 57 16.9 -0.3**
BJI AP pP 05 57 37.6 +1.7
BJI XP sP 05 57 50.4 +5.4
BJI PP PP 05 58 42.6 -0.3
BJI S **S 06 02 59.4 +2.5**
BJI AMB AMB
comp=Z,205nm,1.1s,mb6.0
BJI AMB AMB
comp=Z,1.0nm,2.8s
BJI LR LR
comp=N,834nm,18.9s
BJI LR LR
comp=E,1μm,22.3s
BJI LR LR
comp=Z,1μm,22.0s
MUN Mundaring 37.33 195 *eP* **P 05 57 21.4 +1.3**
SNY Shenyang 37.62 356 ⇑*iP* **P 05 57 22.6 +0.2**
SNY S **S 06 03 14.8 +8.5**
SNY AMB AMB
comp=Z,47nm,1.1s,mb5.2
SNY AMB AMB
comp=Z,754nm,3.7s
SNY LR LR
comp=N,2μm,17.1s
SNY LR LR
comp=E,1μm,19.6s
SNY LR LR
comp=Z,2μm,17.2s
NWAO Narrogin (SRO) 37.98 193 *eP* **P 05 57 23.4 -2.2**
LZH Lanzhou 38.18 329 ⇑*iP* **P 05 57 27.4 +0.1**
LZH AP pP 05 57 47.6 +1.5
LZH XP sP 05 57 59.0 +3.8
LZH PP PP 05 59 01.0 +5.0
LZH PCP PcP 05 59 39.8 -0.7
LZH *e*S **S 06 03 12.0 -3.0**
LZH XS sS 06 03 53.3 +6.0
LZH AMB AMB
comp=Z,113nm,1.3s,mb5.5
LZH AMB AMB
comp=Z,231nm,4.5s
LZH LR LR
comp=E,4μm,14.0s
LZH LR LR
comp=Z,4μm,15.9s
STKA Stephens Creek 38.50 160 ⇑*iP* **P 05 57 29.6 -0.3**
comp=Z,76nm,0.8s,mb5.6
STKA *e*S **S 06 03 29.5 +10**
STKA Stephens Creek 38.50 160 P **P 05 57 30.2 +0.3**
comp=Z,118nm,0.9s,mb5.7,baz=336,slow=7.6,SNR=52
STKA PcP PcP 05 59 42.4 +0.9
comp=Z,18nm,0.9s,baz=329,slow=9.3,SNR=1.9
HHC Hu-ho-hao-te 39.02 342 *eP* **P 05 57 34.3 +0.1**
HHC AP pP 05 57 52.1 -1.0
HHC XP sP 05 58 02.3 +0.1
HHC PP PP 05 59 09.3 +4.2
HHC PCP PcP 05 59 37.8 -5.2
HHC S **S 06 03 28.5 +1.0**
HHC PCS PcS 06 03 31.8 -0.8
HHC XS sS 06 03 59.6 -0.3
HHC AMB AMB
comp=Z,19nm,1.1s,mb4.8
HHC AMB AMB
comp=Z,502nm,4.5s
HHC LR LR
comp=N,2μm,19.0s
HHC LR LR
comp=E,1μm,13.1s
HHC LR LR
comp=Z,2μm,21.4s
VLA Vladivostok 39.06 6⇓*eP* **P 05 57 34.1 -0.4**
VLA pmax pmax
comp=Z,100nm,1.7s,mb5.4
BTO Baotou 39.31 340 *eP* **P 05 57 35.0 -1.7**
CN2 Changchun 39.50 358 *eP* **P 05 57 41.0 +2.9**
CN2 PCP PcP 05 59 45.9 +1.5
CN2 *e*S **S 06 03 37.8 +3.2**
CN2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,18.0s
CN2 LR LR
comp=E,900nm,18.0s
CN2 LR LR
comp=Z,900nm,19.0s
SHL Shillong 39.70 306 *i* P **P 05 57 38.5 -1.6**
comp=Z,44nm,1.0s,mb5.2
SHL *e*S **S 06 03 37.5 -0.6**
MDJ Mudanjiang 40.37 3 P **P 05 57 45.3 0.0**
MDJ AP pP 05 58 02.0 -2.3
MDJ XP sP 05 58 10.4 -3.0
MDJ PP PP 05 59 19.3 -0.4
MDJ SCP ScP 06 03 30.1 +0.4
MDJ PCS PcS 06 03 38.0 +0.3
MDJ S **S 06 03 52.8 +5.2**
MDJ XS sS 06 04 18.3 -1.7
MDJ AMB AMB
comp=Z,37nm,1.2s,mb5.1
MDJ AMB AMB
comp=Z,389nm,6.8s
MDJ LR LR
comp=N,505nm,14.1s
MDJ LR LR
comp=E,922nm,19.4s
MDJ LR LR
comp=Z,1μm,15.9s
MDJ Mudanjiang 40.37 3 *eP* **P 05 57 43.8 -1.5**
comp=Z,43nm,1.0s,mb5.2
ARMA Armidale 41.77 147 *eP* **P 05 57 57.9 +0.8**
ASAJ Asahikawa 42.16 17 P **P 05 58 00.6 +0.6**
ASAJ pmax pmax
comp=Z,30nm,0.9s
ASAJ MLR MLR
comp=Z,1μm,19.8s
ASAJ Asahikawa 42.16 17 P **P 05 58 00.6 +0.6**
comp=Z,30nm,0.9s,mb5.0,baz=220,slow=12,SNR=7.7
ASAJ LR LR 06 16 16.7
comp=Z,1μm,19.8s,baz=330,slow=37
LSA Lhasa 42.22 311 P **P 05 58 01.0 +0.2**
LSA AMB AMB
comp=Z,20nm,1.5s,mb4.6
LSA AMB AMB
comp=Z,160nm,5.0s
LSA LR LR
comp=N,540nm,20.0s
LSA LR LR
comp=E,780nm,23.0s
LSA LR LR
comp=Z,1μm,23.0s
LSA Lhasa 42.22 311 *eP* **P 05 58 01.0 +0.2**
comp=Z,34nm,0.8s,mb5.1
LSA Lhasa 42.22 311 *eP* **P 05 58 01.0 +0.2**
LSA pmax pmax
comp=Z,34nm,0.8s,mb5.1
GTA Gaotai 42.78 329 ⇑P **P 05 58 04.5 -0.6**
GTA AP pP 05 58 27.9 +3.7
GTA XP sP 05 58 38.8 +5.5
GTA PP PP 05 59 48.9 +3.1
GTA PCS PcS 06 03 47.1 -0.4
GTA S **S 06 04 18.5 -4.9**
GTA XS sS 06 04 57.6 +1.5
GTA AMB AMB
comp=Z,19nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,258nm,6.1s
GTA LR LR
comp=N,2μm,18.2s
GTA LR LR
comp=E,3μm,16.4s
GTA LR LR
comp=Z,4μm,19.8s
TAPN Taplejung 43.84 306 *eP* **P 05 58 13.1 -0.8**
comp=Z,90nm,0.8s,mb5.5
ODAN Odare 43.89 305 *eP* **P 05 58 13.6 -0.7**
comp=Z,95nm,0.8s,mb5.6
CNB Canberra Magne 44.61 153 *eP* **P 05 58 20.8 +0.9**
comp=Z,48nm,1.1s,mb5.1
HABR Khabarovsk 44.71 8 *eP* **P 05 58 20.2 -0.3**
HABR *e* 05 59 59.1
HABR *e* 06 00 03.0
HABR *e*S **S 06 04 49.4 -1.9**
HABR *e* 06 08 06.5
HABR *e*SS SS 06 08 11.8 -2.6
HABR pmax pmax
comp=Z,112nm,1.8s,mb5.3
YSS Yuzh-Sakhalins 44.81 15 *eP* **P 05 58 22.1 +0.9**
comp=Z,152nm,1.8s,mb5.4
YSS Yuzh-Sakhalins 44.81 15 *eP* **P 05 58 20.0 -1.3**
YSS MLR MLR
comp=Z,1μm,18.0s
KLR Kul'dur 45.10 5 *eP* **P 05 58 19.8 -3.8**
KLR pmax pmax
comp=Z,78nm,1.8s,mb5.1
KLR MLR MLR
comp=E,900nm,14.0s
KLR MLR MLR
comp=Z,1μm,14.0s
JIRN Jiri 45.19 306 *eP* **P 05 58 24.0 -0.7**
comp=Z,55nm,0.6s,mb5.5
HIA Hailar 45.35 353 *eP* **P 05 58 25.5 0.0**
comp=Z,88nm,1.4s,mb5.3
HIA Hailar 45.35 353 *eP* **P 05 58 25.5 0.0**
HIA pmax pmax
comp=Z,88nm,1.4s
KKN Kakani 45.98 305 *eP* **P 05 58 29.8 -1.1**
comp=Z,31nm,0.5s,mb5.3
KKN Kakani 45.98 305 *eP* **P 05 58 29.8 -1.1**
KKN pmax pmax
comp=Z,31nm,0.5s,mb5.3
GKN Gorkha 46.59 305 *eP* **P 05 58 34.5 -1.2**
comp=Z,67nm,1.0s,mb5.3
DZM Mont Dzumac 46.71 126 P **P 05 58 35.6 -1.1**
comp=Z,15nm,1.0s,mb4.7,baz=325,slow=9.4,SNR=6.7
ULN Ulaanbaatar 46.74 342 *c iP* **P 05 58 36.5 0.0**
ULN Ulaanbaatar 46.74 342 P **P 05 58 37.0 +0.5**
SNR=26
ULN Ulaanbaatar 46.74 342 P **P 05 58 37.0 +0.5**
SNR=26
ULN Ulaanbaatar 46.74 342 P **P 05 58 37.0 +0.5**
SNR=26
SONM Songino Array 46.92 341 P **P 05 58 38.2 +0.3**
SONM 06 00 11.2
SONM pmax pmax
comp=Z,9.0nm,0.7s
SONM pmax pmax
comp=Z,7.0nm,0.8s
SONM MLR MLR
comp=Z,2μm,20.6s
SONM Songino Array 46.92 341 P **P 05 58 38.2 +0.3**
comp=Z,9.1nm,0.7s,mb4.6,baz=162,slow=8.5,SNR=43
SONM PcP PcP 06 00 11.2 +1.9
comp=Z,7.0nm,0.8s,baz=138,slow=2.8,SNR=3.2
SONM LR LR 06 19 52.1
comp=Z,2μm,20.6s,baz=155,slow=38
CIT Chita 48.96 349 *eP* **P 05 58 54.4 +0.8**
CIT pmax pmax
comp=Z,263nm,1.8s,mb5.9
HYB Hyderabad 49.05 289 *eP* **P 05 58 54.5 -0.4**
HYB Hyderabad 49.05 289 *i* P **P 05 58 54.5 -0.4**
HYB *e*S **S 06 05 56.0 +1.9**
ZAK Zakamensk 50.15 341 *eP* **P 05 59 02.3 -0.3**
ZAK *e* 06 00 21.8
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
TLY Talaya 51.15 342 P **P 05 59 11.8 +1.7**
comp=Z,164nm,0.9s,mb6.1,SNR=7.6
TLY Talaya 51.15 342 *eP* **P 05 59 11.5 +1.4**
TLY Talaya 51.15 342 *eP* **P 05 59 10.4 +0.3**
TLY *e*S **S 06 06 33.0 +11**
TLY *e*PS 06 06 36.9
TLY pmax pmax
comp=Z,40nm,1.0s,mb5.4
TLY MLR MLR
comp=Z,1μm,21.0s
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
TLY Talaya 51.15 342 P **P 05 59 10.9 +0.8**
SNR=19
IRK Irkutsk 51.45 342 ⇑*iP* **P 05 59 12.8 +0.5**
IRK *e* 06 00 20.5
IRK *e* 06 01 12.8
IRK pmax pmax
comp=Z,117nm,2.0s,mb5.6
JOSI Joshimath 51.66 306 *eP* **P 05 59 13.7 -0.6**
JOSI AMb AMB 05 59 17.8
comp=Z,328nm,0.9s,mb6.3
AGRA Agra 51.91 302 *eP* **P 05 59 14.4 -1.9**
AGRA AMb AMB 05 59 15.5
comp=Z,66nm,0.7s,mb5.8
MOY Mondy 52.01 340 *eP* **P 05 59 17.2 +0.6**
MOY pmax pmax
comp=Z,124nm,2.6s,mb5.5
NRGR Nerungri 52.38 359 *eP* **P 05 59 17.6 -1.6**
WMQ Urumqi 52.43 325 ⇑*iP* **P 05 59 19.3 -0.5**
WMQ AP pP 05 59 38.3 -1.2
WMQ XP sP 05 59 47.3 -1.1
WMQ PCP PcP 06 00 29.3 -0.3
WMQ PP PP 06 01 19.8 +0.5
WMQ SCP ScP 06 04 17.8 -2.2
WMQ PCS PcS 06 04 26.3 -1.7
WMQ AMB AMB
comp=Z,43nm,0.8s,mb5.5
WMQ AMB AMB
comp=Z,443nm,7.0s
WMQ LR LR
comp=N,3μm,17.0s
WMQ LR LR
comp=E,2μm,13.3s
WMQ LR LR
comp=Z,1μm,15.0s
CLNS Chul'man 52.55 359 *eP* **P 05 59 21.0 +0.5**
CLNS *e* 06 00 28.2
CLNS *e* 06 01 18.2
CLNS *e*PPP 06 02 21.1
CLNS *e*S **S 06 06 46.5 +5.2**
CLNS pmax pmax
comp=N,31nm,0.9s
CLNS pmax pmax
comp=Z,32nm,0.9s,mb5.3
CLNS pmax pmax
comp=E,22nm,1.4s
CLNS pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
CLNS pmax pmax
comp=N,9.0nm,0.7s
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS smax
comp=N,142nm,12.2s
CLNS smax
comp=Z,140nm,11.3s
CLNS smax
comp=E,410nm,13.5s
CLNS MLR MLR
comp=Z,400nm,15.0s
CLNS MLR MLR
comp=N,200nm,14.0s
CLNS MLR MLR
comp=E,400nm,14.0s
NDI New Delhi 52.96 303 *eP* **P 05 59 22.0 -2.0**
KAD Karad 53.16 288 *eP* **P 05 59 23.9 -1.8**
BHGR Bahadurgarh 53.19 303 *eP* **P 05 59 24.2 -1.6**
BHGR AMb AMB 05 59 26.2
comp=Z,162nm,0.2s
POO Poona 53.65 290 *eP* **P 05 59 27.0 -2.2**
RTK Rohtak 53.74 303 *ex* x 05 59 21.6
RTK AMb AMB 05 59 24.4
comp=Z,40nm,1.1s,mb5.3
KHET Khetri 53.97 302 *eP* **P 05 59 29.8 -1.6**
KHET AMb AMB 05 59 31.9
comp=Z,72nm,1.2s,mb5.6
BOD Bodaibo 54.46 352⇓*iP* **P 05 59 34.4 0.0**
BOD pmax pmax
comp=Z,51nm,1.3s,mb5.4
PET Petropavlovsk 55.30 23 *eP* **P 05 59 50.5 +10**
PET *e*S **S 06 07 33.5 +15**
PET pmax pmax
comp=Z,300nm,14.2s
PET pmax pmax
comp=Z,50nm,1.1s,mb5.5
PET MLR MLR
comp=Z,1μm,20.0s
THN Thein Dam 55.38 307 *eP* **P 05 59 39.8 -1.8**
MK31 Makanchi Array 57.26 325 *i* P **P 05 59 53.9 -0.7**
MK31 pmax pmax
comp=Z,50nm,0.8s,mb5.6
MKAR Makanchi Array 57.26 325 P **P 05 59 54.5 -0.1**
MKAR 06 00 50.0
MKAR pmax pmax
comp=Z,12nm,0.5s
MKAR pmax pmax
comp=Z,16nm,0.8s
MKAR MLR MLR
comp=Z,2μm,18.5s
MKAR Makanchi Array 57.26 325 P **P 05 59 54.5 -0.1**
comp=Z,12nm,0.5s,mb5.2,baz=125,slow=8.3,SNR=117
MKAR PcP PcP 06 00 50.0 +1.8
comp=Z,16nm,0.8s,baz=120,slow=4.8,SNR=4.2
MKAR LR LR 06 27 50.7
comp=Z,2μm,18.5s,baz=123,slow=40
MKAR PKPPKP 06 29 48.9
comp=Z,0.5nm,0.9s,baz=255,slow=2.4,SNR=4.7
YAK Yakutsk 57.78 2 *eP* **P 05 59 58.1 +0.1**
comp=Z,106nm,0.6s,mb6.0
YAK Yakutsk 57.78 2⇑*iP* **P 05 59 58.0 0.0**
YAK *e* 06 00 44.6
YAK *e* 06 02 05.1
YAK *e*S **S 06 07 54.4 +3.5**
YAK *e* 06 09 38.1
YAK *e*SS SS 06 11 36.7 -6.0
YAK pmax pmax
comp=Z,131nm,1.0s,mb5.9
YAK pmax pmax
comp=N,49nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=Z,42nm,1.2s,mb5.3
YAK pmax pmax
comp=E,10.0nm,0.7s
YAK smax
comp=N,245nm,4.9s
YAK smax
comp=E,449nm,8.6s
KSH Kashi 57.80 315 P **P 05 59 59.9 +1.3**
KSH *e*AP pP 06 00 23.6 +5.0
KSH *e*PCP PcP 06 00 49.1 -1.4
KSH *e*PP PP 06 02 12.4 +4.8
KSH *e*SCP ScP 06 04 39.3 -4.4
KSH *e*PCS PcS 06 04 49.6 -2.2
KSH *e*S **S 06 07 51.9 -0.2**
KSH *e*SCS ScS 06 09 36.4 -4.6
KSH *e*SS SS 06 11 49.1 +5.2
KSH AMB AMB
comp=Z,100nm,0.4s,mb6.2
KSH AMB AMB
comp=Z,2μm,5.3s
KSH LR LR
comp=N,2μm,7.8s
KSH LR LR
comp=E,3μm,7.5s
KSH LR LR
comp=Z,1μm,8.9s
MA2 Magadan 58.27 14 *eP* **P 06 00 01.5 0.0**
MA2 *e*S **S 06 07 52.5 -4.9**
MA2 *e*SS SS 06 11 58.4 +7.9
MA2 pmax pmax
comp=Z,40nm,0.8s,mb5.5
KZA Kyzart 59.36 317 P **P 06 00 10.0 +0.6**
SNR=17
TKM2 Tokmak 2 59.48 318 *e*Pg **P 06 00 10.5 +0.3**
comp=Z,16nm,0.8s,mb5.1
TKM2 Tokmak 2 59.48 318 *eP* **P 06 00 10.5 +0.3**
TKM2 pmax pmax
comp=Z,16nm,0.8s,mb5.1
TKM2 Tokmak 2 59.48 318 P **P 06 00 10.6 +0.4**
SNR=15
UCH Uchtor 59.92 317 *e*Pg **P 06 00 13.8 +0.5**
comp=Z,34nm,1.1s,mb5.3
UCH Uchtor 59.92 317 P **P 06 00 14.4 +1.2**
SNR=23
CHMS Chumysh 60.08 318 P **P 06 00 14.2 -0.1**
SNR=5.8
AAK Ala-Archa 60.10 318 P **P 06 00 14.8 +0.4**
comp=Z,54nm,1.0s,mb5.5,SNR=6.9
AAK Ala-Archa 60.10 318 *eP* **P 06 00 13.5 -1.0**
comp=Z,43nm,1.5s,mb5.2
AAK Ala-Archa 60.10 318 *eP* **P 06 00 13.5 -0.9**
AAK pmax pmax
comp=Z,43nm,1.5s,mb5.3
FRU Bishkek 60.10 318 *eP* **P 06 00 13.0 -1.4**
FRU pmax pmax
comp=Z,40nm,2.0s,mb5.1
FRU MLR MLR
comp=Z,2μm,20.0s
USP Ospenovka 60.36 318 P **P 06 00 16.2 0.0**
SNR=17
AML Almayashu 60.44 317 *e*Pg **P 06 00 16.5 -0.2**
comp=Z,60nm,1.3s,mb5.5
AML Almayashu 60.44 317 P **P 06 00 17.6 +0.9**
SNR=19
EKS2 Erkin-Say 60.59 317 *e*Pg **P 06 00 18.1 +0.3**
comp=Z,26nm,1.0s,mb5.2
EKS2 Erkin-Say 60.59 317 P **P 06 00 18.4 +0.6**
SNR=16
KURK Kurchatov 61.43 327 P **P 06 00 22.4 -0.9**
comp=Z,495nm,1.0s,SNR=8.5
KURK Kurchatov 61.43 327 *eP* **P 06 00 22.7 -0.6**
KURK Kurchatov 61.43 327 *c iP* **P 06 00 22.1 -1.2**
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
KURK Kurchatov 61.43 327 P **P 06 00 23.0 -0.3**
SNR=32
NVS Novosibirsk 61.53 333 *i* P **P 06 00 22.3 -1.6**
KK31 Karatay Array 62.98 317 *i* P **P 06 00 32.5 -1.3**
KK31 pmax pmax
comp=Z,14nm,0.8s,mb4.9
BRVK Borovoye 67.08 327 *eP* **P 06 00 59.6 -0.6**
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
BRVK Borovoye 67.08 327 P **P 06 01 00.3 0.0**
SNR=28
CHKZ Chkalovo 67.17 328 *eP* **P 06 01 00.1 -0.7**
comp=Z,86nm,1.6s,mb5.3

CHKZ Chkalovo 67.17 328 *e*P P 06 01 00.1 -0.7
CHKZ pmax pmax
comp=Z,86nm,1.6s,mb5.3
TIXI Tiksi 67.42 1 *e*P P 06 01 02.2 +0.3
TIXI Tiksi 67.42 1 *e*P P 06 01 01.2 -0.8
TIXI *e*S S 06 09 53.8 +2.4
TIXI pmax pmax
comp=Z,65nm,1.3s,mb5.3
BILL Bilibino 69.12 15⇓*e*P P 06 01 12.9 +0.2
BILL *e* pP 06 01 38.0 +4.7
BILL pmax pmax
comp=Z,16nm,1.7s,mb4.6
BILL MLR MLR
comp=Z,600nm,19.0s
DRV Dumont d'Urvil 71.29 174 P PcP 06 01 38.0 -7.3
DRV Dumont d'Urvil 71.29 174 PP PP 06 04 21.0 +16
DRV S S 06 10 41.0 +4.0
DRV L 06 20 00.0
DRV R 06 25 00.0
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
WHFO Wadi Hawf 72.61 287 P P 06 01 34.1 -0.7
SNR=9.7
UNV Unalaska Valle 73.02 35 *e*P P 06 01 36.9 +0.4
AKTK Aktyubinsk 73.38 322 P P 06 01 39.0 +0.3
AKTO Aktyubinsk 73.38 322 P P 06 01 39.0 +0.3
AKTO pmax pmax
comp=Z,16nm,0.8s,mb4.9
AKTO Aktyubinsk 73.38 322 P P 06 01 39.0 +0.3
comp=Z,16nm,0.8s,mb4.9,baz=99,slow=7.1,SNR=42
AKUT Akutan 73.52 35 *e*P P 06 01 37.7 -1.8
SVE Sverdlovsk 73.64 328 *e*P P 06 01 40.8 +0.6
SVE pmax pmax
comp=Z,109nm,1.5s,mb5.4
GAMB Gambell 73.97 24 *e*P P 06 01 42.5 +0.6
ARU Arti 74.62 328 *e*P P 06 01 45.8 -0.1
comp=Z,52nm,1.0s,mb5.2
ARU Arti 74.62 328*c i*P P 06 01 45.2 -0.7
ARU *e* 06 01 55.8
ARU 06 04 27.2
ARU S S 06 11 13.6 -1.7
ARU pmax pmax
comp=Z,56nm,1.0s,mb5.2
TNA Tin City 76.16 23 *e*P P 06 01 54.8 +0.3
QRN Al-Qurain 78.28 298 *e*P P 06 02 06.0 -1.2
QRN AMb AMB 06 02 12.4
comp=Z,83nm,0.9s,mb5.5
KBD Kabd 78.49 299 *e*P P 06 02 06.8 -1.5
KBD AMb AMB 06 02 11.4
comp=Z,104nm,0.9s,mb5.6
RDF Al-Radifah 78.61 299 *e*P P 06 02 06.8 -2.1
RDF AMb AMB 06 02 16.2
comp=Z,48nm,0.8s,mb5.4
MIB Mutribah 78.82 299 *e*P P 06 02 08.3 -1.8
MIB AMb AMB 06 02 11.8
comp=Z,67nm,0.7s,mb5.6
NAY Al-Naaiem 78.89 299 *e*P P 06 02 09.0 -1.5
NAY AMb AMB 06 02 13.4
comp=Z,42nm,0.8s,mb5.3
SVW2 Sparrevohn 80.39 29 *e*P P 06 02 19.7 +1.8
TTA Tatalina 80.48 27 *e*P P 06 02 19.2 +0.8
DGRG David-gareji 80.85 311 P P 06 02 22.0 +1.2
BHD Baghdad 81.41 303 *ex* x 06 02 22.0
KDAK Kodiak Island 81.48 32 P P 06 02 24.6 +0.8
comp=Z,27nm,0.9s,mb5.1,baz=140,slow=2.8,SNR=6.8
IMA2 Indian Mountai 81.96 24 *e*P P 06 02 27.4 +1.3
IMA2 *e*P 06 02 27.6
ZEI Tsey 81.99 312 *e*P P 06 02 32.7 +5.9
ZEI pmax pmax
comp=Z,29nm,1.0s,mb5.1
HAKT HAKKARI 82.02 307 *i*P P 06 02 25.9 -1.3
PRGR Permogore 82.17 332⇓*i*P P 06 02 28.1 +0.8
PRGR *e*S S 06 12 37.7 +1.8
ONI Oni 82.32 312 P P 06 02 29.1 +0.6
TUTA Tutak 82.75 309 *i*P P 06 02 32.6 +1.7
KIV Kislovodsk 82.91 314⇑*e*P P 06 02 32.4 +0.8
KIV pmax pmax
comp=Z,20nm,1.2s,mb4.8
SLKM Skilak Lake 82.93 30 *e*P P 06 02 31.3 0.0
ATD Arta Tunnel 83.28 281 P P 06 02 35.8 +1.7
comp=Z,8.7nm,0.7s,mb4.7,baz=248,slow=19,SNR=3.5
PMR Palmer 83.53 29 *e*P P 06 02 34.5 +0.1
comp=Z,68nm,1.1s,mb5.4
PMR Palmer 83.53 29 *e*P P 06 02 34.5 +0.1
PMR pmax pmax
comp=Z,68nm,1.1s,mb5.4
VRHR Novokhopersk 83.77 321 *e*P P 06 02 36.8 +1.0
VRHR pmax pmax
comp=Z,40nm,0.4s,mb5.6
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.4s
SML Sawmill 83.92 28 *e*P P 06 02 36.6 +0.2
MAW Mawson 84.18 200 P P 06 02 37.9 +0.4
comp=E,4.1nm,0.8s,mb4.3,baz=340,slow=12,SNR=2.7
MAW LR LR 06 35 27.8
comp=E,234nm,20.1s,baz=67,slow=32
COLA College 84.27 25*c i*P P 06 02 38.3 +0.2
MARD Mardin 84.35 307 *i*P P 06 02 37.4 -1.7
SOC Sochi 85.06 313 *e*P P 06 02 41.2 -1.3
SOC *e* 06 05 57.7
SOC *e*S S 06 12 56.6 -9.1
SOC *e*SSS 06 22 12.6
SOC pmax pmax
comp=Z,43nm,1.3s,mb5.2
EYAK Cordova Ski Ar 85.14 30 *e*P P 06 02 42.8 +0.3
comp=Z,110nm,1.5s,mb5.6
PPT Papeete 85.16 108 *e*S S 06 13 08.5 +0.9
comp=Z,480nm,25.0s
PPT *e*SS SS 06 18 46.1 +2.7
comp=Z,438nm,30.5s
PPT *e*LR LR 06 29 42.1
comp=Z,564nm,29.8s
PPT Papeete 85.16 108 LR LR 06 33 17.1
comp=Z,303nm,21.2s,baz=70,slow=30
VORD Divnogorie 85.24 321 *e*P P 06 02 43.6 +0.4
VORD pmax pmax
comp=Z,40nm,0.9s,mb5.3
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,30nm,0.8s
VOR Voronezh 85.28 321 *e*P P 06 02 42.0 -1.5
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.7
VRSR Storozhevoye 85.30 321 *e*P P 06 02 44.1 +0.6
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
VRSR pmax pmax
comp=N,5.0nm,3.2s
VRSR pmax pmax
comp=E,10.0nm,1.0s
KELT Kelkit 85.48 310 *i*P P 06 02 43.3 -1.4
ELZG Elazig 85.74 308 *i*P P 06 02 48.3 +2.3
TBI Tubuai 85.88 114 *e*S S 06 13 12.2 -2.3
TBI *e*SS SS 06 18 56.3 +2.6
comp=E,309nm,29.2s
TBI *e*LR LR 06 30 01.2
comp=E,592nm,36.5s
MOS Moscow 86.14 325 *e*P P 06 02 46.0 -1.6
MOS pmax pmax
comp=Z,225nm,1.3s,mb5.9
MALT Malatya 86.19 308⇓P P 06 02 49.9 +1.6
MALT Malatya 86.19 308⇓*i*P P 06 02 49.9 +1.7
ANN Anapa 86.66 315 *e*P P 06 02 48.4 -2.0
ANN *e* 06 13 04.6
ANN pmax pmax
comp=Z,85nm,1.3s,mb5.5
OBN Obninsk 86.76 325 P P 06 02 51.0 +0.3
comp=Z,643nm,1.4s,mb6.4,SNR=5.1
OBN Obninsk 86.76 325 *e*P P 06 02 50.5 -0.2
comp=Z,267nm,1.4s,mb6.0
OBN Obninsk 86.76 325*αe*P P 06 02 50.4 -0.3
OBN *e* 06 02 57.6
OBN *e* 06 13 24.2
OBN pmax pmax
comp=Z,230nm,1.7s,mb5.8
OBN MLR MLR
comp=Z,800nm,18.0s
GZT Gaziantep 86.91 307 *i*P P 06 02 50.8 -1.0
EGAK Eagle 87.14 25 *e*P P 06 02 52.3 +0.1
comp=Z,8.3nm,1.0s,mb4.6
APA Apatity 87.49 337⇓*i*P P 06 02 58.5 +4.5
APA *i* 06 03 12.0
APA pmax pmax
comp=Z,26nm,1.0s,mb5.1
ASF Jabal al Asfar 87.75 302 P P 06 02 57.6 +1.7
ASF pmax pmax
comp=Z,6.0nm,0.8s
ASF Jabal al Asfar 87.75 302 P P 06 02 57.6 +1.6
comp=Z,6.4nm,0.8s,mb4.7,baz=337,slow=12,SNR=9.2
DAWY Dawson 87.95 26 *e*P P 06 02 57.1 +0.9
BOYT Boyabat 88.72 311 *i*P P 06 02 59.3 -1.0
JOF Joensuu 88.84 333 *ep* P 06 02 59.0 -1.4
comp=Z,13nm,0.6s,mb5.1
JOF Joensuu 88.84 333 *e*P P 06 02 59.0 -1.4
JOF pmax pmax
comp=Z,13nm,0.6s,mb5.1
CTKT Corum 88.86 310 *i*P P 06 02 59.3 -1.7
KEV Kevo 89.52 340 *ep* P 06 03 02.4 -1.1
comp=Z,2.9nm,0.7s,mb4.5
KEV Kevo 89.52 340 *e*P P 06 03 02.4 -1.1
KEV pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
EIL Elat 89.59 300 P P 06 03 05.0 +0.4
comp=Z,4.5nm,0.7s,mb4.7,baz=221,slow=2.3,SNR=4.1
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.4
SNR=7.6
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.4
SNR=7.6
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.4
SNR=7.6
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.4
SNR=7.6
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.4
SNR=7.6
KMBO Kilima Mbogo 89.65 269 P P 06 03 06.6 +1.6
comp=Z,11nm,0.9s,mb5.0,baz=43,slow=6.0,SNR=24
KMBO LR LR 06 39 34.8
comp=Z,332nm,21.5s,baz=277,slow=33
INK Inuvik 89.74 22 P P 06 03 04.7 +0.2
INK Inuvik 89.74 22 P P 06 03 04.7 +0.2
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 89.74 22 P P 06 03 04.7 +0.2
comp=Z,7.3nm,1.0s,mb4.8,baz=294,slow=4.9,SNR=23
BRTR Keskin Array B 89.82 310 P P 06 03 05.8 +0.3
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 89.82 310 P P 06 03 05.8 +0.2
comp=Z,5.5nm,0.9s,mb4.7,baz=118,slow=4.4,SNR=14
ELDT Eldivan 89.91 310 *i*P P 06 03 07.2 +1.3
ARCES ARCESS Array B 90.08 340 P P 06 03 06.1 0.0
ARCES pmax pmax
comp=Z,6.0nm,0.6s
ARCES MLR MLR
comp=Z,718nm,19.7s
ARCES ARCESS Array B 90.08 340 P P 06 03 06.1 0.0
comp=Z,5.5nm,0.6s,mb4.9,baz=91,slow=5.6,SNR=35
ARCES LR LR 06 46 36.1
comp=Z,718nm,19.7s,baz=83,slow=38
SGKT Sivrigoynuk 90.94 311 *i*P P 06 03 12.1 +1.4
KAF Kangasniemi 91.26 332 *ep* P 06 03 11.0 -0.7
comp=Z,7.0nm,0.5s,mb5.0,baz=78,slow=4.4
KAF Kangasniemi 91.26 332 *e*P P 06 03 11.0 -0.7
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
FINES FINESS Array B 91.50 332 P P 06 03 12.4 -0.4
comp=Z,11nm,0.9s,mb5.0,baz=82,slow=6.6,SNR=15
FINES LR LR 06 52 13.1
comp=Z,626nm,18.8s,baz=71,slow=41
AKASG Malin Array Be 91.62 321 P P 06 03 13.5 -0.1
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG MLR MLR
comp=Z,529nm,21.9s
AKASG Malin Array Be 91.62 321 P P 06 03 13.4 -0.2
comp=Z,6.8nm,0.8s,mb4.9,baz=70,slow=4.0,SNR=40
AKASG LR LR 06 46 57.8
comp=Z,529nm,21.9s,baz=65,slow=37
VSU Vasula 91.75 329⇓*i*P P 06 03 13.5 -0.6
HENT Hendek 91.78 311 *i*P P 06 03 12.6 -2.0
MNK Minsk 91.85 325 *e*P P 06 03 14.0 -0.6
ESKT Eskisehir 91.98 310 *i*P P 06 03 14.9 -0.7
WRAK Wrangell Islan 92.54 33 *e*P P 06 03 18.8 +1.0
comp=Z,33nm,1.1s,mb5.6
SYO Syowa Base 92.85 201⇓*e*P P 06 03 22.2 +3.3
VRI Vrincioaia 94.05 316⇓P P 06 03 26.0 +1.1
VRI Vrincioaia 94.05 316⇓*i*P P 06 03 26.0 +1.1
SUW Suwalki 94.62 325 *e*P P 06 03 27.3 -0.1
MLR Muntele Rosu 94.65 316⇑P P 06 03 28.8 +1.1
MLR Muntele Rosu 94.65 316⇑*i*P P 06 03 28.8 +1.1
BURAR Bucovina Array 94.74 318⇓P P 06 03 29.0 +0.9
BURAR Bucovina Array 94.74 318⇓*i*P P 06 03 29.0 +0.9
LVV L'vov 95.06 321 *e*P P 06 03 35.6 +6.1
KWP Kalwaria 95.93 321 *e*P P 06 03 34.3 +0.8
KWP Kalwaria 95.93 321⇑*i*P P 06 03 34.8 +1.3
KOLS Kolonicke sedl 96.37 320 *e*P P 06 03 36.0 +0.5
UZH Uzhgorod 96.43 320⇑*i*P P 06 03 36.7 +0.9
UZH *i* 06 03 43.5
UZH *e* 06 14 01.0
UZH *e*S S 06 14 49.0 -0.7
UZH *e* 06 16 25.0
DRGR 96.59 318⇓P P 06 03 37.9 +1.3
DRGR 96.59 318⇓*i*P P 06 03 37.9 +1.4
DAG Danmarks Havn 96.84 352⇑*i*P P 06 03 37.2 +0.1
DAG pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
DAG Danmarks Havn 96.84 352⇑*i*P P 06 03 37.2 +0.1
comp=Z,8.2nm,0.7s,mb5.3
GZR Gura Zlata 96.86 316⇑P P 06 03 38.6 +0.8
GZR Gura Zlata 96.86 316⇑*i*P P 06 03 38.6 +0.8
CRVS Cervenica-Dubn 96.90 320 *e*P P 06 03 39.1 +1.2
STHS Stebnicka Huta 96.91 321 *e*P P 06 03 39.1 +1.2
comp=Z,10nm,1.3s,mb5.1
STHS Stebnicka Huta 96.91 321 *e*P P 06 03 39.1 +1.2
STHS pmax pmax
comp=Z,10.0nm,1.3s,mb5.1
NIE Niedzica 97.50 321 *e*P P 06 03 41.8 +1.2
OJC Ojcow 97.60 322 *e*P P 06 03 42.0 +1.0
KECS Kecovo 97.63 320 *i*P P 06 03 41.0 -0.2
comp=Z,6.2nm,1.0s,mb5.1
KECS Kecovo 97.63 320 *i*P P 06 03 41.0 -0.2
KECS pmax pmax
comp=Z,6.0nm,1.0s,mb5.1
NB2 NORSAR Subarra 98.44 334 P P 06 03 43.9 -0.6
comp=Z,6.5nm,0.8s,mb5.2,baz=68,slow=4.6
NB2 NORSAR Subarra 98.44 334 P P 06 03 43.9 -0.6
NB2 pmax pmax
comp=Z,7.0nm,0.8s,mb5.2
NOA NORSAR Array B 98.44 334 P P 06 03 44.3 -0.2
comp=Z,5.0nm,0.8s,mb5.1,baz=67,slow=4.6,SNR=12
NOA LR LR 06 53 05.3
comp=Z,648nm,21.0s,baz=70,slow=38
VYHS Vyhne 98.69 320 *e*P P 06 03 46.1 +0.2
VYHS Vyhne 98.69 320 PDIF P 06 03 46.1 +0.2
OKC Ostrava-Krasne 98.73 322 *e*PDIF P 06 03 47.1 +1.0
OKC AMS AMS 06 54 40.0
comp=Z,1μm,8.2s
YKA Yellowknife Ar 99.08 24 P P 06 03 48.1 +0.8
comp=Z,1.7nm,0.8s,mb4.6,baz=300,slow=4.4,SNR=28
YKA PKKPbc PKKPbc 06 20 14.1 -1.2
comp=Z,0.2nm,0.6s,baz=115,slow=3.0,SNR=3.3
YKA LR LR 06 48 55.3
comp=Z,188nm,20.1s,baz=175,slow=36
MORC Moravsky Berou 99.13 322⇑P P 06 03 48.6 +0.7
MORC Moravsky Berou 99.13 322⇑*i*P P 06 03 48.6 +0.7
RKT Rikitea 99.16 113 *e*PS PS 06 16 46.2 -4.3
comp=Z,268nm,28.5s
RKT Rikitea 99.16 113 *e*SKSac SKSac 06 14 21.0 +0.6
comp=Z,304nm,27.2s
RKT *e*SS SS 06 22 03.5 -0.7
comp=Z,250nm,28.8s
RKT *e*LR LR 06 35 59.1
comp=Z,623nm,33.2s
PKSM Moragy 99.45 318⇑P Pdif 06 03 49.8 +0.6
PKSM Moragy 99.45 318⇑*i*P Pdif 06 03 49.8 +0.6
KSP Ksiaz 99.56 323 *e*P Pdif 06 03 51.1 +1.4
KSP Ksiaz 99.56 323 *e*P Pdif 06 03 50.4 +0.8
DPC Dobruska-Polom 99.70 322 *e*PDIF Pdif 06 03 51.8 +1.5
DPC AMS AMS 06 51 10.0
comp=Z,1μm,8.5s
TREC Trest 100.55 322 AMS AMS 06 54 20.0
comp=Z,1μm,8.3s
PVCC Panska Ves 100.69 323 AMS AMS 06 52 10.0
comp=Z,2μm,8.9s
PRU Pruhonice 100.90 323 AMS AMS 06 51 50.0
comp=Z,1μm,22.6s
BRG Berggiesshubel 100.95 324⇑*i*P Pdif 06 03 56.6 +0.8
BRG pmax pmax
comp=Z,10.0nm,1.3s
BRG Berggiesshubel 100.95 324 *e*Pdiff Pdif 06 03 56.5 +0.7
BRG Berggiesshubel 100.95 324⇑*i*P Pdif 06 03 56.6 +0.8
comp=Z,17nm,1.3s
CLL Collm 101.34 324 *i* Pdif Pdif 06 03 57.9 +0.3
CLL *e* 06 04 01.0
CLL *i* 06 04 05.2
CLL LR LR
comp=Z,700nm,20.5s
CLL Collm 101.34 324 *i*P Pdif 06 03 57.9 +0.3
CLL pmax pmax
comp=Z,21nm,1.6s
CLL MLR MLR
comp=Z,700nm,20.5s
CLL Collm 101.34 324⇑*i*Pdif Pdif 06 03 57.9 +0.3
comp=Z,21nm,1.6s
CLL *ex* x 06 04 01.0
CLL *i x* x 06 04 05.2
CLL *e*PP 06 08 26.0
CLL *e*SS SS 06 22 54.0 +21
CLL *e*(SSS) 06 27 18.0
CLL LmV 06 55 00.0
comp=Z,700nm,20.5s
CLL Collm 101.34 324 *e*Pdiff Pdif 06 03 58.5 +0.9
KHC Kasperske Hory 101.78 322 *e*PDIF Pdif 06 04 00.0 +0.5
KHC AMS AMS 06 54 20.0
comp=Z,1μm,9.2s
MOA Molln 101.80 321⇓*i*P Pdif 06 03 58.0 -1.6
comp=Z,21nm,1.4s
GEC2 GERESS Array S 101.81 322 *e*Pdiff Pdif 06 04 00.5 +0.9
GERES GERESS Array B 101.81 322 P Pdif 06 04 00.2 +0.6
GERES 06 08 13.9
GERES pmax pmax
comp=Z,4.0nm,1.0s
GERES GERESS Array B 101.81 322 P Pdif 06 04 00.2 +0.5
comp=Z,4.1nm,1.0s,baz=50,slow=4.2,SNR=17
GERES PP PP 06 08 13.9 +2.8
comp=Z,0.2nm,0.3s,baz=286,slow=36,SNR=4.1
BSEG Bad Segeberg 101.83 327 *e*Pdiff Pdif 06 04 01.9 +2.1
TANN Tannenbergstha 101.99 323 *e*Pdiff Pdif 06 04 01.9 +1.4
NKC Novy Kostel 102.07 323 AMS AMS 06 53 10.0
comp=Z,1μm,17.7s
WET Wettzell 102.21 322 *e*Pdiff Pdif 06 04 02.9 +1.5
ROTZ Rotzenmuhle 102.39 323 *e*Pdiff Pdif 06 04 03.8 +1.6
MOX Moxa 102.41 324 *e*P Pdif 06 03 58.1 -4.2
comp=Z,15nm,1.5s
MOX Moxa 102.41 324 *e*P Pdif 06 03 58.1 -4.2
MOX pmax pmax
comp=Z,15nm,1.5s
MOX Moxa 102.41 324 *e*Pdiff Pdif 06 04 03.6 +1.3
KBA Koelnbreinsper 102.65 320⇓*i*P Pdif 06 04 01.9 -1.5
comp=Z,6.9nm,1.1s
KBA Koelnbreinsper 102.65 320⇓*i*P Pdif 06 04 01.9 -1.5
KBA pmax pmax
comp=Z,7.0nm,1.1s
CLZ Clausthal 102.66 325 *e*Pdiff Pdif 06 04 05.4 +2.0
GRA1 Grafenberg Arr 103.01 323 *e*Pdif Pdif 06 04 06.5 +1.5
GRF Grafenberg Arr 103.01 323 *e*Pdiff Pdif 06 04 06.5 +1.5
WTTA Wattenberg 103.67 321⇑*i*P Pdif 06 04 05.9 -2.0
comp=Z,18nm,1.2s
WTTA Wattenberg 103.67 321⇑*i*P Pdif 06 04 05.9 -2.0
WTTA pmax pmax
comp=Z,18nm,1.2s
NEW Newport 103.84 38 P Pdif 06 04 10.4 +1.7
NEW pmax pmax
comp=Z,2.0nm,0.8s
NEW Newport 103.84 38 Pdiff Pdif 06 04 10.4 +1.7
comp=Z,2.0nm,0.8s,baz=306,slow=6.7,SNR=4.7
BFO Black Forest 105.30 323 *e*Pdiff Pdif 06 04 15.7 +0.5
NVAR Mina Array Bea 106.56 48 Pdiff Pdif 06 04 22.9 +2.1
comp=Z,0.6nm,0.7s,baz=270,slow=3.6,SNR=6.3
NVAR PKiKP PKiKP 06 08 34.4 +2.7
comp=Z,0.5nm,0.7s,baz=285,slow=3.5,SNR=3.9
LPG La Plagne 107.47 320 *e*PP PP 06 08 27.1 -26
comp=Z,2.4nm,0.6s
LPL La Plagne 107.48 320 *e*PP PP 06 08 26.8 -26
comp=Z,2.7nm,0.6s
PDAR Pinedale Array 110.98 41 PP PP 06 09 07.7 -11
comp=Z,0.4nm,0.8s,baz=266,slow=11,SNR=3.2
ULM Lac du Bonnet 114.55 29 PKP PKiKP 06 08 49.9 +3.5
comp=Z,1.3nm,0.7s,baz=2.1,slow=2.3,SNR=4.6
ANMO Albuquerque 116.67 47 PKIKP PKPdf 06 08 53.6 +2.6
ANMO pmax pmax
comp=Z,1.0nm,0.7s
ANMO Albuquerque 116.67 47 PKP PKPdf 06 08 53.6 +2.6
comp=Z,0.8nm,0.7s,baz=245,slow=3.7,SNR=5.7
ECSD EROS,Sioux Fal 118.39 35 *e*PKPdf PKPdf 06 08 55.1 +1.1
SCHQ Schefferville 120.13 9 PKP PKPdf 06 08 59.0 +2.0
comp=Z,4.2nm,0.8s,baz=51,slow=4.4,SNR=17
KSU1 Kansas State U 121.22 39 *e*PKPdf PKPdf 06 09 00.1 +0.4
TXAR Lajitas Array 121.27 52 PKIKP PKPdf 06 09 01.9 +1.9
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 121.27 52 PKP PKPdf 06 09 01.9 +1.9
comp=Z,1.1nm,0.8s,baz=224,slow=1.1,SNR=13
JFWS Jewell Farm 122.40 32 *e*PKPdf PKPdf 06 09 02.3 +0.6
TORD Torodi Ar. Bea 122.87 288 PKP PKPdf 06 09 04.6 +1.2
comp=Z,8.3nm,0.8s,baz=48,slow=1.8,SNR=28
JCT Junction City 123.72 49 *e*PKPdf PKPdf 06 09 06.7 +2.0
HKT Hockley 126.94 47 *e*PKPdf PKPdf 06 09 13.3 +2.5
ACSO Alum Creek Sta 128.05 29 *e*PKPdf PKPdf 06 09 13.7 +1.0
PLAL Pickwick Lake 129.10 37 *e*PKPdf PKPdf 06 09 15.0 +0.2
KIC Kosan Boka 130.52 282 *e*P PKPdf 06 09 19.4 +1.3
comp=Z,114nm,1.3s
DBIC Dimbokro 130.57 282 PKIKP PKPdf 06 09 19.8 +1.6
DBIC pmax pmax
comp=Z,12nm,1.1s
DBIC Dimbokro 130.57 282 PKP PKPdf 06 09 19.8 +1.6
comp=Z,12nm,1.1s,baz=61,slow=1.2,SNR=4.7
TIC Toumodi 130.74 282 *e*P PKPdf 06 09 19.5 +1.0
comp=Z,35nm,1.7s
LIC Lamto 130.82 282 *e*P PKPdf 06 09 21.2 +2.5
comp=Z,64nm,1.3s
LIC Lamto 130.82 282 *e*PKPdf PKPdf 06 09 21.1 +2.4
LRAL Lakeview Retre 131.07 38 *e*PKPdf PKPdf 06 09 19.2 +0.6
JTS JuntasAbangare 145.26 65 *e*PKPdf PKPdf 06 09 46.0 +1.0
TRQA Tornquist 145.32 168 *e*PKPdf PKPdf 06 09 45.8 +1.3
FCH Farellones 146.88 153 *e*P PKPbc 06 09 51.7 +2.5
LCO Las Campanas 150.21 148 *e*PKPdf PKPdf 06 09 55.2 +2.4
LCO *e*PKPbc PKPbc 06 10 00.3 +2.4
SDDR Presa de Saban 150.91 37 *e*PKPbc PKPbc 06 09 59.5 -0.3
ROSC El Rosal 157.06 67 PKP PKPdf 06 10 04.5 +1.5
comp=Z,2.7nm,0.4s,baz=81,slow=17,SNR=6.6
ROSC PKPab PKPab 06 10 36.0 +2.4
comp=Z,8.4nm,0.7s,baz=83,slow=5.8,SNR=7.3
LPAZ La Paz 161.00 130 PKIKP PKPdf 06 10 10.5 +3.0
LPAZ pmax pmax
comp=Z,6.0nm,0.8s
LPAZ La Paz 161.00 130 PKP PKPdf 06 10 10.4 +3.0
comp=Z,5.5nm,0.8s,baz=46,slow=1.9,SNR=18

JMA 13 05:50:55.4±0.3, 3398N×14204E, h31km, M3.9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.11**	**308**	P	Pn	05 51 15.0	+0.3
BSO1				*e*S	Sn	05 51 29.5	+0.6
BSO2	**Boso 2**	**1.31**	**306**	*e*S	Sn	05 51 35.1	+1.1
BSO3	**Boso 3**	**1.51**	**303**	P	Pn	05 51 21.1	+0.8
BSO3				*e*S	Sn	05 51 40.5	+1.7
BSO4	**Boso 4**	**1.73**	**306**	P	Pn	05 51 25.0	+1.7
BSO4				*e*S	Sn	05 51 46.2	+1.9
CHOJ	**Chosi**	**1.97**	**331**	P	Pn	05 51 28.1	+1.4
JHJ2	**Mitsune**	**2.05**	**246**	P	Pn	05 51 29.4	+1.7
JOD2	**Odawara 2**	**2.75**	**299**	P	Pn	05 51 37.7	+0.4
JAG	**Ashikaga**	**3.23**	**320**	P	Pn	05 51 45.5	+1.6
JAG				*e*S	Sn	05 52 22.0	+0.6
JYN	**Shimob**	**3.25**	**299**	*e*S	Sn	05 52 22.8	+0.9
JRY	**Ryogami san**	**3.28**	**309**	P	Pn	05 51 45.8	+1.2
MAT	**Matsushiro**	**4.05**	**310**	P	Pn	05 51 57.7	+2.5
MAT				S	Sn	05 52 41.4	-0.1

MAN ***13*** *05:57:06, 3.36N×126.77E, h1km, mb5.9, ML5.0, MS5.5*
IDC ***13*** *05:57:12.4±0.3, 4.13N×126.78E, h0km, mb5.0/28, mb1 5.0/28, mb1mx5.0/29, mbtmp5.0/28, Error ellipse: s-maj=16.6km s-min=8.9km az=80.0*
BJI ***13*** *05:57:15.3, 3.55N×126.93E, h78km, mB5.3, mb5.2, Ms5.1, Msz4.9*
MOS ***13*** *05:57:17.4±1.1, 4.42N×126.74E, h33km, mb5.4/46, Error ellipse: s-maj=12.2km s-min=5.9km az=112.6*
ISCJB ***13*** *05:57:20.2±0.6, 4.16N±0.03×126.84E±0.04, h70km±4km, mb5.1/104, Error ellipse: s-maj=6.6km s-min=4.2km az=177.9*
GCMT ***13*** *05:57:20.7±0.4, 4.25N×126.90E, h28km±1km, MW5.1/57, Moment Tensor Solution. s18,c19; s57,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.72±.56; $M_{\theta\theta}$0.38±.30; $M_{\phi\phi}$-6.11±.34; $M_{r\theta}$0.45±.46; $M_{\theta\phi}$-1.53±.21; $M_{\phi r}$-0.97±.42; Best double couple: $M_0$6.18600×10^{16} NP1:ϕ_s20.00000°,δ41.00000°,λ101.00000°. NP2: ϕ_s186.00000°,δ49.00000°,λ81.00000°. Principal axes: T 5.8600, Plg82.0000°, Azm41.0000°; N 0.6450, Plg7.0000°, Azm192.0000°; P -6.5110, Plg4.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***13*** *05:57:20.7±0.9, 4.16N×126.79E, h58km±8km, mb5.3/34 Error ellipse: s-maj=6.8km s-min=4.5km az=73.0*
ISC 13 05:57:22.3±0.5, 4.15N±0.03×126.83E±0.04, h75km±4km, h75km±2.6km:pP-P, n316, σ1.11/285, mb5.1/104, 42C-26D, Talaud Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.69 316	⇑eP	Pn	05 57 58.5	-4.9
MATI	Mati	2.84 348	eP	Pn	05 58 04.1	-1.3
MATI			eS	Sn	05 58 48.8	+10
DAV	Davao City (W)	3.16 337	ePn	Pn	05 58 09.0	-0.8
KCP	Kidapawan	3.33 329	⇓eP	Pn	05 58 13.0	+1.0
KCP			iS	Sn	05 58 58.6	+8.1
CTBH	Cotabato--PC H	3.99 320	⇑eP	Pn	05 58 18.5	-2.6
CTBH			iS	Sn	05 59 13.6	+6.8
BUKP	Musuan	4.11 335	eP	Pn	05 58 20.5	-2.1
CGP	Cagayan de Oro	4.78 334	⇑iP	Pn	05 58 31.8	-0.1
CGP			iS	Sn	05 59 36.6	+11
PAGZ	Pagadian	5.03 317	eP	Pn	05 58 32.9	-2.4
DCPH	Dipolog City	5.60 322	eP	Pn	05 58 44.2	+1.2
SCPH	Surigao	5.76 347	⇑eP	Pn	05 58 46.9	+1.7
TBP	Tagbilaran	6.25 332	eP	Pn	05 58 49.2	-2.7
MSLP	Maasin	6.26 342	eP	Pn	05 58 52.9	+0.7
LLP	Lapu-Lapu	6.76 335	eP	Pn	05 58 56.0	-2.9
LLP			eS	Sn	06 00 17.4	+2.9
PLP	Palo	7.21 345	eP	Pn	05 59 06.5	+1.5
GUIM	Jordan	7.69 327	eP	Pn	05 59 13.5	+1.9
RCP	Roxas	8.40 331	⇑eP	Pn	05 59 21.1	-0.2
PCI	Palu	8.60 234	P	Pn	05 59 25.1	+1.0
	149nm,1.1s					
CUYO	Cuyo Island	8.81 319	eP	Pn	05 59 25.7	-1.2
OTRP	Odiongan	9.45 330	eP	Pn	05 59 41.5	+5.8
PVCP	Virac	9.76 344	eP	Pn	05 59 43.0	+3.1
ENPP	El Nido	10.15 314	eP	Pn	05 59 43.9	-1.3
KDM	Kudat	10.32 286	⇓P	Pn	05 59 44.2	-3.5
KKM	Kota Kinabalu	10.74 281	ePn	Pn	05 59 53.2	-0.1
KKM	Kota Kinabalu	10.74 281	⇑P	Pn	05 59 54.9	+1.6
KAPI	Kappang	11.52 218	Pn	Pn	06 00 03.8	-0.2
	322nm,1.1s,SNR=7.0					
LUBP	Lubang	11.53 326	eP	Pn	06 00 06.0	+1.9
BALP	Baler	12.63 336	eP	Pn	06 00 24.0	+5.0
BTM	Bintulu	13.75 267	⇑P	Pn	06 00 33.3	-0.7
BATI	Kupang	14.60 192	Pn	Pn	06 00 44.5	-0.6
	4.7nm,0.3s,baz=307,slow=5.2,SNR=4.7					
SBUM	Sibu	14.68 264	⇓P	Pn	06 00 47.6	+1.5
KSM	Kuching	16.71 261	ePn	Pn	06 01 12.8	+1.0
KSM	Kuching	16.71 261	⇑P	Pn	06 01 13.6	+1.8
KMMI	Kalianget	16.99 229	P	Pn	06 01 14.4	-0.8
	71nm,0.8s					
TPI	Tanjungpandan	20.35 251	P	P	06 01 52.4	-0.5
	47nm,1.5s					
BJII	Banjamegara	20.54 236	P	P	06 01 56.9	+2.0
	108nm,1.5s					
YHNB	Yeheng	21.07 346	eP	P	06 01 59.3	-1.1
LEM	Lembang	22.06 240	P	P	06 02 12.4	+1.3
	124nm,0.9s,mb5.2					
FITZ	Fitzroy Crossi	22.14 183	eP	P	06 02 10.1	-1.7
	37nm,0.6s,mb4.9					
FITZ			eS	S	06 06 08.8	-2.8
FITZ	Fitzroy Crossi	22.14 183	P	P	06 02 10.0	-1.9
	21nm,0.6s,mb4.6,baz=17,slow=9.1,SNR=20					
FITZ			S	S	06 06 05.4	-6.2
	8.6nm,1.1s,baz=268,slow=23,SNR=1.9					
QZH	Quanzhou	22.14 340	P	P	06 02 13.5	+1.6
QIZ	Qiongzhong	22.23 313	⇑P	P	06 02 13.5	+0.6
JOW	Kunigami	22.60 3	P	P	06 02 15.7	-1.0
	72nm,0.7s,mb5.1,baz=186,slow=8.1,SNR=16					
GZH	Guangzhou	22.91 327	P	P	06 02 19.9	0.0
GZH			S	S	06 06 25.3	+1.2
GZH			LR	LR		
	comp=N,1µm,15.9s					
GZH			LR	LR		
	comp=E,1µm,16.5s					
GZH			LR	LR		
	comp=Z,2µm,14.6s					
MYKOM	Kota Tinggi	23.07 265	⇓P	P	06 02 21.1	-0.6
KGM	Kluang	23.57 266	⇓P	P	06 02 25.8	-0.5
KTGM	Kuala Trenggan	23.64 274	⇓P	P	06 02 27.3	+0.4
PMG	Port Moresby	24.32 124	P	P	06 02 35.5	+2.3
PMG			pmax	pmax		
	comp=Z,5.0nm,0.5s					
PMG	Port Moresby	24.32 124	P	P	06 02 35.5	+2.4
	comp=Z,4.9nm,0.5s,mb4.1,baz=297,slow=18,SNR=1.8					
WRA	Warramunga Arr	25.05 163	P	P	06 02 38.6	-1.0
WRA					06 06 12.2	
WRA			S	S	06 07 01.8	+3.2
WRA			pmax	pmax		
	comp=Z,65nm,0.9s					
WRA			pmax	pmax		
	comp=Z,2.0nm,0.8s					
WRA			smax			
	comp=N,3.0nm,1.0s					
WRA	Warramunga Arr	25.05 163	P	P	06 02 38.6	-1.0
	comp=N,65nm,0.9s,mb5.1,baz=344,slow=11,SNR=44					
WRA			PcP	PcP	06 06 12.2	-0.6
	comp=N,1.6nm,0.8s,baz=285,slow=3.4,SNR=2.2					
WRA			S	S	06 07 01.8	+3.1
	comp=N,3.3nm,1.0s,baz=337,slow=13,SNR=4.5					
WB2	Warramunga Arr	25.05 163	eP	P	06 02 36.2	-3.5
FRIM	Kepong	25.17 269	⇓P	P	06 02 42.5	+1.6
KULM	Kulim	26.12 274	eP	P	06 02 50.2	+0.8
KULM	Kulim	26.12 274	⇓P	P	06 02 51.7	+2.3
KKTK	Khon Kaen	26.51 299	P	P	06 02 52.0	-0.9
	comp=N,401nm,0.5s,mb6.2					
CBIJ	Chichi jima	27.13 31	P	P	06 02 57.0	-1.4
	comp=N,86nm,0.7s,mb5.4,baz=286,slow=22,SNR=3.5					
SSE	Sheshan	27.33 349	eP	P	06 03 00.9	+0.8
SSE			AMB	AMB		
	comp=Z,58nm,1.1s,mb5.0					
SSE			AMB	AMB		
	comp=Z,399nm,11.5s					
PSI	Prapat	27.89 268	P	P	06 03 04.0	-1.4
PSI	Prapat	27.89 268	P	P	06 03 04.0	-1.4
PSI			pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5					
PSI	Prapat	27.89 268	P	P	06 03 04.0	-1.4
	comp=Z,17nm,0.9s,mb4.5,baz=88,slow=2.9,SNR=11					
ASAR	Alice Springs	28.49 166	P	P	06 03 09.6	-0.9
ASAR					06 06 21.6	
ASAR			pmax	pmax		
	comp=Z,5.0nm,0.6s					
ASAR			pmax	pmax		
	comp=Z,3.0nm,0.7s					
ASAR			pmax	pmax		
	comp=N,2.0nm,0.9s					
ASAR	Alice Springs	28.49 166	P	P	06 03 09.6	-0.9
	comp=N,5.1nm,0.6s,mb4.2,baz=343,slow=6.5,SNR=16					
ASAR			PcP	PcP	06 06 21.6	+0.7
	comp=N,3.1nm,0.7s,baz=330,slow=1.9,SNR=3.7					
ASAR			ScP	ScP	06 10 02.7	+7.1
	comp=N,1.7nm,0.9s,baz=336,slow=2.0,SNR=4.2					
NST	Nakhon Sawan	28.64 295	P	P	06 03 11.0	-1.0
JNU	Nakatsue	29.07 7	P	P	06 03 14.1	-1.5
	comp=N,16nm,0.8s,mb4.7,baz=189,slow=5.1,SNR=8.6					
GYA	Guiyang	29.41 321	⇑iP	P	06 03 21.4	+2.7
GYA			AP	pP	06 03 39.9	+3.5
GYA			XP	sP	06 03 49.4	+4.1
GYA			PP	PP	06 04 20.6	-5.8
GYA			S	S	06 08 09.3	+1.9
GYA			XS	sS	06 08 41.0	+3.1
GYA			SS	SS	06 09 46.8	-28
GYA			AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1					
GYA			AMB	AMB		
	comp=Z,250nm,8.0s					
GYA			LR	LR		
	comp=N,740nm,16.8s					
GYA			LR	LR		
	comp=E,690nm,18.6s					
GYA			LR	LR		
	comp=Z,770nm,17.4s					
CTA	Charters Tower	30.73 142	P	P	06 03 29.7	-0.7
CTA			ScP	ScP	06 10 11.2	+8.4
CTA	Charters Tower	30.73 142	P	P	06 03 29.7	-0.7
CTA			pmax	pmax		
	comp=Z,3.0nm,0.7s					
CTA			pmax	pmax		
	comp=N,8.0nm,1.0s					
CTA	Charters Tower	30.73 142	P	P	06 03 29.7	-0.7
	comp=N,3.3nm,0.7s,mb4.2,baz=330,slow=8.1,SNR=2.4					
CTA			ScP	ScP	06 10 11.2	+8.4
	comp=N,7.6nm,1.0s,baz=336,slow=5.4,SNR=4.8					
KMI	Kunming	31.16 314	P	P	06 03 33.4	-0.8
KMI			AP	pP	06 03 53.8	+1.8
KMI			XP	sP	06 04 03.1	+2.3
KMI			PP	PP	06 04 42.0	-3.9
KMI			S	S	06 08 36.6	+1.7
KMI			AMB	AMB		
	comp=Z,19nm,1.0s,mb4.8					
KMI			AMB	AMB		
	comp=Z,50nm,5.3s					
KMI			LR	LR		
	comp=N,440nm,16.9s					
KMI			LR	LR		
	comp=E,580nm,16.9s					
KMI			LR	LR		
	comp=Z,1µm,18.6s					
TIA	Tai'an	33.14 346	eP	P	06 03 52.6	+1.2
TIA			AMB	AMB		
	comp=Z,45nm,1.0s,mb5.2					
KSRS	Korea Array	33.16 2	P	P	06 03 51.0	-0.6
	comp=Z,16nm,0.8s,mb4.9,baz=179,slow=9.5,SNR=59					
KSRS			PcP	PcP	06 06 34.0	+1.0
	comp=Z,4.7nm,0.8s,baz=204,slow=2.6,SNR=9.6					
MAJO	Matsushiro	33.90 17	eP	P	06 03 55.9	-2.1
	comp=Z,285nm,2.5s,mb5.7					
MAJO	Matsushiro	33.90 17	eP	P	06 03 55.9	-2.1
MAJO			pmax	pmax		
	comp=Z,285nm,2.5s,mb5.7					
MAT	Matsushiro	33.90 17	P	P	06 03 55.2	-2.8
MJAR	Matsushiro Arr	33.90 17	P	P	06 03 55.9	-2.1
MJAR					06 06 36.3	
MJAR			pmax	pmax		
	comp=Z,8.0nm,0.8s					
MJAR			pmax	pmax		
	comp=Z,3.0nm,0.7s					
MJAR	Matsushiro Arr	33.90 17	P	P	06 03 55.9	-2.1
	comp=Z,7.5nm,0.8s,mb4.6,baz=188,slow=10,SNR=13					
MJAR			PcP	PcP	06 06 36.3	+1.2
	comp=Z,2.8nm,0.7s,baz=175,slow=3.6,SNR=4.3					
XAN	Xi'an	34.09 333	P	P	06 03 58.0	-1.7
XAN			AMB	AMB		
	comp=Z,38nm,1.1s,mb5.1					
XAN			LR	LR		
	comp=N,1µm,16.3s					
XAN			LR	LR		
	comp=E,2µm,18.1s					
XAN			LR	LR		
	comp=Z,3µm,17.6s					
CD2	Chengdu	34.37 323	⇓iP	P	06 04 01.3	-0.9
CD2			AP	pP	06 04 19.3	-0.8
CD2			XP	sP	06 04 28.3	-0.6
CD2			PP	PP	06 05 18.8	-2.6
CD2			PCP	PcP	06 06 35.5	-1.1
CD2			S	S	06 09 22.8	-1.8
CD2			XS	sS	06 09 54.0	-1.4
CD2			AMB	AMB		
	comp=Z,40nm,1.2s,mb5.1					
CD2			AMB	AMB		
	comp=Z,160nm,12.0s					
CD2			LR	LR		
	comp=N,1µm,15.6s					
CD2			LR	LR		
	comp=E,2µm,15.6s					
CD2			LR	LR		
	comp=Z,2µm,15.6s					
FORT	Forrest	34.75 178	eP	P	06 04 04.4	-1.0
	comp=Z,54nm,0.7s,mb5.5					
DL2	Dalian	34.92 353	P	P	06 04 07.4	+0.6
DL2			AP	pP	06 04 25.5	+0.7
DL2			eS	S	06 09 32.8	0.0
DL2			AMB	AMB		
	comp=Z,50nm,0.6s,mb5.5					
DL2			LR	LR		
	comp=N,540nm,16.5s					
DL2			LR	LR		
	comp=E,410nm,13.0s					
DL2			LR	LR		
	comp=Z,740nm,16.6s					
KLBR	Kellerberrin	36.57 193	⇓iP	P	06 04 20.5	-0.5
	comp=Z,27nm,0.6s,mb5.4					
BJT	Baijiatuau	36.99 346	eP	P	06 04 24.6	+0.1
	comp=Z,191nm,0.9s,mb6.0					
BJT	Baijiatuau	36.99 346	eP	P	06 04 24.6	+0.2
BJT			pmax	pmax		
	comp=Z,191nm,0.9s					
BJI	Beijing	37.01 346	P	P	06 04 24.8	+0.2
BJI			AP	pP	06 04 41.8	-0.9
BJI			XP	sP	06 04 50.0	-1.4
BJI			PP	PP	06 05 49.5	-0.8
BJI			S	S	06 10 04.1	-0.6
BJI			SS	SS	06 12 48.8	+1.1
BJI			AMB	AMB		
	comp=Z,178nm,1.0s,mb6.0					
BJI			LR	LR		
	comp=N,899nm,18.2s					
BJI			LR	LR		
	comp=E,979nm,17.5s					
BJI			LR	LR		
	comp=Z,980nm,20.0s					
MUN	Mundaring	37.32 195	eP	P	06 04 26.7	-0.6
SNY	Shenyang	37.63 356	⇑P	P	06 04 30.0	+0.2
SNY			AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1					
NWAO	Narrogin (SRO)	37.98 193	P	P	06 04 32.4	-0.5
NWAO			pmax	pmax		
	comp=Z,25nm,0.9s					
NWAO	Narrogin (SRO)	37.98 193	P	P	06 04 32.4	-0.5
	comp=Z,25nm,0.9s,mb5.0,baz=20,slow=12,SNR=8.6					
LZH	Lanzhou	38.20 329	⇑iP	P	06 04 34.5	-0.2
LZH			AP	pP	06 04 52.4	-0.5
LZH			XP	sP	06 05 02.5	+0.9
LZH			PP	PP	06 06 11.3	+7.8
LZH			eS	S	06 10 17.1	-5.8
LZH			XS	sS	06 10 56.0	+2.1
LZH			SS	SS	06 13 06.0	-7.7
LZH			AMB	AMB		
	comp=Z,58nm,1.1s,mb5.3					
LZH			AMB	AMB		
	comp=Z,267nm,5.4s					
LZH			LR	LR		
	comp=N,1µm,13.4s					
LZH			LR	LR		
	comp=Z,2µm,14.3s					
STKA	Stephens Creek	38.48 160	eP	P	06 04 36.8	-0.3
	comp=Z,36nm,0.7s,mb5.3					
STKA	Stephens Creek	38.48 160	P	P	06 04 36.9	-0.2
	comp=Z,65nm,1.0s,mb5.4,baz=336,slow=8.9,SNR=21					
HHC	Hu-ho-hao-te	39.04 342	eP	P	06 04 41.5	-0.2
HHC			AP	pP	06 05 00.0	+0.1
HHC			XP	sP	06 05 08.8	+0.2
HHC			PP	PP	06 06 16.8	+4.2
HHC			PCP	PcP	06 06 45.3	-5.2
HHC			S	S	06 10 34.9	-0.5
HHC			SS	SS	06 13 24.8	-5.6
HHC			SCS	ScS	06 14 41.0	-2.7
HHC			AMB	AMB		
	comp=Z,17nm,1.1s,mb4.8					
HHC			AMB	AMB		
	comp=Z,246nm,7.0s					
HHC			LR	LR		
	comp=N,582nm,15.5s					
HHC			LR	LR		
	comp=E,551nm,14.3s					
HHC			LR	LR		
	comp=Z,1µm,16.7s					
CN2	Changchun	39.51 358	eP	P	06 04 44.6	-1.0
CN2			eXP	sP	06 05 12.0	-0.5
CN2			PCP	PcP	06 06 53.6	+1.7
CN2			eS	S	06 10 42.3	-0.1
CN2			AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8					
CN2			AMB	AMB		
	comp=Z,200nm,4.0s					
CN2			LR	LR		
	comp=N,900nm,16.0s					
CN2			LR	LR		
	comp=E,500nm,16.0s					
CN2			LR	LR		
	comp=Z,1µm,16.0s					
MDJ	Mudanjiang	40.38 3	P	P	06 04 53.1	+0.4
MDJ			AP	pP	06 05 10.3	-0.7
MDJ			XP	sP	06 05 18.8	-0.9
MDJ			PP	PP	06 06 26.4	-0.7
MDJ			PCP	PcP	06 06 56.0	+1.4
MDJ			AMB	AMB		
	comp=Z,34nm,1.3s,mb5.0					
MDJ			AMB	AMB		
	comp=Z,386nm,5.2s					
MDJ			LR	LR		
	comp=N,363nm,13.4s					
MDJ			LR	LR		
	comp=E,831nm,13.4s					
MDJ			LR	LR		
	comp=Z,1µm,13.4s					
MDJ	Mudanjiang	40.38 3	eP	P	06 04 52.2	-0.6
	comp=Z,41nm,1.1s,mb5.2					
ARMA	Armidale	41.76 147	eP	P	06 05 04.9	+0.6
ASAJ	Asahikawa	42.17 17	P	P	06 05 07.3	-0.1
ASAJ			pmax	pmax		
	comp=Z,32nm,0.8s					
ASAJ	Asahikawa	42.17 17	P	P	06 05 07.3	-0.1
	comp=Z,32nm,0.8s,mb5.1,baz=236,slow=14,SNR=8.9					
LSA	Lhasa	42.24 311	eP	P	06 05 08.9	+0.6
	comp=Z,28nm,0.8s,mb5.0					
LSA	Lhasa	42.24 311	eP	P	06 05 08.9	+0.6
LSA			pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0					
GTA	Gaotai	42.80 329	⇑P	P	06 05 12.0	-0.6
GTA			PP	PP	06 06 55.1	+1.8
GTA			S	S	06 11 35.8	+4.6
GTA			AMB	AMB		
	comp=Z,18nm,0.8s,mb4.8					
GTA			AMB	AMB		
	comp=Z,85nm,3.8s					
GTA			LR	LR		
	comp=N,845nm,16.0s					
GTA			LR	LR		
	comp=E,699nm,17.9s					
GTA			LR	LR		
	comp=Z,1µm,16.7s					
TAPN	Taplejung	43.85 306	eP	P	06 05 19.0	-2.3
	comp=Z,64nm,0.7s,mb5.5					
ODAN	Odare	43.91 305	eP	P	06 05 21.1	-0.7
	comp=Z,99nm,0.7s,mb5.7					
CNB	Canberra Magne	44.59 153	eP	P	06 05 28.3	+1.2
	comp=Z,50nm,1.3s,mb5.1					
HABR	Khabarovsk	44.72 8	P	P	06 05 25.0	-2.9
HABR			eS	S	06 11 53.5	-5.5
HABR			e		06 15 14.1	
YSS	Yuzh-Sakhalins	44.82 15	eP	P	06 05 28.6	0.0
	comp=Z,65nm,1.4s,mb5.2					
YSS	Yuzh-Sakhalins	44.82 15	eP	P	06 05 27.7	-1.0
YSS			e		06 05 35.0	
KLR	Kul'dur	45.12 5	eP	P	06 05 27.3	-3.7
JIRN	Jiri	45.21 306	eP	P	06 05 31.2	-1.0
	comp=Z,85nm,0.7s,mb5.6					
HIA	Hailar	45.36 353	eP	P	06 05 32.9	-0.1
	comp=Z,35nm,1.0s,mb5.0					
HIA	Hailar	45.36 353	c iP	P	06 05 33.2	+0.3
KKN	Kakani	46.00 305	eP	P	06 05 37.7	-0.7
	comp=Z,34nm,0.7s,mb5.2					
KKN	Kakani	46.00 305	eP	P	06 05 37.7	-0.7
KKN			pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2					
GKN	Gorkha	46.61 305	eP	P	06 05 42.0	-1.2
	comp=Z,33nm,0.7s,mb5.2					
DZM	Mont Dzumac	46.69 126	P	P	06 05 44.5	+0.6
	comp=Z,9.0nm,0.8s,mb4.6,baz=280,slow=9.9,SNR=6.9					
ULN	Ulaanbaatar	46.76 342	eP	P	06 05 44.2	+0.3
SONM	Songino Array	46.94 341	P	P	06 05 45.5	+0.1
SONM					06 07 17.8	
SONM			pmax	pmax		
	comp=Z,8.0nm,0.5s					
SONM			pmax	pmax		
	comp=Z,9.0nm,0.8s					
SONM	Songino Array	46.94 341	P	P	06 05 45.5	+0.2
	comp=Z,8.1nm,0.5s,mb4.7,baz=158,slow=7.8,SNR=68					
SONM			PcP	PcP	06 07 17.8	+1.0
	comp=Z,8.9nm,0.8s,baz=154,slow=3.2,SNR=7.4					
CIT	Chita	48.98 349	eP	P	06 06 01.9	+0.9
CIT			e		06 06 10.4	
CIT			e	pP	06 06 16.0	-3.8
CIT			pmax	pmax		
	comp=Z,150nm,1.8s,mb5.6					
HYB	Hyderabad	49.07 289	iP	P	06 06 02.5	+0.2
ZAK	Zakamensk	50.17 341	eP	P	06 06 11.8	+1.7
ZAK			e		06 07 30.0	
ZAK			pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2					
ZAK			pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6					
TLY	Talaya	51.17 342	eP	P	06 06 18.9	+1.3
TLY	Talaya	51.17 342	eP	P	06 06 18.8	+1.2
TLY			pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2					
IRK	Irkutsk	51.46 342	eP	P	06 06 20.3	+0.5
IRK			pmax	pmax		
	comp=Z,48nm,1.4s,mb5.3					
MOY	Mondy	52.03 340	eP	P	06 06 21.6	-2.4
MOY			pmax	pmax		
	comp=Z,42nm,1.9s,mb5.1					
WMQ	Urumqi	52.44 325	⇑iP	P	06 06 26.9	-0.4
WMQ			AP	pP	06 06 46.0	-0.2
WMQ			XP	sP	06 06 55.4	+0.6
WMQ			PCP	PcP	06 07 36.9	-0.2
WMQ			PP	PP	06 08 27.4	+0.6
WMQ			SCP	ScP	06 11 25.4	-2.4
WMQ			PCS	PcS	06 11 33.9	-1.5
WMQ			S	S	06 13 45.4	-2.5
WMQ			XS	sS	06 14 18.4	-1.8
WMQ			SCS	ScS	06 16 06.0	-4.1
WMQ			SS	SS	06 17 24.1	-2.7
WMQ			AMB	AMB		
	comp=Z,22nm,1.0s,mb5.1					
WMQ			AMB	AMB		
	comp=Z,380nm,6.2s					
WMQ			LR	LR		
	comp=N,3µm,17.5s					
WMQ			LR	LR		
	comp=E,2µm,16.1s					
WMQ			LR	LR		
	comp=Z,2µm,15.5s					
BOD	Bodaibo	54.47 352	⇓iP	P	06 06 42.1	+0.3
BOD			pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3					
MK31	Makanchi Array	57.27 325	iP	P	06 07 01.4	-0.7
MK31			pmax	pmax		
	comp=Z,25nm,0.7s,mb5.3					
MKAR	Makanchi Array	57.27 325	P	P	06 07 01.5	-0.6
MKAR			ScP	ScP	06 11 55.0	+6.1
MKAR			⇑e		06 37 03.8	
MKAR	Makanchi Array	57.27 325	iP	P	06 07 01.5	-0.6
MKAR			pmax	pmax		
	comp=Z,26nm,0.7s					
MKAR	Makanchi Array	57.27 325	P	P	06 07 01.5	-0.6
	comp=Z,26nm,0.7s,mb5.4,baz=125,slow=8.2,SNR=89					
MKAR			ScP	ScP	06 11 55.0	+6.1
	comp=Z,2.3nm,0.8s,baz=129,slow=4.1,SNR=5.6					
MKAR			PKP2bc		06 37 03.8	
	comp=Z,0.5nm,0.9s,baz=318,slow=1.9,SNR=3.0					
YAK	Yakutsk	57.79 2	eP	P	06 07 05.2	-0.2
	comp=Z,181nm,0.8s,mb6.2					
YAK	Yakutsk	57.79 2	c iP	P	06 07 05.6	+0.2
YAK			e*PP	pP	06 07 15.7	-9.0
YAK			e		06 07 54.8	
YAK			eS	S	06 15 07.2	+8.5

YAK				pmax	pmax		
	comp=Z,153nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=N,41nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				smax			
	comp=N,183nm,4.6s						
YAK				smax			
	comp=E,161nm,5.2s						
MA2	**Magadan**	**58.28**	**14**	*e*P	**P**	**06 07 07.5**	**-1.4**
MA2				*e*S	**S**	**06 14 57.5**	**-7.7**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
KZA	**Kyzart**	**59.38**	**317**	P	**P**	**06 07 17.3**	**+0.4**
	SNR=9.7						
TKM2	**Tokmak 2**	**59.50**	**318**	*e*P	**P**	**06 07 17.4**	**-0.3**
	comp=Z,13nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**59.50**	**318**	*e*P	**P**	**06 07 17.4**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
TKM2	**Tokmak 2**	**59.50**	**318**	P	**P**	**06 07 17.4**	**-0.3**
	SNR=12						
UCH	**Uchtor**	**59.94**	**317**	*e*P	**P**	**06 07 20.9**	**+0.2**
	comp=Z,34nm,1.1s,mb5.3						
UCH	**Uchtor**	**59.94**	**317**	P	**P**	**06 07 21.2**	**+0.5**
	SNR=19						
USP	**Ospenovka**	**60.38**	**318**	P	**P**	**06 07 23.1**	**-0.6**
	SNR=16						
AML	**Almayashu**	**60.46**	**317**	*e*P	**P**	**06 07 24.9**	**+0.7**
	comp=Z,29nm,1.0s,mb5.3						
AML	**Almayashu**	**60.46**	**317**	P	**P**	**06 07 23.6**	**-0.6**
	SNR=15						
EKS2	**Erkin-Say**	**60.61**	**317**	*e*P	**P**	**06 07 25.7**	**+0.4**
	comp=Z,13nm,0.7s,mb5.1						
EKS2	**Erkin-Say**	**60.61**	**317**	P	**P**	**06 07 25.1**	**-0.2**
	SNR=12						
KURK	**Kurchatov**	**61.45**	**327**	P	**P**	**06 07 30.5**	**-0.3**
	comp=Z,451nm,0.6s,SNR=24						
KURK	**Kurchatov**	**61.45**	**327**	*e*P	**P**	**06 07 30.3**	**-0.5**
	comp=Z,52nm,0.6s,mb5.7						
KURK	**Kurchatov**	**61.45**	**327***c*	*i*P	**P**	**06 07 30.1**	**-0.7**
NVS	**Novosibirsk**	**61.55**	**333**	*i*P	**P**	**06 07 29.8**	**-1.6**
NVS				*e*S	**S**	**06 15 41.0**	**-6.3**
NVS				pmax	pmax		
	comp=N,11nm,1.1s						
NVS				pmax	pmax		
	comp=E,19nm,1.1s						
NVS				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
NVS				smax			
	comp=N,13nm,1.8s						
NVS				smax			
	comp=E,11nm,1.8s						
KK31	**Karatay Array**	**63.00**	**317**	*i*P	**P**	**06 07 40.7**	**-0.6**
KK31				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BRVK	**Borovoye**	**67.10**	**327**	*e*P	**P**	**06 08 07.5**	**-0.3**
CHKZ	**Chkalovo**	**67.19**	**328**	*e*P	**P**	**06 08 07.7**	**-0.6**
	comp=Z,21nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**67.19**	**328**	*e*P	**P**	**06 08 07.7**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
TIXI	**Tiksi**	**67.43**	**1**	*e*P	**P**	**06 08 08.7**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.2						
BILL	**Bilibino**	**69.13**	**15**⇑	*e*P	**P**	**06 08 19.7**	**-0.4**
BILL				*e*		06 08 44.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s						
UNV	**Unalaska Valle**	**73.03**	**35**	*e*P	**P**	**06 08 45.9**	**+1.9**
AKTK	**Aktyubinsk**	**73.40**	**322**	P	**P**	**06 08 46.1**	**-0.1**
AKTO	**Aktyubinsk**	**73.40**	**322**	P	**P**	**06 08 46.1**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.1						
AKTO	**Aktyubinsk**	**73.40**	**322**	P	**P**	**06 08 46.1**	**-0.1**
	comp=Z,24nm,0.7s,mb5.1,baz=99,slow=8.0,SNR=60						
SVE	**Sverdlovsk**	**73.66**	**328**⇑	*e*P	**P**	**06 08 47.9**	**+0.3**
SVE				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.2						
GAMB	**Gambell**	**73.98**	**24**	*e*P	**P**	**06 08 50.1**	**+0.8**
ARU	**Arti**	**74.64**	**328**	*e*P	**P**	**06 08 53.0**	**-0.3**
ARU	**Arti**	**74.64**	**328***d*	*i*P	**P**	**06 08 52.3**	**-1.0**
ARU				*e*		06 09 03.6	
ARU				S	S	06 18 19.9	-3.3
ARU				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.2						
QRN	**Al-Qurain**	**78.30**	**298**	*e*P	**P**	**06 09 09.8**	**-4.9**
QRN				AMb	AMB	06 09 14.3	
	comp=Z,42nm,0.4s,mb5.5						
RDF	**Al-Radifah**	**78.63**	**299**	*e*P	**P**	**06 09 14.2**	**-2.3**
RDF				AMb	AMB	06 09 18.0	
	comp=Z,32nm,1.0s,mb5.1						
MIB	**Mutribah**	**78.84**	**299**	*e*P	**P**	**06 09 14.6**	**-3.0**
MIB				AMb	AMB	06 09 19.0	
	comp=Z,50nm,0.7s,mb5.4						
NAY	**Al-Naaiem**	**78.91**	**299**	*e*P	**P**	**06 09 16.1**	**-1.8**
NAY				AMb	AMB	06 09 18.4	
	comp=Z,18nm,1.0s,mb4.8						
SVW2	**Sparrevohn**	**80.39**	**29**	*e*P	**P**	**06 09 26.8**	**+1.5**
TTA	**Tatalina**	**80.49**	**27**	*e*P	**P**	**06 09 26.5**	**+0.7**
KDAK	**Kodiak Island**	**81.49**	**32**	P	**P**	**06 09 32.0**	**+0.8**
	comp=Z,33nm,0.8s,mb5.2,baz=257,slow=3.1,SNR=20						
IMA2	**Indian Mountai**	**81.96**	**24**	*e*P	**P**	**06 09 35.0**	**+1.5**
ZEI	**Tsey**	**82.01**	**312**	*e*P	**P**	**06 09 34.8**	**+0.5**
ZEI				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
PRGR	**Permogore**	**82.19**	**332**⇑	*i*P	**P**	**06 09 35.0**	**+0.2**
PRGR				*e*S	S	06 19 43.2	-0.6
KIV	**Kislovodsk**	**82.93**	**314**	*e*P	**P**	**06 09 39.5**	**+0.5**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
SLKM	**Skilak Lake**	**82.94**	**30**	*e*P	**P**	**06 09 39.2**	**+0.5**
PMR	**Palmer**	**83.53**	**29**	*e*P	**P**	**06 09 42.1**	**+0.3**
	comp=Z,58nm,0.8s,mb5.5						
PMR	**Palmer**	**83.53**	**29**	*e*P	**P**	**06 09 42.1**	**+0.3**
PMR				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.5						
VRHR	**Novokhopersk**	**83.78**	**321**	*e*P	**P**	**06 09 38.9**	**-4.4**
VRHR				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb5.0						
VRHR				pmax	pmax		
	comp=N,6.0nm,0.3s						
VRHR				pmax	pmax		
	comp=E,4.0nm,0.3s						
VNDA	**Vanda**	**83.82**	**173**	P	**P**	**06 09 43.8**	**+0.9**
	baz=308,slow=6.9						
SML	**Sawmill**	**83.92**	**28**	*e*P	**P**	**06 09 44.5**	**+0.7**
MAW	**Mawson**	**84.18**	**200**	P	**P**	**06 09 45.9**	**+1.0**
MAW				pmax	pmax		
	comp=Z,11nm,1.2s						
MAW	**Mawson**	**84.18**	**200**	P	**P**	**06 09 45.9**	**+1.0**
	comp=Z,11nm,1.1s,mb4.6,baz=50,slow=4.9,SNR=3.0						
COLA	**College**	**84.28**	**25**⇓	*e*P	**P**	**06 09 45.8**	**+0.3**
SBA	**Scott Base**	**84.73**	**172**	*e*P	**P**	**06 09 48.5**	**+1.0**
	comp=Z,20nm,1.2s,mb4.9						
SBA	**Scott Base**	**84.73**	**172**	*e*P	**P**	**06 09 48.5**	**+1.0**
SBA				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
EYAK	**Cordova Ski Ar**	**85.15**	**30**	*e*P	**P**	**06 09 50.5**	**+0.6**
	comp=Z,17nm,0.8s,mb5.0						
VORD	**Divnogorie**	**85.25**	**321**	*e*P	**P**	**06 09 50.8**	**+0.1**
VORD				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
VORD				pmax	pmax		
	comp=N,10.0nm,1.2s						
VORD				pmax	pmax		
	comp=E,30nm,1.2s						
VRSR	**Storozhevoye**	**85.32**	**321**	*e*P	**P**	**06 09 51.5**	**+0.5**
VRSR				pmax	pmax		
	comp=N,2.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,8.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MOS	**Moscow**	**86.16**	**325**	*e*P	**P**	**06 09 53.9**	**-1.2**
MOS				pmax	pmax		
	comp=Z,167nm,1.2s,mb5.8						
MALT	**Malatya**	**86.20**	**308**	⇑P	**P**	**06 09 57.9**	**+2.2**
MALT	**Malatya**	**86.20**	**308**⇑	*i*P	**P**	**06 09 57.9**	**+2.2**
ANN	**Anapa**	**86.68**	**315**	*e*P	**P**	**06 09 57.9**	**0.0**
ANN				pmax	pmax		
	comp=Z,87nm,1.6s,mb5.4						
OBN	**Obninsk**	**86.78**	**325**	*e*P	**P**	**06 09 58.0**	**-0.1**
	comp=Z,137nm,1.3s,mb5.7						
OBN	**Obninsk**	**86.78**	**325***c*	*i*P	**P**	**06 09 58.2**	**+0.1**
OBN				*e*		06 10 10.3	
OBN				pmax	pmax		
	comp=Z,104nm,1.2s,mb5.6						
EGAK	**Eagle**	**87.14**	**25**	*e*P	**P**	**06 09 60.0**	**+0.3**
	comp=Z,6.6nm,0.9s,mb4.6						
APA	**Apatity**	**87.51**	**337**⇑	*i*P	**P**	**06 10 05.4**	**+4.0**
APA				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
ASF	**Jabal al Asfar**	**87.76**	**302**	P	**P**	**06 10 03.8**	**+0.4**
ASF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ASF	**Jabal al Asfar**	**87.76**	**302**	P	**P**	**06 10 03.8**	**+0.4**
	comp=Z,4.1nm,0.7s,mb4.6,baz=182,slow=1.1,SNR=5.0						
DAWY	**Dawson**	**87.96**	**26**	*e*P	**P**	**06 10 04.8**	**+1.2**
JOF	**Joensuu**	**88.86**	**333**	*e*p	**P**	**06 10 06.8**	**-1.1**
	comp=Z,21nm,0.7s,mb5.3						
JOF	**Joensuu**	**88.86**	**333**	*e*P	**P**	**06 10 06.8**	**-1.1**
JOF				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.3						
KEV	**Kevo**	**89.54**	**340**	*e*p	**P**	**06 10 10.7**	**-0.2**
	comp=Z,2.7nm,0.6s,mb4.5						
KEV	**Kevo**	**89.54**	**340**	*e*P	**P**	**06 10 10.7**	**-0.2**
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
EIL	**Elat**	**89.61**	**300**	P	**P**	**06 10 14.1**	**+1.9**
EIL	**Elat**	**89.61**	**300**	P	**P**	**06 10 14.1**	**+1.9**
	comp=Z,4.7nm,0.7s,mb4.7,baz=300,slow=9.8,SNR=4.2						
KMBO	**Kilima Mbogo**	**89.66**	**269**	*i*P	**P**	**06 10 14.1**	**+1.4**
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMBO	**Kilima Mbogo**	**89.66**	**269**	P	**P**	**06 10 13.3**	**+0.6**
	comp=Z,5.4nm,1.0s,mb4.6,baz=34,slow=6.6,SNR=7.4						
INK	**Inuvik**	**89.74**	**22**	*e*P	**P**	**06 10 12.0**	**0.0**
	comp=Z,483nm,1.1s						
INK	**Inuvik**	**89.74**	**22**	*e*P	**P**	**06 10 12.0**	**+0.1**
INK				pmax	pmax		
	comp=Z,483nm,1.1s						
BRTR	**Keskin Array B**	**89.83**	**310**	*i*P	**P**	**06 10 12.5**	**-0.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**89.83**	**310**	P	**P**	**06 10 12.5**	**-0.5**
	comp=Z,2.1nm,0.8s,mb4.3,baz=120,slow=3.5,SNR=7.8						
ARCES	**ARCESS Array B**	**90.10**	**340**	P	**P**	**06 10 13.4**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARCES	**ARCESS Array B**	**90.10**	**340**	P	**P**	**06 10 13.4**	**-0.2**
	comp=Z,7.5nm,0.6s,mb5.0,baz=79,slow=6.8,SNR=40						
KAF	**Kangasniemi**	**91.28**	**332**	*e*p	**P**	**06 10 17.6**	**-1.6**
	comp=Z,3.5nm,0.6s,mb4.7,baz=76,slow=4.3						
KAF	**Kangasniemi**	**91.28**	**332**	*e*P	**P**	**06 10 17.6**	**-1.6**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**06 10 20.3**	**0.0**
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**06 10 20.3**	**0.0**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**06 10 20.3**	**0.0**
	comp=Z,5.9nm,0.8s,mb4.9,baz=74,slow=4.8,SNR=14						
AKASG	**Malin Array Be**	**91.64**	**321**	P	**P**	**06 10 20.4**	**-0.7**
AKASG	**Malin Array Be**	**91.64**	**321**	P	**P**	**06 10 20.4**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
AKASG	**Malin Array Be**	**91.64**	**321**	P	**P**	**06 10 20.4**	**-0.7**
	comp=Z,9.6nm,0.7s,mb5.1,baz=69,slow=4.5,SNR=34						
KIS	**Kishinev**	**92.45**	**317**	*e*P	**P**	**06 10 30.0**	**+5.0**
KIS				LRM		06 48 12.0	
	comp=Z,800nm,20.0s						
SYO	**Syowa Base**	**92.85**	**201**⇑	*e*P	**P**	**06 10 25.2**	**-1.1**
SYO	**Syowa Base**	**92.85**	**201**⇑	*e*PcP	PcP	06 10 28.5	+1.6
SYO	**Syowa Base**	**92.85**	**201**⇑	*e*pP	pP	06 10 47.2	+0.3
DLBC	**Dease Lake**	**93.34**	**31**	P	**P**	**06 10 30.0**	**+1.2**
	baz=291,slow=6.4						
QSPA	**South Pole Qui**	**94.05**	**180**	*e*P	**P**	**06 10 32.6**	**+1.0**
	comp=Z,17nm,1.1s,mb5.3						
VRI	**Vrincioaia**	**94.07**	**316**	⇓P	**P**	**06 10 33.0**	**+0.5**
VRI	**Vrincioaia**	**94.07**	**316**⇓	*i*P	**P**	**06 10 33.0**	**+0.6**
SUW	**Suwalki**	**94.64**	**325**	*e*P	**P**	**06 10 35.2**	**+0.3**
MLR	**Muntele Rosu**	**94.67**	**316**	⇑P	**P**	**06 10 35.9**	**+0.7**
MLR	**Muntele Rosu**	**94.67**	**316**⇑	*i*P	**P**	**06 10 35.9**	**+0.7**
BURAR	**Bucovina Array**	**94.76**	**318**	⇑P	**P**	**06 10 36.2**	**+0.6**
BURAR	**Bucovina Array**	**94.76**	**318**⇑	*i*P	**P**	**06 10 36.2**	**+0.6**
KWP	**Kalwaria**	**95.95**	**321**	*e*P	**P**	**06 10 40.9**	**-0.1**
KWP	**Kalwaria**	**95.95**	**321**	*e*P	**P**	**06 10 40.9**	**-0.1**
KWP	**Kalwaria**	**95.95**	**321**⇓	*i*P	**P**	**06 10 41.6**	**+0.6**
KOLS	**Kolonicke sedl**	**96.39**	**320**	*e*P	**P**	**06 10 43.7**	**+0.7**
TRPA	**Tarpa**	**96.41**	**319**⇓	*i*P	**P**	**06 10 42.7**	**-0.4**
UZH	**Uzhgorod**	**96.45**	**320**⇑	*i*P	**P**	**06 10 44.0**	**+0.8**
UZH				*e*		06 10 52.3	
DRGR		**96.61**	**318**	⇑P	**P**	**06 10 44.4**	**+0.4**
DRGR		**96.61**	**318**⇑	*i*P	**P**	**06 10 44.3**	**+0.3**
DAG	**Danmarks Havn**	**96.86**	**352**⇑	*i*P	**P**	**06 10 44.6**	**+0.1**
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.4						
DAG	**Danmarks Havn**	**96.86**	**352**⇑	*i*P	**P**	**06 10 44.6**	**+0.1**
	comp=Z,9.3nm,0.6s,mb5.4						
GZR	**Gura Zlata**	**96.88**	**316**	⇑P	**P**	**06 10 46.2**	**+1.0**
GZR	**Gura Zlata**	**96.88**	**316**⇑	*i*P	**P**	**06 10 46.2**	**+1.0**
CRVS	**Cervenica-Dubn**	**96.92**	**320**	*e*P	**P**	**06 10 46.2**	**+0.8**
STHS	**Stebnicka Huta**	**96.93**	**321**	*i*P	**P**	**06 10 47.1**	**+1.7**
	comp=Z,5.7nm,0.7s,mb5.1						
STHS	**Stebnicka Huta**	**96.93**	**321**	*i*P	**P**	**06 10 47.1**	**+1.7**
STHS				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb5.1						
BZS	**Buzias**	**97.62**	**317**	⇓P	**P**	**06 10 48.6**	**0.0**
BZS	**Buzias**	**97.62**	**317**⇓	*i*P	**P**	**06 10 48.6**	**0.0**
KECS	**Kecovo**	**97.65**	**320**	*e*P	**P**	**06 10 48.7**	**0.0**
	comp=Z,6.1nm,0.8s,mb5.2						
KECS	**Kecovo**	**97.65**	**320**	*e*P	**P**	**06 10 48.7**	**0.0**
KECS				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.2						
NB2	**NORSAR Subarra**	**98.46**	**334**	P	**P**	**06 10 51.1**	**-0.9**
	comp=Z,4.2nm,0.8s,mb5.0,baz=67,slow=4.6						
NB2	**NORSAR Subarra**	**98.46**	**334**	P	**P**	**06 10 51.1**	**-0.9**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb5.0						
NOA	**NORSAR Array B**	**98.46**	**334**	P	**P**	**06 10 50.9**	**-1.1**
NOA	**NORSAR Array B**	**98.46**	**334**	P	**P**	**06 10 50.9**	**-1.1**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	**NORSAR Array B**	**98.46**	**334**	P	**P**	**06 10 50.9**	**-1.1**
	comp=Z,3.1nm,0.8s,mb4.9,baz=69,slow=4.4,SNR=5.2						
OKC	**Ostrava-Krasne**	**98.75**	**322**	*e*PDIF	**P**	**06 10 54.7**	**+1.1**
YKA	**Yellowknife Ar**	**99.08**	**24**	P	**P**	**06 10 54.9**	**+0.2**
YKA	**Yellowknife Ar**	**99.08**	**24**	*i*P	**P**	**06 10 55.4**	**+0.7**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
YKA	**Yellowknife Ar**	**99.08**	**24**	P	**P**	**06 10 54.9**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.8,baz=299,slow=4.4,SNR=21						
MORC	**Moravsky Berou**	**99.14**	**322**⇑	*i*P	**P**	**06 10 56.1**	**+0.8**
PKSM	**Moragy**	**99.47**	**318**	⇓P	Pdif	06 10 56.2	-0.5
PKSM	**Moragy**	**99.47**	**318**⇓	*i*P	Pdif	06 10 56.2	-0.4
DPC	**Dobruska-Polom**	**99.72**	**322**	*e*PDIF	Pdif	06 10 59.2	+1.5
TREC	**Trest**	**100.57**	**322**	*e*PDIF	Pdif	06 11 02.7	+1.2
PVCC	**Panska Ves**	**100.71**	**323**	*e*PDIF	Pdif	06 11 03.5	+1.3
BRG	**Berggiesshubel**	**100.97**	**324**⇓	*i*P	Pdif	06 11 04.6	+1.3
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**100.97**	**324**⇓	*i*P	Pdif	06 11 04.6	+1.3
	comp=Z,11nm,0.8s						
CLL	**Collm**	**101.36**	**324**⇓	*i*Pdif	Pdif	06 11 05.8	+0.7
	comp=Z,7.0nm,0.8s						
CLL				*e*		06 11 21.0	
CLL	**Collm**	**101.36**	**324**⇓	*i*P	Pdif	06 11 05.8	+0.7
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	**Collm**	**101.36**	**324**⇓	*i*Pdif	Pdif	06 11 05.8	+0.7
	comp=Z,7.0nm,0.8s						
CLL				*e*pPdif		06 11 21.0	
CLL				*e*PP	PP	06 15 22.0	+7.0
GERES	**GERESS Array B**	**101.83**	**322**	P	Pdif	06 11 07.8	+0.7
GERES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	**GERESS Array B**	**101.83**	**322**	P	Pdif	06 11 07.8	+0.7
	comp=Z,2.6nm,0.9s,baz=76,slow=5.6,SNR=11						
GRA1	**Grafenberg Arr**	**103.03**	**323**	*e*Pdif	Pdif	06 11 13.9	+1.5
GRF	**Grafenberg Arr**	**103.03**	**323**	*e*Pdiff	Pdif	06 11 13.9	+1.5
NEW	**Newport**	**103.84**	**38**	P	Pdif	06 11 17.1	+1.0
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NEW	**Newport**	**103.84**	**38**	Pdiff	Pdif	06 11 17.1	+1.1
	comp=Z,1.8nm,0.8s,baz=239,slow=3.1,SNR=3.8						
NVAR	**Mina Array Bea**	**106.56**	**48**	Pdif	Pdif	06 11 30.3	+2.1
NVAR	**Mina Array Bea**	**106.56**	**48**	Pdiff	Pdif	06 11 30.3	+2.1
	comp=Z,1.6nm,0.8s,baz=264,slow=4.0,SNR=7.6						
LPG	**La Plagne**	**107.49**	**320**	*e*PP	PKiKP	06 15 34.7	-5.9
	comp=Z,3.1nm,0.7s						
LPL	**La Plagne**	**107.50**	**320**	*e*PP	PKiKP	06 15 34.2	-6.4
PDAR	**Pinedale Array**	**110.98**	**41**	PKKPbc	PKKPbc	06 26 54.3	+8.3
	comp=Z,1.2nm,0.9s,baz=121,slow=4.8,SNR=6.8						
MSU	**Marysvale**	**111.00**	**46**	*e*PKPdf	PKiKP	06 15 49.0	+1.6
PV01	**Paradox Valley**	**113.73**	**45**	*e*PKPdf	PKiKP	06 15 49.7	-2.9
RSSD	**Black Hills**	**113.80**	**38**	*e*Pdif	Pdif	06 12 01.5	+1.2
ULM	**Lac du Bonnet**	**114.55**	**29**	PKP	PKiKP	06 15 53.9	+0.1
	comp=Z,0.8nm,0.9s,baz=251,slow=2.3,SNR=3.1						
ANMO	**Albuquerque**	**116.67**	**47**⇑	*i*PKIKP	PKPdf	06 16 01.1	+2.7
ANMO	**Albuquerque**	**116.67**	**47**	PKP	PKPdf	06 15 59.9	+1.5
	comp=Z,1.8nm,0.8s,baz=215,slow=2.1,SNR=9.4						
ECSD	**EROS,Sioux Fal**	**118.39**	**35**	*e*PKPdf	PKPdf	06 16 02.1	+0.7
SCHQ	**Schefferville**	**120.14**	**9**	PKP	PKPdf	06 16 05.7	+1.2
	comp=Z,7.1nm,0.8s,baz=357,slow=3.3,SNR=20						
KSU1	**Kansas State U**	**121.23**	**39**	*e*PKPdf	PKPdf	06 16 07.4	+0.3
TXAR	**Lajitas Array**	**121.27**	**52**	PKIKP	PKPdf	06 16 08.4	+1.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**121.27**	**52**	PKP	PKPdf	06 16 08.4	+1.0
	comp=Z,1.3nm,0.7s,baz=207,slow=0.8,SNR=16						
JFWS	**Jewell Farm**	**122.40**	**32**	*e*PKPdf	PKPdf	06 16 08.9	-0.2
TORD	**Torodi Ar. Bea**	**122.89**	**288**	PKP	PKPdf	06 16 11.4	+0.6
	comp=Z,5.0nm,0.8s,baz=56,slow=1.9,SNR=26						
TORD				PKKPbc	PKKPbc	06 26 04.6	+1.6
	comp=Z,0.7nm,0.6s,baz=284,slow=3.4,SNR=4.5						
JCT	**Junction City**	**123.71**	**49**	*e*PKPdf	PKPdf	06 16 13.2	+1.1
JCT				*e*pPKPdf	pPKPdf	06 16 34.4	+1.0
JCT				*e*sPKPdf		06 16 41.9	
HDIL	**Hopedale**	**124.56**	**33**	*e*PKPdf	PKPdf	06 16 14.1	+0.7
HDIL				*e*sPKPdf		06 16 44.1	
MIAR	**Mount Ida**	**125.90**	**41**	*e*P	PKPdf	06 16 18.2	+2.0
DBIC	**Dimbokro**	**130.59**	**282**	PKP	PKPdf	06 16 27.4	+1.8
DBIC				SKPbc	SKPbc	06 19 50.5	+7.6
DBIC	**Dimbokro**	**130.59**	**282**	PKIKP	PKPdf	06 16 27.5	+1.9
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DBIC				pmax	pmax		
	comp=N,10.0nm,1.0s						
DBIC	**Dimbokro**	**130.59**	**282**	PKP	PKPdf	06 16 27.4	+1.8
	comp=N,4.9nm,0.8s,baz=144,slow=2.7,SNR=4.3						
DBIC				SKPbc	SKPbc	06 19 50.5	+7.6
	comp=N,10nm,1.0s,baz=52,slow=5.0,SNR=4.9						
LIC	**Lamto**	**130.84**	**282**	*e*PKIKP	PKPdf	06 16 27.9	+1.8
	comp=N,8.9nm,0.7s						
LRAL	**Lakeview Retre**	**131.07**	**38**	*e*PKPdf	PKPdf	06 16 25.9	-0.1
TKL	**Tuckaleechee C**	**131.10**	**33**	SKPbc	SKPbc	06 19 51.4	+7.2
	comp=N,5.0nm,1.0s,baz=294,slow=5.6,SNR=3.9						
CMIG	**Matias Romero**	**133.72**	**62**	PKP	PKPdf	06 16 32.8	+1.4
	comp=N,4.1nm,0.9s,baz=326,slow=3.0,SNR=5.3						
JTS	**JuntasAbangare**	**145.25**	**65**	*e*PKPbc	PKPbc	06 16 52.9	+0.7
JTS	**JuntasAbangare**	**145.25**	**65***c*	*i*PKIKP	PKPdf	06 16 52.9	+0.5
JTS	**JuntasAbangare**	**145.25**	**65**	PKPbc	PKPbc	06 16 52.8	+0.5
	comp=N,27nm,0.7s,baz=303,slow=4.0,SNR=16						
BCIP	**Isla Barro Col**	**150.31**	**63**	*e*PKPbc	PKPbc	06 17 07.0	+0.9
SDDR	**Presa de Saban**	**150.91**	**37**	*e*PKPbc	PKPbc	06 17 07.1	-0.2
SDDR				*e*PKPab	PKPab	06 17 15.6	+1.0
SDDR				*e*pPKPdf	pPKPdf	06 17 23.6	+0.6
ROSC	**El Rosal**	**157.05**	**67**	PKP	PKPdf	06 17 12.7	+2.3
	comp=N,6.2nm,0.9s,baz=79,slow=21,SNR=3.5						
ROSC				PKPab	PKPab	06 17 42.5	+1.5
	comp=N,13nm,0.8s,baz=75,slow=22,SNR=8.6						
SDV	**Santo Domingo**	**158.30**	**53**	PKP	PKPdf	06 17 13.6	+1.6
	comp=N,22nm,1.0s,baz=9.4,slow=1.0,SNR=20						
SDV				PKPab	PKPab	06 17 46.8	+0.5
	comp=N,16nm,0.8s,baz=294,slow=4.8,SNR=9.5						
LPAZ	**La Paz**	**160.99**	**130**	PKIKP	PKPdf	06 17 18.0	+3.1
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LPAZ	**La Paz**	**160.99**	**130**	PKP	PKPdf	06 17 18.0	+3.1
	comp=Z,6.5nm,0.9s,baz=7.5,slow=2.2,SNR=16						

ATH ***13*** *06:32:55.8, 3650N×2192E, h23km±3km, MD3.7/10*
ISCJB ***13*** *06:32:56.0±1.1, 3653N±005×2201E±005, h13km±6km, Error ellipse: s-maj=8.4km s-min=6.0km az=27.1*
CSEM ***13*** *06:32:56.6±0.2, 3646N×2194E, h20km, ML4.1, Error ellipse: s-maj=5.2km s-min=2.4km az=59.0*
THE ***13*** *06:32:56.7, 3652N×2209E, h3km, ML4.1*
NEIC ***13*** *06:32:56.0, 3640N×2191E, h10km, MD3.7(ATH), After ATH.*

ISC 13 06:32:55.8±1.2**, 3648N**±005×**2205E**±005**, h8**km±8km**, n22, σ1ˢ18/28, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**329**	*e*Pg	**Pg**	**06 33 05.9**	**+0.8**
PYL				*e*Sg	**Sg**	**06 33 12.6**	**+1.2**
ITM	**Ithomi**	**0.70**	**352**	*e*PN	**Pn**	**06 33 09.4**	**-2.6**
ITM				*e*SN	**Sg**	**06 33 19.0**	**+0.5**
VLI	**Veliai**	**0.75**	**72**	*e*PB	**Pb**	**06 33 11.9**	**+0.8**
VLI				*e*SN	**Sg**	**06 33 24.6**	**+4.5**
KYTH	**Kithira**	**0.82**	**104**	*e*PN	**Pn**	**06 33 14.0**	**+0.4**
VLX	**Vlachokerasia**	**0.93**	**17**	*e*Pg	**Pg**	**06 33 13.2**	**-0.4**
VLX				*e*Sg	**Sg**	**06 33 26.3**	**+0.7**
DID	**Didima**	**1.40**	**43**	*e*Pg	**Pg**	**06 33 20.7**	**-1.9**
DID				*e*Sg	**Sg**	**06 33 41.0**	**+0.3**
RLS	**Riolos of Patr**	**1.64**	**344**	*e*PN	**Pn**	**06 33 25.9**	**+1.0**
LTK	**Loutraki**	**1.70**	**25**	*e*Pb	**Pb**	**06 33 25.4**	**-1.9**
LTK				*e*Sb	**Sb**	**06 33 49.7**	**+0.8**
NAIG	**Nisos Aigina**	**1.72**	**42**	*e*PN	**Pn**	**06 33 27.0**	**+1.1**
KARN	**Karanos**	**1.86**	**125**	*e*Pb	**Pb**	**06 33 29.4**	**-0.6**
KFL	**Anninata**	**1.91**	**329**	*e*Pb	**Pb**	**06 33 30.0**	**-0.9**
KVR	**Kavouri**	**1.92**	**45**	*e*PB	**Pb**	**06 33 30.0**	**-1.0**
ATH	**Athens Observa**	**2.00**	**41**	*e*PB	**Pb**	**06 33 31.0**	**-1.3**
VLS	**Valsamata**	**2.05**	**326**	*e*PB	**Pb**	**06 33 28.9**	**-4.4**
PTL	**Penteli**	**2.13**	**42**	*e*PN	**Pn**	**06 33 33.0**	**+1.4**
LKR	**Lokris**	**2.29**	**19**	*e*PN	**Pn**	**06 33 32.6**	**-1.2**
EVR	**Evrytania**	**2.44**	**356**	*e*PB	**Pb**	**06 33 38.1**	**-1.7**
LKD	**Levkas**	**2.48**	**334**	*e*Pn	**Pn**	**06 33 36.5**	**+0.1**
NEO	**Neokhori**	**2.97**	**18**	*e*PN	**Pn**	**06 33 45.1**	**+2.0**
LAST	**Lasithi**	**3.08**	**114**	P	**Pn**	**06 33 46.9**	**+2.2**
KRUS	**Krusevo**	**4.92**	**353**	*e*Pn	**Pn**	**06 34 09.7**	**-0.2**
TIP	**Timpagrande**	**4.98**	**304**	P	**Pn**	**06 34 10.6**	**-0.1**

IDC 13 06:53:57.6±1.2**, 405N**×**12681E, h0**km**, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.6**/17**, mbtmp3.5**/6**, Error ellipse: s-maj=92.2km s-min=18.3km az=72.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.04**	**183**	P	P	06 58 54.5	+0.6
	0.6nm,0.5s,baz=0.0,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	**24.96**	**163**	P	P	06 59 22.2	-0.7
	1.8nm,0.7s,baz=343,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**28.40**	**166**	P	P	06 59 53.6	-0.2
	0.1nm,0.5s,baz=350,slow=7.1,SNR=4.5						
STKA	**Stephens Creek**	**38.40**	**160**	P	P	07 01 21.6	+0.8
	0.8nm,0.5s,baz=331,slow=19,SNR=3.7						
SONM	**Songino Array**	**47.02**	**341**	P	P	07 02 31.4	+0.8
	0.2nm,0.5s,baz=150,slow=7.7,SNR=3.0						
MKAR	**Makanchi Array**	**57.34**	**325**	P	P	07 03 46.9	-0.6
	0.7nm,0.6s,baz=116,slow=8.6,SNR=8.7						

IDC 13 06:56:37.0±5.5**, 3015S**×**7548E, h0**km**, mb3.8**/2**, mb1 3.9**/2**, mb1mx3.5**/17**, mbtmp3.8**/2**, MS3.8**/5**, Ms1 3.8**/5**, ms1mx3.5**/29**, Error ellipse: s-maj=210.9km s-min=44.1km az=39.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**38.23**	**188**	LR	LR	07 15 56.5	
	comp=Z,129nm,19.6s,baz=79,slow=30						
PSI	**Prapat**	**39.69**	**38**	LR	LR	07 16 31.6	
	comp=Z,141nm,19.9s,baz=39,slow=30						
BOSA	**Boshof**	**43.51**	**259**	LR	LR	07 19 34.5	
	comp=Z,111nm,18.5s,baz=254,slow=32						
ASAR	**Alice Springs**	**52.02**	**98**	P	P	07 05 48.5	0.0
	1.8nm,0.7s,baz=252,slow=6.5,SNR=13						
WRA	**Warramunga Arr**	**53.78**	**94**	LR	LR	07 26 41.6	
	comp=Z,129nm,18.0s,baz=255,slow=34						
MKAR	**Makanchi Array**	**76.83**	**5**	P	P	07 08 30.4	+0.1
	0.3nm,0.5s,baz=191,slow=2.9,SNR=4.5						
KSRS	**Korea Array**	**83.25**	**39**	LR	LR	07 47 27.9	
	comp=Z,32nm,18.1s,baz=350,slow=37						
YKA	**Yellowknife Ar**	**146.99**	**9**	PKPbc	PKPbc	07 16 20.2	-0.7
	0.7nm,0.8s,baz=341,slow=3.2,SNR=10						

IDC 13 06:57:25.2±8.1**,210N**×**12583E,h0**^{km}**,mb3.6**/3**,mb1 3.8**/3**, mb1mx3.5**/15**,mbtmp3.6**/3**,MS3.5**/1**,Ms1 3.5**/1**, ms1mx2.7**/22**,Error ellipse: s-maj=172.8km s-min=126.3km az=72.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.44**	**160**	P	P	07 02 36.2	-0.4
	0.6nm,0.3s,baz=338,slow=10,SNR=11						
ASAR	**Alice Springs**	**26.79**	**163**	P	P	07 03 07.8	+0.7
	0.2nm,0.3s,baz=345,slow=7.8,SNR=4.5						
HNR	**Honiara**	**35.87**	**109**	LR	LR	07 17 21.9	
	comp=Z,84nm,21.1s,baz=185,slow=33						
STKA	**Stephens Creek**	**36.96**	**157**	P	P	07 04 36.0	-0.3
	1.3nm,0.7s,baz=338,slow=11,SNR=3.1						

*IDC **13** 06:57:36.7±3.7,5093N×17955E,h0^{km},mb3.9/4, mb1 4.1/5,mb1mx3.7/25,mbtmp4.0/5,ML4.0/1,Error ellipse: s-maj=114.1km s-min=26.5km az=1.0*
*NEIC **13** 06:57:41.7,5099N×17932E,h7^{km},ML3.5(AEIC),After AEIC.*
*ISCJB **13** 06:57:43.3±0.9,515N±03×1794E±0.1,h44^{km}±9^{km}, mb3.8/4,Error ellipse: s-maj=44.0km s-min=10.8km az=178.1*
ISC 13 06:57:44.5±1.3**,514N**±03×**1794E**±01**,h39**^{km}±7^{km}**,n12,** σ**1^{s}22**/14**,mb3.8**/4**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.05**	**278**	*e*Pg	**Pn**	**06 57 49.1**	**-1.6**
AMKA				*e*Sg	**Sn**	**06 57 55.3**	**+0.2**
ADK	**Adak**	**2.51**	**77**	P	**Pn**	**06 58 22.8**	**+0.1**
ADK				S	**Sn**	**06 58 54.4**	**+2.4**
SMY	**Shemya**	**3.53**	**295**	P	**Pn**	**06 58 38.3**	**+1.6**
ATKA	**Atka Island**	**4.08**	**76**	P	**Pn**	**06 58 44.7**	**+0.5**
KDAK	**Kodiak Island**	**17.39**	**57**	P	**Pn**	**07 01 41.3**	**-2.6**
	0.5nm,0.3s,baz=255,slow=12,SNR=3.4						
IMA2	**Indian Mountai**	**20.06**	**33**	*e*P	**P**	**07 02 13.7**	**-0.3**
MCK	**McKinley**	**20.75**	**41**	*e*P	**P**	**07 02 20.9**	**-0.7**
YKA	**Yellowknife Ar**	**36.06**	**46**	P	**P**	**07 04 40.8**	**-1.0**
	0.3nm,0.5s,mb3.5,baz=280,slow=8.0,SNR=5.5						
MCMT	**McKenzie Canyo**	**44.26**	**71**	*e*P	**P**	**07 05 51.1**	**+1.2**
PDAR	**Pinedale Array**	**47.40**	**71**	P	**P**	**07 06 13.6**	**-1.1**
	1.6nm,0.6s,mb4.1,baz=310,slow=3.8,SNR=18						
MKAR	**Makanchi Array**	**59.13**	**307**	P	**P**	**07 07 40.5**	**-0.3**
	0.2nm,0.3s,mb3.7,baz=55,slow=5.3,SNR=5.7						
AKTO	**Aktyubinsk**	**67.02**	**324**	P	**P**	**07 08 34.5**	**+1.4**
	0.8nm,0.6s,mb3.9,baz=57,slow=6.6,SNR=3.9						

*IDC **13** 07:00:45.7±0.8,098N×12633E,h0^{km},mb4.2/7,mb1 4.3/8, mb1mx4.1/17,mbtmp4.2/8,ML3.8/1,Error ellipse: s-maj=57.6km s-min=15.5km az=74.0*
*NEIC **13** 07:00:46.7±0.6,107N×12655E,h10^{km},mb4.6/3,Error ellipse: s-maj=38.0km s-min=8.0km az=69.0*
*ISCJB **13** 07:00:48.7±0.7,10N±0.1×1263E±03,h33^{km},mb4.3/9, Error ellipse: s-maj=40.5km s-min=10.3km az=162.6*
ISC 13 07:00:50.8±0.7**,10N**±01×**1264E**±03**,h35**^{km}**,n15,**σ**0^{s}41**/14**, mb4.3**/9**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.95**	**182**	*e*P	**Pn**	**07 05 09.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**18.95**	**182**	P	**Pn**	**07 05 09.4**	**-0.5**
	0.2nm,0.3s,baz=8.6,slow=11,SNR=5.6						
WRA	**Warramunga Arr**	**22.18**	**160**	P	**P**	**07 05 43.6**	**-0.4**
	3.6nm,0.3s,mb4.2,baz=340,slow=11,SNR=58						
WB2	**Warramunga Arr**	**22.18**	**160**	*e*P	**P**	**07 05 44.1**	**0.0**
ASAR	**Alice Springs**	**25.54**	**164**	P	**P**	**07 06 16.9**	**+0.6**
	3.0nm,0.4s,mb4.2,baz=344,slow=11,SNR=30						
ASAR				PcP	PcP	07 09 48.0	+0.7
	0.5nm,0.5s,baz=351,slow=2.8,SNR=4.3						
NWAO	**Narrogin (SRO)**	**34.79**	**194**	P	**P**	**07 07 38.9**	**+0.7**
	4.8nm,0.6s,mb4.6,baz=0.0,slow=9.1,SNR=4.0						
STKA	**Stephens Creek**	**35.69**	**158**	*e*P	**P**	**07 07 45.6**	**-0.3**
	4.0nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**35.69**	**158**	P	**P**	**07 07 45.9**	**0.0**
	2.3nm,0.4s,mb4.5,baz=226,slow=4.5,SNR=5.1						
KSRS	**Korea Array**	**36.35**	**2**	P	**P**	**07 07 51.9**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=184,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**59.65**	**326**	P	**P**	**07 10 51.6**	**+0.1**
	1.8nm,0.6s,mb4.3,baz=118,slow=8.2,SNR=14						
MKAR				PcP	PcP	07 11 38.2	-0.1
	1.4nm,0.7s,baz=128,slow=4.6,SNR=5.9						
AML	**Almayashu**	**62.50**	**318**	*e*P	**P**	**07 11 11.4**	**+0.4**
	6.0nm,1.3s,mb4.6						
KURK	**Kurchatov**	**63.90**	**328**	*e*P	**P**	**07 11 20.0**	**-0.1**
	4.7nm,0.5s,mb4.8						
AKTK	**Aktyubinsk**	**75.62**	**322**	P	**P**	**07 12 31.8**	**-0.5**
AKTO	**Aktyubinsk**	**75.62**	**322**	P	**P**	**07 12 31.8**	**-0.5**
	1.4nm,0.5s,mb4.2,baz=102,slow=7.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**123.42**	**286**	PKP	PKPdf	07 19 45.1	-0.3
	0.9nm,0.6s,baz=70,slow=1.9,SNR=7.5						

IDC 13 07:07:08.2±2.2**,420N**×**12650E,h0**^{km}**,mb3.8**/3**,mb1 4.0**/3**, mb1mx3.6**/16**,mbtmp3.8**/3**,MS3.9**/1**,Ms1 3.9**/1**, ms1mx2.9**/31**,Error ellipse: s-maj=206.0km s-min=27.8km az=64.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.20**	**162**	P	P	07 12 35.4	-0.2
	2.9nm,0.8s,baz=341,slow=11,SNR=5.3						
JNU	**Nakatsue**	**29.06**	**8**	LR	LR	07 23 19.6	
	comp=Z,249nm,19.8s,baz=78,slow=33						
STKA	**Stephens Creek**	**38.65**	**159**	P	P	07 14 33.6	+0.1
	2.0nm,0.7s,baz=344,slow=8.7,SNR=5.2						
MKAR	**Makanchi Array**	**57.04**	**325**	P	P	07 16 56.0	+0.1
	0.4nm,0.6s,baz=116,slow=8.2,SNR=4.7						

*MOS **13** 07:19:38.4±1.8,4823N×15508E,h33^{km},mb4.2/1,Error ellipse: s-maj=42.1km s-min=23.3km az=73.1*
*ISCJB **13** 07:19:41.8±2.3,484N±02×1550E±02,h60^{km}±17^{km}, mb3.6/7,Error ellipse: s-maj=35.3km s-min=12.0km az=136.3*
*IDC **13** 07:19:44.9±5.7,4821N×15495E,h81^{km}±61^{km},mb3.3/7, mb1 3.6/8,mb1mx3.4/22,mbtmp3.4/8,ML3.8/1,Error ellipse: s-maj=60.2km s-min=25.3km az=173.0*
ISC 13 07:19:43.5±2.0**,484N**±02×**1549E**±02**,h59**^{km}±15^{km}**,n11,** σ**0^{s}49**/12**,mb3.6**/7**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.39**	**18**	*e*PN	**Pn**	**07 20 20.0**	**-0.2**
SKR				*e*S	**Sn**	**07 20 48.3**	**0.0**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,60nm,0.5s						
SKR				smax			
	comp=Z,60nm,0.6s						
ASAJ	**Asahikawa**	**9.57**	**248**	PN	**Pn**	**07 21 59.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.57**	**248**	P	**Pn**	**07 21 59.0**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=214,slow=31,SNR=4.2						
KSRS	**Korea Array**	**22.50**	**251**	P	**P**	**07 24 37.2**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.5,baz=53,slow=9.1,SNR=4.9						
MKAR	**Makanchi Array**	**47.28**	**297**	P	**P**	**07 28 10.2**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.6,baz=68,slow=8.0,SNR=4.3						
YKA	**Yellowknife Ar**	**48.84**	**38**	P	**P**	**07 28 22.6**	**+0.1**
	comp=Z,0.3nm,0.8s,mb3.4,baz=297,slow=7.5,SNR=4.5						
PDAR	**Pinedale Array**	**62.77**	**56**	P	**P**	**07 30 02.9**	**+0.4**
	comp=Z,0.5nm,0.8s,mb3.7,baz=336,slow=3.3,SNR=4.0						
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**07 30 04.0**	**0.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**07 30 04.0**	**0.0**
	comp=Z,1.3nm,0.8s,mb4.1,baz=45,slow=8.4,SNR=3.7						
TXAR	**Lajitas Array**	**75.61**	**62**	P	**P**	**07 31 21.5**	**-0.6**
	comp=Z,0.4nm,0.7s,mb3.5,baz=285,slow=4.8,SNR=5.4						
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**07 31 33.3**	**+0.9**
	comp=Z,0.4nm,0.4s,mb3.7,baz=23,slow=4.8,SNR=4.6						

IDC 13 07:20:29.6±10.0**,2188N**×**14295E,h182**^{km}±105^{km}**, mb3.0**/7**,mb1 3.2**/7**,mb1mx3.1**/19**,mbtmp3.0**/7**,Error ellipse: s-maj=43.7km s-min=17.1km az=85.0,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.25**	**323**	P	P	07 24 51.5	+0.7
	0.9nm,0.5s,baz=146,slow=7.3,SNR=4.8						
SONM	**Songino Array**	**39.07**	**320**	P	P	07 27 37.9	-0.9
	0.6nm,0.6s,baz=126,slow=7.3,SNR=4.7						
WRA	**Warramunga Arr**	**42.41**	**192**	P	P	07 28 07.0	+0.6
	0.2nm,0.4s,baz=13,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**46.12**	**192**	P	P	07 28 35.1	-0.6
	0.4nm,0.7s,baz=20,slow=10,SNR=6.9						
MKAR	**Makanchi Array**	**54.42**	**313**	P	P	07 29 38.5	+0.5
	0.2nm,0.2s,baz=88,slow=10,SNR=2.6						
YKA	**Yellowknife Ar**	**76.40**	**28**	P	P	07 31 58.5	-0.1
	0.3nm,0.5s,baz=292,slow=6.0,SNR=7.6						
NVAR	**Mina Array Bea**	**83.20**	**51**	P	P	07 32 36.4	+0.7
	0.4nm,0.7s,baz=261,slow=4.2,SNR=3.7						

*ISCJB **13** 07:37:50.6±0.5,544S±0.1×1208W±02,h10^{km},mb4.4/15, MS4.7/21,Error ellipse: s-maj=21.7km s-min=13.4km az=141.5*
*IDC **13** 07:37:50.3±0.6,5420S×12083W,h0^{km},mb4.2/11, mb1 4.5/11,mb1mx4.4/15,mbtmp4.2/11,MS4.7/21, Ms1 4.7/21,ms1mx4.6/23,Error ellipse: s-maj=29.3km s-min=17.4km az=154.0*
*GCMT **13** 07:37:51.3±0.2,5450S×12069W,h12^{km}±1^{km},MW5.2/83, Moment Tensor Solution. s52,c89; s83,c136; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.20±.17; $M_{\theta\theta}$4.04±.19; $M_{\phi\phi}$-4.24±.17; $M_{r\theta}$0.14±.41; $M_{\theta\phi}$6.46±.16; $M_{\phi r}$3.07±.56; Best double couple: $M_0$8.24800×10^{16} NP1:ϕ_s105.00000°,δ69.00000°,λ-3.00000°. NP2: ϕ_s197.00000°,δ87.00000°,λ-159.00000°. Principal axes: T 7.9210, Plg12.0000°, Azm329.0000°; N 0.6530, Plg69.0000°, Azm205.0000°; P -8.5740, Plg17.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **13** 07:37:51.3±0.3,5508S×12021W,h10^{km},mb4.9/6 Error ellipse: s-maj=23.5km s-min=11.6km az=156.0*
*BJI **13** 07:37:55.1,5510S×12020W,h20^{km}*
ISC 13 07:37:52.4±0.5**,547S**±01×**1206W**±02**,h10**^{km}**,n73,** σ**1^{s}28**/25**,mb4.4**/15**,MS4.7**/21**,1C,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.23**	**133**	LR	LR	07 53 16.8	
	comp=Z,1μm,19.1s,MS4.6,baz=330,slow=31						
USHA	**Ushuaia**	**29.54**	**112**	LR	LR	07 52 17.4	
	comp=Z,572nm,19.0s,MS4.2,baz=227,slow=29						
RKT	**Rikitea**	**33.31**	**335**	*e*S	**S**	**07 49 40.0**	**-10**
	163nm,28.2s						
RKT				*e*LR	LR	07 52 58.6	
	4μm,27.2s,baz=166						
QSPA	**South Pole Qui**	**35.50**	**180**	P	**P**	**07 44 54.2**	**+5.7**
	6.8nm,1.0s,mb4.5,baz=100,slow=5.0,SNR=9.5						
QSPA				LR	LR	07 57 56.1	
	comp=Z,1μm,18.6s,MS4.6,baz=305,slow=34						
TBI	**Tubuai**	**37.97**	**314**	*e*LR	LR	07 55 02.1	
	2μm,26.5s,baz=157						
PPT	**Papeete**	**43.20**	**318**	*e*S	**S**	**07 52 09.0**	**-11**
	163nm,25.8s						
PPT				*e*LQ		07 55 38.3	
	3μm,27.0s						
PPT				*e*LR	LR	07 57 36.6	
	3μm,25.5s,baz=160						
PPT	**Papeete**	**43.20**	**318**	LR	LR	07 59 12.7	
	comp=Z,1μm,18.9s,MS4.8,baz=148,slow=30						
CFAA	**Coronel Fontan**	**43.37**	**80**	P	**P**	**07 45 53.1**	**-1.6**
	0.3nm,0.7s,mb3.1,baz=221,slow=8.5,SNR=8.9						
RPZ	**Rata Peaks**	**44.26**	**255**	LR	LR	07 59 56.0	
	comp=Z,2μm,20.3s,MS5.1,baz=57,slow=30						
URZ	**Urewera**	**44.37**	**265**	LR	LR	08 00 16.1	
	comp=Z,488nm,19.0s,MS4.4,baz=321,slow=30						
RAR	**Rarotonga**	**44.52**	**303**	LR	LR	08 01 23.1	
	comp=Z,546nm,18.2s,MS4.5,baz=163,slow=32						
SNAA	**Sanae**	**46.63**	**157**	LR	LR	08 06 09.3	
	comp=Z,651nm,18.5s,MS4.6,baz=203,slow=36						
LPAZ	**La Paz**	**55.50**	**68**	P	**P**	**07 47 27.9**	**+0.5**
	12nm,1.2s,mb4.8,baz=185,slow=5.0,SNR=14						
LPAZ				LR	LR	08 05 14.2	
	comp=Z,951nm,21.9s,MS4.8,baz=76,slow=30						
SYO	**Syowa Base**	**55.76**	**172**⇑	*e*P	**P**	**07 47 30.0**	**+1.4**
AFI	**Afiamalu**	**56.76**	**295**	LR	LR	08 05 57.4	
	comp=Z,317nm,20.2s,MS4.4,baz=224,slow=30						
MAW	**Mawson**	**58.00**	**182**	LR	LR	08 12 24.9	
	comp=Z,605nm,18.3s,MS4.8,baz=168,slow=36						
DZM	**Mont Dzumac**	**62.47**	**270**	P	**P**	**07 48 16.2**	**+0.5**
	4.0nm,0.9s,mb4.6,baz=221,slow=19,SNR=2.5						
OTAV	**Otavalo**	**64.73**	**48**	*e*P	**P**	**07 48 30.2**	**-0.5**
	16nm,1.4s,mb4.8						
STKA	**Stephens Creek**	**68.84**	**245**	*e*P	**P**	**07 48 57.8**	**+1.0**
	5.4nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**68.84**	**245**	P	**P**	**07 48 57.8**	**+1.0**
	3.6nm,0.8s,mb4.4,baz=120,slow=7.3,SNR=4.3						
STKA				LR	LR	08 14 14.4	
	comp=Z,730nm,18.1s,MS5.0,baz=97,slow=32						
ROSC	**El Rosal**	**70.65**	**50**	LR	LR	08 14 44.5	
	comp=Z,399nm,19.2s,MS4.7,baz=11,slow=31						
CTA	**Charters Tower**	**75.62**	**256**	*e*P	**P**	**07 49 37.2**	**-0.3**
	2.6nm,0.4s,mb4.5						
CTA	**Charters Tower**	**75.62**	**256**	LR	LR	08 19 35.2	
	comp=Z,429nm,18.4s,MS4.8,baz=50,slow=33						
CTAO	**Charters Tower**	**75.62**	**256**	*e*P	**P**	**07 49 37.1**	**-0.4**
	5.3nm,0.7s,mb4.6						
ASAR	**Alice Springs**	**79.46**	**244**	P	**P**	**07 49 58.1**	**-0.7**
	2.6nm,0.8s,mb4.2,baz=150,slow=5.2,SNR=20						
WB2	**Warramunga Arr**	**82.27**	**246**	*e*P	**P**	**07 50 13.2**	**-0.8**
WRA	**Warramunga Arr**	**82.28**	**246**	P	**P**	**07 50 13.5**	**-0.5**
	3.8nm,0.8s,mb4.4,baz=146,slow=4.8,SNR=29						
WRA				LR	LR	08 22 26.8	
	comp=Z,686nm,19.4s,MS5.0,baz=145,slow=32						
PMG	**Port Moresby**	**83.68**	**263**	LR	LR	08 24 00.5	
	comp=Z,212nm,18.2s,MS4.6,baz=340,slow=33						
TXAR	**Lajitas Array**	**84.94**	**15**	P	**P**	**07 50 26.4**	**-0.8**
TXAR				LR	LR	08 23 07.8	
TXAR	**Lajitas Array**	**84.94**	**15**	P	**P**	**07 50 26.4**	**-0.8**
	1.0nm,1.0s,mb3.9,baz=187,slow=6.3,SNR=6.7						
TXAR				LR	LR	08 23 07.8	
	comp=Z,143nm,18.1s,MS4.4,baz=25,slow=32						
JCT	**Junction City**	**86.70**	**18**	*e*P	**P**	**07 50 36.4**	**+0.5**
	24nm,1.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**88.33**	**241**	P	**P**	**07 50 43.3**	**-0.9**
	3.2nm,0.7s,mb4.6,baz=130,slow=6.0,SNR=6.6						
FITZ				LR	LR	08 23 58.8	
	comp=Z,360nm,21.4s,MS4.8,baz=332,slow=31						
BNM	**Barren Site**	**89.30**	**12**	*e*P	**P**	**07 50 49.5**	**+1.4**
LAZ	**Ladron**	**89.49**	**11**	*e*P	**P**	**07 50 51.4**	**+2.4**
WUAZ	**Wupatki**	**90.19**	**8**	*e*P	**P**	**07 50 54.9**	**+2.6**
	24nm,1.8s,mb5.2						
BOSA	**Boshof**	**91.99**	**150**	LR	LR	08 32 54.4	
	comp=Z,337nm,18.1s,MS4.8,baz=186,slow=36						
NVAR	**Mina Array Bea**	**92.77**	**2**	P	**P**	**07 51 00.6**	**-3.6**
	0.1nm,0.3s,mb3.7,baz=133,slow=12,SNR=2.2						
MSU	**Marysvale**	**93.11**	**7**	*e*P	**P**	**07 51 07.9**	**+2.1**
BATI	**Kupang**	**96.01**	**243**	LR	LR	08 31 24.0	
	comp=Z,896nm,18.4s,MS5.3,baz=113,slow=33						
PDAR	**Pinedale Array**	**97.54**	**8**	P	**P**	**07 51 24.0**	**-1.9**
	0.1nm,0.6s,mb3.5,baz=20,slow=11,SNR=2.1						
PDAR				LR	LR	08 27 06.5	
	comp=Z,278nm,18.0s,MS4.8,baz=208,slow=30						
SMRF	**Simiane la Rot**	**144.19**	**85**	*e*PKP1	PKPdf	07 57 25.6	-1.9
	46nm,1.5s						
VIVF	**Saint-Julien-l**	**144.19**	**83**	*e*PKP1	PKPdf	07 57 27.2	-0.2
LMR	**La Mourre**	**144.34**	**86**	*e*PKP1	PKPdf	07 57 26.5	-1.2
	40nm,1.2s						
LZH	**Lanzhou**	**144.40**	**257**	*e*PKP	PKPdf	07 57 29.5	+1.4
LZH				APKP		07 57 36.0	
LZH				XPKP		07 57 39.3	
AVF	**Avril sur Loir**	**144.54**	**79**	*e*PKP1	PKPdf	07 57 24.9	-3.1
	49nm,1.5s						
FRF	**La Foret Royal**	**144.56**	**86**	*e*PKP1	PKPdf	07 57 26.3	-1.8
SMF	**Signal de Mont**	**144.74**	**80**	*e*PKP1	PKPdf	07 57 26.7	-1.6
	45nm,1.2s						
SSF	**Saint Saulge**	**144.78**	**79**	*e*PKP1	PKPdf	07 57 24.8	-3.6
ORIF	**Oris-en-Rattie**	**144.92**	**84**	*e*PKP1	PKPdf	07 57 28.3	-0.4
	43nm,1.1s						
LOR	**Lormes**	**145.09**	**79**	*e*PKP1	PKPbc	07 57 25.9	-2.5
SBF	**Sospel**	**145.20**	**86**	*e*PKP1	PKPbc	07 57 27.8	-1.1
PGF	**Pioggiola**	**145.30**	**89**	*e*PKP1	PKPbc	07 57 26.0	-3.3
	66nm,1.3s						
MBDF	**Montbardon**	**145.32**	**84**	*e*PKP1	PKPbc	07 57 27.7	-1.6
	59nm,1.4s						
BNI	**Bardonecchia**	**145.46**	**84**	*e*PKPbc	PKPbc	07 57 28.7	-1.0
LPG	**La Plagne**	**145.76**	**83**	*e*PKP1	PKPbc	07 57 30.0	-0.6
	56nm,1.4s						
LPL	**La Plagne**	**145.76**	**83**	*e*PKP1	PKPbc	07 57 29.6	-1.0
	38nm,1.3s						
CABF	**La Chapelle**	**146.00**	**81**	*e*PKP1	PKPbc	07 57 29.1	-2.2
LSA	**Lhasa**	**146.18**	**235**	PKP	PKPbc	07 57 35.4	+3.0
LSA	**Lhasa**	**146.18**	**235**	*e*PKPdf	PKPdf	07 57 30.8	-0.6
TIXI	**Tiksi**	**146.79**	**327**	*e*PKPdf	PKPdf	07 57 31.1	+0.1
TIXI				*e*PKPbc	PKPbc	07 57 33.3	+0.4
TIXI				*e*PKPab	PKPab	07 57 34.9	+0.7
TIP	**Timpagrande**	**147.60**	**101**	*e*PKPbc	PKPbc	07 57 34.3	-1.9
GTA	**Gaotai**	**149.00**	**257**	*e*PKP	PKPbc	07 57 40.0	+0.2
GTA				APKP		07 57 46.9	
GTA				XPKP		07 57 49.5	
SONM	**Songino Array**	**150.26**	**276**	PKPbc	PKPbc	07 57 41.8	-0.8
	1.3nm,0.8s,baz=79,slow=1.8,SNR=11						
GRA1	**Grafenberg Arr**	**150.54**	**80**	*e*PKP	PKPbc	07 57 43.6	+0.4
GRF	**Grafenberg Arr**	**150.54**	**80**	*e*PKP	PKPbc	07 57 43.6	+0.4
MOX	**Moxa**	**151.21**	**78**	*e*PKP	PKPbc	07 57 47.1	+2.4
	58nm,2.0s						
GERES	**GERESS Array B**	**151.55**	**83**	PKPbc	PKPbc	07 57 44.8	-0.8
	3.0nm,0.7s,baz=205,slow=2.8,SNR=8.3						
CLL	**Collm**	**152.28**	**78**	*e*PKPbc	PKPbc	07 57 45.0	-2.2
	comp=Z,46nm,2.3s						
CLL				*i* PKPab	PKPab	07 57 55.1	-2.2
BRG	**Berggiesshubel**	**152.63**	**79**	*e*P	PKPab	07 57 55.2	-3.5
	comp=Z,4.5nm,1.0s						
BRG				*e*		07 58 04.5	
	comp=Z,7.7nm,1.0s						
TLY	**Talaya**	**153.63**	**282**	*e*PKPdf	PKPdf	07 57 41.4	-1.0
BRTR	**Keskin Array B**	**157.17**	**120**	PKPab	PKPab	07 58 18.9	+0.5
	comp=Z,1.2nm,0.7s,baz=184,slow=5.9,SNR=4.1						
AKASG	**Malin Array Be**	**161.37**	**90**	PKP	PKPdf	07 57 52.8	+0.7
	comp=Z,0.4nm,0.4s,baz=269,slow=2.1,SNR=5.5						
MKAR	**Makanchi Array**	**163.54**	**251**	PKPab	PKPab	07 58 44.6	-1.4
	comp=Z,1.1nm,0.7s,baz=106,slow=5.6,SNR=8.9						

*ISCJB **13** 07:39:28.7±2.1,68S±02×1052E±02,h33^{km}±22^{km}, mb4.3/14,Error ellipse: s-maj=43.5km s-min=11.8km az=145.5*
*NEIC **13** 07:39:32.3±1.5,686S×10506E,h44^{km}±16^{km},mb4.9/6, Error ellipse: s-maj=34.4km s-min=9.4km az=58.0*
*IDC **13** 07:39:35.5±4.3,656S×10528E,h67^{km}±39^{km},mb3.8/9, mb1 3.9/10,mb1mx3.7/20,mbtmp3.8/10,ML3.5/1,MS3.6/2, Ms1 3.6/2,ms1mx3.1/27,Error ellipse: s-maj=46.9km s-min=14.5km az=53.0*
ISC 13 07:39:32.2±1.6**,69S**±02×**1050E**±02**,h47**^{km}±17^{km}**,n23,** σ**0^{s}89**/21**,mb4.3**/14**,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**3.58**	**169**	*e*Pn	**Pn**	**07 40 24.4**	**-0.9**
XMIS				*e*Sn	**Sn**	**07 41 01.0**	**-5.5**
PSI	**Prapat**	**11.40**	**328**	P	**Pn**	**07 42 13.6**	**+1.1**
	0.4nm,0.3s,baz=345,slow=17,SNR=10						
PSI				LR	LR	07 46 49.8	
	comp=Z,187nm,19.9s,baz=148,slow=39						
WRA	**Warramunga Arr**	**31.29**	**117**	P	**P**	**07 45 47.4**	**-0.7**
	1.0nm,0.8s,mb3.7,baz=289,slow=10,SNR=10						
ASAR	**Alice Springs**	**32.39**	**124**	P	**P**	**07 45 58.0**	**+0.3**
	1.1nm,1.0s,mb3.6,baz=303,slow=8.1,SNR=5.5						
ODAN	**Odare**	**37.67**	**334**	*e*P	**P**	**07 46 43.0**	**0.0**
	7.1nm,0.3s,mb4.9						
TAPN	**Taplejung**	**37.95**	**335**	*e*P	**P**	**07 46 46.0**	**+0.5**
JIRN	**Jiri**	**38.89**	**333**	*e*P	**P**	**07 46 53.4**	**+0.1**
	24nm,0.9s,mb4.9						
KKN	**Kakani**	**39.42**	**332**	*e*P	**P**	**07 46 57.8**	**+0.1**
	13nm,0.7s,mb4.8						
GKN	**Gorkha**	**39.90**	**331**	*e*P	**P**	**07 47 01.8**	**0.0**
	21nm,0.9s,mb4.9						
STKA	**Stephens Creek**	**42.20**	**131**	*e*P	**P**	**07 47 23.0**	**+2.3**
	7.6nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**42.20**	**131**	P	**P**	**07 47 23.1**	**+2.4**
	13nm,0.7s,mb4.6,baz=306,slow=7.7,SNR=20						
NDI	**New Delhi**	**44.38**	**324**	*e*x	**P**	**07 47 37.0**	**-1.3**
SONM	**Songino Array**	**54.55**	**1**	P	**P**	**07 48 54.8**	**-0.7**
	1.2nm,0.7s,mb4.0,baz=176,slow=8.4,SNR=8.7						
SONM				PcP	PcP	07 49 58.1	-0.2
	0.2nm,0.3s,baz=183,slow=3.2,SNR=4.0						
MKAR	**Makanchi Array**	**57.16**	**342**	P	**P**	**07 49 12.9**	**-1.3**
	0.5nm,0.4s,mb3.9,baz=130,slow=8.4,SNR=9.3						
ASAJ	**Asahikawa**	**61.12**	**30**	LR	LR	08 13 29.8	
	comp=Z,81nm,19.2s,baz=165,slow=34						
CHKZ	**Chkalovo**	**66.97**	**339**	*e*P	**P**	**07 50 19.5**	**-0.4**
	1.1nm,0.6s,mb4.1						
AKTK	**Aktyubinsk**	**70.05**	**330**	P	**P**	**07 50 39.1**	**0.0**
AKTO	**Aktyubinsk**	**70.05**	**330**	P	**P**	**07 50 39.1**	**0.0**
	3.4nm,0.9s,mb4.3,baz=121,slow=6.0,SNR=14						
BRTR	**Keskin Array B**	**80.28**	**312**	P	**P**	**07 51 39.1**	**+0.8**
	0.7nm,0.7s,mb3.7,baz=118,slow=7.1,SNR=4.0						
QSPA	**South Pole Qui**	**83.05**	**180**	P	**P**	**07 51 55.6**	**+3.4**
	3.6nm,1.1s,mb4.3,baz=102,slow=3.7,SNR=5.8						
ARCES	**ARCESS Array B**	**92.78**	**340**	P	**P**	**07 52 39.2**	**+0.1**
	1.9nm,0.9s,mb4.5,baz=72,slow=5.8,SNR=2.3						
TXAR	**Lajitas Array**	**145.03**	**47**	PKP	PKPdf	07 59 05.7	+0.6
	1.0nm,0.7s,baz=271,slow=1.7,SNR=12						
JCT	**Junction City**	**147.02**	**42**	*e*PKPdf	PKPdf	07 59 08.6	+0.2
JCT				*e*PKPbc	PKPbc	07 59 11.0	+0.6

*ISCJB **13** 07:44:01.9±1.4,178S±05×1785W±03,h549^{km}±20^{km}, mb3.8/9,Error ellipse: s-maj=87.4km s-min=14.9km az=153.0*
*IDC **13** 07:44:02.6±2.0,1774S×17854W,h548^{km}±25^{km},mb3.3/8, mb1 3.6/10,mb1mx3.5/15,mbtmp3.3/10,Error ellipse: s-maj=71.2km s-min=13.6km az=153.0*
*NEIC **13** 07:44:02.7±1.1,1779S×17850W,h550^{km}±14^{km},mb4.7/1, Error ellipse: s-maj=70.0km s-min=12.0km az=153.0*
ISC 13 07:44:02.7±1.3**,178S**±05×**1785W**±03**,h546**^{km}±17^{km}**,n16,** σ**0^{s}68**/12**,mb3.8**/9**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.53**	**60**	P	**P**	**07 45 55.4**	**-0.4**
	3.2nm,0.3s,baz=49,slow=23,SNR=5.9						
DZM	**Mont Dzumac**	**14.78**	**251**	P	**P**	**07 47 11.1**	**+1.1**
	1.0nm,0.3s,baz=76,slow=20,SNR=7.4						
STKA	**Stephens Creek**	**38.61**	**241**	P	**P**	**07 50 39.1**	**-0.3**
	3.3nm,0.5s,mb4.1,baz=93,slow=9.5,SNR=8.2						
WRA	**Warramunga Arr**	**44.56**	**259**	P	**P**	**07 51 25.7**	**-0.8**
	1.6nm,0.5s,mb3.8,baz=97,slow=7.0,SNR=42						
ASAR	**Alice Springs**	**44.73**	**254**	P	**P**	**07 51 27.4**	**-0.5**
	13nm,0.5s,mb4.7,baz=88,slow=9.1,SNR=161						
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**07 55 12.8**	**+0.4**
NVAR	**Mina Array Bea**	**79.39**	**44**	P	**P**	**07 55 12.8**	**+0.4**
	0.7nm,0.7s,mb3.1,baz=215,slow=6.7,SNR=6.3						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**07 55 46.4**	**+0.6**
	1.0nm,0.7s,mb3.5,baz=220,slow=5.9,SNR=13						
PDAR	**Pinedale Array**	**87.32**	**43**	P	**P**	**07 55 51.1**	**-0.6**
	0.7nm,0.7s,mb3.4,baz=205,slow=2.5,SNR=7.7						
LKWY	**Lake**	**87.60**	**42**	*e*P	**P**	**07 55 53.9**	**+1.0**
	16nm,1.1s,mb4.7						
SONM	**Songino Array**	**93.38**	**319**	P	**P**	**07 56 20.0**	**+0.4**
	0.1nm,0.4s,mb3.2,baz=52,slow=2.4,SNR=3.2						
YKA	**Yellowknife Ar**	**94.25**	**25**	P	**P**	**07 56 22.3**	**-0.9**
	0.2nm,0.5s,mb3.5,baz=244,slow=4.4,SNR=3.9						
ARCES	**ARCESS Array B**	**126.16**	**350**	PKP	PKPdf	08 02 00.8	-1.7
ARCES	**ARCESS Array B**	**126.16**	**350**	PKP	PKPdf	08 02 00.8	-1.7
	7.9nm,1.1s,baz=353,slow=6.3,SNR=3.9						
CLL	**Collm**	**145.31**	**347**	*e*PKPbc	PKPbc	08 02 39.0	-0.4
GERES	**GERESS Array B**	**147.45**	**345**	PKPbc	PKPbc	08 02 44.7	-0.7
	0.8nm,0.4s,baz=22,slow=1.4,SNR=5.5						

*ISCJB **13** 07:46:11.5±0.4,5154N±002×674E±005,h0^{km},Error ellipse: s-maj=4.4km s-min=2.9km az=27.4*
*BUG **13** 07:46:12.6,5159N×686E,h1^{km},ML1.8*
*BGR **13** 07:46:13.3±0.6,5153N×702E,h1^{km},ML2.4,Error ellipse: s-maj=11.1km s-min=5.6km az=112.0*
*BNS **13** 07:46:13.8±1.1,5158N×684E,h1^{km},ML2.4*
*LDG **13** 07:46:14.6±0.2,5154N×675E,h1^{km},Md3.2/2,Ml3.0/12, Error ellipse: s-maj=4.5km s-min=3.0km az=31.0, Suspected Mining induced.*
*CSEM **13** 07:46:15.9±0.2,5151N×661E,h1^{km},ML3.0/11,Error ellipse: s-maj=4.0km s-min=2.8km az=83.0*
ISC 13 07:46:12.3±0.4**,5157N**±002×**685E**±004**,h0**^{km}**,n55,** σ**1^{s}36**/88**,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	**Hlnxe**	**0.05**	**13**	Pg	**Pg**	**07 46 13.3**	**0.0**
BZER				Sg	**Sg**	**07 46 13.9**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WTSB	**Winterswijk**	**0.40**	**355**	*e*Pg	**Pg**	**07 46 20.3**	**+0.4**
	126nm,0.3s						
RODG	**Roetgen-Dahlhe**	**0.60**	**225**	*e*Pg	**Pg**	**07 46 24.8**	**+1.1**
BNS	**Bensberg**	**0.64**	**161**	*e*Pg	**Pg**	**07 46 26.3**	**+1.8**
HOBG	**Hohbusch**	**0.66**	**152**	*e*Pg	**Pg**	**07 46 26.7**	**+1.8**
HOBG				*e*Sg	**Sg**	**07 46 35.5**	**+2.2**
	197nm,0.5s						
IBBN	**Ibbenburen**	**0.93**	**37**	*e*Pg	**Pg**	**07 46 30.3**	**+0.2**
IBBN				*e*Sg	**Sg**	**07 46 44.3**	**+2.2**
STB	**Steinbach**	**0.97**	**180**	*e*Pg	**Pg**	**07 46 32.6**	**+1.7**
KLL	**Kalltalsperre**	**0.98**	**200**	*e*Pg	**Pg**	**07 46 32.5**	**+1.4**
KLL				*e*Sg	**Sg**	**07 46 46.6**	**+2.8**
DREG	**Dreilaegerbach**	**0.99**	**203**	*e*Pg	**Pg**	**07 46 32.8**	**+1.7**
DREG				*e*Sg	**Sg**	**07 46 46.9**	**+3.0**
	212nm,0.3s						
HGN	**Heimansgroeve**	**0.99**	**216**	*e*Pg	**Pg**	**07 46 32.5**	**+1.3**
	49nm,0.1s						
HGN				*e*Sg	**Sg**	**07 46 47.0**	**+2.9**
BEBN	**Eben Emael**	**1.07**	**224**	P	**Pg**	**07 46 33.6**	**+0.9**
BEBN	**Eben Emael**	**1.07**	**224**	P	**Pg**	**07 46 33.6**	**+0.9**
MEM	**Membach**	**1.10**	**209**	P	**Pg**	**07 46 28.9**	**-4.3**
MEM	**Membach**	**1.10**	**209**	P	**Pg**	**07 46 34.2**	**+0.9**
MEM	**Membach**	**1.10**	**209**	P	**Pg**	**07 46 34.1**	**+0.8**
HILG	**Hillesheim**	**1.28**	**185**	*e*Pg	**Pg**	**07 46 37.7**	**+0.9**
BGG	**Burgeitz**	**1.40**	**167**	*e*Pg	**Pg**	**07 46 39.1**	**+0.1**
BGG				*e*Sg	**Sg**	**07 46 58.4**	**+1.3**
	41nm,0.5s						
BCLA	**Clavier**	**1.51**	**221**	P	**Pn**	**07 46 40.7**	**+0.2**
TNS	**Taunus Mts**	**1.69**	**142**	*e*Pg	**Pg**	**07 46 43.7**	**-0.8**
TNS				*e*Sg	**Sg**	**07 47 06.4**	**+0.1**
SNF	**Seneffe**	**1.94**	**238**	P	**Pn**	**07 46 47.0**	**+0.6**
GIVF	**Givet**	**1.95**	**222**	*e*Pn	**Pn**	**07 46 45.3**	**-1.3**
GIVF				*e*Sn	**Sn**	**07 47 07.9**	**-3.8**
GIVF				*e*Sg	**Sg**	**07 47 12.1**	**-2.8**
	43nm,0.4s						
GIVF	**Givet**	**1.95**	**222**	*e*Pn	**Pn**	**07 46 45.3**	**-1.3**
GIVF				*e*Sn	**Sn**	**07 47 07.9**	**-3.8**
GIVF				*e*Sg	**Sg**	**07 47 12.1**	**-2.8**
	22nm,0.4s						
WLF	**Walferdange**	**1.96**	**193**	*e*Pg	**Pg**	**07 46 50.9**	**+1.2**
WLF				*e*Sg	**Sg**	**07 47 15.0**	**-0.1**
WLF	**Walferdange**	**1.96**	**193**	P	**Pn**	**07 46 48.3**	**+1.6**
DOU	**Dourbes**	**2.05**	**225**	P	**Pn**	**07 46 48.2**	**+0.2**
DOU	**Dourbes**	**2.05**	**225**	P	**Pn**	**07 46 48.1**	**+0.1**
CLZ	**Clausthal**	**2.21**	**81**	*e*Sg	**Sg**	**07 47 20.2**	**-3.0**
BAIF	**Baives**	**2.26**	**229**	*e*Pn	**Pn**	**07 46 50.6**	**-0.2**
BAIF				*e*Sg	**Sg**	**07 47 22.3**	**-2.4**
	27nm,0.5s						
BAIF	**Baives**	**2.26**	**229**	*e*Pn	**Pn**	**07 46 50.6**	**-0.2**
BAIF				*e*Sg	**Sg**	**07 47 22.3**	**-2.4**
	13nm,0.5s						
RFYF	**Reffroy**	**3.07**	**197**	*e*Pn	**Pn**	**07 47 02.4**	**+0.4**
RFYF				*e*Sg	**Sg**	**07 47 49.5**	**-1.4**
	16nm,0.4s						
RFYF	**Reffroy**	**3.07**	**197**	*e*Pn	**Pn**	**07 47 02.4**	**+0.4**
RFYF				*e*Sg	**Sg**	**07 47 49.5**	**-1.4**
	8.2nm,0.4s						
MOX	**Moxa**	**3.14**	**105**	*e*(Sg)	**Sg**	**07 47 50.3**	**-2.9**
MOX	**Moxa**	**3.14**	**105**	(SG)	**Sg**	**07 47 50.3**	**-2.9**
CDF	**Champ du Feu**	**3.17**	**175**	*e*Pn	**Pn**	**07 47 02.8**	**-0.5**
CDF				*e*Sg	**Sg**	**07 47 54.0**	**-0.1**
	9.0nm,0.5s						
CDF	**Champ du Feu**	**3.17**	**175**	*e*Pn	**Pn**	**07 47 02.8**	**-0.5**
CDF				*e*Sg	**Sg**	**07 47 54.0**	**-0.1**
	4.5nm,0.5s						
MEZF	**Maizieres J'vi**	**3.28**	**201**	*e*Pn	**Pn**	**07 47 05.3**	**+0.4**
	baz=19						
MEZF				*e*Sg	**Sg**	**07 47 54.9**	**-2.7**
	14nm,0.4s						
MEZF	**Maizieres J'vi**	**3.28**	**201**	*e*Pn	**Pn**	**07 47 05.3**	**+0.4**
MEZF				*e*Sg	**Sg**	**07 47 54.9**	**-2.7**
	7.1nm,0.4s						
HAU	**Haudompre**	**3.58**	**185**	*e*Sg	**Sg**	**07 48 06.8**	**-0.4**
	8.0nm,0.3s						
HAU	**Haudompre**	**3.58**	**185**	*e*Sg	**Sg**	**07 48 06.8**	**-0.4**
	4.0nm,0.3s						
CLL	**Collm**	**3.86**	**91**	*e*Sg	**Sg**	**07 48 14.0**	**-2.1**
BRG	**Berggiesshubel**	**4.51**	**96**	SG	**Sg**	**07 48 33.7**	**-3.4**
	3.8nm,0.7s						
LOR	**Lormes**	**4.73**	**206**	*e*Pn	**Pn**	**07 47 24.4**	**-0.3**
	baz=23						
LOR				*e*Sn	**Sn**	**07 48 15.9**	**-4.2**
LOR				*e*Sg	**Sg**	**07 48 41.1**	**-2.9**
	3.7nm,0.2s						
LOR	**Lormes**	**4.73**	**206**	*e*Pn	**Pn**	**07 47 24.4**	**-0.3**
LOR				*e*Sn	**Sn**	**07 48 15.9**	**-4.2**
LOR				*e*Sg	**Sg**	**07 48 41.1**	**-2.9**
	1.9nm,0.2s						
SSF	**Saint Saulge**	**5.01**	**207**	*e*Pn	**Pn**	**07 47 28.3**	**-0.3**
SSF				*e*Sg	**Sg**	**07 48 49.5**	**-3.7**
	9.2nm,0.5s						
SSF	**Saint Saulge**	**5.01**	**207**	*e*Pn	**Pn**	**07 47 28.3**	**-0.3**
SSF				*e*Sg	**Sg**	**07 48 49.5**	**-3.7**
	4.6nm,0.5s						
AVF	**Avril sur Loir**	**5.30**	**207**	*e*Pn	**Pn**	**07 47 32.1**	**-0.5**
SMF	**Signal de Mont**	**5.31**	**203**	*e*Pn	**Pn**	**07 47 32.0**	**-0.7**
SMF				*e*Sg	**Sg**	**07 48 58.5**	**-4.2**
	5.6nm,0.4s						
SMF	**Signal de Mont**	**5.31**	**203**	*e*Pn	**Pn**	**07 47 32.0**	**-0.7**
SMF				*e*Sg	**Sg**	**07 48 58.5**	**-4.2**
	2.8nm,0.4s						
LDF	**La Druitiere**	**5.39**	**239**	*e*Pn	**Pn**	**07 47 33.3**	**-0.5**
LDF				*e*Sn	**Sn**	**07 48 30.9**	**-5.5**
	2.6nm,0.3s						
LDF	**La Druitiere**	**5.39**	**239**	*e*Pn	**Pn**	**07 47 33.3**	**-0.5**
LDF				*e*Sn	**Sn**	**07 48 30.9**	**-5.5**
	1.3nm,0.3s						
FLN	**La Foliniere**	**5.49**	**242**	*e*Pn	**Pn**	**07 47 34.2**	**-0.9**
	baz=56						
BGF	**Bois d'Agland**	**5.66**	**209**	*e*Pn	**Pn**	**07 47 36.5**	**-1.1**
GRR	**Gorron**	**5.90**	**240**	*e*Pn	**Pn**	**07 47 40.3**	**-0.6**
GRR				*e*Sn	**Sn**	**07 48 42.5**	**-6.6**
	7.5nm,0.2s						
GRR	**Gorron**	**5.90**	**240**	*e*Pn	**Pn**	**07 47 40.3**	**-0.6**
GRR				*e*Sn	**Sn**	**07 48 42.5**	**-6.6**
	3.8nm,0.2s						
TCF	**Toulx Ste Croi**	**6.10**	**212**	*e*Pn	**Pn**	**07 47 42.3**	**-1.3**

IDC 13 08:04:57.3±1.4**, 406N**×**12661E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.7**/17**, mbtmp3.6**/5**, Error ellipse: s-maj=107.1km s-min=19.5km az=73.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.05**	**182**	P	P	08 09 55.3	+1.6
	1.8nm,0.6s,baz=337,slow=22,SNR=5.8						
WRA	**Warramunga Arr**	**25.04**	**163**	P	P	08 10 22.4	-0.9
	2.1nm,0.8s,baz=341,slow=10,SNR=14						
ASAR	**Alice Springs**	**28.46**	**166**	P	P	08 10 54.1	0.0
	0.2nm,0.4s,baz=342,slow=6.7,SNR=6.1						
SONM	**Songino Array**	**46.95**	**341**	P	P	08 13 30.9	+1.1
	0.2nm,0.5s,baz=169,slow=8.9,SNR=2.5						
MKAR	**Makanchi Array**	**57.21**	**325**	P	P	08 14 45.4	-0.9
	0.3nm,0.4s,baz=140,slow=7.5,SNR=5.7						

*ISCJB **13** 08:15:03.3±0.6, 342N±0.1×13636E±009, h393km±5km, mb3.2/5, Error ellipse: s-maj=16.6km s-min=10.9km az=170.6*
*JMA **13** 08:15:03.5±0.1, 3429N×13633E, h393km, M3.0*
*IDC **13** 08:15:04.7±1.0, 3430N×13638E, h388km±16km, mb3.0/5, mb1 3.1/7, mb1mx2.9/23, mbtmp2.9/7, Error ellipse: s-maj=32.8km s-min=15.3km az=64.0*
ISC 13 08:15:04.6±0.6**, 342N**±01×**13633E**±009**, h385**km±5km**, n17, σ0ˢ72**/22**, mb3.2**/5**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	**Ise**	**0.35**	**64**	P	**Pn**	**08 15 52.9**	**+0.5**
JWY	**Kouya**	**0.61**	**268**	P	**Pn**	**08 15 53.2**	**+0.3**
JWY				*e*S	**S**	**08 16 30.9**	**-0.9**
JWT	**Wachi**	**1.29**	**324**	P	**Pn**	**08 15 54.9**	**-0.2**
JGM	**Miyama**	**1.49**	**12**	P	**Pn**	**08 15 56.3**	**+0.2**
JAI	**Aioi**	**1.62**	**255**	P	**Pn**	**08 15 57.1**	**+0.2**
JOD2	**Odawara 2**	**2.49**	**65**	P	**Pn**	**08 16 03.1**	**+0.6**
JOD2				*e*S	**S**	**08 16 51.0**	**+1.7**
JHS	**Saijyo**	**2.75**	**287**	P	**Pn**	**08 16 04.3**	**-0.2**
JRY	**Ryogami san**	**2.76**	**49**	P	**Pn**	**08 16 05.1**	**+0.6**
JRY				S	**S**	**08 16 53.2**	**+0.2**
MJAR	**Matsushiro Arr**	**2.77**	**33**	P	**Pn**	**08 16 04.5**	**-0.1**
	0.8nm,0.3s,baz=218,slow=7.6,SNR=8.6						
MJAR				S	**S**	**08 16 53.0**	**-0.1**
	0.4nm,0.3s,baz=42,slow=15,SNR=4.4						
JAG	**Ashikaga**	**3.36**	**49**	P	**Pn**	**08 16 08.8**	**-0.8**
BSO1	**Boso 1**	**3.87**	**83**	P	**Pn**	**08 16 12.6**	**-1.8**
BSO1				*e*S	**S**	**08 17 07.3**	**-3.6**
KSRS	**Korea Array**	**7.54**	**298**	P	**Pn**	**08 16 54.0**	**+0.1**
	0.5nm,0.3s,baz=111,slow=13,SNR=10						
SONM	**Songino Array**	**26.16**	**310**	P	**P**	**08 20 05.8**	**+0.4**
	0.3nm,0.5s,mb3.0,baz=120,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**42.17**	**304**	P	**P**	**08 22 20.8**	**-0.2**
	0.5nm,0.4s,mb3.2,baz=91,slow=9.7,SNR=8.5						
WRA	**Warramunga Arr**	**53.91**	**182**	P	**P**	**08 23 50.1**	**+0.2**
	0.5nm,0.3s,mb3.2,baz=0.4,slow=7.7,SNR=23						
ASAR	**Alice Springs**	**57.63**	**183**	P	**P**	**08 24 16.5**	**+0.5**
	0.2nm,0.5s,mb2.7,baz=8.3,slow=14,SNR=4.9						
ARCES	**ARCESS Array B**	**65.12**	**339**	P	**P**	**08 25 04.4**	**-0.6**
	2.2nm,1.0s,mb3.8,baz=78,slow=13,SNR=3.0						

IDC 13 08:29:05.7±1.3**, 403N**×**12722E, h0**km**, mb3.6**/6**, mb1 3.7**/6**, mb1mx3.7**/17**, mbtmp3.6**/6**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.0**/22**, Error ellipse: s-maj=91.8km s-min=18.4km az=72.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.05**	**184**	P	P	08 34 02.0	-0.1
	0.8nm,0.5s,baz=349,slow=10,SNR=5.5						
WRA	**Warramunga Arr**	**24.83**	**164**	P	P	08 34 29.5	-0.3
	2.5nm,0.8s,baz=342,slow=10,SNR=20						
WB2	**Warramunga Arr**	**24.83**	**164**	*e*P	P	08 34 29.3	-0.6
ASAR	**Alice Springs**	**28.29**	**167**	P	P	08 35 00.8	-0.2
	0.1nm,0.4s,baz=346,slow=7.3,SNR=4.3						
STKA	**Stephens Creek**	**38.24**	**160**	P	P	08 36 28.2	+0.6
	1.3nm,0.6s,baz=320,slow=7.9,SNR=3.9						
SONM	**Songino Array**	**47.17**	**341**	P	P	08 37 38.6	-1.4
	0.2nm,0.4s,baz=148,slow=11,SNR=3.8						
SONM				LR	LR	08 59 05.8	
	comp=Z,162nm,20.2s,baz=357,slow=38						
MKAR	**Makanchi Array**	**57.59**	**325**	P	P	08 38 58.7	+1.4
	0.4nm,0.5s,baz=122,slow=8.1,SNR=7.6						

WEL 13 08:31:53.1±0.3**, 3822S**×**17599E, h171**km±2km**, ML3.5**/8**, Error ellipse: s-maj=3.7km s-min=3.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.88**	**93**	PN	Pn	08 32 18.9	-0.1
URZ				SN	Sn	08 32 39.1	+0.3
BKZ	**Black Stump Fm**	**1.03**	**158**	PN	Pn	08 32 20.5	+0.4
BKZ				SN	Sn	08 32 41.1	+0.2
MOVZ	**Moawhango**	**1.20**	**189**	PN	Pn	08 32 21.6	+0.1
MOVZ				SN	Sn	08 32 43.0	-0.5
MWZ	**Matawai**	**1.22**	**96**	PN	Pn	08 32 21.8	+0.2
MWZ				SN	Sn	08 32 43.3	-0.2
KNZ	**Kokohu**	**1.54**	**122**	PN	Pn	08 32 24.7	0.0
KNZ				SN	Sn	08 32 48.6	-0.4
TSZ	**Takapari Road**	**1.84**	**181**	PN	Pn	08 32 27.3	-0.4
PXZ	**Pawanui**	**1.94**	**160**	PN	Pn	08 32 28.3	-0.5
MRZ	**Mangatainoka R**	**2.46**	**187**	PN	Pn	08 32 33.2	-1.6
MRZ				SN	Sn	08 33 04.2	-3.0
TIWZ	**Tintock**	**2.56**	**182**	PN	Pn	08 32 34.4	-1.5
KIW	**Kapiti Island**	**2.77**	**197**	PN	Pn	08 32 36.5	-2.0
MTW	**Mount Morrison**	**2.96**	**187**	PN	Pn	08 32 38.3	-2.5
CAW	**Cannon Point**	**2.98**	**194**	PN	Pn	08 32 38.7	-2.2
MRW	**Makara Radio**	**3.17**	**198**	PN	Pn	08 32 40.9	-2.4
TRWZ	**Traveller**	**3.19**	**184**	PN	Pn	08 32 41.3	-2.3
SNZO	**South Karori**	**3.24**	**197**	PN	Pn	08 32 41.5	-2.7
TCW	**Tory Channel**	**3.27**	**203**	PN	Pn	08 32 42.1	-2.5
NNZ	**Nelson**	**3.61**	**213**	PN	Pn	08 32 45.8	-3.1
THZ	**Tophouse**	**4.26**	**213**	PN	Pn	08 32 54.4	-2.8
KHZ	**Kahutara**	**4.59**	**203**	PN	Pn	08 32 58.4	-3.1

IDC 13 08:53:47.1±2.3**, 449N**×**12741E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/16**, mbtmp3.3**/3**, Error ellipse: s-maj=160.2km s-min=28.1km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.21**	**165**	P	P	08 59 14.9	+0.1
	0.5nm,0.6s,baz=344,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**28.69**	**168**	P	P	08 59 45.9	-0.1
	0.2nm,0.8s,baz=354,slow=8.7,SNR=3.5						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	09 03 37.0	+0.1
	0.2nm,0.4s,baz=132,slow=8.6,SNR=3.9						

*MOS **13** 08:54:45.8±2.4, 47.14N×15407E, h33km, mb4.1/2, Error ellipse: s-maj=46.2km s-min=26.3km az=68.2*
*ISCJB **13** 08:54:49.8±2.3, 474N±02×1539E±03, h74km±20km, mb3.5/4, Error ellipse: s-maj=41.6km s-min=13.5km az=42.9*
*IDC **13** 08:54:55.9±5.2, 4723N×15362E, h112km±47km, mb3.1/4, mb1 3.3/5, mb1mx3.1/22, mbtmp3.2/5, Error ellipse: s-maj=38.2km s-min=27.6km az=126.0*
ISC 13 08:54:51.5±2.1**, 474N**±02×**1540E**±03**, h73**km±17km**, n9, σ0ˢ95**/10**, mb3.5**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.62**	**22**	*e*PN	**Pn**	**08 55 44.7**	**-0.4**
SKR				*e*	**Sn**	**08 56 26.5**	**-0.2**
ASAJ	**Asahikawa**	**8.58**	**252**	PN	**Pn**	**08 56 53.4**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.58**	**252**	P	**Pn**	**08 56 53.4**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=90,slow=31,SNR=5.8						
SONM	**Songino Array**	**31.68**	**289**	P	**P**	**09 01 07.6**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.2,baz=61,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**50.10**	**37**	P	**P**	**09 03 41.0**	**+2.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**50.10**	**37**	P	**P**	**09 03 41.0**	**+2.4**
	comp=Z,0.6nm,0.6s,mb3.7,baz=296,slow=7.2,SNR=8.7						
FINES	**FINESS Array B**	**63.74**	**335**	P	**P**	**09 05 14.5**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**63.74**	**335**	P	**P**	**09 05 14.5**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.8,baz=38,slow=7.2,SNR=3.7						
ASAR	**Alice Springs**	**72.96**	**199**	P	**P**	**09 06 11.9**	**-1.0**
	comp=Z,0.3nm,0.9s,mb3.1,baz=13,slow=6.0,SNR=4.3						

*IDC **13** 09:05:42.6±0.4, 8.11S×11786E, h0km, mb5.0/26, mb1 5.0/29, mb1mx5.0/31, mbtmp5.0/29, ML5.0/3, MS5.2/20, Ms1 5.2/20, ms1mx5.2/22, Error ellipse: s-maj=12.4km s-min=7.7km az=54.0*
*NEIC **13** 09:05:43.9±0.2, 8.13S×11786E, h10km, mb5.5/48, MS5.3/137, MW5.5, Error ellipse: s-maj=7.7km s-min=4.8km az=56.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^17Nm; Mrr-0.09; Mθθ-0.82; Mφφ0.91; Mrθ-1.80; Mθφ-0.24; Mφr-1.37; Best double couple: M0 2.40000×10^17 NP1:φs136.00000°, δ20.00000°, λ178.00000°. NP2:φs228.00000°, δ89.00000°, λ70.00000°. Principal axes: T 2.1900, Plg42.0000°, Azm118.0000°; N 0.4400, Plg20.0000°, Azm228.0000°; P -2.6300, Plg41.0000°, Azm337.0000°;*
NEIC Felt [IV] at Sumbawa Besar and [III] at Praya and Sanur.
*GCMT **13** 09:05:43.9±0.1, 807S×11796E, h25km, MW5.6/96, Moment Tensor Solution. s79,c133; s96,c193; Duration: 1ˢ6 Moment tensor: Scale 10^17Nm; Mrr-0.45±.03; Mθθ-2.11±.03; Mφφ2.55±.04; Mrθ-1.60±.07; Mθφ0.38±.03; Mφr-1.73±.08; Best double couple: M0 3.34100×10^17 NP1:φs140.00000°, δ44.00000°, λ-174.00000°. NP2:φs46.00000°, δ86.00000°, λ-46.00000°. Principal axes: T 3.5330, Plg27.0000°, Azm102.0000°; N -0.3910, Plg44.0000°, Azm221.0000°; P -3.1480, Plg34.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **13** 09:05:44.8, 8.10S×11790E, h20km, mB5.7, mb5.3, Ms5.5, Msz5.2*
*ISCJB **13** 09:05:45.7±0.2, 8.16S±003×11789E±003, h31km, mb5.4/107, MS5.3/169, Error ellipse: s-maj=4.3km s-min=3.6km az=137.2*
*MOS **13** 09:05:46.2±1.1, 804S×11793E, h33km, mb5.6/43, MS5.2/25, Error ellipse: s-maj=10.6km s-min=6.3km az=112.3*
ISC 13 09:05:47.7±0.2**, 821S**±003×**11790E**±003**, h33**km**, h33**km±.7km**: pP-P, n426, σ1ˢ33**/298**, mb5.4**/107**, MS5.3**/169**, 15C-14D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	**Denpasar**	**2.70**	**260**	P	**Pn**	**09 06 27.8**	**-1.1**
	7μm,0.8s						
NBBI	**Negara**	**3.25**	**267**	P	**Pn**	**09 06 34.1**	**-2.3**
	6μm,0.7s						
KAPI	**Kappang**	**3.67**	**30**	Pn	**Pn**	**09 06 39.4**	**-2.8**
	11μm,0.6s						
KMMI	**Kalianget**	**4.06**	**286**	P	**Pn**	**09 06 46.3**	**-1.3**
	2μm,1.0s						
KRKI	**Karangkates**	**5.39**	**270**	P	**Pn**	**09 07 05.3**	**-0.6**
	3μm,0.7s						
BATI	**Kupang**	**6.03**	**110**	Pn	**Pn**	**09 07 15.7**	**+1.1**
	69nm,0.3s,baz=330,slow=1.9,SNR=36						
BATI				Sn	**Sn**	**09 08 31.5**	**+8.9**
	84nm,0.3s,baz=11,slow=14,SNR=2.8						
BATI				LR	LR	09 10 16.0	
	comp=Z,73μm,18.6s,baz=165,slow=45						
PCI	**Palu**	**7.51**	**15**	P	**Pn**	**09 07 35.7**	**+0.7**
	421nm,0.7s						
BJII	**Banjamegara**	**8.16**	**276**	P	**Pn**	**09 07 42.4**	**-1.6**
	442nm,0.8s						
BJII	**Banjamegara**	**8.16**	**276**	⇓*e*P	**Pn**	**09 07 43.7**	**-0.3**
BJII				*i* S	**Sn**	**09 09 15.2**	**+0.1**
LEM	**Lembang**	**10.29**	**277**	P	**Pn**	**09 08 14.8**	**+1.7**
	553nm,1.1s						
SBUM	**Sibu**	**12.01**	**332**	⇑P	**Pn**	**09 08 40.1**	**+3.4**
KSM	**Kuching**	**12.24**	**321**	*e*Pn	**Pn**	**09 08 39.0**	**-0.9**
KSM	**Kuching**	**12.24**	**321**	⇓P	**Pn**	**09 08 42.6**	**+2.8**
XMIS	**Christmas Isla**	**12.29**	**258**	*e*Pn	**Pn**	**09 08 38.1**	**-2.5**
XMIS				*e*S	**Sn**	**09 10 46.1**	**-10**
BTM	**Bintulu**	**12.31**	**337**	⇑P	**Pn**	**09 08 44.5**	**+3.7**
FITZ	**Fitzroy Crossi**	**12.39**	**143**	*e*P	**Pn**	**09 08 40.9**	**-0.9**
	259nm,0.8s						
FITZ				*e*S	**Sn**	**09 10 55.5**	**-3.3**
FITZ	**Fitzroy Crossi**	**12.39**	**143**	Pn	**Pn**	**09 08 41.7**	**-0.2**
	2.9nm,0.3s,baz=338,slow=8.5,SNR=63						
FITZ				Sn	**Sn**	**09 10 55.5**	**-3.2**
	8.7nm,0.3s,baz=172,slow=15,SNR=5.6						
FITZ				LR	LR	09 14 20.1	
	comp=Z,8μm,18.0s,baz=326,slow=41						
TSM	**Tawau**	**12.42**	**360**	⇑P	**Pn**	**09 08 45.0**	**+2.7**
MBWA	**Marble Bar**	**13.00**	**172**	*e*Pn	**Pn**	**09 08 51.4**	**+1.2**
MBWA				*e*Sn	**Sn**	**09 11 04.8**	**-8.9**
MYLDM	**Lahad Datu**	**13.31**	**3**	⇑P	**Pn**	**09 09 00.6**	**+6.1**
SDKM	**Sandakan**	**13.77**	**357**	⇑P	**Pn**	**09 09 05.6**	**+4.8**
KKM	**Kota Kinabalu**	**14.26**	**353**	*e*Pn	**Pn**	**09 09 07.1**	**-0.3**
KKM	**Kota Kinabalu**	**14.26**	**353**	⇑P	**Pn**	**09 09 10.8**	**+3.4**
KDM	**Kudat**	**15.06**	**356**	⇑P	**Pn**	**09 09 23.2**	**+4.9**
KSI	**Kapahiang**	**15.88**	**286**	P	**Pn**	**09 09 31.2**	**+2.3**
	532nm,1.0s						
MYKOM	**Kota Tinggi**	**17.17**	**305**	⇑P	**Pn**	**09 09 45.9**	**+0.6**
KGM	**Kluang**	**17.73**	**304**	⇓P	**Pn**	**09 09 52.9**	**+0.6**
TBP	**Tagbilaran**	**18.75**	**19**	*e*P	**Pn**	**09 10 03.7**	**-0.9**
PPI	**Padang Panjang**	**19.06**	**293**	P	**Pn**	**09 10 06.6**	**-1.9**
	218nm,1.6s						
BAKI	**Biak**	**19.43**	**70**	P	**Pn**	**09 10 12.8**	**-0.1**
	2μm,1.5s						
WRA	**Warramunga Arr**	**19.73**	**128**	P	**Pn**	**09 10 14.6**	**-1.9**
WRA				S	**Sn**	**09 13 55.6**	**-1.8**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.3s						
WRA				smax			
	comp=N,1.0nm,0.3s						
WRA				MLR	MLR		
	comp=Z,9μm,20.4s						
WRA	**Warramunga Arr**	**19.73**	**128**	P	**Pn**	**09 10 14.6**	**-1.8**
	comp=Z,5.8nm,0.3s,baz=302,slow=13,SNR=146						
WRA				S	**Sn**	**09 13 55.6**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=297,slow=26,SNR=5.5						
WRA				LR	LR	09 18 31.4	
	comp=Z,9μm,20.4s,baz=315,slow=39						
WB2	**Warramunga Arr**	**19.74**	**128**	*e*P	**Pn**	**09 10 14.6**	**-2.0**
WB2				*e*S	**Sn**	**09 13 56.4**	**-1.2**
FRIM	**Kepong**	**19.82**	**304**	⇓P	**Pn**	**09 10 17.4**	**-0.1**
RCP	**Roxas**	**20.22**	**14**	⇓*e*P	**P**	**09 10 20.9**	**+0.8**
ASAR	**Alice Springs**	**21.71**	**137**	P	**P**	**09 10 37.1**	**+0.9**
ASAR				S	**S**	**09 14 38.4**	**+3.6**
ASAR				pmax	pmax		
	comp=Z,77nm,0.6s						
ASAR				smax			
	comp=N,26nm,1.0s						
ASAR	**Alice Springs**	**21.71**	**137**	P	**P**	**09 10 37.1**	**+0.9**
	comp=N,77nm,0.6s,mb5.3,baz=307,slow=9.0,SNR=298						
ASAR				S	**S**	**09 14 38.4**	**+3.5**
	comp=N,26nm,1.0s,baz=314,slow=18,SNR=4.3						
KULM	**Kulim**	**21.81**	**307**	*e*P	**P**	**09 10 35.6**	**-1.8**
KULM	**Kulim**	**21.81**	**307**	⇓P	**P**	**09 10 38.6**	**+1.3**
PSI	**Prapat**	**21.86**	**299**	P	**P**	**09 10 36.8**	**-1.0**
PSI				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
PSI				MLR	MLR		
	comp=Z,17μm,20.1s,MS5.5						
PSI	**Prapat**	**21.86**	**299**	P	**P**	**09 10 36.8**	**-1.1**
	comp=Z,70nm,0.9s,mb5.1,baz=139,slow=7.9,SNR=21						
PSI				LR	LR	09 19 53.2	
	comp=Z,17μm,20.1s,MS5.5,baz=125,slow=39						
SNG	**Songkhla**	**23.03**	**311**	P	**P**	**09 10 50.0**	**-0.3**
	comp=Z,280nm,0.9s,mb5.7						
KLBR	**Kellerberrin**	**23.27**	**180**	*e*P	**P**	**09 10 52.1**	**-0.5**
	comp=Z,122nm,0.9s,mb5.3						
KLBR				*e*S	**S**	**09 15 05.7**	**+3.2**
MUN	**Mundaring**	**23.70**	**184**	*e*P	**P**	**09 10 57.8**	**+1.0**
MUN				*e*S	**S**	**09 15 16.9**	**+7.3**
FORT	**Forrest**	**24.38**	**158**	*e*P	**P**	**09 11 05.6**	**+2.6**
	comp=Z,356nm,0.8s,mb5.8						
FORT				*e*S	**S**	**09 15 21.9**	**+1.3**
NWAO	**Narrogin (SRO)**	**24.61**	**181**	*e*P	**P**	**09 11 05.7**	**+0.7**
	comp=Z,431nm,1.5s,mb5.8						
NWAO				*e*pP		09 11 14.6	
NWAO				*e*S	**S**	**09 15 32.4**	**+8.2**
NWAO				LR	LR		
	comp=Z,4μm,22.0s,MS4.8						
NWAO	**Narrogin (SRO)**	**24.61**	**181**	P	**P**	**09 11 07.1**	**+2.1**
	SNR=8.3						
NWAO	**Narrogin (SRO)**	**24.61**	**181**	P	**P**	**09 11 07.1**	**+2.1**
	SNR=8.3						
NWAO	**Narrogin (SRO)**	**24.61**	**181**	P	**P**	**09 11 05.7**	**+0.7**
	comp=Z,52nm,0.6s,mb5.2,baz=2.9,slow=7.9,SNR=48						
NWAO				S	**S**	**09 15 32.2**	**+8.1**
	comp=Z,42nm,0.8s,baz=336,slow=19,SNR=3.7						
NWAO				LR	LR	09 20 22.3	
	comp=Z,4μm,20.8s,MS4.8,baz=247,slow=36						
COEN	**Coen**	**25.44**	**105**	*e*P	**P**	**09 11 12.9**	**0.0**
	comp=Z,100nm,0.8s,mb5.4						
COEN				*e*pP	pP	09 11 22.1	-0.2
QIZ	**Qiongzhong**	**28.20**	**344**	P	**P**	**09 11 36.5**	**-1.1**
QIZ				AP	pP	09 11 44.3	-2.8
QIZ				XP	sP	09 11 49.0	-2.1
QIZ				S	**S**	**09 16 23.8**	**+2.5**
QIZ				XS	sS	09 16 36.5	-0.5
QIZ				AMB	AMB		
	comp=Z,19nm,1.3s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,559nm,9.2s						
QIZ				LR	LR		
	comp=N,4μm,14.9s						
QIZ				LR	LR		
	comp=Z,5μm,15.2s,MS5.2						
QIZ	**Qiongzhong**	**28.20**	**344**	PFAKE		09 11 50.0	+12
QIZ				LR	LR		
	comp=Z,5μm,21.0s,MS5.0						
PMG	**Port Moresby**	**28.94**	**95**	*e*P	**P**	**09 11 43.9**	**-0.4**
	comp=Z,6.8nm,0.7s,mb4.5						
PMG				*e*pP	pP	09 11 53.8	+0.1
PMG				LR	LR		
	comp=Z,3μm,21.0s,MS4.9						
PMG	**Port Moresby**	**28.94**	**95**	*e*P	**P**	**09 11 43.9**	**-0.3**
PMG				*e**PP	pP	09 11 53.8	0.0
PMG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PMG				MLR	MLR		
	comp=Z,3μm,21.0s						
PMG	**Port Moresby**	**28.94**	**95**	P	**P**	**09 11 45.0**	**+0.7**
	comp=Z,5.0nm,0.5s,mb4.5,baz=333,slow=11,SNR=3.0						
NST	**Nakhon Sawan**	**29.54**	**323**	P	**P**	**09 11 52.0**	**+2.5**
	comp=Z,67nm,0.9s,mb5.4						
CTA	**Charters Tower**	**29.87**	**116**	*e*P	**P**	**09 11 53.3**	**+0.9**
	comp=Z,31nm,0.9s,mb5.0						
CTA	**Charters Tower**	**29.87**	**116**	*e*P	**P**	**09 11 53.3**	**+0.9**
CTA				pmax	pmax		
	comp=Z,31nm,0.9s						

CTA Charters Tower 29.87 116 P **P** **09 11 53.5 +1.1**
comp=Z,33nm,0.8s,mb5.1,baz=294,slow=11,SNR=39
CTA LR LR 09 26 05.8
comp=Z,14μm,18.3s,MS5.6,baz=293,slow=41
CTAO Charters Tower 29.87 116 *e*P **P** **09 11 53.5 +1.1**
comp=Z,50nm,0.9s,mb5.2
CTAO LR LR
comp=Z,13μm,20.0s,MS5.5
GZH Guangzhou 31.42 352 P **P** **09 12 10.5 +4.5**
GZH S **S** **09 17 18.3 +6.6**
GZH LR LR
comp=N,2μm,24.4s
GZH LR LR
comp=E,2μm,19.1s
GZH LR LR
comp=Z,4μm,24.0s,MS5.0
STKA Stephens Creek 32.25 140 *e*P **P** **09 12 14.5 +1.2**
comp=Z,73nm,0.9s,mb5.5
STKA *e*S **S** **09 17 28.8 +4.1**
STKA Stephens Creek 32.25 140 P **P** **09 12 15.5 +2.2**
comp=Z,56nm,0.8s,mb5.5,baz=312,slow=9.0,SNR=32
STKA LR LR 09 26 40.8
comp=Z,2μm,18.5s,MS4.9,baz=198,slow=39
CHG Chiang Mai 32.72 325 ⇓P **P** **09 12 18.0 +0.5**
comp=Z,46nm,1.1s,mb5.3
CHTO Chiang Mai 32.72 325 *e*P **P** **09 12 18.6 +1.1**
comp=Z,38nm,0.9s,mb5.3
CHTO LR LR
comp=Z,9μm,20.0s,MS5.5
CHTO Chiang Mai 32.72 325 *e*P **P** **09 12 18.6 +1.1**
CHTO pmax pmax
comp=Z,38nm,0.9s,mb5.3
CHTO MLR MLR
comp=Z,9μm,20.0s,MS5.5
CHTO Chiang Mai 32.72 325 P **P** **09 12 19.0 +1.5**
SNR=28
CHTO Chiang Mai 32.72 325 P **P** **09 12 19.0 +1.5**
SNR=28
YHNB Yeheng 32.85 6 *e*P **P** **09 12 18.5 -0.1**
QZH Quanzhou 32.95 1 P **P** **09 12 21.1 +1.6**
QZH S **S** **09 17 34.1 -1.5**
QZH LR LR
comp=N,5μm,14.8s,MS5.3
QZH LR LR
comp=E,2μm,15.9s,MS5.3
QZH LR LR
comp=Z,5μm,17.9s,MS5.3
CHRT Chiangrai 33.12 328 ⇑P **P** **09 12 22.0 +1.1**
comp=Z,579nm,1.0s,mb6.5
TATO Taipei 33.17 6 PFAKE 09 12 30.0 +8.7
TATO LR LR
comp=Z,2μm,22.0s,MS4.7
GUMO Guam 34.44 51 *e*P **P** **09 12 32.3 -0.2**
comp=Z,35nm,1.8s,mb5.0
GUMO LR LR
comp=Z,2μm,19.0s,MS4.8
GUMO Guam 34.44 51 *e*P **P** **09 12 32.3 -0.2**
GUMO pmax pmax
comp=Z,35nm,1.8s,mb5.0
GUMO MLR MLR
comp=Z,2μm,19.0s,MS4.8
GYA Guiyang 36.14 343 ⇑*i*P **P** **09 12 47.5 +0.4**
GYA AP pP 09 12 57.6 +0.9
GYA XP sP 09 13 01.3 +0.6
GYA PP PP 09 14 12.0 +2.3
GYA PCP PcP 09 15 14.3 +1.8
GYA S **S** **09 18 26.3 +1.5**
GYA XS sS 09 18 40.9 +0.3
GYA SCP ScP 09 18 57.3 +0.7
GYA SS SS 09 20 50.0 -13
GYA SCS ScS 09 23 01.6 -0.8
GYA AMB AMB
comp=Z,40nm,0.9s,mb5.3
GYA AMB AMB
comp=Z,870nm,6.4s
GYA LR LR
comp=N,740nm,18.8s,MS4.6
GYA LR LR
comp=E,690nm,18.6s,MS4.6
GYA LR LR
comp=Z,770nm,19.4s,MS4.5
JOW Kunigami 36.26 16 P **P** **09 12 47.8 -0.2**
comp=Z,23nm,0.8s,mb5.2,baz=246,slow=9.3,SNR=4.3
KMI Kunming 36.27 336 P **P** **09 12 49.8 +1.6**
KMI AP pP 09 12 59.9 +2.1
KMI XP sP 09 13 02.5 +0.7
KMI PP PP 09 14 13.0 +1.9
KMI S **S** **09 18 28.0 +1.3**
KMI XS sS 09 18 42.8 +0.2
KMI SS SS 09 20 52.8 -13
KMI SCS ScS 09 23 02.3 -0.9
KMI AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
KMI AMB AMB
comp=Z,474nm,7.1s
KMI LR LR
comp=N,6μm,13.7s,MS5.7
KMI LR LR
comp=E,5μm,14.3s,MS5.7
KMI LR LR
comp=Z,6μm,14.0s,MS5.5
ARMA Armidale 38.50 130 *e*P **P** **09 13 13.5 +6.4**
ARMA Armidale 38.50 130 P **P** **09 13 08.3 +1.2**
comp=Z,0.9nm,0.8s
ENH Enshi 39.10 348 PFAKE 09 13 20.0 +8.0
ENH LR LR
comp=Z,5.0nm,22.0s
SSE Sheshan 39.20 4 *e*P **P** **09 13 15.1 +2.2**
SSE AP pP 09 13 23.5 +0.9
SSE PP PP 09 14 43.8 +0.5
SSE S **S** **09 19 11.1 0.0**
SSE XS sS 09 19 26.0 -1.1
SSE SCS ScS 09 23 20.1 +0.5
SSE AMB AMB
comp=Z,53nm,0.9s,mb5.3
SSE AMB AMB
comp=Z,320nm,6.7s
SSE LR LR
comp=N,1μm,16.5s,MS4.8
SSE LR LR
comp=E,701nm,16.5s,MS4.8
SSE LR LR
comp=Z,1μm,17.4s,MS4.9
CNB Canberra Magne 39.45 138 *e*P **P** **09 13 17.9 +2.9**
comp=Z,34nm,0.9s,mb5.1
RIV Riverview 39.86 135 *e*P **P** **09 13 23.2 +4.8**
NJ2 Nanjing 40.04 1 *e*P **P** **09 13 23.3 +3.5**
NJ2 PP PP 09 15 00.6 +8.2
NJ2 S **S** **09 19 26.5 +2.9**
NJ2 AMB AMB
comp=Z,110nm,1.0s,mb5.5
NJ2 AMB AMB
comp=Z,620nm,5.2s
NJ2 LR LR
comp=N,4μm,16.6s,MS5.5
NJ2 LR LR
comp=E,3μm,14.8s,MS5.5
NJ2 LR LR
comp=Z,3μm,14.8s,MS5.2
PALK Pallekele 40.14 292 PFAKE 09 13 30.0 +9.0
PALK LR LR
comp=Z,5μm,21.0s,MS5.3
IMP Imphal 40.26 325 *e*P **P** **09 13 23.0 +1.2**
AGT Agartala 41.17 321 *e*P **P** **09 13 25.0 -4.3**
CD2 Chengdu 41.19 341 P **P** **09 13 29.5 +0.2**
CD2 AP pP 09 13 39.5 +0.4
CD2 XP sP 09 13 45.8 +2.8
CD2 PP PP 09 15 09.8 +4.9
CD2 PCP PcP 09 15 28.8 +0.6
CD2 PCS PcS 09 19 18.8 -0.5
CD2 S **S** **09 19 42.9 +2.1**
CD2 XS sS 09 19 59.3 +2.5
CD2 SS SS 09 22 43.8 -1.0
CD2 SCS ScS 09 23 28.8 -2.6
CD2 AMB AMB
comp=Z,50nm,0.7s,mb5.2
CD2 AMB AMB
comp=Z,640nm,4.0s
CD2 LR LR
comp=N,4μm,18.6s,MS5.5
CD2 LR LR
comp=E,5μm,15.6s,MS5.5
CD2 LR LR
comp=Z,5μm,15.0s,MS5.5
HNR Honiara 41.55 95 *e*P **P** **09 13 31.9 -0.7**
comp=Z,282nm,1.1s,mb5.8
HNR LR LR
comp=Z,2μm,19.0s,MS5.0
HNR Honiara 41.55 95 *e*P **P** **09 13 32.0 -0.6**
HNR pmax pmax
comp=Z,281nm,1.1s,mb5.8
HNR MLR MLR
comp=Z,2μm,19.0s,MS5.0
HNR Honiara 41.55 95 P **P** **09 13 32.1 -0.5**
comp=Z,67nm,0.6s,mb5.5,baz=78,slow=1.0,SNR=11
SHL Shillong 42.04 324 *e*P **P** **09 13 35.7 -0.8**
SHL AMb AMB 09 13 38.9
comp=Z,686nm,0.8s,mb6.3
SHL *e*S **S** **09 19 55.5 +1.9**
CBIJ Chichi jima 42.26 33 P **P** **09 13 37.6 -0.6**
comp=Z,249nm,0.9s,mb5.8,baz=79,slow=1.4,SNR=5.4
XAN Xi'an 42.87 349 P **P** **09 13 42.3 -0.7**
XAN PP PP 09 15 23.1 +0.1
XAN S **S** **09 20 05.5 0.0**
XAN AMB AMB
comp=Z,64nm,1.2s,mb5.2
XAN AMB AMB
comp=Z,601nm,8.4s
XAN LR LR
comp=N,3μm,17.2s,MS5.3
XAN LR LR
comp=E,2μm,17.1s,MS5.3
XAN LR LR
comp=Z,4μm,17.4s,MS5.4
JNU Nakatsue 42.91 16 P **P** **09 13 42.8 -0.6**
comp=Z,44nm,1.0s,mb5.2,baz=141,slow=2.4,SNR=17
MDRS Chennai 42.96 299 *ex* x 09 13 36.5
TAU Tasmania Unive 43.14 148 PFAKE 09 14 00.0 +15
TAU LR LR
comp=Z,6μm,19.0s,MS5.5
TAU Tasmania Unive 43.14 148 P **P** **09 13 47.4 +2.3**
TIA Tai'an 44.19 359 P **P** **09 13 52.3 -1.3**
TIA AMB AMB
comp=Z,46nm,1.0s,mb5.2
KOD Kodaikanal 44.22 294 *e*P **P** **09 13 54.6 +0.3**
KOD AMb AMB 09 14 44.1
comp=Z,19nm,0.0s
LSA Lhasa 45.64 327 P **P** **09 14 06.8 +1.5**
LSA PP PP 09 15 48.3 -4.3
LSA S **S** **09 20 36.8 -9.2**
LSA AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
LSA AMB AMB
comp=Z,560nm,5.0s
LSA LR LR
comp=N,1μm,17.0s,MS5.1
LSA LR LR
comp=E,2μm,22.0s,MS5.1
LSA LR LR
comp=Z,3μm,15.0s
LSA Lhasa 45.64 327 *e*P **P** **09 14 07.0 +1.7**
comp=Z,83nm,0.9s,mb5.7
LSA LR LR
comp=Z,3μm,19.0s,MS5.3
LSA Lhasa 45.64 327 *e*P **P** **09 14 07.0 +1.7**
LSA pmax pmax
comp=Z,83nm,0.9s,mb5.7
LSA MLR MLR
comp=Z,3μm,19.0s,MS5.3
ODAN Odare 45.72 321 *e*P **P** **09 14 06.5 +0.5**
comp=Z,583nm,1.1s,mb6.4
TAPN Taplejung 45.87 321 *e*P **P** **09 14 07.9 +0.7**
comp=Z,644nm,1.1s,mb6.5
TIY Taiyuan 45.96 354 P **P** **09 14 07.8 +0.1**
TIY XP sP 09 14 21.1 -0.3
TIY S **S** **09 20 49.9 -0.5**
TIY AMB AMB
comp=Z,587nm,7.0s
TIY LR LR
comp=N,2μm,14.8s,MS5.3
TIY LR LR
comp=E,821nm,11.1s,MS5.3
TIY LR LR
comp=Z,2μm,16.6s
LZH Lanzhou 46.00 344 *e*P **P** **09 14 08.9 +0.9**
LZH AP pP 09 14 15.8 -2.0
LZH XP sP 09 14 19.5 -2.3
LZH PCP PcP 09 15 44.3 0.0
LZH PP PP 09 15 59.3 +2.9
LZH *e*S **S** **09 20 49.0 -2.0**
LZH XS sS 09 21 03.0 -4.1
LZH SS SS 09 24 08.0 -8.4
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,313nm,4.7s
LZH LR LR
comp=E,3μm,14.2s
LZH LR LR
comp=Z,4μm,15.2s,MS5.5
INCN Inchon 46.18 10 PFAKE 09 14 20.0 +11
INCN LR LR
comp=Z,1μm,19.0s,MS4.8
KSRS Korea Array 46.38 11 P **P** **09 14 10.8 -0.2**
comp=Z,30nm,0.8s,mb5.3,baz=192,slow=8.9,SNR=65
KSRS LR LR 09 35 32.2
comp=Z,1μm,19.6s,MS4.8,baz=304,slow=39
HYB Hyderabad 46.48 303 *e*P **P** **09 14 11.5 -0.6**
HYB *e* pP 09 14 22.5 +0.6
HYB *e* 09 14 33.0
HYB Hyderabad 46.48 303 *e*P **P** **09 14 11.5 -0.6**
HYB *e* pP 09 14 22.5 +0.6
HYB Hyderabad 46.48 303 *i*P **P** **09 14 11.5 -0.6**
HYB *e* pP 09 14 22.5 +0.6
HYB *e* 09 14 31.0
HYB *e*PP PP 09 16 10.0 +8.4
HYB *e*S **S** **09 21 00.0 +1.7**
DL2 Dalian 47.00 4 P **P** **09 14 15.6 -0.2**
DL2 PP PP 09 16 03.4 -3.4
DL2 S **S** **09 21 05.1 -0.1**
DL2 AMB AMB
comp=Z,30nm,0.8s,mb5.3
DL2 AMB AMB
comp=Z,270nm,6.2s
DL2 LR LR
comp=N,1μm,15.4s,MS5.0
DL2 LR LR
comp=E,340nm,13.8s,MS5.0
DL2 LR LR
comp=Z,1μm,17.4s,MS4.9
JIRN Jiri 47.04 320 *e*P **P** **09 14 17.0 +0.7**
comp=Z,527nm,1.0s,mb6.4
MNGI Mangalore 47.67 296 *e*P **P** **09 14 22.1 +0.7**
MNGI AMb AMB 09 14 44.4
comp=Z,55nm,1.0s,mb5.5
KKN Kakani 47.71 320 *e*P **P** **09 14 21.7 +0.2**
comp=Z,339nm,1.1s,mb6.3
KKN Kakani 47.71 320 *e*P **P** **09 14 21.7 +0.2**
KKN pmax pmax
comp=Z,339nm,1.1s,mb6.3
BJT Baijiatuau 48.01 358 *e*P **P** **09 14 22.9 -0.7**
comp=Z,194nm,1.4s,mb5.9
BJT LR LR
comp=Z,2μm,21.0s,MS5.1
BJT Baijiatuau 48.01 358 *e*P **P** **09 14 22.9 -0.7**
BJT pmax pmax
comp=Z,194nm,1.4s
BJT MLR MLR
comp=Z,2μm,21.0s
NGP Nagpur 48.03 308 *e*P **P** **09 14 23.6 -0.5**
NGP *ex* x 09 14 29.8
comp=Z,55nm,1.4s
NGP *ex* x 09 21 27.7
BJI Beijing 48.03 358 P **P** **09 14 23.4 -0.4**
BJI AP pP 09 14 32.3 -1.3
BJI XP sP 09 14 36.3 -1.3
BJI PP PP 09 16 10.0 -6.2
BJI AMB AMB
comp=Z,76nm,1.6s,mb5.5
BJI AMB AMB
comp=Z,474nm,4.0s
BJI LR LR
comp=N,2μm,15.7s,MS5.4
BJI LR LR
comp=E,2μm,15.0s,MS5.4
BJI LR LR
comp=Z,1μm,16.3s,MS5.0
GKN Gorkha 48.27 319 *e*P **P** **09 14 25.8 0.0**
comp=Z,360nm,1.0s,mb6.3
MAJO Matsushiro 48.43 22 *e*P **P** **09 14 25.6 -1.3**
comp=Z,14nm,0.7s,mb5.1
MAJO LR LR
comp=Z,2μm,20.0s,MS5.0
MAJO Matsushiro 48.43 22 *e*P **P** **09 14 25.3 -1.6**
MAT Matsushiro 48.43 22 P **P** **09 14 25.1 -1.8**
MAT S **S** **09 21 22.0 -3.5**
MJAR Matsushiro Arr 48.43 22 P **P** **09 14 25.1 -1.8**
comp=Z,12nm,0.8s,mb5.0,baz=199,slow=7.9,SNR=15
MJAR LR LR 09 35 48.5
comp=Z,1μm,18.7s,MS4.9,baz=200,slow=37
MJAR PKPPKP 09 45 34.3
comp=Z,1.9nm,0.8s,baz=32,slow=7.4,SNR=4.0
JBP Jabalpur 48.45 311 ⇑*i*P **P** **09 14 29.9 +2.5**
JBP *ex* x 09 14 33.0
comp=Z,59nm,1.9s
DZM Mont Dzumac 48.63 112 *e*P **P** **09 14 29.8 +1.0**
DZM Mont Dzumac 48.63 112 P **P** **09 14 30.9 +2.0**
comp=Z,12nm,0.6s,mb5.1,baz=270,slow=11,SNR=20
BTO Baotou 49.11 352 *e*P **P** **09 14 31.6 -0.5**
HHC Hu-ho-hao-te 49.16 354 *e*P **P** **09 14 35.0 +2.5**
HHC AP pP 09 14 44.9 +2.6
HHC XP sP 09 14 48.9 +2.6
HHC PCP PcP 09 15 57.8 +2.3
HHC PP PP 09 16 27.8 +1.3
HHC PCS PcS 09 19 53.0 +1.2
HHC S **S** **09 21 36.0 +0.3**
HHC XS sS 09 21 52.5 +0.5
HHC SCS ScS 09 24 21.3 -0.8
HHC SS SS 09 25 04.0 -3.5
HHC AMB AMB
comp=Z,37nm,1.0s,mb5.4
HHC AMB AMB
comp=Z,879nm,6.9s
HHC LR LR
comp=N,1μm,20.2s,MS5.0
HHC LR LR
comp=E,744nm,20.2s,MS5.0
HHC LR LR
comp=Z,2μm,20.2s,MS5.0
AKL Akola 49.40 306 *e*P **P** **09 14 32.9 -1.7**
AKL AMb AMB 09 14 37.9
comp=Z,30nm,1.2s,mb5.2
SNY Shenyang 50.06 6 ⇓P **P** **09 14 37.9 -1.4**
SNY S **S** **09 21 42.1 -6.2**
SNY AMB AMB
comp=Z,50nm,1.3s,mb5.4
SNY AMB AMB
comp=Z,692nm,4.5s
SNY LR LR
comp=N,1μm,17.8s,MS5.2
SNY LR LR
comp=E,1μm,14.9s,MS5.2
SNY LR LR
comp=Z,2μm,17.1s,MS5.2
GTA Gaotai 50.26 342 *e*P **P** **09 14 42.0 +1.1**
GTA AP pP 09 14 50.9 +0.1
GTA XP sP 09 14 55.0 +0.3
GTA PP PP 09 16 38.8 +2.2
GTA S **S** **09 21 53.9 +2.8**
GTA XS sS 09 22 08.5 +1.1
GTA SS SS 09 25 24.8 -0.4
GTA AMB AMB
comp=Z,22nm,0.7s,mb5.3
GTA AMB AMB
comp=Z,431nm,5.0s
GTA LR LR
comp=N,2μm,17.9s,MS5.4
GTA LR LR
comp=E,3μm,19.8s,MS5.4
GTA LR LR
comp=Z,3μm,19.4s,MS5.2
POO Poona 50.93 302 *e*P **P** **09 14 47.0 +0.7**
CN2 Changchun 52.21 7 *e*P **P** **09 14 56.0 +0.6**
CN2 *e*XP sP 09 15 09.9 +0.6
CN2 *e*PP PP 09 16 56.3 +2.1
CN2 *e*S **S** **09 22 18.1 +0.1**
CN2 *e*SS SS 09 25 54.6 -1.4
CN2 AMB AMB
comp=Z,30nm,0.7s,mb5.3
CN2 AMB AMB
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,800nm,17.0s,MS5.2
CN2 LR LR
comp=E,2μm,17.0s,MS5.2
CN2 LR LR
comp=Z,500nm,21.0s,MS4.5
MDJ Mudanjiang 53.63 10 P **P** **09 15 05.6 -0.2**
MDJ AP pP 09 15 14.4 -1.4
MDJ XP sP 09 15 18.5 -1.2
MDJ PP PP 09 17 05.8 -1.2
MDJ SCP ScP 09 20 07.1 -0.5
MDJ PCS PcS 09 20 10.8 -0.2
MDJ S **S** **09 22 39.6 +2.4**
MDJ XS sS 09 22 53.3 -0.3
MDJ SCS ScS 09 24 51.5 -1.3
MDJ AMB AMB
comp=Z,66nm,1.2s,mb5.4
MDJ AMB AMB
comp=Z,575nm,5.3s
MDJ LR LR
comp=N,555nm,18.1s,MS4.7
MDJ LR LR
comp=E,367nm,18.1s,MS4.7
MDJ LR LR
comp=Z,680nm,19.8s,MS4.7
MDJ Mudanjiang 53.63 10 *e*P **P** **09 15 05.5 -0.4**
comp=Z,49nm,0.8s,mb5.5
MDJ *e*pP pP 09 15 14.6 -1.2
MDJ LR LR
comp=Z,1μm,20.0s,MS4.9
NDI New Delhi 53.71 315 *e*P **P** **09 15 04.0 -2.8**
NDI *e*P 09 15 04.4
NDI AMb AMB 09 15 14.2
comp=Z,228nm,4.3s
ERM Erimo 55.07 23 PFAKE 09 15 30.0 +14
ERM LR LR
comp=Z,2μm,20.0s,MS5.1
ULN Ulaanbaatar 56.65 351 PFAKE 09 15 40.0 +12
ULN LR LR
comp=Z,2μm,19.0s,MS5.1
ASAJ Asahikawa 56.67 21 P **P** **09 15 28.2 +0.3**
ASAJ pmax pmax
comp=Z,28nm,0.9s
ASAJ Asahikawa 56.67 21 P **P** **09 15 28.1 +0.3**
comp=Z,28nm,0.9s,mb5.3,baz=164,slow=7.0,SNR=10
SONM Songino Array 56.72 351 P **P** **09 15 28.0 -0.1**
SONM pmax pmax
comp=Z,48nm,0.9s
SONM MLR MLR
comp=Z,2μm,18.4s
SONM Songino Array 56.72 351 P **P** **09 15 28.0 0.0**
comp=Z,48nm,0.9s,mb5.5,baz=169,slow=8.2,SNR=160
SONM LR LR 09 44 11.9
comp=Z,2μm,18.4s,MS5.2,baz=179,slow=41
THN Thein Dam 57.00 317 *e*P **P** **09 15 28.7 -1.7**
HIA Hailar 57.25 1 *e*P **P** **09 15 30.8 -1.1**
comp=Z,25nm,1.1s,mb5.2
HIA LR LR
comp=Z,2μm,21.0s,MS5.2
HIA Hailar 57.25 1 *e*P **P** **09 15 30.8 -1.0**
HIA pmax pmax
comp=Z,25nm,1.1s
HIA MLR MLR
comp=Z,2μm,21.0s
CASY Casey 58.21 183 PFAKE 09 15 50.0 +12
CASY LR LR
comp=Z,2μm,20.0s,MS5.3
HABR Khabarovsk 58.43 13 *e*P **P** **09 15 41.3 +1.2**
HABR *e* 09 16 29.1
HABR *e*S **S** **09 23 43.6 +2.7**
HABR *e**SS sS 09 23 56.9 -0.6
HABR *e* 09 25 24.4
HABR *e*SS SS 09 27 36.4 +2.6
HABR pmax pmax
comp=Z,133nm,1.5s,mb5.8
KLR Kul'dur 58.47 11 *e*P **P** **09 15 38.0 -2.4**
KLR *e*S **S** **09 23 37.0 -4.4**
KLR pmax pmax
comp=Z,85nm,1.8s,mb5.5
KLR pmax pmax
comp=Z,1μm,11.0s
KLR smax
comp=N,700nm,14.0s
KLR smax
comp=E,1μm,14.0s

WMQ **Urumqi** 58.57 335⇓ *i* P P 09 15 41.6 +0.4
WMQ AP pP 09 15 51.6 +0.3
WMQ XP sP 09 15 55.8 +0.6
WMQ PCP PcP 09 16 32.0 +0.7
WMQ PP PP 09 17 52.6 +1.4
WMQ SCP ScP 09 20 28.1 -1.3
WMQ PCS PcS 09 20 32.1 -0.7
WMQ S **S** **09 23 40.6 -2.4**
WMQ XS sS 09 23 57.1 -2.5
WMQ AMB AMB
comp=Z,59nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,357nm,5.4s
WMQ LR LR
comp=N,1μm,18.5s,MS5.3
WMQ LR LR
comp=E,2μm,19.3s,MS5.3
WMQ LR LR
comp=Z,2μm,18.0s,MS5.3
YSS **Yuzh-Sakhalins** 59.20 20 *e*P P 09 15 43.7 -1.8
comp=Z,47nm,1.1s,mb5.4
YSS **Yuzh-Sakhalins** 59.20 20 *e*P P **09 15 46.0 +0.5**
YSS *e* 09 15 58.3
YSS pmax pmax
comp=Z,70nm,1.3s,mb5.5
YSS MLR MLR
comp=Z,900nm,19.0s,MS4.9
ZAK **Zakamensk** 59.72 349 *e*P P **09 15 49.2 +0.2**
ZAK *e* 09 24 02.0
ZAK pmax pmax
comp=Z,30nm,1.2s,mb5.2
SNZO **South Karori** 59.90 133 PFAKE 09 16 00.0 +9.4
SNZO LR LR
comp=Z,5μm,19.0s,MS5.7
CIT **Chita** 60.10 357 *e*P P **09 15 52.3 +0.7**
CIT *e* pP 09 16 02.0 +0.3
CIT *e* 09 16 10.6
CIT *e* 09 16 35.8
CIT pmax pmax
comp=Z,145nm,1.3s,mb5.8
DRV **Dumont d'Urvil** 60.30 170 P P **09 15 55.0 +2.2**
DRV **Dumont d'Urvil** 60.30 170 PP PP 09 18 04.0 -2.0
DRV S **S** **09 24 11.0 +6.3**
DRV SS SS 09 28 21.0 +19
DRV L 09 30 00.0
DRV R 06 40 00.0
DRV R 06 55 00.0
DRV L 09 30 00.0
DRV R 09 35 00.0
TLY **Talaya** 60.90 350 P P **09 15 57.1 0.0**
comp=Z,327nm,1.0s,mb6.4,SNR=21
TLY **Talaya** 60.90 350 *e*P P **09 15 57.6 +0.6**
comp=Z,44nm,1.0s,mb5.5
TLY LR LR
comp=Z,2μm,19.0s,MS5.2
TLY **Talaya** 60.90 350 *c i*P P **09 15 57.6 +0.5**
TLY *e*S **S** **09 24 15.9 +3.3**
TLY *e*PS 09 24 26.3
TLY pmax pmax
comp=Z,91nm,1.2s,mb5.8
TLY MLR MLR
comp=Z,2μm,16.0s,MS5.2
TLY **Talaya** 60.90 350 P P **09 15 58.1 +1.0**
SNR=44
TLY **Talaya** 60.90 350 P P **09 15 58.1 +1.0**
SNR=44
URZ **Urewera** 60.90 129 LR LR 09 45 25.8
comp=Z,5μm,18.6s,MS5.7,baz=304,slow=39
KSH **Kashi** 61.33 324 *i* P P **09 16 01.5 +1.3**
KSH *e*AP pP 09 16 11.8 +1.4
KSH XP sP 09 16 15.5 +1.3
KSH *e*PCP PcP 09 16 43.3 +0.9
KSH PP PP 09 18 18.3 +2.6
KSH *e*SCP ScP 09 20 40.8 -1.0
KSH *e*PCS PcS 09 20 44.6 -0.6
KSH *e*S **S** **09 24 16.8 -1.8**
KSH *e*XS sS 09 24 35.3 +0.1
KSH *e*SCS ScS 09 25 47.8 -1.5
KSH *e*SS SS 09 28 18.3 -1.4
KSH AMB AMB
comp=Z,240nm,0.6s,mb6.5
KSH LR LR
comp=N,2μm,5.7s
KSH LR LR
comp=E,3μm,10.5s
KSH LR LR
comp=Z,7μm,20.0s
IRK **Irkutsk** 61.33 350 *e* P **09 16 00.7 +0.7**
IRK *e* 09 18 11.0
IRK *e* 09 24 24.5
IRK pmax pmax
comp=Z,112nm,1.6s,mb5.8
MOY **Mondy** 61.38 348 *e*P P **09 16 01.0 +0.6**
MOY pmax pmax
comp=Z,130nm,1.8s,mb5.8
ULHL **Ulahol** 62.99 326 P P **09 16 11.9 +0.5**
SNR=12
MK31 **Makanchi Array** 63.26 333 *i* P P **09 16 12.7 -0.3**
MKAR **Makanchi Array** 63.26 333 P P **09 16 12.4 -0.6**
MKAR ⇑*e* 09 45 20.1
MKAR LR LR 09 47 25.5
MKAR **Makanchi Array** 63.26 333 *i* P P **09 16 12.3 -0.7**
MKAR pmax pmax
comp=Z,32nm,0.8s
MKAR **Makanchi Array** 63.26 333 P P **09 16 12.4 -0.6**
comp=Z,32nm,0.8s,mb5.5,baz=144,slow=7.2,SNR=225
MKAR PKP2bc 09 45 20.1
comp=Z,0.2nm,0.3s,baz=258,slow=1.1,SNR=4.2
MKAR LR LR 09 47 25.5
comp=Z,2μm,18.5s,MS5.3,baz=48,slow=40
KZA **Kyzart** 63.42 326 P P **09 16 15.4 +1.2**
SNR=70
TKM2 **Tokmak 2** 63.80 327 *e*P P **09 16 16.7 +0.1**
comp=Z,112nm,1.5s,mb5.7
TKM2 LR LR
comp=Z,2μm,19.0s,MS5.3
TKM2 **Tokmak 2** 63.80 327 *e*P P **09 16 16.7 +0.1**
TKM2 pmax pmax
comp=Z,112nm,1.5s,mb5.7
TKM2 MLR MLR
comp=Z,2μm,19.0s,MS5.3
TKM2 **Tokmak 2** 63.80 327 P P **09 16 17.1 +0.5**
SNR=28
UCH **Uchtor** 63.94 325 *e*P P **09 16 18.3 +0.7**
comp=Z,26nm,0.8s,mb5.3
UCH LR LR
comp=Z,3μm,20.0s,MS5.4
UCH **Uchtor** 63.94 325 P P **09 16 18.7 +1.1**
SNR=26
KBK **Karagaybulak** 63.98 326 P P **09 16 18.8 +0.9**
SNR=38
AAK **Ala-Archa** 64.21 326 P P **09 16 19.9 +0.5**
comp=Z,343nm,1.1s,mb6.3,SNR=42
AAK **Ala-Archa** 64.21 326 *e*P P **09 16 19.1 -0.3**
comp=Z,71nm,1.0s,mb5.7
AAK LR LR
comp=Z,2μm,19.0s,MS5.4
AAK **Ala-Archa** 64.21 326 *e*P P **09 16 19.1 -0.3**
AAK pmax pmax
comp=Z,71nm,1.0s,mb5.7
AAK MLR MLR
comp=Z,2μm,19.0s,MS5.4
AAK **Ala-Archa** 64.21 326 P P **09 16 20.7 +1.3**
SNR=37
FRU **Bishkek** 64.28 326 *e*P P **09 16 21.0 +1.2**
FRU pmax pmax
comp=Z,150nm,1.8s,mb5.7
AML **Almayashu** 64.34 325 *e*P P **09 16 20.9 +0.7**
comp=Z,76nm,1.0s,mb5.7
AML LR LR
comp=Z,2μm,21.0s,MS5.2
AML **Almayashu** 64.34 325 P P **09 16 21.1 +0.9**
SNR=62
USP **Ospenovka** 64.62 326 P P **09 16 22.2 +0.1**
SNR=35
EKS2 **Erkin-Say** 64.63 325 *e*P P **09 16 22.9 +0.8**
comp=Z,51nm,0.9s,mb5.5
EKS2 LR LR
comp=Z,3μm,21.0s,MS5.5
EKS2 **Erkin-Say** 64.63 325 P P **09 16 23.0 +0.8**
SNR=35
CLNS **Chul'man** 65.07 4 *e*P P **09 16 26.5 +1.8**
CLNS *e* 09 16 59.5
CLNS *e* 09 18 46.6
CLNS *e*S S 09 25 06.2 +1.5
CLNS *e*SS SS 09 29 19.5 +2.0
CLNS pmax pmax
comp=Z,39nm,1.0s,mb5.4
CLNS pmax pmax
comp=N,33nm,0.9s
CLNS pmax pmax
comp=E,11nm,0.7s
CLNS pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CLNS pmax pmax
comp=N,10.0nm,0.8s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS smax
comp=E,768nm,12.9s
CLNS smax
comp=Z,155nm,13.6s
CLNS smax
comp=N,116nm,11.4s
CLNS MLR MLR
comp=Z,400nm,16.0s,MS4.7
CLNS MLR MLR
comp=N,200nm,13.0s,MS5.0
CLNS MLR MLR
comp=E,600nm,16.0s,MS5.0
BOD **Bodaibo** 65.87 358⇓ *i*P P **09 16 29.4 -0.5**
BOD pmax pmax
comp=Z,66nm,1.4s,mb5.5
KK31 **Karatay Array** 66.78 324 *i* P P **09 16 35.3 -0.7**
KK31 **Karatay Array** 66.78 324 *i* P P **09 16 35.2 -0.8**
KK31 pmax pmax
comp=Z,11nm,0.6s,mb5.1
KURK **Kurchatov** 67.81 334 P P **09 16 41.4 -1.0**
comp=Z,236nm,0.8s,mb6.3,SNR=9.8
KURK **Kurchatov** 67.81 334 *e*P P **09 16 41.1 -1.2**
comp=Z,38nm,0.9s,mb5.4
KURK LR LR
comp=Z,3μm,19.0s,MS5.5
KURK **Kurchatov** 67.81 334 *e*P P **09 16 41.2 -1.2**
KURK pmax pmax
comp=Z,38nm,0.9s,mb5.4
KURK MLR MLR
comp=Z,3μm,19.0s,MS5.5
KURK **Kurchatov** 67.81 334 P P **09 16 43.0 +0.6**
SNR=22
KURK **Kurchatov** 67.81 334 P P **09 16 43.0 +0.6**
SNR=22
AFI **Afiamalu** 69.05 102 PFAKE 09 17 00.0 +9.1
AFI LR LR
comp=Z,1μm,21.0s,MS5.1
NVS **Novosibirsk** 69.19 339 *e*P P **09 16 49.1 -1.8**
NVS pmax pmax
comp=N,36nm,1.4s
NVS pmax pmax
comp=E,27nm,1.4s
NVS pmax pmax
comp=Z,42nm,1.4s,mb5.2
OPO **Ambohidratompo** 69.20 253 P P **09 16 51.8 +0.1**
comp=Z,3.4nm,0.7s,mb4.4,baz=87,slow=13,SNR=3.4
MAW **Mawson** 69.61 200 *e*P P **09 16 54.9 +1.5**
comp=Z,21nm,0.6s,mb5.2
MAW *e*S S 09 26 07.1 +8.0
MAW **Mawson** 69.61 200 P P **09 16 54.9 +1.5**
comp=Z,39nm,0.9s,mb5.3,baz=67,slow=6.5,SNR=15
MAW LR LR 09 41 16.8
comp=Z,1μm,21.5s,MS5.1,baz=57,slow=31
PET **Petropavlovsk** 70.13 25 PFAKE 09 17 10.0 +13
PET LR LR
comp=Z,1μm,19.0s,MS5.2
PET **Petropavlovsk** 70.13 25 *e*P P **09 16 59.6 +2.9**
PET *e*S S 09 26 08.9 +3.4
PET *e*SS SS 09 30 37.1 +1.1
PET *e*SSS 09 33 34.5
PET pmax pmax
comp=Z,600nm,19.6s
PET MLR MLR
comp=Z,800nm,16.0s,MS5.1
YAK **Yakutsk** 70.62 6 *e*P P **09 16 59.3 -0.2**
comp=Z,81nm,0.7s,mb5.8
YAK **Yakutsk** 70.62 6 *e*P P **09 16 59.1 -0.4**
YAK *e**PP pP 09 17 08.3 -1.5
YAK *e* 09 17 16.6
YAK *e*S S 09 26 10.7 -0.2
YAK *e* 09 26 55.4
YAK pmax pmax
comp=Z,102nm,1.0s,mb5.7
YAK pmax pmax
comp=N,62nm,1.4s
YAK pmax pmax
comp=E,19nm,1.3s
YAK smax
comp=E,721nm,5.8s
YAK smax
comp=Z,198nm,3.4s
YAK smax
comp=N,561nm,5.9s
MA2 **Magadan** 72.48 17 *e*P P **09 17 10.1 -0.7**
comp=N,34nm,1.0s,mb5.2
MA2 LR LR
comp=Z,590nm,20.0s,MS4.9
MA2 **Magadan** 72.48 17 *e*P P **09 17 11.2 +0.4**
MA2 *e* pP 09 17 20.2 -0.9
MA2 *e*S S 09 26 32.2 -0.2
MA2 pmax pmax
comp=Z,30nm,1.0s,mb5.2
BRVK **Borovoye** 73.16 332 *e*P P **09 17 13.4 -1.6**
comp=Z,7.0nm,0.7s,mb4.7
BRVK LR LR
comp=Z,1μm,20.0s,MS5.2
BRVK **Borovoye** 73.16 332 *e*P P **09 17 12.1 -2.9**
BRVK **Borovoye** 73.16 332 P P **09 17 15.7 +0.8**
SNR=9.0
BRVK **Borovoye** 73.16 332 P P **09 17 15.7 +0.8**
SNR=9.0
CHKZ **Chkalovo** 73.41 333 *e*P P **09 17 14.5 -1.9**
comp=Z,7.5nm,0.6s,mb4.8
CHKZ **Chkalovo** 73.41 333 *i* P P **09 17 15.4 -1.0**
CHKZ pmax pmax
comp=Z,23nm,1.2s,mb5.0
SBA **Scott Base** 73.94 170 *e*P P **09 17 22.3 +3.0**
comp=Z,50nm,1.2s,mb5.3
SBA LR LR
comp=Z,1μm,20.0s,MS5.2
AB31 **Akbulak array** 76.29 325 *i* P P **09 17 31.3 -1.9**
AKTK **Aktyubinsk** 77.96 326 P P **09 17 40.4 -2.2**
AKTO **Aktyubinsk** 77.96 326 P P **09 17 40.4 -2.1**
AKTO pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
AKTO **Aktyubinsk** 77.96 326 P P **09 17 40.4 -2.2**
comp=Z,10nm,0.8s,mb4.8,baz=103,slow=4.5,SNR=15
SYO **Syowa Base** 78.19 201⇑ *e*P P **09 17 43.2 -0.4**
SYO **Syowa Base** 78.19 201⇓ *e*PcP PcP 09 17 51.4 -1.6
TIXI **Tiksi** 80.02 4 *e*P P **09 17 51.9 -1.5**
comp=Z,35nm,0.8s,mb5.3
TIXI LR LR
comp=Z,810nm,20.0s,MS5.1
TIXI **Tiksi** 80.02 4 *e*P P **09 17 51.8 -1.6**
TIXI *i* S S 09 27 51.3 -3.6
TIXI pmax pmax
comp=Z,38nm,0.8s,mb5.4
KMBO **Kilima Mbogo** 80.58 270 *e*P P **09 17 57.2 -0.5**
comp=Z,14nm,1.0s,mb4.9
KMBO LR LR
comp=Z,1μm,19.0s,MS5.3
KMBO **Kilima Mbogo** 80.58 270 P P **09 17 57.4 -0.3**
KMBO pmax pmax
comp=Z,14nm,1.0s
KMBO **Kilima Mbogo** 80.58 270 P P **09 17 57.0 -0.7**
SNR=7.4
KMBO **Kilima Mbogo** 80.58 270 P P **09 17 57.0 -0.7**
SNR=7.4
KMBO **Kilima Mbogo** 80.58 270 P P **09 17 57.0 -0.7**
comp=Z,5.5nm,0.7s,mb4.6,baz=62,slow=9.2,SNR=15
KMBO LR LR 09 52 59.5
comp=Z,926nm,18.1s,MS5.2,baz=95,slow=35
ARU **Arti** 80.64 331 *e*P P **09 17 55.2 -1.8**
comp=Z,13nm,1.5s,mb4.6
ARU LR LR
comp=Z,2μm,19.0s,MS5.5
ARU **Arti** 80.64 331 *d i*P P **09 17 55.1 -2.0**
ARU 09 20 58.1
ARU S S 09 27 59.4 -2.6
ARU pmax pmax
comp=Z,11nm,1.7s,mb4.5
MAK **Makhachkala** 81.52 316 *e*P P **09 18 03.6 +1.6**
MAK *e* 09 21 10.5
MAK pmax pmax
comp=Z,44nm,0.4s,mb5.7
QSPA **South Pole Qui** 81.78 180 *e*P P **09 18 05.5 +2.7**
comp=Z,66nm,1.0s,mb5.5
QSPA LR LR
comp=Z,1μm,22.0s,MS5.2
BILL **Bilibino** 83.34 16 *e*P P **09 18 10.6 -0.4**
comp=Z,3.3nm,0.6s,mb4.5
BILL LR LR
comp=Z,362nm,20.0s,MS4.8
BILL **Bilibino** 83.34 16 P P **09 18 14.0 +3.0**
BILL *e* 09 28 26.8
BILL PPS 09 29 38.0
BILL *e*SSS 09 37 26.2
BILL pmax pmax
comp=Z,12nm,2.2s,mb4.5
ZEI **Tsey** 83.97 315 *e*P P **09 18 18.7 +3.9**
ZEI *i* 09 18 32.7
ZEI pmax pmax
comp=Z,20nm,1.0s,mb5.2
KIV **Kislovodsk** 85.16 316 PFAKE 09 18 30.0 +9.2
KIV LR LR
comp=Z,871nm,19.0s,MS5.2
KIV **Kislovodsk** 85.16 316 *e*P P **09 18 20.3 -0.5**
KIV *e* 09 28 40.1
KIV *e*SS SS 09 34 21.1 -1.9
KIV pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
GOF **Gofitskoye** 85.23 317 *e*P P **09 18 30.1 +9.0**
ASF **Jabal al Asfar** 86.78 303 P P **09 18 28.5 -0.6**
ASF pmax pmax
comp=Z,4.0nm,0.8s
ASF **Jabal al Asfar** 86.78 303 P P **09 18 28.5 -0.6**
comp=Z,4.2nm,0.8s,mb4.7,baz=156,slow=0.8,SNR=4.9
MALT **Malatya** 86.86 309 *e*P P **09 18 28.0 -1.3**
comp=Z,14nm,1.0s,mb5.2
MALT *e*pP pP 09 18 38.5 -1.3
MALT **Malatya** 86.86 309 *e*P P **09 18 28.0 -1.3**
MALT *e**PP pP 09 18 38.5 -1.3
MALT pmax pmax
comp=Z,14nm,1.0s,mb5.2
SOC **Sochi** 87.14 315 *e*P P **09 18 26.5 -4.0**
SOC *e*S S 09 28 49.8 -18
SOC *e* 09 29 10.4
SOC *e*SS SS 09 34 46.3 -5.8
SOC pmax pmax
comp=Z,31nm,1.2s,mb5.4
SOC MLR MLR
comp=Z,701nm,18.0s,MS5.1
MAIT **Maitri** 87.56 199 *e*P P **09 18 35.4 +3.3**
LSZ **Lusaka** 87.59 255 *e*P P **09 18 33.1 -0.3**
comp=Z,14nm,0.6s,mb5.4
LSZ LR LR
comp=Z,860nm,19.0s,MS5.2
LSZ **Lusaka** 87.59 255 P P **09 18 32.9 -0.5**
LSZ pmax pmax
comp=Z,14nm,0.6s,mb5.4
VRHR **Novokhopersk** 87.82 322 *e*P P **09 18 29.6 -4.0**
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.4
VRHR pmax pmax
comp=N,3.0nm,0.3s
VRHR pmax pmax
comp=E,6.0nm,0.7s
EIL **Elat** 87.94 300 P P **09 18 33.3 -1.4**
comp=E,3.4nm,0.7s,mb4.7,baz=53,slow=5.1,SNR=2.8
MMAI **Mount Meron Ar** 88.18 304 P P **09 18 33.6 -2.1**
comp=E,2.4nm,0.2s,mb5.0,baz=22,slow=17,SNR=6.2
UNV **Unalaska Valle** 88.19 35 PFAKE 09 18 50.0 +15
UNV LR LR
comp=Z,2μm,19.0s,MS5.6
BOSA **Boshof** 88.43 241 P P **09 18 37.3 +0.2**
comp=Z,10nm,0.9s,mb5.0,baz=114,slow=6.3,SNR=11
BOSA LR LR 09 51 01.3
comp=Z,1μm,21.2s,MS5.3,baz=99,slow=31
GAMB **Gambell** 88.83 25 *e*P P **09 18 37.3 -0.8**
comp=Z,12nm,1.5s,mb5.0
GAMB *e*pP pP 09 18 47.4 -1.2
TBI **Tubuai** 89.20 113 *e*SKSac SKSac 09 29 02.1 -6.8
comp=Z,412nm,33.8s
TBI *e*LR LR 09 47 09.2
comp=Z,2μm,24.5s
TBI **Tubuai** 89.20 113 *e*P P **09 18 37.1 -3.7**
comp=Z,386nm,1.4s,mb6.5
TBI *e*SKSac SKSac 09 29 02.1 -6.8
VRSR **Storozhevoye** 89.33 322 *e*P P **09 18 41.3 +0.5**
VRSR pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
VRSR pmax pmax
comp=N,1.0nm,1.5s
VRSR pmax pmax
comp=E,2.0nm,0.9s
PPT **Papeete** 89.95 108 *e*SKSac SKSac 09 29 05.5 -8.0
comp=E,544nm,24.5s
PPT *e*LR LR 09 47 29.7
comp=E,2μm,27.5s
PPT **Papeete** 89.95 108 LR LR 09 52 53.1
comp=E,807nm,20.4s,MS5.1,baz=260,slow=31
BRTR **Keskin Array B** 90.80 310 P P **09 18 45.9 -2.0**
comp=E,0.6nm,0.7s,baz=48,slow=8.6,SNR=2.9
BRTR LR LR 10 03 59.6
comp=E,754nm,21.7s,baz=128,slow=39
TNA **Tin City** 90.95 24 PFAKE 09 19 00.0 +12
TNA LR LR
comp=Z,275nm,20.0s,MS4.7
ANTO **Ankara** 91.46 310 PFAKE 09 19 00.0 +9.0
ANTO LR LR
comp=Z,313nm,21.0s,MS4.7
SNAA **Sanae** 91.46 196 *e*P P **09 18 50.4 0.0**
SNAA *e* 09 18 52.6
SNAA *e* pP 09 19 00.8 -0.1
SNAA *e* 09 19 03.7
SUR **Sutherland** 91.59 237 *e*P P **09 18 49.9 -1.9**
comp=Z,66nm,1.8s,mb5.7
SUR LR LR
comp=Z,1μm,20.0s,MS5.3
OBN **Obninsk** 91.74 325 *e*P P **09 18 49.7 -2.2**
comp=Z,8.6nm,0.4s,mb5.4
OBN LR LR
comp=Z,2μm,21.0s,MS5.6
OBN **Obninsk** 91.74 325 P P **09 18 56.0 +4.1**
OBN *e* pP 09 19 04.9 +2.5
OBN *e* 09 19 14.7
OBN 09 22 30.0
OBN pmax pmax
comp=Z,25nm,1.6s,mb5.3
VNA2 **Neumayer--Watz** 93.10 196 *e*P P **09 18 57.8 -0.2**
VNA2 *e* 09 19 00.2
VNA2 *e* pP 09 19 08.2 -0.3
VNA2 *e* 09 19 11.2
LVZ **Lovozero** 95.00 338 PFAKE 09 19 20.0 +13
LVZ LR LR
comp=Z,2μm,20.0s,MS5.6
AKASG **Malin Array Be** 95.44 320 P P **09 19 07.0 -2.1**
comp=Z,0.2nm,0.3s,baz=88,slow=4.5,SNR=3.8
AKASG LR LR 10 11 43.6
comp=Z,792nm,20.6s,baz=100,slow=42
KIEV **Kiev** 95.45 320 PFAKE 09 19 20.0 +11
KIEV LR LR
comp=Z,1μm,22.0s,MS5.3
IMA2 **Indian Mountai** 96.79 24 *e*P P **09 19 14.4 -0.4**
IMA2 *e*pP pP 09 19 25.0 -0.4
TSUM **Tsumeb** 96.96 250 PFAKE 09 19 30.0 +13
TSUM LR LR
comp=Z,690nm,19.0s,MS5.2
FINES **FINESS Array B** 98.02 331 P P **09 19 18.2 -2.3**
FINES LR LR 10 09 31.5
FINES **FINESS Array B** 98.02 331 *i* P P **09 19 18.7 -1.7**
FINES pmax pmax
comp=Z,3.0nm,1.0s
FINES **FINESS Array B** 98.02 331 P P **09 19 18.2 -2.3**
comp=Z,3.2nm,1.0s,mb4.8,baz=126,slow=2.6,SNR=4.8
FINES LR LR 10 09 31.5
comp=Z,1μm,19.8s,MS5.4,baz=286,slow=39
ARCES **ARCESS Array B** 98.47 339 LR LR 10 11 03.7
comp=Z,2μm,19.2s,MS5.5,baz=102,slow=40
PMR **Palmer** 98.57 29 *e*P P **09 19 21.9 -1.1**
comp=Z,16nm,0.7s,mb5.7
PMR LR LR
comp=Z,587nm,20.0s,MS5.1
PMR **Palmer** 98.57 29 *e*P P **09 19 21.9 -1.0**
PMR pmax pmax
comp=Z,16nm,0.7s,mb5.7
PMR MLR MLR
comp=Z,587nm,20.0s,MS5.1
MCK **McKinley** 98.70 27 *e*P P **09 19 22.3 -1.2**

comp=Z,4.5nm,0.9s,mb5.0
MCK LR LR
comp=Z,268nm,20.0s,MS4.7
MCK McKinley 98.70 27 *e*P **P 09 19 21.8 -1.7**
MCK pmax pmax
comp=Z,2.0nm,0.8s,mb4.7
COLA College 99.18 26 *e*P **P 09 19 23.9 -1.7**
comp=Z,8.7nm,1.8s,mb5.0
COLA LR LR
comp=Z,396nm,21.0s,MS4.9
KBS Kingsbay 101.06 349 PFAKE 09 19 40.0 +5.8
KBS LR LR
comp=Z,1μm,20.0s,MS5.4
EGAK Eagle 102.04 25 PFAKE 09 19 50.0 +11
EGAK LR LR
comp=Z,567nm,20.0s,MS5.1
RKT Rikitea 102.30 116 *e*PS PS 09 32 56.8 -3.1
comp=Z,469nm,25.5s
RKT Rikitea 102.30 116 *e*SKSac SKSac 09 30 11.9 -6.4
comp=Z,377nm,25.5s
RKT *e*LR LR 09 53 03.8
comp=Z,1μm,24.2s
OKC Ostrava-Krasne 102.51 319 AMS AMS 10 13 30.0
DPC Dobruska-Polom 103.66 320 AMS AMS 10 12 20.0
comp=Z,1μm,9.1s
CONA Conrad Observa 104.11 317⇑ *i*PKiKP PKiKP 09 24 04.1 -0.9
comp=Z,15nm,1.4s
TREC Trest 104.27 319 AMS AMS 10 06 30.0
comp=Z,1μm,22.9s
ARSA Arzberg 104.38 317⇓ *i*P PKiKP 09 24 06.1 +0.6
comp=Z,10nm,1.5s
ARSA Arzberg 104.38 317⇓ *i*PP PP 09 24 06.1 -1.9
comp=Z,10nm,1.5s
PVCC Panska Ves 104.76 320 AMS AMS 10 12 10.0
comp=Z,1μm,22.7s
PRU Pruhonice 104.83 319 AMS AMS 10 13 40.0
comp=Z,900nm,18.0s
GERES GERESS Array B 105.48 318 PKiKP PKiKP 09 24 08.7 +1.3
comp=Z,0.3nm,0.2s,baz=64,slow=5.6,SNR=3.2
KHC Kasperske Hory 105.53 319 AMS AMS 10 15 10.0
comp=Z,1μm,20.7s
CLL Collm 105.67 321 *e*SKSac SKSac 09 30 31.0 -1.4
CLL *e*PS PS 09 33 43.0 +8.7
CLL *e*PPS 09 34 29.0
CLL *e*SSSS 09 46 48.0
CLL LmH 10 13 00.0
comp=N,500nm,18.1s
CLL LmH 10 13 00.0
comp=E,800nm,21.1s
CLL LmV 10 14 00.0
comp=Z,1μm,19.7s
PTCN Pitcairn Islan 106.06 119 PFAKE 09 24 20.0 +11
PTCN LR LR
comp=Z,2μm,21.0s,MS5.7
NKC Novy Kostel 106.14 320 AMS AMS 10 14 20.0
comp=Z,1μm,18.2s
KONO Kongsberg 106.26 330 PFAKE 09 24 20.0 +11
KONO LR LR
comp=Z,2μm,21.0s,MS5.7
GRF Grafenberg Arr 107.00 319 *e*PP PP 09 24 33.5 +6.3
GRF *e*L 10 13 35.9
comp=Z,1μm,21.3s
GRFO Grafenberg 107.00 319 PFAKE 09 24 20.0 +10
GRFO LR LR
comp=Z,1μm,22.0s,MS5.5
PMSA Palmer Station 107.21 179 PFAKE 09 24 20.0 +10
PMSA LR LR
comp=Z,1μm,19.0s,MS5.4
BFO Black Forest 109.08 318 PFAKE 09 24 30.0 +16
BFO LR LR
comp=Z,837nm,20.0s,MS5.3
CDF Champ du Feu 109.76 319 *e*PKiKP PKiKP 09 24 14.0 -1.4
CABF La Chapelle 110.87 317 *e*PKiKP PKiKP 09 24 16.4 -1.2
comp=Z,5.7nm,0.7s
LOR Lormes 112.24 318 *e*PKiKP PKiKP 09 24 19.0 -1.2
YKA Yellowknife Ar 113.91 24 PKPdf PKiKP 09 24 21.1 -1.9
YKA PKKPbc PKKPbc 09 35 00.9 -6.3
YKA Yellowknife Ar 113.91 24 PKiKP PKiKP 09 24 21.0 -1.9
comp=Z,0.6nm,0.8s,baz=307,slow=1.9,SNR=9.2
YKA PKKPbc PKKPbc 09 35 00.9 -6.3
comp=Z,0.3nm,0.7s,baz=105,slow=3.4,SNR=5.7
NLWA Neilton Lookou 114.97 41 PFAKE 09 24 40.0 +15
NLWA LR LR
comp=Z,197nm,19.0s,MS4.7
YBH Yreka Blue Hor 117.24 47 PFAKE 09 24 40.0 +10
YBH LR LR
comp=Z,603nm,22.0s,MS5.2
TORD Torodi Ar. Bea 117.25 281 PKP PKPdf 09 24 28.9 -1.8
comp=Z,2.8nm,0.6s,baz=50,slow=1.5,SNR=15
TORD PKKPab PKKPab 09 34 56.8 -1.4
comp=Z,1.6nm,1.0s,baz=294,slow=4.3,SNR=6.0
HOPS Hopland 117.59 50 PFAKE 09 24 40.0 +9.3
HOPS LR LR
comp=Z,395nm,20.0s,MS5.0
WDC Whiskeytown Da 117.64 48 PFAKE 09 24 40.0 +9.3
WDC LR LR
comp=Z,632nm,19.0s,MS5.3
MCCM Marconi Confer 117.92 51 PFAKE 09 24 40.0 +8.6
MCCM LR LR
comp=Z,631nm,19.0s,MS5.3
HAWA Hanford 118.11 41 PFAKE 09 24 40.0 +8.5
HAWA LR LR
comp=Z,395nm,20.0s,MS5.0
MOD Modoc 118.93 46 PFAKE 09 24 40.0 +6.8
MOD LR LR
comp=Z,539nm,21.0s,MS5.2
NEW Newport 118.99 39 PFAKE 09 24 40.0 +6.9
NEW LR LR
comp=Z,543nm,19.0s,MS5.2
EDM Edmonton 119.07 32 *e*PKPdf PKPdf 09 24 32.1 -0.9
SAO San Andreas Ge 119.33 52 PFAKE 09 24 50.0 +16
SAO LR LR
comp=Z,595nm,20.0s,MS5.2
ESLA Sonseca Array 119.57 311 PFAKE 09 24 50.0 +16
ESLA LR LR
comp=Z,4μm,21.0s,MS6.1
CMB Columbia Colle 119.86 51 PFAKE 09 24 50.0 +15
CMB LR LR
comp=Z,576nm,19.0s,MS5.2
PAB San Pablo 119.89 311 PFAKE 09 24 50.0 +15
PAB LR LR
comp=Z,918nm,22.0s,MS5.4
BMO Blue Mountains 120.10 42 PFAKE 09 24 50.0 +15
BMO LR LR
comp=Z,359nm,19.0s,MS5.0
PTRM Twissleman Ran 120.54 53 *e*PKPdf PKPdf 09 24 37.0 +0.5
NVAR Mina Array Bea 121.35 50 PKP PKPdf 09 24 38.6 +0.7
comp=Z,3.1nm,0.7s,baz=242,slow=0.9,SNR=17
NVAR PKKPbc PKKPbc 09 34 42.9 +3.0
comp=Z,0.9nm,0.9s,baz=117,slow=6.0,SNR=4.9
MSO Missoula 121.54 39 *e*PKPdf PKPdf 09 24 37.2 -0.9
MSO LR LR
comp=Z,347nm,21.0s,MS5.0
CHMT Chamberlain Mo 121.93 39 *e*PKPdf PKPdf 09 24 37.6 -1.2
HLID Hailey 122.50 43 *e*PKPdf PKPdf 09 24 40.0 0.0
HLID LR LR
comp=Z,468nm,22.0s,MS5.1
ELK Elko 122.92 46 PFAKE 09 24 50.0 +9.1
ELK LR LR
comp=Z,772nm,20.0s,MS5.4
DBIC Dimbokro 123.25 273 PKIKP PKPdf 09 24 40.7 -1.6
DBIC pmax pmax
comp=Z,4.0nm,0.6s
DBIC Dimbokro 123.25 273 PKP PKPdf 09 24 40.7 -1.6
comp=Z,3.9nm,0.6s,baz=360,slow=2.4,SNR=7.3
TPNV Topopah Spring 123.32 51 PFAKE 09 24 50.0 +8.2
TPNV LR LR
comp=Z,514nm,19.0s,MS5.2
LIC Lamto 123.38 272 *e*PKiKP PKPdf 09 24 41.5 -1.1
BOZ Bozeman (W) 123.49 40 PFAKE 09 24 50.0 +8.2
BOZ LR LR
comp=Z,505nm,19.0s,MS5.2
EGMT Eagleton 123.56 37 *e*PKPdf PKPdf 09 24 40.9 -1.0
EGMT LR LR
comp=Z,509nm,19.0s,MS5.2
FFC Flin Flon 123.79 27 PFAKE 09 24 50.0 +7.9
FFC LR LR
comp=Z,536nm,21.0s,MS5.2
QLMT Earthquake Lak 123.97 41 *e*PKPdf PKPdf 09 24 42.4 -0.4
PFO Pinyon Flat Ob 124.03 55 PFAKE 09 24 50.0 +6.7
PFO LR LR
comp=Z,965nm,19.0s,MS5.5
YMR Madison River 124.33 41 PFAKE 09 25 00.0 +17
YMR LR LR
comp=Z,779nm,19.0s,MS5.4
LKWY Lake 124.74 41 PFAKE 09 25 00.0 +16
LKWY LR LR
comp=Z,624nm,20.0s,MS5.3
DUG Dugway 124.84 46 *e*PKPdf PKPdf 09 24 44.5 -0.1
DUG LR LR
comp=Z,516nm,20.0s,MS5.2
REDW Red Top Meadow 124.96 42 *e*PKPdf PKPdf 09 24 44.7 0.0
AHID Auburn Hatcher 125.04 43 PFAKE 09 25 00.0 +15
AHID LR LR
comp=Z,553nm,19.0s,MS5.2
HWUT Hardware Ranch 125.19 44 PFAKE 09 25 00.0 +15
HWUT LR LR
comp=Z,631nm,20.0s,MS5.3
MPU Maple Canyon 125.75 46 PFAKE 09 25 00.0 +14
MPU LR LR
comp=Z,799nm,22.0s,MS5.3
DAU Daniels Canyon 125.87 45 *e*PKPdf PKPdf 09 24 46.4 -0.2
MSU Marysvale 125.90 48 *e*PKPdf PKPdf 09 24 47.6 +1.0
BW06 Boulder Array 126.07 42 PFAKE 09 25 00.0 +13
BW06 LR LR
comp=Z,532nm,21.0s,MS5.2
PDAR Pinedale Array 126.07 42 PKP PKPdf 09 24 48.5 +1.6
comp=Z,0.7nm,0.7s,baz=202,slow=1.7,SNR=6.3
LAO LASA Array 126.30 36 PFAKE 09 25 00.0 +13
LAO LR LR
comp=Z,633nm,20.0s,MS5.3
DGMT Dagmar 126.49 34 PFAKE 09 25 00.0 +13
DGMT LR LR
comp=Z,553nm,19.0s,MS5.2
PV10 Paradox Valley 128.24 47 *e*PKPdf PKPdf 09 24 51.4 +0.3
PV01 Paradox Valley 128.67 47 *e*PKPdf PKPdf 09 24 52.8 +0.8
RSSD Black Hills 128.96 38 PFAKE 09 25 00.0 +7.7
RSSD LR LR
comp=Z,4μm,22.0s,MS6.1
MVCO Mesa Verde 129.08 48 PFAKE 09 25 00.0 +7.2
MVCO LR LR
comp=Z,445nm,20.0s,MS5.2
ULM Lac du Bonnet 129.57 28 PKP PKPdf 09 24 55.5 +2.2
comp=Z,2.2nm,0.9s,baz=283,slow=1.9,SNR=4.6
ISCO Idaho Springs 130.05 44 PFAKE 09 25 10.0 +15
ISCO LR LR
comp=Z,385nm,20.0s,MS5.1
AGMN Agassiz Refuge 130.93 29 PFAKE 09 25 10.0 +14
AGMN LR LR
comp=Z,702nm,19.0s,MS5.4
SDCO Great Sand Dun 131.04 46 PFAKE 09 25 10.0 +13
SDCO LR LR
comp=Z,664nm,19.0s,MS5.4
ANMO Albuquerque 131.47 50 *i* PKIKP PKPdf 09 24 57.0 -0.4
EYMN Ely 133.22 27 PFAKE 09 25 10.0 +10
EYMN LR LR
comp=Z,602nm,20.0s,MS5.3
SCHQ Schefferville 133.35 4 PKP PKPdf 09 25 02.4 +2.1
comp=Z,3.1nm,0.8s,baz=103,slow=9.5,SNR=4.9
MNTX Cornudas Mount 133.51 54 *e*PKPdf PKPdf 09 25 02.1 +0.8
MNTX LR LR
comp=Z,562nm,21.0s,MS5.3
ECSD EROS,Sioux Fal 133.55 35 *e*PKPdf PKPdf 09 25 00.0 -1.0
ECSD LR LR
comp=Z,493nm,20.0s,MS5.2
CBKS Cedar Bluff 134.50 42 PFAKE 09 25 10.0 +7.0
CBKS LR LR
comp=Z,572nm,19.0s,MS5.3
AMTX Amarillo 135.07 48 PFAKE 09 25 20.0 +16
AMTX LR LR
comp=Z,623nm,22.0s,MS5.3
COWI Conover 135.67 27 PFAKE 09 25 20.0 +15
COWI LR LR
comp=Z,754nm,20.0s,MS5.4
LTX Lajitas 135.71 56 PFAKE 09 25 20.0 +14
LTX LR LR
comp=Z,709nm,21.0s,MS5.4
TXAR Lajitas Array 135.71 56 PKP PKPdf 09 25 07.3 +1.8
TXAR Lajitas Array 135.71 56 PKhKP 09 24 55.5
comp=Z,0.7nm,0.7s,baz=242,slow=1.8,SNR=9.8
TXAR PKP PKPdf 09 25 07.3 +1.8
comp=Z,1.2nm,0.7s,baz=229,slow=3.5,SNR=12
KSU1 Kansas State U 136.37 40 *e*PKPdf PKPdf 09 25 04.3 -2.1
KSU1 LR LR
comp=Z,731nm,20.0s,MS5.4
WMOK Wichita Mounta 137.24 46 *e*PKPdf PKPdf 09 24 59.5 -8.7
JFWS Jewell Farm 137.51 31 *e*PKPdf PKPdf 09 25 08.4 -0.1
JFWS LR LR
comp=Z,799nm,20.0s,MS5.5
JCT Junction City 138.39 53 PFAKE 09 25 20.0 +10
JCT LR LR
comp=Z,653nm,21.0s,MS5.3
GLMI Grayling 138.62 24 PFAKE 09 25 20.0 +10
GLMI LR LR
comp=Z,697nm,20.0s,MS5.4
HDIL Hopedale 139.70 33 PFAKE 09 25 20.0 +7.4
HDIL LR LR
comp=Z,802nm,21.0s,MS5.4
MIAR Mount Ida 140.98 43 PFAKE 09 25 30.0 +15
MIAR LR LR
comp=Z,804nm,20.0s,MS5.5
AAM Ann Arbor 141.09 26 PFAKE 09 25 30.0 +15
AAM LR LR
comp=Z,884nm,19.0s,MS5.5
HKT Hockley 141.72 51 PFAKE 09 25 30.0 +13
HKT LR LR
comp=Z,631nm,20.0s,MS5.4
NATX Nacogdoches 141.72 48 PFAKE 09 25 30.0 +14
NATX LR LR
comp=Z,603nm,20.0s,MS5.3
LCO Las Campanas 142.08 168 *e*PKPdf PKPdf 09 25 15.2 -2.1
LCO LR LR
comp=Z,395nm,20.0s,MS5.2
LONY Lake Ozonia 142.14 15 PFAKE 09 25 30.0 +13
LONY LR LR
comp=Z,649nm,19.0s,MS5.4
PKME Peaks-Kenny Pk 142.56 8 PFAKE 09 25 30.0 +12
PKME LR LR
comp=Z,683nm,20.0s,MS5.4
ERPA Erie 142.72 22 PFAKE 09 25 30.0 +12
ERPA LR LR
comp=Z,981nm,21.0s,MS5.5
NCB Newcomb 142.84 15 PFAKE 09 25 30.0 +12
NCB LR LR
comp=Z,694nm,19.0s,MS5.4
WCI Wyandotte Cave 142.99 32 *e*PKPdf PKPdf 09 25 13.5 -5.1
ACSO Alum Creek Sta 143.06 27 PFAKE 09 25 30.0 +11
ACSO LR LR
comp=Z,688nm,20.0s,MS5.4
LBNH Lisbon 143.10 12 PFAKE 09 25 30.0 +11
LBNH LR LR
comp=Z,884nm,21.0s,MS5.5
OXF Oxford 143.74 40 *e*PKPdf PKPdf 09 25 15.6 -4.4
OXF LR LR
comp=Z,646nm,20.0s,MS5.4
BINY Binghamton 144.00 18 PFAKE 09 25 30.0 +10
BINY LR LR
comp=Z,901nm,20.0s,MS5.5
PLAL Pickwick Lake 144.26 38 *e*PKPdf PKPdf 09 25 16.7 -4.2
PLAL LR LR
comp=Z,779nm,19.0s,MS5.5
SSPA Standing Stone 144.78 21 *e*PKPdf PKPdf 09 25 19.2 -2.4
SSPA LR LR
comp=Z,619nm,20.0s,MS5.4
HRV Harvard--Oak R 144.84 12 *e*PKPdf PKPdf 09 25 18.9 -2.7
HRV LR LR
comp=Z,662nm,20.0s,MS5.4
MCWV Mont Chateau 144.88 24 *e*PKPdf PKPdf 09 25 19.9 -1.9
MCWV LR LR
comp=Z,958nm,20.0s,MS5.5
WES Weston 145.00 12 *e*PKPdf PKPdf 09 25 20.1 -1.8
WES LR LR
comp=Z,879nm,21.0s,MS5.5
SWET Sewanee 145.37 36 *e*PKPdf PKPdf 09 25 20.5 -2.3
BRYW Bryant College 145.41 12 *e*PKPdf PKPdf 09 25 21.8 -0.9
PAL Palisades 145.69 16 *e*PKPdf PKPdf 09 25 22.3 -0.8
PAL *ep*PKPdf pPKPdf 09 25 33.0 -1.0
TZTN Tazewell 145.69 31 *e*PKPdf PKPdf 09 25 22.6 -0.7
TZTN LR LR
comp=Z,862nm,19.0s,MS5.5
MVL Millersville 145.88 20 *e*PKPdf PKPdf 09 25 22.9 -0.7
MVL *ep*PKPdf pPKPdf 09 25 33.4 -1.0
CPNY Central Park 145.88 16 *e*PKPdf PKPdf 09 25 22.8 -0.7
CPCT Cooper Cave 146.00 34 *e*PKPdf PKPdf 09 25 23.2 -0.6
LRAL Lakeview Retre 146.22 39 *e*PKPdf PKPdf 09 25 24.0 -0.3
LRAL LR LR
comp=Z,919nm,20.0s,MS5.6
SDMD Soldier's Deli 146.24 21 *e*PKPdf PKPdf 09 25 23.2 -1.0
ELN Prospectdale 146.52 28 *e*PKPdf PKPdf 09 25 24.2 -0.4
ELN *ep*PKPdf pPKPdf 09 25 35.0 -0.5
BLA Blacksburg 146.68 27 *e*PKPdf PKPdf 09 25 24.9 -0.1
BLA LR LR
comp=Z,896nm,20.0s,MS5.5
CBN Corbin 147.10 22 PFAKE 09 25 40.0 +14
CBN LR LR
comp=Z,719nm,20.0s,MS5.5
BRAL Brewton 147.49 42 *e*PKPbc PKPbc 09 25 28.3 -0.8
BRAL LR LR
comp=Z,759nm,20.0s,MS5.5
URVA University of 147.60 23 *e*PKPbc PKPbc 09 25 27.8 -1.4
CEN1 Los Morros 147.61 166 *e*P PKPdf 09 25 30.2 +3.3
GOGA Godfrey 148.08 35 *e*PKPbc PKPbc 09 25 29.3 -1.3
GOGA *e*PKPab PKPab 09 25 32.0 -1.3
GOGA LR LR
comp=Z,802nm,21.0s,MS5.5
CNNC Cliffs of the 149.45 26 PFAKE 09 25 40.0 +10
CNNC LR LR
comp=Z,784nm,20.0s,MS5.5
NHSC New Hope 150.10 32 PFAKE 09 25 40.0 +9.3
NHSC LR LR
comp=Z,605nm,19.0s,MS5.4
RCBR Riachuelo 150.38 243 PFAKE 09 25 40.0 +8.3
RCBR LR LR
comp=Z,845nm,21.0s,MS5.5
PAYG Puerto Ayora 150.55 106 PFAKE 09 25 40.0 +8.1
PAYG LR LR
comp=Z,514nm,22.0s,MS5.3
TEIG Tepich 152.01 62 PFAKE 09 25 40.0 +6.1
TEIG LR LR
comp=Z,630nm,19.0s,MS5.4
DWPF Disney 153.07 40 PFAKE 09 25 50.0 +15
DWPF LR LR
comp=Z,688nm,21.0s,MS5.4
TGUH Tegucigalpa,Un 154.64 75 PFAKE 09 25 50.0 +12
TGUH LR LR
comp=Z,467nm,20.0s,MS5.3
LPAZ La Paz 154.94 166 PKP PKPdf 09 25 37.7 -0.6
comp=Z,0.9nm,0.9s,baz=338,slow=5.4,SNR=2.7
LPAZ PKPab PKPab 09 26 05.3 +3.2
comp=Z,14nm,0.9s,baz=83,slow=2.0,SNR=7.4
NNA Nana 155.15 144 *e*PKPdf PKPdf 09 25 38.3 -0.3
NNA LR LR
comp=Z,895nm,22.0s,MS5.5
JTS JuntasAbangare 157.35 83 PFAKE 09 25 50.0 +8.5
JTS LR LR
comp=Z,508nm,19.0s,MS5.4
OTAV Otavalo 161.89 115 *e*PKPdf PKPdf 09 25 48.4 +1.6
OTAV LR LR
comp=Z,311nm,21.0s
SDDR Presa de Saban 166.06 39 PFAKE 09 26 00.0 +10
SDDR LR LR
comp=Z,689nm,21.0s
ROSC El Rosal 167.40 105 PKPab PKPab 09 26 59.6 +2.7
comp=Z,3.2nm,0.4s,baz=90,slow=20,SNR=2.9
SJG San Juan 169.40 21 PFAKE 09 26 00.0 +7.3
SJG LR LR
comp=Z,666nm,22.0s
SDV Santo Domingo 171.53 85 PFAKE 09 26 00.0 +6.0
SDV LR LR
comp=Z,392nm,19.0s

ISK ***13*** *09:12:53.3, 36.98N×29.35E, h5km, MD3.4*
CSEM ***13*** *09:12:53.4±0.1, 36.97N×29.38E, h2km, MD3.4, Error ellipse: s-maj=2.2km s-min=1.5km az=169.0*
ISCJB ***13*** *09:12:54.7±0.3, 36.99N±002×29.38E±003, h6km, Error ellipse: s-maj=3.7km s-min=3.2km az=42.1*
DDA ***13*** *09:12:56.7, 37.14N×29.36E, h6km, Md3.4*
NEIC ***13*** *09:13:00.8, 37.04N×28.86E, h26km, MD3.5(ATH), MD3.3(ISK), After ATH.*
ATH ***13*** *09:13:01.7, 36.99N×28.87E, h73km±26km*

ISC 13 09:12:54.9±0.5, 36.99N±003×29.36E±003, h1km±5km, n30, σ0°84/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOLH	**Golhisar**	**0.29**	**34**	*i* P	**Pg**	**09 13 00.2**	**-0.3**
GOLH				*i* S	**Sg**	**09 13 05.7**	**+1.4**
FETY	**Fethiye**	**0.42**	**212**	PG	**Pg**	**09 13 01.7**	**-1.2**
FETY				SG	**Sg**	**09 13 08.9**	**+0.6**
ELL	**Elmali**	**0.51**	**119**	PG	**Pg**	**09 13 03.7**	**-0.8**
ELL				SG	**Sg**	**09 13 13.3**	**+2.2**
DALT	**Dalyan (Mudla)**	**0.62**	**249**	PG	**Pg**	**09 13 06.6**	**-0.1**
DNZL	**Cakiroluk**	**0.74**	**340**	*i* P	**Pg**	**09 13 07.9**	**-1.1**
DNZL				*i* S	**Sg**	**09 13 19.1**	**+0.5**
DENT	**Denizli**	**0.80**	**341**	PG	**Pg**	**09 13 09.2**	**-1.0**
KSL	**Kastellorizon**	**0.86**	**168**	*e*P	**Sg**	**09 13 21.5**	**-1.0**
YER	**Yerkesik**	**0.87**	**280**	PG	**Pg**	**09 13 11.7**	**+0.1**
ANTB	**Antalya**	**1.04**	**95**	PG	**Pg**	**09 13 15.0**	**+0.2**
BCK	**Bucak**	**1.09**	**64**	PN	**Pn**	**09 13 15.4**	**-1.8**
ISP	**Isparta**	**1.25**	**47**	PN	**Pn**	**09 13 17.7**	**-1.8**
ARG	**Arkhangelos**	**1.26**	**232**	*e*P	**Pg**	**09 13 19.9**	**+0.9**
ARG				*e*S	**Sg**	**09 13 35.4**	**+0.1**
MLSB	**Milas**	**1.30**	**284**	PN	**Pn**	**09 13 19.8**	**-0.3**
KHL	**Karahalli**	**1.33**	**6**	*e*PN	**Pn**	**09 13 20.1**	**-0.5**
DAT	**Datca**	**1.45**	**260**	*e*PN	**Pn**	**09 13 22.5**	**+0.3**
BDRM	**Kayabasi**	**1.53**	**273**	*i* P	**Pn**	**09 13 23.8**	**+0.5**
BDRM				*i* S	**Sn**	**09 13 44.0**	**+0.1**
KULA	**Kula-Manisa**	**1.61**	**340**	*e*PN	**Pn**	**09 13 24.2**	**-0.3**
BODT	**Bodrum**	**1.64**	**273**	*e*PN	**Pn**	**09 13 24.8**	**0.0**
SHUT	**Suhut-Afyon**	**1.82**	**31**	*e*PN	**Pn**	**09 13 27.5**	**+0.2**
SMG	**Samos**	**2.13**	**290**	*e*P	**Pn**	**09 13 31.7**	**+0.1**
IZM	**Izmir**	**2.17**	**311**	*e*PN	**Pn**	**09 13 31.8**	**-0.4**
AKS	**Akhisar**	**2.24**	**327**	*e*PN	**Pn**	**09 13 33.0**	**-0.1**
KARP	**Karpathos**	**2.29**	**232**	*e*P	**Pn**	**09 13 34.9**	**+1.2**
BLCB	**Balcova**	**2.30**	**308**	*e*PN	**Pn**	**09 13 33.7**	**-0.2**
KONT	**Konya--Tatoy**	**2.57**	**67**	*e*PN	**Pn**	**09 13 37.1**	**-0.5**
KIZT	**Kizilcal**	**2.74**	**46**	*e*PN	**Pn**	**09 13 40.2**	**+0.2**
ESKT	**Eskisehir**	**2.78**	**25**	*e*PN	**Pn**	**09 13 41.5**	**+1.0**
IZI	**Iznik**	**3.34**	**2**	*e*PN	**Pn**	**09 13 48.9**	**+0.7**
IKL	**Isikli**	**3.56**	**101**	*e*PN	**Pn**	**09 13 51.5**	**+0.2**
YLV	**Yalova**	**3.57**	**0**	*e*PN	**Pn**	**09 13 52.8**	**+1.5**

IDC ***13*** *09:37:19.5±0.7, 10.07N×125.94E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.1/19, mbtmp4.1/12, Error ellipse: s-maj=50.5km s-min=13.7km az=77.0*
ISCJB ***13*** *09:37:25.2±0.8, 10.08N±004×126.25E±006, h56km±8km, mb4.2/17, Error ellipse: s-maj=10.8km s-min=5.6km az=168.2*
MAN ***13*** *09:37:25, 10.10N×126.14E, h20km, mb4.9, ML3.8, MS3.9*
MAN INTENSITY I - GENERAL LUNA, SURIGAO DEL NORTE.
NEIC ***13*** *09:37:32.4±1.8, 1006N×126.12E, h107km±16km, mb4.6/5, Error ellipse: s-maj=30.8km s-min=9.1km az=78.0*
NEIC Felt [I PIVS] at General Luna, Siargao Island.

ISC 13 09:37:26.4±0.8, 1008N±004×12623E±007, h50km±8km, n42, σ1°803/47, mb4.2/17, 2C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.79**	**248**⇓	*e*P	**Pn**	**09 37 39.4**	**-2.0**
SCPH				*e*S	**Sn**	**09 37 50.2**	**-2.0**
MSLP	**Maasin**	**1.35**	**272**	*e*P	**Pn**	**09 37 48.0**	**-0.9**
MSLP				*e*S	**Sn**	**09 38 05.3**	**-0.4**
PLP	**Palo**	**1.64**	**311**	*e*P	**Pn**	**09 37 51.7**	**-1.1**
PLP				*i* S	**Sn**	**09 38 14.2**	**+1.6**
BESP	**Borongan**	**1.70**	**333**	*e*P	**Pn**	**09 37 54.1**	**+0.5**
OCLP	**Ormoc**	**1.86**	**301**	*e*P	**Pn**	**09 37 56.0**	**+0.2**
BIPH	**Bislig**	**1.89**	**176**⇑	*i*P	**Pn**	**09 37 56.6**	**+0.3**
BIPH				*i* S	**Sn**	**09 38 16.8**	**-2.2**
CGP	**Cagayan de Oro** 17746μm,97.0s	**2.22**	**223**⇑	*i*P	**Pn**	**09 38 01.3**	**+0.5**
CGP				*i* S	**Sn**	**09 38 27.6**	**+0.7**
LLP	**Lapu-Lapu**	**2.24**	**276**⇓	*i*P	**Pn**	**09 38 01.3**	**+0.2**
LLP				*i* S	**Sn**	**09 38 24.6**	**-3.0**
TBP	**Tagbilaran**	**2.37**	**261**	*e*P	**Pn**	**09 38 03.2**	**+0.4**
TBP				*i* S	**Sn**	**09 38 31.7**	**+1.1**
BUKP	**Musuan**	**2.48**	**208**	*e*P	**Pn**	**09 38 06.2**	**+1.9**
CNP	**Catarman**	**2.86**	**328**	*e*P	**Pn**	**09 38 08.3**	**-1.3**
SNPH	**Sibulan**	**3.04**	**256**	*e*P	**Pn**	**09 38 13.0**	**+0.9**
DAV	**Davao City (W)**	**3.06**	**192**	*e*Pn	**Pn**	**09 38 18.9**	**+6.6**
DCPH	**Dipolog City**	**3.21**	**243**⇓	*e*P	**Pn**	**09 38 14.5**	**+0.2**
PAGZ	**Pagadian**	**3.59**	**232**	*e*P	**Pn**	**09 38 20.5**	**+1.0**
GUIM	**Jordan**	**3.62**	**279**	*e*P	**Pn**	**09 38 15.7**	**-4.4**
RCP	**Roxas**	**3.73**	**294**⇓	*e*P	**Pn**	**09 38 22.0**	**+0.6**
PVCP	**Virac**	**4.04**	**330**	*e*P	**Pn**	**09 38 26.8**	**+1.0**
CUYO	**Cuyo Island**	**5.18**	**279**	*e*P	**Pn**	**09 38 42.1**	**+0.7**
KSRS	**Korea Array** 0.5nm,0.4s,mb3.4,baz=183,slow=10,SNR=4.1	**27.29**	**3**	P	**P**	**09 43 06.9**	**+0.7**
FITZ	**Fitzroy Crossi**	**28.01**	**181**	P	**P**	**09 43 13.0**	**+0.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	1.0nm,0.6s,mb3.6,baz=1.9,slow=9.7,SNR=7.7						
WRA	**Warramunga Arr**	**30.89**	**165**	P	**P**	**09 43 37.4**	**-0.9**
	1.3nm,0.8s,mb3.8,baz=343,slow=9.6,SNR=12						
WB2	**Warramunga Arr**	**30.89**	**165**	*e*P	**P**	**09 43 37.8**	**-0.5**
ASAR	**Alice Springs**	**34.37**	**167**	P	**P**	**09 44 08.9**	**+0.2**
	1.1nm,0.6s,mb4.0,baz=352,slow=6.7,SNR=30						
FORT	**Forrest**	**40.66**	**178**	*e*P	**P**	**09 45 02.9**	**+1.0**
	15nm,0.5s,mb4.9						
ULN	**Ulaanbaatar**	**40.98**	**340**	*e*P	**P**	**09 45 04.7**	**+0.4**
	1.8nm,0.4s,mb4.0						
SONM	**Songino Array**	**41.18**	**340**	P	**P**	**09 45 05.9**	**-0.1**
	0.9nm,0.5s,mb3.6,baz=151,slow=9.6,SNR=10						
SONM				PcP	PcP	09 47 04.4	+0.1
	0.3nm,0.6s,baz=113,slow=2.3,SNR=3.7						
KLBR	**Kellerberrin**	**42.23**	**191**	*e*P	**P**	**09 45 15.4**	**+0.7**
	15nm,1.0s,mb4.6						
NWAO	**Narrogin (SRO)**	**43.62**	**191**	P	**P**	**09 45 26.2**	**+0.3**
	3.9nm,0.8s,mb4.2,baz=192,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**44.24**	**161**	*e*P	**P**	**09 45 31.5**	**+0.6**
	3.1nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**44.24**	**161**	P	**P**	**09 45 31.7**	**+0.8**
	1.2nm,0.4s,mb4.0,baz=328,slow=9.2,SNR=7.5						
MKAR	**Makanchi Array**	**52.15**	**323**	P	**P**	**09 46 31.0**	**-0.8**
MKAR				PcP	PcP	09 47 42.7	-0.4
MKAR	**Makanchi Array**	**52.15**	**323**	P	**P**	**09 46 31.0**	**-0.8**
	2.5nm,0.7s,mb4.2,baz=123,slow=8.1,SNR=16						
MKAR				PcP	PcP	09 47 42.7	-0.4
	0.7nm,0.6s,baz=119,slow=5.2,SNR=3.1						
TIXI	**Tiksi**	**61.54**	**1**	*e*P	**P**	**09 47 38.3**	**+0.4**
	9.6nm,1.0s,mb4.9						
IMA2	**Indian Mountai**	**76.82**	**24**	*e*P	**P**	**09 49 11.5**	**-1.1**
JOF	**Joensuu**	**83.34**	**333**	*e*p	**P**	**09 49 46.3**	**-1.5**
	1.0nm,0.4s,mb4.2						
ARCES	**ARCESS Array B**	**84.36**	**340**	P	**P**	**09 49 53.2**	**+0.3**
	3.2nm,0.9s,mb4.5,baz=81,slow=7.5,SNR=7.7						
FINES	**FINESS Array B**	**86.04**	**332**	P	**P**	**09 50 00.6**	**-0.8**
	1.1nm,0.6s,mb4.3,baz=87,slow=4.0,SNR=5.5						
AKASG	**Malin Array Be**	**86.69**	**321**	P	**P**	**09 50 02.5**	**-2.3**
	0.8nm,0.6s,mb4.1,baz=68,slow=4.2,SNR=4.2						
YKA	**Yellowknife Ar**	**93.94**	**24**	P	**P**	**09 50 39.6**	**+1.0**
	1.4nm,0.6s,mb4.5,baz=302,slow=4.6,SNR=41						
TXAR	**Lajitas Array**	**117.98**	**49**	PKP	PKPdf	09 56 09.1	+0.8
	0.1nm,0.5s,baz=252,slow=1.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**120.30**	**292**	PKP	PKPdf	09 56 12.2	-0.9
	0.6nm,0.8s,baz=87,slow=1.6,SNR=6.9						

*IDC **13** 09:41:56.6±1.0, 8.18S×117.78E, h0km, mb4.2/7, mb1 4.3/10, mb1mx4.1/19, mbtmp4.2/10, ML3.9/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/24, Error ellipse: s-maj=36.1km s-min=14.9km az=59.0*
*ISCJB **13** 09:41:57.8±7.0, 8.12S±0.09×118.0E±0.1, h20km±52km, mb4.5/15, Error ellipse: s-maj=25.8km s-min=13.7km az=159.3*
*NEIC **13** 09:41:57.1±7.2, 8.14S×117.87E, h3km±47km, mb4.8/10, Error ellipse: s-maj=15.1km s-min=8.3km az=57.0*
ISC 13 09:41:59.3±9.9**, 8.17S**±0.10×**117.9E**±0.1**, h16**km±65km**, n22, σ0.s64**/24**, mb4.5**/15**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.05**	**110**	Pn	**Pn**	**09 43 29.1**	**+1.1**
	6.7nm,0.3s,baz=338,slow=5.3,SNR=4.4						
BATI				Sn	**Sn**	**09 44 42.5**	**+5.6**
	2.4nm,0.3s,baz=340,slow=14,SNR=1.8						
BATI				LR	LR	09 46 54.7	
	comp=Z,877nm,19.2s,baz=132,slow=48						
FITZ	**Fitzroy Crossi**	**12.42**	**143**	*e*P	**Pn**	**09 44 55.4**	**0.0**
	7.8nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.42**	**143**	Pn	**Pn**	**09 44 55.8**	**+0.4**
	0.4nm,0.3s,baz=317,slow=8.5,SNR=6.8						
FITZ				Sn	**Sn**	**09 47 08.5**	**-5.0**
	0.4nm,0.3s,baz=129,slow=18,SNR=3.9						
WRA	**Warramunga Arr**	**19.76**	**128**	P	**Pn**	**09 46 28.8**	**-1.4**
	0.7nm,0.3s,baz=302,slow=12,SNR=22						
WB2	**Warramunga Arr**	**19.77**	**128**	*e*P	**Pn**	**09 46 28.8**	**-1.5**
ASAR	**Alice Springs**	**21.74**	**137**	P	**P**	**09 46 50.8**	**+0.7**
	6.6nm,0.6s,mb4.2,baz=317,slow=11,SNR=48						
KLBR	**Kellerberrin**	**23.30**	**180**	*e*P	**P**	**09 47 06.3**	**-0.3**
	6.8nm,0.4s,mb4.4						
FORT	**Forrest**	**24.42**	**158**	*e*P	**P**	**09 47 17.6**	**+0.5**
	22nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	**24.64**	**181**	P	**P**	**09 47 19.1**	**+0.1**
	4.4nm,0.4s,mb4.3,baz=24,slow=13,SNR=9.0						
CTA	**Charters Tower**	**29.89**	**116**	*e*P	**P**	**09 48 05.8**	**-0.6**
	2.4nm,0.8s,mb4.0						
CTA	**Charters Tower**	**29.89**	**116**	P	**P**	**09 48 06.5**	**+0.1**
	2.1nm,0.6s,mb4.1,baz=287,slow=11,SNR=4.2						
STKA	**Stephens Creek**	**32.28**	**140**	*e*P	**P**	**09 48 28.2**	**+0.8**
	7.5nm,1.8s,mb4.2						
STKA	**Stephens Creek**	**32.28**	**140**	P	**P**	**09 48 28.1**	**+0.8**
	2.1nm,0.5s,mb4.3,baz=311,slow=7.6,SNR=8.5						
TAPN	**Taplejung**	**45.84**	**321**	*e*P	**P**	**09 50 21.2**	**+0.5**
	33nm,1.2s,mb5.1						
KSRS	**Korea Array**	**46.35**	**11**	P	**P**	**09 50 24.6**	**+0.1**
	1.9nm,0.9s,mb4.0,baz=192,slow=8.6,SNR=8.2						
JIRN	**Jiri**	**47.01**	**320**	*e*P	**P**	**09 50 30.1**	**+0.2**
	18nm,0.9s,mb5.0						
KKN	**Kakani**	**47.68**	**320**	*e*P	**P**	**09 50 35.0**	**-0.1**
	8.6nm,0.6s,mb5.0						
GKN	**Gorkha**	**48.24**	**319**	*e*P	**P**	**09 50 39.0**	**-0.5**
	16nm,0.8s,mb5.1						
ULN	**Ulaanbaatar**	**56.61**	**351**	*e*P	**P**	**09 51 41.1**	**-0.1**
	1.8nm,0.8s,mb4.2						
SONM	**Songino Array**	**56.68**	**351**	P	**P**	**09 51 41.9**	**+0.2**
	2.0nm,0.8s,mb4.2,baz=171,slow=8.5,SNR=19						
MKAR	**Makanchi Array**	**63.23**	**333**	P	**P**	**09 52 26.2**	**-0.5**
	1.7nm,0.6s,mb4.3,baz=140,slow=7.8,SNR=20						
AML	**Almayashu**	**64.31**	**325**	*e*P	**P**	**09 52 34.1**	**+0.2**
	6.0nm,1.0s,mb4.6						

*JMA **13** 10:13:13.7±0.2, 24.99N×122.92E, h18km, M2.9*
*IDC **13** 10:13:14.8±1.2, 24.34N×121.91E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/20, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=69.2km s-min=20.3km az=69.0*
*ISCJB **13** 10:13:15.5±1.5, 24.9N±0.1×122.89E±0.10, h29km±10km, mb3.5/4, Error ellipse: s-maj=22.2km s-min=9.5km az=33.1*
ISC 13 10:13:15.9±1.8**, 24.9N**±0.1×**122.96E**±0.07**, h21**km±13km**, n11, σ0.s90**/14**, mb3.5**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**174**	P	**Pb**	**10 13 23.9**	**-0.8**
YOJ				*e*S	**Sb**	**10 13 31.3**	**+0.6**
IRIF	**Iriomote-Funau**	**0.89**	**128**	P	**Pb**	**10 13 31.7**	**-0.9**
HATJ	**Hateruma jima**	**1.13**	**137**	P	**Pn**	**10 13 35.6**	**-0.8**
HATJ				*e*S	**Sb**	**10 13 52.2**	**+1.3**
JKRS	**Kuro-shima**	**1.15**	**124**	P	**Pn**	**10 13 36.0**	**-0.8**
JKRS				*e*S	**Sb**	**10 13 52.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.19**	**115**	P	**Pn**	**10 13 36.3**	**-1.1**
JIJ				*e*S	**Sn**	**10 13 53.0**	**+0.1**
JTJ	**Tarama**	**1.60**	**98**	P	**Pn**	**10 13 43.7**	**+0.7**
KSRS	**Korea Array**	**13.23**	**18**	Pn		10 16 36.0	
	0.1nm,0.3s,baz=196,slow=14,SNR=5.6						
SONM	**Songino Array**	**26.39**	**334**	P	**P**	**10 18 53.5**	**+2.8**
	0.2nm,0.4s,mb3.0,baz=139,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**38.98**	**315**	P	**P**	**10 20 40.3**	**-0.3**
	0.2nm,0.7s,mb2.9,baz=98,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**45.91**	**165**	P	**P**	**10 21 37.0**	**-0.1**
	3.3nm,0.8s,mb4.3,baz=347,slow=8.6,SNR=19						
ASAR	**Alice Springs**	**49.41**	**167**	P	**P**	**10 22 04.6**	**+0.3**
	0.7nm,0.8s,mb3.7,baz=356,slow=7.5,SNR=6.3						

*IDC **13** 10:17:02.8±1.2, 24.46N×121.87E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/20, mbtmp3.7/5, ML3.4/1, MS3.2/3, Ms1 3.2/3, ms1mx3.0/36, Error ellipse: s-maj=69.8km s-min=21.2km az=70.0*
*ISCJB **13** 10:17:03.2±1.6, 24.9N±0.1×122.9E±0.1, h26km±11km, mb3.6/4, Error ellipse: s-maj=23.6km s-min=11.8km az=35.7*
*JMA **13** 10:17:03.1±0.2, 24.94N×122.91E, h23km, M3.0*
ISC 13 10:17:02.9±2.0**, 25.0N**±0.1×**122.99E**±0.09**, h12**km±12km**, n12, σ0.s74**/11**, mb3.6**/4**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.49**	**178**	P	**Pg**	**10 17 12.6**	**0.0**
YOJ				*e*S	**Sg**	**10 17 19.3**	**+0.2**
IRIF	**Iriomote-Funau**	**0.91**	**133**	P	**Pg**	**10 17 20.6**	**+0.1**
HATJ	**Hateruma jima**	**1.16**	**140**	P	**Pb**	**10 17 24.5**	**-0.4**
JKRS	**Kuro-shima**	**1.17**	**128**	P	**Pb**	**10 17 24.6**	**-0.4**
JKRS				*e*S	**Sb**	**10 17 40.8**	**+0.6**
JIJ	**Ishigaki jima**	**1.20**	**119**	P	**Pn**	**10 17 24.9**	**-0.6**
JOW	**Kunigami**	**5.11**	**67**	LR	LR	10 21 24.3	
	comp=Z,123nm,19.4s,baz=318,slow=42						
JNU	**Nakatsue**	**10.66**	**38**	LR	LR	10 24 41.2	
	comp=Z,109nm,18.2s,baz=166,slow=39						
KSRS	**Korea Array**	**13.15**	**17**	Pn		10 20 22.3	
	0.2nm,0.3s,baz=198,slow=11,SNR=4.4						
KSRS				LR	LR	10 26 21.2	
	comp=Z,169nm,18.2s,baz=261,slow=40						
SONM	**Songino Array**	**26.34**	**334**	P	**P**	**10 22 40.5**	**+1.9**
	0.4nm,0.7s,mb3.0,baz=148,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**38.95**	**315**	P	**P**	**10 24 27.4**	**-1.3**
	0.3nm,0.7s,mb3.1,baz=106,slow=8.9,SNR=4.3						
WRA	**Warramunga Arr**	**45.98**	**165**	P	**P**	**10 25 25.9**	**-0.1**
	4.7nm,0.8s,mb4.5,baz=347,slow=8.4,SNR=24						
ASAR	**Alice Springs**	**49.48**	**167**	P	**P**	**10 25 53.4**	**+0.2**
	1.2nm,0.8s,mb4.0,baz=347,slow=6.9,SNR=10						

MAN 13 10:21:50, 10.11N×126.07E, h11km**, mb4.4, ML3.2, MS3.0, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.66**	**240**	⇓*e*P	Pg	10 22 02.8	0.0
SCPH				*e*S	Sg	10 22 13.3	+1.9
MSLP	**Maasin**	**1.19**	**271**	*e*P	Pb	10 22 11.6	-0.9
PLP	**Palo**	**1.50**	**315**	*e*P	Pn	10 22 15.9	-0.9
PLP				*i* S	Sn	10 22 37.0	+0.6
TBP	**Tagbilaran**	**2.21**	**259**	*e*P	Pn	10 22 27.0	+0.3
TBP				*e*S	Sn	10 22 54.9	+0.9
BUKP	**Musuan**	**2.43**	**204**	*e*P	Pn	10 22 30.0	+0.4

MEX 13 10:29:48.7±0.3**, 15.88N×97.29W, h27**km±17km**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.95**	**302**	*i* P	Pn	10 30 03.6	-2.7
PNIG				*i* S	Sb	10 30 15.5	-3.2
HUIG	**Huatulco**	**1.15**	**95**	*i* P	Pn	10 30 06.9	-2.1
HUIG				*i* S	Sn	10 30 20.3	-3.5
VHO	**Vista Hermosa**	**1.30**	**24**	*i* P	Pn	10 30 08.3	-2.8
VHO				*i* S	Sn	10 30 24.0	-3.6
OXX	**Oaxaca**	**1.31**	**25**	*e*P	Pn	10 30 09.0	-2.3
OXX				*i* S	Sn	10 30 25.0	-2.9
CMIG	**Matias Romero**	**2.60**	**62**	*i* P	Pn	10 30 26.9	-2.2
CMIG				*i* S	Sn	10 30 57.4	-2.4

IDC 13 10:34:16.5±0.7**, 54.21S×120.90W, h0**km**, mb3.9**/6**, mb1 4.1**/6**, mb1mx4.0**/13**, mbtmp3.9**/6**, Error ellipse: s-maj=37.5km s-min=22.1km az=149.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**35.98**	**180**	P	P	10 41 20.1	+1.7
	1.8nm,0.5s,baz=95,slow=4.5,SNR=6.4						
CFAA	**Coronel Fontan**	**43.45**	**81**	P	P	10 42 19.5	-1.5
	0.2nm,0.4s,baz=224,slow=9.1,SNR=5.1						
LPAZ	**La Paz**	**55.47**	**68**	P	P	10 43 54.6	+1.7
	4.0nm,1.0s,baz=208,slow=6.9,SNR=9.0						
ASAR	**Alice Springs**	**79.53**	**244**	P	P	10 46 24.7	-0.4
	0.8nm,0.8s,baz=157,slow=5.1,SNR=9.0						
WRA	**Warramunga Arr**	**82.33**	**247**	P	P	10 46 39.9	-0.2
	1.4nm,0.8s,baz=144,slow=4.8,SNR=10						
TXAR	**Lajitas Array**	**84.52**	**15**	P	P	10 46 52.2	+1.4
	0.3nm,0.9s,baz=148,slow=7.4,SNR=3.2						
EKA	**Eskdalemuir Ar**	**145.12**	**62**	PKPbc	PKPbc	10 53 53.2	-1.0
	1.5nm,0.7s,baz=241,slow=2.8,SNR=5.0						
SONM	**Songino Array**	**150.05**	**277**	PKPbc	PKPbc	10 54 07.7	-0.3
	0.5nm,0.6s,baz=74,slow=1.9,SNR=5.9						
GERES	**GERESS Array B**	**151.65**	**82**	PKPbc	PKPbc	10 54 10.8	-0.9
	1.9nm,0.8s,baz=241,slow=2.4,SNR=11						
BRTR	**Keskin Array B**	**157.55**	**120**	PKP	PKPdf	10 54 14.4	+0.5
	1.0nm,1.0s,baz=353,slow=11,SNR=2.7						
BRTR				PKPab	PKPab	10 54 45.0	-0.9
	0.7nm,0.7s,baz=207,slow=6.9,SNR=4.3						

*KISR **13** 10:43:47.3±1.0, 31.67N×46.23E, h2km±527km, ML2.2*
*CSEM **13** 10:43:48.6, 32.06N×48.33E, h35km, ML2.6, After THR*
*THR **13** 10:43:48.5±0.5, 32.06N×48.33E, h35km±4km, ML2.6*
*ISCJB **13** 10:43:49.4±1.0, 32.08N±0.08×48.3E±0.1, h35km, Error ellipse: s-maj=17.4km s-min=5.3km az=37.3*
ISC 13 10:43:50.7±1.0**, 32.05N**±0.09×**48.4E**±0.1**, h35**km**, n10, σ1.s32**/18**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.34**	**81**	*e*Pg	**Pn**	**10 43 57.7**	**-1.5**
SHGR				*e*Sg	**Sn**	**10 44 04.7**	**-0.4**
SHGR				AML	AML	10 44 14.9	
	comp=N,549nm,0.5s						
SHGR				AML	AML	10 44 20.8	
	comp=E,645nm,0.7s						
SHGR	**Shooshtar-Gavs**	**0.34**	**81**	*e*Pg	**Pn**	**10 43 57.7**	**-1.5**
	SNR=125						
SHGR				*e*Sg	**Sn**	**10 44 04.7**	**-0.3**
	comp=E,645nm,0.7s,SNR=125						
MIB	**Mutribah**	**2.42**	**202**	*e*P	**Pn**	**10 44 26.3**	**-1.5**
MIB				*e*S	**Sn**	**10 44 56.4**	**+0.2**
MIB				AML	AML	10 45 00.2	
	comp=Z,15nm,0.4s						
UMR	**Umm Al-Rimmam**	**2.56**	**193**	*e*P	**Pn**	**10 44 31.7**	**+2.0**
UMR				*e*S	**Sn**	**10 45 05.8**	**+6.2**
UMR				AML	AML	10 45 08.6	
	comp=Z,26nm,0.4s						
ASAO	**Ashtian**	**2.84**	**28**	*e*Pn	**Pn**	**10 44 34.2**	**+0.7**
ASAO				*e*Sg	**Sn**	**10 45 15.9**	**+10**
ASAO				AML	AML	10 45 18.5	
	comp=E,14nm,0.8s						
ASAO	**Ashtian**	**2.84**	**28**	*e*Pn	**Pn**	**10 44 34.2**	**+0.7**
	SNR=54						
ASAO				*e*Sg	**Sn**	**10 45 15.9**	**+9.5**
	comp=E,14nm,0.8s,SNR=94						
NAY	**Al-Naaiem**	**2.97**	**200**	*e*P	**Pn**	**10 44 34.0**	**-1.3**
NAY				*e*S	**Sn**	**10 45 07.7**	**-2.0**
NAY				AML	AML	10 45 10.6	
	comp=Z,3.8nm,0.5s						
RDF	**Al-Radifah**	**3.20**	**193**	*e*P	**Pn**	**10 44 39.2**	**+0.7**
RDF				*e*S	**Sn**	**10 45 17.9**	**+2.5**
RDF				AML	AML	10 45 18.1	
	comp=Z,11nm,0.6s						
GHVR	**GHOM**	**3.43**	**44**	*e*Pn	**Pn**	**10 44 41.5**	**-0.1**
NASN	**Na'in**	**3.80**	**78**	*e*Pn	**Pn**	**10 44 47.9**	**+1.2**

MAN 13 10:50:40, 10.63N×125.69E, h10km**, mb4.1, ML2.9, MS2.6, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.86**	**193**	⇓*e*P	Pg	10 50 56.0	-0.6
SCPH				*e*S	Sg	10 51 06.3	-1.5
PLP	**Palo**	**0.88**	**308**	*e*P	Pg	10 50 56.8	-0.1
PLP				*i* S	Sg	10 51 11.2	+2.8
MSLP	**Maasin**	**0.95**	**239**	*e*P	Pg	10 50 59.4	+1.1
BESP	**Borongan**	**1.00**	**346**	*e*P	Pg	10 50 59.2	-0.1
PVCP	**Virac**	**3.31**	**333**	*e*P	Pn	10 51 33.5	+1.6

*NSSC **13** 11:01:04.0, 35.53N×39.77E, h4km±2km*
*ISCJB **13** 11:01:05.5±1.7, 35.57N±0.09×40.08E±0.07, h5km±9km, Error ellipse: s-maj=16.0km s-min=9.9km az=171.9*
*CSEM **13** 11:01:05.5±0.3, 35.65N×40.03E, h2km, Mc2.8, Error ellipse: s-maj=8.1km s-min=3.8km az=168.0*
*ISK **13** 11:01:05.8, 35.62N×40.06E, h10km, MD3.7*
ISC 13 11:01:03.0±1.7**, 35.38N**±0.08×**39.88E**±0.07**, h5**km±7km**, n23, σ1.s55**/28**, 5D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSHR	**Al Beshri**	**0.29**	**350**	⇓P	**Pg**	**11 01 09.4**	**+0.7**
BSHR				⇓S	**Sg**	**11 01 14.0**	**+1.4**
BSHR	**Al Beshri**	**0.29**	**350**	⇓*i*P	**Pg**	**11 01 09.4**	**+0.7**
SFNV	**Sufian**	**1.05**	**10**	⇑P	**Pg**	**11 01 21.6**	**-1.6**
SFNV	**Sufian**	**1.05**	**10**	⇑*i*P	**Pg**	**11 01 21.6**	**-1.6**
JHLN	**Al Jahlan**	**1.21**	**284**	⇓P	**Pg**	**11 01 25.0**	**-1.2**
JHLN				⇓S	**Sg**	**11 01 39.6**	**-2.3**
KBSD	**Kabsdagh**	**1.71**	**18**	⇑P	**Pn**	**11 01 32.7**	**-0.7**
KBSD				⇑S	**Sn**	**11 01 53.6**	**-1.9**
KBSD	**Kabsdagh**	**1.71**	**18**	⇑*i*P	**Pn**	**11 01 32.7**	**-0.7**
KBSD				⇑*i*S	**Sn**	**11 01 53.6**	**-1.9**
SLMH	**Al Salmeh**	**1.79**	**298**	⇑P	**Pn**	**11 01 33.2**	**-1.4**
SLMH				⇑S	**Sn**	**11 01 54.5**	**-3.2**
MARD	**Mardin**	**2.06**	**20**	*i* P	**Pn**	**11 01 37.8**	**-0.5**
URFA	**Urfa**	**2.23**	**338**	PN	**Pn**	**11 01 41.3**	**+0.8**
URFA				SN	**Sn**	**11 02 07.9**	**-0.5**
ATAB	**Bozova**	**2.45**	**329**	*i* P	**Pn**	**11 01 49.3**	**+5.8**
GZT	**Gaziantep**	**2.72**	**317**	*i* P	**Pn**	**11 01 52.5**	**+5.2**
MSL	**Mosul**	**2.76**	**70**	*e*x	x	11 01 47.0	
MSL				*e*x	x	11 02 33.5	
GAZ	**Gaziantep**	**2.80**	**310**	PN	**Pn**	**11 01 51.6**	**+3.2**
MALT	**Malatya**	**3.15**	**339**	*e*PN	**Pn**	**11 01 55.0**	**+1.8**
MYA	**Malataya**	**3.16**	**339**	*e*PN	**Pn**	**11 01 55.5**	**+2.1**
ELZG	**Elazig**	**3.19**	**347**	*i* P	**Pn**	**11 01 51.7**	**-2.1**
KMRS	**Kahramanmaras**	**3.21**	**312**	*e*PN	**Pn**	**11 01 56.9**	**+2.9**
ANDN	**Andirin**	**3.60**	**309**	*i* P	**Pn**	**11 02 05.6**	**+6.3**
BNGL	**BINGOL**	**3.71**	**15**	*i* P	**Pn**	**11 02 00.5**	**-0.4**
HAKT	**HAKKARI**	**3.77**	**54**	*i* P	**Pn**	**11 02 02.5**	**+0.7**
KOZT	**Kozan**	**3.88**	**304**	*e*PN	**Pn**	**11 02 07.6**	**+4.3**
BNN	**Bunyan**	**4.73**	**318**	*e*PN	**Pn**	**11 02 19.3**	**+4.3**

*IDC **13** 11:18:54.4±0.7, 6.74N×72.97W, h151km±9km, mb3.0/3, mb1 3.6/7, mb1mx3.3/21, mbtmp3.4/7, Error ellipse: s-maj=25.5km s-min=7.3km az=132.0*
*FUNV **13** 11:18:54.7, 6.75N×73.20W, h159km, MW4.0*
*ISCJB **13** 11:18:55.5±0.7, 6.94N±0.06×72.96W±0.05, h169km±7km, mb3.2/3, Error ellipse: s-maj=10.4km s-min=8.0km az=153.9*
*NEIC **13** 11:18:55.9±0.7, 6.72N×72.97W, h167km±9km, Error ellipse: s-maj=18.8km s-min=10.7km az=152.0*
ISC 13 11:18:56.4±0.7**, 6.92N**±0.06×**72.97W**±0.05**, h162**km±7km**, n30, σ0.s76**/40**, mb3.2**/3**, 2C-10D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.14**	**35**	⇓*i*P	**Pn**	**11 19 24.2**	**+0.7**
CAPV				*e*S	**Sn**	**11 19 44.5**	**+0.2**
ROSC	**El Rosal**	**2.46**	**214**	P	**Pn**	**11 19 35.6**	**-2.1**
	52nm,0.3s,baz=276,slow=22,SNR=92						
ROSC				S	**Sn**	**11 20 04.0**	**-5.6**
	36nm,0.3s,baz=97,slow=16,SNR=12						
VIGV	**El Vigia**	**2.48**	**40**	⇓*i*P	**Pn**	**11 19 38.8**	**+0.9**
VIGV				*e*S	**Sn**	**11 20 10.2**	**+0.2**
SOCV	**Socops**	**2.49**	**57**	⇓*i*P	**Pn**	**11 19 39.1**	**+1.1**
SOCV				*e*S	**Sn**	**11 20 10.6**	**+0.5**
SDV	**Santo Domingo**	**3.02**	**50**	P	**Pn**	**11 19 45.5**	**+1.0**
SDV				S	**Sn**	**11 20 21.8**	**-0.1**
SDV	**Santo Domingo**	**3.02**	**50**	P	**Pn**	**11 19 45.5**	**+1.0**
	43nm,0.3s,baz=233,slow=5.0,SNR=381						
SDV				S	**Sn**	**11 20 21.8**	**-0.1**
	62nm,0.3s,baz=271,slow=21,SNR=28						
ELOV	**Elorza**	**3.46**	**88**	*e*P	**Pn**	**11 19 50.3**	**+0.3**
ELOV				*e*S	**Sn**	**11 20 31.9**	**+0.3**
VIRV	**Villa del Rosa**	**3.60**	**9**	⇑*i*P	**Pn**	**11 19 51.2**	**-0.6**
VIRV				*e*S	**Sn**	**11 20 33.9**	**-1.1**
QARV	**Quebrada Arrib**	**4.06**	**36**	⇓*i*P	**Pn**	**11 19 58.8**	**+1.1**
QARV				*e*S	**Sn**	**11 20 45.2**	**-0.4**
SANV	**Sanarito**	**4.25**	**53**	⇓*i*P	**Pn**	**11 20 00.5**	**+0.3**
SANV				*e*S	**Sn**	**11 20 50.2**	**+0.2**
CURV	**Curarigua**	**4.27**	**44**	⇓*i*P	**Pn**	**11 20 01.1**	**+0.6**
CURV				*e*S	**Sn**	**11 20 50.0**	**-0.6**
TEPV	**Terepaima**	**4.80**	**51**	⇓*i*P	**Pn**	**11 20 07.9**	**+0.5**
TEPV				*e*S	**Sn**	**11 21 01.4**	**-1.5**
SIQV	**Siquisique**	**4.84**	**40**	*e*P	**Pn**	**11 20 08.3**	**+0.4**
SIQV				*e*S	**Sn**	**11 21 03.6**	**-0.2**
BAUV	**El Baul**	**5.27**	**67**	⇓*i*P	**Pn**	**11 20 12.5**	**-1.1**
IMOV	**Isla Los Monje**	**5.77**	**20**	*e*P	**Pn**	**11 20 19.5**	**-0.7**
TURV	**Turiamo**	**6.16**	**55**	⇓*e*P	**Pn**	**11 20 25.2**	**-0.1**
MERV	**Las Mercedes**	**7.00**	**70**	*e*P	**Pn**	**11 20 36.0**	**-0.4**
BIRV	**Birongo**	**7.50**	**61**	⇑*i*P	**Pn**	**11 20 42.5**	**-0.7**
CUPV	**Cœpira**	**7.75**	**66**	⇓*e*P	**Pn**	**11 20 45.6**	**-0.9**
PCRV	**Puerto La Cruz**	**8.85**	**68**	*e*P	**Pn**	**11 21 00.8**	**-0.2**
PCRV	**Puerto La Cruz**	**8.85**	**68**	P	**Pn**	**11 21 02.5**	**+1.5**
	2.1nm,0.3s,baz=228,slow=2.8,SNR=13						
JTS	**JuntasAbangare**	**12.32**	**287**	P	**Pn**	**11 21 47.4**	**+0.9**
	0.3nm,0.3s,baz=124,slow=15,SNR=2.6						
LPAZ	**La Paz**	**23.55**	**168**	pP	pP	11 24 23.4	+0.1
	1.6nm,0.6s,baz=345,slow=17,SNR=5.9						
TXAR	**Lajitas Array**	**36.51**	**311**	P	**P**	**11 25 46.9**	**+0.6**
TXAR	**Lajitas Array**	**36.51**	**311**	P	**P**	**11 25 46.9**	**+0.7**
	0.2nm,0.4s,mb3.1,baz=129,slow=8.6,SNR=5.4						
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**	**11 27 19.1**	**-0.5**
	0.2nm,0.6s,mb2.9,baz=120,slow=10,SNR=2.5						
YKA	**Yellowknife Ar**	**63.22**	**340**	P	**P**	**11 29 07.5**	**+0.4**
YKA				pP	pP	11 29 45.2	-0.2
YKA	**Yellowknife Ar**	**63.22**	**340**	P	**P**	**11 29 07.4**	**+0.3**
	0.6nm,0.6s,mb3.6,baz=133,slow=6.7,SNR=22						
YKA				pP	pP	11 29 45.2	-0.2
	0.3nm,0.6s,baz=131,slow=7.0,SNR=4.0						
ASAR	**Alice Springs**	**149.29**	**234**	PKPbc	PKPbc	11 38 25.6	-1.2
	0.8nm,0.5s,baz=117,slow=3.6,SNR=20						
WRA	**Warramunga Arr**	**150.52**	**241**	PKPbc	PKPbc	11 38 28.5	-1.3
	0.8nm,0.4s,baz=108,slow=2.7,SNR=36						

*IDC **13** 11:34:50.9±2.0, 51.05N×179.20E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/24, mbtmp3.7/8, Error ellipse: s-maj=73.4km s-min=19.4km az=5.0*
*ISCJB **13** 11:34:57.1±1.6, 51.3N±0.4×179.3E±0.2, h52km±5km, mb3.6/7, Error ellipse: s-maj=64.1km s-min=16.3km az=0.3*
*NEIC **13** 11:34:57.8, 51.04N×179.34E, h8km, ML3.5(AEIC), After AEIC.*
ISC 13 11:34:58.2±1.7**, 51.3N**±0.4×**179.3E**±0.2**, h46**km±5km**, n12, σ1.s03**/13**, mb3.6**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.07**	**20**	P	**Pn**	**11 35 05.0**	**-0.4**
AMKA				S	**Sn**	**11 35 10.8**	**+0.3**
ATKA	**Atka Island**	**4.16**	**75**	P	**Pn**	**11 35 59.7**	**+0.6**
KDAK	**Kodiak Island**	**17.48**	**57**	P	**Pn**	**11 38 56.7**	**-1.6**
	1.0nm,0.3s,baz=192,slow=18,SNR=5.9						
MCK	**McKinley**	**20.84**	**41**	*e*P	**P**	**11 39 43.8**	**+8.1**
	6.6nm,0.5s						
YKA	**Yellowknife Ar**	**36.15**	**46**	P	**P**	**11 41 56.5**	**+1.0**
YKA	**Yellowknife Ar**	**36.15**	**46**	P	**P**	**11 41 56.5**	**+1.0**
	0.5nm,0.6s,mb3.7,baz=280,slow=8.0,SNR=11						
NVAR	**Mina Array Bea**	**44.76**	**81**	P	**P**	**11 43 06.1**	**-0.9**
	0.3nm,0.7s,mb3.2,baz=289,slow=6.2,SNR=3.1						
SONM	**Songino Array**	**45.59**	**296**	P	**P**	**11 43 12.4**	**-1.0**
	0.2nm,0.5s,mb3.3,baz=53,slow=7.0,SNR=2.6						
PDAR	**Pinedale Array**	**47.48**	**71**	P	**P**	**11 43 29.7**	**+1.4**
	2.0nm,0.6s,mb4.2,baz=307,slow=3.1,SNR=20						
MKAR	**Makanchi Array**	**59.12**	**307**	P	**P**	**11 44 55.5**	**+1.8**
	0.4nm,0.4s,mb3.8,baz=45,slow=6.8,SNR=7.1						
TXAR	**Lajitas Array**	**59.86**	**80**	P	**P**	**11 44 58.8**	**-0.3**
	0.1nm,0.6s,mb3.0,baz=296,slow=6.9,SNR=3.4						
BRTR	**Keskin Array B**	**84.49**	**334**	P	**P**	**11 47 25.0**	**-0.9**
	0.8nm,0.7s,mb4.0,baz=358,slow=7.4,SNR=3.3						

IDC 13 11:39:21.2±1.6**, 4.17N×127.04E, h0**km**, mb3.4**/3**, mb1 3.5**/3**, mb1mx3.4**/16**, mbtmp3.4**/3**, Error ellipse: s-maj=137.7km s-min=26.8km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.01**	**164**	P	P	11 44 47.1	+0.1
	1.4nm,0.9s,baz=345,slow=10,SNR=8.9						
SONM	**Songino Array**	**46.98**	**341**	P	P	11 47 55.3	+1.4
	0.1nm,0.4s,baz=153,slow=8.7,SNR=3.7						
MKAR	**Makanchi Array**	**57.37**	**325**	P	P	11 49 10.3	-1.0
	0.1nm,0.4s,baz=128,slow=7.6,SNR=4.7						

*ISCJB **13** 11:52:52.0±6.4, 8.4S±0.2×117.8E±0.3, h15km±43km, mb3.9/4, Error ellipse: s-maj=56.0km s-min=13.1km az=155.7*
*IDC **13** 11:52:51.0±2.3, 8.41S×117.62E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, ML3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=70.0km s-min=17.7km az=64.0*
ISC 13 11:52:52.8±6.1**, 8.4S**±0.2×**117.8E**±0.3**, h7**km±36km**, n8, σ1.s01**/9**, mb3.9**/4**, Sumbawa region**

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

BATI	**Kupang**	**6.08**	**108**	Pn	**Pn**	**11 54 23.2**	**0.0**
	4.5nm,0.3s,baz=280,slow=10,SNR=8.2						
BATI				LR	LR	11 57 13.7	
	comp=Z,374nm,18.5s,baz=118,slow=42						
FITZ	**Fitzroy Crossi**	**12.33**	**143**	Pn	**Pn**	**11 55 49.4**	**+0.5**
	0.2nm,0.3s,baz=330,slow=16,SNR=5.2						
FITZ				Sn	**Sn**	**11 58 06.6**	**-0.1**
	0.2nm,0.3s,baz=174,slow=16,SNR=3.4						
WRA	**Warramunga Arr**	**19.73**	**127**	P	**Pn**	**11 57 22.6**	**-2.0**
	0.3nm,0.3s,baz=302,slow=12,SNR=13						
ASAR	**Alice Springs**	**21.68**	**136**	P	**P**	**11 57 45.0**	**+0.8**
	4.8nm,0.9s,mb3.9,baz=315,slow=10,SNR=44						
STKA	**Stephens Creek**	**32.21**	**140**	P	**P**	**11 59 22.1**	**+0.5**
	2.8nm,0.9s,mb4.1,baz=308,slow=12,SNR=4.6						
JHJ	**Hachijo jima 2**	**46.25**	**26**	P	**P**	**12 01 19.1**	**+0.2**
	187nm,0.6s,baz=62,slow=12,SNR=3.2						
KSRS	**Korea Array**	**46.55**	**11**	P	**P**	**12 01 22.5**	**+1.4**
	0.8nm,0.7s,mb3.7,baz=192,slow=7.9,SNR=4.0						
SONM	**Songino Array**	**56.85**	**351**	P	**P**	**12 02 36.3**	**-1.6**
	0.8nm,0.6s,mb3.9,baz=168,slow=8.6,SNR=5.8						

IDC 13 12:05:41.5±1.2**, 5431S**×**12095W, h0**^{km}**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.9**/11**, mbtmp3.9**/3**, Error ellipse: s-maj=503.3km s-min=29.6km az=157.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**55.53**	**68**	P	P	12 15 19.2	+0.9
	2.3nm,0.9s,baz=203,slow=5.2,SNR=5.7						
ASAR	**Alice Springs**	**79.45**	**244**	P	P	12 17 50.0	+0.3
	0.6nm,0.8s,baz=144,slow=6.1,SNR=5.6						
WRA	**Warramunga Arr**	**82.26**	**247**	P	P	12 18 04.8	+0.1
	0.9nm,0.8s,baz=146,slow=5.5,SNR=7.1						
EKA	**Eskdalemuir Ar**	**145.20**	**62**	PKPbc	PKPbc	12 25 18.4	-1.1
	2.3nm,0.8s,baz=251,slow=2.6,SNR=4.4						
GERES	**GERESS Array B**	**151.69**	**82**	PKPbc	PKPbc	12 25 36.7	-0.1
	1.2nm,0.7s,baz=219,slow=2.5,SNR=7.5						

*IDC **13** 12:15:21.2±1.1, 3501N×2754E, h0^{km}, mb3.9/4, mb1 3.7/8, mb1mx3.6/22, mbtmp3.7/8, ML3.1/4, Error ellipse: s-maj=28.3km s-min=16.7km az=175.0*
*ISCJB **13** 12:15:23.5±1.6, 3492N±006×2760E±005, h28^{km}±13^{km}, mb3.6/4, Error ellipse: s-maj=10.0km s-min=6.6km az=17.5*
*ATH **13** 12:15:27.3, 3539N×27.15E, h28^{km}±5^{km}, MD3.6/4*
*CSEM **13** 12:15:28.4, 3552N×2705E, h23^{km}, MD3.6/4, After ATH*
*NEIC **13** 12:15:29.0, 3537N×27.19E, h10^{km}, MD3.6(ATH), After ATH.*
ISC 13 12:15:23.0±2.4**, 3500N**±006×**2754E**±005**, h10**^{km}±16^{km}**, n15, σ1**^{s}**27**/19**, mb3.6**/4**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.63**	**331**	*e*PB	**Pb**	**12 15 33.0**	**-3.1**
ARG	**Arkhangelos**	**1.31**	**21**	*e*PB	**Pb**	**12 15 48.2**	**+0.5**
ARG				*e*SN	**Sn**	**12 16 05.8**	**+0.9**
NPS	**Neapolis**	**1.60**	**280**	*e*PN	**Pn**	**12 15 50.9**	**-0.4**
IDI	**Anoyia**	**2.19**	**278**	Pn	**Pn**	**12 16 00.4**	**+1.0**
	4.5nm,0.3s,baz=56,slow=12,SNR=19						
IDI				Sn	**Sn**	**12 16 28.2**	**+1.6**
	13nm,0.3s,baz=332,slow=22,SNR=3.5						
APE	**Apeiranthos**	**2.63**	**322**	*e*PN	**Pn**	**12 16 02.9**	**-2.6**
SMG	**Samos**	**2.77**	**348**	P	**Pn**	**12 16 09.4**	**+2.0**
BRTR	**Keskin Array B**	**6.77**	**44**	Pn	**Pn**	**12 17 02.6**	**+0.2**
	0.2nm,0.3s,baz=220,slow=11,SNR=6.9						
MMAI	**Mount Meron Ar**	**6.82**	**105**	Pn	**Pn**	**12 17 04.4**	**+1.3**
	0.7nm,0.3s,baz=286,slow=10,SNR=2.7						
MMAI				Sn	**Sn**	**12 18 20.3**	**-0.6**
	1.0nm,0.3s,baz=290,slow=26,SNR=2.3						
EIL	**Elat**	**8.22**	**128**	Pn	**Pn**	**12 17 23.7**	**+1.4**
	0.2nm,0.3s,baz=23,slow=15,SNR=3.8						
EIL				Sn	**Sn**	**12 18 55.0**	**-0.1**
	1.9nm,0.3s,baz=24,slow=15,SNR=6.3						
AKTK	**Aktyubinsk**	**26.95**	**46**	P	**P**	**12 21 02.8**	**-1.6**
AKTO	**Aktyubinsk**	**26.95**	**46**	P	**P**	**12 21 02.8**	**-1.6**
	1.4nm,0.6s,mb3.7,baz=251,slow=9.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**31.92**	**233**	P	**P**	**12 21 47.5**	**-1.4**
TORD	**Torodi Ar. Bea**	**31.92**	**233**	P	**P**	**12 21 47.5**	**-1.4**
	0.5nm,0.6s,mb3.5,baz=34,slow=8.3,SNR=4.5						
MKAR	**Makanchi Array**	**42.24**	**57**	P	**P**	**12 23 16.4**	**+0.2**
	1.4nm,0.6s,mb3.8,baz=277,slow=6.9,SNR=21						
SONM	**Songino Array**	**58.08**	**51**	P	**P**	**12 25 16.2**	**0.0**
	0.4nm,0.6s,mb3.6,baz=286,slow=7.8,SNR=3.9						

*IDC **13** 12:18:48.5±0.6, 1626S×17225W, h0^{km}, mb4.5/11, mb1 4.7/12, mb1mx4.5/19, mbtmp4.5/12, ML2.2/1, MS3.8/10, Ms1 3.8/10, ms1mx3.5/27, Error ellipse: s-maj=32.5km s-min=14.1km az=141.0*
*ISCJB **13** 12:18:52.4±0.3, 163S±0.1×1724W±0.1, h33^{km}, mb4.6/22, MS3.8/9, Error ellipse: s-maj=19.8km s-min=7.6km az=140.3*
*CSEM **13** 12:18:53.0, 1660S×172.10W, h33^{km}, mb5.6*
*MOS **13** 12:18:54.3±2.6, 1634S×17238W, h33^{km}, mb4.8/5, Error ellipse: s-maj=26.2km s-min=13.9km az=139.2*
*NEIC **13** 12:18:55.7±0.3, 1639S×17232W, h45^{km}, mb4.7/10, Error ellipse: s-maj=21.8km s-min=8.0km az=141.0*
ISC 13 12:18:54.5±0.3**, 1632S**±010×**17235W**±010**, h35**^{km}**, n90, σ0**^{s}**82**/48**, mb4.6**/22**, MS3.8**/9**, 4C-4D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**13**	Pn	**Pn**	**12 19 27.0**	**-5.1**
	34nm,0.3s,baz=154,slow=3.6,SNR=48						
AFI				Sn	**Sn**	**12 19 53.9**	**-7.1**
	218nm,0.3s,baz=149,slow=22,SNR=15						
RAR	**Rarotonga**	**12.87**	**114**	Pn	**Pn**	**12 21 45.0**	**-10**
	2.7nm,0.3s,baz=279,slow=11,SNR=5.3						
RAR				LR	LR	12 24 45.4	
	comp=Z,190nm,21.0s,baz=42,slow=28						
DZM	**Mont Dzumac**	**20.82**	**251**	P	**P**	**12 23 32.2**	**-0.8**
	4.9nm,0.7s,baz=88,slow=20,SNR=6.5						
DZM				LR	LR	12 30 17.8	
	comp=Z,315nm,19.1s,MS3.7,baz=38,slow=33						
PPT	**Papeete**	**21.82**	**97**	*e*LQ		12 27 31.3	
	516nm,28.5s						
PPT				*e*LR	LR	12 28 35.6	
	384nm,27.5s						
PPT	**Papeete**	**21.82**	**97**	LR	LR	12 29 16.6	
	comp=Z,248nm,19.7s,MS3.6,baz=62,slow=29						
TBI	**Tubuai**	**22.62**	**112**	*e*LR	LR	12 28 48.6	
	356nm,31.0s						
URZ	**Urewera**	**23.74**	**201**	P	**P**	**12 24 02.9**	**-0.6**
	40nm,0.5s,mb5.1,baz=308,slow=2.1,SNR=54						
URZ				S	**S**	**12 28 17.6**	**+1.3**
	14nm,1.0s,baz=317,slow=19,SNR=4.1						
HNR	**Honiara**	**27.84**	**281**	LR	LR	12 34 14.0	
	comp=Z,288nm,19.8s,MS3.9,baz=180,slow=33						
RPZ	**Rata Peaks**	**30.73**	**204**	P	**P**	**12 25 11.6**	**+5.4**
	15nm,0.6s,mb5.0,baz=7.2,slow=6.6,SNR=9.6						
ARMA	**Armidale**	**35.75**	**240**	*e*P	**P**	**12 25 50.1**	**0.0**
RKT	**Rikitea**	**35.76**	**107**	*e*LR	LR	12 34 51.9	
	230nm,31.5s						
CNB	**Canberra Magne**	**39.00**	**234**	*e*P	**P**	**12 26 16.9**	**-0.7**
	31nm,0.9s,mb5.0						
CTA	**Charters Tower**	**39.43**	**258**	P	**P**	**12 26 20.2**	**-1.1**
	1.0nm,0.4s,mb3.9,baz=57,slow=14,SNR=3.4						
CTA				LR	LR	12 40 02.0	
	comp=Z,114nm,20.8s,MS3.7,baz=62,slow=32						
PMG	**Port Moresby**	**40.01**	**275**	LR	LR	12 39 12.2	
	comp=Z,88nm,18.3s,MS3.6,baz=296,slow=30						
STKA	**Stephens Creek**	**44.46**	**241**	*e*P	**P**	**12 27 02.7**	**+0.3**
	14nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**44.46**	**241**	P	**P**	**12 27 03.0**	**+0.6**
	21nm,0.9s,mb4.9,baz=88,slow=8.9,SNR=21						
WB2	**Warramunga Arr**	**50.61**	**257**	*e*P	**P**	**12 27 49.6**	**-0.7**
WRA	**Warramunga Arr**	**50.62**	**257**	P	**P**	**12 27 50.0**	**-0.4**
	2.8nm,0.7s,mb4.3,baz=94,slow=7.1,SNR=39						
WRA				LR	LR	12 48 59.2	
	comp=Z,125nm,19.0s,MS4.0,baz=90,slow=36						
ASAR	**Alice Springs**	**50.79**	**253**	P	**P**	**12 27 51.4**	**-0.2**
	12nm,0.6s,mb5.0,baz=88,slow=8.0,SNR=150						
ASAR				PcP	PcP	12 29 09.5	+1.2
	1.1nm,0.8s,baz=96,slow=4.7,SNR=4.3						
SBA	**Scott Base**	**62.42**	**185**	*e*P	**P**	**12 29 14.5**	**+1.1**
	7.4nm,0.8s,mb4.9						
SBA	**Scott Base**	**62.42**	**185**	*e*P	**P**	**12 29 14.5**	**+1.0**
SBA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
KLBR	**Kellerberrin**	**64.70**	**242**	*e*P	**P**	**12 29 29.8**	**+0.5**
	comp=Z,20nm,0.9s,mb5.2						
NWAO	**Narrogin (SRO)**	**65.05**	**241**	P	**P**	**12 29 31.9**	**+0.4**
	comp=Z,7.9nm,0.8s,mb4.8,baz=137,slow=6.9,SNR=4.2						
MUN	**Mundaring**	**65.99**	**242**	*e*P	**P**	**12 29 38.1**	**+0.5**
MTUM	**Tungsten Hills**	**73.54**	**42**	*e*P	**P**	**12 30 27.3**	**+3.5**
QSPA	**South Pole Qui**	**73.73**	**180**	*e*P	**P**	**12 30 23.9**	**-0.4**
	comp=Z,19nm,1.2s,mb4.9						
NVAR	**Mina Array Bea**	**74.34**	**41**	P	**P**	**12 30 28.1**	**-0.4**
	comp=Z,1.6nm,0.7s,mb4.0,baz=217,slow=7.9,SNR=11						
MOD	**Modoc**	**75.23**	**38**	*e*P	**P**	**12 30 33.5**	**-0.1**
	comp=Z,6.9nm,1.0s,mb4.5						
TUC	**Tucson**	**76.20**	**50**	*e*P	**P**	**12 30 39.3**	**0.0**
	comp=Z,4.6nm,0.9s,mb4.4						
TUC	**Tucson**	**76.20**	**50**	*e*P	**P**	**12 30 39.3**	**-0.1**
TUC				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
WVOR	**Wild Horse Val**	**76.53**	**38**	*e*P	**P**	**12 30 40.5**	**-0.5**
	comp=Z,6.0nm,1.1s,mb4.4						
WVOR	**Wild Horse Val**	**76.53**	**38**	*e*P	**P**	**12 30 40.5**	**-0.5**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
KSRS	**Korea Array**	**77.52**	**315**	P	**P**	**12 30 49.9**	**+3.2**
	comp=Z,2.0nm,1.0s,mb4.0,baz=120,slow=5.6,SNR=8.5						
KSM	**Kuching**	**78.27**	**275**	*e*P	**P**	**12 30 54.0**	**+2.5**
MSU	**Marysvale**	**78.38**	**44**	*e*P	**P**	**12 30 52.2**	**+0.8**
DUG	**Dugway**	**78.85**	**42**	P	**P**	**12 30 53.4**	**-0.6**
	comp=Z,7.5nm,1.2s,mb4.5						
DUG	**Dugway**	**78.85**	**42**	P	**P**	**12 30 53.4**	**-0.6**
DUG				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
HLID	**Hailey**	**79.70**	**39**	*e*P	**P**	**12 30 58.6**	**0.0**
	comp=Z,6.3nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**80.29**	**56**	P	**P**	**12 31 01.4**	**-0.6**
	comp=Z,2.4nm,1.1s,mb4.0,baz=221,slow=9.3,SNR=10.0						
ANMO	**Albuquerque**	**80.62**	**49**	*i* P	**P**	**12 31 04.0**	**+0.2**
PV01	**Paradox Valley**	**80.63**	**46**	P	**P**	**12 31 04.0**	**+0.3**
MCMT	**McKenzie Canyo**	**81.34**	**38**	*e*P	**P**	**12 31 07.6**	**+0.2**
TNA	**Tin City**	**81.70**	**2**	*e*P	**P**	**12 31 09.6**	**+0.8**
	comp=Z,14μm,0.8s						
QLMT	**Earthquake Lak**	**82.19**	**39**	*e*P	**P**	**12 31 12.4**	**+0.6**
CHMT	**Chamberlain Mo**	**82.26**	**36**	P	**P**	**12 31 11.8**	**-0.3**
PDAR	**Pinedale Array**	**82.28**	**41**	P	**P**	**12 31 11.4**	**-0.9**
	comp=Z,2.0nm,1.0s,mb4.0,baz=228,slow=3.8,SNR=8.5						
PDAR				LR	LR	13 03 40.0	
	comp=Z,34nm,19.2s,MS3.7,baz=81,slow=33						
COLA	**College**	**83.08**	**10**	*e*P	**P**	**12 31 15.1**	**-0.9**
DAWY	**Dawson**	**84.06**	**14**	*e*P	**P**	**12 31 21.2**	**+0.1**
BILL	**Bilibino**	**85.55**	**352**	*i* P	**P**	**12 31 28.6**	**+0.2**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
EDM	**Edmonton**	**85.74**	**31**	*e*P	**P**	**12 31 31.2**	**+1.4**
MAW	**Mawson**	**87.25**	**198**	LR	LR	13 11 13.7	
	comp=Z,95nm,19.0s,MS4.2,baz=65,slow=36						
JTS	**JuntasAbangare**	**90.39**	**79**	*e*P	**P**	**12 31 51.8**	**-1.0**
YKA	**Yellowknife Ar**	**90.54**	**23**	P	**P**	**12 31 51.6**	**-0.8**
	comp=Z,1.6nm,1.0s,mb4.3,baz=236,slow=4.4,SNR=16						
SONM	**Songino Array**	**96.20**	**318**	LR	LR	13 17 11.0	
	comp=Z,56nm,18.6s,MS4.1,baz=180,slow=36						
MKAR	**Makanchi Array**	**112.19**	**314**	PKPdf	PKiKP	12 37 25.8	-0.6
MKAR	**Makanchi Array**	**112.19**	**314**	⇑*i*PKIKP	PKiKP	12 37 25.7	-0.6
MKAR	**Makanchi Array**	**112.19**	**314**	PKiKP	PKiKP	12 37 25.8	-0.6
	comp=Z,0.9nm,0.6s,baz=133,slow=1.1,SNR=12						
KURK	**Kurchatov**	**114.49**	**319**	*i* PKIKP	PKiKP	12 37 28.3	-2.3
CLL	**Collm**	**144.83**	**354**	⇓*i*PKPdf	PKPdf	12 38 29.0	+1.4
STHS	**Stebnicka Huta**	**145.19**	**344**	*e*PKP	PKPdf	12 38 28.8	+0.5
MALT	**Malatya**	**145.22**	**315**	*e*PKPbc	PKPbc	12 38 30.2	+1.8
MALT	**Malatya**	**145.22**	**315**	⇓*i*P	PKPbc	12 38 30.5	+2.1
KOLS	**Kolonicke sedl**	**145.35**	**343**	*e*PKP	PKPdf	12 38 28.8	+0.2
BURAR	**Bucovina Array**	**145.59**	**339**	⇓*i*P	PKPdf	12 38 30.2	+1.2
CRVS	**Cervenica-Dubn**	**145.60**	**344**	*e*PKP	PKPdf	12 38 29.9	+0.9
KMBO	**Kilima Mbogo**	**146.02**	**242**	PKPbc	PKPbc	12 38 32.9	+1.2
	comp=Z,5.5nm,0.8s,baz=60,slow=3.8,SNR=15						
KECS	**Kecovo**	**146.24**	**345**	*e*PKP	PKPbc	12 38 31.9	+0.7
VRI	**Vrincioaia**	**146.50**	**336**	⇓*i*P	PKPbc	12 38 32.7	+0.7
VYHS	**Vyhne**	**146.63**	**346**	*e*PKP	PKPbc	12 38 33.1	+0.8
KOLL	**Kolacno**	**146.64**	**347**	*e*PKP	PKPbc	12 38 33.5	+1.1
KHC	**Kasperske Hory**	**146.92**	**353**	⇑*i*PKP2	PKPab	12 38 33.9	-0.6
KHC	**Kasperske Hory**	**146.92**	**353**	*e*PKP	PKPbc	12 38 33.0	-0.1
MODS	**Modra-Piesok**	**147.07**	**348**	*e*PKP	PKPbc	12 38 34.8	+1.2
MLR	**Muntele Rosu**	**147.12**	**336**	⇑*i*P	PKPbc	12 38 34.9	+1.1
GERES	**GERESS Array B**	**147.19**	**353**	PKPbc	PKPbc	12 38 33.9	0.0
	comp=Z,1.5nm,0.8s,baz=29,slow=3.0,SNR=10						
BRTR	**Keskin Array B**	**147.50**	**321**	⇑*i*PKP2	PKPab	12 38 36.0	-1.2
BRTR	**Keskin Array B**	**147.50**	**321**	PKPbc	PKPbc	12 38 35.2	+0.2
	comp=Z,6.7nm,0.9s,baz=83,slow=2.9,SNR=18						
CDF	**Champ du Feu**	**147.99**	**0**	*e*PKP1	PKPbc	12 38 35.7	-0.4
	comp=Z,17nm,1.2s						
HAU	**Haudompre**	**148.38**	**2**	*e*PKP1	PKPbc	12 38 37.7	+0.5
LOR	**Lormes**	**148.98**	**5**	*e*PKP1	PKPbc	12 38 39.3	+0.6
MFF	**Saint Martin d**	**149.12**	**10**	*e*PKP1	PKPbc	12 38 39.2	+0.1
SSF	**Saint Saulge**	**149.16**	**6**	*e*PKP1	PKPbc	12 38 39.8	+0.6
BGF	**Bois d'Agland**	**149.59**	**7**	*e*PKP1	PKPbc	12 38 42.4	+2.1
CABF	**La Chapelle**	**149.77**	**2**	*e*PKP1	PKPbc	12 38 40.6	-0.1
	comp=Z,34nm,1.2s						
LPL	**La Plagne**	**150.88**	**1**	*e*PKP1	PKPbc	12 38 45.0	+1.6
LPG	**La Plagne**	**150.90**	**1**	*e*PKP1	PKPbc	12 38 45.1	+1.7
VIVF	**Saint-Julien-l**	**151.44**	**4**	*e*PKP1	PKPbc	12 38 45.6	+0.9
MBDF	**Montbardon**	**151.67**	**1**	*e*PKP1	PKPbc	12 38 46.4	+1.1
	comp=Z,6.2nm,0.7s						
LASF	**Ste Croix**	**152.15**	**6**	*e*PKP1	PKPbc	12 38 47.3	+0.9
TORD	**Torodi Ar. Bea**	**173.44**	**118**	PKP	PKPdf	12 38 59.5	-1.6
	comp=Z,1.7nm,1.1s,baz=359,slow=2.6,SNR=5.8						
TORD				PKPab	PKPab	12 40 27.2	-2.6
	comp=Z,2.2nm,0.9s,baz=260,slow=4.5,SNR=7.6						

*ISCJB **13** 12:25:54.5±1.1, 2421S±004×694W±02, h87^{km}±15^{km}, mb3.4/2, Error ellipse: s-maj=27.3km s-min=7.0km az=1.6*
*GUC **13** 12:25:56.8±0.8, 2421S×6954W, h80^{km}, MD4.2, ML3.7*
*NEIC **13** 12:25:56.8, 2421S×6954W, h80^{km}, MD4.2(GUC), After GUC.*
*IDC **13** 12:25:57.3±9.8, 24.11S×6935W, h87^{km}±73^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=89.3km s-min=39.3km az=18.0*
ISC 13 12:25:55.7±1.0**, 2420S**±004×**694W**±02**, h79**^{km}±15^{km}**, n13, σ0**^{s}**76**/17**, mb3.4**/2**, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.01**	**245**	⇑*i*P	**Pn**	**12 26 15.5**	**+0.7**
CPN1				*i* S	**Sn**	**12 26 29.6**	**+0.5**
CPN1				AML	AML	12 26 30.8	
	comp=E,4μm,0.2s						
ANCH	**Antofagasta**	**1.06**	**299**	⇑*e*P	**Pn**	**12 26 15.7**	**+0.3**
ANCH				*i* S	**Sn**	**12 26 29.7**	**-0.5**
ANCH	**Antofagasta**	**1.06**	**299**	⇑*e*P	**Pn**	**12 26 15.7**	**+0.3**
ANCH				*i* S	**Sn**	**12 26 29.7**	**-0.5**
ANCH				AML	AML	12 26 31.2	
	comp=N,6μm,0.1s						
CEN1	**Los Morros**	**1.09**	**318**	⇓*i*P	**Pn**	**12 26 15.8**	**0.0**
CEN1				*i* S	**Sn**	**12 26 30.3**	**-0.5**
CEN1				AML	AML	12 26 31.5	
	comp=N,2μm,0.5s						
CDCH	**Caldera**	**3.13**	**204**	*e*P	**Pn**	**12 26 41.1**	**-1.8**
CDCH				*i* S	**Sn**	**12 27 19.5**	**+0.3**
CPCH	**Copiapo**	**3.26**	**195**	⇑*i*P	**Pn**	**12 26 44.6**	**+0.1**
CPCH				*i* S	**Sn**	**12 27 23.2**	**+1.0**
LCO	**Las Campanas**	**4.93**	**193**	*e*P	**Pn**	**12 27 05.9**	**-1.4**
LPAZ	**La Paz**	**7.96**	**9**	P	**Pn**	**12 27 49.8**	**+1.0**
	comp=N,0.6nm,0.3s,baz=193,slow=9.3,SNR=15						
TXAR	**Lajitas Array**	**62.60**	**326**	P	**P**	**12 36 11.9**	**+0.2**
	comp=N,0.2nm,0.6s,mb3.2,baz=155,slow=11,SNR=3.1						
TORD	**Torodi Ar. Bea**	**78.69**	**70**	P	**P**	**12 37 49.7**	**-0.1**
TORD				pP	pP	12 38 12.6	+1.8
TORD	**Torodi Ar. Bea**	**78.69**	**70**	P	**P**	**12 37 49.7**	**-0.1**
	comp=N,0.4nm,0.5s,mb3.5,baz=262,slow=5.0,SNR=4.3						
TORD				pP	pP	12 38 12.6	+1.8
	comp=N,1.6nm,0.8s,baz=252,slow=3.9,SNR=6.4						
WRA	**Warramunga Arr**	**130.40**	**210**	PKP	PKPdf	12 44 58.3	+0.4
	comp=N,0.1nm,0.5s,baz=152,slow=1.6,SNR=4.3						
MKAR	**Makanchi Array**	**148.06**	**38**	PKPbc	PKPbc	12 45 32.8	+0.7
	comp=N,0.3nm,0.6s,baz=302,slow=2.3,SNR=4.2						
MKAR				pPKPbc	pPKPbc	12 45 53.0	-1.2
	comp=N,0.5nm,0.7s,baz=319,slow=1.7,SNR=4.3						

IDC 13 12:37:20.9±6.5**, 726S**×**12511E, h538**^{km}±61^{km}**, mb2.9**/1**, mb1 2.9**/5**, mb1mx2.6**/15**, mbtmp2.7**/5**, Error ellipse: s-maj=153.8km s-min=99.1km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**3.26**	**206**	P	P	12 38 37.4	+0.8
	13nm,0.3s,baz=52,slow=1.8,SNR=20						
BATI				S	S	12 39 38.4	+0.1
	baz=202,slow=19,SNR=2.2						
FITZ	**Fitzroy Crossi**	**10.79**	**177**	P	P	12 39 47.3	+0.5
	0.1nm,0.3s,baz=360,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**15.46**	**146**	P	P	12 40 35.7	+0.4
	0.3nm,0.3s,baz=322,slow=11,SNR=20						
ASAR	**Alice Springs**	**18.37**	**154**	P	P	12 41 03.9	+1.2
	0.2nm,0.3s,baz=331,slow=9.1,SNR=15						
STKA	**Stephens Creek**	**28.92**	**150**	P	P	12 42 34.7	-1.9
	0.7nm,0.5s,baz=337,slow=13,SNR=3.0						

IDC 13 12:39:02.6±6.6**, 1201N**×**14065E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/17**, mbtmp3.7**/3**, Error ellipse: s-maj=267.4km s-min=30.1km az=77.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.36**	**191**	P	P	12 45 34.4	+0.5
	1.7nm,1.0s,baz=13,slow=9.4,SNR=6.7						
ASAR	**Alice Springs**	**36.07**	**191**	P	P	12 46 05.6	-0.5
	0.3nm,0.8s,baz=16,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**59.81**	**317**	P	P	12 49 09.8	0.0
	0.9nm,1.0s,baz=101,slow=8.4,SNR=5.7						

IDC 13 12:53:59.8±1.9**, 830S**×**11763E, h0**^{km}**, mb3.6**/3**, mb1 3.7**/6**, mb1mx3.6**/17**, mbtmp3.6**/6**, ML3.5**/2**, Error ellipse: s-maj=93.4km s-min=19.7km az=51.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.25**	**108**	Pn	Pn	12 55 34.6	+1.3
	5.0nm,0.3s,baz=269,slow=6.6,SNR=7.6						
BATI				Sn	Sn	12 56 41.1	-4.4
	baz=313,slow=19,SNR=2.5						
FITZ	**Fitzroy Crossi**	**12.47**	**142**	Pn	Pn	12 56 59.7	+1.0
	0.1nm,0.3s,baz=318,slow=18,SNR=4.6						
FITZ				Sn	Sn	12 59 11.7	-6.8
	0.1nm,0.3s,baz=184,slow=19,SNR=2.7						
WRA	**Warramunga Arr**	**19.89**	**127**	P	Pn	12 58 31.6	-2.8
	0.2nm,0.3s,baz=302,slow=12,SNR=21						
ASAR	**Alice Springs**	**21.83**	**136**	P	P	12 58 54.1	+0.2
	2.0nm,0.6s,baz=309,slow=9.9,SNR=36						
SONM	**Songino Array**	**56.77**	**351**	P	P	13 03 45.0	-0.5
	0.8nm,1.0s,baz=174,slow=6.6,SNR=5.4						
MKAR	**Makanchi Array**	**63.22**	**334**	P	P	13 04 30.5	+0.6
	0.2nm,0.2s,baz=142,slow=7.3,SNR=3.6						

*ISCJB **13** 13:05:16.2±1.6, 6.1S±0.1×1276E±0.1, h417^{km}±15^{km}, mb3.8/2, Error ellipse: s-maj=26.9km s-min=11.5km az=37.3*
*NEIC **13** 13:05:16.4±2.1, 607S×12759E, h396^{km}±30^{km}, mb4.5/2, Error ellipse: s-maj=33.6km s-min=19.0km az=56.0*
*IDC **13** 13:05:17.8±2.8, 6.18S×12751E, h411^{km}±27^{km}, mb3.5/2, mb1 3.3/5, mb1mx3.0/15, mbtmp3.2/5, Error ellipse: s-maj=40.1km s-min=12.2km az=61.0*
ISC 13 13:05:17.0±1.4**, 62S**±01×**1276E**±01**, h401**^{km}±12^{km}**, n9, σ0**^{s}**77**/13**, mb3.8**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.61**	**224**	P	**Pn**	**13 06 46.5**	**+1.0**
	95nm,0.3s,baz=37,slow=3.4,SNR=162						
BATI				S	**S**	**13 07 56.8**	**-0.7**
	5.7nm,0.3s,baz=315,slow=14,SNR=7.7						
KAKA	**Kakadu**	**8.07**	**144**	*e*P	**P**	**13 07 12.8**	**-0.3**
	50nm,0.6s						
KAKA				*e*S	**S**	**13 08 47.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**12.03**	**189**	*e*P	**P**	**13 07 57.9**	**+0.9**
	4.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.03**	**189**	P	**P**	**13 07 58.1**	**+1.1**
	0.4nm,0.3s,baz=39,slow=6.4,SNR=11						
WRA	**Warramunga Arr**	**15.18**	**155**	P	**P**	**13 08 32.0**	**+0.5**
	0.7nm,0.3s,baz=334,slow=11,SNR=21						
WRA				S	**S**	**13 11 11.0**	**-1.4**
	0.2nm,0.3s,baz=344,slow=18,SNR=17						
WB2	**Warramunga Arr**	**15.19**	**155**	*e*P	**P**	**13 08 31.7**	**+0.2**
ASAR	**Alice Springs**	**18.43**	**161**	P	**P**	**13 09 06.8**	**+0.8**
	0.3nm,0.3s,baz=349,slow=11,SNR=34						
ASAR				S	**S**	**13 12 15.8**	**+0.5**
	0.1nm,0.3s,baz=333,slow=18,SNR=15						
PSI	**Prapat**	**30.00**	**286**	P	**P**	**13 10 49.8**	**-1.1**
	9.3nm,0.9s,mb4.1,baz=130,slow=7.0,SNR=6.7						
MKAR	**Makanchi Array**	**66.24**	**328**	P	**P**	**13 15 23.2**	**-0.2**
	0.5nm,0.5s,mb3.4,baz=123,slow=7.6,SNR=9.5						

*CSEM **13** 13:35:07.9±0.3, 2966N×3508E, h15^{km}, ML2.7, Error ellipse: s-maj=12.6km s-min=3.7km az=52.0*
*SGS **13** 13:35:08.7, 2966N×3507E, h13^{km}*
*HLW **13** 13:35:08.7, 2972N×3507E, h5^{km}, Mb2.6*
*ISCJB **13** 13:35:09.1±1.7, 2964N±009×35.1E±0.1, h26^{km}±8^{km}, Error ellipse: s-maj=23.0km s-min=9.1km az=147.8*
ISC 13 13:35:09.3±1.7**, 2963N**±008×**351E**±01**, h22**^{km}±9^{km}**, n13, σ0**^{s}**81**/15**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		**0.33**	**184**	S	**Sb**	**13 35 21.7**	**+0.2**
HQLS		**0.33**	**184**	P	**Pb**	**13 35 16.3**	**-0.3**
HQLS		**0.33**	**184**	P	**Pb**	**13 35 16.3**	**-0.3**
HBST	**Basata**	**0.52**	**217**	P	**Pb**	**13 35 19.7**	**0.0**
JLOS		**0.96**	**159**	P	**Pb**	**13 35 27.5**	**+0.3**
JLOS		**0.96**	**159**	P	**Pb**	**13 35 27.5**	**+0.3**
JLOS				S	**Sb**	**13 35 39.8**	**+0.3**
HNKL	**Nakhl**	**1.01**	**287**	P	**Pb**	**13 35 27.1**	**-1.0**
RSHS		**1.35**	**191**	P	**Pn**	**13 35 31.6**	**-1.2**
RSHS		**1.35**	**191**	P	**Pn**	**13 35 31.6**	**-1.3**
RSHS				S	**Sn**	**13 35 49.1**	**-1.1**
HKAT	**Jabal Katrina**	**1.47**	**221**	P	**Pn**	**13 35 35.7**	**+1.3**
HRDS	**Abu Rudays**	**1.82**	**240**	P	**Pn**	**13 35 40.8**	**+1.5**
AMAG	**Maghara**	**1.92**	**302**	P	**Pn**	**13 35 40.6**	**-0.1**
SUZ		**1.98**	**277**	P	**Pn**	**13 35 41.5**	**+0.1**

*CSEM **13** 13:36:56.5±0.2, 2962N×35.11E, h15^{km}, ML2.5, Error ellipse: s-maj=6.9km s-min=2.2km az=48.0*
*ISCJB **13** 13:36:57.8±1.6, 2961N±008×35.1E±0.1, h24^{km}±8^{km}, Error ellipse: s-maj=22.5km s-min=7.9km az=146.9*
*SGS **13** 13:36:57.6, 2962N×3504E, h9^{km}*
*HLW **13** 13:36:57.0, 2969N×3507E, h3^{km}, Mb2.5*
ISC 13 13:36:57.9±1.8**, 2961N**±008×**351E**±01**, h19**^{km}±6^{km}**, n15, σ0**^{s}**76**/17**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		**0.31**	**181**	S	**Sg**	**13 37 09.4**	**+0.1**
HQLS		**0.31**	**181**	P	**Pg**	**13 37 04.4**	**-0.2**
HQLS		**0.31**	**181**	P	**Pg**	**13 37 04.4**	**-0.3**
HBST	**Basata**	**0.49**	**217**	P	**Pb**	**13 37 07.9**	**+0.1**
JLOS		**0.95**	**157**	P	**Pb**	**13 37 15.3**	**-0.3**
JLOS		**0.95**	**157**	P	**Pb**	**13 37 15.4**	**-0.2**
JLOS				S	**Sb**	**13 37 28.7**	**+1.0**
HDHB	**Dhahab**	**0.97**	**204**	P	**Pb**	**13 37 16.4**	**+0.4**
HNKL	**Nakhl**	**1.00**	**289**	P	**Pb**	**13 37 15.3**	**-1.2**
RSHS		**1.33**	**190**	P	**Pn**	**13 37 19.7**	**-1.6**
RSHS		**1.33**	**190**	P	**Pn**	**13 37 19.7**	**-1.6**
RSHS				S	**Sn**	**13 37 37.5**	**-0.9**
HRDS	**Abu Rudays**	**1.79**	**240**	P	**Pn**	**13 37 28.9**	**+1.2**
AMAG	**Maghara**	**1.91**	**303**	P	**Pn**	**13 37 29.6**	**+0.2**
ZNM		**1.93**	**264**	P	**Pn**	**13 37 30.1**	**+0.5**
SUZ		**1.96**	**277**	P	**Pn**	**13 37 30.1**	**+0.1**
ZAF		**2.22**	**262**	P	**Pn**	**13 37 34.2**	**+0.6**

IDC 13 13:50:47.6±0.9**, 4573N**×**15393E, h0**^{km}**, mb3.7**/7**, mb1 4.0**/8**, mb1mx3.7**/22**, mbtmp3.8**/8**, ML2.9**/1**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.3**/33**, Error ellipse: s-maj=29.5km s-min=21.8km az=111.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**8.21**	**263**	Pn	Pn	13 52 47.7	-0.2
	0.2nm,0.3s,baz=80,slow=18,SNR=2.0						
ASAJ				LR	LR	13 56 17.0	
	comp=Z,35nm,19.1s,baz=316,slow=40						
MKAR	**Makanchi Array**	**47.92**	**299**	P	P	13 59 27.9	+0.4
	0.2nm,0.3s,baz=70,slow=6.3,SNR=2.5						
YKA	**Yellowknife Ar**	**51.40**	**36**	P	P	13 59 54.0	+0.3
	0.2nm,0.6s,baz=297,slow=7.1,SNR=3.8						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES	**ARCESS Array B**	**59.00**	**341**	P	P	14 00 48.3	-0.2
	2.6nm,0.8s,baz=30,slow=7.3,SNR=3.3						
FINES	**FINESS Array B**	**65.20**	**335**	P	P	14 01 29.9	-0.4
	1.3nm,0.9s,baz=27,slow=9.0,SNR=4.1						
WRA	**Warramunga Arr**	**67.74**	**200**	P	P	14 01 46.0	-0.9
	0.3nm,0.8s,baz=16,slow=6.8,SNR=5.6						
ASAR	**Alice Springs**	**71.43**	**199**	P	P	14 02 10.4	+0.8
	1.0nm,0.7s,baz=14,slow=5.2,SNR=15						
TXAR	**Lajitas Array**	**77.49**	**61**	P	P	14 02 45.0	0.0
	0.2nm,0.5s,baz=330,slow=5.2,SNR=3.6						

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*IDC **13** 14:12:02.4±0.8, 4575N×15430E, h0^{km}, mb3.7/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.7/9, ML3.4/1, Error ellipse: s-maj=26.3km s-min=20.5km az=148.0*

*ISCJB **13** 14:12:03.2±5.1, 458N±02×1540E±0.1, h17^{km}±36^{km}, mb3.6/9, Error ellipse: s-maj=26.1km s-min=14.2km az=166.3*

*NEIC **13** 14:12:03.9±0.7, 4579N×15426E, h10^{km}, mb3.8/1, Error ellipse: s-maj=19.9km s-min=17.1km az=162.0*

*MOS **13** 14:12:07.5±1.5, 4577N×15386E, h50^{km}, mb4.1/4, Error ellipse: s-maj=26.8km s-min=22.0km az=174.6*

ISC 13 14:12:06.3±5.2**, 458N**±02×**1540E**±01**, h24**^{km}±37^{km}**, n18,** σ**1^{s}09**/19**, mb3.6**/9**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.34**	**265**	⇓ *i* PN	**Pn**	**14 13 09.8**	**-0.8**
KUR				*i* S	**Sn**	**14 13 59.0**	**-1.4**
KUR				pmax	pmax		
	comp=Z,60nm,0.5s						
KUR				smax			
	comp=N,180nm,0.6s						
KUR				smax			
	comp=E,80nm,0.5s						
ASAJ	**Asahikawa**	**8.25**	**262**	PN	**Pn**	**14 14 05.1**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.25**	**262**	Pn	**Pn**	**14 14 05.0**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=90,slow=10,SNR=5.4						
SONM	**Songino Array**	**32.24**	**291**	P	**P**	**14 18 34.9**	**+2.5**
	comp=Z,0.2nm,0.5s,mb3.2,baz=60,slow=8.5,SNR=2.3						
MKAR	**Makanchi Array**	**47.93**	**299**	P	**P**	**14 20 43.0**	**+0.6**
MKAR	**Makanchi Array**	**47.93**	**299**	P	**P**	**14 20 43.0**	**+0.6**
	comp=Z,0.2nm,0.3s,mb3.6,baz=59,slow=6.9,SNR=2.8						
YKA	**Yellowknife Ar**	**51.34**	**36**	P	**P**	**14 21 07.4**	**-0.7**
YKA	**Yellowknife Ar**	**51.34**	**36**	P	**P**	**14 21 07.4**	**-0.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=298,slow=7.2,SNR=6.0						
CHKZ	**Chkalovo**	**51.52**	**311**	P	**P**	**14 21 09.2**	**-0.4**
	comp=Z,0.7nm,0.6s,mb3.8						
CHKZ	**Chkalovo**	**51.52**	**311**	P	**P**	**14 21 09.2**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**64.83**	**54**	P	**P**	**14 22 41.6**	**-1.3**
	comp=Z,0.3nm,0.7s,mb3.4,baz=275,slow=5.0,SNR=3.5						
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**14 22 46.2**	**+1.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**14 22 46.2**	**+1.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=27,slow=9.2,SNR=4.2						
WRA	**Warramunga Arr**	**67.80**	**200**	P	**P**	**14 23 01.8**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	**Warramunga Arr**	**67.80**	**200**	P	**P**	**14 23 01.8**	**-0.3**
	comp=Z,0.9nm,0.9s,mb3.8,baz=18,slow=6.6,SNR=4.3						
ASAR	**Alice Springs**	**71.49**	**199**	P	**P**	**14 23 25.9**	**+1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=14,slow=4.9,SNR=7.6						
TXAR	**Lajitas Array**	**77.44**	**61**	P	**P**	**14 23 58.7**	**-0.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**77.44**	**61**	P	**P**	**14 23 58.7**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.8,baz=295,slow=4.0,SNR=11						

IDC 13 14:25:48.6±1.6**, 841S**×**11758E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/7**, mb1mx3.8**/17**, mbtmp3.8**/7**, ML3.6**/3**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.6**/30**, Error ellipse: s-maj=83.2km s-min=17.6km az=53.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**6.26**	**107**	Pn	Pn	14 27 23.5	+1.1
	3.5nm,0.3s,baz=284,slow=6.6,SNR=6.4						
BATI				LR	LR	14 29 48.5	
	comp=Z,67nm,21.8s,baz=325,slow=38						
FITZ	**Fitzroy Crossi**	**12.42**	**142**	Pn	Pn	14 28 47.3	+0.5
	0.1nm,0.3s,baz=331,slow=19,SNR=2.6						
FITZ				Sn	Sn	14 31 04.8	-1.2
	0.1nm,0.3s,baz=180,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**19.86**	**127**	P	Pn	14 30 19.9	-3.1
	0.2nm,0.3s,baz=304,slow=13,SNR=16						
WRA				LR	LR	14 38 54.2	
	comp=Z,37nm,20.3s,baz=205,slow=40						
ASAR	**Alice Springs**	**21.79**	**136**	P	P	14 30 42.9	+0.6
	2.6nm,0.7s,baz=310,slow=9.9,SNR=50						
STKA	**Stephens Creek**	**32.30**	**140**	P	P	14 32 19.8	+0.4
	0.8nm,0.4s,baz=310,slow=11,SNR=4.9						
SONM	**Songino Array**	**56.87**	**351**	P	P	14 35 35.0	0.0
	0.6nm,0.8s,baz=174,slow=8.0,SNR=5.3						
MKAR	**Makanchi Array**	**63.30**	**334**	P	P	14 36 19.4	+0.2
	0.3nm,0.5s,baz=121,slow=6.9,SNR=2.8						

GUC 13 14:26:43.9±0.5**, 2799S**×**6674W, h180**^{km}**, ML5.0, 2C, Catamarca Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**3.27**	**280**	*e*P	Pn	14 27 36.5	+0.7
CPCH				*i* S	Sn	14 28 16.4	+0.3
CPCH				AML	AML	14 28 22.1	
	comp=E,2μm,0.1s						
VACH	**Vallenar**	**3.59**	**260**	*i* S	Sn	14 28 24.3	+0.8
VACH				AML	AML	14 28 27.2	
	comp=N,837nm,0.2s						
CDCH	**Caldera**	**3.75**	**283**	*i* P	Pn	14 27 42.6	+0.9
CDCH				*i* S	Sn	14 28 25.4	-1.5
TLL	**Tololo Astrono**	**4.17**	**238**	⇑*e*P	Pn	14 27 48.7	+1.6
CPN1	**Cerro Paranal**	**4.70**	**315**	*e*P	Pn	14 27 55.9	+1.9
CEN1	**Los Morros**	**5.54**	**325**	⇑*i*P	Pn	14 28 05.4	+0.5

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*NSSC **13** 14:36:12.2, 3564N×3931E, h20^{km}±20^{km}*

*CSEM **13** 14:36:15.3±0.1, 3570N×3997E, h2^{km}, Mc2.2, Error ellipse: s-maj=3.1km s-min=1.5km az=156.0*

*DDA **13** 14:36:18.9, 3584N×4001E, h10^{km}, Md3.4*

ISC 13 14:36:13.5±1.6**, 3554N**±008×**3958E**±006**, h17**^{km}±5^{km}**, n11,** σ**1^{s}37**/21**, 5D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSHR	**Al Beshri**	**0.23**	**57**	⇓P	**Pg**	**14 36 18.4**	**-0.4**
BSHR				⇑S	**Sg**	**14 36 23.9**	**+1.4**
BSHR	**Al Beshri**	**0.23**	**57**	⇓*i*P	**Pg**	**14 36 18.4**	**-0.4**
BSHR				⇑*i*S	**Sg**	**14 36 23.9**	**+1.4**
KSRV	**Kasrt alli**	**0.57**	**305**	⇓*i*P	**Pg**	**14 36 21.5**	**-3.2**
SFNV	**Sufian**	**0.98**	**26**	⇑P	**Pb**	**14 36 30.6**	**-1.3**
SFNV				⇑S	**Sb**	**14 36 44.1**	**-0.4**
SFNV	**Sufian**	**0.98**	**26**	⇑*i*P	**Pb**	**14 36 30.6**	**-1.3**
SFNV				⇑*i*S	**Sb**	**14 36 44.1**	**-0.4**
KBSD	**Kabsdagh**	**1.65**	**28**	⇓P	**Pn**	**14 36 41.7**	**0.0**
KBSD				⇑S	**Sn**	**14 37 02.6**	**+0.1**
KBSD	**Kabsdagh**	**1.65**	**28**	⇓*i*P	**Pn**	**14 36 41.7**	**0.0**
KBSD				⇑*i*S	**Sn**	**14 37 02.6**	**+0.1**
MARD	**Mardin**	**2.02**	**28**	*i* P	**Pn**	**14 36 47.2**	**+0.4**
MARD				*i* S	**Sn**	**14 37 14.3**	**+2.8**
GZT	**Gaziantep**	**2.43**	**319**	*i* P	**Pg**	**14 37 00.2**	**+0.1**
GZT				*i* S	**Sg**	**14 37 34.3**	**+2.7**
ELZG	**Elazig**	**2.99**	**351**	*i* P	**Pn**	**14 37 02.7**	**+2.7**
ELZG				*i* S	**Sg**	**14 37 48.1**	**-1.3**
HAKT	**HAKKARI**	**3.89**	**58**	*i* P	**Pn**	**14 37 12.6**	**+0.1**
HAKT				*i* S	**Sn**	**14 37 56.0**	**-1.7**

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*ISCJB **13** 14:50:46.0±2.4, 552S±004×7707W±005, h19^{km}±17^{km}, mb4.8/41, MS4.1/20, Error ellipse: s-maj=9.2km s-min=5.9km az=150.8*

*IDC **13** 14:50:48.3±4.3, 543S×7698W, h20^{km}±28^{km}, mb4.4/17, mb1 4.5/23, mb1mx4.5/29, mbtmp4.4/23, ML4.5/6, MS3.9/18, Ms1 3.9/18, ms1mx3.8/39, Error ellipse: s-maj=16.8km s-min=11.1km az=74.0*

*MOS **13** 14:50:48.4±0.8, 553S×77.12W, h33^{km}, mb5.0/8, Error ellipse: s-maj=18.3km s-min=9.1km az=112.8*

*NEIC **13** 14:50:50.3±0.7, 553S×7706W, h37^{km}±6^{km}, mb5.0/24, ML5.0(LIM), Error ellipse: s-maj=7.2km s-min=4.3km az=67.0*

NEIC Felt [II] at Lamas.

*BJI **13** 14:50:51.2, 550S×77.10W, h37^{km}, mB5.2, Ms5.4, Msz4.9*

ISC 13 14:50:49.7±2.4**, 549S**±004×**7697W**±005**, h29**^{km}±17^{km}**, h34**^{km}±.1^{km}**:pP-P, n321,** σ**0^{s}54**/293**, mb4.8**/41**, MS4.1**/20**, 95C-84D, Northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.07**	**223**	Pn	**Pn**	**14 51 26.1**	**+3.6**
	153nm,0.3s,baz=24,slow=14,SNR=305						
ATAH				Sn	**Sn**	**14 51 52.2**	**+5.0**
	189nm,0.3s,baz=352,slow=12,SNR=6.7						
ATAH				LR	LR	14 52 32.8	
	comp=Z,5μm,20.5s,baz=50,slow=47						
NNA	**Nana**	**6.46**	**179**	Pn	**Pn**	**14 52 23.4**	**+0.5**
	2μm,0.4s,SNR=21						
NNA	**Nana**	**6.46**	**179**	*e*Pn	**Pn**	**14 52 22.9**	**0.0**
	204nm,0.6s						
NNA				*e*Sn	**Sn**	**14 53 34.9**	**-0.8**
NNA	**Nana**	**6.46**	**179**	Pn	**Pn**	**14 52 23.0**	**+0.1**
	49nm,0.3s,baz=334,slow=13,SNR=98						
NNA				Sn	**Sn**	**14 53 34.4**	**-1.2**
	57nm,0.3s,baz=97,slow=20,SNR=6.9						
NNA				Lg		14 54 15.1	
	12nm,0.3s,baz=199,slow=18,SNR=2.8						
ROSC	**El Rosal**	**10.61**	**14**	Pn	**Pn**	**14 53 22.5**	**+2.6**
	2.0nm,0.3s,baz=141,slow=14,SNR=2.5						
ROSC				Lg		14 56 23.2	
	2.7nm,0.3s,baz=90,slow=20,SNR=2.8						
LPAZ	**La Paz**	**13.79**	**142**	Pn	**Pn**	**14 54 03.0**	**-0.4**
	0.6nm,0.3s,baz=331,slow=12,SNR=11						
SDV	**Santo Domingo**	**15.61**	**24**	*e*Pn	**Pn**	**14 54 28.4**	**+0.5**
	22nm,0.8s						
SDV	**Santo Domingo**	**15.61**	**24**	Pn	**Pn**	**14 54 26.6**	**-1.2**
	1.3nm,0.3s,baz=208,slow=8.3,SNR=6.5						
SDV				Lg		14 59 02.6	
	0.4nm,0.3s,baz=270,slow=20,SNR=3.0						
JTS	**JuntasAbangare**	**17.58**	**333**	*e*P	**Pn**	**14 54 52.7**	**0.0**
	28nm,1.1s						
JTS	**JuntasAbangare**	**17.58**	**333**	*c i*P	**Pn**	**14 54 52.7**	**0.0**
JTS	**JuntasAbangare**	**17.58**	**333**	P	**Pn**	**14 54 51.7**	**-1.0**
	0.6nm,0.3s,baz=163,slow=10,SNR=7.2						
JTS				LR	LR	15 00 56.8	
	comp=Z,326nm,19.8s,baz=57,slow=35						
SIV	**San Ignacio**	**18.77**	**125**	P	**Pn**	**14 55 05.6**	**-1.7**
	0.9nm,0.3s,baz=310,slow=12,SNR=16						
SIV				Lg		15 00 46.9	
	baz=196,slow=20,SNR=2.4						
PCRV	**Puerto La Cruz**	**19.83**	**38**	P	**Pn**	**14 55 20.7**	**+0.7**
	6.1nm,0.3s,baz=200,slow=12,SNR=3.4						
SDDR	**Presa de Saban**	**24.95**	**13**	*e*P	**P**	**14 56 08.6**	**-2.1**
SJG	**San Juan**	**25.77**	**24**	P	**P**	**14 56 18.5**	**+0.4**
	8.7nm,0.3s,mb4.7,baz=234,slow=3.1,SNR=5.9						
CFAA	**Coronel Fontan**	**27.24**	**164**	P	**P**	**14 56 31.4**	**+0.1**
	0.5nm,0.8s,baz=331,slow=8.7,SNR=8.1						
CFAA				LR	LR	15 07 16.8	
	comp=Z,39nm,18.0s,baz=347,slow=36						
TEIG	**Tepich**	**27.87**	**337**	P	**P**	**14 56 37.1**	**0.0**
	16nm,0.7s,mb4.8,baz=151,slow=10,SNR=7.0						
TEIG				LR	LR	15 07 20.3	
	comp=Z,252nm,21.1s,MS3.8,baz=24,slow=36						
CMIG	**Matias Romero**	**28.58**	**322**	P	**P**	**14 56 42.5**	**-0.9**
	2.6nm,0.4s,mb4.3,baz=103,slow=10,SNR=4.6						
CMIG				LR	LR	15 06 35.2	
	comp=Z,223nm,19.8s,MS3.8,baz=6.7,slow=33						
LRAL	**Lakeview Retre**	**39.48**	**347**	*e*P	**P**	**14 58 17.1**	**-0.6**
	26nm,0.9s,mb5.0						
SWET	**Sewanee**	**41.36**	**349**	*e*P	**P**	**14 58 31.5**	**-1.7**
TKL	**Tuckaleechee C**	**41.42**	**352**	P	**P**	**14 58 32.1**	**-1.6**
	1.3nm,0.4s,mb4.0,baz=96,slow=9.2,SNR=3.9						
TKL				LR	LR	15 16 59.3	
	comp=Z,160nm,19.0s,MS3.9,baz=70,slow=38						
PLAL	**Pickwick Lake**	**41.59**	**346**	*e*P	**P**	**14 58 33.2**	**-1.9**
	20nm,1.1s,mb4.7						
PLAL				*e*	pP	14 58 42.8	-1.1
TXAR	**Lajitas Array**	**43.09**	**325**	P	**P**	**14 58 47.0**	**-0.4**
TXAR						15 00 37.5	
TXAR	**Lajitas Array**	**43.09**	**325**	P	**P**	**14 58 47.0**	**-0.5**
	1.7nm,0.6s,mb3.9,baz=115,slow=11,SNR=6.6						
TXAR				PcP	PcP	15 00 37.5	+0.3
	1.3nm,0.8s,baz=133,slow=3.7,SNR=3.5						
TXAR				LR	LR	15 15 30.6	
	comp=Z,57nm,21.7s,MS3.4,baz=20,slow=34						
LPIG	**La Paz**	**43.83**	**314**	LR	LR	15 13 41.5	
	comp=Z,126nm,21.4s,MS3.8,baz=292,slow=31						
WMOK	**Wichita Mounta**	**44.99**	**334**	*e*P	**P**	**14 59 02.0**	**-0.6**
	19nm,1.0s,mb4.9						
WMOK	**Wichita Mounta**	**44.99**	**334**	*e*P	**P**	**14 59 02.0**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
MVL	**Millersville**	**45.27**	**1**	*e*P	**P**	**14 59 05.3**	**+0.7**
MVL				*e*	pP	14 59 15.0	+1.5
MNTX	**Cornudas Mount**	**45.84**	**326**	*e*P	**P**	**14 59 08.3**	**-1.1**
	comp=Z,9.2nm,0.9s,mb4.7						
AMTX	**Amarillo**	**46.42**	**332**	*e*P	**P**	**14 59 13.6**	**-0.3**
	comp=Z,23nm,0.8s,mb5.2						
ALLY	**Alegheny Colle**	**47.00**	**357**	*e*P	**P**	**14 59 17.8**	**-0.5**
BINY	**Binghamton**	**47.47**	**1**	*e*P	**P**	**14 59 22.8**	**+0.9**
	comp=Z,28nm,1.1s,mb5.1						
319A	**Douglas**	**47.91**	**322**	⇓P	**P**	**14 59 25.9**	**+0.4**
	baz=48						
KSU1	**Kansas State U**	**47.95**	**339**	*e*P	**P**	**14 59 25.0**	**-0.7**
	comp=Z,15nm,0.8s,mb5.1						
318A	**Bisbee**	**48.39**	**321**	⇓P	**P**	**14 59 29.3**	**+0.1**
	baz=48						
218A	**Dragoon**	**48.79**	**322**	⇑P	**P**	**14 59 32.7**	**+0.3**
	baz=49						
ANMO	**Albuquerque**	**48.88**	**328**	*e*P	**P**	**14 59 33.3**	**+0.3**
	comp=Z,22nm,0.9s,mb5.2						
ANMO	**Albuquerque**	**48.88**	**328**	*c i*P	**P**	**14 59 33.5**	**+0.5**
ANMO	**Albuquerque**	**48.88**	**328**	P	**P**	**14 59 33.4**	**+0.4**
	comp=Z,17nm,0.9s,mb5.1,baz=147,slow=9.2,SNR=27						
ANMO				LR	LR	15 21 52.3	
	comp=Z,66nm,20.3s,MS3.6,baz=113,slow=38						
217A	**Green Valley**	**49.13**	**321**	⇑P	**P**	**14 59 35.2**	**+0.3**
	baz=49						
TUC	**Tucson**	**49.47**	**322**	*e*P	**P**	**14 59 36.9**	**-0.6**
	comp=Z,4.4nm,0.8s,mb4.5						
TUC	**Tucson**	**49.47**	**322**	*e*P	**P**	**14 59 36.9**	**-0.7**
TUC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
USHA	**Ushuaia**	**49.68**	**174**	P	**P**	**14 59 39.4**	**+0.6**
	comp=Z,7.8nm,1.0s,mb4.7,baz=321,slow=6.5,SNR=3.2						
216A	**Three Points,**	**49.68**	**321**	⇑P	**P**	**14 59 39.4**	**+0.2**
	baz=50						
FRNY	**Flat Rock**	**50.19**	**3**	*e*P	**P**	**14 59 42.8**	**+0.1**
SDCO	**Great Sand Dun**	**50.55**	**331**	*e*P	**P**	**14 59 46.1**	**+0.4**
	comp=Z,26nm,0.9s,mb5.2						
Z14A	**Wintersburg**	**51.52**	**321**	⇓P	**P**	**14 59 53.0**	**-0.1**
	baz=52						
MVCO	**Mesa Verde**	**51.67**	**328**	⇑P	**P**	**14 59 54.3**	**+0.2**
	baz=52						
X15A	**Humboldt**	**51.84**	**323**	⇑P	**P**	**14 59 55.5**	**+0.1**
	baz=52						
Y14A	**Wickenburg**	**51.94**	**322**	⇓P	**P**	**14 59 56.2**	**0.0**
	baz=52						
ECSD	**EROS,Sioux Fal**	**52.11**	**342**	*e*P	**P**	**14 59 55.6**	**-1.6**
	comp=Z,20nm,1.1s,mb5.0						
X14A	**Yava**	**52.23**	**322**	⇓P	**P**	**14 59 58.5**	**+0.2**
	baz=52						
PV01	**Paradox Valley**	**52.40**	**329**	*e*P	**P**	**14 59 59.8**	**+0.4**
GLA	**Glamis**	**52.52**	**319**	⇑P	**P**	**15 00 00.5**	**0.0**
	baz=53						
Y12C	**Blythe**	**52.77**	**320**	⇑P	**P**	**15 00 02.5**	**+0.2**
	baz=53						
PV10	**Paradox Valley**	**52.82**	**328**	*e*P	**P**	**15 00 02.1**	**-0.5**
W14A	**Seligman**	**52.85**	**323**	⇑P	**P**	**15 00 03.1**	**+0.2**
	baz=53						
PDMCI	**Parker Dam,Lak**	**52.89**	**321**	⇑P	**P**	**15 00 02.8**	**-0.4**
	baz=53						
X13A	**Yucca**	**52.89**	**322**	⇑P	**P**	**15 00 03.2**	**0.0**
	baz=53						
W13A	**Hualapai Mount**	**53.26**	**322**	⇓P	**P**	**15 00 06.0**	**+0.2**
	baz=53						
BC3	**Big Chuckw Mtn**	**53.31**	**320**	⇓P	**P**	**15 00 06.6**	**+0.3**
	baz=54,SNR=5.3						
IRM	**Iron Mountain**	**53.43**	**320**	P	**P**	**15 00 07.6**	**+0.4**
	baz=54,SNR=12						
T15A	**Red Dirt Ranch**	**53.67**	**325**	⇓P	**P**	**15 00 09.3**	**+0.4**
	baz=54						
U14A	**Mt Trumbull**	**53.72**	**324**	⇓P	**P**	**15 00 09.4**	**+0.2**
	baz=54						
BELC	**Belle Mtn.**	**53.88**	**320**	⇑P	**P**	**15 00 10.7**	**+0.3**
	baz=54						
PFO	**Pinyon Flat Ob**	**53.93**	**319**	P	**P**	**15 00 10.7**	**-0.1**
	comp=Z,3.5nm,0.7s,mb4.4,baz=68,slow=4.3,SNR=5.0						
PFO				LR	LR	15 18 60.0	
	comp=Z,106nm,21.8s,MS3.9,baz=271,slow=31						
PFO	**Pinyon Flat Ob**	**53.93**	**319**	⇑P	**P**	**15 00 11.2**	**+0.4**
	baz=54						
T14A	**Hurricane**	**54.11**	**324**	⇓P	**P**	**15 00 12.4**	**+0.4**
	baz=54						
GMRC	**Granite Mounta**	**54.15**	**321**	⇓P	**P**	**15 00 12.9**	**+0.5**
	baz=54,SNR=5.7						
U13A	**Pakoon Wash**	**54.19**	**323**	⇑P	**P**	**15 00 13.0**	**+0.4**
	baz=54						
V12A	**Nelson**	**54.26**	**322**	⇑P	**P**	**15 00 13.4**	**+0.2**
	baz=54						
CCUT	**Cedar City**	**54.60**	**325**	*e*P	**P**	**15 00 16.2**	**+0.5**
MSU	**Marysvale**	**54.61**	**326**	*e*P	**P**	**15 00 15.9**	**+0.3**
HEC	**Hector,Ludlow**	**54.61**	**320**	⇓P	**P**	**15 00 16.3**	**+0.6**
	baz=55,SNR=11						
TUQ	**Turquoise Mtn.**	**54.74**	**321**	P	**P**	**15 00 17.2**	**+0.5**
	baz=55,SNR=8.3						
S13A	**Holt Ranch, En**	**54.91**	**324**	⇓P	**P**	**15 00 18.5**	**+0.6**
	baz=55						
BFSC	**Mount Baldy St**	**55.10**	**319**	⇑P	**P**	**15 00 19.7**	**+0.3**
	baz=55						
GSC	**Goldstone**	**55.21**	**320**	P	**P**	**15 00 20.7**	**+0.6**
	baz=55,SNR=8.7						
SHOC	**Shoshone**	**55.26**	**321**	⇓P	**P**	**15 00 20.5**	**+0.1**
	baz=55						
DAU	**Daniels Canyon**	**55.48**	**329**	*e*P	**P**	**15 00 22.3**	**+0.3**
T11A	**Corn Creek, Al**	**55.49**	**323**	⇑P	**P**	**15 00 22.2**	**+0.1**
	baz=56						
U10A	**Ash Meadows, A**	**55.62**	**322**	⇑P	**P**	**15 00 23.5**	**+0.5**
	baz=56						
EDW2	**Edwards Air Fo**	**55.71**	**319**	P	**P**	**15 00 23.8**	**+0.1**
	baz=56,SNR=6.8						
R12A	**Pony Springs,**	**55.85**	**325**	⇑P	**P**	**15 00 25.2**	**+0.5**
	baz=56						
LRMC	**Laurel Mountai**	**55.88**	**320**	P	**P**	**15 00 25.3**	**+0.3**
	baz=56,SNR=6.1						
TPNV	**Topopah Spring**	**55.91**	**322**	P	**P**	**15 00 25.8**	**+0.7**
	baz=56,SNR=6.8						
Q13A	**Wheeler Ranch,**	**55.95**	**325**	⇓P	**P**	**15 00 25.9**	**+0.5**
	baz=56						
FURC	**Furnace Creek,**	**55.98**	**321**	⇓P	**P**	**15 00 25.5**	**-0.1**
	baz=56						
S11A	**Rachel**	**56.07**	**323**	⇑P	**P**	**15 00 26.6**	**+0.4**
	baz=56						
AGMN	**Agassiz Refuge**	**56.07**	**345**	*e*P	**P**	**15 00 24.8**	**-1.2**
	comp=Z,19nm,0.8s,mb5.2						
MPMC	**Manual Prospec**	**56.12**	**321**	⇑P	**P**	**15 00 26.3**	**-0.3**
	baz=56						
DUG	**Dugway**	**56.15**	**327**	*e*P	**P**	**15 00 27.0**	**+0.2**
	comp=Z,18nm,1.3s,mb4.9						
DUG	**Dugway**	**56.15**	**327**	*e*P	**P**	**15 00 27.0**	**+0.2**
DUG				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
DUG	**Dugway**	**56.15**	**327**	⇑P	**P**	**15 00 27.2**	**+0.4**
	baz=56,SNR=6.2						
P13A	**Bates Ranch, G**	**56.29**	**326**	⇓P	**P**	**15 00 28.4**	**+0.6**
	baz=56						
PDAR	**Pinedale Array**	**56.40**	**332**	P	**P**	**15 00 27.8**	**-0.7**
	comp=Z,3.1nm,0.9s,mb4.3,baz=134,slow=8.5,SNR=22						
PDAR				PcP	PcP	15 01 24.4	-1.0
	comp=Z,1.8nm,0.8s,baz=130,slow=4.0,SNR=4.7						
PDAR				LR	LR	15 25 24.0	
	comp=Z,75nm,20.3s,MS3.8,baz=125,slow=37						
R11A	**Troy Canyon, C**	**56.44**	**324**	⇑P	**P**	**15 00 29.1**	**+0.3**
	baz=57						
Q12A	**Willow Creek R**	**56.47**	**325**	⇑P	**P**	**15 00 29.4**	**+0.4**
	baz=57						
N15A	**Stansbury Isla**	**56.49**	**328**	⇑P	**P**	**15 00 29.1**	**-0.1**
	baz=57						
ISA	**Isabella**	**56.50**	**320**	P	**P**	**15 00 29.7**	**+0.4**
	baz=57,SNR=5.7						
HWUT	**Hardware Ranch**	**56.52**	**329**	*e*P	**P**	**15 00 28.8**	**-0.5**
	comp=Z,7.8nm,0.8s,mb4.8						
GRAC	**Grapevine Rang**	**56.64**	**322**	⇓P	**P**	**15 00 30.6**	**+0.3**
	baz=57						
CWC	**Cottonwood Cre**	**56.73**	**321**	P	**P**	**15 00 31.3**	**+0.4**
	baz=57,SNR=5.9						
S10A	**Tonopah Range,**	**56.76**	**323**	⇑P	**P**	**15 00 31.6**	**+0.4**
	baz=57						
SPUT	**South Promonto**	**56.76**	**328**	*e*P	**P**	**15 00 30.7**	**-0.4**
SPUT				*e*	pP	15 00 40.6	+0.6
P12A	**McGill**	**56.80**	**325**	⇓P	**P**	**15 00 31.9**	**+0.4**
	baz=57						
Q11A	**Duckwater**	**56.81**	**324**	⇓P	**P**	**15 00 31.9**	**+0.4**
	baz=57						
N14A	**Grayback Hills**	**56.82**	**328**	⇑P	**P**	**15 00 31.5**	**0.0**
	baz=57						
R10A	**Warm Springs**	**56.82**	**323**	⇓P	**P**	**15 00 32.2**	**+0.6**
	baz=57						
M15A	**Larsen Ranch,**	**56.87**	**329**	⇓P	**P**	**15 00 31.5**	**-0.3**
	baz=57						
PKM	**Peak Mountain**	**56.92**	**318**	⇑P	**P**	**15 00 32.1**	**-0.2**
	baz=57						
S09A	**Goldfield**	**57.01**	**322**	⇑P	**P**	**15 00 32.9**	**0.0**
	baz=57						
Q10A	**Clear Creek Ra**	**57.23**	**324**	⇓P	**P**	**15 00 35.0**	**+0.5**
	baz=57						
R09A	**Tonopah**	**57.25**	**323**	⇑P	**P**	**15 00 34.5**	**-0.1**
	baz=57						
O12A	**Currie**	**57.26**	**326**	⇓P	**P**	**15 00 35.0**	**+0.3**
	baz=57						
SMMC	**Simmler**	**57.28**	**318**	⇓P	**P**	**15 00 35.2**	**+0.3**
	baz=57						
M14A	**Sheep Mountain**	**57.37**	**328**	⇑P	**P**	**15 00 35.4**	**0.0**
	baz=58						
S08C	**White Mtn Res**	**57.45**	**322**	⇓P	**P**	**15 00 36.3**	**+0.3**
	baz=58						
HELL	**Mitchell Peak,**	**57.47**	**320**	⇑P	**P**	**15 00 35.9**	**-0.3**
	baz=58						
MTUM	**Tungsten Hills**	**57.60**	**321**	*e*P	**P**	**15 00 37.3**	**+0.2**
O11A	**Cowboy Ranch,**	**57.67**	**325**	⇓P	**P**	**15 00 37.5**	**-0.1**
	baz=58						
M13A	**Montello**	**57.70**	**327**	⇑P	**P**	**15 00 37.7**	**0.0**
	baz=58						
P10A	**Eureka**	**57.79**	**325**	⇑P	**P**	**15 00 38.9**	**+0.5**
	baz=58						
ULM	**Lac du Bonnet**	**57.88**	**346**	P	**P**	**15 00 37.5**	**-1.2**
	comp=Z,11nm,0.8s,mb4.9,baz=155,slow=8.2,SNR=25						
ULM				LR	LR	15 25 54.1	
	comp=Z,61nm,18.1s,MS3.8,baz=134,slow=36						
R08A	**Mina**	**57.94**	**322**	⇑P	**P**	**15 00 39.6**	**+0.2**
	baz=58						
K14A	**Jones Ranch, D**	**58.02**	**329**	⇑P	**P**	**15 00 39.5**	**-0.5**
	baz=58						
KCC	**Kaiser Creek**	**58.05**	**321**	⇑P	**P**	**15 00 40.2**	**-0.1**
	baz=58						
L13A	**Double Diamond**	**58.10**	**328**	⇓P	**P**	**15 00 40.4**	**-0.1**
	baz=58						
NVAR	**Mina Array Bea**	**58.11**	**322**	P	**P**	**15 00 40.9**	**+0.2**
	comp=Z,6.2nm,0.9s,mb4.6,baz=133,slow=7.8,SNR=38						
M12A	**Wells**	**58.14**	**327**	⇑P	**P**	**15 00 40.5**	**-0.3**
	baz=58						
Q08A	**Gabbs**	**58.16**	**323**	⇑P	**P**	**15 00 41.2**	**+0.2**
	baz=58						
O10A	**Cortez Mining,**	**58.26**	**325**	⇑P	**P**	**15 00 42.2**	**+0.6**
	baz=58						
R07C	**Lee Vining**	**58.36**	**322**	⇓P	**P**	**15 00 42.7**	**+0.3**
	baz=58						
K13A	**Stover Farm, H**	**58.57**	**329**	⇑P	**P**	**15 00 43.6**	**-0.1**
	baz=59						
O09A	**Fish Creek Ran**	**58.58**	**325**	⇑P	**P**	**15 00 44.4**	**+0.6**
	baz=59						
M11A	**Holland Ranch,**	**58.63**	**326**	⇑P	**P**	**15 00 44.3**	**+0.1**
	baz=59						
L12A	**House Creek Ra**	**58.70**	**328**	⇓P	**P**	**15 00 45.0**	**+0.2**
	baz=59						
S06C	**San Francisco**	**58.73**	**321**	⇓P	**P**	**15 00 44.8**	**-0.2**
	baz=59						
GCMT	**Greycliff**	**58.78**	**334**	*e*P	**P**	**15 00 45.2**	**0.0**
P08A	**Dixie Valley**	**58.79**	**324**	⇑P	**P**	**15 00 45.5**	**+0.1**
	baz=59						
QLMT	**Earthquake Lak**	**58.85**	**332**	*e*P	**P**	**15 00 46.2**	**+0.5**
R06C	**Coleville**	**58.87**	**322**	⇓P	**P**	**15 00 46.3**	**+0.3**
	baz=59						
HAST	**UC Hastings Re**	**58.94**	**319**	⇑P	**P**	**15 00 46.3**	**-0.2**
	baz=59						
K12A	**Draper Farm, C**	**58.98**	**328**	⇓P	**P**	**15 00 46.9**	**+0.2**
	baz=59						
M10A	**I.L. Ranch, Tu**	**59.11**	**326**	⇑P	**P**	**15 00 47.7**	**+0.2**
	baz=59						
PACP	**Pacheco Peak**	**59.12**	**319**	⇑P	**P**	**15 00 48.1**	**+0.3**
	baz=59						
J13A	**Cove Ranch, Pi**	**59.15**	**329**	⇓P	**P**	**15 00 47.8**	**+0.1**
	baz=59						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMB	Columbia Colle	59.16	321	⇓P	P	15 00 48.0	0.0
	baz=59						
R05C	Kirkwood Meado	59.37	322	⇓P	P	15 00 50.0	+0.5
	baz=60						
HLID	Hailey	59.38	329	P	P	15 00 49.7	+0.3
	baz=60,SNR=11						
L10A	Juniper Basin	59.44	327	⇓P	P	15 00 50.1	+0.2
	baz=60						
I13A	Wildhorse Cree	59.48	330	⇑P	P	15 00 50.4	+0.3
	baz=60						
J12A	Stokes Ranch,	59.52	328	⇓P	P	15 00 50.4	0.0
	baz=60						
MCMT	McKenzie Canyo	59.52	331	*e*P	P	15 00 50.7	+0.3
WCN	Washoe City	59.54	322	⇑P	P	15 00 49.7	-0.9
	baz=60						
O07A	Toulon	59.55	324	⇓P	P	15 00 50.5	-0.2
	baz=60						
BOZ	Bozeman (W)	59.56	332	*e*P	P	15 00 49.8	-0.7
	comp=Z,12nm,1.1s,mb4.8						
BOZ	Bozeman (W)	59.56	332	*e*P	P	15 00 49.8	-0.8
BOZ				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
BOZ	Bozeman (W)	59.56	332	P	P	15 00 50.8	+0.2
	baz=60,SNR=13						
G15A	Dillon	59.60	332	⇓P	P	15 00 51.0	+0.1
	baz=60						
K11A	Parker Ranch,	59.68	327	⇑P	P	15 00 51.5	+0.1
	baz=60						
LAVA	Lava Cap Winer	59.81	321	⇓P	P	15 00 52.5	0.0
	baz=60						
MFID	Camas Ranch	60.01	328	⇓P	P	15 00 54.1	+0.3
	baz=60						
H13A	Challis	60.02	330	⇓P	P	15 00 54.1	+0.3
	baz=60						
L09A	Wilkinson Ranc	60.06	326	⇓P	P	15 00 54.2	+0.1
	baz=60						
P05C	Yuba Gap, Truc	60.06	322	⇓P	P	15 00 54.3	+0.1
	baz=60						
M08A	Happy Creek Ra	60.09	325	⇑P	P	15 00 54.3	0.0
	baz=60						
F15A	Butte	60.10	332	⇓P	P	15 00 54.3	0.0
	baz=60						
O06A	Flanigan	60.12	323	⇓P	P	15 00 54.4	-0.2
	baz=60						
K10A	MacKenzie Ranc	60.13	327	⇓P	P	15 00 54.6	0.0
	baz=60						
BEKR	Beckwourth	60.26	322	P	P	15 00 55.9	+0.4
	baz=60,SNR=11						
H12A	Diamond D Ranc	60.31	330	⇓P	P	15 00 55.8	0.0
	baz=60						
G13A	Cobalt	60.39	330	⇑P	P	15 00 56.1	-0.2
	baz=61						
N06A	Buffalo Meadow	60.49	324	⇑P	P	15 00 57.2	+0.1
	baz=61						
F14A	Wisdom	60.50	332	⇑P	P	15 00 57.0	0.0
	baz=61						
M07A	Soldier Meadow	60.51	324	⇓P	P	15 00 56.8	-0.4
	baz=61						
K09A	Rome	60.55	326	⇓P	P	15 00 57.5	+0.1
	baz=61						
L08A	Fields	60.56	326	⇑P	P	15 00 57.2	-0.3
	baz=61						
EGMT	Eagleton	60.57	335	*e*P	P	15 00 57.0	-0.5
	comp=Z,19nm,1.3s,mb5.1						
EGMT	Eagleton	60.57	335	P	P	15 00 57.2	-0.2
	baz=61,SNR=6.5						
E15A	Deer Lodge	60.61	332	⇑P	P	15 00 57.8	0.0
	baz=61						
O05C	Quincy	60.66	322	⇑P	P	15 00 58.6	+0.3
	baz=61						
SCHQ	Schefferville	60.70	7	P	P	15 00 57.9	-0.3
	comp=Z,3.2nm,1.0s,mb4.4,baz=198,slow=9.6,SNR=3.2						
ORV	Oroville	60.77	322	P	P	15 00 59.4	+0.4
	baz=61,SNR=14						
WVOR	Wild Horse Val	60.88	326	*e*P	P	15 00 59.6	-0.1
	comp=Z,11nm,1.3s,mb4.8						
WVOR	Wild Horse Val	60.88	326	*e*P	P	15 00 59.6	-0.1
WVOR				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.8						
ELFS	Eagle Lake Fie	60.94	323	⇑P	P	15 01 00.5	+0.4
	baz=61						
O04C	Chester	60.98	323	⇑P	P	15 01 00.4	0.0
	baz=61						
K08A	Mann Creek Ran	60.99	326	⇓P	P	15 01 00.2	-0.2
	baz=61						
J09A	Fry Pan Ranch,	61.00	327	⇑P	P	15 01 00.3	-0.2
	baz=61						
E14A	Clinton	61.00	332	⇓P	P	15 01 00.3	-0.1
	baz=61						
D15A	Lincoln	61.02	333	⇑P	P	15 01 00.3	-0.3
	baz=61						
M06C	Likely Place G	61.16	324	⇓P	P	15 01 01.2	-0.4
	baz=61						
H10A	Noah's Angus R	61.30	329	⇓P	P	15 01 01.9	-0.7
	baz=62						
E13A	Victor	61.34	332	⇓P	P	15 01 02.5	-0.3
	baz=62						
F12A	Elk City	61.37	330	⇑P	P	15 01 02.6	-0.3
	baz=62						
I09A	Lost Marbles R	61.41	328	⇓P	P	15 01 02.8	-0.4
	baz=62						
MOD	Modoc	61.49	324	P	P	15 01 04.1	+0.2
	baz=62,SNR=5.3						
D14A	Greenough	61.49	332	⇓P	P	15 01 03.8	0.0
	baz=62						
HATC	Hat Creek Radi	61.51	323	⇑P	P	15 01 03.9	-0.1
	baz=62						
MSO	Missoula	61.51	332	*e*P	P	15 01 03.8	0.0
	comp=Z,13nm,1.1s,mb5.0						
GASB	Alder Springs	61.58	321	⇑P	P	15 01 05.3	+0.8
	baz=62						
M05C	Lookout	61.65	323	⇓P	P	15 01 04.7	-0.2
	baz=62						
L05A	Lakeview	61.89	324	⇑P	P	15 01 06.6	0.0
	baz=62						
F11A	Grangeville	61.91	330	⇑P	P	15 01 06.1	-0.5
	baz=62						
WDC	Whiskeytown Da	62.02	322	⇑P	P	15 01 05.3	-2.1
	baz=62						
K06A	Valley Falls	62.03	325	⇓P	P	15 01 07.4	0.0
	baz=62						
C14A	Swan Lake	62.11	333	⇓P	P	15 01 08.0	+0.1
	baz=62						
J06A	Christmas Vall	62.26	326	⇓P	P	15 01 08.6	-0.3
	baz=62						
E11A	Bogner Ranch,	62.26	330	⇓P	P	15 01 08.5	-0.4
	baz=62						
H08A	Prairie City	62.27	327	⇑P	P	15 01 09.4	+0.4
	baz=62						
M04C	Macdoel	62.32	323	⇓P	P	15 01 09.3	-0.2
	baz=62						
D12A	Red Ives Fores	62.34	331	⇓P	P	15 01 09.3	-0.2
	baz=62						
K05A	Summer Lake	62.35	325	⇓P	P	15 01 09.9	+0.3
	baz=62						
C13A	Hot Springs	62.43	332	⇓P	P	15 01 10.0	0.0
	baz=63						
I07A	Izee	62.44	327	⇓P	P	15 01 10.4	+0.2
	baz=63						
F10A	Beach Ranch, E	62.50	329	⇓P	P	15 01 10.5	-0.1
	baz=63						
N02C	Big Bar	62.63	322	⇑P	P	15 01 11.4	-0.2
	baz=63						
F09A	S2 Ranch, Elgi	62.67	329	⇓P	P	15 01 11.9	+0.2
	baz=63						
I06A	Prineville	62.73	326	⇓P	P	15 01 12.7	+0.6
	baz=63						
E10A	Myers Farm, Un	62.80	330	⇓P	P	15 01 12.3	-0.3
	baz=63						
H07A	Lands Inn, Kim	62.80	327	⇓P	P	15 01 12.8	+0.2
	baz=63						
YBH	Yreka Blue Hor	62.81	323	⇑P	P	15 01 11.4	-1.2
	baz=63						
J05A	Fort Rock	62.89	325	⇓P	P	15 01 13.2	0.0
	baz=63						
G08A	Pilot Rock	62.94	328	⇑P	P	15 01 13.7	+0.2
	baz=63						
F08A	Pendleton	63.18	328	⇑P	P	15 01 14.8	-0.3
	baz=63						
A13A	Flathead Natio	63.27	333	⇑P	P	15 01 15.8	+0.2
	baz=64						
D10A	Wagner Farm, O	63.27	330	⇑P	P	15 01 15.3	-0.4
	baz=64						
G07A	Ruggs Ranch, H	63.30	328	⇓P	P	15 01 15.7	-0.1
	baz=64						
H06A	Lindquist Farm	63.31	327	⇓P	P	15 01 16.4	+0.4
	baz=64						
E09A	Wood Farm, Sta	63.34	329	⇑P	P	15 01 15.8	-0.3
	baz=64						
J04A	Umpqua Nationa	63.37	325	⇑P	P	15 01 16.3	-0.1
	baz=64						
L02A	Cave Junction	63.59	323	⇓P	P	15 01 17.3	-0.6
	baz=64						
D09A	Jones Farm, Ri	63.79	330	⇓P	P	15 01 18.9	-0.2
	baz=64						
G06A	Carlson Farm,	63.80	327	⇑P	P	15 01 19.2	0.0
	baz=64						
B11A	Sandpoint	63.81	332	⇑P	P	15 01 19.0	-0.2
	baz=64						
A12A	Yaak River Ran	63.83	333	⇑P	P	15 01 19.5	+0.1
	baz=64						
I04A	Tendick Farm,	63.88	325	⇑P	P	15 01 18.6	-1.1
	baz=64						
K02A	Glendale	63.89	323	⇓P	P	15 01 19.1	-0.7
	baz=64						
G05A	Wamic	64.17	327	⇑P	P	15 01 22.3	+0.7
	baz=64						
A11A	Hall Mountain,	64.18	332	⇓P	P	15 01 22.1	+0.6
	baz=64						
F06A	Goldendale	64.22	327	⇑P	P	15 01 22.2	+0.3
	baz=64						
J02A	Umpqua	64.30	324	⇓P	P	15 01 22.4	-0.1
	baz=64						
H04A	Detroit Lake	64.30	326	⇑P	P	15 01 22.1	-0.4
	baz=64						
B09A	Rice	64.65	331	⇑P	P	15 01 24.6	-0.1
	baz=65						
D07A	Quincy	64.72	329	⇓P	P	15 01 25.3	+0.1
	baz=65						
E06A	Yakima	64.82	328	⇑P	P	15 01 26.1	+0.2
	baz=65						
H03A	Soap Creek Ran	64.92	325	⇑P	P	15 01 26.6	+0.1
	baz=65						
C07A	Waterville	65.10	329	⇓P	P	15 01 27.9	+0.3
	baz=65						
B08A	Colville Reser	65.18	330	⇑P	P	15 01 27.9	-0.3
	baz=65						
E05A	Randle	65.25	328	⇓P	P	15 01 28.5	-0.1
	baz=65						
A08A	Turner Farm, O	65.55	331	⇑P	P	15 01 30.6	+0.1
	baz=66						
B07A	Winthrop	65.64	330	⇑P	P	15 01 30.7	-0.4
	baz=66						
D05A	Enumclaw	65.77	328	⇑P	P	15 01 31.9	-0.1
	baz=66						
EDM	Edmonton	66.05	337	*e*P	P	15 01 31.8	-1.8
A07A	Ashnola River,	66.16	330	⇑P	P	15 01 35.1	+0.7
	baz=66						
E03A	Lebam	66.21	327	⇑P	P	15 01 35.0	+0.1
	baz=66						
C04A	Brinnon	66.62	328	⇑P	P	15 01 37.4	0.0
	baz=67						
A05A	Maple Falls	66.97	330	⇑P	P	15 01 39.6	-0.1
	baz=67						
PPT	Papeete	71.80	253	LR	LR	15 25 08.4	
	comp=Z,220nm,18.9s,MS4.5,baz=139,slow=29						
LIC	Lamto	72.75	82	*e*P	P	15 02 18.6	+2.7
	comp=Z,74nm,2.0s,mb5.3						
TIC	Toumodi	72.81	81	*e*P	P	15 02 16.8	+0.5
	comp=Z,19nm,1.3s,mb4.9						
DBIC	Dimbokro	72.98	81	P	P	15 02 17.9	+0.6
DBIC				LR	LR	15 33 10.0	
DBIC	Dimbokro	72.98	81	P	P	15 02 17.9	+0.6
	comp=Z,4.9nm,0.6s,mb4.6,baz=223,slow=5.7,SNR=9.5						
DBIC				LR	LR	15 33 10.0	
	comp=Z,302nm,18.7s,MS4.6,baz=162,slow=35						
KIC	Kosan Boka	73.05	82	*e*P	P	15 02 18.3	+0.6
	comp=Z,56nm,0.9s,mb5.5						
YKA	Yellowknife Ar	73.63	343	P	P	15 02 19.1	-0.9
	comp=Z,2.3nm,0.5s,mb4.4,baz=138,slow=5.6,SNR=50						
YKA				LR	LR	15 36 10.5	
	comp=Z,47nm,18.2s,MS3.8,baz=160,slow=37						
TORD	Torodi Ar. Bea	80.26	76	P	P	15 02 58.7	+0.2
	comp=Z,1.6nm,0.4s,mb4.3,baz=278,slow=5.9,SNR=29						
ESDC	Sonseca Array	80.55	48	P	P	15 03 00.4	+0.8
	comp=Z,0.3nm,0.3s,mb3.7,baz=296,slow=38,SNR=4.7						
ESDC				LR	LR	15 35 23.7	
	comp=Z,112nm,20.4s,MS4.2,baz=340,slow=33						
DAWY	Dawson	83.26	337	*e*P	P	15 03 12.6	-0.7
INK	Inuvik	83.35	342	*e*P	P	15 03 13.0	-0.6
	comp=Z,802nm,1.2s						
INK	Inuvik	83.35	342	*e*P	P	15 03 13.0	-0.6
INK				pmax	pmax		
	comp=Z,802nm,1.2s						
INK	Inuvik	83.35	342	P	P	15 03 13.3	-0.3
	comp=Z,13nm,0.9s,mb4.9,baz=112,slow=5.3,SNR=39						
EGAK	Eagle	84.27	337	*e*P	P	15 03 17.6	-0.7
	comp=Z,212nm,1.3s						
EPF	Esparros	84.50	46	*e*P	P	15 03 20.6	+0.5
QSPA	South Pole Qui	84.60	180	*e*P	P	15 03 19.8	-0.1
	comp=Z,14nm,1.0s,mb5.0						
GRR	Gorron	84.92	41	*e*P	P	15 03 21.8	-0.2
	comp=Z,26nm,1.0s,mb5.0						
GRR	Gorron	84.92	41	*e*P	P	15 03 21.8	-0.2
	comp=Z,13nm,1.0s,mb5.0						
GRR	Gorron	84.92	41	*e*P	P	15 03 21.8	-0.2
GRR				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
LFF	La Frestale	85.20	44	*e*P	P	15 03 23.7	+0.2
FLN	La Foliniere	85.26	40	*e*P	P	15 03 23.8	+0.1
	comp=Z,35nm,1.2s,mb5.1						
FLN	La Foliniere	85.26	40	*e*P	P	15 03 23.8	+0.1
	comp=Z,18nm,1.2s,mb5.1						
FLN	La Foliniere	85.26	40	*e*P	P	15 03 23.8	+0.1
FLN				pmax	pmax		
	comp=Z,18nm,1.2s,mb5.1						
LDF	La Druitiere	85.45	40	*e*P	P	15 03 24.6	-0.1
	comp=Z,19nm,1.0s,mb4.9						
LDF	La Druitiere	85.45	40	*e*P	P	15 03 24.6	-0.1
	comp=Z,9.5nm,1.0s,mb4.9						
LDF	La Druitiere	85.45	40	*e*P	P	15 03 24.6	-0.1
LDF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
COLA	College	86.95	336	*e*P	P	15 03 30.7	-1.0
DAG	Danmarks Havn	88.40	11	*e*P	P	15 03 39.0	+0.5
DAG	Danmarks Havn	88.40	11	*i* P	P	15 03 39.0	+0.5
GIVF	Givet	88.92	40	*e*P	P	15 03 41.3	-0.1
GIVF	Givet	88.92	40	*e*P	P	15 03 41.3	-0.1
CABF	La Chapelle	89.19	43	*e*P	P	15 03 43.4	+0.6
LPG	La Plagne	89.48	44	*e*P	P	15 03 44.7	+0.5
NOA	NORSAR Array B	93.88	29	LR	LR	15 43 29.4	
	comp=Z,107nm,18.0s,MS4.3,baz=355,slow=34						
LBTB	Lobatse	99.00	116	LR	LR	15 46 18.8	
	comp=Z,106nm,18.4s,MS4.4,baz=254,slow=34						
STKA	Stephens Creek	127.75	222	PKP	PKPdf	15 09 51.9	-1.1
STKA	Stephens Creek	127.75	222	PKP	PKPdf	15 09 51.9	-1.1
	comp=Z,3.2nm,1.1s,baz=72,slow=3.2,SNR=3.0						
KURK	Kurchatov	130.51	20	*i* PKIKP	PKPdf	15 09 56.8	-0.9
MKAR	Makanchi Array	135.13	20	PKP	PKPdf	15 10 06.0	-0.5
	comp=Z,2.3nm,0.7s,baz=321,slow=2.3,SNR=17						
AAK	Ala-Archa	135.19	30	*e*PKPdf	PKPdf	15 10 07.1	+0.3
AAK	Ala-Archa	135.19	30	*i* PKIKP	PKPdf	15 10 06.3	-0.5
ZAK	Zakamensk	135.26	360	*e*PKIKP	PKPdf	15 10 06.0	-0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CN2	Changchun	137.04	336	*e*PKP	PKPdf	15 10 09.8	-0.4
ULN	Ulaanbaatar	137.64	356	*e*PKPdf	PKPdf	15 10 11.0	-0.1
ULN	Ulaanbaatar	137.64	356	*i* PKIKP	PKPdf	15 10 10.4	-0.7
SONM	Songino Array	137.71	357	PKP	PKPdf	15 10 11.0	-0.3
	comp=Z,1.6nm,0.8s,baz=322,slow=1.5,SNR=13						
ASAR	Alice Springs	138.20	225	PKP		15 10 00.1	
ASAR				PKP	PKPdf	15 10 13.2	+0.2
ASAR	Alice Springs	138.20	225	PKhKP		15 10 00.1	
	comp=Z,0.3nm,0.3s,baz=119,slow=4.0,SNR=13						
ASAR				PKP	PKPdf	15 10 13.2	+0.2
	comp=Z,1.0nm,0.5s,baz=117,slow=2.0,SNR=12						
WMQ	Urumqi	139.50	17	PKP	PKPdf	15 10 14.1	-0.6
WMQ				XPKP		15 10 28.6	
WMQ				PP	PP		
	comp=Z,203nm,5.5s						
WMQ				LR	LR		
	comp=N,68nm,16.4s,MS4.7						
WMQ				LR	LR		
	comp=E,73nm,15.3s,MS4.7						
WMQ				LR	LR		
	comp=Z,56nm,20.0s,MS4.3						
WRA	Warramunga Arr	140.17	230	PKhKP		15 10 07.4	
	comp=Z,0.6nm,0.4s,baz=135,slow=2.6,SNR=21						
WRA				PKP	PKPdf	15 10 17.4	+0.8
	comp=Z,1.4nm,0.5s,baz=131,slow=1.5,SNR=27						
KSRS	Korea Array	140.91	328	PKP	PKPdf	15 10 16.2	-1.2
	comp=Z,2.1nm,0.9s,baz=47,slow=1.5,SNR=7.6						
BJI	Beijing	143.62	343	PKP	PKPdf	15 10 21.0	-1.2
BJI				APKP		15 10 30.9	
BJI				XPKP		15 10 34.5	
BJI				PP	PP	15 13 33.4	+0.1
BJI				SS	SS	15 32 14.0	+1.2
BJI				LR	LR		
	comp=N,283nm,6.3s						
BJI				LR	LR		
	comp=E,230nm,7.5s						
BJI				LR	LR		
	comp=Z,72nm,32.7s,MS4.2						
HHC	Hu-ho-hao-te	143.97	349	*e*PKP	PKPdf	15 10 20.3	-2.5
HHC				XPKP		15 10 34.9	
HHC				PP	PP	15 13 38.4	+3.1
HHC				PKS		15 13 54.4	
HHC				SKS	SKSdf	15 17 24.8	-5.6
HHC				SKKS	SKKSac	15 20 23.3	-3.9
HHC				PP	PP		
	comp=Z,133nm,6.7s						
HHC				LR	LR		
	comp=N,149nm,16.6s,MS5.1						
HHC				LR	LR		
	comp=E,239nm,15.5s,MS5.1						
HHC				LR	LR		
	comp=Z,132nm,13.1s,MS4.9						
GTA	Gaotai	146.11	4	*e*PKP	PKPdf	15 10 26.8	+0.3
GTA				APKP		15 10 37.1	
GTA				XPKP		15 10 40.5	
FITZ	Fitzroy Crossi	147.64	223	*e*PKPbc	PKPbc	15 10 31.1	-1.3
MBWA	Marble Bar	148.86	211	*e*PKPbc	PKPbc	15 10 34.3	-1.2
LZH	Lanzhou	149.54	359	*e*PKP	PKPdf	15 10 37.0	+4.7
LZH				APKP		15 10 47.0	
LZH				XPKP		15 10 51.8	
NJ2	Nanjing	149.71	333	*e*PKP	PKPdf	15 10 31.6	-1.1
XAN	Xi'an	151.07	350	PKP	PKPbc	15 10 39.9	-0.6
XAN				APKP		15 10 47.4	
CD2	Chengdu	154.70	359	*e*PKP	PKPdf	15 10 38.3	-1.8
CD2				APKP		15 10 49.1	
CD2				XPKP		15 10 52.8	
CD2				PKP2	PKPab	15 11 04.1	+0.8
CD2				PP	PP	15 14 40.6	+3.2
CD2				SKS	SKSdf	15 17 39.8	-5.3
CD2				SKKS	SKKSac	15 21 24.3	-2.6
CD2				PP	PP		
	comp=Z,120nm,10.8s						
CD2				LR	LR		
	comp=N,160nm,26.4s						
CD2				LR	LR		
	comp=Z,120nm,24.2s,MS4.6						
GYA	Guiyang	158.86	351	PKP	PKPdf	15 10 43.3	-2.3
GYA				APKP		15 10 55.8	
GYA				XPKP		15 11 00.0	
GYA				PKP2	PKPab	15 11 21.0	-0.3
GYA				PKS		15 14 15.5	
GYA				PP	PP	15 15 02.8	+2.4
GYA				SKS	SKSdf	15 17 42.6	-6.9
GYA				SKKS	SKKSac	15 21 45.5	-3.6
GYA				PP	PP		
	comp=Z,120nm,8.4s						
GYA				LR	LR		
	comp=N,240nm,20.8s,MS5.2						
GYA				LR	LR		
	comp=E,290nm,21.6s,MS5.2						
GYA				LR	LR		
	comp=Z,170nm,21.4s,MS4.8						
KMI	Kunming	160.48	1	PKP	PKPdf	15 10 48.4	+0.9
KMI				LR	LR		
	comp=Z,40nm,23.4s						

IDC 13 14:51:45.2±1.2**, 2183N**×**14287E, h0**km**, mb3.4**/5**, mb1 3.7**/5**, mb1mx3.6**/19**, mbtmp3.4**/5**, Error ellipse: s-maj=44.9km s-min=24.0km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	20.23	324	P	P	14 56 23.8	+1.8
	0.9nm,0.7s,baz=134,slow=10,SNR=5.3						
SONM	Songino Array	39.05	321	P	P	14 59 12.8	-0.9
	0.4nm,0.7s,baz=130,slow=8.0,SNR=5.0						
WRA	Warramunga Arr	42.35	192	P	P	14 59 41.2	+0.1
	0.6nm,0.9s,baz=10.0,slow=8.2,SNR=3.7						
ASAR	Alice Springs	46.06	191	P	P	15 00 10.8	0.0
	0.4nm,0.7s,baz=15,slow=8.7,SNR=11						
NVAR	Mina Array Bea	83.28	51	P	P	15 04 14.4	+0.3
	0.2nm,0.5s,baz=262,slow=6.1,SNR=3.4						

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*KRSC **13** 14:52:41.0±0.3, 5142N×15392E, h539km±49km, ML4.8*
*ISCJB **13** 14:52:46.5±0.3, 5226N±007×1530E±01, h460km±5km, mb3.4/18, Error ellipse: s-maj=13.5km s-min=7.1km az=44.3*
*MOS **13** 14:52:46.2±0.9, 5218N×15329E, h480km, mb3.5/11, Error ellipse: s-maj=16.2km s-min=10.8km az=75.4*
*NEIC **13** 14:52:47.5±0.8, 5234N×15291E, h455km±11km, mb3.8/2, Error ellipse: s-maj=9.4km s-min=6.9km az=141.0*
*IDC **13** 14:52:48.4±2.6, 5237N×15287E, h463km±32km, mb3.0/16, mb1 3.2/18, mb1mx3.1/26, mbtmp3.0/18, Error ellipse: s-maj=13.8km s-min=10.5km az=139.0*
ISC 13 14:52:47.6±0.3**, 5227N**±007×**1530E**±01**, h456**km±6km**, n63, σ1s09**/72**, mb3.4**/18**, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID	Alaid	2.14	130	*e*P	P	14 53 47.3	-2.1
MIPR	Malaya Ipel'ka	2.33	88	*e*P	P	14 53 50.9	+0.4
SKR	Severo-Kuril's	2.53	128	*e*PN	P	14 53 50.5	-1.4
SKR				*e*		14 54 44.4	
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
GRL	Gorelyy	3.14	83	*e*P	P	14 53 56.7	+0.7
GNL	Ganaly	3.33	63	*e*P	P	14 53 57.4	0.0
GNL				*e*S	S	14 54 54.9	+0.5
RUS	Russkaya	3.41	85	*e*P	P	14 53 57.8	-0.3
RUS				*e*S	S	14 54 51.7	-3.8
PET	Petropavlovsk	3.55	75	*e*PN	P	14 53 59.1	-0.1
PET				*e*S	S	14 54 55.3	-2.3
PET				pmax	pmax		
	comp=Z,73nm,0.5s						
PET				smax			
	comp=E,64nm,0.8s						
PET				smax			
	comp=N,57nm,0.6s						
PET	Petropavlovsk	3.55	75	*e*P	P	14 53 59.4	+0.2
PET				*e*S	S	14 54 55.0	-2.6
AVH	Avacha	3.65	72	*e*P	P	14 54 00.2	+0.2
NLC	Nalytchevo	3.98	74	*e*S	S	14 55 00.8	-3.4
SPN	Mys Shipunski	4.38	76	*e*P	P	14 54 04.9	-1.4
SPN				*e*S	S	14 55 04.0	-6.5
TUMR	Tumrok	5.22	52	*e*P	P	14 54 16.0	+1.9
TUMR				*e*S	S	14 55 25.4	+0.5
KMNR	Kamenistaya	5.53	48	P	P	14 54 18.6	+1.4
SRDR	Sredinnyy	5.66	42	*e*P	P	14 54 20.2	+1.7
MKZ	Mys Kozlova	5.72	63	*e*P	P	14 54 18.3	-0.8
MKZ				*e*S	S	14 55 27.2	-6.8
KLY	Klyuchi	6.05	45	*e*P	P	14 54 25.0	+2.6
BDR	Baidarnaya	6.45	45	*e*P	P	14 54 28.2	+1.7
SRKR	Sorokina	6.49	44	*e*P	P	14 54 28.7	+1.8
SRKR				*e*S	S	14 55 47.6	-0.7
SMKR	Semkarok	6.58	46	*e*P	P	14 54 29.4	+1.6
KBTR	Krutoberegovo	6.99	52	*e*P	P	14 54 30.2	-1.9
KBTR				*e*S	S	14 55 53.0	-4.9
YSS	Yuzh-Sakhalins	8.50	235	*e*P	P	14 54 49.3	+0.9
ASAJ	Asahikawa	10.69	224	PN	P	14 55 14.1	+1.9
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.69	224	P	P	14 55 14.1	+1.9
	comp=Z,0.5nm,0.3s,baz=273,slow=32,SNR=5.2						
ERM	Erimo	12.23	217	*e*P	P	14 55 28.6	-0.2
BILL	Bilibino	17.08	17	*e*P	P	14 56 19.0	-1.0
BILL	Bilibino	17.08	17	*e*P	P	14 56 19.0	-1.0
MJAR	Matsushiro Arr	18.87	219	P	P	14 56 37.2	-1.0
	comp=Z,0.3nm,0.3s,baz=26,slow=11,SNR=3.8						
HIA	Hailar	21.12	275	*e*P	P	14 56 58.5	0.0
TIXI	Tiksi	22.18	340	*e*P	P	14 57 07.5	-0.4
	comp=Z,0.7nm,0.4s,mb3.5						
TIXI	Tiksi	22.18	340	*e*P	P	14 57 07.5	-0.4
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
SONM	Songino Array	29.82	280	P	P	14 58 16.5	+0.8
	comp=Z,0.1nm,0.3s,mb2.7,baz=81,slow=8.4,SNR=3.7						
KDAK	Kodiak Island	30.96	58	P	P	14 58 24.9	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KDAK	Kodiak Island	30.96	58	P	P	14 58 24.9	-0.5
	comp=Z,17nm,1.1s,mb4.4,baz=316,slow=9.5,SNR=5.0						
INK	Inuvik	37.14	36	*e*P	P	14 59 17.4	-0.1
INK	Inuvik	37.14	36	P	P	14 59 17.2	-0.3
	comp=Z,0.8nm,0.3s,mb3.6,baz=293,slow=4.4,SNR=10						
MK31	Makanchi Array	44.52	292	P	P	15 00 17.1	+0.2
MKAR	Makanchi Array	44.52	292	P	P	15 00 17.1	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	44.52	292	P	P	15 00 17.1	+0.2
	comp=Z,0.5nm,0.4s,mb3.3,baz=56,slow=7.4,SNR=6.0						
YKA	Yellowknife Ar	46.64	40	P	P	15 00 32.9	0.0
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	Yellowknife Ar	46.64	40	P	P	15 00 32.9	0.0
	comp=Z,0.7nm,0.6s,mb3.3,baz=302,slow=7.4,SNR=12						
CHKZ	Chkalovo	46.94	306	*e*P	P	15 00 34.4	-0.9
	comp=Z,3.7nm,0.7s,mb3.9						
CHKZ	Chkalovo	46.94	306	*e*P	P	15 00 34.4	-0.9
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.0						
BRVK	Borovoye	47.45	306	*e*P	P	15 00 38.9	-0.2
ARCES	ARCESS Array B	52.62	339	P	P	15 01 16.3	-0.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	52.62	339	P	P	15 01 16.2	-0.8
	comp=Z,1.0nm,0.6s,mb3.4,baz=33,slow=8.1,SNR=9.3						
AKTK	Aktyubinsk	55.07	309	P	P	15 01 34.1	-0.6
AKTO	Aktyubinsk	55.07	309	P	P	15 01 34.2	-0.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
AKTO	Aktyubinsk	55.07	309	P	P	15 01 34.1	-0.6
	comp=Z,0.7nm,0.4s,mb3.3,baz=64,slow=5.2,SNR=4.3						
FINES	FINESS Array B	59.03	333	P	P	15 02 01.0	-0.8
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	59.03	333	P	P	15 02 01.0	-0.8
	comp=Z,1.0nm,0.5s,mb3.4,baz=47,slow=8.0,SNR=6.0						
NVAR	Mina Array Bea	60.07	65	P	P	15 02 10.4	+1.3
	comp=Z,0.8nm,0.7s,mb3.3,baz=285,slow=4.6,SNR=2.3						
PDAR	Pinedale Array	61.65	56	P	P	15 02 19.6	0.0
	comp=Z,0.7nm,0.7s,mb3.2,baz=290,slow=2.6,SNR=3.0						
NOA	NORSAR Array B	62.98	340	P	P	15 02 27.3	-0.6
NOA	NORSAR Array B	62.98	340	P	P	15 02 27.3	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	NORSAR Array B	62.98	340	P	P	15 02 27.3	-0.6
	comp=Z,0.8nm,0.7s,mb3.4,baz=26,slow=6.5,SNR=3.3						
AKASG	Malin Array Be	66.93	325	P	P	15 02 51.9	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	66.93	325	P	P	15 02 51.9	-1.2
	comp=Z,0.6nm,0.4s,mb3.5,baz=32,slow=7.2,SNR=3.8						
GERES	GERESS Array B	73.46	333	P	P	15 03 31.6	-0.5
	comp=Z,0.3nm,0.4s,mb3.2,baz=26,slow=7.0,SNR=3.3						
WRA	Warramunga Arr	73.72	198	P	P	15 03 34.1	+0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	Warramunga Arr	73.72	198	P	P	15 03 34.1	+0.3
	comp=Z,0.8nm,0.5s,mb3.5,baz=14,slow=6.0,SNR=14						
TXAR	Lajitas Array	74.90	62	P	P	15 03 41.6	+0.9
	comp=Z,0.3nm,0.6s,mb3.0,baz=302,slow=7.0,SNR=3.9						
ASAR	Alice Springs	77.43	198	P	P	15 03 55.6	+1.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	Alice Springs	77.43	198	P	P	15 03 55.6	+1.2
	comp=Z,1.2nm,0.7s,mb3.6,baz=10,slow=5.2,SNR=25						

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*BJI **13** 15:15:40.4, 23.50S×179.90W, h516km, mB5.0, mb4.6*
*NEIC **13** 15:15:41.5±0.9, 23.47S×179.91W, h516km±10km, mb4.6/25, Error ellipse: s-maj=10.5km s-min=6.5km az=149.0*
*ISCJB **13** 15:15:43.3±1.1, 23.60S±0.05×179.95E±0.05, h548km±14km, mb4.6/41, Error ellipse: s-maj=8.5km s-min=6.0km az=146.9*
*IDC **13** 15:15:43.5±0.7, 23.46S×179.98W, h534km±5km, mb4.1/20, mb1 4.2/21, mb1mx4.2/22, mbtmp4.1/21, Error ellipse: s-maj=11.3km s-min=8.9km az=161.0*
ISC 13 15:15:43.5±1.0, **23.64S**±0.05×**179.99W**±0.05, **h539**km±12km, **n319**, σ**0.59**/251, **mb4.6**/40, **84C-87D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	12.41	40	P	P	15 18 20.1	-6.3
	1.6nm,0.3s,baz=130,slow=7.9,SNR=4.1						
AFI				S	S	15 20 25.3	-15
	0.9nm,0.3s,baz=252,slow=20,SNR=2.9						
DZM	Mont Dzumac	12.61	274	P	P	15 18 29.3	+0.9
	0.7nm,0.3s,baz=83,slow=16,SNR=10						
URZ	Urewera	14.79	189	P	P	15 18 48.3	-2.4
	6.8nm,0.3s,baz=14,slow=4.8,SNR=29						
URZ				S	S	15 21 19.5	-5.4
	1.7nm,0.3s,baz=169,slow=22,SNR=11						
URZ	Urewera	14.79	189	SN	S	15 21 22.3	-2.6
BKZ	Black Stump Fm	15.77	190	PN	P	15 18 59.9	-0.9
NNZ	Nelson	18.39	196	PN	P	15 19 25.4	+0.1
THZ	Tophouse	19.03	196	PN	P	15 19 31.8	+0.8
KHZ	Kahutara	19.49	194	PN	P	15 19 35.1	-0.1
KHZ				SN	S	15 22 42.0	-1.4
LTZ	Lake Taylor	20.15	197	PN	P	15 19 41.4	+0.2
RPZ	Rata Peaks	21.34	198	P	P	15 19 53.8	+1.8
	11nm,0.6s,mb4.7,baz=355,slow=12,SNR=7.2						
HNR	Honiara	23.82	303	*e*P	P	15 20 12.9	-1.6
	185nm,0.8s,mb5.8						
HNR				*e*		15 20 18.6	
HNR	Honiara	23.82	303	P	P	15 20 13.1	-1.4
	58nm,0.7s,mb5.3,baz=140,slow=1.0,SNR=9.8						
TBI	Tubuai	27.98	96	*e*LR	LR	15 21 05.5	
	222nm,26.0s,baz=156						
CTA	Charters Tower	31.49	270	⇓*i*P	P	15 21 22.6	+1.1
	65nm,0.6s,mb5.3						
CTA				*e*SCP	ScP	15 26 53.5	+3.3
CTA	Charters Tower	31.49	270	P	P	15 21 22.6	+1.1
	79nm,0.5s,mb5.5,baz=97,slow=10,SNR=186						
CTA				ScP	ScP	15 26 53.9	+3.7
	4.4nm,0.8s,baz=88,slow=5.5,SNR=4.5						
CTAO	Charters Tower	31.49	270	*e*P	P	15 21 22.6	+1.2
	87nm,0.6s,mb5.5						
PMG	Port Moresby	34.42	289	*e*P	P	15 21 46.3	0.0
	87nm,0.8s,mb5.3						
PMG	Port Moresby	34.42	289	P	P	15 21 46.3	0.0
	92nm,0.7s,mb5.4,baz=100,slow=5.3,SNR=57						
PMG				ScP	ScP	15 27 03.4	+2.9
	7.7nm,0.9s,baz=106,slow=0.7,SNR=3.7						
STKA	Stephens Creek	34.83	248	*e*P	P	15 21 51.0	+1.4
	5.3nm,0.8s,mb4.1						
STKA				*e*pP		15 24 08.4	
STKA	Stephens Creek	34.83	248	P	P	15 21 51.1	+1.5
	5.4nm,0.6s,mb4.3,baz=83,slow=9.2,SNR=17						
COEN	Coen	36.08	279	*e*P	P	15 21 58.1	-2.0
	10nm,1.0s,mb4.3						
ASAR	Alice Springs	42.09	260	P	P	15 22 49.1	+0.6
	21nm,0.7s,mb4.8,baz=90,slow=7.4,SNR=257						
ASAR				ScP	ScP	15 27 33.4	+3.4
	7.4nm,0.9s,baz=112,slow=4.1,SNR=24						
ASAR				S	S	15 28 29.2	+0.1
	2.6nm,0.8s,baz=98,slow=15,SNR=13						
WB2	Warramunga Arr	42.42	266	⇓*i*P	P	15 22 51.1	-0.1
WB2				*e*SCP	ScP	15 27 30.9	-0.5
WB2				*e*S	S	15 28 32.0	-2.1
WRA	Warramunga Arr	42.44	266	P	P	15 22 51.2	-0.1
	11nm,0.2s,mb5.0,baz=90,slow=5.8,SNR=665						
WRA				ScP	ScP	15 27 35.1	+3.6
	6.5nm,0.9s,baz=95,slow=4.2,SNR=18						
WRA				S	S	15 28 32.3	-2.0
	4.7nm,0.9s,baz=101,slow=14,SNR=11						
FORT	Forrest	46.41	249	*e*P	P	15 23 21.9	+0.1
	22nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	50.86	265	*e*P	P	15 23 55.3	+0.3
	19nm,0.8s,mb4.5						
FITZ				*e*pP	pP	15 25 43.6	+6.8
FITZ				*e*S	S	15 30 33.4	+2.1
FITZ	Fitzroy Crossi	50.86	265	P	P	15 23 55.7	+0.7
	8.4nm,0.6s,mb4.3,baz=101,slow=6.9,SNR=71						
SBA	Scott Base	54.64	183	*e*P	P	15 24 23.9	+2.9
	35nm,1.1s,mb4.5						
SBA				*e*PcP	PcP	15 25 17.2	+1.6
BATI	Kupang	55.22	274	P	P	15 24 27.6	+1.6
	24nm,0.5s,mb4.7,baz=158,slow=5.4,SNR=15						
MBWA	Marble Bar	55.43	260	*e*P	P	15 24 27.3	-0.1
QSPA	South Pole Qui	66.45	180	*e*P	P	15 25 40.9	+2.1
	53nm,0.8s,mb5.1						
QSPA	South Pole Qui	66.45	180	P	P	15 25 41.0	+2.2
	40nm,0.7s,mb5.1,baz=33,slow=3.0,SNR=96						
JOW	Kunigami	70.82	312	P	P	15 26 06.0	0.0
	15nm,0.6s,mb4.7,baz=149,slow=8.2,SNR=4.6						
MJAR	Matsushiro Arr	71.69	326	P	P	15 26 10.3	-0.6
	5.5nm,0.8s,mb4.0,baz=165,slow=5.2,SNR=10						
MAT	Matsushiro	71.69	326	P	P	15 26 08.7	-2.2
KSM	Kuching	72.07	280	*e*P	P	15 26 13.6	-0.1
ASAJ	Asahikawa	75.63	333	P	P	15 26 34.0	+0.8
	6.6nm,0.8s,mb4.1,baz=127,slow=5.1,SNR=3.5						
MAW	Mawson	78.00	200	*e*P	P	15 26 47.2	+1.4
	10nm,0.6s,mb4.3						
MAW	Mawson	78.00	200	P	P	15 26 47.3	+1.5
	12nm,0.6s,mb4.4,baz=130,slow=8.3,SNR=16						
KSRS	Korea Array	78.05	320	P	P	15 26 47.0	+0.5
	2.3nm,0.8s,mb3.5,baz=140,slow=6.0,SNR=12						
NJ2	Nanjing	80.49	311	*e*P	P	15 27 01.6	+2.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
SCI	San Clemente I	81.23	48	⇑P	P	15 27 03.3	0.0
	baz=81						
HAST	UC Hastings Re	81.26	44	⇓P	P	15 27 03.8	+0.3
	baz=81						
PKM	Peak Mountain	81.49	46	⇓P	P	15 27 04.9	+0.2
	baz=82						
PKD	Parkfield	81.64	45	⇓P	P	15 27 05.5	0.0
	baz=82						
U04C	Hernandez Rese	81.74	44	⇑P	P	15 27 06.3	+0.4
	baz=82						
PACP	Pacheco Peak	81.81	44	⇓P	P	15 27 06.5	+0.3
	baz=82,SNR=7.0						
S04C	Ingram Canyon,	82.09	43	⇓P	P	15 27 08.0	+0.3
	baz=82						
O01C	Eel River Cons	82.22	40	⇓P	P	15 27 08.5	+0.2
	baz=82						
MNRC	McLaughlin Nat	82.25	42	⇓P	P	15 27 08.7	+0.3
	baz=82						
BFSC	Mount Baldy St	82.56	48	P	P	15 27 09.7	-0.4
	baz=83,SNR=5.1						
GASB	Alder Springs	82.56	41	⇑P	P	15 27 10.5	+0.6
	baz=83,SNR=5.0						
S05C	Merced	82.62	44	⇓P	P	15 27 10.8	+0.5
	baz=83						
MONP	Monument Peak	82.64	49	⇑P	P	15 27 10.8	+0.2
	baz=83,SNR=13						
EDW2	Edwards Air Fo	82.70	47	⇓P	P	15 27 10.4	-0.4
	baz=83,SNR=8.5						
DVTC	Desert V Tower	82.74	50	⇓P	P	15 27 11.1	+0.1
	baz=83						
ISA	Isabella	82.83	46	P	P	15 27 11.4	-0.1
	baz=83,SNR=19						
SUTB	Sutter Butte	82.86	42	⇓P	P	15 27 10.8	-0.8
	baz=83						
N02C	Big Bar	82.95	40	⇑P	P	15 27 11.9	-0.1
	baz=83						
CMB	Columbia Colle	83.00	43	*e*P	P	15 27 11.8	-0.4
	comp=Z,12nm,0.8s,mb4.5						
CMB	Columbia Colle	83.00	43	⇑P	P	15 27 11.8	-0.4
	baz=83,SNR=9.7						
PFO	Pinyon Flat Ob	83.02	49	⇓P	P	15 27 12.5	0.0
	baz=83						
SWSC	Sam W. Stewart	83.11	50	⇓P	P	15 27 12.9	0.0
	baz=83						
OHCM	Honcut	83.11	42	*e*P	P	15 27 12.3	-0.5
O03C	Acorn Hollow,	83.19	41	⇓P	P	15 27 13.0	-0.2
	baz=83						
LAVA	Lava Cap Winer	83.22	43	⇑P	P	15 27 13.1	-0.2
	baz=83						
ORV	Oroville	83.24	42	⇓P	P	15 27 12.9	-0.5
	baz=83,SNR=5.1						
LRMC	Laurel Mountai	83.25	47	P	P	15 27 13.7	+0.2
	baz=83,SNR=5.2						
WDC	Whiskeytown Da	83.25	40	*e*P	P	15 27 12.6	-0.8
	comp=Z,19nm,1.1s,mb4.5						
WDC	Whiskeytown Da	83.25	40	P	P	15 27 13.4	0.0
	baz=83,SNR=5.4						
KCC	Kaiser Creek	83.26	44	⇑P	P	15 27 13.3	-0.2
	baz=83,SNR=6.1						
SYO	Syowa Base	83.27	193	⇓*e*P	P	15 27 11.6	-1.5
SYO	Syowa Base	83.27	193	⇓*e*PcP	PcP	15 27 16.3	+0.1
CWC	Cottonwood Cre	83.54	46	P	P	15 27 14.6	-0.4
	baz=84,SNR=9.2						
BELC	Belle Mtn.	83.56	49	P	P	15 27 15.4	+0.3
	baz=84,SNR=9.5						
L02A	Cave Junction	83.63	39	⇑P	P	15 27 15.7	+0.5
	baz=84						
CN2	Changchun	83.68	324	*e*P	P	15 27 13.0	-2.5
MPMC	Manual Prospec	83.71	46	P	P	15 27 15.8	-0.1
	baz=84,SNR=8.1						
GSC	Goldstone	83.74	47	⇑P	P	15 27 15.9	0.0
	baz=84						
BC3	Big Chuckw Mtn	83.74	49	P	P	15 27 16.4	+0.4
	baz=84,SNR=10						
MTUM	Tungsten Hills	83.76	45	*e*P	P	15 27 16.4	+0.3
HEC	Hector,Ludlow	83.79	48	P	P	15 27 16.2	-0.1
	baz=84,SNR=9.7						
TIN	Tinemaha	83.80	45	⇑P	P	15 27 16.3	0.0
	baz=84						
O05C	Quincy	83.84	42	⇑P	P	15 27 16.5	+0.2
	baz=84						
GLA	Glamis	83.85	50	⇓P	P	15 27 17.1	+0.5
	baz=84,SNR=6.7						
YBH	Yreka Blue Hor	83.88	39	*e*P	P	15 27 16.5	0.0
	comp=Z,4.6nm,0.9s,mb4.0						
YBH	Yreka Blue Hor	83.88	39	⇑P	P	15 27 16.6	+0.2
	baz=84						
O04C	Chester	83.96	41	⇑P	P	15 27 17.1	+0.2
	baz=84						
HATC	Hat Creek Radi	84.04	41	⇑P	P	15 27 17.3	0.0
	baz=84						
K02A	Glendale	84.08	38	⇓P	P	15 27 17.6	+0.1
	baz=84						
LBCM	Butte Creek Ri	84.12	41	P	P	15 27 17.5	-0.2
BEKR	Beckwourth	84.13	42	P	P	15 27 17.6	-0.2
	baz=84,SNR=8.4						
WCN	Washoe City	84.16	43	⇑P	P	15 27 17.8	-0.2
	baz=84						
GMRC	Granite Mounta	84.22	48	P	P	15 27 18.3	-0.1
	baz=84,SNR=9.7						
IRM	Iron Mountain	84.23	49	P	P	15 27 18.7	+0.2
	baz=84,SNR=17						
GRAC	Grapevine Rang	84.33	46	⇑P	P	15 27 18.8	-0.1
	baz=84,SNR=6.6						
ELFS	Eagle Lake Fie	84.36	41	⇑P	P	15 27 19.0	+0.2
	baz=84						
FURC	Furnace Creek,	84.36	46	⇑P	P	15 27 18.8	-0.2
	baz=84						
TUQ	Turquoise Mtn.	84.41	48	P	P	15 27 19.2	-0.1
	baz=84,SNR=6.0						
M04C	Macdoel	84.42	40	⇓P	P	15 27 18.9	-0.2
	baz=84						
J02A	Umpqua	84.42	38	⇓P	P	15 27 19.5	+0.4
	baz=84						
Y12C	Blythe	84.44	50	⇓P	P	15 27 19.6	+0.1
	baz=84						
NVAR	Mina Array Bea	84.56	44	P	P	15 27 19.6	-0.4
	comp=Z,4.7nm,0.8s,mb4.0,baz=206,slow=6.4,SNR=29						
R08A	Mina	84.63	44	⇑P	P	15 27 20.3	0.0
	baz=85						
U10A	Ash Meadows, A	84.69	47	⇑P	P	15 27 20.8	+0.1
	baz=85						
J03A	Ideyld Park	84.77	38	⇓P	P	15 27 20.8	-0.1
	baz=85						
S09A	Goldfield	84.84	45	⇑P	P	15 27 21.0	-0.3
	baz=85						
M06C	Likely Place G	84.87	41	⇑P	P	15 27 21.4	+0.1
	baz=85						
SNAA	Sanae	84.93	179	*e*P	P	15 27 21.1	-0.1
SNAA				*e*		15 27 23.4	
SNAA				*e*		15 27 26.9	
Y13A	Salome	84.96	50	⇑P	P	15 27 21.9	-0.1
	baz=85						
I03A	Eugene	84.97	37	⇓P	P	15 27 22.3	+0.4
	baz=85						
PDMCI	Parker Dam,Lak	85.01	49	P	P	15 27 22.4	+0.2
	baz=85,SNR=8.2						
TPNV	Topopah Spring	85.04	46	*e*P	P	15 27 21.9	-0.4
	comp=Z,9.3nm,1.0s,mb4.3						
Q08A	Gabbs	85.04	44	⇓P	P	15 27 22.0	-0.2
	baz=85						
W12A	Cal Nev Ari	85.05	48	⇑P	P	15 27 22.4	0.0
	baz=85						
VNA3	Neumayer Olymp	85.14	177	*e*P	P	15 27 21.5	-0.8
VNA3				*e*		15 27 23.7	
VNA3				*e*		15 27 28.0	
L05A	Lakeview	85.17	40	⇑P	P	15 27 23.3	+0.5
	baz=85						
V12A	Nelson	85.30	48	⇓P	P	15 27 23.6	0.0
	baz=85						
U11A	Corn Creek	85.32	47	⇓P	P	15 27 23.6	-0.1
	baz=85						
I04A	Tendick Farm,	85.34	38	⇓P	P	15 27 23.4	-0.2
	baz=85						
S10A	Tonopah Range,	85.36	45	⇑P	P	15 27 23.7	-0.1
	baz=85						
MOD	Modoc	85.39	40	*e*P	P	15 27 23.8	-0.1
	comp=Z,8.9nm,0.9s,mb4.3						
MOD	Modoc	85.39	40	P	P	15 27 24.0	+0.1
	baz=86,SNR=6.7						
H03A	Soap Creek Ran	85.42	37	⇑P	P	15 27 24.5	+0.6
	baz=86						
P08A	Dixie Valley	85.44	43	⇑P	P	15 27 24.7	+0.6
	baz=86						
VNA2	Neumayer--Watz	85.56	178	*e*P	P	15 27 24.2	-0.1
	baz=202,slow=2.8						
VNA2				*e*		15 27 26.3	
VNA2				*e*		15 27 29.7	
216A	Three Points,	85.70	52	⇓P	P	15 27 26.1	+0.4
	baz=86						
S11A	Rachel	85.76	46	⇑P	P	15 27 25.4	-0.4
	baz=86						
116A	Eloy	85.81	52	⇑P	P	15 27 26.5	+0.4
	baz=86						
T11A	Corn Creek, Al	85.88	46	⇓P	P	15 27 26.6	+0.2
	baz=86						
U12A	Valley of Fire	85.89	47	⇓P	P	15 27 26.9	+0.4
	baz=86						
Q10A	Clear Creek Ra	86.00	45	⇓P	P	15 27 26.8	-0.1
	baz=86						
H04A	Detroit Lake	86.03	37	⇑P	P	15 27 26.8	-0.1
	baz=86						
217A	Green Valley	86.05	53	⇑P	P	15 27 28.0	+0.7
	baz=86						
R11A	Troy Canyon, C	86.26	45	⇓P	P	15 27 28.0	-0.1
	baz=86						
O09A	Fish Creek Ran	86.27	43	⇓P	P	15 27 28.0	-0.1
	baz=86						
U13A	Pakoon Wash	86.27	48	⇓P	P	15 27 28.4	+0.2
	baz=86						
M08A	Happy Creek Ra	86.28	42	⇑P	P	15 27 28.2	+0.1
	baz=86						
S12A	Delamar Landin	86.33	46	⇓P	P	15 27 28.9	+0.4
	baz=86						
TUC	Tucson	86.35	52	*e*P	P	15 27 29.3	+0.6
	comp=Z,13nm,0.9s,mb4.6						
P10A	Eureka	86.41	44	⇑P	P	15 27 28.3	-0.5
	baz=86						
X15A	Humboldt	86.44	50	⇓P	P	15 27 29.4	+0.4
	baz=86						
N09A	Rock Creek Ran	86.45	42	⇑P	P	15 27 29.1	+0.2
	baz=86						
318A	Bisbee	86.49	54	⇓P	P	15 27 30.1	+0.7
	baz=87						
Q11A	Duckwater	86.49	45	⇓P	P	15 27 28.9	-0.3
	baz=87						
H05A	Madras	86.54	38	⇑P	P	15 27 29.7	+0.4
	baz=87						
GYA	Guiyang	86.62	301	P	P	15 27 29.8	-0.3
GYA				PP	PP	15 31 04.5	+2.1
GYA				SKS		15 37 01.4	
GYA				S	S	15 37 18.5	-3.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,80nm,4.8s						
T13A	Saint George	86.64	47	⇓P	P	15 27 30.2	+0.3
	baz=87						
I06A	Prineville	86.69	39	⇓P	P	15 27 30.7	+0.7
	baz=87						
F04A	Amboy	86.69	36	⇓P	P	15 27 30.3	+0.3
	baz=87						
WVOR	Wild Horse Val	86.70	41	*e*P	P	15 27 29.8	-0.3
	comp=Z,18nm,1.3s,mb4.5						
218A	Dragoon	86.72	53	⇓P	P	15 27 31.1	+0.7
	baz=87						
O10A	Cortez Mining,	86.77	43	⇑P	P	15 27 30.6	+0.1
	baz=87						
U14A	Mt Trumbull	86.81	48	⇓P	P	15 27 31.1	+0.3
	baz=87						
P11A	Circle Ranch,	86.83	44	⇓P	P	15 27 30.9	+0.1
	baz=87						
M09A	Marrel Ranch,	86.83	42	⇑P	P	15 27 31.1	+0.3
	baz=87						
J07A	Hines	86.86	40	⇑P	P	15 27 31.0	+0.2
	baz=87						
R12A	Pony Springs,	86.89	46	⇓P	P	15 27 31.4	+0.3
	baz=87						
S13A	Holt Ranch, En	86.98	47	⇓P	P	15 27 31.9	+0.3
	baz=87						
319A	Douglas	86.98	54	⇑P	P	15 27 32.5	+0.8
	baz=87						
L09A	Wilkinson Ranc	87.04	41	⇓P	P	15 27 31.6	-0.1
	baz=87						
TDL	Tradedollar La	87.06	36	P	P	15 27 32.4	+0.7
F05A	White Salmon	87.18	37	⇑P	P	15 27 32.2	0.0
	baz=87						
P12A	McGill	87.33	45	⇓P	P	15 27 33.3	+0.2
	baz=87						
E05A	Randle	87.44	36	⇓P	P	15 27 33.3	-0.2
	baz=88						
H07A	Lands Inn, Kim	87.45	38	⇑P	P	15 27 33.8	+0.2
	baz=88						
F06A	Goldendale	87.48	37	⇓P	P	15 27 33.7	+0.1
	baz=88						
C04A	Brinnon	87.53	35	⇓P	P	15 27 34.1	+0.3
	baz=88						
Q13A	Wheeler Ranch,	87.62	45	⇑P	P	15 27 34.3	-0.1
	baz=88						
T15A	Red Dirt Ranch	87.67	48	⇓P	P	15 27 35.1	+0.3
	baz=88						
D05A	Enumclaw	87.71	35	⇓P	P	15 27 35.1	+0.4
	baz=88						
L10A	Juniper Basin	87.81	42	⇓P	P	15 27 35.5	+0.2
	baz=88						
P13A	Bates Ranch, G	87.89	45	⇑P	P	15 27 35.6	-0.1
	baz=88						
H08A	Prairie City	87.92	39	⇓P	P	15 27 35.4	-0.4
	baz=88						
K10A	MacKenzie Ranc	87.96	41	⇑P	P	15 27 35.8	-0.2
	baz=88						
F07A	Phinny Hill Vi	88.03	37	⇓P	P	15 27 36.4	+0.1
	baz=88						
I09A	Lost Marbles R	88.14	40	⇑P	P	15 27 36.7	-0.1
	baz=88						
C05A	Tolt Reservoir	88.19	35	⇓P	P	15 27 36.6	-0.3
	baz=88						
EBG	Ellensburg	88.30	36	P	P	15 27 37.7	+0.2
D06A	Cle Elum	88.33	36	⇓P	P	15 27 37.6	+0.1
	baz=88						
B05A	Bryant	88.33	34	⇑P	P	15 27 37.4	-0.2
	baz=88						
J10A	Berg Farm, Mel	88.40	41	⇑P	P	15 27 38.2	+0.2
	baz=88						
K11A	Parker Ranch,	88.47	41	⇑P	P	15 27 38.7	+0.3
	baz=88						
RSW	Rattlesnake Hi	88.52	37	P	P	15 27 38.9	+0.3
N13A	Wendover, West	88.53	44	⇑P	P	15 27 38.7	0.0
	baz=89						
HAWA	Hanford	88.55	37	*e*P	P	15 27 38.4	-0.3
	comp=Z,46nm,1.5s,mb5.1						
MSU	Marysvale	88.60	47	*e*P	P	15 27 39.5	+0.4
H2OWA	Water	88.61	37	P	P	15 27 39.1	+0.2
F08A	Pendleton	88.62	38	⇓P	P	15 27 38.8	-0.1
	baz=89						
L12A	House Creek Ra	88.74	42	⇑P	P	15 27 39.9	+0.2
	baz=89						
I10A	Payette	88.75	40	⇓P	P	15 27 39.8	+0.2
	baz=89						
D07A	Quincy	88.80	36	⇑P	P	15 27 39.7	0.0
	baz=89						
M13A	Montello	88.84	43	⇑P	P	15 27 40.3	+0.2
	baz=89						
E08A	Dider Farm, El	88.87	37	⇓P	P	15 27 39.9	-0.2
	baz=89						
MFID	Camas Ranch	88.95	41	⇑P	P	15 27 40.6	0.0
	baz=89						
C07A	Waterville	89.05	36	⇑P	P	15 27 40.6	-0.4
	baz=89						
F09A	S2 Ranch, Elgi	89.06	38	⇓P	P	15 27 41.0	-0.1
	baz=89						
K12A	Draper Farm, C	89.08	42	⇓P	P	15 27 41.2	0.0
	baz=89						
KMI	Kunming	89.15	298	P	P	15 27 42.8	+0.8
KMI				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.5						
N14A	Grayback Hills	89.18	44	⇓P	P	15 27 41.8	0.0
	baz=89						
D08A	Wollman Farm,	89.29	37	⇑P	P	15 27 41.9	-0.1
	baz=89						

J12A	Stokes Ranch,	89.30	41	⇑P	P	15 27 42.7	+0.5
	baz=89						
L13A	Double Diamond	89.37	43	⇓P	P	15 27 42.6	0.0
	baz=89						
E09A	Wood Farm, Sta	89.39	38	⇓P	P	15 27 42.4	-0.2
	baz=90						
M14A	Sheep Mountain	89.43	44	⇓P	P	15 27 42.9	0.0
	baz=90						
H11A	Donnelly	89.57	40	⇓P	P	15 27 43.3	-0.2
	baz=90						
K13A	Stover Farm, H	89.59	42	⇓P	P	15 27 43.7	+0.1
	baz=90						
D09A	Jones Farm, Ri	89.63	37	⇑P	P	15 27 43.3	-0.3
	baz=90						
N15A	Stansbury Isla	89.63	44	⇓P	P	15 27 43.7	-0.1
	baz=90						
TMUT	Trail Mountain	89.65	46	eP	P	15 27 44.3	+0.4
A07A	Ashnola River,	89.71	35	⇓P	P	15 27 43.3	-0.7
	baz=90						
B08A	Colville Reser	89.84	36	⇓P	P	15 27 43.6	-1.0
	baz=90						
HLID	Hailey	89.89	41	eP	P	15 27 44.8	-0.2
	comp=Z,8.1nm,1.0s,mb4.5						
SPUT	South Promonto	89.90	44	eP	P	15 27 44.6	-0.5
HVU	Hansel Valley	89.94	44	eP	P	15 27 45.0	-0.2
	comp=Z,6.4nm,0.6s,mb4.6						
J13A	Cove Ranch, Pi	89.95	42	⇑P	P	15 27 45.6	+0.4
	baz=90						
M15A	Larsen Ranch,	89.98	44	⇑P	P	15 27 45.3	-0.1
	baz=90						
SRU	San Rafael	90.01	47	eP	P	15 27 45.1	-0.5
	comp=Z,22nm,0.9s,mb5.0						
MNTX	Cornudas Mount	90.05	55	eP	P	15 27 45.8	-0.2
	comp=Z,9.6nm,0.8s,mb4.7						
K14A	Jones Ranch, D	90.10	43	⇓P	P	15 27 46.1	+0.1
	baz=90						
F11A	Grangeville	90.16	39	⇑P	P	15 27 45.6	-0.6
	baz=90						
D10A	Wagner Farm, O	90.20	37	⇓P	P	15 27 45.5	-0.7
	baz=90						
DAU	Daniels Canyon	90.20	45	eP	P	15 27 46.4	-0.1
A08A	Turner Farm, O	90.23	35	⇑P	P	15 27 46.0	-0.4
	baz=90						
I13A	Wildhorse Cree	90.26	41	⇑P	P	15 27 46.5	-0.1
	baz=90						
TXAR	Lajitas Array	90.28	58	P	P	15 27 47.4	+0.3
	comp=Z,8.1nm,0.7s,mb4.7,baz=213,slow=6.5,SNR=85						
B09A	Rice	90.52	36	⇑P	P	15 27 47.2	-0.5
	baz=91						
H13A	Challis	90.54	41	⇓P	P	15 27 47.7	-0.2
	baz=91						
A09A	Danville	90.61	35	⇓P	P	15 27 47.8	-0.4
	baz=91						
HWUT	Hardware Ranch	90.62	44	eP	P	15 27 47.6	-0.8
	comp=Z,6.6nm,0.7s,mb4.7						
G13A	Cobalt	90.84	40	⇓P	P	15 27 48.8	-0.4
	baz=91						
PV01	Paradox Valley	90.84	48	eP	P	15 27 48.8	-0.7
CD2	Chengdu	90.94	303	eP	P	15 27 49.3	-0.8
CD2				PP	PP	15 31 37.3	+1.0
CD2				S	S	15 37 55.8	-5.7
CD2				SS	SS	15 44 20.3	-1.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,9.8s						
D12A	Red Ives Fores	91.28	38	⇑P	P	15 27 50.9	-0.3
	baz=91						
MCMT	McKenzie Canyo	91.52	41	P	P	15 27 52.5	+0.1
E13A	Victor	91.61	39	⇓P	P	15 27 51.4	-1.4
	baz=92						
A11A	Hall Mountain,	91.79	36	⇑P	P	15 27 53.5	-0.1
	baz=92						
G15A	Dillon	91.92	41	⇓P	P	15 27 54.2	-0.1
	baz=92						
E14A	Clinton	91.99	39	⇑P	P	15 27 53.9	-0.7
	baz=92						
A12A	Yaak River Ran	92.17	36	⇑P	P	15 27 55.2	-0.1
	baz=92						
IMW	Indian Meadow	92.20	43	eP	P	15 27 55.4	-0.2
	comp=Z,4.4nm,0.7s,mb4.6						
F15A	Butte	92.27	40	⇑P	P	15 27 55.5	-0.4
	baz=92						
D14A	Greenough	92.35	39	⇑P	P	15 27 55.8	-0.4
	baz=92						
PDAR	Pinedale Array	92.49	44	P	P	15 27 56.2	-0.7
	comp=Z,4.0nm,0.8s,mb4.5,baz=218,slow=3.4,SNR=34						
PDAR				PP	PP	15 31 44.1	-3.9
	comp=Z,0.6nm,1.0s,baz=225,slow=6.1,SNR=4.0						
BOZ	Bozeman (W)	92.69	41	eP	P	15 27 57.5	-0.3
	comp=Z,1.3nm,0.3s,mb4.4						
A13A	Flathead Natio	92.84	37	⇑P	P	15 27 58.1	-0.3
	baz=93						
SONM	Songino Array	96.91	319	PKKPbc	PKKPbc	15 44 56.1	-0.8
	comp=Z,1.0nm,0.6s,baz=279,slow=3.4,SNR=9.7						
INK	Inuvik	97.77	16	P	Pdif	15 28 18.7	-2.2
INK	Inuvik	97.77	16	P	Pdif	15 28 18.7	-2.2
	comp=Z,1.9nm,1.0s,baz=229,slow=6.9,SNR=4.4						
YKA	Yellowknife Ar	100.12	25	P	Pdif	15 28 30.9	-0.5
	comp=Z,0.2nm,0.5s,baz=252,slow=4.4,SNR=3.9						
MKAR	Makanchi Array	111.98	313	PKiKP	PKiKP	15 33 16.1	-1.2
	comp=Z,1.1nm,0.6s,baz=189,slow=0.9,SNR=12						
MKAR				SKP		15 36 02.0	
	comp=Z,0.7nm,0.6s,baz=95,slow=0.8,SNR=5.8						
MKAR				PKKPbc	PKKPbc	15 44 10.8	-0.9
	comp=Z,0.8nm,0.7s,baz=285,slow=3.1,SNR=7.0						
SCHQ	Schefferville	122.26	39	PKP	PKPdf	15 33 35.0	-1.8
	comp=Z,2.3nm,0.8s,baz=6.9,slow=4.6,SNR=6.6						
BOSA	Boshof	122.64	206	PKP	PKPdf	15 33 38.8	+0.3
	comp=Z,4.5nm,0.8s,baz=178,slow=6.9,SNR=5.7						
AKTK	Aktyubinsk	128.11	316	PKP	PKPdf	15 33 47.2	-1.0
AKTO	Aktyubinsk	128.11	316	PKP	PKPdf	15 33 47.2	-1.0
	comp=Z,2.2nm,0.6s,baz=91,slow=3.6,SNR=12						
MATP	Matopo	128.15	215	SKPbc		15 36 19.0	
	comp=Z,3.4nm,0.6s,baz=155,slow=5.8,SNR=9.3						
ARCES	ARCESS Array B	131.63	348	PKP	PKPdf	15 33 53.0	-1.3
	comp=Z,6.3nm,0.8s,baz=47,slow=1.2,SNR=19						
ARCES				SKPbc	SKPbc	15 36 28.6	-1.0
	comp=Z,5.9nm,0.9s,baz=42,slow=2.0,SNR=6.6						
TSUM	Tsumeb	134.10	203	PKP	PKPdf	15 34 01.2	+0.7
	comp=Z,2.4nm,0.7s,baz=45,slow=1.4,SNR=4.0						
JOF	Joensuu	135.49	340	ep	PKPdf	15 33 59.0	-2.7
KMBO	Kilima Mbogo	136.23	241	PKP	PKPdf	15 34 05.5	+0.8
KMBO				SKPbc	SKPbc	15 36 48.1	+1.8
KMBO	Kilima Mbogo	136.23	241	PKP	PKPdf	15 34 05.5	+0.8
	comp=Z,1.9nm,0.7s,baz=178,slow=4.0,SNR=4.2						
KMBO				SKPbc	SKPbc	15 36 48.1	+1.8
	comp=Z,0.6nm,0.2s,baz=64,slow=9.8,SNR=4.5						
KAF	Kangasniemi	137.60	342	ep	PKPdf	15 34 03.4	-2.2
FINES	FINESS Array B	138.20	342	PKhKP		15 33 56.9	
	comp=Z,1.0nm,0.8s,baz=85,slow=2.1,SNR=4.4						
FINES				PKP	PKPdf	15 34 05.9	-0.8
	comp=Z,1.5nm,0.5s,baz=64,slow=4.3,SNR=6.9						
FINES				SKPbc	SKPbc	15 36 50.6	+0.3
	comp=Z,4.7nm,0.6s,baz=70,slow=3.7,SNR=14						
NB2	NORSAR Subarra	141.82	351	PKP		15 34 08.0	
	comp=Z,1.5nm,0.6s,baz=16,slow=3.2						
NOA	NORSAR Array B	141.82	351	PKhKP		15 34 08.2	
	comp=Z,3.3nm,0.7s,baz=16,slow=4.7,SNR=9.6						
NOA				PKP	PKPdf	15 34 14.9	+1.6
	comp=Z,1.7nm,0.7s,baz=13,slow=4.0,SNR=3.9						
NOA				SKPbc	SKPbc	15 37 00.4	+0.5
	comp=Z,2.2nm,0.8s,baz=14,slow=4.2,SNR=6.1						
HFS	Hagfors	142.29	349	PKhKP		15 34 09.4	
	comp=Z,9.2nm,0.4s,baz=67,slow=3.9,SNR=89						
HFS				PKP	PKPdf	15 34 14.2	+0.1
	comp=Z,3.0nm,0.6s,baz=72,slow=4.7,SNR=6.3						
HFS				SKPbc	SKPbc	15 37 01.2	+0.1
	comp=Z,4.8nm,0.8s,baz=234,slow=1.2,SNR=6.1						
AKASG	Malin Array Be	144.75	327	PKP	PKPdf	15 34 17.9	-0.8
	comp=Z,6.6nm,0.6s,baz=44,slow=3.8,SNR=42						
AKASG				pPKP	pPKPdf	15 36 25.2	-0.3
	comp=Z,1.7nm,0.8s,baz=43,slow=3.5,SNR=3.3						
AKASG				SKPbc	SKPbc	15 37 08.0	+0.8
	comp=Z,5.6nm,0.8s,baz=47,slow=2.2,SNR=18						
KIEV	Kiev	144.77	327	ePKP	PKPdf	15 34 17.7	-1.0
ASF	Jabal al Asfar	146.44	293	PKPbc	PKPbc	15 34 24.7	+0.1
	comp=Z,4.0nm,0.7s,baz=358,slow=0.9,SNR=4.4						
BRTR	Keskin Array B	147.43	308	PKPbc	PKPbc	15 34 26.4	-0.5
	comp=Z,1.7nm,0.6s,baz=136,slow=4.2,SNR=9.1						
BRTR				pPKPbc	pPKPbc	15 36 29.2	-2.6
	comp=Z,0.6nm,0.9s,baz=98,slow=4.4,SNR=2.1						
MMAI	Mount Meron Ar	147.60	295	PKPbc	PKPbc	15 34 28.6	+1.0
	comp=Z,9.7nm,0.5s,baz=77,slow=4.7,SNR=15						
EKA	Eskdalemuir Ar	148.25	3	PKPbc	PKPbc	15 34 27.4	-1.1
	comp=Z,4.3nm,0.4s,baz=341,slow=2.5,SNR=19						
EIL	Elat	148.28	289	PKPbc	PKPbc	15 34 30.1	+0.6
	comp=Z,6.0nm,0.6s,baz=308,slow=1.9,SNR=6.7						
KWP	Kalwaria	148.54	331	ePKP	PKPbc	15 34 29.4	-0.1
KWP	Kalwaria	148.54	331	⇓iP	PKPbc	15 34 27.7	-1.8
BURAR	Bucovina Array	148.76	326	⇓iP	PKPbc	15 34 31.3	+1.3
KOLS	Kolonicke sedl	149.25	331	ePKP	PKPbc	15 34 31.3	+0.1
KOLS				e		15 34 39.0	
OJC	Ojcow	149.30	335	ePKP	PKPbc	15 34 30.9	-0.4
STHS	Stebnicka Huta	149.34	332	ePKP	PKPbc	15 34 31.5	+0.1
CRVS	Cervenica-Dubn	149.63	331	ePKP	PKPbc	15 34 31.9	-0.2
MLR	Muntele Rosu	149.71	322	PKPbc	PKPbc	15 34 31.8	-0.7
	comp=Z,4.0nm,0.7s,baz=30,slow=4.4,SNR=5.0						
KSP	Ksiaz	150.05	339	ePKP	PKPbc	15 34 33.2	+0.2
KSP	Ksiaz	150.05	339	ePKPdf	PKPbc	15 34 33.0	0.0
OKC	Ostrava-Krasne	150.24	336	ePKP	PKPbc	15 34 33.4	-0.1
OKC	Ostrava-Krasne	150.24	336	⇑ePKP	PKPbc	15 34 33.4	-0.1
KECS	Kecovo	150.37	332	ePKP	PKPbc	15 34 33.1	-0.8
KECS				e		15 34 39.1	
UPC	Upice	150.43	339	ePKP	PKPbc	15 34 33.7	-0.2
UPC				e		15 36 42.4	
UPC	Upice	150.43	339	⇑ePKP	PKPbc	15 34 33.7	-0.2
UPC				epPKP	pPKPdf	15 36 42.4	+7.4
DPC	Dobruska-Polom	150.46	339	ePKP	PKPbc	15 34 34.1	+0.1
DPC				e		15 36 42.7	
DPC	Dobruska-Polom	150.46	339	⇑ePKP	PKPbc	15 34 34.1	+0.1
DPC				epPKP	pPKPdf	15 36 42.7	+7.6
MORC	Moravsky Berou	150.51	337	⇓iP	PKPbc	15 34 33.9	-0.2
DRGR		150.57	327	⇑iP	PKPdf	15 34 30.9	+2.6
CLL	Collm	150.61	343	⇑iPKP	PKPbc	15 34 33.9	-0.4
CLL				i pPKP	pPKPdf	15 36 42.9	+7.6
CLL	Collm	150.61	343	⇑iPKPbc	PKPbc	15 34 33.9	-0.4
	comp=Z,30nm,0.8s						
CLL				i pPKPbc	pPKPbc	15 36 42.9	+2.9
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	150.74	342	⇑iPKP	PKPbc	15 34 34.2	-0.4
	comp=Z,17nm,0.6s						
BRG				pPKP	pPKPdf	15 36 43.1	+7.6
	comp=Z,19nm,1.4s						
PVCC	Panska Ves	150.86	341	ePKP	PKPbc	15 34 34.6	-0.3
PVCC				e		15 36 43.5	
PVCC	Panska Ves	150.86	341	⇑ePKP	PKPbc	15 34 34.6	-0.3
PVCC				epPKP	pPKPdf	15 36 43.5	+7.8
VYHS	Vyhne	151.06	334	ePKP	PKPbc	15 34 34.9	-0.5
KOLL	Kolacno	151.16	334	ePKP	PKPbc	15 34 35.5	-0.2
PRU	Pruhonice	151.34	340	ePKP	PKPbc	15 34 35.8	-0.2
PRU				e		15 36 43.9	
PRU	Pruhonice	151.34	340	⇑ePKP	PKPbc	15 34 35.8	-0.2
PRU				epPKP	pPKPdf	15 36 43.9	+7.4
GZR	Gura Zlata	151.49	325	⇓iP	PKPbc	15 34 36.2	-0.3
MOX	Moxa	151.57	344	ePKP	PKPbc	15 34 35.8	-0.7
TREC	Trest	151.64	338	⇑ePKP	PKPbc	15 34 36.2	-0.5
TREC				epPKP	pPKPdf	15 36 45.1	+8.1
NKC	Novy Kostel	151.73	343	ePKP	PKPbc	15 34 36.9	0.0
NKC				e		15 36 45.9	
NKC	Novy Kostel	151.73	343	⇑ePKP	PKPbc	15 34 36.9	0.0
NKC				epPKP	pPKPdf	15 36 45.9	+8.8
MODS	Modra-Piesok	151.77	335	ePKP	PKPbc	15 34 36.8	-0.2
KHC	Kasperske Hory	152.40	341	ePKP	PKPbc	15 34 38.1	-0.3
KHC				e		15 36 46.6	
KHC	Kasperske Hory	152.40	341	⇑ePKP	PKPbc	15 34 38.1	-0.3
KHC				epPKP	pPKPdf	15 36 46.6	+8.5
GERES	GERESS Array B	152.61	340	PKP	PKPdf	15 34 32.1	+0.8
	comp=Z,0.6nm,0.7s,baz=5.7,slow=2.7,SNR=3.7						
GERES				PKPbc	PKPbc	15 34 38.3	-0.6
	comp=Z,2.2nm,0.7s,baz=23,slow=1.7,SNR=11						
GERES				pPKPbc	pPKPbc	15 36 44.9	0.0
	comp=Z,1.8nm,0.9s,baz=48,slow=2.0,SNR=2.8						
PKSM	Moragy	152.92	331	⇓iP	PKPbc	15 34 37.6	-2.0
LIC	Lamto	162.02	164	ePKIKP	PKPdf	15 34 43.0	-1.0
	comp=Z,57nm,1.6s						
KIC	Kosan Boka	162.23	164	ePKIKP	PKPdf	15 34 43.3	-0.9
	comp=Z,40nm,0.9s						
TIC	Toumodi	162.43	163	ePKIKP	PKPdf	15 34 43.3	-1.1
	comp=Z,9.3nm,1.0s						
DBIC	Dimbokro	162.49	164	PKP	PKPdf	15 34 43.8	-0.7
DBIC				PKPab	PKPab	15 35 36.5	+0.7
DBIC	Dimbokro	162.49	164	PKP	PKPdf	15 34 43.8	-0.7
	comp=Z,5.2nm,0.9s,baz=68,slow=7.2,SNR=4.8						
DBIC				PKPab	PKPab	15 35 36.5	+0.7
	comp=Z,7.1nm,0.8s,baz=128,slow=0.9,SNR=6.4						
ESDC	Sonseca Array	163.66	11	PKPab	PKPab	15 35 39.8	-0.5
	comp=Z,0.2nm,0.3s,baz=328,slow=4.6,SNR=3.8						
TORD	Torodi Ar. Bea	169.45	189	PKP	PKPdf	15 34 48.6	-1.2
	comp=Z,5.0nm,1.1s,baz=270,slow=0.6,SNR=15						
TORD				PKPab	PKPab	15 36 06.8	+0.4
	comp=Z,5.4nm,0.9s,baz=178,slow=3.9,SNR=20						
TORD				PP	PP	15 39 56.6	+0.8
	comp=Z,1.8nm,0.9s,baz=163,slow=5.9,SNR=4.7						
MDT	Midelt	169.99	23	PKP	PKPdf	15 34 50.1	+0.4
	comp=Z,4.5nm,0.9s,baz=203,slow=7.6,SNR=3.7						
MDT				PKPab	PKPab	15 36 08.1	-0.5
	comp=Z,2.5nm,1.0s,baz=297,slow=14,SNR=2.6						

SKHL 13 15:19:09.3±0.2, 5423N×13209E, h9km±3km, mb4.2/5, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	Ekimchan	1.27	156	⇑iPg	Pg	15 19 32.4	-1.2
EKMR				AMB	AMB	15 19 36.7	
	180nm,0.3s						
EKMR				AMB	AMB	15 19 36.7	
	61nm,0.3s						
EKMR				AMB	AMB	15 19 36.7	
	110nm,0.3s						
EKMR				eSg	Sg	15 19 49.1	-1.0
EKMR				A		15 19 49.6	
	88nm,0.5s						
EKMR				A		15 19 49.6	
	490nm,0.5s						
EKMR				A		15 19 49.6	
	140nm,0.5s						
BMKR	Bomnak	1.96	286	ePn	Pn	15 19 40.8	-1.8
BMKR				erx	rx	15 19 42.5	
BMKR				ePg	Pg	15 19 44.0	-2.8
BMKR				AMB	AMB	15 19 44.5	
	60nm,0.4s						
BMKR				pPg		15 19 46.6	
BMKR				eSn	Sn	15 20 05.9	-1.3
BMKR				eSg	Sg	15 20 09.2	-2.9
BMKR				A		15 20 10.4	
	194nm,0.4s						
BMKR				A		15 20 10.4	
	375nm,0.4s						
ZEA	Zeya	2.90	262	ePn	Pn	15 19 54.2	-1.4
ZEA				ePg	Pg	15 20 00.5	-4.3
ZEA				AMB	AMB	15 20 03.3	
	58nm,0.4s						
ZEA				AMB	AMB	15 20 03.3	
	87nm,0.4s						
ZEA				pPg		15 20 04.3	
ZEA				eSg	Sg	15 20 37.7	-4.7
ZEA				A		15 20 39.9	
	210nm,0.8s						
ZEA				A		15 20 39.9	
	200nm,0.8s						
ZEA				A		15 20 39.9	
	64nm,0.8s						
KROS	Kirovskiy	3.00	276	ePn	Pn	15 19 55.2	-1.8
KROS				sPn		15 20 00.5	
KROS				ePg	Pg	15 20 02.7	-4.1
KROS				AMB	AMB	15 20 05.3	
	26nm,0.5s						
KROS				AMB	AMB	15 20 05.3	
	23nm,0.5s						
KROS				eSn	Sn	15 20 32.1	-1.0
KROS				eSg	Sg	15 20 41.5	-4.2
KROS				A		15 20 44.5	
	120nm,0.5s						
KROS				A		15 20 44.5	
	45nm,0.5s						
KROS				A		15 20 44.5	
	97nm,0.5s						
GRNR	Gornyy	4.36	141	ePg	Pg	15 20 28.1	-4.7
GRNR				eSg	Sg	15 21 25.9	-3.3
GRNR				A		15 21 30.0	
	72nm,0.7s						
CLNS	Chul'man	4.85	305	erx	rx	15 20 39.2	
CLNS				eSg	Sg	15 21 40.1	-4.8
CLNS				A		15 21 44.0	
	94nm,0.4s						
CLNS				A		15 21 44.0	
	182nm,0.4s						
KLR	Kul'dur	5.01	183	ePn	Pn	15 20 25.2	+0.6
KLR				eSg	Sg	15 21 46.3	-3.8
NKL	Nikolayevsk	5.22	98	erx	rx	15 20 23.8	
NKL				eSg	Sg	15 21 50.0	-6.7
NKL				A		15 21 55.0	
	65nm,0.8s						
NKL				A		15 21 55.0	
	30nm,0.8s						
TUP	Tupik	7.10	276	ePn	Pn	15 20 54.9	+1.6
TUP				ePg	Pg	15 21 18.7	-6.5
TUP				AMB	AMB	15 21 23.7	
	12nm,0.6s						
TUP				eSn	Sn	15 22 16.0	+2.0
TUP				eSg	Sg	15 22 52.7	-4.4
TUP				A		15 22 56.5	
	78nm,1.1s						

*TEH **13** 15:34:10.5, 3321N×6026E, h4km, ML3.6*

*IDC **13** 15:35:01.9±1.1, 3297N×6020E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.6/22, mbtmp3.6/9, ML3.4/1, Error ellipse: s-maj=33.2km s-min=23.7km az=178.0*

*CSEM **13** 15:35:03.9±0.1, 3320N×6024E, h18km, ML3.6, Error ellipse: s-maj=4.7km s-min=2.3km az=132.0*

*ISCJB **13** 15:35:04.5±1.3, 33.15N±006×6028E±007, h23km±10km, mb3.5/8, Error ellipse: s-maj=12.6km s-min=6.4km az=136.9*

*NEIC **13** 15:35:04.3, 3321N×6026E, h4km, MN3.6(TEH), After TEH.*

ISC 13 15:35:04.7±1.3, 3316N±006×6022E±007, h13km±9km, n28, σ1§08/31, mb3.5/8, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDAH		0.51	215	eSg	Sg	15 35 22.5	+1.0
IKOO		1.26	235	eSg	Sg	15 35 45.3	+0.1
ITEG		1.26	258	ePg	Pg	15 35 27.1	-1.8
ITEG				eSg	Sg	15 35 45.0	-0.3
IMOG	Moghan	3.03	346	Pn	Pn	15 35 52.3	-0.1
IMOG	Moghan	3.03	346	ePn	Pn	15 35 52.4	0.0
IMOG				e		15 36 03.7	
	comp=Z,2µm,0.2s						
IMYA	Miamay	3.18	358	Pn	Pn	15 35 54.2	-0.2
IMYA	Miamay	3.18	358	ePn	Pn	15 35 54.3	-0.1
IMYA				e		15 36 46.6	
	comp=Z,2µm,0.2s						
IPAY	Payeh	3.43	343	Pn	Pn	15 35 58.4	+0.5
IPAY	Payeh	3.43	343	ePn	Pn	15 35 58.5	+0.6
IPAY				e		15 36 31.9	
	comp=Z,994nm,0.2s						
IKRD	Kardeh	3.87	339	Pn	Pn	15 36 01.1	-2.7
IKRD	Kardeh	3.87	339	ePn	Pn	15 36 01.2	-2.6
IKRD				e		15 36 16.8	
	comp=Z,1µm,0.2s						
IBAF	Bafgh	4.23	250	Pn	Pn	15 36 09.9	+1.0
IBAF				Sn	Sn	15 36 58.4	+0.2
IBAF	Bafgh	4.23	250	eSn	Sn	15 36 58.5	+0.3
IBAF				e		15 37 35.0	
	comp=Z,894nm,0.4s						
IBAF	Bafgh	4.23	250	Pn	Pn	15 36 09.9	+1.0
IBAF				eSn	Sn	15 36 58.5	+0.3
AKTK	Aktyubinsk	17.34	355	P	Pn	15 39 07.4	+1.1
AKTK	Aktyubinsk	17.34	355	P	Pn	15 39 07.4	+1.1
AKTO	Aktyubinsk	17.34	355	P	Pn	15 39 07.4	+1.1
	comp=Z,0.1nm,0.3s,baz=178,slow=14,SNR=2.6						
MKAR	Makanchi Array	21.62	44	P	P	15 39 55.1	+0.7
	comp=Z,0.4nm,0.3s,mb3.3,baz=230,slow=12,SNR=6.3						
BRTR	Keskin Array B	22.32	295	P	P	15 40 03.5	+1.6
	comp=Z,0.5nm,0.7s,mb3.0,baz=137,slow=11,SNR=3.7						
BRTR	Keskin Array B	22.32	295	P	P	15 40 03.5	+1.6
SONM	Songino Array	37.48	53	P	P	15 42 19.0	+1.1
	comp=Z,0.2nm,0.5s,mb3.2,baz=277,slow=9.5,SNR=3.8						
KSRS	Korea Array	54.35	65	P	P	15 44 30.0	-1.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=204,slow=44,SNR=2.8						
TORD	Torodi Ar. Bea	56.65	264	P	P	15 44 45.9	-2.0
	comp=Z,0.6nm,0.6s,mb3.8,baz=54,slow=7.3,SNR=1.3						
YKA	Yellowknife Ar	84.59	358	P	P	15 47 36.9	-0.5
YKA	Yellowknife Ar	84.59	358	P	P	15 47 36.9	-0.5
	comp=Z,0.2nm,0.4s,mb3.6,baz=358,slow=5.4,SNR=7.1						
YKA	Yellowknife Ar	84.59	358	P	P	15 47 36.9	-0.5
WRA	Warramunga Arr	88.20	115	P	P	15 47 54.7	-1.1
	comp=Z,0.3nm,0.6s,mb3.7,baz=302,slow=6.6,SNR=4.9						
ASAR	Alice Springs	90.07	118	P	P	15 48 04.1	-0.4
	comp=Z,0.3nm,0.5s,mb3.9,baz=308,slow=5.1,SNR=12						

IDC 13 15:44:25.1±1.7, 2036S×6873W, h0km, mb4.1/2, mb1 4.3/4, mb1mx3.9/16, mbtmp4.1/4, ML4.1/2, Error ellipse: s-maj=43.1km s-min=40.5km az=100.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.08	8	Pn	Pn	15 45 30.9	+2.0
	7.9nm,0.3s,baz=188,slow=12,SNR=90						
LPAZ				Sn	Sn	15 46 17.6	+0.3
	3.9nm,0.3s,baz=246,slow=19,SNR=1.9						
SIV	San Ignacio	8.47	60	Pn	Pn	15 46 29.1	0.0
	1.5nm,0.3s,baz=231,slow=13,SNR=28						
TORD	Torodi Ar. Bea	76.81	71	P	P	15 56 19.2	-0.1
	1.4nm,0.7s,baz=265,slow=4.5,SNR=7.4						
YKA	Yellowknife Ar	90.17	341	P	P	15 57 26.2	-0.6
	0.9nm,0.8s,baz=133,slow=4.7,SNR=17						
SONM	Songino Array	152.30	7	PKPbc	PKPbc	16 04 23.8	+0.9
	0.4nm,0.9s,baz=11,slow=2.9,SNR=3.1						
SONM				PKPab	PKPab	16 04 32.1	-0.6
	0.4nm,0.7s,baz=320,slow=1.7,SNR=3.6						

*IDC **13** 15:47:38.7±0.5, 5426S×12101W, h0km, mb4.4/11, mb1 4.6/11, mb1mx4.5/16, mbtmp4.4/11, MS4.4/18, Ms1 4.4/18, ms1mx4.4/18, Error ellipse: s-maj=26.1km s-min=16.5km az=146.0*

*ISCJB **13** 15:47:39.1±0.5, 5426S±009×1209W±01, h10km, mb4.5/15, MS4.5/22, Error ellipse: s-maj=13.4km s-min=11.7km az=29.4*

*GCMT **13** 15:47:40.7±0.2, 5446S×12078W, h19km±1km, MW5.1/82, Moment Tensor Solution. s48,c65; s82,c133; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.32±.18; $M_{\theta\theta}$4.48±.19; $M_{\phi\phi}$-3.15±.15; $M_{r\theta}$1.47±.34; $M_{\theta\phi}$4.74±.13; $M_{\phi r}$1.53±.34; Best double couple: $M_0$6.38800×10^{16} NP1:ϕ_s110.00000°, δ73.00000°, λ2.00000°. NP2: ϕ_s20.00000°, δ88.00000°, λ163.00000°. Principal axes: T 7.2140, Plg13.0000°, Azm334.0000°; N -1.6430, Plg73.0000°, Azm194.0000°; P -5.5610, Plg11.0000°, Azm66.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 15:47:40.7±0.4, 5425S×12077W, h10km, mb4.8/3 Error ellipse: s-maj=18.6km s-min=12.6km az=151.0*

*BJI **13** 15:47:40.6, 5420S×12080W, h10km, mB5.1, Ms5.2, Msz4.7*

ISC 13 15:47:40.7±0.5, 5426S±009×1209W±01, h10km, n59, σ1§09/20, mb4.5/15, MS4.5/22, 5C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	Rapa Nui	28.42	22	LR	LR	16 01 08.7	
	comp=Z,259nm,19.6s,MS3.8,baz=138,slow=28						
PMSA	Palmer Station	29.65	133	LR	LR	16 01 58.7	
	comp=Z,1µm,20.5s,MS4.5,baz=183,slow=29						
USHA	Ushuaia	29.86	113	LR	LR	16 02 28.7	
	comp=Z,579nm,18.8s,MS4.2,baz=29,slow=30						
RKT	Rikitea	32.84	336	eS	S	15 59 32.0	+0.4
	213nm,27.7s						
RKT				eLR	LR	16 02 50.6	
	2µm,28.0s,baz=165						
QSPA	South Pole Qui	35.93	180	eP	P	15 54 42.8	+2.3
	71nm,1.7s,mb5.3						
QSPA	South Pole Qui	35.93	180	P	P	15 54 41.8	+1.3
	9.1nm,1.1s,mb4.6,baz=109,slow=5.0,SNR=9.4						
TBI	Tubuai	37.55	314	eS	S	16 00 42.2	-1.7
	130nm,31.0s						
TBI				eLR	LR	16 05 00.6	
	1µm,26.8s,baz=154						
TRQA	Tornquist	42.60	93	eP	P	15 55 36.3	-0.4
	24nm,1.3s,mb4.8						
PPT	Papeete	42.77	318	eS	S	16 02 02.5	+0.5
	157nm,26.2s						
PPT				eLQ		16 05 38.3	
	2µm,26.8s						
PPT				eLR	LR	16 07 26.1	
	2µm,26.0s,baz=159						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	42.77	318	LR	LR	16 08 21.7	
	comp=Z,979nm,21.8s,MS4.7,baz=147,slow=29						
CFAA	Coronel Fontan	43.47	81	P	P	15 55 42.6	-1.1
	1.2nm,0.8s,mb3.7,baz=228,slow=8.4,SNR=18						
LCO	Las Campanas	43.99	76	eP	P	15 55 47.7	-0.3
	146nm,2.0s,mb5.4						
SNAA	Sanae	47.09	158	P	P	15 56 11.6	-0.5
	2.8nm,0.9s,mb4.2,baz=253,slow=14,SNR=2.7						
LPAZ	La Paz	55.50	68	eP	P	15 57 16.5	+0.8
	24nm,1.1s,mb5.1						
LPAZ	La Paz	55.50	68	P	P	15 57 16.5	+0.8
	13nm,1.0s,mb4.9,baz=198,slow=5.8,SNR=26						
LPAZ				LR	LR	16 15 14.6	
	comp=Z,218nm,20.6s,MS4.2,baz=284,slow=30						
ATAH	Atahualpa	58.18	52	P	P	15 57 35.9	+1.1
	5.7nm,0.7s,mb4.7,baz=135,slow=8.6,SNR=3.1						
MAW	Mawson	58.42	182	LR	LR	16 22 04.9	
	comp=Z,338nm,18.1s,MS4.5,baz=352,slow=35						
STKA	Stephens Creek	68.86	245	P	P	15 58 47.6	+2.3
	2.7nm,0.8s,mb4.2,baz=172,slow=7.1,SNR=3.8						
STKA				LR	LR	16 24 02.5	
	comp=Z,302nm,18.3s,MS4.6,baz=302,slow=32						
ROSC	El Rosal	70.51	50	LR	LR	16 24 43.8	
	comp=Z,156nm,18.2s,MS4.3,baz=190,slow=32						
SDV	Santo Domingo	75.75	52	P	P	15 59 25.1	-1.4
	5.8nm,0.9s,mb4.5						
ASAR	Alice Springs	79.49	244	P	P	15 59 45.9	-1.5
	2.8nm,0.9s,mb4.2,baz=139,slow=4.8,SNR=19						
WRA	Warramunga Arr	82.29	247	P	P	16 00 01.5	-0.9
	4.9nm,0.9s,mb4.4,baz=144,slow=4.7,SNR=26						
WRA				LR	LR	16 32 04.5	
	comp=Z,274nm,18.9s,MS4.6,baz=190,slow=32						
PMG	Port Moresby	83.56	263	LR	LR	16 29 32.2	
	comp=Z,112nm,19.4s,MS4.2,baz=8.6,slow=30						
TXAR	Lajitas Array	84.57	15	P	P	16 00 14.2	+0.5
	0.5nm,0.8s,mb3.7,baz=190,slow=6.4,SNR=5.3						
TXAR				LR	LR	16 29 10.6	
	comp=Z,44nm,19.4s,MS3.9,baz=0.0,slow=30						
MNTX	Cornudas Mount	86.65	13	eP	P	16 00 25.2	+1.2
	9.6nm,1.5s,mb4.8						
PFO	Pinyon Flat Ob	87.59	4	LR	LR	16 31 04.9	
	comp=Z,304nm,20.3s,MS4.7,baz=272,slow=30						
FITZ	Fitzroy Crossi	88.39	241	P	P	16 00 32.3	-0.5
	3.0nm,0.9s,mb4.5,baz=145,slow=4.4						
FITZ				LR	LR	16 35 32.0	
	comp=Z,127nm,18.6s,MS4.4,baz=332,slow=32						
ANMO	Albuquerque	89.72	12	LR	LR	16 32 20.7	
	comp=Z,145nm,20.2s,MS4.4,baz=192,slow=30						
NVAR	Mina Array Bea	92.35	2	P	P	16 00 50.8	+0.2
	1.0nm,0.9s,mb4.2,baz=175,slow=6.0,SNR=5.9						
BOSA	Boshof	92.45	151	LR	LR	16 42 16.4	
	comp=Z,191nm,18.4s,MS4.6,baz=193,slow=35						
TKL	Tuckaleechee C	95.11	30	LR	LR	16 36 27.3	
	comp=Z,144nm,19.4s,MS4.5,baz=240,slow=31						
BATI	Kupang	96.04	243	LR	LR	16 39 36.1	
	comp=Z,316nm,18.1s,MS4.8,baz=131,slow=32						
PDAR	Pinedale Array	97.14	8	LR	LR	16 37 45.5	
	comp=Z,201nm,19.5s,MS4.6,baz=23,slow=31						
KMI	Kunming	136.61	246	PKP	PKPdf	16 07 05.6	+2.9
KMI				XPKP		16 07 09.6	
KMI				LR	LR		
	comp=Z,79nm,36.6s,MS4.2						
CD2	Chengdu	140.58	252	ePKP	PKPdf	16 07 11.9	+2.1
CD2				PP	PP	16 10 17.0	+7.6
CD2				SKS	SKSdf	16 14 16.6	-3.3
CD2				SKKS	SKKSac	16 17 02.9	+0.2
CD2				SS	SS	16 28 39.0	+4.5
CD2				PP	PP		
	comp=Z,70nm,10.2s						
CD2				LR	LR		
	comp=N,130nm,18.6s						
CD2				LR	LR		
	comp=Z,120nm,22.4s,MS4.6						
HHC	Hu-ho-hao-te	143.00	271	ePKP	PKPdf	16 07 11.8	-2.0
HHC				APKP		16 07 19.6	
HHC				PP	PP	16 10 25.6	+1.3
HHC				PKS		16 10 45.8	
HHC				SKKS	SKKSac	16 17 12.3	-4.0
HHC				PP	PP		
	comp=Z,123nm,9.7s						
HHC				LR	LR		
	comp=N,227nm,14.3s,MS5.2						
HHC				LR	LR		
	comp=E,174nm,13.1s,MS5.2						
HHC				LR	LR		
	comp=Z,152nm,14.3s,MS4.9						
LZH	Lanzhou	144.32	258	ePKP	PKPdf	16 07 17.0	+0.7
LZH				APKP		16 07 21.5	
EKA	Eskdalemuir Ar	145.16	62	PKPbc	PKPbc	16 07 16.4	-0.4
	comp=Z,6.1nm,0.8s,baz=245,slow=3.3,SNR=11						
LSA	Lhasa	146.28	236	PKP	PKPbc	16 07 22.0	+1.0
LSA	Lhasa	146.28	236	ePKPdf	PKPbc	16 07 22.4	+1.3
TIXI	Tiksi	146.34	328	ePKPdf	PKPdf	16 07 19.6	+0.9
DOU	Dourbes	147.04	74	PKP	PKPbc	16 07 22.5	-0.1
DAVOX	Davos/Dischmat	148.40	83	PKPbc	PKPbc	16 07 25.8	-0.6
	comp=Z,5.3nm,0.9s,baz=104,slow=4.2,SNR=4.2						
GTA	Gaotai	148.92	258	ePKP	PKPbc	16 07 28.9	+0.9
FETA	Feichten	149.02	83	⇑ipPKPdf	PKPbc	16 07 27.1	-0.9
	comp=Z,11nm,1.1s						
RETA	Reutte	149.28	83	⇑ipPKPdf	PKPbc	16 07 28.5	0.0
	comp=Z,7.7nm,1.0s						
ABTA	Abfaltersbach	149.92	85	⇑iPKPbc	PKPbc	16 07 30.0	-0.2
	comp=Z,7.8nm,1.0s						
SONM	Songino Array	150.04	277	PKPbc	PKPbc	16 07 30.8	+0.4
	comp=Z,1.7nm,0.9s,baz=166,slow=2.1,SNR=12						
OBKA	Obir	150.99	87	⇑iP	PKPbc	16 07 33.1	+0.3
	comp=Z,12nm,0.8s						
MOX	Moxa	151.28	78	eP	PKPbc	16 07 33.1	-0.2
GERES	GERESS Array B	151.67	82	PKPbc	PKPbc	16 07 34.0	-0.3
	comp=Z,4.2nm,0.7s,baz=207,slow=2.4,SNR=29						
ARSA	Arzberg	151.94	86	⇑iP	PKPbc	16 07 34.8	-0.1
	comp=Z,7.8nm,0.8s						
NOA	NORSAR Array B	154.03	55	PKPbc	PKPbc	16 07 38.8	-0.2
	comp=Z,1.4nm,0.8s,baz=266,slow=1.9,SNR=2.8						
VYHS	Vyhne	154.50	86	ePKP	PKPdf	16 07 31.9	-0.1
MLR	Muntele Rosu	157.10	99	PKPab	PKPab	16 08 05.1	-1.2
	comp=Z,2.4nm,0.7s,baz=232,slow=6.7,SNR=4.3						
BRTR	Keskin Array B	157.53	120	PKP	PKPdf	16 07 36.5	+0.1
	comp=Z,1.2nm,1.0s,baz=153,slow=0.9,SNR=3.4						
BRTR				PKPab	PKPab	16 08 07.8	-0.5
	comp=Z,2.3nm,0.8s,baz=190,slow=5.8,SNR=8.1						
WMQ	Urumqi	158.68	252	ePKP	PKPdf	16 07 39.6	+2.0
WMQ				ePP	PP	16 11 59.4	+5.2
WMQ				PP	PP		
	comp=Z,210nm,8.0s						
WMQ				LR	LR		
	comp=N,91nm,20.3s,MS4.7						
WMQ				LR	LR		
	comp=E,67nm,22.5s,MS4.7						
WMQ				LR	LR		
	comp=Z,103nm,18.0s,MS4.7						
AKASG	Malin Array Be	161.54	89	PKP	PKPdf	16 07 39.8	-0.8
	comp=Z,0.2nm,0.2s,baz=280,slow=1.1,SNR=6.9						
MKAR	Makanchi Array	163.51	253	PKPab	PKPab	16 08 33.1	-1.1
	comp=Z,1.0nm,0.8s,baz=116,slow=5.5,SNR=8.0						

IDC 13 15:48:09.5±1.3, 338N×12658E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, Error ellipse: s-maj=128.3km s-min=21.1km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.40	162	P	P	15 53 29.8	0.0
	2.3nm,0.5s,baz=342,slow=10.0,SNR=25						
ASAR	Alice Springs	27.82	165	P	P	15 54 00.8	+0.2
	0.3nm,0.6s,baz=345,slow=7.7,SNR=7.4						
SONM	Songino Array	47.58	342	P	P	15 56 47.4	+0.5
	0.3nm,0.8s,baz=145,slow=5.3,SNR=2.3						
MKAR	Makanchi Array	57.76	325	P	P	15 58 02.0	-0.3
	0.6nm,0.4s,baz=124,slow=7.9,SNR=5.4						

IDC 13 15:56:01.7±2.2, 441N×12727E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.3/3, Error ellipse: s-maj=169.6km s-min=26.3km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.18	164	P	P	16 01 28.9	-0.1
	0.7nm,0.8s,baz=344,slow=10,SNR=5.9						
ASAR	Alice Springs	28.65	167	P	P	16 02 00.4	+0.2
	0.2nm,0.7s,baz=346,slow=7.1,SNR=4.1						
MKAR	Makanchi Array	57.31	325	P	P	16 05 51.4	0.0
	0.2nm,0.5s,baz=111,slow=8.9,SNR=2.5						

MAN 13 15:56:52, 1851N×12072E, h32^{km}, mb3.7, ML2.4, MS1.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.21	208	⇓iP	Pb	15 57 00.2	+1.6
PIP				eS	Sb	15 57 27.7	+25
APYP	Conner	0.81	142	eP	Pn	15 57 08.0	+0.7
APYP				eS	Sn	15 57 17.9	-0.2
ABRA	Dolores	0.86	181	eP	Pn	15 57 09.0	+1.2

ISCJB 13 16:18:37.7±0.2, 4466N±002×11324W±002, h14^{km}, Error ellipse: s-maj=2.6km s-min=1.9km az=38.1
NEIC 13 16:18:37.0, 4466N×11326W, h14^{km}, ML2.6(BUT), After BUT.
ISC 13 16:18:36.7±0.3, 4466N±001×11325W±002, h1^{km}±3^{km}, n46, σ0^{s}83/81, 29C-17D, Eastern Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCMT	McKenzie Canyo	0.33	59	ePg	Pg	16 18 44.0	+0.9
G14A	Jackson	0.61	346	⇓P	Pg	16 18 48.9	+0.6
	baz=0.6						
G14A				⇑S	Sg	16 18 57.1	+1.0
	baz=0.6						
H13A	Challis	0.72	263	⇓P	Pg	16 18 51.2	+0.7
	baz=0.7,SNR=99						
H13A				⇑S	Sg	16 19 00.4	+0.5
	baz=0.7						
G15A	Dillon	0.74	46	⇑P	Pg	16 18 51.5	+0.6
	baz=0.7,SNR=107						
G15A				⇓S	Sg	16 19 01.6	+1.1
	baz=0.7						
G13A	Cobalt	0.82	302	⇑P	Pg	16 18 52.9	+0.4
	baz=0.8,SNR=120						
G13A				⇑S	Sg	16 19 03.6	+0.5
	baz=0.8						
DLMT	Dillon	0.84	33	ePg	Pg	16 18 53.4	+0.5
I13A	Wildhorse Cree	0.97	220	⇑P	Pg	16 18 55.9	+0.7
	baz=1.0,SNR=120						
I13A				⇑S	Sg	16 19 07.8	0.0
	baz=1.0						
H12A	Diamond D Ranc	1.15	265	P	Pg	16 18 59.0	+0.2
	baz=1.1,SNR=61						
H12A				⇑S	Sg	16 19 13.7	0.0
	baz=1.1						
F14A	Wisdom	1.16	356	⇓Pb	Pb	16 18 59.3	-0.1
	baz=1.2,SNR=99						
F14A				⇑S	Sg	16 19 14.3	+0.3
	baz=1.2						
LRM	Limekiln Ridge	1.29	26	ePn	Pn	16 19 01.4	-0.5
LRM				eS	Sg	16 19 18.7	+0.4
F15A	Butte	1.30	24	⇑Pb	Pb	16 19 01.7	-0.2
	baz=1.3,SNR=168						
F15A				⇑S	Sg	16 19 18.2	-0.3
	baz=1.3						
QLMT	Earthquake Lak	1.31	82	ePn	Pn	16 19 00.9	-1.1
QLMT				eSg	Sg	16 19 19.7	+1.0
HLID	Hailey	1.38	218	ePn	Pn	16 19 03.1	+0.1
HLID				eSg	Sg	16 19 21.3	+0.4
HLID	Hailey	1.38	218	⇓Pb	Pb	16 19 03.2	0.0
	baz=1.4,SNR=140						
HLID				⇑Sb	Sb	16 19 20.9	-0.4
	baz=1.4						
J13A	Cove Ranch, Pi	1.42	208	⇑Pb	Pb	16 19 04.0	0.0
	baz=1.4,SNR=187						
J13A				⇑Sb	Sb	16 19 22.3	-0.2
	baz=1.4						
BOZ	Bozeman (W)	1.52	49	ePn	Pn	16 19 04.5	-0.4
BOZ				eSn	Sn	16 19 23.4	-1.8
BOZ	Bozeman (W)	1.52	49	⇓P	Pn	16 19 04.7	-0.2
	baz=1.5,SNR=80						
BOZ				⇑S	Sn	16 19 24.1	-1.2
	baz=1.5						
YMR	Madison River	1.63	89	ePg	Pg	16 19 08.6	+0.7
YMR				eSg	Sg	16 19 29.6	+0.6
E14A	Clinton	1.77	355	P	Pn	16 19 08.2	-0.1
	baz=1.8,SNR=42						
E14A				⇑Sb	Sb	16 19 31.9	-0.6
	baz=1.8						
F12A	Elk City	1.79	309	⇑P	Pn	16 19 08.6	-0.1
	baz=1.8						
F12A				⇑Sb	Sb	16 19 33.6	+0.3
	baz=1.8						
E15A	Deer Lodge	1.82	13	⇓P	Pn	16 19 08.7	-0.3
	baz=1.8,SNR=75						
E15A				⇑Sb	Sb	16 19 35.0	+1.0
	baz=1.8						
IMW	Indian Meadow	1.82	114	ePn	Pn	16 19 09.9	+0.8
IMW				eS	Sn	16 19 33.9	+1.0
YNR	Norris Junctio	1.83	87	P	Pn	16 19 10.6	+1.3
YNR				S	Sn	16 19 33.8	+0.7
E13A	Victor	1.90	340	⇑Pb	Pb	16 19 11.8	-0.3
	baz=1.9						
E13A				⇑Sb	Sb	16 19 37.3	+0.8
	baz=1.9						
J12A	Stokes Ranch,	1.94	224	⇓Pb	Pb	16 19 11.8	-1.0
	baz=1.9,SNR=68						
J12A				⇑Sb	Sb	16 19 37.8	+0.4
	baz=1.9						
MOOW	Moose Ponds	2.02	116	ePg	Pg	16 19 13.8	-1.5
TPAW	Teton Pass	2.03	124	eP	Pn	16 19 13.6	+1.7
TPAW				eSg	Sg	16 19 40.8	-1.0
K13A	Stover Farm, H	2.10	197	⇓P	Pn	16 19 11.7	-1.2
	baz=2.1						
K13A				⇑Sb	Sb	16 19 42.4	+0.5
	baz=2.1						
K14A	Jones Ranch, D	2.11	179	⇓Sb	Sb	16 19 43.0	+0.6
	baz=2.1						
LOHW	Long Hollow	2.17	118	ePg	Pg	16 19 20.2	+2.0
MSO	Missoula	2.23	348	ePg	Pg	16 19 18.2	-1.1
MSO				eSg	Sg	16 19 46.9	-1.3
MFID	Camas Ranch	2.23	237	⇓Pb	Pb	16 19 16.2	-1.6
	baz=2.2,SNR=14						
MFID				⇓Sb	Sb	16 19 46.0	0.0
	baz=2.2						
CHMT	Chamberlain Mo	2.26	360	ePn	Pn	16 19 15.3	+0.2
CHMT				ePg	Pg	16 19 19.4	-0.6
CHMT				eSg	Sg	16 19 48.6	-0.6
K12A	Draper Farm, C	2.35	211	⇑Pb	Pb	16 19 18.8	-0.9
	baz=2.3						
K12A				⇓Sb	Sb	16 19 49.4	+0.2
	baz=2.3						
F11A	Grangeville	2.39	302	⇓Sb	Sb	16 19 51.2	+0.7
	baz=2.4						
D14A	Greenough	2.43	356	⇓P	Pn	16 19 17.3	-0.2
	baz=2.4,SNR=13						
D15A	Lincoln	2.44	12	P	Pn	16 19 17.4	-0.2
	baz=2.4,SNR=13						
H10A	Noah's Angus R	2.50	270	⇑P	Pn	16 19 18.0	-0.4
	baz=2.5						
D13A	Huson	2.58	341	⇑P	Pn	16 19 19.3	-0.2
	baz=2.6						
K11A	Parker Ranch,	2.76	228	⇑P	Pn	16 19 22.4	+0.4
	baz=2.8						
K11A				⇑S	Sn	16 19 55.3	-0.6
	baz=2.8						
GCMT	Greycliff	2.77	65	ePg	Pg	16 19 27.9	-1.9
GCMT				eSg	Sg	16 20 04.1	-1.7
HVU	Hansel Valley	2.90	173	ePg	Pg	16 19 28.3	-3.9
HVU				eSg	Sg	16 20 08.0	-1.7
C14A	Swan Lake	3.13	354	⇓P	Pn	16 19 27.0	-0.1
	baz=3.1						
C14A				⇓S	Sn	16 20 04.8	-0.3
	baz=3.1						
BSMT	Bassoo Peak	3.37	342	Pn	Pn	16 19 25.4	-5.0
BSMT				eSg	Sg	16 20 21.1	-3.7
J09A	Fry Pan Ranch,	3.50	250	⇑P	Pn	16 19 33.1	+0.9
	baz=3.5,SNR=10						
EGMT	Eagleton	4.15	34	eSg	Sg	16 20 46.1	-3.7

IDC 13 16:25:47.7±2.2, 131N×12614E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/14, mbtmp3.4/3, Error ellipse: s-maj=174.9km s-min=27.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.60	160	P	P	16 30 50.2	+0.1
	1.2nm,0.4s,baz=338,slow=10,SNR=18						
ASAR	Alice Springs	25.95	164	P	P	16 31 21.9	-0.1
	0.2nm,0.5s,baz=344,slow=7.5,SNR=8.1						
MKAR	Makanchi Array	59.21	326	P	P	16 35 50.9	+0.2
	0.1nm,0.3s,baz=115,slow=6.8,SNR=2.5						

MAN 13 16:35:26, 1847N×12089E, h11^{km}, mb4.3, ML3.2, MS3.0, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.29	241	⇓iP	Pg	16 35 33.0	+1.1
PIP				eS	Sg	16 35 39.2	+3.4
APYP	Conner	0.69	150	eP	Pg	16 35 40.4	+1.0
APYP				eS	Sg	16 35 52.8	+4.3
ABRA	Dolores	0.83	191	eP	Pg	16 35 41.7	-0.4
ABRA				eS	Sg	16 35 55.7	+2.8
SGCP	Mt. Cagua	1.12	101	eP	Pb	16 35 46.1	-1.4
CVP	Callao Caves	1.17	130	⇓iP	Pb	16 35 47.8	-0.5
CVP				i S	Sb	16 36 04.6	+1.1
CAUP	Cauayan	1.76	149	eP	Pn	16 35 58.2	+1.8
PALP	Palanan	2.03	133	eP	Pn	16 36 02.4	+2.3
BOLP	Bolinao	2.27	204	eP	Pn	16 36 04.6	+1.1
BALP	Baler	2.79	166	eP	Pn	16 36 11.8	+1.2

MOS 13 16:37:02.5±0.9, 5166N×1614E, h11^{km}, mb3.7/1, Error ellipse: s-maj=9.7km s-min=5.1km az=88.1
ISCJB 13 16:37:02.2±0.3, 5152N±002×1613E±002, h0^{km}, mb3.4/2, Error ellipse: s-maj=3.1km s-min=1.9km az=11.2
NEIC 13 16:37:03.7±0.4, 5161N×1609E, h5^{km}, ML3.1(SZGRF), ML3.1(BRA), Error ellipse: s-maj=4.9km s-min=3.9km az=196.0
CSEM 13 16:37:04.9±0.1, 5154N×1612E, h1^{km}, ML3.6/9, Error ellipse: s-maj=2.0km s-min=1.1km az=10.0
IDC 13 16:37:04.9±0.8, 5154N×1596E, h0^{km}, mb3.4/2, mb1 3.6/8, mb1mx3.5/22, mbtmp3.5/8, ML3.1/6, Error ellipse: s-maj=13.2km s-min=7.8km az=117.0
IPEC 13 16:37:04.5±0.3, 5155N×1649E, h0^{km}, ML2.9/4, Error ellipse: s-maj=3.4km s-min=1.9km az=93.0
BGR 13 16:37:05.0±0.6, 5150N×1610E, h1^{km}, ML3.1/8, Error ellipse: s-maj=7.8km s-min=3.3km az=21.0
PRU 13 16:37:05.1, 5153N×1608E, h0^{km}
WAR 13 16:37:05.3, 5156N×1609E, ML3.0, Mining Induced
VIE 13 16:37:07.4±0.5, 5131N×1594E, h0^{km}, mb3.0/6, ML3.1/7, Error ellipse: s-maj=3.4km s-min=2.6km az=14.0, Suspected Mining induced.
ISC 13 16:37:03.3±0.3, 5158N±002×1612E±002, h0^{km}, n85, σ1^{s}06/152, mb3.4/2, 15C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.75	172	ePg	Pg	16 37 18.5	+0.9
KSP				eSg	Sg	16 37 28.5	+1.3
KSP	Ksiaz	0.75	172	ePg	Pg	16 37 18.5	+0.9
KSP				eSg	Sg	16 37 28.1	+0.9
KSP	Ksiaz	0.75	172	⇓iPg	Pg	16 37 18.5	+0.9
KSP				eSg	Sg	16 37 28.3	+1.1
KSP				e		16 37 33.7	
KSP	Ksiaz	0.75	172	⇓iP	Pg	16 37 18.5	+0.9
KSP				e		16 37 28.3	
KSP	Ksiaz	0.75	172	ePg	Pg	16 37 18.4	+0.8
KSP				eSg	Sg	16 37 27.7	+0.5
KSP				eS	Sg	16 37 28.3	+1.1
UPC	Upice	1.08	184	ePG	Pg	16 37 24.6	+0.7
DPC	Dobruska-Polom	1.24	174	ePg	Pg	16 37 27.3	+0.3
DPC				eSg	Sg	16 37 43.2	+0.2
DPC	Dobruska-Polom	1.24	174	eP	Pg	16 37 27.3	+0.3
DPC				e		16 37 43.4	
DPC				smax			
	comp=N,214nm,0.9s						
DPC	Dobruska-Polom	1.24	174	ePG	Pg	16 37 27.3	+0.3
DPC				eSG	Sg	16 37 43.4	+0.4
	comp=N,214nm,0.9s						
DPC	Dobruska-Polom	1.24	174	ePg	Pg	16 37 27.2	+0.2
DPC				Sg	Sg	16 37 43.2	+0.2
PVCC	Panska Ves	1.44	224	ePG	Pg	16 37 31.5	+0.6
BRG	Berggiesshubel	1.54	244	ePn	Pn	16 37 31.8	-0.2
BRG				eSg	Sg	16 37 53.4	+0.6
BRG	Berggiesshubel	1.54	244	P	Pn	16 37 31.6	-0.4
BRG						16 37 53.5	
BRG				smax			
	comp=N,97nm,0.4s						
BRG	Berggiesshubel	1.54	244	PN	Pn	16 37 31.6	-0.4
BRG				PG	Pg	16 37 33.2	+0.4
BRG				SG	Sg	16 37 53.5	+0.7
	comp=N,162nm,0.4s						
RUE	Ruedersdorf	1.71	303	ePn	Pn	16 37 34.1	-0.1
RUE	Ruedersdorf	1.71	303	ePn	Pn	16 37 34.1	-0.1
PRA	Prague	1.85	216	PG	Pg	16 37 38.0	-0.8
PRA				SG	Sg	16 38 02.0	-0.8
FBE	Freiberg	1.86	250	ePg	Pg	16 37 38.5	-0.5
FBE				eSg	Sg	16 38 02.9	-0.2
PRU	Pruhonice	1.88	213	eP	Pn	16 37 36.6	-0.1
PRU				e		16 38 04.6	
PRU				smax			
	comp=N,78nm,0.6s						
PRU	Pruhonice	1.88	213	ePN	Pn	16 37 36.6	-0.1
PRU				ePG	Pg	16 37 39.4	0.0
PRU				eSG	Sg	16 38 04.6	+0.8
	comp=N,78nm,0.6s						
CLL	Collm	1.97	263	ePn	Pn	16 37 37.5	-0.4
CLL				eSg	Sg	16 38 07.2	+0.6
CLL	Collm	1.97	263	i Pn	Pn	16 37 37.4	-0.5
CLL				i Pg	Pg	16 37 40.6	-0.5
CLL				eSg	Sg	16 38 06.0	-0.6
CLL	Collm	1.97	263	i Pn	Pn	16 37 37.4	-0.5
CLL				i Pg	Pg	16 37 40.6	-0.5
CLL				i x	x	16 37 44.4	
CLL				eSg	Sg	16 38 06.0	-0.6
	comp=Z,73nm,0.6s						
CLL				i x	x	16 38 13.1	
CLL	Collm	1.97	263	i Pg	Pg	16 37 40.6	-0.5
CLL				eS	Sg	16 38 06.0	-0.6
CLL				Sg	Sg	16 38 07.2	+0.6
RAC	Raciborz	1.99	138	ePg	Pg	16 37 42.1	+0.7
RAC				eSg	Sg	16 38 09.2	+2.0
MORC	Moravsky Berou	2.02	153	⇑P	Pn	16 37 38.9	+0.3
MORC	Moravsky Berou	2.02	153	⇑iP	Pn	16 37 38.9	+0.4
MORC	Moravsky Berou	2.02	153	ePn	Pn	16 37 38.5	0.0
MORC				eSg	Sg	16 38 04.0	-4.1
	comp=Z,56nm,0.3s						
OKC	Ostrava-Krasne	2.17	143	eP	Pn	16 37 40.1	-0.5
OKC				e		16 38 11.9	
OKC				smax			
	comp=N,100nm,0.6s						
OKC	Ostrava-Krasne	2.17	143	ePN	Pn	16 37 40.1	-0.5
OKC				ePG	Pg	16 37 44.7	-0.1
OKC				eSG	Sg	16 38 11.9	-1.0
	comp=N,100nm,0.6s						
VRAC	Vranov	2.29	172	⇑P	Pn	16 37 43.0	+0.7
VRAC	Vranov	2.29	172	P	Pn	16 37 43.4	+1.1
VRAC						16 38 16.7	
VRAC				pmax	pmax		
	comp=Z,5.0nm,0.3s						
VRAC	Vranov	2.29	172	Pn	Pn	16 37 43.4	+1.1
	comp=Z,4.8nm,0.3s,baz=345,slow=13,SNR=15						
VRAC				Lg		16 38 16.7	
	comp=Z,9.3nm,0.3s,baz=268,slow=21,SNR=8.5						
VRAC	Vranov	2.29	172	⇑iP	Pn	16 37 43.0	+0.7
VRAC	Vranov	2.29	172	ePn	Pn	16 37 42.9	+0.6
VRAC				eSg	Sg	16 38 14.4	-2.5
	comp=Z,36nm,0.5s						
KRUC	Moravsky	2.53	176	ePn	Pn	16 37 46.3	+0.8
KRUC				eSg	Sg	16 38 22.9	-1.5
	comp=Z,42nm,0.5s						
TANN	Tannenbergstha	2.59	245	ePn	Pn	16 37 46.7	+0.3
TANN				eSg	Sg	16 38 26.0	-0.5
NKC	Novy Kostel	2.69	241	ePN	Pn	16 37 48.1	+0.3
NKC				ePG	Pg	16 37 55.5	+0.7
NKC				eSG	Sg	16 38 32.0	+2.4
	comp=Z,133nm,0.6s						
OJC	Ojcow	2.70	119	ePg	Pg	16 37 55.1	+0.2
OJC				eSg	Sg	16 38 30.8	+1.0
OJC	Ojcow	2.70	119	ePg	Pg	16 37 55.1	+0.2
OJC				Sg	Sg	16 38 30.2	+0.4
JAVC	Velka Javorina	2.90	159	eSg	Sg	16 38 34.3	-2.1
	comp=Z,87nm,1.0s						
KHC	Kasperske Hory	2.94	215	ePN	Pn	16 37 51.4	+0.1
KHC				ePG	Pg	16 37 57.9	-1.8
KHC				eSN	Sn	16 38 27.7	+0.4
KHC				eSG	Sg	16 38 37.2	-0.6
	comp=Z,26nm,0.4s						
MOX	Moxa	2.99	254	ePN	Pn	16 37 50.4	-1.5
MOX				ePG	Pg	16 38 00.7	+0.1

MOX				eSG	Sg	16 38 40.3	+1.0
MANZ	**Manzenberg**	**3.01**	**240**	ePn	**Pn**	**16 37 53.0**	**+0.9**
ROTZ	**Rotzenmuhle**	**3.08**	**235**	ePn	**Pn**	**16 37 53.4**	**+0.2**
GERES	**GERESS Array B**	**3.15**	**211**	P	**Pn**	**16 37 54.4**	**+0.3**
GERES						16 38 42.1	
GERES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
GERES	**GERESS Array B**	**3.15**	**211**	Pn	**Pn**	**16 37 54.4**	**+0.3**
	comp=Z,2.8nm,0.3s,baz=31,slow=12,SNR=74						
GERES				Lg		16 38 42.1	
	comp=Z,7.2nm,0.3s,baz=31,slow=30,SNR=14						
WET	**Wettzell**	**3.20**	**222**	ePn	**Pn**	**16 37 55.0**	**+0.2**
MODS	**Modra-Piesok**	**3.29**	**166**	ePG	**Pg**	**16 38 05.9**	**-0.5**
MODS				eSG	**Sg**	**16 38 50.5**	**+1.4**
NIE	**Niedzica**	**3.44**	**127**	eP	**Pg**	**16 38 09.4**	**+0.2**
NIE				eS	**Sg**	**16 38 54.0**	**+0.3**
ZST	**Bratislava**	**3.45**	**169**	ePG	**Pg**	**16 38 08.8**	**-0.5**
ZST				eSG	**Sg**	**16 38 54.0**	**+0.1**
VYHS	**Vyhne**	**3.55**	**149**	ePN	**Pn**	**16 37 59.6**	**0.0**
VYHS				ePG	**Pg**	**16 38 09.0**	**-2.3**
VYHS				eSG	**Sg**	**16 38 57.9**	**+0.6**
BSD	**Bornholm Skovb**	**3.61**	**349**	iP	**Pn**	**16 38 00.3**	**-0.1**
BSD				iS	**Sn**	**16 38 42.2**	**-1.6**
BSD				e		16 52 18.5	
BSD	**Bornholm Skovb**	**3.61**	**349**	iP	**Pn**	**16 38 00.3**	**-0.1**
BSD				iS	**Sn**	**16 38 42.2**	**-1.6**
GRFO	**Grafenberg**	**3.65**	**241**	ePn	**Pn**	**16 37 59.8**	**-1.1**
GRFO				eSg	**Sg**	**16 39 02.7**	**+2.2**
GRFO	**Grafenberg**	**3.65**	**241**	ePn	**Pn**	**16 37 59.8**	**-1.1**
GRFO				eSg	**Sg**	**16 39 02.7**	**+2.2**
CONA	**Conrad Observa**	**3.66**	**183**	⇑iPn	**Pn**	**16 38 01.9**	**+0.9**
	SNR=9.3						
CONA				⇑iPg	**Pg**	**16 38 12.3**	**-1.1**
CONA				⇑iSg	**Sg**	**16 38 59.4**	**-1.4**
	comp=Z,37nm,0.5s						
HROE	**Hohe Rhon--Fla**	**3.91**	**257**	⇓iPn	**Pn**	**16 38 04.7**	**+0.2**
STHS	**Stebnicka Huta**	**3.92**	**122**	ePN	**Pn**	**16 38 05.7**	**+1.0**
STHS				ePG	**Pg**	**16 38 18.8**	**+0.4**
STHS				eSG	**Sg**	**16 39 12.9**	**+3.7**
MOA	**Molln**	**3.92**	**199**	⇑iPn	**Pn**	**16 38 05.4**	**+0.6**
	SNR=42						
MOA				⇑iSg	**Sg**	**16 39 08.3**	**-1.0**
	comp=Z,23nm,0.5s						
MOA	**Molln**	**3.92**	**199**	Pn	**Pn**	**16 38 05.4**	**+0.7**
	comp=Z,42nm,1.0s						
MOA				Sg	**Sg**	**16 39 08.3**	**-1.0**
	comp=Z,23nm,0.5s						
KECS	**Kecovo**	**4.18**	**136**	ePN	**Pn**	**16 38 09.0**	**+0.7**
KECS				ePG	**Pg**	**16 38 24.7**	**+1.3**
CRVS	**Cervenica-Dubn**	**4.35**	**126**	ePG	**Pg**	**16 38 27.0**	**+0.4**
CRVS				eSG	**Sg**	**16 39 23.5**	**+0.6**
ARSA	**Arzberg**	**4.35**	**185**	⇓iPn	**Pn**	**16 38 11.0**	**+0.4**
ARSA				⇓iPg	**Pg**	**16 38 25.5**	**-1.2**
ARSA				iSg	**Sg**	**16 39 22.3**	**-0.7**
ARSA	**Arzberg**	**4.35**	**185**	⇓iPn	**Pn**	**16 38 11.0**	**+0.4**
ARSA				⇓iPg	**Pg**	**16 38 25.5**	**-1.2**
ARSA				⇑iSg	**Sg**	**16 39 22.3**	**-0.7**
	comp=Z,29nm,0.6s						
KWP	**Kalwaria**	**4.62**	**112**	⇑P	**Pn**	**16 38 14.8**	**+0.5**
KWP	**Kalwaria**	**4.62**	**112**	⇑iP	**Pn**	**16 38 14.8**	**+0.5**
KOLS	**Kolonicke sedl**	**4.75**	**121**	ePN	**Pn**	**16 38 16.6**	**+0.5**
KOLS				ePG	**Pg**	**16 38 31.7**	**-2.6**
KOLS				eSG	**Sg**	**16 39 40.7**	**+4.9**
KBA	**Koelnbreinsper**	**4.86**	**203**	⇑iPn	**Pn**	**16 38 18.7**	**+1.2**
KBA				⇓iSg	**Sg**	**16 39 37.6**	**-1.7**
	comp=Z,15nm,0.6s						
UZH	**Uzhgorod**	**4.95**	**124**	eP	**Pn**	**16 38 18.0**	**-0.8**
UZH				eS	**Sn**	**16 39 15.0**	**-1.6**
UZH				smax			
	comp=N,22µm,0.8s						
UZH	**Uzhgorod**	**4.95**	**124**	eP	**Pn**	**16 38 18.0**	**-0.8**
UZH				eS	**Sn**	**16 39 15.0**	**-1.6**
	comp=N,22µm,0.8s						
MOTA	**Moosalm**	**5.36**	**220**	⇓iPn	**Pn**	**16 38 24.9**	**+0.5**
MOTA				⇑iSg	**Sg**	**16 39 54.4**	**-0.8**
	comp=N,20nm,0.7s						
BFO	**Black Forest**	**5.99**	**240**	Pg	**Pg**	**16 38 54.0**	**-4.0**
	comp=N,5.0nm,0.5s						
BFO	**Black Forest**	**5.99**	**240**	Pg	**Pg**	**16 38 54.0**	**-4.0**
	comp=N,5.0nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.31**	**223**	Pn	**Pn**	**16 38 39.1**	**+1.6**
	comp=N,0.5nm,0.3s,baz=40,slow=16,SNR=5.0						
DAVOX				Lg		16 40 24.3	
	comp=N,0.6nm,0.3s,baz=204,slow=14,SNR=3.8						
BZS	**Buzias**	**6.99**	**146**	⇓iP	**Pn**	**16 38 49.6**	**+2.8**
BURAR	**Bucovina Array**	**7.12**	**120**	⇑iP	**Pn**	**16 38 50.3**	**+1.7**
AKASG	**Malin Array Be**	**8.29**	**91**	P	**Pn**	**16 39 03.6**	**-1.0**
AKASG						16 40 36.3	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				smax			
	comp=N,1.0nm,0.3s						
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**16 39 03.6**	**-1.0**
	comp=N,1.2nm,0.3s,baz=280,slow=12,SNR=8.8						
AKASG				Sn	**Sn**	**16 40 36.2**	**-2.6**
	comp=N,0.8nm,0.3s,baz=272,slow=23,SNR=3.3						
HFS	**Hagfors**	**8.68**	**352**	Pn	**Pn**	**16 39 17.7**	**+7.8**
	comp=N,0.1nm,0.3s,baz=168,slow=15,SNR=4.8						
FINES	**FINESS Array B**	**11.30**	**25**	Pn	**Pn**	**16 39 45.0**	**-0.7**
	comp=N,0.2nm,0.3s,baz=198,slow=13,SNR=6.2						
FINES				Sn	**Sn**	**16 41 44.4**	**-8.1**
	comp=N,0.2nm,0.3s,baz=204,slow=23,SNR=3.8						
EKA	**Eskdalemuir Ar**	**12.08**	**296**	Pn	**Pn**	**16 39 53.6**	**-2.9**
	comp=N,0.1nm,0.3s,baz=111,slow=16,SNR=3.3						
ARCES	**ARCESS Array B**	**18.55**	**10**	Pn	**Pn**	**16 41 19.4**	**-1.8**
	comp=N,0.1nm,0.3s,baz=190,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**42.18**	**69**	P	**P**	**16 44 59.1**	**+1.8**
	comp=N,0.2nm,0.4s,mb3.2,baz=293,slow=7.4,SNR=2.6						
YKA	**Yellowknife Ar**	**59.80**	**336**	P	**P**	**16 47 10.6**	**+1.0**
	comp=N,0.5nm,0.7s,mb3.7,baz=30,slow=6.7,SNR=9.4						

*ISCJB **13** 16:51:28.0±0.3, 5153N±002×16.12E±002, h0km, mb3.5/5, Error ellipse: s-maj=2.6km s-min=1.7km az=14.4*
*LDG **13** 16:51:28.2±0.2, 5161N×1606E, h1km, Ml3.9/6, Error ellipse: s-maj=5.5km s-min=2.5km az=15.0, Suspected Mining induced.*
*MOS **13** 16:51:28.3±0.9, 5167N×16.11E, h10km, mb3.9/1, Error ellipse: s-maj=7.1km s-min=4.0km az=89.5*
*IPEC **13** 16:51:29.9±0.3, 5156N×1631E, h0km, ML3.1/4, Error ellipse: s-maj=4.0km s-min=2.0km az=83.0*
*NEIC **13** 16:51:29.8±0.3, 5162N×1609E, h5km, ML3.3(SZGRF), ML3.0(BRA), Error ellipse: s-maj=3.8km s-min=3.2km az=198.0*
*CSEM **13** 16:51:30.2±0.1, 5161N×1606E, h1km, mb3.8/2, ML3.9/13, Ms3.7, Error ellipse: s-maj=1.9km s-min=1.3km az=7.0*
*IDC **13** 16:51:30.3±0.6, 5152N×1594E, h0km, mb3.5/4, mb1 3.6/13, mb1mx3.5/26, mbtmp3.5/13, ML3.3/8, Error ellipse: s-maj=10.9km s-min=7.2km az=100.0*
*WAR **13** 16:51:31.3, 5154N×1607E, ML3.0, Mining Induced*
*PRU **13** 16:51:31.3, 5152N×1608E, h0km, Felt In Harrachov*
*BGR **13** 16:51:31.6±0.6, 5145N×1604E, h1km, ML3.3/9, Error ellipse: s-maj=7.8km s-min=3.3km az=21.0*
*VIE **13** 16:51:32.7±0.4, 5132N×1604E, h0km, mb2.9/8, ML3.2/9, Ms3.7/1, Error ellipse: s-maj=2.9km s-min=2.3km az=12.0 71 km WNW of Wroclaw Suspected Mining induced.*

ISC 13 16:51:29.5±0.2, 5157N±002×1610E±002, h0km, n127, σ0.97/215, mb3.5/5, 13C-14D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**170**	ePg	**Pg**	**16 51 44.2**	**+0.5**
KSP				eSg	**Sg**	**16 51 54.1**	**+0.9**
KSP	**Ksiaz**	**0.74**	**170**	⇓iPg	**Pg**	**16 51 44.2**	**+0.6**
KSP				e		16 51 46.6	
KSP				eSg	**Sg**	**16 51 53.9**	**+0.7**
KSP	**Ksiaz**	**0.74**	**170**	ePg	**Pg**	**16 51 44.1**	**+0.5**
KSP				eSg	**Sg**	**16 51 53.9**	**+0.7**
UPC	**Upice**	**1.07**	**183**	ePG	**Pg**	**16 51 50.1**	**+0.2**
DPC	**Dobruska-Polom**	**1.23**	**173**	ePg	**Pg**	**16 51 52.9**	**-0.1**
DPC				eSg	**Sg**	**16 52 08.7**	**-0.3**
DPC	**Dobruska-Polom**	**1.23**	**173**	eP	**Pg**	**16 51 53.0**	**-0.1**
DPC				e		16 52 08.6	
DPC				smax			
	comp=N,232nm,0.8s						
DPC	**Dobruska-Polom**	**1.23**	**173**	ePG	**Pg**	**16 51 53.0**	**-0.1**
DPC				eSG	**Sg**	**16 52 08.6**	**-0.4**
	comp=N,232nm,0.8s						
PVCC	**Panska Ves**	**1.42**	**223**	ePN	**Pn**	**16 51 56.4**	**-0.1**
PVCC				ePG	**Pg**	**16 51 57.2**	**+0.5**
BRG	**Berggiesshubel**	**1.52**	**243**	ePn	**Pn**	**16 51 57.3**	**-0.7**
BRG				eSg	**Sg**	**16 52 18.9**	**+0.5**
BRG	**Berggiesshubel**	**1.52**	**243**	P	**Pn**	**16 51 57.1**	**-0.8**
BRG						16 52 19.0	
BRG				smax			
	comp=N,150nm,0.5s						
BRG	**Berggiesshubel**	**1.52**	**243**	Pg	**Pg**	**16 51 58.9**	**+0.2**
BRG				Sg	**Sg**	**16 52 18.9**	**+0.5**
BRG	**Berggiesshubel**	**1.52**	**243**	PN	**Pn**	**16 51 57.1**	**-0.8**
BRG				PG	**Pg**	**16 51 58.9**	**+0.2**
BRG				SG	**Sg**	**16 52 19.0**	**+0.6**
	comp=N,251nm,0.5s						
RUE	**Ruedersdorf**	**1.69**	**303**	ePn	**Pn**	**16 51 59.6**	**-0.6**
RUE				eSn	**Sn**	**16 52 25.7**	**+3.1**
RUE	**Ruedersdorf**	**1.69**	**303**	ePn	**Pn**	**16 51 59.6**	**-0.7**
RUE				eSn	**Sn**	**16 52 25.7**	**+3.1**
PRA	**Prague**	**1.84**	**216**	PG	**Pg**	**16 52 02.0**	**-2.7**
PRA				SG	**Sg**	**16 52 28.0**	**-0.5**
FBE	**Freiberg**	**1.84**	**250**	ePg	**Pg**	**16 52 04.4**	**-0.4**
FBE				eSg	**Sg**	**16 52 28.4**	**-0.2**
PRU	**Pruhonice**	**1.87**	**212**	eP	**Pn**	**16 52 02.2**	**-0.4**
PRU				e		16 52 29.7	
PRU				smax			
	comp=N,164nm,0.8s						
PRU	**Pruhonice**	**1.87**	**212**	ePN	**Pn**	**16 52 02.2**	**-0.4**
PRU				ePG	**Pg**	**16 52 05.3**	**0.0**
PRU				eSG	**Sg**	**16 52 29.7**	**+0.2**
	comp=N,164nm,0.8s						
CLL	**Collm**	**1.96**	**263**	ePn	**Pn**	**16 52 03.3**	**-0.5**
CLL				eSg	**Sg**	**16 52 32.2**	**-0.1**
CLL	**Collm**	**1.96**	**263**	iPn	**Pn**	**16 52 03.3**	**-0.5**
CLL				ePg	**Pg**	**16 52 07.0**	**+0.1**
CLL				iSg	**Sg**	**16 52 32.2**	**0.0**
CLL	**Collm**	**1.96**	**263**	iPn	**Pn**	**16 52 03.3**	**-0.5**
CLL				ePg	**Pg**	**16 52 07.0**	**+0.1**
CLL				ix	x	16 52 10.2	
CLL				iSg	**Sg**	**16 52 32.2**	**0.0**
	comp=Z,80nm,0.5s						
RAC	**Raciborz**	**2.00**	**137**	ePg	**Pg**	**16 52 08.0**	**+0.3**
RAC				eSg	**Sg**	**16 52 34.6**	**+1.0**
RAC	**Raciborz**	**2.00**	**137**	ePg	**Pg**	**16 52 07.9**	**+0.2**
RAC				eSg	**Sg**	**16 52 34.6**	**+1.0**
MORC	**Moravsky Berou**	**2.02**	**152**	⇑P	**Pn**	**16 52 04.3**	**-0.4**
MORC	**Moravsky Berou**	**2.02**	**152**	⇑iP	**Pn**	**16 52 04.3**	**-0.4**
MORC	**Moravsky Berou**	**2.02**	**152**	ePn	**Pn**	**16 52 04.4**	**-0.3**
MORC				eSg	**Sg**	**16 52 31.0**	**-3.3**
	comp=Z,111nm,0.6s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	ePn	**Pn**	**16 52 06.6**	**-0.3**
OKC				eSg	**Sg**	**16 52 38.7**	**-0.5**
OKC	**Ostrava-Krasne**	**2.17**	**142**	eP	**Pn**	**16 52 06.7**	**-0.1**
OKC				e		16 52 39.7	
OKC				smax			
	comp=N,217nm,0.7s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	ePN	**Pn**	**16 52 06.7**	**-0.1**
OKC				ePG	**Pg**	**16 52 10.8**	**-0.3**
OKC				eSG	**Sg**	**16 52 39.7**	**+0.5**
	comp=N,217nm,0.7s						
OKC	**Ostrava-Krasne**	**2.17**	**142**	ePg	**Pg**	**16 52 10.8**	**-0.3**
OKC				Sg	**Sg**	**16 52 38.7**	**-0.5**
VRAC	**Vranov**	**2.29**	**172**	⇓P	**Pn**	**16 52 08.7**	**+0.2**
VRAC	**Vranov**	**2.29**	**172**	Pn	**Pn**	**16 52 08.7**	**+0.3**
	comp=N,3.1nm,0.3s,baz=338,slow=13,SNR=24						
VRAC				Lg		16 52 41.8	
	comp=N,9.7nm,0.3s,baz=61,slow=22,SNR=12						
VRAC	**Vranov**	**2.29**	**172**	⇓iP	**Pn**	**16 52 08.7**	**+0.3**
VRAC	**Vranov**	**2.29**	**172**	ePn	**Pn**	**16 52 08.4**	**0.0**
VRAC				eSg	**Sg**	**16 52 40.2**	**-2.8**
TREC	**Trest**	**2.31**	**190**	ePN	**Pn**	**16 52 09.0**	**+0.2**
TREC				ePG	**Pg**	**16 52 13.2**	**-0.6**
KRUC	**Moravsky**	**2.52**	**176**	ePn	**Pn**	**16 52 12.0**	**+0.4**
KRUC				eSg	**Sg**	**16 52 49.0**	**-1.4**
	comp=N,64nm,0.4s						
TANN	**Tannenbergstha**	**2.57**	**245**	ePn	**Pn**	**16 52 12.5**	**+0.2**
TANN				eSg	**Sg**	**16 52 51.6**	**-0.4**
TANN	**Tannenbergstha**	**2.57**	**245**	Pn	**Pn**	**16 52 12.5**	**+0.2**
TANN				Sg	**Sg**	**16 52 51.6**	**-0.5**
NKC	**Novy Kostel**	**2.67**	**241**	ePN	**Pn**	**16 52 14.1**	**+0.4**
NKC				ePG	**Pg**	**16 52 20.8**	**+0.2**
NKC				eSG	**Sg**	**16 52 56.8**	**+1.6**
	comp=N,176nm,0.5s						
OJC	**Ojcow**	**2.71**	**119**	ePn	**Pn**	**16 52 12.9**	**-1.3**
OJC				ePg	**Pg**	**16 52 21.3**	**0.0**
OJC				eSg	**Sg**	**16 52 57.2**	**+0.8**
JAVC	**Velka Javorina**	**2.90**	**159**	eSg	**Sg**	**16 53 03.1**	**+0.6**
	comp=N,101nm,0.8s						
KHC	**Kasperske Hory**	**2.93**	**214**	ePN	**Pn**	**16 52 17.1**	**-0.1**
KHC				ePG	**Pg**	**16 52 25.0**	**-0.6**
KHC				eSN	**Sn**	**16 52 53.5**	**+0.4**
KHC				eSG	**Sg**	**16 53 03.3**	**-0.2**
	comp=N,77nm,0.8s						
MOX	**Moxa**	**2.97**	**254**	eSg	**Sg**	**16 53 04.7**	**-0.2**
MOX	**Moxa**	**2.97**	**254**	ePN	**Pn**	**16 52 17.5**	**-0.3**
MOX				ePG	**Pg**	**16 52 26.4**	**0.0**
MOX				eSG	**Sg**	**16 53 05.7**	**+0.8**
MOX	**Moxa**	**2.97**	**254**	ePg	**Pg**	**16 52 26.4**	**0.0**
MOX				Sg	**Sg**	**16 53 04.7**	**-0.2**
MANZ	**Manzenberg**	**2.99**	**239**	ePn	**Pn**	**16 52 18.5**	**+0.4**
ROTZ	**Rotzenmuhle**	**3.06**	**235**	ePn	**Pn**	**16 52 19.3**	**+0.2**
GERES	**GERESS Array B**	**3.13**	**210**	P	**Pn**	**16 52 20.1**	**+0.1**
GERES						16 53 07.6	
GERES				pmax	pmax		
	comp=Z,4.0nm,0.3s						
GERES	**GERESS Array B**	**3.13**	**210**	Pn	**Pn**	**16 52 20.1**	**0.0**
	comp=Z,3.5nm,0.3s,baz=33,slow=12,SNR=91						
GERES				Lg		16 53 07.6	
	comp=Z,16nm,0.3s,baz=27,slow=26,SNR=12						
SMOL	**Smolenice**	**3.18**	**164**	ePG	**Pg**	**16 52 30.2**	**-0.2**
SMOL				eSG	**Sg**	**16 53 12.4**	**+0.8**
SMOL	**Smolenice**	**3.18**	**164**	ePg	**Pg**	**16 52 30.3**	**-0.1**
SMOL				eSg	**Sg**	**16 53 12.4**	**+0.8**
WET	**Wettzell**	**3.19**	**222**	ePn	**Pn**	**16 52 21.0**	**+0.2**
MODS	**Modra-Piesok**	**3.29**	**166**	ePN	**Pn**	**16 52 23.9**	**+1.7**
MODS				ePG	**Pg**	**16 52 32.0**	**-0.5**
MODS				eSG	**Sg**	**16 53 15.8**	**+0.6**
KOLL	**Kolacno**	**3.34**	**153**	ePG	**Pg**	**16 52 34.8**	**+1.3**
KOLL				eSG	**Sg**	**16 53 16.8**	**-0.1**
ZST	**Bratislava**	**3.44**	**169**	ePN	**Pn**	**16 52 25.5**	**+1.2**
ZST				ePG	**Pg**	**16 52 35.1**	**-0.3**
ZST				eSG	**Sg**	**16 53 18.0**	**-2.0**
NIE	**Niedzica**	**3.45**	**127**	eP	**Pg**	**16 52 35.3**	**-0.2**
NIE				eS	**Sg**	**16 53 21.5**	**+1.3**
VYHS	**Vyhne**	**3.55**	**149**	ePn	**Pn**	**16 52 26.4**	**+0.6**
VYHS				ePg	**Pg**	**16 52 38.5**	**+1.0**
VYHS				eSg	**Sg**	**16 53 21.9**	**-1.6**
VYHS	**Vyhne**	**3.55**	**149**	ePN	**Pn**	**16 52 26.3**	**+0.5**
VYHS				ePG	**Pg**	**16 52 38.5**	**+1.0**
VYHS				eSG	**Sg**	**16 53 21.9**	**-1.6**
CLZ	**Clausthal**	**3.57**	**277**	ePn	**Pn**	**16 52 26.9**	**+0.8**
BSD	**Bornholm Skovb**	**3.62**	**349**	iP	**Pn**	**16 52 26.5**	**-0.2**
BSD				iS	**Sn**	**16 53 07.6**	**-2.4**
GRFO	**Grafenberg**	**3.63**	**241**	ePn	**Pn**	**16 52 27.2**	**+0.4**
GRFO				eS	**Sg**	**16 53 26.4**	**+0.3**
GRFO	**Grafenberg**	**3.63**	**241**	ePn	**Pn**	**16 52 27.2**	**+0.3**
CONA	**Conrad Observa**	**3.65**	**182**	⇓iPn	**Pn**	**16 52 27.2**	**+0.1**
	SNR=17						
CONA				⇑iSg	**Sg**	**16 53 24.1**	**-2.6**
HROE	**Hohe Rhon--Fla**	**3.89**	**257**	⇓iPn	**Pn**	**16 52 30.5**	**+0.1**
MOA	**Molln**	**3.91**	**198**	iPn	**Pn**	**16 52 31.2**	**+0.5**
	SNR=22						
MOA				⇑iSg	**Sg**	**16 53 34.5**	**-0.6**
	comp=Z,79nm,0.7s						
MOA	**Molln**	**3.91**	**198**	Pn	**Pn**	**16 52 31.2**	**+0.5**
	comp=Z,21nm,9.0s						
MOA				Sg	**Sg**	**16 53 34.5**	**-0.6**
	comp=Z,79nm,0.7s						
STHS	**Stebnicka Huta**	**3.93**	**121**	ePN	**Pn**	**16 52 31.6**	**+0.6**
STHS				ePG	**Pg**	**16 52 46.8**	**+2.0**
STHS				eSG	**Sg**	**16 53 36.1**	**+0.4**
KECS	**Kecovo**	**4.19**	**136**	ePN	**Pn**	**16 52 36.1**	**+1.5**
KECS				ePG	**Pg**	**16 52 49.6**	**-0.1**
KECS				eSG	**Sg**	**16 53 43.3**	**-0.7**
ARSA	**Arzberg**	**4.34**	**185**	⇓iPn	**Pn**	**16 52 37.1**	**+0.4**
ARSA				⇑iSg	**Sg**	**16 53 47.8**	**-1.1**
	comp=Z,44nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.36**	**126**	ePn	**Pn**	**16 52 39.4**	**+2.5**
CRVS				ePg	**Pg**	**16 52 52.1**	**-0.8**
CRVS				eSg	**Sg**	**16 53 49.9**	**+0.5**
CRVS	**Cervenica-Dubn**	**4.36**	**126**	ePN	**Pn**	**16 52 39.3**	**+2.4**
CRVS				ePG	**Pg**	**16 52 52.1**	**-0.8**
CRVS				eSG	**Sg**	**16 53 49.9**	**+0.5**
PSZ	**Piszkesteto**	**4.41**	**145**	⇓P	**Pn**	**16 52 38.6**	**+1.0**
PSZ	**Piszkesteto**	**4.41**	**145**	⇓iP	**Pn**	**16 52 38.6**	**+1.0**
KWP	**Kalwaria**	**4.64**	**112**	ePn	**Pn**	**16 52 40.5**	**-0.2**
KWP	**Kalwaria**	**4.64**	**112**	ePn	**Pn**	**16 52 40.5**	**-0.2**
KOLS	**Kolonicke sedl**	**4.76**	**121**	ePN	**Pn**	**16 52 42.6**	**+0.2**
KOLS				ePG	**Pg**	**16 52 59.2**	**-1.5**
KBA	**Koelnbreinsper**	**4.85**	**203**	⇓iPn	**Pn**	**16 52 44.3**	**+0.8**
KBA				⇑iSg	**Sg**	**16 54 04.3**	**-0.7**
	comp=Z,30nm,0.5s						
UZH	**Uzhgorod**	**4.96**	**124**	eP	**Pn**	**16 52 44.4**	**-0.7**
UZH				eS	**Sn**	**16 53 41.4**	**-1.6**
UZH				smax			
	comp=N,15µm,0.8s						
UZH	**Uzhgorod**	**4.96**	**124**	eP	**Pn**	**16 52 44.4**	**-0.7**
	comp=N,15µm,0.8s						
UZH				eS	**Sn**	**16 53 41.4**	**-1.6**
TOD	**Tromm**	**5.05**	**250**	P	**Pn**	**16 52 46.0**	**-0.3**
WTTA	**Wattenberg**	**5.20**	**216**	⇑iPn	**Pn**	**16 52 48.6**	**+0.2**
WTTA				⇓iSg	**Sg**	**16 54 16.3**	**-0.3**
	comp=N,25nm,0.6s						
MOTA	**Moosalm**	**5.34**	**220**	⇑iPn	**Pn**	**16 52 50.6**	**+0.3**
MOTA				⇓iSg	**Sg**	**16 54 22.0**	**+1.1**
	comp=N,32nm,0.7s						
SQTA	**Sankt Quirin**	**5.40**	**218**	⇑iPn	**Pn**	**16 52 51.9**	**+0.7**
KTD	**Kalmit**	**5.59**	**249**	P	**Pn**	**16 52 53.1**	**-0.7**
PKSM	**Moragy**	**5.62**	**162**	⇑P	**Pn**	**16 52 55.1**	**+0.9**
PKSM	**Moragy**	**5.62**	**162**	⇑iP	**Pn**	**16 52 55.1**	**+0.9**
ABH	**Alteburg**	**5.69**	**256**	P	**Pn**	**16 52 55.2**	**+0.1**
DAVA	**Damuels**	**5.90**	**226**	⇑iPn	**Pn**	**16 52 59.1**	**+1.0**
RUP	**Ruppelstein**	**6.05**	**255**	P	**Pn**	**16 53 01.1**	**+1.0**
DAVOX	**Davos/Dischmat**	**6.29**	**223**	Pn	**Pn**	**16 53 02.5**	**-0.9**
	comp=N,0.3nm,0.3s,baz=24,slow=14,SNR=3.9						
DAVOX				Lg		16 54 53.6	
	comp=N,1.0nm,0.3s,baz=335,slow=22,SNR=5.6						
DRGR		**6.46**	**135**	⇓P	**Pn**	**16 53 05.4**	**-0.2**
DRGR		**6.46**	**135**	⇓iP	**Pn**	**16 53 05.4**	**-0.3**
CDF	**Champ du Feu**	**6.51**	**244**	eP	**Pn**	**16 53 06.7**	**+0.3**
CDF				eSg	**Sg**	**16 54 51.2**	**-7.1**
	comp=N,24nm,0.7s						
CDF	**Champ du Feu**	**6.51**	**244**	ePn	**Pn**	**16 53 02.7**	**-3.7**
CDF				eP		16 53 06.7	
CDF				eSg	**Sg**	**16 54 51.2**	**-7.1**
CDF	**Champ du Feu**	**6.51**	**244**	ePn	**Pn**	**16 53 02.7**	**-3.7**
CDF				eSg	**Sg**	**16 54 51.2**	**-7.1**
	comp=N,12nm,0.7s						
BZS	**Buzias**	**6.99**	**146**	⇑iP	**Pn**	**16 53 06.1**	**-6.9**
HINF	**Hinteralfeld**	**7.08**	**242**	ePn	**Pn**	**16 53 11.1**	**-3.1**
HINF				eSg	**Sg**	**16 55 08.4**	**-8.2**
	comp=N,26nm,0.8s						
HINF	**Hinteralfeld**	**7.08**	**242**	ePn	**Pn**	**16 53 11.1**	**-3.1**
HINF				eSg	**Sg**	**16 55 08.4**	**-8.2**
	comp=N,13nm,0.8s						
BURAR	**Bucovina Array**	**7.13**	**120**	⇓iP	**Pn**	**16 53 15.2**	**+0.3**
HAU	**Haudompre**	**7.25**	**244**	ePn	**Pn**	**16 53 11.8**	**-4.8**
HAU				eSg	**Sg**	**16 55 14.7**	**-7.4**
	comp=N,41nm,0.8s						
HAU	**Haudompre**	**7.25**	**244**	ePn	**Pn**	**16 53 11.8**	**-4.8**
HAU				eSg	**Sg**	**16 55 14.7**	**-7.4**
	comp=N,20nm,0.8s						
CABF	**La Chapelle**	**8.23**	**237**	eSg	**Sg**	**16 55 47.1**	**-6.5**
	comp=N,44nm,1.1s						
CABF	**La Chapelle**	**8.23**	**237**	eSg	**Sg**	**16 55 47.1**	**-6.5**
	comp=N,22nm,1.1s						
KIEV	**Kiev**	**8.30**	**91**	ePn	**Pn**	**16 53 29.9**	**-0.9**
	comp=N,4.0nm,0.6s						
KIEV	**Kiev**	**8.30**	**91**	eP	**Pn**	**16 53 29.9**	**-1.0**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIEV	**Kiev**	**8.30**	**91**	ePn	**Pn**	**16 53 29.9**	**-1.0**
	comp=Z,4.0nm,0.6s						
AKASG	**Malin Array Be**	**8.30**	**91**	P	**Pn**	**16 53 29.6**	**-1.4**
AKASG						16 55 00.5	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				smax			
	comp=N,1.0nm,0.3s						
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**16 53 29.6**	**-1.4**
	comp=N,1.4nm,0.3s,baz=280,slow=12,SNR=11						
AKASG				Sn	**Sn**	**16 55 00.5**	**-4.9**
	comp=N,0.6nm,0.3s,baz=268,slow=23,SNR=4.3						
HFS	**Hagfors**	**8.69**	**352**	Pn	**Pn**	**16 53 35.5**	**-0.7**
	comp=N,0.1nm,0.3s,baz=125,slow=13,SNR=5.1						
HFS				Sn	**Sn**	**16 55 15.8**	**+1.1**
	comp=N,0.2nm,0.3s,baz=160,slow=26,SNR=3.1						
LOR	**Lormes**	**9.06**	**246**	ePn	**Pn**	**16 53 38.0**	**-3.4**
	baz=72						
LOR				eSg	**Sg**	**16 56 12.3**	**-8.0**
	comp=N,13nm,0.9s						
LOR	**Lormes**	**9.06**	**246**	ePn	**Pn**	**16 53 38.0**	**-3.4**
LOR				eSg	**Sg**	**16 56 12.3**	**-8.0**
	comp=N,6.3nm,0.9s						
MBDF	**Montbardon**	**9.26**	**226**	eP	**Pn**	**16 53 46.2**	**+2.1**
SBF	**Sospel**	**9.67**	**220**	eP	**Pn**	**16 53 50.3**	**+0.6**
NOA	**NORSAR Array B**	**9.87**	**346**	Pn	**Pn**	**16 53 50.4**	**-2.0**
	comp=N,0.1nm,0.3s,baz=167,slow=12,SNR=2.7						
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**16 54 10.6**	**-1.5**
FINES				Sn	**Sn**	**16 56 14.0**	**-5.0**
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**16 54 10.6**	**-1.5**
	comp=N,0.2nm,0.3s,baz=200,slow=12,SNR=10						
FINES				Sn	**Sn**	**16 56 14.0**	**-5.0**
	comp=N,0.3nm,0.3s,baz=213,slow=22,SNR=5.2						
EKA	**Eskdalemuir Ar**	**12.07**	**296**	Pn	**Pn**	**16 54 20.8**	**-1.8**
	comp=N,0.2nm,0.3s,baz=104,slow=14,SNR=3.4						
ARCES	**ARCESS Array B**	**18.56**	**10**	Pn	**Pn**	**16 55 44.5**	**-3.0**
	comp=N,0.2nm,0.3s,baz=195,slow=12,SNR=8.0						
AKTK	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 57 05.2**	**+0.1**
AKTK	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 57 05.2**	**+0.2**
	comp=N,1.0nm,0.6s,mb3.6						
AKTO	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 57 05.2**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
AKTO	**Aktyubinsk**	**26.15**	**76**	P	**P**	**16 57 05.2**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.5,baz=288,slow=6.6,SNR=4.3						
MKAR	**Makanchi Array**	**42.20**	**69**	P	**P**	**16 59 24.7**	**+1.0**
	comp=Z,0.2nm,0.4s,mb3.2,baz=292,slow=7.6,SNR=2.6						
SONM	**Songino Array**	**54.89**	**55**	P	**P**	**17 01 03.4**	**+2.1**
	comp=Z,0.2nm,0.6s,mb3.3,baz=302,slow=8.5,SNR=3.5						
YKA	**Yellowknife Ar**	**59.80**	**336**	iP	**P**	**17 01 36.9**	**+1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**59.80**	**336**	P	**P**	**17 01 36.9**	**+1.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=31,slow=6.6,SNR=12						
YKA	**Yellowknife Ar**	**59.80**	**336**	iP	**P**	**17 01 36.9**	**+1.1**
	comp=Z,1.0nm,0.6s,mb4.0						

IDC 13 17:25:48.5±4.0, 160S×13953E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/11, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=154.5km s-min=27.7km az=85.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.93**	**195**	P	Pn	17 30 10.0	-1.7
	0.2nm,0.3s,baz=18,slow=12,SNR=14						
ASAR	**Alice Springs**	**22.61**	**194**	P	P	17 30 51.6	+0.7
	0.9nm,0.4s,baz=19,slow=11,SNR=20						
MKAR	**Makanchi Array**	**69.42**	**322**	P	P	17 36 58.7	+0.2
	0.1nm,0.4s,baz=112,slow=7.6,SNR=3.1						

MAN 13 17:31:33, 1645N×12219E, h50km, mb3.9, ML2.7, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.65**	**20**	eP	Pn	17 31 47.7	+1.6
PALP				eS	Sn	17 31 58.6	+3.0
PALP	**Palanan**	**0.65**	**20**	⇓eP	Pn	17 31 47.8	+1.7
BALP	**Baler**	**0.92**	**220**	eP	Pn	17 31 50.6	+1.0
APYP	**Conner**	**1.67**	**327**	eP	Pn	17 32 00.5	+0.6
POLP	**Polilio Island**	**1.73**	**188**	eP	Pn	17 32 01.7	+1.0
ABRA	**Dolores**	**1.85**	**310**	eP	Pn	17 32 03.8	+1.5
PVCP	**Virac**	**3.41**	**146**	eP	Pn	17 32 25.3	+1.6

*IDC **13** 17:48:12.3±0.7, 3556N×8950E, h0km, mb4.0/11, mb1 4.2/13, mb1mx4.0/22, mbtmp4.0/13, ML3.1/2, MS3.7/8, Ms1 3.7/8, ms1mx3.4/39, Error ellipse: s-maj=27.0km s-min=15.3km az=28.0*
*MOS **13** 17:48:15.1±1.1, 3567N×8937E, h25km, mb4.3/16, Error ellipse: s-maj=12.1km s-min=7.2km az=94.4*
*BJI **13** 17:48:16.4, 3562N×8939E, h37km, mB4.6, mb4.4, Ms4.3, Msz4.1*
*ISCJB **13** 17:48:17.1±0.9, 3562N±005×8935E±004, h42km±9km,*

mb4.1/22, MS3.9/8, Error ellipse: s-maj=9.3km s-min=5.1km az=11.6
*NEIC **13** 17:48:18.4±0.4, 3569N×8942E, h35km, mb4.2/6, Error ellipse: s-maj=10.8km s-min=6.8km az=215.0*
ISC 13 17:48:19.9±0.7**, 3569N**±006×**8943E**±004**, h51**km±7km**, n70,** σ**1ș09**/74**, mb4.1**/22**, MS3.9**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	6.15	166	eP	Pn	17 49 48.4	+0.2
	46nm,1.3s						
LSA	Lhasa	6.15	166	eP	Pn	17 49 48.4	+0.2
LSA				pmax	pmax		
	comp=Z,46nm,1.3s						
WMQ	Urumqi	8.23	351	eP	Pn	17 50 20.6	+4.0
GTA	Gaotai	9.04	63	eP	Pn	17 50 28.0	+0.2
GTA				S	Sn	17 52 13.8	+5.7
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s						
GTA				LR	LR		
	comp=N,950nm,14.5s						
GTA				LR	LR		
	comp=E,645nm,9.9s						
GTA				LR	LR		
	comp=Z,726nm,12.2s						
KSH	Kashi	11.34	294	iP	Pn	17 50 59.8	+0.7
KSH				AP		17 51 05.9	
KSH				XP		17 51 09.0	
KSH				S	Sn	17 53 05.3	+1.0
KSH				eXS		17 53 15.9	
KSH				eSS		17 53 19.3	
KSH				AMB	AMB		
	comp=Z,21nm,0.3s						
KSH				LR	LR		
	comp=N,3μm,8.0s						
KSH				LR	LR		
	comp=E,3μm,6.8s						
KSH				LR	LR		
	comp=Z,2μm,8.2s						
LZH	Lanzhou	11.70	84	eP	Pn	17 51 04.0	-0.1
LZH				AP		17 51 10.6	
LZH				XP		17 51 15.3	
LZH				eS	Sn	17 53 12.6	-0.6
LZH				XS		17 53 25.6	
LZH				AMB	AMB		
	comp=Z,16nm,1.1s						
LZH				AMB	AMB		
	comp=Z,83nm,4.4s						
LZH				LR	LR		
	comp=N,468nm,9.6s						
LZH				LR	LR		
	comp=Z,547nm,11.1s						
MKAR	Makanchi Array	12.32	336	iP	Pn	17 51 12.3	-0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	12.32	336	Pn	Pn	17 51 10.1	-2.4
	comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=7.7						
MKAR				LR	LR	17 56 45.4	
	comp=Z,183nm,19.4s,baz=151,slow=41						
CD2	Chengdu	12.90	108	eP	Pn	17 51 22.8	+2.3
CD2				XP		17 51 29.4	
CD2				PP		17 51 33.8	
CD2				S	Sn	17 53 48.4	+5.9
CD2				SS		17 54 03.4	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CD2				AMB	AMB		
	comp=Z,30nm,3.8s						
CD2				LR	LR		
	comp=N,680nm,7.2s						
CD2				LR	LR		
	comp=E,2μm,6.6s						
CD2				LR	LR		
	comp=Z,1μm,6.1s						
TKM2	Tokmak 2	12.91	308	eP	Pn	17 51 19.7	-0.9
	comp=Z,10nm,1.0s						
TKM2	Tokmak 2	12.91	308	eP	Pn	17 51 19.7	-0.9
TKM2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
UCH	Uchtor	13.31	304	P	Pn	17 51 25.9	-0.1
	comp=Z,7.4nm,1.2s						
AAK	Ala-Archa	13.49	305	eP	Pn	17 51 26.8	-1.7
	comp=Z,6.8nm,0.9s						
AAK	Ala-Archa	13.49	305	eP	Pn	17 51 26.8	-1.7
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
EKS2	Erkin-Say	13.98	305	eP	Pn	17 51 34.0	-1.2
	comp=Z,7.4nm,0.9s						
XAN	Xi'an	16.09	90	P	Pn	17 52 02.8	+0.2
XAN				AMB	AMB		
	comp=Z,12nm,1.0s						
KURK	Kurchatov	16.93	336	eP	Pn	17 52 11.1	-1.9
	comp=Z,8.6nm,0.9s						
KURK	Kurchatov	16.93	336	eP	Pn	17 52 11.1	-2.0
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SONM	Songino Array	17.48	41	P	Pn	17 52 19.5	-0.5
	comp=Z,0.2nm,0.3s,baz=227,slow=13,SNR=25						
SONM				PcP	PcP	17 56 58.4	+0.3
	baz=205,slow=2.7,SNR=3.6						
SONM				LR	LR	17 59 18.1	
	comp=Z,112nm,19.0s,baz=356,slow=38						
ZAK	Zakamensk	17.79	30	eP	Pn	17 52 22.8	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.8s						
ULN	Ulaanbaatar	17.86	42	iP	Pn	17 52 25.1	+0.6
HHC	Hu-ho-hao-te	18.11	67	eP	Pn	17 52 28.9	+1.2
HHC				S	S	17 55 48.6	-3.7
HHC				SS		17 56 06.4	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,143nm,4.7s						
HHC				LR	LR		
	comp=N,246nm,10.4s						
HHC				LR	LR		
	comp=E,377nm,10.4s						
HHC				LR	LR		
	comp=Z,561nm,12.5s						
TLY	Talaya	18.95	28	eP	Pn	17 52 38.6	+0.9
TLY				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,108nm,12.0s						
NVS	Novosibirsk	19.62	349	iP	Pn	17 52 44.8	-0.9
IRK	Irkutsk	19.63	28	eP	Pn	17 52 46.2	+0.4
IRK				pmax	pmax		
	comp=Z,25nm,3.0s						
WHN	Wuhan	21.47	97	eP	P	17 53 05.0	+0.8
BJT	Baijiatuau	21.52	70	eP	P	17 53 05.1	+0.5
	comp=Z,11nm,0.8s,mb4.3						
BJT	Baijiatuau	21.52	70	eP	P	17 53 05.1	+0.5
BJT				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI	Beijing	21.52	70	P	P	17 53 05.3	+0.7
BJI				S	S	17 56 57.8	-2.5
BJI				AMB	AMB		
	comp=Z,13nm,0.9s,mb4.4						
BJI				AMB	AMB		
	comp=Z,166nm,4.9s						
BJI				LR	LR		
	comp=N,555nm,18.3s,MS4.2						
BJI				LR	LR		
	comp=E,567nm,14.2s,MS4.2						
BJI				LR	LR		
	comp=Z,286nm,14.6s,MS3.8						
BRVK	Borovoye	21.99	328	eP	P	17 53 10.5	+1.0
	comp=Z,19nm,1.2s,mb4.4						
BRVK	Borovoye	21.99	328	eP	P	17 53 10.5	+1.0
BRVK				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.4						
CHKZ	Chkalovo	22.29	330	eP	P	17 53 13.8	+1.1
	comp=Z,15nm,1.4s,mb4.2						
CHKZ	Chkalovo	22.29	330	eP	P	17 53 13.8	+1.1
CHKZ				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.2						
QIZ	Qiongzhong	24.50	127	P	P	17 53 31.4	-3.1
QIZ				AP		17 53 43.5	
QIZ				S	S	17 57 48.5	-3.0
QIZ				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.3						
QIZ				AMB	AMB		
	comp=Z,112nm,6.1s						
QIZ				LR	LR		
	comp=N,359nm,10.8s						
QIZ				LR	LR		
	comp=Z,580nm,11.2s,MS4.3						
NJ2	Nanjing	24.66	90	eP	P	17 53 35.6	-0.3
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.9						
AKTK	Aktyubinsk	27.02	313	P	P	17 54 01.0	+3.9
AKTK				LR	LR	18 05 40.9	
AKTO	Aktyubinsk	27.02	313	P	P	17 54 01.0	+3.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
AKTO				MLR	MLR		
	comp=Z,109nm,20.2s,MS3.4						
AKTO	Aktyubinsk	27.02	313	P	P	17 54 01.0	+3.9
	comp=Z,1.2nm,0.7s,mb3.6,baz=105,slow=10,SNR=4.9						
AKTO				LR	LR	18 05 40.9	
	comp=Z,109nm,20.2s,MS3.4,baz=296,slow=39						
BOD	Bodaibo	27.52	29	eP	P	17 54 01.1	-0.3
BOD				pmax	pmax		
	comp=Z,3.0nm,1.8s,mb3.6						
KSRS	Korea Array	30.82	75	P	P	17 54 27.7	-3.3
	comp=Z,3.1nm,0.9s,mb4.2,baz=274,slow=8.4,SNR=8.9						
KSRS				LR	LR	18 08 11.7	
	comp=Z,117nm,19.1s,MS3.6,baz=315,slow=39						
YAK	Yakutsk	36.38	31	eP	P	17 55 18.3	-0.6
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MJAR	Matsushiro Arr	39.08	74	P	P	17 55 41.3	-0.7
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	39.08	74	P	P	17 55 41.3	-0.7
	comp=Z,2.7nm,0.9s,mb4.0,baz=280,slow=13,SNR=4.1						
TIXI	Tiksi	41.40	18	eP	P	17 56 00.9	+0.1
	comp=Z,2.6nm,0.9s,mb3.9						
TIXI	Tiksi	41.40	18	iP	P	17 56 00.4	-0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
BRTR	Keskin Array B	43.72	293	P	P	17 56 21.3	+1.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	43.72	293	P	P	17 56 21.3	+1.2
	comp=Z,0.6nm,0.6s,mb3.5,baz=76,slow=11,SNR=4.2						
AKASG	Malin Array Be	45.13	309	P	P	17 56 31.3	+0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	Malin Array Be	45.13	309	P	P	17 56 31.3	+0.1
	comp=Z,1.6nm,0.9s,mb3.9,baz=78,slow=6.7,SNR=6.6						
BILL	Bilibino	52.56	27	P	P	17 57 30.0	+2.2
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
VRAC	Vranov	53.39	309	LR	LR	18 21 44.1	
	comp=Z,137nm,18.2s,MS4.0,baz=146,slow=38						
NB2	NORSAR Subarra	53.96	324	P	P	17 57 38.0	-0.2
	comp=Z,2.6nm,0.9s,mb4.2,baz=81,slow=7.9						
NB2	NORSAR Subarra	53.96	324	P	P	17 57 38.0	-0.2
NB2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
NOA	NORSAR Array B	53.96	324	P	P	17 57 38.0	-0.2
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,115nm,18.2s						
NOA	NORSAR Array B	53.96	324	P	P	17 57 38.0	-0.2
	comp=Z,2.2nm,0.9s,mb4.1,baz=81,slow=7.4,SNR=3.4						
NOA				LR	LR	18 22 26.4	
	comp=Z,115nm,18.2s,MS4.0,baz=200,slow=38						
GERES	GERESS Array B	55.35	309	P	P	17 57 48.7	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	55.35	309	P	P	17 57 48.7	+0.3
	comp=Z,0.9nm,0.8s,mb3.9,baz=60,slow=8.1,SNR=6.8						
DAVOX	Davos/Dischmat	58.44	308	LR	LR	18 23 30.9	
	comp=Z,124nm,21.2s,MS4.0,baz=248,slow=36						
IMA2	Indian Mountai	67.66	23	eP	P	17 59 12.5	+1.3
WRA	Warramunga Arr	69.79	135	P	P	17 59 24.2	-0.8
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	Warramunga Arr	69.79	135	P	P	17 59 24.2	-0.8
	comp=Z,3.3nm,0.9s,mb4.2,baz=331,slow=6.0,SNR=16						
ESDC	Sonseca Array	70.60	305	P	P	17 59 30.4	+0.5
	comp=Z,0.2nm,0.3s,mb3.5,baz=268,slow=6.4,SNR=3.1						
INK	Inuvik	71.48	15	eP	P	17 59 35.3	+0.6
ASAR	Alice Springs	72.50	138	P	P	17 59 40.8	-0.5
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	72.50	138	P	P	17 59 40.8	-0.5
	comp=Z,2.1nm,0.9s,mb4.1,baz=324,slow=5.6,SNR=16						
CTA	Charters Tower	77.27	126	LR	LR	18 38 36.4	
	comp=Z,35nm,18.4s,MS3.7,baz=132,slow=39						
YKA	Yellowknife Ar	80.26	11	P	P	18 00 25.6	+0.8
YKA	Yellowknife Ar	80.26	11	P	P	18 00 25.6	+0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	80.26	11	P	P	18 00 25.6	+0.8
	comp=Z,1.3nm,0.8s,mb3.9,baz=334,slow=5.2,SNR=24						
TORD	Torodi Ar. Bea	80.64	279	P	P	18 00 26.1	-1.6
	comp=Z,2.3nm,0.9s,mb4.1,baz=46,slow=5.4,SNR=5.6						

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*PRU **13** 18:10:07.4, 5028N×1873E, h0km*
WAR 13 18:10:06.4, 5027N×1886E, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.60	94	ePg	Pg	18 10 18.5	+0.5
OJC				eSg	Sg	18 10 27.3	+1.5
OKC	Ostrava-Krasne	0.63	227	ePG	Pg	18 10 18.6	+0.2
OKC				eSG	Sg	18 10 28.1	+1.5
	22nm,0.4s						
NIE	Niedzica	1.27	131	ePg	Pg	18 10 30.9	+0.3
NIE				eSg	Sg	18 10 49.1	+2.1
DPC	Dobruska-Polom	1.63	274	ePG	Pg	18 10 35.6	-2.0
DPC				eSG	Sg	18 10 57.0	-1.7
	18nm,0.5s						
KSP	Ksiaz	1.74	290	ePn	Pn	18 10 38.6	+0.9
KSP				eSn	Sn	18 11 01.6	+1.0
STHS	Stebnicka Huta	1.76	118	ePN	Pn	18 10 39.8	+1.7
STHS				eSN	Sn	18 11 04.2	+3.0
VYHS	Vyhne	1.77	181	ePN	Pn	18 10 37.3	-1.0
VYHS				eSN	Sn	18 11 00.5	-1.0
KECS	Kecovo	2.08	149	ePN	Pn	18 10 45.2	+2.8
KECS				eSN	Sn	18 11 10.5	+1.5
CRVS	Cervenica-Dubn	2.17	128	ePN	Pn	18 10 47.1	+3.3
CRVS				eSN	Sn	18 11 15.3	+3.9
PRU	Pruhonice	2.79	266	ePG	Pg	18 10 56.8	-3.1
PRU				eSG	Sg	18 11 33.3	-2.8
	8.2nm,0.7s						
BRG	Berggiesshubel	3.19	283	SG	Sg	18 11 46.5	-2.5
	4.8nm,0.4s						
KHC	Kasperske Hory	3.61	254	ePG	Pg	18 11 12.1	-3.5
KHC				eSG	Sg	18 12 00.8	-1.6
	6.8nm,0.5s						
NKC	Novy Kostel	4.12	272	eSG	Sg	18 12 16.2	-2.3

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*ISCJB **13** 18:10:42.8±0.3, 5148N±002×692E±003, h0km, Error ellipse: s-maj=3.1km s-min=2.3km az=40.1*
*BUG **13** 18:10:43.7, 5153N×683E, h1km, ML2.5*
*NEIC **13** 18:10:44.3±0.6, 5157N×684E, h10km, ML3.1(LDG), ML2.5(SZGRF), Error ellipse: s-maj=8.7km s-min=6.1km az=147.0*
*CSEM **13** 18:10:44.8±0.1, 5162N×681E, h1km, ML3.1/16, Error ellipse: s-maj=1.8km s-min=0.9km az=110.0*
*LDG **13** 18:10:45.1±0.1, 5161N×681E, h1km, Md3.5/2, Ml3.1/19, Error ellipse: s-maj=2.3km s-min=1.9km az=32.0, Suspected Mining induced.*
*BGR **13** 18:10:45.2±0.5, 5152N×691E, h1km, ML2.5/4, Error ellipse: s-maj=6.7km s-min=4.4km az=112.0*
*BNS **13** 18:10:46.1±0.6, 5155N×682E, h1km, ML2.5*
ISC 13 18:10:44.1±0.3**, 5154N**±002×**685E**±003**, h0**km**, n70,** σ**1ș17**/124**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.08	10	Pg	Pg	18 10 45.5	-0.2
BZER				Sg	Sg	18 10 47.0	+0.2
WTSB	Winterswijk	0.43	356	ePg	Pg	18 10 52.6	+0.2
	157nm,0.3s						
RODG	Roetgen-Dahlhe	0.57	227	ePg	Pg	18 10 57.1	+2.0
BNS	Bensberg	0.61	160	ePg	Pg	18 10 58.2	+2.4
HOBG	Hohbusch	0.63	151	ePg	Pg	18 10 58.5	+2.2
STB	Steinbach	0.95	180	ePg	Pg	18 11 04.1	+1.9
STB				eSg	Sg	18 11 17.6	+3.2
	143nm,0.4s						
IBBN	Ibbenburen	0.95	36	ePg	Pg	18 11 02.1	-0.3
	SNR=5.3						
IBBN				eSg	Sg	18 11 15.4	+0.7
	SNR=3.6						
IBBN	Ibbenburen	0.95	36	ePg	Pg	18 11 01.9	-0.5
IBBN				eSg	Sg	18 11 16.8	+2.0
KLL	Kalltalsperre	0.95	201	ePg	Pg	18 11 04.6	+2.2
DREG	Dreilaegerbach	0.96	204	ePg	Pg	18 11 04.2	+1.7
HGN	Heimansgroeve	0.97	217	ePg	Pg	18 11 04.2	+1.6
	34nm,0.1s						
HGN				eSg	Sg	18 11 17.7	+2.6
BEBN	Eben Emael	1.05	225	P	Pg	18 11 05.5	+1.3
BEBN	Eben Emael	1.05	225	P	Pg	18 11 05.4	+1.2
MEM	Membach	1.07	210	P	Pg	18 11 05.8	+1.2
BGG	Burgeitz	1.37	167	ePg	Pg	18 11 10.9	+0.6
BCLA	Clavier	1.49	222	P	Pn	18 11 11.9	-0.1
TNS	Taunus Mts	1.66	142	ePg	Pg	18 11 15.0	-0.9
	SNR=9.8						
TNS				eSg	Sg	18 11 37.1	-0.4
	SNR=3.8						
TNS	Taunus Mts	1.66	142	ePg	Pg	18 11 14.9	-1.1
TNS				eSg	Sg	18 11 38.2	+0.7
TNS	Taunus Mts	1.66	142	eSg	Sg	18 11 38.2	+0.7
SNF	Seneffe	1.92	239	P	Pn	18 11 18.1	+0.1
GIVF	Givet	1.93	223	ePn	Pn	18 11 18.2	+0.1
	SNR=1.0						
GIVF				eSg	Sg	18 11 47.0	+1.0
	116nm,0.4s						
GIVF	Givet	1.93	223	ePn	Pn	18 11 18.2	+0.1
	SNR=1.0						
GIVF				eSg	Sg	18 11 47.0	+1.0
	58nm,0.4s						
WLF	Walferdange	1.93	194	ePg	Pg	18 11 20.7	-0.4
	SNR=4.9						
WLF				eSg	Sg	18 11 45.5	-0.5
	SNR=3.4						
WLF	Walferdange	1.93	194	ePn	Pn	18 11 19.3	+1.2
WLF				eSn	Sn	18 11 44.0	+1.0
WLF	Walferdange	1.93	194	P	Pn	18 11 19.9	+1.8
WLF	Walferdange	1.93	194	ePn	Pn	18 11 19.3	+1.2
WLF				eSn	Sn	18 11 44.0	+1.0
DOU	Dourbes	2.03	226	P	Pn	18 11 19.3	-0.2
UBBA	Unterbreizbach	2.11	109	eSg	Sg	18 11 49.8	-2.1
	SNR=2.8						
CLZ	Clausthal	2.21	81	eSg	Sg	18 11 53.9	-1.4
BAIF	Baives	2.24	230	ePg	Pg	18 11 27.3	+0.4
	SNR=1.0						
BAIF				eSg	Sg	18 11 55.5	-0.4
	17nm,0.2s						
BAIF	Baives	2.24	230	ePn	Pn	18 11 20.8	-1.6
BAIF				ePg	Pg	18 11 27.3	+0.4
BAIF				eSg	Sg	18 11 55.5	-0.4
BAIF	Baives	2.24	230	ePg	Pg	18 11 27.3	+0.4
	SNR=1.0						
BAIF				eSg	Sg	18 11 55.5	-0.4
	8.5nm,0.2s						
RFYF	Reffroy	3.04	197	ePg	Pg	18 11 42.7	+0.3
	baz=15						
RFYF				eSg	Sg	18 12 22.8	+0.9
	12nm,0.2s						
RFYF	Reffroy	3.04	197	ePg	Pg	18 11 42.7	+0.3
RFYF				eSg	Sg	18 12 22.8	+0.9
	6.1nm,0.2s						
MOX	Moxa	3.14	105	eSg	Sg	18 12 23.3	-1.6
	SNR=3.8						
MOX	Moxa	3.14	105	Pn	Pn	18 11 35.4	+0.7
MOX				Sg	Sg	18 12 24.1	-0.7
CDF	Champ du Feu	3.14	175	ePn	Pn	18 11 34.3	-0.5
	SNR=1.0						
CDF				eSn	Sn	18 12 11.5	-1.5
	SNR=1.0						
CDF				eSg	Sg	18 12 26.2	+1.2
	9.9nm,0.4s,SNR=1.0						
CDF	Champ du Feu	3.14	175	ePn	Pn	18 11 34.3	-0.5
	SNR=1.0						
CDF				eSn	Sn	18 12 11.5	-1.5
	SNR=1.0						
CDF				eSg	Sg	18 12 26.2	+1.2
	4.9nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	3.25	202	ePn	Pn	18 11 35.6	-0.7
	baz=16						
MEZF				eSg	Sg	18 12 29.6	+1.0
	13nm,0.4s,SNR=1.0						
MEZF	Maizieres J'vi	3.25	202	ePn	Pn	18 11 35.6	-0.7
MEZF				eSg	Sg	18 12 29.6	+1.0
	6.4nm,0.4s,SNR=1.0						
BFO	Black Forest	3.35	163	ePn	Pn	18 11 38.2	+0.5
	SNR=2.7						
BFO				eSn	Sn	18 12 15.1	-3.1
	SNR=2.4						
SFTF	Sexfontaines	3.54	200	ePg	Pg	18 11 51.8	-0.1
SFTF				eSg	Sg	18 12 37.8	+0.1
	21nm,0.4s						
SFTF	Sexfontaines	3.54	200	ePg	Pg	18 11 51.8	-0.1
SFTF				eSg	Sg	18 12 37.8	+0.1
	11nm,0.4s						
HAU	Haudompre	3.55	185	ePg	Pg	18 11 52.0	-0.2
HAU				eSg	Sg	18 12 38.8	+0.6
	9.3nm,0.3s						
HAU	Haudompre	3.55	185	ePn	Pn	18 11 40.0	-0.4
HAU				ePg	Pg	18 11 52.0	-0.2
HAU				eSg	Sg	18 12 38.8	+0.6
HAU	Haudompre	3.55	185	ePg	Pg	18 11 52.0	-0.2
HAU				eSg	Sg	18 12 38.8	+0.6
	4.7nm,0.3s						
WERD	Werda	3.62	105	ePn	Pn	18 11 41.3	-0.1
	SNR=2.4						
TANN	Tannenbergstha	3.72	105	ePn	Pn	18 11 42.4	-0.4
	SNR=2.5						
HINF	Hinteralfeld	3.73	180	ePn	Pn	18 11 42.9	+0.1
	SNR=1.0						
HINF				eSn	Sn	18 12 25.3	-2.1
	SNR=1.0						
HINF				eSg	Sg	18 12 44.4	+0.7
	9.4nm,0.5s						
HINF	Hinteralfeld	3.73	180	ePn	Pn	18 11 42.9	+0.1
	SNR=1.0						
HINF				eSn	Sn	18 12 25.3	-2.1
	SNR=1.0						
HINF				eSg	Sg	18 12 44.4	+0.7
	4.7nm,0.5s						
CLL	Collm	3.86	91	eSg	Sg	18 12 51.0	+2.9
BRG	Berggiesshubel	4.51	96	SG	Sg	18 13 09.4	+0.4
	6.0nm,1.1s						
LOR	Lormes	4.70	206	ePn	Pn	18 11 55.5	-0.7
	baz=29,SNR=1.0						
LOR				eSn	Sn	18 12 48.2	-3.1
	baz=18,SNR=1.0						
LOR				eSg	Sg	18 13 13.8	-1.2
	6.9nm,0.3s,baz=18,SNR=1.0						
LOR	Lormes	4.70	206	ePn	Pn	18 11 55.5	-0.7
	SNR=1.0						
LOR				eSn	Sn	18 12 48.2	-3.1
	SNR=1.0						
LOR				eSg	Sg	18 13 13.8	-1.2
	3.5nm,0.3s,SNR=1.0						
CABF	La Chapelle	4.96	186	ePn	Pn	18 11 59.5	-0.3
CABF				eSg	Sg	18 13 22.6	-0.7
	2.3nm,0.3s						
CABF	La Chapelle	4.96	186	ePn	Pn	18 11 59.5	-0.3
CABF				eSg	Sg	18 13 22.6	-0.7
	1.1nm,0.3s						
SSF	Saint Saulge	4.99	207	ePn	Pn	18 11 59.4	-0.7
	SNR=1.0						
SSF				eSg	Sg	18 13 22.8	-1.4
	9.0nm,0.4s						
SSF	Saint Saulge	4.99	207	ePn	Pn	18 11 59.4	-0.7
	SNR=1.0						
SSF				eSg	Sg	18 13 22.8	-1.4
	4.5nm,0.4s						
AVF	Avril sur Loir	5.28	207	ePn	Pn	18 12 03.5	-0.6
	SNR=1.0						
AVF				eSg	Sg	18 13 31.9	-1.6
	2.5nm,0.3s						
AVF	Avril sur Loir	5.28	207	ePn	Pn	18 12 03.5	-0.6
	SNR=1.0						
AVF				eSg	Sg	18 13 31.9	-1.6
	1.2nm,0.3s						
SMF	Signal de Mont	5.28	203	ePn	Pn	18 12 03.4	-0.8
	SNR=1.0						
SMF				eSg	Sg	18 13 32.4	-1.2
	6.4nm,0.4s						
SMF	Signal de Mont	5.28	203	ePn	Pn	18 12 03.4	-0.8
	SNR=1.0						
SMF				eSg	Sg	18 13 32.4	-1.2
	3.2nm,0.4s						
LDF	La Druitiere	5.37	239	ePn	Pn	18 12 04.4	-1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LDF				eSn	Sn	18 13 03.7	-4.2
	2.2nm,0.2s,SNR=1.0						
LDF	La Druitiere	5.37	239	ePn	Pn	18 12 04.4	-1.0
LDF				eSn	Sn	18 13 03.7	-4.2
	1.1nm,0.2s,SNR=1.0						
FLN	La Foliniere	5.47	242	ePn	Pn	18 12 05.5	-1.3
	baz=59,SNR=1.0						
BGF	Bois d'Agland	5.63	209	ePn	Pn	18 12 08.3	-0.8
	SNR=1.0						
BGF				eSg	Sg	18 13 43.1	-1.9
	16nm,0.5s						
BGF	Bois d'Agland	5.63	209	ePn	Pn	18 12 08.3	-0.8
	SNR=1.0						
BGF				eSg	Sg	18 13 43.1	-1.9
	8.1nm,0.5s						
GRR	Gorron	5.89	241	ePn	Pn	18 12 11.8	-0.7
	SNR=1.0						
GRR				eSn	Sn	18 13 15.3	-5.3
	7.1nm,0.2s,SNR=1.0						
GRR	Gorron	5.89	241	ePn	Pn	18 12 11.8	-0.7
	SNR=1.0						
GRR				eSn	Sn	18 13 15.3	-5.3
	3.5nm,0.2s,SNR=1.0						
MBDF	Montbardon	6.82	180	eSn	Sn	18 13 38.9	-4.6
	1.9nm,0.5s,SNR=1.0						

SZGRF ***13*** *18:31:36.8, 21.33S×178.34W, h33km, Fiji Islands region*
ISCJB ***13*** *18:32:33.4±1.6, 20.7S±0.2×178.4W±0.1, h516km±19km, mb4.0/17, Error ellipse: s-maj=26.9km s-min=11.9km az=150.9*
NEIC ***13*** *18:32:35.5±1.1, 20.59S×178.34W, h532km±11km, mb4.4/7, Error ellipse: s-maj=22.7km s-min=8.7km az=152.0*
IDC ***13*** *18:32:40.7±2.1, 20.80S×178.50W, h590km±23km, mb3.3/12, mb1 3.5/13, mb1mx3.5/17, mbtmp3.3/13, Error ellipse: s-maj=32.5km s-min=11.3km az=156.0*
ISC 13 18:32:35.1±1.4**, 20.6S**±0.2×**178.3W**±0.1**, h522**km±15km**, n74, σ0.95**/29**, mb4.0**/17**, 14C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.16	44	P	P	18 34 43.0	-1.0
DZM	Mont Dzumac	14.25	262	P	P	18 35 39.1	+2.0
	1.6nm,0.3s,baz=84,slow=16,SNR=19						
CTA	Charters Tower	33.16	265	P	P	18 38 28.7	+0.4
CTA	Charters Tower	33.16	265	P	P	18 38 28.7	+0.4
	6.4nm,0.5s,mb4.4,baz=86,slow=12,SNR=13						
CTAO	Charters Tower	33.16	265	eP	P	18 38 28.7	+0.5
	5.1nm,0.4s,mb4.4						
PMG	Port Moresby	35.06	283	eP	P	18 38 44.4	+0.1
	20nm,1.0s,mb4.6						
PMG	Port Moresby	35.06	283	P	P	18 38 44.5	+0.1
	11nm,0.9s,mb4.4,baz=110,slow=5.5,SNR=3.6						
STKA	Stephens Creek	37.45	244	P	P	18 39 03.9	+0.1
	0.5nm,0.4s,mb3.4,baz=97,slow=15,SNR=3.2						
ASAR	Alice Springs	44.18	257	P	P	18 39 57.0	-0.5
	2.5nm,0.5s,mb4.0,baz=90,slow=8.2,SNR=90						
ASAR				PcP	PcP	18 41 30.1	-1.0
	1.7nm,0.6s,baz=104,slow=3.9,SNR=12						
ASAR				S	S	18 45 48.5	-4.2
	0.6nm,0.7s,baz=93,slow=14,SNR=7.2						
WRA	Warramunga Arr	44.27	262	P	P	18 39 57.5	-0.8
	1.0nm,0.3s,mb3.9,baz=96,slow=7.0,SNR=91						
WRA				PcP	PcP	18 41 30.0	-1.4
	1.5nm,0.9s,baz=91,slow=4.3,SNR=4.8						
WRA				S	S	18 45 48.5	-5.6
	0.8nm,1.0s,baz=98,slow=13,SNR=5.1						
FITZ	Fitzroy Crossi	52.70	263	P	P	18 41 01.0	-0.1
	1.1nm,0.5s,mb3.5,baz=112,slow=14,SNR=8.3						
MBWA	Marble Bar	57.52	258	eP	P	18 41 33.3	-1.4
	6.6nm,0.6s,mb4.0						
NWAO	Narrogin (SRO)	58.02	243	P	P	18 41 37.0	-0.9
QSPA	South Pole Qui	69.43	180	eP	P	18 42 50.1	+0.1
	214nm,2.8s,mb5.2						
MJAR	Matsushiro Arr	70.13	324	P	P	18 42 54.5	-0.3
	1.4nm,0.6s,mb3.6,baz=157,slow=5.7,SNR=6.3						
KSM	Kuching	73.12	278	eP	P	18 43 12.8	+0.1
ASAJ	Asahikawa	73.69	332	P	P	18 43 16.8	+1.4
	10.0nm,0.9s,mb4.2,baz=80,slow=15,SNR=4.8						
KSRS	Korea Array	76.78	319	P	P	18 43 33.5	+0.8
	0.9nm,0.6s,mb3.4,baz=130,slow=5.2,SNR=6.0						
NVAR	Mina Array Bea	81.34	43	P	P	18 43 57.9	+0.9
	1.5nm,0.8s,mb3.5,baz=215,slow=6.3,SNR=10						
SYO	Syowa Base	86.53	193	⇑eX	P	18 44 26.6	+4.6
MNTX	Cornudas Mount	87.09	55	eP	P	18 44 26.4	+1.1
	4.6nm,1.4s,mb3.9						
MCK	McKinley	87.17	13	eP	P	18 44 23.9	-1.1
	3.8nm,0.7s,mb4.1						
TXAR	Lajitas Array	87.39	57	P	P	18 44 27.9	+1.1
TXAR	Lajitas Array	87.39	57	P	P	18 44 27.9	+1.1
	1.5nm,0.9s,mb3.6,baz=223,slow=5.1,SNR=11						
COLA	College	88.41	13	eP	P	18 44 29.1	-1.5
	9.5nm,1.3s,mb4.4						
PDAR	Pinedale Array	89.28	43	P	P	18 44 36.0	+0.7
	1.9nm,0.7s,mb4.0,baz=217,slow=3.7,SNR=17						
INK	Inuvik	94.48	15	eP	P	18 44 57.6	-1.0
	66nm,1.0s						
MKAR	Makanchi Array	111.06	313	PKPdf	PKiKP	18 50 06.3	-2.6
MKAR	Makanchi Array	111.06	313	PKiKP	PKiKP	18 50 06.3	-2.6
	0.4nm,0.4s,baz=63,slow=2.8,SNR=8.2						
ARCES	ARCESS Array B	129.00	349	PKP	PKPdf	18 50 40.8	-1.8
	1.5nm,0.7s,baz=336,slow=2.7,SNR=12						
FINES	FINESS Array B	135.81	343	PKP	PKPdf	18 50 55.2	-0.4
FINES	FINESS Array B	135.81	343	PKP	PKPdf	18 50 55.2	-0.4
	0.7nm,0.5s,baz=118,slow=3.0,SNR=6.2						
AKASG	Malin Array Be	142.98	331	PKP	PKPdf	18 51 05.0	-4.0
	8.1nm,0.4s,baz=43,slow=4.2,SNR=97						
MALT	Malatya	143.76	307	⇑P	PKPdf	18 51 09.9	-0.8
MALT	Malatya	143.76	307	⇑iP	PKPdf	18 51 09.9	-0.8
BSEG	Bad Segeberg	146.10	351	ePKPbc	PKPbc	18 51 15.7	-0.5
KWP	Kalwaria	146.57	335	⇑iP	PKPdf	18 51 15.9	+0.7
BRTR	Keskin Array B	146.69	312	PKPbc	PKPbc	18 51 17.0	-1.3
	2.6nm,0.6s,baz=128,slow=4.9,SNR=12						
BURAR	Bucovina Array	147.02	330	⇓P	PKPbc	18 51 18.6	-0.3
BURAR	Bucovina Array	147.02	330	⇓iP	PKPbc	18 51 18.6	-0.3
STHS	Stebnicka Huta	147.31	336	ePKP	PKPbc	18 51 19.3	-0.3
STHS				e		18 51 24.1	
STHS	Stebnicka Huta	147.31	336	ePKP	PKPbc	18 51 19.3	-0.3
STHS				e		18 51 24.0	
CRVS	Cervenica-Dubn	147.64	335	ePKP	PKPab	18 51 24.5	-0.1
TRPA	Tarpa	147.82	333	⇑iP	PKPbc	18 51 20.3	-0.7
CLZ	Clausthal	148.12	350	ePKPbc	PKPbc	18 51 21.5	-0.1
CLL	Collm	148.12	346	ePKP	PKPdf	18 51 17.0	-0.7
CLL				⇓iPKP	PKPbc	18 51 20.6	-1.0
CLL				⇑iPKP	PKPab	18 51 25.7	-0.7
CLL	Collm	148.12	346	ePKPdf	PKPdf	18 51 17.0	-0.7
CLL				⇓iPKPbc	PKPbc	18 51 20.6	-1.0
	comp=Z,11nm,0.8s						
CLL				⇑iPKPab	PKPab	18 51 25.7	-0.7
	comp=Z,6.0nm,1.0s						
CLL	Collm	148.12	346	⇓iPKPbc	PKPbc	18 51 20.7	-0.9
	comp=Z,11nm,0.7s						
MLR	Muntele Rosu	148.16	327	⇑P	PKPbc	18 51 20.8	-1.2
MLR	Muntele Rosu	148.16	327	⇑iP	PKPbc	18 51 20.8	-1.1
BRG	Berggiesshubel	148.31	345	i P	PKPbc	18 51 21.2	-0.9
BRG				i		18 51 26.8	
BRG	Berggiesshubel	148.31	345	ePKPbc	PKPbc	18 51 21.5	-0.6
BRG	Berggiesshubel	148.31	345	i P	PKPbc	18 51 21.2	-0.9
	comp=Z,8.0nm,1.0s						
BRG				i		18 51 26.8	
	comp=Z,3.0nm,0.6s						
VYHS	Vyhne	148.96	338	ePKP	PKPbc	18 51 23.3	-0.5
VYHS				e		18 51 29.9	
MOX	Moxa	149.04	348	ePKP	PKPbc	18 51 23.2	-0.7
MOX	Moxa	149.04	348	ePKPbc	PKPbc	18 51 23.4	-0.5
KOLL	Kolacno	149.04	338	ePKP	PKPbc	18 51 23.6	-0.4
KOLL				e		18 51 30.6	
TANN	Tannenbergstha	149.08	347	ePKPbc	PKPbc	18 51 23.6	-0.4
MANZ	Manzenberg	149.56	347	ePKPbc	PKPbc	18 51 24.5	-0.7
MODS	Modra-Piesok	149.60	339	ePKP	PKPbc	18 51 24.8	-0.6
ROTZ	Rotzenmuhle	149.74	346	ePKPbc	PKPbc	18 51 24.9	-0.7
GZR	Gura Zlata	149.80	330	⇑P	PKPbc	18 51 24.7	-1.2
GZR	Gura Zlata	149.80	330	⇑iP	PKPbc	18 51 24.7	-1.2
TNS	Taunus Mts	149.99	351	ePKPbc	PKPbc	18 51 25.6	-0.6
KHC	Kasperske Hory	150.01	344	ePKPbc	PKPbc	18 51 25.5	-0.8
KHC				ePKPab	PKPab	18 51 34.0	-0.3
BZS	Buzias	150.16	331	⇓P	PKPbc	18 51 25.7	-1.1
BZS	Buzias	150.16	331	⇓iP	PKPbc	18 51 25.7	-1.1
GEC2	GERESS Array S	150.24	344	ePKPbc	PKPbc	18 51 26.1	-0.7
GERES	GERESS Array B	150.24	344	PKPbc	PKPbc	18 51 26.2	-0.7
	comp=Z,1.7nm,0.6s,baz=24,slow=2.4,SNR=20						
CONA	Conrad Observa	150.45	340	⇓iPKPbc	PKPbc	18 51 26.6	-0.7
	comp=Z,4.3nm,0.7s						
WLF	Walferdange	150.81	354	ePKPbc	PKPbc	18 51 28.1	0.0
PKSM	Moragy	150.94	335	⇑P	PKPbc	18 51 27.2	-1.3
PKSM	Moragy	150.94	335	⇑iP	PKPbc	18 51 27.2	-1.4
ABTA	Abfaltersbach	152.49	344	⇑iPKPbc	PKPbc	18 51 30.4	-1.6
	comp=Z,4.7nm,0.6s						

ISCJB ***13*** *19:18:29.5±0.4, 7.13N±0.04×72.82W±0.05, h193km±4km, mb3.8/15, Error ellipse: s-maj=8.3km s-min=6.2km az=44.9*
IDC ***13*** *19:18:29.8±0.5, 7.09N×72.83W, h183km±5km, mb3.7/9, mb1 4.0/15, mb1mx3.8/24, mbtmp3.9/15, Error ellipse: s-maj=14.3km s-min=7.3km az=126.0*
NEIC ***13*** *19:18:29.7±0.4, 7.11N×72.89W, mb4.1/8, Error ellipse: s-maj=10.2km s-min=7.9km az=136.0*
FUNV ***13*** *19:18:30.8, 7.04N×72.89W, h188km, MW4.2*
ISC 13 19:18:30.5±0.4**, 7.13N**±0.04×**72.80W**±0.04**, h188**km±4km**, n57, σ0.88**/60**, mb4.0**/15**, 1C-16D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.88	33	⇓iP	Pn	19 18 59.1	+0.9
CAPV				eS	Sn	19 19 18.6	-1.1
VIGV	El Vigia	2.22	40	⇓iP	Pn	19 19 11.8	+1.3
VIGV				eS	Sn	19 19 40.9	-0.7
SOCV	Socops	2.24	59	⇓iP	Pn	19 19 12.4	+1.6
SOCV				eS	Sn	19 19 41.2	-0.8
ROSC	El Rosal	2.72	214	P	Pn	19 19 16.1	-0.1
	62nm,0.3s,baz=290,slow=9.5,SNR=62						
ROSC				S	Sn	19 19 50.8	-1.0
	216nm,0.3s,baz=95,slow=21,SNR=16						
SDV	Santo Domingo	2.77	51	ePn	Pn	19 19 18.1	+1.3
SDV				eSn	Sn	19 19 53.0	+0.1
SDV	Santo Domingo	2.77	51	P	Pn	19 19 18.4	+1.6
	202nm,0.3s,baz=224,slow=6.9,SNR=484						
SDV				S	Sn	19 19 53.6	+0.7
	51nm,0.3s,baz=263,slow=24,SNR=6.9						
ELOV	Elorza	3.29	92	⇓iP	Pn	19 19 23.8	+0.7
ELOV				eS	Sn	19 20 03.1	-1.0
VIRV	Villa del Rosa	3.38	7	⇓iP	Pn	19 19 23.7	-0.5
VIRV				eS	Sn	19 20 04.8	-1.4
QARV	Quebrada Arrib	3.80	36	⇓iP	Pn	19 19 30.4	+1.0
SANV	Sanarito	4.00	54	⇓iP	Pn	19 19 32.5	+0.6
CURV	Curarigua	4.01	44	⇓iP	Pn	19 19 32.9	+0.8
DABV	Dabajuro	4.34	29	⇓iP	Pn	19 19 36.9	+0.7
TEPV	Terepaima	4.55	51	⇓eP	Pn	19 19 39.4	+0.6
SIQV	Siquisique	4.58	40	⇓iP	Pn	19 19 39.6	+0.3
BAUV	El Baul	5.04	69	⇓iP	Pn	19 19 44.4	-0.9
IMOV	Isla Los Monje	5.53	20	⇑iP	Pn	19 19 51.5	0.0
TURV	Turiamo	5.91	56	eP	Pn	19 19 56.2	-0.3
CAOV	Caicara del Or	6.43	88	⇓iP	Pn	19 20 02.3	-1.0
MERV	Las Mercedes	6.77	71	⇓iP	Pn	19 20 07.0	-0.8
BIRV	Birongo	7.26	62	⇓iP	Pn	19 20 13.5	-0.6
CUPV	Cœpira	7.52	67	⇓iP	Pn	19 20 16.9	-0.6
PRGV	PARIAGUAN	8.24	78	eP	Pn	19 20 26.5	-0.4
PCRV	Puerto La Cruz	8.62	69	eP	Pn	19 20 32.9	+0.9
PCRV	Puerto La Cruz	8.62	69	P	Pn	19 20 33.2	+1.2
	5.0nm,0.3s,baz=238,slow=6.7,SNR=11						
SDDR	Presa de Saban	11.88	7	ePn	Pn	19 21 16.3	+2.0
SJG	San Juan	12.70	30	P	Pn	19 21 23.9	-0.8
	11nm,0.3s,baz=309,slow=20,SNR=4.8						
CPD	Cerro la Pandu	12.75	31	ePn	Pn	19 21 25.8	+0.4
ATAH	Atahualpa	15.10	202	P	Pn	19 21 57.5	+2.8
	1.7nm,0.3s,baz=39,slow=4.8,SNR=5.5						
PAYG	Puerto Ayora	19.09	247	P	P	19 22 39.4	+0.2
	21nm,0.9s						
TEIG	Tepich	19.87	312	eP	P	19 22 45.4	-2.1
	8.3nm,0.5s						
TEIG	Tepich	19.87	312	P	P	19 22 48.9	+1.4
	1.7nm,0.3s,baz=187,slow=9.7,SNR=8.4						
LPAZ	La Paz	23.72	169	P	P	19 23 25.8	+0.2
LPAZ				pP		19 24 01.8	
LPAZ	La Paz	23.72	169	P	P	19 23 25.8	+0.2
	1.4nm,0.7s,mb3.6,baz=344,slow=12,SNR=3.7						
LPAZ				pP		19 24 01.8	
	1.6nm,0.6s,baz=336,slow=16,SNR=2.9						
SIV	San Ignacio	25.73	153	pP	pP	19 24 21.3	-0.6
	2.5nm,0.6s,baz=334,slow=12,SNR=8.7						
MIAR	Mount Ida	33.34	328	P	P	19 24 50.0	-0.8
	2.2nm,0.6s,mb4.1						
SIUC	Southern Illin	33.90	336	P	P	19 24 51.8	-3.8
	24nm,0.6s,mb5.1						
LTX	Lajitas	36.50	311	P	P	19 25 17.2	-0.7
	1.5nm,0.6s,mb3.8						
TXAR	Lajitas Array	36.50	311	P	P	19 25 18.1	+0.2
	1.1nm,0.5s,mb3.7,baz=127,slow=9.8,SNR=13						
TXAR				PcP	PcP	19 27 38.6	+0.9
	0.5nm,0.6s,baz=120,slow=5.3,SNR=2.7						
SDCO	Great Sand Dun	42.52	321	eP	P	19 26 08.8	+1.3
	2.6nm,0.6s,mb4.0						
ULM	Lac du Bonnet	47.11	340	P	P	19 26 43.1	-0.5
	5.4nm,0.4s,mb4.5,baz=146,slow=6.9,SNR=16						
SCHQ	Schefferville	47.81	5	P	P	19 26 49.2	+0.3
SCHQ	Schefferville	47.81	5	P	P	19 26 49.2	+0.3
	6.4nm,0.6s,mb4.4,baz=193,slow=7.4,SNR=33						
PDAR	Pinedale Array	48.02	324	P	P	19 26 50.2	-0.5
	1.0nm,0.6s,mb3.6,baz=130,slow=8.4,SNR=8.9						
PDAR				PcP	PcP	19 28 15.6	-0.1
	0.4nm,0.6s,baz=121,slow=5.7,SNR=3.8						
HWUT	Hardware Ranch	48.56	321	eP	P	19 26 55.3	+0.3
	1.6nm,0.7s,mb3.8						
NVAR	Mina Array Bea	51.50	314	P	P	19 27 17.5	+0.4
	0.9nm,0.8s,mb3.5,baz=129,slow=8.8,SNR=5.5						
NEW	Newport	55.52	326	P	P	19 27 45.2	-0.9
	2.1nm,0.6s,mb4.1						
YKA	Yellowknife Ar	63.09	340	P	P	19 28 37.6	-0.1
	6.6nm,0.6s,mb4.6,baz=131,slow=6.7,SNR=129						
YKA				pP	pP	19 29 18.5	-2.9
	0.4nm,0.5s,baz=129,slow=7.0,SNR=1.7						
DLBC	Dease Lake	67.21	331	P	P	19 29 04.2	-0.1
INK	Inuvik	72.85	340	eP	P	19 29 38.4	-0.1
	102nm,0.6s						
SVW2	Sparrevohn	80.31	331	P	P	19 30 19.9	-0.6
GERES	GERESS Array B	82.39	42	P	P	19 30 30.8	-0.8
	0.5nm,0.7s,mb3.3,baz=256,slow=5.4,SNR=4.5						
ARCES	ARCESS Array B	86.28	20	P	P	19 30 50.5	-0.3
ARCES	ARCESS Array B	86.28	20	P	P	19 30 50.5	-0.3
	2.0nm,0.7s,mb4.0,baz=278,slow=3.3,SNR=8.3						
MKAR	Makanchi Array	121.93	20	PKP	PKPdf	19 37 01.6	-1.0
	0.2nm,0.2s,baz=334,slow=2.2,SNR=3.3						
SONM	Songino Array	125.28	1	PKP	PKPdf	19 37 09.0	0.0
	0.5nm,0.4s,baz=308,slow=1.6,SNR=13						
ASAR	Alice Springs	149.55	234	PKP	PKPdf	19 37 53.2	-0.5
	1.2nm,0.7s,baz=112,slow=1.5,SNR=10						
ASAR				PKPbc	PKPbc	19 37 57.3	-1.2
	1.4nm,0.7s,baz=123,slow=2.6,SNR=16						
ASAR				pPKPbc	pPKPbc	19 38 44.2	-2.9
	0.4nm,0.6s,baz=116,slow=4.0,SNR=1.8						
WRA	Warramunga Arr	150.76	241	PKP	PKPdf	19 37 55.1	-0.6
	1.9nm,0.4s,baz=107,slow=2.6,SNR=50						
WRA				PKPbc	PKPbc	19 38 00.1	-1.4
	1.9nm,0.4s,baz=106,slow=2.5,SNR=66						
WRA				pPKPbc	pPKPbc	19 38 47.4	-2.7
	0.5nm,0.5s,baz=107,slow=2.9,SNR=2.7						

IDC 13 19:48:49.7±1.5**, 21.62N**×**144.13E, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/19**, mbtmp3.3**/3**, Error ellipse: s-maj=58.1km s-min=31.1km az=90.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	39.97	320	P	P	19 56 25.8	0.0
	0.2nm,0.4s,baz=112,slow=6.4,SNR=4.6						
WRA	Warramunga Arr	42.40	194	P	P	19 56 46.0	0.0
	0.1nm,0.3s,baz=17,slow=9.0,SNR=6.0						
YKA	Yellowknife Ar	76.11	28	P	P	20 00 39.2	+0.2
	0.2nm,0.4s,baz=297,slow=5.9,SNR=4.2						

IDC 13 19:53:50.0±5.9**, 27.20N**×**142.65E, h31**km±45km**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.3**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=32.3km s-min=22.0km az=150.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.43	256	Pn	Pn	19 53 59.9	-0.1
	176nm,0.3s,baz=9.2,slow=4.9,SNR=37						
CBIJ				Sn	Sb	19 54 07.0	+1.3
	712nm,0.3s,baz=287,slow=19,SNR=41						
WRA	Warramunga Arr	47.55	191	P	P	20 02 22.8	+0.2
	1.8nm,0.7s,baz=12,slow=8.7,SNR=30						
ASAR	Alice Springs	51.27	190	P	P	20 02 50.6	-0.3
	0.1nm,0.5s,baz=9.9,slow=5.9,SNR=3.4						
YKA	Yellowknife Ar	71.86	28	P	P	20 05 09.4	0.0
	0.3nm,0.5s,baz=296,slow=6.0,SNR=6.3						

IDC 13 20:12:22.8±1.9**, 0.49N**×**126.24E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.3**/15**, mbtmp3.3**/3**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.8**/8**, Error ellipse: s-maj=176.8km s-min=24.5km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.80	159	P	P	20 17 16.1	-0.6
	0.1nm,0.3s,baz=338,slow=10,SNR=7.0						
ASAR	Alice Springs	25.14	163	P	P	20 17 50.4	+0.6
	0.4nm,0.8s,baz=338,slow=10,SNR=3.7						
STKA	Stephens Creek	35.32	157	LR	LR	20 35 33.1	
	comp=Z,67nm,18.2s,baz=190,slow=39						
MKAR	Makanchi Array	59.95	327	P	P	20 22 30.9	0.0
	0.7nm,0.5s,baz=116,slow=8.5,SNR=11						

GUC 13 20:29:40.1±0.7**, 32.73S**×**71.11W, h4**km±5km**, MD3.5, ML2.0, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.55	139	i S	Sg	20 29 59.9	+2.2
PEL				AML	AML	20 30 02.0	
	comp=N,144nm,0.4s						
TACH	Talagante	0.93	171	eP	Pg	20 29 57.6	-0.3
TACH				i S	Sg	20 30 11.6	+1.6
PCH	Pirque	1.02	151	i S	Sg	20 30 14.2	+1.3
CHCH	Chadas Angostu	1.26	162	eP	Pg	20 30 03.3	-0.9
CHCH				i S	Sg	20 30 21.3	+0.8
LMEL	Las Melosas	1.35	146	⇑iP	Pn	20 30 05.4	-0.3
LMEL				i S	Sg	20 30 23.6	+0.2
LMEL				AML	AML	20 30 24.5	
	comp=N,63nm,0.2s						

MOS ***13*** *20:30:55.6±1.5, 56.56N×117.94E, h5km, mb4.3/1, Error ellipse: s-maj=19.4km s-min=14.5km az=138.6*
BYKL 13 20:30:55.8±0.2**, 56.60N**×**117.97E, h14**km±4km**, 11C-5D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	0.34	29	ePG	Pg	20 31 02.7	-0.1
CRS				e		20 31 07.2	
CRS				pmax	pmax		
	comp=Z,442nm,0.4s						
CRS				smax			
	comp=E,2µm,0.5s						
CRS	Chara	0.34	29	⇓iPg	Pg	20 31 02.8	0.0
CRS				eSg	Sg	20 31 07.9	+0.4
CRS				Pmax			
	comp=E,429nm,0.9s						
CRS				Smax			
	comp=E,2µm,1.3s						
KHNR	Khani	1.15	73	ePg	Pg	20 31 17.4	-0.6
KHNR				eSg	Sg	20 31 32.9	-0.1
TUP	Tupik	2.46	152	ePN	Pn	20 31 36.4	+1.1
TUP				e		20 31 39.5	
TUP				eS	Sn	20 32 06.1	+1.0
TUP				e		20 32 11.2	
TUP				pmax	pmax		
	comp=Z,143nm,0.6s						
TUP				smax			
	comp=E,179nm,0.7s						
TUP	Tupik	2.46	152	⇑iPn	Pn	20 31 36.5	+1.2
TUP				⇑iPg	Pg	20 31 39.4	-3.4
TUP				eSg	Sg	20 32 12.1	-2.5
TUP				Pmax			
	comp=E,171nm,1.2s						
TUP				Smax			
	comp=E,179nm,0.8s						
BOD	Bodaibo	2.48	301	ePN	Pn	20 31 37.5	+1.8
BOD				e		20 31 39.7	
BOD				e		20 32 11.8	
BOD				pmax	pmax		
	comp=Z,74nm,0.4s						
BOD				smax			
	comp=N,760nm,0.4s						
BOD	Bodaibo	2.48	301	⇑iPg	Pg	20 31 39.9	-3.4
BOD				eSg	Sg	20 32 12.2	-3.2
BOD				Pmax			
	comp=N,78nm,0.7s						
BOD				Smax			
	comp=N,774nm,0.9s						
SVKR	Severomuysk	2.50	261	ePN	Pn	20 31 36.9	+0.9
SVKR				e		20 31 40.0	
SVKR				eS	Sn	20 32 07.7	+1.4
SVKR				e		20 32 12.3	
SVKR				pmax	pmax		
	comp=Z,104nm,0.3s						
SVKR				smax			
	comp=N,690nm,1.0s						
SVKR	Severomuysk	2.50	261	ePg	Pg	20 31 40.2	-3.5
SVKR				eSg	Sg	20 32 13.0	-3.1
SVKR				Pmax			
	comp=N,108nm,0.5s						
SVKR				Smax			
	comp=N,685nm,1.0s						
UKT	Uakit	2.68	247	ePN	Pn	20 31 38.5	+0.1
UKT				e		20 31 43.0	
UKT				eS	Sn	20 32 11.0	+0.4
UKT				e		20 32 17.3	
UKT				pmax	pmax		
	comp=Z,65nm,0.5s						
UKT				smax			
	comp=N,119nm,0.4s						
UKT	Uakit	2.68	247	⇓iPn	Pn	20 31 39.5	+1.1
UKT				⇓iPg	Pg	20 31 43.0	-4.1
UKT				eSg	Sg	20 32 18.1	-3.7
UKT				Pmax			
	comp=N,66nm,0.7s						
UKT				Smax			
	comp=N,118nm,0.5s						
YOA	Uoyan	3.51	265	⇑iPN	Pn	20 31 58.5	+8.7
YOA				i		20 32 45.2	
YOA				pmax	pmax		
	comp=Z,51nm,0.4s						
YOA				smax			
	comp=E,687nm,0.8s						
YOA	Uoyan	3.51	265	ePg	Pg	20 31 58.5	-4.4
YOA				eSg	Sg	20 32 45.1	-3.2
YOA				Pmax			
	comp=E,30nm,0.4s						
YOA				Smax			
	comp=E,586nm,1.3s						
NRGR	Nerungri	3.73	86	ePN	Pn	20 31 44.4	-8.5
CLNS	Chul'man	3.82	84	ePN	Pn	20 32 08.1	+14
CLNS				e		20 32 54.7	
CLNS				pmax	pmax		
	comp=N,9.0nm,0.5s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.5s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.3s						
CLNS				smax			
	comp=E,88nm,0.5s						
CLNS				smax			
	comp=Z,56nm,0.6s						
CLNS				smax			
	comp=N,94nm,0.5s						
CLNS	Chul'man	3.82	84	ePg	Pg	20 32 05.1	-3.9
CLNS				eSg	Sg	20 32 53.4	-5.0
KMO	Kumora	3.84	262	ePN	Pn	20 31 54.7	+0.3
KMO				e		20 32 03.7	
KMO				eS	Sn	20 32 38.8	-0.5
KMO				e		20 32 52.2	
KMO				pmax	pmax		
	comp=Z,25nm,0.4s						
KMO				smax			
	comp=N,293nm,1.1s						
KMO	Kumora	3.84	262	⇑iPn	Pn	20 31 55.8	+1.4
KMO				⇑iPg	Pg	20 32 04.3	-5.1
KMO				e		20 32 09.2	
KMO				eSg	Sg	20 32 53.9	-5.2
KMO				max			
	comp=N,27nm,0.4s						
KMO				Smax			
	comp=N,292nm,1.1s						
TNDR	Tynda	4.07	108	ePg	Pg	20 32 09.0	-4.7
TNDR				eSg	Sg	20 33 01.3	-5.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YLYR	Ulyunkhan	4.22	249	ePN	Pn	20 32 00.8	+1.2
YLYR				e		20 32 10.3	
YLYR	Ulyunkhan	4.22	249⇓	iPn	Pn	20 32 00.7	+1.1
YLYR				ePg	Pg	20 32 10.6	-5.9
YLYR				eSg	Sg	20 33 06.6	-4.5
YLYR				Pmax			
	comp=N,10.0nm,0.3s						
YLYR				Smax			
	comp=N,58nm,0.9s						
NIZ	Nizh Angarsk	4.78	264	ePN	Pn	20 32 09.1	+1.8
NIZ				e		20 32 22.3	
NIZ				e		20 33 23.2	
NIZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NIZ				smax			
	comp=N,73nm,1.0s						
NIZ	Nizh Angarsk	4.78	264⇓	iPn	Pn	20 32 09.2	+1.9
NIZ				ePg	Pg	20 32 20.5	-6.8
NIZ				eSg	Sg	20 33 23.1	-6.0
NIZ				Pmax			
	comp=N,14nm,1.0s						
NIZ				Smax			
	comp=N,66nm,1.3s						
CIT	Chita	5.27	211	eSg	Sg	20 33 39.9	-4.8
CIT				Smax			
	comp=N,134nm,0.9s						
SYVR	Suvo	5.44	241⇑	iPn	Pn	20 32 17.3	+1.0
SYVR			⇑	iPg	Pg	20 32 33.3	-6.6
SYVR				eSg	Sg	20 33 44.9	-5.4
SYVR				Pmax			
	comp=N,15nm,1.1s						
SYVR				Smax			
	comp=N,73nm,1.6s						
KROS	Kirovskiy	5.56	109	ePn	Pn	20 32 15.6	-2.3
KROS				ePg	Pg	20 32 31.2	-11
KROS				eSn	Sn	20 33 15.4	-6.1
KROS				eSg	Sg	20 33 45.3	-8.7
ZEA	Zeya	6.04	114	ePg	Pg	20 32 45.1	-6.3
ZEA				eSg	Sg	20 34 02.7	-6.8
MXMB	Maximikha	6.28	242	ePn	Pn	20 32 28.6	+0.7
MXMB				ePg	Pg	20 32 47.9	-8.0
MXMB				eSg	Sg	20 34 10.4	-6.7
MXMB				Pmax			
	comp=N,4.0nm,0.6s						
MXMB				Smax			
	comp=N,104nm,1.1s						
OGRR	Ongureny	6.65	248	ePN	Pn	20 32 34.0	+1.1
OGRR				e		20 32 55.1	
OGRR				e		20 34 19.2	
OGRR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OGRR				smax			
	comp=N,25nm,1.8s						
OGRR	Ongureny	6.65	248⇑	iPn	Pn	20 32 33.9	+1.0
OGRR			⇑	iPg	Pg	20 32 55.2	-7.7
OGRR				eSg	Sg	20 34 21.6	-7.3
OGRR				Pmax			
	comp=N,3.0nm,0.8s						
OGRR				Smax			
	comp=N,22nm,1.3s						
HIA	Hailar	7.42	171	eSg	Sn	20 34 46.0	+39
TRTB	Turuntaevo	7.45	238	ePn	Pn	20 32 44.7	+0.8
TRTB				ePg	Pn	20 33 09.5	+26
TRTB				eSg	Sn	20 34 46.0	+38
TRTB				Smax			
	comp=N,38nm,1.0s						
ZRHB	Zarechye	7.48	242	eSg	Sn	20 34 47.4	+39
ZRHB				Smax			
	comp=N,82nm,1.3s						
KPC	Khapcheranga	7.68	208⇑	iPn	Pn	20 32 47.1	0.0
KPC				ePg	Pn	20 33 13.6	+27
KPC				eSn	Sn	20 34 11.4	-2.4
KPC				eSg	Sn	20 34 53.9	+40
KPC				Pmax			
	comp=N,1.0nm,0.4s						
KPC				Smax			
	comp=N,52nm,2.0s						
TRG	Tyrgan	7.75	245	ePn	Pn	20 32 49.1	+1.0
TRG				eSg	Sn	20 34 57.2	+42
TRG				Smax			
	comp=N,6.0nm,0.7s						
LSTR	Listvyanka	9.03	244	eSg	Sn	20 35 35.0	+48
LSTR				Smax			
	comp=N,19nm,2.3s						
ARS	Arshan	10.22	249	ePg	Pn	20 33 59.4	+37
ARS				eSg	Sn	20 36 10.9	+55
ARS				Smax			
	comp=N,34nm,1.3s						
ULN	Ulaanbaatar	11.00	222	eSg	Sn	20 36 38.5	+63
MOY	Mondy	11.11	251	eSg	Sn	20 36 39.9	+62
MOY				Smax			
	comp=N,18nm,1.7s						
ORL	Orlik	11.29	257	eSg	Sn	20 36 45.0	+63
ORL				Smax			
	comp=N,22nm,2.5s						

*ISCJB **13** 20:42:44.8±0.8, 7.13N±0.10×92.22E±0.07, h10km, mb3.9/11, Error ellipse: s-maj=14.3km s-min=9.5km az=172.5*

*IDC **13** 20:42:46.3±1.6, 7.36N×92.53E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/20, mbtmp3.6/5, Error ellipse: s-maj=69.6km s-min=22.7km az=56.0*

*NEIC **13** 20:42:49.4±0.7, 7.17N×92.18E, h30km, mb4.2/7, Error ellipse: s-maj=14.5km s-min=12.8km az=54.0*

ISC 13 20:42:46.9±0.8**, 7.15N**±0.10×**92.28E**±0.07**, h10**km**, n17, σ1.09/18, mb3.9/11, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	8.52	102	P	Pn	20 44 46.0	-4.5
PALK	Pallekele	11.49	271	Pn	Pn	20 45 29.6	-1.5
PALK				eSn	Sn	20 47 40.5	+0.8
CM31	Chiang Mai Arr	12.98	29	ePn	Pn	20 45 52.8	+1.3
	3.1nm,0.4s						
ODAN	Odare	20.15	347	eP	P	20 47 21.7	+0.3
	10nm,0.7s						
TAPN	Taplejung	20.56	348	eP	P	20 47 24.0	-1.9
	6.8nm,0.6s						
KKN	Kakani	21.58	343	eP	P	20 47 37.5	+0.6
	11nm,1.1s,mb4.2						
GKN	Gorkha	21.97	342	eP	P	20 47 41.6	+0.5
	5.4nm,0.3s,mb4.5						
LSA	Lhasa	22.46	357	eP	P	20 47 46.4	+0.1
	3.3nm,0.6s,mb3.9						
TKM2	Tokmak 2	38.55	340	P	P	20 50 08.7	-1.1
	3.2nm,1.0s,mb4.0						
EKS2	Erkin-Say	38.96	338	P	P	20 50 15.5	+2.2
	6.7nm,1.3s,mb4.2						
MKAR	Makanchi Array	40.42	349	P	P	20 50 25.4	+0.1
MKAR	Makanchi Array	40.42	349	P	P	20 50 25.4	+0.1
	0.5nm,0.4s,mb3.6,baz=167,slow=9.0,SNR=9.0						
SONM	Songino Array	42.29	14	P	P	20 50 39.0	-1.7
	0.3nm,0.7s,mb3.1,baz=199,slow=10,SNR=4.2						
SONM				PcP	PcP	20 52 35.4	+1.0
	0.3nm,1.0s,baz=209,slow=2.9,SNR=3.9						
WRA	Warramunga Arr	49.37	124	P	P	20 51 37.1	+0.1
	0.4nm,0.6s,mb3.6,baz=303,slow=8.8,SNR=8.1						
ASAR	Alice Springs	50.89	128	P	P	20 51 49.0	+0.5
	0.7nm,0.8s,mb3.6,baz=317,slow=7.2,SNR=7.5						
TIXI	Tiksi	68.31	12	eP	P	20 53 46.7	-1.2
	4.8nm,0.6s,mb4.7						
GERES	GERESS Array B	77.14	318	P	P	20 54 41.6	+0.8
	0.5nm,0.7s,mb3.5,baz=86,slow=3.0,SNR=5.4						

MAN 13 21:29:27, 18.20N×120.87E, h49km, mb4.2, ML3.0, MS2.7, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.27	299⇑	iP	Pn	21 29 37.1	+1.4
PIP				eS	Sn	21 29 46.1	+4.1
APYP	Conner	0.49	133	eP	Pn	21 29 39.2	+1.2
APYP				eS	Sn	21 29 49.5	+3.5
ABRA	Dolores	0.56	195	eP	Pn	21 29 39.6	+0.6
ABRA				eS	Sn	21 29 50.9	+3.4
CVP	Callao Caves	1.03	118⇑	iP	Pn	21 29 45.6	+0.5
CVP				i S	Sn	21 30 00.3	+1.7
BALP	Baler	2.53	164	eP	Pn	21 30 07.6	+1.9

*NEIC **13** 22:04:51.2±0.3, 2.36N×127.53E, h10km, mb4.3/10, Error ellipse: s-maj=10.3km s-min=5.5km az=67.0*

*ISCJB **13** 22:04:56.4±3.9, 2.29N±0.08×127.5E±0.1, h65km±37km, mb4.2/15, Error ellipse: s-maj=19.0km s-min=9.2km az=148.9*

*IDC **13** 22:04:57.8±8.4, 2.27N×127.45E, h61km±80km, mb4.0/8, mb1 4.1/8, mb1mx3.9/17, mbtmp4.0/8, Error ellipse: s-maj=67.2km s-min=20.3km az=72.0*

ISC 13 22:04:56.7±3.0**, 2.30N**±0.07×**127.51E**±0.10**, h52**km±29km**, n35, σ0.54/33, mb4.3/15, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	Kuching	17.21	268	ePn	Pn	22 08 53.6	-0.1
FITZ	Fitzroy Crossi	20.36	185	eP	P	22 09 29.2	+0.2
	5.6nm,0.4s						
FITZ	Fitzroy Crossi	20.36	185	P	P	22 09 29.1	+0.1
	3.2nm,0.5s,baz=40,slow=10,SNR=17						
PMG	Port Moresby	22.77	121	eP	P	22 09 54.6	-0.3
	4.8nm,0.5s,mb4.2						
YHNB	Yeheng	23.01	346	eP	P	22 09 57.3	0.0
WRA	Warramunga Arr	23.10	163	P	P	22 09 58.4	+0.1
	7.9nm,0.4s,mb4.5,baz=335,slow=11,SNR=154						
WB2	Warramunga Arr	23.11	163⇑	iP	P	22 09 58.4	+0.1
MBWA	Marble Bar	24.53	198	eP	P	22 10 11.7	+0.2
	5.6nm,0.6s,mb4.3						
ASAR	Alice Springs	26.55	167	P	P	22 10 30.1	+0.3
	3.8nm,0.4s,mb4.3,baz=347,slow=7.3,SNR=66						
KULM	Kulim	26.96	277	eP	P	22 10 32.4	-1.2
ENH	Enshi	32.64	330	P	P	22 11 23.9	+0.1
HNR	Honiara	34.36	110	eP	P	22 11 38.7	-0.2
KLBR	Kellerberrin	34.96	195	eP	P	22 11 43.6	-0.3
	12nm,0.9s,mb4.8						
MUN	Mundaring	35.74	197	eP	P	22 11 50.4	-0.2
NWAO	Narrogin (SRO)	36.36	195	P	P	22 11 55.7	-0.2
NWAO	Narrogin (SRO)	36.36	195	P	P	22 11 55.7	-0.1
	2.2nm,0.3s,mb4.5,baz=28,slow=13,SNR=6.4						
STKA	Stephens Creek	36.53	160	eP	P	22 11 58.3	+1.0
	2.8nm,0.4s,mb4.5						
STKA	Stephens Creek	36.53	160	P	P	22 11 57.7	+0.4
	4.1nm,0.5s,mb4.5,baz=329,slow=6.2,SNR=12						
LSA	Lhasa	43.96	312	eP	P	22 12 58.5	-0.4
	1.4nm,0.5s,mb4.0						
TAU	Tasmania Unive	48.43	161	P	P	22 13 33.9	+0.2
SONM	Songino Array	48.89	341	P	P	22 13 37.5	+0.2
	0.7nm,0.7s,mb3.8,baz=158,slow=9.0,SNR=7.7						
MK31	Makanchi Array	59.16	325	eP	P	22 14 52.9	+0.7
MKAR	Makanchi Array	59.16	325	P	P	22 14 52.6	+0.4
	1.1nm,0.4s,mb4.3,baz=119,slow=8.1,SNR=20						
MKAR				pP	pP	22 15 13.6	+7.1
	1.0nm,0.6s,baz=125,slow=8.4,SNR=6.2						
UCH	Uchtor	61.74	318	eP	P	22 15 11.4	+1.5
	1.1nm,0.6s,mb4.2						
EKS2	Erkin-Say	62.42	318	eP	P	22 15 13.3	-1.1
	2.1nm,0.8s,mb4.3						
KURK	Kurchatov	63.35	328	eP	P	22 15 20.6	+0.2
	4.4nm,0.8s,mb4.6						
CHKZ	Chkalovo	69.10	328	eP	P	22 15 57.9	+0.7
	0.8nm,0.8s,mb3.7						
AKTK	Aktyubinsk	75.25	322	P	P	22 16 34.3	+0.3
AKTO	Aktyubinsk	75.25	322	P	P	22 16 34.3	+0.3
	0.9nm,0.5s,mb3.9,baz=103,slow=9.3,SNR=5.8						
KIV	Kislovodsk	84.68	314	P	P	22 17 24.8	-0.3
MCK	McKinley	85.09	26	eP	P	22 17 26.1	-0.6
OBN	Obninsk	88.67	325	P	P	22 17 43.8	-0.5
DLBC	Dease Lake	94.56	31	P	P	22 18 10.7	-0.8
BOSA	Boshof	101.86	241	Pdif	Pdif	22 18 44.5	+0.1
TORD	Torodi Ar. Bea	124.09	287	PKP	PKPdf	22 23 49.9	-0.5
	0.6nm,0.6s,baz=40,slow=2.5,SNR=5.1						

*NEIC **13** 22:08:02.6, 36.17S×178.56E, h181km, MG4.1(WEL), After WEL.*

WEL 13 22:07:58.0±1.1**, 35.77S**×**178.50E, h189**km±18km**, ML4.0/5, Error ellipse: s-maj=31.6km s-min=19.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.80	185	P	Pn	22 08 33.8	+0.3
MXZ				S	Sn	22 08 57.6	-3.7
MXZ	Matakaoa Point	1.80	185	PN	Pn	22 08 33.8	+0.3
MXZ				SN	Sn	22 09 00.1	-1.2
PUZ	Puketiti	2.31	185	PN	Pn	22 08 39.6	+0.6
PUZ				SN	Sn	22 09 10.9	-0.1
MWZ	Matawai	2.68	197	P	Pn	22 08 43.6	+0.4
MWZ				S	Sn	22 09 15.9	-2.6
MWZ	Matawai	2.68	197	PN	Pn	22 08 43.6	+0.5
MWZ				SN	Sn	22 09 19.5	+1.0
URZ	Urewera	2.73	204	P	Pn	22 08 43.7	0.0
URZ	Urewera	2.73	204	PN	Pn	22 08 43.2	-0.6
EDRZ	Edgecumbe	2.73	211	P	Pn	22 08 43.7	-0.1
EDRZ	Edgecumbe	2.73	211	PN	Pn	22 08 43.5	-0.2
KNZ	Kokohu	3.32	191	eP	Pn	22 08 50.2	-0.6
KNZ	Kokohu	3.32	191	PN	Pn	22 08 50.2	-0.6
MOVZ	Moawhango	4.24	210	P	Pn	22 09 00.9	-1.4
MOVZ	Moawhango	4.24	210	PN	Pn	22 09 00.9	-1.4
BFZ	Birch Farm	5.22	199	PN	Pn	22 09 13.4	-1.4
MRZ	Mangatainoka R	5.40	204	eP	Pn	22 09 14.2	-3.0
MRZ				S	Sn	22 10 14.6	-5.1
MRZ	Mangatainoka R	5.40	204	PN	Pn	22 09 14.2	-3.0
MRZ				SN	Sn	22 10 14.6	-5.1
KIW	Kapiti Island	5.82	208	P	Pn	22 09 19.4	-3.2
KIW	Kapiti Island	5.82	208	PN	Pn	22 09 19.4	-3.1
MTW	Mount Morrison	5.88	203	P	Pn	22 09 19.9	-3.4
MTW	Mount Morrison	5.88	203	PN	Pn	22 09 19.9	-3.4
TRWZ	Traveller	6.04	201	PN	Pn	22 09 22.4	-3.1
MSWZ	Moikau Station	6.19	203	P	Pn	22 09 23.9	-3.5
MSWZ	Moikau Station	6.19	203	PN	Pn	22 09 23.9	-3.5
TCW	Tory Channel	6.37	210	P	Pn	22 09 26.0	-3.7
TCW	Tory Channel	6.37	210	PN	Pn	22 09 26.0	-3.7
TUWZ	Tuamarina	6.69	211	PN	Pn	22 09 29.9	-4.0
NNZ	Nelson	6.76	215	eP	Pn	22 09 31.3	-3.6
NNZ	Nelson	6.76	215	PN	Pn	22 09 31.3	-3.6
KHZ	Kahutara	7.68	209	eP	Pn	22 09 42.8	-4.1
KHZ	Kahutara	7.68	209	PN	Pn	22 09 42.8	-4.1
LTZ	Lake Taylor	8.51	213	ePN	Pn	22 09 53.0	-4.7
MQZ	McQueen's Vall	9.12	208	eP	Pn	22 10 00.2	-5.5
MQZ	McQueen's Vall	9.12	208	PN	Pn	22 10 00.2	-5.5

*ISCJB **13** 22:46:41.9±0.6, 23.67N±0.06×94.47E±0.07, h92km±6km, mb4.2/18, Error ellipse: s-maj=13.3km s-min=5.9km az=140.4*

*BJI **13** 22:46:41.8, 23.75N×94.44E, h78km, mb4.2*

*NEIC **13** 22:46:43.0±0.6, 23.69N×94.48E, h84km±6km, mb4.3/6, Error ellipse: s-maj=11.2km s-min=5.3km az=50.0*

*IDC **13** 22:46:45.1±0.8, 23.71N×94.58E, h102km±7km, mb3.9/12, mb1 4.0/12, mb1mx3.7/22, mbtmp3.9/12, Error ellipse: s-maj=23.2km s-min=12.0km az=57.0*

ISC 13 22:46:43.5±0.5**, 23.69N**±0.06×**94.47E**±0.07**, h87**km±5km**, h100**km±.3km**:pP-P, n38, σ0.86/47, mb4.2/18, 1C, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.19	336	i P	Pn	22 47 05.0	-0.3
IMP				i S	Sn	22 47 23.0	+1.3
SHL	Shillong	3.01	309	i PN	Pn	22 47 29.2	+0.2
SHL				eSN	Sn	22 48 00.2	-3.9
CHTO	Chiang Mai	6.40	138	ePn	Pn	22 48 15.5	+0.4
	7.5nm,0.7s						
CHTO				eSn	Sn	22 49 27.5	+0.8
CM31	Chiang Mai Arr	6.67	140	ePn	Pn	22 48 17.8	-1.1
LSA	Lhasa	6.68	334	P	Pn	22 48 19.4	+0.5
LSA				S	Sn	22 49 26.4	-7.2
LSA				Smax			
	comp=N,40nm,0.8s						
LSA				Smax			
	comp=E,110nm,0.9s						
LSA	Lhasa	6.68	334	ePn	Pn	22 48 19.4	+0.5
	comp=E,24nm,0.4s						
LSA				eSn	Sn	22 49 21.2	-12
TAPN	Taplejung	7.11	302	ePn	Pn	22 48 25.1	+0.3
TAPN				eSn	Sn	22 49 38.3	-5.8
	comp=E,78nm,0.3s						
ODAN	Odare	7.14	298	ePn	Pn	22 48 25.1	-0.2
ODAN				eSn	Sn	22 49 38.7	-6.2
JIRN	Jiri	8.45	300	ePn	Pn	22 48 42.7	-0.4
JIRN				eSn	Sn	22 50 10.4	-6.4
	comp=E,135nm,0.3s						
KKN	Kakani	9.24	298	ePn	Pn	22 48 53.7	-0.1
KKN				eSn	Sn	22 50 28.5	-7.5
	comp=E,41nm,0.2s						
GKN	Gorkha	9.84	298	ePn	Pn	22 49 00.1	-1.9
GKN				eSn	Sn	22 50 43.8	-7.0
	comp=E,92nm,0.3s						
GTA	Gaotai	16.32	15	eP	Pn	22 50 26.1	-1.1
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s						
PALK	Pallekele	21.00	221	P	P	22 51 20.4	+0.4
TKM2	Tokmak 2	24.73	325	eP	P	22 51 57.9	+1.3
	comp=Z,6.3nm,0.6s,mb4.2						
MKAR	Makanchi Array	25.05	340	P	P	22 52 00.2	+0.8
	comp=Z,18nm,0.6s,mb4.7,baz=145,slow=9.7,SNR=216						
MKAR				PcP	PcP	22 55 31.9	0.0
	comp=Z,0.2nm,0.3s,baz=125,slow=1.6,SNR=3.0						
MKAR				ScP	ScP	22 59 01.4	-1.8
	comp=Z,0.2nm,0.3s,baz=116,slow=3.4,SNR=3.7						
AAK	Ala-Archa	25.12	324	eP	P	22 52 01.3	+1.1
	comp=Z,1.4nm,0.5s,mb3.6						
SONM	Songino Array	25.90	19	P	P	22 52 07.0	-0.1
	comp=Z,0.8nm,0.7s,mb3.2,baz=200,slow=11,SNR=14						
KURK	Kurchatov	29.66	339	eP	P	22 52 40.9	+0.3
	comp=Z,3.8nm,0.7s,mb4.1						
BRVK	Borovoye	34.59	334	eP	P	22 53 24.1	+0.4
	comp=Z,1.1nm,0.3s,mb4.2						
CHKZ	Chkalovo	34.92	335	eP	P	22 53 27.1	+0.5
	comp=Z,3.5nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	51.49	141	P	P	22 55 40.0	-0.3
	comp=Z,1.5nm,0.9s,mb4.0,baz=332,slow=15,SNR=4.1						
TIXI	Tiksi	51.79	13	P	P	22 55 40.6	-1.3
WRA	Warramunga Arr	58.23	135	P	P	22 56 28.6	-0.3
	comp=Z,5.6nm,0.6s,mb4.8,baz=322,slow=7.4,SNR=97						
WRA				pP	pP	22 56 53.2	+2.4
	comp=Z,0.6nm,0.5s,baz=321,slow=7.6,SNR=2.0						
WB2	Warramunga Arr	58.24	135⇑	iP	P	22 56 29.0	0.0
FINES	FINESS Array B	59.16	329	P	P	22 56 35.9	+1.0
	comp=Z,1.0nm,0.9s,mb3.8,baz=96,slow=9.9,SNR=2.5						
FINES				pP	pP	22 57 00.4	+3.7
	comp=Z,1.0nm,0.8s,baz=91,slow=8.6,SNR=1.4						
ASAR	Alice Springs	60.68	138	P	P	22 56 46.1	+0.4
	comp=Z,4.0nm,0.5s,mb4.7,baz=321,slow=6.9,SNR=74						
ASAR				pP	pP	22 57 10.6	+2.9
	comp=Z,0.6nm,0.7s,baz=315,slow=6.3,SNR=1.8						
ARCES	ARCESS Array B	60.68	338	P	P	22 56 45.5	+0.4
	comp=Z,3.5nm,1.0s,mb4.4,baz=101,slow=7.4,SNR=4.2						
KMBO	Kilima Mbogo	60.76	254	P	P	22 56 48.2	+1.6
KMBO	Kilima Mbogo	60.76	254	P	P	22 56 48.2	+1.6
	comp=Z,0.9nm,0.3s,mb4.2,baz=75,slow=11,SNR=1.7						
GERES	GERESS Array B	66.61	315	P	P	22 57 24.0	-0.4
	comp=Z,0.3nm,0.6s,mb3.3,baz=42,slow=10,SNR=3.0						
WLF	Walferdange	71.27	317	P	P	22 57 51.1	-2.2
STKA	Stephens Creek	71.29	139	P	P	22 57 52.8	-0.9
	comp=Z,0.6nm,0.3s,mb3.9,baz=252,slow=2.1,SNR=3.0						
CART	Cartagena	80.03	307	eP	P	22 58 42.6	-1.0
	comp=Z,28nm,0.8s,mb5.2						
BOSA	Boshof	84.51	236	P	P	22 59 07.5	+0.5
BOSA	Boshof	84.51	236	P	P	22 59 07.5	+0.5
	comp=Z,6.4nm,0.7s,mb4.7,baz=82,slow=4.5,SNR=18						
TORD	Torodi Ar. Bea	87.30	283	P	P	22 59 20.9	-0.2
TORD	Torodi Ar. Bea	87.30	283	P	P	22 59 20.9	-0.2
	comp=Z,0.3nm,0.4s,mb3.6,baz=72,slow=4.8,SNR=4.0						
ROSC	El Rosal	149.60	338	PKPbc	PKPbc	23 06 23.6	-0.2
	comp=Z,9.2nm,0.5s,baz=101,slow=16,SNR=4.1						

IDC 13 23:08:12.3±1.9**, 24.35S**×**66.97W, h0**km**, mb3.8/2, mb1 3.9/2, mb1mx3.6/14, mbtmp3.7/2, Error ellipse: s-maj=91.8km s-min=60.0km az=1.0, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	76.67	69	P	P	23 20 05.5	-0.1
	0.3nm,0.4s,baz=253,slow=5.9,SNR=9.2						
YKA	Yellowknife Ar	94.46	340	P	P	23 21 33.5	-0.3
	0.1nm,0.3s,baz=119,slow=4.5,SNR=3.8						
WRA	Warramunga Arr	131.33	207	PKP	PKPdf	23 27 26.9	-0.4
	0.2nm,0.7s,baz=172,slow=1.6,SNR=5.7						
MKAR	Makanchi Array	146.77	40	PKPbc	PKPbc	23 27 56.0	-0.2
	0.6nm,0.6s,baz=306,slow=3.7,SNR=9.3						

*ISCJB **13** 23:17:31.3±0.7, 59.81S±0.09×25.0W±0.2, h10km, mb4.0/7, Error ellipse: s-maj=16.3km s-min=11.5km az=153.2*

*IDC **13** 23:17:32.1±0.8, 59.64S×25.26W, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.1/15, mbtmp4.2/8, ML5.4/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/16, Error ellipse: s-maj=24.4km s-min=22.4km az=122.0*

ISC 13 23:17:33.2±0.7**, 59.80S**±0.09×**25.1W**±0.2**, h10**km**, n17, σ1.05/13, mb4.0/7, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	13.07	158	eP	Pn	23 20 37.4	-1.2
VNA3				e		23 20 47.7	
VNA3				e		23 20 54.0	
VNA2	Neumayer--Watz	13.29	154	eP	Pn	23 20 42.1	+0.5
	baz=311,slow=14						
VNA2				e		23 20 51.8	
VNA2				e		23 20 59.8	
SNAA	Sanae	14.86	152	eP	Pn	23 21 02.7	-0.3
SNAA				e		23 21 12.5	
SNAA				e		23 21 17.9	
SNAA	Sanae	14.86	152	Pn	Pn	23 21 01.9	-1.1
	1.0nm,0.3s,baz=316,slow=14,SNR=29						
SNAA				Sn	Sn	23 23 32.6	-15
	0.1nm,0.3s,baz=348,slow=19,SNR=2.2						
PMSA	Palmer Station	18.57	238	P	Pn	23 21 50.7	+0.6
	1.2nm,0.3s,baz=143,slow=20,SNR=5.0						
USHA	Ushuaia	23.61	263	LR	LR	23 30 08.3	
	comp=Z,158nm,18.7s,baz=190,slow=32						
QSPA	South Pole Qui	30.44	180	P	P	23 23 48.1	+2.9
	2.7nm,0.6s,mb4.2,baz=199,slow=1.2,SNR=26						
CFAA	Coronel Fontan	40.14	295	P	P	23 25 07.3	-1.6
	0.4nm,0.6s,mb3.4,baz=148,slow=7.7,SNR=8.3						
BOSA	Boshof	45.98	70	P	P	23 25 55.6	-0.6
	1.8nm,0.8s,mb4.0,baz=237,slow=5.8,SNR=3.5						
LPAZ	La Paz	53.48	305	P	P	23 26 53.0	-0.4
	0.7nm,0.4s,mb3.9,baz=191,slow=5.4,SNR=3.8						
DBIC	Dimbokro	68.18	22	P	P	23 28 34.5	+1.1
	5.7nm,1.1s,mb4.5,baz=225,slow=8.6,SNR=2.6						
TORD	Torodi Ar. Bea	75.83	27	P	P	23 29 19.7	+0.5
	1.7nm,0.6s,mb4.2,baz=202,slow=7.7,SNR=21						
ASAR	Alice Springs	95.06	161	P	P	23 30 56.8	+0.6
	0.4nm,0.6s,mb4.0,baz=180,slow=3.8,SNR=5.1						
ULM	Lac du Bonnet	123.70	313	PKP	PKPdf	23 36 40.1	+10
	1.4nm,0.8s,baz=0.3,slow=3.6,SNR=4.0						
YKA	Yellowknife Ar	139.67	314	PKP	PKPdf	23 36 57.9	-1.6
	0.5nm,0.6s,baz=127,slow=2.5,SNR=6.8						
INK	Inuvik	149.37	316	PKPbc	PKPbc	23 37 20.4	0.0
	4.2nm,0.8s,baz=93,slow=3.4,SNR=25						
SONM	Songino Array	149.66	91	PKPbc	PKPbc	23 37 22.4	+0.6
	0.9nm,1.0s,baz=209,slow=2.6,SNR=5.7						

IDC 13 23:48:47.2±1.2**, 4.21N**×**127.04E, h0**km**, mb3.8/6, mb1 3.9/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=90.7km s-min=18.0km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.21	184	P	P	23 53 47.3	+1.9
	1.0nm,0.4s,baz=29,slow=10,SNR=4.9						
WRA	Warramunga Arr	25.05	164	P	P	23 54 12.0	-1.4
	3.4nm,0.7s,baz=342,slow=10,SNR=19						
ASAR	Alice Springs	28.50	167	P	P	23 54 44.8	+0.4
	0.3nm,0.4s,baz=336,slow=10.0,SNR=4.1						
STKA	Stephens Creek	38.47	160	P	P	23 56 11.0	0.0
	2.4nm,0.7s,baz=329,slow=6.4,SNR=4.6						
SONM	Songino Array	46.95	341	P	P	23 57 21.0	+1.3
	0.2nm,0.3s,baz=164,slow=7.8,SNR=6.1						
MKAR	Makanchi Array	57.34	325	P	P	23 58 36.4	-0.8
	0.6nm,0.3s,baz=120,slow=7.7,SNR=12						

*LDG **14** 00:13:30.6±0.7, 15.82S×167.12E, h10km, Mb4.4/2, Error ellipse: s-maj=91.6km s-min=51.9km az=37.0*

*ISCJB **14** 00:13:49.2±1.8, 16.00S±0.08×167.7E±0.1, h180km±14km, mb4.5/16, Error ellipse: s-maj=20.5km s-min=12.7km az=172.4*

*IDC **14** 00:13:49.3±2.8, 15.98S×167.76E, h169km±22km, mb4.1/8, mb1 4.3/10, mb1mx4.1/17, mbtmp4.2/10, MS3.1/1, Ms1 3.1/1, ms1mx2.7/28, Error ellipse: s-maj=24.9km s-min=16.2km az=74.0*

*NEIC **14** 00:13:50.3±1.6, 16.00S×167.62E, h165km±13km, mb4.6/14, Error ellipse: s-maj=12.8km s-min=11.0km az=83.0*

ISC 14 00:13:49.6±1.7**, 15.96S**±0.08×**167.8E**±0.1**, h169**km±14km**,**

n71, σ0.86/35, mb4.5/16, 5D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.20	191	eP	Pn	00 15 17.8	-1.4
DZM				eS	Sn	00 16 24.0	-5.6
DZM	Mont Dzumac	6.20	191	eP	Pn	00 15 17.8	-1.4
DZM				eS	Sn	00 16 24.0	-5.6
DZM	Mont Dzumac	6.20	191	P	Pn	00 15 17.8	-1.4
	7.6nm,0.3s,baz=60,slow=18,SNR=67						
DZM				S	Sn	00 16 29.5	-0.1
	2.7nm,0.3s,baz=294,slow=20,SNR=5.9						
HNR	Honiara	10.00	310	P	Pn	00 16 10.8	+1.5
	25nm,0.3s,baz=147,slow=0.9,SNR=8.4						
HNR				LR	LR	00 19 43.1	
	comp=Z,92nm,18.4s,baz=1.2,slow=35						
EIDS	Eidsvold	18.17	236	eP	P	00 17 51.0	+1.6
	23nm,0.8s						
CTA	Charters Tower	20.84	255	eP	P	00 18 18.6	+0.3
	12nm,0.6s						
CTA	Charters Tower	20.84	255	P	P	00 18 18.9	+0.7
	18nm,0.7s,baz=85,slow=12,SNR=26						
CTAO	Charters Tower	20.84	255	eP	P	00 18 20.9	+2.6
	12nm,0.5s						
PMG	Port Moresby	21.11	285	P	P	00 18 20.9	-0.2
COEN	Coen	23.82	272	eP	P	00 18 47.1	-0.2
	8.8nm,0.9s,mb4.3						
STKA	Stephens Creek	28.57	232	⇓iP	P	00 19 30.6	+0.8
	15nm,0.8s,mb4.8						
STKA	Stephens Creek	28.57	232	P	P	00 19 30.6	+0.8
	17nm,0.6s,mb5.0,baz=52,slow=7.5,SNR=37						
WB2	Warramunga Arr	31.99	258	⇓iP	P	00 19 58.5	-1.5
WRA	Warramunga Arr	32.00	258	P	P	00 19 58.8	-1.3
	5.4nm,0.7s,mb4.4,baz=83,slow=7.9,SNR=88						
WRA				PcP	PcP	00 22 45.9	-0.1
	0.6nm,1.0s,baz=78,slow=2.2,SNR=4.5						
ASAR	Alice Springs	32.69	251	P	P	00 20 05.6	-0.5
	17nm,0.6s,mb5.0,baz=78,slow=9.1,SNR=168						
ASAR				PcP	PcP	00 22 47.8	-0.1
	1.0nm,0.7s,baz=78,slow=3.3,SNR=5.7						
FORT	Forrest	39.09	241	⇓iP	P	00 21 00.9	+0.5
	50nm,0.5s,mb5.4						
FITZ	Fitzroy Crossi	40.26	261	⇓iP	P	00 21 09.8	-0.4
	27nm,0.6s,mb5.0						
MBWA	Marble Bar	45.68	256	eP	P	00 21 54.0	+0.2
	6.9nm,0.5s,mb4.5						
KLBR	Kellerberrin	47.92	242	⇓iP	P	00 22 10.2	-0.8
	30nm,1.3s,mb4.8						
NWAO	Narrogin (SRO)	48.53	240	eP	P	00 22 15.5	-0.2
	23nm,1.0s,mb4.8						
MUN	Mundaring	49.27	241	eP	P	00 22 21.3	0.0
MJAR	Matsushiro Arr	59.20	332	P	P	00 23 31.7	-1.2
	0.9nm,0.3s,mb4.0,baz=174,slow=12,SNR=4.0						
SBA	Scott Base	61.92	180	eP	P	00 23 52.6	+1.9
	1.6nm,0.6s,mb4.0						
ENH	Enshi	72.50	310	eP	P	00 24 58.0	0.0
BJT	Baijiatuau	73.50	321	eP	P	00 25 03.5	-0.2
	5.6nm,0.4s,mb4.7						
QSPA	South Pole Qui	74.08	180	eP	P	00 25 07.3	+0.9
	22nm,1.4s,mb4.7						
QSPA	South Pole Qui	74.08	180	P	P	00 25 06.8	+0.3
	2.0nm,0.6s,mb4.0,baz=24,slow=1.4,SNR=20						
ULN	Ulaanbaatar	83.39	324	eP	P	00 25 57.9	+0.2
	6.1nm,0.9s,mb4.3						
SONM	Songino Array	83.75	324	P	P	00 25 59.9	+0.3
	2.0nm,0.8s,mb3.9,baz=132,slow=5.0,SNR=17						
LSA	Lhasa	86.60	302	P	P	00 26 14.1	-0.1
COLA	College	87.34	17	eP	P	00 26 16.6	-0.3
MKAR	Makanchi Array	98.41	316	P	P	00 27 08.3	+0.1
	0.2nm,0.2s,mb4.1,baz=87,slow=7.1,SNR=2.0						
LPAZ	La Paz	116.23	118	PKPdf	PKPdf	00 32 14.0	+0.4
ARCES	ARCESS Array B	121.55	345	PKP	PKPdf	00 32 21.5	-0.8
	2.6nm,0.9s,baz=66,slow=2.1,SNR=17						
FINES	FINESS Array B	127.03	338	PKP	PKPdf	00 32 32.7	-0.4
FINES	FINESS Array B	127.03	338	PKP	PKPdf	00 32 32.7	-0.4
	2.2nm,1.0s,baz=261,slow=3.7,SNR=5.0						
NOA	NORSAR Array B	131.93	345	PKP	PKPdf	00 32 42.0	-0.3
	0.8nm,0.9s,baz=59,slow=2.6,SNR=3.1						
BAIF	Baives	143.47	342	ePKP1	PKPdf	00 33 04.9	+1.0
CDF	Champ du Feu	143.88	338	ePKP1	PKPdf	00 33 02.5	-2.2
	3.7nm,0.5s						
HINF	Hinteralfeld	144.54	338	ePKP1	PKPdf	00 33 04.2	-1.6
	3.1nm,0.5s						
HAU	Haudompre	144.56	338	ePKP1	PKPdf	00 33 03.9	-1.9
	6.8nm,0.8s						
CABF	La Chapelle	145.83	337	ePKP1	PKPbc	00 33 09.4	+0.5
	7.0nm,0.7s						
FLN	La Foliniere	145.89	346	ePKP1	PKPbc	00 33 08.7	-0.3
	12nm,0.6s						
LDF	La Druitiere	145.97	346	ePKP1	PKPbc	00 33 08.9	-0.4
	9.1nm,0.8s						
LOR	Lormes	146.04	340	ePKP1	PKPbc	00 33 09.5	0.0
	7.1nm,0.6s						
GRR	Gorron	146.33	346	ePKP1	PKPbc	00 33 10.1	-0.2
	2.8nm,0.3s						
SSF	Saint Saulge	146.34	340	ePKP1	PKPbc	00 33 10.5	+0.1
	18nm,0.7s						
HYF	Humbligny	146.43	342	ePKP1	PKPbc	00 33 11.0	+0.3
LPL	La Plagne	146.50	336	ePKP1	PKPbc	00 33 11.4	+0.5
	8.1nm,0.7s						
LPG	La Plagne	146.50	335	ePKP1	PKPbc	00 33 11.5	+0.6
	14nm,0.8s						
SMF	Signal de Mont	146.60	340	ePKP1	PKPbc	00 33 10.8	-0.4
AVF	Avril sur Loir	146.63	340	ePKP1	PKPbc	00 33 10.8	-0.5
SGMF	Saint Gilles	146.82	348	ePKP1	PKPbc	00 33 11.6	-0.1
	6.4nm,0.6s						
BNI	Bardonecchia	146.90	335	ePKP	PKPbc	00 33 12.1	0.0
BGF	Bois d'Agland	147.00	341	ePKP1	PKPbc	00 33 12.2	-0.1
	16nm,0.8s						
MBDF	Montbardon	147.13	335	ePKP1	PKPbc	00 33 12.5	-0.2
	5.5nm,0.5s						
ORIF	Oris-en-Rattie	147.33	336	ePKP1	PKPbc	00 33 13.3	0.0
	9.6nm,0.6s						
TCF	Toulx Ste Croi	147.44	341	ePKP1	PKPbc	00 33 13.5	0.0
	9.9nm,0.8s						
SBF	Sospel	147.54	333	ePKP1	PKPbc	00 33 13.4	-0.5
	30nm,1.0s						
MFF	Saint Martin d	147.82	344	ePKP1	PKPbc	00 33 14.3	-0.2
	7.4nm,0.5s						
VIVF	Saint-Julien-l	147.85	337	ePKP1	PKPbc	00 33 13.8	-0.9
	4.0nm,0.6s						
FRF	La Foret Royal	148.13	334	ePKP1	PKPbc	00 33 15.0	-0.4
	7.2nm,0.6s						
SMRF	Simiane la Rot	148.24	335	ePKP1	PKPbc	00 33 15.9	+0.2
	8.4nm,0.6s						
LMR	La Mourre	148.37	333	ePKP1	PKPbc	00 33 15.7	-0.4
	8.1nm,0.6s						
RJF	Les Rejaudoux	148.53	341	ePKP1	PKPbc	00 33 16.4	0.0
LASF	Ste Croix	148.82	337	ePKP1	PKPbc	00 33 17.3	+0.1
	12nm,0.8s						
LFF	La Frestale	149.10	342	ePKP1	PKPbc	00 33 17.8	-0.1
MTLF	Montolieu	150.05	339	ePKP1	PKPbc	00 33 20.2	0.0
	7.4nm,0.9s						
ETSF	Etsaut	151.35	342	ePKP1	PKPbc	00 33 23.6	+0.3
	3.1nm,0.6s						
KEST	Kesra	152.45	320	PKPbc	PKPbc	00 33 26.6	+0.6
	1.4nm,1.0s,baz=65,slow=1.9,SNR=8.9						
TORD	Torodi Ar. Bea	166.21	260	PKP	PKPdf	00 33 34.3	-1.0
	0.4nm,0.6s,baz=322,slow=1.4,SNR=7.8						
TORD				PKPab	PKPab	00 34 35.5	-1.7
	0.8nm,0.8s,baz=115,slow=3.3,SNR=5.7						

*IDC **14** 00:18:13.7±0.6, 31.94S×177.47W, h0km, mb4.6/11, mb1 4.8/13, mb1mx4.7/16, mbtmp4.6/13, ML3.7/2, MS3.9/8, Ms1 3.9/8, ms1mx3.6/26, Error ellipse: s-maj=23.4km s-min=17.2km az=164.0*

*ISCJB **14** 00:18:16.1±0.6, 32.33S±0.08×177.4W±0.1, h33km, mb4.5/12, MS3.9/5, Error ellipse: s-maj=15.6km s-min=8.3km az=39.8*

ISC 14 00:18:18.2±0.6**, 32.21S**±0.09×**177.4W**±0.1**, h35km, n62, σ1.16**/21**, mb4.5**/12**, MS3.9**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	7.53	215	Pn	Pn	00 20 03.8	-1.7
	3.0nm,0.3s,baz=307,slow=10,SNR=12						
URZ				Sn	Sn	00 21 30.2	+0.6
	12nm,0.3s,baz=302,slow=9.5,SNR=12						
URZ				LR	LR	00 22 52.6	
	comp=Z,477nm,20.7s,baz=321,slow=36						
RPZ	Rata Peaks	14.65	215	Pn	Pn	00 21 39.1	-3.7
	3.0nm,0.3s,baz=49,slow=5.6,SNR=8.3						
DZM	Mont Dzumac	17.56	301	P	Pn	00 22 22.8	+2.5
	0.3nm,0.3s,baz=114,slow=14,SNR=5.7						
DZM				LR	LR	00 27 42.4	
	comp=Z,845nm,18.1s,baz=252,slow=33						
AFI	Afiamalu	18.93	17	P	Pn	00 22 33.5	-3.4
	2.1nm,0.3s,baz=190,slow=18,SNR=4.9						
RAR	Rarotonga	19.14	59	P	Pn	00 22 39.1	-0.4
	1.8nm,0.3s,baz=207,slow=9.0,SNR=3.7						
RAR				LR	LR	00 27 29.2	
	comp=Z,374nm,19.1s,baz=304,slow=29						
TBI	Tubuai	26.17	77	eLQ		00 28 46.4	
	402nm,26.2s						
TBI				eLR	LR	00 30 08.6	
	560nm,29.0s,baz=237						
TBI	Tubuai	26.17	77	eT		00 50 40.7	
	28nm,0.4s						
PAE	Paea	28.97	67	eT		00 54 02.8	
	20nm,0.3s						
PPT	Papeete	29.02	67	eLR	LR	00 31 21.7	
	348nm,27.5s,baz=237						
PPT	Papeete	29.02	67	LR	LR	00 32 17.3	
	comp=Z,174nm,18.9s,MS3.7,baz=229,slow=29						
HNR	Honiara	30.89	312	LR	LR	00 34 01.7	
	comp=Z,122nm,20.4s,MS3.5,baz=176,slow=31						
VAH	Vaihoa	31.90	65	eT		00 57 41.8	
	11nm,0.3s						
STKA	Stephens Creek	34.62	259	eP	P	00 25 05.2	+1.1
	4.4nm,0.9s,mb4.4						
STKA	Stephens Creek	34.62	259	P	P	00 25 04.8	+0.8
	6.6nm,0.9s,mb4.5,baz=103,slow=9.2,SNR=7.0						
CTA	Charters Tower	34.64	281	eP	P	00 25 05.1	+0.8
	17nm,1.4s,mb4.8						
CTA	Charters Tower	34.64	281	P	P	00 25 05.2	+0.9
	8.0nm,0.5s,mb4.9,baz=104,slow=9.5,SNR=12						
RKT	Rikitea	38.43	87	eLR	LR	00 35 51.0	
	539nm,29.2s,baz=250						
PMG	Port Moresby	39.88	297	P	P	00 25 47.6	-1.1
	5.8nm,0.6s,mb4.5,baz=176,slow=23,SNR=3.6						
ASAR	Alice Springs	43.57	269	P	P	00 26 18.8	-0.2
	11nm,0.9s,mb4.6,baz=113,slow=7.9,SNR=50						
WB2	Warramunga Arr	44.71	274	eP	P	00 26 27.4	-0.7
WRA	Warramunga Arr	44.72	274	P	P	00 26 27.5	-0.7
	11nm,0.9s,mb4.7,baz=112,slow=7.9,SNR=51						
WRA				PcP	PcP	00 28 11.0	+0.8
	7.4nm,1.1s,baz=123,slow=3.2,SNR=5.5						
FITZ	Fitzroy Crossi	52.90	271	eP	P	00 27 30.6	-0.4
	8.6nm,0.9s,mb4.7						
QSPA	South Pole Qui	57.91	180	P	P	00 28 09.9	+3.7
	6.1nm,0.9s,mb4.6,baz=39,slow=2.8,SNR=10.0						
SNAA	Sanae	76.34	178	LR	LR	00 58 39.5	
	comp=Z,40nm,20.3s,MS3.7,baz=203,slow=32						
MJAR	Matsushiro Arr	80.03	325	P	P	00 30 22.5	-1.4
	5.7nm,1.0s,mb4.4,baz=163,slow=6.0,SNR=5.2						
ASAJ	Asahikawa	84.28	332	LR	LR	00 59 29.7	
	comp=Z,196nm,21.7s,MS4.5,baz=312,slow=30						
KSRS	Korea Array	86.06	319	P	P	00 30 55.8	+0.7
	6.8nm,1.0s,mb4.8,baz=145,slow=5.7,SNR=13						
NVAR	Mina Array Bea	89.21	42	P	P	00 31 11.2	+1.0
	3.6nm,1.0s,mb4.7,baz=206,slow=6.1,SNR=15						
TXAR	Lajitas Array	92.92	57	P	P	00 31 29.0	+1.3
	0.7nm,0.9s,mb4.1,baz=212,slow=4.4,SNR=7.7						
LPAZ	La Paz	96.92	114	LR	LR	01 07 45.1	
	comp=Z,43nm,20.8s,MS3.9,baz=42,slow=31						
PDAR	Pinedale Array	97.08	43	P	P	00 31 46.4	0.0
	0.6nm,0.9s,mb4.0,baz=204,slow=3.3,SNR=4.2						
SONM	Songino Array	104.83	317	Pdiff	Pdif	00 32 20.1	-1.0
	0.4nm,0.8s,baz=134,slow=6.2,SNR=3.2						
MKAR	Makanchi Array	119.33	309	PKP	PKPdf	00 37 03.2	-0.2
	0.4nm,0.3s,baz=67,slow=1.6,SNR=9.1						
SCHQ	Schefferville	127.22	43	PKP	PKPdf	00 37 17.9	-0.4
	3.4nm,1.0s,baz=207,slow=4.5,SNR=3.8						
JOF	Joensuu	144.29	338	epkp	PKPdf	00 37 45.1	-4.5
DGRG	David-gareji	144.86	298	P	PKPdf	00 37 52.0	+0.7
MTA	Mtatsminda	145.29	298	P	PKPbc	00 37 52.6	+0.7
TBLG	Delisi	145.33	298	P	PKPbc	00 37 53.3	+1.2
ONI	Oni	146.24	300	P	PKPdf	00 37 55.4	+1.8
KAF	Kangasniemi	146.43	340	epkp	PKPdf	00 37 53.0	-0.3
FINES	FINESS Array B	147.02	339	PKPbc	PKPbc	00 37 56.2	-0.2
	23nm,1.0s,baz=64,slow=3.4,SNR=44						
NB2	NORSAR Subarra	150.62	351	PKP	PKPbc	00 38 05.4	-0.2
	comp=Z,32nm,1.4s,baz=13,slow=2.6						
NOA	NORSAR Array B	150.62	351	PKPbc	PKPbc	00 38 05.8	+0.1
	comp=Z,8.4nm,1.0s,baz=14,slow=4.2,SNR=8.1						
AKASG	Malin Array Be	153.05	321	PKPbc	PKPbc	00 38 11.6	+0.1
	comp=Z,5.0nm,0.9s,baz=48,slow=2.1,SNR=15						
AKASG				PKPab	PKPab	00 38 22.5	-0.6
	comp=Z,2.7nm,0.6s,baz=44,slow=3.5,SNR=9.1						
BRTR	Keskin Array B	153.89	295	PKPbc	PKPbc	00 38 14.4	+0.7
	comp=Z,1.4nm,0.8s,baz=91,slow=2.1,SNR=5.9						
BRTR				PKPab	PKPab	00 38 26.5	-0.5
	comp=Z,4.1nm,0.9s,baz=111,slow=1.7,SNR=8.8						
KOLS	Kolonicke sedl	157.70	324	eP	PKPab	00 38 42.2	-0.8
STHS	Stebnicka Huta	157.87	326	i P	PKPab	00 38 43.8	+0.1
CRVS	Cervenica-Dubn	158.12	325	eP	PKPab	00 38 44.7	-0.1
NIE	Niedzica	158.30	328	ePX	PKPab	00 38 46.1	+0.6
KECS	Kecovo	158.88	325	eP	PKPab	00 38 47.9	-0.2
UPC	Upice	159.20	335	eP	PKPab	00 38 49.7	+0.3
DPC	Dobruska-Polom	159.22	335	eP	PKPab	00 38 49.5	0.0
BRG	Berggiesshubel	159.56	339	e(P)	PKPab	00 38 50.5	-0.5
	comp=Z,3.3nm,1.1s						
BRG				e		00 39 03.0	
	comp=Z,4.7nm,1.3s						
BRG				e		00 39 18.4	
	comp=Z,22nm,2.0s						
VYHS	Vyhne	159.64	328	i P	PKPab	00 38 51.4	0.0
PVCC	Panska Ves	159.67	338	eP	PKPab	00 38 51.1	-0.3
PRU	Pruhonice	160.14	337	eP	PKPab	00 38 53.5	0.0
TREC	Trest	160.39	334	eP	PKPab	00 38 54.1	-0.5
MODS	Modra-Piesok	160.42	330	eP	PKPab	00 38 51.6	-3.2
MODS				e		02 26 37.0	
ZST	Bratislava	160.63	330	eP	PKPab	00 38 57.1	+1.4
TORD	Torodi Ar. Bea	161.01	177	PKP	PKPdf	00 38 16.2	+0.9
	comp=Z,2.3nm,1.2s,baz=222,slow=1.9,SNR=5.7						
TORD				PKPab	PKPab	00 38 59.4	+1.3
	comp=Z,1.4nm,0.5s,baz=179,slow=2.6,SNR=47						
KHC	Kasperske Hory	161.20	337	eP	PKPab	00 38 58.1	0.0
GERES	GERESS Array B	161.41	337	PKP	PKPdf	00 38 15.6	+0.8
	comp=Z,0.1nm,0.3s,baz=187,slow=4.9,SNR=3.7						
GERES				PKPab	PKPab	00 38 59.1	+0.1
	comp=Z,1.8nm,1.0s,baz=46,slow=3.9,SNR=8.5						

*BJI **14** 00:33:21.3, 8.09S×129.47E, h45km, mB5.1, mb5.2, Ms4.8, Msz4.4*

*MOS **14** 00:33:26.3±0.9, 7.30S×129.06E, h33km, mb5.2/27, Error ellipse: s-maj=11.9km s-min=7.2km az=113.8*

*GCMT **14** 00:33:28.9±0.3, 7.57S×129.08E, h63km±3km, MW5.0/56, Moment Tensor Solution. s20,c24; s56,c86; Duration: 0 Moment tensor: Scale 10^16 Nm; M_{rr}0.52±.21; $M_{\theta\theta}$3.14±.15; $M_{\phi\phi}$-3.66±.17; $M_{r\theta}$0.77±.13; $M_{\theta\phi}$-0.36±.16; $M_{\phi r}$1.43±.15; Best double couple: $M_0$3.74800×10^16 NP1: ϕ_s137.00000°, δ66.00000°, λ-2.00000°. NP2: ϕ_s228.00000°, δ88.00000°, λ-156.00000°. Principal axes: T 3.3470, Plg15.0000°, Azm360.0000°; N 0.7980, Plg66.0000°, Azm231.0000°; P -4.1480, Plg18.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **14** 00:33:28.9±0.9, 7.50S×129.09E, h51km±7km, mb5.0/30 Error ellipse: s-maj=7.6km s-min=5.3km az=61.0*

*ISCJB **14** 00:33:29.5±0.7, 7.65S±0.03×129.33E±0.04, h78km±6km, mb5.0/82, Error ellipse: s-maj=7.0km s-min=4.8km az=160.2*

*IDC **14** 00:33:31.8±1.4, 7.47S×129.19E, h73km±12km, mb4.6/19, mb1 4.7/21, mb1mx4.7/22, mbtmp4.7/21, MS3.8/4, Ms1 3.8/4, ms1mx3.5/18, Error ellipse: s-maj=12.4km s-min=9.4km az=44.0*

ISC 14 00:33:31.3±0.6**, 7.65S**±0.03×**129.31E**±0.04**, h78**km±5km**, h45**km±.8km**:pP-P, n281, σ1.24**/241**, mb5.0**/82**, 18C-11D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	4.09	344	P	Pn	00 34 30.0	-1.4
	3μm,0.7s						
KAKA	Kakadu	5.90	149	⇑iP	Pn	00 34 57.2	+1.1
	440nm,0.5s						
BATI	Kupang	6.13	245	P	Pn	00 34 59.1	-0.1
	97nm,0.3s,baz=80,slow=3.4,SNR=59						
BATI				S	Sn	00 36 05.8	-2.3
	105nm,0.3s,baz=66,slow=20,SNR=7.9						
KAPI	Kappang	9.85	285	Pn	Pn	00 35 50.2	+0.1
	766nm,0.7s,SNR=18						
FITZ	Fitzroy Crossi	10.99	199	eP	Pn	00 36 02.8	-2.8
	266nm,0.6s						
FITZ				eS	Sn	00 37 56.7	-10
FITZ	Fitzroy Crossi	10.99	199	P	Pn	00 36 03.7	-1.9
	20nm,0.3s,baz=28,slow=12,SNR=460						
FITZ				S	Sn	00 37 58.2	-8.6
	29nm,0.3s,baz=135,slow=18,SNR=11						
FITZ				LR	LR	00 41 11.1	
	comp=Z,402nm,19.9s,baz=18,slow=41						
WRA	Warramunga Arr	13.16	159	P	Pn	00 36 33.9	-1.1
WRA				S	Sn	00 38 52.2	-7.4
WRA	Warramunga Arr	13.16	159	P	Pn	00 36 33.9	-1.1
	19nm,0.3s,baz=326,slow=14,SNR=120						
WRA				S	Sn	00 38 52.2	-7.4
	29nm,0.3s,baz=337,slow=22,SNR=10						
WB2	Warramunga Arr	13.16	159	eP	Pn	00 36 32.3	-2.8
WB2				eS	Sn	00 38 46.2	-14
COEN	Coen	14.99	116	ePn	Pn	00 36 57.8	-1.1
	124nm,0.8s						
COEN				eS	Sn	00 39 34.3	-10
DAV	Davao City (W)	15.08	346	Pn	Pn	00 36 58.2	-2.0
DAV	Davao City (W)	15.08	346	Pn	Pn	00 37 06.5	+6.4
	SNR=7.0						
DAV	Davao City (W)	15.08	346	P	Pn	00 37 06.5	+6.4
	SNR=7.0						
DAV	Davao City (W)	15.08	346	P	Pn	00 37 06.5	+6.4
	SNR=7.0						
KMMI	Kalianget	15.23	271	P	Pn	00 37 04.2	+2.2
	70nm,1.4s						
BUKP	Musuan	15.99	345	eP	Pn	00 37 13.7	+2.0
MBWA	Marble Bar	16.32	214	ePn	Pn	00 37 12.0	-3.6
MBWA				eS	S	00 40 01.6	-22
TSM	Tawau	16.46	316	⇓P	Pn	00 37 21.2	+3.7
PAGZ	Pagadian	16.49	339	eP	Pn	00 37 19.7	+1.9
ASAR	Alice Springs	16.53	165	P	Pn	00 37 18.9	+0.7
	6.5nm,0.3s,baz=331,slow=9.3,SNR=187						
ASAR				S	S	00 40 16.9	-12
	15nm,0.3s,baz=320,slow=16,SNR=8.9						
MYLDM	Lahad Datu	16.69	319	⇓P	Pn	00 37 23.0	+2.7
SCPH	Surigao	17.73	348	⇑eP	Pn	00 37 34.5	+1.5
PMG	Port Moresby	17.74	97	eP	Pn	00 37 36.9	+3.7
	277nm,1.1s						
PMG	Port Moresby	17.74	97	d iP	Pn	00 37 36.8	+3.6
PMG	Port Moresby	17.74	97	P	Pn	00 37 37.2	+4.0
	5.6nm,0.3s,baz=296,slow=6.1,SNR=46						
SDKM	Sandakan	17.90	317	⇓P	Pn	00 37 37.6	+2.4
TBP	Tagbilaran	18.06	342	eP	Pn	00 37 38.4	+1.4
MSLP	Maasin	18.21	346	eP	Pn	00 37 39.4	+0.5
KKM	Kota Kinabalu	18.86	316	eP	Pn	00 37 42.6	-4.1
KKM	Kota Kinabalu	18.86	316	⇓P	Pn	00 37 47.3	+0.6
KDM	Kudat	19.08	319	⇓P	Pn	00 37 51.7	+2.3
PLP	Palo	19.18	347	eP	Pn	00 37 50.7	+0.3
BJII	Banjamegara	19.44	270	P	Pn	00 37 52.8	-0.8
	56nm,1.1s						
BTM	Bintulu	19.45	303	⇑P	Pn	00 37 54.0	+0.3
SBUM	Sibu	19.78	300	⇑P	Pn	00 37 57.1	-0.5
BATP	Bataraza	19.96	325	eP	Pn	00 37 59.3	-0.4
CUYO	Cuyo Island	20.14	336	eP	P	00 38 00.7	+1.5
CTA	Charters Tower	20.55	129	eP	P	00 38 08.2	+4.5
	67nm,0.9s						
CTA				eS	S	00 41 46.8	-2.6
CTA	Charters Tower	20.55	129	eP	P	00 38 08.2	+4.5
CTA				eS	S	00 41 46.8	-2.6
CTA				pmax	pmax		
	comp=Z,67nm,0.9s						
CTA	Charters Tower	20.55	129	P	P	00 38 08.2	+4.6
	comp=Z,123nm,1.1s,baz=305,slow=13,SNR=21						
CTA				S	S	00 41 52.5	+3.1
	comp=Z,14nm,0.7s,baz=254,slow=8.5,SNR=4.3						
CTA				LR	LR	00 46 36.9	
	comp=Z,421nm,20.1s,baz=307,slow=38						
CTAO	Charters Tower	20.55	129	eP	P	00 38 08.4	+4.7
	comp=Z,108nm,0.9s						
CTAO				eS	S	00 41 48.5	-0.9
CTAO	Charters Tower	20.55	129	eP	P	00 38 08.4	+4.7
CTAO				eS	S	00 41 48.5	-0.9
CTAO				pmax	pmax		
	comp=Z,108nm,0.9s						
KSM	Kuching	21.01	295	eP	P	00 38 07.8	-0.9
KSM	Kuching	21.01	295	⇑P	P	00 38 07.9	-0.8
OTRP	Odiongan	21.16	340	eP	P	00 38 11.2	+1.1
LEM	Lembang	21.54	271	P	P	00 38 14.1	-0.2
	comp=Z,51nm,1.0s,mb4.8						
PVCP	Virac	21.71	346	eP	P	00 38 16.9	+0.7
TPI	Tanjungpandan	22.10	282	P	P	00 38 19.4	-0.9
	comp=Z,102nm,1.0s,mb5.1						
FORT	Forrest	23.04	183	eP	P	00 38 31.9	+1.9
	comp=Z,123nm,0.6s,mb5.4						
FORT				eS	S	00 42 39.9	+5.2
LUBP	Lubang	23.07	337	eP	P	00 38 29.1	-1.2
BALP	Baler	24.47	342	eP	P	00 38 41.1	-2.0
KLBR	Kellerberrin	26.15	203	eP	P	00 38 59.1	+0.8
	comp=Z,32nm,1.0s,mb4.7						
KLBR				eS	sS	00 43 51.5	-4.2
STKA	Stephens Creek	26.69	156	eP	P	00 39 06.0	+2.9
	comp=Z,13nm,0.6s,mb4.6						
STKA	Stephens Creek	26.69	156	P	P	00 39 05.7	+2.6
	comp=Z,16nm,0.5s,mb4.8,baz=328,slow=9.2,SNR=38						
STKA				LR	LR	00 49 08.0	
	comp=Z,340nm,21.2s,baz=159,slow=35						
MYKOM	Kota Tinggi	27.07	289	⇑P	P	00 39 08.1	+1.3
MUN	Mundaring	27.11	205	eP	P	00 39 08.0	+1.1
MUN				eS	sS	00 44 09.5	-1.5
NWAO	Narrogin (SRO)	27.54	202	eP	P	00 39 12.8	+2.1
	comp=Z,22nm,0.7s,mb4.8						
NWAO	Narrogin (SRO)	27.54	202	eP	P	00 39 12.8	+2.1
NWAO				pmax	pmax		
	comp=Z,22nm,0.7s						
NWAO	Narrogin (SRO)	27.54	202	P	P	00 39 12.6	+1.9
	comp=Z,7.9nm,0.6s,mb4.4,baz=25,slow=11,SNR=9.1						
KGM	Kluang	27.65	289	⇑P	P	00 39 14.2	+2.2
KTGM	Kuala Trenggan	29.12	296	⇓P	P	00 39 26.8	+1.7
FRIM	Kepong	29.66	290	⇓P	P	00 39 31.2	+1.3
PPI	Padang Panjang	29.69	283	P	P	00 39 30.2	+0.1
	comp=Z,43nm,0.9s,mb5.1						
HNR	Honiara	30.34	96	P	P	00 39 36.3	+0.5
	comp=Z,77nm,0.4s,mb5.7,baz=256,slow=4.6,SNR=3.5						
KULM	Kulim	31.35	293	⇑P	P	00 39 46.1	+1.4
PSI	Prapat	32.04	288	P	P	00 39 50.0	-0.9
PSI				S	S	00 44 49.9	-7.6
PSI	Prapat	32.04	288	P	P	00 39 50.0	-0.9
	comp=Z,45nm,0.8s,mb5.3,baz=127,slow=5.8,SNR=24						
PSI				S	S	00 44 49.9	-7.6
	comp=Z,1.9nm,0.5s,baz=37,slow=20,SNR=2.0						
QIZ	Qiongzhong	32.72	324	P	P	00 39 55.8	-0.9
QIZ				AP	pP	00 40 06.6	-8.4
QIZ				S	S	00 45 06.6	-1.2
QIZ				LR	LR		
	comp=Z,147nm,18.4s						
BSI	Banda Aceh	36.36	290	P	P	00 40 32.6	+4.4
	comp=Z,32nm,1.0s,mb5.2						
DZM	Mont Dzumac	38.52	116	P	P	00 40 49.0	+2.7
	comp=Z,10nm,0.9s,mb4.7,baz=268,slow=5.2,SNR=7.7						
CHG	Chiang Mai	39.85	312	⇑P	P	00 40 56.4	-1.0
	comp=Z,16nm,0.9s,mb4.9						
CHTO	Chiang Mai	39.85	312	eP	P	00 40 56.0	-1.4
	comp=Z,11nm,0.8s,mb4.7						
CHTO	Chiang Mai	39.85	312	eP	P	00 40 56.0	-1.4
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
CHTO	Chiang Mai	39.85	312	P	P	00 40 57.2	-0.2
	SNR=7.0						
CHTO	Chiang Mai	39.85	312	P	P	00 40 57.2	-0.2
	SNR=7.0						
CHTO	Chiang Mai	39.85	312	P	P	00 40 57.2	-0.2
	SNR=7.0						
CHRT	Chiangrai	39.91	314	⇑P	P	00 40 58.0	+0.1
	comp=Z,132nm,0.6s,mb5.9						
GYA	Guiyang	40.40	328	⇑iP	P	00 41 02.4	+0.5
GYA				AP	pP	00 41 14.6	-6.1
GYA				XP	sP	00 41 20.0	-10
GYA				PP	PP	00 42 39.8	+3.4
GYA				PCP	PcP	00 43 06.4	+2.7
GYA				SCP	ScP	00 46 50.3	+4.0
GYA				S	S	00 47 06.8	+2.2
GYA				XS	sS	00 47 27.8	-9.0
GYA				SCS	ScS	00 51 02.9	+2.3
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,140nm,4.8s						
GYA				LR	LR		
	comp=N,540nm,17.8s						
GYA				LR	LR		
	comp=E,490nm,18.6s						
GYA				LR	LR		
	comp=Z,670nm,18.4s						
WHN	Wuhan	40.59	340	⇑P	P	00 41 03.4	0.0
NJ2	Nanjing	40.72	346	eP	P	00 41 04.8	+0.4
KMI	Kunming	41.60	322	P	P	00 41 11.8	+0.1

KMI XP sP 00 41 28.8 -11
KMI AMB AMB
comp=Z,19nm,1.0s,mb4.8
MJAR Matsushiro Arr 44.74 10 P **P 00 41 34.9 -1.9**
comp=Z,38nm,0.9s,mb5.1,baz=188,slow=9.5,SNR=45
MAJO Matsushiro 44.74 10 *eP* **P 00 41 35.4 -1.4**
comp=Z,39nm,0.7s,mb5.2
MAJO Matsushiro 44.74 10 *eP* **P 00 41 35.4 -1.5**
MAJO pmax pmax
comp=Z,39nm,0.7s,mb5.2
MAT Matsushiro 44.74 10 P **P 00 41 35.6 -1.3**
KSRS Korea Array 44.88 358 P **P 00 41 38.0 0.0**
comp=Z,14nm,0.6s,mb4.8,baz=175,slow=9.2,SNR=34
KSRS ScP ScP 00 47 04.7 +0.6
comp=Z,2.3nm,0.9s,baz=170,slow=3.1,SNR=5.4
KSRS LR LR 01 02 18.6
comp=Z,38nm,19.2s,baz=185,slow=39
CD2 Chengdu 45.49 329 ⇓ *iP* **P 00 41 41.4 -1.5**
CD2 AP pP 00 41 53.8 -8.2
CD2 XP sP 00 41 59.1 -12
CD2 PP PP 00 43 28.5 -2.4
CD2 S **S** **00 48 18.6 -0.4**
CD2 XS sS 00 48 39.6 -12
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
CD2 AMB AMB
comp=Z,40nm,4.2s
CD2 LR LR
comp=N,300nm,15.6s
CD2 LR LR
comp=Z,150nm,10.8s
XAN Xi'an 45.74 336 P **P 00 41 42.5 -2.3**
XAN AMB AMB
comp=Z,18nm,0.9s,mb4.8
DL2 Dalian 46.86 352 P **P 00 41 53.6 +0.1**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb4.9
BJT Baijiatuau 48.96 347 *eP* **P 00 42 08.6 -1.1**
comp=Z,41nm,1.0s,mb5.3
BJT Baijiatuau 48.96 347 *eP* **P 00 42 08.6 -1.1**
BJT pmax pmax
comp=Z,41nm,1.0s
BJI Beijing 48.98 347 P **P 00 42 08.6 -1.2**
BJI XP sP 00 42 26.3 -12
BJI S **S** **00 49 07.8 -0.5**
BJI AMB AMB
comp=Z,36nm,1.1s,mb5.2
BJI LR LR
comp=N,148nm,8.0s
BJI LR LR
comp=E,202nm,5.7s
BJI LR LR
comp=Z,94nm,15.9s
SNY Shenyang 49.51 354 ⇓ P **P 00 42 13.8 -0.1**
SNY AMB AMB
comp=Z,22nm,0.9s,mb5.1
LZH Lanzhou 49.66 333 *eP* **P 00 42 14.8 -0.3**
LZH AP pP 00 42 26.4 -8.1
LZH PCP PcP 00 43 35.9 +0.5
LZH PP PP 00 44 10.1 -0.3
LZH SCP ScP 00 47 25.4 +1.2
LZH PCS PcS 00 47 30.0 -2.2
LZH *eS* **S** **00 49 17.1 -0.9**
LZH XS sS 00 49 38.0 -13
LZH SS SS 00 52 47.0 -4.5
LZH AMB AMB
comp=Z,50nm,1.2s,mb5.3
LZH AMB AMB
comp=Z,230nm,5.4s
LZH LR LR
comp=E,1μm,15.7s
LZH LR LR
comp=Z,1μm,16.5s
PALK Pallekele 50.69 286 P **P 00 42 23.4 +0.1**
HHC Hu-ho-hao-te 50.95 343 *eP* **P 00 42 25.8 +1.0**
HHC AP pP 00 42 38.0 -6.2
HHC XP sP 00 42 43.3 -10
HHC PP PP 00 44 22.8 +0.8
HHC *eS* **S** **00 49 37.8 +2.1**
HHC XS sS 00 49 58.1 -11
HHC SS SS 00 53 09.5 -2.3
HHC AMB AMB
comp=Z,14nm,1.0s,mb5.0
HHC AMB AMB
comp=Z,163nm,6.0s
HHC LR LR
comp=N,117nm,16.7s
HHC LR LR
comp=E,153nm,15.5s
HHC LR LR
comp=Z,129nm,19.0s
RPZ Rata Peaks 51.15 142 P **P 00 42 30.0 +3.7**
comp=Z,17nm,0.7s,mb5.2,baz=6.8,slow=8.5,SNR=8.0
CN2 Changchun 51.32 356 *eP* **P 00 42 29.1 +1.6**
CN2 *e*XP sP 00 42 45.0 -11
CN2 *eS* **S** **00 49 44.0 +3.2**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
CN2 AMB AMB
comp=Z,100nm,4.0s
CN2 LR LR
comp=N,200nm,12.0s
CN2 LR LR
comp=E,300nm,12.0s
CN2 LR LR
comp=Z,400nm,13.0s
MDJ Mudanjiang 52.02 0 P **P 00 42 33.1 +0.4**
MDJ S **S** **00 49 54.8 +4.5**
MDJ AMB AMB
comp=Z,19nm,0.9s,mb5.1
MDJ AMB AMB
comp=Z,153nm,5.2s
MDJ LR LR
comp=N,55nm,19.8s
MDJ LR LR
comp=E,65nm,22.1s
MDJ LR LR
comp=Z,89nm,20.7s
MDJ Mudanjiang 52.02 0 *eP* **P 00 42 32.2 -0.4**
comp=Z,18nm,1.0s,mb5.1
LSA Lhasa 52.20 317 P **P 00 42 34.4 +0.1**
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.1
LSA Lhasa 52.20 317 *eP* **P 00 42 34.2 -0.1**
comp=Z,50nm,0.6s,mb5.7
LSA Lhasa 52.20 317 *eP* **P 00 42 34.2 -0.1**
LSA pmax pmax
comp=Z,50nm,0.6s,mb5.7
ASAJ Asahikawa 52.90 12 P **P 00 42 39.1 -0.1**
comp=Z,17nm,0.6s,mb5.3,baz=198,slow=4.9,SNR=4.8
ODAN Odare 53.17 312 *eP* **P 00 42 40.3 -1.2**
comp=Z,35nm,0.5s,mb5.7
TAPN Taplejung 53.21 312 *eP* **P 00 42 40.4 -1.4**
comp=Z,54nm,0.4s,mb5.9
GTA Gaotai 54.21 332 P **P 00 42 48.5 -0.4**
GTA AP pP 00 43 01.1 -7.5
GTA XP sP 00 43 06.5 -11
GTA PCP PcP 00 43 52.8 +0.4
GTA PP PP 00 44 50.0 -1.5
GTA SCP ScP 00 47 44.9 +1.1
GTA PCS PcS 00 47 50.6 -1.3
GTA S **S** **00 50 21.1 +0.8**
GTA XS sS 00 50 42.4 -11
GTA SS SS 00 54 02.4 -1.1
GTA AMB AMB
comp=Z,25nm,0.9s,mb5.2
GTA AMB AMB
comp=Z,139nm,7.6s
GTA LR LR
comp=N,140nm,14.1s
GTA LR LR
comp=E,136nm,17.1s
GTA LR LR
comp=Z,191nm,15.6s
JIRN Jiri 54.50 312 *eP* **P 00 42 49.5 -1.7**
comp=Z,36nm,0.5s,mb5.6
KKN Kakani 55.24 311 *eP* **P 00 42 54.8 -1.8**
comp=Z,23nm,0.4s,mb5.6
YSS Yuzh-Sakhalins 55.66 11 *eP* **P 00 42 59.4 +0.2**
YSS Yuzh-Sakhalins 55.66 11 *eP* **P 00 42 59.0 -0.2**
YSS pmax pmax
comp=Z,48nm,1.9s,mb5.2
GKN Gorkha 55.84 311 *eP* **P 00 42 59.5 -1.4**
comp=Z,43nm,0.4s,mb5.8
HYB Hyderabad 55.99 297 *eP* **P 00 43 00.5 -1.6**
HYB Hyderabad 55.99 297 *iP* **P 00 43 00.5 -1.6**
HABR Khabarovsk 56.10 5 *eP* **P 00 43 02.2 -0.2**
HABR *eS* **S** **00 50 48.5 +3.2**
KLR Kul'dur 56.67 2 *eP* **P 00 43 02.4 -4.0**
KLR pmax pmax
comp=Z,50nm,1.8s,mb5.2
HIA Hailar 57.29 353 *eP* **P 00 43 09.9 -0.8**
ULN Ulaanbaatar 58.67 343 *eP* **P 00 43 20.4 0.0**
ULN Ulaanbaatar 58.67 343 *c iP* **P 00 43 19.4 -1.0**
ULN Ulaanbaatar 58.67 343 P **P 00 43 20.9 +0.5**
SNR=6.6
ULN Ulaanbaatar 58.67 343 P **P 00 43 20.9 +0.5**
SNR=6.6
ULN Ulaanbaatar 58.67 343 P **P 00 43 20.9 +0.5**
SNR=6.6
SONM Songino Array 58.84 342 P **P 00 43 21.9 +0.4**
comp=Z,9.8nm,0.8s,mb4.9,baz=162,slow=5.6,SNR=88
SONM ScP ScP 00 48 04.6 +0.6
comp=Z,1.4nm,0.8s,baz=156,slow=4.2,SNR=4.5
POO Poona 60.56 296 *ex* **P 00 43 27.0 -7.0**
NDI New Delhi 61.84 308 *ex* **P 00 43 38.0 -4.5**
ZAK Zakamensk 62.05 341 *eP* **P 00 43 42.4 -1.0**
ZAK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.1
TLY Talaya 63.07 342 *eP* **P 00 43 50.9 +0.7**
TLY Talaya 63.07 342 *eP* **P 00 43 51.1 +0.9**
TLY *e* 00 52 50.2
TLY pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
WMQ Urumqi 63.56 328 ⇓ *iP* **P 00 43 53.4 -0.2**
WMQ AP pP 00 44 05.9 -7.9
WMQ XP sP 00 44 11.4 -11
WMQ PCP PcP 00 44 30.4 +0.9
WMQ PP PP 00 46 14.4 0.0
WMQ S **S** **00 52 20.6 -0.7**
WMQ XS sS 00 52 42.5 -13
WMQ AMB AMB
comp=Z,48nm,0.9s,mb5.3
WMQ AMB AMB
comp=Z,189nm,4.9s
WMQ LR LR
comp=N,62nm,22.0s
WMQ LR LR
comp=E,82nm,19.1s
WMQ LR LR
comp=Z,81nm,16.2s
MOY Mondy 63.89 341 *eP* **P 00 43 57.2 +1.6**
MOY pmax pmax
comp=Z,29nm,1.6s,mb4.9
BOD Bodaibo 66.42 351 *eP* **P 00 44 10.9 -1.0**
BOD pmax pmax
comp=Z,14nm,1.3s,mb4.6
KSH Kashi 68.03 318 ⇑ *iP* **P 00 44 23.5 +1.0**
KSH *e*AP pP 00 44 36.5 -6.3
KSH *e*XP sP 00 44 42.3 -9.1
KSH *e*PCP PcP 00 44 50.1 +1.9
KSH *e*PP PP 00 46 51.3 -2.3
KSH *e*SCP 00 48 48.4
KSH *e*PCS 00 48 53.4
KSH S S 00 53 15.5 -0.4
KSH *e*SCS ScS 00 54 13.8 -0.9
KSH *e*SS SS 00 57 40.6 +0.8
KSH AMB AMB
comp=Z,65nm,0.5s,mb5.7
KSH LR LR
comp=N,794nm,4.0s
KSH LR LR
comp=E,799nm,7.5s
MK31 Makanchi Array 68.39 327 *eP* **P 00 44 24.1 -0.4**
MKAR Makanchi Array 68.39 327 ⇑ *eP* **P 00 44 23.7 -0.8**
MKAR Makanchi Array 68.39 327 P **P 00 44 24.2 -0.4**
comp=E,22nm,0.5s,mb5.3,baz=126,slow=7.7,SNR=196
MA2 Magadan 69.16 11 *eP* **P 00 44 29.0 -0.1**
comp=E,22nm,0.9s,mb5.0
MA2 Magadan 69.16 11 *eP* **P 00 44 28.4 -0.6**
MA2 pmax pmax
comp=Z,40nm,1.0s,mb5.2
YAK Yakutsk 69.47 0 *eP* **P 00 44 30.6 -0.3**
YAK Yakutsk 69.47 0 *c iP* **P 00 44 30.6 -0.3**
YAK *e**PP pP 00 44 42.5 -8.8
YAK *e* pP 00 44 53.8 +2.5
YAK *e*S S 00 53 27.7 -4.3
YAK *e*SS SS 00 57 53.7 -7.4
YAK pmax pmax
comp=Z,51nm,0.8s,mb5.4
YAK pmax pmax
comp=N,21nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK smax
comp=N,11nm,1.4s
KZA Kyzart 69.83 320 P **P 00 44 35.2 +1.7**
SNR=12
TKM2 Tokmak 2 70.05 321 *eP* **P 00 44 34.4 -0.5**
comp=N,15nm,0.7s,mb4.9
TKM2 Tokmak 2 70.05 321 *eP* **P 00 44 34.4 -0.5**
TKM2 pmax pmax
comp=Z,15nm,0.7s,mb4.9
TKM2 Tokmak 2 70.05 321 P **P 00 44 34.6 -0.3**
SNR=18
KBK Karagaybulak 70.32 320 P **P 00 44 36.3 -0.2**
SNR=11
UCH Uchtor 70.37 320 *eP* **P 00 44 37.0 +0.1**
comp=Z,20nm,0.9s,mb5.0
UCH Uchtor 70.37 320 P **P 00 44 37.6 +0.8**
SNR=21
AAK Ala-Archa 70.59 320 P **P 00 44 37.8 -0.4**
comp=Z,146nm,0.8s,mb5.9,SNR=15
AAK Ala-Archa 70.59 320 *eP* **P 00 44 37.0 -1.2**
comp=Z,24nm,0.9s,mb5.0
AAK Ala-Archa 70.59 320 *eP* **P 00 44 37.0 -1.2**
AAK pmax pmax
comp=Z,24nm,0.9s,mb5.0
AAK Ala-Archa 70.59 320 P **P 00 44 38.7 +0.5**
SNR=15
CHMS Chumysh 70.62 321 P **P 00 44 39.1 +0.8**
SNR=5.5
AML Almayashu 70.85 319 *eP* **P 00 44 39.8 +0.1**
comp=Z,30nm,1.0s,mb5.1
AML Almayashu 70.85 319 P **P 00 44 40.2 +0.5**
SNR=20
USP Ospenovka 70.91 321 P **P 00 44 39.7 -0.4**
SNR=29
EKS2 Erkin-Say 71.06 320 *eP* **P 00 44 40.9 -0.1**
comp=Z,36nm,1.0s,mb5.2
EKS2 Erkin-Say 71.06 320 P **P 00 44 41.3 +0.2**
SNR=18
KURK Kurchatov 72.71 329 *eP* **P 00 44 49.8 -0.9**
comp=Z,36nm,0.8s,mb5.2
KURK Kurchatov 72.71 329 *eP* **P 00 44 49.8 -0.9**
KURK pmax pmax
comp=Z,35nm,0.8s,mb5.2
KURK Kurchatov 72.71 329 P **P 00 44 50.4 -0.4**
SNR=17
KURK Kurchatov 72.71 329 P **P 00 44 50.4 -0.4**
SNR=17
KURK Kurchatov 72.71 329 P **P 00 44 50.4 -0.4**
SNR=17
NVS Novosibirsk 73.15 334 *i* P **P 00 44 51.9 -1.3**
NVS *e* 00 54 48.8
NVS pmax pmax
comp=N,15nm,1.4s
NVS pmax pmax
comp=E,17nm,1.4s
NVS pmax pmax
comp=Z,30nm,1.4s,mb4.9
MAW Mawson 74.10 201 P **P 00 45 01.4 +2.8**
comp=Z,9.6nm,1.1s,mb4.5,baz=78,slow=10,SNR=6.9
BIDO Bidbid 76.05 296 P **P 00 45 12.3 +1.5**
SNR=5.0
BIDO Bidbid 76.05 296 P **P 00 45 12.3 +1.5**
SNR=5.0
BIDO Bidbid 76.05 296 P **P 00 45 12.3 +1.5**
SNR=5.0
BRVK Borovoye 78.32 328 P **P 00 45 20.4 -2.4**
comp=Z,88nm,0.9s,mb5.5,SNR=6.6
BRVK Borovoye 78.32 328 *eP* **P 00 45 21.8 -1.0**
comp=Z,12nm,0.8s,mb4.7
BRVK Borovoye 78.32 328 *eP* **P 00 45 21.8 -1.0**
BRVK pmax pmax
comp=Z,12nm,0.8s,mb4.7
BRVK Borovoye 78.32 328 P **P 00 45 20.9 -1.9**
SNR=6.8
BRVK Borovoye 78.32 328 P **P 00 45 20.9 -1.9**
SNR=6.8
CHKZ Chkalovo 78.45 329 *eP* **P 00 45 22.0 -1.5**
comp=Z,13nm,0.9s,mb4.7
CHKZ Chkalovo 78.45 329 *eP* **P 00 45 22.0 -1.5**
CHKZ pmax pmax
comp=Z,13nm,0.9s,mb4.7
WHFO Wadi Hawf 78.74 290 P **P 00 45 26.7 +0.9**
SNR=6.0
WHFO Wadi Hawf 78.74 290 P **P 00 45 26.7 +0.9**
SNR=6.0
WHFO Wadi Hawf 78.74 290 P **P 00 45 26.7 +0.9**
SNR=6.0
TIXI Tiksi 79.13 360 *i* P **P 00 45 26.0 -0.8**
TIXI pmax pmax
comp=Z,19nm,0.9s,mb4.9
BILL Bilibino 79.89 13 *eP* **P 00 45 30.4 -0.7**
comp=Z,2.3nm,0.6s,mb4.2
BILL Bilibino 79.89 13 *eP* **P 00 45 31.7 +0.6**
BILL pmax pmax
comp=Z,8.0nm,1.6s,mb4.3
ABKT Ailbek 80.11 311 P **P 00 45 32.2 -0.7**
comp=Z,66nm,0.7s,mb5.6,SNR=5.6
OPO Ambohidratompo 80.17 252 P **P 00 45 34.4 +0.7**
comp=Z,2.1nm,0.6s,mb4.1,baz=114,slow=8.7,SNR=5.1
QSPA South Pole Qui 82.33 180 *eP* **P 00 45 45.8 +1.9**
comp=Z,4.4nm,0.5s,mb4.5
QSPA South Pole Qui 82.33 180 P **P 00 45 46.1 +2.2**
comp=Z,4.0nm,0.7s,mb4.4,baz=251,slow=0.9,SNR=17
SYO Syowa Base 82.82 201 ⇑ *eP* **P 00 45 47.2 +0.6**
SYO Syowa Base 82.82 201 ⇑ *eP* PcP PcP 00 45 50.8 -0.5
GAMB Gambell 83.77 23 *eP* **P 00 45 52.5 +1.0**
AKTK Aktyubinsk 84.16 322 P **P 00 45 53.0 -0.8**
AKTO Aktyubinsk 84.16 322 P **P 00 45 53.0 -0.8**
comp=Z,11nm,0.7s,mb4.8,baz=116,slow=4.7,SNR=43
SVE Sverdlovsk 84.96 329 *eP* **P 00 45 57.8 +0.1**
SVE pmax pmax
comp=Z,11nm,0.7s,mb4.9
ARU Arti 85.89 328 P **P 00 46 02.3 0.0**
comp=Z,91nm,0.7s,mb5.8,SNR=6.3
ARU Arti 85.89 328 *eP* **P 00 46 00.9 -1.4**
comp=Z,10nm,0.8s,mb4.8
ARU Arti 85.89 328 *c iP* **P 00 46 01.6 -0.7**
ARU 00 49 19.7
ARU S S 00 56 23.2 -6.1
ARU SS SS 01 02 08.9 +0.5
ARU pmax pmax
comp=Z,16nm,1.0s,mb4.9
QRN Al-Qurain 86.16 300 *eP* **P 00 46 02.9 -1.4**
QRN AMb AMB 00 46 04.9
comp=Z,59nm,0.8s,mb5.6
RDF Al-Radifah 86.51 300 *eP* **P 00 46 04.0 -2.0**
RDF AMb AMB 00 46 07.8
comp=Z,31nm,0.7s,mb5.3
NAY Al-Naaiem 86.83 300 *eP* **P 00 46 06.0 -1.6**
NAY AMb AMB 00 46 07.3
comp=Z,21nm,0.7s,mb5.2
MIB Mutribah 86.85 300 *eP* **P 00 46 06.3 -1.3**
MIB AMb AMB 00 46 10.8
comp=Z,36nm,0.7s,mb5.4
RST Umm Al-Ruwaisa 87.09 300 *eP* **P 00 46 06.6 -2.2**
RST AMb AMB 00 46 08.4
comp=Z,39nm,0.8s,mb5.4
TTA Tatalina 89.87 26 *eP* **P 00 46 21.6 +0.5**
comp=Z,6.6nm,0.9s,mb4.8
TTA Tatalina 89.87 26 *eP* **P 00 46 21.6 +0.4**
TTA pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
ZEI Tsey 91.78 313 *eP* **P 00 46 32.0 +1.5**
ZEI pmax pmax
comp=Z,11nm,0.8s,mb5.1
KMBO Kilima Mbogo 91.89 269 *eP* **P 00 46 33.5 +1.8**
KMBO Kilima Mbogo 91.89 269 P **P 00 46 32.2 +0.5**
comp=Z,1.9nm,0.8s,mb4.4,baz=65,slow=5.7,SNR=7.6
MCK McKinley 93.16 26 *eP* **P 00 46 36.2 -0.2**
comp=Z,5.2nm,0.8s,mb4.9
MCK McKinley 93.16 26 *eP* **P 00 46 36.2 -0.2**
MCK pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
COLA College 93.83 25 *eP* **P 00 46 38.2 -1.2**
comp=Z,2.3nm,0.6s,mb4.7
COLA College 93.83 25 *eP* **P 00 46 38.3 -1.2**
COLA pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
MALT Malatya 95.37 308 *eP* **P 00 46 46.3 -0.9**
comp=Z,1.6nm,0.7s,mb4.6
MALT Malatya 95.37 308 *eP* **P 00 46 46.3 -0.9**
MALT pmax pmax
comp=Z,2.0nm,0.7s,mb4.7
DAWY Dawson 97.39 26 *eP* **P 00 46 56.4 +0.7**
OBN Obninsk 97.78 325 *eP* **P 00 46 57.5 -0.2**
OBN *e* 00 50 53.5
OBN pmax pmax
comp=Z,5.0nm,1.7s,mb4.8
BOSA Boshof 98.55 240 P **P 00 47 04.2 +2.4**
comp=Z,2.0nm,0.9s,mb4.7,baz=90,slow=6.1,SNR=3.2
LSZ Lusaka 98.62 253 *eP* **P 00 47 04.3 +1.9**
comp=Z,2.1nm,0.7s,mb4.8
LSZ Lusaka 98.62 253 *eP* **P 00 47 04.3 +1.9**
LSZ pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
LSZ Lusaka 98.62 253 P **P 00 47 04.7 +2.3**
comp=Z,1.4nm,0.5s,mb4.7,baz=91,slow=5.0,SNR=5.4
BRTR Keskin Array B 99.19 309 P **P 00 47 05.9 +1.5**
comp=Z,0.7nm,0.7s,mb4.3,baz=115,slow=5.6,SNR=4.8
INK Inuvik 99.71 22 *ePdif* Pdif 00 47 06.8 +0.4
ARCES ARCESS Array B 101.94 340 P Pdif 00 47 16.0 -0.3
comp=Z,2.2nm,0.8s,baz=75,slow=5.1,SNR=7.2
AKASG Malin Array Be 102.26 320 *i* P Pdif 00 47 18.6 +0.9
AKASG Malin Array Be 102.26 320 P Pdif 00 47 16.9 -0.8
comp=Z,0.3nm,0.3s,baz=75,slow=4.1,SNR=4.4
FINES FINESS Array B 103.00 331 P Pdif 00 47 22.7 +1.7
FINES FINESS Array B 103.00 331 P Pdif 00 47 22.7 +1.7
comp=Z,1.4nm,0.9s,baz=72,slow=4.5,SNR=3.4
YKA Yellowknife Ar 108.63 26 PKPdf PKiKP 00 51 51.4 +0.6
YKA PKKPbc PKKPbc 01 03 03.0 +0.2
YKA Yellowknife Ar 108.63 26 PKiKP PKiKP 00 51 51.3 +0.6
comp=Z,0.3nm,0.5s,baz=303,slow=1.9,SNR=6.9
YKA PKKPbc PKKPbc 01 03 03.0 +0.2
comp=Z,0.5nm,0.5s,baz=102,slow=4.0,SNR=8.1
PSZ Piszkesteto 108.63 318 PKiKP PKiKP 00 51 51.9 +0.6
NOA NORSAR Array B 110.04 333 PKiKP PKiKP 00 51 54.1 +0.6
comp=Z,1.1nm,0.9s,baz=300,slow=5.0,SNR=3.8
NEW Newport 111.29 41 *ePKiKP* PKiKP 00 51 59.0 +2.8
GERES GERESS Array B 112.47 320 PKiKP PKiKP 00 51 57.8 -0.6
comp=Z,0.9nm,0.5s,baz=38,slow=2.4,SNR=12
HLID Hailey 114.19 46 *ePKP* PKiKP 00 52 04.3 +2.4
DUG Dugway 116.10 49 *ePKPdf* PKPdf 00 52 07.1 +1.4
TPAW Teton Pass 116.65 45 *ePKPdf* PKPdf 00 52 08.7 +2.0
CDF Champ du Feu 116.67 321 *ePKIKP* PKPdf 00 52 05.8 -0.7
HWUT Hardware Ranch 116.69 47 *ePKPdf* PKPdf 00 52 06.2 -0.6
MOOW Moose Ponds 116.72 45 *ePKPdf* PKPdf 00 52 08.4 +1.7
SNOW Snow King Moun 116.79 45 *ePKPdf* PKPdf 00 52 09.8 +2.9
WLF Walferdange 116.92 322 PKPdf PKPdf 00 52 06.4 -0.6
HINF Hinteralfeld 117.14 320 *ePKIKP* PKPdf 00 52 07.0 -0.5
comp=Z,5.7nm,0.6s
PDAR Pinedale Array 117.83 45 PKP PKPdf 00 52 09.3 +0.4
comp=Z,0.6nm,0.7s,baz=194,slow=0.7,SNR=4.6
LPG La Plagne 117.98 318 *ePKIKP* PKPdf 00 52 09.0 -0.1
comp=Z,2.7nm,0.6s
LPL La Plagne 117.99 318 *ePKIKP* PKPdf 00 52 09.4 +0.2
comp=Z,4.0nm,0.6s
SBF Sospel 118.03 316 *ePKIKP* PKPdf 00 52 08.5 -0.8
CABF La Chapelle 118.04 319 *ePKIKP* PKPdf 00 52 09.5 +0.3
comp=Z,11nm,0.7s
BNI Bardonecchia 118.17 317 *ePKPdf* PKPdf 00 52 11.2 +1.7
MBDF Montbardon 118.21 317 *ePKIKP* PKPdf 00 52 09.9 +0.3
comp=Z,7.9nm,1.0s
KEST Kesra 118.66 307 PKP PKPdf 00 52 12.5 +1.8
comp=Z,1.6nm,1.0s,baz=74,slow=2.4,SNR=11
FRF La Foret Royal 118.66 316 *ePKIKP* PKPdf 00 52 09.5 -1.0
ORIF Oris-en-Rattie 118.75 317 *ePKIKP* PKPdf 00 52 10.6 0.0
comp=Z,6.5nm,0.7s
FCC Fort Churchill 119.22 24 *ePKPdf* PKPdf 00 52 11.8 +0.7
LOR Lormes 119.23 321 *ePKIKP* PKPdf 00 52 11.4 -0.1
TUC Tucson 119.26 57 *ePKPdf* PKPdf 00 52 13.9 +1.9
SMF Signal de Mont 119.48 320 *ePKIKP* PKPdf 00 52 11.7 -0.3
SSF Saint Saulge 119.53 320 *ePKIKP* PKPdf 00 52 12.2 +0.1
comp=Z,4.1nm,0.7s
VIVF Saint-Julien-l 119.58 318 *ePKIKP* PKPdf 00 52 12.3 +0.1
AVF Avril sur Loir 119.73 320 *ePKIKP* PKPdf 00 52 12.2 -0.3
BGF Bois d'Agland 120.14 320 *ePKIKP* PKPdf 00 52 13.5 +0.2
comp=Z,7.8nm,0.6s
LASF Ste Croix 120.40 317 *ePKIKP* PKPdf 00 52 14.0 +0.2
TCF Toulx Ste Croi 120.66 320 *ePKIKP* PKPdf 00 52 14.3 0.0
MTLF Montolieu 121.77 317 *ePKIKP* PKPdf 00 52 16.4 -0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.2nm,0.5s						
MFF	Saint Martin d	122.01	321	ePKIKP	PKPdf	00 52 16.8	-0.1
	comp=Z,5.2nm,0.6s						
SDCO	Great Sand Dun	122.23	50	ePKPdf	PKPdf	00 52 19.9	+2.3
ANMO	Albuquerque	122.23	53	ePKPdf	PKPdf	00 52 19.9	+2.2
EPF	Esparros	123.16	317	ePKIKP	PKPdf	00 52 19.1	-0.1
	comp=Z,2.7nm,0.6s						
ULM	Lac du Bonnet	123.36	33	PKP	PKPdf	00 52 19.6	+0.2
	comp=Z,1.8nm,0.9s,baz=298,slow=0.3,SNR=4.4						
MNTX	Cornudas Mount	123.88	57	ePKPdf	PKPdf	00 52 22.5	+1.5
LTX	Lajitas	125.84	59	ePKPdf	PKPdf	00 52 26.3	+1.5
TXAR	Lajitas Array	125.84	59	PKP	PKPdf	00 52 26.6	+1.9
	comp=Z,0.4nm,0.5s,baz=208,slow=2.8,SNR=5.2						
CBKS	Cedar Bluff	126.16	47	ePKPdf	PKPdf	00 52 27.4	+2.4
TORD	Torodi Ar. Bea	128.26	281	PKP	PKPdf	00 52 29.6	-0.1
TORD				SKPbc		00 55 42.2	
TORD	Torodi Ar. Bea	128.26	281	PKP	PKPdf	00 52 29.6	-0.1
	comp=Z,1.8nm,0.8s,baz=73,slow=1.9,SNR=16						
TORD				SKPbc		00 55 42.2	
	comp=Z,1.2nm,0.9s,baz=78,slow=3.0,SNR=3.6						
WMOK	Wichita Mounta	128.33	51	ePKPdf	PKPdf	00 52 31.5	+2.2
JCT	Junction City	128.82	57	ePKPdf	PKPdf	00 52 32.8	+2.4
SCHQ	Schefferville	131.20	12	PKP	PKPdf	00 52 35.6	+1.5
SCHQ				SKPbc	SKPbc	00 55 51.6	-0.5
SCHQ	Schefferville	131.20	12	PKP	PKPdf	00 52 35.6	+1.5
	comp=Z,1.8nm,0.9s,baz=0.0,slow=3.0,SNR=5.2						
SCHQ				SKPbc	SKPbc	00 55 51.6	-0.5
	comp=Z,4.8nm,0.8s,baz=330,slow=6.4,SNR=8.7						
TRQA	Tornquist	133.33	168	ePKPdf	PKPdf	00 52 41.1	+2.3
DBIC	Dimbokro	134.53	272	PKP	PKPdf	00 52 41.8	+0.2
	comp=Z,2.2nm,0.6s,baz=86,slow=7.7,SNR=4.5						
DBIC				SKPbc	SKPbc	00 56 04.1	-0.8
	comp=Z,5.9nm,0.9s,baz=111,slow=6.9,SNR=4.8						
WCI	Wyandotte Cave	135.74	41	ePKPdf	PKPdf	00 52 45.2	+2.0
LCO	Las Campanas	138.77	153	ePKPdf	PKPdf	00 52 51.0	+1.9
JTS	JuntasAbangare	146.06	83	ePKPbc	PKPbc	00 53 06.6	+3.2
NNA	Nana	147.49	127	ePKPdf	PKPdf	00 53 05.6	+0.8
NNA				ePKPbc	PKPbc	00 53 10.2	+2.7
LPAZ	La Paz	150.62	144	PKP	PKPdf	00 53 13.3	+3.5
	comp=Z,4.6nm,0.8s,baz=198,slow=3.2,SNR=4.9						
LPAZ				PKPbc	PKPbc	00 53 18.6	+3.4
	comp=Z,5.1nm,0.6s,baz=217,slow=1.6,SNR=17						
LPAZ				PKPab	PKPab	00 53 26.1	+3.9
	comp=Z,7.8nm,0.6s,baz=219,slow=4.1,SNR=16						
BCIP	Isla Barro Col	151.13	85	ePKPbc	PKPbc	00 53 18.4	+1.9
OTAV	Otavalo	151.36	104	ePKPbc	PKPbc	00 53 20.6	+3.4

*IDC **14** 00:38:36.9±0.6, 5522N×16191E, h0km, mb4.1/20, mb1 4.3/20, mb1mx4.2/25, mbtmp4.1/20, ML3.9/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/35, Error ellipse: s-maj=20.4km s-min=13.6km az=135.0*

*KRSC **14** 00:38:39.6±0.5, 5508N×16247E, h21km±21km, ML4.8*

*ISCJB **14** 00:38:42.6±0.5, 55.10N±0.02×162.35E±0.07, h60km±4km, mb4.2/29, Error ellipse: s-maj=7.1km s-min=3.5km az=19.3*

*MOS **14** 00:38:42.5±0.8, 55.16N×162.11E, h58km, mb4.3/15, Error ellipse: s-maj=13.9km s-min=6.5km az=81.3*

*NEIC **14** 00:38:45.5±1.0, 55.19N×162.03E, h68km±8km, mb4.2/7, Error ellipse: s-maj=8.9km s-min=6.0km az=136.0*

ISC 14 00:38:43.9±0.5**, 5512N**±002×**16234E**±007**, h55**km±4km**, n100,** σ1s**08**/117**, mb4.2**/29**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.12	14	eP	Pn	00 39 01.3	-2.1
KBTR				i S	Sn	00 39 17.8	0.0
ZLN	Zelenaya	1.25	317	eP	Pn	00 39 04.3	-0.7
ZLN				i S	Sn	00 39 22.7	+1.8
TUMR	Tumrok	1.27	278	eP	Pn	00 39 04.0	-1.2
TUMR				i S	Sn	00 39 22.2	+1.0
BZMR	Bezymyannaya	1.33	309	eP	Pn	00 39 05.0	-1.1
BZMR				i S	Sn	00 39 23.9	+1.2
CIRR	Tsirk	1.34	319	eP	Pn	00 39 05.9	-0.4
CIRR				i S	Sn	00 39 25.6	+2.5
KMNR	Kamenistaya	1.35	299	eP	Pn	00 39 05.4	-1.0
KMNR				i S	Sn	00 39 24.8	+1.4
KIRR	Kirishev	1.41	307	eP	Pn	00 39 06.2	-0.9
KPT	Kopyto	1.47	306	eP	Pn	00 39 06.8	-1.2
KPT				i S	Sn	00 39 27.0	+0.9
KRSR	Krestovskiy	1.49	318	eP	Pn	00 39 07.0	-1.2
KRSR				i S	Sn	00 39 27.1	+0.5
KLY	Klyuchi	1.53	322	eP	Pn	00 39 06.6	-2.2
KLY				i S	Sn	00 39 26.3	-1.3
SMKR	Semkarok	1.55	342	eP	Pn	00 39 08.4	-0.6
SMKR				i S	Sn	00 39 29.0	+1.0
BDR	Baidarnaya	1.58	337	eP	Pn	00 39 09.2	-0.4
SRKR	Sorokina	1.67	337	eP	Pn	00 39 10.3	-0.4
SRKR				i S	Sn	00 39 32.5	+1.4
KOZR	Kozyr	1.68	305	PN	Pn	00 39 10.4	-0.4
KOZ	Kozyrevsk	1.69	305	eP	Pn	00 39 10.4	-0.5
SRDR	Sredinnyy	1.91	310	eP	Pn	00 39 13.2	-0.7
SRDR				i S	Sn	00 39 38.1	+1.3
KII	Karymskiy	2.00	238	eP	Pn	00 39 14.1	-1.1
KII				i S	Sn	00 39 39.6	+0.6
SPN	Mys Shipunski	2.44	215	eP	Pn	00 39 18.4	-2.8
SPN				i S	Sn	00 39 45.8	-4.0
NLC	Nalytchevo	2.63	223	eP	Pn	00 39 22.7	-1.1
NLC				i S	Sn	00 39 53.8	-0.6
AVH	Avacha	2.81	230	eP	Pn	00 39 26.0	-0.3
AVH				i S	Sn	00 40 00.6	+1.6
GNL	Ganaly	2.94	243	eP	Pn	00 39 27.7	-0.3
PET	Petropavlovsk	3.02	227	ePn	Pn	00 39 28.5	-0.6
PET	Petropavlovsk	3.02	227	eP	Pn	00 39 28.8	-0.3
PET				i S	Sn	00 40 04.6	+0.6
RUS	Russkaya	3.52	222	eP	Pn	00 39 35.7	-0.3
RUS				i S	Sn	00 40 17.0	+0.7
GRL	Gorelyy	3.60	226	eP	Pn	00 39 37.5	+0.4
GRL				i S	Sn	00 40 19.9	+1.5
MIPR	Malaya Ipel'ka	4.37	232	eP	Pn	00 39 49.1	+1.5
SKR	Severo-Kuril's	5.82	223	ePN	Pn	00 40 07.5	0.0
SKR				e		00 41 15.5	
MA2	Magadan	7.68	310	Pn	Pn	00 40 33.0	0.0
BILL	Bilibino	13.10	7	i PN	Pn	00 41 48.6	+1.8
BILL				pmax	pmax		
	comp=Z,7.0nm,1.8s						
ASAJ	Asahikawa	16.81	237	LR	LR	00 48 18.0	
	comp=Z,163nm,21.9s,baz=66,slow=35						
TIXI	Tiksi	21.85	332	eP	P	00 43 31.0	-0.3
	comp=Z,7.5nm,0.8s,mb4.2						
TIXI				epP		00 43 41.8	
TIXI	Tiksi	21.85	332	eP	P	00 43 31.0	-0.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
IMA2	Indian Mountai	23.66	45	eP	P	00 43 49.8	0.0
IMA2				esP	sP	00 44 10.9	+1.0
MAJO	Matsushiro	24.84	232	eP	P	00 44 00.8	0.0
MJAR	Matsushiro Arr	24.84	232	P	P	00 44 00.8	0.0
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	Matsushiro Arr	24.84	232	P	P	00 44 00.8	-0.1
	comp=Z,5.1nm,0.7s,mb4.2,baz=29,slow=7.6,SNR=8.1						
MCK	McKinley	25.63	51	eP	P	00 44 08.5	+0.8
	comp=Z,2.3nm,0.7s,mb3.8						
MCK	McKinley	25.63	51	eP	P	00 44 08.5	+0.8
MCK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
COLA	College	26.05	48	eP	P	00 44 11.4	0.0
COLA	College	26.05	48	eP	P	00 44 12.4	+1.0
INK	Inuvik	31.46	40	eP	P	00 45 00.8	+1.3
	comp=Z,43nm,0.6s,mb5.5						
INK	Inuvik	31.46	40	eP	P	00 45 00.9	+1.4
INK				pmax	pmax		
	comp=Z,43nm,0.6s						
INK	Inuvik	31.46	40	P	P	00 45 00.8	+1.2
	comp=Z,0.7nm,0.6s,mb3.7,baz=305,slow=7.5,SNR=5.0						
TLY	Talaya	34.27	289	P	P	00 45 23.9	-0.3
ULN	Ulaanbaatar	34.37	281	eP	P	00 45 22.9	-2.2
	comp=Z,2.6nm,0.7s,mb4.3						
ULN	Ulaanbaatar	34.37	281	eP	P	00 45 22.9	-2.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
YKA	Yellowknife Ar	40.78	45	eP	P	00 46 20.0	+0.9
YKA	Yellowknife Ar	40.78	45	P	P	00 46 20.0	+1.0
	comp=Z,1.4nm,0.7s,mb3.7,baz=300,slow=7.9,SNR=17						
RES	Resolute Bay	40.94	23	eP	P	00 46 20.8	+0.6
	comp=Z,24nm,0.5s,mb5.1						
RES	Resolute Bay	40.94	23	eP	P	00 46 20.8	+0.5
RES				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.1						
TATO	Taipei	42.43	242	eP	P	00 46 33.3	+0.3
CHKZ	Chkalovo	49.63	309	eP	P	00 47 26.5	-2.8
	comp=Z,2.4nm,0.8s,mb4.3						
CHKZ	Chkalovo	49.63	309	eP	P	00 47 26.5	-2.8
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
FCC	Fort Churchill	51.08	41	eP	P	00 47 41.0	+0.9
ARCES	ARCESS Array B	51.77	342	P	P	00 47 45.1	0.0
ARCES						00 48 57.1	
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	51.77	342	P	P	00 47 45.0	0.0
	comp=Z,2.0nm,0.7s,mb4.1,baz=39,slow=7.8,SNR=3.8						
ARCES				PcP	PcP	00 48 57.0	-0.4
	comp=Z,2.9nm,0.9s,baz=3.5,slow=4.0,SNR=3.6						
ARU	Arti	52.80	317	eP	P	00 47 51.2	-1.7
ARU	Arti	52.80	317	eP	P	00 47 51.3	-1.6
NVAR	Mina Array Bea	53.85	73	P	P	00 48 04.1	+3.2
NVAR	Mina Array Bea	53.85	73	P	P	00 48 04.1	+3.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=299,slow=6.1,SNR=3.1						
AAK	Ala-Archa	55.37	296	eP	P	00 48 12.4	+0.6
	comp=Z,1.5nm,0.7s,mb4.1						
AAK	Ala-Archa	55.37	296	eP	P	00 48 12.4	+0.6
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
PDAR	Pinedale Array	55.41	63	P	P	00 48 14.2	+2.1
	comp=Z,1.0nm,0.9s,mb3.8,baz=358,slow=4.9,SNR=7.3						
EKS2	Erkin-Say	55.71	297	P	P	00 48 14.1	-0.2
JOF	Joensuu	56.28	335	ep	P	00 48 15.4	-2.6
	comp=Z,2.0nm,0.6s,mb4.3						
JOF	Joensuu	56.28	335	eP	P	00 48 15.4	-2.6
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ULM	Lac du Bonnet	56.48	49	P	P	00 48 20.3	+0.7
	comp=Z,0.6nm,0.4s,mb4.0,baz=325,slow=9.6,SNR=3.6						
KAF	Kangasniemi	58.13	337	ep	P	00 48 29.8	-1.3
	comp=Z,0.7nm,0.4s,mb4.0,baz=27,slow=6.6						
KAF	Kangasniemi	58.13	337	eP	P	00 48 29.8	-1.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	FINESS Array B	58.77	337	P	P	00 48 35.0	-0.6
FINES	FINESS Array B	58.77	337	eP	P	00 48 35.1	-0.5
FINES	FINESS Array B	58.77	337	P	P	00 48 34.4	-1.2
	comp=Z,0.9nm,0.5s,mb4.1,baz=35,slow=8.6,SNR=10						
FINES				LR	LR	01 17 51.7	
	comp=Z,215nm,19.8s,baz=339,slow=40						
OBN	Obninsk	61.51	328	eP	P	00 48 53.8	-0.6
OBN				eS	S	00 57 10.2	-1.1
OBN				eSS	SS	01 01 09.3	-2.7
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
NB2	NORSAR Subarra	61.95	345	P	P	00 48 56.1	-1.2
	comp=Z,0.8nm,0.5s,mb4.1,baz=17,slow=6.9						
NB2	NORSAR Subarra	61.95	345	P	P	00 48 56.1	-1.2
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
NOA	NORSAR Array B	61.95	345	P	P	00 48 56.4	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	61.95	345	P	P	00 48 56.4	-0.9
	comp=Z,1.0nm,0.6s,mb4.1,baz=18,slow=6.9,SNR=4.4						
SCHQ	Schefferville	63.24	29	P	P	00 49 06.2	+0.3
	comp=Z,1.4nm,0.6s,mb4.2,baz=12,slow=7.8,SNR=5.2						
AKASG	Malin Array Be	67.54	330	P	P	00 49 33.2	-0.6
	comp=Z,0.3nm,0.3s,mb3.8,baz=27,slow=6.3,SNR=2.8						
TXAR	Lajitas Array	68.66	69	P	P	00 49 43.0	+1.9
TXAR	Lajitas Array	68.66	69	eP	P	00 49 43.1	+2.0
TXAR	Lajitas Array	68.66	69	P	P	00 49 43.0	+1.9
	comp=Z,0.9nm,0.6s,mb3.9,baz=302,slow=4.9,SNR=16						
CLL	Collm	70.91	340	eP	P	00 49 54.0	-0.6
PSI	Prapat	72.75	249	P	P	00 50 06.0	-0.1
PSI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
PSI	Prapat	72.75	249	P	P	00 50 06.0	-0.2
	comp=Z,2.7nm,0.6s,mb4.3,baz=8.7,slow=13,SNR=3.5						
GERES	GERESS Array B	73.11	339	P	P	00 50 08.1	+0.3
GERES	GERESS Array B	73.11	339	P	P	00 50 08.2	+0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	GERESS Array B	73.11	339	P	P	00 50 08.2	+0.4
	comp=Z,0.7nm,0.7s,mb3.7,baz=19,slow=4.5,SNR=5.4						
BRTR	Keskin Array B	75.87	322	P	P	00 50 23.8	-0.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	75.87	322	P	P	00 50 23.8	-0.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=47,slow=2.1,SNR=4.2						
WRA	Warramunga Arr	78.48	207	P	P	00 50 39.1	+0.5
WRA	Warramunga Arr	78.48	207	eP	P	00 50 39.2	+0.6
WRA	Warramunga Arr	78.48	207	P	P	00 50 39.2	+0.5
	comp=Z,2.7nm,0.8s,mb4.2,baz=17,slow=5.9,SNR=5.6						
FITZ	Fitzroy Crossi	79.32	215	P	P	00 50 43.6	+0.4
	comp=Z,6.0nm,1.1s,mb4.5,baz=63,slow=6.8,SNR=4.9						
ASAR	Alice Springs	82.16	206	eP	P	00 50 59.4	+1.1
ASAR	Alice Springs	82.16	206	P	P	00 50 59.4	+1.1
	comp=Z,4.1nm,0.7s,mb4.5,baz=15,slow=4.9,SNR=11						
ESDC	Sonseca Array	84.85	349	P	P	00 51 12.9	+0.7
	comp=Z,2.0nm,0.7s,mb4.4,baz=3.6,slow=4.4,SNR=14						
KEST	Kesra	86.59	338	P	P	00 51 20.7	-0.2
	comp=Z,1.2nm,1.0s,mb4.1,baz=350,slow=12,SNR=5.9						
QSPA	South Pole Qui	144.87	180	PKP	PKPdf	00 58 12.0	-0.5
QSPA	South Pole Qui	144.87	180	PKP	PKPdf	00 58 12.0	-0.5
	comp=Z,7.6nm,0.7s,baz=308,slow=1.2,SNR=53						

IGQ 14 00:44:05.1, 210S×8068W, h12km±26km**, Mb4.1, Ms3.9, 12C-5D, Error ellipse: s-maj=27.0km s-min=4.7km az=152.1, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	Cerro-Chispas-	1.04	358	⇑P	Pb	00 44 25.2	+0.1
CHIS				⇑S	Sb	00 44 37.5	-1.2
IGUA	Igualata	2.13	74	P	Pn	00 44 43.7	+3.2
IGUA	Igualata	2.13	74	S	Sn	00 45 07.8	+0.9
MAG1	Magdalena	2.21	24	P	Pn	00 44 42.8	+1.3
MAG1	Magdalena	2.21	24	S	Sn	00 45 08.4	-0.4
ARRY	Arrayan	2.30	75	⇑P	Pn	00 44 46.0	+3.1
ARRY	Arrayan	2.30	75	⇑S	Sn	00 45 11.7	+0.5
PATA	Patacocha	2.32	75	P	Pn	00 44 46.5	+3.3
PATA	Patacocha	2.32	75	S	Sn	00 45 13.1	+1.4
RUN5	Runtun	2.36	73	P	Pn	00 44 46.7	+3.0
RUN5	Runtun	2.36	73	S	Sn	00 45 14.7	+2.2
CAMI	Rancho Maria	2.59	57	⇓P	Pn	00 44 50.6	+3.7
CAMI	Rancho Maria	2.59	57	⇓S	Sn	00 45 24.5	+6.1
VC1	Cotopaxi 1	2.70	58	⇑P	Pn	00 44 52.0	+3.7
TAMB	Tambo	2.70	59	⇑P	Pn	00 44 51.9	+3.5
JUA2	San Juan 2	2.79	48	P	Pn	00 44 52.1	+2.4
JUA2	San Juan 2	2.79	48	S	Sn	00 45 28.9	+5.6
TERV	Terraza Guagua	2.82	47	⇓P	Pn	00 44 53.1	+3.1
GGP	Refugio Guagua	2.83	48	⇑P	Pn	00 44 51.5	+1.4
GGP	Refugio Guagua	2.83	48	⇑S	Sn	00 45 26.3	+2.1
PINO	Pino	2.83	47	⇑P	Pn	00 44 51.4	+1.3
PINO	Pino	2.83	47	⇑S	Sn	00 45 25.9	+1.7
YANA	Yana	2.88	47	⇓P	Pn	00 44 52.7	+1.8
YANA	Yana	2.88	47	⇓S	Sn	00 45 30.3	+4.7
ANTI	Antisana	3.00	57	⇑P	Pn	00 44 56.7	+4.1
ANTI	Antisana	3.00	57	⇑S	Sn	00 45 32.6	+4.1
COTA	Cotacachi	3.37	44	P	Pn	00 45 00.8	+3.2
COTA	Cotacachi	3.37	44	S	Sn	00 45 41.4	+4.0
CAYR	Refugio Cayamb	3.40	52	P	Pn	00 45 03.0	+5.0
CAYR	Refugio Cayamb	3.40	52	S	Sn	00 45 43.8	+5.5

*IDC **14** 00:54:38.5±0.7, 003S×9690E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.9/20, mbtmp3.9/12, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.9/35, Error ellipse: s-maj=24.0km s-min=17.4km az=53.0*

*ISCJB **14** 00:54:41.7±0.5, 0.09N±0.06×97.01E±0.07, h33km, mb4.0/16, Error ellipse: s-maj=10.6km s-min=8.3km az=31.0*

*NEIC **14** 00:54:43.2±0.4, 0.09N×97.02E, h30km, mb4.3/5, Error ellipse: s-maj=10.5km s-min=8.6km az=56.0*

ISC 14 00:54:44.0±0.5**, 010N**±006×**9703E**±007**, h35**km**, n28,** σ1s**00**/30**, mb4.0**/16**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.29	35	Pn	Pn	00 55 31.2	-1.8
PSI				Sn	Sn	00 56 12.8	+1.9
PSI	Prapat	3.29	35	Pn	Pn	00 55 31.2	-1.8
	5.6nm,0.3s,baz=200,slow=15,SNR=14						
PSI				Sn	Sn	00 56 12.8	+1.9
	2.2nm,0.3s,baz=151,slow=21,SNR=3.9						
KULM	Kulim	6.30	35	ePn	Pn	00 56 12.8	-1.7
KULM				eSn	Sn	00 57 23.9	-1.3
QIZ	Qiongzhong	22.63	33	P	P	00 59 41.9	-0.1
MBWA	Marble Bar	30.63	135	P	P	01 00 56.3	+1.1
WRA	Warramunga Arr	41.61	121	P	P	01 02 29.7	+0.6
	0.8nm,0.7s,mb3.5,baz=302,slow=8.9,SNR=11						
ASAR	Alice Springs	42.88	126	P	P	01 02 38.2	-1.1
	0.4nm,0.6s,mb3.4,baz=300,slow=7.7,SNR=6.4						
KSRS	Korea Array	46.85	34	P	P	01 03 12.1	+1.4
	1.4nm,0.5s,mb4.1,baz=219,slow=9.6,SNR=4.5						
SONM	Songino Array	48.24	8	P	P	01 03 22.3	+1.0
	0.4nm,0.6s,mb3.6,baz=192,slow=7.9,SNR=4.7						
SONM				PcP	PcP	01 04 48.8	+0.8
	0.6nm,0.7s,baz=174,slow=3.9,SNR=3.0						
MK31	Makanchi Array	48.26	346	eP	P	01 03 22.7	+1.2
MK31				e	pP	01 03 33.3	+1.3
MKAR	Makanchi Array	48.26	346	P	P	01 03 22.9	+1.4
	1.7nm,0.7s,mb4.2,baz=156,slow=8.2,SNR=20						
CTAO	Charters Tower	52.17	116	P	P	01 03 51.8	+0.1
STKA	Stephens Creek	52.76	131	P	P	01 03 55.7	-0.1
STKA	Stephens Creek	52.76	131	P	P	01 03 55.7	-0.1
	2.0nm,0.6s,mb4.2,baz=296,slow=11,SNR=4.8						
KURK	Kurchatov	52.81	345	P	P	01 03 56.3	+0.6
	3.3nm,1.0s,mb4.2						
BRVK	Borovoye	57.29	341	P	P	01 04 27.6	-0.6
CHKZ	Chkalovo	57.71	342	eP	P	01 04 31.3	+0.2
	4.0nm,1.2s,mb4.3						
KMBO	Kilima Mbogo	59.78	269	eP	P	01 04 45.2	-1.1
	0.9nm,0.6s,mb4.0						
ARU	Arti	64.13	337	P	P	01 05 12.9	-1.7
KIV	Kislovodsk	65.03	320	eP	P	01 05 20.8	0.0
	1.5nm,0.4s,mb4.4						
MALT	Malatya	65.74	313	eP	P	01 05 26.3	+0.8
	1.4nm,0.6s,mb4.2						
BRTR	Keskin Array B	69.72	313	P	P	01 05 50.4	-0.2
	1.3nm,0.7s,mb4.0,baz=123,slow=7.8,SNR=8.3						
BOSA	Boshof	74.09	240	P	P	01 06 16.1	-0.9
	1.8nm,0.7s,mb4.1,baz=115,slow=5.0,SNR=4.4						
AKASG	Malin Array Be	76.02	323	P	P	01 06 27.4	-0.3
	1.2nm,0.5s,mb4.0,baz=88,slow=5.1,SNR=7.3						
FINES	FINESS Array B	80.89	333	P	P	01 06 54.5	+0.1
	1.0nm,0.7s,mb3.9,baz=120,slow=8.2,SNR=3.7						
ARCES	ARCESS Array B	83.51	340	P	P	01 07 08.0	+0.1
ARCES	ARCESS Array B	83.51	340	P	P	01 07 08.0	+0.1
	1.3nm,0.8s,mb4.1,baz=108,slow=7.7,SNR=3.8						
TXAR	Lajitas Array	144.69	32	PKP	PKPdf	01 14 17.3	-0.5
	0.7nm,0.6s,baz=198,slow=0.5,SNR=14						

KRSC 14 01:00:08.9±0.7**, 5161N×15861E, h26**km±26km**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.83	356	i P	Pb	01 00 25.2	+0.6
RUS				i S	Sb	01 00 36.3	+1.0
GRL	Gorelyy	1.00	341	eP	Pn	01 00 28.1	+0.9
GRL				eS	Sb	01 00 41.5	+1.2
MIPR	Malaya Ipel'ka	1.33	301	eP	Pn	01 00 32.4	+0.7
MIPR				eS	Sn	01 00 49.1	+0.6
PET	Petropavlovsk	1.42	1	eP	Pn	01 00 33.5	+0.6
PET				eS	Sn	01 00 50.9	+0.2
NLC	Nalytchevo	1.63	16	eS	Sn	01 00 54.1	-1.8
AVH	Avacha	1.66	3	eP	Pn	01 00 37.7	+1.4
AVH				eS	Sn	01 00 59.1	+2.4
SPN	Mys Shipunski	1.72	30	eP	Pn	01 00 38.4	+1.2
SPN				eS	Sn	01 00 59.6	+1.3
ALID	Alaid	2.06	250	eP	Pn	01 00 42.2	+0.4
ALID				eS	Sn	01 01 06.1	-0.5
GNL	Ganaly	2.13	349	eP	Pn	01 00 44.0	+1.3
KBTR	Krutoberegovo	5.24	27	eP	Pn	01 01 27.6	+2.2

IDC 14 01:06:38.3±5.6**, 257S×14058E, h0**km**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/10**, mbtmp3.4**/3**, Error ellipse: s-maj=216.1km s-min=29.3km az=89.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.31	199	P	Pn	01 10 53.2	-0.7
	0.1nm,0.3s,baz=19,slow=12,SNR=11						
ASAR	Alice Springs	21.94	197	P	P	01 11 33.5	-0.1
	0.6nm,0.5s,baz=28,slow=9.4,SNR=8.4						
MKAR	Makanchi Array	70.82	322	P	P	01 17 57.2	+0.4
	0.4nm,0.6s,baz=111,slow=7.9,SNR=3.7						

*IDC **14** 01:09:42.7±1.2, 2729N×9142E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.8/24, mbtmp3.8/11, Error ellipse: s-maj=42.1km s-min=22.5km az=48.0*

*BJI **14** 01:09:46.8, 27.10N×91.51E, h77km, mb4.0*

*ISCJB **14** 01:09:48.3±0.8, 27.15N±0.05×91.21E±0.06, h63km±8km, mb4.0/14, Error ellipse: s-maj=9.2km s-min=8.3km az=15.9*

*NEIC **14** 01:09:50.3±2.1, 2729N×9133E, h58km±15km, mb3.9/5, Error ellipse: s-maj=20.4km s-min=13.1km az=204.0*

ISC 14 01:09:49.7±0.8**, 2716N**±005×**9128E**±006**, h57**km±8km**, n35,** σ1s**01**/43**, mb4.0**/14**, Bhutan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	1.68	161	i P	Pn	01 10 18.5	+1.7
SHL				eS	Sn	01 10 42.0	+4.8
GTK	Gangtok	2.38	275	eP	Pn	01 10 24.0	-2.3
GTK				ex	Sn	01 11 01.0	+6.7
LSA	Lhasa	2.53	357	P	Pn	01 10 28.4	0.0
LSA				S	Sn	01 11 01.0	+3.0
LSA				Smax			
	comp=N,370nm,0.6s						
LSA				Smax			
	comp=E,540nm,0.6s						
LSA	Lhasa	2.53	357	ePn	Pn	01 10 28.0	-0.3
LSA				eSn	Sn	01 10 57.6	-0.4
IMP	Imphal	3.36	134	eP	Pn	01 10 39.0	-0.8
IMP				ex	Sn	01 11 13.0	-5.5
BOK	Bokaro	5.92	237	eP	Pn	01 11 15.7	+0.9
BOK				eS	Sn	01 12 20.6	-0.6
JOSI	Joshimath	10.82	291	eP	Pn	01 12 32.4	+11
JOSI				eS	Sn	01 14 23.1	+1.8
JOSI				AML	AML	01 14 31.0	
	comp=E,29nm,0.6s						
JOSI				AML	AML	01 14 31.2	
	comp=N,24nm,0.6s						
KUDL	Kundal	13.15	278	eS	Sn	01 15 06.8	-11
KHET	Khetri	13.75	277	eS	Sn	01 15 18.9	-14
KHET				AML	AML	01 17 20.3	
	comp=N,12nm,0.1s						
KHET				AML	AML	01 17 20.4	
	comp=E,4.8nm,0.1s						
HYB	Hyderabad	15.25	233	i P	Pn	01 13 18.5	-3.0
HYB				eS	S	01 16 17.0	-6.3
TKM2	Tokmak 2	20.25	325	eP	P	01 14 21.4	+1.3
	comp=E,43nm,0.9s						
UCH	Uchtor	20.34	322	eP	P	01 14 21.4	+0.2
	comp=E,5.5nm,1.0s						
UCH				e		01 14 58.9	
KBL	Kabul	20.43	297	eP	P	01 14 21.7	-0.6
AAK	Ala-Archa	20.62	323	eP	P	01 14 23.3	-0.9
	comp=E,1.4nm,0.5s						
MKAR	Makanchi Array	20.84	342	P	P	01 14 25.8	-0.8
	comp=E,5.7nm,0.6s,baz=150,slow=12,SNR=64						
SONM	Songino Array	23.78	26	P	P	01 14 55.9	-1.0
SONM	Songino Array	23.78	26	P	P	01 14 55.9	-1.0
	comp=E,2.0nm,1.0s,mb3.5,baz=213,slow=10,SNR=3.0						
KURK	Kurchatov	25.42	341	eP	P	01 15 11.0	-0.8
	comp=E,1.4nm,0.5s,mb3.8						
CHKZ	Chkalovo	30.58	336	eP	P	01 15 58.2	+0.4
	comp=E,2.2nm,0.6s,mb4.2						
AKTK	Aktyubinsk	34.36	322	P	P	01 16 31.4	+0.5
AKTO	Aktyubinsk	34.36	322	P	P	01 16 31.4	+0.5
	comp=E,0.6nm,0.6s,mb3.7,baz=129,slow=11,SNR=3.7						
AKASG	Malin Array Be	51.98	315	P	P	01 18 53.2	+0.3
AKASG	Malin Array Be	51.98	315	P	P	01 18 53.2	+0.3
	comp=E,1.0nm,0.4s,mb4.1,baz=81,slow=7.1,SNR=4.4						
JOF	Joensuu	52.57	330	ep	P	01 18 55.8	-1.3
	comp=E,0.9nm,0.4s,mb4.0						
KAF	Kangasniemi	54.69	329	ep	P	01 19 11.7	-1.0
	baz=94,slow=7.1						
FINES	FINESS Array B	54.70	328	P	P	01 19 13.1	+0.4
	comp=E,1.0nm,0.6s,mb4.0,baz=103,slow=8.6,SNR=4.8						
KWP	Kalwaria	56.18	313	P	P	01 19 23.9	+0.4
ARCES	ARCESS Array B	56.38	337	P	P	01 19 24.9	+0.3
	comp=E,2.7nm,1.0s,mb4.2,baz=107,slow=7.4,SNR=7.6						
VRAC	Vranov	60.18	313	P	P	01 19 58.1	+6.6

	comp=E,1.6nm,0.3s,mb4.5,baz=69,slow=6.7,SNR=5.8						
HFS	Hagfors	60.73	326	P	P	01 19 55.6	+0.6
	comp=E,2.1nm,0.9s,mb4.3,baz=46,slow=6.2,SNR=3.2						
NOA	NORSAR Array B	61.87	327	P	P	01 20 02.4	-0.4
	comp=E,1.4nm,1.1s,mb4.0,baz=86,slow=6.8,SNR=2.3						
GERES	GERESS Array B	62.13	313	P	P	01 20 06.2	+1.5
	comp=E,0.9nm,0.7s,mb4.0,baz=77,slow=6.0,SNR=8.4						
WRA	Warramunga Arr	62.71	134	P	P	01 20 10.0	+1.0
	comp=E,0.4nm,0.8s,mb3.6,baz=316,slow=8.3,SNR=3.9						
WLF	Walferdange	66.78	315	P	P	01 20 35.1	+0.1
YKA	Yellowknife Ar	88.28	12	P	P	01 22 34.1	-0.5
	comp=E,0.2nm,0.6s,mb3.5,baz=331,slow=4.6,SNR=6.2						

IDC 14 01:19:50.4±2.5, 1897S×17724W, h0^{km}, mb4.1/4, mb1 4.4/4, mb1mx4.0/14, mbtmp4.1/4, Error ellipse: s-maj=260.5km s-min=28.6km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.38	262	P	P	01 26 41.1	+1.7
	1.9nm,0.5s,baz=113,slow=13,SNR=3.4						
WRA	Warramunga Arr	45.54	260	P	P	01 28 10.8	-1.4
	1.1nm,0.5s,baz=96,slow=7.2,SNR=57						
ASAR	Alice Springs	45.58	255	P	P	01 28 12.3	-0.2
	4.0nm,0.5s,baz=87,slow=8.8,SNR=71						
TXAR	Lajitas Array	85.63	57	P	P	01 32 31.4	+0.3
	0.6nm,0.8s,baz=211,slow=6.0,SNR=8.6						

MOS 14 01:24:51.1±0.6, 3968N×11038E, h33^{km}, mb4.0/3, Error ellipse: s-maj=43.8km s-min=16.6km az=116.6
BJI 14 01:24:51.2, 3969N×110.14E, h23^{km}, mb4.3, ML3.2
ISCJB 14 01:24:52.1±1.7, 398N±0.1×11023E±007, h30^{km}±16^{km}, mb3.6/4, Error ellipse: s-maj=17.0km s-min=9.2km az=3.9
IDC 14 01:24:52.2±7.9, 3954N×11054E, h33^{km}±54^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.3/22, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=55.8km s-min=29.3km az=14.0
NEIC 14 01:24:54.1±1.0, 3968N×11029E, h35^{km}, mb4.0/1, Error ellipse: s-maj=20.9km s-min=11.3km az=191.0
ISC 14 01:24:51.3±2.0, 3970N±009×11023E±007, h9^{km}±12^{km}, n19, σ1^{s}03/20, mb3.6/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	Baotou	0.92	350	ePG	Pg	01 25 08.4	-0.7
BJT	Baijiatuau	4.58	84	ePn	Pn	01 26 00.9	+0.2
BJT				eSn	Sn	01 26 54.6	+0.5
BJI	Beijing	4.59	84	P	Pn	01 26 05.0	+4.2
BJI				Smax			
	comp=N,47nm,0.7s						
BJI				Smax			
	comp=E,20nm,0.7s						
LZH	Lanzhou	6.20	236	ePG	Pb	01 26 39.5	+0.1
ULN	Ulaanbaatar	8.48	345	eP	Pn	01 26 55.0	+0.8
	comp=E,4.8nm,0.8s						
ULN	Ulaanbaatar	8.48	345	eP	Pn	01 26 55.0	+0.8
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM	Songino Array	8.59	342	Pn	Pn	01 26 56.6	+0.9
	comp=Z,0.2nm,0.3s,baz=157,slow=12,SNR=50						
SONM				Lg		01 29 33.5	
	comp=Z,0.2nm,0.3s,baz=156,slow=29,SNR=8.6						
KSRS	Korea Array	14.03	94	Pn	Pn	01 28 05.2	-4.9
	comp=Z,0.3nm,0.3s,baz=282,slow=14,SNR=3.3						
WMQ	Urumqi	17.30	291	eP	Pn	01 28 56.0	+3.1
MKAR	Makanchi Array	21.48	298	P	P	01 29 41.0	+1.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	21.48	298	P	P	01 29 41.0	+1.1
	comp=Z,2.2nm,0.7s,mb3.6,baz=96,slow=12,SNR=22						
KURK	Kurchatov	24.66	307	eP	P	01 30 11.9	-0.2
	comp=Z,4.3nm,1.0s,mb3.9						
KURK	Kurchatov	24.66	307	eP	P	01 30 11.9	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
AAK	Ala-Archa	26.94	288	P	P	01 30 32.4	-0.4
CHKZ	Chkalovo	30.12	311	P	P	01 31 00.5	-0.5
AKASG	Malin Array Be	55.41	310	P	P	01 34 24.6	-1.1
	comp=Z,0.1nm,0.3s,mb3.3,baz=52,slow=5.0,SNR=4.4						
YKA	Yellowknife Ar	71.98	20	P	P	01 36 12.4	-2.3
YKA	Yellowknife Ar	71.98	20	P	P	01 36 12.4	-2.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	Yellowknife Ar	71.98	20	P	P	01 36 12.4	-2.3
	comp=Z,0.6nm,0.8s,mb3.5,baz=326,slow=6.2,SNR=10						

ISCJB 14 01:40:47.4±1.0, 2726S±004×714W±02, h59^{km}±17^{km}, Error ellipse: s-maj=24.0km s-min=6.3km az=2.2
GUC 14 01:40:48.8±1.1, 2721S×7132W, h53^{km}±12^{km}, MD4.1, ML3.6
NEIC 14 01:40:48.8, 2721S×7132W, h53^{km}, MD4.1(GUC), After GUC.
ISC 14 01:40:48.5±1.0, 2727S±004×714W±02, h52^{km}±19^{km}, n10, σ0^{s}74/17, 5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	Caldera	0.53	68⇓	iP	Pn	01 40 59.8	-0.4
CDCH				i S	Sn	01 41 08.2	-0.4
CPCH	Copiapo	0.92	96⇓	iP	Pn	01 41 05.6	+0.4
CPCH				i S	Sn	01 41 17.6	+0.2
CPCH	Copiapo	0.92	96⇓	iP	Pn	01 41 05.6	+0.4
CPCH				i S	Sn	01 41 17.6	+0.2
CPCH				AML	AML	01 41 19.1	
	comp=E,10μm,0.1s						
VACH	Vallenar	1.41	157⇓	eP	Pn	01 41 11.5	-0.3
VACH				i S	Sn	01 41 26.9	-2.4
LCO	Las Campanas	1.83	161	ePn	Pn	01 41 18.1	+0.5
LCO				eSn	Sn	01 41 39.9	+0.3
CPN1	Cerro Paranal	2.77	19⇓	iP	Pn	01 41 31.1	+0.6
CPN1				i S	Sn	01 42 03.1	+0.4
CPN1				AML	AML	01 42 06.2	
	comp=E,82nm,0.4s						
TLL	Tololo Astrono	2.93	170	eP	Pn	01 41 33.1	+0.5
TLL				i S	Sn	01 42 07.4	+0.9
CEN1	Los Morros	4.01	16	i S	Sn	01 42 26.1	-6.9
NNA	Nana	16.05	340	Pn	Pn	01 44 30.1	-0.7
SDV	Santo Domingo	35.95	1	P	P	01 47 43.6	-0.5

MOS 14 01:45:18.5±2.0, 34.16N×2547E, h12^{km}, mb4.2/12, Error ellipse: s-maj=11.5km s-min=6.4km az=81.4
CSEM 14 01:45:23.9±0.1, 3434N×2574E, h47^{km}±1^{km}, mb4.1/5, Error ellipse: s-maj=3.7km s-min=1.5km az=50.0
ISCJB 14 01:45:24.4±0.3, 3436N±003×2576E±004, h54^{km}±5^{km}, mb3.9/16, Error ellipse: s-maj=6.8km s-min=3.5km az=137.4
HLW 14 01:45:25.4, 3446N×2587E, h21^{km}, Mb4.2
ATH 14 01:45:26.4, 3455N×2565E, h70^{km}±10^{km}
NEIC 14 01:45:26.5, 3453N×2565E, h43^{km}, mb4.2/2, MD3.9(ATH), After ATH.
IDC 14 01:45:30.3±1.7, 3464N×2555E, h72^{km}±10^{km}, mb3.6/12, mb1 3.6/16, mb1mx3.5/25, mbtmp3.5/16, MS3.4/2, Ms1 3.4/2, ms1mx2.7/30, Error ellipse: s-maj=24.0km s-min=16.0km az=164.0
ISC 14 01:45:26.1±0.3, 3439N±003×2570E±004, h47^{km}±5^{km}, n102, σ1^{s}05/107, mb3.9/16, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NPS	Neapolis	0.87	355	eP	Pn	01 45 41.5	-0.5
IDI	Anoyia	1.11	323	P	Pn	01 45 46.4	+1.1
	27nm,0.3s,baz=138,slow=17,SNR=80						
IDI				S	Sn	01 46 00.9	+1.4
	91nm,0.3s,baz=72,slow=20,SNR=14						
GVD	Gavdhos	1.40	289	eP	Pn	01 45 50.0	+0.8
GVD				eSn	Sn	01 46 05.0	-1.5
GVD	Gavdhos	1.40	289	eP	Pn	01 45 50.0	+0.8
GVD				eSn	Sn	01 46 05.0	-1.6
VAM	Vamos	1.60	310	eP	Pn	01 45 52.8	+0.9
KARP	Karpathos	1.66	46	eP	Pn	01 45 52.9	+0.1
SANT	Santorini	1.98	354	ePn	Pn	01 45 56.5	-0.6
SANT	Santorini	1.98	354	ePn	Pn	01 45 56.5	-0.7
APE	Apeiranthos	2.67	357	eP	Pn	01 46 07.4	+0.8
ARG	Arkhangelos	2.69	47	eP	Pn	01 46 09.2	+2.3
SLUM		2.92	188	P	Pn	01 46 10.9	+0.8
VLI	Veliai	3.23	317	eP	Pn	01 46 14.1	-0.2
HMAT	Matruh	3.49	160	P	Pn	01 46 18.1	+0.2
HMAT	Matruh	3.49	160	P	Pn	01 46 18.1	+0.2
ITM	Ithomi	4.14	313	eP	Pn	01 46 26.3	-0.5
LKR	Lokris	4.77	334	eP	Pn	01 46 35.3	-0.1
PRK	Paraskevi	4.87	5	eP	Pn	01 46 37.4	+0.7
HNAT	Natroun	6.32	137	P	Pn	01 46 56.4	-0.3
AANS		6.32	129	P	Pn	01 46 56.2	-0.5
FYM	Al Fayyum	6.52	135	P	Pn	01 46 58.8	-0.7
AYT	Al ‘Ayyat	6.58	134	P	Pn	01 47 00.1	-0.1
HSAF	As Saff	6.88	132	P	Pn	01 47 03.9	-0.5
GLL	Jalalah	7.00	132	P	Pn	01 47 05.8	-0.3
HBNS	Bani Suwayf	7.17	138	P	Pn	01 47 07.8	-0.7
AMAG	Maghara	7.36	118	P	Pn	01 47 10.2	-0.8
SUZ		7.56	125	P	Pn	01 47 13.2	-0.5
HFRF	Wahat Farafira	7.56	162	P	Pn	01 47 14.3	+0.6
ZAF		7.74	129	P	Pn	01 47 15.8	-0.3
ZNM		7.89	127	P	Pn	01 47 17.8	-0.3
MMAI	Mount Meron Ar	8.20	97	P	Pn	01 47 20.1	-2.4
	2.0nm,0.3s,baz=270,slow=11,SNR=18						
MMAI				S	Sn	01 48 52.0	-1.7
	9.4nm,0.3s,baz=218,slow=1.0,SNR=9.0						
BR131	Keskin Array S	8.28	48	Pn	Pn	01 47 22.5	-1.0
BRTR	Keskin Array B	8.28	48	P	Pn	01 47 25.1	+1.6
	0.2nm,0.3s,baz=221,slow=11,SNR=6.1						
HNKL	Nakhl	8.31	120	P	Pn	01 47 23.4	-0.5
GRB	Gharib	8.60	133	P	Pn	01 47 27.8	-0.1
ASUT		8.60	143	P	Pn	01 47 28.4	+0.4
TIP	Timpagrande	8.62	306	ePn	Pn	01 47 25.4	-2.7
TIP	Timpagrande	8.62	306	ePn	Pn	01 47 25.4	-2.7
EIL	Elat	9.15	118	P	Pn	01 47 36.5	+1.0
EIL				S	Sn	01 49 13.3	-3.9
EIL	Elat	9.15	118	P	Pn	01 47 36.5	+1.0
	1.0nm,0.3s,baz=287,slow=11,SNR=15						
EIL				S	Sn	01 49 13.3	-3.9
	4.1nm,0.3s,baz=294,slow=19,SNR=9.2						
EIL	Elat	9.15	118	P	Pn	01 47 36.5	+1.0
HKAT	Jabal Katrina	9.18	127	P	Pn	01 47 35.4	-0.5
HDK1	Dakhla	9.38	159	P	Pn	01 47 39.4	+0.7
HDHB	Dhahab	9.47	124	P	Pn	01 47 39.5	-0.4
ASF	Jabal al Asfar	9.63	100	P	Pn	01 47 43.4	+1.4
	0.4nm,0.3s,baz=166,slow=4.2,SNR=5.9						
VAE	Valguarnera	9.66	292	P	Pn	01 47 42.9	+0.5
	1.1nm,0.3s,baz=90,slow=6.1,SNR=5.0						
GTR	Jabal at Tayr	9.80	153	P	Pn	01 47 45.0	+0.5
HHRG	Al Ghardaqah	9.84	134	P	Pn	01 47 44.8	-0.1
HSFG		10.54	136	P	Pn	01 47 54.8	+0.3
MALT	Malatya	10.98	65	ePn	Pn	01 48 00.9	+0.4
MALT	Malatya	10.98	65	eP	Pn	01 48 00.9	+0.4
MLR	Muntele Rosu	11.09	1	LR	LR	01 52 35.0	
	comp=Z,122nm,20.9s,baz=148,slow=39						
HEDF	Idfu	11.31	143	P	Pn	01 48 06.0	+0.9
KIV	Kislovodsk	16.24	49	ePn	Pn	01 49 14.0	+3.2
	17nm,1.0s						
KIV	Kislovodsk	16.24	49	eP	Pn	01 49 15.4	+4.5
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
AKASG	Malin Array Be	16.50	8	P	Pn	01 49 13.8	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	16.50	8	P	Pn	01 49 13.8	-0.3
	comp=Z,2.4nm,0.3s,baz=201,slow=11,SNR=13						
GERES	GERESS Array B	16.97	332	P	Pn	01 49 18.3	-1.7
	comp=Z,0.2nm,0.3s,baz=145,slow=12,SNR=8.7						
WLF	Walferdange	20.97	323	eP	P	01 50 04.3	-0.7
WLF	Walferdange	20.97	323	eP	P	01 50 04.4	-0.7
OBN	Obninsk	22.06	17	eP	P	01 50 17.8	+1.2
OBN				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.0						
OBN	Obninsk	22.06	17	eP	P	01 50 17.8	+1.2
	comp=Z,9.0nm,1.3s,mb4.0						
ESDC	Sonseca Array	24.20	291	P	P	01 50 37.5	-0.6
	comp=Z,1.1nm,0.7s,mb3.4,baz=78,slow=9.8,SNR=4.2						
ESLA	Sonseca Array	24.20	291	eP	P	01 50 38.1	-0.1
ESLA	Sonseca Array	24.20	291	eP	P	01 50 38.1	-0.1
SFS	San Fernando	26.02	284	P	P	01 50 54.5	-0.2
SFS	San Fernando	26.02	284	P	P	01 50 54.5	-0.2
HFS	Hagfors	26.92	347	P	P	01 51 00.7	-1.9
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HFS				MLR	MLR		
	comp=Z,145nm,19.4s						
HFS	Hagfors	26.92	347	P	P	01 51 00.7	-1.8
	comp=Z,0.7nm,0.4s,mb3.5,baz=121,slow=11,SNR=4.9						
MTE	Manteigas	26.98	293	eP	P	01 51 04.0	+0.7
FINES	FINESS Array B	27.07	0	P	P	01 51 02.4	-1.4
FINES				PcP	PcP	01 54 25.1	+1.3
FINES	FINESS Array B	27.07	0	P	P	01 51 02.4	-1.5
FINES						01 54 25.1	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	27.07	0	P	P	01 51 02.4	-1.4
	comp=Z,0.9nm,0.6s,mb3.5,baz=162,slow=12,SNR=7.7						
FINES				PcP	PcP	01 54 25.1	+1.3
	comp=Z,1.2nm,0.8s,baz=191,slow=5.8,SNR=4.7						
KAF	Kangasniemi	27.74	1	ep	P	01 51 07.7	-2.2
NOA	NORSAR Array B	28.25	345	P	P	01 51 15.8	+1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	28.25	345	P	P	01 51 15.8	+1.4
	comp=Z,0.8nm,0.8s,mb3.4,baz=143,slow=6.7,SNR=3.0						
AKTK	Aktyubinsk	28.45	46	P	P	01 51 17.1	+0.8
AKTK	Aktyubinsk	28.45	46	P	P	01 51 17.1	+0.7
AKTO	Aktyubinsk	28.45	46	P	P	01 51 17.2	+0.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.9						
AKTO	Aktyubinsk	28.45	46	P	P	01 51 17.1	+0.8
	comp=Z,1.3nm,0.3s,mb4.0,baz=249,slow=6.3,SNR=9.7						
JOF	Joensuu	28.76	5	ep	P	01 51 16.3	-2.7
	comp=Z,0.7nm,0.4s,mb3.7						
JOF	Joensuu	28.76	5	eP	P	01 51 16.3	-2.7
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
EKA	Eskdalemuir Ar	28.92	325	P	P	01 51 19.2	-1.3
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKA	Eskdalemuir Ar	28.92	325	P	P	01 51 19.1	-1.3
	comp=Z,1.7nm,0.7s,mb3.9,baz=126,slow=9.6,SNR=4.5						
TORD	Torodi Ar. Bea	30.35	232	P	P	01 51 35.3	+1.8
	comp=Z,0.6nm,0.4s,mb3.7,baz=38,slow=6.7,SNR=6.2						
ARU	Arti	31.41	35	eP	P	01 51 42.5	+0.1
ARU	Arti	31.41	35	eP	P	01 51 42.6	+0.1
ARCES	ARCESS Array B	35.20	360	P	P	01 52 13.4	-1.8
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	35.20	360	P	P	01 52 13.4	-1.8
	comp=Z,0.9nm,0.5s,mb4.0,baz=183,slow=8.9,SNR=19						
CHKZ	Chkalovo	36.84	44	eP	P	01 52 31.0	+1.6
	comp=Z,1.6nm,0.4s,mb4.2						
CHKZ	Chkalovo	36.84	44	eP	P	01 52 31.0	+1.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
CHKZ	Chkalovo	36.84	44	eP	P	01 52 31.0	+1.5
	comp=Z,1.6nm,0.4s,mb4.2						
MKAR	Makanchi Array	43.83	56	P	P	01 53 29.2	+1.8
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	43.83	56	P	P	01 53 29.1	+1.8
	comp=Z,3.1nm,0.5s,mb4.3,baz=274,slow=7.1,SNR=26						
MKAR	Makanchi Array	43.83	56	P	P	01 53 29.1	+1.7
SONM	Songino Array	59.63	50	P	P	01 55 27.3	+2.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	59.63	50	P	P	01 55 27.3	+2.1
	comp=Z,0.5nm,0.4s,mb3.9,baz=281,slow=7.3,SNR=7.5						
BOD	Bodaibo	60.78	38	eP	P	01 55 32.9	0.0
BOD				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
BOD	Bodaibo	60.78	38	eP	P	01 55 32.9	0.0
	comp=Z,2.0nm,0.6s,mb4.4						
SCHQ	Schefferville	64.06	320	P	P	01 55 55.2	+0.3
SCHQ	Schefferville	64.06	320	P	P	01 55 55.2	+0.4
	comp=Z,1.1nm,0.6s,mb4.0,baz=58,slow=8.8,SNR=5.9						
YKA	Yellowknife Ar	78.31	342	P	P	01 57 21.2	+0.4
	comp=Z,0.5nm,0.4s,mb3.8,baz=32,slow=5.2,SNR=12						
YKA	Yellowknife Ar	78.31	342	P	P	01 57 21.3	+0.5

IDC 14 02:14:55.9±0.8, 4678N×15593E, h0^{km}, mb3.7/9, mb1 4.0/9, mb1mx3.8/21, mbtmp3.7/9, MS2.7/1, Ms1 2.7/1, ms1mx2.5/25, Error ellipse: s-maj=26.1km s-min=22.3km az=138.0
NEIC 14 02:14:57.9±0.8, 4678N×15593E, h10^{km}, mb4.2/7, Error ellipse: s-maj=20.2km s-min=16.6km az=141.0
ISCJB 14 02:14:59.2±0.7, 468N±0.1×1559E±0.1, h33^{km}, mb4.0/19, Error ellipse: s-maj=17.2km s-min=13.9km az=157.4
MOS 14 02:14:59.1±1.1, 4675N×15589E, h33^{km}, mb4.2/11, Error ellipse: s-maj=25.3km s-min=13.6km az=104.1
ISC 14 02:15:01.5±0.7, 468N±01×1560E±01, h35^{km}, n38, σ0^{s}99/37, mb4.0/19, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	9.76	259	LR	LR	02 20 35.3	
	comp=Z,48nm,20.5s,baz=1.0,slow=35						
BILL	Bilibino	21.97	10	eP	P	02 19 53.0	+1.1
BILL				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb3.9						
TIXI	Tiksi	28.02	342	eP	P	02 20 48.3	-0.4
	comp=Z,2.1nm,0.6s,mb3.9						
TIXI	Tiksi	28.02	342	eP	P	02 20 49.1	+0.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
SONM	Songino Array	33.16	290	P	P	02 21 32.7	-1.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	33.16	290	P	P	02 21 32.7	-1.6
	comp=Z,0.5nm,0.8s,mb3.5,baz=66,slow=9.1,SNR=4.9						
INK	Inuvik	40.58	33	eP	P	02 22 36.0	-1.1
MKAR	Makanchi Array	48.66	299	P	P	02 23 40.9	-0.8
MKAR				P		02 23 44.6	
MKAR	Makanchi Array	48.66	299	P	P	02 23 40.9	-0.8
	comp=Z,0.4nm,0.4s,mb3.8,baz=67,slow=6.8,SNR=5.5						
KURK	Kurchatov	48.97	305	eP	P	02 23 43.0	-1.1
	comp=Z,3.7nm,0.7s,mb4.5						
KURK				P		02 23 43.7	
KURK	Kurchatov	48.97	305	eP	P	02 23 43.0	-1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
YKA	Yellowknife Ar	49.73	37	P	P	02 23 48.9	-0.8
YKA				P		02 23 52.2	
YKA	Yellowknife Ar	49.73	37	P	P	02 23 48.9	-0.8
	comp=Z,0.1nm,0.4s,mb3.2,baz=292,slow=7.3,SNR=4.1						
CHKZ	Chkalovo	51.90	311	eP	P	02 24 04.9	-1.3
	comp=Z,3.0nm,0.7s,mb4.3						
CHKZ	Chkalovo	51.90	311	eP	P	02 24 04.9	-1.2
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
BRVK	Borovoye	52.38	311	eP	P	02 24 09.5	-0.2
	comp=Z,2.0nm,0.6s,mb4.2						
BRVK	Borovoye	52.38	311	eP	P	02 24 09.5	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
TKM2	Tokmak 2	54.73	298	eP	P	02 24 29.2	+2.1
	comp=Z,1.4nm,0.6s,mb4.2						
TKM2	Tokmak 2	54.73	298	eP	P	02 24 29.3	+2.2
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AAK	Ala-Archa	55.56	298	eP	P	02 24 33.9	+0.7
	comp=Z,1.1nm,0.7s,mb4.0						
AAK	Ala-Archa	55.56	298	eP	P	02 24 33.9	+0.8
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
EKS2	Erkin-Say	55.98	298	eP	P	02 24 36.5	+0.3
	comp=Z,1.8nm,0.8s,mb4.2						
ARCES	ARCESS Array B	58.46	342	P	P	02 24 55.0	+1.8
ARCES	ARCESS Array B	58.46	342	P	P	02 24 53.5	+0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	58.46	342	P	P	02 24 53.5	+0.3
	comp=Z,1.3nm,0.8s,mb4.0,baz=31,slow=9.9,SNR=3.6						
PDAR	Pinedale Array	63.14	55	P	P	02 25 25.4	-0.1
	comp=Z,0.5nm,0.9s,mb3.6,baz=345,slow=3.5,SNR=3.9						
FINES	FINESS Array B	64.83	336	P	P	02 25 39.2	+3.0
FINES	FINESS Array B	64.83	336	P	P	02 25 36.6	+0.4
	comp=Z,0.4nm,0.3s,mb3.9,baz=38,slow=8.2,SNR=6.6						
OBN	Obninsk	66.38	327	eP	P	02 25 47.5	+1.2
OBN				eS	S	02 34 37.8	+4.4
OBN				eSS	SS	02 38 51.2	+2.0
OBN				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
WRA	Warramunga Arr	69.21	202	P	P	02 26 06.0	+1.5
WRA	Warramunga Arr	69.21	202	P	P	02 26 04.4	-0.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WRA	Warramunga Arr	69.21	202	P	P	02 26 04.4	-0.1
	comp=Z,0.6nm,0.9s,mb3.5,baz=22,slow=6.5,SNR=5.4						
ASAR	Alice Springs	72.89	201	P	P	02 26 26.8	+0.1
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	72.89	201	P	P	02 26 26.9	+0.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=9.0,slow=6.6,SNR=6.4						
TXAR	Lajitas Array	75.77	62	P	P	02 26 43.6	0.0
TXAR	Lajitas Array	75.77	62	P	P	02 26 43.7	+0.1
	comp=Z,1.5nm,0.8s,mb4.0,baz=300,slow=4.4,SNR=21						
KWP	Kalwaria	75.78	331	eP	P	02 26 42.8	-0.6
	comp=Z,15nm,0.8s,mb5.0						
KWP	Kalwaria	75.78	331	eP	P	02 26 42.8	-0.6
KWP				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						

MOS 14 02:36:15.3±1.0, 4229N×4746E, h9^{km}, mb3.6/1, Error ellipse: s-maj=48.7km s-min=17.4km az=107.4, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URKR	Urkarakh	0.18	135	i PG	Pg	02 36 21.0	+1.9
URKR				i S	Sg	02 36 26.8	+5.2
MNSR	Manas	0.45	25	ePG	Pg	02 36 25.0	+0.9
MNSR				eS	Sg	02 36 31.5	+1.4
KRNR	Karanay	0.67	323	ePG	Pg	02 36 29.5	+1.2
KRNR				i S	Sg	02 36 41.5	+4.4
AKT	Akhty	0.84	166	i PG	Pg	02 36 31.0	-0.4
AKT				eS	Sg	02 36 44.0	+1.7
AKT				pmax	pmax		
	comp=Z,32nm,0.2s						
KSMR	Kasumkent	0.85	144	ePG	Pg	02 36 33.0	+1.3
KSMR				i S	Sg	02 36 46.0	+3.3

NEIC 14 03:19:17.4, 1641N×9905W, h16^{km}, MD3.8(MEX), After MEX.
MEX 14 03:19:17.2±0.6, 1641N×9906W, h20^{km}±8^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.89	91	eP	Pb	03 19 31.1	-2.9
PNIG				i S	Sb	03 19 42.2	-3.3
PNIG	Pinotepa	0.89	91	eP	Pb	03 19 31.1	-2.9
PNIG				i S	Sb	03 19 42.5	-3.0
ACX	Acapulco	0.94	299	i P	Pb	03 19 29.0	-5.8
ACX	Acapulco	0.94	299	i P	Pb	03 19 30.0	-4.8
CAIG	El Cayaco	1.32	299	i P	Pn	03 19 37.6	-2.9
CAIG				i S	Sn	03 19 53.3	-4.3
MEIG	Mezcala	1.60	340	eP	Pn	03 19 40.7	-3.6
MEIG				i S	Sn	03 20 00.1	-4.3
PLIG	Platanillo	2.02	348	eP	Pn	03 19 48.3	-1.8
PLIG				i S	Sn	03 20 10.6	-4.1
TPIG	Tehuac#an	2.57	39	eP	Pn	03 19 56.4	-1.3
TPIG				i S	Sn	03 20 25.7	-2.7
PPM	Popocatepetl	2.67	9	eP	Pn	03 19 57.1	-2.0
PPM				i S	Sn	03 20 27.8	-3.2
SZVM	Salazar	2.91	354	i P	Pn	03 19 59.8	-2.6
SZVM				i S	Sn	03 20 35.3	-1.6
CMIG	Matias Romero	4.05	80	eP	Pn	03 20 16.4	-1.7
CMIG				i S	Sn	03 21 00.5	-4.6

IDC 14 03:31:03.7±2.0, 328S×12848E, h0^{km}, mb3.7/2, mb1 4.1/3, mb1mx3.7/14, mbtmp3.9/3, ML4.1/1, Error ellipse: s-maj=137.2km s-min=26.9km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.52	161	P	Pn	03 35 10.4	+0.9
	0.7nm,0.3s,baz=340,slow=11,SNR=66						
ASAR	Alice Springs	20.93	166	P	P	03 35 47.0	-1.1
	1.0nm,0.3s,baz=345,slow=11,SNR=15						
MKAR	Makanchi Array	64.31	327	P	P	03 41 41.5	+0.5
	0.4nm,0.3s,baz=123,slow=7.8,SNR=6.5						

ISCJB 14 03:31:33.9±2.2, 2172N±007×1203E±0.1, h10^{km}±14^{km}, mb3.6/9, MS3.5/3, Error ellipse: s-maj=17.9km

s-min=11.4km az=161.8

*IDC **14** 03:31:33.9±1.0, 21.75N×120.48E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.6/6, MS3.4/5, Ms1 3.4/5, ms1mx3.1/29, Error ellipse: s-maj=74.2km s-min=20.1km az=68.0*

*BJI **14** 03:31:35.2, 21.63N×120.28E, h10km, mB4.5, mb4.1, ML3.7*

*NEIC **14** 03:31:37.0±6.6, 21.75N×120.47E, h20km±48km, mb3.7/3, Error ellipse: s-maj=31.1km s-min=11.7km az=66.0*

ISC 14 03:31:36.7±2.3, **21.75N**±0.08×**120.3E**±0.1, **h17**km±15km, **n17**, σ**0.84**/16, **mb3.6**/9, **MS3.5**/3, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**2.68**	**26**	*e*Pn	**Pn**	**03 32 18.4**	**-0.6**
NACB				*e*Pg	**Pg**	**03 32 28.1**	**0.0**
YHNB	**Yeheng**	**3.06**	**18**	*e*Pn	**Pn**	**03 32 24.1**	**-0.2**
QZH	**Quanzhou**	**3.55**	**334**	P	**Pn**	**03 32 32.3**	**+1.3**
QZH				S	**Sn**	**03 33 11.3**	**-1.3**
QZH				Smax			
	comp=N,110nm,0.8s						
QZH				Smax			
	comp=E,270nm,1.2s						
GZH	**Guangzhou**	**6.59**	**283**	P	**Pn**	**03 33 11.5**	**-1.3**
GZH				S	**Sn**	**03 34 21.1**	**-6.5**
GZH				Smax			
	comp=N,84nm,0.9s						
GZH				Smax			
	comp=E,61nm,0.7s						
JNU	**Nakatsue**	**14.69**	**37**	LR	LR	03 40 42.3	
	comp=E,60nm,19.9s,baz=14,slow=38						
KSRS	**Korea Array**	**16.97**	**21**	LR	LR	03 42 57.6	
	comp=E,77nm,18.8s,baz=205,slow=40						
GUMO	**Guam**	**24.73**	**105**	LR	LR	03 44 21.1	
	comp=E,75nm,19.2s,MS3.2,baz=310,slow=31						
ULN	**Ulaanbaatar**	**28.15**	**341**	*e*P	**P**	**03 37 27.2**	**-0.7**
	comp=E,0.7nm,0.6s,mb3.5						
SONM	**Songino Array**	**28.33**	**340**	P	**P**	**03 37 29.6**	**+0.2**
	comp=E,0.2nm,0.6s,mb2.9,baz=134,slow=6.2,SNR=3.7						
SONM				LR	LR	03 50 48.0	
	comp=E,66nm,18.6s,MS3.3,baz=169,slow=41						
MKAR	**Makanchi Array**	**39.57**	**318**	P	**P**	**03 39 08.4**	**+1.5**
	comp=E,0.2nm,0.3s,mb3.3,baz=106,slow=8.9,SNR=4.9						
KURK	**Kurchatov**	**43.48**	**322**	*e*P	**P**	**03 39 39.9**	**+1.1**
	comp=E,0.4nm,0.4s,mb3.5						
WRA	**Warramunga Arr**	**43.65**	**161**	P	**P**	**03 39 39.7**	**-0.8**
	comp=E,1.5nm,0.5s,mb4.0,baz=343,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**47.04**	**163**	P	**P**	**03 40 07.1**	**-0.3**
	comp=E,0.3nm,0.3s,mb3.7,baz=343,slow=6.9,SNR=7.3						
BRVK	**Borovoye**	**49.14**	**322**	*e*P	**P**	**03 40 24.1**	**+0.8**
	comp=E,1.4nm,0.6s,mb4.2						
NOA	**NORSAR Array B**	**79.99**	**332**	LR	LR	04 23 21.9	
	comp=E,70nm,19.4s,MS4.0,baz=0.0,slow=39						
GERES	**GERESS Array B**	**84.21**	**320**	P	**P**	**03 44 07.3**	**+0.1**
	comp=E,0.5nm,0.7s,mb3.8,baz=64,slow=3.1,SNR=5.1						
YKA	**Yellowknife Ar**	**85.51**	**22**	P	**P**	**03 44 13.6**	**+0.2**
	comp=E,0.1nm,0.3s,mb3.5,baz=301,slow=5.8,SNR=5.1						

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*IDC **14** 03:35:26.7±1.6, 3.55S×152.38E, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.9/15, mbtmp4.1/5, ML3.7/1, Error ellipse: s-maj=34.4km s-min=32.7km az=153.0*

*NEIC **14** 03:35:27.5±0.9, 3.40S×152.45E, h10km, mb4.4/4, Error ellipse: s-maj=18.2km s-min=16.8km az=99.0*

*ISCJB **14** 03:35:28.5±1.5, 3.4S±0.2×152.5E±0.2, h33km, mb4.1/7, Error ellipse: s-maj=26.3km s-min=22.4km az=35.7*

ISC 14 03:35:30.0±1.6, **3.4S**±0.2×**152.5E**±0.2, **h35**km, **n12**, σ**0.22**/10, **mb4.1**/7, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.70**	**200**	P	**Pn**	**03 39 34.1**	**+0.2**
	0.2nm,0.3s,baz=25,slow=12,SNR=4.2						
KAKA	**Kakadu**	**21.91**	**244**	*e*P	**P**	**03 40 20.8**	**+0.3**
	3.8nm,0.6s,mb4.0						
DZM	**Mont Dzumac**	**22.99**	**145**	P	**P**	**03 40 31.8**	**0.0**
	2.9nm,0.4s,mb4.0,baz=225,slow=10.0,SNR=9.0						
WB2	**Warramunga Arr**	**24.19**	**226**	*e*P	**P**	**03 40 43.3**	**-0.1**
WRA	**Warramunga Arr**	**24.20**	**226**	P	**P**	**03 40 43.5**	**+0.1**
	3.4nm,0.5s,mb4.1,baz=49,slow=9.8,SNR=50						
ASAR	**Alice Springs**	**27.03**	**220**	P	**P**	**03 41 09.0**	**-0.1**
	0.2nm,0.3s,mb3.1,baz=48,slow=8.2,SNR=4.1						
FITZ	**Fitzroy Crossi**	**30.11**	**239**	*e*P	**P**	**03 41 36.4**	**-0.2**
	4.9nm,0.3s,mb4.7						
FITZ	**Fitzroy Crossi**	**30.11**	**239**	P	**P**	**03 41 36.4**	**-0.2**
	2.8nm,0.3s,mb4.4,baz=50,slow=10,SNR=47						
MBWA	**Marble Bar**	**36.45**	**238**	*e*P	**P**	**03 42 31.4**	**-0.4**
	3.7nm,0.4s,mb4.7						
AAK	**Ala-Archa**	**83.48**	**313**	*e*P	**P**	**03 47 54.5**	**+0.2**
	0.9nm,0.4s,mb4.2						
GERES	**GERESS Array B**	**122.69**	**329**	PKP	PKPdf	03 54 25.0	+2.8
	0.3nm,0.6s,baz=34,slow=0.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**149.57**	**290**	PKPbc	PKPbc	03 55 18.4	+1.5
	0.8nm,0.5s,baz=67,slow=2.1,SNR=10						

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*IDC **14** 03:39:58.2±0.9, 35.90N×68.97E, h0km, mb3.9/10, mb1 4.0/12, mb1mx3.9/24, mbtmp3.9/12, ML3.5/2, MS3.5/3, Ms1 3.5/3, ms1mx3.0/27, Error ellipse: s-maj=27.3km s-min=17.8km az=46.0*

*MOS **14** 03:40:04.6±0.7, 36.40N×68.86E, h33km, mb4.4/21, Error ellipse: s-maj=11.0km s-min=6.9km az=116.6*

*ISCJB **14** 03:40:05.7±0.7, 36.29N±0.02×68.92E±0.05, h55km±8km, mb4.2/25, MS3.5/3, Error ellipse: s-maj=7.0km s-min=3.7km az=179.6*

*NEIC **14** 03:40:06.5±0.7, 36.18N×69.10E, h56km±8km, mb4.4/12, Error ellipse: s-maj=9.0km s-min=6.7km az=110.0*

*BJI **14** 03:40:08.0, 36.29N×69.14E, h44km, mb4.3, ML4.1*

*NNC **14** 03:40:10.1±5.2, 36.51N×68.64E, h177km±44km, mb3.0, mpv3.9, Error ellipse: s-maj=42.1km s-min=35.4km az=32.0*

ISC 14 03:40:08.0±0.6, **36.24N**±0.02×**68.91E**±0.06, **h59**km±8km, **n119**, σ**1.13**/134, **mb4.1**/25, **MS3.5**/3, **5C-3D**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.70**	**176**	*e*Pn	**Pn**	**03 40 32.8**	**-2.6**
KBL				*e*Sn	**Sn**	**03 40 54.1**	**-1.9**
CEP	**Cherat**	**3.44**	**134**	⇑P	**Pn**	**03 40 59.9**	**+0.8**
CEP				S	**Sn**	**03 41 40.0**	**+1.3**
THW	**Thamme Wali**	**4.16**	**145**	P	**Pn**	**03 41 10.0**	**+1.1**
SBDP	**Sheikh Budin**	**4.23**	**158**	P	**Pn**	**03 41 09.2**	**-0.8**
CHCP	**Chirah Chowk**	**4.41**	**125**	P	**Pn**	**03 41 12.7**	**+0.4**
KSH	**Kashi**	**6.47**	**58**	*e*P	**Pn**	**03 41 42.4**	**+1.9**
KSH				*e*S	**Sn**	**03 42 56.8**	**+3.9**
KSH				Smax			
	comp=N,194nm,0.5s						
KSH				Smax			
	comp=E,307nm,0.7s						
THN	**Thein Dam**	**6.79**	**122**	*e*P	**Pn**	**03 41 49.0**	**+4.1**
THN				*e*x	x	03 43 40.1	
DLH	**Dalhousie**	**6.90**	**120**	*e*x	x	03 42 11.0	
DLH				*e*S	**Sn**	**03 43 02.0**	**-1.5**
AML	**Almayashu**	**6.95**	**31**	*e*Pn	**Pn**	**03 41 47.0**	**-0.1**
	comp=E,25nm,0.5s						
AML				*e*Sn	**Sn**	**03 43 05.1**	**+0.4**
AML	**Almayashu**	**6.95**	**31**	P	**Pn**	**03 41 47.3**	**+0.2**
	SNR=18						
KK31	**Karatay Array**	**6.96**	**10**	P	**Pn**	**03 41 46.5**	**-0.8**
	comp=E,1.5nm,0.2s,baz=200,slow=14,SNR=93						
KK31				⇓S	**Sn**	**03 43 04.8**	**-0.1**
	comp=E,4.1nm,0.3s,baz=194,slow=22,SNR=6.0						
UCH	**Uchtor**	**7.39**	**34**	*e*Pn	**Pn**	**03 41 52.4**	**-0.7**
UCH				*e*Sn	**Sn**	**03 43 14.7**	**-0.7**
UCH	**Uchtor**	**7.39**	**34**	P	**Pn**	**03 41 53.2**	**+0.1**
	SNR=31						
EKS2	**Erkin-Say**	**7.43**	**29**	*e*Pn	**Pn**	**03 41 53.6**	**0.0**
	comp=E,8.2nm,0.7s						
EKS2				*e*Sn	**Sn**	**03 43 17.1**	**+0.6**
EKS2	**Erkin-Say**	**7.43**	**29**	P	**Pn**	**03 41 54.7**	**+1.1**
	SNR=12						
KZA	**Kyzart**	**7.62**	**38**	P	**Pn**	**03 41 56.9**	**+0.6**
	SNR=12						
AAK	**Ala-Archa**	**7.70**	**32**	*e*Pn	**Pn**	**03 41 55.7**	**-1.7**
AAK				*e*Sn	**Sn**	**03 43 23.7**	**+0.6**
AAK	**Ala-Archa**	**7.70**	**32**	P	**Pn**	**03 41 57.3**	**-0.1**
	SNR=16						
KBK	**Karagaybulak**	**7.92**	**34**	P	**Pn**	**03 42 02.6**	**+2.2**
	SNR=7.1						
CHMS	**Chumysh**	**8.11**	**32**	P	**Sn**	**03 43 36.1**	**+3.0**
	SNR=7.9						
USP	**Ospenovka**	**8.23**	**30**	P	**Pn**	**03 42 03.8**	**-0.7**
	SNR=11						
ULHL	**Ulahol**	**8.26**	**41**	P	**Pn**	**03 42 04.8**	**-0.2**
	SNR=7.5						
TKM2	**Tokmak 2**	**8.43**	**36**	⇑P	**Pn**	**03 42 06.2**	**-1.1**
	comp=E,5.5nm,0.6s						
TKM2				⇑S	**Sn**	**03 43 42.2**	**+1.3**
	comp=E,21nm,0.9s						
TKM2	**Tokmak 2**	**8.43**	**36**	*e*P	**Pn**	**03 42 05.7**	**-1.6**
TKM2	**Tokmak 2**	**8.43**	**36**	P	**Pn**	**03 42 06.3**	**-1.0**
	SNR=7.8						
KHET	**Khetri**	**10.02**	**142**	*e*P	**Pn**	**03 42 30.6**	**+1.5**
KHET				AMb	AMB	03 42 32.5	
	comp=Z,1.8nm,0.7s						
KHET				*e*S	**Sn**	**03 44 10.4**	**-10**
NDI	**New Delhi**	**10.29**	**135**	*e*P	**Pn**	**03 42 35.0**	**+2.1**
NDI				*e*S	**Sn**	**03 44 18.0**	**-8.7**
KUDL	**Kundal**	**10.31**	**139**	*e*P	**Pn**	**03 42 33.9**	**+0.8**
KUDL				AMb	AMB	03 42 37.1	
	comp=Z,6.6nm,0.7s						
KUDL				*e*S	**Sn**	**03 44 17.4**	**-10**
JOSI	**Joshimath**	**10.55**	**119**	*e*P	**Pn**	**03 42 37.7**	**+1.3**
JOSI				*e*S	**Sn**	**03 44 24.6**	**-8.3**
SONA	**Sohna**	**10.55**	**137**	*e*P	**Pn**	**03 42 37.3**	**+0.9**
SONA				AMb	AMB	03 42 44.3	
	comp=Z,10.0nm,0.7s						
MK31	**Makanchi Array**	**14.52**	**39**	P	**Pn**	**03 43 27.1**	**-3.0**
	comp=Z,2.7nm,0.6s,baz=228,slow=13,SNR=5.2						
MKAR	**Makanchi Array**	**14.52**	**39**	Pn	**Pn**	**03 43 27.4**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=8.7						
AB31	**Akbulak array**	**14.56**	**336**	P	**Pn**	**03 43 25.9**	**-4.6**
	comp=Z,2.9nm,0.4s,baz=155,slow=12,SNR=115						
AB31				⇓S	**Sn**	**03 45 58.6**	**-12**
	comp=Z,1.8nm,0.6s,baz=158,slow=23,SNR=4.5						
GKN	**Gorkha**	**15.64**	**117**	*e*P	**Pn**	**03 43 45.9**	**+1.3**
	comp=Z,17nm,0.4s						
KURK	**Kurchatov**	**16.07**	**23**	*e*Pn	**Pn**	**03 43 48.0**	**-1.9**
AKTK	**Aktyubinsk**	**16.22**	**334**	Pn	**Pn**	**03 43 49.6**	**-2.2**
AKTK				Sn	**Sn**	**03 46 46.7**	**-4.0**
AKTO	**Aktyubinsk**	**16.22**	**334**	P	**Pn**	**03 43 49.7**	**-2.1**
AKTO						03 46 46.7	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.22**	**334**	Pn	**Pn**	**03 43 49.6**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=134,slow=13,SNR=11						
AKTO				Sn	**Sn**	**03 46 46.7**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=209,slow=19,SNR=5.8						
KKN	**Kakani**	**16.22**	**117**	*e*P	**Pn**	**03 43 52.2**	**+0.2**
	comp=Z,26nm,0.7s						
BVA0	**Borovoye Array**	**16.81**	**3**	⇑P	**Pn**	**03 43 53.5**	**-5.7**
	comp=Z,0.9nm,1.3s,baz=0.0,slow=0.1,SNR=9.3						
BVA0				⇓S	**S**	**03 46 54.3**	**-18**
	comp=Z,0.8nm,1.0s						
JIRN	**Jiri**	**16.96**	**115**	*e*P	**Pn**	**03 43 59.7**	**-1.5**
	comp=Z,25nm,0.5s						
CHKZ	**Chkalovo**	**17.47**	**3**	⇑P	**Pn**	**03 43 59.6**	**-7.7**
	comp=Z,2.5nm,1.1s						
CHKZ	**Chkalovo**	**17.47**	**3**	*e*Pn	**Pn**	**03 44 04.9**	**-2.4**
	comp=Z,0.8nm,0.4s						
CHKZ	**Chkalovo**	**17.47**	**3**	*e*P	**Pn**	**03 44 04.9**	**-2.4**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	**Taplejung**	**18.25**	**114**	*e*P	**Pn**	**03 44 15.3**	**-1.7**
	comp=Z,23nm,0.8s						
ODAN	**Odare**	**18.29**	**116**	*e*P	**Pn**	**03 44 16.0**	**-1.5**
	comp=Z,17nm,0.6s						
NVS	**Novosibirsk**	**21.05**	**23**	*i* P	**P**	**03 44 46.1**	**-0.7**
NVS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.2						
NVS				pmax	pmax		
	comp=N,6.0nm,1.1s						
MALT	**Malatya**	**24.30**	**284**	*e*P	**P**	**03 45 21.5**	**+1.8**
	comp=N,2.2nm,0.8s,mb3.6						
MALT	**Malatya**	**24.30**	**284**	*e*P	**P**	**03 45 21.5**	**+1.8**
MALT				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
OBN	**Obninsk**	**29.05**	**321**	*e*P	**P**	**03 46 11.6**	**+9.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**29.87**	**55**	LR	LR	04 00 00.5	
	comp=Z,107nm,19.9s,MS3.5,baz=216,slow=40						
AKASG	**Malin Array Be**	**31.80**	**310**	P	**P**	**03 46 27.1**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**31.80**	**310**	P	**P**	**03 46 27.1**	**+0.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=88,slow=6.9,SNR=4.7						
JOF	**Joensuu**	**35.27**	**331**	*e*p	**P**	**03 46 55.9**	**-0.7**
	comp=Z,2.9nm,0.5s,mb4.5						
JOF	**Joensuu**	**35.27**	**331**	*e*P	**P**	**03 46 55.9**	**-0.7**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**36.77**	**327**	P	**P**	**03 47 10.0**	**+0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**36.77**	**327**	P	**P**	**03 47 10.0**	**+0.6**
	comp=Z,1.1nm,0.6s,mb3.9,baz=119,slow=11,SNR=6.3						
KAF	**Kangasniemi**	**36.94**	**328**	*e*p	**P**	**03 47 10.6**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.0,baz=113,slow=8.5						
KAF	**Kangasniemi**	**36.94**	**328**	*e*P	**P**	**03 47 10.6**	**-0.3**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
ARCES	**ARCESS Array B**	**40.75**	**338**	P	**P**	**03 47 43.3**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	**40.75**	**338**	P	**P**	**03 47 43.3**	**+0.6**
	comp=Z,0.8nm,0.5s,mb3.6,baz=113,slow=9.6,SNR=13						
NB2	**NORSAR Subarra**	**43.58**	**323**	P	**P**	**03 48 05.5**	**-0.2**
	comp=Z,4.0nm,1.0s,mb4.1,baz=98,slow=8.6						
NB2	**NORSAR Subarra**	**43.58**	**323**	P	**P**	**03 48 05.5**	**-0.2**
NB2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
NOA	**NORSAR Array B**	**43.58**	**323**	P	**P**	**03 48 05.4**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,60nm,19.2s						
NOA	**NORSAR Array B**	**43.58**	**323**	P	**P**	**03 48 05.4**	**-0.3**
	comp=Z,2.4nm,0.9s,mb3.9,baz=98,slow=8.0,SNR=4.3						
NOA				LR	LR	04 08 50.4	
	comp=Z,60nm,19.2s,MS3.5,baz=285,slow=40						
PGF	**Pioggiola**	**45.89**	**297**	*e*P	**P**	**03 48 24.3**	**-0.1**
	comp=Z,11nm,0.8s,mb4.5						
PGF	**Pioggiola**	**45.89**	**297**	*e*P	**P**	**03 48 24.3**	**-0.1**
	comp=Z,5.7nm,0.8s,mb4.5						
PGF	**Pioggiola**	**45.89**	**297**	*e*P	**P**	**03 48 24.3**	**-0.1**
PGF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
CDF	**Champ du Feu**	**45.99**	**305**	*e*P	**P**	**03 48 25.5**	**+0.4**
KSRS	**Korea Array**	**46.55**	**70**	LR	LR	04 10 24.4	
	comp=Z,36nm,18.5s,MS3.4,baz=330,slow=39						
HAU	**Haudompre**	**46.66**	**305**	*e*P	**P**	**03 48 30.6**	**+0.2**
LPG	**La Plagne**	**46.85**	**302**	*e*P	**P**	**03 48 32.8**	**+0.9**
	comp=Z,4.8nm,0.8s,mb4.2						
LPG	**La Plagne**	**46.85**	**302**	*e*P	**P**	**03 48 32.8**	**+0.9**
	comp=Z,2.4nm,0.8s,mb4.2						
LPG	**La Plagne**	**46.85**	**302**	*e*P	**P**	**03 48 32.8**	**+0.9**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
LPL	**La Plagne**	**46.86**	**302**	*e*P	**P**	**03 48 32.8**	**+0.8**
MBDF	**Montbardon**	**46.99**	**300**	*e*P	**P**	**03 48 33.0**	**0.0**
	comp=Z,5.3nm,0.6s,mb4.3						
MBDF	**Montbardon**	**46.99**	**300**	*e*P	**P**	**03 48 33.0**	**0.0**
	comp=Z,2.7nm,0.6s,mb4.3						
MBDF	**Montbardon**	**46.99**	**300**	*e*P	**P**	**03 48 33.0**	**0.0**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
CABF	**La Chapelle**	**47.09**	**303**	*e*P	**P**	**03 48 34.2**	**+0.5**
BAIF	**Baives**	**47.73**	**308**	*e*P	**P**	**03 48 39.0**	**+0.4**
	comp=Z,7.8nm,0.8s,mb4.5						
BAIF	**Baives**	**47.73**	**308**	*e*P	**P**	**03 48 39.0**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.5						
BAIF	**Baives**	**47.73**	**308**	*e*P	**P**	**03 48 39.0**	**+0.4**
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
VIVF	**Saint-Julien-l**	**48.42**	**301**	*e*P	**P**	**03 48 44.6**	**+0.5**
LOR	**Lormes**	**48.45**	**304**	*e*P	**P**	**03 48 44.9**	**+0.6**
SMF	**Signal de Mont**	**48.60**	**304**	*e*P	**P**	**03 48 45.7**	**+0.3**
	comp=Z,9.2nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**48.60**	**304**	*e*P	**P**	**03 48 45.7**	**+0.3**
	comp=Z,4.6nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**48.60**	**304**	*e*P	**P**	**03 48 45.7**	**+0.3**
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
SSF	**Saint Saulge**	**48.73**	**304**	*e*P	**P**	**03 48 46.9**	**+0.5**
AVF	**Avril sur Loir**	**48.89**	**304**	*e*P	**P**	**03 48 47.9**	**+0.2**
	comp=Z,8.8nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**48.89**	**304**	*e*P	**P**	**03 48 47.9**	**+0.2**
	comp=Z,4.4nm,0.8s,mb4.5						
AVF	**Avril sur Loir**	**48.89**	**304**	*e*P	**P**	**03 48 47.9**	**+0.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
LASF	**Ste Croix**	**49.18**	**300**	*e*P	**P**	**03 48 50.5**	**+0.6**
	comp=Z,10nm,0.9s,mb4.5						
HYF	**Humbligny**	**49.27**	**305**	*e*P	**P**	**03 48 51.2**	**+0.7**
BGF	**Bois d'Agland**	**49.28**	**304**	*e*P	**P**	**03 48 50.9**	**+0.2**
TCF	**Toulx Ste Croi**	**49.77**	**303**	*e*P	**P**	**03 48 55.1**	**+0.7**
CAF	**Calviac**	**50.20**	**302**	*e*P	**P**	**03 48 58.5**	**+0.8**
	comp=Z,10nm,1.0s,mb4.5						
CAF	**Calviac**	**50.20**	**302**	*e*P	**P**	**03 48 58.5**	**+0.8**
	comp=Z,5.2nm,1.0s,mb4.5						
CAF	**Calviac**	**50.20**	**302**	*e*P	**P**	**03 48 58.5**	**+0.8**
CAF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
MTLF	**Montolieu**	**50.52**	**300**	*e*P	**P**	**03 49 00.4**	**+0.4**
	comp=Z,5.2nm,0.8s,mb4.2						
MTLF	**Montolieu**	**50.52**	**300**	*e*P	**P**	**03 49 00.4**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.2						
MTLF	**Montolieu**	**50.52**	**300**	*e*P	**P**	**03 49 00.4**	**+0.4**
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LDF	**La Druitiere**	**50.79**	**307**	*e*P	**P**	**03 49 02.0**	**0.0**
FLN	**La Foliniere**	**50.98**	**307**	*e*P	**P**	**03 49 03.4**	**-0.1**
LFF	**La Frestale**	**51.11**	**302**	*e*P	**P**	**03 49 05.2**	**+0.7**
EKA	**Eskdalemuir Ar**	**51.30**	**316**	P	**P**	**03 49 05.7**	**0.0**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**51.30**	**316**	P	**P**	**03 49 05.7**	**0.0**
	comp=Z,1.8nm,0.8s,mb4.0,baz=90,slow=9.3,SNR=5.7						
EPF	**Esparros**	**51.92**	**300**	*e*P	**P**	**03 49 09.8**	**-0.8**
ETSF	**Etsaut**	**52.59**	**300**	*e*P	**P**	**03 49 16.1**	**+0.6**
	comp=Z,4.0nm,0.6s,mb4.2						
ETSF	**Etsaut**	**52.59**	**300**	*e*P	**P**	**03 49 16.1**	**+0.6**
	comp=Z,2.0nm,0.6s,mb4.2						
ETSF	**Etsaut**	**52.59**	**300**	*e*P	**P**	**03 49 16.1**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ROSF	**Rostrenen**	**52.88**	**307**	*e*P	**P**	**03 49 17.8**	**+0.2**
ESDC	**Sonseca Array**	**56.08**	**297**	P	**P**	**03 49 40.7**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.0,baz=58,slow=8.1,SNR=6.4						
TORD	**Torodi Ar. Bea**	**64.03**	**267**	P	**P**	**03 50 33.9**	**-1.8**
	comp=Z,1.4nm,0.6s,mb4.2,baz=45,slow=5.9,SNR=6.6						
YKA	**Yellowknife Ar**	**81.56**	**2**	P	**P**	**03 52 18.6**	**-0.2**
YKA	**Yellowknife Ar**	**81.56**	**2**	P	**P**	**03 52 18.6**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.2,baz=348,slow=5.5,SNR=6.4						
WRA	**Warramunga Arr**	**83.30**	**121**	P	**P**	**03 52 26.0**	**-2.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**83.30**	**121**	P	**P**	**03 52 26.0**	**-2.5**
	comp=Z,0.9nm,0.8s,mb3.9,baz=327,slow=4.7,SNR=12						
ASAR	**Alice Springs**	**85.50**	**124**	P	**P**	**03 52 37.6**	**-1.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**85.50**	**124**	P	**P**	**03 52 37.6**	**-1.9**
	comp=Z,1.0nm,0.8s,mb4.1,baz=318,slow=5.2,SNR=8.2						

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*CSEM **14** 03:57:29.9±0.2, 38.42N×39.19E, h5km, MD2.9, Error ellipse: s-maj=5.5km s-min=2.9km az=121.0*

*ISK **14** 03:57:29.3, 38.41N×39.18E, h5km, MD2.8*

*ISCJB **14** 03:57:30.8±0.5, 38.39N±0.03×39.24E±0.04, h9km, Error ellipse: s-maj=4.4km s-min=4.2km az=15.7*

*DDA **14** 03:57:31.8, 38.41N×39.21E, h9km, Md2.9*

ISC 14 03:57:30.9±0.6, **38.39N**±0.03×**39.25E**±0.04, **h5**km±7km, **n12**, σ**0.78**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**298**	*i* P	**Pg**	**03 57 36.0**	**+0.4**
ELZG				*i* S	**Sg**	**03 57 39.9**	**+1.2**
PTK	**Pertek**	**0.52**	**12**	PG	**Pg**	**03 57 40.3**	**-0.6**
PTK				SG	**Sg**	**03 57 48.5**	**+0.9**
MALT	**Malatya**	**0.65**	**264**	PG	**Pg**	**03 57 41.7**	**-1.7**
MYA	**Malataya**	**0.65**	**265**	PG	**Pg**	**03 57 42.7**	**-0.7**
MYA				SG	**Sg**	**03 57 51.4**	**-0.5**
DIY	**Diyarbakir**	**0.91**	**122**	PG	**Pg**	**03 57 48.6**	**+0.2**
URFA	**Urfa**	**1.00**	**200**	PG	**Pg**	**03 57 49.9**	**-0.3**
KEMA	**Kemaliye**	**1.06**	**326**	*i* P	**Pg**	**03 57 50.1**	**-1.2**
KEMA				*i* S	**Sg**	**03 58 05.4**	**+0.3**
ATAB	**Bozova**	**1.19**	**220**	*i* P	**Pg**	**03 57 54.0**	**+0.3**
ATAB				*i* S	**Sg**	**03 58 10.6**	**+1.5**
BNGL	**BINGOL**	**1.59**	**69**	*i* P	**Pn**	**03 58 00.3**	**+0.7**
BNGL				*i* S	**Sn**	**03 58 26.4**	**+5.9**
MARD	**Mardin**	**1.62**	**131**	*i* P	**Pn**	**03 58 00.1**	**+0.1**
MARD				*i* S	**Sn**	**03 58 21.0**	**-0.2**
GZT	**Gaziantep**	**1.69**	**233**	*i* P	**Pn**	**03 58 00.4**	**-0.6**
GZT				*i* S	**Sn**	**03 58 23.5**	**+0.6**
BTMT	**Batman**	**1.77**	**96**	PN	**Pn**	**03 58 01.8**	**-0.4**

IDC 14 04:41:38.1±3.2, **23.27S**×**179.84W**, **h0**km, **mb3.5**/2, **mb1 4.0**/3, **mb1mx3.8**/13, **mbtmp3.9**/3, **Error ellipse: s-maj=65.9km s-min=63.2km az=87.0**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.17**	**189**	Pn	Pn	04 45 13.0	-0.7
	3.3nm,0.3s,baz=190,slow=18,SNR=9.2						
ASAR	**Alice Springs**	**42.29**	**260**	P	P	04 49 32.8	-1.0
	0.4nm,0.4s,baz=95,slow=7.7,SNR=7.9						
WRA	**Warramunga Arr**	**42.60**	**265**	P	P	04 49 37.1	+0.8
	0.2nm,0.3s,baz=101,slow=7.6,SNR=8.4						
NB2	**NORSAR Subarra**	**141.49**	**351**	PKP	PKPdf	05 01 09.3	-1.3
	comp=Z,2.5nm,0.8s,baz=22,slow=3.8						
NOA	**NORSAR Array B**	**141.49**	**351**	PKP	PKPdf	05 01 09.7	-0.9
	comp=Z,1.5nm,0.6s,baz=22,slow=2.6,SNR=5.5						
AKASG	**Malin Array Be**	**144.52**	**328**	PKP	PKPdf	05 01 16.4	+0.1
	comp=Z,0.5nm,0.3s,baz=44,slow=4.0,SNR=5.8						

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*ISCJB **14** 05:12:51.9±0.5, 31.77S±0.03×69.15W±0.06, h122km±6km, mb3.7/2, Error ellipse: s-maj=8.2km s-min=5.1km az=13.5*

*IDC **14** 05:12:52.1±1.9, 31.97S×69.08W, h114km±12km, mb3.5/2, mb1 3.5/4, mb1mx3.3/15, mbtmp3.2/4, Error ellipse: s-maj=41.4km s-min=36.1km az=54.0*

*GUC **14** 05:12:52.5±0.5, 31.81S×69.58W, h158km±6km, MD3.8, ML3.7*

*NEIC **14** 05:12:52.5, 31.81S×69.58W, h158km, MD3.8(GUC), After GUC.*

ISC 14 05:12:52.9±0.5, **31.77S**±0.03×**69.15W**±0.06, **h115**km±6km, **n27**, σ**0.87**/45, **mb3.7**/2, **4C-5D**, **San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**0.79**	**78**	P	**Pn**	**05 13 12.3**	**-0.3**
CFAA				S	**Sn**	**05 13 27.6**	**+0.2**
CFAA	**Coronel Fontan**	**0.79**	**78**	P	**Pn**	**05 13 12.3**	**-0.3**
	9.3nm,0.3s,baz=258,slow=5.1,SNR=1013						
CFAA				S	**Sn**	**05 13 27.6**	**+0.2**
	49nm,0.3s,baz=146,slow=23,SNR=147						
FCH	**Farellones**	**1.83**	**212**	⇓*i*P	**Pn**	**05 13 25.1**	**+1.1**
FCH				*i* S	**Sn**	**05 13 50.0**	**+2.3**
FCH				AML	AML	05 13 53.2	
	comp=E,385nm,0.5s						
PEL	**Peldehue**	**1.89**	**223**	⇓*i*P	**Pn**	**05 13 24.5**	**-0.2**
PEL				*i* S	**Sn**	**05 13 48.7**	**-0.3**
PEL				AML	AML	05 13 50.5	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**1.98**	**232**	*i* P	**Pn**	**05 13 25.4**	**-0.5**
ROCH				*i* S	**Sn**	**05 13 50.4**	**-0.7**
CHNG	**Los Chungos**	**2.01**	**266**	⇓*i*P	**Pn**	**05 13 10.6**	**-16**
CHNG				*i* S	**Sn**	**05 13 34.8**	**-17**
DSCH	**Colegio Aleman**	**2.02**	**216**	*i* P	**Pn**	**05 13 25.9**	**-0.4**
DSCH				*i* S	**Sn**	**05 13 52.0**	**+0.1**
TLL	**Tololo Astrono**	**2.14**	**318**	⇑*i*P	**Pn**	**05 13 28.8**	**+0.8**
TLL				*i* S	**Sn**	**05 13 55.9**	**+1.2**
TLL	**Tololo Astrono**	**2.14**	**318**	⇑*i*P	**Pn**	**05 13 28.8**	**+0.8**
TLL				*i* S	**Sn**	**05 13 55.9**	**+1.2**
TLL				AML	AML	05 13 57.6	
	comp=N,626nm,0.5s						
PCH	**Pirque**	**2.17**	**212**	*e*P	**Pn**	**05 13 28.4**	**+0.1**
PCH				*i* S	**Sn**	**05 13 55.9**	**+0.4**
ANTU	**Antumapu**	**2.19**	**215**	*e*P	**Pn**	**05 13 28.3**	**-0.2**
ANTU				*i* S	**Sn**	**05 13 55.6**	**-0.2**
ANTU	**Antumapu**	**2.19**	**215**	*e*P	**Pn**	**05 13 28.3**	**-0.2**
ANTU				*i* S	**Sn**	**05 13 55.6**	**-0.2**
ANTU				AML	AML	05 13 59.9	
	comp=E,386nm,0.4s						
LMEL	**Las Melosas**	**2.25**	**203**	*i* P	**Pn**	**05 13 30.0**	**+0.7**
LMEL				*i* S	**Sn**	**05 13 58.6**	**+1.4**

LMEL Las Melosas 2.25 203 *i* P **Pn 05 13 30.0 +0.7**
LMEL *i* S **Sn 05 13 58.6 +1.4**
LMEL AML AML 05 14 06.3
comp=N,286nm,0.2s
TACH Talagante 2.41 218⇓*i*P **Pn 05 13 30.6 -0.7**
TACH *i* S **Sn 05 13 59.6 -1.2**
CHCH Chadas Angostu 2.50 210⇓*i*P **Pn 05 13 32.3 -0.3**
CHCH *i* S **Sn 05 14 02.4 -0.6**
LSCH La Serena 2.59 315⇑*i*P **Pn 05 13 33.3 -0.4**
LSCH *i* S **Sn 05 14 03.4 -1.6**
LSCH La Serena 2.59 315⇑*i*P **Pn 05 13 33.3 -0.4**
LSCH *i* S **Sn 05 14 03.4 -1.6**
LSCH AML AML 05 14 04.5
comp=N,350nm,0.7s
CICH Cipreses 2.76 203 *i* P **Pn 05 13 35.9 0.0**
CICH *i* S **Sn 05 14 09.2 +0.3**
LCO Las Campanas 3.06 334 *e*Pn **Pn 05 13 39.6 -0.4**
LCO *e*Sn **Sn 05 14 10.6 -5.5**
TRQA Tornquist 8.60 139 *e*Pn **Pn 05 14 52.6 -1.8**
comp=N,3.6nm,0.6s
LPAZ La Paz 15.44 4 P **Pn 05 16 27.6 +3.0**
comp=N,0.1nm,0.3s,baz=212,slow=9.5,SNR=3.4
SIV San Ignacio 17.34 27 P **Pn 05 16 47.7 -0.2**
comp=N,0.1nm,0.3s,baz=155,slow=10,SNR=4.0
TXAR Lajitas Array 69.06 328 P **P 05 23 47.0 +0.7**
comp=N,0.5nm,0.6s,mb3.5,baz=152,slow=7.0,SNR=8.0
TORD Torodi Ar. Bea 81.15 69 P **P 05 24 55.8 -0.2**
comp=N,1.1nm,0.6s,mb3.9,baz=238,slow=8.3,SNR=4.4
WRA Warramunga Arr 123.87 207 PKP PKPdf 05 31 36.7 -1.3
comp=N,0.4nm,0.4s,baz=158,slow=1.8,SNR=14
MKAR Makanchi Array 153.47 47 PKPbc PKPbc 05 32 36.7 -0.8
comp=N,0.1nm,0.2s,baz=281,slow=0.7,SNR=2.5
MKAR PKPab PKPab 05 32 49.8 -0.5
comp=N,0.1nm,0.2s,baz=288,slow=3.4,SNR=4.7

IDC 14 05:14:56.2±3.7**,3028S×13857E,h0km,mb1 3.0**/3**, mb1mx3.0**/11**,mbtmp2.8**/3**,ML2.7**/3**,Error ellipse: s-maj=106.9km s-min=15.8km az=43.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.04**	**122**	Pn	Pn	05 15 45.8	+0.2
	0.3nm,0.3s,baz=307,slow=12,SNR=11						
STKA				Pg	Pg	05 15 53.2	-1.4
	1.2nm,0.3s,baz=298,slow=12,SNR=11						
STKA				Sn	Sn	05 16 22.8	0.0
	2.1nm,0.3s,baz=310,slow=13,SNR=4.8						
STKA				Lg		05 16 31.6	
	2.6nm,0.3s,baz=293,slow=17,SNR=4.8						
ASAR	**Alice Springs**	**7.79**	**327**	Pn	Pn	05 16 50.2	-0.6
	0.1nm,0.3s,baz=149,slow=12,SNR=6.2						
ASAR				Sn	Sn	05 18 21.9	+2.2
	0.2nm,0.3s,baz=154,slow=22,SNR=5.1						
WRA	**Warramunga Arr**	**10.98**	**339**	Pn	Pn	05 17 34.5	-0.1
	0.1nm,0.3s,baz=153,slow=11,SNR=5.1						

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*NIED **14** 05:30:00,4620N×15390E,h41km,Mw4.6 Best double couple: M₀7.83000×10¹⁵ NP1:φs256.00000°,δ14.00000°, λ95.00000°. NP2:φs71.00000°,δ76.00000°,λ89.00000°.*
*IDC **14** 05:30:24.9±0.5,4573N×15435E,h0km,mb4.3/18, mb1 4.5/20,mb1mx4.4/25,mbtmp4.3/20,ML4.2/2,MS3.4/8, Ms1 3.4/8,ms1mx3.2/36,Error ellipse: s-maj=18.2km s-min=13.0km az=140.0*
*ISCJB **14** 05:30:24.1±0.2,4558N±004×15431E±003,h10km, mb4.6/83,MS3.7/18,Error ellipse: s-maj=6.2km s-min=2.4km az=165.0*
*NEIC **14** 05:30:26.6±0.2,4570N×15431E,h10km,mb4.7/47,Error ellipse: s-maj=6.1km s-min=3.9km az=162.0*
*BJI **14** 05:30:28.3,4618N×15391E,h8km,mB4.8,mb4.5,Ms4.3, Msz3.9*
*JMA **14** 05:30:28.6±0.8,4625N×15390E,h30km,M4.8*
*MOS **14** 05:30:29.5±1.1,4573N×15421E,h43km,mb4.8/52,Error ellipse: s-maj=9.6km s-min=6.5km az=99.7*
*SKHL **14** 05:30:29.7±1.1,4607N×15401E,h53km±21km,mb4.9/3, msh6.1/1*
*SZGRF **14** 05:30:34.3,4546N×15195E,h33km,mb4.5,Kuril Islands, Russia*
ISC 14 05:30:26.6±1.3**,4567N**±005×**15427E**±003**,h11**km±8km**, h16**km±1.4km**:pP-P,n361,**σ**0**ˢ**70**/384**,mb4.6**/83**,MS3.7**/18**, 73C-61D,East of Kuril Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KUR Kuril'sk 4.53 267 *e*P **Pn 05 31 34.0 -1.1**
KUR *e*S **Sn 05 32 23.0 -4.7**
KUR pmax pmax
comp=N,80nm,0.5s
KUR pmax pmax
comp=E,60nm,0.5s
KUR pmax pmax
comp=Z,330nm,0.5s
KUR smax
comp=N,380nm,0.5s
KUR smax
comp=E,120nm,0.5s
KUR Kuril'sk 4.53 267 *e*P **Pn 05 31 34.0 -1.1**
KUR AMB AMB 05 31 35.0
comp=E,80nm,0.5s
KUR AMB AMB 05 31 35.0
comp=E,60nm,0.5s
KUR AMB AMB 05 31 35.0
comp=E,330nm,0.5s
KUR *e*S **Sn 05 32 23.0 -4.7**
KUR A 05 32 27.8
comp=E,380nm,0.5s
KUR A 05 32 27.8
comp=E,120nm,0.5s
SKR Severo-Kuril's 5.17 13 *e*P **Pn 05 31 41.5 -2.3**
SKR *e*S **Sn 05 32 46.5 +3.1**
SKR pmax pmax
comp=Z,80nm,0.5s
SKR smax
comp=N,140nm,0.5s
SKR smax
comp=E,80nm,0.5s
SKR smax
comp=Z,80nm,0.5s
YUK Yuzh-Kuril'sk 6.20 258 P **Pn 05 32 00.5 +2.5**
YUK *e*S **Sn 05 33 07.8 -1.0**
YUK smax
comp=N,420nm,0.5s
YUK smax
comp=E,380nm,0.5s
YUK smax
comp=N,5μm,2.0s
YUK smax
comp=E,5μm,2.0s
YUK Yuzh-Kuril'sk 6.20 258 *e*P **Pn 05 32 00.5 +2.5**
YUK *e*S **Sn 05 33 07.8 -1.0**
YUK A 05 33 08.9
comp=E,420nm,0.5s
YUK A 05 33 08.9
comp=E,380nm,0.5s
YUK A 05 33 15.0
comp=E,5μm,2.0s
NEM2 Nemuro 2 6.52 252 P **Pn 05 32 00.8 -1.6**
NEM2 *e*S **Sn 05 33 09.8 -6.9**
JRA Rausu 6.74 258 P **Pn 05 32 06.0 +0.6**
JRA *e*S **Sn 05 33 19.5 -2.5**
JNK Nakash 7.13 256 P **Pn 05 32 10.7 0.0**
JNK *e*S **Sn 05 33 27.0 -4.7**
JAK Akkeshi 7.37 252 *e*S **Sn 05 33 30.8 -6.8**
JTKR Abashiri--Toko 7.56 261 P **Pn 05 32 17.1 +0.4**
JAR Ashorobuto 7.88 256 P **Pn 05 32 21.5 +0.5**
JAR *e*S **Sn 05 33 46.1 -4.0**
JMP Maruseppu 7.93 262 P **Pn 05 32 23.1 +1.3**
JOB Onbets 7.98 253 P **Pn 05 32 21.5 -1.0**
JOB *e*S **Sn 05 33 45.0 -7.7**
YSS Yuzh-Sakhalins 8.08 283 *e*Pn **Pn 05 32 26.3 +2.6**
YSS Yuzh-Sakhalins 8.08 283 *e*P **Pn 05 32 26.1 +2.3**
YSS AMB AMB 05 32 27.6
comp=E,30nm,0.8s
JKK2 Kamakawa 2 8.39 262 P **Pn 05 32 28.9 +0.8**
JCH Churui 8.42 253 P **Pn 05 32 28.4 0.0**
JCH *e*S **Sn 05 33 55.9 -7.5**
ASAJ Asahikawa 8.44 264 P **Pn 05 32 29.9 +1.2**
ASAJ Asahikawa 8.44 264 P **Pn 05 32 30.3 +1.6**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ MLR MLR
comp=Z,100nm,19.2s
ASAJ Asahikawa 8.44 264 Pn **Pn 05 32 30.3 +1.6**
comp=Z,4.0nm,0.3s,baz=152,slow=3.6,SNR=8.4
ASAJ LR LR 05 36 07.3
comp=Z,100nm,19.2s,baz=116,slow=40
JFR Furan 8.73 257 P **Pn 05 32 33.7 +1.0**
JFR *e*S **Sn 05 34 06.5 -4.5**
JEM Erimo 8.82 250 *e*S **Sn 05 34 06.9 -6.4**
JNBK Urakawa-nobuka 8.97 252 P **Pn 05 32 34.9 -1.1**
JNBK *e*S **Sn 05 34 08.8 -8.2**
JBT2 Biratori 2 9.03 256 P **Pn 05 32 36.1 -0.7**
JNB Noboribetsu 10.05 256 *e*S **Sn 05 34 36.7 -6.7**
JKB Kayabe 10.29 253 P **Pn 05 32 52.6 -1.5**
JKB *e*S **Sn 05 34 39.4 -10**
JYM2 Yakumo 2 10.64 255 P **Pn 05 32 58.4 -0.5**
JTH Tanohata 10.76 242 P **Pn 05 32 56.6 -3.9**
JTH *e*S **Sn 05 34 47.4 -14**
JTM Tenmabayashi 10.80 248 P **Pn 05 32 59.1 -1.9**
JTM *e*S **Sn 05 34 50.5 -11**
JOSM Okushiri--Mats 11.27 257 P **Pn 05 33 06.1 -1.3**
OFUJ Ofunato 11.40 239 P **Pn 05 33 06.6 -2.8**
JIO Ouri 12.00 238 *e*S **Sn 05 35 18.2 -13**
MJAR Matsushiro Arr 15.13 239 P **Pn 05 33 59.7 -0.5**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 15.13 239 Pn **Pn 05 33 59.6 -0.6**
comp=Z,0.5nm,0.3s,baz=33,slow=12,SNR=4.1
MAJO Matsushiro 15.13 239 *e*Pn **Pn 05 34 07.9 +7.6**
MAT Matsushiro 15.13 239 P **Pn 05 34 07.8 +7.6**
MAT *e*S **Sn 05 37 00.0 +12**
ZEA Zeya 19.16 305 *e*P **Pn 05 34 45.6 -5.1**
ZEA AMB AMB 05 34 48.4
comp=Z,23nm,1.0s
CN2 Changchun 20.52 275 *e*P **P 05 35 04.5 -0.2**
CN2 *e*XP sP 05 35 11.0 +1.9
CN2 *e*S **S 05 38 48.5 -5.5**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,200nm,11.0s,MS3.8
CN2 LR LR
comp=E,100nm,11.0s,MS3.8
CN2 LR LR
comp=Z,270nm,12.0s,MS3.8
KSRS Korea Array 21.29 257 P **P 05 35 14.6 +1.6**
comp=Z,7.7nm,0.9s,mb4.0,baz=64,slow=11,SNR=14
KSRS LR LR 05 42 28.7
comp=Z,78nm,19.8s,MS3.1,baz=167,slow=34
CLNS Chul'man 21.34 312 *e*P **P 05 35 12.6 -0.8**
CLNS *e*PPP 05 35 28.7
CLNS *e*S **S 05 38 57.9 -12**
CLNS *e* 05 39 21.7
CLNS *e*SS 05 39 49.5
CLNS pmax pmax
comp=Z,16nm,0.9s,mb4.3
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,0.7s
CLNS pmax pmax
comp=Z,9.0nm,0.8s,mb4.2
CLNS pmax pmax
comp=N,8.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS smax
comp=N,11nm,1.3s
CLNS smax
comp=Z,4.0nm,0.8s
CLNS smax
comp=E,11nm,1.0s
CLNS MLR MLR
comp=Z,200nm,12.0s,MS3.7
CLNS MLR MLR
comp=N,100nm,15.0s,MS3.5
CLNS MLR MLR
comp=E,100nm,12.0s,MS3.5
YAK Yakutsk 21.67 328 *e*P **P 05 35 12.1 -4.8**
YAK *e*S **S 05 39 14.1 -2.3**
YAK pmax pmax
comp=Z,17nm,0.7s,mb4.6
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK smax
comp=N,24nm,1.6s
YAK smax
comp=E,14nm,1.4s
JNU Nakatsue 21.90 243 P **P 05 35 21.0 +1.3**
comp=E,3.3nm,0.7s,mb3.9,baz=76,slow=23,SNR=2.8
JNU LR LR 05 43 10.6
comp=E,59nm,19.4s,MS3.0,baz=11,slow=35
SNY Shenyang 22.43 271 ⇓P **P 05 35 26.5 +1.3**
SNY AMB AMB
comp=Z,20nm,1.1s,mb4.5
SNY AMB AMB
comp=Z,147nm,4.9s
SNY LR LR
comp=N,351nm,17.3s
SNY LR LR
comp=Z,168nm,14.4s,MS3.6
BILL Bilibino 23.28 11 *e*P **P 05 35 33.7 -0.3**
comp=Z,9.5nm,0.9s,mb4.2
BILL Bilibino 23.28 11 *e*P **P 05 35 34.2 +0.2**
BILL pmax pmax
comp=Z,17nm,1.5s,mb4.2
GAMB Gambell 26.25 34 *e*P **P 05 36 01.2 -0.2**
BJI Beijing 28.30 272 P **P 05 36 25.3 +5.3**
BJI AMB AMB
comp=Z,11nm,0.9s,mb4.5
BJI LR LR
comp=N,217nm,9.2s
BJI LR LR
comp=E,185nm,9.2s
BJI LR LR
comp=Z,92nm,21.5s,MS3.3
BJT Baijiatuau 28.31 272 *e*P **P 05 36 25.1 +5.0**
comp=Z,5.5nm,0.6s,mb4.4
BJT Baijiatuau 28.31 272 *e*P **P 05 36 25.1 +5.0**
BJT pmax pmax
comp=Z,6.0nm,0.6s
TIXI Tiksi 28.74 344 *e*P **P 05 36 22.1 -1.4**
TIXI Tiksi 28.74 344 *e*P **P 05 36 22.0 -1.6**
TIXI pmax pmax
comp=Z,6.0nm,1.2s,mb4.2
NJ2 Nanjing 30.48 256 *e*P **P 05 36 44.3 +4.9**
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
HHC Hu-ho-hao-te 31.20 277 *e*P **P 05 36 48.1 +2.5**
HHC AP pP 05 36 52.3 +3.4
HHC XP sP 05 36 54.5 +4.2
HHC PP PP 05 37 51.3 -4.6
HHC *e*S **S 05 41 52.8 +1.3**
HHC XS sS 05 41 59.0 +2.0
HHC PCS PcS 05 43 25.4 +1.1
HHC SS SS 05 43 38.3 -26
HHC AMB AMB
comp=Z,12nm,0.8s,mb4.8
HHC AMB AMB
comp=Z,101nm,7.2s
HHC LR LR
comp=N,214nm,17.8s,MS4.1
HHC LR LR
comp=E,198nm,13.1s,MS4.1
HHC LR LR
comp=Z,155nm,11.9s,MS3.9
ULN Ulaanbaatar 32.03 291 *e*P **P 05 36 54.5 +1.6**
SONM Songino Array 32.47 291 P **P 05 36 57.1 +0.4**
SONM 05 39 42.3
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM MLR MLR
comp=Z,64nm,18.8s
SONM Songino Array 32.47 291 P **P 05 36 57.1 +0.4**
comp=Z,1.6nm,0.9s,mb3.9,baz=65,slow=8.5,SNR=8.6
SONM PcP PcP 05 39 42.3 -1.2
comp=Z,0.9nm,0.8s,baz=105,slow=2.1,SNR=5.3
SONM LR LR 05 49 18.7
comp=Z,64nm,18.8s,MS3.3,baz=44,slow=35
TTA Tatalina 32.72 40 *e*P **P 05 36 59.1 +0.4**
comp=Z,14nm,1.3s,mb4.7
TTA Tatalina 32.72 40 *e*P **P 05 36 59.1 +0.4**
TTA pmax pmax
comp=Z,14nm,1.3s,mb4.7
ZAK Zakamensk 33.88 297 *e*P **P 05 37 08.6 -0.4**
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
XAN Xi'an 36.25 268 P **P 05 37 30.5 +0.8**
COLA College 36.50 37 *e*P **P 05 37 31.3 -0.1**
comp=Z,3.4nm,0.4s,mb4.6
COLA College 36.50 37 *e*P **P 05 37 31.3 -0.1**
COLA pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
LZH Lanzhou 38.75 274 *e*P **P 05 37 54.1 +3.3**
LZH AP pP 05 37 57.1 +3.0
LZH XP sP 05 37 58.6 +3.1
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,102nm,4.9s
LZH LR LR
comp=E,420nm,14.3s
LZH LR LR
comp=Z,602nm,15.0s,MS4.5
EGAK Eagle 39.36 38 *e*P **P 05 37 54.9 -0.6**
comp=Z,9.3nm,0.9s,mb4.5
DAWY Dawson 40.18 39 *e*P **P 05 38 02.1 -0.2**
CD2 Chengdu 41.61 267 *e*P **P 05 38 15.6 +1.0**
CD2 AP pP 05 38 20.1 +2.1
CD2 XP sP 05 38 23.0 +3.7
CD2 PP PP 05 39 55.3 +4.6
CD2 S **S 05 44 31.3 +0.6**
CD2 XS sS 05 44 38.6 +2.4
CD2 SS SS 05 47 30.9 -4.7
CD2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=N,340nm,14.4s
CD2 LR LR
comp=Z,110nm,14.4s,MS3.9
INK Inuvik 42.14 32 P **P 05 38 18.0 -0.5**
INK pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 42.14 32 P **P 05 38 18.0 -0.5**
comp=Z,2.0nm,0.9s,mb3.7,baz=282,slow=7.0,SNR=10
GYA Guiyang 42.29 260 P **P 05 38 25.0 +4.8**
GYA AP pP 05 38 29.3 +5.8
GYA XP sP 05 38 32.8 +7.9
GYA PP PP 05 40 06.3 +8.2
GYA PCP PcP 05 40 19.0 +5.2
GYA SCP ScP 05 44 08.5 +4.3
GYA S **S 05 44 46.3 +5.5**
GYA XS sS 05 44 51.3 +5.0
GYA SS SS 05 47 48.8 -0.3
GYA SCS ScS 05 48 25.0 +2.7
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
GYA AMB AMB
comp=Z,90nm,4.6s
GYA LR LR
comp=N,440nm,17.5s,MS4.5
GYA LR LR
comp=E,460nm,18.2s,MS4.5
GYA LR LR
comp=Z,340nm,18.8s,MS4.3
DLBC Dease Lake 45.78 45 *e*P **P 05 38 49.6 +1.8**
KMI Kunming 45.86 262 P **P 05 38 55.1 +6.3**
KMI AP pP 05 39 01.4 +9.2
KMI AMB AMB
comp=Z,9.0nm,0.6s,mb4.9
KMI LR LR
comp=Z,38nm,24.4s,MS3.2
WMQ Urumqi 46.08 293⇑*i*P **P 05 38 51.5 +1.1**
WMQ AP pP 05 38 56.0 +2.3
WMQ XP sP 05 38 58.5 +3.4
WMQ PCP PcP 05 40 28.5 +2.0
WMQ PP PP 05 40 39.5 +1.3
WMQ *e*S **S 05 45 35.5 -0.1**
WMQ AMB AMB
comp=Z,9.0nm,0.5s,mb5.0
WMQ AMB AMB
comp=Z,79nm,4.3s
WMQ LR LR
comp=N,59nm,16.3s,MS3.7
WMQ LR LR
comp=E,56nm,18.0s,MS3.7
WMQ LR LR
comp=Z,34nm,16.3s,MS3.4
MK31 Makanchi Array 48.16 299 *i* P **P 05 39 07.0 +0.4**
MK31 pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
MKAR Makanchi Array 48.16 299 P **P 05 39 07.0 +0.4**
MKAR 05 40 33.9
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,70nm,18.6s
MKAR Makanchi Array 48.16 299 P **P 05 39 07.0 +0.4**
comp=Z,4.3nm,0.8s,mb4.5,baz=70,slow=7.9,SNR=29
MKAR PcP PcP 05 40 33.9 +0.1
comp=Z,0.9nm,0.6s,baz=49,slow=4.1,SNR=3.2
MKAR LR LR 06 00 18.7
comp=Z,70nm,18.6s,MS3.7,baz=247,slow=37
KURK Kurchatov 48.64 305 *e*P **P 05 39 09.7 -0.5**
comp=Z,7.2nm,0.8s,mb4.8
KURK Kurchatov 48.64 305 *e*P **P 05 39 09.7 -0.5**
KURK pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
YKW3 Yellowknife Ar 51.28 36 *e*P **P 05 39 30.0 -0.1**
YKA Yellowknife Ar 51.31 36 P **P 05 39 30.5 +0.2**
YKA PcP PcP 05 40 45.0 -0.1
YKA LR LR 06 00 32.5
YKA Yellowknife Ar 51.31 36 P **P 05 39 30.5 +0.2**
comp=Z,4.3nm,0.7s,mb4.5,baz=295,slow=7.1,SNR=54
YKA PcP PcP 05 40 45.0 -0.1
comp=Z,0.4nm,0.6s,baz=307,slow=3.8,SNR=4.6
YKA LR LR 06 00 32.5
comp=Z,27nm,18.9s,MS3.3,baz=60,slow=35
RES Resolute Bay 51.61 18 *e*P **P 05 39 34.1 +1.7**
CHKZ Chkalovo 51.75 311 *e*P **P 05 39 33.7 0.0**
comp=Z,8.8nm,0.8s,mb4.7
CHKZ Chkalovo 51.75 311 *e*P **P 05 39 33.7 0.0**
CHKZ pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
BRVK Borovoye 52.21 311 *e*P **P 05 39 38.0 +0.9**
comp=Z,4.6nm,0.7s,mb4.5
BRVK Borovoye 52.21 311 *e*P **P 05 39 38.0 +0.8**
BRVK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TKM2 Tokmak 2 54.21 297 *e*P **P 05 39 53.6 +1.6**
comp=Z,8.0nm,1.2s,mb4.5
TKM2 Tokmak 2 54.21 297 *e*P **P 05 39 53.6 +1.6**
TKM2 pmax pmax
comp=Z,8.0nm,1.2s,mb4.5
A07A Ashnola River, 54.95 53 ⇓P **P 05 39 56.5 -0.8**
baz=54
AAK Ala-Archa 55.05 298 *e*P **P 05 39 58.6 +0.5**
comp=Z,8.6nm,1.0s,mb4.7
AAK Ala-Archa 55.05 298 *e*P **P 05 39 58.6 +0.5**
AAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
G03A Yamhill 55.23 58 ⇓P **P 05 39 58.1 -1.3**
baz=55
B07A Winthrop 55.40 54 ⇑P **P 05 39 59.7 -0.9**
baz=55
EKS2 Erkin-Say 55.48 298 *e*P **P 05 40 02.6 +1.5**
comp=Z,8.1nm,0.8s,mb4.8
A08A Turner Farm, O 55.62 53 ⇑P **P 05 40 01.5 -0.7**
baz=55
C07A Waterville 55.85 54 ⇑P **P 05 40 03.0 -0.8**
baz=55
B08A Colville Reser 55.90 53 ⇓P **P 05 40 03.8 -0.4**
baz=55
A09A Danville 55.99 53 ⇓P **P 05 40 04.6 -0.2**
baz=56
J02A Umpqua 56.11 60 ⇑P **P 05 40 05.8 +0.1**
baz=56
D07A Quincy 56.16 55 ⇓P **P 05 40 05.8 -0.2**
baz=56
H04A Detroit Lake 56.23 59 ⇓P **P 05 40 06.8 +0.3**
baz=56
ARU Arti 56.36 318*c i*P **P 05 40 07.6 +0.3**
ARU 05 42 08.7

ARU S S 05 47 54.0 -3.3
ARU SS SS 05 51 38.6 -4.8
ARU pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
J03A Ideyld Park 56.48 60 ⇓P P 05 40 08.8 +0.5
baz=56
EDM Edmonton 56.49 46 eP P 05 40 07.7 -0.6
B09A Rice 56.53 53 ⇑P P 05 40 08.3 -0.4
baz=56
A10A Northport 56.56 52 ⇓P P 05 40 08.1 -0.8
baz=56
KK31 Karatay Array 57.23 300 i P P 05 40 14.5 +0.8
KK31 pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
H06A Lindquist Farm 57.30 58 ⇓P P 05 40 14.1 -0.1
baz=57
G07A Ruggs Ranch, H 57.40 57 ⇑P P 05 40 14.4 -0.5
baz=57
J05A Fort Rock 57.58 59 ⇑P P 05 40 16.5 +0.3
baz=57
D10A Wagner Farm, O 57.78 54 ⇑P P 05 40 16.7 -0.8
baz=57
G08A Pilot Rock 57.80 56 ⇑P P 05 40 17.2 -0.5
baz=57
I06A Prineville 57.82 58 ⇓P P 05 40 18.0 +0.2
baz=57
H07A Lands Inn, Kim 57.84 57 ⇓P P 05 40 17.5 -0.5
baz=57
K05A Summer Lake 58.10 60 ⇓P P 05 40 20.3 +0.5
baz=58
I07A Izee 58.16 58 ⇑P P 05 40 20.2 -0.1
baz=58
E10A Myers Farm, Un 58.19 54 ⇓P P 05 40 20.2 -0.2
baz=58
J06A Christmas Vall 58.25 59 ⇑P P 05 40 20.6 -0.3
baz=58
A13A Flathead Natio 58.31 51 ⇓P P 05 40 20.8 -0.4
baz=58
H08A Prairie City 58.41 57 ⇓P P 05 40 21.6 -0.3
baz=58
K06A Valley Falls 58.45 59 ⇓P P 05 40 22.3 +0.1
baz=58
WALA Waterton Lakes 58.51 50 eP P 05 40 22.8 +0.2
B13A Whitefish 58.60 51 P P 05 40 23.6 +0.3
baz=58,SNR=11
KEV Kevo 58.63 341 ep P 05 40 21.6 -1.5
comp=Z,3.0nm,0.5s,mb4.6
KEV Kevo 58.63 341 ep P 05 40 21.6 -1.5
KEV pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
PRGR Permogore 58.72 328 ⇑i P P 05 40 23.4 -0.4
PRGR e 05 41 10.6
PRGR eS S 05 48 28.3 +0.2
PRGR pmax pmax
comp=Z,10.0nm,0.5s,mb5.1
M05C Lookout 58.73 61 ⇑P P 05 40 23.7 -0.5
baz=58
E11A Bogner Ranch, 58.78 54 ⇓P P 05 40 23.7 -0.8
baz=58
I08A Drewsey 58.81 58 ⇓P P 05 40 25.1 +0.3
baz=58
D12A Red Ives Fores 58.86 53 ⇑P P 05 40 24.6 -0.5
baz=58
G10A Bishop Farm, J 58.87 56 P P 05 40 25.3 +0.2
baz=58,SNR=7.7
MOD Modoc 58.93 60 eP P 05 40 25.5 -0.1
comp=Z,2.9nm,0.9s,mb4.3
MOD Modoc 58.93 60 ⇑P P 05 40 25.7 0.0
baz=58
C13A Hot Springs 58.94 52 ⇓P P 05 40 25.2 -0.4
baz=58
BMO Blue Mountains 59.01 56 eP P 05 40 26.6 +0.5
comp=Z,25nm,2.2s,mb4.9
BMO Blue Mountains 59.01 56 eP P 05 40 26.6 +0.4
BMO pmax pmax
comp=Z,25nm,2.2s,mb4.9
F11A Grangeville 59.08 55 ⇑P P 05 40 26.3 -0.3
baz=59
K07A Rock Creek Ran 59.11 59 ⇓P P 05 40 26.2 -0.7
baz=59
ARCES ARCESS Array B 59.14 341 P P 05 40 26.3 -0.4
ARCES ARCESS Array B 59.14 341 P P 05 40 26.3 -0.4
ARCES pmax pmax
comp=Z,5.0nm,0.9s
ARCES ARCESS Array B 59.14 341 P P 05 40 26.3 -0.4
comp=Z,5.1nm,0.9s,mb4.6,baz=27,slow=11,SNR=5.4
J08A Circle Bar Ran 59.19 58 ⇓P P 05 40 27.5 +0.1
baz=59
G11A Walters Elk Ra 59.30 55 ⇓P P 05 40 28.2 +0.1
baz=59
D13A Huson 59.34 53 ⇑P P 05 40 27.9 -0.5
baz=59
C14A Swan Lake 59.34 52 ⇑P P 05 40 28.2 -0.2
baz=59
L07A Adell 59.45 60 ⇓P P 05 40 29.0 -0.2
baz=59
H10A Noah's Angus R 59.49 56 ⇓P P 05 40 29.2 -0.2
baz=59
K08A Mann Creek Ran 59.55 59 ⇑P P 05 40 29.6 -0.2
baz=59
ORV Oroville 59.55 63 ⇑P P 05 40 29.8 -0.2
baz=59
J09A Fry Pan Ranch, 59.62 58 ⇑P P 05 40 30.5 +0.1
baz=59
F12A Elk City 59.67 54 P P 05 40 31.1 +0.5
baz=59,SNR=6.5
I10A Payette 59.75 57 ⇑P P 05 40 31.3 0.0
baz=59
MSO Missoula 59.78 53 eP P 05 40 31.7 +0.3
comp=Z,5.6nm,1.1s,mb4.5
H11A Donnelly 59.85 56 P P 05 40 31.8 -0.2
baz=59,SNR=5.6
D14A Greenough 59.88 52 P P 05 40 31.9 -0.1
baz=59,SNR=8.1
N06A Buffalo Meadow 59.89 61 ⇑P P 05 40 32.5 +0.2
baz=59
M07A Soldier Meadow 59.92 60 ⇓P P 05 40 32.4 -0.1
baz=59
L08A Fields 59.95 59 ⇑P P 05 40 32.6 0.0
baz=60
AKTO Aktyubinsk 60.05 313 LR LR 06 07 09.6
comp=Z,68nm,20.3s,MS3.8,baz=82,slow=37
BEKR Beckwourth 60.08 62 ⇑P P 05 40 33.8 +0.1
baz=60
F13A Darby 60.17 54 ⇓P P 05 40 33.8 -0.3
baz=60
E14A Clinton 60.27 53 ⇓P P 05 40 34.5 -0.3
baz=60
K10A MacKenzie Ranc 60.48 58 ⇑P P 05 40 36.1 -0.1
baz=60
G13A Cobalt 60.64 54 P P 05 40 37.2 -0.1
baz=60,SNR=9.1
F14A Wisdom 60.70 53 ⇑P P 05 40 37.6 -0.2
baz=60
MFID Camas Ranch 60.72 57 ⇑P P 05 40 37.8 -0.1
baz=60
E15A Deer Lodge 60.74 52 P P 05 40 37.8 -0.2
baz=60,SNR=8.3
O07A Toulon 60.82 61 ⇓P P 05 40 38.9 +0.2
baz=60
H13A Challis 60.94 55 ⇑P P 05 40 38.9 -0.5
baz=60
K11A Parker Ranch, 60.98 57 ⇓P P 05 40 39.5 -0.1
baz=60
FFC Flin Flon 61.05 40 eP P 05 40 39.8 -0.2
comp=Z,7.5nm,0.8s,mb4.9
FFC Flin Flon 61.05 40 eP P 05 40 39.8 -0.2
FFC pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
L10A Juniper Basin 61.13 58 ⇑P P 05 40 40.6 -0.1
baz=61
CMB Columbia Colle 61.16 64 ⇑P P 05 40 40.9 -0.1
baz=61
F15A Butte 61.18 53 ⇑P P 05 40 41.0 0.0
baz=61
LRM Limekiln Ridge 61.21 53 eP P 05 40 41.6 +0.4
N09A Rock Creek Ran 61.24 60 ⇓P P 05 40 41.3 -0.2
baz=61
J12A Stokes Ranch, 61.24 56 ⇓P P 05 40 40.9 -0.5
baz=61
EGMT Eagleton 61.35 50 eP P 05 40 41.7 -0.5
EGMT Eagleton 61.35 50 P P 05 40 41.7 -0.4
baz=61,SNR=5.5
KAKA Kakadu 61.36 204 eP P 05 40 42.5 +0.1
comp=Z,14nm,0.6s,mb5.3
I13A Wildhorse Cree 61.41 55 ⇑P P 05 40 42.5 -0.1
baz=61
M10A I.L. Ranch, Tu 61.43 59 ⇓P P 05 40 42.8 0.0
baz=61
HLID Hailey 61.45 56 eP P 05 40 42.9 0.0
comp=Z,2.2nm,1.1s,mb4.2
HLID Hailey 61.45 56 ⇓P P 05 40 42.6 -0.3
baz=61
G15A Dillon 61.59 53 ⇓P P 05 40 43.7 0.0
baz=61
J13A Cove Ranch, Pi 61.69 56 ⇓P P 05 40 44.3 -0.2
baz=61
FCC Fort Churchill 61.73 33 eP P 05 40 42.9 -1.6
comp=Z,4.4nm,0.9s,mb4.6
FCC Fort Churchill 61.73 33 eP P 05 40 42.9 -1.6
FCC pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
K12A Draper Farm, C 61.73 57 ⇓P P 05 40 44.8 +0.1
baz=61
BOZ Bozeman (W) 61.77 53 eP P 05 40 45.4 +0.4
BOZ Bozeman (W) 61.77 53 P P 05 40 45.3 +0.3
baz=61,SNR=8.4
O09A Fish Creek Ran 61.85 60 ⇑P P 05 40 45.8 +0.2
baz=61
L12A House Creek Ra 61.96 57 ⇑P P 05 40 46.7 +0.3
baz=62
Q08A Gabbs 62.19 62 ⇑P P 05 40 48.1 +0.2
baz=62
NVAR Mina Array Bea 62.22 62 P P 05 40 48.9 +0.7
comp=Z,0.7nm,0.6s,mb3.9,baz=52,slow=26,SNR=7.7
QLMT Earthquake Lak 62.39 53 eP P 05 40 49.8 +0.7
M12A Wells 62.46 58 ⇓P P 05 40 49.6 -0.1
baz=62
L13A Double Diamond 62.62 57 ⇓P P 05 40 51.1 +0.3
baz=62
P10A Eureka 62.63 60 ⇑P P 05 40 50.6 -0.2
baz=62
JOF Joensuu 62.66 334 ep P 05 40 49.3 -1.4
comp=Z,2.8nm,0.6s,mb4.6
JOF Joensuu 62.66 334 eP P 05 40 49.3 -1.4
JOF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
N12A Clover Valley, 62.73 59 ⇓P P 05 40 51.2 -0.3
baz=62
K14A Jones Ranch, D 62.79 56 ⇓P P 05 40 51.9 0.0
baz=62
HELL Mitchell Peak, 62.84 64 ⇑P P 05 40 52.2 -0.2
baz=62
M13A Montello 62.94 58 ⇑P P 05 40 52.8 -0.1
baz=62
R09A Tonopah 63.10 62 P P 05 40 54.0 0.0
baz=63,SNR=7.0
Q10A Clear Creek Ra 63.16 61 ⇑P P 05 40 54.4 +0.1
baz=63
O12A Currie 63.27 59 ⇓P P 05 40 54.9 -0.1
baz=63
M14A Sheep Mountain 63.34 57 ⇑P P 05 40 55.4 -0.1
baz=63
MOOW Moose Ponds 63.44 54 eP P 05 40 57.0 +0.8
comp=Z,2.2nm,0.7s,mb4.4
TPAW Teton Pass 63.49 54 eP P 05 40 57.9 +1.4
R10A Warm Springs 63.55 62 ⇓P P 05 40 57.3 +0.3
baz=63
S10A Tonopah Range, 63.59 62 ⇑P P 05 40 57.3 0.0
baz=63
Q11A Duckwater 63.60 61 ⇓P P 05 40 57.1 -0.2
baz=63
LOHW Long Hollow 63.61 54 eP P 05 40 57.8 +0.5
comp=Z,4.1nm,1.0s,mb4.4
SNOW Snow King Moun 63.62 54 eP P 05 40 58.7 +1.4
comp=Z,5.3nm,0.8s,mb4.6
GRAC Grapevine Rang 63.69 63 ⇑P P 05 40 58.0 +0.1
baz=63
O13A Hicks Ranch, I 63.81 59 ⇑P P 05 40 58.7 0.0
baz=63
N14A Grayback Hills 63.84 58 ⇑P P 05 40 58.2 -0.7
baz=63
M15A Larsen Ranch, 63.89 57 ⇑P P 05 40 59.1 -0.1
baz=63
R11A Troy Canyon, C 63.95 61 ⇓P P 05 40 59.7 +0.1
baz=64
Q12A Willow Creek R 63.98 60 ⇑P P 05 40 60.0 +0.2
baz=64
LAO LASA Array 64.06 49 eP P 05 41 00.4 +0.1
comp=Z,10nm,0.9s,mb4.9
MPMC Manual Prospec 64.20 64 ⇑P P 05 41 01.4 +0.1
baz=64
N15A Stansbury Isla 64.21 57 ⇑P P 05 41 01.0 -0.3
baz=64
P13A Bates Ranch, G 64.22 59 ⇓P P 05 41 01.7 +0.4
baz=64
FURC Furnace Creek, 64.34 63 ⇑P P 05 41 02.3 +0.1
baz=64
BLG Laguna Peak 64.42 67 ⇑P P 05 41 02.9 +0.1
baz=64
TPNV Topopah Spring 64.42 63 eP P 05 41 03.0 +0.2
comp=Z,8.3nm,1.3s,mb4.6
TPNV Topopah Spring 64.42 63 eP P 05 41 03.0 +0.3
TPNV pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
TPNV Topopah Spring 64.42 63 ⇑P P 05 41 02.8 0.0
baz=64
DUG Dugway 64.47 58 eP P 05 41 03.0 0.0
comp=Z,7.6nm,1.4s,mb4.5
DUG Dugway 64.47 58 eP P 05 41 03.0 0.0
DUG pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
DUG Dugway 64.47 58 P P 05 41 03.5 +0.5
baz=64,SNR=5.5
Q13A Wheeler Ranch, 64.53 60 ⇓P P 05 41 03.5 +0.2
baz=64
R12A Pony Springs, 64.56 61 ⇑P P 05 41 03.5 -0.2
baz=64
EDW2 Edwards Air Fo 64.62 65 ⇓P P 05 41 04.2 +0.2
baz=64
U10A Ash Meadows, A 64.70 63 ⇑P P 05 41 04.6 +0.1
baz=64
BW06 Boulder Array 64.73 54 eP P 05 41 04.5 -0.1
PDAR Pinedale Array 64.73 54 P P 05 41 04.4 -0.3
comp=Z,3.0nm,0.9s,mb4.3,baz=284,slow=2.7,SNR=20
KAF Kangasniemi 64.76 336 ep P 05 41 03.6 -0.9
comp=Z,1.6nm,0.5s,mb4.3,baz=36,slow=6.1
KAF Kangasniemi 64.76 336 eP P 05 41 03.6 -0.9
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
T11A Corn Creek, Al 64.87 62 ⇑P P 05 41 05.7 0.0
baz=64
CIS Catalina Islan 65.29 67 ⇑P P 05 41 08.8 +0.4
baz=65
FINES FINESS Array B 65.36 335 P P 05 41 08.0 -0.5
FINES LR LR 06 09 30.5
FINES FINESS Array B 65.36 335 P P 05 41 08.0 -0.5
FINES pmax pmax
comp=Z,5.0nm,0.7s
FINES MLR MLR
comp=Z,117nm,21.3s
FINES FINESS Array B 65.36 335 P P 05 41 08.0 -0.5
comp=Z,4.8nm,0.7s,mb4.6,baz=43,slow=12,SNR=13
FINES LR LR 06 09 30.5
comp=Z,117nm,21.3s,MS4.0,baz=342,slow=36
SHPR Sheep Range 65.38 62 eP P 05 41 09.4 +0.4
S13A Holt Ranch, En 65.49 61 ⇑P P 05 41 10.2 +0.5
baz=65
V11A Goodsprings 65.63 63 ⇑P P 05 41 11.0 +0.3
baz=65
BBRC Big Bear Sol-O 65.69 65 ⇓P P 05 41 11.7 +0.7
baz=65
S14A Cedar City 65.80 60 ⇓P P 05 41 11.4 -0.3
baz=65
T13A Saint George 65.82 61 ⇓P P 05 41 12.0 +0.1
baz=65
MURC Murrieta 65.94 66 ⇑P P 05 41 12.9 +0.3
baz=66
V12A Nelson 66.06 63 ⇓P P 05 41 13.6 +0.2
baz=66
GMRC Granite Mounta 66.16 64 ⇓P P 05 41 14.0 -0.1
baz=66
U13A Pakoon Wash 66.17 62 ⇑P P 05 41 14.3 +0.2
baz=66
T14A Hurricane 66.30 61 ⇓P P 05 41 15.0 +0.1
baz=66
U14A Mt Trumbull 66.66 61 ⇑P P 05 41 17.4 +0.2
baz=66
OBN Obninsk 66.66 326 eP P 05 41 17.1 +0.2
OBN i 05 41 37.2
OBN pmax pmax
comp=Z,11nm,1.1s,mb4.8
OBN MLR MLR
comp=Z,100nm,18.0s,MS4.1
T15A Red Dirt Ranch 66.76 60 ⇓P P 05 41 18.1 +0.2
baz=66
IRM Iron Mountain 66.88 64 ⇑P P 05 41 18.8 +0.1
baz=66
RSSD Black Hills 66.91 50 eP P 05 41 17.8 -0.8
comp=Z,4.5nm,0.8s,mb4.5
RSSD Black Hills 66.91 50 eP P 05 41 17.8 -0.9
RSSD pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
BC3 Big Chuckw Mtn 67.02 65 ⇑P P 05 41 19.5 0.0
baz=67
W13A Hualapai Mount 67.07 63 ⇓P P 05 41 19.6 -0.2
baz=67
PDMCI Parker Dam,Lak 67.43 64 ⇑P P 05 41 21.9 -0.2
baz=67
X13A Yucca 67.43 63 ⇓P P 05 41 21.8 -0.3
baz=67
W14A Seligman 67.50 62 P P 05 41 22.9 +0.4
baz=67,SNR=7.3
WB2 Warramunga Arr 67.76 200 eP P 05 41 24.3 +0.1
WRA Warramunga Arr 67.76 200 P P 05 41 24.2 0.0
WRA pmax pmax
comp=Z,9.0nm,1.0s
WRA Warramunga Arr 67.76 200 P P 05 41 24.2 0.0
comp=Z,9.1nm,0.9s,mb4.8,baz=18,slow=6.6,SNR=18
X14A Yava 68.10 63 ⇓P P 05 41 26.8 +0.4
baz=68
AGMN Agassiz Refuge 68.19 43 eP P 05 41 26.5 -0.2
Y14A Wickenburg 68.38 63 ⇑P P 05 41 27.9 -0.2
baz=68
X15A Humboldt 68.50 62 ⇓P P 05 41 29.1 +0.3
baz=68
FITZ Fitzroy Crossi 68.58 209 eP P 05 41 30.4 +1.1
comp=Z,4.2nm,0.8s,mb4.4
MVCO Mesa Verde 68.97 58 eP P 05 41 32.1 +0.3
MVCO Mesa Verde 68.97 58 ⇓P P 05 41 31.7 0.0
baz=68
NB2 NORSAR Subarra 69.51 342 P P 05 41 34.1 -0.6
comp=Z,18nm,1.7s,mb4.7,baz=26,slow=6.5
NB2 NORSAR Subarra 69.51 342 P P 05 41 34.1 -0.6
NB2 pmax pmax
comp=Z,18nm,1.7s,mb4.7
NOA NORSAR Array B 69.51 342 P P 05 41 34.5 -0.2
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA NORSAR Array B 69.51 342 P P 05 41 34.5 -0.2
comp=Z,2.0nm,0.8s,mb4.1,baz=28,slow=6.2,SNR=4.7
115A Sonoran Desert 69.68 64 ⇑P P 05 41 36.4 +0.1
baz=69
SDCO Great Sand Dun 70.37 56 eP P 05 41 40.8 +0.4
EYMN Ely 70.47 41 eP P 05 41 40.7 -0.1
216A Three Points, 70.63 64 ⇑P P 05 41 41.9 -0.2
baz=70
ASAR Alice Springs 71.44 200 P P 05 41 48.2 +1.3
ASAR pmax pmax
comp=Z,7.0nm,0.7s
ASAR Alice Springs 71.44 200 P P 05 41 48.2 +1.3
comp=Z,6.9nm,0.7s,mb4.7,baz=14,slow=6.1,SNR=39
ANMO Albuquerque 71.71 59 eP P 05 41 48.6 0.0
comp=Z,2.7nm,1.1s,mb4.1
ANMO Albuquerque 71.71 59 eP P 05 41 48.8 +0.2
318A Bisbee 71.93 63 ⇑P P 05 41 49.9 -0.1
baz=72
KIV Kislovodsk 72.14 315 eP P 05 41 52.4 +1.4
KIV pmax pmax
comp=Z,19nm,1.3s,mb4.9
319A Douglas 72.42 63 ⇓P P 05 41 53.2 +0.3
baz=72
AKASG Malin Array Be 72.90 327 P P 05 41 55.2 -0.2
AKASG Malin Array Be 72.90 327 i P P 05 41 55.2 -0.2
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 72.90 327 P P 05 41 55.2 -0.2
comp=Z,3.6nm,0.6s,mb4.5,baz=33,slow=6.2,SNR=22
KIEV Kiev 72.91 327 eP P 05 41 54.9 -0.6
comp=Z,6.6nm,0.8s,mb4.6
KIEV Kiev 72.91 327 eP P 05 41 54.9 -0.5
KIEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
SCHQ Schefferville 73.99 23 P P 05 42 01.1 -0.7
comp=Z,1.4nm,0.7s,mb4.0,baz=14,slow=7.2,SNR=6.2
ANN Anapa 74.03 319 eP P 05 42 06.3 +4.2
ANN e 05 42 20.5
ANN e 05 44 54.5
ANN pmax pmax
comp=Z,55nm,1.2s,mb5.4
KWP Kalwaria 76.17 330 eP P 05 42 14.9 +0.5
comp=Z,19nm,1.0s,mb5.0
KWP Kalwaria 76.17 330 eP P 05 42 14.9 +0.5
KWP pmax pmax
comp=Z,19nm,1.0s,mb5.0
TXAR Lajitas Array 77.32 61 P P 05 42 20.9 -0.3
TXAR pmax pmax
comp=Z,6.0nm,0.7s
TXAR Lajitas Array 77.32 61 P P 05 42 20.9 -0.3
comp=Z,5.6nm,0.7s,mb4.6,baz=303,slow=4.0,SNR=94
CLL Collm 77.78 336 i P P 05 42 23.6 +0.1
CLL i 05 42 33.0
CLL pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
CLL Collm 77.78 336 i P P 05 42 23.6 +0.1
comp=Z,5.0nm,0.6s,mb4.6
CLL i PcP PcP 05 42 33.0 -0.4
STKA Stephens Creek 78.03 191 eP P 05 42 25.2 +0.4
comp=Z,1.8nm,0.6s,mb4.2
STKA Stephens Creek 78.03 191 P P 05 42 25.5 +0.6
comp=Z,2.8nm,0.7s,mb4.3,baz=337,slow=15,SNR=5.3
KHC Kasperske Hory 79.56 335 eP P 05 42 33.0 -0.3
GRA1 Grafenberg Arr 79.74 337 eP P 05 42 34.9 +0.7
comp=Z,5.0nm,1.2s,mb4.3
GRF Grafenberg Arr 79.74 337 eP P 05 42 34.9 +0.7
GRF pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
GRF Grafenberg Arr 79.74 337 eP P 05 42 34.9 +0.7
GRF pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
GRF Grafenberg Arr 79.74 337 eP P 05 42 34.9 +0.7
comp=Z,5.0nm,1.2s,mb4.3
GERES GERESS Array B 79.78 335 P P 05 42 34.6 +0.1
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 79.78 335 P P 05 42 34.6 +0.1
comp=Z,0.9nm,0.7s,mb3.8,baz=24,slow=3.6,SNR=6.6
BAIF Baives 81.18 341 eP P 05 42 43.0 +1.0
KBA Koelnbreinsper 81.47 334 ⇑i P P 05 42 49.4 +5.8
comp=Z,6.4nm,0.8s,mb4.6
KBA Koelnbreinsper 81.47 334 ⇑i PcP PcP 05 42 49.4 -0.2
comp=Z,6.4nm,0.8s
KBA Koelnbreinsper 81.47 334 ⇑i P P 05 42 49.4 +5.8
KBA pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
CDF Champ du Feu 81.96 338 eP P 05 42 45.9 -0.2
comp=Z,7.6nm,0.8s,mb4.4
CDF Champ du Feu 81.96 338 eP P 05 42 45.9 -0.2
comp=Z,3.8nm,0.8s,mb4.4
CDF Champ du Feu 81.96 338 eP P 05 42 45.9 -0.2
CDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
HAU Haudompre 82.58 339 eP P 05 42 49.5 +0.1
HINF Hinteralfeld 82.62 339 eP P 05 42 49.7 +0.1
SWET Sewanee 82.88 46 eP P 05 42 50.0 -1.2
GRR Gorron 83.84 344 eP P 05 42 55.9 0.0
LOR Lormes 83.87 340 eP P 05 42 56.3 +0.2
comp=Z,7.0nm,0.7s,mb4.6
LOR Lormes 83.87 340 eP P 05 42 56.3 +0.2
comp=Z,3.5nm,0.7s,mb4.6
LOR Lormes 83.87 340 eP P 05 42 56.3 +0.2
LOR pmax pmax
comp=Z,4.0nm,0.7s,mb4.7
SSF Saint Saulge 84.15 340 eP P 05 42 57.7 +0.2
comp=Z,6.1nm,0.8s,mb4.5
SSF Saint Saulge 84.15 340 eP P 05 42 57.7 +0.2
comp=Z,3.0nm,0.8s,mb4.5
SSF Saint Saulge 84.15 340 eP P 05 42 57.7 +0.2
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
SGMF Saint Gilles 84.29 345 eP P 05 42 58.2 0.0
ROSF Rostrenen 84.34 345 eP P 05 42 58.5 +0.1
AVF Avril sur Loir 84.44 340 eP P 05 42 58.6 -0.4
comp=Z,7.7nm,0.9s,mb4.5
AVF Avril sur Loir 84.44 340 eP P 05 42 58.6 -0.4
comp=Z,3.8nm,0.9s,mb4.5
AVF Avril sur Loir 84.44 340 eP P 05 42 58.6 -0.4
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
SMF Signal de Mont 84.46 340 eP P 05 42 58.9 -0.2
comp=Z,19nm,1.1s,mb4.8
SMF Signal de Mont 84.46 340 eP P 05 42 58.9 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,9.4nm,1.1s,mb4.8						
SMF	Signal de Mont	84.46	340	eP	P	05 42 58.9	-0.2
SMF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
BGF	Bois d'Agland	84.78	341	eP	P	05 43 00.3	-0.4
LPL	La Plagne	84.78	338	eP	P	05 43 01.3	+0.6
	comp=Z,16nm,1.0s,mb4.8						
LPL	La Plagne	84.78	338	eP	P	05 43 01.3	+0.6
	comp=Z,8.1nm,1.0s,mb4.8						
LPL	La Plagne	84.78	338	eP	P	05 43 01.3	+0.6
LPL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
LPG	La Plagne	84.80	338	eP	P	05 43 01.6	+0.8
	comp=Z,19nm,1.0s,mb4.9						
LPG	La Plagne	84.80	338	eP	P	05 43 01.6	+0.8
	comp=Z,9.7nm,1.0s,mb4.9						
LPG	La Plagne	84.80	338	eP	P	05 43 01.6	+0.8
LPG				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
TCF	Toulx Ste Croi	85.18	341	eP	P	05 43 02.5	-0.2
MFF	Saint Martin d	85.40	343	eP	P	05 43 03.4	-0.4
MBDF	Montbardon	85.50	337	eP	P	05 43 04.9	+0.5
	comp=Z,5.8nm,0.7s,mb4.6						
MBDF	Montbardon	85.50	337	eP	P	05 43 04.9	+0.5
	comp=Z,2.9nm,0.7s,mb4.6						
MBDF	Montbardon	85.50	337	eP	P	05 43 04.9	+0.5
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
ORIF	Oris-en-Rattie	85.56	338	eP	P	05 43 05.1	+0.5
	comp=Z,8.8nm,0.7s,mb4.8						
ORIF	Oris-en-Rattie	85.56	338	eP	P	05 43 05.1	+0.5
	comp=Z,4.4nm,0.7s,mb4.8						
ORIF	Oris-en-Rattie	85.56	338	eP	P	05 43 05.1	+0.5
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
VIVF	Saint-Julien-l	85.93	339	eP	P	05 43 06.7	+0.2
RJF	Les Rejaudoux	86.27	341	eP	P	05 43 07.8	-0.3
SMRF	Simiane la Rot	86.52	338	eP	P	05 43 09.0	-0.4
	comp=Z,18nm,1.2s,mb4.9						
SMRF	Simiane la Rot	86.52	338	eP	P	05 43 09.0	-0.4
	comp=Z,18nm,1.2s,mb5.2						
CFAA	Coronel Fontan	144.38	82	PKP	PKPdf	05 50 00.2	-2.3
	comp=Z,0.7nm,0.6s,baz=279,slow=2.8,SNR=18						

ISCJB 14 05:32:19.0±0.7, 694S±007×12582E±009, h485km±10km, mb4.0/15, Error ellipse: s-maj=16.1km s-min=7.3km az=146.3
IDC 14 05:32:20.1±0.9, 702S×12571E, h486km±13km, mb3.6/7, mb1 3.6/11, mb1mx3.5/17, mbtmp3.6/11, Error ellipse: s-maj=27.4km s-min=9.6km az=73.0
NEIC 14 05:32:21.1±1.0, 700S×12587E, h500km±15km, mb4.0/11, Error ellipse: s-maj=17.3km s-min=9.9km az=67.0
ISC 14 05:32:19.8±0.7, 700S±007×12585E±009, h481km±9km, n26, σ0ˢ95/32, mb4.0/15, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	3.85	214	P	P	05 33 37.3	+1.6
	102nm,0.3s,baz=90,slow=0.9,SNR=80						
BATI				S	S	05 34 36.3	-1.2
	46nm,0.3s,baz=28,slow=2.7,SNR=9.1						
KAKA	Kakadu	8.62	132	eP	P	05 34 23.6	+1.2
	5.1nm,0.3s						
KAKA				eS	S	05 36 01.6	-1.4
FITZ	Fitzroy Crossi	11.04	181	eP	P	05 34 49.3	+1.2
	40nm,0.3s						
FITZ				eS	S	05 36 48.7	-1.6
FITZ	Fitzroy Crossi	11.04	181	P	P	05 34 49.4	+1.3
	6.7nm,0.3s,baz=15,slow=11,SNR=307						
FITZ				S	S	05 36 49.7	-0.6
	0.7nm,0.3s,baz=310,slow=23,SNR=6.4						
WRA	Warramunga Arr	15.28	148	P	P	05 35 33.9	+0.6
	1.7nm,0.3s,baz=337,slow=9.6,SNR=132						
WRA				S	S	05 38 11.9	-1.1
	0.2nm,0.3s,baz=315,slow=23,SNR=6.5						
WB2	Warramunga Arr	15.29	148	eP	P	05 35 33.7	+0.4
WB2				eS	S	05 38 09.7	-3.4
ASAR	Alice Springs	18.29	156	P	P	05 36 04.8	+1.0
	0.6nm,0.3s,baz=345,slow=14,SNR=41						
ASAR				S	S	05 39 08.3	+1.5
	0.1nm,0.3s,baz=341,slow=22,SNR=5.9						
ASAR				ScP	ScP	05 42 56.5	-3.5
	0.1nm,0.3s,baz=348,slow=2.1,SNR=6.1						
COEN	Coen	18.38	114	eP	P	05 36 04.3	-0.4
	8.0nm,0.3s						
STKA	Stephens Creek	28.79	151	eP	P	05 37 38.2	+0.5
	2.1nm,0.8s,mb3.6						
STKA	Stephens Creek	28.79	151	P	P	05 37 38.4	+0.7
	2.0nm,0.5s,mb3.8,baz=322,slow=11,SNR=6.4						
JOW	Kunigami	33.71	4	P	P	05 38 20.1	0.0
	7.6nm,0.6s,mb4.3,baz=171,slow=13,SNR=3.9						
KSRS	Korea Array	44.26	2	P	P	05 39 45.9	+0.3
	2.8nm,0.6s,mb3.9,baz=180,slow=10,SNR=8.8						
MJAR	Matsushiro Arr	44.84	14	P	P	05 39 49.2	-0.8
	1.1nm,0.4s,mb3.6,baz=192,slow=9.3,SNR=9.1						
BJT	Baijiatuau	47.63	350	eP	P	05 40 13.0	+1.7
	6.5nm,0.4s,mb4.3						
LSA	Lhasa	49.43	319	eP	P	05 40 25.9	+1.0
	7.7nm,0.7s,mb4.1						
ULN	Ulaanbaatar	57.09	345	eP	P	05 41 19.3	+0.1
	4.5nm,0.8s,mb3.9						
SONM	Songino Array	57.24	345	P	P	05 41 20.4	+0.2
	2.0nm,0.5s,mb3.7,baz=162,slow=6.2,SNR=31						
MKAR	Makanchi Array	66.03	329	P	P	05 42 17.6	-0.3
	3.4nm,0.5s,mb4.2,baz=123,slow=7.2,SNR=26						
AAK	Ala-Archa	67.93	322	eP	P	05 42 29.0	-0.8
	1.8nm,0.6s,mb3.9						
EKS2	Erkin-Say	68.39	321	eP	P	05 42 32.1	-0.5
	1.4nm,0.6s,mb3.8						
KURK	Kurchatov	70.42	330	eP	P	05 42 44.1	-0.6
	2.0nm,0.4s,mb4.0						
BRVK	Borovoye	75.98	329	eP	P	05 43 15.7	-0.8
	2.4nm,0.5s,mb4.0						
CHKZ	Chkalovo	76.14	330	eP	P	05 43 16.7	-0.7
	6.5nm,1.0s,mb4.1						
AKTK	Aktyubinsk	81.58	323	P	P	05 43 46.0	-0.5
AKTO	Aktyubinsk	81.58	323	P	P	05 43 46.0	-0.5
	2.7nm,0.5s,mb4.1,baz=108,slow=7.2,SNR=12						
SCHQ	Schefferville	131.22	10	PKP	PKPdf	05 50 36.1	-0.3
	0.9nm,0.8s,baz=40,slow=4.0,SNR=4.9						

IDC 14 05:43:02.4±6.3, 3556N×8963E, h76km±56km, mb3.3/2, mb1 3.5/4, mb1mx3.2/22, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=72.9km s-min=38.4km az=69.0, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.50	336	P	Pn	05 45 57.2	0.0
	0.1nm,0.3s,baz=150,slow=12,SNR=2.9						
SONM	Songino Array	17.48	40	P	Pn	05 47 01.1	+0.1
	0.0nm,0.3s,baz=230,slow=12,SNR=5.9						
WRA	Warramunga Arr	69.58	135	P	P	05 54 03.5	+0.1
	1.3nm,1.1s,baz=329,slow=6.3,SNR=4.9						
YKA	Yellowknife Ar	80.35	11	P	P	05 55 05.0	+0.1
	0.3nm,0.8s,baz=339,slow=5.5,SNR=7.3						

IDC 14 05:50:25.8±3.9, 345S×14948E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/12, mbtmp3.9/3, MS3.7/11, Ms1 3.7/11, ms1mx3.5/25, Error ellipse: s-maj=118.7km s-min=50.1km az=112.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.35	201	LR	LR	05 54 31.9	
	comp=Z,406nm,19.2s,baz=214,slow=39						
HNR	Honiara	11.98	120	LR	LR	05 57 14.0	
	comp=Z,307nm,19.0s,baz=0.2,slow=34						
CTA	Charters Tower	16.84	191	LR	LR	06 00 24.3	
	comp=Z,72nm,21.6s,baz=225,slow=36						
KAKA	Kakadu	19.20	240	eP	Pn	05 54 49.9	-2.3
	8.7nm,0.8s						
WB2	Warramunga Arr	22.06	221	eP	P	05 55 23.2	+0.9
WRA	Warramunga Arr	22.07	221	P	P	05 55 23.5	+1.0
	3.7nm,1.0s,baz=45,slow=9.4,SNR=16						
WRA				LR	LR	06 04 34.9	
	comp=Z,160nm,20.0s,baz=35,slow=38						
DZM	Mont Dzumac	24.78	140	LR	LR	06 04 05.8	
	comp=Z,309nm,18.2s,baz=7.0,slow=33						
ASAR	Alice Springs	25.11	215	P	P	05 55 52.4	-0.1
	0.8nm,0.8s,baz=50,slow=8.0,SNR=3.9						
FITZ	Fitzroy Crossi	27.52	236	eP	P	05 56 12.4	-1.9
	7.3nm,0.8s						
FITZ	Fitzroy Crossi	27.52	236	P	P	05 56 13.5	-0.8
	3.9nm,0.7s,baz=67,slow=9.9,SNR=11						
FITZ				LR	LR	06 07 50.2	
	comp=Z,224nm,18.1s,baz=216,slow=38						
STKA	Stephens Creek	29.23	194	LR	LR	06 09 15.3	
	comp=Z,134nm,18.6s,baz=22,slow=39						
CBIJ	Chichi jima	31.17	347	LR	LR	06 06 35.4	
	comp=Z,304nm,20.3s,baz=48,slow=31						
JOW	Kunigami	36.41	327	LR	LR	06 09 47.2	
	comp=Z,122nm,19.7s,baz=126,slow=32						
MJAR	Matsushiro Arr	41.15	346	LR	LR	06 12 30.3	
	comp=Z,132nm,20.1s,baz=190,slow=32						
URZ	Urewera	42.86	148	LR	LR	06 11 58.3	
	comp=Z,215nm,21.2s,baz=236,slow=30						
TORD	Torodi Ar. Bea	146.74	289	PKPbc	PKPbc	06 10 10.3	-0.5
	0.9nm,0.9s,baz=73,slow=3.9,SNR=4.2						

IDC 14 05:53:12.5±6.1, 4828N×15324E, h124km±66km, mb3.4/7, mb1 3.6/8, mb1mx3.3/22, mbtmp3.4/8, Error ellipse: s-maj=51.3km s-min=23.3km az=7.0
ISCJB 14 05:53:14.0±1.4, 482N±02×1531E±02, h157km±11km, mb3.6/7, Error ellipse: s-maj=35.6km s-min=12.2km az=144.9
MOS 14 05:53:15.1±1.3, 4963N×15138E, h50km, mb4.4/1, Error ellipse: s-maj=38.1km s-min=30.1km az=59.2
ISC 14 05:53:14.8±1.4, 482N±02×1532E±02, h149km±11km, n13, σ0ˢ53/14, mb3.6/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.18	36	ePN	Pn	05 54 04.5	+0.3
SKR				eS	Sn	05 54 42.5	0.0
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,210nm,0.3s						
SKR				smax			
	comp=E,140nm,0.3s						
SKR				smax			
	comp=Z,80nm,0.5s						
ASAJ	Asahikawa	8.38	245	PN	Pn	05 55 12.7	-0.4
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	8.38	245	P	Pn	05 55 12.7	-0.5
	comp=Z,1.6nm,0.3s,baz=79,slow=15,SNR=6.3						
KSRS	Korea Array	21.30	249	P	P	05 57 49.9	+0.4
	comp=Z,2.6nm,0.6s,mb3.7,baz=48,slow=9.7,SNR=8.8						
SONM	Songino Array	30.93	287	P	P	05 59 17.7	+0.5
	comp=Z,0.3nm,0.8s,mb3.1,baz=94,slow=9.0,SNR=3.1						
MKAR	Makanchi Array	46.35	296	P	P	06 01 25.6	+0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	46.35	296	P	P	06 01 25.6	+0.1
	comp=Z,0.9nm,0.4s,mb3.7,baz=64,slow=8.4,SNR=11						
ARCES	ARCESS Array B	56.54	341	P	P	06 02 40.6	-0.3
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	56.54	341	P	P	06 02 40.6	-0.4
	comp=Z,2.7nm,0.9s,mb4.1,baz=30,slow=7.3,SNR=3.4						
NVAR	Mina Array Bea	61.75	63	P	P	06 03 16.3	-0.9
	comp=Z,0.2nm,0.5s,mb3.2,baz=292,slow=7.7,SNR=3.6						
FINES	FINESS Array B	62.79	334	P	P	06 03 23.4	-0.4
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	62.79	334	P	P	06 03 23.4	-0.4
	comp=Z,0.8nm,0.3s,mb4.0,baz=42,slow=7.8,SNR=14						
TXAR	Lajitas Array	76.77	61	P	P	06 04 50.7	+1.0
	comp=Z,0.3nm,0.5s,mb3.2,baz=291,slow=4.8,SNR=6.8						

NEIC 14 06:04:50.3, 2820S×6971W, h91km, MG3.7(GUC), After GUC.
GUC 14 06:04:50.3±1.1, 2820S×6971W, h91km±21km, MD3.4, ML3.7, 6C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VACH	Vallenar	0.99	248	⇑iP	Pn	06 05 10.6	+0.6
VACH				i S	Sn	06 05 25.7	+1.0
VACH	Vallenar	0.99	248	⇑iP	Pn	06 05 10.6	+0.6
VACH				i S	Sn	06 05 25.7	+1.0
VACH				AML	AML	06 05 26.5	
	comp=N,3μm,0.2s						
CPCH	Copiapo	1.01	326	⇑iP	Pn	06 05 10.4	+0.1
CPCH				i S	Sn	06 05 25.6	+0.5
CPCH	Copiapo	1.01	326	⇑iP	Pn	06 05 10.4	+0.1
CPCH				i S	Sn	06 05 25.6	+0.5
CPCH				AML	AML	06 05 27.4	
	comp=E,6μm,0.1s						
LCO	Las Campanas	1.19	227	ePg	Pn	06 05 12.7	+0.5
LCO				eSg	Sn	06 05 29.2	+0.5
CDCH	Caldera	1.50	318	⇓iP	Pn	06 05 16.7	+0.6
CDCH				i S	Sn	06 05 35.7	+0.1
TLL	Tololo Astrono	2.18	206	⇑iP	Pn	06 05 26.1	+1.2
TLL				i S	Sn	06 05 52.5	+1.2
TLL	Tololo Astrono	2.18	206	⇑iP	Pn	06 05 26.1	+1.2
TLL				i S	Sn	06 05 52.5	+1.2
TLL				AML	AML	06 05 58.5	
	comp=N,221nm,0.5s						

IDC 14 06:08:59.6±4.2, 368S×14964E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/12, mbtmp3.8/5, MS4.5/1, Ms1 4.5/1, ms1mx3.3/19, Error ellipse: s-maj=134.3km s-min=25.2km az=105.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	19.23	241	eP	Pn	06 13 24.9	-1.5
	11nm,0.8s						
WB2	Warramunga Arr	21.99	221	eP	P	06 13 55.9	+0.4
WRA	Warramunga Arr	22.00	222	P	P	06 13 55.6	+0.1
	3.3nm,0.8s,baz=45,slow=9.3,SNR=44						
ASAR	Alice Springs	25.02	216	P	P	06 14 25.1	-0.4
	1.1nm,0.8s,baz=47,slow=7.7,SNR=14						
FITZ	Fitzroy Crossi	27.53	237	eP	P	06 14 50.2	+2.0
	6.2nm,0.6s						
FITZ	Fitzroy Crossi	27.53	237	P	P	06 14 48.3	+0.1
	3.8nm,0.7s,baz=67,slow=9.2,SNR=12						
JOW	Kunigami	36.69	327	LR	LR	06 28 48.9	
	comp=Z,851nm,22.0s,baz=137,slow=32						
SONM	Songino Array	63.72	329	P	P	06 19 32.5	-0.6
	0.4nm,0.7s,baz=165,slow=6.0,SNR=3.7						
MKAR	Makanchi Array	77.42	319	P	P	06 20 57.3	+0.6
	0.1nm,0.2s,baz=110,slow=5.4,SNR=4.4						
TORD	Torodi Ar. Bea	146.97	288	PKPbc	PKPbc	06 28 45.1	-0.2
	0.9nm,0.8s,baz=72,slow=2.3,SNR=5.5						

ISCJB 14 06:10:12.3±3.1, 34S±0.1×1490E±02, h45km±24km, mb4.2/8, MS4.5/7, Error ellipse: s-maj=26.6km s-min=16.4km az=163.6
IDC 14 06:10:13.7±4.5, 340S×14926E, h48km±45km, mb4.0/8, mb1 4.2/9, mb1mx4.0/15, mbtmp4.0/9, MS4.6/8, Ms1 4.6/8, ms1mx4.2/23, Error ellipse: s-maj=30.0km s-min=24.3km az=88.0
GCMT 14 06:10:16.0±0.2, 345S×14942E, h13km±1km, MW5.2/90, Moment Tensor Solution. s49,c69; s90,c155; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.47±.15; Mθθ2.48±.15; Mφφ-2.95±.17; Mrθ0.09±.35; Mθφ6.65±.15; Mφr-0.23±.35; Best double couple: M0 7.18700×10^16 NP1:φs281.00000°, δ88.00000°, λ-1.00000°. NP2: φs11.00000°, δ89.00000°, λ-178.00000°. Principal axes: T 6.9480, Plg1.0000°, Azm146.0000°; N 0.4730, Plg88.0000°, Azm39.0000°; P -7.4250, Plg2.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
ISC 14 06:10:14.0±2.8, 34S±01×1491E±01, h48km±23km, n20, σ1ˢ18/14, mb4.2/8, MS4.5/7, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.30	198	P	Pn	06 11 46.3	+1.9
	baz=20,slow=17,SNR=2.3						
PMG				LR	LR	06 14 23.7	
	comp=Z,4μm,18.6s,baz=20,slow=40						
KAKA	Kakadu	18.95	240	eP	Pn	06 14 28.9	-3.5
	29nm,0.8s						
WB2	Warramunga Arr	21.89	220	eP	P	06 15 02.7	-0.5
WRA	Warramunga Arr	21.90	220	P	P	06 15 02.3	-1.0
	9.6nm,0.8s,mb4.3,baz=47,slow=10,SNR=13						
WRA				LR	LR	06 24 16.9	
	comp=Z,1μm,19.2s,MS4.4,baz=50,slow=38						
ASAR	Alice Springs	24.97	215	P	P	06 15 34.0	+0.7
	8.1nm,1.0s,mb4.2,baz=48,slow=8.6,SNR=9.5						
DZM	Mont Dzumac	25.04	139	P	P	06 15 31.8	-2.1
	7.8nm,0.8s,mb4.3,baz=319,slow=18,SNR=4.9						
DZM				LR	LR	06 24 08.4	
	comp=Z,2μm,19.0s,MS4.6,baz=117,slow=34						
FITZ	Fitzroy Crossi	27.28	236	eP	P	06 15 54.8	+0.6
	30nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	27.28	236	P	P	06 15 54.7	+0.5
	16nm,0.7s,mb4.6,baz=71,slow=10,SNR=17						
FITZ				LR	LR	06 27 51.4	
	comp=Z,2μm,18.6s,MS4.6,baz=38,slow=39						
STKA	Stephens Creek	29.22	193	LR	LR	06 28 56.5	
	comp=Z,860nm,18.5s,MS4.4,baz=12,slow=38						
CBIJ	Chichi jima	31.03	348	LR	LR	06 27 10.2	
	comp=Z,1μm,22.0s,MS4.6,baz=185,slow=33						
JNU	Nakatsue	40.21	336	P	P	06 17 44.6	-1.4
	7.1nm,0.8s,mb4.4,baz=116,slow=3.8,SNR=3.9						
NWAO	Narrogin (SRO)	41.89	222	LR	LR	06 36 12.1	
	comp=Z,1μm,21.3s,MS4.7,baz=36,slow=37						
URZ	Urewera	43.09	147	LR	LR	06 32 45.3	
	comp=Z,729nm,21.4s,MS4.5,baz=212,slow=31						
PPT	Papeete	61.63	108	eS	S	06 28 46.6	0.0
	318nm,24.2s						
PPT				eLR	LR	06 38 48.6	
	242nm,26.5s						
TBI	Tubuai	62.46	114	eS	S	06 28 57.9	+0.9
	197nm,29.2s						
TBI				eLR	LR	06 39 08.5	
	444nm,30.8s						
SONM	Songino Array	63.22	329	P	P	06 20 38.0	+0.6
	0.9nm,0.7s,mb4.0,baz=137,slow=5.4,SNR=6.3						
RKT	Rikitea	75.70	113	eLR	LR	06 45 16.9	
	511nm,36.0s						
MKAR	Makanchi Array	76.88	320	P	P	06 22 01.9	+0.7
	1.1nm,1.0s,mb3.8,baz=99,slow=7.5,SNR=6.6						
YKA	Yellowknife Ar	95.87	28	P	P	06 23 36.2	+0.9
	0.4nm,0.8s,mb3.9,baz=275,slow=4.7,SNR=6.9						
TORD	Torodi Ar. Bea	146.40	289	PKPbc	PKPbc	06 29 49.6	-1.2
	2.9nm,0.8s,baz=67,slow=1.3,SNR=11						

IDC 14 06:23:05.0±4.7, 450S×14884E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.8/12, mbtmp3.9/5, Error ellipse: s-maj=150.0km s-min=24.5km az=105.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.86	221	P	P	06 27 49.4	+0.7
	3.0nm,0.9s,baz=41,slow=11,SNR=11						
ASAR	Alice Springs	23.89	216	P	P	06 28 20.0	-0.6
	1.1nm,0.8s,baz=50,slow=8.3,SNR=7.7						
FITZ	Fitzroy Crossi	26.41	237	P	P	06 28 43.5	0.0
	2.1nm,0.9s,baz=108,slow=11,SNR=4.5						
SONM	Songino Array	64.02	330	P	P	06 33 40.7	+0.3
	2.5nm,0.7s,baz=164,slow=9.6,SNR=12						
MKAR	Makanchi Array	77.53	320	P	P	06 35 02.8	0.0
	0.7nm,0.3s,baz=119,slow=8.2,SNR=19						
TORD	Torodi Ar. Bea	146.45	287	PKPbc	PKPbc	06 42 48.8	-0.5
	0.9nm,1.0s,baz=79,slow=2.3,SNR=3.6						

IDC 14 06:25:24.0±1.0, 349S×14953E, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.0/13, mbtmp4.0/7, MS4.3/16, Ms1 4.3/16, ms1mx4.2/19, Error ellipse: s-maj=28.0km s-min=15.7km az=119.0
ISCJB 14 06:25:28.0±3.0, 327S±0.10×1497E±0.1, h36km±24km, mb3.9/7, MS4.4/14, Error ellipse: s-maj=25.8km s-min=15.2km az=163.0
GCMT 14 06:25:29.9±0.1, 347S×14940E, h14km±1km, MW5.2/95, Moment Tensor Solution. s54,c77; s95,c162; Duration: 1ˢ0 Moment tensor: Scale 10^16Nm; Mrr0.12±.16; Mθθ2.18±.14; Mφφ-2.30±.16; Mrθ0.08±.30; Mθφ7.58±.15; Mφr0.30±.29; Best double couple: M0 7.91000×10^16 NP1:φs98.00000°, δ88.00000°, λ0.00000°. NP2: φs8.00000°, δ90.00000°, λ178.00000°. Principal axes: T 7.8520, Plg2.0000°, Azm323.0000°; N 0.1180, Plg88.0000°, Azm180.0000°; P -7.9690, Plg1.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
NEIC 14 06:25:29.8±0.7, 329S×14967E, h35km, mb4.8/2 Error ellipse: s-maj=21.5km s-min=12.5km az=94.0
ISC 14 06:25:31.6±2.1, 34S±01×1497E±01, h53km±17km, n31, σ1ˢ03/23, mb3.9/7, MS4.4/14, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.48	203	Pn	Pn	06 27 03.5	-1.0
PMG				Sn	Sn	06 28 21.5	+4.4
PMG	Port Moresby	6.48	203	Pn	Pn	06 27 03.5	-1.0
	0.7nm,0.3s,baz=205,slow=15,SNR=2.5						
PMG				Sn	Sn	06 28 21.5	+4.4
	0.1nm,0.3s,baz=96,slow=19,SNR=2.5						
PMG				LR	LR	06 28 52.7	
	comp=Z,913nm,20.0s,baz=16,slow=33						
CTA	Charters Tower	16.93	191	Pn	Pn	06 29 25.8	+0.8
CTA	Charters Tower	16.93	191	Pn	Pn	06 29 25.8	+0.8
	0.4nm,0.3s,baz=14,slow=10.0,SNR=3.0						
CTA				LR	LR	06 35 37.6	
	comp=Z,409nm,19.0s,baz=12,slow=36						
KAKA	Kakadu	19.41	241	eP	Pn	06 29 48.0	-7.2
	31nm,0.7s						
WB2	Warramunga Arr	22.24	221	eP	P	06 30 23.6	-0.4
WRA	Warramunga Arr	22.24	221	P	P	06 30 19.8	-4.3
WRA				S	S	06 34 26.6	+0.5
WRA	Warramunga Arr	22.24	221	P	P	06 30 19.8	-4.3
	12nm,1.0s,mb4.3,baz=43,slow=10,SNR=19						
WRA				S	S	06 34 26.6	+0.5
	0.4nm,1.0s,baz=46,slow=15,SNR=3.4						
WRA				LR	LR	06 39 39.2	
	comp=Z,1μm,20.1s,MS4.3,baz=50,slow=39						
DZM	Mont Dzumac	24.69	140	P	P	06 30 47.6	-0.3
	3.3nm,0.6s,mb4.1,baz=144,slow=22,SNR=19						
ASAR	Alice Springs	25.28	216	P	P	06 30 49.6	-3.5
	2.9nm,0.8s,mb3.8,baz=43,slow=8.8,SNR=6.0						
ARMA	Armidale	26.95	176	eP	P	06 31 10.3	+2.1
FITZ	Fitzroy Crossi	27.72	236	eP	P	06 31 16.3	+1.0
	15nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	27.72	236	P	P	06 31 13.9	-1.4
	10.0nm,0.9s,mb4.4,baz=32,slow=4.4,SNR=7.1						
FITZ				LR	LR	06 43 13.9	
	comp=Z,1μm,18.4s,MS4.5,baz=37,slow=39						
STKA	Stephens Creek	29.34	194	LR	LR	06 44 09.0	
	comp=Z,785nm,19.6s,MS4.3,baz=12,slow=38						
CBIJ	Chichi jima	31.16	347	LR	LR	06 43 04.5	
	comp=Z,660nm,19.2s,MS4.3,baz=186,slow=34						
JOW	Kunigami	36.48	327	LR	LR	06 44 11.2	
	comp=Z,781nm,20.8s,MS4.5,baz=55,slow=31						
JHJ	Hachijo jima 2	37.50	346	LR	LR	06 45 17.3	
	comp=Z,714nm,19.9s,MS4.5,baz=66,slow=32						
AFI	Afiamalu	39.44	108	LR	LR	06 46 08.1	
	comp=Z,290nm,21.1s,MS4.1,baz=269,slow=31						
JNU	Nakatsue	40.44	335	LR	LR	06 48 13.7	
	comp=Z,379nm,21.4s,MS4.2,baz=319,slow=34						
MJAR	Matsushiro Arr	41.15	346	LR	LR	06 48 52.3	
	comp=Z,274nm,18.4s,MS4.2,baz=165,slow=34						
KSRS	Korea Array	45.39	336	LR	LR	06 49 13.3	
	comp=Z,330nm,21.8s,MS4.2,baz=142,slow=32						
PPT	Papeete	61.11	108	eS	S	06 43 55.8	-0.9
	498nm,27.2s						
PPT				eLQ		06 51 14.0	
	2μm,33.8s						
PPT				eLR	LR	06 53 52.7	
	272nm,24.8s						
PPT	Papeete	61.11	108	LR	LR	06 57 57.5	
	comp=Z,160nm,19.0s,MS4.2,baz=98,slow=32						
TBI	Tubuai	61.97	115	eS	S	06 44 06.5	-0.8
	211nm,32.5s						
TBI				eLR	LR	06 54 06.7	
	702nm,30.0s						
SONM	Songino Array	63.50	329	P	P	06 35 56.4	+0.1
	0.3nm,0.7s,mb3.5,baz=141,slow=6.5,SNR=3.4						
SONM				LR	LR	07 03 33.6	
	comp=Z,254nm,18.1s,MS4.4,baz=160,slow=36						
RKT	Rikitea	75.20	113	eLR	LR	07 00 23.8	
	359nm,26.2s						
MKAR	Makanchi Array	77.23	319	P	P	06 37 19.9	-0.3
	0.4nm,0.7s,mb3.4,baz=113,slow=8.0,SNR=3.9						
MKAR				LR	LR	07 09 14.7	
	comp=Z,223nm,20.0s,MS4.5,baz=103,slow=34						
MAW	Mawson	85.67	203	LR	LR	07 13 29.1	
	comp=Z,391nm,20.1s,MS4.8,baz=77,slow=34						
YKA	Yellowknife Ar	95.63	28	P	P	06 38 51.9	+0.8
YKA	Yellowknife Ar	95.63	28	P	P	06 38 51.9	+0.8
	0.2nm,0.7s,mb3.6,baz=262,slow=4.6,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TORD	**Torodi Ar. Bea**	**146.91**	**289**	PKPbc	PKPbc	06 45 08.2	-1.1
	2.5nm,0.9s,baz=51,slow=3.9,SNR=6.1						

MAN 14 06:26:50, 1372N×12051E, h98km, mb3.9, ML2.6, MS2.2, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.25**	**274**	*e*P	Pn	06 27 06.5	+2.4
LUBP				*e*S	Sn	06 27 17.4	+2.7
TGY	**Tagaytay City**	**0.57**	**47**⇓	*e*P	Pn	06 27 11.1	+5.1
TGY				*i* S	Sn	06 27 24.4	+6.3
BOAC	**Boac**	**1.32**	**101**	*e*P	Pn	06 27 15.2	+1.2
POLP	**Polilio Island**	**1.71**	**54**	*e*P	Pn	06 27 20.5	+1.7
BUSP	**Coron**	**1.73**	**190**	*e*P	Pn	06 27 20.4	+1.4
OTRP	**Odiongan**	**2.00**	**132**	*e*P	Pn	06 27 23.4	+0.9
BALP	**Baler**	**2.26**	**27**	*e*P	Pn	06 27 27.3	+1.4
ENPP	**El Nido**	**2.71**	**203**	*e*P	Pn	06 27 33.8	+1.9
BOLP	**Bolinao**	**2.71**	**348**	*e*P	Pn	06 27 32.9	+1.0
CUYO	**Cuyo Island**	**2.89**	**170**	*e*P	Pn	06 27 35.2	+0.9

*NEIC **14** 06:32:42.7, 1592N×9856W, h10km, MD3.9(MEX), After MEX.*

MEX 14 06:32:42.8±0.6**, 1592N×9856W, h11**km±12km**, MD3.9, 1C, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.62**	**41**⇑	*i*P	Pg	06 32 53.5	-1.5
PNIG				*i* S	Sg	06 33 02.0	-1.1
ACX	**Acapulco**	**1.61**	**306**	*i* P	Pn	06 33 07.5	-3.6
CAIG	**El Cayaco**	**1.99**	**305**	*e*P	Pn	06 33 13.4	-2.9
CAIG				*i* S	Sn	06 33 37.2	-4.0
MEIG	**Mezcala**	**2.24**	**333**	*e*P	Pn	06 33 17.3	-2.5
MEIG				*i* S	Sn	06 33 42.3	-5.1
HUIG	**Huatulco**	**2.36**	**93**	*e*P	Pn	06 33 17.7	-3.8
HUIG				*i* S	Sn	06 33 46.2	-4.3
PLIG	**Platanillo**	**2.62**	**340**	*e*P	Pn	06 33 22.6	-2.4
PLIG				*i* S	Sn	06 33 52.0	-4.8
TPIG	**Tehuac#an**	**2.73**	**25**	*e*P	Pn	06 33 23.4	-3.2
TPIG				*i* S	Sn	06 33 57.5	-2.1
YAIG	**Yautepec**	**2.96**	**351**	*e*P	Pn	06 33 28.6	-1.2
YAIG				*i* S	Sn	06 34 02.4	-2.9
PPM	**Popocatepetl**	**3.13**	**359**	*i* P	Pn	06 33 30.2	-1.8
PPM				*i* S	Sn	06 34 06.5	-2.9
SZVM	**Salazar**	**3.47**	**347**	*i* P	Pn	06 33 34.9	-1.9
SZVM				*i* S	Sn	06 34 13.1	-4.8
CMIG	**Matias Romero**	**3.71**	**71**	*i* P	Pn	06 33 38.1	-1.9
CMIG				*i* S	Sn	06 34 22.4	-1.4
LVIG	**Laguna Verde**	**4.29**	**28**	*e*P	Pn	06 33 58.0	+10
LVIG				*i* S	Sn	06 34 34.7	-3.5

*IDC **14** 06:54:44.6±0.7, 12.16N×14366E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, MS3.8/2, Ms1 3.8/2, ms1mx3.1/32, Error ellipse: s-maj=27.0km s-min=16.2km az=89.0*
*BJI **14** 06:54:44.2, 1221N×14458E, h40km, mb4.3*
*NEIC **14** 06:54:45.8±0.4, 12.19N×14366E, h10km, Error ellipse: s-maj=15.6km s-min=9.4km az=99.0*
*ISCJB **14** 06:54:47.6±0.5, 12.16N±008×1437E±01, h33km, mb4.2/11, MS3.7/2, Error ellipse: s-maj=15.6km s-min=8.6km az=30.1*

ISC 14 06:54:49.6±0.5**, 1217N**±008×**1437E**±01**, h35**km**, n24, σ0§83**/22**, mb4.2**/11**, MS3.7**/2**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.80**	**38**	*e*Pn	**Pn**	**06 55 17.2**	**-0.9**
GUMO				*e*Sn	**Sn**	**06 55 39.9**	**+0.2**
GUMO	**Guam**	**1.80**	**38**	Pn	**Pn**	**06 55 17.3**	**-0.8**
	168nm,0.3s,baz=184,slow=6.8,SNR=98						
GUMO				Sn	**Sn**	**06 55 39.6**	**-0.2**
	205nm,0.3s,baz=34,slow=22,SNR=4.6						
MJAR	**Matsushiro Arr**	**24.77**	**349**	LR	LR	07 08 08.8	
	comp=Z,227nm,21.8s,MS3.6,baz=180,slow=32						
WRA	**Warramunga Arr**	**33.22**	**196**	P	**P**	**07 01 22.9**	**-0.5**
	1.9nm,0.7s,mb4.1,baz=19,slow=9.6,SNR=10						
FITZ	**Fitzroy Crossi**	**34.98**	**211**	LR	LR	07 14 29.7	
	comp=Z,172nm,20.9s,MS3.8,baz=228,slow=34						
ASAR	**Alice Springs**	**36.89**	**195**	P	**P**	**07 01 55.5**	**+0.5**
	0.7nm,0.9s,mb3.5,baz=358,slow=5.9,SNR=5.7						
DZM	**Mont Dzumac**	**40.68**	**147**	P	**P**	**07 02 26.9**	**+0.1**
	18nm,0.8s,mb4.7,baz=340,slow=5.7,SNR=11						
STKA	**Stephens Creek**	**43.84**	**183**	P	**P**	**07 02 51.9**	**-0.6**
	3.1nm,0.9s,mb4.0,baz=353,slow=11,SNR=4.1						
SONM	**Songino Array**	**47.26**	**326**	P	**P**	**07 03 19.9**	**+0.6**
	0.8nm,0.7s,mb3.8,baz=138,slow=6.4,SNR=6.6						
GTA	**Gaotai**	**47.29**	**313**	*e*P	**P**	**07 03 20.3**	**+0.6**
GTA				AMB	AMB		
	comp=Z,2.0nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**61.74**	**317**	P	**P**	**07 05 05.4**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.3,baz=94,slow=8.6,SNR=19						
KURK	**Kurchatov**	**64.95**	**320**	*e*P	**P**	**07 05 24.6**	**-1.1**
INK	**Inuvik**	**76.09**	**22**	*e*P	**P**	**07 06 32.9**	**-0.5**
WRAK	**Wrangell Islan**	**76.61**	**35**	*e*P	**P**	**07 06 37.8**	**+1.4**
YKA	**Yellowknife Ar**	**84.62**	**27**	P	**P**	**07 07 19.5**	**+0.3**
	comp=Z,1.3nm,0.6s,mb4.2,baz=290,slow=5.4,SNR=23						
RES	**Resolute Bay**	**86.18**	**13**	*e*P	**P**	**07 07 26.1**	**-0.7**
ARCES	**ARCESS Array B**	**88.08**	**342**	P	**P**	**07 07 35.8**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.7,baz=79,slow=8.0,SNR=7.5						
NVAR	**Mina Array Bea**	**88.67**	**51**	P	**P**	**07 07 41.4**	**+1.8**
	comp=Z,0.8nm,0.6s,mb4.2,baz=266,slow=4.0,SNR=9.5						
JOF	**Joensuu**	**89.10**	**335**	*e*p	**P**	**07 07 37.3**	**-3.8**
KAF	**Kangasniemi**	**91.53**	**335**	*e*p	**P**	**07 07 47.6**	**-4.8**
	baz=57,slow=4.4						
FINES	**FINESS Array B**	**91.96**	**335**	P	**P**	**07 07 53.5**	**-0.9**
FINES	**FINESS Array B**	**91.96**	**335**	P	**P**	**07 07 53.5**	**-0.9**
	comp=Z,1.8nm,0.7s,mb4.5,baz=90,slow=6.7,SNR=7.7						
LPAZ	**La Paz**	**148.88**	**101**	PKPbc	PKPbc	07 14 37.0	+2.4
LPAZ	**La Paz**	**148.88**	**101**	PKPbc	PKPbc	07 14 37.0	+2.4
	comp=Z,2.0nm,0.8s,baz=289,slow=6.3,SNR=8.5						

CASC 14 07:25:19.2±3.1**, 1279N×8855W, h37**km±999km**, MD3.8, ML3.3, 4C-8D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.69**	**23**⇓	*i*P	x	07 25 44.3	
VSM				*e*S	x	07 25 54.5	
BLLM	**Bellamira**	**0.72**	**25**⇓	*e*P	x	07 25 44.5	
BLLM				*e*S	x	07 25 54.6	
LCBS	**La Ceiba**	**0.96**	**334**⇓	*i*P	x	07 25 47.4	
LCBS				*e*S	x	07 25 59.9	
LFRS	**El Faro**	**0.97**	**329**⇓	*e*P	x	07 25 47.5	
LFRS				*e*S	x	07 26 02.8	
CAHU	**Cacacuatique**	**1.03**	**19**⇓	*e*P	x	07 25 48.7	
CAHU				*e*S	x	07 26 03.8	
LBRS	**Las Brisas**	**1.06**	**333**⇑	*e*P	x	07 25 49.0	
LBRS				*e*S	x	07 26 01.7	
LFU	**La Fuente**	**1.10**	**330**⇓	*e*P	x	07 25 49.5	
LFU				*e*S	x	07 26 03.5	
SNET	**Serv Nac Est T**	**1.11**	**324**	*e*P	x	07 25 38.4	
SNET				*e*S	x	07 25 52.7	
BOQS	**Boqueron**	**1.18**	**323**⇑	*e*P	x	07 25 50.6	
BOQS				*e*S	x	07 26 05.6	
SBLS	**San Blas**	**1.48**	**315**	*e*P	x	07 25 55.6	
SBLS				*e*S	x	07 26 14.1	
SNJE	**San Jose**	**1.48**	**316**	*e*P	x	07 25 55.2	
SNJE				*e*S	x	07 26 13.6	
RTR	**El Retiro**	**1.53**	**316**	*e*P	x	07 25 56.2	
RTR				*e*S	x	07 26 14.6	
TEL3	**Telica 3**	**1.68**	**97**⇑	*e*P	Pn	07 25 46.7	+0.6
TEL3				*e*S	Sn	07 26 06.8	+0.4
TELN	**Telica**	**1.69**	**96**⇑	*e*P	Pn	07 25 46.8	+0.5
TELN				*e*S	Sn	07 26 07.8	+1.1
TGUH	**Tegucigalpa,Un**	**1.77**	**44**	*e*P	Pn	07 25 48.6	+1.2
TGUH				*e*S	Sn	07 26 09.9	+1.2
MTO2	**Montecristo 2**	**1.79**	**334**⇓	*i*P	x	07 25 59.2	
MTO2				*e*S	x	07 26 20.7	
MOMJ	**Momotombo**	**2.00**	**101**	*e*P	Pn	07 25 50.8	+0.3
MOMJ				*e*S	Sn	07 26 15.6	+1.3
COPN	**Copaltepe**	**2.01**	**107**	*e*P	Pn	07 25 50.7	+0.1
COPN				*e*S	Sn	07 26 14.1	-0.4
XAVN	**Gruta Xavier**	**2.27**	**106**	*e*P	Pn	07 25 54.2	+0.1
XAVN				*e*S	Sn	07 26 21.4	+0.6
MGAN	**Managua**	**2.34**	**106**	*e*P	Pn	07 25 55.2	0.0
MGAN				*e*S	Sn	07 26 22.0	-0.7
MGAN				*i*		07 26 24.4	
	comp=N,206nm,0.4s						
HUEN		**2.37**	**101**	*e*P	Pn	07 25 56.5	+0.9
HUEN				*e*S	Sn	07 26 23.7	+0.3
TICN	**Ticuantepe**	**2.39**	**108**	*e*P	Pn	07 25 56.1	+0.3
TICN				*e*S	Sn	07 26 23.7	-0.2
APON	**Apoyo**	**2.58**	**109**	*e*P	Pn	07 25 58.1	-0.4
APON				*e*S	Sn	07 26 29.9	+1.2
CHI2		**16.72**	**118**⇓	*e*P		07 25 43.1	

IDC 14 07:45:48.1±4.2**, 1927S×17800W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.8**/14**, mbtmp4.2**/3**, Error ellipse: s-maj=261.2km s-min=37.6km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.78**	**261**	P	P	07 54 04.6	+0.7
	1.4nm,0.3s,baz=96,slow=7.5,SNR=114						
ASAR	**Alice Springs**	**44.81**	**256**	P	P	07 54 03.9	-0.2
	2.3nm,0.5s,baz=94,slow=8.0,SNR=42						
FITZ	**Fitzroy Crossi**	**53.20**	**261**	P	P	07 55 07.6	-0.9
	1.0nm,0.4s,baz=71,slow=2.5,SNR=7.5						
ARCES	**ARCESS Array B**	**127.71**	**350**	PKP	PKPdf	08 04 53.9	-0.9
	2.2nm,1.0s,baz=8.1,slow=1.5,SNR=11						
AKASG	**Malin Array Be**	**141.93**	**332**	PKP	PKPdf	08 05 17.5	-4.4
	1.3nm,0.4s,baz=42,slow=4.1,SNR=14						
GERES	**GERESS Array B**	**149.02**	**345**	PKPbc	PKPbc	08 05 38.7	+0.6
	0.5nm,0.5s,baz=17,slow=1.4,SNR=4.7						

*IDC **14** 07:49:27.2±1.9, 361S×14976E, h0km, mb4.0/6, mb1 4.2/6, mb1mx4.1/12, mbtmp4.0/6, MS3.5/1, Ms1 3.5/1, ms1mx2.8/16, Error ellipse: s-maj=68.2km s-min=22.5km az=113.0*
*NEIC **14** 07:49:29.9±2.9, 354S×14949E, h10km, Error ellipse: s-maj=80.2km s-min=18.9km az=106.0*
*ISCJB **14** 07:49:31.6±1.5, 35S±02×1494E±03, h33km, mb3.9/6, Error ellipse: s-maj=49.8km s-min=16.8km az=26.6*

ISC 14 07:49:33.3±1.5**, 36S**±02×**1495E**±03**, h35**km**, n11, σ1§04**/9**, mb3.9**/6**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.71**	**191**	LR	LR	07 59 47.2	
	comp=Z,140nm,18.4s,baz=208,slow=37						
KAKA	**Kakadu**	**19.15**	**241**	*e*P	**Pn**	**07 53 53.0**	**-1.9**
	20nm,0.8s						
WB2	**Warramunga Arr**	**21.97**	**221**	*e*P	**P**	**07 54 25.1**	**+0.8**
WRA	**Warramunga Arr**	**21.98**	**221**	P	**P**	**07 54 23.9**	**-0.5**
	3.3nm,0.7s,mb3.9,baz=44,slow=9.8,SNR=34						
ASAR	**Alice Springs**	**25.01**	**216**	P	**P**	**07 54 53.8**	**-0.3**
	2.0nm,0.7s,mb3.8,baz=49,slow=7.8,SNR=21						
FITZ	**Fitzroy Crossi**	**27.46**	**237**	*e*P	**P**	**07 55 18.3**	**+2.0**
	12nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**27.46**	**237**	P	**P**	**07 55 18.5**	**+2.2**
	7.0nm,0.7s,mb4.3,baz=75,slow=8.0,SNR=13						
SONM	**Songino Array**	**63.57**	**329**	P	**P**	**08 00 00.7**	**+0.4**
	0.9nm,0.6s,mb4.0,baz=147,slow=6.2,SNR=8.2						
MKAR	**Makanchi Array**	**77.25**	**320**	P	**P**	**08 01 24.1**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=100,slow=9.1,SNR=4.1						
YKA	**Yellowknife Ar**	**95.89**	**28**	P	**P**	**08 02 55.4**	**-0.6**
	0.5nm,0.7s,mb4.0,baz=272,slow=4.7,SNR=7.6						
TORD	**Torodi Ar. Bea**	**146.80**	**289**	PKPbc	PKPbc	08 09 12.4	-0.4
	1.9nm,0.9s,baz=76,slow=3.4,SNR=8.2						

*IDC **14** 07:54:01.3±3.5, 356S×14957E, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/12, mbtmp4.0/4, MS3.9/5, Ms1 3.9/5, ms1mx3.4/19, Error ellipse: s-maj=109.5km s-min=28.6km az=105.0*
*NEIC **14** 07:54:02.3±1.3, 362S×14959E, h10km, mb4.8/3, Error ellipse: s-maj=49.2km s-min=13.9km az=118.0*
*ISCJB **14** 07:54:04.4±1.6, 36S±02×1494E±04, h33km, mb4.0/4, MS3.8/4, Error ellipse: s-maj=56.9km s-min=17.2km az=28.0*

ISC 14 07:54:06.5±1.6**, 36S**±02×**1495E**±03**, h35**km**, n13, σ0§88**/8**, mb4.0**/4**, MS3.8**/4**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.19**	**202**	LR	LR	07 58 16.6	
	comp=Z,781nm,18.1s,baz=13,slow=41						
KAKA	**Kakadu**	**19.10**	**241**	*e*P	**Pn**	**07 58 26.4**	**-1.1**
	23nm,0.8s						
WB2	**Warramunga Arr**	**21.92**	**221**	*e*P	**P**	**07 58 56.7**	**-0.2**
WRA	**Warramunga Arr**	**21.93**	**221**	P	**P**	**07 58 56.6**	**-0.4**
	5.7nm,1.0s,mb4.0,baz=44,slow=10,SNR=29						
WRA				LR	LR	08 08 11.0	
	comp=Z,194nm,20.0s,MS3.5,baz=35,slow=39						
DZM	**Mont Dzumac**	**24.66**	**139**	LR	LR	08 08 00.2	
	comp=Z,356nm,18.4s,MS3.9,baz=213,slow=34						
ASAR	**Alice Springs**	**24.96**	**216**	P	**P**	**07 59 27.1**	**+0.2**
	3.6nm,0.9s,mb3.9,baz=51,slow=8.1,SNR=19						
FITZ	**Fitzroy Crossi**	**27.41**	**237**	*e*P	**P**	**07 59 50.8**	**+1.8**
	10nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**27.41**	**237**	P	**P**	**07 59 51.4**	**+2.4**
	5.5nm,0.7s,mb4.2,baz=78,slow=9.0,SNR=17						
FITZ				LR	LR	08 11 36.3	
	comp=Z,251nm,19.2s,MS3.8,baz=211,slow=38						
MJAR	**Matsushiro Arr**	**41.31**	**346**	LR	LR	08 15 45.4	
	comp=Z,149nm,20.8s,MS3.8,baz=185,slow=32						
SONM	**Songino Array**	**63.58**	**329**	P	**P**	**08 04 33.8**	**+0.2**
	0.4nm,0.7s,mb3.6,baz=148,slow=6.0,SNR=4.4						
TNA	**Tin City**	**75.61**	**17**	*e*P	**P**	**08 05 47.0**	**-0.5**
	21µm,1.2s						
ISCO	**Idaho Springs**	**103.77**	**50**	*e*Pdif	Pdif	08 08 05.4	+0.7
	1.9nm,0.3s						
TORD	**Torodi Ar. Bea**	**146.77**	**289**	PKPbc	PKPbc	08 13 45.9	0.0
	1.0nm,0.7s,baz=57,slow=3.7,SNR=6.9						

*NIED **14** 08:35:00, 4530N×151.10E, h8km, Mw4.4 Best double couple: M0 3.79000×10^15 NP1:φs239.00000°, δ20.00000°, λ139.00000°. NP2:φs9.00000°, δ77.00000°, λ75.00000°.*
*NEIC **14** 08:35:47.3±0.3, 4538N×15098E, h10km, mb4.8/44, Error ellipse: s-maj=7.6km s-min=4.3km az=150.0*
*BJI **14** 08:35:48.0, 4535N×15123E, h36km, mB4.8, mb4.8, Ms4.3, Msz4.1*
*ISCJB **14** 08:35:49.1±0.5, 4526N±003×15104E±004, h36km±4km, mb4.7/90, MS4.0/13, Error ellipse: s-maj=6.4km s-min=3.5km az=147.2*
*SKHL **14** 08:35:49.0±1.8, 4526N×151.11E, h49km±13km, mb5.0/6, Ms4.2/3, msh5.9/1*
*MOS **14** 08:35:49.5±0.8, 4530N×15108E, h38km, mb4.8/43, Error ellipse: s-maj=8.7km s-min=5.4km az=104.3*
*JMA **14** 08:35:50.3±0.5, 4533N×15107E, h30km, M5.0*
*IDC **14** 08:35:52.0±0.5, 4545N×15096E, h44km±5km, mb4.0/17, mb1 4.2/20, mb1mx4.1/24, mbtmp4.0/20, ML4.3/3, MS3.8/7, Ms1 3.8/7, ms1mx3.4/38, Error ellipse: s-maj=16.4km s-min=11.3km az=139.0*
*SZGRF **14** 08:35:54.8, 4650N×15150E, h33km, mb4.9, Kuril Islands, Russia*

ISC 14 08:35:51.4±0.5**, 4521N**±003×**15107E**±004**, h45**km±3km**, h45**km±1.9km**:pP-P, n299, σ1§04**/332**, mb4.7**/90**, MS4.0**/14**, 21C-17D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.27**	**272**	*e*PN	**Pn**	**08 36 24.0**	**-2.3**
KUR				*e*S	**Sn**	**08 36 51.6**	**-1.4**
KUR				pmax	pmax		
	comp=N,570nm,0.5s						
KUR				pmax	pmax		
	comp=E,300nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1µm,0.5s						
KUR				smax			
	comp=N,3µm,0.5s						
KUR				smax			
	comp=E,1µm,0.5s						
KUR				smax			
	comp=N,8µm,1.5s						
KUR				smax			
	comp=E,2µm,1.5s						
KUR	**Kuril'sk**	**2.27**	**272**	*e*P	**Pn**	**08 36 24.0**	**-2.3**
KUR				AMB	AMB	08 36 26.0	
	comp=E,570nm,0.5s						
KUR				AMB	AMB	08 36 26.0	
	comp=E,300nm,0.5s						
KUR				AMB	AMB	08 36 26.0	
	comp=E,1µm,0.5s						
KUR				*e*S	**Sn**	**08 36 51.6**	**-1.4**
KUR				A		08 36 56.2	
	comp=E,3µm,0.5s						
KUR				A		08 36 56.2	
	comp=E,1µm,0.5s						
KUR				A		08 36 56.4	
	comp=E,8µm,1.5s						
KUR				A		08 36 56.4	
	comp=E,2µm,1.5s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**254**	*e*PN	**Pn**	**08 36 50.3**	**+1.6**
YUK				*e*S	**Sn**	**08 37 35.0**	**+1.8**
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=N,2µm,2.0s						
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				pmax	pmax		
	comp=E,350nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1µm,0.4s						
YUK				smax			
	comp=N,5µm,2.0s						
YUK				smax			
	comp=E,5µm,1.0s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**254**	*e*P	**Pn**	**08 36 50.3**	**+1.6**
YUK				AMB	AMB	08 36 52.5	
	comp=E,2µm,2.0s						
YUK				AMB	AMB	08 36 52.5	
	comp=E,2µm,1.0s						
YUK				AMB	AMB	08 36 53.0	
	comp=E,1µm,0.4s						
YUK				AMB	AMB	08 36 53.0	
	comp=E,350nm,0.4s						
YUK				*e*S	**Sn**	**08 37 35.0**	**+1.8**
YUK				A		08 37 42.5	
	comp=E,5µm,1.0s						
YUK				A		08 37 42.5	
	comp=E,5µm,2.0s						
YUK				A		08 37 47.0	
	comp=E,2µm,0.5s						
YUK				A		08 37 47.0	
	comp=E,2µm,0.5s						
NEM2	**Nemuro 2**	**4.25**	**246**	P	**Pn**	**08 36 52.9**	**-0.6**
NEM2				*e*S	**Sn**	**08 37 39.2**	**-2.5**
JRA	**Rausu**	**4.44**	**255**	P	**Pn**	**08 36 57.7**	**+1.6**
JRA				*e*S	**Sn**	**08 37 48.0**	**+1.6**
JNK	**Nakash**	**4.83**	**253**	P	**Pn**	**08 37 02.5**	**+1.0**
JAK	**Akkeshi**	**5.09**	**247**	P	**Pn**	**08 37 04.5**	**-0.6**
JAK				*e*S	**Sn**	**08 37 59.9**	**-2.7**
JTKR	**Abashiri--Toko**	**5.26**	**259**	P	**Pn**	**08 37 09.1**	**+1.7**
JAR	**Ashorobuto**	**5.58**	**253**	P	**Pn**	**08 37 13.0**	**+1.2**
JAR				*e*S	**Sn**	**08 38 14.7**	**+0.1**
JMP	**Maruseppu**	**5.63**	**260**	P	**Pn**	**08 37 14.5**	**+2.0**
JOB	**Onbets**	**5.70**	**249**	P	**Pn**	**08 37 13.5**	**+0.1**
JOB				*e*S	**Sn**	**08 38 15.7**	**-1.8**
JSE	**Soyaes**	**6.01**	**271**	P	**Pn**	**08 37 19.6**	**+1.9**
YSS	**Yuzh-Sakhalins**	**6.04**	**290**	*e*Pn	**Pn**	**08 37 17.6**	**-0.5**
YSS	**Yuzh-Sakhalins**	**6.04**	**290**	*e*PN	**Pn**	**08 37 19.8**	**+1.7**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.04**	**290**	*e*P	**Pn**	**08 37 19.8**	**+1.7**
YSS				AMB	AMB	08 37 21.0	
	comp=Z,30nm,0.6s						
YSS				*e*S	**Sn**	**08 38 25.0**	**-0.9**
YSS				*e*LQ		08 38 56.0	
YSS				*e*LR	LR	08 39 16.0	
YSS				AMS	AMS	08 39 37.0	
	comp=Z,800nm,16.0s						
YSS				AMS	AMS	08 39 37.0	
	comp=Z,600nm,16.0s						
JKK2	**Kamakawa 2**	**6.10**	**260**	P	**Pn**	**08 37 20.9**	**+2.0**
JCH	**Churui**	**6.14**	**248**	P	**Pn**	**08 37 19.2**	**-0.3**
JCH				*e*S	**Sn**	**08 38 26.0**	**-2.4**
ASAJ	**Asahikawa**	**6.14**	**263**	P	**Pn**	**08 37 22.0**	**+2.5**
ASAJ	**Asahikawa**	**6.14**	**263**	PN	**Pn**	**08 37 21.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,565nm,21.4s						
ASAJ	**Asahikawa**	**6.14**	**263**	P	**Pn**	**08 37 21.4**	**+2.0**
	comp=Z,8.7nm,0.3s,baz=83,slow=11,SNR=22						
ASAJ				LR	LR	08 39 46.0	
	comp=Z,565nm,21.4s,baz=174,slow=38						
JFR	**Furan**	**6.43**	**254**	P	**Pn**	**08 37 25.6**	**+2.2**
SKR	**Severo-Kuril's**	**6.44**	**30**	*e*P	**Pn**	**08 37 23.0**	**-0.6**
SKR				*e*S	**Sn**	**08 38 34.5**	**-1.2**
SKR				A		08 38 39.0	
	comp=Z,80nm,0.5s						
SKR				A		08 38 39.0	
	comp=Z,220nm,1.0s						
JWK2	**Keihoku**	**6.48**	**274**	P	**Pn**	**08 37 28.1**	**+4.0**
JAB	**Ashibetsu**	**6.57**	**258**	P	**Pn**	**08 37 28.5**	**+3.2**
JEM	**Erimo**	**6.57**	**244**	P	**Pn**	**08 37 26.5**	**+1.1**
JNBK	**Urakawa-nobuka**	**6.70**	**247**	P	**Pn**	**08 37 26.5**	**-0.6**
JBT2	**Biratori 2**	**6.73**	**252**	P	**Pn**	**08 37 27.8**	**+0.2**
JBT2				*e*S	**Sn**	**08 38 43.9**	**+1.0**
JHR	**Hokuryu**	**6.84**	**261**	P	**Pn**	**08 37 32.5**	**+3.4**
UGL	**Uglegorsk**	**7.26**	**305**	*e*P	**Pn**	**08 37 36.8**	**+2.0**
UGL				AMB	AMB	08 37 38.5	
	comp=Z,60nm,0.7s						
UGL				*e*L		08 39 44.0	
UGL				AMS	AMS	08 40 34.0	
	comp=Z,500nm,16.0s						
UGL				AMS	AMS	08 40 34.0	
	comp=Z,1µm,16.0s						
JEW	**Eniwo**	**7.33**	**255**	P	**Pn**	**08 37 37.2**	**+1.4**
JNB	**Noboribetsu**	**7.75**	**253**	P	**Pn**	**08 37 42.1**	**+0.5**
JNB				*e*S	**Sn**	**08 39 06.1**	**-1.9**
TYV	**Tymovskoe**	**7.99**	**318**	*e*P	**Pn**	**08 37 45.5**	**+0.8**
TYV				AMB	AMB	08 37 51.0	
	comp=Z,18nm,0.8s						
TYV				AMB	AMB	08 37 51.0	
	comp=Z,19nm,0.8s						
TYV				AMB	AMB	08 37 51.0	
	comp=Z,24nm,0.8s						
TYV				*e*S	**Sn**	**08 39 12.2**	**-1.4**
TYV				A		08 39 18.8	
	comp=Z,18nm,0.8s						
TYV				A		08 39 18.8	
	comp=Z,24nm,0.8s						
TYV				AMS	AMS	08 40 54.0	
	comp=Z,700nm,18.0s						
TYV				AMS	AMS	08 40 54.0	
	comp=Z,600nm,18.0s						
JKB	**Kayabe**	**8.01**	**249**	P	**Pn**	**08 37 44.9**	**-0.2**
JKB				*e*S	**Sn**	**08 39 09.0**	**-5.3**
JYM2	**Yakumo 2**	**8.35**	**252**	P	**Pn**	**08 37 49.7**	**-0.1**
JANG	**Nango**	**8.52**	**239**	P	**Pn**	**08 37 49.7**	**-2.5**
JANG				*e*S	**Sn**	**08 39 19.3**	**-7.6**
JTM	**Tenmabayashi**	**8.56**	**242**	P	**Pn**	**08 37 51.4**	**-1.2**
JTM				*e*S	**Sn**	**08 39 20.4**	**-7.3**
JSR	**Shiriuchi**	**8.59**	**248**	P	**Pn**	**08 37 52.6**	**-0.4**
JTH	**Tanohata**	**8.59**	**235**	P	**Pn**	**08 37 50.1**	**-3.0**
JTH				*e*S	**Sn**	**08 39 20.1**	**-8.5**
JOSM	**Okushiri--Mats**	**8.97**	**254**	P	**Pn**	**08 37 58.0**	**-0.2**
PET	**Petropavlovsk**	**9.27**	**30**	Pn	**Pn**	**08 38 01.1**	**-1.1**
PET				*e*Sn	**Sn**	**08 39 40.6**	**-4.3**
PET	**Petropavlovsk**	**9.27**	**30**	*e*PN	**Pn**	**08 38 01.3**	**-0.9**
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
OFUJ	**Ofunato**	**9.28**	**232**	P	**Pn**	**08 38 00.3**	**-2.3**
OFUJ				*e*S	**Sn**	**08 39 37.4**	**-8.2**
JRG	**Rokugo**	**9.66**	**237**	P	**Pn**	**08 38 06.3**	**-1.5**
JRG				*e*S	**Sn**	**08 39 48.2**	**-6.7**
OKH	**Okha**	**9.89**	**331**	*e*P	**Pn**	**08 38 12.0**	**+1.3**
OKH				AMB	AMB	08 38 15.0	
	comp=Z,100nm,0.9s						
OKH				*e*S	**Sn**	**08 40 02.1**	**+1.9**
OKH				*e*LQ		08 41 14.0	
OKH				AMS	AMS	08 43 22.0	
	comp=Z,1µm,10.0s						
OKH				AMS	AMS	08 43 22.0	
	comp=Z,900nm,11.0s						
OKH				AMS	AMS	08 43 22.0	
	comp=Z,900nm,11.0s						

JIO Ouri 9.90 230 P **Pn** **08 38 08.8 -2.2**
JIO *e*S **Sn** **08 39 50.2 -11**
HABR Khabarovsk 11.45 292 *e*PN **Pn** **08 38 33.2 +1.1**
MAJO Matsushiro 13.01 233 *e*Pn **Pn** **08 38 53.2 -0.3**
MAT Matsushiro 13.01 233 P **Pn** **08 38 52.1 -1.4**
MAT *e*S **Sn** **08 41 20.8 +4.0**
MJAR Matsushiro Arr 13.01 233 PN **Pn** **08 38 51.6 -1.9**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 13.01 233 P **Pn** **08 38 51.6 -1.9**
comp=Z,0.5nm,0.3s,baz=32,slow=14,SNR=6.9
KLR Kul'dur 13.73 294 *e*P **Pn** **08 39 03.7 +0.5**
MDJ Mudanjiang 15.23 275 P **Pn** **08 39 22.9 -0.3**
MDJ S **S** **08 42 10.4 -15**
MDJ AMB AMB
comp=Z,18nm,0.9s
MDJ AMB AMB
comp=Z,88nm,5.5s
MDJ LR LR
comp=N,119nm,17.8s
MDJ LR LR
comp=E,103nm,21.1s
MDJ LR LR
comp=Z,176nm,20.6s
SMY Shemya 16.84 55 *e*Pn **Pn** **08 39 43.3 -0.4**
ZEA Zeya 17.61 308 *e*P **Pn** **08 39 49.1 -4.1**
ZEA AMB AMB 08 39 53.1
comp=Z,23nm,1.0s
CN2 Changchun 18.31 275 *e*P **Pn** **08 40 00.5 -1.4**
CN2 *e*AP pP 08 40 10.0 -2.2
CN2 *e*S **S** **08 43 19.0 -9.5**
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,190nm,4.0s
CN2 LR LR
comp=N,330nm,19.0s
CN2 LR LR
comp=E,310nm,19.0s
CN2 LR LR
comp=Z,370nm,21.0s
KSRS Korea Array 18.99 254 P **Pn** **08 40 09.4 -0.6**
comp=Z,0.6nm,0.3s,baz=62,slow=11,SNR=17
KSRS LR LR 08 47 30.6
comp=Z,109nm,18.7s,baz=55,slow=37
JNU Nakatsue 19.71 239 P **Pn** **08 40 18.9 +0.2**
comp=Z,0.5nm,0.3s,baz=15,slow=9.0,SNR=5.3
JNU LR LR 08 48 13.2
comp=Z,110nm,19.2s,baz=40,slow=38
CLNS Chul'man 20.02 315 *e*P pP 08 40 30.2 -0.6
CLNS *e*S **S** **08 44 08.2 +5.6**
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS pmax pmax
comp=Z,16nm,0.7s
CLNS pmax pmax
comp=E,8.0nm,0.8s
CLNS pmax pmax
comp=Z,8.0nm,0.9s
CLNS pmax pmax
comp=N,5.0nm,0.8s
CLNS pmax pmax
comp=E,3.0nm,0.9s
CLNS smax
comp=N,108nm,12.8s
CLNS smax
comp=Z,55nm,11.1s
CLNS smax
comp=E,123nm,13.4s
CLNS MLR MLR
comp=Z,100nm,13.0s
CLNS MLR MLR
comp=N,200nm,14.0s,MS3.8
CLNS MLR MLR
comp=E,200nm,14.0s,MS3.8
YAK Yakutsk 20.92 331 *e*P **P** **08 40 28.6 -1.3**
comp=E,38nm,0.6s
YAK Yakutsk 20.92 331⇓ *e*P **P** **08 40 29.7 -0.1**
YAK pmax pmax
comp=Z,49nm,1.0s
YAK MLR MLR
comp=Z,200nm,25.0s
BILL Bilibino 24.23 14 *e*P **P** **08 41 02.4 -1.1**
BILL Bilibino 24.23 14 *e*P **P** **08 41 04.0 +0.5**
BILL *e* 08 41 23.2
BILL pmax pmax
comp=Z,2.0nm,0.8s,mb3.6
BOD Bodaibo 25.93 312 *e*P **P** **08 41 16.3 -2.8**
BOD pmax pmax
comp=Z,2.0nm,1.5s
BJI Beijing 26.06 271 P **P** **08 41 20.6 +0.2**
BJI XP sP 08 41 36.1 -1.4
BJI S **S** **08 45 49.1 +0.8**
BJI AMB AMB
comp=Z,18nm,1.0s,mb4.6
BJI LR LR
comp=N,125nm,13.5s,MS4.0
BJI LR LR
comp=E,245nm,13.5s,MS4.0
BJI LR LR
comp=Z,102nm,16.1s,MS3.5
BJT Baijiatuan 26.07 271 *e*P **P** **08 41 20.2 -0.3**
comp=Z,11nm,0.7s,mb4.5
BJT Baijiatuan 26.07 271 *e*P **P** **08 41 20.3 -0.3**
BJT pmax pmax
comp=Z,11nm,0.7s
NJ2 Nanjing 28.19 253 *e*P **P** **08 41 42.6 +3.0**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
TIXI Tiksi 28.58 346 *e*P **P** **08 41 42.4 -0.3**
TIXI Tiksi 28.58 346 *i* P **P** **08 41 41.7 -1.0**
TIXI MLR MLR
comp=Z,100nm,17.0s,MS3.5
HHC Hu-ho-hao-te 29.00 276 *e*P **P** **08 41 47.3 +0.5**
HHC AP pP 08 41 58.8 +0.2
HHC XP sP 08 42 04.6 +0.7
HHC PP PP 08 42 40.3 -12
HHC PCP PcP 08 44 56.6 +2.3
HHC S **S** **08 46 32.5 -2.2**
HHC XS sS 08 46 52.3 -2.3
HHC SS SS 08 48 00.8 -38
HHC SCS ScS 08 52 24.6 -1.3
HHC AMB AMB
comp=Z,26nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,75nm,3.8s
HHC LR LR
comp=N,74nm,14.2s,MS4.0
HHC LR LR
comp=E,279nm,15.3s,MS4.0
HHC LR LR
comp=Z,318nm,14.2s,MS4.1
ULN Ulaanbaatar 30.09 291 *e*P **P** **08 41 56.9 +0.6**
ULN Ulaanbaatar 30.09 291 *i* P **P** **08 41 58.3 +1.9**
SONM Songino Array 30.53 291 P **P** **08 42 00.9 +0.7**
SONM 08 44 58.7
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM pmax pmax
comp=Z,1.0nm,0.6s
SONM MLR MLR
comp=Z,121nm,19.1s
SONM Songino Array 30.53 291 P **P** **08 42 00.9 +0.7**
comp=Z,1.3nm,0.5s,mb4.0,baz=72,slow=9.5,SNR=9.3
SONM PcP PcP 08 44 58.7 +0.6
comp=Z,0.5nm,0.6s,baz=88,slow=2.4,SNR=3.4
SONM pPcP 08 45 11.3
comp=Z,0.8nm,0.6s,baz=104,slow=3.3,SNR=4.2
SONM LR LR 08 55 19.0
comp=Z,121nm,19.1s,MS3.6,baz=62,slow=38
TLY Talaya 31.65 299 *e*P **P** **08 42 10.4 +0.3**
XAN Xi'an 33.97 266 P **P** **08 42 30.3 -0.2**
XAN AP pP 08 42 36.9 -5.6
XAN AMB AMB
comp=Z,4.0nm,0.8s,mb4.4
IMA2 Indian Mountai 35.89 35 *e*P **P** **08 42 46.9 +0.3**
LZH Lanzhou 36.52 272 *e*P **P** **08 42 53.5 +1.1**
LZH AP pP 08 43 04.5 +0.1
LZH XP sP 08 43 08.5 -1.2
LZH PP PP 08 44 18.0 +2.0
LZH PCP PcP 08 45 17.5 +2.2
LZH *e*S **S** **08 48 31.1 -0.4**
LZH XS sS 08 48 55.0 +3.4
LZH SCP ScP 08 48 58.0 0.0
LZH PCS PcS 08 49 02.1 -1.0
LZH SS SS 08 50 55.0 -17
LZH AMB AMB
comp=Z,41nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,150nm,5.0s
LZH LR LR
comp=E,1μm,15.8s
LZH LR LR
comp=Z,2μm,16.3s,MS5.0
GTA Gaotai 37.82 280 *e*P **P** **08 43 04.0 +0.6**
GTA AP pP 08 43 16.3 +0.9
GTA XP sP 08 43 21.8 +1.1
GTA PP PP 08 44 33.5 +3.3
GTA PCP PcP 08 45 21.0 +1.9
GTA S **S** **08 48 49.0 -2.1**
GTA XS sS 08 49 08.8 -2.5
GTA SCS ScS 08 53 10.5 -1.3
GTA AMB AMB
comp=Z,11nm,1.0s,mb4.5
GTA AMB AMB
comp=Z,56nm,9.7s
GTA LR LR
comp=N,85nm,8.4s
GTA LR LR
comp=E,128nm,11.0s
GTA LR LR
comp=Z,165nm,13.7s,MS4.0
COLA College 38.23 37 *e*P **P** **08 43 06.8 +0.3**
comp=Z,5.2nm,0.9s,mb4.3
COLA College 38.23 37 *i* P **P** **08 43 06.8 +0.3**
CD2 Chengdu 39.33 265 *e*P **P** **08 43 16.6 +0.4**
CD2 AP pP 08 43 28.8 +0.5
CD2 XP sP 08 43 34.3 +0.8
CD2 PP PP 08 44 51.5 +4.6
CD2 S **S** **08 49 13.5 -0.7**
CD2 XS sS 08 49 34.0 -0.4
CD2 SS SS 08 52 00.3 -8.6
CD2 AMB AMB
comp=Z,40nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,160nm,5.8s
CD2 LR LR
comp=E,530nm,15.6s
CD2 LR LR
comp=Z,180nm,12.2s,MS4.1
GYA Guiyang 39.99 257 P **P** **08 43 23.4 +1.7**
GYA AP pP 08 43 36.3 +2.5
GYA XP sP 08 43 41.5 +2.5
GYA PP PP 08 44 59.9 +5.8
GYA PCP PcP 08 45 29.0 +2.8
GYA SCP ScP 08 49 12.9 +1.5
GYA S **S** **08 49 25.4 +1.3**
GYA XS sS 08 49 46.6 +2.3
GYA SS SS 08 52 16.8 -5.3
GYA SCS ScS 08 53 24.5 -0.3
GYA AMB AMB
comp=Z,20nm,0.8s,mb4.9
GYA AMB AMB
comp=Z,120nm,4.7s
GYA LR LR
comp=N,440nm,18.8s,MS4.5
GYA LR LR
comp=E,490nm,17.6s,MS4.5
GYA LR LR
comp=Z,470nm,19.4s,MS4.3
QIZ Qiongzhong 42.93 246 P **P** **08 43 44.3 -1.5**
QIZ S **S** **08 50 01.6 -6.1**
QIZ AMB AMB
comp=Z,130nm,3.5s
QIZ LR LR
comp=Z,169nm,15.3s,MS4.0
KMI Kunming 43.56 259 P **P** **08 43 51.5 +0.6**
KMI AP pP 08 44 04.6 +1.5
KMI XP sP 08 44 09.0 +0.7
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb4.4
KMI LR LR
comp=Z,36nm,20.4s
INK Inuvik 43.72 31 *e*P **P** **08 43 52.1 +0.5**
INK Inuvik 43.72 31 P **P** **08 43 52.1 +0.5**
INK pmax pmax
comp=Z,4.0nm,0.8s
INK Inuvik 43.72 31 P **P** **08 43 52.1 +0.5**
comp=Z,3.6nm,0.8s,mb4.2,baz=278,slow=6.1,SNR=28
WMQ Urumqi 44.17 292 ⇑P **P** **08 43 57.8 +2.3**
WMQ AP pP 08 44 10.0 +2.2
WMQ XP sP 08 44 15.3 +2.3
WMQ PP PP 08 45 42.3 +3.5
WMQ *e*S **S** **08 50 25.9 +0.6**
WMQ AMB AMB
comp=Z,8.0nm,0.5s,mb4.7
WMQ AMB AMB
comp=Z,19nm,4.5s
WMQ LR LR
comp=N,101nm,20.0s,MS4.0
WMQ LR LR
comp=E,139nm,21.5s,MS4.0
WMQ LR LR
comp=Z,92nm,17.1s,MS3.8
MKAR Makanchi Array 46.39 298 *i* P **P** **08 44 12.3 -0.8**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 46.39 298 P **P** **08 44 12.3 -0.8**
comp=Z,3.5nm,0.7s,mb4.4,baz=74,slow=7.9,SNR=35
MKAR PcP PcP 08 45 47.8 +0.4
comp=Z,1.3nm,0.6s,baz=48,slow=0.9,SNR=6.5
MKAR pPcP 08 45 59.8
comp=Z,1.6nm,0.6s,baz=73,slow=3.8,SNR=6.3
MKAR LR LR 09 04 50.3
comp=Z,183nm,18.2s,MS4.1,baz=12,slow=38
LSA Lhasa 48.94 273 P **P** **08 44 35.8 +2.7**
LSA AMB AMB
comp=Z,20nm,0.9s,mb5.2
LSA Lhasa 48.94 273 *e*P **P** **08 44 35.3 +2.2**
comp=Z,6.4nm,0.6s,mb4.8
LSA *e*pP pP 08 44 45.5 0.0
LSA Lhasa 48.94 273 *e*P **P** **08 44 35.3 +2.2**
LSA *e**PP pP 08 44 45.5 +0.1
LSA pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
CHKZ Chkalovo 50.34 310 *e*P **P** **08 44 41.4 -2.0**
CHTO Chiang Mai 50.37 256 P **P** **08 44 45.0 +0.9**
BRVK Borovoye 50.79 310 P **P** **08 44 44.5 -2.3**
SHL Shillong 50.90 268 *e*P **P** **08 44 48.0 0.0**
RES Resolute Bay 52.75 18 *e*P **P** **08 45 01.3 +0.1**
TAPN Taplejung 52.76 273 *e*P **P** **08 45 03.2 +1.3**
comp=Z,21nm,0.7s,mb5.2
YKW3 Yellowknife Ar 52.98 35 *e*P **P** **08 45 03.0 +0.1**
YKA Yellowknife Ar 53.01 35 P **P** **08 45 03.3 +0.1**
YKA *PP pP 08 45 14.3 -1.4
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA pmax pmax
comp=N,2.0nm,0.6s
YKA Yellowknife Ar 53.01 35 P **P** **08 45 03.3 +0.1**
comp=N,1.1nm,0.7s,mb3.9,baz=300,slow=7.0,SNR=26
YKA pP pP 08 45 14.3 -1.4
comp=N,1.5nm,0.6s,baz=299,slow=7.1,SNR=12
AAK Ala-Archa 53.24 296 *e*P **P** **08 45 04.7 -0.5**
comp=N,5.0nm,0.8s,mb4.5
AAK Ala-Archa 53.24 296 *e*P **P** **08 45 04.7 -0.5**
AAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
ODAN Odare 53.28 273 *e*P **P** **08 45 06.6 +0.9**
comp=Z,20nm,0.7s,mb5.1
JIRN Jiri 53.65 274 *e*P **P** **08 45 09.7 +1.3**
comp=Z,25nm,0.5s,mb5.4
EKS2 Erkin-Say 53.68 297 *e*P **P** **08 45 08.2 -0.3**
comp=Z,4.6nm,0.7s,mb4.5
AML Almayashu 54.01 296 *e*P **P** **08 45 11.0 +0.1**
comp=Z,3.9nm,0.8s,mb4.4
KKN Kakani 54.21 275 *e*P **P** **08 45 14.0 +1.5**
comp=Z,38nm,0.7s,mb5.4
GKN Gorkha 54.53 276 *e*P **P** **08 45 15.8 +1.0**
comp=Z,17nm,0.4s,mb5.5
ARU Arti 55.19 317*c i*P **P** **08 45 19.4 +0.3**
ARU 08 47 22.4
ARU S **S** **08 52 57.2 -1.6**
ARU SS SS 08 56 39.2 -3.5
ARU pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
KEV Kevo 58.32 340 *ep* **P** **08 45 38.2 -2.9**
comp=Z,2.7nm,0.6s,mb4.5
KEV Kevo 58.32 340 *e*P **P** **08 45 38.2 -2.9**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
EDM Edmonton 58.41 45 *e*P **P** **08 45 42.4 +0.3**
AKTO Aktyubinsk 58.69 312 LR LR 09 13 09.2
comp=Z,131nm,20.3s,MS4.0,baz=76,slow=38
ARCES ARCESS Array B 58.84 340 P **P** **08 45 43.6 -1.2**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
ARCES ARCESS Array B 58.84 340 P **P** **08 45 43.5 -1.2**
comp=Z,1.2nm,0.6s,mb4.1,baz=43,slow=7.5,SNR=8.4
KBL Kabul 61.31 291 *e*P **P** **08 46 01.6 -0.6**
comp=Z,25nm,0.9s,mb5.3
JOF Joensuu 62.08 333 *ep* **P** **08 46 04.3 -2.7**
comp=Z,2.5nm,0.5s,mb4.6
JOF Joensuu 62.08 333 *e*P **P** **08 46 04.3 -2.7**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
FCC Fort Churchill 63.33 32 *e*P **P** **08 46 14.8 -0.6**
comp=Z,4.3nm,0.5s,mb4.8
FCC *e* pP 08 46 24.7 -3.5
FCC Fort Churchill 63.33 32 *e*P **P** **08 46 14.8 -0.5**
FCC *e* pP 08 46 24.7 -3.4
FCC pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
KAF Kangasniemi 64.24 335 *ep* **P** **08 46 18.6 -2.6**
baz=38,slow=6.1
NVAR Mina Array Bea 64.42 61 P **P** **08 46 23.9 +1.0**
comp=Z,0.2nm,0.4s,mb3.5,baz=305,slow=8.5,SNR=3.0
NVAR pP pP 08 46 37.3 +1.6
comp=Z,0.5nm,0.7s,baz=300,slow=5.9,SNR=3.7
FINES FINESS Array B 64.82 334 P **P** **08 46 22.5 -2.6**
FINES FINESS Array B 64.82 334 *i* P **P** **08 46 23.3 -1.8**
FINES pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 64.82 334 P **P** **08 46 22.5 -2.5**
comp=Z,2.8nm,0.7s,mb4.4,baz=39,slow=7.3,SNR=18
OBN Obninsk 65.77 325 *e*P **P** **08 46 31.0 -0.3**
OBN *e* 08 48 54.9
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
LAO LASA Array 66.05 47 *e*P **P** **08 46 33.6 +0.3**
WRA Warramunga Arr 66.60 197 P **P** **08 46 38.1 +1.1**
WRA *PP pP 08 46 51.5 +1.7
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA pmax pmax
comp=N,3.0nm,0.6s
WRA Warramunga Arr 66.60 197 P **P** **08 46 38.1 +1.2**
comp=N,3.7nm,0.9s,mb4.4,baz=16,slow=6.8,SNR=24
WRA pP pP 08 46 51.5 +1.7
comp=N,2.6nm,0.6s,baz=14,slow=6.5,SNR=7.5
PDAR Pinedale Array 66.81 52 P **P** **08 46 38.9 +0.6**
comp=N,1.1nm,0.9s,mb3.9,baz=286,slow=2.6,SNR=8.6
ULM Lac du Bonnet 68.62 39 P **P** **08 46 48.6 -0.8**
comp=N,0.7nm,0.6s,mb3.7,baz=293,slow=4.9,SNR=4.9
RWWY Rawlins 68.83 52 *e*P **P** **08 46 50.9 0.0**
comp=N,20nm,0.7s,mb5.2
RWWY *e*pP pP 08 47 03.9 +0.1
NB2 NORSAR Subarra 69.22 340 P **P** **08 46 51.8 -1.2**
comp=Z,2.7nm,0.7s,mb4.3,baz=28,slow=6.2
NB2 NORSAR Subarra 69.22 340 P **P** **08 46 51.8 -1.2**
NB2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
NOA NORSAR Array B 69.22 340 P **P** **08 46 52.0 -1.0**
NOA pmax pmax
comp=Z,5.0nm,0.7s
NOA NORSAR Array B 69.22 340 P **P** **08 46 52.0 -1.0**
comp=Z,4.7nm,0.7s,mb4.5,baz=30,slow=6.3,SNR=10.0
AGMN Agassiz Refuge 70.03 41 *e*P **P** **08 46 58.2 0.0**
ASAR Alice Springs 70.31 197 P **P** **08 47 02.3 +2.3**
ASAR *PP pP 08 47 15.6 +2.6
ASAR pmax pmax
comp=Z,2.0nm,0.8s
ASAR pmax pmax
comp=N,2.0nm,0.8s
ASAR Alice Springs 70.31 197 P **P** **08 47 02.2 +2.2**
comp=N,2.3nm,0.8s,mb4.2,baz=13,slow=5.7,SNR=28
ASAR pP pP 08 47 15.6 +2.6
comp=N,1.5nm,0.8s,baz=9.3,slow=6.1,SNR=5.0
KIV Kislovodsk 70.84 313 *e*P **P** **08 47 03.6 +0.4**
comp=N,21nm,0.8s,mb5.1
KIV *e* pP 08 47 15.0 -1.2
KIV Kislovodsk 70.84 313 *e*P **P** **08 47 03.7 +0.4**
KIV *e* pP 08 47 15.0 -1.2
KIV pmax pmax
comp=Z,21nm,0.8s,mb5.1
AKASG Malin Array Be 72.02 325 *i* P **P** **08 47 09.1 -1.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 72.02 325 P **P** **08 47 09.2 -1.1**
comp=Z,1.7nm,0.4s,mb4.3,baz=35,slow=6.0,SNR=8.9
ANN Anapa 72.85 317 *e*P **P** **08 47 12.9 -2.4**
ANN *e* pP 08 47 29.0 +0.7
ANN *e* 08 49 54.6
ANN *e*S S 08 56 33.5 -4.4
ANN pmax pmax
comp=Z,37nm,0.8s,mb5.4
SCHQ Schefferville 75.28 22 P **P** **08 47 28.4 -0.8**
comp=Z,2.6nm,0.7s,mb4.3,baz=299,slow=8.4,SNR=9.2
KWP Kalwaria 75.40 328 *e*P **P** **08 47 29.9 -0.2**
comp=Z,30nm,1.0s,mb5.2
KWP Kalwaria 75.40 328⇓ *i*P **P** **08 47 30.8 +0.7**
OJC Ojcow 75.97 330 *e*P **P** **08 47 32.8 -0.5**
BURAR Bucovina Array 76.08 326 ⇑P **P** **08 47 33.8 -0.1**
BURAR Bucovina Array 76.08 326⇑ *i*P **P** **08 47 33.8 -0.1**
STHS Stebnicka Huta 76.12 329 *e*P **P** **08 47 35.1 +0.9**
comp=Z,7.2nm,0.7s,mb4.7
STHS *e* pP 08 47 49.3 +2.1
STHS Stebnicka Huta 76.12 329 *e*P **P** **08 47 35.1 +0.9**
STHS *e* pP 08 47 49.3 +2.1
STHS pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
KOLS Kolonicke sedl 76.14 328 *e*P **P** **08 47 34.2 -0.1**
KOLS *e*PCP PcP 08 47 51.6 +5.3
CRVS Cervenica-Dubn 76.47 328 *e*P **P** **08 47 36.1 0.0**
CRVS *e* 08 47 54.7
CRVS Cervenica-Dubn 76.47 328 *e*P **P** **08 47 36.0 -0.1**
CRVS *e*PCP PcP 08 47 54.7 +7.0
TRPA Tarpa 76.70 327⇓ *i*P **P** **08 47 38.0 +0.5**
UPC Upice 77.01 332 *e*P **P** **08 47 39.2 0.0**
DPC Dobruska-Polom 77.04 332 *e*P **P** **08 47 39.6 +0.2**
MORC Moravsky Berou 77.12 331 *e*P **P** **08 47 39.9 +0.1**
comp=Z,13nm,0.9s,mb4.8
MORC Moravsky Berou 77.12 331⇓ *i*P **P** **08 47 40.3 +0.5**
MALT Malatya 77.14 312 *e*P **P** **08 47 40.4 +0.2**
comp=Z,6.1nm,0.8s,mb4.6
MALT Malatya 77.14 312⇓ *i*P **P** **08 47 41.5 +1.4**
KECS Kecovo 77.17 329 *e*P **P** **08 47 39.9 -0.2**
comp=Z,3.9nm,1.0s,mb4.3
KECS *e* 08 47 58.2
KECS Kecovo 77.17 329 *e*P **P** **08 47 39.9 -0.2**
KECS *e* 08 47 58.2
KECS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
CLL Collm 77.27 335⇓ *i*P **P** **08 47 40.1 -0.5**
comp=Z,18nm,1.0s,mb5.0
CLL Collm 77.27 335⇓ *i*P **P** **08 47 40.1 -0.5**
CLL pmax pmax
comp=Z,18nm,1.0s,mb5.0
CLL Collm 77.27 335⇓ *i*P **P** **08 47 40.1 -0.5**
comp=Z,18nm,1.0s,mb5.0
CLL Collm 77.27 335 *e*P **P** **08 47 39.9 -0.7**
comp=Z,18nm,1.0s,mb5.0
BRG Berggiesshubel 77.35 334 *i* P **P** **08 47 41.1 0.0**
BRG pmax pmax
comp=Z,11nm,1.7s,mb4.5
BRG Berggiesshubel 77.35 334 *e*P **P** **08 47 41.1 0.0**
comp=Z,19nm,1.7s,mb4.8
BRG Berggiesshubel 77.35 334 *i* P **P** **08 47 41.1 0.0**
comp=Z,18nm,1.7s,mb4.7
MLR Muntele Rosu 77.49 324⇓ P **P** **08 47 43.0 +1.1**
MLR Muntele Rosu 77.49 324 LR LR 09 25 10.8
comp=Z,137nm,18.3s,MS4.3,baz=321,slow=38
MLR Muntele Rosu 77.49 324⇓ *i*P **P** **08 47 43.0 +1.0**
FBE Freiberg 77.50 334 *e*P **P** **08 47 41.2 -0.7**
comp=Z,11nm,0.9s,mb4.8
CLZ Clausthal 77.57 336 *e*P **P** **08 47 42.1 -0.2**
CLZ pmax pmax
comp=Z,11nm,0.9s,mb4.8
CLZ Clausthal 77.57 336 *e*P **P** **08 47 42.1 -0.2**
comp=Z,11nm,0.9s,mb4.8
DRGR 77.74 327 P **P** **08 47 45.5 +2.2**
VYHS Vyhne 77.76 330 *e*P **P** **08 47 43.7 +0.3**
comp=Z,3.3nm,0.7s,mb4.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VYHS	Vyhne	77.76	330	eP	P	08 47 43.7	+0.3
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
VRAC	Vranov	77.85	331	⇑P	P	08 47 44.2	+0.4
VRAC	Vranov	77.85	331	⇑iP	P	08 47 44.2	+0.3
PSZ	Piszkesteto	77.86	329	⇑iP	P	08 47 44.3	+0.3
VOIR		77.91	324	⇓P	P	08 47 44.8	+0.5
VOIR		77.91	324	⇓iP	P	08 47 44.8	+0.5
PRU	Pruhonice	77.94	333	eP	P	08 47 44.0	-0.4
UMR	Umm Al-Rimmam	78.18	300	eP	P	08 47 46.0	-0.1
UMR				AMb	AMB	08 47 47.4	
	comp=Z,37nm,0.5s,mb5.5						
WERD	Werda	78.23	335	eP	P	08 47 45.5	-0.5
	comp=Z,5.0nm,0.9s,mb4.4						
MIB	Mutribah	78.24	300	eP	P	08 47 46.7	+0.3
MIB				AMb	AMB	08 47 47.9	
	comp=Z,32nm,0.8s,mb5.3						
MOX	Moxa	78.27	335	eP	P	08 47 46.6	+0.4
MOX	Moxa	78.27	335	eP	P	08 47 46.4	+0.2
	comp=Z,5.0nm,0.8s,mb4.5						
WERN	Wernitzgruen	78.35	334	eP	P	08 47 46.5	-0.2
	comp=Z,12nm,1.0s,mb4.8						
NKC	Novy Kostel	78.38	334	eP	P	08 47 45.7	-1.1
MODS	Modra-Piesok	78.41	331	eP	P	08 47 47.7	+0.7
	comp=Z,6.6nm,1.1s,mb4.5						
MODS	Modra-Piesok	78.41	331	eP	P	08 47 47.7	+0.7
MODS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
MODS	Modra-Piesok	78.41	331	eP	P	08 47 47.6	+0.6
KBD	Kabd	78.47	300	eP	P	08 47 47.9	+0.2
KBD				AMb	AMB	08 47 48.9	
	comp=Z,123nm,0.7s						
BRTR	Keskin Array B	78.52	316	i P	P	08 47 47.5	-0.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	Keskin Array B	78.52	316	P	P	08 47 47.5	-0.3
	comp=Z,3.2nm,0.8s,mb4.3,baz=74,slow=5.4,SNR=12						
UBBA	Unterbreizbach	78.58	336	eP	P	08 47 47.3	-0.6
	comp=Z,4.0nm,0.7s,mb4.5						
ZST	Bratislava	78.62	331	eP	P	08 47 53.9	+5.7
ZST				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
QRN	Al-Qurain	78.63	299	eP	P	08 47 48.8	+0.2
QRN				AMb	AMB	08 47 49.4	
	comp=Z,44nm,0.7s,mb5.5						
NAY	Al-Naaiem	78.69	300	eP	P	08 47 48.6	-0.3
NAY				AMb	AMB	08 47 49.6	
	comp=Z,12nm,0.8s,mb4.9						
MANZ	Manzenberg	78.70	334	eP	P	08 47 48.4	-0.2
RDF	Al-Radifah	78.73	300	eP	P	08 47 49.6	+0.5
RDF				AMb	AMB	08 47 50.1	
	comp=Z,32nm,0.5s,mb5.5						
ROTZ	Rotzenmuhle	78.86	334	eP	P	08 47 49.9	+0.4
	comp=Z,9.0nm,0.9s,mb4.7						
GZR	Gura Zlata	78.86	326	⇑P	P	08 47 49.3	-0.2
GZR	Gura Zlata	78.86	326	⇑iP	P	08 47 49.3	-0.3
KHC	Kasperske Hory	78.99	333	c iP	P	08 47 50.0	-0.2
KHC	Kasperske Hory	78.99	333	eP	P	08 47 50.2	0.0
GEC2	GERESS Array S	79.20	333	eP	P	08 47 51.1	-0.2
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
GEC2	GERESS Array S	79.20	333	eP	P	08 47 51.1	-0.2
	comp=Z,6.0nm,0.7s,mb4.6						
GERES	GERESS Array B	79.20	333	P	P	08 47 51.3	0.0
GERES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GERES	GERESS Array B	79.20	333	P	P	08 47 51.3	-0.1
	comp=Z,3.4nm,0.6s,mb4.5,baz=34,slow=5.3,SNR=25						
WET	Wettzell	79.20	334	P	P	08 47 51.0	-0.3
GRA1	Grafenberg Arr	79.23	335	eP	P	08 47 51.6	+0.1
	comp=Z,19nm,0.8s,mb5.1						
GRF	Grafenberg Arr	79.23	335	eP	P	08 47 51.6	+0.1
GRF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
GRF	Grafenberg Arr	79.23	335	eP	P	08 47 51.6	+0.1
GRF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
GRF	Grafenberg Arr	79.23	335	eP	P	08 47 51.6	+0.1
	comp=Z,19nm,0.8s,mb5.1						
CONA	Conrad Observa	79.28	331	⇑ipP	P	08 47 52.1	+0.3
	comp=Z,7.3nm,0.6s,mb4.8						
LTX	Lajitas	79.50	59	eP	P	08 47 53.8	+0.5
	comp=Z,52nm,2.6s,mb5.0						
LTX	Lajitas	79.50	59	eP	P	08 47 53.8	+0.5
LTX				pmax	pmax		
	comp=Z,52nm,2.6s,mb5.0						
TXAR	Lajitas Array	79.50	59	P	P	08 47 54.1	+0.8
TXAR				*PP	pP	08 48 06.5	0.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR				pmax	pmax		
	comp=N,2.0nm,0.5s						
TXAR	Lajitas Array	79.50	59	P	P	08 47 54.1	+0.8
	comp=N,0.8nm,0.6s,mb3.9,baz=297,slow=4.4,SNR=17						
TXAR				pP	pP	08 48 06.5	0.0
	comp=N,2.2nm,0.5s,baz=299,slow=4.2,SNR=17						
TNS	Taunus Mts	79.56	337	eP	P	08 47 53.0	-0.3
TNS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
TNS	Taunus Mts	79.56	337	eP	P	08 47 53.0	-0.3
	comp=Z,10.0nm,0.8s,mb4.8						
MEM	Membach	79.87	338	P	P	08 47 54.8	-0.2
MOA	Molln	79.89	332	⇓iP	P	08 47 55.3	+0.2
	comp=Z,4.4nm,0.9s,mb4.4						
MOA	Molln	79.89	332	⇓ipP	P	08 47 55.3	+0.2
	comp=Z,4.4nm,0.9s,mb4.4						
BCLA	Clavier	80.23	339	P	P	08 47 56.8	-0.1
SNF	Seneffe	80.41	339	P	P	08 47 57.8	0.0
BAIF	Baives	80.84	339	eP	P	08 47 59.6	-0.6
KBA	Koelnbreinsper	80.86	332	⇓iP	P	08 48 01.0	+0.6
	comp=Z,11nm,0.7s,mb4.9						
KBA	Koelnbreinsper	80.86	332	⇓ipP	P	08 48 01.0	+0.6
	comp=Z,11nm,0.7s,mb4.9						
KBA	Koelnbreinsper	80.86	332	⇓iP	P	08 48 01.0	+0.6
KBA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
VTS	Vitosha	81.00	324	⇑P	P	08 48 01.5	+0.3
VTS	Vitosha	81.00	324	⇑iP	P	08 48 01.5	+0.3
WTTA	Wattenberg	81.25	333	⇑iP	P	08 48 02.8	+0.4
	comp=Z,12nm,0.9s,mb4.8						
WTTA	Wattenberg	81.25	333	⇑ipP	P	08 48 02.8	+0.4
	comp=Z,12nm,0.9s,mb4.8						
WTTA	Wattenberg	81.25	333	⇑iP	P	08 48 02.8	+0.4
WTTA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
BFO	Black Forest	81.30	336	eP	P	08 48 02.3	-0.4
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
BFO	Black Forest	81.30	336	eP	P	08 48 02.3	-0.4
	comp=Z,6.0nm,0.9s,mb4.5						
MOTA	Moosalm	81.35	334	⇑iP	P	08 48 03.2	+0.2
	comp=Z,7.1nm,1.0s,mb4.6						
MOTA	Moosalm	81.35	334	⇑ipP	P	08 48 03.2	+0.2
	comp=Z,7.1nm,1.0s,mb4.6						
MOTA	Moosalm	81.35	334	⇑iP	P	08 48 03.2	+0.3
MOTA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MIAR	Mount Ida	81.41	49	eP	P	08 48 03.6	+0.1
CDF	Champ du Feu	81.53	337	eP	P	08 48 03.2	-0.6
	comp=Z,16nm,0.9s,mb4.7						
CDF	Champ du Feu	81.53	337	eP	P	08 48 03.2	-0.6
	comp=Z,7.8nm,0.9s,mb4.6						
CDF	Champ du Feu	81.53	337	eP	P	08 48 03.2	-0.6
CDF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
DAVA	Damuels	81.78	334	⇑iP	P	08 48 05.3	+0.1
	comp=Z,5.7nm,0.8s,mb4.6						
DAVA	Damuels	81.78	334	⇑ipP	P	08 48 05.3	+0.1
	comp=Z,5.7nm,0.8s,mb4.6						
MEZF	Maizieres J'vi	82.05	338	eP	P	08 48 06.5	-0.1
HAU	Haudompre	82.16	337	eP	P	08 48 06.4	-0.8
FLN	La Foliniere	83.17	341	eP	P	08 48 12.0	-0.4
LDF	La Druitiere	83.24	341	eP	P	08 48 12.3	-0.5
CABF	La Chapelle	83.50	337	eP	P	08 48 13.9	-0.3
	comp=Z,19nm,1.0s,mb4.9						
CABF	La Chapelle	83.50	337	eP	P	08 48 13.9	-0.3
	comp=Z,9.4nm,1.0s,mb4.9						
CABF	La Chapelle	83.50	337	eP	P	08 48 13.9	-0.3
CABF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
LOR	Lormes	83.50	338	eP	P	08 48 13.8	-0.4
	comp=Z,9.3nm,0.7s,mb4.7						
LOR	Lormes	83.50	338	eP	P	08 48 13.8	-0.4
	comp=Z,4.7nm,0.7s,mb4.7						
LOR	Lormes	83.50	338	eP	P	08 48 13.8	-0.4
LOR				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
GRR	Gorron	83.60	342	eP	P	08 48 14.3	-0.4
	comp=Z,12nm,0.6s,mb4.9						
GRR	Gorron	83.60	342	eP	P	08 48 14.3	-0.4
	comp=Z,5.9nm,0.6s,mb4.9						
GRR	Gorron	83.60	342	eP	P	08 48 14.3	-0.4
GRR				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
SSF	Saint Saulge	83.79	338	eP	P	08 48 15.3	-0.3
	comp=Z,3.3nm,0.5s,mb4.4						
SSF	Saint Saulge	83.79	338	eP	P	08 48 15.3	-0.3
	comp=Z,1.6nm,0.5s,mb4.4						
SSF	Saint Saulge	83.79	338	eP	P	08 48 15.3	-0.3
SSF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.5						
AVF	Avril sur Loir	84.08	338	eP	P	08 48 16.9	-0.2
	comp=Z,5.6nm,0.5s,mb4.6						
AVF	Avril sur Loir	84.08	338	eP	P	08 48 16.9	-0.2
	comp=Z,2.8nm,0.5s,mb4.7						
AVF	Avril sur Loir	84.08	338	eP	P	08 48 16.9	-0.2
AVF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
SMF	Signal de Mont	84.08	338	eP	P	08 48 16.9	-0.2
	comp=Z,39nm,1.1s,mb5.1						
SMF	Signal de Mont	84.08	338	eP	P	08 48 16.9	-0.2
	comp=Z,20nm,1.1s,mb5.2						
SMF	Signal de Mont	84.08	338	eP	P	08 48 16.9	-0.2
SMF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
SGMF	Saint Gilles	84.10	343	eP	P	08 48 17.1	-0.1
ROSF	Rostrenen	84.17	343	eP	P	08 48 17.5	0.0
LPL	La Plagne	84.31	336	eP	P	08 48 18.7	+0.4
LPG	La Plagne	84.33	336	eP	P	08 48 19.0	+0.6
TCF	Toulx Ste Croi	84.84	339	eP	P	08 48 21.1	+0.1
MBDF	Montbardon	85.02	335	eP	P	08 48 21.6	-0.3
	comp=Z,2.9nm,0.5s,mb4.3						
MBDF	Montbardon	85.02	335	eP	P	08 48 21.6	-0.3
	comp=Z,1.5nm,0.5s,mb4.4						
MBDF	Montbardon	85.02	335	eP	P	08 48 21.6	-0.3
MBDF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
ORIF	Oris-en-Rattie	85.11	336	eP	P	08 48 22.7	+0.4
MFF	Saint Martin d	85.12	341	eP	P	08 48 22.4	0.0
	comp=Z,7.9nm,0.6s,mb4.7						
MFF	Saint Martin d	85.12	341	eP	P	08 48 22.4	0.0
	comp=Z,4.0nm,0.6s,mb4.7						
MFF	Saint Martin d	85.12	341	eP	P	08 48 22.4	0.0
MFF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
SBF	Sospel	85.61	335	eP	P	08 48 24.6	-0.3
RJF	Les Rejaudoux	85.93	339	eP	P	08 48 26.6	+0.2
SMRF	Simiane la Rot	86.06	336	eP	P	08 48 27.6	+0.5
CAF	Calviac	86.14	338	eP	P	08 48 28.2	+0.7
	comp=Z,10nm,0.6s,mb4.9						
CAF	Calviac	86.14	338	eP	P	08 48 28.2	+0.7
	comp=Z,5.2nm,0.6s,mb4.9						
CAF	Calviac	86.14	338	eP	P	08 48 28.2	+0.7
CAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9						
LMR	La Mourre	86.37	335	eP	P	08 48 28.3	-0.3
LFF	La Frestale	86.47	339	eP	P	08 48 29.6	+0.5
MTLF	Montolieu	87.58	338	eP	P	08 48 35.2	+0.7
CFAA	Coronel Fontan	146.68	80	PKPbc	PKPbc	08 55 27.6	-0.4
	comp=Z,0.2nm,0.7s,baz=215,slow=4.2,SNR=5.4						

MEX 14 08:37:46.3±0.6**,1523N**×**9304W,h35**km±812km**,MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	Comitan	1.36	40	i P	Pn	08 38 07.1	-1.7
CCIG				i S	Sn	08 38 23.5	-2.2
SCX	San Cristobal	1.55	15	i P	Pn	08 38 10.5	-0.9
SCX				i S	Sn	08 38 28.5	-1.7
CMIG	Matias Romero	2.56	316	eP	Pn	08 38 23.5	-1.8
CMIG				i S	Sn	08 38 52.6	-2.7

IDC 14 08:43:31.1±2.3**,2141S**×**17442W,h0**km**,mb3.9**/6**, mb1 4.1**/7**,mb1mx4.0**/16**,mbtmp3.9**/7**,ML2.6**/1**,Error ellipse: s-maj=126.5km s-min=22.3km az=150.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.87	19	Pn	Pn	08 45 20.8	-6.1
	4.8nm,0.3s,baz=105,slow=13,SNR=8.0						
AFI				Sn	Sn	08 46 38.3	-19
	1.9nm,0.3s,baz=212,slow=19,SNR=1.8						
RAR	Rarotonga	13.65	92	Pn	Pn	08 46 36.0	-10
	3.8nm,0.3s,baz=278,slow=14,SNR=16						
RAR				Sn	Sn	08 48 49.2	-29
	0.7nm,0.3s,baz=106,slow=20,SNR=2.6						
DZM	Mont Dzumac	17.79	264	P	Pn	08 47 41.8	+1.5
	0.0nm,0.3s,baz=81,slow=19,SNR=1.8						
STKA	Stephens Creek	40.44	246	P	P	08 51 11.0	-0.4
	0.6nm,0.3s,baz=87,slow=9.6,SNR=3.0						
ASAR	Alice Springs	47.57	257	P	P	08 52 08.7	-0.2
	2.7nm,0.8s,baz=92,slow=8.0,SNR=26						
ASAR				PcP	PcP	08 53 40.0	+1.1
	0.4nm,0.6s,baz=113,slow=4.2,SNR=4.1						
WRA	Warramunga Arr	47.79	262	P	P	08 52 10.0	-0.6
	0.7nm,0.3s,baz=94,slow=8.7,SNR=24						
NVAR	Mina Array Bea	79.43	42	P	P	08 55 39.4	+0.1
	0.7nm,0.6s,baz=213,slow=6.1,SNR=5.7						
INK	Inuvik	94.30	14	P	P	08 56 51.5	-0.4
	0.6nm,0.8s,baz=236,slow=3.6,SNR=4.5						
YKA	Yellowknife Ar	95.96	24	P	P	08 56 59.9	+0.3
	0.1nm,0.5s,baz=246,slow=4.9,SNR=2.7						
AKASG	Malin Array Be	145.38	333	PKPbc	PKPbc	09 03 09.9	-0.8
	1.0nm,0.4s,baz=41,slow=4.1,SNR=8.4						

*ISCJB **14** 08:51:07.7±0.6, 7773N±008×1266E±04, h10km, mb3.7/10, Error ellipse: s-maj=12.6km s-min=11.3km az=142.4*
*IDC **14** 08:51:08.2±1.0, 7785N×12668E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/23, mbtmp3.6/8, MS3.7/1, Ms1 3.7/1, ms1mx3.0/29, Error ellipse: s-maj=35.1km s-min=18.7km az=149.0*
*MOS **14** 08:51:08.6±1.4, 7770N×12625E, h14km, mb3.8/5, Error ellipse: s-maj=75.6km s-min=15.7km az=89.5*
*NEIC **14** 08:51:09.8±0.5, 7775N×12651E, h10km, mb4.5/2, Error ellipse: s-maj=13.0km s-min=10.9km az=169.0*
ISC 14 08:51:09.7±0.5**,7777N**±008×**1265E**±04**,h10**km**,n20,** σ**0.79**/21**,mb3.7**/10**,Laptev Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	Tiksi	6.18	173	ePn	Pn	08 52 39.9	-1.0
	10nm,0.4s						
TIXI				eSn	Sn	08 53 44.9	-6.6
TIXI	Tiksi	6.18	173	i P	Pn	08 52 39.6	-1.3
TIXI				e		08 53 50.0	
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.2s						
BILL	Bilibino	14.78	109	ePn	Pn	08 54 38.5	+0.2
	comp=Z,56nm,1.3s						
BILL	Bilibino	14.78	109	i P	Pn	08 54 40.5	+2.2
BILL				pmax	pmax		
	comp=Z,11nm,0.7s						
BOD	Bodaibo	20.50	199	eP	P	08 55 46.8	-0.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TNA	Tin City	22.30	86	eP	P	08 56 06.8	+0.1
	comp=Z,8.7nm,0.8s,mb4.2						
ARCES	ARCESS Array B	25.81	308	P	P	08 56 40.4	0.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	25.81	308	P	P	08 56 40.4	0.0
	comp=Z,1.8nm,0.7s,mb3.7,baz=39,slow=7.9,SNR=4.2						
SONM	Songino Array	31.04	207	P	P	08 57 28.2	+1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	31.04	207	P	P	08 57 28.2	+1.0
	comp=Z,0.6nm,0.8s,mb3.5,baz=3.3,slow=7.6,SNR=4.6						
YKA	Yellowknife Ar	35.16	45	P	P	08 58 01.4	-1.5
YKA	Yellowknife Ar	35.16	45	P	P	08 58 01.5	-1.4
	comp=Z,0.4nm,0.8s,mb3.4,baz=343,slow=8.0,SNR=7.4						
MKAR	Makanchi Array	35.43	236	P	P	08 58 05.8	+0.4
	comp=Z,0.4nm,0.5s,mb3.6,baz=348,slow=8.5,SNR=5.2						
AKASG	Malin Array Be	42.55	291	P	P	08 59 04.9	0.0
	comp=Z,0.3nm,0.3s,mb3.5,baz=22,slow=8.5,SNR=3.2						
MORC	Moravsky Berou	45.66	301	eP	P	08 59 29.9	+0.1
	comp=Z,12nm,1.0s,mb4.8						
MORC	Moravsky Berou	45.66	301	eP	P	08 59 30.0	+0.1
MORC				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
PDAR	Pinedale Array	55.01	48	P	P	09 00 40.2	-0.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=29,slow=3.4,SNR=4.2						
NVAR	Mina Array Bea	57.75	57	P	P	09 01 01.1	+0.9
	comp=Z,0.5nm,0.7s,mb3.6,baz=358,slow=3.9,SNR=4.4						
TXAR	Lajitas Array	69.08	46	P	P	09 02 15.6	+0.3
TXAR	Lajitas Array	69.08	46	P	P	09 02 15.1	-0.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=332,slow=4.5,SNR=5.0						

*ISCJB **14** 08:53:39.2±0.9, 268N±02×447W±02, h10km, mb4.0/10, MS3.8/8, Error ellipse: s-maj=24.8km s-min=18.8km az=155.9*
*IDC **14** 08:53:39.4±1.1, 2670N×4465W, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/22, mbtmp4.0/10, MS3.8/8, Ms1 3.8/8, ms1mx3.5/24, Error ellipse: s-maj=30.4km s-min=22.6km az=155.0*
*NEIC **14** 08:53:40.9±0.8, 2669N×4466W, h10km, Error ellipse: s-maj=22.1km s-min=17.1km az=153.0*
ISC 14 08:53:41.3±0.9**,268N**±02×**447W**±02**,h10**km**,n18,**σ**0.89**/13**, mb4.0**/10**,MS3.8**/8**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCHQ	Schefferville	32.40	336	LR	LR	09 11 52.8	
	comp=Z,125nm,19.4s,MS3.6,baz=292,slow=34						
DBIC	Dimbokro	42.78	111	LR	LR	09 16 30.0	
	comp=Z,141nm,18.5s,MS3.9,baz=219,slow=32						
ULM	Lac du Bonnet	45.34	315	P	P	09 02 00.1	+0.6
	0.9nm,0.9s,mb3.6,baz=42,slow=6.3,SNR=4.9						
TORD	Torodi Ar. Bea	45.38	98	LR	LR	09 19 59.3	
	comp=Z,150nm,18.5s,MS4.0,baz=295,slow=35						
LPAZ	La Paz	48.48	211	P	P	09 02 24.4	0.0
LPAZ	La Paz	48.48	211	P	P	09 02 24.4	0.0
	5.4nm,1.2s,mb4.5,baz=5.2,slow=9.1,SNR=8.8						
LPAZ				LR	LR	09 20 10.4	
	comp=Z,43nm,18.9s,MS3.5,baz=85,slow=33						
GERES	GERESS Array B	49.76	47	P	P	09 02 35.3	+1.5
	0.5nm,0.6s,mb3.7,baz=273,slow=3.8,SNR=5.4						
GERES				LR	LR	09 22 08.1	
	comp=Z,70nm,18.4s,MS3.7,baz=91,slow=34						
TXAR	Lajitas Array	51.66	287	LR	LR	09 21 12.5	
	comp=Z,73nm,21.4s,MS3.7,baz=190,slow=32						
RES	Resolute Bay	54.29	345	eP	P	09 03 07.4	+0.2
	117nm,1.1s						
PDAR	Pinedale Array	54.39	305	P	P	09 03 07.1	-1.4
	0.7nm,0.8s,mb3.6,baz=94,slow=9.2,SNR=6.1						
PDAR				LR	LR	09 23 02.8	
	comp=Z,91nm,18.3s,MS3.9,baz=324,slow=32						
YKA	Yellowknife Ar	57.39	329	P	P	09 03 30.8	+1.2
	1.6nm,1.0s,mb4.0,baz=93,slow=7.5,SNR=18						
YKA				LR	LR	09 27 16.9	
	comp=Z,101nm,18.9s,MS4.0,baz=175,slow=35						
FINES	FINESS Array B	57.69	32	P	P	09 03 30.8	-1.0
	2.1nm,0.9s,mb4.2,baz=297,slow=8.4,SNR=4.8						
ARCES	ARCESS Array B	58.27	23	P	P	09 03 34.3	-1.4
	2.9nm,0.8s,mb4.3,baz=282,slow=6.1,SNR=4.2						
AKASG	Malin Array Be	59.77	45	P	P	09 03 46.3	-0.1
	0.2nm,0.2s,mb3.7,baz=274,slow=6.2,SNR=4.3						
BRTR	Keskin Array B	64.85	57	P	P	09 04 20.9	+0.2
	2.5nm,1.1s,mb4.2,baz=305,slow=4.4,SNR=3.6						
INK	Inuvik	65.02	336	P	P	09 04 21.4	+0.2
INK	Inuvik	65.02	336	P	P	09 04 21.4	+0.2
	2.5nm,1.1s,mb4.2,baz=93,slow=8.2,SNR=8.5						
CTAO	Charters Tower	167.99	301	ePKPdf	PKPdf	09 13 47.9	-0.8
CTAO				ePKPdif		09 14 09.6	

*ISCJB **14** 09:04:06.7±1.4, 470S±004×13367E±005, h1km±9km, mb5.0/57, MS4.5/21, Error ellipse: s-maj=8.0km s-min=6.1km az=151.0*
*IDC **14** 09:04:07.8±0.5, 454S×13362E, h0km, mb4.6/9, mb1 4.9/13, mb1mx4.8/15, mbtmp4.8/13, ML4.8/4, MS4.6/10, Ms1 4.6/10, ms1mx4.4/17, Error ellipse: s-maj=21.2km s-min=13.2km az=60.0*
*BJI **14** 09:04:10.2, 470S×13360E, h10km, mB5.1, mb4.9, Ms4.8, Msz4.5*
*MOS **14** 09:04:11.2±1.4, 477S×13344E, h33km, mb5.2/18, Error ellipse: s-maj=13.3km s-min=7.7km az=112.2*
*GCMT **14** 09:04:11.2±0.2, 445S×13369E, h14km±1km, MW5.2/84, Moment Tensor Solution. s42,c53; s84,c134; Duration: 0 Moment tensor: Scale 10[16]Nm; M_{rr}-1.38±.18; $M_{\theta\theta}$-4.92±.15; $M_{\phi\phi}$6.30±.20; $M_{r\theta}$-0.67±.34; $M_{\theta\phi}$3.09±.14; $M_{\phi r}$0.56±.32; Best double couple: $M_0$6.48400×10[16] NP1:ϕ_s59.00000°,δ81.00000°,λ-5.00000°. NP2: ϕ_s150.00000°,δ85.00000°,λ-171.00000°. Principal axes: T 7.1120, Plg3.0000°, Azm284.0000°; N -1.2560, Plg80.0000°, Azm180.0000°; P -5.8560, Plg10.0000°, Azm15.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 09:04:11.2±4.0, 466S×13359E, h17km±25km, mb5.1/24 Error ellipse: s-maj=8.8km s-min=6.5km az=46.0*
ISC 14 09:04:10.9±1.5**,470S**±003×**13363E**±004**,h16**km±9km**, h23**km±.8km**:pP-P,n157,**σ**1.29**/150**,mb5.0**/57**,MS4.5**/21**, 7C-3D,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	1.29	224	P	Sb	09 04 51.6	+0.4
	22μm,1.2s						
AAI	Ambon	5.52	280	P	Pn	09 05 32.6	+0.1
	2μm,0.8s						
KAKA	Kakadu	8.05	188	ePn	Pn	09 06 08.4	+1.2
	448nm,0.5s						
KAKA				eSn	Sn	09 07 36.1	-1.9
BATI	Kupang	11.29	240	Pn	Pn	09 06 53.4	+1.6
	30nm,0.3s,baz=133,slow=2.7,SNR=21						
BATI				Sn	Sn	09 08 55.2	-2.6
	8.2nm,0.3s,baz=246,slow=19,SNR=3.2						
COEN	Coen	13.16	135	ePn	Pn	09 07 14.2	-3.1
	19nm,0.7s						
PMG	Port Moresby	14.21	110	ePn	Pn	09 07 32.9	+1.2
	111nm,0.9s						
PMG	Port Moresby	14.21	110	⇓eP	Pn	09 07 34.1	+2.4
PMG	Port Moresby	14.21	110	Pn	Pn	09 07 30.4	-1.3
	3.3nm,0.3s,baz=318,slow=8.2,SNR=14						
PMG				LR	LR	09 14 19.7	
	comp=Z,3μm,18.0s,baz=130,slow=43						
PCI	Palu	14.28	285	P	Pn	09 07 33.7	+1.0
	217nm,1.0s						
WRA	Warramunga Arr	15.16	177	Pn	Pn	09 07 41.3	-3.3
	2.6nm,0.3s,baz=357,slow=13,SNR=103						
WRA				Sn	Sn	09 10 21.5	-11
	2.1nm,0.3s,baz=0.3,slow=23,SNR=9.8						
WB2	Warramunga Arr	15.17	177	eP	Pn	09 07 41.1	-3.5
WB2				epP	pP	09 07 52.0	-2.0
WB2				eS	Sn	09 10 22.9	-9.5
FITZ	Fitzroy Crossi	15.44	210	eP	Pn	09 07 44.7	-3.5
	38nm,0.3s						
FITZ				epP	pP	09 07 52.7	-4.5
FITZ				eS	Sn	09 10 30.5	-8.7
FITZ	Fitzroy Crossi	15.44	210	Pn	Pn	09 07 45.4	-2.8
	3.1nm,0.3s,baz=41,slow=14,SNR=62						
FITZ				Sn	Sn	09 10 30.4	-8.8
	4.5nm,0.3s,baz=188,slow=22,SNR=7.9						
ASAR	Alice Springs	18.86	179	P	Pn	09 08 29.8	-1.2
	2.3nm,0.3s,baz=355,slow=12,SNR=133						
ASAR				S	Sn	09 11 52.3	-10
	0.6nm,0.3s,baz=5.0,slow=30,SNR=5.2						
CTA	Charters Tower	19.62	142	⇑iP	Pn	09 08 40.3	+0.1
	48nm,0.6s						
CTA				epP	pP	09 08 44.9	+1.6
CTA				esP	sP	09 08 49.6	+4.2
CTA				e		09 09 00.7	
CTA				eS	Sn	09 12 21.6	+1.2
CTA	Charters Tower	19.62	142	⇑iP	Pn	09 08 40.3	+0.1
CTA				eS	Sn	09 12 21.6	+1.2
CTA				pmax	pmax		
	comp=Z,48nm,0.6s						
CTA	Charters Tower	19.62	142	P	Pn	09 08 40.6	+0.3
	comp=Z,3.7nm,0.3s,baz=318,slow=12,SNR=90						
CTA				LR	LR	09 16 39.7	
	comp=Z,1μm,18.2s,baz=142,slow=38						
CTAO	Charters Tower	19.62	142	eP	Pn	09 08 40.5	+0.2
	comp=Z,49nm,0.6s						
CTAO	Charters Tower	19.62	142	eP	Pn	09 08 40.5	+0.3
CTAO				pmax	pmax		
	comp=Z,49nm,0.6s						
KMMI	Kalianget	19.70	262	P	Pn	09 08 41.9	+0.6

comp=Z,272nm,1.1s
KKM Kota Kinabalu 20.41 301 eP P 09 08 47.0 -0.5
MBWA Marble Bar 21.21 218 eP P 09 08 57.8 +1.7
comp=Z,110nm,0.8s,mb5.2
BJII Banjamegara 23.93 263 P P 09 09 26.4 +1.8
comp=Z,48nm,1.0s,mb4.9
KSM Kuching 24.10 284 eP P 09 09 26.8 +0.7
FORT Forrest 26.47 191 eP P 09 09 49.1 +1.7
comp=Z,48nm,0.7s,mb5.1
EIDS Eidsvold 26.51 143 eP P 09 09 46.7 -1.1
HNR Honiara 26.53 102 P P 09 09 47.0 -1.1
comp=Z,53nm,0.6s,mb5.3,baz=103,slow=7.3,SNR=3.5
STKA Stephens Creek 28.05 165⇑ iP P 09 10 02.0 +0.4
comp=Z,24nm,1.6s,mb4.6
STKA eS S 09 15 13.3 +28
STKA Stephens Creek 28.05 165 P P 09 10 02.0 +0.4
comp=Z,10.0nm,0.7s,mb4.5,baz=340,slow=8.4,SNR=21
STKA LR LR 09 21 46.7
comp=Z,1μm,19.9s,MS4.5,baz=157,slow=38
KLBR Kellerberrin 30.62 207 eP P 09 10 26.5 +2.0
comp=Z,87nm,1.6s,mb5.3
ARMA Armidale 30.70 148 eP P 09 10 25.1 -0.1
NWAO Narrogin (SRO) 31.99 207 eP P 09 10 36.8 +0.4
CBIJ Chichi jima 32.67 14 LR LR 09 22 29.1
comp=Z,838nm,19.6s,MS4.4,baz=219,slow=34
QIZ Qiongzhong 33.24 316 P P 09 10 47.5 -0.1
QIZ S S 09 16 07.9 +0.6
QIZ AMB AMB
comp=Z,111nm,6.5s
QIZ LR LR
comp=N,356nm,16.8s
QIZ LR LR
comp=Z,391nm,19.5s,MS4.1
PSI Prapat 35.47 281 P P 09 11 04.7 -2.4
PSI Prapat 35.47 281 P P 09 11 04.7 -2.4
comp=Z,9.4nm,0.9s,mb4.7,baz=140,slow=5.6,SNR=7.3
DZM Mont Dzumac 36.16 122 P P 09 11 12.3 -0.6
comp=Z,4.9nm,0.8s,mb4.5,baz=95,slow=18,SNR=6.2
KKTK Khon Kaen 36.95 305 P P 09 11 25.0 +5.3
comp=Z,432nm,0.8s
SSE Sheshan 37.53 342 P P 09 11 27.3 +3.0
SSE AP pP 09 11 36.1 +6.9
SSE XP sP 09 11 39.9 +8.7
SSE S S 09 17 16.8 +3.9
SSE AMB AMB
comp=Z,34nm,0.7s,mb5.2
SSE AMB AMB
comp=Z,15nm,3.3s
SSE LR LR
comp=N,278nm,18.6s,MS4.2
SSE LR LR
comp=E,267nm,18.6s,MS4.2
SSE LR LR
comp=Z,444nm,15.5s,MS4.4
JHJ Hachijo jima 2 38.06 8 LR LR 09 25 49.5
comp=Z,1μm,19.2s,MS4.7,baz=109,slow=34
NJ2 Nanjing 39.16 340 eP P 09 11 40.8 +2.7
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
WHN Wuhan 39.60 333 eP P 09 11 48.0 +6.2
TAU Tasmania Unive 39.94 164 eP P 09 11 45.2 +0.8
GYA Guiyang 40.52 321⇑ iP P 09 11 51.4 +1.9
GYA AP pP 09 11 57.6 +3.2
GYA XP sP 09 12 01.3 +5.0
GYA PP PP 09 13 29.4 +6.5
GYA PCP PcP 09 13 54.6 +2.6
GYA SCP ScP 09 17 41.6 +0.6
GYA S S 09 17 59.9 +1.8
GYA XS sS 09 18 09.8 +3.7
GYA SS SS 09 20 53.6 -4.4
GYA SCS ScS 09 21 54.4 -0.9
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,140nm,4.7s
GYA LR LR
comp=N,540nm,18.6s,MS4.7
GYA LR LR
comp=E,690nm,17.9s,MS4.7
GYA LR LR
comp=Z,870nm,18.7s,MS4.6
MJAR Matsushiro Arr 41.25 6 P P 09 11 51.8 -3.6
comp=Z,1.5nm,0.8s,baz=200,slow=7.6,SNR=3.5
MJAR LR LR 09 27 36.7
comp=Z,912nm,19.1s,MS4.7,baz=180,slow=34
CHG Chiang Mai 41.39 305 ⇓P P 09 11 56.2 -0.6
comp=Z,24nm,0.7s,mb4.9
CHTO Chiang Mai 41.39 305 eP P 09 11 56.2 -0.6
comp=Z,14nm,0.8s,mb4.7
CHTO Chiang Mai 41.39 305 eP P 09 11 56.2 -0.6
CHTO pmax pmax
comp=Z,14nm,0.8s,mb4.6
KMI Kunming 42.19 316 P P 09 12 08.4 +5.2
KMI AMB AMB
comp=Z,28nm,1.4s,mb4.7
KMI LR LR
comp=Z,365nm,37.8s,MS4.0
KSRS Korea Array 42.27 353 P P 09 12 00.3 -3.4
comp=Z,0.4nm,0.3s,baz=190,slow=12,SNR=3.4
KSRS LR LR 09 31 39.5
comp=Z,537nm,18.1s,MS4.5,baz=177,slow=39
XAN Xi'an 45.05 331 P P 09 12 24.4 -1.7
XAN AP pP 09 12 30.6 -0.5
XAN AMB AMB
comp=Z,6.0nm,1.3s,mb4.3
CD2 Chengdu 45.48 323 eP P 09 12 28.6 -1.0
CD2 AP pP 09 12 35.6 +1.1
CD2 XP sP 09 12 38.3 +1.8
CD2 PP PP 09 14 14.4 -1.8
CD2 PCS PcS 09 18 00.8 -1.8
CD2 S S 09 19 06.3 -4.5
CD2 XS sS 09 19 18.3 -0.7
CD2 SS SS 09 22 22.8 -12
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.2
CD2 AMB AMB
comp=Z,150nm,5.1s
CD2 LR LR
comp=N,480nm,19.1s,MS4.6
CD2 LR LR
comp=E,500nm,18.0s,MS4.6
CD2 LR LR
comp=Z,430nm,14.8s,MS4.5
BJI Beijing 47.33 342 P P 09 12 43.4 -0.6
BJI S S 09 19 39.3 +2.2
BJI AMB AMB
comp=Z,12nm,1.5s,mb4.6
BJI AMB AMB
comp=Z,144nm,2.9s,mb5.4
BJI LR LR
comp=N,292nm,21.0s,MS4.5
BJI LR LR
comp=E,490nm,20.3s,MS4.5
BJI LR LR
comp=Z,436nm,24.1s,MS4.3
VLA Vladivostok 47.62 358 iP P 09 12 45.4 -0.8
CN2 Changchun 48.84 352 eP P 09 12 56.4 +0.8
CN2 eXP sP 09 13 05.1 +2.6
CN2 eS S 09 19 58.4 0.0
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,19.0s,MS4.7
CN2 LR LR
comp=E,690nm,19.0s,MS4.7
CN2 LR LR
comp=Z,520nm,20.0s,MS4.5
MDJ Mudanjiang 49.23 356 P P 09 12 58.0 -0.5
MDJ AP pP 09 13 04.3 +0.8
MDJ XP sP 09 13 07.0 +1.5
MDJ PP PP 09 14 51.1 -1.5
MDJ S S 09 20 03.0 -0.8
MDJ SCS ScS 09 22 48.1 -2.0
MDJ AMB AMB
comp=Z,16nm,0.9s,mb5.0
MDJ AMB AMB
comp=Z,144nm,5.0s
MDJ LR LR
comp=N,89nm,19.7s
MDJ LR LR
comp=E,651nm,27.3s
MDJ LR LR
comp=Z,255nm,21.8s,MS4.2
LZH Lanzhou 49.24 328 eP P 09 13 03.5 +4.7
LZH AP pP 09 13 10.0 +6.2
LZH XP sP 09 13 13.0 +7.3
LZH PP PP 09 14 58.0 +5.2
LZH eS S 09 20 08.0 +3.7
LZH XS sS 09 20 18.0 +5.5
LZH SS SS 09 23 36.0 0.0
LZH AMB AMB
comp=Z,83nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,260nm,4.0s
LZH LR LR
comp=E,1μm,15.3s
LZH LR LR
comp=Z,2μm,16.0s,MS5.1
SHL Shillong 50.45 309 eP P 09 13 07.0 -1.3
RPZ Rata Peaks 50.95 145 P P 09 13 13.0 +1.3
comp=Z,24nm,1.0s,mb5.1,baz=303,slow=16,SNR=3.2
YSS Yuzh-Sakhalins 52.06 8⇑ eP P 09 13 18.2 -1.7
LSA Lhasa 53.17 313 P P 09 13 29.8 +1.3
LSA AMB AMB
comp=Z,20nm,1.0s,mb5.0
LSA Lhasa 53.17 313 eP P 09 13 31.9 +3.4
comp=Z,16nm,0.7s,mb5.0
LSA Lhasa 53.17 313 eP P 09 13 31.9 +3.4
LSA pmax pmax
comp=Z,16nm,0.7s,mb5.1
GTA Gaotai 53.84 328 eP P 09 13 33.1 -0.1
GTA AP pP 09 13 39.5 +1.3
GTA XP sP 09 13 42.3 +2.1
GTA PP PP 09 15 36.5 +2.0
GTA SCP ScP 09 18 33.0 -3.5
GTA S S 09 21 08.1 +0.5
GTA XS sS 09 21 16.4 +0.5
GTA SS SS 09 24 47.1 -1.9
GTA AMB AMB
comp=Z,8.0nm,1.5s,mb4.4
GTA AMB AMB
comp=Z,150nm,5.7s
GTA LR LR
comp=N,304nm,18.6s,MS4.5
GTA LR LR
comp=E,261nm,18.3s,MS4.5
GTA LR LR
comp=Z,256nm,18.3s,MS4.3
TAPN Taplejung 54.59 308 eP P 09 13 42.0 +3.1
comp=Z,46nm,0.9s,mb5.5
ODAN Odare 54.60 308 eP P 09 13 44.4 +5.4
comp=Z,56nm,0.9s,mb5.6
JIRN Jiri 55.92 308 eP P 09 13 52.3 +3.8
comp=Z,54nm,1.2s,mb5.5
KKN Kakani 56.70 308 eP P 09 13 58.4 +4.3
comp=Z,30nm,0.8s,mb5.4
GKN Gorkha 57.30 308 eP P 09 14 01.5 +3.2
comp=Z,59nm,1.0s,mb5.6
ULN Ulaanbaatar 57.31 339 eP P 09 13 57.9 -0.2
comp=Z,15nm,1.3s,mb4.8
SONM Songino Array 57.53 339 P P 09 13 59.1 -0.5
comp=Z,0.8nm,0.8s,baz=156,slow=6.4,SNR=6.5
SONM LR LR 09 38 41.9
comp=Z,386nm,18.7s,MS4.5,baz=161,slow=36
HYB Hyderabad 58.63 294 iP P 09 14 07.0 -0.9
HYB e pP 09 14 13.0 +0.1
ZAK Zakamensk 60.78 338 eP P 09 14 15.9 -6.1
ZAK e 09 18 09.5
ZAK pmax pmax
comp=Z,5.0nm,1.5s,mb4.4
TLY Talaya 61.72 339 eP P 09 14 34.3 +5.9
TLY e 09 16 44.4
TLY eS S 09 22 57.5 +7.0
TLY e 09 24 16.3
TLY SS SS 09 26 56.7 +4.2
TLY pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
CLNS Chul'man 61.74 355 eP P 09 14 34.2 +5.8
CLNS pmax pmax
comp=Z,16nm,1.1s,mb5.1
CLNS pmax pmax
comp=N,13nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,0.9s
CLNS MLR MLR
comp=Z,300nm,16.0s,MS4.5
CLNS MLR MLR
comp=N,200nm,14.0s,MS4.5
CLNS MLR MLR
comp=E,100nm,13.0s,MS4.5
MOY Mondy 62.68 338 eP P 09 14 41.0 +6.2
WMQ Urumqi 63.54 324⇑ iP P 09 14 41.3 +0.6
WMQ AP pP 09 14 47.3 +1.5
WMQ XP sP 09 14 50.3 +2.6
WMQ PCP PcP 09 15 17.8 +0.6
WMQ PP PP 09 17 02.4 +1.8
WMQ S S 09 23 11.4 -2.3
WMQ XS sS 09 23 21.8 -0.3
WMQ AMB AMB
comp=Z,51nm,0.9s,mb5.5
WMQ AMB AMB
comp=Z,206nm,4.6s
WMQ LR LR
comp=N,381nm,25.6s,MS4.5
WMQ LR LR
comp=E,150nm,22.2s,MS4.5
WMQ LR LR
comp=Z,160nm,19.0s,MS4.2
BOD Bodaibo 64.30 348 eP P 09 14 43.6 -1.8
BOD pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
MA2 Magadan 65.50 9 iP P 09 14 53.3 +0.1
YAK Yakutsk 66.61 358 eP P 09 14 59.8 -0.4
YAK Yakutsk 66.61 358 eP P 09 15 05.5 +5.3
YAK pmax pmax
comp=Z,30nm,1.0s,mb5.3
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.0s
MK31 Makanchi Array 68.37 325 iP P 09 15 10.8 -0.9
MK31 pmax pmax
comp=Z,23nm,0.6s,mb5.4
MKAR Makanchi Array 68.37 325 P P 09 15 10.5 -1.2
MKAR Makanchi Array 68.37 325 iP P 09 15 11.1 -0.6
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 68.37 325 P P 09 15 10.5 -1.2
comp=Z,3.0nm,0.4s,mb4.7,baz=115,slow=8.1,SNR=48
KZA Kyzart 70.45 318 P P 09 15 25.8 +1.1
SNR=7.7
TKM2 Tokmak 2 70.59 319 eP P 09 15 25.6 +0.1
comp=Z,8.7nm,0.9s,mb4.7
TKM2 Tokmak 2 70.59 319 eP P 09 15 25.6 +0.1
TKM2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
UCH Uchtor 71.01 318 eP P 09 15 29.3 +1.2
comp=Z,27nm,1.4s,mb5.0
UCH Uchtor 71.01 318 P P 09 15 28.9 +0.8
SNR=8.9
AAK Ala-Archa 71.19 318 eP P 09 15 28.5 -0.7
comp=Z,14nm,1.2s,mb4.8
AAK e pP 09 15 34.8 +0.4
AAK Ala-Archa 71.19 318 eP P 09 15 28.5 -0.7
AAK e pP 09 15 34.8 +0.4
AAK pmax pmax
comp=Z,14nm,1.2s,mb4.8
USP Ospenovka 71.46 319 P P 09 15 30.6 -0.2
SNR=11
AML Almayashu 71.52 317 eP P 09 15 31.9 +0.7
comp=Z,15nm,0.9s,mb4.9
AML Almayashu 71.52 317 P P 09 15 32.0 +0.8
SNR=9.2
EKS2 Erkin-Say 71.69 318 eP P 09 15 32.4 +0.3
comp=Z,64nm,1.9s,mb5.2
EKS2 Erkin-Say 71.69 318 P P 09 15 32.4 +0.2
SNR=6.2
NVS Novosibirsk 72.48 332 iP P 09 15 35.2 -1.4
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=Z,27nm,1.5s,mb5.0
NVS pmax pmax
comp=E,11nm,1.4s
KURK Kurchatov 72.51 327 P P 09 15 36.1 -0.8
comp=E,206nm,0.9s,SNR=7.3
KK31 Karatay Array 74.06 317 iP P 09 15 45.6 -0.7
KK31 pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
PPT Papeete 76.02 107 eSS SS 09 30 30.1 -4.3
comp=Z,156nm,29.2s
PPT eLR LR 09 39 28.5
comp=Z,856nm,33.8s
BILL Bilibino 76.10 12 eP P 09 15 57.7 +0.2
BILL eS S 09 25 41.8 +1.6
BILL pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
TBI Tubuai 76.14 113 eLR LR 09 39 34.3
comp=Z,555nm,24.8s
TIXI Tiksi 76.27 358 eP P 09 15 58.3 -0.1
comp=Z,9.2nm,1.1s,mb4.6
TIXI Tiksi 76.27 358 eP P 09 15 56.4 -2.0
TIXI pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TIXI MLR MLR
comp=Z,360nm,17.0s,MS4.8
BRVK Borovoye 78.17 327 P P 09 16 09.1 -0.4
comp=Z,239nm,0.9s,SNR=6.3
BRVK Borovoye 78.17 327 eP P 09 16 09.0 -0.5
comp=Z,33nm,0.8s,mb5.3
BRVK Borovoye 78.17 327 eP P 09 16 09.0 -0.5
BRVK pmax pmax
comp=Z,33nm,0.8s,mb5.3
CHKZ Chkalovo 78.25 327 eP P 09 16 09.0 -0.9
comp=Z,26nm,1.0s,mb5.1
CHKZ Chkalovo 78.25 327 iP P 09 16 08.3 -1.6
CHKZ pmax pmax
comp=Z,22nm,1.0s,mb5.0
MAW Mawson 78.40 202 P P 09 16 09.4 -1.1
comp=Z,18nm,1.2s,mb4.8,baz=287,slow=17,SNR=2.7
MAW LR LR 09 50 30.3
comp=Z,360nm,18.8s,MS4.7,baz=71,slow=35
GAMB Gambell 79.45 22 eP P 09 16 15.8 -0.4
GAMB epP pP 09 16 22.9 +1.4
GAMB esP sP 09 16 25.4 +2.1
TNA Tin City 81.78 21 eP P 09 16 28.9 +0.2
AKTK Aktyubinsk 84.50 322 P P 09 16 42.6 -0.5
AKTO Aktyubinsk 84.50 322 P P 09 16 42.6 -0.5
comp=Z,6.6nm,1.1s,mb4.7,baz=96,slow=6.5,SNR=12
QSPA South Pole Qui 85.26 180 eP P 09 16 47.5 +1.1
comp=Z,19nm,1.0s,mb5.2
TTA Tatalina 85.36 26 eP P 09 16 47.3 +0.2
ARU Arti 85.70 327 eP P 09 16 52.8 +3.8
comp=Z,12nm,1.0s,mb5.1
ARU Arti 85.70 327 c iP P 09 16 47.1 -1.9
ARU 09 20 04.9
ARU S S 09 27 10.1 -11
ARU SS SS 09 32 50.7 -6.7
ARU pmax pmax
comp=Z,18nm,2.5s,mb4.9
SYO Syowa Base 87.10 201⇓ epP pP 09 17 00.6 -0.3
SLKM Skilak Lake 87.29 29 eP P 09 16 58.8 +2.1
IMA2 Indian Mountai 87.32 23 eP P 09 16 57.2 +0.5
PMR Palmer 88.06 28 eP P 09 17 01.4 +1.0
comp=Z,20nm,1.0s,mb5.3
PMR Palmer 88.06 28 eP P 09 17 01.4 +1.0
PMR pmax pmax
comp=Z,20nm,1.0s,mb5.3
MCK McKinley 88.65 26 eP P 09 17 04.2 +1.1
comp=Z,7.2nm,0.8s,mb5.0
MCK McKinley 88.65 26 eP P 09 17 04.2 +1.1
MCK pmax pmax
comp=Z,7.0nm,0.8s,mb5.0
COLA College 89.36 25 eP P 09 17 08.6 +2.1
comp=Z,1.7nm,0.6s,mb4.5
COLA College 89.36 25 iP P 09 17 07.9 +1.5
RKT Rikitea 89.46 113 eS S 09 27 54.0 -4.3
comp=Z,146nm,37.0s
RKT eLR LR 09 45 42.9
comp=Z,284nm,26.2s
EGAK Eagle 92.17 25 eP P 09 17 19.9 +0.4
comp=Z,3.8nm,0.9s,mb4.7
DAWY Dawson 92.87 26 eP P 09 17 24.4 +1.6
ZEI Tsey 92.96 312 eP P 09 17 24.3 +0.6
ZEI e*PP pP 09 17 30.8 +1.9
KIV Kislovodsk 93.91 314 iP P 09 17 26.4 -1.6
INK Inuvik 95.39 22 eP P 09 17 36.0 +1.8
INK Inuvik 95.39 22 P P 09 17 31.9 -2.3
comp=Z,1.2nm,0.8s,mb4.4,baz=259,slow=8.9,SNR=6.2
KMBO Kilima Mbogo 96.27 268 LR LR 10 00 42.6
comp=Z,165nm,18.2s,MS4.5,baz=96,slow=35
OBN Obninsk 97.88 325 eP P 09 17 43.6 -2.2
OBN pmax pmax
comp=Z,6.0nm,1.2s,mb5.0
FINES FINESS Array B 102.47 332 P Pdif 09 18 05.7 -0.6
comp=Z,1.8nm,0.9s,baz=258,slow=2.6,SNR=2.8
YKA Yellowknife Ar 104.10 26 Pdif Pdif 09 18 12.9 -0.6
YKA Yellowknife Ar 104.10 26 Pdiff Pdif 09 18 12.9 -0.6
comp=Z,0.3nm,0.9s,baz=285,slow=4.7,SNR=4.0
YKA PKiKP PKiKP 09 22 29.5 -0.9
comp=Z,0.3nm,0.7s,baz=303,slow=1.6,SNR=5.2
PDAR Pinedale Array 112.71 45 PKiKP PKiKP 09 22 48.6 +1.5
comp=Z,0.4nm,0.9s,baz=204,slow=2.0,SNR=2.2
ULM Lac du Bonnet 118.55 34 PKP PKPdf 09 22 57.5 -0.6
comp=Z,0.6nm,0.5s,baz=345,slow=12,SNR=2.6
MNTX Cornudas Mount 118.68 56 ePKPdf PKPdf 09 23 04.5 +5.5
TXAR Lajitas Array 120.65 59 PKP PKPdf 09 23 03.2 +0.4
TXAR Lajitas Array 120.65 59 PKP PKPdf 09 23 03.2 +0.4
comp=Z,0.5nm,1.0s,baz=221,slow=3.6,SNR=2.9
ECSD EROS,Sioux Fal 121.20 41 ePKPdf PKPdf 09 23 10.4 +7.0
EYMN Ely 122.21 34 ePKPdf PKPdf 09 23 10.6 +5.4
JCT Junction City 123.62 56 ePKPdf PKPdf 09 23 08.5 0.0
MIAR Mount Ida 127.22 50 ePKPdf PKPdf 09 23 20.6 +5.3
OXF Oxford 130.35 48 ePKPdf PKPdf 09 23 20.3 -0.9
TORD Torodi Ar. Bea 131.86 283 PKP PKPdf 09 23 24.5 -0.1
comp=Z,1.2nm,1.0s,baz=49,slow=1.8,SNR=4.0
CPCT Cooper Cave 133.38 44 ePKPdf PKPdf 09 23 32.2 +5.2
BINY Binghamton 134.29 31 ePKPdf PKPdf 09 23 33.4 +5.0
OTAV Otavalo 147.65 97 ePKPdf PKPdf 09 23 53.7 +0.5
LPAZ La Paz 150.03 135 PKPbc PKPbc 09 24 03.2 +1.4
comp=Z,2.8nm,0.9s,baz=163,slow=1.5,SNR=10
ROSC El Rosal 152.13 89 PKPbc PKPbc 09 24 08.2 +1.3
comp=Z,9.3nm,0.5s,baz=270,slow=23,SNR=5.9
SDV Santo Domingo 155.56 79 ePKPdf PKPdf 09 24 06.2 +1.1

NEIC ***14*** *09:09:54.2, 1622N×98.17W, h15km, MD3.7(MEX), After MEX.*

MEX 14 09:09:52.5±1.1, 1618N×9800W, h26km±16km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.24	330	*i* P	Pb	09 09 57.8	-1.0
PNIG				*i* S	Sb	09 10 01.5	-1.5
HUIG	Huatulco	1.87	102	eP	Pn	09 10 25.5	+2.6
HUIG				*i* S	Sn	09 10 47.8	+2.2
HUIG	Huatulco	1.87	102	*i* P	Pn	09 10 21.8	-1.1
HUIG				*i* S	Sn	09 10 44.1	-1.5
ACX	Acapulco	1.96	291	*i* P	Pn	09 10 32.0	+7.9
ACX				*i* S	Sn	09 10 50.0	+2.1
TPIG	Tehuac#an	2.31	15	*i* P	Pn	09 10 28.6	-0.3
TPIG				*i* S	Sn	09 10 54.9	-1.7
MEIG	Mezcala	2.32	319	eP	Pn	09 10 27.7	-1.4
MEIG				*i* S	Sn	09 10 53.7	-3.2
PPM	Popocatepetl	2.93	348	eP	Pn	09 10 37.2	-0.3
PPM				*i* S	Sn	09 11 10.1	-1.7
CMIG	Matias Romero	3.12	73	eP	Pn	09 10 37.2	-3.0
CMIG				*i* S	Sn	09 11 11.9	-4.7
CMIG	Matias Romero	3.12	73	*i* P	Pn	09 10 37.7	-2.4
CMIG				*i* S	Sn	09 11 13.5	-3.2

IDC 14 09:19:31.5±2.1, 407N×12676E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=155.5km s-min=27.0km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.00	163	P	P	09 24 56.6	-0.6
	3.2nm,0.9s,baz=343,slow=10,SNR=12						
ASAR	Alice Springs	28.43	166	P	P	09 25 28.9	+0.8
	0.2nm,0.5s,baz=349,slow=7.6,SNR=2.8						
MKAR	Makanchi Array	57.30	325	P	P	09 29 21.2	+0.1
	0.6nm,0.7s,baz=133,slow=7.6,SNR=4.6						

ISCJB ***14*** *09:41:31.9±0.7, 3843N±003×39.17E±005, h8km±7km, Error ellipse: s-maj=7.1km s-min=5.5km az=28.9*
CSEM ***14*** *09:41:31.3±0.3, 3847N×3916E, h20km, MD2.7, Error ellipse: s-maj=7.2km s-min=3.8km az=126.0*
ISK ***14*** *09:41:31.2, 3849N×3912E, h5km, MD2.8*
DDA ***14*** *09:41:32.2, 3848N×3923E, h5km, Md2.7*

ISC 14 09:41:32.5±0.8**,3845N**±005×**3918E**±007**,h9**km±14km**,n9,** σ**0.71**/17**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.16**	**287**	*i* P	**Pg**	**09 41 36.0**	**+0.1**
ELZG				*i* S	**Sg**	**09 41 38.6**	**+0.5**
PTK	**Pertek**	**0.47**	**21**	PG	**Pg**	**09 41 41.0**	**-0.7**
PTK				SG	**Sg**	**09 41 49.0**	**+1.1**
MYA	**Malataya**	**0.60**	**258**	PG	**Pg**	**09 41 43.6**	**-0.6**
MYA				SG	**Sg**	**09 41 53.4**	**+1.4**
MALT	**Malatya**	**0.60**	**257**	PG	**Pg**	**09 41 43.0**	**-1.2**
MALT				SG	**Sg**	**09 41 52.0**	**-0.1**
KEMA	**Kemaliye**	**0.97**	**327**	*i* P	**Pg**	**09 41 50.2**	**-1.0**
KEMA				*i* S	**Sg**	**09 42 04.1**	**+0.2**
KEMA	**Kemaliye**	**0.97**	**327**	*i* P	**Pg**	**09 41 50.2**	**-1.1**
KEMA				*i* S	**Sg**	**09 42 04.1**	**+0.2**
URFA	**Urfa**	**1.05**	**196**	*e*PG	**Pg**	**09 41 52.7**	**+0.1**
GZT	**Gaziantep**	**1.68**	**230**	*i* P	**Pg**	**09 42 04.5**	**-0.2**
GZT				*i* S	**Sg**	**09 42 26.6**	**+0.2**
MARD	**Mardin**	**1.70**	**131**	*i* P	**Pn**	**09 42 01.9**	**-0.5**
MARD				*i* S	**Sn**	**09 42 25.1**	**+0.8**

*BJI **14** 09:45:26.5, 760S×12780E, h131km, mB4.7, mb4.8*
*ISCJB **14** 09:45:28.6±1.1, 763S±006×12794E±005, h155km±11km, mb4.3/16, Error ellipse: s-maj=9.8km s-min=7.0km az=27.3*
*NEIC **14** 09:45:28.6±1.6, 757S×12779E, h131km±16km, mb4.3/10, Error ellipse: s-maj=13.3km s-min=11.0km az=47.0*
*IDC **14** 09:45:31.1±2.0, 749S×12775E, h152km±19km, mb4.0/9, mb1 4.1/11, mb1mx4.1/15, mbtmp4.1/11, Error ellipse: s-maj=15.4km s-min=12.0km az=64.0*
ISC 14 09:45:28.5±1.2**,755S**±007×**12794E**±006**,h133**km±13km**, n38,** σ**1.12**/42**,mb4.3**/16**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.98**	**238**	P	**Pn**	**09 46 44.1**	**+2.6**
	409nm,0.3s,baz=106,slow=2.8,SNR=215						
BATI				S	**Sn**	**09 47 38.3**	**+0.1**
	108nm,0.3s,baz=141,slow=4.0,SNR=21						
KAKA	**Kakadu**	**6.77**	**140**	*e*Pn	**Pn**	**09 47 06.9**	**+1.4**
	789nm,0.7s						
KAKA				*e*Sn	**Sn**	**09 48 19.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**10.72**	**192**	*e*P	**Pn**	**09 47 56.7**	**-1.8**
	10nm,0.3s						
FITZ				*e*S	**Sn**	**09 49 48.1**	**-8.7**
FITZ	**Fitzroy Crossi**	**10.72**	**192**	P	**Pn**	**09 47 56.9**	**-1.6**
	0.9nm,0.3s,baz=32,slow=11,SNR=20						
FITZ				S	**Sn**	**09 49 47.3**	**-10**
	5.6nm,0.3s,baz=66,slow=22,SNR=9.3						
WRA	**Warramunga Arr**	**13.79**	**154**	P	**Pn**	**09 48 36.7**	**-1.8**
	9.7nm,0.3s,baz=321,slow=14,SNR=278						
WRA				S	**Sn**	**09 50 59.5**	**-11**
	3.8nm,0.3s,baz=328,slow=23,SNR=14						
WB2	**Warramunga Arr**	**13.79**	**154**	*e*P	**Pn**	**09 48 35.0**	**-3.6**
WB2				*e*		09 48 38.5	
WB2				*e*S	**Sn**	**09 51 01.2**	**-10**
WB2	**Warramunga Arr**	**13.79**	**154**	*e*P	**Pn**	**09 48 38.5**	**-0.1**
WB2				*e*S	**Sn**	**09 51 01.2**	**-10**
MBWA	**Marble Bar**	**15.68**	**210**	*e*Pn	**Pn**	**09 49 02.3**	**0.0**
	8.0nm,0.8s						
MBWA				*e*Sn	**Sn**	**09 51 47.9**	**-8.6**
COEN	**Coen**	**16.25**	**114**	*e*Pn	**Pn**	**09 49 10.7**	**+1.3**
	11nm,0.7s						
COEN				*e*Sn	**Sn**	**09 52 02.5**	**-7.9**
ASAR	**Alice Springs**	**17.01**	**161**	P	**Pn**	**09 49 19.3**	**+0.8**
	2.8nm,0.3s,baz=331,slow=9.6,SNR=151						
ASAR				S	**S**	**09 52 16.8**	**-11**
	1.3nm,0.3s,baz=335,slow=18,SNR=6.7						
PMG	**Port Moresby**	**19.09**	**97**	P	**P**	**09 49 45.8**	**+4.6**
	3.4nm,0.3s,baz=271,slow=5.1,SNR=26						
KSM	**Kuching**	**19.75**	**296**	*e*P	**P**	**09 49 48.6**	**+0.4**
CTA	**Charters Tower**	**21.68**	**127**	*e*P	**P**	**09 50 11.6**	**+2.8**
	9.0nm,1.0s,mb4.2						
CTA	**Charters Tower**	**21.68**	**127**	P	**P**	**09 50 11.7**	**+2.8**
	7.2nm,0.7s,mb4.2,baz=315,slow=9.2,SNR=7.6						
FORT	**Forrest**	**23.11**	**180**	*e*P	**P**	**09 50 20.9**	**-1.9**
	13nm,0.4s,mb4.7						
KLBR	**Kellerberrin**	**25.74**	**200**	*e*P	**P**	**09 50 47.5**	**+0.8**
	9.8nm,0.6s,mb4.6						
KLBR				*e*S	S	09 55 39.0	+33
NWAO	**Narrogin (SRO)**	**27.13**	**200**	P	**P**	**09 50 59.7**	**+0.5**
NWAO	**Narrogin (SRO)**	**27.13**	**200**	P	**P**	**09 50 59.7**	**+0.5**
	4.6nm,0.6s,mb4.3,baz=75,slow=7.4,SNR=7.3						
STKA	**Stephens Creek**	**27.34**	**154**	*e*P	**P**	**09 51 02.7**	**+1.6**
	1.6nm,0.5s,mb3.9						
STKA				*e*S	S	09 56 19.2	+48
STKA	**Stephens Creek**	**27.34**	**154**	P	**P**	**09 51 02.3**	**+1.2**
	1.8nm,0.5s,mb4.0,baz=313,slow=21,SNR=6.0						
PSI	**Prapat**	**30.73**	**289**	P	**P**	**09 51 30.6**	**-0.8**
	24nm,0.7s,mb5.0,baz=101,slow=4.9,SNR=15						
CHTO	**Chiang Mai**	**38.78**	**313**	*e*P	**P**	**09 52 39.9**	**-0.5**
	3.8nm,0.6s,mb4.2						
KSRS	**Korea Array**	**44.77**	**360**	P	**P**	**09 53 29.4**	**+0.6**
	1.8nm,0.5s,mb3.9,baz=179,slow=9.3,SNR=10						
MJAR	**Matsushiro Arr**	**44.91**	**12**	P	**P**	**09 53 28.9**	**-1.1**
	3.4nm,0.8s,mb4.0,baz=188,slow=9.6,SNR=7.7						
LZH	**Lanzhou**	**48.97**	**334**	*e*P	**P**	**09 54 01.3**	**-0.2**
LZH				AMB	AMB		
	comp=Z,18nm,1.4s,mb4.5						
LZH				AMB	AMB		
	comp=Z,79nm,4.3s						
GTA	**Gaotai**	**53.50**	**333**	*e*P	**P**	**09 54 35.5**	**+0.2**
GTA				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.7						
SONM	**Songino Array**	**58.34**	**343**	P	**P**	**09 55 09.8**	**+0.2**
	comp=Z,1.4nm,0.4s,mb4.1,baz=159,slow=7.2,SNR=33						
MKAR	**Makanchi Array**	**67.59**	**328**	P	**P**	**09 56 09.9**	**-0.8**
MKAR				pP	pP	09 56 36.2	-6.9
MKAR	**Makanchi Array**	**67.59**	**328**	P	**P**	**09 56 09.9**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.3,baz=123,slow=8.1,SNR=29						
MKAR				pP	pP	09 56 36.2	-6.9
	comp=Z,1.8nm,0.7s,baz=116,slow=5.5,SNR=7.4						
MAW	**Mawson**	**73.70**	**201**	P	**P**	**09 56 48.3**	**+0.8**
	comp=Z,8.9nm,0.9s,mb4.5,baz=82,slow=12,SNR=5.6						
CHKZ	**Chkalovo**	**77.67**	**329**	*e*P	**P**	**09 57 09.4**	**-0.8**
	comp=Z,2.3nm,0.8s,mb3.9						
QSPA	**South Pole Qui**	**82.43**	**180**	*e*P	**P**	**09 57 35.8**	**+0.4**
	comp=Z,15nm,0.8s,mb4.7						
NSHM	**Saint Helena R**	**109.87**	**52**	*e*Pdif	Pdif	09 59 44.0	+1.6
TORD	**Torodi Ar. Bea**	**126.91**	**281**	PKP	PKPdf	10 04 16.6	-1.1
	comp=Z,1.6nm,0.6s,baz=55,slow=2.1,SNR=18						
SCHQ	**Schefferville**	**131.39**	**11**	PKP	PKPdf	10 04 25.4	+0.3
	comp=Z,1.7nm,0.9s,baz=250,slow=12,SNR=4.2						
DBIC	**Dimbokro**	**133.17**	**272**	PKP	PKPdf	10 04 30.2	+0.5
DBIC	**Dimbokro**	**133.17**	**272**	PKP	PKPdf	10 04 30.2	+0.5
	comp=Z,3.8nm,0.9s,baz=156,slow=20,SNR=4.7						
LPAZ	**La Paz**	**151.47**	**146**	PKPbc	PKPbc	10 05 08.6	+0.7
	comp=Z,1.4nm,0.5s,baz=108,slow=3.2,SNR=7.9						
LPAZ				PKPab	PKPab	10 05 19.3	+2.9
	comp=Z,5.8nm,0.6s,baz=218,slow=3.6,SNR=21						

IDC 14 10:02:32.3±3.9**,2962S**×**17763W,h0**km**,mb3.9**/4**, mb1 4.1**/5**,mb1mx3.9**/13**,mbtmp4.0**/5**,ML3.2**/1**,Error ellipse: s-maj=73.5km s-min=51.4km az=90.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.66**	**205**	Pn	Pn	10 04 52.1	-0.3
	0.2nm,0.3s,baz=277,slow=7.8,SNR=4.9						
URZ				Sn	Sn	10 06 37.1	-4.5
	1.6nm,0.3s,baz=247,slow=21,SNR=14						
CTA	**Charters Tower**	**34.00**	**278**	P	P	10 09 19.6	+1.7
	4.6nm,0.9s,baz=121,slow=12,SNR=2.4						
STKA	**Stephens Creek**	**34.97**	**256**	P	P	10 09 27.3	+1.1
	0.7nm,0.3s,baz=85,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**43.47**	**266**	P	P	10 10 36.2	-1.2
	0.7nm,0.5s,baz=101,slow=7.4,SNR=19						
WRA	**Warramunga Arr**	**44.39**	**271**	P	P	10 10 43.8	-1.1
	0.4nm,0.4s,baz=110,slow=7.9,SNR=8.6						
FINES	**FINESS Array B**	**144.52**	**341**	PKP	PKPdf	10 22 09.7	-0.3
	0.4nm,0.4s,baz=66,slow=3.4,SNR=3.8						

IDC 14 10:13:29.4±1.3**,691S**×**12880E,h0**km**,mb3.8**/3**,mb1 3.9**/5**, mb1mx3.8**/12**,mbtmp3.7**/5**,ML3.7**/2**,Error ellipse: s-maj=124.3km s-min=22.9km az=67.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.03**	**158**	Pn	Pn	10 16 49.2	-0.4
	0.3nm,0.3s,baz=341,slow=12,SNR=19						
WRA				Sn	Sn	10 19 12.7	-13
	0.9nm,0.3s,baz=331,slow=23,SNR=11						
ASAR	**Alice Springs**	**17.37**	**164**	P	Pn	10 17 35.0	+1.7
	0.3nm,0.3s,baz=344,slow=11,SNR=46						
STKA	**Stephens Creek**	**27.57**	**156**	P	P	10 19 17.7	-0.5
	0.8nm,0.3s,baz=315,slow=13,SNR=2.8						
SONM	**Songino Array**	**57.98**	**342**	P	P	10 23 25.1	+1.4
	0.5nm,0.7s,baz=165,slow=6.9,SNR=4.9						
MKAR	**Makanchi Array**	**67.50**	**327**	P	P	10 24 26.5	-0.8
	0.2nm,0.3s,baz=120,slow=8.5,SNR=3.3						

*NEIC **14** 10:13:50.2, 3952N×2065E, h29km, MD3.3(ATH), After ATH.*
*CSEM **14** 10:13:50.2, 3952N×2065E, h29km, MD3.3/4, After ATH*
ATH 14 10:13:50.1,3953N×**2065E,h29**km±11km**,MD3.3**/4**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.20**	**51**	*e*PB	Pb	10 13 55.8	-0.4
JAN				*e*SB	Sb	10 14 00.6	+0.3
KEK	**Kerkira**	**0.68**	**286**	*e*PN	Pn	10 14 04.2	+0.4
EVR	**Evrytania**	**1.09**	**124**	*e*PN	Pn	10 14 11.5	+2.1
VLS	**Valsamata**	**1.35**	**182**	*e*PB	Pb	10 14 14.5	-0.3

*ISCJB **14** 10:13:55.8±0.8, 362S±0.1×1019W±02, h10km, mb4.3/15, MS4.0/8, Error ellipse: s-maj=22.4km s-min=16.3km az=167.2*
*IDC **14** 10:13:56.0±0.9, 36.13S×10189W, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.4/17, mbtmp4.2/11, MS4.0/9, Ms1 4.0/9, ms1mx3.8/26, Error ellipse: s-maj=27.4km s-min=21.0km az=81.0*
*NEIC **14** 10:13:57.6±0.6, 36.10S×10178W, h10km, mb4.6/4, Error ellipse: s-maj=20.6km s-min=15.2km az=79.0*
ISC 14 10:13:57.7±0.8**,361S**±01×**1018W**±02**,h10**km**,n30,** σ**0.93**/15**,mb4.3**/15**,MS4.0**/8**,Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**11.01**	**322**	LR	LR	10 19 33.0	
	comp=Z,610nm,21.4s,baz=351,slow=31						
CFAA	**Coronel Fontan**	**28.18**	**91**	LR	LR	10 28 45.1	
	comp=Z,33nm,19.4s,MS2.9,baz=347,slow=32						
USHA	**Ushuaia**	**29.57**	**140**	P	**P**	**10 20 02.9**	**+0.4**
	6.0nm,0.9s,mb4.3,baz=324,slow=9.0,SNR=3.8						
USHA				LR	LR	10 29 25.4	
	comp=Z,266nm,18.2s,MS3.9,baz=303,slow=31						
RKT	**Rikitea**	**31.43**	**285**	*e*LQ		10 27 03.9	
	314nm,29.8s						
RKT	**Rikitea**	**31.43**	**285**	*e*T		10 52 52.5	
	1.3nm,0.3s						
NNA	**Nana**	**32.95**	**49**	LR	LR	10 30 44.6	
	comp=Z,391nm,20.0s,MS4.1,baz=137,slow=31						
LPAZ	**La Paz**	**35.86**	**65**	P	**P**	**10 20 58.9**	**+1.0**
	8.8nm,1.0s,mb4.6,baz=226,slow=6.5,SNR=23						
ATAH	**Atahualpa**	**36.05**	**42**	P	**P**	**10 20 59.2**	**-0.3**
	8.2nm,0.9s,mb4.7,baz=124,slow=8.3,SNR=6.0						
SIV	**San Ignacio**	**41.37**	**72**	P	**P**	**10 21 43.4**	**-0.7**
	1.5nm,0.5s,mb3.9,baz=244,slow=8.2,SNR=9.7						
OTAV	**Otavalo**	**42.20**	**36**	*e*P	**P**	**10 21 51.1**	**+0.1**
	14nm,1.3s,mb4.4						
TBI	**Tubuai**	**42.88**	**274**	*e*LR	LR	10 33 42.8	
	170nm,26.2s						
TBI	**Tubuai**	**42.88**	**274**	*e*T		11 07 12.5	
	5.2nm,0.4s						
PPT	**Papeete**	**45.94**	**281**	*e*LR	LR	10 35 06.3	
	151nm,25.0s						
ROSC	**El Rosal**	**48.22**	**38**	P	**P**	**10 22 39.8**	**+1.0**
	16nm,0.7s,mb5.2,baz=97,slow=20,SNR=11						
ROSC				LR	LR	10 39 39.3	
	comp=Z,146nm,21.0s,MS3.9,baz=332,slow=32						
SDV	**Santo Domingo**	**53.54**	**40**	*e*P	**P**	**10 23 16.2**	**-2.6**
	6.4nm,0.9s,mb4.5						
QSPA	**South Pole Qui**	**54.09**	**180**	P	**P**	**10 23 21.9**	**-0.1**
	1.8nm,0.8s,mb4.1,baz=100,slow=6.1,SNR=9.0						
RPZ	**Rata Peaks**	**64.30**	**233**	LR	LR	10 45 06.7	
	comp=Z,378nm,20.2s,MS4.6,baz=149,slow=29						
TXAR	**Lajitas Array**	**65.13**	**358**	P	**P**	**10 24 39.8**	**+1.2**
	0.3nm,0.7s,mb3.4,baz=203,slow=3.6,SNR=3.3						
MVCO	**Mesa Verde**	**73.22**	**354**	*e*P	**P**	**10 25 29.3**	**+0.7**
	3.5nm,0.6s,mb4.5						
NVAR	**Mina Array Bea**	**75.73**	**347**	P	**P**	**10 25 43.7**	**+0.5**
	3.1nm,0.8s,mb4.3,baz=162,slow=7.7,SNR=14						
PDAR	**Pinedale Array**	**78.83**	**354**	P	**P**	**10 26 00.1**	**-0.4**
	1.5nm,0.8s,mb4.0,baz=176,slow=5.7,SNR=11						
HLID	**Hailey**	**80.13**	**351**	*e*P	**P**	**10 26 08.1**	**+0.6**
	4.7nm,0.8s,mb4.5						
ULM	**Lac du Bonnet**	**86.16**	**4**	P	**P**	**10 26 37.4**	**-1.1**
	2.1nm,0.8s,mb4.4,baz=206,slow=6.7,SNR=6.1						
STKA	**Stephens Creek**	**89.98**	**230**	LR	LR	11 00 45.1	
	comp=Z,101nm,18.8s,MS4.3,baz=25,slow=31						
HNR	**Honiara**	**91.07**	**258**	LR	LR	11 02 51.0	
	comp=Z,75nm,19.1s,MS4.2,baz=0.7,slow=32						
BBTS	**Babate**	**94.78**	**75**	LR	LR	11 08 36.2	
	comp=Z,97nm,18.8s,MS4.3,baz=64,slow=35						
YKA	**Yellowknife Ar**	**98.81**	**354**	P	**P**	**10 27 35.6**	**-1.3**
	0.2nm,0.8s,mb3.7,baz=165,slow=4.2,SNR=5.7						
BRTR	**Keskin Array B**	**144.96**	**70**	PKPbc	PKPdf	10 33 34.5	-0.4
	4.0nm,1.0s,baz=277,slow=2.1,SNR=6.5						
SONM	**Songino Array**	**156.11**	**308**	PKP	PKPdf	10 33 53.1	+1.2
SONM	**Songino Array**	**156.11**	**308**	PKP	PKPdf	10 33 53.1	+1.2
	0.1nm,0.3s,baz=64,slow=6.7,SNR=2.1						

IGQ 14 10:22:44.5,109S×**7829W,h15**km±4km**,Mb4.0,Ms3.8, 15C-11D,Error ellipse: s-maj=2.2km s-min=1.5km az=26.8,Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUN5	**Runtun**	**0.35**	**203**	⇓P	Pg	10 22 52.0	+0.3
JUIV	**Juive**	**0.37**	**208**	⇑P	Pg	10 22 52.3	+0.1
JUIV	**Juive**	**0.37**	**208**	⇑S	Sg	10 22 58.0	+0.7
ULBA	**Ulba**	**0.37**	**199**	⇑P	Pg	10 22 52.2	0.0
RETU	**Refugio**	**0.39**	**204**	⇓P	Pg	10 22 52.8	+0.4
RETU	**Refugio**	**0.39**	**204**	⇓S	Sg	10 22 59.9	+2.2
BILB	**Tungurahua vol**	**0.40**	**211**	⇓P	Pg	10 22 52.9	+0.2
BILB	**Tungurahua vol**	**0.40**	**211**	⇓S	Sg	10 22 59.5	+1.3
TAMB	**Tambo**	**0.40**	**349**	⇑P	Pg	10 22 52.8	+0.1
PATA	**Patacocha**	**0.43**	**200**	⇑P	Pg	10 22 53.6	+0.4
ARRY	**Arrayan**	**0.44**	**202**	⇑P	Pg	10 22 53.4	-0.1
VC1	**Cotopaxi 1**	**0.46**	**346**	⇑P	Pg	10 22 54.0	+0.2
CAMI	**Rancho Maria**	**0.47**	**332**	⇓P	Pg	10 22 54.2	+0.4
JUA2	**San Juan 2**	**0.93**	**340**	⇑P	Pb	10 23 02.6	+0.2
JUA2	**San Juan 2**	**0.93**	**340**	⇑S	Sb	10 23 15.9	+1.3
TERV	**Terraza Guagua**	**0.96**	**341**	⇓P	Pb	10 23 03.4	+0.4
PINO	**Pino**	**0.98**	**341**	⇑P	Pb	10 23 03.5	+0.2
PINO	**Pino**	**0.98**	**341**	⇑S	Sb	10 23 17.9	+1.8
CAYR	**Refugio Cayamb**	**1.14**	**14**	⇑P	Pb	10 23 06.1	+0.2
CAYR	**Refugio Cayamb**	**1.14**	**14**	⇑S	Sb	10 23 21.4	+0.9
LAV3	**Lava3-Reventad**	**1.19**	**34**	⇑P	Pn	10 23 07.3	+0.6
LAV3	**Lava3-Reventad**	**1.19**	**34**	⇑S	Sb	10 23 23.0	+1.0
CAYA	**Cayambe**	**1.19**	**14**	⇓P	Pn	10 23 07.0	+0.2
CAYA	**Cayambe**	**1.19**	**14**	⇓S	Sb	10 23 23.2	+1.0
CONE	**Cono NE Rev Vo**	**1.20**	**32**	⇓P	Pn	10 23 07.7	+0.8
CONE	**Cono NE Rev Vo**	**1.20**	**32**	⇓S	Sb	10 23 24.9	+2.5
COTA	**Cotacachi**	**1.42**	**358**	P	Pn	10 23 11.8	+1.9
COTA	**Cotacachi**	**1.42**	**358**	S	Sn	10 23 34.1	+5.8
MAG1	**Magdalena**	**1.80**	**304**	P	Pn	10 23 17.9	+2.8

IDC 14 10:23:19.3±5.3**,523S**×**13290E,h0**km**,mb3.5**/1**,mb1 3.8**/3**, mb1mx3.5**/10**,mbtmp3.6**/3**,Error ellipse: s-maj=328.1km s-min=30.9km az=76.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.69**	**175**	Pn	Pn	10 26 47.7	-0.9
	0.2nm,0.3s,baz=355,slow=13,SNR=11						
ASAR	**Alice Springs**	**18.36**	**177**	P	Pn	10 27 36.0	+0.5
	0.3nm,0.3s,baz=355,slow=13,SNR=21						
MKAR	**Makanchi Array**	**68.38**	**325**	P	P	10 34 22.8	+0.1
	0.2nm,0.4s,baz=110,slow=7.1,SNR=3.1						

IDC 14 10:40:38.5±67.0**,1754S**×**17582E,h0**km**,mb3.8**/3**, mb1 4.0**/3**,mb1mx3.7**/12**,mbtmp3.8**/3**,Error ellipse: s-maj=1182.0km s-min=134.9km az=76.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.05**	**239**	P	P	10 47 24.4	-0.2
	2.0nm,0.9s,baz=61,slow=8.4,SNR=3.5						
WRA	**Warramunga Arr**	**39.28**	**260**	P	P	10 48 09.5	+0.1
	0.2nm,0.2s,baz=92,slow=8.0,SNR=13						
ASAR	**Alice Springs**	**39.60**	**254**	P	P	10 48 11.9	-0.1
	1.8nm,0.6s,baz=88,slow=8.1,SNR=39						

*IDC **14** 10:59:09.6±3.6, 6458N×3241E, h0km, mb1 3.0/3, mb1mx2.8/21, mbtmp2.9/3, ML2.5/3, Error ellipse: s-maj=50.0km s-min=10.7km az=102.0*
*ISCJB **14** 10:59:12.0±1.1, 6470N±004×306E±02, h0km, Error ellipse: s-maj=12.8km s-min=5.8km az=10.8*
*HEL **14** 10:59:13.1±0.1, 6468N×3069E, h0km, ML2.1, Explosion*
ISC 14 10:59:12.8±1.0**,6469N**±004×**306E**±02**,h0**km**,n10,** σ**1.28**/13**,Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.38**	**347**	*e*P	**Pg**	**10 59 38.0**	**-1.1**
KU6				*e*S	**Sg**	**10 59 56.1**	**-0.8**
MSF	**Maaselka**	**1.40**	**332**	*e*P	**Pn**	**10 59 38.3**	**-1.1**
KJN	**Kajaani**	**1.41**	**246**	*e*P	**Pn**	**10 59 38.6**	**-1.0**
KJN				*e*S	**Sg**	**10 59 56.9**	**-1.0**
JOF	**Joensuu**	**1.81**	**170**	*e*P	**Pn**	**10 59 44.6**	**-0.5**
OUL	**Oulu**	**2.06**	**283**	*e*P	**Pn**	**10 59 49.8**	**+1.3**
SUF	**Sumiainen**	**2.81**	**227**	MSG		11 00 44.6	
	comp=Z,6.5nm,0.1s						
SGF	**Sodankyl**	**3.23**	**331**	MSG		11 00 57.9	
	comp=Z,5.5nm,0.1s						
FINES	**FINESS Array B**	**3.86**	**214**	Pn	**Pn**	**11 00 14.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=4.2						
FINES				Pg	**Pg**	**11 00 23.2**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=34,slow=15,SNR=6.4						
FINES				Sn	**Sn**	**11 01 06.1**	**+6.8**
	comp=Z,0.2nm,0.3s,baz=37,slow=21,SNR=3.3						
ARCES	**ARCESS Array B**	**5.26**	**340**	Pn	**Pn**	**11 00 32.4**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=152,slow=13,SNR=35						
ARCES				Sn	**Sn**	**11 01 35.9**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=156,slow=23,SNR=3.1						
NOA	**NORSAR Array B**	**9.58**	**256**	Pn	**Pn**	**11 01 33.5**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=44,slow=15,SNR=2.4						

IDC 14 11:01:04.6±3.5**,1256N**×**14172E,h0**km**,mb3.6**/5**, mb1 3.7**/5**,mb1mx3.6**/18**,mbtmp3.6**/5**,MS3.1**/1**,Ms1 3.1**/1**, ms1mx2.5**/18**,Error ellipse: s-maj=158.1km s-min=22.3km az=81.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**22.48**	**166**	LR	LR	11 14 01.0	
	comp=Z,53nm,19.8s,baz=263,slow=34						
WRA	**Warramunga Arr**	**33.11**	**193**	P	P	11 07 41.6	-0.8
	0.8nm,0.6s,baz=11,slow=9.7,SNR=11						
ASAR	**Alice Springs**	**36.81**	**192**	P	P	11 08 15.3	+0.9
	0.1nm,0.3s,baz=20,slow=11,SNR=4.0						
SONM	**Songino Array**	**45.86**	**327**	P	P	11 09 28.9	+0.4
	0.3nm,0.8s,baz=141,slow=7.1,SNR=2.4						
MKAR	**Makanchi Array**	**60.12**	**317**	P	P	11 11 14.8	+1.0
	0.4nm,0.4s,baz=99,slow=7.1,SNR=5.9						
FINES	**FINESS Array B**	**90.78**	**334**	P	P	11 14 07.5	-2.0
	1.2nm,1.0s,baz=72,slow=6.2,SNR=3.4						

*NNC **14** 11:17:12.2±3.3, 40.18N×69.45E, h20km±10km, mb3.8, mpv3.6, Error ellipse: s-maj=28.6km s-min=11.6km az=14.0*
ISC 14 11:17:13.9±2.6**,404N**±02×**6943E**±009**,h12**km±12km**,n11,** σ**0.68**/17**,5C-6D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**2.81**	**16**	⇑Pn	**Pn**	**11 18 02.5**	**+3.8**
	2.0nm,0.3s,baz=190,slow=11,SNR=822						
KK31				⇑Pg	**Pg**	**11 18 07.8**	**-0.1**
	17nm,0.2s,baz=193,slow=17,SNR=5.5						
KK31				⇑Sn	**Sn**	**11 18 46.8**	**+14**
	16nm,0.2s,baz=193,slow=29,SNR=10.0						
KK31				⇓Rg		11 18 54.5	
	46nm,0.5s,baz=188,slow=35,SNR=6.0						
AML	**Almayashu**	**3.65**	**60**	P	**Pn**	**11 18 09.3**	**-0.8**
	SNR=50						
EKS2	**Erkin-Say**	**3.96**	**54**	P	**Pn**	**11 18 14.6**	**+0.1**
	SNR=9.1						
UCH	**Uchtor**	**4.24**	**63**	P	**Pn**	**11 18 18.0**	**-0.2**
	SNR=8.7						
AAK	**Ala-Archa**	**4.41**	**58**	P	**Pn**	**11 18 20.0**	**-0.5**
	SNR=7.7						
KZA	**Kyzart**	**4.69**	**67**	P	**Pn**	**11 18 24.6**	**+0.1**
	SNR=8.3						
KBK	**Karagaybulak**	**4.71**	**60**	P	**Pn**	**11 18 25.4**	**+0.7**
	SNR=5.4						
TKM2	**Tokmak 2**	**5.26**	**59**	⇓Pn	**Pn**	**11 18 31.3**	**-0.9**
	3.1nm,0.4s						
TKM2				⇓Pg	**Pg**	**11 18 49.0**	**-5.6**
	5.7nm,0.4s						
TKM2				⇑Sn	**Sn**	**11 19 33.4**	**+0.7**
	4.8nm,0.5s						
TKM2				⇑Lg		11 19 57.9	
	15nm,0.5s						
TKM2	**Tokmak 2**	**5.26**	**59**	P	**Pn**	**11 18 31.6**	**-0.6**
	SNR=6.9						
AB31	**Akbulak array**	**11.11**	**326**	Pn	**Pn**	**11 19 53.0**	**+0.5**
	0.3nm,0.3s,baz=170,slow=10.0,SNR=18						
AB31				⇓Sn	**Sn**	**11 21 55.2**	**-1.3**
	3.1nm,0.7s,baz=148,slow=23,SNR=4.9						
AKTO	**Aktyubinsk**	**12.82**	**325**	⇓Pn	**Pn**	**11 20 16.5**	**+0.6**
	1.0nm,1.4s						
AKTO				⇓Sn	**Sn**	**11 22 38.8**	**+0.4**
	1.1nm,1.8s						

*NEIC **14** 11:25:05.1, 1739N×10098W, h9km, MD3.6(MEX), After MEX.*
MEX 14 11:25:05.1±0.8**,1739N**×**10098W,h9**km±9km**,MD3.6,2C, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.51**	**295**	⇑*i*P	Pg	11 25 14.0	-0.9
ZIIG				*i* S	Sg	11 25 21.9	+0.3
CAIG	**El Cayaco**	**0.77**	**117**	⇑*i*P	Pg	11 25 18.0	-1.9
CAIG				*i* S	Sg	11 25 28.5	-1.4
ACX	**Acapulco**	**1.15**	**117**	*i* P	Pb	11 25 24.0	-3.1
ACX				*i* S	Sg	11 25 41.0	-1.1
MEIG	**Mezcala**	**1.41**	**68**	*i* P	Pn	11 25 27.9	-3.0
MEIG				*i* S	Sb	11 25 44.1	-5.5
MOIG	**Morelia**	**2.28**	**355**	*i* P	Pn	11 25 40.5	-2.5
MOIG				*i* S	Sn	11 26 07.7	-3.5
MMIG	**Aquila**	**2.42**	**292**	*i* P	Pn	11 25 40.2	-4.7
MMIG				*i* S	Sn	11 26 08.8	-5.9
PPM	**Popocatepetl**	**2.79**	**53**	*i* P	Pn	11 25 47.9	-2.1
PPM				*i* S	Sn	11 26 18.8	-5.0
TPIG	**Tehuac#an**	**3.60**	**73**	*e*P	Pn	11 25 58.1	-3.0
TPIG				*i* S	Sn	11 26 40.8	-2.9

IDC 14 11:40:29.3±2.4**,3552N**×**8222E,h0**km**,mb3.4**/3**,mb1 3.8**/4**, mb1mx3.4**/22**,mbtmp3.5**/4**,ML3.8**/1**,MS3.7**/3**,Ms1 3.7**/3**, ms1mx3.2**/22**,Error ellipse: s-maj=70.6km s-min=32.9km az=79.0,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**11.26**	**0**	Pn	Pn	11 43 13.2	+1.7
	0.6nm,0.3s,baz=180,slow=12,SNR=19						
SONM	**Songino Array**	**21.75**	**48**	P	P	11 45 22.5	+0.2
	0.8nm,0.9s,baz=231,slow=9.2,SNR=7.3						
SONM				LR	LR	11 53 54.9	
	comp=Z,74nm,18.6s,baz=30,slow=37						
AKTO	**Aktyubinsk**	**23.00**	**318**	LR	LR	11 55 23.2	
	comp=Z,109nm,19.0s,baz=302,slow=39						
JOW	**Kunigami**	**40.05**	**89**	LR	LR	12 06 47.5	
	comp=Z,441nm,21.8s,baz=143,slow=39						
WRA	**Warramunga Arr**	**74.03**	**129**	P	P	11 52 07.5	+0.4
	0.8nm,1.0s,baz=329,slow=5.7,SNR=5.3						
YKA	**Yellowknife Ar**	**81.39**	**8**	P	P	11 52 47.1	-0.5
	0.3nm,0.6s,baz=338,slow=5.2,SNR=8.0						

*NEIC **14** 11:46:56.1, 33.18S×7201W, h31km, ML4.2(GUC), After GUC.*

GUC 14 11:46:56.1±0.7**,3318S×7201W,h31km±3km,MD4.1, ML4.2,9C-8D,Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.34	64	⇓iP	Pb	11 47 04.3	+0.1
IHA				iS	Sb	11 47 09.9	+0.2
ROCH	El Roble	0.86	77	⇑iP	Pn	11 47 12.2	+0.2
ROCH				iS	Sn	11 47 24.2	+0.7
LNV	Longovilo	0.92	148	⇓iP	Pn	11 47 12.6	-0.3
LNV				iS	Sn	11 47 25.1	0.0
TACH	Talagante	1.01	118	⇑iP	Pn	11 47 14.2	+0.1
TACH				iS	Sn	11 47 27.9	+0.5
PEL	Peldehue	1.11	89	⇑iP	Pn	11 47 16.6	+1.2
PEL				iS	Sn	11 47 31.4	+1.8
PEL				AML	AML	11 47 33.9	
	comp=E,13µm,0.5s						
ANTU	Antumapu	1.21	109	⇑iP	Pn	11 47 18.2	+1.3
ANTU				iS	Sn	11 47 34.6	+2.3
ANTU	Antumapu	1.21	109	⇑iP	Pn	11 47 18.2	+1.3
ANTU				iS	Sn	11 47 34.6	+2.3
ANTU				AML	AML	11 47 37.9	
	comp=N,8µm,0.3s						
FSR	Penalolen	1.27	104	⇑iP	Pn	11 47 19.1	+1.3
FSR				iS	Sn	11 47 35.9	+2.1
FSR	Penalolen	1.27	104	⇑iP	Pn	11 47 19.1	+1.3
FSR				iS	Sn	11 47 35.9	+2.1
FSR				AML	AML	11 47 37.8	
	comp=N,7µm,0.5s						
PCH	Pirque	1.32	110	⇑iP	Pn	11 47 19.3	+0.9
PCH				iS	Sn	11 47 37.1	+2.1
CHNG	Los Chungos	1.36	18	iP	Pn	11 47 04.7	-14
CHNG				iS	Sn	11 47 21.8	-14
CHCH	Chadas Angostu	1.36	124	⇑iP	Pn	11 47 19.7	+0.8
CHCH				iS	Sn	11 47 37.8	+1.9
FCH	Farellones	1.45	97	⇓iP	Pn	11 47 21.8	+1.7
FCH				iS	Sn	11 47 41.3	+3.4
FCH				AML	AML	11 47 43.6	
	comp=N,7µm,0.4s						
CACH	El Canelo	1.50	129	⇓iP	Pn	11 47 22.7	+1.8
CACH				iS	Sn	11 47 43.1	+3.7
LMEL	Las Melosas	1.65	115	⇓iP	Pn	11 47 24.6	+1.7
LMEL				iS	Sn	11 47 46.3	+3.3
LMEL	Las Melosas	1.65	115	⇓iP	Pn	11 47 24.6	+1.7
LMEL				iS	Sn	11 47 46.3	+3.3
LMEL				AML	AML	11 47 53.0	
	comp=E,5µm,0.2s						
SFDO	San Fernando	1.66	150	⇓iP	Pn	11 47 24.2	+1.2
SFDO				iS	Sn	11 47 46.1	+2.9
YECH	El Yeso	1.68	107	iP	Pn	11 47 25.6	+2.3
YECH				iS	Sn	11 47 47.6	+3.8
YECH				AML	AML	11 47 52.9	
	comp=N,5µm,0.5s						
CICH	Cipreses	1.75	131	⇓iP	Pn	11 47 26.1	+1.9
CICH				iS	Sn	11 47 48.5	+3.1
TLL	Tololo Astrono	3.17	19	AML	AML	11 48 46.5	
	comp=E,740nm,0.8s						
LCO	Las Campanas	4.30	15	ePn	Pn	11 48 00.7	+1.4

NIED 14 12:00:00,2200N×12070E,h44km,Mw4.6 Best double couple: Mo7.61000×10^15 NP1:φs67.00000°,δ29.00000°, λ120.00000°. NP2:φs214.00000°,δ65.00000°,λ75.00000°.
IDC 14 12:00:11.3±0.8,2201N×12042E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.9/21,mbtmp3.8/11,MS3.8/8, Ms1 3.8/8,ms1mx3.3/37,Error ellipse: s-maj=32.5km s-min=16.0km az=68.0
JMA 14 12:00:13.8±0.2,2203N×12068E,h0km,M4.3
BJI 14 12:00:14.4,2211N×12022E,h16km,mB4.5,mb4.4,ML3.7, Ms3.9,Msz3.8
ISCJB 14 12:00:15.1±1.0,2200N±005×12049E±004,h36km±10km, mb4.0/16,MS3.8/8,Error ellipse: s-maj=8.3km s-min=6.5km az=4.4
NEIC 14 12:00:17.4±1.5,2203N×12056E,h41km±14km,mb4.2/6, Error ellipse: s-maj=14.4km s-min=9.2km az=58.0
ISC 14 12:00:16.4±1.8**,2200N**±005×**12048E**±004**,h30**km±14km**, n44,**σ**0^{s}94**/51**,mb4.0**/16**,MS3.8**/8**,Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NACB	Ninganchiao	2.40	25	ePn	Pn	12 00 52.9	-0.7
NACB				eSn	Sn	12 01 19.1	-2.7
YHNB	Yeheng	2.78	17	ePn	Pn	12 00 57.1	-1.8
YHNB				eSn	Sn	12 01 30.5	-0.9
TATO	Taipei	3.10	17	ePn	Pn	12 01 05.6	+2.3
YOJ	Yonaguni jima	3.38	43	P	Pn	12 01 07.2	+0.1
YOJ				S	Sn	12 01 47.2	+1.0
QZH	Quanzhou	3.40	330	P	Pn	12 01 07.3	-0.1
QZH				S	Sn	12 01 42.1	-4.7
QZH				Smax			
	comp=N,240nm,0.9s						
QZH				Smax			
	comp=E,240nm,1.0s						
HATJ	Hateruma jima	3.68	56	P	Pn	12 01 11.3	0.0
HATJ				eS	Sn	12 01 53.9	+0.2
IRIF	Iriomote-Funau	3.79	52	P	Pn	12 01 12.9	+0.2
IRIF				eS	Sn	12 01 56.4	+0.1
JKRS	Kuro-shima	3.94	55	P	Pn	12 01 15.1	+0.3
JKRS				eS	Sn	12 02 00.2	+0.2
JIJ	Ishigaki jima	4.11	54	P	Pn	12 01 17.0	-0.2
JIJ				eS	Sn	12 02 03.8	-0.4
JTJ	Tarama	4.69	55	P	Pn	12 01 25.3	+0.2
JTJ				eS	Sn	12 02 18.6	+0.1
JOGS	Gusukube	5.29	58	P	Pn	12 01 34.1	+0.7
JOGS				eS	Sn	12 02 34.4	+1.0
GZH	Guangzhou	6.68	281	P	Pn	12 01 48.3	-4.2
GZH				Smax			
	comp=N,86nm,1.3s						
GZH				Smax			
	comp=E,77nm,1.1s						
NJ2	Nanjing	10.12	352	eP	Pn	12 02 39.6	0.0
NJ2				PP		12 02 49.8	
NJ2				XP		12 02 54.3	
NJ2				S	Sn	12 04 35.0	+3.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
NJ2				LR	LR		
	comp=N,420nm,12.7s						
NJ2				LR	LR		
	comp=E,360nm,11.0s						
NJ2				LR	LR		
	comp=Z,620nm,14.2s						
GYA	Guiyang	13.36	292	P	Pn	12 03 22.5	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
XAN	Xi'an	15.73	322	P	Pn	12 03 56.6	+0.8
XAN				AP	pP	12 04 04.3	-3.2
XAN				LR	LR		
	comp=N,231nm,14.4s						
XAN				LR	LR		
	comp=Z,251nm,13.1s						
KSRS	Korea Array	16.69	21	Pn	Pn	12 04 07.1	-0.9
	baz=205,slow=11,SNR=2.7						
KSRS				LR	LR	12 12 06.9	
	comp=Z,213nm,18.4s,baz=18,slow=43						
LZH	Lanzhou	20.17	318	eP	P	12 04 49.6	+1.2
LZH				AMB	AMB		
	comp=Z,16nm,1.0s						
LZH				AMB	AMB		
	comp=Z,98nm,5.7s						
LZH				LR	LR		
	comp=N,253nm,9.5s						
LZH				LR	LR		
	comp=Z,447nm,10.6s,MS4.1						
CHTO	Chiang Mai	20.43	265	eP	P	12 04 52.6	+1.2
	comp=Z,3.3nm,0.8s						
MJAR	Matsushiro Arr	21.14	43	P	P	12 04 58.3	-0.6
	comp=Z,1.5nm,0.8s,mb3.4,baz=234,slow=9.2,SNR=3.7						
MJAR				LR	LR	12 12 49.1	
	comp=Z,108nm,21.6s,MS3.2,baz=315,slow=36						
GTA	Gaotai	24.74	319	eP	P	12 05 34.8	-0.3
GTA				AP		12 05 39.5	
GTA				XP	sP	12 05 43.1	-4.5
GTA				AMB	AMB		
	comp=Z,7.0nm,2.2s,mb3.8						
SONM	Songino Array	28.15	340	P	P	12 06 05.5	-0.3
	comp=Z,1.2nm,0.7s,mb3.6,baz=158,slow=8.7,SNR=11						
SONM				LR	LR	12 18 31.2	
	comp=Z,143nm,19.4s,MS3.6,baz=172,slow=39						
PSI	Prapat	28.33	231	LR	LR	12 16 55.5	
	comp=Z,119nm,18.8s,MS3.5,baz=218,slow=35						
MKAR	Makanchi Array	39.48	318	P	P	12 07 43.1	-1.0
	comp=Z,4.5nm,1.0s,mb4.2,baz=110,slow=10,SNR=21						
MKAR				LR	LR	12 25 42.5	
	comp=Z,95nm,19.3s,MS3.6,baz=264,slow=39						
TKM2	Tokmak 2	42.63	310	eP	P	12 08 11.0	+1.0
UCH	Uchtor	43.24	309	eP	P	12 08 16.8	+1.9
	comp=Z,5.0nm,1.1s,mb4.2						
AML	Almayashu	43.81	308	eP	P	12 08 21.2	+1.6
	comp=Z,5.8nm,1.0s,mb4.3						
WRA	Warramunga Arr	43.83	161	P	P	12 08 18.9	-0.9
	comp=Z,1.6nm,0.8s,mb3.8,baz=343,slow=9.0,SNR=12						
WB2	Warramunga Arr	43.84	161	eP	P	12 08 18.4	-1.5
WB2				e		12 08 30.9	
ASAR	Alice Springs	47.23	163	P	P	12 08 46.8	0.0
	comp=Z,0.7nm,0.8s,mb3.7,baz=340,slow=6.8,SNR=8.2						
CTAO	Charters Tower	48.83	147	eP	P	12 09 00.3	+1.2
BRVK	Borovoye	49.04	322	eP	P	12 09 00.0	-0.4
	comp=Z,0.7nm,0.5s,mb4.0						
CHKZ	Chkalovo	49.06	323	eP	P	12 08 60.0	-0.6
	comp=Z,5.1nm,1.0s,mb4.5						
AKTK	Aktyubinsk	55.89	317	P	P	12 09 50.8	-0.4
AKTO	Aktyubinsk	55.89	317	P	P	12 09 50.8	-0.4
	comp=Z,0.2nm,0.3s,mb3.7,baz=236,slow=3.8,SNR=3.5						
STKA	Stephens Creek	57.26	159	P	P	12 10 01.1	0.0
	comp=Z,1.7nm,1.0s,mb4.0,baz=337,slow=11,SNR=2.2						
MALT	Malatya	70.68	304	eP	P	12 11 30.0	+0.6
	comp=Z,5.0nm,1.0s,mb4.4						
BRTR	Keskin Array B	73.95	307	P	P	12 11 48.2	-0.7
	comp=Z,1.1nm,0.8s,mb3.8,baz=98,slow=8.9,SNR=4.2						
INK	Inuvik	75.48	22	eP	P	12 11 57.4	+0.1
EIL	Elat	75.73	296	LR	LR	12 52 32.2	
	comp=Z,47nm,19.5s,MS3.8,baz=110,slow=42						
MLR	Muntele Rosu	77.69	314	LR	LR	12 51 17.9	
	comp=Z,111nm,18.8s,MS4.2,baz=323,slow=40						
NOA	NORSAR Array B	79.84	332	LR	LR	12 51 33.0	
	comp=Z,107nm,18.2s,MS4.2,baz=100,slow=39						
GERES	GERESS Array B	84.11	321	P	P	12 12 44.0	-0.4
	comp=Z,0.6nm,0.2s,mb4.3,baz=58,slow=3.3,SNR=8.1						
YKA	Yellowknife Ar	85.23	22	P	P	12 12 49.3	-0.5
YKA	Yellowknife Ar	85.23	22	P	P	12 12 49.3	-0.5
	comp=Z,0.2nm,0.4s,mb3.6,baz=318,slow=5.0,SNR=8.5						

IDC 14 12:05:24.0±3.1**,951S×11604E,h0km,mb3.6**/4**,mb1 3.8**/5**, mb1mx3.7**/16**,mbtmp3.7**/5**,ML3.5**/1**,MS2.6**/1**,Ms1 2.6**/1**, ms1mx2.4**/22**,Error ellipse: s-maj=163.8km s-min=20.8km az=52.0,Sumbawa region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	7.54	96	LR	LR	12 10 50.6	
	comp=Z,44nm,18.1s,baz=146,slow=43						
FITZ	Fitzroy Crossi	12.64	134	eP	Pn	12 08 25.8	+0.7
	0.8nm,0.4s						
FITZ				eS	Sn	12 10 33.1	-14
FITZ	Fitzroy Crossi	12.64	134	Pn	Pn	12 08 25.2	+0.1
	0.2nm,0.3s,baz=307,slow=15,SNR=11						
FITZ				Sn	Sn	12 10 33.0	-14
	0.2nm,0.3s,baz=168,slow=19,SNR=4.1						
WRA	Warramunga Arr	20.49	122	P	P	12 10 03.5	-0.2
	0.5nm,0.4s,baz=301,slow=12,SNR=12						
WRA				S	S	12 13 39.5	-14
	0.3nm,0.8s,baz=293,slow=22,SNR=4.6						
ASAR	Alice Springs	22.12	132	P	P	12 10 21.4	+0.2
	1.2nm,0.4s,baz=305,slow=9.2,SNR=27						
SONM	Songino Array	57.73	352	P	P	12 15 16.6	+0.1
	0.3nm,0.5s,baz=163,slow=5.9,SNR=3.4						
MKAR	Makanchi Array	63.62	335	P	P	12 15 56.8	+0.1
	0.5nm,0.3s,baz=149,slow=7.4,SNR=7.3						

GII 14 12:23:12.6±0.0,2993N×3632E,h0km,ML1.9/3
CSEM 14 12:23:31.9±0.4,2991N×3630E,h1km,ML1.9,Error ellipse: s-maj=7.5km s-min=3.8km az=53.0,Mining explosion.
HLW 14 12:23:31.5,2945N×3698E,h20km,Mb3.5
SGS 14 12:23:33.5,3004N×3628E,h7km
ISC 14 12:23:31.9±1.1**,2989N**±004×**3639E**±007**,h0km,n17,** σ**0^{s}62**/23**,2C-1D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HRFI	Mount Harif	1.18	278	Pg	Pg	12 23 54.0	-0.6
ZFRI	Zfri	1.24	303	Pg	Pg	12 23 54.8	-0.9
EIL	Elat	1.27	261	Pg	Pg	12 23 56.3	+0.1
EIL				Sg	Sg	12 24 13.8	+1.2
PRNI	Paran	1.28	292	Pg	Pg	12 23 56.1	-0.4
PRNI				Sg	Sg	12 24 13.5	+0.2
PRNI	Paran	1.28	292	Pg	Pg	12 23 56.1	-0.5
PRNI				Sg	Sg	12 24 13.5	+0.3
HQLS		1.29	244	P	Pg	12 23 55.9	-0.8
HQLS		1.29	244	P	Pg	12 23 55.9	-0.8
HQLS				S	Sg	12 24 12.9	-0.6
JLOS		1.39	215	P	Pn	12 23 58.7	+0.1
JLOS		1.39	215	P	Pn	12 23 58.7	+0.2
JLOS				S	Sg	12 24 17.1	+0.6
KRMI	Paran Flat	1.46	280	Pn	Pn	12 23 59.3	-0.2
HBST	Basata	1.59	246	P	Pn	12 24 02.3	+1.0
MZDA	Masada	1.67	328	Pn	Pn	12 24 03.5	+1.0
YTIR	Yattir	1.84	324	Pn	Pn	12 24 05.0	+0.2
HDHB	Dhahab	1.93	234	⇑P	Pn	12 24 05.8	-0.2
HDHB				S	Sn	12 24 30.6	-0.4
RSHS		2.10	222	P	Pn	12 24 07.8	-0.6
HKAT	Jabal Katrina	2.50	238	⇑P	Pn	12 24 13.9	+0.2
AMAG	Maghara	2.85	286	⇓P	Pn	12 24 23.7	+5.0

IDC 14 12:34:39.8±2.1**,059N×9732E,h0km,mb3.5**/5**,mb1 3.6**/6**, mb1mx3.5**/20**,mbtmp3.5**/6**,ML2.7**/1**,Error ellipse: s-maj=57.0km s-min=24.1km az=66.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.72	36	Pn	Pn	12 35 24.3	-0.4
	1.3nm,0.3s,baz=272,slow=6.6,SNR=6.1						
WRA	Warramunga Arr	41.62	121	P	P	12 42 30.2	+0.2
	0.4nm,0.8s,baz=301,slow=9.1,SNR=4.5						
ASAR	Alice Springs	42.94	127	P	P	12 42 40.5	-0.2
	0.2nm,0.5s,baz=298,slow=8.0,SNR=4.5						
KSRS	Korea Array	46.28	34	P	P	12 43 06.5	-0.7
	0.3nm,0.3s,baz=224,slow=8.4,SNR=4.7						
SONM	Songino Array	47.71	8	P	P	12 43 18.3	+0.1
	0.2nm,0.5s,baz=194,slow=9.8,SNR=3.1						
MKAR	Makanchi Array	47.85	346	P	P	12 43 19.4	0.0
	0.8nm,0.6s,baz=159,slow=7.3,SNR=8.6						

CSEM 14 12:45:48.4±0.5**,3863N×415W,h0km,ML3.5**/1**,Error ellipse: s-maj=4.2km s-min=3.4km az=114.0,Spain**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EBAN	Banos Encina	0.55	148	Pg	Pg	12 45 57.7	-1.2
	SNR=7.9						
EBAN				Lg		12 46 05.6	
	7.8nm,0.4s,SNR=7.9						
EADA	Adamuz	0.57	216	Pg	Pg	12 45 59.4	0.0
	SNR=7.9						
EADA				Lg		12 46 06.2	
	5.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	1.05	8	Pg	Pg	12 46 07.3	-1.3
	1.7nm,0.5s,SNR=12						
ESDC				Lg		12 46 21.6	
	2.3nm,0.3s,SNR=118						
EQES	Quesada	1.19	134	Pg	Pg	12 46 10.7	-0.4
	33nm,1.0s,SNR=6.9						
EQES				Lg		12 46 27.3	
	6.5nm,0.4s,SNR=5.1						
EVIA	Vianos	1.29	89	Pg	Pg	12 46 12.1	-1.0
	5.4nm,0.2s,SNR=15						
EVIA				Lg		12 46 29.5	
	2.3nm,0.2s,SNR=7.9						
EBER	Berja	2.00	150	Pg	Pg	12 46 25.6	-1.1
	SNR=7.9						
EBER				Lg		12 46 52.5	
	2.7nm,0.4s,SNR=7.9						
GUD	Guadarrama	2.01	360	Pn	Pn	12 46 23.2	-0.4
	SNR=7.9						
GUD				Lg		12 46 49.9	
	SNR=7.9						
ETOB	Tobarra	2.04	89	Pn	Pn	12 46 21.4	-2.5
	6.7nm,0.5s,SNR=5.1						
ETOB				Lg		12 46 52.9	
	3.1nm,0.4s,SNR=5.0						
EMIN	Mina Concepcio	2.17	247	Pn	Pn	12 46 24.8	-0.9
	SNR=7.9						
EMIN				Lg		12 46 56.0	
	1.6nm,0.3s,SNR=7.9						
ETOR	Torete	2.72	36	Pg	Pg	12 46 37.7	-2.8
	SNR=7.9						
ETOR				Sn	Sn	12 47 04.9	-1.9
	SNR=7.9						

IDC 14 12:48:00.3±0.9,891S×12559E,h0km,mb4.2/5,mb1 4.4/9, mb1mx4.2/15,mbtmp4.3/9,ML4.1/4,Error ellipse: s-maj=27.1km s-min=17.6km az=83.0
NEIC 14 12:48:01.2±0.7,948S×12463E,h10km,mb4.4/2,Error ellipse: s-maj=41.3km s-min=9.5km az=52.0
ISCJB 14 12:48:05.8±2.0,909S±009×12564E±009,h63km±20km, mb4.2/7,Error ellipse: s-maj=20.0km s-min=7.1km az=137.1
ISC 14 12:48:07.0±1.8**,908S**±010×**12564E**±007**,h55**km±20km**, n16,**σ**0^{s}81**/23**,mb4.2**/7**,1C,Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	2.25	240	Pn	Pn	12 48 40.2	-1.6
	38nm,0.3s,baz=105,slow=1.3,SNR=55						
BATI				Sn	Sn	12 49 09.3	+0.8
	36nm,0.3s,baz=198,slow=22,SNR=7.0						
KAKA	Kakadu	7.59	119	ePn	Pn	12 50 02.8	+7.7
	22nm,0.6s						
KAKA				eSn	Sn	12 51 27.4	+7.7
FITZ	Fitzroy Crossi	8.97	180	eP	Pn	12 50 14.2	+0.2
	39nm,0.6s						
FITZ				eS	Sn	12 51 54.8	+1.2
FITZ	Fitzroy Crossi	8.97	180	Pn	Pn	12 50 14.3	+0.4
	3.3nm,0.3s,baz=11,slow=11,SNR=67						
FITZ				Sn	Sn	12 51 52.8	-0.8
	1.3nm,0.3s,baz=139,slow=20,SNR=4.8						
WRA	Warramunga Arr	13.69	143	Pn	Pn	12 51 18.5	+0.1
	0.8nm,0.3s,baz=317,slow=13,SNR=96						
WRA				Sn	Sn	12 53 49.1	+0.1
	0.6nm,0.3s,baz=320,slow=24,SNR=6.1						
WB2	Warramunga Arr	13.70	143	⇑iP	Pn	12 51 19.0	+0.5
WB2				eS	Sn	12 53 48.5	-0.6
ASAR	Alice Springs	16.52	152	Pn	Pn	12 51 56.9	+1.8
	0.5nm,0.3s,baz=320,slow=10,SNR=45						
ASAR				Sn	Sn	12 54 56.1	-1.6
	0.2nm,0.3s,baz=315,slow=18,SNR=6.2						
STKA	Stephens Creek	27.09	149	P	P	12 53 45.5	+0.9
	0.7nm,0.4s,mb3.6,baz=302,slow=13,SNR=2.0						
MJAR	Matsushiro Arr	46.89	14	P	P	12 56 32.0	+0.1
	1.1nm,0.5s,mb4.0,baz=193,slow=9.6,SNR=3.4						
ULN	Ulaanbaatar	59.04	346	eP	P	12 58 01.6	+0.5
	4.1nm,1.2s,mb4.3						
SONM	Songino Array	59.17	345	P	P	12 58 02.5	+0.4
	2.2nm,1.0s,mb4.2,baz=165,slow=9.7,SNR=9.8						
MKAR	Makanchi Array	67.69	329	P	P	12 58 58.1	-0.3
	6.0nm,0.6s,mb4.8,baz=131,slow=7.6,SNR=67						
AML	Almayashu	69.63	321	eP	P	12 59 10.7	+0.1
	106nm,0.6s						
CHKZ	Chkalovo	77.83	330	eP	P	12 59 57.8	-0.6
	3.7nm,1.0s,mb4.3						
AKTK	Aktyubinsk	83.11	323	P	P	13 00 26.2	-0.6
AKTO	Aktyubinsk	83.11	323	P	P	13 00 26.2	-0.6
	2.0nm,0.7s,mb4.3,baz=126,slow=6.0,SNR=8.0						

ISCJB 14 13:01:32.5±0.7,3157S±003×696W±0.1,h129km±10km, mb3.1/3,Error ellipse: s-maj=20.6km s-min=4.5km az=176.5
GUC 14 13:01:32.3±0.5,3157S×6968W,h140km±5km,MD3.5, ML3.5
NEIC 14 13:01:32.3,3157S×6968W,h140km,MD3.5(GUC),After GUC.
IDC 14 13:01:33.9±4.4,3162S×6917W,h124km±46km,mb3.3/3, mb1 3.5/5,mb1mx3.4/15,mbtmp3.2/5,Error ellipse: s-maj=52.2km s-min=36.8km az=73.0
ISC 14 13:01:33.1±0.6**,3156S**±003×**694W**±01**,h114**km±9km**,n25,** σ**0^{s}89**/38**,mb3.2**/3**,9C-2D,San Juan Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JACH	Jahuel	1.50	221	⇑iP	Pn	13 02 00.3	+0.3
JACH				iS	Sn	13 02 21.3	+0.8
CHNG	Los Chungos	1.80	259	⇑iP	Px	13 01 47.9	
CHNG				iS	Sx	13 02 10.5	
CHNG				AML	AML	13 02 16.4	
	comp=N,739nm,0.7s						
TLL	Tololo Astrono	1.82	319	⇑iP	Pn	13 02 04.4	+0.4
TLL				iS	Sn	13 02 28.6	+1.0
TLL	Tololo Astrono	1.82	319	⇑iP	Pn	13 02 04.4	+0.4
TLL				iS	Sn	13 02 28.6	+1.0
TLL				AML	AML	13 02 32.7	
	comp=N,289nm,0.8s						
PEL	Peldehue	1.91	214	⇑iP	Pn	13 02 04.8	-0.2
PEL				eS	Sn	13 02 29.5	+0.1
PEL				AML	AML	13 02 31.1	
	comp=E,717nm,0.6s						
FCH	Farellones	1.91	202	⇓iP	Pn	13 02 06.0	+0.9
FCH				iS	Sn	13 02 31.3	+1.8
FCH				AML	AML	13 02 36.7	
	comp=E,364nm,0.5s						
ROCH	El Roble	1.95	223	⇑iP	Pn	13 02 05.1	-0.4
ROCH				iS	Sn	13 02 30.8	+0.5
ANTU	Antumapu	2.25	207	AML	AML	13 02 39.7	
	comp=E,429nm,0.5s						
PCH	Pirque	2.25	204	⇓iP	Pn	13 02 09.3	-0.1
PCH				iS	Sn	13 02 37.3	+0.1
LSCH	La Serena	2.27	316	eP	Pn	13 02 09.0	-0.6
LSCH				iS	Sn	13 02 36.2	-1.5
LSCH	La Serena	2.27	316	eP	Pn	13 02 09.0	-0.6
LSCH				iS	Sn	13 02 36.2	-1.5
LSCH				AML	AML	13 02 40.2	
	comp=E,132nm,0.4s						
TACH	Talagante	2.45	211	⇑iP	Pn	13 02 11.3	-0.6
TACH				iS	Sn	13 02 41.0	-0.7
CHCH	Chadas Angostu	2.58	203	⇑iP	Pn	13 02 13.4	-0.3
CHCH				iS	Sn	13 02 44.5	-0.4
LCCH	Las Cruces	2.63	223	eP	Pn	13 02 13.2	-1.1
LCCH				iS	Sn	13 02 44.0	-2.0
CACH	El Canelo	2.74	201	⇑iP	Pn	13 02 16.1	+0.5
CACH				iS	Sn	13 02 49.5	+1.0
LCO	Las Campanas	2.77	336	eP	Pn	13 02 16.0	-0.2
LCO				eS	Sn	13 02 49.1	-0.1
CICH	Cipreses	2.88	197	iP	Pn	13 02 17.6	+0.1
CICH				iS	Sn	13 02 51.9	+0.1
VACH	Vallenar	3.19	338	iP	Pn	13 02 21.6	-0.1
TRQA	Tornquist	8.91	139	eP	Pn	13 03 37.3	-1.6
	comp=E,15nm,0.6s						
PLCA	Paso Flores	9.20	185	P	Pn	13 03 43.0	+0.3
	comp=E,0.1nm,0.3s,baz=358,slow=13,SNR=3.7						
LPAZ	La Paz	15.25	5	P	Pn	13 05 04.1	+1.8
LPAZ	La Paz	15.25	5	P	Pn	13 05 04.1	+1.8
	comp=E,0.1nm,0.3s,baz=178,slow=9.1,SNR=5.2						
TXAR	Lajitas Array	68.75	328	P	P	13 12 24.7	0.0
	comp=E,0.1nm,0.5s,mb2.9,baz=173,slow=9.5,SNR=2.8						
TORD	Torodi Ar. Bea	81.29	69	P	P	13 13 35.6	-1.4
	comp=E,0.6nm,0.7s,mb3.5,baz=253,slow=4.4,SNR=3.7						
PDAR	Pinedale Array	82.63	331	P	P	13 13 45.2	+1.8
	comp=E,0.2nm,0.5s,mb3.2,baz=147,slow=8.6,SNR=2.7						

IDC 14 13:06:31.1±1.6,3265N×13910E,h0km,mb3.4/2, mb1 3.5/3,mb1mx3.2/19,mbtmp3.2/3,ML2.5/1,Error ellipse: s-maj=45.6km s-min=16.2km az=125.0
ISCJB 14 13:06:32.2±2.0,3273N±0.10×1388E±0.1,h26km±15km, mb3.4/2,Error ellipse: s-maj=16.8km s-min=14.0km az=162.9
JMA 14 13:06:32.6±0.2,3339N×14086E,h28km,M2.8
ISC 14 13:06:31.7±3.1**,332N**±02×**1410E**±02**,h40**km±41km**,n9,** σ**0^{s}54**/11**,mb3.4**/2**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.99	266	P	Pn	13 06 49.5	+0.4
JHJ2				S	Sn	13 07 01.9	+0.1
JHJ	Hachijo jima 2	1.01	266	Pn	Pn	13 06 49.5	0.0
	33nm,0.3s,baz=260,slow=20,SNR=6.5						
JHJ				Sn	Sn	13 07 02.0	-0.5
	32nm,0.3s,baz=76,slow=23,SNR=23						
BSO1	Boso 1	1.46	360	P	Pn	13 06 55.0	-0.6
JIM2	Oshima 3	2.00	320	P	Pn	13 07 02.4	-0.6
JIZS	Izushimoda	2.32	312	P	Pn	13 07 07.7	+0.2
JOD2	Odawara 2	2.60	323	P	Pn	13 07 10.9	-0.3
MJAR	Matsushiro Arr	4.05	326	Pn	Pn	13 07 32.6	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.4nm,0.3s,baz=186,slow=17,SNR=3.5						
WRA	**Warramunga Arr**	**53.21**	**188**	P	**P**	**13 15 45.9**	**-0.2**
	0.3nm,0.5s,mb3.5,baz=4.6,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**56.94**	**188**	P	**P**	**13 16 13.0**	**+0.1**
	0.2nm,0.6s,mb3.3,baz=9.0,slow=9.6,SNR=5.0						

DDA ***14*** *13:33:46.1, 39.17N×4321E, h10km, Md2.5*
CSEM 14 13:33:46.4±0.3**, 3936N×4318E, h5km, MD2.5, Error ellipse: s-maj=7.3km s-min=5.0km az=9.0, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGRB	**Hanur-Agry**	**0.26**	**326**	*i* PG	Pg	13 33 52.1	+0.7
AGRB				*i* SG	Sg	13 33 56.8	+2.0
TUTA	**Tutak**	**0.29**	**278**	*i* P	Pg	13 33 53.5	+1.5
TUTA				*i* S	Sg	13 33 57.9	+2.2
DYDN	**Diyadin**	**0.43**	**65**	*i* P	Pg	13 33 56.1	+1.3
DYDN				*i* S	Sg	13 34 02.3	+1.9
DIGO	**Kars**	**1.06**	**8**	*i* P	Pg	13 34 08.3	+1.5
DIGO				*i* S	Sg	13 34 24.4	+3.8

NIED ***14*** *13:39:00, 3570N×14080E, h50km, Mw4.6 Best double couple: M0 1.04000×10^16 NP1: φs266.00000°, δ43.00000°, λ-127.00000°. NP2: φs132.00000°, δ57.00000°, λ-61.00000°.*
BJI ***14*** *13:39:35.9, 3549N×14128E, h10km, mB4.8, mb4.6, Ms4.0, Msz3.6*
IDC ***14*** *13:39:40.8±0.5, 3563N×14062E, h0km, mb4.6/18, mb1 4.7/20, mb1mx4.7/23, mbtmp4.6/20, ML4.8/2, MS3.6/8, Ms1 3.7/8, ms1mx3.3/28, Error ellipse: s-maj=19.2km s-min=13.3km az=95.0*
MOS ***14*** *13:39:45.2±0.7, 3587N×14056E, h29km, mb4.9/51, Error ellipse: s-maj=10.3km s-min=5.7km az=108.8*
JMA ***14*** *13:39:47.4±0.1, 3571N×14071E, h52km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs109.00000°, δ8.00000°, λ-51.00000°. NP2: φs250.00000°, δ84.00000°, λ-95.00000°. Principal axes: T Plg39.0000°, Azm344.0000°; N Plg5.0000°, Azm250.0000°; P Plg51.0000°, Azm154.0000°;*
JMA Felt II J1.
ISCJB ***14*** *13:39:47.7±0.3, 3566N±003×14059E±003, h55km±2km, mb4.7/93, MS3.8/12 Error ellipse: s-maj=4.9km s-min=3.5km az=175.3*
NEIC ***14*** *13:39:47.5, 3571N×14071E, h52km, mb4.7/54, MW4.6(NIED), After JMA.*
NEIC Recorded [2 JMA] in Chiba and Ibaraki; [1 JMA] in Fukushima, Miyagi, Saitama and Tochigi Prefectures.
SZGRF ***14*** *13:39:52.7, 3580N×14063E, h48km, mb5.0, Near east coast of eastern Honshu, Japan*
ISC 14 13:39:48.4±0.3**, 3569N**±003×**14057E**±003**, h47**km±3km**, h42**km±5.3km**: pP-P, n421,** σ0.s71/440**, mb4.7**/93**, MS3.8**/12**, 84C-102D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.24**	**87**	⇓P	**Pn**	**13 39 55.6**	**-1.0**
CHOJ				S	**Sn**	**13 40 01.8**	**-0.6**
JCN	**Nagara**	**0.40**	**228**	⇑P	**Pn**	**13 39 59.7**	**+1.5**
JCN				S	**Sn**	**13 40 08.8**	**+3.6**
JYT	**Yasato**	**0.62**	**331**	⇓P	**Pn**	**13 40 01.0**	**+0.1**
JYT				S	**Sn**	**13 40 11.0**	**+1.1**
BSO3	**Boso 3**	**0.89**	**183**	⇓P	**Pn**	**13 40 04.1**	**-0.4**
BSO1	**Boso 1**	**1.09**	**162**	⇑P	**Pn**	**13 40 05.6**	**-1.6**
JAG	**Ashikaga**	**1.16**	**309**	⇓P	**Pn**	**13 40 08.6**	**+0.4**
JOD2	**Odawara 2**	**1.28**	**251**	P	**Pn**	**13 40 11.2**	**+1.4**
JOD2				S	**Sn**	**13 40 29.6**	**+3.8**
JIM2	**Oshima 3**	**1.34**	**224**	P	**Pn**	**13 40 10.5**	**-0.2**
JIM2				S	**Sn**	**13 40 28.2**	**+0.9**
JRY	**Ryogami san**	**1.39**	**284**	P	**Pn**	**13 40 13.0**	**+1.7**
MJAR	**Matsushiro Arr**	**2.09**	**295**	P	**Pn**	**13 40 23.0**	**+2.1**
MJAR				pmax	pmax		
	comp=Z,42nm,0.3s						
MJAR	**Matsushiro Arr**	**2.09**	**295**	Pn	**Pn**	**13 40 23.0**	**+2.1**
	comp=Z,42nm,0.3s,baz=107,slow=7.7,SNR=129						
MAJO	**Matsushiro**	**2.09**	**295**	*e*Pn	**Pn**	**13 40 19.6**	**-1.3**
MAJO				*e*Sn	**Sn**	**13 40 43.4**	**-2.3**
MAT	**Matsushiro**	**2.09**	**295**	P	**Pn**	**13 40 23.5**	**+2.6**
MAT				*e*S	**Sn**	**13 40 47.0**	**+1.3**
JHJ	**Hachijo jima 2**	**2.64**	**194**	Pn	**Pn**	**13 40 28.1**	**-0.5**
	comp=Z,256nm,0.3s,baz=60,slow=11,SNR=31						
JHJ				Sn	**Sn**	**13 40 59.5**	**+0.2**
	comp=Z,298nm,0.3s,baz=58,slow=23,SNR=11						
JHJ				LR	LR	13 41 06.7	
	comp=Z,991nm,21.0s,baz=270,slow=33						
JNU	**Nakatsue**	**8.41**	**255**	Pn	**Pn**	**13 41 51.5**	**+4.0**
	comp=Z,1.0nm,0.3s,baz=73,slow=12,SNR=14						
ASAJ	**Asahikawa**	**8.56**	**10**	P	**Pn**	**13 41 46.7**	**-2.9**
ASAJ						13 43 18.0	
ASAJ				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ	**Asahikawa**	**8.56**	**10**	Pn	**Pn**	**13 41 46.6**	**-2.9**
	comp=N,6.1nm,0.3s,baz=206,slow=10.0,SNR=43						
ASAJ				Sn	**Sn**	**13 43 18.0**	**-6.7**
	comp=N,2.8nm,0.3s,baz=270,slow=20,SNR=2.5						
CBIJ	**Chichi jima**	**8.68**	**170**	Pn	**Pn**	**13 41 46.0**	**-5.3**
	comp=N,75nm,0.3s,baz=324,slow=10.0,SNR=23						
CBIJ				Sn	**Sn**	**13 43 17.0**	**-11**
	comp=N,27nm,0.3s,baz=288,slow=20,SNR=5.0						
VLA	**Vladivostok**	**10.00**	**321**	*i* P	**Pn**	**13 42 08.2**	**-1.1**
KSRS	**Korea Array**	**10.32**	**284**	Pn	**Pn**	**13 42 17.8**	**+4.1**
	comp=N,0.3nm,0.3s,baz=97,slow=14,SNR=21						
KSRS				LR	LR	13 46 14.2	
	comp=N,443nm,21.9s,baz=95,slow=38						
YSS	**Yuzh-Sakhalins**	**11.37**	**8**	*e*Pn	**Pn**	**13 42 25.3**	**-2.8**
	comp=N,33nm,0.7s						
YSS	**Yuzh-Sakhalins**	**11.37**	**8**	*e*P	**Pn**	**13 42 26.0**	**-2.1**
YSS				*e*S	**Sn**	**13 44 28.0**	**-5.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JOW	**Kunigami**	**13.72**	**233**	LR	LR	13 48 09.0	
	comp=Z,185nm,20.6s,baz=78,slow=37						
CN2	**Changchun**	**14.16**	**309**	*e*P	**Pn**	**13 43 11.3**	**+5.2**
CN2				*e*XP		13 43 18.0	
CN2				*e*S	**Sn**	**13 45 49.0**	**+7.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,190nm,4.0s						
CN2				LR	LR		
	comp=N,560nm,13.0s						
CN2				LR	LR		
	comp=E,470nm,13.0s						
CN2				LR	LR		
	comp=Z,320nm,15.0s						
SNY	**Shenyang**	**14.60**	**300**	⇑P	**Pn**	**13 43 17.1**	**+5.2**
SNY				S	**Sn**	**13 46 00.5**	**+8.3**
SNY				AMB	AMB		
	comp=Z,9.0nm,0.8s						
SNY				AMB	AMB		
	comp=Z,94nm,3.5s						
SNY				LR	LR		
	comp=N,273nm,8.9s						
SNY				LR	LR		
	comp=Z,289nm,33.3s						
DL2	**Dalian**	**15.41**	**288**	P	**Pn**	**13 43 26.9**	**+4.3**
DL2				*e*S	**S**	**13 46 22.8**	**-3.5**
DL2				AMB	AMB		
	comp=Z,20nm,0.7s						
DL2				LR	LR		
	comp=N,110nm,14.3s						
DL2				LR	LR		
	comp=E,130nm,15.3s						
DL2				LR	LR		
	comp=Z,190nm,15.6s						
NJ2	**Nanjing**	**18.39**	**265**	*e*P	**Pn**	**13 43 58.6**	**-1.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
BJI	**Beijing**	**19.72**	**290**	P	**Pn**	**13 44 14.5**	**-1.2**
BJI				S	**S**	**13 47 53.1**	**-0.6**
BJI				AMB	AMB		
	comp=Z,6.0nm,0.8s						
BJI				LR	LR		
	comp=N,205nm,20.2s						
BJI				LR	LR		
	comp=E,150nm,19.6s						
BJI				LR	LR		
	comp=Z,259nm,29.6s						
BJT	**Baijiatuau**	**19.73**	**290**	P	**Pn**	**13 44 14.9**	**-0.9**
	comp=Z,24nm,0.8s						
BJT	**Baijiatuau**	**19.73**	**290**	P	**Pn**	**13 44 14.9**	**-0.8**
BJT				pmax	pmax		
	comp=Z,24nm,0.8s						
WHN	**Wuhan**	**22.52**	**264**	*e*P	**P**	**13 44 44.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**23.29**	**292**	*e*P	**P**	**13 44 50.5**	**-1.6**
HHC				AP		13 44 54.8	
HHC				XP	sP	13 44 57.3	-12
HHC				PP		13 45 20.8	
HHC				*e*S	**S**	**13 48 57.0**	**-3.8**
HHC				PCS	PcS	13 52 17.3	+0.1
HHC				AMB	AMB		
	comp=Z,5.0nm,0.7s,mb4.0						
HHC				AMB	AMB		
	comp=Z,45nm,3.6s						
HHC				LR	LR		
	comp=N,113nm,9.9s						
HHC				LR	LR		
	comp=E,146nm,8.9s						
HHC				LR	LR		
	comp=Z,197nm,11.9s,MS3.8						
CLNS	**Chul'man**	**23.66**	**338**	*e*P	**P**	**13 44 54.3**	**-0.9**
CLNS				*e**PP		13 45 02.9	
CLNS				*e*		13 45 08.1	
CLNS				*e*		13 48 35.8	
CLNS				*e*S	**S**	**13 49 05.5**	**-0.9**
CLNS				pmax	pmax		
	comp=N,7.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.8s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.9s						
CLNS				smax			
	comp=N,6.0nm,1.0s						
CLNS				smax			
	comp=Z,3.0nm,0.9s						
CLNS				smax			
	comp=E,5.0nm,1.0s						
CLNS				MLR	MLR		
	comp=N,100nm,12.0s,MS3.6						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s,MS3.5						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS3.6						
MA2	**Magadan**	**24.81**	**12**	*e*P	**P**	**13 45 06.8**	**+1.1**
MA2	**Magadan**	**24.81**	**12**	P	**P**	**13 45 06.5**	**+0.8**
MA2				pmax	pmax		
	comp=Z,40nm,1.0s,mb4.9						
XAN	**Xi'an**	**25.96**	**276**	P	**P**	**13 45 15.3**	**-1.2**
XAN				AP	pP	13 45 21.5	-7.1
XAN				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.1						
YAK	**Yakutsk**	**27.24**	**349**	*e*P	**P**	**13 45 27.7**	**0.0**
YAK	**Yakutsk**	**27.24**	**349**	*e*P	**P**	**13 45 26.2**	**-1.5**
YAK				*i* *PP	pP	13 45 32.3	-7.6
YAK				*e*		13 46 10.1	
YAK				*i* PPP		13 46 18.1	
YAK				*e*S	**S**	**13 50 03.3**	**0.0**
YAK				*i* SS		13 51 13.1	
YAK				*i* SSS		13 51 40.4	
YAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.5						
YAK				pmax	pmax		
	comp=N,18nm,1.6s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,51nm,2.1s,mb4.7						
YAK				pmax	pmax		
	comp=N,57nm,2.3s						
YAK				pmax	pmax		
	comp=E,19nm,2.3s						
YAK				smax			
	comp=E,187nm,5.0s						
YAK				smax			
	comp=N,216nm,6.7s						
YAK				MLR	MLR		
	comp=Z,105nm,23.0s						
YAK				MLR	MLR		
	comp=N,92nm,21.0s,MS3.5						
YAK				MLR	MLR		
	comp=E,91nm,16.0s,MS3.5						
ULN	**Ulaanbaatar**	**27.57**	**307**	*e*P	**P**	**13 45 32.3**	**+1.5**
	comp=E,13nm,1.3s,mb4.4						
ULN	**Ulaanbaatar**	**27.57**	**307**	⇑*e*P	**P**	**13 45 31.7**	**+0.9**
SONM	**Songino Array**	**28.00**	**306**	P	**P**	**13 45 34.3**	**-0.3**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,50nm,20.6s						
SONM	**Songino Array**	**28.00**	**306**	P	**P**	**13 45 34.3**	**-0.3**
	comp=Z,3.3nm,0.7s,mb4.1,baz=112,slow=9.4,SNR=31						
SONM				LR	LR	13 56 50.2	
	comp=Z,50nm,20.6s,baz=345,slow=37						
BOD	**Bodaibo**	**28.32**	**330**	*e*P	**P**	**13 45 36.7**	**-0.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
LZH	**Lanzhou**	**29.64**	**282**	*e*P	**P**	**13 45 48.9**	**-0.5**
LZH				AP	pP	13 45 52.0	-10
LZH				XP	sP	13 45 53.5	-14
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,90nm,5.3s						
GYA	**Guiyang**	**30.34**	**262**	⇑*i*P	**P**	**13 45 54.3**	**-1.3**
GYA				AP	pP	13 45 59.8	-8.1
GYA				XP	sP	13 46 02.4	-11
GYA				PP	PP	13 46 55.4	-9.2
GYA				S	**S**	**13 50 55.0**	**+2.3**
GYA				SCP	ScP	13 52 38.0	+4.6
GYA				SCS	ScS	13 56 32.5	+3.0
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=N,340nm,17.6s,MS4.3						
GYA				LR	LR		
	comp=E,490nm,16.9s,MS4.3						
GYA				LR	LR		
	comp=Z,370nm,17.7s,MS4.1						
ZAK	**Zakamensk**	**30.59**	**310**	*e*P	**P**	**13 45 57.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
CD2	**Chengdu**	**31.01**	**272**	*e*P	**P**	**13 46 01.5**	**0.0**
CD2				AP	pP	13 46 06.0	-7.8
CD2				XP	sP	13 46 09.3	-10
CD2				PP	PP	13 47 03.5	-8.6
CD2				S	**S**	**13 51 04.8**	**+1.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,5.9s						
CD2				LR	LR		
	comp=N,250nm,15.6s,MS4.3						
CD2				LR	LR		
	comp=E,520nm,18.0s,MS4.3						
CD2				LR	LR		
	comp=Z,240nm,18.0s,MS3.9						
QIZ	**Qiongzhong**	**31.76**	**247**	P	**P**	**13 46 08.5**	**+0.3**
QIZ				S	**S**	**13 51 17.5**	**+2.4**
QIZ				AMB	AMB		
	comp=Z,83nm,5.2s						
QIZ				LR	LR		
	comp=E,174nm,17.8s						
QIZ				LR	LR		
	comp=Z,177nm,18.4s,MS3.8						
KMI	**Kunming**	**34.10**	**263**	P	**P**	**13 46 28.8**	**+0.2**
KMI				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.8						
KMI				LR	LR		
	comp=Z,122nm,26.2s,MS3.5						
BILL	**Bilibino**	**35.51**	**16**	*e*P	**P**	**13 46 40.3**	**+0.1**
	comp=Z,25nm,1.4s,mb5.0						
BILL	**Bilibino**	**35.51**	**16**	*i* P	**P**	**13 46 40.1**	**-0.1**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
TIXI	**Tiksi**	**36.55**	**354**	*e*P	**P**	**13 46 48.5**	**-0.5**
	comp=Z,6.6nm,0.9s,mb4.5						
TIXI	**Tiksi**	**36.55**	**354**	*e*P	**P**	**13 46 48.5**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
WMQ	**Urumqi**	**40.85**	**298**	⇓P	**P**	**13 47 26.4**	**+0.9**
WMQ				AP	pP	13 47 30.9	-7.1
WMQ				XP	sP	13 47 33.4	-10
WMQ				PP	PP	13 49 04.0	+3.8
WMQ				*e*S	**S**	**13 53 36.8**	**+3.4**
WMQ				AMB	AMB		
	comp=Z,15nm,0.6s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,107nm,5.2s						
WMQ				LR	LR		
	comp=N,99nm,21.0s,MS3.7						
WMQ				LR	LR		
	comp=E,39nm,18.4s,MS3.7						
WMQ				LR	LR		
	comp=Z,75nm,21.1s,MS3.5						
LSA	**Lhasa**	**41.66**	**276**	P	**P**	**13 47 34.8**	**+2.5**
LSA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.7						
LSA	**Lhasa**	**41.66**	**276**	*e*P	**P**	**13 47 34.0**	**+1.7**
	comp=Z,6.7nm,0.6s,mb4.5						
LSA	**Lhasa**	**41.66**	**276**	*e*P	**P**	**13 47 34.0**	**+1.7**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
TNA	**Tin City**	**42.36**	**29**	*e*P	**P**	**13 47 38.4**	**+0.9**
	comp=Z,5.7nm,0.8s,mb4.2						
TNA				*e*pP	pP	13 47 48.9	-1.2
TNA				*e*sP	sP	13 47 52.9	-2.6
NVS	**Novosibirsk**	**43.29**	**315**	*i* P	**P**	**13 47 45.1**	**-0.1**
MK31	**Makanchi Array**	**44.27**	**303**	*i* P	**P**	**13 47 53.3**	**+0.1**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
MKAR	**Makanchi Array**	**44.27**	**303**	P	**P**	**13 47 53.4**	**+0.2**
MKAR						13 49 35.9	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,63nm,18.4s						
MKAR	**Makanchi Array**	**44.27**	**303**	P	**P**	**13 47 53.4**	**+0.2**
	comp=Z,3.7nm,0.6s,mb4.3,baz=89,slow=10,SNR=50						
MKAR				PP	PP	13 49 35.9	-0.9
	comp=Z,1.8nm,0.8s,baz=77,slow=6.5,SNR=2.5						
MKAR				LR	LR	14 07 06.1	
	comp=Z,63nm,18.4s,MS3.6,baz=93,slow=37						
TAPN	**Taplejung**	**45.36**	**275**	*e*P	**P**	**13 48 03.3**	**+1.1**
	comp=Z,14nm,0.8s,mb4.9						
ODAN	**Odare**	**45.82**	**274**	*e*P	**P**	**13 48 06.9**	**+1.1**
	comp=Z,19nm,0.7s,mb5.1						
JIRN	**Jiri**	**46.47**	**276**	*e*P	**P**	**13 48 11.3**	**+0.4**
	comp=Z,59nm,1.0s,mb5.5						
KKN	**Kakani**	**47.15**	**277**	*e*P	**P**	**13 48 16.5**	**+0.3**
	comp=Z,22nm,0.8s,mb5.1						
GKN	**Gorkha**	**47.59**	**277**	*e*P	**P**	**13 48 19.5**	**-0.1**
	comp=Z,61nm,1.1s,mb5.5						
BATI	**Kupang**	**48.36**	**203**	P	**P**	**13 48 24.9**	**-0.6**
	comp=Z,25nm,0.7s,mb5.3,baz=228,slow=2.0,SNR=8.4						
KDAK	**Kodiak Island**	**48.56**	**41**	P	**P**	**13 48 25.7**	**-0.9**
	comp=Z,14nm,0.8s,mb5.0,baz=222,slow=2.6,SNR=7.4						
KAKA	**Kakadu**	**48.75**	**191**	*e*P	**P**	**13 48 27.6**	**-0.9**
	comp=Z,16nm,0.6s,mb5.2						
TKM2	**Tokmak 2**	**49.68**	**299**	*e*P	**P**	**13 48 36.2**	**+0.8**
MCK	**McKinley**	**50.13**	**33**	*e*P	**P**	**13 48 38.4**	**-0.1**
AAK	**Ala-Archa**	**50.54**	**299**	*e*P	**P**	**13 48 41.6**	**-0.3**
	comp=Z,7.5nm,0.8s,mb4.7						
AAK	**Ala-Archa**	**50.54**	**299**	⇑*e*P	**P**	**13 48 41.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
COLA	**College**	**50.58**	**32**	*e*P	**P**	**13 48 42.6**	**+0.7**
	comp=Z,8.9nm,0.6s,mb4.9						
UCH	**Uchtor**	**50.63**	**299**	*e*P	**P**	**13 48 44.0**	**+1.3**
	comp=Z,4.8nm,0.8s,mb4.5						
CHKZ	**Chkalovo**	**50.74**	**314**	*e*P	**P**	**13 48 43.0**	**-0.3**
	comp=Z,5.2nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	**50.74**	**314**	*e*P	**P**	**13 48 43.0**	**-0.3**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BRVK	**Borovoye**	**51.04**	**313**	*e*P	**P**	**13 48 45.8**	**+0.2**
	comp=Z,5.8nm,0.8s,mb4.6						
BRVK	**Borovoye**	**51.04**	**313**	*e*P	**P**	**13 48 45.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
EKS2	**Erkin-Say**	**51.04**	**299**	*e*P	**P**	**13 48 46.3**	**+0.5**
	comp=Z,5.3nm,0.9s,mb4.5						
EKS2				*e*pP	pP	13 48 59.0	+0.4
AML	**Almayashu**	**51.24**	**299**	*e*P	**P**	**13 48 48.8**	**+1.6**
	comp=Z,22nm,0.8s,mb5.2						
EGAK	**Eagle**	**53.44**	**31**	*e*P	**P**	**13 49 03.0**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**55.34**	**197**	⇑*i*P	**P**	**13 49 16.6**	**-0.8**
	comp=Z,9.6nm,0.7s,mb4.9						
WB2	**Warramunga Arr**	**55.64**	**187**	⇑*i*P	**P**	**13 49 17.9**	**-1.7**
WRA	**Warramunga Arr**	**55.64**	**187**	P	**P**	**13 49 17.6**	**-2.0**
WRA	**Warramunga Arr**	**55.64**	**187**	P	**P**	**13 49 17.6**	**-2.0**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**55.64**	**187**	P	**P**	**13 49 17.6**	**-2.0**
	comp=Z,6.5nm,0.8s,mb4.7,baz=2.7,slow=7.5,SNR=83						
SVE	**Sverdlovsk**	**55.71**	**319**	⇓*e*P	**P**	**13 49 20.3**	**+0.5**
SVE				*e*S	S	13 57 26.4	+24
SVE				*e*SS	SS	14 00 48.7	+0.8
SVE				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
INK	**Inuvik**	**55.89**	**27**	*e*P	**P**	**13 49 20.9**	**0.0**
	comp=Z,126nm,0.6s						
INK	**Inuvik**	**55.89**	**27**	*e*P	**P**	**13 49 20.9**	**0.0**
INK				pmax	pmax		
	comp=Z,126nm,0.6s						
ARU	**Arti**	**56.92**	**319**	*e*P	**P**	**13 49 28.4**	**0.0**
	comp=Z,20nm,0.9s,mb5.1						
ARU	**Arti**	**56.92**	**319**	*d* *i*P	**P**	**13 49 28.0**	**-0.4**
ARU						13 51 32.6	
ARU				S	**S**	**13 57 20.7**	**+2.0**
ARU				SS	SS	14 01 08.0	+1.1
ARU				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
HYB	**Hyderabad**	**57.49**	**269**	*i* P	**P**	**13 49 33.0**	**0.0**
ASAR	**Alice Springs**	**59.37**	**187**	P	**P**	**13 49 44.5**	**-1.3**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	**Alice Springs**	**59.37**	**187**	P	**P**	**13 49 44.5**	**-1.3**
	comp=Z,1.3nm,0.4s,mb4.3,baz=17,slow=9.0,SNR=34						
MBWA	**Marble Bar**	**59.89**	**203**	*e*P	**P**	**13 49 48.3**	**-1.1**
DLBC	**Dease Lake**	**60.11**	**37**	*e*P	**P**	**13 49 52.0**	**+1.5**
PRGR	**Permogore**	**61.52**	**327**	*e*P	**P**	**13 49 58.9**	**-1.2**
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
RES	**Resolute Bay**	**64.07**	**14**	*e*P	**P**	**13 50 16.3**	**-0.6**
	comp=Z,158nm,0.6s						
RES	**Resolute Bay**	**64.07**	**14**	*e*P	**P**	**13 50 16.3**	**-0.6**
RES				pmax	pmax		
	comp=Z,158nm,0.6s						
KEV	**Kevo**	**64.46**	**339**	*e*p	**P**	**13 50 18.5**	**-1.0**
	comp=Z,1.7nm,0.6s,mb4.2						
KEV	**Kevo**	**64.46**	**339**	*e*P	**P**	**13 50 18.5**	**-1.0**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ARCES	**ARCESS Array B**	**65.01**	**339**	P	**P**	**13 50 21.8**	**-1.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARCES				MLR	MLR		
	comp=Z,75nm,20.5s						
ARCES	**ARCESS Array B**	**65.01**	**339**	P	**P**	**13 50 21.8**	**-1.3**
	comp=Z,3.4nm,0.7s,mb4.5,baz=49,slow=8.2,SNR=6.6						
ARCES				LR	LR	14 22 10.3	
	comp=Z,74nm,20.5s,MS3.9,baz=139,slow=39						
YKA	**Yellowknife Ar**	**65.31**	**30**	P	**P**	**13 50 24.4**	**-0.7**
YKA	**Yellowknife Ar**	**65.31**	**30**	P	**P**	**13 50 24.4**	**-0.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	**Yellowknife Ar**	**65.31**	**30**	P	**P**	**13 50 24.4**	**-0.7**
	comp=Z,3.0nm,0.7s,mb4.4,baz=302,slow=6.6,SNR=72						
JOF	**Joensuu**	**66.83**	**332**	*e*p	**P**	**13 50 33.5**	**-1.3**
	comp=Z,3.0nm,0.4s,mb4.7						
JOF	**Joensuu**	**66.83**	**332**	*e*P	**P**	**13 50 33.5**	**-1.3**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**67.22**	**179**	⇑*i*P	**P**	**13 50 36.5**	**-1.1**
	comp=Z,3.7nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**67.22**	**179**	P	**P**	**13 50 36.3**	**-1.3**
	comp=Z,3.1nm,0.8s,mb4.4,baz=333,slow=3.4,SNR=6.7						

C04A	Brinnon	68.50	46	⇑P	P	13 50 43.4	-2.2
	baz=68						
OBN	Obninsk	68.76	323	eP	P	13 50 47.3	+0.1
OBN				e*PP	pP	13 51 01.0	+0.5
OBN				eS	S	13 59 47.9	+0.9
OBN				eSS	SS	14 04 10.2	-1.4
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
KAF	Kangasniemi	69.19	333	ep	P	13 50 47.3	-2.4
	baz=50,slow=5.9						
C05A	Tolt Reservoir	69.26	46	⇓P	P	13 50 50.1	-0.2
	baz=69						
A07A	Ashnola River,	69.32	44	⇓P	P	13 50 49.9	-0.8
	baz=69						
FINES	FINESS Array B	69.68	332	i P	P	13 50 52.4	-0.3
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	69.68	332	P	P	13 50 52.1	-0.7
	comp=Z,1.6nm,0.5s,mb4.2,baz=64,slow=8.7,SNR=9.0						
B07A	Winthrop	69.77	44	⇓P	P	13 50 53.0	-0.5
	baz=70						
E05A	Randle	69.80	47	⇑P	P	13 50 52.5	-1.2
	baz=70						
A08A	Turner Farm, O	70.00	44	⇑P	P	13 50 53.9	-1.0
	baz=70						
D06A	Cle Elum	70.01	46	⇓P	P	13 50 54.5	-0.5
	baz=70						
I03A	Eugene	70.19	50	⇓P	P	13 50 56.0	-0.2
	baz=70						
C07A	Waterville	70.21	45	⇑P	P	13 50 55.5	-0.7
	baz=70						
B08A	Colville Reser	70.27	44	⇑P	P	13 50 56.4	-0.2
	baz=70						
J02A	Umpqua	70.32	50	⇑P	P	13 50 56.9	-0.1
	baz=70						
A09A	Danville	70.37	43	⇓P	P	13 50 56.8	-0.4
	baz=70						
H04A	Detroit Lake	70.50	49	⇑P	P	13 50 57.7	-0.4
	baz=70						
K02A	Glendale	70.68	51	⇓P	P	13 50 59.3	+0.1
	baz=70						
C08A	Higginbotham F	70.74	45	⇓P	P	13 50 59.2	-0.2
	baz=70						
I04A	Tendick Farm,	70.82	50	⇑P	P	13 51 00.3	+0.2
	baz=71						
EDM	Edmonton	70.83	38	eP	P	13 50 59.5	-0.4
B09A	Rice	70.91	44	⇓P	P	13 51 00.4	-0.1
	baz=71						
L02A	Cave Junction	70.92	52	⇓P	P	13 51 00.6	-0.1
	baz=71						
A10A	Northport	70.94	43	⇑P	P	13 51 00.7	0.0
	baz=71						
ZEI	Tsey	71.14	309	eP	P	13 51 01.4	-0.5
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
G06A	Carlson Farm,	71.16	48	⇓P	P	13 51 02.4	+0.3
	baz=71						
C09A	Chrisman Ranch	71.17	44	⇓P	P	13 51 01.8	-0.2
	baz=71						
D08A	Wollman Farm,	71.20	45	⇓P	P	13 51 02.3	0.0
	baz=71						
F07A	Phinny Hill Vi	71.23	47	⇑P	P	13 51 02.2	-0.2
	baz=71						
KIV	Kislovodsk	71.27	311	eP	P	13 51 02.8	+0.1
	comp=Z,7.6nm,0.6s,mb4.8						
KIV	Kislovodsk	71.27	311	eP	P	13 51 03.4	+0.7
KIV				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
J04A	Umpqua Nationa	71.30	50	⇓P	P	13 51 03.0	+0.1
	baz=71						
E08A	Dider Farm, El	71.42	46	⇓P	P	13 51 03.5	-0.1
	baz=71						
D09A	Jones Farm, Ri	71.55	45	⇓P	P	13 51 04.3	-0.1
	baz=71						
H06A	Lindquist Farm	71.60	48	⇑P	P	13 51 04.4	-0.4
	baz=71						
A11A	Hall Mountain,	71.61	43	⇓P	P	13 51 04.8	0.0
	baz=71,SNR=7.8						
NWAO	Narrogin (SRO)	71.67	201	eP	P	13 51 05.8	+0.8
C10A	Spilker Farm,	71.71	44	⇓P	P	13 51 05.2	-0.1
	baz=72						
YBH	Yreka Blue Hor	71.71	52	⇓P	P	13 51 05.5	+0.1
	baz=72						
G07A	Ruggs Ranch, H	71.72	47	⇓P	P	13 51 05.8	+0.3
	baz=72						
M02C	Callahan	71.80	52	⇓P	P	13 51 06.5	+0.5
	baz=72						
J05A	Fort Rock	71.82	50	⇑P	P	13 51 06.4	+0.4
	baz=72						
B11A	Sandpoint	71.90	43	⇑P	P	13 51 06.8	+0.3
	baz=72						
E09A	Wood Farm, Sta	71.94	45	⇑P	P	13 51 06.8	+0.1
	baz=72						
I06A	Prineville	72.10	49	⇓P	P	13 51 07.7	-0.1
	baz=72						
G08A	Pilot Rock	72.13	47	⇓P	P	13 51 07.6	-0.2
	baz=72						
H07A	Lands Inn, Kim	72.14	48	⇓P	P	13 51 08.2	+0.2
	baz=72						
M04C	Macdoel	72.24	51	⇑P	P	13 51 08.5	-0.1
	baz=72,SNR=5.2						
M03C	McCloud	72.33	52	⇓P	P	13 51 09.5	+0.4
	baz=72						
K05A	Summer Lake	72.33	50	⇓P	P	13 51 09.5	+0.4
	baz=72,SNR=6.1						
WDC	Whiskeytown Da	72.43	52	eP	P	13 51 10.1	+0.4
	comp=Z,8.6nm,1.1s,mb4.6						
WDC	Whiskeytown Da	72.43	52	eP	P	13 51 10.1	+0.4
WDC				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
WDC	Whiskeytown Da	72.43	52	⇓P	P	13 51 09.7	0.0
	baz=72						
I07A	Izee	72.45	48	⇓P	P	13 51 09.5	-0.4
	baz=72						
O02C	Red Bluff	72.48	53	⇓P	P	13 51 10.0	0.0
	baz=72						
J06A	Christmas Vall	72.50	49	⇑P	P	13 51 10.0	-0.2
	baz=72						
E10A	Myers Farm, Un	72.56	45	⇓P	P	13 51 10.0	-0.4
	baz=72						
K06A	Valley Falls	72.69	50	⇓P	P	13 51 11.2	-0.1
	baz=72						
A13A	Flathead Natio	72.69	42	⇑P	P	13 51 11.1	-0.1
	baz=72						
H08A	Prairie City	72.72	47	⇓P	P	13 51 11.5	+0.1
	baz=72						
L05A	Lakeview	72.73	50	⇓P	P	13 51 11.5	-0.1
	baz=72						
F10A	Beach Ranch, E	72.77	46	⇑P	P	13 51 11.7	+0.1
	baz=72						
GASB	Alder Springs	72.80	53	⇑P	P	13 51 12.1	+0.1
	baz=73						
WALA	Waterton Lakes	72.89	42	eP	P	13 51 12.7	+0.4
	comp=Z,4.6nm,0.8s,mb4.5						
M05C	Lookout	72.90	51	⇓P	P	13 51 12.7	+0.1
	baz=73						
J07A	Hines	72.96	49	P	P	13 51 13.7	+0.9
	baz=73,SNR=5.8						
B13A	Whitefish	72.98	42	P	P	13 51 13.7	+0.8
	baz=73,SNR=9.3						
HATC	Hat Creek Radi	72.99	52	⇑P	P	13 51 13.5	+0.4
	baz=73						
MOD	Modoc	73.14	50	⇑P	P	13 51 13.6	-0.3
	baz=73						
E11A	Bogner Ranch,	73.14	45	⇑P	P	13 51 13.7	-0.2
	baz=73						
D12A	Red Ives Fores	73.24	44	⇓P	P	13 51 13.6	-0.8
	baz=73						
C13A	Hot Springs	73.32	43	P	P	13 51 15.6	+0.7
	baz=73,SNR=10						
K07A	Rock Creek Ran	73.37	49	⇓P	P	13 51 15.6	+0.4
	baz=73						
MNRC	McLaughlin Nat	73.40	54	⇓P	P	13 51 16.2	+0.7
	baz=73						
F11A	Grangeville	73.44	45	P	P	13 51 15.8	+0.1
	baz=73,SNR=7.9						
J08A	Circle Bar Ran	73.47	48	⇑P	P	13 51 16.4	+0.5
	baz=73						
O04C	Chester	73.50	52	⇓P	P	13 51 16.1	0.0
	baz=73						
ELFS	Eagle Lake Fie	73.57	52	⇑P	P	13 51 16.6	+0.1
	baz=73						
G11A	Walters Elk Ra	73.65	46	⇑P	P	13 51 16.8	-0.1
	baz=73						
ORV	Oroville	73.65	53	⇑P	P	13 51 16.5	-0.5
	baz=73						
L07A	Adell	73.68	50	⇑P	P	13 51 17.4	+0.2
	baz=74,SNR=7.0						
D13A	Huson	73.72	43	⇓P	P	13 51 17.0	-0.2
	baz=74						
C14A	Swan Lake	73.72	43	⇑P	P	13 51 17.3	0.0
	baz=74						
K08A	Mann Creek Ran	73.81	49	⇑P	P	13 51 18.0	+0.1
	baz=74						
H10A	Noah's Angus R	73.82	47	P	P	13 51 17.7	-0.2
	baz=74,SNR=7.3						
J09A	Fry Pan Ranch,	73.92	48	P	P	13 51 19.0	+0.5
	baz=74,SNR=6.1						
ANN	Anapa	73.97	314	eP	P	13 51 13.2	-5.6
ANN				e	pP	13 51 28.0	-4.3
ANN				eS	S	14 00 42.8	-4.6
ANN				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
F12A	Elk City	74.03	45	P	P	13 51 19.2	+0.1
	baz=74,SNR=14						
N06A	Buffalo Meadow	74.07	51	⇓P	P	13 51 19.1	-0.3
	baz=74,SNR=5.0						
M07A	Soldier Meadow	74.13	50	⇑P	P	13 51 20.2	+0.4
	baz=74						
H11A	Donnelly	74.19	46	⇑P	P	13 51 19.1	-0.9
	baz=74						
L08A	Fields	74.20	49	⇑P	P	13 51 20.1	-0.1
	baz=74,SNR=10.0						
BEKR	Beckwourth	74.22	52	⇓P	P	13 51 20.0	-0.3
	baz=74,SNR=8.4						
E13A	Victor	74.25	44	⇑P	P	13 51 19.8	-0.5
	baz=74						
D14A	Greenough	74.26	43	P	P	13 51 20.1	-0.3
	baz=74,SNR=11						
K09A	Rome	74.30	49	⇑P	P	13 51 20.5	-0.2
	baz=74						
O06A	Flanigan	74.39	52	⇑P	P	13 51 21.2	-0.2
	baz=74,SNR=6.4						
F13A	Darby	74.54	44	⇓P	P	13 51 21.0	-1.1
	baz=74						
LAVA	Lava Cap Winer	74.58	53	⇓P	P	13 51 21.9	-0.6
	baz=74						
N07B	Gerlach	74.60	51	⇑P	P	13 51 22.2	-0.3
	baz=74						
E14A	Clinton	74.65	44	⇑P	P	13 51 22.2	-0.5
	baz=74						
L09A	Wilkinson Ranc	74.72	49	⇑P	P	13 51 23.0	-0.2
	baz=74						
K10A	MacKenzie Ranc	74.77	48	⇓P	P	13 51 23.4	-0.1
	baz=74						
PAHR	Pah Rah Range	74.93	52	eP	P	13 51 24.9	+0.5
	comp=Z,11nm,1.2s,mb4.7						
KIEV	Kiev	74.95	322	eP	P	13 51 23.9	-0.4
	comp=Z,5.3nm,0.8s,mb4.5						
KIEV	Kiev	74.95	322	eP	P	13 51 23.9	-0.5
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
H12A	Diamond D Ranc	74.96	46	P	P	13 51 24.5	0.0
	baz=75,SNR=8.3						
O07A	Toulon	75.00	51	⇓P	P	13 51 25.1	+0.3
	baz=75						
G13A	Cobalt	75.00	45	⇓P	P	13 51 24.3	-0.5
	baz=75						
MFID	Camas Ranch	75.04	47	⇓P	P	13 51 25.1	+0.1
	baz=75						
F14A	Wisdom	75.08	44	⇓P	P	13 51 24.9	-0.2
	baz=75						
N08A	GE Springer Mi	75.12	50	P	P	13 51 26.2	+0.7
	baz=75,SNR=5.4						
E15A	Deer Lodge	75.12	43	P	P	13 51 25.5	+0.1
	baz=75,SNR=8.3						
NB2	NORSAR Subarra	75.16	337	P	P	13 51 24.7	-0.7
	comp=Z,4.3nm,0.6s,mb4.6,baz=42,slow=5.9						
NB2	NORSAR Subarra	75.16	337	P	P	13 51 24.7	-0.7
NB2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
NOA	NORSAR Array B	75.16	337	P	P	13 51 25.1	-0.3
NOA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,66nm,19.4s						
NOA	NORSAR Array B	75.16	337	P	P	13 51 25.1	-0.3
	comp=Z,5.6nm,0.8s,mb4.6,baz=39,slow=5.7,SNR=16						
NOA				LR	LR	14 26 32.5	
	comp=Z,66nm,19.4s,MS4.0,baz=350,slow=37						
PACP	Pacheco Peak	75.18	55	⇓P	P	13 51 25.7	-0.3
	baz=75						
M09A	Marrel Ranch,	75.19	50	⇓P	P	13 51 26.1	+0.2
	baz=75						
FFC	Flin Flon	75.20	32	eP	P	13 51 25.4	-0.4
	comp=Z,13nm,1.1s,mb4.8						
FFC	Flin Flon	75.20	32	eP	P	13 51 25.4	-0.3
FFC				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
CMB	Columbia Colle	75.21	54	eP	P	13 51 26.1	+0.1
	comp=Z,12nm,1.1s,mb4.8						
CMB	Columbia Colle	75.21	54	eP	P	13 51 26.2	+0.1
CMB				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
CMB	Columbia Colle	75.21	54	⇑P	P	13 51 25.9	-0.1
	baz=75						
K11A	Parker Ranch,	75.28	48	⇓P	P	13 51 26.4	-0.1
	baz=75						
H13A	Challis	75.30	45	⇓P	P	13 51 26.4	-0.1
	baz=75						
L10A	Juniper Basin	75.42	49	⇓P	P	13 51 27.4	+0.2
	baz=75						
N09A	Rock Creek Ran	75.46	50	⇓P	P	13 51 28.0	+0.5
	baz=75,SNR=5.7						
FCC	Fort Churchill	75.51	26	eP	P	13 51 26.7	-0.7
	comp=Z,11nm,1.0s,mb4.7						
FCC	Fort Churchill	75.51	26	eP	P	13 51 26.7	-0.7
FCC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
R06C	Coleville	75.55	53	⇓P	P	13 51 28.6	+0.6
	baz=75						
F15A	Butte	75.55	44	P	P	13 51 28.4	+0.4
	baz=75,SNR=22						
J12A	Stokes Ranch,	75.57	47	⇑P	P	13 51 28.4	+0.4
	baz=75						
M10A	I.L. Ranch, Tu	75.69	49	P	P	13 51 29.8	+1.0
	baz=76,SNR=11						
EGMT	Eagleton	75.73	41	eP	P	13 51 28.8	0.0
	comp=Z,17nm,1.0s,mb4.9						
EGMT	Eagleton	75.73	41	⇑P	P	13 51 28.9	0.0
	baz=76						
I13A	Wildhorse Cree	75.76	46	⇓P	P	13 51 29.5	+0.4
	baz=76						
HLID	Hailey	75.79	46	P	P	13 51 30.1	+0.8
	baz=76,SNR=5.2						
G15A	Dillon	75.96	44	P	P	13 51 30.8	+0.6
	baz=76,SNR=5.3						
J13A	Cove Ranch, Pi	76.03	46	⇑P	P	13 51 31.2	+0.5
	baz=76						
K12A	Draper Farm, C	76.04	47	⇓P	P	13 51 31.3	+0.5
	baz=76						
R07C	Lee Vining	76.06	53	⇑P	P	13 51 31.3	+0.4
	baz=76						
O09A	Fish Creek Ran	76.06	50	P	P	13 51 32.1	+1.2
	baz=76,SNR=5.5						
BOZ	Bozeman (W)	76.15	43	eP	P	13 51 31.9	+0.5
	comp=Z,7.0nm,0.9s,mb4.6						
BOZ	Bozeman (W)	76.15	43	eP	P	13 51 31.9	+0.6
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
BOZ	Bozeman (W)	76.15	43	P	P	13 51 31.8	+0.5
	baz=76,SNR=8.9						
M11A	Holland Ranch,	76.20	49	P	P	13 51 32.9	+1.2
	baz=76,SNR=8.8						
V04C	Ramage Ranch,	76.22	56	⇓P	P	13 51 32.1	+0.2
	baz=76						
T06C	Millerton Lake	76.23	54	⇓P	P	13 51 32.2	+0.3
	baz=76						
L12A	House Creek Ra	76.26	48	⇓P	P	13 51 32.7	+0.7
	baz=76						
PKD	Parkfield	76.27	56	⇑P	P	13 51 32.2	0.0
	baz=76						
KCC	Kaiser Creek	76.31	54	⇓P	P	13 51 32.4	0.0
	baz=76						
Q08A	Gabbs	76.34	52	⇑P	P	13 51 32.5	0.0
	baz=76						
NVAR	Mina Array Bea	76.34	52	P	P	13 51 32.9	+0.3
	comp=Z,6.6nm,0.7s,mb4.7,baz=306,slow=3.9,SNR=52						
O10A	Cortez Mining,	76.42	50	⇓P	P	13 51 33.5	+0.5
	baz=76						
P09A	Austin	76.45	51	⇑P	P	13 51 33.5	+0.4
	baz=76						
K13A	Stover Farm, H	76.52	47	⇑P	P	13 51 33.9	+0.4
	baz=76						
M12A	Wells	76.75	48	P	P	13 51 36.0	+1.2
	baz=76,SNR=15						
QLMT	Earthquake Lak	76.76	44	eP	P	13 51 35.6	+0.9
P10A	Eureka	76.83	51	⇓P	P	13 51 35.8	+0.5
	baz=77,SNR=5.3						
HELL	Mitchell Peak,	76.87	54	P	P	13 51 35.2	-0.4
	baz=77,SNR=5.1						
L13A	Double Diamond	76.94	47	⇑P	P	13 51 36.3	+0.5
	baz=77						
ELK	Elko	76.94	49	eP	P	13 51 36.5	+0.7
S08C	White Mtn Res	76.96	53	⇓P	P	13 51 36.5	+0.4
	baz=77,SNR=6.3						
N12A	Clover Valley,	77.00	49	P	P	13 51 37.1	+0.9
	baz=77,SNR=5.6						
O11A	Cowboy Ranch,	77.04	50	P	P	13 51 37.5	+1.0
	baz=77,SNR=5.3						
MALT	Malatya	77.06	308	eP	P	13 51 37.9	+1.3
	comp=Z,3.6nm,0.9s,mb4.3						
MALT	Malatya	77.06	308	eP	P	13 51 37.9	+1.3
MALT				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
K14A	Jones Ranch, D	77.12	47	⇓P	P	13 51 37.4	+0.5
	baz=77						
GCMT	Greycliff	77.15	42	eP	P	13 51 37.7	+0.7
M13A	Montello	77.23	48	⇓P	P	13 51 38.0	+0.5
	baz=77						
R09A	Tonopah	77.25	52	P	P	13 51 38.0	+0.4
	baz=77,SNR=15						
P11A	Circle Ranch,	77.32	50	⇑P	P	13 51 37.9	-0.2
	baz=77						
PKM	Peak Mountain	77.35	56	⇑P	P	13 51 38.7	+0.4
	baz=77						
S09A	Goldfield	77.45	53	P	P	13 51 39.0	+0.3
	baz=77,SNR=11						
N13A	Wendover, West	77.51	49	⇓P	P	13 51 39.2	+0.1
	baz=77						
O12A	Currie	77.53	49	P	P	13 51 40.0	+0.8
	baz=77,SNR=12						
IMW	Indian Meadow	77.61	45	eP	P	13 51 41.0	+1.5
	comp=Z,7.6nm,0.8s,mb4.7						
CWC	Cottonwood Cre	77.63	54	⇓P	P	13 51 39.4	-0.4
	baz=77						
M14A	Sheep Mountain	77.64	48	⇑P	P	13 51 40.2	+0.4
	baz=77						
R10A	Warm Springs	77.71	52	⇓P	P	13 51 41.1	+0.8
	baz=78						
S10A	Tonopah Range,	77.74	52	⇓P	P	13 51 40.7	+0.3
	baz=78						
GRAC	Grapevine Rang	77.77	53	⇓P	P	13 51 40.5	-0.1
	baz=78						
Q11A	Duckwater	77.80	51	⇑P	P	13 51 40.7	0.0
	baz=78						
ISA	Isabella	77.81	55	⇑P	P	13 51 40.2	-0.7
	baz=78						
HVU	Hansel Valley	77.82	47	eP	P	13 51 41.2	+0.5
	comp=Z,7.4nm,0.8s,mb4.7						
HVU	Hansel Valley	77.82	47	eP	P	13 51 41.2	+0.4
HVU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
P12A	McGill	77.89	50	P	P	13 51 42.0	+0.7
	baz=78,SNR=8.4						
O13A	Hicks Ranch, I	78.08	49	⇑P	P	13 51 42.6	+0.4
	baz=78						
N14A	Grayback Hills	78.13	48	⇑P	P	13 51 42.9	+0.4
	baz=78						
R11A	Troy Canyon, C	78.13	51	⇓P	P	13 51 43.1	+0.6
	baz=78						
BGU	Big Grassy Mou	78.18	48	eP	P	13 51 43.3	+0.5
Q12A	Willow Creek R	78.20	50	⇑P	P	13 51 43.5	+0.5
	baz=78						
M15A	Larsen Ranch,	78.21	47	⇓P	P	13 51 43.5	+0.5
	baz=78						
MPMC	Manual Prospec	78.24	54	⇑P	P	13 51 43.1	-0.1
	baz=78						
FURC	Furnace Creek,	78.41	53	⇑P	P	13 51 44.5	+0.3
	baz=78						
LAO	LASA Array	78.44	40	eP	P	13 51 44.5	+0.4
	comp=Z,5.2nm,0.8s,mb4.5						
LRMC	Laurel Mountai	78.44	55	⇑P	P	13 51 44.0	-0.4
	baz=78						
S11A	Rachel	78.44	52	⇑P	P	13 51 44.9	+0.6
	baz=78						
P13A	Bates Ranch, G	78.46	50	⇓P	P	13 51 44.6	+0.3
	baz=78						
N15A	Stansbury Isla	78.51	48	⇓P	P	13 51 45.1	+0.5
	baz=78						
TPNV	Topopah Spring	78.53	53	eP	P	13 51 45.1	+0.3
	comp=Z,6.3nm,0.7s,mb4.7						
TPNV	Topopah Spring	78.53	53	eP	P	13 51 45.1	+0.3
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TPNV	Topopah Spring	78.53	53	⇓P	P	13 51 44.9	+0.1
	baz=78						
EDW2	Edwards Air Fo	78.59	55	⇓P	P	13 51 45.2	0.0
	baz=78						
HWUT	Hardware Ranch	78.64	47	eP	P	13 51 46.2	+0.9
	comp=Z,7.9nm,1.0s,mb4.6						
DUG	Dugway	78.75	48	eP	P	13 51 46.5	+0.5
	comp=Z,6.0nm,0.8s,mb4.6						
DUG	Dugway	78.75	48	eP	P	13 51 46.5	+0.5
DUG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
DUG	Dugway	78.75	48	⇑P	P	13 51 46.4	+0.4
	baz=78						
Q13A	Wheeler Ranch,	78.76	50	⇑P	P	13 51 46.4	+0.4
	baz=78						
R12A	Pony Springs,	78.76	51	⇓P	P	13 51 46.0	0.0
	baz=78						
U10A	Ash Meadows, A	78.79	53	⇓P	P	13 51 46.2	0.0
	baz=79						
T11A	Corn Creek, Al	79.02	52	⇑P	P	13 51 47.9	+0.4
	baz=79						
BW06	Boulder Array	79.10	45	eP	P	13 51 47.7	-0.1
	comp=Z,4.0nm,0.7s,mb4.5						
PDAR	Pinedale Array	79.10	45	P	P	13 51 47.6	-0.2
	comp=Z,4.7nm,0.6s,mb4.6,baz=268,slow=2.1,SNR=49						
BRTR	Keskin Array B	79.23	311	P	P	13 51 48.6	0.0
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	79.23	311	P	P	13 51 48.6	+0.1
	comp=Z,2.6nm,0.8s,mb4.2,baz=106,slow=3.1,SNR=8.6						
DAU	Daniels Canyon	79.56	48	eP	P	13 51 51.6	+1.2
TUQ	Turquoise Mtn.	79.63	54	⇑P	P	13 51 50.8	-0.1
	baz=79						
S13A	Holt Ranch, En	79.68	51	⇓P	P	13 51 51.0	-0.1
	baz=80						
HEC	Hector,Ludlow	79.72	55	⇓P	P	13 51 51.8	+0.4
	baz=80						
OJC	Ojcow	79.77	326	eP	P	13 51 51.6	+0.3
GMRC	Granite Mounta	80.20	54	⇓P	P	13 51 53.7	-0.3
	baz=80						
U13A	Pakoon Wash	80.32	52	⇑P	P	13 51 54.7	+0.1
	baz=80						
PFO	Pinyon Flat Ob	80.36	56	⇑P	P	13 51 54.9	0.0
	baz=80						
BELC	Belle Mtn.	80.44	55	⇓P	P	13 51 55.3	0.0
	baz=80						
T14A	Hurricane	80.49	51	⇑P	P	13 51 55.3	-0.1
	baz=80						
MONP	Monument Peak	80.81	56	P	P	13 51 57.6	+0.4
	baz=81,SNR=6.2						
U14A	Mt Trumbull	80.82	52	⇑P	P	13 51 57.5	+0.3
	baz=81						
IRM	Iron Mountain	80.91	54	⇓P	P	13 51 57.5	-0.2
	baz=81						
T15A	Red Dirt Ranch	80.96	51	⇓P	P	13 51 57.8	-0.2
	baz=81						
ULM	Lac du Bonnet	81.00	33	P	P	13 51 56.5	-1.5
ULM	Lac du Bonnet	81.00	33	P	P	13 51 56.5	-1.5
	comp=Z,3.2nm,0.8s,mb4.3,baz=317,slow=7.2,SNR=12						
BC3	Big Chuckw Mtn	81.01	55	P	P	13 51 58.3	0.0
	baz=81,SNR=5.9						
W13A	Hualapai Mount	81.17	53	⇓P	P	13 51 58.9	-0.3
	baz=81						
SWSC	Sam W. Stewart	81.20	56	⇓P	P	13 51 58.7	-0.7
	baz=81						
RSSD	Black Hills	81.29	41	eP	P	13 51 59.5	-0.1
	comp=Z,2.7nm,0.6s,mb4.3						
RSSD	Black Hills	81.29	41	eP	P	13 51 59.5	-0.1
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
PDMCI	Parker Dam,Lak	81.49	54	⇑P	P	13 52 00.7	-0.1
	baz=81						
X13A	Yucca	81.51	53	P	P	13 52 01.1	+0.2
	baz=81,SNR=7.7						
Y12C	Blythe	81.57	54	⇑P	P	13 52 01.0	-0.2
	baz=81						
W14A	Seligman	81.62	53	P	P	13 52 02.0	+0.5
	baz=81,SNR=8.2						
GLA	Glamis	81.79	55	P	P	13 52 02.7	+0.3

	baz=82,SNR=9.2						
BRG	**Berggiesshubel**	**81.86**	**329**	*i* P	**P**	**13 52 02.3**	**-0.1**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRG	**Berggiesshubel**	**81.86**	**329**	*i* P	**P**	**13 52 02.3**	**-0.2**
	comp=Z,5.2nm,0.9s,mb4.5						
CLL	**Collm**	**81.92**	**330**	⇓*i*P	**P**	**13 52 02.3**	**-0.5**
	comp=Z,10.0nm,0.8s,mb4.8						
CLL				*i*	pP	13 52 16.5	+0.1
CLL	**Collm**	**81.92**	**330**	⇓*i*P	**P**	**13 52 02.3**	**-0.5**
CLL				*i*	pP	13 52 16.5	+0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
CLL	**Collm**	**81.92**	**330**	⇓*i*P	**P**	**13 52 02.3**	**-0.5**
	comp=Z,10.0nm,0.8s,mb4.8						
CLL				*i* pP	pP	13 52 16.5	+0.1
CLL				*i* sP	sP	13 52 22.0	+0.4
W15A	**Williams**	**82.17**	**52**	⇓P	**P**	**13 52 04.8**	**+0.4**
	baz=82						
X14A	**Yava**	**82.20**	**53**	P	**P**	**13 52 05.3**	**+0.7**
	baz=82,SNR=5.5						
X15A	**Humboldt**	**82.61**	**53**	⇓P	**P**	**13 52 06.9**	**+0.2**
	baz=82						
MVCO	**Mesa Verde**	**83.25**	**49**	⇑P	**P**	**13 52 10.0**	**0.0**
	baz=83						
GERES	**GERESS Array B**	**83.49**	**328**	P	**P**	**13 52 10.1**	**-0.9**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**83.49**	**328**	P	**P**	**13 52 10.1**	**-0.9**
	comp=Z,1.4nm,0.7s,mb4.1,baz=20,slow=4.3,SNR=8.9						
115A	**Sonoran Desert**	**83.73**	**54**	⇓P	**P**	**13 52 12.8**	**+0.3**
	baz=84						
GRA1	**Grafenberg Arr**	**83.89**	**330**	*e*P	**P**	**13 52 13.3**	**+0.3**
	comp=Z,8.0nm,0.8s,mb4.9						
GRA1				*e*pP	pP	13 52 27.2	+0.5
GRF	**Grafenberg Arr**	**83.89**	**330**	*e*P	**P**	**13 52 13.3**	**+0.3**
GRF				*e**PP	pP	13 52 27.2	+0.5
GRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
GRF	**Grafenberg Arr**	**83.89**	**330**	*e*P	**P**	**13 52 13.3**	**+0.3**
GRF				*e**PP	pP	13 52 27.2	+0.5
GRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.9						
GRF	**Grafenberg Arr**	**83.89**	**330**	*e*P	**P**	**13 52 13.3**	**+0.3**
	comp=Z,8.0nm,0.8s,mb4.9						
GRF				*e*pP	pP	13 52 27.2	+0.5
116A	**Eloy**	**84.16**	**54**	⇑P	**P**	**13 52 14.9**	**+0.2**
	baz=84						
216A	**Three Points,**	**84.67**	**54**	⇑P	**P**	**13 52 17.5**	**+0.2**
	baz=84						
SDCO	**Great Sand Dun**	**84.71**	**47**	*e*P	**P**	**13 52 17.9**	**+0.5**
	comp=Z,15nm,1.3s,mb5.0						
217A	**Green Valley**	**85.24**	**54**	⇓P	**P**	**13 52 20.1**	**-0.1**
	baz=85						
ECSD	**EROS,Sioux Fal**	**85.40**	**38**	*e*P	**P**	**13 52 20.1**	**-0.6**
	comp=Z,6.8nm,0.8s,mb4.8						
218A	**Dragoon**	**85.62**	**54**	⇑P	**P**	**13 52 22.1**	**0.0**
	baz=85						
ANMO	**Albuquerque**	**85.97**	**49**	*e*P	**P**	**13 52 24.5**	**+0.7**
	comp=Z,4.1nm,1.0s,mb4.6						
ANMO	**Albuquerque**	**85.97**	**49**	*e*P	**P**	**13 52 24.5**	**+0.7**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
318A	**Bisbee**	**86.00**	**54**	⇑P	**P**	**13 52 23.7**	**-0.2**
	baz=86						
BFO	**Black Forest**	**86.14**	**330**	*e*P	**P**	**13 52 24.1**	**-0.2**
	comp=Z,4.1nm,0.8s,mb4.7						
BFO	**Black Forest**	**86.14**	**330**	*e*P	**P**	**13 52 24.1**	**-0.2**
BFO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
CDF	**Champ du Feu**	**86.49**	**331**	*e*P	**P**	**13 52 25.5**	**-0.5**
	comp=Z,18nm,0.9s,mb5.0						
CDF	**Champ du Feu**	**86.49**	**331**	*e*P	**P**	**13 52 25.5**	**-0.5**
	comp=Z,9.3nm,0.9s,mb5.0						
CDF	**Champ du Feu**	**86.49**	**331**	*e*P	**P**	**13 52 25.5**	**-0.5**
CDF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
319A	**Douglas**	**86.50**	**54**	⇓P	**P**	**13 52 26.9**	**+0.5**
	baz=86						
SCHQ	**Schefferville**	**86.81**	**15**	P	**P**	**13 52 27.3**	**-0.2**
	comp=Z,4.7nm,0.8s,mb4.8,baz=359,slow=6.2,SNR=10						
HINF	**Hinteralfeld**	**87.14**	**331**	*e*P	**P**	**13 52 28.3**	**-0.9**
	comp=Z,7.8nm,0.7s,mb4.7						
HINF	**Hinteralfeld**	**87.14**	**331**	*e*P	**P**	**13 52 28.3**	**-0.9**
	comp=Z,3.9nm,0.7s,mb4.8						
HINF	**Hinteralfeld**	**87.14**	**331**	*e*P	**P**	**13 52 28.3**	**-0.9**
HINF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
HAU	**Haudompre**	**87.19**	**331**	*e*P	**P**	**13 52 28.6**	**-0.8**
CABF	**La Chapelle**	**88.42**	**331**	*e*P	**P**	**13 52 35.1**	**-0.3**
LOR	**Lormes**	**88.75**	**332**	*e*P	**P**	**13 52 36.3**	**-0.6**
LPL	**La Plagne**	**89.05**	**330**	*e*P	**P**	**13 52 37.9**	**-0.4**
LPG	**La Plagne**	**89.06**	**329**	*e*P	**P**	**13 52 38.1**	**-0.3**
SSF	**Saint Saulge**	**89.06**	**332**	*e*P	**P**	**13 52 37.4**	**-0.9**
SMF	**Signal de Mont**	**89.28**	**332**	*e*P	**P**	**13 52 39.0**	**-0.4**
AVF	**Avril sur Loir**	**89.34**	**332**	*e*P	**P**	**13 52 39.3**	**-0.4**
	comp=Z,13nm,0.8s,mb5.0						
AVF	**Avril sur Loir**	**89.34**	**332**	*e*P	**P**	**13 52 39.3**	**-0.4**
	comp=Z,6.4nm,0.8s,mb5.0						
AVF	**Avril sur Loir**	**89.34**	**332**	*e*P	**P**	**13 52 39.3**	**-0.4**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
GRR	**Gorron**	**89.50**	**335**	*e*P	**P**	**13 52 39.7**	**-0.7**
TCF	**Toulx Ste Croi**	**90.19**	**333**	*e*P	**P**	**13 52 42.6**	**-1.1**
VIVF	**Saint-Julien-l**	**90.43**	**330**	*e*P	**P**	**13 52 44.1**	**-0.7**
	comp=Z,13nm,0.9s,mb5.0						
VIVF	**Saint-Julien-l**	**90.43**	**330**	*e*P	**P**	**13 52 44.1**	**-0.7**
	comp=Z,6.7nm,0.9s,mb5.0						
VIVF	**Saint-Julien-l**	**90.43**	**330**	*e*P	**P**	**13 52 44.1**	**-0.7**
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.0						
FRF	**La Foret Royal**	**90.67**	**328**	*e*P	**P**	**13 52 44.8**	**-1.1**
WMOK	**Wichita Mounta**	**90.71**	**45**	*e*P	**P**	**13 52 46.0**	**-0.3**
	comp=Z,12nm,1.4s,mb5.0						
WMOK	**Wichita Mounta**	**90.71**	**45**	*e*P	**P**	**13 52 46.0**	**-0.3**
WMOK				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.0						
MFF	**Saint Martin d**	**90.79**	**334**	*e*P	**P**	**13 52 46.2**	**-0.2**
	comp=Z,21nm,1.0s,mb5.1						
MFF	**Saint Martin d**	**90.79**	**334**	*e*P	**P**	**13 52 46.2**	**-0.2**
	comp=Z,10nm,1.0s,mb5.1						
MFF	**Saint Martin d**	**90.79**	**334**	*e*P	**P**	**13 52 46.2**	**-0.2**
MFF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.1						
LMR	**La Mourre**	**90.91**	**328**	*e*P	**P**	**13 52 46.0**	**-1.1**
	comp=Z,40nm,1.2s,mb5.3						
LMR	**La Mourre**	**90.91**	**328**	*e*P	**P**	**13 52 46.0**	**-1.1**
	comp=Z,20nm,1.2s,mb5.3						
LMR	**La Mourre**	**90.91**	**328**	*e*P	**P**	**13 52 46.0**	**-1.1**
LMR				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.3						
RJF	**Les Rejaudoux**	**91.29**	**332**	*e*P	**P**	**13 52 48.5**	**-0.3**
LASF	**Ste Croix**	**91.40**	**330**	*e*P	**P**	**13 52 48.4**	**-0.9**
TXAR	**Lajitas Array**	**91.48**	**52**	P	**P**	**13 52 49.8**	**-0.2**
	comp=Z,2.6nm,0.7s,mb4.7,baz=289,slow=3.1,SNR=27						
TXAR				LR	LR	14 29 35.3	
	comp=Z,66nm,19.1s,MS4.1,baz=5.0,slow=33						
SSPA	**Standing Stone**	**96.22**	**28**	*e*P	**P**	**13 53 08.2**	**-3.3**
	comp=Z,37nm,1.0s,mb5.8						
QSPA	**South Pole Qui**	**125.43**	**180**	*e*PKPdf	PKPdf	13 58 42.2	-0.6
LPAZ	**La Paz**	**147.96**	**60**	PKPbc	PKPbc	13 59 28.8	-0.2
LPAZ	**La Paz**	**147.96**	**60**	PKPbc	PKPbc	13 59 28.8	-0.2
	comp=Z,6.9nm,0.7s,baz=353,slow=4.7,SNR=26						

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*ISCJB **14** 13:57:57.0±0.6, 999N±006×7983W±003, h47km±11km, mb3.8/7, MS3.5/2, Error ellipse: s-maj=9.7km s-min=5.1km az=11.8*
*IDC **14** 13:57:57.3±2.5, 976N×7991W, h46km±23km, mb3.7/7, mb1 4.1/9, mb1mx3.8/20, mbtmp3.9/9, ML4.7/2, MS3.2/4, Ms1 3.3/4, ms1mx2.8/24, Error ellipse: s-maj=31.6km s-min=18.9km az=179.0*
*CASC **14** 13:57:57.7±1.7, 994N×7982W, h48km±25km, MD4.1*
*NEIC **14** 13:57:59.0, 987N×7990W, h50km, MD4.2(CASC), After CASC.*
ISC 14 13:57:58.6±0.4**, 991N**±005×**7984W**±003**, h49**km±10km**, n55, σ0.s82**/65**, mb3.8**/7**, MS3.5**/2**, 3C-8D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACLA	**Agua Clara, Si**	**0.56**	**167**	⇓*i*P	**Pn**	**13 58 10.0**	**-0.5**
ACLA				*e*S	**Sn**	**13 58 19.1**	**+0.1**
ACLA	**Agua Clara, Si**	**0.56**	**167**	⇓*i*P	**Pn**	**13 58 10.0**	**-0.5**
ACLA				*e*S	**Sn**	**13 58 19.0**	**0.0**
PINA	**Piqa, Costa Ab**	**0.69**	**199**	⇓*e*P	**Pn**	**13 58 11.6**	**-0.6**
PINA				*e*S	**Sn**	**13 58 22.6**	**+0.6**
PINA	**Piqa, Costa Ab**	**0.69**	**199**	⇓*i*P	**Pn**	**13 58 11.6**	**-0.6**
PINA				*e*S	**Sn**	**13 58 22.4**	**+0.5**
BCIP	**Isla Barro Col**	**0.74**	**180**	*e*P	**Pn**	**13 58 12.2**	**-0.7**
BCIP	**Isla Barro Col**	**0.74**	**180**	*e*P	**Pn**	**13 58 12.2**	**-0.6**
BCIP				*e*S	**Sn**	**13 58 23.3**	**+0.2**
UPIG		**0.96**	**162**	⇑*e*P	**Pn**	**13 58 15.6**	**-0.3**
UPIG				*e*S	**Sn**	**13 58 28.9**	**+0.4**
UPA	**Univ. de Panam**	**0.97**	**162**	*e*P	**Pn**	**13 58 15.5**	**-0.4**
UPA				*e*S	**Sn**	**13 58 28.9**	**+0.3**
AZU	**Azuero**	**2.15**	**192**	⇓*e*P	**Pn**	**13 58 31.7**	**-0.3**
AZU	**Azuero**	**2.15**	**192**	⇓*e*P	**Pn**	**13 58 31.7**	**-0.3**
CNI	**Changuinola**	**2.69**	**260**	*e*P	**Pn**	**13 58 40.7**	**+1.3**
CNI				*e*S	**Sn**	**13 59 10.2**	**-0.6**
CNI	**Changuinola**	**2.69**	**260**	*e*P	**Pn**	**13 58 39.0**	**-0.4**
DVD	**David**	**2.97**	**241**	*e*P	**Pn**	**13 58 44.1**	**+0.9**
BRU2	**Volcan**	**3.03**	**249**	⇑*e*P	**Pn**	**13 58 45.0**	**+0.9**
BRU2				*e*S	**Sn**	**13 59 19.4**	**+0.3**
BRU2	**Volcan**	**3.03**	**249**	⇑*i*P	**Pn**	**13 58 44.9**	**+0.8**
BRU2				*e*S	**Sn**	**13 59 19.1**	**0.0**
CTCR	**Cotoan**	**3.06**	**251**	*e*P	**Pn**	**13 58 44.0**	**-0.5**
BAR1		**3.49**	**259**	*e*P	**Pn**	**13 58 50.3**	**-0.1**
BUS	**Buena Vista**	**3.88**	**265**	*e*P	**Pn**	**13 58 56.0**	**+0.1**
BUS	**Buena Vista**	**3.88**	**265**	*e*P	**Pn**	**13 58 55.9**	**+0.1**
URSC	**Urasca**	**3.88**	**269**	*e*P	**Pn**	**13 58 55.2**	**-0.7**
URSC	**Urasca**	**3.88**	**269**	*e*P	**Pn**	**13 58 55.2**	**-0.6**
LCR2	**La Lucha 2**	**4.11**	**268**	*e*P	**Pn**	**13 58 58.7**	**-0.3**
LCR2				*e*S	**Sn**	**13 59 44.8**	**-1.0**
LCR2	**La Lucha 2**	**4.11**	**268**	*e*P	**Pn**	**13 58 58.9**	**-0.1**
LAJ	**Bijagual**	**4.22**	**270**	*e*P	**Pn**	**13 59 07.9**	**+7.4**
LAJ	**Bijagual**	**4.22**	**270**	*e*P	**Pn**	**13 59 07.8**	**+7.3**
QCR	**Quepos**	**4.29**	**264**	*e*P	**Pn**	**13 59 02.0**	**+0.6**
QCR	**Quepos**	**4.29**	**264**	*e*P	**Pn**	**13 59 02.0**	**+0.5**
PRS1	**Puriscal**	**4.41**	**271**	*e*P	**Pn**	**13 59 04.1**	**+1.0**
PRS1	**Puriscal**	**4.41**	**271**	*e*P	**Pn**	**13 59 04.0**	**+1.0**
CGA2	**Cerro Gallo 2**	**4.56**	**272**	*e*P	**Pn**	**13 59 05.9**	**+0.7**
CGA2	**Cerro Gallo 2**	**4.56**	**272**	*e*P	**Pn**	**13 59 05.9**	**+0.8**
JTS	**JuntasAbangare**	**5.05**	**275**	P	**Pn**	**13 59 10.8**	**-1.1**
JTS				*e*P		13 59 11.2	
JTS				S	**Sn**	**14 00 06.1**	**-2.9**
JTS	**JuntasAbangare**	**5.05**	**275**	P	**Pn**	**13 59 10.8**	**-1.1**
	34nm,0.3s,baz=70,slow=15,SNR=124						
JTS				S	**Sn**	**14 00 06.1**	**-2.9**
	9.3nm,0.3s,baz=336,slow=21,SNR=3.6						
JCR	**Jicaral**	**5.20**	**270**	⇓*e*P	**Pn**	**13 59 15.9**	**+2.0**
JCR	**Jicaral**	**5.20**	**270**	⇓*e*P	**Pn**	**13 59 15.9**	**+2.0**
OCAC	**Ocana**	**6.65**	**104**	*e*P	**Pn**	**13 59 33.8**	**0.0**
SDV	**Santo Domingo**	**9.14**	**96**	P	**Pn**	**14 00 07.4**	**-0.5**
SDV				S	**Sn**	**14 01 45.6**	**-3.9**
SDV	**Santo Domingo**	**9.14**	**96**	P	**Pn**	**14 00 07.4**	**-0.5**
	7.2nm,0.3s,baz=318,slow=8.4,SNR=50						
SDV				S	**Sn**	**14 01 45.6**	**-3.9**
	26nm,0.3s,baz=317,slow=20,SNR=19						
OTAV	**Otavalo**	**9.71**	**172**	*e*P	**Pn**	**14 00 19.8**	**+4.1**
	24nm,0.9s						
CCCC	**Cccc**	**11.40**	**10**	*e*P	**Pn**	**14 00 39.8**	**+1.0**
MGV	**Manicaragua**	**12.13**	**359**	*e*P	**Pn**	**14 00 49.0**	**+0.1**
SDDR	**Presa de Saban**	**12.24**	**42**	*e*P	**Pn**	**14 00 49.7**	**-0.6**
	52nm,0.6s						
SJG	**San Juan**	**15.57**	**57**	LR	LR	14 07 22.3	
	comp=Z,52nm,21.2s,baz=109,slow=36						
CMIG	**Matias Romero**	**16.27**	**298**	LR	LR	14 08 23.1	
	comp=Z,42nm,20.1s,baz=116,slow=38						
TKL	**Tuckaleechee C**	**25.88**	**353**	P	**P**	**14 03 27.6**	**+1.6**
	5.7nm,1.0s,mb4.1,baz=164,slow=10,SNR=3.9						
TKL				LR	LR	14 14 57.6	
	comp=Z,63nm,18.1s,MS3.2,baz=251,slow=39						
TXAR	**Lajitas Array**	**29.51**	**314**	P	**P**	**14 03 58.4**	**-0.1**
	1.0nm,0.8s,mb3.6,baz=143,slow=11,SNR=5.8						
PDAR	**Pinedale Array**	**41.77**	**327**	P	**P**	**14 05 43.6**	**+0.3**
	0.2nm,0.5s,mb3.0,baz=159,slow=8.7,SNR=3.4						
ULM	**Lac du Bonnet**	**42.35**	**345**	P	**P**	**14 05 46.1**	**-1.7**
	2.7nm,0.7s,mb4.0,baz=150,slow=7.7,SNR=7.9						
NVAR	**Mina Array Bea**	**44.62**	**316**	P	**P**	**14 06 07.2**	**+0.8**
	0.7nm,0.7s,mb3.6,baz=129,slow=7.4,SNR=5.7						
SCHQ	**Schefferville**	**45.98**	**10**	P	**P**	**14 06 17.1**	**+0.3**
	3.7nm,0.6s,mb4.5,baz=207,slow=6.2,SNR=12						
YKA	**Yellowknife Ar**	**58.18**	**342**	P	**P**	**14 07 46.5**	**-0.9**
YKA	**Yellowknife Ar**	**58.18**	**342**	P	**P**	**14 07 46.5**	**-0.9**
	1.2nm,0.7s,mb4.1,baz=132,slow=7.5,SNR=33						
NOA	**NORSAR Array B**	**81.92**	**29**	LR	LR	14 45 10.9	
	comp=Z,37nm,18.9s,MS3.8,baz=335,slow=34						
ASAR	**Alice Springs**	**145.03**	**243**	PKP	PKPdf	14 17 28.6	-2.9
	0.4nm,0.8s,baz=112,slow=3.7,SNR=7.5						
WRA	**Warramunga Arr**	**145.57**	**249**	PKPbc	PKPbc	14 17 31.0	-1.7
	0.7nm,0.7s,baz=100,slow=2.8,SNR=10						

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*IDC **14** 14:14:25.6±1.1, 13.18S×166.83E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.2/15, mbtmp4.2/10, ML3.1/1, MS3.5/8, Ms1 3.5/8, ms1mx3.3/20, Error ellipse: s-maj=39.3km s-min=20.6km az=139.0*
*BJI **14** 14:14:26.8, 13.00S×166.80E, h10km, mB5.2, mb4.9, Ms4.7, Msz4.5*
*NEIC **14** 14:14:27.8±0.7, 13.04S×166.84E, h10km, mb4.1/4, Error ellipse: s-maj=14.8km s-min=12.9km az=102.0*
*ISCJB **14** 14:14:31.4±2.3, 13.19S±0.07×166.6E±0.1, h43km±18km, mb4.4/15, MS3.6/6, Error ellipse: s-maj=18.7km s-min=9.0km az=155.9*
ISC 14 14:14:34.0±1.8**, 1317S**±007×**1666E**±01**, h50**km±14km**, n35, σ0.s98**/31**, mb4.4**/15**, MS3.6**/6**, 1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.54**	**299**	*e*Pn	**Pn**	**14 16 21.6**	**+0.2**
	276nm,1.0s						
HNR				*e*Sn	**Sn**	**14 17 43.8**	**-1.8**
HNR	**Honiara**	**7.54**	**299**	Pn	**Pn**	**14 16 22.3**	**+0.9**
	19nm,0.3s,baz=222,slow=1.4,SNR=21						
HNR				Sn	**Sn**	**14 17 45.4**	**-0.1**
	23nm,0.3s,baz=91,slow=13,SNR=5.8						
DZM	**Mont Dzumac**	**8.85**	**181**	*e*P	**Pn**	**14 16 39.8**	**+0.5**
DZM				*e*S	**Sn**	**14 18 16.5**	**-1.2**
DZM	**Mont Dzumac**	**8.85**	**181**	Pn	**Pn**	**14 16 40.3**	**+1.0**
	2.5nm,0.3s,baz=360,slow=20,SNR=13						
DZM				LR	LR	14 18 37.8	
	comp=Z,111nm,19.3s,baz=200,slow=28						
EIDS	**Eidsvold**	**19.02**	**228**	*e*P	**Pn**	**14 18 54.3**	**+1.3**
PMG	**Port Moresby**	**19.46**	**279**	P	**Pn**	**14 18 57.3**	**-1.1**
	0.2nm,0.3s,baz=324,slow=19,SNR=2.2						
PMG				LR	LR	14 25 11.6	
	comp=Z,93nm,21.6s,baz=272,slow=33						
CTA	**Charters Tower**	**20.69**	**248**	P	**P**	**14 19 10.9**	**+0.9**
	5.2nm,0.7s,baz=107,slow=11,SNR=4.3						
CTA				LR	LR	14 26 00.5	
	comp=Z,262nm,19.5s,MS3.6,baz=37,slow=33						
CTAO	**Charters Tower**	**20.69**	**248**	*e*P	**P**	**14 19 11.6**	**+1.5**
ARMA	**Armidale**	**22.06**	**217**	*e*P	**P**	**14 19 25.7**	**+1.0**
STKA	**Stephens Creek**	**29.57**	**227**	*e*P	**P**	**14 20 34.6**	**+0.4**
	1.6nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**29.57**	**227**	P	**P**	**14 20 34.6**	**+0.5**
	1.6nm,0.5s,mb4.0,baz=36,slow=8.3,SNR=9.3						
STKA				PcP	PcP	14 23 37.0	-1.3
	1.9nm,0.6s,baz=115,slow=4.7,SNR=6.8						
STKA				LR	LR	14 32 37.7	
	comp=Z,127nm,18.7s,MS3.6,baz=295,slow=37						
WB2	**Warramunga Arr**	**31.63**	**253**	*e*P	**P**	**14 20 51.5**	**-1.0**
WRA	**Warramunga Arr**	**31.64**	**253**	P	**P**	**14 20 51.7**	**-0.9**
	3.2nm,0.6s,mb4.3,baz=86,slow=9.2,SNR=60						
WRA				PcP	PcP	14 23 43.0	-1.0
	0.5nm,0.6s,baz=84,slow=3.4,SNR=4.8						
WRA				LR	LR	14 33 06.6	
	comp=Z,132nm,18.7s,MS3.6,baz=105,slow=35						
ASAR	**Alice Springs**	**32.69**	**247**	P	**P**	**14 21 00.8**	**-0.9**
	4.2nm,0.6s,mb4.5,baz=74,slow=9.5,SNR=112						
ASAR				PcP	PcP	14 23 45.5	-1.3
	1.1nm,0.6s,baz=68,slow=2.4,SNR=11						
FITZ	**Fitzroy Crossi**	**39.73**	**258**	*e*P	**P**	**14 22 02.1**	**+0.2**
	7.0nm,1.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**39.73**	**258**	LR	LR	14 37 32.8	
	comp=Z,66nm,18.6s,MS3.5,baz=137,slow=35						
PPT	**Papeete**	**42.38**	**102**	*e*LR	LR	14 34 00.1	
	136nm,27.8s						
TBI	**Tubuai**	**42.76**	**110**	*e*LR	LR	14 34 12.8	
	83nm,31.0s						
JNU	**Nakatsue**	**57.30**	**324**	LR	LR	14 43 26.5	
	comp=Z,32nm,21.9s,MS3.4,baz=223,slow=30						
KSRS	**Korea Array**	**62.11**	**326**	P	**P**	**14 24 49.5**	**-0.4**
	1.5nm,0.9s,mb4.1,baz=131,slow=8.1,SNR=6.4						
SBA	**Scott Base**	**64.68**	**180**	P	**P**	**14 25 06.5**	**+0.3**
CN2	**Changchun**	**68.00**	**329**	*e*P	**P**	**14 25 28.3**	**+0.4**
HHC	**Hu-ho-hao-te**	**74.01**	**320**	*e*P	**P**	**14 26 05.5**	**+1.1**
HHC				AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,123nm,4.4s						
CD2	**Chengdu**	**74.58**	**307**	*e*P	**P**	**14 26 09.6**	**+1.6**
CD2				PP	PP	14 28 59.8	+4.4
CD2				S	S	14 35 45.8	+5.7
CD2				SS	SS	14 40 36.3	+8.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
LZH	**Lanzhou**	**76.82**	**312**	*e*P	**P**	**14 26 22.0**	**+1.3**
LZH				AP	pP	14 26 25.4	-10
LZH				XP	sP	14 26 26.8	-14
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,102nm,4.0s						
QSPA	**South Pole Qui**	**76.85**	**180**	*e*P	**P**	**14 26 19.2**	**-0.9**
	comp=Z,12nm,1.3s,mb4.7						
ULN	**Ulaanbaatar**	**80.52**	**324**	*e*P	**P**	**14 26 41.2**	**+0.5**
	comp=Z,2.1nm,1.0s,mb4.0						
SONM	**Songino Array**	**80.89**	**324**	P	**P**	**14 26 42.5**	**-0.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=140,slow=4.4,SNR=7.8						
NVAR	**Mina Array Bea**	**86.73**	**49**	P	**P**	**14 27 12.8**	**+0.1**
	comp=Z,0.4nm,0.6s,mb3.8,baz=220,slow=5.2,SNR=4.2						
WMQ	**Urumqi**	**91.20**	**315**	⇓P	**P**	**14 27 30.3**	**-3.5**
WMQ				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.9						
PDAR	**Pinedale Array**	**94.35**	**47**	LR	LR	15 02 43.8	
	comp=Z,53nm,19.9s,MS4.0,baz=244,slow=31						
MKAR	**Makanchi Array**	**95.66**	**317**	P	**P**	**14 27 53.5**	**-0.7**
	comp=Z,1.6nm,0.7s,mb4.6,baz=99,slow=6.3,SNR=10.0						
YKA	**Yellowknife Ar**	**96.45**	**27**	P	**P**	**14 27 55.8**	**-1.7**
	comp=Z,0.3nm,0.5s,mb4.0,baz=259,slow=4.7,SNR=8.5						
ARCES	**ARCESS Array B**	**118.60**	**345**	PKP	PKPdf	14 33 14.3	-1.4
ARCES	**ARCESS Array B**	**118.60**	**345**	PKP	PKPdf	14 33 14.3	-1.4
	comp=Z,0.9nm,0.5s,baz=65,slow=2.3,SNR=7.1						

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*CSEM **14** 14:21:11.6±0.1, 38.42N×39.23E, h8km, MD2.9, Error ellipse: s-maj=3.5km s-min=2.3km az=127.0*
*ISK **14** 14:21:11.1, 38.38N×39.19E, h5km, MD3.0*
*ISCJB **14** 14:21:12.2±0.5, 38.37N±0.03×39.26E±0.04, h5km, Error ellipse: s-maj=4.5km s-min=4.1km az=32.4*
*DDA **14** 14:21:12.4, 38.41N×39.29E, h13km, Md2.9*
ISC 14 14:21:12.6±0.7**, 3838N**±003×**3926E**±005**, h7**km±8km**, n14, σ0.s87**/21**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.25**	**298**	*i* P	**Pg**	**14 21 17.5**	**0.0**
ELZG				*i* S	**Sg**	**14 21 21.9**	**+1.2**
PTK	**Pertek**	**0.52**	**11**	PG	**Pg**	**14 21 21.8**	**-0.8**
PTK				SG	**Sg**	**14 21 31.4**	**+2.0**
MALT	**Malatya**	**0.66**	**264**	PG	**Pg**	**14 21 23.1**	**-2.2**
MALT				SG	**Sg**	**14 21 33.3**	**-0.6**
MYA	**Malataya**	**0.66**	**265**	PG	**Pg**	**14 21 24.5**	**-0.8**
DIY	**Diyarbakir**	**0.90**	**122**	PG	**Pg**	**14 21 29.6**	**-0.3**
URFA	**Urfa**	**1.00**	**201**	PG	**Pg**	**14 21 31.7**	**-0.1**
KEMA	**Kemaliye**	**1.07**	**326**	*i* P	**Pg**	**14 21 32.2**	**-0.9**
KEMA				*i* S	**Sg**	**14 21 47.5**	**+0.4**
BINT	**Bingol**	**1.08**	**62**	PN	**Pn**	**14 21 33.8**	**-0.4**
ATAB	**Bozova**	**1.19**	**220**	*i* P	**Pg**	**14 21 35.7**	**+0.3**
ATAB				*i* S	**Sg**	**14 21 52.6**	**+1.8**
EZC	**Erzincan**	**1.43**	**17**	PN	**Pn**	**14 21 38.9**	**-0.1**
MARD	**Mardin**	**1.60**	**131**	*i* P	**Pn**	**14 21 41.4**	**0.0**
MARD				*i* S	**Sn**	**14 22 02.9**	**+0.6**
GZT	**Gaziantep**	**1.69**	**233**	*i* P	**Pn**	**14 21 42.7**	**+0.1**
GZT				*i* S	**Sn**	**14 22 09.5**	**+5.0**
BTMT	**Batman**	**1.76**	**95**	PN	**Pn**	**14 21 43.2**	**-0.3**
GAZ	**Gaziantep**	**2.02**	**234**	*e*PN	**Pn**	**14 21 47.3**	**+0.1**

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*NEIC **14** 14:33:15.6±0.5, 4.36S×130.11E, h10km, mb4.2/9, Error ellipse: s-maj=17.0km s-min=7.9km az=66.0*
*ISCJB **14** 14:33:16.1±0.5, 4.42S±0.06×130.2E±0.1, h33km, mb4.5/15, Error ellipse: s-maj=15.3km s-min=7.4km az=162.2*
*IDC **14** 14:33:23.1±3.0, 4.57S×129.87E, h71km±27km, mb3.9/4, mb1 4.1/7, mb1mx3.9/14, mbtmp4.0/7, MS3.2/2, Ms1 3.2/2, ms1mx2.8/15, Error ellipse: s-maj=36.5km s-min=11.7km az=74.0*
ISC 14 14:33:18.5±0.5**, 443S**±005×**1303E**±01**, h35**km**, n32, σ0.s74**/34**, mb4.5**/15**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.51**	**165**	*e*Pn	**Pn**	**14 35 19.7**	**+0.4**
BATI	**Kupang**	**8.70**	**228**	P	**Pn**	**14 35 22.8**	**+0.9**
	1.3nm,0.3s,baz=18,slow=3.2,SNR=4.0						
BATI				LR	LR	14 38 58.1	
	comp=Z,86nm,18.8s,baz=354,slow=40						
FITZ	**Fitzroy Crossi**	**14.32**	**198**	⇓*i*P	**Pn**	**14 36 37.8**	**-1.0**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**14.32**	**198**	*e*P	**Pn**	**14 36 38.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**14.32**	**198**	P	**Pn**	**14 36 38.1**	**-0.7**
	0.4nm,0.3s,baz=35,slow=13,SNR=16						
FITZ				S	**Sn**	**14 39 09.7**	**-6.8**
	0.1nm,0.3s,baz=57,slow=18,SNR=2.5						
COEN	**Coen**	**15.88**	**127**	*e*Pn	**Pn**	**14 36 58.7**	**-0.7**
WRA	**Warramunga Arr**	**15.93**	**166**	P	**Pn**	**14 36 54.3**	**-5.8**
	0.3nm,0.3s,baz=344,slow=13,SNR=18						
WRA				S	**S**	**14 39 49.1**	**-20**
	0.3nm,0.3s,baz=3.3,slow=23,SNR=5.4						
WB2	**Warramunga Arr**	**15.93**	**166**	*e*P	**Pn**	**14 36 56.4**	**-3.7**
ASAR	**Alice Springs**	**19.45**	**170**	P	**Pn**	**14 37 43.6**	**+0.1**
	2.5nm,0.3s,baz=350,slow=11,SNR=138						
ASAR				S	**S**	**14 41 20.0**	**-0.3**
	0.1nm,0.3s,baz=346,slow=21,SNR=11						
ASAR				PcP	PcP	14 42 02.6	-0.1
	0.1nm,0.3s,baz=341,slow=2.0,SNR=5.8						
MBWA	**Marble Bar**	**19.52**	**211**	*e*P	**Pn**	**14 37 43.6**	**-0.8**
	6.9nm,0.7s						
CTA	**Charters Tower**	**22.03**	**136**	*e*P	**P**	**14 38 14.5**	**+4.4**
	4.5nm,0.8s,mb4.0						
CTA	**Charters Tower**	**22.03**	**136**	P	**P**	**14 38 13.9**	**+3.8**
	5.0nm,0.9s,mb4.0,baz=311,slow=11,SNR=5.1						
CTAO	**Charters Tower**	**22.03**	**136**	*e*P	**P**	**14 38 14.2**	**+4.1**
FORT	**Forrest**	**26.29**	**184**	*e*P	**P**	**14 38 51.9**	**+1.1**
	11nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**29.31**	**160**	*e*P	**P**	**14 39 19.5**	**+1.7**
	2.2nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**29.31**	**160**	P	**P**	**14 39 18.6**	**+0.9**
	2.8nm,0.6s,mb4.1,baz=339,slow=7.8,SNR=14						
CHTO	**Chiang Mai**	**38.52**	**308**	*e*P	**P**	**14 40 37.7**	**-0.1**
	3.9nm,0.9s,mb4.1						
LSA	**Lhasa**	**50.55**	**315**	*e*P	**P**	**14 42 14.6**	**+0.9**
	4.6nm,0.8s,mb4.5						
ODAN	**Odare**	**51.80**	**309**	*e*P	**P**	**14 42 23.0**	**-0.1**
	13nm,0.7s,mb5.0						
TAPN	**Taplejung**	**51.80**	**310**	*e*P	**P**	**14 42 23.0**	**-0.1**
	9.9nm,0.3s,mb5.2						
JIRN	**Jiri**	**53.12**	**310**	*e*P	**P**	**14 42 32.8**	**-0.1**
	5.6nm,0.5s,mb4.7						
KKN	**Kakani**	**53.89**	**309**	*e*P	**P**	**14 42 38.2**	**-0.3**
	6.0nm,0.6s,mb4.7						
GKN	**Gorkha**	**54.49**	**309**	*e*P	**P**	**14 42 41.4**	**-1.5**
	12nm,0.7s,mb4.9						
ULN	**Ulaanbaatar**	**55.91**	**341**	*e*P	**P**	**14 42 53.7**	**+0.9**
	2.8nm,1.0s,mb4.2						
SONM	**Songino Array**	**56.10**	**341**	P	**P**	**14 42 54.4**	**+0.2**
	1.0nm,0.9s,mb3.9,baz=154,slow=7.3,SNR=5.7						
SONM				PcP	PcP	14 43 52.4	+0.5
	0.4nm,0.6s,baz=164,slow=5.5,SNR=2.7						
MK31	**Makanchi Array**	**66.23**	**326**	*e*P	**P**	**14 44 03.1**	**+0.3**
MKAR	**Makanchi Array**	**66.23**	**326**	P	**P**	**14 44 03.2**	**+0.4**
MKAR	**Makanchi Array**	**66.23**	**326**	P	**P**	**14 44 03.2**	**+0.4**
	4.4nm,0.6s,mb4.7,baz=122,slow=8.1,SNR=68						
TKM2	**Tokmak 2**	**68.18**	**320**	*e*P	**P**	**14 44 15.3**	**0.0**
TIXI	**Tiksi**	**75.94**	**360**	*e*P	**P**	**14 45 00.6**	**-0.6**
	1.2nm,0.7s,mb3.9						
CHKZ	**Chkalovo**	**76.22**	**328**	*e*P	**P**	**14 45 02.8**	**-0.4**
	3.4nm,0.9s,mb4.3						
LPAZ	**La Paz**	**152.54**	**139**	PKPbc	PKPbc	14 53 13.8	+1.6
	1.4nm,0.7s,baz=180,slow=3.0,SNR=5.0						

IDC 14 14:51:03.4±4.9**, 274S**×**13918E, h0**km**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.4**/10**, mbtmp3.4**/3**, ML3.5**/1**, Error ellipse: s-maj=195.5km s-min=29.3km az=87.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**17.74**	**195**	*e*P	Pn	14 55 12.6	+0.7
WRA	**Warramunga Arr**	**17.74**	**195**	P	Pn	14 55 12.1	+0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	0.2nm,0.3s,baz=17,slow=13,SNR=22						
ASAR	**Alice Springs**	**21.42**	**193**	P	P	14 55 53.0	0.0
	0.6nm,0.6s,baz=15,slow=9.2,SNR=9.1						
MKAR	**Makanchi Array**	**70.10**	**322**	P	P	15 02 17.6	+0.2
	0.4nm,0.4s,baz=107,slow=7.2,SNR=6.5						

IDC 14 14:59:52.1±1.5**, 499N×12562E, h0km, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.3**/16**, mbtmp3.2**/4**, Error ellipse: s-maj=156.9km s-min=23.5km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.22**	**161**	P	P	15 05 29.9	+1.0
	0.3nm,0.4s,baz=339,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**29.61**	**164**	P	P	15 05 58.1	-1.1
	0.2nm,0.8s,baz=356,slow=9.4,SNR=3.5						
SONM	**Songino Array**	**45.76**	**342**	P	P	15 08 14.9	-0.3
	0.2nm,0.7s,baz=156,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**55.89**	**325**	P	P	15 09 32.1	+0.4
	0.1nm,0.3s,baz=114,slow=7.4,SNR=3.4						

*NEIC **14** 15:17:14.2, 1870N×6949W, h81km, MD3.8(RSPR), After RSPR.*

RSPR 14 15:17:14.2, 1870N×6949W, h81km±2km, MD3.8/10**, MD3.8**/10**, 13C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STDO	**Santo Domingo**	**0.48**	**239⇑**	*e*P	Pn	15 17 26.1	-1.8
STDO				*e*S	Sn	15 17 38.0	-0.1
SDDR	**Presa de Saban**	**1.72**	**280⇑**	*e*P	Pn	15 17 42.3	-0.2
SDDR				*e*S	Sn	15 18 04.5	+0.5
AGPR	**Aguadilla, PR**	**2.27**	**96⇑**	*i*P	Pn	15 17 48.8	-1.0
AGPR				*e*S	Sn	15 18 18.4	+1.4
LSP	**Las Mesas**	**2.34**	**103⇑**	*e*P	Pn	15 17 51.3	+0.5
LSP				*e*S	Sn	15 18 18.6	-0.1
CRPR	**Cabo Rojo, PR**	**2.37**	**107⇑**	*e*P	Pn	15 17 50.9	-0.2
CRPR				*e*S	Sn	15 18 20.0	+0.7
LRS	**Lares**	**2.55**	**99⇑**	*e*P	Pn	15 17 53.2	-0.3
LRS				*e*S	Sn	15 18 23.2	-0.4
GBPR	**Guanica, Bosqu**	**2.59**	**106⇑**	*e*P	Pn	15 17 55.0	+1.0
GBPR	**Guanica, Bosqu**	**2.59**	**106**	*e*S	Sn	15 18 25.3	+0.8
AOPR	**Arecibo Observ**	**2.62**	**97⇑**	*e*P	Pn	15 17 53.6	-0.9
AOPR				*e*S	Sn	15 18 24.5	-0.9
CELP	**Cerrillos**	**2.84**	**102⇑**	*e*P	Pn	15 17 58.1	+0.7
CELP				*e*S	Sn	15 18 31.4	+0.8
ICM	**Isla Caja Muer**	**2.94**	**105⇑**	*e*P	Pn	15 17 57.5	-1.3
ICM				*e*S	Sn	15 18 32.1	-1.0
SJG	**San Juan**	**3.23**	**100**	*e*S	Sn	15 18 41.1	+1.0
CBYP	**Canovanas**	**3.48**	**97⇑**	*e*P	Pn	15 18 03.7	-2.4
CBYP				*e*S	Sn	15 18 43.7	-2.5
HUMP	**Col San Antoni**	**3.50**	**99⇑**	*e*P	Pn	15 18 04.7	-1.8
HUMP				*e*S	Sn	15 18 46.0	-0.8
MTP	**Monte Pirata**	**3.79**	**99⇑**	*e*P	Pn	15 18 08.9	-1.4
MTP				*e*S	Sn	15 18 53.0	-0.7

*NEIC **14** 15:17:27.9, 1554N×9480W, h34km, MD3.9(MEX), After MEX.*

MEX 14 15:17:27.9±0.8**, 1554N×9480W, h34km**±503km**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.28**	**281**	*i* P	Pn	15 17 48.0	-1.4
HUIG				*i* S	Sn	15 18 02.4	-3.0
CMIG	**Matias Romero**	**1.55**	**357**	*i* P	Pn	15 17 51.6	-1.5
CMIG				*i* S	Sn	15 18 09.7	-2.3
SCX	**San Cristobal**	**2.40**	**60**	*e*P	Pn	15 18 03.0	-1.7
SCX				*i* S	Sn	15 18 38.0	+5.1
SCX	**San Cristobal**	**2.40**	**60**	*e*P	Pn	15 18 03.0	-1.7
SCX				*i* S	Sn	15 18 28.0	-4.9
CCIG	**Comitan**	**2.67**	**73**	*i* P	Pn	15 18 07.3	-1.1
CCIG				*i* S	Sn	15 18 37.0	-2.5
UTMO	**Huajuapan**	**3.67**	**309**	*i* P	Pn	15 18 20.5	-1.8
UTMO				*i* S	Sn	15 19 03.1	-1.3
PPM	**Popocatepetl**	**5.07**	**314**	*e*P	Pn	15 18 43.0	+1.5
PPM				*i* S	Sn	15 19 40.8	+1.9

*IDC **14** 15:38:43.5±7.6, 3236S×17965E, h473km±99km, mb2.4/2, mb1 2.8/3, mb1mx2.7/12, mbtmp2.7/3, Error ellipse: s-maj=119.6km s-min=41.6km az=7.0*

ISC 14 15:38:44.6±2.2**, 321S**±01×**1790E**±06**, h418km**±40km**, n10, σ0s66**/14**, mb2.8**/2**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.33**	**193**	P	**P**	**15 40 22.3**	**+1.1**
	4.4nm,0.3s,baz=69,slow=4.4,SNR=37						
URZ				S	**S**	**15 41 39.5**	**-0.7**
	2.0nm,0.3s,baz=282,slow=15,SNR=5.9						
URZ	**Urewera**	**6.33**	**193**	*e*PN	**P**	**15 40 20.7**	**-0.5**
URZ				SN	**S**	**15 41 40.3**	**+0.2**
MWZ	**Matawai**	**6.33**	**190**	*e*PN	**P**	**15 40 20.6**	**-0.6**
BKZ	**Black Stump Fm**	**7.33**	**195**	PN	**P**	**15 40 32.5**	**+0.4**
BKZ				SN	**S**	**15 42 00.6**	**+0.4**
PXZ	**Pawanui**	**8.10**	**192**	PN	**P**	**15 40 40.6**	**+0.1**
PXZ				SN	**S**	**15 42 14.3**	**-1.4**
BFZ	**Birch Farm**	**8.84**	**194**	PN	**P**	**15 40 49.1**	**+0.3**
BFZ				SN	**S**	**15 42 31.1**	**+0.3**
TIWZ	**Tintock**	**9.01**	**195**	SN	**S**	**15 42 34.8**	**+0.6**
ASAR	**Alice Springs**	**40.47**	**270**	P	**P**	**15 45 45.8**	**+0.7**
	0.2nm,0.6s,mb2.6,baz=107,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**41.62**	**276**	P	**P**	**15 45 53.4**	**-0.9**
	0.2nm,0.2s,mb3.0,baz=111,slow=8.1,SNR=14						
FINES	**FINESS Array B**	**145.77**	**337**	PKPbc	PKPbc	15 57 28.5	-6.3
	1.2nm,0.7s,baz=37,slow=3.5,SNR=7.2						

*IDC **14** 16:06:45.6±1.4, 1176N×8700W, h0km, mb3.7/6, mb1 4.0/8, mb1mx3.9/20, mbtmp3.7/8, ML3.3/2, Error ellipse: s-maj=52.1km s-min=19.5km az=44.0*
*CASC **14** 16:06:46.4±3.2, 1138N×8754W, h20km±18km, MD4.1*
*ISCJB **14** 16:06:49.6±1.1, 1145N±007×8729W±009, h52km±13km, mb3.7/7, Error ellipse: s-maj=17.4km s-min=6.8km az=146.5*
*NEIC **14** 16:06:49.8±1.2, 1141N×87.19W, h47km±12km, mb3.8/1, Error ellipse: s-maj=25.1km s-min=11.4km az=218.0*

ISC 14 16:06:51.1±1.0**, 1152N**±007×**8722W**±009**, h49km**±12km**, n32, σ1s03**/36**, mb3.7**/7**, 3C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.90**	**43⇓**	*i*P	**Pn**	**16 07 07.7**	**+0.2**
COPN				*e*S	**Sn**	**16 07 26.4**	**+6.9**
XAVN	**Gruta Xavier**	**1.08**	**54⇓**	*e*P	**Pn**	**16 07 10.7**	**+0.8**
TICN	**Ticuantepe**	**1.10**	**62**	*e*P	**Pn**	**16 07 10.5**	**+0.4**
MOMJ	**Momotombo**	**1.11**	**37⇓**	*e*P	**Pn**	**16 07 10.0**	**-0.3**
TEL3	**Telica 3**	**1.11**	**19⇓**	*e*P	**Pn**	**16 07 10.3**	**-0.1**
TISN	**Laguna Tiscapa**	**1.12**	**56**	*e*P	**Pn**	**16 07 10.2**	**-0.2**
MGAN	**Managua**	**1.14**	**57**	*e*S	**Sn**	**16 07 31.8**	**+6.6**
APON	**Apoyo**	**1.20**	**71⇑**	*e*P	**Pn**	**16 07 11.2**	**-0.3**
HUEN		**1.31**	**51⇑**	*e*P	**Pn**	**16 07 13.0**	**0.0**
HUEN			⇓	*i*P		16 07 13.3	
HUEN				*e*S	**Sn**	**16 07 36.1**	**+6.7**
CONN	**Concepcion**	**1.56**	**88⇓**	*e*P	**Pn**	**16 07 15.6**	**-0.9**
MADN	**Villa Maderas**	**1.66**	**94⇑**	*e*P	**Pn**	**16 07 16.7**	**-1.1**
VCR	**Vista de Mar**	**2.09**	**131**	*e*P	**Pn**	**16 07 23.0**	**-0.6**
TGUH	**Tegucigalpa,Un**	**2.52**	**359**	*e*P	**Pn**	**16 07 30.2**	**+0.5**
JTS	**JuntasAbangare**	**2.54**	**118**	*e*Pn	**Pn**	**16 07 27.5**	**-2.4**
JTS				Sn	**Sn**	**16 07 58.4**	**-1.3**
JTS	**JuntasAbangare**	**2.54**	**118**	Pn	**Pn**	**16 07 28.5**	**-1.4**
	5.2nm,0.3s,baz=326,slow=16,SNR=9.1						
JTS				Sn	**Sn**	**16 07 58.4**	**-1.3**
	21nm,0.3s,baz=283,slow=22,SNR=11						
JCR	**Jicaral**	**2.66**	**128**	*e*P	**Pn**	**16 07 30.9**	**-0.6**
PRS1	**Puriscal**	**3.24**	**118**	*e*P	**Pn**	**16 07 42.2**	**+2.7**
PRS1				*e*S	**Sn**	**16 08 18.5**	**+1.6**
LAJ	**Bijagual**	**3.46**	**118**	*e*P	**Pn**	**16 07 39.6**	**-3.0**
LCR2	**La Lucha 2**	**3.62**	**119**	*e*P	**Pn**	**16 07 46.2**	**+1.4**
URSC	**Urasca**	**3.77**	**116⇓**	*e*P	**Pn**	**16 07 49.0**	**+2.2**
BAR1		**4.46**	**120**	*e*P	**Pn**	**16 07 57.0**	**+0.7**
CMIG	**Matias Romero**	**9.26**	**308**	Pn	**Pn**	**16 09 01.7**	**-0.4**
	0.4nm,0.3s,baz=117,slow=11,SNR=3.5						
LTX	**Lajitas**	**23.43**	**322**	*e*P	**P**	**16 11 56.4**	**+0.2**
	3.1nm,0.9s,mb3.7						
TXAR	**Lajitas Array**	**23.43**	**322**	P	**P**	**16 11 57.2**	**+1.0**
	1.0nm,0.6s,mb3.4,baz=133,slow=10,SNR=12						
TKL	**Tuckaleechee C**	**24.23**	**7**	P	**P**	**16 12 03.7**	**+0.3**
TKL				PcP	PcP	16 15 42.0	-0.9
TKL	**Tuckaleechee C**	**24.23**	**7**	P	**P**	**16 12 03.7**	**+0.3**
	6.6nm,0.6s,mb4.2,baz=186,slow=9.2,SNR=4.2						
TKL				PcP	PcP	16 15 42.0	-0.9
	12nm,1.0s,baz=184,slow=6.1,SNR=8.5						
PDAR	**Pinedale Array**	**36.69**	**332**	P	**P**	**16 13 53.3**	**0.0**
	0.4nm,0.5s,mb3.5,baz=125,slow=7.9,SNR=4.6						
NVAR	**Mina Array Bea**	**38.55**	**319**	P	**P**	**16 14 09.5**	**+0.4**
	0.3nm,0.6s,mb3.2,baz=105,slow=6.6,SNR=3.0						
NVAR				PcP	PcP	16 16 23.9	+2.9
	0.5nm,0.8s,baz=108,slow=5.8,SNR=3.3						
ULM	**Lac du Bonnet**	**39.27**	**351**	P	**P**	**16 14 13.5**	**-1.4**
	2.4nm,0.8s,mb4.0,baz=174,slow=8.1,SNR=6.7						
YKA	**Yellowknife Ar**	**54.56**	**345**	P	**P**	**16 16 13.5**	**-0.6**
YKA				PcP	PcP	16 17 17.1	+0.4
YKA	**Yellowknife Ar**	**54.56**	**345**	P	**P**	**16 16 13.5**	**-0.6**
	0.6nm,0.7s,mb3.8,baz=140,slow=7.5,SNR=17						
YKA				PcP	PcP	16 17 17.1	+0.4
	0.2nm,0.5s,baz=143,slow=3.6,SNR=3.6						
WRA	**Warramunga Arr**	**139.22**	**253**	PKP	PKPdf	16 26 18.0	+4.5
	0.5nm,0.7s,baz=91,slow=2.1,SNR=8.1						

*NIED **14** 16:12:00, 4590N×15120E, h14km, Mw3.8 Best double couple: Mo5.73000×10^14 NP1:φs335.00000°, δ46.00000°, λ67.00000°. NP2:φs187.00000°, δ49.00000°, λ112.00000°.*
*ISCJB **14** 16:12:25.1±0.7, 47.1N±0.1×153.1E±0.1, h10km, mb3.8/16, Error ellipse: s-maj=17.7km s-min=6.7km az=150.0*
*IDC **14** 16:12:27.1±0.7, 4754N×15290E, h0km, mb3.9/15, mb1 4.1/16, mb1mx4.0/24, mbtmp3.9/16, ML3.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/43, Error ellipse: s-maj=22.8km s-min=17.9km az=141.0*
*NEIC **14** 16:12:28.7±0.7, 4755N×15291E, h10km, Error ellipse: s-maj=21.0km s-min=16.9km az=148.0*
*MOS **14** 16:12:32.1±1.8, 4726N×15270E, h50km, mb4.1/4, Error ellipse: s-maj=19.0km s-min=11.5km az=76.0*

ISC 14 16:12:27.7±0.6**, 4728N**±010×**1529E**±01**, h10km, n37, σ1s22**/39**, mb3.8**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.00**	**31**	*e*PN	**Pn**	**16 13 35.0**	**+6.0**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR	**Kuril'sk**	**4.06**	**242**	*e*PN	**Pn**	**16 13 30.0**	**+0.2**
KUR				*e*S	**Sn**	**16 14 16.0**	**-1.4**
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
KUR				smax			
	comp=N,300nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.95**	**271**	PN	**Pb**	**16 14 26.9**	**-1.5**
ASAJ	**Asahikawa**	**7.89**	**250**	Pn	**Pn**	**16 14 23.0**	**+0.6**
	comp=E,0.3nm,0.3s,baz=94,slow=13,SNR=3.2						
ASAJ				LR	LR	16 17 05.1	
	comp=E,66nm,18.9s,baz=24,slow=35						
YAK	**Yakutsk**	**19.80**	**327**	*i* P	**Pn**	**16 17 02.2**	**+2.7**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSRS	**Korea Array**	**20.84**	**251**	P	**P**	**16 17 18.2**	**+8.8**
	comp=Z,1.1nm,0.7s,baz=61,slow=11,SNR=4.8						
BILL	**Bilibino**	**21.90**	**13**	*e*P	**P**	**16 17 24.6**	**+4.0**
BILL				*e**PP		16 17 46.0	
BILL				*e*S	**S**	**16 21 20.4**	**-1.8**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.2						
HIA	**Hailar**	**22.08**	**287**	*i* P	**P**	**16 17 25.1**	**+2.5**
IMA2	**Indian Mountai**	**33.45**	**36**	P	**P**	**16 19 05.2**	**-1.2**
INK	**Inuvik**	**41.27**	**33**	*e*P	**P**	**16 20 13.8**	**+1.3**
INK				LR	LR	16 36 47.6	
INK	**Inuvik**	**41.27**	**33**	P	**P**	**16 20 13.1**	**+0.5**
	comp=Z,2.0nm,0.7s,mb3.9,baz=268,slow=4.1,SNR=7.9						
INK				LR	LR	16 36 47.6	
	comp=Z,92nm,19.6s,baz=321,slow=36						
MKAR	**Makanchi Array**	**46.58**	**297**	P	**P**	**16 20 56.9**	**+1.4**
MKAR	**Makanchi Array**	**46.58**	**297**	P	**P**	**16 20 53.6**	**-1.9**
	comp=Z,0.2nm,0.2s,mb3.6,baz=63,slow=8.3,SNR=5.0						
YKA	**Yellowknife Ar**	**50.58**	**37**	P	**P**	**16 21 26.9**	**+1.0**
YKA	**Yellowknife Ar**	**50.58**	**37**	P	**P**	**16 21 27.7**	**+1.7**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**50.58**	**37**	P	**P**	**16 21 26.9**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=296,slow=7.1,SNR=17						
NVAR	**Mina Array Bea**	**62.30**	**62**	P	**P**	**16 22 48.9**	**-1.0**
NVAR	**Mina Array Bea**	**62.30**	**62**	P	**P**	**16 22 48.9**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=276,slow=10,SNR=3.8						
FINES	**FINESS Array B**	**63.51**	**335**	P	**P**	**16 22 57.9**	**+0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**63.51**	**335**	P	**P**	**16 22 57.1**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=38,slow=9.6,SNR=5.3						
PDAR	**Pinedale Array**	**64.54**	**54**	P	**P**	**16 23 04.5**	**-0.2**
	comp=Z,0.8nm,1.0s,mb3.7,baz=338,slow=1.0,SNR=4.2						
NB2	**NORSAR Subarra**	**67.68**	**341**	P	**P**	**16 23 24.7**	**+0.2**
	comp=Z,1.7nm,0.7s,mb4.2,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**67.68**	**341**	P	**P**	**16 23 24.8**	**+0.3**
NOA	**NORSAR Array B**	**67.68**	**341**	P	**P**	**16 23 24.8**	**+0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**67.68**	**341**	P	**P**	**16 23 24.8**	**+0.3**
	comp=Z,2.4nm,0.7s,mb4.3,baz=28,slow=6.2,SNR=7.9						
HFS	**Hagfors**	**67.92**	**339**	P	**P**	**16 23 25.6**	**-0.4**
HFS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HFS	**Hagfors**	**67.92**	**339**	P	**P**	**16 23 25.6**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.6,baz=33,slow=5.7,SNR=5.8						
WRA	**Warramunga Arr**	**68.97**	**199**	P	**P**	**16 23 35.5**	**+2.5**
	comp=Z,0.4nm,0.9s,mb3.3,baz=28,slow=6.8,SNR=3.2						
AKASG	**Malin Array Be**	**71.03**	**326**	P	**P**	**16 23 44.5**	**-0.9**
	comp=Z,0.2nm,0.3s,mb3.5,baz=33,slow=5.6,SNR=4.3						
ASAR	**Alice Springs**	**72.67**	**198**	P	**P**	**16 23 59.6**	**+4.3**
	comp=Z,0.3nm,0.8s,mb3.3,baz=7.7,slow=5.0,SNR=5.1						
TXAR	**Lajitas Array**	**77.34**	**61**	P	**P**	**16 24 21.4**	**-1.2**
TXAR	**Lajitas Array**	**77.34**	**61**	P	**P**	**16 24 21.4**	**-1.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=305,slow=4.4,SNR=3.5						
BRTR	**Keskin Array B**	**77.92**	**317**	P	**P**	**16 24 26.2**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**77.92**	**317**	P	**P**	**16 24 26.2**	**+0.6**
	comp=Z,0.7nm,0.8s,mb3.6,baz=56,slow=5.6,SNR=3.1						
GERES	**GERESS Array B**	**77.92**	**334**	P	**P**	**16 24 25.4**	**-0.1**
	comp=Z,0.2nm,0.3s,mb3.5,baz=35,slow=4.9,SNR=3.8						
TKL	**Tuckaleechee C**	**83.07**	**43**	P	**P**	**16 24 52.8**	**-0.6**
TKL				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
TKL	**Tuckaleechee C**	**83.07**	**43**	P	**P**	**16 24 52.8**	**-0.6**
	comp=Z,4.2nm,0.5s,mb4.8,baz=318,slow=15,SNR=6.5						

*ISCJB **14** 16:23:12.1±0.4, 8087N±007×1218E±03, h10km, mb3.8/21, MS3.4/5, Error ellipse: s-maj=10.5km s-min=6.7km az=10.9*
*IDC **14** 16:23:12.2±0.8, 8093N×12168E, h0km, mb3.7/13, mb1 3.9/13, mb1mx3.7/25, mbtmp3.7/13, MS3.5/5, Ms1 3.4/5, ms1mx3.1/34, Error ellipse: s-maj=25.4km s-min=15.8km az=154.0*
*MOS **14** 16:23:12.7±0.8, 8084N×12161E, h14km, mb4.1/13, Error ellipse: s-maj=58.7km s-min=12.4km az=90.9*
*NEIC **14** 16:23:13.8±0.4, 8092N×12166E, h10km, mb4.1/6, Error ellipse: s-maj=11.6km s-min=7.0km az=159.0*

ISC 14 16:23:13.8±0.4**, 8087N**±007×**1218E**±03**, h10km, (h23km**±5.4km**:pP-P), n57, σ0s88**/58**, mb3.8**/21**, MS3.4**/5**, East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**9.41**	**166**	*e*Pn	**Pn**	**16 25 23.2**	**-6.0**
	3.6nm,0.9s						
TIXI	**Tiksi**	**9.41**	**166**	*e*P	**Pn**	**16 25 31.9**	**+2.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	**Bilibino**	**16.76**	**114**	*e*P	**Pn**	**16 27 09.6**	**+1.5**
BILL				*e*S	**Sn**	**16 30 12.1**	**-1.7**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**19.07**	**169**	*i* P	**Pn**	**16 27 42.9**	**+6.3**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK				MLR	MLR		
	comp=Z,100nm,19.0s						
BOD	**Bodaibo**	**23.28**	**191**	*e*P	**P**	**16 28 19.6**	**-1.5**
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
ARCES	**ARCESS Array B**	**23.38**	**298**	P	**P**	**16 28 21.4**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	**ARCESS Array B**	**23.38**	**298**	P	**P**	**16 28 21.4**	**-0.6**
	comp=Z,2.5nm,0.9s,mb3.6,baz=22,slow=9.9,SNR=3.3						
IMA2	**Indian Mountai**	**24.83**	**75**	P	**P**	**16 28 36.2**	**+0.6**
INK	**Inuvik**	**25.66**	**56**	P	**P**	**16 28 43.8**	**+0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**25.66**	**56**	P	**P**	**16 28 43.8**	**+0.8**
	comp=Z,1.2nm,1.0s,mb3.4,baz=28,slow=14,SNR=3.4						
PRGR	**Permogore**	**27.68**	**273**	*e*P	**P**	**16 29 06.7**	**+5.4**
PRGR				*e*S	**S**	**16 33 48.7**	**+5.9**
JOF	**Joensuu**	**28.71**	**288**	*e*p	**P**	**16 29 09.0**	**-1.4**
CHKZ	**Chkalovo**	**31.46**	**243**	P	**P**	**16 29 34.6**	**-0.2**
	comp=Z,2.5nm,1.1s,mb4.0						
CHKZ	**Chkalovo**	**31.46**	**243**	P	**P**	**16 29 34.6**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
BRVK	**Borovoye**	**32.11**	**243**	*e*P	**P**	**16 29 40.2**	**-0.3**
	comp=Z,2.5nm,0.8s,mb4.1						
BRVK	**Borovoye**	**32.11**	**243**	*e*P	**P**	**16 29 40.2**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**33.51**	**198**	*i* P	**P**	**16 29 59.0**	**+6.2**
YKA	**Yellowknife Ar**	**33.56**	**44**	P	**P**	**16 29 52.5**	**-0.6**
YKA				PcP	PcP	16 32 32.9	-0.2
YKA				LR	LR	16 41 55.6	
YKA	**Yellowknife Ar**	**33.56**	**44**	P	**P**	**16 29 52.5**	**-0.6**
YKA						16 32 32.9	
YKA				MLR	MLR		
	comp=Z,43nm,19.9s						
YKA	**Yellowknife Ar**	**33.56**	**44**	P	**P**	**16 29 52.5**	**-0.6**
	comp=Z,0.1nm,0.5s,mb3.0,baz=349,slow=8.5,SNR=6.3						
YKA				PcP	PcP	16 32 32.9	-0.2
	comp=Z,0.3nm,0.6s,baz=326,slow=4.0,SNR=7.0						
YKA				LR	LR	16 41 55.6	
	comp=Z,43nm,19.9s,MS3.2,baz=230,slow=34						
SONM	**Songino Array**	**33.58**	**199**	P	**P**	**16 29 54.5**	**+1.1**
SONM						16 32 33.5	
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM				MLR	MLR		
	comp=Z,38nm,19.0s						
SONM	**Songino Array**	**33.58**	**199**	P	**P**	**16 29 54.5**	**+1.2**
	comp=Z,0.6nm,1.0s,mb3.5,baz=358,slow=8.3,SNR=3.9						
SONM				PcP	PcP	16 32 33.5	+0.1
	comp=Z,0.4nm,0.7s,baz=54,slow=2.0,SNR=4.2						
SONM				LR	LR	16 44 12.7	
	comp=Z,38nm,19.0s,MS3.1,baz=322,slow=38						
YSS	**Yuzh-Sakhalins**	**34.78**	**155**	*e*P	**P**	**16 30 12.8**	**+8.9**
OBN	**Obninsk**	**35.36**	**278**	*e*P	**P**	**16 30 15.6**	**+6.9**
OBN				*e*S	**S**	**16 35 50.3**	**+7.8**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
AKTK	**Aktyubinsk**	**36.49**	**255**	P	**P**	**16 30 18.2**	**-0.2**
AKTO	**Aktyubinsk**	**36.49**	**255**	P	**P**	**16 30 18.3**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
AKTO	**Aktyubinsk**	**36.49**	**255**	P	**P**	**16 30 18.2**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=34,slow=17,SNR=2.6						
MKAR	**Makanchi Array**	**36.69**	**227**	P	**P**	**16 30 20.1**	**-0.1**
	comp=Z,0.2nm,0.2s,mb3.5,baz=4.1,slow=10,SNR=5.2						
MKAR				PcP	PcP	16 32 41.1	-1.4
	comp=Z,0.2nm,0.2s,baz=351,slow=2.5,SNR=3.3						
MKAR				LR	LR	16 46 48.7	
	comp=Z,82nm,18.3s,MS3.5,baz=346,slow=39						
EKA	**Eskdalemuir Ar**	**40.73**	**314**	P	**P**	**16 30 52.9**	**-1.0**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**40.73**	**314**	P	**P**	**16 30 52.9**	**-1.1**
	comp=Z,2.4nm,0.7s,mb3.9,baz=2.0,slow=9.6,SNR=6.8						
AKASG	**Malin Array Be**	**40.78**	**283**	P	**P**	**16 30 53.7**	**-0.7**
AKASG	**Malin Array Be**	**40.78**	**283**	P	**P**	**16 30 53.7**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**40.78**	**283**	P	**P**	**16 30 53.7**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.5,baz=14,slow=9.6,SNR=4.2						
AAK	**Ala-Archa**	**41.75**	**235**	*e*P	**P**	**16 31 02.7**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.6						
AAK				*e*		16 31 10.1	
AAK	**Ala-Archa**	**41.75**	**235**	*e*P	**P**	**16 31 02.7**	**+0.2**
AAK				*e*		16 31 10.1	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
CLL	**Collm**	**42.60**	**299**	*i* sP	sP	16 31 17.4	+3.8
	comp=Z,6.0nm,1.0s						
KWP	**Kalwaria**	**42.81**	**289**	*e*P	**P**	**16 31 11.4**	**+0.3**
	comp=Z,12nm,0.9s,mb4.6						
KWP	**Kalwaria**	**42.81**	**289**	*e*P	**P**	**16 31 11.4**	**+0.3**
KWP				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
STHS	**Stebnicka Huta**	**43.24**	**290**	*e*P	**P**	**16 31 15.6**	**+1.0**
	comp=Z,3.5nm,0.8s,mb4.1						
STHS				*e*	pP	16 31 19.3	+1.6
STHS				*e*		16 31 23.7	
STHS	**Stebnicka Huta**	**43.24**	**290**	*e*P	**P**	**16 31 15.6**	**+1.0**
STHS				*e*	pP	16 31 19.3	+1.6
STHS				*e*		16 31 23.7	
STHS				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
KOLS	**Kolonicke sedl**	**43.56**	**289**	*e*P	**P**	**16 31 17.6**	**+0.5**
KOLS				*e*		16 31 25.0	
KOLS	**Kolonicke sedl**	**43.56**	**289**	*e*P	**P**	**16 31 17.6**	**+0.5**
KOLS				*e*pP	pP	16 31 24.9	+4.7
CRVS	**Cervenica-Dubn**	**43.71**	**290**	*e*P	**P**	**16 31 18.8**	**+0.5**
CRVS				*e*pP	pP	16 31 27.0	+5.5
VYHS	**Vyhne**	**44.50**	**292**	*e*P	**P**	**16 31 25.3**	**+0.6**
	comp=Z,1.2nm,0.4s,mb4.1						
VYHS				*e*		16 31 33.4	
VYHS	**Vyhne**	**44.50**	**292**	*e*P	**P**	**16 31 25.3**	**+0.6**
VYHS				*e*		16 31 33.4	
VYHS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.0						
MODS	**Modra-Piesok**	**44.85**	**294**	*e*P	**P**	**16 31 34.1**	**+6.7**
GERES	**GERESS Array B**	**44.90**	**297**	P	**P**	**16 31 28.6**	**+0.7**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**44.90**	**297**	P	**P**	**16 31 28.6**	**+0.7**
	comp=Z,0.6nm,0.7s,mb3.6,baz=24,slow=10,SNR=6.3						
ZST	**Bratislava**	**45.05**	**294**	*e*P	**P**	**16 31 33.5**	**+4.5**
MLR	**Muntele Rosu**	**46.36**	**285**	LR	LR	16 52 51.8	
	comp=Z,76nm,19.6s,MS3.6,baz=114,slow=38						
BRTR	**Keskin Array B**	**50.78**	**276**	P	**P**	**16 32 14.3**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**50.78**	**276**	P	**P**	**16 32 14.3**	**+0.8**
	comp=Z,0.9nm,0.6s,mb3.9,baz=12,slow=6.8,SNR=4.0						
PDAR	**Pinedale Array**	**53.52**	**46**	P	**P**	**16 32 33.9**	**0.0**
	comp=Z,0.4nm,0.8s,mb3.4,baz=35,slow=5.4,SNR=3.6						
PDAR				LR	LR	16 55 25.0	
	comp=Z,50nm,19.7s,MS3.6,baz=149,slow=36						
TXAR	**Lajitas Array**	**67.46**	**42**	*e*P	**P**	**16 34 09.0**	**-0.2**
TXAR	**Lajitas Array**	**67.46**	**42**	P	**P**	**16 34 09.0**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.9,baz=3.6,slow=4.8,SNR=8.5						
TORD	**Torodi Ar. Bea**	**81.66**	**302**	P	**P**	**16 35 30.7**	**-1.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=347,slow=5.9,SNR=4.7						
KMBO	**Kilima Mbogo**	**90.24**	**264**	*i* P	**P**	**16 36 19.7**	**+5.5**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.4s						

*TRN **14** 16:42:49.6, 1037N×6240W, h3km, MD4.1*
*NEIC **14** 16:42:49.5, 1037N×6241W, h3km, mb3.9/3, MD4.1(TRN), After TRN.*
*FUNV **14** 16:42:50.8, 1030N×6223W, h3km, MW4.4*
*ISCJB **14** 16:42:51.6±0.4, 1032N±002×6235W±002, h30km±4km, mb3.9/14, MS3.6/4, Error ellipse: s-maj=4.2km s-min=2.5km az=44.0*
*IDC **14** 16:42:53.2±3.3, 1046N×6241W, h33km±25km, mb3.8/12, mb1 4.0/14, mb1mx3.8/25, mbtmp3.9/14, ML3.7/3, MS3.6/5, Ms1 3.6/5, ms1mx3.2/32, Error ellipse: s-maj=18.4km s-min=12.6km az=103.0*

ISC 14 16:42:51.6±0.5**, 1032N**±002×**6230W**±002**, h17km**±3km**, n87, σ1s00**/114**, mb3.9**/14**, MS3.6**/4**, 4C-13D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.34**	**13⇑**	*i*P	**Pg**	**16 42 57.8**	**-1.0**
GUIV				*e*S	**Sg**	**16 43 03.1**	**-0.5**
ALNG	**Atlantic LNG**	**0.61**	**102**	*e*P	**Pg**	**16 43 03.6**	**-0.1**
ALNG				*e*S	**Sg**	**16 43 15.8**	**+3.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUNV	Guanoco	0.65	257	⇑eP	Pg	16 43 03.7	-0.8
GUNV				eS	Sg	16 43 14.9	+1.8
TCE	Chacachacare	0.66	55	⇓iP	Pb	16 43 03.6	-1.0
TCE				eS	Sg	16 43 16.9	+3.5
TCE	Chacachacare	0.66	55	e	Pb	16 43 10.9	+6.2
TCE				eS	Sg	16 43 16.9	+3.5
TPP	Pointe-a-Pierr	0.83	90	eP	Pb	16 43 07.5	-0.2
TRN	Trinidad (W)	0.94	69	⇑iP	Pb	16 43 08.4	-1.1
TRN				eS	Sb	16 43 27.0	+5.4
CRUV	Carupano	0.99	291	⇓iP	Pb	16 43 08.8	-1.6
CRUV				eS	Sb	16 43 23.4	+0.3
TBH	Brigand Hill	1.22	82	eP	Pn	16 43 14.2	+0.3
TBH				eS	Sb	16 43 34.5	+4.8
ITEV	Isla Los Testi	1.32	322	⇓iP	Pn	16 43 14.5	-0.8
ITEV				eS	Sn	16 43 34.6	+2.1
ORIV	Oritupano	1.65	222	eP	Pn	16 43 21.2	+1.3
ORIV				eS	Sn	16 43 43.8	+3.1
TPR	Prospect	1.73	60	eP	Pn	16 43 21.9	+1.0
TPR				eS	Sn	16 43 46.5	+4.0
GRGR	Grenville	1.91	19	eP	Pn	16 43 22.3	-1.2
GRGR				eS	Sn	16 43 47.0	-0.1
GRW	Mount Saint Ca	1.94	19	eP	Pn	16 43 24.5	+0.7
GRW				eS	Sn	16 43 48.5	+0.7
GRHS	Sauteurs	2.00	19	eP	Pn	16 43 25.3	+0.6
GRHS				eS	Sn	16 43 48.9	-0.5
GRIC	Isle de Caille	2.08	20	eP	Pn	16 43 26.4	+0.7
GRIC				eS	Sn	16 43 51.7	+0.5
GRSS	Sisters	2.08	19	eP	Pn	16 43 26.4	+0.6
GRSS				eS	Sn	16 43 52.8	+1.5
RIOV	Rio Grande	2.28	168	eP	Pn	16 43 29.3	+0.7
RIOV				eS	Sn	16 43 56.3	+0.1
PCRV	Puerto La Cruz	2.31	267	eP	Pn	16 43 29.2	+0.4
PCRV				eS	Sn	16 43 58.1	+1.3
PCRV	Puerto La Cruz	2.31	267	Pn	Pn	16 43 27.9	-0.9
	26nm,0.3s,baz=85,slow=5.0,SNR=60						
PCRV				Lg		16 44 02.6	
	59nm,0.3s,baz=217,slow=21,SNR=7.6						
GURV	El Guri	2.66	197	⇑eP	Pn	16 43 32.8	-0.9
GURV				eS	Sn	16 44 05.2	-0.3
IBAV	Isla La Blanqu	2.69	304	eP	Pn	16 43 33.1	-1.1
PRGV	PARIAGUAN	2.78	236	⇓iP	Pn	16 43 35.9	+0.5
PRGV				eS	Sn	16 44 09.8	+1.2
FCV	Fort Charlotte	3.01	20	eP	Pn	16 43 37.5	-1.0
FCV				eS	Sn	16 44 14.9	+0.8
SVB	Belmont	3.11	19	eP	Pn	16 43 39.9	-0.1
SVB				eS	Sn	16 44 17.6	+0.9
SVV	Soufriere Volc	3.17	19	eP	Pn	16 43 41.0	+0.3
SVV				eS	Sn	16 44 17.4	-0.7
BHS	Barnard House	3.18	21	eP	Pn	16 43 40.9	0.0
BHS				eS	Sn	16 44 18.5	+0.1
SSV	Crater Summit	3.18	20	eP	Pn	16 43 40.1	-0.8
SSV				eS	Sn	16 44 18.1	-0.4
CUPV	Cœpira	3.44	266	eP	Pn	16 43 45.8	+1.2
CUPV				eS	Sn	16 44 25.4	+0.5
SLB	Belfond	3.70	19	eP	Pn	16 43 46.8	-1.2
SLB				eS	Sn	16 44 30.5	-0.8
BIRV	Birongo	3.91	273	⇓eP	Pn	16 43 52.4	+1.4
TIOV	TMO PEDROTE	4.05	272	eP	Pn	16 43 54.2	+1.4
MERV	Las Mercedes	4.08	255	⇓eP	Pn	16 43 53.4	+0.1
ORCV	Isla La Orchil	4.10	292	eP	Pn	16 43 53.2	-0.4
BIM	Bigot	4.34	16	⇓eP	Pn	16 43 57.3	+0.4
MVM	Montagne Vaucl	4.43	18	⇓eP	Pn	16 43 58.6	+0.6
OCUV	OCUMARITO	4.44	268	eP	Pn	16 43 59.2	+1.0
FUNV	FUNVISIS	4.44	272	⇓eP	Pn	16 43 59.5	+1.3
LUEV	Luepa	4.52	169	eP	Pn	16 43 57.8	-1.5
LUEV				eS	Sn	16 44 48.4	-3.2
FDF	Fort de France	4.53	14	⇓eP	Pn	16 43 59.7	+0.2
FDCV	FORTIN DE LA C	4.58	273	eP	Pn	16 44 00.9	+0.7
BOTV	Botiquin	4.84	271	eP	Pn	16 44 04.2	+0.5
PAUV	EL PAUJM	4.87	269	eP	Pn	16 44 05.4	+1.3
CAOV	Caicara del Or	4.96	234	eP	Pn	16 44 04.9	-0.5
TURV	Turiamo	5.45	272	eP	Pn	16 44 12.6	+0.4
TBG	Guadaloupe-3	5.54	7	eP	Pn	16 44 15.7	+2.3
BAUV	El Baul	5.83	257	⇓eP	Pn	16 44 16.5	-0.8
DEG	La Desirade	6.08	11	eP	Pn	16 44 21.1	+0.3
JACV	Jacura	6.46	277	eP	Pn	16 44 25.9	-0.2
TEPV	Terepaima	6.80	268	⇓iP	Pn	16 44 30.0	-0.6
SANV	Sanarito	7.18	264	eP	Pn	16 44 35.8	0.0
SIQV	Siquisique	7.39	273	eP	Pn	16 44 38.5	-0.3
CURV	Curarigua	7.55	268	eP	Pn	16 44 41.2	+0.3
ELOV	Elorza	7.83	246	eP	Pn	16 44 44.0	-0.8
QARV	Quebrada Arrib	8.10	270	eP	Pn	16 44 48.0	-0.5
SDV	Santo Domingo	8.34	261	eP	Pn	16 44 50.2	-1.6
	47nm,0.4s						
SDV				eS	Sn	16 46 23.7	-2.0
SDV	Santo Domingo	8.34	261	Pn	Pn	16 44 50.5	-1.3
	18nm,0.3s,baz=101,slow=8.1,SNR=68						
SDV				Sn	Sn	16 46 23.4	-2.4
	8.8nm,0.3s,baz=54,slow=22,SNR=3.7						
MTP	Monte Pirata	8.35	338	P	Pn	16 44 52.2	+0.2
SJG	San Juan	8.60	335	LR	LR	16 48 32.9	
	comp=Z,312nm,19.2s,baz=103,slow=40						
SOCV	Socops	8.68	257	eP	Pn	16 44 55.7	-0.8
VIGV	El Vigia	9.06	261	eP	Pn	16 45 01.4	-0.3
VIRV	Villa del Rosa	9.95	272	eP	Pn	16 45 13.3	-0.6
CAPV	Capacho	10.19	257	⇓eP	Pn	16 45 15.8	-1.3
SDDR	Presa de Saban	12.24	316	eP	Pn	16 45 40.2	-5.0
	19nm,0.7s						
ROSC	El Rosal	13.10	246	Pn	Pn	16 45 56.7	-0.3
	1.0nm,0.3s,baz=95,slow=7.0,SNR=6.1						
OTAV	Otavalo	18.93	239	eP	Pn	16 47 12.9	+0.4
	5.3nm,0.8s						
ATAH	Atahualpa	23.51	224	P	P	16 48 01.9	+0.8
	12nm,0.9s,mb4.3,baz=79,slow=5.2,SNR=5.9						
SIV	San Ignacio	26.16	177	P	P	16 48 25.3	+0.1
	1.7nm,0.6s,mb3.8,baz=7.4,slow=11,SNR=11						
NNA	Nana	26.45	213	LR	LR	16 59 35.9	
	comp=Z,149nm,19.0s,MS3.6,baz=153,slow=38						
LPAZ	La Paz	27.05	192	P	P	16 48 34.2	+0.9
	0.6nm,0.6s,mb3.3,baz=59,slow=5.9,SNR=3.5						
LPAZ				LR	LR	16 59 53.1	
	comp=Z,102nm,18.4s,MS3.4,baz=318,slow=38						
WMOK	Wichita Mounta	41.19	312	eP	P	16 50 33.4	-2.0
	1.0nm,0.4s,mb3.8						
CFAA	Coronel Fontan	42.07	188	P	P	16 50 44.2	+1.6
CFAA	Coronel Fontan	42.07	188	P	P	16 50 44.2	+1.6
	1.2nm,0.3s,mb4.0,baz=359,slow=4.2,SNR=21						
TXAR	Lajitas Array	42.98	302	P	P	16 50 49.1	-1.1
	1.0nm,0.8s,mb3.6,baz=123,slow=11,SNR=8.4						
TXAR				PcP	PcP	16 52 38.6	-2.0
	0.9nm,0.7s,baz=116,slow=5.7,SNR=4.5						
SCHQ	Schefferville	44.55	356	P	P	16 51 01.5	-0.8
SCHQ	Schefferville	44.55	356	P	P	16 51 01.5	-0.8
	2.8nm,1.0s,mb4.0,baz=217,slow=5.1,SNR=2.6						
MNTX	Cornudas Mount	45.12	305	P	P	16 51 06.0	-1.3
	2.5nm,1.0s,mb4.0						
ULM	Lac du Bonnet	48.49	332	P	P	16 51 29.8	-3.6
	0.8nm,0.4s,mb4.1,baz=138,slow=8.8,SNR=5.2						
ULM				LR	LR	17 13 48.8	
	comp=Z,50nm,18.1s,MS3.5,baz=19,slow=38						
PDAR	Pinedale Array	52.25	317	P	P	16 51 59.6	-2.4
	1.3nm,0.6s,mb4.0,baz=119,slow=11,SNR=10						
NVAR	Mina Array Bea	57.16	309	P	P	16 52 37.4	-0.3
NVAR	Mina Array Bea	57.16	309	P	P	16 52 37.4	-0.3
	0.6nm,0.8s,mb3.7,baz=104,slow=7.5,SNR=4.1						
TORD	Torodi Ar. Bea	62.58	81	P	P	16 53 14.6	-0.8
TORD	Torodi Ar. Bea	62.58	81	P	P	16 53 14.6	-0.8
	0.9nm,0.9s,mb3.9,baz=270,slow=5.6,SNR=3.6						
YKA	Yellowknife Ar	64.09	336	P	P	16 53 21.1	-3.4
YKA	Yellowknife Ar	64.09	336	P	P	16 53 21.1	-3.4
	0.6nm,0.6s,mb3.8,baz=108,slow=7.3,SNR=14						
FINES	FINESS Array B	80.25	29	P	P	16 55 00.6	-0.6
	1.4nm,0.7s,mb4.0,baz=249,slow=4.2,SNR=5.4						
BOSA	Boshof	92.74	118	LR	LR	17 32 57.4	
	comp=Z,59nm,19.7s,MS4.0,baz=139,slow=32						

*IDC **14** 16:55:05.2±2.3, 1128S×16330E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/15, mbtmp4.0/6, ML4.4/1, Error ellipse: s-maj=46.8km s-min=33.0km az=113.0*
*ISCJB **14** 16:55:10.5±2.4, 114S±01×1632E±02, h46km±19km, mb3.9/6, Error ellipse: s-maj=34.7km s-min=13.7km az=142.3*
*NEIC **14** 16:55:12.6±1.6, 1128S×16307E, h44km±14km, mb4.1/1, Error ellipse: s-maj=25.4km s-min=13.3km az=59.0*

ISC 14 16:55:13.1±2.1**, 113S**±01×**1632E**±02**, h52**km±16km**, n11,** σ0s99/13**, mb3.9**/6**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.69	300	ePn	Pn	16 56 05.7	-2.0
HNR				eSn	Sn	16 56 51.2	+1.2
HNR	Honiara	3.69	300	Pn	Pn	16 56 05.0	-2.6
	25nm,0.3s,baz=118,slow=2.9,SNR=27						
HNR				Sn	Sn	16 56 51.3	+1.4
	61nm,0.3s,baz=241,slow=14,SNR=9.1						
DZM	Mont Dzumac	11.14	164	eP	Pn	16 57 50.3	+0.6
WRA	Warramunga Arr	29.03	249	P	P	17 01 08.6	+0.2
	0.9nm,0.6s,mb3.7,baz=80,slow=8.9,SNR=17						
ASAR	Alice Springs	30.43	242	P	P	17 01 21.1	+0.3
	1.7nm,0.6s,mb4.0,baz=63,slow=10,SNR=55						
FITZ	Fitzroy Crossi	36.88	255	eP	P	17 02 14.8	-2.1
	3.5nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	36.88	255	eP	P	17 02 15.1	-1.8
FITZ	Fitzroy Crossi	36.88	255	P	P	17 02 16.1	-0.7
	1.2nm,0.6s,mb3.9,baz=84,slow=12,SNR=7.4						
ULN	Ulaanbaatar	77.06	325	eP	P	17 07 00.9	+0.3
	1.9nm,0.9s,mb4.0						
SONM	Songino Array	77.42	325	P	P	17 07 02.6	0.0
	0.7nm,0.7s,mb3.7,baz=142,slow=7.3,SNR=7.6						
MKAR	Makanchi Array	92.00	317	P	P	17 08 16.6	+0.3
	0.1nm,0.2s,mb3.7,baz=94,slow=5.9,SNR=2.4						

SKHL 14 17:19:27.9±0.5**, 5255N**×**13286E, h13**km±2km**, mb3.6**/6**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EKMR	Ekimchan	0.52	6	⇑iPg	Pg	17 19 38.0	-0.2
EKMR				AMB	AMB	17 19 38.7	
	80nm,0.1s						
EKMR				pPg		17 19 42.4	
EKMR				eSg	Sg	17 19 45.4	+0.3
EKMR				A		17 19 47.1	
	270nm,0.4s						
EKMR				A		17 19 47.1	
	350nm,0.4s						
GRNR	Gornyy	2.85	127	ePg	Pg	17 20 19.0	-3.4
GRNR				AMB	AMB	17 20 19.6	
	11nm,0.5s						
GRNR				eSg	Sg	17 20 55.2	-4.1
GRNR				A		17 20 57.4	
	74nm,0.6s						
BMKR	Bomnak	3.23	314	ePn	Pn	17 20 18.5	+0.3
BMKR				ePg	Pg	17 20 26.4	-3.3
BMKR				AMB	AMB	17 20 28.1	
	6.0nm,0.5s						
BMKR				sPg		17 20 30.9	
BMKR				eSn	Sn	17 20 57.0	+0.6
BMKR				eSg	Sg	17 21 08.0	-3.4
BMKR				A		17 21 13.5	
	38nm,0.5s						
BMKR				A		17 21 13.5	
	75nm,0.5s						
ZEA	Zeya	3.58	292	ePn	Pn	17 20 23.9	+0.8
ZEA				ePg	Pg	17 20 32.0	-4.5
ZEA				AMB	AMB	17 20 33.7	
	10.0nm,0.5s						
ZEA				eSn	Sn	17 21 05.3	+0.1
ZEA				eSg	Sg	17 21 18.8	-4.0
ZEA				A		17 21 20.5	
	69nm,0.7s						
ZEA				A		17 21 20.5	
	25nm,0.7s						
KROS	Kirovskiy	3.99	301	ePn	Pn	17 20 29.4	+0.7
KROS				pPn		17 20 32.5	
KROS				ePg	Pg	17 20 38.7	-5.6
KROS				AMB	AMB	17 20 42.5	
	4.0nm,0.5s						
KROS				eSn	Sn	17 21 15.9	+0.6
KROS				eSg	Sg	17 21 30.2	-5.7
KROS				A		17 21 34.8	
	19nm,0.4s						
KROS				A		17 21 34.8	
	11nm,0.4s						
NKL	Nikolayevsk	4.78	80	ePg	Pg	17 20 52.8	-6.5
NKL				AMB	AMB	17 20 56.3	
	7.0nm,0.5s						
NKL				eSg	Sg	17 21 56.0	-5.2
NKL				A		17 22 02.2	
	26nm,0.9s						

*NEIC **14** 17:36:25.9, 3225S×7170W, h24km, ML2.9(GUC), After GUC.*

GUC 14 17:36:25.9±0.5**, 3225S**×**7170W, h24**km±2km**, MD4.0, ML2.9, 4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.41	25	⇓iP	Pb	17 36 19.7	-15
CHNG				iS	Sb	17 36 26.2	-14
CHNG				AML	AML	17 36 26.5	
	comp=N,1µm,0.2s						
PEL	Peldehue	1.23	136	eP	Pn	17 36 47.3	-0.3
PEL				iS	Sn	17 37 03.8	+0.3
PEL				AML	AML	17 37 07.4	
	comp=N,725nm,0.3s						
TACH	Talagante	1.54	156	⇓iP	Pn	17 36 52.1	+0.3
TACH				iS	Sn	17 37 12.4	+1.4
FCH	Farellones	1.60	132	eP	Pn	17 36 53.7	+1.1
FCH				iS	Sn	17 37 15.1	+2.6
FCH				AML	AML	17 37 18.9	
	comp=E,190nm,0.2s						
PCH	Pirque	1.69	144	eP	Pn	17 36 54.8	+0.8
PCH				iS	Sn	17 37 16.7	+1.9
LNV	Longovilo	1.71	172	iP	Pn	17 36 55.0	+0.8
CHCH	Chadas Angostu	1.89	153	eP	Pn	17 36 57.9	+1.2
CHCH				iS	Sn	17 37 22.2	+2.4
LMEL	Las Melosas	2.03	142	eP	Pn	17 37 00.2	+1.6
LMEL				iS	Sn	17 37 26.1	+3.0
LMEL	Las Melosas	2.03	142	eP	Pn	17 37 00.2	+1.6
LMEL				iS	Sn	17 37 26.1	+3.0
LMEL				AML	AML	17 37 34.3	
	comp=N,228nm,0.2s						
CACH	El Canelo	2.08	154	⇓eP	Pn	17 37 00.6	+1.4
TLL	Tololo Astrono	2.22	20	eP	Pn	17 37 01.9	+0.7
TLL				iS	Sn	17 37 33.6	+5.8
CICH	Cipreses	2.32	153	⇓iP	Pn	17 37 04.4	+1.8
CICH				iS	Sn	17 37 35.5	+5.0
SFDO	San Fernando	2.42	167	eP	Pn	17 37 04.5	+0.5

*NEIC **14** 18:07:16.8, 1687N×100.12W, h26km, MD3.8(MEX), After MEX.*

MEX 14 18:07:16.8±0.5**, 1688N**×**10012W, h28**km±8km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.20	94	iP	Pb	18 07 20.8	-1.9
ACX				iS	Sb	18 07 25.3	-1.4
CAIG	El Cayaco	0.22	320	iP	Pb	18 07 21.6	-1.3
CAIG				iS	Sb	18 07 25.8	-1.3
MEIG	Mezcala	1.14	25	iP	Pn	18 07 34.4	-2.6
MEIG				iS	Sn	18 07 48.2	-3.6
UTMO	Huajuapan	2.41	67	iP	Pn	18 07 53.8	-0.5
UTMO				iS	Sn	18 08 21.9	-1.0
PPM	Popocatepetl	2.60	33	eP	Pn	18 07 57.9	+0.9
PPM				iS	Sn	18 08 26.1	-1.6
IIO	Organos	3.01	26	eP	Pn	18 08 00.8	-1.8

*IDC **14** 18:10:30.1±3.7, 705S×12928E, h133km±32km, mb4.1/5, mb1 4.3/9, mb1mx4.1/15, mbtmp4.3/9, Error ellipse: s-maj=34.9km s-min=15.2km az=62.0*
*NEIC **14** 18:10:32.0±1.3, 706S×129.17E, h150km±13km, mb4.1/4, Error ellipse: s-maj=15.5km s-min=7.8km az=59.0*
*ISCJB **14** 18:10:32.4±1.3, 737S±006×12908E±006, h179km±13km, mb4.5/12, Error ellipse: s-maj=11.9km s-min=7.7km az=42.8*

ISC 14 18:10:27.3±2.1**, 70S**±01×**12923E**±008**, h104**km±21km**, n32,** σ0s61/40**, mb4.6**/12**, 2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	6.34	240	P	Pn	18 12 03.4	+5.1
	38nm,0.3s,baz=95,slow=2.9,SNR=92						
BATI				S	Sn	18 13 08.8	-0.6
	31nm,0.3s,baz=93,slow=4.3,SNR=4.1						
KAKA	Kakadu	6.48	151	ePn	Pn	18 12 04.5	+4.4
KAKA				eSn	Sn	18 13 12.4	-0.1
FITZ	Fitzroy Crossi	11.55	197	⇑iP	Pn	18 13 08.9	0.0
	32nm,0.4s						
FITZ				eS	Sn	18 15 08.2	-7.8
FITZ	Fitzroy Crossi	11.55	197	ePn	Pn	18 13 08.9	0.0
FITZ				eSn	Sn	18 15 09.0	-7.0
FITZ	Fitzroy Crossi	11.55	197	P	Pn	18 13 09.0	+0.1
	3.8nm,0.3s,baz=27,slow=11,SNR=112						
FITZ				S	Sn	18 15 09.3	-6.7
	8.1nm,0.3s,baz=248,slow=22,SNR=7.4						
WRA	Warramunga Arr	13.77	159	P	Pn	18 13 37.4	-0.6
	9.0nm,0.3s,baz=346,slow=13,SNR=122						
WRA				S	Sn	18 16 03.6	-6.1
	8.5nm,0.3s,baz=331,slow=23,SNR=9.9						
WB2	Warramunga Arr	13.77	159	eP	Pn	18 13 37.3	-0.8
WB2				eS	Sn	18 16 03.1	-6.7
WB2	Warramunga Arr	13.77	159	ePn	Pn	18 13 37.3	-0.8
WB2				eSn	Sn	18 16 01.6	-8.2
WB2				eS	Sn	18 16 03.1	-6.7
MBWA	Marble Bar	16.79	212	eP	Pn	18 14 17.1	+1.0
	8.9nm,0.6s						
MBWA				eS	S	18 17 09.2	-17
ASAR	Alice Springs	17.15	165	P	Pn	18 14 22.1	+1.6
	2.2nm,0.3s,baz=345,slow=11,SNR=253						
KSM	Kuching	20.68	293	eP	P	18 14 60.0	+0.8
FORT	Forrest	23.66	183	eP	P	18 15 28.7	-0.5
	9.5nm,0.4s,mb4.5						
FORT	Forrest	23.66	183	eP	P	18 15 29.2	0.0
STKA	Stephens Creek	27.29	157	⇑iP	P	18 16 02.5	+0.5
	4.2nm,1.1s,mb3.9						
STKA				e		18 16 32.5	
STKA	Stephens Creek	27.29	157	P	P	18 16 01.9	-0.1
	2.0nm,0.5s,mb3.9,baz=328,slow=8.2,SNR=13						
NWAO	Narrogin (SRO)	28.08	202	eP	P	18 16 09.4	+0.3
NWAO	Narrogin (SRO)	28.08	202	P	P	18 16 09.3	+0.3
	4.9nm,0.5s,mb4.3,baz=38,slow=8.7,SNR=10						
KULM	Kulim	31.03	292	eP	P	18 16 35.2	-0.3
PSI	Prapat	31.78	287	P	P	18 16 42.7	+0.6
PSI	Prapat	31.78	287	P	P	18 16 42.7	+0.6
	8.4nm,0.6s,mb4.6,baz=108,slow=6.4,SNR=11						
LSA	Lhasa	51.69	317	eP	P	18 19 24.4	+0.6
	1.8nm,0.4s,mb4.5						
ODAN	Odare	52.70	311	eP	P	18 19 31.0	-0.3
	19nm,0.5s,mb5.4						
TAPN	Taplejung	52.73	312	eP	P	18 19 31.5	-0.1
	31nm,0.4s,mb5.7						
JIRN	Jiri	54.03	312	eP	P	18 19 41.0	-0.1
	15nm,0.4s,mb5.3						
KKN	Kakani	54.77	311	eP	P	18 19 46.1	-0.4
	16nm,0.5s,mb5.3						
GKN	Gorkha	55.37	311	eP	P	18 19 50.3	-0.5
	37nm,0.3s						
SONM	Songino Array	58.23	342	P	P	18 20 11.0	+0.5
	0.4nm,0.5s,mb3.7,baz=158,slow=6.3,SNR=5.3						
MKAR	Makanchi Array	67.83	327	P	P	18 21 13.8	-0.3
	1.4nm,0.3s,mb4.2,baz=115,slow=8.4,SNR=35						
MAW	Mawson	74.65	201	P	P	18 21 54.2	-0.7
	1.9nm,0.4s,mb4.1,baz=80,slow=13,SNR=6.8						
CHKZ	Chkalovo	77.88	329	eP	P	18 22 12.9	-0.5
	0.3nm,0.4s						
TORD	Torodi Ar. Bea	128.06	281	PKP	PKPdf	18 29 20.1	-2.0
	1.5nm,0.9s,baz=196,slow=4.2,SNR=5.6						
LPAZ	La Paz	151.16	144	PKPbc	PKPbc	18 30 09.9	+0.6
	2.1nm,0.3s,baz=32,slow=2.9,SNR=18						

MAN 14 18:20:01, 963N×**12604E, h72**km**, mb4.4, ML3.3, MS3.1, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.56	286	⇓eP	Pn	18 20 16.4	+1.8
SCPH				eS	Sn	18 20 28.7	+4.0
MSLP	Maasin	1.27	294	eP	Pn	18 20 24.6	+1.6
CGP	Cagayan de Oro	1.77	229	⇑iP	Pn	18 20 30.9	+1.3
CGP				iS	Sn	18 20 51.7	+0.5
PLP	Palo	1.85	326	eP	Pn	18 20 31.7	+1.0
PLP				eS	Sn	18 20 53.7	+0.4
BUKP	Musuan	1.99	209	eP	Pn	18 20 35.3	+2.8
OCLP	Ormoc	2.00	315	eP	Pn	18 20 34.0	+1.3
TBP	Tagbilaran	2.15	272	eP	Pn	18 20 36.1	+1.4
TBP				eS	Sn	18 21 01.5	+1.0
LLP	Lapu-Lapu	2.16	289	⇓eP	Pn	18 20 36.3	+1.5
LLP				iS	Sn	18 21 02.0	+1.4
MATI	Mati	2.67	175	eP	Pn	18 20 44.9	+3.1
CNP	Catarman	3.17	335	eP	Pn	18 20 47.7	-0.9
GUIM	Jordan	3.54	287	eP	Pn	18 20 54.8	+1.2

*IDC **14** 18:25:38.8±0.9, 3982N×7358E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.7/24, mbtmp3.7/11, ML3.0/2, Error ellipse: s-maj=21.1km s-min=17.6km az=4.0*
*NEIC **14** 18:25:40.5±0.7, 3990N×7345E, h10km, Error ellipse: s-maj=13.3km s-min=11.1km az=118.0*
*MOS **14** 18:25:42.5±0.6, 3988N×7349E, h35km, mb3.8/1, Error ellipse: s-maj=27.1km s-min=12.1km az=76.5*
*ISCJB **14** 18:25:43.3±0.7, 3998N±004×7330E±007, h41km±9km, mb3.7/9, Error ellipse: s-maj=9.9km s-min=5.3km az=156.5*
*BJI **14** 18:25:43.6, 3949N×7347E, h25km, ML3.7*
*NNC **14** 18:25:44.6±3.2, 4034N×7336E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=34.3km s-min=15.1km az=0.0*

ISC 14 18:25:45.5±0.5**, 4005N**±003×**7337E**±007**, h42**km±8km**, n49,** σ1s21/58**, mb3.7**/9**, 5C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.08	104	⇓iPG	Pn	18 26 16.6	-1.2
KSH				SG	Sn	18 26 43.3	+0.9
KSH				Smax			
	comp=N,6µm,0.5s						
KSH				Smax			
	comp=E,3µm,0.4s						
AML	Almayashu	2.10	7	eP	Pn	18 26 18.1	0.0
AML	Almayashu	2.10	7	P	Pn	18 26 18.4	+0.3
	SNR=371						
UCH	Uchtor	2.34	21	eP	Pn	18 26 21.5	0.0
UCH	Uchtor	2.34	21	P	Pn	18 26 21.7	+0.2
	SNR=323						
KZA	Kyzart	2.48	34	P	Pn	18 26 22.6	-0.7
	SNR=241						
EKS2	Erkin-Say	2.63	7	eP	Pn	18 26 26.1	+0.7
EKS2	Erkin-Say	2.63	7	P	Pn	18 26 26.1	+0.6
	SNR=206						
AAK	Ala-Archa	2.72	18	eP	Pn	18 26 26.1	-0.5
AAK	Ala-Archa	2.72	18	P	Pn	18 26 27.4	+0.8
	SNR=73						
KBK	Karagaybulak	2.87	24	P	Pn	18 26 29.2	+0.6
	SNR=131						
ULHL	Ulahol	3.09	44	P	Pn	18 26 32.6	+0.9
	SNR=9.4						
CHMS	Chumysh	3.13	19	P	Pn	18 26 32.7	+0.4
	SNR=43						
TKM2	Tokmak 2	3.33	29	⇓Pn	Pn	18 26 34.8	-0.1
	comp=E,30nm,0.5s						
TKM2				⇓Lg		18 27 22.7	
	comp=E,247nm,0.6s						
TKM2	Tokmak 2	3.33	29	ePN	Pn	18 26 34.8	-0.1
TKM2	Tokmak 2	3.33	29	P	Pn	18 26 35.0	0.0
	SNR=28						
USP	Ospenovka	3.33	14	P	Pn	18 26 35.1	+0.2
	SNR=52						
KK31	Karatay Array	3.73	326	Pn	Pn	18 26 42.1	+1.6
	comp=E,3.3nm,0.3s,baz=132,slow=13,SNR=244						
KK31				⇑Pg	Pn	18 26 51.5	+11
	comp=E,9.2nm,0.3s,baz=134,slow=16,SNR=49						
KK31				Lg		18 27 35.5	
	comp=E,54nm,0.5s,baz=135,slow=29,SNR=6.5						
KNDC	Almaty	4.16	39	⇓Pn	Pn	18 26 50.7	+4.3
	comp=E,58nm,0.7s						
KNDC				⇓Lg		18 27 47.8	
	comp=E,805nm,0.8s						
DLH	Dalhousie	7.78	164	eS	Sn	18 29 01.0	-1.8
THN	Thein Dam	7.83	165	eP	Pn	18 27 39.1	+2.3
THN				ex	x	18 29 06.2	
MK31	Makanchi Array	9.36	41	⇑Pn	Pn	18 27 59.9	+2.3
	comp=E,0.5nm,0.7s,baz=224,slow=11,SNR=5.0						
MK31				⇓Pg	Pn	18 28 10.2	+13
	comp=E,1.4nm,0.8s,baz=222,slow=14,SNR=7.4						
MK31				⇓Lg		18 30 26.3	
	comp=E,2.8nm,0.7s,baz=221,slow=27,SNR=4.9						
MKAR	Makanchi Array	9.36	41	Pn	Pn	18 27 57.5	-0.1
	comp=E,0.1nm,0.3s,baz=231,slow=14,SNR=5.3						
MKAR				Lg		18 30 27.5	
	comp=E,0.4nm,0.3s,baz=231,slow=26,SNR=6.2						
JOSI	Joshimath	10.73	150	eP	Pn	18 28 16.0	-0.6
JOSI				AMb	AMB	18 28 18.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,17nm,0.8s						
JOSI				eS	Sn	18 30 07.4	-7.9
KURBB	Kurchatov Arra	11.18	17	⇑Pn	Pn	18 28 18.9	-3.7
	comp=Z,0.4nm,1.2s						
KURBB				⇑Sn	Sn	18 31 00.7	+35
	comp=Z,0.8nm,0.6s						
KURBB				⇓Lg		18 31 29.7	
	comp=Z,3.4nm,0.7s						
KHET	Khetri	12.11	170	eP	Pn	18 28 35.7	+0.3
KHET				AMb	AMB	18 28 38.1	
	comp=Z,1.5nm,0.2s						
KHET				eS	Sn	18 30 40.4	-8.7
KUDL	Kundal	12.15	167	eP	Pn	18 28 37.0	+1.1
KUDL				AMb	AMB	18 28 40.0	
	comp=Z,2.8nm,0.8s						
KUDL				eS	Sn	18 30 40.4	-10
SONA	Sohna	12.16	164	eP	Pn	18 28 35.9	-0.2
SONA				AMb	AMB	18 28 43.2	
	comp=Z,5.9nm,0.4s						
SONA				eS	Sn	18 30 43.0	-7.3
BRVK	Borovoye	13.19	352	eP	Pn	18 28 46.2	-3.8
	comp=Z,1.9nm,0.4s						
BRVK	Borovoye	13.19	352	eP	Pn	18 28 46.2	-3.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AB31	Akbulak array	13.25	318	Pn	Pn	18 28 49.5	-1.4
	comp=Z,1.2nm,0.5s,baz=125,slow=14,SNR=21						
AB31				⇓Sn	Sn	18 31 17.2	+0.5
	comp=Z,1.0nm,0.7s						
CHKZ	Chkalovo	13.76	353	⇓Pn	Pn	18 28 54.6	-3.2
	comp=Z,7.9nm,2.1s						
CHKZ				⇓Sn	Sn	18 31 27.0	-2.1
	comp=Z,7.7nm,3.1s						
CHKZ				⇓Lg		18 32 53.6	
	comp=Z,10nm,1.8s						
CHKZ	Chkalovo	13.76	353	eP	Pn	18 28 55.0	-2.8
AKTK	Aktyubinsk	14.96	319	Pn	Pn	18 29 12.7	-1.3
AKTO	Aktyubinsk	14.96	319	⇑Pn	Pn	18 29 11.8	-2.2
	comp=Z,0.1nm,0.6s						
AKTO	Aktyubinsk	14.96	319	Pn	Pn	18 29 12.7	-1.3
	comp=Z,0.1nm,0.3s,baz=124,slow=13,SNR=5.8						
NVS	Novosibirsk	16.21	21	eP	Pn	18 29 31.3	+1.3
NVS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.4s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
SONM	Songino Array	24.88	61	P	P	18 31 02.8	-1.2
	comp=E,0.4nm,0.9s,mb3.0,baz=265,slow=7.4,SNR=4.3						
FINES	FINESS Array B	35.69	323	P	P	18 32 40.6	+1.2
	comp=E,0.6nm,0.4s,mb3.9,baz=112,slow=10,SNR=10						
ARCES	ARCESS Array B	38.64	335	P	P	18 33 05.2	+0.9
	comp=E,0.8nm,0.6s,mb3.7,baz=107,slow=8.2,SNR=8.9						
NOA	NORSAR Array B	42.75	321	P	P	18 33 40.3	+2.0
	comp=E,0.7nm,0.7s,mb3.5,baz=89,slow=8.2,SNR=3.4						
TORD	Torodi Ar. Bea	67.67	269	P	P	18 36 39.5	+1.0
TORD	Torodi Ar. Bea	67.67	269	P	P	18 36 39.5	+1.0
	comp=E,1.6nm,0.5s,mb4.3,baz=49,slow=4.6,SNR=9.7						
DBIC	Dimbokro	76.73	268	P	P	18 37 33.7	+1.1
DBIC	Dimbokro	76.73	268	P	P	18 37 33.7	+1.1
	comp=E,1.1nm,0.5s,mb4.0,baz=16,slow=21,SNR=4.4						
YKA	Yellowknife Ar	77.61	4	P	P	18 37 36.5	-0.2
YKA	Yellowknife Ar	77.61	4	P	P	18 37 36.5	-0.2
	comp=E,0.2nm,0.4s,mb3.4,baz=346,slow=5.6,SNR=4.2						
WRA	Warramunga Arr	82.35	124	P	P	18 38 01.2	-1.7
	comp=E,2.3nm,1.3s,mb3.9,baz=319,slow=4.2,SNR=8.4						
ASAR	Alice Springs	84.81	127	P	P	18 38 13.8	-1.6
	comp=E,0.3nm,0.6s,mb3.6,baz=326,slow=5.9,SNR=6.1						

MOS 14 18:32:19.5±1.1**, 4206N×4829E, h22**^{km}**, mb3.7**/1**, Error ellipse: s-maj=34.4km s-min=24.4km az=108.9, Caspian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSMR	Kasumkent	0.47	195	ePG	Pb	18 32 31.0	+1.9
KSMR				eS	Sb	18 32 37.8	+2.1
KSMR				pmax	pmax		
	comp=Z,93nm,0.2s						
URKR	Urkarakh	0.50	282	PG	Pb	18 32 31.7	+2.1
URKR				i S	Sb	18 32 40.7	+4.2
AKT	Akhty	0.72	216	i PG	Pb	18 32 33.0	-0.3
AKT				i S	Sb	18 32 44.3	+1.7
AKT				pmax	pmax		
	comp=Z,89nm,0.2s						
KRNR	Karanay	1.28	307	PG	Pn	18 32 41.7	-0.3
KRNR				i S	Sn	18 32 59.7	+1.2
DBC	Dubki	1.45	312	PG	Pn	18 32 44.5	+0.2
DBC				eS	Sn	18 33 04.5	+1.9
DGRG	David-gareji	2.27	255	P	Pn	18 33 01.8	+6.2
DGRG				S	Sn	18 33 33.9	+11

*TRN **14** 18:36:09.6, 1045N×6239W, h4^{km}, MD3.7*
*NEIC **14** 18:36:09.6, 1045N×6239W, h4^{km}, MD3.7(TRN), After TRN.*
*FUNV **14** 18:36:10.6, 1032N×6228W, h2^{km}, MW2.9*
*ISCJB **14** 18:36:11.1±0.5, 1034N±003×6231W±003, h21^{km}±5^{km}, Error ellipse: s-maj=5.4km s-min=3.6km az=147.1*
ISC 14 18:36:11.0±0.6**, 1034N**±003×**6231W**±002**, h15**^{km}±4^{km}**, n17,** σ**0**^{s}**93**/34**, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.32	16	⇑i P	Pg	18 36 17.2	-0.5
GUIV				eS	Sg	18 36 22.3	+0.1
GUNV	Guanoco	0.65	254	eP	Pg	18 36 23.3	-0.4
GUNV				eS	Sg	18 36 33.5	+1.2
TCE	Chacachacare	0.66	57	eP	Pg	18 36 22.9	-1.0
TCE				eS	Sg	18 36 32.6	0.0
TPP	Pointe-a-Pierr	0.85	92	eP	Pb	18 36 30.8	+3.3
TPP				eS	Sb	18 36 45.0	+6.3
TRN	Trinidad (W)	0.95	71	⇑eP	Pb	18 36 27.6	-1.5
TRN				eS	Sb	18 36 43.3	+1.8
CRUV	Carupano	0.97	290	⇓eP	Pb	18 36 28.3	-1.2
CRUV				eS	Sb	18 36 41.9	-0.2
TBH	Brigand Hill	1.23	83	eP	Pn	18 36 34.3	+0.5
TBH				eS	Sb	18 36 54.3	+4.5
ITEV	Isla Los Testi	1.29	321	eP	Pn	18 36 34.3	-0.2
ITEV				eS	Sb	18 36 52.7	+1.4
TPR	Prospect	1.73	61	eP	Pn	18 36 41.1	+0.6
TPR				eS	Sn	18 37 03.1	+0.8
GRW	Mount Saint Ca	1.92	19	eP	Pn	18 36 42.9	-0.3
GRW				eS	Sn	18 37 07.2	+0.2
GRHS	Sauteurs	1.98	19	eP	Pn	18 36 44.0	-0.1
GRHS				eS	Sn	18 37 08.1	-0.5
GRSS	Sisters	2.06	19	eP	Pn	18 36 44.9	-0.3
GRSS				eS	Sn	18 37 09.0	-1.6
PCRV	Puerto La Cruz	2.29	266	eP	Pn	18 36 49.3	+0.9
PCRV				eS	Sn	18 37 17.6	+1.3
RIOV	Rio Grande	2.31	168	eP	Pn	18 36 49.2	+0.6
RIOV				eS	Sn	18 37 16.2	-0.5
GURV	El Guri	2.68	197	eP	Pn	18 36 53.1	-0.5
GURV				eS	Sn	18 37 25.7	-0.1
CUPV	Cœpira	3.43	266	eP	Pn	18 37 04.6	+0.6
CUPV				eS	Sn	18 37 44.2	-0.3
CAOV	Caicara del Or	4.97	233	eP	Pn	18 37 24.8	-0.3
CAOV				eS	Sn	18 38 19.6	-2.7

*BJI **14** 18:40:00.1, 5221N×17936W, h140^{km}, mB5.1, mb4.9*
*ISCJB **14** 18:40:02.4±0.5, 52.14N±007×17929W±008, h156^{km}±5^{km}, mb4.2/32, Error ellipse: s-maj=12.8km s-min=6.2km az=155.6*
*NEIC **14** 18:40:04.9, 5192N×179.17W, h152^{km}, mb4.4/10, After AEIC.*
*IDC **14** 18:40:06.4±1.6, 5227N×17928W, h180^{km}±14^{km}, mb3.7/20, mb1 3.9/20, mb1mx3.8/27, mbtmp3.7/20, Error ellipse: s-maj=15.7km s-min=9.0km az=160.0*
ISC 14 18:40:03.5±0.5**, 5213N**±007×**17928W**±008**, h152**^{km}±5^{km}**, n53,** σ**0**^{s}**86**/52**, mb4.2**/32**, 1C, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	1.16	230	P	Pn	18 40 30.0	+0.2
AMKA				S	Sn	18 40 49.3	-0.6
ATKA	Atka Island	3.13	87	P	Pn	18 40 52.0	-0.5
UNV	Unalaska Valle	7.90	72	P	Pn	18 41 55.0	-0.3
FALS	False Pass	9.84	68	P	Pn	18 42 21.9	+0.8
GAMB	Gambell	12.34	16	eP	Pn	18 42 54.5	+0.7
	6.6nm,0.8s						
TNA	Tin City	14.66	19	eP	Pn	18 43 24.4	+1.3
	7.7nm,0.9s						
KDAK	Kodiak Island	16.28	59	P	Pn	18 43 40.9	-2.2
KDAK	Kodiak Island	16.28	59	P	Pn	18 43 40.9	-2.2
	6.8nm,0.3s,baz=270,slow=7.1,SNR=94						
TTA	Tatalina	16.41	40	eP	Pn	18 43 45.9	+1.1
	62nm,1.3s						
BILL	Bilibino	17.42	342	eP	Pn	18 43 58.0	+1.2
	20nm,1.2s						
IMA2	Indian Mountai	18.97	33	eP	P	18 44 13.5	+0.8
MCK	McKinley	19.63	42	eP	P	18 44 18.8	-1.1
	6.8nm,0.7s						
EGAK	Eagle	23.18	42	eP	P	18 44 56.0	-0.3
	29nm,1.1s,mb4.6						
DAWY	Dawson	23.77	44	eP	P	18 45 00.9	-0.6
YSS	Yuzh-Sakhalins	24.97	273	eP	P	18 45 09.9	-2.7
ASAJ	Asahikawa	26.43	268	P	P	18 45 26.2	+0.4
	4.5nm,0.7s,mb4.2,baz=0.0,slow=2.0,SNR=4.5						
INK	Inuvik	27.02	36	eP	P	18 45 30.5	-0.4
	288nm,1.1s,mb5.8						
INK	Inuvik	27.02	36	P	P	18 45 30.6	-0.2
	1.2nm,0.5s,mb3.8,baz=243,slow=4.5,SNR=8.4						
MJAR	Matsushiro Arr	33.62	259	P	P	18 46 29.9	+0.7
	3.3nm,0.6s,mb4.2,baz=45,slow=6.7,SNR=12						
YKA	Yellowknife Ar	34.93	47	P	P	18 46 39.7	-0.5
YKA				ScP	ScP	18 52 36.6	-3.4
YKA	Yellowknife Ar	34.93	47	P	P	18 46 39.7	-0.5
	2.6nm,0.6s,mb4.0,baz=281,slow=8.1,SNR=40						
YKA				ScP	ScP	18 52 36.6	-3.4
	0.7nm,0.7s,baz=289,slow=3.3,SNR=11						
YBH	Yreka Blue Hor	39.07	82	eP	P	18 47 16.8	+1.5
	8.0nm,0.9s,mb4.3						
KSRS	Korea Array	39.34	269	P	P	18 47 18.6	+1.0
	4.4nm,0.7s,mb4.2,baz=55,slow=7.9,SNR=18						
MOD	Modoc	40.44	80	eP	P	18 47 27.6	+0.9
	3.9nm,0.5s,mb4.3						
NVAR	Mina Array Bea	43.76	83	P	P	18 47 54.7	+1.2
NVAR				ScP	ScP	18 53 11.4	-3.1
NVAR	Mina Array Bea	43.76	83	P	P	18 47 54.7	+1.2
	6.5nm,0.7s,mb4.4,baz=305,slow=6.3,SNR=39						
NVAR				ScP	ScP	18 53 11.4	-3.1
	0.7nm,0.7s,baz=321,slow=2.3,SNR=3.1						
BJI	Beijing	44.93	281	P	P	18 48 03.3	+0.4
BJI				AMB	AMB		
	comp=Z,19nm,0.8s,mb4.8						
BJT	Baijiatuau	44.95	281	eP	P	18 48 03.6	+0.6
	comp=Z,5.7nm,0.5s,mb4.5						
TPNV	Topopah Spring	45.95	83	eP	P	18 48 11.2	+0.2
	comp=Z,18nm,0.8s,mb4.7						
SONM	Songino Array	46.05	296	P	P	18 48 11.6	+0.1
	comp=Z,0.4nm,0.5s,mb3.3,baz=64,slow=8.3,SNR=6.6						
SONM				PcP	PcP	18 49 44.8	-0.4
	comp=Z,0.7nm,0.7s,baz=73,slow=2.6,SNR=4.4						
SONM				ScP	ScP	18 53 20.7	-3.2
	comp=Z,0.4nm,0.6s,baz=36,slow=4.0,SNR=4.6						
PDAR	Pinedale Array	46.37	73	P	P	18 48 13.3	-0.7
	comp=Z,2.2nm,0.7s,mb3.9,baz=316,slow=3.7,SNR=18						
PDAR				ScP	ScP	18 53 21.5	-3.7
	comp=Z,0.5nm,0.7s,baz=317,slow=3.8,SNR=3.6						
XAN	Xi'an	53.23	280	P	P	18 49 05.4	-0.6
XAN				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.3						
ARCES	ARCESS Array B	57.30	350	P	P	18 49 34.3	-0.3
	comp=Z,2.8nm,1.0s,mb4.0,baz=30,slow=7.3,SNR=4.9						
TXAR	Lajitas Array	58.84	81	P	P	18 49 45.7	-0.2
	comp=Z,2.4nm,0.6s,mb4.2,baz=300,slow=4.7,SNR=32						
MKAR	Makanchi Array	59.34	308	P	P	18 49 47.2	-1.9
MKAR				ScP	ScP	18 54 17.2	-4.3
MKAR	Makanchi Array	59.34	308	P	P	18 49 47.2	-1.9
	comp=Z,0.4nm,0.6s,mb3.4,baz=64,slow=7.2,SNR=7.1						
MKAR				ScP	ScP	18 54 17.2	-4.3
	comp=Z,0.3nm,0.8s,baz=48,slow=2.3,SNR=3.1						
SCHQ	Schefferville	59.60	38	P	P	18 49 49.3	-1.4
	comp=Z,1.3nm,0.5s,mb4.0,baz=323,slow=10,SNR=5.7						
GYA	Guiyang	59.95	275	⇑i P	P	18 49 54.6	+1.0
GYA				AP	pP	18 50 32.5	+3.3
GYA				PCP	PcP	18 50 39.6	+1.4
GYA				PP	PP	18 52 11.8	+4.5
GYA				SCP	ScP	18 54 24.9	+0.4
GYA				PCS	PcS	18 54 41.3	+0.5
GYA				S	S	18 57 53.8	+0.1
GYA				SCS	ScS	18 59 26.9	-2.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
FINES	FINESS Array B	64.98	347	P	P	18 50 25.3	-1.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=23,slow=7.0,SNR=3.0						
TAPN	Taplejung	70.67	290	eP	P	18 51 02.4	-0.1
	comp=Z,8.2nm,0.7s,mb4.6						
JIRN	Jiri	71.31	291	eP	P	18 51 05.9	-0.5
	comp=Z,14nm,0.6s,mb4.9						
KKN	Kakani	71.74	292	eP	P	18 51 08.8	-0.1
	comp=Z,7.6nm,0.6s,mb4.6						
GKN	Gorkha	71.94	292	eP	P	18 51 09.6	-0.5
	comp=Z,6.3nm,0.6s,mb4.5						
AKASG	Malin Array Be	74.74	342	P	P	18 51 25.5	-0.7
	comp=Z,2.4nm,0.5s,mb4.1,baz=20,slow=6.6,SNR=13						
BATI	Kupang	78.97	237	P	P	18 51 50.4	+0.2
	comp=Z,7.6nm,0.4s,mb4.7,baz=159,slow=5.0,SNR=5.5						
WRA	Warramunga Arr	82.35	223	P	P	18 52 07.7	-0.3
	comp=Z,2.0nm,0.7s,mb3.8,baz=36,slow=6.3,SNR=14						
BRTR	Keskin Array B	84.14	335	P	P	18 52 17.2	+0.1
	comp=Z,1.7nm,0.7s,mb3.9,baz=50,slow=2.4,SNR=6.1						
FITZ	Fitzroy Crossi	84.69	232	P	P	18 52 20.4	+0.4
	comp=Z,2.6nm,1.1s,mb3.9,baz=76,slow=4.2,SNR=2.9						
ASAR	Alice Springs	85.84	222	P	P	18 52 25.9	+0.3
	comp=Z,0.7nm,0.5s,mb3.7,baz=24,slow=5.5,SNR=29						
STKA	Stephens Creek	90.40	212	P	P	18 52 47.6	+0.6
	comp=Z,0.7nm,0.5s,mb3.8,baz=24,slow=2.7,SNR=5.0						
TSUM	Tsumeb	144.58	332	PKP	PKPdf	18 59 20.0	-1.7
	comp=Z,2.6nm,0.7s,baz=354,slow=4.2,SNR=4.1						
MAW	Mawson	146.89	218	PKPbc	PKPbc	18 59 26.4	0.0
	comp=Z,3.5nm,0.8s,baz=109,slow=6.2,SNR=6.2						
BOSA	Boshof	150.25	313	PKPbc	PKPbc	18 59 34.4	-1.8
	comp=Z,2.5nm,0.5s,baz=164,slow=5.8,SNR=7.8						

IDC 14 18:40:29.3±1.9**, 146S×12654E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.4**/15**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=158.7km s-min=25.1km az=65.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.89	158	P	Pn	18 45 02.9	-1.1
	0.1nm,0.3s,baz=336,slow=11,SNR=8.3						
ASAR	Alice Springs	23.20	163	P	P	18 45 37.9	-0.2
	0.4nm,0.4s,baz=345,slow=11,SNR=13						
MKAR	Makanchi Array	61.73	327	P	P	18 50 49.5	+0.1
	0.2nm,0.5s,baz=111,slow=8.3,SNR=3.0						

*CSEM **14** 18:45:17.6±0.1, 3844N×3927E, h2^{km}, MD3.4, Error ellipse: s-maj=2.3km s-min=1.8km az=141.0*
*DDA **14** 18:45:18.0, 3848N×3938E, h16^{km}, Md3.4*
*ISK **14** 18:45:17.0, 3844N×3928E, h5^{km}, MD3.4*
*ISCJB **14** 18:45:18.3±0.4, 3842N±003×3932E±003, h5^{km}, Error ellipse: s-maj=3.8km s-min=3.3km az=166.0*
ISC 14 18:45:18.7±0.6**, 3843N**±003×**3932E**±003**, h2**^{km}±6^{km}**, n23,** σ**0**^{s}**96**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	285	i P	Pg	18 45 23.9	0.0
ELZG				i S	Sg	18 45 28.2	+0.8
PTK	Pertek	0.47	7	i PG	Pg	18 45 26.9	-0.7
PTK				i SG	Sg	18 45 34.5	+0.8
MYA	Malataya	0.71	262	PG	Pg	18 45 30.9	-1.4
MALT	Malatya	0.71	261	PG	Pg	18 45 30.8	-1.5
MALT				SG	Sg	18 45 41.7	+0.1
DIY	Diyarbakir	0.89	126	PG	Pg	18 45 35.0	-0.7
BINT	Bingol	1.02	64	PG	Pg	18 45 37.6	-0.6
KEMA	Kemaliye	1.06	323	i P	Pg	18 45 37.8	-1.2
KEMA				i S	Sg	18 45 54.0	+1.3
URFA	Urfa	1.06	202	PG	Pg	18 45 38.6	-0.4
ATAB	Bozova	1.25	221	i P	Pg	18 45 43.1	+0.4
ATAB				i S	Sg	18 45 58.6	-0.4
EZC	Erzincan	1.37	16	PN	Pn	18 45 43.8	-1.1
MARD	Mardin	1.60	134	i P	Pn	18 45 46.6	-1.4
MARD				i S	Sg	18 46 12.2	+2.1
BTMT	Batman	1.72	97	PN	Pn	18 45 48.3	-1.4
GZT	Gaziantep	1.75	233	i P	Pn	18 45 49.3	-0.9
GZT				i S	Sg	18 46 17.0	+2.0
GUMT	Gumushane	2.03	3	ePN	Pn	18 45 54.6	+0.6
GAZ	Gaziantep	2.09	234	ePN	Pn	18 45 54.7	0.0
KMRS	Kahramanmaras	2.12	245	ePN	Pn	18 45 55.3	+0.1
EZM	Erzurum	2.17	46	ePN	Pn	18 45 55.9	+0.1
ESPY	Espiye-Giresun	2.53	350	ePN	Pn	18 46 00.8	0.0
SIRT	Sirnak	2.63	110	ePN	Pn	18 46 03.4	+1.2
BNN	Bunyan	2.75	280	ePN	Pn	18 46 04.2	+0.3
KOZT	Kozan	2.92	252	ePN	Pn	18 46 06.5	+0.3
AGRB	Hanur-Agry	3.08	67	ePN	Pn	18 46 09.7	+1.4
CUKT	Cukurca	3.59	108	ePN	Pn	18 46 15.9	+0.5

WEL 14 19:36:29.9±0.3**, 3698S×17750E, h148**^{km}±3^{km}**, ML3.7**/7**, Error ellipse: s-maj=4.1km s-min=3.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.87	132	PN	Pn	19 36 53.4	+0.1
MXZ				SN	Sn	19 37 11.6	+0.3
PUZ	Puketiti	1.25	151	PN	Pn	19 36 56.6	0.0
PUZ				SN	Sn	19 37 16.5	-0.7
URZ	Urewera	1.31	194	PN	Pn	19 36 57.5	+0.2
URZ				SN	Sn	19 37 18.5	0.0
MWZ	Matawai	1.35	179	PN	Pn	19 36 58.2	+0.5
MWZ				SN	Sn	19 37 19.4	+0.3
BKZ	Black Stump Fm	2.32	200	PN	Pn	19 37 08.0	-0.7
PXZ	Pawanui	3.09	189	PN	Pn	19 37 16.5	-1.8
BFZ	Birch Farm	3.82	194	PN	Pn	19 37 25.1	-2.6
MRZ	Mangatainoka R	3.97	202	PN	Pn	19 37 26.4	-3.2
TIWZ	Tintock	4.00	198	PN	Pn	19 37 27.1	-2.8
KIW	Kapiti Island	4.37	207	PN	Pn	19 37 31.4	-3.4
MTW	Mount Morrison	4.45	200	PN	Pn	19 37 32.2	-3.7
CAW	Cannon Point	4.54	204	PN	Pn	19 37 33.1	-3.9
SNZO	South Karori	4.84	206	PN	Pn	19 37 36.8	-4.2
TCW	Tory Channel	4.92	210	PN	Pn	19 37 38.0	-4.0
KHZ	Kahutara	6.23	208	PN	Pn	19 37 54.9	-4.6

IDC 14 20:05:21.0±49.0**, 1313S×16678E, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/13**, mbtmp3.9**/3**, Error ellipse: s-maj=835.0km s-min=105.2km az=63.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.70	227	P	P	20 11 28.5	-0.3
	1.8nm,0.7s,baz=41,slow=11,SNR=5.6						
WRA	Warramunga Arr	31.79	253	P	P	20 11 47.8	+0.4
	0.4nm,0.4s,baz=84,slow=8.8,SNR=19						
ASAR	Alice Springs	32.83	247	P	P	20 11 56.5	-0.1
	0.8nm,0.5s,baz=72,slow=9.8,SNR=39						

*ISCJB **14** 20:11:17.8±0.7, 3839N±003×3934E±004, h0^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=4.5km az=135.3*
*ISK **14** 20:11:17.5, 3842N×3929E, h3^{km}, MD3.2*
*CSEM **14** 20:11:18.0±0.1, 3844N×3929E, h6^{km}±1^{km}, MD3.1, Error ellipse: s-maj=2.7km s-min=1.7km az=135.0*
*DDA **14** 20:11:19.2, 3841N×3932E, h6^{km}, Md3.1*
ISC 14 20:11:18.5±0.6**, 3839N**±003×**3934E**±004**, h3**^{km}±5^{km}**, n17,** σ**0**^{s}**78**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.30	291	i P	Pg	20 11 24.2	0.0
ELZG				i S	Sg	20 11 28.7	+0.6
PTK	Pertek	0.50	5	i PG	Pg	20 11 27.5	-0.6
PTK				i SG	Sg	20 11 35.3	+0.6
MALT	Malatya	0.72	264	PG	Pg	20 11 31.1	-1.2
MALT				SG	Sg	20 11 41.5	-0.1
MYA	Malataya	0.72	265	PG	Pg	20 11 31.7	-0.6
DIY	Diyarbakir	0.86	125	PG	Pg	20 11 35.4	+0.5
BINT	Bingol	1.02	61	PG	Pg	20 11 38.4	+0.3
URFA	Urfa	1.03	203	PG	Pg	20 11 39.0	+0.7
KEMA	Kemaliye	1.10	323	i P	Pg	20 11 37.8	-1.7
KEMA				i S	Sg	20 11 54.0	+0.3
ATAB	Bozova	1.23	222	i P	Pg	20 11 42.1	0.0
ATAB				i S	Sg	20 11 59.8	+1.6
EZC	Erzincan	1.41	15	PN	Pn	20 11 44.0	-0.9
MARD	Mardin	1.57	133	i P	Pn	20 11 47.0	-0.2
MARD				i S	Sn	20 12 08.0	+0.1
BTMT	Batman	1.71	96	PN	Pn	20 11 47.8	-1.2
GZT	Gaziantep	1.74	234	i P	Pn	20 11 49.2	-0.3
GZT				i S	Sn	20 12 11.8	-0.5
KELT	Kelkit	1.76	358	i P	Pn	20 11 50.6	+0.8
KELT				i S	Sn	20 12 14.3	+1.7
GAZ	Gaziantep	2.08	235	ePN	Pn	20 11 53.9	-0.3
KMRS	Kahramanmaras	2.12	246	ePN	Pn	20 11 55.0	+0.3
EZM	Erzurum	2.18	46	ePN	Pn	20 11 55.8	+0.2

*DDA **14** 20:18:28.7, 3642N×3582E, h5^{km}, Md3.2*
*GRAL **14** 20:18:28.9±1.3, 3681N×3644E, h0^{km}, MD3.7*
*ISCJB **14** 20:18:29.2±0.4, 3643N±002×3578E±004, h5^{km}, Error ellipse: s-maj=4.5km s-min=2.8km az=174.9*
*ISK **14** 20:18:29.5, 3650N×3587E, h5^{km}, MD3.4*
*CSEM **14** 20:18:29.7±0.2, 3651N×3590E, h1^{km}±1^{km}, MD3.2, Error ellipse: s-maj=2.9km s-min=2.0km az=74.0*
*NSSC **14** 20:18:33.2, 3644N×3606E, h14^{km}±1^{km}*
ISC 14 20:18:29.7±0.6**, 3647N**±002×**3581E**±004**, h0**^{km}±5^{km}**, n33,** σ**1**^{s}**23**/49**, 3D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COBT	Iskenderun	0.37	81	i P	Pg	20 18 35.1	-1.7
COBT				i S	Sg	20 18 41.4	-0.1
HTY	Hatay	0.44	142	i PG	Pg	20 18 39.1	+1.0
HTY				i SG	Sg	20 18 46.2	+2.5
CEYT	Ceyhan	0.55	355	ePG	Pg	20 18 40.8	+0.6
ARNB	Al Arnab	0.62	167	⇑P	Pg	20 18 43.6	+2.0
ARNB				⇑S	Sg	20 18 51.3	+1.8
BTCH	Batrach	0.68	129	⇓S	Sg	20 18 50.8	-0.7
BTCH	Batrach	0.68	129	⇓P	Pg	20 18 43.5	+0.8
BTCH	Batrach	0.68	129	⇓i P	Pg	20 18 43.5	+0.8
SLNF	Slenfeh	0.93	159	⇑P	Pg	20 18 44.5	-3.1
SLNF				⇑S	Sg	20 18 53.2	-6.4
SLNF	Slenfeh	0.93	159	⇑i P	Pg	20 18 44.5	-3.1
KOZT	Kozan	1.01	1	ePG	Pg	20 18 48.4	-0.8
WRDH	Warideh	1.07	153	⇑P	Pg	20 18 51.3	+1.0
WRDH				⇑S	Sg	20 19 04.5	+0.2
WRDH	Warideh	1.07	153	⇑i P	Pg	20 18 51.3	+1.0
WRDH				⇑i S	Sg	20 19 04.4	+0.2
MERS	Mersin	1.11	292	ePN	Pn	20 18 51.7	-0.8
ANDN	Andirin	1.19	21	i P	Pg	20 18 50.4	-2.2
ANDN				i S	Sg	20 19 11.7	+3.6
ANDN	Andirin	1.19	21	i P	Pg	20 18 50.3	-2.3
ANDN				i S	Sg	20 19 11.7	+3.6
GAZ	Gaziantep	1.33	58	ePN	Pn	20 18 54.9	-0.6
KMRS	Kahramanmaras	1.36	40	ePN	Pn	20 18 55.4	-0.5
BIDA	Albida	1.51	164	⇑P	Pg	20 18 58.9	+0.3
BIDA				⇑S	Sb	20 19 16.1	-2.1
BIDA	Albida	1.51	164	⇑i P	Pg	20 18 58.9	+0.3
GZT	Gaziantep	1.67	57	i P	Pn	20 18 59.5	-0.6
GZT				i S	Sn	20 19 23.9	+1.7
IKL	Isikli	1.73	263	ePN	Pg	20 19 03.1	+0.3
NIG	Nigde	1.90	330	ePN	Pn	20 19 05.0	+1.7
HWQ	Hawqa	2.19	177	eP	Pg	20 19 10.7	-0.9
HWQ				eS	Sg	20 19 39.9	0.0
ATAB	Bozova	2.23	63	i P	Pn	20 19 06.3	-1.6
ATAB				i S	Sn	20 19 35.6	-0.5
JHLN	Al Jahlan	2.28	110	⇑P	Pn	20 19 00.8	-7.8
JHLN				⇑S	Sn	20 19 18.6	-19
BNN	Bunyan	2.38	1	ePN	Pn	20 19 10.9	+0.9
AVNT	Avonos	2.43	342	i P	Pn	20 19 09.8	-0.9
AVNT				i S	Sn	20 19 41.8	+0.8
BHL	Bhannes	2.56	183	eP	Pg	20 19 15.5	-3.3
BHL				eS	Sg	20 19 51.1	-0.8
URFA	Urfa	2.60	67	ePN	Pn	20 19 13.6	+0.6
MALT	Malatya	2.79	48	ePN	Pn	20 19 15.4	-0.1
MYA	Malataya	2.79	48	ePN	Pn	20 19 16.5	+0.9
RCY	Rachaya	2.97	180	eS	Sg	20 20 00.8	-4.5
KEMA	Kemaliye	3.51	36	i P	Pn	20 19 26.2	+0.6
KEMA				i S	Sg	20 20 19.4	-3.3

WEL 14 20:19:37.0±1.1**, 3721S×17647E, h275**^{km}±9^{km}**, ML3.8**/7**, Error ellipse: s-maj=16.0km s-min=13.6km az=90.0, North Island**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.17**	**155**	PN	Pn	20 20 15.6	+0.1
URZ				SN	S	20 20 44.5	-1.5
MWZ	**Matawai**	**1.41**	**144**	PN	Pn	20 20 17.3	+0.3
MWZ				SN	S	20 20 49.2	+0.6
PUZ	**Puketiti**	**1.66**	**122**	PN	Pn	20 20 18.9	+0.1
BKZ	**Black Stump Fm**	**1.96**	**180**	PN	Pn	20 20 21.8	+0.7
KNZ	**Kokohu**	**2.05**	**153**	PN	Pn	20 20 22.0	+0.1
PXZ	**Pawanui**	**2.84**	**174**	PN	Pn	20 20 29.1	-0.2
TCW	**Tory Channel**	**4.35**	**202**	PN	Pn	20 20 45.1	-0.8
TUWZ	**Tuamarina**	**4.65**	**204**	PN	Pn	20 20 48.8	-0.6
KHZ	**Kahutara**	**5.67**	**203**	PN	Pn	20 21 00.9	-0.7

*ISCJB **14** 20:26:45.6±0.7, 36.7N±0.1×135.2E±0.1, h383km±9km, mb2.8/2, Error ellipse: s-maj=19.4km s-min=9.8km az=150.2*

*JMA **14** 20:26:45.5±0.3, 36.78N×135.01E, h379km, M2.8*

*IDC **14** 20:26:46.5±1.1, 36.67N×135.13E, h375km±15km, mb2.6/2, mb1 2.9/6, mb1mx2.7/25, mbtmp2.9/6, Error ellipse: s-maj=24.0km s-min=21.8km az=44.0*

ISC 14 20:26:46.7±0.7**, 36.7N**±0.1×**135.1E**±0.1**, h374**km±9km**, n17,** σ0s77/19**, mb2.7**/2**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.06**	**181**	P	**Pn**	**20 27 35.0**	**-0.3**
JWT	**Wachi**	**1.43**	**171**	P	**Pn**	**20 27 37.0**	**+0.1**
JWT				*e*S	**S**	**20 28 16.5**	**-0.8**
JGM	**Miyama**	**1.62**	**127**	P	**Pn**	**20 27 38.4**	**+0.5**
JNG	**Nsakai**	**2.41**	**96**	P	**Pn**	**20 27 44.0**	**+1.0**
MAT	**Matsushiro**	**2.48**	**93**	P	**Pn**	**20 27 44.1**	**+0.6**
MJAR	**Matsushiro Arr**	**2.48**	**93**	P	**Pn**	**20 27 44.6**	**+1.0**
	1.4nm,0.3s,baz=283,slow=9.6,SNR=20						
JRY	**Ryogami san**	**3.12**	**101**	P	**Pn**	**20 27 49.7**	**+0.9**
JWZ	**Kozaga**	**3.19**	**171**	P	**Pn**	**20 27 49.5**	**-0.1**
JTO	**Tosashimizu**	**4.28**	**207**	P	**Pn**	**20 28 00.0**	**0.0**
JFK	**Kawauchi**	**4.64**	**80**	P	**Pn**	**20 28 03.1**	**-0.5**
JFK				*e*S	**S**	**20 29 03.1**	**-2.8**
JMM	**Marumori**	**4.66**	**74**	P	**Pn**	**20 28 04.1**	**+0.4**
JNU	**Nakatsue**	**4.99**	**226**	P	**Pn**	**20 28 07.2**	**-0.2**
	0.7nm,0.3s,baz=3.5,slow=2.4,SNR=5.5						
JMK	**Ichinoseki**	**5.32**	**63**	P	**Pn**	**20 28 11.1**	**+0.4**
KSRS	**Korea Array**	**5.81**	**280**	P	**Pn**	**20 28 15.7**	**-0.5**
	0.4nm,0.3s,baz=100,slow=12,SNR=17						
ASAJ	**Asahikawa**	**9.34**	**35**	P	**Pn**	**20 28 55.6**	**-1.0**
	5.0nm,0.3s,baz=228,slow=11,SNR=50						
SONM	**Songino Array**	**23.87**	**307**	P	**P**	**20 31 28.4**	**+0.6**
	0.6nm,0.9s,mb2.8,baz=107,slow=7.7,SNR=4.5						
WRA	**Warramunga Arr**	**56.33**	**181**	P	**P**	**20 35 49.4**	**-0.6**
	0.1nm,0.3s,mb2.6,baz=0.6,slow=7.6,SNR=7.6						

IDC 14 20:33:40.9±8.4**, 1.85N**×**125.36E, h0**km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/16**, mbtmp3.4**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.7**/17**, Error ellipse: s-maj=172.0km s-min=129.5km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.38**	**158**	P	P	20 38 51.5	0.0
	0.5nm,0.4s,baz=336,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.69**	**162**	P	P	20 39 22.8	+0.9
	0.2nm,0.7s,baz=343,slow=6.0,SNR=4.9						
JHJ	**Hachijo jima 2**	**33.93**	**22**	LR	LR	20 51 43.9	
	comp=Z,107nm,20.4s,baz=117,slow=32						
STKA	**Stephens Creek**	**36.91**	**157**	P	P	20 40 50.6	-0.9
	1.0nm,0.6s,baz=325,slow=9.6,SNR=3.1						

*IDC **14** 20:52:34.2±2.0, 2.26N×97.07E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/19, mbtmp3.8/4, Error ellipse: s-maj=53.6km s-min=25.9km az=42.0*

*ISCJB **14** 20:52:37.1±1.5, 2.2N±0.2×97.1E±0.1, h33km, mb3.9/4, Error ellipse: s-maj=28.3km s-min=20.2km az=14.0*

*NEIC **14** 20:52:38.3±1.2, 2.17N×97.06E, h30km, Error ellipse: s-maj=23.8km s-min=16.6km az=199.0*

ISC 14 20:52:39.2±1.5**, 2.2N**±0.2×**97.1E**±0.2**, h35**km**, n7,** σ0s56/7**, mb3.9**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.92**	**71**	Pn	**Pn**	**20 53 08.5**	**-0.9**
PSI	**Prapat**	**1.92**	**71**	Pn	**Pn**	**20 53 08.5**	**-0.9**
	1.3nm,0.3s,baz=6.9,slow=21,SNR=6.6						
KULM	**Kulim**	**4.70**	**49**	*e*P	**Pn**	**20 53 48.5**	**+0.9**
WRA	**Warramunga Arr**	**42.65**	**123**	P	**P**	**21 00 33.1**	**+0.4**
	0.3nm,0.3s,mb3.5,baz=305,slow=9.0,SNR=6.1						
SONM	**Songino Array**	**46.17**	**9**	P	**P**	**21 01 00.3**	**-0.2**
	0.5nm,0.4s,mb3.8,baz=190,slow=9.3,SNR=18						
MKAR	**Makanchi Array**	**46.26**	**346**	P	**P**	**21 01 01.1**	**0.0**
	0.9nm,0.5s,mb4.0,baz=160,slow=7.9,SNR=13						
ARCES	**ARCESS Array B**	**81.58**	**340**	P	**P**	**21 04 52.9**	**-0.1**
	3.3nm,1.2s,mb4.2,baz=103,slow=3.9,SNR=4.6						

IDC 14 20:53:20.6±1.2**, 1.48S**×**126.51E, h0**km**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.7**/15**, mbtmp3.7**/5**, ML3.9**/1**, Error ellipse: s-maj=148.0km s-min=19.6km az=68.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.88**	**158**	P	Pn	20 57 52.8	-2.4
	0.4nm,0.3s,baz=340,slow=12,SNR=25						
WB2	**Warramunga Arr**	**19.89**	**158**	*e*P	Pn	20 57 52.5	-2.7
ASAR	**Alice Springs**	**23.19**	**163**	P	P	20 58 29.4	+0.2
	1.5nm,0.7s,baz=345,slow=11,SNR=26						
STKA	**Stephens Creek**	**33.42**	**156**	P	P	21 00 01.5	+0.4
	2.7nm,0.7s,baz=331,slow=12,SNR=8.7						
SONM	**Songino Array**	**52.16**	**343**	P	P	21 02 33.2	+0.3
	0.4nm,1.0s,baz=160,slow=5.5,SNR=3.2						
MKAR	**Makanchi Array**	**61.73**	**327**	P	P	21 03 40.6	-0.2
	0.2nm,0.3s,baz=115,slow=6.8,SNR=4.3						

IDC 14 21:03:28.7±2.0**, 0.93S**×**127.76E, h0**km**, mb4.0**/3**, mb1 4.1**/4**, mb1mx3.8**/14**, mbtmp4.0**/4**, ML3.9**/1**, Error ellipse: s-maj=188.6km s-min=24.5km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.97**	**162**	Pn	Pn	21 08 02.2	-2.1
	0.4nm,0.3s,baz=345,slow=12,SNR=9.6						
ASAR	**Alice Springs**	**23.38**	**166**	P	P	21 08 39.2	0.0
	2.6nm,0.7s,baz=344,slow=10,SNR=23						
STKA	**Stephens Creek**	**33.45**	**158**	*e*P	P	21 10 11.0	+1.6
	2.8nm,0.6s						
STKA	**Stephens Creek**	**33.45**	**158**	P	P	21 10 10.0	+0.5
	4.2nm,0.7s,baz=324,slow=9.1,SNR=12						
MKAR	**Makanchi Array**	**61.96**	**326**	P	P	21 13 50.4	0.0
	0.3nm,0.4s,baz=122,slow=8.1,SNR=6.0						

*ISCJB **14** 21:20:18.5±0.6, 13.76N±0.09×90.64W±0.08, h10km, mb4.0/11, MS3.7/5, Error ellipse: s-maj=15.7km s-min=4.9km az=39.6*

*IDC **14** 21:20:18.3±0.9, 13.67N×90.64W, h0km, mb4.0/10, mb1 4.2/14, mb1mx4.0/25, mbtmp4.0/14, ML3.3/4, MS3.8/5, Ms1 3.7/5, ms1mx3.1/35, Error ellipse: s-maj=33.5km s-min=13.1km az=49.0*

*NEIC **14** 21:20:20.0±0.8, 13.86N×90.42W, h10km, mb4.4/2, Error ellipse: s-maj=22.6km s-min=8.0km az=214.0*

*CASC **14** 21:20:26.8±1.2, 13.12N×91.72W, h20km±413km, MD4.4, mb4.4(NEIC)*

ISC 14 21:20:20.3±0.6**, 13.81N**±0.09×**90.57W**±0.08**, h10**km**, n43,** σ1s05/31**, mb4.0**/11**, MS3.7**/5**, 4C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTR	**El Retiro**	**0.90**	**84**	*e*P	x	21 21 01.9	
RBDL	**Robledal**	**0.91**	**70**	*e*P	x	21 21 03.2	
RBDL				*e*S	x	21 21 30.1	
SBLS	**San Blas**	**0.92**	**88**⇑	*e*P	x	21 21 01.6	
SNJE	**San Jose**	**0.93**	**86**⇑	*e*P	x	21 21 02.2	
BOQS	**Boqueron**	**1.25**	**93**	*e*P	x	21 21 05.8	
MTO2	**Montecristo 2**	**1.31**	**63**⇑	*e*P	x	21 21 09.4	
LFRS	**El Faro**	**1.47**	**97**⇓	*e*P	x	21 21 09.0	
LCBS	**La Ceiba**	**1.55**	**96**	*e*P	x	21 21 09.0	
SNVI	**San Vicente**	**1.69**	**96**	*e*P	x	21 21 12.2	
SNVI				*e*S	x	21 21 46.9	
VSM	**San Miguel**	**2.26**	**99**⇓	*e*P	x	21 21 18.8	
CAHU	**Cacacuatique**	**2.29**	**91**	*e*P	x	21 21 20.5	
BLLM	**Bellamira**	**2.29**	**99**	*e*P	x	21 21 19.2	
CNCH	**Conchagua**	**2.71**	**101**⇑	*e*P	x	21 21 23.7	
CCIG	**Comitan**	**2.89**	**328**	*i* P	**Pb**	**21 21 11.0**	**-0.9**
CCIG				*i* S	**Sg**	**21 21 53.3**	**+0.1**
TGUH	**Tegucigalpa,Un**	**3.21**	**85**	*e*Pg	**Pb**	**21 21 17.1**	**-0.2**
SCX	**San Cristobal**	**3.53**	**326**	*e*P	**Pb**	**21 21 21.1**	**-1.7**
CMIG	**Matias Romero**	**5.29**	**309**	Pn	**Pn**	**21 21 38.7**	**-0.7**
CMIG				Sn	**Sn**	**21 22 41.5**	**+1.0**
CMIG	**Matias Romero**	**5.29**	**309**	Pn	**Pn**	**21 21 38.7**	**-0.7**
	0.3nm,0.3s,baz=154,slow=10,SNR=2.1						
CMIG				Sn	**Sn**	**21 22 41.5**	**+1.0**
	0.9nm,0.3s,baz=132,slow=21,SNR=2.7						
JTS	**JuntasAbangare**	**6.51**	**122**	Pn	**Pn**	**21 21 53.4**	**-2.8**
	36nm,1.1s						
JTS	**JuntasAbangare**	**6.51**	**122**	Pn	**Pn**	**21 21 55.7**	**-0.5**
	0.7nm,0.3s,baz=295,slow=18,SNR=2.5						
TEIG	**Tepich**	**6.75**	**19**	*e*P	**Pn**	**21 22 09.2**	**+10**
PPM	**Popocatepetl**	**9.33**	**305**	*i* P	**Pn**	**21 22 27.8**	**-7.1**
PPM				*i* S	**Sn**	**21 24 20.0**	**0.0**
ROSC	**El Rosal**	**18.31**	**118**	P	**Pn**	**21 24 35.7**	**+1.1**
	1.0nm,0.3s,baz=269,slow=22,SNR=2.8						
TXAR	**Lajitas Array**	**19.65**	**324**	P	**Pn**	**21 24 50.7**	**+0.1**
	0.1nm,0.3s,baz=152,slow=13,SNR=15						
SDV	**Santo Domingo**	**20.14**	**102**	*e*P	**P**	**21 24 55.3**	**+0.5**
SDV	**Santo Domingo**	**20.14**	**102**	P	**P**	**21 24 55.2**	**+0.4**
	4.9nm,0.6s,baz=318,slow=7.2,SNR=6.8						
LPIG	**La Paz**	**21.27**	**302**	LR	LR	21 34 42.0	
	comp=Z,101nm,19.2s,MS3.2,baz=217,slow=41						
MNTX	**Cornudas Mount**	**22.40**	**325**	*e*P	**P**	**21 25 18.6**	**-0.3**
	33nm,1.6s,mb4.5						
TKL	**Tuckaleechee C**	**22.60**	**15**	P	**P**	**21 25 23.8**	**+2.7**
	5.0nm,0.7s,mb4.1,baz=201,slow=6.5,SNR=4.4						
TKL				LR	LR	21 35 16.6	
	comp=Z,233nm,19.8s,MS3.6,baz=82,slow=40						
AMTX	**Amarillo**	**23.26**	**336**	P	**P**	**21 25 27.4**	**-0.7**
	7.1nm,0.7s,mb4.2						
ATAH	**Atahualpa**	**23.95**	**149**	P	**P**	**21 25 35.8**	**+1.0**
	5.7nm,0.7s,mb4.1,baz=51,slow=6.5,SNR=3.2						
ANMO	**Albuquerque**	**25.48**	**328**	P	**P**	**21 25 49.4**	**+0.7**
	1.1nm,0.6s,mb3.6,baz=114,slow=10.0,SNR=2.8						
PDAR	**Pinedale Array**	**33.19**	**334**	P	**P**	**21 26 58.5**	**+1.4**
	0.3nm,0.8s,mb3.2,baz=270,slow=1.8,SNR=2.5						
PDAR				PcP	PcP	21 29 38.6	-1.3
	0.4nm,0.8s,baz=128,slow=5.8,SNR=3.3						
NVAR	**Mina Array Bea**	**34.70**	**320**	P	**P**	**21 27 11.8**	**+1.4**
NVAR	**Mina Array Bea**	**34.70**	**320**	P	**P**	**21 27 11.8**	**+1.4**
	4.4nm,0.8s,mb4.4,baz=129,slow=9.6,SNR=19						
ULM	**Lac du Bonnet**	**36.60**	**354**	P	**P**	**21 27 25.9**	**-0.6**
	1.6nm,0.6s,mb4.0,baz=180,slow=9.3,SNR=7.4						
ULM				LR	LR	21 46 12.1	
	comp=Z,78nm,18.4s,MS3.5,baz=35,slow=42						
SIV	**San Ignacio**	**41.55**	**134**	P	**P**	**21 28 06.6**	**-1.7**
	4.1nm,1.0s,mb4.0,baz=304,slow=10,SNR=9.0						
SCHQ	**Schefferville**	**44.93**	**19**	P	**P**	**21 28 35.7**	**+0.5**
SCHQ				LR	LR	21 48 46.7	
SCHQ	**Schefferville**	**44.93**	**19**	P	**P**	**21 28 35.7**	**+0.5**
	5.4nm,0.8s,mb4.4,baz=213,slow=8.6,SNR=11						
SCHQ				LR	LR	21 48 46.7	
	comp=Z,113nm,19.8s,MS3.8,baz=304,slow=38						
YKA	**Yellowknife Ar**	**51.54**	**346**	P	**P**	**21 29 25.6**	**-0.4**
	1.3nm,0.9s,mb3.9,baz=150,slow=7.6,SNR=15						
SFJD	**Kangerlussuaq**	**59.28**	**17**	LR	LR	21 56 35.6	
	comp=Z,179nm,18.8s,MS4.2,baz=217,slow=37						
RES	**Resolute Bay**	**60.92**	**359**	*e*P	**P**	**21 30 31.3**	**-1.5**
	60nm,0.7s						
WRA	**Warramunga Arr**	**136.70**	**256**	PKP	PKPdf	21 39 43.4	-0.4
	0.6nm,0.9s,baz=89,slow=1.8,SNR=4.8						

*ISCJB **14** 21:33:58.1±1.1, 19.94S±0.05×69.02W±0.07, h91km±9km, mb4.8/36, Error ellipse: s-maj=11.2km s-min=6.8km az=154.5*

*NEIC **14** 21:34:00.9±0.3, 19.99S×68.98W, mb4.9/20, Error ellipse: s-maj=8.9km s-min=5.8km az=52.0*

NEIC Felt [IV] at Huara and Iquique; [II] at Arica, Pisagua and Pozo Almonte.

*IDC **14** 21:34:00.8±0.5, 19.99S×69.00W, h101km±3km, mb4.4/16, mb1 4.6/18, mb1mx4.5/21, mbtmp4.5/18, MS3.6/2, Ms1 3.6/2, ms1mx3.0/27, Error ellipse: s-maj=18.4km s-min=11.4km az=60.0*

*LDG **14** 21:34:00.9±0.4, 19.49S×69.08W, h100km, Mb5.1/6, Ms2.9/1, Error ellipse: s-maj=20.8km s-min=11.5km az=31.0*

*BJI **14** 21:34:02.9, 20.00S×69.00W, h103km*

ISC 14 21:34:00.2±0.9**, 19.93S**±0.05×**68.97W**±0.07**, h93**km±8km**, h103**km±1.1km**:pP-P, n93,** σ0s89/81**, mb4.8**/36**, 6C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.71**	**13**	P	**Pn**	**21 35 01.3**	**+6.0**
LPAZ				S	**Sn**	**21 35 45.0**	**+6.9**
LPAZ	**La Paz**	**3.71**	**13**	P	**Pn**	**21 35 01.3**	**+6.0**
	66nm,0.3s,baz=189,slow=7.8,SNR=824						
LPAZ				S	**Sn**	**21 35 45.0**	**+6.9**
	11nm,0.3s,baz=350,slow=3.0,SNR=2.1						
ARE	**Arequipa**	**4.20**	**325**⇓	*i*P	**Pn**	**21 35 01.8**	**-0.2**
ARE				*i*		21 35 07.5	
ARE				*e*S	**Sn**	**21 35 47.0**	**-3.0**
SIV	**San Ignacio**	**8.47**	**64**	P	**Pn**	**21 36 01.8**	**+1.7**
	40nm,0.3s,baz=253,slow=12,SNR=1270						
LCO	**Las Campanas**	**9.18**	**190**	*e*Pn	**Pn**	**21 36 02.3**	**-7.4**
	214nm,0.6s						
LCO				Sn	**Sn**	**21 37 52.1**	**+1.0**
NNA	**Nana**	**10.94**	**315**	Pn	**Pn**	**21 36 31.2**	**-2.5**
NNA				*e*Sn	**Sn**	**21 38 29.6**	**-4.6**
NNA				S	**Sn**	**21 38 34.3**	**+0.1**
NNA	**Nana**	**10.94**	**315**	P	**Pn**	**21 36 31.9**	**-1.8**
	3.0nm,0.3s,baz=161,slow=9.6,SNR=8.4						
NNA				S	**Sn**	**21 38 34.3**	**+0.1**
	5.5nm,0.3s,baz=233,slow=13,SNR=3.6						
CFAA	**Coronel Fontan**	**11.64**	**177**	P	**Pn**	**21 36 36.7**	**-6.5**
CFAA				S	**Sn**	**21 38 57.6**	**+6.4**
CFAA	**Coronel Fontan**	**11.64**	**177**	P	**Pn**	**21 36 36.7**	**-6.5**
	0.3nm,0.3s,baz=353,slow=12,SNR=33						
CFAA				S	**Sn**	**21 38 57.6**	**+6.4**
	0.2nm,0.3s,baz=218,slow=19,SNR=2.0						
ATAH	**Atahualpa**	**15.78**	**323**	P	**Pn**	**21 37 37.9**	**+0.8**
	0.4nm,0.3s,baz=26,slow=4.4,SNR=5.8						
TRQA	**Tornquist**	**19.05**	**163**	*e*P	**Pn**	**21 38 13.8**	**-3.0**
	55nm,0.9s						
OTAV	**Otavalo**	**22.09**	**334**	*e*P	**P**	**21 38 50.5**	**+2.6**
	16nm,0.9s,mb4.3						
SDV	**Santo Domingo**	**28.68**	**357**	*e*P	**P**	**21 39 48.3**	**-0.2**
SDV				LR	LR	21 52 23.3	
SDV	**Santo Domingo**	**28.68**	**357**	P	**P**	**21 39 48.3**	**-0.2**
	7.1nm,0.5s,mb4.6,baz=96,slow=6.4,SNR=8.3						
SDV				LR	LR	21 52 23.3	
	comp=Z,71nm,21.2s,baz=182,slow=38						
PCRV	**Puerto La Cruz**	**30.22**	**8**	LR	LR	21 53 29.1	
	comp=Z,204nm,18.4s,baz=26,slow=39						
USHA	**Ushuaia**	**34.84**	**179**	P	**P**	**21 40 40.8**	**-1.2**
	12nm,0.8s,mb4.8,baz=319,slow=1.9,SNR=6.4						
RCBR	**Riachuelo**	**35.05**	**71**	*e*P	**P**	**21 40 45.2**	**+0.8**
	64nm,0.8s,mb5.5						
SJG	**San Juan**	**37.91**	**4**	P	**P**	**21 41 07.1**	**-1.4**
	18nm,0.4s,mb5.3,baz=239,slow=1.4,SNR=6.9						
TEIG	**Tepich**	**44.16**	**334**	P	**P**	**21 41 60.0**	**+0.1**
	7.9nm,0.8s,mb4.5,baz=41,slow=6.7,SNR=4.9						
CMIG	**Matias Romero**	**44.74**	**324**	P	**P**	**21 42 05.1**	**+0.7**
	4.8nm,1.1s,mb4.2,baz=120,slow=4.9,SNR=4.4						
NHSC	**New Hope**	**53.81**	**348**	P	**P**	**21 43 13.4**	**+0.1**
	51nm,0.8s,mb5.6						
TKL	**Tuckaleechee C**	**57.04**	**346**	P	**P**	**21 43 35.3**	**-1.1**
	4.2nm,0.7s,mb4.6,baz=193,slow=8.4,SNR=5.3						
TKL				pP	pP	21 44 01.4	+2.0
	11nm,0.7s,baz=140,slow=8.4,SNR=6.7						
SWET	**Sewanee**	**57.16**	**343**	*e*P	**P**	**21 43 36.7**	**-0.6**
SWET				*e*	pP	21 44 01.3	+1.1
MIAR	**Mount Ida**	**59.01**	**336**	*e*P	**P**	**21 43 49.8**	**-0.5**
	4.5nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**59.32**	**325**	P	**P**	**21 43 52.2**	**-0.2**
	0.3nm,0.5s,baz=158,slow=9.7,SNR=3.6						
TXAR				pP	pP	21 44 17.1	+1.6
	1.9nm,0.9s,baz=150,slow=8.6,SNR=6.6						
MCWV	**Mont Chateau**	**60.14**	**350**	*e*P	**P**	**21 43 58.6**	**+0.7**
	15nm,0.8s,mb5.1						
SIUC	**Southern Illin**	**60.42**	**342**	P	**P**	**21 43 58.8**	**-1.0**
	18nm,0.6s,mb5.3						
FVM	**French Village**	**61.04**	**341**	*e*P	**P**	**21 44 03.7**	**-0.3**
	7.7nm,0.4s,mb5.1						
FVM				*e*	pP	21 44 29.1	+1.9
ERPA	**Erie**	**62.57**	**351**	*e*P	**P**	**21 44 14.8**	**+0.6**
	50nm,0.8s,mb5.5						
SNAA	**Sanae**	**63.77**	**161**	P	**P**	**21 44 21.5**	**-0.4**
	4.3nm,0.7s,mb4.4,baz=257,slow=7.3,SNR=11						
SNAA				pP	pP	21 44 46.8	+1.6
	2.3nm,0.8s,baz=277,slow=8.1,SNR=2.2						
MSNY	**Massena**	**64.84**	**355**	*e*P	**P**	**21 44 29.9**	**+0.9**
SDCO	**Great Sand Dun**	**66.88**	**329**	*e*P	**P**	**21 44 43.4**	**+1.1**
	7.4nm,0.9s,mb4.5						
SDCO				*e*	pP	21 45 08.1	+2.3
LIC	**Lamto**	**68.01**	**74**	*e*P	**P**	**21 44 49.7**	**-0.3**
	25nm,0.5s,mb5.0						
LIC	**Lamto**	**68.01**	**74**	*e*P	**P**	**21 44 49.7**	**-0.3**
	44nm,0.4s,mb5.6						
TIC	**Toumodi**	**68.19**	**74**	*e*P	**P**	**21 44 50.8**	**-0.4**
	18nm,0.6s,mb5.0						
KIC	**Kosan Boka**	**68.33**	**74**	*e*P	**P**	**21 44 51.5**	**-0.5**
	128nm,0.5s						
DBIC	**Dimbokro**	**68.35**	**74**	P	**P**	**21 44 52.0**	**-0.1**
	40nm,0.7s,mb5.4,baz=222,slow=6.1,SNR=82						
QSPA	**South Pole Qui**	**70.25**	**180**	*e*P	**P**	**21 45 03.1**	**+0.3**
	14nm,1.0s,mb4.8						
QSPA				*e*	pP	21 45 28.6	+2.1
CCUT	**Cedar City**	**70.81**	**324**	*e*P	**P**	**21 45 08.7**	**+2.0**
CCUT				*e*	pP	21 45 33.3	+2.8
TPNV	**Topopah Spring**	**72.03**	**322**	*e*P	**P**	**21 45 16.0**	**+1.9**
	17nm,1.2s,mb4.8						
AGMN	**Agassiz Refuge**	**72.06**	**341**	*e*P	**P**	**21 45 13.7**	**-0.3**
	6.3nm,0.7s,mb4.5						
PDAR	**Pinedale Array**	**72.73**	**330**	P	**P**	**21 45 18.3**	**+0.2**
	0.4nm,0.6s,baz=75,slow=3.8,SNR=2.2						
PDAR				pP	pP	21 45 45.7	+3.7
	1.1nm,0.6s,baz=127,slow=6.2,SNR=3.3						
ULM	**Lac du Bonnet**	**73.81**	**342**	P	**P**	**21 45 24.0**	**-0.3**
	4.9nm,0.6s,mb4.5,baz=166,slow=6.7,SNR=22						
NVAR	**Mina Array Bea**	**74.23**	**322**	P	**P**	**21 45 28.2**	**+1.2**
	0.7nm,0.5s,mb3.7,baz=145,slow=8.0,SNR=7.0						
NVAR				pP	pP	21 45 53.5	+2.6
	2.9nm,0.9s,baz=136,slow=7.6,SNR=5.8						
SCHQ	**Schefferville**	**74.48**	**1**	P	**P**	**21 45 28.6**	**+0.6**
	9.6nm,0.8s,mb4.6,baz=162,slow=4.2,SNR=20						
PAHR	**Pah Rah Range**	**75.71**	**322**	P	**P**	**21 45 35.0**	**-0.5**
	6.8nm,0.9s,mb4.4						
PAHR				*e*pP	pP	21 46 02.3	+2.8
PAHR				*e*sP	sP	21 46 13.5	+3.9
TOA0	**Torodi Ar. Sit**	**76.89**	**71**	*e*P	**P**	**21 45 42.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**76.89**	**71**	P	**P**	**21 45 42.2**	**-0.5**
TORD				pP	pP	21 46 09.5	+2.7
TORD	**Torodi Ar. Bea**	**76.89**	**71**	P	**P**	**21 45 42.2**	**-0.5**
	15nm,0.4s,mb5.1,baz=254,slow=5.3,SNR=78						
TORD				pP	pP	21 46 09.5	+2.7
	5.3nm,0.7s,baz=250,slow=5.6,SNR=1.9						
SYO	**Syowa Base**	**77.98**	**160**⇑	*e*P	pP	21 46 12.6	+0.6
TSUM	**Tsumeb**	**80.55**	**107**	*e*P	**P**	**21 46 03.2**	**+0.4**
	18nm,1.0s,mb4.9						
FCC	**Fort Churchill**	**81.10**	**347**	*e*P	**P**	**21 46 04.9**	**+0.2**
	6.3nm,0.8s,mb4.5						
EDM	**Edmonton**	**82.32**	**335**	*e*P	**P**	**21 46 10.6**	**-0.7**
BOSA	**Boshof**	**84.23**	**118**	P	**P**	**21 46 21.9**	**0.0**
	9.3nm,0.8s,mb4.6,baz=255,slow=3.4,SNR=12						
ESDC	**Sonseca Array**	**84.76**	**45**	P	**P**	**21 46 25.2**	**+1.1**
	3.9nm,0.9s,mb4.3,baz=242,slow=5.2,SNR=12						
ETSF	**Etsaut**	**88.59**	**43**	*e*P	**P**	**21 46 43.2**	**+0.5**
EPF	**Esparros**	**89.23**	**43**	*e*P	**P**	**21 46 45.2**	**-0.5**
ROSF	**Rostrenen**	**89.66**	**37**⇑	*i*P	**P**	**21 46 47.0**	**-0.5**
YKA	**Yellowknife Ar**	**89.69**	**341**	P	**P**	**21 46 47.7**	**+0.3**
YKA				pP	pP	21 47 14.3	+2.3
YKA	**Yellowknife Ar**	**89.69**	**341**	P	**P**	**21 46 47.7**	**+0.3**
	7.2nm,0.7s,mb4.9,baz=133,slow=4.6,SNR=151						
YKA				pP	pP	21 47 14.3	+2.3
	3.7nm,0.7s,baz=134,slow=4.8,SNR=4.0						
SGMF	**Saint Gilles**	**90.03**	**38**	*e*P	**P**	**21 46 48.4**	**-0.8**
LFF	**La Frestale**	**90.39**	**42**⇑	*i*P	**P**	**21 46 50.9**	**-0.1**
	26nm,0.7s,mb5.2						
LFF	**La Frestale**	**90.39**	**42**⇑	*i*P	**P**	**21 46 50.9**	**-0.1**
	13nm,0.7s,mb5.2						
MTLF	**Montolieu**	**90.59**	**44**	*e*P	**P**	**21 46 51.6**	**-0.4**
MFF	**Saint Martin d**	**90.64**	**40**⇑	*i*P	**P**	**21 46 51.8**	**-0.3**
RJF	**Les Rejaudoux**	**91.05**	**42**⇑	*i*P	**P**	**21 46 53.6**	**-0.5**
GRR	**Gorron**	**91.08**	**38**	*e*P	**P**	**21 46 53.2**	**-0.9**
	11nm,0.9s,mb4.7						
GRR	**Gorron**	**91.08**	**38**	*e*P	**P**	**21 46 53.2**	**-0.9**
	5.7nm,0.9s,mb4.7						
CAF	**Calviac**	**91.22**	**42**	*e*P	**P**	**21 46 54.7**	**-0.2**
LDF	**La Druitiere**	**91.61**	**38**	*e*P	**P**	**21 46 55.8**	**-0.8**
KEST	**Kesra**	**92.41**	**53**	P	**P**	**21 47 01.2**	**+0.6**
	1.7nm,0.8s,mb4.3,baz=255,slow=10,SNR=4.6						
ORIF	**Oris-en-Rattie**	**93.66**	**43**	*e*P	**P**	**21 47 06.6**	**+0.5**
	1.8nm,0.6s,mb4.3						
ORIF	**Oris-en-Rattie**	**93.66**	**43**	*e*P	**P**	**21 47 06.6**	**+0.5**
	0.9nm,0.6s,mb4.3						
LPG	**La Plagne**	**94.45**	**43**	*e*P	**P**	**21 47 10.5**	**+0.7**
ASAR	**Alice Springs**	**131.27**	**208**	PKP	PKPdf	21 53 00.6	-1.6
	0.3nm,0.5s,baz=102,slow=1.5,SNR=5.6						
ASAR				pPKP	pPKPdf	21 53 27.9	-0.1
	0.6nm,0.5s,baz=133,slow=1.7,SNR=5.4						
WRA	**Warramunga Arr**	**134.27**	**211**	PKhKP		21 52 56.8	
	0.5nm,0.9s,baz=113,slow=2.8,SNR=5.5						
WRA				PKP	PKPdf	21 53 07.2	-0.8
	0.6nm,0.6s,baz=154,slow=1.8,SNR=14						
WRA				pPKP	pPKPdf	21 53 34.0	+0.3
	0.9nm,0.6s,baz=153,slow=1.6,SNR=4.1						
AAK	**Ala-Archa**	**141.86**	**45**	PKPpre	PKPdf	21 53 17.6	-3.5
KSH	**Kashi**	**144.14**	**49**	*i* PKPR	PKPdf	21 53 25.6	+0.3
MKAR	**Makanchi Array**	**144.39**	**35**	PKP	PKPdf	21 53 24.5	-1.0
	5.5nm,0.5s,baz=311,slow=3.6,SNR=98						
MKAR				pPKP	pPKPdf	21 53 52.3	+1.1
	4.4nm,0.8s,baz=324,slow=5.3,SNR=3.3						
THN	**Thein Dam**	**146.11**	**61**	*e*P	PKPdf	21 53 29.9	+1.0
TLY	**Talaya**	**147.79**	**9**	*e*PKPbc	PKPbc	21 53 34.7	+0.6
TLY				*e*PKPab	PKPab	21 53 38.0	+1.4
HYB	**Hyderabad**	**149.16**	**89**	*i* PKP	PKPbc	21 53 39.0	+0.4
WMQ	**Urumqi**	**149.22**	**34**	*e*PKP	PKPbc	21 53 38.3	+0.3
HIA	**Hailar**	**149.91**	**349**	*e*PKPbc	PKPbc	21 53 39.3	-0.2
MJAR	**Matsushiro Arr**	**151.04**	**311**	PKPbc	PKPbc	21 53 41.3	-1.3
MJAR				pPKPbc	pPKPbc	21 54 08.3	+0.1
MJAR	**Matsushiro Arr**	**151.04**	**311**	PKPbc	PKPbc	21 53 41.3	-1.3
	1.3nm,0.5s,baz=99,slow=1.5,SNR=6.3						
MJAR				pPKPbc	pPKPbc	21 54 08.3	+0.1
	3.2nm,0.7s,baz=108,slow=1.5,SNR=5.3						
SONM	**Songino Array**	**151.91**	**7**	PKP	PKPdf	21 53 38.7	+1.0
	0.8nm,0.8s,baz=320,slow=1.0,SNR=8.7						
SONM				PKPbc	PKPbc	21 53 44.8	+0.5
	7.1nm,0.8s,baz=298,slow=1.2,SNR=61						
SONM				pPKP	pPKPdf	21 54 05.2	+1.7
	2.6nm,0.5s,baz=292,slow=1.8,SNR=5.6						
ULN	**Ulaanbaatar**	**151.95**	**6**	*e*PKPbc	PKPbc	21 53 44.5	+0.2
ULN				*e*PKPab	PKPab	21 53 54.7	+0.9
GKN	**Gorkha**	**154.62**	**66**	*e*P	PKPab	21 54 05.1	-0.8
	25nm,0.5s						
KKN	**Kakani**	**155.22**	**67**	*e*P	PKPab	21 54 08.3	-0.1
	26nm,1.0s						
JIRN	**Jiri**	**156.03**	**67**	*e*P	PKPab	21 54 11.8	-0.1
	12nm,0.9s						
ODAN	**Odare**	**157.25**	**68**	*e*P	PKPab	21 54 17.3	+0.1
	23nm,0.8s						
TAPN	**Taplejung**	**157.42**	**66**	*e*P	PKPab	21 54 18.0	+0.1
	15nm,1.1s						

*IDC **14** 21:59:08.8±0.4, 11.75N×86.50W, h0km, mb4.7/23, mb1 4.8/24, mb1mx4.8/28, mbtmp4.7/24, ML5.0/1, MS4.9/25, Ms1 4.9/25, ms1mx4.8/32, Error ellipse: s-maj=17.1km s-min=10.1km az=56.0*

*SZGRF **14** 21:59:10.4, 11.51N×87.16W, h33km, mb4.7, MS5.4, Near coast of Nicaragua*

*BJI **14** 21:59:13.0, 11.50N×86.60W, h35km, mB5.4, Ms5.6, Msz5.2*

*NEIC **14** 21:59:13.1±0.2, 11.51N×86.59W, h35km, mb5.3/57, MS5.1/112, MW5.5, MD5.4(SNET), Error ellipse: s-maj=5.9km s-min=3.9km az=212.0, Moment Tensor Solution. s29 Moment tensor: Scale 10^{17}Nm; M_{rr}1.57; $M_{\theta\theta}$0.44; $M_{\phi\phi}$-2.00; $M_{r\theta}$0.34; $M_{\theta\phi}$0.98; $M_{\phi r}$-0.42; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s353.00000°, δ39.00000°, λ109.00000°. NP2:ϕ_s150.00000°, δ53.00000°, λ76.00000°. Principal axes: T 1.6700, Plg76.0000°, Azm12.0000°; N 0.7400, Plg12.0000°, Azm159.0000°; P -2.4100, Plg7.0000°, Azm250.0000°;*

NEIC Felt [II] at San Salvador, El Salvador. Felt at Managua and San Marcos, Nicaragua.

*GCMT **14** 21:59:13.1±0.2, 11.19N×87.14W, h35km, MW5.5/96, Moment Tensor Solution. s96,c172; s96,c172; Duration: 1s4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.73±.04; $M_{\theta\theta}$-1.64±.03; $M_{\phi\phi}$-0.08±.04; $M_{r\theta}$0.97±.04;*

$M_{\theta\phi}$1.20±.03; $M_{\phi r}$-0.71±.06; Best double couple: $M_0$2.34300×10^{17} NP1:ϕ_s291.00000°,δ30.00000°, λ79.00000°. NP2:ϕ_s124.00000°,δ60.00000°,λ96.00000°. Principal axes: T 2.0690, Plg74.0000°, Azm50.0000°; N 0.5500, Plg5.0000°, Azm301.0000°; P -2.6170, Plg15.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*MOS **14** 21:59:13.0±0.9, 1194N×8637W, h33km, mb5.1/26, MS5.2/24 Error ellipse: s-maj=8.4km s-min=5.2km az=106.3*

*CASC **14** 21:59:14.3±2.9, 1162N×8682W, h101km±29km, MD4.8, mb5.3(NEIC)*

*ISCJB **14** 21:59:16.6±0.3, 1159N±003×8666W±003, h80km±2km, mb5.0/80, Error ellipse: s-maj=5.6km s-min=3.1km az=35.3*

ISC 14 21:59:17.5±0.3**, 1159N**±003×**8664W**±002**, h73**km±2km**,** **h89**km±.4km**:pP-P, n760, σ0.88**/633**, mb5.0**/80**, 129C-132D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	**El Crucero**	**0.52**	**41**	⇓eP	**Pn**	**21 59 30.6**	**-0.2**
TICN	**Ticuantepe**	**0.60**	**42**	⇓iP	**Pn**	**21 59 31.5**	**0.0**
XAVN	**Gruta Xavier**	**0.64**	**29**	⇓iP	**Pn**	**21 59 31.6**	**-0.3**
APON	**Apoyo**	**0.65**	**60**	⇓iP	**Pn**	**21 59 32.2**	**+0.1**
TISN	**Laguna Tiscapa**	**0.66**	**34**	⇑iP	**Pn**	**21 59 32.0**	**-0.2**
MGAN	**Managua**	**0.68**	**35**	⇓iP	**Pn**	**21 59 32.3**	**-0.1**
MOMJ	**Momotombo**	**0.82**	**7**	⇓iP	**Pn**	**21 59 33.3**	**-0.7**
MOMJ				eS	**Sn**	**21 59 49.1**	**+2.9**
SSNN	**San Juan del S**	**0.83**	**111**	⇑eP	**Pn**	**21 59 33.4**	**-0.7**
HUEN		**0.87**	**32**	⇓eP	**Pn**	**21 59 35.0**	**+0.4**
HUEN				eP		21 59 35.1	
TEL3	**Telica 3**	**0.99**	**349**	eP	**Pn**	**21 59 34.6**	**-1.6**
CONN	**Concepcion**	**1.00**	**91**	⇓eP	**Pn**	**21 59 36.1**	**-0.1**
TELN	**Telica**	**1.02**	**350**	eP	**Pn**	**21 59 35.0**	**-1.5**
MADN	**Villa Maderas**	**1.10**	**99**	⇑iP	**Pn**	**21 59 37.5**	**+0.1**
CUI		**1.71**	**122**	eP	**Pn**	**21 59 44.5**	**-0.8**
CNCH	**Conchagua**	**2.04**	**325**	⇑eP	x	21 59 46.5	
JTS	**JuntasAbangare**	**2.10**	**128**	Pn	**Pn**	**21 59 49.9**	**-0.8**
	20µm,0.9s						
JTS	**JuntasAbangare**	**2.10**	**128**	ePn	**Pn**	**21 59 45.4**	**-5.3**
JTS	**JuntasAbangare**	**2.10**	**128**	c iP	**Pn**	**21 59 47.6**	**-3.1**
JTS	**JuntasAbangare**	**2.10**	**128**	Pn	**Pn**	**21 59 50.0**	**-0.6**
	24nm,0.3s,baz=312,slow=22,SNR=110						
JTS				Sn	**Sn**	**22 00 13.2**	**-2.7**
	274nm,0.3s,baz=293,slow=19,SNR=10						
JTS				LR	LR	22 00 30.1	
	comp=Z,11µm,18.6s,baz=320,slow=39						
JCR	**Jicaral**	**2.29**	**139**	eP	**Pn**	**21 59 50.8**	**-2.4**
JCR				eS	**Sn**	**22 00 26.3**	**+5.8**
BLLM	**Bellamira**	**2.41**	**320**	⇓eP	x	21 59 50.7	
VSM	**San Miguel**	**2.42**	**319**	⇑eP	x	21 59 50.8	
TGUH	**Tegucigalpa,Un**	**2.53**	**346**	ePn	**Pn**	**21 59 55.1**	**-1.3**
TGUH	**Tegucigalpa,Un**	**2.53**	**346**	⇑eP	**Pn**	**21 59 55.0**	**-1.4**
TGUH				eS	**Sn**	**22 00 21.7**	**-4.5**
TGUH				eS	**Sn**	**22 00 26.3**	**+0.1**
CGA2	**Cerro Gallo 2**	**2.65**	**126**	eP	**Pn**	**21 59 58.0**	**0.0**
CAHU	**Cacacuatique**	**2.65**	**325**	⇓eP	x	21 59 55.3	
CAHU				eP	x	21 59 55.5	
PRS1	**Puriscal**	**2.79**	**125**	eP	**Pn**	**22 00 01.5**	**+1.5**
SNVI	**San Vicente**	**2.94**	**313**	eP	x	21 59 58.6	
LAJ	**Bijagual**	**3.02**	**124**	eP	**Pn**	**21 59 59.0**	**-4.0**
SJS	**Escuela Geolog**	**3.03**	**123**	eP	**Pn**	**22 00 05.7**	**+2.5**
LCBS	**La Ceiba**	**3.07**	**312**	⇑eP	x	21 59 58.8	
LCBS				eP	x	21 59 59.2	
LFRS	**El Faro**	**3.11**	**311**	⇑eP	x	21 59 59.3	
LBRS	**Las Brisas**	**3.17**	**313**	eP	x	22 00 00.7	
LCR2	**La Lucha 2**	**3.18**	**125**	eP	**Pn**	**22 00 06.2**	**+0.9**
LFU	**La Fuente**	**3.23**	**312**	eP	x	22 00 02.0	
QCR	**Quepos**	**3.25**	**131**	eP	**Pn**	**22 00 06.0**	**-0.2**
URSC	**Urasca**	**3.31**	**122**	eP	**Pn**	**22 00 08.6**	**+1.5**
BOQS	**Boqueron**	**3.34**	**310**	⇑eP	x	22 00 05.8	
BUS	**Buena Vista**	**3.48**	**125**	eP	**Pn**	**22 00 11.3**	**+1.9**
SBLS	**San Blas**	**3.67**	**308**	eP	x	22 00 07.8	
SNJE	**San Jose**	**3.67**	**308**	eP	x	22 00 08.5	
RTR	**El Retiro**	**3.72**	**308**	eP	x	22 00 08.8	
MTO2	**Montecristo 2**	**3.85**	**317**	⇓eP	x	22 00 10.7	
RBDL	**Robledal**	**3.88**	**311**	⇓eP	x	22 00 10.9	
RBDL				eP	x	22 00 11.3	
BAR1		**4.02**	**125**	eP	**Pn**	**22 00 17.5**	**+0.7**
SCX	**San Cristobal**	**7.74**	**312**	eP	**Pn**	**22 01 05.0**	**-2.5**
TEIG	**Tepich**	**8.73**	**350**	ePn	**Pn**	**22 01 22.1**	**+1.1**
TEIG	**Tepich**	**8.73**	**350**	Pn	**Pn**	**22 01 20.8**	**-0.3**
	1.3nm,0.3s,baz=156,slow=14,SNR=15						
TEIG				LR	LR	22 05 21.7	
	comp=Z,12µm,19.1s,baz=170,slow=43						
CMIG	**Matias Romero**	**9.68**	**305**	Pn	**Pn**	**22 01 30.5**	**-3.5**
	14nm,0.3s,baz=102,slow=9.0,SNR=96						
CMIG				Sn	**Sn**	**22 03 15.8**	**-5.3**
	1.6nm,0.3s,baz=271,slow=23,SNR=2.5						
HUIG	**Huatulco**	**10.09**	**295**	i P	**Pn**	**22 01 36.2**	**-3.5**
OXX	**Oaxaca**	**11.19**	**300**	eP	**Pn**	**22 01 52.0**	**-2.6**
BBJ	**Bamboo Saint A**	**11.29**	**52**	⇑iP	**Pn**	**22 02 03.0**	**+6.9**
STH	**Stony Hill**	**11.48**	**55**	⇑iP	**Pn**	**22 02 05.4**	**+6.7**
GWJ	**Greenwich**	**11.55**	**55**	⇑iP	**Pn**	**22 02 06.3**	**+6.7**
SOR	**Soroa**	**11.67**	**17**	eP	**Pn**	**22 02 06.7**	**+5.6**
PNIG	**Pinotepa**	**12.12**	**294**	eP	**Pn**	**22 02 01.4**	**-6.0**
MGV	**Manicaragua**	**12.25**	**30**	eP	**Pn**	**22 02 13.9**	**+4.9**
LMGC	**Las Mercedes**	**12.52**	**47**	eP	**Pn**	**22 02 12.5**	**-0.3**
	baz=214						
LMGC				eS	**Sn**	**22 04 45.2**	**+15**
	comp=N,4µm,18.6s						
LMGC				e			
	comp=E,7µm,18.2s						
PAYG	**Puerto Ayora**	**12.71**	**197**	eP	**Pn**	**22 02 10.5**	**-4.9**
	comp=E,672nm,2.2s						
PPM	**Popocatepetl**	**13.74**	**304**	i P	**Pn**	**22 02 27.2**	**-1.9**
ACX	**Acapulco**	**13.89**	**294**	eP	**Pn**	**22 02 28.0**	**-3.1**
ROSC	**El Rosal**	**13.90**	**118**	Pn	**Pn**	**22 02 33.7**	**+2.5**
	comp=E,0.7nm,0.3s,baz=300,slow=10,SNR=2.9						
ROSC				LR	LR	22 07 38.3	
	comp=E,6µm,21.9s,baz=338,slow=37						
OTAV	**Otavalo**	**13.91**	**144**	eP	**Pn**	**22 02 31.1**	**-0.2**
YAIG	**Yautepec**	**13.99**	**303**	i P	**Pn**	**22 02 30.7**	**-1.7**
PLIG	**Platanillo**	**14.14**	**300**	i P	**Pn**	**22 02 32.5**	**-1.9**
CAIG	**El Cayaco**	**14.27**	**294**	eP	**Pn**	**22 02 33.0**	**-3.1**
MASC	**Masc**	**14.67**	**53**	eP	**Pn**	**22 02 48.8**	**+7.6**
ZIIG	**Zihuatanejo**	**15.54**	**294**	i P	**Pn**	**22 02 52.0**	**-0.4**
SDV	**Santo Domingo**	**15.98**	**98**	ePn	**Pn**	**22 03 00.8**	**+2.7**
SDV	**Santo Domingo**	**15.98**	**98**	Pn	**Pn**	**22 03 00.1**	**+2.1**
	comp=E,1.4nm,0.3s,baz=308,slow=6.8,SNR=19						
SDV				PcP	PcP	22 07 54.3	+2.7
	comp=E,0.3nm,0.3s,baz=261,slow=5.0,SNR=6.8						
MOIG	**Morelia**	**16.14**	**302**	i P	**Pn**	**22 02 58.4**	**-1.7**
SDDR	**Presa de Saban**	**16.53**	**62**	eP	**Pn**	**22 03 07.7**	**+2.9**
DWPF	**Disney**	**17.14**	**16**	ePn	**Pn**	**22 03 15.1**	**+2.7**
KVTX	**Kingsville**	**19.06**	**328**	ePn	**Pn**	**22 03 34.4**	**-1.3**
BRAL	**Brewton**	**19.33**	**359**	Pn	**Pn**	**22 03 38.4**	**-0.4**
CJM	**Chamela**	**19.38**	**296**	i P	**Pn**	**22 03 39.9**	**+0.5**
HKT	**Hockley**	**20.17**	**336**	ePn	**P**	**22 03 46.8**	**+0.6**
	comp=E,558nm,1.1s						
HKT				LR	LR		
	comp=Z,1µm,20.0s						
HKT	**Hockley**	**20.17**	**336**	eP	**P**	**22 03 46.8**	**+0.7**
HKT				pmax	pmax		
	comp=Z,558nm,1.1s						
HKT				MLR	MLR		
	comp=Z,1µm,20.0s						
ATAH	**Atahualpa**	**20.21**	**156**	P	**P**	**22 03 48.6**	**+1.9**
	comp=Z,3.2nm,0.5s,baz=55,slow=12,SNR=3.5						
ATAH				LR	LR	22 10 48.9	
	comp=Z,9µm,19.5s,baz=339,slow=34						
SJG	**San Juan**	**20.83**	**69**	P	**P**	**22 03 50.9**	**-2.5**
SJG				epP		22 04 07.6	
SJG				LR	LR	22 11 09.4	
SJG	**San Juan**	**20.83**	**69**	P	**P**	**22 03 50.9**	**-2.5**
SJG				e*PP		22 04 07.6	
SJG	**San Juan**	**20.83**	**69**	P	**P**	**22 03 50.9**	**-2.5**
	comp=Z,3.1nm,0.3s,baz=255,slow=15,SNR=1.7						
SJG				LR	LR	22 11 09.5	
	comp=Z,4µm,21.0s,baz=358,slow=35						
LRAL	**Lakeview Retre**	**21.35**	**359**	ePn	**P**	**22 04 00.2**	**+1.4**
LRAL				LR	LR		
	comp=Z,3µm,20.0s						
MTP	**Monte Pirata**	**21.38**	**70**	eP	**P**	**22 04 03.5**	**+4.2**
NATX	**Nacogdoches**	**21.39**	**341**	ePn	**P**	**22 03 59.9**	**+0.6**
NATX				LR	LR		
	comp=Z,2µm,22.0s						
PCRV	**Puerto La Cruz**	**21.66**	**92**	P	**P**	**22 04 02.0**	**-0.3**
	comp=Z,33nm,0.8s,mb4.7,baz=243,slow=4.6,SNR=11						
GOGA	**Godfrey**	**21.91**	**7**	eP	**P**	**22 04 07.0**	**+2.1**
GOGA				LR	LR		
	comp=Z,3µm,20.0s						
NHSC	**New Hope**	**22.22**	**14**	eP	**P**	**22 04 10.6**	**+2.5**
NHSC				LR	LR		
	comp=Z,4µm,20.0s						
COW	**Cow Castle Cre**	**22.36**	**13**	eP	**P**	**22 04 12.1**	**+2.5**
JCT	**Junction City**	**22.41**	**329**	eP	**P**	**22 04 08.2**	**-2.0**
OXF	**Oxford**	**22.95**	**354**	eP	**P**	**22 04 15.5**	**-0.3**
OXF				LR	LR		
	comp=Z,2µm,22.0s						
JSC	**Jenkinsville**	**23.11**	**11**	eP	**P**	**22 04 18.8**	**+1.4**
PLAL	**Pickwick Lake**	**23.32**	**357**	eP	**P**	**22 04 18.9**	**-0.3**
	comp=Z,137nm,1.1s,mb5.2						
PLAL				LR	LR		
	comp=Z,1µm,19.0s						
LHS	**Liberty Hill**	**23.39**	**12**	eP	**P**	**22 04 21.3**	**+1.4**
SWET	**Sewanee**	**23.53**	**1**	eP	**P**	**22 04 21.5**	**+0.3**
MET	**Memphis--Engin**	**23.61**	**353**	eP	**P**	**22 04 22.5**	**+0.5**
UALR	**University of**	**23.66**	**348**	eP	**P**	**22 04 21.5**	**-0.8**
	comp=Z,197nm,1.0s,mb5.4						
MIAR	**Mount Ida**	**23.71**	**346**	eP	**P**	**22 04 22.4**	**-0.4**
	comp=Z,292nm,1.2s,mb5.5						
MIAR				LR	LR		
	comp=Z,4µm,22.0s						
MIAR	**Mount Ida**	**23.71**	**346**	eP	**P**	**22 04 22.4**	**-0.4**
MIAR				pmax	pmax		
	comp=Z,292nm,1.2s,mb5.5						
MIAR				MLR	MLR		
	comp=Z,4µm,22.0s						
LTX	**Lajitas**	**23.73**	**321**	eP	**P**	**22 04 22.1**	**-1.0**
	comp=Z,186nm,0.8s,mb5.5						
LTX				LR	LR		
	comp=Z,1µm,21.0s						
LTX	**Lajitas**	**23.73**	**321**	eP	**P**	**22 04 22.1**	**-1.0**
LTX				pmax	pmax		
	comp=Z,186nm,0.8s,mb5.5						
LTX				MLR	MLR		
	comp=Z,1µm,21.0s						
TXAR	**Lajitas Array**	**23.73**	**321**	P	**P**	**22 04 22.8**	**-0.4**
TXAR				PcP	PcP	22 08 08.4	+3.0
TXAR				ScP	ScP	22 11 52.7	+15
TXAR	**Lajitas Array**	**23.73**	**321**	P	**P**	**22 04 22.8**	**-0.3**
TXAR						22 08 08.4	
TXAR	**Lajitas Array**	**23.73**	**321**	P	**P**	**22 04 22.8**	**-0.4**
	comp=Z,79nm,0.8s,mb5.1,baz=144,slow=8.8,SNR=236						
TXAR				PcP	PcP	22 08 08.4	+3.0
	comp=Z,13nm,0.9s,baz=153,slow=3.9,SNR=6.4						
TXAR				ScP	ScP	22 11 52.7	+15
	comp=Z,8.1nm,1.1s,baz=134,slow=5.4,SNR=12						
CPCT	**Cooper Cave**	**23.83**	**4**	eP	**P**	**22 04 25.4**	**+1.5**
TKL	**Tuckaleechee C**	**24.10**	**6**	P	**P**	**22 04 26.4**	**+0.1**
	comp=Z,93nm,0.9s,mb5.1,baz=178,slow=8.5,SNR=61						
TKL				LR	LR	22 14 05.8	
	comp=Z,3µm,20.5s,baz=119,slow=38						
HBAR	**Harrisburg**	**24.13**	**352**	eP	**P**	**22 04 26.7**	**+0.1**
HALT	**Halls**	**24.34**	**355**	eP	**P**	**22 04 29.0**	**+0.5**
GNAR	**Gosnell**	**24.46**	**353**	eP	**P**	**22 04 30.0**	**+0.4**
	comp=Z,2µm,0.9s						
SCG	**Saint Claude**	**24.63**	**77**	eP	**P**	**22 04 36.1**	**+4.7**
TBG	**Guadaloupe-3**	**24.64**	**77**	eP	**P**	**22 04 30.6**	**-0.9**
GLAT	**Glass**	**24.69**	**355**	eP	**P**	**22 04 32.8**	**+1.1**
UTMT	**University of**	**24.72**	**356**	eP	**P**	**22 04 32.0**	**-0.1**
	comp=Z,241nm,1.0s,mb5.6						
CNNC	**Cliffs of the**	**24.85**	**17**	eP	**P**	**22 04 34.8**	**+1.6**
CNNC				LR	LR		
	comp=Z,4µm,19.0s						
TZTN	**Tazewell**	**25.00**	**6**	eP	**P**	**22 04 36.3**	**+1.7**
	comp=Z,137nm,1.3s,mb5.2						
PARMO	**Parma**	**25.12**	**354**	eP	**P**	**22 04 35.8**	**+0.2**
NNA	**Nana**	**25.36**	**157**	P	**P**	**22 04 38.7**	**+0.6**
NNA				LR	LR	22 13 35.7	
NNA	**Nana**	**25.36**	**157**	P	**P**	**22 04 38.7**	**+0.6**
	comp=Z,2.0nm,0.3s,mb4.0,baz=199,slow=18,SNR=1.8						
NNA				LR	LR	22 13 35.7	
	comp=Z,2µm,20.3s,baz=224,slow=34						
WMOK	**Wichita Mounta**	**25.55**	**336**	eP	**P**	**22 04 38.6**	**-1.0**
LPIG	**La Paz**	**25.68**	**302**	P	**P**	**22 04 41.5**	**+0.6**
	comp=Z,40nm,0.7s,mb4.9,baz=214,slow=3.7,SNR=5.6						
LPIG				LR	LR	22 15 29.3	
	comp=Z,3µm,19.9s,baz=115,slow=38						
ELN	**Prospectdale**	**26.07**	**11**	eP	**P**	**22 04 42.5**	**-1.8**
SIUC	**Southern Illin**	**26.11**	**355**	eP	**P**	**22 04 44.5**	**-0.1**
	comp=Z,134nm,0.9s,mb5.4						
BLA	**Blacksburg**	**26.12**	**11**	PFAKE		22 05 00.0	+15
BLA				LR	LR		
	comp=Z,3µm,20.0s						
USIN	**University of**	**26.28**	**358**	eP	**P**	**22 04 45.8**	**-0.3**
	comp=Z,65nm,0.8s,mb5.1						
BBGH	**Gun Hill**	**26.50**	**84**	PFAKE		22 05 00.0	+12
BBGH				LR	LR		
	comp=Z,4µm,21.0s						
FVM	**French Village**	**26.50**	**353**	eP	**P**	**22 04 46.9**	**-1.2**
	comp=Z,478nm,2.7s,mb5.5						
FVM	**French Village**	**26.50**	**353**	eP	**P**	**22 04 46.9**	**-1.2**
FVM				pmax	pmax		
	comp=Z,479nm,2.7s,mb5.5						
WCI	**Wyandotte Cave**	**26.53**	**1**	eP	**P**	**22 04 49.0**	**+0.7**
AMTX	**Amarillo**	**26.92**	**332**	eP	**P**	**22 04 51.4**	**-0.5**
AMTX				LR	LR		
	comp=Z,2µm,22.0s						
SLM	**Saint Louis**	**27.12**	**354**	eP	**P**	**22 04 53.9**	**+0.2**
	comp=Z,100nm,1.2s,mb5.2						
SLM	**Saint Louis**	**27.12**	**354**	eP	**P**	**22 04 53.9**	**+0.2**
SLM				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.2						
URVA	**University of**	**27.13**	**16**	eP	**P**	**22 04 53.2**	**-0.5**
BLO	**Bloomington**	**27.47**	**0**	eP	**P**	**22 04 56.7**	**-0.1**
	comp=Z,113nm,1.2s,mb5.3						
BLO	**Bloomington**	**27.47**	**0**	eP	**P**	**22 04 56.7**	**-0.1**
BLO				pmax	pmax		
	comp=Z,113nm,1.2s,mb5.3						
CBN	**Corbin**	**27.77**	**16**	eP	**P**	**22 05 00.9**	**+1.4**
	comp=Z,285nm,1.5s,mb5.6						
CBN				LR	LR		
	comp=Z,4µm,19.0s						
MCWV	**Mont Chateau**	**28.60**	**11**	eP	**P**	**22 05 08.1**	**+1.3**
MCWV				LR	LR		
	comp=Z,3µm,19.0s						
ACSO	**Alum Creek Sta**	**28.71**	**6**	eP	**P**	**22 05 08.4**	**+0.6**
	comp=Z,68nm,0.7s,mb5.4						
319A	**Douglas**	**28.72**	**317**	⇓P	**P**	**22 05 08.2**	**+0.2**
	baz=28						
KSU1	**Kansas State U**	**28.80**	**344**	eP	**P**	**22 05 07.9**	**-0.7**
KSU1				LR	LR		
	comp=Z,2µm,22.0s						
BBSR	**BB Station**	**28.90**	**41**	eP	**P**	**22 05 11.9**	**+2.3**
BBSR				LR	LR		
	comp=Z,4µm,19.0s						
HDIL	**Hopedale**	**28.95**	**356**	eP	**P**	**22 05 09.7**	**-0.2**
HDIL				LR	LR		
	comp=Z,1µm,20.0s						
SDMD	**Soldier's Deli**	**29.04**	**16**	eP	**P**	**22 05 12.4**	**+1.6**
ANMO	**Albuquerque**	**29.41**	**325**	eP	**P**	**22 05 15.0**	**+0.8**
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	**Albuquerque**	**29.41**	**325**	c iP	**P**	**22 05 14.0**	**-0.1**
ANMO	**Albuquerque**	**29.41**	**325**	P	**P**	**22 05 14.7**	**+0.5**
	comp=Z,20nm,0.9s,mb4.7,baz=147,slow=9.5,SNR=21						
ANMO				PcP	PcP	22 08 20.5	+1.9
	comp=Z,11nm,1.0s,baz=132,slow=3.0,SNR=4.7						
ANMO				ScP	ScP	22 12 08.7	+15
	comp=Z,4.2nm,1.0s,baz=198,slow=6.7,SNR=3.1						
ANMO				LR	LR	22 18 57.8	
	comp=Z,1µm,19.2s,baz=248,slow=40						
CBKS	**Cedar Bluff**	**29.52**	**339**	eP	**P**	**22 05 14.5**	**-0.5**
	comp=Z,84nm,1.0s,mb5.3						
CBKS				LR	LR		
	comp=Z,3µm,22.0s						
CBKS	**Cedar Bluff**	**29.52**	**339**	eP	**P**	**22 05 14.5**	**-0.5**
CBKS				pmax	pmax		
	comp=Z,84nm,1.0s,mb5.3						
CBKS				MLR	MLR		
	comp=Z,3µm,22.0s						
MVL	**Millersville**	**29.73**	**16**	eP	**P**	**22 05 19.2**	**+2.4**
SSPA	**Standing Stone**	**29.94**	**13**	eP	**P**	**22 05 19.8**	**+1.0**
AAM	**Ann Arbor**	**30.70**	**4**	eP	**P**	**22 05 25.5**	**+0.1**
AAM				LR	LR		
	comp=Z,3µm,21.0s						
BRNJ	**Basking Ridge**	**30.87**	**18**	eP	**P**	**22 05 29.6**	**+2.7**
ERPA	**Erie**	**30.96**	**10**	eP	**P**	**22 05 28.8**	**+1.1**
	comp=Z,74nm,0.8s,mb5.5						
ERPA				LR	LR		
	comp=Z,2µm,21.0s						
SDCO	**Great Sand Dun**	**31.05**	**330**	eP	**P**	**22 05 28.6**	**0.0**
	comp=Z,45nm,0.8s,mb5.2						
SDCO				LR	LR		
	comp=Z,793nm,20.0s						
JFWS	**Jewell Farm**	**31.36**	**355**	eP	**P**	**22 05 30.3**	**-1.0**
JFWS				LR	LR		
	comp=Z,1µm,22.0s						
BINY	**Binghamton**	**31.88**	**15**	eP	**P**	**22 05 37.3**	**+1.5**
	comp=Z,67nm,0.9s,mb5.4						
BINY				LR	LR		
	comp=Z,4µm,21.0s						
MVCO	**Mesa Verde**	**32.19**	**326**	eP	**P**	**22 05 39.0**	**+0.4**
MVCO				ePcP	PcP	22 08 27.9	+2.0
MVCO				eScP	ScP	22 12 14.9	+12
MVCO				LR	LR		
	comp=Z,2µm,20.0s						
MVCO	**Mesa Verde**	**32.19**	**326**	⇑P	**P**	**22 05 39.1**	**+0.5**
	baz=32,SNR=34						
Z14A	**Wintersburg**	**32.39**	**316**	⇓P	**P**	**22 05 40.6**	**+0.2**
	baz=32						
X15A	**Humboldt**	**32.59**	**319**	⇑P	**P**	**22 05 42.7**	**+0.5**
	baz=32						
WUAZ	**Wupatki**	**32.70**	**321**	eP	**P**	**22 05 44.3**	**+1.2**
	comp=Z,93nm,1.0s,mb5.6						
WUAZ				ePcP	PcP	22 08 30.0	+2.7
WUAZ	**Wupatki**	**32.70**	**321**	⇓P	**P**	**22 05 43.6**	**+0.5**
	baz=32						
ISCO	**Idaho Springs**	**32.74**	**332**	eP	**P**	**22 05 44.2**	**+0.9**
	comp=Z,81nm,1.8s,mb5.2						
ISCO				eScP	ScP	22 12 15.1	+10
ISCO	**Idaho Springs**	**32.74**	**332**	eP	**P**	**22 05 44.2**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,81nm,1.8s,mb5.2						
Y14A	**Wickenburg**	**32.77**	**317**	⇓P	**P**	**22 05 44.2**	**+0.4**
	baz=32						
X14A	**Yava**	**33.01**	**318**	⇑P	**P**	**22 05 46.1**	**+0.2**
	baz=33						
W15A	**Williams**	**33.05**	**319**	⇓P	**P**	**22 05 46.8**	**+0.7**
	baz=33						
GLMI	**Grayling**	**33.16**	**3**	eP	**P**	**22 05 47.1**	**+0.1**
GLMI				LR	LR		
	comp=Z,679nm,21.0s						
ECSD	**EROS,Sioux Fal**	**33.17**	**347**	eP	**P**	**22 05 45.5**	**-1.5**
LPAZ	**La Paz**	**33.21**	**146**	P	**P**	**22 05 50.1**	**+2.4**
	comp=Z,1.3nm,0.6s,mb4.0,baz=325,slow=6.1,SNR=6.1						
LPAZ				LR	LR	22 19 39.1	
	comp=Z,3µm,19.2s,baz=314,slow=37						
HRV	**Harvard--Oak R**	**33.49**	**20**	PFAKE		22 06 00.0	+10
HRV				LR	LR		
	comp=Z,6µm,19.0s						
GLA	**Glamis**	**33.52**	**314**	⇑P	**P**	**22 05 50.6**	**+0.3**
	baz=33,SNR=11						
W14A	**Seligman**	**33.59**	**319**	⇓P	**P**	**22 05 51.3**	**+0.4**
	baz=33						
ACCN	**Adirondack Com**	**33.61**	**17**	eP	**P**	**22 05 51.8**	**+0.8**
Y12C	**Blythe**	**33.69**	**315**	⇓P	**P**	**22 05 52.1**	**+0.3**
	baz=33						
X13A	**Yucca**	**33.71**	**317**	⇑P	**P**	**22 05 52.2**	**+0.3**
	baz=33,SNR=11						
PDMCI	**Parker Dam,Lak**	**33.74**	**317**	⇓P	**P**	**22 05 52.4**	**+0.2**
	baz=33,SNR=14						
NCB	**Newcomb**	**34.00**	**16**	eP	**P**	**22 05 55.5**	**+1.3**
NCB				LR	LR		
	comp=Z,3µm,19.0s						
W13A	**Hualapai Mount**	**34.04**	**318**	⇓P	**P**	**22 05 55.4**	**+0.6**
	baz=34						
SWSC	**Sam W. Stewart**	**34.14**	**313**	⇓P	**P**	**22 05 56.2**	**+0.5**
	baz=34,SNR=9.7						
DVTC	**Desert V Tower**	**34.22**	**312**	⇓P	**P**	**22 05 56.9**	**+0.6**
	baz=34,SNR=16						
BC3	**Big Chuckw Mtn**	**34.28**	**314**	⇓P	**P**	**22 05 57.4**	**+0.6**
	baz=34,SNR=24						
T15A	**Red Dirt Ranch**	**34.30**	**322**	⇑P	**P**	**22 05 57.8**	**+0.8**
	baz=34						
IRM	**Iron Mountain**	**34.35**	**315**	⇓P	**P**	**22 05 57.8**	**+0.3**
	baz=34,SNR=13						
U14A	**Mt Trumbull**	**34.40**	**320**	⇑P	**P**	**22 05 58.6**	**+0.8**
	baz=34						
COWI	**Conover**	**34.46**	**357**	eP	**P**	**22 05 57.7**	**-0.5**
COWI				LR	LR		
	comp=Z,1µm,20.0s						
LONY	**Lake Ozonia**	**34.51**	**15**	eP	**P**	**22 05 59.3**	**+0.7**
MONP	**Monument Peak**	**34.57**	**313**	⇑P	**P**	**22 05 59.9**	**+0.5**
	baz=34,SNR=11						
T14A	**Hurricane**	**34.75**	**321**	⇓P	**P**	**22 06 01.6**	**+0.7**
	baz=34						
MSNY	**Massena**	**34.79**	**15**	eP	**P**	**22 06 01.5**	**+0.5**
W12A	**Cal Nev Ari**	**34.81**	**317**	⇓P	**P**	**22 06 01.8**	**+0.4**
	baz=34						
BELC	**Belle Mtn.**	**34.85**	**315**	⇑P	**P**	**22 06 02.3**	**+0.5**
	baz=34,SNR=23						
U13A	**Pakoon Wash**	**34.89**	**320**	⇑P	**P**	**22 06 02.8**	**+0.7**
	baz=35						
LBNH	**Lisbon**	**34.92**	**19**	eP	**P**	**22 06 04.3**	**+2.1**
	comp=Z,182nm,2.0s,mb5.6						
LBNH				LR	LR		
	comp=Z,4µm,21.0s						
LBNH	**Lisbon**	**34.92**	**19**	eP	**P**	**22 06 04.3**	**+2.1**
LBNH				pmax	pmax		
	comp=Z,181nm,2.0s,mb5.6						
LBNH				MLR	MLR		
	comp=Z,4µm,21.0s						
PFO	**Pinyon Flat Ob**	**34.96**	**314**	P	**P**	**22 06 04.2**	**+1.4**
	comp=Z,182nm,0.9s,mb5.9,SNR=8.7						
PFO	**Pinyon Flat Ob**	**34.96**	**314**	eP	**P**	**22 06 04.0**	**+1.2**
PFO				e		22 08 36.0	
PFO				MLR	MLR		
	comp=Z,2µm,21.0s						
PFO	**Pinyon Flat Ob**	**34.96**	**314**	P	**P**	**22 06 02.8**	**+0.1**
	comp=Z,14nm,1.0s,mb4.8,baz=118,slow=5.5,SNR=19						
PFO				PcP	PcP	22 08 36.7	+2.9
	comp=Z,13nm,0.8s,baz=111,slow=1.8,SNR=8.2						
PFO				LR	LR	22 22 42.3	
	comp=Z,2µm,20.0s,baz=134,slow=40						
PFO	**Pinyon Flat Ob**	**34.96**	**314**	⇑P	**P**	**22 06 03.4**	**+0.6**
	baz=35,SNR=11						
FRNY	**Flat Rock**	**34.97**	**16**	eP	**P**	**22 06 03.7**	**+1.0**
RWWY	**Rawlins**	**34.98**	**333**	eP	**P**	**22 06 03.9**	**+1.2**
GMRC	**Granite Mounta**	**35.05**	**316**	⇓P	**P**	**22 06 04.1**	**+0.6**
	baz=35						
V12A	**Nelson**	**35.05**	**318**	⇑P	**P**	**22 06 03.9**	**+0.4**
	baz=35						
109C	**Camp Elliot, M**	**35.06**	**312**	⇑P	**P**	**22 06 03.9**	**+0.3**
	baz=35						
TMUT	**Trail Mountain**	**35.17**	**326**	eP	**P**	**22 06 04.9**	**+0.5**
TMUT				ePcP	PcP	22 08 37.5	+3.2
MSU	**Marysvale**	**35.17**	**324**	eP	**P**	**22 06 05.0**	**+0.6**
MSU				ePcP	PcP	22 08 37.6	+3.2
T13A	**Saint George**	**35.23**	**321**	⇑P	**P**	**22 06 05.8**	**+0.7**
	baz=35						
CCUT	**Cedar City**	**35.24**	**322**	eP	**P**	**22 06 06.0**	**+0.9**
S14A	**Cedar City**	**35.25**	**322**	⇑P	**P**	**22 06 05.9**	**+0.7**
	baz=35						
U12A	**Valley of Fire**	**35.27**	**319**	⇓P	**P**	**22 06 05.9**	**+0.6**
	baz=35						
ARUT	**Antelope Range**	**35.44**	**322**	eP	**P**	**22 06 07.4**	**+0.7**
MURC	**Murrieta**	**35.49**	**313**	⇓P	**P**	**22 06 07.7**	**+0.4**
	baz=35						
V11A	**Goodsprings**	**35.50**	**318**	⇓P	**P**	**22 06 07.9**	**+0.6**
	baz=35						
HEC	**Hector,Ludlow**	**35.53**	**315**	⇑P	**P**	**22 06 08.4**	**+0.7**
	baz=35						
S13A	**Holt Ranch, En**	**35.56**	**321**	⇑P	**P**	**22 06 08.9**	**+1.1**
	baz=35						
T12A	**Moapa**	**35.56**	**319**	⇑P	**P**	**22 06 08.6**	**+0.7**
	baz=35						
TUQ	**Turquoise Mtn.**	**35.59**	**317**	⇑P	**P**	**22 06 08.6**	**+0.5**
	baz=35						
RSSD	**Black Hills**	**35.71**	**338**	eP	**P**	**22 06 09.2**	**+0.2**
SHPR	**Sheep Range**	**35.71**	**319**	eP	**P**	**22 06 09.8**	**+0.7**
SHPR				ePcP	PcP	22 08 39.1	+3.1
SHPR				eScP	ScP	22 12 25.6	+10
MPU	**Maple Canyon**	**35.91**	**326**	eP	**P**	**22 06 11.8**	**+1.0**
MPU				ePcP	PcP	22 08 39.7	+3.3
MPU				LR	LR		
	comp=Z,904nm,19.0s						
DAU	**Daniels Canyon**	**35.99**	**327**	eP	**P**	**22 06 11.7**	**+0.3**
SHOC	**Shoshone**	**36.10**	**317**	⇑P	**P**	**22 06 13.0**	**+0.5**
	baz=36						
NLU	**North Lily Min**	**36.11**	**326**	eP	**P**	**22 06 13.4**	**+0.9**
GSC	**Goldstone**	**36.12**	**316**	⇓P	**P**	**22 06 13.2**	**+0.6**
	baz=36						
BFSC	**Mount Baldy St**	**36.15**	**314**	⇑P	**P**	**22 06 13.5**	**+0.6**
	baz=36						
SCI	**San Clemente I**	**36.16**	**311**	⇓P	**P**	**22 06 13.6**	**+0.6**
	baz=36						
S12A	**Delamar Landin**	**36.19**	**321**	⇓P	**P**	**22 06 14.3**	**+1.1**
	baz=36						
T11A	**Corn Creek, Al**	**36.19**	**320**	⇓P	**P**	**22 06 14.1**	**+0.8**
	baz=36						

CIS Catalina Islan 36.26 312 ⇓P P **22 06 14.5 +0.6**
baz=36,SNR=11
FMP Fort Macarthur 36.33 312 ⇑P P **22 06 15.3 +0.8**
baz=36
U10A Ash Meadows, A 36.43 318 ⇑P P **22 06 15.9 +0.6**
baz=36,SNR=12
CTU Camp Tracy 36.45 327 *eP* P **22 06 16.2 +0.8**
EYMN Ely 36.47 355 *eP* P **22 06 14.3 -1.1**
comp=Z,66nm,1.0s,mb5.5
R12A Pony Springs, 36.49 322 ⇓P P **22 06 16.7 +1.0**
baz=36
Q13A Wheeler Ranch, 36.54 323 ⇑P P **22 06 17.1 +0.9**
baz=36
NOQ North Oquirrh 36.62 327 *eP* P **22 06 18.1 +1.3**
DECC Green Verdugo 36.63 313 ⇓P P **22 06 17.6 +0.6**
baz=36
TPNV Topopah Spring 36.68 319 *eP* P **22 06 18.4 +1.0**
comp=Z,46nm,0.9s,mb5.4
TPNV *eScP* ScP 22 12 28.9 +10
TPNV Topopah Spring 36.68 319 *eP* P **22 06 18.4 +1.0**
TPNV pmax pmax
comp=Z,46nm,0.9s,mb5.4
TPNV Topopah Spring 36.68 319 ⇓P P **22 06 18.4 +1.0**
baz=36
DUG Dugway 36.68 326 *eP* P **22 06 17.8 +0.5**
comp=Z,52nm,1.0s,mb5.4
DUG Dugway 36.68 326 *eP* P **22 06 17.8 +0.4**
DUG pmax pmax
comp=Z,52nm,1.0s,mb5.4
DUG Dugway 36.68 326 ⇑P P **22 06 17.9 +0.5**
baz=36
PKME Peaks-Kenny Pk 36.69 21 *eP* P **22 06 19.9 +2.5**
PKME *epP* pP 22 06 28.4 -6.5
PKME LR LR
comp=Z,5μm,19.0s
EDW2 Edwards Air Fo 36.71 314 ⇓P P **22 06 18.0 +0.3**
baz=36,SNR=12
S11A Rachel 36.77 320 ⇓P P **22 06 19.3 +1.1**
baz=36
FURC Furnace Creek, 36.80 317 ⇓P P **22 06 19.0 +0.5**
baz=36,SNR=7.3
LRMC Laurel Mountai 36.82 315 ⇓P P **22 06 19.2 +0.6**
baz=36,SNR=9.9
P13A Bates Ranch, G 36.87 324 P P **22 06 20.0 +1.1**
baz=36
BW06 Boulder Array 36.90 331 *eP* P **22 06 18.7 -0.5**
BW06 LR LR
comp=Z,2μm,20.0s
PDAR Pinedale Array 36.90 331 P P **22 06 19.2 +0.1**
comp=Z,15nm,0.6s,mb5.1,baz=130,slow=10,SNR=98
PDAR PcP PcP 22 08 40.4 +1.0
comp=Z,7.1nm,0.9s,baz=110,slow=3.5,SNR=5.1
PDAR ScP ScP 22 12 27.4 +7.3
comp=Z,1.8nm,0.9s,baz=158,slow=4.3,SNR=5.5
PDAR LR LR 22 25 53.6
comp=Z,2μm,20.0s,baz=142,slow=44
MPMC Manual Prospec 37.00 316 P P **22 06 20.6 +0.5**
baz=37,SNR=38
N15A Stansbury Isla 37.01 327 ⇑P P **22 06 20.4 +0.3**
baz=37
SNCC San Nicolas Is 37.01 311 ⇑P P **22 06 20.9 +0.7**
baz=37
HWUT Hardware Ranch 37.02 328 *eP* P **22 06 20.1 0.0**
HWUT *ePcP* PcP 22 08 41.9 +2.1
HWUT *eScP* ScP 22 12 28.8 +8.3
HWUT LR LR
comp=Z,1μm,20.0s
Q12A Willow Creek R 37.08 322 ⇓P P **22 06 21.5 +0.8**
baz=37
BLG Laguna Peak 37.09 312 ⇓P P **22 06 21.4 +0.5**
baz=37
OSI Osito Adit 37.09 313 ⇓P P **22 06 21.2 +0.2**
baz=37
R11A Troy Canyon, C 37.10 321 ⇑P P **22 06 21.7 +0.7**
baz=37
TRCR Troy Canyon 37.10 321 *eP* P **22 06 22.5 +1.5**
SPUT South Promonto 37.26 327 *eP* P **22 06 22.4 +0.2**
O13A Hicks Ranch, I 37.30 324 P P **22 06 23.4 +0.8**
baz=37
SIV San Ignacio 37.30 137 P P **22 06 23.9 +1.1**
comp=Z,37nm,0.6s,mb5.5,baz=312,slow=8.3,SNR=189
SIV PcP PcP 22 08 42.1 +1.1
comp=Z,8.0nm,0.8s,baz=307,slow=2.2,SNR=3.6
BGU Big Grassy Mou 37.31 326 *eP* P **22 06 22.8 +0.2**
BGU *ePcP* PcP 22 08 41.6 +1.0
N14A Grayback Hills 37.34 326 ⇑P P **22 06 23.5 +0.6**
baz=37
M15A Larsen Ranch, 37.37 327 ⇑P P **22 06 23.4 +0.2**
baz=37
AGMN Agassiz Refuge 37.40 350 *eP* P **22 06 21.8 -1.5**
AGMN LR LR
comp=Z,1μm,21.0s
P12A McGill 37.40 323 P P **22 06 24.4 +0.9**
baz=37,SNR=17
ARVC Arvin 37.43 314 ⇑P P **22 06 24.3 +0.5**
baz=37
GRAC Grapevine Rang 37.44 318 ⇑P P **22 06 24.7 +0.9**
baz=37
BSC Santa Cruz Isl 37.44 312 ⇓P P **22 06 24.2 +0.3**
baz=37
Q11A Duckwater 37.45 321 ⇓P P **22 06 24.6 +0.7**
baz=37,SNR=15
ISA Isabella 37.46 315 ⇑P P **22 06 24.7 +0.7**
baz=37
S10A Tonopah Range, 37.48 320 P P **22 06 24.8 +0.6**
baz=37
R10A Warm Springs 37.51 320 ⇑P P **22 06 25.3 +0.9**
baz=37,SNR=14
CWC Cottonwood Cre 37.61 316 ⇓P P **22 06 26.0 +0.8**
baz=37
AHID Auburn Hatcher 37.64 330 *eP* P **22 06 25.8 +0.4**
comp=Z,70nm,0.9s,mb5.5
AHID LR LR
comp=Z,1μm,20.0s
SBC Santa Barbara 37.72 313 ⇓P P **22 06 26.8 +0.5**
baz=37
S09A Goldfield 37.76 319 P P **22 06 27.2 +0.7**
baz=37
HVU Hansel Valley 37.77 327 *eP* P **22 06 27.1 +0.5**
comp=Z,30nm,0.8s,mb5.2
HVU Hansel Valley 37.77 327 *eP* P **22 06 27.1 +0.6**
HVU pmax pmax
comp=Z,31nm,0.8s,mb5.2
O12A Currie 37.82 324 ⇓P P **22 06 27.8 +0.8**
baz=38,SNR=17
M14A Sheep Mountain 37.88 327 ⇓P P **22 06 27.9 +0.4**
baz=38
Q10A Clear Creek Ra 37.90 321 ⇓P P **22 06 28.3 +0.6**
baz=38
N13A Wendover, West 37.91 325 ⇑P P **22 06 28.3 +0.5**
baz=38,SNR=11
P11A Circle Ranch, 37.95 322 P P **22 06 28.9 +0.8**
baz=38
REDW Red Top Meadow 37.97 331 *eP* P **22 06 28.5 +0.4**
REDW *eScP* ScP 22 12 36.0 +12
R09A Tonopah 37.97 320 ⇓P P **22 06 28.8 +0.6**
baz=38,SNR=13
SNOW Snow King Moun 37.99 331 *eP* P **22 06 29.3 +0.9**
PKM Peak Mountain 38.02 313 ⇑P P **22 06 29.0 +0.3**
baz=38,SNR=18
LOHW Long Hollow 38.04 331 *eP* P **22 06 29.5 +0.7**
comp=Z,40nm,0.8s,mb5.3
TPAW Teton Pass 38.11 331 *eP* P **22 06 30.2 +0.8**
MOOW Moose Ponds 38.21 331 *eP* P **22 06 30.1 -0.1**
M13A Montello 38.23 326 ⇑P P **22 06 30.7 +0.3**
baz=38,SNR=8.6
S08C White Mtn Res 38.25 318 ⇓P P **22 06 31.3 +0.7**
baz=38,SNR=25
O11A Cowboy Ranch, 38.27 323 ⇑P P **22 06 31.3 +0.6**
baz=38,SNR=12
DCID1 Drake Creek 38.30 331 *eP* P **22 06 30.3 -0.7**
SMMC Simmler 38.35 314 ⇑P P **22 06 31.9 +0.4**
baz=38
HELL Mitchell Peak, 38.37 316 P P **22 06 32.4 +0.7**
baz=38,SNR=17
N12A Clover Valley, 38.38 324 P P **22 06 32.2 +0.5**
baz=38,SNR=22
Q09A Carvers 38.39 320 ⇓P P **22 06 32.6 +0.8**
baz=38
IMW Indian Meadow 38.41 331 *eP* P **22 06 32.5 +0.6**
IMW *ePcP* PcP 22 08 47.2 +3.2
ELK Elko 38.42 324 PFAKE **22 06 40.0 +8.0**
ELK LR LR
comp=Z,57nm,19.0s
P10A Eureka 38.42 322 ⇑P P **22 06 32.8 +0.7**
baz=38
MTUM Tungsten Hills 38.43 317 *eP* P **22 06 33.7 +1.5**
MTUM *ePcP* PcP 22 08 47.2 +3.0
K14A Jones Ranch, D 38.52 328 ⇑P P **22 06 32.7 -0.1**
baz=38
L13A Double Diamond 38.61 327 ⇓P P **22 06 33.6 0.0**
baz=38
LKWY Lake 38.68 333 PFAKE 22 06 50.0 +16
LKWY LR LR
comp=Z,2μm,20.0s
M12A Wells 38.68 325 ⇑P P **22 06 34.1 -0.1**
baz=38,SNR=23
R08A Mina 38.69 319 ⇑P P **22 06 35.3 +0.9**
baz=38
LAO LASA Array 38.71 338 *eP* P **22 06 33.8 -0.5**
comp=Z,48nm,0.9s,mb5.3
LAO LR LR
comp=Z,1μm,20.0s
N11A Elko Archery C 38.75 324 ⇓P P **22 06 35.2 +0.4**
baz=38
YFT Old Faithful 38.79 332 *eP* P **22 06 37.2 +2.1**
YFT *ePcP* PcP 22 08 49.3 +4.2
P09A Austin 38.80 321 ⇑P P **22 06 35.8 +0.6**
baz=38
NVAR Mina Array Bea 38.87 319 P P **22 06 36.9 +1.1**
NVAR PcP PcP 22 08 48.0 +2.5
NVAR ScP ScP 22 12 36.4 +8.8
NVAR Mina Array Bea 38.87 319 P P **22 06 36.9 +1.1**
comp=Z,27nm,1.0s,mb5.0,baz=151,slow=5.8,SNR=31
NVAR PcP PcP 22 08 48.0 +2.5
comp=Z,11nm,0.6s,baz=125,slow=4.5,SNR=14
NVAR ScP ScP 22 12 36.4 +8.9
comp=Z,3.6nm,1.1s,baz=125,slow=5.4,SNR=5.3
O10A Cortez Mining, 38.87 323 ⇑P P **22 06 36.5 +0.8**
baz=38,SNR=8.2
Q08A Gabbs 38.88 320 ⇑P P **22 06 36.3 +0.5**
baz=38,SNR=11
KCC Kaiser Creek 38.92 317 ⇓P P **22 06 36.1 -0.2**
baz=39,SNR=8.4
YNR Norris Junctio 38.92 332 *eP* P **22 06 37.1 +1.0**
T06C Millerton Lake 39.01 316 ⇓P P **22 06 36.8 -0.2**
baz=39
YMR Madison River 39.01 332 *eP* P **22 06 37.8 +0.9**
comp=Z,122nm,1.3s,mb5.6
PKD Parkfield 39.05 314 ⇓P P **22 06 37.5 +0.2**
baz=39
K13A Stover Farm, H 39.07 327 ⇑P P **22 06 37.3 -0.2**
baz=39
V04C Ramage Ranch, 39.13 313 ⇓P P **22 06 38.4 +0.4**
baz=39
N10A Dunphy 39.14 323 ⇑P P **22 06 38.5 +0.4**
baz=39
R07C Lee Vining 39.16 318 ⇑P P **22 06 39.3 +1.1**
baz=39
M11A Holland Ranch, 39.19 325 ⇓P P **22 06 38.2 -0.2**
baz=39,SNR=5.6
O09A Fish Creek Ran 39.20 322 P P **22 06 39.2 +0.6**
baz=39,SNR=15
L12A House Creek Ra 39.23 326 ⇓P P **22 06 38.8 0.0**
baz=39
ULM Lac du Bonnet 39.29 351 P P **22 06 37.3 -1.8**
comp=Z,90nm,0.9s,mb5.6,baz=170,slow=8.2,SNR=106
ULM PcP PcP 22 08 47.8 +1.1
comp=Z,10nm,0.6s,baz=304,slow=0.2,SNR=4.7
ULM LR LR 22 23 46.5
comp=Z,1μm,21.7s,baz=165,slow=38
QLMT Earthquake Lak 39.35 332 *eP* P **22 06 40.9 +1.1**
BMN Battle Mountai 39.38 322 PFAKE 22 06 50.0 +10
BMN LR LR
comp=Z,395nm,22.0s
P08A Dixie Valley 39.46 321 ⇑P P **22 06 41.2 +0.5**
baz=39
K12A Draper Farm, C 39.50 327 ⇓P P **22 06 40.9 -0.1**
baz=39
V03C Hunter Liggett 39.57 314 ⇓P P **22 06 41.4 -0.3**
baz=39
DGMT Dagmar 39.58 342 *eP* P **22 06 41.4 -0.2**
DGMT comp=Z,83nm,0.7s,mb5.7 LR LR
comp=Z,2μm,22.0s
S05C Merced 39.61 316 ⇑P P **22 06 41.6 -0.5**
baz=39
T05C Eagle Field, D 39.62 315 ⇑P P **22 06 41.9 -0.2**
baz=39
WAKR Walker 39.64 318 *eP* P **22 06 42.5 +0.2**
J13A Cove Ranch, Pi 39.64 328 ⇑P P **22 06 42.3 +0.1**
baz=39
R06C Coleville 39.66 318 ⇓P P **22 06 43.0 +0.6**
baz=39,SNR=18
M10A I.L. Ranch, Tu 39.67 324 ⇑P P **22 06 42.1 -0.3**
baz=39,SNR=10.0
N09A Rock Creek Ran 39.83 323 P P **22 06 44.3 +0.5**
baz=40,SNR=23
O08A Rochester Mine 39.86 321 ⇑P P **22 06 44.5 +0.4**
baz=40
P07A Fallon 39.88 320 ⇓P P **22 06 44.7 +0.5**
baz=40
HLID Hailey 39.88 328 *eP* P **22 06 44.3 +0.1**
HLID Hailey 39.88 328 P P **22 06 44.4 +0.2**
baz=40,SNR=33
HAST UC Hastings Re 39.98 314 ⇓P P **22 06 45.1 0.0**
baz=40
I13A Wildhorse Cree 39.98 329 ⇑P P **22 06 45.5 +0.5**
baz=40
L10A Juniper Basin 39.99 325 ⇓P P **22 06 45.1 0.0**
baz=40
CMB Columbia Colle 40.01 317 PFAKE 22 07 00.0 +15
CMB LR LR
comp=Z,2μm,21.0s
CMB Columbia Colle 40.01 317 ⇑P P **22 06 45.3 0.0**
baz=40,SNR=7.4
MCMT McKenzie Canyo 40.02 331 P P **22 06 43.0 -2.3**
J12A Stokes Ranch, 40.02 327 ⇓P P **22 06 45.3 0.0**
baz=40
BOZ Bozeman (W) 40.07 333 *eP* P **22 06 45.5 -0.1**
BOZ LR LR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 40.07 333 ⇓P P **22 06 45.6 -0.1**
baz=40
SAO San Andreas Ge 40.09 315 PFAKE 22 07 00.0 +14
SAO LR LR
comp=Z,3μm,21.0s
G15A Dillon 40.10 331 P P **22 06 46.6 +0.6**
baz=40,SNR=37
PACP Pacheco Peak 40.10 315 ⇓P P **22 06 45.7 -0.4**
baz=40
M09A Marrel Ranch, 40.14 323 ⇓P P **22 06 46.3 0.0**
baz=40
N08A GE Springer Mi 40.15 322 ⇑P P **22 06 46.0 -0.4**
baz=40,SNR=17
R05C Kirkwood Meado 40.17 318 ⇑P P **22 06 47.2 +0.6**
baz=40
K11A Parker Ranch, 40.20 326 ⇑P P **22 06 47.1 +0.2**
baz=40
O07A Toulon 40.23 321 P P **22 06 47.2 +0.1**
baz=40,SNR=19
PAHR Pah Rah Range 40.28 320 *eP* P **22 06 48.1 +0.5**
WCN Washoe City 40.29 319 ⇓P P **22 06 48.2 +0.6**
baz=40
DLMT Dillon 40.30 332 *eP* P **22 06 46.1 -1.4**
DLMT comp=Z,69nm,0.6s,mb5.7 *ePcP* PcP 22 08 57.0 +7.0
R04C Big Horse Ranc 40.50 317 P P **22 06 49.6 +0.2**
baz=40
H13A Challis 40.51 329 P P **22 06 49.6 +0.2**
baz=40
MFID Camas Ranch 40.53 327 ⇑P P **22 06 49.7 +0.2**
baz=40
LRM Limekiln Ridge 40.57 332 *eP* P **22 06 50.2 +0.3**
P06A Stead Airport, 40.59 319 ⇓P P **22 06 50.4 +0.2**
baz=40
F15A Butte 40.61 332 P P **22 06 50.4 +0.3**
baz=40,SNR=33
G14A Jackson 40.62 331 ⇑P P **22 06 50.1 -0.1**
baz=40
LAVA Lava Cap Winer 40.63 318 ⇓P P **22 06 50.6 +0.1**
baz=40
L09A Wilkinson Ranc 40.64 324 ⇑P P **22 06 50.0 -0.5**
baz=40
N07B Gerlach 40.65 321 ⇑P P **22 06 50.3 -0.3**
baz=40
K10A MacKenzie Ranc 40.67 325 ⇑P P **22 06 50.3 -0.4**
baz=40
M08A Happy Creek Ra 40.70 323 ⇓P P **22 06 51.1 +0.1**
baz=40,SNR=17
WENL Wente Brothers 40.73 316 ⇑P P **22 06 52.0 +0.7**
baz=40
BNLO Ben Lomond (Sa 40.77 315 ⇑P P **22 06 51.1 -0.5**
baz=40
H12A Diamond D Ranc 40.80 329 P P **22 06 52.0 +0.2**
baz=40,SNR=33
O06A Flanigan 40.83 320 P P **22 06 51.5 -0.5**
baz=40,SNR=28
P05C Yuba Gap, Truc 40.84 318 ⇓P P **22 06 52.8 +0.6**
baz=40
G13A Cobalt 40.88 330 P P **22 06 52.2 -0.2**
baz=41,SNR=16
BDM Black Diamond 40.97 316 ⇑P P **22 06 53.6 +0.3**
baz=41
F14A Wisdom 40.99 331 P P **22 06 53.2 -0.1**
baz=41
BEKR Beckwourth 40.99 319 ⇑P P **22 06 53.8 +0.4**
baz=41,SNR=23
J10A Berg Farm, Mel 41.04 326 ⇓P P **22 06 53.7 -0.1**
baz=41
Q04C Lincoln 41.10 317 ⇑P P **22 06 54.8 +0.5**
baz=41
K09A Rome 41.10 325 ⇓P P **22 06 54.1 -0.2**
baz=41,SNR=45
E15A Deer Lodge 41.12 333 ⇓P P **22 06 54.0 -0.3**
baz=41,SNR=20
L08A Fields 41.14 324 ⇓P P **22 06 53.9 -0.6**
baz=41,SNR=28
M07A Soldier Meadow 41.14 322 ⇑P P **22 06 54.1 -0.4**
baz=41,SNR=16
EGMT Eagleton 41.15 336 *eP* P **22 06 54.0 -0.6**
comp=Z,357nm,2.3s,mb5.8
EGMT *e* 22 07 02.9
EGMT Eagleton 41.15 336 ⇓P P **22 06 54.5 -0.1**
baz=41
N06A Buffalo Meadow 41.17 321 ⇑P P **22 06 54.6 -0.2**
baz=41,SNR=26
O05C Quincy 41.41 319 ⇓P P **22 06 57.4 +0.6**
baz=41
Q03C Winters 41.42 317 ⇓P P **22 06 57.1 +0.2**
baz=41
F13A Darby 41.43 331 P P **22 06 56.4 -0.5**
baz=41,SNR=20
OHCM Honcut 41.43 318 *eP* P **22 06 57.3 +0.3**
OHCM *e* 22 07 05.3
OHCM *ePcP* PcP 22 08 56.4 +2.6
WVOR Wild Horse Val 41.46 324 *eP* P **22 06 56.4 -0.8**
comp=Z,64nm,0.9s,mb5.5
WVOR *e* 22 07 05.5
WVOR Wild Horse Val 41.46 324 *eP* P **22 06 56.4 -0.8**
WVOR *e* 22 07 05.6
WVOR pmax pmax
comp=Z,64nm,0.9s,mb5.5
E14A Clinton 41.50 332 ⇑P P **22 06 56.8 -0.6**
baz=41,SNR=9.9
I10A Payette 41.50 327 ⇓P P **22 06 57.3 -0.2**
baz=41,SNR=6.6
H11A Donnelly 41.50 328 P P **22 06 57.1 -0.4**
baz=41,SNR=32
D15A Lincoln 41.53 333 ⇓P P **22 06 57.7 0.0**
baz=41
J09A Fry Pan Ranch, 41.53 325 ⇑P P **22 06 57.4 -0.4**
baz=41,SNR=35
K08A Mann Creek Ran 41.56 324 P P **22 06 58.2 +0.2**
baz=41,SNR=52
ORV Oroville 41.56 318 ⇑P P **22 06 58.2 +0.2**
baz=41,SNR=7.7
CVS Carmenet Viney 41.57 316 ⇑P P **22 06 58.2 0.0**
baz=41
SUTB Sutter Butte 41.58 318 ⇓P P **22 06 58.6 +0.4**
baz=41
L07A Adell 41.62 323 P P **22 06 58.2 -0.3**
baz=41,SNR=24
FARB Farallon Islan 41.62 315 ⇓P P **22 06 57.6 -1.1**
baz=41
ELFS Eagle Lake Fie 41.65 320 P P **22 06 59.6 +0.8**
baz=41,SNR=79
O04C Chester 41.71 319 ⇓P P **22 06 59.6 +0.3**
baz=41
MCCM Marconi Confer 41.76 316 *epP* pP 22 07 09.9 -7.7
MCCM LR LR
comp=Z,2μm,20.0s
CHMT Chamberlain Mo 41.76 333 *eP* P **22 06 59.7 +0.1**
H10A Noah's Angus R 41.81 327 ⇑P P **22 06 58.8 -1.2**
baz=42,SNR=18
M06C Likely Place G 41.83 321 ⇑P P **22 07 00.1 -0.1**
baz=42
MNRC McLaughlin Nat 41.83 317 ⇓P P **22 07 01.0 +0.7**
baz=42
E13A Victor 41.84 331 P P **22 06 60.0 -0.3**
baz=42,SNR=15
F12A Elk City 41.86 330 P P **22 07 00.1 -0.3**
baz=42,SNR=50
I09A Lost Marbles R 41.93 326 P P **22 07 00.1 -0.9**
baz=42
J08A Circle Bar Ran 41.95 325 ⇑P P **22 07 00.8 -0.3**
baz=42,SNR=10
K07A Rock Creek Ran 41.97 324 ⇑P P **22 07 01.1 -0.2**
baz=42,SNR=30
D14A Greenough 42.00 333 P P **22 07 01.4 -0.2**
baz=42,SNR=8.3
MSO Missoula 42.01 332 *eP* P **22 07 00.8 -0.9**
MSO LR LR
comp=Z,1μm,19.0s
MOD Modoc 42.13 322 PFAKE 22 07 10.0 +7.4
MOD LR LR
comp=Z,4μm,19.0s
BMO Blue Mountains 42.28 327 *eP* P **22 07 02.9 -1.0**
BMO LR LR
comp=Z,3μm,19.0s
HOPS Hopland 42.31 317 PFAKE 22 07 20.0 +16
HOPS LR LR
comp=Z,2μm,21.0s
M05C Lookout 42.33 321 P P **22 07 03.8 -0.5**
baz=42,SNR=14
H09A Durkee 42.35 327 ⇑P P **22 07 03.4 -1.0**
baz=42
I08A Drewsey 42.35 325 ⇑P P **22 07 04.3 -0.2**
baz=42
F11A Grangeville 42.40 329 ⇓P P **22 07 03.6 -1.1**
baz=42,SNR=12
GASB Alder Springs 42.41 318 ⇑P P **22 07 05.1 +0.1**
baz=42,SNR=5.6
J07A Hines 42.43 324 ⇓P P **22 07 04.2 -0.9**
baz=42
D13A Huson 42.45 332 ⇓P P **22 07 04.5 -0.6**
baz=42,SNR=14
G10A Bishop Farm, J 42.48 328 ⇓P P **22 07 04.8 -0.7**
baz=42
L05A Lakeview 42.53 322 P P **22 07 06.0 +0.1**
baz=42
K06A Valley Falls 42.63 323 ⇑P P **22 07 06.4 -0.3**
baz=42
P01C Double 8 Ranch 42.73 317 ⇑P P **22 07 07.6 0.0**
baz=42
O02C Red Bluff 42.73 318 P P **22 07 07.5 -0.1**
baz=42
E11A Bogner Ranch, 42.75 330 P P **22 07 06.5 -1.1**
baz=42,SNR=21
WDC Whiskeytown Da 42.78 319 ⇓P P **22 07 07.7 -0.3**
baz=42
H08A Prairie City 42.80 326 ⇓P P **22 07 07.3 -0.8**
baz=42,SNR=12
G09A Cove 42.82 328 ⇓P P **22 07 07.2 -1.0**
baz=42,SNR=17
J06A Christmas Vall 42.84 324 ⇓P P **22 07 07.7 -0.8**
baz=42,SNR=9.9
M03C McCloud 42.89 320 ⇓P P **22 07 08.4 -0.4**
baz=42
C13A Hot Springs 42.93 332 ⇓P P **22 07 08.7 -0.3**
baz=43
K05A Summer Lake 42.96 323 ⇓P P **22 07 07.8 -1.6**
baz=43
I07A Izee 42.98 325 ⇓P P **22 07 08.7 -0.8**
baz=43,SNR=7.8
M04C Macdoel 43.00 321 ⇓P P **22 07 09.2 -0.5**
baz=43
F10A Beach Ranch, E 43.00 329 P P **22 07 09.4 -0.3**
baz=43,SNR=18
BSMT Bassoo Peak 43.16 332 *eP* P **22 07 11.2 +0.3**
F09A S2 Ranch, Elgi 43.17 328 P P **22 07 11.1 +0.1**
baz=43,SNR=10
LCO Las Campanas 43.20 159 PFAKE 22 07 20.0 +8.5
LCO LR LR
comp=Z,1μm,19.0s
E10A Myers Farm, Un 43.29 329 ⇓P P **22 07 11.2 -0.8**
baz=43
I06A Prineville 43.30 324 ⇑P P **22 07 11.3 -0.7**
baz=43,SNR=8.6
B13A Whitefish 43.40 333 ⇓P P **22 07 12.7 -0.2**
baz=43,SNR=13
K04A Chilquin 43.40 322 ⇓P P **22 07 12.4 -0.6**

baz=43
N02C Big Bar 43.41 319 ⇓P P **P** 22 07 12.3 **-0.8**
baz=43
G08A Pilot Rock 43.45 327 ⇓P P **P** 22 07 12.8 **-0.5**
baz=43
J05A Fort Rock 43.49 323 P P **P** 22 07 13.4 **-0.3**
baz=43
YBH Yreka Blue Hor 43.51 320 *e*P P **P** 22 07 14.4 **+0.5**
YBH Yreka Blue Hor 43.51 320 ⇓P P **P** 22 07 14.1 **+0.2**
baz=43,SNR=5.3
WALA Waterton Lakes 43.67 334 *e*P P **P** 22 07 14.8 **-0.3**
comp=Z,201nm,2.1s,mb5.5
F08A Pendleton 43.69 327 P P **P** 22 07 14.6 **-0.6**
baz=43,SNR=8.6
KHMM Horse Mountain 43.71 319 *e*P P **P** 22 07 17.1 **+1.6**
KHMM *e*PcP PcP 22 09 05.2 +3.8
D10A Wagner Farm, O 43.77 330 P P **P** 22 07 14.9 **-0.9**
baz=43,SNR=7.7
G07A Ruggs Ranch, H 43.82 326 ⇑P P **P** 22 07 15.8 **-0.5**
baz=44
E09A Wood Farm, Sta 43.83 329 ⇓P P **P** 22 07 15.3 **-1.1**
baz=44,SNR=7.4
H06A Lindquist Farm 43.85 325 ⇑P P **P** 22 07 15.6 **-1.0**
baz=44
B12A Libby 43.97 332 ⇑P P **P** 22 07 17.5 **0.0**
baz=44
J04A Umpqua Nationa 43.99 322 ⇓P P **P** 22 07 17.2 **-0.4**
baz=44,SNR=9.0
D09A Jones Farm, Ri 44.29 329 ⇑P P **P** 22 07 19.2 **-0.8**
baz=44,SNR=9.8
B11A Sandpoint 44.31 332 ⇑P P **P** 22 07 19.7 **-0.4**
baz=44
G06A Carlson Farm, 44.33 326 ⇑P P **P** 22 07 19.9 **-0.4**
baz=44,SNR=7.7
A12A Yaak River Ran 44.34 333 ⇑P P **P** 22 07 20.6 **+0.2**
baz=44
RPN Rapa Nui 44.34 209 PFAKE
RPN LR LR 22 07 30.0 +9.3
comp=Z,3μm,19.0s
RPN Rapa Nui 44.34 209 LR LR 22 20 56.0
comp=Z,3μm,20.7s,baz=341,slow=29
F07A Phinny Hill Vi 44.36 327 ⇑P P **P** 22 07 19.8 **-0.8**
baz=44
HAWA Hanford 44.47 328 *e*P P **P** 22 07 21.1 **-0.3**
I04A Tendick Farm, 44.49 323 P P **P** 22 07 20.9 **-0.7**
baz=44
IRO Indian Ridge 44.52 323 P P **P** 22 07 21.1 **-0.7**
NEW Newport 44.54 331 *e*P P **P** 22 07 20.6 **-1.3**
NEW LR LR
comp=Z,2μm,19.0s
NEW Newport 44.54 331 LR LR 22 31 33.6
comp=Z,1μm,18.3s,baz=134,slow=44
K02A Glendale 44.56 321 ⇑P P **P** 22 07 21.7 **-0.5**
baz=44
J03A Ideyld Park 44.58 322 ⇑P P **P** 22 07 22.2 **-0.2**
baz=44
D08A Wollman Farm, 44.59 329 P P **P** 22 07 22.3 **-0.1**
baz=44,SNR=10
B10A Chitwood Farm, 44.61 331 ⇓P P **P** 22 07 22.0 **-0.5**
baz=44
A11A Hall Mountain, 44.68 332 P P **P** 22 07 23.1 **+0.1**
baz=44,SNR=24
FFC Flin Flon 44.70 347 P P **P** 22 07 22.8 **-0.3**
comp=Z,358nm,0.8s,SNR=32
FFC Flin Flon 44.70 347 PFAKE
FFC LR LR 22 07 40.0 +17
comp=Z,1μm,21.0s
OD2 Odessa Site #2 44.71 329 P P **P** 22 07 23.2 **-0.1**
G05A Wamic 44.72 325 ⇑P P **P** 22 07 23.4 **-0.1**
baz=44,SNR=7.2
MDW Midway 44.73 328 P P **P** 22 07 23.7 **+0.2**
F06A Goldendale 44.74 326 P P **P** 22 07 24.4 **+0.7**
baz=44,SNR=10.0
C09A Chrisman Ranch 44.77 330 ⇑P P **P** 22 07 23.4 **-0.5**
baz=44
VFP Flag Point 44.84 325 P P **P** 22 07 25.4 **+0.9**
H04A Detroit Lake 44.87 324 ⇑P P **P** 22 07 24.1 **-0.6**
baz=44,SNR=9.3
J02A Umpqua 44.94 322 P P **P** 22 07 24.8 **-0.5**
baz=45
HOOD Mount Hood Mea 44.95 325 *e*P P **P** 22 07 27.0 **+1.7**
I03A Eugene 45.10 323 ⇑P P **P** 22 07 25.4 **-1.1**
baz=45
B09A Rice 45.14 331 P P **P** 22 07 26.0 **-0.7**
baz=45,SNR=18
C08A Higginbotham F 45.14 329 ⇓P P **P** 22 07 26.0 **-0.8**
baz=45
F05A White Salmon 45.19 326 ⇓P P **P** 22 07 26.9 **-0.3**
baz=45
K01A Sixes 45.19 320 P P **P** 22 07 26.4 **-0.8**
baz=45
D07A Quincy 45.22 328 ⇓P P **P** 22 07 27.1 **-0.3**
baz=45
A10A Northport 45.25 332 ⇓P P **P** 22 07 27.6 **0.0**
baz=45
E06A Yakima 45.34 327 ⇑P P **P** 22 07 28.1 **-0.2**
baz=45,SNR=15
I02A Mapleton 45.45 322 ⇑P P **P** 22 07 28.7 **-0.6**
baz=45
COR Corvallis 45.47 323 PFAKE
COR LR LR 22 07 40.0 +11
comp=Z,2μm,21.0s
H03A Soap Creek Ran 45.51 323 ⇓P P **P** 22 07 29.5 **-0.3**
baz=45
C07A Waterville 45.59 329 ⇓P P **P** 22 07 29.9 **-0.4**
baz=45,SNR=9.8
B08A Colville Reser 45.67 330 ⇑P P **P** 22 07 29.9 **-1.0**
baz=45,SNR=6.7
D06A Cle Elum 45.68 328 ⇑P P **P** 22 07 30.8 **-0.2**
baz=45
A09A Danville 45.73 331 ⇓P P **P** 22 07 31.0 **-0.4**
baz=45,SNR=6.8
F04A Amboy 45.75 325 ⇑P P **P** 22 07 30.6 **-1.0**
baz=45
E05A Randle 45.77 326 ⇓P P **P** 22 07 31.2 **-0.5**
baz=45,SNR=6.8
G03A Yamhill 45.87 324 ⇓P P **P** 22 07 32.3 **-0.2**
baz=46
SCHQ Schefferville 45.88 16 P P **P** 22 07 32.0 **-0.5**
comp=Z,12nm,0.6s,mb4.8,baz=218,slow=6.8,SNR=53
SCHQ LR LR 22 26 46.4
comp=Z,3μm,22.0s,baz=211,slow=36
A08A Turner Farm, O 46.05 330 ⇓P P **P** 22 07 33.3 **-0.6**
baz=46,SNR=8.1
B07A Winthrop 46.13 329 ⇑P P **P** 22 07 33.5 **-1.0**
baz=46
C06A Tall Timber Ra 46.17 328 ⇑P P **P** 22 07 34.7 **-0.2**
baz=46
D05A Enumclaw 46.28 327 ⇑P P **P** 22 07 35.3 **-0.5**
baz=46
F03A Seaside 46.39 325 ⇓P P **P** 22 07 35.6 **-1.0**
baz=46
CFAA Coronel Fontan 46.43 158 P P **P** 22 07 38.6 **+1.5**
comp=Z,0.2nm,0.4s,baz=348,slow=6.5,SNR=5.3
C05A Tolt Reservoir 46.44 328 ⇑P P **P** 22 07 35.9 **-1.1**
baz=46
A07A Ashnola River, 46.65 330 ⇓P P **P** 22 07 38.3 **-0.4**
baz=46,SNR=22
EDM Edmonton 46.70 338 *e*P P **P** 22 07 37.8 **-1.1**
EDM *e*ScP ScP 22 13 06.6 +7.8
B06A Marblemount 46.86 329 ⇓P P **P** 22 07 39.4 **-0.8**
baz=46,SNR=5.7
JCW Jim Creek 46.88 328 P P **P** 22 07 39.6 **-0.8**
GNW Green Mountain 46.96 327 *e*P P **P** 22 07 40.4 **-0.7**
GNW *e*PcP PcP 22 09 14.4 +1.9
B05A Bryant 47.01 328 ⇓P P **P** 22 07 40.3 **-1.1**
baz=47
FCC Fort Churchill 47.41 355 *e*P P **P** 22 07 43.3 **-1.1**
comp=Z,39nm,0.6s,mb5.3
FCC Fort Churchill 47.41 355 *e*P P **P** 22 07 43.3 **-1.1**
FCC pmax pmax
comp=Z,39nm,0.6s,mb5.3
NLWA Neilton Lookou 47.42 326 *e*P P **P** 22 07 45.6 **+0.9**
NLWA LR LR
comp=Z,4μm,21.0s
NLWA Neilton Lookou 47.42 326 ⇑P P **P** 22 07 44.5 **-0.2**
baz=47
A04A Legoe Bay, Lum 47.61 328 ⇓P P **P** 22 07 45.3 **-0.8**
baz=47
B04A Port Angeles 47.62 327 ⇓P P **P** 22 07 45.8 **-0.4**
baz=47
C03A Quillayute Air 48.13 326 ⇑P P **P** 22 07 50.5 **+0.4**
baz=48
RCBR Riachuelo 53.36 106 PFAKE
RCBR LR LR 22 08 40.0 +10
comp=Z,4μm,19.0s
YKA Yellowknife Ar 54.64 345 P P **P** 22 08 37.2 **-1.3**
YKA PcP PcP 22 09 41.0 +0.4
YKA ScP ScP 22 13 40.4 +7.6
YKA LR LR 22 32 31.8
YKA Yellowknife Ar 54.64 345 P P **22 08 37.2 -1.4**
YKA 22 09 41.0
YKA Yellowknife Ar 54.64 345 P P **22 08 37.2 -1.3**
comp=Z,32nm,0.9s,mb5.3,baz=136,slow=7.5,SNR=215
YKA PcP PcP 22 09 41.0 +0.4
comp=Z,8.0nm,0.7s,baz=144,slow=4.2,SNR=19
YKA ScP ScP 22 13 40.4 +7.6
comp=Z,0.5nm,0.8s,baz=152,slow=2.8,SNR=3.1
YKA LR LR 22 32 31.8
comp=Z,588nm,21.2s,baz=160,slow=37
YKW3 Yellowknife Ar 54.70 345 *e*P P **22 08 37.5 -1.5**
DLBC Dease Lake 57.02 334 *e*P P **22 08 55.7 +0.1**
RKT Rikitea 58.55 234 *e*S S **22 17 19.0 +14**
comp=Z,2μm,26.8s
RKT *e*SS SS 22 21 01.8 +2.4
comp=Z,316nm,30.5s
RKT *e*LQ 22 23 59.1
comp=Z,1μm,32.0s
RKT *e*LR LR 22 26 26.8
comp=Z,2μm,25.5s,baz=48
RKT Rikitea 58.55 234 *e*T 23 11 48.5
comp=Z,11nm,0.2s
SIT Sitka 58.62 331 PFAKE
SIT LR LR 22 09 20.0 +13
comp=Z,2μm,19.0s
SKAG Skagway 59.87 334 *e*P P **22 09 15.2 -0.2**
RES Resolute Bay 63.25 358 *e*P P **22 09 36.9 -1.1**
DAWY Dawson 63.89 337 *e*P P **22 09 40.9 -1.4**
INK Inuvik 64.26 342 *e*P P **22 09 44.0 -0.6**
EGAK Eagle 64.91 337 *e*P P **22 09 48.4 -0.6**
PMOR Pomariorio Ree 66.17 248 *e*T 23 21 23.5
comp=Z,6.5nm,0.2s
SML Sawmill 66.65 333 *e*P P **22 10 00.7 +0.5**
PMR Palmer 66.93 333 PFAKE
PMR LR LR 22 10 10.0 +8.0
comp=Z,2μm,21.0s
SLKM Skilak Lake 67.09 331 *e*P P **22 10 02.7 -0.4**
KDAK Kodiak Island 67.51 328 PFAKE
KDAK LR LR 22 10 20.0 +14
comp=Z,322nm,20.0s
COLA College 67.54 336 *e*P P **22 10 04.5 -1.3**
comp=Z,48nm,1.4s,mb5.1
COLA LR LR
comp=Z,1μm,19.0s
COLA College 67.54 336ĵ *e*P P **22 10 05.0 -0.8**
MCK McKinley 67.57 335 *e*P P **22 10 06.0 -0.1**
MCK LR LR
comp=Z,683nm,19.0s
EFI East Falkland 67.69 161 PFAKE
EFI LR LR 22 10 20.0 +13
comp=Z,824nm,20.0s
PPT Papeete 68.56 246 *e*S S 22 19 21.1 +11
comp=Z,597nm,24.5s
PPT *e*SS SS 22 23 43.0 +7.0
comp=Z,287nm,26.2s
PPT *e*LR LR 22 31 00.1
comp=Z,2μm,24.2s,baz=60
PPT Papeete 68.56 246 LR LR 22 33 12.4
comp=Z,870nm,18.5s,baz=62,slow=30
SVW2 Sparrevohn 69.78 331 *e*P P **22 10 18.0 -1.9**
IMA2 Indian Mountai 70.23 336 *e*P P **22 10 21.3 -1.2**
CHGN Chignik 70.33 326 *e*P P **22 10 23.4 +0.1**
TTA Tatalina 70.40 333 *e*P P **22 10 22.7 -0.8**
TBI Tubuai 70.56 240 *e*S S 22 19 46.5 +13
comp=Z,570nm,26.8s
TBI *e*LR LR 22 31 57.9
comp=Z,2μm,25.0s,baz=65
TBI Tubuai 70.56 240 *e*T 23 26 51.8
comp=Z,14nm,0.2s
FALS False Pass 72.99 324 *e*P P **22 10 39.6 +0.3**
UNV Unalaska Valle 74.75 323 *e*P P **22 10 49.5 -0.1**
TNA Tin City 75.92 335 *e*P P **22 10 56.0 0.0**
PAB San Pablo 76.81 52 PFAKE
PAB LR LR 22 11 10.0 +8.4
comp=Z,1μm,21.0s
ESK Eskdalemuir 76.83 36 *e*P P **22 11 01.9 +0.5**
ESK LR LR
comp=Z,1μm,21.0s
EKA Eskdalemuir Ar 76.86 36 P P **22 11 00.7 -0.9**
comp=Z,5.8nm,0.8s,mb4.4,baz=266,slow=5.7,SNR=13
ROSF Rostrenen 77.05 43 *e*P P **22 11 01.4 -1.4**
comp=Z,11nm,0.8s,mb4.3
ROSF Rostrenen 77.05 43 *e*P P **22 11 01.4 -1.4**
comp=Z,5.6nm,0.8s,mb4.3
ROSF Rostrenen 77.05 43 *e*P P **22 11 01.4 -1.4**
ROSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
QUIF Quistinic 77.14 43 *e*P P **22 11 02.0 -1.3**
comp=Z,28nm,0.8s,mb4.8
QUIF Quistinic 77.14 43 *e*P P **22 11 02.0 -1.3**
comp=Z,14nm,0.8s,mb4.7
QUIF Quistinic 77.14 43 *e*P P **22 11 02.0 -1.3**
QUIF pmax pmax
comp=Z,14nm,0.8s,mb4.7
GAMB Gambell 77.50 333 *e*P P **22 11 05.8 +0.8**
SGMF Saint Gilles 77.53 43 *e*P P **22 11 03.9 -1.6**
PMSA Palmer Station 78.03 170 P P **22 11 08.9 +1.1**
comp=Z,100nm,0.5s,mb5.8,baz=41,slow=12,SNR=48
GRR Gorron 78.65 43 *e*P P **22 11 10.3 -1.4**
comp=Z,19nm,0.7s,mb4.7
GRR *e*pP pP 22 11 33.6 +2.3
GRR Gorron 78.65 43 *e*P P **22 11 10.3 -1.4**
comp=Z,9.6nm,0.7s,mb4.7
GRR *e*pP pP 22 11 33.6 +2.3
GRR Gorron 78.65 43 *e*P P **22 11 10.3 -1.4**
GRR pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
SJPF Ste Jean 78.86 48 *e*P P **22 11 12.4 -0.5**
comp=Z,15nm,0.8s,mb4.6
SJPF Ste Jean 78.86 48 *e*P P **22 11 12.4 -0.5**
comp=Z,7.4nm,0.8s,mb4.6
SJPF Ste Jean 78.86 48 *e*P P **22 11 12.4 -0.5**
SJPF pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
FLN La Foliniere 78.87 42 *e*P P **22 11 11.6 -1.3**
comp=Z,13nm,0.8s,mb4.5
FLN *e*MLR MLR
comp=Z,3μm,20.8s
FLN La Foliniere 78.87 42 *e*P P **22 11 11.6 -1.3**
comp=Z,6.7nm,0.8s,mb4.5
FLN LR LR
comp=Z,3μm,20.8s
FLN La Foliniere 78.87 42 *e*P P **22 11 11.6 -1.3**
FLN pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
FLN MLR MLR
comp=Z,3μm,20.8s
LDF La Druitiere 79.12 42 *e*P P **22 11 12.9 -1.3**
comp=Z,17nm,1.0s,mb4.5
LDF *e*pP pP 22 11 36.2 +2.3
LDF La Druitiere 79.12 42 *e*P P **22 11 12.9 -1.3**
comp=Z,8.7nm,1.0s,mb4.5
LDF *e*pP pP 22 11 36.2 +2.3
LDF La Druitiere 79.12 42 *e*P P **22 11 12.9 -1.3**
LDF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
MFF Saint Martin d 79.29 44 *e*P P **22 11 13.8 -1.4**
comp=Z,14nm,0.8s,mb4.6
MFF Saint Martin d 79.29 44 *e*P P **22 11 13.8 -1.4**
comp=Z,7.1nm,0.8s,mb4.5
MFF Saint Martin d 79.29 44 *e*P P **22 11 13.8 -1.4**
MFF pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
ETSF Etsaut 79.36 48 *e*P P **22 11 15.1 -0.6**
LFF La Frestale 80.08 46 *e*P P **22 11 18.2 -1.3**
comp=Z,18nm,1.0s,mb4.6
LFF La Frestale 80.08 46 *e*P P **22 11 18.2 -1.3**
comp=Z,9.1nm,1.0s,mb4.6
LFF La Frestale 80.08 46 *e*P P **22 11 18.2 -1.3**
LFF pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
KBS Kingsbay 80.35 11 PFAKE
KBS LR LR 22 11 30.0 +10
comp=Z,1μm,19.0s
RJF Les Rejaudoux 80.58 46 *e*P P **22 11 20.7 -1.5**
RJF *e*MLR MLR
comp=Z,2μm,19.5s
RJF Les Rejaudoux 80.58 46 *e*P P **22 11 20.7 -1.5**
RJF MLR MLR
comp=Z,2μm,19.5s
DBIC Dimbokro 80.67 85 P P **22 11 23.2 -0.1**
comp=Z,5.1nm,1.0s,mb4.3,baz=70,slow=22,SNR=2.4
TCF Toulx Ste Croi 80.94 45 *e*P P **22 11 22.7 -1.4**
TCF *e*pP pP 22 11 46.0 +2.2
MTLF Montolieu 81.33 48 *e*P P **22 11 25.0 -1.3**
BGF Bois d'Agland 81.34 44 *e*P P **22 11 24.8 -1.4**
BGF *e*pP pP 22 11 48.1 +2.1
AVF Avril sur Loir 81.66 44 *e*P P **22 11 26.4 -1.5**
comp=Z,5.4nm,0.9s,mb4.1
AVF *e*pP pP 22 11 49.3 +1.7
AVF Avril sur Loir 81.66 44 *e*P P **22 11 26.4 -1.5**
comp=Z,2.7nm,0.9s,mb4.1
AVF *e*pP pP 22 11 49.3 +1.7
AVF Avril sur Loir 81.66 44 *e*P P **22 11 26.4 -1.5**
AVF pmax pmax
comp=Z,3.0nm,0.9s,mb4.1
SSF Saint Saulge 81.72 44 *e*P P **22 11 27.0 -1.2**
comp=Z,9.6nm,0.9s,mb4.3
SSF Saint Saulge 81.72 44 *e*P P **22 11 27.0 -1.2**
comp=Z,4.8nm,0.9s,mb4.3
SSF Saint Saulge 81.72 44 *e*P P **22 11 27.0 -1.2**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
LOR Lormes 81.93 43 *e*P P **22 11 27.8 -1.5**
comp=Z,18nm,1.1s,mb4.5
LOR *e*pP pP 22 11 51.0 +1.9
LOR *e*MLR MLR
comp=Z,3μm,19.0s
LOR Lormes 81.93 43 *e*P P **22 11 27.8 -1.5**
comp=Z,9.1nm,1.1s,mb4.5
LOR *e*pP pP 22 11 51.0 +1.9
LOR LR LR
comp=Z,3μm,19.0s
LOR Lormes 81.93 43 *e*P P **22 11 27.8 -1.5**
LOR pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
LOR MLR MLR
comp=Z,3μm,19.0s
SMF Signal de Mont 82.01 44 *e*P P **22 11 27.8 -2.0**
comp=Z,12nm,1.0s,mb4.4
SMF Signal de Mont 82.01 44 *e*P P **22 11 27.8 -2.0**
comp=Z,5.9nm,1.0s,mb4.4
SMF Signal de Mont 82.01 44 *e*P P **22 11 27.8 -2.0**
SMF pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
LASF Ste Croix 82.40 47 *e*P P **22 11 30.9 -1.0**
comp=Z,15nm,1.2s,mb4.4
VIVF Saint-Julien-l 82.86 46 *e*P P **22 11 33.5 -0.7**
KONO Kongsberg 83.23 31 PFAKE
KONO LR LR 22 11 50.0 +14
comp=Z,884nm,21.0s
HAU Haudompre 83.48 42 *e*P P **22 11 35.9 -1.4**
HAU *e*pP pP 22 11 59.2 +2.1
HAU *e*MLR MLR
comp=Z,3μm,19.5s
HAU Haudompre 83.48 42 *e*P P **22 11 35.9 -1.4**
HAU *e*pP pP 22 11 59.2 +2.1
HAU LR LR
comp=Z,3μm,19.5s
NB2 NORSAR Subarra 83.73 29 P P **22 11 39.6 +1.2**
comp=Z,4.0nm,0.9s,mb4.2,baz=283,slow=5.1
NB2 NORSAR Subarra 83.73 29 P P **22 11 39.6 +1.2**
NB2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
NOA NORSAR Array B 83.73 29 P P **22 11 37.9 -0.5**
comp=Z,2.4nm,0.8s,mb4.1,baz=284,slow=5.1,SNR=6.2
NOA LR LR 22 46 02.7
comp=Z,1μm,20.4s,baz=280,slow=34
HINF Hinteralfeld 83.85 43 *e*P P **22 11 37.3 -1.9**
CDF Champ du Feu 84.02 42 *e*P P **22 11 38.6 -1.5**
LPL La Plagne 84.18 45 *e*P P **22 11 40.0 -1.0**
comp=Z,4.9nm,0.7s,mb4.2
LPL La Plagne 84.18 45 *e*P P **22 11 40.0 -1.0**
comp=Z,2.5nm,0.7s,mb4.2
LPL La Plagne 84.18 45 *e*P P **22 11 40.0 -1.0**
LPL pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
LPG La Plagne 84.20 45 *e*P P **22 11 41.2 +0.1**
MBDF Montbardon 84.35 46 *e*P P **22 11 40.8 -1.1**
LMR La Mourre 84.42 47 *e*P P **22 11 40.8 -1.5**
FRF La Foret Royal 84.48 47 *e*P P **22 11 41.1 -1.4**
BFO Black Forest 84.72 42 PFAKE
BFO LR LR 22 12 00.0 +16
comp=Z,2μm,19.0s
SBF Sospel 84.98 46 *e*P P **22 11 43.5 -1.6**
comp=Z,22nm,1.1s,mb4.7
SBF Sospel 84.98 46 *e*P P **22 11 43.5 -1.6**
comp=Z,11nm,1.1s,mb4.7
SBF Sospel 84.98 46 *e*P P **22 11 43.5 -1.6**
SBF pmax pmax
comp=Z,11nm,1.1s,mb4.7
HFS Hagfors 85.14 30 P P **22 11 45.5 0.0**
comp=Z,2.9nm,0.7s,mb4.3,baz=277,slow=2.4,SNR=5.7
BILL Bilibino 85.60 339 *e*P P **22 11 47.5 -0.1**
comp=Z,56nm,1.4s,mb5.3
BILL LR LR
comp=Z,602nm,19.0s
BILL Bilibino 85.60 339*c i*P P **22 11 47.4 -0.2**
BILL pmax pmax
comp=Z,61nm,1.4s,mb5.3
BILL MLR MLR
comp=Z,2μm,28.0s
TORD Torodi Ar. Bea 85.83 78 P P **22 11 50.3 +0.5**
comp=Z,0.8nm,0.8s,mb3.7,baz=292,slow=5.2,SNR=3.3
TORD LR LR 22 47 25.5
comp=Z,662nm,21.9s,baz=265,slow=34
DAVA Damuels 85.96 43 ĵ *i*P P **22 11 49.8 0.0**
comp=Z,7.5nm,0.8s,mb4.7
GRFO Grafenberg 86.29 40 PFAKE
GRFO LR LR 22 12 00.0 +8.6
comp=Z,2μm,20.0s
GRA1 Grafenberg Arr 86.29 40 *e*P P **22 11 50.7 -0.7**
comp=Z,10.0nm,1.4s,mb4.5
GRA1 *e* 22 12 20.5
GRA1 LR LR
comp=Z,2μm,20.7s
GRF Grafenberg Arr 86.29 40 *e*P P **22 11 50.7 -0.7**
GRF pmax pmax
comp=Z,10.0nm,1.4s,mb4.5
GRF MLR MLR
comp=Z,2μm,20.7s
GRF Grafenberg Arr 86.29 40 *e*P P **22 11 50.7 -0.7**
comp=Z,10.0nm,1.4s,mb4.5
GRF *e* 22 12 20.5
GRF *e*L 22 45 56.9
comp=Z,2μm,20.7s
MOX Moxa 86.31 39 *e*P P **22 11 50.6 -0.9**
MOX
comp=Z,1μm,20.0s
PGF Pioggiola 86.37 47 *e*P P **22 11 50.2 -1.8**
comp=Z,16nm,0.9s,mb4.7
PGF Pioggiola 86.37 47 *e*P P **22 11 50.2 -1.8**
comp=Z,8.3nm,0.9s,mb4.7
PGF Pioggiola 86.37 47 *e*P P **22 11 50.2 -1.8**
PGF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
ARCES ARCESS Array B 86.74 19 P P **22 11 52.6 -0.6**
comp=Z,3.0nm,0.8s,mb4.3,baz=277,slow=4.3,SNR=10
ARCES LR LR 22 49 39.4
comp=Z,746nm,18.5s,baz=302,slow=35
NKC Novy Kostel 86.93 39 *e*P P **22 11 53.0 -1.5**
CLL Collm 87.00 38 *i* P P **22 11 55.5 +0.7**
comp=Z,45nm,2.4s,mb5.0
CLL *e* 22 12 23.0
CLL *e*S S 22 22 34.0 +6.2
CLL LR LR
comp=Z,2μm,19.9s
CLL Collm 87.00 38 *i* P P **22 11 55.5 +0.7**
CLL *e*S S 22 22 34.0 +6.2
CLL pmax pmax
comp=Z,45nm,2.4s,mb5.0
CLL MLR MLR
comp=Z,2μm,19.9s
CLL Collm 87.00 38 *i* P P **22 11 55.5 +0.7**
comp=Z,45nm,2.4s,mb5.0
CLL *i* pP pP 22 12 04.4 -10
CLL *ex* x 22 12 23.0
CLL *e*S S 22 22 34.0 +6.2
CLL *e*PS 22 23 44.0
CLL *ex* x 22 25 48.0
CLL *e*SS SS 22 28 45.0 +34
CLL *e*SSS 22 32 18.0
KEV Kevo 87.12 19 PFAKE
KEV LR LR 22 12 10.0 +15
comp=Z,757nm,21.0s
KHC Kasperske Hory 87.92 40 *e*P P **22 11 59.4 +0.1**
KHC AMS AMS 22 47 00.0
comp=Z,2μm,18.7s
GERES GERESS Array B 88.07 41 P P **22 12 01.1 +1.0**

GERES LR LR 22 48 28.9
GERES GERESS Array B 88.07 41 P **P** **22 12 01.1 +1.0**
comp=Z,1.2nm,0.7s,mb4.0,baz=279,slow=2.6,SNR=11
GERES LR LR 22 48 28.9
comp=Z,2μm,19.6s,baz=267,slow=34
AFI Afiamalu 88.11 255 PFAKE 22 12 10.0 +9.2
AFI LR LR
comp=Z,1μm,20.0s
AFI Afiamalu 88.11 255 LR LR 22 44 43.3
comp=Z,931nm,18.2s,baz=86,slow=31
KEST Kesra 88.12 54 LR LR 22 45 51.6
comp=Z,376nm,21.8s,baz=192,slow=32
PVCC Panska Ves 88.16 39 AMS AMS 22 48 10.0
comp=Z,2μm,21.4s
PRU Pruhonice 88.29 39 AMS AMS 22 52 10.0
comp=Z,2μm,16.1s
DPC Dobruska-Polom 89.29 39 AMS AMS 22 49 00.0
comp=Z,2μm,23.2s
APA Apatity 90.23 19 *e*P **P** **22 12 18.5 +8.7**
APA *i* 22 12 29.7
APA MLR MLR
comp=Z,1μm,19.0s
FINES FINESS Array B 90.39 26 P **P** **22 12 10.7 +0.1**
comp=Z,0.7nm,0.7s,mb3.9,baz=318,slow=5.4,SNR=4.9
LVZ Lovozero 90.45 19 PFAKE 22 12 20.0 +9.2
LVZ LR LR
comp=Z,794nm,19.0s
OKC Ostrava-Krasne 90.56 39 AMS AMS 22 51 00.0
comp=Z,2μm,19.5s
SEY Seymchan 93.05 337‖ *e*P **P** **22 12 23.4 +0.5**
TIXI Tiksi 93.63 349 *e*P **P** **22 12 24.4 -1.1**
comp=Z,7.8nm,0.6s,mb5.2
TIXI Tiksi 93.63 349 *e*P **P** **22 12 24.5 -0.9**
TIXI pmax pmax
comp=Z,7.0nm,0.6s,mb5.2
TIXI MLR MLR
comp=Z,786nm,20.0s
PET Petropavlovsk 95.06 327 PFAKE 22 12 40.0 +7.6
PET LR LR
comp=Z,776nm,21.0s
MA2 Magadan 95.55 334 PFAKE 22 12 50.0 +16
MA2 LR LR
comp=Z,536nm,21.0s
KIEV Kiev 96.76 35 PFAKE 22 12 50.0 +10
KIEV LR LR
comp=Z,351nm,19.0s
AKASG Malin Array Be 96.77 35 LR LR 22 54 07.9
comp=Z,1μm,20.4s,baz=285,slow=34
OBN Obninsk 98.34 29 PFAKE 22 13 00.0 +13
OBN LR LR
comp=Z,834nm,20.0s
OBN Obninsk 98.34 29 *e*P **P** **22 12 47.5 +0.4**
OBN *e* 22 16 48.1
OBN pmax pmax
comp=Z,3.0nm,1.6s,mb4.6
MSKU Masuku 100.38 90 PFAKE 22 13 10.0 +14
MSKU LR LR
comp=Z,45nm,20.0s
ANTO Ankara 104.07 44 PFAKE 22 13 20.0 +7.3
ANTO LR LR
comp=Z,785nm,20.0s
ARU Arti 106.32 19 *e*Pdif Pdif 22 13 32.9 +10
ARU LR LR
comp=Z,1μm,20.0s
ARU Arti 106.32 19 *e*P Pdif 22 13 32.9 +10
ARU MLR MLR
comp=Z,1μm,20.0s
KIV Kislovodsk 108.09 36 PFAKE 22 17 50.0 +13
KIV LR LR
comp=Z,452nm,19.0s
HABR Khabarovsk 109.75 332 *e*P Pdif 22 13 39.8 +1.9
HABR *e* 22 18 11.1
HABR *e*SS SS 22 33 37.0 +7.2
HABR *e*SSS 22 37 40.1
ERM Erimo 109.77 323 PFAKE 22 17 50.0 +9.5
ERM LR LR
comp=Z,562nm,20.0s
BRVK Borovoye 112.64 15 PFAKE 22 18 00.0 +14
BRVK LR LR
comp=Z,923nm,20.0s
SYO Syowa Base 113.26 162⇑ *e*PP PP 22 18 43.8 +6.5
BOSA Boshof 114.61 116 PKP PKiKP 22 17 51.1 +1.1
comp=Z,5.9nm,0.8s,baz=271,slow=4.4,SNR=10
HNR Honiara 114.62 265 PFAKE 22 18 00.0 +10
HNR LR LR
comp=Z,670nm,19.0s
HIA Hailar 115.10 341 PFAKE 22 18 00.0 +10
HIA LR LR
comp=Z,893nm,22.0s
MDJ Mudanjiang 115.13 332 PFAKE 22 18 00.0 +9.3
MDJ LR LR
comp=Z,466nm,20.0s
MAJO Matsushiro 116.17 321 PFAKE 22 18 00.0 +7.1
MAJO LR LR
comp=Z,531nm,22.0s
MJAR Matsushiro Arr 116.17 321 PKP PKPdf 22 17 53.1 +0.2
comp=Z,2.6nm,0.8s,baz=100,slow=2.0,SNR=6.4
LSZ Lusaka 116.71 101 *e*PKPdf PKPdf 22 17 56.9 +2.5
LSZ *e*PKPdf PKPdf 22 17 57.3 +2.9
LSZ LR LR
comp=Z,771nm,21.0s
CN2 Changchun 117.61 334 *e*PKP PKPdf 22 17 59.4 +3.9
CN2 PP PP 22 19 15.0 +7.3
CN2 PP PP
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,300nm,22.0s
CN2 LR LR
comp=E,300nm,22.0s
CN2 LR LR
comp=Z,400nm,22.0s
ZAK Zakamensk 117.68 353 *e*PKIKP PKPdf 22 17 55.7 +0.3
ZAK pmax pmax
comp=Z,2.0nm,1.5s
ZAK pmax pmax
comp=Z,1.0nm,1.3s
ULN Ulaanbaatar 119.57 349 *e*PKPdf PKPdf 22 18 00.3 +1.2
ULN LR LR
comp=Z,644nm,20.0s
SONM Songino Array 119.71 350 PKP PKPdf 22 18 00.1 +0.7
comp=Z,5.7nm,0.7s,baz=337,slow=1.2,SNR=46
MAW Mawson 120.53 167 PKP PKPdf 22 18 01.2 +0.9
comp=Z,3.5nm,0.7s,baz=298,slow=5.3,SNR=4.0
MKAR Makanchi Array 121.04 9 *i* PKIKP PKPdf 22 18 01.6 -0.4
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 121.04 9 PKP PKPdf 22 18 01.6 -0.3
comp=Z,1.8nm,0.8s,baz=357,slow=2.5,SNR=17
KSRS Korea Array 121.42 328 PKP PKPdf 22 18 04.1 +1.1
comp=Z,21nm,0.7s,baz=10,slow=1.5,SNR=68
INCN Inchon 122.06 329 PFAKE 22 18 20.0 +16
INCN LR LR
comp=Z,311nm,20.0s
EKS2 Erkin-Say 123.11 17 PFAKE 22 18 20.0 +14
EKS2 LR LR
comp=Z,906nm,21.0s
AAK Ala-Archa 123.34 17 *e*PKPdf PKPdf 22 18 07.2 +0.7
AAK LR LR
comp=Z,1μm,21.0s
KMBO Kilima Mbogo 123.38 84 PKP PKPdf 22 18 09.7 +2.3
KMBO LR LR
comp=Z,540nm,20.0s
KMBO Kilima Mbogo 123.38 84 PKP PKPdf 22 18 09.7 +2.3
comp=Z,0.4nm,0.3s,baz=237,slow=23,SNR=4.4
AML Almayashu 123.57 17 *e*PKPdf PKPdf 22 18 08.5 +1.6
AML LR LR
comp=Z,788nm,21.0s
UCH Uchtor 123.72 17 *e*PKPdf PKPdf 22 18 10.3 +3.1
CASY Casey 124.14 188 PFAKE 22 18 20.0 +13
CASY LR LR
comp=Z,1μm,20.0s
BJI Beijing 124.44 339 PKP PKPdf 22 18 09.8 +1.1
BJI PP PP 22 19 54.8 +0.6
BJI PP PP
comp=Z,205nm,12.4s
BJI LR LR
comp=N,674nm,20.9s
BJI LR LR
comp=E,305nm,20.9s
BJI LR LR
comp=Z,851nm,27.1s
BJT Baijiatuan 124.46 339 PFAKE 22 18 20.0 +11
BJT LR LR
comp=Z,1μm,21.0s
WMQ Urumqi 124.62 5 PKP PKPdf 22 18 10.8 +1.9
WMQ PP PP 22 20 01.8 +6.7
comp=Z,196nm,5.6s
WMQ LR LR
comp=N,978nm,22.6s
WMQ LR LR
comp=E,366nm,20.8s
WMQ LR LR
comp=Z,1μm,21.5s
HHC Hu-ho-hao-te 125.17 343 *e*PKP PKPdf 22 18 11.8 +1.7
HHC PKS 22 21 46.9
HHC SKS SKSdf 22 25 11.9 -3.9
HHC SKKS SKKSac 22 26 46.8 -5.1
HHC PP PP
comp=Z,120nm,6.5s
HHC LR LR
comp=N,452nm,19.0s
HHC LR LR
comp=E,258nm,16.7s
HHC LR LR
comp=Z,657nm,19.0s
KSH Kashi 126.64 17 PKP PKPdf 22 18 16.6 +3.7
KSH *e*PP PP 22 20 18.1 +9.4
KSH *e*PKS 22 21 51.8
KSH *e*SKS SKSdf 22 25 16.4 -2.2
KSH *e*SS SS 22 37 16.8 +8.8
KSH PP PP
comp=Z,579nm,4.9s
KSH LR LR
comp=N,1μm,5.5s
KSH LR LR
comp=E,1μm,6.1s
KSH LR LR
comp=Z,2μm,15.6s
PMG Port Moresby 127.12 267 PFAKE 22 18 30.0 +16
PMG LR LR
comp=Z,497nm,19.0s
CTAO Charters Tower 128.59 254 PFAKE 22 18 30.0 +13
CTAO LR LR
comp=Z,472nm,20.0s
GTA Gaotai 128.91 354 *e*PKP PKPdf 22 18 18.8 +1.5
GTA PP PP 22 20 28.3 +4.8
GTA PKS 22 21 54.3
GTA SKS SKSdf 22 25 19.9 -2.8
GTA PP PP
comp=Z,153nm,9.9s
GTA LR LR
comp=N,434nm,22.4s
GTA LR LR
comp=E,349nm,20.1s
GTA LR LR
comp=Z,704nm,22.4s
SSE Sheshan 129.85 329 PKP PKPdf 22 18 17.4 -1.9
SSE PP PP 22 20 32.9 +2.7
SSE LR LR
comp=N,175nm,20.6s
SSE LR LR
comp=E,276nm,20.6s
SSE LR LR
comp=Z,232nm,15.7s
STKA Stephens Creek 131.31 238 *e*PKP PKPdf 22 18 23.6 +1.6
comp=Z,8.7nm,1.9s
STKA Stephens Creek 131.31 238 PKP PKPdf 22 18 23.5 +1.6
comp=Z,4.3nm,0.7s,baz=62,slow=1.7,SNR=8.9
LZH Lanzhou 131.56 349‖ PKP PKPdf 22 18 24.5 +2.1
LZH PP PP 22 20 46.8 +6.1
LZH PP PP
comp=Z,110nm,7.8s
XAN Xi'an 132.27 342 PKP PKPdf 22 18 24.4 +0.6
WHN Wuhan 133.50 335 *e*PKP PKPdf 22 18 25.8 -0.4
CD2 Chengdu 136.58 347 *e*PKP PKPdf 22 18 31.6 -0.4
CD2 PP PP 22 21 16.1 +3.4
CD2 PKS 22 22 06.5
CD2 PP PP
comp=Z,110nm,10.8s
CD2 LR LR
comp=N,290nm,21.6s
CD2 LR LR
comp=E,940nm,21.6s
CD2 LR LR
comp=Z,510nm,22.4s
LSA Lhasa 138.90 3 PFAKE 22 18 50.0 +14
LSA LR LR
comp=Z,927nm,22.0s
ASAR Alice Springs 139.67 247 PKhKP 22 18 29.6
comp=Z,1.8nm,0.8s,baz=110,slow=2.9,SNR=10
ASAR PKP PKPdf 22 18 39.6 +1.8
comp=Z,5.1nm,0.8s,baz=102,slow=1.6,SNR=18
GKN Gorkha 139.75 12 *e*P PKPdf 22 18 36.5 -1.4
comp=Z,12nm,0.6s
WB2 Warramunga Arr 139.77 253 *e*PKP PKPdf 22 18 30.2 -7.8
WRA Warramunga Arr 139.78 253 PKhKP 22 18 30.4
comp=Z,1.1nm,0.8s,baz=97,slow=2.9,SNR=10
WRA PKP PKPdf 22 18 37.8 -0.3
comp=Z,5.3nm,0.7s,baz=91,slow=1.8,SNR=21
KKN Kakani 140.08 11 *e*P PKPdf 22 18 36.2 -2.3
comp=Z,14nm,0.7s
JIRN Jiri 140.37 10 *e*P PKPdf 22 18 33.4 -5.6
comp=Z,10nm,0.7s
TAPN Taplejung 140.91 8 *e*P PKPdf 22 18 35.4 -4.6
comp=Z,24nm,1.0s
ODAN Odare 141.34 9 *e*P PKPdf 22 18 42.2 +1.4
comp=Z,8.1nm,0.6s
KMI Kunming 142.38 346 PKP PKPdf 22 18 42.1 -0.6
KMI PP PP 22 21 50.4 +2.0
KMI LR LR
comp=Z,353nm,26.3s
FORT Forrest 142.65 234 *e*PKP PKPdf 22 18 44.1 +1.2
comp=Z,20nm,0.7s
QIZ Qiongzhong 145.50 332 PKP PKPdf 22 18 49.8 +1.5
QIZ PP PP
comp=Z,148nm,7.6s
QIZ LR LR
comp=N,268nm,23.9s
QIZ LR LR
comp=E,375nm,22.9s
QIZ LR LR
comp=Z,353nm,21.5s
QIZ Qiongzhong 145.50 332 PFAKE 22 19 00.0 +12
QIZ LR LR
comp=Z,366nm,19.0s
HYB Hyderabad 147.68 27 *i* PKP PKPdf 22 18 53.5 +1.6
FITZ Fitzroy Crossi 148.16 254 *e*PKP PKPdf 22 18 53.2 +0.5
comp=Z,30nm,0.8s
FITZ Fitzroy Crossi 148.16 254 PKP PKPdf 22 18 54.3 +1.6
comp=Z,15nm,0.8s,baz=148,slow=4.8,SNR=23
FITZ PKPbc PKPbc 22 18 56.8 +0.8
comp=Z,15nm,0.8s,baz=143,slow=3.7,SNR=31
CHTO Chiang Mai 149.29 350 *e*PKPdf PKPdf 22 18 55.6 +1.0
CHTO LR LR
comp=Z,655nm,22.0s
NWAO Narrogin (SRO) 149.49 222 *e*PKPbc PKPbc 22 18 56.5 -2.6
NWAO LR LR
comp=Z,375nm,19.0s
KLBR Kellerberrin 149.95 225 *e*PKP PKPdf 22 18 57.6 +2.4
comp=Z,16nm,0.7s
BATI Kupang 150.22 270 PKPbc PKPbc 22 19 04.3 +3.0
comp=Z,20nm,0.7s,baz=119,slow=8.3,SNR=7.0
MUN Mundaring 150.76 223 *e*PKP PKPbc 22 19 02.8 +0.7
KKM Kota Kinabalu 151.29 306 *e*PKPdf PKPdf 22 18 58.0 +0.2
MBWA Marble Bar 153.00 246 *e*PKPdf PKPdf 22 19 01.5 +1.3
MBWA LR LR
comp=Z,638nm,19.0s
PALK Pallekele 157.42 34 PFAKE 22 19 20.0 +14
PALK LR LR
comp=Z,592nm,19.0s
KULM Kulim 161.73 336 *e*PKPdf PKPdf 22 19 11.7 +0.4

IDC ***14*** *22:10:54.0±0.8, 11.71N×86.64W, h0km, mb4.4/9, mb1 4.5/12, mb1mx4.2/23, mbtmp4.3/12, ML3.7/3, MS4.3/2, Ms1 4.3/2, ms1mx3.6/33, Error ellipse: s-maj=30.6km s-min=16.7km az=54.0*
CASC ***14*** *22:10:55.9±2.5, 11.28N×87.10W, h0km±6km, MD4.4, mb4.9(NEIC)*
NEIC ***14*** *22:10:56.2±0.6, 11.17N×86.85W, h35km, mb4.9/36, Error ellipse: s-maj=12.9km s-min=8.0km az=212.0*
ISCJB ***14*** *22:10:59.6±0.7, 11.42N±0.05×86.97W±0.07, h65km±5km, mb4.7/44, Error ellipse: s-maj=12.3km s-min=5.3km az=149.5*
ISC 14 22:11:00.9±0.6, 11.46N±0.05×86.93W±0.06, h58km±5km, n138, σ1s15/116, mb4.8/44, 7C-7D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.79**	**24**⇑	*i*P		**Pn**	**22 11 15.8**	**-0.4**
CRUN	**El Crucero**	**0.81**	**49**‖	*e*P		**Pn**	**22 11 16.5**	**+0.1**
CRUN				*e*S		**Sn**	**22 11 35.6**	**+7.9**
TICN	**Ticuantepe**	**0.89**	**50**‖	*e*P		**Pn**	**22 11 17.4**	**-0.1**
XAVN	**Gruta Xavier**	**0.91**	**40**‖	*e*P		**Pn**	**22 11 17.1**	**-0.6**
TISN	**Laguna Tiscapa**	**0.94**	**43**‖	*e*P		**Pn**	**22 11 17.6**	**-0.5**
MGAN	**Managua**	**0.96**	**44**‖	*e*P		**Pn**	**22 11 18.0**	**-0.4**
APON	**Apoyo**	**0.96**	**61**‖	*i*P		**Pn**	**22 11 18.0**	**-0.4**
MOMJ	**Momotombo**	**1.02**	**22**‖	*e*P		**Pn**	**22 11 18.9**	**-0.2**
SSNN	**San Juan del S**	**1.07**	**99**‖	*e*P		**Pn**	**22 11 18.9**	**-0.8**
TEL3	**Telica 3**	**1.11**	**4**‖	*e*P		**Pn**	**22 11 20.3**	**-0.1**
TELN	**Telica**	**1.15**	**5**‖	*e*P		**Pn**	**22 11 20.6**	**-0.2**
HUEN		**1.15**	**40**‖	*e*P		**Pn**	**22 11 21.0**	**+0.1**
HUEN				*e*S		**Sn**	**22 11 41.3**	**+5.6**
CONN	**Concepcion**	**1.28**	**85**⇑	*e*P		**Pn**	**22 11 21.9**	**-0.7**
MADN	**Villa Maderas**	**1.37**	**92**⇑	*e*P		**Pn**	**22 11 23.0**	**-0.8**
VCR	**Vista de Mar**	**1.83**	**136**	*e*P		**Pn**	**22 11 29.5**	**-0.7**
CUI		**1.89**	**114**	*i* P		**Pn**	**22 11 30.0**	**-0.9**
CUI				*i* S		**Sn**	**22 11 58.7**	**+5.1**
CNCH	**Conchagua**	**2.02**	**334**	*e*P		x	22 11 31.2	
CNCH				*e*S		x	22 12 01.0	
JTS	**JuntasAbangare**	**2.26**	**121**	*e*Pn		**Pn**	**22 11 28.4**	**-7.5**
JTS					Sn	**Sn**	**22 12 08.8**	**+6.2**
JTS	**JuntasAbangare**	**2.26**	**121**	Pn		**Pn**	**22 11 35.3**	**-0.6**
	42nm,0.3s,baz=304,slow=7.6,SNR=48							
JTS					Sn	**Sn**	**22 12 08.8**	**+6.2**
	147nm,0.3s,baz=279,slow=17,SNR=14							
BLLM	**Bellamira**	**2.35**	**327**	*e*P		x	22 11 36.0	
VSM	**San Miguel**	**2.36**	**326**	*e*P		x	22 11 37.0	
JCR	**Jicaral**	**2.39**	**132**	*e*P		**Pn**	**22 11 38.2**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.61**	**353**	*e*Pn		**Pn**	**22 11 40.6**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.61**	**353**	*e*P		**Pn**	**22 11 40.2**	**-0.5**
TGUH				*e*S		**Sn**	**22 12 13.9**	**+2.7**
CAHU	**Cacacuatique**	**2.62**	**332**	*e*P		x	22 11 39.9	
CGA2	**Cerro Gallo 2**	**2.81**	**120**	*e*P		**Pn**	**22 11 44.7**	**+1.2**
SNVI	**San Vicente**	**2.84**	**319**	*e*P		x	22 11 43.3	
PRS1	**Puriscal**	**2.96**	**119**	*e*P		**Pn**	**22 11 47.7**	**+2.2**
LCBS	**La Ceiba**	**2.96**	**318**	*e*P		x	22 11 44.5	
LFRS	**El Faro**	**3.00**	**316**	*e*P		x	22 11 45.0	
LBRS	**Las Brisas**	**3.07**	**318**	*e*P		x	22 11 46.9	
LFU	**La Fuente**	**3.12**	**317**	*e*P		x	22 11 47.7	
LAJ	**Bijagual**	**3.18**	**120**	*e*P		**Pn**	**22 11 45.0**	**-3.5**
BOQS	**Boqueron**	**3.23**	**315**	*e*P		x	22 11 49.6	
LCR2	**La Lucha 2**	**3.34**	**120**	*e*P		**Pn**	**22 11 50.2**	**-0.5**
QCR	**Quepos**	**3.38**	**126**	*e*P		**Pn**	**22 11 51.4**	**+0.1**
URSC	**Urasca**	**3.49**	**117**	*e*P		**Pn**	**22 11 54.4**	**+1.7**
SBLS	**San Blas**	**3.54**	**312**	*e*P		x	22 11 53.3	
SNJE	**San Jose**	**3.55**	**313**	*e*P		x	22 11 53.1	
RBDL	**Robledal**	**3.77**	**315**	*e*P		x	22 11 56.4	
BAR1		**4.18**	**121**	*e*P		**Pn**	**22 12 02.9**	**+0.6**
TEIG	**Tepich**	**8.82**	**352**	*e*Pn		**Pn**	**22 13 05.7**	**0.0**
TEIG				LR		LR	22 16 22.4	
TEIG	**Tepich**	**8.82**	**352**	Pn		**Pn**	**22 13 01.8**	**-3.9**
	0.2nm,0.3s,baz=119,slow=19,SNR=2.0							
TEIG				LR		LR	22 16 22.4	
	comp=Z,2μm,20.5s,baz=296,slow=38							
CMIG	**Matias Romero**	**9.53**	**307**	Pn		**Pn**	**22 13 15.3**	**-0.2**
CMIG				Sn		**Sn**	**22 15 08.7**	**+7.5**
CMIG	**Matias Romero**	**9.53**	**307**	Pn		**Pn**	**22 13 15.3**	**-0.2**
	2.2nm,0.3s,baz=138,slow=8.0,SNR=13							
CMIG				Sn		**Sn**	**22 15 08.7**	**+7.5**
	0.7nm,0.3s,baz=277,slow=21,SNR=3.1							
ROSC	**El Rosal**	**14.08**	**117**	Pn		**Pn**	**22 14 25.8**	**+8.3**
	1.5nm,0.3s,baz=279,slow=22,SNR=11							
SDV	**Santo Domingo**	**16.24**	**98**	Pn		**Pn**	**22 14 40.8**	**-4.6**
SDV	**Santo Domingo**	**16.24**	**98**	Pn		**Pn**	**22 14 40.8**	**-4.6**
	0.4nm,0.3s,baz=302,slow=9.5,SNR=2.8							
DWPF	**Disney**	**17.35**	**16**	Pn		**Pn**	**22 15 01.6**	**+2.5**
HKT	**Hockley**	**20.18**	**337**	*e*P		**P**	**22 15 32.1**	**+1.4**
	83nm,1.1s							
ATAH	**Atahualpa**	**20.20**	**155**	LR		LR	22 22 33.0	
	comp=Z,865nm,19.3s,baz=241,slow=34							
NATX	**Nacogdoches**	**21.43**	**342**	*e*P		**P**	**22 15 45.6**	**+1.4**
	104nm,0.9s,mb5.2							
LRAL	**Lakeview Retre**	**21.48**	**360**	*e*P		**P**	**22 15 45.9**	**+1.2**
PCRV	**Puerto La Cruz**	**21.93**	**91**	P		**P**	**22 15 49.9**	**+0.1**
	16nm,0.7s,mb4.5,baz=313,slow=10,SNR=4.1							
JCT	**Junction City**	**22.39**	**330**	*e*P		**P**	**22 15 48.1**	**-6.3**
	33nm,0.8s,mb4.8							
OXF	**Oxford**	**23.06**	**355**	*e*P		**P**	**22 16 00.9**	**-0.6**
	23nm,0.7s,mb4.7							
JSC	**Jenkinsville**	**23.30**	**12**	*e*P		**P**	**22 16 04.5**	**+0.7**
PLAL	**Pickwick Lake**	**23.44**	**358**	*e*P		**P**	**22 16 04.4**	**-0.7**
LHS	**Liberty Hill**	**23.59**	**13**	*e*P		**P**	**22 16 08.6**	**+2.2**
LTX	**Lajitas**	**23.66**	**321**	*e*P		**P**	**22 16 04.9**	**-2.3**
TXAR	**Lajitas Array**	**23.66**	**321**	P		**P**	**22 16 06.8**	**-0.4**
	5.1nm,0.6s,mb4.1,baz=144,slow=9.9,SNR=38							
TXAR					PcP	PcP	22 19 53.0	+2.6
	4.3nm,0.9s,baz=134,slow=3.6,SNR=7.2							
TXAR					ScP	ScP	22 23 38.0	+14
	2.0nm,1.0s,baz=122,slow=4.7,SNR=7.6							
SWET	**Sewanee**	**23.67**	**2**	*e*P		**P**	**22 16 08.8**	**+1.6**
UALR	**University of**	**23.73**	**349**	*e*P		**P**	**22 16 07.1**	**-0.6**
MIAR	**Mount Ida**	**23.77**	**346**	P		**P**	**22 16 06.2**	**-2.0**
	222nm,1.0s,mb5.5							
CPCT	**Cooper Cave**	**23.99**	**5**	*e*P		**P**	**22 16 11.2**	**+1.1**
TKL	**Tuckaleechee C**	**24.26**	**6**	P		**P**	**22 16 13.8**	**+1.2**
	20nm,1.0s,mb4.5,baz=180,slow=12,SNR=15							
TZTN	**Tazewell**	**25.16**	**6**	*e*P		**P**	**22 16 21.7**	**+1.0**
WMOK	**Wichita Mounta**	**25.57**	**337**	*e*P		**P**	**22 16 24.4**	**0.0**
	90nm,0.9s,mb5.3							
SIUC	**Southern Illin**	**26.23**	**356**	*e*P		**P**	**22 16 30.4**	**0.0**
ELN	**Prospectdale**	**26.26**	**11**	*e*P		**P**	**22 16 32.1**	**+1.5**
MNTX	**Cornudas Mount**	**26.38**	**323**	*e*P		**P**	**22 16 32.6**	**+0.7**
	22nm,1.0s,mb4.6							
WCI	**Wyandotte Cave**	**26.67**	**1**	*e*P		**P**	**22 16 34.4**	**+0.1**
KSU1	**Kansas State U**	**28.85**	**344**	*e*P		**P**	**22 16 52.8**	**-1.0**
	34nm,1.0s,mb5.0							
ACSO	**Alum Creek Sta**	**28.87**	**6**	*e*P		**P**	**22 16 55.1**	**+1.1**
HDIL	**Hopedale**	**29.06**	**356**	*e*P		**P**	**22 16 55.7**	**0.0**
ANMO	**Albuquerque**	**29.37**	**326**	P		**P**	**22 16 54.6**	**-3.9**
	4.2nm,0.7s,mb4.3							
ANMO	**Albuquerque**	**29.37**	**326**	P		**P**	**22 17 00.2**	**+1.7**
	4.3nm,0.9s,mb4.2,baz=238,slow=2.8,SNR=4.5							
SDCO	**Great Sand Dun**	**31.02**	**331**	*e*P		**P**	**22 17 13.6**	**+0.5**
	6.4nm,0.8s,mb4.5							
ERPA	**Erie**	**31.14**	**10**	*e*P		**P**	**22 17 14.2**	**+0.1**
	34nm,1.0s,mb5.1							
JFWS	**Jewell Farm**	**31.47**	**355**	*e*P		**P**	**22 17 16.2**	**-0.8**
	17nm,0.9s,mb4.9							
BINY	**Binghamton**	**32.08**	**15**	*e*P		**P**	**22 17 22.7**	**+0.3**
	19nm,0.9s,mb4.9							
BINY				*e*		pP	22 17 33.5	-3.4
MVCO	**Mesa Verde**	**32.15**	**327**	*e*P		**P**	**22 17 25.3**	**+2.3**
	17nm,0.8s,mb4.9							
WUAZ	**Wupatki**	**32.63**	**321**	P		**P**	**22 17 25.5**	**-1.7**
	20nm,1.0s,mb5.0							
SMCO	**Snowmass**	**32.86**	**331**	*e*P		**P**	**22 17 26.3**	**-2.9**
	16nm,1.2s,mb4.8							
SMCO					*e*PcP	PcP	22 20 11.0	-1.9
ECSD	**EROS,Sioux Fal**	**33.23**	**347**	*e*P		**P**	**22 17 30.7**	**-1.7**
	28nm,1.0s,mb5.2							
ECSD					*e*PcP	PcP	22 20 15.3	+1.5
SADO	**Sadowa**	**33.86**	**10**	P		**P**	**22 17 37.2**	**-0.7**
	baz=204,slow=11							
COWI	**Conover**	**34.58**	**357**	*e*P		**P**	**22 17 42.5**	**-1.5**
	21nm,0.9s,mb5.1							
LONY	**Lake Ozonia**	**34.71**	**16**	*e*P		**P**	**22 17 45.6**	**+0.4**
	13nm,1.1s,mb4.8							
PFO	**Pinyon Flat Ob**	**34.86**	**314**	P		**P**	**22 17 47.8**	**+1.2**
	2.1nm,0.6s,mb4.2,baz=112,slow=11,SNR=2.5							
MSU	**Marysvale**	**35.12**	**324**	*e*P		**P**	**22 17 49.4**	**+0.6**
RSSD	**Black Hills**	**35.74**	**339**	*e*P		**P**	**22 17 56.2**	**+2.1**
TPNV	**Topopah Spring**	**36.60**	**319**	*e*P		**P**	**22 18 02.9**	**+1.4**
	8.7nm,0.9s,mb4.6							
TPNV					*e*PcP	PcP	22 20 26.7	+2.9
DUG	**Dugway**	**36.64**	**326**	*e*P		**P**	**22 18 00.8**	**-0.9**
	16nm,1.1s,mb4.8							
PDAR	**Pinedale Array**	**36.89**	**332**	P		**P**	**22 18 02.5**	**-1.3**
	2.2nm,0.7s,mb4.1,baz=116,slow=8.1,SNR=12							
PDAR					PcP	PcP	22 20 25.8	+1.3
	1.7nm,1.0s,baz=125,slow=4.2,SNR=4.2							
PDAR					ScP	ScP	22 24 14.7	+8.1
	0.6nm,0.7s,baz=149,slow=7.2,SNR=3.1							
HWUT	**Hardware Ranch**	**36.99**	**329**	*e*P		**P**	**22 18 05.3**	**+0.6**
	27nm,0.8s,mb5.1							
BGU	**Big Grassy Mou**	**37.27**	**327**	*e*P		**P**	**22 18 08.3**	**+1.2**
BGU				*e*PP		PP	22 19 37.6	+4.5
SIV	**San Ignacio**	**37.39**	**136**	P		**P**	**22 18 09.7**	**+1.2**
	13nm,0.7s,mb4.9,baz=312,slow=8.4,SNR=68							
AGMN	**Agassiz Refuge**	**37.48**	**350**	*e*P		**P**	**22 18 07.0**	**-1.8**
	39nm,0.6s,mb5.4							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
REDW	Red Top Meadow	37.95	331	eP	P	22 18 13.9	+1.1
	30nm,0.8s,mb5.1						
SNOW	Snow King Moun	37.98	331	eP	P	22 18 14.0	+0.9
	29nm,0.8s,mb5.1						
TPAW	Teton Pass	38.09	331	eP	P	22 18 14.7	+0.6
	15nm,0.8s,mb4.8						
MOOW	Moose Ponds	38.20	332	eP	P	22 18 14.9	0.0
	9.4nm,0.8s,mb4.6						
NVAR	Mina Array Bea	38.78	319	P	P	22 18 22.3	+2.3
NVAR				PcP	PcP	22 20 33.4	+2.9
NVAR	Mina Array Bea	38.78	319	P	P	22 18 22.3	+2.3
	0.9nm,0.7s,baz=112,slow=8.9,SNR=4.8						
NVAR				PcP	PcP	22 20 33.4	+2.9
	3.2nm,0.7s,baz=127,slow=5.1,SNR=9.1						
ULM	Lac du Bonnet	39.38	351	P	P	22 18 21.8	-2.9
	17nm,0.9s,mb4.8,baz=170,slow=8.2,SNR=27						
ULM				PcP	PcP	22 20 32.2	+0.2
	4.7nm,0.9s,baz=218,slow=2.8,SNR=4.8						
DGMT	Dagmar	39.62	342	eP	P	22 18 26.8	+0.1
	26nm,0.9s,mb5.0						
HLID	Hailey	39.85	328	eP	P	22 18 29.5	+0.7
	7.7nm,0.8s,mb4.5						
BOZ	Bozeman (W)	40.06	333	eP	P	22 18 30.6	+0.2
	4.2nm,0.8s,mb4.2						
BMO	Blue Mountains	42.25	328	eP	P	22 18 48.0	-0.4
	7.8nm,0.8s,mb4.4						
WALA	Waterton Lakes	43.67	334	eP	P	22 18 58.2	-1.6
	3.5nm,0.7s,mb4.2						
HAWA	Hanford	44.44	328	eP	P	22 19 06.0	-0.1
	8.7nm,0.8s,mb4.5						
HAWA				ePcP	PcP	22 20 46.5	-2.4
FFC	Flin Flon	44.77	348	eP	P	22 19 07.6	-1.0
	6.7nm,0.8s,mb4.5						
SCHQ	Schefferville	46.08	16	eP	P	22 19 17.6	-1.3
SCHQ	Schefferville	46.08	16	P	P	22 19 17.1	-1.8
	4.9nm,1.0s,mb4.4,baz=206,slow=5.2,SNR=14						
EDM	Edmonton	46.72	338	eP	P	22 19 23.1	-0.9
FCC	Fort Churchill	47.52	355	eP	P	22 19 28.6	-1.5
	3.1nm,0.4s,mb4.7						
YKA	Yellowknife Ar	54.70	345	P	P	22 20 22.5	-1.3
	5.7nm,0.9s,mb4.6,baz=136,slow=7.5,SNR=64						
YKA				PcP	PcP	22 21 26.1	+0.2
	1.4nm,0.7s,baz=145,slow=4.2,SNR=9.2						
DLBC	Dease Lake	57.02	335	eP	P	22 20 37.1	-3.5
RKT	Rikitea	58.24	234	eLR	LR	22 37 50.4	
	300nm,26.0s						
RKT	Rikitea	58.24	234	eT		23 23 27.4	
	3.0nm,0.2s						
RES	Resolute Bay	63.37	358	eP	P	22 21 22.4	-1.3
	42nm,0.4s						
INK	Inuvik	64.30	343	eP	P	22 21 29.2	-0.8
	374nm,1.2s						
INK				ePP	PP	22 23 49.7	-2.1
COLA	College	67.55	336	P	P	22 21 45.1	-5.8
MCK	McKinley	67.58	335	eP	P	22 21 48.7	-2.4
	7.9nm,1.0s,mb4.7						
PPT	Papeete	68.26	246	eLR	LR	22 42 30.8	
	209nm,22.5s						
TBI	Tubuai	70.26	240	eLR	LR	22 43 26.2	
	209nm,25.2s						
LSZ	Lusaka	116.95	101	PKPdf	PKPdf	22 29 35.2	-4.8
SONM	Songino Array	119.80	350	PKP	PKPdf	22 29 45.6	+0.9
	1.1nm,0.6s,baz=23,slow=1.8,SNR=9.5						
KSRS	Korea Array	121.38	328	PKP	PKPdf	22 29 49.5	+1.3
	3.9nm,0.6s,baz=5.1,slow=1.6,SNR=13						
ASAR	Alice Springs	139.37	247	PKP	PKPdf	22 30 22.9	+0.4
	0.8nm,0.6s,baz=129,slow=2.4,SNR=6.3						
WRA	Warramunga Arr	139.48	253	PKP	PKPdf	22 30 22.5	-0.2
	1.2nm,0.7s,baz=88,slow=1.9,SNR=7.8						
FITZ	Fitzroy Crossi	147.86	254	eP	PKPbc	22 30 41.0	+0.6
	7.5nm,1.0s						
FITZ	Fitzroy Crossi	147.86	254	PKPbc	PKPbc	22 30 41.0	+0.6
	3.8nm,0.9s,baz=94,slow=3.8,SNR=4.5						
CHG	Chiang Mai	149.37	349	P	PKPbc	22 30 44.7	+0.4
CHTO	Chiang Mai	149.37	349	ePKPdf	PKPdf	22 30 37.3	-2.6
CHTO				ePKPab	PKPbc	22 30 44.7	+0.5
KKTK	Khon Kaen	150.75	341	P	PKPbc	22 30 49.3	+1.6
	494nm,0.9s						
PSI	Prapat	164.69	337	PKP	PKPdf	22 30 59.7	+0.4
PSI	Prapat	164.69	337	PKP	PKPdf	22 30 59.7	+0.4
	2.6nm,0.6s,baz=182,slow=16,SNR=5.2						

*CASC **14** 22:32:24.1±2.8, 1140N×8703W, h1^{km}±6^{km}, MD3.9, mb3.8(NEIC)*
*ISCJB **14** 22:32:27.9±0.7, 1156N±006×8681W±009, h82^{km}±6^{km}, mb3.7/7, Error ellipse: s-maj=17.2km s-min=4.8km az=147.6*
*IDC **14** 22:32:27.9±4.7, 1194N×8657W, h40^{km}±58^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.5/5, Error ellipse: s-maj=91.0km s-min=28.6km az=51.0*
*NEIC **14** 22:32:27.1±0.6, 1187N×8655W, h35^{km}, mb3.8/4, Error ellipse: s-maj=16.1km s-min=9.9km az=63.0*
ISC 14 22:32:29.4±0.6**, 1161N**±005×**8673W**±008**, h79**^{km}±6^{km}**, n40, σ1^{s}38**/49**, mb3.7**/7**, 11C-3D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	El Crucero	0.56	48	⇑eP	Pn	22 32 43.0	-0.6
COPN	Copaltepe	0.58	13	⇑eP	Pn	22 32 41.9	-1.9
COPN				eS	Sn	22 32 56.1	+1.6
TICN	Ticuantepe	0.65	49	⇓eP	Pn	22 32 44.1	-0.3
XAVN	Gruta Xavier	0.67	36	⇑eP	Pn	22 32 43.8	-0.9
TISN	Laguna Tiscapa	0.70	40	⇓eP	Pn	22 32 44.4	-0.6
MGAN	Managua	0.71	41	⇑eP	Pn	22 32 44.6	-0.5
MGAN				eS	Sn	22 33 00.2	+3.4
APON	Apoyo	0.72	65	⇑iP	Pn	22 32 44.4	-0.7
MOMJ	Momotombo	0.82	13	⇓eP	Pn	22 32 45.1	-1.2
MOMJ				eS	Sn	22 33 01.7	+2.9
HUEN		0.91	37	⇑iP	Pn	22 32 47.2	-0.1
HUEN				eS	Sn	22 33 07.6	+7.0
SSNN	San Juan del S	0.92	110	⇑eP	Pn	22 32 45.4	-2.0
SSNN				eS	Sn	22 33 03.1	+2.2
TEL3	Telica 3	0.96	353	⇑eP	Pn	22 32 46.4	-1.5
TEL3				eS	Sn	22 33 02.9	+1.1
TELN	Telica	0.99	354	⇑eP	Pn	22 32 46.8	-1.5
TELN				eS	Sn	22 33 02.9	+0.4
CONN	Concepcion	1.08	92	⇑eP	Pn	22 32 48.3	-1.0
CONN				eS	Sn	22 33 07.7	+3.3
MADN	Villa Maderas	1.19	99	⇑eP	Pn	22 32 49.5	-1.2
CUI		1.79	121	eP	Pn	22 32 57.9	-0.6
VCR	Vista de Mar	1.83	144	eP	Pn	22 32 57.4	-1.5
JTS	JuntasAbangare	2.18	127	P	Pn	22 33 02.5	-1.2
JTS				S	Sn	22 33 30.6	+0.7
JTS	JuntasAbangare	2.18	127	P	Pn	22 33 02.5	-1.2
	24nm,0.3s,baz=314,slow=21,SNR=25						
JTS				S	Sn	22 33 30.6	+0.7
	18nm,0.3s,baz=295,slow=19,SNR=4.9						
JCR	Jicaral	2.36	138	eP	Pn	22 33 05.6	-0.5
TGUH	Tegucigalpa,Un	2.49	348	ePn	Pn	22 33 06.9	-0.9
TGUH				eSn	Sn	22 33 30.5	-6.8
CGA2	Cerro Gallo 2	2.73	125	eP	Pn	22 33 11.7	+0.6
PRS1	Puriscal	2.87	124	eP	Pn	22 33 13.5	+0.5
LAJ	Bijagual	3.10	124	eP	Pn	22 33 12.3	-3.7
LCR2	La Lucha 2	3.26	124	eP	Pn	22 33 20.7	+2.5
URSC	Urasca	3.39	121	eP	Pn	22 33 22.3	+2.2
BAR1		4.10	125	eP	Pn	22 33 29.9	+0.2
PAYG	Puerto Ayora	12.70	196	Pn	Pn	22 35 29.0	+2.0
SDV	Santo Domingo	16.07	98	ePn	Pn	22 36 09.2	-1.5
	1.3nm,0.5s						
TXAR	Lajitas Array	23.67	321	P	P	22 37 34.3	+0.5
	0.9nm,0.7s,mb3.2,baz=140,slow=9.2,SNR=5.7						
WMOK	Wichita Mounta	25.50	336	eP	P	22 37 53.1	+2.7
	8.3nm,1.1s,mb4.1						
BRNJ	Basking Ridge	30.88	18	P	P	22 38 36.3	-2.0
SDCO	Great Sand Dun	30.99	330	eP	P	22 38 42.0	+2.8
	0.8nm,0.6s,mb3.6						
FRNY	Flat Rock	34.98	16	P	P	22 39 13.1	-0.8
ARUT	Antelope Range	35.37	322	eP	P	22 39 19.6	+2.3
PDAR	Pinedale Array	36.84	332	P	P	22 39 31.6	+1.7
	0.4nm,0.6s,mb3.5,baz=134,slow=8.6,SNR=4.0						
ULM	Lac du Bonnet	39.26	351	P	P	22 39 50.0	-0.1
	1.1nm,0.5s,mb3.9,baz=160,slow=8.5,SNR=4.4						
FCC	Fort Churchill	47.39	355	eP	P	22 40 54.5	-0.8
	0.7nm,0.4s,mb3.7						
YKA	Yellowknife Ar	54.60	345	P	P	22 41 49.4	0.0
	0.4nm,0.7s,mb3.6,baz=137,slow=7.7,SNR=8.4						
ASAR	Alice Springs	139.60	247	PKP	PKPdf	22 51 52.4	+3.7
	0.2nm,0.6s,baz=102,slow=2.3,SNR=3.4						
WRA	Warramunga Arr	139.70	253	PKP	PKPdf	22 51 51.5	+2.5
	0.4nm,0.8s,baz=96,slow=1.3,SNR=5.8						

WEL 14 22:36:25.0±0.1**, 3790S**×**17675E, h5**^{km}**, ML3.5**/9**, 4C-4D, Error ellipse: s-maj=0.7km s-min=0.7km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.11	214	⇓PG	Pg	22 36 27.6	+0.4
MARZ				SG	Sg	22 36 29.7	+1.1
OPRZ	Ohinepanea	0.16	289	⇑PG	Pg	22 36 28.5	+0.3
OPRZ				SG	Sg	22 36 31.1	+0.8
EDRZ	Edgecumbe	0.21	182	⇑PG	Pg	22 36 29.5	+0.4
LIRZ	Lichensteins R	0.31	250	⇓PG	Pg	22 36 31.5	+0.5
LIRZ				SG	Sg	22 36 35.9	+0.9
MKRZ	Makatiti	0.33	223	PG	Pg	22 36 32.2	+0.9
TAZ	Tarawera	0.38	210	PG	Pg	22 36 33.3	+0.9
KARZ	Kaharoa	0.42	253	⇓PG	Pg	22 36 33.4	+0.4
TGRZ	Tauranga	0.42	293	PG	Pg	22 36 33.5	+0.4
TGRZ				SG	Sg	22 36 39.2	+0.6
URZ	Urewera	0.46	142	⇑PG	Pg	22 36 33.9	+0.1
WIZ	White Island	0.51	44	⇓PG	Pg	22 36 35.4	+0.7
UTU	Utuhina	0.52	237	PG	Pg	22 36 35.7	+0.7
PATZ	Paeroa	0.62	219	P*	Pg	22 36 37.6	+0.7
MYRZ	Mayor Island	0.74	327	P*	Pb	22 36 39.5	-0.7
MWZ	Matawai	0.75	126	⇑P*	Pb	22 36 39.4	-1.1
TOZ	Tahuroa Road	1.00	279	P*	Pb	22 36 43.6	-1.2
KUZ	Kuaotunu	1.41	324	PN	Pn	22 36 50.2	-1.1

WEL 14 22:38:47.2±0.1**, 3791S**×**17675E, h5**^{km}**, ML3.5**/10**, 3C-4D, Error ellipse: s-maj=0.7km s-min=0.6km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.10	218	⇓PG	Pg	22 38 49.7	+0.4
MARZ				SG	Sg	22 38 51.8	+1.1
EDRZ	Edgecumbe	0.20	183	⇑PG	Pg	22 38 51.6	+0.4
LIRZ	Lichensteins R	0.31	251	⇓PG	Pg	22 38 53.6	+0.4
LIRZ				SG	Sg	22 38 58.2	+1.0
MKRZ	Makatiti	0.32	224	⇓PG	Pg	22 38 54.3	+0.8
TAZ	Tarawera	0.38	211	PG	Pg	22 38 55.4	+0.9
KARZ	Kaharoa	0.42	254	⇓PG	Pg	22 38 55.6	+0.3
TGRZ	Tauranga	0.43	294	⇑PG	Pg	22 38 55.7	+0.2
URZ	Urewera	0.45	141	⇑PG	Pg	22 38 56.1	+0.1
WIZ	White Island	0.51	43	PG	Pg	22 38 57.6	+0.5
UTU	Utuhina	0.52	238	PG	Pg	22 38 57.7	+0.5
PATZ	Paeroa	0.61	219	P*	Pg	22 39 00.2	+1.2
MYRZ	Mayor Island	0.74	327	P*	Pb	22 39 01.7	-0.9
MWZ	Matawai	0.75	125	P*	Pb	22 39 01.5	-1.2
TOZ	Tahuroa Road	1.00	280	P*	Pb	22 39 05.6	-1.5
PUZ	Puketiti	1.20	98	P*	Pb	22 39 09.9	-0.6

IDC 14 22:43:42.8±10.0**, 2208N**×**14443E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.6**/17**, Error ellipse: s-maj=394.3km s-min=25.7km az=75.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.40	338	LR	LR	22 46 30.9	
	comp=Z,106nm,19.0s,baz=286,slow=31						
SONM	Songino Array	39.79	320	P	P	22 51 17.8	+0.3
	0.4nm,0.6s,baz=125,slow=6.6,SNR=4.8						
WRA	Warramunga Arr	42.91	194	P	P	22 51 43.2	-0.1
	0.7nm,0.9s,baz=16,slow=9.0,SNR=4.2						
ASAR	Alice Springs	46.61	193	P	P	22 52 12.9	+0.1
	0.3nm,0.6s,baz=20,slow=13,SNR=5.7						
MKAR	Makanchi Array	55.29	312	P	P	22 53 17.8	-0.3
	0.3nm,0.2s,baz=91,slow=9.2,SNR=4.0						

*CASC **14** 22:44:03.0±3.3, 1131N×8717W, h0^{km}±4^{km}, MD4.7, mb5.2(NEIC)*
*IDC **14** 22:44:03.2±0.4, 1187N×8637W, h0^{km}, mb4.6/18, mb1 4.8/20, mb1mx4.6/25, mbtmp4.6/20, ML4.6/2, MS4.6/28, Ms1 4.6/28, ms1mx4.5/35, Error ellipse: s-maj=23.1km s-min=10.1km az=56.0*
*BJI **14** 22:44:06.1, 1160N×8670W, h25^{km}, mB5.5, Ms5.3, Msz5.0*
*MOS **14** 22:44:06.6±1.2, 1173N×8654W, h33^{km}, mb5.3/21, MS4.8/10, Error ellipse: s-maj=10.1km s-min=5.1km az=111.5*
*NEIC **14** 22:44:08.2±0.2, 1157N×8667W, h35^{km}, mb5.2/63, MS4.7/23, Error ellipse: s-maj=6.2km s-min=4.0km az=219.0*
*GCMT **14** 22:44:08.2±0.3, 1127N×8707W, h30^{km}, MW5.2/81, Moment Tensor Solution. s68,c102; s81,c136; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.61±.02; $M_{\theta\theta}$-0.51±.02; $M_{\phi\phi}$-0.09±.02; $M_{r\theta}$0.37±.03; $M_{\theta\phi}$0.44±.01; $M_{\phi r}$-0.23±.03; Best double couple: $M_0$0.82600×10^{17} NP1:ϕ_s303.00000°, δ29.00000°, λ91.00000°. NP2:ϕ_s122.00000°, δ61.00000°, λ89.00000°. Principal axes: T 0.7360, Plg74.0000°, Azm30.0000°; N 0.1810, Plg1.0000°, Azm122.0000°; P -0.9160, Plg16.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*CRAAG **14** 22:44:10.4, 1152N×8672W, Mb5.2*
*ISCJB **14** 22:44:10.1±0.3, 1157N±003×8668W±003, h70^{km}±2^{km}, mb4.9/78, Error ellipse: s-maj=5.4km s-min=3.2km az=40.3*
ISC 14 22:44:11.1±0.3**, 1160N**±003×**8667W**±003**, h62**^{km}±2^{km}**, n547, σ0^{s}88**/492**, mb5.0**/78**, 93C-89D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUN	El Crucero	0.53	43	⇑eP	Pn	22 44 23.7	+0.3
COPN	Copaltepe	0.59	7	⇑iP	Pn	22 44 23.3	-0.8
TICN	Ticuantepe	0.61	44	⇓iP	Pn	22 44 24.6	+0.2
XAVN	Gruta Xavier	0.64	31	⇓iP	Pn	22 44 24.8	0.0
APON	Apoyo	0.67	61	⇓iP	Pn	22 44 25.3	+0.2
TISN	Laguna Tiscapa	0.67	35	⇑eP	Pn	22 44 25.2	+0.1
MGAN	Managua	0.69	37	⇓iP	Pn	22 44 26.2	+0.9
MOMJ	Momotombo	0.82	9	⇓eP	Pn	22 44 26.6	-0.3
SSNN	San Juan del S	0.86	111	⇑iP	Pn	22 44 26.5	-0.8
HUEN		0.88	33	⇓eP	Pn	22 44 28.2	+0.6
TEL3	Telica 3	0.99	350	⇑iP	Pn	22 44 28.0	-1.1
TELN	Telica	1.02	351	⇑eP	Pn	22 44 28.3	-1.1
TELN				eS	Sn	22 44 47.3	+4.3
CONN	Concepcion	1.02	92	⇓eP	Pn	22 44 29.2	-0.2
MADN	Villa Maderas	1.12	99	⇑eP	Pn	22 44 30.5	-0.3
MADN				eS	Sn	22 44 57.3	+12
CUI		1.73	122	⇓eP	Pn	22 44 38.9	0.0
CUI				eS	Sn	22 45 07.1	+7.2
VCR	Vista de Mar	1.78	145	eP	Pn	22 44 35.9	-3.7
CNCH	Conchagua	2.02	326	⇑eP	x	22 44 57.1	
CNCH				eS	x	22 45 25.7	
JTS	JuntasAbangare	2.12	127	Pn	Pn	22 44 43.3	-1.0
	41μm,0.9s						
JTS	JuntasAbangare	2.12	127	P	Pn	22 44 41.1	-3.2
JTS						22 45 15.3	
JTS	JuntasAbangare	2.12	127	Pn	Pn	22 44 41.1	-3.1
	166nm,0.3s,baz=309,slow=9.1,SNR=149						
JTS				Sn	Sn	22 45 15.3	+5.7
	295nm,0.3s,baz=152,slow=18,SNR=8.2						
JTS				LR	LR	22 45 23.3	
	comp=Z,4μm,19.3s,baz=37,slow=38						
JCR	Jicaral	2.31	138	eP	Pn	22 44 44.9	-1.9
BLLM	Bellamira	2.39	320	eP	x	22 45 02.3	
BLLM				eS	x	22 45 30.8	
TGUH	Tegucigalpa,Un	2.52	346	ePn	Pn	22 44 49.6	0.0
TGUH				eSn	Sn	22 45 19.0	-0.2
CAHU	Cacacuatique	2.64	325	⇓eP	x	22 45 06.7	
CAHU				eS	x	22 45 41.0	
CGA2	Cerro Gallo 2	2.67	126	eP	Pn	22 44 53.4	+1.6
PRS1	Puriscal	2.81	124	eP	Pn	22 44 54.5	+0.8
SNVI	San Vicente	2.92	314	eP	x	22 45 09.6	
LAJ	Bijagual	3.04	124	eP	Pn	22 44 52.7	-4.0
SJS	Escuela Geolog	3.05	122	eP	Pn	22 44 57.1	+0.2
LFRS	El Faro	3.09	311	⇓eP	x	22 45 10.2	
LFRS				eS	x	22 45 50.1	
LBRS	Las Brisas	3.15	313	eP	x	22 45 11.6	
LBRS				eS	x	22 45 50.1	
LCR2	La Lucha 2	3.20	125	eP	Pn	22 45 00.2	+1.2
QCR	Quepos	3.27	131	eP	Pn	22 44 59.6	-0.3
BOQS	Boqueron	3.32	310	eP	x	22 45 14.4	
BOQS				eS	x	22 45 55.2	
URSC	Urasca	3.33	121	eP	Pn	22 45 02.2	+1.4
BUS	Buena Vista	3.50	125	eP	Pn	22 45 04.6	+1.5
RTR	El Retiro	3.70	309	eP	x	22 45 20.0	
MTO2	Montecristo 2	3.83	317	eP	x	22 45 22.0	
RBDL	Robledal	3.87	311	eP	x	22 45 22.1	
BAR1		4.04	125	eP	Pn	22 45 11.3	+0.8
CNI	Changuinola	4.62	118	eP	Pn	22 45 20.4	+2.1
BCIP	Isla Barro Col	7.14	109	ePn	Pn	22 45 53.1	+0.2
BCIP				eSn	Sn	22 47 17.3	+4.7
SCX	San Cristobal	7.72	312	eP	Pn	22 45 55.2	-5.7
TEIG	Tepich	8.72	350	ePn	Pn	22 46 18.3	+3.7
TEIG				eSn	Sn	22 47 49.6	-1.8
TEIG				LR	LR	22 50 16.3	
TEIG	Tepich	8.72	350	Pn	Pn	22 46 14.5	-0.1
	1.2nm,0.3s,baz=150,slow=14,SNR=13						
TEIG				LR	LR	22 50 16.3	
	comp=Z,5μm,18.9s,baz=279,slow=44						
CMIG	Matias Romero	9.66	305	Pn	Pn	22 46 24.8	-2.6
CMIG				iP		22 46 25.0	
CMIG				Sn	Sn	22 48 15.5	+1.1
CMIG				iS	Sn	22 48 17.3	+2.9
CMIG				LR	LR	22 50 45.3	
CMIG	Matias Romero	9.66	305	Pn	Pn	22 46 24.8	-2.6
	6.7nm,0.3s,baz=106,slow=8.6,SNR=52						
CMIG				Sn	Sn	22 48 15.5	+1.1
	1.2nm,0.3s,baz=254,slow=19,SNR=2.3						
CMIG				LR	LR	22 50 45.3	
	comp=Z,6μm,21.3s,baz=125,slow=41						
SOR	Soroa	11.67	17	eP	Pn	22 46 59.4	+4.5
PNIG	Pinotepa	12.10	295	eP	Pn	22 46 58.9	-1.9
MGV	Manicaragua	12.26	31	eP	Pn	22 47 03.7	+0.9
LMGC	Las Mercedes	12.54	47	eP	Pn	22 47 07.0	+0.3
	baz=230						
LMGC				eS	Sn	22 49 18.3	-6.4
	comp=N,2μm,20.0s						
LMGC				e			
	comp=E,3μm,18.8s						
PAYG	Puerto Ayora	12.71	197	ePn	Pn	22 47 07.3	-1.7
	comp=E,91nm,1.0s						
PPM	Popocatepetl	13.72	304	eP	Pn	22 47 19.6	-3.1
PPM				iP		22 47 21.6	
ROSC	El Rosal	13.92	118	Pn	Pn	22 47 24.4	-1.1
	comp=E,1.0nm,0.3s,baz=270,slow=20,SNR=2.3						
ROSC				LR	LR	22 52 30.8	
	comp=E,2μm,21.1s,baz=338,slow=37						
OTAV	Otavalo	13.92	144	ePn	Pn	22 47 24.5	-1.0
	comp=E,89nm,1.5s						
OTAV				eSn	Sn	22 49 54.9	-3.7
YAIG	Yautepec	13.97	303	eP	Pn	22 47 24.4	-1.7
IIO	Organos	14.07	306	iP	Pn	22 47 25.9	-1.5
PLIG	Platanillo	14.12	300	eP	Pn	22 47 27.0	-1.1
PTVM	Pico Tres Padr	14.38	305	eP	Pn	22 47 27.9	-3.5
SDV	Santo Domingo	16.00	98	ePn	Pn	22 47 53.6	+1.2
	comp=E,194nm,1.5s						
SDV				eSn	Sn	22 50 30.7	-18
SDV	Santo Domingo	16.00	98	Pn	Pn	22 47 52.5	0.0
	comp=E,1.1nm,0.3s,baz=273,slow=6.0,SNR=13						
SDV				PcP	PcP	22 52 47.2	+0.6
	comp=E,0.6nm,0.3s,baz=310,slow=1.2,SNR=4.2						
MOIG	Morelia	16.12	302	eP	Pn	22 47 52.0	-1.9
SDDR	Presa de Saban	16.54	62	ePn	Pn	22 48 01.8	+2.6
	comp=E,53nm,1.1s						
DWPF	Disney	17.15	16	ePn	Pn	22 48 11.1	+4.5
DWPF				Sn	Sn	22 51 09.2	-7.4
ZAIG	Zacatecas	18.80	308	eP	Pn	22 48 26.1	-0.7
HKT	Hockley	20.16	336	eP	P	22 48 40.6	+0.3
	comp=E,216nm,1.1s						
HKT	Hockley	20.16	336	eP	P	22 48 40.7	+0.3
HKT				pmax	pmax		
	comp=Z,216nm,1.1s						
ATAH	Atahualpa	20.22	156	P	P	22 48 45.0	+3.8
	comp=Z,23nm,1.1s,baz=9.9,slow=5.3,SNR=9.2						
ATAH				LR	LR	22 55 41.4	
	comp=Z,3μm,19.4s,baz=339,slow=34						
SJG	San Juan	20.85	69	eP	P	22 48 47.4	-0.6
SJG				eS	S	22 52 32.5	-4.8
SJG				LR	LR		
	comp=Z,3μm,19.0s						
SJG	San Juan	20.85	69	P	P	22 48 48.0	0.0
	comp=Z,9.3nm,0.5s,baz=258,slow=14,SNR=2.7						
CPD	Cerro la Pandu	21.05	70	P	P	22 48 48.7	-1.4
CBYP	Canovanas	21.16	69	eP	P	22 48 51.6	+0.2
LRAL	Lakeview Retre	21.34	359	eP	P	22 48 54.6	+1.5
	comp=Z,112nm,1.1s,mb5.1						
LRAL				ePcP	PcP	22 52 56.5	+1.1
NATX	Nacogdoches	21.38	341	eP	P	22 48 54.4	+0.8
PCRV	Puerto La Cruz	21.68	92	P	P	22 48 57.2	+0.2
	comp=Z,56nm,0.7s,mb5.1,baz=246,slow=4.4,SNR=15						
GOGA	Godfrey	21.91	7	eP	P	22 49 00.3	+1.1
GOGA				e		22 49 11.6	
NHSC	New Hope	22.22	15	eP	P	22 49 03.4	+0.8
	comp=Z,142nm,1.1s,mb5.3						
NHSC				e		22 49 14.9	
NHSC				PcP	PcP	22 52 58.5	+1.4
COW	Cow Castle Cre	22.36	13	eP	P	22 49 02.7	-1.3
COW				ePcP	PcP	22 52 59.1	+1.8
JCT	Junction City	22.40	329	eP	P	22 49 02.5	-1.9
OXF	Oxford	22.95	354	eP	P	22 49 09.6	-0.6
	comp=Z,116nm,0.6s,mb5.5						
OXF				PcP	PcP	22 52 58.8	+0.2
OXF				LR	LR		
	comp=Z,853nm,19.0s						
OXF	Oxford	22.95	354	eP	P	22 49 09.6	-0.6
OXF						22 52 58.8	
OXF				pmax	pmax		
	comp=Z,116nm,0.6s,mb5.5						
OXF				MLR	MLR		
	comp=Z,853nm,19.0s						
JSC	Jenkinsville	23.11	11	eP	P	22 49 12.9	+1.0
JSC				ePcP	PcP	22 52 59.4	+0.5
PLAL	Pickwick Lake	23.32	357	eP	P	22 49 13.6	-0.3
	comp=Z,85nm,1.2s,mb5.0						
PLAL				e		22 49 26.7	
PLAL				ePcP	PcP	22 52 59.5	+0.2
SWET	Sewanee	23.52	2	eP	P	22 49 16.8	+1.1
UALR	University of	23.65	348	eP	P	22 49 16.2	-0.7
	comp=Z,81nm,0.8s,mb5.2						
UALR				ePcP	PcP	22 52 59.8	-0.3
MIAR	Mount Ida	23.70	346	eP	P	22 49 16.5	-0.8
	comp=Z,92nm,0.7s,mb5.3						
MIAR				ePcP	PcP	22 53 01.9	+1.8
MIAR				LR	LR		
	comp=Z,1μm,22.0s						
MIAR	Mount Ida	23.70	346	eP	P	22 49 16.5	-0.8
MIAR				e		22 53 01.9	
MIAR				pmax	pmax		
	comp=Z,92nm,0.7s,mb5.3						
MIAR				MLR	MLR		
	comp=Z,1μm,22.0s						
LTX	Lajitas	23.72	321	P	P	22 49 13.7	-3.9
	comp=Z,45nm,0.7s,mb5.0						
LTX	Lajitas	23.72	321	P	P	22 49 13.7	-3.9
LTX				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.0						
TXAR	Lajitas Array	23.72	321	P	P	22 49 17.2	-0.4
TXAR						22 53 01.3	
TXAR	Lajitas Array	23.72	321	P	P	22 49 17.2	-0.3
	comp=Z,12nm,0.5s,mb4.6,baz=143,slow=9.0,SNR=177						
TXAR				PcP	PcP	22 53 01.3	+1.0
	comp=Z,14nm,0.9s,baz=152,slow=4.9,SNR=11						
TXAR				ScP	ScP	22 56 40.0	+6.5
	comp=Z,0.6nm,0.5s,baz=126,slow=5.2,SNR=4.7						
CPCT	Cooper Cave	23.83	4	eP	P	22 49 19.4	+0.9
CPCT				ePcP	PcP	22 53 00.9	+0.5
TKL	Tuckaleechee C	24.10	6	P	P	22 49 21.4	+0.4
	comp=Z,41nm,0.8s,mb4.9,baz=176,slow=10,SNR=48						
TKL				LR	LR	22 59 00.4	
	comp=Z,1μm,20.3s,baz=107,slow=38						
HALT	Halls	24.33	355	eP	P	22 49 23.3	+0.2
GNAR	Gosnell	24.45	353	eP	P	22 49 23.4	-0.8
	comp=Z,1μm,0.9s						
GLAT	Glass	24.68	355	eP	P	22 49 26.2	0.0
GLAT				ePcP	PcP	22 52 59.3	-2.9
UTMT	University of	24.72	356	eP	P	22 49 26.9	+0.3
	comp=Z,142nm,1.1s,mb5.4						
TZTN	Tazewell	25.00	6	eP	P	22 49 30.3	+1.2
	comp=Z,64nm,1.0s,mb5.1						
TZTN				ePcP	PcP	22 53 04.0	+1.1
PARMO	Parma	25.11	354	eP	P	22 49 29.9	-0.3
NNA	Nana	25.38	157	P	P	22 49 33.9	+1.2
	comp=Z,80nm,1.2s,mb5.1						
NNA				LR	LR	22 58 28.7	
NNA	Nana	25.38	157	P	P	22 49 35.1	+2.3
	comp=Z,3.2nm,0.3s,mb4.4,baz=312,slow=11,SNR=3.2						
NNA				LR	LR	22 58 28.7	
	comp=Z,711nm,19.6s,baz=219,slow=34						

WMOK **Wichita Mounta** 25.54 336 eP P 22 49 33.2 -0.9
WMOK ePcP PcP 22 53 04.6 +0.4
WMOK eS S 22 54 00.7 +3.3
WMOK LR LR
comp=Z,445nm,22.0s
LPIG La Paz 25.66 302 P P 22 49 35.6 +0.3
comp=Z,20nm,0.4s,mb5.0,baz=129,slow=6.5,SNR=3.2
LPIG LR LR 23 00 23.9
comp=Z,1µm,19.8s,baz=331,slow=38
ELN Prospectdale 26.07 11 eP P 22 49 40.7 +1.9
SIUC Southern Illin 26.11 355 eP P 22 49 38.9 -0.3
comp=Z,61nm,0.6s,mb5.3
SIUC eS S 22 54 05.2 -1.0
BLA Blacksburg 26.12 11 eP P 22 49 40.6 +1.3
comp=Z,25nm,0.8s,mb4.8
BLA pmax pmax
BLA Blacksburg 26.12 11 eP P 22 49 40.6 +1.3
comp=Z,25nm,0.8s,mb4.8
USIN University of 26.27 358 eP P 22 49 40.6 0.0
comp=Z,51nm,0.7s,mb5.2
MNTX Cornudas Mount 26.43 322 eP P 22 49 41.0 -1.1
comp=Z,178nm,1.8s,mb5.3
MNTX ePcP PcP 22 53 06.9 +0.6
FVM French Village 26.49 353 eP P 22 49 41.4 -1.2
FVM eS S 22 54 08.8 -3.5
WCI Wyandotte Cave 26.52 1 eP P 22 49 42.7 -0.2
WCI ePcP PcP 22 53 06.9 +0.5
URVA University of 27.13 16 eP P 22 49 49.6 +1.2
BLO Bloomington 27.46 0 eP P 22 49 51.0 -0.3
comp=Z,39nm,0.8s,mb5.0
BLO PcP PcP 22 53 04.8 -3.8
BLO Bloomington 27.46 0 eP P 22 49 51.0 -0.4
BLO 22 53 04.8
BLO pmax pmax
comp=Z,39nm,0.8s,mb5.0
CBN Corbin 27.77 16 eP P 22 49 56.0 +1.9
comp=Z,55nm,0.8s,mb5.2
MCWV Mont Chateau 28.60 11 eP P 22 50 01.8 +0.4
comp=Z,31nm,0.6s,mb5.2
MCWV ePcP PcP 22 53 10.0 -1.4
319A Douglas 28.70 317 ⇓P P 22 50 02.9 +0.4
baz=29
ACSO Alum Creek Sta 28.71 6 eP P 22 50 03.1 +0.7
comp=Z,46nm,0.6s,mb5.4
ACSO eS S 22 54 40.7 -6.5
KSU1 Kansas State U 28.79 344 eP P 22 50 02.1 -1.0
KSU1 S S 22 54 44.5 -3.9
KSU1 LR LR
comp=Z,546nm,21.0s
BBSR BB Station 28.91 41 P P 22 50 08.1 +3.8
BBSR eS S 22 55 00.6 +10
BBSR LR LR
comp=Z,2µm,19.0s
HDIL Hopedale 28.94 356 eP P 22 50 03.7 -0.7
comp=Z,82nm,0.6s,mb5.6
HDIL ePcP PcP 22 53 12.2 0.0
HDIL eS S 22 54 48.0 -2.8
SDMD Soldier's Deli 29.04 16 eP P 22 50 06.6 +1.2
318A Bisbee 29.22 316 ⇑P P 22 50 07.7 +0.6
baz=29
ANMO Albuquerque 29.40 325 eP P 22 50 09.1 +0.4
ANMO ePcP PcP 22 53 15.4 +1.9
ANMO S S 22 54 51.0 -7.2
ANMO LR LR
comp=Z,592nm,22.0s
ANMO Albuquerque 29.40 325 P P 22 50 08.3 -0.3
comp=Z,4.6nm,0.6s,mb4.4,baz=144,slow=7.7,SNR=19
ANMO PcP PcP 22 53 14.2 +0.7
comp=Z,7.8nm,0.7s,baz=146,slow=5.7,SNR=7.7
ANMO LR LR 23 05 45.4
comp=Z,356nm,18.5s,baz=245,slow=44
CBKS Cedar Bluff 29.50 339 eP P 22 50 08.8 -0.7
comp=Z,27nm,0.8s,mb5.0
CBKS ePcP PcP 22 53 14.6 +0.9
CBKS eS S 22 54 59.3 -0.5
CBKS Cedar Bluff 29.50 339 eP P 22 50 08.8 -0.7
CBKS e 22 53 14.6
CBKS eS S 22 54 59.3 -0.4
CBKS pmax pmax
comp=Z,27nm,0.8s,mb5.0
218A Dragoon 29.59 317 ⇓P P 22 50 10.7 +0.4
baz=30
MVL Millersville 29.73 16 eP P 22 50 12.1 +0.6
comp=Z,18nm,0.6s,mb5.0
MVL ePcP PcP 22 53 12.0 -2.2
217A Green Valley 29.99 316 ⇑P P 22 50 14.3 +0.4
baz=30
TUC Tucson 30.29 317 eP P 22 50 17.2 +0.7
ALLY Alegheny Colle 30.48 10 eP P 22 50 18.9 +0.8
ALLY ePP PP 22 51 16.4 -12
ALLY ePcP PcP 22 53 17.2 +1.1
216A Three Points, 30.56 316 ⇓P P 22 50 19.3 +0.4
baz=31
AAM Ann Arbor 30.70 4 eP P 22 50 20.3 +0.2
BRNJ Basking Ridge 30.87 18 eP P 22 50 19.2 -2.4
ERPA Erie 30.96 10 eP P 22 50 22.6 +0.3
SDCO Great Sand Dun 31.03 330 eP P 22 50 23.3 +0.3
comp=Z,32nm,1.0s,mb5.1
SDCO ePP PP 22 51 34.8 +0.7
SDCO ePcP PcP 22 53 18.7 +1.1
SDCO S S 22 55 23.8 +0.1
SDCO eScP ScP 22 56 56.5 +1.1
SDCO LR LR
comp=Z,698nm,22.0s
116A Eloy 31.06 316 ⇑P P 22 50 23.4 +0.1
baz=31
JFWS Jewell Farm 31.36 355 eP P 22 50 25.4 -0.5
JFWS ePP PP 22 51 37.1 -0.6
JFWS ePcP PcP 22 53 18.9 +0.4
PAL Palisades 31.37 19 eP P 22 50 27.4 +1.4
115A Sonoran Desert 31.50 316 ⇓P P 22 50 27.1 -0.1
baz=32,SNR=6.9
BINY Binghamton 31.88 15 eP P 22 50 30.4 -0.1
BINY ePcP PcP 22 53 20.3 +0.4
MVCO Mesa Verde 32.17 326 eP P 22 50 32.9 -0.2
MVCO ePcP PcP 22 53 22.9 +2.1
MVCO Mesa Verde 32.17 326 ⇓P P 22 50 33.5 +0.5
baz=32,SNR=11
Z14A Wintersburg 32.37 316 ⇑P P 22 50 34.9 0.0
baz=32
X15A Humboldt 32.58 319 ⇑P P 22 50 37.1 +0.4
baz=33
WUAZ Wupatki 32.68 321 eP P 22 50 38.2 +0.7
comp=Z,32nm,1.0s,mb5.2
WUAZ ePcP PcP 22 53 24.3 +2.1
WUAZ Wupatki 32.68 321 ⇓P P 22 50 38.1 +0.6
baz=33
ISCO Idaho Springs 32.72 332 eP P 22 50 38.3 +0.4
comp=Z,53nm,1.8s,mb5.2
ISCO ePcP PcP 22 53 25.0 +2.7
ISCO eS S 22 55 52.6 +2.5
ISCO Idaho Springs 32.72 332 eP P 22 50 38.3 +0.5
ISCO e 22 53 25.0
ISCO eS S 22 55 52.6 +2.6
ISCO pmax pmax
comp=Z,53nm,1.8s,mb5.2
Y14A Wickenburg 32.75 317 ⇓P P 22 50 38.8 +0.6
baz=33
SMCO Snowmass 32.87 330 eP P 22 50 34.4 -4.7
comp=Z,33nm,1.1s,mb5.2
SMCO ePcP PcP 22 53 20.7 -2.0
X14A Yava 32.99 318 ⇑P P 22 50 40.7 +0.4
baz=33,SNR=7.7
W15A Williams 33.03 320 ⇑P P 22 50 41.1 +0.5
baz=33
ECSD EROS,Sioux Fal 33.16 347 eP P 22 50 39.8 -1.8
comp=Z,87nm,0.9s,mb5.7
ECSD ePcP PcP 22 53 23.6 +0.3
ECSD eS S 22 55 54.4 -2.3
GLMI Grayling 33.16 3 eP P 22 50 41.3 -0.3
GLMI ePcP PcP 22 53 23.9 +0.6
LPAZ La Paz 33.22 146 P P 22 50 43.5 +1.1
LPAZ 22 53 25.2
LPAZ La Paz 33.22 146 P P 22 50 43.5 +1.0
comp=Z,0.9nm,0.6s,mb3.9,baz=345,slow=8.8,SNR=6.0
LPAZ PcP PcP 22 53 25.2 +1.3
comp=Z,1.8nm,0.7s,baz=331,slow=5.0,SNR=4.3
LPAZ LR LR 23 05 11.2
comp=Z,1µm,19.0s,baz=304,slow=38
Y13A Salome 33.23 316 ⇓P P 22 50 42.8 +0.4
baz=33
GLA Glamis 33.50 314 ⇓P P 22 50 44.8 +0.1
baz=34,SNR=5.0
W14A Seligman 33.57 319 ⇓P P 22 50 45.8 +0.5
baz=34
ACCN Adirondack Com 33.62 17 eP P 22 50 46.2 +0.6
Y12C Blythe 33.67 315 ⇑P P 22 50 46.3 +0.1
baz=34
X13A Yucca 33.69 317 P P 22 50 47.1 +0.7
baz=34,SNR=56
PDMCI Parker Dam,Lak 33.73 317 ⇑P P 22 50 47.1 +0.4
baz=34
NCB Newcomb 34.00 16 eP P 22 50 49.4 +0.5
comp=Z,79nm,1.7s,mb5.4
NCB ePcP PcP 22 53 24.0 -1.7
W13A Hualapai Mount 34.03 318 ⇑P P 22 50 49.6 +0.3
baz=34,SNR=13
SWSC Sam W. Stewart 34.12 313 ⇑P P 22 50 50.4 +0.3
baz=34
DVTC Desert V Tower 34.20 312 ⇓P P 22 50 51.0 +0.2
baz=34,SNR=7.7
BC3 Big Chuckw Mtn 34.27 314 ⇑P P 22 50 51.6 +0.3
baz=34,SNR=14
T15A Red Dirt Ranch 34.28 322 ⇓P P 22 50 51.8 +0.4
baz=34
IRM Iron Mountain 34.33 315 ⇑P P 22 50 52.5 +0.5
baz=34,SNR=7.5
U14A Mt Trumbull 34.38 320 ⇓P P 22 50 53.2 +0.8
baz=34
COWI Conover 34.45 357 eP P 22 50 51.7 -1.1
COWI ePcP PcP 22 53 27.9 +0.9
LONY Lake Ozonia 34.51 15 eP P 22 50 53.8 +0.5
comp=Z,35nm,0.7s,mb5.4
MONP Monument Peak 34.55 313 ⇑P P 22 50 54.1 +0.3
baz=35,SNR=5.9
T14A Hurricane 34.73 321 ⇑P P 22 50 55.9 +0.5
baz=35
MSNY Massena 34.79 15 eP P 22 50 56.5 +0.7
MSNY ePcP PcP 22 53 29.3 +1.3
BELC Belle Mtn. 34.83 315 ⇓P P 22 50 56.5 +0.2
baz=35,SNR=9.9
U13A Pakoon Wash 34.88 320 ⇑P P 22 50 57.2 +0.6
baz=35
PFO Pinyon Flat Ob 34.95 314 P P 22 50 59.5 +2.3
comp=Z,56nm,1.1s,mb5.4,SNR=5.1
PFO Pinyon Flat Ob 34.95 314 eP P 22 50 59.0 +1.8
PFO Pinyon Flat Ob 34.95 314 P P 22 50 58.2 +1.0
comp=Z,8.0nm,1.0s,mb4.6,baz=103,slow=6.5,SNR=9.3
PFO PcP PcP 22 53 29.9 +1.2
comp=Z,12nm,0.8s,baz=129,slow=2.2,SNR=12
PFO LR LR 23 07 36.8
comp=Z,836nm,19.1s,baz=343,slow=40
PFO Pinyon Flat Ob 34.95 314 ⇓P P 22 50 57.6 +0.3
baz=35,SNR=6.2
RWWY Rawlins 34.96 333 eP P 22 50 58.9 +1.6
comp=Z,55nm,1.2s,mb5.4
FRNY Flat Rock 34.97 16 eP P 22 50 58.1 +0.8
FRNY ePcP PcP 22 53 26.7 -1.8
GMRC Granite Mounta 35.03 316 ⇓P P 22 50 58.3 +0.4
baz=35
V12A Nelson 35.03 318 ⇑P P 22 50 58.5 +0.5
baz=35,SNR=9.7
TMUT Trail Mountain 35.16 326 eP P 22 51 00.8 +1.9
TMUT ePcP PcP 22 53 31.3 +2.1
MSU Marysvale 35.16 324 eP P 22 51 00.2 +1.3
MSU ePcP PcP 22 53 31.9 +2.7
T13A Saint George 35.22 321 ⇑P P 22 51 00.1 +0.6
baz=35
CCUT Cedar City 35.22 322 eP P 22 50 59.8 +0.3
S13A Holt Ranch, En 35.54 321 ⇓P P 22 51 03.5 +1.2
baz=36
TUQ Turquoise Mtn. 35.58 317 ⇑P P 22 51 03.3 +0.7
baz=36
SHPR Sheep Range 35.70 319 eP P 22 51 05.8 +2.2
SHPR ePcP PcP 22 53 33.1 +2.3
RSSD Black Hills 35.70 338 eP P 22 51 04.2 +0.7
RSSD ePcP PcP 22 53 31.6 +1.0
MPU Maple Canyon 35.90 326 eP P 22 51 06.1 +0.8
MPU ePcP PcP 22 53 33.7 +2.3
DAU Daniels Canyon 35.98 327 eP P 22 51 07.0 +1.0
DAU ePcP PcP 22 53 33.8 +2.2
NLU North Lily Min 36.09 326 eP P 22 51 07.5 +0.5
GSC Goldstone 36.10 316 ⇓P P 22 51 07.9 +0.8
baz=36
S12A Delamar Landin 36.17 321 ⇑P P 22 51 08.7 +1.0
baz=36
T11A Corn Creek, Al 36.18 320 ⇓P P 22 51 08.5 +0.8
baz=36
CIS Catalina Islan 36.24 312 ⇓P P 22 51 08.8 +0.4
baz=36,SNR=5.9
U10A Ash Meadows, A 36.41 318 ⇓P P 22 51 10.4 +0.7
baz=36
CTU Camp Tracy 36.44 327 eP P 22 51 10.7 +0.7
CTU ePcP PcP 22 53 34.4 +1.4
EYMN Ely 36.46 355 eP P 22 51 08.6 -1.4
comp=Z,33nm,0.8s,mb5.3
EYMN ePcP PcP 22 53 32.7 -0.2
R12A Pony Springs, 36.47 322 ⇑P P 22 51 11.2 +1.0
baz=37
Q13A Wheeler Ranch, 36.52 323 ⇑P P 22 51 11.6 +0.9
baz=37
NOQ North Oquirrh 36.61 327 eP P 22 51 12.6 +1.2
NOQ ePcP PcP 22 53 34.9 +1.5
TPNV Topopah Spring 36.66 319 eP P 22 51 13.3 +1.4
TPNV ePP PP 22 52 37.1 +0.7
TPNV ePcP PcP 22 53 35.9 +2.2
TPNV Topopah Spring 36.66 319 ⇑P P 22 51 12.7 +0.8
baz=37,SNR=22
DUG Dugway 36.67 326 eP P 22 51 12.7 +0.8
DUG ePP PP 22 52 37.4 +1.1
DUG ePcP PcP 22 53 35.3 +1.6
DUG Dugway 36.67 326 ⇑P P 22 51 12.5 +0.6
baz=37
EDW2 Edwards Air Fo 36.69 314 ⇓P P 22 51 13.1 +0.9
baz=37,SNR=8.4
PKME Peaks-Kenny Pk 36.70 21 eP P 22 51 13.9 +1.8
PKME ePP PP 22 52 31.9 -4.7
FURC Furnace Creek, 36.79 317 ⇓P P 22 51 13.5 +0.5
baz=37
LRMC Laurel Mountai 36.80 315 ⇓P P 22 51 13.5 +0.4
baz=37
P13A Bates Ranch, G 36.85 324 ⇑P P 22 51 14.2 +0.8
baz=37
PDAR Pinedale Array 36.88 331 P P 22 51 13.3 -0.3
comp=Z,9.1nm,0.6s,mb4.8,baz=131,slow=10,SNR=69
PDAR PcP PcP 22 53 34.4 +0.1
comp=Z,4.3nm,0.8s,baz=107,slow=2.9,SNR=7.9
PDAR ScP ScP 22 57 21.4 +5.5
comp=Z,1.0nm,0.7s,baz=174,slow=3.0,SNR=5.5
PDAR LR LR 23 10 57.9
comp=Z,507nm,18.6s,baz=141,slow=44
MPMC Manual Prospec 36.98 316 ⇑P P 22 51 14.6 0.0
baz=37,SNR=8.4
N15A Stansbury Isla 36.99 327 ⇓P P 22 51 14.9 +0.3
baz=37
HWUT Hardware Ranch 37.00 328 eP P 22 51 14.5 -0.2
comp=Z,57nm,1.0s,mb5.4
HWUT ePP PP 22 52 39.2 -0.8
HWUT LR LR
comp=Z,493nm,21.0s
Q12A Willow Creek R 37.06 322 ⇑P P 22 51 15.5 +0.3
baz=37
R11A Troy Canyon, C 37.08 321 ⇑P P 22 51 16.1 +0.7
baz=37
SPUT South Promonto 37.25 327 eP P 22 51 17.4 +0.6
SPUT ePP PP 22 52 52.9 +10
O13A Hicks Ranch, I 37.28 324 ⇑P P 22 51 17.7 +0.6
baz=37
BGU Big Grassy Mou 37.29 326 eP P 22 51 17.1 -0.1
BGU ePP PP 22 52 54.3 +11
SIV San Ignacio 37.32 137 P P 22 51 17.9 +0.2
comp=Z,74nm,0.8s,mb5.6,baz=314,slow=8.8,SNR=311
SIV PcP PcP 22 53 36.5 +0.5
comp=Z,14nm,0.8s,baz=325,slow=3.5,SNR=4.8
N14A Grayback Hills 37.33 326 ⇓P P 22 51 18.0 +0.5
baz=37
M15A Larsen Ranch, 37.36 327 ⇑P P 22 51 17.7 0.0
baz=37
P12A McGill 37.38 323 ⇓P P 22 51 18.5 +0.5
baz=38
AGMN Agassiz Refuge 37.39 350 eP P 22 51 16.7 -1.1
comp=Z,12nm,0.3s,mb5.2
AGMN ePP PP 22 52 46.6 +2.4
AGMN ePcP PcP 22 53 36.3 +0.6
BSC Santa Cruz Isl 37.43 312 ⇓P P 22 51 18.5 0.0
baz=38
Q11A Duckwater 37.44 321 ⇓P P 22 51 19.0 +0.6
baz=38,SNR=11
ISA Isabella 37.44 315 ⇑P P 22 51 18.8 +0.3
baz=38
S10A Tonopah Range, 37.46 320 ⇑P P 22 51 19.2 +0.5
baz=38
R10A Warm Springs 37.49 320 ⇓P P 22 51 19.6 +0.7
baz=38
AHID Auburn Hatcher 37.62 330 eP P 22 51 25.8 +5.8
comp=Z,22nm,0.8s,mb4.9
AHID ePP PP 22 52 46.7 -0.1
AHID ePcP PcP 22 53 37.5 +1.0
S09A Goldfield 37.75 319 ⇑P P 22 51 21.2 +0.2
baz=38
HVU Hansel Valley 37.76 327 eP P 22 51 21.9 +0.8
HVU ePP PP 22 52 48.5 +0.2
O12A Currie 37.81 324 ⇑P P 22 51 21.9 +0.3
baz=38
M14A Sheep Mountain 37.87 327 ⇑P P 22 51 22.0 0.0
baz=38
N13A Wendover, West 37.89 325 ⇓P P 22 51 22.4 +0.2
baz=38,SNR=7.3
P11A Circle Ranch, 37.94 322 ⇓P P 22 51 22.9 +0.2
baz=38
TPH Tonopah 37.95 319 P P 22 51 23.0 +0.2
R09A Tonopah 37.95 320 ⇑P P 22 51 23.0 +0.2
baz=38
REDW Red Top Meadow 37.95 331 eP P 22 51 22.9 +0.2
REDW ePP PP 22 52 48.6 -1.8
REDW ePcP PcP 22 53 39.5 +1.9
SNOW Snow King Moun 37.98 331 eP P 22 51 23.7 +0.8
SNOW ePcP PcP 22 53 38.0 +0.4
PKM Peak Mountain 38.00 313 ⇓P P 22 51 23.5 +0.2
baz=38,SNR=6.5
LOHW Long Hollow 38.02 331 eP P 22 51 23.8 +0.5
comp=Z,76nm,1.6s,mb5.2
LOHW ePcP PcP 22 53 38.7 +1.0
TPAW Teton Pass 38.10 331 eP P 22 51 24.4 +0.5
comp=Z,44nm,1.0s,mb5.2
TPAW ePcP PcP 22 53 38.0 +0.1
MOOW Moose Ponds 38.20 331 eP P 22 51 24.3 -0.4
comp=Z,15nm,0.8s,mb4.8
MOOW ePcP PcP 22 53 39.7 +1.5
M13A Montello 38.21 326 ⇓P P 22 51 24.9 -0.1
baz=38,SNR=12
S08C White Mtn Res 38.23 318 ⇓P P 22 51 25.2 +0.1
baz=38,SNR=13
HELL Mitchell Peak, 38.36 316 ⇑P P 22 51 26.8 +0.6
baz=38,SNR=12
IMW Indian Meadow 38.40 331 eP P 22 51 26.8 +0.4
IMW ePP PP 22 52 56.4 +1.0
IMW ePcP PcP 22 53 41.4 +2.5
MTUM Tungsten Hills 38.41 317 eP P 22 51 27.0 +0.3
MTUM ePP PP 22 52 55.9 +0.3
MTUM ePcP PcP 22 53 41.2 +2.1
K14A Jones Ranch, D 38.51 328 ⇓P P 22 51 26.8 -0.6
baz=39
L13A Double Diamond 38.59 327 ⇑P P 22 51 27.8 -0.3
baz=39
LKWY Lake 38.66 333 ePcP PcP 22 53 44.3 +4.6
M12A Wells 38.67 325 ⇑P P 22 51 28.5 -0.2
baz=39,SNR=11
LAO LASA Array 38.70 338 eP P 22 51 31.4 +2.5
comp=Z,31nm,1.1s,mb5.0
N11A Elko Archery C 38.74 324 ⇓P P 22 51 29.7 +0.3
baz=39
YFT Old Faithful 38.77 332 eP P 22 51 31.9 +2.2
YFT ePcP PcP 22 53 43.5 +3.5
NVAR Mina Array Bea 38.85 319 P P 22 51 31.5 +1.2
comp=Z,4.0nm,0.6s,mb4.3,baz=120,slow=9.2,SNR=17
NVAR PcP PcP 22 53 42.4 +1.9
comp=Z,18nm,0.6s,baz=126,slow=4.6,SNR=32
NVAR ScP ScP 22 57 32.9 +9.4
comp=Z,1.3nm,0.7s,baz=122,slow=5.5,SNR=4.4
O10A Cortez Mining, 38.85 323 ⇓P P 22 51 30.6 +0.3
baz=39
KCC Kaiser Creek 38.90 317 ⇑P P 22 51 30.7 -0.1
baz=39
T06C Millerton Lake 39.00 316 ⇓P P 22 51 31.8 +0.2
baz=39
YMR Madison River 39.00 332 eP P 22 51 31.6 +0.2
comp=Z,29nm,0.9s,mb5.0
YMR ePP PP 22 53 01.1 -0.8
YMR ePcP PcP 22 53 40.5 -0.2
PKD Parkfield 39.03 314 ⇑P P 22 51 32.5 +0.6
baz=39
K13A Stover Farm, H 39.06 327 ⇓P P 22 51 31.4 -0.6
baz=39
L12A House Creek Ra 39.21 326 ⇑P P 22 51 33.6 +0.3
baz=39
ULM Lac du Bonnet 39.28 351 P P 22 51 31.5 -2.3
comp=Z,55nm,0.8s,mb5.3,baz=169,slow=8.4,SNR=105
ULM PcP PcP 22 53 41.6 +0.1
comp=Z,8.7nm,0.6s,baz=175,slow=2.6,SNR=6.2
ULM ScP ScP 22 57 29.7 +4.8
comp=Z,1.1nm,0.6s,baz=209,slow=1.8,SNR=3.6
ULM LR LR 23 08 40.4
comp=Z,453nm,20.8s,baz=41,slow=38
QLMT Earthquake Lak 39.34 332 eP P 22 51 35.5 +1.2
QLMT ePP PP 22 53 05.3 -0.3
QLMT ePcP PcP 22 53 43.8 +1.9
BMN Battle Mountai 39.37 322 eP P 22 51 34.2 -0.5
comp=Z,7.6nm,0.5s,mb4.7
BMN Battle Mountai 39.37 322 eP P 22 51 34.2 -0.4
BMN pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
U04C Hernandez Rese 39.41 315 ⇓P P 22 51 35.5 +0.5
baz=40
K12A Draper Farm, C 39.48 327 ⇑P P 22 51 36.1 +0.5
baz=40
DGMT Dagmar 39.57 342 eP P 22 51 36.0 -0.1
WAKR Walker 39.62 318 eP P 22 51 38.3 +1.5
WAKR ePcP PcP 22 53 45.6 +2.7
J13A Cove Ranch, Pi 39.63 328 ⇑P P 22 51 37.3 +0.5
baz=40
R06C Coleville 39.64 318 ⇓P P 22 51 36.6 -0.3
baz=40,SNR=5.5
N09A Rock Creek Ran 39.81 323 ⇑P P 22 51 38.3 0.0
baz=40,SNR=9.4
HLID Hailey 39.87 328 eP P 22 51 39.1 +0.3
HLID ePcP PcP 22 53 45.9 +2.3
HLID Hailey 39.87 328 P P 22 51 39.2 +0.4
baz=40,SNR=20
HAST UC Hastings Re 39.96 314 ⇓P P 22 51 39.5 0.0
baz=40
I13A Wildhorse Cree 39.97 329 ⇑P P 22 51 40.1 +0.6
baz=40
L10A Juniper Basin 39.98 325 ⇓P P 22 51 39.7 +0.1
baz=40
CMB Columbia Colle 40.00 317 eP P 22 51 37.9 -2.0
comp=Z,16nm,1.4s,mb4.6
CMB LR LR
comp=Z,829nm,22.0s
CMB Columbia Colle 40.00 317 eP P 22 51 37.9 -2.0
CMB pmax pmax
comp=Z,16nm,1.4s,mb4.6
CMB MLR MLR
comp=Z,829nm,22.0s
MCMT McKenzie Canyo 40.00 331 eP P 22 51 41.4 +1.6
MCMT ePcP PcP 22 53 43.5 -0.4
J12A Stokes Ranch, 40.01 327 ⇑P P 22 51 40.3 +0.3
baz=40
BOZ Bozeman (W) 40.05 333 eP P 22 51 40.4 +0.2
comp=Z,59nm,1.8s,mb5.0
BOZ ePP PP 22 53 14.9 +1.6
BOZ Bozeman (W) 40.05 333 eP P 22 51 40.4 +0.2
BOZ e 22 53 14.9
BOZ pmax pmax
comp=Z,59nm,1.8s,mb5.0
BOZ Bozeman (W) 40.05 333 P P 22 51 40.5 +0.2
baz=40,SNR=20
G15A Dillon 40.08 331 ⇓P P 22 51 40.7 +0.2
baz=40,SNR=15
M09A Marrel Ranch, 40.12 323 ⇑P P 22 51 40.7 -0.1
baz=40
N08A GE Springer Mi 40.13 322 ⇑P P 22 51 40.8 -0.2
baz=40
R05C Kirkwood Meado 40.15 318 ⇓P P 22 51 41.6 +0.4
baz=40,SNR=5.9
K11A Parker Ranch, 40.19 326 ⇑P P 22 51 41.4 0.0
baz=40
O07A Toulon 40.21 321 ⇓P P 22 51 41.6 -0.1
baz=40
DLMT Dillon 40.28 332 eP P 22 51 43.6 +1.5
S04C Ingram Canyon, 40.36 316 ⇑P P 22 51 43.5 +0.6
baz=40
H13A Challis 40.50 329 ⇑P P 22 51 43.9 -0.1
baz=41
MFID Camas Ranch 40.51 327 ⇑P P 22 51 44.2 +0.2
baz=41
LRM Limekiln Ridge 40.56 332 eP P 22 51 44.8 +0.4

LRM ePcP PcP 22 53 48.0 +2.3
F15A Butte 40.59 332 ⇑P **P 22 51 44.7 0.0**
baz=41,SNR=17
G14A Jackson 40.60 331 ⇑P **P 22 51 44.9 +0.1**
baz=41
LAVA Lava Cap Winer 40.62 318 ⇓P **P 22 51 44.9 -0.1**
baz=41
K10A MacKenzie Ranc 40.66 325 ⇑P **P 22 51 45.2 -0.1**
baz=41
M08A Happy Creek Ra 40.68 323 P **P 22 51 45.8 +0.3**
baz=41,SNR=5.7
H12A Diamond D Ranc 40.79 329 P **P 22 51 46.9 +0.5**
baz=41,SNR=8.4
O06A Flanigan 40.81 320 ⇓P **P 22 51 46.6 0.0**
baz=41,SNR=17
P05C Yuba Gap, Truc 40.83 318 ⇑P **P 22 51 47.0 +0.3**
baz=41
G13A Cobalt 40.87 330 ⇑P **P 22 51 47.1 +0.1**
baz=41
BEKR Beckwourth 40.98 319 ⇓P **P 22 51 48.1 +0.2**
baz=41,SNR=6.3
K09A Rome 41.09 325 P **P 22 51 49.0 +0.1**
baz=41,SNR=25
E15A Deer Lodge 41.10 333 P **P 22 51 49.0 +0.1**
baz=41,SNR=9.3
L08A Fields 41.12 324 ⇑P **P 22 51 48.6 -0.5**
baz=41,SNR=13
M07A Soldier Meadow 41.12 322 P **P 22 51 49.0 -0.2**
baz=41,SNR=10
EGMT Eagleton 41.14 336 ⇓P **P 22 51 49.5 +0.3**
baz=41
N06A Buffalo Meadow 41.15 321 P **P 22 51 49.5 +0.2**
baz=41,SNR=7.0
OHCM Honcut 41.42 318 *e*P **P 22 51 52.8 +1.2**
OHCM *e*PcP PcP 22 53 50.5 +1.9
F13A Darby 41.42 331 P **P 22 51 51.3 -0.2**
baz=42,SNR=9.7
WVOR Wild Horse Val 41.44 324 *e*P **P 22 51 52.1 +0.4**
comp=Z,35nm,1.2s,mb4.9
WVOR *e*ScP ScP 22 57 35.3 +1.7
WVOR Wild Horse Val 41.44 324 *e*P **P 22 51 52.1 +0.4**
WVOR pmax pmax
comp=Z,35nm,1.2s,mb4.9
E14A Clinton 41.48 332 P **P 22 51 52.6 +0.6**
baz=42,SNR=6.9
H11A Donnelly 41.49 328 P **P 22 51 51.9 -0.2**
baz=42,SNR=26
D15A Lincoln 41.52 333 P **P 22 51 52.4 +0.1**
baz=42,SNR=8.1
J09A Fry Pan Ranch, 41.52 325 P **P 22 51 52.3 0.0**
baz=42,SNR=29
K08A Mann Creek Ran 41.54 324 ⇓P **P 22 51 52.6 0.0**
baz=42,SNR=12
ORV Oroville 41.54 318 ⇓P **P 22 51 53.2 +0.6**
baz=42
L07A Adell 41.60 323 ⇑P **P 22 51 52.9 -0.2**
baz=42,SNR=21
ELFS Eagle Lake Fie 41.63 320 ⇓P **P 22 51 53.5 +0.2**
baz=42,SNR=23
O04C Chester 41.69 319 ⇑P **P 22 51 54.1 +0.3**
baz=42,SNR=5.4
CHMT Chamberlain Mo 41.75 333 *e*P **P 22 51 53.9 -0.2**
CHMT *e*PcP PcP 22 53 51.8 +2.3
H10A Noah's Angus R 41.80 327 P **P 22 51 53.7 -0.9**
baz=42,SNR=10
E13A Victor 41.83 331 ⇑P **P 22 51 54.5 -0.3**
baz=42,SNR=9.8
F12A Elk City 41.84 330 P **P 22 51 54.4 -0.6**
baz=42,SNR=36
I09A Lost Marbles R 41.92 326 ⇑P **P 22 51 55.1 -0.5**
baz=42
J08A Circle Bar Ran 41.93 325 ⇓P **P 22 51 55.4 -0.3**
baz=42
K07A Rock Creek Ran 41.96 324 P **P 22 51 56.1 +0.2**
baz=42,SNR=18
D14A Greenough 41.99 333 ⇑P **P 22 51 55.8 -0.3**
baz=42
MSO Missoula 42.00 332 *e*P **P 22 51 56.0 -0.2**
MSO *e*PcP PcP 22 53 52.3 +1.9
MOD Modoc 42.11 322 *e*P **P 22 51 58.4 +1.2**
MOD *e*PcP PcP 22 53 52.3 +1.4
BMO Blue Mountains 42.27 327 *e*P **P 22 51 57.2 -1.2**
BMO *e*PcP PcP 22 53 52.7 +1.3
M05C Lookout 42.31 321 ⇑P **P 22 51 58.6 -0.3**
baz=42
H09A Durkee 42.33 327 ⇑P **P 22 51 58.8 -0.2**
baz=42
F11A Grangeville 42.38 329 P **P 22 51 58.5 -0.9**
baz=42,SNR=7.1
D13A Huson 42.43 332 P **P 22 51 59.3 -0.4**
baz=42,SNR=8.6
G10A Bishop Farm, J 42.47 328 P **P 22 51 59.3 -0.7**
baz=42,SNR=10
O02C Red Bluff 42.71 318 P **P 22 52 00.9 -1.2**
baz=43,SNR=5.1
E11A Bogner Ranch, 42.74 330 P **P 22 52 01.3 -0.9**
baz=43,SNR=12
WDC Whiskeytown Da 42.77 319 ⇑P **P 22 52 01.4 -1.2**
baz=43
H08A Prairie City 42.78 326 ⇓P **P 22 52 01.9 -0.7**
baz=43
G09A Cove 42.80 328 P **P 22 52 01.8 -1.0**
baz=43,SNR=5.2
J06A Christmas Vall 42.83 324 ⇓P **P 22 52 01.9 -1.1**
baz=43
M03C McCloud 42.88 320 ⇑P **P 22 52 02.9 -0.5**
baz=43
C13A Hot Springs 42.92 332 ⇑P **P 22 52 03.7 0.0**
baz=43
K05A Summer Lake 42.95 323 ⇓P **P 22 52 03.9 -0.1**
baz=43
I07A Izee 42.97 325 ⇓P **P 22 52 03.8 -0.3**
baz=43
M04C Macdoel 42.98 321 ⇓P **P 22 52 04.0 -0.3**
baz=43
F10A Beach Ranch, E 42.98 329 P **P 22 52 03.6 -0.6**
baz=43,SNR=10
F09A S2 Ranch, Elgi 43.16 328 ⇓P **P 22 52 05.6 0.0**
baz=43
E10A Myers Farm, Un 43.28 329 ⇓P **P 22 52 06.1 -0.4**
baz=43
I06A Prineville 43.28 324 ⇑P **P 22 52 07.0 +0.3**
baz=43
B13A Whitefish 43.39 333 P **P 22 52 08.2 +0.8**
baz=44,SNR=6.4
G08A Pilot Rock 43.44 327 ⇑P **P 22 52 07.0 -0.9**
baz=44
YBH Yreka Blue Hor 43.49 320 *e*PcP PcP 22 53 56.5 +0.9
YBH Yreka Blue Hor 43.49 320 ⇓P **P 22 52 07.6 -0.8**
baz=44
WALA Waterton Lakes 43.66 334 *e*P **P 22 52 09.8 +0.2**
comp=Z,92nm,2.1s,mb5.1
KHMM Horse Mountain 43.69 319 *e*PcP PcP 22 53 59.3 +3.1
D10A Wagner Farm, O 43.75 330 P **P 22 52 09.6 -0.8**
baz=44,SNR=5.2
G07A Ruggs Ranch, H 43.80 326 ⇑P **P 22 52 10.3 -0.6**
baz=44
E09A Wood Farm, Sta 43.82 329 ⇓P **P 22 52 10.8 -0.2**
baz=44
B12A Libby 43.96 332 ⇓P **P 22 52 12.3 +0.3**
baz=44
J04A Umpqua Nationa 43.97 322 ⇑P **P 22 52 12.1 -0.1**
baz=44
D09A Jones Farm, Ri 44.27 329 P **P 22 52 14.2 -0.3**
baz=44,SNR=7.6
B11A Sandpoint 44.29 332 P **P 22 52 14.6 -0.1**
baz=44,SNR=9.6
G06A Carlson Farm, 44.32 326 ⇑P **P 22 52 14.8 -0.1**
baz=44
A12A Yaak River Ran 44.33 333 ⇓P **P 22 52 15.3 +0.3**
baz=44
RPN Rapa Nui 44.34 209 LR LR 23 05 49.2
comp=Z,1μm,20.7s,baz=209,slow=29
M01C Crescent City 44.45 320 ⇓P **P 22 52 15.5 -0.5**
baz=44
HAWA Hanford 44.46 328 *e*P **P 22 52 15.3 -0.7**
comp=Z,49nm,1.7s,mb5.0
HAWA *e*PcP PcP 22 53 59.7 +1.0
I04A Tendick Farm, 44.47 323 ⇑P **P 22 52 15.8 -0.4**
baz=44
NEW Newport 44.52 331 *e*P **P 22 52 15.7 -0.8**
NEW *e*PcP PcP 22 53 58.9 0.0
K02A Glendale 44.55 321 ⇑P **P 22 52 17.0 +0.2**
baz=45
D08A Wollman Farm, 44.58 329 P **P 22 52 16.8 -0.2**
baz=45,SNR=7.9
A11A Hall Mountain, 44.67 332 P **P 22 52 17.7 0.0**
baz=45,SNR=12
FFC Flin Flon 44.69 347 P **P 22 52 16.9 -0.9**
comp=Z,293nm,0.6s,SNR=18
FFC Flin Flon 44.69 347 *e*P **P 22 52 16.9 -0.9**
comp=Z,32nm,0.8s,mb5.2
FFC *e*PcP PcP 22 53 59.7 +0.4
FFC Flin Flon 44.69 347 *e*P **P 22 52 16.9 -0.9**
FFC *e* 22 53 59.7
FFC pmax pmax
comp=Z,32nm,0.8s,mb5.2
G05A Wamic 44.70 325 ⇓P **P 22 52 17.9 -0.1**
baz=45
F06A Goldendale 44.73 326 ⇓P **P 22 52 17.9 -0.3**
baz=45
C09A Chrisman Ranch 44.76 330 ⇓P **P 22 52 18.4 0.0**
baz=45
H04A Detroit Lake 44.86 324 P **P 22 52 19.3 0.0**
baz=45,SNR=5.7
J02A Umpqua 44.93 322 ⇓P **P 22 52 19.7 -0.1**
baz=45
HOOD Mount Hood Mea 44.94 325 *e*P **P 22 52 22.0 +2.1**
I03A Eugene 45.09 323 ⇓P **P 22 52 20.8 -0.3**
baz=45
B09A Rice 45.12 331 P **P 22 52 20.8 -0.5**
baz=45,SNR=8.9
C08A Higginbotham F 45.13 329 ⇓P **P 22 52 21.4 0.0**
baz=45
E06A Yakima 45.32 327 P **P 22 52 23.4 +0.5**
baz=45,SNR=6.1
I02A Mapleton 45.43 322 ⇓P **P 22 52 23.7 -0.1**
baz=46
C07A Waterville 45.58 329 P **P 22 52 25.1 +0.2**
baz=46,SNR=6.0
B08A Colville Reser 45.66 330 P **P 22 52 24.9 -0.7**
baz=46,SNR=6.6
D06A Cle Elum 45.66 328 ⇑P **P 22 52 25.2 -0.4**
baz=46
A09A Danville 45.72 331 ⇑P **P 22 52 25.9 -0.1**
baz=46
SCHQ Schefferville 45.88 16 P **P 22 52 25.6 -1.6**
comp=Z,14nm,0.5s,mb5.1,baz=213,slow=6.5,SNR=86
SCHQ PcP PcP 22 54 02.7 -0.7
comp=Z,3.3nm,0.7s,baz=280,slow=4.5,SNR=3.0
SCHQ LR LR 23 11 40.9
comp=Z,882nm,21.6s,baz=33,slow=36
A08A Turner Farm, O 46.03 330 ⇑P **P 22 52 28.2 -0.3**
baz=46
C05A Tolt Reservoir 46.42 328 ⇑P **P 22 52 31.2 -0.4**
baz=46
CFAA Coronel Fontan 46.44 158 P **P 22 52 32.1 +0.3**
comp=Z,0.2nm,0.6s,baz=331,slow=1.6,SNR=4.7
CFAA PcP PcP 22 54 06.0 +0.2
comp=Z,0.5nm,0.8s,baz=207,slow=4.5,SNR=2.5
A07A Ashnola River, 46.64 330 P **P 22 52 33.5 +0.3**
baz=47,SNR=7.0
EDM Edmonton 46.69 338 *e*P **P 22 52 32.4 -1.1**
EDM *e*PcP PcP 22 54 05.8 -0.5
B06A Marblemount 46.84 329 ⇑P **P 22 52 34.2 -0.7**
baz=47
GNW Green Mountain 46.95 327 *e*P **P 22 52 34.6 -1.1**
GNW *e*PcP PcP 22 54 08.5 +1.2
FCC Fort Churchill 47.41 355 *e*P **P 22 52 37.4 -1.6**
FCC *e*PcP PcP 22 54 07.4 -1.3
NLWA Neilton Lookou 47.41 326 ⇑P **P 22 52 39.2 0.0**
baz=48
A05A Maple Falls 47.45 329 ⇑P **P 22 52 38.9 -0.7**
baz=48
A04A Legoe Bay, Lum 47.60 328 ⇓P **P 22 52 40.2 -0.6**
baz=48
RCBR Riachuelo 53.38 106 PFAKE 22 53 40.0 +15
RCBR LR LR
comp=Z,1μm,19.0s
TRQA Tornquist 54.53 156 *e*P **P 22 53 32.6 -0.2**
TRQA LR LR
comp=Z,449nm,21.0s
YKA Yellowknife Ar 54.63 345 P **P 22 53 31.6 -1.6**
YKA 22 54 35.1
YKA Yellowknife Ar 54.63 345 P **P 22 53 31.5 -1.7**
comp=Z,20nm,0.8s,mb5.2,baz=139,slow=7.3,SNR=238
YKA PcP PcP 22 54 35.1 -0.4
comp=Z,9.1nm,0.6s,baz=144,slow=4.2,SNR=30
YKA LR LR 23 20 17.3
comp=Z,276nm,21.6s,baz=180,slow=40
YKW3 Yellowknife Ar 54.69 345 *e*P **P 22 53 31.8 -1.8**
DLBC Dease Lake 57.01 334 *e*P **P 22 53 50.7 +0.5**
RKT Rikitea 58.53 234 *e*S **S 23 02 09.9 +8.9**
comp=Z,887nm,27.2s
RKT *e*LR LR 23 11 20.2
comp=Z,670nm,25.2s,baz=52
RES Resolute Bay 63.24 358 *e*P **P 22 54 31.3 -1.4**
RES *e*PP PP 22 56 51.5 -0.7
DAWY Dawson 63.88 337 *e*P **P 22 54 35.9 -1.1**
INK Inuvik 64.25 342 *e*P **P 22 54 38.4 -1.0**
comp=Z,876nm,1.0s
INK *e*PP PP 22 57 00.9 -0.2
INK Inuvik 64.25 342 *e*P **P 22 54 38.4 -1.0**
INK *e* 22 57 01.0
INK pmax pmax
comp=Z,876nm,1.0s
EGAK Eagle 64.89 337 *e*P **P 22 54 42.3 -1.3**
comp=Z,22nm,1.3s,mb5.0
PMR Palmer 66.92 333 PFAKE 22 55 10.0 +13
PMR LR LR
comp=Z,785nm,20.0s
KDAK Kodiak Island 67.49 328 P **P 22 55 01.0 +0.6**
comp=Z,9.2nm,0.6s,mb5.0,baz=65,slow=12,SNR=9.4
COLA College 67.53 336 *e*P **P 22 54 59.7 -0.8**
comp=Z,23nm,1.3s,mb5.0
COLA LR LR 23 11 20.2
comp=Z,691nm,19.0s
COLA College 67.53 336 *i*P **P 22 54 59.8 -0.7**
MCK McKinley 67.56 335 *e*P **P 22 55 00.2 -0.6**
comp=Z,12nm,1.0s,mb4.9
MCK LR LR 23 11 20.2
comp=Z,334nm,19.0s
MCK McKinley 67.56 335 *e*P **P 22 55 00.2 -0.5**
MCK pmax pmax
comp=Z,12nm,1.0s,mb4.9
MCK MLR MLR 23 11 20.2
comp=Z,334nm,19.0s
EFI East Falkland 67.70 161 PFAKE 22 55 10.0 +8.3
EFI LR LR
comp=Z,442nm,20.0s
PPT Papeete 68.55 246 *e*S S 23 04 12.9 +7.1
comp=Z,200nm,24.8s
PPT *e*LR LR 23 15 52.5
comp=Z,784nm,24.2s,baz=54
PPT Papeete 68.55 246 LR LR 23 18 14.9
comp=Z,502nm,19.4s,baz=322,slow=30
IMA2 Indian Mountai 70.22 336 *e*P **P 22 55 16.9 -0.3**
IMA2 *e*PP PP 22 57 54.5 +1.3
TTA Tatalina 70.39 333 *e*P **P 22 55 17.3 -1.0**
comp=Z,82nm,2.2s,mb5.3
TTA Tatalina 70.39 333 *e*P **P 22 55 17.3 -1.0**
TTA pmax pmax
comp=Z,82nm,2.2s,mb5.3
TBI Tubuai 70.55 240 *e*S S 23 04 36.6 +7.4
comp=Z,239nm,29.0s
TBI *e*LR LR 23 17 01.4
comp=Z,733nm,25.5s,baz=64
UNV Unalaska Valle 74.73 323 *e*P **P 22 55 44.8 +0.5**
comp=Z,42nm,0.9s,mb5.4
TNA Tin City 75.90 335 *e*P **P 22 55 50.8 0.0**
comp=Z,35nm,1.6s,mb5.0
ESDC Sonseca Array 77.11 52 P **P 22 55 57.1 -1.1**
comp=Z,0.9nm,0.5s,mb3.9,baz=285,slow=5.1,SNR=7.8
QUIF Quistinic 77.15 43 *e*P **P 22 55 56.3 -1.9**
comp=Z,19nm,0.8s,mb4.8
QUIF Quistinic 77.15 43 *e*P **P 22 55 56.3 -1.9**
comp=Z,9.4nm,0.8s,mb4.8
QUIF Quistinic 77.15 43 *e*P **P 22 55 56.3 -1.9**
QUIF pmax pmax
comp=Z,9.0nm,0.8s,mb4.8
GAMB Gambell 77.49 333 *e*P **P 22 55 59.5 -0.3**
comp=Z,12nm,1.0s,mb4.8
SGMF Saint Gilles 77.54 43 *e*P **P 22 55 57.9 -2.5**
GRR Gorron 78.66 43 *e*P **P 22 56 04.4 -2.2**
comp=Z,8.8nm,0.8s,mb4.4
GRR Gorron 78.66 43 *e*P **P 22 56 04.4 -2.2**
comp=Z,4.4nm,0.8s,mb4.4
GRR Gorron 78.66 43 *e*P **P 22 56 04.4 -2.2**
GRR pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
SJPF Ste Jean 78.87 48 *e*P **P 22 56 06.5 -1.3**
MFF Saint Martin d 79.30 44 *e*P **P 22 56 08.0 -2.1**
comp=Z,6.2nm,0.7s,mb4.4
MFF Saint Martin d 79.30 44 *e*P **P 22 56 08.0 -2.1**
comp=Z,3.1nm,0.7s,mb4.3
MFF Saint Martin d 79.30 44 *e*P **P 22 56 08.0 -2.1**
MFF pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
DBIC Dimbokro 80.69 85 LR LR 23 30 36.0
comp=Z,241nm,20.7s,baz=270,slow=35
TCF Toulx Ste Croi 80.95 45 *e*P **P 22 56 16.6 -2.4**
comp=Z,3.9nm,0.7s,mb4.1
TCF Toulx Ste Croi 80.95 45 *e*P **P 22 56 16.6 -2.4**
comp=Z,2.0nm,0.7s,mb4.2
TCF Toulx Ste Croi 80.95 45 *e*P **P 22 56 16.6 -2.4**
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ADK Adak 81.00 321 *e*P **P 22 56 19.6 +0.4**
comp=Z,69nm,0.6s,mb5.8
ADK Adak 81.00 321 *e*P **P 22 56 19.6 +0.5**
ADK pmax pmax
comp=Z,69nm,0.6s,mb5.8
LOR Lormes 81.94 43 *e*P **P 22 56 22.5 -1.8**
LOR *e*MLR MLR
comp=Z,980nm,19.0s
LOR Lormes 81.94 43 *e*P **P 22 56 22.5 -1.8**
LOR MLR MLR
comp=Z,980nm,19.0s
NB2 NORSAR Subarra 83.74 29 P **P 22 56 31.7 -1.5**
comp=Z,6.9nm,1.2s,mb4.7,baz=284,slow=4.8
NB2 NORSAR Subarra 83.74 29 P **P 22 56 31.7 -1.5**
NB2 pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
NOA NORSAR Array B 83.74 29 P **P 22 56 32.0 -1.2**
comp=Z,1.3nm,0.7s,mb4.1,baz=286,slow=4.8,SNR=5.0
NOA LR LR 23 31 25.7
comp=Z,342nm,18.9s,baz=275,slow=34
HINF Hinteralfeld 83.86 43 *e*P **P 22 56 31.3 -2.8**
MBDF Montbardon 84.37 46 *e*P **P 22 56 34.7 -2.1**
HFS Hagfors 85.14 30 LR LR 23 31 14.5
comp=Z,309nm,19.6s,baz=250,slow=33
BILL Bilibino 85.59 339 *e*P **P 22 56 41.9 -0.5**
comp=Z,15nm,0.6s,mb5.4
BILL *e*PcP PcP 22 56 45.3 0.0
BILL Bilibino 85.59 339 *c i*P **P 22 56 41.4 -1.0**
BILL pmax pmax
comp=Z,25nm,0.8s,mb5.5
BILL MLR MLR 23 11 40.9
comp=Z,600nm,30.0s
TORD Torodi Ar. Bea 85.84 77 LR LR 23 30 46.5
comp=Z,268nm,19.8s,baz=260,slow=33
DAVOX Davos/Dischmat 86.08 43 LR LR 23 32 50.6
comp=Z,712nm,18.7s,baz=258,slow=34
ARCES ARCESS Array B 86.74 19 P **P 22 56 45.9 -2.2**
ARCES LR LR 23 35 28.0
ARCES ARCESS Array B 86.74 19 P **P 22 56 45.9 -2.2**
comp=Z,1.1nm,0.6s,mb4.3,baz=274,slow=5.0,SNR=8.4
ARCES LR LR 23 35 28.0
comp=Z,301nm,18.2s,baz=290,slow=36
CLL Collm 87.01 38 *e*P **P 22 56 49.0 -0.8**
CLL Lm 23 32 00.0
comp=N,100nm,19.3s
CLL Lm 23 32 00.0
comp=E,400nm,20.8s
CLL Lm 23 32 00.0
comp=Z,600nm,19.5s
KHC Kasperske Hory 87.93 40 *e*P **P 22 56 53.5 -0.7**
KHC *e* 22 57 02.5
KHC Kasperske Hory 87.93 40 *e*P **P 22 56 53.5 -0.7**
KHC pP pP 22 57 02.5 -9.1
GERES GERESS Array B 88.08 41 P **P 22 56 54.8 -0.2**
comp=Z,0.7nm,0.7s,mb4.0,baz=276,slow=3.9,SNR=9.7
GERES LR LR 23 33 32.3
comp=Z,712nm,19.2s,baz=273,slow=34
AFI Afiamalu 88.09 255 LR LR 23 26 32.9
comp=Z,412nm,20.3s,baz=31,slow=29
VRAC Vranov 89.78 40 LR LR 23 33 58.2
comp=Z,602nm,18.2s,baz=280,slow=34
FINES FINESS Array B 90.39 26 P **P 22 57 03.4 -2.1**
comp=Z,1.1nm,0.7s,mb4.3,baz=228,slow=2.3,SNR=4.8
VAE Valguarnera 91.65 51 LR LR 23 36 20.4
comp=Z,538nm,18.6s,baz=291,slow=34
SEY Seymchan 93.04 337 ⇓*e*P **P 22 57 17.5 -0.2**
TIXI Tiksi 93.62 349 *e*P **P 22 57 19.2 -1.1**
comp=Z,10nm,0.6s,mb5.4
TIXI Tiksi 93.62 349 *e*P **P 22 57 18.9 -1.4**
TIXI pmax pmax
comp=Z,8.0nm,0.6s,mb5.3
TIXI MLR MLR 23 11 40.9
comp=Z,437nm,22.0s
AKASG Malin Array Be 96.78 35 LR LR 23 39 01.6
comp=Z,593nm,20.3s,baz=295,slow=34
KIS Kishinev 98.22 39 LRM 22 56 36.0
comp=Z,900nm,20.0s
SBA Scott Base 104.74 192 PFAKE 22 58 20.0 +10
SBA LR LR
comp=Z,2μm,22.0s
TSUM Tsumeb 107.05 107 PFAKE 23 02 40.0 +9.1
TSUM LR LR
comp=Z,283nm,20.0s
HABR Khabarovsk 109.74 332 *e*P Pdif 22 58 30.7 -2.0
BOSA Boshof 114.63 116 PKP PKiKP 23 02 45.4 +0.4
BOSA Boshof 114.63 116 PKP PKiKP 23 02 45.4 +0.4
comp=Z,4.6nm,0.8s,baz=44,slow=3.2,SNR=6.7
MJAR Matsushiro Arr 116.16 321 PKP PKPdf 23 02 47.8 0.0
comp=Z,2.7nm,0.7s,baz=90,slow=1.2,SNR=7.5
LSZ Lusaka 116.73 101 *e*PKPdf PKPdf 23 02 48.7 -0.6
LSZ LR LR
comp=Z,459nm,19.0s
CN2 Changchun 117.59 334 *e*PKP PKPdf 23 02 44.6 -5.8
ZAK Zakamensk 117.68 353 *e*PKIKP PKPdf 23 02 50.4 +0.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 119.56 349 *e*PKPdf PKPdf 23 02 54.3 +0.3
ULN Ulaanbaatar 119.56 349 *c i*PKIKP PKPdf 23 02 55.0 +1.0
SONM Songino Array 119.71 350 PKP PKPdf 23 02 54.4 +0.1
comp=Z,4.9nm,0.6s,baz=336,slow=1.7,SNR=57
MK31 Makanchi Array 121.04 9 *e*PKPdf PKPdf 23 02 56.3 -0.6
MKAR Makanchi Array 121.04 9 PKP PKPdf 23 02 56.0 -0.9
MKAR Makanchi Array 121.04 9 *i* PKIKP PKPdf 23 02 56.0 -0.9
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 121.04 9 PKP PKPdf 23 02 56.0 -0.9
comp=Z,1.1nm,0.7s,baz=349,slow=1.9,SNR=11
KSRS Korea Array 121.40 328 PKP PKPdf 23 02 58.6 +0.7
comp=Z,18nm,0.6s,baz=12,slow=1.7,SNR=53
KMBO Kilima Mbogo 123.41 84 *e*PKPdf PKPdf 23 03 04.1 +1.7
KMBO LR LR
comp=Z,354nm,21.0s
UCH Uchtor 123.72 17 *e*PKPdf PKPdf 23 03 03.5 +1.3
BJI Beijing 124.42 339 PKP PKPdf 23 03 04.0 +0.4
BJI LR LR
comp=N,235nm,22.1s
BJI LR LR 23 11 40.9
comp=E,219nm,18.6s
BJI LR LR 23 11 40.9
comp=Z,365nm,25.0s
WMQ Urumqi 124.61 5 PKP PKPdf 23 03 03.1 -0.8
WMQ PP PP 23 04 55.3 +5.5
WMQ PP PP
comp=Z,47nm,5.4s
WMQ LR LR
comp=N,354nm,22.4s
WMQ LR LR
comp=E,140nm,21.3s
WMQ LR LR
comp=Z,383nm,21.3s
HHC Hu-ho-hao-te 125.16 343 *e*PKP PKPdf 23 03 06.4 +1.4
HHC PP PP 23 05 00.8 +7.1
HHC PKS 23 06 41.5
HHC SKS SKSdf 23 10 06.9 -4.9
HHC SS SS 23 21 45.8 +0.7
HHC PP PP
comp=Z,270nm,9.0s
HHC LR LR
comp=N,191nm,15.5s
HHC LR LR
comp=E,303nm,20.2s
HHC LR LR
comp=Z,197nm,17.8s
GTA Gaotai 128.90 354 *e*PKP PKPdf 23 03 13.0 +0.8
GTA XPKP 23 03 27.4
GTA PP PP 23 05 22.5 +4.3
GTA PKS 23 06 48.5
GTA SKS SKSdf 23 10 18.3 -0.5
GTA SKKS SKKSac 23 12 08.3 -3.1
GTA SS SS 23 22 32.6 +1.2
GTA PP PP
comp=Z,155nm,10.1s
GTA LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,195nm,18.6s						
GTA				LR	LR		
	comp=E,185nm,16.3s						
GTA				LR	LR		
	comp=Z,283nm,20.2s						
STKA	**Stephens Creek**	**131.29**	**238**	*e*P	PKPdf	23 03 16.8	-0.1
	comp=Z,5.0nm,1.4s						
STKA	**Stephens Creek**	**131.29**	**238**	PKP	PKPdf	23 03 17.2	+0.3
	comp=Z,4.0nm,0.6s,baz=2.7,slow=2.3,SNR=8.2						
LZH	**Lanzhou**	**131.55**	**349**	*e*PKP	PKPdf	23 03 18.8	+1.5
LZH				PP	PP	23 05 42.3	+6.8
LZH				PP	PP		
	comp=Z,111nm,4.7s						
XAN	**Xi'an**	**132.26**	**342**	PKP	PKPdf	23 03 18.8	+0.1
WHN	**Wuhan**	**133.48**	**335**	*e*PKP	PKPdf	23 03 19.5	-1.6
TATO	**Taipei**	**134.45**	**323**	PFAKE		23 03 40.0	+17
TATO				LR	LR		
	comp=Z,363nm,21.0s						
CD2	**Chengdu**	**136.57**	**347**	*e*PKP	PKPdf	23 03 25.3	-1.6
CD2				PP	PP	23 06 10.0	+2.6
CD2				PKS		23 07 00.1	
CD2				SKS	SKSdf	23 10 27.8	-5.0
CD2				PP	PP		
	comp=Z,80nm,10.6s						
CD2				LR	LR		
	comp=N,350nm,20.4s						
CD2				LR	LR		
	comp=E,300nm,18.0s						
CD2				LR	LR		
	comp=Z,290nm,15.6s						
LSA	**Lhasa**	**138.89**	**3**	PKP	PKPdf	23 03 32.4	+1.2
LSA	**Lhasa**	**138.89**	**3**	*e*PKIKP	PKPdf	23 03 32.2	+1.0
ASAR	**Alice Springs**	**139.66**	**247**	PKhKP		23 03 23.8	
	comp=Z,1.1nm,0.8s,baz=117,slow=3.0,SNR=7.1						
ASAR				PKP	PKPdf	23 03 33.2	+0.5
	comp=Z,4.0nm,0.7s,baz=104,slow=2.4,SNR=29						
GKN	**Gorkha**	**139.75**	**12**	*e*P	PKPdf	23 03 30.4	-2.4
	comp=Z,18nm,1.0s						
WB2	**Warramunga Arr**	**139.75**	**253**	*e*P		23 03 24.4	
WRA	**Warramunga Arr**	**139.76**	**253**	PKhKP		23 03 24.2	
	comp=Z,0.6nm,0.7s,baz=98,slow=2.8,SNR=8.3						
WRA				PKP	PKPdf	23 03 33.1	+0.1
	comp=Z,3.8nm,0.5s,baz=91,slow=2.1,SNR=36						
KKN	**Kakani**	**140.08**	**11**	*e*P	PKPdf	23 03 27.8	-5.6
	comp=Z,11nm,0.6s						
JIRN	**Jiri**	**140.37**	**10**	*e*P	PKPdf	23 03 26.2	-7.7
	comp=Z,8.8nm,0.7s						
TAPN	**Taplejung**	**140.91**	**8**	*e*P	PKPdf	23 03 28.1	-6.8
	comp=Z,14nm,0.7s						
KMI	**Kunming**	**142.37**	**346**	PKP	PKPdf	23 03 36.5	-1.1
KMI				APKP		23 03 48.5	
KMI				LR	LR		
	comp=Z,208nm,22.7s						
FORT	**Forrest**	**142.64**	**234**	*e*P	PKPdf	23 03 37.8	-0.1
	comp=Z,14nm,0.7s						
SHL	**Shillong**	**143.04**	**2**	*i* P	PKPdf	23 03 40.0	+1.2
QIZ	**Qiongzhong**	**145.49**	**332**	PKP	PKPdf	23 03 43.4	+0.2
QIZ	**Qiongzhong**	**145.49**	**332**	*e*PKP	PKPdf	23 03 43.8	+0.6
HYB	**Hyderabad**	**147.69**	**27**	*i* PKP	PKPdf	23 03 49.5	+2.6
FITZ	**Fitzroy Crossi**	**148.15**	**254**	*e*P	PKPdf	23 03 48.4	+0.8
	comp=Z,24nm,0.8s						
CHG	**Chiang Mai**	**149.28**	**350**	⇓P		23 03 54.1	
	comp=Z,27nm,0.9s						
CHTO	**Chiang Mai**	**149.28**	**350**	*e*PKPdf	PKPdf	23 03 49.9	+0.4
CHTO				*e*PKPbc	PKPbc	23 03 54.0	+0.2
KLBR	**Kellerberrin**	**149.94**	**225**	*e*P		23 03 54.8	
KKTK	**Khon Kaen**	**150.70**	**341**	⇓P		23 03 58.5	
	comp=Z,2μm,0.5s						
MUN	**Mundaring**	**150.75**	**223**	*e*P		23 03 56.3	
BDT	**Bhumibol Dam**	**150.80**	**349**	P	PKPdf	23 03 53.0	+1.1
	comp=Z,22nm,0.8s						
KKM	**Kota Kinabalu**	**151.27**	**306**	*e*PKP		23 03 59.3	
NST	**Nakhon Sawan**	**152.09**	**346**	P		23 03 59.0	
KULM	**Kulim**	**161.72**	**336**	*e*PKPdf	PKPdf	23 04 05.7	-0.6

IDC 14 22:44:50.9±10.0**, 2196N**×**14378E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, Error ellipse: s-maj=418.3km s-min=25.1km az=75.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.49**	**320**	P	P	22 52 23.9	+0.9
	0.5nm,0.5s,baz=135,slow=8.1,SNR=7.1						
WRA	**Warramunga Arr**	**42.66**	**193**	P	P	22 52 48.9	-0.4
	0.2nm,0.7s,baz=16,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**46.36**	**193**	P	P	22 53 19.4	+0.5
	0.3nm,0.6s,baz=15,slow=8.0,SNR=5.6						
MKAR	**Makanchi Array**	**54.93**	**312**	P	P	22 54 22.5	-1.0
	0.2nm,0.3s,baz=93,slow=9.1,SNR=4.7						

JMA 14 22:52:01.5±0.2**, 4361N**×**14708E, h35**km±4km**, M4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.00**	**256**	P	Pn	22 52 19.5	+0.5
NEM2				*e*S	Sn	22 52 32.4	+0.5
JRA	**Rausu**	**1.46**	**284**	P	Pn	22 52 25.9	+0.6
JRA				*e*S	Sn	22 52 44.6	+1.5
JNK	**Nakash**	**1.71**	**270**	P	Pn	22 52 29.6	+0.8
JNK				*e*S	Sn	22 52 50.3	+0.8
JAK	**Akkeshi**	**1.84**	**251**	P	Pn	22 52 31.4	+0.8
JAK				*e*S	Sn	22 52 53.5	+0.8
JTKR	**Abashiri--Toko**	**2.33**	**280**	P	Pn	22 52 38.8	+1.6
JAR	**Ashorobuto**	**2.43**	**264**	P	Pn	22 52 40.4	+1.7
JAR				*e*S	Sn	22 53 09.0	+1.8
JOB	**Onbets**	**2.47**	**255**	P	Pn	22 52 41.0	+1.7
JOB				*e*S	Sn	22 53 09.7	+1.5
JMP	**Maruseppu**	**2.72**	**280**	P	Pn	22 52 44.7	+2.0
JCH	**Churui**	**2.90**	**251**	P	Pn	22 52 46.4	+1.3
JCH				*e*S	Sn	22 53 19.3	+0.6
JFR	**Furan**	**3.30**	**264**	*e*S	Sn	22 53 30.9	+2.3
JNBK	**Urakawa-nobuka**	**3.44**	**249**	P	Pn	22 52 53.9	+1.3
JSE	**Soyaes**	**3.50**	**294**	P	Pn	22 52 54.5	+1.2

*IDC **14** 23:00:54.7±0.7, 1983S×17424W, h0km, mb4.3/10, mb1 4.6/13, mb1mx4.4/19, mbtmp4.4/13, ML3.7/2, Error ellipse: s-maj=26.8km s-min=14.8km az=144.0*
*ISCJB **14** 23:00:58.0±0.5, 1975S±0.10×17438W±0.10, h33km, mb4.4/16, Error ellipse: s-maj=16.8km s-min=8.9km az=137.0*
*NEIC **14** 23:00:59.6±0.3, 1980S×17426W, h35km, mb4.4/5, Error ellipse: s-maj=11.7km s-min=6.9km az=148.0*
ISC 14 23:00:59.7±0.4**, 1984S**±009×**17425W**±008**, h35**km**, n34, σ0.99**/34**, mb4.4**/16**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.36**	**22**	Pn	**Pn**	**23 02 29.5**	**-1.4**
	7.1nm,0.3s,baz=70,slow=3.0,SNR=2.2						
AFI				Sn	**Sn**	**23 03 34.9**	**-7.4**
	7.6nm,0.3s,baz=49,slow=21,SNR=6.2						
RAR	**Rarotonga**	**13.63**	**98**	Pn	**Pn**	**23 04 08.2**	**-2.4**
	5.7nm,0.3s,baz=47,slow=2.0,SNR=5.1						
DZM	**Mont Dzumac**	**18.17**	**260**	P	**Pn**	**23 05 12.8**	**+3.6**
	1.8nm,0.3s,baz=73,slow=19,SNR=8.6						
URZ	**Urewera**	**19.83**	**200**	P	**Pn**	**23 05 28.4**	**-0.7**
	4.7nm,0.3s,baz=322,slow=3.7,SNR=20						
URZ				S	**S**	**23 09 00.8**	**-8.0**
	1.4nm,0.3s,baz=299,slow=21,SNR=6.0						
RPZ	**Rata Peaks**	**26.80**	**204**	P	**P**	**23 06 37.3**	**+0.9**
	20nm,1.0s,mb4.6,baz=215,slow=12,SNR=2.4						
HNR	**Honiara**	**26.98**	**289**	P	**P**	**23 06 37.8**	**-0.6**
ARMA	**Armidale**	**32.52**	**244**	*e*P	**P**	**23 07 27.9**	**+0.5**
CTA	**Charters Tower**	**37.06**	**263**	*e*P	**P**	**23 08 06.8**	**+0.1**
	9.4nm,0.4s,mb5.0						
CTA	**Charters Tower**	**37.06**	**263**	P	**P**	**23 08 07.0**	**+0.4**
	9.7nm,0.4s,mb5.0,baz=89,slow=11,SNR=29						
CTAO	**Charters Tower**	**37.06**	**263**	*e*P	**P**	**23 08 07.0**	**+0.3**
	10.0nm,0.4s,mb5.0						
TAU	**Tasmania Unive**	**39.59**	**226**	P	**P**	**23 08 27.3**	**-0.3**
STKA	**Stephens Creek**	**41.24**	**244**	*e*P	**P**	**23 08 41.1**	**-0.4**
	2.4nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**41.24**	**244**	P	**P**	**23 08 41.5**	**0.0**
	2.9nm,0.5s,mb4.1,baz=91,slow=10.0,SNR=14						
ASAR	**Alice Springs**	**48.09**	**256**	P	**P**	**23 09 35.6**	**-0.6**
	5.1nm,0.6s,mb4.8,baz=88,slow=8.3,SNR=46						
WB2	**Warramunga Arr**	**48.17**	**261**	*e*P	**P**	**23 09 35.6**	**-1.3**
WRA	**Warramunga Arr**	**48.18**	**261**	P	**P**	**23 09 36.2**	**-0.8**
	3.9nm,0.4s,mb4.8,baz=92,slow=5.9,SNR=345						
KAKA	**Kakadu**	**51.49**	**269**	*e*P	**P**	**23 10 01.4**	**-0.8**
	13nm,0.7s,mb5.0						
KAKA				*e*PcP	PcP	23 11 17.1	+0.8
FITZ	**Fitzroy Crossi**	**56.61**	**261**	*e*P	**P**	**23 10 39.1**	**-0.4**
	3.5nm,0.4s,mb4.7						
MBWA	**Marble Bar**	**61.43**	**256**	*e*P	**P**	**23 11 12.4**	**-0.5**
	3.2nm,0.5s,mb4.7						
QSPA	**South Pole Qui**	**70.23**	**180**	*e*P	**P**	**23 12 10.6**	**+2.0**
	14nm,1.4s,mb4.7						
MJAR	**Matsushiro Arr**	**71.83**	**321**	P	**P**	**23 12 20.0**	**+1.1**
MJAR	**Matsushiro Arr**	**71.83**	**321**	P	**P**	**23 12 20.0**	**+1.1**
	2.1nm,0.8s,mb4.2,baz=160,slow=5.5,SNR=3.4						
LPIG	**La Paz**	**76.06**	**58**	P	**P**	**23 12 43.5**	**-0.4**
	27nm,0.3s,baz=153,slow=0.1,SNR=2.9						
CMB	**Columbia Colle**	**76.62**	**41**	*e*P	**P**	**23 12 46.9**	**+0.1**
NVAR	**Mina Array Bea**	**78.16**	**42**	P	**P**	**23 12 57.0**	**+1.6**
	1.8nm,0.8s,mb4.1,baz=215,slow=7.2,SNR=9.4						
KSRS	**Korea Array**	**78.78**	**317**	P	**P**	**23 13 00.3**	**+1.5**
	1.2nm,0.8s,mb3.9,baz=75,slow=34,SNR=3.4						
TXAR	**Lajitas Array**	**83.75**	**56**	P	**P**	**23 13 26.3**	**+0.8**
TXAR	**Lajitas Array**	**83.75**	**56**	P	**P**	**23 13 26.3**	**+0.8**
	0.2nm,0.7s,mb3.4,baz=210,slow=7.1,SNR=3.5						
ANMO	**Albuquerque**	**84.27**	**50**	*e*P	**P**	**23 13 28.8**	**+0.8**
	0.6nm,0.5s,mb4.0						
PDAR	**Pinedale Array**	**86.10**	**42**	P	**P**	**23 13 37.3**	**+0.4**
	0.3nm,0.7s,mb3.6,baz=208,slow=3.1,SNR=2.7						
COLA	**College**	**86.85**	**11**	P	**P**	**23 13 39.6**	**-0.5**
WALA	**Waterton Lakes**	**87.00**	**35**	*e*P	**P**	**23 13 41.3**	**+0.1**
	1.6nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**128.86**	**351**	PKP	PKPdf	23 20 03.5	+0.7
	1.7nm,0.9s,baz=338,slow=1.9,SNR=4.0						
BRTR	**Keskin Array B**	**148.92**	**316**	PKPbc	PKPbc	23 20 43.9	-0.1
	0.3nm,0.4s,baz=158,slow=7.7,SNR=4.0						

IDC 14 23:28:49.0±3.6**, 838S**×**11730E, h0**km**, mb3.0**/3**, mb1 3.3**/3**, mb1mx3.2**/15**, mbtmp3.1**/3**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.4**/8**, Error ellipse: s-maj=298.1km s-min=26.6km az=50.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.11**	**127**	P	P	23 33 24.6	0.0
	0.3nm,0.5s,baz=302,slow=13,SNR=8.2						
ASAR	**Alice Springs**	**22.00**	**136**	P	P	23 33 45.1	+0.1
	0.5nm,0.8s,baz=312,slow=8.6,SNR=3.8						
PMG	**Port Moresby**	**29.52**	**94**	LR	LR	23 49 23.3	
	comp=Z,188nm,19.3s,baz=342,slow=42						
CTA	**Charters Tower**	**30.33**	**116**	LR	LR	23 48 13.2	
	comp=Z,180nm,19.4s,baz=52,slow=38						
MKAR	**Makanchi Array**	**63.15**	**334**	P	P	23 39 18.7	+0.1
	0.4nm,0.6s,baz=148,slow=7.6,SNR=5.7						

*ISK **14** 23:42:50.1, 3582N×3027E, h8km, MD3.4*
*ISCJB **14** 23:42:54.7±1.2, 36.17N±009×3031E±004, h10km, Error ellipse: s-maj=13.1km s-min=5.1km az=2.8*
*CSEM **14** 23:42:54.2±0.2, 3626N×3026E, h2km, MD3.4, Error ellipse: s-maj=5.9km s-min=2.5km az=7.0*
*DDA **14** 23:42:56.0, 3628N×3028E, h9km, Md3.4*
ISC 14 23:42:54.9±1.2**, 3611N**±009×**3028E**±005**, h10**km**, n13, σ1.00**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**1.10**	**299**	*e*PN	**Pn**	**23 43 14.5**	**-1.8**
FETY				*e*SN	**Sn**	**23 43 32.6**	**+1.1**
GOLH	**Golhisar**	**1.27**	**333**	*i* P	**Pn**	**23 43 16.2**	**-2.3**
GOLH				*i* S	**Sb**	**23 43 38.7**	**+3.6**
GOLH	**Golhisar**	**1.27**	**333**	*i* P	**Pn**	**23 43 16.2**	**-2.4**
ISP	**Isparta**	**1.74**	**6**	*e*PN	**Pn**	**23 43 26.1**	**+1.0**
DENT	**Denizli**	**1.92**	**329**	*e*PN	**Pn**	**23 43 27.3**	**-0.3**
ERMK	**Ermenek**	**2.19**	**75**	*i* P	**Pn**	**23 43 32.1**	**+0.8**
ERMK				*i* S	**Sg**	**23 44 05.2**	**-0.1**
BDRM	**Kayabasi**	**2.47**	**294**	*i* P	**Pn**	**23 43 35.8**	**+0.6**
BDRM				*i* S	**Sn**	**23 44 05.6**	**+0.2**
KONT	**Konya--Tatoy**	**2.48**	**42**	*e*PN	**Pn**	**23 43 35.7**	**+0.4**
MANT	**Manisa**	**2.75**	**331**	*i* P	**Pn**	**23 43 38.3**	**-0.7**
MANT				*i* S	**Sn**	**23 44 12.7**	**+0.6**
KIZT	**Kizilcal**	**3.05**	**24**	*e*PN	**Pn**	**23 43 43.7**	**+0.6**
ESKT	**Eskisehir**	**3.44**	**7**	*i* P	**Pn**	**23 43 47.6**	**-0.8**
ESKT				*i* S	**Sn**	**23 44 28.3**	**-0.9**
ESKT	**Eskisehir**	**3.44**	**7**	*e*Pn	**Pn**	**23 43 48.9**	**+0.5**
SEYT	**Eskypehyr**	**3.44**	**7**	*i* P	**Pn**	**23 43 47.6**	**-0.8**
SEYT				*i* S	**Sn**	**23 44 28.3**	**-0.9**

CASC 15 00:02:45.0±1.7**, 840N**×**8283W, h0**km±3km**, MD3.5, 3C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.38**	**85**	*e*S	Sg	00 02 59.4	+2.2
BRU2	**Volcan**	**0.41**	**20**	*e*P	Pg	00 02 54.3	+1.3
BRU2				*e*S	Sg	00 03 02.9	+4.6
CTCR	**Cotoan**	**0.50**	**8**⇑	*e*P	Pg	00 02 56.0	+1.4
CTCR				*e*S	Sg	00 03 05.5	+4.5
BAR1		**0.96**	**330**	*e*P	Pg	00 03 03.7	+0.3
BAR1				*e*S	Sg	00 03 17.5	+1.5
CNI	**Changuinola**	**1.06**	**17**⇑	*i*P	Pg	00 03 05.5	+0.2
QCR	**Quepos**	**1.67**	**308**	*e*P	Pn	00 03 14.6	-0.9
QCR				*e*S	Sn	00 03 38.0	+0.5
URSC	**Urasca**	**1.70**	**327**	*e*P	Pn	00 03 15.3	-0.7
URSC				*e*S	Sn	00 03 40.4	+1.8
LCR2	**La Lucha 2**	**1.77**	**319**	*e*P	Pn	00 03 17.5	+0.7
LCR2				*e*S	Sn	00 03 41.8	+1.8
PRS1	**Puriscal**	**2.15**	**317**	*e*P	Pn	00 03 22.3	+0.2
PRS1				*e*S	Sn	00 03 49.8	+0.3
CGA2	**Cerro Gallo 2**	**2.28**	**315**	*e*P	Pn	00 03 25.2	+1.3
CGA2				*e*S	Sn	00 03 54.6	+1.9
AZU	**Azuero**	**2.60**	**103**	*e*P	Pn	00 03 31.4	+3.1
PTP	**Ponta Puerca**	**19.38**	**58**⇑	*i*P		00 02 49.6	
PTP				*e*S		00 02 54.6	

IDC 15 00:21:36.7±2.4**, 5670S**×**2649W, h0**km**, mb4.0**/2**, mb1 4.1**/2**, mb1mx3.8**/12**, mbtmp4.0**/2**, Error ellipse: s-maj=90.6km s-min=45.4km az=8.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**51.07**	**305**	P	P	00 30 41.3	+0.6
	1.0nm,0.6s,baz=131,slow=9.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**73.43**	**29**	P	P	00 33 10.6	+0.1
	0.5nm,0.6s,baz=203,slow=6.7,SNR=6.5						
YKA	**Yellowknife Ar**	**136.91**	**317**	PKP	PKPdf	00 40 59.7	0.0
	0.2nm,0.6s,baz=120,slow=2.4,SNR=4.2						
SONM	**Songino Array**	**150.37**	**87**	PKPbc	PKPbc	00 41 28.6	-0.2
	0.3nm,0.6s,baz=214,slow=3.9,SNR=3.6						

IDC 15 00:44:57.6±4.1**, 3001S**×**13881E, h0**km**, mb1 2.8**/3**, mb1mx2.8**/11**, mbtmp2.6**/3**, ML2.5**/3**, Error ellipse: s-maj=159.7km s-min=17.7km az=46.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.04**	**129**	Pn	Pn	00 45 45.8	-1.1
	0.3nm,0.3s,baz=312,slow=14,SNR=3.2						
STKA				Sn	Sn	00 46 23.3	-0.6
	0.6nm,0.3s,baz=336,slow=20,SNR=4.2						
STKA				Lg		00 46 35.7	
	1.7nm,0.3s,baz=29,slow=19,SNR=6.4						
ASAR	**Alice Springs**	**7.68**	**324**	Pn	Pn	00 46 51.3	+0.5
	0.1nm,0.3s,baz=147,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	**10.81**	**337**	Pn	Pn	00 47 33.9	+0.3
	0.1nm,0.3s,baz=154,slow=11,SNR=6.4						

*ISCJB **15** 00:54:29.8±0.5, 3833N±003×2203E±004, h20km±5km, Error ellipse: s-maj=5.3km s-min=4.9km az=6.5*
*CSEM **15** 00:54:29.9±0.1, 3831N×2207E, h12km, ML2.9, Error ellipse: s-maj=2.1km s-min=1.8km az=6.0*
*THE **15** 00:54:29.8, 3834N×22.10E, h3km, ML2.9*
*ATH **15** 00:54:29.3, 3830N×22.10E, h27km±2km, MD3.2/4*
*NEIC **15** 00:54:29.3, 3830N×22.10E, h27km, MD3.2(ATH), After ATH.*
ISC 15 00:54:29.8±0.4**, 3832N**±003×**2209E**±004**, h17**km±4km**, n16, σ0.97**/26**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELA	**Sela**	**0.16**	**254**	*e*Pg	**Pg**	**00 54 33.2**	**-0.8**
SELA				*e*Sg	**Sg**	**00 54 36.6**	**-0.3**
SELA	**Sela**	**0.16**	**254**	*e*Pg	**Pg**	**00 54 33.2**	**-0.8**
SELA				*e*Sg	**Sg**	**00 54 36.6**	**-0.3**
RLS	**Riolos of Patr**	**0.56**	**242**	*e*PN	**Pg**	**00 54 40.6**	**-0.2**
RLS				*e*SN	**Sg**	**00 54 49.5**	**+1.2**
EVR	**Evrytania**	**0.64**	**340**	*e*PB	**Pb**	**00 54 41.9**	**-0.5**
EVR				*e*SN	**Sg**	**00 54 52.5**	**+1.7**
AGG	**Agios Georgios**	**0.73**	**15**	*e*Pg	**Pg**	**00 54 42.8**	**-1.3**
AGG				*e*Sg	**Sg**	**00 54 54.0**	**+0.3**
LTK	**Loutraki**	**0.75**	**113**	*e*Pg	**Pg**	**00 54 44.4**	**-0.1**
LTK				*e*Sg	**Sg**	**00 54 55.3**	**+0.8**
LKR	**Lokris**	**0.79**	**65**	*e*PB	**Pb**	**00 54 44.1**	**-0.9**
LKR				*e*SN	**Sn**	**00 54 56.6**	**-0.9**
VLX	**Vlachokerasia**	**0.98**	**166**	*e*Pg	**Pg**	**00 54 47.3**	**-1.4**
VLX				*e*Sg	**Sg**	**00 55 01.2**	**-0.4**
KFL	**Anninata**	**1.04**	**259**	*e*Pg	**Pg**	**00 54 49.5**	**-0.6**
ITM	**Ithomi**	**1.15**	**186**	*e*PN	**Pn**	**00 54 50.6**	**-0.4**
VLS	**Valsamata**	**1.19**	**264**	*e*PN	**Pn**	**00 54 51.7**	**+0.1**
DID	**Didima**	**1.22**	**131**	*e*Pg	**Pg**	**00 54 52.9**	**-0.4**
DID				*e*Sg	**Sg**	**00 55 11.0**	**+1.7**
THL	**Klokotos Trika**	**1.24**	**357**	*e*PN	**Pn**	**00 54 53.3**	**+0.9**
NEO	**Neokhori**	**1.33**	**42**	*e*PN	**Pn**	**00 54 54.5**	**+1.0**
PYL	**PYLOS**	**1.45**	**191**	*e*Pg	**Pg**	**00 54 55.9**	**-1.8**
PYL				*e*Sg	**Sg**	**00 55 18.2**	**+1.6**
VLI	**Veliai**	**1.74**	**157**	*e*PN	**Pn**	**00 55 00.0**	**+0.9**

*CSEM **15** 01:10:28.7±0.6, 3744N×3886E, h5km, MD2.9, Error ellipse: s-maj=15.4km s-min=6.4km az=118.0*
*ISK **15** 01:10:29.5, 3745N×3879E, h5km, MD2.9*
*ISCJB **15** 01:10:30.1±0.7, 3746N±004×3883E±004, h2km±5km, Error ellipse: s-maj=6.7km s-min=5.7km az=167.4*
*DDA **15** 01:10:30.8, 3748N×3885E, h2km, Md2.8*
ISC 15 01:10:30.2±0.8**, 3744N**±005×**3884E**±005**, h5**km±4km**, n8, σ0.77**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.01**	**283**	*i* PG	**Pg**	**01 10 30.7**	**-0.4**
URFA				SG	**Sg**	**01 10 31.5**	**-0.1**
ATAB	**Bozova**	**0.43**	**274**	*i* P	**Pg**	**01 10 38.0**	**-0.5**
ATAB				*i* S	**Sg**	**01 10 43.9**	**-0.2**
MALT	**Malatya**	**0.93**	**340**	PG	**Pg**	**01 10 47.9**	**-0.2**
MALT				SG	**Sg**	**01 11 00.3**	**+0.1**
GZT	**Gaziantep**	**1.01**	**266**	*i* P	**Pg**	**01 10 50.9**	**+1.2**
GZT				*i* S	**Sg**	**01 11 05.8**	**+3.0**
ELZG	**Elazig**	**1.06**	**6**	*i* P	**Pg**	**01 10 50.0**	**-0.7**
ELZG				*i* S	**Sg**	**01 11 05.0**	**+0.5**
GAZ	**Gaziantep**	**1.32**	**259**	*e*PN	**Pn**	**01 10 54.7**	**-0.7**
GAZ				*e*SN	**Sn**	**01 11 12.6**	**-0.8**
KMRS	**Kahramanmaras**	**1.54**	**273**	*e*PN	**Pn**	**01 10 58.6**	**+0.2**
MARD	**Mardin**	**1.55**	**94**	*i* P	**Pn**	**01 10 58.1**	**-0.4**
MARD				*i* S	**Sn**	**01 11 20.0**	**+0.9**

CASC 15 01:23:32.5±2.6**, 1162N**×**8683W, h79**km±29km**, MD3.8, 7C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.60**	**23**⇑	*e*P	Pn	01 23 46.3	-0.8
COPN				*e*S	Sn	01 23 59.8	+1.9
TICN	**Ticuantepe**	**0.71**	**55**⇑	*e*P	Pn	01 23 47.7	-0.5
TICN				*e*S	Sn	01 24 00.8	+0.9
XAVN	**Gruta Xavier**	**0.72**	**43**⇓	*e*P	Pn	01 23 47.8	-0.5
TISN	**Laguna Tiscapa**	**0.76**	**47**	*e*P	Pn	01 23 48.3	-0.4
APYN	**Apoyeque**	**0.77**	**38**	*e*P	Pn	01 23 48.6	-0.2
MGAN	**Managua**	**0.77**	**47**⇓	*e*P	Pn	01 23 49.0	+0.1
MGAN				*e*S	Sn	01 24 02.4	+1.4
APON	**Apoyo**	**0.80**	**68**⇓	*e*P	Pn	01 23 48.4	-0.8
APON				*e*S	Sn	01 24 02.8	+1.2
MOMJ	**Momotombo**	**0.83**	**20**⇑	*e*P	Pn	01 23 49.5	0.0
MOMJ				*e*S	Sn	01 24 04.0	+1.8
TEL3	**Telica 3**	**0.94**	**359**⇑	*e*P	Pn	01 23 51.1	+0.3
HUEN		**0.96**	**42**⇑	*e*P	Pn	01 23 51.2	+0.2
TELN	**Telica**	**0.98**	**360**⇓	*e*P	Pn	01 23 51.5	+0.3
TELN				*e*S	Sn	01 24 06.9	+1.7
SSNN	**San Juan del S**	**1.02**	**109**	*e*P	Pn	01 23 50.0	-1.7
SSNN				*e*S	Sn	01 24 06.2	+0.2
CONN	**Concepcion**	**1.18**	**93**⇓	*e*P	Pn	01 23 52.1	-1.5
MADN	**Villa Maderas**	**1.29**	**99**⇑	*e*P	Pn	01 23 53.6	-1.5
VCR	**Vista de Mar**	**1.90**	**141**	*e*P	Pn	01 24 04.1	+1.1
JCR	**Jicaral**	**2.44**	**136**	*e*P	Pn	01 24 11.9	+1.7
PRS1	**Puriscal**	**2.96**	**123**	*e*P	Pn	01 24 19.9	+2.6
LAJ	**Bijagual**	**3.18**	**123**	*e*P	Pn	01 24 17.2	-3.1
LCR2	**La Lucha 2**	**3.35**	**124**⇑	*e*P	Pn	01 24 25.9	+3.3
URSC	**Urasca**	**3.48**	**120**	*e*P	Pn	01 24 25.6	+1.2

*ISCJB **15** 01:32:41.9±0.2, 5979N±005×2968W±006, h10km, mb4.2/66, MS3.7/24, Error ellipse: s-maj=8.1km s-min=3.7km az=21.2*
*CSEM **15** 01:32:41.1±0.1, 5980N×2971W, h10km, mb4.3/47, Ms3.7, Error ellipse: s-maj=4.3km s-min=1.7km az=27.0*
*IDC **15** 01:32:42.3±0.6, 5986N×2968W, h0km, mb4.0/17, mb1 4.1/21, mb1mx4.1/28, mbtmp4.0/21, ML3.7/4, MS3.8/20, Ms1 3.8/20, ms1mx3.7/44, Error ellipse: s-maj=20.3km s-min=11.3km az=6.0*
*NEIC **15** 01:32:43.7±0.2, 5974N×2965W, h10km, mb4.3/52, MS3.8/3, Error ellipse: s-maj=6.9km s-min=3.0km az=199.0*
*SZGRF **15** 01:32:51.3, 5970N×2894W, h33km, mb4.4, MS3.8, Reykjanes Ridge*
ISC 15 01:32:43.4±3.5**, 5980N**±005×**2959W**±006**, h7**km±22km**, n176, σ0.88**/167**, mb4.2**/66**, MS3.7**/23**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.28**	**34**	*e*Pn	**Pn**	**01 34 19.4**	**+3.1**
BORG	**Borgarnes**	**6.28**	**34**	Pn	**Pn**	**01 34 16.8**	**+0.5**
	12nm,0.3s,baz=196,slow=7.2,SNR=23						
BORG				Sn	**Sn**	**01 35 26.0**	**-2.1**
	baz=108,slow=20,SNR=8.8						
BORG				LR	LR	01 36 04.5	
	comp=Z,462nm,19.3s,baz=173,slow=32						
SFJD	**Kangerlussuaq**	**11.81**	**316**	Pn	**Pn**	**01 35 33.0**	**+1.0**
	0.6nm,0.3s,baz=113,slow=8.9,SNR=3.8						
SFJD				LR	LR	01 39 21.6	
	comp=Z,829nm,18.2s,baz=93,slow=34						
JMIC	**Jan Mayen**	**14.13**	**29**	LR	LR	01 40 39.1	
	comp=Z,148nm,19.4s,baz=125,slow=34						
ESK	**Eskdalemuir**	**14.80**	**96**	*e*P	**Pn**	**01 36 13.0**	**+0.2**
ESK	**Eskdalemuir**	**14.80**	**96**	*e*P	**Pn**	**01 36 13.0**	**+0.2**
EKA	**Eskdalemuir Ar**	**14.82**	**96**	Pn	**Pn**	**01 36 12.5**	**-0.5**
	0.1nm,0.3s,baz=294,slow=25,SNR=3.8						
ROSF	**Rostrenen**	**19.09**	**115**	*e*P	**Pn**	**01 37 06.9**	**-0.1**
	86nm,1.7s						
ROSF	**Rostrenen**	**19.09**	**115**	*e*P	**Pn**	**01 37 06.9**	**-0.1**
	43nm,1.7s						
QUIF	**Quistinic**	**19.45**	**116**	*e*P	**Pn**	**01 37 10.9**	**-0.4**
	27nm,1.1s						
QUIF	**Quistinic**	**19.45**	**116**	*e*P	**Pn**	**01 37 10.9**	**-0.4**
	14nm,1.1s						
SGMF	**Saint Gilles**	**19.48**	**114**	*e*P	**Pn**	**01 37 10.8**	**-0.9**
	39nm,1.2s						
SGMF	**Saint Gilles**	**19.48**	**114**	*e*P	**Pn**	**01 37 10.8**	**-0.9**
	20nm,1.2s						
KONO	**Kongsberg**	**19.57**	**73**	P	**Pn**	**01 37 13.4**	**+0.7**
KONO	**Kongsberg**	**19.57**	**73**	P	**Pn**	**01 37 13.4**	**+0.7**
NOA	**NORSAR Array B**	**19.95**	**69**	P	**Pn**	**01 37 15.7**	**-1.5**
	0.1nm,0.3s,baz=292,slow=9.7,SNR=3.0						
NOA				LR	LR	01 44 05.5	
	comp=Z,163nm,18.6s,baz=290,slow=34						
FLN	**La Foliniere**	**20.09**	**110**	*e*P	**P**	**01 37 17.4**	**+0.3**
	38nm,1.1s						
FLN				*e*MLR	MLR		
	comp=Z,234nm,17.2s,MS3.3						
FLN	**La Foliniere**	**20.09**	**110**	*e*P	**P**	**01 37 17.4**	**+0.3**
	comp=Z,19nm,1.1s						
FLN				LR	LR		
	comp=Z,230nm,17.3s,MS3.6						
GRR	**Gorron**	**20.17**	**112**	*e*P	**P**	**01 37 18.6**	**+0.5**
LDF	**La Druitiere**	**20.38**	**110**	*e*P	**P**	**01 37 20.5**	**+0.2**
	comp=Z,18nm,0.9s						
LDF	**La Druitiere**	**20.38**	**110**	*e*P	**P**	**01 37 20.5**	**+0.2**
	comp=Z,9.1nm,0.9s						
SCHQ	**Schefferville**	**20.52**	**272**	P	**P**	**01 37 21.0**	**-0.7**
SCHQ				LR	LR	01 43 50.2	
SCHQ	**Schefferville**	**20.52**	**272**	P	**P**	**01 37 21.0**	**-0.7**
	comp=Z,5.9nm,1.0s,baz=73,slow=10,SNR=6.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SCHQ				LR	LR	01 43 50.2	
	comp=Z,140nm,18.6s,MS3.4,baz=84,slow=33						
HFS	Hagfors	21.39	70	P	P	01 37 30.7	-0.4
	comp=Z,6.3nm,0.9s,mb4.0,baz=285,slow=12,SNR=7.0						
HFS				LR	LR	01 44 26.6	
	comp=Z,241nm,20.4s,MS3.6,baz=246,slow=33						
BAIF	Baives	21.50	102	eP	P	01 37 32.0	-0.3
	comp=Z,45nm,1.1s,mb4.4						
BAIF	Baives	21.50	102	eP	P	01 37 32.0	-0.3
	comp=Z,22nm,1.1s,mb4.4						
GIVF	Givet	21.77	101	eP	P	01 37 35.4	+0.1
	comp=Z,51nm,1.0s,mb4.6						
GIVF	Givet	21.77	101	eP	P	01 37 35.4	+0.1
	comp=Z,26nm,1.0s,mb4.6						
MFF	Saint Martin d	21.80	114	eP	P	01 37 35.5	-0.2
	comp=Z,22nm,0.9s,mb4.3						
MFF	Saint Martin d	21.80	114	eP	P	01 37 35.5	-0.2
	comp=Z,11nm,0.9s,mb4.3						
HYF	Humbligny	22.63	109	eP	P	01 37 44.8	+0.4
MEZF	Maizieres J'vi	22.94	104	eP	P	01 37 47.9	+0.2
	comp=Z,28nm,1.0s,mb4.3						
MEZF	Maizieres J'vi	22.94	104	eP	P	01 37 47.9	+0.2
	comp=Z,14nm,1.0s,mb4.3						
TCF	Toulx Ste Croi	23.13	112	eP	P	01 37 49.7	-0.1
	comp=Z,37nm,1.1s,mb4.4						
TCF	Toulx Ste Croi	23.13	112	eP	P	01 37 49.7	-0.1
	comp=Z,18nm,1.1s,mb4.4						
SSF	Saint Saulge	23.19	109	eP	P	01 37 49.9	-0.5
	comp=Z,20nm,1.0s,mb4.2						
SSF	Saint Saulge	23.19	109	eP	P	01 37 49.9	-0.5
	comp=Z,9.8nm,1.0s,mb4.2						
LOR	Lormes	23.21	108	eP	P	01 37 50.1	-0.5
	comp=Z,15nm,0.8s,mb4.2						
LOR				eMLR	MLR		
	comp=Z,333nm,17.2s,MS3.5						
LOR	Lormes	23.21	108	eP	P	01 37 50.1	-0.5
	comp=Z,7.7nm,0.8s,mb4.2						
LOR				LR	LR		
	comp=Z,330nm,17.3s,MS3.9						
BGF	Bois d'Agland	23.24	110	eP	P	01 37 50.5	-0.4
	comp=Z,21nm,0.8s,mb4.3						
BGF	Bois d'Agland	23.24	110	eP	P	01 37 50.5	-0.4
	comp=Z,11nm,0.8s,mb4.3						
AVF	Avril sur Loir	23.31	109	eP	P	01 37 51.3	-0.4
	comp=Z,18nm,0.9s,mb4.2						
AVF	Avril sur Loir	23.31	109	eP	P	01 37 51.3	-0.4
	comp=Z,8.8nm,0.9s,mb4.2						
LFF	La Frestale	23.47	116	eP	P	01 37 53.0	-0.3
	comp=Z,41nm,1.0s,mb4.5						
LFF	La Frestale	23.47	116	eP	P	01 37 53.0	-0.3
	comp=Z,21nm,1.0s,mb4.5						
RGN	Rugen	23.52	84	eP	P	01 37 53.3	-0.4
	comp=Z,39nm,0.6s,mb5.0						
RGN	Rugen	23.52	84	eP	P	01 37 53.3	-0.4
	comp=Z,39nm,0.6s,mb5.0						
RJF	Les Rejaudoux	23.54	114	eP	P	01 37 53.3	-0.8
	comp=Z,14nm,0.9s,mb4.1						
RJF				eMLR	MLR		
	comp=Z,280nm,23.0s,MS3.4						
RJF	Les Rejaudoux	23.54	114	eP	P	01 37 53.3	-0.8
	comp=Z,6.9nm,0.9s,mb4.1						
RJF				LR	LR		
	comp=Z,280nm,23.0s,MS3.7						
SMF	Signal de Mont	23.65	109	eP	P	01 37 53.9	-1.2
	comp=Z,22nm,0.9s,mb4.3						
SMF	Signal de Mont	23.65	109	eP	P	01 37 53.9	-1.2
	comp=Z,11nm,0.9s,mb4.3						
HAU	Haudompre	23.91	103	eP	P	01 37 57.0	-0.5
HAU				eMLR	MLR		
	comp=Z,378nm,22.0s,MS3.5						
HAU	Haudompre	23.91	103	eP	P	01 37 57.0	-0.5
HAU				LR	LR		
	comp=Z,380nm,22.0s,MS3.8						
CAF	Calviac	24.08	114	eP	P	01 37 58.5	-0.6
CDF	Champ du Feu	24.09	102	eP	P	01 37 59.4	+0.3
	comp=Z,22nm,1.1s,mb4.2						
CDF	Champ du Feu	24.09	102	eP	P	01 37 59.4	+0.3
	comp=Z,11nm,1.1s,mb4.2						
HINF	Hinteralfeld	24.29	103	eP	P	01 38 00.3	-0.6
ETSF	Etsaut	24.49	121	eP	P	01 38 02.4	-0.4
ARCES	ARCESS Array B	24.57	44	P	P	01 38 02.9	-0.4
	comp=Z,4.7nm,0.9s,mb4.0,baz=266,slow=4.9,SNR=6.8						
ARCES				LR	LR	01 45 55.2	
	comp=Z,114nm,18.4s,MS3.4,baz=282,slow=32						
CABF	La Chapelle	24.75	106	eP	P	01 38 04.6	-0.6
	comp=Z,8.5nm,0.7s,mb4.1						
CABF	La Chapelle	24.75	106	eP	P	01 38 04.6	-0.6
	comp=Z,4.2nm,0.7s,mb4.1						
EPF	Esparros	24.78	119	eP	P	01 38 05.5	+0.1
	comp=Z,7.5nm,0.8s,mb4.0						
EPF	Esparros	24.78	119	eP	P	01 38 05.5	+0.1
	comp=Z,3.8nm,0.8s,mb4.0						
RUE	Ruedersdorf	24.86	88	eP	P	01 38 06.5	+0.5
	comp=Z,11nm,0.3s,mb4.9						
RUE	Ruedersdorf	24.86	88	eP	P	01 38 06.5	+0.5
	comp=Z,11nm,0.3s,mb4.9						
CLL	Collm	25.14	91	iP	P	01 38 09.9	+1.3
	comp=Z,7.0nm,1.1s,mb4.1						
CLL				ex	x	01 38 23.0	
GRA1	Grafenberg Arr	25.23	95	eP	P	01 38 10.6	+1.1
	comp=Z,10.0nm,1.5s,mb4.1						
GRA1				LR	LR		
	comp=Z,300nm,19.2s,MS3.8						
GRF	Grafenberg Arr	25.23	95	eP	P	01 38 10.6	+1.1
	comp=Z,10.0nm,1.5s,mb4.1						
GRF				LR	LR		
	comp=Z,300nm,19.2s,MS3.8						
GRF	Grafenberg Arr	25.23	95	eP	P	01 38 10.6	+1.1
	comp=Z,10.0nm,1.5s,mb4.1						
GRF				eL		01 47 45.9	
	comp=Z,285nm,19.2s						
EVOP	Sao Brissos	25.28	138	eP	P	01 38 09.9	-0.1
	comp=Z,14nm,1.3s,mb4.3						
EVO	Evora	25.31	138	eP	P	01 38 09.9	-0.4
	comp=Z,27nm,1.3s,mb4.3						
EVO				eMLR	MLR		
	comp=Z,234nm,19.8s,MS3.4						
VIVF	Saint-Julien-l	25.36	111	eP	P	01 38 10.3	-0.4
MTLF	Montolieu	25.38	116	eP	P	01 38 10.9	0.0
	comp=Z,8.4nm,0.8s,mb4.0						
MTLF	Montolieu	25.38	116	eP	P	01 38 10.9	0.0
	comp=Z,4.2nm,0.8s,mb4.0						
LASF	Ste Croix	25.56	113	eP	P	01 38 12.5	0.0
	comp=Z,40nm,1.6s,mb4.4						
LASF	Ste Croix	25.56	113	eP	P	01 38 12.5	0.0
	comp=Z,20nm,1.6s,mb4.4						
ESDC	Sonseca Array	25.79	130	P	P	01 38 15.8	+1.2
	comp=Z,4.0nm,0.7s,mb4.0,baz=334,slow=9.0,SNR=18						
ESDC				LR	LR	01 46 19.8	
	comp=Z,120nm,19.7s,MS3.4,baz=0.0,slow=32						
ESLA	Sonseca Array	25.79	130	eP	P	01 38 14.0	-0.6
	comp=Z,1.0nm,0.8s,mb3.4						
ESLA	Sonseca Array	25.79	130	eP	P	01 38 14.0	-0.6
	comp=Z,1.0nm,0.8s,mb3.4						
LPL	La Plagne	25.85	107	eP	P	01 38 15.3	+0.1
	comp=Z,8.2nm,0.9s,mb3.9						
LPL	La Plagne	25.85	107	eP	P	01 38 15.3	+0.1
	comp=Z,4.1nm,0.9s,mb3.9						
LPG	La Plagne	25.88	107	eP	P	01 38 15.8	+0.4
	comp=Z,8.4nm,1.0s,mb3.9						
LPG	La Plagne	25.88	107	eP	P	01 38 15.8	+0.4
	comp=Z,4.2nm,1.0s,mb3.9						
ORIF	Oris-en-Rattie	25.88	109	eP	P	01 38 15.3	-0.1
	comp=Z,11nm,1.0s,mb4.0						
ORIF				eMLR	MLR		
	comp=Z,198nm,18.2s,MS3.4						
ORIF	Oris-en-Rattie	25.88	109	eP	P	01 38 15.3	-0.1
	comp=Z,5.3nm,1.0s,mb4.0						
SMRF	Simiane la Rot	26.44	111	eP	P	01 38 21.4	+0.9
	comp=Z,7.5nm,1.0s,mb3.9						
SMRF	Simiane la Rot	26.44	111	eP	P	01 38 21.4	+0.9
	comp=Z,3.8nm,1.0s,mb3.9						
MBDF	Montbardon	26.45	108	eP	P	01 38 20.8	+0.2
DAVOX	Davos/Dischmat	26.50	102	LR	LR	01 47 43.4	
	comp=Z,183nm,18.5s,MS3.7,baz=316,slow=34						
FINES	FINESS Array B	26.66	62	P	P	01 38 21.9	-0.4
	comp=Z,3.3nm,0.9s,mb3.9,baz=305,slow=6.7,SNR=7.6						
FINES				LR	LR	01 47 03.0	
	comp=Z,108nm,21.6s,MS3.4,baz=239,slow=32						
GERES	GERESS Array B	27.02	94	P	P	01 38 26.4	+0.7
	comp=Z,0.4nm,0.8s,baz=289,slow=4.1,SNR=4.2						
GERES				LR	LR	01 49 00.5	
	comp=Z,246nm,18.2s,MS3.8,baz=135,slow=36						
FRF	La Foret Royal	27.27	110	eP	P	01 38 28.1	+0.2
	comp=Z,18nm,1.2s,mb4.2						
FRF	La Foret Royal	27.27	110	eP	P	01 38 28.1	+0.2
	comp=Z,9.1nm,1.2s,mb4.2						
LMR	La Mourre	27.37	111	eP	P	01 38 28.4	-0.5
	comp=Z,13nm,1.1s,mb4.1						
LMR	La Mourre	27.37	111	eP	P	01 38 28.4	-0.5
	comp=Z,6.3nm,1.1s,mb4.1						
RES	Resolute Bay	27.39	328	eP	P	01 38 28.0	-0.8
	comp=Z,63nm,0.9s,mb5.2						
RES				eScP	ScP	01 45 24.1	-3.5
VRAC	Vranov	28.19	91	LR	LR	01 49 08.5	
	comp=Z,147nm,18.1s,MS3.6,baz=319,slow=35						
MORC	Moravsky Berou	28.37	89	eP	P	01 38 36.9	-0.8
	comp=Z,1.2nm,0.7s,mb3.6						
MORC	Moravsky Berou	28.37	89	eP	P	01 38 36.9	-0.8
	comp=Z,1.2nm,0.7s,mb3.6						
PGF	Pioggiola	29.16	109	eP	P	01 38 45.4	+0.6
	comp=Z,11nm,0.9s,mb4.3						
PGF	Pioggiola	29.16	109	eP	P	01 38 45.4	+0.6
	comp=Z,5.3nm,0.9s,mb4.2						
VYHS	Vyhne	29.84	90	eP	P	01 38 57.8	+7.0
STHS	Stebnicka Huta	30.47	87	eP	P	01 38 52.8	-3.5
KECS	Kecovo	30.69	89	eP	P	01 39 02.4	+4.2
PSZ	Piszkesteto	30.76	90	eP	P	01 38 59.1	+0.2
	comp=Z,2.0nm,0.7s,mb4.1						
PSZ	Piszkesteto	30.76	90	eP	P	01 38 59.1	+0.2
	comp=Z,2.0nm,0.7s,mb4.1						
CRVS	Cervenica-Dubn	30.91	88	eP	P	01 39 00.1	-0.1
FCC	Fort Churchill	31.81	297	eP	P	01 39 07.5	-0.5
	comp=Z,3.7nm,0.8s,mb4.3						
FCC	Fort Churchill	31.81	297	eP	P	01 39 07.5	-0.5
	comp=Z,3.7nm,0.8s,mb4.3						
AKASG	Malin Array Be	33.66	79	P	P	01 39 24.4	+0.1
	comp=Z,2.5nm,0.8s,mb4.2,baz=304,slow=8.4,SNR=11						
OBN	Obninsk	34.55	68	eP	P	01 39 32.2	+0.2
	comp=Z,6.6nm,0.8s,mb4.6						
OBN	Obninsk	34.55	68	eP	P	01 39 32.2	+0.2
	comp=Z,6.6nm,0.8s,mb4.6						
KEST	Kesra	34.76	116	P	P	01 39 35.3	+1.3
	comp=Z,1.5nm,0.8s,mb4.0,baz=272,slow=5.7,SNR=4.7						
KEST				LR	LR	01 52 24.9	
	comp=Z,67nm,18.1s,MS3.4,baz=340,slow=34						
EYMN	Ely	36.99	280	eP	P	01 39 50.4	-2.5
EYMN	Ely	36.99	280	eP	P	01 39 50.4	-2.6
ULM	Lac du Bonnet	37.62	286	P	P	01 39 56.9	-1.5
	comp=Z,1.5nm,0.7s,mb3.8,baz=36,slow=12,SNR=3.0						
ULM				LR	LR	01 54 22.8	
	comp=Z,228nm,18.7s,MS4.0,baz=67,slow=35						
ULM	Lac du Bonnet	37.62	286	P	P	01 39 56.8	-1.5
YKW3	Yellowknife Ar	38.28	312	eP	P	01 40 03.3	-0.4
YKW3	Yellowknife Ar	38.28	312	eP	P	01 40 03.3	-0.5
YKA	Yellowknife Ar	38.32	312	P	P	01 40 03.6	-0.5
	comp=Z,2.3nm,0.8s,mb4.0,baz=52,slow=9.2,SNR=30						
YKA				LR	LR	01 55 03.5	
	comp=Z,108nm,19.9s,MS3.7,baz=80,slow=35						
CNNC	Cliffs of the	39.57	254	eScP	ScP	01 46 05.5	-5.2
INK	Inuvik	40.91	327	eP	P	01 40 24.2	-1.4
	comp=Z,62nm,0.8s,mb5.3						
TKL	Tuckaleechee C	42.13	260	LR	LR	01 56 38.9	
	comp=Z,179nm,20.4s,MS3.9,baz=306,slow=34						
CPCT	Cooper Cave	42.66	260	eP	P	01 40 42.6	+2.3
ARU	Arti	43.41	54	eP	P	01 40 47.0	+1.0
	comp=Z,11nm,1.1s,mb4.5						
ARU				eScP	ScP	01 46 14.8	-11
ARU	Arti	43.41	54	eP	P	01 40 47.0	+0.9
BRTR	Keskin Array B	43.55	88	P	P	01 40 49.5	+2.1
	comp=Z,3.5nm,0.9s,mb4.1,baz=335,slow=5.5,SNR=12						
KIV	Kislovodsk	44.93	77	eP	P	01 40 59.6	+1.2
	comp=Z,5.3nm,0.7s,mb4.5						
KIV	Kislovodsk	44.93	77	eP	P	01 40 59.6	+1.2
	comp=Z,5.3nm,0.7s,mb4.5						
DAWY	Dawson	45.60	325	eP	P	01 41 04.3	+0.8
DAWY	Dawson	45.60	325	eP	P	01 41 04.3	+0.8
LRAL	Lakeview Retre	45.82	261	eP	P	01 41 05.9	+0.3
	comp=Z,7.4nm,0.9s,mb4.6						
LRAL	Lakeview Retre	45.82	261	eP	P	01 41 05.9	+0.3
	comp=Z,7.4nm,0.9s,mb4.6						
RSSD	Black Hills	45.88	285	P	P	01 41 08.5	+2.6
WALA	Waterton Lakes	46.94	296	eP	P	01 41 13.7	-0.5
	comp=Z,8.3nm,1.3s,mb4.5						
WALA	Waterton Lakes	46.94	296	eP	P	01 41 13.7	-0.5
	comp=Z,8.2nm,1.3s,mb4.5						
MALT	Malatya	47.03	85	eP	P	01 41 16.9	+1.8
MALT	Malatya	47.03	85	eP	P	01 41 16.9	+1.8
COLA	College	47.31	329	eP	P	01 41 17.0	+0.1
	comp=Z,4.2nm,0.9s,mb4.4						
COLA	College	47.31	329	eP	P	01 41 17.0	+0.1
	comp=Z,4.2nm,0.9s,mb4.4						
HRY	Holter Researc	47.70	293	eScP	ScP	01 46 47.0	+3.5
MIAR	Mount Ida	47.93	268	eP	P	01 41 22.1	0.0
MIAR	Mount Ida	47.93	268	eP	P	01 41 22.1	+0.1
TIXI	Tiksi	47.98	9	P	P	01 41 22.6	+0.6
TIXI	Tiksi	47.98	9	P	P	01 41 22.5	+0.5
MCK	McKinley	48.51	329	eP	P	01 41 27.0	+0.8
	comp=Z,1.6nm,0.7s,mb4.2						
MCK	McKinley	48.51	329	eP	P	01 41 27.0	+0.8
	comp=Z,1.6nm,0.7s,mb4.2						
BW06	Boulder Array	49.57	288	eP	P	01 41 34.4	-0.2
	comp=Z,15nm,2.0s,mb4.7						
BW06	Boulder Array	49.57	288	eP	P	01 41 34.4	-0.1
	comp=Z,15nm,2.0s,mb4.7						
PDAR	Pinedale Array	49.57	288	P	P	01 41 33.9	-0.6
	comp=Z,0.8nm,0.7s,mb3.9,baz=57,slow=5.5,SNR=7.4						
PDAR				LR	LR	02 01 45.7	
	comp=Z,179nm,18.5s,MS4.1,baz=41,slow=35						
CHKZ	Chkalovo	50.19	50	eP	P	01 41 39.5	+0.3
	comp=Z,2.9nm,0.7s,mb4.4						
WMOK	Wichita Mounta	50.41	273	eP	P	01 41 40.0	-1.0
	comp=Z,3.5nm,1.0s,mb4.3						
WMOK	Wichita Mounta	50.41	273	eP	P	01 41 40.0	-1.0
	comp=Z,3.5nm,1.0s,mb4.3						
BRVK	Borovoye	50.54	50	eP	P	01 41 42.4	+0.6
	comp=Z,2.1nm,0.8s,mb4.1						
BRVK	Borovoye	50.54	50	eP	P	01 41 42.4	+0.6
	comp=Z,2.1nm,0.8s,mb4.1						
TTA	Tatalina	50.96	332	eScP	ScP	01 46 53.6	-3.5
TNA	Tin City	51.14	339	eP	P	01 41 48.0	+1.9
	comp=Z,10.0nm,1.6s,mb4.5						
TNA	Tin City	51.14	339	eP	P	01 41 48.0	+1.9
	comp=Z,10.0nm,1.6s,mb4.5						
HLID	Hailey	51.27	292	eP	P	01 41 48.3	+0.9
	comp=Z,0.8nm,0.5s,mb3.9						
HLID	Hailey	51.27	292	eP	P	01 41 48.3	+0.9
	comp=Z,0.8nm,0.5s,mb3.9						
TORD	Torodi Ar. Bea	51.99	140	P	P	01 41 51.7	-1.3
	comp=Z,2.2nm,0.7s,mb4.2,baz=322,slow=6.7,SNR=11						
MOD	Modoc	55.29	295	P	P	01 42 17.1	+0.1
	comp=Z,2.6nm,0.6s,mb4.4						
MOD	Modoc	55.29	295	P	P	01 42 17.1	+0.1
	comp=Z,2.6nm,0.6s,mb4.4						
YBH	Yreka Blue Hor	56.52	296	eP	P	01 42 30.0	+4.1
NVAR	Mina Array Bea	57.11	291	P	P	01 42 29.1	-0.9
	comp=Z,0.5nm,0.7s,mb3.6,baz=62,slow=6.2,SNR=4.6						
LTX	Lajitas	57.20	273	P	P	01 42 29.4	-1.4
LTX	Lajitas	57.20	273	P	P	01 42 29.5	-1.3
TXAR	Lajitas Array	57.21	273	P	P	01 42 31.2	+0.3
TXAR	Lajitas Array	57.21	273	P	P	01 42 31.2	+0.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=74,slow=5.3,SNR=4.0						
SDV	Santo Domingo	59.39	229	LR	LR	02 06 27.6	
	comp=Z,72nm,18.1s,MS3.8,baz=32,slow=34						
PFO	Pinyon Flat Ob	60.10	286	LR	LR	02 07 47.2	
	comp=Z,188nm,19.7s,MS4.2,baz=221,slow=35						
MKAR	Makanchi Array	60.17	47	P	P	01 42 51.6	+0.4
	comp=Z,0.5nm,0.4s,mb3.9,baz=335,slow=5.4,SNR=8.8						
AAK	Ala-Archa	60.56	55	eP	P	01 42 53.0	-0.9
	comp=Z,0.7nm,0.4s,mb4.1						
AAK	Ala-Archa	60.56	55	eP	P	01 42 53.0	-1.0
	comp=Z,0.7nm,0.4s,mb4.1						
ROSC	El Rosal	64.51	231	P	P	01 43 23.0	+2.4
	comp=Z,2.1nm,0.5s,mb4.4,baz=96,slow=18,SNR=3.6						
BOSA	Boshof	98.92	133	LR	LR	02 32 36.8	
	comp=Z,217nm,20.1s,MS4.7,baz=100,slow=36						

IDC ***15*** *01:34:10.3±0.5, 076S×127.44E, h0^{km}, mb4.8/18, mb1 4.8/20, mb1mx4.7/23, mbtmp4.8/20, ML4.2/1, MS4.6/8, Ms1 4.6/8, ms1mx4.4/16, Error ellipse: s-maj=22.2km s-min=11.8km az=70.0*

NEIC ***15*** *01:34:12.4±0.2, 082S×127.47E, h10^{km}, mb5.3/31, MS4.5/26, MW5.4, Error ellipse: s-maj=9.4km s-min=5.3km az=63.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.43; $M_{\theta\theta}$0.39; $M_{\phi\phi}$1.04; $M_{r\theta}$0.14; $M_{\theta\phi}$0.83; $M_{\phi r}$-0.35; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s227.00000°, δ43.00000°, λ-70.00000°. NP2: ϕ_s21.00000°, δ50.00000°, λ-107.00000°. Principal axes: T 1.6200, Plg4.0000°, Azm124.0000°; N -0.1000, Plg13.0000°, Azm33.0000°; P -1.5200, Plg76.0000°, Azm230.0000°;*

NEIC Felt [IV] at Labuha.

ISCJB ***15*** *01:34:12.2±1.0, 086S±003×12751E±004, h21^{km}±6^{km}, mb5.3/95, MS4.6/49 Error ellipse: s-maj=6.2km s-min=4.6km az=161.5*

GCMT ***15*** *01:34:12.4±0.1, 076S×12758E, h12^{km}, MW5.4/87, Moment Tensor Solution. s65,c112; s87,c182; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.35±.02; $M_{\theta\theta}$-0.03±.02; $M_{\phi\phi}$1.38±.02; $M_{r\theta}$-0.59±.06; $M_{\theta\phi}$0.50±.02; $M_{\phi r}$-0.09±.06; Best double couple: $M_0$1.57400×10^{17} NP1:ϕ_s178.00000°, δ43.00000°, λ-121.00000°. NP2:ϕ_s38.00000°, δ54.00000°, λ-64.00000°. Principal axes: T 1.5680, Plg6.0000°, Azm110.0000°; N 0.0160, Plg21.0000°, Azm202.0000°; P -1.5810, Plg68.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***15*** *01:34:12.3, 080S×12750E, h10^{km}, mB5.4, mb5.2, Ms4.7, Msz4.5*

MOS ***15*** *01:34:15.1±1.3, 066S×12740E, h40^{km}, mb5.4/28, MS4.5/16, Error ellipse: s-maj=14.4km s-min=6.8km az=115.7*

ISC 15 01:34:15.8±1.0, **088S**±003×**12750E**±004, **h33**^{km}±6^{km}, **h19**^{km}±2.0^{km}**:pP-P, n317,** σ1^s**34**/305, **mb5.3**/95, **MS4.6**/49, **15C-18D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	2.88	166	P	Pn	01 35 02.3	+2.9
	713nm,0.8s						
PCI	Palu	7.66	270	P	Pn	01 36 04.1	-1.1
	324nm,0.9s						
DAV	Davao City (W)	8.12	346	eP	Pn	01 36 12.0	+0.4
DAV	Davao City (W)	8.12	346	P	Pn	01 36 17.9	+6.4
	SNR=11						
DAV	Davao City (W)	8.12	346	P	Pn	01 36 17.9	+6.4
	SNR=11						
BIPH	Bislig	9.07	353	eP	Pn	01 36 25.9	+1.3
CGP	Cagayan de Oro	9.68	343	eP	Pn	01 36 24.9	-8.0
BATI	Kupang	10.02	202	Pn	Pn	01 36 35.3	-2.3
	baz=306,slow=19,SNR=2.4						
BATI				LR	LR	01 40 45.7	
	comp=Z,5μm,21.1s,baz=357,slow=39						
MYLDM	Lahad Datu	10.82	304	⇓P	Pn	01 36 51.6	+3.1
TSM	Tawau	10.90	298	⇑P	Pn	01 36 48.7	-1.0
SDKM	Sandakan	12.16	302	⇓P	Pn	01 37 07.4	+0.6
KAKA	Kakadu	12.74	158	eP	Pn	01 37 12.4	-2.3
	35nm,0.6s						
KAKA				eS	Sn	01 39 35.2	-0.2
KDM	Kudat	13.16	306	⇓P	Pn	01 37 19.5	-1.0
KKM	Kota Kinabalu	13.20	302	eP	Pn	01 37 22.2	+1.1
KKM	Kota Kinabalu	13.20	302	⇑P	Pn	01 37 22.6	+1.5
BTM	Bintulu	14.97	286	⇓P	Pn	01 37 44.7	-0.4
SBUM	Sibu	15.63	282	⇑P	Pn	01 37 54.1	+0.3
FITZ	Fitzroy Crossi	17.21	186	eP	Pn	01 38 16.0	+2.2
	33nm,1.0s						
FITZ				eS	Sn	01 41 22.9	-1.6
FITZ	Fitzroy Crossi	17.21	186	P	Pn	01 38 15.5	+1.6
	0.7nm,0.3s,baz=20,slow=10,SNR=29						
FITZ				LR	LR	01 45 55.9	
	comp=Z,1μm,18.4s,baz=13,slow=41						
KSM	Kuching	17.35	278	eP	Pn	01 38 13.5	-2.1
KSM	Kuching	17.35	278	⇓P	Pn	01 38 17.4	+1.8
BJII	Banjamegara	18.86	250	P	Pn	01 38 35.7	+1.6
	387nm,1.8s						
TPI	Tanjungpandan	19.92	264	P	Pn	01 38 45.0	-1.8
	155nm,1.1s						
WRA	Warramunga Arr	20.09	161	P	P	01 38 45.3	-1.5
WRA				S	S	01 42 41.0	+10
WRA	Warramunga Arr	20.09	161	P	P	01 38 45.3	-1.5
	14nm,0.5s,baz=343,slow=11,SNR=56						
WRA				S	S	01 42 41.0	+10
	7.8nm,1.1s,baz=344,slow=21,SNR=4.1						
WRA				LR	LR	01 47 42.6	
	comp=Z,2μm,18.1s,MS4.6,baz=340,slow=40						
WB2	Warramunga Arr	20.10	161	⇑iP	P	01 38 44.8	-2.0
COEN	Coen	20.23	131	eP	P	01 38 47.9	-0.4
	49nm,1.0s						
PMG	Port Moresby	21.32	114	eP	P	01 39 02.5	+2.4
	87nm,1.3s,mb4.9						
PMG	Port Moresby	21.32	114	eP	P	01 39 02.5	+2.4
PMG				pmax	pmax		
	comp=Z,87nm,1.3s						
PMG	Port Moresby	21.32	114	P	P	01 39 00.7	+0.6
	comp=Z,25nm,0.9s,mb4.5,baz=299,slow=7.8,SNR=12						
MBWA	Marble Bar	21.54	200	eP	P	01 39 03.3	+0.9
	comp=Z,142nm,1.2s,mb5.3						
MBWA				LR	LR		
	comp=Z,1μm,20.0s,MS4.3						
SBJI	Serang	21.95	256	P	P	01 39 13.3	+6.4
	comp=Z,322nm,1.7s,mb5.5						
KLI	Kotabumi	22.95	260	P	P	01 39 20.3	+2.7
	comp=Z,348nm,1.3s,mb5.6						
ASAR	Alice Springs	23.49	165	P	P	01 39 22.8	-0.2
	comp=Z,48nm,0.8s,mb5.0,baz=344,slow=9.4,SNR=214						
XMIS	Christmas Isla	23.72	245	P	P	01 39 23.8	-1.4
MYKOM	Kota Tinggi	23.80	276	⇑P	P	01 39 27.9	+2.0
KGM	Kluang	24.35	277	⇑P	P	01 39 33.8	+2.8
KSI	Kapahiang	25.04	263	P	P	01 39 39.8	+2.6
	comp=Z,236nm,0.8s,mb5.8						
KTGM	Kuala Trenggan	25.10	284	⇑P	P	01 39 40.5	+2.7
NACB	Ninganchiao	25.55	347	eP	P	01 39 42.5	+0.8
YHNB	Yeheng	26.08	347	eP	P	01 39 44.8	-1.7
FRIM	Kepong	26.18	279	⇓P	P	01 39 49.9	+2.3
QIZ	Qiongzhong	26.31	320	P	P	01 39 49.6	+0.9
QIZ				S	S	01 44 20.6	+1.1
QIZ				XS	sS	01 44 28.3	-6.9
QIZ				AMB	AMB		
	comp=Z,21nm,1.1s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,1μm,6.9s						
QIZ				LR	LR		
	comp=N,1μm,18.5s						
QIZ				LR	LR		
	comp=Z,2μm,35.5s						
QIZ	Qiongzhong	26.31	320	eP	P	01 39 50.1	+1.5
	comp=Z,45nm,1.0s,mb5.0						
QIZ				LR	LR		
	comp=Z,961nm,21.0s,MS4.3						
TATO	Taipei	26.35	348	eP	P	01 39 48.5	-0.4
	comp=Z,99nm,0.9s,mb5.3						
CTA	Charters Tower	26.48	137	eP	P	01 39 51.7	+1.5
	comp=Z,10nm,0.8s,mb4.4						
CTA				eS	S	01 44 26.4	+4.2
CTA	Charters Tower	26.48	137	eP	P	01 39 51.7	+1.5
CTA				eS	S	01 44 26.4	+4.2
CTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTA	Charters Tower	26.48	137	P	P	01 39 51.1	+0.9
	comp=Z,11nm,0.8s,mb4.5,baz=330,slow=8.8,SNR=9.8						
CTAO	Charters Tower	26.48	137	eP	P	01 39 51.1	+0.9
	comp=Z,25nm,1.0s,mb4.7						
CTAO				LR	LR		
	comp=Z,2μm,22.0s,MS4.7						
CTAO	Charters Tower	26.48	137	eP	P	01 39 51.1	+0.9
CTAO				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.7						
CTAO				MLR	MLR		
	comp=Z,2μm,22.0s,MS4.7						
PPI	Padang Panjang	27.10	271	P	P	01 39 57.8	+1.8
	comp=Z,123nm,2.2s,mb5.0						
KULM	Kulim	27.51	283	eP	P	01 39 59.4	-0.2
KULM	Kulim	27.51	283	⇓P	P	01 40 01.3	+1.7
GZH	Guangzhou	27.52	331	P	P	01 40 03.3	+3.8
GZH				S	S	01 44 43.0	+4.5
GZH				LR	LR		
	comp=N,1μm,19.7s,MS4.5						
GZH				LR	LR		
	comp=E,482nm,16.0s,MS4.5						
GZH				LR	LR		
	comp=Z,1μm,16.0s,MS4.5						
JOW	Kunigami	27.56	1	P	P	01 39 57.5	-2.4
	comp=Z,51nm,0.8s,mb5.2,baz=177,slow=19,SNR=3.1						
PSI	Prapat	28.80	277	P	P	01 40 10.3	-0.8
	comp=Z,30nm,0.9s,mb5.0,baz=140,slow=4.5,SNR=21						
FORT	Forrest	29.74	179	eP	P	01 40 21.0	+1.8
	comp=Z,37nm,0.7s,mb5.2						
KKTK	Khon Kaen	29.76	306	P	P	01 40 20.0	+0.4
NST	Nakhon Sawan	31.65	302	P	P	01 40 35.5	-0.7
SSE	Sheshan	32.36	350	P	P	01 40 41.8	-0.5
SSE				S	S	01 45 55.3	+1.0
SSE				AMB	AMB		
	comp=Z,34nm,0.7s,mb5.3						
SSE				AMB	AMB		

comp=Z,284nm,6.5s
SSE LR LR
comp=N,187nm,15.4s,MS4.3
SSE LR LR
comp=E,495nm,15.4s,MS4.3
SSE LR LR
comp=Z,524nm,15.7s,MS4.3
BSI Banda Aceh 32.78 282 P **P** **01 40 51.7 +5.5**
comp=Z,44nm,1.2s,mb5.3
HNR Honiara 33.38 106 *e*P **P** **01 40 54.4 +2.9**
comp=Z,99nm,1.2s,mb5.6
HNR LR LR
comp=Z,1μm,20.0s,MS4.6
HNR Honiara 33.38 106 *e*P **P** **01 40 54.4 +2.9**
HNR pmax pmax
comp=Z,99nm,1.2s,mb5.6
HNR MLR MLR
comp=Z,1μm,20.0s,MS4.6
STKA Stephens Creek 33.59 158 *e*P **P** **01 40 54.6 +1.6**
comp=Z,14nm,1.0s,mb4.9
STKA *e*S **S** **01 46 08.6 -4.8**
STKA Stephens Creek 33.59 158 P **P** **01 40 54.1 +1.1**
comp=Z,10nm,0.7s,mb4.9,baz=326,slow=8.5,SNR=29
STKA LR LR 01 55 37.9
comp=Z,2μm,21.3s,MS4.8,baz=226,slow=38
WHN Wuhan 33.66 339 P **P** **01 40 54.5 +0.8**
WHN LR LR
comp=Z,1μm,17.2s,MS4.7
NJ2 Nanjing 33.76 347 *e*P **P** **01 40 54.4 -0.1**
NJ2 AP pP 01 40 57.6 -6.4
NJ2 XP sP 01 41 00.3 -7.7
NJ2 PP PP 01 42 08.3 -3.0
NJ2 S **S** **01 46 17.0 +1.0**
NJ2 XS sS 01 46 25.5 -6.3
NJ2 AMB AMB
comp=Z,100nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,300nm,7.4s
NJ2 LR LR
comp=N,3μm,31.2s
NJ2 LR LR
comp=E,810nm,17.5s
NJ2 LR LR
comp=Z,880nm,23.2s
GYA Guiyang 33.80 325⇑ *i*P **P** **01 40 55.6 +0.7**
GYA AMB AMB
comp=Z,30nm,0.8s,mb5.3
JNU Nakatsue 33.97 5 P **P** **01 40 56.0 -0.3**
comp=Z,4.1nm,0.5s,mb4.7,baz=179,slow=9.2,SNR=2.7
CHG Chiang Mai 34.20 306 ⇓P **P** **01 40 58.8 +0.2**
comp=Z,54nm,0.7s,mb5.6
CHTO Chiang Mai 34.20 306 *e*P **P** **01 40 59.0 +0.4**
comp=Z,76nm,1.5s,mb5.4
CHTO Chiang Mai 34.20 306 *e*P **P** **01 40 59.0 +0.4**
CHTO pmax pmax
comp=Z,76nm,1.5s,mb5.4
CHTO Chiang Mai 34.20 306 P **P** **01 40 59.2 +0.6**
SNR=20
CHTO Chiang Mai 34.20 306 P **P** **01 40 59.2 +0.6**
SNR=20
CHTO Chiang Mai 34.20 306 P **P** **01 40 59.2 +0.6**
SNR=20
CHTO Chiang Mai 34.20 306 P **P** **01 40 59.2 +0.6**
SNR=20
CHTO Chiang Mai 34.20 306 P **P** **01 40 59.2 +0.6**
SNR=20
JWZ Kozaga 35.09 12 P **P** **01 41 07.4 +1.4**
KMI Kunming 35.25 319 P **P** **01 41 09.1 +1.6**
KMI AP pP 01 41 14.8 -2.3
KMI PP PP 01 42 25.6 -2.3
KMI PCP PcP 01 43 43.9 +5.9
KMI S **S** **01 46 36.4 -2.9**
KMI LR LR
comp=N,677nm,18.9s,MS4.5
KMI LR LR
comp=E,699nm,23.3s,MS4.5
KMI LR LR
comp=Z,1μm,25.5s,MS4.5
JHS Saijyo 36.07 8 P **P** **01 41 12.3 -2.1**
JAD Aida 36.17 9 P **P** **01 41 19.5 +4.2**
JWT Wachi 36.72 11 P **P** **01 41 20.3 +0.3**
ARMA Armidale 37.26 144 *e*P **P** **01 41 25.8 +1.2**
JGF Kuroka 37.44 13 P **P** **01 41 26.4 +0.3**
KSRS Korea Array 38.14 1 P **P** **01 41 30.6 -1.3**
comp=Z,14nm,0.7s,mb4.8,baz=177,slow=9.8,SNR=26
JRY Ryogami san 38.21 15 P **P** **01 41 33.7 +1.1**
MJAR Matsushiro Arr 38.54 14 P **P** **01 41 32.8 -2.5**
MJAR LR LR 01 53 59.5
MJAR Matsushiro Arr 38.54 14 P **P** **01 41 32.8 -2.5**
comp=Z,20nm,0.9s,mb4.8,baz=183,slow=9.5,SNR=22
MJAR LR LR 01 53 59.4
comp=Z,509nm,21.8s,MS4.3,baz=200,slow=31
MAJO Matsushiro 38.54 14 *e*P **P** **01 41 39.2 +3.9**
comp=Z,115nm,1.8s,mb5.3
MAJO LR LR
comp=Z,916nm,20.0s,MS4.6
MAJO Matsushiro 38.54 14 *e*P **P** **01 41 39.3 +4.0**
MAJO pmax pmax
comp=Z,115nm,1.8s,mb5.3
MAJO MLR MLR
comp=Z,916nm,20.0s,MS4.6
MAT Matsushiro 38.54 14 P **P** **01 41 33.9 -1.4**
MAT *e*S **S** **01 47 31.0 +1.9**
MAT Matsushiro 38.54 14 P **P** **01 41 36.8 +1.5**
CD2 Chengdu 38.84 327⇓ *i*P **P** **01 41 37.5 -0.5**
CD2 AP pP 01 41 42.0 -5.6
CD2 XP sP 01 41 45.0 -6.5
CD2 PP PP 01 43 09.8 +2.4
CD2 PCP PcP 01 43 48.0 -0.8
CD2 S **S** **01 47 35.5 +1.7**
CD2 XS sS 01 47 43.1 -6.6
CD2 SS SS 01 50 19.3 -6.6
CD2 SCS ScS 01 51 44.6 -1.1
CD2 AMB AMB
comp=Z,60nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,670nm,9.4s
CD2 LR LR
comp=N,860nm,15.6s,MS5.0
CD2 LR LR
comp=E,2μm,19.2s,MS5.0
CD2 LR LR
comp=Z,840nm,26.4s
XAN Xi'an 38.87 335 P **P** **01 41 37.3 -0.9**
XAN AP pP 01 41 43.5 -4.3
XAN AMB AMB
comp=Z,37nm,1.2s,mb5.0
XAN AMB AMB
comp=Z,429nm,8.5s
XAN LR LR
comp=E,500nm,30.6s
XAN LR LR
comp=Z,749nm,37.8s
DL2 Dalian 39.96 353 P **P** **01 41 50.5 +3.4**
DL2 PP PP 01 43 24.8 +5.4
DL2 *e*S **S** **01 47 54.3 +4.0**
DL2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
DL2 AMB AMB
comp=Z,130nm,9.1s
DL2 LR LR
comp=N,350nm,18.7s,MS4.4
DL2 LR LR
comp=E,370nm,19.0s,MS4.4
DL2 LR LR
comp=Z,560nm,16.5s,MS4.5
JYA Atsumi 40.85 15 P **P** **01 41 56.8 +2.2**
IMP Imphal 41.33 310 *e*P **P** **01 42 00.0 +1.3**
BJT Baijiatuau 42.00 347 *e*P **P** **01 42 03.6 -0.3**
comp=Z,23nm,0.7s,mb4.9
BJT *e*PcP PcP 01 43 53.9 -4.9
BJT LR LR
comp=Z,386nm,20.0s,MS4.3
BJT Baijiatuau 42.00 347 *e*P **P** **01 42 03.6 -0.3**
BJT *e* 01 43 53.9
BJT pmax pmax
comp=Z,23nm,0.7s
BJT MLR MLR
comp=Z,386nm,20.0s
BJI Beijing 42.02 347 P **P** **01 42 02.3 -1.8**
BJI AMB AMB
comp=Z,24nm,1.0s,mb4.8
BJI AMB AMB
comp=Z,286nm,4.1s
BJI LR LR
comp=N,360nm,27.3s,MS4.4
BJI LR LR
comp=E,499nm,23.3s,MS4.4
BJI LR LR
comp=Z,772nm,31.2s
JOM Ohasama 42.10 16 P **P** **01 42 05.4 +0.6**
SNY Shenyang 42.66 356⇓P **P** **01 42 09.4 +0.2**
SNY PP PP 01 43 48.8 +0.2
SNY S **S** **01 48 30.9 +0.6**
SNY SS SS 01 51 37.8 -3.7
SNY AMB AMB
comp=Z,20nm,0.7s,mb5.0
SNY AMB AMB
comp=Z,240nm,5.7s
SNY LR LR
comp=N,256nm,21.0s,MS4.6
SNY LR LR
comp=E,821nm,19.2s,MS4.6
SNY LR LR
comp=Z,526nm,21.3s,MS4.4
LZH Lanzhou 42.87 331 *e*P **P** **01 42 11.8 +0.7**
LZH AP pP 01 42 17.1 -3.7
LZH XP sP 01 42 20.0 -4.7
LZH PP PP 01 43 54.0 +3.0
LZH PCP PcP 01 44 02.5 +0.8
LZH AMB AMB
comp=Z,292nm,1.5s,mb5.8
LZH AMB AMB
comp=Z,830nm,4.0s
LZH LR LR
comp=N,2μm,14.3s
LZH LR LR
comp=Z,3μm,15.5s,MS5.3
JTM Tenmabayashi 43.27 15 P **P** **01 42 15.8 +1.6**
SHL Shillong 43.31 310⇓ *i*P **P** **01 42 16.0 +1.1**
SHL *i* x x 01 48 37.0
JOT Ohata 43.82 15 P **P** **01 42 22.1 +3.4**
HHC Hu-ho-hao-te 43.99 343 *e*P **P** **01 42 19.6 -0.4**
HHC AP pP 01 42 24.1 -5.7
HHC XP sP 01 42 26.4 -7.3
HHC PP PP 01 44 03.6 +0.6
HHC PCS PcS 01 47 57.6 -0.7
HHC S **S** **01 48 47.6 -2.3**
HHC XS sS 01 48 58.8 -7.1
HHC SS SS 01 51 59.1 -8.6
HHC SCS ScS 01 52 16.4 -0.1
HHC AMB AMB
comp=Z,19nm,0.9s,mb4.8
HHC AMB AMB
comp=Z,387nm,3.7s
HHC LR LR
comp=N,421nm,20.2s,MS4.5
HHC LR LR
comp=E,357nm,16.7s,MS4.5
HHC LR LR
comp=Z,872nm,27.3s
CN2 Changchun 44.52 358 *e*P **P** **01 42 25.0 +0.8**
CN2 *e*XP sP 01 42 32.0 -5.9
CN2 *e*S **S** **01 49 00.5 +3.0**
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
CN2 AMB AMB
comp=Z,300nm,5.0s
CN2 LR LR
comp=N,300nm,15.0s,MS4.5
CN2 LR LR
comp=E,300nm,15.0s,MS4.5
CN2 LR LR
comp=Z,400nm,16.0s,MS4.4
MDJ Mudanjiang 45.33 2 P **P** **01 42 32.1 +1.4**
MDJ AP pP 01 42 35.3 -5.2
MDJ XP sP 01 42 36.5 -7.9
MDJ S **S** **01 49 14.9 +5.7**
MDJ XS sS 01 49 19.8 -5.5
MDJ AMB AMB
comp=Z,29nm,1.0s,mb5.1
MDJ AMB AMB
comp=Z,299nm,8.7s
MDJ LR LR
comp=N,350nm,29.5s
MDJ LR LR
comp=Z,404nm,30.3s,MS4.2
TAU Tasmania Unive 45.46 160 PFAKE 01 42 40.0 +8.3
TAU LR LR
comp=Z,2μm,21.0s,MS5.0
LSA Lhasa 46.12 314 P **P** **01 42 38.3 +1.1**
LSA AP pP 01 42 48.6 +1.6
LSA XP sP 01 42 50.8 -0.1
LSA AMB AMB
comp=Z,90nm,0.8s,mb5.8
LSA AMB AMB
comp=Z,350nm,7.0s
LSA LR LR
comp=N,320nm,40.0s
LSA LR LR
comp=E,700nm,32.0s
LSA LR LR
comp=Z,1μm,38.0s,MS4.5
LSA Lhasa 46.12 314 *e*P **P** **01 42 38.7 +1.5**
comp=Z,64nm,0.6s,mb5.7
LSA *e*PP PP 01 44 27.3 +1.5
LSA LR LR
comp=Z,285nm,20.0s,MS4.2
LSA Lhasa 46.12 314 *e*P **P** **01 42 38.7 +1.5**
LSA *e* 01 44 27.3
LSA pmax pmax
comp=Z,64nm,0.6s,mb5.7
LSA MLR MLR
comp=Z,285nm,20.0s,MS4.2
VIS Vishakhapatnam 47.24 295 *i* P **P** **01 42 46.4 +0.3**
VIS *ex* x 01 42 57.7
comp=Z,110nm,1.7s
VIS *i* S **S** **01 49 38.3 +0.9**
PALK Pallekele 47.38 281 *e*P **P** **01 42 46.9 -0.4**
comp=Z,50nm,1.4s,mb5.3
PALK LR LR
comp=Z,439nm,22.0s,MS4.4
TAPN Taplejung 47.43 309 *e*P **P** **01 42 48.0 +0.5**
comp=Z,276nm,0.9s,mb6.2
GTA Gaotai 47.44 331 *e*P **P** **01 42 47.0 -0.4**
GTA PCP PcP 01 44 14.3 -3.2
GTA PP PP 01 44 38.1 -0.8
GTA AMB AMB
comp=Z,41nm,1.6s,mb5.1
GTA AMB AMB
comp=Z,495nm,10.3s
GTA LR LR
comp=N,433nm,20.2s,MS4.5
GTA LR LR
comp=E,374nm,20.9s,MS4.5
GTA LR LR
comp=Z,537nm,26.6s
ODAN Odare 47.44 309 *e*P **P** **01 42 48.1 +0.5**
comp=Z,287nm,0.7s,mb6.3
JIRN Jiri 48.76 309 *e*P **P** **01 42 58.6 +0.8**
comp=Z,253nm,0.7s,mb6.4
YSS Yuzh-Sakhalins 49.48 14 *e*P **P** **01 43 07.4 +4.5**
YSS LR LR
comp=Z,510nm,20.0s,MS4.5
YSS Yuzh-Sakhalins 49.48 14 *e*P **P** **01 43 04.0 +1.1**
YSS MLR MLR
comp=Z,500nm,20.0s,MS4.5
KKN Kakani 49.53 309 *e*P **P** **01 43 04.0 +0.3**
comp=Z,193nm,0.8s,mb6.2
HABR Khabarovsk 49.59 7 *e*P **P** **01 43 01.3 -2.4**
HABR *e* 01 44 22.5
HABR *e*S **S** **01 50 10.8 +1.2**
HABR *e* 01 52 51.8
HABR pmax pmax
comp=Z,42nm,1.2s,mb5.3
KLR Kul'dur 50.05 4 *e*P **P** **01 43 02.1 -5.1**
GKN Gorkha 50.14 308 *e*P **P** **01 43 08.6 +0.3**
comp=Z,329nm,1.0s,mb6.3
HIA Hailar 50.39 353 *e*P **P** **01 43 12.9 +3.1**
comp=Z,16nm,0.9s,mb5.0
HIA LR LR
comp=Z,423nm,20.0s,MS4.5
HIA Hailar 50.39 353⇑ *e*P **P** **01 43 09.2 -0.6**
TRD Trivandrum 51.22 282⇓ *e*P **P** **01 43 14.0 -2.7**
HYB Hyderabad 51.51 293 *i* P **P** **01 43 18.5 -0.3**
comp=Z,170nm,1.0s,mb5.9
HYB *e*sP sP 01 43 25.0 -7.5
HYB *e*PP PP 01 45 22.0 +5.7
HYB *e*S **S** **01 50 34.0 -3.3**
ULN Ulaanbaatar 51.71 343 *e*P **P** **01 43 18.0 -1.7**
comp=Z,18nm,0.6s,mb5.2
ULN LR LR
comp=Z,271nm,20.0s,MS4.3
ULN Ulaanbaatar 51.71 343 *d* P **P** **01 43 18.6 -1.1**
ULN Ulaanbaatar 51.71 343 P **P** **01 43 19.2 -0.5**
SNR=26
ULN Ulaanbaatar 51.71 343 P **P** **01 43 19.2 -0.5**
SNR=26
SONM Songino Array 51.88 342 P **P** **01 43 20.3 -0.7**
comp=Z,13nm,0.9s,mb4.9,baz=161,slow=7.9,SNR=54
CIT Chita 54.01 349 *e*P **P** **01 43 35.1 -1.5**
CIT *e* 01 43 54.1
CIT *e* 01 46 52.4
ZAK Zakamensk 55.10 341 *e*P **P** **01 43 42.9 -1.7**
ZAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
AGRA Agra 55.21 304 *e*P **P** **01 43 45.5 -0.3**
JOSI Joshimath 55.24 309 *e*P **P** **01 43 46.4 +0.4**
KAD Karad 55.52 292 *e*P **P** **01 43 47.0 -1.2**
POO Poona 56.12 293⇓ *i*P **P** **01 43 52.0 -0.5**
comp=Z,30nm,1.0s,mb5.3
TLY Talaya 56.12 342 *e*P **P** **01 43 52.9 +1.0**
TLY LR LR
comp=Z,307nm,19.0s,MS4.4
TLY Talaya 56.12 342 *e*P **P** **01 43 51.4 -0.5**
TLY *e* 01 46 03.1
TLY *e*S **S** **01 51 39.1 +0.5**
TLY pmax pmax
comp=Z,20nm,0.9s,mb5.2
TLY Talaya 56.12 342 P **P** **01 43 51.9 +0.1**
SNR=8.3
TLY Talaya 56.12 342 P **P** **01 43 51.9 +0.1**
SNR=8.3
TLY Talaya 56.12 342 P **P** **01 43 51.9 +0.1**
SNR=8.3
TLY Talaya 56.12 342 P **P** **01 43 51.9 +0.1**
SNR=8.3
TLY Talaya 56.12 342 P **P** **01 43 51.9 +0.1**
SNR=8.3
SONA Sohna 56.30 305 *e*P **P** **01 43 52.8 -0.8**
NDI New Delhi 56.35 306 *e*P **P** **01 43 51.5 -2.5**
comp=Z,35nm,0.6s,mb5.6
IRK Irkutsk 56.43 343⇑ *i*P **P** **01 43 52.9 -1.2**
IRK *e*S **S** **01 51 40.1 -2.6**
IRK pmax pmax
comp=Z,55nm,1.8s,mb5.3
WMQ Urumqi 56.94 326⇓ *i*P **P** **01 43 57.4 -0.5**
WMQ AP pP 01 44 01.9 -6.0
WMQ XP sP 01 44 04.4 -7.3
WMQ PCP PcP 01 44 52.9 -0.1
WMQ PP PP 01 46 05.3 +0.6
WMQ SCP ScP 01 48 50.4 0.0
WMQ PCS PcS 01 48 52.4 -1.3
WMQ S **S** **01 51 48.4 -1.4**
WMQ AMB AMB
comp=Z,70nm,0.9s,mb5.7
WMQ AMB AMB
comp=Z,751nm,6.0s
WMQ LR LR
comp=N,779nm,22.6s,MS4.8
WMQ LR LR
comp=E,509nm,25.4s,MS4.8
WMQ LR LR
comp=Z,465nm,22.6s,MS4.5
MOY Mondy 56.95 341 *e*P **P** **01 43 56.8 -1.0**
MOY pmax pmax
comp=Z,62nm,1.6s,mb5.4
RTK Rohtak 57.13 306 *ex* **P** **01 43 52.3 -7.3**
RTK AMb AMB 01 43 54.6
comp=Z,55nm,1.4s,mb5.4
KHET Khetri 57.28 304 *e*P **P** **01 43 59.8 -0.8**
KHET AMb AMB 01 44 02.1
comp=Z,68nm,0.9s,mb5.7
CLNS Chul'man 57.57 358 *e*P **P** **01 44 01.1 -1.0**
CLNS pmax pmax
comp=Z,12nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,8.0nm,0.7s
CLNS pmax pmax
comp=E,10.0nm,0.8s
RPZ Rata Peaks 57.59 144 LR LR 02 08 46.7
comp=E,1μm,19.4s,MS4.9,baz=292,slow=36
SDNR Sundarnagar 57.66 309 *e*P **P** **01 44 03.4 +0.2**
SDNR *ex* x 01 47 26.8
DLH Dalhousie 58.85 309 *e*P **P** **01 44 11.0 -0.6**
THN Thein Dam 59.01 309 *e*P **P** **01 44 10.9 -1.7**
BOD Bodaibo 59.50 352 *e*P **P** **01 44 13.4 -2.1**
BOD pmax pmax
comp=Z,16nm,1.5s,mb4.8
MK31 Makanchi Array 61.77 326 *i* P **P** **01 44 30.2 -1.0**
MK31 pmax pmax
comp=Z,31nm,0.6s,mb5.6
MKAR Makanchi Array 61.77 326⇑ *e*P **P** **01 44 30.2 -1.0**
MKAR Makanchi Array 61.77 326 P **P** **01 44 30.5 -0.7**
comp=Z,41nm,0.7s,mb5.7,baz=122,slow=7.8,SNR=107
MKAR LR LR 02 11 46.6
comp=Z,342nm,21.4s,MS4.5,baz=114,slow=37
KSH Kashi 61.86 317 *i* P **P** **01 44 32.6 +0.6**
KSH AP pP 01 44 36.8 -5.3
KSH XP sP 01 44 40.8 -5.1
KSH *e*PCP PcP 01 45 12.4 -0.3
KSH *e*PP PP 01 46 50.8 +2.3
KSH *e*SCP ScP 01 49 13.3 +0.9
KSH S **S** **01 52 54.6 +1.0**
KSH *e*XS sS 01 53 02.1 -8.1
KSH *e*SCS ScS 01 54 19.5 -2.1
KSH AMB AMB
comp=Z,38nm,0.2s,mb6.2
KSH AMB AMB
comp=Z,1μm,4.0s
KSH LR LR
comp=Z,1μm,14.6s,MS5.3
YAK Yakutsk 62.76 1 *e*P **P** **01 44 36.4 -1.1**
YAK LR LR
comp=Z,333nm,20.0s,MS4.5
YAK Yakutsk 62.76 1 *e*P **P** **01 44 37.3 -0.3**
YAK pmax pmax
comp=N,19nm,0.9s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK pmax pmax
comp=Z,107nm,0.9s,mb6.0
MA2 Magadan 62.97 13 *e*P **P** **01 44 39.4 +0.4**
comp=Z,60nm,0.9s,mb5.7
MA2 LR LR
comp=Z,437nm,20.0s,MS4.6
MA2 Magadan 62.97 13 *e*P **P** **01 44 40.4 +1.4**
MA2 *e* 01 45 15.1
MA2 *e*S **S** **01 53 06.8 0.0**
MA2 pmax pmax
comp=Z,100nm,1.1s,mb5.9
KZA Kyzart 63.54 319 P **P** **01 44 43.7 +0.6**
SNR=22
TKM2 Tokmak 2 63.71 320 *e*P **P** **01 44 44.0 -0.3**
comp=Z,40nm,0.8s,mb5.5
TKM2 LR LR
comp=Z,501nm,22.0s,MS4.7
TKM2 Tokmak 2 63.71 320 *e*P **P** **01 44 44.0 -0.2**
TKM2 pmax pmax
comp=Z,40nm,0.8s,mb5.5
TKM2 MLR MLR
comp=Z,501nm,22.0s,MS4.7
TKM2 Tokmak 2 63.71 320 P **P** **01 44 45.2 +0.9**
SNR=39
KBK Karagaybulak 64.01 319 P **P** **01 44 47.6 +1.4**
SNR=9.6
UCH Uchtor 64.09 319 *e*P **P** **01 44 47.4 +0.7**
comp=Z,51nm,0.9s,mb5.5
UCH LR LR
comp=Z,402nm,21.0s,MS4.6
UCH Uchtor 64.09 319 P **P** **01 44 48.8 +2.0**
SNR=32
AAK Ala-Archa 64.29 319 *e*P **P** **01 44 46.6 -1.4**
comp=Z,53nm,1.1s,mb5.5
AAK LR LR
comp=Z,484nm,22.0s,MS4.6
AAK Ala-Archa 64.29 319⇑ *e*P **P** **01 44 47.4 -0.7**
AAK pmax pmax
comp=Z,23nm,1.8s,mb4.9
AAK Ala-Archa 64.29 319 P **P** **01 44 48.6 +0.6**
SNR=12
FRU Bishkek 64.31 319 *e*P **P** **01 44 51.0 +2.8**
FRU *e* 01 45 20.0
FRU pmax pmax
comp=Z,45nm,1.9s,mb5.2
USP Ospenovka 64.58 320 P **P** **01 44 50.8 +0.8**

SNR=48
AML Almayashu 64.59 318 eP P 01 44 50.0 -0.1
comp=Z,93nm,1.1s,mb5.7
AML Almayashu 64.59 318 P P 01 44 51.8 +1.8
SNR=29
EKS2 Erkin-Say 64.78 319 eP P 01 44 51.3 +0.1
comp=Z,70nm,1.0s,mb5.6
EKS2 ePcP PcP 01 45 24.6 0.0
EKS2 LR LR
comp=Z,352nm,19.0s,MS4.6
EKS2 Erkin-Say 64.78 319 P P 01 44 52.7 +1.4
SNR=44
KBL Kabul 64.96 309 eP P 01 44 52.6 0.0
comp=Z,44nm,0.8s,mb5.5
DRV Dumont d'Urvil 66.25 175 P P 01 45 00.0 -0.2
DRV SS SS 01 58 22.0 +19
DRV R 02 06 00.0
NVS Novosibirsk 66.31 334 *i* **P P 01 44 58.3 -2.6**
NVS *i* S S 01 53 45.1 -3.0
NVS pmax pmax
comp=Z,68nm,1.1s,mb5.6
NVS pmax pmax
comp=N,68nm,1.4s
NVS pmax pmax
comp=E,48nm,1.2s
NVS smax
comp=N,39nm,2.3s
NVS smax
comp=E,40nm,1.8s
SEY Seymchan 66.33 12 eP P 01 45 00.5 -0.3
CASY Casey 66.37 187 eP P 01 45 01.8 +0.8
KK31 Karatay Array 67.13 318 *i* **P P 01 45 05.6 -0.8**
KK31 pmax pmax
comp=Z,35nm,0.9s,mb5.4
JMDO Jabal Madar 71.34 294 P P 01 45 33.8 +1.0
SNR=10.0
JMDO Jabal Madar 71.34 294 P P 01 45 33.8 +1.0
SNR=10.0
JMDO Jabal Madar 71.34 294 P P 01 45 33.8 +1.0
SNR=10.0
JMDO Jabal Madar 71.34 294 P P 01 45 33.8 +1.0
SNR=10.0
JMDO Jabal Madar 71.34 294 P P 01 45 33.8 +1.0
SNR=10.0
SMDO Samad 71.50 295 P P 01 45 34.4 +0.6
SNR=7.2
SMDO Samad 71.50 295 P P 01 45 34.4 +0.6
SNR=7.2
SMDO Samad 71.50 295 P P 01 45 34.4 +0.6
SNR=7.2
SMDO Samad 71.50 295 P P 01 45 34.4 +0.6
SNR=7.2
SMDO Samad 71.50 295 P P 01 45 34.4 +0.6
SNR=7.2
BIDO Bidbid 71.50 295 P P 01 45 34.8 +1.0
SNR=15
BIDO Bidbid 71.50 295 P P 01 45 34.8 +1.0
SNR=15
BIDO Bidbid 71.50 295 P P 01 45 34.8 +1.0
SNR=15
BIDO Bidbid 71.50 295 P P 01 45 34.8 +1.0
SNR=15
BIDO Bidbid 71.50 295 P P 01 45 34.8 +1.0
SNR=15
BRVK Borovoye 71.66 328 eP P 01 45 32.7 -1.5
BRVK LR LR
comp=Z,235nm,20.0s,MS4.5
BRVK Borovoye 71.66 328 P P 01 45 33.4 -0.7
SNR=31
BRVK Borovoye 71.66 328 P P 01 45 33.4 -0.7
SNR=31
BRVK Borovoye 71.66 328 P P 01 45 33.4 -0.7
SNR=31
BRVK Borovoye 71.66 328 P P 01 45 33.4 -0.7
SNR=31
CHKZ Chkalovo 71.77 328 eP P 01 45 33.5 -1.4
comp=Z,52nm,1.2s,mb5.3
CHKZ Chkalovo 71.77 328 eP P 01 45 33.5 -1.3
CHKZ pmax pmax
comp=Z,52nm,1.2s,mb5.3
BSY Bisya 72.22 294 P P 01 45 39.2 +1.0
SNR=21
BSY Bisya 72.22 294 P P 01 45 39.2 +1.0
SNR=21
BSY Bisya 72.22 294 P P 01 45 39.2 +1.0
SNR=21
BSY Bisya 72.22 294 P P 01 45 39.2 +1.0
SNR=21
BSY Bisya 72.22 294 P P 01 45 39.2 +1.0
SNR=21
HOQ Hoqain 72.25 295 P P 01 45 39.3 +1.0
SNR=8.8
HOQ Hoqain 72.25 295 P P 01 45 39.3 +1.0
SNR=8.8
HOQ Hoqain 72.25 295 P P 01 45 39.3 +1.0
SNR=8.8
HOQ Hoqain 72.25 295 P P 01 45 39.3 +1.0
SNR=8.8
HOQ Hoqain 72.25 295 P P 01 45 39.3 +1.0
SNR=8.8
TIXI Tiksi 72.41 0 eP P 01 45 37.1 -1.2
comp=Z,29nm,0.5s,mb5.5
TIXI Tiksi 72.41 0 eP P 01 45 35.4 -2.9
TIXI pmax pmax
comp=Z,21nm,0.6s,mb5.2
TIXI MLR MLR
comp=Z,363nm,18.0s,MS4.7
BILL Bilibino 73.79 14 eP P 01 45 47.1 +0.6
comp=Z,16nm,1.2s,mb4.8
BILL LR LR
comp=Z,363nm,21.0s,MS4.6
BILL Bilibino 73.79 14 eP P 01 45 47.6 +1.1
BILL *e**PP pP 01 46 02.5 +5.7
BILL *eS* SKSac 01 55 49.8 -0.9
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.5
WHFO Wadi Hawf 74.81 289 P P 01 45 53.4 -0.1
SNR=13
WHFO Wadi Hawf 74.81 289 P P 01 45 53.4 -0.1
SNR=13
WHFO Wadi Hawf 74.81 289 P P 01 45 53.4 -0.1
SNR=13
WHFO Wadi Hawf 74.81 289 P P 01 45 53.4 -0.1
SNR=13
ABTO Aybut 75.20 288 P P 01 45 54.8 -0.9
SNR=18
ABTO Aybut 75.20 288 P P 01 45 54.8 -0.9
SNR=18
ABTO Aybut 75.20 288 P P 01 45 54.8 -0.9
SNR=18
ABTO Aybut 75.20 288 P P 01 45 54.8 -0.9
SNR=18
AKTK Aktyubinsk 77.74 322 P P 01 46 08.3 -1.1
AKTO Aktyubinsk 77.74 322 P P 01 46 08.3 -1.1
comp=Z,13nm,0.8s,mb4.9,baz=98,slow=7.5,SNR=44
SVE Sverdlovsk 78.27 329 eP P 01 46 10.8 -1.5
SVE *eSS* SS 02 01 11.2 +3.4
SVE pmax pmax
comp=Z,48nm,1.0s,mb5.4
SVE MLR MLR
comp=Z,391nm,18.0s,MS4.8
GAMB Gambell 78.28 23 eP P 01 46 12.1 -0.1
ARU Arti 79.22 328 eP P 01 46 16.6 -0.9
comp=Z,54nm,1.3s,mb5.3
ARU LR LR
comp=Z,273nm,20.0s,MS4.6
ARU Arti 79.22 328 *e* *i*P P 01 46 16.1 -1.4
ARU *e* pP 01 46 24.4 -3.4
ARU *e* 01 49 16.1
ARU PPP 01 51 07.6
ARU S S 01 56 18.1 +2.9
ARU SS SS 02 01 23.9 +1.8
ARU pmax pmax
comp=Z,19nm,1.0s,mb5.0
ARU Arti 79.22 328 eP P 01 46 16.6 -0.9
ARU pmax pmax
comp=Z,54nm,1.3s,mb5.3
ARU MLR MLR
comp=Z,273nm,20.0s,MS4.6
MAW Mawson 79.73 201 LR LR 02 17 01.5
comp=Z,336nm,20.7s,MS4.7,baz=69,slow=32
TNA Tin City 80.52 22 eP P 01 46 29.0 +4.7
QRN Al-Qurain 81.29 299 eP P 01 46 28.1 -1.2
QRN AMb AMB 01 46 36.7
comp=Z,82nm,0.9s,mb5.7

UMR Umm Al-Rimmam 81.54 300 eP P 01 46 28.5 -2.1
UMR AMb AMB 01 46 37.1
comp=Z,49nm,1.0s,mb5.4
MIB Mutribah 81.89 300 eP P 01 46 31.1 -1.3
MIB AMb AMB 01 46 39.9
comp=Z,79nm,1.0s,mb5.6
NAY Al-Naaiem 81.92 300 eP P 01 46 30.9 -1.7
NAY AMb AMB 01 46 38.1
comp=Z,38nm,0.8s,mb5.4
PPT Papeete 82.99 107 eS S 01 56 54.3 -1.5
comp=Z,131nm,22.5s
PPT *eSS* SS 02 02 21.4 +1.4
comp=Z,403nm,30.2s
PPT *eLR* LR 02 12 46.5
comp=Z,1μm,31.5s
TBI Tubuai 83.26 113 eS S 01 56 56.4 -2.0
comp=Z,332nm,32.8s
TBI *eSS* SS 02 02 19.0 -4.8
comp=Z,268nm,32.0s
TBI *eLR* LR 02 12 53.0
comp=Z,651nm,31.0s
DGRG David-gareji 84.67 312 P P 01 46 48.1 +1.6
TBLG Delisi 85.17 312 P P 01 46 52.8 +3.8
ZEI Tsey 85.89 313 eP P 01 46 52.0 -0.5
ZEI *e* pP 01 47 00.5 -2.5
ZEI *e* 01 50 14.0
ZEI pmax pmax
comp=Z,27nm,1.1s,mb5.4
ONI Oni 86.20 313 P P 01 46 54.8 +0.7
IMA2 Indian Mountai 86.26 24 eP P 01 46 54.0 +0.2
KIV Kislovodsk 86.86 314 eP P 01 46 59.7 +2.4
KIV LR LR
comp=Z,210nm,22.0s,MS4.5
KIV Kislovodsk 86.86 314 eP P 01 46 54.5 -2.8
KIV *e* 01 57 21.5
KIV pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
KIV MLR MLR
comp=Z,103nm,20.0s,MS4.2
PRGR Permogore 86.90 332 eP P 01 46 53.5 -3.6
PRGR pmax pmax
comp=Z,24nm,1.1s,mb5.3
PMR Palmer 87.60 28 eP P 01 46 59.7 -0.7
comp=Z,39nm,1.1s,mb5.5
PMR LR LR
comp=Z,281nm,20.0s,MS4.7
PMR Palmer 87.60 28 eP P 01 46 59.7 -0.8
PMR pmax pmax
comp=Z,39nm,1.1s,mb5.5
PMR MLR MLR
comp=Z,281nm,20.0s,MS4.7
MCK McKinley 87.92 26 eP P 01 47 02.7 +0.7
VRHR Novokhopersk 88.08 321 eP P 01 47 08.8 +5.8
VRHR pmax pmax
comp=Z,50nm,0.8s,mb5.8
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,30nm,0.7s
SOC Sochi 88.99 313 eP P 01 47 02.7 -4.8
SOC *e* 01 50 35.1
SOC *eS* S 01 57 30.1 -23
SOC *e* 01 57 55.7
SOC *ePS* 01 58 57.6
SOC pmax pmax
comp=Z,21nm,1.0s,mb5.4
QSPA South Pole Qui 89.06 180 eP P 01 47 08.2 +1.1
comp=Z,4μm,0.7s
VRSR Storozhevoye 89.61 321 eP P 01 47 15.2 +5.0
VRSR pmax pmax
comp=Z,3.0nm,1.1s,mb4.5
VRSR pmax pmax
comp=N,2.0nm,0.9s
VRSR pmax pmax
comp=E,3.0nm,0.9s
MALT Malatya 89.81 308 eP P 01 47 11.8 +0.4
comp=E,6.7nm,1.1s,mb4.9
MALT Malatya 89.81 308 eP P 01 47 11.8 +0.4
MALT pmax pmax
comp=Z,7.0nm,1.1s,mb4.9
KMBO Kilima Mbogo 90.23 269 P P 01 47 14.2 +0.2
KMBO LR LR
comp=Z,235nm,19.0s,MS4.6
KMBO Kilima Mbogo 90.23 269 eP P 01 47 15.6 +1.6
KMBO Kilima Mbogo 90.23 269 P P 01 47 15.8 +1.8
SNR=6.8
KMBO Kilima Mbogo 90.23 269 P P 01 47 15.8 +1.8
SNR=6.8
KMBO Kilima Mbogo 90.23 269 P P 01 47 15.8 +1.8
SNR=6.8
KMBO Kilima Mbogo 90.23 269 P P 01 47 14.2 +0.2
comp=Z,6.0nm,1.0s,mb4.9,baz=52,slow=7.6,SNR=11
MOS Moscow 90.65 326 eP P 01 47 15.9 +1.0
MOS *e* 01 50 55.6
ANN Anapa 90.66 315 eP P 01 47 12.5 -2.8
ANN *eS* S 01 57 43.9 -25
ANN pmax pmax
comp=Z,143nm,6.3s
OBN Obninsk 91.25 325 eP P 01 47 15.8 -1.9
OBN LR LR
comp=Z,196nm,19.0s,MS4.6
OBN Obninsk 91.25 325 eP P 01 47 15.7 -2.0
OBN *eSS* SS 02 04 15.8 -3.2
OBN pmax pmax
comp=Z,5.0nm,0.9s,mb4.8
OBN MLR MLR
comp=Z,200nm,20.0s,MS4.5
DAWY Dawson 92.15 26 eP P 01 47 25.1 +3.4
BRTR Keskin Array B 93.53 310 P P 01 47 26.6 -2.1
comp=Z,0.7nm,1.0s,mb4.1,baz=101,slow=3.4,SNR=2.6
BRTR PP PP 01 51 12.2 -1.3
comp=Z,1.9nm,0.9s,baz=100,slow=6.8,SNR=5.5
INK Inuvik 94.14 22 eP P 01 47 33.9 +3.1
ARCES ARCESS Array B 95.01 340 P P 01 47 32.7 -2.1
comp=Z,2.1nm,0.7s,mb4.7,baz=76,slow=5.1,SNR=8.4
AKASG Malin Array Be 95.93 321 P P 01 47 38.2 -1.1
AKASG PP PP 01 51 35.7 +4.0
AKASG Malin Array Be 95.93 321 P P 01 47 38.2 -1.1
comp=Z,0.2nm,0.3s,baz=72,slow=4.2,SNR=2.5
AKASG PP PP 01 51 35.7 +4.0
comp=Z,0.4nm,0.3s,baz=68,slow=6.9,SNR=2.9
FINES FINESS Array B 96.23 332 P P 01 47 38.4 -2.1
comp=Z,0.7nm,0.7s,mb4.2,baz=46,slow=4.0,SNR=2.7
FINES PP PP 01 51 36.8 +3.0
comp=Z,4.0nm,1.1s,baz=123,slow=7.0,SNR=4.1
RKT Rikitea 96.58 113 eSS SS 02 05 36.0 -0.9
comp=Z,267nm,30.0s
RKT *eLR* LR 02 19 00.5
comp=Z,482nm,33.2s
SANT Santorini 100.21 307 ePdif Pdif 01 47 59.1 +0.6
YKA Yellowknife Ar 103.34 25 PKKPbc PKKPbc 02 04 08.2 -0.9
comp=Z,0.3nm,0.6s,baz=101,slow=2.3,SNR=6.3
DPC Dobruska-Polom 104.07 322 ePP PP 01 52 39.3 +5.8
UPC Upice 104.22 322 ePP PP 01 52 39.0 +4.5
PVCC Panska Ves 105.09 322 ePKP PKiKP 01 52 34.9 +0.1
PRU Pruhonice 105.27 322 ePP PP 01 52 47.3 +4.9
CLL Collm 105.79 324 P PKiKP 01 52 41.0 +4.9
CLL *i* 01 52 53.6
CLL Collm 105.79 324 ePP PP 01 52 41.0 -5.2
CLL *i* (sPP) 01 52 53.6
CLL *ePS* PS 02 02 04.0 +0.5
CLL *ePPS* 02 03 03.0
CLL *eSS* SS 02 07 42.0 -0.9
CLL *eSSS* 02 11 48.0
GERES GERESS Array B 106.14 321 PP PP 01 52 52.3 +3.5
comp=Z,1.5nm,0.9s,baz=69,slow=8.7,SNR=7.2
GRF Grafenberg Arr 107.40 322 ePP PP 01 53 02.4 +4.4
GRF *eL* 02 43 30.7
comp=Z,187nm,20.1s
LPG La Plagne 111.74 319 ePP PP 01 53 27.5 -2.1
comp=Z,13nm,1.0s
LPL La Plagne 111.74 319 ePP PP 01 53 26.7 -2.9
comp=Z,26nm,1.2s
MBDF Montbardon 112.02 319 ePP PP 01 53 29.7 -1.9
comp=Z,12nm,1.0s
KEST Kesra 113.12 309 PP PP 01 53 39.9 0.0
comp=Z,2.0nm,0.8s,baz=33,slow=4.2,SNR=6.2
VIVF Saint-Julien-l 113.34 319 ePP PP 01 53 38.2 -2.8
comp=Z,21nm,1.3s
PDAR Pinedale Array 114.25 43 PKKPbc PKKPbc 02 03 33.8 0.0
comp=Z,11nm,0.7s,baz=123,slow=6.5,SNR=4.4
SDCO Great Sand Dun 119.10 46 PKPdf PKPdf 01 53 03.5 +1.7
ESDC Sonseca Array 121.38 317 PP PP 01 54 37.5 +0.5
comp=Z,0.7nm,0.7s,baz=61,slow=7.3,SNR=4.8
ECSD EROS,Sioux Fal 122.06 37 ePKPdf PKPdf 01 53 07.9 +0.6

TXAR Lajitas Array 123.70 55 PKP PKPdf 01 53 09.2 -1.6
comp=Z,0.1nm,0.5s,baz=338,slow=2.1,SNR=2.5
SCHQ Schefferville 124.95 10 PKP PKPdf 01 53 10.5 -2.0
SCHQ Schefferville 124.95 10 PKP PKPdf 01 53 10.5 -2.0
comp=Z,1.7nm,0.9s,baz=270,slow=1.0,SNR=2.1
TORD Torodi Ar. Bea 124.98 285 PKP PKPdf 01 53 12.9 -0.7
comp=Z,3.0nm,0.8s,baz=51,slow=2.3,SNR=11
WMOK Wichita Mounta 125.29 47 ePKPdf PKPdf 01 53 14.9 +1.1
TKL Tuckaleechee C 134.81 37 PKP PKPdf 01 53 32.9 +1.0
comp=Z,1.8nm,0.6s,baz=64,slow=4.8,SNR=4.4
PLCA Paso Flores 135.44 160 PKP PKPdf 01 53 33.4 +0.6
PLCA Paso Flores 135.44 160 PKP PKPdf 01 53 33.4 +0.6
comp=Z,4.5nm,0.9s,baz=183,slow=6.7,SNR=9.2
LCO Las Campanas 145.55 151 ePKPdf PKPdf 01 53 52.1 +0.7
JTS JuntasAbangare 146.41 73 ePKPdf PKPdf 01 53 53.7 +0.4
LPAZ La Paz 157.00 139 PKP PKPdf 01 54 09.8 +0.7
LPAZ La Paz 157.00 139 PKP PKPdf 01 54 09.8 +0.7
comp=Z,2.2nm,1.0s,baz=4.5,slow=1.6,SNR=6.9
SDV Santo Domingo 160.27 66 PKP PKPdf 01 54 14.4 +1.3
comp=Z,4.3nm,0.6s,baz=280,slow=12,SNR=3.0
SIV San Ignacio 161.22 154 PKP PKPdf 01 54 14.2 +0.2
comp=Z,4.6nm,1.1s,baz=171,slow=1.7,SNR=10
SIV PKPab PKPab 01 54 57.7 +0.3
comp=Z,0.9nm,0.7s,baz=221,slow=4.6,SNR=2.2

NEIC ***15*** *01:37:21.9±0.4, 067S×12765E, h10km, mb4.8/6, Error ellipse: s-maj=14.8km s-min=7.9km az=59.0*
IDC ***15*** *01:37:21.1±1.0, 081S×12746E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.1/16, mbtmp4.1/8, Error ellipse: s-maj=36.8km s-min=19.7km az=77.0*
ISCJB ***15*** *01:37:23.7±3.5, 074S±008×12765E±0.10, h34km±33km, mb4.6/17, Error ellipse: s-maj=18.9km s-min=10.1km az=142.7*

ISC 15 01:37:27.1±3.0, 078S±008×12761E±009, h47km±30km, n35, σ1s16/35, mb4.6/17, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**13.24**	**301**	*e*	Pn	**Pn**		**01 40 24.3**	**-8.4**
KSM	**Kuching**	**17.45**	**277**	*e*	Pn	**Pn**		**01 41 27.3**	**0.0**
WRA	**Warramunga Arr**	**20.15**	**161**	P		**P**		**01 41 57.8**	**+0.2**
	2.5nm,0.6s,baz=343,slow=11,SNR=2.6								
COEN	**Coen**	**20.21**	**131**	*e*	P	**P**		**01 41 59.0**	**+0.7**
MBWA	**Marble Bar**	**21.66**	**200**	P		**P**		**01 42 11.9**	**-1.9**
ASAR	**Alice Springs**	**23.55**	**165**	P		**P**		**01 42 33.1**	**-0.4**
	3.0nm,0.6s,mb3.9,baz=344,slow=10,SNR=3.6								
NACB	**Ninganchiao**	**25.48**	**347**	*e*	P	**P**		**01 42 48.0**	**-3.1**
QIZ	**Qiongzhong**	**26.31**	**319**	P		**P**		**01 42 56.9**	**-1.8**
CTAO	**Charters Tower**	**26.47**	**138**	*e*	P	**P**		**01 43 01.2**	**+1.1**
	1.4nm,0.5s,mb3.8								
KULM	**Kulim**	**27.59**	**283**	P		**P**		**01 43 10.3**	**0.0**
PSI	**Prapat**	**28.90**	**277**	P		**P**		**01 43 21.6**	**-0.3**
	4.1nm,0.7s,mb4.3,baz=88,slow=2.3,SNR=3.6								
KSRS	**Korea Array**	**38.05**	**0**	P		**P**		**01 44 41.3**	**+0.3**
	0.7nm,0.3s,mb3.8,baz=185,slow=9.4,SNR=2.6								
MJAR	**Matsushiro Arr**	**38.42**	**14**	P		**P**		**01 44 46.0**	**+1.8**
MJAR	**Matsushiro Arr**	**38.42**	**14**	P		**P**		**01 44 46.0**	**+1.8**
	6.3nm,1.0s,mb4.3,baz=187,slow=9.6,SNR=4.4								
MAJO	**Matsushiro**	**38.42**	**14**	P		**P**		**01 44 42.4**	**-1.8**
TAU	**Tasmania Unive**	**45.51**	**160**	P		**P**		**01 45 41.7**	**-0.3**
LSA	**Lhasa**	**46.13**	**314**	*e*	P	**P**		**01 45 49.5**	**+2.4**
	12nm,0.7s,mb4.9								
TAPN	**Taplejung**	**47.46**	**309**	*e*	P	**P**		**01 45 59.0**	**+1.5**
	44nm,0.5s,mb5.7								
ODAN	**Odare**	**47.47**	**308**	*e*	P	**P**		**01 45 58.8**	**+1.2**
	90nm,0.7s,mb5.8								
JIRN	**Jiri**	**48.79**	**309**	*e*	P	**P**		**01 46 09.3**	**+1.5**
	89nm,0.6s								
KKN	**Kakani**	**49.56**	**308**	*e*	P	**P**		**01 46 14.4**	**+0.7**
	52nm,0.6s,mb5.8								
GKN	**Gorkha**	**50.17**	**308**	*e*	P	**P**		**01 46 19.1**	**+0.8**
	70nm,0.7s,mb5.8								
SONM	**Songino Array**	**51.83**	**342**	P		**P**		**01 46 30.3**	**-0.1**
	1.3nm,0.9s,mb3.9,baz=159,slow=7.3,SNR=2.6								
MKAR	**Makanchi Array**	**61.76**	**326**	P		**P**		**01 47 41.1**	**+0.3**
	1.7nm,0.5s,mb4.5,baz=119,slow=8.3,SNR=4.9								
TKM2	**Tokmak 2**	**63.71**	**320**	*e*	P	**P**		**01 47 54.5**	**+0.5**
	1.5nm,0.5s,mb4.3								
TKM2				*e*				01 48 00.8	
UCH	**Uchtor**	**64.10**	**319**	*e*	P	**P**		**01 47 57.1**	**+0.6**
AAK	**Ala-Archa**	**64.30**	**319**	*e*	P	**P**		**01 47 56.4**	**-1.4**
	5.1nm,1.2s,mb4.4								
EKS2	**Erkin-Say**	**64.78**	**319**	*e*	P	**P**		**01 48 01.1**	**+0.1**
	3.2nm,0.9s,mb4.3								
BRVK	**Borovoye**	**71.64**	**328**	*e*	P	**P**		**01 48 41.1**	**-2.6**
CHKZ	**Chkalovo**	**71.75**	**328**	*e*	P	**P**		**01 48 43.5**	**-0.9**
AKTK	**Aktyubinsk**	**77.73**	**322**	P		**P**		**01 49 18.9**	**-0.2**
AKTO	**Aktyubinsk**	**77.73**	**322**	P		**P**		**01 49 18.9**	**-0.2**
	3.3nm,0.8s,mb4.3,baz=134,slow=11,SNR=3.7								
KIV	**Kislovodsk**	**86.88**	**314**	*e*	P	**P**		**01 50 06.4**	**-0.6**
KMBO	**Kilima Mbogo**	**90.34**	**269**	*e*	P	**P**		**01 50 25.6**	**+1.5**
OBN	**Obninsk**	**91.23**	**325**	*e*	P	**P**		**01 50 25.3**	**-2.0**
	4.1nm,0.5s,mb5.0								

BJI ***15*** *01:37:23.1, 134S×12823E, h23km, mB5.1, mb4.9, Ms4.6, Msz4.4*
IDC ***15*** *01:37:27.3±0.7, 068S×12760E, h0km, mb4.5/12, mb1 4.6/13, mb1mx4.4/19, mbtmp4.5/13, ML3.9/1, Error ellipse: s-maj=32.2km s-min=14.5km az=72.0*
NEIC ***15*** *01:37:29.0±0.4, 059S×12779E, h10km, mb4.8/9, Error ellipse: s-maj=17.4km s-min=7.5km az=67.0*
ISCJB ***15*** *01:37:31.0±3.6, 065S±007×1279E±0.1, h38km±34km, mb4.6/22, Error ellipse: s-maj=18.6km s-min=10.1km az=156.9*

ISC 15 01:37:33.6±3.1, 067S±007×1279E±01, h45km±31km, h23km±3.4km:pP-P, n45, σ1s04/44, mb4.6/22, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**17.46**	**187**	P		**Pn**		**01 41 33.5**	**-0.5**
	0.3nm,0.3s,baz=32,slow=11,SNR=4.8								
WRA	**Warramunga Arr**	**20.18**	**162**	P		**P**		**01 42 02.9**	**-1.6**
WRA	**Warramunga Arr**	**20.18**	**162**	P		**P**		**01 42 02.9**	**-1.6**
	6.4nm,0.5s,baz=343,slow=11,SNR=7.3								
PMG	**Port Moresby**	**21.08**	**115**	*e*	Pn	**P**		**01 42 13.5**	**-0.8**
MBWA	**Marble Bar**	**21.86**	**201**	*e*	P	**P**		**01 42 24.5**	**+1.9**
	18nm,1.0s,mb4.5								
ASAR	**Alice Springs**	**23.60**	**166**	P		**P**		**01 42 39.4**	**-1.2**
ASAR	**Alice Springs**	**23.60**	**166**	P		**P**		**01 42 39.4**	**-1.2**
	11nm,0.7s,mb4.4,baz=348,slow=9.2,SNR=7.2								
YHNB	**Yeheng**	**25.96**	**346**	*e*	P	**P**		**01 43 00.9**	**-1.1**
CTA	**Charters Tower**	**26.39**	**138**	P		**P**		**01 43 08.3**	**+2.3**
	5.4nm,0.8s,mb4.1,baz=308,slow=14,SNR=2.9								
CTAO	**Charters Tower**	**26.39**	**138**	*e*	P	**P**		**01 43 08.2**	**+2.2**
	6.3nm,0.7s,mb4.2								
KULM	**Kulim**	**27.81**	**283**	P		**P**		**01 43 19.3**	**+0.4**
PSI	**Prapat**	**29.13**	**277**	P		**P**		**01 43 29.4**	**-1.2**
PSI	**Prapat**	**29.13**	**277**	P		**P**		**01 43 29.4**	**-1.2**
	7.1nm,0.8s,mb4.4,baz=95,slow=9.0,SNR=4.0								
WHN	**Wuhan**	**33.59**	**339**	P		**P**		**01 44 11.0**	**+1.3**
STKA	**Stephens Creek**	**33.65**	**159**	P		**P**		**01 44 11.0**	**+0.9**
STKA	**Stephens Creek**	**33.65**	**159**	P		**P**		**01 44 11.0**	**+0.9**
	5.2nm,0.7s,mb4.6,baz=323,slow=9.9,SNR=4.0								
KSRS	**Korea Array**	**37.93**	**0**	P		**P**		**01 44 47.5**	**+0.8**
	3.2nm,0.8s,mb4.1,baz=179,slow=9.9,SNR=4.1								
MJAR	**Matsushiro Arr**	**38.25**	**14**	P		**P**		**01 44 49.4**	**0.0**
MJAR	**Matsushiro Arr**	**38.25**	**14**	P		**P**		**01 44 49.4**	**0.0**
	3.7nm,0.8s,mb4.2,baz=182,slow=9.3,SNR=6.1								
XAN	**Xi'an**	**38.84**	**335**	P		**P**		**01 44 54.1**	**-0.3**
XAN				AP	pP	01 45 02.5			-4.0
XAN				XP	sP	01 45 05.8			-6.0
XAN				AMB	AMB				
	comp=Z,19nm,1.1s,mb4.7								
BJI	**Beijing**	**41.90**	**347**	P		**P**		**01 45 19.1**	**-0.5**
BJI				AMB	AMB				
	comp=Z,16nm,0.9s,mb4.7								
LZH	**Lanzhou**	**42.86**	**331**	*e*	P	**P**		**01 45 28.5**	**+1.0**
LZH				AP	pP	01 45 35.0			-4.8
LZH				XP	sP	01 45 39.5			-5.5
LZH				AMB	AMB				
	comp=Z,81nm,1.5s,mb5.2								
LZH				AMB	AMB				
	comp=Z,332nm,4.2s								
TAU	**Tasmania Unive**	**45.53**	**160**	*e*	P	**P**		**01 45 48.6**	**-0.2**
	comp=Z,14nm,0.9s,mb4.9								
LSA	**Lhasa**	**46.23**	**314**	P		**P**		**01 45 55.4**	**+0.8**
LSA				AMB	AMB				
	comp=Z,20nm,0.9s,mb5.0								
LSA	**Lhasa**	**46.23**	**314**	*e*	P	**P**		**01 45 55.9**	**+1.4**
	comp=Z,23nm,0.5s,mb5.4								
GTA	**Gaotai**	**47.44**	**330**	*e*	P	**P**		**01 46 04.8**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA				AP	pP	01 46 11.9	-4.3
GTA				XP	sP	01 46 17.0	-4.5
GTA				SCS	ScS	01 55 50.1	-3.9
GTA				AMB	AMB		
	comp=Z,20nm,1.2s						
GTA				AMB	AMB		
	comp=Z,138nm,6.1s						
GTA				LR	LR		
	comp=N,347nm,19.8s						
GTA				LR	LR		
	comp=E,239nm,14.5s						
GTA				LR	LR		
	comp=Z,379nm,19.8s						
SONM	Songino Array	51.80	342	P	P	01 46 36.9	+0.1
SONM	Songino Array	51.80	342	P	P	01 46 36.9	+0.1
	comp=Z,6.4nm,1.1s,mb4.5,baz=159,slow=8.1,SNR=4.7						
MKAR	Makanchi Array	61.80	326	P	P	01 47 47.4	-0.4
MKAR	Makanchi Array	61.80	326	P	P	01 47 47.4	-0.4
	comp=Z,3.7nm,0.3s,mb5.0,baz=116,slow=7.9,SNR=12						
UCH	Uchtor	64.17	319	eP	P	01 48 04.6	+0.9
	comp=Z,4.6nm,0.7s,mb4.6						
AAK	Ala-Archa	64.37	319	P	P	01 48 07.4	+2.4
AML	Almayashu	64.68	318	eP	P	01 48 06.9	-0.1
	comp=Z,16nm,1.1s,mb5.0						
EKS2	Erkin-Say	64.86	319	eP	P	01 48 08.5	+0.3
	comp=Z,9.7nm,1.1s,mb4.8						
KBL	Kabul	65.11	309	eP	P	01 48 09.3	-0.7
BRVK	Borovoye	71.68	328	eP	P	01 48 49.7	-1.0
	comp=Z,12nm,1.1s,mb4.7						
CHKZ	Chkalovo	71.78	328	eP	P	01 48 50.1	-1.2
	comp=Z,1.4nm,0.4s,mb4.2						
AKTK	Aktyubinsk	77.79	322	P	P	01 49 25.3	-0.8
AKTO	Aktyubinsk	77.79	322	P	P	01 49 25.3	-0.8
	comp=Z,7.3nm,0.9s,mb4.6,baz=121,slow=11,SNR=4.6						
VNDA	Vanda	78.95	173	P	P	01 49 33.8	+1.7
	comp=Z,1.2nm,0.5s,mb4.0,baz=323,slow=6.8,SNR=4.9						
ARU	Arti	79.23	328	P	P	01 49 33.0	-0.9
MALT	Malatya	89.96	308	P	P	01 50 28.3	-0.2
KMBO	Kilima Mbogo	90.60	269	P	P	01 50 30.7	-1.3
KMBO	Kilima Mbogo	90.60	269	P	P	01 50 30.7	-1.3
	comp=Z,1.0nm,0.4s,mb4.5,baz=24,slow=20,SNR=4.6						
TORD	Torodi Ar. Bea	125.27	286	PKP	PKPdf	01 56 28.1	-2.3
	comp=Z,2.0nm,0.9s,baz=86,slow=1.1,SNR=3.6						

IGQ 15 01:45:57.9,336S×7813W,h209^{km}±18^{km},Mb4.2,Ms4.0, 4C-9D,Error ellipse: s-maj=25.2km s-min=17.9km az=11.2,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARRY	Arrayan	1.87	350	⇓P	Pn	01 46 36.4	+0.5
ARRY	Arrayan	1.87	350	⇓S	Sn	01 47 04.2	-1.3
PATA	Patacocha	1.87	351	⇓P	Pn	01 46 38.8	+3.0
PATA	Patacocha	1.87	351	⇓S	Sn	01 47 06.4	+0.9
ULBA	Ulba	1.92	352	P	Pn	01 46 38.9	+2.7
ULBA	Ulba	1.92	352	S	Sn	01 47 07.5	+1.2
IGUA	Igualata	1.92	345	P	Pn	01 46 34.9	-1.5
IGUA	Igualata	1.92	345	S	Sn	01 47 02.9	-3.5
RUN5	Runtun	1.95	351	⇓P	Pn	01 46 38.7	+2.0
RUN5	Runtun	1.95	351	⇓S	Sn	01 47 05.3	-1.7
TAMB	Tambo	2.66	355	P	Pn	01 46 46.5	+2.3
CAMI	Rancho Maria	2.69	352	⇓P	Pn	01 46 45.7	+1.2
VC1	Cotopaxi 1	2.71	354	⇓P	Pn	01 46 47.2	+2.5
JUA2	San Juan 2	3.16	351	P	Pn	01 46 50.0	+0.1
TERV	Terraza Guagua	3.20	351	⇑P	Pn	01 46 50.3	-0.1
TERV	Terraza Guagua	3.20	351	⇑S	Sn	01 47 30.9	-0.6
PINO	Pino	3.21	351	⇓P	Pn	01 46 50.7	+0.1
YANA	Yana	3.25	352	⇑P	Pn	01 46 50.7	-0.3
YANA	Yana	3.25	352	⇑S	Sn	01 47 34.1	+1.4
CAYR	Refugio Cayamb	3.35	2	P	Pn	01 46 57.5	+5.2
CHIS	Cerro-Chispas-	3.46	311	P	Pn	01 46 56.6	+3.1
COTA	Cotacachi	3.67	357	P	Pn	01 47 00.8	+4.8

IDC 15 01:46:28.3±6.5,2691N×4470W,h0^{km},mb3.7/5, mb1 4.0/5,mb1mx3.6/21,mbtmp3.7/5,MS3.7/3,Ms1 3.7/3, ms1mx3.1/25,Error ellipse: s-maj=175.4km s-min=31.1km az=178.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDT	Midelt	35.10	71	LR	LR	02 03 43.7	
	comp=Z,94nm,21.9s,baz=106,slow=30						
ROSC	El Rosal	35.78	237	LR	LR	02 07 51.1	
	comp=Z,79nm,18.1s,baz=176,slow=36						
DBIC	Dimbokro	42.87	111	LR	LR	02 09 26.7	
	comp=Z,140nm,20.2s,baz=70,slow=32						
GERES	GERESS Array B	49.68	48	P	P	01 55 22.8	+1.0
	0.6nm,0.8s,baz=286,slow=7.0,SNR=5.4						
PDAR	Pinedale Array	54.27	305	P	P	01 55 56.5	+0.3
	0.7nm,1.0s,baz=91,slow=6.3,SNR=4.2						
YKA	Yellowknife Ar	57.23	329	P	P	01 56 16.8	-0.3
	0.5nm,0.9s,baz=91,slow=7.5,SNR=7.3						
ARCES	ARCESS Array B	58.14	23	P	P	01 56 23.8	+0.4
	1.6nm,0.7s,baz=258,slow=5.9,SNR=6.2						
AKASG	Malin Array Be	59.69	45	P	P	01 56 33.6	-0.9
	0.2nm,0.2s,baz=267,slow=7.4,SNR=3.2						

*ISCJB **15** 01:51:35.6±0.9,710N±009×7685W±007,h93^{km}±19^{km}, mb3.7/1,Error ellipse: s-maj=16.1km s-min=8.7km az=31.3*
*IDC **15** 01:51:36.9±5.6,704N×7684W,h93^{km}±58^{km},mb3.2/1, mb1 3.4/3,mb1mx3.1/19,mbtmp3.3/3,ML1.9/1,Error ellipse: s-maj=52.0km s-min=22.5km az=102.0*
*NEIC **15** 01:51:36.9±1.3,702N×7679W,h100^{km}±20^{km},Error ellipse: s-maj=20.2km s-min=16.1km az=114.0*
ISC 15 01:51:37.0±0.8,710N±009×7686W±007,h85^{km}±18^{km},n9, σ0^{s}62/12,mb3.7/1,Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	3.36	131	P	Pn	01 52 26.3	-1.0
	2.5nm,0.3s,baz=270,slow=20,SNR=5.0						
ROSC				S	Sn	01 53 07.1	+1.0
	3.4nm,0.3s,baz=78,slow=20,SNR=3.7						
BCIP	Isla Barro Col	3.60	305	ePn	Pn	01 52 24.0	-6.6
BCIP				eSn	Sn	01 53 12.4	+0.4
SDV	Santo Domingo	6.41	73	ePn	Pn	01 53 08.3	-0.6
SDV				eSn	Sn	01 54 15.1	-5.6
SDV	Santo Domingo	6.41	73	P	Pn	01 53 08.2	-0.7
	2.6nm,0.3s,baz=275,slow=7.8,SNR=23						
SDV				S	Sn	01 54 21.3	+0.6
	1.2nm,0.3s,baz=4.6,slow=18,SNR=4.0						
OTAV	Otavalo	7.00	193	Pn	Pn	01 53 16.7	-0.2
TEIG	Tepich	17.12	321	Pn	Pn	01 55 30.7	-0.2
YKA	Yellowknife Ar	61.77	341	P	P	02 01 46.7	+0.3
YKA	Yellowknife Ar	61.77	341	P	P	02 01 46.7	+0.3
	0.3nm,0.4s,mb3.7,baz=131,slow=6.7,SNR=5.6						
WRA	Warramunga Arr	147.17	244	PKPbc	PKPbc	02 11 08.6	-2.8
	0.2nm,0.7s,baz=92,slow=2.9,SNR=3.7						

IDC 15 01:53:20.6±1.6,1655S×17848W,h0^{km},mb3.9/6, mb1 4.2/6,mb1mx3.9/16,mbtmp3.9/6,MS3.8/2,Ms1 3.9/2, ms1mx3.1/30,Error ellipse: s-maj=137.8km s-min=23.6km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.98	69	LR	LR	01 57 26.8	
	comp=Z,119nm,18.9s,baz=343,slow=35						
STKA	Stephens Creek	39.24	240	P	P	02 00 51.6	+0.7
	3.3nm,0.8s,baz=89,slow=8.5,SNR=5.8						
WRA	Warramunga Arr	44.82	258	P	P	02 01 36.8	0.0
	0.8nm,0.5s,baz=95,slow=8.0,SNR=31						
ASAR	Alice Springs	45.11	253	P	P	02 01 38.9	-0.1
	6.2nm,0.4s,baz=89,slow=8.1,SNR=100						
FITZ	Fitzroy Crossi	53.19	260	P	P	02 02 39.9	-1.1
	0.8nm,0.8s,baz=106,slow=15,SNR=3.8						
TXAR	Lajitas Array	85.33	58	P	P	02 06 00.8	+0.8
	0.3nm,0.8s,baz=230,slow=7.7,SNR=3.7						
TXAR				LR	LR	02 36 08.8	
	comp=Z,301nm,20.7s,baz=25,slow=30						
PDAR	Pinedale Array	86.42	44	P	P	02 06 04.9	-0.1
	0.2nm,0.5s,baz=213,slow=6.3,SNR=2.9						

IDC 15 01:54:56.5±2.0,059S×12792E,h0^{km},mb3.2/3,mb1 3.5/3, mb1mx3.3/14,mbtmp3.3/3,MS3.7/1,Ms1 3.7/1, ms1mx3.2/17,Error ellipse: s-maj=141.8km s-min=25.5km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	10.45	204	LR	LR	02 01 32.5	
	comp=Z,468nm,21.3s,baz=180,slow=38						
WRA	Warramunga Arr	20.23	162	P	P	01 59 33.1	-0.2
	0.4nm,0.5s,baz=342,slow=12,SNR=6.5						
ASAR	Alice Springs	23.66	166	P	P	02 00 10.1	+0.1
	0.6nm,0.6s,baz=346,slow=11,SNR=9.6						
MKAR	Makanchi Array	61.77	326	P	P	02 05 17.1	0.0
	0.1nm,0.3s,baz=130,slow=6.6,SNR=2.8						

CASC 15 02:05:04.5±2.3,1139N×8701W,h0^{km}±9^{km},MD3.7,6C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	0.89	27	⇑eP	Pg	02 05 22.4	+0.8
COPN				eS	Sg	02 05 36.2	+3.0
TICN	Ticuantepe	1.00	50	eP	Pg	02 05 24.0	+0.3
XAVN	Gruta Xavier	1.01	41	⇑eP	Pg	02 05 24.0	+0.1
TISN	Laguna Tiscapa	1.04	44	eP	Pg	02 05 24.4	-0.2
TISN				eS	Sg	02 05 40.4	+2.3
MGAN	Managua	1.06	45	⇑eP	Pg	02 05 24.8	-0.2
MGAN				eS	Sg	02 05 40.8	+2.1
APON	Apoyo	1.06	60	⇑eP	Pg	02 05 24.6	-0.4
MOMJ	Momotombo	1.12	24	⇓eP	Pg	02 05 25.4	-0.5
SSNN	San Juan del S	1.14	95	⇓eP	Pg	02 05 25.9	-0.6
SSNN				eS	Sg	02 05 43.2	+1.9
TEL3	Telica 3	1.19	8	⇑eP	Pg	02 05 26.7	-0.7
TELN	Telica	1.22	8	⇑eP	Pg	02 05 27.2	-0.8
TELN				eS	Sg	02 05 45.2	+1.3
HUEN		1.25	41	⇓eP	Pg	02 05 27.3	-1.3
HUEN				eS	Sg	02 05 47.4	+2.5
CONN	Concepcion	1.37	82	⇓eP	Pg	02 05 28.7	-2.1
CONN				eS	Sg	02 05 50.0	+1.4
MADN	Villa Maderas	1.45	89	⇓eP	Pn	02 05 29.9	-2.1
JCR	Jicaral	2.41	129	eP	Pn	02 05 48.4	+3.2
URSC	Urasca	3.53	116	eP	Pn	02 06 00.7	+0.1

IDC 15 02:13:31.1±2.2,065S×12791E,h0^{km},mb3.4/3,mb1 3.7/3, mb1mx3.5/14,mbtmp3.5/3,Error ellipse: s-maj=158.3km s-min=27.0km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.18	162	P	P	02 18 07.2	-0.2
	0.6nm,0.5s,baz=341,slow=12,SNR=14						
ASAR	Alice Springs	23.61	166	P	P	02 18 44.1	+0.1
	1.1nm,0.6s,baz=343,slow=11,SNR=19						
MKAR	Makanchi Array	61.81	326	P	P	02 23 51.9	0.0
	0.2nm,0.3s,baz=132,slow=7.2,SNR=4.1						

*ISCJB **15** 02:16:20.4±0.5,074S±008×1277E±0.1,h10^{km},mb4.5/23, Error ellipse: s-maj=20.2km s-min=6.6km az=152.4*
*IDC **15** 02:16:20.5±1.2,072S×12765E,h0^{km},mb4.1/6,mb1 4.2/7, mb1mx4.0/17,mbtmp4.1/7,ML3.4/1,Error ellipse: s-maj=49.9km s-min=17.6km az=66.0*
*NEIC **15** 02:16:22.1±0.5,068S×12767E,h10^{km},mb4.4/13,Error ellipse: s-maj=19.3km s-min=6.8km az=63.0*
NEIC Felt [III] at Labuha.
*BJI **15** 02:16:22.1,070S×12770E,h10^{km},mB5.1,mb4.5*
ISC 15 02:16:22.7±0.5,076S±007×1277E±01,h10^{km}, (h25^{km}±4.7^{km}:pP-P),n35,σ0^{s}98/35,mb4.5/23,Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	Kakadu	12.79	158	eP	Pn	02 19 24.1	-0.7
	7.5nm,0.6s						
KKM	Kota Kinabalu	13.27	301	ePn	Pn	02 19 29.6	-1.7
FITZ	Fitzroy Crossi	17.35	186	eP	Pn	02 20 27.7	+2.6
	5.8nm,0.9s						
FITZ	Fitzroy Crossi	17.35	186	P	Pn	02 20 26.5	+1.4
	0.1nm,0.3s,baz=28,slow=17,SNR=4.2						
WRA	Warramunga Arr	20.16	161	P	P	02 20 56.0	-1.3
	4.3nm,0.8s,baz=341,slow=11,SNR=23						
WB2	Warramunga Arr	20.16	161	eP	P	02 20 56.4	-1.0
COEN	Coen	20.20	131	eP	P	02 20 58.1	+0.3
	9.0nm,1.1s						
MBWA	Marble Bar	21.70	200	eP	P	02 21 13.8	-0.2
	17nm,1.3s,mb4.3						
ASAR	Alice Springs	23.57	166	P	P	02 21 32.9	-0.9
	6.5nm,0.7s,mb4.2,baz=344,slow=9.0,SNR=49						
PSI	Prapat	28.93	277	P	P	02 22 21.3	-1.1
	2.6nm,0.4s,mb4.3,baz=75,slow=11,SNR=5.5						
FORT	Forrest	29.86	179	eP	P	02 22 32.8	+2.4
	14nm,0.9s,mb4.7						
FORT	Forrest	29.86	179	eP	P	02 22 32.4	+1.9
	1.2nm,0.6s,mb3.8						
STKA	Stephens Creek	33.64	158	eP	P	02 23 04.7	+1.1
	7.3nm,1.1s,mb4.5						
STKA	Stephens Creek	33.64	158	P	P	02 23 04.1	+0.4
	6.6nm,1.0s,mb4.5,baz=333,slow=8.4,SNR=5.1						
CHTO	Chiang Mai	34.26	306	eP	P	02 23 08.7	-0.4
	2.7nm,0.6s,mb4.3						
XAN	Xi'an	38.83	335	P	P	02 23 48.3	+0.3
XAN				AP	pP	02 23 57.3	+6.2
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.2						
LZH	Lanzhou	42.83	331	eP	P	02 24 22.9	+1.9
LZH				AP	pP	02 24 30.9	+6.8
LZH				AMB	AMB		
	comp=Z,39nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,135nm,4.5s						
SHL	Shillong	43.35	310	eP	P	02 24 25.5	+0.1
SHL				eP		02 26 07.0	
GTA	Gaotai	47.41	331	eP	P	02 24 58.8	+1.4
GTA				AP	pP	02 25 02.9	+2.4
GTA				XP	sP	02 25 06.1	+4.3
GTA				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.6						
TAPN	Taplejung	47.47	309	eP	P	02 24 58.1	0.0
	comp=Z,24nm,1.0s,mb5.1						
ODAN	Odare	47.49	308	eP	P	02 24 58.9	+0.7
	comp=Z,29nm,0.9s,mb5.2						
JIRN	Jiri	48.80	309	eP	P	02 25 09.2	+0.8
	comp=Z,33nm,1.0s,mb5.3						
KKN	Kakani	49.58	308	eP	P	02 25 14.6	+0.3
	comp=Z,23nm,1.0s,mb5.2						
GKN	Gorkha	50.18	308	eP	P	02 25 19.9	+1.0
	comp=Z,11nm,0.7s,mb5.0						
HYB	Hyderabad	51.60	293	i P	P	02 25 30.0	+0.3
ULN	Ulaanbaatar	51.64	342	eP	P	02 25 27.5	-2.0
	comp=Z,2.4nm,0.9s,mb4.1						
SONM	Songino Array	51.82	342	P	P	02 25 30.0	-0.8
	comp=Z,1.0nm,0.9s,mb3.8,baz=163,slow=8.5,SNR=8.2						
MKAR	Makanchi Array	61.76	326	P	P	02 26 40.9	-0.5
MKAR	Makanchi Array	61.76	326	P	P	02 26 40.9	-0.5
	comp=Z,1.1nm,0.4s,mb4.4,baz=120,slow=8.3,SNR=23						
TKM2	Tokmak 2	63.72	320	eP	P	02 26 54.5	-0.1
	comp=Z,2.4nm,0.8s,mb4.3						
UCH	Uchtor	64.10	319	eP	P	02 26 56.6	-0.6
	comp=Z,3.4nm,0.9s,mb4.4						
AAK	Ala-Archa	64.30	319	eP	P	02 26 57.7	-0.8
	comp=Z,3.2nm,1.0s,mb4.3						
AML	Almayashu	64.60	318	eP	P	02 27 00.6	+0.1
	comp=Z,5.3nm,1.0s,mb4.5						
EKS2	Erkin-Say	64.78	319	eP	P	02 27 01.7	+0.1
	comp=Z,2.7nm,0.8s,mb4.3						
BRVK	Borovoye	71.64	328	eP	P	02 27 44.9	+0.4
	comp=Z,5.3nm,0.8s,mb4.5						

*IDC **15** 02:18:01.7±0.8,072S×12772E,h0^{km},mb4.3/9,mb1 4.4/9, mb1mx4.2/16,mbtmp4.3/9,MS3.8/6,Ms1 3.8/6, ms1mx3.5/19,Error ellipse: s-maj=34.0km s-min=17.1km az=75.0*
*NEIC **15** 02:18:03.5±0.3,073S×12772E,h10^{km},mb4.5/15,Error ellipse: s-maj=12.1km s-min=6.1km az=69.0*
*BJI **15** 02:18:03.0,070S×12770E,h10^{km},mB5.1,mb4.8*
*MOS **15** 02:18:04.7±1.1,073S×12774E,h33^{km},mb4.6/7,Error ellipse: s-maj=22.7km s-min=10.5km az=115.6*
*ISCJB **15** 02:18:09.6±4.0,081S±007×12778E±009,h80^{km}±40^{km}, mb4.6/32,Error ellipse: s-maj=15.4km s-min=11.4km az=151.2*
ISC 15 02:18:10.9±3.5,082S±008×12776E±009,h72^{km}±36^{km}, h17^{km}±5.3^{km}:pP-P,n70,σ0^{s}79/64,mb4.6/32,6C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	17.30	187	eP	Pn	02 22 07.6	-0.1
	6.9nm,0.8s						
FITZ	Fitzroy Crossi	17.30	187	P	Pn	02 22 08.4	+0.6
	0.2nm,0.3s,baz=36,slow=15,SNR=3.2						
WRA	Warramunga Arr	20.07	162	P	P	02 22 37.5	-1.0
	4.4nm,0.7s,baz=343,slow=12,SNR=8.0						
WRA				LR	LR	02 30 02.6	
	comp=Z,157nm,19.2s,baz=340,slow=36						
WB2	Warramunga Arr	20.07	162	eP	P	02 22 37.8	-0.7
COEN	Coen	20.08	131	eP	P	02 22 39.4	+0.8
	12nm,1.3s						
PMG	Port Moresby	21.11	114	eP	P	02 22 49.9	+0.2
	13nm,1.0s,mb4.2						
PMG	Port Moresby	21.11	114	eP	P	02 22 49.9	+0.2
PMG				pmax	pmax		
	comp=Z,13nm,1.0s						
PMG	Port Moresby	21.11	114	LR	LR	02 30 51.2	
	comp=Z,235nm,21.6s,baz=239,slow=36						
MBWA	Marble Bar	21.68	201	eP	P	02 22 55.2	-0.6
	comp=Z,22nm,1.3s,mb4.3						
ASAR	Alice Springs	23.48	166	P	P	02 23 14.2	+0.1
	comp=Z,6.6nm,0.9s,mb4.0,baz=345,slow=9.4,SNR=6.0						
ASAR				PcP	PcP	02 26 59.5	+1.2
	comp=Z,1.5nm,0.8s,baz=355,slow=2.4,SNR=7.1						
YHNB	Yeheng	26.08	347	eP	P	02 23 38.5	+0.7
CTA	Charters Tower	26.35	138	LR	LR	02 34 35.6	
	comp=Z,177nm,21.1s,baz=47,slow=38						
KULM	Kulim	27.75	283	eP	P	02 23 53.3	+0.3
PSI	Prapat	29.05	277	P	P	02 24 03.9	-0.7
	comp=Z,6.8nm,0.7s,mb4.4,baz=91,slow=6.6,SNR=7.2						
FORT	Forrest	29.80	179	eP	P	02 24 11.4	+0.5
	comp=Z,1.8nm,0.9s,mb3.7						
STKA	Stephens Creek	33.54	158	eP	P	02 24 47.8	+4.0
	comp=Z,4.3nm,0.8s,mb4.3						
STKA	Stephens Creek	33.54	158	P	P	02 24 45.1	+1.3
	comp=Z,2.4nm,0.8s,mb4.1,baz=336,slow=10.0,SNR=2.7						
STKA				LR	LR	02 38 05.9	
	comp=Z,155nm,18.2s,baz=210,slow=36						
WHN	Wuhan	33.70	339	P	P	02 24 46.3	+1.1
KSRS	Korea Array	38.08	0	P	P	02 25 21.6	-1.0
	comp=Z,1.9nm,0.8s,mb4.0,baz=177,slow=8.5,SNR=5.3						
MJAR	Matsushiro Arr	38.42	14	P	P	02 25 23.8	-1.6
	comp=Z,4.4nm,0.8s,mb4.3,baz=185,slow=10,SNR=7.0						
XAN	Xi'an	38.93	335	P	P	02 25 29.0	-0.7
XAN				AP	pP	02 25 35.3	-12
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
LZH	Lanzhou	42.94	331	eP	P	02 26 03.3	+0.6
LZH				AP	pP	02 26 10.6	-10
LZH				XP	sP	02 26 13.5	-15
LZH				AMB	AMB		
	comp=Z,41nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,180nm,5.3s						
LSA	Lhasa	46.26	314	P	P	02 26 31.0	+1.7
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LSA	Lhasa	46.26	314	eP	P	02 26 30.9	+1.6
	comp=Z,15nm,0.6s,mb4.9						
LSA	Lhasa	46.26	314	eP	P	02 26 30.9	+1.6
LSA				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9						
GTA	Gaotai	47.52	331	eP	P	02 26 39.5	+0.6
GTA				AP	pP	02 26 44.3	-13
GTA				XP	sP	02 26 47.4	-18
GTA				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.7						
TAPN	Taplejung	47.60	309	eP	P	02 26 39.8	+0.1
	comp=Z,58nm,0.9s,mb5.4						
TAPN	Taplejung	47.60	309	eP	P	02 26 39.6	-0.1
	comp=Z,58nm,0.9s,mb5.4						
ODAN	Odare	47.61	308	eP	P	02 26 40.3	+0.5
	comp=Z,67nm,0.8s,mb5.5						
ODAN	Odare	47.61	308	eP	P	02 26 40.3	+0.5
	comp=Z,67nm,0.8s,mb5.5						
JIRN	Jiri	48.93	309	eP	P	02 26 50.5	+0.5
	comp=Z,63nm,0.7s,mb5.7						
JIRN	Jiri	48.93	309	eP	P	02 26 50.5	+0.5
	comp=Z,63nm,0.7s,mb5.7						
KKN	Kakani	49.70	308	eP	P	02 26 56.0	+0.1
	comp=Z,54nm,0.9s,mb5.5						
KKN	Kakani	49.70	308	eP	P	02 26 55.9	0.0
	comp=Z,54nm,0.9s,mb5.5						
GKN	Gorkha	50.31	308	eP	P	02 27 00.5	+0.1
	comp=Z,59nm,0.8s,mb5.5						
GKN	Gorkha	50.31	308	eP	P	02 27 00.5	+0.1
	comp=Z,59nm,0.8s,mb5.5						
HYB	Hyderabad	51.72	293	i P	P	02 27 10.5	-0.7
ULN	Ulaanbaatar	51.73	342	eP	P	02 27 10.6	-0.2
	comp=Z,7.8nm,1.0s,mb4.7						
ULN	Ulaanbaatar	51.73	342	⇑eP	P	02 27 11.0	+0.2
SONM	Songino Array	51.91	342	P	P	02 27 12.0	-0.1
	comp=Z,3.6nm,1.0s,mb4.4,baz=161,slow=7.8,SNR=9.4						
ZAK	Zakamensk	55.13	341	eP	P	02 27 31.3	-4.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.0						
TLY	Talaya	56.15	342	i P	P	02 27 43.6	+0.7
BOD	Bodaibo	59.48	352	eP	P	02 28 05.5	-0.6
MKAR	Makanchi Array	61.87	326	P	P	02 28 22.2	-0.4
MKAR				LR	LR	02 59 23.7	
MKAR	Makanchi Array	61.87	326	P	P	02 28 22.2	-0.4
	comp=Z,6.4nm,0.7s,mb4.8,baz=117,slow=7.8,SNR=15						
MKAR				LR	LR	02 59 23.7	
	comp=Z,37nm,18.3s,baz=237,slow=40						
YAK	Yakutsk	62.70	1	eP	P	02 28 27.9	0.0
	comp=Z,35nm,0.7s,mb5.4						
YAK	Yakutsk	62.70	1	⇑eP	P	02 28 28.3	+0.5
YAK				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
TKM2	Tokmak 2	63.84	320	eP	P	02 28 35.8	+0.1
	comp=Z,5.5nm,0.8s,mb4.4						
TKM2	Tokmak 2	63.84	320	eP	P	02 28 35.8	+0.1
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
AAK	Ala-Archa	64.42	319	eP	P	02 28 39.0	-0.6
	comp=Z,3.0nm,1.1s,mb4.0						
AAK	Ala-Archa	64.42	319	eP	P	02 28 39.0	-0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
AML	Almayashu	64.72	318	eP	P	02 28 42.1	+0.5
	comp=Z,8.2nm,0.9s,mb4.6						
EKS2	Erkin-Say	64.91	319	eP	P	02 28 43.1	+0.4
	comp=Z,3.5nm,0.8s,mb4.2						
SEY	Seymchan	66.22	12	⇑eP	P	02 28 52.7	+1.9
NVS	Novosibirsk	66.37	334	i P	P	02 28 51.0	-0.9
BRVK	Borovoye	71.75	328	eP	P	02 29 24.6	-0.6
	comp=Z,6.4nm,0.9s,mb4.5						
BRVK	Borovoye	71.75	328	eP	P	02 29 24.6	-0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
CHKZ	Chkalovo	71.86	328	eP	P	02 29 24.7	-1.2
	comp=Z,2.8nm,0.9s,mb4.1						
CHKZ	Chkalovo	71.86	328	eP	P	02 29 24.7	-1.2
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
TIXI	Tiksi	72.35	0	eP	P	02 29 28.8	+0.3
	comp=Z,5.5nm,0.8s,mb4.4						
TIXI	Tiksi	72.35	0	eP	P	02 29 27.6	-0.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
VNDA	Vanda	78.81	173	LR	LR	03 00 57.5	
	comp=Z,181nm,18.6s,baz=311,slow=33						
ARU	Arti	79.31	328d	iP	P	02 30 07.3	-1.2
ARU						02 33 04.4	
ARU				S	S	02 40 03.9	+0.8
ARU				SS	SS	02 45 08.2	-3.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
KMBO	Kilima Mbogo	90.49	269	⇑eP	P	02 31 06.9	+1.4
KMBO	Kilima Mbogo	90.49	269	P	P	02 31 06.0	+0.5
	comp=Z,1.7nm,0.7s,mb4.3,baz=69,slow=6.5,SNR=6.2						
MOS	Moscow	90.75	326	eP	P	02 31 11.1	+5.3
OBN	Obninsk	91.35	325c	eP	P	02 31 14.4	+5.8
OBN				e		02 34 48.4	
OBN				eSS	SS	02 48 06.7	-1.6
OBN				pmax	pmax		
	comp=Z,24nm,2.2s,mb4.9						
ANMO	Albuquerque	119.23	50	⇑iPKIKP	PKPdf	02 36 56.1	+3.8
TOA0	Torodi Ar. Sit	125.21	285	ePKPdf	PKPdf	02 37 04.4	+0.2
TORD	Torodi Ar. Bea	125.21	285	PKP	PKPdf	02 37 04.8	+0.5
	comp=Z,1.0nm,0.7s,baz=78,slow=1.8,SNR=4.7						

IDC 15 02:42:09.6±12.0**, 2204N×14353E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.4**/20**, mbtmp3.4**/4**, Error ellipse: s-maj=468.4km s-min=27.4km az=75.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.28**	**320**	P	P	02 49 40.1	0.0
	0.1nm,0.4s,baz=132,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**42.68**	**193**	P	P	02 50 08.3	0.0
	0.5nm,0.9s,baz=15,slow=9.3,SNR=2.9						
ASAR	**Alice Springs**	**46.39**	**192**	P	P	02 50 37.8	-0.1
	0.2nm,0.7s,baz=7.8,slow=7.5,SNR=3.3						
MKAR	**Makanchi Array**	**54.70**	**312**	P	P	02 51 40.7	+0.1
	0.2nm,0.2s,baz=83,slow=8.8,SNR=4.0						

IDC 15 02:43:06.7±10.0**, 2241N×14462E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=398.3km s-min=25.5km az=75.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**15.50**	**290**	LR	LR	02 51 48.1	
	comp=Z,104nm,18.8s,baz=282,slow=34						
SONM	**Songino Array**	**39.65**	**319**	P	P	02 50 40.3	+0.1
	0.5nm,0.8s,baz=134,slow=8.2,SNR=3.1						
WRA	**Warramunga Arr**	**43.28**	**194**	P	P	02 51 09.9	-0.3
	0.9nm,1.0s,baz=16,slow=8.6,SNR=4.8						
ASAR	**Alice Springs**	**46.97**	**193**	P	P	02 51 39.8	+0.2
	0.5nm,0.7s,baz=16,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**55.20**	**312**	P	P	02 52 41.3	0.0
	0.3nm,0.6s,baz=110,slow=6.5,SNR=3.6						

*IDC **15** 03:21:56.5±0.8, 1793N×67.18W, h0^{km}, mb3.7/7, mb1 4.0/9, mb1mx3.8/21, mbtmp3.8/9, ML3.6/2, Error ellipse: s-maj=17.7km s-min=9.8km az=3.0*
*ISCJB **15** 03:21:57.1±0.6, 1788N±004×67.14W±003, h20^{km}±4^{km}, mb3.8/8, Error ellipse: s-maj=7.6km s-min=4.3km az=17.5*
*NEIC **15** 03:21:59.6, 1799N×6706W, h5^{km}, MD3.6(RSPR), After RSPR.*
NEIC Felt [V] at Cabo Rojo and Lajas. Felt at Ciales, Hormigueros, Las Marias, Mayaguez, Sabana Grande, San German, San Sebastian and Yauco.
*RSPR **15** 03:21:59.6, 1799N×6706W, h5^{km}±1^{km}, MD3.5/18, MD3.5/18*
ISC 15 03:21:58.5±0.5**, 1793N**±004×**6708W**±003**, h17^{km}**±3^{km}**, n41, σ0ˢ86**/58**, mb3.8**/8**, 18C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.08**	**338**⇑	eP	**Pg**	**03 22 01.2**	**-0.7**
CRPR				eS	**Sg**	**03 22 02.9**	**-1.3**
GBPR	**Guanica, Bosqu**	**0.20**	**77**⇑	eP	**Pg**	**03 22 03.4**	**+0.1**
LSP	**Las Mesas**	**0.24**	**358**⇓	eP	**Pg**	**03 22 03.9**	**-0.1**
MPR	**Mayaguez**	**0.28**	**348**⇑	eP	**Pg**	**03 22 04.4**	**-0.3**
MPR				eS	**Sg**	**03 22 08.7**	**-0.2**
LRS	**Lares**	**0.42**	**32**⇑	eP	**Pg**	**03 22 07.2**	**+0.1**
CELP	**Cerrillos**	**0.50**	**73**⇑	eP	**Pg**	**03 22 08.6**	**+0.2**
AOPR	**Arecibo Observ**	**0.52**	**37**	eS	**Sg**	**03 22 16.2**	**+0.5**
AOPR	**Arecibo Observ**	**0.52**	**37**⇑	eP	**Pg**	**03 22 08.7**	**0.0**
AOPR	**Arecibo Observ**	**0.52**	**37**⇑	eP	**Pg**	**03 22 08.7**	**0.0**
AOPR				eS	**Sg**	**03 22 16.2**	**+0.5**
ICM	**Isla Caja Muer**	**0.53**	**94**	eS	**Sg**	**03 22 18.1**	**+1.8**
ICM	**Isla Caja Muer**	**0.53**	**94**⇑	eP	**Pg**	**03 22 09.5**	**+0.4**
ICM	**Isla Caja Muer**	**0.53**	**94**⇑	eP	**Pg**	**03 22 09.5**	**+0.4**
ICM				eS	**Sg**	**03 22 18.1**	**+1.8**
AGPR	**Aguadilla, PR**	**0.53**	**357**	eS	**Sg**	**03 22 16.5**	**+0.2**
AGPR	**Aguadilla, PR**	**0.53**	**357**⇑	eP	**Pg**	**03 22 08.8**	**-0.3**
AGPR	**Aguadilla, PR**	**0.53**	**357**⇑	eP	**Pg**	**03 22 08.8**	**-0.3**
AGPR				eS	**Sg**	**03 22 16.5**	**+0.2**
SJG	**San Juan**	**0.90**	**78**⇑	eP	**Pb**	**03 22 15.2**	**-0.4**
SJG	**San Juan**	**0.90**	**78**⇑	eP	**Pb**	**03 22 15.2**	**-0.5**
SJG	**San Juan**	**0.90**	**78**	eS	**Sb**	**03 22 28.3**	**+1.0**
SJG	**San Juan**	**0.90**	**78**⇑	eP	**Pb**	**03 22 15.2**	**-0.5**
SJG				eS	**Sb**	**03 22 28.3**	**+1.0**
SJG	**San Juan**	**0.90**	**78**	Pg	**Pg**	**03 22 16.7**	**+0.7**
	226nm,0.3s,baz=267,slow=14,SNR=140						
SJG				Lg		03 22 29.0	
	722nm,0.3s,baz=68,slow=19,SNR=39						
CPD	**Cerro la Pandu**	**1.11**	**84**⇑	eP	**Pn**	**03 22 18.9**	**-0.3**
CPD				eS	**Sb**	**03 22 33.8**	**+0.4**
HUMP	**Col San Antoni**	**1.19**	**80**⇑	eP	**Pn**	**03 22 19.9**	**-0.3**
HUMP				eS	**Sb**	**03 22 35.3**	**-0.3**
CBYP	**Canovanas**	**1.21**	**74**⇑	eP	**Pn**	**03 22 20.0**	**-0.5**
CBYP				eS	**Sb**	**03 22 35.8**	**-0.5**
MTP	**Monte Pirata**	**1.46**	**83**⇓	eP	**Pn**	**03 22 24.5**	**+0.5**
MTP				eS	**Sn**	**03 22 42.7**	**-0.1**
TBVI	**Tortola**	**2.39**	**78**⇓	eP	**Pn**	**03 22 37.8**	**+1.0**
TBVI				eS	**Sn**	**03 23 05.1**	**-0.5**
SDDR	**Presa de Saban**	**4.13**	**285**⇑	eP	**Pn**	**03 23 04.3**	**+3.6**
SDDR				eS	**Sn**	**03 23 47.7**	**-0.9**
HMG	**Houelmont**	**5.50**	**110**	eP	**Pn**	**03 23 19.6**	**0.0**
HMG				eS	**Sn**	**03 24 20.3**	**-2.2**
SCG	**Saint Claude**	**5.50**	**109**	eP	**Pn**	**03 23 19.4**	**-0.1**
SCG				eS	**Sn**	**03 24 19.9**	**-2.6**
TBG	**Guadaloupe-3**	**5.60**	**111**	eP	**Pn**	**03 23 19.8**	**-1.1**
DEG	**La Desirade**	**5.98**	**105**	eP	**Pn**	**03 23 25.5**	**-0.7**
PCRV	**Puerto La Cruz**	**8.07**	**163**	Pn	**Pn**	**03 23 56.2**	**+1.4**
	0.5nm,0.3s,baz=46,slow=5.0,SNR=6.6						
PCRV				Sn	**Sn**	**03 25 17.6**	**-8.1**
	0.7nm,0.3s,baz=21,slow=19,SNR=2.3						
SDV	**Santo Domingo**	**9.63**	**201**	Pn	**Pn**	**03 24 16.2**	**-0.2**
SDV				Sn	**Sn**	**03 25 57.9**	**-6.4**
SDV	**Santo Domingo**	**9.63**	**201**	Pn	**Pn**	**03 24 16.2**	**-0.2**
	0.7nm,0.3s,baz=28,slow=10,SNR=3.5						
SDV				Sn	**Sn**	**03 25 57.9**	**-6.4**
	0.6nm,0.3s,baz=24,slow=20,SNR=2.8						
LPAZ	**La Paz**	**34.02**	**182**	P	**P**	**03 28 45.8**	**+4.2**
	0.8nm,0.3s,mb4.1,baz=346,slow=15,SNR=3.9						
SIV	**San Ignacio**	**34.22**	**170**	P	**P**	**03 28 44.6**	**+1.2**
	1.6nm,0.7s,mb4.1,baz=12,slow=9.5,SNR=13						
TXAR	**Lajitas Array**	**35.25**	**296**	P	**P**	**03 28 52.5**	**+0.2**
	1.0nm,0.7s,mb3.9,baz=111,slow=9.5,SNR=10						
SCHQ	**Schefferville**	**36.83**	**0**	P	**P**	**03 29 06.7**	**+1.2**
	2.2nm,0.7s,mb4.1,baz=184,slow=7.0,SNR=11						
ULM	**Lac du Bonnet**	**39.62**	**331**	P	**P**	**03 29 28.4**	**-0.6**
	0.5nm,0.4s,mb3.6,baz=90,slow=9.1,SNR=3.3						
PDAR	**Pinedale Array**	**43.61**	**314**	P	**P**	**03 30 03.5**	**+1.7**
	0.2nm,0.4s,mb3.2,baz=76,slow=7.5,SNR=3.5						
PDAR				PcP	PcP	03 31 49.0	-0.1
	0.5nm,0.5s,baz=118,slow=6.0,SNR=5.2						
NVAR	**Mina Array Bea**	**48.88**	**306**	P	**P**	**03 30 44.1**	**+0.8**
	0.5nm,0.4s,mb3.9,baz=96,slow=7.3,SNR=6.1						
YKA	**Yellowknife Ar**	**55.28**	**335**	P	**P**	**03 31 30.2**	**-0.4**
	0.2nm,0.5s,mb3.5,baz=111,slow=7.5,SNR=4.9						

WEL 15 03:28:53.0±0.6**, 3865S×17656E, h189^{km}**±4^{km}**, ML3.5**/4**, Error ellipse: s-maj=18.8km s-min=9.8km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.52**	**186**	PN	Pn	03 29 19.0	+0.1
BKZ				SN	Sn	03 29 38.4	-0.6
MWZ	**Matawai**	**0.82**	**68**	PN	Pn	03 29 20.5	+0.1
MWZ				SN	Sn	03 29 41.3	-0.2
MRZ	**Mangatainoka R**	**2.15**	**200**	PN	Pn	03 29 32.0	-0.2
MRZ				SN	Sn	03 30 02.3	-0.5
KHZ	**Kahutara**	**4.41**	**210**	PN	Pn	03 29 57.2	-2.3

CASC 15 03:29:39.1±1.8**, 1250N×8766W, h148^{km}**±23^{km}**, MD3.6, 1C-4D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEL3	**Telica 3**	**0.80**	**84**⇑	eP	Pn	03 30 02.5	+0.4
TELN	**Telica**	**0.82**	**82**	eP	Pn	03 30 01.2	-1.0
COPN	**Copaltepe**	**1.09**	**107**⇓	eP	Pn	03 30 04.2	-0.2
COPN				eS	Sn	03 30 25.0	+1.2
MOMJ	**Momotombo**	**1.10**	**94**⇓	eP	Pn	03 30 05.0	+0.5
XAVN	**Gruta Xavier**	**1.35**	**105**	eP	Pn	03 30 06.9	-0.1
TISN	**Laguna Tiscapa**	**1.41**	**104**	eP	Pn	03 30 08.3	+0.8
MGAN	**Managua**	**1.43**	**104**	eP	Pn	03 30 09.0	+1.3
MGAN				eS	Sn	03 30 28.8	-0.8
HUEN		**1.46**	**96**⇓	iP	Pn	03 30 10.2	+2.1
TICN	**Ticuantepe**	**1.47**	**108**	eP	Pn	03 30 09.1	+0.9
APON	**Apoyo**	**1.66**	**110**	eP	Pn	03 30 10.7	+0.5
LFRS	**El Faro**	**1.77**	**310**	eP	x	03 30 29.1	
LFRS				eS	x	03 30 54.9	
CONN	**Concepcion**	**2.20**	**115**	eP	Pn	03 30 16.7	+0.3
CHI2		**15.81**	**118**⇓	eP		03 30 01.0	

IDC 15 03:34:50.7±1.1**, 2194N×14305E, h0^{km}, mb3.5**/5**, mb1 3.8**/5**, mb1mx3.6**/19**, mbtmp3.5**/5**, Error ellipse: s-maj=47.1km s-min=24.9km az=100.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.08**	**320**	P	P	03 42 19.6	+0.2
	0.5nm,0.8s,baz=117,slow=7.5,SNR=4.6						
WRA	**Warramunga Arr**	**42.49**	**192**	P	P	03 42 47.6	-0.2
	0.9nm,0.9s,baz=15,slow=8.6,SNR=5.5						
ASAR	**Alice Springs**	**46.20**	**192**	P	P	03 43 17.5	0.0
	0.5nm,0.8s,baz=9.8,slow=9.6,SNR=5.4						
YKA	**Yellowknife Ar**	**76.30**	**28**	P	P	03 46 40.5	-0.7
	0.1nm,0.5s,baz=279,slow=4.7,SNR=4.0						
NVAR	**Mina Array Bea**	**83.09**	**51**	P	P	03 47 19.5	+1.0
	0.6nm,0.8s,baz=253,slow=5.3,SNR=3.4						

*NEIC **15** 04:00:13.0, 1621N×98.14W, h12^{km}, MD3.8(MEX), After MEX.*
MEX 15 04:00:13.0±0.9**, 1621N×9814W, h12^{km}**±7^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**5**	iP	Pg	04 00 16.7	-0.4
PNIG				iS	Sg	04 00 19.7	-0.3
VHO	**Vista Hermosa**	**1.60**	**57**	eP	Pn	04 00 38.6	-2.6
VHO				iS	Sn	04 00 55.5	-6.3
ACX	**Acapulco**	**1.82**	**291**	iP	Pn	04 00 40.0	-4.2
ACX				iS	Sn	04 01 03.5	-3.7
MEIG	**Mezcala**	**2.22**	**321**	eP	Pn	04 00 47.4	-2.2
MEIG				iS	Sn	04 01 12.2	-4.8
TPIG	**Tehuac#an**	**2.33**	**19**	eP	Pn	04 00 48.9	-2.2
TPIG				iS	Sn	04 01 13.9	-5.7
PLIG	**Platanillo**	**2.53**	**329**	eP	Pn	04 00 52.9	-1.1
PLIG				iS	Sn	04 01 21.1	-3.6
PPM	**Popocatepetl**	**2.88**	**351**	eP	Pn	04 00 56.6	-2.2
PPM				iS	Sn	04 01 32.3	-1.1
CMIG	**Matias Romero**	**3.25**	**74**	eP	Pn	04 01 00.8	-3.0
CMIG				iS	Sn	04 01 38.6	-3.8
IIO	**Organos**	**3.41**	**351**	eP	Pn	04 01 09.9	+3.8
IIO				iS	Sn	04 01 52.2	+5.7
PTVM	**Pico Tres Padr**	**3.49**	**345**	eP	Pn	04 01 03.3	-3.9
PTVM				iS	Sn	04 01 44.0	-4.5

*ISCJB **15** 04:01:13.4±3.3, 14N±0.1×1270E±02, h5^{km}±20^{km}, mb4.2/14, Error ellipse: s-maj=43.4km s-min=10.5km az=159.1*
*NEIC **15** 04:01:15.8±0.5, 148N×127.12E, h10^{km}, mb4.3/10, Error ellipse: s-maj=31.8km s-min=8.9km az=70.0*
*IDC **15** 04:01:21.9±3.4, 139N×127.10E, h56^{km}±29^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.9/16, mbtmp3.9/8, ML3.7/1, Error ellipse: s-maj=78.5km s-min=12.5km az=71.0*
ISC 15 04:01:20.1±2.7**, 13N**±01×**1269E**±02**, h37^{km}**±25^{km}**, n20, σ0ˢ75**/21**, mb4.2**/14**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.99**	**159**	eP	**Pn**	**04 04 54.8**	**+5.4**
	12nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.36**	**184**	eP	**Pn**	**04 05 43.6**	**-0.4**
	5.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.36**	**184**	P	**Pn**	**04 05 43.1**	**-0.8**
	0.2nm,0.3s,baz=354,slow=2.1,SNR=5.9						
WRA	**Warramunga Arr**	**22.36**	**161**	P	**P**	**04 06 14.9**	**-0.1**
	11nm,0.7s,mb4.4,baz=339,slow=11,SNR=76						
WRA				S	**S**	**04 10 18.1**	**-0.9**
	1.7nm,0.9s,baz=342,slow=16,SNR=4.6						
WB2	**Warramunga Arr**	**22.36**	**161**	eP	**P**	**04 06 14.9**	**-0.2**
MBWA	**Marble Bar**	**23.44**	**197**	eP	**P**	**04 06 28.0**	**+1.6**
	8.2nm,0.9s,mb4.2						
ASAR	**Alice Springs**	**25.76**	**165**	P	**P**	**04 06 47.6**	**+0.1**
	5.7nm,0.8s,mb4.2,baz=346,slow=13,SNR=25						
ASAR				PcP	PcP	04 10 17.5	+0.6
	0.6nm,0.7s,baz=354,slow=1.7,SNR=4.3						
ASAR				S	**S**	**04 11 14.0**	**-0.2**
	0.6nm,0.8s,baz=352,slow=18,SNR=4.7						
CTAO	**Charters Tower**	**28.50**	**139**	eP	**P**	**04 07 12.1**	**-0.1**
	17nm,1.2s,mb4.5						
FORT	**Forrest**	**31.95**	**178**	eP	**P**	**04 07 41.9**	**-0.7**
	1.3nm,0.7s,mb3.9						
STKA	**Stephens Creek**	**35.84**	**158**	eP	**P**	**04 08 17.0**	**+0.7**
	4.1nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**35.84**	**158**	P	**P**	**04 08 16.6**	**+0.3**
	5.5nm,0.9s,mb4.5,baz=323,slow=8.0,SNR=8.5						
SONM	**Songino Array**	**49.62**	**342**	P	**P**	**04 10 08.8**	**+1.0**
	0.4nm,0.5s,mb3.7,baz=159,slow=8.9,SNR=4.9						
MKAR	**Makanchi Array**	**59.63**	**326**	P	**P**	**04 11 19.9**	**-0.5**
	1.3nm,0.5s,mb4.2,baz=122,slow=8.5,SNR=14						
TKM2	**Tokmak 2**	**61.67**	**319**	eP	**P**	**04 11 33.2**	**-1.3**
	1.7nm,0.6s,mb4.3						
EKS2	**Erkin-Say**	**62.75**	**318**	eP	**P**	**04 11 41.6**	**-0.1**
	1.8nm,0.8s,mb4.2						
BRVK	**Borovoye**	**69.50**	**327**	eP	**P**	**04 12 25.4**	**+0.6**
	3.7nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**69.61**	**328**	eP	**P**	**04 12 25.1**	**-0.4**
	1.5nm,0.8s,mb4.0						
VNDA	**Vanda**	**81.04**	**173**	P	**P**	**04 13 32.0**	**+1.3**
	1.8nm,0.8s,mb4.0,baz=322,slow=7.5,SNR=8.3						
BRTR	**Keskin Array B**	**91.69**	**310**	P	**P**	**04 14 23.6**	**-0.3**
	1.0nm,0.9s,mb4.2,baz=44,slow=7.3,SNR=3.6						
TXAR	**Lajitas Array**	**122.88**	**53**	PKP	PKPdf	04 20 10.2	-2.8
	0.2nm,0.8s,baz=213,slow=6.5,SNR=2.3						

SSNC 15 04:31:21.7, 1987N×7434W, h50^{km}, mb4.3, MD2.7, ML2.0, Cuba region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.32**	**18**	ePG	Pn	04 31 31.1	+0.1
MASC				eSG	Sn	04 31 36.2	-1.5
	comp=N,68nm,0.0s						
MASC				e			
	comp=E,18nm,0.0s						
RCC	**Rio Carpintero**	**1.28**	**276**	ePG	Pn	04 31 43.0	-0.2
	baz=96						
RCC				eSG	Sn	04 31 57.6	-1.7
	comp=N,38nm,0.2s						
RCC				e			
	comp=E,56nm,0.2s						
LMGC	**Las Mercedes**	**2.52**	**275**	i PG	Pn	04 31 58.0	-2.1
LMGC				i PG	Sn	04 32 25.0	-4.6
	comp=N,17nm,0.2s						
LMGC				e			
	comp=E,17nm,0.1s						

KRSC 15 04:35:58.5±0.6**, 5536N×16477E, h31^{km}**±30^{km}**, ML3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.39**	**308**	eP	Pn	04 36 21.5	-0.2
KBTR				iS	Sn	04 36 38.7	-0.3
MKZ	**Mys Kozlova**	**1.93**	**247**	eP	Pn	04 36 30.1	+1.0
MKZ				iS	Sn	04 36 53.1	+0.8
SMKR	**Semkarok**	**2.22**	**305**	eP	Pn	04 36 34.9	+1.7
SMKR				iS	Sn	04 37 02.2	+2.7
BDR	**Baidarnaya**	**2.34**	**303**	eP	Pn	04 36 36.9	+2.1
BDR				iS	Sn	04 37 05.1	+2.7
ZLN	**Zelenaya**	**2.34**	**288**	eP	Pn	04 36 38.6	+3.9
ZLN				iS	Sn	04 37 08.2	+5.8
SRKR	**Sorokina**	**2.40**	**304**	eP	Pn	04 36 37.7	+2.1
SRKR				iS	Sn	04 37 06.0	+2.1
BZMR	**Bezymyannaya**	**2.49**	**285**	eP	Pn	04 36 39.8	+2.9
BZMR				iS	Sn	04 37 09.9	+3.7
KLY	**Klyuchi**	**2.51**	**294**	eP	Pn	04 36 38.5	+1.4
KLY				iS	Sn	04 37 07.7	+1.1
KRSR	**Krestovskiy**	**2.52**	**292**	eP	Pn	04 36 39.1	+1.8
KRSR				iS	Sn	04 37 08.6	+1.6
KIRR	**Kirishev**	**2.58**	**285**	eP	Pn	04 36 40.9	+2.9
KIRR				iS	Sn	04 37 12.1	+3.8
TUMR	**Tumrok**	**2.64**	**270**	eP	Pn	04 36 41.7	+2.8
TUMR				iS	Sn	04 37 13.6	+3.7
KPT	**Kopyto**	**2.65**	**285**	eP	Pn	04 36 41.7	+2.7
KPT				iS	Sn	04 37 12.8	+2.8
SRDR	**Sredinnyy**	**3.01**	**291**	P	Pn	04 36 46.9	+3.0
SRDR				iS	Sn	04 37 22.8	+4.0
SPN	**Mys Shipunski**	**3.59**	**233**	eP	Pn	04 36 53.1	+1.2
SPN				iS	Sn	04 37 31.8	-1.4
AVH	**Avacha**	**4.11**	**242**	eP	Pn	04 37 01.9	+2.8
AVH				iS	Sn	04 37 48.2	+2.2
GNL	**Ganaly**	**4.31**	**250**	eP	Pn	04 37 04.7	+2.8

IDC 15 05:31:02.5±1.3**, 122S×12654E, h0^{km}, mb3.3**/4**, mb1 3.6**/4**, mb1mx3.5**/15**, mbtmp3.4**/4**, Error ellipse: s-maj=136.6km s-min=21.8km az=69.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.11**	**158**	P	P	05 35 37.3	-0.7
	0.9nm,0.7s,baz=335,slow=12,SNR=7.0						
ASAR	**Alice Springs**	**23.43**	**163**	P	P	05 36 13.9	+0.4
	0.8nm,0.5s,baz=345,slow=9.2,SNR=10						
SONM	**Songino Array**	**51.92**	**343**	P	P	05 40 12.4	-0.6
	0.2nm,0.4s,baz=152,slow=9.4,SNR=2.9						
MKAR	**Makanchi Array**	**61.53**	**327**	P	P	05 41 22.1	+0.7
	0.3nm,0.4s,baz=113,slow=9.3,SNR=7.4						

*NIED **15** 05:43:00, 4190N×14140E, h119^{km}, Mw4.7 Best double couple: $M_0$1.37000×10^{16} NP1:ϕ_s10.00000°, δ48.00000°, λ-117.00000°. NP2:ϕ_s227.00000°, δ49.00000°, λ-63.00000°.*
*SZGRF **15** 05:43:03.6, 4251N×14093E, h129^{km}, mb4.8, Hokkaido, Japan, region*
*MOS **15** 05:43:09.6±0.9, 4200N×14120E, h121^{km}, mb4.6/80, Error ellipse: s-maj=7.5km s-min=4.2km az=107.3*
*ISCJB **15** 05:43:10.3±0.2, 4196N±002×14128E±002, h127^{km}±1^{km}, mb4.6/149, Error ellipse: s-maj=3.7km s-min=2.5km az=161.2*
*IDC **15** 05:43:10.4±0.9, 4196N×14128E, h118^{km}±7^{km}, mb4.3/26, mb1 4.4/31, mb1mx4.4/33, mbtmp4.3/31, MS3.5/4, Ms1 3.5/4, ms1mx3.0/35, Error ellipse: s-maj=10.6km s-min=7.1km az=106.0*
*BJI **15** 05:43:10.4, 4206N×14125E, h130^{km}, mB5.0, mb4.7*
*NEIC **15** 05:43:11.3±0.4, 4196N×14122E, h125^{km}±4^{km}, mb4.6/98, MW4.7(NIED), Error ellipse: s-maj=3.5km s-min=2.9km az=156.0*
NEIC Recorded [2 JMA] in southwestern Hokkaido and [1 JMA] in south-central, eastern and the Tomakomai area, Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures, Honshu.
*JMA **15** 05:43:11.4±0.1, 4194N×14139E, h123^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s23.00000°, δ39.00000°, λ-106.00000°. NP2: ϕ_s223.00000°, δ53.00000°, λ-78.00000°. Principal axes: T Plg7.0000°, Azm304.0000°; N Plg10.0000°, Azm35.0000°; P Plg78.0000°, Azm179.0000°;*
JMA Felt II J1.
ISC 15 05:43:11.5±0.2**, 4198N**±002×**14125E**±002**, h123^{km}**±1^{km}**, h128^{km}**±3.0^{km}**:pP-P, n637, σ0ˢ70**/658**, mb4.6**/149**, 102C-120D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.18**	**241**	⇓P	**Pn**	**05 43 28.6**	**+0.2**
JKB				eS	**Sn**	**05 43 41.5**	**+0.4**
JNB	**Noboribetsu**	**0.52**	**342**	⇓P	**Pn**	**05 43 30.0**	**+0.2**
JNB				eS	**Sn**	**05 43 44.1**	**+0.4**
JOT	**Ohata**	**0.61**	**194**	⇓P	**Pn**	**05 43 30.5**	**0.0**
JYM2	**Yakumo 2**	**0.67**	**282**	⇑P	**Pn**	**05 43 31.8**	**+1.0**
JYM2				eS	**Sn**	**05 43 46.9**	**+1.4**
JSR	**Shiriuchi**	**0.77**	**235**	⇓P	**Pn**	**05 43 32.3**	**+0.7**
JSR				eS	**Sn**	**05 43 47.6**	**+0.8**
JEW	**Eniwo**	**0.88**	**10**	⇓P	**Pn**	**05 43 32.9**	**+0.3**
JEW				eS	**Sn**	**05 43 49.1**	**+0.5**
JNBK	**Urakawa-nobuka**	**1.16**	**74**	⇓P	**Pn**	**05 43 34.9**	**-0.4**
JNBK				eS	**Sn**	**05 43 53.0**	**+5.1**
JOSM	**Okushiri--Mats**	**1.32**	**275**	⇑P	**Pn**	**05 43 37.7**	**+0.6**
JOSM				eS	**Sn**	**05 43 58.0**	**+6.1**
ERM	**Erimo**	**1.42**	**88**	ePn	**Pn**	**05 43 37.7**	**-0.5**
ERM				eSn	**Sn**	**05 43 54.0**	**-0.3**
ERM	**Erimo**	**1.42**	**88**d	iP	**Pn**	**05 43 37.7**	**-0.5**
JSK	**Shakotan**	**1.49**	**338**	⇑P	**Pn**	**05 43 39.9**	**+1.0**
JSK				eS	**Sn**	**05 44 01.8**	**+5.9**
JFR	**Furan**	**1.55**	**40**	P	**Pn**	**05 43 38.5**	**-1.1**
JFR				eS	**Sn**	**05 44 00.1**	**+2.7**
JANG	**Nango**	**1.61**	**173**	⇑P	**Pn**	**05 43 39.2**	**-1.2**
JANG				eS	**Sn**	**05 43 59.6**	**+0.6**
JCH	**Churui**	**1.69**	**67**	⇓P	**Pn**	**05 43 40.8**	**-0.5**
JCH				eS	**Sn**	**05 44 02.2**	**+1.3**
JHR	**Hokuryu**	**1.80**	**11**	⇓P	**Pn**	**05 43 43.4**	**+0.8**
JHR				eS	**Sn**	**05 44 07.8**	**+4.3**
JKK2	**Kamakawa 2**	**2.19**	**30**	⇓P	**Pn**	**05 43 47.1**	**-0.3**
JKK2				eS	**Sn**	**05 44 13.9**	**+0.9**
JAR	**Ashorobuto**	**2.28**	**54**	⇓P	**Pn**	**05 43 47.3**	**-1.2**
JAR				eS	**Sn**	**05 44 14.1**	**-1.0**
ASAJ	**Asahikawa**	**2.36**	**24**	P	**Pn**	**05 43 49.3**	**-0.2**
ASAJ				S	**Sn**	**05 44 17.2**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,56nm,0.3s						
ASAJ				smax			
	comp=N,53nm,0.3s						
ASAJ	**Asahikawa**	**2.36**	**24**	P	**Pn**	**05 43 49.3**	**-0.2**
	comp=N,56nm,0.3s,baz=224,slow=13,SNR=157						
ASAJ				S	**Sn**	**05 44 17.1**	**+0.2**
	comp=N,53nm,0.3s,baz=265,slow=33,SNR=19						
YUK	**Yuzh-Kuril'sk**	**3.96**	**57**⇓	iP	**Pn**	**05 44 10.5**	**0.0**
YUK				iS	**Sn**	**05 44 53.4**	**-2.3**
YUK				pmax	pmax		
	comp=N,550nm,0.5s						
YUK				pmax	pmax		
	comp=E,370nm,0.5s						
YUK				pmax	pmax		
	comp=Z,920nm,0.5s						
YUK				smax			
	comp=N,18μm,0.5s						
YUK				smax			
	comp=E,13μm,0.5s						
YUK				smax			
	comp=N,28μm,1.0s						
YUK				smax			
	comp=E,24μm,1.0s						
YSS	**Yuzh-Sakhalins**	**5.09**	**12**	ePn	**Pn**	**05 44 26.2**	**+0.6**
YSS	**Yuzh-Sakhalins**	**5.09**	**12**⇓	eP	**Pn**	**05 44 27.0**	**+1.4**
YSS				eS	**Sn**	**05 45 23.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,120nm,0.9s						
YSS				pmax	pmax		
	comp=N,120μm,0.8s						
YSS				smax			
	comp=N,130nm,1.0s						
MAJO	**Matsushiro**	**5.92**	**204**	ePn	**Pn**	**05 44 36.3**	**-0.5**
MAT	**Matsushiro**	**5.92**	**204**	P	**Pn**	**05 44 37.0**	**+0.2**
MAT				eS	**Sn**	**05 45 43.7**	**+0.5**
MJAR	**Matsushiro Arr**	**5.92**	**204**	P	**Pn**	**05 44 37.4**	**+0.6**
MJAR				LR	LR	05 46 35.9	
MJAR	**Matsushiro Arr**	**5.92**	**204**	P	**Pn**	**05 44 37.4**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,244nm,20.6s						
MJAR	**Matsushiro Arr**	**5.92**	**204**	P	**Pn**	**05 44 37.4**	**+0.6**
	comp=Z,7.8nm,0.3s,baz=20,slow=14,SNR=20						
MJAR				LR	LR	05 46 35.9	
	comp=Z,244nm,20.6s,baz=270,slow=35						
VLA	**Vladivostok**	**7.00**	**283**	iP	**Pn**	**05 44 53.0**	**+1.6**
VLA				pmax	pmax		
	comp=Z,335nm,0.8s						
HABR	**Khabarovsk**	**7.83**	**328**⇑	iP	**Pn**	**05 45 02.1**	**-0.4**
HABR						05 46 30.7	
HABR				pmax	pmax		
	comp=Z,191nm,1.6s						
MDJ	**Mudanjiang**	**8.90**	**291**	P	**Pn**	**05 45 18.3**	**+1.3**
MDJ				S	**Sn**	**05 46 58.6**	**+3.2**
MDJ				AMB	AMB		
	comp=Z,81nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,160nm,7.1s						
MDJ				LR	LR		
	comp=N,251nm,12.0s						
MDJ				LR	LR		

comp=E,181nm,15.0s
MDJ LR LR
comp=Z,222nm,11.6s
JHJ Hachijo jima 2 8.92 188 P **Pn 05 45 14.8 -2.6**
comp=Z,63nm,0.3s,baz=229,slow=20,SNR=11
JHJ S **Sn 05 46 45.0 -11**
comp=Z,51nm,0.3s,baz=66,slow=23,SNR=9.6
KLR Kul'dur 9.84 321 *e*P **Pn 05 45 26.8 -2.8**
KLR pmax pmax
comp=E,50nm,1.2s
KLR pmax pmax
comp=Z,50nm,1.2s
KSRS Korea Array 11.21 251 P **Pn 05 45 49.6 +1.6**
comp=Z,0.4nm,0.3s,baz=57,slow=13,SNR=6.4
CN2 Changchun 11.74 284 *e*P **Pn 05 45 54.1 -0.8**
CN2 *e*XP 05 46 23.9
CN2 *e*S **Sn 05 48 01.9 -2.2**
CN2 AMB AMB
comp=Z,10.0nm,1.4s
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,510nm,10.0s
CN2 LR LR
comp=E,290nm,10.0s
CN2 LR LR
comp=Z,250nm,11.0s
CBIJ Chichi jima 14.87 177 P **Pn 05 46 32.6 -2.8**
comp=Z,13nm,0.3s,baz=279,slow=23,SNR=5.3
CBIJ S **Sn 05 49 07.9 -12**
comp=Z,21nm,0.3s,baz=282,slow=22,SNR=6.3
CBIJ LR LR 05 51 21.7
comp=Z,118nm,19.7s,baz=314,slow=33
HIA Hailar 16.68 303 *e*P **Pn 05 46 56.1 -1.6**
comp=Z,62nm,0.8s
HIA Hailar 16.68 303 *e*P **Pn 05 46 56.1 -1.6**
HIA pmax pmax
comp=Z,62nm,0.8s
NRGR Nerungri 18.14 330 *e*P **P 05 47 14.1 +0.2**
NRGR S **S 05 50 25.6 -9.5**
NRGR smax
comp=E,21nm,0.4s
CLNS Chul'man 18.21 330 *e*P **P 05 47 13.1 -1.6**
CLNS *e*S **S 05 50 35.4 -1.1**
CLNS pmax pmax
comp=Z,37nm,0.9s
CLNS pmax pmax
comp=N,21nm,0.8s
CLNS pmax pmax
comp=E,9.0nm,0.8s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=Z,19nm,0.9s
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS smax
comp=E,17nm,1.1s
CLNS smax
comp=N,10.0nm,0.9s
CLNS smax
comp=Z,5.0nm,0.9s
CLNS MLR MLR
comp=Z,100nm,9.0s
CLNS MLR MLR
comp=N,100nm,12.0s
CLNS MLR MLR
comp=E,200nm,14.0s
BJT Baijiatuau 19.02 272 *e*P **P 05 47 22.4 -1.2**
comp=E,16nm,0.7s
BJT Baijiatuau 19.02 272 *e*P **P 05 47 22.4 -1.2**
BJT pmax pmax
comp=Z,16nm,0.7s
NJ2 Nanjing 20.39 248 *e*P **P 05 47 39.4 +0.9**
NJ2 AMB AMB
comp=Z,20nm,0.5s
YAK Yakutsk 21.25 345 *e*P **P 05 47 45.5 -1.9**
comp=Z,125nm,0.6s,mb5.4
YAK Yakutsk 21.25 345 *e*P **P 05 47 45.4 -1.9**
YAK *e*S **S 05 51 29.2 -7.0**
YAK *e* 05 51 53.5
YAK pmax pmax
comp=Z,87nm,0.8s,mb5.1
YAK pmax pmax
comp=N,43nm,1.0s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK smax
comp=N,260nm,2.0s
YAK smax
comp=E,125nm,1.6s
CIT Chita 21.27 308 *e*P **P 05 47 45.6 -2.1**
CIT *e* 05 48 17.5
CIT *e*S **S 05 51 32.3 -4.6**
CIT pmax pmax
comp=Z,57nm,1.2s,mb4.8
SEY Seymchan 22.00 14 *i* P **P 05 47 54.5 -0.8**
HHC Hu-ho-hao-te 22.25 277 *e*P **P 05 47 54.8 -3.4**
HHC AP 05 48 18.1
HHC *e*S **S 05 51 45.3 -8.8**
HHC AMB AMB
comp=Z,11nm,0.6s,mb4.4
HHC AMB AMB
comp=Z,96nm,5.2s
BOD Bodaibo 23.41 322 *e*P **P 05 48 05.9 -3.2**
BOD pmax pmax
comp=Z,14nm,0.7s,mb4.4
TATO Taipei 23.55 230 *e*P **P 05 48 09.5 -1.1**
comp=Z,87nm,0.9s,mb5.1
WHN Wuhan 24.41 251 *e*P **P 05 48 18.3 -0.1**
ULN Ulaanbaatar 24.78 295 *e*P **P 05 48 21.2 -0.4**
comp=Z,16nm,0.6s,mb4.6
ULN Ulaanbaatar 24.78 295 *d i*P **P 05 48 22.1 +0.5**
SONM Songino Array 25.22 295 P **P 05 48 25.5 -0.1**
SONM 05 51 55.8
SONM pmax pmax
comp=Z,7.0nm,0.6s
SONM pmax pmax
comp=Z,2.0nm,0.5s
SONM pmax pmax
comp=N,1.0nm,0.9s
SONM MLR MLR
comp=Z,76nm,18.1s
SONM Songino Array 25.22 295 P **P 05 48 25.5 -0.1**
comp=Z,6.6nm,0.6s,mb4.3,baz=101,slow=8.0,SNR=36
SONM PcP PcP 05 51 55.8 +0.1
comp=Z,1.7nm,0.5s,baz=136,slow=2.3,SNR=9.9
SONM ScP ScP 05 55 22.2 -1.1
comp=Z,1.0nm,0.9s,baz=336,slow=3.3,SNR=3.7
SONM LR LR 05 59 25.2
comp=Z,76nm,18.1s,baz=122,slow=39
XAN Xi'an 26.56 263 P **P 05 48 38.3 +0.5**
XAN AMB AMB
comp=Z,6.0nm,0.9s,mb4.1
IRK Irkutsk 26.91 305 *e*P **P 05 48 42.3 +1.6**
IRK pmax pmax
comp=Z,54nm,0.7s,mb5.2
TLY Talaya 27.22 304 *e*P **P 05 48 43.7 +0.2**
TLY Talaya 27.22 304 *e*P **P 05 48 43.7 +0.1**
TLY *e* 05 49 41.0
TLY pmax pmax
comp=Z,9.0nm,0.7s,mb4.4
TLY MLR MLR
comp=Z,53nm,12.0s
ZAK Zakamensk 27.35 301 *e*P **P 05 48 44.3 -0.4**
ZAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.1
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.5
MOY Mondy 28.87 304 *e*P **P 05 48 58.7 +0.5**
MOY pmax pmax
comp=Z,24nm,1.8s,mb4.5
BILL Bilibino 29.36 19 ⇓*e*P **P 05 49 02.6 +0.3**
BILL *i* S **S 05 53 44.2 -2.3**
BILL *e*SS SS 05 55 24.4 -32
BILL pmax pmax
comp=Z,3.0nm,1.5s,mb3.7
BILL MLR MLR
comp=Z,100nm,14.0s
LZH Lanzhou 29.48 271 *e*P **P 05 49 07.1 +3.3**
LZH AP pP 05 49 37.5 +7.1
LZH XP sP 05 49 51.1 +6.5
LZH PP PP 05 50 07.5 -5.0
LZH PCP PcP 05 52 09.5 +3.3
LZH *e*S **S 05 53 47.0 -2.0**
LZH XS sS 05 54 36.0 +0.4
LZH SS SS 05 55 30.0 -29
LZH AMB AMB
comp=Z,20nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,130nm,4.4s
TIXI Tiksi 30.38 352 ⇑*e*P **P 05 49 10.9 -0.4**
TIXI pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
GTA Gaotai 31.30 279 *e*P **P 05 49 20.4 +0.6**
GTA AP pP 05 49 44.5 -2.0
GTA PP PP 05 50 28.6 -4.1
GTA PCP PcP 05 52 11.6 +0.7
GTA S **S 05 54 14.8 -2.7**
GTA SCP ScP 05 55 41.9 -0.5
GTA PCS PcS 05 55 56.0 +0.8
GTA SS SS 05 56 10.4 -26
GTA SCS ScS 05 59 38.6 -1.5
GTA AMB AMB
comp=Z,3.0nm,1.0s,mb4.0
GTA AMB AMB
comp=Z,62nm,8.4s
GTA LR LR
comp=N,159nm,18.7s
GTA LR LR
comp=E,121nm,16.8s
GTA LR LR
comp=Z,126nm,13.0s
CD2 Chengdu 31.89 262 *e*P **P 05 49 26.1 +1.1**
CD2 XP sP 05 50 05.9 0.0
CD2 PP PP 05 50 36.3 -3.0
CD2 S **S 05 54 26.0 -0.7**
CD2 SS SS 05 56 25.4 -23
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,200nm,14.4s
CD2 LR LR
comp=Z,220nm,10.8s
GYA Guiyang 32.26 252 P **P 05 49 29.8 +1.5**
GYA AP pP 05 49 56.8 +1.7
GYA XP sP 05 50 11.4 +2.1
GYA PP PP 05 50 41.3 -2.2
GYA PCP PcP 05 52 15.5 +1.8
GYA S **S 05 54 32.9 +0.2**
GYA XS sS 05 55 20.0 +0.5
GYA SCP ScP 05 55 46.9 +1.0
GYA PCS PcS 05 55 59.8 +0.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,70nm,4.2s
KMI Kunming 35.88 254 P **P 05 49 59.3 -0.3**
KMI AP pP 05 50 27.6 +0.9
KMI XP sP 05 50 40.8 +0.1
KMI AMB AMB
comp=Z,12nm,0.5s,mb5.1
KMI LR LR
comp=Z,49nm,29.2s
TNA Tin City 36.69 33 *e*P **P 05 50 05.9 -0.1**
WMQ Urumqi 38.70 291 ⇑P **P 05 50 24.1 +0.9**
WMQ AP pP 05 50 51.8 +1.2
WMQ XP sP 05 51 05.8 +1.2
WMQ PP PP 05 51 59.5 +5.4
WMQ S **S 05 56 11.1 +0.3**
WMQ XS sS 05 57 01.1 +2.7
WMQ AMB AMB
comp=Z,11nm,0.7s,mb4.8
WMQ AMB AMB
comp=Z,83nm,4.5s
WMQ LR LR
comp=N,99nm,19.9s
WMQ LR LR
comp=E,83nm,23.6s
WMQ LR LR
comp=Z,57nm,16.0s
NVS Novosibirsk 39.47 309 *e*P **P 05 50 29.8 +0.4**
NVS *i* *PP pP 05 50 58.0 +1.1
NVS *e*S **S 05 56 22.1 +0.2**
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,10.0nm,0.7s
NVS pmax pmax
comp=Z,11nm,0.7s,mb4.8
NVS smax
comp=N,17nm,1.8s
NVS smax
comp=E,30nm,1.8s
TTA Tatalina 41.52 38 *e*P **P 05 50 46.5 +0.4**
comp=E,3.5nm,0.6s,mb4.3
TTA Tatalina 41.52 38 *e*P **P 05 50 46.5 +0.4**
TTA pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
MK31 Makanchi Array 41.55 297 *i* P **P 05 50 47.3 +0.7**
MK31 pmax pmax
comp=Z,15nm,0.5s,mb5.0
MKAR Makanchi Array 41.55 297 P **P 05 50 47.8 +1.2**
MKAR 05 52 41.2
MKAR S **S 05 56 53.3 +0.1**
MKAR pmax pmax
comp=Z,15nm,0.6s
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR pmax pmax
comp=N,1.0nm,0.6s
MKAR Makanchi Array 41.55 297 P **P 05 50 47.8 +1.2**
comp=N,15nm,0.6s,mb4.9,baz=82,slow=8.7,SNR=62
MKAR PcP PcP 05 52 41.2 -0.4
comp=N,5.0nm,0.7s,baz=64,slow=5.5,SNR=6.4
MKAR ScP ScP 05 56 18.6 -1.6
comp=N,0.9nm,0.6s,baz=74,slow=5.2,SNR=6.1
MKAR S **S 05 56 53.3 +0.1**
comp=N,0.1nm,0.4s,baz=57,slow=12,SNR=3.7
LSA Lhasa 41.87 270 *e*P **P 05 50 50.6 +1.2**
IMA2 Indian Mountai 42.56 33 *e*P **P 05 50 54.2 -0.3**
CHTO Chiang Mai 42.61 250 *e*P **P 05 50 55.8 +0.3**
comp=N,3.9nm,0.6s,mb4.3
CHTO *e* pP 05 51 27.0 +3.6
CHTO *e*PcP PcP 05 52 45.3 -0.2
CHTO Chiang Mai 42.61 250 *e*P **P 05 50 55.8 +0.3**
CHTO *e* pP 05 51 27.0 +3.6
CHTO *e* 05 52 45.3
CHTO pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KDAK Kodiak Island 43.61 45 P **P 05 51 02.2 -0.9**
KDAK Kodiak Island 43.61 45 P **P 05 51 02.2 -0.9**
comp=Z,6.1nm,0.5s,mb4.6,baz=280,slow=11,SNR=6.5
MCK McKinley 44.67 36 *e*P **P 05 51 11.8 +0.3**
PMR Palmer 44.82 39 *e*P **P 05 51 12.4 -0.2**
comp=Z,23nm,1.2s,mb4.8
PMR Palmer 44.82 39 *e*P **P 05 51 12.4 -0.2**
PMR pmax pmax
comp=Z,23nm,1.2s,mb4.8
COLA College 45.03 35 *e*P **P 05 51 14.3 0.0**
comp=Z,22nm,0.8s,mb4.9
COLA College 45.03 35 ⇓*e*P **P 05 51 14.5 +0.2**
TAPN Taplejung 45.68 269 *e*P **P 05 51 20.7 +0.8**
comp=Z,29nm,0.9s,mb5.0
ODAN Odare 46.19 269 *e*P **P 05 51 24.6 +0.7**
comp=Z,17nm,0.8s,mb4.8
JIRN Jiri 46.65 270 *e*P **P 05 51 28.2 +0.7**
comp=Z,12nm,0.5s,mb4.9
CHKZ Chkalovo 46.95 310 *e*P **P 05 51 29.2 -0.2**
KKN Kakani 47.25 271 *e*P **P 05 51 32.8 +0.6**
comp=Z,50nm,0.8s,mb5.3
BRVK Borovoye 47.31 309 *e*P **P 05 51 32.8 +0.5**
TKM2 Tokmak 2 47.32 294 *e*P **P 05 51 33.2 +0.7**
comp=Z,39nm,0.7s,mb5.2
TKM2 Tokmak 2 47.32 294 *e*P **P 05 51 33.2 +0.7**
TKM2 pmax pmax
comp=Z,39nm,0.7s,mb5.2
GKN Gorkha 47.62 272 *e*P **P 05 51 35.0 0.0**
comp=Z,20nm,0.4s,mb5.3
EGAK Eagle 47.88 34 *e*P **P 05 51 36.3 -0.3**
AAK Ala-Archa 48.18 295 *e*P **P 05 51 37.9 -1.2**
comp=Z,6.6nm,0.6s,mb4.6
AAK Ala-Archa 48.18 295 *e*P **P 05 51 37.9 -1.2**
AAK pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
UCH Uchtor 48.32 294 *e*P **P 05 51 43.3 +3.0**
comp=Z,3.8nm,0.6s,mb4.4
UCH *e*PcP PcP 05 53 05.8 +0.7
EKS2 Erkin-Say 48.65 295 *e*P **P 05 51 42.8 +0.1**
comp=Z,7.1nm,0.6s,mb4.8
KSM Kuching 48.98 223 *e*P **P 05 51 45.7 +0.2**
INK Inuvik 50.09 29 *e*P **P 05 51 53.4 +0.1**
INK Inuvik 50.09 29 P **P 05 51 53.3 0.0**
INK 05 53 10.2
INK pmax pmax
comp=Z,22nm,0.5s
INK pmax pmax
comp=Z,2.0nm,0.5s
INK Inuvik 50.09 29 P **P 05 51 53.3 0.0**
comp=Z,22nm,0.5s,mb5.3,baz=297,slow=6.6,SNR=362
INK PcP PcP 05 53 10.2 -0.9
comp=Z,1.9nm,0.5s,baz=245,slow=4.4,SNR=2.2
KK31 Karatay Array 50.66 297 *i* P **P 05 51 55.8 -2.2**
KK31 pmax pmax
comp=Z,13nm,0.7s,mb5.1
KULM Kulim 51.33 236 *e*P **P 05 52 03.8 +0.5**
PMG Port Moresby 51.42 173 *e*P **P 05 52 03.0 -0.8**
comp=Z,6.5nm,0.8s,mb4.7
PMG Port Moresby 51.42 173 ⇑*e*P **P 05 52 03.5 -0.3**
PMG Port Moresby 51.42 173 P **P 05 52 02.8 -1.1**
comp=Z,2.0nm,0.3s,mb4.6,baz=278,slow=22,SNR=3.6
SVE Sverdlovsk 51.43 316 ⇓*e*P **P 05 52 08.7 +5.2**
SVE pmax pmax
comp=Z,46nm,0.7s,mb5.6
ARU Arti 52.64 316 *e*P **P 05 52 12.7 +0.2**
comp=Z,63nm,1.6s,mb5.4
ARU Arti 52.64 316 *d i*P **P 05 52 12.3 -0.2**
ARU *e* 05 53 17.4
ARU 05 54 11.2
ARU S **S 05 59 31.7 +1.6**
ARU SS SS 06 03 05.3 -4.2
ARU pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
PSI Prapat 54.34 236 P **P 05 52 25.1 -0.3**
PSI PcP PcP 05 53 27.7 -0.2
PSI Prapat 54.34 236 P **P 05 52 25.2 -0.2**
PSI 05 53 27.7
PSI pmax pmax
comp=Z,9.0nm,0.7s,mb4.9
PSI pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
PSI Prapat 54.34 236 P **P 05 52 25.1 -0.3**
comp=Z,9.0nm,0.7s,mb4.9,baz=1.0,slow=22,SNR=11
PSI PcP PcP 05 53 27.7 -0.2
comp=Z,2.9nm,0.4s,baz=107,slow=1.4,SNR=4.8
DLBC Dease Lake 54.87 40 P **P 05 52 29.4 +0.7**
baz=313,slow=3.7
KAKA Kakadu 55.02 191 *e*P **P 05 52 29.0 -1.2**
comp=Z,23nm,0.7s,mb5.3
AKTK Aktyubinsk 55.36 309 P **P 05 52 32.4 +0.1**
AKTK ScP ScP 05 57 16.6 -1.8
AKTO Aktyubinsk 55.36 309 P **P 05 52 32.4 +0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
AKTO pmax pmax
comp=N,2.0nm,0.7s
AKTO Aktyubinsk 55.36 309 P **P 05 52 32.4 +0.1**
comp=N,4.0nm,0.7s,mb4.6,baz=67,slow=13,SNR=16
AKTO ScP ScP 05 57 16.6 -1.8
comp=N,1.6nm,0.7s,baz=48,slow=4.5,SNR=4.6
KBL Kabul 55.65 288 *e*P **P 05 52 33.8 -0.9**
COEN Coen 55.68 178 *e*P **P 05 52 34.4 -0.5**
comp=N,28nm,1.3s,mb5.1
PRGR Permogore 56.59 325 *i* P **P 05 52 40.1 -0.8**
RES Resolute Bay 57.86 15 *e*P **P 05 52 48.9 -0.7**
KEV Kevo 58.80 338 *ep* P **P 05 52 54.7 -1.5**
comp=N,6.7nm,0.6s,mb4.8
KEV Kevo 58.80 338 *e*P **P 05 52 54.7 -1.5**
KEV pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ARCES ARCESS Array B 59.35 338 P **P 05 52 59.6 -0.4**
ARCES LR LR 06 21 15.0
ARCES ARCESS Array B 59.35 338 P **P 05 52 59.6 -0.4**
ARCES pmax pmax
comp=Z,2.0nm,0.5s
ARCES MLR MLR
comp=Z,90nm,18.5s
ARCES ARCESS Array B 59.35 338 P **P 05 52 59.6 -0.4**
comp=Z,2.2nm,0.5s,mb4.5,baz=53,slow=8.2,SNR=33
ARCES LR LR 06 21 15.0
comp=Z,90nm,18.5s,baz=14,slow=38
YKW3 Yellowknife Ar 59.59 31 *e*P **P 05 53 01.3 -0.5**
YKA Yellowknife Ar 59.63 31 P **P 05 53 01.6 -0.4**
YKA 05 53 47.6
YKA pmax pmax
comp=Z,3.0nm,0.5s
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 59.63 31 P **P 05 53 01.6 -0.5**
comp=Z,3.2nm,0.5s,mb4.6,baz=308,slow=6.1,SNR=134
YKA PcP PcP 05 53 47.6 -0.3
comp=Z,1.2nm,0.7s,baz=313,slow=3.0,SNR=4.2
KTK1 Kautokeino 60.30 339 *e*P **P 05 53 07.2 +0.7**
KTK1 *e* 05 53 12.5
TRO Tromso 61.02 340 *e*P **P 05 53 09.8 -1.5**
comp=Z,48nm,2.0s,mb5.2
TRO Tromso 61.02 340 *e*P **P 05 53 09.8 -1.5**
TRO AMb AMB 05 53 16.6
comp=Z,48nm,2.0s,mb5.2
FITZ Fitzroy Crossi 61.49 197 ⇓*i*P **P 05 53 14.3 -0.8**
comp=Z,16nm,0.9s,mb5.0
FITZ Fitzroy Crossi 61.49 197 P **P 05 53 14.7 -0.5**
comp=Z,8.5nm,0.8s,mb4.8,baz=16,slow=7.4,SNR=20
FITZ PcP PcP 05 53 55.8 -0.1
comp=Z,2.5nm,0.8s,baz=34,slow=7.1,SNR=4.0
JOF Joensuu 61.57 331 *ep* P **P 05 53 13.5 -1.7**
comp=Z,14nm,0.6s,mb5.2
JOF Joensuu 61.57 331 *e*P **P 05 53 13.5 -1.7**
JOF pmax pmax
comp=Z,14nm,0.6s,mb5.2
CTA Charters Tower 61.92 175 *e*P **P 05 53 16.9 -1.1**
comp=Z,6.8nm,0.9s,mb4.7
CTA Charters Tower 61.92 175 *e*P **P 05 53 16.9 -1.1**
CTA pmax pmax
comp=Z,7.0nm,0.9s
CTA Charters Tower 61.92 175 P **P 05 53 17.0 -1.0**
comp=Z,8.5nm,0.8s,mb4.8,baz=344,slow=5.4,SNR=7.8
CTAO Charters Tower 61.92 175 *e*P **P 05 53 17.5 -0.5**
comp=Z,11nm,0.9s,mb4.9
CTAO Charters Tower 61.92 175 *e*P **P 05 53 17.5 -0.5**
CTAO pmax pmax
comp=Z,11nm,0.9s,mb4.9
WB2 Warramunga Arr 61.93 187 ⇓*i*P **P 05 53 16.2 -1.8**
WRA Warramunga Arr 61.94 187 P **P 05 53 16.4 -1.7**
WRA 05 53 57.7
WRA pmax pmax
comp=Z,10.0nm,0.6s
WRA pmax pmax
comp=Z,3.0nm,0.6s
WRA Warramunga Arr 61.94 187 P **P 05 53 16.4 -1.7**
comp=Z,10.0nm,0.6s,mb5.0,baz=6.7,slow=6.9,SNR=146
WRA PcP PcP 05 53 57.7 +0.1
comp=Z,3.3nm,0.6s,baz=1.5,slow=4.9,SNR=7.8
NLWA Neilton Lookou 63.53 49 ⇓P **P 05 53 28.7 +0.3**
baz=63
D03A Wishkah Elem. 63.74 49 ⇓P **P 05 53 28.5 -1.3**
baz=64
KAF Kangasniemi 63.88 332 *ep* P **P 05 53 28.8 -1.7**
comp=Z,14nm,0.7s,mb4.9,baz=48,slow=6.2
KAF Kangasniemi 63.88 332 *e*P **P 05 53 28.8 -1.7**
KAF pmax pmax
comp=Z,14nm,0.7s,mb4.9
B05A Bryant 64.02 48 ⇑P **P 05 53 31.0 -0.7**
baz=64
OBN Obninsk 64.10 322 ⇑*i*P **P 05 53 31.8 -0.2**
OBN *i* *PP pP 05 53 59.9 -2.0
OBN *e* 05 55 50.2
OBN pmax pmax
comp=Z,13nm,0.8s,mb4.8
OBN MLR MLR
comp=Z,100nm,17.0s
E03A Lebam 64.18 50 ⇑P **P 05 53 33.0 +0.3**
baz=64
FINES FINESS Array B 64.41 331 P **P 05 53 33.3 -0.6**
FINES pmax pmax
comp=Z,14nm,0.7s
FINES FINESS Array B 64.41 331 P **P 05 53 33.3 -0.6**
comp=Z,14nm,0.7s,mb4.9,baz=52,slow=7.5,SNR=50
A07A Ashnola River, 64.51 46 ⇓P **P 05 53 34.4 -0.4**
baz=64
D05A Enumclaw 64.70 49 ⇓P **P 05 53 35.4 -0.7**
baz=64
MOR8 Moi Rana 64.70 339 *e*P **P 05 53 33.9 -1.8**
MOR8 *e* 05 53 39.5
B07A Winthrop 64.99 47 ⇓P **P 05 53 37.6 -0.4**

baz=65
A08A **Turner Farm, O** 65.16 46 ⇑P P 05 53 38.3 -0.7
baz=65
F04A **Amboy** 65.18 50 ⇑P P 05 53 38.5 -0.7
baz=65
E05A **Randle** 65.19 49 ⇑P P 05 53 39.2 0.0
baz=65
D06A **Cle Elum** 65.33 48 ⇓P P 05 53 40.1 0.0
baz=65
H03A **Soap Creek Ran** 65.40 51 ⇑P P 05 53 40.6 0.0
baz=65
C07A **Waterville** 65.47 47 ⇓P P 05 53 40.4 -0.7
baz=65
B08A **Colville Reser** 65.47 46 ⇓P P 05 53 40.4 -0.7
baz=65
A09A **Danville** 65.51 45 ⇑P P 05 53 40.9 -0.4
baz=65
EDM **Edmonton** 65.59 40 eP P 05 53 41.6 -0.1
E06A **Yakima** 65.64 49 ⇑P P 05 53 42.4 +0.3
baz=65
ASAR **Alice Springs** 65.66 187 P P 05 53 41.5 -0.9
ASAR pP 05 54 12.7 +0.3
ASAR pmax pmax
comp=Z,7.0nm,0.8s
ASAR pmax pmax
comp=Z,3.0nm,0.7s
ASAR **Alice Springs** 65.66 187 P P 05 53 41.5 -0.9
comp=Z,6.6nm,0.8s,mb4.5,baz=6.6,slow=6.0,SNR=70
ASAR PcP PcP 05 54 12.7 -0.1
comp=Z,3.1nm,0.7s,baz=6.5,slow=4.7,SNR=7.6
D07A **Quincy** 65.81 48 ⇑P P 05 53 42.9 -0.4
baz=66
I03A **Eugene** 65.82 52 ⇓P P 05 53 43.6 +0.3
baz=66
MBWA **Marble Bar** 65.90 202 eP P 05 53 42.8 -1.2
comp=Z,6.1nm,0.6s,mb4.6
J02A **Umpqua** 65.99 53 ⇓P P 05 53 44.5 0.0
baz=66
H04A **Detroit Lake** 66.04 51 ⇑P P 05 53 44.7 0.0
baz=66
A10A **Northport** 66.05 45 ⇑P P 05 53 44.4 -0.4
baz=66
B09A **Rice** 66.07 46 ⇑P P 05 53 44.9 -0.1
baz=66
VSU **Vasula** 66.16 328 i P P 05 53 45.1 -0.2
F06A **Goldendale** 66.20 49 ⇓P P 05 53 46.4 +0.6
baz=66
C09A **Chrisman Ranch** 66.38 46 ⇓P P 05 53 46.5 -0.4
baz=66
K02A **Glendale** 66.39 53 ⇑P P 05 53 46.7 -0.3
baz=66
I04A **Tendick Farm,** 66.43 52 ⇓P P 05 53 46.3 -1.0
baz=66
D08A **Wollman Farm,** 66.47 47 ⇓P P 05 53 46.8 -0.7
baz=66
HAWA **Hanford** 66.53 48 eP P 05 53 48.0 +0.1
comp=Z,41nm,2.1s,mb4.9
G06A **Carlson Farm,** 66.60 50 ⇓P P 05 53 48.3 0.0
baz=66
F07A **Phinny Hill Vi** 66.61 49 ⇑P P 05 53 48.0 -0.4
baz=66
H05A **Madras** 66.61 50 ⇑P P 05 53 48.4 0.0
baz=66
A11A **Hall Mountain,** 66.69 45 ⇑P P 05 53 48.8 -0.1
baz=66
NEW **Newport** 66.72 45 eP P 05 53 48.7 -0.3
comp=Z,3.6nm,0.9s,mb4.2
NEW **Newport** 66.72 45 eP P 05 53 48.7 -0.3
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW **Newport** 66.72 45 P P 05 53 49.0 0.0
comp=Z,1.1nm,0.6s,mb3.9,baz=321,slow=5.2,SNR=5.3
I05A **Bend** 66.88 51 ⇓P P 05 53 49.4 -0.7
baz=67
J04A **Umpqua Nationa** 66.93 52 ⇓P P 05 53 51.4 +0.9
baz=67
B11A **Sandpoint** 67.01 45 ⇓P P 05 53 51.1 +0.2
baz=67
VIPM **Ingram Point** 67.04 50 P P 05 53 51.6 +0.5
H06A **Lindquist Farm** 67.07 50 ⇓P P 05 53 50.7 -0.7
baz=67
G07A **Ruggs Ranch, H** 67.13 49 ⇑P P 05 53 52.0 +0.3
baz=67
F08A **Pendleton** 67.31 48 ⇑P P 05 53 52.8 0.0
baz=67
D10A **Wagner Farm, O** 67.37 47 ⇓P P 05 53 53.1 -0.1
baz=67
J05A **Fort Rock** 67.42 52 ⇓P P 05 53 53.8 +0.3
baz=67
YBH **Yreka Blue Hor** 67.47 54 ⇑P P 05 53 54.2 +0.3
baz=67
G08A **Pilot Rock** 67.52 49 ⇓P P 05 53 54.1 0.0
baz=67
M02C **Callahan** 67.59 54 ⇑P P 05 53 54.6 0.0
baz=67
H07A **Lands Inn, Kim** 67.60 50 ⇑P P 05 53 54.3 -0.4
baz=67
I06A **Prineville** 67.62 51 ⇓P P 05 53 55.1 +0.3
baz=67
KIV **Kislovodsk** 67.62 309 eP P 05 53 56.4 +1.6
KIV **Kislovodsk** 67.62 309 eP P 05 53 55.0 +0.2
KIV pmax pmax
comp=Z,32nm,1.1s,mb5.1
KIV **Kislovodsk** 67.62 309 ⇑iP P 05 53 57.4 +2.6
A13A **Flathead Natio** 67.72 44 ⇑P P 05 53 54.9 -0.4
baz=68
E10A **Myers Farm, Un** 67.81 47 ⇓P P 05 53 55.9 -0.1
baz=68
LHEM **Herd Peak** 67.83 54 P P 05 53 56.9 +0.7
WALA **Waterton Lakes** 67.90 43 eP P 05 53 56.7 +0.3
I07A **Izee** 67.94 50 P P 05 53 57.5 +0.7
baz=68,SNR=5.1
K05A **Summer Lake** 67.96 52 ⇓P P 05 53 57.7 +0.8
baz=68,SNR=6.1
M04C **Macdoel** 67.96 53 ⇑P P 05 53 57.3 +0.3
baz=68,SNR=6.0
B13A **Whitefish** 68.04 44 ⇓P P 05 53 57.6 +0.2
baz=68,SNR=7.4
F10A **Beach Ranch, E** 68.06 47 ⇓P P 05 53 57.5 -0.1
baz=68
J06A **Christmas Vall** 68.07 51 ⇓P P 05 53 58.2 +0.6
baz=68
H08A **Prairie City** 68.15 49 ⇑P P 05 53 58.2 +0.1
baz=68,SNR=7.3
LASM **Arnica Sink** 68.23 53 P P 05 53 59.4 +0.7
WDC **Whiskeytown Da** 68.27 55 ⇓P P 05 53 58.9 0.0
baz=68
K06A **Valley Falls** 68.29 52 ⇓P P 05 53 59.3 +0.3
baz=68
O02C **Red Bluff** 68.36 55 ⇑P P 05 53 59.8 +0.3
baz=68
E11A **Bogner Ranch,** 68.38 47 ⇑P P 05 53 59.1 -0.4
baz=68
L05A **Lakeview** 68.40 53 ⇓P P 05 54 00.0 +0.3
baz=68
D12A **Red Ives Fores** 68.40 46 ⇓P P 05 53 59.3 -0.4
baz=68
C13A **Hot Springs** 68.42 45 P P 05 54 00.1 +0.4
baz=68,SNR=6.7
J07A **Hines** 68.48 51 ⇑P P 05 54 00.6 +0.4
baz=68,SNR=12
G10A **Bishop Farm, J** 68.54 48 P P 05 54 00.7 +0.1
baz=68,SNR=6.1
I08A **Drewsey** 68.58 50 P P 05 54 01.7 +0.9
baz=68,SNR=10
M05C **Lookout** 68.63 53 ⇑P P 05 54 01.2 0.0
baz=68
F11A **Grangeville** 68.70 47 P P 05 54 01.6 +0.1
baz=68,SNR=6.5
BMO **Blue Mountains** 68.71 48 eP P 05 54 01.4 -0.2
comp=Z,8.0nm,1.0s,mb4.5
BMO **Blue Mountains** 68.71 48 eP P 05 54 01.4 -0.2
BMO pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
GASB **Alder Springs** 68.72 55 ⇑P P 05 54 02.0 +0.3
baz=68
HATC **Hat Creek Radi** 68.78 54 ⇓P P 05 54 02.4 +0.3
baz=69
C14A **Swan Lake** 68.80 44 ⇑P P 05 54 02.6 +0.6
baz=69
MOD **Modoc** 68.80 52 eP P 05 54 01.9 -0.3
comp=Z,6.4nm,0.6s,mb4.6
LBCM **Butte Creek Ri** 68.83 54 P P 05 54 02.6 +0.2
D13A **Huson** 68.85 45 P P 05 54 02.4 -0.1
baz=69,SNR=5.9
K07A **Rock Creek Ran** 68.94 51 ⇑P P 05 54 03.4 +0.4
baz=69,SNR=8.8
G11A **Walters Elk Ra** 68.94 47 P P 05 54 02.8 -0.2
baz=69,SNR=19
J08A **Circle Bar Ran** 68.97 50 ⇓P P 05 54 03.7 +0.4
baz=69,SNR=7.4
I09A **Lost Marbles R** 69.01 49 ⇑P P 05 54 04.0 +0.6
baz=69
H10A **Noah's Angus R** 69.19 48 P P 05 54 04.3 -0.2
baz=69,SNR=15
F12A **Elk City** 69.27 47 P P 05 54 05.2 +0.2
baz=69,SNR=11
MSO **Missoula** 69.30 45 eP P 05 54 05.1 0.0
L07A **Adell** 69.30 52 P P 05 54 06.0 +0.7
baz=69,SNR=16
O04C **Chester** 69.30 54 P P 05 54 06.0 +0.6
baz=69,SNR=13
K08A **Mann Creek Ran** 69.36 51 ⇑P P 05 54 06.0 +0.4
baz=69,SNR=5.5
MNRC **McLaughlin Nat** 69.36 56 ⇑P P 05 54 06.0 +0.3
baz=69
D14A **Greenough** 69.36 45 P P 05 54 05.3 -0.2
baz=69,SNR=5.5
J09A **Fry Pan Ranch,** 69.39 50 P P 05 54 06.3 +0.5
baz=69,SNR=14
E13A **Victor** 69.41 46 ⇑P P 05 54 05.8 -0.1
baz=69
WVOR **Wild Horse Val** 69.45 51 eP P 05 54 06.0 -0.2
comp=Z,5.3nm,1.0s,mb4.3
WVOR **Wild Horse Val** 69.45 51 eP P 05 54 06.0 -0.2
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
I10A **Payette** 69.47 49 ⇑P P 05 54 06.5 +0.3
baz=69
H11A **Donnelly** 69.52 48 ⇓P P 05 54 06.1 -0.5
baz=69,SNR=9.4
ORV **Oroville** 69.52 55 P P 05 54 06.3 -0.4
baz=69,SNR=7.7
NB2 **NORSAR Subarra** 69.60 337 P P 05 54 06.0 -0.7
comp=Z,12nm,0.7s,mb4.8,baz=37,slow=6.2
NB2 **NORSAR Subarra** 69.60 337 P P 05 54 06.0 -0.7
NB2 pmax pmax
comp=Z,12nm,0.7s,mb4.8
NOA **NORSAR Array B** 69.60 337 P P 05 54 06.1 -0.6
NOA pmax pmax
comp=Z,11nm,0.7s
NOA **NORSAR Array B** 69.60 337 P P 05 54 06.1 -0.6
comp=Z,11nm,0.7s,mb4.8,baz=38,slow=6.2,SNR=42
O05C **Quincy** 69.63 54 ⇓P P 05 54 06.7 -0.6
baz=69
FFC **Flin Flon** 69.64 34 eP P 05 54 06.7 -0.5
FCC **Fort Churchill** 69.66 27 eP P 05 54 06.5 -0.7
comp=Z,22nm,1.4s,mb4.8
FCC **Fort Churchill** 69.66 27 eP P 05 54 06.5 -0.7
FCC pmax pmax
comp=Z,22nm,1.4s,mb4.8
OHCM **Honcut** 69.67 55 eP P 05 54 07.4 -0.2
Q03C **Winters** 69.77 56 ⇓P P 05 54 09.2 +1.0
baz=70
L08A **Fields** 69.77 51 P P 05 54 08.7 +0.5
baz=70,SNR=6.7
M07A **Soldier Meadow** 69.79 52 P P 05 54 09.1 +0.8
baz=70,SNR=21
N06A **Buffalo Meadow** 69.79 53 P P 05 54 08.7 +0.3
baz=70,SNR=7.5
E14A **Clinton** 69.80 45 ⇑P P 05 54 07.6 -0.7
baz=70
K09A **Rome** 69.81 50 P P 05 54 08.7 +0.3
baz=70,SNR=5.3
NAO01 **NORSAR Array S** 69.85 337 eP P 05 54 06.8 -1.5
comp=Z,13nm,1.0s,mb4.7
D15A **Lincoln** 69.91 44 ⇑P P 05 54 08.2 -0.7
baz=70
BEKR **Beckwourth** 70.02 54 P P 05 54 09.8 +0.1
baz=70,SNR=11
O06A **Flanigan** 70.16 54 P P 05 54 10.9 +0.4
baz=70,SNR=6.0
M08A **Happy Creek Ra** 70.22 52 ⇑P P 05 54 11.2 +0.3
baz=70
P05C **Yuba Gap, Truc** 70.22 55 ⇑P P 05 54 10.7 -0.3
baz=70
E15A **Deer Lodge** 70.24 45 P P 05 54 10.9 0.0
baz=70,SNR=6.8
G13A **Cobalt** 70.25 47 ⇓P P 05 54 09.7 -1.3
baz=70
K10A **MacKenzie Ranc** 70.25 50 ⇓P P 05 54 10.8 -0.3
baz=70
H12A **Diamond D Ranc** 70.26 48 P P 05 54 11.2 +0.1
baz=70,SNR=8.1
L09A **Wilkinson Ranc** 70.27 51 P P 05 54 11.8 +0.6
baz=70,SNR=6.6
N07B **Gerlach** 70.29 53 ⇓P P 05 54 11.3 0.0
baz=70
AKASG **Malin Array Be** 70.34 321 P P 05 54 10.7 -0.8
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG **Malin Array Be** 70.34 321 P P 05 54 10.7 -0.8
comp=Z,6.5nm,0.4s,mb4.8,baz=45,slow=6.0,SNR=42
AKBB **Malin Array Si** 70.34 321 eP P 05 54 10.7 -0.8
KIEV **Kiev** 70.35 321 eP P 05 54 10.6 -1.0
comp=Z,12nm,0.6s,mb4.9
KIEV **Kiev** 70.35 321 eP P 05 54 10.6 -1.0
KIEV pmax pmax
comp=Z,12nm,0.6s,mb4.9
MFID **Camas Ranch** 70.44 49 ⇓P P 05 54 12.0 -0.2
baz=70
LAVA **Lava Cap Winer** 70.48 55 P P 05 54 12.6 0.0
baz=70,SNR=5.8
H13A **Challis** 70.58 47 ⇑P P 05 54 12.7 -0.4
baz=70
EGMT **Eagleton** 70.67 42 eP P 05 54 13.4 -0.2
comp=Z,11nm,0.8s,mb4.7
EGMT **Eagleton** 70.67 42 P P 05 54 13.5 0.0
baz=70,SNR=9.2
F15A **Butte** 70.70 45 P P 05 54 14.0 +0.3
baz=70,SNR=11
PAHR **Pah Rah Range** 70.71 54 eP P 05 54 14.4 +0.5
comp=Z,10nm,0.8s,mb4.7
O07A **Toulon** 70.73 53 ⇑P P 05 54 14.2 +0.2
baz=70,SNR=9.8
LRM **Limekiln Ridge** 70.73 45 eP P 05 54 14.1 +0.2
K11A **Parker Ranch,** 70.73 50 ⇓P P 05 54 13.9 -0.2
baz=70
WCN **Washoe City** 70.74 54 ⇓P P 05 54 14.1 0.0
baz=70
M09A **Marrel Ranch,** 70.78 51 ⇑P P 05 54 14.6 +0.3
baz=71
N08A **GE Springer Mi** 70.78 52 P P 05 54 14.8 +0.5
baz=71,SNR=9.3
R05C **Kirkwood Meado** 70.92 55 ⇑P P 05 54 15.5 +0.3
baz=71
L10A **Juniper Basin** 70.93 50 ⇑P P 05 54 15.4 +0.2
baz=71
J12A **Stokes Ranch,** 70.95 49 ⇓P P 05 54 15.9 +0.6
baz=71
DLMT **Dillon** 70.96 46 eP P 05 54 15.8 +0.4
comp=Z,16nm,0.9s,mb4.8
LCCM **Lewis and Clar** 71.03 45 P P 05 54 15.9 +0.1
I13A **Wildhorse Cree** 71.07 48 ⇑P P 05 54 16.6 +0.6
baz=71
N09A **Rock Creek Ran** 71.09 52 ⇑P P 05 54 16.8 +0.6
baz=71
HLID **Hailey** 71.14 48 eP P 05 54 16.8 +0.3
HLID **Hailey** 71.14 48 P P 05 54 16.9 +0.5
baz=71,SNR=8.5
G15A **Dillon** 71.14 46 P P 05 54 16.9 +0.5
baz=71,SNR=25
CMB **Columbia Colle** 71.14 56 eP P 05 54 16.6 0.0
comp=Z,4.8nm,0.8s,mb4.4
CMB **Columbia Colle** 71.14 56 eP P 05 54 16.6 0.0
CMB pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
CMB **Columbia Colle** 71.14 56 ⇑P P 05 54 16.6 0.0
baz=71
PACP **Pacheco Peak** 71.23 57 ⇑P P 05 54 17.1 0.0
baz=71
M10A **I.L. Ranch, Tu** 71.24 51 ⇓P P 05 54 17.4 +0.3
baz=71,SNR=9.4
BOZ **Bozeman (W)** 71.28 45 eP P 05 54 17.5 +0.2
BOZ **Bozeman (W)** 71.28 45 P P 05 54 17.6 +0.4
baz=71,SNR=12
J13A **Cove Ranch, Pi** 71.38 48 ⇑P P 05 54 18.4 +0.6
baz=71
R06C **Coleville** 71.41 55 ⇑P P 05 54 18.8 +0.6
baz=71
WAKR **Walker** 71.43 55 eP P 05 54 18.9 +0.6
K12A **Draper Farm, C** 71.46 49 ⇑P P 05 54 19.0 +0.6
baz=71
S06C **San Francisco** 71.57 55 ⇓P P 05 54 19.2 0.0
baz=71
S05C **Merced** 71.61 56 ⇓P P 05 54 19.4 0.0
baz=71
L12A **House Creek Ra** 71.71 50 ⇑P P 05 54 20.5 +0.6
baz=72
O09A **Fish Creek Ran** 71.72 52 ⇓P P 05 54 20.3 +0.2
baz=72
M11A **Holland Ranch,** 71.73 51 ⇑P P 05 54 21.0 +0.9
baz=72,SNR=9.5
K13A **Stover Farm, H** 71.91 49 ⇓P P 05 54 21.8 +0.7
baz=72
R07C **Lee Vining** 71.93 55 P P 05 54 22.4 +1.1
baz=72,SNR=8.2
O10A **Cortez Mining,** 72.05 52 ⇓P P 05 54 22.7 +0.7
baz=72
Q08A **Gabbs** 72.12 54 P P 05 54 22.8 +0.4
baz=72,SNR=11
N11A **Elko Archery C** 72.16 51 ⇓P P 05 54 23.3 +0.6
baz=72
NVAR **Mina Array Bea** 72.17 54 P P 05 54 23.4 +0.7
comp=Z,5.8nm,0.7s,mb4.5,baz=306,slow=4.2,SNR=44
GCMT **Greycliff** 72.21 44 eP P 05 54 23.1 +0.3
M12A **Wells** 72.24 50 P P 05 54 24.0 +0.9
baz=72,SNR=10
KCC **Kaiser Creek** 72.25 56 ⇓P P 05 54 23.3 +0.1
baz=72
R08A **Mina** 72.34 54 ⇓P P 05 54 24.2 +0.5
baz=72
L13A **Double Diamond** 72.36 49 ⇑P P 05 54 24.3 +0.6
baz=72
K14A **Jones Ranch, D** 72.49 48 ⇓P P 05 54 25.4 +0.9
baz=72
YFT **Old Faithful** 72.50 46 eP P 05 54 27.1 +2.6
P10A **Eureka** 72.50 52 ⇑P P 05 54 25.4 +0.7
baz=72
N12A **Clover Valley,** 72.54 51 P P 05 54 25.6 +0.8
baz=72,SNR=8.7
O11A **Cowboy Ranch,** 72.65 51 P P 05 54 26.1 +0.6
baz=72,SNR=5.2
M13A **Montello** 72.71 50 ⇓P P 05 54 26.3 +0.5
baz=72
IMW **Indian Meadow** 72.81 46 eP P 05 54 27.8 +1.3
comp=Z,7.8nm,0.8s,mb4.6
HELL **Mitchell Peak,** 72.84 56 ⇑P P 05 54 26.3 -0.4
baz=73
S08C **White Mtn Res** 72.84 55 ⇓P P 05 54 27.3 +0.6
baz=73
DCID1 **Drake Creek** 72.88 46 eP P 05 54 28.1 +1.3
P11A **Circle Ranch,** 72.97 52 ⇓P P 05 54 27.9 +0.5
baz=73
N13A **Wendover, West** 73.02 50 ⇓P P 05 54 28.0 +0.3
baz=73
MOOW **Moose Ponds** 73.02 46 eP P 05 54 28.2 +0.6
comp=Z,12nm,1.2s,mb4.6
R09A **Tonopah** 73.03 54 ⇓P P 05 54 28.1 +0.2
baz=73
Q10A **Clear Creek Ra** 73.06 53 ⇓P P 05 54 28.3 +0.4
baz=73
M14A **Sheep Mountain** 73.08 49 ⇓P P 05 54 28.3 +0.3
baz=73
TPAW **Teton Pass** 73.08 46 eP P 05 54 29.3 +1.3
comp=Z,18nm,1.4s,mb4.7
O12A **Currie** 73.09 51 P P 05 54 28.5 +0.4
baz=73,SNR=10
LOHW **Long Hollow** 73.18 46 eP P 05 54 28.7 0.0
comp=Z,2.4nm,0.6s,mb4.2
SNOW **Snow King Moun** 73.20 46 eP P 05 54 30.1 +1.3
comp=Z,15nm,1.3s,mb4.7
REDW **Red Top Meadow** 73.22 46 eP P 05 54 29.8 +1.0
comp=Z,10nm,1.2s,mb4.5
S09A **Goldfield** 73.27 54 ⇑P P 05 54 29.6 +0.3
baz=73
LAO **LASA Array** 73.34 42 eP P 05 54 29.8 +0.3
comp=Z,11nm,1.1s,mb4.6
FORT **Forrest** 73.41 192 eP P 05 54 29.6 -0.3
comp=Z,26nm,0.6s,mb5.2
R10A **Warm Springs** 73.46 53 ⇑P P 05 54 30.4 0.0
baz=73
AHID **Auburn Hatcher** 73.48 47 eP P 05 54 30.7 +0.3
Q11A **Duckwater** 73.48 52 ⇑P P 05 54 30.6 +0.2
baz=73
STKA **Stephens Creek** 73.49 180 eP P 05 54 30.2 -0.1
comp=Z,3.8nm,0.8s,mb4.3
STKA **Stephens Creek** 73.49 180 P P 05 54 30.2 -0.1
comp=Z,4.0nm,0.6s,mb4.4,baz=345,slow=6.2,SNR=10
P12A **McGill** 73.51 52 ⇓P P 05 54 30.9 +0.3
baz=73,SNR=5.8
S10A **Tonopah Range,** 73.52 54 ⇑P P 05 54 31.0 +0.3
baz=73
N14A **Grayback Hills** 73.60 50 ⇓P P 05 54 31.5 +0.4
baz=73
M15A **Larsen Ranch,** 73.61 49 ⇓P P 05 54 31.5 +0.3
baz=73
O13A **Hicks Ranch, I** 73.62 51 ⇑P P 05 54 31.7 +0.4
baz=73
BGU **Big Grassy Mou** 73.64 49 eP P 05 54 31.5 +0.2
GRAC **Grapevine Rang** 73.65 55 P P 05 54 32.1 +0.6
baz=73,SNR=5.6
MALT **Malatya** 73.67 307 eP P 05 54 32.5 +0.9
comp=Z,8.8nm,1.1s,mb4.4
MALT eP cP P cP 05 54 44.9 -1.9
MALT **Malatya** 73.67 307 eP P 05 54 32.5 +0.9
MALT e 05 54 44.9
MALT pmax pmax
comp=Z,9.0nm,1.1s,mb4.4
MALT **Malatya** 73.67 307 ⇑iP P 05 54 32.8 +1.2
Q12A **Willow Creek R** 73.84 52 ⇑P P 05 54 33.0 +0.4
baz=74
R11A **Troy Canyon, C** 73.85 53 ⇑P P 05 54 32.9 +0.2
baz=74
HWUT **Hardware Ranch** 74.00 48 eP P 05 54 33.9 +0.4
P13A **Bates Ranch, G** 74.05 51 ⇓P P 05 54 33.8 +0.1
baz=74
KWP **Kalwaria** 74.06 324 eP P 05 54 33.9 +0.3
KWP **Kalwaria** 74.06 324 eP P 05 54 33.9 +0.3
KWP **Kalwaria** 74.06 324 ⇑iP P 05 54 34.2 +0.6
MPMC **Manual Prospec** 74.19 56 ⇑P P 05 54 34.9 +0.3
baz=74
S11A **Rachel** 74.21 53 ⇓P P 05 54 35.1 +0.4
baz=74
DUG **Dugway** 74.25 50 eP P 05 54 35.4 +0.6
comp=Z,8.4nm,0.8s,mb4.5
DUG **Dugway** 74.25 50 eP P 05 54 35.4 +0.5
DUG pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
DUG **Dugway** 74.25 50 ⇓P P 05 54 35.3 +0.4
baz=74
FURC **Furnace Creek,** 74.31 55 P P 05 54 35.7 +0.4
baz=74,SNR=5.9
BW06 **Boulder Array** 74.32 46 eP P 05 54 34.9 -0.4
comp=Z,10nm,1.1s,mb4.5
PDAR **Pinedale Array** 74.32 46 P P 05 54 35.0 -0.2
comp=Z,9.4nm,0.9s,mb4.5,baz=265,slow=1.6,SNR=64
TPNV **Topopah Spring** 74.37 54 eP P 05 54 35.8 +0.2
TPNV **Topopah Spring** 74.37 54 ⇑P P 05 54 36.1 +0.5
baz=74
Q13A **Wheeler Ranch,** 74.37 52 ⇓P P 05 54 36.1 +0.4
baz=74
BURAR **Bucovina Array** 74.38 321 ⇑iP P 05 54 35.7 +0.2
R12A **Pony Springs,** 74.44 52 ⇑P P 05 54 36.2 +0.2
baz=74
EDW2 **Edwards Air Fo** 74.64 57 ⇓P P 05 54 37.3 0.0
baz=74
U10A **Ash Meadows, A** 74.66 55 ⇓P P 05 54 37.7 +0.3
baz=74
KOLS **Kolonicke sedl** 74.77 323 eP P 05 54 38.1 +0.4
T11A **Corn Creek, Al** 74.80 54 ⇓P P 05 54 38.6 +0.5
baz=75
NLU **North Lily Min** 74.83 50 eP P 05 54 38.4 +0.1
STHS **Stebnicka Huta** 74.87 324 eP P 05 54 39.1 +0.8
comp=Z,4.2nm,0.6s,mb4.3
STHS e 05 54 47.9
STHS **Stebnicka Huta** 74.87 324 eP P 05 54 39.1 +0.8
STHS e 05 54 47.9
STHS pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
OJC **Ojcow** 74.89 325 i P P 05 54 38.5 +0.1
OJC e 05 54 47.1
OJC **Ojcow** 74.89 325 ⇓iP P 05 54 38.5 +0.1
OJC e 05 54 47.1
MPU **Maple Canyon** 75.04 49 eP P 05 54 39.9 +0.4
GSC **Goldstone** 75.10 56 ⇑P P 05 54 40.1 +0.1
baz=75
CRVS **Cervenica-Dubn** 75.15 324 eP P 05 54 40.3 +0.4
TRPA **Tarpa** 75.24 323 ⇓iP P 05 54 40.9 +0.4
BFSC **Mount Baldy St** 75.27 57 ⇓P P 05 54 41.1 +0.2
baz=75
NIE **Niedzica** 75.27 325 eP P 05 54 41.5 +0.9
SHPR **Sheep Range** 75.32 54 eP P 05 54 41.6 +0.5

S13A **Holt Ranch, En** 75.38 53 ⇑P P 05 54 41.6 +0.1
baz=75
ULM **Lac du Bonnet** 75.46 34 P P 05 54 40.2 -1.4
comp=Z,3.5nm,0.7s,mb4.2,baz=349,slow=7.8,SNR=7.1
BRTR **Keskin Array B** 75.51 311 P P 05 54 42.3 +0.1
BRTR 05 57 36.2
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR **Keskin Array B** 75.51 311 P P 05 54 42.2 +0.1
comp=Z,2.5nm,0.7s,mb4.1,baz=76,slow=4.5,SNR=9.8
BRTR PP PP 05 57 36.2 +3.8
comp=Z,1.5nm,0.9s,baz=52,slow=8.1,SNR=4.1
MLR **Muntele Rosu** 75.56 319 ⇓*i*P P 05 54 42.2 -0.1
TUQ **Turquoise Mtn.** 75.56 55 ⇑P P 05 54 42.7 +0.2
baz=75
V11A **Goodsprings** 75.59 55 ⇓P P 05 54 43.0 +0.3
baz=75
CCUT **Cedar City** 75.69 52 *e*P P 05 54 43.4 +0.2
HEC **Hector,Ludlow** 75.71 56 ⇑P P 05 54 43.4 0.0
baz=76
T13A **Saint George** 75.73 53 ⇓P P 05 54 44.2 +0.8
baz=76
U12A **Valley of Fire** 75.74 54 ⇓P P 05 54 43.6 0.0
baz=76
MSU **Marysvale** 75.74 51 *e*P P 05 54 44.6 +1.1
KSP **Ksiaz** 75.85 328 *e*P P 05 54 43.9 0.0
KSP **Ksiaz** 75.85 328 *e*P P 05 54 43.6 -0.3
OKC **Ostrava-Krasne** 75.87 326 *e*P P 05 54 44.8 +0.8
KECS **Kecovo** 75.90 324 *e*P P 05 54 42.2 -2.0
comp=Z,1.1nm,0.7s,mb3.7
KECS *e* 05 54 53.0
KECS **Kecovo** 75.90 324 *e*P P 05 54 42.2 -2.0
KECS *e* 05 54 53.0
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb3.6
V12A **Nelson** 76.02 54 ⇓P P 05 54 45.5 +0.3
baz=76
VOIR 76.03 319 ⇓*i*P P 05 54 45.7 +0.7
U13A **Pakoon Wash** 76.09 53 ⇑P P 05 54 46.2 +0.6
baz=76
GMRC **Granite Mounta** 76.15 56 P P 05 54 46.2 +0.3
baz=76,SNR=12
MORC **Moravsky Berou** 76.17 326 *e*P P 05 54 45.8 +0.1
comp=Z,16nm,1.2s,mb4.6
MORC *e* 05 54 53.3
MORC **Moravsky Berou** 76.17 326 *e*P P 05 54 45.8 +0.1
MORC *e* 05 54 53.3
MORC pmax pmax
comp=Z,16nm,1.2s,mb4.6
MORC **Moravsky Berou** 76.17 326 ⇑*i*P P 05 54 46.2 +0.5
DPC **Dobruska-Polom** 76.22 327 *e*P P 05 54 46.3 +0.3
DPC *e*PCP PcP 05 54 53.7 -3.8
UPC **Upice** 76.22 328 *e*P P 05 54 46.3 +0.3
UPC *ex* x 05 54 53.1
RSSD **Black Hills** 76.25 42 *e*P P 05 54 45.8 -0.5
W12A **Cal Nev Ari** 76.29 55 ⇑P P 05 54 46.9 +0.2
baz=76
RWWY **Rawlins** 76.32 46 *e*P P 05 54 46.6 -0.1
comp=Z,43nm,1.4s,mb5.0
KLBR **Kellerberrin** 76.34 200 *e*P P 05 54 46.0 -0.7
comp=Z,13nm,0.7s,mb4.8
PFO **Pinyon Flat Ob** 76.43 57 ⇓P P 05 54 47.2 -0.3
baz=76
BELC **Belle Mtn.** 76.46 56 ⇑P P 05 54 47.4 -0.3
baz=76
U14A **Mt Trumbull** 76.56 53 ⇓P P 05 54 48.8 +0.6
baz=76
PSZ **Piszkesteto** 76.58 324 *e*P P 05 54 48.2 +0.1
comp=Z,5.1nm,0.8s,mb4.3
PSZ **Piszkesteto** 76.58 324 ⇓*i*P P 05 54 47.6 -0.5
VYHS **Vyhne** 76.61 325 *e*P P 05 54 48.4 +0.2
comp=Z,7.0nm,1.7s,mb4.1
VYHS *e* 05 54 56.5
VYHS **Vyhne** 76.61 325 *e*P P 05 54 48.4 +0.2
VYHS *e* 05 54 56.5
VYHS pmax pmax
comp=Z,7.0nm,1.7s,mb4.1
T15A **Red Dirt Ranch** 76.63 52 ⇑P P 05 54 48.9 +0.3
baz=76
BRG **Berggiesshubel** 76.75 329 *e*P P 05 54 48.9 -0.1
comp=Z,4.0nm,0.8s,mb4.2
CLL **Collm** 76.76 330 ⇓*i*P P 05 54 48.5 -0.5
comp=Z,8.0nm,0.6s,mb4.6
CLL *i* PcP PcP 05 54 59.5 -0.3
CLL **Collm** 76.76 330 ⇓*i*P P 05 54 48.5 -0.5
CLL *i* 05 54 59.5
CLL pmax pmax
comp=Z,8.0nm,0.6s,mb4.6
CLL **Collm** 76.76 330 ⇓*i*P P 05 54 48.5 -0.5
comp=Z,8.0nm,0.6s,mb4.6
CLL *i* PcP PcP 05 54 59.5 -0.3
CLL **Collm** 76.76 330 *e*P P 05 54 48.7 -0.3
comp=Z,9.0nm,0.5s,mb4.8
IRM **Iron Mountain** 76.88 56 P P 05 54 50.1 +0.1
baz=77,SNR=7.1
MONP **Monument Peak** 76.93 58 ⇑P P 05 54 50.2 -0.1
baz=77
FBE **Freiberg** 76.94 329 *e*P P 05 54 50.0 0.0
comp=Z,6.0nm,0.6s,mb4.5
W13A **Hualapai Mount** 77.03 54 P P 05 54 51.1 +0.3
baz=77,SNR=11
BC3 **Big Chuckw Mtn** 77.03 56 ⇓P P 05 54 50.8 -0.1
baz=77
PRU **Pruhonice** 77.22 328 *e*P P 05 54 51.6 0.0
PRU *e*PCP PcP 05 55 01.0 -0.8
SWSC **Sam W. Stewart** 77.29 57 ⇑P P 05 54 52.1 -0.2
baz=77
CLZ **Clausthal** 77.30 331 *e*P P 05 54 52.0 0.0
CLZ pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CLZ **Clausthal** 77.30 331 *e*P P 05 54 52.0 0.0
comp=Z,10.0nm,0.9s,mb4.5
MODS **Modra-Piesok** 77.36 325 *e*P P 05 54 53.6 +1.2
X13A **Yucca** 77.40 55 ⇓P P 05 54 53.0 +0.1
baz=77,SNR=18
PDMCI **Parker Dam,Lak** 77.41 55 P P 05 54 53.2 +0.3
baz=77,SNR=5.0
W14A **Seligman** 77.43 54 ⇑P P 05 54 53.7 +0.6
baz=77,SNR=11
Y12C **Blythe** 77.54 56 ⇓P P 05 54 53.9 +0.2
baz=77
ZST **Bratislava** 77.57 325 *e*P P 05 54 57.8 +4.2
comp=Z,4.8nm,0.4s,mb4.6
ZST **Bratislava** 77.57 325 *e*P P 05 54 57.8 +4.2
ZST pmax pmax
comp=Z,5.0nm,0.4s,mb4.6
MOX **Moxa** 77.82 330 *e*P P 05 54 54.2 -0.7
comp=Z,8.0nm,1.1s,mb4.4
GLA **Glamis** 77.82 57 ⇑P P 05 54 55.4 +0.2
baz=78,SNR=5.5
WERN **Wernitzgruen** 77.82 329 *e*P P 05 54 54.9 0.0
comp=Z,5.0nm,0.9s,mb4.2
Y13A **Salome** 77.92 55 ⇑P P 05 54 56.0 +0.1
baz=78
W15A **Williams** 77.95 53 ⇓P P 05 54 56.3 +0.4
baz=78
X14A **Yava** 78.05 54 P P 05 54 57.2 +0.7
baz=78,SNR=13
SMCO **Snowmass** 78.22 48 *e*P P 05 54 52.8 -4.6
comp=Z,7.6nm,0.8s,mb4.5
WUAZ **Wupatki** 78.25 53 ⇑P P 05 54 58.2 +0.6
baz=78
KHC **Kasperske Hory** 78.28 328 *e*P P 05 54 57.6 +0.1
KHC *e*PCP PcP 05 55 05.0 -1.5
ROTZ **Rotzenmuhle** 78.31 329 *e*P P 05 54 57.7 +0.1
comp=Z,5.0nm,0.9s,mb4.2
Y14A **Wickenburg** 78.34 55 P P 05 54 58.2 +0.1
baz=78,SNR=7.5
X15A **Humboldt** 78.44 54 P P 05 54 59.4 +0.8
baz=78,SNR=19
GEC2 **GERESS Array S** 78.46 328 *e*P P 05 54 58.3 -0.2
GEC2 pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
GEC2 **GERESS Array S** 78.46 328 *e*P P 05 54 58.3 -0.2
comp=Z,4.0nm,0.8s,mb4.2
GERES **GERESS Array B** 78.46 328 P P 05 54 58.5 0.0
GERES pmax pmax
comp=Z,2.0nm,0.6s
GERES **GERESS Array B** 78.46 328 P P 05 54 58.5 0.0
comp=Z,1.9nm,0.6s,mb4.0,baz=43,slow=6.0,SNR=15
ISCO **Idaho Springs** 78.52 46 *e*P P 05 54 59.3 +0.3
comp=Z,4.0nm,1.0s,mb4.2
ISCO **Idaho Springs** 78.52 46 *e*P P 05 54 59.3 +0.3
ISCO pmax pmax
comp=Z,4.0nm,1.0s,mb4.2
WET **Wettzell** 78.55 328 *e*P P 05 54 59.3 +0.3
WET pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
WET **Wettzell** 78.55 328 *e*P P 05 54 59.3 +0.3
comp=Z,9.0nm,1.0s,mb4.5
GRA1 **Grafenberg Arr** 78.74 330 *e*P P 05 55 00.2 +0.2
comp=Z,14nm,1.0s,mb4.8
GRA1 *e*pP pP 05 55 32.5 +1.5
GRF **Grafenberg Arr** 78.74 330 *e*P P 05 55 00.2 +0.2
GRF *e**PP pP 05 55 32.5 +1.5
GRF pmax pmax
comp=Z,14nm,1.0s,mb4.8
GRF **Grafenberg Arr** 78.74 330 *e*P P 05 55 00.2 +0.2
GRF *e**PP pP 05 55 32.5 +1.5
GRF pmax pmax
comp=Z,14nm,1.0s,mb4.8
GRF **Grafenberg Arr** 78.74 330 *e*P P 05 55 00.2 +0.2
comp=Z,14nm,1.0s,mb4.8
GRF *e*pP pP 05 55 32.5 +1.5
MVCO **Mesa Verde** 78.75 50 *e*P P 05 54 60.0 -0.3
comp=Z,5.7nm,1.0s,mb4.4
MVCO **Mesa Verde** 78.75 50 ⇓P P 05 55 00.4 +0.2
baz=78
Z14A **Wintersburg** 78.77 55 ⇓P P 05 55 00.3 -0.2
baz=79
VTS **Vitosha** 79.02 318 ⇓*i*P P 05 55 02.2 +0.5
TNS **Taunus Mts** 79.33 331 *e*P P 05 55 03.6 +0.4
TNS pmax pmax
comp=Z,13nm,1.4s,mb4.6
TNS **Taunus Mts** 79.33 331 *e*P P 05 55 03.6 +0.4
comp=Z,13nm,1.4s,mb4.6
PERS **Pernice** 79.64 326 *e*P P 05 55 05.2 +0.2
115A **Sonoran Desert** 79.66 55 ⇑P P 05 55 05.0 -0.4
baz=80
KBA **Koelnbreinsper** 80.02 327 ⇑*i*P P 05 55 07.8 +0.8
comp=Z,8.8nm,0.7s,mb4.7
KBA **Koelnbreinsper** 80.02 327 ⇑*i*P P 05 55 07.8 +0.8
KBA pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
SDCO **Great Sand Dun** 80.05 48 *e*P P 05 55 07.5 +0.2
116A **Eloy** 80.08 55 ⇑P P 05 55 07.5 -0.1
baz=80
PDKS **Podkum** 80.14 325 *i* P P 05 55 07.6 -0.1
STU **Stuttgart** 80.26 330 *e*P P 05 55 08.3 +0.1
comp=Z,16nm,0.7s,mb5.0
216A **Three Points,** 80.61 55 ⇑P P 05 55 10.3 -0.1
baz=80
SCHQ **Schefferville** 80.63 16 P P 05 55 09.6 -0.6
comp=Z,3.8nm,0.9s,mb4.2,baz=328,slow=7.7,SNR=9.5
MOTA **Moosalm** 80.70 328 ⇓*i*P P 05 55 10.6 0.0
comp=Z,10nm,1.0s,mb4.6
MOTA **Moosalm** 80.70 328 ⇓*i*P P 05 55 10.6 0.0
MOTA pmax pmax
comp=Z,11nm,1.0s,mb4.6
RETA **Reutte** 80.72 328 ⇓*i*P P 05 55 10.9 +0.1
comp=Z,11nm,0.9s,mb4.7
BFO **Black Forest** 80.94 330 *e*P P 05 55 11.8 -0.1
BFO pmax pmax
comp=Z,18nm,1.5s,mb4.7
BFO **Black Forest** 80.94 330 *e*P P 05 55 11.8 -0.1
comp=Z,18nm,1.5s,mb4.7
FETA **Feichten** 81.11 328 ⇓*i*P P 05 55 12.9 +0.1
comp=Z,6.2nm,0.7s,mb4.6
217A **Green Valley** 81.17 55 ⇓P P 05 55 13.4 0.0
baz=81
DAVA **Damuels** 81.22 329 ⇓*i*P P 05 55 13.4 0.0
comp=Z,8.6nm,0.7s,mb4.7
CDF **Champ du Feu** 81.26 331 *e*P P 05 55 13.2 -0.4
comp=Z,4.6nm,0.5s,mb4.3
CDF **Champ du Feu** 81.26 331 *e*P P 05 55 13.2 -0.4
comp=Z,2.3nm,0.4s,mb4.4
CDF **Champ du Feu** 81.26 331 *e*P P 05 55 13.2 -0.4
CDF pmax pmax
comp=Z,2.0nm,0.4s,mb4.3
ANMO **Albuquerque** 81.51 50 *e*P P 05 55 16.0 +0.9
ANMO **Albuquerque** 81.51 50 ⇓*e*P P 05 55 15.7 +0.5
318A **Bisbee** 81.90 55 ⇑P P 05 55 17.4 +0.1
baz=82
HINF **Hinteralfeld** 81.92 331 *e*P P 05 55 16.1 -0.9
HAU **Haudompre** 81.94 331 *e*P P 05 55 16.5 -0.7
319A **Douglas** 82.38 54 ⇑P P 05 55 19.8 +0.1
baz=82
CABF **La Chapelle** 83.21 331 *e*P P 05 55 23.2 -0.6
LOR **Lormes** 83.44 332 *e*P P 05 55 24.2 -0.8
comp=Z,18nm,0.9s,mb4.6
LOR **Lormes** 83.44 332 *e*P P 05 55 24.2 -0.8
comp=Z,9.1nm,0.9s,mb4.6
LOR **Lormes** 83.44 332 *e*P P 05 55 24.2 -0.8
LOR pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
FLN **La Foliniere** 83.56 336 *e*P P 05 55 24.8 -0.7
LDF **La Druitiere** 83.59 335 *e*P P 05 55 24.7 -1.0
comp=Z,5.9nm,0.5s,mb4.3
LDF **La Druitiere** 83.59 335 *e*P P 05 55 24.7 -1.0
comp=Z,3.0nm,0.5s,mb4.4
LDF **La Druitiere** 83.59 335 *e*P P 05 55 24.7 -1.0
LDF pmax pmax
comp=Z,3.0nm,0.5s,mb4.4
SSF **Saint Saulge** 83.74 332 *e*P P 05 55 25.8 -0.7
comp=Z,11nm,0.8s,mb4.5
SSF **Saint Saulge** 83.74 332 *e*P P 05 55 25.8 -0.7
comp=Z,5.7nm,0.8s,mb4.5
SSF **Saint Saulge** 83.74 332 *e*P P 05 55 25.8 -0.7
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
LPL **La Plagne** 83.90 330 *e*P P 05 55 27.2 -0.1
comp=Z,14nm,0.8s,mb4.6
LPL **La Plagne** 83.90 330 *e*P P 05 55 27.2 -0.1
comp=Z,7.3nm,0.8s,mb4.6
LPL **La Plagne** 83.90 330 *e*P P 05 55 27.2 -0.1
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
LPG **La Plagne** 83.91 330 *e*P P 05 55 27.3 -0.1
comp=Z,8.6nm,0.5s,mb4.6
LPG **La Plagne** 83.91 330 *e*P P 05 55 27.3 -0.1
comp=Z,4.3nm,0.5s,mb4.5
LPG **La Plagne** 83.91 330 *e*P P 05 55 27.3 -0.1
LPG pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
SMF **Signal de Mont** 83.99 332 *e*P P 05 55 27.2 -0.5
comp=Z,25nm,0.9s,mb4.7
SMF **Signal de Mont** 83.99 332 *e*P P 05 55 27.2 -0.5
comp=Z,13nm,0.9s,mb4.8
SMF **Signal de Mont** 83.99 332 *e*P P 05 55 27.2 -0.5
SMF pmax pmax
comp=Z,13nm,0.9s,mb4.8
GRR **Gorron** 84.00 336 *e*P P 05 55 27.2 -0.6
comp=Z,14nm,0.7s,mb4.6
GRR **Gorron** 84.00 336 *e*P P 05 55 27.2 -0.6
comp=Z,7.2nm,0.7s,mb4.6
GRR **Gorron** 84.00 336 *e*P P 05 55 27.2 -0.6
GRR pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
AVF **Avril sur Loir** 84.03 332 *e*P P 05 55 27.4 -0.6
comp=Z,19nm,0.6s,mb4.8
AVF **Avril sur Loir** 84.03 332 *e*P P 05 55 27.4 -0.6
comp=Z,9.4nm,0.6s,mb4.8
AVF **Avril sur Loir** 84.03 332 *e*P P 05 55 27.4 -0.6
AVF pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
BNI **Bardonecchia** 84.31 330 *e*P P 05 55 28.9 -0.5
comp=Z,6.4nm,0.8s,mb4.5
BNI **Bardonecchia** 84.31 330 *e*P P 05 55 28.9 -0.5
BNI pmax pmax
comp=Z,6.0nm,0.8s,mb4.5
BGF **Bois d'Agland** 84.41 333 *e*P P 05 55 29.3 -0.6
MNTX **Cornudas Mount** 84.47 52 *e*P P 05 55 29.8 -0.7
comp=Z,7.9nm,1.4s,mb4.3
MBDF **Montbardon** 84.55 329 *e*P P 05 55 29.9 -0.7
comp=Z,14nm,0.7s,mb4.7
MBDF **Montbardon** 84.55 329 *e*P P 05 55 29.9 -0.7
comp=Z,7.2nm,0.7s,mb4.7
MBDF **Montbardon** 84.55 329 *e*P P 05 55 29.9 -0.7
MBDF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
SGMF **Saint Gilles** 84.64 337 *e*P P 05 55 30.4 -0.6
comp=Z,7.7nm,0.6s,mb4.5
SGMF **Saint Gilles** 84.64 337 *e*P P 05 55 30.4 -0.6
comp=Z,3.8nm,0.6s,mb4.5
SGMF **Saint Gilles** 84.64 337 *e*P P 05 55 30.4 -0.6
SGMF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ORIF **Oris-en-Rattie** 84.73 330 *e*P P 05 55 31.3 -0.2
comp=Z,17nm,0.7s,mb4.8
ORIF **Oris-en-Rattie** 84.73 330 *e*P P 05 55 31.3 -0.2
comp=Z,8.4nm,0.7s,mb4.8
ORIF **Oris-en-Rattie** 84.73 330 *e*P P 05 55 31.3 -0.2
ORIF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ROSF **Rostrenen** 84.77 337 *e*P P 05 55 30.9 -0.8
comp=Z,17nm,0.8s,mb4.7
ROSF **Rostrenen** 84.77 337 *e*P P 05 55 30.9 -0.8
comp=Z,8.3nm,0.8s,mb4.7
ROSF **Rostrenen** 84.77 337 *e*P P 05 55 30.9 -0.8
ROSF pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
TIP **Timpagrande** 84.78 320 *e*P P 05 55 31.4 -0.4
TCF **Toulx Ste Croi** 84.86 333 *e*P P 05 55 31.6 -0.5
comp=Z,10nm,0.9s,mb4.5
TCF **Toulx Ste Croi** 84.86 333 *e*P P 05 55 31.6 -0.5
comp=Z,5.3nm,0.9s,mb4.5
TCF **Toulx Ste Croi** 84.86 333 *e*P P 05 55 31.6 -0.5
TCF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
SBF **Sospel** 85.03 328 *e*P P 05 55 31.9 -1.1
QUIF **Quistinic** 85.12 337 *e*P P 05 55 32.5 -0.9
comp=Z,25nm,1.0s,mb4.8
QUIF **Quistinic** 85.12 337 *e*P P 05 55 32.5 -0.9
comp=Z,12nm,1.0s,mb4.8
QUIF **Quistinic** 85.12 337 *e*P P 05 55 32.5 -0.9
QUIF pmax pmax
comp=Z,13nm,1.0s,mb4.8
VIVF **Saint-Julien-l** 85.23 331 *e*P P 05 55 33.5 -0.5
comp=Z,11nm,0.7s,mb4.6
VIVF **Saint-Julien-l** 85.23 331 *e*P P 05 55 33.5 -0.5
comp=Z,5.6nm,0.7s,mb4.6
VIVF **Saint-Julien-l** 85.23 331 *e*P P 05 55 33.5 -0.5
VIVF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
MFF **Saint Martin d** 85.36 334 *e*P P 05 55 33.9 -0.8
PGF **Pioggiola** 85.50 327 *e*P P 05 55 34.3 -1.1
FRF **La Foret Royal** 85.59 329 *e*P P 05 55 34.8 -1.0
SMRF **Simiane la Rot** 85.64 330 *e*P P 05 55 35.6 -0.5
LMR **La Mourre** 85.83 329 *e*P P 05 55 36.0 -1.0
comp=Z,17nm,0.8s,mb4.7
LMR **La Mourre** 85.83 329 *e*P P 05 55 36.0 -1.0
comp=Z,8.3nm,0.8s,mb4.7
LMR **La Mourre** 85.83 329 *e*P P 05 55 36.0 -1.0
LMR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
WMOK **Wichita Mounta** 85.92 46 *e*P P 05 55 36.8 -0.9
comp=Z,2.6nm,0.9s,mb4.2
WMOK **Wichita Mounta** 85.92 46 *e*P P 05 55 36.8 -0.8
WMOK pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
RJF **Les Rejaudoux** 85.95 333 *e*P P 05 55 37.4 -0.2
comp=Z,17nm,0.9s,mb4.7
RJF **Les Rejaudoux** 85.95 333 *e*P P 05 55 37.4 -0.2
comp=Z,8.3nm,0.9s,mb4.7
RJF **Les Rejaudoux** 85.95 333 *e*P P 05 55 37.4 -0.2
RJF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CAF **Calviac** 86.10 332 *e*P P 05 55 38.4 +0.1
comp=Z,31nm,0.8s,mb5.0
CAF **Calviac** 86.10 332 *e*P P 05 55 38.4 +0.1
comp=Z,15nm,0.8s,mb5.0
CAF **Calviac** 86.10 332 *e*P P 05 55 38.4 +0.1
CAF pmax pmax
comp=Z,15nm,0.8s,mb5.0
LASF **Ste Croix** 86.20 331 *e*P P 05 55 38.7 -0.1
LFF **La Frestale** 86.54 333 *e*P P 05 55 39.9 -0.6
comp=Z,24nm,0.8s,mb4.9
LFF **La Frestale** 86.54 333 *e*P P 05 55 39.9 -0.6
comp=Z,12nm,0.8s,mb4.9
LFF **La Frestale** 86.54 333 *e*P P 05 55 39.9 -0.6
LFF pmax pmax
comp=Z,12nm,0.8s,mb4.9
LTX **Lajitas** 87.21 52 *e*P P 05 55 43.6 -0.4
comp=Z,1.0nm,0.6s,mb3.9
LTX **Lajitas** 87.21 52 *e*P P 05 55 43.6 -0.4
LTX pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
TXAR **Lajitas Array** 87.21 52 P P 05 55 43.7 -0.3
TXAR PKKPbc PKKPbc 06 13 34.5 +2.0
TXAR **Lajitas Array** 87.21 52 P P 05 55 43.7 -0.3
comp=Z,0.8nm,0.6s,mb3.9,baz=293,slow=3.1,SNR=16
TXAR PKKPbc PKKPbc 06 13 34.5 +2.0
comp=Z,0.4nm,0.7s,baz=155,slow=5.3,SNR=6.7
MTLF **Montolieu** 87.42 331 *e*P P 05 55 44.5 -0.3
comp=Z,8.1nm,0.9s,mb4.4
MTLF **Montolieu** 87.42 331 *e*P P 05 55 44.5 -0.3
comp=Z,4.1nm,0.9s,mb4.4
MTLF **Montolieu** 87.42 331 *e*P P 05 55 44.5 -0.3
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
ETSF **Etsaut** 88.78 333 *e*P P 05 55 50.5 -0.7
comp=Z,5.3nm,0.7s,mb4.4
ETSF **Etsaut** 88.78 333 *e*P P 05 55 50.5 -0.7
comp=Z,2.7nm,0.7s,mb4.4
ETSF **Etsaut** 88.78 333 *e*P P 05 55 50.5 -0.7
ETSF pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
WCI **Wyandotte Cave** 89.19 36 *e*P P 05 55 52.5 -0.7
comp=Z,5.8nm,0.8s,mb4.7
WCI **Wyandotte Cave** 89.19 36 *e*P P 05 55 52.5 -0.7
WCI pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
ESDC **Sonseca Array** 92.81 334 P P 05 56 09.3 -0.6
comp=Z,0.9nm,0.6s,mb4.3,baz=3,6,slow=5.0,SNR=3.4
KMBO **Kilima Mbogo** 101.15 279 P Pdif 05 56 48.0 +0.3
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO **Kilima Mbogo** 101.15 279 P Pdif 05 56 48.0 +0.3
comp=Z,1.8nm,0.8s,baz=37,slow=10,SNR=6.0
TORD **Torodi Ar. Bea** 113.71 316 PKiKP PKiKP 06 01 34.3 -1.5
comp=Z,1.1nm,0.7s,baz=27,slow=1.6,SNR=5.5
TORD PP PP 06 02 32.4 +3.2
comp=Z,2.3nm,1.0s,baz=19,slow=6.7,SNR=6.3
DBIC **Dimbokro** 122.54 319 PKIKP PKPdf 06 01 51.4 -1.4
DBIC pmax pmax
comp=Z,3.0nm,0.7s
DBIC **Dimbokro** 122.54 319 PKP PKPdf 06 01 51.4 -1.5
comp=Z,3.2nm,0.7s,baz=242,slow=1.3,SNR=8.0
MAW **Mawson** 123.91 207 PKIKP PKPdf 06 01 53.1 -0.6
MAW pmax pmax
comp=Z,6.0nm,0.8s
MAW **Mawson** 123.91 207 PKP PKPdf 06 01 53.1 -0.6
comp=Z,6.3nm,0.8s,baz=301,slow=1.0,SNR=6.5
TSUM **Tsumeb** 127.48 278 *e*PKPdf PKPdf 06 02 02.2 +0.2
QSPA **South Pole Qui** 131.71 180 *e*PKPdf PKPdf 06 02 08.8 +0.5
NNA **Nana** 135.38 59 *e*PKPdf PKPdf 06 02 16.8 -0.3
LPAZ **La Paz** 144.07 53 PKIKP PKPdf 06 02 31.7 -1.1
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ **La Paz** 144.07 53 PKP PKPdf 06 02 31.7 -1.1
comp=Z,2.2nm,0.7s,baz=350,slow=22,SNR=6.0
SNAA **Sanae** 145.40 199 *e*PKPdf PKPdf 06 02 33.0 -0.4
SNAA *e* 06 02 37.6
SNAA *e* 06 02 44.5
VNA2 **Neumayer--Watz** 147.00 198 *e*PKPdf PKPdf 06 02 36.5 +0.4
VNA2 *e* 06 02 40.0
VNA2 *e* 06 02 48.2
VNA3 **Neumayer Olymp** 147.28 197 *e*PKPdf PKPdf 06 02 36.6 0.0
VNA3 *e* 06 02 41.0
VNA3 *e* 06 02 49.3
LCO **Las Campanas** 151.13 74 *e*PKPbc PKPbc 06 02 50.0 -0.1
PLCA **Paso Flores** 156.16 98 PKP2 PKPab 06 03 19.5 +0.2
PLCA pmax pmax
comp=Z,4.0nm,0.8s
PLCA **Paso Flores** 156.16 98 PKPab PKPab 06 03 19.4 +0.1
comp=Z,4.0nm,0.8s,baz=282,slow=4.5,SNR=9.7

IDC 15 05:44:12.5±26.0, 1812S×17822W, h572km±235km, mb3.2/2, mb1 3.5/2, mb1mx3.0/15, mbtmp3.2/2, Error ellipse: s-maj=239.6km s-min=78.0km az=118.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.77**	**260**	P	P	P	05 51 35.9	-0.4
	0.9nm,0.5s,baz=96,slow=7.5,SNR=39							
WRA				PcP	PcP	PcP	05 53 05.5	-0.5
	0.2nm,0.4s,baz=89,slow=3.7,SNR=5.0							
ASAR	**Alice Springs**	**44.91**	**254**	P	P	P	05 51 37.5	+0.3
	4.4nm,0.6s,baz=87,slow=8.5,SNR=50							
ASAR				PcP	PcP	PcP	05 53 06.1	-0.3
	0.5nm,0.7s,baz=96,slow=3.8,SNR=4.1							
MKAR	**Makanchi Array**	**109.41**	**314**	PKiKP	PKiKP	PKiKP	06 01 37.2	-1.2
	0.1nm,0.4s,baz=61,slow=1.0,SNR=3.8							
BRTR	**Keskin Array B**	**145.06**	**315**	PKPbc	PKPbc	PKPbc	06 02 46.3	-0.1
	0.5nm,0.5s,baz=44,slow=4.0,SNR=3.4							

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GERES	GERESS Array B	147.86	345	PKPbc	PKPbc	06 02 53.4	-0.3
	0.5nm,0.4s,baz=8.5,slow=2.7,SNR=5.4						

BJI ***15*** *06:07:48.1,357N×12703E,h10km,mB5.3,mb5.3,Ms4.8, Msz4.6*
IDC ***15*** *06:07:53.5±0.4,4.17N×12681E,h0km,mb5.1/26, mb1 5.1/26,mb1mx5.1/27,mbtmp5.1/26,MS4.4/15, Ms1 4.4/15,ms1mx4.2/29,Error ellipse: s-maj=18.3km s-min=9.2km az=84.0*
ISCJB ***15*** *06:07:54.1±0.2,4.13N±0.02×12699E±0.03,h16km, mb5.3/126,MS4.6/44,Error ellipse: s-maj=4.3km s-min=3.3km az=167.4*
NEIC ***15*** *06:07:55.1±0.1,4.14N×12693E,h10km,mb5.4/63,Error ellipse: s-maj=5.8km s-min=4.0km az=75.0*
NEIC Felt [III] at Naha.
GCMT ***15*** *06:07:55.1±0.2,4.12N×12700E,h19km,MW5.2/67, Moment Tensor Solution. s62,c75; s67,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.97±.20; $M_{\theta\theta}$-0.01±.14; $M_{\phi\phi}$-5.96±.16; $M_{r\theta}$3.10±.37; $M_{\theta\phi}$-0.05±.12; $M_{\phi r}$-0.07±.30; Best double couple: $M_0$6.62400×10^{16} NP1:ϕ_s22.00000°,δ49.00000°,λ121.00000°. NP2: ϕ_s159.00000°,δ50.00000°,λ59.00000°. Principal axes: T 7.2870, Plg67.0000°, Azm1.0000°; N -1.3310, Plg23.0000°, Azm180.0000°; P -5.9610, Plg0.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
MOS ***15*** *06:07:57.6±1.3,428N×12683E,h33km,mb5.5/51, MS4.6/14 Error ellipse: s-maj=9.5km s-min=4.9km az=113.0*
MAN ***15*** *06:07:58,395N×12645E,h9km,mb5.8,ML4.8,MS5.3*
ISC 15 06:07:55.9±0.2,**414N**±002×**12701E**±003,**h17km**, **h17km**±1.5km**:pP-P,n446,**σ1^s**17**/371,**mb5.3**/126,**MS4.6**/44, **39C-31D,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.82	313	⇑eP	Pn	06 08 40.5	+0.2
MATI	Mati	2.88	345	eP	Pn	06 08 45.6	+4.4
DAV	Davao City (W)	3.24	334	ePn	Pn	06 08 50.8	+4.8
DAV				eSg	Sg	06 09 40.7	+0.7
DAV	Davao City (W)	3.24	334	eP	Pg	06 09 00.0	+1.9
DMPH	Davao City--Mi	3.28	333	i P	Pn	06 08 51.5	+4.9
DMPH				i S	Sn	06 09 29.8	+4.5
KCP	Kidapawan	3.43	326	⇓eP	Pn	06 08 55.1	+6.5
BIPH	Bislig	4.07	351	⇓iP	Pn	06 08 59.8	+2.3
BIPH				i S	Sn	06 09 54.5	+10
CTBH	Cotabato--PC H	4.11	318	⇑eP	Pn	06 09 00.2	+2.2
BUKP	Musuan	4.19	333	eP	Pn	06 09 02.1	+3.0
CGP	Cagayan de Oro	4.86	332	eP	Pn	06 09 10.2	+1.8
CGP				i S	Sn	06 10 10.4	+6.0
DCPH	Dipolog City	5.72	321	eP	Pn	06 09 23.7	+3.6
SCPH	Surigao	5.80	345	⇑eP	Pn	06 09 26.7	+5.3
MSLP	Maasin	6.32	340	eP	Pn	06 09 34.1	+5.6
TBP	Tagbilaran	6.34	331	eP	Pn	06 09 32.1	+3.4
LLP	Lapu-Lapu	6.84	334	eP	Pn	06 09 41.3	+5.8
PLP	Palo	7.26	344	eP	Pn	06 09 47.2	+5.8
OCLP	Ormoc	7.26	341	eP	Pn	06 09 46.9	+5.5
GUIM	Jordan	7.79	326	eP	Pn	06 09 54.5	+5.9
RCP	Roxas	8.49	330	⇓eP	Pn	06 10 02.3	+4.0
MYLDM	Lahad Datu	8.54	277	⇑P	Pn	06 10 03.1	+4.1
CNP	Catarman	8.63	345	eP	Pn	06 10 07.4	+7.2
PCI	Palu	8.75	235	P	Pn	06 10 03.2	+1.4
	137nm,0.9s						
CUYO	Cuyo Island	8.93	319	eP	Pn	06 10 09.0	+4.8
TSM	Tawau	9.11	271	⇓P	Pn	06 10 10.8	+4.0
OTRP	Odiongan	9.54	329	eP	Pn	06 10 17.5	+4.9
PVCP	Virac	9.81	343	eP	Pn	06 10 24.6	+8.3
SDKM	Sandakan	9.89	279	⇓P	Pn	06 10 19.7	+2.3
BATP	Bataraza	10.25	297	eP	Pn	06 10 22.5	+0.1
ENPP	El Nido	10.28	313	eP	Pn	06 10 25.0	+2.2
KDM	Kudat	10.50	286	⇑P	Pn	06 10 30.6	+4.9
BAKI	Biak	10.52	120	P	Pn	06 10 32.6	+6.5
	196nm,1.6s						
KKM	Kota Kinabalu	10.92	280	ePn	Pn	06 10 34.9	+3.4
KKM				eSn	Sn	06 12 35.0	+1.6
KKM	Kota Kinabalu	10.92	280	⇓P	Pn	06 10 36.3	+4.8
KAPI	Kappang	11.63	219	Pn	Pn	06 10 43.3	+2.0
	317nm,0.9s,SNR=6.0						
LUBP	Lubang	11.63	325	eP	Pn	06 10 48.4	+7.0
BALP	Baler	12.70	336	eP	Pn	06 11 04.8	+8.9
CAUP	Cauayan	13.70	339	eP	Pn	06 11 12.6	+3.0
BTM	Bintulu	13.93	267	⇓P	Pn	06 11 17.4	+4.7
BATI	Kupang	14.64	193	Pn	Pn	06 11 25.5	+3.1
	4.7nm,0.3s,baz=95,slow=2.1,SNR=8.5						
BATI				Sn	Sn	06 13 54.0	-10
	3.4nm,0.3s,baz=7.9,slow=5.2,SNR=2.0						
SBUM	Sibu	14.86	264	⇓P	Pn	06 11 30.1	+4.6
KSM	Kuching	16.89	261	eP	Pn	06 11 53.5	+1.8
KSM	Kuching	16.89	261	⇑P	Pn	06 11 55.6	+3.9
KMMI	Kalianget	17.12	230	P	Pn	06 11 59.0	+4.4
	122nm,0.8s						
KAKA	Kakadu	17.59	162	eP	Pn	06 11 58.2	-2.3
	81nm,0.8s						
KRKI	Karangkates	18.98	230	P	Pn	06 12 21.8	+4.3
	195nm,0.7s						
GUMO	Guam	19.97	61	eP	Pn	06 12 29.2	-0.2
	434nm,1.4s						
GUMO	Guam	19.97	61	eP	Pn	06 12 29.2	-0.2
GUMO				pmax	pmax		
	comp=Z,434nm,1.4s						
TPI	Tanjungpandan	20.52	251	P	P	06 12 34.4	+0.8
	comp=Z,81nm,1.2s						
NACB	Ninganchiao	20.59	346	eP	P	06 12 33.5	-0.8
BJII	Banjamegara	20.69	237	P	P	06 12 32.4	-3.0
	comp=Z,95nm,1.1s						
YHNB	Yeheng	21.12	346	eP	P	06 12 39.6	-0.3
YHNB				eS	S	06 16 32.6	-1.8
TATO	Taipei	21.38	346	eP	P	06 12 43.5	+0.7
	comp=Z,47nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	22.14	183	eP	P	06 12 50.3	-0.7
	comp=Z,54nm,0.8s,mb5.0						
FITZ				eS	S	06 16 47.9	-6.7
FITZ	Fitzroy Crossi	22.14	183	P	P	06 12 50.8	-0.2
	comp=Z,12nm,0.5s,mb4.6,baz=16,slow=10,SNR=38						
FITZ				S	S	06 16 49.0	-5.6
	comp=Z,10nm,1.2s,baz=167,slow=20,SNR=7.8						
QIZ	Qiongzhong	22.36	313	P	P	06 12 53.0	-0.4
QIZ				S	S	06 16 55.3	-3.6
QIZ				SS		06 17 35.8	
QIZ				AMB	AMB		
	comp=Z,59nm,0.9s,mb5.0						
QIZ				LR	LR		
	comp=N,909nm,17.3s,MS4.4						
QIZ				LR	LR		
	comp=E,1μm,18.2s,MS4.4						
QIZ				LR	LR		
	comp=Z,2μm,17.9s,MS4.6						
QIZ	Qiongzhong	22.36	313	eP	P	06 12 53.9	+0.6
	comp=Z,138nm,1.3s,mb5.2						
JOW	Kunigami	22.59	3	P	P	06 12 56.1	+0.3
	comp=Z,32nm,0.5s,mb5.0,baz=208,slow=19,SNR=6.8						
GZH	Guangzhou	23.01	326	P	P	06 13 00.9	+0.7
GZH				S	S	06 17 09.5	-0.7
GZH				LR	LR		
	comp=N,2μm,20.0s,MS4.8						
GZH				LR	LR		
	comp=E,2μm,18.5s,MS4.8						
GZH				LR	LR		
	comp=Z,3μm,18.5s,MS4.7						
SBJI	Serang	23.21	244	P	P	06 13 04.8	+2.4
	comp=Z,199nm,1.3s,mb5.4						
MYKOM	Kota Tinggi	23.24	265	⇑P	P	06 13 03.7	+0.9
KGM	Kluang	23.75	266	⇓P	P	06 13 08.0	+0.2
KTGM	Kuala Trenggan	23.82	274	⇓P	P	06 13 10.3	+1.9
PMG	Port Moresby	24.18	124	eP	P	06 13 11.4	-0.2
	comp=Z,60nm,1.3s,mb4.9						
PMG	Port Moresby	24.18	124	⇑eP	P	06 13 11.8	+0.2
PMG	Port Moresby	24.18	124	P	P	06 13 10.7	-0.9
	comp=Z,2.0nm,0.4s,baz=265,slow=19,SNR=3.1						
WRA	Warramunga Arr	24.99	163	P	P	06 13 18.3	-0.7
WRA				S	S	06 17 45.8	+3.5
WRA				pmax	pmax		
	comp=Z,59nm,0.6s						
WRA				smax			
	comp=N,2.0nm,0.7s						
WRA	Warramunga Arr	24.99	163	P	P	06 13 18.3	-0.7
	comp=N,59nm,0.6s,mb5.3,baz=344,slow=10,SNR=156						
WRA				S	S	06 17 45.8	+3.4
	comp=N,2.0nm,0.7s,baz=335,slow=20,SNR=4.7						
WB2	Warramunga Arr	25.00	163	eP	P	06 13 16.9	-2.1
WB2				eS	S	06 17 36.9	-5.5
XMIS	Christmas Isla	25.75	236	eP	P	06 13 24.9	-1.1
IPM	Ipoh	25.91	272	⇓P	P	06 13 30.4	+2.9
MBWA	Marble Bar	26.14	196	eP	P	06 13 29.4	0.0
	comp=N,440nm,2.0s,mb5.6						
KULM	Kulim	26.29	274	eP	P	06 13 29.9	-1.0
KULM				ePcP	PcP	06 17 02.3	+5.0
KULM	Kulim	26.29	274	⇑P	P	06 13 31.0	+0.1
PPI	Padang Panjang	26.98	261	P	P	06 13 42.7	+5.5
	comp=N,78nm,1.4s,mb5.0						
CBIJ	Chichi jima	27.04	31	P	P	06 13 37.5	-0.1
	comp=N,161nm,0.8s,mb5.6,baz=268,slow=7.9,SNR=9.4						
CBIJ				LR	LR	06 21 25.3	
	comp=N,862nm,21.9s,MS4.3,baz=218,slow=30						
SSE	Sheshan	27.37	349	P	P	06 13 41.8	+1.4
SSE				XP	sP	06 13 45.9	-1.8
SSE				S	S	06 18 19.9	+0.2
SSE				AMB	AMB		
	comp=Z,89nm,1.1s,mb5.2						
SSE				AMB	AMB		
	comp=Z,262nm,3.8s						
SSE				LR	LR		
	comp=N,424nm,17.1s,MS4.2						
SSE				LR	LR		
	comp=E,290nm,17.1s,MS4.2						
SSE				LR	LR		
	comp=Z,597nm,15.9s,MS4.3						
PSI	Prapat	28.06	268	P	P	06 13 46.1	-0.8
PSI				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
PSI	Prapat	28.06	268	P	P	06 13 46.1	-0.8
	comp=Z,11nm,0.8s,mb4.6,baz=121,slow=2.2,SNR=11						
ASAR	Alice Springs	28.45	167	P	P	06 13 50.4	+0.3
ASAR						06 17 03.2	
ASAR				S	S	06 18 47.8	+11
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR				smax			
	comp=N,3.0nm,0.9s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.9s						
ASAR	Alice Springs	28.45	167	P	P	06 13 50.4	+0.3
	comp=N,5.7nm,0.7s,mb4.3,baz=352,slow=7.7,SNR=58						
ASAR				PcP	PcP	06 17 03.1	+0.9
	comp=N,4.6nm,0.7s,baz=346,slow=3.8,SNR=4.6						
ASAR				S	S	06 18 47.8	+11
	comp=N,3.1nm,0.9s,baz=350,slow=21,SNR=4.4						
ASAR				ScP	ScP	06 20 44.5	+1.6
	comp=N,1.6nm,0.9s,baz=336,slow=2.0,SNR=4.2						
NJ2	Nanjing	28.80	346	eP	P	06 13 55.6	+2.4
NJ2				AP	pP	06 13 59.4	+1.1
NJ2				XP	sP	06 14 01.6	+1.1
NJ2				PP	PP	06 14 48.3	-10
NJ2				S	S	06 18 41.0	-1.3
NJ2				XS	sS	06 18 50.5	-0.3
NJ2				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,350nm,4.8s						
NJ2				LR	LR		
	comp=N,2μm,19.6s,MS4.9						
NJ2				LR	LR		
	comp=E,1μm,17.8s,MS4.9						
NJ2				LR	LR		
	comp=Z,2μm,16.2s,MS4.8						
NST	Nakhon Sawan	28.80	295	P	P	06 13 52.7	-0.7
WHN	Wuhan	28.85	337	⇓P	P	06 13 54.0	+0.3
WHN				PCP	PcP	06 17 05.0	+1.9
WHN				S	S	06 18 49.8	+6.7
WHN				AMB	AMB		
	comp=Z,648nm,4.1s						
WHN				LR	LR		
	comp=Z,4μm,19.8s,MS5.0						
JNU	Nakatsue	29.06	7	P	P	06 13 55.0	-0.5
	comp=Z,26nm,0.8s,mb5.0,baz=159,slow=11,SNR=6.6						
GYA	Guiyang	29.52	321	⇑QP	P	06 13 59.6	-0.1
GYA				AP	pP	06 14 03.8	-1.1
GYA				XP	sP	06 14 06.9	-0.1
GYA				PP	PP	06 14 54.8	-12
GYA				PCP	PcP	06 17 06.6	+1.7
GYA				S	S	06 18 51.6	-2.2
GYA				SCP	ScP	06 20 47.0	+0.7
GYA				SCS	ScS	06 24 39.9	-1.1
GYA				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,870nm,4.9s						
GYA				LR	LR		
	comp=N,4μm,16.8s,MS5.2						
GYA				LR	LR		
	comp=E,3μm,17.6s,MS5.2						
GYA				LR	LR		
	comp=Z,4μm,16.5s,MS5.2						
BDT	Bhumibol Dam	30.38	297	P	P	06 14 07.0	-0.4
CTA	Charters Tower	30.62	143	eP	P	06 14 11.8	+2.4
	comp=Z,8.4nm,0.9s,mb4.6						
CTA	Charters Tower	30.62	143	eP	P	06 14 11.8	+2.4
CTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CTAO	Charters Tower	30.62	143	eP	P	06 14 12.8	+3.4
	comp=Z,13nm,0.8s,mb4.8						
CTAO	Charters Tower	30.62	143	eP	P	06 14 12.8	+3.4
CTAO				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
CHRT	Chiangrai	30.80	303	⇓P	P	06 14 11.0	0.0
	comp=Z,192nm,0.9s,mb5.9						
CHG	Chiang Mai	31.05	300	⇓P	P	06 14 12.7	-0.6
	comp=Z,87nm,1.0s,mb5.5						
CHTO	Chiang Mai	31.05	300	eP	P	06 14 13.2	-0.1
	comp=Z,25nm,0.8s,mb5.1						
CHTO	Chiang Mai	31.05	300	eP	P	06 14 13.2	-0.1
CHTO				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.1						
JHJ	Hachijo jima 2	31.20	21	LR	LR	06 26 36.1	
	comp=Z,814nm,19.0s,MS4.4,baz=72,slow=36						
KMI	Kunming	31.29	314	P	P	06 14 16.1	+0.8
KMI				AP	pP	06 14 20.1	-0.4
KMI				XP	sP	06 14 22.0	-0.6
KMI				PP	PP	06 15 19.1	-7.0
KMI				S	S	06 19 23.8	+2.2
KMI				LR	LR		
	comp=N,564nm,17.6s,MS4.5						
KMI				LR	LR		
	comp=E,630nm,17.4s,MS4.5						
KMI				LR	LR		
	comp=Z,980nm,18.1s,MS4.5						
KSRS	Korea Array	33.16	1	P	P	06 14 31.5	-0.1
	comp=Z,15nm,0.8s,mb5.0,baz=178,slow=10,SNR=35						
KSRS				PcP	PcP	06 17 14.2	-0.2
	comp=Z,5.2nm,0.6s,baz=177,slow=2.3,SNR=8.8						
KSRS				LR	LR	06 28 29.2	
	comp=Z,452nm,19.3s,MS4.2,baz=332,slow=37						
TIA	Tai'an	33.19	345	eP	P	06 14 32.0	+0.2
TIA				AMB	AMB		
	comp=Z,77nm,1.0s,mb5.6						
MAJO	Matsushiro	33.85	16	eP	P	06 14 36.2	-1.4
	comp=Z,17nm,1.0s,mb4.9						
MAJO	Matsushiro	33.85	16	eP	P	06 14 36.2	-1.4
MAJO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
MAT	Matsushiro	33.85	16	P	P	06 14 36.3	-1.3
MAT				S	S	06 20 02.2	+1.1
MJAR	Matsushiro Arr	33.85	16	P	P	06 14 36.5	-1.1
MJAR						06 17 17.5	
MJAR				pmax	pmax		
	comp=Z,11nm,1.0s						
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR	Matsushiro Arr	33.85	16	P	P	06 14 36.5	-1.1
	comp=Z,11nm,1.0s,mb4.7,baz=197,slow=8.9,SNR=17						
MJAR				PcP	PcP	06 17 17.5	+1.1
	comp=Z,2.3nm,0.7s,baz=180,slow=3.5,SNR=4.4						
XAN	Xi'an	34.18	333	P	P	06 14 38.8	-1.7
XAN				AP	pP	06 14 47.9	+2.2
XAN				XP	sP	06 14 52.0	+4.2
XAN				AMB	AMB		
	comp=Z,84nm,1.3s,mb5.5						
XAN				LR	LR		
	comp=N,524nm,19.9s,MS4.5						
XAN				LR	LR		
	comp=E,815nm,20.5s,MS4.5						
XAN				LR	LR		
	comp=Z,1μm,18.6s,MS4.7						
CD2	Chengdu	34.48	323	⇓iP	P	06 14 41.9	-1.2
CD2				AP	pP	06 14 46.3	-2.0
CD2				XP	sP	06 14 49.0	-1.5
CD2				PP	PP	06 15 57.5	-3.9
CD2				PCP	PcP	06 17 17.6	-0.7
CD2				S	S	06 20 08.4	-2.6
CD2				SCS	ScS	06 25 02.3	-3.5
CD2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.3						
CD2				AMB	AMB		
	comp=Z,150nm,7.2s						
CD2				LR	LR		
	comp=N,1μm,19.2s,MS4.9						
CD2				LR	LR		
	comp=E,2μm,18.0s,MS4.9						
CD2				LR	LR		
	comp=Z,1μm,18.0s,MS4.7						
FORT	Forrest	34.74	178	eP	P	06 14 45.9	+0.6
	comp=Z,46nm,0.6s,mb5.6						
DL2	Dalian	34.95	353	⇑P	P	06 14 47.1	0.0
DL2				S	S	06 20 17.3	-0.7
DL2				AMB	AMB		
	comp=Z,60nm,0.6s,mb5.7						
DL2				AMB	AMB		
	comp=Z,120nm,5.0s						
DL2				LR	LR		
	comp=N,210nm,14.5s,MS4.2						
DL2				LR	LR		
	comp=E,270nm,15.3s,MS4.2						
DL2				LR	LR		
	comp=Z,320nm,16.2s,MS4.2						
HNR	Honiara	35.49	112	LR	LR	06 28 13.8	
	comp=Z,584nm,20.5s,MS4.3,baz=1.0,slow=34						
KLBR	Kellerberrin	36.61	193	eP	P	06 15 01.0	-0.4
	comp=Z,25nm,0.6s,mb5.2						
BJT	Baijiatuau	37.03	346	eP	P	06 15 05.8	+0.8
	comp=Z,405nm,1.1s,mb6.2						
BJT	Baijiatuau	37.03	346	eP	P	06 15 05.8	+0.9
BJT				pmax	pmax		
	comp=Z,405nm,1.1s						
BJI	Beijing	37.05	346	P	P	06 15 05.9	+0.8
BJI				XP	sP	06 15 10.5	-1.9
BJI				PP	PP	06 16 33.0	+3.3
BJI				S	S	06 20 49.8	-0.5
BJI				SCP	ScP	06 21 13.3	+1.1
BJI				SCS	ScS	06 25 20.9	+1.4
BJI				AMB	AMB		
	comp=Z,370nm,1.1s,mb6.1						
BJI				LR	LR		
	comp=N,348nm,20.8s,MS4.4						
BJI				LR	LR		
	comp=E,540nm,23.3s,MS4.4						
BJI				LR	LR		
	comp=Z,582nm,18.8s,MS4.4						
MUN	Mundaring	37.36	195	eP	P	06 15 07.6	-0.2
EIDS	Eidsvold	37.51	143	eP	P	06 15 09.9	+0.8
	comp=Z,17nm,0.9s,mb4.8						
EIDS				ePP	PP	06 16 35.8	+0.9
SNY	Shenyang	37.65	356	⇑P	P	06 15 10.5	+0.4
SNY				AP	pP	06 15 15.5	+0.2
SNY				XP	sP	06 15 17.3	-0.1
SNY				S	S	06 21 02.0	+2.8
SNY				XS	sS	06 21 08.8	+0.9
SNY				SS	SS	06 23 37.8	-7.0
SNY				AMB	AMB		
	comp=Z,42nm,1.2s,mb5.0						
SNY				AMB	AMB		
	comp=Z,240nm,4.5s						
SNY				LR	LR		
	comp=N,710nm,15.9s,MS4.6						
SNY				LR	LR		
	comp=E,458nm,16.8s,MS4.6						
SNY				LR	LR		
	comp=Z,749nm,17.4s,MS4.5						
NWAO	Narrogin (SRO)	38.01	193	eP	P	06 15 13.5	+0.2
	comp=Z,80nm,1.3s,mb5.3						
NWAO	Narrogin (SRO)	38.01	193	eP	P	06 15 13.5	+0.2
NWAO				pmax	pmax		
	comp=Z,80nm,1.3s						
NWAO	Narrogin (SRO)	38.01	193	P	P	06 15 14.7	+1.4
	comp=Z,36nm,0.9s,mb5.1,baz=12,slow=9.5,SNR=14						
LZH	Lanzhou	38.29	329	eP	P	06 15 15.0	-0.6
LZH				AP	pP	06 15 24.5	+3.6
LZH				XP	sP	06 15 28.0	+5.0
LZH				PP	PP	06 16 45.9	+2.5
LZH				eS	S	06 21 05.5	-3.7
LZH				AMB	AMB		
	comp=Z,143nm,1.2s,mb5.6						
LZH				AMB	AMB		
	comp=Z,239μm,3.0s						
LZH				LR	LR		
	comp=N,2μm,14.2s						
LZH				LR	LR		
	comp=Z,4μm,16.5s,MS5.3						
STKA	Stephens Creek	38.41	160	eP	P	06 15 12.9	-3.8
	comp=Z,29nm,0.6s,mb5.2						
STKA	Stephens Creek	38.41	160	P	P	06 15 17.1	+0.3
	comp=Z,27nm,0.6s,mb5.2,baz=337,slow=8.3,SNR=68						
HHC	Hu-ho-hao-te	39.10	341	eP	P	06 15 23.1	+0.8
HHC				AP	pP	06 15 27.4	-0.2
HHC				XP	sP	06 15 30.1	+0.4
HHC				PP	PP	06 16 56.1	+4.0
HHC				PCP	PcP	06 17 31.8	-0.2
HHC				eS	S	06 21 20.1	-1.1
HHC				PCS	PcS	06 21 22.3	+0.8
HHC				SCS	ScS	06 25 30.4	-0.8
HHC				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.0						
HHC				AMB	AMB		
	comp=Z,216nm,3.8s						
HHC				LR	LR		
	comp=N,665nm,21.4s,MS4.6						
HHC				LR	LR		
	comp=E,442nm,16.6s,MS4.6						
HHC				LR	LR		
	comp=Z,528nm,17.8s,MS4.4						
BTO	Baotou	39.40	339	eP	P	06 15 25.5	+0.7
CN2	Changchun	39.52	358	eP	P	06 15 25.0	-0.8
CN2				eXP	sP	06 15 32.0	-1.1
CN2				eS	S	06 21 27.3	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,330nm,17.0s,MS4.4						
CN2				LR	LR		
	comp=E,320nm,17.0s,MS4.4						
CN2				LR	LR		
	comp=Z,360nm,17.0s,MS4.3						
MDJ	Mudanjiang	40.37	3	P	P	06 15 33.4	+0.5
MDJ				AP	pP	06 15 37.3	-0.8
MDJ				XP	sP	06 15 40.5	+0.3
MDJ				PP	PP	06 17 06.9	+0.9
MDJ				PCS	PcS	06 21 26.8	+0.5
MDJ				S	S	06 21 42.5	+2.3
MDJ				SS	SS	06 24 38.8	-0.6
MDJ				AMB	AMB		
	comp=Z,43nm,1.3s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,186nm,8.8s						
MDJ				LR	LR		
	comp=E,293nm,22.5s						
MDJ				LR	LR		
	comp=Z,313nm,21.7s,MS4.1						
ARMA	Armidale	41.66	147	⇓iP	P	06 15 45.3	+1.6
ASAJ	Asahikawa	42.12	17	P	P	06 15 47.8	+0.6
ASAJ				pmax	pmax		
	comp=Z,38nm,0.9s						
ASAJ	Asahikawa	42.12	17	P	P	06 15 47.8	+0.6
	comp=Z,38nm,0.9s,mb5.0,baz=237,slow=15,SNR=14						
LSA	Lhasa	42.38	311	P	P	06 15 50.0	+0.4
LSA	Lhasa	42.38	311	eP	P	06 15 50.1	+0.5
	comp=Z,29nm,0.8s,mb5.0						
LSA	Lhasa	42.38	311	eP	P	06 15 50.1	+0.5
LSA				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.0						
GTA	Gaotai	42.89	329	eP	P	06 15 52.8	-0.8
GTA				AP	pP	06 15 57.0	-1.9
GTA				XP	sP	06 16 00.4	-0.6
GTA				PP	PP	06 17 35.3	+2.0
GTA				PCP	PcP	06 17 45.8	+1.4
GTA				S	S	06 22 13.6	-4.1
GTA				SCS	ScS	06 25 54.0	-0.1
GTA				AMB	AMB		

comp=Z,20nm,1.2s,mb4.7
GTA AMB AMB
comp=Z,71nm,7.3s
GTA LR LR
comp=N,1µm,21.0s,MS4.9
GTA LR LR
comp=E,1µm,18.3s,MS4.9
GTA LR LR
comp=Z,1µm,18.3s,MS4.9
TAPN Taplejung 44.00 306 *eP* **P 06 16 01.3 -1.5**
comp=Z,75nm,0.7s,mb5.5
ODAN Odare 44.06 305 *eP* **P 06 16 02.1 -1.2**
comp=Z,111nm,0.6s,mb5.7
CNB Canberra Magne 44.51 154 *eP* **P 06 16 07.7 +1.0**
comp=Z,26nm,0.9s,mb5.1
HABR Khabarovsk 44.70 8 *eP* **P 06 16 06.0 -2.0**
HABR *e* 06 17 47.5
HABR *e* 06 17 50.3
HABR *eS* **S 06 22 43.4 -0.5**
HABR *e* 06 26 05.9
YSS Yuzh-Sakhalins 44.77 15 *eP* **P 06 16 08.4 -0.2**
comp=Z,32nm,0.9s,mb5.2
YSS Yuzh-Sakhalins 44.77 15⇑ *eP* **P 06 16 09.1 +0.5**
YSS *e* 06 17 52.1
YSS pmax pmax
comp=N,30nm,1.0s
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.2
KLR Kul'dur 45.11 4 *eP* **P 06 16 08.0 -3.2**
KLR pmax pmax
comp=Z,50nm,1.6s,mb5.1
JIRN Jiri 45.36 305 *eP* **P 06 16 12.7 -0.9**
comp=Z,101nm,0.7s,mb5.8
HIA Hailar 45.38 353 *eP* **P 06 16 14.2 +0.7**
comp=Z,71nm,1.1s,mb5.4
HIA *ePcP* PcP 06 17 54.1 +1.4
HIA Hailar 45.38 353 *eP* **P 06 16 14.2 +0.8**
HIA *e* 06 17 54.1
HIA pmax pmax
comp=Z,71nm,1.1s
KKN Kakani 46.15 305 *eP* **P 06 16 18.3 -1.6**
comp=Z,57nm,0.8s,mb5.6
PALK Pallekele 46.17 276 *eP* **P 06 16 20.7 +0.5**
comp=Z,7.9nm,0.9s,mb4.6
DZM Mont Dzumac 46.55 126 P **P 06 16 24.7 +1.6**
comp=Z,8.1nm,0.8s,mb4.7,baz=134,slow=16,SNR=5.2
GKN Gorkha 46.76 305 *eP* **P 06 16 22.8 -1.9**
comp=Z,50nm,0.6s,mb5.6
ULN Ulaanbaatar 46.82 342 *eP* **P 06 16 24.6 -0.1**
comp=Z,38nm,0.8s,mb5.4
ULN Ulaanbaatar 46.82 342 *eP* **P 06 16 24.6 -0.1**
ULN pmax pmax
comp=Z,38nm,0.8s,mb5.4
SONM Songino Array 47.00 341 P **P 06 16 26.0 -0.2**
SONM 06 17 59.5
SONM pmax pmax
comp=Z,12nm,0.5s
SONM pmax pmax
comp=Z,12nm,0.8s
SONM MLR MLR
comp=Z,572nm,20.1s
SONM Songino Array 47.00 341 P **P 06 16 26.0 -0.1**
comp=Z,12nm,0.5s,mb5.1,baz=158,slow=9.0,SNR=99
SONM PcP PcP 06 17 59.5 +1.2
comp=Z,12nm,0.8s,baz=154,slow=4.0,SNR=6.9
SONM LR LR 06 37 38.6
comp=Z,572nm,20.1s,MS4.5,baz=160,slow=38
CIT Chita 49.02 349 *eP* **P 06 16 43.1 +1.4**
CIT pmax pmax
comp=Z,240nm,1.4s,mb6.0
HYB Hyderabad 49.24 289 *eP* **P 06 16 43.5 -0.5**
HYB Hyderabad 49.24 289 *i P* **P 06 16 43.5 -0.5**
HYB *ePcP* PcP 06 18 09.0 +2.0
ZAK Zakamensk 50.23 340 *eP* **P 06 16 50.7 -0.3**
ZAK *e* 06 18 10.7
ZAK pmax pmax
comp=Z,8.0nm,1.4s,mb4.6
ZAK pmax pmax
comp=Z,12nm,1.0s,mb4.9
TAU Tasmania Unive 50.31 161 P **P 06 16 53.9 +2.2**
comp=Z,28nm,0.9s,mb5.3
TAU Tasmania Unive 50.31 161 P **P 06 16 53.9 +2.2**
TAU pmax pmax
comp=Z,28nm,0.9s,mb5.3
TLY Talaya 51.23 342 P **P 06 16 59.9 +1.4**
comp=Z,264nm,0.9s,mb6.2,SNR=19
TLY Talaya 51.23 342 *eP* **P 06 16 58.7 +0.2**
comp=Z,32nm,0.8s,mb5.3
TLY Talaya 51.23 342 *eP* **P 06 16 58.8 +0.3**
TLY *e* 06 19 01.4
TLY *eS* **S 06 24 23.3 +7.0**
TLY pmax pmax
comp=Z,56nm,1.1s,mb5.4
TLY MLR MLR
comp=Z,439nm,20.0s,MS4.5
IRK Irkutsk 51.52 342⇑ *iP* **P 06 17 01.0 +0.3**
IRK pmax pmax
comp=Z,94nm,1.7s,mb5.4
MOY Mondy 52.09 340 *eP* **P 06 17 06.0 +1.0**
MOY pmax pmax
comp=Z,71nm,1.8s,mb5.3
NRGR Nerungri 52.40 358 *eP* **P 06 17 08.4 +1.3**
NRGR S **S 06 24 31.4 -0.8**
NRGR smax
comp=N,27nm,0.6s
WMQ Urumqi 52.55 325⇑ *iP* **P 06 17 07.8 -0.7**
WMQ AP pP 06 17 12.3 -1.6
WMQ XP sP 06 17 14.8 -1.2
WMQ PCP PcP 06 18 19.3 +0.5
WMQ PP PP 06 19 07.3 -0.3
WMQ SCP ScP 06 22 14.3 -1.2
WMQ PCS PcS 06 22 16.3 -0.8
WMQ S **S 06 24 30.6 -4.1**
WMQ AMB AMB
comp=Z,38nm,1.1s,mb5.2
WMQ LR LR
comp=N,1µm,20.8s,MS5.0
WMQ LR LR
comp=E,447nm,21.8s,MS5.0
WMQ LR LR
comp=Z,673nm,20.0s,MS4.7
CLNS Chul'man 52.57 359 *eP* **P 06 17 05.6 -2.8**
CLNS *e* 06 18 14.6
CLNS *eS* **S 06 24 24.0 -11**
CLNS *e* 06 26 53.2
CLNS pmax pmax
comp=Z,36nm,0.8s,mb5.3
CLNS pmax pmax
comp=N,18nm,0.7s
CLNS pmax pmax
comp=E,13nm,0.8s
CLNS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
CLNS pmax pmax
comp=N,14nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,1.0s
CLNS smax
comp=E,200nm,13.5s
CLNS smax
comp=Z,44nm,13.7s
CLNS smax
comp=N,108nm,13.5s
BOD Bodaibo 54.50 351⇓ *iP* **P 06 17 22.5 -0.1**
BOD pmax pmax
comp=Z,60nm,1.2s,mb5.4
MK31 Makanchi Array 57.38 325 *eP* **P 06 17 42.3 -1.1**
MK31 Makanchi Array 57.38 325 *i P* **P 06 17 42.2 -1.2**
MK31 pmax pmax
comp=Z,25nm,0.6s,mb5.4
MKAR Makanchi Array 57.38 325 P **P 06 17 42.4 -1.0**
MKAR ScP ScP 06 22 36.0 -0.7
MKAR LR LR 06 45 38.9
MKAR *⇑e* 06 47 38.9
MKAR Makanchi Array 57.38 325 P **P 06 17 42.4 -1.0**
comp=Z,20nm,0.6s,mb5.4,baz=121,slow=8.3,SNR=267
MKAR ScP ScP 06 22 36.0 -0.7
comp=Z,1.4nm,0.7s,baz=108,slow=5.6,SNR=4.7
MKAR LR LR 06 45 38.9
comp=Z,898nm,18.6s,MS4.9,baz=122,slow=40
MKAR PKP2bc 06 47 38.9
comp=Z,1.1nm,1.1s,baz=293,slow=0.9,SNR=4.8
YAK Yakutsk 57.79 1 *eP* **P 06 17 46.2 +0.1**
comp=Z,96nm,0.7s,mb5.9
YAK Yakutsk 57.79 1 *eP* **P 06 17 46.4 +0.4**
YAK *e* 06 18 38.3
YAK *e* 06 19 54.5
YAK *ePPP* 06 21 14.1
YAK *eS* **S 06 25 45.4 +1.1**
YAK *e* 06 27 26.2
YAK *eSS* SS 06 29 30.3 -4.8
YAK pmax pmax
comp=Z,156nm,0.9s,mb6.0
YAK pmax pmax
comp=N,80nm,1.4s
YAK pmax pmax
comp=E,21nm,1.2s
YAK smax
comp=E,116nm,3.9s
YAK smax
comp=N,57nm,3.7s
KSH Kashi 57.95 315 *eP* **P 06 17 48.3 +0.7**
KSH *eAP* pP 06 17 52.3 -0.7
KSH XP sP 06 17 56.0 +0.9
KSH *ePCP* PcP 06 18 39.3 -0.4
KSH *ePP* PP 06 19 58.0 +1.9
KSH *eSCP* ScP 06 22 38.3 -1.0
KSH *ePCS* PcS 06 22 40.1 -0.9
KSH S **S 06 25 47.1 -0.1**
KSH *eXS* sS 06 25 55.0 -1.1
KSH *eSCS* ScS 06 27 34.1 -2.6
KSH *eSS* SS 06 29 40.9 +2.5
KSH AMB AMB
comp=Z,425nm,1.8s,mb6.2
KSH LR LR
comp=N,917nm,6.2s
KSH LR LR
comp=E,1µm,6.2s
KSH LR LR
comp=Z,1µm,4.6s
MA2 Magadan 58.24 14 *eP* **P 06 17 50.4 +1.2**
comp=Z,10.0nm,0.8s,mb4.9
MA2 Magadan 58.24 14 *eP* **P 06 17 50.4 +1.2**
MA2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
ULHL Ulahol 58.90 318 P **P 06 17 53.7 -0.5**
SNR=7.8
KZA Kyzart 59.50 317 P **P 06 18 01.0 +2.7**
SNR=9.9
TKM2 Tokmak 2 59.62 318 P **P 06 17 58.0 -1.2**
SNR=13
KBK Karagaybulak 59.95 318 P **P 06 18 01.0 -0.4**
SNR=6.7
UCH Uchtor 60.06 317 P **P 06 18 04.0 +1.8**
SNR=12
CHMS Chumysh 60.22 318 P **P 06 18 02.7 -0.6**
SNR=6.3
AAK Ala-Archa 60.24 318 P **P 06 18 02.9 -0.5**
comp=Z,94nm,1.3s,mb5.7,SNR=9.3
AAK Ala-Archa 60.24 318 *eP* **P 06 18 02.3 -1.1**
comp=Z,14nm,0.8s,mb5.1
AAK *ePcP* PcP 06 18 48.6 -0.1
AAK Ala-Archa 60.24 318 *eP* **P 06 18 02.3 -1.1**
AAK *e* 06 18 48.6
AAK pmax pmax
comp=Z,15nm,0.8s,mb5.1
FRU Bishkek 60.24 318 *eP* **P 06 18 02.2 -1.2**
FRU MLR MLR
comp=E,800nm,21.0s
FRU MLR MLR
comp=Z,800nm,21.0s,MS4.8
USP Ospenovka 60.50 318 P **P 06 18 00.0 -5.1**
SNR=33
AML Almayashu 60.58 317 P **P 06 18 01.0 -4.7**
SNR=9.6
EKS2 Erkin-Say 60.73 317 P **P 06 18 06.6 -0.2**
SNR=29
KURK Kurchatov 61.55 327 P **P 06 18 11.1 -1.0**
comp=Z,747nm,0.9s,SNR=58
SEY Seymchan 61.57 13⇑ *eP* **P 06 18 12.9 +0.9**
NVS Novosibirsk 61.63 333 *i P* **P 06 18 11.3 -1.3**
NVS *eS* **S 06 26 29.2 -4.9**
NVS *i* 06 27 59.5
NVS pmax pmax
comp=N,27nm,1.2s
NVS pmax pmax
comp=E,45nm,1.2s
NVS pmax pmax
comp=Z,14nm,1.2s,mb5.0
NVS smax
comp=N,6.0nm,1.1s
NVS smax
comp=E,8.0nm,0.7s
KK31 Karatay Array 63.12 317 *i P* **P 06 18 21.6 -1.2**
KK31 pmax pmax
comp=Z,36nm,1.0s,mb5.5
AFI Afiamalu 63.30 108 LR LR 06 43 11.5
comp=Z,259nm,18.3s,MS4.4,baz=58,slow=33
ADK Adak 66.47 34 *eP* **P 06 18 45.1 +0.6**
comp=Z,47nm,1.0s,mb5.5
BRVK Borovoye 67.20 327 P **P 06 18 48.2 -0.9**
comp=Z,657nm,0.9s,SNR=33
BRVK Borovoye 67.20 327 *eP* **P 06 18 48.3 -0.8**
comp=Z,76nm,0.8s,mb5.8
BRVK Borovoye 67.20 327 *eP* **P 06 18 47.2 -1.9**
CHKZ Chkalovo 67.29 328 *eP* **P 06 18 48.5 -1.1**
comp=Z,27nm,0.9s,mb5.3
CHKZ Chkalovo 67.29 328 *i P* **P 06 18 47.7 -1.9**
CHKZ pmax pmax
comp=Z,34nm,1.2s,mb5.2
TIXI Tiksi 67.43 1 *eP* **P 06 18 50.0 -0.2**
comp=Z,62nm,1.1s,mb5.5
TIXI *ePP* PP 06 21 18.3 -0.6
TIXI Tiksi 67.43 1 *eP* **P 06 18 47.8 -2.4**
TIXI *e* 06 19 14.7
TIXI *eS* S 06 27 41.7 -3.5
TIXI pmax pmax
comp=Z,88nm,1.4s,mb5.6
BILL Bilibino 69.09 15 *eP* **P 06 19 00.9 +0.2**
comp=Z,37nm,1.4s,mb5.1
BILL Bilibino 69.09 15⇓ *iP* **P 06 19 00.8 +0.1**
BILL *eS* S 06 28 24.3 +19
BILL pmax pmax
comp=Z,18nm,1.2s,mb4.9
BILL MLR MLR
comp=Z,300nm,21.0s,MS4.5
CASY Casey 71.26 187 *eP* **P 06 19 14.8 +0.9**
comp=Z,50nm,1.3s,mb5.3
UNV Unalaska Valle 72.93 35 *eP* **P 06 19 25.0 +0.7**
comp=Z,58nm,0.8s,mb5.6
AKUT Akutan 73.42 34 *eP* **P 06 19 28.2 +1.0**
comp=Z,108nm,0.8s,mb5.8
AKTO Aktyubinsk 73.51 321 *i P* **P 06 19 26.8 -1.0**
AKTO pmax pmax
comp=Z,1.0nm,1.1s
SVE Sverdlovsk 73.76 328⇑ *eP* **P 06 19 28.9 -0.2**
SVE pmax pmax
comp=Z,117nm,1.2s,mb5.7
GAMB Gambell 73.91 24 *eP* **P 06 19 30.6 +0.8**
comp=Z,49nm,1.1s,mb5.3
ARU Arti 74.74 328 *eP* **P 06 19 34.1 -0.7**
comp=Z,64nm,0.9s,mb5.5
ARU Arti 74.74 328 *c iP* **P 06 19 33.8 -1.0**
ARU *e* 06 19 43.6
ARU 06 22 21.3
ARU S S 06 29 12.3 +1.9
ARU SS SS 06 34 00.4 +2.4
ARU pmax pmax
comp=Z,97nm,1.2s,mb5.6
FALS False Pass 74.94 34 *eP* **P 06 19 37.2 +1.1**
RAR Rarotonga 75.94 113 LR LR 06 47 50.8
comp=Z,166nm,20.5s,MS4.3,baz=6.0,slow=32
TNA Tin City 76.10 23 *eP* **P 06 19 43.2 +0.8**
comp=Z,8.7nm,1.1s,mb4.6
SOKR Solikamsk 76.49 330 *c iP* **P 06 19 44.8 0.0**
SOKR pmax pmax
comp=Z,70nm,1.3s,mb5.4
SOKR MLR MLR
comp=Z,410nm,20.0s,MS4.7
SDPT Sand Point 76.70 34 *eP* **P 06 19 46.1 0.0**
comp=Z,210nm,1.5s,mb5.8
QRN Al-Qurain 78.46 298 *eP* **P 06 19 54.4 -2.1**
QRN AMb AMB 06 20 02.1
comp=Z,55nm,0.7s,mb5.6
UMR Umm Al-Rimmam 78.66 299 *eP* **P 06 19 55.8 -1.8**
UMR AMb AMB 06 20 06.2
comp=Z,47nm,0.7s,mb5.5
RDF Al-Radifah 78.79 299 *eP* **P 06 19 55.8 -2.5**
RDF AMb AMB 06 20 13.1
comp=Z,100nm,1.3s,mb5.6
MIB Mutribah 78.99 299 *eP* **P 06 19 58.0 -1.4**
MIB AMb AMB 06 20 08.7
comp=Z,87nm,0.7s,mb5.8
NAY Al-Naaiem 79.06 299 *eP* **P 06 19 57.8 -2.0**
NAY AMb AMB 06 20 08.2
comp=Z,26nm,0.7s,mb5.2
SVW2 Sparrevohn 80.31 29 *eP* **P 06 20 07.9 +2.0**
TTA Tatalina 80.41 27 *eP* **P 06 20 08.0 +1.6**
TTA Tatalina 80.41 27 *eP* **P 06 20 07.4 +1.0**
DGRG David-gareji 81.00 311 P **P 06 20 09.8 -0.3**
KDAK Kodiak Island 81.40 32 P **P 06 20 13.9 +2.2**
comp=Z,325nm,0.9s,mb6.3,SNR=9.2
KDAK Kodiak Island 81.40 32 P **P 06 20 13.2 +1.4**
comp=Z,42nm,0.8s,mb5.4,baz=337,slow=3.2,SNR=21
IMA2 Indian Mountai 81.89 24 *eP* **P 06 20 15.6 +1.4**
ZEI Tsey 82.15 312 *eP* **P 06 20 15.5 -0.5**
ZEI *e* 06 23 24.6
ZEI pmax pmax
comp=Z,24nm,0.7s,mb5.2
HAKT HAKKARI 82.18 307 *i P* **P 06 20 16.2 -0.2**
PRGR Permogore 82.28 332⇑ *iP* **P 06 20 15.9 -0.4**
PRGR *eS* S 06 30 29.1 -1.9
ONI Oni 82.47 312 P **P 06 20 17.4 -0.3**
GOF Gofitskoye 82.83 315 *eP* **P 06 20 10.9 -8.7**
SLKM Skilak Lake 82.85 30 *eP* **P 06 20 19.8 +0.5**
KIV Kislovodsk 83.06 314 P **P 06 20 20.8 +0.1**
comp=Z,13nm,0.8s,mb5.0
KIV Kislovodsk 83.06 314 *eP* **P 06 20 17.8 -3.0**
KIV pmax pmax
comp=Z,14nm,1.2s,mb4.9
PMR Palmer 83.45 29 *eP* **P 06 20 22.8 +0.4**
comp=Z,64nm,0.9s,mb5.7
PMR Palmer 83.45 29 *eP* **P 06 20 22.8 +0.4**
PMR pmax pmax
comp=Z,64nm,0.9s,mb5.7
MCK McKinley 83.67 26 *eP* **P 06 20 24.2 +0.7**
comp=Z,107nm,1.0s,mb5.9
MCK McKinley 83.67 26 *eP* **P 06 20 24.2 +0.7**
MCK pmax pmax
comp=Z,53nm,1.0s,mb5.6
VNDA Vanda 83.80 173 P **P 06 20 23.9 +0.1**
VNDA LR LR 06 59 07.4
VNDA Vanda 83.80 173 P **P 06 20 23.9 0.0**
VNDA pmax pmax
comp=Z,11nm,1.1s
VNDA MLR MLR
comp=Z,179nm,18.0s
VNDA Vanda 83.80 173 P **P 06 20 23.9 +0.1**
comp=Z,11nm,1.1s,mb4.9,baz=317,slow=7.1,SNR=11
VNDA LR LR 06 59 07.4
comp=Z,179nm,18.0s,MS4.5,baz=330,slow=37
SML Sawmill 83.84 28 *eP* **P 06 20 25.5 +1.0**
SML Sawmill 83.84 28 *eP* **P 06 20 25.1 +0.7**
VRHR Novokhopersk 83.90 321 *eP* **P 06 20 24.0 -0.9**
VRHR pmax pmax
comp=Z,50nm,0.4s,mb6.0
VRHR pmax pmax
comp=N,20nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.6s
COLA College 84.21 25 *eP* **P 06 20 26.0 -0.2**
comp=E,16nm,0.8s,mb5.2
COLA College 84.21 25⇑ *eP* **P 06 20 26.1 -0.1**
MAW Mawson 84.23 200 P **P 06 20 27.5 +1.3**
MAW pmax pmax
comp=Z,21nm,1.2s
MAW MLR MLR
comp=Z,212nm,18.8s
MAW Mawson 84.23 200 P **P 06 20 27.5 +1.2**
comp=Z,21nm,1.2s,mb5.1,baz=66,slow=9.7,SNR=7.5
MAW LR LR 06 57 48.4
comp=Z,212nm,18.8s,MS4.5,baz=249,slow=36
SBA Scott Base 84.70 172 P **P 06 20 30.1 +1.7**
SOC Sochi 85.21 313 *eP* **P 06 20 27.3 -4.4**
SOC *eS* S 06 30 51.5 -10
SOC pmax pmax
comp=Z,31nm,1.1s,mb5.3
VRSR Storozhevoye 85.43 321 *eP* **P 06 20 32.0 -0.7**
VRSR pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
VRSR pmax pmax
comp=N,8.0nm,3.4s
VRSR pmax pmax
comp=E,10.0nm,1.0s
KELT Kelkit 85.64 310 *i P* **P 06 20 33.4 -0.5**
ELZG Elazig 85.90 308 *i P* **P 06 20 36.2 +0.9**
MENT Mentasta 86.01 27 *eP* **P 06 20 37.0 +1.7**
KEMA Kemaliye 86.26 309 *i P* **P 06 20 37.4 +0.4**
MOS Moscow 86.26 325 *eP* **P 06 20 33.9 -2.8**
MOS *e* 06 20 41.6
MOS pmax pmax
comp=Z,400nm,1.6s,mb6.4
MOS pmax pmax
comp=Z,284nm,1.4s,mb6.3
MALT Malatya 86.35 308 *eP* **P 06 20 37.3 -0.2**
comp=Z,8.4nm,0.9s,mb5.0
MALT Malatya 86.35 308⇑ *iP* **P 06 20 37.7 +0.2**
ANN Anapa 86.81 315 *eP* **P 06 20 36.5 -3.1**
ANN *eS* S 06 31 02.4 -15
ANN pmax pmax
comp=Z,90nm,1.3s,mb5.8
OBN Obninsk 86.89 325 P **P 06 20 39.9 +0.1**
comp=Z,932nm,1.7s,SNR=6.0
OBN Obninsk 86.89 325 *eP* **P 06 20 39.3 -0.4**
comp=Z,200nm,1.2s,mb6.2
OBN Obninsk 86.89 325⇓ *iP* **P 06 20 39.6 -0.2**
OBN *i S* S 06 31 09.6 -7.6
OBN pmax pmax
comp=Z,337nm,1.8s,mb6.3
OBN MLR MLR
comp=Z,300nm,17.0s,MS4.8
EGAK Eagle 87.07 25 P **P 06 20 39.7 -0.8**
comp=Z,4.1nm,0.7s,mb4.8
GZT Gaziantep 87.07 307 *i P* **P 06 20 39.9 -1.1**
LVZ Lovozero 87.08 338 *i P* **P 06 20 38.0 -2.5**
LVZ pmax pmax
comp=Z,20nm,1.3s,mb5.2
LVZ MLR MLR
comp=Z,300nm,26.0s,MS4.6
APA Apatity 87.58 337⇑ *iP* **P 06 20 41.0 -1.9**
APA *i* 06 20 48.6
APA *i S* S 06 31 22.0 -1.5
APA pmax pmax
comp=Z,39nm,1.3s,mb5.5
DAWY Dawson 87.89 26 *eP* **P 06 20 44.8 +0.4**
JOF Joensuu 88.94 333 *ep* **P 06 20 48.2 -1.2**
comp=Z,26nm,0.6s,mb5.7
JOF Joensuu 88.94 333 *eP* **P 06 20 48.2 -1.2**
JOF pmax pmax
comp=Z,26nm,0.6s,mb5.7
INK Inuvik 89.68 22 *eP* **P 06 20 52.7 -0.1**
comp=Z,1µm,1.2s
INK Inuvik 89.68 22 *eP* **P 06 20 53.3 +0.5**
INK Inuvik 89.68 22 P **P 06 20 53.1 +0.4**
comp=Z,21nm,1.1s,mb5.4,baz=282,slow=5.0,SNR=37
INK PKiKP PKiKP 06 25 49.8 0.0
comp=Z,0.9nm,0.9s,baz=251,slow=3.6,SNR=3.9
KMBO Kilima Mbogo 89.84 269 *eP* **P 06 20 54.1 -0.5**
comp=Z,16nm,1.1s,mb5.3
KMBO Kilima Mbogo 89.84 269⇑ *eP* **P 06 20 55.7 +1.0**
KMBO Kilima Mbogo 89.84 269 P **P 06 20 54.3 -0.4**
comp=Z,13nm,1.1s,mb5.2,baz=49,slow=6.5,SNR=16
BRTR Keskin Array B 89.97 310 P **P 06 20 53.4 -1.4**
comp=Z,3.1nm,0.9s,mb4.6,baz=132,slow=4.2,SNR=8.7
BRTR LR LR 07 05 44.2
comp=Z,119nm,21.7s,MS4.3,baz=124,slow=39
ARCES ARCESS Array B 90.16 340 P **P 06 20 54.1 -0.9**
comp=Z,11nm,0.6s,mb5.3,baz=83,slow=5.9,SNR=54
ARCES PKiKP PKiKP 06 25 51.2 +0.6
comp=Z,1.2nm,0.5s,baz=106,slow=1.5,SNR=9.2
ARCES LR LR 07 04 33.7
comp=Z,356nm,20.2s,MS4.8,baz=270,slow=38
KAF Kangasniemi 91.36 332 *ep* **P 06 20 59.5 -1.2**
comp=Z,11nm,0.6s,mb5.4,baz=74,slow=4.2
KAF Kangasniemi 91.36 332 *eP* **P 06 20 59.5 -1.2**
KAF pmax pmax
comp=Z,11nm,0.6s,mb5.4
FINES FINESS Array B 91.60 332 P **P 06 21 01.1 -0.7**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 91.60 332 P **P 06 21 01.1 -0.8**
comp=Z,4.9nm,0.6s,mb5.0,baz=79,slow=4.8,SNR=25
AKASG Malin Array Be 91.75 321 P **P 06 21 01.2 -1.6**
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKASG MLR MLR
comp=Z,169nm,19.4s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKASG	Malin Array Be	91.75	321	P	P	06 21 01.2	-1.6
	comp=Z,8.6nm,0.7s,mb5.2,baz=69,slow=4.2,SNR=56						
AKASG				LR	LR	07 04 56.0	
	comp=Z,169nm,19.4s,MS4.5,baz=60,slow=37						
KIEV	Kiev	91.76	321	eP	P	06 21 01.1	-1.7
	comp=Z,38nm,1.3s,mb5.6						
KIEV	Kiev	91.76	321	eP	P	06 21 01.1	-1.7
KIEV				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.6						
VSU	Vasula	91.86	329	i P	P	06 21 00.2	-2.9
KIS	Kishinev	92.58	317	eP	P	06 21 04.0	-2.7
KIS				e		06 24 50.0	
KIS				e		06 31 30.0	
KIS				e		06 33 18.0	
KIS	Kishinev	92.58	317	eP	P	06 21 04.0	-2.7
KIS				LRM		07 09 34.0	
	comp=Z,300nm,19.0s						
SYO	Syowa Base	92.91	201	⇓eP	P	06 21 08.0	+0.3
SYO	Syowa Base	92.91	201	⇓epP	pP	06 21 23.0	+10
DLBC	Dease Lake	93.25	31	P	P	06 21 11.3	+1.8
DLBC	Dease Lake	93.25	31	P	P	06 21 11.3	+1.8
VRI	Vrincioaia	94.19	316	⇓iP	P	06 21 14.4	+0.3
SUW	Suwalki	94.75	325	eP	P	06 21 15.9	-0.6
MLR	Muntele Rosu	94.80	316	⇓iP	P	06 21 16.5	-0.4
BURAR	Bucovina Array	94.88	318	⇓iP	P	06 21 17.3	0.0
LVV	L'vov	95.19	321	eP	P	06 21 18.2	-0.4
VOIR		95.43	316	⇑iP	P	06 21 19.2	-0.6
KWP	Kalwaria	96.07	321	eP	P	06 21 22.8	+0.1
KWP	Kalwaria	96.07	321	⇑iP	P	06 21 22.9	+0.3
KOLS	Kolonicke sedl	96.51	320	eP	P	06 21 24.0	-0.7
KOLS	Kolonicke sedl	96.51	320	eP	P	06 21 23.9	-0.8
TRPA	Tarpa	96.53	319	⇑iP	P	06 21 25.0	+0.2
UZH	Uzhgorod	96.57	320	i P	P	06 21 25.0	+0.1
UZH				i	pP	06 21 31.2	+0.6
UZH				e		06 21 40.4	
DRGR		96.73	318	⇓iP	P	06 21 25.7	0.0
DAG	Danmarks Havn	96.88	352	⇑iP	P	06 21 25.6	-0.2
DAG				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.5						
DAG	Danmarks Havn	96.88	352	⇑iP	P	06 21 25.6	-0.2
	comp=Z,24nm,1.1s,mb5.5						
GZR	Gura Zlata	97.00	317	⇑iP	P	06 21 27.6	+0.6
CRVS	Cervenica-Dubn	97.04	320	eP	P	06 21 27.4	+0.4
STHS	Stebnicka Huta	97.05	321	eP	P	06 21 27.4	+0.3
	comp=Z,9.0nm,0.8s,mb5.2						
STHS	Stebnicka Huta	97.05	321	eP	P	06 21 27.4	+0.3
STHS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
RES	Resolute Bay	97.36	10	eP	P	06 21 27.8	-0.2
	comp=Z,145nm,0.8s						
RES	Resolute Bay	97.36	10	eP	P	06 21 27.8	-0.2
RES				pmax	pmax		
	comp=Z,145nm,0.8s						
NIE	Niedzica	97.63	321	eP	P	06 21 30.7	+1.0
OJC	Ojcow	97.73	322	i P	P	06 21 30.1	-0.1
KECS	Kecovo	97.77	320	eP	P	06 21 30.8	+0.4
	comp=Z,23nm,1.7s,mb5.4						
KECS	Kecovo	97.77	320	eP	P	06 21 30.8	+0.4
KECS				pmax	pmax		
	comp=Z,23nm,1.7s,mb5.4						
PSZ	Piszkesteto	98.30	319	eP	P	06 21 32.1	-0.6
	comp=Z,30nm,1.5s,mb5.6						
PSZ	Piszkesteto	98.30	319	⇓eP	P	06 21 32.6	-0.2
PSZ	Piszkesteto	98.30	319	⇑iP	P	06 21 32.6	-0.2
NB2	NORSAR Subarra	98.54	334	P	P	06 21 32.2	-1.3
	comp=Z,5.6nm,0.8s,mb5.2,baz=68,slow=4.8						
NB2	NORSAR Subarra	98.54	334	P	P	06 21 32.2	-1.3
NB2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.2						
NOA	NORSAR Array B	98.54	334	P	P	06 21 32.0	-1.5
	comp=Z,2.5nm,0.6s,mb4.9,baz=68,slow=4.5,SNR=8.6						
NOA				LR	LR	07 11 50.3	
	comp=Z,279nm,18.5s,MS4.8,baz=35,slow=39						
VYHS	Vyhne	98.82	320	eP	P	06 21 34.7	-0.4
	comp=Z,10nm,1.7s,mb5.1						
VYHS	Vyhne	98.82	320	eP	P	06 21 34.7	-0.4
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb5.1						
VYHS	Vyhne	98.82	320	PDIF	P	06 21 34.7	-0.4
OKC	Ostrava-Krasne	98.86	322	ePDIF	P	06 21 35.3	+0.1
YKW3	Yellowknife Ar	98.98	24	eP	P	06 21 36.1	+0.6
BUD	Budapest	98.98	319	eP	P	06 21 35.5	-0.3
YKA	Yellowknife Ar	99.01	24	P	P	06 21 35.3	-0.3
YKA	Yellowknife Ar	99.01	24	P	P	06 21 35.3	-0.3
	comp=Z,2.3nm,0.6s,mb4.9,baz=299,slow=4.4,SNR=49						
YKA				PKiKP	PKiKP	06 26 07.5	+1.5
	comp=Z,0.4nm,0.5s,baz=297,slow=1.8,SNR=8.5						
YKA				PKKPbc	PKKPbc	06 38 05.3	+1.1
	comp=Z,0.2nm,0.7s,baz=114,slow=2.5,SNR=4.1						
YKA				LR	LR	07 06 21.2	
	comp=Z,102nm,19.7s,MS4.3,baz=200,slow=35						
MORC	Moravsky Berou	99.26	322	eP	P	06 21 37.2	+0.2
	comp=Z,13nm,1.1s,mb5.4						
MORC	Moravsky Berou	99.26	322	⇓iP	P	06 21 37.3	+0.3
LSZ	Lusaka	99.58	255	eP	P	06 21 37.1	-2.0
	comp=Z,58nm,2.3s,mb5.6						
LSZ	Lusaka	99.58	255	eP	P	06 21 37.1	-2.0
LSZ				pmax	pmax		
	comp=Z,58nm,2.3s,mb5.6						
PKSM	Moragy	99.59	318	⇑iP	P	06 21 38.1	-0.5
KSP	Ksiaz	99.68	323	eP	Pdif	06 21 39.5	+0.8
KSP	Ksiaz	99.68	323	eP	Pdif	06 21 39.0	+0.3
NLWA	Neilton Lookou	99.75	41	ePdif	Pdif	06 21 40.9	+1.9
DPC	Dobruska-Polom	99.83	323	ePDIF	Pdif	06 21 39.8	+0.4
DPC				epP		06 21 44.7	
MODS	Modra-Piesok	99.85	320	eP	Pdif	06 21 39.2	-0.3
MODS	Modra-Piesok	99.85	320	PDIF	Pdif	06 21 39.2	-0.3
UPC	Upice	99.96	323	ePDIF	Pdif	06 21 40.2	+0.2
VRAC	Vranov	99.99	321	⇓iP	Pdif	06 21 41.0	+0.9
GNW	Green Mountain	100.38	40	ePdif	Pdif	06 21 42.9	+1.1
SOP	Sopron	100.52	320	eP	Pdif	06 21 40.9	-1.6
PVCC	Panska Ves	100.82	323	ePDIF	Pdif	06 21 44.2	+0.4
CONA	Conrad Observa	100.89	320	⇓iPdiff	Pdif	06 21 44.7	+0.6
	comp=Z,4.1nm,1.1s						
PRU	Pruhonice	101.03	323	ePDIF	Pdif	06 21 44.9	+0.2
BRG	Berggiesshubel	101.08	324	i P	Pdif	06 21 44.9	0.0
BRG				pmax	pmax		
	comp=Z,19nm,1.5s						
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	101.08	324	i P	Pdif	06 21 44.9	0.0
	comp=Z,32nm,1.5s						
BRG				e		06 21 54.0	
	comp=Z,7.8nm,0.9s						
ARSA	Arzberg	101.32	320	⇑iP	Pdif	06 21 46.8	+0.8
	comp=Z,6.1nm,0.9s						
CLL	Collm	101.47	324	ePdif	Pdif	06 21 47.0	+0.3
	comp=Z,35nm,1.8s						
CLL				e		06 21 55.0	
CLL				LR	LR		
	comp=Z,300nm,18.3s,MS4.8						
CLL	Collm	101.47	324	ePdif	Pdif	06 21 47.0	+0.3
	comp=Z,35nm,1.8s						
CLL				e(sPdif)		06 21 55.0	
CLL				LmH		07 08 00.0	
	comp=N,100nm,21.2s						
CLL				LmH		07 08 00.0	
	comp=E,300nm,19.0s						
CLL				LmV		07 10 00.0	
	comp=Z,300nm,18.3s						
KHC	Kasperske Hory	101.91	322	ePDIF	Pdif	06 21 48.5	-0.2
KHC				epP		06 21 54.0	
MOA	Molln	101.93	321	⇓iP	Pdif	06 21 49.2	+0.5
	comp=Z,26nm,1.6s						
GERES	GERESS Array B	101.94	322	P	Pdif	06 21 49.3	+0.5
	comp=Z,3.4nm,0.9s,baz=72,slow=4.3,SNR=24						
GERES				PKiKP	PKiKP	06 26 13.7	+1.9
	comp=Z,1.1nm,0.6s,baz=50,slow=2.1,SNR=6.0						
NKC	Novy Kostel	102.20	323	ePDIF	Pdif	06 21 50.7	+0.8
MOX	Moxa	102.53	324	eP	Pdif	06 21 52.4	+1.0
GRA1	Grafenberg Arr	103.13	323	ePdif	Pdif	06 21 54.3	+0.2
GRA1				LR	LR		
	comp=Z,300nm,19.7s,MS4.8						
GRF	Grafenberg Arr	103.13	323	ePdiff	Pdif	06 21 54.3	+0.2
GRF				eL		07 13 46.0	
	comp=Z,271nm,19.7s						
ABTA	Abfaltersbach	103.43	320	⇓iPdiff	Pdif	06 21 55.1	-0.3
	comp=Z,6.5nm,1.1s						
NEW	Newport	103.73	38	ePdif	Pdif	06 21 57.7	+0.9
WTTA	Wattenberg	103.80	321	⇑iP	Pdif	06 21 57.8	+0.7
	comp=Z,16nm,0.9s						
WTTA	Wattenberg	103.80	321	⇑iP	Pdif	06 21 57.8	+0.7
WTTA				pmax	pmax		
	comp=Z,16nm,0.9s						
FETA	Feichten	104.47	321	⇑iPdiff	Pdif	06 22 00.8	+0.8
	comp=Z,11nm,1.4s						
DAVA	Damuels	104.90	321	⇑iP	Pdif	06 22 04.1	+2.2
	comp=Z,8.1nm,1.1s						
DAVA	Damuels	104.90	321	⇑ipPdiff		06 22 04.1	
	comp=Z,8.1nm,1.1s						
BSMT	Bassoo Peak	105.34	38	ePdif	Pdif	06 22 06.6	+2.8
BSMT				ePKiKP	PKiKP	06 26 18.5	+0.5
WALA	Waterton Lakes	105.36	37	ePdif	Pdif	06 22 06.4	+2.4
WALA				ePKiKP	PKiKP	06 26 18.3	+0.3
NVAR	Mina Array Bea	106.43	48	Pdif	Pdif	06 22 11.8	+3.0
NVAR				PKPdf	PKiKP	06 26 22.9	+2.6
NVAR				PKKPbc	PKKPbc	06 37 43.6	+2.1
NVAR	Mina Array Bea	106.43	48	Pdiff	Pdif	06 22 11.8	+3.0
	comp=Z,1.4nm,0.7s,baz=268,slow=3.5,SNR=11						
NVAR				PKiKP	PKiKP	06 26 22.9	+2.6
	comp=Z,0.7nm,0.8s,baz=310,slow=3.9,SNR=3.7						
NVAR				PKKPbc	PKKPbc	06 37 43.6	+2.1
	comp=Z,0.2nm,0.5s,baz=117,slow=5.5,SNR=2.9						
HINF	Hinteralfeld	106.54	323	ePKIKP	PKiKP	06 26 20.2	0.0
PGF	Pioggiola	107.33	317	ePKIKP	PKiKP	06 26 22.0	+0.1
	comp=Z,22nm,1.4s						
CABF	La Chapelle	107.54	322	ePKIKP	PKiKP	06 26 22.5	+0.4
	comp=Z,13nm,0.8s						
LPG	La Plagne	107.61	320	ePKIKP	PKiKP	06 26 22.5	+0.2
	comp=Z,4.3nm,0.6s						
LPL	La Plagne	107.61	320	ePKIKP	PKiKP	06 26 22.7	+0.4
	comp=Z,4.3nm,0.7s						
BNI	Bardonecchia	107.84	320	ePKPdf	PKiKP	06 26 20.1	-2.6
SBF	Sospel	107.85	319	ePKIKP	PKiKP	06 26 22.9	+0.1
MBDF	Montbardon	107.92	320	ePKIKP	PKiKP	06 26 23.5	+0.6
	comp=Z,5.3nm,0.7s						
ORIF	Oris-en-Rattie	108.41	320	ePKIKP	PKiKP	06 26 24.1	+0.3
	comp=Z,4.4nm,0.7s						
ORIF				eMLR	MLR		
	comp=Z,247nm,17.0s,MS4.5						
LOR	Lormes	108.60	323	ePKIKP	PKiKP	06 26 24.2	+0.1
	comp=Z,9.9nm,1.0s						
LOR				eMLR	MLR		
	comp=Z,289nm,17.2s,MS4.6						
LOR	Lormes	108.60	323	ePKPdf	PKiKP	06 26 24.2	+0.1
LOR				LR	LR		
	comp=Z,290nm,17.3s,MS4.9						
LMR	La Mourre	108.68	318	ePKIKP	PKiKP	06 26 24.5	+0.1
	comp=Z,13nm,1.0s						
SMF	Signal de Mont	108.90	322	ePKIKP	PKiKP	06 26 24.8	+0.1
SSF	Saint Saulge	108.91	323	ePKIKP	PKiKP	06 26 25.3	+0.6
SMRF	Simiane la Rot	109.02	319	ePKIKP	PKiKP	06 26 25.3	+0.3
	comp=Z,14nm,1.1s						
AVF	Avril sur Loir	109.13	323	ePKIKP	PKiKP	06 26 25.3	+0.2
	comp=Z,11nm,1.1s						
VIVF	Saint-Julien-l	109.21	320	ePKIKP	PKiKP	06 26 25.8	+0.5
BGF	Bois d'Agland	109.55	323	ePKIKP	PKiKP	06 26 26.4	+0.5
	comp=Z,8.4nm,0.7s						
TCF	Toulx Ste Croi	110.06	323	ePKIKP	PKiKP	06 26 26.9	0.0
	comp=Z,9.2nm,0.9s						
LASF	Ste Croix	110.08	320	ePKIKP	PKiKP	06 26 27.2	+0.2
PDAR	Pinedale Array	110.86	41	PKiKP	PKiKP	06 26 30.2	+1.7
	comp=Z,0.6nm,0.9s,baz=239,slow=0.9,SNR=4.6						
PDAR				PP	PP	06 27 00.5	-5.3
	comp=Z,0.8nm,0.9s,baz=293,slow=7.6,SNR=4.3						
PDAR				PKKPbc	PKKPbc	06 37 34.4	+6.8
	comp=Z,0.8nm,0.8s,baz=121,slow=5.0,SNR=6.6						
RJF	Les Rejaudoux	110.97	322	ePKIKP	PKiKP	06 26 29.1	+0.5
RJF				eMLR	MLR		
	comp=Z,283nm,20.0s,MS4.5						
RJF	Les Rejaudoux	110.97	322	ePKIKP	PKiKP	06 26 29.1	+0.5
RJF				MLR	MLR		
	comp=Z,280nm,20.0s,MS4.8						
MFF	Saint Martin d	111.31	324	ePKIKP	PKiKP	06 26 29.8	+0.6
	comp=Z,7.0nm,0.6s						
MTLF	Montolieu	111.48	320	ePKIKP	PKiKP	06 26 30.1	+0.5
	comp=Z,8.3nm,0.8s						
SGMF	Saint Gilles	111.79	326	ePKIKP	PKiKP	06 26 30.7	+0.6
	comp=Z,5.5nm,0.5s						
ROSF	Rostrenen	112.14	327	ePKIKP	PKiKP	06 26 31.3	+0.6
QUIF	Quistinic	112.32	326	ePKIKP	PKiKP	06 26 31.7	+0.6
EPF	Esparros	112.83	320	ePKIKP	PKiKP	06 26 33.0	+0.8
ETSF	Etsaut	113.47	321	ePKIKP	PKiKP	06 26 34.3	+0.9
RSSD	Black Hills	113.70	38	ePKPdf	PKiKP	06 26 34.8	+0.9
SJPF	Ste Jean	113.78	321	ePKIKP	PKiKP	06 26 34.7	+0.7
	comp=Z,11nm,0.8s						
ULM	Lac du Bonnet	114.47	29	PKP	PKiKP	06 26 36.0	+0.8
	comp=Z,1.4nm,0.7s,baz=0.0,slow=1.0,SNR=3.6						
ISCO	Idaho Springs	114.88	42	ePKPdf	PKiKP	06 26 38.4	+2.1
ANMO	Albuquerque	116.54	48	⇑iPKIKP	PKPdf	06 26 42.0	+2.4
ESDC	Sonseca Array	117.33	319	PKP	PKPdf	06 26 41.8	+0.9
	comp=Z,0.2nm,0.3s,baz=297,slow=36,SNR=4.9						
ECSD	EROS,Sioux Fal	118.29	35	ePKPdf	PKPdf	06 26 43.0	+0.3
MNTX	Cornudas Mount	118.77	50	ePKPdf	PKPdf	06 26 45.7	+1.7
MTE	Manteigas	119.22	321	ePKIKP	PKPdf	06 26 45.6	+1.1
SCHQ	Schefferville	120.12	9	PKP	PKPdf	06 26 47.2	+1.3
	comp=Z,5.4nm,0.6s,baz=23,slow=3.9,SNR=21						
EVO	Evora	120.59	320	ePKIKP	PKPdf	06 26 47.8	+0.5
	comp=Z,25nm,0.8s						
KSU1	Kansas State U	121.12	39	ePKPdf	PKPdf	06 26 49.1	+0.8
TXAR	Lajitas Array	121.13	52	PKP	PKPdf	06 26 50.4	+1.8
TXAR				PKKPbc	PKKPbc	06 36 56.6	+5.2
TXAR	Lajitas Array	121.13	52	PKP	PKPdf	06 26 50.4	+1.8
	comp=Z,1.8nm,0.7s,baz=318,slow=0.9,SNR=21						
TXAR				PKKPbc	PKKPbc	06 36 56.6	+5.2
	comp=Z,0.4nm,0.7s,baz=97,slow=5.3,SNR=4.2						
WMOK	Wichita Mounta	122.15	44	ePKPdf	PKPdf	06 26 51.6	+1.2
TORD	Torodi Ar. Bea	123.05	288	PKP	PKPdf	06 26 52.7	0.0
TORD	Torodi Ar. Bea	123.05	288	PKP	PKPdf	06 26 52.7	0.0
	comp=Z,8.3nm,0.7s,baz=49,slow=2.3,SNR=35						
JCT	Junction City	123.58	49	ePKPdf	PKPdf	06 26 54.2	+0.9
FVM	French Village	125.58	36	ePKPdf	PKPdf	06 26 57.2	+0.4
FVM				ePP	PP	06 28 45.8	-1.8
MIAR	Mount Ida	125.79	41	ePKPdf	PKPdf	06 26 58.6	+1.2
ACSO	Alum Creek Sta	127.97	29	ePKPdf	PKPdf	06 27 02.1	+0.7
NCB	Newcomb	128.44	20	ePKPdf	PKPdf	06 27 04.1	+2.0
OXF	Oxford	128.49	39	ePKPdf	PKPdf	06 27 03.7	+1.1
PLAL	Pickwick Lake	129.00	37	ePKPdf	PKPdf	06 27 03.8	+0.3
SWET	Sewanee	130.11	36	ePKPdf	PKPdf	06 27 06.1	+0.5
KIC	Kosan Boka	130.71	282	ePKIKP	PKPdf	06 27 07.9	+0.6
	comp=Z,121nm,1.3s						
DBIC	Dimbokro	130.76	282	PKP	PKPdf	06 27 08.0	+0.6
DBIC				SKPbc	SKPbc	06 30 31.3	+0.4
DBIC	Dimbokro	130.76	282	PKP	PKPdf	06 27 08.0	+0.6
	comp=Z,9.8nm,1.0s,baz=340,slow=4.3,SNR=6.8						
DBIC				SKPbc	SKPbc	06 30 31.3	+0.4
	comp=Z,2.9nm,0.8s,baz=110,slow=8.5,SNR=4.3						
TIC	Toumodi	130.93	282	ePKIKP	PKPdf	06 27 07.8	+0.1
	comp=Z,39nm,1.8s						
LRAL	Lakeview Retre	130.97	38	ePKPdf	PKPdf	06 27 08.5	+1.2
LIC	Lamto	131.01	282	ePKIKP	PKPdf	06 27 07.7	-0.2
	comp=Z,33nm,1.0s						
LIC	Lamto	131.01	282	ePKIKP	PKPdf	06 27 08.3	+0.4
	comp=Z,70nm,1.4s						
PLCA	Paso Flores	140.29	159	PKP	PKPdf	06 27 25.2	+0.8
	comp=Z,6.2nm,0.8s,baz=230,slow=4.5,SNR=12						
JTS	JuntasAbangare	145.09	66	ePKPdf	PKPdf	06 27 33.9	+0.2
TRQA	Tornquist	145.26	168	ePKPdf	PKPdf	06 27 34.0	+0.8
FCH	Farellones	146.78	153	eP	PKPdf	06 27 38.1	+2.1
LCO	Las Campanas	150.10	148	ePKPdf	PKPdf	06 27 42.2	+0.7
LCO				ePKPbc	PKPbc	06 27 48.2	+1.7
LCO				ePKPab	PKPab	06 27 54.6	+2.3
BCIP	Isla Barro Col	150.15	64	ePKPbc	PKPbc	06 27 48.2	+1.1
BCIP				ePKPab	PKPab	06 27 53.6	+0.6
SDDR	Presa de Saban	150.80	38	ePKPbc	PKPbc	06 27 50.4	+1.9
SDDR				ePKPab	PKPab	06 27 56.9	+1.5
OTAV	Otavalo	154.19	81	ePKPdf	PKPdf	06 27 49.0	+0.9
OTAV				ePKPab	PKPab	06 28 11.8	+1.8
ROSC	El Rosal	156.89	67	PKP	PKPdf	06 27 52.3	+0.6
	comp=Z,2.3nm,0.3s,baz=90,slow=23,SNR=5.6						
ROSC				PKPab	PKPab	06 28 24.9	+3.4
	comp=Z,8.7nm,0.7s,baz=267,slow=23,SNR=5.7						
SDV	Santo Domingo	158.16	54	ePKPdf	PKPdf	06 27 54.1	+0.8
SDV				ePKPab	PKPab	06 28 28.9	+1.9
LPAZ	La Paz	160.85	130	PKP	PKPdf	06 27 59.1	+2.9
	comp=Z,12nm,1.1s,baz=12,slow=2.3,SNR=16						

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*NIED **15** 06:09:00, 3700N×14180E, h35km, Mw3.5 Best double couple: $M_0$2.20000×10^14 NP1:ϕ_s199.00000°, δ10.00000°, λ109.00000°. NP2:ϕ_s0.00000°, δ81.00000°, λ87.00000°.*

*ISCJB **15** 06:09:22.4±1.6, 3706N±005×14200E±009, h15km±12km, mb3.3/2, Error ellipse: s-maj=11.8km s-min=7.5km az=13.8*

*IDC **15** 06:09:25.8±6.1, 3686N×142.12E, h48km±55km, mb3.2/2, mb1 3.5/4, mb1mx3.3/22, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=53.1km s-min=19.5km az=58.0*

*JMA **15** 06:09:25.2±0.2, 3700N×14178E, h49km±4km, M3.6*

*NEIC **15** 06:09:25.2, 3700N×14178E, h49km, MG3.6(JMA), After JMA.*

ISC 15 06:09:22.6±1.4**, 3708N**±005×**14193E**±008**, h7**km±6km**, n17,** σ1s**22**/28**, mb3.2**/2**, 6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.89	289	⇓P	Pg	06 09 40.2	+0.5
JFK				eS	Sg	06 09 51.0	-0.3
ONAJ	Iwakimizuishiy	0.91	272	⇓P	Pg	06 09 40.1	+0.1
JHO	Hitachi	1.19	247	⇓P	Pb	06 09 43.3	-2.2
JHO				S	Sb	06 09 56.9	-4.1
JMM	Marumori	1.20	311	⇓P	Pb	06 09 45.4	-0.2
JFT	Otama	1.34	289	⇓P	Pn	06 09 47.8	0.0
JFT				eS	Sb	06 10 03.6	-1.9
JIO	Ouri	1.45	342	⇓P	Pn	06 09 49.6	+0.4
JIO				eS	Sn	06 10 07.1	-1.4
JOU	Okura	1.63	322	P	Pn	06 09 52.5	+0.8
JOU				eS	Sn	06 10 12.9	-0.1
JFY	Yanaizu	1.81	281	P	Pn	06 09 54.5	+0.4
JFY				S	Sn	06 10 16.3	-1.0
JYS	Shirataka	1.87	308	P	Pn	06 09 56.0	+1.0
JYS				S	Sn	06 10 19.3	+0.5
MJAR	Matsushiro Arr	3.03	261	P	Pn	06 10 11.3	+0.3
	9.1nm,0.3s,baz=89,slow=15,SNR=27						
MJAR				S	Sn	06 10 49.6	+2.0
	6.4nm,0.3s,baz=309,slow=32,SNR=5.7						
MAJO	Matsushiro	3.04	261	ePn	Pn	06 10 13.2	+2.2
MAJO				eSn	Sn	06 10 50.3	+2.6
MAT	Matsushiro	3.04	261	P	Pn	06 10 13.1	+2.0
MAT				eS	Sn	06 10 49.6	+1.9
JHJ	Hachijo jima 2	4.33	205	P	Pn	06 10 28.3	-0.5
	19nm,0.3s,baz=83,slow=20,SNR=5.0						
JHJ				S	Sn	06 11 14.9	-4.6
	12nm,0.3s,baz=50,slow=23,SNR=4.1						
SONM	Songino Array	28.10	304	P	P	06 15 14.9	+0.1
	0.4nm,0.6s,mb3.2,baz=92,slow=8.3,SNR=5.5						
CHTO	Chiang Mai	41.70	256	eP	P	06 17 10.2	-2.1
MKAR	Makanchi Array	44.44	302	P	P	06 17 34.1	0.0
MKAR	Makanchi Array	44.44	302	P	P	06 17 34.1	0.0
	0.3nm,0.6s,mb3.2,baz=84,slow=8.8,SNR=4.6						

IDC 15 06:25:44.4±1.8**, 182N**×**12767E, h0**km**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.7**/16**, mbtmp3.7**/5**, ML3.6**/1**, Error ellipse: s-maj=100.2km s-min=24.6km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.90	186	P	Pn	06 30 18.0	-1.2
	0.1nm,0.3s,baz=23,slow=16,SNR=4.2						
WRA	Warramunga Arr	22.60	163	P	P	06 30 47.3	+0.5
	2.4nm,0.5s,baz=342,slow=11,SNR=40						
ASAR	Alice Springs	26.05	167	P	P	06 31 19.1	-0.5
	0.5nm,0.5s,baz=350,slow=7.6,SNR=8.9						
STKA	Stephens Creek	36.02	160	P	P	06 32 47.4	-0.1
	1.1nm,0.6s,baz=329,slow=6.2,SNR=7.1						
MKAR	Makanchi Array	59.65	325	P	P	06 35 50.6	+0.1
	0.5nm,0.6s,baz=127,slow=7.6,SNR=4.3						

IDC 15 07:15:10.5±9.1**, 686S**×**12900E, h174**km±95km**, mb3.5**/1**, mb1 3.8**/5**, mb1mx3.5**/15**, mbtmp3.6**/5**, Error ellipse: s-maj=86.0km s-min=25.3km az=41.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	6.24	237	P	Pn	07 16 41.6	+1.0
	7.9nm,0.3s,baz=86,slow=3.2,SNR=6.2						
BATI				S	Sn	07 17 52.0	+0.5
	5.2nm,0.3s,baz=28,slow=23,SNR=4.7						
FITZ	Fitzroy Crossi	11.65	196	P	Pn	07 17 50.3	-1.3
	1.2nm,0.3s,baz=31,slow=11,SNR=30						
FITZ				S	Sn	07 19 51.4	-10
	0.3nm,0.3s,baz=280,slow=23,SNR=3.0						
WRA	Warramunga Arr	14.01	159	P	Pn	07 18 20.2	-1.4
	0.9nm,0.3s,baz=332,slow=14,SNR=23						
WRA				S	Sn	07 20 48.8	-8.7
	0.7nm,0.3s,baz=328,slow=24,SNR=9.3						
ASAR	Alice Springs	17.37	165	P	Pn	07 19 03.2	+0.7
	2.4nm,0.3s,baz=338,slow=9.8,SNR=75						
ASAR				S	S	07 22 09.6	-3.3
	0.1nm,0.3s,baz=345,slow=25,SNR=3.7						
MKAR	Makanchi Array	67.56	327	P	P	07 25 48.1	0.0
	0.8nm,0.5s,baz=114,slow=7.2,SNR=8.6						

IDC 15 07:35:56.3±2.3**, 112S**×**12725E, h0**km**, mb3.4**/2**, mb1 3.5**/3**, mb1mx3.3**/15**, mbtmp3.3**/3**, ML3.3**/1**, Error ellipse: s-maj=193.7km s-min=27.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.95	160	P	Pn	07 40 30.2	-1.4
	0.1nm,0.3s,baz=342,slow=12,SNR=8.8						
ASAR	Alice Springs	23.32	164	P	P	07 41 06.2	-0.1
	0.8nm,0.5s,baz=347,slow=11,SNR=7.8						
MKAR	Makanchi Array	61.84	327	P	P	07 46 17.2	+0.1
	0.3nm,0.6s,baz=118,slow=7.3,SNR=4.2						

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*NIED **15** 07:48:00, 4690N×15320E, h38km, Mw4.3 Best double couple: $M_0$3.13000×10^15 NP1:ϕ_s221.00000°, δ60.00000°, λ172.00000°. NP2:ϕ_s315.00000°, δ83.00000°, λ30.00000°.*

*JMA **15** 07:48:28.8±0.9, 4689N×153.16E, h30km, M4.7*

*MOS **15** 07:48:29.1±0.9, 4690N×15262E, h47km, mb4.8/34, Error ellipse: s-maj=11.8km s-min=6.1km az=85.8*

*ISCJB **15** 07:48:30.8±0.2, 4691N±004×15282E±003, h59km, mb4.5/84, MS3.9/13, Error ellipse: s-maj=5.9km s-min=2.3km az=159.4*

*SKHL **15** 07:48:31.8±3.4, 4702N×15288E, h55km±7km, mb5.0/6, Ms4.0/2*

*BJI **15** 07:48:31.0, 47.14N×15303E, h65km, mB4.8, mb4.4, Ms4.4, Msz4.2*

*IDC **15** 07:48:32.7±0.6, 4700N×15266E, h61km±5km, mb3.9/22, mb1 4.1/23, mb1mx4.1/26, mbtmp3.9/23, MS3.5/6, Ms1 3.5/6, ms1mx3.2/23, Error ellipse: s-maj=15.2km s-min=11.7km az=137.0*

*NEIC **15** 07:48:32.6±0.2, 4699N×15267E, mb4.6/43, Error ellipse: s-maj=6.3km s-min=3.6km az=155.0*

ISC 15 07:48:33.1±0.1**, 4698N**±004×**15274E**±003**, h61**km**, h61**km±1.4km**:pP-P, n343,** σ0s**93**/352**, mb4.5**/84**, 52C-64D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.33	30	eP	Pn	07 49 36.5	+0.2
SKR				AMB	AMB	07 49 37.0	
	80nm,0.6s						
SKR				eS	Sn	07 50 22.5	-2.9
SKR				A		07 50 49.5	
	80nm,0.5s						
SKR				A		07 50 49.5	
	240nm,0.6s						
SKR				A		07 50 49.5	
	160nm,0.6s						
YUK	Yuzh-Kuril'sk	5.66	241	⇓iPN	Pn	07 49 57.0	+2.5
YUK				S	Sn	07 51 03.5	+5.5
YUK				pmax	pmax		
	comp=Z,360nm,0.3s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,1μm,1.0s						
YUK				smax			
	comp=N,380nm,0.5s						
YUK				smax			
	comp=E,570nm,0.5s						
YUK	Yuzh-Kuril'sk	5.66	241	⇓iP	Pn	07 49 57.0	+2.5
YUK				AMB	AMB	07 49 57.5	
	comp=E,360nm,0.3s						
YUK				eS	Sn	07 51 03.5	+5.5
YUK				A		07 51 19.8	
	comp=E,2μm,1.0s						
YUK				A		07 51 19.8	
	comp=E,1μm,1.0s						
YUK				A		07 51 21.0	
	comp=E,380nm,0.5s						
YUK				A		07 51 21.0	
	comp=E,570nm,0.5s						
NEM2	Nemuro 2	6.12	236	P	Pn	07 49 59.1	-1.8

NEM2 eS **Sn** 07 51 06.0 -3.4
JRA Rausu 6.16 243 P **Pn** 07 50 02.9 +1.6
JNK Nakash 6.59 242 P **Pn** 07 50 07.8 +0.5
YSS Yuzh-Sakhalins 6.83 273 ePn **Pn** 07 50 11.1 +0.5
YSS Yuzh-Sakhalins 6.83 273⇑ ePN **Pn** 07 50 14.4 +3.8
YSS eS **Sn** 07 51 32.0 +5.2
YSS pmax pmax
comp=Z,60nm,1.0s
YSS pmax pmax
comp=N,30nm,0.9s
YSS pmax pmax
comp=E,70nm,1.0s
JTKR Abashiri--Toko 6.89 247 P **Pn** 07 50 13.3 +1.9
JAK Akkeshi 6.95 238 P **Pn** 07 50 10.8 -1.4
JAK eS **Sn** 07 51 26.0 -3.8
PET Petropavlovsk 7.15 30 ePn **Pn** 07 50 15.2 +0.2
PET eSn **Sn** 07 51 32.5 -2.1
PET Petropavlovsk 7.15 30 ePN **Pn** 07 50 16.5 +1.6
PET MLR MLR
comp=Z,100nm,20.0s
JMP Maruseppu 7.23 249 P **Pn** 07 50 17.5 +1.5
JAR Ashorobuto 7.33 243 P **Pn** 07 50 18.1 +0.7
UGL Uglegorsk 7.46 290 eP **Pn** 07 50 21.5 +2.4
UGL AMB AMB 07 50 24.0
comp=Z,139nm,0.9s
UGL AMS AMS 07 53 16.0
comp=Z,1µm,16.0s
UGL AMS AMS 07 53 16.0
comp=Z,600nm,16.0s
UGL AMS AMS 07 53 16.0
comp=Z,500nm,15.0s
JOB Onbets 7.51 240 P **Pn** 07 50 19.5 -0.4
JOB eS **Sn** 07 51 40.3 -3.3
ASAJ Asahikawa 7.67 252 P **Pn** 07 50 25.0 +2.9
ASAJ Asahikawa 7.67 252 PN **Pn** 07 50 25.4 +3.3
ASAJ S **Sn** 07 51 51.4 +4.0
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ smax
comp=N,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,286nm,21.1s
ASAJ Asahikawa 7.67 252 P **Pn** 07 50 25.4 +3.3
comp=Z,4.2nm,0.3s,baz=72,slow=13,SNR=15
ASAJ S **Sn** 07 51 51.4 +4.0
comp=Z,0.9nm,0.3s,baz=339,slow=25,SNR=1.8
ASAJ LR LR 07 53 11.0
comp=Z,286nm,21.1s,baz=122,slow=36
JKK2 Kamakawa 2 7.68 250 P **Pn** 07 50 24.7 +2.5
TYV Tymovskoe 7.69 304 eP **Pn** 07 50 25.0 +2.7
TYV AMB AMB 07 50 27.0
comp=Z,18nm,0.8s
TYV AMB AMB 07 50 27.0
comp=Z,33nm,0.8s
JWK2 Keihoku 7.71 262 P **Pn** 07 50 27.6 +5.0
JCH Churui 7.96 240 P **Pn** 07 50 24.8 -1.3
JCH eS **Sn** 07 51 50.7 -3.9
JAB Ashibetsu 8.19 249 P **Pn** 07 50 32.0 +2.8
ERM Erimo 8.45 238 ePn **Pn** 07 50 33.8 +1.1
JBT2 Biratori 2 8.47 244 P **Pn** 07 50 32.7 -0.4
JNBK Urakawa-nobuka 8.53 240 P **Pn** 07 50 31.8 -2.0
JNBK eS **Sn** 07 52 03.5 -4.9
OKH Okha 9.09 320 eP **Pn** 07 50 44.0 +2.6
OKH eL 07 53 12.2
OKH AMS AMS 07 54 26.2
comp=Z,700nm,12.0s
JNB Noboribetsu 9.46 246 P **Pn** 07 50 46.1 -0.5
JKB Kayabe 9.79 243 P **Pn** 07 50 49.2 -1.9
NKL Nikolayevsk 9.90 313 eP **Pn** 07 50 47.0 -5.5
NKL AMB AMB 07 50 51.5
comp=Z,50nm,1.3s
NKL AMB AMB 07 50 51.5
comp=Z,69nm,1.3s
NKL AMB AMB 07 50 51.5
comp=Z,100nm,1.3s
NKL eL 07 53 19.0
NKL AMS AMS 07 55 26.0
comp=Z,300nm,14.0s
NKL AMS AMS 07 55 26.0
comp=Z,600nm,14.0s
JSH Shimam 10.00 249 P **Pn** 07 50 54.5 +0.6
JYM2 Yakumo 2 10.07 246 P **Pn** 07 50 53.5 -1.4
OFUJ Ofunato 11.30 230 eS **Sn** 07 53 05.1 -11
JRG Rokugo 11.63 234 eS **Sn** 07 53 15.0 -9.2
JIO Ouri 11.93 229 eS **Sn** 07 53 20.6 -11
MA2 Magadan 12.68 355 ePn **Pn** 07 51 31.9 +1.6
MA2 Magadan 12.68 355 ePN **Pn** 07 51 31.4 +1.1
MA2 pmax pmax
comp=Z,30nm,0.5s
KLR Kul'dur 14.20 287 eP **Pn** 07 51 51.7 +0.9
SMY Shemya 14.91 59 ePn **Pn** 07 51 58.9 -1.2
MAJO Matsushiro 15.02 231 ePn **Pn** 07 51 58.6 -3.0
MJAR Matsushiro Arr 15.02 231 P **Pn** 07 52 01.4 -0.1
comp=Z,0.3nm,0.3s,baz=36,slow=12,SNR=4.5
MJAR LR LR 07 57 47.8
comp=Z,119nm,21.8s,baz=45,slow=37
SEY Seymchan 15.99 359 eP **Pn** 07 52 15.3 +1.5
MDJ Mudanjiang 16.30 270 P **Pn** 07 52 18.9 +1.0
MDJ AMB AMB
comp=Z,10.0nm,0.9s
MDJ AMB AMB
comp=Z,76nm,5.7s
ZEA Zeya 17.55 302 eP **Pn** 07 52 32.3 -1.0
ZEA AMB AMB 07 52 41.5
comp=Z,14nm,1.2s
CN2 Changchun 19.39 271 eP **Pn** 07 52 58.9 +3.4
CN2 eS **S** 07 56 31.3 +1.6
CN2 AMB AMB
comp=Z,10.0nm,0.6s
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,780nm,13.0s
CN2 LR LR
comp=E,320nm,13.0s
CN2 LR LR
comp=Z,500nm,11.0s
YAK Yakutsk 19.99 327 eP **Pn** 07 53 04.4 +2.0
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,19nm,1.5s
YAK pmax pmax
comp=E,23nm,1.6s
KSRS Korea Array 20.62 251 P **P** 07 53 06.5 -0.8
comp=E,2.6nm,0.6s,baz=58,slow=10,SNR=8.0
KSRS LR LR 08 00 00.5
comp=E,68nm,20.4s,baz=354,slow=33
JNU Nakatsue 21.62 238 LR LR 08 02 23.9
comp=E,72nm,20.6s,baz=229,slow=38
BILL Bilibino 22.23 13 eP **P** 07 53 23.6 -0.6
comp=E,2.3nm,0.4s,mb4.0
BILL Bilibino 22.23 13⇓ eP **P** 07 53 23.6 -0.6
BILL eS **S** 07 57 25.4 +0.3
BILL pmax pmax
comp=Z,2.0nm,1.0s,mb3.5
BILL MLR MLR
comp=Z,100nm,18.0s
GAMB Gambell 25.79 36 eP **P** 07 53 58.4 +0.4
GAMB epP pP 07 54 13.4 +0.6
TIXI Tiksi 27.18 344 eP **P** 07 54 10.0 -0.3
TIXI pmax pmax
comp=Z,1.0nm,1.0s,mb3.3
BJI Beijing 27.22 269 P **P** 07 54 12.8 +1.8
BJI S **S** 07 58 45.6 +0.1
BJI AMB AMB
comp=Z,8.0nm,0.9s,mb4.2
BJI AMB AMB
comp=Z,79nm,3.0s
BJI LR LR
comp=N,219nm,15.6s
BJI LR LR
comp=E,219nm,17.8s
BJI LR LR
comp=Z,112nm,24.0s
NJ2 Nanjing 29.82 252 eP **P** 07 54 38.3 +4.1
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
HHC Hu-ho-hao-te 30.02 273 eP **P** 07 54 37.9 +2.0
HHC AP pP 07 54 52.8 +1.9
HHC XP sP 07 54 59.9 +1.8
HHC PCP PcP 07 57 38.4 +1.9
HHC eS **S** 07 59 30.8 +1.3
HHC XS sS 07 59 54.6 -0.5
HHC SS SS 08 01 09.9 -29
HHC PCS PcS 08 01 20.8 +0.9
HHC AMB AMB
comp=Z,17nm,0.6s,mb5.0
HHC AMB AMB
comp=Z,142nm,5.6s
HHC LR LR
comp=N,845nm,18.5s
HHC LR LR
comp=E,480nm,16.4s
HHC LR LR
comp=Z,549nm,18.5s
ULN Ulaanbaatar 30.58 289 eP **P** 07 54 39.8 -0.9
SONM Songino Array 31.01 289 P **P** 07 54 43.8 -0.8
comp=Z,0.6nm,0.8s,mb3.5,baz=83,slow=7.3,SNR=5.8
CHGN Chignik 31.11 54 epP pP 07 54 58.0 -2.3
TTA Tatalina 32.42 42 eP **P** 07 54 56.8 0.0
TTA epP pP 07 55 11.3 -0.6
IMA2 Indian Mountai 33.77 36 eP **P** 07 55 08.6 +0.1
XAN Xi'an 35.28 265 P **P** 07 55 21.9 0.0
XAN LR LR
comp=E,338nm,13.6s
XAN LR LR
comp=Z,397nm,10.2s
PMR Palmer 35.62 44 eP **P** 07 55 23.6 -0.8
comp=Z,14nm,1.2s,mb4.8
PMR Palmer 35.62 44 eP **P** 07 55 23.6 -0.8
PMR pmax pmax
comp=Z,14nm,1.2s,mb4.8
COLA College 36.12 39 eP **P** 07 55 29.2 +0.5
comp=Z,7.5nm,0.8s,mb4.7
COLA epP pP 07 55 43.7 -0.2
COLA College 36.12 39 eP **P** 07 55 29.2 +0.5
COLA e*PP pP 07 55 43.7 -0.3
COLA pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
LZH Lanzhou 37.62 271 eP **P** 07 55 44.9 +3.1
LZH AP pP 07 56 00.3 +3.2
LZH XP sP 07 56 08.0 +3.7
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,73nm,4.2s
GTA Gaotai 38.68 279 eP **P** 07 55 51.6 +0.9
GTA AP pP 07 56 06.9 +0.9
GTA XP sP 07 56 13.8 +0.6
GTA PP PP 07 57 24.4 +4.4
GTA PCP PcP 07 58 02.8 +1.3
GTA SCP ScP 08 01 45.8 +1.7
GTA PCS PcS 08 01 50.6 -0.2
GTA XS sS 08 02 18.8 +10
GTA SCS ScS 08 05 51.8 -2.9
GTA AMB AMB
comp=Z,4.0nm,0.8s,mb4.2
GTA AMB AMB
comp=Z,133nm,6.9s
GTA LR LR
comp=N,126nm,8.0s
GTA LR LR
comp=E,91nm,8.0s
GTA LR LR
comp=Z,91nm,8.8s
EGAK Eagle 38.98 39 eP **P** 07 55 52.5 -0.3
DAWY Dawson 39.83 39 eP **P** 07 56 00.1 +0.1
CD2 Chengdu 40.64 265 eP **P** 07 56 09.8 +2.8
CD2 XP sP 07 56 32.3 +2.7
CD2 PP PP 07 57 48.0 +6.5
CD2 S **S** 08 02 16.0 +3.6
CD2 SS SS 08 05 14.3 -0.1
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,130nm,12.8s
CD2 LR LR
comp=Z,120nm,13.6s
GYA Guiyang 41.51 257 P **P** 07 56 16.8 +2.6
GYA AP pP 07 56 32.8 +3.1
GYA XP sP 07 56 38.8 +2.0
GYA PP PP 07 57 57.3 +6.3
GYA PCP PcP 07 58 13.8 +3.1
GYA SCP ScP 08 01 57.6 +2.3
GYA SCS ScS 08 06 12.5 +0.6
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
GYA AMB AMB
comp=Z,60nm,5.2s
GYA LR LR
comp=N,340nm,18.6s
GYA LR LR
comp=E,460nm,17.9s
GYA LR LR
comp=Z,370nm,17.6s
INK Inuvik 41.60 33 eP **P** 07 56 15.3 +0.8
comp=Z,259nm,0.8s
INK epP pP 07 56 26.3 -3.7
INK Inuvik 41.60 33 eP **P** 07 56 15.3 +0.9
INK e*PP pP 07 56 26.3 -3.6
INK pmax pmax
comp=Z,259nm,0.8s
INK Inuvik 41.60 33 P **P** 07 56 15.1 +0.6
comp=Z,9.2nm,0.9s,mb4.4,baz=288,slow=6.8,SNR=56
WMQ Urumqi 44.60 291 ⇑P **P** 07 56 42.4 +3.4
WMQ AP pP 07 56 57.4 +2.8
WMQ XP sP 07 57 04.3 +2.6
WMQ AMB AMB
comp=Z,4.0nm,0.6s,mb4.4
WMQ AMB AMB
comp=Z,201nm,4.3s
WMQ LR LR
comp=N,92nm,19.2s
WMQ LR LR
comp=E,43nm,18.1s
WMQ LR LR
comp=Z,71nm,20.3s
QIZ Qiongzhong 44.70 246 P **P** 07 56 42.3 +2.3
QIZ S **S** 08 03 15.0 +2.8
QIZ AMB AMB
comp=Z,19nm,2.3s,mb4.5
QIZ AMB AMB
comp=Z,209nm,2.9s,mb5.5
QIZ LR LR
comp=N,496nm,11.5s
QIZ LR LR
comp=Z,675nm,12.1s
KMI Kunming 45.03 259 P **P** 07 56 42.5 -0.1
KMI AMB AMB
comp=Z,16nm,1.4s,mb4.7
DLBC Dease Lake 45.62 46 eP **P** 07 56 49.0 +2.2
MKAR Makanchi Array 46.61 297 i P **P** 07 56 54.2 -0.6
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 46.61 297 P **P** 07 56 54.2 -0.6
comp=Z,0.9nm,0.6s,mb3.9,baz=67,slow=8.2,SNR=6.5
MKAR PcP PcP 07 58 27.6 -0.2
comp=Z,1.2nm,0.5s,baz=64,slow=5.5,SNR=6.6
MKAR LR LR 08 17 50.6
comp=Z,160nm,18.3s,baz=245,slow=38
LSA Lhasa 50.00 273 P **P** 07 57 16.0 -5.1
LSA Lhasa 50.00 273 eP **P** 07 57 22.4 +1.3
comp=Z,38nm,1.2s,mb5.3
LSA Lhasa 50.00 273 eP **P** 07 57 22.5 +1.4
LSA pmax pmax
comp=Z,38nm,1.2s,mb5.3
CHKZ Chkalovo 50.09 310 eP **P** 07 57 20.0 -1.4
comp=Z,3.0nm,0.4s,mb4.7
CHKZ ePcP PcP 07 58 39.1 -1.1
CHKZ Chkalovo 50.09 310 eP **P** 07 57 20.0 -1.4
CHKZ e 07 58 39.1
CHKZ pmax pmax
comp=Z,3.0nm,0.4s,mb4.7
BRVK Borovoye 50.55 309 eP **P** 07 57 23.6 -1.3
comp=Z,2.0nm,0.5s,mb4.3
BRVK ePcP PcP 07 58 41.7 -0.3
BRVK Borovoye 50.55 309 eP **P** 07 57 23.7 -1.3
BRVK e 07 58 41.7
BRVK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
RES Resolute Bay 50.70 19 eP **P** 07 57 27.2 +1.4
YKW3 Yellowknife Ar 50.86 37 eP **P** 07 57 27.8 +0.6
YKW3 epP pP 07 57 42.6 -0.4
YKA Yellowknife Ar 50.90 37 P **P** 07 57 27.3 -0.1
YKA PcP PcP 07 58 42.2 -0.8
YKA Yellowknife Ar 50.90 37 P **P** 07 57 27.3 -0.1
comp=Z,1.2nm,0.5s,mb4.1,baz=297,slow=7.1,SNR=33
YKA PcP PcP 07 58 42.2 -0.8
comp=Z,1.2nm,0.6s,baz=303,slow=3.7,SNR=11
CHTO Chiang Mai 51.92 256 eP **P** 07 57 36.3 +0.7
comp=Z,6.2nm,0.9s,mb4.5
CHTO Chiang Mai 51.92 256 eP **P** 07 57 36.3 +0.7
CHTO pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SHL Shillong 52.12 268 eP **P** 07 57 36.5 -0.5
AAK Ala-Archa 53.50 296 eP **P** 07 57 46.5 -0.6
comp=Z,1.8nm,0.4s,mb4.3
AAK Ala-Archa 53.50 296 eP **P** 07 57 46.5 -0.5
AAK pmax pmax
comp=Z,2.0nm,0.4s,mb4.4
ARU Arti 54.67 317 *c i*P **P** 07 57 53.9 -1.4
ARU 07 58 51.0
ARU 07 59 53.6
ARU S **S** 08 05 30.2 -0.2
ARU SS SS 08 09 12.6 -0.7
ARU pmax pmax
comp=Z,7.0nm,1.2s,mb4.6
JIRN Jiri 54.67 274 eP **P** 07 57 53.2 -2.5
comp=Z,23nm,0.8s,mb5.3
A07A Ashnola River, 55.02 53 ⇓P **P** 07 57 56.8 -1.2
baz=55
D05A Enumclaw 55.15 56 ⇑P **P** 07 57 59.0 0.0
baz=55
B07A Winthrop 55.49 54 ⇓P **P** 07 58 00.1 -1.2
baz=55
GKN Gorkha 55.51 276 eP **P** 07 58 02.9 +1.1
comp=Z,15nm,0.5s,mb5.3
F04A Amboy 55.61 57 ⇑P **P** 07 58 02.6 +0.3
baz=55
A08A Turner Farm, O 55.68 53 ⇑P **P** 07 58 02.5 -0.2
baz=55
B08A Colville Reser 55.98 54 ⇑P **P** 07 58 04.0 -0.9
baz=56
A09A Danville 56.04 53 ⇓P **P** 07 58 04.4 -0.9
baz=56
D07A Quincy 56.28 55 ⇓P **P** 07 58 06.5 -0.6
baz=56
J02A Umpqua 56.39 61 ⇓P **P** 07 58 07.9 0.0
baz=56
HOOD Mount Hood Mea 56.40 58 eP **P** 07 58 08.0 +0.1
H04A Detroit Lake 56.45 59 ⇓P **P** 07 58 08.9 +0.6
baz=56
I04A Tendick Farm, 56.83 59 ⇑P **P** 07 58 10.7 -0.3
baz=56
A11A Hall Mountain, 57.25 52 ⇓P **P** 07 58 14.3 +0.4
baz=57
C10A Spilker Farm, 57.40 53 ⇑P **P** 07 58 14.7 -0.2
baz=57
H06A Lindquist Farm 57.50 58 ⇓P **P** 07 58 15.4 -0.3
baz=57
ARCES ARCESS Array B 57.55 341 P **P** 07 58 15.4 -0.3
ARCES PcP PcP 07 59 08.0 -0.4
ARCES ARCESS Array B 57.55 341 P **P** 07 58 15.4 -0.3
comp=Z,1.3nm,0.6s,mb4.1,baz=28,slow=7.2,SNR=8.1
ARCES PcP PcP 07 59 08.0 -0.4
comp=Z,2.0nm,0.8s,baz=23,slow=4.0,SNR=3.8
G07A Ruggs Ranch, H 57.57 57 ⇓P **P** 07 58 15.9 -0.3
baz=57
J05A Fort Rock 57.83 59 ⇓P **P** 07 58 18.3 +0.3
baz=58
G08A Pilot Rock 57.96 56 ⇓P **P** 07 58 18.3 -0.6
baz=58
H07A Lands Inn, Kim 58.03 57 ⇑P **P** 07 58 20.4 +1.0
baz=58
A13A Flathead Natio 58.30 51 ⇓P **P** 07 58 21.4 +0.1
baz=58
K05A Summer Lake 58.36 60 ⇑P **P** 07 58 22.1 +0.3
baz=58
AKTO Aktyubinsk 58.38 312 PcP PcP 07 59 11.0 -1.0
comp=Z,1.3nm,0.5s,baz=50,slow=4.0,SNR=3.5
J06A Christmas Vall 58.48 59 ⇑P **P** 07 58 22.9 +0.3
baz=58
WALA Waterton Lakes 58.50 50 eP **P** 07 58 23.1 +0.6
F10A Beach Ranch, E 58.53 55 ⇑P **P** 07 58 23.6 +0.7
baz=58
H08A Prairie City 58.58 57 ⇑P **P** 07 58 23.6 +0.4
baz=58
B13A Whitefish 58.61 51 ⇑P **P** 07 58 23.5 +0.1
baz=58
K06A Valley Falls 58.69 59 ⇑P **P** 07 58 24.7 +0.7
baz=58,SNR=6.3
L05A Lakeview 58.80 60 ⇑P **P** 07 58 25.5 +0.6
baz=58
C13A Hot Springs 58.97 52 ⇑P **P** 07 58 25.7 -0.2
baz=59
G10A Bishop Farm, J 59.00 55 P **P** 07 58 26.9 +0.8
baz=59,SNR=5.8
H09A Durkee 59.07 56 ⇑P **P** 07 58 26.7 +0.1
baz=59
BMO Blue Mountains 59.16 56 eP **P** 07 58 28.0 +0.8
K07A Rock Creek Ran 59.35 59 ⇓P **P** 07 58 28.9 +0.4
baz=59
C14A Swan Lake 59.36 51 ⇓P **P** 07 58 29.0 +0.4
baz=59
D13A Huson 59.39 52 ⇑P **P** 07 58 28.9 +0.1
baz=59
J08A Circle Bar Ran 59.40 58 ⇓P **P** 07 58 29.0 +0.1
baz=59
G11A Walters Elk Ra 59.42 55 ⇑P **P** 07 58 29.4 +0.4
baz=59
H10A Noah's Angus R 59.64 56 P **P** 07 58 31.2 +0.7
baz=59,SNR=8.4
L07A Adell 59.70 60 ⇑P **P** 07 58 32.3 +1.3
baz=59
F12A Elk City 59.77 54 ⇑P **P** 07 58 32.1 +0.7
baz=59
K08A Mann Creek Ran 59.77 58 P **P** 07 58 32.7 +1.2
baz=59,SNR=5.2
J09A Fry Pan Ranch, 59.82 58 ⇓P **P** 07 58 31.9 +0.1
baz=60
MSO Missoula 59.83 52 eP **P** 07 58 32.4 +0.6
comp=Z,5.0nm,1.1s,mb4.5
WVOR Wild Horse Val 59.86 59 eP **P** 07 58 32.9 +0.7
comp=Z,2.9nm,0.8s,mb4.4
WVOR Wild Horse Val 59.86 59 eP **P** 07 58 32.9 +0.8
WVOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
D14A Greenough 59.91 52 P **P** 07 58 33.0 +0.6
baz=60,SNR=10
I10A Payette 59.91 56 ⇑P **P** 07 58 32.8 +0.4
baz=60
E13A Victor 59.93 53 ⇑P **P** 07 58 33.3 +0.7
baz=60
H11A Donnelly 59.98 55 P **P** 07 58 33.5 +0.5
baz=60,SNR=6.5
L08A Fields 60.18 59 ⇓P **P** 07 58 34.1 -0.3
baz=60
N06A Buffalo Meadow 60.19 61 ⇓P **P** 07 58 34.1 -0.3
baz=60
M07A Soldier Meadow 60.19 60 P **P** 07 58 35.6 +1.3
baz=60,SNR=7.4
K09A Rome 60.23 58 ⇑P **P** 07 58 34.4 -0.2
baz=60
F13A Darby 60.26 54 ⇑P **P** 07 58 34.9 +0.1
baz=60
E14A Clinton 60.33 53 P **P** 07 58 35.9 +0.7
baz=60,SNR=5.0
BEKR Beckwourth 60.41 62 ⇓P **P** 07 58 35.4 -0.6
baz=60
D15A Lincoln 60.47 52 ⇑P **P** 07 58 35.7 -0.5
baz=60
O06A Flanigan 60.55 62 ⇓P **P** 07 58 36.6 -0.3
baz=60
K10A MacKenzie Ranc 60.68 58 ⇑P **P** 07 58 38.7 +1.0
baz=60
N07B Gerlach 60.68 61 ⇑P **P** 07 58 38.1 +0.4
baz=60
H12A Diamond D Ranc 60.73 55 ⇑P **P** 07 58 38.1 +0.1
baz=60
FFC Flin Flon 60.73 40 eP **P** 07 58 38.2 +0.3
FFC epP pP 07 58 53.4 -0.7
G13A Cobalt 60.74 54 P **P** 07 58 38.5 +0.4
baz=60,SNR=5.5
E15A Deer Lodge 60.78 52 ⇑P **P** 07 58 38.5 +0.1
baz=60
MFID Camas Ranch 60.88 56 ⇑P **P** 07 58 39.2 +0.1
baz=61
JOF Joensuu 61.02 333 ep **P** 07 58 37.4 -2.2
comp=Z,1.4nm,0.6s,mb4.3
JOF Joensuu 61.02 333 eP **P** 07 58 37.4 -2.2
JOF pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
H13A Challis 61.06 55 ⇓P **P** 07 58 40.3 +0.1
baz=61

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
O07A	**Toulon**	**61.12**	**61**	⇓P	**P**	**07 58 40.5**	**-0.3**
	baz=61						
K11A	**Parker Ranch,**	**61.17**	**57**	⇓P	**P**	**07 58 41.1**	**+0.1**
	baz=61						
N08A	**GE Springer Mi**	**61.18**	**60**	⇓P	**P**	**07 58 41.2**	**+0.1**
	baz=61						
FCC	**Fort Churchill**	**61.22**	**33**	*e*P	**P**	**07 58 40.3**	**-0.8**
	comp=Z,5.0nm,0.7s,mb4.8						
FCC	**Fort Churchill**	**61.22**	**33**	*e*P	**P**	**07 58 40.3**	**-0.8**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
F15A	**Butte**	**61.23**	**53**	⇓P	**P**	**07 58 41.8**	**+0.4**
	baz=61						
LRM	**Limekiln Ridge**	**61.27**	**53**	*e*P	**P**	**07 58 42.3**	**+0.7**
EGMT	**Eagleton**	**61.31**	**49**	*e*P	**P**	**07 58 41.5**	**-0.4**
	comp=Z,9.5nm,1.1s,mb4.8						
EGMT				*e*pP	pP	07 58 57.6	-0.6
EGMT	**Eagleton**	**61.31**	**49**	⇓P	**P**	**07 58 41.7**	**-0.1**
	baz=61						
L10A	**Juniper Basin**	**61.35**	**58**	⇑P	**P**	**07 58 42.3**	**+0.1**
	baz=61						
N09A	**Rock Creek Ran**	**61.50**	**60**	⇓P	**P**	**07 58 43.3**	**+0.1**
	baz=61						
CMB	**Columbia Colle**	**61.54**	**64**	⇓P	**P**	**07 58 43.3**	**-0.3**
	baz=61						
I13A	**Wildhorse Cree**	**61.54**	**55**	⇓P	**P**	**07 58 43.6**	**+0.1**
	baz=61						
HLID	**Hailey**	**61.60**	**56**	*e*P	**P**	**07 58 44.6**	**+0.7**
	comp=Z,22nm,2.4s,mb4.9						
HLID	**Hailey**	**61.60**	**56**	⇑P	**P**	**07 58 44.3**	**+0.4**
	baz=61						
M10A	**I.L. Ranch, Tu**	**61.66**	**59**	⇓P	**P**	**07 58 44.4**	**+0.1**
	baz=61						
G15A	**Dillon**	**61.66**	**53**	P	**P**	**07 58 44.8**	**+0.6**
	baz=61,SNR=7.2						
R06C	**Coleville**	**61.80**	**63**	⇑P	**P**	**07 58 46.0**	**+0.7**
	baz=62						
BOZ	**Bozeman (W)**	**61.82**	**52**	*e*P	**P**	**07 58 46.0**	**+0.6**
	comp=Z,3.8nm,0.8s,mb4.6						
BOZ	**Bozeman (W)**	**61.82**	**52**	*e*P	**P**	**07 58 46.0**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
BOZ	**Bozeman (W)**	**61.82**	**52**	⇓P	**P**	**07 58 45.8**	**+0.5**
	baz=62						
J13A	**Cove Ranch, Pi**	**61.84**	**56**	⇑P	**P**	**07 58 45.6**	**+0.1**
	baz=62						
HAST	**UC Hastings Re**	**61.85**	**66**	⇓P	**P**	**07 58 45.5**	**-0.2**
	baz=62						
K12A	**Draper Farm, C**	**61.90**	**57**	⇑P	**P**	**07 58 46.4**	**+0.4**
	baz=62						
O09A	**Fish Creek Ran**	**62.12**	**60**	⇑P	**P**	**07 58 47.9**	**+0.4**
	baz=62						
L12A	**House Creek Ra**	**62.15**	**57**	⇓P	**P**	**07 58 47.7**	**+0.1**
	baz=62						
N10A	**Dunphy**	**62.18**	**59**	⇓P	**P**	**07 58 48.6**	**+0.7**
	baz=62						
Q08A	**Gabbs**	**62.51**	**62**	⇓P	**P**	**07 58 50.2**	**+0.1**
	baz=62						
NVAR	**Mina Array Bea**	**62.56**	**62**	P	**P**	**07 58 50.7**	**+0.3**
NVAR				pP	pP	07 59 07.2	+0.4
NVAR	**Mina Array Bea**	**62.56**	**62**	P	**P**	**07 58 50.7**	**+0.3**
	comp=Z,0.9nm,0.6s,mb4.1,baz=298,slow=7.7,SNR=11						
NVAR				pP	pP	07 59 07.2	+0.4
	comp=Z,1.2nm,0.9s,baz=289,slow=6.6,SNR=5.1						
M12A	**Wells**	**62.67**	**58**	⇑P	**P**	**07 58 51.8**	**+0.7**
	baz=62						
P10A	**Eureka**	**62.90**	**60**	⇓P	**P**	**07 58 53.1**	**+0.4**
	baz=63						
K14A	**Jones Ranch, D**	**62.94**	**56**	⇑P	**P**	**07 58 53.6**	**+0.7**
	baz=63						
O11A	**Cowboy Ranch,**	**63.05**	**59**	⇑P	**P**	**07 58 54.4**	**+0.7**
	baz=63						
KAF	**Kangasniemi**	**63.13**	**335**	*e*p	**P**	**07 58 52.5**	**-1.3**
	comp=Z,3.2nm,0.6s,mb4.6,baz=37,slow=6.2						
KAF	**Kangasniemi**	**63.13**	**335**	*e*P	**P**	**07 58 52.5**	**-1.3**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
LKWY	**Lake**	**63.18**	**53**	*e*P	**P**	**07 58 55.0**	**+0.5**
	comp=Z,5.9nm,0.4s,mb5.1						
LKWY	**Lake**	**63.18**	**53**	*e*P	**P**	**07 58 55.0**	**+0.5**
LKWY				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.1						
HELL	**Mitchell Peak,**	**63.23**	**64**	⇓P	**P**	**07 58 53.5**	**-1.5**
	baz=63						
IMW	**Indian Meadow**	**63.32**	**54**	*e*P	**P**	**07 58 55.6**	**+0.2**
	comp=Z,5.2nm,1.1s,mb4.6						
IMW				*e*sP	sP	07 59 16.5	-2.2
R09A	**Tonopah**	**63.42**	**62**	⇑P	**P**	**07 58 56.0**	**-0.2**
	baz=63						
N13A	**Wendover, West**	**63.44**	**58**	⇓P	**P**	**07 58 55.7**	**-0.5**
	baz=63						
Q10A	**Clear Creek Ra**	**63.45**	**61**	⇑P	**P**	**07 58 55.5**	**-0.8**
	baz=63						
O12A	**Currie**	**63.50**	**59**	⇓P	**P**	**07 58 56.4**	**-0.2**
	baz=63						
MOOW	**Moose Ponds**	**63.52**	**54**	*e*P	**P**	**07 58 57.3**	**+0.6**
MOOW				*e*sP	sP	07 59 18.2	-1.9
TPAW	**Teton Pass**	**63.58**	**54**	*e*P	**P**	**07 58 56.9**	**-0.2**
	comp=Z,6.7nm,0.8s,mb4.7						
S09A	**Goldfield**	**63.66**	**62**	⇓P	**P**	**07 58 57.9**	**+0.1**
	baz=63						
LOHW	**Long Hollow**	**63.69**	**54**	*e*P	**P**	**07 58 58.0**	**+0.2**
	comp=Z,3.6nm,0.9s,mb4.4						
REDW	**Red Top Meadow**	**63.72**	**54**	*e*P	**P**	**07 58 57.9**	**-0.1**
	comp=Z,5.9nm,0.8s,mb4.7						
REDW				*e*pP	pP	07 59 15.1	+0.6
FINES	**FINESS Array B**	**63.72**	**335**	*i* P	**P**	**07 58 57.0**	**-0.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
FINES	**FINESS Array B**	**63.72**	**335**	P	**P**	**07 58 57.0**	**-0.7**
	comp=Z,3.1nm,0.4s,mb4.7,baz=39,slow=7.1,SNR=35						
FINES				PcP	PcP	07 59 32.1	-1.2
	comp=Z,0.6nm,0.5s,baz=80,slow=4.6,SNR=4.3						
LAO	**LASA Array**	**64.00**	**49**	*e*P	**P**	**07 59 00.2**	**+0.3**
	comp=Z,9.3nm,0.9s,mb4.8						
LAO				*e*pP	pP	07 59 15.3	-1.0
M15A	**Larsen Ranch,**	**64.06**	**56**	⇓P	**P**	**07 59 00.4**	**+0.1**
	baz=64						
R11A	**Troy Canyon, C**	**64.25**	**61**	⇓P	**P**	**07 59 01.4**	**-0.2**
	baz=64						
HWUT	**Hardware Ranch**	**64.46**	**56**	*e*P	**P**	**07 59 03.1**	**+0.2**
MPMC	**Manual Prospec**	**64.58**	**64**	⇓P	**P**	**07 59 03.3**	**-0.5**
	baz=64						
S11A	**Rachel**	**64.61**	**61**	⇓P	**P**	**07 59 04.1**	**+0.1**
	baz=64						
DUG	**Dugway**	**64.67**	**58**	*e*P	**P**	**07 59 04.7**	**+0.4**
	comp=Z,3.8nm,0.9s,mb4.4						
DUG	**Dugway**	**64.67**	**58**	*e*P	**P**	**07 59 04.7**	**+0.4**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
DUG	**Dugway**	**64.67**	**58**	⇓P	**P**	**07 59 05.4**	**+1.1**
	baz=64						
FURC	**Furnace Creek,**	**64.70**	**63**	⇓P	**P**	**07 59 02.7**	**-1.9**
	baz=64						
TPNV	**Topopah Spring**	**64.76**	**62**	⇑P	**P**	**07 59 04.7**	**-0.2**
	baz=64						
Q13A	**Wheeler Ranch,**	**64.78**	**59**	⇓P	**P**	**07 59 04.2**	**-0.8**
	baz=64						
BW06	**Boulder Array**	**64.82**	**54**	*e*P	**P**	**07 59 05.7**	**+0.5**
	comp=Z,4.3nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**64.82**	**54**	P	**P**	**07 59 05.7**	**+0.4**
	comp=Z,3.5nm,0.7s,mb4.5,baz=297,slow=1.5,SNR=33						
PDAR				pP	pP	07 59 21.9	+0.1
	comp=Z,1.4nm,0.9s,baz=333,slow=1.7,SNR=4.3						
R12A	**Pony Springs,**	**64.84**	**60**	⇓P	**P**	**07 59 05.3**	**-0.2**
	baz=64						
EDW2	**Edwards Air Fo**	**65.04**	**65**	⇓P	**P**	**07 59 06.6**	**-0.2**
	baz=65						
U10A	**Ash Meadows, A**	**65.05**	**63**	⇓P	**P**	**07 59 07.6**	**+0.8**
	baz=65						
T11A	**Corn Creek, Al**	**65.19**	**61**	⇓P	**P**	**07 59 07.5**	**-0.2**
	baz=65						
S13A	**Holt Ranch, En**	**65.78**	**60**	⇓P	**P**	**07 59 12.0**	**+0.5**
	baz=65						
U13A	**Pakoon Wash**	**66.49**	**61**	⇑P	**P**	**07 59 15.9**	**-0.1**
	baz=66						
ULM	**Lac du Bonnet**	**66.52**	**41**	P	**P**	**07 59 14.7**	**-1.3**
ULM				pP	pP	07 59 32.4	-0.2
ULM	**Lac du Bonnet**	**66.52**	**41**	P	**P**	**07 59 14.7**	**-1.3**
	comp=Z,1.1nm,0.6s,mb4.1,baz=338,slow=5.4,SNR=4.3						
ULM				pP	pP	07 59 32.4	-0.2
	comp=Z,1.2nm,0.7s,baz=11,slow=3.2,SNR=2.7						
GMRC	**Granite Mounta**	**66.55**	**64**	⇓P	**P**	**07 59 15.7**	**-0.8**
	baz=66						
RSSD	**Black Hills**	**66.88**	**50**	*e*P	**P**	**07 59 18.5**	**+0.1**
	comp=Z,4.7nm,0.6s,mb4.7						
RSSD				*e*pP	pP	07 59 34.8	-0.1
RSSD	**Black Hills**	**66.88**	**50**	*e*P	**P**	**07 59 18.5**	**+0.1**
RSSD				*e**PP	pP	07 59 34.8	-0.2
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
U14A	**Mt Trumbull**	**66.96**	**61**	⇓P	**P**	**07 59 18.9**	**-0.1**
	baz=67						
T15A	**Red Dirt Ranch**	**67.03**	**60**	⇓P	**P**	**07 59 19.7**	**+0.2**
	baz=67						
IRM	**Iron Mountain**	**67.27**	**64**	⇓P	**P**	**07 59 20.1**	**-1.0**
	baz=67						
X13A	**Yucca**	**67.79**	**63**	⇓P	**P**	**07 59 23.3**	**-1.1**
	baz=68						
W14A	**Seligman**	**67.82**	**62**	⇑P	**P**	**07 59 24.8**	**+0.2**
	baz=68						
NB2	**NORSAR Subarra**	**67.93**	**341**	P	**P**	**07 59 23.6**	**-1.2**
	comp=Z,6.4nm,0.6s,mb4.8,baz=28,slow=6.2						
NB2	**NORSAR Subarra**	**67.93**	**341**	P	**P**	**07 59 23.6**	**-1.2**
NB2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
NOA	**NORSAR Array B**	**67.93**	**341**	P	**P**	**07 59 23.7**	**-1.0**
	comp=Z,6.1nm,0.6s,mb4.8,baz=28,slow=6.4,SNR=22						
NOA				LR	LR	08 37 47.2	
	comp=Z,47nm,18.1s,baz=65,slow=44						
X14A	**Yava**	**68.44**	**62**	⇑P	**P**	**07 59 29.3**	**+0.8**
	baz=68						
WRA	**Warramunga Arr**	**68.64**	**199**	P	**P**	**07 59 28.9**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=15,slow=6.7,SNR=11						
WRA				pP	pP	07 59 45.7	-0.5
	comp=Z,0.6nm,0.9s,baz=17,slow=6.6,SNR=3.0						
SMCO	**Snowmass**	**68.69**	**55**	*e*P	**P**	**07 59 25.3**	**-4.6**
	comp=Z,45nm,2.5s,mb5.0						
X15A	**Humboldt**	**68.83**	**62**	⇑P	**P**	**07 59 31.1**	**+0.2**
	baz=68						
ISCO	**Idaho Springs**	**69.02**	**54**	*e*P	**P**	**07 59 32.5**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.5						
ISCO	**Idaho Springs**	**69.02**	**54**	*e*P	**P**	**07 59 32.5**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
MVCO	**Mesa Verde**	**69.17**	**58**	*e*P	**P**	**07 59 33.8**	**+0.8**
MVCO	**Mesa Verde**	**69.17**	**58**	⇑P	**P**	**07 59 33.2**	**+0.2**
	baz=69						
FITZ	**Fitzroy Crossi**	**69.22**	**208**	P	**P**	**07 59 33.6**	**+0.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=41,slow=9.3,SNR=5.0						
115A	**Sonoran Desert**	**70.05**	**63**	⇑P	**P**	**07 59 38.4**	**-0.1**
	baz=70						
KIV	**Kislovodsk**	**70.45**	**314**	*e*P	**P**	**07 59 40.5**	**-0.2**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
KIV				MLR	MLR		
	comp=Z,76nm,17.0s						
SDCO	**Great Sand Dun**	**70.51**	**55**	*e*P	**P**	**07 59 41.1**	**-0.1**
	comp=Z,1.5nm,0.5s,mb4.2						
ECSD	**EROS,Sioux Fal**	**70.91**	**46**	*e*P	**P**	**07 59 42.9**	**-0.6**
	comp=Z,4.4nm,0.8s,mb4.4						
AKASG	**Malin Array Be**	**71.21**	**326**	P	**P**	**07 59 44.1**	**-1.1**
	comp=Z,6.0nm,0.4s,mb4.9,baz=34,slow=6.1,SNR=18						
217A	**Green Valley**	**71.56**	**63**	⇓P	**P**	**07 59 47.5**	**0.0**
	baz=71						
318A	**Bisbee**	**72.29**	**63**	⇑P	**P**	**07 59 51.7**	**-0.3**
	baz=72						
ASAR	**Alice Springs**	**72.34**	**198**	P	**P**	**07 59 52.0**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=12,slow=6.1,SNR=7.2						
SCHQ	**Schefferville**	**73.20**	**23**	P	**P**	**07 59 56.1**	**-0.9**
	comp=Z,0.8nm,0.5s,mb4.0,baz=344,slow=7.4,SNR=7.8						
KWP	**Kalwaria**	**74.50**	**329**	*e*P	**P**	**08 00 04.9**	**+0.3**
AMTX	**Amarillo**	**74.71**	**55**	*e*P	**P**	**08 00 06.0**	**-0.1**
	comp=Z,7.4nm,0.8s,mb4.7						
UPC	**Upice**	**75.96**	**333**	*e*P	**P**	**08 00 12.4**	**-0.6**
CLL	**Collm**	**76.15**	**335**	⇓*i*P	**P**	**08 00 13.0**	**-1.1**
	comp=Z,9.0nm,0.9s,mb4.7						
CLL	**Collm**	**76.15**	**335**	⇓*i*P	**P**	**08 00 13.0**	**-1.1**
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
CLL	**Collm**	**76.15**	**335**	⇓*i*P	**P**	**08 00 13.0**	**-1.1**
	comp=Z,9.0nm,0.9s,mb4.7						
WMOK	**Wichita Mounta**	**76.43**	**53**	*e*P	**P**	**08 00 16.0**	**0.0**
	comp=Z,0.2nm,1.7s						
TXAR	**Lajitas Array**	**77.61**	**60**	P	**P**	**08 00 22.4**	**-0.2**
	comp=Z,1.8nm,0.5s,mb4.3,baz=296,slow=4.7,SNR=50						
TXAR				pP	pP	08 00 39.4	-0.2
	comp=Z,1.4nm,0.7s,baz=301,slow=4.3,SNR=7.2						
KHC	**Kasperske Hory**	**77.92**	**334**	*e*P	**P**	**08 00 23.9**	**-0.2**
BRTR	**Keskin Array B**	**78.05**	**316**	*i* P	**P**	**08 00 25.2**	**+0.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**78.05**	**316**	P	**P**	**08 00 25.2**	**+0.3**
	comp=Z,2.2nm,0.8s,mb4.1,baz=81,slow=4.0,SNR=7.9						
GERES	**GERESS Array B**	**78.14**	**334**	P	**P**	**08 00 24.6**	**-0.7**
	comp=Z,1.1nm,0.5s,mb4.0,baz=38,slow=5.0,SNR=6.8						
UMR	**Umm Al-Rimmam**	**78.29**	**301**	*e*P	**P**	**08 00 24.6**	**-1.8**
UMR				AMb	AMB	08 00 26.8	
	comp=Z,23nm,0.4s,mb5.4						
MIB	**Mutribah**	**78.32**	**301**	*e*P	**P**	**08 00 25.1**	**-1.5**
MIB				AMb	AMB	08 00 27.1	
	comp=Z,31nm,0.5s,mb5.5						
NAY	**Al-Naaiem**	**78.79**	**301**	*e*P	**P**	**08 00 28.4**	**-0.8**
NAY				AMb	AMB	08 00 31.7	
	comp=Z,8.2nm,1.2s,mb4.5						
RDF	**Al-Radifah**	**78.85**	**300**	*e*P	**P**	**08 00 28.8**	**-0.8**
RDF				AMb	AMB	08 00 30.0	
	comp=Z,33nm,0.9s,mb5.2						
JCT	**Junction City**	**79.02**	**57**	*e*P	**P**	**08 00 29.4**	**-1.0**
	comp=Z,3.0nm,0.6s,mb4.4						
JCT	**Junction City**	**79.02**	**57**	*e*P	**P**	**08 00 29.4**	**-1.1**
JCT				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**79.13**	**190**	P	**P**	**08 00 30.6**	**-0.1**
	comp=Z,0.5nm,0.4s,mb3.8,baz=349,slow=10,SNR=2.8						
CDF	**Champ du Feu**	**80.35**	**337**	*e*P	**P**	**08 00 36.8**	**-0.5**
	comp=Z,9.6nm,0.7s,mb4.5						
CDF	**Champ du Feu**	**80.35**	**337**	*e*P	**P**	**08 00 36.8**	**-0.5**
	comp=Z,4.8nm,0.7s,mb4.5						
CDF	**Champ du Feu**	**80.35**	**337**	*e*P	**P**	**08 00 36.8**	**-0.5**
CDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
HINF	**Hinteralfeld**	**81.01**	**337**	*e*P	**P**	**08 00 39.6**	**-1.3**
	comp=Z,6.9nm,0.7s,mb4.4						
HINF	**Hinteralfeld**	**81.01**	**337**	*e*P	**P**	**08 00 39.6**	**-1.3**
	comp=Z,3.5nm,0.7s,mb4.4						
HINF	**Hinteralfeld**	**81.01**	**337**	*e*P	**P**	**08 00 39.6**	**-1.3**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
PMOR	**Pomariorio Ree**	**81.39**	**123**	*e*T		09 30 00.8	
	comp=Z,6.2nm,0.2s						
LOR	**Lormes**	**82.27**	**339**	*e*P	**P**	**08 00 46.5**	**-1.0**
	comp=Z,12nm,0.7s,mb4.6						
LOR	**Lormes**	**82.27**	**339**	*e*P	**P**	**08 00 46.5**	**-1.0**
	comp=Z,5.8nm,0.7s,mb4.6						
LOR	**Lormes**	**82.27**	**339**	*e*P	**P**	**08 00 46.5**	**-1.0**
LOR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
CABF	**La Chapelle**	**82.32**	**338**	*e*P	**P**	**08 00 47.0**	**-0.8**
	comp=Z,9.6nm,0.8s,mb4.5						
CABF	**La Chapelle**	**82.32**	**338**	*e*P	**P**	**08 00 47.0**	**-0.8**
	comp=Z,4.8nm,0.8s,mb4.5						
CABF	**La Chapelle**	**82.32**	**338**	*e*P	**P**	**08 00 47.0**	**-0.8**
CABF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ASF	**Jabal al Asfar**	**82.35**	**310**	P	**P**	**08 00 47.0**	**-1.2**
	comp=Z,1.6nm,0.7s,mb4.1,baz=63,slow=2.3,SNR=3.7						
MMAI	**Mount Meron Ar**	**82.47**	**311**	P	**P**	**08 00 49.6**	**+0.7**
	comp=Z,3.4nm,0.5s,mb4.6,baz=47,slow=7.7,SNR=8.5						
PPT	**Papeete**	**82.50**	**126**	*e*LR	LR	08 26 42.2	
	comp=Z,94nm,22.8s						
SSF	**Saint Saulge**	**82.55**	**339**	*e*P	**P**	**08 00 48.6**	**-0.4**
	comp=Z,13nm,0.9s,mb4.7						
SSF	**Saint Saulge**	**82.55**	**339**	*e*P	**P**	**08 00 48.6**	**-0.4**
	comp=Z,6.6nm,0.9s,mb4.7						
SSF	**Saint Saulge**	**82.55**	**339**	*e*P	**P**	**08 00 48.6**	**-0.4**
SSF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
SGMF	**Saint Gilles**	**82.74**	**344**	*e*P	**P**	**08 00 49.1**	**-0.8**
	comp=Z,11nm,0.7s,mb4.7						
SGMF	**Saint Gilles**	**82.74**	**344**	*e*P	**P**	**08 00 49.1**	**-0.8**
	comp=Z,5.6nm,0.7s,mb4.7						
SGMF	**Saint Gilles**	**82.74**	**344**	*e*P	**P**	**08 00 49.1**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
ROSF	**Rostrenen**	**82.80**	**344**	*e*P	**P**	**08 00 49.3**	**-0.9**
AVF	**Avril sur Loir**	**82.84**	**339**	*e*P	**P**	**08 00 49.6**	**-0.9**
	comp=Z,3.4nm,0.4s,mb4.5						
SMF	**Signal de Mont**	**82.86**	**339**	*e*P	**P**	**08 00 49.7**	**-0.9**
	comp=Z,8.4nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**82.86**	**339**	*e*P	**P**	**08 00 49.7**	**-0.9**
	comp=Z,4.2nm,0.7s,mb4.6						
SMF	**Signal de Mont**	**82.86**	**339**	*e*P	**P**	**08 00 49.7**	**-0.9**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
LPL	**La Plagne**	**83.16**	**337**	*e*P	**P**	**08 00 52.0**	**-0.2**
LPG	**La Plagne**	**83.17**	**337**	*e*P	**P**	**08 00 52.2**	**0.0**
	comp=Z,4.5nm,0.6s,mb4.4						
LPG	**La Plagne**	**83.17**	**337**	*e*P	**P**	**08 00 52.2**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.4						
LPG	**La Plagne**	**83.17**	**337**	*e*P	**P**	**08 00 52.2**	**0.0**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
QUIF	**Quistinic**	**83.18**	**344**	*e*P	**P**	**08 00 51.2**	**-1.0**
BGF	**Bois d'Agland**	**83.18**	**340**	*e*P	**P**	**08 00 51.5**	**-0.8**
TCF	**Toulx Ste Croi**	**83.59**	**340**	*e*P	**P**	**08 00 53.6**	**-0.8**
MBDF	**Montbardon**	**83.88**	**336**	*e*P	**P**	**08 00 55.5**	**-0.4**
	comp=Z,5.3nm,0.6s,mb4.5						
MBDF	**Montbardon**	**83.88**	**336**	*e*P	**P**	**08 00 55.5**	**-0.4**
	comp=Z,2.7nm,0.6s,mb4.5						
MBDF	**Montbardon**	**83.88**	**336**	*e*P	**P**	**08 00 55.5**	**-0.4**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
ORIF	**Oris-en-Rattie**	**83.94**	**337**	*e*P	**P**	**08 00 56.0**	**-0.2**
	comp=Z,7.9nm,0.6s,mb4.7						
ORIF	**Oris-en-Rattie**	**83.94**	**337**	*e*P	**P**	**08 00 56.0**	**-0.2**
	comp=Z,4.0nm,0.6s,mb4.7						
ORIF	**Oris-en-Rattie**	**83.94**	**337**	*e*P	**P**	**08 00 56.0**	**-0.2**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
VIVF	**Saint-Julien-l**	**84.32**	**338**	*e*P	**P**	**08 00 57.7**	**-0.4**
	comp=Z,11nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**84.32**	**338**	*e*P	**P**	**08 00 57.7**	**-0.4**
	comp=Z,5.5nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**84.32**	**338**	*e*P	**P**	**08 00 57.7**	**-0.4**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
SBF	**Sospel**	**84.49**	**336**	*e*P	**P**	**08 00 58.1**	**-0.9**
LMR	**La Mourre**	**85.24**	**336**	*e*P	**P**	**08 01 02.1**	**-0.7**
PGF	**Pioggiola**	**85.24**	**334**	*e*P	**P**	**08 01 02.1**	**-0.7**
TBI	**Tubuai**	**87.24**	**129**	*e*T		09 37 20.2	
	comp=Z,16nm,0.3s						
QSPA	**South Pole Qui**	**136.71**	**180**	*e*PKPdf	PKPdf	08 07 47.7	+1.1
CFAA	**Coronel Fontan**	**145.20**	**79**	PKPbc	PKPbc	08 08 01.9	-1.2
CFAA	**Coronel Fontan**	**145.20**	**79**	PKPbc	PKPbc	08 08 01.9	-1.2
	comp=Z,0.4nm,0.8s,baz=295,slow=3.9,SNR=10.0						
PLCA	**Paso Flores**	**148.49**	**95**	PKPbc	PKPbc	08 08 11.9	-0.3
	comp=Z,2.7nm,0.8s,baz=245,slow=3.1,SNR=9.2						

*IDC **15** 07:55:39.5±0.9, 3546N×8938E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/21, mbtmp3.8/8, ML3.3/1, MS3.7/8, Ms1 3.7/8, ms1mx3.5/21, Error ellipse: s-maj=30.2km s-min=21.1km az=46.0*

*NEIC **15** 07:55:41.1±0.6, 3539N×8933E, h10km, Error ellipse: s-maj=16.9km s-min=12.5km az=56.0*

*BJI **15** 07:55:43.6, 3565N×8942E, h25km, mb3.9, Ms4.1, Msz4.0*

*ISCJB **15** 07:55:45.1±1.4, 3549N±007×8942E±0.1, h53km±15km, mb3.8/8, MS3.8/8, Error ellipse: s-maj=14.3km s-min=11.0km az=6.5*

ISC 15 07:55:47.1±1.1**, 3552N**±007×**8940E**±009**, h51**km±12km**, n21, σ0^{s}93**/18**, mb3.8**/8**, MS3.8**/8**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**8.27**	**191**	*e*P	**Pn**	**07 57 44.7**	**+0.3**
	20nm,0.9s						
WMQ	**Urumqi**	**8.39**	**352**	*e*P	**Pn**	**07 57 49.0**	**+3.0**
ODAN	**Odare**	**8.80**	**192**	*e*P	**Pn**	**07 57 50.9**	**-0.8**
	50nm,1.1s						
MKAR	**Makanchi Array**	**12.46**	**337**	Pn	**Pn**	**07 58 40.3**	**-1.3**
	0.3nm,0.3s,baz=146,slow=16,SNR=4.5						
MKAR				LR	LR	08 03 34.0	
	comp=Z,178nm,19.6s,baz=153,slow=38						
XAN	**Xi'an**	**16.11**	**90**	P	**Pn**	**07 59 30.6**	**+0.6**
XAN				AMB	AMB		
	comp=Z,7.0nm,1.2s						
SONM	**Songino Array**	**17.63**	**41**	P	**Pn**	**07 59 48.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=222,slow=13,SNR=12						
BJI	**Beijing**	**21.60**	**70**	P	**P**	**08 00 32.3**	**-0.3**
BJI				S	**S**	**08 04 30.6**	**+1.7**
BJI				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb3.9						
BJI				LR	LR		
	comp=N,922nm,17.5s,MS4.4						
BJI				LR	LR		
	comp=E,628nm,12.6s,MS4.4						
BJI				LR	LR		
	comp=Z,386nm,21.7s						
POO	**Poona**	**21.82**	**223**	*e*x	**P**	**08 00 37.0**	**+1.9**
AKTO	**Aktyubinsk**	**27.12**	**313**	LR	LR	08 13 29.3	
	comp=Z,99nm,20.6s,MS3.4,baz=285,slow=39						
KSRS	**Korea Array**	**30.89**	**75**	P	**P**	**08 01 57.4**	**-1.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=277,slow=9.6,SNR=4.8						
KSRS				LR	LR	08 15 50.3	
	comp=Z,118nm,20.9s,MS3.5,baz=126,slow=39						
MJAR	**Matsushiro Arr**	**39.14**	**74**	LR	LR	08 20 00.3	
	comp=Z,85nm,19.2s,MS3.6,baz=90,slow=37						
NOA	**NORSAR Array B**	**54.09**	**324**	P	**P**	**08 05 06.2**	**0.0**
	comp=Z,1.3nm,0.9s,mb3.9,baz=81,slow=7.4,SNR=3.4						
NOA				LR	LR	08 28 24.7	
	comp=Z,88nm,19.0s,MS3.8,baz=65,slow=36						
GERES	**GERESS Array B**	**55.44**	**309**	P	**P**	**08 05 16.3**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.7,baz=51,slow=10,SNR=3.5						
GERES				LR	LR	08 30 13.5	
	comp=Z,111nm,19.2s,MS4.0,baz=259,slow=37						
WRA	**Warramunga Arr**	**69.69**	**135**	P	**P**	**08 06 50.7**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=328,slow=5.9,SNR=11						
ESDC	**Sonseca Array**	**70.68**	**305**	LR	LR	08 40 28.9	
	comp=Z,77nm,21.1s,MS3.9,baz=25,slow=38						
INK	**Inuvik**	**71.65**	**15**	P	**P**	**08 07 03.1**	**+0.4**
	baz=350,slow=7.3						
ASAR	**Alice Springs**	**72.39**	**138**	P	**P**	**08 07 08.0**	**+0.2**
	comp=Z,1.0nm,0.8s,mb3.8,baz=328,slow=5.8,SNR=13						
YKA	**Yellowknife Ar**	**80.43**	**11**	P	**P**	**08 07 52.5**	**-0.3**
YKA	**Yellowknife Ar**	**80.43**	**11**	P	**P**	**08 07 52.5**	**-0.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=333,slow=5.3,SNR=13						
TORD	**Torodi Ar. Bea**	**80.65**	**279**	P	**P**	**08 07 54.3**	**-0.5**
	comp=Z,1.0nm,0.8s,mb3.8,baz=60,slow=3.5,SNR=4.0						
DBIC	**Dimbokro**	**89.62**	**278**	LR	LR	08 50 21.7	
	comp=Z,57nm,18.9s,MS4.0,baz=55,slow=37						

SKHL 15 08:52:27.2±0.1**, 5467N**×**12763E, h9**km±1km**, mb3.6**/2**, 2C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KROS	**Kirovskiy**	**0.45**	**239**	⇑*i*Pg	Pg	08 52 35.3	-0.7
KROS				AMB	AMB	08 52 35.5	
	30nm,0.2s						
KROS				*i* Sg	Sg	08 52 41.2	-0.7
KROS				A		08 52 41.9	
	380nm,0.3s						
KROS				A		08 52 41.9	
	350nm,0.3s						
BMKR	**Bomnak**	**0.70**	**86**	⇑*i*Pg	Pg	08 52 39.9	-0.9
BMKR				AMB	AMB	08 52 40.3	
	24nm,0.2s						
BMKR				AMB	AMB	08 52 40.3	
	26nm,0.2s						
BMKR				pP		08 52 42.4	
BMKR				*e*Sg	Sg	08 52 49.4	-0.6
BMKR				A		08 52 49.9	
	338nm,0.2s						
BMKR				A		08 52 49.9	
	262nm,0.2s						
ZEA	**Zeya**	**0.96**	**194**	*e*Pg	Pg	08 52 44.3	-1.3
ZEA				*e*Sg	Sg	08 52 56.8	-1.3
ZEA				A		08 52 57.8	
	97nm,0.4s						
EKMR	**Ekimchan**	**3.53**	**115**	*e*Pg	Pg	08 53 31.5	-3.3
EKMR				pP		08 53 34.0	
EKMR				*e*Sg	Sg	08 54 18.2	-2.4
EKMR				A		08 54 23.5	
	8.0nm,0.5s						
TUP	**Tupik**	**4.48**	**270**	*e*Pn	Pn	08 53 38.9	+3.8
TUP				*e*Pg	Pg	08 53 51.2	-1.7
TUP				*e*Sn	Sn	08 54 30.7	+3.4
TUP				*e*Sg	Sg	08 54 49.3	-1.5
TUP				A		08 54 57.6	
	20nm,0.7s						

WEL 15 09:46:20.5±0.2**, 3596S**×**17802E, h230**km±3km**, ML3.7**/8**, Error ellipse: s-maj=5.1km s-min=4.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.62**	**172**	PN	Pn	09 46 57.9	+0.2
MXZ				SN	S	09 47 26.9	-0.2
PUZ	**Puketiti**	**2.12**	**175**	PN	Pn	09 47 02.5	+0.2
PUZ				SN	S	09 47 34.9	-0.4
MWZ	**Matawai**	**2.41**	**189**	PN	Pn	09 47 05.6	+0.4
MWZ				SN	S	09 47 40.2	-0.3
URZ	**Urewera**	**2.41**	**197**	PN	Pn	09 47 05.6	+0.3
URZ				SN	S	09 47 40.0	-0.6
KNZ	**Kokohu**	**3.07**	**185**	PN	Pn	09 47 12.2	-0.2
BKZ	**Black Stump Fm**	**3.42**	**200**	PN	Pn	09 47 16.2	-0.2
PXZ	**Pawanui**	**4.17**	**192**	PN	Pn	09 47 24.5	-0.8
TSZ	**Takapari Road**	**4.41**	**201**	PN	Pn	09 47 27.0	-1.2
CAW	**Cannon Point**	**5.64**	**203**	PN	Pn	09 47 41.1	-2.4
THZ	**Tophouse**	**7.04**	**213**	PN	Pn	09 47 59.3	-2.0

*ISCJB **15** 10:17:08.7±2.4, 4001N±005×78.1E±0.1, h0km±14km, mb3.7/4, Error ellipse: s-maj=16.5km s-min=6.9km az=23.7*
*IDC **15** 10:17:10.9±1.9, 4008N×7761E, h0km, mb3.8/4, mb1 3.8/6, mb1mx3.5/24, mbtmp3.7/6, ML3.1/1, Error ellipse: s-maj=42.3km s-min=20.8km az=138.0*
*BJI **15** 10:17:13.6, 4022N×7771E, h16km, ML3.4*
*NNC **15** 10:17:20.1±1.5, 4075N×7805E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=12.2km s-min=5.2km az=159.0*
ISC 15 10:17:12.7±2.1**, 4009N**±005×**779E**±01**, h5**km±13km**, n23, σ1.32**/27**, mb3.6**/4**, 7C-4D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.55**	**249**	PG	**Pg**	**10 17 41.0**	**-1.4**
KSH				SG	**Sg**	**10 18 02.6**	**+0.1**
KSH				Smax			
	comp=N,2μm,0.4s						
ULHL	**Ulahol**	**2.47**	**331**	P	**Pn**	**10 17 54.4**	**+0.8**
	SNR=27						
KZA	**Kyzart**	**2.79**	**316**	P	**Pn**	**10 17 59.2**	**+1.1**
	SNR=193						
TKM2	**Tokmak 2**	**3.30**	**330**	⇓Pn	**Pn**	**10 18 05.8**	**+0.9**
	comp=N,33nm,0.6s						
TKM2				⇑Lg		10 18 50.1	
	comp=N,195nm,0.8s						
TKM2	**Tokmak 2**	**3.30**	**330**	P	**Pn**	**10 18 05.9**	**+0.9**
	SNR=38						
UCH	**Uchtor**	**3.30**	**311**	P	**Pn**	**10 18 05.7**	**+0.6**
	SNR=24						
KBK	**Karagaybulak**	**3.37**	**321**	P	**Pn**	**10 18 10.7**	**+4.7**
	SNR=30						
AAK	**Ala-Archa**	**3.58**	**316**	P	**Pn**	**10 18 09.6**	**+0.7**
	SNR=39						
CHMS	**Chumysh**	**3.72**	**322**	P	**Pn**	**10 18 11.8**	**+1.0**
	SNR=8.1						
AML	**Almayashu**	**3.74**	**304**	P	**Pn**	**10 18 12.5**	**+1.4**
	SNR=16						
EKS2	**Erkin-Say**	**4.00**	**311**	P	**Pn**	**10 18 17.3**	**+2.7**
	SNR=22						
USP	**Ospenovka**	**4.05**	**323**	P	**Pb**	**10 18 22.0**	**-2.5**
	SNR=32						
KK31	**Karatay Array**	**6.27**	**301**	⇓Pn	**Pb**	**10 18 56.0**	**-6.3**
	comp=N,5.2nm,0.7s,baz=120,slow=16,SNR=16						
KK31				⇑Sn	**Sb**	**10 20 10.4**	**-7.2**
	comp=N,23nm,0.8s,baz=128,slow=26,SNR=5.8						
MK31	**Makanchi Array**	**7.44**	**24**	⇓Pn	**Pn**	**10 19 03.1**	**+1.2**
	comp=N,2.1nm,0.8s,baz=212,slow=12,SNR=7.8						
MK31				⇑Sn	**Sn**	**10 20 25.2**	**-1.4**
	comp=N,2.1nm,0.7s,baz=194,slow=19,SNR=4.2						
MK31				⇑Lg		10 20 50.1	
	comp=N,4.8nm,0.8s						
MKAR	**Makanchi Array**	**7.44**	**24**	Pn	**Pn**	**10 19 03.3**	**+1.4**
	comp=N,0.3nm,0.3s,baz=205,slow=13,SNR=9.9						
MKAR				Sn	**Sn**	**10 20 26.4**	**-0.2**
	comp=N,0.3nm,0.3s,baz=214,slow=23,SNR=3.6						
MKAR				Lg		10 21 09.2	
	comp=N,0.5nm,0.3s,baz=206,slow=24,SNR=5.1						
DLH	**Dalhousie**	**7.68**	**192**	*e*P	**Sn**	**10 20 33.0**	**+0.3**
KURBB	**Kurchatov Arra**	**10.55**	**2**	⇑Pn	**Pn**	**10 19 43.0**	**-1.4**
	comp=N,0.4nm,0.9s						
KURBB				⇑Lg		10 22 34.4	
	comp=N,8.5nm,1.1s						
KURK	**Kurchatov**	**10.64**	**3**	⇓Pn	**Pn**	**10 19 44.5**	**-1.2**
	comp=N,1.9nm,0.9s						
KURK				⇑Lg		10 22 37.6	
	comp=N,21nm,1.6s						
AKTO	**Aktyubinsk**	**17.32**	**313**	P	**Pn**	**10 21 13.9**	**-1.2**
	baz=59,slow=18,SNR=2.3						
SONM	**Songino Array**	**21.87**	**60**	P	**P**	**10 22 08.1**	**+1.8**
	comp=N,0.5nm,0.8s,mb3.0,baz=256,slow=8.6,SNR=5.5						
ARCES	**ARCESS Array B**	**40.07**	**334**	P	**P**	**10 24 47.4**	**-1.1**
	comp=N,1.5nm,0.7s,mb3.8,baz=109,slow=10,SNR=5.6						
TORD	**Torodi Ar. Bea**	**71.10**	**271**	P	**P**	**10 28 29.9**	**-2.5**
	comp=N,2.5nm,0.8s,mb4.2,baz=46,slow=8.3,SNR=3.4						
YKA	**Yellowknife Ar**	**77.28**	**6**	P	**P**	**10 29 06.1**	**-1.5**
	comp=N,0.3nm,0.5s,mb3.5,baz=345,slow=5.6,SNR=10						

*ISCJB **15** 10:36:21.3±1.3, 178S±04×1783W±02, h612km±20km, mb3.9/8, Error ellipse: s-maj=72.7km s-min=14.5km az=153.9*
*IDC **15** 10:36:22.3±2.1, 1769S×17829W, h608km±28km, mb3.1/8, mb1 3.4/9, mb1mx3.2/18, mbtmp3.2/9, Error ellipse: s-maj=100.0km s-min=14.0km az=155.0*
ISC 15 10:36:22.1±1.3**, 179S**±04×**1782W**±02**, h606**km±19km**, n14, σ0.24**/14**, mb3.9**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.35**	**59**	P	**P**	**10 38 15.6**	**0.0**
	3.1nm,0.3s,baz=99,slow=12,SNR=5.4						
CNB	**Canberra Magne**	**33.59**	**232**	*e*P	**P**	**10 42 13.7**	**-0.1**
	43nm,1.5s						
CTA	**Charters Tower**	**33.62**	**260**	P	**P**	**10 42 14.2**	**0.0**
	3.2nm,0.6s,mb4.1,baz=74,slow=10,SNR=4.3						
STKA	**Stephens Creek**	**38.80**	**241**	*e*P	**P**	**10 42 56.9**	**+0.3**
	3.5nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**38.80**	**241**	P	**P**	**10 42 56.9**	**+0.3**
	2.9nm,0.7s,mb3.9,baz=95,slow=11,SNR=6.6						
WB2	**Warramunga Arr**	**44.79**	**259**	*e*P	**P**	**10 43 43.3**	**-0.4**
WRA	**Warramunga Arr**	**44.80**	**259**	P	**P**	**10 43 43.8**	**0.0**
	2.7nm,0.4s,mb4.1,baz=97,slow=7.1,SNR=36						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**10 43 45.0**	**+0.1**
	5.1nm,0.6s,mb4.2,baz=90,slow=7.9,SNR=43						
KAKA	**Kakadu**	**47.75**	**269**	*e*P	**P**	**10 44 06.4**	**+0.3**
	2.3nm,0.2s,mb4.4						
FITZ	**Fitzroy Crossi**	**53.20**	**260**	*e*P	**P**	**10 44 45.4**	**-0.1**
	2.3nm,0.9s,mb3.5						
FITZ	**Fitzroy Crossi**	**53.20**	**260**	P	**P**	**10 44 45.4**	**-0.1**
	0.7nm,0.3s,mb3.4,baz=106,slow=7.4,SNR=4.1						
NVAR	**Mina Array Bea**	**79.27**	**44**	P	**P**	**10 47 26.1**	**+0.3**
	0.2nm,0.6s,baz=219,slow=7.0,SNR=4.0						
TXAR	**Lajitas Array**	**85.83**	**58**	P	**P**	**10 47 59.1**	**+0.2**
	0.8nm,0.7s,mb3.5,baz=217,slow=6.7,SNR=14						
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**10 48 04.7**	**-0.4**
	0.5nm,0.8s,mb3.3,baz=264,slow=1.5,SNR=4.4						

IDC 15 10:36:27.4±0.7**, 142N**×**12727E, h0**km**, mb4.1**/8**, mb1 4.2**/9**, mb1mx4.1**/16**, mbtmp4.1**/9**, ML4.1**/1**, Error ellipse: s-maj=49.1km s-min=13.8km az=80.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.46**	**185**	P	Pn	10 40 57.2	+0.3
	0.4nm,0.3s,baz=26,slow=11,SNR=8.1						
WRA	**Warramunga Arr**	**22.33**	**162**	P	P	10 41 27.3	+0.4
	6.2nm,0.7s,baz=339,slow=11,SNR=66						
ASAR	**Alice Springs**	**25.75**	**166**	P	P	10 41 59.6	-0.3
	1.1nm,0.5s,baz=350,slow=7.3,SNR=29						
NWAO	**Narrogin (SRO)**	**35.45**	**195**	P	P	10 43 25.5	0.0
	2.7nm,0.7s,baz=0.0,slow=6.1,SNR=3.1						
STKA	**Stephens Creek**	**35.79**	**159**	*e*P	P	10 43 28.6	+0.1
	1.9nm,0.5s						
STKA	**Stephens Creek**	**35.79**	**159**	P	P	10 43 28.6	+0.1
	2.8nm,0.6s,baz=327,slow=7.3,SNR=7.5						
KSRS	**Korea Array**	**35.87**	**1**	P	P	10 43 30.4	+1.4
	1.9nm,0.6s,baz=177,slow=9.4,SNR=6.7						
MJAR	**Matsushiro Arr**	**36.39**	**15**	P	P	10 43 32.8	-0.7
	1.4nm,0.7s,baz=183,slow=10,SNR=4.9						
SONM	**Songino Array**	**49.65**	**342**	P	P	10 45 21.6	+0.9
	1.3nm,0.7s,baz=157,slow=8.5,SNR=12						
SONM				PcP	PcP	10 46 40.6	-1.6
	0.3nm,0.6s,baz=128,slow=4.0,SNR=2.7						
MKAR	**Makanchi Array**	**59.75**	**326**	P	P	10 46 34.3	+0.2
	2.0nm,0.6s,baz=118,slow=8.6,SNR=21						
MKAR				PcP	PcP	10 47 19.6	-1.4
	0.6nm,0.6s,baz=118,slow=4.5,SNR=2.6						

*SZGRF **15** 10:39:56.9, 1946S×17592E, h33km, South of Fiji Islands*
*ISCJB **15** 10:40:06.8±1.7, 188S±0.1×1756W±0.1, h162km±16km, mb4.3/23, Error ellipse: s-maj=20.9km s-min=10.7km az=136.7*
*NEIC **15** 10:40:07.9±1.4, 1880S×17553W, h160km±13km, mb4.5/11, Error ellipse: s-maj=16.8km s-min=8.1km az=138.0*
*IDC **15** 10:40:08.3±2.5, 1884S×17551W, h162km±23km, mb4.1/15, mb1 4.2/16, mb1mx4.1/20, mbtmp4.0/16, Error ellipse: s-maj=21.1km s-min=11.9km az=139.0*
ISC 15 10:40:07.8±1.6**, 188S**±01×**1756W**±01**, h157**km±16km**, n52, σ0.93**/40**, mb4.3**/23**, 2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.06**	**37**	P	**Pn**	**10 41 35.1**	**-0.3**
	4.7nm,0.3s,baz=246,slow=20,SNR=9.9						
AFI				S	**Sn**	**10 42 37.5**	**-6.5**
	7.5nm,0.3s,baz=264,slow=19,SNR=4.5						
DZM	**Mont Dzumac**	**17.19**	**256**	P	**Pn**	**10 44 03.1**	**+4.4**
	0.8nm,0.3s,baz=81,slow=16,SNR=4.1						
URZ	**Urewera**	**20.43**	**197**	P	**P**	**10 44 32.3**	**-0.4**
	9.0nm,0.4s,baz=356,slow=4.1,SNR=26						
URZ				S	**S**	**10 48 02.4**	**-10**
	5.3nm,0.8s,baz=189,slow=19,SNR=4.3						
RPZ	**Rata Peaks**	**27.29**	**202**	P	**P**	**10 45 39.2**	**+1.7**
	9.7nm,0.6s,mb4.6,baz=34,slow=15,SNR=3.7						
ARMA	**Armidale**	**31.89**	**242**	*e*P	**P**	**10 46 19.7**	**+1.3**
CNB	**Canberra Magne**	**35.09**	**235**	*e*P	**P**	**10 46 46.9**	**+0.9**
	6.3nm,0.6s,mb4.4						
CTA	**Charters Tower**	**35.99**	**261**	*e*P	**P**	**10 46 54.3**	**+0.4**
	14nm,0.6s,mb4.8						
CTA	**Charters Tower**	**35.99**	**261**	P	**P**	**10 46 54.8**	**+0.9**
	17nm,0.7s,mb4.8,baz=96,slow=10,SNR=23						
PMG	**Port Moresby**	**37.28**	**279**	*e*P	**P**	**10 47 06.1**	**+1.2**
	22nm,1.0s,mb4.7						
PMG	**Port Moresby**	**37.28**	**279**	P	**P**	**10 47 06.2**	**+1.3**
	20nm,1.0s,mb4.7,baz=89,slow=3.8,SNR=6.9						
STKA	**Stephens Creek**	**40.62**	**243**	*e*P	**P**	**10 47 32.9**	**+0.5**
	3.1nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**40.62**	**243**	P	**P**	**10 47 32.7**	**+0.3**
	3.8nm,0.5s,mb4.2,baz=76,slow=8.4,SNR=9.6						
WB2	**Warramunga Arr**	**47.14**	**260**	*e*P	**P**	**10 48 23.7**	**-0.9**
WRA	**Warramunga Arr**	**47.15**	**260**	P	**P**	**10 48 24.0**	**-0.7**
	9.4nm,0.5s,mb4.7,baz=98,slow=8.6,SNR=285						
WRA				PcP	PcP	10 49 53.3	-0.6
	2.4nm,0.7s,baz=92,slow=3.7,SNR=9.6						
WRA				S	**S**	**10 54 58.6**	**-6.9**
	0.5nm,0.9s,baz=96,slow=14,SNR=4.6						
ASAR	**Alice Springs**	**47.18**	**255**	P	**P**	**10 48 24.6**	**-0.3**
	17nm,0.8s,mb4.7,baz=96,slow=8.3,SNR=154						
ASAR				PcP	PcP	10 49 53.1	-0.8
	3.5nm,0.7s,baz=106,slow=3.9,SNR=15						
ASAR				S	**S**	**10 54 59.5**	**-6.3**
	0.5nm,0.8s,baz=89,slow=16,SNR=6.1						
KAKA	**Kakadu**	**50.28**	**269**	*e*P	**P**	**10 48 48.2**	**-0.5**
	8.4nm,0.6s,mb4.5						
KAKA	**Kakadu**	**50.28**	**269**	*e*P	**P**	**10 48 47.8**	**-0.8**
FORT	**Forrest**	**52.10**	**245**	*e*P	**P**	**10 49 00.0**	**-2.0**
	17nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**55.57**	**261**	*e*P	**P**	**10 49 27.0**	**-0.3**
	4.2nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**55.57**	**261**	P	**P**	**10 49 27.4**	**+0.1**
	2.7nm,0.5s,mb4.3,baz=116,slow=6.2,SNR=12						
MBWA	**Marble Bar**	**60.49**	**256**	*e*P	**P**	**10 50 00.6**	**-1.0**
	4.4nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	**61.20**	**242**	P	**P**	**10 50 04.5**	**-1.7**
	5.6nm,0.9s,mb4.4,baz=58,slow=8.3,SNR=2.9						
MJAR	**Matsushiro Arr**	**70.26**	**322**	P	**P**	**10 51 04.3**	**+0.3**
	3.0nm,0.8s,mb4.1,baz=157,slow=5.9,SNR=9.0						
QSPA	**South Pole Qui**	**71.27**	**180**	*e*P	**P**	**10 51 09.1**	**-0.4**
	16nm,1.4s,mb4.5						
KSRS	**Korea Array**	**77.18**	**317**	P	**P**	**10 51 45.4**	**+1.0**
	4.1nm,1.0s,mb4.0,baz=137,slow=7.0,SNR=7.0						
NVAR	**Mina Array Bea**	**78.21**	**42**	P	**P**	**10 51 50.2**	**+0.2**
NVAR	**Mina Array Bea**	**78.21**	**42**	P	**P**	**10 51 50.2**	**+0.2**
	0.9nm,0.7s,mb3.5,baz=236,slow=12,SNR=8.4						
TXAR	**Lajitas Array**	**84.19**	**57**	P	**P**	**10 52 22.7**	**+0.9**
TXAR	**Lajitas Array**	**84.19**	**57**	P	**P**	**10 52 22.7**	**+0.9**
	1.1nm,1.0s,mb3.6,baz=216,slow=6.2,SNR=9.7						
ANMO	**Albuquerque**	**84.54**	**50**	*e*P	**P**	**10 52 24.0**	**+0.6**
	1.4nm,0.8s,mb3.7						
COLA	**College**	**86.07**	**11**	*e*P	**P**	**10 52 29.5**	**-0.8**
	5.8nm,0.9s,mb4.3						
WALA	**Waterton Lakes**	**86.86**	**35**	*e*P	**P**	**10 52 34.2**	**-0.3**
	2.2nm,0.7s,mb4.1						
INK	**Inuvik**	**92.04**	**14**	*e*P	**P**	**10 52 57.7**	**-0.7**
	52nm,0.9s,mb5.6						
YKA	**Yellowknife Ar**	**94.01**	**24**	P	**P**	**10 53 06.9**	**-0.7**
YKA	**Yellowknife Ar**	**94.01**	**24**	P	**P**	**10 53 06.9**	**-0.7**
	0.3nm,0.7s,mb3.5,baz=241,slow=4.5,SNR=8.1						
SONM	**Songino Array**	**96.00**	**318**	P	**P**	**10 53 18.6**	**+1.6**
	0.1nm,0.3s,mb3.6,baz=149,slow=3.0,SNR=3.9						
MALT	**Malatya**	**144.66**	**311**	*e*PKPdf	PKPdf	10 59 26.0	-0.1
CLZ	**Clausthal**	**146.69**	**353**	*e*PKPbc	PKPbc	10 59 32.1	+1.2
CLL	**Collm**	**146.86**	**350**	⇓*i*P	PKPbc	10 59 30.8	-0.6
CLL	**Collm**	**146.86**	**350**	⇓*i*PKPbc	PKPbc	10 59 30.8	-0.6
	comp=Z,6.0nm,0.8s						
CLL	**Collm**	**146.86**	**350**	*e*PKPbc	PKPbc	10 59 31.2	-0.2
BRG	**Berggiesshubel**	**147.12**	**349**	*e*(P)	PKPdf	10 59 29.8	0.0
	comp=Z,12nm,1.7s						
BRTR	**Keskin Array B**	**147.32**	**316**	PKPbc	PKPbc	10 59 32.7	-0.4
	comp=Z,2.4nm,0.8s,baz=101,slow=4.4,SNR=9.0						
MOX	**Moxa**	**147.71**	**351**	*e*PKPbc	PKPbc	10 59 33.9	+0.1
TANN	**Tannenbergstha**	**147.81**	**350**	*e*PKPbc	PKPbc	10 59 33.8	-0.3
MANZ	**Manzenberg**	**148.28**	**351**	*e*PKPbc	PKPbc	10 59 35.3	0.0
ROTZ	**Rotzenmuhle**	**148.48**	**350**	*e*PKPbc	PKPbc	10 59 36.0	+0.2
GRA1	**Grafenberg Arr**	**148.70**	**352**	*e*PKPbc	PKPbc	10 59 36.8	+0.4
GRF	**Grafenberg Arr**	**148.70**	**352**	*e*PKPbc	PKPbc	10 59 36.8	+0.4
GEC2	**GERESS Array S**	**149.10**	**348**	*e*PKPbc	PKPbc	10 59 36.7	-0.7
GERES	**GERESS Array B**	**149.10**	**348**	PKPbc	PKPbc	10 59 36.9	-0.6
	comp=Z,1.4nm,0.7s,baz=45,slow=2.1,SNR=8.9						
TORD	**Torodi Ar. Bea**	**173.79**	**154**	PKP	PKPdf	10 59 56.8	-2.6
	comp=Z,0.9nm,0.9s,baz=281,slow=2.2,SNR=4.0						

*ISCJB **15** 11:00:01.9±0.6, 3836N±004×39.15E±004, h10km, Error ellipse: s-maj=5.4km s-min=4.4km az=32.3*
*CSEM **15** 11:00:01.5±0.2, 3838N×39.11E, h10km, MD2.7, Error ellipse: s-maj=4.0km s-min=2.6km az=121.0*
*ISK **15** 11:00:01.9, 3840N×39.10E, h5km, MD2.8*
*NEIC **15** 11:00:01.8, 3840N×3909E, h14km, MD2.7(ISK), After ISK.*
*DDA **15** 11:00:04.0, 3849N×3920E, h5km, Md2.7*
ISC 15 11:00:02.6±0.6**, 3840N**±004×**3914E**±004**, h10**km**, n11, σ0.89**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.16**	**310**	*i* P	**Pg**	**11 00 06.1**	**-0.1**
ELZG				*i* S	**Sg**	**11 00 07.8**	**-0.8**
PTK	**Pertek**	**0.54**	**22**	PG	**Pg**	**11 00 12.9**	**-0.1**
MALT	**Malatya**	**0.57**	**262**	PG	**Pg**	**11 00 12.8**	**-0.8**
MALT				SG	**Sg**	**11 00 20.3**	**-0.8**
MALT	**Malatya**	**0.57**	**262**	Pg	**Pg**	**11 00 12.8**	**-0.8**
MALT				Sg	**Sg**	**11 00 20.8**	**-0.2**
MALT	**Malatya**	**0.57**	**262**	*e*Pg	**Pg**	**11 00 12.8**	**-0.8**
MALT				Sg	**Sg**	**11 00 20.8**	**-0.2**
MYA	**Malataya**	**0.57**	**263**	PG	**Pg**	**11 00 12.6**	**-1.0**
MYA				SG	**Sg**	**11 00 20.6**	**-0.4**
MYA	**Malataya**	**0.57**	**263**	Pg	**Pg**	**11 00 12.6**	**-1.0**
MYA				Sg	**Sg**	**11 00 20.6**	**-0.5**
URFA	**Urfa**	**0.98**	**195**	*e*PG	**Pg**	**11 00 21.0**	**-0.5**
KEMA	**Kemaliye**	**1.01**	**330**	*i* P	**Pg**	**11 00 22.1**	**+0.1**
KEMA				*i* S	**Sg**	**11 00 36.9**	**+1.7**
GZT	**Gaziantep**	**1.62**	**231**	*i* P	**Pg**	**11 00 35.4**	**+1.6**
GZT				*i* S	**Sg**	**11 00 56.2**	**+1.4**
MARD	**Mardin**	**1.69**	**129**	*i* P	**Pg**	**11 00 34.2**	**-0.8**
MARD				*i* S	**Sg**	**11 00 57.4**	**+0.5**

IDC 15 11:06:27.6±2.6**, 2922S**×**17856W, h0**km**, mb4.1**/5**, mb1 4.2**/6**, mb1mx4.0**/16**, mbtmp4.1**/6**, ML3.3**/1**, MS4.0**/14**, Ms1 4.0**/14**, ms1mx3.8**/24**, Error ellipse: s-maj=55.8km s-min=29.5km az=51.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**9.71**	**201**	Pn	Pn	11 08 46.7	-1.9
	0.3nm,0.3s,baz=196,slow=7.4,SNR=2.5						
URZ				Sn	Sn	11 10 36.7	-1.6
	0.3nm,0.3s,baz=171,slow=19,SNR=3.3						
URZ				LR	LR	11 12 09.2	
	comp=Z,1μm,21.2s,baz=218,slow=35						
DZM	**Mont Dzumac**	**15.28**	**294**	LR	LR	11 13 56.4	
	comp=Z,368nm,21.8s,baz=31,slow=29						
AFI	**Afiamalu**	**16.48**	**24**	LR	LR	11 15 13.3	
	comp=Z,214nm,19.6s,baz=147,slow=32						
RPZ	**Rata Peaks**	**16.68**	**207**	LR	LR	11 16 47.5	
	comp=Z,576nm,19.5s,baz=178,slow=37						
RAR	**Rarotonga**	**18.76**	**69**	LR	LR	11 15 47.8	
	comp=Z,457nm,21.6s,baz=165,slow=30						
TBI	**Tubuai**	**26.70**	**84**	*e*LQ		11 17 26.4	
	515nm,31.0s						
TBI				*e*LR	LR	11 18 42.2	
	636nm,30.0s						
TBI	**Tubuai**	**26.70**	**84**	*e*T		11 39 14.6	
	19nm,0.4s						
HNR	**Honiara**	**28.17**	**310**	LR	LR	11 21 37.6	
	comp=Z,174nm,18.5s,baz=182,slow=32						
PAE	**Paea**	**28.89**	**73**	*e*T		11 41 55.8	
	70nm,0.2s						
PPT	**Papeete**	**28.94**	**73**	*e*LQ		11 18 25.1	
	714nm,25.8s						
PPT				*e*LR	LR	11 19 36.5	
	589nm,28.5s,baz=249						
PPT	**Papeete**	**28.94**	**73**	*e*T		11 41 59.5	
	15nm,0.4s						
VAH	**Vaihoa**	**31.72**	**71**	*e*T		11 45 27.0	
	25nm,0.2s						
CTA	**Charters Tower**	**33.15**	**278**	LR	LR	11 24 47.5	
	comp=Z,455nm,19.3s,baz=57,slow=33						
STKA	**Stephens Creek**	**34.29**	**255**	P	P	11 13 16.8	+1.1
	2.8nm,0.9s,baz=108,slow=15,SNR=4.4						
STKA				LR	LR	11 26 46.2	
	comp=Z,278nm,18.1s,baz=29,slow=36						
RKT	**Rikitea**	**39.41**	**92**	*e*LR	LR	11 24 40.4	
	504nm,29.8s						
RKT	**Rikitea**	**39.41**	**92**	*e*T		11 55 10.3	
	1.2nm,0.3s						
ASAR	**Alice Springs**	**42.70**	**266**	P	P	11 14 26.4	-0.1
	1.2nm,0.7s,baz=99,slow=7.6,SNR=20						
WRA	**Warramunga Arr**	**43.58**	**271**	P	P	11 14 33.3	-0.3
	3.1nm,0.8s,baz=108,slow=8.0,SNR=20						
WRA				LR	LR	11 30 40.5	
	comp=Z,198nm,18.2s,baz=105,slow=33						
FITZ	**Fitzroy Crossi**	**51.88**	**269**	P	P	11 15 38.1	-0.1
	1.6nm,0.5s,baz=121,slow=5.9,SNR=6.1						
FITZ				LR	LR	11 36 57.1	
	comp=Z,94nm,19.0s,baz=287,slow=35						
NWAO	**Narrogin (SRO)**	**54.37**	**249**	LR	LR	11 39 14.7	
	comp=Z,150nm,19.0s,baz=327,slow=36						
BATI	**Kupang**	**57.02**	**277**	LR	LR	11 40 54.6	
	comp=Z,495nm,18.3s,baz=82,slow=36						
QSPA	**South Pole Qui**	**60.88**	**180**	P	P	11 16 42.6	+1.1
	1.6nm,0.8s,baz=0.0,slow=0.0,SNR=4.2						
MAW	**Mawson**	**73.24**	**201**	LR	LR	11 51 00.3	
	comp=Z,173nm,19.3s,baz=245,slow=36						
TXAR	**Lajitas Array**	**92.16**	**58**	LR	LR	11 53 26.3	
	comp=Z,67nm,19.7s,baz=0.0,slow=31						
TORD	**Torodi Ar. Bea**	**164.00**	**181**	PKPab	PKPab	11 27 25.2	-1.1
	0.2nm,0.5s,baz=196,slow=3.4,SNR=2.8						

*CSEM **15** 11:27:19.2, 3332N×3633E, h57km, ML3.1, After GRAL*
GRAL 15 11:27:19.2±1.1**, 3332N**×**3633E, h58**km±28km**, MD3.1, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.46**	**291**	*e*Pg	Pn	11 27 30.2	-0.3
RCY				*e*Sg	Sn	11 27 38.3	-0.5
BHL	**Bhannes**	**0.81**	**316**	*e*Pg	Pn	11 27 33.5	-1.2
BHL				*e*Sg	Sn	11 27 45.7	-0.4
HWQ	**Hawqa**	**1.01**	**342**	*e*Pg	Pn	11 27 37.4	+0.1
HWQ				*e*Sg	Sn	11 27 49.3	-1.3

IDC 15 11:34:26.4±1.2**, 1142S**×**11555E, h0**km**, mb3.8**/5**, mb1 4.0**/6**, mb1mx3.8**/15**, mbtmp3.9**/6**, Error ellipse: s-maj=55.7km s-min=19.4km az=59.0, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.80**	**125**	Pn	Pn	11 37 11.8	-4.3
	0.2nm,0.3s,baz=319,slow=15,SNR=4.8						
FITZ				Sn	Sn	11 39 13.7	-15
	1.6nm,0.3s,baz=178,slow=23,SNR=14						
WRA	**Warramunga Arr**	**19.96**	**117**	P	Pn	11 39 01.0	-1.0
	0.2nm,0.3s,baz=293,slow=10,SNR=43						
WRA				S	Sn	11 42 27.7	-19
	0.2nm,0.3s,baz=323,slow=36,SNR=6.0						
ASAR	**Alice Springs**	**21.29**	**127**	P	P	11 39 15.1	+0.3
	3.6nm,0.8s,baz=299,slow=10,SNR=68						
ASAR				S	S	11 43 03.6	-8.6
	1.1nm,0.7s,baz=296,slow=23,SNR=7.9						
NWAO	**Narrogin (SRO)**	**21.46**	**176**	P	P	11 39 17.4	+0.8
	5.5nm,0.7s,baz=2.1,slow=10.0,SNR=5.7						
STKA	**Stephens Creek**	**31.48**	**134**	P	P	11 40 49.2	-0.8
	2.3nm,0.8s,baz=307,slow=13,SNR=4.5						
SONM	**Songino Array**	**59.55**	**353**	P	P	11 44 32.6	+1.0
	0.3nm,0.6s,baz=171,slow=9.3,SNR=2.9						
MKAR	**Makanchi Array**	**65.14**	**335**	P	P	11 45 08.8	-0.2
	0.6nm,0.3s,baz=156,slow=7.4,SNR=7.8						
YKA	**Yellowknife Ar**	**117.77**	**24**	PKP	PKPdf	11 53 13.3	-1.1
	0.2nm,0.5s,baz=315,slow=1.9,SNR=4.8						

MAN 15 11:48:39, 993N×12628E, h94km, mb3.8, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.42**	**278**	*e*P	Pn	11 49 04.8	+0.8
MSLP				*e*S	Sn	11 49 24.3	+1.5
PLP	**Palo**	**1.78**	**314**	*e*P	Pn	11 49 11.3	+2.8
PLP				*e*S	Sn	11 49 37.3	+6.5
BESP	**Borongan**	**1.86**	**333**	*e*P	Pn	11 49 11.3	+1.8
BUKP	**Musuan**	**2.37**	**211**	*e*P	Pn	11 49 17.3	+1.1
TBP	**Tagbilaran**	**2.40**	**265**	*e*P	Pn	11 49 11.9	-4.6
TBP				*e*S	Sn	11 49 50.1	+4.7
CNP	**Catarman**	**3.02**	**328**	*e*P	Pn	11 49 26.0	+1.1
PAGZ	**Pagadian**	**3.54**	**234**	*e*P	Pn	11 49 34.5	+2.7
GUIM	**Jordan**	**3.70**	**281**	*e*P	Pn	11 49 38.4	+4.3
PVCP	**Virac**	**4.20**	**330**	*e*P	Pn	11 49 43.1	+2.3

*ISCJB **15** 11:58:46.3±0.2, 4820N±001×11544W±002, h10km, Error ellipse: s-maj=2.3km s-min=1.7km az=33.9*
*PGC **15** 11:58:48.8±0.5, 4829N×11559W, h1km, ML2.9/7, 135km south of Cranbrook, Bc Montana*
ISC 15 11:58:46.8±0.2**, 4820N**±001×**11546W**±002**, h10**km**, n62, σ0.91**/97**, 42C-37D, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
B12A	**Libby**	**0.29**	**342**	P	**Pg**	**11 58 52.5**	**0.0**
	baz=0.3,SNR=63						
B12A				⇓S	**Sg**	**11 58 56.4**	**0.0**
	baz=0.3						
B11A	**Sandpoint**	**0.65**	**292**	⇓P	**Pg**	**11 58 58.5**	**-0.9**
	baz=0.6,SNR=52						
B11A				⇓S	**Sg**	**11 59 06.8**	**-1.1**
	baz=0.6						
B13A	**Whitefish**	**0.69**	**75**	P	**Pg**	**11 58 60.0**	**-0.1**
	baz=0.7,SNR=171						
B13A				⇓S	**Sg**	**11 59 09.0**	**0.0**
	baz=0.7						
A12A	**Yaak River Ran**	**0.75**	**350**	⇑P	**Pg**	**11 59 00.8**	**-0.4**
	baz=0.7,SNR=31						
A12A				⇓S	**Sg**	**11 59 11.6**	**+0.6**
	baz=0.7						
C13A	**Hot Springs**	**0.79**	**131**	⇓P	**Pg**	**11 59 00.7**	**-1.3**
	baz=0.8,SNR=131						
C13A				⇓S	**Sg**	**11 59 10.5**	**-1.8**
	baz=0.8						
A11A	**Hall Mountain,**	**0.97**	**322**	⇑P	**Pg**	**11 59 04.8**	**-0.7**
	baz=0.9,SNR=179						
A11A				⇓S	**Sg**	**11 59 17.6**	**-0.5**
	baz=0.9						
B10A	**Chitwood Farm,**	**1.19**	**276**	⇑P	**Pb**	**11 59 08.1**	**-1.3**
	baz=1.2,SNR=10						
B10A				⇓S	**Sb**	**11 59 22.8**	**-1.9**
	baz=1.2						
C14A	**Swan Lake**	**1.23**	**110**	⇓P	**Pn**	**11 59 09.8**	**-0.2**
	baz=1.2						
C14A				⇑S	**Sb**	**11 59 25.6**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=1.2						
D13A	Huson	1.29	148	⇑P	Pn	11 59 09.4	-1.4
	baz=1.3						
D13A				⇑S	Sb	11 59 27.1	-0.8
	baz=1.3						
C10A	Spilker Farm,	1.30	254	⇓P	Pn	11 59 09.5	-1.4
	baz=1.3,SNR=29						
C10A				⇑S	Sb	11 59 26.5	-1.4
	baz=1.3						
WALA	Waterton Lakes	1.34	49	Trac			
WALA	Waterton Lakes	1.34	49	Pn	Pn	11 59 12.6	+1.0
WALA				Sg	Sg	11 59 31.1	+1.2
A10A	Northport	1.60	300	⇑P	Pn	11 59 15.6	+0.5
	baz=1.6,SNR=39						
A10A				⇑S	Sn	11 59 36.2	+0.4
	baz=1.6						
D10A	Wagner Farm, O	1.68	228	⇑P	Pn	11 59 15.9	-0.3
	baz=1.7,SNR=25						
D10A				⇓S	Sn	11 59 37.5	-0.2
	baz=1.7						
D14A	Greenough	1.73	129	P	Pn	11 59 16.8	0.0
	baz=1.7,SNR=58						
D14A				⇓S	Sn	11 59 39.0	0.0
	baz=1.7						
B09A	Rice	1.81	278	⇑P	Pn	11 59 17.4	-0.6
	baz=1.8,SNR=35						
B09A				⇓S	Sn	11 59 41.1	+0.2
	baz=1.8						
E11A	Bogner Ranch,	1.91	196	⇑Pb	Pb	11 59 19.9	-1.8
	baz=1.9,SNR=56						
E11A				⇓S	Sn	11 59 45.0	+1.5
	baz=1.9						
C09A	Chrisman Ranch	1.93	259	⇑P	Pn	11 59 19.3	-0.4
	baz=1.9,SNR=20						
C09A				⇓Sb	Sb	11 59 46.6	+0.4
	baz=1.9						
E13A	Victor	1.96	153	P	Pn	11 59 20.1	+0.2
	baz=2.0,SNR=55						
E13A				⇓Sb	Sb	11 59 47.1	+0.2
	baz=2.0						
E10A	Myers Farm, Un	2.05	214	⇑Sb	Sb	11 59 49.3	-0.2
	baz=2.0						
A09A	Danville	2.22	292	⇓Pb	Pb	11 59 26.3	-0.6
	baz=2.2						
A09A				⇓Sb	Sb	11 59 55.3	+0.9
	baz=2.2						
E14A	Clinton	2.23	142	⇑P	Pn	11 59 24.2	+0.5
	baz=2.2,SNR=12						
E14A				⇓Sb	Sb	11 59 55.1	+0.4
	baz=2.2						
D09A	Jones Farm, Ri	2.24	241	⇓Sb	Sb	11 59 54.7	-0.3
	baz=2.2						
D15A	Lincoln	2.30	119	⇓P	Pn	11 59 25.3	+0.6
	baz=2.3,SNR=21						
D15A				⇑S	Sn	11 59 54.0	+1.0
	baz=2.3						
F11A	Grangeville	2.36	192	⇑Pb	Pb	11 59 27.4	-2.0
	baz=2.4						
F11A				⇑Sb	Sb	11 59 57.9	-0.6
	baz=2.4						
C08A	Higginbotham F	2.44	262	⇓Pb	Pb	11 59 29.7	-1.1
	baz=2.4						
C08A				⇑Sb	Sb	12 00 01.4	+0.5
	baz=2.4						
F12A	Elk City	2.44	177	⇑Pb	Pb	11 59 29.6	-1.2
	baz=2.5,SNR=55						
F12A				⇓Sb	Sb	12 00 01.0	+0.1
	baz=2.5						
E09A	Wood Farm, Sta	2.48	228	⇑Sb	Sb	12 00 02.5	+0.5
	baz=2.5						
F13A	Darby	2.53	162	⇑P	Pn	11 59 27.4	-0.5
	baz=2.5,SNR=35						
F13A				⇑Sb	Sb	12 00 03.9	+0.6
	baz=2.5						
F10A	Beach Ranch, E	2.53	209	⇑Sb	Sb	12 00 03.4	0.0
	baz=2.5						
B08A	Colville Reser	2.59	275	⇑P	Pn	11 59 28.2	-0.5
	baz=2.6,SNR=7.6						
B08A				⇑Sb	Sb	12 00 06.1	+0.9
	baz=2.6						
D08A	Wollman Farm,	2.60	245	⇑P	Pn	11 59 28.0	-0.9
	baz=2.6						
D08A				⇓Sb	Sb	12 00 06.3	+0.8
	baz=2.6						
E15A	Deer Lodge	2.61	132	⇓Sb	Sb	12 00 07.3	+1.6
	baz=2.6						
A08A	Turner Farm, O	2.64	288	⇑Sb	Sb	12 00 08.0	+1.3
	baz=2.6						
F14A	Wisdom	2.78	148	⇓P	Pn	11 59 31.3	0.0
	baz=2.8,SNR=11						
F14A				⇓Sb	Sb	12 00 12.3	+1.6
	baz=2.8						
G11A	Walters Elk Ra	2.85	192	⇑P	Pn	11 59 32.3	0.0
	baz=2.9,SNR=19						
G11A				⇓Sb	Sb	12 00 13.4	+0.8
	baz=2.9						
PNT	Penticton	2.97	294	Trac			
PNT	Penticton	2.97	294	Pn	Pn	11 59 34.7	+0.8
PNT				Pg	Pg	11 59 40.5	-3.2
PNT				Sg	Sg	12 00 17.5	-4.7
E08A	Dider Farm, El	2.98	236	⇑Sb	Sb	12 00 17.1	+0.6
	baz=3.0						
F09A	S2 Ranch, Elgi	3.00	215	⇓Sb	Sb	12 00 19.0	+2.0
	baz=3.0						
F15A	Butte	3.11	138	⇑P	Pn	11 59 36.1	+0.2
	baz=3.1						
F15A				⇓S	Sn	12 00 12.5	-0.6
	baz=3.1						
B07A	Winthrop	3.12	277	⇑P	Pn	11 59 35.5	-0.5
	baz=3.1						
B07A				⇑Sb	Sb	12 00 22.1	+1.7
	baz=3.1						
G10A	Bishop Farm, J	3.12	202	⇑P	Pn	11 59 35.8	-0.3
	baz=3.1,SNR=7.1						
G10A				⇑Sb	Sb	12 00 21.0	+0.5
	baz=3.1						
C07A	Waterville	3.14	262	⇑P	Pn	11 59 35.6	-0.6
	baz=3.1						
C07A				⇓Sb	Sb	12 00 22.1	+1.3
	baz=3.1						
G13A	Cobalt	3.22	164	⇑P	Pn	11 59 37.3	0.0
	baz=3.2,SNR=11						
G13A				⇓S	Sn	12 00 15.3	-0.3
	baz=3.2						
A07A	Ashnola River,	3.38	286	⇑Sb	Sb	12 00 29.1	+1.3
	baz=3.3						
SLEB	Sale Mountain	3.44	331	Trac			
SLEB	Sale Mountain	3.44	331	Pn	Pn	11 59 42.3	+1.9
SLEB				Pg	Pg	11 59 48.1	-4.6
SLEB				Sg	Sg	12 00 32.8	-4.6
H11A	Donnelly	3.52	186	⇓P	Pn	11 59 41.3	-0.1
	baz=3.5,SNR=5.1						
H11A				⇓Sb	Sb	12 00 34.1	+2.4
	baz=3.5						
G15A	Dillon	3.66	145	⇓S	Sn	12 00 26.5	0.0
	baz=3.7						
BOZ	Bozeman (W)	3.66	133	⇑S	Sn	12 00 26.7	+0.2
	baz=3.7						
H13A	Challis	3.73	167	⇓P	Pn	11 59 44.6	+0.3
	baz=3.7,SNR=11						
H13A				⇑S	Sn	12 00 27.2	-1.1
	baz=3.7						
DOWB	Downie Slide	3.87	330	Trac			
DOWB	Downie Slide	3.87	330	Pn	Pn	11 59 46.8	+0.5
DOWB				Pg	Pg	11 59 55.2	-5.6
DOWB				Sg	Sg	12 00 44.8	-6.2
E06A	Yakima	4.10	248	⇑P	Pn	11 59 49.1	-0.3
	baz=4.1,SNR=7.6						
I13A	Wildhorse Cree	4.38	167	⇑P	Pn	11 59 53.6	+0.2
	baz=4.4,SNR=5.4						
VDB	Vedder Mountai	4.49	283	Trac			
VDB	Vedder Mountai	4.49	283	Sg	Sg	12 01 03.7	-7.0
EDM	Edmonton	5.21	14	Trac			
EDM	Edmonton	5.21	14	Sg	Sg	12 01 28.4	-5.4
WSLR	Whistler	5.26	294	Trac			
WSLR	Whistler	5.26	294	Sg	Sg	12 01 27.6	-8.1

*NIED **15** 12:10:00, 44.10N×147.40E, h53km, Mw4.0 Best double couple: M0 1.02000×10^15 NP1:φs 127.00000°, δ15.00000°, λ-54.00000°. NP2:φs 269.00000°, δ78.00000°, λ-99.00000°.*

*MOS **15** 12:10:42.6±2.0, 44.62N×147.42E, h111km, mb3.9/8, Error ellipse: s-maj=16.8km s-min=12.3km az=70.7*

*ISCJB **15** 12:10:44.2±0.8, 44.27N±0.07×147.4E±0.1, h129km±8km, mb3.6/16, Error ellipse: s-maj=13.4km s-min=10.7km az=22.8*

*IDC **15** 12:10:46.2±2.4, 44.42N×147.28E, h129km±23km, mb3.5/15, mb1 3.7/18, mb1mx3.6/25, mbtmp3.5/18, MS3.1/1, Ms1 3.1/1, ms1mx2.5/33, Error ellipse: s-maj=18.7km s-min=15.6km az=125.0*

*JMA **15** 12:10:46.3±0.3, 44.12N×147.41E, h109km±5km, M3.8*

ISC 15 12:10:45.2±0.8, **44.24N**±0.07×**147.5E**±0.1, **h122**km±8km, **n51**, σ1.02/60, **mb3.7**/16, **1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.16	261	⇓iPN	Pn	12 11 09.4	+0.4
YUK				iS	Sn	12 11 26.4	-0.7
YUK				pmax	pmax		
	comp=Z,570nm,0.3s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,2µm,0.5s						
YUK				smax			
	comp=N,4µm,0.9s						
YUK				smax			
	comp=E,4µm,0.9s						
NEM2	Nemuro 2	1.51	235	P	Pn	12 11 12.4	-0.5
NEM2				eS	Sn	12 11 31.8	-2.1
JRA	Rausu	1.71	261	P	Pn	12 11 15.2	+0.1
JRA				eS	Sn	12 11 38.2	+0.2
JNK	Nakash	2.08	253	P	Pn	12 11 20.0	+0.3
JAK	Akkeshi	2.35	239	P	Pn	12 11 22.9	-0.3
JAK				eS	Sn	12 11 50.8	-1.5
JTKR	Abashiri--Toko	2.57	265	P	Pn	12 11 26.1	+0.2
JTKR				eS	Sn	12 11 58.2	+1.0
JAR	Ashorobuto	2.83	252	P	Pn	12 11 30.2	+0.9
JOB	Onbets	2.95	244	P	Pn	12 11 31.4	+0.6
JOB				eS	Sn	12 12 05.2	-0.8
JMP	Maruseppu	2.96	267	P	Pn	12 11 31.2	+0.3
JMP				eS	Sn	12 12 06.8	+0.6
JCH	Churui	3.39	243	P	Pn	12 11 36.7	0.0
JCH				eS	Sn	12 12 14.4	-2.0
JKK2	Kamakawa 2	3.41	266	P	Pn	12 11 37.7	+0.8
ASAJ	Asahikawa	3.50	270	PN	Pn	12 11 39.0	+1.0
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ	Asahikawa	3.50	270	P	Pn	12 11 39.0	+1.0
	comp=Z,4.3nm,0.3s,baz=297,slow=32,SNR=50						
JSE	Soyaes	3.55	283	P	Pn	12 11 38.7	-0.1
JFR	Furan	3.68	255	P	Pn	12 11 41.9	+1.4
ERM	Erimo	3.85	236	d iPN	Pn	12 11 44.0	+1.3
JNBK	Urakawa-nobuka	3.95	242	P	Pn	12 11 43.4	-0.7
JWK2	Keihoku	4.10	287	P	Pn	12 11 47.5	+1.4
YSS	Yuzh-Sakhalins	4.27	311	ePN	Pn	12 11 39.7	-8.7
JKB	Kayabe	5.25	246	P	Pn	12 12 01.3	-0.3
JKB				eS	Sn	12 12 57.1	-3.9
MJAR	Matsushiro Arr	10.42	226	P	Pn	12 13 10.9	-0.4
	comp=Z,0.2nm,0.3s,baz=40,slow=14,SNR=3.3						
JHJ	Hachijo jima 2	12.60	211	P	Pn	12 13 40.6	+0.5
	comp=Z,8.2nm,0.3s,baz=72,slow=20,SNR=3.4						
CBIJ	Chichi jima	17.62	196	LR	LR	12 20 54.4	
	comp=Z,69nm,21.4s,baz=148,slow=34						
BILL	Bilibino	25.83	16	⇑iP	P	12 15 58.3	-6.4
BILL				e		12 16 39.7	
BILL				eS	S	12 20 19.7	-5.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb3.6						
SONM	Songino Array	28.49	292	P	P	12 16 28.2	-0.5
SONM				*PP	pP	12 16 57.5	+2.4
SONM				pmax	pmax		
	comp=N,1.0nm,0.8s						
SONM	Songino Array	28.49	292	P	P	12 16 28.2	-0.4
	comp=N,0.4nm,0.5s,mb3.2,baz=89,slow=8.7,SNR=6.2						
SONM				pP	pP	12 16 57.5	+2.4
	comp=N,0.5nm,0.8s,baz=81,slow=7.9,SNR=4.8						
KDAK	Kodiak Island	38.76	48	P	P	12 17 56.2	-1.0
	comp=N,2.3nm,0.4s,mb4.3,baz=319,slow=14,SNR=5.9						
MKAR	Makanchi Array	44.55	297	iP	P	12 18 47.0	+2.4
INK	Inuvik	45.88	31	P	P	12 18 54.7	0.0
INK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
INK	Inuvik	45.88	31	P	P	12 18 54.7	-0.1
	comp=Z,5.2nm,0.5s,mb4.5,baz=300,slow=6.4,SNR=74						
YKA	Yellowknife Ar	55.28	34	iP	P	12 20 05.1	-0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	55.28	34	P	P	12 20 05.2	-0.1
	comp=Z,0.9nm,0.7s,mb3.9,baz=299,slow=6.8,SNR=12						
ARCES	ARCESS Array B	58.87	340	P	P	12 20 28.4	-2.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	58.87	340	P	P	12 20 28.4	-2.1
	comp=Z,1.6nm,0.8s,mb4.1,baz=46,slow=7.4,SNR=14						
FINES	FINESS Array B	64.54	333	iP	P	12 21 06.5	-2.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	FINESS Array B	64.54	333	P	P	12 21 06.6	-2.1
	comp=Z,1.9nm,0.6s,mb4.1,baz=61,slow=7.7,SNR=10						
WRA	Warramunga Arr	64.98	194	iP	P	12 21 14.1	+2.2
WRA	Warramunga Arr	64.98	194	P	P	12 21 13.0	+1.1
	comp=Z,0.2nm,0.6s,mb3.1,baz=16,slow=6.9,SNR=4.6						
NVAR	Mina Array Bea	67.14	58	P	P	12 21 25.5	-0.2
	comp=Z,0.1nm,0.4s,mb3.0,baz=286,slow=7.4,SNR=3.2						
ASAR	Alice Springs	68.70	193	P	P	12 21 37.0	+1.6
	comp=Z,0.2nm,0.8s,mb3.0,baz=12,slow=5.1,SNR=5.0						
NB2	NORSAR Subarra	69.23	339	P	P	12 21 37.3	-1.0
	comp=Z,0.8nm,0.5s,mb3.8,baz=31,slow=6.5						
NOA	NORSAR Array B	69.23	339	P	P	12 21 37.2	-1.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	69.23	339	P	P	12 21 37.2	-1.1
	comp=Z,1.6nm,0.8s,mb3.9,baz=34,slow=6.1,SNR=3.9						
PDAR	Pinedale Array	69.43	50	P	P	12 21 40.9	+1.0
	comp=Z,0.2nm,0.6s,mb3.1,baz=287,slow=3.5,SNR=3.3						
AKASG	Malin Array Be	71.32	324	iP	P	12 21 50.4	-0.8
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	71.32	324	P	P	12 21 50.4	-0.8
	comp=Z,1.9nm,0.5s,mb4.2,baz=37,slow=6.1,SNR=13						
SCHQ	Schefferville	77.09	20	P	P	12 22 23.9	-0.7
	comp=Z,0.9nm,0.7s,mb3.6,baz=287,slow=11,SNR=5.3						
GERES	GERESS Array B	78.84	331	P	P	12 22 33.9	-0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GERES	GERESS Array B	78.84	331	P	P	12 22 33.9	-0.5
	comp=Z,0.5nm,0.4s,mb3.7,baz=23,slow=7.2,SNR=4.7						
TXAR	Lajitas Array	82.20	57	eP	P	12 22 53.0	+0.3
TXAR	Lajitas Array	82.20	57	P	P	12 22 53.8	+1.1
	comp=Z,0.3nm,0.6s,mb3.3,baz=298,slow=3.1,SNR=6.4						

IDC 15 12:18:20.3±1.2, **576N**×**12734E**, **h0**km, **mb3.7**/6, **mb1 3.9**/6, **mb1mx3.7**/17, **mbtmp3.7**/6, **MS2.9**/2, **Ms1 2.9**/2, **ms1mx2.6**/30, **Error ellipse: s-maj=89.9km s-min=17.5km az=71.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	23.76	184	P	P	12 23 36.2	+1.4
	0.7nm,0.4s,baz=7.7,slow=14,SNR=3.6						
WRA	Warramunga Arr	26.45	165	P	P	12 23 59.1	0.0
	1.1nm,0.3s,baz=343,slow=10,SNR=20						
WB2	Warramunga Arr	26.45	165	eP	P	12 24 01.7	+2.5
JNU	Nakatsue	27.43	6	LR	LR	12 35 15.2	
	comp=Z,38nm,19.8s,baz=216,slow=37						
ASAR	Alice Springs	29.93	168	P	P	12 24 29.3	-1.0
	0.5nm,0.6s,baz=356,slow=8.3,SNR=15						
ASAR				PcP	PcP	12 27 32.6	-0.6
	0.3nm,0.5s,baz=339,slow=2.4,SNR=4.7						
KSRS	Korea Array	31.56	1	LR	LR	12 37 43.1	
	comp=Z,17nm,21.3s,baz=335,slow=37						
STKA	Stephens Creek	39.81	161	eP	P	12 25 56.1	+0.7
	1.2nm,0.4s						
STKA	Stephens Creek	39.81	161	P	P	12 25 55.5	+0.1
	2.2nm,0.5s,baz=352,slow=7.6,SNR=6.2						
SONM	Songino Array	45.60	340	P	P	12 26 42.3	+0.1
	0.1nm,0.3s,baz=146,slow=8.3,SNR=2.3						
MKAR	Makanchi Array	56.26	324	P	P	12 28 02.7	+0.1
	0.7nm,0.4s,baz=126,slow=8.3,SNR=16						

NEIC 15 12:40:24.5, 4789S×16544E, h33km, ML4.2(WEL), **After WEL., Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APZ	The Paps	2.03	60	PN	Pn	12 40 55.9	-0.4
APZ				SN	Sn	12 41 18.2	-2.3
WHZ	Wether Hill Ro	2.63	42	P	Pn	12 41 03.5	-1.1
WHZ				S	Sn	12 41 33.8	-1.6
WHZ	Wether Hill Ro	2.63	42	PN	Pn	12 41 03.5	-1.2
WHZ				SN	Sn	12 41 33.8	-1.7
DCZ	Deep Cove	2.69	27	P	Pn	12 41 04.7	-0.6
DCZ	Deep Cove	2.69	27	PN	Pn	12 41 04.7	-0.6
DCZ				SN	Sn	12 41 40.1	+3.4
SYZ	Scrubby Hill	2.86	63	ePN	Pn	12 41 08.1	+0.4
SYZ				SN	Sn	12 41 38.7	-2.3
MLZ	Mavora Lakes	3.16	38	eP	Pn	12 41 10.8	-1.1
MLZ				S	Sn	12 41 47.0	-1.5
MLZ	Mavora Lakes	3.16	38	PN	Pn	12 41 10.7	-1.2
MLZ				SN	Sn	12 41 47.0	-1.5
TUZ	Tuapeka	3.46	58	P	Pn	12 41 16.2	+0.2
TUZ	Tuapeka	3.46	58	PN	Pn	12 41 16.2	+0.1
TUZ				SN	Sn	12 41 56.4	+0.6
MSZ	Milford Sound	3.65	29	eP	Pn	12 41 19.6	+1.0
MSZ	Milford Sound	3.65	29	PN	Pn	12 41 19.0	+0.4
EAZ	Earnscleugh	3.77	47	eP	Pn	12 41 19.1	-1.1
EAZ	Earnscleugh	3.77	47	PN	Pn	12 41 18.7	-1.5
WKZ	Wanaka	3.94	40	eP	Pn	12 41 22.7	+0.1
WKZ	Wanaka	3.94	40	PN	Pn	12 41 22.7	+0.2
JCZ	Jackson Bay	4.46	32	eP	Pn	12 41 30.2	+0.4
JCZ	Jackson Bay	4.46	32	PN	Pn	12 41 30.2	+0.4
ODZ	Otahua Downs	4.58	54	eP	Pn	12 41 29.3	-2.1
ODZ	Otahua Downs	4.58	54	PN	Pn	12 41 29.3	-2.1
LBZ	Lake Benmore	4.81	45	PN	Pn	12 41 34.0	-0.5
FOZ	Fox Glacier	5.25	36	PN	Pn	12 41 42.8	+2.3

*SOF **15** 12:41:39.2, 39.40N×24.44E, h6km, MD2.9*

*BEO **15** 12:41:40.6±0.8, 39.25N×23.88E, ML3.7/3*

*MOS **15** 12:41:41.7±1.2, 39.46N×24.27E, h10km, mb3.6/1, Error ellipse: s-maj=9.8km s-min=5.8km az=110.3*

*IDC **15** 12:41:41.1±1.2, 39.53N×24.22E, h0km, mb3.8/3, mb1 3.9/7, mb1mx3.6/23, mbtmp3.8/7, ML3.7/4, Error ellipse: s-maj=28.5km s-min=14.5km az=98.0*

*DDA **15** 12:41:41.1, 39.31N×24.11E, h11km, Md3.8, Ml4.0*

*NEIC **15** 12:41:42.7, 39.48N×24.28E, h40km, MD3.8(ATH), After ATH.*

*ATH **15** 12:41:42.7, 39.48N×24.28E, h40km±2km, MD3.8/21, ML3.8*

*THE **15** 12:41:43.4, 39.48N×24.25E, h12km, ML4.2*

*ISCJB **15** 12:41:43.6±0.4, 39.45N±0.02×24.23E±0.02, h26km±4km, mb3.7/3, Error ellipse: s-maj=2.8km s-min=2.6km az=11.8*

*ISK **15** 12:41:43.8, 39.08N×24.28E, h34km, MD3.8*

*CSEM **15** 12:41:43.4±0.0, 39.47N×24.24E, h30km, ML4.2, Error ellipse: s-maj=1.2km s-min=1.1km az=60.0*

ISC 15 12:41:42.6±0.4, **39.47N**±0.02×**24.22E**±0.02, **h10**km±3km, **n111**, σ1.33/143, **mb3.7**/3, **6C-3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AOS	Alonnisos	0.40	221	ePg	Pg	12 41 51.8	+1.2
AOS				eSg	Sg	12 41 57.8	+1.9
PAIG	Paliouri	0.62	317	ePg	Pg	12 41 55.8	+1.2
PAIG				eSg	Sg	12 42 05.0	+2.4
NEO	Neokhori	0.79	258	eP	Pg	12 41 58.9	+1.0
NEO				eS	Sg	12 42 10.8	+2.6
XOR	Xorichti	0.81	263	ePg	Pg	12 41 59.1	+0.9
XOR				eSg	Sg	12 42 10.1	+1.5
LOS	Limnos	0.81	55	ePg	Pg	12 41 58.2	0.0
LIA	Limnos Island	0.85	60	P	Pg	12 42 03.2	+4.1
OUR	Ouranopolis	0.88	348	ePg	Pg	12 42 00.2	+0.6
PLG	Polygyros	1.08	327	ePg	Pg	12 42 03.0	-0.4
PLG				eSg	Sg	12 42 19.4	+2.0
PLG	Polygyros	1.08	327	eP	Pb	12 42 02.7	-0.7
PLG				eS	Sg	12 42 16.8	-0.6
PLG	Polygyros	1.08	327	ePg	Pg	12 42 03.0	-0.4
PLG				eS	Sg	12 42 16.8	-0.6
LKR	Lokris	1.26	230	⇑iP	Pn	12 42 05.7	-0.6
LKR				eS	Sb	12 42 22.9	+0.2
HORT	Hortiatis	1.42	323	ePg	Pg	12 42 08.4	-1.5
HORT				eSg	Sg	12 42 28.6	+0.4
PTL	Penteli	1.45	191	eP	Pn	12 42 08.0	-0.9
PTL				eS	Sn	12 42 26.0	-2.0
BOZC	Bozcaada	1.46	75	iP	Pn	12 42 07.8	-1.3
BOZC				iS	Sn	12 42 28.7	+0.4
LIT	Litokhoron	1.47	296	ePg	Pg	12 42 09.4	-1.6
LIT				eSg	Sg	12 42 28.5	-1.5
GADA	Gvkgeada	1.48	60	PN	Pn	12 42 10.9	+1.6
SOH	Sokhos	1.50	334	ePg	Pg	12 42 09.5	-2.0
SOH				eSg	Sg	12 42 29.1	-1.9
THE	Thessaloniki	1.51	321	ePg	Pg	12 42 09.7	-1.9
THE				eSg	Sg	12 42 30.0	-1.1
AGG	Agios Georgios	1.54	254	ePg	Pg	12 42 09.9	-2.2
ATH	Athens Observa	1.55	195	eP	Pn	12 42 09.9	-0.4
ATH				eS	Sn	12 42 28.3	-2.2
PRK	Paraskevi	1.60	97	⇓iP	Pn	12 42 10.0	-1.1
PRK				eS	Sn	12 42 28.9	-2.9
EZN	Ezine	1.66	77	PN	Pn	12 42 12.7	+0.9
EZN				SN	Sn	12 42 33.5	+0.2
KVR	Kavouri	1.68	192	eP	Pn	12 42 10.5	-1.6
THL	Klokotos Trika	1.71	274	eP	Pn	12 42 12.5	0.0
LTK	Loutraki	1.75	215	ePb	Pn	12 42 12.8	-0.3
CHOS	Chios island	1.79	127	ePb	Pn	12 42 13.0	-0.7
CHOS				eSb	Sb	12 42 37.6	-0.5
NAIG	Nisos Aigina	1.81	199	eP	Pn	12 42 13.0	-0.8
NVR	Nevrokopi	1.90	352	⇑iP	Pn	12 42 14.4	-0.7
AYVA	Ayvalik	1.92	94	iP	Pn	12 42 14.1	-1.3
AYVA				iS	Sg	12 42 43.2	-1.2
ENEZ	Enez	1.94	49	PN	Pn	12 42 18.7	+3.0
RDO	Rodhopi	1.95	31	⇑iP	Pn	12 42 14.3	-1.5
EVR	Evrytania	1.96	254	eP	Pn	12 42 16.8	+0.9
KNT	Kendrikon	1.97	329	ePb	Pn	12 42 16.0	-0.1
ALN	Alexandroupoli	1.99	44	ePb	Pn	12 42 14.7	-1.7
KZN	Kozani	2.06	295	eP	Pn	12 42 18.2	+0.9
MMB	Musomiste	2.15	350	iP	Pn	12 42 17.8	-0.7
LPK	Lapseki	2.15	64	ePN	Pn	12 42 20.1	+1.5
URLA	Izmir	2.16	120	iP	Pn	12 42 17.6	-1.1
URLA				iS	Sn	12 42 46.1	+0.6
SELA	Sela	2.18	237	ePn	Pn	12 42 19.2	+0.3
VAY	Valandovo	2.23	326	ePn	Pn	12 42 19.8	+0.1
RZN	Rozhen	2.24	9	iP	Pn	12 42 19.6	-0.3
RZN				iPg	Pg	12 42 25.8	+0.1
MEV	Metsovon	2.33	279	ePn	Pn	12 42 22.4	+1.3
KDZ	Kurdzhali	2.36	22	iP	Pn	12 42 19.6	-1.8
BLCB	Balcova	2.45	115	ePN	Pn	12 42 20.1	-2.6
BLCB	Balcova	2.45	115	ePn	Pn	12 42 22.3	-0.4
KKB	Krupnik	2.54	340	iP	Pn	12 42 24.0	0.0
FNA	Florina	2.54	302	ePn	Pn	12 42 25.1	+1.1
VLX	Vlachokerasia	2.55	215	ePn	Pn	12 42 24.4	+0.3
RKY	Sarkoy-Tekirda	2.57	61	ePN	Pn	12 42 26.6	+2.3
SART	Tekirdag	2.57	61	iP	Pn	12 42 26.2	+1.8
SART				iS	Sn	12 42 60.0	+4.2
RLS	Riolos of Patr	2.58	238	eP	Pn	12 42 25.3	+0.9
IZM	Izmir	2.60	113	ePN	Pn	12 42 22.4	-2.4
KDAG	Bornova	2.60	113	iP	Pn	12 42 23.2	-1.6
KDAG				iS	Sg	12 43 12.3	+6.0
APE	Apeiranthos	2.61	156	ePn	Pn	12 42 24.0	-0.9
APE	Apeiranthos	2.61	156	⇓iP	Pn	12 42 24.2	-0.7
PLD	Plovdiv	2.65	8	ePn	Pn	12 42 25.8	+0.3
MFT	Murefte	2.69	60	ePN	Pn	12 42 29.0	+3.0
SMG	Samos	2.70	130	eP	Pn	12 42 25.7	-0.5
STIP	Stip	2.71	326	ePn	Pg	12 42 38.6	+4.1
MRMT	Marmara Adasi	2.83	65	ePN	Pn	12 42 30.2	+2.3
BALB	Balikesir	2.83	85	ePN	Pn	12 42 27.9	0.0
AKS	Akhisar	2.85	101	ePN	Pn	12 42 26.5	-1.7
ITM	Ithomi	2.92	219	eP	Pn	12 42 28.8	-0.3
VLI	Veliai	2.93	201	eP	Pn	12 42 28.8	-0.5
EDC	Edincik	2.93	72	ePN	Pn	12 42 31.6	+2.3
KRUS	Krusevo	2.96	311	iPn	Pn	12 42 31.1	+1.4
KRUS	Krusevo	2.96	311	iPn	Pn	12 42 31.0	+1.4
BNT	Bandirma	2.98	72	ePN	Pn	12 42 31.1	+1.2
EDRB	Edirne	3.05	38	ePN	Pn	12 42 35.3	+4.4
PGB	Panagyurishte	3.07	359	iP	Pn	12 42 31.1	-0.2
VLS	Valsamata	3.12	247	eP	Pn	12 42 31.5	-0.4
VTS	Vitosha	3.21	346	ePn	Pn	12 42 33.8	+0.7
VTS				eSn	Sn	12 43 10.7	-0.7
VTS	Vitosha	3.21	346	iP	Pn	12 42 33.9	+0.8
PYL	PYLOS	3.23	218	ePn	Pn	12 42 34.8	+1.3
KCT	Karacabey	3.28	75	ePN	Pn	12 42 35.8	+1.7
KYTH	Kithira	3.32	197	eP	Pn	12 42 35.5	+0.8
DST	Dursunbey	3.41	86	ePN	Pn	12 42 36.2	+0.3
KEK	Kerkira	3.43	275	eP	Pn	12 42 36.5	+0.4
JMB	Yambol	3.48	30	iP	Pn	12 42 35.3	-1.6
JMB				iPg	Pg	12 42 48.1	-1.3
KULA	Kula-Manisa	3.59	104	ePN	Pn	12 42 36.7	-1.7
BARS	Barje	3.80	332	ePn	Pn	12 42 42.1	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BARS				eSg	Sg	12 43 45.9	+1.2
GEMT	Gemlik	3.94	74	ePN	Pn	12 42 45.0	+1.8
SZH	Strazhica	4.00	18	i P	Pn	12 42 43.7	-0.3
ISK	Istanbul-Kandi	4.03	65	ePN	Pn	12 42 46.7	+2.3
YLV	Yalova	4.10	73	ePN	Pn	12 42 48.2	+2.8
IZI	Iznik	4.13	76	ePN	Pn	12 42 47.7	+2.0
IDI	Anoyia	4.21	173	Pn	Pn	12 42 46.5	-0.4
	4.3nm,0.3s,baz=336,slow=17,SNR=8.4						
ADVT	Abdulvahap	4.35	76	ePN	Pn	12 42 51.0	+2.2
GULT	Gulveren	4.93	77	ePN	Pn	12 42 58.3	+1.6
ESKT	Eskisehir	5.13	87	ePN	Pn	12 43 00.2	+0.7
GRUS	Gruza	5.13	330	ePn	Pn	12 42 59.5	-0.1
GRUS				eSg	Sg	12 44 24.9	-2.5
ISP	Isparta	5.18	106	eP	Pn	12 42 58.7	-1.6
DJES	Djerdap	5.31	347	eSg	Sg	12 44 34.4	+1.4
SVIS	Svilajnac	5.31	336	ePn	Pn	12 43 01.2	-0.8
SVIS				eSg	Sg	12 44 31.6	-1.6
DIVS	Divcibare	5.60	327	ePn	Pn	12 43 06.6	+0.7
DIVS				eSg	Sg	12 44 40.3	-2.0
BBLS	Bajina Basta -	5.68	322	ePn	Pn	12 43 04.0	-3.1
BBLS				eSg	Sg	12 44 41.8	-3.1
TIP	Timpagrande	5.79	269	ePn	Pn	12 43 10.2	+1.5
	5.9nm,0.5s						
GZR	Gura Zlata	6.01	350	⇓iP	Pn	12 43 11.5	-0.1
MLR	Muntele Rosu	6.15	11	Pn	Pn	12 43 13.5	0.0
	1.4nm,0.3s,baz=184,slow=7.5,SNR=27						
MLR				Sn	Sn	12 44 20.4	-3.4
	0.5nm,0.3s,baz=210,slow=16,SNR=1.6						
MLR	Muntele Rosu	6.15	11	⇑iP	Pn	12 43 13.9	+0.4
VRI	Vrincioaia	6.65	15	⇑iP	Pn	12 43 22.8	+2.4
BRTR	Keskin Array B	7.28	85	eP	Pn	12 43 33.4	+4.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	7.28	85	Pn	Pn	12 43 29.2	+0.2
	comp=Z,0.2nm,0.3s,baz=263,slow=13,SNR=4.5						
BRTR	Keskin Array B	7.28	85	Pn	Pn	12 43 29.2	+0.2
MMAI	Mount Meron Ar	11.09	122	Pn	Pn	12 44 20.2	-1.0
	comp=Z,1.0nm,0.3s,baz=304,slow=11,SNR=5.3						
OBN	Obninsk	17.70	24	⇑eP	Pn	12 45 51.9	+2.8
OBN				eS	Sn	12 49 12.2	+6.0
OBN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
OBN	Obninsk	17.70	24	eP	Pn	12 45 51.9	+2.8
	comp=Z,7.0nm,0.7s						
NOA	NORSAR Array B	23.05	344	P	P	12 46 47.3	-0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	23.05	344	P	P	12 46 47.3	-0.6
	comp=Z,1.3nm,0.8s,mb3.4,baz=154,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	32.91	223	P	P	12 48 17.3	+0.2
	comp=Z,4.8nm,0.7s,mb4.5,baz=32,slow=8.0,SNR=2.3						
MKAR	Makanchi Array	42.16	60	P	P	12 49 35.3	+0.2
	comp=Z,0.2nm,0.3s,mb3.2,baz=292,slow=4.5,SNR=3.4						

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*ISCJB **15** 12:48:16.9±1.0, 3.84S±0.03×126.36E±0.04, h10km±6km, mb4.8/55, MS4.2/25, Error ellipse: s-maj=6.9km s-min=4.4km az=158.9*

*MOS **15** 12:48:19.9±1.1, 3.78S×126.17E, h30km, mb4.8/19, Error ellipse: s-maj=17.9km s-min=8.9km az=121.7*

*IDC **15** 12:48:20.7±0.7, 3.80S×126.10E, h27km±4km, mb4.3/13, mb1 4.3/13, mb1mx4.2/21, mbtmp4.3/13, MS4.1/14, Ms1 4.1/14, ms1mx4.0/26, Error ellipse: s-maj=23.7km s-min=12.3km az=65.0*

*NEIC **15** 12:48:21.0±0.3, 3.88S×126.26E, mb4.8/15, Error ellipse: s-maj=11.2km s-min=6.0km az=63.0*

*BJI **15** 12:48:20.3, 4.58S×126.03E, h56km, mB5.1, mb4.8, Ms4.7, Msz4.2*

*GCMT **15** 12:48:21.0±0.2, 3.70S×126.18E, h25km, MW5.1/71, Moment Tensor Solution. s40,c58; s71,c120; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.74±.20; Mθθ-2.25±.13; Mφφ3.99±.18; Mrθ0.77±.32; Mθφ5.43±.12; Mφr1.04±.35; Best double couple: M0 6.35700×10^16 NP1: φs345.00000°, δ83.00000°, λ176.00000°. NP2: φs75.00000°, δ86.00000°, λ7.00000°. Principal axes: T 7.3160, Plg8.0000°, Azm300.0000°; N -1.9170, Plg82.0000°, Azm103.0000°; P -5.3990, Plg2.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 12:48:20.7±0.9, **3.86S**±0.03×**126.36E**±0.04, **h22**km±7km, **h29**km±2.9km**:pP-P, n148, σ1.22**/152, **mb4.8**/54, **MS4.2**/25, **14C-8D, Buru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	1.83	85	P	Pn	12 48 50.6	-0.2
	2μm,1.0s						
BATI	Kupang	6.85	203	Pn	Pn	12 50 01.9	+2.0
	16nm,0.3s,baz=176,slow=0.3,SNR=22						
BATI				LR	LR	12 52 25.0	
	comp=Z,2μm,19.9s,baz=30,slow=36						
PCI	Palu	7.15	294	P	Pn	12 50 02.1	-1.9
	815nm,0.9s						
WSI	Waingapu	8.34	226	P	Pn	12 50 26.3	+5.9
	606nm,0.7s						
BAKI	Biak	10.09	75	P	Pn	12 50 51.6	+7.3
	402nm,0.9s						
KAKA	Kakadu	10.65	146	eP	Pn	12 50 53.2	+1.1
	34nm,0.6s						
MATI	Mati	10.73	359	eP	Pn	12 50 54.6	+1.5
DAV	Davao City (W)	10.88	356	Pn	Pn	12 50 56.9	+1.7
TARAI	Tarakan	11.32	309	P	Pn	12 50 59.0	-2.2
	575nm,0.6s						
TSM	Tawau	11.73	314	⇓P	Pn	12 51 04.1	-2.7
BUKP	Musuan	11.73	354	eP	Pn	12 51 06.9	+0.1
MYLDM	Lahad Datu	11.93	319	⇓P	Pn	12 51 09.5	0.0
PAGZ	Pagadian	12.00	346	eP	Pn	12 51 10.7	+0.2
KMMI	Kalianget	12.74	255	P	Pn	12 51 22.7	+2.1
	62nm,1.2s						
SDKM	Sandakan	13.15	316	⇓P	Pn	12 51 27.1	+0.9
SCPH	Surigao	13.58	356	⇓eP	Pn	12 51 31.7	-0.4
MSLP	Maasin	13.98	354	eP	Pn	12 51 36.1	-1.4
KKM	Kota Kinabalu	14.12	314	ePn	Pn	12 51 38.2	-1.3
KKM	Kota Kinabalu	14.12	314	⇓P	Pn	12 51 39.1	-0.4
FITZ	Fitzroy Crossi	14.18	183	eP	Pn	12 51 37.3	-2.9
	25nm,1.4s						
FITZ				eS	Sn	12 54 17.0	+0.1
FITZ	Fitzroy Crossi	14.18	183	Pn	Pn	12 51 37.7	-2.5
	0.5nm,0.3s,baz=25,slow=12,SNR=24						
FITZ				LR	LR	12 57 18.3	
	comp=Z,450nm,19.2s,baz=7.2,slow=38						
KDM	Kudat	14.32	318	⇑P	Pn	12 51 42.7	+0.5
BTM	Bintulu	15.01	298	⇑P	Pn	12 51 52.2	+0.7
SBUM	Sibu	15.46	294	⇑P	Pn	12 51 58.7	+1.2
KSM	Kuching	16.90	288	eP	Pn	12 52 16.1	+0.2
KSM	Kuching	16.90	288	⇓P	Pn	12 52 16.5	+0.6
BJII	Banjamegara	16.93	257	P	Pn	12 52 18.2	+1.9
	92nm,1.4s						
WRA	Warramunga Arr	17.78	155	P	Pn	12 52 25.1	-1.7
	0.7nm,0.3s,baz=326,slow=14,SNR=25						
WRA				ScP	ScP	13 00 33.2	-5.0
	baz=309,slow=3.1,SNR=4.1						
WB2	Warramunga Arr	17.79	155	eP	Pn	12 52 25.0	-1.9
WB2				eS	Sn	12 55 45.5	+0.8
MBWA	Marble Bar	18.37	200	eP	Pn	12 52 35.3	+1.3
	41nm,1.0s						
LUBP	Lubang	18.50	341	eP	Pn	12 52 37.9	+2.2
TPI	Tanjungpandan	18.71	273	P	Pn	12 52 37.8	-0.5
	87nm,1.9s						
COEN	Coen	19.39	122	eP	Pn	12 52 46.0	-0.4
BALP	Baler	20.04	346	eP	P	12 52 53.2	+0.9
SCZP	Santa Cruz	20.52	342	eP	P	12 52 56.5	-1.0
ASAR	Alice Springs	21.00	160	P	P	12 53 03.6	+0.9
ASAR				*PP		12 53 13.0	
ASAR	Alice Springs	21.00	160	P	P	12 53 03.5	+0.9
	25nm,0.8s,baz=342,slow=11,SNR=142						
ASAR				pP		12 53 12.9	
	147nm,0.9s,baz=343,slow=11,SNR=44						
ASAR				ScP	ScP	13 00 40.5	-4.9
	0.4nm,0.7s,baz=334,slow=1.7,SNR=4.1						
PMG	Port Moresby	21.37	106	eP	P	12 53 08.9	+2.1
	38nm,0.9s,mb4.7						
PMG	Port Moresby	21.37	106	eP	P	12 53 08.9	+2.1
PMG				pmax	pmax		
	comp=Z,38nm,0.9s						
PMG	Port Moresby	21.37	106	P	P	12 53 09.2	+2.4
	comp=Z,34nm,1.0s,mb4.7,baz=330,slow=1.0,SNR=11						
APYP	Conner	22.16	347	eP	P	12 53 15.0	-0.2
MYKOM	Kota Tinggi	23.19	284	⇑P	P	12 53 26.3	+0.1
KSI	Kapahiang	23.72	270	P	P	12 53 35.5	+4.0
	comp=Z,105nm,1.2s,mb5.1						
KGM	Kluang	23.76	284	⇑P	P	12 53 32.2	+0.4
KTGM	Kuala Trenggan	24.93	291	⇑P	P	12 53 44.4	+1.8
CTA	Charters Tower	25.22	131	eP	P	12 53 48.5	+3.4
	comp=Z,13nm,0.9s,mb4.5						
CTA				eS	S	12 58 13.2	+3.7
CTA	Charters Tower	25.22	131	eP	P	12 53 48.5	+3.4
CTA				eS	S	12 58 13.2	+3.7
CTA				pmax	pmax		
	comp=Z,13nm,0.9s						
CTA	Charters Tower	25.22	131	P	P	12 53 47.6	+2.5
	comp=Z,6.0nm,0.9s,mb4.1,baz=283,slow=18,SNR=4.7						
CTAO	Charters Tower	25.22	131	eP	P	12 53 46.7	+1.6
	comp=Z,34nm,1.2s,mb4.8						
CTAO	Charters Tower	25.22	131	eP	P	12 53 46.7	+1.6
CTAO				pmax	pmax		
	comp=Z,34nm,1.2s,mb4.8						
FRIM	Kepong	25.71	286	⇓P	P	12 53 49.3	-0.3
PPI	Padang Panjang	26.16	277	P	P	12 53 53.5	-0.2
	comp=Z,79nm,1.5s,mb5.0						
FORT	Forrest	26.83	177	⇑iP	P	12 53 59.2	-0.3
	comp=Z,47nm,0.8s,mb5.1						
KULM	Kulim	27.24	289	eP	P	12 54 03.5	0.0
KULM	Kulim	27.24	289	⇑P	P	12 54 04.0	+0.5
SNG	Songkhla	27.94	293	P	P	12 54 14.0	+4.3
QIZ	Qiongzhong	27.96	325	P	P	12 54 09.3	-0.4
QIZ				S	S	12 58 55.5	+2.8
QIZ				AMB	AMB		
	comp=Z,29nm,1.6s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,305nm,3.1s						
QIZ				LR	LR		
	comp=N,350nm,16.1s						
QIZ				LR	LR		
	comp=Z,382nm,30.2s						
PSI	Prapat	28.21	283	P	P	12 54 10.4	-1.7
	comp=Z,7.8nm,0.7s,mb4.4,baz=69,slow=5.9,SNR=8.8						
PSI				LR	LR	13 08 10.4	
	comp=Z,563nm,18.7s,MS4.2,baz=320,slow=43						
YHNB	Yeheng	28.77	351	eP	P	12 54 16.4	-0.5
NWAO	Narrogin (SRO)	30.16	195	P	P	12 54 28.4	-0.8
	comp=Z,7.6nm,0.8s,mb4.5,baz=354,slow=10,SNR=3.2						
JOW	Kunigami	30.56	3	LR	LR	13 05 45.0	
	comp=Z,298nm,21.4s,MS3.9,baz=294,slow=34						
KKTK	Khon Kaen	30.73	311	P	P	12 54 34.5	+0.1
STKA	Stephens Creek	31.33	155	eP	P	12 54 38.7	-0.8
	comp=Z,7.7nm,0.4s,mb4.9						
STKA	Stephens Creek	31.33	155	P	P	12 54 38.8	-0.8
	comp=Z,4.3nm,0.6s,mb4.5,baz=330,slow=9.4,SNR=20						
CBIJ	Chichi jima	34.36	26	LR	LR	13 07 16.9	
	comp=Z,284nm,21.3s,MS4.0,baz=143,slow=33						
SSE	Sheshan	35.10	352	P	P	12 55 14.5	+2.1
SSE				S	S	13 00 47.3	+3.3
SSE				AMB	AMB		
	comp=Z,23nm,1.0s,mb5.1						
SSE				AMB	AMB		
	comp=Z,448nm,4.3s						
SSE				LR	LR		
	comp=E,276nm,16.4s						
SSE				LR	LR		
	comp=Z,99nm,16.6s,MS3.6						
CHG	Chiang Mai	35.16	311	⇑P	P	12 55 13.3	+0.2
	comp=Z,66nm,1.0s,mb5.5						
CHTO	Chiang Mai	35.16	311	eP	P	12 55 13.0	-0.1
	comp=Z,38nm,1.1s,mb5.2						
CHTO	Chiang Mai	35.16	311	eP	P	12 55 13.0	-0.1
CHTO				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
GYA	Guiyang	35.66	329	P	P	12 55 19.8	+2.5
GYA				PP	PP	12 56 41.3	+2.7
GYA				PCP	PcP	12 57 48.0	+2.4
GYA				S	S	13 00 56.5	+3.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,380nm,18.6s,MS4.4						
GYA				LR	LR		
	comp=E,420nm,18.9s,MS4.4						
GYA				LR	LR		
	comp=Z,390nm,19.6s,MS4.2						
WHN	Wuhan	36.08	342	P	P	12 55 24.5	+3.7
NJ2	Nanjing	36.42	349	eP	P	12 55 24.6	+0.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
KMI	Kunming	36.83	323	P	P	12 55 28.8	+1.5
KMI				S	S	13 01 11.8	+1.2
KMI				SS	SS	13 03 39.8	-12
KMI				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.6						
KMI				AMB	AMB		
	comp=Z,134nm,6.7s						
KMI				LR	LR		
	comp=N,277nm,15.3s,MS4.2						
KMI				LR	LR		
	comp=E,218nm,19.8s,MS4.2						
KMI				LR	LR		
	comp=Z,258nm,29.9s						
JNU	Nakatsue	37.02	6	LR	LR	13 09 44.3	
	comp=Z,286nm,21.3s,MS4.0,baz=317,slow=35						
JHJ	Hachijo jima 2	38.91	18	LR	LR	13 12 14.2	
	comp=Z,292nm,18.9s,MS4.1,baz=246,slow=37						
CD2	Chengdu	40.75	330	eP	P	12 56 00.5	+0.4
CD2				PP	PP	12 57 38.3	+4.0
CD2				S	S	13 02 10.8	+1.2
CD2				SS	SS	13 05 06.9	-4.1
CD2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.9						
CD2				AMB	AMB		
	comp=Z,60nm,5.2s						
CD2				LR	LR		
	comp=N,310nm,16.8s,MS4.5						
CD2				LR	LR		
	comp=E,470nm,15.6s,MS4.5						
CD2				LR	LR		
	comp=Z,310nm,16.8s,MS4.2						
KSRS	Korea Array	41.12	2	P	P	12 56 02.4	-0.7
	comp=Z,2.8nm,0.7s,mb4.0,baz=179,slow=9.4,SNR=8.5						
XAN	Xi'an	41.13	338	P	P	12 56 02.6	-0.6
XAN				AMB	AMB		
	comp=Z,15nm,0.7s,mb4.7						
MJAR	Matsushiro Arr	41.68	14	P	P	12 56 07.1	-0.6
	comp=Z,2.3nm,0.7s,mb3.9,baz=189,slow=9.1,SNR=6.9						
MAT	Matsushiro	41.68	14	P	P	12 56 05.9	-1.8
MAT				eS	S	13 02 33.8	+10
SHL	Shillong	44.42	313	eP	P	12 56 30.5	+0.4
BJI	Beijing	44.67	349	P	P	12 56 33.0	+1.2
BJI				PP	PP	12 58 16.4	0.0
BJI				S	S	13 03 06.5	-0.6
BJI				SS	SS	13 06 24.1	-3.8
BJI				AMB	AMB		
	comp=Z,5.0nm,1.6s,mb4.1						
BJI				LR	LR		
	comp=N,189nm,15.0s,MS4.3						
BJI				LR	LR		
	comp=E,229nm,18.1s,MS4.3						
BJI				LR	LR		
	comp=Z,195nm,29.9s						
LZH	Lanzhou	44.98	334	eP	P	12 56 35.3	+1.0
LZH				PP	PP	12 58 21.0	+1.3
LZH				eS	S	13 03 11.0	-0.6
LZH				AMB	AMB		
	comp=Z,41nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,170nm,5.2s						
LZH				LR	LR		
	comp=E,452nm,13.6s						
LZH				LR	LR		
	comp=Z,930nm,14.8s,MS4.8						
HHC	Hu-ho-hao-te	46.51	345	eP	P	12 56 46.1	-0.2
HHC				PCP	PcP	12 58 20.1	-0.5
HHC				PP	PP	12 58 35.3	-0.5
HHC				PCS	PcS	13 02 13.0	-2.2
HHC				eS	S	13 03 32.6	-0.9
HHC				SCS	ScS	13 06 36.9	-3.3
HHC				SS	SS	13 06 52.6	-7.2
HHC				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
HHC				AMB	AMB		
	comp=Z,229nm,5.4s						
HHC				LR	LR		
	comp=N,142nm,20.2s,MS4.2						
HHC				LR	LR		
	comp=E,253nm,19.0s,MS4.2						
HHC				LR	LR		
	comp=Z,169nm,19.0s,MS4.0						
LSA	Lhasa	47.44	317	eP	P	12 56 54.6	+0.8
	comp=Z,16nm,0.6s,mb5.1						
LSA	Lhasa	47.44	317	eP	P	12 56 54.6	+0.8
LSA				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
CN2	Changchun	47.45	359	eP	P	12 56 56.3	+2.7
CN2				eS	S	13 03 50.3	+3.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,450nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,310nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,160nm,11.0s,MS4.2						
MDJ	Mudanjiang	48.34	3	P	P	12 57 02.3	+1.8
MDJ				S	S	13 04 08.4	+9.0
MDJ				SS	SS	13 07 35.1	+5.7
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,98nm,7.0s						
MDJ				LR	LR		
	comp=N,94nm,33.9s,MS3.8						
MDJ				LR	LR		
	comp=E,133nm,37.0s,MS3.8						
MDJ				LR	LR		
	comp=Z,160nm,24.5s						
ODAN	Odare	48.48	311	eP	P	12 57 02.0	+0.1
	comp=Z,62nm,0.8s,mb5.7						
TAPN	Taplejung	48.51	312	eP	P	12 57 01.8	-0.3
	comp=Z,83nm,0.9s,mb5.8						
GTA	Gaotai	49.52	333	eP	P	12 57 09.9	+0.2
GTA				PCP	PcP	12 58 32.5	+1.1
GTA				PP	PP	12 59 05.8	+1.7
GTA				S	S	13 04 17.5	+1.3
GTA				SS	SS	13 07 45.3	-3.3
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,162nm,6.5s						
GTA				LR	LR		
	comp=N,261nm,19.9s,MS4.3						
GTA				LR	LR		
	comp=E,164nm,19.5s,MS4.3						
GTA				LR	LR		
	comp=Z,272nm,14.9s,MS4.4						
JIRN	Jiri	49.80	311	eP	P	12 57 11.8	-0.3
	comp=Z,50nm,0.9s,mb5.6						
ASAJ	Asahikawa	49.93	15	P	P	12 57 11.9	-0.8
	comp=Z,8.2nm,1.0s,mb4.7,baz=197,slow=11,SNR=2.5						
KKN	Kakani	50.56	311	eP	P	12 57 17.1	-0.7
	comp=Z,40nm,0.9s,mb5.4						
GKN	Gorkha	51.15	311	eP	P	12 57 21.7	-0.6
	comp=Z,127nm,1.2s,mb5.7						
HYB	Hyderabad	51.69	296	eP	P	12 57 25.5	-1.0
HYB	Hyderabad	51.69	296	i P	P	12 57 25.5	-1.0
HYB				esP	sP	12 57 38.0	+1.9
YSS	Yuzh-Sakhalins	52.62	14	eP	P	12 57 34.5	+1.7
YSS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KLR	Kul'dur	53.08	4	eP	P	12 57 40.2	+4.0
ULN	Ulaanbaatar	54.22	344	eP	P	12 57 44.0	-0.6
	comp=Z,6.4nm,0.6s,mb4.7						
ULN	Ulaanbaatar	54.22	344	⇑eP	P	12 57 44.6	0.0
SONM	Songino Array	54.38	344	P	P	12 57 44.8	-0.9
SONM				*PP	pP	12 57 51.9	-0.8
SONM	Songino Array	54.38	344	P	P	12 57 44.8	-0.9
	comp=Z,2.9nm,0.9s,mb4.2,baz=152,slow=7.4,SNR=18						
SONM				pP	pP	12 57 51.9	-0.8
	comp=Z,5.3nm,0.8s,baz=158,slow=9.5,SNR=23						
SONM				LR	LR	13 25 14.7	
	comp=Z,82nm,18.3s,MS3.8,baz=357,slow=41						
ZAK	Zakamensk	57.57	343	eP	P	12 58 07.5	-1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
TLY	Talaya	58.62	344	eP	P	12 58 25.6	+10
TLY				eS	S	13 06 20.2	+1.4
TLY				ePS		13 06 41.1	
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
TLY				MLR	MLR		
	comp=Z,135nm,21.0s,MS4.0						
WMQ	Urumqi	58.81	328	⇑P	P	12 58 16.9	-0.5
WMQ				PCP	PcP	12 59 05.9	-0.9
WMQ				PP	PP	13 00 28.8	+1.1
WMQ				S	S	13 06 18.4	-3.2
WMQ				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,174nm,5.4s						
WMQ				LR	LR		
	comp=N,337nm,28.7s						
WMQ				LR	LR		
	comp=E,89nm,21.5s						
WMQ				LR	LR		
	comp=Z,165nm,24.4s,MS4.1						
IRK	Irkutsk	58.95	344	eP	P	12 58 25.6	+7.5
IRK				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.0						
BOD	Bodaibo	62.28	353	eP	P	12 58 39.9	-0.8
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
MKAR	Makanchi Array	63.64	328	P	P	12 58 48.5	-1.5
MKAR				*PP	pP	12 58 56.8	-0.3
MKAR	Makanchi Array	63.64	328	P	P	12 58 48.5	-1.5
	comp=Z,3.5nm,0.7s,mb4.5,baz=125,slow=8.4,SNR=34						
MKAR				pP	pP	12 58 56.8	-0.3
	comp=Z,5.9nm,0.7s,baz=118,slow=8.0,SNR=18						
MKAR				LR	LR	13 26 49.3	
	comp=Z,100nm,20.5s,MS4.0,baz=216,slow=36						
TKM2	Tokmak 2	65.28	321	eP	P	12 59 00.6	-0.2
	comp=Z,5.5nm,0.8s,mb4.6						
TKM2	Tokmak 2	65.28	321	eP	P	12 59 00.6	-0.2
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YAK	Yakutsk	65.75	2	eP	P	12 59 03.7	+0.2
	comp=Z,32nm,0.8s,mb5.4						
YAK	Yakutsk	65.75	2	eP	P	12 59 08.8	+5.3
YAK				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,14nm,1.5s						
AAK	Ala-Archa	65.82	320	eP	P	12 59 03.5	-0.9
	comp=N,3.6nm,0.8s,mb4.5						
AAK	Ala-Archa	65.82	320	eP	P	12 59 02.5	-1.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
NVS	Novosibirsk	68.49	335	eP	P	12 59 19.4	-1.6
NVS				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
NVS				pmax	pmax		
	comp=N,18nm,1.6s						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
SEY	Seymchan	69.46	12	⇑eP	P	12 59 26.4	-0.5
BRVK	Borovoye	73.57	329	eP	P	12 59 50.6	-1.3
	comp=E,11nm,1.1s,mb4.7						
BRVK	Borovoye	73.57	329	eP	P	12 59 50.6	-1.3
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
CHKZ	Chkalovo	73.72	329	eP	P	12 59 51.1	-1.7
	comp=Z,4.9nm,0.8s,mb4.5						
CHKZ	Chkalovo	73.72	329	eP	P	12 59 51.1	-1.6
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TIXI	Tiksi	75.38	1	eP	P	13 00 00.7	-1.4
	comp=Z,8.7nm,0.9s,mb4.7						
TIXI	Tiksi	75.38	1	eP	P	13 00 01.2	-0.9
TIXI				i		13 00 09.9	
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
VNDA	Vanda	76.00	173	LR	LR	13 32 37.7	
	comp=Z,209nm,18.5s,MS4.5,baz=330,slow=35						
MAW	Mawson	76.56	201	LR	LR	13 33 17.5	
	comp=Z,154nm,19.7s,MS4.3,baz=257,slow=35						
BILL	Bilibino	76.94	14	⇑eP	P	13 00 13.8	+2.8
BILL				i		13 00 30.8	
BILL				e		13 03 06.2	
BILL				eS	S	13 10 14.1	+17
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,9μm,22.0s						

AKTK	Aktyubinsk	79.39	323	P	P	13 00 22.2	-2.7
AKTK				LR	LR	13 39 00.5	
AKTO	Aktyubinsk	79.39	323	P	P	13 00 22.2	-2.7
	comp=Z,2.0nm,0.7s,mb4.2,baz=100,slow=6.5,SNR=8.9						
AKTO				LR	LR	13 39 00.5	
	comp=Z,148nm,18.5s,MS4.4,baz=273,slow=38						
ARU	Arti	81.15	329d	*i*P	P	13 00 34.6	+0.3
ARU						13 03 38.6	
ARU				S	S	13 10 43.6	+0.8
ARU				SS	SS	13 15 52.9	-5.3
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
GAMB	Gambell	81.45	23	*e*P	P	13 00 36.1	+0.4
TNA	Tin City	83.69	22	*e*P	P	13 00 46.1	-1.2
	comp=Z,12nm,1.4s,mb4.8						
ZEI	Tsey	87.07	313	*e*P	P	13 01 04.1	-0.7
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.5						
KIV	Kislovodsk	88.10	314	*e*P	P	13 01 09.7	0.0
KIV				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
KMBO	Kilima Mbogo	89.04	269	LR	LR	13 40 23.4	
	comp=Z,95nm,20.4s,MS4.2,baz=94,slow=35						
IMA2	Indian Mountai	89.42	24	*e*P	P	13 01 15.7	+0.3
OBN	Obninsk	93.02	325⇑	*e*P	P	13 01 31.5	-0.8
OBN				*e*		13 05 20.6	
OBN				*e*S	SKSac	13 11 58.9	-6.1
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.4						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.7						
DAWY	Dawson	95.31	26	*e*P	P	13 01 42.5	-0.1
AKASG	Malin Array Be	97.49	320	P	P	13 01 50.0	-2.9
AKASG				pP	pP	13 01 60.0	-0.3
AKASG	Malin Array Be	97.49	320	P	P	13 01 50.0	-2.9
	comp=Z,0.5nm,0.5s,mb4.2,baz=73,slow=4.8,SNR=4.3						
AKASG				pP	pP	13 01 60.0	-0.3
	comp=Z,0.2nm,0.3s,baz=72,slow=4.5,SNR=2.9						
SNAA	Sanae	97.83	194	*e*P	P	13 01 54.4	+0.4
BOSA	Boshof	97.89	241	LR	LR	13 38 29.3	
	comp=Z,81nm,19.4s,MS4.2,baz=357,slow=31						
PDAR	Pinedale Array	117.19	43	PKP	PKPdf	13 07 03.5	-0.9
	comp=Z,0.2nm,0.7s,baz=214,slow=3.1,SNR=2.5						
ANMO	Albuquerque	122.23	51	*i* PKIKP	PKPdf	13 07 17.9	+3.5
TORD	Torodi Ar. Bea	124.61	283	PKP	PKPdf	13 07 17.4	-2.1
	comp=Z,1.8nm,0.7s,baz=73,slow=1.9,SNR=11						
SCHQ	Schefferville	128.06	10	PKP	PKPdf	13 07 23.8	-1.1
	comp=Z,0.5nm,0.5s,baz=315,slow=2.9,SNR=4.6						
JTS	JuntasAbangare	148.29	77	PKPbc	PKPbc	13 08 07.3	+1.1
	comp=Z,5.0nm,0.6s,baz=320,slow=9.3,SNR=4.7						
LPAZ	La Paz	155.38	145	pPKPab	pPKPab	13 08 49.5	+3.5
	comp=Z,1.8nm,0.8s,baz=205,slow=4.4,SNR=4.9						

MOS **15** *12:59:12.9±2.9, 47.26N×142.36E, h10km, mb3.6/4, Error ellipse: s-maj=29.9km s-min=12.3km az=94.5*

ISCJB **15** *12:59:36.7±0.6, 45.48N±0.07×142.6E±0.1, h313km±5km, mb3.2/4, Error ellipse: s-maj=13.7km s-min=10.0km az=146.3*

IDC **15** *12:59:37.5±0.8, 45.55N×142.52E, h307km±21km, mb3.0/4, mb1 3.1/5, mb1mx2.8/21, mbtmp3.0/5, Error ellipse: s-maj=48.2km s-min=22.0km az=164.0*

JMA **15** *12:59:37.7±0.3, 45.52N×142.50E, h306km±2km, M2.5*

ISC 15 12:59:37.7±0.6**, 45.45N**±0.07×**142.6E**±0.1**, h307**km±5km**, n27,** σ**1.01**/36**, mb3.2**/4**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	Keihoku	0.48	254	P	Pn	13 00 17.0	0.0
JWK2				*e*S	S	13 00 47.4	-1.0
JSE	Soyaes	0.49	178	P	Pn	13 00 17.0	-0.1
JSE				*e*S	S	13 00 47.8	-0.7
JRR	Rishiri	0.94	251	P	Pn	13 00 18.3	-0.2
JRR				*e*S	S	13 00 50.8	-0.2
ASAJ	Asahikawa	1.33	179	P	Pn	13 00 21.3	+0.7
ASAJ	Asahikawa	1.33	179	P	Pn	13 00 21.4	+0.8
	2.2nm,0.3s,baz=34,slow=7.3,SNR=21						
ASAJ				S	S	13 00 55.8	+1.0
	0.4nm,0.3s,baz=225,slow=20,SNR=5.1						
JMP	Maruseppu	1.55	158	P	Pn	13 00 22.6	+0.7
JKK2	Kamakawa 2	1.58	175	P	Pn	13 00 23.0	+0.9
JTKR	Abashiri--Toko	1.76	146	P	Pn	13 00 24.2	+0.8
JAB	Ashibetsu	1.96	187	P	Pn	13 00 25.7	+0.9
JFR	Furan	2.29	179	P	Pn	13 00 28.2	+0.7
JAR	Ashorobuto	2.32	158	P	Pn	13 00 29.0	+1.3
JRA	Rausu	2.37	129	P	Pn	13 00 29.7	+1.6
JEW	Eniwo	2.73	197	P	Pn	13 00 32.5	+1.1
JCH	Churui	2.89	168	P	Pn	13 00 32.6	-0.3
JCH				*e*S	S	13 01 14.4	-2.7
JAK	Akkeshi	2.89	147	P	Pn	13 00 33.7	+0.8
JAK				*e*S	S	13 01 15.6	-1.5
NEM2	Nemuro 2	3.09	131	P	Pn	13 00 34.7	-0.1
NEM2				*e*S	S	13 01 18.2	-2.3
JNBK	Urakawa-nobuka	3.17	177	P	Pn	13 00 35.9	+0.2
JNBK				*e*S	S	13 01 21.7	-0.3
ERM	Erimo	3.46	173	*e*PN	Pn	13 00 39.4	+0.8
JKB	Kayabe	3.73	198	P	Pn	13 00 41.1	-0.3
JKB				*e*S	S	13 01 30.1	-2.4
MJAR	Matsushiro Arr	9.48	202	P	Pn	13 01 50.7	+1.2
	0.4nm,0.3s,baz=19,slow=11,SNR=4.3						
SONM	Songino Array	24.80	289	P	P	13 04 31.8	-0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	24.80	289	P	P	13 04 31.8	-0.5
	comp=Z,0.8nm,0.5s,mb3.5,baz=81,slow=8.7,SNR=10						
MKAR	Makanchi Array	40.89	294	P	P	13 06 49.3	-1.1
	comp=Z,0.2nm,0.2s,mb2.9,baz=69,slow=7.9,SNR=2.2						
YKA	Yellowknife Ar	56.19	33	*e*P	P	13 08 44.8	-0.9
YKA	Yellowknife Ar	56.19	33	P	P	13 08 44.8	-0.9
	comp=Z,0.5nm,0.5s,mb3.2,baz=306,slow=6.8,SNR=8.6						
FINES	FINESS Array B	61.83	331	P	P	13 09 23.6	-0.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	FINESS Array B	61.83	331	P	P	13 09 23.6	-0.6
	comp=Z,0.7nm,0.8s,mb3.3,baz=60,slow=8.5,SNR=3.0						

ISCJB **15** *13:12:59.8±0.2, 16.34N±0.03×96.97W±0.02, h26km, mb4.9/114, MS4.6/38, Error ellipse: s-maj=4.8km s-min=2.3km az=24.6*

BJI **15** *13:12:59.4, 16.10N×97.20W, h12km, mB5.4, Ms5.3, Msz4.9*

GCMT **15** *13:13:00.4±0.3, 16.21N×97.00W, h12km, MW5.3/82, Moment Tensor Solution. s48,c68; s82,c128; Duration: 1.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.16±.01; $M_{\theta\theta}$-0.29±.01; $M_{\phi\phi}$0.12±.01; $M_{r\theta}$-1.10±.03; $M_{\theta\phi}$0.05±.01; $M_{\phi r}$0.59±.03; Best double couple: $M_0$1.27100×10^{17} NP1:ϕ_s63.00000°,δ8.00000°,λ35.00000°. NP2: ϕ_s298.00000°,δ85.00000°,λ97.00000°. Principal axes: T 1.2320, Plg49.0000°, Azm215.0000°; N 0.0790, Plg7.0000°, Azm118.0000°; P -1.3110, Plg40.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MEX **15** *13:13:00.1±0.8, 16.06N×97.24W, h11km±9km, MD5.1*

NEIC **15** *13:13:00.4, 16.07N×97.24W, h13km, mb5.1/101, MS4.9/8, MD5.1(MEX), After MEX.*

MOS **15** *13:13:00.7±0.8, 16.37N×97.00W, h34km, mb5.1/44, MS4.9/7, Error ellipse: s-maj=8.7km s-min=4.6km az=93.1*

IDC **15** *13:13:00.0±0.6, 16.22N×97.12W, h27km±3km, mb4.4/20, mb1 4.6/22, mb1mx4.5/27, mbtmp4.4/22, ML4.3/2, MS4.6/27, Ms1 4.6/27, ms1mx4.4/33, Error ellipse: s-maj=13.1km s-min=11.3km az=38.0*

ISC 15 13:13:01.8±0.2**, 16.35N**±0.03×**96.91W**±0.02**, h28**km**, h28**km±.4km**:pP-P, n607,** σ**0.74**/592**, mb4.9**/114**, MS4.6**/38**, 111C-102D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.74	13	*e*P	Pb	13 13 17.6	+1.4
VHO				*i* S	Sb	13 13 31.3	+5.3
OXX	Oaxaca	0.75	14	*i* P	Pb	13 13 18.0	+1.6
HUIG	Huatulco	0.96	127	*e*P	Pn	13 13 18.8	-0.6
HUIG				*i* S	Sn	13 13 32.6	+0.4
PNIG	Pinotepa	1.17	272	*i* P	Pn	13 13 15.0	-7.4
PNIG				*i* S	Sn	13 13 26.0	-11
UTMO	Huajuapan	1.71	330	*e*P	Pn	13 13 29.3	-0.5
UTMO				*i* S	Sn	13 13 51.0	+0.4
CMIG	Matias Romero	2.08	69	Pn	Pn	13 13 36.5	+1.7
CMIG				Sn	Sn	13 14 05.2	+5.4
CMIG				Lg		13 14 13.5	
CMIG	Matias Romero	2.08	69	Pn	Pn	13 13 36.5	+1.7
	269nm,0.3s,baz=248,slow=11,SNR=1314						
CMIG				Sn	Sn	13 14 05.2	+5.4
	1µm,0.3s,baz=236,slow=18,SNR=8.7						
CMIG				Lg		13 14 13.5	
	2µm,0.3s,baz=358,slow=18,SNR=12						
CMIG				LR	LR	13 14 54.4	
	comp=Z,22µm,19.6s,baz=231,slow=50						
CMIG	Matias Romero	2.08	69	*e*P	Pn	13 13 36.6	+1.8
CMIG				*i* S	Sn	13 14 06.7	+7.0
TPIG	Tehuac#an	2.11	348	*e*P	Pn	13 13 36.2	+1.0
TPIG				*i* S	Sn	13 14 02.9	+2.4
ACX	Acapulco	2.93	281	*i* P	Pn	13 13 38.2	-8.3
ACX	Acapulco	2.93	281	*i* P	Pn	13 13 39.0	-7.6
MEIG	Mezcala	3.03	302	*e*P	Pn	13 13 44.5	-3.4
MEIG				*i* S	Sn	13 14 18.3	-5.1
PPM	Popocatepetl	3.16	329	*i* P	Pn	13 13 54.3	+4.5
PPM				*i* S	Sn	13 14 27.8	+1.2
PPM	Popocatepetl	3.16	329	*e*P	Pn	13 13 49.8	0.0
PPM				*i* S	Sn	13 14 27.8	+1.2
PLIG	Platanillo	3.21	310	*e*P	Pn	13 13 48.6	-1.8
PLIG				*i* S	Sn	13 14 24.3	-3.3
YAIG	Yautepec	3.24	321	*e*P	Pn	13 13 50.1	-0.7
YAIG				*i* S	Sn	13 14 26.6	-1.9
CAIG	El Cayaco	3.29	283	*e*P	Pn	13 13 45.2	-6.4
CAIG				*i* S	Sn	13 14 22.7	-7.1
LVIG	Laguna Verde	3.39	8	*e*P	Pn	13 13 52.5	-0.4
LVIG				*i* S	Sn	13 14 42.9	+11
UNM	Universidad Na	3.67	324	*e*P	Pn	13 13 58.0	+1.2
SZVM	Salazar	3.78	322	*i* P	Pn	13 13 57.4	-0.9
SZVM				*i* S	Sn	13 14 43.1	+1.2
SCX	San Cristobal	4.12	84	*i* P	Pn	13 14 04.0	+1.1
ZIIG	Zihuatanejo	4.54	287	*i* P	Pn	13 14 03.6	-5.1
ZIIG				*i* S	Sn	13 14 52.0	-8.5
CCIG	Comitan	4.58	90	*e*P	Pn	13 14 13.1	+3.8
CCIG				*i* S	Sn	13 15 06.4	+4.8
MOIG	Morelia	5.25	310	*e*P	Pn	13 14 15.6	-2.9
MOIG				*i* S	Sn	13 15 15.6	-2.5
SCIG	Sabancuy	6.05	64	*i* P	Pn	13 14 31.1	+1.7
SCIG				*i* S	Sn	13 15 40.8	+3.1
MMIG	Aquila	6.45	288	*i* P	Pn	13 14 30.4	-4.5
MMIG				*i* S	Sn	13 15 39.7	-7.9
SFJM	Santa Fe	7.13	306	*i* P	Pn	13 14 42.5	-1.8
RTR	El Retiro	7.42	108	*e*P	x	13 14 51.3	
SBLS	San Blas	7.46	109	*e*P	x	13 14 52.1	
SNJE	San Jose	7.47	108	*e*P	x	13 14 54.2	
LFRS	El Faro	8.05	109	*e*P	x	13 15 01.9	
LCBS	La Ceiba	8.12	108	*e*P	x	13 15 04.0	
ANIG	Ahuacatlan	8.60	304	*e*P	Pn	13 14 59.6	-4.9
ANIG				*i* S	Sn	13 16 38.8	-1.8
LNIG	Linares	8.84	345	*i* P	Pn	13 15 09.5	+1.8
TEIG	Tepich	9.06	63	*e*Pn	Pn	13 15 10.6	-0.2
TEIG				*e*Sn	Sn	13 16 52.3	+0.4
TEIG	Tepich	9.06	63	Pn	Pn	13 15 11.4	+0.6
	91nm,0.3s,baz=244,slow=3.5,SNR=115						
TEIG				Sn	Sn	13 16 48.7	-3.2
	20nm,0.3s,baz=339,slow=22,SNR=3.5						
TEIG				LR	LR	13 19 31.3	
	comp=Z,6µm,19.6s,baz=242,slow=42						
TEIG	Tepich	9.06	63	*e*P	Pn	13 15 13.0	+2.1
TGUH	Tegucigalpa,Un	9.57	102	*e*Pn	Pn	13 15 21.7	+3.8
JTS	JuntasAbangare	13.10	116	Pn	Pn	13 16 09.3	+3.2
	344nm,0.8s,SNR=6.4						
JTS	JuntasAbangare	13.10	116	*e*P	Pn	13 16 09.5	+3.4
JTS	JuntasAbangare	13.10	116	Pn	Pn	13 16 08.5	+2.4
	2.0nm,0.3s,baz=314,slow=16,SNR=6.8						
JTS				LR	LR	13 20 32.3	
	comp=Z,724nm,21.3s,baz=311,slow=34						
HKT	Hockley	13.58	4	*e*Pn	Pn	13 16 11.8	-0.8
	51nm,1.3s						
HKT	Hockley	13.58	4	*e*P	Pn	13 16 11.8	-0.8
HKT				pmax	pmax		
	comp=Z,51nm,1.3s						
JCT	Junction City	14.32	350	*e*Pn	Pn	13 16 22.5	-0.2
LTX	Lajitas	14.34	335	*e*Pn	Pn	13 16 23.8	+0.8
LTX				*e*		13 20 41.2	
TXAR	Lajitas Array	14.34	335	Pn	Pn	13 16 23.2	+0.2
TXAR				Lg		13 20 37.4	
TXAR	Lajitas Array	14.34	335	Pn	Pn	13 16 23.2	+0.2
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=44						
TXAR				Lg		13 20 37.4	
	comp=Z,0.0nm,0.3s,baz=168,slow=34,SNR=2.9						
TXAR				LR	LR	13 22 35.2	
	comp=Z,6µm,19.4s,baz=290,slow=40						
LPIG	La Paz	14.75	304	Pn	Pn	13 16 28.1	-0.5
	comp=Z,3.7nm,0.3s,baz=63,slow=2.3,SNR=2.0						
LPIG				LR	LR	13 21 09.8	
	comp=Z,2µm,21.8s,baz=123,slow=33						
NATX	Nacogdoches	15.48	7	*e*P	Pn	13 16 37.7	-0.6
MNTX	Cornudas Mount	17.12	335	*e*P	Pn	13 16 58.4	-0.7
MIAR	Mount Ida	18.37	9	*e*P	Pn	13 17 13.2	-1.3
	comp=Z,86nm,0.8s						
MIAR	Mount Ida	18.37	9	*e*P	Pn	13 17 13.2	-1.3
MIAR				pmax	pmax		
	comp=Z,86nm,0.8s						
WMOK	Wichita Mounta	18.39	355	*e*P	Pn	13 17 12.9	-1.9
	comp=Z,38nm,1.0s						
WMOK	Wichita Mounta	18.39	355	*e*P	Pn	13 17 12.9	-1.9
WMOK				pmax	pmax		
	comp=Z,39nm,1.0s						
319A	Douglas	18.73	325	⇑P	Pn	13 17 19.2	+0.2
	baz=19						
UALR	University of	18.80	12	*e*P	Pn	13 17 19.1	-0.7
	comp=Z,66nm,0.8s						
LRAL	Lakeview Retre	18.88	27	*e*P	Pn	13 17 20.4	-0.3
	comp=Z,53nm,1.0s						
AMTX	Amarillo	18.95	348	*e*P	Pn	13 17 21.1	-0.4
	comp=Z,27nm,0.7s						
318A	Bisbee	19.18	324	⇓P	Pn	13 17 23.8	-0.5
	baz=19						
OXF	Oxford	19.30	19	*e*P	Pn	13 17 24.1	-1.7
	comp=Z,228nm,1.1s						
OXF	Oxford	19.30	19	*e*P	Pn	13 17 24.1	-1.7
OXF				pmax	pmax		
	comp=Z,228nm,1.1s						
218A	Dragoon	19.61	325	⇓P	Pn	13 17 28.8	-0.7
	baz=20						
Y22C	IRIS PASSCAL I	19.82	335	⇑P	Pn	13 17 30.9	-1.0
	baz=20						
217A	Green Valley	19.90	323	⇓P	Pn	13 17 31.7	-1.2
	baz=20						
HBAR	Harrisburg	19.93	15	*e*P	Pn	13 17 32.4	-0.8
PLAL	Pickwick Lake	20.18	21	*e*P	P	13 17 33.6	-0.5
	comp=Z,81nm,1.1s						
PLAL				*e*S	S	13 21 17.3	-1.9
ANMO	Albuquerque	20.41	337	*e*P	P	13 17 36.9	+0.2
	comp=Z,44nm,1.1s						
ANMO	Albuquerque	20.41	337	P	P	13 17 37.0	+0.3
	comp=Z,25nm,1.0s,baz=145,slow=12,SNR=32						
ANMO				LR	LR	13 26 15.2	
	comp=Z,3µm,18.8s,MS4.7,baz=162,slow=39						
216A	Three Points,	20.44	322	⇑P	P	13 17 37.3	+0.3
	baz=20						
GNAR	Gosnell	20.48	16	*e*P	P	13 17 37.6	+0.2
	comp=Z,4µm,1.4s						
HALT	Halls	20.62	18	*e*P	P	13 17 38.7	-0.2
GOGA	Godfrey	20.88	33	*e*P	P	13 17 41.1	-0.6
	comp=Z,64nm,0.7s						
GOGA				*e*S	S	13 21 32.4	-0.8
GOGA	Godfrey	20.88	33	*e*P	P	13 17 41.1	-0.7
GOGA				*e*S	S	13 21 32.4	-0.8
GOGA				pmax	pmax		
	comp=Z,64nm,0.7s						
GLAT	Glass	20.97	17	*e*P	P	13 17 42.2	-0.6
116A	Eloy	20.98	323	⇓P	P	13 17 43.1	+0.1
	baz=21						
UTMT	University of	21.16	18	*e*P	P	13 17 44.3	-0.5
	comp=Z,471nm,1.1s,mb5.7						
SWET	Sewanee	21.20	26	*e*P	P	13 17 44.4	-0.9
PARMO	Parma	21.21	16	*e*P	P	13 17 45.6	+0.3
115A	Sonoran Desert	21.39	322	⇑P	P	13 17 47.7	+0.4
	baz=21,SNR=44						
CPCT	Cooper Cave	22.01	28	*e*P	P	13 17 52.6	-1.2
Z14A	Wintersburg	22.28	322	⇑P	P	13 17 57.0	+0.1
	baz=22,SNR=10						
FVM	French Village	22.30	14	*e*P	P	13 17 56.6	-0.3
	comp=Z,227nm,1.9s,mb5.3						
FVM	French Village	22.30	14	*e*P	P	13 17 56.6	-0.4
FVM				pmax	pmax		
	comp=Z,227nm,1.9s,mb5.3						
SIUC	Southern Illin	22.34	16	*e*P	P	13 17 57.9	+0.5
	comp=Z,64nm,0.8s,mb5.1						
COW	Cow Castle Cre	22.40	38	P	P	13 17 58.0	-0.1
CBKS	Cedar Bluff	22.52	354	*e*P	P	13 17 59.2	-0.1
	comp=Z,114nm,1.0s,mb5.3						
CBKS	Cedar Bluff	22.52	354	*e*P	P	13 17 59.3	0.0
CBKS				pmax	pmax		
	comp=Z,114nm,1.0s,mb5.3						
TKL	Tuckaleechee C	22.52	29	P	P	13 17 59.7	+0.4
TKL	Tuckaleechee C	22.52	29	P	P	13 17 59.7	+0.4
	comp=Z,11nm,0.6s,mb4.5,baz=218,slow=13,SNR=8.6						
TKL				LR	LR	13 28 07.8	
	comp=Z,710nm,21.1s,MS4.1,baz=226,slow=40						
SDCO	Great Sand Dun	22.63	342	*e*P	P	13 18 00.4	-0.1
	comp=Z,67nm,1.2s,mb5.0						
KSU1	Kansas State U	22.67	1	*e*P	P	13 18 00.8	-0.1
	comp=Z,69nm,0.8s,mb5.1						
X15A	Humboldt	22.71	326	⇓P	P	13 18 01.8	+0.4
	baz=23,SNR=44						
JSC	Jenkinsville	22.73	35	*e*P	P	13 18 00.8	-0.8
Y14A	Wickenburg	22.73	323	⇑P	P	13 18 01.3	-0.3
	baz=23,SNR=16						
USIN	University of	23.02	19	*e*P	P	13 18 04.5	-0.2
	comp=Z,180nm,1.4s,mb5.3						
WUAZ	Wupatki	23.05	329	*e*P	P	13 18 05.8	+0.9
	comp=Z,254nm,1.5s,mb5.4						
WUAZ	Wupatki	23.05	329	⇑P	P	13 18 05.9	+0.9
	baz=23						
X14A	Yava	23.05	324	⇑P	P	13 18 05.3	+0.2
	baz=23,SNR=18						
Y13A	Salome	23.12	322	⇓P	P	13 18 05.4	-0.3
	baz=23						
MVCO	Mesa Verde	23.18	336	*e*P	P	13 18 06.5	+0.3
	comp=Z,128nm,1.0s,mb5.3						
MVCO	Mesa Verde	23.18	336	⇓P	P	13 18 06.1	-0.1
	baz=23,SNR=68						
GLA	Glamis	23.21	319	P	P	13 18 06.4	-0.3
	baz=23,SNR=19						
W15A	Williams	23.25	327	⇑P	P	13 18 07.9	+0.9
	baz=23						
TZTN	Tazewell	23.36	28	*e*P	P	13 18 07.3	-0.8
	comp=Z,172nm,1.4s,mb5.3						
Y12C	Blythe	23.50	321	⇑P	P	13 18 09.3	-0.3
	baz=23,SNR=8.2						
PDMCI	Parker Dam,Lak	23.65	322	P	P	13 18 11.0	0.0
	baz=24,SNR=8.7						
X13A	Yucca	23.68	323	P	P	13 18 11.3	+0.1
	baz=24,SNR=17						
W14A	Seligman	23.71	325	⇑P	P	13 18 11.9	+0.4
	baz=24,SNR=15						
WCI	Wyandotte Cave	23.72	21	*e*P	P	13 18 11.3	-0.2
	comp=Z,72nm,0.8s,mb5.2						
WCI	Wyandotte Cave	23.72	21	*e*P	P	13 18 11.3	-0.2
WCI				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.2						
SWSC	Sam W. Stewart	23.76	318	P	P	13 18 12.0	0.0
	baz=24,SNR=8.9						
DVTC	Desert V Tower	23.78	317	⇑P	P	13 18 12.2	-0.1
	baz=24						
BC3	Big Chuckw Mtn	24.00	319	P	P	13 18 14.1	-0.2
	baz=24,SNR=27						
W13A	Hualapai Mount	24.07	324	⇑P	P	13 18 15.6	+0.7
	baz=24,SNR=6.0						
MONP	Monument Peak	24.14	317	⇑P	P	13 18 15.5	0.0
	baz=24,SNR=6.5						
IRM	Iron Mountain	24.16	321	⇓P	P	13 18 15.8	+0.2
	baz=24,SNR=24						
OTAV	Otavalo	24.24	130	*e*P	P	13 18 17.8	+1.3
	comp=Z,4µm,1.8s						
SMCO	Snowmass	24.39	341	*e*P	P	13 18 14.3	-3.4
	comp=Z,221nm,1.7s,mb5.3						
BLO	Bloomington	24.49	20	*e*P	P	13 18 18.6	0.0
	comp=Z,69nm,0.9s,mb5.1						
BLO	Bloomington	24.49	20	*e*P	P	13 18 18.6	0.0
BLO				pmax	pmax		
	comp=Z,69nm,0.9s,mb5.1						
SDDR	Presa de Saban	24.55	80	*e*P	P	13 18 21.1	+1.8
	comp=Z,62nm,1.1s,mb5.0						
ISCO	Idaho Springs	24.57	344	*e*P	P	13 18 21.3	+2.0
	comp=Z,49nm,1.1s,mb5.0						
ISCO	Idaho Springs	24.57	344	*e*P	P	13 18 21.3	+2.0
ISCO				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.0						
BELC	Belle Mtn.	24.57	319	P	P	13 18 19.5	+0.1
	baz=24,SNR=14						
PFO	Pinyon Flat Ob	24.61	318	P	P	13 18 19.9	+0.1
	comp=Z,69nm,1.4s,mb5.0,SNR=5.9						
PFO	Pinyon Flat Ob	24.61	318	*e*P	P	13 18 19.7	0.0
	comp=Z,44nm,1.6s,mb4.7						
PFO	Pinyon Flat Ob	24.61	318	*e*P	P	13 18 19.7	-0.1
PFO				pmax	pmax		
	comp=Z,44nm,1.6s,mb4.7						
PFO	Pinyon Flat Ob	24.61	318	P	P	13 18 18.9	-0.9
	comp=Z,14nm,1.1s,mb4.4,baz=125,slow=7.5,SNR=13						
PFO				LR	LR	13 29 20.1	
	comp=Z,1µm,19.0s,MS4.5,baz=114,slow=40						
PFO	Pinyon Flat Ob	24.61	318	⇓P	P	13 18 19.6	-0.1
	baz=24,SNR=8.6						
U14A	Mt Trumbull	24.67	327	⇑P	P	13 18 20.1	-0.1
	baz=25						
T15A	Red Dirt Ranch	24.73	329	⇑P	P	13 18 21.2	+0.4
	baz=25						
W12A	Cal Nev Ari	24.78	323	⇓P	P	13 18 21.5	+0.2
	baz=25						
GMRC	Granite Mounta	24.88	321	P	P	13 18 22.5	+0.2
	baz=25,SNR=16						
ROSC	El Rosal	24.92	115	P	P	13 18 26.4	+3.6
	comp=Z,12nm,0.8s,mb4.5,baz=111,slow=14,SNR=7.3						
HDIL	Hopedale	25.01	14	*e*P	P	13 18 22.7	-0.6
	comp=Z,34nm,0.6s,mb5.0						
V12A	Nelson	25.07	324	⇑P	P	13 18 24.0	+0.1
	baz=25,SNR=22						
U13A	Pakoon Wash	25.08	326	⇑P	P	13 18 24.7	+0.6
	baz=25						
MURC	Murrieta	25.09	317	⇓P	P	13 18 24.2	+0.1
	baz=25						
T14A	Hurricane	25.12	328	⇓P	P	13 18 24.8	+0.5
	baz=25						
ELN	Prospectdale	25.24	31	*e*P	P	13 18 25.6	+0.2
BBRC	Big Bear Sol-O	25.32	318	⇓P	P	13 18 27.1	+0.9
	baz=25,SNR=6.0						
HEC	Hector,Ludlow	25.33	320	⇑P	P	13 18 26.6	+0.3
	baz=25,SNR=19						
BLA	Blacksburg	25.39	32	*e*P	P	13 18 27.0	+0.2
	comp=Z,70nm,0.7s,mb5.3						
BLA	Blacksburg	25.39	32	*e*P	P	13 18 27.0	+0.2
BLA				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.3						
U12A	Valley of Fire	25.41	325	⇑P	P	13 18 27.2	+0.3
	baz=25,SNR=7.0						
V11A	Goodsprings	25.48	323	⇓P	P	13 18 27.9	+0.3
	baz=25						
TUQ	Turquoise Mtn.	25.49	322	P	P	13 18 28.0	+0.3
	baz=25,SNR=42						
T13A	Saint George	25.51	327	⇓P	P	13 18 28.6	+0.7
	baz=25						
CCUT	Cedar City	25.64	329	*e*P	P	13 18 30.3	+1.3
S14A	Cedar City	25.70	329	⇑P	P	13 18 30.2	+0.6
	baz=26						
T12A	Moapa	25.72	326	⇑P	P	13 18 30.0	+0.3
	baz=26						
RRX	Edison Barstow	25.77	319	⇑P	P	13 18 30.9	+0.5
	baz=26						
CIS	Catalina Islan	25.77	315	⇓P	P	13 18 29.9	-0.5
	baz=26						
BFSC	Mount Baldy St	25.78	318	⇑P	P	13 18 30.3	-0.1
	baz=26						
SHPR	Sheep Range	25.80	325	*e*P	P	13 18 30.9	+0.3
MSU	Marysvale	25.84	332	*e*P	P	13 18 31.5	+0.7
S13A	Holt Ranch, En	25.91	328	⇓P	P	13 18 32.3	+0.8
	baz=26						
GSC	Goldstone	25.93	320	⇑P	P	13 18 31.9	+0.2
	baz=26,SNR=6.3						
PHWY	Pilot Hill	25.94	345	*e*P	P	13 18 32.0	+0.3
SHOC	Shoshone	26.02	322	⇓P	P	13 18 32.3	-0.2
	baz=26						
R14A	James Farms, M	26.06	330	⇓P	P	13 18 33.2	+0.3
	baz=26						
TMUT	Trail Mountain	26.06	334	*e*P	P	13 18 32.9	0.0
DECC	Green Verdugo	26.23	317	⇓P	P	13 18 34.6	+0.1
	baz=26						
T11A	Corn Creek, Al	26.37	326	⇑P	P	13 18 35.7	0.0
	baz=26						
EDW2	Edwards Air Fo	26.40	318	⇑P	P	13 18 35.9	-0.1
	baz=26						
U10A	Ash Meadows, A	26.41	323	⇑P	P	13 18 36.4	+0.4
	baz=26,SNR=5.5						
S12A	Delamar Landin	26.44	327	⇑P	P	13 18 37.0	+0.7
	baz=26						
LRMC	Laurel Mountai	26.59	320	⇓P	P	13 18 37.6	-0.1
	baz=26						
BLG	Laguna Peak	26.63	316	⇓P	P	13 18 37.9	-0.2

baz=27
SDV **Santo Domingo** 26.67 103 eP P 13 18 40.0 +1.4
comp=Z,44nm,0.9s,mb5.0
SDV **Santo Domingo** 26.67 103 P P 13 18 40.2 +1.6
comp=Z,26nm,0.9s,mb4.8,baz=307,slow=3.2,SNR=28
SDV LR LR 13 29 57.2
comp=Z,501nm,21.6s,MS4.0,baz=155,slow=38
ACSO **Alum Creek Sta** 26.70 24 eP P 13 18 38.6 -0.1
comp=Z,68nm,0.9s,mb5.2
OSI **Osito Adit** 26.71 317 ⇑P P 13 18 38.7 -0.1
baz=27
TPNV **Topopah Spring** 26.73 324 eP P 13 18 39.0 +0.1
comp=Z,81nm,1.7s,mb5.0
TPNV **Topopah Spring** 26.73 324 eP P 13 18 39.0 +0.1
TPNV pmax pmax
comp=Z,81nm,1.7s,mb5.0
TPNV **Topopah Spring** 26.73 324 ⇓P P 13 18 39.6 +0.6
baz=27
FURC **Furnace Creek,** 26.75 322 ⇑P P 13 18 39.1 0.0
baz=27
RWWY **Rawlins** 26.77 343 eP P 13 18 39.0 -0.3
comp=Z,138nm,1.6s,mb5.2
MPU **Maple Canyon** 26.84 334 eP P 13 18 40.5 +0.6
comp=Z,25nm,1.3s,mb4.6
MPMC **Manual Prospec** 26.85 321 P P 13 18 40.0 0.0
baz=27,SNR=14
R12A **Pony Springs,** 26.86 328 ⇓P P 13 18 40.8 +0.7
baz=27
S11A **Rachel** 26.95 326 ⇑P P 13 18 41.8 +0.9
baz=27
NLU **North Lily Min** 26.98 334 eP P 13 18 39.3 -1.9
DAU **Daniels Canyon** 27.02 335 eP P 13 18 41.9 +0.4
Q13A **Wheeler Ranch,** 27.05 330 ⇓P P 13 18 42.6 +0.8
baz=27
DAC **Darwin (Calif)** 27.06 321 eP P 13 18 42.3 +0.4
comp=Z,24nm,1.4s,mb4.5
DAC **Darwin (Calif)** 27.06 321 eP P 13 18 42.3 +0.4
DAC pmax pmax
comp=Z,24nm,1.4s,mb4.5
JFWS **Jewell Farm** 27.09 11 eP P 13 18 41.6 -0.5
comp=Z,30nm,0.6s,mb5.0
JFWS **Jewell Farm** 27.09 11 eP P 13 18 41.6 -0.5
JFWS pmax pmax
comp=Z,30nm,0.6s,mb5.0
ARVC **Arvin** 27.09 318 ⇓P P 13 18 42.1 -0.1
baz=27
ISA **Isabella** 27.20 319 ⇓P P 13 18 43.3 +0.1
baz=27
ECSD **EROS,Sioux Fal** 27.30 0 eP P 13 18 43.4 -0.6
comp=Z,24nm,0.9s,mb4.7
R11A **Troy Canyon, C** 27.38 327 ⇑P P 13 18 45.1 +0.3
baz=27
TRCR **Troy Canyon** 27.38 327 eP P 13 18 44.6 -0.2
GRAC **Grapevine Rang** 27.41 323 ⇑P P 13 18 45.4 +0.3
baz=27
P13A **Bates Ranch, G** 27.45 330 ⇓P P 13 18 46.1 +0.8
baz=27
CWC **Cottonwood Cre** 27.46 321 ⇓P P 13 18 45.2 -0.3
baz=27
CTU **Camp Tracy** 27.46 335 eP P 13 18 45.2 -0.3
comp=Z,11nm,0.9s,mb4.4
DUG **Dugway** 27.49 333 eP P 13 18 45.8 +0.1
comp=Z,6.1nm,0.8s,mb4.2
DUG **Dugway** 27.49 333 eP P 13 18 45.8 0.0
DUG pmax pmax
comp=Z,6.0nm,0.8s,mb4.2
DUG **Dugway** 27.49 333 ⇑P P 13 18 46.0 +0.2
baz=27
Q12A **Willow Creek R** 27.52 329 ⇓P P 13 18 46.4 +0.4
baz=28,SNR=8.2
MCWV **Mont Chateau** 27.58 29 eP P 13 18 46.2 -0.4
comp=Z,89nm,1.4s,mb5.2
PKM **Peak Mountain** 27.60 316 ⇑P P 13 18 46.5 -0.3
baz=28
S10A **Tonopah Range,** 27.62 325 ⇓P P 13 18 47.3 +0.4
baz=28
R10A **Warm Springs** 27.72 326 ⇑P P 13 18 48.6 +0.8
baz=28,SNR=7.9
Q11A **Duckwater** 27.79 327 P P 13 18 49.5 +1.0
baz=28,SNR=19
S09A **Goldfield** 27.83 324 P P 13 18 49.2 +0.4
baz=28,SNR=15
P12A **McGill** 27.89 329 ⇑P P 13 18 50.1 +0.8
baz=28,SNR=8.5
N15A **Stansbury Isla** 27.94 334 ⇓P P 13 18 49.7 -0.1
baz=28
SMMC **Simmler** 27.96 317 ⇓P P 13 18 50.2 +0.1
baz=28
TPH **Tonopah** 28.07 324 eP P 13 18 51.3 +0.3
comp=Z,8.9nm,0.8s,mb4.5
TPH **Tonopah** 28.07 324 eP P 13 18 51.3 +0.3
TPH pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
R09A **Tonopah** 28.11 325 ⇑P P 13 18 51.3 +0.1
baz=28,SNR=16
Q10A **Clear Creek Ra** 28.16 326 ⇓P P 13 18 52.8 +1.0
baz=28
HWUT **Hardware Ranch** 28.16 336 eP P 13 18 51.7 -0.1
comp=Z,63nm,1.8s,mb4.9
BGU **Big Grassy Mou** 28.19 334 eP P 13 18 52.0 +0.1
HELL **Mitchell Peak,** 28.19 320 P P 13 18 52.5 +0.5
baz=28,SNR=9.9
N14A **Grayback Hills** 28.19 333 ⇓P P 13 18 52.3 +0.3
baz=28
S08C **White Mtn Res** 28.22 322 P P 13 18 53.2 +1.0
baz=28,SNR=13
RSSD **Black Hills** 28.34 349 eP P 13 18 54.2 +1.0
MTUM **Tungsten Hills** 28.35 322 eP P 13 18 53.5 +0.1
M15A **Larsen Ranch,** 28.39 335 ⇓P P 13 18 54.0 +0.2
baz=28
BW06 **Boulder Array** 28.47 340 eP P 13 18 54.3 -0.2
comp=Z,90nm,2.1s,mb5.0
PDAR **Pinedale Array** 28.47 340 P P 13 18 54.6 +0.2
comp=Z,0.9nm,0.5s,baz=140,slow=5.8,SNR=14
PDAR LR LR 13 31 22.9
comp=Z,2μm,18.7s,MS4.7,baz=175,slow=39
Q09A **Carvers** 28.59 326 ⇓P P 13 18 56.1 +0.5
baz=28
N13A **Wendover, West** 28.65 332 ⇓P P 13 18 56.2 +0.1
baz=29
PKD **Parkfield** 28.70 317 ⇓P P 13 18 56.3 -0.2
baz=29
MLAC **Mammoth Lakes** 28.70 322 ⇓P P 13 18 57.4 +0.8
baz=29
R08A **Mina** 28.76 324 ⇑P P 13 18 58.1 +1.0
baz=29
O11A **Cowboy Ranch,** 28.77 329 ⇑P P 13 18 58.0 +0.9
baz=29,SNR=6.9
P10A **Eureka** 28.79 328 ⇑P P 13 18 57.7 +0.4
baz=29,SNR=6.6
KCC **Kaiser Creek** 28.79 321 P P 13 18 57.6 +0.3
baz=29,SNR=7.4
HVU **Hansel Valley** 28.79 335 eP P 13 18 57.4 0.0
M14A **Sheep Mountain** 28.80 334 ⇓P P 13 18 57.8 +0.4
baz=29
T06C **Millerton Lake** 28.82 320 ⇓P P 13 18 56.7 -1.0
baz=29
SDMD **Soldier's Deli** 28.90 33 eP P 13 19 01.7 +3.4
comp=Z,22nm,0.8s,mb5.0
NVAR **Mina Array Bea** 28.93 324 P P 13 18 58.5 0.0
comp=Z,26nm,1.2s,mb4.8,baz=134,slow=8.8,SNR=64
Q08A **Gabbs** 29.02 325 ⇑P P 13 18 59.8 +0.4
baz=29,SNR=11
N12A **Clover Valley,** 29.03 331 ⇑P P 13 18 59.8 +0.4
baz=29
M13A **Montello** 29.04 333 ⇑P P 13 19 00.0 +0.5
baz=29,SNR=10
P09A **Austin** 29.09 327 ⇑P P 13 19 00.7 +0.7
baz=29
R07C **Lee Vining** 29.13 322 ⇑P P 13 19 01.2 +0.8
baz=29,SNR=5.5
SSPA **Standing Stone** 29.28 30 eP P 13 19 02.1 +0.4
comp=Z,91nm,1.3s,mb5.3
O10A **Cortez Mining,** 29.31 328 ⇑P P 13 19 02.7 +0.8
baz=29
SJG **San Juan** 29.41 82 LR LR 13 31 27.6
comp=Z,412nm,20.5s,MS4.0,baz=283,slow=37
M12A **Wells** 29.42 332 ⇓P P 13 19 03.6 +0.7
baz=29
S05C **Merced** 29.42 320 ⇑P P 13 19 02.9 -0.1
baz=29
REDW **Red Top Meadow** 29.43 339 eP P 13 19 00.6 -2.4
comp=Z,158nm,1.9s,mb5.4
S06C **San Francisco** 29.47 321 ⇓P P 13 19 03.5 +0.1
baz=29
SNOW **Snow King Moun** 29.49 339 eP P 13 19 04.4 +1.0
comp=Z,100nm,1.4s,mb5.3
L13A **Double Diamond** 29.54 334 ⇑P P 13 19 04.3 +0.4
baz=30
ATAH **Atahualpa** 29.56 140 P P 13 19 06.4 +2.0
comp=Z,13nm,0.9s,mb4.6,baz=311,slow=7.8,SNR=7.8
ATAH LR LR 13 29 02.0
comp=Z,1μm,18.3s,MS4.5,baz=322,slow=32
O09A **Fish Creek Ran** 29.57 327 ⇑P P 13 19 04.7 +0.5
baz=30,SNR=9.0
LOHW **Long Hollow** 29.57 340 eP P 13 19 04.5 +0.3
comp=Z,32nm,1.1s,mb5.0
TPAW **Teton Pass** 29.58 339 eP P 13 19 04.8 +0.5
comp=Z,138nm,1.8s,mb5.4
MVL **Millersville** 29.59 33 eP P 13 19 04.1 -0.3
comp=Z,47nm,1.3s,mb5.1
K14A **Jones Ranch, D** 29.60 335 ⇑P P 13 19 04.5 0.0
baz=30
HAST **UC Hastings Re** 29.62 317 ⇑P P 13 19 04.8 +0.1
baz=30
WAKR **Walker** 29.63 323 eP P 13 19 04.8 -0.1
R06C **Coleville** 29.65 323 ⇑P P 13 19 05.6 +0.6
baz=30,SNR=9.2
P08A **Dixie Valley** 29.69 326 ⇓P P 13 19 06.2 +0.9
baz=30
MOOW **Moose Ponds** 29.74 340 eP P 13 19 05.3 -0.4
comp=Z,132nm,2.4s,mb5.2
BMN **Battle Mountai** 29.78 328 eP P 13 19 06.4 +0.4
comp=Z,7.3nm,1.0s,mb4.4
BMN **Battle Mountai** 29.78 328 eP P 13 19 06.4 +0.3
BMN pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
PACP **Pacheco Peak** 29.81 318 ⇑P P 13 19 06.4 -0.1
baz=30
M11A **Holland Ranch,** 29.83 331 ⇑P P 13 19 07.4 +0.8
baz=30,SNR=5.3
CMB **Columbia Colle** 29.89 321 eP P 13 19 07.0 -0.2
comp=Z,12nm,1.2s,mb4.5
CMB **Columbia Colle** 29.89 321 eP P 13 19 07.0 -0.1
CMB pmax pmax
comp=Z,12nm,1.2s,mb4.5
CMB **Columbia Colle** 29.89 321 ⇑P P 13 19 07.2 0.0
baz=30,SNR=5.4
IMW **Indian Meadow** 29.93 339 eP P 13 19 06.8 -0.7
comp=Z,70nm,1.9s,mb5.1
P07A **Fallon** 30.03 325 ⇑P P 13 19 09.3 +1.0
baz=30
L12A **House Creek Ra** 30.05 333 ⇑P P 13 19 08.7 +0.2
baz=30
K13A **Stover Farm, H** 30.05 334 ⇓P P 13 19 08.8 +0.3
baz=30
R05C **Kirkwood Meado** 30.14 322 ⇑P P 13 19 10.2 +0.9
baz=30,SNR=8.2
N09A **Rock Creek Ran** 30.24 328 ⇑P P 13 19 10.6 +0.4
baz=30
M10A **I.L. Ranch, Tu** 30.26 330 ⇑P P 13 19 11.0 +0.7
baz=30
LKWY **Lake** 30.35 341 eP P 13 19 12.2 +1.1
comp=Z,37nm,1.5s,mb4.9
LKWY **Lake** 30.35 341 eP P 13 19 12.2 +1.1
LKWY pmax pmax
comp=Z,37nm,1.5s,mb4.9
WCN **Washoe City** 30.35 323 ⇓P P 13 19 12.1 +0.9
baz=30,SNR=9.7
R04C **Big Horse Ranc** 30.37 321 ⇓P P 13 19 11.9 +0.6
baz=30
K12A **Draper Farm, C** 30.39 333 ⇓P P 13 19 11.8 +0.3
baz=30
PAHR **Pah Rah Range** 30.42 324 eP P 13 19 11.9 +0.1
comp=Z,57nm,1.6s,mb5.0
O07A **Toulon** 30.45 326 ⇓P P 13 19 12.4 +0.3
baz=30,SNR=14
WENL **Wente Brothers** 30.48 319 ⇑P P 13 19 13.0 +0.7
baz=30
RLMT **Red Lodge** 30.52 343 eP P 13 19 13.4 +0.9
comp=Z,26nm,1.2s,mb4.9
LAVA **Lap Cap Winer** 30.57 322 P P 13 19 13.5 +0.4
baz=30,SNR=5.9
YMR **Madison River** 30.63 340 eP P 13 19 14.3 +0.8
comp=Z,59nm,1.5s,mb5.2
M09A **Marrel Ranch,** 30.63 329 ⇓P P 13 19 14.3 +0.7
baz=31,SNR=13
L10A **Juniper Basin** 30.66 331 ⇑P P 13 19 14.2 +0.4
baz=31
P06A **Stead Airport,** 30.69 324 ⇓P P 13 19 15.1 +1.0
baz=31
J13A **Cove Ranch, Pi** 30.71 335 ⇓P P 13 19 14.5 +0.2
baz=31
P05C **Yuba Gap, Truc** 30.85 323 ⇓P P 13 19 16.2 +0.6
baz=31,SNR=7.1
QLMT **Earthquake Lak** 30.92 340 eP P 13 19 17.3 +1.1
HLID **Hailey** 30.94 335 eP P 13 19 16.0 -0.3
comp=Z,7.1nm,0.9s,mb4.5
HLID **Hailey** 30.94 335 ⇓P P 13 19 16.8 +0.4
baz=31,SNR=6.7
N07B **Gerlach** 30.94 326 ⇓P P 13 19 16.5 +0.2
baz=31
O06A **Flanigan** 30.98 325 P P 13 19 17.6 +0.8
baz=31,SNR=27
Q04C **Lincoln** 31.00 321 ⇓P P 13 19 17.9 +1.0
baz=31
BEKR **Beckwourth** 31.08 324 P P 13 19 18.5 +0.9
baz=31,SNR=27
I13A **Wildhorse Cree** 31.12 336 ⇓P P 13 19 18.4 +0.6
baz=31
M08A **Happy Creek Ra** 31.12 328 ⇓P P 13 19 18.0 +0.1
baz=31
L09A **Wilkinson Ranc** 31.18 329 ⇑P P 13 19 18.7 +0.2
baz=31,SNR=7.4
GCMT **Greycliff** 31.24 343 eP P 13 19 19.2 +0.2
OHCM **Honcut** 31.38 322 eP P 13 19 20.2 -0.1
N06A **Buffalo Meadow** 31.39 325 ⇓P P 13 19 20.9 +0.6
baz=31,SNR=40
BINY **Binghamton** 31.40 31 eP P 13 19 19.9 -0.5
comp=Z,39nm,0.8s,mb5.3
MCMT **McKenzie Canyo** 31.41 338 eP P 13 19 22.0 +1.5
MFID **Camas Ranch** 31.42 333 ⇓P P 13 19 20.9 +0.3
baz=31
O05C **Quincy** 31.46 323 ⇑P P 13 19 21.8 +0.9
baz=31
SUTB **Sutter Butte** 31.50 321 ⇑P P 13 19 21.5 +0.2
baz=31
ORV **Oroville** 31.53 322 ⇑P P 13 19 22.2 +0.6
baz=32,SNR=7.4
G15A **Dillon** 31.58 339 ⇓P P 13 19 22.8 +0.9
baz=32,SNR=16
L08A **Fields** 31.65 329 P P 13 19 23.0 +0.4
baz=32,SNR=13
BOZ **Bozeman (W)** 31.71 340 eP P 13 19 22.9 -0.2
BOZ **Bozeman (W)** 31.71 340 ⇓P P 13 19 23.2 +0.1
baz=32
H13A **Challis** 31.71 336 ⇓P P 13 19 23.4 +0.3
baz=32
K09A **Rome** 31.73 330 P P 13 19 23.8 +0.5
baz=32,SNR=11
DLMT **Dillon** 31.79 339 eP P 13 19 23.2 -0.6
comp=Z,32nm,0.9s,mb5.2
ELFS **Eagle Lake Fie** 31.79 324 ⇑P P 13 19 24.6 +0.7
baz=32,SNR=12
O04C **Chester** 31.79 324 P P 13 19 24.9 +1.0
baz=32,SNR=20
AGMN **Agassiz Refuge** 31.88 1 eP P 13 19 24.2 -0.3
H12A **Diamond D Ranc** 31.94 335 ⇑P P 13 19 25.9 +0.7
baz=32,SNR=26
WVOR **Wild Horse Val** 31.97 329 eP P 13 19 25.4 0.0
comp=Z,41nm,1.5s,mb5.0
WVOR **Wild Horse Val** 31.97 329 eP P 13 19 25.4 0.0
WVOR pmax pmax
comp=Z,41nm,1.5s,mb5.0
PCRV **Puerto La Cruz** 31.98 97 P P 13 19 26.1 +0.3
comp=Z,8.9nm,0.8s,mb4.6,baz=180,slow=1.0,SNR=2.1
PCRV LR LR 13 34 30.7
comp=Z,279nm,18.0s,MS4.0,baz=97,slow=40
G14A **Jackson** 31.99 338 ⇓P P 13 19 26.2 +0.6
baz=32,SNR=6.0
L07A **Adell** 32.03 328 P P 13 19 26.5 +0.6
baz=32,SNR=12
SADO **Sadowa** 32.05 24 P P 13 19 25.1 -0.9
baz=249,slow=11
M06C **Likely Place G** 32.05 325 P P 13 19 27.0 +0.9
baz=32,SNR=36
K08A **Mann Creek Ran** 32.12 329 ⇑P P 13 19 27.6 +0.8
baz=32,SNR=9.7
LRM **Limekiln Ridge** 32.14 339 eP P 13 19 26.3 -0.6
G13A **Cobalt** 32.15 337 P P 13 19 27.6 +0.6
baz=32,SNR=8.4
F15A **Butte** 32.17 339 ⇓P P 13 19 27.5 +0.4
baz=32,SNR=16
J09A **Fry Pan Ranch,** 32.24 331 ⇑P P 13 19 28.2 +0.5
baz=32,SNR=9.8
LBCM **Butte Creek Ri** 32.29 324 P P 13 19 28.4 +0.1
GASB **Alder Springs** 32.32 321 ⇓P P 13 19 29.3 +0.7
baz=32
HATC **Hat Creek Radi** 32.34 324 ⇓P P 13 19 29.1 +0.4
baz=32,SNR=5.1
I10A **Payette** 32.38 333 ⇑P P 13 19 29.6 +0.6
baz=32
MOD **Modoc** 32.45 326 eP P 13 19 29.2 -0.4
comp=Z,43nm,1.2s,mb5.2
MOD **Modoc** 32.45 326 P P 13 19 30.0 +0.4
baz=32,SNR=11
F14A **Wisdom** 32.45 338 ⇓P P 13 19 30.0 +0.5
baz=32,SNR=7.6
K07A **Rock Creek Ran** 32.47 329 P P 13 19 30.4 +0.6
baz=32,SNR=19
M05C **Lookout** 32.53 325 ⇑P P 13 19 30.7 +0.4
baz=32,SNR=8.5
H11A **Donnelly** 32.54 334 ⇑P P 13 19 30.6 +0.2
baz=32,SNR=12
J08A **Circle Bar Ran** 32.59 330 P P 13 19 31.3 +0.5
baz=32,SNR=7.0
I09A **Lost Marbles R** 32.71 332 ⇑P P 13 19 31.8 -0.1
baz=33,SNR=9.8
E15A **Deer Lodge** 32.73 340 ⇑P P 13 19 32.6 +0.6
baz=33,SNR=6.6
F13A **Darby** 32.78 337 ⇑P P 13 19 32.4 0.0
baz=33,SNR=12
L05A **Lakeview** 32.83 326 P P 13 19 33.7 +0.8
baz=33,SNR=23
LASM **Arnica Sink** 32.93 325 P P 13 19 34.1 +0.2
J07A **Hines** 33.00 329 ⇓P P 13 19 34.4 -0.1
baz=33
E14A **Clinton** 33.01 339 ⇑P P 13 19 34.6 +0.1
baz=33,SNR=6.0
M03C **McCloud** 33.02 324 ⇓P P 13 19 34.0 -0.6
baz=33
I08A **Drewsey** 33.05 331 ⇑P P 13 19 34.9 0.0
baz=33
K06A **Valley Falls** 33.05 328 ⇑P P 13 19 35.1 +0.2
baz=33
F12A **Elk City** 33.10 336 ⇓P P 13 19 35.5 +0.3
baz=33,SNR=19
M04C **Macdoel** 33.20 325 P P 13 19 36.4 +0.2
baz=33,SNR=9.3
BMO **Blue Mountains** 33.21 333 eP P 13 19 35.7 -0.5
G11A **Walters Elk Ra** 33.21 335 P P 13 19 36.3 +0.1
baz=33,SNR=24
H09A **Durkee** 33.22 333 P P 13 19 36.0 -0.3
baz=33,SNR=14
D15A **Lincoln** 33.23 340 ⇑P P 13 19 36.3 -0.1
baz=33,SNR=9.1
E13A **Victor** 33.28 338 ⇓P P 13 19 36.7 -0.1
baz=33,SNR=8.3
EGMT **Eagleton** 33.31 344 eP P 13 19 36.4 -0.7
EGMT **Eagleton** 33.31 344 ⇑P P 13 19 37.2 +0.2
baz=33
K05A **Summer Lake** 33.34 327 ⇓P P 13 19 37.8 +0.5
baz=33
CHMT **Chamberlain Mo** 33.36 339 eP P 13 19 36.9 -0.6
N02C **Big Bar** 33.41 322 ⇑P P 13 19 37.8 -0.2
baz=33
ACCN **Adirondack Com** 33.42 31 eP P 13 19 37.6 -0.6
G10A **Bishop Farm, J** 33.48 334 P P 13 19 38.3 -0.3
baz=33,SNR=14
MSO **Missoula** 33.52 339 eP P 13 19 38.5 -0.4
comp=Z,4.8nm,0.9s,mb4.4
H08A **Prairie City** 33.56 331 P P 13 19 39.3 0.0
baz=34,SNR=9.3
F11A **Grangeville** 33.56 335 ⇓P P 13 19 38.6 -0.7
baz=34
NCB **Newcomb** 33.58 30 eP P 13 19 38.9 -0.6
comp=Z,112nm,1.4s,mb5.6
D14A **Greenough** 33.59 339 ⇓P P 13 19 39.4 -0.1
baz=34,SNR=7.9
I07A **Izee** 33.62 330 ⇑P P 13 19 39.7 -0.2
baz=34
YBH **Yreka Blue Hor** 33.65 324 ⇓P P 13 19 39.6 -0.5
baz=34
KHMM **Horse Mountain** 33.69 322 eP P 13 19 40.1 -0.4
K04A **Chilquin** 33.70 326 ⇑P P 13 19 40.5 -0.1
baz=34
ULM **Lac du Bonnet** 33.83 1 P P 13 19 39.7 -1.9
ULM **Lac du Bonnet** 33.83 1 P P 13 19 39.7 -1.9
comp=Z,3.9nm,0.8s,mb4.4,baz=181,slow=13,SNR=4.0
ULM LR LR 13 34 44.5
comp=Z,870nm,19.0s,MS4.5,baz=201,slow=38
I06A **Prineville** 33.86 329 ⇑P P 13 19 41.5 -0.5
baz=34
LONY **Lake Ozonia** 33.90 29 eP P 13 19 41.6 -0.6
comp=Z,30nm,0.8s,mb5.3
J05A **Fort Rock** 33.91 327 ⇑P P 13 19 41.8 -0.5
baz=34
D13A **Huson** 33.94 338 ⇑P P 13 19 42.1 -0.4
baz=34,SNR=8.8
E11A **Bogner Ranch,** 33.97 336 ⇑P P 13 19 41.7 -1.1
baz=34,SNR=12
MSNY **Massena** 34.06 28 eP P 13 19 44.3 +0.7
F10A **Beach Ranch, E** 34.07 334 ⇑P P 13 19 43.1 -0.6
baz=34,SNR=15
F09A **S2 Ranch, Elgi** 34.15 333 ⇓P P 13 19 44.0 -0.4
baz=34
G08A **Pilot Rock** 34.28 332 P P 13 19 45.1 -0.5
baz=34,SNR=8.1
J04A **Umpqua Nationa** 34.34 327 ⇑P P 13 19 45.9 -0.2
baz=34,SNR=9.2
E10A **Myers Farm, Un** 34.44 335 ⇑P P 13 19 45.9 -0.9
baz=34
NNA **Nana** 34.44 144 LR LR 13 31 25.5
comp=Z,825nm,18.1s,MS4.5,baz=328,slow=32
C13A **Hot Springs** 34.48 339 ⇓P P 13 19 46.8 -0.4
baz=34
VIPM **Ingram Point** 34.48 329 P P 13 19 47.2 -0.1
H06A **Lindquist Farm** 34.51 330 ⇓P P 13 19 47.3 -0.2
baz=34
FRNY **Flat Rock** 34.53 30 eP P 13 19 46.9 -0.8
comp=Z,47nm,1.2s,mb5.3
I05A **Bend** 34.55 328 ⇓P P 13 19 47.5 -0.4
baz=34
G07A **Ruggs Ranch, H** 34.59 331 ⇓P P 13 19 47.7 -0.5
baz=34
BSMT **Bassoo Peak** 34.70 339 eP P 13 19 48.6 -0.5
I04A **Tendick Farm,** 34.88 327 ⇑P P 13 19 50.3 -0.4
baz=35
J03A **Ideyld Park** 34.88 326 ⇓P P 13 19 50.1 -0.6
baz=35
E09A **Wood Farm, Sta** 34.88 334 ⇑P P 13 19 50.4 -0.4
baz=35
LBNH **Lisbon** 34.92 32 eP P 13 19 50.5 -0.6
comp=Z,43nm,1.0s,mb5.3
LBNH **Lisbon** 34.92 32 eP P 13 19 50.5 -0.6
LBNH pmax pmax
comp=Z,43nm,1.0s,mb5.3
IRO **Indian Ridge** 34.94 327 P P 13 19 51.3 +0.1
D10A **Wagner Farm, O** 34.96 335 ⇑P P 13 19 50.7 -0.7
baz=35
B13A **Whitefish** 35.04 339 ⇓P P 13 19 52.0 0.0
baz=35,SNR=13
J02A **Umpqua** 35.21 325 ⇑P P 13 19 53.0 -0.6
baz=35
H04A **Detroit Lake** 35.38 328 ⇑P P 13 19 54.5 -0.6
baz=35,SNR=7.6
D09A **Jones Farm, Ri** 35.39 334 ⇑P P 13 19 54.2 -0.9
baz=35
WALA **Waterton Lakes** 35.45 341 eP P 13 19 55.0 -0.6
comp=Z,12nm,0.8s,mb4.9
I03A **Eugene** 35.45 326 ⇑P P 13 19 55.5 -0.2
baz=35,SNR=6.9
F06A **Goldendale** 35.48 331 ⇑P P 13 19 55.9 0.0
baz=35
B12A **Libby** 35.51 338 ⇑P P 13 19 56.2 +0.1
baz=35
SSOR **Sweet Springs** 35.64 328 P P 13 19 56.9 -0.4
B11A **Sandpoint** 35.76 338 ⇓P P 13 19 57.8 -0.4
baz=36
F05A **White Salmon** 35.89 330 ⇓P P 13 19 59.8 +0.4
baz=36,SNR=5.8
NEW **Newport** 35.90 337 eP P 13 19 58.1 -1.3
comp=Z,13nm,1.1s,mb4.8
NEW **Newport** 35.90 337 eP P 13 19 58.1 -1.3
NEW pmax pmax
comp=Z,13nm,1.1s
A12A **Yaak River Ran** 35.92 339 ⇑P P 13 19 59.6 -0.1
baz=36,SNR=11
H03A **Soap Creek Ran** 35.94 327 ⇓P P 13 20 00.1 +0.2
baz=36
C09A **Chrisman Ranch** 35.97 335 ⇑P P 13 19 59.8 -0.2
baz=36,SNR=5.4
E06A **Yakima** 36.15 331 ⇑P P 13 20 01.7 0.0
baz=36,SNR=12

A11A Hall Mountain, 36.19 338 ⇑P P **13 20 01.8 -0.1**
baz=36,SNR=9.8
EBG Ellensburg 36.24 332 P P **13 20 03.1 +0.7**
C08A Higginbotham F 36.27 335 ⇓P P **13 20 02.4 -0.2**
baz=36,SNR=9.0
F04A Amboy 36.39 330 ⇓P P **13 20 03.4 -0.2**
baz=36
B09A Rice 36.42 336 ⇓P P **13 20 03.4 -0.5**
baz=36,SNR=11
TBM Table Mountain 36.45 333 P P **13 20 04.6 +0.4**
D06A Cle Elum 36.58 332 ⇑P P **13 20 05.4 +0.1**
baz=36
C07A Waterville 36.62 334 ⇓P P **13 20 05.2 -0.4**
baz=36,SNR=6.1
B08A Colville Reser 36.84 335 P P **13 20 07.3 -0.2**
baz=37,SNR=7.9
PKME Peaks-Kenny Pk 36.98 33 *e*P P **13 20 08.2 -0.5**
comp=Z,25nm,0.9s,mb5.0
E04A Onalaska 37.01 330 ⇓P P **13 20 08.9 -0.1**
baz=37
D05A Enumclaw 37.10 331 ⇓P P **13 20 09.5 -0.2**
baz=37
B07A Winthrop 37.24 334 ⇑P P **13 20 10.4 -0.5**
baz=37
A08A Turner Farm, O 37.29 336 ⇓P P **13 20 10.8 -0.4**
baz=37
E03A Lebam 37.38 329 ⇓P P **13 20 12.0 -0.1**
baz=37
GNW Green Mountain 37.76 331 *e*P P **13 20 14.8 -0.5**
A07A Ashnola River, 37.81 335 ⇓P P **13 20 15.8 +0.1**
baz=38
NLWA Neilton Lookou 38.13 330 *e*P P **13 20 18.9 +0.5**
comp=Z,40nm,1.4s,mb5.0
NLWA Neilton Lookou 38.13 330 ⇑P P **13 20 18.5 +0.1**
baz=38
B04A Port Angeles 38.43 331 ⇓P P **13 20 20.6 -0.3**
baz=38
A05A Maple Falls 38.49 333 ⇑P P **13 20 20.6 -0.8**
baz=38
FFC Flin Flon 38.50 355 *e*P P **13 20 21.0 -0.4**
comp=Z,18nm,1.1s,mb4.7
FFC Flin Flon 38.50 355 *e*P P **13 20 21.0 -0.4**
FFC pmax pmax
comp=Z,18nm,1.1s,mb4.7
EDM Edmonton 39.00 344 *e*P P **13 20 25.1 -0.5**
FCC Fort Churchill 42.40 2 *e*P P **13 20 53.1 -0.5**
comp=Z,75nm,1.8s,mb5.0
FCC Fort Churchill 42.40 2 *e*P P **13 20 53.1 -0.5**
FCC pmax pmax
comp=Z,75nm,1.8s,mb5.0
LPAZ La Paz 43.10 137 P P **13 20 59.1 -0.7**
comp=Z,3.6nm,0.9s,mb4.1,baz=344,slow=11,SNR=11
LPAZ LR LR 13 37 14.9
comp=Z,486nm,19.9s,MS4.4,baz=101,slow=34
SCHQ Schefferville 44.86 24 P P **13 21 11.9 -1.5**
comp=Z,6.5nm,0.6s,mb4.6,baz=225,slow=7.1,SNR=28
SCHQ LR LR 13 45 08.7
comp=Z,649nm,18.2s,MS4.6,baz=216,slow=43
RPN Rapa Nui 44.86 196 LR LR 13 35 02.4
comp=Z,640nm,21.6s,MS4.5,baz=211,slow=30
YKA Yellowknife Ar 47.75 349 P P **13 21 34.4 -1.6**
YKA pP pP 13 21 42.6 -2.0
YKA Yellowknife Ar 47.75 349 P P **13 21 34.4 -1.6**
comp=Z,3.7nm,0.6s,mb4.6,baz=154,slow=7.3,SNR=57
YKA pP pP 13 21 42.6 -2.0
comp=Z,5.0nm,0.7s,baz=154,slow=7.4,SNR=13
YKA LR LR 13 44 45.7
comp=Z,212nm,19.1s,MS4.1,baz=230,slow=40
YKW3 Yellowknife Ar 47.81 349 *e*P P **13 21 36.1 -0.4**
DLBC Dease Lake 48.64 337 *e*P P **13 21 44.2 +1.2**
TAOE Nuku Hiva Isla 49.58 243 *e*S S **13 29 03.5 +6.0**
comp=Z,404nm,26.9s
TAOE *e*LR LR 13 35 36.5
comp=Z,3μm,25.4s,baz=61
RKT Rikitea 54.08 225 *e*LR LR 13 37 59.9
comp=Z,1μm,27.5s,baz=38
FCH Farellones 55.55 153⇓ *e*P P **13 22 33.3 -1.4**
DAWY Dawson 55.77 339 *e*P P **13 22 35.8 0.0**
EGAK Eagle 56.81 339 *e*P P **13 22 41.8 -1.5**
comp=Z,5.9nm,0.6s,mb4.8
INK Inuvik 56.90 345 *e*P P **13 22 42.8 -1.1**
comp=Z,1.4nm,0.6s,mb4.2
INK Inuvik 56.90 345 *e*P P **13 22 42.8 -1.1**
INK pmax pmax
comp=Z,1.0nm,0.6s
PMR Palmer 58.20 334 *e*P P **13 22 52.6 -0.6**
comp=Z,13nm,1.3s,mb4.8
PMR Palmer 58.20 334 *e*P P **13 22 52.6 -0.6**
PMR pmax pmax
comp=Z,13nm,1.3s,mb4.8
RES Resolute Bay 58.36 1 *e*P P **13 22 52.5 -1.5**
comp=Z,2μm,1.8s
RES Resolute Bay 58.36 1 *e*P P **13 22 52.5 -1.6**
RES pmax pmax
comp=Z,2μm,1.8s
MCK McKinley 59.11 336 *e*P P **13 22 59.0 -0.5**
comp=Z,29nm,1.3s,mb5.2
MCK McKinley 59.11 336 *e*P P **13 22 59.0 -0.5**
MCK pmax pmax
comp=Z,29nm,1.3s,mb5.2
COLA College 59.26 337 *e*P P **13 22 59.4 -1.0**
comp=Z,9.9nm,0.9s,mb4.8
COLA College 59.26 337 *e*P P **13 22 59.4 -1.0**
COLA pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
SVW2 Sparrevohn 60.86 332 *e*P P **13 23 10.0 -1.5**
TTA Tatalina 61.69 334 *e*P P **13 23 15.4 -1.7**
comp=Z,17nm,1.3s,mb5.0
TTA Tatalina 61.69 334 *e*P P **13 23 15.4 -1.7**
TTA pmax pmax
comp=Z,17nm,1.3s,mb5.0
PLCA Paso Flores 61.84 158 P P **13 23 15.2 -3.1**
PLCA LR LR 13 44 31.8
PLCA Paso Flores 61.84 158 P P **13 23 15.2 -3.1**
comp=Z,20nm,1.0s,mb5.2,baz=331,slow=9.9,SNR=37
PLCA LR LR 13 44 31.8
comp=Z,642nm,18.6s,MS4.8,baz=347,slow=31
PPT Papeete 61.87 239 *e*LR LR 13 26 18.3
comp=Z,179nm,25.0s
PPT Papeete 61.87 239 *e*S S **13 31 45.0 +3.8**
comp=Z,595nm,28.0s
PPT *e*LR LR 13 41 21.3
comp=Z,1μm,25.8s,baz=55
PPT Papeete 61.87 239 LR LR 13 41 59.8
comp=Z,734nm,20.4s,MS4.8,baz=67,slow=28
IMA2 Indian Mountai 61.97 337 *e*P P **13 23 17.1 -1.8**
TRQA Tornquist 63.28 150 *e*P P **13 23 25.0 -3.0**
comp=Z,22nm,1.3s,mb5.1
RCBR Riachuelo 64.23 105 *e*P P **13 23 35.4 +0.6**
comp=Z,24nm,1.0s,mb5.2
TBI Tubuai 64.77 234 *e*LR LR 13 42 53.3
comp=Z,1μm,26.2s,baz=61
TNA Tin City 67.40 335 *e*P P **13 23 53.5 -0.9**
comp=Z,20nm,1.2s,mb5.0
DAG Danmarks Havn 71.51 14⇓ *e*P P **13 24 25.9 +6.3**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DAG Danmarks Havn 71.51 14⇓ *i*P P **13 24 25.9 +6.3**
comp=Z,9.7nm,0.8s,mb4.8
BILL Bilibino 77.51 338⇓ *e*P P **13 24 53.7 -0.9**
BILL *e* 13 27 48.8
BILL *e*S S 13 34 42.1 -1.5
BILL pmax pmax
comp=Z,15nm,1.2s,mb4.8
EKA Eskdalemuir Ar 78.83 36 P P **13 25 01.4 -0.7**
comp=Z,4.8nm,1.0s,mb4.4,baz=284,slow=4.2,SNR=4.2
EVO Evora 79.16 53 *e*P P **13 25 03.7 -0.6**
comp=Z,8.0nm,0.8s,mb4.4
EVO *e*MLR MLR
comp=Z,876nm,20.2s,MS4.8
ROSF Rostrenen 80.34 42 *e*P P **13 25 09.9 -0.6**
QUIF Quistinic 80.52 43 *e*P P **13 25 11.0 -0.4**
comp=Z,20nm,1.1s,mb4.7
QUIF Quistinic 80.52 43 *e*P P **13 25 11.0 -0.4**
comp=Z,9.9nm,1.1s,mb4.7
QUIF Quistinic 80.52 43 *e*P P **13 25 11.0 -0.4**
QUIF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
SGMF Saint Gilles 80.83 42 *e*P P **13 25 12.4 -0.7**
GRR Gorron 81.89 42 *e*P P **13 25 18.6 -0.1**
comp=Z,24nm,1.0s,mb4.8
GRR Gorron 81.89 42 *e*P P **13 25 18.6 -0.1**
comp=Z,12nm,1.0s,mb4.8
GRR Gorron 81.89 42 *e*P P **13 25 18.6 -0.1**
GRR pmax pmax
comp=Z,12nm,1.0s,mb4.8
ESDC Sonseca Array 81.97 51 P P **13 25 19.5 +0.2**
comp=Z,1.4nm,0.7s,mb4.0,baz=290,slow=4.7,SNR=7.9
ESDC pP pP 13 25 27.8 -0.5
comp=Z,1.6nm,0.7s,baz=295,slow=5.9,SNR=4.2
ESDC LR LR 13 59 20.8
comp=Z,447nm,19.4s,MS4.8,baz=285,slow=34
ESLA Sonseca Array 81.97 51 *e*P P **13 25 19.6 +0.3**
comp=Z,3.9nm,1.4s,mb4.1
FLN La Foliniere 82.03 42 *e*P P **13 25 19.4 -0.1**
comp=Z,24nm,1.0s,mb4.8
FLN *e*MLR MLR
comp=Z,880nm,22.0s,MS4.8
FLN La Foliniere 82.03 42 *e*P P **13 25 19.4 -0.1**
comp=Z,12nm,1.0s,mb4.8
FLN LR LR
comp=Z,880nm,22.0s,MS5.1
FLN La Foliniere 82.03 42 *e*P P **13 25 19.4 -0.1**
FLN pmax pmax
comp=Z,12nm,1.0s,mb4.8
FLN MLR MLR
comp=Z,880nm,22.0s,MS5.1
LDF La Druitiere 82.31 42 *e*P P **13 25 20.7 -0.2**
comp=Z,27nm,1.1s,mb4.8
LDF La Druitiere 82.31 42 *e*P P **13 25 20.7 -0.2**
comp=Z,14nm,1.1s,mb4.8
LDF La Druitiere 82.31 42 *e*P P **13 25 20.7 -0.2**
LDF pmax pmax
comp=Z,14nm,1.1s,mb4.8
MFF Saint Martin d 82.84 44 *e*P P **13 25 23.3 -0.4**
comp=Z,18nm,1.0s,mb4.8
MFF Saint Martin d 82.84 44 *e*P P **13 25 23.3 -0.4**
comp=Z,8.8nm,1.0s,mb4.7
MFF Saint Martin d 82.84 44 *e*P P **13 25 23.3 -0.4**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
SJPF Ste Jean 83.06 47 *e*P P **13 25 24.7 -0.2**
MDT Midelt 83.19 58 P P **13 25 26.2 +0.3**
comp=Z,2.5nm,0.8s,mb4.3,baz=276,slow=6.4,SNR=3.2
MDT pP pP 13 25 35.0 +0.2
comp=Z,2.0nm,0.7s,baz=317,slow=5.7,SNR=3.6
ETSF Etsaut 83.59 47 *e*P P **13 25 27.5 -0.2**
comp=Z,26nm,1.3s,mb4.9
ETSF Etsaut 83.59 47 *e*P P **13 25 27.5 -0.2**
comp=Z,13nm,1.3s,mb4.9
ETSF Etsaut 83.59 47 *e*P P **13 25 27.5 -0.2**
ETSF pmax pmax
comp=Z,13nm,1.3s,mb4.9
LFF La Frestale 83.91 45 *e*P P **13 25 29.0 -0.3**
EPF Esparros 84.18 47 *e*P P **13 25 30.7 0.0**
comp=Z,51nm,1.4s,mb5.1
EPF Esparros 84.18 47 *e*P P **13 25 30.7 0.0**
comp=Z,25nm,1.4s,mb5.2
EPF Esparros 84.18 47 *e*P P **13 25 30.7 0.0**
EPF pmax pmax
comp=Z,25nm,1.4s,mb5.2
NB2 NORSAR Subarra 84.32 28 P P **13 25 31.6 +0.6**
comp=Z,1.4nm,0.8s,mb4.1,baz=297,slow=5.1
NB2 NORSAR Subarra 84.32 28 P P **13 25 31.6 +0.6**
NB2 pmax pmax
comp=Z,1.0nm,0.8s,mb4.0
NOA NORSAR Array B 84.32 28 P P **13 25 31.7 +0.7**
NOA pP pP 13 25 40.4 +0.4
NOA LR LR 14 06 23.7
NOA NORSAR Array B 84.32 28 P P **13 25 31.7 +0.7**
NOA *PP pP 13 25 40.4 +0.4
NOA NORSAR Array B 84.32 28 P P **13 25 31.7 +0.7**
comp=Z,3.8nm,0.9s,mb4.5,baz=294,slow=4.7,SNR=6.3
NOA pP pP 13 25 40.4 +0.4
comp=Z,8.1nm,0.9s,baz=299,slow=5.1,SNR=12
NOA LR LR 14 06 23.7
comp=Z,270nm,18.2s,MS4.7,baz=290,slow=38
RJF Les Rejaudoux 84.33 45 *e*P P **13 25 30.8 -0.6**
RJF *e*MLR MLR
comp=Z,966nm,21.8s,MS4.8
RJF Les Rejaudoux 84.33 45 *e*P P **13 25 30.8 -0.6**
RJF MLR MLR
comp=Z,970nm,21.8s,MS5.2
TCF Toulx Ste Croi 84.49 43 *e*P P **13 25 31.7 -0.5**
comp=Z,14nm,0.9s,mb4.8
TCF Toulx Ste Croi 84.49 43 *e*P P **13 25 31.7 -0.5**
comp=Z,7.1nm,0.9s,mb4.8
TCF Toulx Ste Croi 84.49 43 *e*P P **13 25 31.7 -0.5**
TCF pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
BAIF Baives 84.58 39 *e*P P **13 25 32.5 0.0**
SEY Seymchan 84.64 335 *e*P P **13 25 31.4 -1.2**
CAF Calviac 84.81 45 *e*P P **13 25 33.4 -0.4**
BGF Bois d'Agland 84.83 43 *e*P P **13 25 33.4 -0.5**
GIVF Givet 84.94 39 *e*P P **13 25 34.4 0.0**
AVF Avril sur Loir 85.08 43 *e*P P **13 25 34.3 -0.9**
comp=Z,8.1nm,0.8s,mb4.6
AVF Avril sur Loir 85.08 43 *e*P P **13 25 34.3 -0.9**
comp=Z,4.1nm,0.8s,mb4.6
AVF Avril sur Loir 85.08 43 *e*P P **13 25 34.3 -0.9**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SSF Saint Saulge 85.10 42 *e*P P **13 25 34.6 -0.6**
LOR Lormes 85.26 42 *e*P P **13 25 35.6 -0.4**
comp=Z,16nm,0.8s,mb4.9
LOR *e*MLR MLR
comp=Z,502nm,21.0s,MS4.6
LOR Lormes 85.26 42 *e*P P **13 25 35.6 -0.4**
comp=Z,7.8nm,0.8s,mb4.9
LOR LR LR
comp=Z,500nm,21.0s,MS4.9
LOR Lormes 85.26 42 *e*P P **13 25 35.6 -0.4**
LOR pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,500nm,21.0s,MS4.9
ARCES ARCESS Array B 85.36 17 P P **13 25 35.1 -1.0**
ARCES *PP pP 13 25 43.3 -1.9
ARCES ARCESS Array B 85.36 17 P P **13 25 35.1 -1.0**
comp=Z,3.1nm,0.9s,mb4.4,baz=266,slow=3.4,SNR=3.7
ARCES pP pP 13 25 43.3 -1.9
comp=Z,4.5nm,0.8s,baz=286,slow=4.9,SNR=4.2
ARCES LR LR 14 05 46.7
comp=Z,367nm,18.3s,MS4.8,baz=313,slow=37
MTLF Montolieu 85.40 46 *e*P P **13 25 36.5 -0.3**
comp=Z,27nm,1.3s,mb4.9
MTLF Montolieu 85.40 46 *e*P P **13 25 36.5 -0.3**
comp=Z,13nm,1.3s,mb4.9
MTLF Montolieu 85.40 46 *e*P P **13 25 36.5 -0.3**
MTLF pmax pmax
comp=Z,13nm,1.3s,mb4.9
SMF Signal de Mont 85.45 43 *e*P P **13 25 36.1 -0.9**
MEZF Maizieres J'vi 85.61 41 *e*P P **13 25 37.6 -0.2**
LASF Ste Croix 86.30 45 *e*P P **13 25 41.5 +0.3**
comp=Z,32nm,1.2s,mb5.1
VIVF Saint-Julien-l 86.59 44 *e*P P **13 25 42.7 0.0**
HAU Haudompre 86.59 41 *e*P P **13 25 42.1 -0.5**
HAU *e*MLR MLR
comp=Z,402nm,18.7s,MS4.5
HAU Haudompre 86.59 41 *e*P P **13 25 42.1 -0.5**
HAU MLR MLR
comp=Z,400nm,18.7s,MS4.8
MA2 Magadan 86.84 332 *e*P P **13 25 44.0 +0.4**
MA2 pmax pmax
comp=Z,19nm,1.1s,mb5.2
CABF La Chapelle 86.92 42 *e*P P **13 25 43.9 -0.3**
TIXI Tiksi 86.95 347 *e*P P **13 25 42.2 -1.7**
comp=Z,15nm,0.8s,mb5.3
TIXI Tiksi 86.95 347 *d i*P P **13 25 42.5 -1.4**
TIXI *i* pP 13 25 51.0 -2.0
TIXI *i* 13 36 18.0
TIXI pmax pmax
comp=Z,22nm,1.2s,mb5.3
HINF Hinteralfeld 86.98 41 *e*P P **13 25 44.0 -0.5**
CDF Champ du Feu 87.03 40 *e*P P **13 25 44.6 -0.1**
ORIF Oris-en-Rattie 87.37 44 *e*P P **13 25 46.3 -0.2**
ORIF *e*MLR MLR
comp=Z,819nm,22.8s,MS4.8
SMRF Simiane la Rot 87.50 45 *e*P P **13 25 47.3 +0.2**
comp=Z,17nm,1.3s,mb4.8
SMRF Simiane la Rot 87.50 45 *e*P P **13 25 47.3 +0.2**
comp=Z,17nm,1.3s,mb5.1
LPL La Pagne 87.72 43 *e*P P **13 25 48.8 +0.6**
MBDF Montbardon 88.03 44 *e*P P **13 25 49.6 -0.1**
GRA1 Grafenberg Arr 88.93 38 *e*P P **13 25 54.5 +0.7**
comp=Z,6.0nm,1.2s,mb4.8
GRA1 LR LR
comp=Z,500nm,21.1s,MS4.9
GRF Grafenberg Arr 88.93 38 *e*P P **13 25 54.5 +0.7**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.8
GRF MLR MLR
comp=Z,500nm,21.1s,MS4.9
GRF Grafenberg Arr 88.93 38 *e*P P **13 25 54.5 +0.7**
comp=Z,6.0nm,1.2s,mb4.8
GRF *e*L 14 04 39.7
comp=Z,499nm,21.1s
CLL Collm 89.28 36 *e*P P **13 26 03.0 +7.6**
comp=Z,18nm,1.8s,mb5.1
CLL *e*S S 13 36 33.0 -10
CLL *e*sS sS 13 37 08.0 +10
CLL LR LR
comp=Z,500nm,21.2s,MS4.9
CLL Collm 89.28 36 *e*P P **13 26 03.0 +7.6**
CLL *e*S S 13 36 33.0 -10
CLL pmax pmax
comp=Z,18nm,1.8s,mb5.1
CLL MLR MLR
comp=Z,500nm,21.2s,MS4.9
CLL Collm 89.28 36 *e*sP sP 13 26 03.0 -4.7
comp=Z,18nm,1.8s
CLL *e*pSKSac 13 36 33.0
CLL *e*ScS 13 37 08.0
CLL *e*PS PS 13 37 51.0 -0.1
CLL *e*SS SS 13 42 42.0 +4.9
BRG Berggiesshubel 90.01 36 *e*P P **13 25 58.8 0.0**
BRG *i* pP 13 26 07.0 -0.9
BRG pmax pmax
comp=Z,3.0nm,1.0s,mb4.6
BRG pmax pmax
comp=Z,3.0nm,0.8s,mb4.7
BRG Berggiesshubel 90.01 36 *e*P P **13 25 58.8 0.0**
comp=Z,4.8nm,1.0s,mb4.8
BRG *i* pP 13 26 07.0 -0.9
comp=Z,5.5nm,0.8s
LIC Lamto 90.07 84 *e*P P **13 25 58.6 -1.2**
comp=Z,67nm,1.5s,mb5.5
LIC *e*MLR MLR
comp=Z,317nm,21.8s,MS4.4
LIC Lamto 90.07 84 *e*P P **13 25 58.6 -1.2**
comp=Z,34nm,1.5s,mb5.5
LIC LR LR
comp=Z,160nm,21.8s,MS4.4
FINES FINESS Array B 90.34 24 P P **13 25 58.6 -1.5**
comp=Z,1.8nm,0.9s,mb4.4,baz=287,slow=16,SNR=3.7
GERES GERESS Array B 90.76 38 P P **13 26 01.8 -0.5**
comp=Z,0.7nm,0.7s,mb4.1,baz=336,slow=2.9,SNR=5.9
GERES LR LR 14 05 53.5
comp=Z,562nm,19.4s,MS5.0,baz=281,slow=35
KEST Kesra 93.21 51 LR LR 14 04 34.9
comp=Z,139nm,18.5s,MS4.5,baz=247,slow=33
YAK Yakutsk 93.69 340 *e*P P **13 26 13.3 -2.3**
YAK pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
PRGR Permogore 96.79 17 *e*P P **13 26 34.8 +5.0**
AKASG Malin Array Be 98.29 31 LR LR 14 12 38.9
comp=Z,252nm,20.5s,MS4.7,baz=305,slow=36
OBN Obninsk 98.66 25⇑ *e*P P **13 26 39.3 +1.0**
OBN *e*PP pP 13 26 58.0 +11
OBN *e*S SKSac 13 37 08.7 -5.8
OBN pmax pmax
comp=Z,5.0nm,0.5s,mb5.3
MDJ Mudanjiang 106.03 327 PDIF Pdif 13 27 10.3 -0.8
MDJ S Sdif 13 39 02.3 -5.1
MDJ PP PP
comp=Z,117nm,8.1s
MDJ LR LR
comp=N,68nm,28.8s,MS4.2
MDJ LR LR
comp=E,79nm,28.8s,MS4.2
MDJ LR LR
comp=Z,107nm,24.0s,MS4.3
MKAR Makanchi Array 117.15 1 PKP PKPdf 13 31 42.2 -2.3
MKAR PKKPbc PKKPbc 13 42 09.2 -1.0
MKAR Makanchi Array 117.15 1 PKP PKPdf 13 31 42.2 -2.3
comp=Z,0.3nm,0.5s,baz=11,slow=1.5,SNR=3.6
MKAR PKKPbc PKKPbc 13 42 09.2 -1.0
comp=Z,0.2nm,0.4s,baz=183,slow=4.7,SNR=4.1
HHC Hu-ho-hao-te 117.26 336 *e*PKP PKPdf 13 31 44.5 -0.3
HHC SKS SKSdf 13 38 51.8 -3.4
HHC SKKS SKKSac 13 39 47.8 -6.8
HHC PP PP
comp=Z,98nm,5.4s
HHC LR LR
comp=N,247nm,16.6s,MS5.1
HHC LR LR
comp=E,248nm,14.3s,MS5.1
HHC LR LR
comp=Z,239nm,17.8s,MS4.9
WMQ Urumqi 119.98 356 PKP PKPdf 13 31 52.0 +2.0
WMQ PP PP 13 33 19.3 +6.3
WMQ PP PP
comp=Z,118nm,4.5s
WMQ LR LR
comp=N,191nm,20.7s,MS4.8
WMQ LR LR
comp=E,152nm,19.0s,MS4.8
WMQ LR LR
comp=Z,244nm,21.5s,MS4.8
NJ2 Nanjing 120.92 325 *e*PKP PKPdf 13 31 54.0 +1.9
GTA Gaotai 122.38 345 *e*PKP PKPdf 13 31 52.9 -1.8
GTA PKS 13 35 27.3
GTA SKS SKSdf 13 39 01.1 -3.9
GTA PP PP
comp=Z,98nm,9.2s
GTA LR LR
comp=N,221nm,20.6s,MS5.0
GTA LR LR
comp=E,226nm,20.6s,MS5.0
GTA LR LR
comp=Z,208nm,20.3s,MS4.8
XAN Xi'an 124.18 334 PKP PKPdf 13 31 55.8 -2.5
STKA Stephens Creek 125.01 242 *e*P PKPdf 13 31 56.9 -3.0
comp=Z,6.0nm,1.0s
STKA Stephens Creek 125.01 242 PKP PKPdf 13 31 57.1 -2.8
comp=Z,7.3nm,1.0s,baz=112,slow=3.8,SNR=8.9
BOSA Boshof 125.64 114 PKP PKPdf 13 31 59.0 -2.1
comp=Z,6.3nm,1.0s,baz=94,slow=6.6,SNR=5.3
CD2 Chengdu 128.99 337 *e*PKP PKPdf 13 32 05.6 -2.0
CD2 PP PP 13 34 15.9 +2.2
CD2 PKS 13 35 40.6
CD2 PP PP
comp=Z,80nm,10.2s
CD2 LR LR
comp=N,390nm,22.4s,MS5.1
CD2 LR LR
comp=E,320nm,25.2s,MS5.1
CD2 LR LR
comp=Z,260nm,22.8s,MS4.9
WB2 Warramunga Arr 131.31 258 *e*P PKPdf 13 32 09.2 -3.0
WRA Warramunga Arr 131.32 258 PKIKP PKPdf 13 32 09.5 -2.7
WRA 13 32 18.0
WRA Warramunga Arr 131.32 258 PKP PKPdf 13 32 09.5 -2.7
comp=Z,7.2nm,1.0s,baz=79,slow=1.6,SNR=17
WRA pPKP pPKPdf 13 32 18.0 -3.5
comp=Z,2.7nm,0.9s,baz=86,slow=2.2,SNR=5.2
WRA SKPbc SKPbc 13 35 31.5 -3.9
comp=Z,1.0nm,0.8s,baz=85,slow=4.2,SNR=5.5
GYA Guiyang 131.68 331 PDIF Pdif 13 29 04.0 -1.1
GYA PKP PKPdf 13 32 12.8 0.0
GYA PP PP 13 34 34.5 +3.1
GYA PKS 13 35 47.6
GYA SKS SKSdf 13 39 16.8 -5.9
GYA PP PP
comp=Z,120nm,8.9s
GYA LR LR
comp=N,140nm,21.6s,MS5.0
GYA LR LR
comp=E,290nm,22.9s,MS5.0
GYA LR LR
comp=Z,170nm,23.7s,MS4.7
ASAR Alice Springs 131.90 253 PKIKP PKPdf 13 32 10.3 -2.9
ASAR 13 32 19.9
ASAR Alice Springs 131.90 253 PKP PKPdf 13 32 10.3 -2.9
comp=Z,3.2nm,1.0s,baz=105,slow=1.8,SNR=16
ASAR pPKP pPKPdf 13 32 19.9 -2.7
comp=Z,1.4nm,0.7s,baz=78,slow=1.5,SNR=7.4
ASAR SKPbc SKPbc 13 35 35.3 -2.1
comp=Z,2.4nm,1.2s,baz=95,slow=5.3,SNR=5.3
KMI Kunming 134.55 335 PKP PKPdf 13 32 19.3 +1.0
KMI PP PP 13 34 53.3 +3.6
KMI PP PP
comp=Z,169nm,5.0s
KMI LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=N,207nm,19.7s,MS4.9						
KMI				LR	LR		
	comp=E,161nm,21.0s,MS4.9						
KMI				LR	LR		
	comp=Z,244nm,21.6s,MS4.9						
FITZ	**Fitzroy Crossi**	**139.39**	**261**	PKP	PKPdf	13 32 25.1	-2.2
	comp=Z,5.9nm,1.2s,baz=329,slow=12,SNR=3.6						
MBWA	**Marble Bar**	**145.03**	**256**	*e*PKPdf	PKPdf	13 32 32.9	-4.4
NWAO	**Narrogin (SRO)**	**145.05**	**235**	PKP	PKPdf	13 32 33.0	-4.0
	comp=Z,9.7nm,0.9s,baz=110,slow=5.9,SNR=5.2						
KLBR	**Kellerberrin**	**145.06**	**238**	*e*P	PKPbc	13 32 31.4	-5.1
	comp=Z,38nm,1.1s						
HYB	**Hyderabad**	**146.16**	**8**	*e*P	PKPdf	13 32 38.0	-1.4
HYB				*e*		13 32 47.0	
HYB	**Hyderabad**	**146.16**	**8**	*i* PKP	PKPdf	13 32 38.0	-1.4
	comp=Z,40nm,1.0s						
HYB				*e*		13 32 47.0	
HYB				*e*		13 32 55.0	
MUN	**Mundaring**	**146.18**	**237**	*e*P	PKPdf	13 32 36.8	-2.2
PSI	**Prapat**	**155.37**	**319**	PKP	PKPdf	13 32 50.6	-3.1
	comp=Z,4.6nm,0.9s,baz=254,slow=9.4,SNR=4.4						

*IDC **15** 13:21:46.4±1.1, 179N×12066E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.8/18, mbtmp3.7/6, MS3.5/1, Ms1 3.5/1, ms1mx2.9/21, Error ellipse: s-maj=121.7km s-min=18.2km az=66.0*

*ISCJB **15** 13:21:48.5±0.9, 15N±02×120.1E±04, h33km, mb3.7/5, Error ellipse: s-maj=61.4km s-min=14.1km az=153.5*

ISC 15 13:21:51.4±0.9**, 17N**±02×**1206E**±05**, h35km, n10, σ0ˢ55**/9**, mb3.7**/5**, 1C, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**12.22**	**166**	LR	LR	13 30 51.2	
	comp=Z,182nm,18.2s,baz=144,slow=44						
KAKA	**Kakadu**	**18.54**	**141**	*e*P	**Pn**	**13 26 04.9**	**-0.7**
	9.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.30**	**166**	*e*P	**P**	**13 26 24.2**	**-0.2**
	3.3nm,0.5s						
FITZ				*i*		13 26 35.4	
FITZ	**Fitzroy Crossi**	**20.30**	**166**	P	**P**	**13 26 24.6**	**+0.2**
	1.8nm,0.5s,baz=356,slow=15,SNR=16						
WRA	**Warramunga Arr**	**25.40**	**149**	P	**P**	**13 27 15.7**	**0.0**
	1.3nm,0.8s,mb3.5,baz=332,slow=9.4,SNR=3.5						
ASAR	**Alice Springs**	**28.35**	**154**	P	**P**	**13 27 42.5**	**+0.2**
	0.7nm,0.6s,mb3.5,baz=345,slow=14,SNR=21						
STKA	**Stephens Creek**	**38.89**	**151**	P	**P**	**13 29 14.5**	**+0.7**
	1.0nm,0.4s,mb3.9,baz=307,slow=7.7,SNR=4.5						
SONM	**Songino Array**	**47.56**	**347**	P	**P**	**13 30 24.1**	**+0.6**
	0.2nm,0.4s,mb3.5,baz=168,slow=7.4,SNR=3.0						
MKAR	**Makanchi Array**	**55.91**	**329**	P	**P**	**13 31 25.1**	**-0.8**
	0.8nm,0.4s,mb4.1,baz=142,slow=9.5,SNR=6.7						
SYO	**Syowa Base**	**88.35**	**201**	⇑*e*P	**P**	**13 34 33.2**	**-6.0**

IGQ 15 13:23:36.6, 116S×7890W, h15km±6km, Mb4.1, Ms3.9, 15C-11D, Error ellipse: s-maj=3.6km s-min=1.2km az=156.7, Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IGUA	**Igualata**	**0.42**	**141**	⇓P	Pg	13 23 45.9	+0.8
IGUA	**Igualata**	**0.42**	**141**	⇓S	Sg	13 23 52.8	+2.1
BILB	**Tungurahua vol**	**0.49**	**124**	⇑P	Pg	13 23 46.3	0.0
BILB	**Tungurahua vol**	**0.49**	**124**	⇑S	Sg	13 23 55.2	+2.3
JUIV	**Juive**	**0.51**	**121**	⇑P	Pg	13 23 46.3	-0.4
JUIV	**Juive**	**0.51**	**121**	⇑S	Sg	13 23 56.1	+2.6
RETU	**Refugio**	**0.54**	**122**	⇑P	Pg	13 23 47.3	0.0
RETU	**Refugio**	**0.54**	**122**	⇑S	Sg	13 23 58.3	+3.8
RUN5	**Runtun**	**0.54**	**118**	⇑P	Pg	13 23 46.9	-0.4
ARRY	**Arrayan**	**0.56**	**127**	⇑P	Pg	13 23 47.5	-0.2
ULBA	**Ulba**	**0.57**	**120**	⇑P	Pg	13 23 47.4	-0.5
PATA	**Patacocha**	**0.58**	**126**	⇑P	Pg	13 23 48.0	0.0
CAMI	**Rancho Maria**	**0.63**	**40**	⇓P	Pg	13 23 48.8	0.0
TAMB	**Tambo**	**0.71**	**49**	⇓P	Pg	13 23 49.8	-0.6
VC1	**Cotopaxi 1**	**0.72**	**44**	⇓P	Pg	13 23 50.2	-0.4
JUA2	**San Juan 2**	**0.99**	**18**	⇑P	Pb	13 23 55.5	0.0
TERV	**Terraza Guagua**	**1.03**	**17**	⇑P	Pb	13 23 56.5	+0.4
TERV	**Terraza Guagua**	**1.03**	**17**	⇑S	Sb	13 24 13.6	+4.2
GGP	**Refugio Guagua**	**1.03**	**18**	P	Pb	13 23 51.7	-4.4
PINO	**Pino**	**1.04**	**17**	⇓P	Pb	13 23 56.8	+0.5
PINO	**Pino**	**1.04**	**17**	⇓S	Sb	13 24 16.4	+6.6
YANA	**Yana**	**1.09**	**18**	⇓P	Pb	13 23 56.5	-0.7
YANA	**Yana**	**1.09**	**18**	⇓S	Sb	13 24 13.4	+2.2
MAG1	**Magdalena**	**1.39**	**321**	⇑P	Pn	13 24 03.8	+2.4
CAYR	**Refugio Cayamb**	**1.47**	**38**	⇑P	Pn	13 24 04.4	+1.8
COTA	**Cotacachi**	**1.59**	**21**	P	Pn	13 24 07.4	+3.1
LAV3	**Lava3-Reventad**	**1.65**	**50**	⇓P	Pn	13 24 07.4	+2.2
LAV3	**Lava3-Reventad**	**1.65**	**50**	⇓S	Sn	13 24 30.0	+3.9
CONE	**Cono NE Rev Vo**	**1.66**	**49**	P	Pn	13 24 07.0	+1.8
CHIS	**Cerro-Chispas-**	**1.82**	**274**	P	Pn	13 24 13.4	+5.9

*NEIC **15** 13:37:04.5, 16.11N×9724W, h28km, MD4.1(MEX), After MEX.*

MEX 15 13:37:04.0±1.6**, 1615N×9722W, h10km**±13km**, MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.90**	**286**	*i* P	Pg	13 37 18.1	-3.3
PNIG				*i* S	Sg	13 37 30.0	-3.1
VHO	**Vista Hermosa**	**1.03**	**27**	*i* P	Pg	13 37 20.8	-3.0
VHO				*i* S	Sg	13 37 34.4	-2.8
OXX	**Oaxaca**	**1.04**	**27**	*i* P	Pg	13 37 21.0	-3.1
OXX				*i* S	Sg	13 37 32.0	-5.6
HUIG	**Huatulco**	**1.14**	**109**	*i* P	Pb	13 37 22.4	-3.3
HUIG				*i* S	Sb	13 37 37.2	-3.4
UTMO	**Huajuapan**	**1.76**	**342**	*i* P	Pn	13 37 32.6	-1.9
UTMO				*i* S	Sn	13 37 53.7	-3.2
TPIG	**Tehuac#an**	**2.26**	**357**	*i* P	Pn	13 37 37.1	-4.3
TPIG				*i* S	Sn	13 38 05.2	-4.1
CMIG	**Matias Romero**	**2.43**	**67**	*i* P	Pn	13 37 39.9	-3.9
CMIG				*i* S	Sn	13 38 08.5	-5.0
ACX	**Acapulco**	**2.68**	**286**	*i* P	Pn	13 37 42.2	-5.0
ACX				*i* S	Sn	13 38 14.4	-5.3
MEIG	**Mezcala**	**2.89**	**308**	*e*P	Pn	13 37 48.4	-1.7
MEIG				*i* S	Sn	13 38 20.6	-4.3
CAIG	**El Cayaco**	**3.05**	**287**	*i* P	Pn	13 37 48.4	-3.9
CAIG				*i* S	Sn	13 38 24.7	-4.2
PLIG	**Platanillo**	**3.12**	**316**	*e*P	Pn	13 37 54.5	+1.4
PLIG				*i* S	Sn	13 38 35.9	+5.4
PLIG	**Platanillo**	**3.12**	**316**	*i* P	Pn	13 37 52.2	-0.9
PLIG				*i* S	Sn	13 38 27.9	-2.6
PPM	**Popocatepetl**	**3.19**	**335**	*i* P	Pn	13 37 53.7	-0.6
PPM				*i* S	Sn	13 38 29.5	-2.8
IIO	**Organos**	**3.71**	**338**	*e*P	Pn	13 37 58.4	-2.9
IIO				*e*S	Sn	13 38 43.7	-1.3
PTVM	**Pico Tres Padr**	**3.87**	**333**	*e*P	Pn	13 37 58.8	-4.7

*NEIC **15** 13:40:06.2, 3690S×17681E, h286km, MG4.0(WEL), After WEL.*

WEL 15 13:40:06.5±0.4**, 3692S×17682E, h285km**±5km**, ML3.9**/10**, Error ellipse: s-maj=10.2km s-min=8.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.35**	**119**	P	Pn	13 40 47.2	0.0
MXZ				S	S	13 41 18.6	-0.8
MXZ	**Matakaoa Point**	**1.35**	**119**	PN	Pn	13 40 47.2	+0.1
MXZ				SN	S	13 41 18.6	-0.8
URZ	**Urewera**	**1.36**	**170**	P	Pn	13 40 47.5	+0.3
URZ	**Urewera**	**1.36**	**170**	PN	Pn	13 40 47.5	+0.3
URZ				SN	S	13 41 19.3	-0.2
MWZ	**Matawai**	**1.52**	**159**	P	Pn	13 40 48.7	+0.4
MWZ				S	S	13 41 21.6	+0.1
MWZ	**Matawai**	**1.52**	**159**	PN	Pn	13 40 48.7	+0.4
MWZ				SN	S	13 41 21.6	+0.1
PUZ	**Puketiti**	**1.62**	**136**	*e*P	Pn	13 40 49.1	+0.1
PUZ	**Puketiti**	**1.62**	**136**	PN	Pn	13 40 49.1	+0.1
KNZ	**Kokohu**	**2.21**	**163**	*e*P	Pn	13 40 53.9	+0.3
KNZ	**Kokohu**	**2.21**	**163**	PN	Pn	13 40 53.9	+0.3
BKZ	**Black Stump Fm**	**2.26**	**187**	P	Pn	13 40 54.3	+0.2
BKZ	**Black Stump Fm**	**2.26**	**187**	PN	Pn	13 40 54.3	+0.1
TSZ	**Takapari Road**	**3.21**	**192**	*e*P	Pn	13 41 02.8	-0.5
TSZ	**Takapari Road**	**3.21**	**192**	PN	Pn	13 41 02.8	-0.6
DUWZ	**D'Urville Isla**	**4.50**	**209**	PN	Pn	13 41 16.3	-1.2
MRW	**Makara Radio**	**4.62**	**200**	P	Pn	13 41 17.5	-1.4
MRW	**Makara Radio**	**4.62**	**200**	PN	Pn	13 41 17.5	-1.3
TCW	**Tory Channel**	**4.73**	**204**	*e*P	Pn	13 41 18.7	-1.5
TCW	**Tory Channel**	**4.73**	**204**	*e*PN	Pn	13 41 18.7	-1.5
TUWZ	**Tuamarina**	**5.03**	**205**	PN	Pn	13 41 22.2	-1.6
NNZ	**Nelson**	**5.06**	**211**	*e*P	Pn	13 41 22.0	-2.1
NNZ	**Nelson**	**5.06**	**211**	PN	Pn	13 41 22.0	-2.1
QRZ	**Quartz Range**	**5.15**	**219**	*e*P	Pn	13 41 23.0	-2.1
QRZ	**Quartz Range**	**5.15**	**219**	PN	Pn	13 41 23.9	-1.2
THZ	**Tophouse**	**5.71**	**211**	*e*P	Pn	13 41 30.4	-1.5
THZ	**Tophouse**	**5.71**	**211**	PN	Pn	13 41 30.4	-1.5
KHZ	**Kahutara**	**6.05**	**204**	*e*P	Pn	13 41 34.4	-1.5
KHZ	**Kahutara**	**6.05**	**204**	PN	Pn	13 41 34.4	-1.5

IDC 15 14:32:43.4±1.9**, 2653N×4459W, h0km, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/30**, Error ellipse: s-maj=61.1km s-min=33.2km az=108.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.61**	**252**	LR	LR	14 43 43.6	
	comp=Z,84nm,21.0s,baz=70,slow=30						
LPAZ	**La Paz**	**48.32**	**211**	P	P	14 41 27.4	+0.6
	1.2nm,0.8s,baz=40,slow=8.1,SNR=4.5						
PDAR	**Pinedale Array**	**54.57**	**305**	P	P	14 42 14.1	+0.6
	0.2nm,0.6s,baz=97,slow=7.4,SNR=3.6						
YKA	**Yellowknife Ar**	**57.61**	**329**	P	P	14 42 34.4	-0.4
	0.2nm,0.7s,baz=97,slow=7.4,SNR=3.9						
ARCES	**ARCESS Array B**	**58.45**	**23**	P	P	14 42 40.8	+0.1
	1.4nm,0.7s,baz=278,slow=7.2,SNR=4.2						

*NEIC **15** 14:36:43.2, 16.19N×9720W, h19km, MD3.9(MEX), After MEX.*

MEX 15 14:36:43.4±0.9**, 1617N×9722W, h19km**±36km**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.90**	**284**	*e*P	Pb	14 36 57.4	-3.1
PNIG				*i* S	Sb	14 37 08.8	-3.4
VHO	**Vista Hermosa**	**1.01**	**27**	*e*P	Pb	14 36 59.2	-3.1
VHO				*i* S	Sb	14 37 10.4	-4.9
OXX	**Oaxaca**	**1.02**	**27**	*i* P	Pb	14 37 00.5	-2.0
OXX				*i* S	Sb	14 37 11.5	-4.1
HUIG	**Huatulco**	**1.14**	**110**	*i* P	Pn	14 37 00.7	-3.7
HUIG				*i* S	Sb	14 37 14.1	-4.9
UTMO	**Huajuapan**	**1.74**	**341**	*e*P	Pn	14 37 09.6	-3.1
UTMO				*i* S	Sn	14 37 30.9	-3.6
TPIG	**Tehuac#an**	**2.24**	**356**	*e*P	Pn	14 37 16.1	-3.4
TPIG				*i* S	Sn	14 37 43.3	-3.5
CMIG	**Matias Romero**	**2.42**	**67**	*i* P	Pn	14 37 19.2	-2.7
CMIG				*i* S	Sn	14 37 52.1	+1.1
CMIG	**Matias Romero**	**2.42**	**67**	*i* P	Pn	14 37 19.2	-2.7
CMIG				*i* S	Sn	14 37 45.4	-5.6
ACX	**Acapulco**	**2.68**	**285**	*i* P	Pn	14 37 24.0	-1.6
ACX				*i* S	Sn	14 37 54.6	-3.0
MEIG	**Mezcala**	**2.89**	**308**	*i* P	Pn	14 37 25.8	-2.6
MEIG				*i* S	Sn	14 37 59.9	-2.8
CAIG	**El Cayaco**	**3.05**	**287**	*e*P	Pn	14 37 26.7	-4.1
CAIG				*i* S	Sn	14 38 03.1	-3.7
PPM	**Popocatepetl**	**3.18**	**335**	*e*P	Pn	14 37 28.7	-3.7
PPM				*i* S	Sn	14 38 06.8	-3.1
IIO	**Organos**	**3.69**	**337**	*e*P	Pn	14 37 39.9	+0.3
IIO				*i* S	Sn	14 38 28.4	+5.8
TEIG	**Tepich**	**9.40**	**63**	Pn	Pn	14 38 54.9	-3.1
JTS	**JuntasAbangare**	**13.29**	**115**	Pn	Pn	14 39 46.9	-4.3
	4.7nm,0.6s						
HKT	**Hockley**	**13.77**	**5**	*e*Pn	Pn	14 39 59.3	+1.5
	2.0nm,0.6s						

*NIED **15** 14:37:00, 4670N×15340E, h20km, Mw4.2 Best double couple: M₀2.51000×10^15 NP1:φₛ226.00000°, δ64.00000°, λ175.00000°. NP2:φₛ318.00000°, δ86.00000°, λ26.00000°.*

*BJI **15** 14:37:34.5, 4697N×15387E, h10km, mB4.7, mb4.6, Ms4.1, Msz3.8*

*ISCJB **15** 14:37:40.9±1.0, 4667N±005×153.19E±006, h28km±7km, mb4.4/68, MS3.7/13, Error ellipse: s-maj=9.4km s-min=3.8km az=139.1*

*MOS **15** 14:37:40.4±1.5, 4668N×15326E, h24km, mb4.7/22, Error ellipse: s-maj=8.7km s-min=6.2km az=95.9*

*NEIC **15** 14:37:40.4±0.4, 4676N×15309E, h10km, mb4.6/31, Error ellipse: s-maj=10.0km s-min=5.8km az=139.0*

*JMA **15** 14:37:41.4±0.9, 4670N×15344E, h30km, M4.9*

*SKHL **15** 14:37:41.5±2.9, 4660N×15350E, h80km±47km, mb4.9/7, mbh5.2/1, Ms3.9/2*

*IDC **15** 14:37:42.6±0.8, 4680N×15307E, h24km±4km, mb4.1/24, mb1 4.3/25, mb1mx4.2/29, mbtmp4.1/25, ML3.6/1, MS3.7/7, Ms1 3.8/7, ms1mx3.4/25, Error ellipse: s-maj=16.9km s-min=12.1km az=162.0*

ISC 15 14:37:44.1±0.5**, 4669N**±004×**15320E**±006**, h36km**±4km**, h16km**±4.7km**:pP-P, n196, σ1ˢ27**/217**, mb4.4**/68**, MS3.7**/13**, 16C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.00**	**251**	⇓*e*PN	**Pn**	**14 38 42.0**	**-0.7**
KUR				*e*S	**Sn**	**14 39 28.5**	**+0.2**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,230nm,0.5s						
KUR				smax			
	comp=N,380nm,0.5s						
KUR				smax			
	comp=E,150nm,0.5s						
KUR				smax			
	comp=Z,2μm,3.0s						
KUR				smax			
	comp=N,2μm,3.0s						
KUR				smax			
	comp=E,2μm,3.0s						
KUR	**Kuril'sk**	**4.00**	**251**	*e*P	**Pn**	**14 38 42.0**	**-0.7**
KUR				AMB	AMB	14 38 50.0	
	comp=E,150nm,0.5s						
KUR				AMB	AMB	14 38 50.0	
	comp=E,230nm,0.5s						
KUR				AMB	AMB	14 38 54.0	
	comp=E,2μm,3.0s						
KUR				*e*S	**Sn**	**14 39 28.5**	**+0.2**
KUR				A		14 39 29.0	
	comp=E,380nm,0.5s						
KUR				A		14 39 29.0	
	comp=E,150nm,0.5s						
KUR				A		14 39 32.0	
	comp=E,2μm,3.0s						
SKR	**Severo-Kuril's**	**4.44**	**25**	*e*P	**Pn**	**14 38 49.1**	**+0.3**
SKR				AMB	AMB	14 38 55.0	
	comp=E,60nm,0.5s						
SKR				AMB	AMB	14 38 55.0	
	comp=E,110nm,0.6s						
SKR				*e*S	**Sn**	**14 39 38.0**	**-1.1**
SKR				A		14 39 55.7	
	comp=E,230nm,0.5s						
SKR				A		14 39 55.7	
	comp=E,50nm,0.5s						
SKR				A		14 39 55.7	
	comp=E,320nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.81**	**245**	*e*P	**Pn**	**14 39 10.2**	**+2.5**
YUK				AMB	AMB	14 39 12.4	
	comp=E,190nm,0.2s						
YUK				*e*S	**Sn**	**14 40 14.9**	**+1.8**
YUK				A		14 40 41.9	
	comp=E,940nm,0.6s						
YUK				A		14 40 41.9	
	comp=E,1μm,0.6s						
YUK				A		14 40 42.8	
	comp=E,2μm,0.9s						
YUK				A		14 40 42.8	
	comp=E,3μm,0.9s						
NEM2	**Nemuro 2**	**6.24**	**241**	P	**Pn**	**14 39 12.7**	**-0.9**
NEM2				*e*S	**Sn**	**14 40 19.6**	**-4.1**
JRA	**Rausu**	**6.33**	**247**	P	**Pn**	**14 39 16.5**	**+1.7**
JNK	**Nakash**	**6.75**	**246**	P	**Pn**	**14 39 21.8**	**+1.2**
JNK				*e*S	**Sn**	**14 40 36.3**	**0.0**
JAK	**Akkeshi**	**7.08**	**242**	P	**Pn**	**14 39 24.1**	**-1.0**
JAK				*e*S	**Sn**	**14 40 41.1**	**-3.3**
JTKR	**Abashiri--Toko**	**7.09**	**251**	P	**Pn**	**14 39 27.4**	**+2.1**
YSS	**Yuzh-Sakhalins**	**7.17**	**276**	*e*Pn	**Pn**	**14 39 28.9**	**+2.5**
	comp=E,42nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.17**	**276**	*e*PN	**Pn**	**14 39 30.0**	**+3.6**
YSS				*e*S	**Sn**	**14 40 53.9**	**+7.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.17**	**276**	*e*P	**Pn**	**14 39 30.0**	**+3.6**
YSS				AMB	AMB	14 39 31.4	
	comp=Z,20nm,1.0s						
YSS				*e*LQ		14 41 12.0	
PET	**Petropavlovsk**	**7.25**	**27**	*e*Pn	**Pn**	**14 39 25.5**	**-1.8**
PET				*e*Sn	**Sn**	**14 40 47.9**	**-0.5**
PET	**Petropavlovsk**	**7.25**	**27**	*e*PN	**Pn**	**14 39 23.0**	**-4.4**
PET				pmax	pmax		
	comp=Z,32nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
JMP	**Maruseppu**	**7.44**	**252**	P	**Pn**	**14 39 31.3**	**+1.3**
JAR	**Ashorobuto**	**7.50**	**247**	P	**Pn**	**14 39 32.2**	**+1.4**
JAR				*e*S	**Sn**	**14 40 54.8**	**+0.3**
JOB	**Onbets**	**7.66**	**244**	P	**Pn**	**14 39 33.6**	**+0.5**
JOB				*e*S	**Sn**	**14 40 55.4**	**-3.2**
UGL	**Uglegorsk**	**7.86**	**292**	*e*P	**Pn**	**14 39 45.0**	**+9.3**
UGL				AMB	AMB	14 39 52.5	
	comp=Z,72nm,0.8s						
UGL				AMS	AMS	14 42 30.0	
	comp=Z,700nm,20.0s						
UGL				AMS	AMS	14 42 30.0	
	comp=Z,4μm,20.0s						
UGL				AMS	AMS	14 42 30.0	
	comp=Z,800nm,17.0s						
UGL				AMS	AMS	14 42 30.0	
	comp=Z,500nm,17.0s						
UGL				AMS	AMS	14 42 30.0	
	comp=Z,4μm,17.0s						
JKK2	**Kamakawa 2**	**7.89**	**253**	P	**Pn**	**14 39 38.9**	**+2.7**
ASAJ	**Asahikawa**	**7.89**	**255**	P	**Pn**	**14 39 39.5**	**+3.2**
ASAJ	**Asahikawa**	**7.89**	**255**	PN	**Pn**	**14 39 38.8**	**+2.5**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,277nm,20.4s						
ASAJ	**Asahikawa**	**7.89**	**255**	Pn	**Pn**	**14 39 38.8**	**+2.5**
	comp=Z,2.8nm,0.3s,baz=87,slow=17,SNR=38						
ASAJ				LR	LR	14 42 27.6	
	comp=Z,277nm,20.4s,baz=40,slow=36						
JWK2	**Keihoku**	**7.99**	**264**	P	**Pn**	**14 39 42.6**	**+5.0**
JCH	**Churui**	**8.11**	**243**	P	**Pn**	**14 39 38.9**	**-0.3**
JCH				*e*S	**Sn**	**14 41 04.8**	**-4.8**
TYV	**Tymovskoe**	**8.12**	**305**	*e*P	**Pn**	**14 39 41.5**	**+2.2**
TYV				AMB	AMB	14 39 45.0	
	comp=Z,500nm,6.0s						
TYV				AMB	AMB	14 39 45.0	
	comp=Z,400nm,6.0s						
TYV				AMB	AMB	14 39 45.0	
	comp=Z,600nm,6.0s						
TYV				AMB	AMB	14 39 45.5	
	comp=Z,22nm,1.0s						
TYV				AMB	AMB	14 39 45.5	
	comp=Z,26nm,1.0s						
TYV				*e*rx	rx	14 40 48.0	
TYV				AMS	AMS	14 42 56.0	
	comp=Z,500nm,16.0s						
TYV				AMS	AMS	14 42 56.0	
	comp=Z,800nm,16.0s						
JFR	**Furan**	**8.31**	**249**	P	**Pn**	**14 39 43.5**	**+1.5**
JAB	**Ashibetsu**	**8.39**	**252**	P	**Pn**	**14 39 45.9**	**+2.8**
JEM	**Erimo**	**8.58**	**241**	P	**Pn**	**14 39 46.4**	**+0.8**
ERM	**Erimo**	**8.58**	**241**	*e*Pn	**Pn**	**14 39 46.5**	**+0.8**
	comp=Z,116nm,0.6s						
ERM				*e*Sn	**Sn**	**14 41 19.6**	**-1.6**
ERM	**Erimo**	**8.58**	**241**	*e*PN	**Pn**	**14 39 46.5**	**+0.8**
ERM				pmax	pmax		
	comp=Z,115nm,0.6s						
JBT2	**Biratori 2**	**8.65**	**247**	P	**Pn**	**14 39 47.0**	**+0.4**
JNBK	**Urakawa-nobuka**	**8.67**	**243**	P	**Pn**	**14 39 45.9**	**-1.0**
JEW	**Eniwo**	**9.20**	**250**	P	**Pn**	**14 39 55.8**	**+1.6**
OKH	**Okha**	**9.52**	**320**	*e*P	**Pn**	**14 39 59.1**	**+0.7**
JNB	**Noboribetsu**	**9.65**	**248**	P	**Pn**	**14 39 59.7**	**-0.6**
JKB	**Kayabe**	**9.96**	**246**	P	**Pn**	**14 40 03.0**	**-1.5**
JKB				*e*S	**Sn**	**14 41 48.2**	**-6.7**
JSH	**Shimam**	**10.21**	**251**	P	**Pn**	**14 40 09.3**	**+1.4**
JYM2	**Yakumo 2**	**10.26**	**248**	P	**Pn**	**14 40 08.6**	**0.0**
NKL	**Nikolayevsk**	**10.34**	**313**	*e*P	**Pn**	**14 40 07.8**	**-1.8**
NKL				AMB	AMB	14 40 07.8	
	comp=Z,20nm,1.2s						
NKL				AMB	AMB	14 40 07.8	
	comp=Z,30nm,1.2s						
NKL				AMB	AMB	14 40 07.8	
	comp=Z,70nm,1.5s						
JANG	**Nango**	**10.57**	**238**	P	**Pn**	**14 40 10.1**	**-2.8**
JANG				*e*S	**Sn**	**14 41 59.6**	**-10**
JTM	**Tenmabayashi**	**10.57**	**240**	P	**Pn**	**14 40 10.6**	**-2.4**
JTM				*e*S	**Sn**	**14 41 59.8**	**-10**
JTH	**Tanohata**	**10.66**	**235**	*e*S	**Sn**	**14 42 00.9**	**-11**
JOSM	**Okushiri--Mats**	**10.85**	**250**	P	**Pn**	**14 40 16.2**	**-0.5**
OFUJ	**Ofunato**	**11.37**	**232**	P	**Pn**	**14 40 20.1**	**-3.7**
JRG	**Rokugo**	**11.73**	**236**	P	**Pn**	**14 40 27.4**	**-1.3**
JRG				*e*S	**Sn**	**14 42 29.6**	**-8.7**
JIO	**Ouri**	**11.99**	**231**	P	**Pn**	**14 40 29.2**	**-3.2**
MA2	**Magadan**	**12.99**	**354**	*e*Pn	**Pn**	**14 40 46.2**	**+0.3**
MA2	**Magadan**	**12.99**	**354**	*e*PN	**Pn**	**14 40 46.3**	**+0.4**
MA2				pmax	pmax		
	comp=Z,40nm,1.1s						
JFY	**Yanaizu**	**13.64**	**232**	P	**Pn**	**14 40 52.7**	**-2.2**
KLR	**Kul'dur**	**14.59**	**288**	*e*P	**Pn**	**14 41 08.2**	**+0.5**
KLR				MLR	MLR		
	comp=Z,800nm,13.0s						
MAJO	**Matsushiro**	**15.09**	**233**	*e*Pn	**Pn**	**14 41 12.7**	**-1.8**
	comp=Z,22nm,0.8s						
MAJO				*e*		14 41 20.4	
MAJO	**Matsushiro**	**15.09**	**233**	*e*P	**Pn**	**14 41 12.7**	**-1.8**
MAJO				pmax	pmax		
	comp=Z,22nm,0.8s						
MAT	**Matsushiro**	**15.09**	**233**	P	**Pn**	**14 41 13.6**	**-0.9**
MJAR	**Matsushiro Arr**	**15.09**	**233**	Pn	**Pn**	**14 41 11.9**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=25,slow=14,SNR=7.6						
SEY	**Seymchan**	**16.29**	**359**	⇑*e*P	**Pn**	**14 41 30.3**	**+0.6**
MDJ	**Mudanjiang**	**16.63**	**271**	P	**Pn**	**14 41 36.9**	**+2.7**
MDJ				AP	pP	14 41 41.9	-3.6
MDJ				XP	sP	14 41 43.3	-6.8
MDJ				S	**S**	**14 44 41.0**	**-7.0**
MDJ				AMB	AMB		
	comp=Z,19nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,72nm,5.0s						
MDJ				LR	LR		
	comp=N,70nm,19.4s						
MDJ				LR	LR		
	comp=E,103nm,23.5s						
MDJ				LR	LR		
	comp=Z,128nm,22.2s						
ZEA	**Zeya**	**17.98**	**303**	*e*P	**Pn**	**14 41 49.2**	**-1.6**
ZEA				AMB	AMB	14 41 50.6	
	comp=Z,12nm,1.0s						
CN2	**Changchun**	**19.71**	**272**	*e*P	**Pn**	**14 42 10.0**	**-1.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CLNS	**Chul'man**	**20.11**	**311**	*e*P	**P**	**14 42 17.5**	**+3.1**
CLNS				pmax	pmax		
	comp=N,5.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.9s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.0s						
CLNS				MLR	MLR		
	comp=Z,300nm,16.0s,MS3.7						
CLNS				MLR	MLR		
	comp=N,100nm,12.0s,MS3.5						
CLNS				MLR	MLR		
	comp=E,100nm,14.0s,MS3.5						
YAK	**Yakutsk**	**20.41**	**327**	*e*P	**P**	**14 42 16.8**	**-0.8**
	comp=E,25nm,0.7s						
YAK	**Yakutsk**	**20.41**	**327**	*e*P	**P**	**14 42 18.1**	**+0.5**
YAK				pmax	pmax		
	comp=Z,27nm,1.2s						
YAK				pmax	pmax		
	comp=N,17nm,1.4s						
YAK				pmax	pmax		
	comp=E,18nm,1.4s						
KSRS	**Korea Array**	**20.84**	**253**	P	**P**	**14 42 23.8**	**+1.3**
	comp=E,7.5nm,0.7s,baz=59,slow=8.6,SNR=11						
KSRS				LR	LR	14 49 27.5	
	comp=E,80nm,20.2s,MS3.1,baz=348,slow=34						
SNY	**Shenyang**	**21.70**	**268**	⇑P	**P**	**14 42 30.1**	**-1.6**
SNY				AMB	AMB		
	comp=Z,9.0nm,0.6s,mb4.4						
SNY				AMB	AMB		

comp=Z,206nm,4.8s
SNY LR LR
comp=N,206nm,13.2s,MS3.9
SNY LR LR
comp=E,254nm,14.4s,MS3.9
SNY LR LR
comp=Z,249nm,21.9s
JNU Nakatsue 21.74 239 P P **14 42 33.0 +0.8**
comp=Z,16nm,0.9s,mb4.4,baz=45,slow=3.1,SNR=4.7
JNU LR LR 14 50 42.8
comp=Z,92nm,21.7s,MS3.1,baz=302,slow=36
BILL Bilibino 22.44 13 *eP* **P 14 42 38.2 -1.1**
comp=Z,8.5nm,1.1s,mb4.1
BILL Bilibino 22.44 13⇑ *eP* **P 14 42 37.8 -1.5**
BILL *eS* **S 14 46 45.8 +2.3**
BILL pmax pmax
comp=Z,4.0nm,1.2s,mb3.7
HIA Hailar 22.45 289 *eP* **P 14 42 38.6 -1.0**
comp=Z,3.7nm,0.6s,mb4.0
HIA Hailar 22.45 289 *eP* **P 14 42 38.6 -1.0**
HIA pmax pmax
comp=Z,4.0nm,0.6s
TIXI Tiksi 27.54 344 *eP* **P 14 43 28.9 +2.0**
BJT Baijiatuau 27.55 270 P **P 14 43 29.6 +2.3**
comp=Z,16nm,0.9s,mb4.6
BJT Baijiatuau 27.55 270 P **P 14 43 29.6 +2.3**
BJT pmax pmax
comp=Z,16nm,0.9s
NJ2 Nanjing 30.04 253 *eP* **P 14 43 55.0 +5.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
HHC Hu-ho-hao-te 30.36 274 *eP* **P 14 43 52.9 +0.7**
HHC AP pP 14 43 57.3 -5.2
HHC XP sP 14 43 59.4 -7.5
HHC PP PP 14 44 50.9 -10
HHC PCP PcP 14 46 52.8 +1.3
HHC S **S 14 48 48.8 -1.3**
HHC PCS PcS 14 50 36.8 +1.8
HHC AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
HHC AMB AMB
comp=Z,288nm,4.9s
HHC LR LR
comp=N,237nm,14.9s,MS4.1
HHC LR LR
comp=E,180nm,13.9s,MS4.1
HHC LR LR
comp=Z,119nm,12.9s,MS3.7
ULN Ulaanbaatar 30.98 289 *eP* **P 14 43 59.4 +1.8**
comp=Z,8.7nm,1.0s,mb4.5
ULN Ulaanbaatar 30.98 289 *eP* **P 14 43 59.4 +1.8**
ULN pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
SONM Songino Array 31.41 290 P **P 14 43 59.9 -1.5**
SONM *PP pP 14 44 08.5 -3.2
SONM Songino Array 31.41 290 P **P 14 43 59.9 -1.6**
comp=Z,0.9nm,0.8s,mb3.7,baz=77,slow=9.1,SNR=8.7
SONM pP pP 14 44 08.5 -3.2
comp=Z,2.7nm,0.9s,baz=85,slow=9.1,SNR=12
SONM LR LR 14 58 05.9
comp=Z,135nm,18.4s,MS3.6,baz=54,slow=39
TLY Talaya 32.26 297 *eP* **P 14 44 10.6 +1.7**
TLY *e* 14 49 26.0
TLY *e* 14 51 12.7
TLY pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
TLY MLR MLR
comp=Z,103nm,14.0s,MS3.7
ZAK Zakamensk 32.76 295 *eP* **P 14 44 12.0 -1.2**
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
IMA2 Indian Mountai 33.82 36 *eP* **P 14 44 22.1 -0.2**
XAN Xi'an 35.57 265 P **P 14 44 37.5 -0.3**
XAN AP pP 14 44 44.3 -3.8
XAN AMB AMB
comp=Z,9.0nm,1.0s,mb4.7
COLA College 36.15 38 *eP* **P 14 44 43.3 +0.9**
comp=Z,8.0nm,0.8s,mb4.7
COLA College 36.15 38 *eP* **P 14 44 40.5 -1.8**
LZH Lanzhou 37.95 272 *eP* **P 14 44 54.5 -3.5**
LZH AMB AMB
comp=Z,16nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,76nm,4.2s
EGAK Eagle 39.01 38 *eP* **P 14 45 06.7 +0.2**
comp=Z,4.6nm,0.8s,mb4.3
GTA Gaotai 39.04 279 *eP* **P 14 45 07.6 +0.5**
GTA AP pP 14 45 11.8 -5.8
GTA XP sP 14 45 14.9 -7.0
GTA AMB AMB
comp=Z,3.0nm,1.1s,mb3.9
CD2 Chengdu 40.94 265 *eP* **P 14 45 22.8 -0.1**
CD2 PP PP 14 47 00.5 +2.9
CD2 S **S 14 51 33.1 +0.9**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,20nm,4.8s
CD2 LR LR
comp=N,100nm,18.4s
CD2 LR LR
comp=Z,120nm,16.4s,MS3.8
INK Inuvik 41.67 32 *eP* **P 14 45 29.4 +0.9**
comp=Z,77nm,0.6s,mb5.5
INK PcP PcP 14 47 20.6 -3.9
INK Inuvik 41.67 32 *eP* **P 14 45 29.4 +0.9**
INK *e* 14 47 20.7
INK pmax pmax
comp=Z,77nm,0.6s
INK Inuvik 41.67 32 P **P 14 45 29.7 +1.2**
comp=Z,3.2nm,0.6s,mb4.1,baz=296,slow=7.4,SNR=28
WMQ Urumqi 45.01 291 ⇑P **P 14 45 54.3 -1.4**
WMQ AP pP 14 45 58.8 -7.5
WMQ XP sP 14 46 01.3 -9.3
WMQ PP PP 14 47 40.1 -1.0
WMQ *eS* **S 14 52 30.3 -1.3**
WMQ AMB AMB
comp=Z,3.0nm,0.5s,mb4.4
WMQ AMB AMB
comp=Z,277nm,6.1s
WMQ LR LR
comp=N,92nm,17.3s,MS3.9
WMQ LR LR
comp=E,76nm,18.7s,MS3.9
WMQ LR LR
comp=Z,65nm,21.2s,MS3.5
KMI Kunming 45.29 260 P **P 14 45 58.8 +0.6**
KMI AP pP 14 46 02.3 -6.5
KMI XP sP 14 46 03.9 -9.2
KMI AMB AMB
comp=Z,9.0nm,1.0s,mb4.5
KMI LR LR
comp=Z,52nm,20.6s,MS3.5
MKAR Makanchi Array 47.02 297 P **P 14 46 10.1 -1.5**
MKAR PcP PcP 14 47 42.5 -0.8
MKAR LR LR 15 07 11.8
MKAR Makanchi Array 47.02 297 P **P 14 46 10.1 -1.5**
MKAR 14 47 42.5
MKAR Makanchi Array 47.02 297 P **P 14 46 10.1 -1.5**
comp=Z,1.9nm,0.6s,mb4.2,baz=67,slow=9.3,SNR=11
MKAR PcP PcP 14 47 42.5 -0.8
comp=Z,0.9nm,0.6s,baz=48,slow=3.8,SNR=3.7
MKAR LR LR 15 07 11.8
comp=Z,196nm,18.3s,MS4.1,baz=241,slow=38
LSA Lhasa 50.34 273 *eP* **P 14 46 38.5 +1.3**
comp=Z,7.2nm,0.5s,mb5.0
LSA Lhasa 50.34 273 *eP* **P 14 46 38.6 +1.3**
LSA pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
CHKZ Chkalovo 50.52 310 *eP* **P 14 46 36.0 -2.2**
comp=Z,3.4nm,0.6s,mb4.5
CHKZ Chkalovo 50.52 310 *eP* **P 14 46 36.0 -2.3**
CHKZ pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
RES Resolute Bay 50.87 19 *eP* **P 14 46 40.4 -0.3**
comp=Z,121nm,1.0s,mb5.8
RES Resolute Bay 50.87 19 *eP* **P 14 46 40.4 -0.3**
RES pmax pmax
comp=Z,121nm,1.0s,mb5.8
YKA Yellowknife Ar 50.94 37 P **P 14 46 41.7 +0.5**
YKA Yellowknife Ar 50.94 37 P **P 14 46 41.7 +0.5**
comp=Z,1.0nm,0.6s,mb3.9,baz=298,slow=7.3,SNR=16
BRVK Borovoye 50.98 310 *eP* **P 14 46 39.0 -2.8**
comp=Z,3.6nm,0.9s,mb4.3
BRVK Borovoye 50.98 310 *eP* **P 14 46 39.0 -2.8**
BRVK pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
CHTO Chiang Mai 52.16 257 *eP* **P 14 46 51.4 +0.4**
comp=Z,7.6nm,0.9s,mb4.6
CHTO Chiang Mai 52.16 257 *eP* **P 14 46 51.4 +0.4**
CHTO pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
SHL Shillong 52.43 269 *eP* **P 14 46 58.5 +5.5**
AAK Ala-Archa 53.92 296 *eP* **P 14 47 01.9 -1.8**
comp=Z,4.2nm,1.3s,mb4.2
AAK Ala-Archa 53.92 296⇑ *eP* **P 14 47 01.5 -2.2**
AAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
TAPN Taplejung 54.16 273 *eP* **P 14 47 06.6 +0.9**
comp=Z,13nm,0.8s,mb4.9
EKS2 Erkin-Say 54.34 297 P **P 14 47 05.5 -1.3**
comp=Z,2.0nm,0.8s,mb4.1
AML Almayashu 54.69 296 *eP* **P 14 47 10.5 +1.2**
comp=Z,3.6nm,1.1s,mb4.3
ODAN Odare 54.70 273 *eP* **P 14 47 13.0 +3.4**
comp=Z,7.3nm,0.5s,mb5.0
JIRN Jiri 55.01 275 *eP* **P 14 47 12.7 +0.9**
comp=Z,31nm,0.8s,mb5.4
ARU Arti 55.10 318 P **P 14 47 10.0 -2.1**
comp=Z,3.2nm,0.5s,mb4.6
ARU Arti 55.10 318 *d iP* **P 14 47 12.2 +0.2**
ARU S **S 14 54 52.5 +0.6**
ARU SS SS 14 58 31.1 -4.2
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
KKN Kakani 55.55 275 *eP* **P 14 47 16.3 +0.6**
comp=Z,20nm,0.6s,mb5.3
GKN Gorkha 55.86 276 *eP* **P 14 47 18.5 +0.6**
comp=Z,22nm,0.6s,mb5.3
ARCES ARCESS Array B 57.93 341 P **P 14 47 30.6 -1.4**
comp=Z,2.1nm,0.7s,mb4.3,baz=30,slow=7.6,SNR=4.4
AKTK Aktyubinsk 58.81 312 P **P 14 47 37.3 -1.1**
AKTO Aktyubinsk 58.81 312 P **P 14 47 37.3 -1.1**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
AKTO Aktyubinsk 58.81 312 P **P 14 47 37.3 -1.1**
comp=Z,0.8nm,0.6s,mb3.9,baz=53,slow=11,SNR=3.6
FFC Flin Flon 60.75 40 *eP* **P 14 47 51.8 +0.2**
KULM Kulim 61.10 245 P **P 14 47 55.3 +0.7**
FCC Fort Churchill 61.28 33 *eP* **P 14 47 54.8 -0.4**
comp=Z,2.9nm,0.7s,mb4.5
FCC Fort Churchill 61.28 33 *eP* **P 14 47 54.8 -0.4**
FCC pmax pmax
comp=Z,3.0nm,0.7s,mb4.5
NVAR Mina Array Bea 62.41 62 P **P 14 48 03.8 +0.7**
comp=Z,0.2nm,0.3s,mb3.7,baz=249,slow=26,SNR=6.4
NVAR pP pP 14 48 11.5 -2.5
comp=Z,1.4nm,0.7s,baz=302,slow=6.1,SNR=9.5
KAF Kangasniemi 63.52 335 *ep* **P 14 48 04.4 -5.7**
comp=Z,4.2nm,0.6s,mb4.7
KAF Kangasniemi 63.52 335 *eP* **P 14 48 04.4 -5.7**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
FINES FINESS Array B 64.12 335⇑ *eP* **P 14 48 13.1 -1.0**
FINES FINESS Array B 64.12 335 P **P 14 48 13.1 -1.0**
comp=Z,3.2nm,0.5s,mb4.6,baz=38,slow=7.5,SNR=22
PDAR Pinedale Array 64.73 54 P **P 14 48 19.0 +0.6**
comp=Z,1.3nm,0.8s,mb4.0,baz=293,slow=3.4,SNR=12
PDAR pP pP 14 48 26.2 -3.2
comp=Z,1.3nm,0.7s,baz=319,slow=2.0,SNR=8.7
ULM Lac du Bonnet 66.53 41 P **P 14 48 29.4 -0.4**
comp=Z,1.5nm,0.5s,mb4.3,baz=285,slow=8.5,SNR=5.8
NB2 NORSAR Subarra 68.31 341 P **P 14 48 39.9 -1.0**
comp=Z,8.4nm,0.7s,mb4.9,baz=27,slow=6.5
NB2 NORSAR Subarra 68.31 341 P **P 14 48 39.9 -1.0**
NB2 pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
NOA NORSAR Array B 68.31 341 P **P 14 48 40.2 -0.6**
NOA LR LR 15 24 28.9
NOA NORSAR Array B 68.31 341 P **P 14 48 40.2 -0.6**
comp=Z,8.0nm,0.7s,mb4.9,baz=27,slow=6.3,SNR=23
NOA LR LR 15 24 28.9
comp=Z,78nm,19.4s,MS4.0,baz=240,slow=41
WRA Warramunga Arr 68.47 199 P **P 14 48 42.7 +0.3**
comp=Z,0.9nm,0.7s,mb3.9,baz=319,slow=7.0,SNR=4.6
HFS Hagfors 68.54 340 P **P 14 48 41.5 -0.9**
comp=Z,16nm,0.7s,mb5.1,baz=56,slow=5.8,SNR=36
AKASG Malin Array Be 71.63 326 P **P 14 49 00.0 -1.5**
comp=Z,4.0nm,0.5s,mb4.6,baz=33,slow=6.1,SNR=11
KIEV Kiev 71.64 326 *eP* **P 14 48 59.5 -2.0**
comp=Z,6.6nm,0.9s,mb4.6
KIEV Kiev 71.64 326 *eP* **P 14 48 59.5 -2.0**
KIEV pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
ASAR Alice Springs 72.17 199 P **P 14 49 05.8 +1.0**
comp=Z,1.0nm,0.8s,mb3.8,baz=21,slow=5.9,SNR=11
SCHQ Schefferville 73.34 23 P **P 14 49 11.2 -0.3**
comp=Z,1.6nm,0.9s,mb4.0,baz=23,slow=4.4,SNR=4.1
KWP Kalwaria 74.91 329 *eP* **P 14 49 20.8 0.0**
KWP Kalwaria 74.91 329 *eP* **P 14 49 20.8 0.0**
KWP Kalwaria 74.91 329⇑ *iP* **P 14 49 21.2 +0.4**
OJC Ojcow 75.40 331 *eP* **P 14 49 22.9 -0.8**
STHS Stebnicka Huta 75.60 330 *i P* **P 14 49 25.4 +0.6**
comp=Z,5.2nm,0.7s,mb4.6
STHS Stebnicka Huta 75.60 330 *i P* **P 14 49 25.4 +0.6**
STHS pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KOLS Kolonicke sedl 75.65 329 *i P* **P 14 49 25.0 -0.1**
TRPA Tarpa 76.23 328⇑ *iP* **P 14 49 28.4 0.0**
MORC Moravsky Berou 76.52 332 *eP* **P 14 49 29.6 -0.4**
comp=Z,5.0nm,0.9s,mb4.4
MORC Moravsky Berou 76.52 332⇑ *iP* **P 14 49 30.3 +0.3**
CLL Collm 76.55 336 *i P* **P 14 49 29.4 -0.7**
CLL pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
CLL Collm 76.55 336 *i P* **P 14 49 29.4 -0.7**
comp=Z,10.0nm,1.1s,mb4.7
KECS Kecovo 76.66 330 *eP* **P 14 49 30.8 0.0**
comp=Z,2.9nm,0.9s,mb4.2
KECS Kecovo 76.66 330 *eP* **P 14 49 30.8 0.0**
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRG Berggiesshubel 76.66 335 *i P* **P 14 49 30.5 -0.3**
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRG Berggiesshubel 76.66 335 *i P* **P 14 49 30.5 -0.3**
comp=Z,4.7nm,0.9s,mb4.4
MLR Muntele Rosu 77.15 325 P **P 14 49 34.0 +0.3**
comp=Z,8.8nm,0.7s,mb4.8,baz=210,slow=2.7,SNR=13
MLR Muntele Rosu 77.15 325⇑ *iP* **P 14 49 33.8 +0.1**
VYHS Vyhne 77.21 331 *i P* **P 14 49 33.4 -0.5**
comp=Z,2.4nm,0.8s,mb4.2
VYHS Vyhne 77.21 331 *i P* **P 14 49 33.4 -0.5**
VYHS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
VRAC Vranov 77.23 333 P **P 14 49 34.1 0.0**
comp=Z,3.4nm,0.7s,mb4.4,baz=33,slow=4.3,SNR=3.9
MALT Malatya 77.24 313 *eP* **P 14 49 31.9 -2.3**
comp=Z,4.4nm,1.0s,mb4.3
MALT Malatya 77.24 313⇑ *iP* **P 14 49 35.7 +1.4**
PSZ Piszkesteto 77.34 330 *eP* **P 14 49 34.0 -0.7**
comp=Z,5.8nm,0.9s,mb4.5
PSZ Piszkesteto 77.34 330⇓ *iP* **P 14 49 35.1 +0.4**
TXAR Lajitas Array 77.47 61 P **P 14 49 36.2 +0.4**
TXAR Lajitas Array 77.47 61 P **P 14 49 36.2 +0.5**
comp=Z,1.9nm,0.6s,mb4.2,baz=300,slow=4.4,SNR=29
VOIR 77.55 325 ⇑P **P 14 49 36.4 +0.6**
VOIR 77.55 325 ⇑*iP* **P 14 49 36.4 +0.5**
KHC Kasperske Hory 78.32 334 *eP* **P 14 49 38.7 -1.4**
KHC Kasperske Hory 78.32 334 *eP* **P 14 49 40.0 -0.1**
GZR Gura Zlata 78.45 327 ⇑P **P 14 49 40.9 -0.1**
GZR Gura Zlata 78.45 327⇑ *iP* **P 14 49 40.8 -0.1**
BRTR Keskin Array B 78.48 317⇑ *eP* **P 14 49 41.4 +0.3**
BRTR Keskin Array B 78.48 317 P **P 14 49 41.4 +0.3**
comp=Z,3.9nm,0.8s,mb4.4,baz=61,slow=5.3,SNR=16
GERES GERESS Array B 78.54 334 P **P 14 49 41.2 -0.1**
comp=Z,1.2nm,0.6s,mb4.0,baz=35,slow=4.9,SNR=8.6
GERES LR LR 15 26 37.7
comp=Z,199nm,18.6s,MS4.5,baz=346,slow=37
CDF Champ du Feu 80.74 338 *eP* **P 14 49 54.7 +1.5**
DAVOX Davos/Dischmat 81.52 335 P **P 14 49 58.3 +0.9**
comp=Z,2.7nm,0.7s,mb4.3,baz=300,slow=20,SNR=3.1
LOR Lormes 82.66 340 *eP* **P 14 50 05.0 +1.6**
comp=Z,7.5nm,0.8s,mb4.5
LOR Lormes 82.66 340 *eP* **P 14 50 05.0 +1.6**
comp=Z,3.8nm,0.8s,mb4.5
LOR Lormes 82.66 340 *eP* **P 14 50 05.0 +1.6**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
CABF La Chapelle 82.71 338 *eP* **P 14 50 05.5 +1.8**
SSF Saint Saulge 82.93 340 *eP* **P 14 50 06.2 +1.4**
comp=Z,4.2nm,0.5s,mb4.4
SSF Saint Saulge 82.93 340 *eP* **P 14 50 06.2 +1.4**
comp=Z,2.1nm,0.5s,mb4.4
SSF Saint Saulge 82.93 340 *eP* **P 14 50 06.2 +1.4**
SSF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
AVF Avril sur Loir 83.22 340 *eP* **P 14 50 08.1 +1.8**
comp=Z,7.4nm,0.8s,mb4.5
AVF Avril sur Loir 83.22 340 *eP* **P 14 50 08.1 +1.8**
comp=Z,3.7nm,0.8s,mb4.5
AVF Avril sur Loir 83.22 340 *eP* **P 14 50 08.1 +1.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TCF Toulx Ste Croi 83.97 340 *eP* **P 14 50 11.5 +1.3**
CFAA Coronel Fontan 144.94 79 PKPbc PKPdf 14 57 15.7 -1.3
comp=Z,0.2nm,0.4s,baz=246,slow=2.2,SNR=3.4
PLCA Paso Flores 148.14 95 PKPbc PKPbc 14 57 25.6 +0.2
comp=Z,2.2nm,0.7s,baz=241,slow=2.4,SNR=9.0

ISCJB ***15*** *14:52:10.2±3.1, 468N±0.1×1555E±0.2, h15km±22km, mb3.7/11, Error ellipse: s-maj=21.7km s-min=12.1km az=135.5*
NEIC ***15*** *14:52:11.2±0.7, 4680N×15537E, h10km, mb4.0/2, Error ellipse: s-maj=19.4km s-min=9.5km az=137.0*
MOS ***15*** *14:52:13.9±1.4, 4669N×15542E, h45km, mb4.2/1, Error ellipse: s-maj=16.2km s-min=11.6km az=53.3*
IDC ***15*** *14:52:17.4±5.4, 4681N×15542E, h54km±51km, mb3.3/8, mb1 3.6/9, mb1mx3.5/22, mbtmp3.4/9, MS2.9/1, Ms1 2.9/1, ms1mx2.4/22, Error ellipse: s-maj=34.8km s-min=23.4km az=161.0*

ISC 15 14:52:15.6±1.5, 469N±01×1555E±02, h39km±13km, n29, σ1§19/31, mb3.7/11, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.82**	**6**	*e*PN		**Pn**	**14 53 16.9**	**+5.1**
SKR				pmax	pmax			
	comp=Z,50nm,0.5s							
KUR	**Kuril'sk**	**5.54**	**255**	*e*PN		**Pn**	**14 53 35.0**	**-0.4**
KUR				pmax	pmax			
	comp=Z,150nm,0.5s							
PET	**Petropavlovsk**	**6.48**	**17**	*e*Pn		**Pn**	**14 53 46.6**	**-1.6**
PET				*e*Sn		**Sn**	**14 54 55.8**	**-5.0**
PET	**Petropavlovsk**	**6.48**	**17**	*e*PN		**Pn**	**14 53 48.3**	**0.0**
YSS	**Yuzh-Sakhalins**	**8.70**	**275**	*e*Pn		**Pn**	**14 54 20.6**	**+1.9**
YSS	**Yuzh-Sakhalins**	**8.70**	**275**	*e*PN		**Pn**	**14 54 21.3**	**+2.5**
ASAJ	**Asahikawa**	**9.45**	**258**	PN		**Pn**	**14 54 30.4**	**+1.3**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,68nm,20.8s							
ASAJ	**Asahikawa**	**9.45**	**258**	P		**Pn**	**14 54 30.4**	**+1.3**
	comp=Z,1.6nm,0.3s,baz=88,slow=14,SNR=13							
ASAJ				LR	LR		14 57 27.0	
	comp=Z,68nm,20.8s,baz=177,slow=33							
ERM	**Erimo**	**10.05**	**245**	*e*PN		**Pn**	**14 54 36.5**	**-0.8**
MAJO	**Matsushiro**	**16.48**	**237**	*e*Pn		**Pn**	**14 56 00.0**	**-3.8**
	comp=Z,6.8nm,0.8s							
MAJO	**Matsushiro**	**16.48**	**237**	*e*P		**Pn**	**14 56 00.0**	**-3.8**
MAJO				pmax	pmax			
	comp=Z,7.0nm,0.8s							
MJAR	**Matsushiro Arr**	**16.48**	**237**	P		**Pn**	**14 56 01.2**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=28,slow=14,SNR=6.3							
BILL	**Bilibino**	**21.92**	**11⇑**	*e*P		**P**	**14 56 59.4**	**-5.7**
BILL				*e*S		**S**	**15 01 02.3**	**-2.4**
BILL				pmax	pmax			
	comp=Z,9.0nm,1.9s,mb3.9							
KSRS	**Korea Array**	**22.39**	**255**	P		**P**	**14 57 11.2**	**+0.9**
	comp=Z,1.9nm,0.5s,mb3.8,baz=54,slow=11,SNR=9.9							
SONM	**Songino Array**	**32.81**	**290**	P		**P**	**14 58 44.1**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=69,slow=8.9,SNR=5.4							
MKAR	**Makanchi Array**	**48.30**	**298**	*e*P		**P**	**15 00 53.6**	**+0.9**
MKAR	**Makanchi Array**	**48.30**	**298**	P		**P**	**15 00 53.0**	**+0.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=64,slow=8.2,SNR=5.5							
YKA	**Yellowknife Ar**	**49.84**	**37**	P		**P**	**15 01 05.1**	**+0.9**
YKA				pP		pP	15 01 15.1	-0.4
YKA	**Yellowknife Ar**	**49.84**	**37**	P		**P**	**15 01 05.1**	**+0.9**
	comp=Z,0.1nm,0.4s,mb3.2,baz=302,slow=6.9,SNR=4.0							
YKA				pP		pP	15 01 15.0	-0.4
	comp=Z,0.2nm,0.5s,baz=293,slow=7.2,SNR=3.8							
CHKZ	**Chkalovo**	**51.57**	**311**	*e*P		**P**	**15 01 17.0**	**-0.4**
	comp=Z,2.9nm,0.8s,mb4.3							
CHKZ	**Chkalovo**	**51.57**	**311**	*e*P		**P**	**15 01 17.0**	**-0.4**
CHKZ				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
AAK	**Ala-Archa**	**55.21**	**297**	*e*P		**P**	**15 01 43.5**	**-0.8**
AAK				pmax	pmax			
	comp=Z,1.0nm,1.3s,mb3.7							
PDAR	**Pinedale Array**	**63.35**	**55**	P		**P**	**15 02 40.7**	**+0.2**
	comp=Z,0.1nm,0.4s,mb3.3,baz=72,slow=4.8,SNR=3.5							
FINES	**FINESS Array B**	**64.59**	**336**	*e*P		**P**	**15 02 51.6**	**+3.2**
FINES	**FINESS Array B**	**64.59**	**336**	P		**P**	**15 02 49.9**	**+1.5**
	comp=Z,0.4nm,0.5s,mb3.7,baz=48,slow=8.5,SNR=3.8							
ASAR	**Alice Springs**	**72.88**	**201**	P		**P**	**15 03 40.1**	**-0.2**
	comp=Z,0.3nm,0.9s,mb3.2,baz=23,slow=7.2,SNR=3.2							
ASAR				pP		pP	15 03 50.5	-1.6
	comp=Z,0.4nm,0.8s,baz=15,slow=4.8,SNR=3.5							
TXAR	**Lajitas Array**	**76.01**	**62**	P		**P**	**15 03 59.4**	**+0.7**
TXAR	**Lajitas Array**	**76.01**	**62**	*e*P		**P**	**15 03 59.4**	**+0.7**
TXAR	**Lajitas Array**	**76.01**	**62**	P		**P**	**15 03 59.4**	**+0.7**
	comp=Z,1.4nm,0.6s,mb4.0,baz=302,slow=4.4,SNR=18							

NEIC ***15*** *14:57:53.4, 16.14N×9727W, h17km, MD3.9(MEX), After MEX.*

MEX 15 14:57:53.4±0.8, 1612N×9727W, h20km±16km, MD3.9, 1C, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.86**	**288⇑**	*i*P		Pb	14 58 07.3	-2.4
PNIG				*i* S		Sb	14 58 17.6	-3.3
VHO	**Vista Hermosa**	**1.08**	**29**	*i* P		Pn	14 58 09.8	-3.5
VHO				*i* S		Sb	14 58 23.4	-3.6
OXX	**Oaxaca**	**1.09**	**29**	*i* P		Pn	14 58 10.5	-3.1
OXX				*i* S		Sb	14 58 24.5	-2.9
HUIG	**Huatulco**	**1.17**	**107**	*i* P		Pn	14 58 11.4	-3.3
HUIG				*i* S		Sb	14 58 26.0	-3.8
UTMO	**Huajuapan**	**1.77**	**343**	*e*P		Pn	14 58 20.7	-2.3
UTMO				*i* S		Sn	14 58 39.9	-5.1
TPIG	**Tehuac#an**	**2.29**	**358**	*e*P		Pn	14 58 27.2	-2.8
TPIG				*i* S		Sn	14 58 54.1	-3.5
CMIG	**Matias Romero**	**2.48**	**67**	*i* P		Pn	14 58 29.1	-3.6
CMIG				*i* S		Sn	14 58 58.8	-3.7
ACX	**Acapulco**	**2.64**	**287**	*e*P		Pn	14 58 33.0	-1.9
ACX				*i* S		Sn	14 59 03.5	-2.9
MEIG	**Mezcala**	**2.88**	**309**	*e*P		Pn	14 58 37.7	-0.4
MEIG				*i* S		Sn	14 59 11.6	-0.6
CAIG	**El Cayaco**	**3.02**	**288**	*e*P		Pn	14 58 37.3	-2.8
CAIG				*i* S		Sn	14 59 08.8	-6.8
CAIG	**El Cayaco**	**3.02**	**288**	*i* P		Pn	14 58 36.9	-3.2
CAIG				*i* S		Sn	14 59 09.2	-6.4
PLIG	**Platanillo**	**3.10**	**317**	*e*P		Pn	14 58 47.9	+6.7
PLIG				*i* S		Sn	14 59 17.0	-0.8
PLIG	**Platanillo**	**3.10**	**317**	*e*P		Pn	14 58 39.1	-2.1
PLIG				*i* S		Sn	14 59 13.9	-3.9
PPM	**Popocatepetl**	**3.20**	**336**	*e*P		Pn	14 58 47.1	+4.5
PPM				*i* S		Sn	14 59 28.0	+7.8
PPM	**Popocatepetl**	**3.20**	**336**	*i* P		Pn	14 58 39.9	-2.8
PPM				*i* S		Sn	14 59 18.1	-2.0
IIO	**Organos**	**3.72**	**338**	*e*P		Pn	14 58 54.7	+5.0
IIO				*i* S		Sn	14 59 39.0	+6.1

ISCJB ***15*** *15:05:23.6±0.9, 562S±0.1×266W±0.3, h10km, mb4.2/7, Error ellipse: s-maj=25.1km s-min=20.0km az=170.3*
IDC ***15*** *15:05:23.4±0.8, 5608S×2652W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.1/14, mbtmp4.2/5, MS3.2/1, Ms1 3.2/1, ms1mx3.0/13, Error ellipse: s-maj=41.6km s-min=24.3km az=66.0*
NEIC ***15*** *15:05:35.8±5.5, 5620S×2679W, h101km±48km, mb4.6/4, Error ellipse: s-maj=24.8km s-min=14.2km az=57.0*

ISC 15 15:05:25.5±0.9, 561S±01×265W±03, h10km, n14, σ0§72/9, mb4.2/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**20.14**	**229**	*e*P		**P**	**15 09 59.6**	**+0.3**
	29nm,1.0s							
PLCA	**Paso Flores**	**32.41**	**280**	P		**P**	**15 12 01.3**	**+6.1**
	2.7nm,1.0s,mb4.0							

PLCA	**Paso Flores**	**32.41**	**280**	LR	LR	15 25 28.2	
	comp=Z,39nm,19.4s,baz=183,slow=37						
QSPA	**South Pole Qui**	**34.11**	**180**	*e*P	**P**	**15 12 09.7**	**0.0**
	5.2nm,0.6s,mb4.6						
MAW	**Mawson**	**39.84**	**143**	P	**P**	**15 12 59.6**	**+1.1**
	1.3nm,0.5s,mb3.9,baz=242,slow=10,SNR=4.3						
VNDA	**Vanda**	**46.50**	**182**	P	**P**	**15 13 51.8**	**-0.3**
	1.0nm,0.6s,mb4.0,baz=184,slow=9.1,SNR=12						
LPAZ	**La Paz**	**50.75**	**305**	*e*P	**P**	**15 14 25.5**	**0.0**
	6.3nm,0.6s,mb4.7						
LPAZ	**La Paz**	**50.75**	**305**	P	**P**	**15 14 26.0**	**+0.5**
	5.9nm,0.5s,mb4.8,baz=190,slow=5.2,SNR=26						
TORD	**Torodi Ar. Bea**	**72.94**	**29**	P	**P**	**15 16 54.9**	**+0.1**
	1.2nm,0.4s,mb4.2,baz=204,slow=8.4,SNR=4.4						
ASAR	**Alice Springs**	**98.78**	**162**	P	**P**	**15 19 03.9**	**-1.4**
	0.2nm,0.5s,mb3.9,baz=176,slow=3.7,SNR=9.7						
FINES	**FINESS Array B**	**124.28**	**28**	PKP	PKPdf	15 24 20.9	-2.1
	0.9nm,0.7s,baz=194,slow=3.1,SNR=6.1						
ARCES	**ARCESS Array B**	**130.88**	**22**	PKP	PKPdf	15 24 34.0	-1.3
	2.6nm,1.0s,baz=180,slow=1.2,SNR=7.6						
YKA	**Yellowknife Ar**	**136.50**	**318**	PKP	PKPdf	15 24 44.6	-1.5
	0.3nm,0.4s,baz=124,slow=2.2,SNR=5.3						
SONM	**Songino Array**	**150.34**	**86**	PKPbc	PKPbc	15 25 15.0	-0.9
	0.4nm,0.4s,baz=218,slow=3.7,SNR=5.6						

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*ISCJB **15** 15:29:23.8±0.6, 35.8N±0.1×135.5E±0.1, h364km±6km, mb2.9/4, Error ellipse: s-maj=20.7km s-min=15.4km az=16.2*

*JMA **15** 15:29:23.9±0.5, 35.96N×135.50E, h360km±5km, M3.2*

*IDC **15** 15:29:24.7±1.4, 35.86N×135.48E, h361km±21km, mb2.7/4, mb1 2.7/6, mb1mx2.6/23, mbtmp2.6/6, Error ellipse: s-maj=49.3km s-min=17.5km az=50.0*

ISC 15 15:29:24.8±0.6**, 35.8N**±0.1×**135.4E**±0.1**, h356**km±6km**, n16, σ0.47**/17**, mb2.9**/4**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.35**	**233**	P	**Pn**	**15 30 09.5**	**0.0**
JWT	**Wachi**	**0.55**	**184**	P	**Pn**	**15 30 09.8**	**-0.1**
JWT				*e*S	**S**	**15 30 44.9**	**-1.1**
JKG	**Kaga**	**0.84**	**58**	P	**Pn**	**15 30 10.0**	**-0.5**
JGM	**Miyama**	**1.04**	**97**	P	**Pn**	**15 30 11.0**	**-0.3**
JWY	**Kouya**	**1.62**	**176**	P	**Pn**	**15 30 14.7**	**+0.4**
JIE	**Ise**	**1.77**	**144**	P	**Pn**	**15 30 15.6**	**+0.4**
JHS	**Saijyo**	**2.08**	**247**	P	**Pn**	**15 30 17.3**	**+0.1**
JAI	**Aioi**	**2.20**	**202**	P	**Pn**	**15 30 18.7**	**+0.6**
MJAR	**Matsushiro Arr**	**2.34**	**72**	P	**Pn**	**15 30 19.5**	**+0.4**
	0.5nm,0.3s,baz=219,slow=6.1,SNR=4.4						
JYN	**Shimob**	**2.55**	**97**	P	**Pn**	**15 30 20.8**	**+0.1**
JRY	**Ryogami san**	**2.81**	**85**	P	**Pn**	**15 30 23.3**	**+0.4**
KSRS	**Korea Array**	**6.26**	**287**	P	**Pn**	**15 30 59.4**	**+0.7**
	0.3nm,0.3s,baz=105,slow=12,SNR=11						
SONM	**Songino Array**	**24.59**	**308**	P	**P**	**15 34 13.3**	**-0.4**
	0.7nm,0.7s,mb3.0,baz=114,slow=10,SNR=7.4						
MKAR	**Makanchi Array**	**40.69**	**302**	P	**P**	**15 36 31.5**	**-0.2**
	0.2nm,0.2s,mb2.9,baz=88,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**55.48**	**181**	P	**P**	**15 38 23.3**	**-0.6**
	0.4nm,0.4s,mb3.1,baz=358,slow=7.5,SNR=13						
ASAR	**Alice Springs**	**59.20**	**182**	P	**P**	**15 38 49.5**	**0.0**
	0.1nm,0.6s,mb2.5,baz=17,slow=14,SNR=5.0						

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*NEIC **15** 15:41:11.9, 39.43S×174.75E, h146km, MG3.9(WEL), After WEL.*

WEL 15 15:41:12.0±0.2**, 39.44S×174.75E, h145**km±1km**, ML3.9**/22**, 3C-9D, Error ellipse: s-maj=1.3km s-min=1.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.31**	**1**	P	Pn	15 41 31.4	-0.5
VRZ				S	Sn	15 41 46.4	-0.7
VRZ	**Vera Road**	**0.31**	**1**	PN	Pn	15 41 31.4	-0.5
VRZ				SN	Sn	15 41 46.1	-0.9
RAEZ	**Rainy Point**	**0.31**	**298**	P	Pn	15 41 31.9	0.0
RAEZ	**Rainy Point**	**0.31**	**298**	PN	Pn	15 41 31.9	-0.1
WAZ	**Wanganui**	**0.37**	**151**	P	Pn	15 41 32.5	+0.4
WAZ	**Wanganui**	**0.37**	**151**	⇑PN	Pn	15 41 32.5	+0.4
WAZ				SN	Sn	15 41 47.5	0.0
PKVZ	**Pokaka**	**0.48**	**73**	⇓PN	Pn	15 41 32.5	-0.1
PKVZ				SN	Sn	15 41 47.6	-0.7
DFE	**Dawson Falls**	**0.51**	**282**	P	Pn	15 41 32.8	0.0
DFE	**Dawson Falls**	**0.51**	**282**	PN	Pn	15 41 32.8	0.0
NEZ	**North Egmont**	**0.53**	**288**	P	Pn	15 41 33.1	+0.2
NEZ	**North Egmont**	**0.53**	**288**	PN	Pn	15 41 33.1	+0.2
MTVZ	**Mangateitei**	**0.56**	**85**	PN	Pn	15 41 32.9	-0.1
MTVZ				SN	Sn	15 41 48.3	-0.7
TRVZ	**Turoa**	**0.63**	**78**	⇓PN	Pn	15 41 33.6	+0.1
TRVZ				SN	Sn	15 41 48.9	-0.9
PKE	**Pukeiti**	**0.64**	**292**	P	Pn	15 41 33.1	-0.4
PKE	**Pukeiti**	**0.64**	**292**	PN	Pn	15 41 33.1	-0.4
NRZ	**Ngariki Road**	**0.64**	**279**	P	Pn	15 41 33.4	-0.1
NRZ	**Ngariki Road**	**0.64**	**279**	PN	Pn	15 41 33.4	-0.1
TWVZ	**Taurewa**	**0.65**	**56**	⇓PN	Pn	15 41 33.3	-0.3
FWVZ	**Far West T-bar**	**0.65**	**74**	P	Pn	15 41 33.6	+0.1
FWVZ	**Far West T-bar**	**0.65**	**74**	⇑PN	Pn	15 41 33.6	+0.1
DRZ	**Dome Shelter**	**0.65**	**76**	P	Pn	15 41 33.9	+0.3
DRZ				S	Sn	15 41 48.3	-1.7
DRZ	**Dome Shelter**	**0.65**	**76**	PN	Pn	15 41 33.9	+0.3
WPVZ	**Whakapapa**	**0.66**	**70**	P	Pn	15 41 33.3	-0.3
WPVZ	**Whakapapa**	**0.66**	**70**	PN	Pn	15 41 33.6	0.0
WNVZ	**Wahianoa**	**0.67**	**81**	P	Pn	15 41 33.9	+0.2
WNVZ	**Wahianoa**	**0.67**	**81**	PN	Pn	15 41 33.9	+0.2
NWEZ	**Newall Road**	**0.70**	**283**	P	Pn	15 41 33.7	-0.2
NWEZ	**Newall Road**	**0.70**	**283**	PN	Pn	15 41 33.7	-0.2
NGZ	**Ngauruhoe**	**0.71**	**69**	P	Pn	15 41 34.0	0.0
NGZ	**Ngauruhoe**	**0.71**	**69**	⇓PN	Pn	15 41 34.0	0.0
TUVZ	**Tukino**	**0.72**	**77**	P	Pn	15 41 34.3	+0.3
TUVZ	**Tukino**	**0.72**	**77**	⇓PN	Pn	15 41 34.3	+0.3
WTVZ	**West Tongariro**	**0.72**	**64**	P	Pn	15 41 34.1	0.0
WTVZ	**West Tongariro**	**0.72**	**64**	⇓PN	Pn	15 41 34.1	0.0
KRVZ	**Karewarewa**	**0.77**	**64**	⇓PN	Pn	15 41 34.4	0.0
MOVZ	**Moawhango**	**0.78**	**88**	P	Pn	15 41 34.2	-0.2
MOVZ				S	Sn	15 41 49.5	-2.0
MOVZ	**Moawhango**	**0.78**	**88**	⇓PN	Pn	15 41 34.2	-0.2
MOVZ				SN	Sn	15 41 49.4	-2.1
KATZ	**Kakaramea**	**0.86**	**58**	P	Pn	15 41 35.2	+0.1
KATZ	**Kakaramea**	**0.86**	**58**	PN	Pn	15 41 35.2	+0.1
HIZ	**Hauiti**	**0.92**	**5**	P	Pn	15 41 34.8	-0.8
HIZ	**Hauiti**	**0.92**	**5**	PN	Pn	15 41 34.8	-0.9
RATZ	**Rangitukua**	**0.97**	**55**	P	Pn	15 41 35.9	-0.1
RATZ	**Rangitukua**	**0.97**	**55**	PN	Pn	15 41 35.8	-0.2
RITZ	**Rihia Road**	**0.97**	**62**	P	Pn	15 41 36.0	0.0
RITZ	**Rihia Road**	**0.97**	**62**	PN	Pn	15 41 36.0	0.0
WATZ	**Wairara**	**1.05**	**47**	P	Pn	15 41 36.7	0.0
WATZ	**Wairara**	**1.05**	**47**	⇓PN	Pn	15 41 36.7	0.0
TSZ	**Takapari Road**	**1.12**	**124**	P	Pn	15 41 37.5	+0.2
TSZ	**Takapari Road**	**1.12**	**124**	PN	Pn	15 41 37.5	+0.2
TSZ				SN	Sn	15 41 55.4	-1.3
HATZ	**Hinemaiaia**	**1.18**	**63**	P	Pn	15 41 37.3	-0.5
HATZ	**Hinemaiaia**	**1.18**	**63**	PN	Pn	15 41 37.3	-0.5
WHTZ	**Whakaora**	**1.21**	**51**	P	Pn	15 41 38.3	+0.1
WHTZ	**Whakaora**	**1.21**	**51**	PN	Pn	15 41 38.3	+0.1
BKZ	**Black Stump Fm**	**1.38**	**79**	P	Pn	15 41 39.4	-0.4
BKZ	**Black Stump Fm**	**1.38**	**79**	PN	Pn	15 41 39.4	-0.4
KIW	**Kapiti Island**	**1.43**	**175**	P	Pn	15 41 40.2	-0.2
KIW	**Kapiti Island**	**1.43**	**175**	PN	Pn	15 41 40.2	-0.1
DUWZ	**D'Urville Isla**	**1.51**	**205**	PN	Pn	15 41 40.8	-0.4
TIWZ	**Tintock**	**1.60**	**147**	PN	Pn	15 41 42.1	-0.1
CAW	**Cannon Point**	**1.69**	**172**	P	Pn	15 41 43.0	-0.2
CAW	**Cannon Point**	**1.69**	**172**	PN	Pn	15 41 43.0	-0.1
BFZ	**Birch Farm**	**1.69**	**138**	*e*P	Pn	15 41 42.9	-0.3
BFZ	**Birch Farm**	**1.69**	**138**	PN	Pn	15 41 42.9	-0.3
PXZ	**Pawanui**	**1.73**	**111**	PN	Pn	15 41 43.7	0.0
MRW	**Makara Radio**	**1.79**	**181**	P	Pn	15 41 44.0	-0.3
MRW	**Makara Radio**	**1.79**	**181**	⇑PN	Pn	15 41 44.0	-0.3
TCW	**Tory Channel**	**1.81**	**191**	P	Pn	15 41 44.1	-0.4
TCW	**Tory Channel**	**1.81**	**191**	PN	Pn	15 41 44.1	-0.4
MTW	**Mount Morrison**	**1.81**	**162**	P	Pn	15 41 44.1	-0.5
MTW	**Mount Morrison**	**1.81**	**162**	PN	Pn	15 41 44.1	-0.5
WEL	**Wellington**	**1.85**	**180**	P	Pn	15 41 44.5	-0.5
WEL	**Wellington**	**1.85**	**180**	PN	Pn	15 41 44.5	-0.5
SNZO	**South Karori**	**1.87**	**181**	P	Pn	15 41 44.7	-0.5
SNZO	**South Karori**	**1.87**	**181**	PN	Pn	15 41 44.7	-0.5
BHW	**Baring Head**	**1.97**	**177**	P	Pn	15 41 45.8	-0.6
BHW	**Baring Head**	**1.97**	**177**	PN	Pn	15 41 45.8	-0.6
PAWZ	**Paruwai Farm**	**2.01**	**165**	P	Pn	15 41 46.4	-0.5
PAWZ	**Paruwai Farm**	**2.01**	**165**	PN	Pn	15 41 46.4	-0.5
MSWZ	**Moikau Station**	**2.02**	**169**	PN	Pn	15 41 46.4	-0.5
NNZ	**Nelson**	**2.07**	**210**	P	Pn	15 41 46.5	-1.0
NNZ	**Nelson**	**2.07**	**210**	PN	Pn	15 41 46.5	-1.0
TUWZ	**Tuamarina**	**2.09**	**197**	PN	Pn	15 41 46.8	-1.0
TRWZ	**Traveller**	**2.09**	**160**	PN	Pn	15 41 47.4	-0.4
URZ	**Urewera**	**2.18**	**58**	P	Pn	15 41 47.6	-1.3
URZ	**Urewera**	**2.18**	**58**	PN	Pn	15 41 47.6	-1.3
QRZ	**Quartz Range**	**2.20**	**230**	P	Pn	15 41 47.6	-1.5
QRZ	**Quartz Range**	**2.20**	**230**	PN	Pn	15 41 47.6	-1.5
KNZ	**Kokohu**	**2.31**	**81**	P	Pn	15 41 49.6	-0.8
KNZ	**Kokohu**	**2.31**	**81**	PN	Pn	15 41 49.6	-0.8
BSWZ	**Blackbirch Sta**	**2.37**	**196**	P	Pn	15 41 50.5	-0.7
BSWZ	**Blackbirch Sta**	**2.37**	**196**	PN	Pn	15 41 50.5	-0.7
MWZ	**Matawai**	**2.43**	**64**	P	Pn	15 41 50.8	-1.1
MWZ	**Matawai**	**2.43**	**64**	PN	Pn	15 41 50.8	-1.1
THZ	**Tophouse**	**2.72**	**211**	*e*P	Pn	15 41 54.1	-1.4
THZ	**Tophouse**	**2.72**	**211**	PN	Pn	15 41 54.1	-1.4
PUZ	**Puketiti**	**3.06**	**65**	*e*P	Pn	15 41 58.2	-1.7
PUZ	**Puketiti**	**3.06**	**65**	PN	Pn	15 41 58.2	-1.6
KHZ	**Kahutara**	**3.12**	**197**	P	Pn	15 41 59.5	-1.0
KHZ	**Kahutara**	**3.12**	**197**	PN	Pn	15 41 59.5	-1.1
DSZ	**Denniston Nort**	**3.22**	**223**	*e*P	Pn	15 42 00.1	-1.8
DSZ	**Denniston Nort**	**3.22**	**223**	PN	Pn	15 42 00.1	-1.8
MXZ	**Matakaoa Point**	**3.36**	**57**	P	Pn	15 42 02.5	-1.2
MXZ	**Matakaoa Point**	**3.36**	**57**	PN	Pn	15 42 02.5	-1.2
LTZ	**Lake Taylor**	**3.83**	**208**	*e*P	Pn	15 42 07.4	-2.4
LTZ	**Lake Taylor**	**3.83**	**208**	PN	Pn	15 42 07.4	-2.4
CRLZ	**Canterbury Las**	**4.44**	**200**	P	Pn	15 42 14.3	-3.4
CRLZ	**Canterbury Las**	**4.44**	**200**	PN	Pn	15 42 14.3	-3.4
MQZ	**McQueen's Vall**	**4.55**	**200**	*e*P	Pn	15 42 15.6	-3.6
MQZ	**McQueen's Vall**	**4.55**	**200**	PN	Pn	15 42 15.6	-3.6
ODZ	**Otahua Downs**	**6.38**	**207**	*e*P	Pn	15 42 40.7	-2.9
ODZ	**Otahua Downs**	**6.38**	**207**	PN	Pn	15 42 40.7	-2.9

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*ISCJB **15** 16:13:44.8±0.5, 6.84N±0.06×73.02W±0.07, h173km±6km, mb3.6/4, Error ellipse: s-maj=13.0km s-min=6.2km az=39.5*

*IDC **15** 16:13:45.8±0.7, 6.75N×72.99W, h168km±10km, mb3.3/4, mb1 3.6/6, mb1mx3.3/19, mbtmp3.5/6, Error ellipse: s-maj=34.4km s-min=8.0km az=131.0*

*FUNV **15** 16:13:45.1, 6.72N×73.14W, h171km, MW3.5*

*NEIC **15** 16:13:45.8±0.8, 6.69N×72.97W, h174km±11km, Error ellipse: s-maj=33.1km s-min=11.6km az=126.0*

ISC 15 16:13:45.8±0.5**, 6.83N**±0.06×**73.00W**±0.07**, h168**km±6km**, n26, σ0.91**/31**, mb3.6**/4**, 10C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.24**	**33**	⇑*i*P	**Pn**	**16 14 14.9**	**+0.7**
CAPV				*e*S	**Sn**	**16 14 36.7**	**+0.5**
ROSC	**El Rosal**	**2.36**	**214**	P	**Pn**	**16 14 26.9**	**+0.8**
	44nm,0.3s,baz=270,slow=9.4,SNR=94						
ROSC				S	**Sn**	**16 14 57.2**	**-0.2**
	63nm,0.3s,baz=108,slow=23,SNR=11						
SOCV	**Socops**	**2.57**	**56**	⇑*i*P	**Pn**	**16 14 29.7**	**+1.0**
SOCV				*e*S	**Sn**	**16 15 01.2**	**-0.7**
VIGV	**El Vigia**	**2.58**	**39**	⇑*i*P	**Pn**	**16 14 29.4**	**+0.7**
VIGV				*e*S	**Sn**	**16 15 02.2**	**+0.2**
SDV	**Santo Domingo**	**3.11**	**49**	P	**Pn**	**16 14 36.3**	**+1.0**
	54nm,0.3s,baz=243,slow=4.6,SNR=325						
SDV				S	**Sn**	**16 15 15.2**	**+1.4**
	13nm,0.3s,baz=35,slow=18,SNR=8.2						
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**16 14 40.9**	**+0.8**
VIRV	**Villa del Rosa**	**3.70**	**9**	⇑*i*P	**Pn**	**16 14 41.7**	**-1.0**
VIRV				*e*S	**Sn**	**16 15 24.6**	**-2.5**
QARV	**Quebrada Arrib**	**4.16**	**36**	⇑*i*P	**Pn**	**16 14 49.2**	**+0.7**
QARV				*e*S	**Sn**	**16 15 36.3**	**-1.3**
SANV	**Sanarito**	**4.34**	**52**	⇑*i*P	**Pn**	**16 14 51.1**	**+0.3**
CURV	**Curarigua**	**4.37**	**43**	⇑*i*P	**Pn**	**16 14 51.5**	**+0.3**
DABV	**Dabajuro**	**4.69**	**30**	*e*P	**Pn**	**16 14 55.8**	**+0.3**
TEPV	**Terepaima**	**4.89**	**50**	⇑*e*P	**Pn**	**16 14 58.4**	**+0.3**
SIQV	**Siquisique**	**4.94**	**39**	⇑*i*P	**Pn**	**16 14 58.6**	**-0.1**
BAUV	**El Baul**	**5.34**	**66**	⇑*i*P	**Pn**	**16 15 02.9**	**-1.1**
IMOV	**Isla Los Monje**	**5.88**	**20**	*e*P	**Pn**	**16 15 10.4**	**-0.6**
TURV	**Turiamo**	**6.24**	**54**	*e*P	**Pn**	**16 15 15.7**	**-0.2**
CAOV	**Caicara del Or**	**6.64**	**85**	*e*P	**Pn**	**16 15 19.9**	**-1.3**
BIRV	**Birongo**	**7.58**	**61**	*e*P	**Pn**	**16 15 32.8**	**-0.8**
CUPV	**Cœpira**	**7.82**	**65**	*e*P	**Pn**	**16 15 35.9**	**-0.9**
OTAV	**Otavalo**	**8.51**	**220**	Pn	**Pn**	**16 15 44.1**	**-1.8**
TXAR	**Lajitas Array**	**36.55**	**312**	P	**P**	**16 20 36.4**	**+0.9**
	0.2nm,0.4s,mb3.1,baz=96,slow=8.3,SNR=3.3						
ULM	**Lac du Bonnet**	**47.32**	**340**	P	**P**	**16 22 01.9**	**-0.6**
	0.9nm,0.4s,mb3.8,baz=140,slow=7.9,SNR=2.8						
SCHQ	**Schefferville**	**48.13**	**5**	P	**P**	**16 22 09.8**	**+1.2**
	2.7nm,1.1s,mb3.8,baz=190,slow=6.1,SNR=2.4						
YKA	**Yellowknife Ar**	**63.30**	**340**	P	**P**	**16 23 57.1**	**+0.7**
	0.7nm,0.5s,mb3.7,baz=132,slow=6.9,SNR=14						
ASAR	**Alice Springs**	**149.21**	**234**	PKPbc	PKPbc	16 33 14.2	-1.1
	0.2nm,0.6s,baz=119,slow=3.6,SNR=4.3						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	PKPbc	16 33 18.2	-0.2
	0.3nm,0.6s,baz=109,slow=2.3,SNR=7.1						

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*BJI **15** 16:25:59.7, 17.70S×67.37E, h17km, mB5.0, mb4.6, Ms4.5, Msz4.2*

*IDC **15** 16:26:02.4±0.6, 16.99S×67.05E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.2/23, mbtmp4.1/13, ML4.2/1, MS4.3/18, Ms1 4.3/18, ms1mx4.1/29, Error ellipse: s-maj=22.1km s-min=16.3km az=29.0*

*ISCJB **15** 16:26:02.0±0.3, 16.90S±0.07×67.05E±0.07, h10km, mb4.5/40, MS4.3/23, Error ellipse: s-maj=10.2km s-min=8.9km az=19.9*

*MOS **15** 16:26:02.1±1.4, 16.87S×67.06E, h10km, mb4.7/12, Error ellipse: s-maj=15.4km s-min=11.6km az=97.3*

*NEIC **15** 16:26:04.4±0.4, 16.94S×67.05E, h10km, mb4.8/18, Error ellipse: s-maj=14.2km s-min=11.0km az=203.0*

*GCMT **15** 16:26:04.4±0.3, 16.98S×66.77E, h17km±1km, MW5.1/79, Moment Tensor Solution. s32,c37; s79,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.34±.17; $M_{\theta\theta}$-5.32±.17; $M_{\phi\phi}$4.99±.16; $M_{r\theta}$-1.92±.45; $M_{\theta\phi}$1.36±.14; $M_{\phi r}$-0.85±.40; Best double couple: $M_0$5.71400×10^{16} NP1:ϕ_s143.00000°,δ69.00000°,λ-178.00000°. NP2: ϕ_s52.00000°,δ88.00000°,λ-21.00000°. Principal axes: T 5.4170, Plg13.0000°, Azm100.0000°; N 0.6010, Plg69.0000°, Azm227.0000°; P -6.0120, Plg16.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 16:26:04.0±0.3**, 16.95S**±0.07×**67.03E**±0.07**, h10**km**, (h21**km±3.1km**:pP-P), n106, σ1.13**/74**, mb4.5**/40**, MS4.3**/23**, 6C, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.96**	**262**	Pn	**Pn**	**16 30 26.3**	**0.0**
	0.7nm,0.3s,baz=70,slow=7.0,SNR=4.4						
KMBO	**Kilima Mbogo**	**33.25**	**295**	*e*P	**P**	**16 32 43.6**	**+1.8**
	18nm,1.7s,mb4.7						
KMBO	**Kilima Mbogo**	**33.25**	**295**	*e*P	**P**	**16 32 43.6**	**+1.8**
KMBO				pmax	pmax		
	comp=Z,18nm,1.7s						
KMBO	**Kilima Mbogo**	**33.25**	**295**	P	**P**	**16 32 43.9**	**+2.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=103,slow=10,SNR=6.3						
KMBO				LR	LR	16 43 24.9	
	comp=Z,832nm,19.8s,MS4.5,baz=269,slow=31						
LSZ	**Lusaka**	**37.31**	**267**	P	**P**	**16 33 17.1**	**+0.3**
	comp=Z,8.0nm,1.1s,mb4.5						
LSZ	**Lusaka**	**37.31**	**267**	P	**P**	**16 33 17.1**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
LBTB	**Lobatse**	**39.38**	**251**	P	**P**	**16 33 33.1**	**-1.0**
	comp=Z,5.2nm,0.7s,mb4.4,baz=128,slow=15,SNR=3.6						
BOSA	**Boshof**	**40.04**	**246**	LR	LR	16 46 04.3	
	comp=Z,280nm,21.8s,MS4.1,baz=88,slow=30						
SHL	**Shillong**	**48.70**	**30**	*e*P	**P**	**16 34 52.0**	**+3.3**
MAW	**Mawson**	**50.70**	**182**	P	**P**	**16 35 02.6**	**-0.9**
	comp=Z,4.2nm,0.9s,mb4.3,baz=12,slow=10,SNR=4.8						
MAW				LR	LR	16 50 52.3	
	comp=Z,491nm,21.0s,MS4.5,baz=70,slow=29						
LSA	**Lhasa**	**51.89**	**27**	P	**P**	**16 35 15.4**	**+2.5**
LSA	**Lhasa**	**51.89**	**27**	*e*P	**P**	**16 35 14.3**	**+1.5**
	comp=Z,4.6nm,1.0s,mb4.4						
LSA	**Lhasa**	**51.89**	**27**	*e*P	**P**	**16 35 14.3**	**+1.4**
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
KMI	**Kunming**	**54.40**	**41**	P	**P**	**16 35 31.0**	**-0.5**
KMI				AP	pP	16 35 34.8	+0.1
KMI				XP	sP	16 35 37.5	+1.6
KMI				PP	PP	16 37 33.9	+0.1
KMI				S	**S**	**16 43 04.8**	**-5.3**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.5						
KMI				AMB	AMB		
	comp=Z,76nm,4.1s						
KMI				LR	LR		
	comp=N,138nm,24.5s,MS4.2						
KMI				LR	LR		
	comp=E,216nm,22.3s,MS4.2						
KMI				LR	LR		
	comp=Z,216nm,19.3s,MS4.2						
QIZ	**Qiongzhong**	**55.23**	**52**	P	**P**	**16 35 34.5**	**-3.1**
QIZ				S	**S**	**16 43 14.8**	**-6.6**
QIZ				AMB	AMB		
	comp=Z,71nm,3.9s						
QIZ				LR	LR		
	comp=N,294nm,21.5s						
QIZ				LR	LR		
	comp=Z,214nm,17.0s,MS4.3						
FITZ	**Fitzroy Crossi**	**55.70**	**101**	⇑*i*P	**P**	**16 35 41.4**	**+0.3**
	comp=Z,25nm,0.9s,mb5.2						
FITZ				*e*pP	pP	16 35 50.9	+6.6
EIL	**Elat**	**55.73**	**326**	LR	LR	16 56 07.7	
	comp=Z,276nm,18.9s,MS4.4,baz=327,slow=32						
FORT	**Forrest**	**56.87**	**116**	*e*P	**P**	**16 35 48.7**	**-0.6**
	comp=Z,27nm,0.9s,mb5.3						
EKS2	**Erkin-Say**	**59.64**	**6**	*e*P	**P**	**16 36 07.9**	**-0.3**
	comp=Z,6.5nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**59.68**	**6**	*e*P	**P**	**16 36 07.8**	**-0.7**
	comp=Z,8.6nm,1.4s,mb4.6						
AAK	**Ala-Archa**	**59.68**	**6**	*e*P	**P**	**16 36 06.0**	**-2.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.2						
TKM2	**Tokmak 2**	**60.09**	**7**	*e*P	**P**	**16 36 10.7**	**-0.7**
	comp=Z,2.5nm,0.7s,mb4.3						
TKM2	**Tokmak 2**	**60.09**	**7**	*e*P	**P**	**16 36 10.7**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MALT	**Malatya**	**61.17**	**335**	P	**P**	**16 36 18.9**	**0.0**
	comp=Z,13nm,1.4s,mb4.9						
MALT	**Malatya**	**61.17**	**335**	P	**P**	**16 36 18.9**	**+0.1**
MALT				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.9						
ASAR	**Alice Springs**	**62.60**	**108**	P	**P**	**16 36 28.8**	**-0.1**
	comp=Z,14nm,0.9s,mb5.1,baz=264,slow=6.5,SNR=112						
KAKA	**Kakadu**	**63.13**	**96**	*e*P	**P**	**16 36 33.0**	**+0.5**
	comp=Z,40nm,0.9s,mb5.5						
KAKA				*e*pP	pP	16 36 41.6	+5.8
LZH	**Lanzhou**	**63.21**	**33**	*e*P	**P**	**16 36 33.6**	**+1.0**
LZH				AP	pP	16 36 36.5	+0.7
LZH				XP	sP	16 36 38.5	+1.5
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.1						
WMQ	**Urumqi**	**63.37**	**17**	⇑P	**P**	**16 36 33.6**	**+0.2**
WMQ				AP	pP	16 36 38.1	+1.4
WMQ				XP	sP	16 36 40.6	+2.7
WMQ				PCP	PcP	16 37 12.6	+2.2
WMQ				PP	PP	16 38 53.1	0.0
WMQ				S	**S**	**16 44 58.8**	**-7.1**
WMQ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,113nm,4.5s						
WMQ				LR	LR		
	comp=N,115nm,31.8s,MS4.3						
WMQ				LR	LR		
	comp=E,264nm,28.8s,MS4.3						
WMQ				LR	LR		
	comp=Z,139nm,31.8s,MS3.9						
WRA	**Warramunga Arr**	**63.54**	**104**	P	**P**	**16 36 35.6**	**+0.4**
	comp=Z,30nm,0.9s,mb5.3,baz=265,slow=6.5,SNR=182						
WRA				LR	LR	17 04 05.3	
	comp=Z,397nm,18.5s,MS4.6,baz=260,slow=36						
WB2	**Warramunga Arr**	**63.55**	**104**	⇑*i*P	**P**	**16 36 35.4**	**+0.1**
WB2				*e*pP	pP	16 36 44.3	+5.8
GTA	**Gaotai**	**63.89**	**28**	*e*P	**P**	**16 36 37.9**	**+0.9**
GTA				AP	pP	16 36 42.3	+2.1
GTA				XP	sP	16 36 45.5	+4.1
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s,mb4.4						
BRTR	**Keskin Array B**	**64.41**	**332**	P	**P**	**16 36 41.3**	**+0.9**
BRTR				LR	LR	17 04 01.2	
BRTR	**Keskin Array B**	**64.41**	**332**	*i* P	**P**	**16 36 41.2**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**64.41**	**332**	P	**P**	**16 36 41.3**	**+0.9**
	comp=Z,1.1nm,0.9s,mb3.9,baz=124,slow=10,SNR=4.6						
BRTR				LR	LR	17 04 01.2	
	comp=Z,156nm,19.0s,MS4.2,baz=131,slow=35						
XAN	**Xi'an**	**64.52**	**38**	P	**P**	**16 36 40.8**	**-0.5**
XAN				AP	pP	16 36 49.5	+5.0
XAN				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.5						
KIV	**Kislovodsk**	**64.57**	**341**	*e*P	**P**	**16 36 39.5**	**-1.8**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
MKAR	**Makanchi Array**	**64.92**	**12**	P	**P**	**16 36 42.8**	**-0.8**
	comp=Z,0.6nm,0.5s,mb3.9,baz=212,slow=8.6,SNR=7.9						
MKAR				LR	LR	17 04 25.2	
	comp=Z,172nm,21.2s,MS4.2,baz=194,slow=36						
AKTK	**Aktyubinsk**	**67.56**	**354**	P	**P**	**16 36 59.8**	**-0.6**
AKTO	**Aktyubinsk**	**67.56**	**354**	P	**P**	**16 36 59.8**	**-0.6**
	comp=Z,1.8nm,0.9s,mb4.1,baz=183,slow=6.3,SNR=4.5						
STKA	**Stephens Creek**	**68.35**	**118**	⇑*i*P	**P**	**16 37 06.0**	**0.0**
	comp=Z,5.4nm,1.2s,mb4.5						
STKA	**Stephens Creek**	**68.35**	**118**	P	**P**	**16 37 06.0**	**0.0**
	comp=Z,4.9nm,0.9s,mb4.5,baz=305,slow=8.2,SNR=8.3						
STKA				LR	LR	17 01 24.8	
	comp=Z,469nm,21.1s,MS4.7,baz=221,slow=31						
NJ2	**Nanjing**	**69.56**	**45**	*e*P	**P**	**16 37 08.4**	**-4.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
CHKZ	**Chkalovo**	**70.40**	**2**	*e*P	**P**	**16 37 17.1**	**-0.9**
	comp=Z,8.7nm,1.4s,mb4.5						
CHKZ	**Chkalovo**	**70.40**	**2**	*e*P	**P**	**16 37 17.2**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
HHC	**Hu-ho-hao-te**	**70.81**	**34**	*e*P	**P**	**16 37 22.4**	**+1.6**
HHC				AP	pP	16 37 26.8	+2.7
HHC				XP	sP	16 37 29.3	+4.0
HHC				PCP	PcP	16 37 44.8	+3.3
HHC				PP	PP	16 39 58.3	+0.3
HHC				AMB	AMB		
	comp=Z,21nm,0.7s,mb5.2						
HHC				AMB	AMB		
	comp=Z,225nm,5.2s						
HHC				LR	LR		
	comp=N,136nm,16.2s,MS4.7						
HHC				LR	LR		
	comp=E,258nm,13.1s,MS4.7						
HHC				LR	LR		
	comp=Z,153nm,20.2s						
TOA0	**Torodi Ar. Sit**	**71.12**	**291**	*e*P	**P**	**16 37 27.3**	**+4.0**
TORD	**Torodi Ar. Bea**	**71.12**	**291**	P	**P**	**16 37 23.6**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=130,slow=4.5,SNR=3.0						
TORD				LR	LR	17 06 47.1	
	comp=Z,252nm,19.5s,MS4.5,baz=130,slow=34						
MLR	**Muntele Rosu**	**72.45**	**331**	P	**P**	**16 37 31.4**	**+0.8**
MLR	**Muntele Rosu**	**72.45**	**331**	P	**P**	**16 37 31.4**	**+0.8**
	comp=Z,2.7nm,1.0s,mb4.1,baz=193,slow=5.4,SNR=3.6						
NVS	**Novosibirsk**	**72.82**	**10**	*e*P	**P**	**16 37 30.5**	**-2.1**
QSPA	**South Pole Qui**	**73.14**	**180**	*e*P	**P**	**16 37 33.2**	**-1.1**
	comp=Z,25nm,1.1s,mb5.0						
ARU	**Arti**	**73.44**	**355***c*	*i*P	**P**	**16 37 36.1**	**-0.1**
ARU						16 40 16.2	
ARU				S	S	16 46 59.7	-5.6
ARU				pmax	pmax		
	comp=Z,30nm,5.0s						
SONM	**Songino Array**	**73.47**	**26**	P	**P**	**16 37 38.0**	**+1.4**
	comp=Z,1.6nm,0.9s,mb4.0,baz=217,slow=5.3,SNR=11						
SONM				LR	LR	17 10 59.2	
	comp=Z,63nm,19.6s,MS3.9,baz=0.9,slow=37						
ULN	**Ulaanbaatar**	**73.78**	**27**	*e*P	**P**	**16 37 35.9**	**-2.5**
	comp=Z,3.4nm,1.0s,mb4.2						
ULN	**Ulaanbaatar**	**73.78**	**27**	*e*P	**P**	**16 37 35.9**	**-2.5**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
ZAK	**Zakamensk**	**74.24**	**23**	*e*P	**P**	**16 37 44.9**	**+3.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
CTA	**Charters Tower**	**74.51**	**107**	*e*P	**P**	**16 37 44.4**	**+1.0**
	comp=Z,14nm,1.0s,mb4.8						
CTA	**Charters Tower**	**74.51**	**107**	*e*P	**P**	**16 37 44.4**	**+1.0**
CTA				pmax	pmax		
	comp=Z,14nm,1.0s						
CTAO	**Charters Tower**	**74.51**	**107**	*e*P	**P**	**16 37 44.1**	**+0.7**
	comp=Z,39nm,1.4s,mb5.2						
CTAO	**Charters Tower**	**74.51**	**107**	*e*P	**P**	**16 37 44.1**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CTAO				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.1						
DBIC	Dimbokro	74.80	282	LR	LR	17 08 52.4	
	comp=Z,234nm,20.9s,MS4.5,baz=92,slow=34						
AKASG	Malin Array Be	75.09	336	LR	LR	17 10 25.1	
	comp=Z,73nm,18.7s,MS4.0,baz=320,slow=35						
TLY	Talaya	75.43	23	eP	P	16 37 47.1	-0.8
	comp=Z,3.1nm,0.6s,mb4.4						
TLY	Talaya	75.43	23	eP	P	16 37 47.1	-0.8
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KEST	Kesra	75.65	315	LR	LR	17 11 05.8	
	comp=Z,92nm,18.2s,MS4.1,baz=13,slow=36						
OBN	Obninsk	76.30	343	⇑eP	P	16 37 51.6	-1.2
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
ARMA	Armidale	77.07	118	eP	P	16 37 59.3	+1.4
PMG	Port Moresby	77.94	96	eP	P	16 38 03.6	+0.6
	comp=Z,22nm,1.0s,mb5.0						
PMG				e		16 38 11.7	
PMG	Port Moresby	77.94	96	eP	P	16 38 03.6	+0.6
PMG				e		16 38 11.7	
PMG				pmax	pmax		
	comp=Z,22nm,1.0s						
KSRS	Korea Array	78.75	45	LR	LR	17 11 10.2	
	comp=Z,77nm,18.7s,MS4.1,baz=200,slow=34						
PRGR	Permogore	80.15	350	eP	P	16 38 18.2	+4.2
VSU	Vasula	82.11	340	eP	P	16 38 26.5	+2.0
MDJ	Mudanjiang	83.56	40	P	P	16 38 32.1	-0.3
MDJ				XP	sP	16 38 36.6	-0.3
MDJ				S	S	16 48 49.5	-4.9
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.8s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,60nm,5.4s						
MDJ				LR	LR		
	comp=N,126nm,34.5s,MS4.1						
MDJ				LR	LR		
	comp=E,85nm,38.2s,MS4.1						
MDJ				LR	LR		
	comp=Z,46nm,29.6s						
JOF	Joensuu	84.37	344	ep	P	16 38 38.2	+2.1
	comp=Z,5.6nm,0.8s,mb4.8						
JOF	Joensuu	84.37	344	eP	P	16 38 38.2	+2.1
MDT	Midelt	84.40	307	LR	LR	17 17 35.6	
	comp=Z,218nm,18.0s,MS4.6,baz=253,slow=37						
MJAR	Matsushiro Arr	85.59	50	P	P	16 38 41.4	-1.4
	comp=Z,0.6nm,0.5s,mb4.1,baz=236,slow=8.1,SNR=4.9						
ESDC	Sonseca Array	86.77	313	LR	LR	17 17 11.5	
	comp=Z,143nm,18.1s,MS4.4,baz=10.0,slow=35						
ARCES	ARCESS Array B	91.10	347	LR	LR	17 19 12.5	
	comp=Z,188nm,20.5s,MS4.5,baz=217,slow=35						
ASAJ	Asahikawa	91.67	44	LR	LR	17 15 53.2	
	comp=Z,69nm,21.7s,MS4.1,baz=349,slow=33						
INK	Inuvik	127.03	9	ePKPdf	PKPdf	16 45 12.7	+4.9
PPT	Papeete	130.25	132	eLR	LR	17 26 13.8	
	comp=Z,105nm,25.0s						
YKA	Yellowknife Ar	134.49	1	PKP	PKPdf	16 45 23.5	+1.5
	comp=Z,0.1nm,0.4s,baz=348,slow=2.8,SNR=3.6						
RKT	Rikitea	134.74	151	eT		19 14 54.4	
	comp=Z,7.0nm,0.2s						
ULM	Lac du Bonnet	144.04	341	PKP	PKPdf	16 45 38.5	-1.4
	comp=Z,0.5nm,0.3s,baz=45,slow=2.9,SNR=3.3						
ACSO	Alum Creek Sta	145.19	318	ePKPdf	PKPdf	16 45 42.2	0.0
AGMN	Agassiz Refuge	145.74	340	ePKPdf	PKPdf	16 45 44.1	+1.3
AGMN				e		16 45 49.8	
TZTN	Tazewell	147.47	313	PKPdf	PKPdf	16 45 53.4	+7.2
DGMT	Dagmar	147.75	349	ePKPdf	PKPdf	16 45 48.6	+2.4
EGMT	Eagleton	148.90	356	ePKPbc	PKPbc	16 45 55.9	+3.9
LAO	LASA Array	149.82	351	ePKPdf	PKPdf	16 45 54.0	+4.3
LAO				ePKPab	PKPab	16 46 02.9	+3.2
ECSD	EROS,Sioux Fal	149.92	336	ePKPdf	PKPdf	16 45 55.8	+5.9
ECSD				ePKPbc	PKPbc	16 46 01.6	+6.9
ECSD				e		16 46 07.3	
CHMT	Chamberlain Mo	150.12	0	ePKPbc	PKPbc	16 45 59.8	+4.6
CHMT				ePKPab	PKPab	16 46 03.6	+2.7
MSO	Missoula	150.19	1	ePKPdf	PKPdf	16 45 55.3	+5.0
MSO				ePKPbc	PKPbc	16 45 58.3	+3.0
MSO				ePKPab	PKPab	16 46 03.2	+1.9
SIUC	Southern Illin	150.60	319	ePKPdf	PKPdf	16 45 54.6	+3.4
GCMT	Greycliff	151.11	355	PKPdf	PKPdf	16 45 56.5	+4.8
GCMT				ePKPbc	PKPbc	16 45 60.0	+2.5
GCMT				ePKPab	PKPab	16 46 06.3	+1.3
BOZ	Bozeman (W)	151.37	358	PKPdf	PKPdf	16 45 55.8	+3.7
BOZ				ePKPbc	PKPbc	16 46 01.0	+2.9
BOZ				ePKPab	PKPab	16 46 06.8	+0.7
BOZ	Bozeman (W)	151.37	358	PKIKP	PKPdf	16 45 55.8	+3.7
BOZ				e		16 46 01.0	
DLMT	Dillon	151.67	359	ePKPbc	PKPbc	16 46 03.1	+4.3
RLMT	Red Lodge	151.74	354	ePKPdf	PKPdf	16 45 54.2	+1.5
RLMT				ePKPab	PKPab	16 46 07.8	+0.1
RSSD	Black Hills	151.88	346	ePKPdf	PKPdf	16 45 59.9	+7.0
RSSD				ePKPbc	PKPbc	16 46 07.2	+7.9
QLMT	Earthquake Lak	152.17	358	ePKPbc	PKPbc	16 46 03.0	+3.1
QLMT				ePKPab	PKPab	16 46 08.6	-0.9
MCMT	McKenzie Canyo	152.21	360	ePKPdf	PKPdf	16 45 56.5	+3.1
MCMT				ePKPab	PKPab	16 46 09.2	-0.4
PDAR	Pinedale Array	154.10	354	PKPbc	PKPbc	16 46 05.6	+1.3
	comp=Z,0.5nm,0.8s,baz=45,slow=4.4,SNR=4.1						
MIAR	Mount Ida	155.33	319	ePKPab	PKPab	16 46 30.4	+7.1

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*BJI **15** 16:35:30.3, 51.60N×16.10E, h5km, mB5.0, mb4.7, Ms4.7, Msz4.6*
*MOS **15** 16:35:33.2±1.3, 51.64N×16.06E, h10km, mb4.1/6, Error ellipse: s-maj=6.4km s-min=4.0km az=86.2*
*ISCJB **15** 16:35:33.1±0.2, 51.45N±0.01×16.13E±0.02, h0km, mb4.1/13, Error ellipse: s-maj=2.0km s-min=1.5km az=8.9*
*LDG **15** 16:35:33.1±0.1, 51.58N×16.11E, h1km, Ml4.3/12, Error ellipse: s-maj=4.0km s-min=2.3km az=174.0, Suspected Mining induced.*
*NEIC **15** 16:35:34.3±0.3, 51.59N×16.07E, h5km, mb4.0/5, ML3.8(SZGRF), Error ellipse: s-maj=5.0km s-min=4.3km az=180.0*
*CSEM **15** 16:35:34.1±0.1, 51.58N×16.13E, h1km, mb4.0/6, ML4.3/17, Ms3.7, Error ellipse: s-maj=1.7km s-min=1.3km az=6.0*
*BGR **15** 16:35:35.5±0.4, 51.51N×16.15E, h1km, ML3.8/15, Error ellipse: s-maj=4.4km s-min=2.2km az=17.0*
*IDC **15** 16:35:35.3±0.6, 51.52N×16.05E, h0km, mb3.7/4, mb1 3.8/12, mb1mx3.7/25, mbtmp3.7/12, ML3.5/8, MS3.0/1, Ms1 3.0/1, ms1mx2.4/37, Error ellipse: s-maj=10.4km s-min=6.2km az=114.0*
*IPEC **15** 16:35:35.8±0.2, 51.52N×16.15E, h9km±1km, ML3.4/7, Error ellipse: s-maj=1.3km s-min=0.5km az=37.0*
*PRU **15** 16:35:36.0, 51.48N×16.13E, h0km*
*WAR **15** 16:35:36.0, 51.52N×16.12E, ML3.4, Mining Induced*
*VIE **15** 16:35:37.7±0.6, 51.28N×16.10E, h0km, mb3.1/9, ML3.4/8, Ms3.7/2, Error ellipse: s-maj=3.6km s-min=2.6km az=9.0 66 km WNW of Wroclaw Suspected Mining induced.*
*STR **15** 16:35:37.2±1.1, 51.43N×15.82E, h5km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 15 16:35:34.6±0.2**, 51.52N**±0.01×**16.13E**±0.02**, h0km, n210, σ1.14/336, mb4.1/13, 10C-15D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	172	ePg	Pg	16 35 48.5	+0.8
KSP				eSg	Sg	16 35 57.8	+1.2
KSP	Ksiaz	0.69	172	ePg	Pg	16 35 48.5	+0.8
KSP				eSg	Sg	16 35 58.0	+1.4
KSP	Ksiaz	0.69	172	⇓iPg	Pg	16 35 48.5	+0.8
KSP				i		16 35 48.8	
KSP				eSg	Sg	16 35 57.8	+1.2
KSP				e		16 36 02.5	
KSP	Ksiaz	0.69	172	⇓iP	Pg	16 35 48.5	+0.8
KSP				e		16 35 57.8	
KSP	Ksiaz	0.69	172	Pg	Pg	16 35 48.5	+0.8
KSP				eSg	Sg	16 35 57.7	+1.1
UPC	Upice	1.02	184	ePG	Pg	16 35 54.4	+0.3
DPC	Dobruska-Polom	1.18	174	ePg	Pg	16 35 57.4	+0.3
DPC				eSg	Sg	16 36 12.7	+0.3
DPC	Dobruska-Polom	1.18	174	eP	Pg	16 35 57.3	+0.2
DPC				e		16 36 12.1	
DPC				smax			
	comp=N,471nm,0.7s						
DPC	Dobruska-Polom	1.18	174	ePG	Pg	16 35 57.3	+0.2
DPC				eSG	Sg	16 36 12.1	-0.3
	comp=N,471nm,0.7s						
PVCC	Panska Ves	1.40	225	eP	Pn	16 36 01.1	-0.2
PVCC				e		16 36 20.0	
PVCC				smax			
	comp=N,775nm,0.3s						
PVCC	Panska Ves	1.40	225	ePG	Pn	16 36 01.1	-0.2
PVCC				eSG	Sg	16 36 20.0	+0.4
	comp=N,775nm,0.3s						
PVCC	Panska Ves	1.40	225	ePn	Pn	16 36 01.5	+0.2
PVCC				eSg	Sg	16 36 20.0	+0.4
	comp=N,775nm,0.3s						
BRG	Berggiesshubel	1.52	246	ePn	Pn	16 36 03.3	+0.3
BRG				eSg	Sg	16 36 24.8	+1.4
BRG	Berggiesshubel	1.52	246	P	Pn	16 36 02.3	-0.7
BRG						16 36 24.5	
BRG				smax			
	comp=N,381nm,0.9s						
BRG	Berggiesshubel	1.52	246	Pg	Pg	16 36 04.3	+0.6
BRG				eSg	Sg	16 36 23.7	+0.2
BRG				S	Sg	16 36 24.5	+1.0
	comp=N,381nm,0.9s						
BRG	Berggiesshubel	1.52	246	PN	Pn	16 36 02.3	-0.7
BRG				PG	Pg	16 36 04.3	+0.6
BRG				SG	Sg	16 36 24.5	+1.0
	comp=N,636nm,0.9s						
RUE	Ruedersdorf	1.74	304	ePn	Pn	16 36 04.9	-1.1
RUE				eSn	Sn	16 36 31.1	+2.2
RUE	Ruedersdorf	1.74	304	ePn	Pn	16 36 04.9	-1.1
RUE				eSn	Sn	16 36 31.1	+2.2
RUE				eSg	Sg	16 36 31.5	+1.0
PRA	Prague	1.81	217	PG	Pg	16 36 07.0	-2.2
PRA				SG	Sg	16 36 33.0	+0.3
PRU	Pruhonice	1.84	214	eP	Pn	16 36 07.0	-0.3
PRU				e		16 36 33.1	
PRU				smax			
	comp=N,239nm,0.5s						
PRU	Pruhonice	1.84	214	ePN	Pn	16 36 07.0	-0.3
PRU				ePG	Pg	16 36 09.2	-0.6
PRU				eSG	Sg	16 36 33.1	-0.5
	comp=N,239nm,0.5s						
PRU	Pruhonice	1.84	214	ePg	Pg	16 36 09.2	-0.6
PRU				eSg	Sg	16 36 32.5	-1.1
PRU				eS	Sg	16 36 33.1	-0.5
	comp=N,239nm,0.5s						
FBE	Freiberg	1.85	252	ePn	Pn	16 36 06.7	-0.7
FBE				eSg	Sg	16 36 34.5	+0.6
RAC	Raciborz	1.94	137	ePg	Pg	16 36 12.0	+0.2
RAC				eSg	Sg	16 36 38.2	+1.2
RAC	Raciborz	1.94	137	ePg	Pg	16 36 12.0	+0.2
RAC				eSg	Sg	16 36 38.1	+1.1
MORC	Moravsky Berou	1.96	152	ePn	Pn	16 36 08.7	-0.4
MORC				eSn	Sn	16 36 29.8	-4.5
MORC	Moravsky Berou	1.96	152	ePn	Pn	16 36 08.7	-0.4
MORC				eS	Sn	16 36 29.8	-4.6
MORC				Sg	Sg	16 36 37.2	-0.4
CLL	Collm	1.97	265	ePn	Pn	16 36 08.4	-0.7
CLL				eSg	Sg	16 36 39.2	+1.3
CLL	Collm	1.97	265	i Pn	Pn	16 36 08.3	-0.9
CLL				ePg	Pg	16 36 12.0	-0.3
CLL				i Sg	Sg	16 36 38.5	+0.6
CLL				i		16 36 44.2	
CLL	Collm	1.97	265	i P	Pn	16 36 08.3	-0.9
CLL				i		16 36 38.5	
CLL	Collm	1.97	265	i Pn	Pn	16 36 08.3	-0.9
CLL				ePg	Pg	16 36 12.0	-0.3
CLL				ex	x	16 36 16.0	
CLL				i Sg	Sg	16 36 38.5	+0.6
	comp=Z,277nm,0.7s						
CLL				i x	x	16 36 44.2	
CLL	Collm	1.97	265	ePg	Pg	16 36 12.0	-0.3
CLL				eSg	Sg	16 36 37.8	-0.1
OKC	Ostrava-Krasne	2.12	142	ePn	Pn	16 36 10.6	-0.5
OKC				eSg	Sg	16 36 41.6	-1.0
OKC	Ostrava-Krasne	2.12	142	eP	Pn	16 36 10.4	-0.8
OKC				e		16 36 41.4	
OKC				smax			
	comp=N,482nm,0.8s						
OKC	Ostrava-Krasne	2.12	142	ePN	Pn	16 36 10.4	-0.8
OKC				ePG	Pg	16 36 15.0	-0.1
OKC				eSG	Sg	16 36 41.4	-1.1
	comp=N,482nm,0.8s						
VRAC	Vranov	2.23	172	Pn	Pn	16 36 13.4	+0.6
	comp=N,7.3nm,0.3s,baz=349,slow=15,SNR=26						
VRAC				Lg		16 36 45.2	
	comp=N,49nm,0.3s,baz=77,slow=20,SNR=14						
VRAC	Vranov	2.23	172	ePn	Pn	16 36 13.3	+0.5
VRAC				eSg	Sg	16 36 45.0	-1.3
	comp=N,175nm,0.5s						
KRUC	Moravsky	2.47	176	ePn	Pn	16 36 16.8	+0.8
KRUC	Moravsky	2.47	176	ePg	Pg	16 36 20.8	-1.0
KRUC				eSg	Sg	16 36 52.8	-1.0
	comp=N,140nm,0.6s						
TANN	Tannenbergstha	2.57	246	ePn	Pn	16 36 18.0	+0.6
TANN				eSg	Sg	16 36 56.1	-1.0
WERD	Werda	2.65	248	ePn	Pn	16 36 18.6	+0.2
WERD				eSg	Sg	16 36 59.2	-0.4
OJC	Ojcow	2.66	118	ePn	Pn	16 36 17.2	-1.5
OJC				ePg	Pg	16 36 24.9	-0.7
OJC				eSn	Sn	16 36 47.5	-4.1
OJC				eSg	Sg	16 37 00.4	+0.3
OJC	Ojcow	2.66	118	ePn	Pn	16 36 18.9	+0.2
OJC				eSg	Sg	16 37 00.2	+0.1
OJC	Ojcow	2.66	118	eP	Pn	16 36 17.2	-1.5
OJC				e		16 36 47.5	
NKC	Novy Kostel	2.67	243	eSG	Sg	16 37 00.5	+0.3
	comp=N,366nm,0.6s						
NKC	Novy Kostel	2.67	243	ePn	Pn	16 36 19.2	+0.5
NKC				eSg	Sg	16 37 00.3	+0.1
JAVC	Velka Javorina	2.84	159	ePn	Pn	16 36 22.6	+1.5
JAVC				eSg	Sg	16 37 05.6	-0.2
	comp=N,273nm,0.9s						
KHC	Kasperske Hory	2.90	215	ePN	Pn	16 36 22.2	+0.3
KHC				ePG	Pg	16 36 28.4	-1.7
KHC				eSN	Sn	16 36 56.8	-0.6
KHC				eSG	Sg	16 37 06.5	-1.2
	comp=N,114nm,0.4s						
MOX	Moxa	2.98	255	ePn	Pn	16 36 24.7	+1.6
MOX				eSg	Sg	16 37 11.4	+1.1
MOX	Moxa	2.98	255	ePN	Pn	16 36 23.2	+0.2
MOX				ePG	Pg	16 36 31.6	-0.1
MOX				eSG	Sg	16 37 11.7	+1.4
MOX	Moxa	2.98	255	ePg	Pg	16 36 31.6	-0.1
MOX				eSg	Sg	16 37 09.2	-1.1
MANZ	Manzenberg	2.98	241	ePn	Pn	16 36 23.7	+0.6
ROTZ	Rotzenmuhle	3.06	236	ePn	Pn	16 36 24.5	+0.5
ROTZ				eSg	Sg	16 37 11.4	-1.3
GEC2	GERESS Array S	3.10	211	ePn	Pn	16 36 26.1	+1.4
GEC2				eSg	Sg	16 37 12.9	-1.2
GEC2	GERESS Array S	3.10	211	ePn	Pn	16 36 26.1	+1.4
GEC2				eSg	Sg	16 37 12.9	-1.3
GERES	GERESS Array B	3.10	211	P	Pg	16 36 31.3	-2.7
GERES						16 37 12.9	
GERES				pmax	pmax		
	comp=Z,8.0nm,0.3s						
GERES	GERESS Array B	3.10	211	Pn	Pn	16 36 25.2	+0.5
	comp=Z,5.9nm,0.3s,baz=32,slow=12,SNR=123						
GERES				Pg	Pg	16 36 31.3	-2.7
	comp=Z,8.3nm,0.3s,baz=31,slow=15,SNR=41						
GERES				Lg		16 37 12.9	
	comp=Z,27nm,0.3s,baz=39,slow=26,SNR=13						
GERES	GERESS Array B	3.10	211	Pg	Pg	16 36 31.3	-2.7
LIKS	Likavka	3.12	141	eSg	Sg	16 37 16.6	+1.8
SMOL	Smolenice	3.12	164	ePN	Pn	16 36 27.2	+2.2
SMOL				ePG	Pg	16 36 34.4	0.0
SMOL				eSG	Sg	16 37 13.5	-1.4
WET	Wettzell	3.17	222	ePn	Pn	16 36 26.0	+0.4
WET				eSg	Sg	16 37 15.4	-0.8
WET	Wettzell	3.17	222	ePn	Pn	16 36 26.0	+0.4
WET				eSg	Sg	16 37 15.4	-0.8
WET	Wettzell	3.17	222	ePn	Pn	16 36 25.9	+0.3
WET				Sg	Sg	16 37 15.4	-0.8
MODS	Modra-Piesok	3.24	166	ePn	Pn	16 36 28.0	+1.4
MODS				ePg	Pg	16 36 36.2	-0.4
MODS				eSg	Sg	16 37 17.6	-0.9
MODS	Modra-Piesok	3.24	166	eP	Pn	16 36 28.0	+1.4
MODS				e		16 37 17.6	
MODS				smax			
	comp=N,61nm,0.8s						
MODS	Modra-Piesok	3.24	166	ePN	Pn	16 36 28.0	+1.4
MODS				ePG	Pg	16 36 36.1	-0.5
MODS				eSG	Sg	16 37 17.6	-0.9
KOLL	Kolacno	3.29	153	ePN	Pn	16 36 28.1	+0.8
KOLL				eSG	Sg	16 37 19.9	-0.3
ZST	Bratislava	3.39	169	ePG	Pg	16 36 37.4	-2.1
ZST				eSG	Sg	16 37 22.4	-0.9
NIE	Niedzica	3.40	127	ePn	Pn	16 36 30.8	+2.0
NIE				ePg	Pg	16 36 39.5	-0.2
NIE				eSg	Sg	16 37 23.1	-0.6
RGN	Rugen	3.47	332	Pn	Pn	16 36 29.4	-0.4
RGN				ePg	Pg	16 36 45.2	+4.1
RGN	Rugen	3.47	332	Pn	Pn	16 36 29.4	-0.4
RGN	Rugen	3.47	332	ePg	Pg	16 36 45.2	+4.1
VYHS	Vyhne	3.50	149	i PN	Pn	16 36 30.0	-0.1
VYHS				eSG	Sg	16 37 26.0	-0.8
CLZ	Clausthal	3.60	277	ePn	Pn	16 36 32.3	+0.8
CLZ				eSg	Sg	16 37 31.2	+1.1
CLZ	Clausthal	3.60	277	ePn	Pn	16 36 32.3	+0.8
CLZ				eSg	Sg	16 37 31.2	+1.1
CLZ	Clausthal	3.60	277	ePn	Pn	16 36 32.0	+0.5
CLZ				eSg	Sg	16 37 28.3	-1.8
CONA	Conrad Observa	3.60	183	⇓iPn	Pn	16 36 32.2	+0.7
	SNR=17						
CONA				⇑iSg	Sg	16 37 28.7	-1.5
	comp=N,168nm,0.6s						
GRA1	Grafenberg Arr	3.62	242	ePn	Pn	16 36 33.1	+1.2
GRA1				eSg	Sg	16 37 32.1	+1.1
GRF	Grafenberg Arr	3.62	242	ePn	Pn	16 36 33.1	+1.2
GRF				eSg	Sg	16 37 32.1	+1.1
GRFO	Grafenberg	3.63	242	ePn	Pn	16 36 31.6	-0.3
GRFO				ePg	Pg	16 36 45.0	+1.0
GRFO				eSn	Sn	16 37 11.0	-4.4
GRFO				eSg	Sg	16 37 30.3	-0.7
GRFO	Grafenberg	3.63	242	eP	Pn	16 36 31.6	-0.3
GRFO				e		16 37 11.0	
GRFO	Grafenberg	3.63	242	ePn	Pn	16 36 31.6	-0.3
GRFO	Grafenberg	3.63	242	ePg	Pg	16 36 45.0	+1.0
BSD	Bornholm Skovb	3.67	349	i P	Pn	16 36 31.4	-1.1
BSD				i S	Sn	16 37 12.4	-4.1
SOP	Sopron	3.85	176	⇑ePn	Pn	16 36 35.9	+0.9
MOA	Molln	3.87	199	⇑iPn	Pn	16 36 35.9	+0.6
	SNR=16						
MOA				⇓iSg	Sg	16 37 39.0	+0.2
	comp=N,177nm,0.7s						
MOA	Molln	3.87	199	Pn	Pn	16 36 35.9	+0.6
	comp=N,16nm,4.0s						
MOA				Sg	Sg	16 37 39.0	+0.2
	comp=N,177nm,0.7s						
STHS	Stebnicka Huta	3.88	121	ePN	Pn	16 36 35.9	+0.4
STHS				ePG	Pg	16 36 50.0	+1.0
STHS				eSG	Sg	16 37 41.5	+2.2
HROE	Hohe Rhon--Fla	3.90	258	⇓iPn	Pn	16 36 35.5	-0.2
KECS	Kecovo	4.14	136	eP	Pn	16 36 39.0	+0.1
KECS				e		16 37 23.8	
KECS				smax			
	comp=N,20nm,0.7s						
KECS	Kecovo	4.14	136	ePN	Pn	16 36 39.0	+0.1
KECS				ePG	Pg	16 36 54.1	+0.3
KECS				eSN	Sn	16 37 23.8	-4.2
ARSA	Arzberg	4.29	186	⇓iPn	Pn	16 36 42.0	+0.9
ARSA				⇑iSg	Sg	16 37 50.7	-1.7
	comp=N,141nm,0.7s						
CRVS	Cervenica-Dubn	4.31	125	ePN	Pn	16 36 41.6	+0.3
CRVS				ePG	Pg	16 36 58.0	+0.9
CRVS				eSG	Sg	16 37 54.2	+1.2
PSZ	Piszkesteto	4.35	144	ePn	Pn	16 36 42.1	+0.2
PSZ				ePg	Pg	16 36 59.3	+1.3
PSZ				eSn	Sn	16 37 29.9	-3.4
PSZ	Piszkesteto	4.35	144	⇓ePn	Pn	16 36 43.1	+1.2
PSZ	Piszkesteto	4.35	144	ePg	Pg	16 36 59.3	+1.3
PSZ				eS	Sn	16 37 29.9	-3.4
KWP	Kalwaria	4.60	112	ePn	Pg	16 36 60.0	-2.7
KWP				eSg	Sg	16 38 18.2	+16
KWP	Kalwaria	4.60	112	ePn	Pn	16 36 44.8	-0.4
KWP				ePg	Pg	16 36 59.6	-3.0
KWP	Kalwaria	4.60	112	ePn	Pn	16 36 44.8	-0.4
KWP	Kalwaria	4.60	112	ePg	Pg	16 36 59.6	-3.0
KOLS	Kolonicke sedl	4.72	121	i P	Pn	16 36 46.8	-0.1
KOLS				e		16 37 38.2	
KOLS				smax			
	comp=N,42nm,0.8s						
KOLS	Kolonicke sedl	4.72	121	i PN	Pn	16 36 46.8	-0.1
KOLS				i PG	Pg	16 37 04.8	-0.1
KOLS				eSN	Sn	16 37 38.2	-4.0
KBA	Koelnbreinsper	4.81	203	⇑iSg	Sg	16 38 09.0	+0.1
	comp=N,68nm,0.8s						
KBA	Koelnbreinsper	4.81	203	⇑iPn	Pn	16 36 49.2	+1.1
	SNR=9.1						
KBA				⇑iSg	Sg	16 38 09.0	+0.1
	comp=N,68nm,0.8s						
KBA	Koelnbreinsper	4.81	203	Pn	Pn	16 36 49.2	+1.1
	comp=N,9.0nm,1.0s						
KBA				Sg	Sg	16 38 09.0	+0.1
	comp=N,68nm,0.8s						
UZH	Uzhgorod	4.91	124	eP	Pn	16 36 50.0	+0.5
UZH				eS	Sn	16 37 46.0	-1.0
UZH				smax			
	comp=N,24μm,0.8s						
UZH				smax			
	comp=E,90μm,0.8s						
UZH				MLR	MLR		
	comp=Z,76μm,1.1s						
UZH	Uzhgorod	4.91	124	eP	Pn	16 36 50.0	+0.5
UZH				eS	Sn	16 37 46.0	-1.0
	comp=Z,76μm,1.1s						
SUW	Suwalki	4.95	57	ePn	Pg	16 37 08.5	-0.9
SUW				eSg	Sg	16 38 22.6	+9.0
TOD	Tromm	5.05	251	P	Pn	16 36 50.4	-1.1
TOD				S	Sn	16 37 50.9	+0.5
GROS	Grobnik	5.08	185	i Pn	Pn	16 36 53.2	+1.3
WTTA	Wattenberg	5.17	216	⇑iPn	Pn	16 36 53.7	+0.5
WTTA				⇓iSg	Sg	16 38 21.6	+0.9
	comp=Z,42nm,0.7s						
WTTA	Wattenberg	5.17	216	Pn	Pn	16 36 53.7	+0.5
WTTA				i Sg	Sg	16 38 21.5	+0.8
LVV	L'vov	5.30	106	eP	Pn	16 36 45.4	-10
MOTA	Moosalm	5.31	220	⇓iPn	Pn	16 36 55.4	+0.4
MOTA				⇓iSg	Sg	16 38 25.6	+0.4
	comp=Z,54nm,0.8s						
ABTA	Abfaltersbach	5.34	208	⇓iPn	Pn	16 36 56.1	+0.7
	SNR=8.6						
PKSM	Moragy	5.57	162	⇓eP	Pn	16 36 59.8	+1.3
VOY	Vojsko	5.69	196	ePn	Pn	16 37 08.0	+7.7
VOY				eSn	Sg	16 38 38.6	+1.4
ABH	Alteburg	5.70	257	P	Pn	16 36 59.3	-1.0
FETA	Feichten	5.73	220	⇓iPn	Pn	16 37 01.8	+1.0
VISS	Visnje	5.79	189	i Pn	Pn	16 37 03.2	+1.6
WTSB	Winterswijk	5.82	278	eSn	Sg	16 38 50.8	+10
SPAK	Spaichingen-Ko	5.86	237	P	Pn	16 37 00.5	-2.1
DAVA	Damuels	5.88	226	⇑iPn	Pn	16 37 02.2	-0.7
DAVA				⇑iSg	Sg	16 38 46.5	+3.1
	comp=Z,39nm,0.7s						
LANF	Langenberg	5.92	248	P	Pn	16 37 02.7	-0.7
BFO	Black Forest	5.97	241	ePn	Pn	16 37 00.8	-3.3
	comp=Z,17nm,0.8s						
BFO				ePg	Pg	16 37 31.1	+2.3
BFO				eSg	Sg	16 38 42.4	-3.7
BFO	Black Forest	5.97	241	eP	Pn	16 37 00.8	-3.2
BFO				pmax	pmax		
	comp=Z,17nm,0.8s						
BFO	Black Forest	5.97	241	ePn	Pn	16 37 00.8	-3.2
	comp=Z,17nm,0.8s						
BOJS	Bojanci	6.05	186	i Pn	Pn	16 37 06.5	+1.3
RUP	Ruppelstein	6.06	256	P	Pn	16 37 03.7	-1.6
DAVOX	Davos/Dischmat	6.27	223	Pn	Pn	16 37 09.8	+1.5
	comp=Z,1.3nm,0.3s,baz=50,slow=15,SNR=8.2						
DAVOX				Lg		16 38 55.2	
	comp=Z,1.4nm,0.3s,baz=292,slow=14,SNR=4.3						
MEM	Membach	6.45	266	P	Pn	16 37 09.3	-1.4
CDF	Champ du Feu	6.51	245	eP	Pn	16 37 12.1	+0.7
CDF				eSg	Sg	16 38 57.4	-6.0
	comp=Z,136nm,1.1s						
CDF	Champ du Feu	6.51	245	ePn	Pn	16 37 07.8	-3.6
CDF				eP		16 37 12.1	
CDF				eSg	Sg	16 38 57.4	-6.0
CDF	Champ du Feu	6.51	245	eP	Pn	16 37 12.1	+0.7
CDF				eSg	Sg	16 38 57.4	-6.0
	comp=Z,68nm,1.1s						
MOF	Molkenrain	6.90	241	P	Pn	16 37 16.6	-0.2
HINF	Hinteralfeld	7.07	242	ePn	Pn	16 37 15.9	-3.3
HINF				eSg	Sg	16 39 15.2	-6.3
	comp=Z,84nm,0.9s						
HINF	Hinteralfeld	7.07	242	ePn	Pn	16 37 15.9	-3.3
HINF				eSg	Sg	16 39 15.2	-6.3
	comp=Z,42nm,0.9s						
HAU	Haudompre	7.25	245	ePn	Pn	16 37 17.8	-3.8
HAU				eSg	Sg	16 39 19.9	-7.3
	comp=Z,100nm,1.1s						
HAU	Haudompre	7.25	245	ePn	Pn	16 37 17.8	-3.8

HAU eSg Sg 16 39 19.9 -7.3
comp=Z,50nm,1.1s
BAIF Baives 7.70 264 ePn **Pn** **16 37 24.7 -3.1**
BAIF eSg **Sg** **16 39 34.5 -7.2**
comp=Z,116nm,1.4s
BAIF Baives 7.70 264 ePn **Pn** **16 37 24.7 -3.1**
BAIF eSg **Sg** **16 39 34.5 -7.2**
comp=Z,58nm,1.4s
CABF La Chapelle 8.22 237 eSg **Sg** **16 39 51.1 -7.3**
comp=Z,162nm,1.4s
CABF La Chapelle 8.22 237 eSg **Sg** **16 39 51.1 -7.3**
comp=Z,81nm,1.4s
KIEV Kiev 8.27 91 ePn **Pn** **16 37 32.8 -2.9**
comp=Z,22nm,0.8s
KIEV eSn **Sn** **16 39 06.7 -3.0**
KIEV Kiev 8.27 91 eP **Pn** **16 37 32.8 -2.9**
KIEV e 16 39 06.7
KIEV pmax pmax
comp=Z,22nm,0.8s
KIEV Kiev 8.27 91 ePn **Pn** **16 37 32.8 -2.9**
comp=Z,22nm,0.8s
KIEV eSn **Sn** **16 39 06.7 -3.0**
AKASG Malin Array Be 8.28 91 P **Pn** **16 37 34.2 -1.6**
AKASG 16 39 04.8
AKASG Malin Array Be 8.28 91 Pn **Pn** **16 37 34.2 -1.6**
comp=Z,4.4nm,0.3s,baz=279,slow=12,SNR=25
AKASG Sn **Sn** **16 39 04.8 -5.2**
comp=Z,2.4nm,0.3s,baz=253,slow=35,SNR=5.5
AKASG Lg 16 40 00.2
comp=Z,0.3nm,0.3s,baz=269,slow=24,SNR=4.1
AKBB Malin Array Si 8.28 91 ePn **Pn** **16 37 34.1 -1.7**
AKBB eSn **Sn** **16 39 04.3 -5.6**
LPL La Plagne 8.66 230 eSg **Sg** **16 40 04.5 -7.9**
comp=Z,49nm,1.4s
LPG La Plagne 8.66 230 eSg **Sg** **16 40 04.4 -8.1**
comp=Z,94nm,1.4s
HFS Hagfors 8.74 352 Pn **Pn** **16 37 40.8 -1.2**
comp=Z,0.2nm,0.3s,baz=167,slow=19,SNR=6.2
KONO Kongsberg 8.94 338 eP **Pn** **16 37 47.7 +2.9**
BNI Bardonecchia 9.03 228 ePn **Pn** **16 37 41.4 -4.7**
LOR Lormes 9.06 247 ePn **Pn** **16 37 42.7 -3.8**
baz=67
LOR eSg **Sg** **16 40 17.2 -8.2**
comp=Z,30nm,1.0s
LOR Lormes 9.06 247 ePn **Pn** **16 37 42.7 -3.8**
LOR eSg **Sg** **16 40 17.2 -8.2**
comp=Z,15nm,1.0s
MBDF Montbardon 9.24 226 eP **Pn** **16 37 51.3 +2.4**
MBDF eSg Sn 16 40 23.4 +50
comp=Z,41nm,1.2s
MBDF Montbardon 9.24 226 eP **Pn** **16 37 51.3 +2.4**
MBDF eSg Sn 16 40 23.4 +50
comp=Z,20nm,1.2s
SMF Signal de Mont 9.42 244 eSg Sx 16 40 28.6
comp=Z,36nm,1.0s
SMF Signal de Mont 9.42 244 eSg Sx 16 40 28.6
comp=Z,18nm,1.0s
ORIF Oris-en-Rattie 9.51 230 eSg Sx 16 40 32.3
comp=Z,92nm,1.4s
ORIF Oris-en-Rattie 9.51 230 eSg Sx 16 40 32.3
comp=Z,46nm,1.4s
SBF Sospel 9.64 221 eP **Pn** **16 37 55.8 +1.3**
SBF Sospel 9.64 221 ePn **Pn** **16 37 50.8 -3.7**
SBF eP 16 37 55.8
SBF Sospel 9.64 221 eP **Pn** **16 37 55.8 +1.3**
NAO01 NORSAR Array S 9.79 345 ePn **Pn** **16 37 47.5 -8.9**
NOA NORSAR Array B 9.92 346 Pn **Pn** **16 37 55.7 -2.5**
comp=Z,0.2nm,0.3s,baz=166,slow=12,SNR=2.4
FRF La Foret Royal 10.22 222 eP **Pn** **16 38 03.5 +1.2**
FRF La Foret Royal 10.22 222 ePn **Pn** **16 37 58.7 -3.6**
FRF eP 16 38 03.5
FRF La Foret Royal 10.22 222 eP **Pn** **16 38 03.5 +1.2**
FINES FINESS Array B 11.35 25 Pn **Pn** **16 38 14.8 -2.9**
FINES Sn **Sn** **16 40 15.0 -10**
FINES FINESS Array B 11.35 25 Pn **Pn** **16 38 14.8 -2.9**
comp=Z,0.3nm,0.3s,baz=202,slow=12,SNR=11
FINES Sn **Sn** **16 40 15.0 -10**
comp=Z,0.3nm,0.3s,baz=225,slow=20,SNR=3.7
KAF Kangasniemi 11.97 24 ep **Pn** **16 38 17.9 -8.3**
comp=Z,12nm,1.0s
KAF Kangasniemi 11.97 24 eP **Pn** **16 38 17.9 -8.3**
KAF pmax pmax
comp=Z,12nm,1.0s
EKA Eskdalemuir Ar 12.11 296 Pn **Pn** **16 38 24.4 -3.8**
comp=Z,0.2nm,0.3s,baz=107,slow=14,SNR=4.0
ESK Eskdalemuir 12.14 296 Pn **Pn** **16 38 25.2 -3.3**
ESK eSn **Sn** **16 40 35.0 -9.4**
OBN Obninsk 12.73 66⇓eP **Pn** **16 38 36.9 +0.3**
OBN eS **Sn** **16 40 59.9 +1.1**
OBN pmax pmax
comp=Z,23nm,1.7s
OBN MLR MLR
comp=Z,100nm,19.0s
OBN Obninsk 12.73 66 eP **Pn** **16 38 36.9 +0.3**
comp=Z,23nm,1.7s
OBN eS **Sn** **16 40 59.9 +1.1**
comp=Z,100nm,19.0s
IDI Anoyia 17.41 155 LR LR 16 46 27.1
comp=Z,53nm,19.6s,baz=308,slow=37
ARCES ARCESS Array B 18.61 10 Pn **Pn** **16 39 49.3 -3.9**
comp=Z,0.6nm,0.3s,baz=194,slow=12,SNR=20
PRGR Permogore 18.97 46 eP **Pn** **16 40 08.6 +11**
ARU Arti 25.12 62 eP **P** **16 41 00.1 -0.6**
comp=Z,6.2nm,1.1s,mb4.2
ARU Arti 25.12 62d iP **P** **16 41 00.9 +0.1**
ARU PPP 16 41 38.9
ARU S **S** **16 45 26.4 +0.2**
ARU pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
ARU Arti 25.12 62 i P **P** **16 41 00.9 +0.1**
comp=Z,6.0nm,1.0s,mb4.3
ARU S **S** **16 45 26.4 +0.2**
AKTK Aktyubinsk 26.14 76 P **P** **16 41 09.7 -0.3**
comp=Z,2.0nm,0.7s,mb3.9
AKTO Aktyubinsk 26.14 76 P **P** **16 41 09.7 -0.3**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
AKTO Aktyubinsk 26.14 76 P **P** **16 41 09.7 -0.3**
comp=Z,1.7nm,0.7s,mb3.8,baz=301,slow=10,SNR=7.1
CHKZ Chkalovo 32.49 64 eP **P** **16 42 06.7 +0.3**
comp=Z,0.6nm,0.6s,mb3.7
CHKZ Chkalovo 32.49 64 eP **P** **16 42 06.7 +0.3**
CHKZ pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
CHKZ Chkalovo 32.49 64 eP **P** **16 42 06.7 +0.3**
comp=Z,0.6nm,0.6s,mb3.7
BRVK Borovoye 32.50 66 eP **P** **16 42 07.4 +0.9**
comp=Z,2.3nm,0.7s,mb4.2
BRVK Borovoye 32.50 66 eP **P** **16 42 07.4 +0.9**
BRVK pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BRVK Borovoye 32.50 66 eP **P** **16 42 07.4 +0.9**
comp=Z,2.3nm,0.7s,mb4.2
EKS2 Erkin-Say 39.30 80 P **P** **16 43 06.7 +1.8**
comp=Z,1.0nm,0.7s,mb3.5
EKS2 Erkin-Say 39.30 80 P **P** **16 43 06.7 +1.8**
comp=Z,1.0nm,0.7s,mb3.5
AAK Ala-Archa 39.76 79 eP **P** **16 43 09.7 +0.9**
comp=Z,6.8nm,1.4s,mb4.1
AAK Ala-Archa 39.76 79 eP **P** **16 43 09.7 +1.0**
AAK pmax pmax
comp=Z,7.0nm,1.4s,mb4.1
AAK Ala-Archa 39.76 79 eP **P** **16 43 09.7 +1.0**
comp=Z,7.0nm,1.4s,mb4.1
MKAR Makanchi Array 42.20 69 P **P** **16 43 29.8 +1.0**
MKAR Makanchi Array 42.20 69 P **P** **16 43 29.8 +1.0**
comp=Z,0.2nm,0.3s,mb3.4,baz=312,slow=7.6,SNR=4.1
SONM Songino Array 54.90 55 P **P** **16 45 08.1 +1.5**
comp=Z,0.6nm,0.9s,mb3.6,baz=279,slow=8.5,SNR=7.7
YKA Yellowknife Ar 59.85 336 P **P** **16 45 41.7 +0.5**
YKA Yellowknife Ar 59.85 336 i P **P** **16 45 41.7 +0.4**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 59.85 336 P **P** **16 45 41.7 +0.5**
comp=Z,1.0nm,0.8s,mb3.9,baz=29,slow=6.5,SNR=10
YKA Yellowknife Ar 59.85 336 i P **P** **16 45 41.7 +0.4**
comp=Z,1.0nm,0.8s,mb3.9
LZH Lanzhou 61.44 67 eP **P** **16 45 51.4 -1.1**
LZH AP 16 45 54.5
LZH XP 16 45 56.4
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.1
HHC Hu-ho-hao-te 62.36 58 eP **P** **16 45 54.3 -4.4**
HHC AMB AMB
comp=Z,11nm,1.1s,mb5.0
HHC AMB AMB
comp=Z,115nm,4.5s
CD2 Chengdu 65.08 71 eP **P** **16 46 15.9 -0.8**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.1
ASAR Alice Springs 125.35 84 PKP PKPdf 16 54 36.5 -0.6
comp=Z,0.2nm,0.8s,baz=305,slow=0.8,SNR=4.2
ASAR Alice Springs 125.35 84 PKIKP PKPdf 16 54 36.5 -0.6

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*NERS **15** 17:09:40.0, 6078N×13646E, h0km*
*IDC **15** 17:09:41.5±0.9, 61.14N×13660E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.7/25, mbtmp3.7/10, Error ellipse: s-maj=26.1km s-min=22.2km az=79.0*
*ISCJB **15** 17:09:42.7±2.1, 6120N±006×13657E±007, h18km±17km, mb3.6/14, Error ellipse: s-maj=10.1km s-min=5.4km az=169.4*
*MOS **15** 17:09:44.0±1.4, 6120N×13652E, h27km, mb4.1/5, Error ellipse: s-maj=18.3km s-min=10.4km az=81.4*
*NEIC **15** 17:09:46.4±2.2, 61.19N×13650E, h32km±16km, mb3.7/2, Error ellipse: s-maj=9.0km s-min=7.1km az=186.0*
ISC 15 17:09:46.2±2.1**, 6119N**±006×**13652E**±007**, h30**km±17km**, n39, σ0.98**/48**, mb3.6**/14**, 1C, Eastern Siberia**

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

YAK Yakutsk 3.38 288 ePn **Pn** **17 10 36.3 -0.5**
YAK eSn **Sn** **17 11 15.2 -0.6**
YAK Yakutsk 3.38 288 eP **Pn** **17 10 37.3 +0.5**
YAK e 17 11 16.1
YAK pmax pmax
comp=Z,37nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.6s
YAK pmax pmax
comp=E,26nm,1.2s
YAK pmax pmax
comp=Z,179nm,0.8s
YAK pmax pmax
comp=N,36nm,1.4s
YAK pmax pmax
comp=E,99nm,1.2s
YAK smax
comp=N,138nm,0.9s
YAK smax
comp=Z,51nm,0.8s
YAK smax
comp=E,87nm,0.7s
YAK smax
comp=N,296nm,0.7s
YAK smax
comp=Z,136nm,0.9s
YAK smax
comp=E,179nm,0.7s
YAK MLR MLR
comp=Z,124nm,6.0s
SUUS Susuman 5.72 69 eP **Pn** **17 11 11.1 +2.1**
SUUS Pmax 17 11 11.9
comp=Z,10.0nm,0.5s
SUUS e 17 11 31.1
SUUS eS **Sn** **17 12 14.2 +0.7**
SUUS eSg Sn 17 12 45.5 +32
SUUS Sgmax 17 12 49.0
comp=Z,50nm,0.4s
SUUS Sgmax 17 12 49.0
comp=Z,40nm,0.6s
MGD Magadan 1 7.08 93 eP **Pn** **17 11 27.1 -0.6**
MGD Pmax 17 11 29.7
comp=Z,40nm,0.2s
MGD eS **Sn** **17 12 45.0 -2.1**
MGD eSg Sn 17 13 22.8 +36
MGD Sgmax 17 13 26.5
comp=Z,90nm,0.5s
MGD Sgmax 17 13 26.5
comp=Z,50nm,0.5s
MA2 Magadan 7.24 97 ePn **Pn** **17 11 30.3 +0.4**
MA2 eSn Sn 17 13 19.7 +29
MA2 Magadan 7.24 97 eP **Pn** **17 11 30.4 +0.5**
MA2 eS **Sn** **17 12 51.4 +0.4**
MA2 pmax pmax
comp=Z,20nm,0.9s
MA2 Magadan 7.24 97 eP **Pn** **17 11 30.1 +0.2**
MA2 Pmax 17 11 34.1
comp=Z,30nm,1.0s
MA2 eS **Sn** **17 12 44.1 -6.9**
MA2 eSg Sn 17 13 26.6 +36
MA2 Sgmax 17 13 36.1
comp=Z,50nm,0.7s
CLNS Chul'man 7.42 239 eP **Pn** **17 11 30.6 -1.7**
CLNS eS **Sn** **17 12 50.4 -4.8**
CLNS pmax pmax
comp=Z,5.0nm,0.3s
CLNS pmax pmax
comp=N,5.0nm,0.4s
CLNS pmax pmax
comp=E,2.0nm,0.3s
CLNS pmax pmax
comp=N,12nm,0.4s
CLNS pmax pmax
comp=Z,13nm,0.4s
CLNS pmax pmax
comp=E,7.0nm,0.3s
CLNS smax
comp=N,64nm,0.7s
CLNS smax
comp=Z,29nm,0.6s
CLNS smax
comp=E,44nm,0.7s
CLNS smax
comp=N,226nm,0.5s
CLNS smax
comp=Z,120nm,0.6s
CLNS smax
comp=E,193nm,0.7s
CLNS MLR MLR
comp=Z,30nm,7.0s
SEY Seymchan 7.65 70 eP **Pn** **17 11 36.4 +0.9**
SEY Seymchan 7.65 70 eP **Pn** **17 11 37.5 +2.0**
SEY Pmax 17 11 39.9
comp=Z,10.0nm,0.4s
SEY eS **Sn** **17 12 52.7 -8.3**
SEY eSg Sn 17 13 44.6 +44
SEY Sgmax 17 13 52.6
comp=Z,30nm,0.6s
SEY Sgmax 17 13 52.6
comp=Z,10.0nm,0.3s
TIXI Tiksi 10.93 347 ePn **Pn** **17 12 20.2 -0.1**
comp=Z,2.3nm,0.8s
TIXI eSn **Sn** **17 14 16.2 -5.2**
TIXI Tiksi 10.93 347 i P **Pn** **17 12 20.2 -0.1**
TIXI pmax pmax
comp=Z,2.0nm,0.7s
HABR Khabarovsk 12.77 184 eP **Pn** **17 12 44.3 -1.2**
HABR 17 15 07.2
BILL Bilibino 14.36 49⇑eP **Pn** **17 13 05.6 -1.5**
BILL eS **Sn** **17 15 44.0 -0.9**
BILL pmax pmax
comp=Z,3.0nm,1.8s
HIA Hailar 15.24 226 eP **Pn** **17 13 20.3 +1.3**
ZAK Zakamensk 21.34 255 eP **P** **17 14 30.7 +0.1**
ZAK pmax pmax
comp=Z,1.0nm,1.0s,mb3.1
ULN Ulaanbaatar 21.44 245 eP **P** **17 14 31.9 +0.3**
comp=Z,0.9nm,0.7s,mb3.2
ULN Ulaanbaatar 21.44 245 eP **P** **17 14 33.5 +1.8**
SONM Songino Array 21.76 246 P **P** **17 14 35.5 +0.4**
comp=Z,0.5nm,0.5s,mb3.2,baz=43,slow=9.6,SNR=6.2
ARU Arti 38.41 299 eP **P** **17 17 04.5 0.0**
comp=Z,3.1nm,0.8s,mb4.1
ARU Arti 38.41 299 eP **P** **17 17 04.5 0.0**
ARU pmax pmax
comp=Z,3.0nm,0.8s,mb4.1
ARCES ARCESS Array B 40.73 330 P **P** **17 17 23.7 +0.1**
comp=Z,1.6nm,0.8s,mb3.7,baz=49,slow=9.7,SNR=6.1
AKTK Aktyubinsk 42.75 293 P **P** **17 17 40.3 -0.1**
AKTO Aktyubinsk 42.75 293 P **P** **17 17 40.3 -0.1**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
AKTO Aktyubinsk 42.75 293 P **P** **17 17 40.3 -0.1**
comp=Z,0.8nm,0.5s,mb3.8,baz=88,slow=1.8,SNR=4.1
YKA Yellowknife Ar 45.41 38 P **P** **17 18 01.0 -0.5**
YKA Yellowknife Ar 45.41 38 i P **P** **17 18 03.7 +2.2**
YKA Yellowknife Ar 45.41 38 P **P** **17 18 01.0 -0.5**
comp=Z,0.1nm,0.4s,mb3.0,baz=319,slow=7.3,SNR=4.6
FINES FINESS Array B 46.70 322 i P **P** **17 18 12.1 +0.5**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 46.70 322 P **P** **17 18 12.1 +0.5**
comp=Z,1.0nm,0.5s,mb4.0,baz=39,slow=10,SNR=12
NOA NORSAR Array B 51.10 329 P **P** **17 18 45.2 -0.2**
comp=Z,1.4nm,0.8s,mb3.9,baz=36,slow=8.6,SNR=2.9
AKASG Malin Array Be 54.30 312 i P **P** **17 19 08.6 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 54.30 312 P **P** **17 19 08.7 -0.5**
comp=Z,0.5nm,0.4s,mb3.8,baz=35,slow=7.8,SNR=4.6
KIV Kislovodsk 54.43 298 eP **P** **17 19 00.7 -10**
KIV pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
TXAR Lajitas Array 77.52 51 P **P** **17 21 39.5 +0.7**
TXAR Lajitas Array 77.52 51 P **P** **17 21 39.5 +0.7**
comp=Z,0.1nm,0.3s,mb3.2,baz=356,slow=5.4,SNR=3.8
WRA Warramunga Arr 80.86 182 i P **P** **17 21 59.4 +2.5**
WRA Warramunga Arr 80.86 182 P **P** **17 21 56.3 -0.6**
comp=Z,0.4nm,0.8s,mb3.4,baz=358,slow=5.6,SNR=6.1
ASAR Alice Springs 84.57 182 P **P** **17 22 15.9 -0.2**
comp=Z,0.5nm,0.6s,mb3.8,baz=3.9,slow=5.7,SNR=12

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*ISCJB **15** 17:12:22.3±1.5, 3482N±007×2625E±005, h8km±11km, mb3.7/3, Error ellipse: s-maj=11.6km s-min=6.1km az=15.4*
*IDC **15** 17:12:25.7±2.4, 35.15N×26.16E, h27km±21km, mb3.6/3, mb1 3.7/6, mb1mx3.4/21, mbtmp3.7/6, ML3.8/3, Error ellipse: s-maj=29.2km s-min=19.3km az=9.0*
*CSEM **15** 17:12:28.2, 3531N×26.14E, h25km, MD3.5/11, After ATH*
*ATH **15** 17:12:28.2, 3531N×26.14E, h26km±1km, MD3.5/11*
*NEIC **15** 17:12:28.0, 3520N×26.17E, h10km, ML3.1(ATH), After ATH.*
ISC 15 17:12:24.6±1.5**, 3494N**±007×**2624E**±004**, h8**km±11km**, n20, σ1.08**/26**, mb3.7**/3**, 2C, Crete**

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

NPS Neapolis 0.60 302⇑iPB **Pb** **17 12 36.8 -0.5**
NPS eSB **Sb** **17 12 44.1 -1.9**
KARP Karpathos 0.97 51⇑iPB **Pb** **17 12 44.5 +0.9**
KARP eSN **Sn** **17 12 57.9 -0.4**
IDI Anoyia 1.16 288 Pg **Pg** **17 12 46.4 -0.4**
25nm,0.3s,baz=109,slow=16,SNR=143
IDI Lg 17 12 59.1
46nm,0.3s,baz=354,slow=16,SNR=12
VAM Vamos 1.73 286 ePN **Pn** **17 12 58.0 +3.1**
VAM eSN **Sn** **17 13 18.2 +1.0**
GVD Gavdhos 1.77 267 ePN **Pn** **17 12 59.0 +3.6**
ARG Arkhangelos 2.00 50 ePN **Pn** **17 13 00.5 +1.9**
APE Apeiranthos 2.20 345 ePN **Pn** **17 13 00.3 -1.0**
SMG Samos 2.80 10 ePN **Pn** **17 13 09.2 -0.4**
KYTH Kithira 2.93 298 ePN **Pn** **17 13 12.0 +0.6**
VLI Veliai 3.21 304 ePN **Pn** **17 13 14.9 -0.4**
ITM Ithomi 4.14 304 ePN **Pn** **17 13 28.4 +0.3**
LKR Lokris 4.52 326 P **Pn** **17 13 35.3 +2.0**
THL Klokotos Trika 5.71 325 ePN **Pn** **17 13 49.3 -0.3**
MMAI Mount Meron Ar 7.85 102 Pn **Pn** **17 14 18.2 -0.8**
2.1nm,0.3s,baz=306,slow=12,SNR=14
MMAI Sn **Sn** **17 15 43.2 -4.9**
0.6nm,0.3s,baz=315,slow=57,SNR=2.6
EIL Elat 9.06 123 Pn **Pn** **17 14 35.9 +0.3**
EIL Sn **Sn** **17 16 12.5 -5.2**
EIL Elat 9.06 123 Pn **Pn** **17 14 35.9 +0.3**
0.9nm,0.3s,baz=316,slow=22,SNR=11
EIL Sn **Sn** **17 16 12.5 -5.2**
0.5nm,0.3s,baz=24,slow=20,SNR=3.4
ASF Jabal al Asfar 9.32 104 Pn **Pn** **17 14 38.7 -0.4**
0.4nm,0.3s,baz=284,slow=4.2,SNR=3.9
TORD Torodi Ar. Bea 31.04 232 P **P** **17 18 42.0 -0.9**
0.3nm,0.4s,mb3.5,baz=29,slow=8.6,SNR=6.7
ARCES ARCESS Array B 34.65 360 P **P** **17 19 09.1 -4.9**
1.6nm,0.9s,mb4.0,baz=180,slow=8.0,SNR=5.5
MKAR Makanchi Array 43.16 56 P **P** **17 20 24.7 -0.8**
0.3nm,0.3s,mb3.5,baz=282,slow=7.2,SNR=3.4

IDC 15 17:41:19.3±1.3**, 406N**×**12661E, h0**km**, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.6**/18**, mbtmp3.5**/6**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.6**/23**, Error ellipse: s-maj=97.9km s-min=19.9km az=71.0, Talaud Islands**

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

FITZ Fitzroy Crossi 22.04 182 P P 17 46 16.5 +0.8
0.4nm,0.4s,baz=359,slow=16,SNR=3.4
WRA Warramunga Arr 25.03 163 P P 17 46 44.8 -0.5
2.0nm,0.8s,baz=344,slow=11,SNR=8.6
ASAR Alice Springs 28.46 166 P P 17 47 15.6 -0.5
0.2nm,0.8s,baz=338,slow=6.5,SNR=5.0
JHJ Hachijo jima 2 31.43 22 LR LR 18 00 11.3
comp=Z,29nm,19.2s,baz=128,slow=36
STKA Stephens Creek 38.48 159 P P 17 48 43.9 +0.7
1.2nm,0.6s,baz=340,slow=13,SNR=4.3
SONM Songino Array 46.95 341 P P 17 49 53.8 +2.0
0.3nm,0.7s,baz=157,slow=7.8,SNR=3.0
MKAR Makanchi Array 57.22 325 P P 17 51 07.1 -1.3
0.4nm,0.5s,baz=123,slow=8.8,SNR=5.4

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*CSEM **15** 17:48:14.1±0.2, 3935N×4083E, h2km, MD2.8, Error ellipse: s-maj=5.3km s-min=3.8km az=132.0*
*ISK **15** 17:48:14.8, 3938N×4083E, h9km, MD3.0*
*ISCJB **15** 17:48:15.3±0.5, 3931N±003×4089E±004, h6km, Error ellipse: s-maj=5.0km s-min=3.6km az=40.9*
*DDA **15** 17:48:17.0, 3950N×4089E, h6km, Md2.8*
ISC 15 17:48:15.8±0.6**, 3933N**±003×**4089E**±004**, h3**km±6km**, n12, σ1.13**/19**, 1C, Turkey**

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

BINT Bingol 0.55 215 i PG **Pg** **17 48 26.2 -0.1**
BINT i SG **Sg** **17 48 35.1 +1.7**
EZM Erzurum 0.68 32 i PG **Pg** **17 48 27.6 -1.2**
EZM i SG **Sg** **17 48 38.3 +0.6**
ERZM Erzurum 0.68 32⇑iP **Pg** **17 48 27.5 -1.4**
ERZM eS **Sg** **17 48 39.5 +1.8**
EZC Erzincan 0.93 297 PN **Pn** **17 48 37.8 +2.0**
BTMT Batman 1.23 157 ePN **Pn** **17 48 39.3 -0.5**
PTK Pertek 1.25 250 PN **Pn** **17 48 38.9 -1.2**
TUTA Tutak 1.49 87 i P **Pn** **17 48 43.1 -0.4**
TUTA i S **Sn** **17 49 05.1 +1.6**
KELT Kelkit 1.50 303 eP **Pn** **17 48 42.0 -1.7**
KELT i S **Sn** **17 49 04.0 +0.3**
GUMT Gumushane 1.57 317 ePN **Pn** **17 48 43.0 -1.5**
AGRB Hanur-Agry 1.65 81 ePN **Pn** **17 48 45.2 -0.4**
KEMA Kemaliye 1.86 269 i P **Pn** **17 48 49.7 +1.1**
KEMA i S **Sg** **17 49 16.0 +0.4**
MARD Mardin 2.01 183 i P **Pg** **17 48 53.9 -0.5**
MARD i S **Sg** **17 49 20.2 -0.2**

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*ISCJB **15** 18:07:22.2±3.7, 6.1S±02×1502E±02, h71km±28km, mb3.9/6, Error ellipse: s-maj=30.2km s-min=24.8km az=160.1*
*IDC **15** 18:07:23.2±6.6, 6.17S×15024E, h64km±51km, mb3.8/7, mb1 4.0/8, mb1mx3.8/15, mbtmp3.9/8, ML3.3/1, MS3.0/3, Ms1 3.0/3, ms1mx2.8/25, Error ellipse: s-maj=45.9km s-min=27.5km az=75.0*
*NEIC **15** 18:07:23.5±3.0, 605S×150.18E, h69km±21km, mb4.0/2, Error ellipse: s-maj=29.8km s-min=19.1km az=69.0*
ISC 15 18:07:23.9±3.3**, 61S**±02×**1502E**±02**, h70**km±24km**, n18, σ0.67**/17**, mb3.9**/6**, New Britain region**

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

PMG Port Moresby 4.44 223 ePn **Pn** **18 08 28.9 +0.1**
PMG eS **Sn** **18 09 20.0 +0.7**
PMG LR LR 18 10 05.5
PMG Port Moresby 4.44 223 P **Pn** **18 08 29.6 +0.8**
12nm,0.3s,baz=45,slow=7.9,SNR=57
PMG S **Sn** **18 09 17.4 -1.8**
15nm,0.3s,baz=218,slow=9.0,SNR=4.5
PMG LR LR 18 10 05.5
comp=Z,116nm,19.5s,baz=41,slow=37
HNR Honiara 10.18 109 LR LR 18 12 47.7
comp=Z,92nm,20.1s,baz=359,slow=32
COEN Coen 10.41 221 eP **Pn** **18 09 49.9 -0.5**
CTA Charters Tower 14.39 195 LR LR 18 15 09.8
comp=Z,77nm,19.0s,baz=56,slow=32
EIDS Eidsvold 19.14 178 eP **Pn** **18 11 43.6 +0.5**

WB2	Warramunga Arr	20.64	227	eP	P	18 11 57.9	0.0
WRA	Warramunga Arr	20.65	227	P	P	18 11 58.4	+0.4
	6.6nm,0.6s,baz=50,slow=10,SNR=72						
ASAR	Alice Springs	23.45	220	P	P	18 12 27.6	+0.3
	2.0nm,0.6s,mb3.7,baz=56,slow=9.0,SNR=101						
BATI	Kupang	26.59	260	P	P	18 12 56.5	+0.6
	11nm,0.6s,mb4.5,baz=137,slow=2.8,SNR=4.5						
FITZ	Fitzroy Crossi	26.77	241	eP	P	18 12 56.6	-0.8
	4.2nm,0.5s,mb4.2						
FITZ	Fitzroy Crossi	26.77	241	eP	P	18 12 57.5	+0.1
	4.8nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	26.77	241	P	P	18 12 57.5	0.0
	2.6nm,0.5s,mb4.0,baz=70,slow=11,SNR=7.5						
STKA	Stephens Creek	26.84	196	eP	P	18 12 57.8	-0.2
	2.0nm,0.6s,mb3.8						
STKA	Stephens Creek	26.84	196	P	P	18 12 58.9	+0.9
	5.9nm,1.0s,mb4.1,baz=15,slow=12,SNR=6.2						
SONM	Songino Array	66.12	329	P	P	18 18 03.5	-0.3
	0.3nm,0.5s,mb3.4,baz=133,slow=6.1,SNR=4.7						
VNDA	Vanda	71.60	177	P	P	18 18 36.3	-1.1
	1.0nm,0.7s,mb3.7,baz=334,slow=5.7,SNR=4.5						
TORD	Torodi Ar. Bea	148.22	285	PKPbc	PKPbc	18 27 02.5	-0.6
	0.8nm,0.6s,baz=65,slow=1.5,SNR=4.8						

*ISCJB **15** 18:09:07.3±0.3, 5150N±002×16.11E±002, h0km, mb3.5/2, Error ellipse: s-maj=2.5km s-min=1.7km az=15.8*
*MOS **15** 18:09:08.1±0.9, 5162N×16.17E, h10km, mb4.0/1, Error ellipse: s-maj=8.6km s-min=4.4km az=86.4*
*NEIC **15** 18:09:09.1±0.4, 5155N×16.10E, h5km, ML3.5(SZGRF), ML2.9(BRA), Error ellipse: s-maj=5.3km s-min=4.6km az=200.0*
*CSEM **15** 18:09:09.6±0.2, 5154N×16.12E, h1km±1km, mb4.0/1, ML3.9/8, Error ellipse: s-maj=2.4km s-min=1.8km az=37.0*
*BGR **15** 18:09:09.9±0.4, 5152N×16.12E, h1km, ML3.5/15, Error ellipse: s-maj=5.6km s-min=2.2km az=17.0*
*IPEC **15** 18:09:10.1±0.2, 5152N×16.15E, h9km±1km, ML2.7/3, Error ellipse: s-maj=1.3km s-min=0.6km az=40.0*
*PRU **15** 18:09:10.5, 5149N×1609E, h0km*
*WAR **15** 18:09:10.4, 5152N×16.12E, ML3.1, Mining Induced*
*ORF **15** 18:09:10.8, 5168N×1623E, h30km, mb5.4, ML3.2*
*IDC **15** 18:09:10.2±0.6, 5154N×1596E, h0km, mb3.2/1, mb1 3.5/9, mb1mx3.3/24, mbtmp3.3/9, ML3.1/8, Error ellipse: s-maj=9.8km s-min=5.4km az=100.0*
*VIE **15** 18:09:11.5±0.6, 5134N×1603E, h0km, mb3.0/6, ML3.4/7, Error ellipse: s-maj=3.9km s-min=3.0km az=24.0 73 km WNW of Wroclaw Suspected Mining induced.*
*LDG **15** 18:09:13.2±0.2, 5121N×1586E, h1km, Ml3.8/8, Error ellipse: s-maj=5.5km s-min=2.3km az=12.0, Suspected Mining induced.*

ISC 15 18:09:08.8±0.3, **5154N**±002×**1612E**±002, **h0km, n119, σ1^{s}05**/205, **mb3.5**/2, **6C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	171	ePg	Pg	18 09 22.9	+0.6
KSP				eSg	Sg	18 09 32.3	+0.8
KSP	Ksiaz	0.71	171	ePg	Pg	18 09 22.6	+0.3
KSP				eSg	Sg	18 09 31.4	-0.1
KSP	Ksiaz	0.71	171	⇓iPg	Pg	18 09 22.9	+0.6
KSP				eSg	Sg	18 09 32.3	+0.9
KSP				e		18 09 37.1	
KSP	Ksiaz	0.71	171	⇓iP	Pg	18 09 22.9	+0.6
KSP				e		18 09 32.3	
UPC	Upice	1.03	184	ePG	Pg	18 09 28.9	+0.3
DPC	Dobruska-Polom	1.20	174	ePg	Pg	18 09 31.7	0.0
DPC				eSg	Sg	18 09 48.0	+0.8
DPC	Dobruska-Polom	1.20	174	eP	Pg	18 09 31.6	-0.1
DPC				e		18 09 47.5	
DPC				smax			
	comp=N,155nm,0.5s						
DPC	Dobruska-Polom	1.20	174	ePG	Pg	18 09 31.6	-0.1
DPC				eSG	Sg	18 09 47.5	+0.3
	comp=N,155nm,0.5s						
DPC	Dobruska-Polom	1.20	174	Pg	Pg	18 09 31.7	0.0
DPC				eSg	Sg	18 09 47.4	+0.2
PVCC	Panska Ves	1.41	225	eP	Pn	18 09 35.6	0.0
PVCC				e		18 09 54.6	
PVCC				smax			
	comp=N,529nm,0.2s						
PVCC	Panska Ves	1.41	225	ePG	Pn	18 09 35.6	0.0
PVCC				eSG	Sg	18 09 54.6	+0.7
	comp=N,529nm,0.2s						
BRG	Berggiesshubel	1.52	245	ePn	Pn	18 09 36.8	-0.4
BRG				eSg	Sg	18 09 58.7	+1.1
BRG	Berggiesshubel	1.52	245	Pn	Pn	18 09 36.9	-0.3
BRG				Pg	Pg	18 09 38.9	+1.0
BRG				Sg	Sg	18 09 58.9	+1.3
BRG	Berggiesshubel	1.52	245	P	Pn	18 09 36.9	-0.3
BRG						18 09 58.9	
BRG				smax			
	comp=N,302nm,0.9s						
BRG	Berggiesshubel	1.52	245	PN	Pn	18 09 36.9	-0.3
BRG				PG	Pg	18 09 38.9	+1.0
BRG				SG	Sg	18 09 58.9	+1.3
	comp=N,504nm,0.9s						
RUE	Ruedersdorf	1.72	304	eP	Pn	18 09 39.5	-0.6
RUE	Ruedersdorf	1.72	304	ePn	Pn	18 09 39.6	-0.4
RUE				eSg	Sg	18 10 05.8	+1.7
PRA	Prague	1.82	217	PG	Pg	18 09 42.0	-1.6
FBE	Freiberg	1.84	251	ePn	Pn	18 09 43.6	+2.0
FBE				eSg	Sg	18 10 08.2	+0.3
PRU	Pruhonice	1.85	213	eP	Pn	18 09 41.4	-0.3
PRU				e		18 10 07.6	
PRU				smax			
	comp=N,140nm,0.3s						
PRU	Pruhonice	1.85	213	ePN	Pn	18 09 41.4	-0.3
PRU				ePG	Pg	18 09 43.3	-0.9
PRU				eSG	Sg	18 10 07.6	-0.5
	comp=N,140nm,0.3s						
CLL	Collm	1.96	264	ePn	Pn	18 09 43.1	-0.2
CLL				eSg	Sg	18 10 12.9	+1.1
CLL	Collm	1.96	264	ePn	Pn	18 09 43.0	-0.3
CLL				ePg	Pg	18 09 46.0	-0.4
CLL				eSg	Sg	18 10 13.0	+1.2
	comp=Z,215nm,0.8s						
CLL	Collm	1.96	264	ePn	Pn	18 09 42.9	-0.4
CLL	Collm	1.96	264	ePg	Pg	18 09 46.0	-0.4
CLL				eSg	Sg	18 10 11.2	-0.6
RAC	Raciborz	1.97	137	ePg	Pg	18 09 46.4	-0.1
RAC				eSg	Sg	18 10 13.0	+1.1
MORC	Moravsky Berou	1.98	152	ePn	Pn	18 09 43.4	-0.2
MORC				eSg	Sg	18 10 12.3	-0.2
MORC	Moravsky Berou	1.98	152	ePn	Pn	18 09 43.0	-0.6
MORC				Sg	Sg	18 10 12.3	-0.2
OKC	Ostrava-Krasne	2.14	142	ePn	Pn	18 09 45.1	-0.6
OKC				eSg	Sg	18 10 16.7	-0.8
OKC	Ostrava-Krasne	2.14	142	eP	Pn	18 09 45.4	-0.3
OKC				e		18 10 16.6	
OKC				smax			
	comp=N,94nm,0.3s						
OKC	Ostrava-Krasne	2.14	142	ePN	Pn	18 09 45.4	-0.3
OKC				ePG	Pg	18 09 49.2	-0.6
OKC				eSG	Sg	18 10 16.6	-0.9
	comp=N,94nm,0.3s						
VRAC	Vranov	2.25	172	P	Pn	18 09 47.9	+0.6
VRAC						18 10 17.5	
VRAC	Vranov	2.25	172	Pn	Pn	18 09 47.9	+0.6
	comp=N,3.6nm,0.3s,baz=338,slow=14,SNR=17						
VRAC				Sn	Sn	18 10 17.5	+1.7
	comp=N,16nm,0.3s,baz=251,slow=19,SNR=9.3						
VRAC				Lg		18 10 22.4	
	comp=N,16nm,0.3s,baz=90,slow=19,SNR=6.9						
VRAC	Vranov	2.25	172	ePn	Pn	18 09 47.5	+0.2
VRAC				Sn	Sn	18 10 17.5	+1.7
VRAC				eSg	Sg	18 10 19.2	-2.0
	comp=N,36nm,0.3s						
KRUC	Moravsky	2.49	176	ePn	Pn	18 09 51.5	+1.0
KRUC	Moravsky	2.49	176	ePg	Pg	18 09 55.0	-1.4
KRUC				eSg	Sg	18 10 28.7	+0.1
	comp=N,32nm,0.2s						
TANN	Tannenbergstha	2.57	245	ePn	Pn	18 09 52.2	+0.6
TANN				eSg	Sg	18 10 31.3	0.0
WERD	Werda	2.64	247	ePg	Pg	18 09 57.6	-1.9
WERD				eSg	Sg	18 10 34.6	+1.0
NKC	Novy Kostel	2.67	242	eP	Pn	18 09 53.7	+0.8
NKC				e		18 10 35.2	
NKC				smax			
	comp=N,290nm,0.3s						
NKC	Novy Kostel	2.67	242	ePN	Pn	18 09 53.7	+0.8
NKC				ePG	Pg	18 09 59.0	-0.8
NKC				eSG	Sg	18 10 35.2	+0.8
	comp=N,290nm,0.3s						
NKC	Novy Kostel	2.67	242	ePn	Pn	18 09 53.4	+0.5
NKC	Novy Kostel	2.67	242	ePg	Pg	18 09 59.0	-0.8
NKC				eSg	Sg	18 10 34.2	-0.2
OJC	Ojcow	2.68	118	ePn	Pn	18 09 51.4	-1.8
OJC				ePg	Pg	18 10 01.0	+0.8
OJC				eSn	Sn	18 10 23.7	-2.6
OJC				eSg	Sg	18 10 35.8	+0.9
OJC	Ojcow	2.68	118	ePg	Pg	18 09 59.2	-1.0
OJC				eSg	Sg	18 10 35.8	+0.9
OJC	Ojcow	2.68	118	eP	Pn	18 09 51.4	-1.8
OJC				e		18 10 23.7	
OJC	Ojcow	2.68	118	Pg	Pg	18 09 59.2	-1.0
OJC				eSn	Sn	18 10 23.7	-2.6
OJC				Sg	Sg	18 10 35.8	+0.9
JAVC	Velka Javorina	2.86	159	ePn	Pn	18 09 56.8	+1.1
KHC	Kasperske Hory	2.91	215	eP	Pn	18 09 56.0	-0.3
KHC				e		18 10 42.1	
KHC				smax			
	comp=N,64nm,0.5s						
KHC	Kasperske Hory	2.91	215	ePN	Pn	18 09 56.0	-0.3
KHC				ePG	Pg	18 10 02.7	-1.8
KHC				eSG	Sg	18 10 42.1	-0.1
	comp=N,64nm,0.5s						
KHC	Kasperske Hory	2.91	215	ePn	Pn	18 09 56.4	+0.1
MOX	Moxa	2.98	254	ePn	Pn	18 09 57.7	+0.5
MOX				eSg	Sg	18 10 44.8	+0.5
MOX	Moxa	2.98	254	ePN	Pn	18 09 57.6	+0.4
MOX				ePG	Pg	18 10 06.0	+0.2
MOX				eSG	Sg	18 10 45.5	+1.2
MOX	Moxa	2.98	254	ePg	Pg	18 10 04.6	-1.2
MOX				Sg	Sg	18 10 44.8	+0.5
MANZ	Manzenberg	2.98	240	ePn	Pn	18 09 57.7	+0.4
ROTZ	Rotzenmuhle	3.06	236	ePn	Pn	18 09 58.7	+0.4
ROTZ				eSg	Sg	18 10 45.3	-1.6
GEC2	GERESS Array S	3.11	211	ePn	Pn	18 10 00.3	+1.2
GERES	GERESS Array B	3.11	211	P	Pn	18 10 00.3	+1.2
GERES						18 10 36.2	
GERES	GERESS Array B	3.11	211	Pn	Pn	18 10 00.3	+1.3
	comp=N,2.6nm,0.3s,baz=32,slow=12,SNR=71						
GERES				Pg	Pg	18 10 06.2	-2.2
	comp=N,6.6nm,0.3s,baz=28,slow=18,SNR=52						
GERES				Sn	Sn	18 10 36.2	-0.7
	comp=N,6.4nm,0.3s,baz=32,slow=21,SNR=6.8						
GERES				Lg		18 10 48.6	
	comp=N,12nm,0.3s,baz=32,slow=26,SNR=7.2						
GERES	GERESS Array B	3.11	211	Pg	Pg	18 10 06.2	-2.2
SMOL	Smolenice	3.15	164	eSG	Sg	18 10 49.5	-0.3
WET	Wettzell	3.17	222	ePn	Pn	18 10 00.3	+0.4
WET	Wettzell	3.17	222	ePn	Pn	18 10 00.1	+0.2
WET				eSg	Sg	18 10 49.6	-1.0
MODS	Modra-Piesok	3.26	166	ePN	Pn	18 10 03.2	+2.1
MODS				eSG	Sg	18 10 53.2	-0.2
KOLL	Kolacno	3.31	153	ePN	Pn	18 10 02.9	+1.1
KOLL				ePG	Pg	18 10 12.5	+0.3
KOLL				eSG	Sg	18 10 54.0	-1.1
ZST	Bratislava	3.41	169	ePG	Pg	18 10 13.0	-1.1
ZST				eSG	Sg	18 10 57.1	-1.1
NIE	Niedzica	3.42	127	eP	Pg	18 10 14.3	0.0
NIE				eS	Sg	18 10 59.3	+0.7
VYHS	Vyhne	3.52	149	i PN	Pn	18 10 04.4	-0.2
CLZ	Clausthal	3.59	277	ePn	Pn	18 10 06.9	+1.3
CLZ				eSg	Sg	18 11 04.0	0.0
CLZ	Clausthal	3.59	277	ePn	Pn	18 10 06.9	+1.3
CLZ				eSg	Sg	18 11 04.0	+0.1
CLZ	Clausthal	3.59	277	ePn	Pn	18 10 06.8	+1.2
CLZ				eSg	Sg	18 11 03.3	-0.6
CONA	Conrad Observa	3.62	183	⇑iPn	Pn	18 10 06.7	+0.7
	SNR=14						
CONA				⇓iSg	Sg	18 11 04.0	-0.9
	comp=N,48nm,0.4s						
GRA1	Grafenberg Arr	3.62	241	ePn	Pn	18 10 07.0	+0.9
GRA1				eSg	Sg	18 11 05.9	+0.8
GRA1	Grafenberg Arr	3.62	241	Pn	Pn	18 10 07.0	+0.9
GRA1				Sg	Sg	18 11 05.9	+0.8
GRF	Grafenberg Arr	3.62	241	ePn	Pn	18 10 07.0	+0.9
GRF				eSg	Sg	18 11 05.9	+0.8
GRFO	Grafenberg	3.62	241	ePn	Pn	18 10 06.5	+0.3
GRFO	Grafenberg	3.62	241	ePn	Pn	18 10 06.5	+0.4
BSD	Bornholm Skovb	3.65	349	i P	Pn	18 10 05.9	-0.6
BSD				i S	Sn	18 10 49.2	-1.0
MOA	Molln	3.88	199	⇑iPn	Pn	18 10 10.2	+0.6
	SNR=9.3						
MOA				⇓iSg	Sg	18 11 13.6	+0.1
	comp=N,53nm,0.5s						
MOA	Molln	3.88	199	Pn	Pn	18 10 10.2	+0.5
	comp=N,9.0nm,3.0s						
MOA				Sg	Sg	18 11 13.6	+0.1
	comp=N,53nm,0.5s						
HROE	Hohe Rhon--Fla	3.89	257	⇑iPn	Pn	18 10 10.5	+0.7
STHS	Stebnicka Huta	3.90	121	ePN	Pn	18 10 11.3	+1.3
STHS				ePG	Pg	18 10 24.9	+1.3
STHS				eSG	Sg	18 11 16.7	+2.5
KECS	Kecovo	4.16	136	ePN	Pn	18 10 13.0	-0.5
KECS				i PG	Pg	18 10 28.6	+0.1
CRVS	Cervenica-Dubn	4.33	125	ePN	Pn	18 10 16.3	+0.5
CRVS				ePG	Pg	18 10 32.7	+1.0
CRVS				eSG	Sg	18 11 31.8	+4.0
KWP	Kalwaria	4.61	112	P	Pn	18 10 24.5	+4.8
KWP	Kalwaria	4.61	112	P	Pn	18 10 24.5	+4.8
KOLS	Kolonicke sedl	4.74	121	eP	Pn	18 10 21.5	+0.1
KOLS				e		18 11 13.9	
KOLS				smax			
	comp=N,15nm,0.9s						
KOLS	Kolonicke sedl	4.74	121	ePN	Pn	18 10 21.5	+0.1
KOLS				ePG	Pg	18 10 39.6	+0.1
KOLS				eSN	Sn	18 11 13.9	-3.0
KBA	Koelnbreinsper	4.82	203	⇑iPn	Pn	18 10 23.6	+1.0
KBA				⇑iSg	Sg	18 11 44.0	+0.5
	comp=N,20nm,0.5s						
UZH	Uzhgorod	4.93	124	eP	Pn	18 10 30.0	+6.0
UZH				e		18 11 31.7	
SQTA	Sankt Quirin	5.38	218	⇓iPn	Pn	18 10 30.3	+0.1
GORS	Gorjuse	5.41	196	i Pg	Pg	18 10 58.3	+5.9
GORS							
	comp=Z,19nm,0.2s						
SISC	Sisak	6.08	178	Sg	Pg	18 11 09.1	+3.9
DAVOX	Davos/Dischmat	6.28	223	Pn	Pn	18 10 43.1	+0.6
	comp=Z,0.9nm,0.3s,baz=30,slow=15,SNR=7.2						
DAVOX				Lg		18 12 23.2	
	comp=Z,0.3nm,0.3s,baz=234,slow=18,SNR=3.5						
CDF	Champ du Feu	6.50	245	ePn	Pn	18 10 44.1	-1.5
CDF				eSg	Sg	18 12 27.9	-10
	comp=Z,39nm,0.9s						
HINF	Hinteralfeld	7.07	242	ePn	Pn	18 10 51.2	-2.2
HINF				eSg	Sg	18 12 45.9	-10
	comp=Z,24nm,0.8s						
HAU	Haudompre	7.25	245	ePn	Pn	18 10 53.8	-2.0
HAU				eSg	Sg	18 12 51.1	-10
	comp=Z,36nm,0.9s						
GIVF	Givet	7.30	263	eSg	Sg	18 12 55.5	-7.5
	comp=Z,25nm,0.8s						
GIVF	Givet	7.30	263	eSg	Sg	18 12 55.5	-7.5
	comp=Z,13nm,0.8s						
CABF	La Chapelle	8.22	237	eSg	Sg	18 13 21.7	-11
	comp=Z,49nm,1.2s						
AKASG	Malin Array Be	8.29	91	Pn	Pn	18 11 10.6	+0.4
AKASG				Sn	Sn	18 12 38.5	-6.0
AKASG	Malin Array Be	8.29	91	Pn	Pn	18 11 10.6	+0.4
	comp=Z,0.9nm,0.3s,baz=283,slow=12,SNR=26						
AKASG				Sn	Sn	18 12 38.5	-6.0
	comp=Z,1.3nm,0.3s,baz=253,slow=10.0,SNR=4.7						
LPG	La Plagne	8.67	229	eSg	Sg	18 13 33.9	-13
	comp=Z,19nm,1.1s						
HFS	Hagfors	8.72	352	Pn	Pn	18 11 15.0	-1.0
	comp=Z,0.1nm,0.3s,baz=164,slow=13,SNR=6.0						
HFS				Sn	Sn	18 12 48.3	-6.7
	comp=Z,0.1nm,0.3s,baz=176,slow=20,SNR=3.0						
LOR	Lormes	9.06	247	ePn	Pn	18 11 18.7	-2.0
	baz=63						
LOR				eSg	Sg	18 13 48.4	-11
	comp=Z,11nm,0.8s						
SBF	Sospel	9.65	221	eP	Pn	18 11 31.2	+2.4
SBF	Sospel	9.65	221	ePn	Pn	18 11 25.4	-3.4
SBF				eP		18 11 31.2	
SBF	Sospel	9.65	221	eP	Pn	18 11 31.2	+2.4
NOA	NORSAR Array B	9.90	346	Pn	Pn	18 11 31.4	-0.7
	comp=Z,0.1nm,0.3s,baz=174,slow=12,SNR=2.3						
NOA				Sn	Sn	18 13 18.0	-5.9
	comp=Z,0.1nm,0.3s,baz=286,slow=11,SNR=2.8						
FRF	La Foret Royal	10.22	222	ePn	Pn	18 11 33.4	-3.3
FRF	La Foret Royal	10.22	222	eP	Pn	18 11 38.6	+1.9
FRF	La Foret Royal	10.22	222	eP	Pn	18 11 38.6	+1.9
FINES	FINESS Array B	11.34	25	Pn	Pn	18 11 49.8	-2.0
FINES				Sn	Sn	18 13 49.2	-10
FINES	FINESS Array B	11.34	25	Pn	Pn	18 11 49.8	-2.0
	comp=Z,0.1nm,0.3s,baz=205,slow=12,SNR=5.7						
FINES				Sn	Sn	18 13 49.2	-10
	comp=Z,0.2nm,0.3s,baz=219,slow=22,SNR=4.0						
JOF	Joensuu	14.01	30	ep	Pn	18 12 28.3	0.0
	comp=Z,4.3nm,1.0s						
JOF	Joensuu	14.01	30	eP	Pn	18 12 28.3	0.0
JOF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	18.59	10	Pn	Pn	18 13 23.9	-3.4
	comp=Z,0.1nm,0.3s,baz=190,slow=14,SNR=6.0						
ARU	Arti	25.12	62c	iP	P	18 14 35.2	+0.2
ARU						18 15 06.0	
ARU				S	S	18 19 00.4	0.0
ARU				SS		18 19 49.5	
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.0						
ARU	Arti	25.12	62	i P	P	18 14 35.2	+0.2
	comp=Z,5.0nm,1.7s,mb4.0						
ARU				S	S	18 19 00.4	0.0
YKA	Yellowknife Ar	59.83	336	P	P	18 19 16.8	+1.4
	comp=Z,0.1nm,0.5s,mb3.1,baz=30,slow=6.5,SNR=3.3						

IDC 15 18:10:25.0±2.7, **3550N×8874E, h0km, mb3.4**/3, **mb1 3.6**/4, **mb1mx3.4**/21, **mbtmp3.4**/4, **Error ellipse: s-maj=95.8km s-min=35.0km az=84.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	18.00	41	P	Pn	18 14 36.5	+0.1
	0.0nm,0.3s,baz=225,slow=12,SNR=5.3						
WRA	Warramunga Arr	70.05	134	P	P	18 21 39.0	+0.1
	0.5nm,0.9s,baz=327,slow=7.1,SNR=3.7						
ASAR	Alice Springs	72.73	137	P	P	18 21 55.1	+0.2
	0.3nm,0.9s,baz=318,slow=5.4,SNR=4.0						
YKA	Yellowknife Ar	80.55	11	P	P	18 22 38.8	0.0
	0.2nm,0.5s,baz=341,slow=4.9,SNR=4.4						

ISC 15 18:10:29.8±0.6, **4497N**±003×**1497E**±005, **h10km, n17, σ0^{s}78**/31, **1D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	0.42	190	ePg	Pg	18 10 38.1	+0.1
NVLJ				Sg	Sg	18 10 44.9	+1.4
BOJS	Bojanci	0.57	21	⇓iPg	Pg	18 10 40.7	-0.1
BOJS				i Sg	Sg	18 10 48.8	+0.5
BOJS							
	comp=Z,59nm,0.1s						
KNDS	Knezji Dol	0.69	323	i Pg	Pg	18 10 42.6	-0.6
KNDS				i Sg	Sg	18 10 52.9	+0.6
KNDS							
	comp=Z,59nm,0.1s						
VISS	Visnje	0.83	354	i Pg	Pg	18 10 45.1	-0.8
VISS				i Sg	Sg	18 10 57.9	+1.1
VISS							
	comp=Z,40nm,0.2s						
CEY	Cerknica	0.85	334	i Pg	Pg	18 10 45.7	-0.6
CEY				i Sg	Sg	18 10 58.0	+0.6
CEY							
	comp=Z,46nm,0.1s						
SKDS	Skadanscina	0.88	311	i Pg	Pg	18 10 45.7	-1.2
SKDS				i Sg	Sg	18 10 58.9	+0.5
CRES	Cresnjev	0.92	22	i Pg	Pg	18 10 47.1	-0.5
CRES				eSg	Sg	18 10 59.2	-0.3
CRES							
	comp=Z,13nm,0.1s						
LEGS	Legarje	1.00	14	i Pg	Pg	18 10 49.0	-0.1
LEGS				i Sg	Sg	18 11 03.2	+1.0
GCIS	Gornji Cirnik	1.01	27	i Pg	Pg	18 10 49.3	+0.1
GCIS							
	comp=Z,31nm,0.2s						
LJU	Ljubljana	1.11	344	i Pg	Pg	18 10 51.6	+0.4
LJU							
	comp=Z,10.0nm,0.1s						
JAVS	Javornik	1.12	326	i Pg	Pg	18 10 49.8	-1.6
JAVS				i Sg	Sg	18 11 06.0	+0.2
GOLS	Golise	1.14	24	i Pg	Pg	18 10 51.9	+0.2
GOLS				eSg	Sg	18 11 07.7	+1.3
GOLS							
	comp=Z,12nm,0.2s						
DOBS	Dobrina	1.23	17	i Pg	Pg	18 10 53.5	+0.1
DOBS				eSg	Sg	18 11 09.9	+0.6
VOJS	Vojsko	1.30	325	i Pg	Pg	18 10 55.3	+0.4
VOJS				i Sg	Sg	18 11 12.4	+0.6
ZAVS	Zavodnje	1.46	2	i Pg	Pg	18 10 57.7	-0.2
GROS	Grobnik	1.53	14	i Pg	Pg	18 10 57.7	-1.6
GROS				i Sg	Sg	18 11 19.2	+0.1
GROS							
	comp=Z,3.0nm,0.1s						
PERS	Pernice	1.67	4	i Pg	Pg	18 11 00.2	-1.5
PERS				eSg	Sg	18 11 22.5	-0.9
PERS							
	comp=Z,10.0nm,0.2s						

IDC 15 18:21:47.4±1.4, **083N×12706E, h0km, mb3.3**/4, **mb1 3.5**/4, **mb1mx3.4**/14, **mbtmp3.3**/4, **Error ellipse: s-maj=137.9km s-min=21.2km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.84	161	P	P	18 26 41.6	-0.1
	0.5nm,0.6s,baz=340,slow=11,SNR=8.1						
ASAR	Alice Springs	25.24	165	P	P	18 27 15.4	+0.2
	0.5nm,0.7s,baz=346,slow=9.0,SNR=8.7						
SONM	Songino Array	50.13	342	P	P	18 30 44.7	+0.3
	0.3nm,0.9s,baz=161,slow=6.1,SNR=2.2						
MKAR	Makanchi Array	60.12	326	P	P	18 31 56.5	-0.1
	0.3nm,0.4s,baz=120,slow=7.6,SNR=3.2						

*LDG **15** 18:30:03.5±0.3, 3570N×8925E, h10km, Mb4.6/15, Ms4.0/8, Error ellipse: s-maj=14.6km s-min=5.2km az=146.0*
*IDC **15** 18:30:03.4±0.6, 3552N×8952E, h0km, mb4.1/18, mb1 4.2/20, mb1mx4.1/25, mbtmp4.1/20, ML3.4/2, MS4.1/17, Ms1 4.1/17, ms1mx3.9/27, Error ellipse: s-maj=19.7km s-min=12.6km az=35.0*
*MOS **15** 18:30:04.9±0.9, 3559N×8933E, h20km, mb4.6/22, MS4.1/10, Error ellipse: s-maj=8.8km s-min=6.2km az=103.9*
*BJI **15** 18:30:05.3, 3568N×8941E, h16km, mB5.0, mb4.4, ML4.5, Ms4.7, Msz4.4*
*ISCJB **15** 18:30:08.7±0.7, 3567N±003×8939E±003, h50km±6km, mb4.3/46, MS4.2/29, Error ellipse: s-maj=5.8km s-min=4.6km az=6.8*
*GCMT **15** 18:30:08.8±0.2, 3550N×8949E, h19km, MW5.0/63, Moment Tensor Solution. s31,c38; s63,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.10±.17; $M_{\theta\theta}$-0.30±.10; $M_{\phi\phi}$3.40±.11; $M_{r\theta}$-1.50±.27; $M_{\theta\phi}$1.24±.08; $M_{\phi r}$1.09±.21; Best double couple: $M_0$3.94600×10^{16} NP1:ϕ_s41.00000°, δ46.00000°, λ-51.00000°. NP2: ϕ_s172.00000°, δ56.00000°, λ-123.00000°. Principal axes: T 3.8360, Plg6.0000°, Azm285.0000°; N 0.2190, Plg27.0000°, Azm192.0000°; P -4.0560, Plg62.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **15** 18:30:08.8±0.7, 3562N×8943E, h35km±6km, mb4.4/20 Error ellipse: s-maj=7.0km s-min=5.4km az=210.0*

ISC 15 18:30:10.8±0.5, **3569N**±003×**8943E**±004, **h50km**±5km, **n141, σ1^{s}04**/147, **mb4.3**/46, **MS4.2**/29, **7C-2D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	6.15	166	P	Pn	18 31 40.0	+1.0
LSA				LR	LR		
	comp=N,1μm,8.0s						
LSA				LR	LR		
	comp=Z,4μm,11.0s						
LSA	Lhasa	6.15	166	ePn	Pn	18 31 38.1	-0.9
	comp=Z,30nm,0.8s						
LSA	Lhasa	6.15	166	eP	Pn	18 31 38.2	-0.8
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
WMQ	Urumqi	8.23	351	eP	Pn	18 32 09.0	+1.5

TAPN Taplejung 8.44 190 *e*P **Pn 18 32 09.9 -0.6**
comp=Z,59nm,1.4s

JIRN Jiri 8.47 200 *e*P **Pn 18 32 12.2 +1.4**
comp=Z,14nm,0.9s

KKN Kakani 8.63 205 *e*P **Pn 18 32 14.5 +1.4**
comp=Z,35nm,1.4s

GKN Gorkha 8.68 209 *e*P **Pn 18 32 14.7 +1.0**
comp=Z,34nm,1.2s

ODAN Odare 8.97 192 *e*P **Pn 18 32 16.5 -1.3**
comp=Z,79nm,1.3s

GTA Gaotai 9.04 63 *e*P **Pn 18 32 21.5 +2.8**
GTA AP 18 32 25.5
GTA XP 18 32 28.8
GTA AMB AMB
comp=Z,8.0nm,1.2s
GTA AMB AMB
comp=Z,165nm,8.8s
GTA LR LR
comp=N,4μm,19.5s
GTA LR LR
comp=E,3μm,13.0s
GTA LR LR
comp=Z,3μm,14.9s

KSH Kashi 11.34 294⇑ *i*P **Pn 18 32 48.9 -1.1**
KSH *e*AP 18 32 56.8
KSH *e*PP 18 32 58.5
KSH *e*XP 18 33 00.8
KSH S **Sn 18 34 56.6 +1.5**
KSH *e*XS 18 35 07.3
KSH *e*SS 18 35 10.4
KSH LR LR
comp=N,7μm,5.2s
KSH LR LR
comp=E,5μm,5.8s
KSH LR LR
comp=Z,5μm,5.8s

LZH Lanzhou 11.70 84 *e*P **Pn 18 32 51.5 -3.5**
LZH AP 18 32 58.6
LZH PP 18 33 01.3
LZH XP 18 33 03.5
LZH *e*S **Sn 18 35 00.0 -4.1**
LZH XS 18 35 15.0
LZH SS 18 35 21.3
LZH AMB AMB
comp=Z,28nm,1.5s
LZH AMB AMB
comp=Z,120nm,4.0s
LZH LR LR
comp=N,912nm,10.4s
LZH LR LR
comp=Z,1μm,11.6s

MKAR Makanchi Array 12.32 336 Pn **Pn 18 33 01.4 -2.0**
comp=Z,0.3nm,0.3s,baz=145,slow=13,SNR=10
MKAR Lg 18 36 35.0
comp=Z,0.0nm,0.3s,baz=343,slow=37,SNR=2.0
MKAR LR LR 18 37 57.8
comp=Z,603nm,18.9s,baz=152,slow=38

CD2 Chengdu 12.90 108 *e*P **Pn 18 33 13.5 +2.1**
CD2 XP 18 33 25.6
CD2 S **Sn 18 35 41.5 +8.1**
CD2 AMB AMB
comp=Z,10.0nm,0.6s
CD2 AMB AMB
comp=Z,20nm,4.2s
CD2 LR LR
comp=N,2μm,7.2s
CD2 LR LR
comp=E,4μm,6.0s
CD2 LR LR
comp=Z,4μm,6.0s

TKM2 Tokmak 2 12.91 308 *e*Pn **Pn 18 33 09.8 -1.6**
comp=Z,7.4nm,0.8s

TKM2 Tokmak 2 12.91 308 *e*P **Pn 18 33 09.8 -1.6**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s

UCH Uchtor 13.31 304 *e*Pn **Pn 18 33 14.8 -2.1**
comp=Z,13nm,1.7s

AAK Ala-Archa 13.49 305 *e*P **Pn 18 33 17.1 -2.3**
comp=Z,6.7nm,1.0s

AAK Ala-Archa 13.49 305⇑ *e*P **Pn 18 33 18.0 -1.4**
AAK pmax pmax
comp=Z,14nm,2.9s

FRU Bishkek 13.50 306 *e*P **Pn 18 33 27.0 +7.5**
FRU pmax pmax
comp=Z,150nm,3.2s
FRU MLR MLR
comp=E,1μm,20.0s
FRU MLR MLR
comp=Z,1μm,20.0s

AML Almayashu 13.83 302 P **Pn 18 33 25.3 +1.3**
comp=Z,3.8nm,0.8s

EKS2 Erkin-Say 13.98 305 *e*P **Pn 18 33 24.8 -1.3**
comp=Z,25nm,1.6s

XAN Xi'an 16.09 90 P **Pn 18 33 54.3 +0.7**
XAN AMB AMB
comp=Z,20nm,1.1s

SONM Songino Array 17.49 41 P **Pn 18 34 10.3 -0.6**
comp=Z,0.1nm,0.3s,baz=228,slow=6.0,SNR=40
SONM Lg 18 39 20.6
baz=242,slow=28,SNR=3.2
SONM LR LR 18 41 09.3
comp=Z,435nm,19.5s,baz=44,slow=38

ZAK Zakamensk 17.79 30 *e*P **Pn 18 34 13.8 -0.8**
ZAK pmax pmax
comp=Z,4.0nm,1.2s

ULN Ulaanbaatar 17.86 42 *e*P **Pn 18 34 14.3 -1.2**
comp=Z,3.7nm,0.3s

ULN Ulaanbaatar 17.86 42 *d i*P **Pn 18 34 15.8 +0.3**

MOY Mondy 17.99 24 *e*P **Pn 18 34 17.3 +0.3**
MOY pmax pmax
comp=Z,50nm,2.8s

HHC Hu-ho-hao-te 18.11 67 *e*P **Pn 18 34 18.5 -0.1**
HHC AP pP 18 34 22.9 -7.0
HHC XP sP 18 34 25.4 -11
HHC PP 18 34 32.5
HHC S **S 18 37 33.9 -9.4**
HHC AMB AMB
comp=Z,24nm,1.1s
HHC AMB AMB
comp=Z,341nm,4.4s
HHC LR LR
comp=N,961nm,8.9s
HHC LR LR
comp=E,1μm,10.1s
HHC LR LR
comp=Z,2μm,11.9s

CHTO Chiang Mai 18.80 151 *e*P **Pn 18 34 22.3 -4.8**
comp=Z,2.8nm,0.8s

CHTO Chiang Mai 18.80 151 *e*P **Pn 18 34 22.3 -4.8**
CHTO pmax pmax
comp=Z,3.0nm,0.8s

TLY Talaya 18.95 28 *e*P **Pn 18 34 28.9 +0.3**
comp=Z,16nm,1.4s

TLY Talaya 18.95 28 *e*P **Pn 18 34 29.4 +0.8**
TLY pmax pmax
comp=Z,13nm,1.7s
TLY MLR MLR
comp=Z,194nm,9.0s

NVS Novosibirsk 19.62 349 *e*P **Pn 18 34 32.1 -4.5**
NVS *e* 18 38 20.0

IRK Irkutsk 19.63 28⇑ *i*P **Pn 18 34 36.8 +0.1**
IRK pmax pmax
comp=Z,38nm,2.0s

HYB Hyderabad 20.61 211 *e*P **P 18 34 47.0 +1.1**
HYB Hyderabad 20.61 211 *i*P **P 18 34 47.0 +1.1**

WHN Wuhan 21.47 97 P **P 18 35 00.3 +5.2**

BJT Baijiatuau 21.52 70 *e*P **P 18 34 55.9 +0.4**
comp=Z,53nm,1.3s,mb4.8

BJT Baijiatuau 21.52 70 *e*P **P 18 34 55.9 +0.4**
BJT pmax pmax
comp=Z,53nm,1.3s

BJI Beijing 21.52 70 P **P 18 34 55.8 +0.2**
BJI AMB AMB
comp=Z,34nm,1.3s,mb4.6
BJI AMB AMB
comp=Z,394nm,4.4s
BJI LR LR
comp=N,2μm,16.7s,MS4.7
BJI LR LR
comp=E,543nm,16.3s,MS4.7
BJI LR LR
comp=Z,1μm,17.9s,MS4.3

BRVK Borovoye 21.99 328 *e*P **P 18 35 00.8 +0.4**
comp=Z,23nm,1.2s,mb4.5

BRVK Borovoye 21.99 328 *e*P **P 18 35 00.8 +0.4**
BRVK pmax pmax
comp=Z,23nm,1.2s,mb4.5

CHKZ Chkalovo 22.29 330 *e*P **P 18 35 03.8 +0.2**
comp=Z,29nm,1.5s,mb4.5

CHKZ Chkalovo 22.29 330 *e*P **P 18 35 03.8 +0.2**
CHKZ pmax pmax
comp=Z,29nm,1.5s,mb4.5

CIT Chita 23.69 39 *e*P **P 18 35 18.0 +0.3**
CIT *e* 18 36 02.6
CIT pmax pmax
comp=Z,56nm,3.3s

QIZ Qiongzhong 24.50 127 P **P 18 35 23.8 -1.6**
QIZ S **S 18 39 44.3 +1.8**
QIZ AMB AMB
comp=Z,22nm,2.0s,mb4.2
QIZ LR LR
comp=N,972nm,11.9s
QIZ LR LR
comp=Z,2μm,12.2s,MS4.8

NJ2 Nanjing 24.66 90 *e*P **P 18 35 27.3 +0.5**
NJ2 AP 18 35 38.8
NJ2 PP 18 36 04.8
NJ2 S **S 18 39 44.0 -0.9**
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
NJ2 AMB AMB
comp=Z,480nm,7.8s
NJ2 LR LR
comp=N,2μm,24.9s
NJ2 LR LR
comp=E,810nm,15.9s
NJ2 LR LR
comp=Z,1μm,20.2s,MS4.4

DL2 Dalian 25.74 73 P **P 18 35 36.8 +0.2**
DL2 S **S 18 40 07.4 +5.4**
DL2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
DL2 AMB AMB
comp=Z,100nm,3.8s
DL2 LR LR
comp=N,640nm,16.4s,MS4.3
DL2 LR LR
comp=E,390nm,15.1s,MS4.3
DL2 LR LR
comp=Z,410nm,17.7s,MS4.0

HIA Hailar 25.95 49 *e*P **P 18 35 37.7 -0.6**
comp=Z,6.4nm,0.9s,mb4.2

HIA Hailar 25.95 49 *e*P **P 18 35 38.8 +0.5**
SSE Sheshan 26.84 91 P **P 18 35 51.8 +5.2**
SSE S **S 18 40 22.8 +3.3**
SSE AMB AMB
comp=Z,42nm,0.8s,mb5.0
SSE AMB AMB
comp=Z,226nm,4.4s
SSE LR LR
comp=N,232nm,16.5s,MS3.9
SSE LR LR
comp=E,97nm,16.5s,MS3.9
SSE LR LR
comp=Z,115nm,15.2s,MS3.5

AKTK Aktyubinsk 27.02 313 P **P 18 35 49.4 +1.4**
AKTK LR LR 18 47 53.1
AKTO Aktyubinsk 27.02 313 P **P 18 35 49.4 +1.4**
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
AKTO MLR MLR
comp=Z,408nm,21.3s,MS4.0

AKTO Aktyubinsk 27.02 313 P **P 18 35 49.4 +1.4**
comp=Z,0.9nm,0.7s,mb3.4,baz=117,slow=11,SNR=2.9
AKTO LR LR 18 47 53.1
comp=Z,408nm,21.3s,MS4.0,baz=276,slow=39

SNY Shenyang 27.20 67⇑ P **P 18 35 49.8 +0.1**
SNY AMB AMB
comp=Z,6.0nm,0.7s,mb4.2
SNY AMB AMB
comp=Z,124nm,3.5s
SNY LR LR
comp=N,3μm,15.6s
SNY LR LR
comp=E,340nm,7.5s
SNY LR LR
comp=Z,1μm,20.0s,MS4.5

BOD Bodaibo 27.52 29 *e*P **P 18 35 52.7 +0.3**
BOD pmax pmax
comp=Z,8.0nm,1.4s,mb4.2

ARU Arti 29.41 325 *c i*P **P 18 36 10.5 +1.3**
ARU 18 37 02.7
ARU S **S 18 40 58.0 -1.4**
ARU pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
ARU MLR MLR
comp=Z,816nm,23.0s,MS4.3
ARU MLR MLR
comp=E,600nm,21.0s

KSRS Korea Array 30.83 75 P **P 18 36 19.6 -2.4**
comp=E,2.0nm,0.8s,mb4.0,baz=284,slow=12,SNR=5.8
KSRS LR LR 18 50 03.7
comp=E,385nm,19.9s,MS4.1,baz=112,slow=39

KLR Kul'dur 33.58 53 *e*P **P 18 36 43.9 -2.0**
KLR MLR MLR
comp=E,800nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s,MS5.1

JNU Nakatsue 34.12 82 LR LR 18 50 47.0
comp=Z,137nm,18.1s,MS3.7,baz=285,slow=36

JOW Kunigami 34.18 94 LR LR 18 51 02.5
comp=Z,167nm,20.9s,MS3.8,baz=97,slow=37

HABR Khabarovsk 35.67 55 *e*P **P 18 37 04.7 +0.7**
HABR *e* 18 38 24.7
HABR *e* 18 39 33.9
HABR S **S 18 42 36.5 -0.3**
HABR *e* 18 47 20.1
HABR pmax pmax
comp=Z,14nm,1.4s,mb4.7

YAK Yakutsk 36.38 31 P **P 18 37 09.4 -0.5**
comp=Z,11nm,0.9s,mb4.8

YAK Yakutsk 36.38 31⇑ *e*P **P 18 37 10.1 +0.3**
YAK pmax pmax
comp=Z,12nm,1.3s,mb4.7

MJAR Matsushiro Arr 39.08 74 P **P 18 37 31.9 -1.0**
comp=Z,4.9nm,1.2s,mb4.1,baz=289,slow=10,SNR=7.6
MJAR LR LR 18 54 25.6
comp=Z,141nm,20.5s,MS3.8,baz=325,slow=37

OBN Obninsk 40.73 315⇑ *e*P **P 18 37 50.3 +3.9**
OBN pmax pmax
comp=Z,22nm,1.7s,mb4.5
OBN MLR MLR
comp=Z,200nm,16.0s,MS4.1

TIXI Tiksi 41.41 18 *e*P **P 18 37 52.1 +0.4**
comp=Z,7.7nm,1.0s,mb4.3

TIXI Tiksi 41.41 18 *e*P **P 18 37 50.7 -1.1**
TIXI pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
TIXI MLR MLR
comp=Z,274nm,11.0s,MS4.4

BRTR Keskin Array B 43.72 293 P **P 18 38 12.6 +1.6**
comp=Z,1.5nm,1.0s,mb3.7,baz=126,slow=6.3,SNR=3.5

AKASG Malin Array Be 45.13 309 *i*P **P 18 38 21.1 -1.0**
AKASG Malin Array Be 45.13 309 P **P 18 38 20.7 -1.3**
comp=Z,0.1nm,0.3s,mb3.1,baz=76,slow=6.5,SNR=4.4
AKASG LR LR 19 00 56.0
comp=Z,263nm,19.3s,MS4.2,baz=100,slow=41

SEY Seymchan 46.70 34⇑ *e*P **P 18 38 35.8 +1.5**

FINES Array B 46.78 324 P **P 18 38 35.6 +0.7**
comp=Z,1.1nm,0.8s,mb3.8,baz=96,slow=9.9,SNR=3.0
FINES LR LR 18 59 40.2
comp=Z,346nm,18.8s,MS4.3,baz=269,slow=38

ARCES ARCESS Array B 47.97 335 P **P 18 38 45.1 +1.1**
comp=Z,0.9nm,0.5s,mb4.1,baz=72,slow=7.8,SNR=9.2
ARCES LR LR 19 00 29.5
comp=Z,317nm,18.4s,MS4.3,baz=97,slow=38

BILL Bilibino 52.57 27 *e*P **P 18 39 20.6 +1.8**
comp=Z,16nm,1.1s,mb4.9

BILL Bilibino 52.57 27⇓ *e*P **P 18 39 20.3 +1.5**
BILL *e* 18 41 14.1
BILL pmax pmax
comp=Z,20nm,1.7s,mb4.8
BILL MLR MLR
comp=Z,200nm,19.0s,MS4.2

NB2 NORSAR Subarra 53.96 324 P **P 18 39 29.6 +0.4**
comp=Z,4.2nm,1.0s,mb4.3,baz=81,slow=7.4

NB2 NORSAR Subarra 53.96 324 P **P 18 39 29.6 +0.4**
NB2 pmax pmax
comp=Z,4.0nm,1.0s,mb4.3

NOA NORSAR Array B 53.96 324 P **P 18 39 29.6 +0.5**
comp=Z,1.4nm,0.7s,mb4.0,baz=82,slow=7.5,SNR=4.4
NOA LR LR 19 03 51.0
comp=Z,226nm,18.9s,MS4.2,baz=50,slow=37

CLL Collm 55.11 312 *e*P **P 18 39 39.0 +1.4**

GERES GERESS Array B 55.35 309 P **P 18 39 40.9 +1.5**
comp=Z,1.0nm,0.7s,mb3.9,baz=79,slow=6.9,SNR=8.5
GERES LR LR 19 06 14.6
comp=Z,186nm,21.3s,MS4.1,baz=241,slow=39

DAVOX Davos/Dischmat 58.44 308 P **P 18 40 02.0 +0.7**
comp=Z,1.7nm,0.8s,mb4.2,baz=139,slow=5.5,SNR=4.2

CDF Champ du Feu 59.52 310 *e*P **P 18 40 08.8 0.0**
comp=Z,3.9nm,0.7s,mb4.2

CDF Champ du Feu 59.52 310 *e*P **P 18 40 08.8 0.0**
comp=Z,2.0nm,0.7s,mb4.3

CDF Champ du Feu 59.52 310 *e*P **P 18 40 08.8 0.0**
CDF pmax pmax
comp=Z,2.0nm,0.7s,mb4.3

HINF Hinteralfeld 60.00 309 *e*P **P 18 40 12.5 +0.4**

HAU Haudompre 60.25 310 *e*P **P 18 40 13.7 -0.1**
comp=Z,5.0nm,0.8s,mb4.3
HAU *e*MLR MLR
comp=Z,245nm,17.5s,MS4.1

HAU Haudompre 60.25 310 *e*P **P 18 40 13.7 -0.1**
comp=Z,2.5nm,0.8s,mb4.3
HAU LR LR
comp=Z,250nm,17.5s,MS4.4

HAU Haudompre 60.25 310 *e*P **P 18 40 13.7 -0.1**
HAU pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
HAU MLR MLR
comp=Z,250nm,17.5s,MS4.4

PGF Pioggiola 60.57 303 *e*P **P 18 40 16.0 -0.1**
comp=Z,6.8nm,1.0s,mb4.4

PGF Pioggiola 60.57 303 *e*P **P 18 40 16.0 -0.1**
comp=Z,3.4nm,1.0s,mb4.4

PGF Pioggiola 60.57 303 *e*P **P 18 40 16.0 -0.1**
PGF pmax pmax
comp=Z,3.0nm,1.0s,mb4.4

KMBO Kilima Mbogo 60.81 245 P **P 18 40 17.4 -0.6**
comp=Z,0.5nm,0.4s,mb4.0,baz=41,slow=24,SNR=3.8

LPG La Plagne 60.93 307 *e*P **P 18 40 18.7 +0.2**
comp=Z,12nm,1.0s,mb4.7

LPG La Plagne 60.93 307 *e*P **P 18 40 18.7 +0.2**
comp=Z,6.2nm,1.0s,mb4.7

LPG La Plagne 60.93 307 *e*P **P 18 40 18.7 +0.2**
LPG pmax pmax
comp=Z,6.0nm,1.0s,mb4.7

CABF La Chapelle 60.93 308 *e*P **P 18 40 16.9 -1.6**

LPL La Plagne 60.94 307 *e*P **P 18 40 18.6 +0.1**

SBF Sospel 61.11 305 *e*P **P 18 40 19.7 0.0**

MBDF Montbardon 61.22 306 *e*P **P 18 40 20.5 +0.1**

ORIF Oris-en-Rattie 61.73 307 *e*P **P 18 40 23.2 -0.6**
comp=Z,5.2nm,0.8s,mb4.4
ORIF *e*MLR MLR
comp=Z,251nm,21.8s,MS4.0

ORIF Oris-en-Rattie 61.73 307 *e*P **P 18 40 23.2 -0.6**
comp=Z,2.6nm,0.8s,mb4.4

ORIF Oris-en-Rattie 61.73 307 *e*P **P 18 40 23.2 -0.6**
ORIF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5

FRF La Foret Royal 61.76 305 *e*P **P 18 40 23.9 -0.2**
comp=Z,5.0nm,0.9s,mb4.3

FRF La Foret Royal 61.76 305 *e*P **P 18 40 23.9 -0.2**
comp=Z,2.5nm,0.9s,mb4.3

FRF La Foret Royal 61.76 305 *e*P **P 18 40 23.9 -0.2**
FRF pmax pmax
comp=Z,3.0nm,0.9s,mb4.4

LMR La Mourre 61.94 305 *e*P **P 18 40 24.8 -0.5**

SMRF Simiane la Rot 62.30 306 *e*P **P 18 40 27.4 -0.3**

SMF Signal de Mont 62.35 309 *e*P **P 18 40 27.9 -0.1**
comp=Z,4.1nm,0.5s,mb4.5

SMF Signal de Mont 62.35 309 *e*P **P 18 40 27.9 -0.1**
comp=Z,2.0nm,0.5s,mb4.5

SMF Signal de Mont 62.35 309 *e*P **P 18 40 27.9 -0.1**
SMF pmax pmax
comp=Z,2.0nm,0.5s,mb4.5

VIVF Saint-Julien-l 62.54 307 *e*P **P 18 40 29.0 -0.3**

LASF Ste Croix 63.39 307 *e*P **P 18 40 34.8 -0.2**
comp=Z,9.8nm,1.0s,mb4.6

TCF Toulx Ste Croi 63.52 309 *e*P **P 18 40 35.6 -0.2**
comp=Z,6.3nm,0.8s,mb4.4

TCF Toulx Ste Croi 63.52 309 *e*P **P 18 40 35.6 -0.2**
comp=Z,3.2nm,0.8s,mb4.4

TCF Toulx Ste Croi 63.52 309 *e*P **P 18 40 35.6 -0.2**
TCF pmax pmax
comp=Z,3.0nm,0.8s,mb4.4

FITZ Fitzroy Crossi 63.55 141 *e*P **P 18 40 36.1 -0.1**
comp=Z,4.4nm,1.2s,mb4.4

FITZ Fitzroy Crossi 63.55 141 P **P 18 40 35.5 -0.7**
comp=Z,2.1nm,0.9s,mb4.2,baz=328,slow=9.5,SNR=4.5

CAF Calviac 64.19 308 *e*P **P 18 40 39.7 -0.5**

RJF Les Rejaudoux 64.38 309 *e*P **P 18 40 41.1 -0.3**
RJF *e*MLR MLR
comp=Z,202nm,18.1s,MS4.0

RJF Les Rejaudoux 64.38 309 *e*P **P 18 40 41.1 -0.3**
RJF MLR MLR
comp=Z,200nm,18.1s,MS4.3

MTLF Montolieu 64.78 306 *e*P **P 18 40 43.8 -0.3**

QUIF Quistinic 66.11 313 *e*P **P 18 40 51.9 -0.7**

ETSF Etsaut 66.79 307 *e*P **P 18 40 56.8 -0.3**
comp=Z,13nm,1.0s,mb4.6

ETSF Etsaut 66.79 307 *e*P **P 18 40 56.8 -0.3**
comp=Z,6.3nm,1.0s,mb4.6

ETSF Etsaut 66.79 307 *e*P **P 18 40 56.8 -0.3**
ETSF pmax pmax
comp=Z,6.0nm,1.0s,mb4.6

SJPF Ste Jean 67.12 307 *e*P **P 18 40 58.5 -0.7**

WRA Warramunga Arr 69.79 135 P **P 18 41 14.5 -1.5**
comp=Z,3.0nm,0.9s,mb4.2,baz=332,slow=6.0,SNR=19

WB2 Warramunga Arr 69.80 135 *e*P **P 18 41 15.2 -0.8**

ESDC Sonseca Array 70.60 305 P **P 18 41 21.6 +0.7**
comp=Z,0.2nm,0.3s,mb3.5,baz=57,slow=6.0,SNR=3.7

INK Inuvik 71.48 15 *e*P **P 18 41 26.1 +0.5**
comp=Z,226nm,1.1s,mb6.0

INK Inuvik 71.48 15 *e*P **P 18 41 26.1 +0.5**
INK pmax pmax
comp=Z,226nm,1.1s

INK Inuvik 71.48 15 P **P 18 41 26.6 +0.9**
comp=Z,3.2nm,0.9s,mb4.2,baz=322,slow=10,SNR=5.9

ASAR Alice Springs 72.50 138 P **P 18 41 31.8 -0.5**
comp=Z,2.3nm,0.9s,mb4.1,baz=321,slow=5.7,SNR=23

YKA Yellowknife Ar 80.26 11 P **P 18 42 16.6 +0.8**
YKA pmax pmax
comp=Z,2.0nm,1.0s
YKA MLR MLR
comp=Z,75nm,20.0s

YKA Yellowknife Ar 80.26 11 P **P 18 42 16.6 +0.9**
comp=Z,2.4nm,1.0s,mb4.1,baz=338,slow=5.2,SNR=17
YKA LR LR 19 20 46.7
comp=Z,74nm,20.0s,MS4.0,baz=170,slow=38

TORD Torodi Ar. Bea 80.64 279 P **P 18 42 18.2 -0.4**
comp=Z,1.9nm,0.8s,mb4.1,baz=42,slow=5.0,SNR=7.2
TORD LR LR 19 19 05.6
comp=Z,106nm,20.5s,MS4.2,baz=335,slow=36

STKA Stephens Creek 83.13 137 P **P 18 42 29.6 -1.7**
comp=Z,1.2nm,0.6s,mb4.1,baz=325,slow=3.8,SNR=4.8
STKA LR LR 19 26 07.6
comp=Z,88nm,20.1s,MS4.1,baz=203,slow=41

BOSA Boshof 87.99 232 LR LR 19 17 49.8
comp=Z,70nm,19.9s,MS4.1,baz=216,slow=33

DBIC Dimbokro 89.62 278 LR LR 19 26 38.2
comp=Z,110nm,20.4s,MS4.3,baz=42,slow=38

IDC 15 18:30:56.3±28.0, 2213S×17410W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/17, mbtmp4.0/4, Error ellipse: s-maj=517.0km s-min=155.7km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.97**	**266**	P	P	P	18 38 08.4	+0.8
	2.0nm,0.4s,baz=96,slow=12,SNR=7.8							
STKA	**Stephens Creek**	**40.42**	**246**	P	P	P	18 38 35.3	-1.1
	0.8nm,0.5s,baz=108,slow=16,SNR=3.8							
ASAR	**Alice Springs**	**47.71**	**258**	P	P	P	18 39 34.9	-0.2
	0.9nm,0.6s,baz=91,slow=7.5,SNR=30							
WRA	**Warramunga Arr**	**47.99**	**263**	P	P	P	18 39 37.5	+0.2
	1.5nm,0.5s,baz=97,slow=8.4,SNR=43							

NEIC ***15*** *18:37:00.8±2.6, 2332S×17983E, h600km, mb4.3/5, Error ellipse: s-maj=65.3km s-min=23.4km az=221.0*
IDC ***15*** *18:37:02.6±14.0, 2301S×17998E, h650km±186km, mb3.3/6, mb1 3.4/6, mb1mx3.1/17, mbtmp3.3/6, Error ellipse: s-maj=93.7km s-min=53.0km az=61.0*
ISC 15 18:37:01.1±3.4, 233S±05×1798E±04, h600km, n14,

σ0s43/14, mb4.0/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIDS	Eidsvold	26.25	260	eP	P	18 41 50.6	+0.3
CTA	Charters Tower	31.31	269	eP	P	18 42 32.5	-1.6
	7.3nm,0.4s,mb4.7						
CTA	Charters Tower	31.31	269	P	P	18 42 34.8	+0.7
	13nm,0.5s,mb4.8,baz=93,slow=10,SNR=29						
CTAO	Charters Tower	31.31	269	eP	P	18 42 34.6	+0.5
	9.9nm,0.5s,mb4.7						
PMG	Port Moresby	34.14	288	eP	P	18 42 58.2	+0.2
	8.3nm,0.8s,mb4.4						
PMG	Port Moresby	34.14	288	P	P	18 42 58.0	0.0
	2.3nm,0.5s,mb4.0,baz=48,slow=7.9,SNR=3.6						
STKA	Stephens Creek	34.80	247	eP	P	18 43 03.2	-0.1
	1.1nm,0.4s,mb3.8						
STKA	Stephens Creek	34.80	247	P	P	18 43 03.3	+0.1
	1.4nm,0.4s,mb3.9,baz=98,slow=10,SNR=6.1						
ASAR	Alice Springs	41.97	260	P	P	18 44 01.3	+0.1
	2.7nm,0.5s,mb4.0,baz=93,slow=7.4,SNR=80						
WB2	Warramunga Arr	42.27	266	eP	P	18 44 03.1	-0.5
WRA	Warramunga Arr	42.28	266	P	P	18 44 03.5	-0.2
	1.7nm,0.3s,mb4.1,baz=91,slow=8.4,SNR=174						
FITZ	Fitzroy Crossi	50.71	265	eP	P	18 45 07.5	+0.4
	2.8nm,0.7s,mb3.8						
QSPA	South Pole Qui	66.79	180	eP	P	18 46 53.6	0.0
QSPA	South Pole Qui	66.79	180	P	P	18 46 53.5	0.0
	1.7nm,0.8s,mb3.5,baz=30,slow=2.5,SNR=7.9						

NEIC 15 18:45:43.8, 5787N×15672W, h9km, ML3.6(PMR), ML2.7(AEIC), After AEIC., Alaska Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHGN	Chignik	1.82	211	eP	Pn	18 46 13.4	-1.9
KDAK	Kodiak Island	2.21	90	ePn	Pn	18 46 22.6	+1.9
KDAK				eSn	Sn	18 46 49.7	+1.6
SDPT	Sand Point	3.27	221	eP	Pn	18 46 33.6	-1.5
SVW2	Sparrevohn	3.29	10	eP	Pn	18 46 33.8	-1.7
TTA	Tatalina	5.09	4	Pn	Pn	18 47 01.2	+1.1
	9.1nm,0.7s						

CSEM 15 18:47:56.3±0.5, 4272N×1794E, h10km, ML2.6/10, Error ellipse: s-maj=7.3km s-min=4.5km az=72.0
ISCJB 15 18:47:57.6±0.9, 4270N±003×1806E±006, h10km, Error ellipse: s-maj=6.3km s-min=4.1km az=163.3
PDG 15 18:47:58.4±0.1, 4273N×18.11E, h0km±11km, MD2.5/2, ML2.6/10, Error ellipse: s-maj=0.2km s-min=0.6km az=0.0
NEIC 15 18:47:58.4, 4273N×18.11E, h0km, ML2.6(PDG), After PDG.
BEO 15 18:48:01.5±0.7, 4281N×1839E, ML2.3/3
ISC 15 18:47:58.5±0.9, 4271N±003×1806E±006, h10km, n26, σ1s21/43, 7C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRY	Bratogost	0.40	62	⇓iPg	Pg	18 48 05.2	-1.2
BRY				eSg	Sg	18 48 10.7	-1.0
HCY	Herceg Novi	0.42	130	ePg	Pg	18 48 05.8	-0.9
HCY				eSg	Sg	18 48 11.9	-0.3
NKY	Niksic	0.69	82	⇓iPg	Pg	18 48 10.7	-1.2
NKY				i Sg	Sg	18 48 20.9	-0.1
BUM	Brajici-Budva	0.74	124	⇓iPg	Pg	18 48 11.7	-1.1
BUM				eSg	Sg	18 48 23.0	+0.5
UPM	Unac-Piva	0.79	52	⇑iPg	Pg	18 48 12.0	-1.8
UPM				eSg	Sg	18 48 24.1	0.0
PDG	Podgorica	0.93	107	⇑iPg	Pg	18 48 14.9	-1.5
PDG				eSg	Sg	18 48 29.2	+0.7
TTG	Podgorica	0.93	107	⇑iPg	Pg	18 48 14.9	-1.5
TTG				eSg	Sg	18 48 29.2	+0.7
PLE	Pljevlja	1.15	57	⇑iPg	Pg	18 48 18.9	-1.8
PLE				eSg	Sg	18 48 36.5	+0.8
ULC	Ulcinj	1.16	130	⇑iPg	Pg	18 48 19.7	-1.0
ULC				eSg	Sg	18 48 37.2	+1.5
BEY	Berane	1.36	83	⇑iPg	Pg	18 48 22.9	-1.7
BEY				eSg	Sg	18 48 43.7	+1.5
IVA	Berane	1.36	83	⇑iPg	Pg	18 48 22.9	-1.7
IVA				eSg	Sg	18 48 43.7	+1.5
PVY	Plav	1.41	94	⇓iPg	Pg	18 48 24.0	-1.6
PVY				eSg	Sg	18 48 45.8	+1.8
SJES	Sjenica	1.48	67	ePn	Pn	18 48 26.3	+1.0
SJES	Sjenica	1.48	67	Pn	Pn	18 48 26.3	+1.0
BBLS	Bajina Basta -	1.52	40	ePn	Pn	18 48 27.4	+1.7
BBLS	Bajina Basta -	1.52	40	Pn	Pg	18 48 27.7	+0.1
DIVS	Divcibare	1.97	45	ePn	Pn	18 48 33.2	+1.3
DIVS				eSg	Sn	18 48 57.2	+0.5
DIVS	Divcibare	1.97	45	Pn	Pn	18 48 33.2	+1.3
DIVS				Sg	Sg	18 48 59.5	-2.4
GRUS	Gruza	2.26	58	ePn	Pn	18 48 36.7	+0.7
GRUS				eSg	Sn	18 49 05.1	+1.2
GRUS	Gruza	2.26	58	Pn	Pn	18 48 36.8	+0.8
FGSL	Fruska Gora	2.75	27	ePn	Pn	18 48 43.5	+0.9
FGSL	Fruska Gora	2.75	27	Pn	Pn	18 48 43.6	+1.0
BARS	Barje	2.77	87	ePn	Pn	18 48 45.1	+2.2
BARS				eSg	Sn	18 49 20.5	+4.1
BARS	Barje	2.77	87	Pn	Pn	18 48 45.2	+2.3
SVIS	Svilajnac	2.79	54	ePn	Pn	18 48 43.1	-0.1
SVIS				eSg	Sb	18 49 22.2	-0.4
PKSM	Moragy	3.52	7	ePn	Pn	18 48 54.1	+0.9

MAN 15 19:06:50, 1683N×12253E, h8km, mb3.9, ML2.6, MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.25	336	eP	Pg	19 06 55.7	+0.7
BALP	Baler	1.42	220	eP	Pn	19 07 15.5	-0.6
APYP	Conner	1.60	310	eP	Pn	19 07 18.6	0.0
APYP				eS	Sn	19 07 40.1	+0.7
ABRA	Dolores	1.92	295	eP	Pn	19 07 22.8	-0.2

IDC 15 19:15:14.1±2.5, 732N×12241E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/27, Error ellipse: s-maj=344.5km s-min=27.1km az=62.0
ISCJB 15 19:15:17.5±2.8, 73N±0.1×1226E±02, h36km±29km, mb3.5/4, Error ellipse: s-maj=25.3km s-min=16.6km az=170.8
ISC 15 19:15:16.9±4.6, 736N±008×1227E±01, h16km±30km, n8, σ0s82/9, mb3.5/4, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	2.30	62	eP	Pn	19 15 53.0	-1.1
CGP				i S	Sn	19 16 21.2	-0.9
BUKP	Musuan	2.44	78	eP	Pn	19 15 57.2	+1.0
TBP	Tagbilaran	2.61	27	eP	Pn	19 15 58.7	+0.2
TBP				eS	Sn	19 16 31.0	+1.1
PSI	Prapat	24.06	260	LR	LR	19 29 05.8	
	comp=Z,86nm,19.4s,baz=348,slow=35						
WRA	Warramunga Arr	29.46	157	P	P	19 21 20.2	0.0
	0.5nm,0.3s,mb3.6,baz=335,slow=9.5,SNR=8.2						
ASAR	Alice Springs	32.73	161	P	P	19 21 49.2	+0.1
	0.3nm,0.4s,mb3.6,baz=342,slow=7.0,SNR=5.8						
STKA	Stephens Creek	43.00	156	P	P	19 23 16.4	+0.7
	0.8nm,0.7s,mb3.6,baz=350,slow=17,SNR=3.0						
MKAR	Makanchi Array	52.29	326	P	P	19 24 26.6	-1.0
	0.2nm,0.4s,mb3.4,baz=122,slow=7.2,SNR=3.9						

CSEM 15 19:17:48.6±0.1, 3693N×2857E, h2km, MD2.9, Error ellipse: s-maj=3.1km s-min=1.9km az=2.0
ISCJB 15 19:17:49.7±0.6, 3695N±004×2861E±004, h5km, Error ellipse: s-maj=6.2km s-min=4.5km az=9.9
ISK 15 19:17:49.0, 3694N×2860E, h5km, MD2.9
DDA 15 19:17:51.6, 3693N×2857E, h9km, Md3.1
ATH 15 19:17:52.0, 3674N×2808E, h91km
ISC 15 19:17:50.8±0.6, 3700N±005×2859E±004, h5km±7km, n15, σ1s28/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.28	300	i PG	Pg	19 17 55.8	-0.5
YER				i SG	Sg	19 18 00.1	+0.1
FETY	Fethiye	0.54	132	PG	Pg	19 17 58.3	-2.8
MLSB	Milas	0.71	295	PG	Pg	19 18 03.8	-0.8
GOLH	Golhisar	0.81	72	i P	Pg	19 18 07.4	+1.0
GOLH				i S	Sg	19 18 23.3	+6.3
DENT	Denizli	0.83	25	PG	Pg	19 18 07.1	+0.2
DAT	Datca	0.85	252	PG	Pg	19 18 05.5	-1.7
ARG	Arkhangelos	0.86	206	eP	Pg	19 18 07.5	+0.1
BDRM	Kayabasi	0.92	275	i P	Pg	19 18 07.5	-1.0
BDRM				i S	Sg	19 18 23.0	+2.6
BODT	Bodrum	1.03	274	PG	Pg	19 18 09.8	-0.7
BODT				SG	Sg	19 18 25.2	+1.4
ELL	Elmali	1.09	103	ePG	Pg	19 18 10.6	-1.0
KSL	Kastellorizon	1.16	136	eP	Pg	19 18 16.0	+2.9
KSL				eS	Sg	19 18 35.5	+7.3
MANT	Manisa	1.49	359	i P	Pn	19 18 18.0	-0.3
MANT				i S	Sn	19 18 37.5	-0.8
SMG	Samos	1.57	298	eP	Pn	19 18 17.5	-1.8
KDAG	Bornova	1.75	324	i P	Pn	19 18 24.3	+2.4
KDAG				i S	Sn	19 18 45.1	+0.5
BLCB	Balcova	1.85	319	ePN	Pn	19 18 23.8	+0.5

MEX 15 19:20:27.5±1.1, 1710N×9430W, h150km±11km, MD4.0, Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.56	270	i P	Pn	19 20 48.2	-1.0
CMIG				i S	Sn	19 21 03.4	-2.2
HUIG	Huatulco	2.18	233	i P	Pn	19 21 02.8	-2.0
HUIG				i S	Sn	19 21 32.4	-1.1
OXX	Oaxaca	2.32	270	i P	Pn	19 21 05.5	-0.9
OXX				i S	Sn	19 21 35.0	-1.4
VHO	Vista Hermosa	2.33	270	i P	Pn	19 21 05.7	-0.8
VHO				i S	Sn	19 21 34.4	-2.2
TPIG	Tehuac#an	3.20	295	i P	Pn	19 21 15.1	-2.4
TPIG				i S	Sn	19 21 51.5	-4.6

ISCJB 15 19:56:57.3±0.4, 5005N±002×1837E±002, h0km, Error ellipse: s-maj=3.6km s-min=2.1km az=20.0
IPEC 15 19:56:59.2±0.1, 5006N×1844E, h8km±1km, ML2.1/3, Error ellipse: s-maj=1.6km s-min=0.7km az=162.0
WAR 15 19:56:59.4, 5005N×1844E, ML2.6, Mining Induced
PRU 15 19:56:59.6, 5004N×1838E, h0km
VIE 15 19:57:00.4±1.0, 4979N×1843E, h0km, mb2.1/3, ML2.5/4, Error ellipse: s-maj=7.6km s-min=6.3km az=160.0 14 km ESE of Ostrava Suspected Mining induced.
CSEM 15 19:57:00.3±0.1, 5005N×1835E, h2km, ML3.1/6, Error ellipse: s-maj=2.5km s-min=1.4km az=27.0
ISC 15 19:56:58.7±0.3, 5005N±002×1839E±002, h0km, n33, σ1s10/62, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAC	Raciborz	0.13	286	i Pg	Pg	19 57 03.1	+1.9
RAC				eSg	Sg	19 57 06.3	+3.4
RAC	Raciborz	0.13	286	⇓iPg	Pg	19 57 03.0	+1.8
RAC				eSg	Sg	19 57 06.3	+3.4
OKC	Ostrava-Krasne	0.26	217	ePG	Pg	19 57 04.9	+1.2
OKC				eSG	Sg	19 57 08.7	+1.7
	166nm,0.5s						
OKC	Ostrava-Krasne	0.26	217	ePg	Pg	19 57 04.9	+1.2
OKC				eSg	Sg	19 57 09.2	+2.2
MORC	Moravsky Berou	0.61	244	ePg	Pg	19 57 11.0	+0.6
MORC				eSg	Sg	19 57 20.1	+1.8
	32nm,0.2s						
OJC	Ojcow	0.92	79	ePg	Pg	19 57 15.8	-0.6
OJC				eSg	Sg	19 57 28.1	-0.3
OJC	Ojcow	0.92	79	ePg	Pg	19 57 15.7	-0.7
OJC				eSg	Sg	19 57 27.9	-0.5
LIKS	Likavka	1.10	155	i Pg	Pg	19 57 20.8	+1.0
LIKS				eSg	Sg	19 57 33.3	-0.8
JAVC	Velka Javorina	1.28	202	ePn	Pn	19 57 23.9	+0.1
DPC	Dobruska-Polom	1.36	284	ePG	Pg	19 57 24.9	+0.1
DPC				eSG	Sg	19 57 43.4	+1.0
	63nm,0.5s						
DPC	Dobruska-Polom	1.36	284	ePg	Pg	19 57 24.9	+0.1
DPC				eSg	Sg	19 57 43.3	+0.9
VRAC	Vranov	1.38	238	ePn	Pn	19 57 24.9	-0.3
VRAC				eSg	Sg	19 57 43.7	+0.7
	24nm,0.3s						
NIE	Niedzica	1.40	116	ePg	Pg	19 57 25.3	-0.2
NIE				eSg	Sg	19 57 45.0	+1.4
KOLL	Kolacno	1.47	180	ePG	Pg	19 57 26.2	-0.6
KOLL				eSG	Sg	19 57 46.2	+0.3
KSP	Ksiaz	1.56	302	ePn	Pn	19 57 27.9	+0.3
KSP	Ksiaz	1.56	302	ePg	Pg	19 57 30.2	+1.6
KSP				eSg	Sg	19 57 49.4	+0.6
VYHS	Vyhne	1.58	169	ePg	Pg	19 57 27.6	-1.4
VYHS				eSg	Sg	19 57 49.0	-0.5
UPC	Upice	1.59	288	ePG	Pg	19 57 27.9	-1.3
UPC				eSG	Sg	19 57 49.5	-0.4
KRUC	Moravsky	1.63	234	ePn	Pn	19 57 28.6	0.0
KRUC				eSg	Sg	19 57 50.7	-0.3
	15nm,0.4s						
SMOL	Smolenice	1.66	203	ePN	Pn	19 57 28.6	-0.4
SMOL				eSG	Sg	19 57 51.6	-0.3
MODS	Modra-Piesok	1.83	204	ePN	Pn	19 57 31.2	-0.1
STHS	Stebnicka Huta	1.96	108	ePN	Pn	19 57 35.2	+2.1
STHS				eSN	Sn	19 57 58.5	+0.2
ZST	Bratislava	2.04	205	ePN	Pn	19 57 34.0	-0.2
KECS	Kecovo	2.08	138	ePN	Pn	19 57 33.9	-0.9
KECS				ePG	Pg	19 57 39.7	+1.1
KECS				eSN	Sn	19 57 59.1	-2.3
CRVS	Cervenica-Dubn	2.31	119	ePN	Pn	19 57 40.8	+2.9
CRVS				eSG	Sg	19 58 13.3	+0.5
PRU	Pruhonice	2.48	270	ePG	Pg	19 57 44.5	-1.7
PRU				eSG	Sg	19 58 17.0	-1.4
	14nm,0.8s						
PVCC	Panska Ves	2.50	283	eSG	Sg	19 58 18.4	-0.5
	28nm,0.5s						
KOLS	Kolonicke sedl	2.77	112	ePG	Pg	19 57 49.5	-2.2
KOLS				eSG	Sg	19 58 28.1	+0.5
KHC	Kasperske Hory	3.26	256	ePN	Pn	19 57 50.0	-1.0
KHC				ePG	Pg	19 57 59.3	-1.9
KHC				ex	x	19 58 33.0	
KHC				eSG	Sg	19 58 41.6	-1.8
	13nm,0.4s						
ARSA	Arzberg	3.38	215	⇑iPn	Pn	19 57 53.1	+0.4
MOA	Molln	3.50	233	⇑iPn	Pn	19 57 53.8	-0.5
MOA				⇓iSg	Sg	19 58 51.5	+0.6
	comp=Z,8.4nm,0.6s						
CLL	Collm	3.65	292	ePg	Pg	19 58 09.0	+0.4
CLL				eSn	Sn	19 58 38.0	-2.1
CLL				i Sg	Sg	19 58 56.4	+0.5
	comp=Z,8.0nm,0.8s						
MOX	Moxa	4.38	280	eSG	Sg	19 59 19.7	+0.4

IDC 15 20:09:39.2±30.0, 2208S×17479W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, Error ellipse: s-maj=539.4km s-min=142.4km az=77.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	36.34	266	P	P	20 16 45.8	+0.7
	6.3nm,0.9s,baz=84,slow=9.2,SNR=2.8						
STKA	Stephens Creek	39.85	246	P	P	20 17 13.4	-1.2
	0.8nm,0.8s,baz=100,slow=11,SNR=3.7						
ASAR	Alice Springs	47.10	258	P	P	20 18 13.0	-0.2
	0.1nm,0.4s,baz=98,slow=8.1,SNR=4.1						
WRA	Warramunga Arr	47.37	263	P	P	20 18 16.0	+0.6
	0.4nm,0.4s,baz=98,slow=8.3,SNR=4.7						

MEX 15 20:19:57.7±0.5, 1616N×9726W, h9km±7km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.87	286	i P	Pg	20 20 11.9	-2.5
PNIG				i S	Sg	20 20 23.5	-2.2
VHO	Vista Hermosa	1.04	29	i P	Pg	20 20 14.9	-2.9
VHO				i S	Sg	20 20 28.0	-3.3
OXX	Oaxaca	1.05	29	i P	Pg	20 20 15.5	-2.5
OXX				i S	Sg	20 20 29.5	-2.2
HUIG	Huatulco	1.17	109	i P	Pb	20 20 16.9	-3.3
HUIG				i S	Sb	20 20 30.7	-4.7
TPIG	Tehuac#an	2.25	358	i S	Sn	20 20 59.2	-3.9
CMIG	Matias Romero	2.46	67	i P	Pn	20 20 34.2	-3.7
CMIG				i S	Sn	20 21 03.0	-5.1
MEIG	Mezcala	2.86	308	i S	Sn	20 21 14.7	-3.4

NEIC 15 20:51:20.6±0.6, 4820N×15475E, h10km, mb4.4/8, Error ellipse: s-maj=16.2km s-min=10.8km az=137.0
MOS 15 20:51:22.6±1.2, 48.19N×15473E, h38km, mb4.5/9, Error ellipse: s-maj=15.8km s-min=8.9km az=92.3
ISCJB 15 20:51:23.2±1.2, 48.15N±008×1549E±0.1, h43km±8km, mb4.0/23, MS3.4/3, Error ellipse: s-maj=19.1km s-min=6.5km az=41.7
SZGRF 15 20:51:24.6, 4752N×15340E, h33km, mb4.5, Kuril Islands, Russia
IDC 15 20:51:28.1±4.7, 48.16N×15481E, h74km±42km, mb3.6/14, mb1 3.8/15, mb1mx3.6/22, mbtmp3.6/15, ML4.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/37, Error ellipse: s-maj=22.9km s-min=17.7km az=107.0
ISC 15 20:51:25.6±1.0, 4820N±008×1549E±01, h48km±7km, n60, σ1s12/63, mb4.0/23, MS3.4/3, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.61	17	ePN	Pn	20 52 05.0	-0.3
SKR				eS	Sn	20 52 36.5	+0.8
SKR				pmax	pmax		
	comp=N,90nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax			
	comp=N,150nm,0.5s						
SKR				smax			
	comp=E,310nm,0.5s						
SKR				smax			
	comp=Z,140nm,0.6s						
PET	Petropavlovsk	5.39	25	ePN	Pn	20 52 42.3	-1.1
PET				pmax	pmax		
	comp=Z,23nm,0.6s						
KUR	Kuril'sk	5.67	241	ePN	Pn	20 52 46.2	-1.0
KUR				eS	Sn	20 53 52.0	+1.1
KUR				pmax	pmax		
	comp=Z,280nm,0.9s						
KUR				smax			
	comp=N,170nm,0.9s						
KUR				smax			
	comp=E,140nm,0.9s						
YSS	Yuzh-Sakhalins	8.30	266	eP	Pn	20 53 26.1	+2.9
	comp=E,12nm,0.4s						
YSS	Yuzh-Sakhalins	8.30	266	ePN	Pn	20 53 27.1	+3.9
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
ASAJ	Asahikawa	9.46	249	PN	Pn	20 53 41.3	+2.2
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ	Asahikawa	9.46	249	P	Pn	20 53 41.3	+2.2
	comp=Z,3.0nm,0.3s,baz=81,slow=13,SNR=26						
ERM	Erimo	10.34	238	eP	Pn	20 53 49.9	-1.2
MJAR	Matsushiro Arr	16.92	233	P	Pn	20 55 11.7	-7.1
	comp=Z,0.3nm,0.3s,baz=109,slow=22,SNR=3.6						
BILL	Bilibino	20.71	12	⇑eP	P	20 55 58.0	-3.5
BILL				eS	S	20 59 50.2	+0.3
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.2						
KSRS	Korea Array	22.39	251	P	P	20 56 20.3	+0.6
	comp=Z,3.5nm,0.5s,mb4.0,baz=46,slow=10,SNR=13						
TNA	Tin City	26.16	35	eP	P	20 56 56.8	+1.9
	comp=Z,4.5nm,0.9s,mb4.0						
TIXI	Tiksi	26.44	342	eP	P	20 56 54.4	-3.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
ULN	Ulaanbaatar	31.58	288	P	P	20 57 41.2	-2.2
	comp=Z,0.6nm,0.6s,mb3.6						
ULN	Ulaanbaatar	31.58	288	eP	P	20 57 41.7	-1.7
SONM	Songino Array	32.01	288	P	P	20 57 46.4	-0.7
SONM				LR	LR	21 11 48.0	
SONM	Songino Array	32.01	288	P	P	20 57 46.4	-0.7
	comp=Z,0.6nm,0.8s,mb3.5,baz=57,slow=11,SNR=5.8						
SONM				LR	LR	21 11 48.0	
	comp=Z,99nm,20.6s,MS3.5,baz=13,slow=38						
TLY	Talaya	32.61	296	eP	P	20 57 52.2	-0.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
TLY				MLR	MLR		
	comp=Z,89nm,18.0s,MS3.5						
MKAR	Makanchi Array	47.35	297	i P	P	20 59 53.9	-0.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	47.35	297	P	P	20 59 53.9	-0.6
	comp=Z,1.9nm,0.6s,mb4.2,baz=67,slow=7.9,SNR=25						
KURK	Kurchatov	47.57	303	eP	P	20 59 54.1	-2.0
	comp=Z,4.9nm,0.6s,mb4.7						
KURK	Kurchatov	47.57	303	eP	P	20 59 54.1	-2.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
YKA	Yellowknife Ar	49.04	38	P	P	21 00 06.6	-0.7
YKA	Yellowknife Ar	49.04	38	i P	P	21 00 06.5	-0.7
YKA	Yellowknife Ar	49.04	38	P	P	21 00 06.6	-0.6
	comp=Z,0.4nm,0.7s,mb3.6,baz=298,slow=7.4,SNR=5.4						
CHKZ	Chkalovo	50.42	310	eP	P	21 00 15.5	-2.4
	comp=Z,2.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	50.42	310	eP	P	21 00 15.5	-2.4
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
SHL	Shillong	53.61	269	eP	P	21 00 43.7	+1.8
ARCES	ARCESS Array B	56.88	341	P	P	21 01 03.2	-1.7
	comp=Z,4.0nm,1.0s,mb4.4,baz=31,slow=7.4,SNR=4.1						
FINES	FINESS Array B	63.24	335	P	P	21 01 48.2	-0.3
FINES	FINESS Array B	63.24	335	eP	P	21 01 48.6	+0.1
FINES	FINESS Array B	63.24	335	P	P	21 01 48.2	-0.3
	comp=Z,1.7nm,0.9s,mb4.2,baz=37,slow=6.6,SNR=9.0						
NOA	NORSAR Array B	67.24	342	P	P	21 02 14.5	+0.1
	comp=Z,1.2nm,0.8s,mb4.0,baz=29,slow=6.5,SNR=2.8						
WRA	Warramunga Arr	70.28	201	P	P	21 02 32.7	-1.0
	comp=Z,0.7nm,1.1s,mb3.5,baz=16,slow=6.2,SNR=3.7						
AKASG	Malin Array Be	71.00	327	P	P	21 02 37.4	-0.5
	comp=Z,0.5nm,0.4s,mb3.8,baz=34,slow=6.0,SNR=2.9						
SCHQ	Schefferville	71.50	24	P	P	21 02 42.1	+1.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=345,slow=9.4,SNR=7.0						
ASAR	Alice Springs	73.97	200	P	P	21 02 55.0	-0.7
ASAR	Alice Springs	73.97	200	P	P	21 02 55.0	-0.7
	comp=Z,0.2nm,0.3s,mb3.5,baz=26,slow=4.5,SNR=2.7						
STHS	Stebnicka Huta	74.86	331	i P	P	21 03 02.0	+1.3
	comp=Z,3.2nm,0.8s,mb4.3						
STHS	Stebnicka Huta	74.86	331	i P	P	21 03 02.0	+1.3
STHS				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KOLS	Kolonicke sedl	74.93	330	i P	P	21 03 01.5	+0.3
CRVS	Cervenica-Dubn	75.23	330	i P	P	21 03 02.9	0.0
UPC	Upice	75.51	334	eP	P	21 03 04.5	0.0
DPC	Dobruska-Polom	75.56	334	eP	P	21 03 05.7	+0.9
CLL	Collm	75.63	336	i P	P	21 03 05.0	-0.1
CLL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
CLL	Collm	75.63	336	i P	P	21 03 05.0	-0.1
	comp=Z,4.0nm,0.7s,mb4.5						
MORC	Moravsky Berou	75.71	333	⇓iP	P	21 03 06.3	+0.7
TXAR	Lajitas Array	75.74	62	P	P	21 03 06.2	+0.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=305,slow=3.2,SNR=2.3						
PRU	Pruhonice	76.40	335	eP	P	21 03 10.2	+0.7
VYHS	Vyhne	76.44	332	i P	P	21 03 10.5	+0.7
MLR	Muntele Rosu	76.56	326	⇑iP	P	21 03 11.4	+0.9
SMOL	Smolenice	76.86	333	eP	P	21 03 10.8	-1.4
KHC	Kasperske Hory	77.44	335	eP	P	21 03 16.4	+1.0
GRA1	Grafenberg Arr	77.58	337	eP	P	21 03 16.7	+0.6
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	Grafenberg Arr	77.58	337	eP	P	21 03 16.7	+0.6
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	Grafenberg Arr	77.58	337	eP	P	21 03 16.7	+0.6
GRF				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
GRF	Grafenberg Arr	77.58	337	eP	P	21 03 16.7	+0.6
	comp=Z,4.0nm,1.1s,mb4.3						
GERES	GERESS Array B	77.67	335	P	P	21 03 17.4	+0.7
	comp=Z,1.0nm,0.5s,mb4.0,baz=33,slow=5.8,SNR=11						
BRTR	Keskin Array B	78.15	318	i P	P	21 03 19.5	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	Keskin Array B	78.15	318	P	P	21 03 19.9	+0.4
	comp=Z,1.3nm,0.8s,mb3.9,baz=66,slow=3.1,SNR=4.8						

IDC 15 20:56:17.2±1.8, 052S×12844E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.7/4, Error ellipse: s-maj=131.3km s-min=24.4km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.15	164	P	P	21 00 52.5	-0.8
	1.3nm,0.8s,baz=345,slow=12,SNR=7.9						
ASAR	Alice Springs	23.61	167	P	P	21 01 29.0	-1.3
	1.3nm,0.7s,baz=346,slow=12,SNR=19						
STKA	Stephens Creek	33.58	160	P	P	21 03 01.0	+1.8
	3.9nm,0.9s,baz=336,slow=9.9,SNR=6.6						
MKAR	Makanchi Array	62.00	326	P	P	21 06 39.1	-0.1
	0.2nm,0.3s,baz=115,slow=7.4,SNR=5.6						

*CSEM **15** 21:45:45.6±0.1, 35.11N×381W, h10^{km}, ML3.2/10, Error ellipse: s-maj=2.9km s-min=2.5km az=9.0*
*ISCJB **15** 21:45:46.3±0.4, 35.19N±003×404W±002, h21^{km}±4^{km}, Error ellipse: s-maj=4.8km s-min=3.3km az=164.1*
*MDD **15** 21:45:46.8±0.3, 3508N×392W, h9^{km}±2^{km}, mbLg2.5/22, Error ellipse: s-maj=3.6km s-min=2.9km az=43.0, PRXIMO*
*NEIC **15** 21:45:47.5, 3521N×405W, h0^{km}, MN2.5(MDD), After MDD.*
*CNRM **15** 21:45:47.3, 3506N×390W, h7^{km}, MD3.8*
*SFS **15** 21:45:47.0, 3520N×400W, h0^{km}, ML3.6*
*INMG **15** 21:45:47.3±1.1, 3507N×400W, h23^{km}±12^{km}, ML2.5, Error ellipse: s-maj=9.0km s-min=3.2km az=171.0*
*LDG **15** 21:45:48.8±0.3, 3505N×398W, h20^{km}, Ml3.3/1, Error ellipse: s-maj=6.2km s-min=2.7km az=173.0*
ISC 15 21:45:47.9±0.5**, 3522N**±003×**402W**±002**, h18**^{km}±3^{km}**, n118,** σ**1^{s}24**/212**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.06	84	P	Pg	21 45 50.0	-1.3
MPAL				S	Sg	21 45 53.0	-0.5
MPAL	Palemas	0.06	84	i P	Pg	21 45 50.0	-1.3
TOU	Touzarine	0.34	140	P	Pg	21 45 50.0	-5.1
TOU				S	Sg	21 45 53.0	-6.8
TOU	Touzarine	0.34	140	i P	Pg	21 45 50.0	-5.1
MELI	Melilla	0.89	85	P	Pb	21 46 01.6	-3.3
MELI				S	Sb	21 46 13.7	-2.7
MELI	Melilla	0.89	85	i P	Pb	21 46 01.6	-3.3
MELI				eS	Sb	21 46 13.7	-2.7
ZAI	Zaio	1.07	103	i P	Pb	21 46 04.0	-4.0
ZAI				i S	Sb	21 46 18.0	-3.6
EALB	Alboran	1.08	48	P	Pb	21 46 07.1	-0.9
	6.3nm,0.1s,SNR=7.1						
EALB				S	Sb	21 46 22.2	+0.4
	58nm,0.2s,SNR=4.6						
EALB	Alboran	1.08	48	P	Pb	21 46 07.1	-1.0
	6.3nm,0.1s,SNR=7.1						
EALB				S	Sb	21 46 22.2	+0.4
	58nm,0.2s,SNR=4.6						
DKH	Dar Kharkhour	1.13	284	i P	Pn	21 46 10.0	+1.1
DKH				i S	Sb	21 46 26.5	+3.2
MDAL	Dalia	1.37	300	eP	Pn	21 46 14.0	+1.8
MDAL				i S	Sn	21 46 33.0	+3.1
EMIJ	Mijas	1.48	336	P	Pn	21 46 12.3	-1.3
EMIJ				S	Sn	21 46 31.8	-0.7
EMIJ	Mijas	1.48	336	P	Pn	21 46 12.3	-1.3
	4.4nm,0.1s,SNR=26						
EMIJ				S	Sn	21 46 32.7	+0.2
	12nm,0.1s,SNR=7.8						
EMIJ	Mijas	1.48	336	P	Pn	21 46 12.3	-1.3
	4.4nm,0.1s,SNR=26						
EMIJ				S	Sn	21 46 31.8	-0.7
	12nm,0.1s,SNR=7.8						
RSA	Sarsar	1.52	258	P	Pn	21 46 15.0	+0.7
RSA				S	Sn	21 46 33.5	-0.1
RSA	Sarsar	1.52	258	i P	Pn	21 46 15.0	+0.7
EMAL	Malaga-Limoner	1.58	348	P	Pn	21 46 14.1	-0.9
EMAL				S	Sn	21 46 33.5	-1.5
EMAL	Malaga-Limoner	1.58	348	i P	Pn	21 46 14.1	-0.9
EMAL				eS	Sn	21 46 33.5	-1.5
REAL	Reales	1.59	323	eS	Sn	21 46 35.0	-0.3
TSY	Tnine Yamani	1.60	276	P	Pn	21 46 17.0	+1.6
TSY				S	Sn	21 46 36.0	+0.4
TSY	Tnine Yamani	1.60	276	i P	Pn	21 46 17.0	+1.6
EJIF	Jimena Fronter	1.70	317	P	Pn	21 46 18.5	+1.8
EJIF				S	Sn	21 46 39.4	+1.3
EJIF	Jimena Fronter	1.70	317	P	Pn	21 46 18.5	+1.8
	3.7nm,0.3s,SNR=7.9						
EJIF				S	Sn	21 46 39.4	+1.3
	5.8nm,0.2s,SNR=7.9						
ERON	Agron	1.81	5	P	Pn	21 46 18.9	+0.7
	2.6nm,0.2s,SNR=7.9						
ERON				S	Sn	21 46 41.0	+0.4
	3.8nm,0.2s,SNR=7.9						
EBER	Berja	1.91	28	P	Pn	21 46 17.8	-1.8
	2.4nm,0.2s,SNR=7.9						
EBER				S	Sn	21 46 45.0	+1.8
	54nm,0.4s,SNR=7.9						
EBER	Berja	1.91	28	P	Pn	21 46 17.8	-1.8
	2.4nm,0.2s,SNR=7.9						
EBER				S	Sn	21 46 45.0	+1.8
	54nm,0.4s,SNR=7.9						
ELOJ	Sierra Loja	1.93	357	P	Pn	21 46 20.2	+0.3
	0.8nm,0.2s,SNR=7.9						
ELOJ				S	Sn	21 46 45.7	+2.1
	SNR=7.9						
LIJA	Lijar	2.02	327	eS	Sg	21 46 52.5	-0.6
EQUE	Quentar	2.04	13	P	Pn	21 46 21.1	-0.2
	1.2nm,0.2s,SNR=8.8						
EQUE				S	Sn	21 46 46.9	+0.5
	19nm,0.4s,SNR=7.9						
ECOG	Cogollos-Vega	2.09	10	P	Pn	21 46 23.8	+1.7
ECOG				S	Sn	21 46 50.0	+2.5
ECOG	Cogollos-Vega	2.09	10	P	Pn	21 46 23.8	+1.7
	1.4nm,0.2s,SNR=7.9						
ECOG				S	Sn	21 46 50.0	+2.5
	8.5nm,0.3s,SNR=7.9						
ESPR	Espera	2.22	318	P	Pn	21 46 24.8	+0.9
	1.6nm,0.1s,SNR=6.8						
ESPR				S	Sn	21 46 51.8	+0.9
	8.8nm,0.3s,SNR=4.0						
ESPR	Espera	2.22	318	P	Pn	21 46 24.8	+0.9
	1.6nm,0.1s,SNR=6.8						
ESPR				S	Sn	21 46 51.8	+0.9
	8.8nm,0.3s,SNR=4.0						
ENIJ	Nijar	2.28	39	P	Pn	21 46 26.4	+1.7
	0.9nm,0.1s,SNR=7.9						
ENIJ				S	Sn	21 46 50.8	-1.7
	9.5nm,0.3s,SNR=7.9						
CZD	Col de Zad	2.34	202	i P	Pn	21 46 25.0	-0.5
ELUQ	Luque	2.35	355	P	Pn	21 46 27.2	+1.6
ELUQ				S	Sg	21 47 01.6	-1.8
ELUQ	Luque	2.35	355	P	Pn	21 46 27.2	+1.6
	5.6nm,0.2s,SNR=4.7						
ELUQ				S	Sn	21 46 57.0	+3.1
	8.1nm,0.3s,SNR=4.0						
ELUQ	Luque	2.35	355	P	Pn	21 46 27.2	+1.6
	5.6nm,0.2s,SNR=4.7						
ELUQ				S	Sg	21 47 01.6	-1.8
	8.1nm,0.3s,SNR=4.0						
EQES	Quesada	2.69	16	P	Pn	21 46 31.6	+1.3
EQES				S	Sn	21 47 05.2	+2.7
EQES	Quesada	2.69	16	P	Pn	21 46 31.6	+1.3
	1.3nm,0.1s,SNR=23						
EQES				S	Sn	21 47 05.2	+2.7
	23nm,0.4s,SNR=7.9						
EQES	Quesada	2.69	16	P	Pn	21 46 31.6	+1.3
	1.3nm,0.1s,SNR=23						
EQES				S	Sn	21 47 05.2	+2.8
	23nm,0.4s,SNR=7.9						
EBAN	Banos Encina	2.95	4	P	Pn	21 46 35.5	+1.6
EBAN				S	Sn	21 47 14.7	+5.9
EBAN	Banos Encina	2.95	4	P	Pn	21 46 35.5	+1.6
	1.0nm,0.2s,SNR=4.0						
EBAN				S	Sn	21 47 11.7	+2.9
	5.6nm,0.2s,SNR=7.9						
EBAN	Banos Encina	2.95	4	P	Pn	21 46 35.5	+1.6
	1.0nm,0.2s,SNR=4.0						
EBAN				S	Sn	21 47 14.7	+5.9
	5.6nm,0.2s,SNR=7.9						
EADA	Adamuz	2.98	351	P	Pn	21 46 35.4	+1.1
EADA				S	Sn	21 47 13.1	+3.6
EADA	Adamuz	2.98	351	P	Pn	21 46 35.3	+1.1
	0.8nm,0.1s,SNR=7.9						
EADA				S	Sn	21 47 11.4	+1.9
	5.1nm,0.2s,SNR=7.9						
EADA	Adamuz	2.98	351	P	Pn	21 46 35.3	+1.0
	0.8nm,0.1s,SNR=7.9						
EADA				S	Sn	21 47 13.1	+3.6
	5.1nm,0.2s,SNR=7.9						
ZFT	Errachidia	3.19	185	eP	Pn	21 46 36.0	-1.2
EMIN	Mina Concepcio	3.32	321	P	Pn	21 46 38.6	-0.4
EMIN				S	Sn	21 47 17.1	-0.9
EMIN	Mina Concepcio	3.32	321	P	Pn	21 46 38.6	-0.4
	1.4nm,0.1s,SNR=6.5						
EMIN				S	Sn	21 47 18.0	0.0
	1.1nm,0.1s						
EMIN	Mina Concepcio	3.32	321	P	Pn	21 46 38.6	-0.4
	1.4nm,0.1s,SNR=6.5						
AVE	Averroes	3.40	237	P	Pn	21 46 43.0	+2.9
EMUR	La Murta	3.44	40	P	Pn	21 46 46.1	+5.4
EMUR				S	Sn	21 47 20.3	-0.8
EMUR	La Murta	3.44	40	P	Pn	21 46 40.0	-0.7
	1.0nm,0.2s,SNR=4.0						
EMUR				S	Sn	21 47 20.3	-0.8
	17nm,0.5s,SNR=7.9						
EVIA	Vianos	3.62	19	P	Pn	21 46 44.8	+1.7
	2.4nm,0.3s,SNR=7.9						
EVIA				S	Sn	21 47 25.0	-0.5
	SNR=4.0						
EVIA	Vianos	3.62	19	S	Sn	21 47 32.1	+6.6
	SNR=4.0						
EGRO	El Granado	3.63	311	P	Pn	21 46 42.3	-0.9
EGRO				S	Sn	21 47 23.4	-2.2
EGRO	El Granado	3.63	311	P	Pn	21 46 42.3	-0.9
	0.9nm,0.1s,SNR=14						
EGRO				S	Sn	21 47 25.7	+0.2
	2.8nm,0.1s,SNR=7.9						
EGRO	El Granado	3.63	311	P	Pn	21 46 42.3	-0.9
	0.9nm,0.1s,SNR=14						
PVAQ	Vaqueiros	3.70	307	ePn	Pn	21 46 43.5	-0.7
PVAQ				eSn	Sn	21 47 25.5	-1.8
PVAQ				A		21 47 33.8	
	12nm,0.7s						
PVAQ	Vaqueiros	3.70	307	ePn	Pn	21 46 43.5	-0.7
PVAQ				eSn	Sn	21 47 25.5	-1.8
	12nm,0.7s						
PBDV	Barranco-do-Ve	3.75	304	ePn	Pn	21 46 44.5	-0.4
PBDV				eSn	Sn	21 47 27.5	-1.2
PBDV				A		21 47 35.6	
	5.9nm,0.8s						
PBDV	Barranco-do-Ve	3.75	304	ePn	Pn	21 46 44.5	-0.4
PBDV				eSn	Sn	21 47 27.5	-1.2
	5.9nm,0.8s						
PBAR	Barrancos	3.82	321	ePn	Pn	21 46 45.5	-0.4
PBAR				eSn	Sn	21 47 29.3	-1.0
PBAR				A		21 47 44.8	
	6.8nm,0.5s						
PBAR	Barrancos	3.82	321	ePn	Pn	21 46 45.5	-0.4
PBAR				eSn	Sn	21 47 29.3	-1.0
	6.8nm,0.5s						
ETOB	Tobarra	3.95	29	P	Pn	21 46 49.5	+1.8
	4.7nm,0.3s,SNR=18						
ETOB				S	Sn	21 47 33.9	+0.4
	4.5nm,0.5s						
ETOB	Tobarra	3.95	29	P	Pn	21 46 49.5	+1.8
	4.7nm,0.3s,SNR=18						
ETOB				S	Sn	21 47 34.0	+0.5
PBEJ	Beja	4.17	313	eSn	Sn	21 47 38.3	-0.8
PBEJ				A		21 47 45.0	
	5.0nm,0.4s						
PBEJ	Beja	4.17	313	eSn	Sn	21 47 38.3	-0.8
	5.0nm,0.4s						
EBAD	Badajoz	4.27	327	P	Pn	21 46 51.7	-0.3
	1.6nm,0.1s,SNR=12						
EBAD				S	Sn	21 47 40.1	-1.2
	11nm,0.3s						
EBAD	Badajoz	4.27	327	P	Pn	21 46 51.7	-0.3
	1.6nm,0.1s,SNR=12						
MORF	Marmelete	4.28	300	ePn	Pn	21 46 52.7	+0.5
MORF				eSn	Sn	21 47 40.7	-1.1
MORF				A		21 47 46.5	
	4.3nm,0.2s						
MORF	Marmelete	4.28	300	P	Pn	21 46 52.5	+0.3
MORF				Pn	Pn	21 46 52.7	+0.5
MORF				S	Sn	21 47 40.3	-1.5
MORF	Marmelete	4.28	300	ePn	Pn	21 46 52.7	+0.5
MORF				eSn	Sn	21 47 40.7	-1.1
	4.3nm,0.2s						
PFVI	Vila Bisbo	4.33	298	ePn	Pn	21 46 52.4	-0.5
PFVI				eSn	Sn	21 47 41.3	-1.7
PFVI				A		21 47 54.6	
	7.9nm,0.9s						
PFVI	Vila Bisbo	4.33	298	P	Pn	21 46 52.8	-0.1
PFVI				S	Sn	21 47 41.2	-1.8
PFVI	Vila Bisbo	4.33	298	Pn	Pn	21 46 52.4	-0.5
PFVI				P		21 46 52.8	
PFVI				S	Sn	21 47 41.2	-1.8
PFVI				Sn	Sn	21 47 41.3	-1.7
	4.0nm,0.9s						
PFVI	Vila Bisbo	4.33	298	P	Pn	21 46 52.8	-0.1
PFVI				eSn	Sn	21 47 41.3	-1.7
	7.9nm,0.9s						
ESDC	Sonseca Array	4.45	1	P	Pn	21 46 55.5	+1.0
	0.7nm,0.1s,baz=175,slow=12,SNR=14						
ESDC				S	Sn	21 47 46.0	+0.2
	0.5nm,0.1s,baz=190,slow=20,SNR=7.9						
ESDC	Sonseca Array	4.45	1	P	Pn	21 46 55.5	+1.0
	0.7nm,0.1s,SNR=14						
ESDC				S	Sn	21 47 46.0	+0.2
	0.5nm,0.1s,SNR=7.9						
ESLA	Sonseca Array	4.45	1	eP	Pn	21 46 54.8	+0.3
ESLA	Sonseca Array	4.45	1	eP	Pn	21 46 54.8	+0.3
PTEO	Sao Teotonio	4.45	303	ePn	Pn	21 46 55.0	+0.5
PTEO				eSn	Sn	21 47 44.7	-1.2
PTEO				A		21 48 07.4	
	8.8nm,1.1s						
PTEO	Sao Teotonio	4.45	303	ePn	Pn	21 46 55.0	+0.5
PTEO				eSn	Sn	21 47 44.7	-1.2
	8.8nm,1.1s						
EVO	Evora	4.60	317	ePn	Pn	21 46 57.3	+0.7
EVO				eSn	Sn	21 47 49.8	+0.2
	14nm,0.4s						
EVO	Evora	4.60	317	ePn	Pn	21 46 57.3	+0.7
EVO				eSn	Sn	21 47 49.6	0.0
EVO				A		21 48 05.9	
	5.1nm,0.4s						
EVO	Evora	4.60	317	ePn	Pn	21 46 57.3	+0.7
EVO				eSn	Sn	21 47 49.6	0.0
	5.1nm,0.4s						
EBEN	Beniarda	4.62	40	S	Sn	21 47 48.0	-2.0
	5.1nm,0.5s,SNR=4.0						
EBEN	Beniarda	4.62	40	S	Sn	21 47 48.0	-2.0
	5.1nm,0.5s,SNR=4.0						
PESTR	Estremoz	4.63	323	ePn	Pn	21 46 58.0	+1.0
PESTR				eSn	Sn	21 47 50.0	-0.2
PESTR				A		21 48 17.2	
	6.8nm,0.4s						
PESTR	Estremoz	4.63	323	ePn	Pn	21 46 58.0	+1.0
PESTR				eSn	Sn	21 47 50.0	-0.2
	6.8nm,0.4s						
EVOP	Sao Brissos	4.66	316	ePn	Pn	21 46 57.3	-0.1
EVOP				eSn	Sn	21 47 49.8	-1.3
	7.0nm,0.4s						
MOE	Montemor	4.79	315	ePn	Pn	21 47 00.5	+1.3
MOE				eSn	Sn	21 47 53.4	-0.8
MOE	Montemor	4.79	315	P	Pn	21 47 00.4	+1.2
MOE				Pn	Pn	21 47 00.5	+1.3
MOE				S	Sn	21 47 53.3	-0.9
MOE				Sn	Sn	21 47 53.4	-0.8
PCBR	Castelo Branco	5.37	330	ePn	Pn	21 47 07.5	+0.3
PCBR				eSn	Sn	21 48 07.7	-0.8
PCBR				A		21 48 14.6	
	3.4nm,0.3s						
PCBR	Castelo Branco	5.37	330	Pn	Pn	21 47 07.5	+0.3
PCBR				Sn	Sn	21 48 07.7	-0.8
	1.7nm,0.3s						
CIA	Chichaoua	5.38	229	P	Pn	21 47 05.0	-2.4
CIA				S	Sn	21 48 04.0	-4.9
GUD	Guadarrama	5.42	359	P	Pn	21 47 08.5	+0.7
	0.7nm,0.3s,SNR=7.9						
GUD				S	Sn	21 48 08.5	-1.2
	2.0nm,0.4s,SNR=4.0						
EIBI	Ibiza	5.73	47	P	Pn	21 47 11.6	-0.4
	0.9nm,0.1s,SNR=5.9						
EIBI				S	Sn	21 48 14.1	-3.2
	1.9nm,0.2s,SNR=7.9						
EIBI	Ibiza	5.73	47	P	Pn	21 47 11.6	-0.5
	0.9nm,0.1s,SNR=5.9						
ETOR	Torete	5.80	15	P	Pn	21 47 13.7	+0.6
	0.9nm,0.1s,SNR=7.9						
ETOR				S	Sn	21 48 16.8	-2.4
	3.3nm,0.2s,SNR=7.9						
PVIS	Viseu	6.28	332	eSn	Sn	21 48 30.9	-0.1
MVO	Moncorvo	6.39	339	ePn	Pn	21 47 21.8	+0.6
MVO				eSn	Sn	21 48 32.9	-0.8
MVO				A		21 48 35.5	
	6.7nm,0.6s						
MVO	Moncorvo	6.39	339	P	Pn	21 47 22.0	+0.8
MVO				S	Sn	21 48 32.8	-0.9
MVO	Moncorvo	6.39	339	Pn	Pn	21 47 21.8	+0.6
MVO				P		21 47 22.0	
MVO				S	Sn	21 48 32.8	-0.9
MVO				Sn	Sn	21 48 32.9	-0.8
	3.3nm,0.6s						
ERTA	Horta de San J	6.68	30	P	Pn	21 47 29.7	+4.6
ERTA	Horta de San J	6.68	30	P	Pn	21 47 29.7	+4.6
	0.0nm,0.1s,SNR=7.9						
PVRL	Vila Real	6.71	335	ePn	Pn	21 47 26.3	+0.7
PVRL				eSn	Sn	21 48 40.4	-1.1
PVRL				A		21 48 42.7	
	4.8nm,0.4s						
PVRL	Vila Real	6.71	335	Pn	Pn	21 47 26.3	+0.7
PVRL				Sn	Sn	21 48 40.4	-1.1
	2.4nm,0.4s						
PBRG	Braganca	6.91	343	ePn	Pn	21 47 29.1	+0.8
PBRG				eSn	Sn	21 48 46.8	+0.3
ECAL	Calabor	7.04	343	P	Pn	21 47 31.2	+1.1
	0.6nm,0.2s,SNR=6.2						
ECAL				S	Sn	21 48 47.8	-1.9
	0.8nm,0.2s,SNR=7.9						
ETOS	Mallorca	7.08	48	P	Pn	21 47 30.6	0.0
	1.3nm,0.3s,SNR=5.3						
ETOS	Mallorca	7.08	48	P	Pn	21 47 30.6	0.0
PCAB	Cabril	7.20	335	ePn	Pn	21 47 33.2	+0.9
ELOB	Lobios	7.36	336	P	Pn	21 47 34.8	+0.4
	0.1nm,0.1s,SNR=4.0						
ELOB				S	Sn	21 48 55.0	-2.3
	1.5nm,0.2s,SNR=7.9						
ETSF	Etsaut	8.13	18	ePn	Pn	21 47 45.8	+0.8
SJPF	Ste Jean	8.18	15	ePn	Pn	21 47 46.4	+0.7
PGF	Pioggiola	12.50	50	eP	Pn	21 48 49.8	+5.0

IDC 15 22:20:51.6±2.0**, 435N**×**12739E, h0**^{km}**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=151.5km s-min=25.6km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.08	164	P	P	22 26 17.6	-0.5
	2.6nm,0.7s,baz=345,slow=11,SNR=11						
ASAR	Alice Springs	28.56	167	P	P	22 26 48.6	-0.7
	0.1nm,0.4s,baz=342,slow=8.9,SNR=3.9						
STKA	Stephens Creek	38.48	160	P	P	22 28 16.9	+1.4
	1.5nm,0.7s,baz=322,slow=6.7,SNR=3.7						
MKAR	Makanchi Array	57.43	325	P	P	22 30 42.2	+0.1
	0.2nm,0.3s,baz=130,slow=8.9,SNR=5.1						

*IDC **15** 22:23:48.0±9.2, 3176S×17948W, h103^{km}±87^{km}, mb3.5/2, mb1 3.7/3, mb1mx3.4/14, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=71.3km s-min=51.0km az=176.0*
ISC 15 22:23:53.5±2.4**, 3186S**±008×**1797E**±04**, h100**^{km}**, n11,** σ**1^{s}02**/14**, mb3.8**/2**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.80	191	PN	Pn	22 25 18.7	+1.6
MXZ				SN	Sn	22 26 21.3	-1.0
PUZ	Puketiti	6.31	190	PN	Pn	22 25 23.1	-0.9
PUZ				SN	Sn	22 26 28.8	-5.8
MWZ	Matawai	6.70	195	ePN	Pn	22 25 29.0	-0.2
MWZ				SN	Sn	22 26 44.2	+0.2
URZ	Urewera	6.73	198	P	Pn	22 25 30.6	+1.0
	1.3nm,0.3s,baz=3.6,slow=21,SNR=9.6						
URZ				S	Sn	22 26 45.5	+0.9
	3.3nm,0.3s,baz=207,slow=20,SNR=16						
URZ	Urewera	6.73	198	PN	Pn	22 25 31.1	+1.5
MRZ	Mangatainoka R	9.39	200	eSN	Sn	22 27 43.1	-6.3
TCW	Tory Channel	10.30	203	PN	Pn	22 26 16.0	-2.1
KHZ	Kahutara	11.62	203	PN	Pn	22 26 30.9	-5.1
ASAR	Alice Springs	41.08	270	P	P	22 31 27.7	+0.2
	0.7nm,0.6s,mb3.7,baz=103,slow=7.6,SNR=9.6						
WRA	Warramunga Arr	42.21	275	P	P	22 31 36.6	-0.1
	0.9nm,0.4s,mb3.9,baz=111,slow=8.0,SNR=25						
FINES	FINESS Array B	145.78	338	PKPbc	PKPbc	22 43 13.7	-6.5
	0.8nm,0.4s,baz=52,slow=3.6,SNR=13						

*NEIC **15** 22:29:59.9, 15.17N×9290W, h29^{km}, MD4.3(MEX), After MEX.*
MEX 15 22:29:59.4±0.5**, 1514N**×**9288W, h30**^{km}±20^{km}**, MD4.3, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	1.34	32	i P	Pn	22 30 19.8	-2.3
CCIG				i S	Sn	22 30 36.4	-2.6
SCX	San Cristobal	1.61	8	i P	Pn	22 30 24.5	-1.3
SCX				i S	Sn	22 30 43.2	-2.3
CMIG	Matias Romero	2.74	316	i P	Pn	22 30 40.6	-0.7
CMIG				i S	Sn	22 31 09.1	-4.3
CMIG	Matias Romero	2.74	316	i P	Pn	22 30 39.9	-1.5
CMIG				i S	Sn	22 31 09.1	-4.3
HUIG	Huatulco	3.18	282	i P	Pn	22 30 46.0	-1.4
HUIG				i S	Sn	22 31 21.5	-2.9
OXX	Oaxaca	4.17	298	eP	Pn	22 31 02.0	+0.9
VHO	Vista Hermosa	4.18	298	i P	Pn	22 31 00.4	-0.8
VHO				i S	Sn	22 31 46.6	-2.4
UTMO	Huajuapan	5.43	300	eP	Pn	22 31 17.4	-1.0
UTMO				i S	Sn	22 32 17.6	-2.4
PPM	Popocatepetl	6.74	306	i P	Pn	22 31 20.3	-16
PPM				i S	Sn	22 32 35.9	-16
MEIG	Mezcala	7.04	294	i P	Pn	22 31 40.0	-0.4
MEIG				i S	Sn	22 32 57.2	-2.2
CAIG	El Cayaco	7.35	286	i P	Pn	22 31 44.7	-0.1
CAIG				i S	Sn	22 33 01.9	-5.4
CAIG	El Cayaco	7.35	286	i P	Pn	22 31 44.7	-0.1
CAIG				i S	Sn	22 33 05.8	-1.4

*IDC **15** 22:45:28.7±0.8, 1436N×14424E, h0^{km}, mb4.1/11, mb1 4.3/11, mb1mx4.1/21, mbtmp4.1/11, MS3.4/5, Ms1 3.4/5, ms1mx3.1/30, Error ellipse: s-maj=39.9km s-min=13.9km az=86.0*
*ISCJB **15** 22:45:32.5±1.6, 1433N±006×1442E±01, h41^{km}±17^{km}, mb4.2/18, MS3.2/4, Error ellipse: s-maj=17.5km s-min=9.5km az=175.5*
*NEIC **15** 22:45:33.8±0.3, 1433N×14424E, h35^{km}, mb4.5/10, Error ellipse: s-maj=12.1km s-min=6.3km az=81.0*
ISC 15 22:45:32.0±2.0**, 1433N**±006×**1442E**±01**, h22**^{km}±16^{km}**, n38,** σ**0^{s}93**/35**, mb4.2**/18**, MS3.2**/4**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.99	138	eP	Pb	22 45 49.9	-0.6
GUMO				eS	Sb	22 46 03.6	+0.6
JOW	Kunigami	19.38	312	LR	LR	22 55 39.0	
	comp=Z,138nm,18.4s,baz=100,slow=32						
DAV	Davao City (W)	19.65	250	P	Pn	22 49 59.5	-1.5
MJAR	Matsushiro Arr	22.76	347	P	P	22 50 33.8	+1.0
	2.5nm,0.7s,mb3.8,baz=168,slow=8.1,SNR=8.3						
MAJO	Matsushiro	22.76	347	eP	P	22 50 32.2	-0.6
	19nm,1.1s,mb4.4						
PMG	Port Moresby	23.77	173	eP	P	22 50 41.6	-1.5
	5.2nm,0.3s,mb4.4						
PMG	Port Moresby	23.77	173	LR	LR	22 57 41.4	
	comp=Z,75nm,19.3s,MS3.2,baz=300,slow=31						
KSRS	Korea Array	27.20	331	P	P	22 51 14.5	+0.3
	3.3nm,0.8s,mb3.9,baz=144,slow=9.2,SNR=7.9						
KSRS				LR	LR	23 01 25.3	
	comp=Z,31nm,19.3s,MS2.9,baz=340,slow=35						
INCN	Inchon	27.85	329	P	P	22 51 20.3	+0.3
HNR	Honiara	28.31	146	LR	LR	23 00 05.2	
	comp=Z,97nm,21.5s,MS3.4,baz=358,slow=31						
YSS	Yuzh-Sakhalins	32.55	358	P	P	22 52 01.3	-0.1
QIZ	Qiongzhong	33.20	283	eP	P	22 52 07.2	-0.3
CTA	Charters Tower	34.26	177	eP	P	22 52 17.5	+0.9
	6.2nm,1.4s,mb4.3						
CTA	Charters Tower	34.26	177	P	P	22 52 17.3	+0.7
	6.9nm,1.0s,mb4.5,baz=5.2,slow=11,SNR=3.4						
CTAO	Charters Tower	34.26	177	P	P	22 52 17.4	+0.8
WB2	Warramunga Arr	35.41	196	eP	P	22 52 26.4	-0.1
WB2				e	pP	22 52 34.0	+0.8
WB2				e		22 52 40.2	
WRA	Warramunga Arr	35.41	196	P	P	22 52 26.9	+0.4
	10.0nm,0.8s,mb4.8,baz=14,slow=9.8,SNR=54						
FITZ	Fitzroy Crossi	37.06	210	eP	P	22 52 40.8	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	5.5nm,0.9s,mb4.4						
FITZ	Fitzroy Crossi	37.06	210	P	P	22 52 40.7	0.0
	3.0nm,0.9s,mb4.1,baz=32,slow=15,SNR=6.6						
ASAR	Alice Springs	39.08	195	P	P	22 52 58.0	+0.4
	1.5nm,0.8s,mb3.8,baz=12,slow=13,SNR=16						
MBWA	Marble Bar	42.67	215	eP	P	22 53 28.1	+0.8
	11nm,0.7s,mb4.7						
ULN	Ulaanbaatar	45.40	325	eP	P	22 53 49.9	+1.0
	2.0nm,0.9s,mb4.0						
SONM	Songino Array	45.75	325	P	P	22 53 53.3	+1.6
	1.4nm,0.8s,mb4.0,baz=141,slow=8.5,SNR=16						
SONM				PcP	PcP	22 55 29.6	+0.4
	0.7nm,0.8s,baz=129,slow=4.0,SNR=3.8						
SONM				LR	LR	23 13 12.4	
	comp=Z,56nm,18.3s,MS3.5,baz=147,slow=36						
STKA	Stephens Creek	46.01	183	eP	P	22 53 54.4	+0.5
	3.9nm,0.8s,mb4.4						
STKA	Stephens Creek	46.01	183	P	P	22 53 54.2	+0.3
	5.2nm,0.8s,mb4.5,baz=347,slow=9.5,SNR=12						
LSA	Lhasa	51.08	297	eP	P	22 54 34.9	+1.8
	1.6nm,0.7s,mb4.1						
BILL	Bilibino	55.55	10	eP	P	22 55 05.2	-0.1
	15nm,1.7s,mb4.8						
KURK	Kurchatov	63.60	320	eP	P	22 56 01.6	+0.5
	14nm,1.8s,mb4.7						
COLA	College	67.81	25	P	P	22 56 27.2	-0.8
CHKZ	Chkalovo	68.86	322	P	P	22 56 33.7	-1.1
BRVK	Borovoye	69.01	322	P	P	22 56 34.2	-1.5
AKTK	Aktyubinsk	76.68	319	P	P	22 57 20.5	-0.8
AKTO	Aktyubinsk	76.68	319	P	P	22 57 20.5	-0.8
	0.6nm,0.5s,mb3.8,baz=22,slow=11,SNR=3.4						
YKA	Yellowknife Ar	82.51	27	P	P	22 57 51.5	-1.3
YKA	Yellowknife Ar	82.51	27	P	P	22 57 51.5	-1.3
	0.4nm,0.7s,mb3.6,baz=288,slow=5.2,SNR=6.9						
RES	Resolute Bay	83.98	13	eP	P	22 58 02.0	+1.8
	84nm,0.7s						
FINES	FINESS Array B	90.22	335	P	P	22 58 29.9	-0.8
	1.2nm,0.8s,mb4.3,baz=54,slow=7.1,SNR=3.6						
LPAZ	La Paz	148.78	98	PKPbc	PKPbc	23 05 20.6	+1.9
	2.6nm,0.8s,baz=275,slow=4.9,SNR=9.8						

IDC 15 22:52:30.4±3.3, 443S×15203E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.6/12, mbtmp3.7/3, Error ellipse: s-maj=117.0km s-min=47.0km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.12	227	P	P	22 57 37.7	-0.6
	0.9nm,0.4s,baz=53,slow=10.0,SNR=16						
ASAR	Alice Springs	25.91	221	P	P	22 58 05.0	+0.7
	0.8nm,0.6s,baz=55,slow=8.9,SNR=9.4						
FITZ	Fitzroy Crossi	29.17	240	P	P	22 58 33.6	0.0
	1.1nm,0.7s,baz=47,slow=6.9,SNR=5.1						
TORD	Torodi Ar. Bea	149.46	288	PKPbc	PKPbc	23 12 22.0	-0.6
	0.1nm,0.4s,baz=63,slow=2.0,SNR=1.6						

*NEIC **15** 23:11:14.4±0.5, 5008N×1840E, h7^{km}±4^{km}, MG2.6(WAR), Error ellipse: s-maj=7.0km s-min=3.8km az=187.0*
*IPEC **15** 23:11:14.8±0.1, 5006N×1844E, h9^{km}±1^{km}, ML2.0/3, Error ellipse: s-maj=1.2km s-min=0.7km az=166.0*
*VIE **15** 23:11:15.3±0.7, 4980N×1848E, h0^{km}, mb2.0/3, ML2.5/4, Error ellipse: s-maj=4.3km s-min=3.8km az=73.0 17 km ESE of Ostrava Suspected Mining induced.*
*CSEM **15** 23:11:15.4±0.2, 5000N×1839E, h0^{km}, ML3.0/5, Error ellipse: s-maj=4.8km s-min=2.4km az=29.0*
WAR 15 23:11:14.8, 5005N×1844E, ML2.6, 1C-4D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.16	284	⇓iPg	Pg	23 11 18.6	+0.7
RAC				eSg	Sg	23 11 21.9	+1.8
OKC	Ostrava-Krasne	0.28	223	ePG	Pg	23 11 20.4	+0.2
OKC				eSG	Sg	23 11 23.9	+0.1
	171nm,0.4s						
OKC	Ostrava-Krasne	0.28	223	ePg	Pg	23 11 20.2	0.0
OKC				eSg	Sg	23 11 23.9	+0.1
MORC	Moravsky Berou	0.64	246	eP	Pg	23 11 26.6	-0.4
MORC				eS	Sg	23 11 36.0	+0.7
MORC	Moravsky Berou	0.64	246	ePg	Pg	23 11 26.5	-0.6
MORC				eSg	Sg	23 11 35.9	+0.6
	29nm,0.3s						
OJC	Ojcow	0.89	78	ePg	Pg	23 11 31.3	-0.5
OJC				eSg	Sg	23 11 43.7	+0.3
LIKS	Likavka	1.09	156	eSG	Sg	23 11 53.3	+3.7
JAVC	Velka Javorina	1.29	203	ePn	Pn	23 11 39.4	-0.6
NIE	Niedzica	1.37	117	ePg	Pg	23 11 40.8	-0.2
NIE				eSg	Sg	23 11 58.8	+0.1
DPC	Dobruska-Polom	1.40	283	ePG	Pg	23 11 40.3	-1.2
DPC				eSG	Sg	23 11 58.9	-0.7
	72nm,0.5s						
VRAC	Vranov	1.41	239	ePn	Pn	23 11 40.5	-1.2
VRAC				eSg	Sg	23 11 59.5	-0.5
	25nm,0.4s						
KOLL	Kolacno	1.47	181	ePG	Pg	23 11 41.3	-1.6
KOLL				eSG	Sg	23 12 02.0	+0.1
VYHS	Vyhne	1.57	170	i Pg	Pg	23 11 43.4	-1.5
VYHS				eSg	Sg	23 12 04.6	-0.7
KSP	Ksiaz	1.59	301	ePn	Pn	23 11 42.6	-1.5
KSP				ePg	Pg	23 11 45.9	+0.7
KSP				eSn	Sn	23 12 05.0	-0.3
KSP				eSg	Sg	23 12 07.6	+1.7
KSP	Ksiaz	1.59	301	ePn	Pn	23 11 42.5	-1.7
KSP				ePg	Pg	23 11 45.8	+0.6
KSP				eSg	Sg	23 12 05.0	-0.8
KSP	Ksiaz	1.59	301	ePg	Pg	23 11 45.8	+0.6
KSP				eSg	Sg	23 12 05.0	-0.8
UPC	Upice	1.63	287	ePg	Pg	23 11 44.0	-1.9
UPC				eSg	Sg	23 12 05.8	-1.2
UPC	Upice	1.63	287	ePG	Pg	23 11 44.0	-1.9
UPC				eSG	Sg	23 12 05.8	-1.2
KRUC	Moravsky	1.66	234	ePn	Pn	23 11 43.2	-1.9
KRUC	Moravsky	1.66	234	ePg	Pg	23 11 44.2	-2.3
KRUC				eSg	Sg	23 12 06.3	-1.7
	14nm,0.3s						
SMOL	Smolenice	1.67	204	i PG	Pg	23 11 44.1	-2.7
SMOL				eSG	Sg	23 12 06.9	-1.5
MODS	Modra-Piesok	1.84	205	i Pg	Pg	23 11 46.6	-3.4
MODS	Modra-Piesok	1.84	205	i PG	Pg	23 11 46.6	-3.4
STHS	Stebnicka Huta	1.92	108	ePN	Pn	23 11 49.0	+0.3
STHS				eSN	Sn	23 12 16.4	+2.8
STHS	Stebnicka Huta	1.92	108	ePn	Pn	23 11 49.1	+0.4
STHS				eSn	Sn	23 12 16.4	+2.8
ZST	Bratislava	2.05	206	ePN	Pn	23 11 49.4	-1.1
ZST				eSG	Sg	23 12 17.5	-3.1
KECS	Kecovo	2.06	139	ePN	Pn	23 11 49.6	-1.0
KECS				ePG	Pg	23 11 56.0	+1.8
KECS				eSN	Sn	23 12 14.5	-2.4
CRVS	Cervenica-Dubn	2.28	119	ePN	Pn	23 11 56.4	+2.8
PSZ	Piszkesteto	2.33	155	ePn	Pn	23 11 54.6	+0.2
PSZ				ePg	Pg	23 12 02.0	+2.5
PSZ	Piszkesteto	2.33	155	ePn	Pn	23 11 54.6	+0.2
PSZ	Piszkesteto	2.33	155	ePg	Pg	23 12 02.0	+2.5
PRU	Pruhonice	2.52	270	ePg	Pg	23 11 59.4	-3.6
PRU				eSg	Sg	23 12 32.2	-3.4
PRU	Pruhonice	2.52	270	ePG	Pg	23 11 59.4	-3.6
PRU				eSG	Sg	23 12 32.2	-3.4
	13nm,0.8s						
PVCC	Panska Ves	2.53	283	eSG	Sg	23 12 34.2	-1.9
	29nm,0.5s						
CONA	Conrad Observa	2.72	220	⇑iPn	Pn	23 11 58.3	-1.3
CONA				⇓iSg	Sg	23 12 40.1	-1.9
	5.5nm,0.5s						
KOLS	Kolonicke sedl	2.73	113	ePn	Pn	23 12 00.1	+0.2
KOLS				ePn	Pn	23 12 00.9	+1.0
KOLS				eSg	Sg	23 12 44.0	+1.4
KOLS	Kolonicke sedl	2.73	113	ePN	Pn	23 12 00.9	+1.0
KOLS				eSG	Sg	23 12 44.0	+1.4
KHC	Kasperske Hory	3.29	256	ePn	Pn	23 12 06.0	-1.6
KHC				ePg	Pg	23 12 14.7	-3.2
KHC				e		23 12 39.5	
KHC				eSg	Sg	23 12 56.5	-4.1
KHC	Kasperske Hory	3.29	256	ePN	Pn	23 12 06.0	-1.6
KHC				ePG	Pg	23 12 14.7	-3.2
KHC				ex	x	23 12 39.5	
KHC				eSG	Sg	23 12 56.5	-4.1
	11nm,0.4s						
MOA	Molln	3.52	233	⇓iPn	Pn	23 12 09.3	-1.4
MOA				⇓iSg	Sg	23 13 07.1	-0.8
	comp=Z,7.4nm,0.6s						
CLL	Collm	3.68	292	i Pg	Pg	23 12 25.1	-0.3
CLL				eSn	Sn	23 12 53.0	-4.0
CLL				i Sg	Sg	23 13 11.8	-1.3
	comp=Z,8.0nm,0.7s						
MOX	Moxa	4.41	280	eSG	Sg	23 13 35.8	-0.7

GUC 16 00:01:13.2±0.8, 3332S×7016W, h9^{km}±2^{km}, MD3.7, ML2.3, 5C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLCH	Cerro Calan	0.33	256	⇓iP	Pg	00 01 21.1	+1.4
CLCH				i S	Sg	00 01 26.6	+2.6
CLCH				AML	AML	00 01 29.3	
	comp=E,1µm,0.6s						
FSR	Penalolen	0.35	242	⇓iP	Pg	00 01 20.9	+0.8
FSR				i S	Sg	00 01 26.6	+1.9
FSR				AML	AML	00 01 26.8	
	comp=N,1µm,0.1s						
DSCH	Colegio Aleman	0.35	256	⇑iP	Pg	00 01 20.4	+0.2
DSCH				i S	Sg	00 01 26.6	+1.7
DSCH				AML	AML	00 01 27.1	
	comp=E,184nm,0.2s						
STL	Santa Lucia	0.42	253	eP	Pg	00 01 21.7	+0.3
STL				i S	Sg	00 01 28.4	+1.4
STL				AML	AML	00 01 30.9	
	comp=N,95nm,0.3s						
PCH	Pirque	0.43	224	⇑iP	Pg	00 01 22.1	+0.6
PCH				i S	Sg	00 01 28.7	+1.6
ANTU	Antumapu	0.47	237	i P	Pg	00 01 23.0	+0.6
ANTU				i S	Sg	00 01 30.0	+1.4
ANTU				AML	AML	00 01 32.5	
	comp=E,378nm,0.6s						
TACH	Talagante	0.73	242	⇑iP	Pg	00 01 27.5	+0.1
TACH				i S	Sg	00 01 38.0	+1.1
CHCH	Chadas Angostu	0.74	214	⇑iP	Pg	00 01 27.5	0.0
CHCH				i S	Sg	00 01 38.2	+1.0
ROCH	El Roble	0.79	295	i S	Sg	00 01 40.1	+1.3
CACH	El Canelo	0.88	205	⇓iP	Pg	00 01 30.5	+0.3
CACH				i S	Sg	00 01 42.9	+1.3
CICH	Cipreses	1.03	192	eP	Pg	00 01 32.9	0.0
CICH				i S	Sg	00 01 46.6	+0.4
LNV	Longovilo	1.23	238	⇓iP	Pn	00 01 35.3	-1.2
LNV				i S	Sb	00 01 52.3	-0.2
CHNG	Los Chungos	1.82	321	⇑iP	Pn	00 01 30.9	-14
CHNG				i S	Sn	00 01 55.1	-13
CHNG				AML	AML	00 01 59.1	
	comp=E,172nm,0.4s						

*NEIC **16** 00:04:45.0, 1660N×10043W, h5^{km}, MD3.8(MEX), After MEX.*
MEX 16 00:04:45.0±0.7, 1656N×10052W, h16^{km}±249^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.54	26	i P	Pg	00 04 53.7	-2.0
CAIG				i S	Sg	00 05 00.8	-2.2
ACX	Acapulco	0.65	62	i P	Pg	00 04 55.1	-2.7
ACX				i S	Sg	00 05 04.0	-2.5
MEIG	Mezcala	1.61	32	eP	Pn	00 05 10.5	-2.2
MEIG				i S	Sn	00 05 28.3	-4.8
UTMO	Huajuapan	2.89	64	eP	Pn	00 05 28.2	-2.1
UTMO				i S	Sn	00 06 01.1	-3.6
PPM	Popocatepetl	3.08	36	eP	Pn	00 05 31.4	-1.5
PPM				i S	Sn	00 06 06.6	-2.8
IIO	Organos	3.46	29	eP	Pn	00 05 37.4	-0.9
IIO				i S	Sn	00 06 22.9	+3.9

*IDC **16** 00:04:51.5±0.7, 31.13S×17841W, h0^{km}, mb4.6/7, mb1 4.8/9, mb1mx4.5/16, mbtmp4.6/9, ML4.1/2, MS3.8/9, Ms1 3.8/9, ms1mx3.6/25, Error ellipse: s-maj=22.9km s-min=22.5km az=112.0*
*ISCJB **16** 00:04:56.3±0.5, 3153S±004×1786W±0.1, h33^{km}, mb4.7/14, MS3.9/7, Error ellipse: s-maj=12.7km s-min=5.1km az=15.2*
*NEIC **16** 00:04:57.8±1.7, 3142S×17841W, h41^{km}±14^{km}, mb4.6/6, Error ellipse: s-maj=15.1km s-min=13.1km az=70.0*
ISC 16 00:04:58.0±0.5, 3145S±004×17856W±010, h35^{km}, n63, σ1.16/51, mb4.7/14, MS3.9/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.62	202	eP	Pn	00 06 33.6	+0.8
MXZ	Matakaoa Point	6.62	202	ePN	Pn	00 06 33.6	+0.8
MXZ				SN	Sn	00 07 46.5	-0.5
PUZ	Puketiti	7.10	201	eP	Pn	00 06 38.0	-1.4
PUZ				S	Sn	00 07 57.7	-1.2
PUZ	Puketiti	7.10	201	PN	Pn	00 06 38.0	-1.5
PUZ				SN	Sn	00 07 57.7	-1.2
WCZ	Waipu Caves	7.42	231	PN	Pn	00 06 51.7	+8.0
MWZ	Matawai	7.58	204	eP	Pn	00 06 47.1	+1.1
MWZ	Matawai	7.58	204	PN	Pn	00 06 47.1	+1.1
URZ	Urewera	7.67	206	eP	Pn	00 06 46.6	-0.5
URZ	Urewera	7.67	206	Pn	Pn	00 06 47.4	+0.3
	3.0nm,0.3s,baz=337,slow=2.9,SNR=15						
URZ				Sn	Sn	00 08 13.9	+1.2
	14nm,0.3s,baz=102,slow=20,SNR=9.7						
URZ	Urewera	7.67	206	PN	Pn	00 06 47.2	0.0
BKZ	Black Stump Fm	8.69	206	eP	Pn	00 07 02.5	+1.3
BKZ				S	Sn	00 08 36.2	-1.7
BKZ	Black Stump Fm	8.69	206	PN	Pn	00 07 03.5	+2.2
BKZ				SN	Sn	00 08 36.2	-1.7
MRZ	Mangatainoka R	10.34	206	eP	Pn	00 07 20.2	-3.6
MRZ				S	Sn	00 09 12.4	-5.9
MRZ	Mangatainoka R	10.34	206	ePN	Pn	00 07 20.2	-3.6
MRZ				SN	Sn	00 09 12.4	-5.9
MTW	Mount Morrison	10.80	205	SN	Sn	00 09 22.8	-6.9
THZ	Tophouse	12.36	211	SN	Sn	00 09 59.2	-8.5
RPZ	Rata Peaks	14.74	211	Pn	Pn	00 08 26.5	+2.7
	0.8nm,0.3s,baz=18,slow=3.2,SNR=2.5						
RPZ				Sn	Sn	00 10 54.0	-12
	0.9nm,0.3s,baz=18,slow=20,SNR=3.9						
JCZ	Jackson Bay	16.08	215	PN	Pn	00 08 39.3	-2.0
DZM	Mont Dzumac	16.32	301	LR	LR	00 13 47.9	
	comp=Z,531nm,18.9s,baz=354,slow=33						
AFI	Afiamalu	18.54	21	P	Pn	00 09 10.7	-1.4
RAR	Rarotonga	19.66	63	LR	LR	00 15 17.0	
	comp=Z,149nm,18.6s,baz=347,slow=32						
ARMA	Armidale	25.56	265	eP	P	00 10 28.4	+4.7
TBI	Tubuai	27.01	80	eLR	LR	00 17 11.6	
	180nm,26.2s						
HNR	Honiara	29.64	313	eP	P	00 11 00.1	-0.2
	40nm,0.4s,mb5.5						
PPT	Papeete	29.66	69	eLR	LR	00 18 17.0	
	176nm,29.5s,baz=247						
CTA	Charters Tower	33.51	281	eP	P	00 11 36.9	+2.5
	9.7nm,0.6s,mb4.9						
CTA	Charters Tower	33.51	281	P	P	00 11 35.9	+1.6
	12nm,0.7s,mb5.0,baz=97,slow=11,SNR=20						
CTAO	Charters Tower	33.51	281	eP	P	00 11 36.9	+2.6
	32nm,1.3s,mb5.1						
STKA	Stephens Creek	33.79	259	eP	P	00 11 38.5	+1.9
	3.6nm,0.6s,mb4.5						
STKA	Stephens Creek	33.79	259	P	P	00 11 38.7	+2.1
	5.1nm,0.6s,mb4.6,baz=106,slow=10,SNR=14						
STKA				LR	LR	00 23 05.2	
	comp=Z,123nm,19.5s,MS3.6,baz=25,slow=32						
PMG	Port Moresby	38.64	297	LR	LR	00 24 16.1	
	comp=Z,166nm,18.1s,MS3.9,baz=134,slow=30						
RKT	Rikitea	39.41	89	eLR	LR	00 22 54.2	
	213nm,29.2s						
ASAR	Alice Springs	42.59	268	P	P	00 12 50.8	0.0
	11nm,0.7s,mb4.7,baz=105,slow=7.2,SNR=109						
WB2	Warramunga Arr	43.66	274	eP	P	00 12 59.1	-0.5
WRA	Warramunga Arr	43.67	274	P	P	00 12 59.4	-0.2
	17nm,0.3s,mb5.2,baz=112,slow=7.9,SNR=441						
WRA				LR	LR	00 28 47.2	
	comp=Z,93nm,19.1s,MS3.7,baz=100,slow=33						
FORT	Forrest	45.32	256	eP	P	00 13 12.0	-0.7
	6.6nm,0.5s,mb4.7						
SBA	Scott Base	46.95	184	eP	P	00 13 25.0	+0.1
	2.3nm,0.6s,mb4.3						
VNDA	Vanda	47.00	186	LR	LR	00 31 03.8	
	comp=Z,149nm,18.6s,MS4.0,baz=58,slow=33						
FITZ	Fitzroy Crossi	51.89	271	LR	LR	00 34 37.2	
	comp=Z,82nm,19.4s,MS3.8,baz=72,slow=34						
CASY	Casey	53.99	208	eP	P	00 14 17.8	-0.3
	5.9nm,0.4s,mb4.9						
MBWA	Marble Bar	55.64	265	eP	P	00 14 29.5	-1.2
BATI	Kupang	57.32	278	LR	LR	00 38 06.4	
	comp=Z,127nm,18.5s,MS4.0,baz=215,slow=35						
QSPA	South Pole Qui	58.66	180	P	P	00 14 53.4	+2.2
	4.2nm,0.5s,mb4.7,baz=29,slow=0.5,SNR=42						
MAW	Mawson	71.16	201	P	P	00 16 12.6	0.0
	3.1nm,0.7s,mb4.4,baz=90,slow=6.1,SNR=6.0						
PMSA	Palmer Station	71.50	156	eP	P	00 16 15.3	+0.5
	15nm,0.9s,mb4.9						
MAJO	Matsushiro	78.84	326	P	P	00 16 57.9	+0.6
TATO	Taipei	80.19	307	P	P	00 17 05.0	+0.1
PLCA	Paso Flores	82.14	133	P	P	00 17 16.3	+1.1
	1.8nm,0.8s,mb4.1,baz=216,slow=7.5,SNR=5.3						
LPIG	La Paz	85.50	58	LR	LR	00 46 26.1	
	comp=Z,73nm,21.6s,MS4.0,baz=229,slow=29						
CMB	Columbia Colle	87.86	42	eP	P	00 17 42.9	-0.8
	0.8nm,0.4s,mb4.3						
TRQA	Tornquist	89.03	135	eP	P	00 17 49.4	-0.1
NVAR	Mina Array Bea	89.33	43	P	P	00 17 49.8	-0.8
	1.4nm,0.8s,mb4.3,baz=204,slow=6.6,SNR=7.5						
BOSA	Boshof	116.11	203	PKP	PKPdf	00 23 36.8	-1.0
	5.0nm,1.0s,baz=225,slow=1.4,SNR=5.3						
MKAR	Makanchi Array	118.08	310	PKP	PKPdf	00 23 38.0	-2.8
	0.4nm,0.4s,baz=86,slow=2.1,SNR=2.6						
ARCES	ARCESS Array B	139.51	347	PKP		00 24 12.1	
ARCES				PKP	PKPdf	00 24 21.1	+0.3
ARCES	ARCESS Array B	139.51	347	PKhKP		00 24 12.1	
	1.1nm,0.6s,baz=61,slow=3.0,SNR=6.2						
ARCES				PKP	PKPdf	00 24 21.1	+0.3
	2.2nm,0.6s,baz=0.0,slow=1.1,SNR=7.9						
KAF	Kangasniemi	145.37	340	ep	PKPbc	00 24 27.7	-3.6
	11nm,0.5s						
FINES	FINESS Array B	145.96	339	PKPbc	PKPbc	00 24 30.7	-2.5
	9.6nm,0.5s,baz=55,slow=3.3,SNR=39						
NB2	NORSAR Subarra	149.71	351	PKP	PKPdf	00 24 41.3	+2.7
	comp=Z,1.6nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.71	351	PKPbc	PKPbc	00 24 41.3	-2.0
	comp=Z,4.8nm,0.7s,baz=14,slow=4.1,SNR=8.1						
AKASG	Malin Array Be	151.83	321	PKPbc	PKPbc	00 24 46.5	-2.1
	comp=Z,1.7nm,0.5s,baz=50,slow=2.7,SNR=5.7						
BRTR	Keskin Array B	152.66	297	PKPbc	PKPbc	00 24 49.0	-1.8
	comp=Z,1.2nm,0.7s,baz=145,slow=4.8,SNR=7.2						
BRTR				PKPab	PKPab	00 24 59.6	-2.0
	comp=Z,2.0nm,0.7s,baz=129,slow=4.4,SNR=6.7						
TORD	Torodi Ar. Bea	161.78	181	PKP	PKPdf	00 24 54.9	-1.1
	comp=Z,2.4nm,1.2s,baz=225,slow=1.8,SNR=5.2						
TORD				PKPab	PKPab	00 25 40.7	-0.6
	comp=Z,2.9nm,0.6s,baz=179,slow=2.8,SNR=16						

*ISCJB **16** 00:07:09.8±0.5, 2844S±003×7108W±0.10, h69^{km}±4^{km}, mb4.4/7, Error ellipse: s-maj=14.5km s-min=4.5km az=3.0*
*GUC **16** 00:07:10.8±1.1, 2852S×7075W, h66^{km}±6^{km}, ML4.8*
*NEIC **16** 00:07:10.8, 2852S×7075W, h66^{km}, mb4.5/1, After GUC.*
*IDC **16** 00:07:14.5±3.5, 2852S×7091W, h91^{km}±26^{km}, mb4.0/5, mb1 3.8/8, mb1mx3.6/20, mbtmp3.7/8, MS3.3/1, Ms1 3.3/1, ms1mx2.4/25, Error ellipse: s-maj=37.6km s-min=16.9km az=93.0*
ISC 16 00:07:10.8±0.5, 2844S±003×7110W±010, h60^{km}±5^{km}, n39, σ0.84/47, mb4.5/7, 2C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.33	115	⇑iP	Pn	00 07 20.7	-0.5
VACH				i S	Sn	00 07 27.8	-0.9
VACH	Vallenar	0.33	115	⇑iP	Pn	00 07 20.7	-0.5
VACH				i S	Sn	00 07 27.8	-0.9
VACH				AML	AML	00 07 28.0	
	comp=E,87µm,0.1s						
LCO	Las Campanas	0.67	149	ePn	Pn	00 07 24.3	-0.4
LCO				eSn	Sn	00 07 34.7	-0.2
CPCH	Copiapo	1.26	32	eP	Pn	00 07 32.2	-0.1
CPCH				i S	Sn	00 07 48.2	-0.1
CPCH	Copiapo	1.26	32	eP	Pn	00 07 32.2	-0.1
CPCH				i S	Sn	00 07 48.2	-0.1
CPCH				AML	AML	00 07 49.9	
	comp=E,72µm,0.1s						
CDCH	Caldera	1.38	10	⇓iP	Pn	00 07 32.7	-1.2
CDCH				i S	Sn	00 07 52.3	+1.0
LSCH	La Serena	1.47	185	⇓iP	Pn	00 07 35.1	0.0
LSCH				i S	Sn	00 07 54.1	+0.7
TLL	Tololo Astrono	1.74	172	⇓eP	Pn	00 07 39.8	+1.0
TLL				i S	Sn	00 08 00.8	+0.9
OVCH	Ovalle	2.16	182	eP	Pn	00 07 44.5	0.0
OVCH				i S	Sn	00 08 09.8	-0.4
OVCH	Ovalle	2.16	182	eP	Pn	00 07 44.5	0.0
OVCH				i S	Sn	00 08 09.8	-0.4
OVCH				AML	AML	00 08 31.4	
	comp=E,7µm,0.8s						
CMCH	Combarbala	2.73	178	eP	Pn	00 07 51.7	-0.4
CMCH				i S	Sn	00 08 23.4	-0.5
CMCH	Combarbala	2.73	178	eP	Pn	00 07 51.7	-0.4
CMCH				i S	Sn	00 08 23.4	-0.5
CMCH				AML	AML	00 08 42.7	
	comp=E,2µm,0.1s						
CHNG	Los Chungos	3.45	186	eP	Px	00 07 44.8	
CHNG				i S	Sx	00 08 23.9	
CFAA	Coronel Fontan	4.01	143	P	Pn	00 08 11.4	+1.6
	comp=E,1.8nm,0.3s,baz=321,slow=12,SNR=106						
CFAA				S	Sn	00 08 56.3	+0.8
	comp=E,0.7nm,0.3s,baz=314,slow=6.7,SNR=3.9						
PEL	Peldehue	4.70	176	eP	Pn	00 08 18.9	-0.3
FCH	Farellones	4.92	172	eP	Pn	00 08 22.3	+0.1
CEN1	Los Morros	5.09	9	eP	Pn	00 08 18.6	-6.0
TRQA	Tornquist	12.25	144	Pn	Pn	00 09 53.8	-8.6
LPAZ	La Paz	12.40	13	P	Pn	00 10 08.6	+4.0
	comp=E,0.1nm,0.3s,baz=211,slow=12,SNR=3.2						
SIV	San Ignacio	15.47	39	P	Pn	00 10 48.4	+3.1
	comp=E,0.2nm,0.3s,baz=237,slow=17,SNR=3.6						
ATAH	Atahualpa	22.41	341	LR	LR	00 18 53.8	
	comp=E,85nm,21.6s,baz=2.2,slow=31						
EFI	East Falkland	25.18	161	eP	P	00 12 28.0	-2.4
	comp=E,19nm,1.0s,mb4.6						
USHA	Ushuaia	26.44	177	P	P	00 12 41.6	-0.2
	comp=E,3.6nm,0.6s,mb4.1,baz=254,slow=7.4,SNR=3.8						
OTAV	Otavalo	29.37	345	P	P	00 13 09.8	+1.5
JTS	JuntasAbangare	40.77	339	P	P	00 14 46.1	-0.1
SJG	San Juan	46.52	6	eP	P	00 15 31.3	-1.1
	comp=E,61nm,1.7s,mb5.3						
TEIG	Tepich	51.15	339	P	P	00 16 08.4	+0.6
SNAA	Sanae	56.45	159	P	P	00 16 45.6	-0.3
	comp=E,1.4nm,0.6s,mb4.2,baz=280,slow=7.0,SNR=10						
QSPA	South Pole Qui	61.78	180	P	P	00 17 23.5	+0.9
	comp=E,1.7nm,0.5s,mb4.5,baz=144,slow=6.8,SNR=7.5						
SWET	Sewanee	64.84	347	P	P	00 17 43.0	-0.3
OXF	Oxford	64.96	343	P	P	00 17 44.8	+0.6
WVT	Waverly	66.13	345	P	P	00 17 51.6	-0.1
MIAR	Mount Ida	66.15	340	P	P	00 17 51.3	-0.5
TORD	Torodi Ar. Bea	81.56	70	P	P	00 19 21.8	-0.6
TORD	Torodi Ar. Bea	81.56	70	P	P	00 19 21.8	-0.6
	comp=E,2.3nm,0.6s,mb4.3,baz=239,slow=5.2,SNR=17						
BOSA	Boshof	81.95	118	P	P	00 19 23.8	-0.6
	comp=E,3.0nm,0.6s,mb4.4,baz=272,slow=5.0,SNR=10						
ASAR	Alice Springs	122.87	207	PKP	PKPdf	00 25 59.9	-0.8
	comp=E,0.2nm,0.4s,baz=143,slow=2.3,SNR=3.4						
WRA	Warramunga Arr	125.98	210	PKP	PKPdf	00 26 06.5	-0.2
	comp=E,0.4nm,0.5s,baz=156,slow=1.7,SNR=20						
MKAR	Makanchi Array	152.27	41	PKPbc	PKPbc	00 26 59.4	-0.2
	comp=E,0.8nm,0.4s,baz=319,slow=1.8,SNR=11						
MKAR				PKPab	PKPab	00 27 09.6	0.0
	comp=E,0.2nm,0.3s,baz=315,slow=3.4,SNR=3.4						

*ISCJB **16** 00:10:59.5±0.4, 5144N±002×650E±005, h0^{km}, Error ellipse: s-maj=4.5km s-min=2.7km az=20.1*
*CSEM **16** 00:11:00.7±0.1, 5154N×658E, h1^{km}, ML2.7/9, Error ellipse: s-maj=2.6km s-min=1.6km az=102.0*
*BUG **16** 00:11:00.5, 5142N×662E, h1^{km}, ML1.5*
*LDG **16** 00:11:00.9±0.1, 5153N×655E, h1^{km}, Ml2.7/10, Error ellipse: s-maj=2.3km s-min=1.7km az=20.0, Suspected Mining induced.*
*NEIC **16** 00:11:00.9, 5153N×655E, h1^{km}, ML2.7(LDG), After LDG.*
*BNS **16** 00:11:02.2±1.2, 5146N×655E, h1^{km}, ML2.0*
ISC 16 00:11:00.4±0.4, 5150N±002×650E±004, h0^{km}, n48, σ1.17/93, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRHE	Rheinberg	0.05	70	Pg	Pg	00 11 01.3	0.0
BRHE				Sg	Sg	00 11 02.0	+0.1
WTSB	Winterswijk	0.50	22	ePg	Pg	00 11 11.4	+1.4
	27nm,0.4s						
WTSB				eSg	Sg	00 11 17.6	+1.0
WTSB	Winterswijk	0.50	22	eSg	Sg	00 11 17.6	+1.0

BNS	**Bensberg**	**0.68**	**141**	*e*Pg	**Pg**	**00 11 14.3**	**+0.9**
HOBG	**Hohbusch**	**0.74**	**134**	*e*Pg	**Pg**	**00 11 15.1**	**+0.7**
HGN	**Heimansgroeve**	**0.82**	**206**	*e*Pg	**Pg**	**00 11 18.6**	**+2.5**
	30nm,0.2s,baz=40						
HGN				*e*Sg	**Sg**	**00 11 28.3**	**+1.7**
HGN	**Heimansgroeve**	**0.82**	**206**	*e*Pg	**Pg**	**00 11 18.6**	**+2.6**
	30nm,0.2s						
HGN				*e*Sg	**Sg**	**00 11 28.3**	**+1.7**
DREG	**Dreilaegerbach**	**0.85**	**191**	*e*Pg	**Pg**	**00 11 17.4**	**+0.7**
DREG				*e*Sg	**Sg**	**00 11 30.0**	**+2.2**
	63nm,0.2s						
KLL	**Kalltalsperre**	**0.86**	**188**	*e*Pg	**Pg**	**00 11 17.6**	**+0.7**
KLL				*e*Sg	**Sg**	**00 11 29.7**	**+1.7**
	61nm,0.2s						
BEBN	**Eben Emael**	**0.87**	**217**	P	**Pg**	**00 11 19.8**	**+2.7**
BEBN				S	**Sg**	**00 11 30.8**	**+2.4**
	comp=E,17nm,0.3s						
BEBN	**Eben Emael**	**0.87**	**217**	P	**Pg**	**00 11 19.7**	**+2.6**
BEBN				S	**Sg**	**00 11 30.7**	**+2.3**
	comp=E,17nm,0.3s						
STB	**Steinbach**	**0.93**	**166**	*e*Pg	**Pg**	**00 11 19.6**	**+1.4**
STB				*e*Sg	**Sg**	**00 11 31.1**	**+0.8**
	comp=E,49nm,0.4s						
MEM	**Membach**	**0.94**	**199**	P	**Pg**	**00 11 19.2**	**+0.8**
MEM				S	**Sg**	**00 11 34.0**	**+3.4**
	comp=E,38nm,0.3s						
HILG	**Hillesheim**	**1.21**	**175**	*e*Sg	**Sg**	**00 11 40.7**	**+1.4**
BCLA	**Clavier**	**1.32**	**215**	P	**Pg**	**00 11 25.4**	**-0.2**
BCLA				S	**Sg**	**00 11 44.5**	**+1.8**
	comp=N,9.9nm,0.3s						
BGG	**Burgeitz**	**1.40**	**157**	*e*Pg	**Pg**	**00 11 27.1**	**-0.1**
GIVF	**Givet**	**1.76**	**218**	*e*Pg	**Pg**	**00 11 34.4**	**+0.4**
GIVF				*e*Sn	**Sn**	**00 11 53.1**	**-2.0**
GIVF				*e*Sg	**Sg**	**00 11 57.8**	**+1.0**
	comp=N,24nm,0.3s						
GIVF	**Givet**	**1.76**	**218**	*e*Pn	**Pn**	**00 11 31.5**	**-0.5**
GIVF				*e*Pg	**Pg**	**00 11 34.4**	**+0.4**
GIVF				*e*Sn	**Sn**	**00 11 53.1**	**-2.0**
GIVF				*e*Sg	**Sg**	**00 11 57.8**	**+1.0**
GIVF	**Givet**	**1.76**	**218**	*e*Pg	**Pg**	**00 11 34.4**	**+0.4**
GIVF				*e*Sn	**Sn**	**00 11 53.1**	**-2.0**
GIVF				*e*Sg	**Sg**	**00 11 57.8**	**+1.0**
	comp=N,12nm,0.3s						
TNS	**Taunus Mts**	**1.78**	**135**	*e*Pg	**Pg**	**00 11 33.0**	**-1.5**
	SNR=6.7						
TNS				*e*Sg	**Sg**	**00 11 55.9**	**-1.5**
	SNR=2.1						
WLF	**Walferdange**	**1.85**	**187**	*e*Pg	**Pg**	**00 11 35.3**	**-0.6**
	SNR=3.7						
WLF				*e*Sg	**Sg**	**00 11 58.2**	**-1.5**
	SNR=3.7						
WLF	**Walferdange**	**1.85**	**187**	P	**Pn**	**00 11 34.6**	**+1.3**
WLF				S	**Sn**	**00 11 58.8**	**+1.5**
	comp=N,11nm,0.5s						
WLF	**Walferdange**	**1.85**	**187**	P	**Pn**	**00 11 34.5**	**+1.2**
WLF				S	**Sn**	**00 11 58.8**	**+1.4**
	comp=N,11nm,0.5s						
DOU	**Dourbes**	**1.85**	**221**	P	**Pn**	**00 11 33.6**	**+0.2**
DOU				S	**Sn**	**00 11 57.4**	**0.0**
	comp=E,8.7nm,0.3s						
DOU	**Dourbes**	**1.85**	**221**	P	**Pn**	**00 11 33.5**	**+0.2**
DOU				S	**Sn**	**00 11 57.4**	**0.0**
	comp=E,8.7nm,0.3s						
BAIF	**Baives**	**2.05**	**226**	*e*Pg	**Pg**	**00 11 40.0**	**+0.4**
BAIF				*e*Sn	**Sn**	**00 12 01.2**	**-1.0**
	comp=E,13nm,0.3s						
BAIF	**Baives**	**2.05**	**226**	*e*Pn	**Pn**	**00 11 35.1**	**-0.9**
BAIF				*e*Pg	**Pg**	**00 11 40.0**	**+0.4**
BAIF				*e*Sn	**Sn**	**00 12 01.2**	**-1.0**
BAIF	**Baives**	**2.05**	**226**	*e*Pg	**Pg**	**00 11 40.0**	**+0.4**
BAIF				*e*Sn	**Sn**	**00 12 01.2**	**-1.0**
	comp=E,6.4nm,0.3s						
RFYF	**Reffroy**	**2.95**	**193**	*e*Pg	**Pg**	**00 11 56.3**	**-0.6**
	baz=13						
RFYF				*e*Sg	**Sg**	**00 12 34.5**	**-0.5**
	comp=E,6.4nm,0.2s,baz=13						
RFYF	**Reffroy**	**2.95**	**193**	*e*Pg	**Pg**	**00 11 56.3**	**-0.6**
RFYF				*e*Sg	**Sg**	**00 12 34.5**	**-0.5**
	comp=E,3.2nm,0.2s						
CDF	**Champ du Feu**	**3.13**	**170**	*e*Pg	**Pg**	**00 11 59.5**	**-0.9**
CDF				*e*Sg	**Sg**	**00 12 39.9**	**-1.0**
	comp=E,2.1nm,0.3s						
CDF	**Champ du Feu**	**3.13**	**170**	*e*Pg	**Pg**	**00 11 59.5**	**-0.9**
CDF				*e*Sg	**Sg**	**00 12 39.9**	**-1.0**
	comp=E,1.0nm,0.3s						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Pn	**Pn**	**00 11 49.8**	**-1.3**
	baz=20						
MEZF				*e*Sg	**Sg**	**00 12 40.9**	**-0.4**
	comp=E,7.6nm,0.3s,baz=17						
MEZF	**Maizieres J'vi**	**3.14**	**198**	*e*Pn	**Pn**	**00 11 49.8**	**-1.3**
MEZF				*e*Sg	**Sg**	**00 12 40.9**	**-0.4**
	comp=E,3.8nm,0.3s						
SFTF	**Sexfontaines**	**3.43**	**197**	*e*Pg	**Pg**	**00 12 05.3**	**-0.8**
	baz=18						
SFTF				*e*Sg	**Sg**	**00 12 49.7**	**-0.8**
	comp=E,5.6nm,0.4s						
SFTF	**Sexfontaines**	**3.43**	**197**	*e*Pg	**Pg**	**00 12 05.3**	**-0.8**
SFTF				*e*Sg	**Sg**	**00 12 49.7**	**-0.8**
	comp=E,2.8nm,0.4s						
HAU	**Haudompre**	**3.50**	**182**	*e*Sg	**Sg**	**00 12 51.9**	**-0.8**
	comp=E,4.1nm,0.3s						
HAU	**Haudompre**	**3.50**	**182**	*e*Sg	**Sg**	**00 12 51.9**	**-0.8**
	comp=E,2.0nm,0.3s						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**00 12 09.9**	**-0.8**
	baz=34						
LOR				*e*Sn	**Sn**	**00 13 00.9**	**-3.6**
LOR				*e*Sg	**Sg**	**00 13 26.3**	**-0.9**
	comp=E,4.1nm,0.5s,baz=22						
LOR	**Lormes**	**4.57**	**203**	*e*Pn	**Pn**	**00 12 09.9**	**-0.8**
LOR				*e*Sn	**Sn**	**00 13 00.9**	**-3.6**
LOR				*e*Sg	**Sg**	**00 13 26.3**	**-0.9**
	comp=E,2.0nm,0.5s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**00 12 13.8**	**-0.8**
SSF				*e*Sg	**Sg**	**00 13 35.0**	**-1.2**
	comp=E,3.5nm,0.4s						
SSF	**Saint Saulge**	**4.85**	**205**	*e*Pn	**Pn**	**00 12 13.8**	**-0.8**
SSF				*e*Sg	**Sg**	**00 13 35.0**	**-1.2**
	comp=E,1.8nm,0.4s						
AVF	**Avril sur Loir**	**5.14**	**205**	*e*Pn	**Pn**	**00 12 17.6**	**-1.0**
LDF	**La Druitiere**	**5.16**	**238**	*e*Pn	**Pn**	**00 12 19.0**	**+0.2**
LDF				*e*Sn	**Sn**	**00 13 15.3**	**-3.7**
SMF	**Signal de Mont**	**5.16**	**201**	*e*Pn	**Pn**	**00 12 17.7**	**-1.1**
FLN	**La Foliniere**	**5.26**	**241**	*e*Pn	**Pn**	**00 12 19.2**	**-0.9**
	baz=57						
BGF	**Bois d'Agland**	**5.50**	**207**	*e*Pn	**Pn**	**00 12 21.8**	**-1.6**
BGF				*e*Sn	**Sn**	**00 13 22.3**	**-5.0**
GRR	**Gorron**	**5.68**	**240**	*e*Pn	**Pn**	**00 12 25.0**	**-0.9**
GRR				*e*Sn	**Sn**	**00 13 26.6**	**-5.1**

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*IDC **16** 00:11:24.8±1.3, 6.61N×125.39E, h0km, mb4.5/5, mb1 4.7/6, mb1mx4.1/20, mbtmp4.6/6, ML5.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.8/25, Error ellipse: s-maj=51.7km s-min=22.6km az=69.0*
*ISCJB **16** 00:11:39.1±0.5, 6.79N±0.05×125.7E±0.1, h172km±5km, mb4.2/13, Error ellipse: s-maj=16.9km s-min=7.7km az=171.0*
*NEIC **16** 00:11:40.0±0.8, 6.83N×125.67E, h161km±8km, mb4.5/10, Error ellipse: s-maj=15.3km s-min=6.9km az=76.0*
NEIC Felt [II PIVS] at General Santos.
*MAN **16** 00:11:40, 5.99N×125.64E, h51km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY II - GENERAL SANTOS CITY.
ISC 16 00:11:40.6±0.5**, 6.83N**±0.06×**125.7E**±0.1**, h166**km±5km**, n36, σ1s00**/39**, mb4.2**/13**, 4C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.26**	**340**	*e*Pn	**Pn**	**00 12 02.0**	**-1.0**
DAV				*e*Sn	**Sn**	**00 12 21.1**	**+1.0**
DAV	**Davao City (W)**	**0.26**	**340**⇑	*e*P	**Pn**	**00 12 02.0**	**-1.0**
MATI	**Mati**	**0.60**	**79**	*e*S	**Sn**	**00 12 16.0**	**-6.3**
CTBH	**Cotabato--PC H**	**1.47**	**286**⇑	*i*P	**Pn**	**00 12 10.7**	**-0.4**
BIPH	**Bislig**	**1.51**	**27**⇑	*i*P	**Pn**	**00 12 17.4**	**+5.8**
BIPH				*i* S	**Sn**	**00 12 46.4**	**+11**
SCPH	**Surigao**	**2.94**	**357**⇑	*e*P	**Pn**	**00 12 37.5**	**+10**
TBP	**Tagbilaran**	**3.36**	**328**	*e*P	**Pn**	**00 12 42.3**	**+9.1**
BATI	**Kupang**	**17.04**	**187**	Pn	**Pn**	**00 15 22.1**	**-7.1**
	13nm,0.3s,baz=320,slow=4.1,SNR=6.8						
BATI				Sn	**Sn**	**00 18 28.4**	**-12**
	1.5nm,0.3s,baz=0.0,slow=20,SNR=2.8						
BATI				LR	LR	00 22 47.8	
	comp=Z,90nm,20.1s,baz=219,slow=41						
GUMO	**Guam**	**20.05**	**69**	*e*P	**P**	**00 16 01.3**	**+0.2**
KAKA	**Kakadu**	**20.55**	**161**	*e*P	**P**	**00 16 03.4**	**-3.0**
	17nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.77**	**180**	*e*P	**P**	**00 16 46.2**	**-0.9**
	11nm,0.3s,mb4.9						
FITZ	**Fitzroy Crossi**	**24.77**	**180**	P	**P**	**00 16 46.7**	**-0.5**
	6.1nm,0.3s,mb4.5,baz=12,slow=8.8,SNR=12						
PMG	**Port Moresby**	**26.81**	**127**	*e*P	**P**	**00 17 04.9**	**-0.7**
	10.0nm,0.8s,mb4.5						
PMG	**Port Moresby**	**26.81**	**127**	P	**P**	**00 17 08.1**	**+2.5**
	12nm,0.9s,mb4.5,baz=311,slow=7.6,SNR=3.9						
WRA	**Warramunga Arr**	**27.94**	**162**	P	**P**	**00 17 15.3**	**-0.3**
	2.4nm,0.5s,mb4.2,baz=345,slow=10,SNR=6.3						
WRA				PcP	PcP	00 20 32.3	+5.4
	0.7nm,0.3s,baz=348,slow=1.9,SNR=6.1						
WB2	**Warramunga Arr**	**27.94**	**162**	P	**P**	**00 17 15.4**	**-0.2**
MBWA	**Marble Bar**	**28.42**	**192**	*e*P	**P**	**00 17 18.9**	**-0.9**
	3.1nm,0.7s,mb4.2						
INCN	**Inchon**	**30.53**	**2**	P	**P**	**00 17 38.3**	**+0.1**
ASAR	**Alice Springs**	**31.36**	**165**	P	**P**	**00 17 45.9**	**+0.2**
	1.5nm,0.4s,mb4.1,baz=338,slow=7.1,SNR=9.2						
BJT	**Baijiatuau**	**34.13**	**347**	P	**P**	**00 18 09.5**	**-0.1**
FORT	**Forrest**	**37.46**	**177**	*e*P	**P**	**00 18 38.5**	**+0.4**
	9.7nm,0.7s,mb4.5						
KLBR	**Kellerberrin**	**38.94**	**191**	*e*P	**P**	**00 18 50.5**	**0.0**
	28nm,1.1s,mb4.8						
LSA	**Lhasa**	**39.64**	**309**	*e*P	**P**	**00 18 56.8**	**+0.4**
	1.8nm,0.5s,mb4.0						
BBOO	**Buckleboo**	**40.64**	**167**	*e*P	**P**	**00 19 05.8**	**+1.4**
	5.2nm,0.3s,mb4.6						
STKA	**Stephens Creek**	**41.38**	**159**	P	**P**	**00 19 12.8**	**+2.2**
STKA	**Stephens Creek**	**41.38**	**159**	P	**P**	**00 19 12.8**	**+2.2**
	2.6nm,0.4s,mb4.2,baz=336,slow=8.9,SNR=9.1						
HIA	**Hailar**	**42.59**	**354**	P	**P**	**00 19 19.4**	**-0.7**
ULN	**Ulaanbaatar**	**43.86**	**342**	*e*P	**P**	**00 19 30.4**	**0.0**
PET	**Petropavlovsk**	**53.33**	**24**	*e*P	**P**	**00 20 41.8**	**-0.7**
MKAR	**Makanchi Array**	**54.43**	**325**	P	**P**	**00 20 53.8**	**+3.2**
	0.2nm,0.4s,mb3.2,baz=136,slow=7.6,SNR=5.9						
MA2	**Magadan**	**55.99**	**15**	P	**P**	**00 21 00.8**	**-0.8**
AML	**Almayashu**	**57.73**	**316**	*e*P	**P**	**00 21 15.2**	**+1.1**
	0.9nm,0.4s,mb4.0						
EKS2	**Erkin-Say**	**57.87**	**317**	P	**P**	**00 21 14.1**	**-1.0**
KURK	**Kurchatov**	**58.58**	**327**	P	**P**	**00 21 20.2**	**+0.3**
	0.7nm,0.4s,mb3.8						
BRVK	**Borovoye**	**64.24**	**327**	P	**P**	**00 21 56.4**	**-1.3**
ARU	**Arti**	**71.77**	**327**	P	**P**	**00 22 46.1**	**+1.4**

IDC 16 00:30:27.9±13.0**, 7.00S**×**129.48E, h170**km±148km**, mb3.2**/1**, mb1 2.9**/4**, mb1mx2.8**/13**, mbtmp2.8**/4**, ML3.2**/3**, Error ellipse: s-maj=93.0km s-min=52.4km az=28.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.66**	**198**	P	Pn	00 33 10.6	+1.3
	0.1nm,0.3s,baz=9.5,slow=16,SNR=6.4						
FITZ				S	Sn	00 35 18.3	-0.3
	0.1nm,0.3s,baz=94,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**13.71**	**160**	P	Pn	00 33 33.6	-1.7
	0.1nm,0.3s,baz=340,slow=13,SNR=11						
WRA				S	Sn	00 36 01.8	-5.9
	0.2nm,0.3s,baz=340,slow=23,SNR=6.7						
ASAR	**Alice Springs**	**17.11**	**166**	P	Pn	00 34 16.8	-0.3
	0.1nm,0.3s,baz=340,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**67.94**	**327**	P	P	00 41 08.3	+0.1
	0.3nm,0.4s,baz=123,slow=7.3,SNR=6.0						

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*IDC **16** 00:34:12.3±3.8, 14.99N×94.36W, h0km, mb3.4/2, mb1 3.8/5, mb1mx3.6/21, mbtmp3.5/5, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/20, Error ellipse: s-maj=53.0km s-min=36.7km az=172.0*
*ISCJB **16** 00:34:17.0±2.5, 15.14N±0.06×94.40W±0.04, h23km±23km, mb3.6/3, Error ellipse: s-maj=10.1km s-min=5.9km az=14.5*
*MEX **16** 00:34:17.9±0.6, 15.05N×94.43W, h6km±20km, MD4.3*
*NEIC **16** 00:34:17.9, 15.05N×94.43W, h6km, mb4.3/3, MD4.3(MEX), After MEX.*
ISC 16 00:34:18.1±2.4**, 15.16N**±0.07×**94.39W**±0.04**, h18**km±18km**, n19, σ1s26**/30**, mb3.6**/3**, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.98**	**346**	*i* P	**Pn**	**00 34 49.6**	**-1.1**
CMIG				*i* S	**Sn**	**00 35 15.3**	**+0.2**
CMIG				Sn	**Sn**	**00 35 16.7**	**+1.6**
CMIG	**Matias Romero**	**1.98**	**346**	Pn	**Pn**	**00 34 49.7**	**-1.1**
	16nm,0.3s,baz=160,slow=12,SNR=125						
CMIG				Sn	**Sn**	**00 35 16.7**	**+1.6**
	9.6nm,0.3s,baz=90,slow=20,SNR=3.6						
CMIG	**Matias Romero**	**1.98**	**346**	*i* P	**Pn**	**00 34 49.6**	**-1.1**
CMIG				*i* S	**Sn**	**00 35 15.3**	**+0.2**
SCX	**San Cristobal**	**2.30**	**47**	*i* P	**Pn**	**00 34 55.0**	**-0.2**
SCX				*i* S	**Sn**	**00 35 23.7**	**+0.5**
CCIG	**Comitan**	**2.44**	**63**	*i* P	**Pn**	**00 34 57.0**	**-0.1**
CCIG				*i* S	**Sn**	**00 35 25.9**	**-0.6**
VHO	**Vista Hermosa**	**2.95**	**310**	*e*P	**Pn**	**00 35 03.0**	**-1.1**
VHO				*i* S	**Sn**	**00 35 37.4**	**-1.7**
UTMO	**Huajuapan**	**4.21**	**309**	*e*P	**Pn**	**00 35 21.8**	**+0.2**
UTMO				*i* S	**Sn**	**00 36 12.0**	**+1.6**
PPM	**Popocatepetl**	**5.61**	**314**	*e*P	**Pn**	**00 35 40.9**	**+0.2**
PPM				*i* S	**Sn**	**00 36 43.4**	**-1.4**
TEIG	**Tepich**	**7.70**	**48**	Pn	**Pn**	**00 36 07.8**	**-1.7**
	4.0nm,0.3s,baz=222,slow=0.8,SNR=18						
TEIG				Sn	**Sn**	**00 37 36.4**	**+0.1**
	0.9nm,0.3s,baz=217,slow=20,SNR=2.7						
TEIG				LR	LR	00 39 47.4	
	comp=Z,162nm,18.3s,baz=24,slow=43						
JTS	**JuntasAbangare**	**10.40**	**117**	*e*Pn	**Pn**	**00 36 46.0**	**-0.5**
PAYG	**Puerto Ayora**	**16.25**	**165**	*e*Pn	**Pn**	**00 38 06.2**	**+0.5**
	32nm,0.9s						
LTX	**Lajitas**	**16.50**	**330**	Pn	**Pn**	**00 38 08.8**	**+0.1**
TXAR	**Lajitas Array**	**16.50**	**330**	Pn	**Pn**	**00 38 10.2**	**+1.4**
	0.0nm,0.3s,baz=149,slow=12,SNR=5.2						
TXAR				Sn	**Sn**	**00 41 20.9**	**+9.4**
	0.0nm,0.3s,baz=61,slow=46,SNR=2.8						
NATX	**Nacogdoches**	**16.52**	**359**	*e*Pn	**Pn**	**00 38 11.7**	**+2.6**
	13nm,0.5s						
ANMO	**Albuquerque**	**22.50**	**333**	P	**P**	**00 39 18.9**	**+2.2**
TUC	**Tucson**	**22.68**	**322**	P	**P**	**00 39 21.9**	**+3.2**
	2.7nm,0.5s,mb3.9						
SDV	**Santo Domingo**	**24.05**	**102**	P	**P**	**00 39 33.6**	**+1.1**
NVAR	**Mina Array Bea**	**31.33**	**322**	P	**P**	**00 40 36.0**	**-1.5**
	0.4nm,0.6s,mb3.4,baz=130,slow=8.9,SNR=3.8						
YKA	**Yellowknife Ar**	**49.39**	**348**	P	**P**	**00 43 04.3**	**-2.2**
	0.3nm,0.5s,mb3.6,baz=154,slow=7.0,SNR=6.3						

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*CSEM **16** 01:02:30.9±0.1, 38.46N×39.15E, h10km, MD3.0, Error ellipse: s-maj=2.7km s-min=1.9km az=133.0*
*ISK **16** 01:02:30.8, 38.43N×39.17E, h6km, MD3.1*
*ISCJB **16** 01:02:31.2±0.5, 38.44N±0.03×39.22E±0.03, h5km±5km, Error ellipse: s-maj=4.6km s-min=4.2km az=164.4*
*DDA **16** 01:02:32.0, 38.48N×39.28E, h7km±2km, Md3.0*
ISC 16 01:02:31.8±0.5**, 38.45N**±0.03×**39.20E**±0.03**, h10**km±5km**, n15, σ0s94**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.18**	**286**	*i* P	**Pg**	**01 02 35.5**	**-0.1**
ELZG				*i* S	**Sg**	**01 02 40.3**	**+2.1**
PTK	**Pertek**	**0.47**	**19**	PG	**Pg**	**01 02 40.9**	**0.0**
PTK				SG	**Sg**	**01 02 48.5**	**+1.4**
MYA	**Malataya**	**0.62**	**259**	PG	**Pg**	**01 02 42.7**	**-1.2**
MYA				SG	**Sg**	**01 02 52.0**	**0.0**
MALT	**Malatya**	**0.62**	**258**	PG	**Pg**	**01 02 42.5**	**-1.4**
MALT				SG	**Sg**	**01 02 51.1**	**-1.0**
DIY	**Diyarbakir**	**0.98**	**124**	PG	**Pg**	**01 02 50.8**	**+0.2**
DIY				SG	**Sg**	**01 03 04.0**	**+0.6**
KEMA	**Kemaliye**	**0.99**	**326**	*i* P	**Pg**	**01 02 50.1**	**-0.7**
KEMA				*i* S	**Sg**	**01 03 03.7**	**0.0**
URFA	**Urfa**	**1.05**	**197**	PG	**Pg**	**01 02 50.5**	**-1.5**
URFA				SG	**Sg**	**01 03 06.1**	**+0.4**
BINT	**Bingol**	**1.09**	**67**	PN	**Pn**	**01 02 52.5**	**-0.6**
ATAB	**Bozova**	**1.21**	**216**	*i* P	**Pn**	**01 02 54.6**	**-0.2**
ATAB				*i* S	**Sb**	**01 03 11.2**	**+0.7**
EZC	**Erzincan**	**1.38**	**20**	PN	**Pn**	**01 02 56.3**	**-0.8**
MARD	**Mardin**	**1.69**	**132**	*i* P	**Pn**	**01 03 02.2**	**+1.0**
MARD				*i* S	**Sn**	**01 03 22.4**	**-0.5**
GZT	**Gaziantep**	**1.69**	**230**	*i* P	**Pn**	**01 03 02.4**	**+1.0**
GZT				*i* S	**Sn**	**01 03 25.9**	**+2.8**
BTMT	**Batman**	**1.82**	**97**	*e*PN	**Pn**	**01 03 02.3**	**-0.8**
GAZ	**Gaziantep**	**2.03**	**232**	*e*PN	**Pn**	**01 03 06.2**	**+0.2**
KMRS	**Kahramanmaras**	**2.05**	**243**	*e*PN	**Pn**	**01 03 06.2**	**-0.1**

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*BJI **16** 01:12:32.2, 9.57N×126.32E, h42km, mB5.0, mb4.7, Ms4.3, Msz4.0*
*MAN **16** 01:12:34, 9.83N×126.38E, h9km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY II - GENERAL LUNA, SURIGAO DEL NORTE.
*IDC **16** 01:12:35.9±2.0, 9.75N×126.38E, h44km±16km, mb4.1/18, mb1 4.2/18, mb1mx4.2/21, mbtmp4.1/18, MS3.8/8, Ms1 3.8/8, ms1mx3.5/30, Error ellipse: s-maj=29.7km s-min=9.9km az=72.0*
*ISCJB **16** 01:12:36.1±0.7, 9.84N±0.03×126.43E±0.05, h61km±6km, mb4.5/38, Error ellipse: s-maj=8.5km s-min=4.2km az=173.6*
*NEIC **16** 01:12:41.3±2.0, 9.74N×126.22E, h93km±19km, mb4.6/20, Error ellipse: s-maj=10.4km s-min=5.3km az=78.0*
NEIC Felt [II PIVS] at General Luna and [I PIVS] at Surigao.
ISC 16 01:12:37.7±0.7**, 9.84N**±0.03×**126.41E**±0.05**, h60**km±6km**, n85, σ1s06**/94**, mb4.5**/38**, MS3.7**/7**, 5C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.90**	**267**⇑	*e*P	**Pn**	**01 12 51.0**	**-3.6**
SCPH				*e*S	**Sn**	**01 13 03.9**	**-3.0**
MSLP	**Maasin**	**1.55**	**281**	*e*P	**Pn**	**01 13 01.8**	**-1.4**
MSLP				*e*S	**Sn**	**01 13 22.4**	**+0.1**
BIPH	**Bislig**	**1.64**	**182**⇓	*i*P	**Pn**	**01 13 00.1**	**-4.3**
BIPH				*i* S	**Sn**	**01 13 17.9**	**-6.6**
PLP	**Palo**	**1.93**	**313**	*e*P	**Pn**	**01 13 06.8**	**-1.4**
PLP				*e*S	**Sn**	**01 13 31.8**	**+0.4**
BESP	**Borongan**	**1.99**	**332**	*e*P	**Pn**	**01 13 08.6**	**-0.5**
BESP				*e*S	**Sn**	**01 13 31.9**	**-1.1**
OCLP	**Ormoc**	**2.14**	**304**	*e*P	**Pn**	**01 13 11.8**	**+0.6**
CGP	**Cagayan de Oro**	**2.18**	**231**⇑	*i*P	**Pn**	**01 13 09.8**	**-1.8**
CGP				*i* S	**Sn**	**01 13 38.0**	**+0.5**
BUKP	**Musuan**	**2.35**	**214**	*e*P	**Pn**	**01 13 13.6**	**-0.5**
BUKP				*e*S	**Sn**	**01 13 45.4**	**+3.5**
LLP	**Lapu-Lapu**	**2.45**	**281**⇑	*e*P	**Pn**	**01 13 15.6**	**+0.2**
LLP				*e*S	**Sn**	**01 13 40.6**	**-3.5**
TBP	**Tagbilaran**	**2.51**	**267**	*e*P	**Pn**	**01 13 16.1**	**0.0**
TBP				*e*S	**Sn**	**01 13 46.4**	**+0.7**
DAV	**Davao City (W)**	**2.87**	**197**	*e*P	**Pn**	**01 13 22.0**	**+0.9**
MATI	**Mati**	**2.88**	**183**	*e*P	**Pn**	**01 13 21.6**	**+0.4**
CNP	**Catarman**	**3.16**	**327**	*e*P	**Pn**	**01 13 22.8**	**-2.2**
CNP				*e*S	**Sn**	**01 14 02.2**	**+0.7**
CTBH	**Cotabato--PC H**	**3.36**	**220**⇑	*i*P	**Pn**	**01 13 27.8**	**-0.1**
CTBH				*i* S	**Sn**	**01 14 08.2**	**+1.7**
PAGZ	**Pagadian**	**3.58**	**237**	*e*P	**Pn**	**01 13 31.1**	**+0.3**
PAGZ				*e*S	**Sn**	**01 14 14.8**	**+2.9**
GUIM	**Jordan**	**3.84**	**282**	*e*P	**Pn**	**01 13 34.1**	**-0.2**
GUIM				*e*S	**Sn**	**01 14 18.6**	**+0.4**
RCP	**Roxas**	**3.98**	**296**⇑	*e*P	**Pn**	**01 13 36.9**	**+0.6**
PVCP	**Virac**	**4.34**	**330**	*e*P	**Pn**	**01 13 41.6**	**+0.4**
OTRP	**Odiongan**	**4.98**	**301**	*e*P	**Pn**	**01 13 51.1**	**+1.1**
CUYO	**Cuyo Island**	**5.39**	**281**	*e*P	**Pn**	**01 13 56.5**	**+0.8**
JOW	**Kunigami**	**17.00**	**6**	P	**Pn**	**01 16 34.6**	**+3.1**
	0.7nm,0.3s,baz=167,slow=8.8,SNR=3.5						
JOW				LR	LR	01 21 55.2	
	comp=Z,190nm,18.4s,baz=151,slow=33						
GUMO	**Guam**	**18.46**	**77**	P	**Pn**	**01 16 53.3**	**+3.8**
	114nm,0.9s						
BATI	**Kupang**	**20.10**	**188**	P	**P**	**01 17 08.2**	**+1.6**
	77nm,0.7s,baz=314,slow=0.5,SNR=22						
BATI				S	**S**	**01 20 49.2**	**-0.1**
	9.1nm,0.3s,baz=252,slow=20,SNR=2.8						
BATI				LR	LR	01 25 08.9	
	comp=Z,266nm,20.2s,MS3.6,baz=109,slow=38						
KAKA	**Kakadu**	**23.19**	**165**	*e*P	**P**	**01 17 38.6**	**-1.0**
	20nm,0.6s,mb4.7						
JNU	**Nakatsue**	**23.54**	**9**	LR	LR	01 26 27.9	
	comp=Z,90nm,20.4s,MS3.2,baz=159,slow=35						
ENH	**Enshi**	**25.74**	**325**	P	**P**	**01 18 05.1**	**+2.4**
KSRS	**Korea Array**	**27.53**	**3**	P	**P**	**01 18 19.4**	**+0.6**
	2.0nm,0.6s,mb3.9,baz=192,slow=8.3,SNR=5.4						
FITZ	**Fitzroy Crossi**	**27.77**	**182**	*e*P	**P**	**01 18 21.2**	**+0.1**
	13nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**27.77**	**182**	P	**P**	**01 18 21.3**	**+0.2**
	8.9nm,0.8s,mb4.5,baz=18,slow=9.4,SNR=22						
PSI	**Prapat**	**28.18**	**257**	P	**P**	**01 18 25.3**	**+0.5**
	3.0nm,0.4s,mb4.3,baz=147,slow=11,SNR=5.1						
MJAR	**Matsushiro Arr**	**28.66**	**20**	LR	LR	01 30 03.0	
	comp=Z,254nm,18.2s,MS3.9,baz=210,slow=36						
XAN	**Xi'an**	**28.94**	**329**	P	**P**	**01 18 30.1**	**-1.3**
XAN				AP	pP	01 18 38.3	-7.9
XAN				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.7						
WRA	**Warramunga Arr**	**30.61**	**165**	P	**P**	**01 18 44.4**	**-1.9**
	comp=Z,1.2nm,0.7s,mb3.9,baz=344,slow=9.5,SNR=20						
WRA				S	**S**	**01 23 42.0**	**-2.3**
	comp=Z,0.8nm,1.2s,baz=355,slow=15,SNR=2.8						
WB2	**Warramunga Arr**	**30.61**	**165**	*e*P	**P**	**01 18 44.9**	**-1.4**
BJT	**Baijiatuau**	**31.41**	**345**	*e*P	**P**	**01 18 54.6**	**+1.4**
	comp=Z,6.2nm,0.4s,mb4.8						
BJI	**Beijing**	**31.43**	**345**	P	**P**	**01 18 53.6**	**+0.3**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.6s,mb4.7						
MBWA	**Marble Bar**	**31.49**	**192**	*e*P	**P**	**01 18 53.6**	**-0.4**
	comp=Z,15nm,0.9s,mb4.8						
ASAR	**Alice Springs**	**34.09**	**168**	P	**P**	**01 19 15.6**	**-1.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=354,slow=7.3,SNR=17						
ASAR				S	**S**	**01 24 38.7**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=353,slow=20,SNR=4.0						
ASAR				ScP	ScP	01 25 36.1	+2.9
	comp=Z,0.7nm,0.8s,baz=344,slow=3.1,SNR=4.0						
CTA	**Charters Tower**	**35.58**	**147**	P	**P**	**01 19 29.6**	**0.0**
	comp=Z,4.1nm,0.6s,mb4.5,baz=358,slow=5.2,SNR=4.3						
CTAO	**Charters Tower**	**35.58**	**147**	*e*P	**P**	**01 19 30.1**	**+0.4**
	comp=Z,7.6nm,0.8s,mb4.7						
ASAJ	**Asahikawa**	**36.93**	**20**	LR	LR	01 35 09.9	
	comp=Z,147nm,18.4s,MS3.8,baz=203,slow=37						
GTA	**Gaotai**	**37.81**	**326**	*e*P	**P**	**01 19 48.5**	**+0.1**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.0						
HNR	**Honiara**	**38.48**	**119**	LR	LR	01 32 23.6	
	comp=Z,182nm,20.8s,MS3.9,baz=359,slow=31						
FORT	**Forrest**	**40.41**	**178**	*e*P	**P**	**01 20 10.1**	**-0.1**
	comp=Z,24nm,0.5s,mb5.2						
SONM	**Songino Array**	**41.47**	**340**	P	**P**	**01 20 19.4**	**+0.7**
	comp=Z,1.7nm,0.6s,mb3.8,baz=158,slow=11,SNR=18						
SONM				ScP	ScP	01 26 02.8	+2.2
	comp=Z,0.5nm,1.0s,baz=129,slow=3.9,SNR=2.7						
KLBR	**Kellerberrin**	**42.02**	**191**	*e*P	**P**	**01 20 23.1**	**-0.2**
MUN	**Mundaring**	**42.71**	**193**	*e*P	**P**	**01 20 29.1**	**+0.2**
NWAO	**Narrogin (SRO)**	**43.41**	**191**	*e*P	**P**	**01 20 35.3**	**+0.7**
	comp=Z,12nm,0.8s,mb4.7						
NWAO	**Narrogin (SRO)**	**43.41**	**191**	LR	LR	01 38 59.0	
	comp=Z,121nm,19.4s,MS3.8,baz=295,slow=36						
STKA	**Stephens Creek**	**43.95**	**161**	*e*P	**P**	**01 20 38.5**	**-0.5**
	comp=Z,3.1nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**43.95**	**161**	P	**P**	**01 20 37.8**	**-1.2**
	comp=Z,3.8nm,0.5s,mb4.4,baz=29,slow=6.6,SNR=8.0						
TLY	**Talaya**	**45.68**	**340**	P	**P**	**01 20 53.5**	**+1.0**
MKAR	**Makanchi Array**	**52.45**	**323**	P	**P**	**01 21 43.9**	**-0.5**
	comp=Z,3.9nm,0.8s,mb4.4,baz=121,slow=8.1,SNR=42						
MKAR				ScP	ScP	01 26 49.6	+3.0
	comp=Z,0.8nm,0.9s,baz=150,slow=5.1,SNR=4.9						
MA2	**Magadan**	**52.91**	**15**	*e*P	**P**	**01 21 48.5**	**+1.0**
TKM2	**Tokmak 2**	**55.07**	**316**	*e*P	**P**	**01 22 02.8**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.2						
UCH	**Uchtor**	**55.57**	**315**	*e*P	**P**	**01 22 07.5**	**+0.3**
	comp=Z,4.3nm,0.8s,mb4.5						
UCH				*e*PP	PP	01 24 13.9	+2.1
AAK	**Ala-Archa**	**55.72**	**315**	P	**P**	**01 22 06.4**	**-1.9**
AML	**Almayashu**	**56.11**	**315**	*e*P	**P**	**01 22 11.4**	**+0.3**
	comp=Z,3.8nm,1.0s,mb4.4						
EKS2	**Erkin-Say**	**56.23**	**315**	*e*P	**P**	**01 22 11.6**	**-0.3**
	comp=Z,1.8nm,0.6s,mb4.3						
KURK	**Kurchatov**	**56.50**	**326**	*e*P	**P**	**01 22 11.4**	**-2.2**
	comp=Z,3.5nm,0.6s,mb4.6						
TIXI	**Tiksi**	**61.78**	**1**	*e*P	**P**	**01 22 49.8**	**0.0**
	comp=Z,6.7nm,0.9s,mb4.8						
BRVK	**Borovoye**	**62.17**	**325**	*e*P	**P**	**01 22 52.2**	**-0.5**
	comp=Z,4.1nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**62.22**	**326**	P	**P**	**01 22 52.4**	**-0.7**
	comp=Z,1.6nm,0.9s,mb4.2						
BILL	**Bilibino**	**63.78**	**16**	P	**P**	**01 23 04.3**	**+1.2**
IMA2	**Indian Mountai**	**76.97**	**24**	*e*P	**P**	**01 24 25.2**	**+1.5**
KIV	**Kislovodsk**	**78.74**	**313**	*e*P	**P**	**01 24 32.4**	**-1.6**
	comp=Z,6.4nm,0.9s,mb4.5						
MCK	**McKinley**	**78.88**	**27**	*e*P	**P**	**01 24 35.0**	**+0.7**
	comp=Z,13nm,0.9s,mb4.8						
MCK				*e*PcP	PcP	01 24 42.9	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
COLA	**College**	**79.36**	**26**	*e*P	**P**	**01 24 38.4**	**+1.5**
JOF	**Joensuu**	**83.63**	**333**	*e*p	**P**	**01 24 58.3**	**-1.2**
	comp=Z,2.2nm,0.5s,mb4.5						
INK	**Inuvik**	**84.64**	**22**	*e*P	**P**	**01 25 05.5**	**+0.9**
	comp=Z,209nm,1.1s						
INK				*e*		01 25 45.1	
ARCES	**ARCESS Array B**	**84.64**	**340**	P	**P**	**01 25 04.7**	**+0.1**
	comp=Z,2.6nm,0.7s,mb4.5,baz=75,slow=5.0,SNR=17						
BRTR	**Keskin Array B**	**85.91**	**309**	P	**P**	**01 25 12.1**	**+0.6**
	comp=Z,1.8nm,0.9s,mb4.3,baz=95,slow=5.3,SNR=6.5						
KAF	**Kangasniemi**	**86.07**	**332**	*e*p	**P**	**01 25 11.0**	**-0.8**
	comp=Z,6.6nm,0.8s,mb4.9,baz=74,slow=4.5						
FINES	**FINESS Array B**	**86.33**	**332**	P	**P**	**01 25 12.8**	**-0.3**
FINES	**FINESS Array B**	**86.33**	**332**	P	**P**	**01 25 12.8**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.6,baz=84,slow=4.4,SNR=30						
AKASG	**Malin Array Be**	**86.98**	**321**	P	**P**	**01 25 15.4**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.3,baz=62,slow=4.4,SNR=4.1						
KMBO	**Kilima Mbogo**	**89.36**	**269**	P	**P**	**01 25 29.1**	**+0.5**
	comp=Z,0.7nm,0.4s,mb4.4,baz=0.0,slow=11,SNR=4.0						
KMBO				LR	LR	02 08 47.3	
	comp=Z,52nm,18.8s,MS4.0,baz=88,slow=38						
VNDA	**Vanda**	**89.48**	**173**	P	**P**	**01 25 28.4**	**+0.7**
	comp=Z,0.9nm,0.7s,mb4.2,baz=322,slow=3.3,SNR=2.6						
RES	**Resolute Bay**	**91.90**	**10**	*e*P	**P**	**01 25 40.0**	**+0.9**
	comp=Z,115nm,0.8s						
NOA	**NORSAR Array B**	**93.20**	**334**	P	**P**	**01 25 44.7**	**-0.7**
	comp=Z,0.4nm,0.6s,mb4.1,baz=46,slow=5.5,SNR=2.7						
YKA	**Yellowknife Ar**	**94.10**	**24**	P	**P**	**01 25 50.5**	**+1.0**
YKA	**Yellowknife Ar**	**94.10**	**24**	P	**P**	**01 25 50.5**	**+1.0**
	comp=Z,2.8nm,0.7s,mb4.8,baz=302,slow=4.6,SNR=58						
GERES	**GERESS Array B**	**97.11**	**322**	P	**P**	**01 26 02.9**	**-0.7**
	comp=Z,0.7nm,0.8s,mb4.1,baz=40,slow=2.3,SNR=5.0						
TXAR	**Lajitas Array**	**118.01**	**49**	PKP	PKPdf	01 31 18.9	+0.4
	comp=Z,0.2nm,0.6s,baz=339,slow=4.3,SNR=3.3						
PLCA	**Paso Flores**	**145.76**	**157**	PKPbc	PKPbc	01 32 11.0	+0.6
	comp=Z,3.4nm,0.8s,baz=213,slow=3.8,SNR=8.8						

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*ISCJB **16** 01:19:15.8±0.6, 988N±004×12657E±005, h5km, mb3.7/7, Error ellipse: s-maj=7.1km s-min=5.2km az=156.0*
*IDC **16** 01:19:15.8±0.9, 986N×12636E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.8/18, mbtmp3.7/8, MS4.3/1, Ms1 4.3/1, ms1mx3.1/27, Error ellipse: s-maj=78.2km s-min=17.9km az=75.0*
*MAN **16** 01:19:20, 987N×12633E, h5km, mb4.6, ML3.5, MS3.5*
ISC 16 01:19:16.8±1.6**, 987N**±004×**12653E**±005**, h3**km±9km**, n17,** σ**1**^{s}**14**/24**, mb3.7**/7**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.03**	**265**⇓	*e*P	**Pg**	**01 19 36.1**	**-0.5**
SCPH				*e*S	**Sg**	**01 19 48.9**	**-1.2**
MSLP	**Maasin**	**1.67**	**279**	*e*P	**Pn**	**01 19 47.4**	**+0.4**
MSLP				*e*S	**Sn**	**01 20 07.0**	**-2.0**
BIPH	**Bislig**	**1.68**	**186**⇑	*e*P	**Pn**	**01 19 45.9**	**-1.3**
BIPH				*i* S	**Sn**	**01 20 09.1**	**-0.1**
PLP	**Palo**	**2.00**	**310**	*e*P	**Pn**	**01 19 53.0**	**+1.4**
PLP				*e*S	**Sn**	**01 20 18.8**	**+1.6**
BUKP	**Musuan**	**2.45**	**216**	*e*P	**Pn**	**01 19 59.2**	**+1.4**
BUKP				*e*S	**Sn**	**01 20 29.6**	**+1.3**
TBP	**Tagbilaran**	**2.64**	**266**	*e*P	**Pn**	**01 20 01.4**	**+1.0**
TBP				*e*S	**Sn**	**01 20 31.5**	**-1.4**
CNP	**Catarman**	**3.21**	**325**	*e*P	**Pn**	**01 20 08.9**	**+0.8**
CNP				*e*S	**Sn**	**01 20 46.6**	**-0.2**
PAGZ	**Pagadian**	**3.70**	**237**	*e*P	**Pn**	**01 20 16.6**	**+1.6**
GUIM	**Jordan**	**3.96**	**281**	*e*P	**Pn**	**01 20 20.1**	**+1.6**
FITZ	**Fitzroy Crossi**	**27.80**	**182**	P	**P**	**01 25 07.5**	**+0.1**
	1.6nm,0.9s,mb3.7,baz=349,slow=22,SNR=6.5						
WRA	**Warramunga Arr**	**30.60**	**165**	P	**P**	**01 25 30.9**	**-1.4**
	0.3nm,0.6s,baz=346,slow=9.5,SNR=3.0						
ASAR	**Alice Springs**	**34.10**	**168**	P	**P**	**01 26 03.1**	**+0.3**
	0.3nm,0.3s,mb3.6,baz=349,slow=7.0,SNR=5.8						
SONM	**Songino Array**	**41.49**	**340**	P	**P**	**01 27 04.6**	**-0.4**
	0.2nm,0.4s,mb3.1,baz=148,slow=6.8,SNR=5.5						
MKAR	**Makanchi Array**	**52.50**	**323**	P	**P**	**01 28 29.1**	**-2.1**
	0.5nm,0.7s,mb3.6,baz=130,slow=7.3,SNR=6.9						
ARCES	**ARCESS Array B**	**84.66**	**340**	P	**P**	**01 31 50.7**	**-1.0**
	1.0nm,0.6s,mb4.1,baz=82,slow=6.5,SNR=6.2						
FINES	**FINESS Array B**	**86.37**	**332**	P	**P**	**01 32 00.1**	**-0.2**
	0.6nm,0.3s,mb4.2,baz=69,slow=5.9,SNR=6.4						
YKA	**Yellowknife Ar**	**94.02**	**24**	P	**P**	**01 32 36.0**	**-0.1**
	0.1nm,0.3s,mb3.7,baz=306,slow=4.6,SNR=6.3						

MEX 16 01:23:50.5±1.0**, 1635N**×**9446W, h82**km±18km**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.84**	**331**	*i* P	Pn	01 24 06.6	-1.2
CMIG				*i* S	Sn	01 24 19.0	-1.8
HUIG	**Huatulco**	**1.69**	**250**	*i* P	Pn	01 24 16.5	-1.8
HUIG				*i* S	Sn	01 24 38.3	-1.1
CCIG	**Comitan**	**2.23**	**91**	*i* P	Pn	01 24 25.2	-0.3
CCIG				*i* S	Sn	01 24 50.9	-1.4
OXX	**Oaxaca**	**2.29**	**289**	*i* P	Pn	01 24 26.5	+0.2
OXX				*e*S	Sn	01 24 48.5	-5.2
VHO	**Vista Hermosa**	**2.29**	**289**	*i* P	Pn	01 24 25.9	-0.5
VHO				*i* S	Sn	01 24 51.9	-1.9

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*IDC **16** 01:31:04.8±0.9, 996N×12656E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, MS3.2/1, Ms1 3.2/1, ms1mx2.8/25, Error ellipse: s-maj=60.5km s-min=17.2km az=83.0*
*ISCJB **16** 01:31:05.5±1.3, 991N±004×12662E±004, h11km±8km, mb4.0/9, Error ellipse: s-maj=7.8km s-min=6.1km az=145.1*
*MAN **16** 01:31:08, 986N×12635E, h1km, mb4.5, ML3.4, MS3.3*
ISC 16 01:31:05.9±1.2**, 987N**±004×**12659E**±005**, h2**km±7km**, n19,** σ**1**^{s}**33**/26**, mb4.0**/9**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.09**	**266**⇑	*e*P	**Pg**	**01 31 26.0**	**-0.7**
SCPH				*e*S	**Sg**	**01 31 39.1**	**-1.8**
BIPH	**Bislig**	**1.69**	**188**⇑	*i*P	**Pn**	**01 31 36.0**	**-0.3**
BIPH				*i* S	**Sn**	**01 31 58.0**	**-0.5**
MSLP	**Maasin**	**1.73**	**279**	*e*P	**Pn**	**01 31 38.6**	**+1.8**
MSLP				*e*S	**Sn**	**01 31 58.5**	**-1.0**
BESP	**Borongan**	**2.06**	**327**	*e*P	**Pg**	**01 31 44.6**	**-0.9**
BESP				*e*S	**Sg**	**01 32 13.8**	**+1.6**
BUKP	**Musuan**	**2.49**	**218**	*e*P	**Pn**	**01 31 49.2**	**+1.8**
BUKP				*e*S	**Sn**	**01 32 21.8**	**+3.5**
TBP	**Tagbilaran**	**2.70**	**266**	*e*S	**Sn**	**01 32 20.8**	**-2.6**
CNP	**Catarman**	**3.24**	**324**	*e*P	**Pn**	**01 31 58.6**	**+0.9**
CNP				*e*S	**Sn**	**01 32 37.2**	**+0.4**
PAGZ	**Pagadian**	**3.75**	**238**	*e*P	**Pn**	**01 32 06.7**	**+1.9**
PAGZ				*e*S	**Sn**	**01 32 49.6**	**+0.1**
GUIM	**Jordan**	**4.01**	**281**	*e*P	**Pn**	**01 32 09.9**	**+1.6**
GUIM				*e*S	**Sn**	**01 32 56.6**	**+0.7**
JOW	**Kunigami**	**16.95**	**5**	LR	LR	01 41 28.2	
	comp=Z,71nm,18.6s,baz=135,slow=37						
JNU	**Nakatsue**	**23.48**	**9**	P	**P**	**01 36 14.1**	**-2.9**
	4.3nm,0.4s,mb4.2,baz=184,slow=8.2,SNR=5.8						
FITZ	**Fitzroy Crossi**	**27.81**	**182**	P	**P**	**01 36 58.2**	**+1.7**
	1.6nm,0.6s,mb3.8,baz=9.5,slow=8.9,SNR=7.5						
WRA	**Warramunga Arr**	**30.59**	**166**	P	**P**	**01 37 21.4**	**+0.1**
	0.5nm,0.9s,mb3.3,baz=344,slow=9.4,SNR=6.0						
ASAR	**Alice Springs**	**34.09**	**168**	P	**P**	**01 37 51.4**	**-0.5**
	0.3nm,0.3s,mb3.6,baz=350,slow=7.0,SNR=6.1						
NWAO	**Narrogin (SRO)**	**43.48**	**191**	P	**P**	**01 39 09.1**	**-1.5**
	3.3nm,0.4s,mb4.4,baz=6.3,slow=9.2,SNR=4.0						
MKAR	**Makanchi Array**	**52.54**	**323**	P	**P**	**01 40 18.8**	**-1.8**
	0.7nm,0.8s,mb3.7,baz=109,slow=7.3,SNR=4.1						
ARCES	**ARCESS Array B**	**84.68**	**340**	P	**P**	**01 43 41.3**	**+0.4**
	2.5nm,0.9s,mb4.4,baz=78,slow=5.4,SNR=6.5						
FINES	**FINESS Array B**	**86.39**	**332**	P	**P**	**01 43 48.1**	**-1.4**
	1.9nm,1.0s,mb4.3,baz=64,slow=4.4,SNR=3.8						
YKA	**Yellowknife Ar**	**93.99**	**24**	P	**P**	**01 44 25.1**	**-0.1**
	0.3nm,0.8s,mb3.8,baz=298,slow=4.8,SNR=4.1						

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*ISCJB **16** 01:31:08.1±2.3, 4735N±006×1554E±0.1, h2km±14km, mb4.0/26, MS3.4/2, Error ellipse: s-maj=12.9km s-min=7.3km az=32.6*
*IDC **16** 01:31:09.3±0.8, 4724N×15533E, h0km, mb3.9/13, mb1 4.1/15, mb1mx4.0/23, mbtmp3.9/15, ML3.5/2, MS3.4/2, Ms1 3.4/2, ms1mx3.0/26, Error ellipse: s-maj=23.3km s-min=17.9km az=147.0*
*MOS **16** 01:31:13.1±1.1, 4735N×15523E, h38km, mb4.4/15, Error ellipse: s-maj=13.5km s-min=7.8km az=90.0*
*NEIC **16** 01:31:14.1±3.0, 4731N×15541E, h30km±21km, mb4.4/10, Error ellipse: s-maj=9.8km s-min=6.3km az=133.0*
ISC 16 01:31:11.5±2.5**, 4735N**±006×**1554E**±01**, h11**km±15km**, n67,** σ**0**^{s}**97**/69**, mb4.0**/26**, MS3.4**/2**, 2C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.37**	**8**	*e*PN	**Pn**	**01 32 03.0**	**-1.0**
SKR				*e*S	**Sn**	**01 32 42.2**	**-1.7**
SKR				pmax	pmax		
	comp=N,50nm,0.4s						
SKR				pmax	pmax		
	comp=Z,70nm,0.4s						
SKR				smax			
	comp=E,70nm,0.4s						
SKR				smax			
	comp=N,170nm,0.5s						
SKR				smax			
	comp=Z,60nm,0.5s						
PET	**Petropavlovsk**	**6.05**	**19**	Pn	**Pn**	**01 32 40.6**	**-0.2**
YSS	**Yuzh-Sakhalins**	**8.63**	**272**	*e*PN	**Pn**	**01 33 23.0**	**+6.7**
ASAJ	**Asahikawa**	**9.52**	**255**	Pn	**Pn**	**01 33 28.1**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=96,slow=17,SNR=3.1						
ERM	**Erimo**	**10.22**	**243**	*e*PN	**Pn**	**01 33 36.9**	**-1.2**
MA2	**Magadan**	**12.55**	**349**	*e*PN	**Pn**	**01 34 10.1**	**+0.3**
MA2				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MJAR	**Matsushiro Arr**	**16.70**	**236**	Pn	**Pn**	**01 35 05.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=75,slow=12,SNR=3.0						
BILL	**Bilibino**	**21.47**	**11**	*e*P	**P**	**01 36 01.2**	**+1.5**
	comp=Z,5.7nm,0.9s,mb3.9						
BILL	**Bilibino**	**21.47**	**11**	*e*P	**P**	**01 36 01.2**	**+1.5**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9						
KSRS	**Korea Array**	**22.47**	**254**	P	**P**	**01 36 12.4**	**+1.8**
	comp=Z,3.0nm,0.8s,mb3.8,baz=49,slow=9.1,SNR=6.3						
KSRS				LR	LR	01 45 32.1	
	comp=Z,32nm,19.9s,MS2.8,baz=330,slow=38						
INCN	**Inchon**	**23.30**	**255**	*e*P	**P**	**01 36 20.7**	**+1.3**
HIA	**Hailar**	**23.67**	**288**	*e*P	**P**	**01 36 24.1**	**+1.2**
BOD	**Bodaibo**	**26.83**	**308**	*e*P	**P**	**01 36 50.4**	**-1.2**
TIXI	**Tiksi**	**27.36**	**342**	*e*P	**P**	**01 36 58.1**	**+1.9**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
SONM	**Songino Array**	**32.61**	**289**	P	**P**	**01 37 42.2**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**32.61**	**289**	P	**P**	**01 37 42.2**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.8,baz=65,slow=8.2,SNR=13						
TATO	**Taipei**	**34.92**	**242**	P	**P**	**01 38 04.0**	**+0.8**
ENH	**Enshi**	**39.01**	**261**	*e*P	**P**	**01 38 38.4**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.4						
INK	**Inuvik**	**40.30**	**33**	*e*P	**P**	**01 38 48.4**	**+0.2**
	comp=Z,64nm,0.8s,mb5.4						
INK	**Inuvik**	**40.30**	**33**	*e*P	**P**	**01 38 48.4**	**+0.2**
INK				pmax	pmax		
	comp=Z,64nm,0.8s						
INK	**Inuvik**	**40.30**	**33**	P	**P**	**01 38 49.5**	**+1.3**
	comp=Z,2.0nm,0.8s,mb3.9,baz=277,slow=3.4,SNR=7.8						
NVS	**Novosibirsk**	**44.07**	**308**	*e*P	**P**	**01 39 16.0**	**-3.1**
MK31	**Makanchi Array**	**48.05**	**298**	*e*P	**P**	**01 39 50.3**	**-0.3**
MKAR	**Makanchi Array**	**48.05**	**298**	*i* P	**P**	**01 39 50.5**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**48.05**	**298**	P	**P**	**01 39 50.6**	**0.0**
	comp=Z,1.7nm,0.7s,mb4.2,baz=68,slow=7.3,SNR=22						
KURK	**Kurchatov**	**48.33**	**304**	*e*P	**P**	**01 39 52.5**	**-0.2**
	comp=Z,6.6nm,1.1s,mb4.6						
KURK	**Kurchatov**	**48.33**	**304**⇑	*e*P	**P**	**01 39 53.2**	**+0.5**
YKA	**Yellowknife Ar**	**49.50**	**38**	P	**P**	**01 40 02.0**	**+0.5**
	comp=Z,1.9nm,0.8s,mb4.2,baz=297,slow=7.3,SNR=4.9						
RES	**Resolute Bay**	**49.76**	**19**	P	**P**	**01 40 04.5**	**+1.2**
CHKZ	**Chkalovo**	**51.24**	**311**	*e*P	**P**	**01 40 14.2**	**-0.5**
	comp=Z,6.4nm,0.6s,mb4.7						
CHKZ	**Chkalovo**	**51.24**	**311**	*e*P	**P**	**01 40 14.3**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
BRVK	**Borovoye**	**51.72**	**310**	*e*P	**P**	**01 40 18.4**	**0.0**
	comp=Z,4.2nm,0.6s,mb4.5						
BRVK	**Borovoye**	**51.72**	**310**	*e*P	**P**	**01 40 18.4**	**0.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
LSA	**Lhasa**	**51.80**	**274**	P	**P**	**01 40 19.7**	**+0.4**
AAK	**Ala-Archa**	**54.97**	**297**	*e*P	**P**	**01 40 43.3**	**+0.9**
	comp=Z,1.6nm,0.6s,mb4.2						
AAK	**Ala-Archa**	**54.97**	**297**	*e*P	**P**	**01 40 43.3**	**+0.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
UCH	**Uchtor**	**55.19**	**297**	P	**P**	**01 40 45.7**	**+1.7**
EKS2	**Erkin-Say**	**55.38**	**298**	*e*P	**P**	**01 40 43.9**	**-1.5**
	comp=Z,1.4nm,0.7s,mb4.1						
ARU	**Arti**	**55.62**	**318**	*e*P	**P**	**01 40 46.8**	**-0.1**
	comp=Z,5.7nm,0.9s,mb4.6						
ARU	**Arti**	**55.62**	**318***c*	*i*P	**P**	**01 40 47.1**	**+0.2**
ARU						01 42 48.7	
ARU				*e*S	**S**	**01 48 33.2**	**+0.8**
ARU				SS	SS	01 52 12.8	-3.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
AML	**Almayashu**	**55.74**	**297**	P	**P**	**01 40 48.7**	**+0.7**
PMG	**Port Moresby**	**56.98**	**190**	P	**P**	**01 40 57.3**	**+0.3**
ARCES	**ARCESS Array B**	**57.79**	**341**	P	**P**	**01 41 02.8**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ARCES	**ARCESS Array B**	**57.79**	**341**	P	**P**	**01 41 02.8**	**+0.6**
	comp=Z,6.2nm,1.1s,mb4.6,baz=32,slow=11,SNR=3.6						
FCC	**Fort Churchill**	**59.89**	**34**	*e*P	**P**	**01 41 17.3**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.3						
FCC	**Fort Churchill**	**59.89**	**34**	*e*P	**P**	**01 41 17.3**	**+0.4**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
JOF	**Joensuu**	**61.48**	**334**	*e*p	**P**	**01 41 26.5**	**-1.1**
	comp=Z,3.6nm,0.6s,mb4.7						
JOF	**Joensuu**	**61.48**	**334**	*e*P	**P**	**01 41 26.5**	**-1.1**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
PDAR	**Pinedale Array**	**63.12**	**55**	P	**P**	**01 41 39.5**	**+0.6**
	comp=Z,0.5nm,0.8s,mb3.7,baz=318,slow=2.0,SNR=4.4						
FINES	**FINESS Array B**	**64.15**	**336**	*i* P	**P**	**01 41 45.5**	**0.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**64.15**	**336**	P	**P**	**01 41 45.6**	**+0.2**
	comp=Z,2.3nm,0.8s,mb4.3,baz=44,slow=8.3,SNR=16						
OBN	**Obninsk**	**65.69**	**326**	*e*P	**P**	**01 41 55.4**	**-0.1**
NB2	**NORSAR Subarra**	**68.15**	**342**	P	**P**	**01 42 11.1**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.2,baz=27,slow=6.5						
NB2	**NORSAR Subarra**	**68.15**	**342**	P	**P**	**01 42 11.1**	**0.0**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
NOA	**NORSAR Array B**	**68.15**	**342**	P	**P**	**01 42 11.4**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**68.15**	**342**	P	**P**	**01 42 11.4**	**+0.3**
	comp=Z,1.2nm,0.7s,mb4.1,baz=25,slow=6.6,SNR=5.3						
WRA	**Warramunga Arr**	**69.61**	**201**	P	**P**	**01 42 18.9**	**-1.8**
	comp=Z,0.4nm,0.9s,mb3.3,baz=18,slow=7.0,SNR=4.9						
KIV	**Kislovodsk**	**71.49**	**315**	P	**P**	**01 42 31.8**	**-0.2**
KIV	**Kislovodsk**	**71.49**	**315**	P	**P**	**01 42 31.8**	**-0.2**
AKASG	**Malin Array Be**	**71.90**	**327**	P	**P**	**01 42 33.6**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**71.90**	**327**	P	**P**	**01 42 33.6**	**-0.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=35,slow=6.1,SNR=2.8						
ASAR	**Alice Springs**	**73.30**	**201**	P	**P**	**01 42 42.2**	**-0.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=11,slow=5.4,SNR=4.0						
TXAR	**Lajitas Array**	**75.83**	**62**	P	**P**	**01 42 57.8**	**+0.1**
TXAR				LR	LR	02 14 51.6	
TXAR	**Lajitas Array**	**75.83**	**62**	P	**P**	**01 42 57.8**	**+0.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=300,slow=4.1,SNR=8.6						
TXAR				LR	LR	02 14 51.7	
	comp=Z,68nm,19.9s,MS4.0,baz=35,slow=34						
ARMA	**Armidale**	**77.48**	**183**	P	**P**	**01 43 05.2**	**-1.5**
	comp=Z,0.2nm,0.6s,mb3.2						
BRTR	**Keskin Array B**	**79.01**	**318**	P	**P**	**01 43 14.1**	**-1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BRTR	**Keskin Array B**	**79.01**	**318**	P	**P**	**01 43 14.1**	**-1.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=69,slow=4.8,SNR=2.9						

CASC 16 02:11:21.9±1.1**, 821N**×**8270W, h42**km±10km**, MD3.8, 1C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	**David**	**0.33**	**47**	*e*P	Pn	02 11 29.9	-0.8
BAR1		**1.20**	**329**⇓	*e*P	Pn	02 11 41.7	-0.5
CNI	**Changuinola**	**1.22**	**8**	*e*P	Pn	02 11 42.4	-0.1
QCR	**Quepos**	**1.89**	**310**	*e*P	Pn	02 11 51.7	0.0
URSC	**Urasca**	**1.94**	**327**⇑	*e*P	Pn	02 11 53.1	+0.7
URSC				*e*S	Sn	02 12 17.5	+2.0
LCR2	**La Lucha 2**	**2.00**	**320**	*e*P	Pn	02 11 53.5	+0.3
LCR2				*e*S	Sn	02 12 18.5	+1.5
LAJ	**Bijagual**	**2.17**	**320**	*e*P	Pn	02 11 57.9	+2.4
PRS1	**Puriscal**	**2.38**	**318**	*e*P	Pn	02 11 58.5	+0.1
AZU	**Azuero**	**2.43**	**100**	*e*P	Pn	02 11 59.8	+0.6
CGA2	**Cerro Gallo 2**	**2.51**	**316**	*e*P	Pn	02 12 01.0	+0.8
JCR	**Jicaral**	**2.89**	**305**	*e*P	Pn	02 12 05.3	-0.2
PTP	**Ponta Puerca**	**19.37**	**57**	*e*P		02 11 29.5	

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*NEIC **16** 02:15:56.4±0.8, 240N×12726E, h10km, mb4.5/3, Error ellipse: s-maj=53.1km s-min=9.6km az=71.0*
*IDC **16** 02:16:02.3±7.4, 233N×127.16E, h54km±67km, mb3.9/8, mb1 4.1/8, mb1mx3.9/16, mbtmp4.0/8, MS3.8/2, Ms1 3.8/2, ms1mx3.0/24, Error ellipse: s-maj=88.2km s-min=17.7km az=67.0*
*ISCJB **16** 02:16:11.0±5.5, 2.1N±02×1269E±05, h153km±56km, mb4.1/8, Error ellipse: s-maj=80.0km s-min=20.4km az=162.4*
ISC 16 02:16:12.4±5.2**, 22N**±02×**1271E**±04**, h151**km±52km**, n16,** σ**0**^{s}**64**/14**, mb4.1**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**15.70**	**160**	*e*P	**Pn**	**02 19 46.3**	**+0.8**
	22nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.17**	**184**	*e*P	**P**	**02 20 35.2**	**0.0**
	4.2nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.17**	**184**	P	**P**	**02 20 34.6**	**-0.6**
	1.5nm,0.4s,baz=31,slow=10,SNR=12						
WRA	**Warramunga Arr**	**23.09**	**162**	P	**P**	**02 21 04.6**	**-0.3**
	12nm,0.5s,mb4.6,baz=334,slow=11,SNR=156						
WB2	**Warramunga Arr**	**23.09**	**162**	*e*P	**P**	**02 21 04.5**	**-0.5**
JOW	**Kunigami**	**24.57**	**3**	LR	LR	02 31 21.6	
	comp=Z,90nm,19.3s,baz=296,slow=38						
ASAR	**Alice Springs**	**26.51**	**166**	P	**P**	**02 21 36.1**	**+0.2**
	0.9nm,0.3s,mb3.9,baz=353,slow=7.7,SNR=27						
ASAR				PcP	PcP	02 24 58.7	+1.7
	0.7nm,0.4s,baz=352,slow=2.2,SNR=8.3						
FORT	**Forrest**	**32.76**	**178**	*e*P	**P**	**02 22 30.4**	**-0.6**
	11nm,0.6s,mb4.8						
STKA	**Stephens Creek**	**36.55**	**159**	*e*P	**P**	**02 23 03.8**	**+0.2**
	13nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**36.55**	**159**	P	**P**	**02 23 04.1**	**+0.5**
	14nm,0.7s,mb4.7,baz=330,slow=8.3,SNR=37						
STKA				PcP	PcP	02 25 25.6	+1.7
	2.0nm,0.6s,baz=321,slow=6.5,SNR=3.6						
SONM	**Songino Array**	**48.89**	**342**	P	**P**	**02 24 41.9**	**-0.8**
	1.0nm,0.7s,mb3.6,baz=160,slow=7.8,SNR=9.2						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**02 25 56.0**	**-0.4**
	1.1nm,0.4s,mb4.0,baz=118,slow=8.4,SNR=20						
AKTK	**Aktyubinsk**	**75.09**	**322**	P	**P**	**02 27 37.7**	**+0.1**
AKTO	**Aktyubinsk**	**75.09**	**322**	P	**P**	**02 27 37.7**	**+0.1**
	1.0nm,0.5s,mb3.7,baz=110,slow=8.7,SNR=6.8						
KDAK	**Kodiak Island**	**83.04**	**32**	LR	LR	03 01 18.3	
	comp=Z,142nm,20.5s,baz=355,slow=33						
BRTR	**Keskin Array B**	**91.27**	**310**	P	**P**	**02 29 02.6**	**+1.6**
	0.5nm,0.6s,mb3.7,baz=95,slow=8.8,SNR=3.1						

MEX 16 02:20:18.1±0.9**, 1609N**×**9725W, h10**km±12km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.89**	**290**	*i* P	Pg	02 20 32.8	-2.5
PNIG				*i* S	Sg	02 20 44.5	-2.4
VHO	**Vista Hermosa**	**1.09**	**27**	*i* P	Pg	02 20 35.6	-3.6
VHO				*i* S	Sg	02 20 49.0	-4.3
OXX	**Oaxaca**	**1.11**	**27**	*i* P	Pb	02 20 36.5	-2.9
OXX				*i* S	Sg	02 20 50.5	-3.3
HUIG	**Huatulco**	**1.15**	**106**	*i* P	Pb	02 20 36.9	-3.2
HUIG				*i* S	Sb	02 20 51.4	-3.7
TPIG	**Tehuac#an**	**2.31**	**357**	*i* S	Sn	02 21 20.2	-4.7
CMIG	**Matias Romero**	**2.48**	**66**	*i* P	Pn	02 20 55.2	-3.4
CMIG				*i* S	Sn	02 21 24.3	-4.6

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*ATH **16** 02:20:19.9, 4028N×2396E, h22km±4km, MD3.0/5*
*ISCJB **16** 02:20:20.1±0.5, 4030N±003×2393E±004, h11km±3km, Error ellipse: s-maj=5.0km s-min=4.5km az=29.5*
*CSEM **16** 02:20:20.4±0.1, 4028N×2397E, h12km, ML2.5, Error ellipse: s-maj=3.0km s-min=2.0km az=93.0*
*THE **16** 02:20:21.1, 4027N×2390E, h1km, ML2.5*
*NEIC **16** 02:20:21.1, 4027N×2390E, h2km, ML2.5(THE), After THE.*
ISC 16 02:20:20.4±0.5**, 4030N**±003×**2395E**±004**, h12**km±3km**, n16,** σ**0**^{s}**67**/28**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.04**	**37**	*e*Pg	**Pg**	**02 20 22.8**	**+0.1**
OUR				*e*Sg	**Sg**	**02 20 24.0**	**-0.4**
PLG	**Polygyros**	**0.39**	**281**	*e*Pg	**Pg**	**02 20 28.3**	**+0.1**
PLG				*e*Sg	**Sg**	**02 20 33.3**	**-0.2**
PLG	**Polygyros**	**0.39**	**281**	*e*PB	**Pg**	**02 20 28.3**	**+0.1**
PLG				*e*SB	**Sg**	**02 20 33.7**	**+0.2**
PAIG	**Paliouri**	**0.42**	**209**	*e*Pg	**Pg**	**02 20 28.4**	**-0.4**
PAIG				*e*Sg	**Sg**	**02 20 34.4**	**-0.1**
PAIG	**Paliouri**	**0.42**	**209**	*e*Pg	**Pg**	**02 20 28.5**	**-0.3**
PAIG				*e*Sg	**Sg**	**02 20 34.3**	**-0.2**
SOH	**Sokhos**	**0.69**	**319**	*e*Pg	**Pg**	**02 20 34.1**	**+0.2**
SOH				*e*Sg	**Sg**	**02 20 43.5**	**+0.5**
HORT	**Hortiatis**	**0.71**	**295**	*e*Pg	**Pg**	**02 20 34.0**	**-0.2**
HORT				*e*Sg	**Sg**	**02 20 43.9**	**+0.2**
HORT	**Hortiatis**	**0.71**	**295**	*e*Pg	**Pg**	**02 20 34.0**	**-0.3**
HORT				*e*Sg	**Sg**	**02 20 43.9**	**+0.3**
LOS	**Limnos**	**0.94**	**112**	*e*Pg	**Pg**	**02 20 39.3**	**+0.6**
NVR	**Nevrokopi**	**1.05**	**357**	*e*PN	**Pn**	**02 20 41.0**	**0.0**
NVR				*e*SN	**Sn**	**02 20 54.8**	**-0.8**
XOR	**Xorichti**	**1.10**	**212**	*e*Sg	**Sg**	**02 20 55.8**	**-0.1**
XOR				*e*Sg	**Sg**	**02 20 57.6**	**+1.7**
NEO	**Neokhori**	**1.14**	**210**	*e*PN	**Pn**	**02 20 41.4**	**-0.7**
NEO				*e*SN	**Sn**	**02 20 57.0**	**-0.6**
KNT	**Kendrikon**	**1.17**	**318**	*e*Pg	**Pg**	**02 20 42.9**	**-0.1**
GRG	**Griva**	**1.35**	**300**	*e*Pg	**Pg**	**02 20 46.1**	**-0.3**
RDO	**Rodhopi**	**1.48**	**54**	*e*PB	**Pb**	**02 20 46.3**	**-1.5**
RDO				*e*SN	**Sn**	**02 21 07.6**	**+1.6**
THL	**Klokotos Trika**	**1.66**	**244**	*e*PN	**Pn**	**02 20 50.2**	**+0.9**

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*IDC **16** 02:38:15.9±1.2, 098S×12744E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.9/15, mbtmp3.8/6, ML3.4/1, Error ellipse: s-maj=92.9km s-min=18.1km az=70.0*
*NEIC **16** 02:38:17.3±0.8, 098S×12749E, h10km, mb3.9/2, Error ellipse: s-maj=45.9km s-min=10.8km az=71.0*
*ISCJB **16** 02:38:18.3±1.0, 10S±0.1×1277E±04, h33km, mb3.9/4, Error ellipse: s-maj=55.3km s-min=13.2km az=161.7*
ISC 16 02:38:20.5±1.0**, 10S**±02×**1277E**±04**, h35**km**, n11,** σ**1**^{s}**08**/11**, mb3.9**/4**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.55**	**158**	*e*Pn	**Pn**	**02 41 17.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**17.10**	**187**	*e*P	**Pn**	**02 42 17.1**	**+0.2**
	6.6nm,1.6s						
FITZ	**Fitzroy Crossi**	**17.10**	**187**	P	**Pn**	**02 42 17.5**	**+0.6**
	0.1nm,0.3s,baz=36,slow=10,SNR=6.9						
WRA	**Warramunga Arr**	**19.91**	**161**	P	**Pn**	**02 42 49.5**	**-1.6**
	1.4nm,0.4s,baz=340,slow=11,SNR=38						
WB2	**Warramunga Arr**	**19.92**	**161**	*e*P	**Pn**	**02 42 50.1**	**-1.1**
ASAR	**Alice Springs**	**23.32**	**165**	P	**P**	**02 43 26.1**	**+0.3**
	2.1nm,0.5s,mb3.8,baz=342,slow=10,SNR=34						
STKA	**Stephens Creek**	**33.40**	**158**	*e*P	**P**	**02 44 58.3**	**+2.4**
	2.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**33.40**	**158**	P	**P**	**02 44 58.4**	**+2.5**
	3.2nm,0.8s,mb4.3,baz=331,slow=11,SNR=8.0						
SONM	**Songino Array**	**52.06**	**342**	P	**P**	**02 47 27.1**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=144,slow=6.6,SNR=3.3						
MKAR	**Makanchi Array**	**61.98**	**326**	P	**P**	**02 48 36.4**	**-0.6**
MKAR	**Makanchi Array**	**61.98**	**326**	P	**P**	**02 48 36.4**	**-0.6**
	0.6nm,0.3s,mb4.2,baz=114,slow=8.1,SNR=13						

KRSC 16 03:09:45.5±0.4**, 5508N**×**16225E, h24**km±23km**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.18	16	eP	Pn	03 10 06.5	+0.1
KBTR				i S	Sn	03 10 21.8	+0.2
TUMR	Tumrok	1.22	280	eP	Pn	03 10 07.8	+0.7
TUMR				i S	Sn	03 10 24.3	+1.5
ZLN	Zelenaya	1.25	319	eP	Pn	03 10 08.6	+1.2
ZLN				i S	Sn	03 10 25.9	+2.5
BZMR	Bezymyannaya	1.32	311	eP	Pn	03 10 09.2	+0.9
KMNR	Kamenistaya	1.33	301	eP	Pn	03 10 09.3	+0.7
KMNR				i S	Sn	03 10 27.2	+1.7
CIRR	Tsirk	1.34	321	eP	Pn	03 10 10.1	+1.4
CIRR				eS	Sn	03 10 28.2	+2.4
KIRR	Kirishev	1.39	310	eP	Pn	03 10 10.5	+1.1
KIRR				i S	Sn	03 10 28.8	+1.8
KPT	Kopyto	1.46	308	eP	Pn	03 10 11.7	+1.5
KRSR	Krestovskiy	1.49	321	eP	Pn	03 10 11.2	+0.5
KRSR				i S	Sn	03 10 30.3	+1.0
KLY	Klyuchi	1.53	324	eP	Pn	03 10 11.1	-0.2
KLY				i S	Sn	03 10 30.2	-0.2
SMKR	Semkarok	1.57	344	eP	Pn	03 10 13.0	+1.2
SMKR				i S	Sn	03 10 33.4	+2.1
BDR	Baidarnaya	1.60	339	eP	Pn	03 10 13.8	+1.5
BDR				i S	Sn	03 10 34.6	+2.4
SRKR	Sorokina	1.69	339	eP	Pn	03 10 14.6	+1.1
SRDR	Sredinnyy	1.90	312	eP	Pn	03 10 17.4	+1.1
SRDR				i S	Sn	03 10 41.3	+1.9
SPN	Mys Shipunski	2.38	214	eP	Pn	03 10 22.5	-0.4
SPN				i S	Sn	03 10 48.7	-2.6
NLC	Nalytchevo	2.56	223	eP	Pn	03 10 26.7	+1.2
NLC				i S	Sn	03 10 57.2	+1.3
AVH	Avacha	2.75	230	eP	Pn	03 10 30.7	+2.7
AVH				i S	Sn	03 11 04.3	+3.8
GNL	Ganaly	2.88	243	eP	Pn	03 10 31.6	+1.8
PET	Petropavlovsk	2.96	227	eP	Pn	03 10 32.4	+1.5
PET				i S	Sn	03 11 07.6	+2.1
RUS	Russkaya	3.46	221	P	Pn	03 10 40.2	+2.5
RUS				i S	Sn	03 11 20.6	+2.7
GRL	Gorelyy	3.54	226	eP	Pn	03 10 41.5	+2.6
GRL				i S	Sn	03 11 23.4	+3.4

*MOS **16** 03:10:29.5±0.8, 5505N×16244E, h13km, mb4.2/1, Error ellipse: s-maj=46.9km s-min=16.4km az=75.5*
*ISCJB **16** 03:10:30.1±1.4, 5507N±002×16229E±009, h8km±10km, Error ellipse: s-maj=8.5km s-min=3.8km az=2.8*
*KRSC **16** 03:10:30.5±0.1, 5510N×16230E, h16km±16km, ML4.1*
ISC 16 03:10:31.0±1.1, **5512N**±002×**1623E**±01, **h9**km±10km, **n21**, σ1ˢ04/40, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	1.14	15	eP	Pg	03 10 51.6	-1.2
KBTR				i S	Sg	03 11 08.5	+1.0
ZLN	Zelenaya	1.23	318	eP	Pn	03 10 54.3	0.0
ZLN				i S	Sb	03 11 11.1	+0.7
TUMR	Tumrok	1.24	279	eP	Pn	03 10 53.1	-1.2
TUMR				i S	Sb	03 11 10.4	0.0
BZMR	Bezymyannaya	1.31	310	P	Pn	03 10 53.8	-1.5
BZMR				i S	Sb	03 11 11.0	-1.5
CIRR	Tsirk	1.33	320	eP	Pn	03 10 55.6	0.0
CIRR				i S	Sb	03 11 14.1	+1.1
KMNR	Kamenistaya	1.33	300	eP	Pn	03 10 55.6	0.0
KMNR				i S	Sb	03 11 13.7	+0.6
KPT	Kopyto	1.45	307	P	Pn	03 10 57.0	-0.3
KPT				i S	Sn	03 11 16.6	+0.3
KRSR	Krestovskiy	1.47	319	P	Pn	03 10 56.8	-0.8
KRSR				i S	Sn	03 11 15.9	-1.0
KLY	Klyuchi	1.51	323	eP	Pn	03 10 57.0	-1.2
KLY				i S	Sn	03 11 15.8	-2.2
SMKR	Semkarok	1.54	343	eP	Pn	03 10 58.5	0.0
SMKR				eS	Sn	03 11 18.5	-0.1
BDR	Baidarnaya	1.58	338	eP	Pn	03 10 59.3	+0.3
SRKR	Sorokina	1.67	338	P	Pn	03 11 01.4	+1.2
SRKR				i S	Sn	03 11 24.4	+2.7
SRDR	Sredinnyy	1.89	311	eP	Pn	03 11 03.2	-0.1
SRDR				eS	Sn	03 11 28.0	+0.9
SPN	Mys Shipunski	2.42	214	eP	Pn	03 11 09.4	-1.2
SPN				i S	Sn	03 11 36.7	-3.6
NLC	Nalytchevo	2.60	223	eP	Pn	03 11 12.7	-0.4
NLC				i S	Sn	03 11 43.8	-1.0
AVH	Avacha	2.79	230	eP	Pn	03 11 16.6	+0.9
AVH				i S	Sn	03 11 50.3	+0.9
GNL	Ganaly	2.91	242	eP	Pn	03 11 19.5	+2.2
PET	Petropavlovsk	3.00	227	ePN	Pn	03 11 19.6	+1.1
PET				eS	Sn	03 11 54.1	-0.4
PET				pmax	pmax		
	comp=Z,116nm,0.5s						
PET				smax			
	comp=N,248nm,0.5s						
PET				smax			
	comp=E,191nm,0.5s						
PET	Petropavlovsk	3.00	227	eP	Pn	03 11 19.4	+0.9
PET				i S	Sn	03 11 55.4	+0.9
RUS	Russkaya	3.50	221	eP	Pn	03 11 25.3	-0.1
RUS				i S	Sn	03 12 05.8	-1.0
GRL	Gorelyy	3.58	226	eP	Pn	03 11 27.9	+1.4
GRL				i S	Sn	03 12 09.9	+1.0

*TIF **16** 03:14:21.5, 4258N×4348E, h12km*
*ISCJB **16** 03:14:22.7±0.8, 4258N±003×4348E±007, h8km±5km, Error ellipse: s-maj=8.3km s-min=4.7km az=3.5*
*MOS **16** 03:14:24.1±1.6, 4267N×4371E, h20km, mb3.7/1, Error ellipse: s-maj=27.2km s-min=13.6km az=76.5*
ISC 16 03:14:22.9±0.8, **4256N**±003×**4347E**±007, **h8**km±5km, **n12**, σ0ˢ82/22, **2C-3D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	Oni	0.02	319	P	Pg	03 14 24.1	-0.2
ONI				S	Sg	03 14 25.5	+0.1
DIGR	Digorskoe uzhe	0.35	14	⇓iPG	Pg	03 14 29.2	-0.5
DIGR				i S	Sg	03 14 34.5	+0.2
ZEI	Tsey	0.38	57	⇓iPG	Pg	03 14 30.1	-0.1
ZEI				i S	Sg	03 14 36.1	+0.9
LACR	Lac	0.66	66	⇑iPG	Pg	03 14 35.0	-0.6
LACR				i S	Sg	03 14 44.4	+0.1
KORR	Kora	0.68	40	ePG	Pg	03 14 35.0	-1.0
KORR				eS	Sg	03 14 44.6	-0.4
GOR	Gori	0.75	140	S	Sg	03 14 47.7	+0.7
LSNR	Lesken	0.76	20	⇓iPG	Pg	03 14 38.1	+0.7
LSNR				i S	Sg	03 14 49.1	+1.9
ARNR	Ardon	0.86	43	ePG	Pg	03 14 38.2	-1.3
ARNR				eS	Sg	03 14 50.1	-0.6
TBLG	Delisi	1.26	131	P	Pn	03 14 46.5	-0.1
TBLG				S	Sb	03 15 03.2	+0.2
MTA	Mtatsminda	1.31	131	P	Pn	03 14 46.3	-1.1
MTA				S	Sb	03 15 04.2	-0.5
KIV	Kislovodsk	1.50	338	⇑ePG	Pg	03 14 51.8	+0.1
KIV				pmax	pmax		
	comp=Z,22nm,1.4s						
DGRG	David-gareji	1.80	127	P	Pn	03 14 56.3	+2.2
DGRG				S	Sn	03 15 22.9	+5.8

*IDC **16** 03:17:36.5±0.8, 986N×12649E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.9/19, mbtmp3.9/10, Error ellipse: s-maj=63.2km s-min=15.4km az=77.0*
*ISCJB **16** 03:17:37.1±0.5, 990N±003×12661E±004, h10km, mb3.9/11, Error ellipse: s-maj=6.2km s-min=4.2km az=155.3*
*MAN **16** 03:17:39, 987N×12646E, h5km, mb4.7, ML3.5, MS3.5*
*NEIC **16** 03:17:44.2±6.2, 981N×12639E, h58km±58km, mb4.5/1, Error ellipse: s-maj=37.0km s-min=11.4km az=70.0*
ISC 16 03:17:38.6±0.5, **988N**±003×**12656E**±004, **h10**km, **n27**, σ1ˢ18/37, **mb3.9**/11, **2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.06	265	⇓eP	Pg	03 17 57.5	-1.6
SCPH				eS	Sg	03 18 09.2	-3.8
BIPH	Bislig	1.69	187	⇑iP	Pn	03 18 07.6	-0.7
BIPH				i S	Sn	03 18 30.3	+0.3
MSLP	Maasin	1.70	279	eP	Pn	03 18 08.2	-0.2
MSLP				eS	Sg	03 18 32.1	-1.2
PLP	Palo	2.02	310	eP	Pn	03 18 14.0	+1.3
PLP				eS	Sg	03 18 42.2	-1.3
BESP	Borongan	2.04	327	eP	Pn	03 18 13.6	+0.5
BESP				eS	Sg	03 18 44.4	+0.2
OCLP	Ormoc	2.25	301	eP	Pg	03 18 19.1	-2.6
OCLP				eS	Sg	03 18 47.9	-3.1
CGP	Cagayan de Oro	2.32	233	⇓eP	Pn	03 18 17.3	+0.4
CGP				i S	Sn	03 18 46.8	+1.3
TBP	Tagbilaran	2.67	266	eP	Pn	03 18 22.4	+0.8
TBP				eS	Sn	03 18 54.2	+0.1
CNP	Catarman	3.21	325	eP	Pn	03 18 30.4	+1.2
CNP				eS	Sn	03 19 08.9	+1.3
DCPH	Dipolog City	3.42	248	⇓eP	Pn	03 18 32.5	+0.5
PAGZ	Pagadian	3.73	238	eP	Pn	03 18 37.4	+1.0
PAGZ				eS	Sn	03 19 24.3	+3.8
GUIM	Jordan	3.98	281	eP	Pn	03 18 41.9	+2.1
RCP	Roxas	4.11	294	⇑eP	Pn	03 18 43.9	+2.4
PVCP	Virac	4.39	328	eP	Pn	03 18 47.6	+2.3
KAKA	Kakadu	23.19	165	eP	P	03 22 46.2	+0.5
	9.4nm,0.5s,mb4.5						
FITZ	Fitzroy Crossi	27.81	182	P	P	03 23 27.2	-1.0
	1.4nm,0.4s,mb3.9,baz=349,slow=12,SNR=8.3						
WRA	Warramunga Arr	30.60	166	P	P	03 23 52.2	-0.7
	0.3nm,0.7s,mb3.2,baz=347,slow=8.5,SNR=7.2						
ASAR	Alice Springs	34.10	168	P	P	03 24 24.1	+0.5
	0.4nm,0.3s,mb3.8,baz=350,slow=7.2,SNR=8.9						
SONM	Songino Array	41.49	339	P	P	03 25 26.0	+0.3
	0.2nm,0.3s,mb3.2,baz=149,slow=9.0,SNR=4.6						
NWAO	Narrogin (SRO)	43.48	191	P	P	03 25 41.5	-0.6
	6.4nm,0.6s,mb4.5,baz=358,slow=9.8,SNR=4.5						
STKA	Stephens Creek	43.94	161	P	P	03 25 44.6	-1.3
	0.6nm,0.3s,mb3.8,baz=352,slow=7.1,SNR=4.1						
MK31	Makanchi Array	52.51	323	eP	P	03 26 50.6	-1.3
MKAR	Makanchi Array	52.51	323	P	P	03 26 50.9	-1.1
MKAR	Makanchi Array	52.51	323	P	P	03 26 50.9	-1.0
	0.4nm,0.5s,mb3.6,baz=117,slow=6.9,SNR=4.6						
ARCES	ARCESS Array B	84.66	340	P	P	03 30 11.4	-0.8
	5.1nm,1.0s,mb4.6,baz=80,slow=5.9,SNR=6.7						
FINES	FINESS Array B	86.37	332	P	P	03 30 20.1	-0.8
	0.7nm,0.4s,mb4.2,baz=98,slow=3.9,SNR=8.4						
YKA	Yellowknife Ar	94.00	24	P	P	03 30 56.4	-0.3
	0.2nm,0.4s,mb3.9,baz=299,slow=4.3,SNR=4.5						

IDC 16 03:46:47.2±1.5, **3095N**×**8277E**, **h0**km, **mb3.8**/4, **mb1 4.0**/5, **mb1mx3.6**/23, **mbtmp3.8**/5, **ML3.8**/1, **Error ellipse: s-maj=47.2km s-min=26.4km az=52.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.82	359	Pn	Pn	03 50 31.0	-0.3
	0.4nm,0.3s,baz=185,slow=12,SNR=18						
SONM	Songino Array	24.70	40	P	P	03 52 09.9	0.0
	0.8nm,0.8s,baz=229,slow=11,SNR=6.1						
AKASG	Malin Array Be	43.98	313	P	P	03 54 56.1	+0.1
	0.8nm,0.5s,baz=86,slow=7.3,SNR=4.4						
ARCES	ARCESS Array B	50.02	337	P	P	03 55 42.6	-0.5
	5.3nm,1.1s,baz=108,slow=8.9,SNR=2.8						
WRA	Warramunga Arr	70.80	129	P	P	03 58 06.0	+0.2
	0.6nm,0.7s,baz=321,slow=6.1,SNR=11						

*ISK **16** 03:52:25.5, 3744N×4357E, h3km, MD3.1*
*CSEM **16** 03:52:26.4±0.3, 3751N×4355E, h5km, MD3.1, Error ellipse: s-maj=11.8km s-min=4.3km az=177.0*
*ISCJB **16** 03:52:28.5±0.8, 3757N±007×4358E±005, h3km, Error ellipse: s-maj=10.6km s-min=5.2km az=0.4*
ISC 16 03:52:29.2±0.8, **376N**±01×**4362E**±008, **h4**km±16km, **n7**, σ0ˢ90/9, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	HAKKARI	0.08	125	i P	Pg	03 52 30.4	-0.5
HKR	Hakkari	0.10	106	i PG	Pg	03 52 30.2	-1.0
HKR				i SG	Sg	03 52 33.7	+1.2
VANB	Van	1.00	350	PN	Pn	03 52 48.3	-1.7
VANB				SN	Sn	03 53 05.3	+0.7
MSL	Mosul	1.38	198	ex	x	03 52 51.0	
MSL				i x	x	03 53 08.0	
MSL				i x	x	03 53 10.0	
CLDR	Caldiran	1.55	9	ePN	Pn	03 52 58.2	+0.6
BTMT	Batman	1.79	290	ePN	Pn	03 53 00.2	-0.6
MARD	Mardin	2.28	264	i P	Pn	03 53 08.4	+0.9
MARD				i S	Sg	03 53 42.6	+0.2

*ISCJB **16** 05:11:28.3±0.3, 5146N±002×1611E±002, h0km, Error ellipse: s-maj=2.5km s-min=1.7km az=19.7*
*MOS **16** 05:11:28.8±2.6, 5166N×1596E, h10km, mb3.8/1, Error ellipse: s-maj=7.3km s-min=4.0km az=85.0*
*LDG **16** 05:11:29.6±0.3, 5147N×1606E, h1km, Ml3.5/4, Error ellipse: s-maj=6.7km s-min=2.4km az=12.0, Suspected Mining induced.*
*NEIC **16** 05:11:29.6±0.4, 5156N×16.11E, h5km, ML3.2(SZGRF), ML2.7(BRA), Error ellipse: s-maj=5.3km s-min=5.0km az=213.0*
*IPEC **16** 05:11:29.5±0.2, 5154N×1620E, h0km, ML2.6/4, Error ellipse: s-maj=1.5km s-min=1.3km az=11.0*
*BGR **16** 05:11:30.9±0.4, 5146N×1608E, h1km, ML3.2/14, Error ellipse: s-maj=6.7km s-min=3.3km az=6.0*
*PRU **16** 05:11:31.3, 5146N×1608E, h0km*
*IDC **16** 05:11:31.2±0.6, 5141N×1603E, h0km, mb3.5/1, mb1 3.6/9, mb1mx3.5/24, mbtmp3.5/9, ML3.4/8, Error ellipse: s-maj=13.4km s-min=6.1km az=100.0*
*CSEM **16** 05:11:31.4±0.1, 5147N×16.10E, h1km, ML3.7/14, Error ellipse: s-maj=1.6km s-min=1.0km az=19.0*
*WAR **16** 05:11:31.8, 5146N×1608E, ML3.0, Mining Induced*
*VIE **16** 05:11:32.4±0.5, 5131N×16.11E, h0km, mb2.7/6, ML3.2/7, Error ellipse: s-maj=3.1km s-min=2.0km az=21.0 67 km WNW of Wroclaw Suspected Mining induced.*
ISC 16 05:11:29.7±0.3, **5151N**±002×**1611E**±002, **h0**km, **n114**, σ1ˢ03/194, **6C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	170	i Pg	Pg	05 11 43.2	+0.7
KSP				eSg	Sg	05 11 51.1	-0.2
KSP	Ksiaz	0.68	170	ePg	Pg	05 11 43.2	+0.6
KSP	Ksiaz	0.68	170	⇓iPg	Pg	05 11 43.2	+0.6
KSP				eSg	Sg	05 11 51.4	+0.1
KSP				e		05 11 56.0	
KSP	Ksiaz	0.68	170	⇓iP	Pg	05 11 43.2	+0.6
KSP				e		05 11 51.4	
KSP	Ksiaz	0.68	170	Pg	Pg	05 11 43.2	+0.6
KSP				eSg	Sg	05 11 51.4	+0.1
UPC	Upice	1.00	184	ePG	Pg	05 11 49.1	+0.2
DPC	Dobruska-Polom	1.17	173	ePg	Pg	05 11 52.0	0.0
DPC				eSg	Sg	05 12 06.6	-0.5
DPC	Dobruska-Polom	1.17	173	eP	Pg	05 11 52.0	0.0
DPC				e		05 12 06.3	
DPC				smax			
	comp=N,96nm,0.4s						
DPC	Dobruska-Polom	1.17	173	ePG	Pg	05 11 52.0	0.0
DPC				eSG	Sg	05 12 06.3	-0.8
	comp=N,96nm,0.4s						
DPC	Dobruska-Polom	1.17	173	ePg	Pg	05 11 51.9	-0.1
DPC				Sg	Sg	05 12 06.6	-0.5
PVCC	Panska Ves	1.38	225	eP	Pg	05 11 56.2	+0.1
PVCC				e		05 12 14.6	
PVCC				smax			
	comp=N,478nm,0.2s						
PVCC	Panska Ves	1.38	225	ePG	Pg	05 11 56.2	+0.1
PVCC				eSG	Sg	05 12 14.6	+0.6
	comp=N,478nm,0.2s						
BRG	Berggiesshubel	1.50	246	ePn	Pn	05 11 57.5	-0.4
BRG				eSg	Sg	05 12 18.8	+0.8
BRG	Berggiesshubel	1.50	246	P	Pn	05 11 57.4	-0.5
BRG						05 12 18.6	
BRG				smax			
	comp=N,115nm,0.4s						
BRG	Berggiesshubel	1.50	246	PN	Pn	05 11 57.4	-0.5
BRG				PG	Pg	05 11 58.8	+0.3
BRG				SG	Sg	05 12 18.6	+0.6
	comp=N,192nm,0.3s						
RUE	Ruedersdorf	1.74	305	ePn	Pn	05 12 00.3	-0.8
RUE				ePg	Pg	05 12 04.3	+1.3
RUE				eSn	Sn	05 12 23.9	-0.1
RUE				eSg	Sg	05 12 26.2	+0.7
RUE	Ruedersdorf	1.74	305	ePn	Pn	05 12 00.3	-0.8
RUE	Ruedersdorf	1.74	305	ePg	Pg	05 12 04.3	+1.3
PRA	Prague	1.79	217	PG	Pg	05 12 02.0	-1.9
PRA				SG	Sg	05 12 27.0	-0.1
PRU	Pruhonice	1.82	214	eP	Pn	05 12 01.8	-0.4
PRU				e		05 12 27.7	
PRU				smax			
	comp=N,74nm,0.4s						
PRU	Pruhonice	1.82	214	ePN	Pn	05 12 01.8	-0.4
PRU				ePG	Pg	05 12 03.6	-0.9
PRU				eSG	Sg	05 12 27.7	-0.3
	comp=N,74nm,0.4s						
FBE	Freiberg	1.83	252	ePn	Pn	05 12 02.4	+0.1
FBE				eSg	Sg	05 12 28.9	+0.5
RAC	Raciborz	1.94	136	ePg	Pg	05 12 06.4	-0.5
RAC				eSg	Sg	05 12 32.5	+0.4
RAC				eS	Sg	05 12 32.5	+0.4
CLL	Collm	1.96	265	ePn	Pn	05 12 03.9	-0.2
CLL	Collm	1.96	265	i Pn	Pn	05 12 03.7	-0.4
CLL				i Pg	Pg	05 12 07.0	-0.2
CLL				i Sg	Sg	05 12 33.2	+0.7
	comp=Z,48nm,0.6s						
CLL	Collm	1.96	265	i Pg	Pg	05 12 07.0	-0.2
CLL				i S	Sg	05 12 33.2	+0.7
MORC	Moravsky Berou	1.96	152	ePn	Pn	05 12 04.2	+0.1
MORC	Moravsky Berou	1.96	152	ePn	Pn	05 12 03.8	-0.3
MORC				eSg	Sg	05 12 32.6	+0.1
MORC	Moravsky Berou	1.96	152	eP	Pn	05 12 03.8	-0.3
MORC				eSg	Sg	05 12 32.6	+0.1
OKC	Ostrava-Krasne	2.12	141	ePn	Pn	05 12 06.1	-0.1
OKC	Ostrava-Krasne	2.12	141	Pn	Pn	05 12 06.1	-0.1
OKC				eSg	Sg	05 12 36.1	-1.4
	comp=Z,113nm,0.7s						
VRAC	Vranov	2.22	172	Pn	Pn	05 12 07.7	-0.1
	comp=Z,4.6nm,0.3s,baz=334,slow=15,SNR=17						
VRAC				Lg		05 12 36.3	
	comp=Z,5.3nm,0.3s,baz=75,slow=20,SNR=6.0						
VRAC	Vranov	2.22	172	Pn	Pn	05 12 07.7	0.0
VRAC				eSg	Sg	05 12 39.3	-1.7
	comp=Z,23nm,0.2s						
KRUC	Moravsky	2.46	176	ePn	Pn	05 12 11.2	+0.3
KRUC				eSg	Sg	05 12 47.9	-0.6
	comp=Z,32nm,0.3s						
TANN	Tannenbergstha	2.55	246	ePn	Pn	05 12 12.7	+0.4
TANN				eSg	Sg	05 12 50.5	-1.1
WERD	Werda	2.63	248	ePn	Pn	05 12 13.7	+0.4
NKC	Novy Kostel	2.65	243	ePn	Pn	05 12 14.1	+0.5
NKC				ePg	Pg	05 12 19.5	-0.9
NKC				eSg	Sg	05 12 55.4	+0.7
NKC	Novy Kostel	2.65	243	ePN	Pn	05 12 14.1	+0.5
NKC				ePG	Pg	05 12 19.5	-0.9
NKC				eSG	Sg	05 12 55.4	+0.7
	comp=Z,107nm,0.3s						
OJC	Ojcow	2.67	117	ePn	Pn	05 12 12.7	-1.1
OJC				ePg	Pg	05 12 20.1	-0.7
OJC				eSn	Sn	05 12 43.9	-2.9
OJC				eSg	Sg	05 12 55.9	+0.6
OJC	Ojcow	2.67	117	ePn	Pn	05 12 12.7	-1.1
OJC				eSg	Sg	05 12 57.2	+1.9
OJC	Ojcow	2.67	117	eP	Pn	05 12 12.7	-1.1
OJC				e		05 12 43.9	
JAVC	Velka Javorina	2.83	159	ePn	Pn	05 12 17.3	+1.2
JAVC				eSg	Sg	05 13 01.7	+1.0
	comp=Z,21nm,0.3s						
KHC	Kasperske Hory	2.88	215	ePN	Pn	05 12 16.6	-0.1
KHC				ePG	Pg	05 12 23.0	-1.8
KHC				eSN	Sn	05 12 51.9	-0.2
KHC				eSG	Sg	05 13 01.2	-0.9
	comp=Z,26nm,0.3s						
MANZ	Manzenberg	2.96	241	ePn	Pn	05 12 18.5	+0.6
MOX	Moxa	2.96	255	ePn	Pn	05 12 18.3	+0.4
MOX				eSg	Sg	05 13 04.5	-0.4
MOX	Moxa	2.96	255	ePN	Pn	05 12 18.3	+0.4
MOX				ePG	Pg	05 12 26.5	+0.1
MOX				eSG	Sg	05 13 06.0	+1.2
MOX	Moxa	2.96	255	ePg	Pg	05 12 26.5	+0.1
MOX				Sg	Sg	05 13 04.5	-0.3
ROTZ	Rotzenmuhle	3.04	236	ePn	Pn	05 12 19.6	+0.7
GEC2	GERESS Array S	3.08	211	ePn	Pn	05 12 20.7	+1.1
GEC2				eSg	Sg	05 13 05.5	-3.1
GEC2	GERESS Array S	3.08	211	ePn	Pn	05 12 20.7	+1.2
GEC2				eSg	Sg	05 13 05.4	-3.2
GERES	GERESS Array B	3.08	211	Pn	Pn	05 12 19.9	+0.4
	comp=Z,2.5nm,0.3s,baz=31,slow=13,SNR=67						
GERES				Pg	Pg	05 12 26.5	-2.2
	comp=Z,11nm,0.3s,baz=36,slow=16,SNR=82						
GERES				Lg		05 13 04.9	
	comp=Z,8.5nm,0.3s,baz=33,slow=32,SNR=7.6						
GERES	GERESS Array B	3.08	211	Pg	Pg	05 12 26.5	-2.2
SMOL	Smolenice	3.12	164	eSg	Sg	05 13 11.9	+2.2
WET	Wettzell	3.15	222	ePn	Pn	05 12 20.7	+0.3
MODS	Modra-Piesok	3.23	166	eP	Pn	05 12 21.8	+0.3
MODS				e		05 13 13.1	
MODS				smax			
	comp=N,29nm,1.4s						
MODS	Modra-Piesok	3.23	166	ePN	Pn	05 12 21.8	+0.3
MODS				ePG	Pg	05 12 31.0	-0.5
MODS				eSG	Sg	05 13 13.1	-0.1
KOLL	Kolacno	3.28	152	ePG	Pg	05 12 31.9	-0.6
KOLL				eSG	Sg	05 13 13.6	-1.5
KOLL	Kolacno	3.28	152	ePg	Pg	05 12 32.0	-0.5
KOLL				eSg	Sg	05 13 13.6	-1.5
ZST	Bratislava	3.38	169	eP	Pg	05 12 33.1	-1.2
ZST				e		05 13 16.0	
ZST				smax			
	comp=N,17nm,0.4s						
ZST	Bratislava	3.38	169	ePG	Pg	05 12 33.1	-1.2
ZST				eSG	Sg	05 13 16.0	-2.1
NIE	Niedzica	3.40	126	eP	Pg	05 12 34.2	-0.6
NIE				eS	Sg	05 13 19.5	+0.6
VYHS	Vyhne	3.49	149	ePN	Pn	05 12 25.4	+0.3
VYHS				eSG	Sg	05 13 23.1	+1.4
CONA	Conrad Observa	3.59	183	⇑iPn	Pn	05 12 27.3	+0.9
	SNR=14						
CONA				⇑iSg	Sg	05 13 24.1	-0.7
	comp=N,17nm,0.3s						
CONA	Conrad Observa	3.59	183	Pn	Pn	05 12 27.3	+0.8
	SNR=14						
CONA				Sg	Sg	05 13 24.1	-0.7
	comp=N,17nm,0.3s						
GRA1	Grafenberg Arr	3.61	242	ePn	Pn	05 12 27.4	+0.7
GRA1				eSg	Sg	05 13 25.3	-0.2
GRA1	Grafenberg Arr	3.61	242	Pn	Pn	05 12 27.4	+0.7
GRA1				Sg	Sg	05 13 25.3	-0.2
GRF	Grafenberg Arr	3.61	242	ePn	Pn	05 12 27.4	+0.7
GRF				eSg	Sg	05 13 25.3	-0.1
GRFO	Grafenberg	3.61	242	ePn	Pn	05 12 26.9	+0.2
GRFO				ePg	Pg	05 12 39.1	+0.3
GRFO				eSn	Sn	05 13 10.1	+0.1
GRFO				eSg	Sg	05 13 25.5	0.0
GRFO	Grafenberg	3.61	242	eP	Pn	05 12 26.9	+0.2
GRFO				e		05 13 10.1	
GRFO	Grafenberg	3.61	242	ePn	Pn	05 12 26.9	+0.2
GRFO	Grafenberg	3.61	242	ePg	Pg	05 12 39.1	+0.3
GRFO				eS	Sn	05 13 10.1	+0.1
BSD	Bornholm Skovb	3.68	349	i P	Pn	05 12 27.9	+0.1
BSD				i		05 12 34.4	
BSD				i S	Sn	05 13 08.7	-3.2
MOA	Molln	3.85	199	⇑iPn	Pn	05 12 30.5	+0.4
	SNR=12						
MOA				⇑iSg	Sg	05 13 33.7	+0.3
	comp=N,37nm,0.5s						
MOA	Molln	3.85	199	Pn	Pn	05 12 30.5	+0.4
	comp=N,11nm,6.0s						
MOA				Sg	Sg	05 13 33.7	+0.3
	comp=N,37nm,0.5s						
STHS	Stebnicka Huta	3.89	121	ePN	Pn	05 12 33.1	+2.5
STHS				eSG	Sg	05 13 39.6	+5.1
KECS	Kecovo	4.14	135	ePN	Pn	05 12 34.9	+0.9
KECS				eSG	Sg	05 13 46.2	+3.7
ARSA	Arzberg	4.28	185	⇓iPn	Pn	05 12 36.6	+0.7
ARSA				⇑iSg	Sg	05 13 47.2	+0.1
	comp=N,32nm,0.6s						
CRVS	Cervenica-Dubn	4.31	125	ePN	Pn	05 12 38.4	+2.0
KWP	Kalwaria	4.60	111	ePn	Pn	05 12 40.7	+0.3
KWP				ePg	Pg	05 12 57.0	-0.8
KWP				eSg	Sg	05 13 57.5	0.0
KOLS	Kolonicke sedl	4.72	121	eP	Pn	05 12 42.7	+0.7
KOLS				e		05 13 37.0	
KOLS				smax			
	comp=N,14nm,1.6s						
KOLS	Kolonicke sedl	4.72	121	ePN	Pn	05 12 42.7	+0.7
KOLS				eSN	Sn	05 13 37.0	-0.4
KBA	Koelnbreinsper	4.79	203	⇑iPn	Pn	05 12 44.0	+1.0
UZH	Uzhgorod	4.91	123	eP	Pn	05 12 47.7	+3.0
UZH				eS	Sn	05 13 43.0	+0.8
SQTA	Sankt Quirin	5.35	219	⇓iPn	Pn	05 12 51.6	+0.9

SQTA				⇓iSg	Sg	05 14 24.8	+3.3
	comp=N,6.7nm,0.3s						
DAVOX	Davos/Dischmat	6.25	223	Pn	Pn	05 13 03.6	+0.6
	comp=N,0.6nm,0.3s,baz=102,slow=18,SNR=7.3						
CDF	Champ du Feu	6.49	245	ePn	Pn	05 13 03.8	-2.5
CDF				eSg	Sg	05 14 51.4	-6.5
	comp=N,20nm,0.9s						
CDF	Champ du Feu	6.49	245	ePn	Pn	05 13 03.8	-2.5
CDF				eSg	Sg	05 14 51.4	-6.5
	comp=N,9.8nm,0.9s						
HINF	Hinteralfeld	7.05	242	ePn	Pn	05 13 11.3	-2.7
HINF				eSg	Sg	05 15 08.9	-7.1
	comp=N,16nm,0.8s						
HINF	Hinteralfeld	7.05	242	ePn	Pn	05 13 11.3	-2.7
HINF				eSg	Sg	05 15 08.9	-7.1
	comp=N,7.8nm,0.8s						
HAU	Haudompre	7.23	245	eSg	Sg	05 15 15.0	-6.7
	comp=N,16nm,0.8s						
HAU	Haudompre	7.23	245	eSg	Sg	05 15 15.0	-6.7
	comp=N,8.1nm,0.8s						
AKASG	Malin Array Be	8.29	90	P	Pn	05 13 32.5	+1.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	8.29	90	Pn	Pn	05 13 30.4	-0.7
	comp=Z,1.7nm,0.3s,baz=278,slow=12,SNR=6.0						
AKASG	Malin Array Be	8.29	90	P	Pn	05 13 32.5	+1.4
	comp=Z,2.0nm,0.3s						
LPL	La Plagne	8.64	230	eP	Pn	05 13 37.4	+1.6
HFS	Hagfors	8.75	352	Pn	Pn	05 13 36.9	-0.4
	comp=Z,0.4nm,0.3s,baz=161,slow=14,SNR=14						
HFS				Sn	Sn	05 15 15.9	-0.7
	comp=Z,0.3nm,0.3s,baz=152,slow=31,SNR=3.0						
LOR	Lormes	9.05	247	ePn	Pn	05 13 38.4	-3.0
	baz=72						
VSU	Vasula	9.26	37	eP	Pn	05 13 43.2	-1.0
SBF	Sospel	9.62	221	eP	Pn	05 13 50.9	+1.6
NOA	NORSAR Array B	9.93	346	Pn	Pn	05 13 52.9	-0.6
	comp=Z,0.3nm,0.3s,baz=154,slow=12,SNR=2.5						
NOA	NORSAR Array B	9.93	346	Pn	Pn	05 13 52.8	-0.7
FRF	La Foret Royal	10.20	222	eP	Pn	05 13 58.9	+1.7
FINES	FINESS Array B	11.37	25	P	Pn	05 14 12.2	-0.9
FINES						05 16 14.5	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	FINESS Array B	11.37	25	Pn	Pn	05 14 12.2	-0.9
	comp=Z,0.5nm,0.3s,baz=203,slow=12,SNR=18						
FINES				Sn	Sn	05 16 14.5	-6.1
	comp=Z,0.3nm,0.3s,baz=212,slow=19,SNR=5.4						
KAF	Kangasniemi	11.99	24	ep	Pn	05 14 17.8	-3.8
	comp=Z,2.5nm,0.5s						
KAF	Kangasniemi	11.99	24	eP	Pn	05 14 17.8	-3.8
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EKA	Eskdalemuir Ar	12.11	296	Pn	Pn	05 14 19.9	-3.3
	comp=Z,0.1nm,0.3s,baz=99,slow=13,SNR=2.8						
ARCES	ARCESS Array B	18.62	10	P	Pn	05 15 45.0	-3.5
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	ARCESS Array B	18.62	10	Pn	Pn	05 15 45.0	-3.6
	comp=Z,0.6nm,0.3s,baz=190,slow=13,SNR=14						
KIV	Kislovodsk	19.33	103	eP	Pn	05 15 57.2	0.0
KIV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	Kislovodsk	19.33	103	eP	Pn	05 15 57.2	0.0
	comp=Z,4.0nm,0.7s						
YKA	Yellowknife Ar	59.86	336	P	P	05 21 38.0	+1.6
YKA	Yellowknife Ar	59.86	336	P	P	05 21 37.9	+1.5
YKA	Yellowknife Ar	59.86	336	P	P	05 21 38.0	+1.6
	comp=Z,0.3nm,0.5s,baz=32,slow=6.5,SNR=9.5						

IDC 16 05:21:14.8±2.0**,685S**×**12947E,h0**km**,mb3.3**/1**,mb1 3.6**/4**, mb1mx3.4**/14**,mbtmp3.4**/4**,ML3.4**/2**,MS3.0**/1**,Ms1 3.0**/1**, ms1mx2.6**/13**,Error ellipse: s-maj=80.5km s-min=27.7km az=76.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	6.64	239	Sn	Sn	05 24 09.9	-0.1
	4.0nm,0.3s,baz=60,slow=20,SNR=3.3						
BATI				LR	LR	05 25 52.0	
	comp=Z,127nm,18.6s,baz=84,slow=42						
FITZ	Fitzroy Crossi	11.79	198	eP	Pn	05 24 04.3	0.0
	2.3nm,1.0s						
FITZ				eS	Sn	05 25 58.8	-18
FITZ	Fitzroy Crossi	11.79	198	Pn	Pn	05 24 04.0	-0.4
	0.1nm,0.3s,baz=18,slow=16,SNR=5.6						
FITZ				Sn	Sn	05 26 03.7	-13
	0.4nm,0.3s,baz=78,slow=22,SNR=7.9						
WRA	Warramunga Arr	13.85	160	Pn	Pn	05 24 32.4	0.0
	0.3nm,0.3s,baz=340,slow=14,SNR=20						
WRA				Sn	Sn	05 26 53.5	-14
	0.7nm,0.3s,baz=331,slow=22,SNR=14						
ASAR	Alice Springs	17.26	166	P	Pn	05 25 17.7	+0.4
	0.2nm,0.3s,baz=342,slow=11,SNR=15						
ASAR				S	Sn	05 28 17.5	-13
	0.1nm,0.3s,baz=348,slow=26,SNR=3.9						
MKAR	Makanchi Array	67.81	327	P	P	05 32 14.7	+0.1
	0.1nm,0.3s,baz=117,slow=8.7,SNR=3.1						

NNC 16 05:34:27.3±3.5**,3708N**×**7119E,h181**km±45km**,mb2.7, mpv3.6,1C-4D,Error ellipse: s-maj=33.1km s-min=18.9km az=19.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.04	355	⇓P	Pn	05 35 55.2	+0.6
	2.6nm,0.2s,baz=179,slow=12,SNR=174						
KK31				⇓S	Sn	05 37 04.0	+0.5
	6.2nm,0.3s						
TKM2	Tokmak 2	6.74	29	⇓P	Pn	05 36 03.4	-0.5
	2.9nm,1.0s						
TKM2				⇑S	Sn	05 37 21.5	+1.2
	2.1nm,0.5s						
AB31	Akbulak array	14.65	330	P	Pn	05 37 45.8	-0.1
	0.8nm,0.5s,baz=151,slow=12,SNR=17						
AB31				S	Sn	05 40 27.9	-1.2
	0.4nm,0.3s,baz=149,slow=23,SNR=2.6						
AKTO	Aktyubinsk	16.35	329	⇓P	Pn	05 38 06.8	+0.2
	0.4nm,0.5s						

IDC 16 05:49:42.1±7.4**,679S**×**14785E,h74**km±67km**,mb3.0**/2**, mb1 3.1**/4**,mb1mx3.0**/14**,mbtmp3.0**/4**,ML2.7**/2**,Error ellipse: s-maj=94.4km s-min=53.8km az=123.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.69	195	P	Pn	05 50 22.4	-0.8
	2.1nm,0.3s,baz=15,slow=12,SNR=6.2						
PMG				S	Sn	05 50 55.9	+1.2
	2.7nm,0.3s,baz=354,slow=19,SNR=3.5						
WRA	Warramunga Arr	18.52	224	P	Pn	05 53 52.9	-0.8
	0.1nm,0.3s,baz=50,slow=11,SNR=5.9						
ASAR	Alice Springs	21.47	217	P	P	05 54 24.8	+0.1
	0.6nm,0.5s,baz=55,slow=9.2,SNR=13						
FITZ	Fitzroy Crossi	24.39	241	P	P	05 54 52.9	-0.9
	0.4nm,0.3s,baz=48,slow=14,SNR=6.0						
TORD	Torodi Ar. Bea	146.10	283	PKPbc	PKPbc	06 09 14.7	-0.2
	0.5nm,0.5s,baz=83,slow=5.3,SNR=3.0						

*CSEM **16** 06:20:28.2±0.2, 3908N×4041E, h2km, MD2.7, Error ellipse: s-maj=5.2km s-min=4.9km az=173.0*
*ISK **16** 06:20:28.6, 3906N×4039E, h2km, MD2.7*
*ISCJB **16** 06:20:29.7±1.1, 3907N±004×4042E±005, h2km±8km, Error ellipse: s-maj=6.9km s-min=6.5km az=25.3*
*DDA **16** 06:20:30.0, 3928N×4055E, h24km, Md2.8*
ISC 16 06:20:30.3±0.8**,3907N**±004×**4042E**±005**,h5**km±6km**,n7, σ0.s97**/13**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	Bingol	0.20	164	i PG	Pg	06 20 33.8	-0.4
BINT				i SG	Sg	06 20 36.8	-0.1
PTK	Pertek	0.82	258	PG	Pg	06 20 45.0	-1.0
PTK				SG	Sg	06 20 56.9	+0.3
EZC	Erzincan	0.82	326	PG	Pg	06 20 48.9	+2.8
EZM	Erzurum	1.11	41	PN	Pn	06 20 50.6	-1.8
EZM				SN	Sn	06 21 08.0	-0.1
ERZM	Erzurum	1.11	41	i P	Pg	06 20 45.9	-5.7
ERZM				i S	Sg	06 21 06.7	+0.7
KEMA	Kemaliye	1.51	278	i P	Pn	06 20 57.1	-0.8
KEMA				i S	Sn	06 21 18.3	+0.4
MARD	Mardin	1.77	171	i P	Pn	06 21 02.2	+0.7
MARD				i S	Sn	06 21 25.3	+0.8

*ISCJB **16** 06:32:29.4±1.3, 756S±008×12795E±007, h147km±14km, mb4.2/8, Error ellipse: s-maj=14.5km s-min=8.3km az=34.2*
*NEIC **16** 06:32:30.0±1.9, 766S×12772E, h133km±19km, mb4.5/5, Error ellipse: s-maj=19.0km s-min=13.0km az=217.0*
*IDC **16** 06:32:34.4±2.3, 754S×12766E, h172km±22km, mb3.8/6, mb1 3.9/9, mb1mx3.8/14, mbtmp3.9/9, Error ellipse: s-maj=21.2km s-min=14.4km az=46.0*
ISC 16 06:32:33.1±1.0**,786S**±007×**12790E**±006**,h178**km±11km**, n26,**σ**1.s05**/29**,mb4.2**/8**,2D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Kupang	4.79	241	P	Pn	06 33 45.6	+1.3
	21nm,0.3s,baz=94,slow=2.7,SNR=20						
BATI				S	Sn	06 34 40.9	+0.7
	68nm,0.3s,baz=160,slow=19,SNR=16						
KAKA	Kakadu	6.57	138	⇓iP	Pn	06 34 08.4	+0.8
	308nm,0.2s						
KAKA				eS	Sn	06 35 20.6	-1.5
FITZ	Fitzroy Crossi	10.42	192	⇓iP	Pn	06 34 57.7	-0.4
	12nm,0.3s						
FITZ				eS	Sn	06 36 51.6	-2.3
FITZ	Fitzroy Crossi	10.42	192	P	Pn	06 34 58.1	0.0
	2.5nm,0.3s,baz=28,slow=11,SNR=68						
FITZ				S	Sn	06 36 52.1	-1.9
	5.9nm,0.3s,baz=120,slow=22,SNR=6.7						
WRA	Warramunga Arr	13.53	153	P	Pn	06 35 38.5	+0.4
	8.8nm,0.3s,baz=322,slow=14,SNR=248						
WRA				S	Sn	06 38 02.9	-5.8
	5.8nm,0.3s,baz=322,slow=24,SNR=8.3						
WB2	Warramunga Arr	13.54	153	eP	Pn	06 35 37.9	-0.2
WB2				eS	Sn	06 38 02.3	-6.5
COEN	Coen	16.17	113	ePn	Pn	06 36 11.9	+1.3
	3.9nm,0.5s						
ASAR	Alice Springs	16.74	161	P	Pn	06 36 21.3	+3.9
	2.9nm,0.3s,baz=335,slow=9.8,SNR=197						
ASAR				S	S	06 39 23.1	+0.7
	1.4nm,0.3s,baz=327,slow=22,SNR=4.9						
PMG	Port Moresby	19.10	96	P	P	06 36 47.2	+4.8
	1.1nm,0.3s,baz=313,slow=5.2,SNR=6.8						
KSM	Kuching	19.85	297	eP	P	06 36 50.0	-0.5
STKA	Stephens Creek	27.09	154	eP	P	06 38 03.6	+4.4
	0.9nm,0.4s,mb3.8						
STKA	Stephens Creek	27.09	154	P	P	06 38 03.8	+4.5
	1.6nm,0.6s,mb3.8,baz=328,slow=9.8,SNR=5.6						
PSI	Prapat	30.79	289	P	P	06 38 30.9	-1.4
	9.4nm,0.7s,mb4.6,baz=86,slow=7.2,SNR=6.9						
KSRS	Korea Array	45.07	0	P	P	06 40 30.5	-0.8
	1.6nm,0.6s,mb3.9,baz=177,slow=9.6,SNR=5.5						
SONM	Songino Array	58.62	343	P	P	06 42 11.3	0.0
	0.6nm,0.4s,mb3.8,baz=160,slow=7.9,SNR=7.4						
CASY	Casey	59.55	188	eP	P	06 42 22.1	+4.7
	56nm,0.7s,mb5.5						
MK31	Makanchi Array	67.82	328	eP	P	06 43 11.1	-0.7
MKAR	Makanchi Array	67.82	328	P	P	06 43 11.0	-0.8
MKAR				PcP	PcP	06 43 35.9	-1.3
MKAR	Makanchi Array	67.82	328	P	P	06 43 11.0	-0.8
	1.0nm,0.5s,mb3.8,baz=116,slow=8.6,SNR=38						
MKAR				PcP	PcP	06 43 35.9	-1.3
	0.6nm,0.5s,baz=125,slow=5.9,SNR=6.8						
TIXI	Tiksi	79.34	0	eP	P	06 44 19.2	+0.7
	3.1nm,0.4s,mb4.3						
KMBO	Kilima Mbogo	90.49	269	P	P	06 45 17.3	+1.8
KMBO	Kilima Mbogo	90.49	269	P	P	06 45 17.3	+1.8
	1.0nm,0.3s,mb4.3,baz=34,slow=15,SNR=4.2						
ANMO	Albuquerque	123.48	53	ePKPdf	PKPdf	06 51 12.4	+2.8
TORD	Torodi Ar. Bea	126.93	281	PKP	PKPdf	06 51 17.6	+0.8
	0.8nm,0.7s,baz=45,slow=2.5,SNR=5.5						
TXAR	Lajitas Array	127.15	59	PKP	PKPdf	06 51 19.2	+2.4
	0.2nm,0.7s,baz=46,slow=5.2,SNR=3.4						
LPAZ	La Paz	151.23	147	PKPbc	PKPbc	06 52 10.1	+3.8
	0.8nm,0.4s,baz=120,slow=4.2,SNR=6.2						
LPAZ				PKPab	PKPab	06 52 19.9	+5.1
	2.9nm,0.6s,baz=185,slow=1.1,SNR=16						

IDC 16 06:45:01.7±1.4**,2795N**×**14018E,h0**km**,mb3.7**/4**, mb1 3.9**/4**,mb1mx3.5**/18**,mbtmp3.6**/4**,Error ellipse: s-maj=56.5km s-min=32.0km az=75.0,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.94	187	P	P	06 53 42.0	0.0
	0.2nm,0.4s,baz=6.3,slow=7.7,SNR=7.3						
MKAR	Makanchi Array	48.56	309	P	P	06 53 46.2	-0.4
	0.1nm,0.5s,baz=90,slow=4.6,SNR=4.1						
FINES	FINESS Array B	76.39	333	P	P	06 56 53.4	+0.8
	1.8nm,1.0s,baz=41,slow=9.3,SNR=3.4						
TXAR	Lajitas Array	96.51	52	P	P	06 58 33.1	-0.3
	0.3nm,0.6s,baz=304,slow=5.6,SNR=4.5						

*SKHL **16** 07:08:37.5±0.1, 5175N×14271E, h10km, mb4.4/5, Ms3.9/1, msh4.8/1*
SKHL Felt (II-III) at Nogliki.
*ISCJB **16** 07:08:38.3±0.5, 5173N±002×14265E±006, h10km, mb3.3/4, Error ellipse: s-maj=5.7km s-min=3.5km az=179.6*
*MOS **16** 07:08:40.5±1.6, 5107N×14471E, h20km, mb3.6/3, Error ellipse: s-maj=23.4km s-min=13.5km az=71.0*
MOS Felt (III-IV) at Nogliki.
*IDC **16** 07:08:46.8±4.2, 5109N×14374E, h46km±41km, mb3.1/6, mb1 3.4/7, mb1mx3.3/21, mbtmp3.1/7, ML3.3/1, MS2.9/2, Ms1 2.9/2, ms1mx2.7/10, Error ellipse: s-maj=27.6km s-min=24.9km az=118.0*
ISC 16 07:08:39.2±0.6**,5171N**±003×**14275E**±008**,h10**km**,n21, σ1.s46**/27**,mb3.3**/4**,1C,Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TYV	Tymovskoe	0.85	184	ePg	Pg	07 08 55.5	0.0
TYV				AMB	AMB	07 08 57.0	
	196nm,0.6s						
TYV				AMB	AMB	07 08 57.0	
	315nm,0.6s						
TYV				AMB	AMB	07 08 57.0	
	528nm,0.6s						
TYV				eSg	Sg	07 09 08.0	+1.4
TYV				A		07 09 12.0	
	910nm,0.6s						
TYV				A		07 09 12.0	
	2μm,0.6s						
TYV				A		07 09 14.0	
	4μm,3.0s						
TYV				A		07 09 14.0	
	4μm,3.0s						
OKH	Okha	1.85	3	ePN	Pn	07 09 12.1	+1.2
OKH	Okha	1.85	3	eP	Pn	07 09 10.0	-0.9
OKH				AMB	AMB	07 09 13.1	
	500nm,0.3s						
OKH				i S	Sn	07 09 33.0	-1.2
OKH				i Sg	Sg	07 09 39.0	+0.5
OKH				A		07 09 41.1	
	2μm,0.6s						
OKH				A		07 09 41.1	
	1μm,0.6s						
UGL	Uglegorsk	2.67	190	ePg	Pg	07 09 31.8	+1.5
UGL				AMB	AMB	07 09 33.0	
	39nm,0.5s						
UGL				AMB	AMB	07 09 33.0	
	31nm,0.5s						
UGL				AMB	AMB	07 09 33.0	
	77nm,0.5s						
UGL				eSg	Sg	07 10 09.8	+4.9
UGL				A		07 10 14.0	
	110nm,0.7s						
UGL				A		07 10 14.0	
	150nm,0.7s						
UGL				A		07 10 17.0	
	1μm,2.0s						
UGL				A		07 10 17.0	
	800nm,4.0s						
UGL				AMS	AMS	07 10 44.0	
	1μm,6.0s						
UGL				AMS	AMS	07 10 44.0	
	1μm,6.0s						
UGL				AMS	AMS	07 10 44.0	
	600nm,8.0s						
GRNR	Gornyy	4.09	259	ePg	Pg	07 09 56.1	-1.3
GRNR				AMB	AMB	07 09 58.0	
	13nm,0.4s						
GRNR				eSg	Sg	07 10 52.0	+1.7
GRNR				A		07 10 54.0	
	60nm,0.3s						
YSS	Yuzh-Sakhalins	4.76	180	ePN	Pn	07 09 47.2	-3.7
YSS				eS	Sn	07 10 38.5	-7.6
YSS				MLR	MLR		
	comp=Z,800nm,20.0s						
YSS	Yuzh-Sakhalins	4.76	180	ePb	Pb	07 10 01.5	-1.1
YSS				eSg	Sg	07 11 17.0	+5.1
YSS				A		07 11 18.0	
	comp=Z,42nm,0.8s						
YSS				A		07 11 18.0	
	comp=Z,25nm,0.8s						
YSS				AMS	AMS	07 11 54.0	
	comp=Z,400nm,13.0s						
HABR	Khabarovsk	5.92	240	ePN	Pb	07 10 20.4	-2.0
EKMR	Ekimchan	6.15	287	ePb	Pb	07 10 25.3	-1.0
EKMR				ePg	Pg	07 10 38.0	+1.1
EKMR				AMB	AMB	07 10 40.3	
	comp=Z,2.0nm,0.2s						
EKMR				eSg	Sg	07 12 03.5	+7.0
EKMR				A		07 12 18.4	
	comp=Z,5.0nm,0.8s						
EKMR				A		07 12 18.4	
	comp=Z,40nm,0.8s						
EKMR				A		07 12 18.4	
	comp=Z,20nm,0.8s						
KLR	Kul'dur	7.45	255	ePN	Px	07 10 58.2	
ASAJ	Asahikawa	7.60	181	PN	Pn	07 10 27.3	-2.6
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,59nm,20.1s						
ASAJ	Asahikawa	7.60	181	P	Pn	07 10 27.3	-2.6
	comp=Z,0.5nm,0.3s,baz=30,slow=20,SNR=2.2						
ASAJ				LR	LR	07 13 46.2	
	comp=Z,59nm,20.1s,baz=151,slow=43						
TEY	Ternei	7.83	214	eS	Sn	07 12 08.2	+6.6
BMKR	Bomnak	8.87	295	erx	Sx	07 12 43.0	
BMKR				eSg	Sx	07 13 37.0	
KSRS	Korea Array	17.69	222	LR	LR	07 19 22.8	
	comp=Z,50nm,18.1s,baz=55,slow=36						
BILL	Bilibino	19.96	26	⇑iP	Pn	07 13 15.8	+3.1
BILL				pmax	pmax		
	comp=Z,8.0nm,2.5s						
YKA	Yellowknife Ar	50.94	36	i P	P	07 17 41.5	+1.4
YKA	Yellowknife Ar	50.94	36	P	P	07 17 42.3	+2.1
	comp=Z,0.3nm,0.9s,mb3.2,baz=304,slow=7.1,SNR=4.2						
WRA	Warramunga Arr	71.72	188	P	P	07 20 00.1	-1.1
	comp=Z,0.2nm,0.7s,mb3.1,baz=0.5,slow=6.5,SNR=2.4						
ASAR	Alice Springs	75.45	188	P	P	07 20 23.0	0.0
	comp=Z,0.3nm,0.5s,mb3.5,baz=2.6,slow=5.8,SNR=6.6						
TXAR	Lajitas Array	80.55	54	P	P	07 20 54.9	+3.3
	comp=Z,0.4nm,1.0s,mb3.3,baz=310,slow=7.0,SNR=2.8						

*IDC **16** 07:19:38.4±0.9, 1288N×9182E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, MS2.9/1, Ms1 2.9/1, ms1mx2.7/34, Error ellipse: s-maj=35.5km s-min=19.0km az=55.0*
*NEIC **16** 07:19:42.8±0.6, 1289N×9186E, h30km, mb4.7/1, Error ellipse: s-maj=27.0km s-min=13.0km az=55.0*
*ISCJB **16** 07:19:44.5±1.4, 127N±02×912E±02, h87km±13km, mb4.0/8, Error ellipse: s-maj=41.1km s-min=12.1km az=42.7*
ISC 16 07:19:46.1±1.4**,130N**±02×**916E**±02**,h66**km±15km**,n12, σ1.s52**/14**,mb4.0**/8**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	Port Blair	1.71	139	eP	Pn	07 20 17.9	+4.1
PBA				eS	Sn	07 20 36.0	+1.4
PBA				ex	x	07 20 46.7	
	comp=E,3μm,0.4s						
PBA				ex	x	07 20 46.9	
	comp=N,3μm,0.4s						
VIS	Vishakhapatnam	9.28	302	i P	Pn	07 21 54.7	-2.4
VIS				i S	Sn	07 23 32.6	-7.4
VIS				ex	x	07 23 34.3	
	comp=N,89nm,0.4s						
VIS				ex	x	07 23 35.0	
	comp=E,137nm,0.3s						
MKAR	Makanchi Array	34.64	349	P	P	07 26 29.2	+0.2
	comp=E,0.7nm,0.7s,mb3.6,baz=162,slow=8.8,SNR=12						
SONM	Songino Array	36.91	17	P	P	07 26 49.3	+0.8
	comp=E,0.3nm,0.5s,mb3.5,baz=196,slow=9.1,SNR=3.4						
FITZ	Fitzroy Crossi	45.61	132	eP	P	07 27 58.6	-1.6
	comp=E,4.0nm,0.4s,mb4.5						
AKTK	Aktyubinsk	46.32	331	P	P	07 28 09.1	+3.7
AKTO	Aktyubinsk	46.32	331	P	P	07 28 09.1	+3.7
	comp=E,0.6nm,0.5s,mb3.6,baz=117,slow=9.0,SNR=3.3						
WRA	Warramunga Arr	53.27	127	P	P	07 28 57.5	-1.0
	comp=E,2.0nm,0.6s,mb4.3,baz=306,slow=8.2,SNR=28						
WB2	Warramunga Arr	53.28	127	eP	P	07 28 57.2	-1.4
ASAR	Alice Springs	55.10	131	P	P	07 29 11.1	-0.7
	comp=E,1.8nm,0.6s,mb4.3,baz=310,slow=6.7,SNR=30						
BRTR	Keskin Array B	57.27	309	P	P	07 29 28.5	+1.4
	comp=E,0.8nm,0.8s,mb3.8,baz=79,slow=11,SNR=3.0						
BOSA	Boshof	76.23	236	P	P	07 31 30.4	+2.6
	comp=E,2.5nm,0.7s,mb4.0,baz=74,slow=5.5,SNR=5.0						

IDC 16 07:20:42.3±4.6**,471S**×**10145E,h0**km**,mb3.4**/4**,mb1 3.5**/4**, mb1mx3.4**/17**,mbtmp3.4**/4**,Error ellipse: s-maj=182.9km s-min=25.4km az=55.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.41	118	P	P	07 27 41.3	+1.0
	0.3nm,0.7s,baz=291,slow=12,SNR=3.2						
ASAR	Alice Springs	36.52	124	P	P	07 27 48.6	-1.1
	0.3nm,0.5s,baz=295,slow=7.7,SNR=5.4						
SONM	Songino Array	52.51	4	P	P	07 29 57.2	+0.1
	0.3nm,0.7s,baz=179,slow=8.5,SNR=3.9						
MKAR	Makanchi Array	54.02	344	P	P	07 30 08.2	0.0
	0.4nm,0.7s,baz=141,slow=8.4,SNR=4.1						

IDC 16 07:40:30.3±1.8**,081N**×**9719E,h0**km**,mb3.5**/4**,mb1 3.6**/5**, mb1mx3.5**/20**,mbtmp3.5**/5**,ML3.0**/1**,Error ellipse: s-maj=53.1km s-min=23.3km az=62.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.63	41	Pn	Pn	07 41 13.8	-0.3
	2.9nm,0.3s,baz=212,slow=9.5,SNR=12						
WRA	Warramunga Arr	41.84	122	P	P	07 48 22.0	-0.4
	0.3nm,0.6s,baz=302,slow=9.1,SNR=5.5						
ASAR	Alice Springs	43.17	127	P	P	07 48 33.3	+0.1
	0.3nm,0.5s,baz=295,slow=7.9,SNR=9.0						
SONM	Songino Array	47.52	8	P	P	07 49 06.7	-0.5
	0.2nm,0.3s,baz=185,slow=7.4,SNR=4.1						
SONM				PcP	PcP	07 50 37.8	+0.4
	0.4nm,0.8s,baz=161,slow=1.1,SNR=3.0						
MKAR	Makanchi Array	47.61	346	P	P	07 49 08.0	0.0
	0.8nm,0.5s,baz=162,slow=8.9,SNR=18						

*CSEM **16** 07:50:21.4±0.1, 3704N×2954E, h16km, MD2.9, Error ellipse: s-maj=1.6km s-min=1.3km az=7.0*
*ISK **16** 07:50:21.4, 3705N×2953E, h15km, MD2.9*
*ISCJB **16** 07:50:22.5±0.5, 3703N±004×2956E±005, h21km±6km, Error ellipse: s-maj=6.9km s-min=6.1km az=170.1*
ISC 16 07:50:22.4±0.5**,3703N**±004×**2955E**±004**,h17**km±5km**,n15, σ0.s98**/20**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	Golhisar	0.20	2	i P	Pg	07 50 27.5	+0.2
GOLH				i S	Sg	07 50 32.1	+1.5
ELL	Elmali	0.40	135	i PG	Pg	07 50 30.3	-0.4
ELL				i SG	Sg	07 50 37.1	+0.9
FETY	Fethiye	0.55	224	PG	Pg	07 50 32.0	-1.3
FETY				SG	Sg	07 50 40.9	+0.3
DENT	Denizli	0.83	330	ePG	Pg	07 50 37.9	-0.7
ANTB	Antalya	0.89	98	ePG	Pg	07 50 40.0	+0.2
BCK	Bucak	0.93	62	ePG	Pg	07 50 39.5	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	1.02	276	ePG	Pg	07 50 41.5	-0.7
ISP	Isparta	1.11	43	ePN	Pn	07 50 43.2	-0.1
MLSB	Milas	1.44	281	ePN	Pn	07 50 46.4	-1.4
DAT	Datca	1.61	260	ePN	Pn	07 50 50.1	0.0
KULA	Kula-Manisa	1.64	335	ePN	Pn	07 50 49.6	-0.9
BDRM	Kayabasi	1.69	272	iP	Pn	07 50 53.2	+2.1
BDRM				iS	Sn	07 51 14.4	+2.0
BDRM	Kayabasi	1.69	272	iP	Pn	07 50 53.2	+2.0
BDRM				iS	Sn	07 51 14.4	+2.0
BODT	Bodrum	1.79	272	ePN	Pn	07 50 52.3	-0.3
KONT	Konya--Tatoy	2.41	67	ePN	Pn	07 51 01.5	+0.3

IDC 16 07:58:16.2±3.1**, 2892N×5140E, h0**km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/22**, mbtmp3.5**/4**, Error ellipse: s-maj=101.5km s-min=31.2km az=144.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKTO	Aktyubinsk	22.07	11	P	P	08 03 13.1	+0.6
	1.0nm,0.5s,baz=293,slow=13,SNR=5.0						
MKAR	Makanchi Array	29.95	45	P	P	08 04 26.5	+0.5
	0.2nm,0.5s,baz=232,slow=7.0,SNR=4.3						
TORD	Torodi Ar. Bea	48.62	262	P	P	08 07 02.4	+0.3
	0.7nm,0.7s,baz=55,slow=6.9,SNR=4.6						
YKA	Yellowknife Ar	88.22	354	P	P	08 11 07.8	-1.1
	0.2nm,0.5s,baz=9.7,slow=5.1,SNR=4.6						

*ISCJB **16** 08:40:17.9±0.6, 3127N±005×1303E±0.1, h158km±4km, mb3.2/3, Error ellipse: s-maj=15.4km s-min=7.9km az=15.0*
*IDC **16** 08:40:18.3±0.9, 3133N×13004E, h149km±9km, mb3.1/3, mb1 3.2/5, mb1mx3.0/22, mbtmp3.1/5, Error ellipse: s-maj=41.1km s-min=9.8km az=108.0*
*JMA **16** 08:40:19.9±0.1, 3133N×13042E, h151km±1km, M3.1*
*NEIC **16** 08:40:20.0, 3133N×13042E, h151km, MG3.1(JMA), After JMA.*
ISC 16 08:40:19.0±0.6**, 3128N**±005×**13033E**±010**, h154**km±4km**, n15, σ0.86**/24**, mb3.2**/3**, Kyushu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.25	26	P	Pn	08 40 40.4	+0.5
JSU				eS	Sn	08 40 56.2	+0.3
JTSR	Tashiro 2	0.52	103	P	Pn	08 40 41.3	+0.4
JTSR				S	Sn	08 40 57.1	-0.5
JSJ	Shimokoshiki	0.65	307	P	Pn	08 40 42.5	+0.9
JSJ				eS	Sn	08 40 59.8	+0.9
JTN	Tanegashima 3	0.84	138	P	Pn	08 40 43.6	+0.7
JTN				S	Sn	08 41 01.2	+0.1
JNAR	Kushima--Naru	0.84	73	P	Pn	08 40 43.3	+0.4
JNAR				S	Sn	08 41 00.8	-0.4
JTZ	Takazaki	0.90	46	P	Pn	08 40 43.4	+0.1
JTZ				S	Sn	08 41 00.6	-1.3
JIU2	Izumi 2	1.33	18	P	Pn	08 40 47.3	+0.2
JIU2				S	Sn	08 41 07.6	-1.1
JNU	Nakatsue	1.89	14	P	Pn	08 40 53.3	+0.2
	14nm,0.3s,baz=206,slow=5.8,SNR=96						
JNU				S	Sn	08 41 18.6	-0.8
	2.4nm,0.3s,baz=158,slow=10,SNR=4.3						
JOW	Kunigami	4.78	203	P	Pn	08 41 29.9	+0.2
	1.6nm,0.3s,baz=284,slow=22,SNR=13						
JOW				S	Sn	08 42 22.4	-2.3
	6.2nm,0.3s,baz=142,slow=24,SNR=12						
MJAR	Matsushiro Arr	8.39	49	P	Pn	08 42 19.8	+2.3
	0.8nm,0.3s,baz=227,slow=13,SNR=5.7						
ASAR	Alice Springs	54.74	176	P	P	08 49 32.9	+0.3
	0.2nm,0.3s,mb3.3,baz=359,slow=6.3,SNR=5.0						
FINES	FINESS Array B	69.40	330	P	P	08 51 08.8	-1.1
FINES	FINESS Array B	69.40	330	P	P	08 51 08.8	-1.0
	0.5nm,0.3s,mb3.7,baz=75,slow=5.9,SNR=6.3						
YKA	Yellowknife Ar	73.19	26	P	P	08 51 32.3	-0.3
YKA	Yellowknife Ar	73.19	26	P	P	08 51 32.3	-0.3
	0.1nm,0.6s,mb2.7,baz=304,slow=5.6,SNR=4.5						

*IDC **16** 08:42:05.3±1.8, 792N×12707E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, ML4.6/1, Error ellipse: s-maj=91.5km s-min=22.9km az=70.0*
*MAN **16** 08:42:06, 776N×12652E, h32km, mb4.9, ML3.8, MS3.9*
*NEIC **16** 08:42:08.0±1.2, 763N×12636E, h10km, Error ellipse: s-maj=26.0km s-min=19.4km az=53.0*
*ISCJB **16** 08:42:09.2±0.6, 770N±004×12636E±005, h33km, mb3.5/5, Error ellipse: s-maj=7.6km s-min=5.5km az=160.7*
ISC 16 08:42:10.4±0.6**, 771N**±004×**12633E**±005**, h35**km**, n14, σ1.22**/19**, mb3.5**/5**, 3C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.47	3	⇑iP	Pn	08 42 19.3	-1.4
BIPH				iS	Sn	08 42 26.8	-1.1
MATI	Mati	0.76	186	eP	Pn	08 42 22.8	-1.8
MATI				eS	Sn	08 42 34.6	-0.3
DAV	Davao City (W)	0.98	230	ePn	Pn	08 42 27.1	-0.5
BUKP	Musuan	1.27	278	eP	Pn	08 42 30.2	-1.4
BUKP				eS	Sn	08 42 47.9	+0.4
CGP	Cagayan de Oro	1.78	295	⇑eP	Pn	08 42 39.0	+0.3
CGP				iS	Sn	08 43 01.8	+1.6
CTBH	Cotabato--PC H	2.12	257	⇑iP	Pn	08 42 42.7	-0.7
CTBH				iS	Sn	08 43 07.3	-1.3
SCPH	Surigao	2.22	338	⇓eP	Pn	08 42 48.9	+4.1
TBP	Tagbilaran	3.14	309	eP	Pn	08 42 57.9	+0.5
BATI	Kupang	17.99	189	P	Pn	08 46 21.0	+3.1
	2.1nm,0.3s,baz=283,slow=7.4,SNR=3.3						
FITZ	Fitzroy Crossi	25.65	182	P	P	08 47 38.4	+1.4
	0.7nm,0.7s,mb3.3,baz=2.0,slow=17,SNR=3.3						
WRA	Warramunga Arr	28.58	164	P	P	08 48 04.0	+0.7
	0.2nm,0.7s,mb3.0,baz=347,slow=10.0,SNR=2.8						
ASAR	Alice Springs	32.05	167	P	P	08 48 35.1	+1.2
	0.3nm,0.3s,mb3.5,baz=346,slow=7.2,SNR=7.7						
STKA	Stephens Creek	41.97	160	P	P	08 49 57.1	-1.0
	1.1nm,0.5s,mb3.8,baz=338,slow=9.9,SNR=4.0						
MKAR	Makanchi Array	54.11	324	P	P	08 51 33.9	+2.1
	0.7nm,0.7s,mb3.7,baz=127,slow=8.4,SNR=9.1						

IDC 16 09:00:14.4±2.4**, 5222N×3537E, h0**km**, mb3.2**/1**, mb1 3.6**/5**, mb1mx3.3**/21**, mbtmp3.5**/5**, ML3.2**/5**, Error ellipse: s-maj=28.4km s-min=11.6km az=122.0, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG	Malin Array Be	4.13	251	Pn	Pn	09 01 17.9	-0.8
	1.2nm,0.3s,baz=62,slow=15,SNR=6.8						
AKASG				Pg	Pg	09 01 25.6	-8.0
	1.1nm,0.3s,baz=70,slow=18,SNR=4.7						
AKASG				Sn	Sn	09 02 06.2	-1.5
	1.8nm,0.3s,baz=66,slow=25,SNR=3.4						
AKASG				Lg		09 02 23.7	
	2.7nm,0.3s,baz=67,slow=30,SNR=5.9						
FINES	FINESS Array B	10.55	335	Pn	Pn	09 02 42.2	-4.4
	0.1nm,0.3s,baz=148,slow=14,SNR=5.5						
FINES				Sn	Sn	09 04 32.9	-12
	0.2nm,0.3s,baz=145,slow=22,SNR=3.0						
HFS	Hagfors	14.39	312	Pn	Pn	09 03 32.2	-6.8
	0.2nm,0.3s,baz=116,slow=16,SNR=2.4						
NOA	NORSAR Array B	15.87	313	Pn	Pn	09 03 51.7	-7.1
	0.1nm,0.3s,baz=107,slow=13,SNR=2.8						
ARCES	ARCESS Array B	17.98	349	Pn	Pn	09 04 21.2	-4.2
	0.3nm,0.3s,baz=162,slow=12,SNR=8.5						
YKA	Yellowknife Ar	63.20	345	P	P	09 10 41.9	-1.8
	0.2nm,0.6s,baz=16,slow=6.6,SNR=4.2						

*ISCJB **16** 09:04:23.7±0.7, 1558N±009×9243W±005, h184km±6km, mb3.5/3, Error ellipse: s-maj=15.6km s-min=6.7km az=11.9*
*IDC **16** 09:04:24.4±1.6, 1565N×9219W, h182km±17km, mb3.2/3, mb1 3.5/7, mb1mx3.3/21, mbtmp3.2/7, Error ellipse: s-maj=31.7km s-min=15.0km az=48.0*
*MEX **16** 09:04:26.8±0.8, 1563N×9248W, h184km±13km, MD4.1*
*NEIC **16** 09:04:27.0, 1479N×9284W, h34km, MD4.0(MEX), After MEX.*
ISC 16 09:04:24.6±0.7**, 1557N**±009×**9244W**±005**, h180**km±6km**, n21, σ1.34**/35**, mb3.5**/3**, 1C, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CCIG	Comitan	0.76	22	iP	Pn	09 04 51.8	+1.1
CCIG				iS	Sn	09 05 11.0	+0.1
CCIG	Comitan	0.76	22	iP	Pn	09 04 51.8	+1.1
CCIG				iS	Sn	09 05 11.8	+0.8
SCX	San Cristobal	1.17	351	iP	Pn	09 04 53.3	-0.3
SCX				iS	Sn	09 05 15.5	-0.7
SCX	San Cristobal	1.17	351	iP	Pn	09 04 53.3	-0.3
SCX				iS	Sn	09 05 17.2	+1.0
CMIG	Matias Romero	2.79	303	P	Pn	09 05 11.3	+0.6
	26nm,0.3s,baz=115,slow=10,SNR=307						
CMIG				S	Sn	09 05 45.4	-1.2
	18nm,0.3s,baz=316,slow=20,SNR=23						
CMIG	Matias Romero	2.79	303	⇑iP	Pn	09 05 11.1	+0.4
CMIG				iS	Sn	09 05 45.4	-1.2
HUIG	Huatulco	3.54	274	iP	Pn	09 05 19.9	0.0
HUIG				iS	Sn	09 06 03.2	+0.2
OXX	Oaxaca	4.38	291	iP	Pn	09 05 31.3	+0.7
OXX				eS	Sn	09 06 19.9	-2.2
VHO	Vista Hermosa	4.38	290	iP	Pn	09 05 30.3	-0.3
VHO				iS	Sn	09 06 19.9	-2.4
VHO	Vista Hermosa	4.38	290	iP	Pn	09 05 32.8	+2.2
VHO				iS	Sn	09 06 21.2	-1.1
UTMO	Huajuapan	5.61	294	iP	Pn	09 05 48.6	+2.1
UTMO				iS	Sn	09 06 50.9	0.0
TEIG	Tepich	6.09	40	P	Pn	09 05 50.7	-2.1
	0.7nm,0.3s,baz=66,slow=19,SNR=11						
PPM	Popocatepetl	6.86	301	eP	Pn	09 06 07.6	+4.8
PPM	Popocatepetl	6.86	301	iP	Pn	09 06 06.7	+3.9
PPM				iS	Sn	09 07 21.0	+0.6
IIO	Organos	7.20	305	eP	Pn	09 06 07.8	+0.4
MEIG	Mezcala	7.27	290	iP	Pn	09 06 11.1	+2.9
MEIG				iS	Sn	09 07 27.9	-2.2
JTS	JuntasAbangare	8.99	125	P	Pn	09 06 30.1	-0.8
	0.8nm,0.3s,baz=320,slow=18,SNR=5.9						
JTS				S	Sn	09 08 02.2	-9.1
	0.2nm,0.3s,baz=257,slow=18,SNR=1.9						
TXAR	Lajitas Array	17.16	325	P	Pn	09 08 14.8	+1.0
	0.1nm,0.3s,baz=157,slow=16,SNR=5.9						
NVAR	Mina Array Bea	32.19	320	P	P	09 10 38.2	+2.6
	0.9nm,0.6s,mb3.6,baz=130,slow=9.1,SNR=10						
LPAZ	La Paz	39.72	142	P	P	09 11 39.0	-0.7
	0.6nm,0.5s,mb3.5,baz=315,slow=11,SNR=3.5						
YKA	Yellowknife Ar	49.41	347	P	P	09 12 53.7	-1.9
	0.5nm,0.5s,mb3.5,baz=151,slow=7.4,SNR=13						

*NEIC **16** 09:06:02.8, 4003S×17364E, h204km, MG4.1(WEL), After WEL.*
WEL 16 09:06:02.7±0.4**, 4003S×17364E, h204**km±3km**, ML4.1**/22**, 3C-2D, Error ellipse: s-maj=2.3km s-min=1.1km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NRZ	Ngariki Road	0.73	18	P	Pn	09 06 31.5	+0.2
NRZ				S	Sn	09 06 52.4	-1.0
NRZ	Ngariki Road	0.73	18	PN	Pn	09 06 31.5	+0.2
NRZ				SN	Sn	09 06 52.4	-1.0
NWEZ	Newall Road	0.78	13	P	Pn	09 06 31.7	+0.1
NWEZ				S	Sn	09 06 52.9	-1.0
NWEZ	Newall Road	0.78	13	PN	Pn	09 06 31.7	+0.1
NWEZ				SN	Sn	09 06 52.9	-0.9
DUWZ	D'Urville Isla	0.80	165	⇑PN	Pn	09 06 31.7	+0.1
DUWZ				SN	Sn	09 06 51.1	-3.1
NEZ	North Egmont	0.83	25	P	Pn	09 06 31.7	-0.2
NEZ	North Egmont	0.83	25	PN	Pn	09 06 31.7	-0.2
PKE	Pukeiti	0.88	18	P	Pn	09 06 32.2	+0.1
PKE	Pukeiti	0.88	18	PN	Pn	09 06 32.2	0.0
PKE				SN	Sn	09 06 53.0	-1.8
RAEZ	Rainy Point	0.94	38	PN	Pn	09 06 32.4	-0.1
WAZ	Wanganui	1.07	76	P	Pn	09 06 33.9	+0.6
WAZ				S	Sn	09 06 56.3	-0.7
WAZ	Wanganui	1.07	76	PN	Pn	09 06 33.9	+0.6
WAZ				SN	Sn	09 06 56.3	-0.7
QRZ	Quartz Range	1.17	227	P	Pn	09 06 33.6	-0.4
QRZ	Quartz Range	1.17	227	⇑PN	Pn	09 06 33.6	-0.4
NNZ	Nelson	1.20	190	P	Pn	09 06 34.1	-0.2
NNZ	Nelson	1.20	190	PN	Pn	09 06 34.1	-0.2
VRZ	Vera Road	1.25	44	P	Pn	09 06 34.1	-0.6
VRZ	Vera Road	1.25	44	PN	Pn	09 06 34.1	-0.6
KIW	Kapiti Island	1.27	131	P	Pn	09 06 35.0	+0.2
KIW	Kapiti Island	1.27	131	⇑PN	Pn	09 06 35.0	+0.1
TUWZ	Tuamarina	1.42	171	PN	Pn	09 06 36.0	0.0
MRW	Makara Radio	1.44	146	P	Pn	09 06 36.5	+0.3
MRW	Makara Radio	1.44	146	⇓PN	Pn	09 06 36.5	+0.3
PKVZ	Pokaka	1.51	61	PN	Pn	09 06 36.7	-0.1
SNZO	South Karori	1.51	148	⇓PN	Pn	09 06 36.9	+0.1
WEL	Wellington	1.52	146	P	Pn	09 06 37.0	+0.1
WEL	Wellington	1.52	146	PN	Pn	09 06 37.0	+0.2
CAW	Cannon Point	1.53	135	P	Pn	09 06 37.2	+0.2
CAW	Cannon Point	1.53	135	PN	Pn	09 06 37.2	+0.2
MTVZ	Mangateitei	1.55	66	PN	Pn	09 06 37.1	0.0
MRZ	Mangatainoka R	1.61	114	eP	Pn	09 06 37.6	-0.1
MRZ	Mangatainoka R	1.61	114	PN	Pn	09 06 37.6	0.0
TRVZ	Turoa	1.64	64	PN	Pn	09 06 38.1	+0.1
BHW	Baring Head	1.66	146	P	Pn	09 06 38.1	-0.1
BHW	Baring Head	1.66	146	PN	Pn	09 06 38.1	-0.1
WNVZ	Wahianoa	1.66	66	P	Pn	09 06 38.3	+0.1
WNVZ	Wahianoa	1.66	66	PN	Pn	09 06 38.3	0.0
FWVZ	Far West T-bar	1.66	63	P	Pn	09 06 38.0	-0.2
FWVZ	Far West T-bar	1.66	63	PN	Pn	09 06 38.0	-0.3
WPVZ	Whakapapa	1.68	61	P	Pn	09 06 38.3	-0.1
WPVZ	Whakapapa	1.68	61	PN	Pn	09 06 38.3	-0.1
TWVZ	Taurewa	1.69	56	P	Pn	09 06 37.9	-0.5
TWVZ	Taurewa	1.69	56	PN	Pn	09 06 37.9	-0.6
BSWZ	Blackbirch Sta	1.69	174	P	Pn	09 06 38.9	+0.5
BSWZ	Blackbirch Sta	1.69	174	PN	Pn	09 06 38.9	+0.4
TUVZ	Tukino	1.73	65	PN	Pn	09 06 39.0	+0.2
NGZ	Ngauruhoe	1.74	61	P	Pn	09 06 38.7	-0.2
NGZ	Ngauruhoe	1.74	61	PN	Pn	09 06 38.7	-0.2
MOVZ	Moawhango	1.74	70	PN	Pn	09 06 38.6	-0.4
WTVZ	West Tongariro	1.76	59	P	Pn	09 06 38.9	-0.2
WTVZ	West Tongariro	1.76	59	PN	Pn	09 06 38.9	-0.3
TSZ	Takapari Road	1.78	92	eP	Pn	09 06 39.4	+0.1
TSZ	Takapari Road	1.78	92	PN	Pn	09 06 39.4	+0.1
HIZ	Hauiti	1.78	32	P	Pn	09 06 38.8	-0.6
HIZ	Hauiti	1.78	32	PN	Pn	09 06 38.8	-0.6
KRVZ	Karewarewa	1.80	59	PN	Pn	09 06 39.2	-0.4
MTW	Mount Morrison	1.81	129	P	Pn	09 06 39.5	-0.1
MTW	Mount Morrison	1.81	129	PN	Pn	09 06 39.5	0.0
THZ	Tophouse	1.82	198	P	Pn	09 06 39.5	-0.1
THZ	Tophouse	1.82	198	PN	Pn	09 06 39.5	-0.2
MSWZ	Moikau Station	1.84	139	P	Pn	09 06 39.8	-0.1
MSWZ	Moikau Station	1.84	139	PN	Pn	09 06 39.8	-0.1
TIWZ	Tintock	1.87	114	PN	Pn	09 06 40.2	+0.1
KATZ	Kakaramea	1.90	57	P	Pn	09 06 40.5	-0.1
KATZ	Kakaramea	1.90	57	PN	Pn	09 06 40.5	0.0
PAWZ	Paruwai Farm	1.91	135	P	Pn	09 06 40.6	0.0
PAWZ	Paruwai Farm	1.91	135	PN	Pn	09 06 40.6	0.0
TRWZ	Traveller	2.07	132	PN	Pn	09 06 42.2	0.0
WATZ	Wairara	2.09	51	P	Pn	09 06 42.2	-0.2
WATZ	Wairara	2.09	51	PN	Pn	09 06 42.2	-0.2
BFZ	Birch Farm	2.09	109	PN	Pn	09 06 42.4	0.0
DSZ	Denniston Nort	2.21	219	P	Pn	09 06 43.3	-0.3
DSZ	Denniston Nort	2.21	219	PN	Pn	09 06 43.3	-0.3
BKZ	Black Stump Fm	2.36	70	P	Pn	09 06 44.8	-0.5
BKZ	Black Stump Fm	2.36	70	PN	Pn	09 06 44.8	-0.6
KHZ	Kahutara	2.39	182	PN	Pn	09 06 45.2	-0.3
PXZ	Pawanui	2.47	91	PN	Pn	09 06 46.6	+0.1
LTZ	Lake Taylor	2.94	200	P	Pn	09 06 51.1	-0.6
LTZ	Lake Taylor	2.94	200	PN	Pn	09 06 51.1	-0.6
URZ	Urewera	3.22	58	P	Pn	09 06 53.5	-1.7
URZ	Urewera	3.22	58	PN	Pn	09 06 53.5	-1.6
KNZ	Kokohu	3.27	73	P	Pn	09 06 55.3	-0.5
KNZ	Kokohu	3.27	73	PN	Pn	09 06 55.3	-0.5
MWZ	Matawai	3.46	62	P	Pn	09 06 56.7	-1.3
MWZ	Matawai	3.46	62	PN	Pn	09 06 56.7	-1.3
CRLZ	Canterbury Las	3.62	192	P	Pn	09 06 58.2	-1.7
CRLZ	Canterbury Las	3.62	192	PN	Pn	09 06 58.2	-1.7
WVZ	Waitaha Valley	3.74	215	P	Pn	09 07 00.1	-1.3
WVZ	Waitaha Valley	3.74	215	PN	Pn	09 07 00.1	-1.3
MQZ	McQueen's Vall	3.75	191	P	Pn	09 06 59.4	-2.0
MQZ	McQueen's Vall	3.75	191	PN	Pn	09 06 59.4	-2.0
PUZ	Puketiti	4.09	63	eP	Pn	09 07 04.0	-1.7
PUZ	Puketiti	4.09	63	PN	Pn	09 07 04.0	-1.7
RPZ	Rata Peaks	4.16	207	P	Pn	09 07 05.3	-1.2
RPZ	Rata Peaks	4.16	207	PN	Pn	09 07 05.3	-1.2
MXZ	Matakaoa Point	4.40	57	P	Pn	09 07 07.9	-1.7
MXZ	Matakaoa Point	4.40	57	PN	Pn	09 07 07.9	-1.7
FOZ	Fox Glacier	4.61	219	eP	Pn	09 07 09.1	-3.0
FOZ	Fox Glacier	4.61	219	PN	Pn	09 07 09.1	-2.9
LBZ	Lake Benmore	5.05	209	eP	Pn	09 07 16.1	-1.7
LBZ	Lake Benmore	5.05	209	PN	Pn	09 07 16.1	-1.7
JCZ	Jackson Bay	5.44	220	eP	Pn	09 07 20.9	-1.8
JCZ	Jackson Bay	5.44	220	PN	Pn	09 07 20.9	-1.8
ODZ	Otahua Downs	5.48	203	eP	Pn	09 07 22.0	-1.2
ODZ	Otahua Downs	5.48	203	PN	Pn	09 07 22.0	-1.2
WKZ	Wanaka	5.89	214	eP	Pn	09 07 25.8	-2.7
WKZ	Wanaka	5.89	214	PN	Pn	09 07 25.8	-2.7
EAZ	Earnscleugh	6.10	210	eP	Pn	09 07 28.5	-2.7
EAZ	Earnscleugh	6.10	210	PN	Pn	09 07 28.5	-2.7
TUZ	Tuapeka	6.61	205	eP	Pn	09 07 35.6	-2.2
TUZ	Tuapeka	6.61	205	PN	Pn	09 07 35.6	-2.2
WHZ	Wether Hill Ro	7.20	214	eP	Pn	09 07 43.2	-2.2
WHZ	Wether Hill Ro	7.20	214	PN	Pn	09 07 42.7	-2.7

*ISK **16** 09:13:34.7, 3834N×39.18E, h3km, ML3.3*
*ISCJB **16** 09:13:35.3±0.6, 3833N±002×3920E±003, h1km±5km, Error ellipse: s-maj=4.1km s-min=3.6km az=168.4*
*CSEM **16** 09:13:35.0±0.1, 3835N×39.17E, h8km, MD3.2, Error ellipse: s-maj=1.6km s-min=1.2km az=171.0*
*DDA **16** 09:13:35.9, 3833N×3923E, h5km±5km, Md3.2*
ISC 16 09:13:36.0±0.5**, 3833N**±002×**3920E**±003**, h3**km±5km**, n29, σ1.10**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.23	315	iP	Pg	09 13 40.4	-0.2
ELZG				iS	Sg	09 13 49.5	+5.9
PTK	Pertek	0.58	15	iPG	Pg	09 13 46.7	-0.4
PTK				iSG	Sg	09 13 55.4	+0.8
MALT	Malatya	0.60	268	iPG	Pg	09 13 46.5	-1.1
MALT				iSG	Sg	09 13 56.0	+0.5
MYA	Malataya	0.61	270	iPG	Pg	09 13 46.9	-0.8
MYA				iSG	Sg	09 13 56.0	+0.5
DIY	Diyarbakir	0.92	118	iPG	Pg	09 13 53.5	-0.2
DIY				iSG	Sg	09 14 07.0	+1.3
URFA	Urfa	0.94	199	iPG	Pg	09 13 53.6	-0.4
URFA				iSG	Sg	09 14 07.2	+1.0
KEMA	Kemaliye	1.08	330	iP	Pg	09 13 55.3	-1.5
KEMA				iS	Sg	09 14 10.9	+0.1
KEMA	Kemaliye	1.08	330	iP	Pg	09 13 55.3	-1.5
KEMA				iS	Sg	09 14 10.9	0.0
ATAB	Bozova	1.12	220	iP	Pg	09 13 57.7	+0.2
ATAB				iS	Sg	09 14 13.1	+1.1
BINT	Bingol	1.15	61	iPN	Pn	09 13 57.3	-1.7
EZC	Erzincan	1.49	19	iPN	Pn	09 14 02.5	-1.2
MARD	Mardin	1.61	129	iP	Pn	09 14 04.2	-1.2
MARD				iS	Sn	09 14 24.4	-2.3
GZT	Gaziantep	1.62	233	iP	Pn	09 14 04.3	-1.1
GZT				iS	Sn	09 14 29.3	+2.5
BNGL	BINGOL	1.65	67	iP	Pn	09 14 07.0	+1.2
BNGL				iS	Sn	09 14 31.4	+3.9
BTMT	Batman	1.81	94	iPN	Pn	09 14 06.0	-2.1
KELT	Kelkit	1.81	1	iP	Pn	09 14 10.0	+1.9
KELT				iS	Sn	09 14 34.0	+2.4
GAZ	Gaziantep	1.95	234	ePN	Pn	09 14 09.6	-0.5
KMRS	Kahramanmaras	2.00	246	ePN	Pn	09 14 10.2	-0.4
GUMT	Gumushane	2.13	6	ePN	Pn	09 14 12.5	-0.1
EZM	Erzurum	2.30	46	ePN	Pn	09 14 14.9	0.0
ANDN	Andirin	2.38	252	iP	Pn	09 14 14.8	-1.1
BNN	Bunyan	2.68	282	ePN	Pn	09 14 20.2	+0.2
SIRT	Sirnak	2.70	107	ePN	Pn	09 14 20.8	+0.5
KOZT	Kozan	2.80	253	ePN	Pn	09 14 21.4	-0.3
AGRB	Hanur-Agry	3.21	66	ePN	Pn	09 14 27.9	+0.6
YOZ	Yozgat	3.29	295	ePN	Pn	09 14 28.4	0.0
CUKT	Cukurca	3.66	106	ePN	Pn	09 14 35.0	+1.5
HKR	Hakkari	3.67	100	ePN	Pn	09 14 34.4	+0.7
MSL	Mosul	3.71	122	ex	x	09 14 41.0	
MSL				ex	x	09 15 32.5	

*ISCJB **16** 09:29:41.6±0.2, 4834N±002×658E±002, h10km, Error ellipse: s-maj=2.2km s-min=1.8km az=179.6*
*STR **16** 09:29:43.8±0.3, 4836N×670E, h10km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **16** 09:29:43.8±0.6, 4838N×668E, h10km, ML2.3, Error ellipse: s-maj=8.9km s-min=4.4km az=70.0*
*CSEM **16** 09:29:44.0±0.0, 4834N×667E, h10km, ML2.8/16, Error ellipse: s-maj=0.9km s-min=0.7km az=170.0*
*LDG **16** 09:29:44.3±0.1, 4833N×665E, h10km, Md2.8/4, Ml2.8/17, Error ellipse: s-maj=1.1km s-min=0.7km az=162.0*
*NEIC **16** 09:29:44.3, 4833N×665E, h10km, ML2.8(LDG), After LDG.*
ISC 16 09:29:43.1±0.2**, 4834N**±001×**663E**±002**, h19**km±2km**, n63, σ0.79**/135**, France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ECH	Echery	0.37	109	Pg	Pg	09 29 51.2	+0.2
ECH				Sg	Sg	09 29 55.8	-0.5
HAU	Haudompre	0.38	210	ePg	Pg	09 29 51.9	+0.8
	SNR=1.0						
HAU				eSg	Sg	09 29 57.0	+0.5
	96nm,0.2s						
HAU	Haudompre	0.38	210	ePg	Pg	09 29 51.9	+0.8
	SNR=1.0						
HAU				eSg	Sg	09 29 57.0	+0.5
	48nm,0.2s						
CDF	Champ du Feu	0.44	80	ePg	Pg	09 29 52.3	+0.2
	SNR=1.0						
CDF				eSg	Sg	09 29 57.8	-0.4
	28nm,0.2s						
CDF	Champ du Feu	0.44	80	ePg	Pg	09 29 52.3	+0.2
	SNR=1.0						
CDF				eSg	Sg	09 29 57.8	-0.4
	14nm,0.2s						
THEF	They Montfort	0.44	256	Pg	Pg	09 29 53.0	+0.8
HINF	Hinteralfeld	0.54	164	ePg	Pg	09 29 54.5	+0.5
	SNR=1.0						
HINF				eSg	Sg	09 30 01.3	0.0
	103nm,0.2s						
HINF	Hinteralfeld	0.54	164	ePg	Pg	09 29 54.5	+0.5
	SNR=1.0						
HINF				eSg	Sg	09 30 01.3	0.0
	51nm,0.2s						
MOF	Molkenrain	0.59	145	Pg	Pg	09 29 55.1	+0.2
RFYF	Reffroy	0.82	291	ePn	Pn	09 30 00.7	+1.1
	baz=106						
RFYF				eSg	Sg	09 30 11.4	+1.3
	70nm,0.2s,baz=104						
RFYF	Reffroy	0.82	291	eSg	Sg	09 30 11.4	+1.3
	35nm,0.2s						
LOMF	Lomont	1.00	172	Pg	Pg	09 30 03.2	+0.7
LOMF				Sg	Sg	09 30 16.5	+0.9
LANF	Langenberg	1.01	50	Pg	Pg	09 30 02.7	0.0
LANF				Sg	Sg	09 30 15.4	-0.6
BOURR	Bourrignon	1.03	157	ePg	Pg	09 30 03.9	+0.9
BOURR				eSg	Sg	09 30 17.4	+0.8
FELD	Feldberg im Sc	1.03	116	Pg	Pg	09 30 03.1	0.0
FELD				Sg	Sg	09 30 16.4	-0.2
BBS	Basel-Blauen	1.05	146	Pg	Pg	09 30 05.1	+1.5
MEZF	Maizieres J'vi	1.06	279	ePg	Pg	09 30 04.6	+0.9
	baz=103,SNR=1.0						
MEZF				eSg	Sg	09 30 18.1	+0.4
	22nm,0.2s,SNR=1.0						
MEZF	Maizieres J'vi	1.06	279	ePg	Pg	09 30 04.6	+0.9
	SNR=1.0						
MEZF				eSg	Sg	09 30 18.1	+0.4
	11nm,0.2s,SNR=1.0						
SFTF	Sexfontaines	1.07	263	ePg	Pg	09 30 05.0	+1.1
	baz=88						
SFTF				eSg	Sg	09 30 18.7	+0.7
	24nm,0.2s						
SFTF	Sexfontaines	1.07	263	ePn	Pn	09 30 04.1	+1.1
SFTF				ePg	Pg	09 30 05.0	+1.1
SFTF				eSg	Sg	09 30 18.7	+0.7
SFTF	Sexfontaines	1.07	263	ePg	Pg	09 30 05.0	+1.1
SFTF				eSg	Sg	09 30 18.7	+0.7
	12nm,0.2s						
BFO	Black Forest	1.13	90	ePg	Pg	09 30 05.1	0.0
BFO				eSg	Sg	09 30 17.8	-2.2
BFO	Black Forest	1.13	90	ePg	Pg	09 30 05.1	0.0
BFO				eSg	Sg	09 30 17.8	-2.1
SULZ	Cheisacher	1.28	129	eSg	Sg	09 30 24.6	-0.1
WLF	Walferdange	1.36	347	eSg	Sg	09 30 25.0	-2.3
SLE	Schleitheim	1.38	114	ePg	Pg	09 30 09.9	+0.3
SLE				eSg	Sg	09 30 27.2	-0.4
RUP	Ruppelstein	1.39	12	Pg	Pg	09 30 10.2	+0.2
RUP				Sg	Sg	09 30 27.5	-0.7
ZUR	Degenried	1.63	126	eSg	Sg	09 30 35.6	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CABF	La Chapelle	1.77	192	ePg	Pg	09 30 17.6	+0.5
CABF				eSn	Sn	09 30 34.5	+0.1
CABF				eSg	Sg	09 30 39.7	-0.3
	9.9nm,0.3s,SNR=1.0						
CABF	La Chapelle	1.77	192	ePn	Pn	09 30 13.6	+1.0
CABF				ePg	Pg	09 30 17.6	+0.5
CABF				eSn	Sn	09 30 34.5	+0.1
CABF				eSg	Sg	09 30 39.7	-0.3
CABF	La Chapelle	1.77	192	ePg	Pg	09 30 17.6	+0.5
CABF				eSn	Sn	09 30 34.5	+0.1
CABF				eSg	Sg	09 30 39.7	-0.3
	4.9nm,0.3s,SNR=1.0						
WILA	Wila	1.79	120	ePg	Pg	09 30 18.3	+0.8
WILA				eSg	Sg	09 30 40.8	0.0
GIVF	Givet	2.13	327	ePg	Pg	09 30 24.1	+0.2
GIVF				eSn	Sn	09 30 43.5	+0.2
GIVF				eSg	Sg	09 30 51.6	+0.1
	7.2nm,0.2s,SNR=1.0						
GIVF	Givet	2.13	327	ePg	Pg	09 30 24.1	+0.2
GIVF				eSn	Sn	09 30 43.5	+0.2
GIVF				eSg	Sg	09 30 51.6	+0.1
	3.6nm,0.2s,SNR=1.0						
LOR	Lormes	2.15	241	ePn	Pn	09 30 18.5	+0.6
	baz=65,SNR=1.0						
LOR	Lormes	2.15	241	ePg	Pg	09 30 24.9	+0.5
	baz=67,SNR=1.0						
LOR				eSg	Sg	09 30 52.2	-0.2
	12nm,0.2s,baz=64,SNR=1.0						
LOR	Lormes	2.15	241	ePn	Pn	09 30 18.5	+0.6
LOR				ePg	Pg	09 30 24.9	+0.5
LOR				eSg	Sg	09 30 52.2	-0.2
LOR	Lormes	2.15	241	ePg	Pg	09 30 24.9	+0.5
	SNR=1.0						
LOR				eSg	Sg	09 30 52.2	-0.2
	6.2nm,0.2s,SNR=1.0						
TNS	Taunus Mts	2.23	32	eSg	Sg	09 30 54.0	-0.8
BAIF	Baives	2.34	318	eSg	Sg	09 30 58.5	0.0
	5.0nm,0.2s						
BAIF	Baives	2.34	318	eSg	Sg	09 30 58.5	0.0
	2.5nm,0.2s						
SSF	Saint Saulge	2.47	240	ePg	Pg	09 30 30.1	-0.3
	SNR=1.0						
SSF				eSg	Sg	09 31 01.7	-0.7
	7.3nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.47	240	ePn	Pn	09 30 22.7	+0.5
SSF				ePg	Pg	09 30 30.1	-0.3
SSF				eSg	Sg	09 31 01.7	-0.7
SSF	Saint Saulge	2.47	240	ePg	Pg	09 30 30.1	-0.3
	SNR=1.0						
SSF				eSg	Sg	09 31 01.7	-0.7
	3.7nm,0.3s,SNR=1.0						
SMF	Signal de Mont	2.54	229	ePg	Pg	09 30 31.7	-0.1
SMF				eSn	Sn	09 30 52.7	-0.8
SMF				eSg	Sg	09 31 04.3	-0.4
	16nm,0.3s						
SMF	Signal de Mont	2.54	229	ePn	Pn	09 30 24.0	+0.8
SMF				ePg	Pg	09 30 31.7	-0.1
SMF				eSn	Sn	09 30 52.7	-0.8
SMF				eSg	Sg	09 31 04.3	-0.4
SMF	Signal de Mont	2.54	229	ePg	Pg	09 30 31.7	-0.1
SMF				eSn	Sn	09 30 52.7	-0.8
SMF				eSg	Sg	09 31 04.3	-0.4
	7.9nm,0.3s						
AVF	Avril sur Loir	2.71	236	ePg	Pg	09 30 35.2	+0.2
AVF				eSn	Sn	09 30 56.6	-1.0
	SNR=1.0						
AVF				eSg	Sg	09 31 09.4	-0.6
	2.2nm,0.2s,SNR=1.0						
AVF	Avril sur Loir	2.71	236	ePn	Pn	09 30 25.8	+0.3
AVF				ePg	Pg	09 30 35.2	+0.2
AVF				eSn	Sn	09 30 56.6	-1.0
AVF				eSg	Sg	09 31 09.4	-0.6
AVF	Avril sur Loir	2.71	236	ePg	Pg	09 30 35.2	+0.2
AVF				eSn	Sn	09 30 56.6	-1.0
	SNR=1.0						
AVF				eSg	Sg	09 31 09.4	-0.6
	1.1nm,0.2s,SNR=1.0						
HYF	Humbligny	2.90	250	ePn	Pn	09 30 28.6	+0.5
HYF				ePg	Pg	09 30 38.4	-0.2
HYF				eSn	Sn	09 31 01.4	-0.9
HYF				eSg	Sg	09 31 15.8	-0.3
BGF	Bois d'Agland	3.12	237	ePg	Pg	09 30 42.6	-0.4
BGF				eSn	Sn	09 31 06.6	-1.4
BGF				eSg	Sg	09 31 22.5	-0.9
	17nm,0.5s						
BGF	Bois d'Agland	3.12	237	ePn	Pn	09 30 31.4	+0.2
BGF				ePg	Pg	09 30 42.6	-0.4
BGF				eSn	Sn	09 31 06.6	-1.4
BGF				eSg	Sg	09 31 22.5	-0.9
BGF	Bois d'Agland	3.12	237	ePg	Pg	09 30 42.6	-0.4
BGF				eSn	Sn	09 31 06.6	-1.4
BGF				eSg	Sg	09 31 22.5	-0.9
	8.5nm,0.5s						
ORIF	Oris-en-Rattie	3.46	189	ePn	Pn	09 30 36.1	+0.3
ORIF				eSg	Sg	09 31 33.0	-1.2
	2.6nm,0.2s						
TCF	Toulx Ste Croi	3.64	237	ePg	Pg	09 30 51.8	-1.0
TCF				eSg	Sg	09 31 38.7	-1.2
	3.0nm,0.2s						
TCF	Toulx Ste Croi	3.64	237	ePn	Pn	09 30 38.4	+0.1
TCF				ePg	Pg	09 30 51.8	-1.0
TCF				eSg	Sg	09 31 38.7	-1.2
TCF	Toulx Ste Croi	3.64	237	ePg	Pg	09 30 51.8	-1.0
TCF				eSg	Sg	09 31 38.7	-1.2
	1.5nm,0.2s						
VIVF	Saint-Julien-l	3.73	202	ePn	Pn	09 30 40.1	+0.5
	SNR=1.0						
VIVF				eSg	Sg	09 31 40.0	-3.0
	9.3nm,0.5s,SNR=1.0						
CAF	Calviac	4.64	224	eSg	Sg	09 32 08.1	-3.9
	5.0nm,0.4s,SNR=1.0						
CAF	Calviac	4.64	224	eSg	Sg	09 32 08.1	-3.9
	2.5nm,0.4s,SNR=1.0						
LASF	Ste Croix	4.68	205	eSg	Sg	09 32 10.9	-2.3
	1.4nm,0.3s						
LASF	Ste Croix	4.68	205	eSg	Sg	09 32 10.9	-2.3
	0.7nm,0.3s						

*IDC **16** 09:41:25.5±0.5, 3198S×17741W, h0km, mb4.6/10, mb1 4.7/11, mb1mx4.6/15, mbtmp4.6/11, ML4.4/1, MS4.0/15, Ms1 4.0/15, ms1mx3.9/20, Error ellipse: s-maj=22.7km s-min=18.0km az=0.0*

*ISCJB **16** 09:41:26.8±0.6, 3250S±005×1773W±0.1, h33km, mb4.7/15, MS4.0/13, Error ellipse: s-maj=14.1km s-min=4.8km az=24.7*

*NEIC **16** 09:41:26.0±0.3, 3232S×17733W, h10km, mb5.0/7, Error ellipse: s-maj=14.8km s-min=8.7km az=162.0*

*BJI **16** 09:41:26.0, 3230S×17730W, h10km, mB5.7, mb5.1*

*MOS **16** 09:41:28.9±1.8, 3205S×17743W, h33km, mb5.3/4, Error ellipse: s-maj=26.0km s-min=17.7km az=6.0*

ISC 16 09:41:28.9±0.5**, 3242S**±005×**1773W**±01**, h35km, n95, σ1s11**/55**, mb4.7**/15**, MS4.0**/13**, 9C-3D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.29	214	ePN	Pn	09 42 59.7	+0.6
MXZ				SN	Sn	09 44 12.9	+3.1
PUZ	Puketiti	6.73	212	ePN	Pn	09 43 05.3	+0.2
PUZ				SN	Sn	09 44 25.2	+4.7
MWZ	Matawai	7.28	214	ePN	Pn	09 43 12.5	-0.2
MWZ				SN	Sn	09 44 35.0	+1.0
URZ	Urewera	7.42	217	Pn	Pn	09 43 14.8	+0.1
	2.4nm,0.3s,baz=90,slow=3.0,SNR=15						
URZ				Sn	Sn	09 44 42.1	+4.5
	13nm,0.3s,baz=157,slow=22,SNR=10						
URZ				LR	LR	09 46 04.8	
	comp=Z,542nm,20.2s,baz=266,slow=36						
URZ	Urewera	7.42	217	ePN	Pn	09 43 13.9	-0.8
URZ				SN	Sn	09 44 39.3	+1.7
KNZ	Kokohu	7.77	211	SN	Sn	09 44 50.1	+4.1
BKZ	Black Stump Fm	8.43	215	ePN	Pn	09 43 27.4	-1.1
BKZ				eSN	Sn	09 45 04.7	+2.4
PXZ	Pawanui	8.96	210	ePN	Pn	09 43 34.4	-1.3
PXZ				eSN	Sn	09 45 14.1	-1.2
TSZ	Takapari Road	9.38	214	ePN	Pn	09 43 40.2	-1.4
TSZ				eSN	Sn	09 45 25.5	-0.3
MRZ	Mangatainoka R	10.04	213	ePN	Pn	09 43 50.2	-0.4
TUWZ	Tuamarina	11.41	216	PN	Pn	09 44 08.4	-0.9
THZ	Tophouse	12.18	217	PN	Pn	09 44 18.7	-1.2
THZ				SN	Sn	09 46 29.6	-4.8
KHZ	Kahutara	12.36	214	PN	Pn	09 44 21.9	-0.4
KHZ				SN	Sn	09 46 31.0	-7.7
DSZ	Denniston Nort	12.75	220	PN	Pn	09 44 27.9	+0.3
RPZ	Rata Peaks	14.54	216	Pn	Pn	09 44 50.9	-1.1
	2.3nm,0.3s,baz=50,slow=2.2,SNR=10						
RPZ				Sn	Sn	09 47 23.2	-8.7
	2.3nm,0.3s,baz=206,slow=11,SNR=6.7						
DZM	Mont Dzumac	17.76	301	Pn	Pn	09 45 33.5	0.0
	0.9nm,0.3s,baz=106,slow=14,SNR=6.1						
DZM				LR	LR	09 51 04.8	
	comp=Z,796nm,18.6s,baz=49,slow=33						
RAR	Rarotonga	19.16	59	P	Pn	09 45 48.2	-2.2
	1.3nm,0.3s,baz=238,slow=4.3,SNR=3.6						
TBI	Tubuai	26.12	77	eLR	LR	09 53 22.8	
	455nm,29.2s						
TBI	Tubuai	26.12	77	eT		10 13 56.8	
	12nm,0.3s						
PAE	Paea	28.95	66	eT		10 17 18.0	
	20nm,0.3s						
PPT	Papeete	29.01	66	eLR	LR	09 54 34.8	
	351nm,28.2s						
PPT	Papeete	29.01	66	eT		10 17 22.1	
	5.7nm,0.3s						
PPT	Papeete	29.01	66	LR	LR	09 55 47.6	
	comp=Z,80nm,19.7s,MS3.3,baz=240,slow=30						
HNR	Honiara	31.11	312	LR	LR	09 57 13.0	
	comp=Z,160nm,19.9s,MS3.7,baz=175,slow=31						
VAH	Vaihoa	31.90	65	eT		10 20 56.7	
	9.5nm,0.3s						
STKA	Stephens Creek	34.69	260	⇑iP	P	09 48 17.4	+2.1
	7.2nm,0.8s,mb4.7						
STKA	Stephens Creek	34.69	260	P	P	09 48 16.6	+1.3
	7.2nm,0.6s,mb4.8,baz=104,slow=11,SNR=16						
STKA				LR	LR	10 02 27.6	
	comp=Z,473nm,18.3s,MS4.3,baz=39,slow=36						
CTA	Charters Tower	34.79	282	⇓iP	P	09 48 16.2	-0.1
	9.6nm,0.6s,mb4.9						
CTA	Charters Tower	34.79	282	⇓iP	P	09 48 16.2	-0.1
CTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CTA	Charters Tower	34.79	282	P	P	09 48 16.6	+0.3
	comp=Z,12nm,0.6s,mb5.0,baz=111,slow=9.1,SNR=16						
CTAO	Charters Tower	34.79	282	eP	P	09 48 16.9	+0.6
	comp=Z,53nm,1.3s,mb5.3						
CTAO	Charters Tower	34.79	282	eP	P	09 48 16.9	+0.6
CTAO				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.3						
RKT	Rikitea	38.34	87	eLR	LR	09 59 02.8	
	comp=Z,793nm,35.2s						
ASAR	Alice Springs	43.67	269	P	P	09 49 30.7	+0.3
	comp=Z,9.0nm,0.8s,mb4.6,baz=112,slow=8.1,SNR=83						
ASAR				PcP	PcP	09 51 18.7	+1.5
	comp=Z,1.2nm,0.5s,baz=116,slow=4.6,SNR=4.0						
WB2	Warramunga Arr	44.82	274	eP	P	09 49 38.1	-1.6
WRA	Warramunga Arr	44.84	274	P	P	09 49 39.2	-0.6
WRA						09 51 22.8	
WRA	Warramunga Arr	44.84	274	P	P	09 49 39.2	-0.6
	comp=Z,14nm,0.9s,mb4.8,baz=112,slow=8.0,SNR=157						
WRA				PcP	PcP	09 51 22.8	+1.5
	comp=Z,4.0nm,0.9s,baz=119,slow=3.3,SNR=4.6						
WRA				LR	LR	10 08 47.3	
	comp=Z,364nm,18.1s,MS4.3,baz=90,slow=37						
FORT	Forrest	46.17	257	eP	P	09 49 50.6	+0.3
	comp=Z,22nm,0.7s,mb5.2						
FITZ	Fitzroy Crossi	53.01	271	⇑iP	P	09 50 42.2	-0.3
	comp=Z,9.1nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	53.01	271	LR	LR	10 13 12.7	
	comp=Z,293nm,18.1s,MS4.4,baz=198,slow=36						
KLBR	Kellerberrin	54.31	252	eP	P	09 50 52.4	+0.5
	comp=Z,13nm,0.7s,mb5.0						
MUN	Mundaring	55.43	251	eP	P	09 51 00.6	+0.6
QSPA	South Pole Qui	57.70	180	P	P	09 51 21.8	+6.4
	comp=Z,5.4nm,0.8s,mb4.7,baz=38,slow=1.4,SNR=15						
BATI	Kupang	58.55	278	LR	LR	10 17 05.4	
	comp=Z,292nm,18.3s,MS4.4,baz=155,slow=37						
MAW	Mawson	70.64	201	LR	LR	10 24 03.6	
	comp=Z,154nm,19.4s,MS4.3,baz=68,slow=36						
SNAA	Sanae	76.12	178	⇑eP	P	09 53 14.6	+2.0
MJAR	Matsushiro Arr	80.26	325	P	P	09 53 35.1	-0.8
	comp=Z,3.0nm,0.9s,mb4.2,baz=177,slow=4.9,SNR=4.4						
MJAR				LR	LR	10 24 23.1	
	comp=Z,76nm,21.8s,MS4.0,baz=100,slow=32						
PLCA	Paso Flores	80.67	132	LR	LR	10 22 48.2	
	comp=Z,92nm,18.9s,MS4.2,baz=192,slow=31						
KSRS	Korea Array	86.29	319	P	P	09 54 07.6	+0.7
	comp=Z,4.7nm,0.8s,mb4.8,baz=146,slow=5.4,SNR=11						
YSS	Yuzh-Sakhalins	86.83	334	eP	P	09 54 09.2	-0.2
	comp=Z,7.0nm,0.5s,mb5.2						
YSS	Yuzh-Sakhalins	86.83	334	⇑eP	P	09 54 10.3	+0.9
YSS				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
CFAA	Coronel Fontan	87.53	126	LR	LR	10 23 48.4	
	comp=Z,12nm,19.8s,MS3.3,baz=21,slow=29						
NVAR	Mina Array Bea	89.30	42	P	P	09 54 23.4	+2.1
	comp=Z,1.2nm,0.8s,mb4.2,baz=208,slow=6.6,SNR=12						
CN2	Changchun	92.13	322	eP	P	09 54 34.3	-0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.1						
TXAR	Lajitas Array	92.95	57	LR	LR	10 31 26.1	
	comp=Z,74nm,19.5s,MS4.1,baz=60,slow=32						
KLR	Kul'dur	93.09	329	eP	P	09 54 35.7	-3.0
LPAZ	La Paz	96.74	114	P	P	09 55 00.7	+4.4
	comp=Z,1.2nm,0.8s,mb4.4,baz=135,slow=4.6,SNR=5.5						
LPAZ				LR	LR	10 32 38.0	
	comp=Z,48nm,18.0s,MS4.0,baz=46,slow=32						
PDAR	Pinedale Array	97.16	43	P	P	09 54 58.4	+0.9
	comp=Z,0.4nm,0.7s,mb4.0,baz=156,slow=1.5,SNR=3.7						
PDAR				LR	LR	10 34 04.4	
	comp=Z,63nm,18.8s,MS4.1,baz=169,slow=33						
HRY	Holter Researc	98.35	39	eP	P	09 55 03.2	+0.5
SONM	Songino Array	105.06	317	Pdif	Pdif	09 55 32.9	+0.1
SONM	Songino Array	105.06	317	Pdiff	Pdif	09 55 32.9	+0.1
	comp=Z,0.3nm,0.7s,baz=96,slow=3.8,SNR=2.4						
SWET	Sewanee	108.81	60	ePKP	PKiKP	09 59 55.1	+0.7
MKAR	Makanchi Array	119.54	309	⇑iPKIKP	PKPdf	10 00 15.1	+0.6
MKAR	Makanchi Array	119.54	309	PKP	PKPdf	10 00 15.2	+0.7
	comp=Z,1.1nm,0.6s,baz=79,slow=2.0,SNR=5.6						
KURK	Kurchatov	122.89	313	⇑iPKIKP	PKPdf	10 00 21.3	+0.5
AML	Almayashu	124.19	302	ePKPdf	PKPdf	10 00 25.7	+2.1
KBL	Kabul	125.57	292	ePKPdf	PKPdf	10 00 28.8	+2.3
ARU	Arti	135.04	319	⇓iPKIKP	PKPdf	10 00 46.0	+2.3
AKTK	Aktyubinsk	135.91	311	PKP	PKPdf	10 00 46.3	+0.7
AKTO	Aktyubinsk	135.91	311	PKP	PKPdf	10 00 46.3	+0.7
	comp=Z,2.6nm,0.8s,baz=72,slow=3.2,SNR=5.9						
ARCES	ARCESS Array B	140.69	348	PKP	PKPdf	10 00 54.9	+1.1
ARCES	ARCESS Array B	140.69	348	PKP	PKPdf	10 00 54.9	+1.2
	comp=Z,2.9nm,0.7s,baz=20,slow=3.9,SNR=6.0						
DGRG	David-gareji	145.05	297	P	PKPbc	10 01 04.4	+2.6
MTA	Mtatsminda	145.48	298	P	PKPdf	10 01 05.2	+2.1
TBLG	Delisi	145.52	298	P	PKPbc	10 01 05.7	+2.4
MOS	Moscow	146.35	324	ePKIKP	PKPdf	10 01 03.7	-0.4
MOS				pmax	pmax		
	comp=Z,55nm,0.8s						
ONI	Oni	146.43	299	P	PKPdf	10 01 08.6	+4.0
KIV	Kislovodsk	146.86	302	c iPKP2	PKPab	10 01 09.8	+1.2
OBN	Obninsk	147.18	324	⇑iPKP2	PKPab	10 01 08.4	-1.1
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
VOR	Voronezh	147.23	317	PKP2	PKPab	10 01 15.0	+5.2
VOR				pmax	pmax		
	comp=Z,500nm,2.0s						
FINES	FINESS Array B	147.25	339	⇑iPKP2	PKPbc	10 01 07.9	+0.1
FINES	FINESS Array B	147.25	339	PKPbc	PKPbc	10 01 07.8	+0.1
	comp=Z,8.6nm,0.7s,baz=60,slow=3.2,SNR=27						
MALT	Malatya	150.44	292	ePKPbc	PKPbc	10 01 17.8	+1.2
NB2	NORSAR Subarra	150.84	352	PKP	PKPbc	10 01 17.5	+0.6
	comp=Z,2.1nm,0.7s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.84	352	PKPbc	PKPbc	10 01 17.8	+0.9
	comp=Z,3.2nm,0.7s,baz=14,slow=4.2,SNR=8.5						
NOA				PKPab	PKPab	10 01 24.8	+0.6
	comp=Z,1.9nm,0.7s,baz=13,slow=4.1,SNR=5.9						
ASF	Jabal al Asfar	151.20	279	PKPbc	PKPbc	10 01 20.7	+2.1
	comp=Z,4.1nm,0.7s,baz=347,slow=5.1,SNR=7.9						
ASF				PKPab	PKPab	10 01 28.2	+1.6
	comp=Z,3.4nm,1.0s,baz=168,slow=5.0,SNR=3.9						
EIL	Elat	152.32	273	PKPbc	PKPbc	10 01 23.1	+1.8
	comp=Z,6.6nm,0.9s,baz=10,slow=4.3,SNR=5.5						
MMAI	Mount Meron Ar	152.57	280	PKPbc	PKPbc	10 01 24.0	+2.3
	comp=Z,4.2nm,0.5s,baz=83,slow=6.8,SNR=12						
MMAI				PKPab	PKPab	10 01 34.4	+2.0
	comp=Z,6.2nm,0.7s,baz=93,slow=6.3,SNR=4.6						
AKASG	Malin Array Be	153.28	321	PKPbc	PKPbc	10 01 23.4	+0.7
AKASG				PKPab	PKPab	10 01 34.6	-0.1
AKASG	Malin Array Be	153.28	321	PKPbc	PKPbc	10 01 23.4	+0.7
	comp=Z,3.1nm,0.8s,baz=50,slow=2.3,SNR=9.5						
AKASG				PKPab	PKPab	10 01 34.6	-0.1
	comp=Z,2.8nm,0.7s,baz=51,slow=4.5,SNR=6.0						
DBIC	Dimbokro	153.42	163	PKPbc	PKPbc	10 01 26.6	+2.5
	comp=Z,4.1nm,0.7s,baz=188,slow=2.8,SNR=4.7						
DBIC				PKPab	PKPab	10 01 37.7	+1.5
	comp=Z,3.3nm,0.9s,baz=211,slow=5.9,SNR=2.1						
BRTR	Keskin Array B	154.07	295	PKPbc	PKPbc	10 01 25.9	+1.1
	comp=Z,1.2nm,0.7s,baz=153,slow=3.3,SNR=5.0						
BRTR				PKPab	PKPab	10 01 39.0	+0.5
	comp=Z,3.6nm,0.8s,baz=102,slow=3.7,SNR=9.3						
TOA0	Torodi Ar. Sit	160.79	177	ePKPdf	PKPdf	10 01 25.7	-0.1
TORD	Torodi Ar. Bea	160.79	177	PKP	PKPdf	10 01 28.1	+2.3
	comp=Z,0.4nm,0.6s,baz=150,slow=1.1,SNR=3.5						
TORD				PKPab	PKPab	10 02 11.5	+3.7
	comp=Z,1.8nm,0.5s,baz=169,slow=3.2,SNR=32						
KEST	Kesra	173.60	303	PKPab	PKPab	10 03 05.8	+1.7
	comp=Z,0.8nm,0.6s,baz=258,slow=2.4,SNR=4.3						

IDC 16 09:43:47.6±3.1**, 2811N**×**5729E, h0km, mb3.9**/6**, mb1 4.0**/7**, mb1mx3.6**/26**, mbtmp3.9**/7**, ML4.6**/1**, Error ellipse: s-maj=63.1km s-min=32.8km az=133.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMAI	Mount Meron Ar	19.46	290	P	Pn	09 48 17.1	+0.1
	1.9nm,0.3s,baz=100,slow=7.5,SNR=7.4						
AKTO	Aktyubinsk	22.30	1	P	P	09 48 47.0	+0.5
	1.9nm,0.3s,baz=200,slow=9.8,SNR=6.6						
BRTR	Keskin Array B	22.72	307	P	P	09 48 51.8	+0.7
	1.3nm,0.7s,baz=114,slow=11,SNR=4.2						
FINES	FINESS Array B	39.28	337	P	P	09 51 17.4	-0.4
	1.5nm,0.6s,baz=141,slow=9.2,SNR=12						
HFS	Hagfors	43.45	330	P	P	09 51 51.1	-1.0
	3.4nm,0.9s,baz=100,slow=13,SNR=3.8						
TORD	Torodi Ar. Bea	53.69	266	P	P	09 53 11.2	-0.3
	0.6nm,0.5s,baz=64,slow=6.6,SNR=12						
YKA	Yellowknife Ar	89.48	356	P	P	09 56 46.9	+0.6
	0.1nm,0.4s,baz=2.7,slow=5.0,SNR=5.4						

*NEIC **16** 09:53:48.5, 3267S×7165W, h15km, ML3.1(GUC), After GUC.*

GUC 16 09:53:48.5±0.8**, 3267S**×**7165W, h15km**±4km**, MD3.7, ML3.1, 9C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.35	179	⇓iP	Pg	09 53 55.8	0.0
IHA				i S	Sg	09 54 01.4	+0.7
ROCH	El Roble	0.62	119	⇑iP	Pg	09 54 00.5	-0.1
ROCH				i S	Sg	09 54 09.6	+0.8
CHNG	Los Chungos	0.80	9	⇑iP	Pg	09 53 47.8	-16
CHNG				i S	Sg	09 53 58.6	-16
PEL	Peldehue	0.94	120	⇑iP	Pb	09 54 05.6	-0.9
PEL				i S	Sb	09 54 18.2	-0.6
PEL				AML	AML	09 54 21.1	
	comp=N,2μm,0.3s						
TACH	Talagante	1.15	149	⇓iP	Pn	09 54 08.6	-1.5
TACH				i S	Sb	09 54 23.1	-1.7
DSCH	Colegio Aleman	1.16	129	⇑iP	Pn	09 54 08.0	-2.3
DSCH				i S	Sb	09 54 23.9	-1.3
CLCH	Cerro Calan	1.18	128	eP	Pn	09 54 10.2	-0.3
CLCH				i S	Sb	09 54 25.7	0.0
CLCH	Cerro Calan	1.18	128	eP	Pn	09 54 10.2	-0.3
CLCH				i S	Sb	09 54 25.7	0.0
CLCH				AML	AML	09 54 27.5	
	comp=N,494nm,0.4s						
ANTU	Antumapu	1.24	137	i P	Pn	09 54 10.6	-0.7
ANTU				i S	Sb	09 54 26.6	-0.8
ANTU	Antumapu	1.24	137	i P	Pn	09 54 10.6	-0.7
ANTU				i S	Sb	09 54 26.6	-0.8
ANTU				AML	AML	09 54 31.8	
	comp=E,331nm,0.2s						
LNV	Longovilo	1.30	171	⇑iP	Pn	09 54 09.7	-2.3
LNV				i S	Sb	09 54 26.7	-2.4
FCH	Farellones	1.32	120	⇓iP	Pn	09 54 11.5	-0.8
FCH				i S	Sb	09 54 29.3	-0.3
FCH				AML	AML	09 54 30.3	
	comp=E,349nm,0.2s						
PCH	Pirque	1.34	135	eP	Pn	09 54 11.9	-0.8
PCH				eS	Sn	09 54 29.3	-1.0
CHCH	Chadas Angostu	1.51	147	eP	Pn	09 54 14.6	-0.4
CHCH				i S	Sn	09 54 34.4	0.0
CMCH	Combarbala	1.59	20	⇑iP	Pn	09 54 15.7	-0.4
CMCH				i S	Sn	09 54 36.5	+0.1
CMCH	Combarbala	1.59	20	⇑iP	Pn	09 54 15.7	-0.4
CMCH				i S	Sn	09 54 36.5	+0.1
CMCH				AML	AML	09 54 40.2	
	comp=E,1μm,0.6s						
LMEL	Las Melosas	1.69	134	⇑iP	Pn	09 54 17.7	+0.2
LMEL				i S	Sn	09 54 39.8	+1.0
LMEL	Las Melosas	1.69	134	⇑iP	Pn	09 54 17.7	+0.2
LMEL				i S	Sn	09 54 39.8	+1.0
LMEL				AML	AML	09 54 45.0	
	comp=N,304nm,0.2s						
CACH	El Canelo	1.69	149	i P	Pn	09 54 17.7	+0.3
CICH	Cipreses	1.94	148	eP	Pn	09 54 20.8	-0.1

*NEIC **16** 09:56:28.1, 1572N×9583W, h5km, MD3.6(MEX), After MEX.*

MEX 16 09:56:28.0±0.5**, 1572N**×**9582W, h5km, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.28	280	i P	Pg	09 56 33.0	-0.4
HUIG				i S	Sg	09 56 37.2	+0.1
VHO	Vista Hermosa	1.60	327	i P	Pn	09 56 54.5	-2.5
VHO				i S	Sn	09 57 13.6	-4.5
VHO	Vista Hermosa	1.60	327	i P	Pn	09 56 53.7	-3.3
VHO				i S	Sn	09 57 13.6	-4.5
CMIG	Matias Romero	1.63	33	i P	Pn	09 56 54.5	-2.9
CMIG				i S	Sn	09 57 13.2	-5.6
UTMO	Huajuapan	2.83	318	i P	Pn	09 57 12.3	-1.5
UTMO				i S	Sn	09 57 45.2	-3.1
PPM	Popocatepetl	4.27	322	eP	Pn	09 57 32.3	-1.4
PPM				i S	Sn	09 58 22.1	-1.9

*IDC **16** 09:59:57.8±12.0, 3908N×75.13E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/22, mbtmp3.8/3, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=1029.0km s-min=36.8km az=17.0*

*ISCJB **16** 10:00:12.4±1.2, 3485N±0.10×736E±02, h69km±15km, mb3.3/3, Error ellipse: s-maj=31.4km s-min=7.1km az=150.9*

ISC 16 10:00:13.5±1.1**, 3471N**±008×**734E**±02**, h57km**±14km**, n11, σ1s15**/17**, mb3.4**/3**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THN	Thein Dam	2.98	139	eP	Pn	10 00 59.1	+0.8
THN				ex	Sn	10 01 39.8	+7.0
DLH	Dalhousie	3.04	134	eP	Pn	10 01 00.0	+0.9
DLH				eS	Sn	10 01 38.0	+3.7
SDNR	Sundarnagar	4.38	136	eP	Pn	10 01 16.4	-1.1
SDNR				eS	Sn	10 02 08.0	+0.7
SMLA	Simla	4.77	137	eP	Pn	10 01 23.2	+0.4
SMLA				eS	Sn	10 02 17.9	+1.0
JOSI	Joshimath	6.64	127	eP	Pn	10 01 42.2	-6.3
JOSI				eS	Sn	10 03 01.4	-1.4
JOSI				AML	AML	10 03 14.4	
	comp=N,38nm,0.0s						
JOSI				AML	AML	10 03 20.1	
	comp=E,44nm,0.6s						
KUDL	Kundal	7.05	157	eS	Sn	10 03 10.5	-2.4
KUDL				AML	AML	10 04 01.3	
	comp=N,6.0nm,0.4s						
KUDL				AML	AML	10 04 01.4	
	comp=E,8.5nm,0.6s						
SONA	Sohna	7.16	153	eS	Sn	10 03 15.2	-0.3
SONA				AML	AML	10 04 08.8	
	comp=N,8.7nm,0.3s						
SONA				AML	AML	10 04 12.2	
	comp=E,12nm,0.2s						
KK31	Karatay Array	8.68	346	⇑P	Pn	10 02 17.0	+0.7
	comp=E,0.8nm,0.3s,baz=157,slow=12,SNR=18						
KK31				⇑S	Sn	10 03 51.5	-1.1
	comp=E,0.5nm,0.3s,baz=147,slow=25						
TORD	Torodi Ar. Bea	67.66	271	P	P	10 11 05.5	+0.7
	comp=E,0.5nm,0.9s,mb3.5,baz=45,slow=6.2,SNR=4.7						
WRA	Warramunga Arr	79.38	123	P	P	10 12 11.9	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,0.3nm,0.7s,mb3.3,baz=325,slow=5.1,SNR=5.8						
ASAR	**Alice Springs**	**81.62**	**126**	P	**P**	**10 12 26.8**	**+1.4**
	comp=E,0.4nm,0.9s,mb3.4,baz=316,slow=5.1,SNR=6.1						

IDC ***16*** *10:07:10.3±1.3, 1.46N×96.92E, h0^{km}, mb3.9/6, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML2.8/1, Error ellipse: s-maj=32.8km s-min=22.2km az=53.0*
ISCJB ***16*** *10:07:14.6±1.0, 1.6N±0.1×97.0E±0.1, h33^{km}, mb4.0/8, Error ellipse: s-maj=19.8km s-min=15.2km az=138.8*
NEIC ***16*** *10:07:15.5±0.9, 1.57N×97.04E, h30^{km}, mb4.1/2, Error ellipse: s-maj=19.4km s-min=13.4km az=54.0*
ISC 16 10:07:16.8±1.0**, 1.6N**±0.1×**97.1E**±0.1**, h35^{km}, n13,** σ**0^{s}64**/15, **mb4.0**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.17**	**58**	Pn	**Pn**	**10 07 50.5**	**+0.1**
PSI				Sn	**Sn**	**10 08 22.6**	**+6.5**
PSI	**Prapat**	**2.17**	**58**	Pn	**Pn**	**10 07 50.5**	**+0.1**
	2.5nm,0.3s,baz=241,slow=3.9,SNR=7.3						
PSI				Sn	**Sn**	**10 08 22.6**	**+6.5**
	15nm,0.3s,baz=235,slow=3.7,SNR=6.2						
KULM	**Kulim**	**5.08**	**44**	*e*P	**Pn**	**10 08 30.5**	**+0.1**
WRA	**Warramunga Arr**	**42.36**	**122**	P	**P**	**10 15 04.9**	**-3.0**
	0.7nm,0.6s,mb3.5,baz=300,slow=9.1,SNR=4.8						
WB2	**Warramunga Arr**	**42.37**	**122**	*e*P	**P**	**10 15 08.6**	**+0.6**
ASAR	**Alice Springs**	**43.75**	**127**	P	**P**	**10 15 19.6**	**+0.5**
	0.3nm,0.5s,mb3.3,baz=303,slow=8.1,SNR=6.9						
KSRS	**Korea Array**	**45.55**	**35**	P	**P**	**10 15 33.2**	**-0.1**
	1.0nm,0.6s,mb4.0,baz=232,slow=7.8,SNR=5.8						
SONM	**Songino Array**	**46.72**	**9**	P	**P**	**10 15 42.3**	**+0.1**
	1.1nm,0.4s,mb4.1,baz=191,slow=9.6,SNR=25						
SONM				PcP	PcP	10 17 14.5	-0.9
	0.3nm,0.5s,baz=177,slow=5.0,SNR=4.1						
MK31	**Makanchi Array**	**46.79**	**346**	*e*P	**P**	**10 15 43.0**	**+0.1**
MKAR	**Makanchi Array**	**46.79**	**346**	P	**P**	**10 15 42.7**	**-0.2**
	3.9nm,0.7s,mb4.4,baz=159,slow=7.9,SNR=22						
ULN	**Ulaanbaatar**	**46.85**	**9**	*e*P	**P**	**10 15 43.3**	**0.0**
	0.7nm,0.4s,mb3.9						
KURK	**Kurchatov**	**51.34**	**345**	*e*P	**P**	**10 16 17.4**	**-0.3**
	3.0nm,0.9s,mb4.2						
ARCES	**ARCESS Array B**	**82.09**	**340**	P	**P**	**10 19 33.6**	**+0.4**
	3.1nm,0.9s,mb4.2,baz=93,slow=4.9,SNR=9.1						

IDC ***16*** *10:13:28.4±1.8, 14.18S×167.49E, h0^{km}, mb4.0/8, mb1 4.1/8, mb1mx4.0/15, mbtmp4.0/8, Error ellipse: s-maj=71.9km s-min=24.5km az=135.0*
NEIC ***16*** *10:13:50.4±4.5, 14.34S×167.12E, h176^{km}±46^{km}, mb4.5/1, Error ellipse: s-maj=50.2km s-min=21.3km az=156.0*
ISCJB ***16*** *10:13:52.5±5.7, 14.6S±0.4×167.2E±0.3, h214^{km}±65^{km}, mb3.6/8, Error ellipse: s-maj=78.7km s-min=28.7km az=148.2*
ISC 16 10:13:51.7±5.6**, 14.4S**±0.4×**167.2E**±0.3**, h192^{km}**±63^{km}**, n14,** σ**0^{s}96**/12**, mb3.6**/8**, 1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.63**	**185**	*e*P	**Pn**	**10 15 40.2**	**+0.1**
DZM				*e*S	Sx	10 16 31.6	
DZM	**Mont Dzumac**	**7.63**	**185**	*e*P	**Pn**	**10 15 40.2**	**+0.1**
DZM				*e*S	Sx	10 16 31.6	
STKA	**Stephens Creek**	**29.12**	**229**	⇑*i*P	**P**	**10 19 35.9**	**+1.2**
	4.1nm,0.4s,mb4.4						
STKA	**Stephens Creek**	**29.12**	**229**	P	**P**	**10 19 36.2**	**+1.5**
	5.2nm,0.5s,mb4.4,baz=48,slow=9.1,SNR=28						
WRA	**Warramunga Arr**	**31.82**	**255**	P	**P**	**10 19 57.2**	**-1.3**
	0.2nm,0.3s,mb3.1,baz=84,slow=9.0,SNR=6.6						
ASAR	**Alice Springs**	**32.70**	**249**	P	**P**	**10 20 05.2**	**-1.0**
	1.3nm,0.4s,mb3.9,baz=72,slow=9.5,SNR=51						
FITZ	**Fitzroy Crossi**	**39.99**	**259**	P	**P**	**10 21 08.5**	**+0.5**
	0.8nm,0.6s,mb3.3,baz=104,slow=16,SNR=3.4						
NWAO	**Narrogin (SRO)**	**48.83**	**239**	P	**P**	**10 22 17.6**	**-0.2**
NWAO	**Narrogin (SRO)**	**48.83**	**239**	P	**P**	**10 22 17.2**	**-0.6**
	1.5nm,0.4s,mb3.7,baz=105,slow=12,SNR=4.1						
SONM	**Songino Array**	**82.21**	**324**	P	**P**	**10 25 52.2**	**+1.0**
	0.5nm,0.7s,mb3.2,baz=132,slow=6.0,SNR=5.8						
MKAR	**Makanchi Array**	**96.93**	**316**	P	**P**	**10 27 02.1**	**+1.0**
	0.2nm,0.3s,mb3.8,baz=106,slow=4.8,SNR=4.1						
YKA	**Yellowknife Ar**	**97.32**	**27**	P	**P**	**10 27 01.3**	**-1.2**
	0.1nm,0.5s,mb3.3,baz=255,slow=4.3,SNR=3.9						
ARCES	**ARCESS Array B**	**119.94**	**345**	PKP	PKPdf	10 32 19.1	+0.4
	2.2nm,0.8s,baz=88,slow=1.8,SNR=12						
FINES	**FINESS Array B**	**125.42**	**338**	PKP	PKPdf	10 32 30.3	+1.0
	1.8nm,0.9s,baz=86,slow=4.6,SNR=3.1						

JMA 16 10:28:00.2±0.5**, 44.88N**×**150.45E, h106^{km}, M3.5, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.71**	**248**	P	Pn	10 28 56.4	+0.9
NEM2				*e*S	Sn	10 29 40.4	+2.0
JRA	**Rausu**	**3.93**	**258**	P	Pn	10 28 59.8	+1.3
JNK	**Nakash**	**4.32**	**255**	P	Pn	10 29 05.2	+1.5
JAK	**Akkeshi**	**4.56**	**248**	P	Pn	10 29 07.7	+0.7
JAK				*e*S	Sn	10 29 59.5	+0.6
JTKR	**Abashiri--Toko**	**4.77**	**261**	P	Pn	10 29 10.5	+0.7
JAR	**Ashorobuto**	**5.07**	**254**	P	Pn	10 29 16.1	+2.3
JMP	**Maruseppu**	**5.15**	**263**	P	Pn	10 29 16.2	+1.3
JOB	**Onbets**	**5.17**	**250**	P	Pn	10 29 17.0	+1.8
JOB				*e*S	Sn	10 30 14.9	+1.2
JCH	**Churui**	**5.61**	**249**	P	Pn	10 29 22.2	+1.0
JCH				*e*S	Sn	10 30 24.7	+0.4
JKK2	**Kamakawa 2**	**5.61**	**262**	P	Pn	10 29 22.4	+1.2
JNBK	**Urakawa-nobuka**	**6.17**	**248**	*e*S	Sn	10 30 37.4	-0.3
JNB	**Noboribetsu**	**7.24**	**254**	P	Pn	10 29 44.4	+1.2
JNB				*e*S	Sn	10 31 03.4	-0.4
JKB	**Kayabe**	**7.48**	**250**	*e*S	Sn	10 31 07.8	-2.0
JANG	**Nango**	**7.98**	**239**	*e*S	Sn	10 31 19.7	-2.1
JTM	**Tenmabayashi**	**8.02**	**243**	*e*S	Sn	10 31 20.4	-2.3
JTH	**Tanohata**	**8.04**	**235**	*e*S	Sn	10 31 20.8	-2.6
JIO	**Ouri**	**9.36**	**230**	S	Sn	10 31 54.8	-0.5

ISCJB ***16*** *10:36:56.6±1.4, 33.22N±0.06×142.38E±0.09, h42^{km}±14^{km}, mb3.3/4, Error ellipse: s-maj=13.0km s-min=9.7km az=163.2*
IDC ***16*** *10:36:56.2±11.0, 32.76N×141.58E, h0^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.3/20, mbtmp3.2/5, ML3.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/10, Error ellipse: s-maj=412.6km s-min=22.8km az=67.0*
JMA ***16*** *10:36:56.6±0.4, 33.28N×142.41E, h80^{km}, M3.3*
ISC 16 10:36:57.4±2.2**, 33.20N**±0.06×**142.36E**±0.09**, h29^{km}**±19^{km}**, n18,** σ**0^{s}90**/27**, mb3.3**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.85**	**322**	P	**Pn**	**10 37 26.3**	**-0.9**
BSO1				S	**Sn**	**10 37 49.4**	**-0.2**
JHJ2	**Mitsune**	**2.13**	**268**	P	**Pn**	**10 37 32.0**	**+1.0**
JHJ2				S	**Sn**	**10 37 57.6**	**+1.0**
JHJ	**Hachijo jima 2**	**2.16**	**269**	Sn	**Sn**	**10 37 55.8**	**-1.5**
	37nm,0.3s,baz=272,slow=22,SNR=5.7						
BSO3	**Boso 3**	**2.22**	**317**	P	**Pn**	**10 37 31.9**	**-0.3**
BSO3				S	**Sn**	**10 37 59.6**	**+0.9**
BSO4	**Boso 4**	**2.45**	**317**	P	**Pn**	**10 37 35.5**	**+0.1**
BSO4				S	**Sn**	**10 38 05.6**	**+1.2**
JOD2	**Odawara 2**	**3.41**	**308**	P	**Pn**	**10 37 46.9**	**-1.6**
JOD2				S	**Sn**	**10 38 26.8**	**-1.1**
JYN	**Shimob**	**3.90**	**307**	P	**Pn**	**10 37 55.8**	**+0.4**
JYN				S	**Sn**	**10 38 40.2**	**0.0**
JRY	**Ryogami san**	**4.01**	**316**	P	**Pn**	**10 37 57.3**	**+0.5**
JRY				S	**Sn**	**10 38 42.8**	**+0.1**
JAG	**Ashikaga**	**4.01**	**324**	P	**Pn**	**10 37 56.3**	**-0.6**
JAG				S	**Sn**	**10 38 41.3**	**-1.6**
MJAR	**Matsushiro Arr**	**4.77**	**316**	Pn	**Pn**	**10 38 08.1**	**+0.8**
	1.7nm,0.3s,baz=165,slow=13,SNR=14						
MJAR				Sn	**Sn**	**10 39 02.3**	**+0.6**
	1.8nm,0.3s,baz=135,slow=22,SNR=7.0						
MAT	**Matsushiro**	**4.78**	**316**	P	**Pn**	**10 38 07.8**	**+0.5**
MAT				S	**Sn**	**10 39 01.5**	**-0.2**
MAT	**Matsushiro**	**4.78**	**316**	P	**Pn**	**10 38 07.5**	**+0.2**
MAT				S	**Sn**	**10 39 01.2**	**-0.5**
ASAJ	**Asahikawa**	**10.91**	**1**	LR	LR	10 43 55.0	
	comp=Z,52nm,18.8s,baz=360,slow=37						
SONM	**Songino Array**	**30.69**	**309**	P	**P**	**10 43 11.4**	**+2.0**
	0.4nm,0.7s,mb3.4,baz=120,slow=8.7,SNR=3.5						
MKAR	**Makanchi Array**	**46.89**	**305**	P	**P**	**10 45 25.5**	**+0.6**
	0.2nm,0.3s,mb3.6,baz=81,slow=9.3,SNR=2.6						
KDAK	**Kodiak Island**	**49.49**	**40**	LR	LR	11 04 37.8	
	comp=Z,45nm,21.5s,baz=269,slow=33						
WRA	**Warramunga Arr**	**53.39**	**189**	P	**P**	**10 46 13.4**	**-1.0**
	0.2nm,0.7s,mb3.2,baz=7.5,slow=7.7,SNR=3.9						
ASAR	**Alice Springs**	**57.12**	**189**	P	**P**	**10 46 41.0**	**-0.2**
	0.2nm,0.9s,mb3.1,baz=17,slow=6.8,SNR=3.0						

ISCJB ***16*** *10:43:28.6±2.1, 9.2S±0.1×113.5E±0.1, h44^{km}±26^{km}, mb3.7/6, Error ellipse: s-maj=25.2km s-min=13.1km az=28.4*
NEIC ***16*** *10:43:30.9±2.9, 9.20S×113.61E, h44^{km}±38^{km}, Error ellipse: s-maj=41.0km s-min=11.4km az=211.0*
IDC ***16*** *10:43:35.0±3.5, 9.15S×113.83E, h77^{km}±26^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.5/17, mbtmp3.6/8, Error ellipse: s-maj=45.3km s-min=13.3km az=47.0*
ISC 16 10:43:31.4±1.3**, 9.3S**±0.1×**113.63E**±0.07**, h52^{km}**±15^{km}**, n12,** σ**1^{s}06**/18**, mb3.7**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**7.96**	**261**	*e*Pn	**Pn**	**10 45 23.7**	**-0.7**
XMIS				*e*Sn	**Sn**	**10 46 40.4**	**-13**
BATI	**Kupang**	**9.93**	**96**	P	**Pn**	**10 45 53.8**	**+2.3**
	1.9nm,0.3s,baz=323,slow=5.1,SNR=2.5						
BATI				S	**Sn**	**10 47 40.0**	**-1.5**
	2.8nm,0.3s,baz=88,slow=18,SNR=3.5						
MBWA	**Marble Bar**	**13.20**	**154**	*e*Pn	**Pn**	**10 46 35.2**	**-0.9**
MBWA				*e*Sn	**Sn**	**10 48 46.9**	**-15**
FITZ	**Fitzroy Crossi**	**14.59**	**128**	*e*P	**Pn**	**10 46 56.0**	**+1.1**
FITZ				S	**Sn**	**10 49 26.6**	**-8.7**
FITZ	**Fitzroy Crossi**	**14.59**	**128**	P	**Pn**	**10 46 55.6**	**+0.7**
	0.2nm,0.3s,baz=314,slow=12,SNR=5.1						
FITZ				S	**Sn**	**10 49 26.6**	**-8.7**
	0.2nm,0.3s,baz=191,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**22.64**	**120**	P	**P**	**10 48 28.9**	**+0.7**
	0.2nm,0.4s,mb2.9,baz=294,slow=12,SNR=6.3						
WRA				S	**S**	**10 52 31.8**	**-1.1**
	0.2nm,0.9s,baz=294,slow=21,SNR=2.6						
ASAR	**Alice Springs**	**24.09**	**129**	P	**P**	**10 48 43.0**	**+0.8**
	0.8nm,0.5s,mb3.4,baz=302,slow=8.3,SNR=28						
KSRS	**Korea Array**	**48.37**	**15**	P	**P**	**10 52 07.6**	**-0.5**
	2.3nm,0.9s,mb4.2,baz=191,slow=7.9,SNR=5.1						
MJAR	**Matsushiro Arr**	**51.09**	**25**	P	**P**	**10 52 27.9**	**-1.0**
	0.4nm,0.6s,mb3.5,baz=212,slow=5.9,SNR=4.2						
SONM	**Songino Array**	**57.22**	**354**	P	**P**	**10 53 14.2**	**+1.1**
	1.0nm,0.4s,mb4.2,baz=175,slow=8.2,SNR=15						
MKAR	**Makanchi Array**	**62.42**	**336**	P	**P**	**10 53 49.0**	**0.0**
MKAR	**Makanchi Array**	**62.42**	**336**	P	**P**	**10 53 49.0**	**0.0**
	0.2nm,0.3s,mb3.7,baz=148,slow=7.8,SNR=4.8						

IDC 16 10:44:01.5±2.5**, 4.33N**×**123.35E, h0^{km}, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/17**, mbtmp3.3**/3**, Error ellipse: s-maj=351.6km s-min=27.8km az=63.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.43**	**156**	P	P	10 49 40.3	+0.2
	0.2nm,0.3s,baz=336,slow=9.7,SNR=4.6						
ASAR	**Alice Springs**	**29.66**	**160**	P	P	10 50 09.1	0.0
	0.1nm,0.4s,baz=335,slow=8.3,SNR=3.2						
MKAR	**Makanchi Array**	**55.17**	**327**	P	P	10 53 36.0	0.0
	0.2nm,0.4s,baz=115,slow=8.2,SNR=4.2						

NIED ***16*** *10:58:00, 43.20N×145.60E, h47^{km}, Mw3.7 Best double couple: $M_0$3.90000×10^{14} NP1:ϕ_s230.00000°, δ29.00000°, λ104.00000°. NP2:ϕ_s33.00000°, δ62.00000°, λ82.00000°.*
IDC ***16*** *10:58:22.3±2.9, 44.40N×145.81E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.3/21, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=53.7km s-min=25.7km az=162.0*
MOS ***16*** *10:58:22.3±1.4, 44.40N×145.80E, h60^{km}, mb3.7/1, Error ellipse: s-maj=39.1km s-min=19.5km az=23.6*
ISCJB ***16*** *10:58:25.5±1.1, 43.15N±0.07×145.58E±0.08, h56^{km}±7^{km}, mb3.3/2, Error ellipse: s-maj=13.3km s-min=8.2km az=146.3*
JMA ***16*** *10:58:26.1±0.1, 43.17N×145.58E, h51^{km}±1^{km}, M3.8*
JMA Felt II J1.
ISC 16 10:58:26.4±1.1**, 43.15N**±0.07×**145.58E**±0.08**, h49^{km}**±7^{km}**, n14,** σ**0^{s}59**/20**, mb3.3**/2**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.25**	**29**	P	**Pn**	**10 58 34.7**	**-0.2**
NEM2				*e*S	**Sn**	**10 58 40.8**	**-0.1**
JAK	**Akkeshi**	**0.66**	**257**	P	**Pn**	**10 58 39.4**	**-0.2**
JAK				*e*S	**Sn**	**10 58 49.1**	**0.0**
JNK	**Nakash**	**0.76**	**305**	P	**Pn**	**10 58 40.4**	**-0.5**
JNK				*e*S	**Sn**	**10 58 50.3**	**-1.1**
JRA	**Rausu**	**0.85**	**337**	P	**Pn**	**10 58 41.8**	**-0.3**
JRA				*e*S	**Sn**	**10 58 53.0**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**0.91**	**13**	*e*PN	**Pn**	**10 58 43.5**	**+0.7**
YUK				pmax	pmax		
	comp=Z,360nm,0.3s						
JOB	**Onbets**	**1.30**	**260**	P	**Pn**	**10 58 48.1**	**0.0**
JOB				*e*S	**Sn**	**10 59 04.3**	**-0.1**
JAR	**Ashorobuto**	**1.33**	**277**	P	**Pn**	**10 58 48.5**	**0.0**
JAR				*e*S	**Sn**	**10 59 05.3**	**+0.2**
JTKR	**Abashiri--Toko**	**1.47**	**305**	P	**Pn**	**10 58 50.8**	**+0.5**
JTKR				*e*S	**Sn**	**10 59 09.0**	**+0.6**
ASAJ	**Asahikawa**	**2.37**	**295**	Pg	**Pn**	**10 59 04.2**	**+1.4**
	comp=Z,16nm,0.3s,baz=110,slow=11,SNR=127						
ASAJ				Lg		10 59 36.6	
	comp=Z,6.7nm,0.3s,baz=222,slow=31,SNR=8.8						
YSS	**Yuzh-Sakhalins**	**4.30**	**333**	*e*PN	**Pn**	**10 59 30.0**	**+0.9**
MJAR	**Matsushiro Arr**	**8.70**	**223**	Pn		11 00 43.9	
	comp=Z,0.2nm,0.3s,baz=19,slow=14,SNR=4.1						
SONM	**Songino Array**	**27.65**	**293**	P	**P**	**11 04 08.7**	**-0.6**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**27.65**	**293**	P	**P**	**11 04 08.7**	**-0.6**
	comp=Z,0.6nm,0.7s,mb3.3,baz=86,slow=9.1,SNR=4.1						
MKAR	**Makanchi Array**	**43.85**	**298**	P	**P**	**11 06 26.8**	**-0.7**
	comp=Z,0.4nm,0.6s,mb3.3,baz=77,slow=10.0,SNR=2.6						

IDC ***16*** *11:03:02.0±2.2, 51.88N×178.87E, h0^{km}, mb3.6/6, mb1 4.0/7, mb1mx3.6/25, mbtmp3.7/7, ML4.2/1, Error ellipse: s-maj=60.1km s-min=28.4km az=8.0*
ISCJB ***16*** *11:03:10.3±1.5, 51.8N±0.2×178.9E±0.1, h84^{km}±13^{km}, mb3.6/7, Error ellipse: s-maj=39.8km s-min=13.4km az=2.5*
NEIC ***16*** *11:03:13.1, 51.90N×178.94E, h54^{km}, ML3.4(AEIC), After AEIC.*
ISC 16 11:03:12.0±1.5**, 51.8N**±0.2×**178.9E**±0.1**, h79^{km}**±12^{km}**, n17,** σ**1^{s}17**/17**, mb3.6**/7**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**2.74**	**87**	P	**Pn**	**11 03 53.0**	**-0.7**
SMY	**Shemya**	**3.08**	**289**	P	**Pn**	**11 03 58.3**	**0.0**
UNV	**Unalaska Valle**	**9.06**	**71**	Pn	**Pn**	**11 05 21.8**	**+2.1**
KDAK	**Kodiak Island**	**17.39**	**59**	P	**Pn**	**11 07 06.9**	**-2.2**
	0.8nm,0.3s,baz=178,slow=19,SNR=18						
SLKM	**Skilak Lake**	**19.09**	**51**	*e*P	**Pn**	**11 07 28.5**	**-0.9**
MCK	**McKinley**	**20.60**	**42**	*e*P	**P**	**11 07 45.5**	**+1.3**
EGAK	**Eagle**	**24.15**	**42**	*e*P	**P**	**11 08 20.4**	**+0.3**
	15nm,1.3s,mb4.2						
DAWY	**Dawson**	**24.76**	**44**	*e*P	**P**	**11 08 28.0**	**+2.3**
INK	**Inuvik**	**27.91**	**36**	*e*P	**P**	**11 08 52.6**	**-1.4**
INK	**Inuvik**	**27.91**	**36**	P	**P**	**11 08 52.0**	**-2.0**
	0.3nm,0.3s,mb3.2,baz=277,slow=7.0,SNR=6.6						
YKA	**Yellowknife Ar**	**35.95**	**46**	P	**P**	**11 10 04.4**	**+0.1**
	0.2nm,0.3s,mb3.5,baz=284,slow=7.4,SNR=6.4						
NVAR	**Mina Array Bea**	**44.91**	**82**	P	**P**	**11 11 19.3**	**+0.8**
NVAR	**Mina Array Bea**	**44.91**	**82**	P	**P**	**11 11 19.3**	**+0.8**
	0.9nm,0.7s,mb3.6,baz=305,slow=6.0,SNR=12						
PDAR	**Pinedale Array**	**47.52**	**71**	P	**P**	**11 11 38.2**	**-0.7**
	0.7nm,0.6s,mb3.7,baz=301,slow=4.2,SNR=10.0						
MKAR	**Makanchi Array**	**58.62**	**307**	P	**P**	**11 13 00.3**	**0.0**
MKAR	**Makanchi Array**	**58.62**	**307**	P	**P**	**11 13 00.3**	**0.0**
	0.1nm,0.3s,mb3.3,baz=52,slow=6.1,SNR=5.0						
TXAR	**Lajitas Array**	**59.99**	**80**	P	**P**	**11 13 09.9**	**-0.1**
	0.4nm,0.6s,mb3.6,baz=308,slow=4.4,SNR=2.9						

ISK ***16*** *11:09:03.8, 40.85N×40.26E, h22^{km}, MD2.9*
CSEM ***16*** *11:09:04.2±0.1, 40.90N×40.27E, h20^{km}, MD2.4, Error ellipse: s-maj=5.3km s-min=2.7km az=162.0*
ISCJB ***16*** *11:09:05.2±0.6, 40.95N±0.08×40.22E±0.06, h26^{km}±8^{km}, Error ellipse: s-maj=14.4km s-min=5.4km az=152.7*
DDA ***16*** *11:09:05.5, 40.98N×40.21E, h31^{km}±1^{km}, Md2.4*
ISC 16 11:09:05.3±0.6**, 40.94N**±0.08×**40.22E**±0.07**, h24^{km}**±9^{km}**, n10,** σ**0^{s}79**/15**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MACK	**Trabzon**	**0.34**	**270**	*i* P	**Pb**	**11 09 13.2**	**+0.4**
MACK				*i* S	**Sb**	**11 09 18.5**	**+0.5**
KTUT	**Trabzon**	**0.34**	**278**	PG	**Pb**	**11 09 13.3**	**+0.4**
PZAR	**Pazar-Rize**	**0.57**	**65**	PG	**Pb**	**11 09 15.4**	**-1.2**
PZAR				SG	**Sb**	**11 09 24.7**	**+0.4**
GUMT	**Gumushane**	**0.74**	**230**	PG	**Pb**	**11 09 19.2**	**-0.3**
GUMT				SG	**Sb**	**11 09 28.0**	**-1.2**
KELT	**Kelkit**	**1.08**	**223**	*i* P	**Pn**	**11 09 25.4**	**+0.5**
KELT				*i* S	**Sb**	**11 09 39.4**	**+0.4**
ESPY	**Espiye-Giresun**	**1.13**	**269**	PN	**Pn**	**11 09 24.7**	**-0.9**
EZC	**Erzincan**	**1.23**	**195**	*e*PN	**Pn**	**11 09 27.4**	**+0.4**
ARTV	**Artvin**	**1.32**	**79**	*i* P	**Pn**	**11 09 28.4**	**+0.2**
ARTV				*i* S	**Sn**	**11 09 44.9**	**-0.1**
EZM	**Erzurum**	**1.35**	**139**	*e*PN	**Pn**	**11 09 27.4**	**-1.3**
ERZM	**Erzurum**	**1.36**	**139**	*i* P	**Pn**	**11 09 30.4**	**+1.7**

MOS ***16*** *11:17:41.5±0.9, 9.82N×126.36E, h33^{km}, mb5.1/25, Error ellipse: s-maj=14.4km s-min=6.9km az=108.0*
IDC ***16*** *11:17:41.1±2.7, 9.79N×126.16E, h21^{km}±16^{km}, mb4.6/23, mb1 4.7/23, mb1mx4.6/26, mbtmp4.6/23, MS4.0/12, Ms1 4.0/12, ms1mx3.8/42, Error ellipse: s-maj=26.3km s-min=9.6km az=71.0*
MAN ***16*** *11:17:42, 9.87N×126.59E, h30^{km}, mb5.5, ML4.5, MS4.8*
MAN INTENSITY III - GENERAL LUNA, SURIGAO DEL NORTE; INTENSITY I - SURIGAO CITY.
ISCJB ***16*** *11:17:43.6±0.5, 9.81N±0.03×126.49E±0.04, h53^{km}±4^{km}, mb4.7/70, MS4.1/25, Error ellipse: s-maj=6.5km s-min=3.7km az=156.0*
BJI ***16*** *11:17:46.9, 10.09N×126.36E, h44^{km}, mB5.0, mb4.7, Ms4.5, Msz4.3*
NEIC ***16*** *11:17:49.4±1.2, 9.75N×126.30E, h92^{km}±11^{km}, mb4.8/26, Error ellipse: s-maj=10.1km s-min=5.2km az=74.0*
NEIC Felt [II PIVS] at General Luna and [I PIVS] at Surigao.
ISC 16 11:17:45.4±0.5**, 9.80N**±0.03×**126.45E**±0.04**, h54^{km}**±4^{km}**, h70^{km}**±3.0^{km}**:pP-P, n169,** σ**1^{s}18**/185**, mb4.8**/69**, MS4.1**/25**, 22C-6D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.95**	**269**	⇓*e*P	**Pn**	**11 17 59.1**	**-3.5**
SCPH				*e*S	**Sn**	**11 18 12.4**	**-2.8**
MSLP	**Maasin**	**1.60**	**282**	*e*P	**Pn**	**11 18 09.6**	**-1.7**
MSLP				*e*S	**Sn**	**11 18 31.1**	**+0.2**
BIPH	**Bislig**	**1.61**	**183**	⇑*e*P	**Pn**	**11 18 09.2**	**-2.3**
BIPH				*i* S	**Sn**	**11 18 29.7**	**-1.4**
PLP	**Palo**	**1.98**	**313**	*e*P	**Pn**	**11 18 15.4**	**-1.2**
PLP				*e*S	**Sn**	**11 18 41.4**	**+1.1**
BESP	**Borongan**	**2.05**	**331**	*e*P	**Pn**	**11 18 15.1**	**-2.3**
BESP				*e*S	**Sn**	**11 18 47.0**	**+5.1**
CGP	**Cagayan de Oro**	**2.19**	**233**	⇑*e*P	**Pn**	**11 18 18.1**	**-1.3**
CGP				*i* S	**Sn**	**11 18 48.2**	**+2.8**
OCLP	**Ormoc**	**2.20**	**305**	*e*P	**Pn**	**11 18 19.9**	**+0.4**
OCLP				*e*S	**Sn**	**11 18 49.4**	**+3.9**
BUKP	**Musuan**	**2.35**	**216**	*e*P	**Pn**	**11 18 21.8**	**+0.2**
LLP	**Lapu-Lapu**	**2.50**	**282**	⇑*e*P	**Pn**	**11 18 23.9**	**+0.2**
LLP				*e*S	**Sn**	**11 18 54.3**	**+1.3**
TBP	**Tagbilaran**	**2.56**	**268**	*e*P	**Pn**	**11 18 24.0**	**-0.4**
TBP				*e*S	**Sn**	**11 18 54.0**	**-0.3**
MATI	**Mati**	**2.84**	**184**	*e*P	**Pn**	**11 18 28.4**	**0.0**
DAV	**Davao City (W)**	**2.85**	**198**	*e*Pn	**Pn**	**11 18 31.5**	**+3.1**
DAV	**Davao City (W)**	**2.85**	**198**	⇑*e*P	**Pn**	**11 18 31.0**	**+2.6**
SNPH	**Sibulan**	**3.20**	**262**	*e*P	**Pn**	**11 18 33.0**	**-0.3**
CNP	**Catarman**	**3.21**	**327**	*e*P	**Pn**	**11 18 31.0**	**-2.4**
CNP				*e*S	**Sn**	**11 19 10.5**	**0.0**
DCPH	**Dipolog City**	**3.29**	**249**	⇑*e*P	**Pn**	**11 18 34.2**	**-0.2**
DCPH				*i* S	**Sn**	**11 19 09.4**	**-3.0**
CTBH	**Cotabato--PC H**	**3.37**	**221**	⇑*e*P	**Pn**	**11 18 35.5**	**0.0**
CTBH				*i* S	**Sn**	**11 19 18.1**	**+3.8**
PAGZ	**Pagadian**	**3.60**	**238**	*e*P	**Pn**	**11 18 39.6**	**+0.9**
GUIM	**Jordan**	**3.89**	**283**	*e*P	**Pn**	**11 18 42.6**	**-0.1**
GUIM				*e*S	**Sn**	**11 19 29.7**	**+2.6**
RCP	**Roxas**	**4.04**	**296**	⇑*e*P	**Pn**	**11 18 45.4**	**+0.6**
PVCP	**Virac**	**4.39**	**329**	*e*P	**Pn**	**11 18 50.1**	**+0.6**
PVCP	**Virac**	**4.39**	**329**	⇑*e*P	**Pn**	**11 18 50.0**	**+0.5**
KALP	**Kalibo**	**4.45**	**295**	*e*P	**Pn**	**11 18 55.0**	**+4.6**
OTRP	**Odiongan**	**5.04**	**301**	*e*P	**Pn**	**11 18 58.9**	**+0.4**
CUYO	**Cuyo Island**	**5.45**	**282**	*e*P	**Pn**	**11 19 05.0**	**+0.9**
POLP	**Polilio Island**	**6.59**	**318**	*e*P	**Pn**	**11 19 19.8**	**0.0**
LUBP	**Lubang**	**7.22**	**303**	*e*P	**Pn**	**11 19 32.3**	**+3.9**
BALP	**Baler**	**7.58**	**322**	*e*P	**Pn**	**11 19 33.4**	**+0.1**
JOW	**Kunigami**	**17.03**	**6**	P	**Pn**	**11 21 44.1**	**+4.3**
JOW				LR	LR	11 27 03.7	
JOW	**Kunigami**	**17.03**	**6**	P	**Pn**	**11 21 44.1**	**+4.3**
	1.7nm,0.3s,baz=141,slow=9.1,SNR=5.2						
JOW				LR	LR	11 27 03.7	
	comp=Z,550nm,18.7s,baz=103,slow=33						
KSM	**Kuching**	**18.06**	**244**	*e*P	**Pn**	**11 21 56.8**	**+4.1**
GUMO	**Guam**	**18.42**	**76**	LR	LR	11 27 31.1	
	comp=Z,676nm,20.3s,baz=265,slow=32						
QIZ	**Qiongzhong**	**18.50**	**302**	*e*P	**Pn**	**11 21 58.3**	**+0.3**
QIZ				S	**S**	**11 25 18.4**	**-6.8**
QIZ				XS	sS	11 25 37.8	-7.3
QIZ				LR	LR		
	comp=E,706nm,17.9s						
QIZ				LR	LR		
	comp=Z,1μm,18.0s						
BATI	**Kupang**	**20.07**	**188**	P	**P**	**11 22 16.0**	**+1.6**
	comp=Z,121nm,0.8s,baz=200,slow=0.5,SNR=28						
BATI				S	**S**	**11 26 00.0**	**+2.8**
	comp=Z,7.5nm,0.5s,baz=47,slow=19,SNR=2.2						
BATI				LR	LR	11 30 07.3	
	comp=Z,666nm,21.2s,MS4.0,baz=109,slow=37						
SSE	**Sheshan**	**21.75**	**348**	P	**P**	**11 22 33.8**	**+1.4**
SSE				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,317nm,4.4s						
SSE				LR	LR		
	comp=N,125nm,19.3s,MS3.4						
SSE				LR	LR		
	comp=E,86nm,19.3s,MS3.4						
SSE				LR	LR		
	comp=Z,174nm,18.9s,MS3.5						
CBIJ	**Chichi jima**	**22.73**	**39**	LR	LR	11 29 31.2	
	comp=Z,716nm,21.9s,MS4.1,baz=268,slow=31						
KAKA	**Kakadu**	**23.14**	**165**	⇑*i*P	**P**	**11 22 45.9**	**-1.4**
	comp=Z,28nm,0.6s,mb4.9						
NJ2	**Nanjing**	**23.23**	**343**	*e*P	**P**	**11 22 47.6**	**-0.5**
NJ2				PP		11 23 20.8	
NJ2				S	**S**	**11 26 51.0**	**-5.0**
NJ2				AMB	AMB		
	comp=Z,50nm,0.9s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,260nm,4.8s						
NJ2				LR	LR		
	comp=N,1μm,26.0s,MS4.4						
NJ2				LR	LR		
	comp=E,1μm,23.2s,MS4.4						
NJ2				LR	LR		
	comp=Z,830nm,22.2s,MS4.1						
WHN	**Wuhan**	**23.52**	**333**	*e*P	**P**	**11 22 51.8**	**+1.0**
JNU	**Nakatsue**	**23.57**	**9**	LR	LR	11 31 35.0	
	comp=Z,248nm,20.9s,MS3.6,baz=342,slow=35						
GYA	**Guiyang**	**25.00**	**314**	P	**P**	**11 23 03.5**	**-0.8**
GYA				AP	pP	11 23 21.8	+4.0
GYA				PP		11 23 47.6	
GYA				PCP	PcP	11 26 40.4	+2.0
GYA				S	**S**	**11 27 22.9**	**-1.7**
GYA				SCP	ScP	11 30 10.8	-2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GYA				AMB	AMB		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,340nm,17.9s,MS4.1						
GYA				LR	LR		
	comp=E,370nm,16.8s,MS4.1						
GYA				LR	LR		
	comp=Z,410nm,17.6s,MS4.0						
KULM	**Kulim**	**25.96**	**262**	*e*P	**P**	**11 23 16.1**	**+2.9**
JHJ	**Hachijo jima 2**	**26.26**	**26**	LR	LR	11 31 16.3	
	comp=Z,493nm,21.4s,MS4.0,baz=293,slow=31						
KMI	**Kunming**	**27.20**	**307**	P	**P**	**11 23 27.6**	**+3.4**

KMI S **S** **11 27 59.3 -0.2**
KMI AMB AMB
comp=Z,12nm,1.1s,mb4.3
KMI AMB AMB
comp=Z,128nm,4.3s
KMI LR LR
comp=N,256nm,15.7s,MS4.1
KMI LR LR
comp=E,325nm,16.1s,MS4.1
KMI LR LR
comp=Z,450nm,17.4s,MS4.1
KSRS Korea Array 27.56 3 P **P** **11 23 27.3 0.0**
comp=Z,8.2nm,1.1s,mb4.3,baz=179,slow=10,SNR=12
KSRS LR LR 11 32 26.7
comp=Z,299nm,20.7s,MS3.9,baz=159,slow=32
FITZ Fitzroy Crossi 27.74 182 ⇑*iP* **P** **11 23 28.6 -0.4**
comp=Z,46nm,0.8s,mb5.2
FITZ Fitzroy Crossi 27.74 182 P **P** **11 23 28.8 -0.2**
comp=Z,33nm,0.9s,mb5.0,baz=18,slow=14,SNR=26
FITZ LR LR 11 34 09.7
comp=Z,93nm,19.9s,MS3.4,baz=142,slow=36
CHTO Chiang Mai 28.09 292 *eP* **P** **11 23 32.5 +0.3**
comp=Z,6.3nm,0.8s,mb4.3
CHTO Chiang Mai 28.09 292 *eP* **P** **11 23 32.5 +0.3**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
PMG Port Moresby 28.09 132 P **P** **11 23 34.6 +2.4**
comp=Z,6.3nm,0.8s,mb4.3,baz=269,slow=8.6,SNR=3.6
PSI Prapat 28.21 258 P **P** **11 23 35.0 +1.5**
comp=Z,5.9nm,0.8s,mb4.3,baz=67,slow=5.4,SNR=4.4
MJAR Matsushiro Arr 28.68 20 LR LR 11 35 03.0
comp=Z,411nm,18.8s,MS4.1,baz=205,slow=36
XAN Xi'an 29.00 329 P **P** **11 23 38.3 -1.8**
XAN S **S** **11 28 17.8 -10**
XAN AMB AMB
comp=Z,16nm,0.7s,mb4.9
XAN LR LR
comp=N,278nm,15.0s,MS4.1
XAN LR LR
comp=E,226nm,14.2s,MS4.1
XAN LR LR
comp=Z,390nm,16.1s,MS4.1
CD2 Chengdu 29.78 318 *eP* **P** **11 23 50.5 +3.4**
CD2 PP PP 11 24 50.6 -4.5
CD2 S **S** **11 28 41.5 +1.6**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
CD2 AMB AMB
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,740nm,16.8s,MS4.6
CD2 LR LR
comp=E,1μm,17.8s,MS4.6
CD2 LR LR
comp=Z,940nm,15.6s,MS4.5
WRA Warramunga Arr 30.56 165 P **P** **11 23 52.6 -1.4**
comp=Z,3.1nm,0.6s,mb4.3,baz=344,slow=9.6,SNR=24
WB2 Warramunga Arr 30.56 165 *eP* **P** **11 23 51.9 -2.2**
BJT Baijiatuan 31.45 345 *eP* **P** **11 24 02.2 +0.5**
MBWA Marble Bar 31.47 192 *eP* **P** **11 24 01.5 -0.6**
BJI Beijing 31.47 345 P **P** **11 24 01.1 -0.8**
BJI S **S** **11 29 11.1 +4.9**
BJI AMB AMB
comp=Z,13nm,1.1s,mb4.7
BJI LR LR
comp=N,290nm,18.9s,MS4.0
BJI LR LR
comp=E,214nm,20.5s,MS4.0
BJI LR LR
comp=Z,199nm,20.2s,MS3.8
SNY Shenyang 32.00 356 ⇑P **P** **11 24 07.8 +1.3**
SNY PP PP 11 25 16.8 -2.9
SNY S **S** **11 29 14.4 0.0**
SNY AMB AMB
comp=Z,9.0nm,0.8s,mb4.7
SNY AMB AMB
comp=Z,195nm,4.7s
SNY LR LR
comp=E,319nm,15.0s
SNY LR LR
comp=Z,258nm,19.2s,MS3.9
LZH Lanzhou 33.26 325 *eP* **P** **11 24 19.0 +1.3**
LZH AP pP 11 24 35.3 +3.9
LZH PP PP 11 25 33.0 -0.7
LZH *eS* **S** **11 29 32.0 -2.2**
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.9
LZH AMB AMB
comp=Z,120nm,5.4s
LZH LR LR
comp=E,763nm,14.2s
LZH LR LR
comp=Z,963nm,15.0s,MS4.6
HHC Hu-ho-hao-te 33.62 339 *eP* **P** **11 24 21.1 +0.4**
HHC AP pP 11 24 39.1 +4.7
HHC PP PP 11 25 35.3 -2.3
HHC PCP PcP 11 26 59.0 -1.0
HHC S **S** **11 29 37.0 -2.5**
HHC SS SS 11 31 45.3 -21
HHC AMB AMB
comp=Z,16nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,129nm,5.3s
HHC LR LR
comp=N,373nm,15.3s,MS4.4
HHC LR LR
comp=E,318nm,14.2s,MS4.4
HHC LR LR
comp=Z,404nm,15.3s,MS4.3
CN2 Changchun 33.88 359 *eP* **P** **11 24 26.1 +3.2**
ASAR Alice Springs 34.05 168 P **P** **11 24 23.8 -0.8**
comp=Z,1.8nm,0.4s,mb4.3,baz=353,slow=6.9,SNR=51
ASAR PcP PcP 11 27 01.9 +0.5
comp=Z,0.7nm,0.6s,baz=337,slow=2.1,SNR=4.1
ASAR S **S** **11 29 51.5 +5.0**
comp=Z,1.2nm,0.9s,baz=345,slow=22,SNR=5.8
MDJ Mudanjiang 34.79 4 P **P** **11 24 31.6 +0.8**
MDJ AP pP 11 24 49.8 +5.2
MDJ PP PP 11 25 53.3 +2.8
MDJ PCP PcP 11 27 03.9 +0.7
MDJ S **S** **11 29 59.8 +2.2**
MDJ PCS PcS 11 30 50.8 +1.0
MDJ AMB AMB
comp=Z,14nm,1.6s,mb4.6
MDJ AMB AMB
comp=Z,208nm,4.8s
MDJ LR LR
comp=N,160nm,11.1s,MS4.2
MDJ LR LR
comp=E,232nm,14.8s,MS4.2
MDJ LR LR
comp=Z,344nm,15.2s,MS4.2
MDJ Mudanjiang 34.79 4 *eP* **P** **11 24 31.6 +0.8**
comp=Z,20nm,1.1s,mb5.0
CTA Charters Tower 35.53 147 ⇓*iP* **P** **11 24 38.5 +1.1**
comp=Z,11nm,1.0s,mb4.7
CTA Charters Tower 35.53 147 ⇓*iP* **P** **11 24 38.5 +1.1**
CTA pmax pmax
comp=Z,11nm,1.0s
CTA Charters Tower 35.53 147 P **P** **11 24 38.8 +1.4**
comp=Z,14nm,0.9s,mb4.9,baz=329,slow=9.9,SNR=5.8
CTAO Charters Tower 35.53 147 *eP* **P** **11 24 38.5 +1.1**
SHL Shillong 36.33 300 *eP* **P** **11 24 44.0 -0.3**
ASAJ Asahikawa 36.95 19 P **P** **11 24 49.9 +0.7**
comp=Z,3.0nm,0.4s,mb4.4,baz=280,slow=12,SNR=4.7
ASAJ LR LR 11 39 59.7
comp=Z,343nm,18.4s,MS4.2,baz=174,slow=36
GTA Gaotai 37.87 326 *eP* **P** **11 24 56.4 -0.7**
GTA AP pP 11 25 14.6 +3.6
GTA PP PP 11 26 28.3 +3.8
GTA PCP PcP 11 27 12.3 -0.3
GTA S **S** **11 30 41.4 -3.3**
GTA SCP ScP 11 30 59.6 +3.8
GTA SS SS 11 33 20.8 -11
GTA AMB AMB
comp=Z,4.0nm,0.6s,mb4.3
GTA AMB AMB
comp=Z,169nm,6.1s
GTA LR LR
comp=N,261nm,17.5s,MS4.3
GTA LR LR
comp=E,316nm,17.5s,MS4.3
GTA LR LR
comp=Z,399nm,17.1s,MS4.3
HNR Honiara 38.42 119 LR LR 11 40 15.3
comp=Z,106nm,18.7s,MS3.7,baz=359,slow=35

LSA Lhasa 38.45 306 P **P** **11 25 05.0 +2.8**
YSS Yuzh-Sakhalins 39.54 18 *eP* **P** **11 25 11.2 +0.2**
comp=Z,6.1nm,0.4s,mb4.7
YSS Yuzh-Sakhalins 39.54 18⇑*eP* **P** **11 25 11.6 +0.6**
YSS pmax pmax
comp=Z,18nm,1.2s,mb4.7
KLR Kul'dur 39.55 5 *eP* **P** **11 25 08.0 -3.1**
HIA Hailar 39.74 353 *eP* **P** **11 25 12.4 -0.2**
comp=Z,14nm,1.0s,mb4.6
HIA Hailar 39.74 353 *eP* **P** **11 25 12.4 -0.2**
HIA pmax pmax
comp=Z,13nm,1.0s
FORT Forrest 40.38 178 *eP* **P** **11 25 18.3 +0.2**
comp=Z,27nm,0.4s,mb5.3
ULN Ulaanbaatar 41.32 340 *eP* **P** **11 25 26.0 +0.3**
comp=Z,7.5nm,0.7s,mb4.4
ULN Ulaanbaatar 41.32 340⇑*eP* **P** **11 25 26.2 +0.5**
SONM Songino Array 41.52 340 P **P** **11 25 27.4 0.0**
comp=Z,4.1nm,0.7s,mb4.2,baz=155,slow=8.8,SNR=19
SONM ScP ScP 11 31 12.4 +2.6
comp=Z,0.9nm,1.0s,baz=196,slow=2.6,SNR=12
SONM LR LR 11 45 12.8
comp=Z,287nm,18.9s,MS4.2,baz=63,slow=40
KLBR Kellerberrin 41.99 191 *eP* **P** **11 25 31.5 +0.1**
comp=Z,31nm,0.8s,mb5.0
MUN Mundaring 42.68 193 *eP* **P** **11 25 37.4 +0.4**
NWAO Narrogin (SRO) 43.39 191 *eP* **P** **11 25 43.4 +0.8**
comp=Z,60nm,0.9s,mb5.3
NWAO Narrogin (SRO) 43.39 191 *eP* **P** **11 25 43.4 +0.7**
NWAO pmax pmax
comp=Z,60nm,0.9s
CIT Chita 43.40 348 *eP* **P** **11 25 43.1 +0.6**
CIT *e* pP 11 25 51.9 -4.7
CIT *e* 11 28 08.3
CIT pmax pmax
comp=Z,34nm,1.2s,mb5.0
STKA Stephens Creek 43.90 161⇑*iP* **P** **11 25 46.7 -0.1**
comp=Z,5.5nm,0.4s,mb4.6
STKA Stephens Creek 43.90 161 P **P** **11 25 46.6 -0.2**
comp=Z,4.3nm,0.4s,mb4.5,baz=341,slow=6.8,SNR=14
ZAK Zakamensk 44.77 339 *eP* **P** **11 25 53.0 -0.5**
ZAK *e* 11 27 36.0
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
TLY Talaya 45.73 340 *eP* **P** **11 26 02.5 +1.3**
comp=Z,10nm,0.8s,mb4.8
TLY Talaya 45.73 340 *eP* **P** **11 26 01.0 -0.2**
TLY *e* pP 11 26 15.5 +0.1
TLY *e* 11 27 39.8
TLY *eS* **S** **11 32 44.2 +3.6**
TLY *e*SS SS 11 36 02.6 -2.9
TLY pmax pmax
comp=Z,11nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,204nm,20.0s,MS4.1
MOY Mondy 46.64 338 *eP* **P** **11 26 09.6 +1.3**
CLNS Chul'man 46.94 359 *eP* **P** **11 26 09.9 -0.6**
CLNS pmax pmax
comp=Z,17nm,1.0s,mb4.9
CLNS pmax pmax
comp=N,10.0nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.1s
HYB Hyderabad 47.06 285 *eP* **P** **11 26 12.5 +0.3**
HYB Hyderabad 47.06 285 *i* P **P** **11 26 12.5 +0.3**
WMQ Urumqi 47.70 322 ⇑P **P** **11 26 15.9 -0.8**
WMQ AP pP 11 26 34.6 +3.6
WMQ PCP PcP 11 27 44.4 -1.0
WMQ PP PP 11 28 07.9 -0.8
WMQ S **S** **11 33 05.4 -3.6**
WMQ AMB AMB
comp=Z,3.0nm,0.5s,mb4.6
WMQ AMB AMB
comp=Z,179nm,5.4s
WMQ LR LR
comp=N,344nm,23.8s,MS4.3
WMQ LR LR
comp=E,217nm,22.4s,MS4.3
WMQ LR LR
comp=Z,176nm,19.6s,MS4.0
BOD Bodaibo 48.86 351 *eP* **P** **11 26 24.9 -0.5**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
DDI Dehra Dun 49.40 302 *ex* **P** **11 26 36.0 +6.0**
DZM Mont Dzumac 50.41 129 P **P** **11 26 39.4 +1.7**
comp=Z,8.1nm,0.6s,mb4.9,baz=307,slow=3.7,SNR=6.5
YAK Yakutsk 52.19 2 *eP* **P** **11 26 49.8 -0.6**
YAK Yakutsk 52.19 2 *eP* **P** **11 26 50.5 +0.1**
YAK *e**PP pP 11 27 05.5 +0.7
YAK *e* 11 28 02.2
YAK *e* 11 28 48.4
YAK *eS* **S** **11 34 10.1 -0.8**
YAK *e**SS sS 11 34 18.1 -17
YAK pmax pmax
comp=Z,25nm,1.0s,mb5.1
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
YAK smax
comp=N,28nm,2.4s
YAK smax
comp=Z,74nm,3.0s
YAK smax
comp=E,65nm,3.9s
MKAR Makanchi Array 52.51 323 P **P** **11 26 51.4 -1.6**
MKAR ScP ScP 11 31 56.7 +0.8
MKAR Makanchi Array 52.51 323 P **P** **11 26 51.4 -1.6**
comp=E,7.3nm,0.8s,mb4.7,baz=120,slow=7.9,SNR=62
MKAR ScP ScP 11 31 56.7 +0.8
comp=E,2.5nm,1.1s,baz=120,slow=4.8,SNR=8.5
UCH Uchtor 55.63 315 *eP* **P** **11 27 15.6 -0.3**
comp=E,5.0nm,0.7s,mb4.7
AML Almayashu 56.17 315 *eP* **P** **11 27 19.7 -0.1**
comp=E,4.0nm,0.7s,mb4.6
SEY Seymchan 56.23 14⇑*eP* **P** **11 27 21.4 +1.6**
EKS2 Erkin-Say 56.29 315 *eP* **P** **11 27 19.8 -0.8**
comp=E,4.3nm,0.9s,mb4.5
NVS Novosibirsk 56.40 332 *eP* **P** **11 27 20.7 -0.5**
NVS pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
NVS pmax pmax
comp=N,6.0nm,1.3s
KURK Kurchatov 56.55 326 *eP* **P** **11 27 21.0 -1.3**
comp=N,12nm,0.8s,mb5.0
KURK Kurchatov 56.55 326⇑*eP* **P** **11 27 21.7 -0.6**
TIXI Tiksi 61.81 1 *eP* **P** **11 27 58.1 -0.2**
comp=N,11nm,0.8s,mb5.0
TIXI Tiksi 61.81 1 *eP* **P** **11 27 56.1 -2.3**
TIXI pmax pmax
comp=Z,19nm,1.0s,mb5.2
TIXI MLR MLR
comp=Z,299nm,18.0s,MS4.5
BRVK Borovoye 62.22 325 P **P** **11 28 00.9 -0.5**
comp=Z,6.1nm,0.8s,mb4.8
BRVK Borovoye 62.22 325 P **P** **11 28 00.9 -0.5**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
BILL Bilibino 63.80 16⇓*iP* **P** **11 28 12.3 +0.7**
BILL pmax pmax
comp=Z,11nm,1.2s,mb4.8
RPZ Rata Peaks 66.90 146 P **P** **11 28 31.9 -0.1**
comp=Z,12nm,0.6s,mb5.1,baz=341,slow=7.0,SNR=7.4
URZ Urewera 67.19 139 P **P** **11 28 33.9 -0.1**
comp=Z,7.1nm,0.9s,mb4.7,baz=265,slow=9.8,SNR=3.0
ARU Arti 69.71 327 *eP* **P** **11 28 47.4 -2.1**
comp=Z,5.6nm,0.4s,mb4.8
ARU Arti 69.71 327*d iP* **P** **11 28 48.0 -1.5**
ARU 11 31 20.7
ARU S S 11 37 50.4 -3.8
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
IMA2 Indian Mountai 76.99 24 *eP* **P** **11 29 33.5 +1.4**
PRGR Permogore 77.08 331 *eP* **P** **11 29 29.1 -3.6**
PRGR pmax pmax
comp=Z,48nm,0.5s,mb5.7
ZEI Tsey 77.97 312 *eP* **P** **11 29 38.2 +0.1**
ZEI *e**PP pP 11 29 55.6 +2.3
ZEI pmax pmax
comp=Z,13nm,0.9s,mb4.9
KIV Kislovodsk 78.80 313 ⇓*iP* **P** **11 29 42.8 +0.1**

KIV Kislovodsk 78.80 313⇓*iP* **P** **11 29 43.1 +0.5**
KIV *e* 11 29 51.8
KIV pmax pmax
comp=Z,21nm,1.2s,mb4.9
MCK McKinley 78.89 27 *eP* **P** **11 29 42.9 +0.2**
comp=Z,11nm,0.9s,mb4.8
MCK McKinley 78.89 27 *eP* **P** **11 29 42.9 +0.2**
MCK pmax pmax
comp=Z,11nm,0.9s,mb4.8
COLA College 79.37 26⇑*eP* **P** **11 29 46.7 +1.4**
OBN Obninsk 81.98 325⇑*eP* **P** **11 29 58.5 -0.9**
OBN pmax pmax
comp=Z,14nm,1.4s,mb4.7
DAWY Dawson 83.08 26 *eP* **P** **11 30 06.8 +1.8**
JOF Joensuu 83.69 333 *ep* **P** **11 30 07.2 -1.0**
comp=Z,4.9nm,0.5s,mb4.9
KEV Kevo 84.13 340 *ep* **P** **11 30 09.4 -0.9**
comp=Z,14nm,0.9s,mb5.1
KEV Kevo 84.13 340 *eP* **P** **11 30 09.4 -0.9**
KEV pmax pmax
comp=Z,14nm,0.9s,mb5.1
INK Inuvik 84.65 22 *eP* **P** **11 30 14.0 +1.0**
comp=Z,501nm,1.2s
INK Inuvik 84.65 22 *eP* **P** **11 30 14.0 +1.0**
INK pmax pmax
comp=Z,501nm,1.2s
INK Inuvik 84.65 22 P **P** **11 30 13.3 +0.4**
comp=Z,10nm,1.1s,mb4.9,baz=273,slow=5.5,SNR=20
ARCES ARCESS Array B 84.69 340 P **P** **11 30 13.1 0.0**
comp=Z,11nm,0.9s,mb5.0,baz=79,slow=5.5,SNR=25
BRTR Keskin Array B 85.37 309 P **P** **11 30 19.0 -1.1**
comp=Z,1.9nm,0.8s,mb4.4,baz=94,slow=6.4,SNR=6.8
KAF Kangasniemi 86.12 332 *ep* **P** **11 30 19.2 -1.2**
comp=Z,11nm,0.8s,mb5.1,baz=75,slow=4.5
KAF Kangasniemi 86.12 332 *eP* **P** **11 30 19.2 -1.2**
KAF pmax pmax
comp=Z,11nm,0.8s,mb5.1
FINES FINESS Array B 86.39 332 P **P** **11 30 20.9 -0.8**
comp=Z,4.1nm,0.5s,mb4.9,baz=71,slow=5.5,SNR=23
AKASG Malin Array Be 87.04 321 P **P** **11 30 23.2 -1.9**
comp=Z,2.3nm,0.6s,mb4.6,baz=66,slow=4.2,SNR=8.7
KIEV Kiev 87.05 321 *eP* **P** **11 30 24.4 -0.7**
comp=Z,10nm,1.1s,mb5.0
KIEV Kiev 87.05 321 *eP* **P** **11 30 24.4 -0.8**
KIEV pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
PPT Papeete 87.25 108 *e*LR LR 11 58 20.0
comp=Z,189nm,22.0s
TBI Tubuai 88.47 114 *e*LR LR 11 58 46.7
comp=Z,246nm,23.2s
KMBO Kilima Mbogo 89.40 269 *eP* **P** **11 30 37.6 +0.5**
comp=Z,5.4nm,1.0s,mb4.8
KMBO Kilima Mbogo 89.40 269 *eP* **P** **11 30 37.6 +0.5**
KMBO pmax pmax
comp=Z,5.0nm,1.0s
KMBO Kilima Mbogo 89.40 269 P **P** **11 30 37.2 +0.1**
comp=Z,3.9nm,0.9s,mb4.8,baz=58,slow=10,SNR=8.4
DAG Danmarks Havn 91.24 352⇑*iP* **P** **11 30 44.1 -0.3**
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
DAG Danmarks Havn 91.24 352⇑*iP* **P** **11 30 44.1 -0.3**
comp=Z,10nm,0.8s,mb5.2
RES Resolute Bay 91.92 10 *eP* **P** **11 30 48.6 +1.0**
comp=Z,238nm,0.9s
RES Resolute Bay 91.92 10 *eP* **P** **11 30 48.6 +1.0**
RES pmax pmax
comp=Z,238nm,0.9s
NB2 NORSAR Subarra 93.26 334 P **P** **11 30 50.3 -3.7**
comp=Z,2.0nm,0.6s,mb4.7,baz=66,slow=4.6
NB2 NORSAR Subarra 93.26 334 P **P** **11 30 50.3 -3.7**
NB2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.7
NOA NORSAR Array B 93.26 334 P **P** **11 30 52.4 -1.6**
comp=Z,1.6nm,0.7s,mb4.6,baz=65,slow=4.7,SNR=3.3
YKA Yellowknife Ar 94.11 24 P **P** **11 30 58.8 +0.9**
YKA Yellowknife Ar 94.11 24 *i* P **P** **11 30 58.7 +0.8**
YKA pmax pmax
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 94.11 24 P **P** **11 30 58.8 +0.9**
comp=Z,3.7nm,0.7s,mb4.9,baz=301,slow=4.6,SNR=58
KHC Kasperske Hory 97.13 322⇑*eP* **P** **11 31 12.0 0.0**
GERES GERESS Array B 97.17 322 P **P** **11 31 11.7 -0.5**
comp=Z,2.0nm,0.9s,mb4.5,baz=64,slow=6.2,SNR=7.8
NEW Newport 99.63 37 P Pdif 11 31 23.0 0.0
NEW Newport 99.63 37 P Pdif 11 31 23.0 0.0
comp=Z,2.2nm,0.8s,baz=256,slow=17,SNR=2.7
NVAR Mina Array Bea 103.03 47 Pdiff Pdif 11 31 40.3 +2.1
comp=Z,0.1nm,0.3s,baz=271,slow=6.1,SNR=3.2
TXAR Lajitas Array 118.00 49 PKP PKPdf 11 36 26.6 -0.2
comp=Z,0.5nm,0.6s,baz=276,slow=3.4,SNR=3.8
TORD Torodi Ar. Bea 120.61 292 PKP PKPdf 11 36 30.6 -1.5
comp=Z,0.4nm,0.5s,baz=96,slow=1.4,SNR=4.6
PLCA Paso Flores 145.71 157 PKPbc PKPbc 11 37 20.0 +1.4
comp=Z,10nm,1.0s,baz=184,slow=4.2,SNR=17

IDC ***16*** *11:30:50.9±0.8, 986N×12654E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/20, mbtmp4.0/11, Error ellipse: s-maj=58.6km s-min=15.0km az=79.0*
ISCJB ***16*** *11:30:56.1±1.0, 984N±004×12649E±007, h48km±9km, mb3.9/10, Error ellipse: s-maj=11.1km s-min=6.0km az=163.4*
NEIC ***16*** *11:31:03.3±0.6, 978N×12636E, h100km, Error ellipse: s-maj=43.7km s-min=10.4km az=76.0*
ISC 16 11:30:57.3±1.0, 984N±004×12650E±007, h42km±10km, n30, σ1§22/39, mb3.9/10, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SCPH	**Surigao**	**0.99**	**267**	⇓*eP*		**Pn**	**11 31 11.9**	**-2.8**
SCPH				*eS*		**Sn**	**11 31 24.8**	**-2.8**
MSLP	**Maasin**	**1.64**	**280**	*eP*		**Pn**	**11 31 23.5**	**-0.1**
MSLP				*eS*		**Sn**	**11 31 43.4**	**0.0**
BIPH	**Bislig**	**1.65**	**185**	⇓*iP*		**Pn**	**11 31 22.6**	**-1.2**
BIPH				*i* S		**Sn**	**11 31 42.8**	**-1.0**
PLP	**Palo**	**1.99**	**312**	*eP*		**Pn**	**11 31 28.1**	**-0.3**
PLP				*eS*		**Sn**	**11 31 54.8**	**+2.8**
OCLP	**Ormoc**	**2.21**	**303**	*eP*		**Pn**	**11 31 33.1**	**+1.7**
CGP	**Cagayan de Oro**	**2.25**	**232**	*eP*		**Pn**	**11 31 27.9**	**-4.1**
CGP				*i* S		**Sn**	**11 32 00.6**	**+2.1**
BUKP	**Musuan**	**2.41**	**216**	*eP*		**Pn**	**11 31 35.6**	**+1.4**
BUKP				*eS*		**Sn**	**11 32 02.9**	**+0.3**
TBP	**Tagbilaran**	**2.60**	**267**	*eP*		**Pn**	**11 31 37.0**	**+0.2**
TBP				*eS*		**Sn**	**11 32 06.1**	**-1.1**
CNP	**Catarman**	**3.20**	**326**	*eP*		**Pn**	**11 31 44.6**	**-0.5**
CNP				*eS*		**Sn**	**11 32 19.0**	**-3.1**
GUIM	**Jordan**	**3.92**	**282**	*eP*		**Pn**	**11 31 55.9**	**+0.9**
GUIM				*eS*		**Sn**	**11 32 38.8**	**-1.0**
RCP	**Roxas**	**4.06**	**295**	⇑*eP*		**Pn**	**11 31 58.0**	**+1.1**
PVCP	**Virac**	**4.38**	**329**	*eP*		**Pn**	**11 32 00.6**	**-0.7**
OTRP	**Odiongan**	**5.05**	**300**	*eP*		**Pn**	**11 32 13.1**	**+2.6**
BATI	**Kupang**	**20.12**	**188**	P		**P**	**11 35 28.7**	**+1.0**
	13nm,0.4s,baz=27,slow=9.0,SNR=2.8							
FITZ	**Fitzroy Crossi**	**27.78**	**182**	P		**P**	**11 36 42.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**27.78**	**182**	P		**P**	**11 36 40.8**	**-1.5**
	0.9nm,0.4s,mb3.8,baz=13,slow=19,SNR=2.8							
WRA	**Warramunga Arr**	**30.59**	**165**	P		**P**	**11 37 07.2**	**-0.1**
	0.4nm,0.6s,mb3.5,baz=342,slow=9.5,SNR=5.9							
WB2	**Warramunga Arr**	**30.59**	**165**	*eP*		**P**	**11 37 08.6**	**+1.3**
ASAR	**Alice Springs**	**34.08**	**168**	P		**P**	**11 37 37.1**	**-0.7**
	0.4nm,0.4s,mb3.7,baz=351,slow=7.1,SNR=14							
ASAR				PcP		PcP	11 40 14.3	-0.5
	0.2nm,0.8s,baz=336,slow=2.0,SNR=2.9							
SONM	**Songino Array**	**41.49**	**340**	P		**P**	**11 38 41.0**	**+0.9**
SONM	**Songino Array**	**41.49**	**340**	P		**P**	**11 38 41.0**	**+0.9**
	0.3nm,0.5s,mb3.2,baz=158,slow=9.6,SNR=2.4							
NWAO	**Narrogin (SRO)**	**43.44**	**191**	P		**P**	**11 38 56.6**	**+0.5**
	8.3nm,1.0s,mb4.4,baz=17,slow=10,SNR=5.9							
STKA	**Stephens Creek**	**43.93**	**161**	P		**P**	**11 38 59.0**	**-1.1**
STKA	**Stephens Creek**	**43.93**	**161**	P		**P**	**11 38 59.0**	**-1.1**
	0.5nm,0.3s,mb3.7,baz=318,slow=3.9,SNR=3.2							
MKAR	**Makanchi Array**	**52.50**	**323**	P		**P**	**11 40 05.0**	**-1.1**
MKAR	**Makanchi Array**	**52.50**	**323**	P		**P**	**11 40 05.0**	**-1.1**
	0.8nm,0.6s,mb3.8,baz=122,slow=7.5,SNR=5.7							
ARCES	**ARCESS Array B**	**84.67**	**340**	P		**P**	**11 43 26.0**	**-0.2**
	2.0nm,0.8s,mb4.3,baz=79,slow=4.7,SNR=3.2							
FINES	**FINESS Array B**	**86.37**	**332**	P		**P**	**11 43 33.9**	**-0.9**
FINES	**FINESS Array B**	**86.37**	**332**	P		**P**	**11 43 33.9**	**-0.9**
	0.8nm,0.7s,mb4.0,baz=79,slow=9.9,SNR=4.3							
YKA	**Yellowknife Ar**	**94.06**	**24**	P		**P**	**11 44 11.5**	**+0.6**
	0.5nm,0.6s,mb4.1,baz=304,slow=4.6,SNR=10							

BJI ***16*** *11:34:55.6, 9.14N×12653E, h80km, mB5.2, mb5.0, Ms4.6,*

Msz4.3
*MAN **16** 11:34:56, 985N×12663E, h71km, mb5.5, ML4.5, MS4.9*
MAN INTENSITY III - GEN LUNA, SURIGAO DEL NORTE; INTENSITY I - SURIGAO CITY, BUTUAN CITY.
*MOS **16** 11:34:57.0±0.9, 980N×12620E, h33km, mb5.4/38, Error ellipse: s-maj=12.7km s-min=5.8km az=112.7*
*IDC **16** 11:34:58.5±3.3, 985N×12626E, h33km±24km, mb4.9/28, mb1 4.9/28, mb1mx4.9/29, mbtmp4.9/28, MS4.2/15, Ms1 4.2/15, ms1mx4.0/34, Error ellipse: s-maj=17.0km s-min=8.3km az=79.0*
*ISCJB **16** 11:34:59.4±0.5, 985N±002×12645E±003, h57km±4km, mb5.0/98, MS4.3/30, Error ellipse: s-maj=5.5km s-min=3.6km az=166.5*
*NEIC **16** 11:35:05.8±0.2, 970N×12620E, h100km, mb5.1/43, Error ellipse: s-maj=7.7km s-min=4.2km az=75.0*
NEIC Felt [III PIVS] at General Luna and [I PIVS] at Butuan and Surigao.
ISC 16 11:35:01.6±0.5, 984N±002×12639E±004, h62km±4km, h85km±3.5km: pP-P, n283, σ1^{s}14/297, mb5.0/98, 27C-28D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.89	267	⇑eP	Pn	11 35 14.5	-3.8
SCPH				eS	Sn	11 35 27.2	-3.3
MSLP	Maasin	1.53	281	eP	Pn	11 35 24.9	-1.9
MSLP				eS	Sn	11 35 47.9	+2.1
BIPH	Bislig	1.64	181	⇑iP	Pn	11 35 24.1	-4.2
BIPH						10 26 58.5	
PLP	Palo	1.91	314	eP	Pn	11 35 30.5	-1.4
PLP				eS	Sn	11 35 59.1	+4.1
BESP	Borongan	1.99	332	eP	Pn	11 35 31.6	-1.3
BESP				eS	Sn	11 36 04.8	+8.0
OCLP	Ormoc	2.12	305	eP	Pn	11 35 34.6	-0.2
CGP	Cagayan de Oro	2.16	231	⇓eP	Pn	11 35 33.5	-1.8
CGP				iS	Sn	11 36 02.2	+1.1
BUKP	Musuan	2.34	214	eP	Pn	11 35 37.0	-0.9
BUKP				eS	Sn	11 36 07.8	+2.3
LLP	Lapu-Lapu	2.43	282	⇓iP	Pn	11 35 39.0	0.0
LLP				iS	Sn	11 36 09.5	+1.9
TBP	Tagbilaran	2.49	267	eP	Pn	11 35 39.2	-0.6
TBP				eS	Sn	11 36 09.9	+0.8
DAV	Davao City (W)	2.86	196	ePn	Pn	11 35 45.9	+1.0
DAV	Davao City (W)	2.86	196	P	Pn	11 35 45.9	+1.0
	SNR=52						
MATI	Mati	2.87	183	eP	Pn	11 35 42.1	-3.0
MATI				eS	Sn	11 36 28.2	+10
SNPH	Sibulan	3.15	261	⇑eP	Pn	11 35 48.0	-0.7
SNPH				eS	Sn	11 36 35.0	+10
CNP	Catarman	3.15	328	eP	Pn	11 35 48.6	-0.2
CNP				eS	Sn	11 36 25.3	+0.1
DCPH	Dipolog City	3.24	248	⇓eP	Pn	11 35 49.4	-0.7
DCPH				iS	Sn	11 36 23.9	-3.7
PAGZ	Pagadian	3.57	237	eP	Pn	11 35 54.4	-0.1
GUIM	Jordan	3.82	282	eP	Pn	11 35 58.0	0.0
GUIM				eS	Sn	11 36 46.2	+4.5
RCP	Roxas	3.97	296	⇓eP	Pn	11 36 00.5	+0.5
PVCP	Virac	4.33	330	eP	Pn	11 36 02.8	-2.1
PVCP	Virac	4.33	330	⇓eP	Pn	11 36 04.7	-0.3
KALP	Kalibo	4.38	295	eP	Pn	11 36 08.6	+2.9
OTRP	Odiongan	4.97	301	eP	Pn	11 36 13.5	-0.2
CUYO	Cuyo Island	5.38	281	eP	Pn	11 36 19.5	+0.2
BUSP	Coron	6.45	290	eP	Pn	11 36 34.6	+0.6
POLP	Polilio Island	6.52	319	eP	Pn	11 36 34.2	-0.8
POLP				eS	Sn	11 37 48.5	+0.5
LUBP	Lubang	7.15	303	eP	Pn	11 36 45.0	+1.4
BALP	Baler	7.51	322	eP	Pn	11 36 46.9	-1.7
PCPH	Palayan	7.68	318	⇓eP	Pn	11 36 49.6	-1.3
CAUP	Cauayan	8.34	328	eP	Pn	11 36 58.4	-1.5
MYLDM	Lahad Datu	9.08	240	⇑P	Pn	11 37 13.6	+3.5
APYP	Conner	9.41	329	eP	Pn	11 37 13.1	-1.4
APYP				eS	Sn	11 38 53.9	-5.0
KDM	Kudat	9.89	254	⇓P	Pn	11 37 25.2	+4.1
SDKM	Sandakan	10.02	246	⇑P	Pn	11 37 27.0	+4.1
TSM	Tawau	10.08	237	⇑P	Pn	11 37 26.8	+3.1
KKM	Kota Kinabalu	10.76	250	ePn	Pn	11 37 30.6	-2.3
KKM	Kota Kinabalu	10.76	250	⇓P	Pn	11 37 35.7	+2.7
BTM	Bintulu	14.76	244	⇑P	Pn	11 38 32.6	+5.5
YHNB	Yeheng	15.51	343	eP	Pn	11 38 41.0	+4.5
SBUM	Sibu	15.87	243	⇑P	Pn	11 38 44.5	+3.1
KAPI	Kappang	16.16	204	Pn	Pn	11 38 43.9	-1.1
	218nm,0.9s,SNR=9.4						
QZH	Quanzhou	16.75	335	⇓P	Pn	11 38 59.3	+7.0
QZH				LR	LR		
	comp=N,4μm,17.3s						
QZH				LR	LR		
	comp=E,1μm,11.0s						
QZH				LR	LR		
	comp=Z,2μm,15.4s						
JOW	Kunigami	17.00	6	Pn	Pn	11 38 57.6	+2.3
	comp=Z,4.0nm,0.3s,baz=179,slow=8.2,SNR=14						
JOW				LR	LR	11 44 21.5	
	comp=Z,857nm,19.4s,baz=113,slow=33						
KSM	Kuching	18.02	244	eP	Pn	11 39 10.3	+2.4
KSM	Kuching	18.02	244	⇑P	Pn	11 39 10.0	+2.1
QIZ	Qiongzhong	18.43	302	P	Pn	11 39 13.8	+0.9
QIZ				S	S	11 42 35.5	-3.6
QIZ				AMB	AMB		
	comp=Z,25nm,0.9s						
QIZ				LR	LR		
	comp=N,442nm,16.0s						
QIZ				LR	LR		
	comp=E,667nm,16.8s						
QIZ				LR	LR		
	comp=Z,1μm,17.1s						
GUMO	Guam	18.48	77	LR	LR	11 44 47.3	
	comp=Z,870nm,20.6s,baz=109,slow=32						
BATI	Kupang	20.09	188	P	P	11 39 30.6	+0.2
	comp=Z,229nm,0.6s,baz=52,slow=0.4,SNR=42						
BATI				S	S	11 43 15.7	+2.8
	comp=Z,15nm,0.6s,baz=123,slow=17,SNR=3.1						
BATI				LR	LR	11 47 41.3	
	comp=Z,516nm,18.3s,baz=199,slow=38						
SSE	Sheshan	21.70	348	P	P	11 39 48.8	+1.3
SSE				AP		11 40 06.8	
SSE				S	S	11 43 47.8	+3.6
SSE				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.0						
SSE				AMB	AMB		
	comp=Z,315nm,4.4s						
SSE				LR	LR		
	comp=N,193nm,18.3s						
SSE				LR	LR		
	comp=E,136nm,18.3s						
SSE				LR	LR		
	comp=Z,260nm,18.6s						
CBIJ	Chichi jima	22.74	39	LR	LR	11 46 59.2	
	comp=Z,661nm,21.9s,baz=223,slow=32						
NJ2	Nanjing	23.18	344	eP	P	11 40 02.8	-0.3
NJ2				AP		11 40 23.9	
NJ2				PP		11 40 38.8	
NJ2				AMB	AMB		
	comp=Z,320nm,0.8s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,430nm,4.1s						
NJ2				LR	LR		
	comp=N,2μm,23.1s						
NJ2				LR	LR		
	comp=E,890nm,21.5s						
NJ2				LR	LR		
	comp=Z,960nm,21.4s						
KAKA	Kakadu	23.19	165	⇓iP	P	11 40 01.0	-2.4
	comp=Z,90nm,0.7s,mb5.3						
WHN	Wuhan	23.46	333	⇑P	P	11 40 05.3	-0.4
KTGM	Kuala Trenggan	23.47	261	⇑P	P	11 40 07.1	+1.0
JNU	Nakatsue	23.54	9	P	P	11 40 05.5	-1.0
	comp=Z,22nm,0.8s,mb4.6,baz=81,slow=2.5,SNR=7.5						
MYKOM	Kota Tinggi	23.79	252	⇑P	P	11 40 10.5	+1.6
KGM	Kluang	24.21	253	⇓P	P	11 40 14.2	+1.4
GYA	Guiyang	24.93	314	P	P	11 40 19.4	+0.2
GYA				AP		11 40 39.8	
GYA				XP	sP	11 40 51.3	+10
GYA				PP		11 41 01.3	
GYA				S	S	11 44 35.3	-3.1
GYA				XS	sS	11 45 08.8	+4.9
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=N,440nm,17.6s						
GYA				LR	LR		
	comp=E,570nm,17.0s						
GYA				LR	LR		
	comp=Z,410nm,17.9s						
FRIM	Kepong	25.45	257	⇓P	P	11 40 25.4	+1.4
IPM	Ipoh	25.71	260	⇑P	P	11 40 28.4	+2.0
KULM	Kulim	25.90	262	eP	P	11 40 28.6	+0.5
KULM	Kulim	25.90	262	⇓P	P	11 40 29.4	+1.3
JHJ	Hachijo jima 2	26.26	26	LR	LR	11 48 57.2	
	comp=Z,588nm,21.1s,baz=326,slow=32						
KMI	Kunming	27.13	307	P	P	11 40 40.3	+1.2
KMI				AP	pP	11 41 00.0	+5.9
KMI				XP	sP	11 41 11.3	+10
KMI				S	S	11 45 10.6	-2.6
KMI				XS	sS	11 45 42.3	+3.4
KMI				SS		11 46 32.0	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KMI				AMB	AMB		
	comp=Z,231nm,5.8s						
KMI				LR	LR		
	comp=N,389nm,18.9s						
KMI				LR	LR		
	comp=E,456nm,18.1s						
KMI				LR	LR		
	comp=Z,605nm,18.1s						
KSRS	Korea Array	27.53	3	P	P	11 40 43.0	+0.5
	comp=Z,5.8nm,0.7s,mb4.3,baz=186,slow=9.6,SNR=18						
FITZ	Fitzroy Crossi	27.77	182	eP	P	11 40 43.2	-1.6
	comp=Z,123nm,0.8s,mb5.6						
FITZ	Fitzroy Crossi	27.77	182	P	P	11 40 44.0	-0.8
	comp=Z,80nm,0.8s,mb5.4,baz=12,slow=9.3,SNR=42						
FITZ				S	S	11 45 39.1	+16
	comp=Z,2.3nm,0.7s,baz=285,slow=19,SNR=3.2						
CHTO	Chiang Mai	28.01	292	eP	P	11 40 46.1	-0.9
	comp=Z,22nm,1.1s,mb4.7						
CHTO	Chiang Mai	28.01	292	eP	P	11 40 46.2	-0.8
CHTO				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
CHTO	Chiang Mai	28.01	292	P	P	11 40 46.8	-0.2
	SNR=10.0						
CHTO	Chiang Mai	28.01	292	P	P	11 40 46.8	-0.2
	SNR=10.0						
CHTO	Chiang Mai	28.01	292	P	P	11 40 46.8	-0.2
	SNR=10.0						
PSI	Prapat	28.16	257	P	P	11 40 48.9	+0.4
	comp=Z,13nm,0.7s,mb4.7,baz=76,slow=6.6,SNR=12						
MJAR	Matsushiro Arr	28.67	20	P	P	11 40 51.0	-1.7
MJAR				PcP	PcP	11 44 02.9	+0.8
MJAR				LR	LR	11 50 23.5	
MJAR	Matsushiro Arr	28.67	20	P	P	11 40 51.0	-1.6
MJAR						11 44 02.9	
MJAR	Matsushiro Arr	28.67	20	P	P	11 40 51.0	-1.7
	comp=Z,3.3nm,0.8s,mb4.1,baz=187,slow=9.0,SNR=8.0						
MJAR				PcP	PcP	11 44 02.9	+0.8
	comp=Z,3.4nm,0.8s,baz=181,slow=2.9,SNR=6.7						
MJAR				LR	LR	11 50 23.5	
	comp=Z,587nm,20.0s,baz=210,slow=32						
MAT	Matsushiro	28.67	20	P	P	11 40 51.7	-0.9
MAT				eS	S	11 45 38.0	+0.9
COEN	Coen	28.92	145	eP	P	11 40 53.7	-1.3
	comp=Z,8.3nm,0.8s,mb4.5						
XAN	Xi'an	28.93	329	P	P	11 40 53.5	-1.5
XAN				AMB	AMB		
	comp=Z,83nm,0.7s,mb5.6						
XAN				LR	LR		
	comp=N,223nm,15.5s						
XAN				LR	LR		
	comp=E,390nm,16.1s						
XAN				LR	LR		
	comp=Z,454nm,16.8s						
CD2	Chengdu	29.71	318	eP	P	11 41 01.5	-0.4
CD2				AP	pP	11 41 21.3	+4.2
CD2				PP	PP	11 42 01.8	-8.2
CD2				S	S	11 45 51.3	-2.4
CD2				XS	sS	11 46 24.5	+5.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,1μm,20.4s						
CD2				LR	LR		
	comp=E,1μm,15.5s						
CD2				LR	LR		
	comp=Z,1μm,15.6s						
WRA	Warramunga Arr	30.61	165	P	P	11 41 07.7	-2.3
	comp=Z,2.4nm,0.4s,mb4.4,baz=346,slow=8.2,SNR=33						
WRA				PcP	PcP	11 44 07.8	+0.4
	comp=Z,3.2nm,0.8s,baz=342,slow=3.1,SNR=4.6						
WB2	Warramunga Arr	30.61	165	⇓iP	P	11 41 07.6	-2.4
BJT	Baijiatuau	31.40	345	eP	P	11 41 17.2	+0.5
	comp=Z,22nm,0.7s,mb5.1						
BJT	Baijiatuau	31.40	345	eP	P	11 41 17.3	+0.5
BJT				pmax	pmax		
	comp=Z,22nm,0.7s						
BJI	Beijing	31.42	345	P	P	11 41 17.1	+0.2
BJI				XP	sP	11 41 44.8	+5.4
BJI				PP	PP	11 42 28.5	-0.4
BJI				PCP	PcP	11 44 03.3	-5.9
BJI				S	S	11 46 24.3	+4.0
BJI				XS	sS	11 46 57.5	+11
BJI				AMB	AMB		
	comp=Z,23nm,0.8s,mb5.1						
BJI				LR	LR		
	comp=N,498nm,15.3s						
BJI				LR	LR		
	comp=E,321nm,18.5s						
BJI				LR	LR		
	comp=Z,322nm,18.9s						
MBWA	Marble Bar	31.49	192	eP	P	11 41 17.0	-0.6
	comp=Z,16nm,0.7s,mb5.0						
SNY	Shenyang	31.96	356	⇑P	P	11 41 22.6	+0.9
SNY				S	S	11 46 26.3	-2.3
SNY				SS	SS	11 48 37.3	-11
SNY				AMB	AMB		
	comp=Z,23nm,0.8s,mb5.1						
SNY				AMB	AMB		
	comp=Z,251nm,5.5s						
SNY				LR	LR		
	comp=E,378nm,16.5s						
SNY				LR	LR		
	comp=Z,375nm,22.5s						
LZH	Lanzhou	33.20	325	eP	P	11 41 32.8	+0.2
LZH				AP	pP	11 41 51.6	+3.8
LZH				XP	sP	11 42 03.5	+8.4
LZH				eS	S	11 46 48.8	+0.8
LZH				XS	sS	11 47 19.0	+5.0
LZH				AMB	AMB		
	comp=Z,39nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,240nm,5.4s						
LZH				LR	LR		
	comp=E,842nm,15.3s						
LZH				LR	LR		
	comp=Z,963nm,16.0s						
HHC	Hu-ho-hao-te	33.56	339	eP	P	11 41 36.3	+0.6
HHC				AP	pP	11 41 58.3	+7.4
HHC				XP	sP	11 42 10.0	+12
HHC				PP	PP	11 42 50.3	-2.3
HHC				PCP	PcP	11 44 13.1	-2.0
HHC				eS	S	11 46 49.5	-4.0
HHC				XS	sS	11 47 27.3	+7.8
HHC				PCS	PcS	11 47 59.9	-0.9
HHC				SCS	ScS	11 51 49.8	-5.9
HHC				AMB	AMB		
	comp=Z,54nm,0.8s,mb5.5						
HHC				AMB	AMB		
	comp=Z,197nm,3.8s						
HHC				LR	LR		
	comp=N,572nm,15.3s						
HHC				LR	LR		
	comp=E,370nm,13.1s						
HHC				LR	LR		
	comp=Z,517nm,17.4s						
CN2	Changchun	33.85	359	eP	P	11 41 39.4	+1.3
CN2				eXP	sP	11 42 10.1	+9.5
CN2				eS	S	11 46 57.3	-0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,400nm,16.0s						
CN2				LR	LR		
	comp=E,400nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
ASAR	Alice Springs	34.10	168	P	P	11 41 39.0	-1.4
	comp=Z,4.8nm,0.5s,mb4.7,baz=351,slow=7.0,SNR=78						
ASAR				PcP	PcP	11 44 15.9	-0.9
	comp=Z,4.6nm,0.7s,baz=350,slow=2.2,SNR=8.3						
MDJ	Mudanjiang	34.76	4	P	P	11 41 47.1	+1.1
MDJ				AP	pP	11 42 07.9	+6.6
MDJ				XP	sP	11 42 17.4	+8.8
MDJ				PP	PP	11 43 10.0	+4.1
MDJ				PCP	PcP	11 44 19.1	+0.7
MDJ				S	S	11 47 16.3	+4.3
MDJ				XS	sS	11 47 49.3	+11
MDJ				AMB	AMB		
	comp=Z,29nm,1.3s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,210nm,8.2s						
MDJ				LR	LR		
	comp=N,252nm,11.9s						
MDJ				LR	LR		
	comp=E,230nm,15.1s						
MDJ				LR	LR		
	comp=Z,401nm,17.5s						
MDJ	Mudanjiang	34.76	4	eP	P	11 41 47.0	+0.9
	comp=Z,51nm,1.4s,mb5.3						
CTA	Charters Tower	35.59	147	⇓iP	P	11 41 53.4	0.0
	comp=Z,18nm,0.8s,mb5.0						
CTA	Charters Tower	35.59	147	⇓iP	P	11 41 53.4	0.0
CTA				pmax	pmax		
	comp=Z,18nm,0.8s						
CTA	Charters Tower	35.59	147	P	P	11 41 53.5	+0.1
	comp=Z,25nm,0.8s,mb5.2,baz=326,slow=10,SNR=17						
CTAO	Charters Tower	35.59	147	eP	P	11 41 53.6	+0.2
	comp=Z,22nm,0.8s,mb5.1						
CTAO	Charters Tower	35.59	147	eP	P	11 41 53.6	+0.2
CTAO				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
SHL	Shillong	36.26	300	eP	P	11 41 58.0	-1.1
ASAJ	Asahikawa	36.93	20	P	P	11 42 06.3	+1.7
	comp=Z,11nm,0.6s,mb4.8,baz=228,slow=12,SNR=21						
ASAJ				LR	LR	11 55 59.1	
	comp=Z,396nm,21.5s,baz=207,slow=34						
GTA	Gaotai	37.80	326	P	P	11 42 11.8	-0.2
GTA				AP	pP	11 42 35.6	+8.1
GTA				PP	PP	11 43 45.5	+6.1
GTA				PCP	PcP	11 44 28.5	+0.8
GTA				S	S	11 47 56.9	-1.6
GTA				XS	sS	11 48 33.8	+9.0
GTA				AMB	AMB		
	comp=Z,22nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,280nm,5.7s						
GTA				LR	LR		
	comp=N,406nm,20.5s						
GTA				LR	LR		
	comp=E,331nm,17.5s						
GTA				LR	LR		
	comp=Z,376nm,18.3s						
LSA	Lhasa	38.37	306	P	P	11 42 16.0	-1.0
LSA	Lhasa	38.37	306	eP	P	11 42 16.5	-0.5
	comp=Z,16nm,0.9s,mb4.8						
LSA	Lhasa	38.37	306	eP	P	11 42 16.5	-0.5
LSA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
HNR	Honiara	38.50	119	LR	LR	11 55 14.4	
	comp=Z,394nm,19.5s,baz=358,slow=32						
HABR	Khabarovsk	39.19	9	eP	P	11 42 24.1	+0.5
HABR				e		11 44 28.6	
HABR				S	S	11 48 21.2	+1.9
HABR				e		11 52 23.8	
HABR				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.0						
YSS	Yuzh-Sakhalins	39.52	18	eP	P	11 42 27.4	+1.0
	comp=Z,17nm,0.8s,mb4.8						
YSS	Yuzh-Sakhalins	39.52	18	⇑eP	P	11 42 28.0	+1.7
YSS				e	pP	11 42 46.0	+4.2
YSS				pmax	pmax		
	comp=Z,150nm,1.8s,mb5.4						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
KLR	Kul'dur	39.52	6	eP	P	11 42 23.9	-2.4
HIA	Hailar	39.70	353	eP	P	11 42 28.2	+0.4
	comp=Z,6.4nm,0.7s,mb4.5						
HIA	Hailar	39.70	353	eP	P	11 42 28.2	+0.5
HIA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FORT	Forrest	40.41	178	⇓iP	P	11 42 33.5	-0.4
	comp=Z,81nm,0.7s,mb5.6						
ULN	Ulaanbaatar	41.27	340	⇑eP	P	11 42 41.1	+0.4
ULN	Ulaanbaatar	41.27	340	P	P	11 42 41.6	+0.9
	SNR=15						
ULN	Ulaanbaatar	41.27	340	P	P	11 42 41.6	+0.9
	SNR=15						
ULN	Ulaanbaatar	41.27	340	P	P	11 42 41.6	+0.9
	SNR=15						
SONM	Songino Array	41.46	340	P	P	11 42 42.7	+0.4
SONM						11 44 39.9	
SONM	Songino Array	41.46	340	P	P	11 42 42.7	+0.3
	comp=Z,12nm,0.8s,mb4.6,baz=156,slow=9.5,SNR=81						
SONM				PcP	PcP	11 44 39.9	+0.8
	comp=Z,3.6nm,0.7s,baz=141,slow=2.8,SNR=4.0						
SONM				LR	LR	12 02 26.7	
	comp=Z,461nm,18.1s,baz=207,slow=40						
KLBR	Kellerberrin	42.01	191	⇓iP	P	11 42 46.5	-0.5
	comp=Z,140nm,1.0s,mb5.5						
EIDS	Eidsvold	42.46	146	eP	P	11 42 50.8	0.0
	comp=Z,6.7nm,0.8s,mb4.3						
MUN	Mundaring	42.70	193	⇓iP	P	11 42 52.3	-0.3
CIT	Chita	43.35	348	eP	P	11 42 58.7	+1.1
CIT				e		11 43 04.5	
CIT				e		11 44 44.6	
CIT				pmax	pmax		
	comp=Z,105nm,1.9s,mb5.2						
NWAO	Narrogin (SRO)	43.41	191	eP	P	11 42 58.4	+0.1
	comp=Z,165nm,0.8s,mb5.8						
NWAO	Narrogin (SRO)	43.41	191	eP	P	11 42 58.4	+0.1
NWAO				pmax	pmax		
	comp=Z,165nm,0.8s						
NWAO	Narrogin (SRO)	43.41	191	P	P	11 42 59.2	+0.9
	SNR=6.2						
NWAO	Narrogin (SRO)	43.41	191	P	P	11 42 59.2	+0.9
	SNR=6.2						
NWAO	Narrogin (SRO)	43.41	191	P	P	11 42 59.2	+0.9
	SNR=6.2						
NWAO	Narrogin (SRO)	43.41	191	P	P	11 42 58.5	+0.2
	comp=Z,196nm,0.8s,mb5.9,baz=16,slow=7.9,SNR=105						
NWAO				LR	LR	12 02 10.0	
	comp=Z,188nm,18.7s,baz=163,slow=38						
STKA	Stephens Creek	43.95	161	⇓iP	P	11 43 01.8	-0.9
	comp=Z,12nm,0.4s,mb5.0						
STKA	Stephens Creek	43.95	161	P	P	11 43 02.0	-0.7
	comp=Z,15nm,0.4s,mb5.0,baz=337,slow=7.3,SNR=37						
STKA				LR	LR	12 02 41.4	
	comp=Z,227nm,18.9s,baz=284,slow=38						
ZAK	Zakamensk	44.71	339	⇓eP	P	11 43 08.0	-0.5
ZAK				e		11 44 48.9	
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
TLY	Talaya	45.68	340	P	P	11 43 16.3	+0.1
	comp=Z,328nm,0.7s,SNR=10						
TLY	Talaya	45.68	340	eP	P	11 43 16.8	+0.6
	comp=Z,40nm,0.8s,mb5.4						
TLY	Talaya	45.68	340	eP	P	11 43 16.7	+0.5
TLY				pmax	pmax		
	comp=Z,44nm,8.0s						
TLY				MLR	MLR		
	comp=Z,273nm,19.0s						
TLY	Talaya	45.68	340	P	P	11 43 17.1	+0.9
	SNR=19						
TLY	Talaya	45.68	340	P	P	11 43 17.1	+0.9
	SNR=19						
TLY	Talaya	45.68	340	P	P	11 43 17.1	+0.9
	SNR=19						
IRK	Irkutsk	45.95	341	⇑iP	P	11 43 18.7	+0.4
IRK				eS	S	11 49 51.3	-7.2
IRK				pmax	pmax		
	comp=Z,46nm,1.8s,mb5.1						
MOY	Mondy	46.59	338	eP	P	11 43 25.0	+1.7
MOY				pmax	pmax		
	comp=Z,34nm,2.1s,mb4.9						
ARMA	Armidale	46.80	150	eP	P	11 43 25.5	+0.2
CLNS	Chul'man	46.90	359	eP	P	11 43 27.0	+1.3
CLNS				pmax	pmax		

comp=Z,18nm,0.8s,mb5.0
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=E,17nm,0.9s
HYB Hyderabad 46.99 285 *e*P **P 11 43 27.5 +0.5**
comp=E,75nm,1.0s,mb5.6
HYB Hyderabad 46.99 285 *e*P **P 11 43 27.5 +0.5**
HYB pmax pmax
comp=Z,75nm,1.0s,mb5.6
HYB Hyderabad 46.99 285 *i* P **P 11 43 27.5 +0.5**
comp=Z,75nm,1.0s,mb5.6
WMQ Urumqi 47.63 322 ⇑P **P 11 43 31.4 -0.2**
WMQ AP pP 11 43 51.9 +4.4
WMQ XP sP 11 44 02.8 +8.2
WMQ PCP PcP 11 45 00.3 -0.1
WMQ PP PP 11 45 23.6 0.0
WMQ S **S 11 50 20.6 -2.2**
WMQ AMB AMB
comp=Z,14nm,0.7s,mb5.1
WMQ AMB AMB
comp=Z,305nm,4.5s
WMQ LR LR
comp=N,670nm,21.8s
WMQ LR LR
comp=E,317nm,23.2s
WMQ LR LR
comp=Z,293nm,20.6s
BOD Bodaibo 48.81 351 ⇓*i*P **P 11 43 41.2 +0.8**
BOD pmax pmax
comp=Z,22nm,0.9s,mb5.2
DDI Dehra Dun 49.33 302 *ex* **P 11 43 43.0 -1.8**
DZM Mont Dzumac 50.48 129 P **P 11 43 54.9 +1.2**
comp=Z,14nm,0.6s,mb5.2,baz=326,slow=23,SNR=12
KAD Karad 51.16 284 *ex* **P 11 43 59.0 +0.1**
YAK Yakutsk 52.16 2 *e*P **P 11 44 06.2 +0.6**
comp=Z,34nm,0.7s,mb5.4
YAK Yakutsk 52.16 2 *e*P **P 11 44 06.6 +1.0**
YAK *e* 11 45 18.1
YAK *e* 11 46 07.7
YAK *e*S **S 11 51 27.2 +2.0**
YAK *e* 11 53 47.4
YAK pmax pmax
comp=Z,47nm,1.0s,mb5.4
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK smax
comp=N,90nm,2.6s
YAK smax
comp=Z,50nm,2.4s
YAK smax
comp=E,46nm,2.5s
MK31 Makanchi Array 52.44 323 *i* P **P 11 44 07.0 -1.0**
MK31 pmax pmax
comp=Z,29nm,0.6s,mb5.4
MKAR Makanchi Array 52.44 323 P **P 11 44 07.5 -0.5**
comp=Z,30nm,0.7s,mb5.4,baz=121,slow=8.3,SNR=294
MKAR PcP PcP 11 45 18.1 +0.1
comp=Z,9.9nm,0.9s,baz=107,slow=4.2,SNR=4.6
MKAR S **S 11 51 30.6 +1.0**
comp=Z,0.4nm,0.7s,baz=116,slow=13,SNR=3.0
ULHL Ulahol 54.37 315 P **P 11 44 22.1 -0.1**
SNR=8.0
KZA Kyzart 54.99 315 P **P 11 44 27.3 +0.6**
SNR=33
TKM2 Tokmak 2 55.05 316 *e*P **P 11 44 26.4 -0.8**
comp=Z,9.5nm,0.8s,mb4.9
TKM2 Tokmak 2 55.05 316 *e*P **P 11 44 26.4 -0.8**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
TKM2 Tokmak 2 55.05 316 P **P 11 44 26.4 -0.7**
SNR=15
KBK Karagaybulak 55.41 316 P **P 11 44 29.6 -0.1**
SNR=6.3
UCH Uchtor 55.56 315 *e*P **P 11 44 31.0 +0.2**
comp=Z,26nm,0.7s,mb5.4
UCH Uchtor 55.56 315 P **P 11 44 31.3 +0.5**
SNR=47
AAK Ala-Archa 55.71 315 P **P 11 44 30.9 -1.0**
comp=Z,57nm,0.7s,mb5.7,SNR=7.3
AAK Ala-Archa 55.71 315 *e*P **P 11 44 30.6 -1.2**
comp=Z,5.8nm,0.6s,mb4.8
AAK Ala-Archa 55.71 315 *e*P **P 11 44 30.7 -1.2**
AAK pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
USP Ospenovka 55.93 316 P **P 11 44 32.9 -0.6**
SNR=17
AML Almayashu 56.10 315 *e*P **P 11 44 34.7 0.0**
comp=Z,111nm,0.6s,mb6.1
AML Almayashu 56.10 315 P **P 11 44 35.0 +0.3**
SNR=27
SEY Seymchan 56.21 14⇑*e*P **P 11 44 37.0 +1.9**
EKS2 Erkin-Say 56.22 315 *e*P **P 11 44 35.1 -0.4**
comp=Z,16nm,0.8s,mb5.1
EKS2 Erkin-Say 56.22 315 P **P 11 44 35.4 -0.1**
SNR=14
NVS Novosibirsk 56.34 332 *e*P **P 11 44 34.9 -1.2**
NVS *e*S **S 11 52 19.0 -2.8**
NVS pmax pmax
comp=Z,17nm,0.9s,mb5.1
NVS pmax pmax
comp=N,6.0nm,0.8s
NVS pmax pmax
comp=E,11nm,0.9s
NVS smax
comp=N,31nm,2.4s
KURK Kurchatov 56.49 326 P **P 11 44 36.1 -1.2**
comp=N,302nm,0.8s,SNR=33
KURK Kurchatov 56.49 326 *e*P **P 11 44 35.9 -1.3**
comp=N,39nm,0.8s,mb5.5
KURK Kurchatov 56.49 326⇑*e*P **P 11 44 36.2 -1.1**
KURK Kurchatov 56.49 326 P **P 11 44 36.9 -0.4**
SNR=11
KURK Kurchatov 56.49 326 P **P 11 44 36.9 -0.4**
SNR=11
KURK Kurchatov 56.49 326 P **P 11 44 36.9 -0.4**
SNR=11
KK31 Karatay Array 58.64 315 *i* P **P 11 44 51.5 -1.0**
KK31 pmax pmax
comp=Z,1.0nm,0.3s,mb4.3
TIXI Tiksi 61.78 1 *e*P **P 11 45 13.6 0.0**
comp=Z,22nm,0.8s,mb5.3
TIXI Tiksi 61.78 1*c i*P **P 11 45 13.9 +0.4**
TIXI pmax pmax
comp=Z,24nm,0.8s,mb5.4
TIXI MLR MLR
comp=Z,303nm,18.0s
BILL Bilibino 63.79 16 *e*P **P 11 45 27.9 +1.0**
comp=Z,19nm,0.9s,mb5.1
BILL Bilibino 63.79 16⇑*i*P **P 11 45 27.9 +1.0**
BILL *i* 11 45 33.1
BILL *e* 11 46 02.8
BILL pmax pmax
comp=Z,29nm,1.6s,mb5.1
ABKT Ailbek 66.89 307 P **P 11 45 47.0 -0.6**
comp=Z,213nm,0.8s,mb6.2,SNR=5.1
RPZ Rata Peaks 66.96 146 P **P 11 45 48.3 +0.5**
comp=Z,20nm,0.7s,mb5.2,baz=346,slow=0.9,SNR=9.4
URZ Urewera 67.26 139 P **P 11 45 50.7 +0.9**
comp=Z,14nm,0.9s,mb5.0,baz=360,slow=6.0,SNR=4.7
SVE Sverdlovsk 68.64 327⇓*e*P **P 11 45 57.7 -0.4**
SVE *e*S S 11 54 47.0 -9.1
SVE pmax pmax
comp=Z,18nm,0.7s,mb5.1
AKTK Aktyubinsk 68.73 320 P **P 11 45 58.0 -0.8**
AKTO Aktyubinsk 68.73 320 *i* P **P 11 45 56.0 -2.8**
AKTO Aktyubinsk 68.73 320 P **P 11 45 58.0 -0.8**
comp=Z,7.6nm,0.7s,mb4.7,baz=94,slow=7.7,SNR=35
GAMB Gambell 69.01 25 *e*P **P 11 46 01.9 +1.5**
ARU Arti 69.65 327 P **P 11 46 03.8 -0.6**
comp=Z,236nm,0.5s,SNR=8.5
ARU Arti 69.65 327 *e*P **P 11 46 03.4 -1.0**
comp=Z,22nm,0.6s,mb5.3
ARU Arti 69.65 327*d i*P **P 11 46 03.2 -1.2**
ARU pP 11 46 23.3 +2.1
ARU *e* 11 48 35.2
ARU S S 11 55 05.3 -2.8
ARU SS SS 11 59 37.0 0.0
ARU pmax pmax
comp=Z,20nm,0.6s,mb5.2

TTA Tatalina 75.66 27 *e*P **P 11 46 41.6 +1.6**
comp=Z,7.5nm,0.9s,mb4.6
TTA Tatalina 75.66 27 *e*P **P 11 46 41.6 +1.6**
TTA pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
CASY Casey 76.80 187 *e*P **P 11 46 46.0 -0.2**
IMA2 Indian Mountai 76.98 24 *e*P **P 11 46 49.1 +1.7**
PRGR Permogore 77.02 331 *e*P **P 11 46 43.6 -4.1**
PRGR *e* 11 46 53.9
PRGR *e*S S 11 56 22.3 -8.9
ZEI Tsey 77.89 312 *e*P **P 11 46 53.2 +0.2**
ZEI *e* 11 46 59.2
ZEI pmax pmax
comp=Z,29nm,0.7s,mb5.3
KIV Kislovodsk 78.73 313 *e*P **P 11 46 57.8 +0.2**
comp=Z,14nm,0.6s,mb5.1
KIV Kislovodsk 78.73 313*c i*P **P 11 46 57.7 +0.1**
KIV *i* 11 47 05.1
KIV pmax pmax
comp=Z,38nm,1.0s,mb5.3
PMR Palmer 78.79 29 *e*P **P 11 46 58.0 +0.4**
comp=Z,8.0nm,0.8s,mb4.7
PMR Palmer 78.79 29 *e*P **P 11 46 58.0 +0.5**
PMR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
VRHR Novokhopersk 79.14 320 *e*P **P 11 46 58.6 -1.0**
VRHR pmax pmax
comp=N,30nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s,mb5.3
VRHR pmax pmax
comp=E,20nm,0.7s
COLA College 79.36 26 *e*P **P 11 47 01.1 +0.5**
comp=E,9.3nm,0.8s,mb4.8
COLA College 79.36 26*d i*P **P 11 47 01.3 +0.7**
VORD Divnogorie 80.61 320 *e*P **P 11 47 06.4 -1.2**
VORD pmax pmax
comp=Z,20nm,1.0s,mb5.0
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,30nm,1.1s
VRSR Storozhevoye 80.66 320 *e*P **P 11 47 06.7 -1.2**
VRSR pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
VRSR pmax pmax
comp=N,2.0nm,1.0s
VRSR pmax pmax
comp=E,4.0nm,0.8s
ATD Arta Tunnel 81.81 280 LR LR 12 23 14.4
comp=E,91nm,21.0s,baz=77,slow=35
OBN Obninsk 81.91 325⇑*i*P **P 11 47 13.6 -0.8**
OBN pmax pmax
comp=Z,46nm,1.6s,mb5.2
OBN MLR MLR
comp=Z,300nm,18.0s
APA Apatity 82.12 337⇑*i*P **P 11 47 15.8 +0.5**
APA pmax pmax
comp=Z,54nm,1.2s,mb5.3
EGAK Eagle 82.23 26 *e*P **P 11 47 17.2 +1.4**
comp=Z,14nm,0.8s,mb5.0
ANN Anapa 82.42 314 *e*P **P 11 47 16.1 -1.2**
ANN *e*S S 11 57 26.2 -2.7
ANN pmax pmax
comp=Z,59nm,1.7s,mb5.2
OPO Ambohidratompo 83.02 250 P **P 11 47 20.1 -0.8**
comp=Z,8.4nm,0.7s,mb4.9,baz=77,slow=3.8,SNR=5.8
DAWY Dawson 83.08 26 *e*P **P 11 47 22.4 +2.1**
JOF Joensuu 83.63 333 *e*p **P 11 47 22.2 -1.0**
comp=Z,12nm,0.5s,mb5.3
JOF Joensuu 83.63 333 *e*P **P 11 47 22.2 -1.0**
JOF pmax pmax
comp=Z,12nm,0.5s,mb5.3
KEV Kevo 84.08 340 *e*p **P 11 47 24.5 -0.8**
comp=Z,16nm,0.7s,mb5.2
KEV Kevo 84.08 340 *e*P **P 11 47 24.5 -0.8**
KEV pmax pmax
comp=Z,16nm,0.7s,mb5.3
ASF Jabal al Asfar 84.41 302 P **P 11 47 28.2 +0.4**
comp=Z,3.6nm,0.8s,mb4.6,baz=309,slow=2.2,SNR=7.8
ARCES ARCESS Array B 84.64 340 P **P 11 47 28.2 0.0**
ARCES ARCESS Array B 84.64 340 P **P 11 47 28.2 0.0**
comp=Z,21nm,0.7s,mb5.4,baz=71,slow=5.5,SNR=44
INK Inuvik 84.64 22 *e*P **P 11 47 29.4 +1.2**
comp=Z,666nm,1.0s
INK Inuvik 84.64 22 *e*P **P 11 47 29.4 +1.2**
INK pmax pmax
comp=Z,666nm,1.0s
MMAI Mount Meron Ar 85.54 303 LR LR 12 30 16.1
comp=Z,78nm,19.2s,baz=40,slow=39
SKAG Skagway 85.79 30 *e*P **P 11 47 36.5 +2.4**
comp=Z,16nm,0.9s,mb5.2
BRTR Keskin Array B 85.89 309 P **P 11 47 34.0 -1.0**
comp=Z,5.1nm,0.8s,mb4.8,baz=104,slow=4.1,SNR=18
KAF Kangasniemi 86.06 332 *ep* **P 11 47 34.4 -1.0**
comp=Z,32nm,0.7s,mb5.7,baz=75,slow=4.6
KAF Kangasniemi 86.06 332 *e*P **P 11 47 34.4 -1.0**
KAF pmax pmax
comp=Z,32nm,0.7s,mb5.7
FINES FINESS Array B 86.33 332 P **P 11 47 36.3 -0.4**
comp=Z,18nm,0.8s,mb5.4,baz=68,slow=5.5,SNR=52
VSU Vasula 86.70 329⇓*i*P **P 11 47 38.7 +0.1**
AKASG Malin Array Be 86.97 321 P **P 11 47 39.0 -1.1**
AKASG Malin Array Be 86.97 321 P **P 11 47 39.0 -1.1**
comp=Z,4.5nm,0.5s,mb5.0,baz=68,slow=4.1,SNR=26
KIEV Kiev 86.98 321 *e*P **P 11 47 39.2 -0.9**
comp=Z,9.0nm,0.8s,mb5.0
KIEV Kiev 86.98 321 *e*P **P 11 47 39.3 -0.9**
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
MAW Mawson 89.33 200 P **P 11 47 50.6 -0.2**
comp=Z,5.0nm,0.9s,mb4.8,baz=93,slow=4.0,SNR=7.2
MAW LR LR 12 22 16.1
comp=Z,115nm,19.1s,baz=248,slow=32
KMBO Kilima Mbogo 89.34 269 *e*P **P 11 47 50.7 -1.4**
comp=Z,14nm,0.9s,mb5.3
KMBO Kilima Mbogo 89.34 269⇑*e*P **P 11 47 53.0 +0.9**
KMBO Kilima Mbogo 89.34 269 P **P 11 47 52.7 +0.6**
SNR=7.5
KMBO Kilima Mbogo 89.34 269 P **P 11 47 52.7 +0.6**
SNR=7.5
KMBO Kilima Mbogo 89.34 269 P **P 11 47 52.3 +0.2**
comp=Z,11nm,0.8s,mb5.2,baz=47,slow=7.8,SNR=23
DAG Danmarks Havn 91.19 352⇓*i*P **P 11 47 59.9 +0.4**
DAG pmax pmax
comp=Z,10.0nm,0.7s,mb5.2
DAG Danmarks Havn 91.19 352⇓*i*P **P 11 47 59.9 +0.4**
comp=Z,10nm,0.7s,mb5.3
KOLS Kolonicke sedl 91.77 320 *e*P **P 11 48 02.7 0.0**
RES Resolute Bay 91.90 10 *e*P **P 11 48 04.2 +1.4**
comp=Z,517nm,0.8s
RES Resolute Bay 91.90 10 *e*P **P 11 48 04.2 +1.4**
RES pmax pmax
comp=Z,517nm,0.8s
STHS Stebnicka Huta 92.27 321 *e*P **P 11 48 05.2 +0.2**
comp=Z,5.9nm,0.7s,mb5.0
STHS *e* 11 48 06.2
STHS Stebnicka Huta 92.27 321 *e*P **P 11 48 05.2 +0.2**
STHS pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
CRVS Cervenica-Dubn 92.29 320 *e*P **P 11 48 05.0 -0.1**
KECS Kecovo 93.03 320 *e*P **P 11 48 08.4 -0.2**
comp=Z,2.8nm,0.8s,mb4.7
KECS Kecovo 93.03 320 *e*P **P 11 48 08.4 -0.2**
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
NB2 NORSAR Subarra 93.20 334 P **P 11 48 07.8 -1.2**
comp=Z,7.9nm,0.8s,mb5.2,baz=67,slow=4.6
NB2 NORSAR Subarra 93.20 334 P **P 11 48 07.8 -1.2**
NB2 pmax pmax
comp=Z,8.0nm,0.8s,mb5.2
NOA NORSAR Array B 93.20 334 P **P 11 48 08.1 -0.9**
comp=Z,6.6nm,0.8s,mb5.1,baz=64,slow=4.6,SNR=18
VYHS Vyhne 94.07 321 *e*P **P 11 48 13.5 +0.2**
YKA Yellowknife Ar 94.11 24 P **P 11 48 14.0 +0.8**
YKA Yellowknife Ar 94.11 24⇑*e*P **P 11 48 14.0 +0.8**
YKA Yellowknife Ar 94.11 24 P **P 11 48 14.0 +0.8**
comp=Z,14nm,0.7s,mb5.5,baz=302,slow=4.6,SNR=276
YKA PKiKP PKiKP 11 52 57.6 +0.6
comp=Z,0.3nm,0.6s,baz=304,slow=1.5,SNR=4.2
YKA PKKPbc PKKPbc 12 05 13.5 -3.5
comp=Z,0.2nm,0.5s,baz=114,slow=2.4,SNR=4.3
DPC Dobruska-Polom 94.95 323 *e*P **P 11 48 17.0 -0.3**
MODS Modra-Piesok 95.08 321 *e*P **P 11 48 18.2 +0.2**
BRG Berggiesshubel 96.15 324 *e*P **P 11 48 23.0 +0.2**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
BRG Berggiesshubel 96.15 324 *e*P **P 11 48 23.0 +0.2**
comp=Z,7.0nm,1.0s,mb5.0
CLL Collm 96.51 325 *e*P **P 11 48 24.0 -0.4**
CLL *e* pP 11 48 41.0 -0.8
KHC Kasperske Hory 97.06 322 *e*P **P 11 48 27.0 +0.1**
GERES GERESS Array B 97.10 322 P **P 11 48 26.9 -0.2**
comp=Z,3.7nm,0.8s,mb4.9,baz=64,slow=4.6,SNR=20
GRA1 Grafenberg Arr 98.23 324 *e*Pdif **P 11 48 32.7 +0.5**
GRF Grafenberg Arr 98.23 324 *e*Pdiff **P 11 48 32.7 +0.5**
QSPA South Pole Qui 99.70 180 LR LR 12 33 53.4
comp=Z,192nm,20.0s,baz=144,slow=35
NVAR Mina Array Bea 103.05 47 Pdiff Pdif 11 48 55.5 +2.0
comp=Z,1.0nm,0.7s,baz=286,slow=3.2,SNR=10
NVAR PKKPbc PKKPbc 12 04 50.8 -0.5
comp=Z,0.3nm,0.7s,baz=131,slow=5.7,SNR=4.2
PDAR Pinedale Array 106.95 40 PKKPab PKKPab 12 04 52.0 -3.2
comp=Z,2.2nm,0.7s,baz=123,slow=6.4,SNR=21
TXAR Lajitas Array 118.02 49 PKP PKPdf 11 53 42.5 +0.3
TXAR Lajitas Array 118.02 49 PKP PKPdf 11 53 42.5 +0.3
comp=Z,1.4nm,0.6s,baz=276,slow=0.7,SNR=7.9
JCT Junction City 120.22 46 *e*PKPdf PKPdf 11 53 47.5 +1.2
TORD Torodi Ar. Bea 120.53 292 PKP PKPdf 11 53 46.4 -1.0
TORD PKKPbc PKKPbc 12 03 54.9 +2.1
TORD Torodi Ar. Bea 120.53 292 PKP PKPdf 11 53 46.4 -1.0
comp=Z,2.0nm,0.7s,baz=54,slow=1.4,SNR=11
TORD PKKPbc PKKPbc 12 03 54.9 +2.1
comp=Z,2.0nm,1.1s,baz=247,slow=5.3,SNR=4.1
PLCA Paso Flores 145.76 157 PKPbc PKPbc 11 54 35.4 +1.4
comp=Z,18nm,0.9s,baz=210,slow=3.9,SNR=44
SDDR Presa de Saban 146.48 31 *e*PKPbc PKPbc 11 54 38.0 +1.2
CPD Cerro la Pandu 149.76 24 *e*PKPbc PKPbc 11 54 46.0 +0.4
CPD *e*PKPab PKPab 11 54 51.6 +0.8
MTP Monte Pirata 149.85 23 *e*PKPbc PKPbc 11 54 46.8 +1.0
MTP *e*PKPab PKPab 11 54 52.4 +1.2
TRQA Tornquist 150.91 166 *e*PKPbc PKPbc 11 54 48.1 +0.4
OTAV Otavalo 153.33 69 *e*PKPab PKPab 11 55 09.3 +3.2
SDV Santo Domingo 154.84 43 *e*PKPdf PKPdf 11 54 49.4 +1.0
SDV *e*PKPbc PKPbc 11 54 58.5 +1.3
LPAZ La Paz 164.48 116 PKP PKPdf 11 55 01.3 +2.0
comp=Z,1.8nm,1.0s,baz=21,slow=5.0,SNR=6.3
LPAZ PKPab PKPab 11 55 55.8 +1.5
comp=Z,2.7nm,1.1s,baz=253,slow=10,SNR=2.9

ISCJB ***16*** *11:38:25.7±1.1, 984N±004×126 47E±008, h55km±11km, mb4.2/11, MS4.2/2, Error ellipse: s-maj=12.6km s-min=6.6km az=175.8*
IDC ***16*** *11:38:32.2±5.6, 974N×12605E, h95km±53km, mb4.0/10, mb1 4.1/12, mb1mx3.9/21, mbtmp4.0/12, MS4.2/2, Ms1 4.2/2, ms1mx3.6/36, Error ellipse: s-maj=49.9km s-min=14.1km az=79.0*
NEIC ***16*** *11:38:32.7±0.4, 972N×12604E, h100km, mb4.9/1, Error ellipse: s-maj=24.3km s-min=6.8km az=85.0*
ISC 16 11:38:27.5±1.1, 986N±004×12645E±008, h56km±11km, n34, σ0°88/41, mb4.2/11, MS4.2/2, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.95**	**265**⇑	*e*P	**Pn**	**11 38 40.7**	**-4.0**
SCPH				*e*S	**Sn**	**11 38 53.4**	**-4.1**
MSLP	**Maasin**	**1.59**	**280**	*e*P	**Pn**	**11 38 52.5**	**-0.8**
MSLP				*e*S	**Sn**	**11 39 11.8**	**-0.9**
PLP	**Palo**	**1.94**	**312**	*e*P	**Pn**	**11 38 57.5**	**-0.6**
PLP				*e*S	**Sn**	**11 39 22.9**	**+1.6**
OCLP	**Ormoc**	**2.16**	**303**	*e*P	**Pn**	**11 39 01.9**	**+0.8**
BUKP	**Musuan**	**2.40**	**215**	*e*P	**Pn**	**11 39 04.9**	**+0.5**
BUKP				*e*S	**Sn**	**11 39 33.9**	**+1.3**
LLP	**Lapu-Lapu**	**2.48**	**281**⇓	*e*P	**Pn**	**11 39 06.4**	**+0.8**
LLP				*e*S	**Sn**	**11 39 36.4**	**+1.6**
TBP	**Tagbilaran**	**2.56**	**266**	*e*P	**Pn**	**11 39 05.0**	**-1.5**
CNP	**Catarman**	**3.16**	**327**	*e*P	**Pn**	**11 39 13.8**	**-1.0**
CNP				*e*S	**Sn**	**11 39 50.0**	**-1.3**
SNPH	**Sibulan**	**3.21**	**261**	*e*P	**Pn**	**11 39 14.0**	**-1.5**
DCPH	**Dipolog City**	**3.31**	**248**⇓	*e*P	**Pn**	**11 39 15.9**	**-0.9**
DCPH				*e*S	**Sn**	**11 39 54.3**	**-0.7**
PAGZ	**Pagadian**	**3.63**	**237**	*e*P	**Pn**	**11 39 21.4**	**+0.2**
GUIM	**Jordan**	**3.87**	**282**	*e*P	**Pn**	**11 39 24.7**	**+0.1**
GUIM				*e*S	**Sn**	**11 40 08.9**	**+0.1**
RCP	**Roxas**	**4.01**	**295**⇑	*e*P	**Pn**	**11 39 27.2**	**+0.7**
PVCP	**Virac**	**4.34**	**329**	*e*P	**Pn**	**11 39 31.0**	**+0.1**
OTRP	**Odiongan**	**5.00**	**300**	*e*P	**Pn**	**11 39 41.0**	**+1.0**
CUYO	**Cuyo Island**	**5.43**	**281**	*e*P	**Pn**	**11 39 46.8**	**+0.9**
JOW	**Kunigami**	**16.97**	**6**	P	**Pn**	**11 42 27.1**	**+6.0**
	1.9nm,0.3s,baz=133,slow=18,SNR=5.0						
BATI	**Kupang**	**20.13**	**188**	P		**11 42 58.1**	**+1.1**
	7.3nm,0.3s,baz=268,slow=0.6,SNR=4.4						
FITZ	**Fitzroy Crossi**	**27.80**	**182**	P	**P**	**11 44 11.1**	**-0.3**
FITZ	**Fitzroy Crossi**	**27.80**	**182**	P	**P**	**11 44 10.4**	**-1.0**
	4.5nm,0.6s,mb4.2,baz=12,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**30.62**	**165**	P	**P**	**11 44 36.7**	**+0.2**
	1.5nm,0.8s,mb3.9,baz=344,slow=7.9,SNR=4.5						
WRA				LR	LR	11 57 28.2	
	comp=Z,250nm,19.1s,MS3.9,baz=60,slow=37						
MBWA	**Marble Bar**	**31.53**	**192**	P	**P**	**11 44 43.4**	**-1.0**
ASAR	**Alice Springs**	**34.11**	**168**	P	**P**	**11 45 07.2**	**+0.3**
	0.9nm,0.3s,mb4.2,baz=347,slow=7.5,SNR=5.5						
SONM	**Songino Array**	**41.46**	**340**	P	**P**	**11 46 09.6**	**+0.9**
	0.6nm,0.4s,mb3.6,baz=158,slow=9.2,SNR=5.0						
KLBR	**Kellerberrin**	**42.05**	**191**	*e*P	**P**	**11 46 13.1**	**-0.6**
	21nm,1.1s,mb4.7						
MUN	**Mundaring**	**42.74**	**193**	*e*P	**P**	**11 46 19.0**	**-0.3**
NWAO	**Narrogin (SRO)**	**43.45**	**191**	P	**P**	**11 46 24.6**	**-0.4**
	15nm,0.6s,mb4.9,baz=21,slow=8.3,SNR=9.3						
STKA	**Stephens Creek**	**43.96**	**161**	P	**P**	**11 46 29.7**	**+0.5**
	1.7nm,0.3s,mb4.2,baz=353,slow=7.6,SNR=5.4						
MKAR	**Makanchi Array**	**52.45**	**323**	P	**P**	**11 47 33.8**	**-0.8**
	1.8nm,0.6s,mb4.2,baz=114,slow=8.5,SNR=4.0						
ARCES	**ARCESS Array B**	**84.63**	**340**	P	**P**	**11 50 54.8**	**+0.1**
	1.5nm,0.5s,mb4.3,baz=79,slow=5.4,SNR=7.8						
ARCES				LR	LR	12 29 35.9	
	comp=Z,187nm,18.1s,MS4.5,baz=69,slow=36						
FINES	**FINESS Array B**	**86.33**	**332**	P	**P**	**11 51 02.8**	**-0.4**
	0.9nm,0.5s,mb4.3,baz=72,slow=4.9,SNR=5.7						
YKA	**Yellowknife Ar**	**94.06**	**24**	P	**P**	**11 51 40.5**	**+1.0**
YKA	**Yellowknife Ar**	**94.06**	**24**	P	**P**	**11 51 40.5**	**+1.0**
	0.6nm,0.6s,mb4.2,baz=302,slow=4.6,SNR=11						
PLCA	**Paso Flores**	**145.77**	**157**	PKPbc	PKPbc	11 58 01.6	+1.0
	1.3nm,0.8s,baz=168,slow=2.6,SNR=2.8						

NIED ***16*** *11:40:00, 2280N×12170E, h56km, Mw4.6 Best double couple: M0 7.71000×10^15 NP1:φ244.00000°, δ40.00000°, λ134.00000°. NP2:φ12.00000°, δ62.00000°, λ60.00000°.*
IDC ***16*** *11:40:38.9±1.3, 2247N×121.11E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/20, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=42.3km s-min=23.7km az=78.0*
NEIC ***16*** *11:40:39.0±0.7, 2283N×121.81E, h10km, MG3.8(JMA), Error ellipse: s-maj=50.7km s-min=9.6km az=75.0*
ISCJB ***16*** *11:40:40.6±0.7, 2282N±005×121 48E±004, h33km, mb3.7/3, Error ellipse: s-maj=7.9km s-min=5.2km az=173.1*
JMA ***16*** *11:40:42.2±0.4, 2280N×121 70E, h23km, M3.8*
BJI ***16*** *11:40:44.6, 2323N×121.17E, h10km, mb4.3, ML3.9, Ms4.2, Msz3.9*
ISC 16 11:40:42.6±1.3, 2284N±008×12150E±004, h38km±18km, n19, σ0°80/27, mb3.7/3, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**1.33**	**4**	*e*Pn	**Pn**	**11 41 02.7**	**-2.0**
YHNB	**Yeheng**	**1.83**	**357**	*e*Pn	**Pn**	**11 41 11.5**	**0.0**
TATO	**Taipei**	**2.13**	**360**	*e*Pn	**Pn**	**11 41 15.9**	**+0.3**
YOJ	**Yonaguni jima**	**2.13**	**40**	P	**Pn**	**11 41 16.3**	**+0.6**
YOJ				*e*S	**Sn**	**11 41 40.8**	**-0.1**
HATJ	**Hateruma jima**	**2.44**	**60**	P	**Pn**	**11 41 19.6**	**-0.4**
HATJ				*e*S	**Sn**	**11 41 48.2**	**-0.4**
IRIF	**Iriomote-Funau**	**2.53**	**54**	P	**Pn**	**11 41 21.8**	**+0.6**
IRIF				*e*S	**Sn**	**11 41 51.5**	**+0.7**
JKRS	**Kuro-shima**	**2.69**	**58**	P	**Pn**	**11 41 23.6**	**+0.2**
JIJ	**Ishigaki jima**	**2.86**	**57**	P	**Pn**	**11 41 26.0**	**+0.3**
JIJ				*e*S	**Sn**	**11 41 57.8**	**-1.2**
QZH	**Quanzhou**	**3.38**	**309**⇑	*i*P	**Pn**	**11 41 34.1**	**+1.2**
QZH				S	**Sn**	**11 42 11.1**	**-0.7**
QZH				Smax			
	comp=N,330nm,0.8s						
QZH				Smax			
	comp=E,440nm,1.0s						
JTJ	**Tarama**	**3.44**	**58**	P	**Pn**	**11 41 33.9**	**+0.2**
JTJ				*e*S	**Sn**	**11 42 13.2**	**-0.1**
JOGS	**Gusukube**	**4.06**	**61**	P	**Pn**	**11 41 42.9**	**+0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOGS				eS	**Sn**	**11 42 29.0**	**+0.5**
NJ2	**Nanjing**	**9.47**	**346**	eP	**Pn**	**11 42 55.9**	**-0.6**
NJ2				AP		11 42 59.1	
NJ2				XP		11 43 03.1	
NJ2				S	**Sn**	**11 44 41.5**	**-0.2**
NJ2				XS		11 44 48.0	
NJ2				LR	LR		
	comp=N,1µm,12.0s						
NJ2				LR	LR		
	comp=E,840nm,15.4s						
NJ2				LR	LR		
	comp=Z,860nm,13.1s						
KSRS	**Korea Array**	**15.58**	**19**	Pn	**Pn**	**11 44 26.2**	**+6.8**
	comp=Z,0.2nm,0.3s,baz=191,slow=11,SNR=4.5						
MJAR	**Matsushiro Arr**	**19.89**	**43**	P	**Pn**	**11 45 17.4**	**+4.9**
MJAR	**Matsushiro Arr**	**19.89**	**43**	P	**Pn**	**11 45 17.4**	**+4.9**
	comp=Z,1.5nm,0.8s,baz=228,slow=7.9,SNR=6.6						
MKAR	**Makanchi Array**	**39.51**	**317**	P	**P**	**11 48 11.3**	**+1.8**
	comp=Z,1.8nm,0.7s,mb3.9,baz=113,slow=9.7,SNR=4.8						
COEN	**Coen**	**42.28**	**148**	eP	**P**	**11 48 31.4**	**-1.3**
WRA	**Warramunga Arr**	**44.33**	**163**	P	**P**	**11 48 48.2**	**-0.9**
	comp=Z,0.4nm,0.6s,mb3.4,baz=342,slow=7.9,SNR=2.9						
ASAR	**Alice Springs**	**47.77**	**165**	P	**P**	**11 49 16.7**	**+0.5**
	comp=Z,0.3nm,0.4s,mb3.7,baz=344,slow=7.6,SNR=4.4						

*IDC **16** 11:45:46.6±3.0, 3500S×17972W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.9/13, mbtmp3.9/4, ML3.7/1, Error ellipse: s-maj=68.7km s-min=45.1km az=126.0*

ISC 16 11:45:53.5±2.3**, 3514S**±009×**1799W**±02**, h42**km±17km**, n13, σ0s92**/17**, mb3.8**/3**, East of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.82**	**210**	PN	**Pn**	**11 46 34.7**	**-1.2**
PUZ	**Puketiti**	**3.28**	**206**	PN	**Pn**	**11 46 42.8**	**+0.4**
PUZ				SN	**Sn**	**11 47 21.4**	**+1.3**
MWZ	**Matawai**	**3.80**	**212**	PN	**Pn**	**11 46 49.7**	**+0.3**
MWZ				SN	**Sn**	**11 47 34.6**	**+1.7**
KUZ	**Kuaotunu**	**3.90**	**244**	PN	**Pn**	**11 46 50.9**	**+0.2**
URZ	**Urewera**	**3.93**	**217**	Pn	**Pn**	**11 46 51.3**	**0.0**
	5.0nm,0.3s,baz=310,slow=2.6,SNR=47						
URZ				Sn	**Sn**	**11 47 35.1**	**-1.0**
	7.6nm,0.3s,baz=140,slow=18,SNR=9.0						
URZ	**Urewera**	**3.93**	**217**	PN	**Pn**	**11 46 51.0**	**-0.2**
URZ				SN	**Sn**	**11 47 34.8**	**-1.3**
WCZ	**Waipu Caves**	**4.76**	**259**	PN	**Pn**	**11 47 03.0**	**+0.3**
BKZ	**Black Stump Fm**	**4.95**	**215**	PN	**Pn**	**11 47 04.8**	**-0.4**
BKZ				SN	**Sn**	**11 47 58.5**	**-2.6**
OUZ	**Omahuta**	**5.33**	**267**	PN	**Pn**	**11 47 10.6**	**+0.2**
ASAR	**Alice Springs**	**41.51**	**273**	P	**P**	**11 53 36.9**	**+0.2**
	1.2nm,0.6s,mb3.7,baz=116,slow=7.3,SNR=32						
WRA	**Warramunga Arr**	**42.93**	**278**	P	**P**	**11 53 48.4**	**+0.1**
	1.8nm,0.5s,mb4.0,baz=120,slow=7.6,SNR=31						
FITZ	**Fitzroy Crossi**	**50.94**	**275**	P	**P**	**11 54 50.5**	**-0.4**
	1.1nm,0.9s,mb3.8,baz=141,slow=13,SNR=3.6						
FINES	**FINESS Array B**	**148.93**	**336**	PKPbc	PKPbc	12 05 34.9	-0.9
	0.7nm,0.5s,baz=28,slow=5.2,SNR=5.8						

*NEIC **16** 11:48:11.6, 4402S×16961E, h5km, ML4.2(WEL), After WEL.*

WEL 16 11:48:11.5±0.1**, 4402S×16959E, h5**km**, ML4.1**/18**, 3C-3D, Error ellipse: s-maj=1.2km s-min=0.8km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FOZ	**Fox Glacier**	**0.46**	**9**	P	Pg	11 48 21.6	+1.2
FOZ				S	Sg	11 48 27.9	+1.5
FOZ	**Fox Glacier**	**0.46**	**9**	⇑PG	Pg	11 48 21.6	+1.2
FOZ				SG	Sg	11 48 27.9	+1.5
LBZ	**Lake Benmore**	**0.56**	**131**	P	Pg	11 48 23.0	+0.6
LBZ				S	Sg	11 48 29.9	+0.2
LBZ	**Lake Benmore**	**0.56**	**131**	⇓PG	Pg	11 48 23.0	+0.6
LBZ				SG	Sg	11 48 29.9	+0.2
JCZ	**Jackson Bay**	**0.60**	**264**	⇓P*	Pg	11 48 23.7	+0.6
JCZ				SG	Sg	11 48 30.9	-0.1
WKZ	**Wanaka**	**0.91**	**207**	P	Pg	11 48 28.5	-0.4
WKZ				S	Sg	11 48 42.4	+1.7
WKZ	**Wanaka**	**0.91**	**207**	⇑P*	Pb	11 48 28.5	-1.2
WKZ				S*	Sb	11 48 42.4	+0.3
RPZ	**Rata Peaks**	**1.10**	**75**	P	Pg	11 48 32.6	0.0
RPZ	**Rata Peaks**	**1.10**	**75**	⇓P*	Pb	11 48 32.6	-0.4
EAZ	**Earnscleugh**	**1.23**	**189**	P	Pg	11 48 34.2	-0.9
EAZ				S	Sg	11 48 51.7	+0.7
EAZ	**Earnscleugh**	**1.23**	**189**	⇑P*	Pb	11 48 34.2	-1.1
EAZ				S*	Sb	11 48 51.7	+0.3
WVZ	**Waitaha Valley**	**1.26**	**42**	P	Pg	11 48 34.8	-0.8
WVZ	**Waitaha Valley**	**1.26**	**42**	P*	Pb	11 48 34.8	-0.9
ODZ	**Otahua Downs**	**1.27**	**144**	P	Pg	11 48 35.3	-0.6
ODZ	**Otahua Downs**	**1.27**	**144**	P*	Pb	11 48 35.3	-0.7
MSZ	**Milford Sound**	**1.36**	**241**	P	Pn	11 48 37.8	+0.7
MSZ				S	Sb	11 48 53.7	-1.4
MSZ	**Milford Sound**	**1.36**	**241**	ePN	Pn	11 48 36.0	-1.2
MSZ				S*	Sb	11 48 53.7	-1.4
MLZ	**Mavora Lakes**	**1.67**	**217**	ePN	Pn	11 48 42.3	+0.9
MLZ				SN	Sn	11 49 06.0	+2.8
TUZ	**Tuapeka**	**1.94**	**179**	eP	Pn	11 48 44.7	-0.4
TUZ	**Tuapeka**	**1.94**	**179**	PN	Pn	11 48 44.7	-0.4
HHSZ	**Highcliff Hill**	**2.00**	**159**	PN	Pn	11 48 47.1	+1.2
WHZ	**Wether Hill Ro**	**2.21**	**211**	PN	Pn	11 48 48.4	-0.4
MQZ	**McQueen's Vall**	**2.24**	**83**	ePN	Pn	11 48 49.1	-0.1
CRLZ	**Canterbury Las**	**2.24**	**80**	P	Pn	11 48 49.5	+0.3
CRLZ	**Canterbury Las**	**2.24**	**80**	PN	Pn	11 48 49.5	+0.2
LTZ	**Lake Taylor**	**2.31**	**59**	eP	Pn	11 48 51.2	+1.0
LTZ	**Lake Taylor**	**2.31**	**59**	PN	Pn	11 48 51.2	+1.0
SYZ	**Scrubby Hill**	**2.54**	**187**	PN	Pn	11 48 52.8	-0.6
DSZ	**Denniston Nort**	**2.79**	**36**	eP	Pn	11 48 56.4	-0.5
DSZ	**Denniston Nort**	**2.79**	**36**	PN	Pn	11 48 56.4	-0.5
APZ	**The Paps**	**3.03**	**201**	PN	Pn	11 48 59.1	-1.0
KHZ	**Kahutara**	**3.30**	**62**	eP	Pn	11 49 04.9	+1.1
KHZ	**Kahutara**	**3.30**	**62**	PN	Pn	11 49 04.9	+1.0
THZ	**Tophouse**	**3.32**	**48**	PN	Pn	11 49 05.0	+1.0
QRZ	**Quartz Range**	**3.86**	**35**	P	Pn	11 49 11.4	-0.1
QRZ	**Quartz Range**	**3.86**	**35**	PN	Pn	11 49 11.4	-0.1
NNZ	**Nelson**	**3.96**	**46**	eP	Pn	11 49 13.8	+1.0
NNZ	**Nelson**	**3.96**	**46**	PN	Pn	11 49 13.8	+1.0
DUWZ	**D'Urville Isla**	**4.54**	**46**	PN	Pn	11 49 22.9	+2.1
NRZ	**Ngariki Road**	**5.70**	**36**	eP	Pn	11 49 37.7	+0.9
NRZ	**Ngariki Road**	**5.70**	**36**	PN	Pn	11 49 37.7	+1.0
NWEZ	**Newall Road**	**5.72**	**35**	P	Pn	11 49 37.9	+0.8
NWEZ	**Newall Road**	**5.72**	**35**	PN	Pn	11 49 37.9	+0.8
NEZ	**North Egmont**	**5.82**	**37**	P	Pn	11 49 38.4	-0.1
NEZ	**North Egmont**	**5.82**	**37**	PN	Pn	11 49 38.4	-0.1
PKE	**Pukeiti**	**5.84**	**36**	P	Pn	11 49 39.2	+0.5
PKE	**Pukeiti**	**5.84**	**36**	PN	Pn	11 49 39.2	+0.5
WAZ	**Wanganui**	**5.86**	**45**	eP	Pn	11 49 41.1	+2.1
WAZ	**Wanganui**	**5.86**	**45**	PN	Pn	11 49 40.6	+1.6
RAEZ	**Rainy Point**	**5.94**	**39**	P	Pn	11 49 41.4	+1.3
RAEZ	**Rainy Point**	**5.94**	**39**	PN	Pn	11 49 41.4	+1.3
HIZ	**Hauiti**	**6.78**	**38**	eP	Pn	11 49 51.8	+0.2
HIZ	**Hauiti**	**6.78**	**38**	PN	Pn	11 49 51.8	+0.2

*IDC **16** 11:53:42.4±2.7, 1024N×12698E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=155.9km s-min=26.5km az=68.0*

*ISCJB **16** 11:53:50.0±1.9, 986N±006×1264E±02, h58km±20km, mb3.3/4, Error ellipse: s-maj=25.8km s-min=10.5km az=174.6*

ISC 16 11:53:51.6±1.8**, 985N**±007×**1264E**±01**, h53**km±20km**, n12, σ1s38**/16**, mb3.3**/4**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.91**	**266**	⇓eP	**Pn**	**11 54 05.3**	**-2.8**
SCPH				eS	**Sn**	**11 54 18.4**	**-1.9**
MSLP	**Maasin**	**1.55**	**281**	eP	**Pn**	**11 54 15.9**	**-0.9**
MSLP				eS	**Sn**	**11 54 37.7**	**+1.8**
PLP	**Palo**	**1.92**	**313**	eP	**Pn**	**11 54 23.0**	**+1.1**
PLP				eS	**Sn**	**11 54 49.6**	**+4.7**
BUKP	**Musuan**	**2.36**	**214**	eP	**Pn**	**11 54 28.3**	**+0.3**
TBP	**Tagbilaran**	**2.51**	**267**	eP	**Pn**	**11 54 30.2**	**+0.3**
CNP	**Catarman**	**3.15**	**327**	eP	**Pn**	**11 54 37.6**	**-1.2**
CNP				eS	**Sn**	**11 55 14.8**	**-0.4**
GUIM	**Jordan**	**3.83**	**282**	eP	**Pn**	**11 54 49.3**	**+1.2**
PVCP	**Virac**	**4.33**	**330**	eP	**Pn**	**11 54 56.6**	**+1.7**
FITZ	**Fitzroy Crossi**	**27.78**	**182**	P	**P**	**11 59 37.5**	**+1.9**
	0.5nm,0.4s,mb3.5,baz=6.8,slow=10,SNR=4.4						
WRA	**Warramunga Arr**	**30.61**	**165**	P	**P**	**12 00 01.3**	**+0.5**
	0.2nm,0.5s,mb3.2,baz=346,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**34.10**	**168**	P	**P**	**12 00 29.9**	**-1.5**
	0.1nm,0.3s,mb3.2,baz=349,slow=7.2,SNR=7.6						
MKAR	**Makanchi Array**	**52.44**	**323**	P	**P**	**12 02 57.1**	**-1.8**
	0.3nm,0.6s,mb3.4,baz=124,slow=8.0,SNR=4.7						

MEX 16 12:02:51.8±0.7**, 1588N**×**9642W, h24**km±36km**, MD3.5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.32**	**110**	i P	Pb	12 02 57.5	-1.6
HUIG				i S	Sb	12 03 03.1	-0.9
VHO	**Vista Hermosa**	**1.22**	**346**	i P	Pn	12 03 10.9	-2.5
VHO				i S	Sn	12 03 24.9	-4.2
CMIG	**Matias Romero**	**1.91**	**51**	eP	Pn	12 03 20.4	-2.4
CMIG				i S	Sn	12 03 42.4	-3.6
UTMO	**Huajuapan**	**2.35**	**326**	eP	Pn	12 03 27.6	-1.3
UTMO				i S	Sn	12 03 54.9	-2.0

*IDC **16** 12:17:54.5±0.7, 1521S×17332W, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.1/18, mbtmp4.1/9, MS3.7/2, Ms1 3.7/2, ms1mx2.9/30, Error ellipse: s-maj=35.9km s-min=19.2km az=132.0*

*NEIC **16** 12:17:56.1±0.3, 1513S×17335W, h10km, mb4.2/4, Error ellipse: s-maj=18.8km s-min=8.0km az=132.0*

*ISCJB **16** 12:17:57.9±0.5, 151S±01×1734W±02, h33km, mb4.1/13, MS3.7/2, Error ellipse: s-maj=29.2km s-min=11.3km az=42.5*

ISC 16 12:17:59.9±0.5**, 151S**±02×**1734W**±02**, h35**km**, n21, σ0s64**/17**, mb4.1**/13**, MS3.7**/2**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.95**	**53**	ePn	**Pn**	**12 18 28.8**	**-1.7**
AFI				eSn	**Sn**	**12 18 46.6**	**-7.1**
URZ	**Urewera**	**24.55**	**198**	P	**P**	**12 23 16.3**	**-0.1**
	6.8nm,0.6s,mb4.3,baz=21,slow=4.9,SNR=6.6						
HNR	**Honiara**	**26.65**	**279**	LR	LR	12 32 43.3	
	comp=Z,137nm,21.0s,MS3.5,baz=181,slow=33						
WRA	**Warramunga Arr**	**49.93**	**257**	P	**P**	**12 26 50.4**	**-0.2**
	0.3nm,0.5s,mb3.6,baz=91,slow=6.8,SNR=12						
ASAR	**Alice Springs**	**50.22**	**252**	P	**P**	**12 26 52.1**	**-0.7**
	1.6nm,0.8s,mb4.1,baz=87,slow=8.3,SNR=39						
FITZ	**Fitzroy Crossi**	**58.29**	**258**	LR	LR	12 50 09.9	
	comp=Z,85nm,21.1s,MS3.8,baz=90,slow=33						
SBA	**Scott Base**	**63.55**	**185**	eP	**P**	**12 28 27.0**	**+0.6**
	4.9nm,0.8s,mb4.6						
NVAR	**Mina Array Bea**	**74.09**	**42**	P	**P**	**12 29 33.3**	**+0.8**
	0.8nm,0.9s,mb3.6,baz=234,slow=6.3,SNR=4.3						
QSPA	**South Pole Qui**	**74.94**	**180**	P	**P**	**12 29 36.7**	**-0.2**
	6.8nm,1.0s,mb4.5,baz=42,slow=3.6,SNR=9.6						
MNTX	**Cornudas Mount**	**80.03**	**53**	eP	**P**	**12 30 06.2**	**+0.2**
	0.9nm,0.9s,mb3.7						
TXAR	**Lajitas Array**	**80.43**	**56**	P	**P**	**12 30 08.8**	**+0.5**
	1.4nm,1.0s,mb3.9,baz=251,slow=3.8,SNR=6.1						
MCMT	**McKenzie Canyo**	**81.01**	**39**	eP	**P**	**12 30 11.9**	**+1.0**
BW06	**Boulder Array**	**82.03**	**42**	eP	**P**	**12 30 16.0**	**-0.5**
	4.9nm,1.5s,mb4.2						
PDAR	**Pinedale Array**	**82.03**	**42**	P	**P**	**12 30 16.6**	**+0.1**
	1.2nm,0.9s,mb3.8,baz=204,slow=3.3,SNR=8.8						
RLMT	**Red Lodge**	**83.35**	**40**	eP	**P**	**12 30 23.6**	**+0.3**
	1.1nm,0.8s,mb3.9						
MAW	**Mawson**	**88.08**	**199**	P	**P**	**12 30 45.8**	**-0.6**
	4.1nm,0.8s,mb4.7,baz=253,slow=3.9,SNR=3.9						
YKA	**Yellowknife Ar**	**89.81**	**23**	P	**P**	**12 30 54.7**	**+0.2**
YKA	**Yellowknife Ar**	**89.81**	**23**	P	**P**	**12 30 54.7**	**+0.2**
	0.6nm,0.9s,mb3.9,baz=245,slow=4.3,SNR=6.3						
KHC	**Kasperske Hory**	**145.58**	**352**	ePKP	PKPdf	12 37 35.5	+1.1
GERES	**GERESS Array B**	**145.85**	**352**	PKPbc	PKPbc	12 37 36.1	+0.6
	0.4nm,0.6s,baz=307,slow=2.7,SNR=6.0						
BRTR	**Keskin Array B**	**145.94**	**321**	PKPbc	PKPbc	12 37 37.8	+1.7
	2.5nm,0.7s,baz=106,slow=3.2,SNR=9.4						

*IDC **16** 12:21:03.6±0.7, 168N×9771E, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/23, mbtmp4.4/14, MS3.9/2, Ms1 3.9/2, ms1mx3.1/42, Error ellipse: s-maj=30.7km s-min=13.3km az=49.0*

*MOS **16** 12:21:07.3±0.8, 197N×9806E, h33km, mb4.6/16, Error ellipse: s-maj=24.7km s-min=11.0km az=101.7*

*ISCJB **16** 12:21:13.8±2.0, 20N±01×982E±02, h89km±14km, mb4.3/25, Error ellipse: s-maj=31.4km s-min=10.1km az=146.0*

ISC 16 12:21:13.5±2.1**, 20N**±01×**981E**±02**, h72**km±16km**, n52, σ0s80**/46**, mb4.3**/25**, 8C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.17**	**43**	P	**Pn**	**12 21 34.5**	**+0.2**
PSI				pmax	pmax		
	comp=Z,79nm,0.3s						
PSI	**Prapat**	**1.17**	**43**	Pn	**Pn**	**12 21 34.5**	**+0.2**
	comp=Z,79nm,0.3s,baz=227,slow=5.3,SNR=350						
BATI	**Kupang**	**28.15**	**116**	P	**P**	**12 26 59.8**	**+0.5**
	comp=Z,8.8nm,0.3s,mb4.7,baz=87,slow=6.5,SNR=4.3						
FITZ	**Fitzroy Crossi**	**33.63**	**127**	eP	**P**	**12 27 46.6**	**-0.9**
	comp=Z,2.2nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**33.63**	**127**	P	**P**	**12 27 46.7**	**-0.8**
	comp=Z,1.0nm,0.6s,mb3.9,baz=298,slow=10,SNR=6.2						
KAKA	**Kakadu**	**37.05**	**114**	eP	**P**	**12 28 14.8**	**-2.1**
	comp=Z,3.7nm,0.5s,mb4.6						
JOW	**Kunigami**	**38.06**	**47**	LR	LR	12 41 57.1	
	comp=Z,480nm,20.9s,baz=6.9,slow=32						
WRA	**Warramunga Arr**	**41.66**	**123**	P	**P**	**12 28 55.4**	**+0.2**
WRA						12 30 52.3	
WRA				pmax	pmax		
	comp=Z,13nm,0.5s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**41.66**	**123**	P	**P**	**12 28 55.4**	**+0.1**
	comp=Z,12nm,0.5s,mb4.9,baz=302,slow=9.1,SNR=162						
WRA				PcP	PcP	12 30 52.3	+1.3
	comp=Z,0.8nm,0.7s,baz=306,slow=2.4,SNR=5.2						
WB2	**Warramunga Arr**	**41.67**	**123**	eP	**P**	**12 28 54.9**	**-0.4**
ASAR	**Alice Springs**	**43.12**	**128**	P	**P**	**12 29 07.1**	**0.0**
ASAR						12 30 57.2	
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**43.12**	**128**	P	**P**	**12 29 07.0**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.0,baz=299,slow=7.7,SNR=36						
ASAR				PcP	PcP	12 30 57.1	+1.4
	comp=Z,0.8nm,0.8s,baz=303,slow=3.1,SNR=6.0						
FORT	**Forrest**	**43.26**	**141**	eP	**P**	**12 29 10.3**	**+2.2**
	comp=Z,7.7nm,0.5s,mb4.7						
KSRS	**Korea Array**	**44.72**	**34**	LR	LR	12 48 28.4	
	comp=Z,39nm,18.6s,baz=333,slow=36						
AAK	**Ala-Archa**	**45.69**	**336**	⇑eP	**P**	**12 29 27.1**	**-0.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
SONM	**Songino Array**	**46.27**	**8**	P	**P**	**12 29 32.0**	**+0.3**
SONM						12 31 06.9	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**46.27**	**8**	P	**P**	**12 29 32.0**	**+0.3**
	comp=Z,0.9nm,0.3s,mb3.9,baz=190,slow=9.2,SNR=12						
SONM				PcP	PcP	12 31 06.9	+0.8
	comp=Z,1.4nm,0.6s,baz=185,slow=4.3,SNR=6.9						
ULN	**Ulaanbaatar**	**46.39**	**8**	⇑eP	**P**	**12 29 33.8**	**+1.2**
MKAR	**Makanchi Array**	**46.75**	**345**	P	**P**	**12 29 35.9**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MKAR	**Makanchi Array**	**46.75**	**345**	P	**P**	**12 29 35.9**	**+0.4**
	comp=Z,5.9nm,0.4s,mb4.7,baz=153,slow=8.2,SNR=81						
ZAK	**Zakamensk**	**48.46**	**4**	eP	**P**	**12 29 48.5**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
TLY	**Talaya**	**49.78**	**5**	eP	**P**	**12 29 59.4**	**+0.7**
TLY				e		12 31 56.8	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
TLY				MLR	MLR		
	comp=Z,70nm,22.0s						
KURK	**Kurchatov**	**51.32**	**344**	⇑eP	**P**	**12 30 10.4**	**0.0**
STKA	**Stephens Creek**	**53.18**	**133**	eP	**P**	**12 30 25.3**	**+0.8**
	comp=Z,2.0nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**53.18**	**133**	P	**P**	**12 30 25.0**	**+0.5**
	comp=Z,1.9nm,0.6s,mb4.3,baz=350,slow=2.2,SNR=7.0						
BOD	**Bodaibo**	**57.12**	**10**	eP	**P**	**12 30 51.7**	**-0.7**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
AKTO	**Aktyubinsk**	**59.02**	**331**	P	**P**	**12 31 05.3**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
AKTO	**Aktyubinsk**	**59.02**	**331**	P	**P**	**12 31 05.2**	**-0.5**
	comp=Z,1.3nm,0.4s,mb4.3,baz=115,slow=6.5,SNR=5.6						
YSS	**Yuzh-Sakhalins**	**59.22**	**34**	⇑eP	**P**	**12 31 07.6**	**+0.3**
YSS				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
ARU	**Arti**	**62.86**	**337**	c iP	**P**	**12 31 31.2**	**-0.5**
ARU						12 33 45.9	
ARU				S	**S**	**12 39 56.7**	**+1.0**
ARU				SS	SS	12 43 58.2	-3.8
ARU				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4						
YAK	**Yakutsk**	**64.45**	**16**	⇑eP	**P**	**12 31 41.2**	**-0.9**
YAK				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
TIXI	**Tiksi**	**72.30**	**10**	⇑eP	**P**	**12 32 29.9**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
SEY	**Seymchan**	**72.72**	**23**	⇑eP	**P**	**12 32 34.3**	**+0.7**
AKASG	**Malin Array Be**	**75.23**	**322**	P	**P**	**12 32 47.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**75.23**	**322**	P	**P**	**12 32 47.7**	**-0.8**
	comp=Z,1.8nm,0.5s,mb4.1,baz=92,slow=4.4,SNR=5.8						
FINES	**FINESS Array B**	**79.77**	**332**	P	**P**	**12 33 13.8**	**+0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**79.77**	**332**	P	**P**	**12 33 13.8**	**+0.2**
	comp=Z,2.9nm,0.6s,mb4.3,baz=106,slow=5.7,SNR=22						
KAF	**Kangasniemi**	**79.84**	**333**	ep	**P**	**12 33 12.5**	**-1.4**
	comp=Z,5.6nm,0.6s,mb4.6						
KAF	**Kangasniemi**	**79.84**	**333**	eP	**P**	**12 33 12.5**	**-1.4**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**82.15**	**340**	P	**P**	**12 33 25.9**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	**ARCESS Array B**	**82.15**	**340**	P	**P**	**12 33 25.9**	**-0.2**
	comp=Z,3.7nm,0.9s,mb4.2,baz=94,slow=5.0,SNR=16						
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**12 33 41.2**	**+0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**12 33 41.2**	**+0.8**
	comp=Z,0.5nm,0.5s,mb3.7,baz=128,slow=8.6,SNR=4.6						
NB2	**NORSAR Subarra**	**86.81**	**331**	P	**P**	**12 33 49.8**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.0,baz=94,slow=5.1						
NOA	**NORSAR Array B**	**86.81**	**331**	P	**P**	**12 33 50.0**	**+0.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	**NORSAR Array B**	**86.81**	**331**	P	**P**	**12 33 50.0**	**+0.2**
	comp=Z,2.0nm,0.8s,mb4.1,baz=90,slow=5.9,SNR=4.4						
DAVOX	**Davos/Dischmat**	**87.39**	**317**	P	**P**	**12 33 53.6**	**+0.7**
	comp=Z,2.5nm,0.4s,mb4.5,baz=144,slow=5.1,SNR=4.7						
ULM	**Lac du Bonnet**	**126.64**	**11**	PKP	PKPdf	12 40 08.8	+0.1
	comp=Z,1.1nm,0.9s,baz=319,slow=3.6,SNR=3.5						
NVAR	**Mina Array Bea**	**127.64**	**36**	PKP	PKPdf	12 40 13.4	+2.4
	comp=Z,0.8nm,0.8s,baz=305,slow=1.5,SNR=7.1						
PDAR	**Pinedale Array**	**128.97**	**26**	PKP	PKPdf	12 40 14.5	+1.1
	comp=Z,0.4nm,0.6s,baz=190,slow=1.4,SNR=3.8						
TXAR	**Lajitas Array**	**142.55**	**32**	PKIKP	PKPdf	12 40 42.1	+3.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**142.55**	**32**	PKP	PKPdf	12 40 42.1	+3.1
	comp=Z,0.6nm,0.5s,baz=162,slow=0.4,SNR=5.5						

JMA 16 12:35:00.7±0.6**, 4536N**×**15027E, h30**km**, M4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.81**	**240**	P	Pn	12 35 56.2	-1.1
NEM2				eS	Sn	12 36 36.8	-4.2
JRA	**Rausu**	**3.94**	**251**	P	Pn	12 36 00.4	+1.4
JNK	**Nakash**	**4.35**	**248**	P	Pn	12 36 05.8	+1.1
JNK				eS	Sn	12 36 53.4	-1.0
JAK	**Akkeshi**	**4.65**	**241**	P	Pn	12 36 08.0	-0.9
JAK				eS	Sn	12 36 57.6	-4.2
JTKR	**Abashiri--Toko**	**4.75**	**255**	P	Pn	12 36 12.1	+2.0
JAR	**Ashorobuto**	**5.10**	**248**	P	Pn	12 36 16.7	+1.7
JAR				eS	Sn	12 37 12.8	0.0
JMP	**Maruseppu**	**5.11**	**257**	P	Pn	12 36 17.0	+1.9
JOB	**Onbets**	**5.24**	**244**	P	Pn	12 36 17.5	+0.5
JOB				eS	Sn	12 37 14.4	-1.9
JKK2	**Kamakawa 2**	**5.57**	**257**	P	Pn	12 36 24.2	+2.7
JCH	**Churui**	**5.69**	**244**	P	Pn	12 36 22.8	-0.3
JCH				eS	Sn	12 37 23.5	-3.8
JFR	**Furan**	**5.93**	**251**	P	Pn	12 36 29.0	+2.6
JNBK	**Urakawa-nobuka**	**6.25**	**243**	P	Pn	12 36 30.1	-0.7
JNBK				eS	Sn	12 37 35.8	-5.3
JBT2	**Biratori 2**	**6.25**	**248**	P	Pn	12 36 31.9	+1.1
JNB	**Noboribetsu**	**7.26**	**250**	P	Pn	12 36 44.8	+0.1
JNB				eS	Sn	12 38 02.7	-3.4
JKB	**Kayabe**	**7.55**	**246**	P	Pn	12 36 48.1	-0.5
JKB				eS	Sn	12 38 06.8	-6.3
JANG	**Nango**	**8.13**	**235**	P	Pn	12 36 54.2	-2.4
JANG				eS	Sn	12 38 18.1	-9.4
JTM	**Tenmabayashi**	**8.14**	**239**	eS	Sn	12 38 19.6	-8.0
JTH	**Tanohata**	**8.23**	**232**	eS	Sn	12 38 19.0	-11
JIO	**Ouri**	**9.58**	**227**	eS	Sn	12 38 51.4	-12
JFK	**Kawauchi**	**10.65**	**225**	eS	Sn	12 39 18.1	-11

*ISCJB **16** 12:39:22.7±1.0, 53N±01×1262E±06, h10km, mb3.3/4, Error ellipse: s-maj=85.9km s-min=12.5km az=168.9*

*IDC **16** 12:39:22.8±2.0, 527N×12614E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/17, mbtmp3.3/4, Error ellipse: s-maj=111.9km s-min=25.3km az=69.0*

ISC 16 12:39:25.0±1.0**, 52N**±01×**1260E**±05**, h10**km**, n5, σ0s83**/5**, mb3.3**/4**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**4.62**	**354**	⇓eP	**Pg**	**12 40 53.9**	**+0.3**
SCPH				eS	Sn	12 41 06.9	-22
FITZ	**Fitzroy Crossi**	**23.12**	**181**	P	**P**	**12 44 32.2**	**+0.8**
	0.6nm,0.7s,mb3.2,baz=10.0,slow=17,SNR=3.1						
WRA	**Warramunga Arr**	**26.27**	**162**	P	**P**	**12 45 00.9**	**+0.2**
	0.4nm,0.5s,mb3.2,baz=342,slow=10,SNR=8.9						
ASAR	**Alice Springs**	**29.68**	**165**	P	**P**	**12 45 30.4**	**-0.8**
	0.1nm,0.3s,mb3.0,baz=334,slow=7.3,SNR=7.9						
MKAR	**Makanchi Array**	**55.96**	**325**	P	**P**	**12 49 03.0**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=116,slow=7.6,SNR=5.0						

*ISCJB **16** 12:47:41.4±0.5, 2713N±004×12680E±004, h120km, mb3.6/6, Error ellipse: s-maj=7.1km s-min=4.3km az=145.4*

*IDC **16** 12:47:42.9±1.6, 2703N×12696E, h130km±17km, mb3.3/5, mb1 3.5/5, mb1mx3.3/20, mbtmp3.3/5, Error ellipse: s-maj=38.1km s-min=16.3km az=66.0*

*JMA **16** 12:47:42.7±0.3, 2714N×12683E, h120km±3km, M3.3*

*NEIC **16** 12:47:43.3±1.0, 2699N×12694E, h133km±11km, mb3.9/1, Error ellipse: s-maj=17.7km s-min=15.8km az=220.0*

ISC 16 12:47:42.6±0.5**, 2704N**±007×**12689E**±006**, h128**km±6km**, n21, σ1s04**/34**, mb3.6**/6**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.55**	**145**	P	**Pn**	**12 48 01.9**	**+0.2**
JAGN				S	**Sn**	**12 48 16.3**	**+0.2**
JKE	**Kume jima 2**	**0.72**	**188**	P	**Pn**	**12 48 02.9**	**0.0**
JKE				S	**Sn**	**12 48 18.8**	**+0.5**
JIH	**Iheya**	**0.96**	**90**	P	**Pn**	**12 48 05.4**	**+0.5**
JIH				S	**Sn**	**12 48 21.6**	**-0.1**
NAH1	**Naha**	**1.10**	**139**	P	**Pn**	**12 48 07.1**	**+0.8**
NAH1				S	**Sn**	**12 48 25.0**	**+0.8**
JJT2	**Tamagusuku 2**	**1.18**	**140**	P	**Pn**	**12 48 08.3**	**+1.2**
JJT2				S	**Sn**	**12 48 27.1**	**+1.4**
JOW	**Kunigami**	**1.25**	**99**	P	**Pn**	**12 48 08.2**	**+0.4**
JOW				S	**Sn**	**12 48 26.3**	**-0.6**
JOW	**Kunigami**	**1.25**	**99**	P	**Pn**	**12 48 08.2**	**+0.5**
	59nm,0.3s,baz=241,slow=4.5,SNR=122						
JOW				S	**Sn**	**12 48 26.6**	**-0.4**
	127nm,0.3s,baz=11,slow=30,SNR=5.9						
JTK	**Tokunoshima**	**1.97**	**68**	P	**Pn**	**12 48 16.0**	**-0.1**
JTK				S	**Sn**	**12 48 40.4**	**-1.3**
JOGS	**Gusukube**	**2.64**	**211**	S	**Sn**	**12 48 56.7**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAM	Amami Oshima	2.76	60	P	Pn	12 48 25.7	-0.3
JAM				S	Sn	12 48 57.7	-1.8
JZK	Kikaishima	3.01	64	P	Pn	12 48 30.1	+0.9
JZK				S	Sn	12 49 05.0	-0.2
JTJ	Tarama	3.10	220	P	Pn	12 48 29.0	-1.5
JTJ				S	Sn	12 49 04.9	-2.5
JIJ	Ishigaki jima	3.65	224	P	Pn	12 48 36.3	-1.3
JIJ				S	Sn	12 49 16.7	-3.5
JMZ	Minamidaito 2	4.07	106	P	Pn	12 48 42.3	-0.9
JMZ				S	Sn	12 49 25.7	-4.5
YHNB	Yeheng	5.50	246	eP	Pn	12 49 03.6	+1.1
ULN	Ulaanbaatar	25.94	328	eP	P	12 53 04.5	+1.7
	1.2nm,0.3s,mb3.8						
SONM	Songino Array	26.23	328	P	P	12 53 07.7	+2.3
	2.2nm,0.5s,mb3.9,baz=142,slow=10,SNR=15						
MKAR	Makanchi Array	40.10	311	P	P	12 55 04.4	-1.1
	1.0nm,0.5s,mb4.0,baz=95,slow=11,SNR=13						
WRA	Warramunga Arr	47.26	170	P	P	12 56 02.7	-0.3
	0.3nm,0.5s,mb3.2,baz=354,slow=8.6,SNR=6.2						
ASAR	Alice Springs	50.87	172	P	P	12 56 30.6	+0.2
	0.4nm,0.4s,mb3.8,baz=358,slow=14,SNR=17						
YKA	Yellowknife Ar	78.29	25	P	P	12 59 28.0	-0.1
	0.3nm,0.6s,mb3.2,baz=299,slow=5.5,SNR=6.3						

IDC 16 12:55:27.6±14.0**, 1945N**×**14543E, h170**^{km}±138^{km}**, mb3.4**/9**, mb1 3.6**/9**, mb1mx3.5**/19**, mbtmp3.4**/9**, Error ellipse: s-maj=44.4km s-min=15.5km az=81.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	23.57	323	P	P	13 00 22.2	-0.5
	1.7nm,1.0s,baz=145,slow=10,SNR=4.2						
WRA	Warramunga Arr	40.63	196	P	P	13 02 50.7	-0.3
	2.4nm,0.5s,baz=20,slow=8.6,SNR=19						
FITZ	Fitzroy Crossi	42.07	209	P	P	13 03 03.4	+0.5
	0.6nm,0.3s,baz=36,slow=11,SNR=15						
SONM	Songino Array	42.40	321	P	P	13 03 06.0	+0.8
	0.3nm,0.4s,baz=125,slow=6.5,SNR=4.8						
ASAR	Alice Springs	44.30	195	P	P	13 03 20.2	-0.4
	0.3nm,0.3s,baz=11,slow=6.5,SNR=26						
MKAR	Makanchi Array	57.76	314	P	P	13 05 01.1	+0.3
	0.2nm,0.2s,baz=92,slow=9.7,SNR=3.6						
YKA	Yellowknife Ar	77.45	28	P	P	13 07 03.5	-0.2
	0.3nm,0.5s,baz=291,slow=5.2,SNR=5.9						
NVAR	Mina Array Bea	82.88	52	P	P	13 07 34.4	+1.0
	0.5nm,0.6s,baz=274,slow=5.1,SNR=7.7						
FINES	FINESS Array B	86.10	335	P	P	13 07 48.2	-0.8
	0.5nm,0.4s,baz=74,slow=4.4,SNR=7.2						

HEL 16 12:59:36.7±0.4**, 6813N**×**3301E, h0**^{km}**, ML1.3, ML1.9**(UPP)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KU6	Riekki	2.44	211	ePB	Pb	13 00 19.2	-2.3
KU6				eSG	Sg	13 00 51.8	-3.3
SGF	Sodankyl	2.56	257	eP	Pn	13 00 19.8	+0.5
	baz=77						
SGF				MSG		13 00 55.4	
	comp=Z,1.6nm,0.2s						
SGF				eSG	Sg	13 00 55.4	-3.4
KEV	Kevo	2.71	310	eP	Pn	13 00 22.8	+1.4
KEV				MSG		13 01 00.0	
	comp=Z,1.7nm,0.2s						
KEV				eSG	Sg	13 01 00.0	-3.7
MSF	Maaselka	2.72	217	ePB	Pb	13 00 23.9	-2.2
MSF				eSG	Sg	13 01 00.8	-3.2
MSF				MSG		13 01 00.8	
	comp=Z,0.3nm,0.4s						
HEF	Hetta	3.49	279	eP	Pn	13 00 32.6	+0.6
	baz=91						
KTK1	Kautokeino	3.69	288	eP	Pn	13 00 36.3	+1.4
LANU	Lannavaara	4.13	274	eP	Pn	13 00 41.7	+0.7
OUL	Oulu	4.17	226	eP	Pn	13 00 41.8	+0.4
MASU	Masugnsbyn	4.23	266	eP	Pn	13 00 42.4	0.0
ERTU	Ertsjaerv	4.47	254	eP	Pn	13 00 45.5	-0.1
ERTU				eS	Sn	13 01 41.1	+2.8
KUA	Kurravaara	4.76	274	eP	Pn	13 00 49.6	+0.1
DUNU	Dundret	4.86	264	eP	Pn	13 00 50.6	-0.3
DUNU				eS	Sn	13 01 47.8	0.0
HARU	Harads	5.09	253	eP	Pn	13 00 53.3	-0.8
SJUU	Sjulsmark	5.22	245	eP	Pn	13 00 54.9	-1.0

MEX 16 13:06:59.2±0.5**, 1651N**×**10016W, h5**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.42	33	i P	Pg	13 07 07.0	-0.3
ACX				i S	Sg	13 07 13.0	+0.2
CAIG	El Cayaco	0.54	349	i P	Pg	13 07 09.0	-0.7
CAIG				i S	Sg	13 07 17.8	+1.0
MEIG	Mezcala	1.50	20	eP	Pn	13 07 22.8	-4.0
MEIG				i S	Sn	13 07 41.5	-5.2
UTMO	Huajuapan	2.60	59	eP	Pn	13 07 39.9	-2.1
UTMO				i S	Sn	13 08 09.9	-4.0
PPM	Popocatepetl	2.93	30	i P	Pn	13 07 45.7	-0.8
PPM				i S	Sn	13 08 19.5	-2.5

*NIED **16** 13:15:00, 4670N×15300E, h5^{km}, Mw4.4 Best double couple: $M_0$4.08000×10^{15} NP1:ϕ_s198.00000°, δ19.00000°, λ145.00000°. NP2:ϕ_s322.00000°, δ79.00000°, λ74.00000°.*
*IDC **16** 13:15:14.4±0.6, 4676N×15276E, h0^{km}, mb4.1/15, mb1 4.3/16, mb1mx4.2/25, mbtmp4.1/16, ML3.8/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/40, Error ellipse: s-maj=22.1km s-min=13.2km az=136.0*
*NEIC **16** 13:15:15.9±0.4, 4666N×15290E, h10^{km}, mb4.5/6, Error ellipse: s-maj=14.4km s-min=6.2km az=133.0*
*BJI **16** 13:15:16.2, 4655N×15269E, h11^{km}, mB4.5, mb4.2, Ms4.1, Msz3.8*
*SKHL **16** 13:15:18.6±3.5, 4657N×153.14E, h75^{km}±35^{km}, mb4.9/4*
*ISCJB **16** 13:15:19.8±0.9, 4648N±006×15289E±008, h67^{km}±9^{km}, mb4.1/20, Error ellipse: s-maj=11.5km s-min=5.6km az=136.9*
*JMA **16** 13:15:19.2±0.9, 4669N×15297E, h30^{km}, M4.8*
*MOS **16** 13:15:19.5±1.3, 4668N×15287E, h61^{km}, mb4.4/8, Error ellipse: s-maj=13.8km s-min=7.7km az=62.7*
ISC 16 13:15:20.2±0.7**, 4649N**±005×**15305E**±008**, h48**^{km}±7^{km}**, n98, σ1^{s}50**/120**, mb4.2**/20**, MS3.2**/3**, 4C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.83	253⇓	i P	Pn	13 16 16.5	-0.1
KUR				AMB	AMB	13 16 17.0	
	300nm,0.5s						
KUR				eS	Sn	13 17 10.0	+10
KUR				A		13 17 14.0	
	3μm,1.8s						
KUR				A		13 17 22.0	
	890nm,0.8s						
KUR				A		13 17 22.0	
	270nm,0.8s						
SKR	Severo-Kuril's	4.66	25	eP	Pn	13 16 25.5	-2.4
SKR				AMB	AMB	13 16 28.5	
	240nm,0.4s						
SKR				AMB	AMB	13 16 28.5	
	100nm,0.4s						
SKR				AMB	AMB	13 16 28.5	
	410nm,0.4s						
SKR				eS	Sn	13 17 13.1	-7.6
SKR				A		13 17 19.0	
	330nm,0.2s						
SKR				A		13 17 19.0	
	610nm,0.2s						
SKR				A		13 17 19.0	
	100nm,0.5s						
YUK	Yuzh-Kuril'sk	5.63	247	eP	Pn	13 16 43.5	+2.2
YUK				eS	Sn	13 17 49.8	+5.1
YUK				A		13 18 09.0	
	3μm,0.6s						
YUK				A		13 18 09.0	
	3μm,0.6s						
YUK				A		13 18 11.5	
	2μm,0.7s						
YUK				A		13 18 11.5	
	970nm,0.6s						
NEM2	Nemuro 2	6.05	242	P	Pn	13 16 46.5	-0.5
NEM2				eS	Sn	13 17 50.8	-4.2
JRA	Rausu	6.15	248	P	Pn	13 16 50.1	+1.7
JRA				eS	Sn	13 17 58.0	+0.6
JNK	Nakash	6.58	247	P	Pn	13 16 55.4	+1.2
JNK				eS	Sn	13 18 08.3	+0.5
JAK	Akkeshi	6.90	243	P	Pn	13 16 57.9	-0.7
JAK				eS	Sn	13 18 13.2	-2.5
JTKR	Abashiri--Toko	6.93	252	P	Pn	13 17 00.9	+1.9
YSS	Yuzh-Sakhalins	7.09	277	ePn	Pn	13 17 02.4	+1.2
	21nm,0.5s						
YSS	Yuzh-Sakhalins	7.09	277⇓	ePN	Pn	13 17 03.5	+2.3
YSS				eS	Sn	13 18 21.3	+0.9
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	7.09	277⇓	eP	Pn	13 17 03.5	+2.3
YSS				AMB	AMB	13 17 04.2	
	comp=Z,30nm,1.0s						
YSS				eS	Sn	13 18 21.3	+0.9
JMP	Maruseppu	7.27	254	P	Pn	13 17 05.8	+2.0
JAR	Ashorobuto	7.32	247	P	Pn	13 17 05.6	+1.2
JAR				eS	Sn	13 18 27.4	+1.3
PET	Petropavlovsk	7.48	27	ePn	Pn	13 17 04.8	-1.7
PET				eSn	Sn	13 18 23.7	-6.1
PET	Petropavlovsk	7.48	27	ePN	Pn	13 17 06.4	-0.1
PET				pmax	pmax		
	comp=Z,55nm,0.6s						
PET				MLR	MLR		
	comp=Z,100nm,11.0s						
JOB	Onbets	7.48	245	P	Pn	13 17 07.5	+0.9
JOB				eS	Sn	13 18 28.2	-1.8
JSE	Soyaes	7.48	262	P	Pn	13 17 09.1	+2.5
JKK2	Kamakawa 2	7.73	254	P	Pn	13 17 12.3	+2.3
ASAJ	Asahikawa	7.74	256	PN	Pn	13 17 13.2	+3.0
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,106nm,18.1s						
ASAJ	Asahikawa	7.74	256	Pn	Pn	13 17 13.2	+3.0
	comp=Z,4.4nm,0.3s,baz=86,slow=12,SNR=78						
ASAJ				LR	LR	13 20 43.9	
	comp=Z,106nm,18.1s,baz=45,slow=43						
UGL	Uglegorsk	7.83	293	eP	Pn	13 17 13.0	+1.6
JWK2	Keihoku	7.87	265	P	Pn	13 17 16.3	+4.4
JCH	Churui	7.93	244	P	Pn	13 17 12.9	+0.2
JCH				eS	Sn	13 18 37.7	-3.3
JFR	Furan	8.14	250	P	Pn	13 17 17.8	+2.2
TYV	Tymovskoe	8.15	306	eP	Pn	13 17 18.8	+3.1
TYV				AMB	AMB	13 17 20.5	
	comp=Z,9.0nm,0.8s						
TYV				AMB	AMB	13 17 20.5	
	comp=Z,11nm,0.8s						
JAB	Ashibetsu	8.23	253	P	Pn	13 17 19.7	+2.8
ERM	Erimo	8.39	241	ePn	Pn	13 17 19.8	+0.8
	comp=Z,69nm,0.6s						
ERM				eSn	Sn	13 18 51.5	-0.9
ERM	Erimo	8.39	241	ePN	Pn	13 17 19.8	+0.8
ERM				pmax	pmax		
	comp=Z,69nm,0.6s						
JEM	Erimo	8.39	241	P	Pn	13 17 19.0	0.0
JEM				eS	Sn	13 18 50.3	-2.0
JBT2	Biratori 2	8.47	248	P	Pn	13 17 20.7	+0.5
JNBK	Urakawa-nobuka	8.49	244	P	Pn	13 17 19.8	-0.6
JNBK				eS	Sn	13 18 49.5	-5.2
JEW	Eniwo	9.03	250	P	Pn	13 17 29.3	+1.4
JNB	Noboribetsu	9.48	249	P	Pn	13 17 33.9	0.0
JNB				eS	Sn	13 19 17.6	-1.4
JKB	Kayabe	9.78	246	P	Pn	13 17 37.0	-1.0
JKB				eS	Sn	13 19 20.5	-5.8
JSH	Shimam	10.04	252	P	Pn	13 17 43.0	+1.3
JYM2	Yakumo 2	10.08	249	P	Pn	13 17 42.0	-0.2
JSR	Shiriuchi	10.36	246	P	Pn	13 17 45.2	-0.8
JANG	Nango	10.37	238	P	Pn	13 17 43.1	-3.1
JANG				eS	Sn	13 19 31.8	-9.2
JTM	Tenmabayashi	10.38	241	P	Pn	13 17 44.5	-1.8
NKL	Nikolayevsk	10.39	314	eP	Pn	13 17 40.2	-6.2
JTH	Tanohata	10.46	235	P	Pn	13 17 44.4	-3.0
JTH				eS	Sn	13 19 33.3	-10
JOSM	Okushiri--Mats	10.68	251	P	Pn	13 17 49.8	-0.6
OFUJ	Ofunato	11.16	232	P	Pn	13 17 54.4	-2.6
OFUJ				eS	Sn	13 19 53.3	-6.9
JRG	Rokugo	11.53	236	P	Pn	13 18 00.5	-1.4
JRG				eS	Sn	13 20 02.8	-6.3
JIO	Ouri	11.79	231	P	Pn	13 18 02.9	-2.6
JIO				eS	Sn	13 20 08.0	-7.5
MA2	Magadan	13.18	355	eP	Pn	13 18 22.9	-1.5
	comp=Z,18nm,0.4s						
MA2	Magadan	13.18	355	ePN	Pn	13 18 22.8	-1.5
MA2				pmax	pmax		
	comp=Z,20nm,0.5s						
MA2				pmax	pmax		
	comp=N,10.0nm,0.4s						
KLR	Kul'dur	14.55	289	eP	Pn	13 18 45.4	+2.5
MAJO	Matsushiro	14.89	233	eP	Pn	13 18 45.5	-1.9
	comp=N,22nm,0.6s						
MAJO				e		13 18 54.9	
MAJO	Matsushiro	14.89	233	eP	Pn	13 18 45.5	-2.0
MAJO				pmax	pmax		
	comp=Z,22nm,0.6s						
MAT	Matsushiro	14.89	233	P	Pn	13 18 45.8	-1.7
MJAR	Matsushiro Arr	14.89	233	Pn	Pn	13 18 46.0	-1.5
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=11						
SEY	Seymchan	16.48	359⇑	eP	Pn	13 19 06.8	-0.9
KSRS	Korea Array	20.68	253	P	P	13 19 55.9	0.0
	comp=Z,5.6nm,0.9s,baz=55,slow=10,SNR=12						
KSRS				LR	LR	13 27 09.4	
	comp=Z,73nm,18.2s,MS3.1,baz=251,slow=35						
CBIJ	Chichi jima	21.18	208	LR	LR	13 26 53.0	
	comp=Z,137nm,21.2s,MS3.3,baz=322,slow=33						
JNU	Nakatsue	21.55	240	P	P	13 20 06.5	+1.2
	comp=Z,17nm,1.0s,mb4.5,baz=68,slow=6.1,SNR=5.3						
JNU				LR	LR	13 28 30.3	
	comp=Z,78nm,21.4s,MS3.1,baz=307,slow=37						
BILL	Bilibino	22.65	13	P	P	13 20 13.6	-3.1
	comp=Z,3.8nm,0.6s,mb4.0						
BILL	Bilibino	22.65	13⇑	eP	P	13 20 14.2	-2.5
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
GAMB	Gambell	26.06	36	eP	P	13 20 48.2	-0.4
BOD	Bodaibo	26.12	310	eP	P	13 20 56.3	+7.1
SONM	Songino Array	31.38	290	P	P	13 21 34.5	-1.5
	comp=Z,0.4nm,0.7s,mb3.4,baz=46,slow=6.2,SNR=2.3						
TTA	Tatalina	32.65	41	P	P	13 21 47.5	+0.5
	comp=Z,6.6nm,1.0s,mb4.5						
TTA	Tatalina	32.65	41	P	P	13 21 47.5	+0.5
TTA				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
IMA2	Indian Mountai	34.04	36	eP	P	13 21 59.3	+0.1
XAN	Xi'an	35.45	265	P	P	13 22 11.0	-0.6
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.5						
COLA	College	36.37	38	eP	P	13 22 19.3	+0.2
	comp=Z,5.5nm,0.9s,mb4.5						
COLA	College	36.37	38⇑	eP	P	13 22 18.6	-0.5
EGAK	Eagle	39.23	38	eP	P	13 22 42.9	-0.4
	comp=Z,8.7nm,1.0s,mb4.4						
INK	Inuvik	41.90	32	eP	P	13 23 05.5	+0.3
INK	Inuvik	41.90	32	P	P	13 23 05.8	+0.6
	comp=Z,3.2nm,0.5s,mb4.2,baz=273,slow=5.9,SNR=32						
MKAR	Makanchi Array	47.02	298	P	P	13 23 44.2	-2.1
	comp=Z,0.4nm,0.4s,mb3.7,baz=68,slow=6.8,SNR=6.4						
KURK	Kurchatov	47.47	304⇓	eP	P	13 23 46.9	-2.9
LSA	Lhasa	50.24	273	eP	P	13 24 12.9	+1.6
	comp=Z,7.3nm,0.6s,mb4.9						
LSA	Lhasa	50.24	273	eP	P	13 24 12.9	+1.6
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
YKA	Yellowknife Ar	51.16	37	P	P	13 24 18.2	+0.4
YKA	Yellowknife Ar	51.16	37	P	P	13 24 18.2	+0.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	51.16	37	P	P	13 24 18.2	+0.4
	comp=Z,1.5nm,0.8s,mb4.0,baz=296,slow=7.4,SNR=18						
EDM	Edmonton	56.53	46	eP	P	13 24 57.6	+0.5
NVAR	Mina Array Bea	62.59	62	P	P	13 25 41.1	+2.0
	comp=Z,1.1nm,0.7s,mb4.1,baz=301,slow=5.2,SNR=12						
FINES	FINESS Array B	64.25	335	P	P	13 25 48.1	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES	FINESS Array B	64.25	335	P	P	13 25 48.1	-1.6
	comp=Z,2.0nm,0.9s,mb4.1,baz=41,slow=6.5,SNR=4.8						
PDAR	Pinedale Array	64.94	54	P	P	13 25 55.8	+1.3
	comp=Z,1.4nm,0.8s,mb4.0,baz=307,slow=0.7,SNR=12						
ULM	Lac du Bonnet	66.75	41	P	P	13 26 06.2	+0.2
ULM	Lac du Bonnet	66.75	41	P	P	13 26 06.2	+0.2
	comp=Z,1.5nm,0.8s,mb4.1,baz=294,slow=5.2,SNR=3.9						
WB2	Warramunga Arr	68.25	199	eP	P	13 26 16.9	+1.2
WRA	Warramunga Arr	68.25	199	P	P	13 26 17.1	+1.4
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	68.25	199	P	P	13 26 17.1	+1.4
	comp=Z,1.9nm,0.8s,mb4.2,baz=19,slow=6.9,SNR=24						
NOA	NORSAR Array B	68.46	341	P	P	13 26 15.3	-1.3
NOA	NORSAR Array B	68.46	341	P	P	13 26 15.3	-1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	NORSAR Array B	68.46	341	P	P	13 26 15.3	-1.3
	comp=Z,1.4nm,0.8s,mb4.1,baz=29,slow=6.4,SNR=2.7						
FITZ	Fitzroy Crossi	68.89	208	eP	P	13 26 21.7	+2.0
	comp=Z,5.2nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	68.89	208	P	P	13 26 22.0	+2.3
	comp=Z,3.0nm,0.8s,mb4.3,baz=3.5,slow=6.1,SNR=9.1						
KIV	Kislovodsk	70.95	314⇓	eP	P	13 26 29.6	-2.6
ASAR	Alice Springs	71.95	198	P	P	13 26 40.8	+2.5
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ASAR	Alice Springs	71.95	198	P	P	13 26 40.8	+2.5
	comp=Z,2.8nm,0.6s,mb4.3,baz=11,slow=5.4,SNR=77						
ANMO	Albuquerque	72.01	58⇑	eP	P	13 26 37.4	-1.3
TXAR	Lajitas Array	77.66	60	P	P	13 27 12.8	+1.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	77.66	60	P	P	13 27 12.8	+1.3
	comp=Z,0.8nm,0.5s,mb4.0,baz=296,slow=4.6,SNR=9.2						

*NEIC **16** 13:42:28.0±4.5, 1127S×16678E, h98^{km}±13^{km}, mb4.5/6, Error ellipse: s-maj=72.5km s-min=13.9km az=54.0*
*IDC **16** 13:42:32.5±7.5, 1153S×16631E, h97^{km}±29^{km}, mb4.1/5, mb1 4.3/7, mb1mx3.9/17, mbtmp4.3/7, Error ellipse: s-maj=108.5km s-min=24.2km az=46.0*
ISC 16 13:42:30.7±4.3**, 114S**±03×**1665E**±03**, h96**^{km}±16^{km}**, n19, σ0^{s}52**/21**, mb4.5**/7**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.71	286	ePn	Pn	13 44 07.2	+0.5
HNR				eSn	Sn	13 45 21.9	+0.2
HNR	Honiara	6.71	286	P	Pn	13 44 07.1	+0.4
	22nm,0.3s,baz=204,slow=0.6,SNR=15						
HNR				S	Sn	13 45 21.0	-0.8
	24nm,0.3s,baz=260,slow=23,SNR=7.2						
DZM	Mont Dzumac	10.60	180	eP	Pn	13 44 59.0	-0.5
DZM	Mont Dzumac	10.60	180	eP	Pn	13 44 59.0	-0.5
DZM	Mont Dzumac	10.60	180	P	Pn	13 44 59.4	-0.1
	6.9nm,0.3s,baz=272,slow=13,SNR=42						
PMG	Port Moresby	19.10	274	eP	Pn	13 46 47.9	0.0
	21nm,1.1s						
CTA	Charters Tower	21.27	244	eP	P	13 47 10.5	+1.1
	9.3nm,0.6s,mb4.3						
CTA	Charters Tower	21.27	244	P	P	13 47 10.2	+0.8
	13nm,0.7s,mb4.4,baz=80,slow=13,SNR=13						
CTAO	Charters Tower	21.27	244	eP	P	13 47 09.9	+0.5
	10.0nm,0.6s,mb4.3						
STKA	Stephens Creek	30.67	225	eP	P	13 48 37.4	+1.1
	2.0nm,0.6s,mb4.0						
STKA	Stephens Creek	30.67	225	eP	P	13 48 37.2	+0.9
STKA	Stephens Creek	30.67	225	P	P	13 48 37.0	+0.8
	2.4nm,0.6s,mb4.1,baz=70,slow=8.1,SNR=5.8						
WB2	Warramunga Arr	32.02	251	eP	P	13 48 47.9	-0.4
WRA	Warramunga Arr	32.03	251	P	P	13 48 48.0	-0.4
	5.3nm,0.6s,mb4.4,baz=84,slow=9.1,SNR=70						
ASAR	Alice Springs	33.27	244	P	P	13 48 58.4	-0.8
	6.3nm,0.7s,mb4.6,baz=70,slow=9.8,SNR=115						
KAKA	Kakadu	33.29	264	eP	P	13 48 59.3	-0.2
	8.9nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	39.98	255	eP	P	13 49 56.1	-0.1
	5.4nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	39.98	255	P	P	13 49 56.3	+0.1
	1.8nm,0.7s,mb4.0,baz=92,slow=5.6,SNR=5.8						
KLBR	Kellerberrin	49.11	238	eP	P	13 51 08.9	+0.1
	6.8nm,0.4s,mb4.9						

*IDC **16** 13:49:04.2±0.9, 986N×12655E, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.1/9, MS3.1/1, Ms1 3.1/1, ms1mx2.7/31, Error ellipse: s-maj=67.7km s-min=17.3km az=78.0*
*ISCJB **16** 13:49:05.0±1.6, 988N±003×12665E±005, h15^{km}±12^{km}, mb4.0/9, Error ellipse: s-maj=9.1km s-min=5.2km az=162.8*
*MAN **16** 13:49:07, 977N×12642E, h5^{km}, mb4.9, ML3.8, MS3.8*
MAN INTENSITY I - BUTUAN CITY.
*NEIC **16** 13:49:16.4±0.7, 980N×12702E, h100^{km}, mb4.2/1, Error ellipse: s-maj=51.1km s-min=13.6km az=85.0*
NEIC Felt [I PIVS] at Butuan.
ISC 16 13:49:07.9±2.0**, 986N**±003×**12662E**±005**, h25**^{km}±15^{km}**, n29, σ1^{s}05**/38**, mb4.0**/9**, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.11	266⇓	eP	Pn	13 49 24.5	-3.4
SCPH				eS	Sn	13 49 37.2	-5.2
BIPH	Bislig	1.68	189⇑	i P	Pn	13 49 34.6	-1.1
BIPH				i S	Sn	13 49 56.9	+0.5
MSLP	Maasin	1.75	279	eP	Pn	13 49 35.8	-0.9
MSLP				eS	Sn	13 49 55.8	-2.4
PLP	Palo	2.07	309	eP	Pn	13 49 41.1	+0.1
PLP				i S	Sn	13 50 08.1	+2.1
BESP	Borongan	2.08	326	eP	Pn	13 49 40.4	-0.9
BESP				eS	Sn	13 50 12.8	+6.4
OCLP	Ormoc	2.30	301	eP	Pn	13 49 45.4	+1.1
BUKP	Musuan	2.49	218	eP	Pn	13 49 47.2	+0.3
BUKP				eS	Sn	13 50 19.2	+2.7
LLP	Lapu-Lapu	2.65	280⇑	eP	Pn	13 49 49.4	+0.4
LLP				eS	Sn	13 50 19.6	-0.8
TBP	Tagbilaran	2.72	267	eP	Pn	13 49 49.4	-0.6
MATI	Mati	2.91	187	eP	Pn	13 49 53.0	+0.3
MATI				eS	Sn	13 50 24.7	-2.2
CNP	Catarman	3.26	324	eP	Pn	13 49 56.8	-0.7
CNP				eS	Sn	13 50 35.0	-0.4
SNPH	Sibulan	3.37	262	eP	Pn	13 50 00.0	+1.0
DCPH	Dipolog City	3.46	249	eP	Pn	13 49 60.0	-0.2
GUIM	Jordan	4.04	281	eP	Pn	13 50 09.2	+1.1
PVCP	Virac	4.43	327	eP	Pn	13 50 13.9	+0.3
ENPP	El Nido	7.20	281	eP	Pn	13 50 52.8	+1.1
CAUP	Cauayan	8.45	327	eP	Pn	13 51 08.5	-0.3
BATI	Kupang	20.15	188	P	P	13 53 41.5	+1.1
	14nm,0.4s,baz=90,slow=3.9,SNR=9.9						
KAKA	Kakadu	23.16	165	eP	P	13 54 13.0	+0.4
	10nm,0.7s,mb4.4						
FITZ	Fitzroy Crossi	27.80	182	P	P	13 54 54.9	-0.2
	1.5nm,0.5s,mb3.9,baz=2.5,slow=11,SNR=9.5						
MAJO	Matsushiro	28.57	20	eP	P	13 55 00.8	-1.1
WRA	Warramunga Arr	30.57	166	P	P	13 55 18.8	-1.0
	0.1nm,0.3s,mb3.1,baz=345,slow=8.3,SNR=8.7						
ASAR	Alice Springs	34.07	168	P	P	13 55 50.9	+0.5
	0.5nm,0.4s,mb3.8,baz=348,slow=7.4,SNR=24						
MKAR	Makanchi Array	52.56	323	P	P	13 58 18.1	-1.2
	0.6nm,0.6s,mb3.7,baz=124,slow=7.6,SNR=5.5						
ARCES	ARCESS Array B	84.70	340	P	P	14 01 38.8	-0.5
	3.6nm,0.8s,mb4.5,baz=74,slow=6.7,SNR=4.4						
FINES	FINESS Array B	86.41	332	P	P	14 01 49.0	+1.0
	0.8nm,0.5s,mb4.2,baz=77,slow=7.3,SNR=8.1						
HFS	Hagfors	92.57	333	P	P	14 02 18.2	+1.2
	1.5nm,0.6s,mb4.6,baz=99,slow=8.9,SNR=4.3						
YKA	Yellowknife Ar	93.99	24	P	P	14 02 24.3	+0.8
YKA	Yellowknife Ar	93.99	24	P	P	14 02 24.3	+0.8
	0.4nm,0.7s,mb4.0,baz=304,slow=4.6,SNR=9.1						

*ISCJB **16** 14:15:46.5±2.0, 2.1S±02×1020E±02, h170^{km}±17^{km}, mb3.8/10, Error ellipse: s-maj=36.6km s-min=17.3km az=145.1*
*IDC **16** 14:15:46.9±3.2, 223S×10195E, h157^{km}±30^{km}, mb3.4/5, mb1 3.4/6, mb1mx3.2/18, mbtmp3.4/6, Error ellipse: s-maj=33.6km s-min=16.2km az=55.0*
*NEIC **16** 14:15:47.5±1.5, 2.13S×10199E, h164^{km}±13^{km}, mb4.1/5, Error ellipse: s-maj=25.0km s-min=12.1km az=55.0*
ISC 16 14:15:46.8±2.0**, 22S**±02×**1020E**±02**, h156**^{km}±17^{km}**, n12, σ0^{s}65**/12**, mb3.8**/10**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	5.79	328	P	Pn	14 17 10.4	-0.3
	2.1nm,0.3s,baz=172,slow=8.7,SNR=9.7						
KULM	Kulim	7.50	350	ePn	Pn	14 17 34.0	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.22	122	P	P	14 22 34.8	-0.2
	0.3nm,0.7s,mb3.0,baz=297,slow=8.3,SNR=4.0						
WRA				PcP	PcP	14 24 56.1	-0.9
	0.3nm,0.6s,baz=302,slow=2.1,SNR=4.6						
ASAR	Alice Springs	37.58	127	P	P	14 22 46.3	-0.1
	0.2nm,0.5s,mb3.0,baz=301,slow=8.3,SNR=3.4						
ASAR				PcP	PcP	14 25 00.5	-0.6
	0.3nm,0.4s,baz=307,slow=2.6,SNR=5.4						
SONM	Songino Array	49.92	4	P	P	14 24 26.3	+1.8
	2.1nm,0.5s,mb4.1,baz=185,slow=10.0,SNR=17						
ULN	Ulaanbaatar	50.00	4	eP	P	14 24 24.4	-0.6
	2.0nm,0.9s,mb3.8						
UCH	Uchtor	50.68	334	eP	P	14 24 29.9	-0.4
	4.0nm,1.2s,mb3.9						
TKM2	Tokmak 2	50.77	335	eP	P	14 24 31.2	+0.3
	3.2nm,0.6s,mb4.1						
EKS2	Erkin-Say	51.35	333	eP	P	14 24 35.2	-0.1
	3.5nm,0.8s,mb4.0						
MKAR	Makanchi Array	51.73	343	P	P	14 24 37.7	-0.3
	1.2nm,0.4s,mb3.9,baz=144,slow=7.8,SNR=20						
KURK	Kurchatov	56.32	342	eP	P	14 25 10.3	-0.9
	2.2nm,0.7s,mb4.1						
BOSA	Boshof	77.32	241	P	P	14 27 25.1	+0.6
	1.6nm,0.7s,mb3.7,baz=45,slow=2.9,SNR=4.4						

IDC 16 14:15:58.5±1.6, 170N×12747E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/14, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/21, Error ellipse: s-maj=135.6km s-min=21.8km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.53	163	P	P	14 21 00.2	+0.1
	4.3nm,0.9s,baz=343,slow=10,SNR=12						
WB2	Warramunga Arr	22.54	163	eP	P	14 21 03.7	+3.5
ASAR	Alice Springs	25.97	166	P	P	14 21 33.5	+0.5
	0.5nm,0.8s,baz=344,slow=6.7,SNR=7.2						
CTA	Charters Tower	28.43	141	LR	LR	14 34 22.0	
	comp=Z,60nm,19.5s,baz=45,slow=39						
STKA	Stephens Creek	35.98	159	eP	P	14 23 00.3	-0.9
	1.3nm,0.7s						
STKA	Stephens Creek	35.98	159	P	P	14 22 60.0	-1.2
	1.3nm,0.8s,baz=348,slow=9.3,SNR=3.0						
MKAR	Makanchi Array	59.64	326	P	P	14 26 03.8	-0.7
	0.5nm,0.6s,baz=117,slow=9.1,SNR=4.7						
MKAR				PcP	PcP	14 26 53.5	+1.9
	0.4nm,0.6s,baz=123,slow=6.0,SNR=3.7						

CASC 16 14:24:24.0±2.3, 1467N×9121W, h120km±7km, MD4.3, mb4.4(NEIC)
ISCJB 16 14:24:24.6±0.4, 1428N±005×9136W±004, h117km±3km, mb4.3/23, Error ellipse: s-maj=9.1km s-min=4.3km az=35.8
NEIC 16 14:24:25.6±0.7, 1430N×9125W, h108km±6km, mb4.4/20, Error ellipse: s-maj=9.7km s-min=6.8km az=213.0
MEX 16 14:24:26.4±0.9, 1393N×9175W, h60km, MD4.7
IDC 16 14:24:26.2±0.9, 1457N×9078W, h102km±6km, mb3.9/12, mb1 4.0/13, mb1mx3.9/22, mbtmp3.8/13, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=22.9km s-min=11.2km az=61.0
BJI 16 14:24:27.5, 1430N×9120W, h107km, mB4.9
ISC 16 14:24:25.7±0.3, 1430N±005×9135W±004, h110km±3km, h107km±2.9km:pP-P, n103, σ1s24/93, mb4.3/23, 7C-4D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.28	274⇑	eP	Pn	14 24 40.1	-1.3
JAT				eS	Sn	14 24 50.8	-2.3
FUG	Fuego 3	0.52	73	i P	Pn	14 24 42.1	-0.6
FG6		0.52	60⇓	iP	Pn	14 24 42.6	-0.2
PCG	Pacaya	0.73	83	eP	Pn	14 24 44.3	0.0
PCG				eS	Sn	14 25 00.1	+1.8
RBDL	Robledal	1.63	96⇓	eP	x	14 24 53.0	
RBDL				eP	x	14 24 53.1	
RTR	El Retiro	1.70	103	eP	x	14 24 54.3	
RTR				eS	x	14 25 18.8	
SBLS	San Blas	1.74	105⇓	eP	x	14 24 54.6	
SNJE	San Jose	1.75	104	eP	x	14 24 54.7	
SNJE				eS	x	14 25 19.1	
MTO2	Montecristo 2	1.93	87	eP	x	14 24 57.0	
MTO2				eS	x	14 25 17.6	
BOQS	Boqueron	2.09	105⇑	eP	x	14 24 59.0	
BOQS				eS	x	14 25 26.2	
CCIG	Comitan	2.11	339⇑	iP	Pn	14 25 01.6	+1.4
CCIG				i S	Sn	14 25 28.2	+3.3
CCIG	Comitan	2.11	339	i P	Pn	14 25 01.6	+1.5
CCIG				i S	Sn	14 25 29.3	+4.4
SNET	Serv Nac Est T	2.15	106	eP	x	14 24 58.8	
SNET				eS	x	14 25 27.0	
LFU	La Fuente	2.24	104⇑	eP	x	14 25 01.2	
LBRS	Las Brisas	2.31	104⇓	eP	x	14 25 01.9	
LBRS				eP	x	14 25 01.9	
LFRS	El Faro	2.32	107⇑	eP	x	14 25 01.9	
LFRS				eP	x	14 25 02.5	
LFRS				eS	x	14 25 31.7	
LCBS	La Ceiba	2.39	105	eP	x	14 25 03.0	
LCBS				⇑eP	x	14 25 03.1	
SNVI	San Vicente	2.54	105	eP	x	14 25 04.8	
SNVI				eS	x	14 25 37.3	
SCX	San Cristobal	2.72	333	i P	Pn	14 25 08.6	+0.5
SCX				i S	Sn	14 25 37.0	-2.7
CAHU	Cacacuatique	3.09	99⇑	eP	x	14 25 12.3	
CAHU				eS	x	14 25 25.9	
VSM	San Miguel	3.11	106	eP	x	14 25 10.8	
BLLM	Bellamira	3.14	105	eP	x	14 25 11.9	
BLLM				eS	x	14 25 53.1	
TGUH	Tegucigalpa,Un	3.96	93	ePn	Pn	14 25 24.0	-0.6
TGUH	Tegucigalpa,Un	3.96	93	eP	Pn	14 25 24.2	-0.5
TGUH				eS	Sn	14 25 58.9	-11
CMIG	Matias Romero	4.39	310	i P	Pn	14 25 29.3	-1.0
CMIG				P		14 25 30.0	
CMIG				S	Sn	14 26 19.3	-1.0
CMIG				i S	Sn	14 26 19.5	-0.8
CMIG	Matias Romero	4.39	310	P	Pn	14 25 30.0	-0.3
	16nm,0.3s,baz=130,slow=14,SNR=102						
CMIG				S	Sn	14 26 19.3	-1.0
	24nm,0.3s,baz=130,slow=14,SNR=9.0						
HUIG	Huatulco	4.82	288	eP	Pn	14 25 34.2	-2.0
HUIG				i S	Sn	14 26 20.7	-10
HUIG	Huatulco	4.82	288	eP	Pn	14 25 34.2	-2.0
HUIG				i S	Sn	14 26 22.9	-7.9
VHO	Vista Hermosa	5.87	299	i P	Pn	14 25 54.0	+3.6
VHO				i S	Sn	14 26 51.8	-4.5
VHO	Vista Hermosa	5.87	299	i P	Pn	14 25 50.4	0.0
VHO				i S	Sn	14 26 53.9	-2.4
TEIG	Tepich	6.58	26	ePn	Pn	14 25 59.5	-0.5
	321nm,0.4s						
TEIG				e		14 26 08.5	
TEIG	Tepich	6.58	26	P	Pn	14 26 00.1	0.0
	116nm,0.3s,baz=192,slow=1.1,SNR=149						
VCR	Vista de Mar	6.96	126	eP	Pn	14 26 06.1	+0.8
UTMO	Huajuapan	7.12	300	i P	Pn	14 26 07.9	+0.5
UTMO				i S	Sn	14 27 23.1	-3.7
JTS	JuntasAbangare	7.42	122	ePn	Pn	14 26 10.3	-1.0
	26nm,0.8s						
JTS				eSn	Sn	14 27 27.3	-6.6
JTS	JuntasAbangare	7.42	122	P	Pn	14 26 10.7	-0.6
	2.6nm,0.3s,baz=310,slow=18,SNR=10						
JCR	Jicaral	7.54	125	eP	Pn	14 26 13.9	+0.9
PRS1	Puriscal	8.11	121	eP	Pn	14 26 22.6	+1.8
LAJ	Bijagual	8.33	121	eP	Pn	14 26 21.6	-2.2
PPM	Popocatepetl	8.43	305	i P	Pn	14 26 26.3	+1.2
PPM				i S	Sn	14 27 51.9	-6.6
PPM	Popocatepetl	8.43	305	i P	Pn	14 26 26.3	+1.2
PPM				i S	Sn	14 27 59.1	+0.7
LCR2	La Lucha 2	8.50	121	eP	Pn	14 26 26.8	+0.8
URSC	Urasca	8.63	120	eP	Pn	14 26 28.7	+0.8
MEIG	Mezcala	8.72	296	eP	Pn	14 26 30.2	+1.1
IIO	Organos	8.80	308	eP	Pn	14 26 31.2	+1.1
CAIG	El Cayaco	9.01	289	eP	Pn	14 26 32.7	-0.2
BAR1		9.34	122	eP	Pn	14 26 38.3	+0.8
SOR	Soroa	11.57	42	eP	Pn	14 27 07.3	-0.1
MGV	Manicaragua	13.30	53	eP	Pn	14 27 36.3	+6.0
CCCC	Cccc	14.64	60	eP	Pn	14 27 55.9	+8.4
LTX	Lajitas	18.80	325	eP	P	14 28 39.0	+2.3
	5.3nm,0.7s						
TXAR	Lajitas Array	18.80	325	P	P	14 28 39.2	+2.5
TXAR	Lajitas Array	18.80	325	P	P	14 28 39.2	+2.5
	0.6nm,0.3s,baz=151,slow=12,SNR=25						
LRAL	Lakeview Retre	19.07	11	eP	P	14 28 40.8	+1.3
	21nm,1.0s						
ROSC	El Rosal	19.21	118	LR	LR	14 36 35.6	
	comp=Z,49nm,19.3s,baz=349,slow=39						
SDDR	Presa de Saban	19.78	74	P	P	14 28 47.0	-0.4
	13nm,0.9s						
OXF	Oxford	20.20	5	P	P	14 28 51.5	-0.3
MIAR	Mount Ida	20.26	355	eP	P	14 28 52.2	-0.2
	8.7nm,0.6s						
GOGA	Godfrey	20.33	19	eP	P	14 28 53.9	+0.7
	20nm,0.4s						
UALR	University of	20.41	358	eP	P	14 28 54.0	0.0
	44nm,0.6s						
PLAL	Pickwick Lake	20.80	8	P	P	14 28 57.3	-0.9
	9.9nm,0.8s						
PLAL				e		14 29 13.3	
SDV	Santo Domingo	20.99	103	eP	P	14 28 58.1	-2.4
	5.8nm,0.6s						
SDV	Santo Domingo	20.99	103	P	P	14 28 58.2	-2.3
	5.7nm,0.5s,baz=293,slow=5.2,SNR=11						
WMOK	Wichita Mounta	21.43	343	eP	P	14 29 03.9	-1.0
	5.0nm,1.0s,mb3.8						
WMOK				e		14 29 26.5	
MNTX	Cornudas Mount	21.56	326	eP	P	14 29 06.7	+0.3
	8.3nm,0.9s,mb4.1						
LHS	Liberty Hill	22.23	24	eP	P	14 29 14.0	+0.5
TKL	Tuckaleechee C	22.33	16	P	P	14 29 14.8	+0.3
	32nm,0.7s,mb4.8,baz=181,slow=11,SNR=7.2						
TZTN	Tazewell	23.23	16	eP	P	14 29 22.7	-0.5
	32nm,1.0s,mb4.6						
SIUC	Southern Illin	23.40	4	eP	P	14 29 24.6	0.0
	25nm,0.6s,mb4.7						
CNNC	Cliffs of the	24.12	28	eP	P	14 29 30.9	-0.4
	42nm,0.4s,mb5.1						
BNM	Barren Site	24.12	328	eP	P	14 29 34.0	+2.7
KSU1	Kansas State U	25.14	350	P	P	14 29 40.2	-0.3
ACSO	Alum Creek Sta	26.85	14	eP	P	14 29 55.3	-0.7
	18nm,0.6s,mb4.8						
BBSR	BB Station	30.24	49	P	P	14 30 25.4	-0.8
	12nm,0.7s,mb4.6						
HWUT	Hardware Ranch	32.37	331	eP	P	14 30 47.3	+2.5
	2.5nm,0.8s,mb4.0						
PDAR	Pinedale Array	32.41	335	P	P	14 30 45.5	+0.4
	0.4nm,0.6s,mb3.3,baz=116,slow=10,SNR=4.5						
PDAR				PcP	PcP	14 33 31.0	+1.0
	0.2nm,0.3s,baz=124,slow=5.9,SNR=4.6						
PDAR				ScP	ScP	14 37 07.0	+3.1
	0.5nm,0.7s,baz=134,slow=4.3,SNR=5.8						
NVAR	Mina Array Bea	33.84	320	P	P	14 31 01.4	+3.8
	4.2nm,0.6s,mb4.4,baz=124,slow=9.4,SNR=49						
NVAR				pP	pP	14 31 24.6	+2.5
	3.4nm,1.1s,baz=126,slow=9.4,SNR=3.4						
NVAR				PcP	PcP	14 33 36.6	+2.4
	1.3nm,0.7s,baz=118,slow=4.7,SNR=8.1						
NVAR				ScP	ScP	14 37 13.9	+5.0
	1.3nm,0.9s,baz=125,slow=5.1,SNR=6.7						
LKWY	Lake	34.24	336	P	P	14 31 03.9	+2.9
	7.6nm,0.7s,mb4.6						
HLID	Hailey	35.22	330	eP	P	14 31 11.7	+2.3
	3.6nm,1.2s,mb4.1						
ULM	Lac du Bonnet	36.04	355	P	P	14 31 15.2	-1.1
	3.4nm,0.6s,mb4.5,baz=173,slow=9.8,SNR=9.4						
LPAZ	La Paz	38.08	142	pP	pP	14 31 59.1	+0.2
	1.0nm,0.9s,baz=347,slow=14,SNR=3.7						
SIV	San Ignacio	42.44	134	P	P	14 32 09.9	0.0
	1.9nm,0.8s,mb3.9,baz=299,slow=9.2,SNR=11						
SIV				pP	pP	14 32 34.3	-1.0
	2.5nm,0.7s,baz=308,slow=9.4,SNR=5.2						
SIV				PcP	PcP	14 34 02.8	+1.6
	1.6nm,0.7s,baz=237,slow=2.0,SNR=4.0						
FCC	Fort Churchill	44.43	358	eP	P	14 32 24.1	-1.2
	2.7nm,0.5s,mb4.2						
FCC				e		14 34 06.2	
SCHQ	Schefferville	44.73	20	P	P	14 32 26.6	-1.1
	8.1nm,0.6s,mb4.7,baz=220,slow=6.9,SNR=48						
CFAA	Coronel Fontan	50.75	154	P	P	14 33 15.4	+0.9
	0.5nm,0.7s,mb3.6,baz=339,slow=6.1,SNR=5.6						
YKA	Yellowknife Ar	50.88	346	P	P	14 33 14.8	-0.3
YKA				pP	pP	14 33 41.1	-0.1
YKA				PcP	PcP	14 34 30.2	+0.1
YKA				ScP	ScP	14 38 17.3	+0.9
YKA	Yellowknife Ar	50.88	346	P	P	14 33 14.8	-0.3
	1.2nm,0.5s,mb4.2,baz=149,slow=7.6,SNR=24						
YKA				pP	pP	14 33 41.1	-0.1
	0.8nm,0.7s,baz=148,slow=7.4,SNR=4.0						
YKA				PcP	PcP	14 34 30.2	+0.1
	0.6nm,0.6s,baz=149,slow=4.1,SNR=7.2						
YKA				ScP	ScP	14 38 17.3	+0.9
	0.1nm,0.5s,baz=142,slow=4.2,SNR=5.1						
PLCA	Paso Flores	58.05	161	P	P	14 34 07.8	+0.5
	1.8nm,1.0s,mb4.0,baz=353,slow=6.3,SNR=2.8						
INK	Inuvik	60.33	343	eP	P	14 34 22.2	-0.4
	57nm,0.9s						
EKA	Eskdalemuir Ar	77.36	36	P	P	14 36 06.2	-2.1
	2.3nm,0.5s,mb4.1,baz=275,slow=6.0,SNR=12						
HFS	Hagfors	85.04	29	P	P	14 36 47.3	-1.6
HFS	Hagfors	85.04	29	P	P	14 36 47.3	-1.6
	3.3nm,0.8s,mb4.3,baz=304,slow=3.2,SNR=7.1						
ARCES	ARCESS Array B	85.66	18	P	P	14 36 49.3	-2.5
	1.7nm,0.8s,mb4.0,baz=308,slow=4.0,SNR=6.4						
BOSA	Boshof	119.91	115	PKP	PKPdf	14 43 04.5	+0.6
	3.6nm,0.9s,baz=284,slow=2.9,SNR=4.2						
HHC	Hu-ho-hao-te	121.16	340	ePKP	PKPdf	14 43 08.3	+2.3
HHC				XPKP		14 43 45.9	
HHC				PP	PP	14 44 42.6	+6.4
HHC				PKS		14 46 43.8	
HHC				SKS	SKSdf	14 50 09.3	+1.2
HHC				SKKS	SKKSac	14 51 24.5	-1.8
HHC				SS	SS	15 01 03.6	+3.7
HHC				PP	PP		
	comp=Z,75nm,4.9s						
WMQ	Urumqi	122.16	1	ePKP	PKPdf	14 43 08.1	+0.3
LZH	Lanzhou	127.87	344	ePKP	PKPdf	14 43 21.3	+2.3
LZH				XPKP		14 44 05.6	
STKA	Stephens Creek	128.75	241	PKP	PKPdf	14 43 21.6	+0.9
	comp=Z,1.5nm,0.7s,baz=147,slow=6.2,SNR=4.2						
CD2	Chengdu	132.76	342	ePKP	PKPdf	14 43 27.3	-1.1
GYA	Guiyang	135.86	337	ePDIF	Pdif	14 40 37.9	+0.1
GYA				PKP	PKPdf	14 43 33.6	-0.7
GYA				XPKP		14 44 18.3	
GYA				PP	PP	14 46 16.6	+4.1
GYA				PP	PP		
	comp=Z,70nm,7.8s						
WRA	Warramunga Arr	136.08	256	PKP	PKPdf	14 43 36.0	+1.2
	comp=Z,0.7nm,0.8s,baz=16,slow=0.9,SNR=16						
WRA				SKP		14 47 04.4	
	comp=Z,0.5nm,0.6s,baz=89,slow=2.8,SNR=14						
ASAR	Alice Springs	136.36	251	PKP	PKPdf	14 43 35.4	+0.2
	comp=Z,0.6nm,0.7s,baz=95,slow=1.9,SNR=10						
ASAR				SKPbc	SKPbc	14 47 03.0	+5.4
	comp=Z,0.3nm,0.9s,baz=77,slow=4.0,SNR=2.6						
FITZ	Fitzroy Crossi	144.31	259	PKP	PKPdf	14 43 49.4	-0.3
	comp=Z,1.0nm,0.5s,baz=333,slow=4.5,SNR=6.3						

IDC 16 14:28:45.1±1.5, 2951S×6090E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.9/4, Error ellipse: s-maj=80.5km s-min=26.8km az=26.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	64.58	104	P	P	14 39 24.6	+0.1
	0.4nm,0.5s,baz=244,slow=6.2,SNR=18						
WRA	Warramunga Arr	66.42	100	P	P	14 39 36.6	+0.1
	0.6nm,0.8s,baz=246,slow=5.5,SNR=7.4						
TORD	Torodi Ar. Bea	71.10	298	P	P	14 40 05.6	0.0
	1.8nm,0.4s,baz=115,slow=6.5,SNR=3.0						
MKAR	Makanchi Array	78.37	15	P	P	14 40 47.0	-0.1
	0.2nm,0.2s,baz=193,slow=5.0,SNR=4.3						
YKA	Yellowknife Ar	146.88	356	PKPbc	PKPbc	14 48 28.2	-0.4
	0.7nm,0.6s,baz=353,slow=3.2,SNR=17						

LDG 16 14:53:35.8±0.3, 1594S×7128W, h89km, Mb5.0/28, Ms3.2/1, Error ellipse: s-maj=16.6km s-min=7.0km az=46.0
ISCJB 16 14:53:38.6±0.2, 1627S±005×71.15W±004, h120km, mb4.8/82, Error ellipse: s-maj=7.6km s-min=4.3km az=34.4
NEIC 16 14:53:39.6±0.2, 1631S×71.19W, mb4.8/65, Error ellipse: s-maj=6.3km s-min=4.4km az=55.0
NEIC Felt [III] at Punta de Bombon and [II] at Arequipa.
IDC 16 14:53:40.0±0.5, 1633S×7141W, h121km±3km, mb4.4/21, mb1 4.5/25, mb1mx4.5/27, mbtmp4.4/25, MS3.7/3, Ms1 3.8/3, ms1mx3.0/26, Error ellipse: s-maj=12.0km s-min=8.6km az=33.0
BJI 16 14:53:42.5, 1630S×7120W, h119km, mB5.1
ISC 16 14:53:40.5±0.2, 1627S±005×7107W±004, h122km, h122km±1.0km:pP-P, n365, σ0s68/343, mb4.8/82, 76C-82D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	0.45	245⇑	iP	Pn	14 53 54.5	-3.9
ARE				eS	Sn	14 54 05.0	-6.9
LPAZ	La Paz	2.82	91	P	Pn	14 54 30.3	+5.7
LPAZ				S	Sn	14 55 08.8	+10
LPAZ	La Paz	2.82	91	P	Pn	14 54 30.3	+5.7
	211nm,0.3s,baz=266,slow=11,SNR=4722						
LPAZ				S	Sn	14 55 08.8	+10
	34nm,0.3s,baz=179,slow=24,SNR=8.9						
NNA	Nana	7.03	307	ePn	Pn	14 55 14.8	-6.2
	81nm,0.6s						
NNA	Nana	7.03	307	P	Pn	14 55 15.6	-5.4
	9.6nm,0.3s,baz=143,slow=11,SNR=17						
NNA				S	Sn	14 56 39.3	-0.3
	19nm,0.3s,baz=246,slow=22,SNR=7.6						
SIV	San Ignacio	9.61	90	P	Pn	14 55 56.0	+0.1
	10nm,0.3s,baz=271,slow=12,SNR=91						
ATAH	Atahualpa	11.67	321	P	Pn	14 56 20.7	-2.7
	0.7nm,0.3s,baz=12,slow=5.8,SNR=3.5						
LCO	Las Campanas	12.68	179	ePn	Pn	14 56 28.6	-7.9
	8.2nm,0.9s						
CFAA	Coronel Fontan	15.48	171	P	Pn	14 57 12.2	+0.1
	0.5nm,0.3s,baz=340,slow=11,SNR=24						
OTAV	Otavalo	17.95	335	eP	Pn	14 57 43.2	+0.7
	38nm,1.1s						
OTAV				e		14 57 51.0	
ROSC	El Rosal	21.24	351	P	P	14 58 17.5	+0.6
	12nm,0.4s,mb4.6,baz=90,slow=17,SNR=6.4						
TRQA	Tornquist	23.13	161	eP	P	14 58 34.6	-1.3
	14nm,0.7s,mb4.4						
TRQA				e		14 58 43.7	
TRQA				epP		14 59 11.0	
PAYG	Puerto Ayora	24.48	307	eP	P	14 58 46.6	-1.8
	22nm,0.9s,mb4.5						
SDV	Santo Domingo	25.00	1	eP	P	14 58 51.6	-1.5
	46nm,0.8s,mb5.0						
SDV				e		14 59 07.7	
SDV	Santo Domingo	25.00	1	P	P	14 58 52.1	-1.0
	23nm,0.5s,mb4.9,baz=182,slow=9.4,SNR=30						
PCRV	Puerto La Cruz	27.04	14	P	P	14 59 12.4	+0.9
	8.4nm,0.6s,mb4.5,baz=246,slow=1.4,SNR=2.6						
PCRV				LR	LR	15 11 34.1	
	comp=Z,104nm,20.6s,baz=27,slow=40						
SJG	San Juan	34.51	8	eP	P	15 00 15.3	-1.8
	58nm,1.0s,mb5.4						
SJG	San Juan	34.51	8	P	P	15 00 15.8	-1.3
	15nm,0.3s,mb5.2,baz=332,slow=20,SNR=6.6						
MTP	Monte Pirata	34.58	9	eP	P	15 00 13.5	-4.2
SDDR	Presa de Saban	35.03	360	eP	P	15 00 19.6	-2.0
	16nm,0.9s,mb4.9						
RCBR	Riachuelo	35.98	77	eP	P	15 00 30.0	+0.1
	19nm,0.5s,mb5.3						
EFI	East Falkland	36.81	166	eP	P	15 00 35.2	-1.2
	34nm,1.2s,mb5.2						
USHA	Ushuaia	38.54	178	P	P	15 00 50.2	-0.7
	5.6nm,0.7s,mb4.5,baz=322,slow=5.0,SNR=5.9						
TEIG	Tepich	40.02	334	eP	P	15 01 01.8	-1.8
	7.3nm,0.6s,mb4.7						
TEIG				pP	pP	15 01 32.8	+1.6
TEIG	Tepich	40.02	334	P	P	15 01 03.1	-0.5
	4.5nm,0.5s,mb4.6,baz=196,slow=15,SNR=4.8						
DWPF	Disney	45.25	347	eP	P	15 01 46.4	+0.6
	39nm,0.6s,mb5.3						
BBSR	BB Station	48.75	7	eP	P	15 02 11.2	-1.7
	22nm,0.7s,mb5.2						
ELN	Prospectdale	53.99	350	eP	P	15 02 52.1	+0.3
ELN				epP	pP	15 03 21.8	+1.0
JCT	Junction City	54.09	329	eP	P	15 02 51.7	-1.0
	14nm,1.0s,mb4.9						
MIAR	Mount Ida	54.88	337	eP	P	15 02 57.3	-1.1
	4.6nm,0.6s,mb4.7						
MIAR				epP	pP	15 03 28.5	+1.1
LTX	Lajitas	55.19	325	eP	P	15 02 59.4	-1.4
	13nm,1.4s,mb4.8						
TXAR	Lajitas Array	55.19	325	P	P	15 02 59.6	-1.1
	3.5nm,0.6s,mb4.6,baz=150,slow=9.1,SNR=23						
TXAR				pP	pP	15 03 29.1	-0.6
	2.6nm,0.9s,baz=150,slow=10,SNR=3.4						
MCWV	Mont Chateau	56.24	352	eP	P	15 03 07.1	-0.9
	26nm,1.0s,mb5.2						
SIUC	Southern Illin	56.35	343	eP	P	15 03 07.2	-1.6
	52nm,0.7s,mb5.7						
SIUC				epP	pP	15 03 38.2	+0.3
FVM	French Village	56.95	342	eP	P	15 03 14.0	+1.0
	26nm,0.8s,mb5.3						
FVM				pP	pP	15 03 43.3	+1.1
MNTX	Cornudas Mount	57.95	325	eP	P	15 03 18.2	-2.0
	12nm,1.2s,mb4.8						
MNTX				epP	pP	15 03 46.6	-2.9
MNTX				esP	sP	15 04 00.7	-2.2
319A	Douglas	59.92	322	⇑P	P	15 03 33.5	-0.4
	baz=60						
318A	Bisbee	60.38	322	⇑P	P	15 03 36.6	-0.4
	baz=61						
BNM	Barren Site	60.50	326	eP	P	15 03 36.8	-1.0
BNM				pP	pP	15 04 07.5	+0.2
218A	Dragoon	60.80	322	⇑P	P	15 03 39.4	-0.4
	baz=61						
LAZ	Ladron	60.97	326	eP	P	15 03 41.1	+0.2
LAZ				epP	pP	15 04 09.8	-0.7
ANMO	Albuquerque	61.03	327	eP	P	15 03 40.6	-0.7
	2.1nm,0.6s,mb4.3						
ANMO				epP	pP	15 04 10.0	-0.8
217A	Green Valley	61.12	322	⇑P	P	15 03 41.2	-0.7
	baz=61						
216A	Three Points,	61.66	321	⇑P	P	15 03 45.0	-0.6
	baz=62						
BBTS	Babate	62.01	63	P	P	15 03 49.8	+1.5
	18nm,0.7s,mb5.2,baz=31,slow=3.1,SNR=3.4						
BBTS				LR	LR	15 27 56.7	
	comp=Z,67nm,18.1s,baz=0.5,slow=33						
115A	Sonoran Desert	62.61	321	⇓P	P	15 03 51.9	0.0
	baz=63						
SDCO	Great Sand Dun	62.73	330	eP	P	15 03 52.3	-0.3
	13nm,0.9s,mb4.8						
SDCO				epP	pP	15 04 21.8	-0.4
Z14A	Wintersburg	63.51	321	⇓P	P	15 03 57.5	-0.4
	baz=64						
MVCO	Mesa Verde	63.82	327	⇓P	P	15 03 59.3	-0.5
	baz=64						
X15A	Humboldt	63.88	323	⇑P	P	15 04 00.2	0.0
	baz=64						
Y14A	Wickenburg	63.94	322	⇑P	P	15 04 00.3	-0.4
	baz=64,SNR=6.3						
WUAZ	Wupatki	64.12	324	eP	P	15 04 01.4	-0.4
	14nm,1.0s,mb4.7						
WUAZ				epP	pP	15 04 30.6	-1.0
WUAZ	Wupatki	64.12	324	⇑P	P	15 04 02.0	+0.2
	baz=64						
X14A	Yava	64.25	322	⇑P	P	15 04 02.7	+0.1
	baz=64,SNR=7.1						
Y13A	Salome	64.35	321	⇓P	P	15 04 03.3	0.0
	baz=64						
W15A	Williams	64.39	323	⇑P	P	15 04 03.9	+0.3
	baz=65						
ISCO	Idaho Springs	64.41	331	eP	P	15 04 02.9	-0.7
	3.0nm,0.8s,mb4.2						
ISCO				epP	pP	15 04 32.9	-0.5
PV01	Paradox Valley	64.56	328	eP	P	15 04 04.5	0.0
PV01				epP	pP	15 04 32.4	-2.1
SMCO	Snowmass	64.56	330	eP	P	15 03 59.9	-4.7
	9.0nm,0.8s,mb4.7						
SMCO				epP	pP	15 04 29.9	-4.6
W14A	Seligman	64.88	323	⇓P	P	15 04 07.1	+0.3
	baz=65,SNR=7.7						
X13A	Yucca	64.89	322	⇓P	P	15 04 06.5	-0.3
	baz=65,SNR=6.9						
SWSC	Sam W. Stewart	64.97	319	⇑P	P	15 04 07.6	+0.2
	baz=65						
DVTC	Desert V Tower	64.97	319	⇑P	P	15 04 07.8	+0.4
	baz=65						
BC3	Big Chuckw Mtn	65.23	320	⇑P	P	15 04 08.8	-0.2
	baz=65						
W13A	Hualapai Mount	65.27	322	P	P	15 04 09.7	+0.4
	baz=66,SNR=6.4						
MONP	Monument Peak	65.33	319	⇑P	P	15 04 09.7	0.0
	baz=66						
IRM	Iron Mountain	65.39	321	P	P	15 04 10.1	+0.1
	baz=66,SNR=6.7						
T15A	Red Dirt Ranch	65.77	325	⇑P	P	15 04 12.9	+0.4

baz=66
U14A Mt Trumbull 65.79 324 ⇑P P 15 04 13.2 +0.6
baz=66
BELC Belle Mtn. 65.80 320 ⇓P P 15 04 12.5 -0.3
baz=66
PFO Pinyon Flat Ob 65.82 319 ⇓P P 15 04 12.8 0.0
baz=66
GMRC Granite Mounta 66.11 321 P P 15 04 15.0 +0.3
baz=66,SNR=7.9
T14A Hurricane 66.19 324 ⇑P P 15 04 15.5 +0.3
baz=66
V12A Nelson 66.28 322 ⇑P P 15 04 15.6 -0.1
baz=66,SNR=6.6
HEC Hector,Ludlow 66.56 320 P P 15 04 18.1 +0.6
baz=67,SNR=7.1
U12A Valley of Fire 66.58 323 P P 15 04 18.0 +0.4
baz=67,SNR=5.2
T13A Saint George 66.62 324 ⇓P P 15 04 18.4 +0.5
baz=67
CCUT Cedar City 66.69 324 eP P 15 04 19.2 +0.8
CCUT epP pP 15 04 46.7 -1.7
TUQ Turquoise Mtn. 66.72 321 ⇑P P 15 04 18.4 -0.2
baz=67
MSU Marysvale 66.73 326 eP P 15 04 18.8 +0.2
MSU epP pP 15 04 47.3 -1.3
CIS Catalina Islan 66.93 318 ⇓P P 15 04 20.8 +0.9
baz=67
BFSC Mount Baldy St 66.99 319 ⇑P P 15 04 20.3 0.0
baz=67
S13A Holt Ranch, En 66.99 324 ⇑P P 15 04 21.0 +0.8
baz=67
GSC Goldstone 67.16 321 ⇓P P 15 04 21.5 +0.1
baz=67,SNR=6.5
SHOC Shoshone 67.24 321 ⇓P P 15 04 22.0 +0.2
baz=67
T11A Corn Creek, Al 67.53 323 ⇓P P 15 04 24.2 +0.5
baz=68
EDW2 Edwards Air Fo 67.62 320 ⇓P P 15 04 23.9 -0.4
baz=68,SNR=8.1
U10A Ash Meadows, A 67.62 322 ⇑P P 15 04 24.6 +0.3
baz=68
LRMC Laurel Mountai 67.82 320 ⇑P P 15 04 25.6 +0.1
baz=68,SNR=5.6
SNAA Sanae 67.86 162 P P 15 04 25.3 +0.1
2.6nm,0.7s,mb4.2,baz=311,slow=6.0,SNR=11
SNAA pP pP 15 04 55.3 0.0
3.1nm,0.9s,baz=287,slow=7.4,SNR=3.3
TPNV Topopah Spring 67.93 322 eP P 15 04 26.5 +0.3
13nm,0.9s,mb4.8
TPNV Topopah Spring 67.93 322 ⇓P P 15 04 26.7 +0.6
baz=68
R12A Pony Springs, 67.94 324 ⇓P P 15 04 26.8 +0.6
baz=68
FURC Furnace Creek, 67.97 321 ⇓P P 15 04 26.6 +0.2
baz=68,SNR=5.1
AGMN Agassiz Refuge 67.98 342 eP P 15 04 25.2 -1.0
11nm,0.6s,mb4.9
Q13A Wheeler Ranch, 68.05 325 ⇑P P 15 04 27.2 +0.3
baz=68
MPMC Manual Prospec 68.08 321 P P 15 04 27.2 +0.1
baz=68,SNR=12
S11A Rachel 68.11 323 ⇑P P 15 04 28.0 +0.8
baz=68
DUG Dugway 68.29 327 eP P 15 04 28.6 +0.3
14nm,1.3s,mb4.6
DUG epP pP 15 04 58.2 -0.3
P13A Bates Ranch, G 68.40 325 ⇓P P 15 04 29.6 +0.5
baz=69
ISA Isabella 68.42 320 P P 15 04 29.6 +0.3
baz=69,SNR=11
R11A Troy Canyon, C 68.50 324 ⇑P P 15 04 30.1 +0.4
baz=69
Q12A Willow Creek R 68.56 325 ⇓P P 15 04 30.1 +0.1
baz=69
PDAR Pinedale Array 68.58 331 P P 15 04 29.3 -0.8
2.2nm,0.9s,mb4.0,baz=124,slow=7.4,SNR=9.7
HWUT Hardware Ranch 68.68 328 eP P 15 04 29.7 -1.0
CWC Cottonwood Cre 68.69 321 P P 15 04 31.3 +0.4
baz=69,SNR=9.6
PKM Peak Mountain 68.78 318 P P 15 04 32.0 +0.5
baz=69,SNR=7.0
S10A Tonopah Range, 68.79 323 ⇓P P 15 04 32.0 +0.5
baz=69
O13A Hicks Ranch, I 68.87 326 ⇑P P 15 04 32.2 +0.3
baz=69
R10A Warm Springs 68.87 323 ⇓P P 15 04 32.9 +0.9
baz=69
Q11A Duckwater 68.89 324 P P 15 04 32.6 +0.6
baz=69,SNR=8.2
P12A McGill 68.91 325 ⇑P P 15 04 32.5 +0.3
baz=69,SNR=5.1
N14A Grayback Hills 68.96 327 ⇓P P 15 04 32.2 -0.3
baz=69
M15A Larsen Ranch, 69.02 328 ⇑P P 15 04 32.5 -0.3
baz=69
S09A Goldfield 69.03 322 ⇓P P 15 04 33.0 0.0
baz=69
LIC Lamto 69.04 77 ⇑iP P 15 04 33.3 -0.3
26nm,0.4s,mb5.1
LIC Lamto 69.04 77 ⇑iP P 15 04 33.3 -0.3
13nm,0.4s,mb5.1
SMMC Simmler 69.16 319 P P 15 04 34.8 +0.9
baz=69,SNR=5.3
R09A Tonopah 69.28 323 P P 15 04 34.6 +0.1
baz=70,SNR=8.5
Q10A Clear Creek Ra 69.29 324 ⇓P P 15 04 35.3 +0.7
baz=70
DBIC Dimbokro 69.35 76 P P 15 04 35.6 +0.1
28nm,0.4s,mb5.5,baz=233,slow=6.6,SNR=81
DBIC LR LR 15 34 24.9
comp=Z,85nm,18.8s,baz=243,slow=35
O12A Currie 69.38 326 ⇑P P 15 04 35.3 +0.2
baz=70
HELL Mitchell Peak, 69.42 320 P P 15 04 35.5 0.0
baz=70,SNR=16
HVU Hansel Valley 69.42 328 eP P 15 04 34.8 -0.5
4.5nm,0.7s,mb4.4
HVU epP pP 15 05 04.8 -0.7
S08C White Mtn Res 69.44 322 P P 15 04 36.3 +0.7
baz=70,SNR=7.9
M14A Sheep Mountain 69.52 327 ⇓P P 15 04 35.7 -0.2
baz=70
MTUM Tungsten Hills 69.58 321 eP P 15 04 36.4 0.0
ULM Lac du Bonnet 69.74 343 P P 15 04 36.0 -1.0
10.0nm,0.6s,mb4.8,baz=152,slow=5.8,SNR=23
ULM pP pP 15 05 07.8 +0.5
5.5nm,0.6s,baz=163,slow=4.9,SNR=3.5
Q09A Carvers 69.75 323 ⇓P P 15 04 37.8 +0.4
baz=70
O11A Cowboy Ranch, 69.78 325 P P 15 04 38.0 +0.4
baz=70,SNR=6.9
P10A Eureka 69.87 324 ⇓P P 15 04 38.9 +0.7
baz=70
V04C Ramage Ranch, 69.91 319 ⇑P P 15 04 39.4 +1.0
baz=70
N12A Clover Valley, 69.94 326 ⇑P P 15 04 38.3 -0.3
baz=70
KCC Kaiser Creek 70.02 321 ⇑P P 15 04 38.3 -0.8
baz=70
IMW Indian Meadow 70.09 330 eP P 15 04 39.1 -0.3
3.8nm,0.6s,mb4.4
FLWY Flagg Ranch 70.12 331 eP P 15 04 39.7 +0.2
13nm,0.9s,mb4.8
FLWY epP pP 15 05 09.8 0.0
NVAR Mina Array Bea 70.13 322 P P 15 04 40.3 +0.6
3.5nm,0.8s,mb4.2,baz=142,slow=8.0,SNR=33
Q08A Gabbs 70.20 323 ⇓P P 15 04 39.9 -0.2
baz=70
L13A Double Diamond 70.25 327 ⇑P P 15 04 40.6 +0.2
baz=70
M12A Wells 70.28 326 ⇓P P 15 04 40.2 -0.4
baz=70
U04C Hernandez Rese 70.31 319 ⇑P P 15 04 41.2 +0.3
baz=70,SNR=9.3
R07C Lee Vining 70.35 322 ⇓P P 15 04 41.7 +0.6
baz=70,SNR=13
O10A Cortez Mining, 70.36 325 ⇓P P 15 04 41.5 +0.4
baz=71
S05C Merced 70.65 320 ⇑P P 15 04 43.8 +0.8
baz=71,SNR=6.3
S06C San Francisco 70.70 321 P P 15 04 43.5 +0.3
baz=71,SNR=12
HAST UC Hastings Re 70.81 319 ⇓P P 15 04 44.0 0.0
baz=71
P08A Dixie Valley 70.84 323 ⇓P P 15 04 44.5 +0.5
baz=71
R06C Coleville 70.87 322 ⇑P P 15 04 45.1 +0.9
baz=71,SNR=5.1

SCHQ Schefferville 70.91 3 P P 15 04 43.8 -0.3
2.4nm,0.6s,mb4.2,baz=173,slow=8.6,SNR=9.2
GCMT Greycliff 70.96 332 eP P 15 04 44.3 -0.3
GCMT epP pP 15 05 13.2 -1.7
PACP Pacheco Peak 71.03 319 ⇓P P 15 04 45.4 +0.2
baz=71
CMB Columbia Colle 71.12 321 ⇓P P 15 04 45.7 -0.1
baz=71
K12A Draper Farm, C 71.14 327 ⇓P P 15 04 46.2 +0.4
baz=71
J13A Cove Ranch, Pi 71.31 328 ⇑P P 15 04 46.7 0.0
baz=72
R05C Kirkwood Meado 71.36 321 P P 15 04 47.9 +0.7
baz=72,SNR=6.8
S04C Ingram Canyon, 71.37 320 ⇓P P 15 04 47.6 +0.4
baz=72
HLID Hailey 71.55 328 eP P 15 04 48.3 +0.1
2.1nm,0.8s,mb4.0
HLID epP pP 15 05 17.9 -0.7
HLID Hailey 71.55 328 ⇑P P 15 04 48.5 +0.3
baz=72
WCN Washoe City 71.56 322 ⇓P P 15 04 49.0 +0.6
baz=72
L10A Juniper Basin 71.57 326 ⇑P P 15 04 48.5 +0.1
baz=72
R04C Big Horse Ranc 71.60 321 ⇑P P 15 04 49.0 +0.4
baz=72
N08A GE Springer Mi 71.60 324 ⇓P P 15 04 47.9 -0.7
baz=72
PAHR Pah Rah Range 71.61 323 eP P 15 04 48.8 +0.2
25nm,1.1s,mb5.0
PAHR epP pP 15 05 17.8 -1.2
O07A Toulon 71.61 323 ⇓P P 15 04 49.2 +0.6
baz=72,SNR=6.2
I13A Wildhorse Cree 71.65 329 ⇓P P 15 04 49.3 +0.5
baz=72
MCMT McKenzie Canyo 71.70 330 eP P 15 04 49.6 +0.6
MCMT epP pP 15 05 18.9 -0.6
BOZ Bozeman (W) 71.74 331 ⇓P P 15 04 48.7 -0.6
baz=72
G15A Dillon 71.78 330 ⇑P P 15 04 49.6 +0.1
baz=72
K11A Parker Ranch, 71.82 327 ⇓P P 15 04 49.5 -0.4
baz=72
BDM Black Diamond 71.98 320 ⇑P P 15 04 52.6 +1.7
baz=72
P05C Yuba Gap, Truc 72.06 322 ⇑P P 15 04 52.0 +0.6
baz=72
N07B Gerlach 72.07 324 ⇓P P 15 04 51.3 -0.1
baz=72
O06A Flanigan 72.16 323 ⇑P P 15 04 51.7 -0.2
baz=72
MFID Camas Ranch 72.17 327 ⇓P P 15 04 51.9 0.0
baz=72
L09A Wilkinson Ranc 72.18 325 ⇓P P 15 04 52.2 +0.2
baz=72
Q04C Lincoln 72.23 321 ⇑P P 15 04 52.9 +0.5
baz=72
K10A MacKenzie Ranc 72.27 326 ⇑P P 15 04 52.3 -0.3
baz=72
BEKR Beckwourth 72.28 322 ⇓P P 15 04 52.8 +0.1
baz=72,SNR=5.7
F15A Butte 72.28 331 ⇑P P 15 04 51.2 -1.3
baz=72
H12A Diamond D Ranc 72.48 329 ⇑P P 15 04 53.3 -0.4
baz=73
N06A Buffalo Meadow 72.55 323 ⇓P P 15 04 54.2 0.0
baz=73,SNR=14
G13A Cobalt 72.56 329 ⇓P P 15 04 54.3 +0.1
baz=73,SNR=8.8
M07A Soldier Meadow 72.59 324 ⇑P P 15 04 54.3 -0.2
baz=73
OHCM Honcut 72.61 321 eP P 15 04 53.8 -0.9
L08A Fields 72.66 325 ⇑P P 15 04 54.4 -0.5
baz=73,SNR=5.1
O05C Quincy 72.67 322 ⇓P P 15 04 55.0 0.0
baz=73
K09A Rome 72.67 326 P P 15 04 55.0 +0.1
baz=73,SNR=8.7
MCCM Marconi Confer 72.73 320 ⇑P P 15 04 57.9 +2.5
baz=73
EGMT Eagleton 72.73 334 eP P 15 04 54.6 -0.5
5.7nm,0.8s,mb4.5
EGMT Eagleton 72.73 334 ⇓P P 15 04 54.4 -0.7
baz=73
ORV Oroville 72.76 321 P P 15 04 55.9 +0.4
baz=73,SNR=9.4
E15A Deer Lodge 72.78 331 ⇑P P 15 04 54.3 -1.2
baz=73
ELFS Eagle Lake Fie 72.98 323 ⇑P P 15 04 57.0 +0.3
baz=73,SNR=12
O04C Chester 73.00 322 ⇓P P 15 04 56.9 0.0
baz=73
L07A Adell 73.10 324 ⇓P P 15 04 57.5 +0.1
baz=73
F13A Darby 73.11 330 P P 15 04 58.1 +0.6
baz=73,SNR=5.1
J09A Fry Pan Ranch, 73.13 326 ⇑P P 15 04 57.1 -0.5
baz=73
H11A Donnelly 73.17 328 ⇓P P 15 04 56.6 -1.2
baz=73
E14A Clinton 73.17 331 P P 15 04 58.4 +0.6
baz=73,SNR=5.5
D15A Lincoln 73.19 332 ⇑P P 15 04 56.5 -1.3
baz=73
K07A Rock Creek Ran 73.50 325 ⇑P P 15 04 59.4 -0.4
baz=74
E13A Victor 73.52 330 ⇓P P 15 04 59.9 +0.1
baz=74
HATC Hat Creek Radi 73.53 322 ⇓P P 15 05 00.1 +0.1
baz=74
F12A Elk City 73.54 329 ⇓P P 15 04 59.9 0.0
baz=74
GASB Alder Springs 73.55 321 ⇑P P 15 05 00.8 +0.7
baz=74
MOD Modoc 73.57 324 ⇓P P 15 04 59.8 -0.4
baz=74
M05C Lookout 73.70 323 P P 15 05 01.3 +0.3
baz=74,SNR=7.8
G11A Walters Elk Ra 73.79 329 ⇑P P 15 05 01.3 -0.1
baz=74,SNR=6.7
QSPA South Pole Qui 73.89 180 eP P 15 05 01.4 -0.1
13nm,1.2s,mb4.5
QSPA epP pP 15 05 29.5 -2.6
QSPA esP sP 15 05 42.3 -2.9
BMO Blue Mountains 73.93 328 eP P 15 05 01.7 -0.6
3.1nm,0.8s,mb4.1
BMO epP pP 15 05 32.0 -0.8
I08A Drewsey 73.95 326 ⇓P P 15 05 02.8 +0.5
baz=74
L05A Lakeview 73.96 324 P P 15 05 03.6 +1.1
baz=74,SNR=5.0
J07A Hines 73.98 326 ⇑P P 15 05 02.4 -0.2
baz=74
WDC Whiskeytown Da 74.02 322 ⇑P P 15 05 00.8 -2.1
baz=74
F11A Grangeville 74.08 329 ⇑P P 15 05 02.4 -0.7
baz=74
K06A Valley Falls 74.12 325 P P 15 05 04.1 +0.7
baz=74,SNR=14
D13A Huson 74.12 331 ⇓P P 15 05 03.1 -0.2
baz=74
G10A Bishop Farm, J 74.14 328 P P 15 05 03.9 +0.4
baz=74,SNR=16
J06A Christmas Vall 74.36 325 P P 15 05 05.2 +0.4
baz=75,SNR=7.5
M04C Macdoel 74.37 323 P P 15 05 05.2 +0.3
baz=75,SNR=6.2
H08A Prairie City 74.41 327 ⇓P P 15 05 05.4 +0.4
baz=75
E11A Bogner Ranch, 74.43 329 ⇓P P 15 05 04.4 -0.8
baz=75
K05A Summer Lake 74.43 324 P P 15 05 06.3 +1.1
baz=75,SNR=5.8
D12A Red Ives Fores 74.52 330 ⇓P P 15 05 05.1 -0.5
baz=75
I07A Izee 74.56 326 P P 15 05 06.5 +0.6
baz=75,SNR=5.4
C13A Hot Springs 74.60 331 ⇑P P 15 05 05.9 -0.1
baz=75
N02C Big Bar 74.63 322 P P 15 05 06.8 +0.4
baz=75,SNR=9.1
M02C Callahan 74.71 322 ⇓P P 15 05 05.7 -1.2
baz=75
F09A S2 Ranch, Elgi 74.83 328 ⇑P P 15 05 07.3 -0.2
baz=75
K04A Chilquin 74.83 324 ⇓P P 15 05 07.7 +0.1
baz=75

YBH Yreka Blue Hor 74.84 323 P P 15 05 06.9 -0.7
baz=75,SNR=5.2
I06A Prineville 74.85 326 ⇓P P 15 05 08.1 +0.5
baz=75,SNR=5.8
E10A Myers Farm, Un 74.97 329 ⇓P P 15 05 08.1 -0.1
baz=75
J05A Fort Rock 74.99 325 P P 15 05 08.9 +0.5
baz=75,SNR=8.3
G08A Pilot Rock 75.08 327 ⇑P P 15 05 08.9 0.0
baz=75
G07A Ruggs Ranch, H 75.44 327 ⇑P P 15 05 11.9 +1.0
baz=76
H06A Lindquist Farm 75.44 326 P P 15 05 11.9 +1.0
baz=76,SNR=6.9
A13A Flathead Natio 75.45 332 ⇓P P 15 05 10.9 0.0
baz=76
D10A Wagner Farm, O 75.45 329 ⇓P P 15 05 10.3 -0.6
baz=76
J04A Umpqua Nationa 75.45 324 P P 15 05 11.4 +0.4
baz=76,SNR=6.3
E09A Wood Farm, Sta 75.50 329 ⇑P P 15 05 10.9 -0.3
baz=76
I05A Bend 75.57 325 ⇓P P 15 05 12.6 +0.9
baz=76
L02A Cave Junction 75.63 322 ⇓P P 15 05 11.8 -0.3
baz=76
B12A Libby 75.64 331 ⇑P P 15 05 12.2 +0.2
baz=76
G06A Carlson Farm, 75.93 326 ⇑P P 15 05 14.4 +0.7
baz=76
K02A Glendale 75.94 323 P P 15 05 14.1 +0.2
baz=76,SNR=5.4
D09A Jones Farm, Ri 75.96 329 ⇑P P 15 05 13.2 -0.7
baz=76
I04A Tendick Farm, 75.97 324 P P 15 05 13.9 -0.1
baz=76,SNR=5.3
A12A Yaak River Ran 76.01 332 ⇓P P 15 05 14.6 +0.5
baz=76
J02A Umpqua 76.36 323 P P 15 05 16.8 +0.6
baz=76,SNR=6.6
H04A Detroit Lake 76.41 325 ⇑P P 15 05 16.2 -0.3
baz=77
I03A Eugene 76.57 324 ⇓P P 15 05 17.5 +0.1
baz=77
B09A Rice 76.82 330 ⇓P P 15 05 18.1 -0.6
baz=77
H03A Soap Creek Ran 77.02 325 ⇓P P 15 05 20.8 +1.0
baz=77
FCC Fort Churchill 77.11 348 eP P 15 05 19.0 -1.1
1.8nm,0.6s,mb4.0
FCC epP pP 15 05 50.3 -0.5
C07A Waterville 77.26 328 P P 15 05 21.8 +0.6
baz=78,SNR=6.3
D06A Cle Elum 77.33 328 ⇓P P 15 05 22.1 +0.5
baz=78
F04A Amboy 77.34 326 ⇓P P 15 05 22.0 +0.4
baz=78
A09A Danville 77.41 330 ⇑P P 15 05 21.7 -0.3
baz=78
TOA0 Torodi Ar. Sit 77.63 72 eP P 15 05 23.8 -0.2
TOA0 epP pP 15 05 54.7 0.0
TORD Torodi Ar. Bea 77.63 72 P P 15 05 23.8 -0.1
58nm,0.8s,mb5.4,baz=257,slow=5.3,SNR=194
TORD pP pP 15 05 55.5 +0.7
15nm,0.8s,baz=259,slow=5.5,SNR=4.1
A08A Turner Farm, O 77.73 330 ⇑P P 15 05 24.0 +0.2
baz=78
B07A Winthrop 77.81 329 ⇓P P 15 05 24.6 +0.5
baz=78
EDM Edmonton 78.18 336 eP P 15 05 24.8 -1.4
EDM epP pP 15 05 54.8 -2.2
A07A Ashnola River, 78.33 329 ⇓P P 15 05 27.6 +0.5
baz=78
EVO Evora 80.30 45 eP P 15 05 37.2 -0.8
31nm,0.9s,mb4.8
SBA Scott Base 80.57 190 eP P 15 05 38.6 -0.2
10.0nm,1.3s,mb4.5
SBA epP pP 15 06 07.5 -2.4
SYO Syowa Base 82.09 160⇓eP P 15 05 45.7 -1.3
SYO Syowa Base 82.09 160⇓epP pP 15 06 16.0 -2.1
SUR Sutherland 83.01 122 eP P 15 05 54.0 +1.5
6.0nm,0.8s,mb4.5
PAB San Pablo 83.29 46 eP P 15 05 54.7 +1.0
22nm,0.9s,mb5.0
TSUM Tsumeb 83.55 108 eP P 15 05 56.4 +0.8
13nm,0.9s,mb4.8
TSUM epP pP 15 06 26.8 +0.1
ESDC Sonseca Array 83.61 46 P P 15 05 56.5 +1.1
15nm,0.7s,mb4.9,baz=255,slow=5.0,SNR=48
YKA Yellowknife Ar 85.60 341 P P 15 06 04.1 -0.7
YKA pP pP 15 06 35.6 -0.5
YKA Yellowknife Ar 85.60 341 P P 15 06 04.1 -0.7
2.6nm,0.7s,mb4.3,baz=135,slow=5.3,SNR=47
YKA pP pP 15 06 35.6 -0.5
5.8nm,0.7s,baz=136,slow=5.0,SNR=9.0
SJPF Ste Jean 86.98 44 eP P 15 06 12.7 +0.7
8.7nm,0.6s,mb4.5
SJPF Ste Jean 86.98 44 eP P 15 06 12.7 +0.7
4.3nm,0.6s,mb4.6
ETSF Etsaut 87.33 44 eP P 15 06 14.4 +0.7
14nm,0.7s,mb4.7
ETSF Etsaut 87.33 44 eP P 15 06 14.4 +0.7
6.8nm,0.7s,mb4.7
BOSA Boshof 87.73 119 P P 15 06 16.5 +0.5
BOSA Boshof 87.73 119 P P 15 06 16.5 +0.5
2.7nm,0.9s,mb4.3,baz=270,slow=2.7,SNR=3.8
QUIF Quistinic 87.88 39 eP P 15 06 15.6 -0.6
EPF Esparros 87.98 44 eP P 15 06 17.2 +0.4
ROSF Rostrenen 88.01 38 eP P 15 06 16.3 -0.5
20nm,0.8s,mb4.9
ROSF Rostrenen 88.01 38 eP P 15 06 16.3 -0.5
9.8nm,0.8s,mb4.9
SGMF Saint Gilles 88.40 38 eP P 15 06 18.4 -0.2
SALF Salau 88.44 45 eP P 15 06 19.9 +0.9
LFF La Frestale 89.03 42 eP P 15 06 21.5 -0.2
MFF Saint Martin d 89.16 41 eP P 15 06 21.8 -0.4
26nm,0.8s,mb5.0
MFF Saint Martin d 89.16 41 eP P 15 06 21.8 -0.4
13nm,0.8s,mb5.0
FILF Fillols 89.29 45 eP P 15 06 23.1 +0.1
MTLF Montolieu 89.37 44 eP P 15 06 23.1 -0.2
18nm,0.8s,mb4.8
MTLF Montolieu 89.37 44 eP P 15 06 23.1 -0.2
8.8nm,0.8s,mb4.8
GRR Gorron 89.47 39 eP P 15 06 22.9 -0.8
25nm,0.7s,mb5.0
GRR Gorron 89.47 39 eP P 15 06 22.9 -0.8
13nm,0.7s,mb5.1
RJF Les Rejaudoux 89.68 42 eP P 15 06 24.3 -0.4
10nm,0.6s,mb4.8
RJF Les Rejaudoux 89.68 42 eP P 15 06 24.3 -0.4
5.1nm,0.6s,mb4.8
FLN La Foliniere 89.86 39 eP P 15 06 25.0 -0.4
CAF Calviac 89.89 43 eP P 15 06 25.5 -0.2
12nm,0.7s,mb4.8
CAF Calviac 89.89 43 eP P 15 06 25.5 -0.2
6.3nm,0.7s,mb4.8
MAW Mawson 89.90 164 P P 15 06 25.4 0.0
3.5nm,0.8s,mb4.5,baz=243,slow=10,SNR=7.3
LDF La Druitiere 90.00 39 eP P 15 06 25.6 -0.5
16nm,0.7s,mb5.0
LDF epP pP 15 06 49.7 -8.0
LDF La Druitiere 90.00 39 eP P 15 06 25.6 -0.5
8.1nm,0.7s,mb5.0
LDF epP pP 15 06 49.7 -8.0
TCF Toulx Ste Croi 90.52 42 eP P 15 06 28.0 -0.6
10nm,0.8s,mb4.7
TCF epP pP 15 06 52.2 -7.9
TCF Toulx Ste Croi 90.52 42 eP P 15 06 28.0 -0.6
5.2nm,0.8s,mb4.7
TCF epP pP 15 06 52.2 -7.9
LASF Ste Croix 90.75 44 eP P 15 06 29.9 +0.2
12nm,1.0s,mb4.7
LBL Lubilhac 90.78 43 eP P 15 06 30.7 +0.9
PYM Petit Puy Mans 90.82 42 eP P 15 06 30.4 +0.4
AGO Saint Agoulin 91.02 42 eP P 15 06 31.4 +0.5
BGF Bois d'Agland 91.03 42 eP P 15 06 30.5 -0.4
38nm,0.9s,mb5.2
BGF Bois d'Agland 91.03 42 eP P 15 06 30.5 -0.4
19nm,0.9s,mb5.2
PLDF La Plantade 91.30 42 eP P 15 06 32.6 +0.4
AVF Avril sur Loir 91.44 41 eP P 15 06 32.1 -0.7
8.8nm,0.8s,mb4.6
AVF Avril sur Loir 91.44 41 eP P 15 06 32.1 -0.7
4.4nm,0.8s,mb4.6
VIVF Saint-Julien-l 91.58 44 eP P 15 06 34.0 +0.5
SSF Saint Saulge 91.64 41 eP P 15 06 32.9 -0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	4.6nm,0.6s,mb4.6						
SSF	Saint Saulge	91.64	41	eP	P	15 06 32.9	-0.9
	2.3nm,0.6s,mb4.6						
SMF	Signal de Mont	91.69	42	eP	P	15 06 33.6	-0.4
	29nm,0.9s,mb5.2						
SMF	Signal de Mont	91.69	42	eP	P	15 06 33.6	-0.4
	15nm,0.9s,mb5.2						
KEST	Kesra	91.82	53	P	P	15 06 37.0	+2.1
	0.9nm,0.6s,mb4.2,baz=209,slow=10,SNR=3.6						
SMRF	Simiane la Rot	91.86	45	eP	P	15 06 35.5	+0.6
	18nm,1.1s,mb4.9						
SMRF	Simiane la Rot	91.86	45	eP	P	15 06 35.5	+0.6
	18nm,1.1s,mb5.2						
LOR	Lormes	91.94	41	eP	P	15 06 34.3	-0.8
LMR	La Mourre	92.27	45	eP	P	15 06 37.0	+0.2
	18nm,1.1s,mb4.9						
LMR	La Mourre	92.27	45	eP	P	15 06 37.0	+0.2
	9.1nm,1.1s,mb4.9						
ORIF	Oris-en-Rattie	92.40	44	eP	P	15 06 38.0	+0.7
	17nm,0.8s,mb5.0						
ORIF	Oris-en-Rattie	92.40	44	eP	P	15 06 38.0	+0.7
	8.6nm,0.8s,mb5.0						
CABF	La Chapelle	93.13	42	eP	P	15 06 39.4	-1.2
MEZF	Maizieres J'vi	93.14	40	eP	P	15 06 39.6	-1.0
	14nm,0.6s,mb5.2						
MEZF	Maizieres J'vi	93.14	40	eP	P	15 06 39.6	-1.0
	14nm,0.6s,mb5.5						
LPL	La Plagne	93.17	43	eP	P	15 06 41.7	+0.8
	9.9nm,0.7s,mb5.0						
LPL	La Plagne	93.17	43	eP	P	15 06 41.7	+0.8
	4.9nm,0.7s,mb5.0						
LPG	La Plagne	93.18	44	eP	P	15 06 41.9	+1.0
	23nm,1.1s,mb5.1						
LPG	La Plagne	93.18	44	eP	P	15 06 41.9	+1.0
	12nm,1.1s,mb5.1						
PGF	Pioggiola	93.74	47	eP	P	15 06 43.6	0.0
	6.9nm,1.0s,mb4.6						
PGF	Pioggiola	93.74	47	eP	P	15 06 43.6	0.0
	3.5nm,1.0s,mb4.6						
CDF	Champ du Feu	94.50	41	eP	P	15 06 46.4	-0.5
	15nm,1.1s,mb4.9						
CDF	Champ du Feu	94.50	41	eP	P	15 06 46.4	-0.5
	7.7nm,1.1s,mb5.0						
CASY	Casey	97.69	181	P	P	15 06 58.1	-3.0
	17nm,1.1s,mb5.5						
GERES	GERESS Array B	98.70	42	P	P	15 07 06.2	+0.3
	0.8nm,0.8s,mb4.3,baz=251,slow=4.1,SNR=6.2						
STKA	Stephens Creek	122.79	213	PKP	PKPdf	15 12 19.7	-3.0
STKA	Stephens Creek	122.79	213	PKP	PKPdf	15 12 19.7	-2.9
	1.2nm,0.4s,baz=174,slow=6.5,SNR=7.2						
AKTK	Aktyubinsk	126.97	38	PKP	PKPdf	15 12 30.4	+0.5
AKTO	Aktyubinsk	126.97	38	PKP	PKPdf	15 12 30.4	+0.5
	0.9nm,0.6s,baz=278,slow=7.6,SNR=4.2						
ASAR	Alice Springs	133.40	212	PKP	PKPdf	15 12 41.8	-1.3
	1.5nm,0.6s,baz=132,slow=1.9,SNR=30						
ASAR				pPKP	pPKPdf	15 13 13.9	-2.1
	1.5nm,0.8s,baz=152,slow=2.4,SNR=5.6						
ASAR				SKPbc	SKPbc	15 15 58.6	-1.7
	0.6nm,0.8s,baz=132,slow=4.0,SNR=5.0						
WB2	Warramunga Arr	136.19	216	eP	PKPdf	15 12 47.2	-1.1
WRA	Warramunga Arr	136.20	216	PKhKP		15 12 37.5	
	0.2nm,0.5s,baz=132,slow=2.6,SNR=11						
WRA				PKP	PKPdf	15 12 47.5	-0.8
	2.7nm,0.4s,baz=149,slow=1.8,SNR=90						
WRA				pPKP	pPKPdf	15 13 18.5	-2.9
	3.4nm,0.8s,baz=146,slow=1.5,SNR=7.8						
FITZ	Fitzroy Crossi	142.09	206	eP	PKPdf	15 12 51.8	-7.3
	5.2nm,0.6s						
MK31	Makanchi Array	142.39	30	ePKPpre		15 12 55.3	
MK31				ePKPdf	PKPdf	15 12 57.3	-1.5
MKAR	Makanchi Array	142.39	30	PKhKP		15 12 54.9	
	1.8nm,0.7s,baz=343,slow=3.8,SNR=9.2						
MKAR				PKP	PKPdf	15 12 57.9	-0.8
	1.6nm,0.6s,baz=293,slow=3.0,SNR=9.8						
KAKA	Kakadu	142.99	220	ePKPdf	PKPdf	15 12 54.8	-6.0
HIA	Hailar	145.93	347	ePKPdf	PKPdf	15 13 05.3	+0.4
HIA				epPKPdf	pPKPdf	15 13 36.6	-1.3
POO	Poona	146.48	81	⇓iP	PKPdf	15 13 08.0	+1.3
	30nm,1.0s						
MJAR	Matsushiro Arr	147.11	314	PKPbc	PKPbc	15 13 09.1	-0.5
	20nm,0.8s,baz=105,slow=1.6,SNR=51						
MJAR				pPKPbc	pPKPbc	15 13 39.3	-3.0
	6.3nm,0.8s,baz=92,slow=0.9,SNR=3.6						
MAT	Matsushiro	147.12	314	PKP	PKPdf	15 13 09.0	+1.7
WMQ	Urumqi	147.15	29	PKP	PKPdf	15 13 10.0	+2.9
WMQ				PKP2	PKPab	15 13 12.0	+0.7
WMQ				APKP		15 13 38.0	
WMQ				XPKP		15 13 51.5	
WMQ				PP	PP		
	comp=Z,202nm,5.8s						
WMQ				LR	LR		
	comp=N,68nm,16.0s						
WMQ				LR	LR		
	comp=E,69nm,17.0s						
WMQ				LR	LR		
	comp=Z,39nm,14.0s						
SONM	Songino Array	148.46	3	PKPbc	PKPbc	15 13 14.1	+1.3
	comp=Z,3.1nm,0.7s,baz=337,slow=1.5,SNR=12						
SONM				pPKPbc	pPKPbc	15 13 43.8	-1.8
	comp=Z,3.1nm,0.8s,baz=330,slow=2.0,SNR=4.8						
HYB	Hyderabad	150.92	83	eP	PKPdf	15 13 20.5	+6.6
HYB	Hyderabad	150.92	83	i PKP	PKPdf	15 13 20.5	+6.6
HYB				e		15 13 27.5	
HYB				e		15 13 51.5	
KSRS	Korea Array	153.04	325	PKPbc	PKPbc	15 13 23.8	-0.2
	comp=Z,2.7nm,0.6s,baz=13,slow=2.2,SNR=6.7						
KSRS				PKPab	PKPab	15 13 34.9	-0.9
	comp=Z,2.4nm,0.8s,baz=42,slow=1.9,SNR=3.7						
HHC	Hu-ho-hao-te	155.40	355	ePKP	PKPdf	15 13 20.4	+0.7
HHC				PKP2	PKPab	15 13 47.6	+2.0
HHC				PKS		15 16 52.1	
HHC				PP	PP	15 17 23.5	+2.1
HHC				SKS	SKSdf	15 20 16.1	+1.1
HHC				SKKS	SKKSac	15 24 01.0	+0.5
HHC				SS	SS	15 36 57.9	+2.0
HHC				PP	PP		
	comp=Z,145nm,6.1s						
HHC				LR	LR		
	comp=N,155nm,16.7s						
HHC				LR	LR		
	comp=E,153nm,15.5s						
HHC				LR	LR		
	comp=Z,112nm,13.1s						
LZH	Lanzhou	159.75	12	ePKP	PKPdf	15 13 26.5	+1.2
LZH				APKP		15 13 57.8	
LZH				XPKP		15 14 10.5	
NJ2	Nanjing	161.89	332	ePKP	PKPdf	15 13 28.3	+0.6
CD2	Chengdu	164.68	17	ePKP	PKPdf	15 13 28.8	-1.6
CD2				PKP2	PKPab	15 14 27.3	+1.1
CD2				PP	PP	15 18 14.8	+3.2
CD2				SKS	SKSdf	15 20 19.4	-4.3
CD2				SKKS	SKKSac	15 24 48.5	-0.5
CD2				SS	SS	15 38 33.8	0.0
CD2				PP	PP		
	comp=Z,100nm,10.8s						
CD2				LR	LR		
	comp=N,120nm,24.2s						
CD2				LR	LR		
	comp=Z,130nm,22.4s						
GYA	Guiyang	169.65	11	PKP	PKPdf	15 13 30.4	-3.8
GYA				APKP		15 14 04.4	
GYA				XPKP		15 14 16.9	
GYA				PKP2	PKPab	15 14 48.6	+0.4
GYA				PKS		15 17 03.0	
GYA				PP	PP	15 18 39.0	+2.1
GYA				SKS	SKSdf	15 20 21.8	-4.9
GYA				SKKS	SKKSac	15 25 12.3	-1.4
GYA				SS	SS	15 39 23.3	-0.2
GYA				PP	PP		
	comp=Z,110nm,8.7s						
GYA				LR	LR		
	comp=N,240nm,22.6s						
GYA				LR	LR		
	comp=E,170nm,21.0s						
GYA				LR	LR		
	comp=Z,210nm,24.9s						

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*ISCJB **16** 15:04:21.5±0.7, 3330N±005×1401E±01, h144km±6km, mb4.1/2, Error ellipse: s-maj=20.3km s-min=7.6km az=165.9*

*IDC **16** 15:04:21.4±3.0, 3281N×13854E, h78km±44km, mb3.8/2, mb1 4.0/4, mb1mx3.4/22, mbtmp3.9/4, ML4.2/2, Error ellipse: s-maj=53.0km s-min=13.0km az=62.0*

*JMA **16** 15:04:24.0±0.1, 3341N×14025E, h127km±2km, M3.9*

ISC 16 15:04:22.8±0.7, **3334N**±005×**1402E**±01, **h138**km±6km, **n15**, σ**0.54**/22, **mb4.1**/2, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.39	234	P	Pn	15 04 42.7	+0.4
JHJ2				S	Sn	15 04 57.0	0.0
JHJ	Hachijo jima 2	0.41	237	P	Pn	15 04 42.8	+0.4
	246nm,0.3s,baz=78,slow=23,SNR=76						
JHJ				S	Sn	15 04 57.1	-0.1
JKO	Kozu shima	1.22	314	P	Pn	15 04 48.5	0.0
JKO				S	Sn	15 05 07.9	-0.2
NJJJ	Nii jima 2	1.30	325	P	Pn	15 04 50.0	+0.7
BSO1	Boso 1	1.46	26	P	Pn	15 04 51.1	0.0
BSO3	Boso 3	1.48	10	P	Pn	15 04 51.2	0.0
JIM2	Oshima 3	1.51	335	P	Pn	15 04 51.7	+0.1
JIM2				eS	Sn	15 05 12.9	-0.7
BSO4	Boso 4	1.65	4	P	Pn	15 04 53.5	+0.4
JIZS	Izushimoda	1.75	322	P	Pn	15 04 55.0	+0.7
KTJJ	Kamata 2	1.83	330	P	Pn	15 04 55.1	-0.2
KTJJ				S	Sn	15 05 20.2	0.0
MJAR	Matsushiro Arr	3.58	334	P	Pn	15 05 17.3	+0.1
	5.0nm,0.3s,baz=165,slow=11,SNR=56						
MJAR				S	Sn	15 05 59.1	-0.3
	1.5nm,0.3s,baz=302,slow=24,SNR=4.9						
MAT	Matsushiro	3.58	333	P	Pn	15 05 17.4	+0.1
MAT				S	Sn	15 05 59.1	-0.4
CBIJ	Chichi jima	6.46	164	P	Pn	15 05 52.6	-3.0
	22nm,0.3s,baz=269,slow=20,SNR=10						
WRA	Warramunga Arr	53.28	187	P	P	15 13 27.2	-0.2
	2.1nm,0.4s,mb4.2,baz=2.9,slow=7.7,SNR=6.6						
ASAR	Alice Springs	57.01	187	P	P	15 13 54.5	+0.4
	0.9nm,0.4s,mb3.9,baz=22,slow=11,SNR=21						

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*NIED **16** 15:04:00, 4720N×15290E, h35km, Mw4.2 Best double couple: M0 2.12000×10^15 NP1:φs216.00000°, δ43.00000°, λ180.00000°. NP2:φs306.00000°, δ90.00000°, λ47.00000°.*

*JMA **16** 15:04:49.0±0.8, 4718N×15288E, h30km, M4.5*

*BJI **16** 15:04:50.0, 4731N×15313E, h89km, mB4.8, mb4.5, Ms4.5, Msz4.0*

*ISCJB **16** 15:04:50.2±0.8, 4695N±006×15282E±008, h68km±8km, mb4.1/27, Error ellipse: s-maj=12.9km s-min=5.6km az=139.7*

*NEIC **16** 15:04:51.1±1.5, 4700N×15266E, h58km±13km, mb4.3/10, Error ellipse: s-maj=14.2km s-min=8.4km az=141.0*

*IDC **16** 15:04:51.8±0.6, 4704N×15269E, h60km±4km, mb3.8/12, mb1 4.0/12, mb1mx3.9/21, mbtmp3.8/12, MS3.2/2, Ms1 3.2/2, ms1mx2.8/31, Error ellipse: s-maj=21.3km s-min=12.9km az=133.0*

*MOS **16** 15:04:52.9±1.4, 4706N×15286E, h87km, mb4.1/14, Error ellipse: s-maj=12.7km s-min=7.7km az=72.1*

ISC 16 15:04:51.9±0.7, **4697N**±006×**15286E**±008, **h64**km±6km, **h62**km±2.6km**:pP-P**, **n93**, σ**1.27**/99, **mb4.2**/27, **4C-5D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.88	245	⇑iPN	Pn	15 05 48.9	-0.1
KUR				eS	Sn	15 06 35.0	+1.7
KUR				pmax	pmax		
	comp=Z,130nm,0.5s						
KUR				smax			
	comp=N,460nm,0.5s						
KUR				smax			
	comp=E,360nm,0.5s						
SKR	Severo-Kuril's	4.30	29	ePN	Pn	15 05 54.0	-0.7
SKR				eS	Sn	15 06 41.0	-2.5
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,240nm,0.6s						
SKR				smax			
	comp=E,170nm,0.6s						
SKR				smax			
	comp=Z,100nm,0.6s						
NEM2	Nemuro 2	6.19	237	P	Pn	15 06 19.2	-1.4
NEM2				eS	Sn	15 07 26.4	-3.4
JRA	Rausu	6.23	244	P	Pn	15 06 22.2	+1.1
JNK	Nakash	6.66	242	P	Pn	15 06 27.7	+0.6
YSS	Yuzh-Sakhalins	6.92	274	ePn	Pn	15 06 32.6	+2.1
	comp=Z,19nm,0.6s						
YSS	Yuzh-Sakhalins	6.92	274	⇓ePN	Pn	15 06 33.5	+3.0
YSS				eS	Sn	15 07 48.0	+0.3
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
JTKR	Abashiri--Toko	6.97	248	P	Pn	15 06 32.7	+1.4
JAK	Akkeshi	7.02	239	P	Pn	15 06 30.2	-1.7
JAK				eS	Sn	15 07 45.3	-4.9
PET	Petropavlovsk	7.12	29	ePn	Pn	15 06 33.4	+0.2
PET				eSn	Sn	15 07 48.2	-4.4
PET	Petropavlovsk	7.12	29	ePN	Pn	15 06 37.8	+4.5
JMP	Maruseppu	7.30	250	P	Pn	15 06 37.8	+2.0
JAR	Ashorobuto	7.40	244	P	Pn	15 06 38.0	+0.8
JAR				eS	Sn	15 08 00.1	+0.5
JOB	Onbets	7.58	241	P	Pn	15 06 39.2	-0.4
JOB				eS	Sn	15 08 01.4	-2.7
ASAJ	Asahikawa	7.75	252	P	Pn	15 06 44.7	+2.8
ASAJ	Asahikawa	7.75	252	PN	Pn	15 06 44.3	+2.4
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	7.75	252	P	Pn	15 06 44.3	+2.4
	comp=Z,1.1nm,0.3s,baz=88,slow=14,SNR=22						
JKK2	Kamakawa 2	7.76	250	P	Pn	15 06 43.9	+1.9
JCH	Churui	8.03	241	P	Pn	15 06 45.1	-0.7
ERM	Erimo	8.52	238	⇑ePN	Pn	15 06 57.9	+5.5
JNBK	Urakawa-nobuka	8.60	241	P	Pn	15 06 53.3	-0.2
JNB	Noboribetsu	9.54	246	P	Pn	15 07 06.0	-0.4
JNB				eS	Sn	15 08 48.4	-3.6
JKB	Kayabe	9.86	243	P	Pn	15 07 08.8	-2.0
JKB				eS	Sn	15 08 53.1	-6.8
JYM2	Yakumo 2	10.15	246	P	Pn	15 07 13.8	-0.9
JANG	Nango	10.53	235	eS	Sn	15 09 05.0	-11
JTH	Tanohata	10.63	233	eS	Sn	15 09 07.5	-11
JRG	Rokugo	11.69	234	eS	Sn	15 09 35.7	-8.8
JIO	Ouri	11.99	229	eS	Sn	15 09 38.7	-13
MA2	Magadan	12.69	355	ePn	Pn	15 07 49.6	+0.4
MA2	Magadan	12.69	355	ePN	Pn	15 07 49.5	+0.2
MA2				pmax	pmax		
	comp=N,20nm,0.6s						
MA2				pmax	pmax		
	comp=Z,30nm,0.6s						
KLR	Kul'dur	14.28	287	eP	Pn	15 08 13.7	+3.1
MJAR	Matsushiro Arr	15.07	232	P	Pn	15 08 24.9	+3.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	15.07	232	P	Pn	15 08 24.9	+3.9
	comp=Z,0.7nm,0.3s,baz=36,slow=9.1,SNR=8.3						
MAJO	Matsushiro	15.08	232	ePn	Pn	15 08 17.6	-3.4
SEY	Seymchan	16.00	359	⇓eP	Pn	15 08 32.9	+0.2
CN2	Changchun	19.47	271	eP	Pn	15 09 18.1	+3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	20.05	327	P	P	15 09 15.5	-3.9
	comp=Z,7.1nm,0.6s						
YAK	Yakutsk	20.05	327	⇓eP	P	15 09 21.2	+1.8
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSRS	Korea Array	20.70	252	P	P	15 09 27.4	+0.7
	comp=Z,3.8nm,0.6s,baz=55,slow=10,SNR=10.0						
JNU	Nakatsue	21.68	238	LR	LR	15 17 24.8	
	comp=Z,47nm,21.1s,baz=212,slow=35						
BILL	Bilibino	22.22	13	P	P	15 09 41.8	-0.8
	comp=Z,1.8nm,0.6s,mb3.7						
BILL	Bilibino	22.22	13	P	P	15 09 41.8	-0.9
BILL				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.7						
TIXI	Tiksi	27.21	344	⇑eP	P	15 10 28.9	-0.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s,mb3.8						
HHC	Hu-ho-hao-te	30.11	274	eP	P	15 10 53.9	-1.3
HHC				AMB	AMB		
	comp=Z,17nm,0.6s,mb5.0						
HHC				AMB	AMB		
	comp=Z,191nm,5.5s						
ULN	Ulaanbaatar	30.66	289	eP	P	15 11 02.7	+2.6
	comp=Z,2.5nm,1.1s,mb4.0						
ULN	Ulaanbaatar	30.66	289	⇑eP	P	15 11 03.3	+3.3
SONM	Songino Array	31.10	289	P	P	15 11 03.6	-0.3
	comp=Z,0.4nm,0.8s,mb3.3,baz=61,slow=12,SNR=2.5						
SONM				LR	LR	15 24 06.7	
	comp=Z,57nm,20.7s,baz=6.9,slow=37						
TTA	Tatalina	32.37	42	eP	P	15 11 15.1	+0.2
	comp=Z,4.2nm,1.0s,mb4.2						
TTA	Tatalina	32.37	42	eP	P	15 11 15.1	+0.2
TTA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
IMA2	Indian Mountai	33.73	36	eP	P	15 11 26.6	0.0
IMA2				e	pP	15 11 43.9	+1.6
MCK	McKinley	35.60	41	P	P	15 11 43.0	+0.2
	comp=Z,12nm,1.3s,mb4.7						
MCK	McKinley	35.60	41	P	P	15 11 43.0	+0.2
MCK				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
COLA	College	36.08	39	eP	P	15 11 47.5	+0.6
	comp=Z,15nm,1.4s,mb4.7						
COLA				e	pP	15 12 00.7	-1.9
COLA	College	36.08	39	⇓iP	P	15 11 47.6	+0.7
COLA				i *PP	pP	15 12 03.9	+1.3
LZH	Lanzhou	37.71	271	eP	P	15 11 59.3	-1.8
LZH				AMB	AMB		
	comp=Z,18nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,73nm,4.0s						
CD2	Chengdu	40.73	265	eP	P	15 12 23.1	-3.2
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				AMB	AMB		
	comp=Z,20nm,5.8s						
INK	Inuvik	41.56	33	eP	P	15 12 33.2	+0.5
INK				e	pP	15 12 50.6	+1.9
INK	Inuvik	41.56	33	P	P	15 12 33.7	+1.0
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
INK				pmax	pmax		
	comp=N,2.0nm,0.6s						
INK	Inuvik	41.56	33	P	P	15 12 33.7	+1.0
	comp=N,3.6nm,0.8s,mb4.0,baz=257,slow=8.8,SNR=13						
INK				pP	pP	15 12 48.6	-0.1
	comp=N,1.8nm,0.6s,baz=320,slow=7.1,SNR=4.8						
GYA	Guiyang	41.59	257	P	P	15 12 32.8	-0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
WMQ	Urumqi	44.69	291	⇓P	P	15 12 58.3	+0.1
WMQ				AMB	AMB		
	comp=Z,3.0nm,0.5s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,224nm,5.2s						
WMQ				LR	LR		
	comp=N,69nm,20.3s						
WMQ				LR	LR		
	comp=E,72nm,18.1s						
WMQ				LR	LR		
	comp=Z,47nm,22.3s						
KMI	Kunming	45.11	259	P	P	15 13 02.1	+0.3
KMI				AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.4						
MKAR	Makanchi Array	46.69	297	PcP	PcP	15 14 46.1	-0.4
	comp=Z,1.4nm,0.7s,baz=55,slow=6.4,SNR=2.8						
KURK	Kurchatov	47.10	303	eP	P	15 13 14.8	-2.3
	comp=Z,1.7nm,0.8s,mb4.0						
KURK	Kurchatov	47.10	303	eP	P	15 13 14.8	-2.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
LSA	Lhasa	50.09	273	eP	P	15 13 41.9	+1.6
	comp=Z,2.3nm,0.5s,mb4.5						
LSA	Lhasa	50.09	273	eP	P	15 13 41.9	+1.6
LSA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
RES	Resolute Bay	50.69	19	eP	P	15 13 43.7	-0.5
	comp=Z,113nm,1.0s						
RES	Resolute Bay	50.69	19	eP	P	15 13 43.7	-0.5
RES				pmax	pmax		
	comp=Z,113nm,1.0s						
YKA	Yellowknife Ar	50.85	37	P	P	15 13 45.8	+0.2
YKA				pP	pP	15 14 00.4	-1.7
YKA				PcP	PcP	15 15 01.0	-0.3
YKA	Yellowknife Ar	50.85	37	P	P	15 13 45.8	+0.2
YKA						15 15 01.0	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA				pmax	pmax		
	comp=N,2.0nm,0.7s						
YKA	Yellowknife Ar	50.85	37	P	P	15 13 45.8	+0.2
	comp=N,0.6nm,0.6s,mb3.7,baz=301,slow=7.7,SNR=9.4						
YKA				pP	pP	15 14 00.4	-1.7
	comp=N,2.4nm,0.7s,baz=298,slow=7.1,SNR=14						
YKA				PcP	PcP	15 15 01.0	-0.3
	comp=N,0.4nm,0.6s,baz=298,slow=3.6,SNR=5.4						
FCC	Fort Churchill	61.18	33	eP	P	15 14 58.5	-0.9
	comp=N,3.3nm,0.7s,mb4.6						
FCC				e	pP	15 15 15.8	-0.4
FCC	Fort Churchill	61.18	33	eP	P	15 14 58.5	-0.8
FCC				e	pP	15 15 15.8	-0.4
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
KBL	Kabul	61.83	291	P	P	15 15 03.8	-0.3
	comp=Z,3.6nm,0.8s,mb4.5						
NVAR	Mina Array Bea	62.49	62	P	P	15 15 09.9	+1.5
	comp=Z,1.2nm,0.7s,mb4.1,baz=299,slow=5.5,SNR=12						
NVAR				pP	pP	15 15 24.1	-1.3
	comp=Z,0.5nm,0.7s,baz=282,slow=7.9,SNR=3.5						
FINES	FINESS Array B	63.77	335	P	P	15 15 15.5	-1.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	63.77	335	P	P	15 15 15.5	-1.1
	comp=Z,0.9nm,0.5s,mb4.1,baz=48,slow=8.7,SNR=7.6						
PDAR	Pinedale Array	64.76	54	P	P	15 15 24.4	+1.0
	comp=Z,1.9nm,0.8s,mb4.2,baz=310,slow=2.0,SNR=16						
PDAR				pP	pP	15 15 41.4	+1.0
	comp=Z,2.6nm,0.8s,baz=293,slow=2.2,SNR=14						
NB2	NORSAR Subarra	67.97	341	P	P	15 15 42.6	-0.9
	comp=Z,1.2nm,0.6s,mb4.1,baz=29,slow=6.2						
NOA	NORSAR Array B	67.97	341	P	P	15 15 42.5	-1.0
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	67.97	341	P	P	15 15 42.5	-1.1
	comp=Z,2.0nm,0.7s,mb4.3,baz=29,slow=6.3,SNR=4.8						
WRA	Warramunga Arr	68.66	199	P	P	15 15 48.1	-0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA				pmax	pmax		
	comp=N,1.0nm,0.7s						
WRA	Warramunga Arr	68.66	199	P	P	15 15 48.1	-0.2
	comp=N,0.8nm,1.0s,mb3.6,baz=15,slow=6.6,SNR=4.6						
WRA				pP	pP	15 16 05.2	-0.3
	comp=N,0.5nm,0.7s,baz=17,slow=6.8,SNR=3.3						
ASAR	Alice Springs	72.36	198	P	P	15 16 11.9	+1.2
ASAR				*PP	pP	15 16 27.1	-1.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,1.0nm,0.6s						
ASAR	Alice Springs	72.36	198	P	P	15 16 11.9	+1.2
	comp=N,1.4nm,0.8s,mb4.0,baz=18,slow=6.1,SNR=13						
ASAR				pP	pP	15 16 27.1	-1.0
	comp=N,0.6nm,0.6s,baz=11,slow=5.5,SNR=4.5						
TXAR	Lajitas Array	77.54	60	P	P	15 16 41.5	+0.7
TXAR				pP	pP	15 16 58.8	+0.5
TXAR	Lajitas Array	77.54	60	P	P	15 16 41.5	+0.7
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TXAR				pmax	pmax		
	comp=N,4.0nm,0.6s						
TXAR	Lajitas Array	77.54	60	P	P	15 16 41.5	+0.7
	comp=N,4.2nm,0.6s,mb4.5,baz=300,slow=4.4,SNR=30						
TXAR				pP	pP	15 16 58.8	+0.5
	comp=N,3.5nm,0.6s,baz=305,slow=4.2,SNR=10						
BRTR	Keskin Array B	78.11	317	P	P	15 16 44.4	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	78.11	317	P	P	15 16 44.4	+0.6
	comp=Z,1.2nm,0.9s,mb3.8,baz=48,slow=5.5,SNR=4.4						
CFAA	Coronel Fontan	145.12	79	PKPbc	PKPbc	15 24 21.1	-0.3
	comp=Z,0.2nm,0.4s,baz=268,slow=3.9,SNR=5.1						
CFAA				pPKPbc	pPKPbc	15 24 39.2	-0.5
	comp=Z,0.3nm,0.7s,baz=236,slow=4.1,SNR=2.8						
PLCA	Paso Flores	148.40	95	PKPbc	PKPbc	15 24 30.7	+0.2
	comp=Z,1.7nm,0.8s,baz=238,slow=5.6,SNR=5.8						

IDC 16 15:13:27.1±5.0, **2818N**×**5327E**, **h0**km, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.4**/21, **mbtmp3.6**/3, **Error ellipse: s-maj=131.7km s-min=50.1km az=127.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**37.88**	**339**	P	P	15 20 45.4	-0.1
	0.6nm,0.7s,baz=150,slow=8.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**50.16**	**264**	P	P	15 22 24.6	-0.1
	0.5nm,0.6s,baz=47,slow=7.6,SNR=3.8						
YKA	**Yellowknife Ar**	**89.13**	**354**	P	P	15 26 24.1	0.0
	0.1nm,0.4s,baz=3.3,slow=4.2,SNR=4.0						

*NEIC **16** 15:26:00.2, 3275S×7188W, h29km, ML2.5(GUC), After GUC.*

GUC 16 15:26:00.2±0.8**, 3275S×7188W, h29**km±11km**, MD3.5, ML2.5, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.77**	**107**	*e*P	Pb	15 26 14.4	-0.6
ROCH				*i* S	Sb	15 26 25.6	+0.5
CHNG	**Los Chungos**	**0.92**	**21**	*e*P	Pn	15 26 00.8	-16
CHNG				*i* S	Sn	15 26 13.4	-16
CHNG				AML	AML	15 26 15.4	
	comp=E,121nm,0.3s						
PEL	**Peldehue**	**1.08**	**112**	⇑ *i*P	Pn	15 26 19.6	+0.3
PEL				*i* S	Sn	15 26 34.5	+1.2
PEL				AML	AML	15 26 40.4	
	comp=N,432nm,0.3s						
TACH	**Talagante**	**1.20**	**139**	⇑ *i*P	Pn	15 26 21.1	+0.1
TACH				*i* S	Sn	15 26 37.1	+0.8
PCH	**Pirque**	**1.44**	**128**	*e*P	Pn	15 26 25.2	+0.9
FCH	**Farellones**	**1.46**	**114**	*e*P	Pn	15 26 25.6	+1.1
FCH				*i* S	Sn	15 26 45.1	+2.5
FCH				AML	AML	15 26 51.7	
	comp=N,69nm,0.8s						
CHCH	**Chadas Angostu**	**1.57**	**139**	*e*P	Pn	15 26 27.3	+1.2
LMEL	**Las Melosas**	**1.78**	**128**	*e*P	Pn	15 26 31.0	+2.0
LMEL				*i* S	Sn	15 26 53.8	+3.2
LMEL	**Las Melosas**	**1.78**	**128**	*e*P	Pn	15 26 31.0	+2.0
LMEL				*i* S	Sn	15 26 53.8	+3.2
LMEL				AML	AML	15 27 00.3	
	comp=N,138nm,0.4s						
CICH	**Cipreses**	**1.99**	**143**	*i* P	Pn	15 26 33.6	+1.8
SFDO	**San Fernando**	**2.00**	**159**	*e*P	Pn	15 26 33.1	+1.1

NEIC 16 15:32:10.7, 3518S×17780E, h287km**, MG3.9**(WEL)**, After WEL., Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**2.91**	**173**	SN	S	15 34 04.9	+17
URZ	**Urewera**	**3.12**	**190**	*e*P	Pn	15 33 06.5	-0.2
URZ	**Urewera**	**3.12**	**190**	PN	Pn	15 33 06.5	-0.2
MWZ	**Matawai**	**3.16**	**184**	*e*P	Pn	15 33 07.0	0.0
MWZ	**Matawai**	**3.16**	**184**	PN	Pn	15 33 07.0	0.0
BKZ	**Black Stump Fm**	**4.12**	**194**	*e*P	Pn	15 33 18.5	+1.1
BKZ	**Black Stump Fm**	**4.12**	**194**	PN	Pn	15 33 18.3	+0.9
MOVZ	**Moawhango**	**4.53**	**201**	P	Pn	15 33 23.5	+1.4
MOVZ	**Moawhango**	**4.53**	**201**	PN	Pn	15 33 23.3	+1.2
PXZ	**Pawanui**	**4.90**	**188**	PN	Pn	15 33 26.6	+0.2
PXZ				SN	S	15 34 50.3	+23
TSZ	**Takapari Road**	**5.09**	**196**	*e*P	Pn	15 33 28.8	+0.2
TSZ	**Takapari Road**	**5.09**	**196**	PN	Pn	15 33 28.4	-0.2
MRZ	**Mangatainoka R**	**5.75**	**197**	*e*P	Pn	15 33 36.5	0.0
MRZ	**Mangatainoka R**	**5.75**	**197**	PN	Pn	15 33 36.1	-0.4
KIW	**Kapiti Island**	**6.11**	**201**	P	Pn	15 33 41.1	+0.2
KIW	**Kapiti Island**	**6.11**	**201**	PN	Pn	15 33 40.6	-0.3
MTW	**Mount Morrison**	**6.24**	**196**	PN	Pn	15 33 42.0	-0.4
TUWZ	**Tuamarina**	**6.94**	**205**	PN	Pn	15 33 50.6	-0.3
NNZ	**Nelson**	**6.96**	**209**	*e*P	Pn	15 33 51.2	0.0
NNZ	**Nelson**	**6.96**	**209**	PN	Pn	15 33 51.2	0.0
THZ	**Tophouse**	**7.61**	**209**	PN	Pn	15 33 58.9	-0.3
KHZ	**Kahutara**	**7.95**	**203**	*e*P	Pn	15 34 03.1	-0.3
KHZ	**Kahutara**	**7.95**	**203**	PN	Pn	15 34 03.1	-0.3

*CSEM **16** 15:37:04.6±0.2, 3944N×4320E, h2km, MD2.9, Error ellipse: s-maj=9.5km s-min=4.0km az=28.0*
*ISCJB **16** 15:37:05.9±0.7, 3939N±007×4320E±004, h4km±7km, Error ellipse: s-maj=11.3km s-min=4.9km az=12.0*
*DDA **16** 15:37:06.0, 3950N×4316E, h7km±1km, Md3.2, Ml3.5*
*ISK **16** 15:37:05.5, 3941N×4320E, h10km, MD2.9*

ISC 16 15:37:06.3±0.7**, 3941N**±007×**4319E**±004**, h3**km±7km**, n7, σ0^{s}90**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGRB	**Hanur-Agry**	**0.23**	**318**	*i* PG	**Pg**	**15 37 10.4**	**-0.3**
AGRB				*i* SG	**Sg**	**15 37 14.8**	**+1.0**
TUTA	**Tutak**	**0.29**	**269**	*i* P	**Pg**	**15 37 11.2**	**-0.8**
TUTA				*i* S	**Sg**	**15 37 15.6**	**-0.1**
DYDN	**Diyadin**	**0.41**	**70**	*i* P	**Pg**	**15 37 13.5**	**-0.7**
DYDN				*i* S	**Sg**	**15 37 19.8**	**+0.3**
CLDR	**Caldiran**	**0.62**	**115**	PG	**Pg**	**15 37 18.5**	**+0.3**
CLDR				SG	**Sg**	**15 37 26.8**	**+0.6**
KARS	**Kars**	**1.21**	**356**	*e*PN	**Pn**	**15 37 28.8**	**-1.2**
ERZM	**Erzurum**	**1.50**	**290**	*i* P	**Pn**	**15 37 34.9**	**+0.9**
ERZM				*i* S	**Sn**	**15 37 56.0**	**+2.0**
EZM	**Erzurum**	**1.50**	**290**	*e*PN	**Pn**	**15 37 32.8**	**-1.2**
EZM				*e*SN	**Sn**	**15 37 53.4**	**-0.6**

JMA 16 16:12:32.6±0.3**, 2603N×12401E, h188**km**, M4.1, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.52**	**155**	P	Pn	16 13 06.0	+0.6
JTJ				S	Sn	16 13 30.3	-0.5
JIJ	**Ishigaki jima**	**1.66**	**176**	P	Pn	16 13 06.5	-0.3
JMJ	**Miyako jima 2**	**1.68**	**136**	S	Sn	16 13 33.3	-0.2
IRIF	**Iriomote-Funau**	**1.71**	**189**	P	Pn	16 13 07.0	-0.3
IRIF				S	Sn	16 13 34.2	+0.1
JKRS	**Kuro-shima**	**1.79**	**180**	P	Pn	16 13 07.9	-0.1
JKRS				S	Sn	16 13 34.3	-1.2
JOGS	**Gusukube**	**1.79**	**135**	P	Pn	16 13 09.1	+1.1
JOGS				S	Sn	16 13 35.5	+0.1
YOJ	**Yonaguni jima**	**1.81**	**210**	P	Pn	16 13 08.7	+0.5
HATJ	**Hateruma jima**	**1.97**	**185**	P	Pn	16 13 09.9	-0.1
HATJ				S	Sn	16 13 37.9	-1.1
JKE	**Kume jima 2**	**2.51**	**83**	P	Pn	16 13 16.2	+0.3
JAGN	**Aguni-jima**	**2.95**	**78**	P	Pn	16 13 20.8	-0.2
JAGN				S	Sn	16 13 58.7	-0.1
NAH1	**Naha**	**3.31**	**86**	P	Pn	16 13 25.2	-0.2
NAH1				S	Sn	16 14 06.2	-0.4
JJT2	**Tamagusuku 2**	**3.36**	**87**	P	Pn	16 13 26.0	0.0
JIH	**Iheya**	**3.68**	**73**	P	Pn	16 13 29.9	-0.1
JIH				S	Sn	16 14 12.6	-2.2
JOW	**Kunigami**	**3.91**	**77**	P	Pn	16 13 31.9	-0.9
JOW				S	Sn	16 14 15.3	-4.5
JTK	**Tokunoshima**	**4.75**	**67**	P	Pn	16 13 41.8	-1.6
JTK				S	Sn	16 14 34.5	-4.5
JMZ	**Minamidaito 2**	**6.50**	**90**	P	Pn	16 14 04.5	-1.7
JMZ				S	Sn	16 15 14.5	-5.5

*NNC **16** 16:35:24.6±4.8, 3862N×7019E, h100km±96km, mb3.3, mpv3.8, Error ellipse: s-maj=41.9km s-min=24.8km az=16.0*

ISC 16 16:35:22.9±1.8**, 385N**±01×**701E**±01**, h35**km**, n14, σ0^{s}64**/17**, 5C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.54**	**36**	P	**Pn**	**16 36 28.6**	**-0.4**
	SNR=24						
KK31	**Karatay Array**	**4.59**	**4**	⇓Pn	**Pn**	**16 36 30.5**	**+0.8**
	3.6nm,0.3s,baz=181,slow=12,SNR=89						
KK31				⇑Sn	**Sn**	**16 37 22.1**	**+0.4**
	26nm,0.5s,baz=182,slow=36						
EKS2	**Erkin-Say**	**5.00**	**33**	P	**Pn**	**16 36 36.0**	**+0.7**
	SNR=9.3						
UCH	**Uchtor**	**5.01**	**41**	P	**Pn**	**16 36 35.7**	**+0.2**
	SNR=39						
AAK	**Ala-Archa**	**5.30**	**38**	P	**Pn**	**16 36 39.9**	**+0.3**
	SNR=18						
KZA	**Kyzart**	**5.31**	**46**	P	**Pn**	**16 36 39.9**	**+0.3**
	SNR=70						
KBK	**Karagaybulak**	**5.54**	**40**	P	**Pn**	**16 36 43.5**	**+0.7**
	SNR=22						
CHMS	**Chumysh**	**5.70**	**37**	P	**Pn**	**16 36 44.8**	**-0.2**
	SNR=12						
USP	**Ospenovka**	**5.80**	**34**	P	**Pn**	**16 36 45.6**	**-0.7**
	SNR=8.8						
ULHL	**Ulahol**	**5.99**	**50**	P	**Pn**	**16 36 48.4**	**-0.6**
	SNR=6.2						
TKM2	**Tokmak 2**	**6.07**	**42**	⇑Pn	**Pn**	**16 36 49.7**	**-0.4**
	14nm,0.8s						
TKM2				⇑Sn	**Sn**	**16 37 57.9**	**-0.3**
	29nm,1.0s						
TKM2	**Tokmak 2**	**6.07**	**42**	P	**Pn**	**16 36 49.4**	**-0.6**
	SNR=26						
AB31	**Akbulak array**	**12.97**	**329**	⇑P	**Pn**	**16 38 23.9**	**-0.7**
	2.7nm,0.5s,baz=147,slow=11,SNR=54						
AB31				⇑S	**Sn**	**16 40 43.9**	**-3.6**
	6.5nm,0.8s,baz=148,slow=23,SNR=12						
AKTO	**Aktyubinsk**	**14.68**	**328**	⇓P	**Pn**	**16 38 48.6**	**+0.8**
	1.2nm,1.2s						

*ISCJB **16** 17:33:15.2±0.4, 5146N±002×1613E±002, h0km, Error ellipse: s-maj=3.5km s-min=1.9km az=15.2*
*NEIC **16** 17:33:16.2±0.4, 5157N×1618E, h5km, ML3.0(SZGRF), Error ellipse: s-maj=4.7km s-min=4.1km az=207.0*
*BGR **16** 17:33:16.3±0.4, 5156N×1617E, h1km, ML3.1/15, Error ellipse: s-maj=4.4km s-min=2.2km az=14.0*
*WAR **16** 17:33:17.6, 5152N×1611E, ML2.9, Mining Induced*
*CSEM **16** 17:33:17.4±0.1, 5151N×1614E, h1km, ML3.6/7, Error ellipse: s-maj=1.9km s-min=1.1km az=20.0*
*IPEC **16** 17:33:17.6±0.4, 5152N×1617E, h10km±2km, ML2.5/3, Error ellipse: s-maj=2.1km s-min=1.3km az=175.0*
*IDC **16** 17:33:17.8±0.8, 5147N×1620E, h0km, mb1 3.5/5, mb1mx3.3/21, mbtmp3.4/5, ML2.6/5, Error ellipse: s-maj=17.4km s-min=7.2km az=108.0*
*PRU **16** 17:33:18.3, 5145N×1609E, h0km*
*VIE **16** 17:33:18.9±0.6, 5133N×1610E, h0km, mb2.4/4, ML3.2/4, Error ellipse: s-maj=3.6km s-min=3.4km az=170.0 68 km WNW of Wroclaw Suspected Mining induced.*

ISC 16 17:33:15.9±0.3**, 5154N**±002×**1614E**±002**, h0**km**, n73, σ0^{s}90**/128**, 3C-1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**17 33 30.1**	**+0.7**
KSP				*e*Sg	**Sg**	**17 33 39.4**	**+0.8**
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**17 33 30.3**	**+0.8**
KSP				*e*Sg	**Sg**	**17 33 38.8**	**+0.2**
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**17 33 30.1**	**+0.7**
KSP				*e*Sg	**Sg**	**17 33 39.4**	**+0.8**
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**17 33 30.1**	**+0.7**
KSP				Sg	**Sg**	**17 33 38.8**	**+0.2**
UPC	**Upice**	**1.04**	**185**	*e*PG	**Pg**	**17 33 36.3**	**+0.5**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*Pn	**Pn**	**17 33 39.0**	**-0.8**
DPC				*e*Sg	**Sg**	**17 33 55.2**	**+0.8**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**17 33 39.0**	**+0.1**
DPC				*e*SG	**Sg**	**17 33 54.2**	**-0.2**
	61nm,0.3s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pg**	**17 33 42.9**	**-0.2**
PVCC				*e*SG	**Sg**	**17 34 01.8**	**+0.3**
	240nm,0.2s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*Pg	**Pg**	**17 33 42.9**	**-0.2**
PVCC				*e*Sg	**Sg**	**17 34 02.2**	**+0.7**
BRG	**Berggiesshubel**	**1.54**	**245**	*e*Pn	**Pn**	**17 33 44.7**	**+0.2**
BRG				*e*Sg	**Sg**	**17 34 06.1**	**+0.8**
BRG	**Berggiesshubel**	**1.54**	**245**	Pg	**Pg**	**17 33 45.9**	**+0.6**
BRG				Sg	**Sg**	**17 34 06.1**	**+0.8**
BRG	**Berggiesshubel**	**1.54**	**245**	PN	**Pn**	**17 33 44.6**	**+0.1**
BRG				PG	**Pg**	**17 33 45.9**	**+0.5**
BRG				SG	**Sg**	**17 34 05.9**	**+0.7**
	150nm,0.3s						
PRU	**Pruhonice**	**1.86**	**214**	*e*PN	**Pn**	**17 33 49.0**	**0.0**
PRU				*e*PG	**Pg**	**17 33 50.8**	**-0.7**
PRU				*e*SG	**Sg**	**17 34 14.3**	**-1.3**
	84nm,0.3s						
FBE	**Freiberg**	**1.86**	**252**	*e*Sg	**Sg**	**17 34 15.2**	**-0.4**
RAC	**Raciborz**	**1.96**	**138**	*e*Pg	**Pg**	**17 33 53.5**	**+0.1**
RAC				*e*Sg	**Sg**	**17 34 19.4**	**+0.7**
CLL	**Collm**	**1.98**	**264**	*e*Pn	**Pn**	**17 33 50.3**	**-0.3**
CLL				*e*Sg	**Sg**	**17 34 20.0**	**+0.6**
CLL	**Collm**	**1.98**	**264**	*i* Pn	**Pn**	**17 33 50.1**	**-0.5**
CLL				*e*Pg	**Pg**	**17 33 54.0**	**+0.2**
CLL				*i* Sg	**Sg**	**17 34 19.8**	**+0.3**
CLL	**Collm**	**1.98**	**264**	*i* Pn	**Pn**	**17 33 50.1**	**-0.5**
CLL				*e*Pg	**Pg**	**17 33 54.0**	**+0.2**
CLL				*i* x	x	17 33 56.5	
CLL				*i* x	x	17 34 00.4	
CLL				*i* Sg	**Sg**	**17 34 19.8**	**+0.3**
	comp=Z,42nm,0.7s						
CLL				*e*x	x	17 34 27.0	
CLL	**Collm**	**1.98**	**264**	*e*Pg	**Pg**	**17 33 54.0**	**+0.2**
CLL				Sg	**Sg**	**17 34 20.0**	**+0.5**
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	**Pn**	**17 33 50.7**	**+0.1**
MORC				*e*Sg	**Sg**	**17 34 18.6**	**-0.8**
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	**Pn**	**17 33 49.8**	**-0.9**
MORC				*e*Sn	**Sn**	**17 34 18.7**	**+2.6**
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	**Pn**	**17 33 49.8**	**-0.8**
MORC				Sg	**Sg**	**17 34 18.6**	**-0.9**
MORC				*e*Sn	**Sn**	**17 34 18.7**	**+2.6**
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PG	**Pg**	**17 33 56.6**	**-0.1**
OKC				*e*SG	**Sg**	**17 34 23.3**	**-1.0**
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*Pn	**Pn**	**17 33 52.6**	**-0.1**
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*Pg	**Pg**	**17 33 56.6**	**-0.1**
OKC				Sg	**Sg**	**17 34 23.5**	**-0.8**
VRAC	**Vranov**	**2.26**	**172**	Pn	**Pn**	**17 33 55.6**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=338,slow=12,SNR=12						
VRAC				Lg		17 34 25.4	
	comp=Z,6.2nm,0.3s,baz=79,slow=21,SNR=12						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	**Pn**	**17 33 54.9**	**+0.5**
VRAC				*e*Sg	**Sg**	**17 34 27.3**	**-1.0**
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn	**Pn**	**17 33 58.6**	**+1.0**
KRUC				*e*Sg	**Sg**	**17 34 35.0**	**-0.8**
	comp=Z,19nm,0.2s						
TANN	**Tannenbergstha**	**2.59**	**246**	*e*Pn	**Pn**	**17 33 59.6**	**+0.7**
TANN				*e*Sg	**Sg**	**17 34 38.8**	**-0.1**
TANN	**Tannenbergstha**	**2.59**	**246**	Pn	**Pn**	**17 33 59.6**	**+0.7**
TANN				Sg	**Sg**	**17 34 38.8**	**-0.1**
WERD	**Werda**	**2.66**	**247**	*e*Pn	**Pn**	**17 34 00.2**	**+0.2**
WERD				*e*Sg	**Sg**	**17 34 41.5**	**+0.2**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**17 34 07.1**	**+0.1**
OJC				*e*Sg	**Sg**	**17 34 42.5**	**+0.9**
OJC	**Ojcow**	**2.67**	**118**	*e*Pn	**Pn**	**17 33 59.4**	**-0.7**
OJC				*e*Sg	**Sg**	**17 34 42.5**	**+1.0**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**17 34 07.1**	**+0.1**
OJC				*e*Sg	**Sg**	**17 34 42.5**	**+0.9**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	**Pn**	**17 34 00.4**	**+0.1**
NKC				*e*PG	**Pg**	**17 34 06.3**	**-1.0**
NKC				*e*SG	**Sg**	**17 34 42.7**	**+0.7**
	comp=Z,62nm,0.3s						
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Sg	**Sg**	**17 34 47.9**	**+0.2**
	comp=Z,31nm,0.7s						
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**17 34 03.6**	**+0.1**
KHC				*e*PG	**Pg**	**17 34 09.5**	**-2.3**
KHC				*e*SG	**Sg**	**17 34 47.6**	**-2.1**
	comp=Z,12nm,0.3s						
MOX	**Moxa**	**2.99**	**254**	*e*Pn	**Pn**	**17 34 05.0**	**+0.5**
MOX				*e*Sg	**Sg**	**17 34 52.5**	**+0.5**
MOX	**Moxa**	**2.99**	**254**	*e*PN	**Pn**	**17 34 05.6**	**+1.1**
MOX				*e*PG	**Pg**	**17 34 13.4**	**+0.2**
MOX				*e*SG	**Sg**	**17 34 52.7**	**+0.7**
MANZ	**Manzenberg**	**3.00**	**240**	*e*Pn	**Pn**	**17 34 04.4**	**-0.2**
MANZ				*e*Sg	**Sg**	**17 34 52.7**	**+0.5**
ROTZ	**Rotzenmuhle**	**3.07**	**236**	*e*Pn	**Pn**	**17 34 05.7**	**+0.1**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	**Pn**	**17 34 07.5**	**+1.1**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	**Pn**	**17 34 07.5**	**+1.2**
GERES	**GERESS Array B**	**3.12**	**211**	Pn	**Pn**	**17 34 06.9**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=31,slow=12,SNR=26						
GERES				Pg	**Pg**	**17 34 14.9**	**-0.8**
	comp=Z,2.6nm,0.3s,baz=29,slow=17,SNR=34						
GERES				Sn	**Sn**	**17 34 45.2**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=30,slow=26,SNR=8.2						
GERES				Lg		17 34 54.9	
	comp=Z,5.9nm,0.3s,baz=33,slow=27,SNR=14						
GERES	**GERESS Array B**	**3.12**	**211**	Pg	**Pg**	**17 34 14.9**	**-0.8**
SMOL	**Smolenice**	**3.14**	**164**	*e*SG	**Sg**	**17 34 57.1**	**+0.3**
WET	**Wettzell**	**3.18**	**222**	*e*Pn	**Pn**	**17 34 07.5**	**+0.3**
WET	**Wettzell**	**3.18**	**222**	*e*Pn	**Pn**	**17 34 07.5**	**+0.3**
MODS	**Modra-Piesok**	**3.26**	**167**	*e*SG	**Sg**	**17 35 00.1**	**-0.4**
KOLL	**Kolacno**	**3.31**	**153**	*e*SG	**Sg**	**17 34 59.8**	**-2.2**
KOLL	**Kolacno**	**3.31**	**153**	*e*Sg	**Sg**	**17 34 59.9**	**-2.1**
ZST	**Bratislava**	**3.41**	**169**	*e*SG	**Sg**	**17 35 04.1**	**-1.2**
NIE	**Niedzica**	**3.41**	**127**	*e*P	**Pg**	**17 34 20.7**	**-0.5**
NIE				*e*S	**Sg**	**17 35 06.0**	**+0.7**
VYHS	**Vyhne**	**3.51**	**149**	*e*SG	**Sg**	**17 35 06.7**	**-2.0**
CLZ	**Clausthal**	**3.60**	**277**	*e*Pn	**Pn**	**17 34 14.0**	**+1.0**
CLZ	**Clausthal**	**3.60**	**277**	*e*Pn	**Pn**	**17 34 14.0**	**+1.1**
CONA	**Conrad Observa**	**3.62**	**183**	⇓ *i*Pn	**Pn**	**17 34 14.0**	**+0.8**
CONA				⇑ *i*Sg	**Sg**	**17 35 12.0**	**-0.3**
	comp=Z,38nm,0.6s						
GRA1	**Grafenberg Arr**	**3.64**	**241**	Sg	**Sg**	**17 35 12.7**	**-0.1**
GRF	**Grafenberg Arr**	**3.64**	**241**	*e*Sg	**Sg**	**17 35 12.7**	**0.0**
GRFO	**Grafenberg**	**3.64**	**241**	*e*Pn	**Pn**	**17 34 13.7**	**+0.3**
GRFO	**Grafenberg**	**3.64**	**241**	*e*Pn	**Pn**	**17 34 13.7**	**+0.2**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**17 34 13.2**	**-0.4**
BSD				*i* S	**Sn**	**17 34 55.1**	**-2.2**
MOA	**Molln**	**3.89**	**199**	⇑ *i*Pn	**Pn**	**17 34 17.6**	**+0.7**
MOA				⇑ *i*Sg	**Sg**	**17 35 21.2**	**+0.4**
	comp=Z,38nm,0.8s						
MOA	**Molln**	**3.89**	**199**	Pn	**Pn**	**17 34 17.6**	**+0.7**
MOA				Sg	**Sg**	**17 35 21.2**	**+0.3**
	comp=Z,38nm,0.8s						
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*PN	**Pn**	**17 34 18.2**	**+1.3**
STHS				*e*PG	**Pg**	**17 34 31.8**	**+1.4**
STHS				*e*SG	**Sg**	**17 35 23.4**	**+2.5**
KECS	**Kecovo**	**4.15**	**136**	*e*PG	**Pg**	**17 34 35.8**	**+0.4**
KECS				*e*SG	**Sg**	**17 35 28.0**	**-1.1**
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*PG	**Pg**	**17 34 39.6**	**+1.0**
CRVS				*e*SG	**Sg**	**17 35 35.2**	**+0.6**
DAVOX	**Davos/Dischmat**	**6.29**	**223**	Lg		17 36 38.1	
	comp=Z,0.6nm,0.3s,baz=340,slow=23,SNR=3.6						
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**17 35 23.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=181,slow=7.2,SNR=2.5						
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**17 35 23.0**	**-0.1**
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**17 35 57.4**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=218,slow=10,SNR=5.3						
FINES				Sn	**Sn**	**17 37 58.1**	**-7.7**
	comp=Z,0.2nm,0.3s,baz=214,slow=22,SNR=3.6						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**17 35 57.3**	**-1.5**
FINES				Sn	**Sn**	**17 37 58.1**	**-7.8**
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**Pn**	**17 37 32.2**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=2.9						

*IDC **16** 17:40:06.2±0.7, 1035N×12598E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/20, mbtmp4.0/11, MS3.8/11, Ms1 3.8/11, ms1mx3.5/34, Error ellipse: s-maj=55.8km s-min=14.8km az=74.0*
*BJI **16** 17:40:10.2, 1030N×12610E, h57km, mb4.3*
*ISCJB **16** 17:40:11.1±0.7, 1041N±003×12623E±005, h56km±6km, mb4.2/24, MS3.8/10, Error ellipse: s-maj=8.0km s-min=4.0km az=166.5*
*MAN **16** 17:40:11, 1038N×12616E, h20km, mb4.8, ML3.8, MS3.8*
*NEIC **16** 17:40:16.2±2.7, 1032N×12610E, h87km±25km, mb4.5/14, Error ellipse: s-maj=19.2km s-min=6.8km az=62.0*

ISC 16 17:40:12.6±0.6**, 1040N**±003×**12622E**±005**, h51**km±6km**, n71, σ0^{s}97**/81**, mb4.2**/24**, MS3.8**/10**, 3C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.94**	**230**	⇓ *e*P	**Pn**	**17 40 27.5**	**-2.1**
SCPH				*e*S	**Sn**	**17 40 40.7**	**-1.3**
MSLP	**Maasin**	**1.36**	**259**	*e*P	**Pn**	**17 40 33.7**	**-1.6**
MSLP				*e*S	**Sn**	**17 40 51.1**	**-1.1**
BESP	**Borongan**	**1.42**	**327**	*e*P	**Pn**	**17 40 35.8**	**-0.3**
BESP				*e*S	**Sn**	**17 40 57.0**	**+3.3**
PLP	**Palo**	**1.44**	**302**	*e*P	**Pn**	**17 40 35.0**	**-1.3**
PLP				*i* S	**Sn**	**17 40 53.7**	**-0.3**
OCLP	**Ormoc**	**1.71**	**293**	*e*P	**Pn**	**17 40 40.0**	**+0.1**
OCLP				*e*S	**Sn**	**17 40 59.8**	**-0.9**
BIPH	**Bislig**	**2.20**	**176**	⇓ *i*P	**Pn**	**17 40 46.2**	**-0.6**
BIPH				*i* S	**Sn**	**17 41 22.6**	**+10**
LLP	**Lapu-Lapu**	**2.22**	**268**	⇑ *e*P	**Pn**	**17 40 46.5**	**-0.4**
LLP				*e*S	**Sn**	**17 41 13.7**	**+0.6**
TBP	**Tagbilaran**	**2.42**	**253**	*e*P	**Pn**	**17 40 49.8**	**0.0**
TBP				*e*S	**Sn**	**17 41 18.7**	**+0.5**
CGP	**Cagayan de Oro**	**2.45**	**218**	⇓ *e*P	**Pn**	**17 40 50.6**	**+0.5**
CGP				*e*S	**Sn**	**17 41 19.0**	**+0.2**
CNP	**Catarman**	**2.59**	**324**	*e*P	**Pn**	**17 40 51.5**	**-0.7**
CNP				*e*S	**Sn**	**17 41 23.3**	**+0.8**
BUKP	**Musuan**	**2.75**	**205**	*e*P	**Pn**	**17 40 56.0**	**+1.7**
BUKP				*e*S	**Sn**	**17 41 30.2**	**+4.0**
MATI	**Mati**	**3.43**	**179**	*e*P	**Pn**	**17 41 03.8**	**+0.2**
MATI				*e*S	**Sn**	**17 41 42.6**	**-0.4**
GUIM	**Jordan**	**3.58**	**274**	*e*P	**Pn**	**17 41 05.2**	**-0.3**
GUIM				*e*S	**Sn**	**17 41 46.0**	**-0.6**
RCP	**Roxas**	**3.60**	**289**	⇑ *e*P	**Pn**	**17 41 06.3**	**+0.4**
PVCP	**Virac**	**3.77**	**328**	*e*P	**Pn**	**17 41 07.5**	**-0.7**
PVCP				*e*S	**Sn**	**17 41 52.3**	**+1.0**
PVCP	**Virac**	**3.77**	**328**	⇑ *e*P	**Pn**	**17 41 08.6**	**+0.4**
PAGZ	**Pagadian**	**3.77**	**228**	*e*P	**Pn**	**17 41 10.1**	**+1.8**
PAGZ				*e*S	**Sn**	**17 41 53.0**	**+1.5**
KALP	**Kalibo**	**4.02**	**289**	*e*P	**Pn**	**17 41 16.0**	**+4.3**
OTRP	**Odiongan**	**4.55**	**296**	*e*P	**Pn**	**17 41 19.4**	**+0.3**
CUYO	**Cuyo Island**	**5.13**	**276**	*e*P	**Pn**	**17 41 27.3**	**+0.3**
POLP	**Polilio Island**	**6.00**	**316**	*e*P	**Pn**	**17 41 40.2**	**+1.3**
POLP				*e*S	**Sn**	**17 42 46.3**	**+0.1**
BUSP	**Coron**	**6.12**	**286**	*e*P	**Pn**	**17 41 41.4**	**+0.9**
ENPP	**El Nido**	**6.72**	**277**	*e*P	**Pn**	**17 41 49.2**	**+0.4**
BALP	**Baler**	**6.98**	**320**	*e*P	**Pn**	**17 41 50.9**	**-1.3**
CAUP	**Cauayan**	**7.78**	**327**	*e*P	**Pn**	**17 42 02.1**	**-1.2**
CAUP				*e*S	**Sn**	**17 43 26.1**	**-4.0**
APYP	**Conner**	**8.85**	**328**	*e*P	**Pn**	**17 42 17.9**	**0.0**
ABRA	**Dolores**	**8.97**	**324**	*e*P	**Pn**	**17 42 20.8**	**+1.2**
KKM	**Kota Kinabalu**	**10.80**	**247**	*e*Pn	**Pn**	**17 42 46.7**	**+2.0**
KSM	**Kuching**	**18.12**	**242**	P	**Pn**	**17 44 20.0**	**-0.8**
GUMO	**Guam**	**18.52**	**78**	LR	LR	17 50 05.8	
	comp=Z,161nm,19.3s,baz=126,slow=32						
BATI	**Kupang**	**20.62**	**187**	P	**P**	**17 44 51.1**	**+3.3**
	13nm,0.4s,baz=15,slow=2.3,SNR=9.6						
KAKA	**Kakadu**	**23.77**	**165**	*e*P	**P**	**17 45 20.5**	**-0.1**
	11nm,0.6s,mb4.5						
KULM	**Kulim**	**25.82**	**261**	P	**P**	**17 45 34.3**	**-5.1**
PSI	**Prapat**	**28.12**	**256**	LR	LR	17 58 23.2	
	comp=Z,90nm,18.1s,MS3.4,baz=222,slow=39						
MJAR	**Matsushiro Arr**	**28.20**	**21**	LR	LR	17 55 46.2	
	comp=Z,109nm,18.3s,MS3.5,baz=220,slow=33						
FITZ	**Fitzroy Crossi**	**28.32**	**181**	*e*P	**P**	**17 46 01.5**	**-0.2**
	2.5nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**28.32**	**181**	P	**P**	**17 46 02.4**	**+0.7**
	1.5nm,0.5s,mb3.9,baz=8.5,slow=23,SNR=21						
PMG	**Port Moresby**	**28.66**	**133**	P	**P**	**17 46 03.9**	**-0.9**
	13nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**31.19**	**165**	P	**P**	**17 46 26.3**	**-0.8**
	0.7nm,0.5s,mb3.7,baz=342,slow=8.9,SNR=20						
WB2	**Warramunga Arr**	**31.19**	**165**	*e*P	**P**	**17 46 26.8**	**-0.3**
WB2	**Warramunga Arr**	**31.19**	**165**	*e*P	**P**	**17 46 26.7**	**-0.4**
MBWA	**Marble Bar**	**32.00**	**191**	P	**P**	**17 46 33.8**	**-0.4**
ASAR	**Alice Springs**	**34.68**	**168**	P	**P**	**17 46 57.6**	**+0.1**
	0.9nm,0.3s,mb4.2,baz=351,slow=7.2,SNR=114						
CTA	**Charters Tower**	**36.15**	**147**	LR	LR	18 02 12.3	
	comp=Z,96nm,20.4s,MS3.6,baz=157,slow=37						
GTA	**Gaotai**	**37.25**	**325**	*e*P	**P**	**17 47 19.3**	**-0.1**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb3.9						
LSA	**Lhasa**	**37.91**	**306**	P	**P**	**17 47 25.3**	**+0.2**
	comp=Z,11nm,1.2s,mb4.5						
LSA				*e*	pP	17 47 34.8	-3.7
HNR	**Honiara**	**38.91**	**119**	LR	LR	18 01 07.5	
	comp=Z,204nm,21.9s,MS3.9,baz=359,slow=32						
ULN	**Ulaanbaatar**	**40.69**	**340**	*e*P	**P**	**17 47 49.2**	**+1.3**
	comp=Z,2.3nm,0.9s,mb3.8						
SONM	**Songino Array**	**40.88**	**340**	P	**P**	**17 47 50.6**	**+1.0**
	comp=Z,0.5nm,0.6s,mb3.3,baz=143,slow=5.2,SNR=4.9						
SONM				LR	LR	18 06 56.5	
	comp=Z,52nm,19.9s,MS3.4,baz=16,slow=39						
FORT	**Forrest**	**40.98**	**178**	*e*P	**P**	**17 47 50.6**	**+0.1**
	comp=Z,11nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**44.54**	**161**	*e*P	**P**	**17 48 20.2**	**+0.8**
	comp=Z,2.4nm,1.0s,mb4.0						
STKA	**Stephens Creek**	**44.54**	**161**	*e*P	**P**	**17 48 19.7**	**+0.3**
	comp=Z,8.8nm,1.3s,mb4.4						
STKA	**Stephens Creek**	**44.54**	**161**	P	**P**	**17 48 20.2**	**+0.9**
	comp=Z,1.1nm,0.5s,mb4.0,baz=341,slow=6.0,SNR=5.4						
STKA				LR	LR	18 05 29.1	
	comp=Z,83nm,20.5s,MS3.6,baz=27,slow=34						
DZM	**Mont Dzumac**	**50.97**	**130**	LR	LR	18 11 40.9	
	comp=Z,282nm,18.3s,MS4.3,baz=15,slow=37						
MKAR	**Makanchi Array**	**51.90**	**323**	P	**P**	**17 49 15.7**	**-0.3**
MKAR				LR	LR	18 10 54.0	
MKAR	**Makanchi Array**	**51.90**	**323**	P	**P**	**17 49 15.7**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.2,baz=121,slow=8.2,SNR=18						
MKAR				LR	LR	18 10 54.0	
	comp=Z,77nm,18.1s,MS3.8,baz=149,slow=36						
UCH	**Uchtor**	**55.05**	**315**	*e*P	**P**	**17 49 39.2**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,8.2nm,1.4s,mb4.6						
UCH				e	pP	17 49 49.0	-4.2
AML	Almayashu	55.59	314	P	P	17 49 43.0	-0.1
	comp=Z,6.9nm,1.3s,mb4.5						
EKS2	Erkin-Say	55.71	315	P	P	17 49 42.9	-1.0
	comp=Z,2.0nm,0.9s,mb4.2						
KURK	Kurchatov	55.93	325	eP	P	17 49 44.5	-0.9
	comp=Z,6.2nm,0.9s,mb4.6						
BRVK	Borovoye	61.60	325	eP	P	17 50 23.9	-0.9
	comp=Z,5.9nm,1.2s,mb4.6						
AKTK	Aktyubinsk	68.19	320	P	P	17 51 07.2	-0.5
AKTO	Aktyubinsk	68.19	320	P	P	17 51 07.2	-0.5
	comp=Z,0.8nm,0.7s,mb3.9,baz=85,slow=12,SNR=4.2						
ARU	Arti	69.09	327	eP	P	17 51 11.2	-2.0
	comp=Z,2.8nm,0.7s,mb4.3						
MCK	McKinley	78.47	27	P	P	17 52 06.6	-1.3
	comp=Z,9.5nm,1.2s,mb4.6						
ARCES	ARCESS Array B	84.06	340	P	P	17 52 38.9	+1.4
	comp=Z,3.5nm,0.9s,mb4.5,baz=74,slow=6.7,SNR=3.9						
ARCES				LR	LR	18 31 00.7	
	comp=Z,96nm,20.2s,MS4.2,baz=71,slow=36						
INK	Inuvik	84.19	22	P	P	17 52 39.2	+1.0
	comp=Z,72nm,1.0s,mb5.8						
INK	Inuvik	84.19	22	P	P	17 52 39.8	+1.7
	comp=Z,0.3nm,0.3s,mb3.9,baz=236,slow=4.5,SNR=3.2						
FINES	FINESS Array B	85.76	332	P	P	17 52 46.0	-0.1
	comp=Z,1.0nm,0.8s,mb4.1,baz=95,slow=8.4,SNR=7.5						
KMBO	Kilima Mbogo	89.18	269	LR	LR	18 33 49.5	
	comp=Z,54nm,18.3s,MS4.0,baz=92,slow=36						
YKA	Yellowknife Ar	93.66	24	P	P	17 53 25.0	+1.7
	comp=Z,0.5nm,0.8s,mb4.0,baz=300,slow=4.7,SNR=9.2						

*CSEM **16** 17:50:34.8±0.1, 3841N×3929E, h2km, ML3.3, Error ellipse: s-maj=2.0km s-min=1.5km az=165.0*
*ISK **16** 17:50:34.7, 3842N×3929E, h2km, MD3.4*
*ISCJB **16** 17:50:35.7±0.3, 3842N±002×3932E±003, h4km, Error ellipse: s-maj=3.4km s-min=2.8km az=159.7*
*DDA **16** 17:50:36.4, 3841N×3928E, h4km±5km, Md3.7, Ml3.3*
ISC 16 17:50:36.3±0.3, 3843N±002×3931E±003, h4km, n29, σ1.14/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.27	285	i P	Pg	17 50 41.2	-0.3
ELZG				i S	Sg	17 50 48.0	+3.0
PTK	Pertek	0.47	7	i PG	Pg	17 50 44.5	-0.7
PTK				SG	Sg	17 50 52.3	+1.0
MYA	Malataya	0.71	262	i PG	Pg	17 50 48.9	-0.9
MALT	Malatya	0.71	261	i PG	Pg	17 50 48.0	-1.8
MALT				SG	Sg	17 50 58.8	-0.2
DIY	Diyarbakir	0.90	126	i PG	Pg	17 50 52.7	-0.7
DIY				SG	Sg	17 51 05.6	+0.6
BINT	Bingol	1.02	64	PG	Pg	17 50 55.3	-0.6
KEMA	Kemaliye	1.05	323	i P	Pg	17 50 54.4	-2.1
KEMA				i S	Sg	17 51 08.9	-1.3
URFA	Urfa	1.06	202	PG	Pg	17 50 55.9	-0.7
URFA				SG	Sg	17 51 10.9	+0.5
ATAB	Bozova	1.25	220	i P	Pg	17 50 59.2	-1.1
ATAB				i S	Sg	17 51 17.7	+1.2
EZC	Erzincan	1.37	16	PN	Pn	17 51 01.4	-0.8
BNGL	BINGOL	1.53	69	i P	Pn	17 51 05.5	+1.1
BNGL				i S	Sn	17 51 26.1	+1.5
MARD	Mardin	1.61	133	i P	Pn	17 51 03.5	-2.0
MARD				i S	Sn	17 51 24.2	-2.5
KELT	Kelkit	1.72	358	i P	Pn	17 51 07.8	+0.9
KELT				i S	Sn	17 51 30.0	+0.7
BTMT	Batman	1.73	97	PN	Pn	17 51 05.3	-1.8
GZT	Gaziantep	1.75	233	i P	Pn	17 51 06.5	-1.0
GZT				i S	Sn	17 51 31.6	+1.4
GAZ	Gaziantep	2.09	234	PN	Pn	17 51 12.4	+0.4
KMRS	Kahramanmaras	2.12	245	ePN	Pn	17 51 12.4	-0.1
EZM	Erzurum	2.17	47	ePN	Pn	17 51 13.4	+0.2
ERZM	Erzurum	2.17	47	i P	Pn	17 51 13.4	+0.2
ANDN	Andirin	2.49	251	i P	Pn	17 51 19.0	+1.3
ANDN				i S	Sn	17 51 51.2	+2.7
SIRT	Sirnak	2.64	110	ePN	Pn	17 51 20.5	+0.9
BNN	Bunyan	2.75	280	ePN	Pn	17 51 21.4	+0.3
KOZT	Kozan	2.92	252	ePN	Pn	17 51 23.4	0.0
AGRB	Hanur-Agry	3.08	67	ePN	Pn	17 51 26.7	+0.9
HTY	Hatay	3.42	229	ePN	Pn	17 51 30.5	+0.1
HAKT	HAKKARI	3.58	103	i P	Pn	17 51 31.6	-0.9
CUKT	Cukurca	3.60	108	ePN	Pn	17 51 33.8	+1.0
HKR	Hakkari	3.60	102	ePN	Pn	17 51 34.3	+1.5
MSL	Mosul	3.69	124	ex	x	17 51 43.0	
MSL				i x	x	17 52 34.0	

IDC 16 17:51:18.5±7.2, 725S×12290E, h186km±49km, mb3.3/1, mb1 3.0/4, mb1mx2.8/16, mbtmp2.9/4, Error ellipse: s-maj=180.8km s-min=71.8km az=68.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	3.04	166	P	Pn	17 52 07.9	0.0
	4.0nm,0.3s,baz=312,slow=4.2,SNR=19						
BATI				S	Sn	17 52 47.0	+0.4
	6.4nm,0.3s,baz=55,slow=21,SNR=8.9						
WRA	Warramunga Arr	16.80	140	P	Pn	17 55 04.2	+1.0
	0.1nm,0.3s,baz=309,slow=13,SNR=15						
ASAR	Alice Springs	19.45	148	P	P	17 55 31.0	+0.1
	0.2nm,0.3s,baz=331,slow=12,SNR=25						
STKA	Stephens Creek	30.07	147	P	P	17 57 09.7	-0.7
	0.3nm,0.3s,baz=344,slow=15,SNR=2.9						

*IDC **16** 18:00:02.5±6.9, 3143S×17937W, h145km±51km, mb4.3/4, mb1 4.3/5, mb1mx3.9/13, mbtmp4.2/5, Error ellipse: s-maj=53.5km s-min=21.0km az=45.0*
*NEIC **16** 18:00:08.1±5.3, 3169S×17976W, h176km±32km, mb4.8/1, Error ellipse: s-maj=62.6km s-min=21.7km az=224.0*
ISC 16 18:00:07.4±2.7, 317S±01×1797W±02, h176km±20km, n31, σ0.71/34, mb4.5/4, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.10	195	eP	Pn	18 01 36.8	+1.2
MXZ				S	Sn	18 02 47.0	+1.9
MXZ	Matakaoa Point	6.10	195	PN	Pn	18 01 35.7	+0.1
MXZ				SN	Sn	18 02 45.2	0.0
PUZ	Puketiti	6.60	194	P	Pn	18 01 42.7	+0.5
PUZ	Puketiti	6.60	194	PN	Pn	18 01 42.7	+0.5
MWZ	Matawai	7.03	198	eP	Pn	18 01 48.0	+0.2
MWZ				S	Sn	18 03 05.9	-1.2
MWZ	Matawai	7.03	198	PN	Pn	18 01 47.9	+0.1
MWZ				SN	Sn	18 03 05.9	-1.1
URZ	Urewera	7.08	201	eP	Pn	18 01 47.6	-0.9
URZ	Urewera	7.08	201	P	Pn	18 01 48.8	+0.3
	1.6nm,0.3s,baz=307,slow=21,SNR=32						
URZ				S	Sn	18 03 08.6	+0.3
	11nm,0.3s,baz=220,slow=23,SNR=12						
URZ	Urewera	7.08	201	PN	Pn	18 01 48.1	-0.4
KNZ	Kokohu	7.64	196	PN	Pn	18 01 55.1	-0.8
TSZ	Takapari Road	9.09	202	P	Pn	18 02 15.0	+0.2
TSZ	Takapari Road	9.09	202	PN	Pn	18 02 14.3	-0.6
TUWZ	Tuamarina	11.00	206	PN	Pn	18 02 35.8	-4.1
NNZ	Nelson	11.04	209	eP	Pn	18 02 40.5	+0.1
NNZ				S	Sx	18 04 36.2	
NNZ	Nelson	11.04	209	ePN	Pn	18 02 40.5	+0.1
NNZ				SN	Sx	18 04 36.2	
THZ	Tophouse	11.69	209	eP	Pn	18 02 48.6	-0.3
THZ				S	Sx	18 04 51.1	
THZ	Tophouse	11.69	209	PN	Pn	18 02 48.6	-0.2
THZ				SN	Sx	18 04 51.1	
KHZ	Kahutara	12.01	205	eP	Pn	18 02 48.7	-4.2
KHZ				S	Sx	18 04 57.3	
KHZ	Kahutara	12.01	205	PN	Pn	18 02 48.7	-4.2
KHZ				SN	Sx	18 04 57.3	
STKA	Stephens Creek	32.82	259	P	P	18 06 25.4	+1.2
STKA	Stephens Creek	32.82	259	P	P	18 06 25.4	+1.2
	4.2nm,0.7s,mb4.3,baz=89,slow=11,SNR=14						
ASAR	Alice Springs	41.64	269	P	P	18 07 38.5	0.0
	5.7nm,0.5s,mb4.5,baz=107,slow=7.4,SNR=200						
WB2	Warramunga Arr	42.74	274	⇑iP	P	18 07 47.1	-0.3
WRA	Warramunga Arr	42.75	274	P	P	18 07 47.0	-0.5
	6.2nm,0.3s,mb4.7,baz=111,slow=8.0,SNR=272						
QSPA	South Pole Qui	58.43	180	eP	P	18 09 45.0	+1.0
	12nm,0.8s,mb4.8						
QSPA	South Pole Qui	58.43	180	P	P	18 09 45.2	+1.2
	11nm,0.7s,mb4.8,baz=30,slow=3.9,SNR=64						
SNAA	Sanae	76.91	179	e	P	18 11 39.0	-0.7
SNAA				e		18 11 41.3	
SNAA				e		18 11 46.4	
VNA3	Neumayer Olymp	77.12	177	e	P	18 11 40.4	-0.4
VNA3				e		18 11 43.1	
VNA3				e		18 11 48.1	
VNA2	Neumayer--Watz	77.54	177	e	P	18 11 43.2	+0.1
	baz=189,slow=5.5						
VNA2				e		18 11 45.7	
VNA2				e		18 11 51.1	
FINES	FINESS Array B	145.83	338	PKPbc	PKPbc	18 19 22.4	-2.7
	0.6nm,0.5s,baz=61,slow=4.7,SNR=8.0						
TORD	Torodi Ar. Bea	161.51	184	PKPab	PKPab	18 20 31.0	-1.9
	1.3nm,0.9s,baz=182,slow=2.9,SNR=8.1						

*ISCJB **16** 18:03:18.3±0.5, 686N±005×7295W±005, h171km±5km, mb4.0/11, Error ellipse: s-maj=9.0km s-min=6.5km az=42.3*
*IDC **16** 18:03:18.4±0.6, 672N×7294W, h163km±6km, mb3.7/10, mb1 3.9/12, mb1mx3.7/23, mbtmp3.7/12, Error ellipse: s-maj=14.5km s-min=7.3km az=124.0*
*FUNV **16** 18:03:18.7, 677N×73.16W, h166km, MW4.1*
*NEIC **16** 18:03:19.6±1.0, 670N×7283W, h178km±10km, mb4.5/5, Error ellipse: s-maj=16.3km s-min=12.8km az=74.0*
ISC 16 18:03:19.2±0.5, 683N±005×7294W±005, h164km±5km, n44, σ0.90/54, mb4.0/11, 5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.20	31	⇑iP	Pn	18 03 48.0	+1.0
CAPV				eS	Sn	18 04 09.2	+0.8
ROSC	El Rosal	2.40	215	P	Pn	18 03 59.7	-0.2
	90nm,0.3s,baz=294,slow=6.7,SNR=65						
ROSC				S	Sn	18 04 29.5	-1.7
	69nm,0.3s,baz=107,slow=16,SNR=9.4						
SOCV	Socops	2.52	55	eP	Pn	18 04 02.7	+1.4
SOCV				eS	Sn	18 04 34.4	+0.6
VIGV	El Vigia	2.54	38	⇑iP	Pn	18 04 02.4	+1.0
VIGV				eS	Sn	18 04 34.3	+0.2
SDV	Santo Domingo	3.06	48	ePn	Pn	18 04 09.1	+1.2
SDV				eSn	Sn	18 04 45.0	-0.8
SDV	Santo Domingo	3.06	48	P	Pn	18 04 09.4	+1.5
	22nm,0.3s,baz=242,slow=2.8,SNR=92						
SDV				S	Sn	18 04 46.6	+0.8
	43nm,0.3s,baz=260,slow=24,SNR=26						
ELOV	Elorza	3.44	87	eP	Pn	18 04 14.0	+1.4
VIRV	Villa del Rosa	3.69	8	⇑iP	Pn	18 04 14.8	-1.1
VIRV				eS	Sn	18 04 57.0	-3.0
QARV	Quebrada Arrib	4.12	35	⇑iP	Pn	18 04 22.3	+0.9
QARV				eS	Sn	18 05 09.1	-0.8
SANV	Sanarito	4.29	52	eP	Pn	18 04 24.1	+0.5
SANV				eS	Sn	18 05 13.3	-0.5
CURV	Curarigua	4.32	43	eP	Pn	18 04 24.6	+0.5
CURV				eS	Sn	18 05 12.9	-1.7
DABV	Dabajuro	4.66	29	eP	Pn	18 04 28.9	+0.4
DABV				eS	Sn	18 05 19.9	-2.6
TEPV	Terepaima	4.84	50	eP	Pn	18 04 31.1	+0.3
SIQV	Siquisique	4.90	39	eP	Pn	18 04 31.7	+0.1
BAUV	El Baul	5.29	66	⇑iP	Pn	18 04 36.1	-0.6
BAUV				eS	Sn	18 05 35.8	-1.4
IMOV	Isla Los Monje	5.85	20	eP	Pn	18 04 43.8	-0.3
TURV	Turiamo	6.19	54	eP	Pn	18 04 48.9	+0.2
CAOV	Caicara del Or	6.58	85	eP	Pn	18 04 53.5	-0.3
MERV	Las Mercedes	7.00	69	eP	Pn	18 04 59.7	+0.3
BIRV	Birongo	7.52	61	eP	Pn	18 05 06.1	-0.2
CUPV	Cœpira	7.77	65	eP	Pn	18 05 09.5	0.0
PRGV	PARIAGUAN	8.44	76	eP	Pn	18 05 18.5	+0.1
PCRV	Puerto La Cruz	8.86	67	eP	Pn	18 05 23.8	-0.2
JTS	JuntasAbangare	12.37	287	eP	Pn	18 06 14.5	+4.6
TEIG	Tepich	19.97	313	eP	P	18 07 39.4	+0.5
	11nm,0.5s						
TEIG	Tepich	19.97	313	P	P	18 07 39.7	+0.8
	14nm,0.6s,baz=101,slow=2.2,SNR=9.5						
LPAZ	La Paz	23.46	168	eP	P	18 08 13.8	-0.2
	2.1nm,0.7s,mb3.7						
LPAZ	La Paz	23.46	168	P	P	18 08 14.1	+0.1
	1.3nm,0.6s,mb3.5,baz=336,slow=7.8,SNR=8.0						
SIV	San Ignacio	25.54	153	P	P	18 08 31.5	-1.4
	1.4nm,0.8s,mb3.6,baz=341,slow=10,SNR=7.5						
LTX	Lajitas	36.59	312	eP	P	18 10 09.2	-0.4
	1.9nm,0.5s,mb4.0						
TXAR	Lajitas Array	36.59	312	P	P	18 10 09.6	-0.1
	1.2nm,0.6s,mb3.7,baz=128,slow=9.6,SNR=11						
ULM	Lac du Bonnet	47.34	340	P	P	18 11 35.6	-0.8
	2.9nm,0.3s,mb4.3,baz=135,slow=7.8,SNR=6.4						
SCHQ	Schefferville	48.12	5	P	P	18 11 43.5	+1.2
SCHQ	Schefferville	48.12	5	P	P	18 11 43.5	+1.2
	2.0nm,0.5s,mb4.0,baz=185,slow=7.4,SNR=12						
PDAR	Pinedale Array	48.18	324	P	P	18 11 43.2	+0.2
	1.2nm,0.7s,mb3.7,baz=127,slow=10,SNR=5.7						
NVAR	Mina Array Bea	51.61	315	P	P	18 12 09.1	+0.1
NVAR	Mina Array Bea	51.61	315	P	P	18 12 09.1	+0.1
	0.5nm,0.5s,mb3.4,baz=126,slow=7.2,SNR=5.6						
WALA	Waterton Lakes	54.40	328	eP	P	18 12 30.4	+1.2
	11nm,0.5s,mb4.8						
YKA	Yellowknife Ar	63.32	340	P	P	18 13 30.1	-0.3
YKA	Yellowknife Ar	63.32	340	P	P	18 13 30.1	-0.3
	3.3nm,0.6s,mb4.4,baz=132,slow=6.7,SNR=77						
INK	Inuvik	73.08	340	eP	P	18 14 30.9	-0.2
	43nm,0.6s,mb5.3						
INK	Inuvik	73.08	340	P	P	18 14 31.1	0.0
	1.2nm,0.6s,mb3.8,baz=99,slow=2.9,SNR=6.7						
ASAR	Alice Springs	149.26	234	PKPbc	PKPbc	18 22 45.7	-3.7
	0.4nm,0.4s,baz=121,slow=3.1,SNR=8.6						
WRA	Warramunga Arr	150.50	241	PKPbc	PKPbc	18 22 51.4	-1.0
	0.5nm,0.4s,baz=111,slow=2.2,SNR=18						
WRA				PKPab	PKPab	18 22 58.8	-0.8
	0.3nm,0.3s,baz=105,slow=2.9,SNR=7.6						

IDC 16 18:05:26.2±2.2, 745S×12511E, h520km±25km, mb2.6/2, mb1 2.8/6, mb1mx2.7/15, mbtmp2.7/6, 1C, Error ellipse: s-maj=74.9km s-min=19.5km az=57.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	3.09	207	P	P	18 06 40.5	+1.2
	8.2nm,0.3s,baz=3.7,slow=0.3,SNR=27						
BATI				S	S	18 07 38.4	-0.5
	6.2nm,0.3s,baz=309,slow=23,SNR=6.1						
FITZ	Fitzroy Crossi	10.60	177	⇑iP	P	18 07 51.3	+1.3
	4.8nm,0.2s						
FITZ	Fitzroy Crossi	10.60	177	P	P	18 07 51.2	+1.1
	1.4nm,0.3s,baz=15,slow=11,SNR=53						
WRA	Warramunga Arr	15.31	145	P	P	18 08 38.1	-1.2
	0.3nm,0.3s,baz=334,slow=9.7,SNR=10						
ASAR	Alice Springs	18.20	153	P	P	18 09 06.8	-0.6
	0.1nm,0.3s,baz=328,slow=7.9,SNR=6.3						
ASAR				ScP	ScP	18 15 60.0	+1.1
	0.0nm,0.3s,baz=332,slow=1.9,SNR=4.1						
STKA	Stephens Creek	28.76	150	P	P	18 10 42.2	+0.7
	0.8nm,0.4s,baz=322,slow=12,SNR=3.4						
MKAR	Makanchi Array	66.03	329	P	P	18 15 21.0	-0.1
	0.1nm,0.4s,baz=124,slow=7.9,SNR=3.8						

*NEIC **16** 18:29:48.4, 3237S×6987W, h125km, MD3.9(GUC), After GUC.*
GUC 16 18:29:48.4±0.6, 3237S×6987W, h125km±4km, MD3.5, ML3.8, 9C-7D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	1.02	200	⇑iP	Pn	18 30 12.0	+1.0
FCH				i S	Sn	18 30 29.9	+1.7
FCH				AML	AML	18 30 30.9	
	comp=E,2μm,0.2s						
PEL	Peldehue	1.03	221	⇓iP	Pn	18 30 11.7	+0.6
PEL				i S	Sn	18 30 29.2	+0.8
PEL				AML	AML	18 30 31.1	
	comp=N,2μm,0.2s						
ROCH	El Roble	1.13	238	⇓iP	Pn	18 30 13.1	+1.0
ROCH				i S	Sn	18 30 31.5	+1.4
CLCH	Cerro Calan	1.17	208	i P	Pn	18 30 13.7	+1.2
CLCH				i S	Sn	18 30 32.6	+1.8
CLCH	Cerro Calan	1.17	208	i P	Pn	18 30 13.7	+1.2
CLCH				i S	Sn	18 30 32.6	+1.8
CLCH				AML	AML	18 30 34.9	
	comp=E,3μm,0.4s						
DSCH	Colegio Aleman	1.18	209	⇓iP	Pn	18 30 12.7	+0.1
DSCH				i S	Sn	18 30 31.6	+0.5
FSR	Penalolen	1.24	206	i P	Pn	18 30 14.3	+1.1
FSR				i S	Sn	18 30 33.6	+1.5
FSR	Penalolen	1.24	206	i P	Pn	18 30 14.3	+1.1
FSR				i S	Sn	18 30 33.6	+1.5
FSR				AML	AML	18 30 35.8	
	comp=N,2μm,0.3s						
SAN	Santiago	1.27	211	⇑iP	Pn	18 30 14.1	+0.5
SAN				i S	Sn	18 30 33.5	+0.8
SAN	Santiago	1.27	211	⇑iP	Pn	18 30 14.1	+0.5
SAN				i S	Sn	18 30 33.5	+0.8
SAN				AML	AML	18 30 34.0	
	comp=N,1μm,0.2s						
ANTU	Antumapu	1.36	208	⇑iP	Pn	18 30 15.0	+0.5
ANTU				i S	Sn	18 30 35.4	+0.9
ANTU	Antumapu	1.36	208	⇑iP	Pn	18 30 15.0	+0.5
ANTU				i S	Sn	18 30 35.4	+0.9
ANTU				AML	AML	18 30 36.6	
	comp=E,2μm,0.6s						
PCH	Pirque	1.36	203	⇓iP	Pn	18 30 15.2	+0.6
PCH				i S	Sn	18 30 35.4	+1.0
CHNG	Los Chungos	1.46	289	i P	Pn	18 30 01.8	-14
CHNG				i S	Sn	18 30 22.4	-14
LMEL	Las Melosas	1.50	191	⇑iP	Pn	18 30 16.7	+0.5
LMEL				i S	Sn	18 30 38.3	+1.0
LMEL	Las Melosas	1.50	191	⇑iP	Pn	18 30 16.7	+0.5
LMEL				i S	Sn	18 30 38.3	+1.0
LMEL				AML	AML	18 30 43.4	
	comp=N,785nm,0.2s						
CMCH	Combarbala	1.53	321	eP	Pn	18 30 18.0	+1.5
CMCH				i S	Sn	18 30 39.8	+2.0
CMCH	Combarbala	1.53	321	eP	Pn	18 30 18.0	+1.5
CMCH				i S	Sn	18 30 39.8	+2.0
CMCH				AML	AML	18 30 41.3	
	comp=N,2μm,0.4s						
TACH	Talagante	1.56	215	⇓iP	Pn	18 30 17.1	+0.3
TACH				i S	Sn	18 30 39.0	+0.4
CHCH	Chadas Angostu	1.69	202	⇓iP	Pn	18 30 18.8	+0.5
CHCH				i S	Sn	18 30 41.9	+0.6
LCCH	Las Cruces	1.80	232	⇑iP	Pn	18 30 20.1	+0.4
LCCH				i S	Sn	18 30 43.9	+0.3
CACH	El Canelo	1.85	199	⇑iP	Pn	18 30 21.2	+1.0
CACH				i S	Sn	18 30 45.9	+1.4
CICH	Cipreses	2.00	193	⇓iP	Pn	18 30 22.9	+0.8
CICH				i S	Sn	18 30 48.9	+1.0
OVCH	Ovalle	2.09	327	i P	Pn	18 30 23.9	+0.7
OVCH				i S	Sn	18 30 50.5	+0.7
TLL	Tololo Astrono	2.33	340	i P	Pn	18 30 28.4	+2.1
TLL				i S	Sn	18 30 57.6	+2.3
TLL	Tololo Astrono	2.33	340	i P	Pn	18 30 28.4	+2.1
TLL				i S	Sn	18 30 57.6	+2.3
TLL				AML	AML	18 31 00.7	
	comp=N,417nm,0.4s						
SFDO	San Fernando	2.43	203	eP	Pn	18 30 27.3	-0.2
SFDO				i S	Sn	18 30 57.5	-0.1
LSCH	La Serena	2.72	334	i P	Pn	18 30 31.6	+0.4
LSCH				i S	Sn	18 31 04.2	+0.1
LCO	Las Campanas	3.42	348	ePn	Pn	18 30 41.6	+1.2
LCO				eSn	Sn	18 31 18.1	-2.5

IDC 16 19:02:13.6±9.7, 253N×12791E, h141km±93km, mb3.1/5, mb1 3.2/5, mb1mx3.1/14, mbtmp3.1/5, Error ellipse: s-maj=109.2km s-min=18.3km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.21	164	P	P	19 07 08.4	+0.2
	0.6nm,0.5s,baz=344,slow=10,SNR=24						
ASAR	Alice Springs	26.69	168	P	P	19 07 39.8	+0.1
	0.1nm,0.4s,baz=349,slow=7.6,SNR=7.5						
ASAR				PcP	PcP	19 10 59.3	-0.6
	0.2nm,0.4s,baz=354,slow=2.2,SNR=10						
STKA	Stephens Creek	36.61	160	P	P	19 09 06.3	0.0
	0.3nm,0.3s,baz=343,slow=14,SNR=2.9						
SONM	Songino Array	48.80	341	P	P	19 10 43.9	-0.5
	0.4nm,0.5s,baz=149,slow=7.5,SNR=4.1						
MKAR	Makanchi Array	59.20	325	P	P	19 12 00.4	+0.5
	0.6nm,0.5s,baz=122,slow=8.4,SNR=8.5						

IDC 16 19:24:30.4±5.7, 178N×9893E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, Error ellipse: s-maj=307.4km s-min=27.7km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.90	124	P	P	19 32 15.4	+0.7
	0.3nm,0.7s,baz=304,slow=8.9,SNR=5.0						
ASAR	Alice Springs	42.39	129	P	P	19 32 26.1	-0.8
	0.1nm,0.4s,baz=297,slow=7.8,SNR=6.0						
MKAR	Makanchi Array	47.12	344	P	P	19 33 04.2	0.0
	0.4nm,0.5s,baz=159,slow=8.7,SNR=8.3						

*NNC **16** 19:34:44.8±20.0, 3631N×6948E, h96km±482km, mb3.2, mpv3.6, Error ellipse: s-maj=183.5km s-min=170.1km az=140.0*
ISC 16 19:34:43.9±2.5, 362N±02×697E±02, h112km±61km, n10, σ0.71/12, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.71	27	P	Pn	19 36 19.3	-0.4
	SNR=62						
KK31	Karatay Array	6.94	5	⇓P	Pn	19 36 22.6	-0.2
	0.8nm,0.3s,baz=194,slow=14,SNR=17						
KK31				⇑S	Sn	19 37 40.0	-0.1
	4.8nm,0.5s,baz=201,slow=22						
UCH	Uchtor	7.11	31	P	Pn	19 36 24.3	-0.8
	SNR=24						
EKS2	Erkin-Say	7.20	25	P	Pn	19 36 28.5	+2.0
	SNR=12						
KZA	Kyzart	7.31	35	P	Pn	19 36 27.0	-0.8
	SNR=13						
AAK	Ala-Archa	7.44	29	P	Pn	19 36 29.4	-0.2
	SNR=6.5						
CHMS	Chumysh	7.85	28	P	Pn	19 36 34.8	-0.4
	SNR=10.0						
USP	Ospenovka	7.99	26	P	Pn	19 36 37.6	+0.6
	SNR=10						
TKM2	Tokmak 2	8.13	32	⇓P	Pn	19 36 39.7	+0.6
	3.1nm,0.5s						
TKM2				⇑S	Sn	19 38 09.2	0.0
	1.1nm,0.4s						
AB31	Akbulak array	14.86	334	⇑P	Pn	19 38 08.0	-0.1
	0.3nm,0.2s,baz=165,slow=12,SNR=32						

*IDC **16** 19:57:28.6±0.8, 878N×12635E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/18, mbtmp4.0/8, Error ellipse: s-maj=57.5km s-min=16.3km az=77.0*
*MAN **16** 19:57:35, 878N×126.17E, h1km, mb4.9, ML3.9, MS3.9*
*ISCJB **16** 19:57:36.1±0.7, 874N±003×12641E±006, h68km±7km, mb3.9/10, Error ellipse: s-maj=10.5km s-min=4.9km az=163.5*
ISC 16 19:57:37.4±0.7, 872N±003×12640E±006, h63km±8km, n29, σ1.04/42, mb4.0/10, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.53	184	⇓iP	Pn	19 57 46.7	-3.3
BIPH				i S	Sn	19 57 54.4	-4.8
SCPH	Surigao	1.38	320	⇑eP	Pn	19 57 59.2	-1.4
SCPH				eS	Sn	19 58 16.2	-1.9
BUKP	Musuan	1.56	238	eP	Pn	19 58 02.8	-0.2
BUKP				eS	Sn	19 58 24.7	+2.4
CGP	Cagayan de Oro	1.70	261	⇓eP	Pn	19 58 03.9	-1.0
CGP				i S	Sn	19 58 24.2	-1.5
MATI	Mati	1.77	185	eP	Pn	19 58 05.4	-0.4
MATI				eS	Sn	19 58 28.9	+1.6
MSLP	Maasin	2.07	313	eP	Pn	19 58 09.6	-0.2
MSLP				eS	Sn	19 58 37.4	+2.8
TBP	Tagbilaran	2.68	291	eP	Pn	19 58 17.7	-0.5
TBP				eS	Sn	19 58 48.6	-1.0
PLP	Palo	2.80	330	eP	Pn	19 58 20.4	+0.6
PLP				i S	Sn	19 58 53.6	+1.1
LLP	Lapu-Lapu	2.88	304	⇑eP	Pn	19 58 21.1	+0.2
LLP				eS	Sn	19 58 53.6	-0.7
OCLP	Ormoc	2.91	323	eP	Pn	19 58 22.5	+1.2
OCLP				eS	Sn	19 58 60.0	+4.9
DCPH	Dipolog City	3.01	268	⇓eP	Pn	19 58 22.4	-0.4
PAGZ	Pagadian	3.11	254	eP	Pn	19 58 24.8	+0.8
CNP	Catarman	4.13	336	eP	Pn	19 58 38.5	+0.4
CNP				eS	Sn	19 59 26.6	+1.5
GUIM	Jordan	4.21	297	eP	Pn	19 58 38.9	-0.1

GUIM				eS	Sn	19 59 27.7	+0.8
PVCP	Virac	5.32	336	eP	Pn	19 58 55.8	+1.5
PVCP				eS	Sn	19 59 53.6	-0.7
ENPP	El Nido	7.30	290	eP	Pn	19 59 21.8	+0.4
KAKA	Kakadu	22.12	164	eP	P	20 02 29.0	+1.2
	5.4nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	26.66	182	eP	P	20 03 11.1	+0.6
	5.1nm,1.2s,mb3.9						
FITZ	Fitzroy Crossi	26.66	182	P	P	20 03 10.2	-0.3
	1.2nm,0.7s,mb3.5,baz=360,slow=10,SNR=10						
WRA	Warramunga Arr	29.54	165	P	P	20 03 35.8	-0.3
	0.3nm,0.3s,mb3.5,baz=344,slow=8.5,SNR=12						
WB2	Warramunga Arr	29.54	165	eP	P	20 03 35.8	-0.3
MJAR	Matsushiro Arr	29.71	19	P	P	20 03 36.5	-1.0
	1.9nm,0.8s,mb3.9,baz=187,slow=9.5,SNR=4.5						
ASAR	Alice Springs	33.01	167	P	P	20 04 06.0	-0.7
	0.3nm,0.3s,mb3.7,baz=350,slow=7.5,SNR=13						
FORT	Forrest	39.30	178	eP	P	20 05 01.5	+1.2
	4.8nm,0.4s,mb4.6						
STKA	Stephens Creek	42.90	161	eP	P	20 05 30.5	+0.7
	1.4nm,0.7s,mb3.8						
STKA	Stephens Creek	42.90	161	P	P	20 05 29.9	0.0
	0.9nm,0.5s,mb3.8,baz=309,slow=6.5,SNR=5.5						
MKAR	Makanchi Array	53.33	323	P	P	20 06 49.6	-0.6
	0.4nm,0.4s,mb3.7,baz=121,slow=7.8,SNR=9.5						
MKAR				PcP	PcP	20 07 56.8	-0.1
	0.1nm,0.3s,baz=120,slow=4.9,SNR=3.9						
ARCES	ARCESS Array B	85.68	340	P	P	20 10 08.5	-0.5
	6.9nm,1.0s,mb4.8,baz=83,slow=7.4,SNR=3.4						
FINES	FINESS Array B	87.31	332	P	P	20 10 16.2	-0.9
	2.4nm,1.0s,mb4.4,baz=90,slow=5.7,SNR=7.6						

*IDC **16** 20:03:13.3±2.0, 4346N×10532W, h0^{km}, mb4.4/1, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML3.5/3, Error ellipse: s-maj=45.8km s-min=8.8km az=153.0*
*ISCJB **16** 20:03:14.6±0.5, 4378N±003×10527W±005, h0^{km}, Error ellipse: s-maj=5.2km s-min=4.4km az=7.1*
*NEIC **16** 20:03:15.8±0.4, 4370N×10523W, h0^{km}, ML3.2, Error ellipse: s-maj=7.0km s-min=5.3km az=147.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 16 20:03:16.0±0.5**, 4375N**±003×**10525W**±004**, h0**^{km}**, n27, σ1^{s}13**/43**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.95	67	eP	Pg	20 03 34.7	+0.4
PHWY	Pilot Hill	2.45	184	ePn	Pn	20 03 56.6	-0.6
PHWY				eSn	Sn	20 04 28.4	+0.5
RWWY	Rawlins	2.52	216	ePn	Pn	20 03 58.3	+0.2
RWWY				eSn	Sn	20 04 31.9	+2.5
LAO	LASA Array	3.02	347	ePn	Pn	20 04 06.5	+1.5
LAO				ePg	Pg	20 04 12.7	-1.1
LAO				eSg	Sg	20 04 53.4	+0.4
RLMT	Red Lodge	3.19	297	ePn	Pn	20 04 07.1	-0.3
BW06	Boulder Array	3.30	254	ePn	Pn	20 04 08.1	-0.8
BW06				eSn	Sn	20 04 52.5	+3.8
PDAR	Pinedale Array	3.30	254	Pn	Pn	20 04 08.2	-0.6
	3.3nm,0.3s,baz=82,slow=17,SNR=33						
PDAR				Lg		20 04 52.2	
	11nm,0.3s,baz=77,slow=30,SNR=12						
GCMT	Greycliff	3.75	305	ePn	Pn	20 04 14.3	-0.8
GCMT				eSn	Sn	20 05 01.4	+1.5
LOHW	Long Hollow	3.89	270	ePn	Pn	20 04 18.7	+1.7
FLWY	Flagg Ranch	3.95	277	ePn	Pn	20 04 18.8	+0.9
FLWY				ePg	Pg	20 04 28.4	-3.3
FLWY				eSn	Sn	20 05 09.7	+4.8
FLWY				eSg	Sg	20 05 22.9	-0.1
ISCO	Idaho Springs	3.96	184	ePn	Pn	20 04 17.6	-0.2
ISCO				eSn	Sn	20 05 11.9	+6.9
MOOW	Moose Ponds	3.98	272	ePn	Pn	20 04 18.4	+0.2
MOOW				ePg	Pg	20 04 27.7	-4.6
SNOW	Snow King Moun	4.01	268	ePn	Pn	20 04 21.9	+3.3
SNOW				ePg	Pg	20 04 27.9	-5.0
SNOW				eSn	Sn	20 05 06.4	+0.2
SNOW				eSg	Sg	20 05 23.4	-1.4
REDW	Red Top Meadow	4.09	267	ePn	Pn	20 04 26.0	+6.2
IMW	Indian Meadow	4.12	274	ePn	Pn	20 04 20.8	+0.6
TPAW	Teton Pass	4.15	268	ePg	Pg	20 04 29.2	-6.3
YMR	Madison River	4.21	285	ePg	Pg	20 04 31.5	-5.2
QLMT	Earthquake Lak	4.57	286	ePg	Pg	20 04 37.1	-6.4
DGMT	Dagmar	4.78	8	ePn	Pn	20 04 30.9	+1.7
BOZ	Bozeman (W)	4.93	295	ePn	Pn	20 04 35.4	+4.1
BOZ				ePg	Pg	20 04 47.1	-3.4
BOZ				eS	Sg	20 05 45.6	-8.7
HWUT	Hardware Ranch	5.12	247	ePn	Pn	20 04 33.1	-0.9
EGMT	Eagleton	5.31	325	ePn	Pn	20 04 36.7	+0.3
	16nm,0.5s						
ECSD	EROS,Sioux Fal	6.25	87	ePn	Pn	20 04 49.4	-0.1
	5.3nm,0.4s						
MVU	Marysvale	7.42	227	ePn	Pn	20 05 04.6	-0.9
	2.4nm,0.5s						
ULM	Lac du Bonnet	9.12	41	Pn	Pn	20 05 27.0	-1.8
	1.6nm,0.3s,baz=231,slow=12,SNR=16						
ULM				Lg		20 08 03.7	
	0.3nm,0.3s,baz=132,slow=17,SNR=3.8						
YKA	Yellowknife Ar	19.56	347	P	Pn	20 07 46.3	+0.1
	0.1nm,0.3s,baz=158,slow=9.1,SNR=5.8						
ARCES	ARCESS Array B	61.40	18	P	P	20 13 32.0	-1.3
	5.1nm,0.9s,baz=336,slow=6.4,SNR=3.9						

IDC 16 20:09:17.2±1.9**, 510S×15365E, h0**^{km}**, mb3.0**/2**, mb1 3.5**/3**, mb1mx3.3**/13**, mbtmp3.3**/3**, ML3.3**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.7**/12**, Error ellipse: s-maj=126.0km s-min=37.8km az=134.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.73	236	Pn	Pn	20 11 12.8	+1.8
	2.7nm,0.3s,baz=54,slow=8.7,SNR=11						
PMG				LR	LR	20 13 39.8	
	comp=Z,96nm,19.2s,baz=64,slow=34						
WRA	Warramunga Arr	23.89	230	P	P	20 14 32.6	-0.2
	0.3nm,0.8s,baz=53,slow=9.8,SNR=5.8						
WRA				PcP	PcP	20 18 15.3	-0.6
	0.1nm,0.5s,baz=58,slow=2.4,SNR=6.4						
ASAR	Alice Springs	26.51	224	P	P	20 14 56.0	-0.7
	0.5nm,1.1s,baz=49,slow=6.2,SNR=3.3						
ASAR				PcP	PcP	20 18 21.6	-0.1
	0.2nm,0.5s,baz=63,slow=2.9,SNR=5.4						
TORD	Torodi Ar. Bea	151.20	288	PKPbc	PKPbc	20 29 13.7	+0.1
	0.7nm,0.7s,baz=69,slow=2.2,SNR=2.3						

IDC 16 20:32:40.7±2.2**, 085S×12793E, h0**^{km}**, mb3.4**/2**, mb1 3.5**/3**, mb1mx3.3**/14**, mbtmp3.3**/3**, Error ellipse: s-maj=179.2km s-min=25.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.98	162	P	Pn	20 37 15.8	-0.7
	0.2nm,0.3s,baz=341,slow=11,SNR=23						
ASAR	Alice Springs	23.41	166	P	P	20 37 51.0	-0.6
	0.4nm,0.6s,baz=345,slow=11,SNR=10						
MKAR	Makanchi Array	61.99	326	P	P	20 43 02.7	0.0
	0.3nm,0.3s,baz=115,slow=8.0,SNR=6.3						

*IDC **16** 20:45:55.8±1.0, 56.11N×161.87E, h0^{km}, mb3.6/7, mb1 3.9/7, mb1mx3.6/22, mbtmp3.6/7, Error ellipse: s-maj=35.0km s-min=20.9km az=168.0*
*ISCJB **16** 20:46:01.8±0.5, 5567N±003×16226E±007, h73^{km}±6^{km}, mb3.6/7, Error ellipse: s-maj=7.5km s-min=4.4km az=24.1*
*MOS **16** 20:46:01.3±1.9, 5578N×162.14E, h70^{km}, mb4.3/1, Error ellipse: s-maj=28.2km s-min=12.5km az=73.9*
*KRSC **16** 20:46:01.3±0.9, 5569N×162.19E, h66^{km}±65^{km}, ML4.2*
ISC 16 20:46:03.0±0.5**, 5570N**±003×**16226E**±007**, h66**^{km}±6^{km}**, n32, σ0^{s}98**/55**, mb3.6**/7**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.60	31	eP	Pn	20 46 16.0	-0.5
KBTR				iS	Sn	20 46 26.7	+0.3
ZLN	Zelenaya	0.88	292	eP	Pn	20 46 19.5	-0.2
ZLN				iS	Sn	20 46 32.8	+0.7
CIRR	Tsirk	0.95	297	eP	Pn	20 46 20.5	-0.1
CIRR				iS	Sn	20 46 33.8	+0.2
SMKR	Semkarok	0.99	334	eP	Pn	20 46 20.6	-0.5
SMKR				iS	Sn	20 46 34.9	+0.3
BZMR	Bezymyannaya	1.03	284	eP	Pn	20 46 21.0	-0.5
BZMR				iS	Sn	20 46 35.3	-0.1
BDR	Baidarnaya	1.05	326	eP	Pn	20 46 21.8	-0.1
BDR				iS	Sn	20 46 37.2	+1.2
KRSR	Krestovskiy	1.09	299	eP	Pn	20 46 21.4	-0.9
KRSR				iS	Sn	20 46 35.8	-0.9
KLY	Klyuchi	1.09	305	eP	Pn	20 46 20.3	-2.1
KLY				iS	Sn	20 46 34.4	-2.5
KIRR	Kirishev	1.11	284	iP	Pn	20 46 22.3	-0.3
KIRR				iS	Sn	20 46 37.8	+0.5
SRKR	Sorokina	1.14	328	eP	Pn	20 46 22.9	-0.1
SRKR				iS	Sn	20 46 38.5	+0.6
KMNR	Kamenistaya	1.15	274	eP	Pn	20 46 22.6	-0.5
KMNR				iS	Sn	20 46 38.3	+0.2
KPT	Kopyto	1.18	284	eP	Pn	20 46 23.1	-0.4
KPT				iS	Sn	20 46 39.1	+0.2
KOZR	Kozyr	1.38	287	PN	Pn	20 46 26.4	+0.2
KOZR				S	Sn	20 46 45.1	+1.5
KOZ	Kozyrevsk	1.39	286	eP	Pn	20 46 26.4	+0.1
KOZ				iS	Sn	20 46 45.1	+1.2
SRDR	Sredinnyy	1.56	295	eP	Pn	20 46 28.3	-0.2
SRDR				iS	Sn	20 46 48.1	+0.3
SPN	Mys Shipunski	2.91	208	eP	Pn	20 46 45.2	-1.6
SPN				iS	Sn	20 47 17.4	-3.2
NLC	Nalytchevo	3.05	215	eP	Pn	20 46 48.8	+0.1
NLC				iS	Sn	20 47 23.4	-0.6
AVH	Avacha	3.19	222	eP	Pn	20 46 51.1	+0.5
AVH				iS	Sn	20 47 28.3	+1.0
GNL	Ganaly	3.21	233	eP	Pn	20 46 51.3	+0.4
GNL				iS	Sn	20 47 28.5	+0.6
PET	Petropavlovsk	3.41	220	ePN	Pn	20 46 54.2	+0.6
PET				eS	Sn	20 47 32.2	-0.6
PET				smax			
	comp=E,136nm,0.4s						
PET				smax			
	comp=N,234nm,0.5s						
PET	Petropavlovsk	3.41	220	eP	Pn	20 46 54.0	+0.4
PET				iS	Sn	20 47 32.2	-0.6
RUS	Russkaya	3.94	216	eP	Pn	20 47 00.8	-0.1
RUS				iS	Sn	20 47 44.7	-1.2
GRL	Gorelyy	4.00	220	eP	Pn	20 47 03.2	+1.6
GRL				iS	Sn	20 47 48.6	+1.4
SONM	Songino Array	34.60	281	P	P	20 52 44.2	-0.9
SONM	Songino Array	34.60	281	P	P	20 52 44.2	-0.8
	comp=N,0.5nm,1.1s,mb3.2,baz=70,slow=8.3,SNR=2.7						
YKA	Yellowknife Ar	40.41	45	P	P	20 53 34.1	+0.1
	comp=N,0.3nm,0.6s,mb3.3,baz=299,slow=7.7,SNR=5.1						
MKAR	Makanchi Array	48.19	295	P	P	20 54 33.3	-2.9
	comp=N,0.3nm,0.3s,mb3.6,baz=61,slow=7.5,SNR=5.0						
NVAR	Mina Array Bea	53.72	73	P	P	20 55 20.1	+2.2
	comp=N,1.0nm,0.7s,mb4.0,baz=318,slow=6.5,SNR=7.7						
PDAR	Pinedale Array	55.19	64	P	P	20 55 29.9	+1.5
	comp=N,0.9nm,0.8s,mb3.9,baz=336,slow=3.3,SNR=6.9						
FINES	FINESS Array B	58.23	337	P	P	20 55 48.2	-1.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	FINESS Array B	58.23	337	P	P	20 55 48.2	-1.5
	comp=Z,1.5nm,0.8s,mb4.1,baz=32,slow=5.1,SNR=7.2						
WRA	Warramunga Arr	78.98	207	P	P	20 58 02.8	+3.6
	comp=Z,0.2nm,0.5s,mb3.2,baz=24,slow=5.9,SNR=3.9						

IDC 16 20:55:55.8±2.6**, 1955S×6992W, h91**^{km}±21^{km}**, mb3.7**/8**, mb1 3.9**/10**, mb1mx3.8**/18**, mbtmp3.8**/10**, Error ellipse: s-maj=26.7km s-min=20.1km az=36.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.66	28	P	Pn	20 56 52.7	+2.5
	0.3nm,0.3s,baz=210,slow=8.3,SNR=7.0						
SIV	San Ignacio	9.14	69	P	Pn	20 58 03.7	-1.1
	2.0nm,0.3s,baz=266,slow=10.0,SNR=54						
NNA	Nana	10.04	317	P	Pn	20 58 15.8	-1.4
	3.0nm,0.3s,baz=144,slow=11,SNR=4.3						
PLCA	Paso Flores	21.12	181	P	P	21 00 33.7	+0.6
	1.1nm,0.4s,baz=4.4,slow=9.0,SNR=4.6						
ANMO	Albuquerque	64.36	327	P	P	21 06 21.7	-0.3
	0.6nm,0.5s,baz=165,slow=12,SNR=3.1						
DBIC	Dimbokro	69.11	75	P	P	21 06 53.2	+0.6
	0.9nm,0.4s,baz=232,slow=8.2,SNR=4.1						
PDAR	Pinedale Array	71.95	330	P	P	21 07 09.9	+0.7
	0.4nm,0.6s,baz=132,slow=8.6,SNR=4.5						
ULM	Lac du Bonnet	73.18	343	P	P	21 07 15.8	-0.5
	1.4nm,0.4s,baz=155,slow=6.4,SNR=6.7						
NVAR	Mina Array Bea	73.38	322	P	P	21 07 18.9	+1.1
	0.6nm,0.5s,baz=142,slow=8.8,SNR=7.6						
TORD	Torodi Ar. Bea	77.60	71	P	P	21 07 42.0	-0.5
	1.3nm,0.5s,baz=251,slow=5.4,SNR=13						
YKA	Yellowknife Ar	89.04	341	P	P	21 08 40.0	-0.1
	3.0nm,0.7s,baz=135,slow=4.7,SNR=70						
WRA	Warramunga Arr	134.12	213	PKP	PKPdf	21 15 01.8	-1.7
	0.2nm,0.5s,baz=159,slow=1.6,SNR=5.3						
MJAR	Matsushiro Arr	150.11	310	PKPbc	PKPbc	21 15 36.2	0.0
	1.1nm,0.5s,baz=107,slow=1.4,SNR=5.2						
SONM	Songino Array	151.62	5	PKPbc	PKPbc	21 15 40.1	+0.7
	1.0nm,0.6s,baz=319,slow=1.5,SNR=6.6						

*ISCJB **16** 21:06:14.9±0.4, 5149N±002×690E±003, h0^{km}, Error ellipse: s-maj=3.6km s-min=2.5km az=143.9*
*BGR **16** 21:06:16.0±0.6, 5151N×690E, h1^{km}, ML2.5, Error ellipse: s-maj=10.0km s-min=5.6km az=116.0*
*BUG **16** 21:06:16.5, 5150N×663E, h1^{km}, ML1.5*
*CSEM **16** 21:06:16.6±0.1, 5156N×693E, h1^{km}, ML3.0/11, Error ellipse: s-maj=1.7km s-min=1.1km az=147.0*
*NEIC **16** 21:06:16.0, 5151N×690E, h1^{km}, ML2.9(LDG), ML2.5(SZGRF), After SZGRF.*
*LDG **16** 21:06:17.8±0.2, 5154N×682E, h1^{km}, Md3.5/1, Ml2.9/14, Error ellipse: s-maj=2.9km s-min=2.0km az=33.0, Suspected Mining induced.*
*BNS **16** 21:06:18.2±0.4, 5152N×683E, h1^{km}, ML2.3*
ISC 16 21:06:16.2±0.4**, 5155N**±002×**681E**±003**, h0**^{km}**, n65, σ1^{s}32**/121**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRHE	Rheinberg	0.15	256	Pg	Pg	21 06 20.7	+1.6
BRHE				Sg	Sg	21 06 24.5	+3.4
WTSB	Winterswijk	0.41	359	ePg	Pg	21 06 24.2	+0.1
	66nm,0.3s						
BNS	Bensberg	0.63	158	ePg	Pg	21 06 29.7	+1.4
HOBG	Hohbusch	0.66	150	ePg	Pg	21 06 29.7	+0.9
IBBN	Ibbenburen	0.96	38	ePg	Pg	21 06 33.5	-1.0
IBBN				eSg	Sg	21 06 48.3	+1.4
IBBN	Ibbenburen	0.96	38	ePg	Pg	21 06 33.5	-1.0
IBBN				eSg	Sg	21 06 48.3	+1.4
KLL	Kalltalsperre	0.96	199	ePg	Pg	21 06 36.0	+1.4
KLL				eSg	Sg	21 06 49.3	+2.3
	140nm,0.3s						
STB	Steinbach	0.96	179	ePg	Pg	21 06 35.9	+1.3
STB				eSg	Sg	21 06 48.7	+1.7
	84nm,0.4s						
DREG	Dreilaegerbach	0.96	202	ePg	Pg	21 06 36.0	+1.4
DREG				eSg	Sg	21 06 49.2	+2.2
HGN	Heimansgroeve	0.96	215	ePg	Pg	21 06 35.8	+1.2
	18nm,0.2s						
BEBN	Eben Emael	1.04	224	P	Pg	21 06 36.9	+0.8
BEBN				S	Sg	21 06 51.2	+1.7
	comp=N,59nm,0.5s						
BEBN	Eben Emael	1.04	224	P	Pg	21 06 36.8	+0.7
BEBN				S	Sg	21 06 51.2	+1.7
	comp=N,59nm,0.5s						
MEM	Membach	1.07	208	P	Pg	21 06 37.5	+0.7
MEM				S	Sg	21 06 52.0	+1.4
	comp=N,98nm,0.3s						
MEM	Membach	1.07	208	P	Pg	21 06 37.4	+0.7
MEM				S	Sg	21 06 52.0	+1.4
	comp=N,98nm,0.3s						
HILG	Hillesheim	1.27	184	eSg	Sg	21 06 58.0	+1.1
BGG	Burgeitz	1.39	166	ePg	Pg	21 06 42.7	-0.1
BGG				eSg	Sg	21 07 00.7	-0.1
	comp=N,41nm,0.3s						
BCLA	Clavier	1.48	221	P	Pn	21 06 43.6	-0.5
BCLA				S	Sg	21 07 03.9	+0.1
	comp=N,23nm,0.0s						
BCLA	Clavier	1.48	221	P	Pn	21 06 43.5	-0.5
BCLA				S	Sg	21 07 03.8	+0.1
TNS	Taunus Mts	1.69	141	ePn	Pn	21 06 46.2	-0.7
TNS				eSg	Sg	21 07 08.7	-1.7
SNF	Seneffe	1.91	238	P	Pn	21 06 49.4	-0.5
GIVF	Givet	1.92	222	eP	Pn	21 06 52.3	+2.2
GIVF	Givet	1.92	222	ePg	Pg	21 06 53.6	+0.6
GIVF				eSn	Sn	21 07 13.2	-1.8
GIVF				eSg	Sg	21 07 18.3	+0.4
	comp=N,67nm,0.4s						
GIVF	Givet	1.92	222	ePn	Pn	21 06 49.8	-0.3
GIVF				eP		21 06 52.3	
GIVF				ePg	Pg	21 06 53.6	+0.6
GIVF				eSn	Sn	21 07 13.2	-1.8
GIVF				eSg	Sg	21 07 18.3	+0.4
GIVF	Givet	1.92	222	eP	Pn	21 06 52.3	+2.2
GIVF	Givet	1.92	222	ePg	Pg	21 06 53.6	+0.6
GIVF				eSn	Sn	21 07 13.2	-1.8
GIVF				eSg	Sg	21 07 18.3	+0.4
	comp=N,33nm,0.4s						
WLF	Walferdange	1.94	193	ePg	Pg	21 06 52.7	-0.5
WLF				eSg	Sg	21 07 15.7	-2.7
WLF	Walferdange	1.94	193	ePg	Pg	21 06 52.8	-0.5
WLF				eSn	Sn	21 07 15.3	0.0
WLF	Walferdange	1.94	193	P	Pn	21 06 53.2	+2.9
WLF				S	Sn	21 07 17.0	+1.7
	comp=N,14nm,0.4s						
WLF	Walferdange	1.94	193	P	Pn	21 06 53.2	+2.9
WLF				S	Sn	21 07 16.9	+1.6
	comp=N,14nm,0.4s						
DOU	Dourbes	2.02	225	P	Pn	21 06 51.4	-0.1
DOU				S	Sn	21 07 20.2	+2.8
	comp=N,10nm,0.3s						
DOU	Dourbes	2.02	225	P	Pn	21 06 51.3	-0.2
DOU				S	Sn	21 07 20.2	+2.7
	comp=N,10nm,0.3s						
BAIF	Baives	2.23	229	ePg	Pg	21 06 59.4	+0.6
BAIF				eSn	Sn	21 07 20.8	-1.7
BAIF				eSg	Sg	21 07 27.8	+0.1
	comp=N,12nm,0.3s						
BAIF	Baives	2.23	229	ePn	Pn	21 06 54.3	0.0
BAIF				ePg	Pg	21 06 59.4	+0.6
BAIF				eSn	Sn	21 07 20.8	-1.7
BAIF				eSg	Sg	21 07 27.8	+0.1
BAIF	Baives	2.23	229	ePg	Pg	21 06 59.4	+0.6
BAIF				eSn	Sn	21 07 20.8	-1.7
BAIF				eSg	Sg	21 07 27.8	+0.1
	comp=N,6.1nm,0.3s						
CLZ	Clausthal	2.24	81	ePg	Pg	21 06 57.5	-1.5
CLZ				eSg	Sg	21 07 25.6	-2.4
RFYF	Reffroy	3.05	197	eSg	Sg	21 07 53.4	-0.8
	comp=N,7.3nm,0.2s,baz=18						
RFYF	Reffroy	3.05	197	eSg	Sg	21 07 53.4	-0.8
	comp=N,3.7nm,0.2s						
CDF	Champ du Feu	3.16	174	ePg	Pg	21 07 16.5	-0.2
CDF				eSg	Sg	21 07 56.3	-1.3
	comp=N,6.4nm,0.4s						
CDF	Champ du Feu	3.16	174	ePn	Pn	21 07 07.0	-0.1
CDF				ePg	Pg	21 07 16.5	-0.2
CDF				eSg	Sg	21 07 56.3	-1.3
CDF	Champ du Feu	3.16	174	ePg	Pg	21 07 16.5	-0.2
CDF				eSg	Sg	21 07 56.3	-1.3
	comp=N,3.2nm,0.4s						
MOX	Moxa	3.17	105	eSg	Sg	21 07 54.7	-3.1
MOX	Moxa	3.17	105	eSG	Sg	21 07 54.1	-3.7
MEZF	Maizieres J'vi	3.26	201	ePn	Pn	21 07 08.0	-0.5
	baz=12						
MEZF				eSg	Sg	21 07 59.8	-1.0
	comp=N,9.2nm,0.4s						
MEZF	Maizieres J'vi	3.26	201	ePn	Pn	21 07 08.0	-0.5
MEZF				eSg	Sg	21 07 59.8	-1.0
	comp=N,4.6nm,0.4s						
SFTF	Sexfontaines	3.54	200	eSg	Sg	21 08 08.9	-1.0
	comp=N,7.9nm,0.3s,baz=25						
SFTF	Sexfontaines	3.54	200	eSg	Sg	21 08 08.9	-1.0
	comp=N,4.0nm,0.3s						
HAU	Haudompre	3.56	185	ePg	Pg	21 07 23.9	-0.6
HAU				eSg	Sg	21 08 08.7	-1.9
	comp=N,6.1nm,0.3s						
HAU	Haudompre	3.56	185	eP	Pn	21 07 15.2	+2.5
HAU				ePg	Pg	21 07 23.9	-0.6
HAU				eSg	Sg	21 08 08.7	-1.9
HAU	Haudompre	3.56	185	ePg	Pg	21 07 23.9	-0.6
HAU				eSg	Sg	21 08 08.7	-1.9
	comp=N,3.0nm,0.3s						
CLL	Collm	3.88	91	eSg	Sg	21 08 23.0	+2.1
BRG	Berggiesshubel	4.54	96	SG	Sg	21 08 43.5	+1.6
	comp=N,1.0nm,0.3s						
LOR	Lormes	4.70	205	ePn	Pn	21 07 27.3	-1.0
	baz=28						
LOR				eSn	Sn	21 08 19.5	-4.0
LOR				eSg	Sg	21 08 43.8	-3.3
	comp=N,2.7nm,0.3s,baz=25						
LOR	Lormes	4.70	205	ePn	Pn	21 07 27.3	-1.0
LOR				eSn	Sn	21 08 19.5	-4.0
LOR				eSg	Sg	21 08 43.8	-3.3
	comp=N,1.4nm,0.3s						
SSF	Saint Saulge	4.99	207	ePn	Pn	21 07 31.2	-1.0
SSF				eSg	Sg	21 08 52.5	-3.8
	comp=N,4.6nm,0.4s						
AVF	Avril sur Loir	5.28	207	ePn	Pn	21 07 35.4	-0.8
SMF	Signal de Mont	5.29	203	ePn	Pn	21 07 34.9	-1.4
LDF	La Druitiere	5.36	239	ePn	Pn	21 07 36.3	-1.0
LDF				eSn	Sn	21 08 34.9	-4.7
	comp=N,3.4nm,0.4s						
LDF	La Druitiere	5.36	239	ePn	Pn	21 07 36.3	-1.0
LDF				eSn	Sn	21 08 34.9	-4.7
	comp=N,1.7nm,0.4s						
FLN	La Foliniere	5.46	242	ePn	Pn	21 07 37.8	-0.8
	baz=52						
FLN				eSn	Sn	21 08 38.2	-3.8
	comp=N,4.8nm,0.4s,baz=68						
FLN	La Foliniere	5.46	242	ePn	Pn	21 07 37.8	-0.8
FLN				eSn	Sn	21 08 38.2	-3.8
	comp=N,2.4nm,0.4s						
BGF	Bois d'Agland	5.64	209	ePn	Pn	21 07 39.9	-1.2
GRR	Gorron	5.87	240	ePn	Pn	21 07 43.6	-0.8
GRR				eSn	Sn	21 08 47.5	-4.8
	comp=N,6.6nm,0.3s						
GRR	Gorron	5.87	240	ePn	Pn	21 07 43.6	-0.8
GRR				eSn	Sn	21 08 47.5	-4.8
	comp=N,3.3nm,0.3s						
TCF	Toulx Ste Croi	6.08	212	ePn	Pn	21 07 46.3	-0.9
MFF	Saint Martin d	6.74	225	ePn	Pn	21 07 55.2	-1.0

*ISCJB **16** 21:06:54.8±0.4, 4387N±003×10528W±004, h0^{km}, Error ellipse: s-maj=4.4km s-min=3.4km az=147.9*
*IDC **16** 21:06:55.3±1.4, 4369N×10541W, h0^{km}, mb4.5/1, mb1 4.0/6, mb1mx3.6/24, mbtmp3.7/6, ML3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.5/38, Error ellipse: s-maj=29.8km s-min=7.7km az=149.0*
*NEIC **16** 21:06:56.5±0.4, 4381N×10525W, h0^{km}, ML3.4, Error ellipse: s-maj=6.2km s-min=5.5km az=143.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] SSE of Gillette.
ISC 16 21:06:56.3±0.3**, 4386N**±003×**10524W**±003**, h0**^{km}**, n46, σ1^{s}20**/70**, 5C-9D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	73	eP	Pg	21 07 14.9	+1.2
PHWY	Pilot Hill	2.56	184	ePn	Pn	21 07 38.0	-0.9
PHWY				eSn	Sn	21 08 11.0	+0.2
RWWY	Rawlins	2.61	214	ePn	Pn	21 07 39.6	-0.1
RWWY				eSn	Sn	21 08 11.7	-0.3
LAO	LASA Array	2.91	347	ePn	Pn	21 07 44.9	+1.1
LAO				ePg	Pg	21 07 53.3	+1.2
LAO				eSn	Sn	21 08 24.0	+4.4
RLMT	Red Lodge	3.15	295	ePn	Pn	21 07 47.5	+0.5
BW06	Boulder Array	3.34	252	ePn	Pn	21 07 49.5	-0.2
BW06				eSn	Sn	21 08 33.7	+3.7
PDAR	Pinedale Array	3.34	252	Pn	Pn	21 07 49.3	-0.3
PDAR				Pg	Pg	21 07 57.4	-2.8
PDAR				Lg		21 08 33.2	
PDAR	Pinedale Array	3.34	252	Pn	Pn	21 07 49.3	-0.3
	4.2nm,0.3s,baz=77,slow=14,SNR=57						
PDAR				Pg	Pg	21 07 57.4	-2.8
	11nm,0.3s,baz=68,slow=17,SNR=32						
PDAR				Lg		21 08 33.2	
	3.2nm,0.3s,baz=85,slow=21,SNR=3.9						
LKWY	Lake	3.78	283	ePn	Pn	21 07 57.5	+1.8
LOHW	Long Hollow	3.90	268	ePn	Pn	21 08 00.9	+3.5
FLWY	Flagg Ranch	3.95	275	ePn	Pn	21 07 58.5	+0.4
FLWY				ePg	Pg	21 08 08.7	-3.2
FLWY				eSg	Sg	21 09 05.7	+2.6
MOOW	Moose Ponds	3.99	270	ePn	Pn	21 08 01.1	+2.4
SNOW	Snow King Moun	4.02	266	ePn	Pn	21 08 05.1	+6.0
ISCO	Idaho Springs	4.07	184	ePn	Pn	21 07 59.0	-0.7
ISCO				eS	Sb	21 08 59.0	+0.6

YFT	Old Faithful	4.07	280	ePg	Pg	21 08 10.7	-3.6
REDW	Red Top Meadow	4.11	265	ePn	Pn	21 08 05.1	+4.9
IMW	Indian Meadow	4.12	272	ePn	Pn	21 08 01.5	+1.1
TPAW	Teton Pass	4.16	267	ePn	Pn	21 08 06.9	+5.9
TPAW				eSn	Sn	21 08 48.2	-2.0
YMR	Madison River	4.19	283	eP	Pn	21 08 10.4	+9.0
QLMT	Earthquake Lak	4.55	284	ePg	Pg	21 08 16.5	-6.9
DGMT	Dagmar	4.67	9	ePn	Pn	21 08 10.3	+2.4
BOZ	Bozeman (W)	4.89	294	ePn	Pn	21 08 10.3	-0.7
BOZ				eS	Sb	21 09 25.4	+3.3
BOZ	Bozeman (W)	4.89	294	P	Pn	21 08 10.6	-0.4
	baz=6.1,SNR=5.3						
BOZ				⇓S	Sb	21 09 23.0	+0.9
	baz=6.1						
HWUT	Hardware Ranch	5.17	246	ePn	Pn	21 08 14.2	-0.7
	10nm,0.5s						
EGMT	Eagleton	5.22	324	ePn	Pn	21 08 16.1	+0.5
	20nm,0.4s						
EGMT				ePg	Pg	21 08 35.7	-0.6
EGMT				eSn	Sn	21 09 15.1	-1.3
EGMT	Eagleton	5.22	324	⇑P	Pn	21 08 16.0	+0.4
	baz=6.5						
G15A	Dillon	5.35	287	⇑S	Sb	21 09 35.1	-0.1
	baz=6.5						
F15A	Butte	5.53	294	⇓P	Pn	21 08 20.0	+0.3
	baz=6.7,SNR=5.7						
F15A				⇑S	Sb	21 09 40.3	0.0
	baz=6.7						
DAU	Daniels Canyon	5.65	234	ePn	Pn	21 08 21.5	+0.1
DAU				ePg	Pg	21 08 45.1	+0.7
M15A	Larsen Ranch,	5.83	248	⇓Sb	Sb	21 09 54.2	+5.1
	baz=6.5						
E15A	Deer Lodge	5.83	299	⇓P	Pn	21 08 24.0	+0.1
	baz=7.1,SNR=20						
E15A				⇑S	Sb	21 09 47.4	-1.7
	baz=7.1						
D15A	Lincoln	6.03	304	⇓P	Pn	21 08 27.1	+0.5
	baz=7.3,SNR=7.0						
D15A				⇓S	Sb	21 09 52.2	-2.7
	baz=7.3						
G14A	Jackson	6.04	286	⇓S	Sb	21 09 48.0	-7.0
	baz=7.2						
F14A	Wisdom	6.10	291	⇓S	Sb	21 09 53.0	-3.9
	baz=7.3						
SDCO	Great Sand Dun	6.11	182	ePn	Pn	21 08 28.7	+1.0
	7.9nm,1.0s						
SDCO				eSg	Sg	21 10 03.7	-8.8
N15A	Stansbury Isla	6.16	244	⇑Sb	Sb	21 10 05.1	+6.6
	baz=6.7						
ECSD	EROS,Sioux Fal	6.24	88	ePn	Pn	21 08 29.9	+0.4
	9.5nm,0.3s						
ECSD				ePg	Pg	21 08 52.2	-3.6
ECSD				eSg	Sg	21 10 15.1	-1.6
PV01	Paradox Valley	6.25	205	ePn	Pn	21 08 29.2	-0.5
PV01				ePg	Pg	21 08 47.1	-8.9
PV01				eSg	Sg	21 10 08.7	-8.2
CHMT	Chamberlain Mo	6.42	301	ePn	Pn	21 08 32.3	+0.3
D14A	Greenough	6.65	302	⇓P	Pn	21 08 35.1	0.0
	baz=7.9,SNR=22						
ULM	Lac du Bonnet	9.04	42	Pn	Pn	21 09 07.1	-0.7
	1.7nm,0.3s,baz=230,slow=11,SNR=18						
ULM				Pg	Pg	21 09 36.3	-13
	0.7nm,0.3s,baz=208,slow=15,SNR=2.6						
ULM				Lg		21 11 41.8	
	0.6nm,0.3s,baz=302,slow=19,SNR=2.9						
NEW	Newport	9.36	302	Pn	Pn	21 09 10.5	-1.8
	0.7nm,0.3s,baz=110,slow=15,SNR=3.0						
NVAR	Mina Array Bea	11.24	246	Pn	Pn	21 09 37.4	-0.7
	0.0nm,0.3s,baz=53,slow=12,SNR=3.7						
BBB	Bella Bella	17.37	307	LR	LR	21 17 41.5	
	comp=Z,40nm,18.6s,baz=250,slow=37						
YKA	Yellowknife Ar	19.45	347	P	Pn	21 11 24.5	-0.7
	0.2nm,0.3s,baz=165,slow=13,SNR=8.2						
ARCES	ARCESS Array B	61.30	18	P	P	21 17 13.5	+0.6
	5.6nm,0.9s,baz=330,slow=8.4,SNR=2.7						

*ISCJB **16** 21:08:07.9±1.9, 70.03N±0.04×140.6E±0.1, h1km±12km, mb4.4/73, MS3.6/9, Error ellipse: s-maj=7.0km s-min=6.4km az=27.8*
*IDC **16** 21:08:09.1±0.6, 70.00N×140.61E, h0km, mb4.0/20, mb1 4.1/20, mb1mx4.1/26, mbtmp4.0/20, MS3.4/5, Ms1 3.4/5, ms1mx3.1/42, Error ellipse: s-maj=16.8km s-min=15.0km az=148.0*
*MOS **16** 21:08:10.7±0.8, 70.01N×140.52E, h20km, mb4.7/39, Error ellipse: s-maj=18.0km s-min=5.5km az=98.7*
*NEIC **16** 21:08:10.9±0.3, 69.97N×140.63E, h10km, mb4.6/36, Error ellipse: s-maj=6.4km s-min=4.6km az=181.0*
*BJI **16** 21:08:10.9, 70.00N×140.60E, h30km, mB4.8, mb4.5, Ms4.3, Msz4.0*
*SZGRF **16** 21:08:23.9, 70.86N×137.67E, h33km, mb4.6, Near north coast of eastern Siberia, Russia*
ISC 16 21:08:10.4±2.1**, 70.00N**±0.04×**140.6E**±0.1**, h5**km±13km**, h16**km±.3km**:pP-P, n207,** σ0.84/211**, mb4.4**/73**, MS3.6**/9**, 12C-22D, Near north coast of eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	4.21	299	ePn	Pn	21 09 11.6	-3.6
TIXI				eSn	Sn	21 10 00.4	-4.2
TIXI	Tiksi	4.21	299	c iP	Pn	21 09 11.5	-3.6
TIXI				eS	Sn	21 10 00.1	-4.5
TIXI				pmax	pmax		
	comp=Z,103nm,0.5s						
TIXI				MLR	MLR		
	comp=Z,1μm,8.0s						
SEY	Seymchan	8.50	141	⇑eP	Pn	21 10 21.3	+7.3
YAK	Yakutsk	9.14	214	ePn	Pn	21 10 22.2	-0.5
	comp=Z,31nm,0.6s						
YAK	Yakutsk	9.14	214	eP	Pn	21 10 22.2	-0.5
YAK				e		21 12 00.6	
YAK				pmax	pmax		
	comp=N,6.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.4s						
YAK				pmax	pmax		
	comp=Z,14nm,0.4s						
YAK				smax			
	comp=E,31nm,1.0s						
YAK				smax			
	comp=Z,24nm,0.4s						
YAK				smax			
	comp=N,25nm,0.6s						
YAK				MLR	MLR		
	comp=Z,424nm,8.0s						
BILL	Bilibino	9.37	90	ePn	Pn	21 10 27.7	+1.8
	comp=Z,12nm,0.8s						
BILL				eSn	Sn	21 12 26.5	+15
BILL	Bilibino	9.37	90	⇓iP	Pn	21 10 28.5	+2.6
BILL				eS	Sn	21 12 19.9	+8.4
BILL				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL				smax			
	comp=E,60nm,1.1s						
CLNS	Chul'man	14.89	215	eP	Pn	21 11 49.8	+8.6
CLNS				pmax	pmax		
	comp=E,18nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,28nm,0.9s						
CLNS				pmax	pmax		
	comp=N,19nm,0.8s						
BOD	Bodaibo	16.71	236	eP	Pn	21 11 59.2	-5.7
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PET	Petropavlovsk	18.94	145	⇑eP	Pn	21 12 37.8	+5.4
PET				pmax	pmax		
	comp=Z,99nm,1.3s						
TNA	Tin City	19.44	78	eP	Pn	21 12 36.9	-1.4
	comp=Z,7.7nm,1.0s						
KLR	Kul'dur	21.27	196	eP	P	21 12 53.2	-4.0
HABR	Khabarovsk	21.77	190	eP	P	21 13 02.9	+0.4
HABR				e		21 17 01.6	
HABR				eS	S	21 17 05.6	+2.3
HABR				eSS		21 17 31.9	
HABR				e		21 24 22.5	
YSS	Yuzh-Sakhalins	23.14	176	⇓eP	P	21 13 17.9	+0.7
YSS				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.2						
IMA2	Indian Mountai	23.79	67	eP	P	21 13 22.9	-0.7
IRK	Irkutsk	24.38	242	eP	P	21 13 29.5	+0.5
IRK				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
TLY	Talaya	25.06	242	⇑eP	P	21 13 34.7	-0.5
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
MOY	Mondy	25.89	245	eP	P	21 13 42.3	-0.4
ASAJ	Asahikawa	25.98	177	P	P	21 13 43.3	-0.3
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAJ	Asahikawa	25.98	177	P	P	21 13 43.3	-0.3
	comp=Z,4.0nm,0.8s,mb4.0,baz=352,slow=7.1,SNR=3.4						
MDJ	Mudanjiang	26.05	198	P	P	21 13 44.1	-0.2
MDJ				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,92nm,4.3s						
MDJ	Mudanjiang	26.05	198	eP	P	21 13 44.0	-0.3
	comp=Z,33nm,0.8s,mb4.9						
ZAK	Zakamensk	26.31	241	eP	P	21 13 44.9	-1.6
ZAK				e		21 19 19.0	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
COLA	College	26.41	66	eP	P	21 13 46.8	-0.6
	comp=Z,4.6nm,0.8s,mb4.1						
COLA	College	26.41	66	eP	P	21 13 46.8	-0.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
MCK	McKinley	26.86	68	eP	P	21 13 51.1	-0.3
	comp=Z,5.1nm,0.8s,mb4.1						
MCK	McKinley	26.86	68	eP	P	21 13 51.1	-0.3
MCK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
ULN	Ulaanbaatar	27.48	234	⇓eP	P	21 13 59.0	+1.9
SONM	Songino Array	27.69	235	P	P	21 13 57.8	-1.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	27.69	235	P	P	21 13 57.8	-1.1
	comp=Z,1.1nm,0.7s,mb3.6,baz=20,slow=8.4,SNR=10						
INK	Inuvik	28.25	52	eP	P	21 14 06.2	+2.4
	comp=Z,173nm,1.0s,mb5.6						
INK	Inuvik	28.25	52	P	P	21 14 04.5	+0.7
	comp=Z,3.4nm,0.9s,mb4.0,baz=357,slow=8.7,SNR=4.2						
INK				LR	LR	21 27 30.5	
	comp=Z,67nm,18.2s,MS3.3,baz=134,slow=41						
NVS	Novosibirsk	29.17	269	eP	P	21 14 10.7	-1.4
HHC	Hu-ho-hao-te	32.87	223	eP	P	21 14 45.1	+0.3
HHC				AP	pP	21 14 49.5	+3.2
HHC				PP	PP	21 15 54.3	-4.5
HHC				PCP	PcP	21 17 29.6	+0.4
HHC				eS	S	21 20 02.3	-0.1
HHC				SS	SS	21 21 55.1	-28
HHC				SCS	ScS	21 25 09.9	-3.4
HHC				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,86nm,5.4s						
HHC				LR	LR		
	comp=N,230nm,14.2s,MS4.2						
HHC				LR	LR		
	comp=E,295nm,16.3s,MS4.2						
HHC				LR	LR		
	comp=Z,132nm,12.0s,MS3.9						
KSRS	Korea Array	33.32	199	LR	LR	21 27 00.8	
	comp=Z,39nm,19.4s,MS3.1,baz=190,slow=34						
MJAR	Matsushiro Arr	33.55	184	P	P	21 14 51.2	+0.4
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	Matsushiro Arr	33.55	184	P	P	21 14 51.1	+0.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=35,slow=11,SNR=4.1						
KURK	Kurchatov	34.16	268	eP	P	21 14 55.5	-0.4
	comp=Z,2.0nm,0.6s,mb4.2						
KURK	Kurchatov	34.16	268	⇑iP	P	21 14 55.5	-0.4
BRVK	Borovoye	35.06	278	eP	P	21 15 02.7	-1.0
	comp=Z,2.0nm,0.8s,mb4.1						
BRVK	Borovoye	35.06	278	eP	P	21 15 02.7	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SVE	Sverdlovsk	35.19	290	eP	P	21 15 05.9	+1.1
ARU	Arti	36.18	291	eP	P	21 15 13.6	+0.3
	comp=Z,6.4nm,0.6s,mb4.7						
ARU	Arti	36.18	291	d iP	P	21 15 13.6	+0.3
ARU				S	S	21 20 53.2	0.0
ARU				SS	SS	21 23 14.4	-16
ARU				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.7						
MKAR	Makanchi Array	36.26	261	i P	P	21 15 11.6	-2.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	36.26	261	P	P	21 15 11.7	-2.4
	comp=Z,0.8nm,0.4s,mb4.0,baz=42,slow=6.7,SNR=14						
MKAR				LR	LR	21 29 33.4	
	comp=Z,50nm,19.3s,MS3.3,baz=199,slow=35						
WMQ	Urumqi	37.06	253	⇓P	P	21 15 20.9	0.0
WMQ				AP	pP	21 15 25.4	+3.0
WMQ				PP	PP	21 16 47.3	+2.2
WMQ				AMB	AMB		
	comp=Z,5.0nm,0.5s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,74nm,4.3s						
WMQ				LR	LR		
	comp=N,40nm,23.2s,MS3.7						
WMQ				LR	LR		
	comp=E,139nm,19.0s,MS3.7						
WMQ				LR	LR		
	comp=Z,56nm,13.5s						
YKA	Yellowknife Ar	37.73	47	P	P	21 15 25.2	-1.2
YKA	Yellowknife Ar	37.73	47	P	P	21 15 25.2	-1.2
	comp=Z,0.4nm,0.5s,mb3.4,baz=331,slow=7.9,SNR=6.6						
JOF	Joensuu	38.48	316	ep	P	21 15 31.7	-1.0
	comp=Z,4.1nm,0.6s,mb4.3						
JOF	Joensuu	38.48	316	eP	P	21 15 31.7	-1.0
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
FINES	FINESS Array B	40.99	318	P	P	21 15 53.7	+0.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,85nm,19.0s						
FINES	FINESS Array B	40.99	318	P	P	21 15 53.6	+0.1
	comp=Z,2.1nm,0.6s,mb4.0,baz=29,slow=9.0,SNR=12						
FINES				LR	LR	21 35 52.1	
	comp=Z,85nm,19.0s,MS3.6,baz=97,slow=41						
AAK	Ala-Archa	42.57	266	eP	P	21 16 06.7	0.0
	comp=Z,3.4nm,0.9s,mb4.1						
AAK	Ala-Archa	42.57	266	⇑eP	P	21 16 06.8	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
OBN	Obninsk	43.90	307	eP	P	21 16 16.7	-0.6
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
CD2	Chengdu	44.23	228	eP	P	21 16 20.6	+0.3
CD2				AP	pP	21 16 25.1	+3.3
CD2				XP	sP	21 16 28.0	+5.6
CD2				PP	PP	21 18 04.8	+1.7
CD2				S	S	21 22 52.6	-1.3
CD2				SS	SS	21 26 02.1	-9.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
CD2				AMB	AMB		
	comp=Z,20nm,5.2s						
CD2				LR	LR		
	comp=N,120nm,13.6s						
CD2				LR	LR		
	comp=Z,100nm,14.4s,MS3.9						
NB2	NORSAR Subarra	44.44	328	PKP	P	21 16 20.6	-1.0
	comp=Z,0.9nm,0.6s,mb3.7,baz=16,slow=3.3						
NOA	NORSAR Array B	44.44	328	P	P	21 16 21.8	+0.2
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	NORSAR Array B	44.44	328	P	P	21 16 21.8	+0.2
	comp=Z,2.8nm,0.8s,mb4.1,baz=23,slow=7.9,SNR=3.6						
VRSR	Storozhevoye	46.60	302	eP	P	21 16 39.1	+0.3
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.9s						
VORD	Divnogorie	46.79	302	eP	P	21 16 38.6	-1.7
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
VORD				pmax	pmax		
	comp=N,30nm,1.1s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.8s						
NEW	Newport	49.48	59	LR	LR	21 39 11.7	
	comp=E,68nm,20.7s,MS3.6,baz=68,slow=38						
AKASG	Malin Array Be	49.84	309	P	P	21 17 03.5	-0.3
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG	Malin Array Be	49.84	309	P	P	21 17 03.5	-0.3
	comp=Z,5.9nm,0.6s,mb4.8,baz=27,slow=8.5,SNR=17						
KMI	Kunming	50.01	227	P	P	21 17 09.3	+3.9
KMI				AP	pP	21 17 13.5	+6.5
KMI				AMB	AMB		
	comp=Z,3.0nm,1.0s,mb4.3						
KMI				LR	LR		
	comp=Z,47nm,19.3s,MS3.5						
KIV	Kislovodsk	52.03	295	eP	P	21 17 21.6	+1.2
	comp=Z,6.6nm,0.8s,mb4.6						
KIV	Kislovodsk	52.03	295	⇑iP	P	21 17 21.8	+1.4
KIV				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
KIV	Kislovodsk	52.03	295	⇓iP	P	21 17 21.4	+1.0
KWP	Kalwaria	52.51	314	eP	P	21 17 24.8	+0.9
	comp=Z,21nm,0.8s,mb5.1						
KWP	Kalwaria	52.51	314	⇓iP	P	21 17 25.1	+1.3
OJC	Ojcow	52.67	316	eP	P	21 17 25.4	+0.4
STHS	Stebnicka Huta	53.07	315	i P	P	21 17 29.2	+1.2
	comp=Z,7.6nm,0.8s,mb4.7						
STHS	Stebnicka Huta	53.07	315	i P	P	21 17 29.2	+1.2
STHS				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
CLL	Collm	53.19	322	⇓iP	P	21 17 28.8	-0.1
	comp=Z,7.0nm,0.7s,mb4.7						
CLL	Collm	53.19	322	⇓iP	P	21 17 28.8	-0.1
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
CLL	Collm	53.19	322	⇓iP	P	21 17 28.8	-0.1
	comp=Z,7.0nm,0.7s,mb4.7						
CLL	Collm	53.19	322	eP	P	21 17 29.1	+0.2
	comp=Z,7.0nm,0.7s,mb4.7						
KOLS	Kolonicke sedl	53.26	314	eP	P	21 17 30.1	+0.7
NIE	Niedzica	53.29	315	eP	P	21 17 30.9	+1.3
DPC	Dobruska-Polom	53.36	319	eP	P	21 17 30.9	+0.8
OKC	Ostrava-Krasne	53.42	317	eP	P	21 17 31.4	+0.9
BOZ	Bozeman (W)	53.45	56	eP	P	21 17 31.4	+0.6
	comp=Z,3.0nm,0.9s,mb4.2						
BOZ	Bozeman (W)	53.45	56	eP	P	21 17 31.4	+0.6
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
FBE	Freiberg	53.48	321	eP	P	21 17 31.4	+0.4
	comp=Z,12nm,1.4s,mb4.6						
CRVS	Cervenica-Dubn	53.49	314	eP	P	21 17 31.7	+0.6
MORC	Moravsky Berou	53.61	318	eP	P	21 17 32.2	+0.3
	comp=Z,5.0nm,0.8s,mb4.5						
MORC	Moravsky Berou	53.61	318	⇓iP	P	21 17 32.9	+0.9
SCHQ	Schefferville	53.90	19	P	P	21 17 33.7	-0.3
SCHQ	Schefferville	53.90	19	P	P	21 17 33.7	-0.3
	comp=Z,1.4nm,0.8s,mb3.9,baz=18,slow=6.4,SNR=5.0						
TRPA	Tarpa	53.94	313	⇓iP	P	21 17 35.2	+0.8
PRU	Pruhonice	54.10	320	eP	P	21 17 35.5	0.0
MOX	Moxa	54.11	322	eP	P	21 17 36.4	+0.8
MOX	Moxa	54.11	322	eP	P	21 17 36.2	+0.6
	comp=Z,5.0nm,0.7s,mb4.5						
KECS	Kecovo	54.12	315	eP	P	21 17 35.9	+0.2
	comp=Z,1.5nm,0.5s,mb4.2						
KECS	Kecovo	54.12	315	eP	P	21 17 35.9	+0.2
KECS				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
TANN	Tannenbergstha	54.15	322	eP	P	21 17 36.5	+0.6
	comp=Z,4.0nm,0.8s,mb4.4						
WERD	Werda	54.15	322	eP	P	21 17 36.8	+0.9
	comp=Z,9.0nm,0.9s,mb4.7						
GUNZ	Gunzen	54.22	322	eP	P	21 17 37.5	+1.1
	comp=Z,8.0nm,0.9s,mb4.7						
VRAC	Vranov	54.27	318	⇑P	P	21 17 36.8	0.0
VRAC	Vranov	54.27	318	⇑iP	P	21 17 36.8	0.0
UBBA	Unterbreizbach	54.28	324	eP	P	21 17 38.1	+1.3
	comp=Z,4.0nm,0.9s,mb4.3						
WERN	Wernitzgruen	54.29	322	eP	P	21 17 37.7	+0.8
	comp=Z,5.0nm,1.0s,mb4.4						
VYHS	Vyhne	54.51	316	eP	P	21 17 39.4	+0.9
	comp=Z,5.2nm,1.2s,mb4.4						
VYHS	Vyhne	54.51	316	eP	P	21 17 39.4	+0.9
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
PSZ	Piszkesteto	54.79	315	eP	P	21 17 40.4	-0.2
	comp=Z,12nm,1.0s,mb4.9						
PSZ	Piszkesteto	54.79	315	eP	P	21 17 40.4	-0.2
PSZ				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
VRI	Vrincioaia	54.94	309	⇓P	P	21 17 43.3	+1.6
VRI	Vrincioaia	54.94	309	⇓iP	P	21 17 43.3	+1.6
GRA1	Grafenberg Arr	55.09	322	eP	P	21 17 44.0	+1.2
	comp=Z,9.0nm,1.0s,mb4.8						
GRF	Grafenberg Arr	55.09	322	eP	P	21 17 44.0	+1.2
GRF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
GRF	Grafenberg Arr	55.09	322	eP	P	21 17 44.0	+1.2
GRF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
GRF	Grafenberg Arr	55.09	322	eP	P	21 17 44.0	+1.2
	comp=Z,9.0nm,1.0s,mb4.8						
KHC	Kasperske Hory	55.12	320	eP	P	21 17 43.5	+0.6
TNS	Taunus Mts	55.16	325	eP	P	21 17 44.1	+0.9
TNS				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.9						
TNS	Taunus Mts	55.16	325	eP	P	21 17 44.1	+0.9
	comp=Z,23nm,1.7s,mb4.9						
GEC2	GERESS Array S	55.36	320	eP	P	21 17 45.4	+0.7
GEC2				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.7						
GEC2	GERESS Array S	55.36	320	eP	P	21 17 45.4	+0.7
	comp=Z,14nm,1.9s,mb4.7						
GERES	GERESS Array B	55.36	320	P	P	21 17 43.6	-1.1
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	55.36	320	P	P	21 17 43.6	-1.1
	comp=Z,1.8nm,0.8s,mb4.2,baz=27,slow=6.6,SNR=14						
MLR	Muntele Rosu	55.50	309	⇓iP	P	21 17 44.1	-1.6
TIRR	Tirgusor	55.78	307	⇓P	P	21 17 47.9	0.0
TIRR	Tirgusor	55.78	307	⇓iP	P	21 17 47.8	0.0
GIVF	Givet	55.97	327	eP	P	21 17 48.8	-0.3
BAIF	Baives	56.13	328	eP	P	21 17 49.9	-0.3
GZR	Gura Zlata	56.42	312	⇓P	P	21 17 53.5	+1.1
GZR	Gura Zlata	56.42	312	⇓iP	P	21 17 53.5	+1.2
BZS	Buzias	56.51	313	⇑P	P	21 17 53.6	+0.7
BZS	Buzias	56.51	313	⇑iP	P	21 17 53.6	+0.6
PDAR	Pinedale Array	56.68	56	P	P	21 17 52.8	-1.5
	comp=Z,0.6nm,0.8s,mb3.7,baz=48,slow=2.4,SNR=4.7						
PKSM	Moragy	56.69	315	⇓P	P	21 17 54.7	+0.5
PKSM	Moragy	56.69	315	⇓iP	P	21 17 54.7	+0.5
BFO	Black Forest	56.99	324	eP	P	21 17 56.9	+0.6
BFO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BFO	Black Forest	56.99	324	eP	P	21 17 56.9	+0.6
	comp=Z,5.0nm,1.0s,mb4.5						
CDF	Champ du Feu	57.12	325	eP	P	21 17 57.3	+0.1
	comp=Z,16nm,1.1s,mb4.7						
CDF	Champ du Feu	57.12	325	eP	P	21 17 57.3	+0.1
	comp=Z,8.2nm,1.1s,mb4.7						
CDF	Champ du Feu	57.12	325	eP	P	21 17 57.3	+0.1
CDF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
MEZF	Maizieres J'vi	57.47	326	eP	P	21 17 59.3	-0.4
HAU	Haudompre	57.69	325	eP	P	21 18 00.9	-0.4
	comp=Z,5.2nm,0.6s,mb4.4						
HAU	Haudompre	57.69	325	eP	P	21 18 00.9	-0.4
	comp=Z,2.6nm,0.6s,mb4.4						
HAU	Haudompre	57.69	325	eP	P	21 18 00.9	-0.4
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
HINF	Hinteralfeld	57.77	325	eP	P	21 18 01.4	-0.5
NVAR	Mina Array Bea	58.04	65	P	P	21 18 03.1	-0.8
	comp=Z,0.3nm,0.7s,mb3.4,baz=329,slow=3.8,SNR=4.2						
FLN	La Foliniere	58.20	331	eP	P	21 18 04.8	-0.1
	comp=Z,23nm,0.9s,mb4.9						
FLN	La Foliniere	58.20	331	eP	P	21 18 04.8	-0.1
	comp=Z,12nm,0.9s,mb4.9						
FLN	La Foliniere	58.20	331	eP	P	21 18 04.8	-0.1
FLN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
LDF	La Druitiere	58.31	330	eP	P	21 18 05.4	-0.2
GRR	Gorron	58.63	331	eP	P	21 18 07.7	-0.2
BRTR	Keskin Array B	58.65	300	⇑eP	P	21 18 09.1	+1.0
BRTR	Keskin Array B	58.65	300	P	P	21 18 09.2	+1.1
	comp=Z,1.5nm,0.9s,mb4.0,baz=44,slow=9.0,SNR=5.5						
LOR	Lormes	58.88	327	eP	P	21 18 09.0	-0.6
	comp=Z,13nm,0.8s,mb4.7						
LOR	Lormes	58.88	327	eP	P	21 18 09.0	-0.6
	comp=Z,6.7nm,0.8s,mb4.7						
LOR	Lormes	58.88	327	eP	P	21 18 09.0	-0.6
LOR				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.0nm,0.8s,mb4.7						
SGMF	Saint Gilles	59.04	332	eP	P	21 18 10.1	-0.6
CABF	La Chapelle	59.08	325	eP	P	21 18 11.0	0.0
SSF	Saint Saulge	59.14	327	eP	P	21 18 11.1	-0.3
	comp=Z,6.2nm,0.7s,mb4.4						
SSF	Saint Saulge	59.14	327	eP	P	21 18 11.1	-0.3
	comp=Z,3.1nm,0.7s,mb4.5						
SSF	Saint Saulge	59.14	327	eP	P	21 18 11.1	-0.3
SSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
AVF	Avril sur Loir	59.43	327	eP	P	21 18 13.1	-0.3
	comp=Z,15nm,1.1s,mb4.7						
AVF	Avril sur Loir	59.43	327	eP	P	21 18 13.1	-0.3
	comp=Z,7.6nm,1.1s,mb4.6						
AVF	Avril sur Loir	59.43	327	eP	P	21 18 13.1	-0.3
AVF				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
QUIF	Quistinic	59.46	333	eP	P	21 18 13.3	-0.3
	comp=Z,26nm,1.1s,mb4.8						
QUIF	Quistinic	59.46	333	eP	P	21 18 13.3	-0.3
	comp=Z,13nm,1.1s,mb4.9						
QUIF	Quistinic	59.46	333	eP	P	21 18 13.3	-0.3
QUIF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
SMF	Signal de Mont	59.48	327	eP	P	21 18 13.6	-0.2
LPL	La Plagne	60.00	324	eP	P	21 18 17.2	-0.2
LPG	La Plagne	60.01	324	eP	P	21 18 17.4	0.0
TCF	Toulx Ste Croi	60.12	328	eP	P	21 18 17.9	-0.3
	comp=Z,6.6nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	60.12	328	eP	P	21 18 17.9	-0.3
	comp=Z,3.3nm,0.8s,mb4.4						
TCF	Toulx Ste Croi	60.12	328	eP	P	21 18 17.9	-0.3
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
MFF	Saint Martin d	60.24	330	eP	P	21 18 18.6	-0.4
ORIF	Oris-en-Rattie	60.74	325	eP	P	21 18 22.1	-0.3
	comp=Z,6.0nm,0.7s,mb4.6						
ORIF	Oris-en-Rattie	60.74	325	eP	P	21 18 22.1	-0.3
	comp=Z,3.0nm,0.7s,mb4.5						
ORIF	Oris-en-Rattie	60.74	325	eP	P	21 18 22.1	-0.3
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
MBDF	Montbardon	60.75	324	eP	P	21 18 22.3	-0.2
VIVF	Saint-Julien-l	61.04	326	eP	P	21 18 24.0	-0.5
CAF	Calviac	61.47	328	eP	P	21 18 26.3	-1.1
	comp=Z,8.0nm,0.9s,mb4.5						
CAF	Calviac	61.47	328	eP	P	21 18 26.3	-1.1
	comp=Z,4.0nm,0.9s,mb4.5						
CAF	Calviac	61.47	328	eP	P	21 18 26.3	-1.1
CAF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
LFF	La Frestale	61.69	329	eP	P	21 18 28.4	-0.5
	comp=Z,64nm,1.6s,mb5.2						
LFF	La Frestale	61.69	329	eP	P	21 18 28.4	-0.5
	comp=Z,32nm,1.6s,mb5.2						
LFF	La Frestale	61.69	329	eP	P	21 18 28.4	-0.5
LFF				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.2						
SMRF	Simiane la Rot	61.71	325	eP	P	21 18 28.7	-0.3
FRF	La Foret Royal	61.89	324	eP	P	21 18 29.7	-0.5
LASF	Ste Croix	61.95	326	eP	P	21 18 30.3	-0.3
	comp=Z,7.1nm,0.8s,mb4.5						
PGF	Pioggiola	62.37	321	eP	P	21 18 33.2	-0.3
	comp=Z,5.5nm,0.9s,mb4.4						
PGF	Pioggiola	62.37	321	eP	P	21 18 33.2	-0.3
	comp=Z,2.8nm,0.9s,mb4.4						
PGF	Pioggiola	62.37	321	eP	P	21 18 33.2	-0.3
PGF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
MTLF	Montolieu	62.97	327	eP	P	21 18 37.0	-0.5
	comp=Z,8.0nm,1.0s,mb4.5						
MTLF	Montolieu	62.97	327	eP	P	21 18 37.0	-0.5
	comp=Z,4.0nm,1.0s,mb4.5						
MTLF	Montolieu	62.97	327	eP	P	21 18 37.0	-0.5
MTLF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
EPF	Esparros	63.61	328	eP	P	21 18 41.2	-0.5
	comp=Z,9.5nm,0.9s,mb4.5						
EPF	Esparros	63.61	328	eP	P	21 18 41.2	-0.5
	comp=Z,4.8nm,0.9s,mb4.5						
EPF	Esparros	63.61	328	eP	P	21 18 41.2	-0.5
EPF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
SJPF	Ste Jean	63.81	330	eP	P	21 18 42.8	-0.2
ETSF	Etsaut	63.90	329	eP	P	21 18 43.1	-0.5
ANMO	Albuquerque	64.83	57	⇓eP	P	21 18 51.9	+2.1
ESDC	Sonseca Array	67.62	331	P	P	21 19 07.2	-0.5
	comp=Z,1.1nm,0.7s,mb4.0,baz=17,slow=8.3,SNR=5.2						
KEST	Kesra	68.82	319	P	P	21 19 15.3	+0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=284,slow=1.5,SNR=9.9						
TXAR	Lajitas Array	70.90	56	P	P	21 19 27.1	-1.0
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	Lajitas Array	70.90	56	P	P	21 19 27.1	-1.0
	comp=Z,1.7nm,1.0s,mb3.9,baz=7.1,slow=5.0,SNR=6.3						
WRA	Warramunga Arr	89.81	186	P	P	21 21 09.7	+0.2
	comp=Z,0.4nm,1.0s,mb3.7,baz=6.3,slow=4.2,SNR=3.5						
TORD	Torodi Ar. Bea	92.31	320	P	P	21 21 19.3	-2.2
	comp=Z,1.7nm,0.7s,mb4.5,baz=7.3,slow=4.0,SNR=17						
ASAR	Alice Springs	93.53	186	P	P	21 21 26.5	-0.2
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	93.53	186	P	P	21 21 26.5	-0.2
	comp=Z,0.5nm,1.0s,mb3.9,baz=9.8,slow=4.7,SNR=3.6						
PLCA	Paso Flores	146.51	45	PKP2	PKPab	21 27 51.5	-1.1
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLCA	Paso Flores	146.51	45	PKPbc	PKPbc	21 27 51.5	0.0
	comp=Z,1.3nm,0.6s,baz=340,slow=5.3,SNR=4.0						

CASC 16 21:16:27.9±2.2, 855N×8296W, h0km±6km, MD4.0, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DVD	David	0.51	103	eP	Pg	21 16 39.4	+1.6
DVD				eS	Sg	21 16 47.5	+3.0
BAR1		0.77	333	⇓eP	Pg	21 16 44.1	+1.4
CNI	Changuinola	0.96	27	⇑iP	Pg	21 16 48.0	+1.6
BUS	Buena Vista	1.27	322	eP	Pg	21 16 51.8	-0.6
QCR	Quepos	1.48	306	eP	Pn	21 16 54.9	-0.8
URSC	Urasca	1.51	328	eP	Pn	21 16 55.5	-0.7
LCR2	La Lucha 2	1.57	319	eP	Pn	21 16 55.4	-1.7
LAJ	Bijagual	1.74	319	eP	Pn	21 17 01.4	+2.0
LAJ				eS	Sn	21 17 30.5	+8.2
PRS1	Puriscal	1.95	317	eP	Pn	21 17 01.4	-1.0
CGA2	Cerro Gallo 2	2.08	314	eP	Pn	21 17 04.1	0.0
CGA2				eS	Sn	21 17 33.2	+2.4
JCR	Jicaral	2.49	301	eP	Pn	21 17 09.7	0.0
JCR				eS	Sn	21 17 43.3	+2.5
AZU	Azuero	2.76	106	eP	Pn	21 17 12.2	-1.3
PTP	Ponta Puerca	19.40	58	⇓iP		21 16 36.9	

NEIC 16 21:25:22.7, 31.13S×68.59W, h140km, MD3.7(GUC), After GUC.

GUC 16 21:25:22.7±0.7, 3113S×6859W, h140km, MD3.7, ML3.9, 3D, San Juan Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	2.07	268	eP	Pn	21 25 58.7	+0.7
CMCH				iS	Sn	21 26 26.1	+1.1
CMCH	Combarbala	2.07	268	eP	Pn	21 25 58.7	+0.7
CMCH				iS	Sn	21 26 26.1	+1.1
CMCH				AML	AML	21 26 28.8	
	comp=E,1µm,0.8s						
OVCH	Ovalle	2.30	282	eP	Pn	21 26 01.7	+0.8
OVCH				iS	Sn	21 26 30.6	+0.4
LSCH	La Serena	2.59	297	iS	Sn	21 26 36.6	-0.1
CHNG	Los Chungos	2.60	252	eP	Pn	21 25 49.5	-15
CHNG				iS	Sn	21 26 21.7	-15
FCH	Farellones	2.62	213	eP	Pn	21 26 06.3	+1.4
FCH				iS	Sn	21 26 39.2	+1.9
PEL	Peldehue	2.68	221	eP	Pn	21 26 06.1	+0.5
PEL				iS	Sn	21 26 38.9	+0.2
PEL				AML	AML	21 26 40.8	
	comp=N,248nm,0.4s						
ROCH	El Roble	2.76	228	⇓iP	Pn	21 26 07.2	+0.6
PCH	Pirque	2.97	213	⇓iP	Pn	21 26 10.0	+0.8
PCH				iS	Sn	21 26 46.3	+1.1
LMEL	Las Melosas	3.03	206	eP	Pn	21 26 11.1	+1.0
TACH	Talagante	3.21	218	⇓iP	Pn	21 26 12.5	+0.3
TACH				iS	Sn	21 26 50.9	+0.3
CHCH	Chadas Angostu	3.29	211	iP	Pn	21 26 14.1	+0.7
CICH	Cipreses	3.54	205	iP	Pn	21 26 17.6	+1.1
LNV	Longovilo	3.69	219	iP	Pn	21 26 17.4	-1.2

IDC 16 21:34:28.4±4.3, 128N×12688E, h28km±27km, mb3.4/4, mb1 3.6/5, mb1mx3.4/15, mbtmp3.4/5, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/14, Error ellipse: s-maj=92.2km s-min=15.7km az=72.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.30	184	P	Pn	21 38 52.1	-0.3
	0.1nm,0.3s,baz=3.4,slow=19,SNR=2.4						
FITZ				S	Sn	21 42 22.2	-5.9
	0.2nm,0.3s,baz=302,slow=15,SNR=6.2						
WRA	Warramunga Arr	22.32	161	P	P	21 39 24.8	+0.9
	1.6nm,0.4s,baz=338,slow=11,SNR=28						
WRA				S	S	21 43 24.7	-3.6
	1.1nm,1.0s,baz=335,slow=20,SNR=5.5						
WRA				LR	LR	21 49 23.7	
	comp=Z,37nm,18.1s,baz=75,slow=40						
ASAR	Alice Springs	25.72	165	P	P	21 39 57.4	+0.9
	0.9nm,0.4s,baz=344,slow=11,SNR=20						
ASAR				S	S	21 44 27.6	+3.8
	1.0nm,0.7s,baz=348,slow=20,SNR=8.5						
SONM	Songino Array	49.65	342	P	P	21 43 17.4	-0.1
	0.3nm,0.8s,baz=142,slow=7.3,SNR=2.9						
MKAR	Makanchi Array	59.65	326	P	P	21 44 29.3	-0.8
	0.4nm,0.5s,baz=125,slow=8.6,SNR=6.4						

ISCJB 16 21:35:53.9±0.3, 28.67S±0.02×70.51W±0.09, h83km±4km, mb4.0/11, Error ellipse: s-maj=12.7km s-min=4.1km az=0.0

NEIC 16 21:35:53.8, 28.70S×70.35W, h76km, MG5.1(GUC), After GUC.

NEIC Felt [III] at Alto del Carmen, Freirina, Huasco and Vallenar; [II] at Copiapo and Tierra Amarilla.

GUC 16 21:35:53.8±0.9, 28.70S×70.35W, h76km±9km, ML5.1

IDC 16 21:35:55.5±0.7, 28.66S×70.53W, h79km±5km, mb3.9/11, mb1 4.0/13, mb1mx3.9/18, mbtmp3.8/13, MS2.9/1, Ms1 3.1/1, ms1mx2.4/21, Error ellipse: s-maj=25.5km s-min=10.1km az=62.0

ISC 16 21:35:55.0±0.3, 2866S±002×7055W±009, h76km±3km, h81km±1.4km:pP-P, n43, σ0.99/53, mb4.0/11, 3C-4D, Central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VACH	Vallenar	0.20	294	⇓iP	Pn	21 36 06.9	+0.5
VACH				iS	Sn	21 36 15.9	+1.2
VACH	Vallenar	0.20	294	⇓iP	Pn	21 36 06.9	+0.5
VACH				iS	Sn	21 36 15.9	+1.2
VACH				AML	AML	21 36 17.2	
	comp=N,202µm,0.5s						
LCO	Las Campanas	0.37	201	ePn	Pn	21 36 07.6	+0.2
LCO				eSn	Sn	21 36 17.4	+0.9
CPCH	Copiapo	1.31	8	eP	Pn	21 36 17.0	-0.7
CPCH				iS	Sn	21 36 34.8	0.0
CPCH	Copiapo	1.31	8	eP	Pn	21 36 17.0	-0.7
CPCH				iS	Sn	21 36 34.8	0.0
CPCH				AML	AML	21 36 36.8	
	comp=E,100µm,0.1s						
LSCH	La Serena	1.38	206	⇑eP	Pn	21 36 18.5	-0.2
LSCH				iS	Sn	21 36 35.5	-1.0
TLL	Tololo Astrono	1.52	188	P	Pn	21 36 20.8	+0.4
TLL				iS	Sn	21 36 40.0	+0.3
TLL	Tololo Astrono	1.52	188	⇑iP	Pn	21 36 20.8	+0.4
TLL				iS	Sn	21 36 40.0	+0.3
TLL				AML	AML	21 36 48.3	
	comp=N,8µm,0.8s						
CDCH	Caldera	1.60	351	⇑eP	Pn	21 36 21.6	0.0
CDCH				iS	Sn	21 36 42.6	+1.1
OVCH	Ovalle	2.02	196	⇓iP	Pn	21 36 26.5	-0.6
OVCH				iS	Sn	21 36 51.0	-0.6
OVCH	Ovalle	2.02	196	⇓iP	Pn	21 36 26.5	-0.6
OVCH				iS	Sn	21 36 51.0	-0.6
OVCH				AML	AML	21 36 57.9	
	comp=N,11µm,0.4s						
CMCH	Combarbala	2.54	189	eP	Pn	21 36 33.1	-0.9
CMCH				AML	AML	21 37 18.8	
	comp=E,18µm,0.6s						
CHNG	Los Chungos	3.32	194	eP	Px	21 36 28.2	
CHNG				iS	Sx	21 37 09.4	
CFAA	Coronel Fontan	3.55	146	P	Pn	21 36 49.1	+1.3
	comp=E,7.7nm,0.3s,baz=321,slow=12,SNR=205						
CFAA				S	Sn	21 37 30.7	+2.1
	comp=E,13nm,0.3s,baz=211,slow=22,SNR=14						
CPN1	Cerro Paranal	4.02	2	eP	Pn	21 36 53.3	-0.9
PEL	Peldehue	4.47	181	eP	Pn	21 37 00.1	-0.2
PEL				iS	Sn	21 37 49.8	-1.3
FCH	Farellones	4.66	177	eP	Pn	21 37 03.8	+0.9
FCH				iS	Sn	21 37 56.2	+0.6
ANTU	Antumapu	4.89	181	eP	Pn	21 37 03.7	-2.3
ANCH	Antofagasta	4.96	1	eP	Pn	21 37 05.0	-2.0
CHCH	Chadas Angostu	5.26	181	eP	Pn	21 37 10.5	-0.5
CEN1	Los Morros	5.26	3	eP	Pn	21 37 06.2	-5.0
TRQA	Tornquist	11.79	145	ePn	Pn	21 38 39.5	-0.6
	comp=E,32nm,0.8s						
PLCA	Paso Flores	12.04	180	P	Pn	21 38 43.3	-0.3
	comp=E,0.1nm,0.3s,baz=4.2,slow=18,SNR=3.7						
LPAZ	La Paz	12.51	11	ePn	Pn	21 38 46.7	-3.5
	comp=E,4.9nm,0.5s						
LPAZ	La Paz	12.51	11	P	Pn	21 38 46.9	-3.3
	comp=E,0.4nm,0.3s,baz=203,slow=9.0,SNR=7.2						
LPAZ				LR	LR	21 43 58.0	
	comp=E,60nm,20.2s,baz=187,slow=39						
SIV	San Ignacio	15.35	37	P	Pn	21 39 25.0	-2.2
	comp=E,0.7nm,0.3s,baz=236,slow=9.5,SNR=13						
TEIG	Tepich	51.53	339	P	P	21 44 53.7	+0.6
TEIG	Tepich	51.53	339	P	P	21 44 53.7	+0.6
	comp=E,5.1nm,0.6s,mb4.8,baz=146,slow=0.3,SNR=4.7						
VNA2	Neumayer--Watz	54.47	159	e	P	21 45 15.3	+1.1
	baz=301,slow=7.8						
VNA2				e	pP	21 45 36.0	+2.5
VNA2				e		21 45 44.8	
SNAA	Sanae	56.08	159	e	P	21 45 26.1	+0.4
SNAA				e	pP	21 45 46.9	+1.8
SNAA				e		21 45 55.3	
SNAA	Sanae	56.08	159	P	P	21 45 26.0	+0.2
	comp=E,2.3nm,0.7s,mb4.3,baz=314,slow=6.8,SNR=9.6						
SNAA				pP	pP	21 45 45.4	+0.3
	comp=E,1.4nm,0.8s,baz=282,slow=8.3,SNR=1.8						
TXAR	Lajitas Array	65.78	328	P	P	21 46 33.3	+1.3
	comp=E,0.1nm,0.3s,mb3.1,baz=155,slow=9.5,SNR=6.9						
DBIC	Dimbokro	72.28	72	P	P	21 47 12.8	+0.1
	comp=E,4.5nm,0.5s,mb4.5,baz=196,slow=8.9,SNR=17						
MAW	Mawson	77.92	163	P	P	21 47 44.2	0.0
	comp=E,2.9nm,0.5s,mb4.3,baz=200,slow=10,SNR=14						
PDAR	Pinedale Array	79.62	332	P	P	21 47 54.8	+1.0
	comp=E,0.3nm,0.4s,mb3.5,baz=120,slow=5.8,SNR=3.8						
PDAR				pP	pP	21 48 15.8	+1.6
	comp=E,0.2nm,0.4s,baz=180,slow=0.9,SNR=2.6						
NVAR	Mina Array Bea	80.29	324	P	P	21 47 59.2	+1.8
	comp=E,0.3nm,0.6s,mb3.3,baz=146,slow=7.3,SNR=3.7						
TORD	Torodi Ar. Bea	81.19	70	P	P	21 48 02.9	+0.1
	comp=E,3.9nm,0.8s,mb4.3,baz=271,slow=5.4,SNR=17						
TORD				pP	pP	21 48 23.4	+0.1
	comp=E,3.9nm,0.7s,baz=266,slow=4.7,SNR=8.6						
BOSA	Boshof	81.42	118	P	P	21 48 03.3	-0.6
	comp=E,1.0nm,0.5s,mb3.9,baz=270,slow=3.0,SNR=3.3						
BOSA				pP	pP	21 48 25.1	+0.7
	comp=E,0.7nm,0.4s,baz=228,slow=4.9,SNR=1.3						
ULM	Lac du Bonnet	81.71	344	P	P	21 48 04.4	-0.3
	comp=E,0.8nm,0.6s,mb3.8,baz=130,slow=4.3,SNR=4.3						
YKA	Yellowknife Ar	97.43	341	P	P	21 49 19.3	-0.2
	comp=E,0.2nm,0.6s,mb3.7,baz=138,slow=4.6,SNR=5.8						
ASAR	Alice Springs	122.89	207	PKP	PKPdf	21 54 42.4	-0.6
	comp=E,0.7nm,0.5s,baz=132,slow=1.7,SNR=17						
WRA	Warramunga Arr	126.03	209	PKP	PKPdf	21 54 48.2	-0.8
	comp=E,2.4nm,0.6s,baz=159,slow=1.6,SNR=52						
WRA				pPKP	pPKPdf	21 55 10.8	+0.1
	comp=E,0.7nm,0.6s,baz=159,slow=1.7,SNR=4.5						
MKAR	Makanchi Array	152.12	42	PKPbc	PKPbc	21 55 41.9	+0.5
	comp=E,3.5nm,0.7s,baz=304,slow=1.6,SNR=5.4						

SZGRF 16 21:51:11.2, 31.12N×87.06E, h33km, mb4.8, MS4.3, Xizang

ISCJB 16 21:51:15.1±0.2, 35.55N±0.03×89.39E±0.03, h10km, mb4.6/82, MS4.3/39, Error ellipse: s-maj=4.1km s-min=3.1km az=5.0

LDG 16 21:51:16.1±0.2, 35.82N×89.06E, h10km, Mb4.9/29, Ms4.2/7, Error ellipse: s-maj=9.8km s-min=2.8km az=94.0

MOS 16 21:51:16.9±1.0, 35.56N×89.37E, h24km, mb4.8/53, MS4.3/18, Error ellipse: s-maj=8.1km s-min=5.3km az=118.0

BJI 16 21:51:16.7, 35.67N×89.48E, h16km, mB4.9, mb4.3, Ms4.8, Msz4.6

IDC 16 21:51:20.2±5.7, 35.57N×89.52E, h35km±45km, mb4.1/21, mb1 4.2/23, mb1mx4.1/25, mbtmp4.1/23, ML3.6/2, MS4.2/25, Ms1 4.2/25, ms1mx4.0/37, Error ellipse: s-maj=21.3km s-min=12.0km az=30.0

NEIC 16 21:51:21.5±0.7, 35.64N×89.41E, h45km±6km, mb4.7/44, Error ellipse: s-maj=6.4km s-min=4.9km az=210.0

GCMT 16 21:51:21.5±0.2, 35.56N×89.50E, h16km, MW5.1/62, Moment Tensor Solution. s34,c48; s62,c117; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.34±.17; $M_{\theta\theta}$-1.24±.12; $M_{\phi\phi}$4.58±.13; $M_{r\theta}$-1.24±.39; $M_{\theta\phi}$1.52±.10; $M_{\phi r}$1.43±.32; Best double couple: $M_0$4.72200×10^{16} NP1:ϕ_s41.00000°,δ45.00000°,λ-47.00000°. NP2: ϕ_s168.00000°,δ59.00000°,λ-124.00000°. Principal axes: T 5.1010, Plg8.0000°, Azm282.0000°; N -0.7580, Plg29.0000°, Azm188.0000°; P -4.3430, Plg60.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 16 21:51:17.1±0.2, 3555N±002×8943E±002, h10km, n266, σ1.20/271, mb4.6/82, MS4.3/39, 12C-5D, Xizang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	Lhasa	6.01	166	P	Pn	21 52 51.8	+5.8
LSA				SG	Sg	21 54 31.3	+1.4
LSA				LR	LR		
	comp=N,1µm,13.3s						
LSA				LR	LR		
	comp=E,9µm,12.6s						
LSA				LR	LR		
	comp=Z,4µm,11.1s						
LSA	Lhasa	6.01	166	ePn	Pn	21 52 52.0	+6.0
	comp=Z,68nm,1.0s						
LSA	Lhasa	6.01	166	eP	Pn	21 52 52.0	+6.0
LSA				pmax	pmax		
	comp=Z,68nm,1.0s						
WMQ	Urumqi	8.37	351	eP	Pn	21 53 20.5	+2.1
GTA	Gaotai	9.11	62	P	Pn	21 53 29.8	+1.3
GTA				AP		21 53 33.1	
GTA				S	Sn	21 55 09.6	-1.4
GTA				AMB	AMB		
	comp=Z,4.0nm,1.0s						
GTA				AMB	AMB		
	comp=Z,186nm,5.3s						
GTA				LR	LR		
	comp=N,5µm,14.8s						
GTA				LR	LR		
	comp=E,4µm,11.8s						
GTA				LR	LR		
	comp=Z,4µm,11.8s						
SHL	Shillong	10.17	167	eP	Pn	21 53 46.0	+2.9
SHL				ex	x	21 56 48.0	
KSH	Kashi	11.40	294	⇑iP	Pn	21 54 02.3	+2.4
KSH				AP		21 54 09.3	
KSH				PP		21 54 11.8	
KSH				eXP		21 54 14.3	
KSH				S	Sn	21 56 08.1	+0.9
KSH				eXS		21 56 20.6	
KSH				eSS		21 56 24.9	
KSH				LR	LR		
	comp=N,8µm,5.8s						
KSH				LR	LR		
	comp=E,12µm,6.6s						
KSH				LR	LR		
	comp=Z,5µm,6.4s						
LZH	Lanzhou	11.71	83	eP	Pn	21 54 05.8	+1.6
LZH				AP		21 54 13.5	
LZH				PP		21 54 15.1	
LZH				XP		21 54 18.9	
LZH				eS	Sn	21 56 14.0	-1.0
LZH				XS		21 56 28.0	
LZH				SS		21 56 30.0	
LZH				AMB	AMB		
	comp=Z,19nm,1.0s						
LZH				AMB	AMB		
	comp=Z,110nm,4.2s						
LZH				LR	LR		
	comp=E,789nm,10.0s						
LZH				LR	LR		
	comp=Z,976nm,11.0s						
BOK	Bokaro	12.11	196	eP	Pn	21 54 07.8	-1.8
BOK				AMb	AMB	21 54 12.4	
	comp=Z,12nm,2.1s						
BOK				ex	x	21 56 39.2	
ULHL	Ulahol	12.25	307	P	Pn	21 54 13.4	+1.8
	SNR=50						
MKAR	Makanchi Array	12.45	337	iP	Pn	21 54 12.8	-1.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	Makanchi Array	12.45	337	Pn	Pn	21 54 12.9	-1.3
	comp=Z,0.2nm,0.3s,baz=144,slow=15,SNR=18						
MKAR				LR	LR	21 59 10.1	
	comp=Z,848nm,19.2s,baz=152,slow=38						
KZA	Kyzart	12.83	305	P	Pn	21 54 20.8	+1.3
	SNR=12						
CD2	Chengdu	12.85	107	⇑iP	Pn	21 54 24.8	+5.0
CD2				AP		21 54 28.1	
CD2				XP		21 54 31.8	
CD2				PP		21 54 35.6	
CD2				S	Sn	21 56 50.0	+7.1
CD2				XS		21 56 55.9	
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CD2				AMB	AMB		
	comp=Z,30nm,4.2s						
CD2				LR	LR		
	comp=N,3µm,7.2s						
CD2				LR	LR		
	comp=E,5µm,4.8s						
CD2				LR	LR		
	comp=Z,6µm,6.0s						
TKM2	Tokmak 2	13.00	309	P	Pn	21 54 23.4	+1.7
	SNR=13						
UCH	Uchtor	13.39	304	ePn	Pn	21 54 28.8	+1.7
	comp=Z,14nm,1.1s						
AAK	Ala-Archa	13.58	306	ePn	Pn	21 54 29.7	+0.1
	comp=Z,28nm,1.0s						
AAK	Ala-Archa	13.58	306	⇑eP	Pn	21 54 30.9	+1.2
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
FRU	Bishkek	13.59	307	eP	Pn	21 54 34.0	+4.2
FRU				pmax	pmax		
	comp=N,290nm,2.4s						
USP	Ospenovka	13.87	308	P	Pn	21 54 33.9	+0.3
	SNR=6.0						
AML	Almayashu	13.91	303	ePn	Pn	21 54 35.8	+1.7
	comp=N,16nm,1.0s						
AML	Almayashu	13.91	303	P	Pn	21 54 37.0	+2.8
	SNR=10						
EKS2	Erkin-Say	14.07	305	ePn	Pn	21 54 38.1	+1.7
	comp=N,23nm,1.1s						
EKS2	Erkin-Say	14.07	305	P	Pn	21 54 38.3	+2.0
	SNR=13						
BLSP	Bilaspur	14.81	207	eP	Pn	21 54 44.8	-1.8
BLSP				AMb	AMB	21 54 49.8	
	comp=Z,22nm,1.5s						
BLSP				ex	x	21 59 04.7	
JBP	Jabalpur	14.82	216	⇑iP	Pn	21 54 47.6	+0.8
JBP				ex	x	21 54 55.5	
	comp=Z,30nm,1.4s						
JBP				ix	x	21 57 53.2	
KMI	Kunming	15.47	129	P	Pn	21 54 56.6	+1.2
KMI				AMB	AMB		
	comp=Z,4.0nm,1.7s						
XAN	Xi'an	16.08	90	P	Pn	21 55 05.0	+1.8
XAN				AP	pP	21 55 12.4	+3.0
XAN				S	Sn	21 58 02.4	+0.8
XAN				AMB	AMB		
	comp=Z,12nm,1.5s						
XAN				LR	LR		
	comp=N,1µm,7.9s						
XAN				LR	LR		
	comp=E,1µm,10.5s						
XAN				LR	LR		
	comp=Z,2µm,9.2s						
BHPL	Bhopal	16.10	224	eP	Pn	21 55 02.3	-1.2

BHPL AMb AMB 21 55 10.1
comp=Z,35nm,0.6s
BTO Baotou 16.97 67 *eP* **Pn 21 55 16.5 +2.0**
NGP Nagpur 16.99 215 *eP* **Pn 21 55 14.3 -0.6**
NGP *ex* x 21 55 15.2
comp=Z,71nm,1.6s
NGP *ex* x 21 58 30.9
KURK Kurchatov 17.06 336 *eP* **Pn 21 55 13.1 -2.5**
comp=Z,62nm,1.4s
KURK Kurchatov 17.06 336 *d iP* **Pn 21 55 13.3 -2.2**
GYA Guiyang 17.31 117⇑ *iP* **Pn 21 55 19.1 +0.3**
GYA S **Sn 21 58 38.8 +7.4**
GYA AMB AMB
comp=Z,20nm,1.5s
GYA AMB AMB
comp=Z,230nm,3.8s
GYA LR LR
comp=N,2μm,7.8s
GYA LR LR
comp=E,1μm,7.0s
GYA LR LR
comp=Z,2μm,7.6s
SONM Songino Array 17.59 41 P **Pn 21 55 20.5 -1.7**
comp=Z,0.3nm,0.3s,baz=225,slow=15,SNR=43
SONM PcP PcP 22 00 01.4 0.0
baz=186,slow=2.8,SNR=4.7
SONM LR LR 22 01 52.4
comp=Z,288nm,22.0s,baz=48,slow=36
ZAK Zakamensk 17.91 30⇓ *iP*
ZAK pmax pmax **Pn 21 55 25.7 -0.4**
comp=Z,6.0nm,2.0s
ULN Ulaanbaatar 17.96 41 *eP* **Pn 21 55 27.5 +0.8**
comp=Z,65nm,1.6s
ULN Ulaanbaatar 17.96 41⇑ *eP* **Pn 21 55 27.6 +0.8**
MOY Mondy 18.12 24 *eP* **Pn 21 55 29.2 +0.5**
MOY pmax pmax
comp=Z,77nm,2.2s
HHC Hu-ho-hao-te 18.17 66 *eP* **Pn 21 55 30.5 +1.2**
HHC AP pP 21 55 35.0 +2.6
HHC XP sP 21 55 38.8 +5.1
HHC PP 21 55 46.3
HHC *eS* **Sn 21 58 50.4 -1.6**
HHC XS sS 21 59 02.0 0.0
HHC AMB AMB
comp=Z,23nm,1.3s
HHC AMB AMB
comp=Z,368nm,7.1s
HHC LR LR
comp=N,1μm,10.7s
HHC LR LR
comp=E,2μm,12.5s
HHC LR LR
comp=Z,3μm,13.4s
AKL Akola 18.38 220⇑ *iP* **Pn 21 55 32.6 +0.6**
AKL *ex* x 21 55 35.5
comp=Z,51nm,1.3s
AKL *i* x x 22 00 27.7
VIS Vishakhapatnam 18.57 199 *eP* **Pn 21 55 36.0 +1.7**
VIS AMb AMB 21 55 37.9
comp=Z,29nm,2.0s
TLY Talaya 19.07 28 *eP* **Pn 21 55 41.3 +1.1**
TLY pmax pmax
comp=Z,17nm,2.1s
TLY MLR MLR
comp=Z,459nm,11.0s
IRK Irkutsk 19.75 28⇓ *iP*
IRK pmax pmax **Pn 21 55 48.0 -0.4**
comp=Z,74nm,4.0s
NVS Novosibirsk 19.77 349 *eP* **Pn 21 55 43.7 -4.8**
NVS *eS* **Sn 21 59 32.8 +2.4**
NVS pmax pmax
comp=Z,68nm,2.7s
NVS pmax pmax
comp=N,47nm,2.5s
NVS smax
comp=N,42nm,2.0s
HYB Hyderabad 20.49 211 *eP* **P 21 55 56.0 +0.9**
HYB Hyderabad 20.49 211 *i P* **P 21 55 56.0 +0.9**
BHJ Bhuj 21.10 240 *eP* **P 21 55 59.6 -2.1**
BHJ AMb AMB 21 56 47.1
comp=Z,50nm,1.0s,mb4.8
WHN Wuhan 21.45 96 P **P 21 56 09.1 +3.6**
BJT Baijiatuau 21.56 70 *eP* **P 21 56 07.7 +1.1**
comp=Z,21nm,0.8s,mb4.6
BJT Baijiatuau 21.56 70 *eP* **P 21 56 07.7 +1.1**
BJT pmax pmax
comp=Z,21nm,0.8s
BJI Beijing 21.57 70 P **P 21 56 07.8 +1.1**
BJI AMB AMB
comp=Z,3.0nm,1.3s,mb3.6
BJI LR LR
comp=N,3μm,16.5s,MS5.0
BJI LR LR
comp=E,3μm,14.0s,MS5.0
BJI LR LR
comp=Z,2μm,16.6s,MS4.5
POO Poona 21.86 223 *eP* **P 21 56 10.8 +0.9**
POO AMb AMB 21 56 16.5
comp=Z,39nm,1.3s,mb4.7
BRVK Borovoye 22.11 328 *eP* **P 21 56 12.9 +0.5**
comp=Z,91nm,1.3s,mb5.0
BRVK Borovoye 22.11 328 *eP* **P 21 56 12.9 +0.5**
BRVK pmax pmax
comp=Z,91nm,1.3s,mb5.0
BOM Bombay 22.16 226 *ex* x 21 56 31.6
BOM *ex* x 21 56 34.1
comp=Z,107nm,1.4s
BOM *ex* x 22 01 47.3
KAD Karad 22.67 221 *eP* **P 21 56 17.7 -0.9**
KAD AMb AMB 21 56 26.4
comp=Z,36nm,4.4s
CIT Chita 23.80 39 *eP* **P 21 56 29.8 0.0**
CIT *e* 21 56 39.6
CIT pmax pmax
comp=Z,58nm,2.6s,mb4.5
MDRS Chennai 23.87 203 *eP* **P 21 56 31.2 +0.4**
MDRS AMb AMB 21 56 32.6
comp=Z,28nm,1.1s,mb4.6
GZH Guangzhou 24.19 114 P **P 21 56 33.8 +0.1**
GZH S **S 22 00 53.8 +1.8**
GZH LR LR
comp=N,2μm,13.5s,MS4.8
GZH LR LR
comp=E,1μm,14.3s,MS4.8
GZH LR LR
comp=Z,2μm,9.0s
GOA Goa 24.38 219 *eP* **P 21 56 37.1 +1.7**
GOA AMb AMB 21 56 37.5
comp=Z,49nm,0.8s,mb5.0
QIZ Qiongzhong 24.41 127 P **P 21 56 32.0 -3.7**
QIZ S **S 22 00 46.0 -10**
QIZ LR LR
comp=N,2μm,12.7s
QIZ LR LR
comp=Z,3μm,11.7s,MS5.0
NJ2 Nanjing 24.65 90 *eP* **P 21 56 36.9 -1.0**
NJ2 AP 21 56 42.8
NJ2 PP 21 57 13.0
NJ2 S **S 22 00 54.0 -5.4**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.6
NJ2 AMB AMB
comp=Z,390nm,4.3s
NJ2 LR LR
comp=N,1μm,12.3s,MS4.7
NJ2 LR LR
comp=E,870nm,12.0s,MS4.7
NJ2 LR LR
comp=Z,870nm,12.0s,MS4.5
DL2 Dalian 25.78 73 P **P 21 56 49.3 +1.2**
DL2 S **S 22 01 21.0 +3.8**
DL2 AMB AMB
comp=Z,20nm,0.6s,mb4.8
DL2 AMB AMB
comp=Z,120nm,4.9s
DL2 LR LR
comp=N,930nm,17.6s,MS4.4
DL2 LR LR
comp=E,400nm,15.6s,MS4.4
DL2 LR LR
comp=Z,670nm,17.1s,MS4.2
HIA Hailar 26.04 49 *eP* **P 21 56 50.3 0.0**
comp=Z,31nm,1.5s,mb4.6
HIA Hailar 26.04 49⇑ *eP* **P 21 56 51.4 +1.1**
MNGI Mangalore 26.09 214 *eP* **P 21 56 53.3 +2.3**
MNGI AMb AMB 21 56 54.6
comp=Z,36nm,0.9s,mb4.9
AKTK Aktyubinsk 27.13 313 P **P 21 57 00.9 +0.9**
AKTK LR LR 22 09 05.7
AKTO Aktyubinsk 27.13 313 P **P 21 57 01.0 +0.9**
AKTO pmax pmax
comp=Z,8.0nm,1.0s,mb4.2
AKTO MLR MLR
comp=Z,590nm,19.0s,MS4.2
AKTO Aktyubinsk 27.13 313 P **P 21 57 00.9 +0.9**
comp=Z,8.1nm,1.0s,mb4.2,baz=112,slow=11,SNR=17
AKTO LR LR 22 09 05.7
comp=Z,590nm,19.0s,MS4.2,baz=281,slow=39
BOD Bodaibo 27.65 29 *eP* **P 21 57 04.4 -0.2**
BOD pmax pmax
comp=Z,7.0nm,1.8s,mb4.0
CN2 Changchun 28.74 62 *eP* **P 21 57 14.8 +0.2**
SVE Sverdlovsk 28.80 327⇓ *eP* **P 21 57 17.8 +2.9**
SVE pmax pmax
comp=Z,14nm,1.4s,mb4.5
SVE MLR MLR
comp=Z,795nm,12.0s,MS4.5
ARU Arti 29.53 325 *eP* **P 21 57 22.8 +1.4**
comp=Z,3.0nm,0.7s,mb4.1
ARU Arti 29.53 325 *d iP* **P 21 57 23.4 +2.0**
ARU 21 58 12.0
ARU S **S 22 02 18.4 +2.5**
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.3
ARU MLR MLR
comp=Z,1μm,22.0s,MS4.4
ARU MLR MLR
comp=N,333nm,14.0s
ARU MLR MLR
comp=E,696nm,21.0s
KSRS Korea Array 30.86 75 P **P 21 57 32.1 -1.3**
comp=E,2.6nm,0.7s,mb4.2,baz=274,slow=9.0,SNR=7.0
KSRS LR LR 22 11 24.8
comp=E,537nm,18.7s,MS4.2,baz=115,slow=39
KLR Kul'dur 33.66 53 *eP* **P 21 57 54.8 -3.0**
PSI Prapat 33.75 163 LR LR 22 11 52.0
comp=E,200nm,19.4s,MS3.9,baz=331,slow=36
JNU Nakatsue 34.13 82 LR LR 22 14 50.4
comp=E,137nm,19.5s,MS3.7,baz=142,slow=41
JOW Kunigami 34.17 94 LR LR 22 12 48.4
comp=E,305nm,18.8s,MS4.1,baz=356,slow=38
HABR Khabarovsk 35.75 54 *eP* **P 21 58 12.6 -3.3**
HABR *e* 22 00 39.3
HABR S **S 22 03 50.0 -2.8**
HABR *e*SS SS 22 06 13.7 -14
HABR *e* 22 08 35.9
KIV Kislovodsk 36.50 298 *i P* **P 21 58 23.3 +0.9**
KIV pmax pmax
comp=Z,11nm,1.3s,mb4.6
YAK Yakutsk 36.50 31⇑ *iP* **P 21 58 22.8 +0.7**
YAK pmax pmax
comp=Z,25nm,1.7s,mb4.9
KSM Kuching 39.06 146 *eP* **P 21 58 43.6 -0.6**
MAT Matsushiro 39.11 74 P **P 21 58 43.9 -0.6**
MAT *eS* **S 22 04 57.2 +13**
MJAR Matsushiro Arr 39.11 74 P **P 21 58 43.4 -1.2**
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR MLR MLR
comp=Z,240nm,18.0s
MJAR Matsushiro Arr 39.11 74 P **P 21 58 43.4 -1.2**
comp=Z,2.2nm,0.7s,mb4.0,baz=290,slow=11,SNR=7.3
MJAR LR LR 22 15 35.5
comp=Z,240nm,18.0s,MS4.1,baz=325,slow=37
ANN Anapa 40.19 300 *eP* **P 21 58 53.6 +0.1**
MOS Moscow 40.32 317 *eP* **P 21 58 54.4 +0.1**
OBN Obninsk 40.84 316⇑ *eP* **P 21 58 59.8 +1.2**
OBN pmax pmax
comp=Z,34nm,1.6s,mb4.7
ASAJ Asahikawa 41.09 61 LR LR 22 16 57.7
comp=Z,586nm,19.3s,MS4.5,baz=332,slow=38
JHJ Hachijo jima 2 41.28 78 LR LR 22 16 20.9
comp=Z,268nm,18.1s,MS4.2,baz=299,slow=36
TIXI Tiksi 41.54 18 *eP* **P 21 59 03.6 -0.6**
comp=Z,11nm,1.1s,mb4.4
TIXI Tiksi 41.54 18 *eP* **P 21 59 03.3 -0.9**
TIXI pmax pmax
comp=Z,10.0nm,1.1s,mb4.4
TIXI MLR MLR
comp=Z,477nm,12.0s,MS4.6
BR131 Keskin Array S 43.78 293 *eP* **P 21 59 22.3 -0.5**
comp=Z,1.5nm,0.3s,mb4.2
BRTR Keskin Array B 43.78 293 *i P* **P 21 59 23.7 +0.9**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 43.78 293 P **P 21 59 23.5 +0.7**
comp=Z,3.2nm,0.9s,mb4.0,baz=81,slow=9.4,SNR=11
AKASG Malin Array Be 45.23 309 *i P* **P 21 59 37.7 +3.5**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 45.23 309 P **P 21 59 33.8 -0.4**
comp=Z,1.9nm,0.8s,mb4.0,baz=77,slow=6.5,SNR=8.7
AKASG LR LR 22 22 08.8
comp=Z,342nm,19.3s,MS4.3,baz=95,slow=41
CBIJ Chichi jima 45.39 85 LR LR 22 18 01.2
comp=Z,208nm,19.1s,MS4.1,baz=125,slow=35
SEY Seymchan 46.82 34⇑ *eP* **P 21 59 46.7 +0.1**
FINES FINESS Array B 46.90 324 P **P 21 59 47.1 -0.1**
FINES pmax pmax
comp=Z,1.0nm,0.7s
FINES FINESS Array B 46.90 324 P **P 21 59 47.0 -0.2**
comp=Z,1.2nm,0.7s,mb3.9,baz=98,slow=14,SNR=5.1
ARCES ARCESS Array B 48.10 335 P **P 21 59 56.9 +0.4**
ARCES pmax pmax
comp=Z,14nm,1.1s
ARCES MLR MLR
comp=Z,374nm,19.5s
ARCES ARCESS Array B 48.10 335 P **P 21 59 56.9 +0.4**
comp=Z,14nm,1.1s,mb4.9,baz=91,slow=7.3,SNR=7.2
ARCES LR LR 22 20 35.9
comp=Z,374nm,19.5s,MS4.4,baz=100,slow=36
KWP Kalwaria 49.52 308 *eP* **P 22 00 08.1 +0.4**
comp=Z,18nm,1.0s,mb5.1
KWP Kalwaria 49.52 308 *eP* **P 22 00 08.1 +0.5**
KWP pmax pmax
comp=Z,18nm,1.0s,mb5.1
STHS Stebnicka Huta 50.49 308 *eP* **P 22 00 14.7 -0.4**
comp=Z,4.5nm,1.3s,mb4.3
STHS Stebnicka Huta 50.49 308 *eP* **P 22 00 14.7 -0.4**
STHS pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
VYHS Vyhne 52.24 307 *eP* **P 22 00 28.9 +0.7**
BILL Bilibino 52.69 27 *eP* **P 22 00 32.4 +1.2**
comp=Z,24nm,1.3s,mb5.0
BILL Bilibino 52.69 27⇑ *eP* **P 22 00 32.8 +1.6**
BILL pmax pmax
comp=Z,25nm,1.6s,mb4.9
MORC Moravsky Berou 52.77 309 *eP* **P 22 00 30.8 -1.3**
comp=Z,11nm,1.4s,mb4.6
MORC Moravsky Berou 52.77 309 *eP* **P 22 00 30.8 -1.3**
MORC pmax pmax
comp=Z,11nm,1.4s,mb4.6
DPC Dobruska-Polom 53.40 310 *eP* **P 22 00 37.3 +0.6**
NB2 NORSAR Subarra 54.08 324 P **P 22 00 40.1 -1.4**
comp=Z,3.8nm,0.6s,mb4.5,baz=81,slow=7.4
NORSAR Subarra 54.08 324 P **P 22 00 40.1 -1.4**
NB2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
NOA NORSAR Array B 54.08 324 P **P 22 00 40.5 -1.1**
NOA LR LR 22 24 53.6
NOA NORSAR Array B 54.08 324 P **P 22 00 40.5 -1.0**
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA MLR MLR
comp=Z,363nm,18.1s
NOA NORSAR Array B 54.08 324 P **P 22 00 40.5 -1.1**
comp=Z,3.0nm,0.6s,mb4.4,baz=80,slow=7.3,SNR=13
NOA LR LR 22 24 53.6
comp=Z,363nm,18.1s,MS4.5,baz=85,slow=37
PVCC Panska Ves 54.45 311 *eP* **P 22 00 45.7 +1.3**
PRU Pruhonice 54.60 310 *eP* **P 22 00 46.2 +0.7**
BRG Berggiesshubel 54.74 311 *eP* **P 22 00 46.7 +0.2**
BRG pmax pmax
comp=Z,5.0nm,1.0s,mb4.5
BRG MLR MLR
comp=N,172nm,19.7s,MS4.4
BRG MLR MLR
comp=E,253nm,17.0s,MS4.4
BRG MLR MLR
comp=Z,360nm,17.5s,MS4.5
BRG Berggiesshubel 54.74 311 *eP* **P 22 00 47.3 +0.8**
comp=Z,8.0nm,1.0s,mb4.7
BRG Berggiesshubel 54.74 311 *eP* **P 22 00 46.7 +0.2**
comp=Z,7.7nm,1.0s,mb4.7
BRG
comp=N,287nm,19.6s
BRG
comp=E,423nm,17.0s
BRG
comp=Z,601nm,17.5s
FBE Freiberg 55.09 311 *eP* **P 22 00 51.7 +2.7**
comp=Z,5.0nm,0.7s,mb4.7
CLL Collm 55.20 312 *eP* **P 22 00 50.0 +0.2**
CLL *e*SSP 22 12 54.0
KHC Kasperske Hory 55.44 309 *eP* **P 22 00 51.9 +0.3**
GEC2 GERESS Array S 55.44 309 *eP* **P 22 00 52.3 +0.7**
GEC2 pmax pmax
comp=Z,14nm,1.5s,mb4.8
GEC2 GERESS Array S 55.44 309 *eP* **P 22 00 52.3 +0.7**
comp=Z,14nm,1.5s,mb4.8
GERES GERESS Array B 55.44 309 P **P 22 00 52.4 +0.8**
GERES pmax pmax
comp=Z,3.0nm,1.0s
GERES MLR MLR
comp=Z,268nm,18.8s
GERES GERESS Array B 55.44 309 P **P 22 00 52.4 +0.9**
comp=Z,3.1nm,1.0s,mb4.3,baz=64,slow=6.1,SNR=17
GERES LR LR 22 27 14.7
comp=Z,268nm,18.8s,MS4.3,baz=259,slow=39
TANN Tannenbergstha 55.77 311 *eP* **P 22 00 56.5 +2.5**
comp=Z,22nm,1.7s,mb4.9
WERN Wernitzgruen 55.86 311 *eP* **P 22 00 56.5 +1.9**
comp=Z,9.0nm,0.5s,mb5.1
GUNZ Gunzen 55.87 311 *eP* **P 22 00 55.3 +0.7**
comp=Z,7.0nm,1.0s,mb4.7
WET Wettzell 55.88 310 *eP* **P 22 00 55.3 +0.6**
WET pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
WET Wettzell 55.88 310 *eP* **P 22 00 55.3 +0.6**
comp=Z,4.0nm,1.0s,mb4.4
MANZ Manzenberg 56.11 311 *eP* **P 22 00 57.9 +1.5**
comp=Z,14nm,1.6s,mb4.7
ROTZ Rotzenmuhle 56.12 310 *eP* **P 22 00 57.1 +0.7**
comp=Z,14nm,1.4s,mb4.8
MOX Moxa 56.23 312 *eP* **P 22 00 58.7 +1.5**
comp=Z,9.0nm,1.4s,mb4.6
CLZ Clausthal 56.64 313 *eP* **P 22 01 03.1 +3.0**
CLZ pmax pmax
comp=Z,14nm,1.1s,mb4.9
CLZ Clausthal 56.64 313 *eP* **P 22 01 03.1 +3.0**
comp=Z,14nm,1.1s,mb4.9
GRF Grafenberg Arr 56.75 311 *eP* **P 22 01 01.8 +0.9**
GRF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GRF MLR MLR
comp=Z,200nm,19.1s,MS4.2
GRF Grafenberg Arr 56.75 311 *eP* **P 22 01 01.8 +0.9**
GRF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GRF MLR MLR
comp=Z,200nm,19.1s,MS4.2
GRF Grafenberg Arr 56.75 311 *eP* **P 22 01 01.8 +0.9**
comp=Z,8.0nm,0.8s,mb4.8
GRF *e*L 22 25 23.8
comp=Z,214nm,19.1s
TNS Taunus Mts 58.29 312 *eP* **P 22 01 12.9 +1.1**
TNS pmax pmax
comp=Z,12nm,1.2s,mb4.8
TNS Taunus Mts 58.29 312 *eP* **P 22 01 12.9 +1.1**
comp=Z,12nm,1.2s,mb4.8
BFO Black Forest 58.99 310 *eP* **P 22 01 17.0 +0.3**
BFO pmax pmax
comp=Z,24nm,2.0s,mb4.9
BFO Black Forest 58.99 310 *eP* **P 22 01 17.0 +0.3**
comp=Z,24nm,2.0s,mb4.9
CDF Champ du Feu 59.62 310 *eP* **P 22 01 20.0 -1.0**
comp=Z,11nm,0.9s,mb4.6
CDF Champ du Feu 59.62 310 *eP* **P 22 01 20.0 -1.0**
comp=Z,5.4nm,0.9s,mb4.6
CDF Champ du Feu 59.62 310 *eP* **P 22 01 20.0 -1.0**
CDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
HINF Hinteralfeld 60.10 310 *eP* **P 22 01 23.2 -1.1**
comp=Z,10.0nm,0.7s,mb4.6
HINF Hinteralfeld 60.10 310 *eP* **P 22 01 23.2 -1.1**
comp=Z,5.0nm,0.7s,mb4.7
HINF Hinteralfeld 60.10 310 *eP* **P 22 01 23.2 -1.1**
HINF pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
HAU Haudompre 60.34 310 *eP* **P 22 01 25.0 -1.0**
HAU *e*MLR MLR
comp=Z,325nm,22.0s,MS4.1
HAU Haudompre 60.34 310 *eP* **P 22 01 25.0 -1.0**
HAU MLR MLR
comp=Z,320nm,22.0s,MS4.4
PGF Pioggiola 60.65 303 *eP* **P 22 01 27.3 -0.9**
comp=Z,10nm,1.1s,mb4.6
PGF Pioggiola 60.65 303 *eP* **P 22 01 27.3 -0.9**
comp=Z,5.2nm,1.0s,mb4.6
PGF Pioggiola 60.65 303 *eP* **P 22 01 27.3 -0.9**
PGF pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KMBO Kilima Mbogo 60.75 245 P **P 22 01 28.4 -0.8**
KMBO LR LR 22 28 26.7
KMBO Kilima Mbogo 60.75 245 *i P* **P 22 01 30.1 +0.9**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 60.75 245 P **P 22 01 28.4 -0.8**
comp=Z,1.2nm,0.7s,mb4.2,baz=34,slow=21,SNR=3.9
KMBO LR LR 22 28 26.7
comp=Z,117nm,19.3s,MS4.0,baz=87,slow=37
BAIF Baives 60.91 313 *eP* **P 22 01 28.9 -0.9**
comp=Z,33nm,1.4s,mb5.0
BAIF Baives 60.91 313 *eP* **P 22 01 28.9 -0.9**
comp=Z,16nm,1.4s,mb5.0
BAIF Baives 60.91 313 *eP* **P 22 01 28.9 -0.9**
BAIF pmax pmax
comp=Z,17nm,1.4s,mb5.0
MEZF Maizieres J'vi 60.97 311 *eP* **P 22 01 29.3 -1.0**
LPG La Plagne 61.02 307 *eP* **P 22 01 30.4 -0.3**
comp=Z,29nm,1.0s,mb5.1
LPG La Plagne 61.02 307 *eP* **P 22 01 30.4 -0.3**
comp=Z,14nm,1.0s,mb5.1
LPG La Plagne 61.02 307 *eP* **P 22 01 30.4 -0.3**
LPG pmax pmax
comp=Z,14nm,1.0s,mb5.0
CABF La Chapelle 61.03 308 *eP* **P 22 01 29.8 -0.9**
LPL La Plagne 61.03 307 *eP* **P 22 01 29.8 -0.9**
comp=Z,47nm,1.2s,mb5.2
LPL La Plagne 61.03 307 *eP* **P 22 01 29.8 -0.9**
comp=Z,23nm,1.2s,mb5.2
LPL La Plagne 61.03 307 *eP* **P 22 01 29.8 -0.9**
LPL pmax pmax
comp=Z,23nm,1.2s,mb5.2
SBF Sospel 61.20 305 *eP* **P 22 01 31.1 -0.8**
comp=Z,24nm,0.9s,mb5.0
SBF Sospel 61.20 305 *eP* **P 22 01 31.1 -0.8**
comp=Z,12nm,0.9s,mb5.0
SBF Sospel 61.20 305 *eP* **P 22 01 31.1 -0.8**
SBF pmax pmax
comp=Z,12nm,0.9s,mb5.0
BNI Bardonecchia 61.24 307 *eP* **P 22 01 31.6 -0.6**
comp=Z,10nm,1.1s,mb4.9
BNI Bardonecchia 61.24 307 *eP* **P 22 01 31.6 -0.6**
BNI pmax pmax
comp=Z,10.0nm,1.1s,mb4.9
ORIF Oris-en-Rattie 61.81 307 *eP* **P 22 01 35.2 -0.8**
comp=Z,7.5nm,0.8s,mb4.6
ORIF *e*MLR MLR
comp=Z,419nm,22.0s,MS4.2
ORIF Oris-en-Rattie 61.81 307 *eP* **P 22 01 35.2 -0.8**
comp=Z,3.8nm,0.8s,mb4.6
ORIF Oris-en-Rattie 61.81 307 *eP* **P 22 01 35.2 -0.8**
ORIF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
FRF La Foret Royal 61.84 305 *eP* **P 22 01 35.2 -1.1**
comp=Z,4.1nm,0.8s,mb4.3
FRF La Foret Royal 61.84 305 *eP* **P 22 01 35.2 -1.1**
comp=Z,2.0nm,0.8s,mb4.3
FRF La Foret Royal 61.84 305 *eP* **P 22 01 35.2 -1.1**
FRF pmax pmax
comp=Z,2.0nm,0.8s,mb4.3
LMR La Mourre 62.03 305 *eP* **P 22 01 36.4 -1.1**
LOR Lormes 62.18 310 *eP* **P 22 01 37.3 -1.2**
LOR *e*MLR MLR
comp=Z,404nm,19.2s,MS4.3
LOR Lormes 62.18 310 *eP* **P 22 01 37.3 -1.2**
LOR MLR MLR
comp=Z,400nm,19.2s,MS4.6

SMRF	**Simiane la Rot**	**62.39**	**306**	*e*P	**P**	**22 01 38.9**	**-1.0**
	comp=Z,14nm,1.2s,mb4.6						
SMRF	**Simiane la Rot**	**62.39**	**306**	*e*P	**P**	**22 01 38.9**	**-1.0**
	comp=Z,14nm,1.3s,mb4.9						
GAMB	**Gambell**	**62.44**	**30**	*e*P	**P**	**22 01 40.0**	**0.0**
SMF	**Signal de Mont**	**62.44**	**309**	*e*P	**P**	**22 01 39.2**	**-1.0**
	comp=Z,9.2nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**62.44**	**309**	*e*P	**P**	**22 01 39.2**	**-1.0**
	comp=Z,4.6nm,0.8s,mb4.7						
SMF	**Signal de Mont**	**62.44**	**309**	*e*P	**P**	**22 01 39.2**	**-1.0**
SMF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
SSF	**Saint Saulge**	**62.48**	**310**	*e*P	**P**	**22 01 39.4**	**-1.1**
	comp=Z,9.7nm,0.9s,mb4.6						
SSF	**Saint Saulge**	**62.48**	**310**	*e*P	**P**	**22 01 39.4**	**-1.1**
	comp=Z,4.8nm,0.9s,mb4.6						
SSF	**Saint Saulge**	**62.48**	**310**	*e*P	**P**	**22 01 39.4**	**-1.1**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
VIVF	**Saint-Julien-l**	**62.62**	**307**	*e*P	**P**	**22 01 40.3**	**-1.2**
	comp=Z,29nm,1.3s,mb5.0						
VIVF	**Saint-Julien-l**	**62.62**	**307**	*e*P	**P**	**22 01 40.3**	**-1.2**
	comp=Z,14nm,1.3s,mb5.0						
VIVF	**Saint-Julien-l**	**62.62**	**307**	*e*P	**P**	**22 01 40.3**	**-1.2**
VIVF				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.0						
AVF	**Avril sur Loir**	**62.69**	**310**	*e*P	**P**	**22 01 40.8**	**-1.1**
	comp=Z,27nm,1.2s,mb4.9						
AVF	**Avril sur Loir**	**62.69**	**310**	*e*P	**P**	**22 01 40.8**	**-1.1**
	comp=Z,13nm,1.2s,mb5.0						
AVF	**Avril sur Loir**	**62.69**	**310**	*e*P	**P**	**22 01 40.8**	**-1.1**
AVF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.9						
BGF	**Bois d'Agland**	**63.10**	**309**	*e*P	**P**	**22 01 43.5**	**-1.1**
	comp=Z,5.5nm,0.7s,mb4.5						
BGF	**Bois d'Agland**	**63.10**	**309**	*e*P	**P**	**22 01 43.5**	**-1.1**
	comp=Z,2.8nm,0.6s,mb4.6						
BGF	**Bois d'Agland**	**63.10**	**309**	*e*P	**P**	**22 01 43.5**	**-1.1**
BGF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
KEST	**Kesra**	**63.21**	**296**	LR	LR	22 32 10.3	
	comp=Z,50nm,19.9s,MS3.7,baz=241,slow=39						
FITZ	**Fitzroy Crossi**	**63.44**	**141**	*e*P	**P**	**22 01 46.9**	**-0.2**
	comp=Z,3.9nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**63.44**	**141**	P	**P**	**22 01 46.7**	**-0.5**
	comp=Z,2.3nm,0.9s,mb4.3,baz=227,slow=1.8,SNR=4.7						
LASF	**Ste Croix**	**63.48**	**307**	*e*P	**P**	**22 01 46.1**	**-1.1**
	comp=Z,30nm,1.3s,mb5.0						
TCF	**Toulx Ste Croi**	**63.62**	**309**	*e*P	**P**	**22 01 47.0**	**-1.0**
	comp=Z,17nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**63.62**	**309**	*e*P	**P**	**22 01 47.0**	**-1.0**
	comp=Z,8.4nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**63.62**	**309**	*e*P	**P**	**22 01 47.0**	**-1.0**
TCF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
LDF	**La Druitiere**	**64.09**	**312**	*e*P	**P**	**22 01 50.0**	**-1.1**
FLN	**La Foliniere**	**64.23**	**313**	*e*P	**P**	**22 01 50.9**	**-1.1**
	comp=Z,12nm,0.8s,mb4.7						
FLN				*e*MLR	MLR		
	comp=Z,432nm,20.8s,MS4.3						
FLN	**La Foliniere**	**64.23**	**313**	*e*P	**P**	**22 01 50.9**	**-1.1**
	comp=Z,6.1nm,0.8s,mb4.7						
FLN				LR	LR		
	comp=Z,430nm,20.8s,MS4.6						
FLN	**La Foliniere**	**64.23**	**313**	*e*P	**P**	**22 01 50.9**	**-1.1**
FLN				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
FLN				MLR	MLR		
	comp=Z,430nm,20.8s,MS4.6						
CAF	**Calviac**	**64.28**	**308**	*e*P	**P**	**22 01 51.4**	**-1.1**
RJF	**Les Rejaudoux**	**64.47**	**309**	*e*P	**P**	**22 01 52.4**	**-1.3**
RJF				*e*MLR	MLR		
	comp=Z,265nm,17.8s,MS4.2						
RJF	**Les Rejaudoux**	**64.47**	**309**	*e*P	**P**	**22 01 52.4**	**-1.3**
RJF				MLR	MLR		
	comp=Z,270nm,17.8s,MS4.5						
GRR	**Gorron**	**64.62**	**312**	*e*P	**P**	**22 01 53.6**	**-1.0**
	comp=Z,18nm,0.8s,mb4.8						
GRR	**Gorron**	**64.62**	**312**	*e*P	**P**	**22 01 53.6**	**-1.0**
	comp=Z,8.9nm,0.8s,mb4.8						
GRR	**Gorron**	**64.62**	**312**	*e*P	**P**	**22 01 53.6**	**-1.0**
GRR				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MTLF	**Montolieu**	**64.87**	**306**	*e*P	**P**	**22 01 55.0**	**-1.3**
MFF	**Saint Martin d**	**64.95**	**310**	*e*P	**P**	**22 01 55.3**	**-1.5**
	comp=Z,10nm,1.0s,mb4.5						
MFF	**Saint Martin d**	**64.95**	**310**	*e*P	**P**	**22 01 55.3**	**-1.5**
	comp=Z,5.2nm,1.0s,mb4.5						
MFF	**Saint Martin d**	**64.95**	**310**	*e*P	**P**	**22 01 55.3**	**-1.5**
MFF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
LFF	**La Frestale**	**65.12**	**308**	*e*P	**P**	**22 01 56.6**	**-1.3**
	comp=Z,13nm,0.8s,mb4.7						
LFF	**La Frestale**	**65.12**	**308**	*e*P	**P**	**22 01 56.6**	**-1.3**
	comp=Z,6.3nm,0.8s,mb4.7						
LFF	**La Frestale**	**65.12**	**308**	*e*P	**P**	**22 01 56.6**	**-1.3**
LFF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
SGMF	**Saint Gilles**	**65.69**	**313**	*e*P	**P**	**22 02 00.2**	**-1.4**
ROSF	**Rostrenen**	**66.08**	**313**	*e*P	**P**	**22 02 02.9**	**-1.2**
QUIF	**Quistinic**	**66.21**	**313**	*e*P	**P**	**22 02 03.3**	**-1.6**
ETSF	**Etsaut**	**66.88**	**307**	*e*P	**P**	**22 02 07.9**	**-1.4**
	comp=Z,18nm,1.0s,mb4.8						
ETSF	**Etsaut**	**66.88**	**307**	*e*P	**P**	**22 02 07.9**	**-1.4**
	comp=Z,8.8nm,1.0s,mb4.7						
ETSF	**Etsaut**	**66.88**	**307**	*e*P	**P**	**22 02 07.9**	**-1.4**
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
SJPF	**Ste Jean**	**67.22**	**307**	*e*P	**P**	**22 02 09.9**	**-1.5**
IMA2	**Indian Mountai**	**67.79**	**23**	*e*P	**P**	**22 02 14.9**	**+0.3**
WRA	**Warramunga Arr**	**69.69**	**135**	P	**P**	**22 02 26.5**	**-0.5**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**69.69**	**135**	P	**P**	**22 02 26.5**	**-0.5**
	comp=Z,5.8nm,0.9s,mb4.5,baz=331,slow=5.9,SNR=29						
WB2	**Warramunga Arr**	**69.69**	**135**	*e*P	**P**	**22 02 27.0**	**-0.1**
COLA	**College**	**70.42**	**22**	*e*P	**P**	**22 02 30.6**	**-0.3**
	comp=Z,38nm,1.6s,mb5.1						
COLA	**College**	**70.42**	**22**⇑	*e*P	**P**	**22 02 31.9**	**+1.0**
ESDC	**Sonseca Array**	**70.69**	**305**	P	**P**	**22 02 32.7**	**-0.4**
	comp=Z,1.8nm,0.6s,mb4.2,baz=50,slow=6.4,SNR=8.6						
ESDC				LR	LR	22 39 04.4	
	comp=Z,111nm,19.3s,MS4.1,baz=0.0,slow=40						
INK	**Inuvik**	**71.62**	**15**	*e*P	**P**	**22 02 37.3**	**-0.8**
	comp=Z,733nm,1.6s						
INK	**Inuvik**	**71.62**	**15**	*e*P	**P**	**22 02 37.3**	**-0.9**
INK				pmax	pmax		
	comp=Z,733nm,1.6s						
ASAR	**Alice Springs**	**72.39**	**138**	P	**P**	**22 02 43.2**	**-0.2**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ASAR	**Alice Springs**	**72.39**	**138**	P	**P**	**22 02 43.1**	**-0.2**
	comp=Z,4.3nm,0.9s,mb4.4,baz=323,slow=5.8,SNR=30						
KDAK	**Kodiak Island**	**73.52**	**30**	LR	LR	22 38 06.0	
	comp=Z,309nm,18.7s,MS4.6,baz=283,slow=38						
DAWY	**Dawson**	**73.52**	**20**	*e*P	**P**	**22 02 49.6**	**0.0**
EVO	**Evora**	**73.97**	**306**	*e*P	**P**	**22 02 50.9**	**-1.8**
	comp=Z,19nm,1.1s,mb4.7						
EVO				*e*MLR	MLR		
	comp=Z,244nm,21.7s,MS4.2						
MATP	**Matopo**	**80.17**	**236**	P	**P**	**22 03 27.2**	**-0.5**
MATP	**Matopo**	**80.17**	**236**	P	**P**	**22 03 27.2**	**-0.5**
	comp=Z,3.2nm,1.1s,mb4.2,baz=47,slow=11,SNR=4.8						
YKA	**Yellowknife Ar**	**80.40**	**11**	P	**P**	**22 03 27.6**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.2,baz=332,slow=5.4,SNR=40						
TOA0	**Torodi Ar. Sit**	**80.67**	**279**	*e*P	**P**	**22 03 29.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**80.67**	**279**	P	**P**	**22 03 29.9**	**-0.7**
	comp=Z,6.1nm,1.0s,mb4.5,baz=47,slow=4.7,SNR=16						
TORD				LR	LR	22 41 38.8	
	comp=Z,137nm,18.8s,MS4.3,baz=15,slow=37						
DLBC	**Dease Lake**	**80.73**	**20**	P	**P**	**22 03 31.5**	**+1.3**
STKA	**Stephens Creek**	**83.03**	**137**	*e*P	**P**	**22 03 42.1**	**-0.4**
	comp=Z,4.3nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**83.03**	**137**	P	**P**	**22 03 41.8**	**-0.7**
	comp=Z,1.9nm,0.6s,mb4.3,baz=305,slow=4.9,SNR=8.7						
STKA				LR	LR	22 40 22.0	
	comp=Z,152nm,20.4s,MS4.4,baz=317,slow=35						
SCHQ	**Schefferville**	**87.70**	**347**	LR	LR	22 44 46.8	
	comp=Z,160nm,20.1s,MS4.4,baz=319,slow=37						
BOSA	**Boshof**	**87.90**	**232**	P	**P**	**22 04 07.0**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
BOSA				MLR	MLR		
	comp=Z,60nm,18.2s,MS4.0						
BOSA	**Boshof**	**87.90**	**232**	P	**P**	**22 04 07.0**	**+0.1**
	comp=Z,2.0nm,0.8s,mb4.4,baz=7.0,slow=9.2,SNR=3.5						
BOSA				LR	LR	22 46 26.5	
	comp=Z,60nm,18.2s,MS4.0,baz=320,slow=38						
DBIC	**Dimbokro**	**89.64**	**278**	P	**P**	**22 04 15.1**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DBIC				MLR	MLR		
	comp=Z,142nm,19.1s						
DBIC	**Dimbokro**	**89.64**	**278**	P	**P**	**22 04 15.1**	**-0.5**
	comp=Z,4.1nm,1.0s,mb4.7,baz=49,slow=2.3,SNR=3.2						
DBIC				LR	LR	22 47 49.9	
	comp=Z,142nm,19.1s,MS4.4,baz=40,slow=38						
ULM	**Lac du Bonnet**	**94.45**	**3**	P	**P**	**22 04 35.1**	**-2.0**
	comp=Z,1.4nm,0.9s,mb4.4,baz=15,slow=4.1,SNR=3.5						
ULM				LR	LR	22 54 43.4	
	comp=Z,101nm,18.6s,MS4.3,baz=67,slow=40						
LPAZ	**La Paz**	**152.28**	**308**	PKP	PKPdf	22 11 06.5	-0.3
	comp=Z,4.3nm,1.2s,baz=3.3,slow=7.7,SNR=7.8						
LPAZ				PKPbc	PKPbc	22 11 11.2	-2.4
	comp=Z,1.7nm,0.8s,baz=14,slow=4.2,SNR=7.9						
LPAZ				PKPab	PKPab	22 11 22.9	-0.5
	comp=Z,2.7nm,0.9s,baz=22,slow=9.9,SNR=6.8						

IDC 16 21:55:43.1±7.0**,712S**×**11126E,h307**^{km}±69^{km}**,mb3.4**/6**, mb1 3.5**/8**,mb1mx3.3**/17**,mbtmp3.4**/8**,1D,Error ellipse: s-maj=52.0km s-min=14.2km az=68.0,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**12.64**	**105**	P	Pn	21 58 32.1	-1.3
	12nm,0.3s,baz=239,slow=1.6,SNR=20						
FITZ	**Fitzroy Crossi**	**17.76**	**129**⇓	*i*P	P	21 59 29.7	-0.2
	3.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**17.76**	**129**	P	P	21 59 29.3	-0.6
	0.3nm,0.3s,baz=336,slow=8.0,SNR=11						
FITZ				S	S	22 02 46.3	+8.1
	0.1nm,0.3s,baz=195,slow=19,SNR=5.3						
KAKA	**Kakadu**	**21.59**	**107**	*e*P	P	22 00 08.0	-1.0
	5.2nm,0.6s						
WRA	**Warramunga Arr**	**25.76**	**122**	P	P	22 00 46.4	-0.3
	0.9nm,0.6s,baz=295,slow=12,SNR=14						
WB2	**Warramunga Arr**	**25.77**	**122**	*e*P	P	22 00 46.6	-0.2
ASAR	**Alice Springs**	**27.27**	**130**	P	P	22 01 00.3	+0.3
	1.3nm,0.5s,baz=305,slow=8.3,SNR=37						
STKA	**Stephens Creek**	**37.50**	**135**	*e*P	P	22 02 29.4	+1.2
	1.4nm,0.3s						
STKA	**Stephens Creek**	**37.50**	**135**	P	P	22 02 29.5	+1.2
	1.8nm,0.4s,baz=302,slow=7.7,SNR=13						
MJAR	**Matsushiro Arr**	**50.25**	**28**	P	P	22 04 07.7	-1.2
	1.0nm,0.5s,baz=205,slow=8.3,SNR=3.4						
SONM	**Songino Array**	**54.88**	**356**	P	P	22 04 42.9	+0.6
	1.1nm,0.5s,baz=170,slow=8.9,SNR=18						
SONM				PcP	PcP	22 05 40.5	+0.3
	0.4nm,0.5s,baz=174,slow=4.4,SNR=4.6						
MKAR	**Makanchi Array**	**59.53**	**337**	P	P	22 05 14.8	+0.1
	2.0nm,0.4s,baz=151,slow=7.3,SNR=31						
LPAZ	**La Paz**	**156.74**	**181**	PKPab	PKPab	22 15 32.4	-1.1
	1.8nm,0.6s,baz=188,slow=5.7,SNR=9.8						

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*NEIC **16** 22:03:39.9,1708N×9951W,h39^{km},MD3.9(MEX),After MEX.*

MEX 16 22:03:39.9±0.5**,1708N**×**9951W,h39**^{km}±12^{km}**,MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.44**	**241**	*i* P	Pn	22 03 48.2	-1.6
ACX				*i* S	Sn	22 03 54.7	-2.0
CAIG	**El Cayaco**	**0.72**	**268**	*i* P	Pn	22 03 51.7	-1.9
CAIG				*i* S	Sn	22 04 01.5	-1.9
MEIG	**Mezcala**	**0.85**	**353**	*i* P	Pn	22 03 53.5	-1.9
MEIG				*i* S	Sn	22 04 04.5	-2.1
PNIG	**Pinotepa**	**1.49**	**117**	*i* P	Pn	22 04 02.4	-1.9
PNIG				*i* S	Sn	22 04 19.8	-2.7
UTMO	**Huajuapan**	**1.80**	**65**	*i* P	Pn	22 04 07.4	-1.0
UTMO				*i* S	Sn	22 04 27.1	-2.9
PPM	**Popocatepetl**	**2.15**	**23**	*e*P	Pn	22 04 11.4	-1.8
PPM				*i* S	Sn	22 04 38.8	+0.1
TPIG	**Tehuac#an**	**2.45**	**57**	*i* P	Pn	22 04 15.8	-1.6
TPIG				*i* S	Sn	22 04 43.9	-2.1
VHO	**Vista Hermosa**	**2.66**	**90**	*i* P	Pn	22 04 20.4	+0.2
VHO				*i* S	Sn	22 04 49.4	-1.9

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*ISCJB **16** 22:06:58.7±0.4,203S±006×1262E±0.1,h33^{km},mb4.5/19, Error ellipse: s-maj=16.4km s-min=5.9km az=159.0*
*MOS **16** 22:06:58.1±1.5,2.15S×12586E,h33^{km},mb4.6/4,Error ellipse: s-maj=28.0km s-min=11.8km az=109.4*
*BJI **16** 22:06:59.0,2.10S×12620E,h35^{km},mB5.1,mb4.8*
*NEIC **16** 22:07:00.5±0.4,206S×126.18E,h35^{km},mb4.4/7,Error ellipse: s-maj=20.5km s-min=8.1km az=64.0*
*IDC **16** 22:07:02.4±3.7,2.11S×126.10E,h52^{km}±36^{km},mb4.1/8, mb1 4.2/11,mb1mx4.0/20,mbtmp4.1/11,ML4.1/3,Error ellipse: s-maj=29.6km s-min=16.3km az=72.0*

ISC 16 22:07:00.7±0.4**,210S**±006×**1262E**±01**,h35**^{km}**,n37, σ1§25**/37**,mb4.5**/19**,7C-2D,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**8.45**	**197**	P	**Pn**	**22 09 03.3**	**+2.6**
	2.2nm,0.3s,baz=0.0,slow=3.0,SNR=6.1						
KAKA	**Kakadu**	**12.21**	**150**	*e*P	**Pn**	**22 09 56.2**	**+4.0**
	5.9nm,0.6s						
KAKA	**Kakadu**	**12.21**	**150**	*e*Pn	**Pn**	**22 09 56.2**	**+4.0**
KAKA				*e*Sn	**Sn**	**22 12 12.6**	**+5.4**
FITZ	**Fitzroy Crossi**	**15.91**	**182**	*e*P	**Pn**	**22 10 45.5**	**+3.4**
	4.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.91**	**182**	*e*Pn	**Pn**	**22 10 44.5**	**+2.4**
	4.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**15.91**	**182**	P	**Pn**	**22 10 44.4**	**+2.3**
	0.3nm,0.3s,baz=6.2,slow=9.1,SNR=7.5						
WRA	**Warramunga Arr**	**19.43**	**156**	P	**Pn**	**22 11 24.0**	**-1.5**
	1.0nm,0.3s,baz=334,slow=11,SNR=48						
WRA				PcP	PcP	22 15 45.2	+0.3
	0.1nm,0.3s,baz=328,slow=1.7,SNR=5.7						
WB2	**Warramunga Arr**	**19.43**	**156**	*e*P	**Pn**	**22 11 23.7**	**-1.9**
COEN	**Coen**	**20.48**	**126**	*e*P	**P**	**22 11 35.2**	**-0.5**
	5.6nm,0.7s						
PMG	**Port Moresby**	**22.05**	**110**⇑	*e*P	**P**	**22 11 57.4**	**+4.8**
PMG	**Port Moresby**	**22.05**	**110**	P	**P**	**22 11 55.1**	**+2.5**
	20nm,0.7s,mb4.6,baz=294,slow=4.8,SNR=9.8						
ASAR	**Alice Springs**	**22.69**	**161**	P	**P**	**22 11 58.5**	**-0.8**
	5.5nm,0.6s,mb4.2,baz=344,slow=12,SNR=96						
ASAR				PcP	PcP	22 15 51.9	+0.8
	0.4nm,0.5s,baz=345,slow=2.3,SNR=5.6						
STKA	**Stephens Creek**	**32.98**	**156**⇓	*i*P	**P**	**22 13 32.8**	**+0.5**
	1.3nm,0.4s,mb4.2						
STKA	**Stephens Creek**	**32.98**	**156**	P	**P**	**22 13 32.4**	**+0.1**
	1.6nm,0.5s,mb4.2,baz=332,slow=11,SNR=7.8						
NJ2	**Nanjing**	**34.67**	**349**	*e*P	**P**	**22 13 48.3**	**+1.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
MJAR	**Matsushiro Arr**	**40.03**	**15**	P	**P**	**22 14 31.3**	**-1.1**
	comp=Z,2.6nm,0.6s,mb4.1,baz=187,slow=9.1,SNR=8.6						
GTA	**Gaotai**	**47.90**	**332**	P	**P**	**22 15 36.6**	**+1.1**
GTA				AMB	AMB		
	comp=Z,8.0nm,0.6s,mb4.9						
ASAJ	**Asahikawa**	**48.29**	**16**	P	**P**	**22 15 40.1**	**+1.7**
	comp=Z,4.0nm,0.6s,mb4.6,baz=215,slow=16,SNR=4.7						
ULN	**Ulaanbaatar**	**52.50**	**344**	*e*P	**P**	**22 16 10.7**	**+0.5**
	comp=Z,6.6nm,1.0s,mb4.5						
ULN	**Ulaanbaatar**	**52.50**	**344**⇑	*e*P	**P**	**22 16 10.9**	**+0.7**
SONM	**Songino Array**	**52.66**	**343**	P	**P**	**22 16 11.6**	**+0.2**
	comp=Z,3.6nm,1.0s,mb4.3,baz=162,slow=8.4,SNR=17						
BOD	**Bodaibo**	**60.53**	**353**	*e*P	**P**	**22 17 04.2**	**-3.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.3						
PET	**Petropavlovsk**	**61.28**	**22**⇑	*e*P	**P**	**22 17 11.4**	**-0.9**
MK31	**Makanchi Array**	**62.09**	**327**	*e*P	**P**	**22 17 17.7**	**-0.2**
MKAR	**Makanchi Array**	**62.09**	**327**	P	**P**	**22 17 17.7**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.6,baz=120,slow=8.3,SNR=38						
YAK	**Yakutsk**	**64.01**	**2**	*e*P	**P**	**22 17 31.3**	**+0.9**
YAK				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
AAK	**Ala-Archa**	**64.39**	**320**⇓	*e*P	**P**	**22 17 33.1**	**-0.2**
AAK				pmax	pmax		
	comp=Z,11nm,2.5s,mb4.4						
AML	**Almayashu**	**64.66**	**319**	*e*P	**P**	**22 17 35.6**	**+0.5**
	comp=Z,3.8nm,1.0s,mb4.4						
KBL	**Kabul**	**64.75**	**310**	*e*P	**P**	**22 17 35.1**	**-0.7**
	comp=Z,5.0nm,0.9s,mb4.5						
KURK	**Kurchatov**	**66.40**	**329**	*e*P	**P**	**22 17 45.6**	**-0.6**
	comp=Z,10nm,0.9s,mb4.9						
KURK	**Kurchatov**	**66.40**	**329**⇑	*e*P	**P**	**22 17 45.5**	**-0.6**
SEY	**Seymchan**	**67.79**	**13**⇑	*e*P	**P**	**22 17 57.0**	**+2.3**
TIXI	**Tiksi**	**73.64**	**1**⇑	*i*P	**P**	**22 18 30.3**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s,mb4.2						
AKTK	**Aktyubinsk**	**77.92**	**323**	P	**P**	**22 18 53.6**	**-1.4**
AKTO	**Aktyubinsk**	**77.92**	**323**	P	**P**	**22 18 53.6**	**-1.4**
	comp=Z,2.5nm,0.7s,mb4.3,baz=100,slow=5.0,SNR=11						
ARU	**Arti**	**79.58**	**329***c*	*i*P	**P**	**22 19 03.1**	**-1.0**
ARU						22 22 03.2	
ARU				S	S	22 29 02.3	-1.1
ARU				*e*SS	SS	22 34 08.6	-3.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
TORD	**Torodi Ar. Bea**	**124.06**	**284**	PKP	PKPdf	22 25 55.6	-0.8
	comp=Z,0.6nm,0.7s,baz=62,slow=1.4,SNR=4.0						

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*NEIC **16** 22:08:44.0,3520S×6865W,h0^{km},MD4.0(SJA), ML3.2(GUC),After GUC.*
NEIC Felt [III] at San Rafael.

GUC 16 22:08:44.0±0.5**,3520S**×**6865W,h0**^{km}±18^{km}**,MD3.5, ML3.2,Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CICH	**Cipreses**	**1.70**	**301**	*e*P	Pn	22 09 15.9	+1.0
CICH				*e*S	Sn	22 09 39.8	+2.4
LMEL	**Las Melosas**	**1.86**	**316**	*i* P	Pn	22 09 18.5	+1.4
LMEL				*i* S	Sn	22 09 44.9	+3.5
LMEL	**Las Melosas**	**1.86**	**316**	*i* P	Pn	22 09 18.5	+1.4
LMEL				*i* S	Sn	22 09 44.9	+3.5
LMEL				AML	AML	22 09 48.6	
	comp=N,232nm,0.2s						
CACH	**El Canelo**	**1.94**	**303**	*i* P	Pn	22 09 19.4	+1.2
CACH				*i* S	Sn	22 09 46.6	+3.4
CHCH	**Chadas Angostu**	**2.08**	**307**	*i* P	Pn	22 09 22.0	+1.9
CHCH				*i* S	Sn	22 09 51.0	+4.3
FCH	**Farellones**	**2.31**	**324**	*i* P	Pn	22 09 23.7	+0.4
FCH				*i* S	Sn	22 09 56.2	+3.8
FCH				AML	AML	22 09 58.4	
	comp=E,141nm,0.3s						
PEL	**Peldehue**	**2.66**	**320**	*i* P	Pn	22 09 32.1	+4.0
PEL				*i* S	Sn	22 10 08.1	+7.1
PEL				AML	AML	22 10 09.6	
	comp=N,210nm,0.3s						
TRQA	**Tornquist**	**6.07**	**120**	*e*Pn	Pn	22 10 11.0	-4.0
	comp=N,6.4nm,0.5s						
TRQA				*e*Sn	Sn	22 11 15.5	-10

CASC 16 22:11:23.1±1.5**,838N**×**8282W,h0**^{km}±4^{km}**,MD4.1,1C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.36**	**82**	*e*P	Pg	22 11 31.1	+0.9
DVD				*e*S	Sg	22 11 38.2	+3.3
BAR1		**0.98**	**330**	*e*P	Pg	22 11 42.6	+0.6
CNI	**Changuinola**	**1.07**	**16**	*e*P	Pg	22 11 43.4	-0.3
BUS	**Buena Vista**	**1.49**	**321**	*e*P	Pn	22 11 50.4	-0.8
BUS				*e*S	Sg	22 12 14.1	+2.9
QCR	**Quepos**	**1.69**	**308**	*e*P	Pn	22 11 53.3	-0.6
URSC	**Urasca**	**1.73**	**327**	*e*P	Pn	22 11 54.2	-0.2
URSC				*e*S	Sn	22 12 18.3	+1.1
LCR2	**La Lucha 2**	**1.79**	**319**	*e*P	Pn	22 11 55.9	+0.6
LCR2				*e*S	Sn	22 12 21.2	+2.5
LAJ	**Bijagual**	**1.96**	**319**	*e*P	Pn	22 11 59.8	+2.2
PRS1	**Puriscal**	**2.17**	**317**	*e*P	Pn	22 12 00.3	-0.2
CGA2	**Cerro Gallo 2**	**2.30**	**315**	*e*P	Pn	22 12 03.4	+1.1
CGA2				*e*S	Sn	22 12 33.2	+1.9
PTP	**Ponta Puerca**	**19.37**	**58**⇑	*i*P		22 11 27.8	

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*NEIC **16** 22:42:03.5,3086S×7126W,h44^{km},MG3.5(GUC),After GUC.*

GUC 16 22:42:03.5±0.8**,3086S**×**7126W,h44**^{km}±3^{km}**,ML3.5, 2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.26**	**11**	*e*P	Pn	22 42 12.0	+0.3
OVCH				*e*S	Sn	22 42 17.9	+0.5
OVCH	**Ovalle**	**0.26**	**11**	*e*P	Pn	22 42 12.0	+0.3
OVCH				*e*S	Sn	22 42 17.9	+0.5
OVCH				AML	AML	22 42 19.1	
	comp=N,6μm,0.1s						
CMCH	**Combarbala**	**0.38**	**145**⇑	*i*P	Pn	22 42 13.1	+0.1
CMCH				*i* S	Sn	22 42 20.9	+1.2
CMCH	**Combarbala**	**0.38**	**145**⇑	*i*P	Pn	22 42 13.1	+0.1
CMCH				*i* S	Sn	22 42 20.9	+1.2
CMCH				AML	AML	22 42 21.2	
	comp=N,18μm,0.2s						
TLL	**Tololo Astrono**	**0.80**	**30**⇓	*i*P	Pn	22 42 19.3	+1.0
TLL				*i* S	Sn	22 42 31.2	+2.2
CHNG	**Los Chungos**	**1.04**	**191**⇓	*i*P	Pn	22 42 05.4	-16
CHNG				*i* S	Sn	22 42 19.3	-16
LCO	**Las Campanas**	**1.91**	**15**	*e*Pn	Pn	22 42 33.9	+0.4
LCO				*e*Sn	Sn	22 42 49.9	-6.4
PEL	**Peldehue**	**2.33**	**168**	AML	AML	22 43 21.2	
	comp=N,317nm,0.8s						
FCH	**Farellones**	**2.59**	**162**	*i* P	Pn	22 42 44.8	+1.9
FCH				*e*S	Sn	22 43 15.4	+2.2
FCH				AML	AML	22 43 29.6	
	comp=E,109nm,0.2s						

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*NEIC **16** 22:51:10.6,3790S×17675E,h6^{km},ML3.9(WEL),After WEL.*
NEIC Felt at Edgecumbe.

WEL 16 22:51:10.6±0.1**,3790S**×**17675E,h5**^{km}**,ML3.5**/10**,4C-4D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.11**	**216**	P	Pg	22 51 13.3	+0.5
MARZ				S	Sg	22 51 15.4	+1.1
MARZ	**Manawahe**	**0.11**	**216**	⇓PG	Pg	22 51 13.3	+0.5
MARZ				SG	Sg	22 51 15.4	+1.0
OPRZ	**Ohinepanea**	**0.17**	**289**	⇑PG	Pg	22 51 14.2	+0.3
OPRZ				SG	Sg	22 51 16.8	+0.7
EDRZ	**Edgecumbe**	**0.21**	**184**	P	Pg	22 51 15.1	+0.4
EDRZ	**Edgecumbe**	**0.21**	**184**	⇑PG	Pg	22 51 15.1	+0.4
LIRZ	**Lichensteins R**	**0.31**	**250**	P	Pg	22 51 17.2	+0.6
LIRZ				S	Sg	22 51 22.2	+1.5
LIRZ	**Lichensteins R**	**0.31**	**250**	⇓PG	Pg	22 51 17.2	+0.5
LIRZ				SG	Sg	22 51 22.2	+1.5
MKRZ	**Makatiti**	**0.33**	**223**	P	Pg	22 51 17.8	+0.8
MKRZ	**Makatiti**	**0.33**	**223**	⇓PG	Pg	22 51 17.8	+0.8
TAZ	**Tarawera**	**0.38**	**210**	P	Pg	22 51 19.0	+1.0
TAZ	**Tarawera**	**0.38**	**210**	PG	Pg	22 51 19.0	+1.0
KARZ	**Kaharoa**	**0.42**	**253**	P	Pg	22 51 19.1	+0.4
KARZ	**Kaharoa**	**0.42**	**253**	⇓PG	Pg	22 51 19.1	+0.4
TGRZ	**Tauranga**	**0.43**	**293**	P	Pg	22 51 19.2	+0.4
TGRZ	**Tauranga**	**0.43**	**293**	⇑PG	Pg	22 51 19.2	+0.3
URZ	**Urewera**	**0.46**	**142**	P	Pg	22 51 19.5	+0.1
URZ	**Urewera**	**0.46**	**142**	⇑PG	Pg	22 51 19.5	+0.1
WIZ	**White Island**	**0.51**	**43**	P	Pg	22 51 21.0	+0.6
WIZ	**White Island**	**0.51**	**43**	PG	Pg	22 51 21.0	+0.6
UTU	**Utuhina**	**0.52**	**238**	P	Pg	22 51 21.2	+0.5
UTU	**Utuhina**	**0.52**	**238**	PG	Pg	22 51 21.2	+0.6
PATZ	**Paeroa**	**0.62**	**219**	P	Pg	22 51 23.5	+1.0
PATZ	**Paeroa**	**0.62**	**219**	P*	Pg	22 51 23.5	+1.0
MYRZ	**Mayor Island**	**0.74**	**326**	P*	Pb	22 51 25.1	-0.9
MWZ	**Matawai**	**0.75**	**126**	P	Pg	22 51 25.0	0.0
MWZ	**Matawai**	**0.75**	**126**	P*	Pb	22 51 25.0	-1.1
TOZ	**Tahuroa Road**	**1.01**	**279**	P	Pg	22 51 28.2	-1.7
TOZ	**Tahuroa Road**	**1.01**	**279**	P*	Pb	22 51 29.2	-1.3
MXZ	**Matakaoa Point**	**1.28**	**75**	P	Pg	22 51 34.6	-0.5
MXZ	**Matakaoa Point**	**1.28**	**75**	P*	Pb	22 51 34.6	-0.5
KNZ	**Kokohu**	**1.33**	**147**	P	Pn	22 51 35.5	-0.4
KNZ	**Kokohu**	**1.33**	**147**	P*	Pb	22 51 35.5	-0.6
KUZ	**Kuaotunu**	**1.42**	**324**	P	Pn	22 51 35.7	-1.3
KUZ	**Kuaotunu**	**1.42**	**324**	PN	Pn	22 51 35.7	-1.3
HIZ	**Hauiti**	**1.62**	**247**	*e*P	Pn	22 51 37.6	-2.2
HIZ	**Hauiti**	**1.62**	**247**	PN	Pn	22 51 37.6	-2.2
MOVZ	**Moawhango**	**1.70**	**207**	P	Pn	22 51 41.0	+0.1
PXZ	**Pawanui**	**2.13**	**178**	PN	Pn	22 51 45.6	-1.2

IDC 16 23:04:35.0±3.0**,5565N**×**3512W,h0**^{km}**,mb3.7**/3**, mb1 3.7**/3**,mb1mx3.3**/23**,mbtmp3.7**/3**,MS3.9**/1**,Ms1 3.9**/1**,**

ms1mx2.8/37, Error ellipse: s-maj=82.1km s-min=43.0km az=74.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAE	Valguarnera	37.64	98	LR	LR	23 28 28.7	
	comp=Z,173nm,19.7s,baz=139,slow=38						
BRTR	Keskin Array B	46.94	80	P	P	23 13 08.0	+0.9
	0.9nm,0.8s,baz=315,slow=6.0,SNR=4.5						
TORD	Torodi Ar. Bea	51.08	131	P	P	23 13 38.7	-0.4
	0.8nm,0.9s,baz=337,slow=8.3,SNR=2.5						
MKAR	Makanchi Array	65.21	42	P	P	23 15 17.1	-0.6
	0.4nm,0.5s,baz=332,slow=6.2,SNR=7.0						
ASAR	Alice Springs	147.04	19	PKPbc	PKPbc	23 24 19.3	-0.1
	0.3nm,0.5s,baz=344,slow=2.3,SNR=5.2						

BJI 16 23:07:56.7, 2531N×10667E, h18km, ML3.8, Ms3.8, Msz3.7, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	1.14	360	P	Pn	23 08 15.4	-2.4
GYA				PG	Pg	23 08 17.9	-1.0
GYA				S	Sb	23 08 29.6	-2.9
GYA				SG	Sg	23 08 31.9	-2.0
GYA				Smax			
	comp=N,1μm,0.8s						
GYA				Smax			
	comp=E,3μm,0.9s						
KMI	Kunming	3.56	268	P	Pn	23 08 52.8	+1.7
KMI				PG	Pg	23 09 04.4	-0.6
KMI				S	Sn	23 09 31.3	-1.5
KMI				SG	Sg	23 09 49.8	-1.4
KMI				Smax			
	comp=N,297nm,1.0s						
KMI				Smax			
	comp=E,242nm,0.9s						
KMI				LR	LR		
	comp=N,856nm,4.7s						
KMI				LR	LR		
	comp=E,504nm,5.1s						
KMI				LR	LR		
	comp=Z,292nm,7.0s						
CD2	Chengdu	6.14	336	eP	Pn	23 09 31.5	+5.0
CD2				S	Sn	23 10 40.9	+4.6
CD2				Smax			
	comp=N,100nm,0.8s						
CD2				Smax			
	comp=E,120nm,0.7s						
CD2				LR	LR		
	comp=N,480nm,6.0s						
CD2				LR	LR		
	comp=E,1μm,6.0s						
CD2				LR	LR		
	comp=Z,390nm,6.0s						
QIZ	Qiongzhong	6.91	154	PG	Pn	23 10 03.8	+27
QIZ				Smax			
	comp=N,49nm,0.9s						
QIZ				Smax			
	comp=E,64nm,0.9s						
XAN	Xi'an	8.92	12	P	Pn	23 10 05.3	+0.7
XAN				S	Sn	23 11 42.1	-2.5
XAN				Smax			
	comp=N,25nm,0.9s						
XAN				Smax			
	comp=E,13nm,0.8s						

NEIC 16 23:16:43.4, 3204S×7146W, h20km, ML3.1(GUC), After GUC.

GUC 16 23:16:43.4±0.8, 3204S×7146W, h20km±5km, MD3.5, ML3.1, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.16	348	iP	Pg	23 16 34.9	-13
CHNG				eS	Sg	23 16 38.6	-12
CMCH	Combarbala	0.95	24	⇑iP	Pb	23 17 00.6	-0.6
CMCH				iS	Sb	23 17 13.3	0.0
CMCH	Combarbala	0.95	24	⇑iP	Pb	23 17 00.6	-0.6
CMCH				iS	Sb	23 17 13.3	0.0
CMCH				AML	AML	23 17 18.1	
	comp=E,4μm,0.7s						
ROCH	El Roble	1.00	158	iP	Pb	23 17 01.6	-0.5
ROCH				iS	Sb	23 17 15.8	+0.9
PEL	Peldehue	1.28	149	eP	Pn	23 17 05.8	-0.4
PEL				eS	Sn	23 17 22.7	0.0
PEL				AML	AML	23 17 25.4	
	comp=N,795nm,0.2s						
OVCH	Ovalle	1.45	9	iP	Pn	23 17 08.6	+0.1
OVCH				eS	Sn	23 17 26.7	-0.2
OVCH	Ovalle	1.45	9	iP	Pn	23 17 08.6	+0.1
OVCH				eS	Sn	23 17 26.7	-0.2
OVCH				AML	AML	23 17 30.2	
	comp=N,817nm,0.2s						
CLCH	Cerro Calan	1.56	150	AML	AML	23 17 33.7	
	comp=N,549nm,0.5s						
FCH	Farellones	1.62	143	⇑iP	Pn	23 17 11.5	+0.6
FCH				iS	Sn	23 17 32.8	+1.7
FCH				AML	AML	23 17 34.8	
	comp=E,165nm,0.1s						
TACH	Talagante	1.67	165	iP	Pn	23 17 11.5	0.0
TACH				iS	Sn	23 17 32.9	+0.6
ANTU	Antumapu	1.68	156	AML	AML	23 17 41.2	
	comp=N,224nm,0.4s						
TLL	Tololo Astrono	1.95	17	iP	Pn	23 17 16.5	+1.1
TLL				iS	Sn	23 17 42.3	+3.0
TLL	Tololo Astrono	1.95	17	iP	Pn	23 17 16.5	+1.1
TLL				iS	Sn	23 17 42.3	+3.0
TLL				AML	AML	23 17 45.7	
	comp=E,347nm,0.2s						
LMEL	Las Melosas	2.09	150	AML	AML	23 17 51.9	
	comp=N,118nm,0.3s						
SFDO	San Fernando	2.59	172	iP	Pn	23 17 25.4	+1.2
SFDO				iS	Sn	23 17 57.6	+2.4
LCO	Las Campanas	3.09	12	ePn	Pn	23 17 30.7	-0.4
LCO				eSn	Sn	23 18 08.9	+1.4

ISCJB 16 23:24:48.2±3.3, 240S±0.1×1767W±03, h39km±42km, mb4.1/6, Error ellipse: s-maj=41.2km s-min=18.6km az=13.9
IDC 16 23:24:48.4±2.1, 2394S×17732W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.9/14, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=71.6km s-min=36.8km az=136.0
NEIC 16 23:24:50.8±0.7, 2406S×17684W, h35km, mb4.3/4, Error ellipse: s-maj=20.9km s-min=11.6km az=119.0

ISC 16 23:24:50.2±6.4, 241S±01×1768W±03, h33km±55km, n13, σ0s65/10, mb4.1/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	11.15	26	Pn	Pn	23 27 27.3	-0.1
	36nm,0.8s						
URZ	Urewera	15.08	199	Pn	Pn	23 28 21.0	+0.2
	0.9nm,0.3s,baz=268,slow=8.4,SNR=6.2						
STKA	Stephens Creek	37.38	248	eP	P	23 32 00.0	0.0
	0.7nm,0.3s,mb4.0						
STKA	Stephens Creek	37.38	248	P	P	23 32 00.0	0.0
	0.8nm,0.3s,mb4.0,baz=87,slow=7.6,SNR=4.0						
ASAR	Alice Springs	44.89	260	P	P	23 33 00.8	-1.1
	0.7nm,0.4s,mb3.9,baz=88,slow=7.3,SNR=14						
WB2	Warramunga Arr	45.30	265	eP	P	23 33 04.6	-0.6
WRA	Warramunga Arr	45.31	265	P	P	23 33 04.8	-0.4
	1.7nm,0.4s,mb4.2,baz=101,slow=8.3,SNR=53						
KAKA	Kakadu	49.24	274	eP	P	23 33 37.1	+1.2
	1.8nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	53.73	265	eP	P	23 34 10.3	+0.8
	4.2nm,1.2s,mb4.2						
SBA	Scott Base	54.42	184	eP	P	23 34 13.6	-0.1
	1.8nm,0.7s,mb4.1						
AKASG	Malin Array Be	146.64	330	PKPbc	PKPbc	23 44 29.4	+1.2
	1.3nm,0.5s,baz=42,slow=4.2,SNR=11						
BRTR	Keskin Array B	149.98	309	PKPbc	PKPbc	23 44 39.0	+1.6
	0.6nm,0.5s,baz=132,slow=3.1,SNR=3.9						
BRTR				PKPab	PKPab	23 44 46.4	+3.3
	1.1nm,0.7s,baz=88,slow=4.4,SNR=5.0						
MMAI	Mount Meron Ar	150.42	295	PKPbc	PKPbc	23 44 41.1	+2.5
	0.6nm,0.4s,baz=83,slow=6.8,SNR=5.8						

MOS 16 23:49:33.8±0.7, 5505N×15868W, h16km, mb4.9/49, Error ellipse: s-maj=12.8km s-min=5.3km az=87.9
ISCJB 16 23:49:35.3±1.1, 5508N±005×15854W±005, h23km±7km, mb4.5/85, MS4.1/21, Error ellipse: s-maj=8.0km s-min=4.7km az=169.2
BJI 16 23:49:36.8, 5588N×15926W, h10km, mB5.0, mb4.8, Ms5.0, Msz4.7
NEIC 16 23:49:37.3±0.2, 5502N×15852W, mb4.7/40, ML4.3(AEIC), Error ellipse: s-maj=4.4km s-min=3.1km az=164.0
IDC 16 23:49:37.0±0.6, 5501N×15860W, h27km±3km, mb4.1/23, mb1 4.3/25, mb1mx4.3/27, mbtmp4.1/25, ML4.3/2, MS3.8/14, Ms1 3.8/14, ms1mx3.5/32, Error ellipse: s-maj=14.4km s-min=9.9km az=176.0
SZGRF 16 23:49:47.9, 5643N×15806W, h33km, mb4.5, Alaska Peninsula, United States

ISC 16 23:49:38.5±1.1, 5504N±005×15854W±005, h35km±7km, h32km±1.1km:pP-P, n234, σ0s82/236, mb4.5/85, MS4.1/21, 15C-8D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	1.15	286	⇑iP	Pn	23 49 58.1	0.0
SDPT				eSn	Sn	23 50 15.3	+2.6
CHGN	Chignik	1.27	3	eP	Pn	23 49 59.9	+0.2
FALS	False Pass	2.82	268	ePn	Pn	23 50 21.2	+0.2
KDAK	Kodiak Island	4.30	48	ePn	Pn	23 50 39.5	-1.8
KDAK				eSn	Sn	23 51 47.8	+18
KDAK	Kodiak Island	4.30	48	Pn	Pn	23 50 39.4	-2.0
	8.8nm,0.3s,baz=247,slow=8.3,SNR=34						
KDAK				Lg		23 51 53.4	
	19nm,0.3s,baz=276,slow=24,SNR=3.7						
KDAK				LR	LR	23 52 21.8	
	comp=Z,205nm,19.2s,baz=171,slow=38						
AKUT	Akutan	4.30	261	eP	Pn	23 50 42.2	+0.8
AKLV	Akutan Long Va	4.40	262	P	Pn	23 50 43.2	+0.5
UNV	Unalaska Valle	4.80	259	P	Pn	23 50 47.7	-0.5
SVW2	Sparrevohn	6.28	13	eP	Pn	23 51 08.8	+0.4
SLKM	Skilak Lake	7.06	36	ePn	Pn	23 51 19.2	0.0
SLKM				eSn	Sn	23 52 44.0	+6.0
RC01	Rabbit Creek A	7.65	34	P	Pn	23 51 27.3	0.0
TTA	Tatalina	8.02	8	ePn	Pn	23 51 32.9	+0.6
	100nm,1.1s						
TTA	Tatalina	8.02	8	eP	Pn	23 51 32.9	+0.5
TTA				pmax	pmax		
	comp=Z,100nm,1.1s						
PMR	Palmer	8.22	33	ePn	Pn	23 51 37.0	+2.0
	comp=Z,41nm,1.0s						
PMR	Palmer	8.22	33	eP	Pn	23 51 37.1	+2.0
PMR				pmax	pmax		
	comp=Z,41nm,1.0s						
EYAK	Cordova Ski Ar	8.78	46	P	Pn	23 51 41.7	-1.0
RAGM	Ragged Mountai	9.14	48	P	Pn	23 51 47.5	-0.2
KTH	Kantishna Hill	9.38	21	P	Pn	23 51 52.0	+1.0
MCK	McKinley	9.99	25	ePn	Pn	23 51 58.5	-0.8
GAMB	Gambell	11.01	328	ePn	Pn	23 52 17.7	+4.5
COLA	College	11.20	24	ePn	Pn	23 52 13.0	-2.9
	comp=Z,15nm,0.9s						
COLA	College	11.20	24	⇓eP	Pn	23 52 13.2	-2.7
IMA2	Indian Mountai	11.32	10	eP	Pn	23 52 17.9	+0.5
TNA	Tin City	11.52	340	ePn	Pn	23 52 21.6	+1.4
EGAK	Eagle	13.04	35	ePn	Pn	23 52 40.1	-0.8
DAWY	Dawson	13.21	39	ePn	Pn	23 52 43.1	-0.2
DLBC	Dease Lake	15.95	66	ePn	Pn	23 53 22.7	+2.8
DLBC	Dease Lake	15.95	66	Pn	Pn	23 53 19.9	-0.1
	baz=250,slow=12						
INK	Inuvik	17.63	31	ePn	Pn	23 53 39.8	-1.1
INK	Inuvik	17.63	31	P	Pn	23 53 39.2	-1.7
	comp=Z,1.2nm,0.3s,baz=220,slow=12,SNR=25						
INK				S	Sn	23 56 59.1	+3.2
	comp=Z,0.1nm,0.3s,baz=252,slow=20,SNR=3.7						
INK				LR	LR	00 01 10.3	
	comp=Z,264nm,18.2s,baz=180,slow=39						
BBB	Bella Bella	18.20	86	LR	LR	23 59 35.7	
	comp=Z,262nm,19.5s,baz=277,slow=33						
BILL	Bilibino	20.84	322	eP	P	23 54 16.0	-0.7
	comp=Z,22nm,0.9s						
BILL	Bilibino	20.84	322	⇓eP	P	23 54 15.7	-1.0
BILL				pmax	pmax		
	comp=Z,29nm,1.2s						
YKW3	Yellowknife Ar	23.54	54	eP	P	23 54 45.7	+0.4
YKA	Yellowknife Ar	23.55	54	P	P	23 54 43.7	-1.7
YKA	Yellowknife Ar	23.55	54	P	P	23 54 43.7	-1.7
	comp=Z,1.1nm,0.5s,mb3.5,baz=267,slow=8.4,SNR=27						
EDM	Edmonton	26.19	75	eP	P	23 55 14.7	+5.3
NEW	Newport	26.26	88	P	P	23 55 10.1	0.0
	comp=Z,2.7nm,0.7s,mb3.9,baz=271,slow=5.0,SNR=4.2						
NEW				LR	LR	00 03 34.4	
	comp=Z,201nm,21.4s,MS3.6,baz=301,slow=32						
WALA	Waterton Lakes	27.70	84	eP	P	23 55 29.8	+6.7
	comp=Z,14nm,0.4s,mb4.9						
MCMT	McKenzie Canyo	30.61	90	eP	P	23 55 48.9	0.0
RES	Resolute Bay	31.10	27	eP	P	23 55 52.7	-0.3
NVAR	Mina Array Bea	31.65	105	P	P	23 55 59.0	+0.9
NVAR				pP	pP	23 56 05.7	-2.4
NVAR	Mina Array Bea	31.65	105	P	P	23 55 59.0	+0.9
	comp=Z,2.3nm,0.7s,mb4.1,baz=311,slow=7.5,SNR=19						
NVAR				pP	pP	23 56 05.7	-2.4
	comp=Z,1.1nm,0.6s,baz=307,slow=7.4,SNR=6.3						
DAC	Darwin (Calif)	33.59	107	eP	P	23 56 16.0	+0.9
	comp=Z,50nm,2.8s,mb5.0						
DAC	Darwin (Calif)	33.59	107	eP	P	23 56 16.0	+0.9
DAC				pmax	pmax		
	comp=Z,50nm,2.8s,mb5.0						
PDAR	Pinedale Array	33.76	91	P	P	23 56 16.9	+0.5
	comp=Z,1.7nm,0.7s,mb4.1,baz=315,slow=4.5,SNR=18						
PDAR				pP	pP	23 56 25.8	-0.7
	comp=Z,1.1nm,0.7s,baz=311,slow=4.2,SNR=6.0						
TPNV	Topopah Spring	33.85	105	eP	P	23 56 18.0	+0.7
TIXI	Tiksi	33.89	327	eP	P	23 56 16.1	-1.2
	comp=Z,20nm,1.1s,mb5.0						
TIXI	Tiksi	33.89	327	d iP	P	23 56 16.5	-0.8
TIXI				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,454nm,16.0s,MS4.3						
FCC	Fort Churchill	34.18	57	eP	P	23 56 19.9	0.0
	comp=Z,71nm,2.5s,mb5.2						
FCC	Fort Churchill	34.18	57	eP	P	23 56 20.0	0.0
FCC				pmax	pmax		
	comp=Z,71nm,2.5s,mb5.2						
YAK	Yakutsk	36.30	311	⇑eP	P	23 56 36.7	-1.4
YAK				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
YSS	Yuzh-Sakhalins	36.82	282	⇑eP	P	23 56 43.3	+0.5
YSS				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.7						
ULM	Lac du Bonnet	37.19	71	P	P	23 56 46.0	+0.1
	comp=Z,0.8nm,0.6s,mb3.7,baz=297,slow=11,SNR=2.6						
PV01	Paradox Valley	37.36	96	eP	P	23 56 46.8	-0.7
WUAZ	Wupatki	37.61	101	eP	P	23 56 50.2	+0.6
ASAJ	Asahikawa	38.59	279	P	P	23 56 57.3	-0.5
	comp=Z,8.5nm,0.7s,mb4.6,baz=92,slow=15,SNR=6.3						
ERM	Erimo	39.59	276	⇓iP	P	23 57 05.3	-0.8
HABR	Khabarovsk	40.21	289	eP	P	23 57 09.6	-1.6
HABR				eS	S	00 03 14.4	-1.1
HABR				e*SS	sS	00 03 26.3	-6.1
HABR				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
ANMO	Albuquerque	40.81	97	⇓eP	P	23 57 18.7	+2.4
EYMN	Ely	40.86	71	eP	P	23 57 16.1	-0.5
	comp=Z,5.1nm,0.8s,mb4.2						
KLR	Kul'dur	41.55	292	eP	P	23 57 15.2	-7.0
COWI	Conover	43.26	72	eP	P	23 57 43.9	+7.7
MNTX	Cornudas Mount	43.80	100	eP	P	23 57 41.2	+0.5
	comp=Z,62nm,2.9s,mb4.8						
BOD	Bodaibo	45.22	311	eP	P	23 57 49.7	-2.0
BOD				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
MJAR	Matsushiro Arr	46.10	274	P	P	23 57 58.3	-0.6
	comp=Z,1.8nm,0.4s,mb4.3,baz=35,slow=7.1,SNR=7.6						
MJAR				LR	LR	00 15 36.5	
	comp=Z,90nm,20.6s,MS3.7,baz=80,slow=34						
MAJO	Matsushiro	46.10	274	eP	P	23 57 58.0	-0.9
	comp=Z,18nm,1.0s,mb5.0						
MAJO	Matsushiro	46.10	274	eP	P	23 57 58.0	-0.9
MAJO				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
MAT	Matsushiro	46.10	274	P	P	23 57 59.3	+0.4
LTX	Lajitas	46.55	100	eP	P	23 58 02.9	+0.4
	comp=Z,5.9nm,1.0s,mb4.5						
LTX	Lajitas	46.55	100	eP	P	23 58 02.9	+0.4
LTX				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
TXAR	Lajitas Array	46.55	100	P	P	23 58 02.2	-0.3
TXAR				pP	pP	23 58 10.2	-2.7
TXAR				LR	LR	00 16 38.7	
TXAR	Lajitas Array	46.55	100	P	P	23 58 02.2	-0.3
TXAR				*PP	pP	23 58 10.2	-2.7
TXAR	Lajitas Array	46.55	100	P	P	23 58 02.2	-0.3
	comp=Z,2.3nm,0.8s,mb4.2,baz=305,slow=5.3,SNR=17						
TXAR				pP	pP	23 58 10.2	-2.7
	comp=Z,2.4nm,0.9s,baz=316,slow=5.2,SNR=7.4						
TXAR				LR	LR	00 16 38.7	
	comp=Z,180nm,18.1s,MS4.1,baz=310,slow=35						
HIA	Hailar	47.77	299	⇓eP	P	23 58 10.3	-1.5
JCT	Junction City	47.89	96	eP	P	23 58 11.7	-1.2
	comp=Z,5.9nm,0.8s,mb4.7						
JCT	Junction City	47.89	96	eP	P	23 58 11.7	-1.2
JCT				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
CN2	Changchun	48.34	290	⇑P	P	23 58 15.8	-0.5
CN2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
CN2				AMB	AMB		
	comp=Z,600nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=E,200nm,11.0s,MS4.5						
CN2				LR	LR		
	comp=Z,300nm,13.0s,MS4.5						
SCHQ	Schefferville	48.92	50	P	P	23 58 19.1	-1.5
	comp=Z,1.4nm,0.9s,mb4.0,baz=322,slow=15,SNR=3.6						
KSRS	Korea Array	51.32	282	P	P	23 58 38.6	-0.4
	comp=Z,6.0nm,0.8s,mb4.6,baz=44,slow=6.9,SNR=12						
KSRS				LR	LR	00 19 09.6	
	comp=Z,47nm,18.4s,MS3.5,baz=5.8,slow=34						
TKL	Tuckaleechee C	53.29	79	LR	LR	00 21 07.3	
	comp=Z,159nm,18.5s,MS4.1,baz=322,slow=35						
TLY	Talaya	53.76	310	eP	P	23 58 57.0	+0.1
TLY	Talaya	53.76	310	eP	P	23 58 56.9	0.0
TLY				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
TLY				MLR	MLR		
	comp=Z,109nm,19.0s,MS3.9						
ZAK	Zakamensk	54.85	309	⇑iP	P	23 59 04.7	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
ULN	Ulaanbaatar	54.92	305	eP	P	23 59 05.0	-0.3
	comp=Z,7.2nm,0.9s,mb4.7						
ULN	Ulaanbaatar	54.92	305	⇑eP	P	23 59 05.1	-0.2
MOY	Mondy	54.93	312	eP	P	23 59 05.3	0.0
SONM	Songino Array	55.25	305	P	P	23 59 08.0	+0.3
SONM						00 00 08.3	
SONM	Songino Array	55.25	305	P	P	23 59 08.0	+0.3
	comp=Z,11nm,0.7s,mb5.0,baz=46,slow=6.8,SNR=69						
SONM				PcP	PcP	00 00 08.3	+0.1
	comp=Z,1.9nm,0.8s,baz=83,slow=1.4,SNR=4.5						
SONM				LR	LR	00 24 45.4	
	comp=Z,216nm,18.6s,MS4.3,baz=358,slow=38						
ARCES	ARCESS Array B	55.70	358	P	P	23 59 10.1	-0.6
	comp=Z,2.1nm,0.6s,mb4.3,baz=27,slow=7.0,SNR=8.2						
HHC	Hu-ho-hao-te	57.75	296	eP	P	23 59 26.6	+1.0
HHC				AP	pP	23 59 36.8	+0.6
HHC				AMB	AMB		
	comp=Z,11nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,152nm,5.1s						
HHC				LR	LR		
	comp=N,188nm,17.8s,MS4.4						
HHC				LR	LR		
	comp=E,112nm,13.1s,MS4.4						
HHC				LR	LR		
	comp=Z,122nm,15.5s,MS4.1						
NVS	Novosibirsk	59.37	324	eP	P	23 59 35.5	-1.1
NVS				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,12nm,1.6s						
NJ2	Nanjing	60.35	284	eP	P	23 59 47.0	+3.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
CMIG	Matias Romero	61.11	102	LR	LR	00 24 16.5	
	comp=Z,59nm,18.8s,MS3.8,baz=192,slow=34						
PRGR	Permogore	62.12	347	eP	P	23 59 54.2	-1.0
TEIG	Tepich	62.38	94	LR	LR	00 27 55.0	
	comp=Z,44nm,21.1s,MS3.6,baz=339,slow=37						
FINES	FINESS Array B	63.80	358	P	P	00 00 05.9	-0.5
	comp=Z,6.3nm,0.9s,mb4.7,baz=12,slow=7.4,SNR=13						
NB2	NORSAR Subarra	63.98	6	P	P	00 00 07.6	0.0
	comp=Z,3.9nm,0.6s,mb4.6,baz=355,slow=6.9						
NB2	NORSAR Subarra	63.98	6	P	P	00 00 07.6	0.0
NB2				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
NOA	NORSAR Array B	63.98	6	P	P	00 00 07.2	-0.4
NOA				*PP	pP	00 00 16.0	-2.3
NOA	NORSAR Array B	63.98	6	P	P	00 00 07.2	-0.4
	comp=Z,2.4nm,0.8s,mb4.2,baz=354,slow=6.6,SNR=5.4						
NOA				pP	pP	00 00 16.0	-2.3
	comp=Z,3.1nm,0.6s,baz=354,slow=6.7,SNR=5.9						
NOA				LR	LR	00 29 38.5	
	comp=Z,72nm,19.8s,MS3.9,baz=0.0,slow=38						
SVE	Sverdlovsk	64.04	337	⇑eP	P	00 00 08.2	+0.1
SVE				eS	S	00 09 12.5	+31
SVE				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KURK	Kurchatov	64.36	324	⇑eP	P	00 00 10.3	+0.1
GTA	Gaotai	64.72	303	eP	P	00 00 12.6	-0.2
GTA				AP	pP	00 00 23.3	-0.2
GTA				XP	sP	00 00 27.3	-0.3
GTA				PP	PP	00 02 37.8	+2.9
GTA				S	S	00 08 50.8	+0.3
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.6						
GTA				AMB	AMB		
	comp=Z,100nm,6.5s						
GTA				LR	LR		
	comp=N,116nm,17.5s,MS4.3						
GTA				LR	LR		
	comp=E,133nm,17.5s,MS4.3						
GTA				LR	LR		
	comp=Z,163nm,16.7s,MS4.3						
ARU	Arti	64.86	338	c iP	P	00 00 13.0	-0.4
ARU						00 02 36.6	
ARU				S	S	00 08 51.2	-0.4
ARU				SS	SS	00 13 02.4	+0.1
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LZH	Lanzhou	65.31	298	eP	P	00 00 17.0	+0.3
LZH				AP	pP	00 00 26.5	-0.9
LZH				XP	sP	00 00 30.5	-1.0
LZH				PP	PP	00 02 42.5	+2.3
LZH				eS	S	00 08 58.0	+0.2
LZH				SS	SS	00 13 09.0	-1.3
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,80nm,5.4s						
LZH				LR	LR		
	comp=E,413nm,15.5s						
LZH				LR	LR		
	comp=Z,725nm,16.3s,MS5.0						
MKAR	Makanchi Array	66.34	319	P	P	00 00 22.6	-0.5
MKAR				*PP	pP	00 00 30.5	-3.4
MKAR	Makanchi Array	66.34	319	P	P	00 00 22.6	-0.5
	comp=Z,2.7nm,0.6s,mb4.5,baz=45,slow=6.4,SNR=36						
MKAR				pP	pP	00 00 30.5	-3.4
	comp=Z,2.1nm,0.7s,baz=43,slow=6.4,SNR=10						
MKAR				LR	LR	00 31 46.0	
	comp=Z,139nm,18.6s,MS4.2,baz=357,slow=38						
WMQ	Urumqi	66.65	314	⇑iP	P	00 00 25.4	+0.2
WMQ				AP	pP	00 00 35.9	0.0
WMQ				PCP	PcP	00 00 54.4	+0.2
WMQ				PP	PP	00 02 54.1	+2.5
WMQ				S	S	00 09 13.9	0.0
WMQ				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,154nm,4.2s						
WMQ				LR	LR		
	comp=N,92nm,19.0s,MS4.1						
WMQ				LR	LR		
	comp=E,68nm,18.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,116nm,23.4s						
EKA	Eskdalemuir Ar	68.16	15	P	P	00 00 34.9	+0.4
	comp=Z,3.1nm,0.7s,mb4.4,baz=336,slow=4.7,SNR=9.0						
EKA				pP	pP	00 00 43.8	-1.5
	comp=Z,3.1nm,0.7s,baz=342,slow=5.4,SNR=3.8						
CD2	Chengdu	69.41	295	eP	P	00 00 43.0	+0.3

CD2 AP pP 00 00 53.3 -0.2
CD2 XP sP 00 00 57.8 +0.2
CD2 PP PP 00 03 18.3 +2.4
CD2 S S 00 09 45.3 -1.9
CD2 SS SS 00 14 13.8 -0.2
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,40nm,6.2s
CD2 LR LR
comp=N,340nm,9.6s
CD2 LR LR
comp=E,690nm,10.8s
CD2 LR LR
comp=Z,280nm,10.8s,MS4.8
OBN Obninsk 69.51 351⇑eP P 00 00 42.1 -0.8
OBN e pP 00 00 51.4 -2.3
OBN e 00 01 03.2
OBN pmax pmax
comp=Z,20nm,1.7s,mb4.8
GYA Guiyang 71.39 290 P P 00 00 56.4 +1.6
GYA AP pP 00 01 07.3 +1.6
GYA PCP PcP 00 01 16.3 +2.0
GYA PP PP 00 03 36.3 +3.3
GYA S S 00 10 09.3 -1.0
GYA SKS 00 10 51.6
GYA SCS ScS 00 10 54.3 -2.5
GYA SS SS 00 14 45.3 +0.8
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,120nm,6.8s
GYA LR LR
comp=N,540nm,20.6s,MS4.9
GYA LR LR
comp=E,480nm,19.0s,MS4.9
GYA LR LR
comp=Z,430nm,20.9s,MS4.7
JTS JuntasAbangare 72.23 98 LR LR 00 34 09.2
comp=Z,50nm,19.9s,MS3.8,baz=222,slow=37
CHMS Chumysh 72.35 322 P **P 00 01 01.2 +0.9**
SNR=6.3
KBK Karagaybulak 72.58 322 P **P 00 01 02.8 +1.1**
SNR=6.8
AAK Ala-Archa 72.76 322⇑eP **P 00 01 02.5 -0.3**
AAK pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
AAK Ala-Archa 72.76 322 P **P 00 01 04.0 +1.2**
SNR=5.7
EKS2 Erkin-Say 72.99 322 P **P 00 01 05.5 +1.3**
SNR=7.7
AML Almayashu 73.48 322 P **P 00 01 08.9 +1.9**
SNR=5.3
BAIF Baives 74.28 11 eP **P 00 01 11.2 -0.4**
GIVF Givet 74.31 11 eP **P 00 01 12.0 +0.2**
MOX Moxa 74.37 6 eP **P 00 01 12.7 +0.6**
comp=Z,9.0nm,1.2s,mb4.6
MOX Moxa 74.37 6 eP **P 00 01 12.7 +0.6**
MOX pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
AKASG Malin Array Be 74.43 355 P **P 00 01 11.9 -0.6**
comp=Z,6.6nm,0.6s,mb4.7,baz=7.2,slow=5.8,SNR=25
AKASG pP pP 00 01 20.5 -2.9
comp=Z,2.9nm,0.5s,baz=7.8,slow=5.7,SNR=8.2
KMI Kunming 74.56 292 P **P 00 01 13.8 +0.1**
KMI AP pP 00 01 26.1 +1.6
KMI S S 00 10 43.9 -2.6
KMI XS sS 00 11 01.5 -3.0
KMI SS SS 00 15 30.8 -2.3
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb4.6
KMI AMB AMB
comp=Z,89nm,4.8s
KMI LR LR
comp=Z,39nm,20.1s,MS3.7
ROSF Rostrenen 74.92 17 eP **P 00 01 15.3 0.0**
comp=Z,43nm,1.3s,mb4.9
ROSF Rostrenen 74.92 17 eP **P 00 01 15.3 0.0**
comp=Z,21nm,1.3s,mb4.9
ROSF Rostrenen 74.92 17 eP **P 00 01 15.3 0.0**
ROSF pmax pmax
comp=Z,21nm,1.3s,mb4.9
FLN La Foliniere 74.94 15 eP **P 00 01 15.3 -0.1**
SGMF Saint Gilles 75.11 16 eP **P 00 01 16.5 0.0**
LDF La Druitiere 75.16 15 eP **P 00 01 16.7 0.0**
comp=Z,19nm,1.1s,mb4.6
LDF La Druitiere 75.16 15 eP **P 00 01 16.7 0.0**
comp=Z,9.6nm,1.1s,mb4.6
LDF La Druitiere 75.16 15 eP **P 00 01 16.7 0.0**
LDF pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
GRR Gorron 75.25 15 eP **P 00 01 17.3 +0.1**
comp=Z,24nm,1.1s,mb4.8
GRR Gorron 75.25 15 eP **P 00 01 17.3 +0.1**
comp=Z,12nm,1.1s,mb4.8
GRR Gorron 75.25 15 eP **P 00 01 17.3 +0.1**
GRR pmax pmax
comp=Z,12nm,1.1s,mb4.7
GRA1 Grafenberg Arr 75.29 7 eP **P 00 01 17.7 +0.3**
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 75.29 7 eP **P 00 01 17.7 +0.3**
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 75.29 7 eP **P 00 01 17.7 +0.3**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 75.29 7 eP **P 00 01 17.7 +0.3**
GRF pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
GRF Grafenberg Arr 75.29 7 eP **P 00 01 17.7 +0.3**
comp=Z,6.0nm,1.2s,mb4.4
QUIF Quistinic 75.34 17 eP **P 00 01 17.5 -0.3**
comp=Z,8.9nm,0.9s,mb4.4
QUIF Quistinic 75.34 17 eP **P 00 01 17.5 -0.3**
comp=Z,4.4nm,0.9s,mb4.4
QUIF Quistinic 75.34 17 eP **P 00 01 17.5 -0.3**
QUIF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
MEZF Maizieres J'vi 75.91 11 eP **P 00 01 21.3 +0.3**
comp=Z,10.0nm,0.8s,mb4.5
MEZF Maizieres J'vi 75.91 11 eP **P 00 01 21.3 +0.3**
comp=Z,10.0nm,0.8s,mb4.8
STHS Stebnicka Huta 75.92 0 eP **P 00 01 21.8 +0.8**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
KHC Kasperske Hory 75.99 5⇓iP **P 00 01 22.0 +0.5**
KHC Kasperske Hory 75.99 5 eP **P 00 01 21.5 0.0**
CDF Champ du Feu 76.23 10 eP **P 00 01 23.0 +0.1**
GERES GERESS Array B 76.28 5 P **P 00 01 23.1 0.0**
comp=Z,0.9nm,0.5s,mb3.9,baz=351,slow=4.4,SNR=11
GERES pP pP 00 01 32.9 -1.1
comp=Z,0.6nm,0.6s,baz=0.0,slow=4.4,SNR=4.2
KOLS Kolonicke sedl 76.40 359 eP **P 00 01 26.8 +3.0**
CRVS Cervenica-Dubn 76.43 0 eP **P 00 01 26.8 +2.8**
HAU Haudompre 76.54 10 eP **P 00 01 24.6 0.0**
comp=Z,11nm,0.8s,mb4.5
HAU Haudompre 76.54 10 eP **P 00 01 24.6 0.0**
comp=Z,5.5nm,0.8s,mb4.5
HAU Haudompre 76.54 10 eP **P 00 01 24.6 0.0**
HAU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
HINF Hinteralfeld 76.78 10 eP **P 00 01 26.0 0.0**
VYHS Vyhne 76.82 2 eP **P 00 01 26.8 +0.6**
VYHS pmax pmax
comp=Z,16nm,2.1s,mb4.6
HYF Humbligny 76.84 13 eP **P 00 01 26.4 +0.1**
KECS Kecovo 76.85 1 eP **P 00 01 27.2 +0.9**
KECS pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
MODS Modra-Piesok 76.90 3 eP **P 00 01 26.4 -0.2**
LOR Lormes 76.99 12 eP **P 00 01 27.2 0.0**
comp=Z,4.9nm,0.7s,mb4.2
LOR Lormes 76.99 12 eP **P 00 01 27.2 0.0**
comp=Z,2.5nm,0.7s,mb4.2
LOR Lormes 76.99 12 eP **P 00 01 27.2 0.0**
LOR pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
ZST Bratislava 77.07 3 eP **P 00 01 28.6 +1.0**
ZST pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
MFF Saint Martin d 77.10 15 eP **P 00 01 27.8 0.0**
comp=Z,12nm,0.7s,mb4.6
MFF Saint Martin d 77.10 15 eP **P 00 01 27.8 0.0**
comp=Z,6.2nm,0.7s,mb4.7
MFF Saint Martin d 77.10 15 eP **P 00 01 27.8 0.0**
MFF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
SSF Saint Saulge 77.15 12 eP **P 00 01 28.3 +0.2**
comp=Z,11nm,0.7s,mb4.6
SSF Saint Saulge 77.15 12 eP **P 00 01 28.3 +0.2**
comp=Z,5.6nm,0.7s,mb4.6
SSF Saint Saulge 77.15 12 eP **P 00 01 28.3 +0.2**
SSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
AVF Avril sur Loir 77.40 13 eP **P 00 01 29.2 -0.2**
comp=Z,19nm,0.9s,mb4.7
AVF Avril sur Loir 77.40 13 eP **P 00 01 29.2 -0.2**
comp=Z,9.5nm,0.9s,mb4.7
AVF Avril sur Loir 77.40 13 eP **P 00 01 29.2 -0.2**
AVF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
BGF Bois d'Agland 77.56 13 eP **P 00 01 30.4 0.0**
comp=Z,20nm,0.8s,mb4.8
BGF Bois d'Agland 77.56 13 eP **P 00 01 30.4 0.0**
comp=Z,10nm,0.8s,mb4.8
BGF Bois d'Agland 77.56 13 eP **P 00 01 30.4 0.0**
BGF pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
SMF Signal de Mont 77.60 12 eP **P 00 01 30.3 -0.3**
comp=Z,18nm,1.0s,mb4.7
SMF Signal de Mont 77.60 12 eP **P 00 01 30.3 -0.3**
comp=Z,8.9nm,1.0s,mb4.7
SMF Signal de Mont 77.60 12 eP **P 00 01 30.3 -0.3**
SMF pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
TCF Toulx Ste Croi 77.74 14 eP **P 00 01 31.2 -0.2**
comp=Z,11nm,0.8s,mb4.5
TCF Toulx Ste Croi 77.74 14 eP **P 00 01 31.2 -0.2**
comp=Z,5.3nm,0.8s,mb4.5
TCF Toulx Ste Croi 77.74 14 eP **P 00 01 31.2 -0.2**
TCF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CABF La Chapelle 77.89 11 eP **P 00 01 32.4 +0.2**
KBA Koelnbreinsper 78.03 6⇑iP **P 00 01 34.0 +1.0**
comp=Z,6.6nm,1.1s,mb4.5
KBA Koelnbreinsper 78.03 6⇑iP **P 00 01 34.0 +1.1**
KBA pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
PERS Pernice 78.56 4 eP **P 00 01 36.3 +0.4**
RJF Les Rejaudoux 78.61 14 eP **P 00 01 36.0 -0.2**
comp=Z,10nm,0.7s,mb4.6
RJF Les Rejaudoux 78.61 14 eP **P 00 01 36.0 -0.2**
comp=Z,5.1nm,0.7s,mb4.6
RJF Les Rejaudoux 78.61 14 eP **P 00 01 36.0 -0.2**
RJF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
OBKA Obir 78.66 5⇓iP **P 00 01 37.0 +0.6**
comp=Z,16nm,0.9s,mb4.9
LFF La Frestale 78.86 15 eP **P 00 01 37.4 -0.2**
comp=Z,15nm,0.6s,mb4.8
LFF La Frestale 78.86 15 eP **P 00 01 37.4 -0.2**
comp=Z,7.6nm,0.6s,mb4.8
LFF La Frestale 78.86 15 eP **P 00 01 37.4 -0.2**
LFF pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
CADS Cadrg 78.90 5 eP **P 00 01 37.1 -0.7**
LPL La Plagne 79.05 10 eP **P 00 01 37.9 -0.7**
CAF Calviac 79.06 14 eP **P 00 01 38.5 -0.2**
comp=Z,6.9nm,0.8s,mb4.4
CAF Calviac 79.06 14 eP **P 00 01 38.5 -0.2**
comp=Z,3.5nm,0.8s,mb4.3
CAF Calviac 79.06 14 eP **P 00 01 38.5 -0.2**
CAF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
LPG La Plagne 79.06 10 eP **P 00 01 38.4 -0.3**
VIVF Saint-Julien-l 79.47 12 eP **P 00 01 40.8 -0.1**
ORIF Oris-en-Rattie 79.54 11 eP **P 00 01 41.6 +0.3**
comp=Z,3.1nm,0.6s,mb4.1
ORIF Oris-en-Rattie 79.54 11 eP **P 00 01 41.6 +0.3**
comp=Z,1.5nm,0.6s,mb4.1
ORIF Oris-en-Rattie 79.54 11 eP **P 00 01 41.6 +0.3**
ORIF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
BOJS Bojanci 79.69 4 eP **P 00 01 42.1 0.0**
KIV Kislovodsk 79.74 345 P **P 00 01 42.0 -0.4**
KIV pP 00 01 50.0 -3.4
KIV pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
MBDF Montbardon 79.83 11 eP **P 00 01 42.8 -0.1**
comp=Z,4.9nm,0.6s,mb4.3
MBDF Montbardon 79.83 11 eP **P 00 01 42.8 -0.1**
comp=Z,2.5nm,0.6s,mb4.3
MBDF Montbardon 79.83 11 eP **P 00 01 42.8 -0.1**
MBDF pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
SJPF Ste Jean 80.33 17 eP **P 00 01 45.2 -0.4**
SMRF Simiane la Rot 80.44 12 eP **P 00 01 46.3 +0.1**
comp=Z,11nm,1.0s,mb4.4
SMRF Simiane la Rot 80.44 12 eP **P 00 01 46.3 +0.1**
comp=Z,11nm,1.0s,mb4.7
MTLF Montolieu 80.64 14 eP **P 00 01 46.9 -0.3**
comp=Z,9.4nm,0.9s,mb4.4
MTLF Montolieu 80.64 14 eP **P 00 01 46.9 -0.3**
comp=Z,4.7nm,0.9s,mb4.4
MTLF Montolieu 80.64 14 eP **P 00 01 46.9 -0.3**
MTLF pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ETSF Etsaut 80.65 16 eP **P 00 01 46.9 -0.4**
comp=Z,8.7nm,0.7s,mb4.5
ETSF Etsaut 80.65 16 eP **P 00 01 46.9 -0.4**
comp=Z,4.3nm,0.7s,mb4.5
ETSF Etsaut 80.65 16 eP **P 00 01 46.9 -0.4**
ETSF pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
EPF Esparros 80.66 16 eP **P 00 01 47.2 -0.2**
SBF Sospel 80.75 10 eP **P 00 01 47.9 0.0**
FRF La Foret Royal 80.97 11 eP **P 00 01 48.6 -0.4**
comp=Z,7.3nm,0.8s,mb4.3
FRF La Foret Royal 80.97 11 eP **P 00 01 48.6 -0.4**
comp=Z,3.7nm,0.8s,mb4.4
FRF La Foret Royal 80.97 11 eP **P 00 01 48.6 -0.4**
FRF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LMR La Mourre 81.18 11 eP **P 00 01 49.7 -0.4**
PGF Pioggiola 82.21 9 eP **P 00 01 55.2 -0.4**
comp=Z,9.5nm,0.7s,mb4.5
PGF Pioggiola 82.21 9 eP **P 00 01 55.2 -0.4**
comp=Z,4.8nm,0.7s,mb4.5
PGF Pioggiola 82.21 9 eP **P 00 01 55.2 -0.4**
PGF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
ESDC Sonseca Array 83.18 19 P **P 00 02 00.9 +0.2**
comp=Z,2.1nm,0.7s,mb4.3,baz=342,slow=5.8,SNR=10
BRTR Keskin Array B 85.03 351 P **P 00 02 10.4 +0.3**
comp=Z,3.8nm,0.9s,mb4.5,baz=31,slow=3.6,SNR=17
BRTR pP pP 00 02 19.3 -1.8
comp=Z,1.7nm,0.7s,baz=46,slow=2.9,SNR=6.0
ISP Isparta 87.16 353c iP **P 00 02 20.5 -0.1**
KEST Kesra 89.00 10 P **P 00 02 30.7 +1.3**
comp=Z,1.2nm,0.9s,mb4.2,baz=339,slow=2.0,SNR=3.8
WRA Warramunga Arr 93.83 240 P **P 00 02 49.9 -1.9**
comp=Z,0.8nm,1.1s,mb4.1,baz=35,slow=6.0,SNR=4.8
WRA pP pP 00 02 59.2 -3.7
comp=Z,0.9nm,0.9s,baz=40,slow=4.4,SNR=4.8
ASAR Alice Springs 97.17 239 P **P 00 03 06.3 -0.7**
comp=Z,0.4nm,0.8s,mb3.9,baz=39,slow=6.2,SNR=3.3

IDC 17 00:03:47.8±24.0**,2054S**×**6795W,h173**km±149km**,**
mb3.6/2**,mb1 3.8**/4**,mb1mx3.3**/17**,mbtmp3.6**/4**,ML4.1**/2**,**
Error ellipse: s-maj=329.4km s-min=35.2km az=19.0,
Southern Bolivia

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LPAZ La Paz 4.23 358 P Pn 00 04 52.6 +0.9
2.8nm,0.3s,baz=170,slow=7.4,SNR=70
SIV San Ignacio 7.95 56 P Pn 00 05 40.1 -0.3
4.8nm,0.3s,baz=252,slow=12,SNR=106
TORD Torodi Ar. Bea 76.19 70 P P 00 15 17.7 +0.3
2.3nm,0.6s,baz=254,slow=5.5,SNR=28
YKA Yellowknife Ar 90.59 340 P P 00 16 29.7 -0.2
0.3nm,0.7s,baz=135,slow=4.0,SNR=6.4
MKAR Makanchi Array 144.33 36 PKP PKPdf 00 23 02.1 -1.1
0.8nm,0.4s,baz=321,slow=3.1,SNR=14

IDC 17 00:54:40.7±2.1**,079S**×**12770E,h0**km**,mb3.3**/3**,mb1 3.5**/3**,**
mb1mx3.4/14**,mbtmp3.3**/3**,Error ellipse:**
s-maj=167.3km s-min=25.5km az=67.0,Halmahera

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
WRA Warramunga Arr 20.12 162 P P 00 59 15.2 -1.0
0.4nm,0.7s,baz=340,slow=12,SNR=6.8
ASAR Alice Springs 23.53 166 P P 00 59 53.4 +0.6
0.6nm,0.7s,baz=342,slow=10,SNR=11
MKAR Makanchi Array 61.81 326 P P 01 05 01.4 0.0
0.5nm,0.7s,baz=122,slow=8.5,SNR=7.4

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*ATH **17** 00:59:48.4,4131N×2374E,h14km±2km,MD3.5/8*
*SOF **17** 00:59:49.5,41.15N×2378E,h9km,MD2.9*
*ISCJB **17** 00:59:49.4±0.4,41.18N±002×2379E±002,h1km±4km, Error ellipse: s-maj=3.2km s-min=2.8km az=32.2*
*THE **17** 00:59:50.6,41.15N×2379E,h6km,ML3.3*
*CSEM **17** 00:59:50.8±0.1,4120N×2378E,h20km,MD2.9,Error ellipse: s-maj=2.1km s-min=1.9km az=147.0*
*NEIC **17** 00:59:50.6,41.15N×2379E,h6km,ML3.3(THE),After THE.*
*SKO **17** 00:59:51.8,41.13N×2377E,h10km*
ISC 17 00:59:50.2±0.4**,4116N**±002×**2382E**±003**,h5**km±3km**,n51,**
σ**0s95**/79**,11C-3D,Greece-Bulgaria border region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
MMB Musomiste 0.43 351 i Pg **Pg 00 59 57.8 -0.8**
SOH Sokhos 0.49 226 ePg **Pg 01 00 00.1 +0.5**
SOH eSg **Sg 01 00 05.6 -0.3**
KNT Kendrikon 0.69 270 ePg **Pg 01 00 03.3 -0.2**
KNT eSg **Sg 01 00 13.1 +0.5**
OUR Ouranopolis 0.83 171 ePg **Pg 01 00 06.5 +0.2**
THE Thessaloniki 0.83 231 ePg **Pg 01 00 06.2 -0.1**
THE eSg **Sg 01 00 17.3 +0.3**
PLG Polygyros 0.84 200 ePg **Pg 01 00 06.4 +0.1**
PLG eSg **Sg 01 00 16.8 -0.2**
PLG Polygyros 0.84 200⇑iPG **Pg 01 00 06.5 +0.3**
PLG eSB **Sb 01 00 19.0 +0.3**
PLG Polygyros 0.84 200 ePg **Pg 01 00 06.4 +0.2**
PLG eSg **Sg 01 00 16.8 -0.3**
PLG eSb **Sb 01 00 19.0 +0.3**
RZN Rozhen 0.86 52 i P **Pg 01 00 07.3 +0.6**
KKB Krupnik 0.90 322 i P **Pg 01 00 06.6 -0.8**
VAY Valandovo 0.95 280 ePg **Pg 01 00 07.9 -0.6**
VAY eSg **Sg 01 00 20.8 -0.1**
VAY Valandovo 0.95 280 ePg **Pg 01 00 08.8 +0.3**
VAY eSg **Sg 01 00 22.3 +1.4**
VAY Valandovo 0.95 280 ePg **Pg 01 00 07.9 -0.6**
VAY eSg **Sg 01 00 22.3 +1.4**
GRG Griva 1.09 260 ePg **Pg 01 00 10.6 -0.5**
GRG eSg **Sg 01 00 26.2 +0.9**
PLD Plovdiv 1.15 35 ePg **Pg 01 00 12.3 0.0**
PLD eSg **Sg 01 00 30.7 +3.4**
PLD Plovdiv 1.15 35 i P **Pg 01 00 12.9 +0.6**
PAIG Paliouri 1.24 185 ePg **Pg 01 00 12.8 -1.1**
PAIG eSg **Sg 01 00 31.1 +1.1**
KDZ Kurdzhali 1.30 67 i P **Pn 01 00 14.1 -0.9**
RDO Rodhopi 1.30 90⇑iPG **Pn 01 00 13.8 -1.2**
RDO eSB **Sb 01 00 33.0 +0.9**
STIP Stip 1.34 294 ePg **Pn 01 00 14.9 -0.6**
STIP eSg **Sg 01 00 33.2 0.0**
STIP Stip 1.34 294 ePg **Pn 01 00 15.2 -0.4**
STIP eSg **Sg 01 00 33.8 +0.6**
STIP Stip 1.34 294 ePg **Pn 01 00 14.9 -0.6**
STIP eSg **Sg 01 00 33.8 +0.6**
PGB Panagyurishte 1.41 11 i P **Pn 01 00 16.2 -0.4**
LIT Litokhoron 1.46 224 ePg **Pn 01 00 16.3 -0.9**
LIT eSg **Sg 01 00 36.7 -0.6**
VTS Vitosha 1.50 343 ePg **Pn 01 00 17.5 -0.3**
VTS eSg **Sg 01 00 37.5 -0.9**
VTS Vitosha 1.50 343 i P **Pn 01 00 18.2 +0.4**
LOS Limnos 1.56 141 ePg **Pn 01 00 16.8 -1.7**
DIM Dimitrovgrad 1.56 55 i P **Pn 01 00 20.1 +1.5**
LIA Limnos Island 1.64 140⇓iPG **Pg 01 00 22.3 +0.7**
LIA eSN **Sn 01 00 44.4 +3.4**
LIA Limnos Island 1.64 140⇓iPg **Pg 01 00 22.3 +0.7**
LIA eSn **Sn 01 00 46.4 +5.4**
ALN Alexandroupoli 1.71 98 ePb **Pn 01 00 19.6 -1.0**
ALN eSb **Sb 01 00 44.0 +0.2**
KZN Kozani 1.77 242⇓iPG **Pn 01 00 21.6 +0.1**
KZN eSN **Sn 01 00 45.6 +1.1**
XOR Xorichti 1.86 195 ePb **Pn 01 00 21.9 -0.7**
FNA Florina 1.89 259 ePb **Pn 01 00 22.7 -0.4**
NEO Neokhori 1.91 194⇑iPB **Pn 01 00 22.8 -0.6**
NEO Neokhori 1.91 194⇑iPb **Pn 01 00 22.4 -1.0**
KRUS Krusevo 1.95 277 ePn **Pn 01 00 24.4 +0.5**
KRUS eSn **Sn 01 00 48.5 -0.2**
KRUS Krusevo 1.95 277 ePn **Pn 01 00 24.3 +0.4**
KRUS eSn **Sn 01 00 48.5 -0.2**
AOS Alonnisos 1.99 179 ePb **Pn 01 00 23.1 -1.4**
THL Klokotos Trika 2.11 221⇑iPB **Pn 01 00 25.8 -0.3**
THL eSN **Sn 01 00 54.8 +2.1**
BARS Barje 2.23 319 Pn **Pn 01 00 28.0 +0.3**
BARS Sg **Sg 01 01 01.0 -0.7**
AGG Agios Georgios 2.42 209 ePn **Pn 01 00 29.9 -0.5**
JMB Yambol 2.44 57 i P **Pn 01 00 34.9 +4.1**
PRK Paraskevi 2.68 135⇑iPN **Pn 01 00 34.6 +0.6**
EVR Evrytania 2.72 215⇑iPN **Pn 01 00 34.8 +0.2**
GRUS Gruza 3.56 321 Pn **Pn 01 00 43.8 -2.3**
DIVS Divcibare 4.07 317 Pn **Pn 01 00 52.0 -1.1**
DIVS Sg **Sg 01 02 01.7 +0.7**
GZR Gura Zlata 4.30 350⇑iP **Pn 01 00 58.4 +2.2**
MLR Muntele Rosu 4.60 19⇑iP **Pn 01 01 02.4 +2.1**
BZS Buzias 4.73 341⇑iP **Pn 01 01 01.2 -1.0**
PKSM Moragy 6.29 325⇑iP **Pn 01 01 25.3 +1.7**

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*IDC **17** 01:03:36.2±3.5,3537N×8246E,h0km,mb3.2/2,mb1 3.6/3, mb1mx3.3/22,mbtmp3.4/3,ML3.2/1,MS3.3/1,Ms1 3.3/1, ms1mx2.8/11,Error ellipse: s-maj=69.2km s-min=52.0km az=77.0*
*BJI **17** 01:03:40.6,3554N×8282E,h11km,mb4.2,ML3.7*
ISC 17 01:03:43.1±2.1**,357N**±01×**831E**±02**,h10**km**,n6,**σ**1s74**/6**,**
mb3.1/2**,Xizang**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
KSH Kashi 6.84 306 eP **Pn 01 05 24.1 +0.7**
KSH Smax
comp=N,466nm,1.3s
KSH Smax
comp=E,311nm,1.0s
WMQ Urumqi 8.88 22 eP **Pn 01 05 56.1 +4.7**
MKAR Makanchi Array 11.14 357 Pn **Pn 01 06 21.0 -1.3**
comp=E,0.2nm,0.3s,baz=182,slow=13,SNR=25
MKAR Sn **Sn 01 08 27.1 +0.3**
comp=E,0.1nm,0.3s,baz=182,slow=19,SNR=2.6
SONM Songino Array 21.12 48 P **P 01 08 28.8 +1.0**
comp=E,0.3nm,0.7s,mb2.7,baz=235,slow=12,SNR=2.8
AKTO Aktyubinsk 23.38 317 LR LR 01 18 25.7
comp=E,66nm,18.4s,baz=307,slow=38
YKA Yellowknife Ar 81.15 8 P **P 01 15 55.2 -3.2**
comp=E,0.3nm,0.6s,mb3.4,baz=342,slow=5.2,SNR=11

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*NEIC **17** 01:24:03.7,2034N×6921W,h101km,MD3.9(RSPR), After RSPR.*
RSPR 17 01:24:03.7,2034N×**6921W,h101**km±33km**,MD3.9**/14**,**
MD3.9/14**,13C-2D,Dominican Republic region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
AGPR Aguadilla, PR 2.71 133⇑eP Pn 01 24 45.0 -0.7
AGPR eS Sn 01 25 17.5 -0.5
LSP Las Mesas 2.94 137⇑eP Pn 01 24 48.1 -0.6
LSP eS Sn 01 25 24.8 +1.5
LRS Lares 3.02 132⇓eP Pn 01 24 49.2 -0.5
AOPR Arecibo Observ 3.05 130⇓eP Pn 01 24 49.4 -0.7
AOPR eS Sn 01 25 27.1 +1.2
CRPR Cabo Rojo, PR 3.05 139⇑eP Pn 01 24 49.1 -1.0
CRPR eS Sn 01 25 26.3 +0.3
GBPR Guanica, Bosqu 3.22 137⇑eP Pn 01 24 52.2 -0.3
GBPR Guanica, Bosqu 3.22 137 eS Sn 01 25 32.0 +2.0
CELP Cerrillos 3.35 132⇑eP Pn 01 24 55.1 +0.9
CELP eS Sn 01 25 32.7 -0.5
OBIP Obispado Ponce 3.35 132⇑eP Pn 01 24 54.0 -0.2
OBIP eS Sn 01 25 34.1 +0.9
ICM Isla Caja Muer 3.51 133⇑eP Pn 01 24 56.6 +0.2
ICM eS Sn 01 25 37.3 +0.1
SJG San Juan 3.64 127⇑eP Pn 01 24 57.7 -0.3
SJG eS Sn 01 25 39.8 -0.3
CBYP Canovanas 3.77 122⇑eP Pn 01 25 00.3 +0.4
CBYP eS Sn 01 25 44.4 +1.1
HUMP Col San Antoni 3.85 124⇑eP Pn 01 25 00.9 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HUMP				eS	Sn	01 25 44.6	-0.6
CPD	Cerro la Pandu	3.86	126	⇑eP	Pn	01 25 01.7	+0.6
CPD				eS	Sn	01 25 45.0	-0.5
MTP	Monte Pirata	4.11	122	⇑eP	Pn	01 25 04.9	+0.5
MTP				eS	Sn	01 25 52.6	+1.1
TBVI	Tortola	4.73	113	⇑eP	Pn	01 25 15.0	+2.1
TBVI				eS	Sn	01 26 07.5	+0.9

IDC 17 01:56:53.8±6.1**, 448N×12361E, h488**km±84km**, mb2.9**/6**, mb1 3.0**/6**, mb1mx2.9**/18**, mbtmp2.9**/6**, Error ellipse: s-maj=83.3km s-min=18.8km az=67.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.53	175	P	P	02 01 16.0	0.0
	0.5nm,0.6s,baz=1.7,slow=18,SNR=3.9						
WRA	Warramunga Arr	26.46	157	P	P	02 01 50.5	-0.5
	0.9nm,0.5s,baz=336,slow=9.9,SNR=17						
ASAR	Alice Springs	29.73	161	P	P	02 02 19.9	+0.3
	0.7nm,0.4s,baz=340,slow=7.1,SNR=9.3						
STKA	Stephens Creek	40.01	156	P	P	02 03 46.2	+0.6
	1.0nm,0.3s,baz=346,slow=8.3,SNR=3.9						
SONM	Songino Array	45.65	344	P	P	02 04 29.8	+0.1
	0.7nm,0.8s,baz=152,slow=8.8,SNR=4.8						
MKAR	Makanchi Array	55.19	326	P	P	02 05 39.8	+0.1
	0.6nm,0.3s,baz=122,slow=7.3,SNR=17						
MKAR				PcP	PcP	02 06 33.1	-0.5
	0.2nm,0.4s,baz=131,slow=3.2,SNR=3.1						

*IDC **17** 02:04:45.8±0.9, 2199N×14312E, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.8/19, mbtmp3.6/7, MS3.0/2, Ms1 3.0/2, ms1mx2.7/29, Error ellipse: s-maj=34.7km s-min=22.8km az=94.0*
*ISCJB **17** 02:04:49.3±0.8, 220N±01×1430E±02, h33km, mb3.6/8, Error ellipse: s-maj=27.8km s-min=18.7km az=176.3*
*NEIC **17** 02:04:51.1±0.6, 2196N×14309E, h35km, mb4.0/1, Error ellipse: s-maj=20.4km s-min=13.8km az=87.0*
ISC 17 02:04:51.3±0.8**, 220N**±01×**1431E**±02**, h35**km**, n10,** σ**0ˢ29**/8**, mb3.6**/8**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	11.49	346	LR	LR	02 11 18.8	
	comp=Z,47nm,18.1s,baz=115,slow=34						
ASAJ	Asahikawa	22.10	359	LR	LR	02 18 54.6	
	comp=Z,55nm,18.4s,baz=112,slow=38						
SONM	Songino Array	39.07	320	P	**P**	**02 12 14.3**	**-0.6**
	0.3nm,0.4s,mb3.4,baz=122,slow=8.7,SNR=2.7						
WRA	Warramunga Arr	42.51	192	P	**P**	**02 12 43.2**	**-0.2**
	0.4nm,0.5s,mb3.4,baz=13,slow=8.5,SNR=4.6						
ASAR	Alice Springs	46.22	192	P	**P**	**02 13 13.1**	**+0.1**
	0.4nm,0.6s,mb3.5,baz=17,slow=11,SNR=8.0						
MKAR	Makanchi Array	54.45	313	P	**P**	**02 14 15.4**	**+0.3**
	0.2nm,0.3s,mb3.5,baz=99,slow=8.1,SNR=5.5						
KURK	Kurchatov	57.22	317	eP	**P**	**02 14 35.3**	**+0.4**
	1.3nm,0.8s,mb4.0						
YKA	Yellowknife Ar	76.28	28	P	**P**	**02 16 35.8**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=292,slow=5.6,SNR=9.2						
NVAR	Mina Array Bea	83.06	51	P	**P**	**02 17 13.6**	**+0.2**
	1.2nm,0.8s,mb4.0,baz=273,slow=3.7,SNR=4.8						
PDAR	Pinedale Array	87.28	45	P	**P**	**02 17 34.5**	**+0.1**
	0.5nm,0.8s,mb3.8,baz=222,slow=2.0,SNR=4.0						

MAN 17 02:38:41, 1692N×11994E, h29km**, mb3.9, ML2.7, MS2.3, 3D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.81	131	⇓eP	Pn	02 38 56.0	-0.5
BCPH				eS	Sb	02 39 06.3	-0.9
ABRA	Dolores	1.04	45	eP	Pn	02 39 00.9	+1.3
ABRA				eS	Sn	02 39 16.6	+3.4
APYP	Conner	1.56	53	eP	Pn	02 39 07.5	+0.7
APYP				eS	Sn	02 39 26.4	+0.3
PCPH	Palayan	1.75	140	⇓eP	Pn	02 39 10.0	+0.7
PCPH				eS	Sn	02 39 30.1	-0.5
BALP	Baler	1.96	126	eS	Sn	02 39 37.6	+1.7
CVP	Callao Caves	1.96	66	⇓eP	Pn	02 39 14.0	+1.6
CVP				eS	Sn	02 39 39.4	+3.4

WEL 17 03:11:00.9±0.1**, 4403S×16961E, h5**km**, ML3.7**/16**, 3C-2D, Error ellipse: s-maj=1.4km s-min=0.8km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOZ	Fox Glacier	0.46	7	⇑PG	Pg	03 11 10.9	+1.2
FOZ				eSG	Sg	03 11 16.6	+0.8
FOZ				SG	Sg	03 11 16.8	+1.0
LBZ	Lake Benmore	0.55	131	⇓PG	Pg	03 11 12.2	+0.8
LBZ				SG	Sg	03 11 19.1	+0.5
LBZ				SG	Sg	03 11 19.2	+0.6
JCZ	Jackson Bay	0.61	265	⇓P*	Pg	03 11 13.0	+0.3
WKZ	Wanaka	0.91	208	⇑P*	Pb	03 11 17.8	-1.3
RPZ	Rata Peaks	1.09	74	⇑P*	Pb	03 11 21.9	-0.3
EAZ	Earnscleugh	1.23	190	P*	Pb	03 11 23.5	-1.1
EAZ				S*	Sb	03 11 40.5	-0.2
WVZ	Waitaha Valley	1.25	41	P*	Pb	03 11 24.1	-0.9
ODZ	Otahua Downs	1.26	144	P*	Pb	03 11 24.5	-0.6
MSZ	Milford Sound	1.37	241	PN	Pn	03 11 26.1	-0.5
MLZ	Mavora Lakes	1.67	217	PN	Pn	03 11 31.7	+0.9
TUZ	Tuapeka	1.93	180	PN	Pn	03 11 33.9	-0.5
WHZ	Wether Hill Ro	2.21	212	PN	Pn	03 11 37.8	-0.4
DCZ	Deep Cove	2.27	229	PN	Pn	03 11 39.5	+0.5
LTZ	Lake Taylor	2.30	58	PN	Pn	03 11 40.5	+1.1
APZ	The Paps	3.03	202	PN	Pn	03 11 48.8	-0.7
QRZ	Quartz Range	3.86	35	PN	Pn	03 12 00.9	+0.1

IDC 17 03:16:35.1±1.3**, 361N×12531E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/15**, mbtmp3.5**/4**, Error ellipse: s-maj=151.4km s-min=21.5km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.03	160	P	P	03 22 01.2	+0.2
	1.3nm,0.6s,baz=338,slow=11,SNR=14						
WB2	Warramunga Arr	25.04	160	eP	P	03 21 59.7	-1.4
ASAR	Alice Springs	28.38	163	P	P	03 22 30.9	-0.2
	0.4nm,0.9s,baz=176,slow=21,SNR=3.6						
SONM	Songino Array	46.97	343	P	P	03 25 07.4	-0.3
	0.4nm,0.6s,baz=158,slow=8.6,SNR=4.1						
MKAR	Makanchi Array	56.85	326	P	P	03 26 22.0	+0.5
	0.4nm,0.6s,baz=120,slow=8.2,SNR=5.9						

*ISCJB **17** 03:24:44.0±0.6, 3534N±006×892E±01, h10km, mb3.7/6, MS4.4/1, Error ellipse: s-maj=14.9km s-min=7.0km az=162.4*
*IDC **17** 03:24:44.8±0.9, 3539N×8927E, h0km, mb3.9/6, mb1 4.0/8, mb1mx3.7/22, mbtmp3.8/8, ML2.8/2, MS3.7/2, Ms1 3.7/2, ms1mx3.0/36, Error ellipse: s-maj=39.4km s-min=21.3km az=50.0*
*NEIC **17** 03:24:46.3±0.6, 3547N×8924E, h10km, mb3.7/2, Error ellipse: s-maj=13.2km s-min=10.8km az=55.0*
*BJI **17** 03:24:49.9, 3558N×8944E, h23km, mb3.9, Ms3.8, Msz3.8*
ISC 17 03:24:45.3±2.5**, 3546N**±007×**892E**±01**, h2**km±18km**, n14,** σ**0ˢ71**/14**, mb3.7**/6**, MS4.4**/1**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	5.99	163	PG	**Pg**	**03 26 36.5**	**-3.5**
LSA				SG	**Sg**	**03 27 58.1**	**+0.6**
LSA				LR	LR		
	comp=E,450nm,12.7s						
MKAR	Makanchi Array	12.44	338	Pn	**Pn**	**03 27 43.4**	**0.0**
	comp=E,0.0nm,0.3s,baz=156,slow=11,SNR=2.3						
XAN	Xi'an	16.30	89	P	**Pn**	**03 28 36.4**	**+1.1**
XAN				AP	pP	03 28 46.5	+7.6
XAN				AMB	AMB		
	comp=Z,7.0nm,1.2s						
KURK	Kurchatov	17.05	337	eP	**Pn**	**03 28 44.6**	**-0.2**
	comp=Z,7.5nm,1.3s						
SONM	Songino Array	17.80	41	Pn	**Pn**	**03 28 54.1**	**0.0**
	comp=Z,0.1nm,0.3s,baz=226,slow=12,SNR=14						
SONM				LR	LR	03 37 10.4	
	comp=Z,38nm,18.5s,baz=131,slow=42						
ULN	Ulaanbaatar	18.17	42	eP	**Pn**	**03 28 58.3**	**-0.4**
	comp=Z,11nm,1.6s						
JHJ	Hachijo jima 2	41.52	78	LR	LR	03 50 23.7	
	comp=Z,538nm,21.6s,MS4.4,baz=66,slow=37						
NOA	NORSAR Array B	54.02	324	P	**P**	**03 34 11.6**	**+1.0**
	comp=Z,1.0nm,0.9s,mb3.8,baz=107,slow=14,SNR=2.9						
WRA	Warramunga Arr	69.78	135	P	**P**	**03 35 56.5**	**-0.7**
	comp=Z,2.0nm,1.1s,mb4.0,baz=338,slow=6.6,SNR=7.0						
ESDC	Sonseca Array	70.56	305	P	**P**	**03 36 02.5**	**+0.6**
	comp=Z,0.7nm,0.7s,mb3.7,baz=55,slow=5.6,SNR=4.2						
ASAR	Alice Springs	72.47	137	P	**P**	**03 36 12.9**	**-0.5**
	comp=Z,0.9nm,1.1s,mb3.6,baz=316,slow=6.2,SNR=7.9						
TORD	Torodi Ar. Bea	80.47	279	P	**P**	**03 36 59.1**	**-0.1**
	comp=Z,1.0nm,0.9s,mb3.8,baz=53,slow=2.5,SNR=6.9						
YKA	Yellowknife Ar	80.52	11	P	**P**	**03 36 58.0**	**-0.6**
YKA	Yellowknife Ar	80.52	11	P	**P**	**03 36 58.0**	**-0.6**
	comp=Z,0.5nm,0.7s,mb3.5,baz=331,slow=5.0,SNR=9.7						

*ISCJB **17** 03:35:06.1±0.5, 5142N±003×648E±006, h0km, Error ellipse: s-maj=5.9km s-min=3.4km az=29.4*
*CSEM **17** 03:35:07.8±0.1, 5152N×654E, h1km, ML2.6/8, Error ellipse: s-maj=1.9km s-min=1.7km az=116.0*
*BUG **17** 03:35:07.2, 5142N×662E, h1km, ML1.4*
*BNS **17** 03:35:08.1±1.2, 5152N×652E, h1km, ML1.9*
*LDG **17** 03:35:08.1±0.1, 5151N×653E, h1km, Md3.2/1, Ml2.5/8, Error ellipse: s-maj=2.0km s-min=1.3km az=20.0, Suspected Mining induced.*
*NEIC **17** 03:35:09.0±2.9, 5137N×642E, h10km, ML2.5(LDG), Error ellipse: s-maj=31.6km s-min=9.1km az=45.0*
ISC 17 03:35:07.0±0.6**, 5150N**±003×**645E**±005**, h0**km**, n38,** σ**1ˢ14**/67**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	Rheinberg	0.08	78	Pg	**Pg**	**03 35 08.0**	**-0.5**
BRHE				Sg	**Sg**	**03 35 08.7**	**-0.8**
WTSB	Winterswijk	0.52	25	ePg	**Pg**	**03 35 18.9**	**+2.0**
	22nm,0.3s						
HOBG	Hohbusch	0.76	133	ePg	**Pg**	**03 35 22.0**	**+0.5**
HGN	Heimansgroeve	0.81	204	ePg	**Pg**	**03 35 25.3**	**+2.9**
	19nm,0.2s,baz=30						
HGN				eSg	**Sg**	**03 35 34.8**	**+2.0**
HGN	Heimansgroeve	0.81	204	ePg	**Pg**	**03 35 25.3**	**+2.9**
	19nm,0.2s						
HGN				eSg	**Sg**	**03 35 34.8**	**+2.0**
DREG	Dreilaegerbach	0.85	189	ePg	**Pg**	**03 35 24.3**	**+1.1**
KLL	Kalltalsperre	0.86	186	ePg	**Pg**	**03 35 25.3**	**+1.9**
MEM	Membach	0.93	198	P	**Pg**	**03 35 25.9**	**+1.0**
STB	Steinbach	0.94	165	ePg	**Pg**	**03 35 26.4**	**+1.4**
STB				eSg	**Sg**	**03 35 39.4**	**+2.3**
	28nm,0.4s						
BGG	Burgeitz	1.41	156	ePg	**Pg**	**03 35 34.0**	**-0.1**
GIVF	Givet	1.74	217	ePg	**Pg**	**03 35 41.0**	**+0.7**
GIVF				eSg	**Sg**	**03 36 03.9**	**+1.1**
	19nm,0.3s						
GIVF	Givet	1.74	217	ePn	**Pn**	**03 35 38.2**	**-0.2**
GIVF				ePg	**Pg**	**03 35 41.0**	**+0.7**
GIVF				eSg	**Sg**	**03 36 03.9**	**+1.1**
GIVF	Givet	1.74	217	ePg	**Pg**	**03 35 41.0**	**+0.7**
GIVF				eSg	**Sg**	**03 36 03.9**	**+1.1**
	9.6nm,0.3s						
TNS	Taunus Mts	1.80	134	ePg	**Pg**	**03 35 40.8**	**-0.7**
	SNR=4.6						
DOU	Dourbes	1.83	221	P	**Pn**	**03 35 33.3**	**-6.3**
WLF	Walferdange	1.85	186	eSg	**Sg**	**03 36 05.5**	**-0.8**
	SNR=3.0						
BAIF	Baives	2.03	225	eP	**Pn**	**03 35 44.4**	**+2.1**
BAIF	Baives	2.03	225	ePg	**Pg**	**03 35 46.5**	**+0.7**
BAIF				eSn	**Sn**	**03 36 07.1**	**-1.2**
BAIF				eSg	**Sg**	**03 36 13.5**	**+1.5**
	9.8nm,0.4s						
BAIF	Baives	2.03	225	ePn	**Pn**	**03 35 42.4**	**+0.1**
BAIF				eP		03 35 44.4	
BAIF				ePg	**Pg**	**03 35 46.5**	**+0.7**
BAIF				eSn	**Sn**	**03 36 07.1**	**-1.2**
BAIF				eSg	**Sg**	**03 36 13.5**	**+1.5**
BAIF	Baives	2.03	225	ePg	**Pg**	**03 35 46.5**	**+0.7**
BAIF				eSn	**Sn**	**03 36 07.1**	**-1.2**
BAIF				eSg	**Sg**	**03 36 13.5**	**+1.5**
	4.9nm,0.4s						
MEZF	Maizieres J'vi	3.13	197	ePg	**Pg**	**03 36 06.7**	**-0.3**
MEZF				eSg	**Sg**	**03 36 47.3**	**-0.3**
	5.3nm,0.5s						
MEZF	Maizieres J'vi	3.13	197	ePg	**Pg**	**03 36 06.7**	**-0.3**
MEZF				eSg	**Sg**	**03 36 47.3**	**-0.3**
	2.7nm,0.5s						
CDF	Champ du Feu	3.14	170	ePg	**Pg**	**03 36 06.6**	**-0.5**
CDF				eSg	**Sg**	**03 36 46.9**	**-0.8**
	1.3nm,0.3s						
CDF	Champ du Feu	3.14	170	ePg	**Pg**	**03 36 06.6**	**-0.5**
CDF				eSg	**Sg**	**03 36 46.9**	**-0.8**
	0.6nm,0.3s						
SFTF	Sexfontaines	3.42	196	ePg	**Pg**	**03 36 11.8**	**-0.7**
SFTF				eSg	**Sg**	**03 36 56.4**	**-0.5**
	2.6nm,0.3s						
SFTF	Sexfontaines	3.42	196	ePg	**Pg**	**03 36 11.8**	**-0.7**
SFTF				eSg	**Sg**	**03 36 56.4**	**-0.5**
	1.3nm,0.3s						
HAU	Haudompre	3.50	181	eSg	**Sg**	**03 36 58.3**	**-1.0**
	3.1nm,0.4s						
HAU	Haudompre	3.50	181	eSg	**Sg**	**03 36 58.3**	**-1.0**
	1.5nm,0.4s						
LOR	Lormes	4.56	203	ePn	**Pn**	**03 36 16.5**	**-0.7**
LOR				eSn	**Sn**	**03 37 07.3**	**-3.5**
LOR				eSg	**Sg**	**03 37 32.1**	**-1.3**
	1.9nm,0.3s						
LOR	Lormes	4.56	203	ePn	**Pn**	**03 36 16.5**	**-0.7**
LOR				eSn	**Sn**	**03 37 07.3**	**-3.5**
LOR				eSg	**Sg**	**03 37 32.1**	**-1.3**
	0.9nm,0.3s						
SSF	Saint Saulge	4.84	205	ePn	**Pn**	**03 36 20.2**	**-0.8**
AVF	Avril sur Loir	5.13	205	ePn	**Pn**	**03 36 23.9**	**-1.1**
LDF	La Druitiere	5.14	238	ePn	**Pn**	**03 36 24.5**	**-0.6**
LDF				eSn	**Sn**	**03 37 21.9**	**-3.1**
SMF	Signal de Mont	5.15	200	ePn	**Pn**	**03 36 24.6**	**-0.7**
FLN	La Foliniere	5.23	241	ePn	**Pn**	**03 36 26.0**	**-0.4**
BGF	Bois d'Agland	5.48	207	ePn	**Pn**	**03 36 29.4**	**-0.5**
BGF				eSn	**Sn**	**03 37 29.0**	**-4.6**
GRR	Gorron	5.65	239	ePn	**Pn**	**03 36 31.5**	**-0.7**
GRR				eSn	**Sn**	**03 37 33.6**	**-4.1**
	3.9nm,0.3s						
GRR	Gorron	5.65	239	ePn	**Pn**	**03 36 31.5**	**-0.7**
GRR				eSn	**Sn**	**03 37 33.6**	**-4.1**
	2.0nm,0.3s						

*IDC **17** 03:37:07.5±1.1, 386N×8277W, h0km, mb3.8/6, mb1 4.1/10, mb1mx3.9/22, mbtmp4.0/10, ML3.8/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/32, Error ellipse: s-maj=40.6km s-min=16.3km az=56.0*
*ISCJB **17** 03:37:08.0±0.6, 398N±006×8270W±008, h10km, mb4.1/14, MS3.2/3, Error ellipse: s-maj=13.6km s-min=6.6km az=149.2*
*NEIC **17** 03:37:09.9±0.6, 385N×8272W, h10km, mb4.3/10, Error ellipse: s-maj=15.2km s-min=9.6km az=46.0*
ISC 17 03:37:10.0±0.6**, 395N**±006×**8273W**±008**, h10**km**, n39,** σ**1ˢ29**/34**, mb4.1**/14**, MS3.2**/3**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		5.29	354	eP	**Pn**	**03 38 28.1**	**-1.0**
QCR	Quepos	5.62	345	eP	**Pn**	**03 38 32.1**	**-1.6**
OTAV	Otavalo	5.64	131	ePn	**Pn**	**03 38 28.5**	**-5.5**
	8.7nm,0.4s						
LCR2	La Lucha 2	5.89	348	eP	**Pn**	**03 38 36.8**	**-0.7**
BCIP	Isla Barro Col	5.93	29	ePn	**Pn**	**03 38 38.2**	**+0.3**
	97nm,0.6s						
URSC	Urasca	5.94	350	eP	**Pn**	**03 38 37.8**	**-0.3**
PRS1	Puriscal	6.20	345	eP	**Pn**	**03 38 39.1**	**-2.5**
CGA2	Cerro Gallo 2	6.27	344	eP	**Pn**	**03 38 42.6**	**0.0**
JTS	JuntasAbangare	6.68	341	Pn	**Pn**	**03 38 46.3**	**-1.9**
	7.9nm,0.3s,baz=114,slow=11,SNR=53						
JTS				Sn	**Sn**	**03 40 04.9**	**+0.5**
	1.2nm,0.3s,baz=326,slow=17,SNR=2.3						
JTS				LR	LR	03 40 50.5	
	comp=Z,207nm,19.0s,baz=71,slow=33						
ROSC	El Rosal	8.42	84	ePn	**Pn**	**03 39 13.3**	**+1.2**
ROSC				LR	LR	03 42 38.9	
ROSC	El Rosal	8.42	84	Pn	**Pn**	**03 39 13.2**	**+1.0**
	0.3nm,0.3s,baz=257,slow=19,SNR=3.3						
ROSC				LR	LR	03 42 38.9	
	comp=Z,82nm,18.9s,baz=342,slow=39						
ATAH	Atahualpa	11.70	158	LR	LR	03 44 05.1	
	comp=Z,430nm,21.2s,baz=171,slow=36						
SDV	Santo Domingo	12.98	67	Pn	**Pn**	**03 40 15.5**	**+0.9**
SDV				LR	LR	03 44 57.7	
SDV	Santo Domingo	12.98	67	Pn	**Pn**	**03 40 15.5**	**+0.9**
	0.3nm,0.3s,baz=246,slow=13,SNR=4.6						
SDV				LR	LR	03 44 57.7	
	comp=Z,132nm,21.7s,baz=245,slow=36						
NNA	Nana	16.88	160	eP	**Pn**	**03 41 06.3**	**-0.2**
	14nm,0.9s						
NNA	Nana	16.88	160	Pn	**Pn**	**03 41 06.0**	**-0.5**
	0.6nm,0.3s,baz=229,slow=7.5,SNR=4.2						
TEIG	Tepich	17.06	342	LR	LR	03 48 14.2	
	comp=Z,70nm,18.2s,baz=201,slow=39						
CMIG	Matias Romero	17.69	318	LR	LR	03 47 00.1	
	comp=Z,63nm,20.2s,baz=196,slow=33						
SJG	San Juan	21.48	48	LR	LR	03 48 37.2	
	comp=Z,50nm,22.0s,MS2.9,baz=91,slow=32						
LPAZ	La Paz	24.75	145	eP	**P**	**03 42 30.2**	**-1.7**
	9.1nm,1.1s,mb4.2						
LPAZ	La Paz	24.75	145	P	**P**	**03 42 30.4**	**-1.6**
	8.2nm,1.1s,mb4.2,baz=344,slow=10,SNR=15						
SIV	San Ignacio	29.18	133	P	**P**	**03 43 10.7**	**-1.1**
	1.0nm,0.9s,mb3.5,baz=229,slow=12,SNR=3.3						
TXAR	Lajitas Array	32.12	324	LR	LR	03 58 27.9	
	comp=Z,29nm,18.8s,MS3.0,baz=275,slow=40						
MNTX	Cornudas Mount	34.86	325	eP	**P**	**03 44 00.4**	**-1.1**
	24nm,2.1s,mb4.8						
ANMO	Albuquerque	37.89	327	eP	**P**	**03 44 29.5**	**+2.1**
	4.9nm,1.3s,mb4.1						
SDCO	Great Sand Dun	39.56	331	eP	**P**	**03 44 44.3**	**+2.9**
	5.9nm,1.1s,mb4.2						
PDAR	Pinedale Array	45.42	332	P	**P**	**03 45 30.1**	**+1.1**
	0.6nm,0.9s,mb3.4,baz=126,slow=7.5,SNR=5.1						
HWUT	Hardware Ranch	45.52	330	eP	**P**	**03 45 31.9**	**+2.1**
	14nm,1.7s,mb4.6						
AGMN	Agassiz Refuge	45.60	348	eP	**P**	**03 45 30.2**	**0.0**
	6.1nm,1.3s,mb4.4						
TPAW	Teton Pass	46.63	332	eP	**P**	**03 45 41.8**	**+3.3**
	5.3nm,1.4s,mb4.3						
NVAR	Mina Array Bea	47.19	321	P	**P**	**03 45 43.5**	**+0.5**
NVAR	Mina Array Bea	47.19	321	P	**P**	**03 45 43.5**	**+0.5**
	0.6nm,0.8s,mb3.6,baz=145,slow=4.9,SNR=4.9						
ULM	Lac du Bonnet	47.46	349	P	**P**	**03 45 43.9**	**-1.0**
	1.3nm,0.7s,mb4.0,baz=177,slow=12,SNR=3.8						
BOZ	Bozeman (W)	48.59	333	eP	**P**	**03 45 56.2**	**+2.5**
	1.2nm,0.9s,mb3.9						
WVOR	Wild Horse Val	49.90	325	eP	**P**	**03 46 04.3**	**+0.5**
	2.9nm,0.9s,mb4.3						
EDM	Edmonton	55.19	338	eP	**P**	**03 46 43.2**	**+0.4**
YKA	Yellowknife Ar	63.01	344	P	**P**	**03 47 36.0**	**-0.8**
YKA	Yellowknife Ar	63.01	344	P	**P**	**03 47 36.0**	**-0.8**
	0.8nm,0.9s,mb3.9,baz=138,slow=6.7,SNR=13						
DBIC	Dimbokro	77.52	84	LR	LR	04 22 38.4	
	comp=Z,48nm,18.0s,MS3.9,baz=355,slow=35						

*ISCJB **17** 03:52:46.7±2.2, 3324S±006×1787W±02, h19km±17km, mb4.5/7, MS3.9/3, Error ellipse: s-maj=26.7km s-min=10.2km az=6.8*
*NEIC **17** 03:52:48.4±0.6, 3311S×17833W, h35km, mb4.6/5, Error ellipse: s-maj=15.6km s-min=12.0km az=94.0*
*IDC **17** 03:52:51.5±3.3, 3300S×17849W, h55km±28km, mb4.3/3, mb1 4.4/4, mb1mx3.9/14, mbtmp4.2/4, ML3.3/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/20, Error ellipse: s-maj=32.4km s-min=20.9km az=18.0*
ISC 17 03:52:49.2±2.3**, 3318S**±006×**1787W**±02**, h23**km±18km**, n36,** σ**0ˢ84**/22**, mb4.5**/7**, MS3.9**/3**, 2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.00	208	PN	**Pn**	**03 54 01.6**	**-1.3**
MWZ	Matawai	5.98	210	PN	**Pn**	**03 54 14.8**	**-1.6**
MWZ				SN	**Sn**	**03 55 25.2**	**+1.0**
URZ	Urewera	6.10	213	P	**Pn**	**03 54 17.6**	**-0.4**
	9.7nm,0.3s,baz=267,slow=3.9,SNR=34						
URZ				S	**Sn**	**03 55 27.5**	**+0.4**
	12nm,0.3s,baz=166,slow=18,SNR=13						
URZ	Urewera	6.10	213	PN	**Pn**	**03 54 17.8**	**-0.2**
URZ				SN	**Sn**	**03 55 27.0**	**-0.1**
BFZ	Birch Farm	8.50	207	SN	**Sn**	**03 56 20.1**	**-6.1**
SNZO	South Karori	9.66	211	Pn	**Pn**	**03 55 07.9**	**+1.1**
SNZO				eSn	**Sn**	**03 56 48.0**	**-6.5**
THZ	Tophouse	10.85	215	SN	Sx	03 57 17.4	
MQZ	McQueen's Vall	12.49	210	SN	Sx	03 57 50.5	
RPZ	Rata Peaks	13.21	214	LR	LR	04 01 45.2	
	comp=Z,390nm,19.0s,baz=240,slow=40						
DZM	Mont Dzumac	17.17	306	P	**Pn**	**03 56 47.6**	**-0.2**
	0.1nm,0.3s,baz=158,slow=19,SNR=1.9						
DZM				LR	LR	04 02 15.9	
	comp=Z,344nm,18.3s,baz=84,slow=33						
STKA	Stephens Creek	33.36	261	LR	LR	04 12 55.4	
	comp=Z,322nm,18.9s,MS4.1,baz=26,slow=36						
CTA	Charters Tower	33.76	284	eP	**P**	**03 59 29.5**	**+0.2**
	3.3nm,0.4s,mb4.6						
CTAO	Charters Tower	33.76	284	eP	**P**	**03 59 31.3**	**+2.0**
	5.9nm,0.6s,mb4.7						
COEN	Coen	39.55	290	eP	**P**	**04 00 19.9**	**+1.2**
	1.7nm,0.7s,mb3.9						
ASAR	Alice Springs	42.44	270	P	**P**	**04 00 42.6**	**+0.2**
	8.0nm,0.8s,mb4.4,baz=108,slow=7.4,SNR=100						
ASAR				S	**S**	**04 07 02.5**	**-0.6**
	1.9nm,1.0s,baz=115,slow=16,SNR=10						
WB2	Warramunga Arr	43.67	275	⇓iP	**P**	**04 00 52.4**	**0.0**
WRA	Warramunga Arr	43.68	275	P	**P**	**04 00 52.3**	**-0.2**
	7.0nm,0.8s,mb4.5,baz=117,slow=7.5,SNR=36						
WRA				S	**S**	**04 07 20.0**	**-1.3**
	0.8nm,1.0s,baz=114,slow=16,SNR=3.7						
FITZ	Fitzroy Crossi	51.81	272	⇓iP	**P**	**04 01 55.3**	**-0.3**
	6.6nm,1.0s,mb4.5						
CASY	Casey	52.41	209	eP	**P**	**04 01 59.0**	**-0.4**
	9.8nm,0.8s,mb4.8						
QSPA	South Pole Qui	56.94	180	P	**P**	**04 02 32.5**	**+0.4**
	5.4nm,0.9s,mb4.6,baz=49,slow=4.2,SNR=11						
SNAA	Sanae	75.40	179	e	pP	04 04 40.1	+2.2
SNAA				e		04 04 54.0	
VNA3	Neumayer Olymp	75.58	176	e	pP	04 04 41.3	+2.4
VNA2	Neumayer--Watz	76.00	177	e	pP	04 04 44.2	+2.8
	baz=185,slow=6.5						
VNA2				e		04 04 57.8	
KSRS	Korea Array	86.08	320	LR	LR	04 41 15.3	
	comp=Z,26nm,19.6s,MS3.6,baz=340,slow=34						
TXAR	Lajitas Array	94.39	58	LR	LR	04 41 25.0	
	comp=Z,49nm,18.0s,MS4.0,baz=185,slow=31						
MKAR	Makanchi Array	119.08	309	PKP	PKPdf	04 11 33.0	-2.7
	0.1nm,0.3s,baz=119,slow=1.4,SNR=2.7						
KURK	Kurchatov	122.51	313	ePKPdf	PKPdf	04 11 40.2	-2.0
ARCES	ARCESS Array B	141.16	347	PKP	PKPdf	04 12 13.0	-3.8
	4.2nm,1.0s,baz=29,slow=2.8,SNR=3.8						
JOF	Joensuu	144.75	337	epkp	PKPdf	04 12 20.3	-3.0
KAF	Kangasniemi	146.94	339	epkp	PKPdf	04 12 22.9	-4.1
	baz=15,slow=1.8						
FINES	FINESS Array B	147.52	338	PKPbc	PKPbc	04 12 27.6	-3.1
	7.9nm,0.8s,baz=85,slow=4.0,SNR=16						
NB2	NORSAR Subarra	151.39	350	PKP	PKPbc	04 12 38.4	-1.9
	comp=Z,23nm,1.7s,baz=17,slow=4.1						
NOA	NORSAR Array B	151.39	350	PKPbc	PKPbc	04 12 38.3	-2.0
	comp=Z,1.3nm,0.8s,baz=15,slow=4.0,SNR=3.7						
AKASG	Malin Array Be	153.07	319	PKPbc	PKPbc	04 12 42.1	-2.3
	comp=Z,0.2nm,0.2s,baz=327,slow=12,SNR=4.4						
BRTR	Keskin Array B	153.27	293	PKPbc	PKPbc	04 12 44.2	-1.0
	comp=Z,1.4nm,0.6s,baz=128,slow=3.6,SNR=10						
TORD	Torodi Ar. Bea	160.05	181	PKPab	PKPab	04 13 23.7	-3.0
	comp=Z,0.4nm,0.4s,baz=4.1,slow=2.0,SNR=2.5						

MAN 17 03:58:59, 1611N×12000E, h26km**, mb4.0, ML2.8, MS2.5, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.29	344	eP	Pb	03 59 08.7	+2.8
BOLP				eS	Sb	03 59 15.5	+4.9
SCZP	Santa Cruz	0.34	194	eP	Pb	03 59 06.5	-0.2
SCZP				eS	Sb	03 59 12.0	+0.1
BCPH	Baguio City Da	0.62	64	⇑iP	Pb	03 59 13.0	+1.6
BCPH				i S	Sb	03 59 23.4	+3.7
BALP	Baler	1.56	103	eP	Pn	03 59 25.9	+0.8
CAUP	Cauayan	1.94	64	eP	Pn	03 59 34.7	+4.4
POLP	Polilio Island	2.32	126	eP	Sn	03 59 58.8	-4.4
LUBP	Lubang	2.37	174	eP	Pn	03 59 36.3	+0.1

IDC 17 04:01:52.8±21.0**, 2181S×7380E, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/20**, mbtmp3.7**/3**, Error ellipse:**

s-maj=700.2km s-min=36.9km az=51.0,South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	55.10	104	P	P	04 11 27.8	+0.7
	0.3nm,0.7s,baz=250,slow=5.8,SNR=5.1						
WRA	Warramunga Arr	56.27	100	P	P	04 11 34.8	-0.8
	1.0nm,1.0s,baz=259,slow=6.6,SNR=5.6						
MKAR	Makanchi Array	68.71	6	P	P	04 12 58.2	+0.2
	1.3nm,0.7s,baz=185,slow=5.6,SNR=11						

IDC 17 04:06:36.2±2.0,21.99S×179.46W,h575km±21km,mb3.7/10, mb1 3.9/12,mb1mx3.8/15,mbtmp3.7/12,Error ellipse: s-maj=23.7km s-min=15.2km az=151.0
ISCJB 17 04:06:38.2±1.9,22.23S±0.1×179.54W±0.10,h621km±25km, mb4.3/20,Error ellipse: s-maj=15.4km s-min=13.9km az=0.7
NEIC 17 04:06:39.6±1.5,22.13S×179.54W,h622km±17km,mb4.6/13, Error ellipse: s-maj=15.3km s-min=11.6km az=171.0
ISC 17 04:06:38.7±1.9,22.1S±0.1×179.5W±0.1,h606km±23km,n44, σ0s83/33,mb4.3/19,6D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.99	267	eP	P	04 09 29.3	+1.8
DZM	Mont Dzumac	12.99	267	P	P	04 09 26.6	-0.9
	2.1nm,0.3s,baz=79,slow=16,SNR=20						
URZ	Urewera	16.37	189	P	P	04 09 56.7	-2.3
	2.3nm,0.3s,baz=21,slow=0.7,SNR=11						
URZ				S	S	04 12 35.8	-6.2
	1.1nm,0.3s,baz=106,slow=20,SNR=7.7						
ARMA	Armidale	27.10	246	⇓iP	P	04 11 36.8	+1.8
CTA	Charters Tower	31.94	267	⇓iP	P	04 12 17.1	+0.3
	15nm,0.5s,mb4.9						
CTAO	Charters Tower	31.94	267	eP	P	04 12 16.8	+0.1
	13nm,0.6s,mb4.7						
PMG	Port Moresby	34.35	286	eP	P	04 12 36.8	-0.2
	37nm,0.8s,mb5.1						
PMG	Port Moresby	34.35	286	P	P	04 12 36.9	-0.1
	34nm,0.8s,mb5.0,baz=86,slow=4.4,SNR=16						
STKA	Stephens Creek	35.82	246	⇓iP	P	04 12 49.9	+0.9
	6.9nm,0.6s,mb4.4						
STKA	Stephens Creek	35.82	246	P	P	04 12 50.0	+1.0
	8.2nm,0.5s,mb4.5,baz=89,slow=9.7,SNR=42						
COEN	Coen	36.29	276	eP	P	04 12 53.1	0.0
	7.1nm,0.8s,mb4.2						
ASAR	Alice Springs	42.78	259	P	P	04 13 45.0	+0.3
	21nm,0.8s,mb4.7,baz=101,slow=8.1,SNR=196						
ASAR				ScP	ScP	04 18 19.9	+3.9
	1.1nm,0.8s,baz=96,slow=4.6,SNR=5.0						
ASAR				S	S	04 19 26.2	-0.1
	1.9nm,0.9s,baz=97,slow=16,SNR=14						
WB2	Warramunga Arr	42.97	264	⇓iP	P	04 13 45.8	-0.5
WRA	Warramunga Arr	42.98	264	P	P	04 13 45.9	-0.5
	13nm,0.8s,mb4.5,baz=97,slow=7.9,SNR=102						
WRA				ScP	ScP	04 18 21.3	+4.4
	1.8nm,0.7s,baz=94,slow=4.2,SNR=9.0						
KAKA	Kakadu	46.60	273	⇓iP	P	04 14 13.5	-0.6
	20nm,0.6s,mb4.8						
KAKA	Kakadu	46.60	273	eP	P	04 14 13.4	-0.7
	29nm,0.5s,mb5.1						
FORT	Forrest	47.36	248	eP	P	04 14 19.3	-0.2
	24nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	51.41	264	⇓iP	P	04 14 49.6	+0.2
	7.8nm,0.6s,mb4.3						
MBWA	Marble Bar	56.12	259	eP	P	04 15 21.8	-0.6
	18nm,0.7s,mb4.4						
NWAO	Narrogin (SRO)	56.38	244	P	P	04 15 24.4	+0.4
NWAO	Narrogin (SRO)	56.38	244	P	P	04 15 24.4	+0.4
	4.5nm,0.8s,mb3.8,baz=163,slow=11,SNR=3.0						
KKM	Kota Kinabalu	68.80	286	eP	P	04 16 44.2	+0.1
MJAR	Matsushiro Arr	70.65	325	P	P	04 16 53.6	-1.0
	0.9nm,0.3s,mb3.8,baz=159,slow=6.5,SNR=4.2						
KSM	Kuching	72.22	279	eP	P	04 17 04.4	+0.2
NVAR	Mina Array Bea	83.16	44	P	P	04 18 03.1	+0.8
	2.4nm,0.8s,mb3.8,baz=210,slow=6.7,SNR=16						
MCK	McKinley	88.83	13	eP	P	04 18 28.1	-0.6
	2.7nm,0.7s,mb4.2						
MNTX	Cornudas Mount	88.83	55	eP	P	04 18 29.8	+0.3
	3.2nm,0.8s,mb4.2						
TXAR	Lajitas Array	89.11	58	P	P	04 18 32.0	+1.1
	2.0nm,0.8s,mb4.0,baz=212,slow=6.2,SNR=15						
PLCA	Paso Flores	89.22	134	eP	P	04 18 32.2	+0.9
	2.7nm,0.9s,mb4.1						
PDAR	Pinedale Array	91.10	44	P	P	04 18 39.9	+0.1
	1.3nm,1.0s,mb3.8,baz=217,slow=3.8,SNR=9.8						
RLMT	Red Lodge	92.43	42	eP	P	04 18 44.5	-1.3
	10nm,1.1s,mb4.8						
YKA	Yellowknife Ar	98.55	25	P	Pdif	04 19 11.9	-1.6
	0.1nm,0.3s,baz=245,slow=4.4,SNR=4.2						
MKAR	Makanchi Array	111.23	313	PKiKP	PKiKP	04 24 03.6	-0.9
	0.2nm,0.3s,baz=123,slow=1.6,SNR=2.8						
ARCES	ARCESS Array B	130.20	349	PKP	PKPdf	04 24 39.4	-0.8
	8.6nm,1.1s,baz=101,slow=2.2,SNR=11						
FINES	FINESS Array B	136.86	342	PKP	PKPdf	04 24 53.5	+0.6
	1.0nm,0.6s,baz=29,slow=1.4,SNR=6.1						
AKASG	Malin Array Be	143.66	329	PKP	PKPdf	04 25 03.7	-1.7
AKASG	Malin Array Be	143.66	329	PKP	PKPdf	04 25 03.7	-1.7
	0.8nm,0.3s,baz=42,slow=3.8,SNR=8.9						
MALT	Malatya	143.71	305	ePKPdf	PKPdf	04 25 06.2	+0.3
BRTR	Keskin Array B	146.79	310	PKPbc	PKPbc	04 25 14.0	0.0
	0.8nm,0.8s,baz=122,slow=4.9,SNR=3.4						
CLL	Collm	149.24	345	i PKPbc	PKPbc	04 25 19.7	-0.1
	comp=Z,9.0nm,0.9s						
MORC	Moravsky Berou	149.25	338	ePKPdf	PKPdf	04 25 14.6	-0.2
MORC				ePKPbc	PKPbc	04 25 20.1	+0.3
BRG	Berggiesshubel	149.40	343	i P	PKPbc	04 25 20.4	+0.2
	comp=Z,8.7nm,0.9s						
GERES	GERESS Array B	151.29	342	PKPbc	PKPbc	04 25 23.9	-0.7
	comp=Z,0.6nm,0.4s,baz=8.5,slow=2.7,SNR=6.5						
TORD	Torodi Ar. Bea	171.03	188	PKP	PKPdf	04 25 37.8	-1.4
	comp=Z,0.6nm,0.8s,baz=186,slow=1.9,SNR=3.8						
TORD				PKPab	PKPab	04 27 02.9	+0.3
	comp=Z,0.6nm,0.7s,baz=166,slow=4.6,SNR=7.1						

NNC 17 04:36:51.5±4.2,37.23N×70.45E,h0km,mb3.7,mpv3.6, 4C-3D,Error ellipse: s-maj=34.6km s-min=32.0km az=94.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.87	0	Pn	Pn	04 38 23.3	+3.7
	2.9nm,0.3s,baz=181,slow=13,SNR=40						
KK31				⇓Sn	Sn	04 39 34.0	+6.5
	2.3nm,0.4s,baz=194,slow=22,SNR=9.2						
TKM2	Tokmak 2	6.92	33	⇑Pn	Pn	04 38 30.4	-3.6
	3.4nm,0.9s						
TKM2				⇑Sn	Sn	04 39 56.1	+2.6
	2.6nm,0.7s						
AB31	Akbulak array	14.23	331	⇓Pn	Pn	04 40 14.3	+0.2
	0.5nm,0.6s,baz=162,slow=11,SNR=10						
AB31				⇑Sn	Sn	04 42 51.5	-1.1
	0.5nm,0.5s,baz=156,slow=23,SNR=3.4						
AKTO	Aktyubinsk	15.93	330	⇓Pn	Pn	04 40 36.6	-0.2
	0.8nm,1.0s						
AKTO				⇑Sn	Sn	04 43 32.8	-1.1
	1.6nm,1.9s						

TIR 17 04:45:25.5±1.3,39.30N×20.68E,h3km±449km
THE 17 04:45:30.0,39.46N×20.61E,h3km,ML2.9
ATH 17 04:45:29.3,39.45N×20.63E,h5km,MD3.3/6
NEIC 17 04:45:30.0,39.46N×20.61E,h0km,MD3.3(ATH), ML2.9(THE),After THE.
ISCJB 17 04:45:29.2±0.5,39.46N±0.03×20.63E±0.04,h6km±8km, Error ellipse: s-maj=4.9km s-min=4.4km az=10.8
CSEM 17 04:45:30.0±0.2,39.49N×20.60E,h5km,ML2.9,Error ellipse: s-maj=5.3km s-min=4.0km az=136.0
ISC 17 04:45:29.6±0.5,39.47N±0.03×20.61E±0.04,h13km±6km,n20, σ0s87/32,3C-2D,Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.22	287	ePg	Pg	04 45 33.6	-0.8
IGT				eSg	Sg	04 45 38.7	+1.0
IGT	Igoumenitsa	0.22	287	i PG	Pg	04 45 33.6	-0.8
IGT				i SG	Sg	04 45 38.7	+1.0
JAN	Janina	0.27	45	⇑iPG	Pg	04 45 34.0	-1.2
JAN				eSG	Sg	04 45 39.0	0.0
MEV	Metsovon	0.57	56	ePg	Pg	04 45 40.2	-0.6
MEV				eSg	Sg	04 45 49.7	+1.2
MEV	Metsovon	0.57	56	i PG	Pg	04 45 40.2	-0.7
MEV				i SG	Sg	04 45 49.7	+1.2
MEV	Metsovon	0.57	56	ePg	Pg	04 45 40.2	-0.7
MEV				eSg	Sg	04 45 49.7	+1.2
SRN	Sarande	0.62	311	i PG	Pg	04 45 41.8	0.0
SRN				i SG	Sg	04 45 55.5	+5.5
KEK	Kerkira	0.67	292	⇓iPB	Pb	04 45 43.1	-0.1
LKD	Levkas	0.76	177	ePg	Pg	04 45 43.1	-1.3
LKD				eSg	Sg	04 45 55.9	+1.6
EVR	Evrytania	1.08	120	⇑iPG	Pg	04 45 49.0	-1.5
THL	Klokotos Trika	1.09	84	⇓iPB	Pb	04 45 50.7	+0.3
VLS	Valsamata	1.29	181	⇑iPB	Pb	04 45 53.6	-0.1
KFL	Anninata	1.36	174	ePg	Pg	04 45 55.8	-0.1
AGG	Agios Georgios	1.41	108	eSg	Sg	04 46 15.9	+0.9
RLS	Riolos of Patr	1.56	154	ePB	Pb	04 45 59.1	+0.8
LIT	Litokhoron	1.58	66	ePg	Pg	04 45 58.9	-1.1
OHR	Ohrid	1.65	5	ePn	Pn	04 45 58.4	+0.1
OHR				eSn	Sg	04 46 26.8	+4.2
OHR	Ohrid	1.65	5	ePn	Pn	04 45 58.3	0.0
OHR				eSn	Sg	04 46 26.8	+4.1
KRUS	Krusevo	1.96	14	ePn	Pg	04 46 07.0	-0.2
KRUS				eSn	Sg	04 46 33.7	+1.0
KRUS	Krusevo	1.96	14	ePn	Pg	04 46 07.0	-0.2
KRUS				eSn	Sg	04 46 33.6	+0.9

IDC 17 04:52:57.9±3.6,37.69N×72.06E,h0km,mb3.8/2,mb1 3.8/3, mb1mx3.4/22,mbtmp3.7/3,ML2.9/1,Error ellipse: s-maj=94.7km s-min=27.5km az=143.0
ISCJB 17 04:53:13.2±2.0,38.3N±0.1×72.4E±0.1,h146km±21km, mb3.4/2,Error ellipse: s-maj=24.4km s-min=14.3km az=33.0
NNC 17 04:53:14.5±6.7,38.41N×72.09E,h127km±139km,mb2.9, mpv3.4,Error ellipse: s-maj=63.1km s-min=37.9km az=16.0
ISC 17 04:53:13.5±2.4,38.3N±0.2×72.4E±0.1,h133km±24km,n13, σ0s87/16,mb3.4/2,5C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.99	14	P	Pn	04 54 13.5	+0.4
	SNR=11						
UCH	Uchtor	4.28	22	P	Pn	04 54 17.1	+0.2
	SNR=13						
KZA	Kyzart	4.40	29	P	Pn	04 54 18.0	-0.6
	SNR=31						
EKS2	Erkin-Say	4.52	13	P	Pn	04 54 20.9	+0.7
	SNR=11						
AAK	Ala-Archa	4.65	20	P	Pn	04 54 22.8	+0.8
	SNR=8.2						
ULHL	Ulahol	4.95	35	P	Pn	04 54 25.8	-0.1
	SNR=12						
KK31	Karatay Array	5.04	344	Pn	Pn	04 54 26.9	-0.1
	2.1nm,0.2s,baz=167,slow=13,SNR=95						
KK31				⇑Sn	Sn	04 55 23.9	-0.4
	16nm,0.5s,baz=172,slow=22,SNR=4.0						
TKM2	Tokmak 2	5.26	27	⇑Pn	Pn	04 54 30.2	+0.2
	1.8nm,0.5s						
TKM2				⇓Sn	Sn	04 55 29.1	-0.5
	5.7nm,0.6s						
MKAR	Makanchi Array	11.22	37	Pn	Pn	04 55 49.2	-0.7
	0.1nm,0.3s,baz=223,slow=14,SNR=10						
AB31	Akbulak array	14.17	325	⇑Pn	Pn	04 56 26.2	-1.9
	1.9nm,0.4s,baz=129,slow=12,SNR=52						
AB31				⇑Sn	Sx	04 58 54.4	
	0.4nm,0.3s,baz=125,slow=24,SNR=5.0						
AKTO	Aktyubinsk	15.89	325	⇓Pn	Pn	04 56 50.8	+1.3
	0.3nm,0.6s						
AKTO				⇑Sn	Sn	04 59 39.3	-6.5
	1.5nm,1.8s						
FINES	FINESS Array B	36.66	324	P	P	05 00 08.5	+1.7
	1.9nm,1.0s,mb3.7,baz=124,slow=6.9,SNR=3.8						
TORD	Torodi Ar. Bea	66.86	269	P	P	05 03 50.3	-1.1
	0.1nm,0.4s,mb3.0,baz=50,slow=5.9,SNR=7.6						

IDC 17 04:59:39.4±8.0,7.24S×129.27E,h152km±84km,mb3.4/1, mb1 3.4/5,mb1mx3.3/13,mbtmp3.3/5,Error ellipse: s-maj=74.4km s-min=25.4km az=37.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	6.28	242	P	Pn	05 01 10.7	+0.9
	13nm,0.3s,baz=100,slow=3.1,SNR=14						
BATI				S	Sn	05 02 21.3	+0.6
	4.7nm,0.3s,baz=115,slow=17,SNR=2.8						
FITZ	Fitzroy Crossi	11.37	198	P	Pn	05 02 15.6	-1.8
	0.3nm,0.3s,baz=34,slow=14,SNR=16						
FITZ				S	Sn	05 04 16.0	-7.1
	1.2nm,0.3s,baz=269,slow=20,SNR=10						
WRA	Warramunga Arr	13.55	159	P	Pn	05 02 45.2	-0.4
	0.7nm,0.3s,baz=342,slow=13,SNR=34						
WRA				S	Sn	05 05 07.5	-8.3
	0.7nm,0.3s,baz=337,slow=21,SNR=5.7						
ASAR	Alice Springs	16.93	165	P	Pn	05 03 28.8	+1.4
	0.2nm,0.3s,baz=343,slow=10,SNR=11						
ASAR				S	S	05 06 28.1	-7.5
	0.2nm,0.3s,baz=329,slow=17,SNR=5.3						
MKAR	Makanchi Array	68.03	327	P	P	05 10 22.3	0.0
	0.4nm,0.3s,baz=111,slow=8.6,SNR=8.9						

IDC 17 05:17:54.1±49.0,15.47S×170.48W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.7/14,mbtmp3.8/3,Error ellipse: s-maj=966.0km s-min=209.5km az=80.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	46.45	241	P	P	05 26 23.2	+0.3
	0.6nm,0.5s,baz=66,slow=10.0,SNR=3.0						
WRA	Warramunga Arr	52.57	257	P	P	05 27 09.3	-0.6
	0.2nm,0.4s,baz=95,slow=6.9,SNR=6.1						
ASAR	Alice Springs	52.77	252	P	P	05 27 11.5	+0.2
	2.3nm,0.6s,baz=90,slow=8.0,SNR=36						

NNC 17 05:23:31.7±10.0,37.79N×71.03E,h0km,mb3.7,mpv3.5, 2C-2D,Error ellipse: s-maj=110.3km s-min=80.2km az=66.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.32	356	Pn	Pn	05 24 55.5	+3.2
	0.9nm,0.2s,baz=186,slow=15,SNR=33						
KK31				⇑Sn	Sn	05 26 01.0	+6.8
	2.6nm,0.3s,baz=170,slow=24,SNR=12						
TKM2	Tokmak 2	6.20	33	⇓Pn	Pn	05 25 03.8	-0.5
	4.5nm,0.6s						
AB31	Akbulak array	13.98	329	⇓Pn	Pn	05 26 49.3	-1.6
	0.2nm,0.3s,baz=130,slow=13,SNR=14						
AB31				⇑Sn	Sn	05 29 23.3	-3.4
	0.5nm,0.5s,baz=153,slow=22,SNR=2.5						

CASC 17 05:52:46.6±1.3,8.57N×82.31W,h10km±6km,MD3.9,1C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	David	0.19	228	eP	Pg	05 52 51.1	+0.4
DVD				eS	Sg	05 52 54.6	+1.1
CNI	Changuinola	0.87	346	⇑eP	Pg	05 53 02.2	-1.2
BAR1		1.20	304	eP	Pb	05 53 07.4	-2.0
BAR1				eS	Sb	05 53 24.1	-0.8
URSC	Urasca	1.92	311	eP	Pn	05 53 19.6	+0.2
URSC				eS	Sn	05 53 44.6	+1.0
LCR2	La Lucha 2	2.04	305	eP	Pn	05 53 20.9	-0.2
AZU	Azuero	2.15	111	eP	Pn	05 53 21.7	-0.9
PRS1	Puriscal	2.43	306	eP	Pn	05 53 25.9	-0.5
CGA2	Cerro Gallo 2	2.57	304	eP	Pn	05 53 29.2	+0.9
CGA2				eS	Sn	05 54 00.9	+1.3
PTP	Ponta Puerca	18.85	58	eP		05 53 00.3	
PTP				eS		05 53 08.5	

CASC 17 05:58:12.1±0.9,8.58N×82.38W,h5km±9km,MD3.6, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DVD	David	0.16	206	eS	Sg	05 58 19.1	+1.6
CNI	Changuinola	0.84	351	eP	Pg	05 58 27.5	-0.8
BAR1		1.13	306	eP	Pg	05 58 32.7	-1.1
BAR1				eS	Sg	05 58 48.6	+0.1
URSC	Urasca	1.86	312	eP	Pn	05 58 45.0	+0.4
URSC				eS	Sn	05 59 10.5	+2.0
LCR2	La Lucha 2	1.98	306	eP	Pn	05 58 46.2	0.0
LCR2				eS	Sn	05 59 12.3	+1.0
PRS1	Puriscal	2.36	306	eP	Pn	05 58 51.3	-0.2
PRS1				eS	Sn	05 59 21.3	+0.4
PTP	Ponta Puerca	18.90	58	eS		05 58 33.8	

PRU 17 05:58:52.0,50.26N×18.85E,h0km
WAR 17 05:58:50.7,50.25N×18.98E,ML2.6,Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.52	93	ePg	Pg	05 59 01.1	+0.4
OJC				eSg	Sg	05 59 08.9	+1.4
OKC	Ostrava-Krasne	0.68	233	ePG	Pg	05 59 03.7	+0.1
OKC				eSG	Sg	05 59 12.9	+0.5
	38nm,0.7s						
NIE	Niedzica	1.19	133	ePg	Pg	05 59 14.2	+0.6
NIE				eSg	Sg	05 59 30.7	+1.7
STHS	Stebnicka Huta	1.68	119	ePN	Pn	05 59 22.9	+1.6
STHS				eSN	Sn	05 59 46.0	+2.5
DPC	Dobruska-Polom	1.71	275	ePG	Pg	05 59 20.8	-2.7
DPC				eSG	Sg	05 59 43.3	-2.3
	26nm,0.6s						
KOLL	Kolacno	1.71	193	ePN	Pn	05 59 23.1	+1.4
KOLL				eSN	Sn	05 59 45.3	+1.0
VYHS	Vyhne	1.76	183	ePN	Pn	05 59 21.4	-0.9
VYHS				eSN	Sn	05 59 44.5	-0.9
UPC	Upice	1.92	279	eSG	Sg	05 59 49.5	-2.9
KECS	Kecovo	2.02	150	ePN	Pn	05 59 28.5	+2.5
KECS				eSN	Sn	05 59 53.9	+2.0
CRVS	Cervenica-Dubn	2.10	129	ePN	Pn	05 59 29.5	+2.4
CRVS				eSN	Sn	05 59 58.0	+4.2
MODS	Modra-Piesok	2.18	211	ePN	Pn	05 59 30.9	+2.7
PRU	Pruhonice	2.87	267	eSG	Sg	06 00 20.1	-2.8
	8.9nm,0.7s						
BRG	Berggiesshubel	3.27	283	PG	Pg	05 59 52.2	-1.2
BRG				SG	Sg	06 00 33.0	-2.8
	4.8nm,0.6s						
KHC	Kasperske Hory	3.68	254	ePG	Pg	05 59 58.0	-3.2
KHC				eSG	Sg	06 00 44.6	-4.4
	6.8nm,0.4s						
CLL	Collm	3.94	288	i Sg	Sg	06 00 56.4	-0.9

CASC 17 06:08:01.1±2.9,15.83N×88.26W,h0km±56km,MD4.3, 6C-5D,Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO2	Montecristo 2	1.77	217	eP	x	06 08 32.1	
MTO2				eS	x	06 08 55.0	
CAHU	Cacacuatique	2.05	179	⇑eP	x	06 08 35.9	
RBDL	Robledal	2.19	219	eP	x	06 08 39.3	
RBDL				eS	x	06 09 07.8	
LBRS	Las Brisas	2.21	200	⇓eP	x	06 08 38.9	
LBRS				eS	x	06 09 07.9	
LFU	La Fuente	2.23	202	eP	x	06 08 39.1	
LFU				eS	x	06 09 08.4	
LCBS	La Ceiba	2.27	198	⇓eP	x	06 08 39.6	
SNVI	San Vicente	2.27	194	⇑eP	x	06 08 39.7	
SNVI				eS	x	06 09 09.1	
BOQS	Boqueron	2.30	205	⇓eP	x	06 08 40.6	
LFRS	El Faro	2.32	200	⇓eP	x	06 08 40.9	
LFRS				eS	x	06 09 14.0	
RTR	El Retiro	2.34	215	⇓eP	x	06 08 41.7	
RTR				eS	x	06 09 13.7	
SNJE	San Jose	2.34	214	⇑eP	x	06 08 41.2	
SNJE				eS	x	06 09 13.4	
BLLM	Bellamira	2.37	179	⇑eP	x	06 08 40.9	
BLLM				eS	x	06 09 13.4	
SBLS	San Blas	2.38	214	⇑eP	x	06 08 42.2	
SBLS				eS	x	06 09 13.3	
VSM	San Miguel	2.39	180	⇑eP	x	06 08 41.4	
VSM				eS	x	06 09 12.2	
BOAB	BOACO BROADBAN	4.20	143	eS	Sn	06 10 02.8	+6.7

NIED 17 06:31:00,46.20N×153.60E,h5km,Mw4.6 Best double couple: Mo7.73000×10^15 NP1:φs256.00000°,δ13.00000°, λ89.00000°. NP2:φs77.00000°,δ77.00000°,λ90.00000°.
JMA 17 06:31:40.7±0.9,46.24N×153.59E,h30km,M4.4
ISCJB 17 06:31:42.5±1.1,45.74N±0.08×153.44E±0.08,h48km±11km, mb4.2/25,MS3.2/2,Error ellipse: s-maj=14.8km s-min=8.4km az=158.9
MOS 17 06:31:42.2±1.8,46.04N×153.42E,h40km,mb4.3/15,Error ellipse: s-maj=11.0km s-min=9.0km az=95.7
NEIC 17 06:31:44.5±0.6,45.80N×153.56E,mb4.2/3,Error ellipse: s-maj=17.1km s-min=10.5km az=154.0
BJI 17 06:31:44.5,45.80N×153.60E,h46km,mB4.5,mb4.2
IDC 17 06:31:44.9±0.6,45.93N×153.48E,h48km±4km,mb3.6/12, mb1 3.9/14,mb1mx3.8/22,mbtmp3.7/14,MS3.0/2, Ms1 3.0/2,ms1mx2.9/30,Error ellipse: s-maj=17.4km s-min=13.8km az=145.0
ISC 17 06:31:44.7±0.9,45.79N±0.09×153.44E±0.08,h46km±9km, h49km±1.1km:pP-P,n85,σ1s35/96,mb4.2/25,MS3.2/2, 6C-1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.96	264	⇑iPN	Pn	06 32 42.0	-0.8
KUR				i S	Sn	06 33 28.8	+0.9
KUR				pmax	pmax		
	comp=N,220nm,0.7s						
KUR				pmax	pmax		
	comp=E,90nm,0.7s						
KUR				pmax	pmax		
	comp=Z,690nm,0.7s						
KUR				smax			
	comp=N,470nm,0.8s						
KUR				smax			
	comp=E,480nm,0.8s						
SKR	Severo-Kuril's	5.21	19	ePN	Pn	06 32 54.0	-6.0
NEM2	Nemuro 2	6.01	249	P	Pn	06 33 10.4	-0.6
NEM2				eS	Sn	06 34 16.3	-2.1
JRA	Rausu	6.19	256	P	Pn	06 33 14.9	+1.4
JNK	Nakash	6.59	254	P	Pn	06 33 19.8	+0.8
JNK				eS	Sn	06 34 33.7	+0.9
JAK	Akkeshi	6.86	249	P	Pn	06 33 22.3	-0.3
JAK				eS	Sn	06 34 37.6	-1.7
JTKR	Abashiri--Toko	7.01	258	P	Pn	06 33 26.0	+1.3
JAR	Ashorobuto	7.34	254	P	Pn	06 33 30.1	+0.8
JAR				eS	Sn	06 34 52.2	+1.0
JOB	Onbets	7.46	251	P	Pn	06 33 31.2	+0.3
JOB				eS	Sn	06 34 53.1	-1.1
YSS	Yuzh-Sakhalins	7.48	283	ePn	Pn	06 33 33.9	+2.7
	comp=E,36nm,1.1s						
YSS	Yuzh-Sakhalins	7.48	283	⇑iPN	Pn	06 33 35.0	+3.9
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
JKK2	Kamakawa 2	7.84	260	P	Pn	06 33 37.6	+1.6
ASAJ	Asahikawa	7.87	262	P	Pn	06 33 38.4	+1.9
ASAJ	Asahikawa	7.87	262	PN	Pn	06 33 37.8	+1.3
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	Asahikawa	7.87	262	P	Pn	06 33 37.8	+1.3
	comp=Z,1.9nm,0.3s,baz=80,slow=20,SNR=9.6						
JCH	Churui	7.90	250	P	Pn	06 33 37.0	0.0
JCH				eS	Sn	06 35 01.6	-3.4
JWK2	Keihoku	8.12	271	P	Pn	06 33 44.6	+4.8
JFR	Furan	8.19	255	P	Pn	06 33 43.2	+2.4
ERM	Erimo	8.33	247	⇑ePN	Pn	06 33 45.4	+2.7
JNBK	Urakawa-nobuka	8.46	249	P	Pn	06 33 43.7	-0.9
JNBK				eS	Sn	06 35 14.9	-3.7
JBT2	Biratori 2	8.50	253	P	Pn	06 33 45.6	+0.5
JNB	Noboribetsu	9.51	254	P	Pn	06 33 59.2	+0.2
JNB				eS	Sn	06 35 42.4	-2.1
JKB	Kayabe	9.77	251	P	Pn	06 34 01.9	-0.7
JKB				eS	Sn	06 35 45.9	-5.0
JYM2	Yakumo 2	10.11	253	P	Pn	06 34 07.3	+0.1
JSH	Shimam	10.12	257	P	Pn	06 34 08.7	+1.5
JANG	Nango	10.26	242	P	Pn	06 34 07.0	-2.2
JTM	Tenmabayashi	10.31	245	P	Pn	06 34 08.5	-1.4
JTM				eS	Sn	06 35 57.6	-6.3
JTH	Tanohata	10.31	240	P	Pn	06 34 07.4	-2.5
JOSM	Okushiri--Mats	10.73	255	P	Pn	06 34 15.2	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIO	Ouri	11.58	235	P	Pn	06 34 25.0	-2.3
HABR	Khabarovsk	12.80	289	*e*PN	Pn	06 34 40.0	-3.9
MAT	Matsushiro	14.71	236	P	Pn	06 35 18.2	+8.5
MJAR	Matsushiro Arr	14.71	236	P	Pn	06 35 09.2	-0.5
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,53nm,21.9s						
MJAR	Matsushiro Arr	14.71	236	P	Pn	06 35 09.2	-0.6
	comp=Z,0.5nm,0.3s,baz=31,slow=13,SNR=6.9						
MJAR				LR	LR	06 40 40.9	
	comp=Z,53nm,21.9s,baz=20,slow=36						
KLR	Kul'dur	15.04	291	*e*P	Pn	06 35 12.9	-1.1
MDJ	Mudanjiang	16.84	275	P	Pn	06 35 37.8	+0.9
MDJ				AMB	AMB		
	comp=Z,13nm,1.0s						
MDJ	Mudanjiang	16.84	275	*e*Pn	Pn	06 35 38.0	+1.0
	comp=Z,18nm,1.2s						
MDJ				*e*pP	pP	06 35 50.0	+0.7
KSRS	Korea Array	20.75	255	P	P	06 36 25.1	+3.7
	comp=Z,1.4nm,0.5s,baz=60,slow=11,SNR=6.2						
YAK	Yakutsk	21.25	328⇑	*e*P	P	06 36 22.7	-3.9
YAK				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.4						
JNU	Nakatsue	21.44	242	LR	LR	06 44 47.6	
	comp=Z,55nm,18.9s,MS3.0,baz=358,slow=36						
BILL	Bilibino	23.28	12	P	P	06 36 44.0	-4.0
BILL				*e*		06 40 27.7	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
BOD	Bodaibo	26.78	311	*e*P	P	06 37 20.8	+0.9
BOD				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.6						
TIXI	Tiksi	28.45	344⇑	*e*P	P	06 37 29.9	-4.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.3s,mb3.6						
TLY	Talaya	32.83	299	*e*P	P	06 38 13.3	-0.2
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
TLY				MLR	MLR		
	comp=Z,78nm,16.0s,MS3.5						
ZAK	Zakamensk	33.30	296	*e*P	P	06 38 14.2	-3.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.2s,mb4.9						
ZAK				pmax	pmax		
	comp=N,28nm,2.2s						
COLA	College	36.76	38⇑	*e*P	P	06 38 47.9	+0.7
INK	Inuvik	42.34	32	P	P	06 39 32.1	-1.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	42.34	32	P	P	06 39 32.1	-1.6
	comp=Z,1.1nm,0.8s,mb3.5,baz=258,slow=7.2,SNR=8.5						
MKAR	Makanchi Array	47.59	298	P	P	06 40 15.1	-0.5
MKAR				pP	pP	06 40 28.5	+0.2
MKAR				PcP	PcP	06 41 44.2	-0.5
MKAR	Makanchi Array	47.59	298	P	P	06 40 15.1	-0.5
MKAR				*PP	pP	06 40 28.5	+0.2
MKAR						06 41 44.2	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=N,2.0nm,0.7s						
MKAR	Makanchi Array	47.59	298	P	P	06 40 15.1	-0.5
	comp=N,1.1nm,0.7s,mb4.0,baz=66,slow=7.3,SNR=12						
MKAR				pP	pP	06 40 28.5	+0.2
	comp=N,2.1nm,0.7s,baz=67,slow=7.4,SNR=12						
MKAR				PcP	PcP	06 41 44.2	-0.5
	comp=N,0.4nm,0.7s,baz=41,slow=4.3,SNR=2.7						
KURK	Kurchatov	48.09	304⇓	*e*P	P	06 40 18.3	-1.1
YKA	Yellowknife Ar	51.56	36	P	P	06 40 44.6	-1.0
YKA				*PP	pP	06 40 58.0	-0.4
YKA				pmax	pmax		
	comp=N,1.0nm,0.7s						
YKA	Yellowknife Ar	51.56	36	P	P	06 40 44.6	-1.0
	comp=N,0.4nm,0.7s,mb3.4,baz=296,slow=7.0,SNR=6.0						
YKA				pP	pP	06 40 58.0	-0.4
	comp=N,0.6nm,0.7s,baz=297,slow=7.2,SNR=4.3						
RES	Resolute Bay	51.68	18	*e*P	P	06 40 47.5	+1.2
	comp=N,137nm,1.1s						
RES				*e*pP	pP	06 40 59.4	+0.3
RES	Resolute Bay	51.68	18	*e*P	P	06 40 47.5	+1.2
RES				*e**PP	pP	06 40 59.4	+0.3
RES				pmax	pmax		
	comp=Z,137nm,1.1s						
TAPN	Taplejung	54.39	274	*e*P	P	06 41 09.6	+2.7
	comp=Z,8.6nm,0.7s,mb4.8						
JIRN	Jiri	55.25	275	*e*P	P	06 41 15.6	+2.4
	comp=Z,13nm,0.8s,mb5.0						
ARU	Arti	55.87	318	*e*P	P	06 41 17.8	+0.6
ARU						06 43 19.9	
ARU				S	S	06 48 59.2	-1.8
ARU				SS	SS	06 52 42.4	-4.1
GKN	Gorkha	56.12	277	*e*P	P	06 41 21.5	+2.1
	comp=Z,23nm,0.8s,mb5.3						
KOLN	Koldanda	56.99	277	*e*P	P	06 41 28.1	+2.5
	comp=Z,18nm,0.8s,mb5.1						
PRGR	Permogore	58.30	328	*e*P	P	06 41 33.8	-0.4
PRGR				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
ARCES	ARCESS Array B	58.83	341	P	P	06 41 37.1	-0.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	58.83	341	P	P	06 41 37.0	-0.8
	comp=Z,3.1nm,0.8s,mb4.4,baz=31,slow=7.4,SNR=5.2						
JOF	Joensuu	62.30	334	*e*p	P	06 41 57.8	-3.7
	comp=Z,3.3nm,0.7s,mb4.6						
JOF	Joensuu	62.30	334	*e*P	P	06 41 57.8	-3.7
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
NVAR	Mina Array Bea	62.68	62	P	P	06 42 04.4	-0.1
	comp=Z,0.3nm,0.6s,mb3.6,baz=298,slow=5.7,SNR=5.4						
KAF	Kangasniemi	64.41	335	*e*p	P	06 42 24.1	+8.6
	comp=Z,5.5nm,0.7s,mb4.7						
KAF	Kangasniemi	64.41	335	*e*P	P	06 42 24.1	+8.6
KAF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
FINES	FINESS Array B	65.01	335	P	P	06 42 18.8	-0.6
FINES				pP	pP	06 42 31.8	-0.8
FINES	FINESS Array B	65.01	335	P	P	06 42 18.8	-0.6
FINES				*PP	pP	06 42 31.8	-0.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES				pmax	pmax		
	comp=N,3.0nm,0.6s						
FINES	FINESS Array B	65.01	335	P	P	06 42 18.8	-0.6
	comp=N,1.7nm,0.4s,mb4.4,baz=38,slow=7.8,SNR=19						
FINES				pP	pP	06 42 31.8	-0.8
	comp=N,2.5nm,0.6s,baz=39,slow=8.4,SNR=4.2						
PDAR	Pinedale Array	65.13	54	P	P	06 42 20.0	-0.5
	comp=N,0.2nm,0.3s,mb3.6,baz=312,slow=5.4,SNR=3.7						
PDAR				pP	pP	06 42 33.9	+0.1
	comp=N,1.0nm,0.9s,baz=270,slow=1.5,SNR=6.5						
WRA	Warramunga Arr	67.68	199	P	P	06 42 36.0	-0.9
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	67.68	199	P	P	06 42 36.0	-0.9
	comp=Z,0.5nm,0.7s,mb3.6,baz=17,slow=6.6,SNR=4.2						
NB2	NORSAR Subarra	69.21	341	P	P	06 42 46.6	+0.5
	comp=Z,1.0nm,0.6s,mb3.9,baz=27,slow=6.2						
NB2	NORSAR Subarra	69.21	341	P	P	06 42 46.6	+0.5
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NOA	NORSAR Array B	69.21	341	P	P	06 42 45.5	-0.6
NOA				*PP	pP	06 42 59.2	-0.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA				pmax	pmax		
	comp=N,2.0nm,0.6s						
NOA	NORSAR Array B	69.21	341	P	P	06 42 45.5	-0.6
	comp=N,1.9nm,0.7s,mb4.1,baz=28,slow=6.4,SNR=3.6						
NOA				pP	pP	06 42 59.1	-0.2
	comp=N,2.3nm,0.6s,baz=26,slow=6.2,SNR=4.0						
ASAR	Alice Springs	71.37	199	P	P	06 43 02.1	+2.5
ASAR				*PP	pP	06 43 15.3	+2.3
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,1.0nm,0.8s						
ASAR	Alice Springs	71.37	199	P	P	06 43 02.0	+2.4
	comp=N,0.8nm,0.8s,mb3.7,baz=11,slow=5.3,SNR=8.2						
ASAR				pP	pP	06 43 15.2	+2.3
	comp=N,0.8nm,0.8s,baz=18,slow=5.4,SNR=5.7						
AKASG	Malin Array Be	72.47	327	P	P	06 43 05.5	-0.5
AKASG				*PP	pP	06 43 18.9	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG				pmax	pmax		
	comp=N,4.0nm,0.6s						
AKASG	Malin Array Be	72.47	327	P	P	06 43 05.5	-0.5
	comp=N,0.6nm,0.3s,mb4.0,baz=34,slow=6.4,SNR=4.1						
AKASG				pP	pP	06 43 18.9	-0.6
	comp=N,3.7nm,0.6s,baz=32,slow=6.1,SNR=9.2						
TXAR	Lajitas Array	77.77	61	P	P	06 43 36.6	-0.3
TXAR				*PP	pP	06 43 50.1	-0.3
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR				pmax	pmax		
	comp=N,2.0nm,0.6s						
TXAR	Lajitas Array	77.77	61	P	P	06 43 36.5	-0.4
	comp=N,0.7nm,0.6s,mb3.8,baz=304,slow=4.7,SNR=13						
TXAR				pP	pP	06 43 50.0	-0.4
	comp=N,1.9nm,0.6s,baz=306,slow=3.8,SNR=15						

IDC 17 06:54:05.0±3.5**,618S**×**15485E,h0**^{km}**,mb3.3**/2**,mb1 3.6**/2**, mb1mx3.4**/11**,mbtmp3.3**/2**,Error ellipse: s-maj=171.7km s-min=49.3km az=127.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.17	234	P	P	06 59 23.9	+0.7
	0.4nm,0.4s,baz=59,slow=9.4,SNR=14						
ASAR	Alice Springs	26.61	227	P	P	06 59 44.6	-0.7
	0.2nm,0.6s,baz=59,slow=8.9,SNR=5.0						
TORD	Torodi Ar. Bea	152.66	287	PKPbc	PKPbc	07 14 04.7	0.0
	0.3nm,0.8s,baz=89,slow=2.5,SNR=2.8						

CASC 17 07:01:01.9±1.4**,960N**×**8287W,h13**^{km}±9^{km}**,MD3.5,2C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNI	Changuinola	0.39	117	*e*S	Sg	07 01 15.1	+0.2
CNI				⇑*i*P		07 01 09.6	
BAR1		0.56	231⇓	*e*P	Pg	07 01 12.7	-0.2
BAR1				*e*S	Sg	07 01 20.7	+0.3
URSC	Urasca	0.93	285	*e*P	Pg	07 01 18.6	-1.3
URSC				*e*S	Sg	07 01 31.8	-0.3
LCR2	La Lucha 2	1.13	277	*e*P	Pb	07 01 22.2	-1.1
LCR2				*e*S	Sb	07 01 37.4	-0.6
LAJ	Bijagual	1.27	282	*e*P	Pn	07 01 31.6	+6.3
LAJ				*e*S	Sb	07 01 53.7	+12
QCR	Quepos	1.29	263	*e*P	Pn	07 01 25.1	-0.6
QCR				*e*S	Sb	07 01 42.7	0.0
PRS1	Puriscal	1.48	285	*e*P	Pn	07 01 28.5	+0.3
CGA2	Cerro Gallo 2	1.63	285	*e*P	Pn	07 01 31.1	+0.7
CGA2				*e*S	Sn	07 01 51.7	+0.4
PTP	Ponta Puerca	18.80	61⇑	*i*P		07 01 26.7	

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*IDC **17** 07:10:13.7±1.6,656N×9261E,h0^{km},mb3.4/4,mb1 3.5/4, mb1mx3.4/20,mbtmp3.4/4,Error ellipse: s-maj=95.3km s-min=24.7km az=49.0*

*ISCJB **17** 07:10:16.4±1.4,60N±03×922E±04,h33^{km},mb3.9/7,Error ellipse: s-maj=72.2km s-min=17.3km az=143.3*

ISC 17 07:10:18.9±1.4**,61N**±03×**923E**±04**,h35**^{km}**,n9,**σ**1**^{s}**21**/8**, mb3.9**/7**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ODAN	Odare	21.14	348	*e*P	P	07 15 08.3	+7.4
	8.0nm,0.6s,mb4.2						
TAPN	Taplejung	21.55	349	*e*P	P	07 15 00.8	-4.5
	12nm,0.7s,mb4.4						
JIRN	Jiri	22.19	345	*e*P	P	07 15 11.9	-0.2
	9.0nm,0.5s,mb4.4						
GKN	Gorkha	22.94	342	*e*P	P	07 15 22.0	+1.9
KOLN	Koldanda	23.06	340	*e*P	pP	07 15 33.6	+2.9
	13nm,0.7s						
MKAR	Makanchi Array	41.42	350	P	P	07 17 59.0	-2.9
	0.3nm,0.5s,mb3.2,baz=174,slow=8.9,SNR=6.3						
WRA	Warramunga Arr	48.78	123	P	P	07 19 00.5	-0.3
	0.2nm,0.4s,mb3.5,baz=304,slow=8.7,SNR=6.5						
ASAR	Alice Springs	50.24	128	P	P	07 19 12.5	+0.6
	0.2nm,0.5s,mb3.5,baz=300,slow=7.6,SNR=4.4						
BRTR	Keskin Array B	62.21	312	P	P	07 20 37.0	-0.2
	0.5nm,0.5s,mb3.9,baz=109,slow=7.8,SNR=3.9						

WEL 17 07:15:20.9±0.4**,4130S**×**17257E,h190**^{km}±2^{km}**,ML3.7**/12**, 9C-1D,Error ellipse: s-maj=3.0km s-min=2.4km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
QRZ	Quartz Range	0.48	357	⇑PN	Pn	07 15 46.7	-0.1
QRZ				SN	Sn	07 16 05.9	-0.8
THZ	Tophouse	0.53	151	⇑PN	Pn	07 15 47.3	+0.3
THZ				SN	Sn	07 16 06.8	-0.4
NNZ	Nelson	0.62	82	⇑PN	Pn	07 15 47.2	-0.2
NNZ				SN	Sn	07 16 07.4	-0.3
DSZ	Denniston Nort	0.72	232	⇑PN	Pn	07 15 47.6	-0.2
DSZ				SN	Sn	07 16 07.3	-1.5
TUWZ	Tuamarina	1.04	97	⇑PN	Pn	07 15 50.1	+0.1
BSWZ	Blackbirch Sta	1.07	113	⇑PN	Pn	07 15 50.2	+0.1
DUWZ	D'Urville Isla	1.14	64	PN	Pn	07 15 50.6	0.0
KHZ	Kahutara	1.33	147	⇑PN	Pn	07 15 52.4	+0.2
LTZ	Lake Taylor	1.50	188	⇓PN	Pn	07 15 53.8	+0.1
LTZ				SN	Sn	07 16 17.3	-1.9
MRW	Makara Radio	1.61	88	PN	Pn	07 15 54.4	-0.3
SNZO	South Karori	1.61	91	⇑PN	Pn	07 15 54.3	-0.4
WEL	Wellington	1.66	90	PN	Pn	07 15 54.9	-0.3
BHW	Baring Head	1.74	94	PN	Pn	07 15 55.6	-0.4
KIW	Kapiti Island	1.82	77	PN	Pn	07 15 56.5	-0.4
CAW	Cannon Point	1.90	85	PN	Pn	07 15 57.1	-0.5
MSWZ	Moikau Station	2.02	94	PN	Pn	07 15 58.5	-0.4
MTW	Mount Morrison	2.22	87	⇑PN	Pn	07 16 00.5	-0.5
WVZ	Waitaha Valley	2.23	217	PN	Pn	07 15 59.9	-1.2
MRZ	Mangatainoka R	2.37	75	PN	Pn	07 16 01.6	-1.1
MQZ	McQueen's Vall	2.40	179	PN	Pn	07 16 01.8	-1.2
TIWZ	Tintock	2.56	79	PN	Pn	07 16 04.3	-0.6
RPZ	Rata Peaks	2.66	204	PN	Pn	07 16 04.6	-1.3
TSZ	Takapari Road	2.87	65	PN	Pn	07 16 07.2	-1.2
FOZ	Fox Glacier	3.11	222	PN	Pn	07 16 08.4	-2.8
LBZ	Lake Benmore	3.54	209	PN	Pn	07 16 15.0	-1.6
BKZ	Black Stump Fm	3.69	56	PN	Pn	07 16 16.2	-2.2
JCZ	Jackson Bay	3.94	224	PN	Pn	07 16 19.5	-2.0
ODZ	Otahua Downs	4.00	200	PN	Pn	07 16 21.2	-1.0
WKZ	Wanaka	4.38	215	PN	Pn	07 16 24.5	-2.5
EAZ	Earnscleugh	4.59	210	PN	Pn	07 16 27.2	-2.5
WHZ	Wether Hill Ro	5.68	215	PN	Pn	07 16 41.3	-2.5

MAN 17 07:48:34,994N×**12619E,h17**^{km}**,mb4.1,ML2.9,MS2.6, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.70	257⇓	*e*P	Pg	07 48 48.5	+0.7
SCPH				*e*S	Sg	07 49 01.6	+4.3
PLP	Palo	1.70	316	*e*P	Pn	07 49 02.5	-0.4
PLP				*e*S	Sn	07 49 28.2	+4.0
BESP	Borongan	1.80	336	*e*P	Pn	07 49 05.8	+1.5

KRSC 17 08:00:18.9±1.0**,5272N**×**16016E,h26**^{km}±26^{km}**,ML3.9,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.39	348	*i* P	Pb	08 00 27.8	+0.5
SPN				*i* S	Sb	08 00 34.1	+1.1
NLC	Nalytchevo	0.67	313	*e*P	Pb	08 00 32.0	+0.1
NLC				*i* S	Sb	08 00 41.7	+0.9
PET	Petropavlovsk	0.96	289	*e*P	Pn	08 00 36.7	0.0
PET				*i* S	Sb	08 00 49.7	+0.5
AVH	Avacha	1.02	303	*e*P	Pn	08 00 37.8	+0.3
AVH				*i* S	Sb	08 00 52.0	+1.2
RUS	Russkaya	1.04	255	*e*P	Pn	08 00 38.1	+0.3
RUS				*i* S	Sn	08 00 51.6	+0.1
GRL	Gorelyy	1.28	263	*e*P	Pn	08 00 42.1	+1.0
GRL				*i* S	Sn	08 00 59.0	+1.6
KII	Karymskiy	1.39	342	*e*P	Pn	08 00 43.2	+0.7
KII				*i* S	Sn	08 01 00.8	+0.9
GNL	Ganaly	1.65	307	*e*P	Pn	08 00 47.8	+1.6
GNL				*i* S	Sn	08 01 09.0	+2.5
MIPR	Malaya Ipel'ka	2.13	259	*e*P	Pn	08 00 54.4	+1.7
MIPR				*i* S	Sn	08 01 20.4	+2.2
TUMR	Tumrok	2.57	360	*e*P	Pn	08 01 00.1	+1.4
TUMR				*i* S	Sn	08 01 30.4	+1.3
KMNR	Kamenistaya	3.04	1	P	Pn	08 01 06.8	+1.5
KBTR	Krutoberegovo	3.82	23	*e*P	Pn	08 01 17.7	+1.7
KBTR				*i* S	Sn	08 02 01.1	+1.1

IDC 17 08:00:43.0±2.2**,063S**×**12805E,h0**^{km}**,mb3.3**/3**,mb1 3.6**/3**, mb1mx3.5**/14**,mbtmp3.4**/3**,MS3.1**/1**,Ms1 3.1**/1**, ms1mx2.7**/16**,Error ellipse: s-maj=170.3km s-min=26.6km az=67.0,Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	10.47	204	LR	LR	08 07 41.0	
	comp=Z,113nm,19.7s,baz=291,slow=40						
WRA	Warramunga Arr	20.16	163	P	P	08 05 19.2	+0.2
	0.5nm,0.5s,baz=342,slow=12,SNR=9.4						
ASAR	Alice Springs	23.59	166	P	P	08 05 55.6	-0.2
	0.8nm,0.6s,baz=342,slow=11,SNR=9.1						
MKAR	Makanchi Array	61.88	326	P	P	08 11 04.2	+0.1
	0.2nm,0.4s,baz=108,slow=8.4,SNR=5.1						

MAN 17 08:01:46,979N×**12613E,h14**^{km}**,mb4.2,ML3.1,MS2.8, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.64	270⇓	*e*P	Pg	08 01 59.0	+0.5
SCPH				*e*S	Sg	08 02 11.6	+4.7
PLP	Palo	1.78	320	*e*P	Pn	08 02 16.6	+0.2
PLP				*e*S	Sn	08 02 40.3	+1.5

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*IDC **17** 08:04:10.1±11.0,839N×12601E,h0^{km},mb4.1/4, mb1 4.2/4,mb1mx3.7/17,mbtmp4.0/4,Error ellipse: s-maj=409.9km s-min=79.0km az=15.0*

*ISCJB **17** 08:04:21.6±3.0,96N±01×1264E±03,h55^{km}±23^{km}, mb4.0/4,Error ellipse: s-maj=42.0km s-min=17.6km az=174.7*

*MAN **17** 08:04:30,985N×12554E,h45^{km},mb4.4,ML3.2,MS3.1*

ISC 17 08:04:19.6±3.8**,97N**±01×**12671E**±010**,h28**^{km}±28^{km}**,n9,** σ**1**^{s}**31**/11**,mb4.0**/4**,1D,Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	1.21	275⇓	*e*P	Pn	08 04 38.2	-2.4
SCPH				*e*S	Sn	08 04 57.9	+1.9
PLP	Palo	2.25	311	*e*P	Pn	08 04 54.6	-0.5
PLP				*e*S	Sn	08 05 20.9	-1.1
CNP	Catarman	3.46	325	*e*P	Pn	08 05 13.3	+1.6
PAGZ	Pagadian	3.75	241	*e*P	Pn	08 05 15.5	-0.2
RCP	Roxas	4.32	296	*e*P	Pn	08 05 24.4	+0.9
MKAR	Makanchi Array	52.76	323	P	P	08 13 31.3	-0.8
	0.4nm,0.6s,mb3.5,baz=122,slow=7.9,SNR=5.4						
ARCES	ARCESS Array B	84.90	340	P	P	08 16 52.1	+0.5
	2.4nm,0.8s,mb4.4,baz=58,slow=8.6,SNR=3.5						
FINES	FINESS Array B	86.62	332	P	P	08 16 58.5	-1.8
	3.1nm,1.1s,mb4.5,baz=72,slow=4.5,SNR=4.3						
YKA	Yellowknife Ar	94.12	24	P	P	08 17 36.9	+1.5
	0.2nm,0.7s,mb3.7,baz=300,slow=4.8,SNR=5.6						

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*ISCJB **17** 09:10:05.6±0.7,3758N±003×2173E±005,h12^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=4.6km az=164.6*

*CSEM **17** 09:10:06.6±0.1,3755N×2174E,h10^{km},MD3.2,Error ellipse: s-maj=2.6km s-min=1.7km az=58.0*

*THE **17** 09:10:06.3,3756N×2174E,h11^{km},ML2.9*

*ATH **17** 09:10:06.6,3756N×2177E,h17^{km}±2^{km},MD3.2/4*

*NEIC **17** 09:10:06.6,3756N×2177E,h16^{km},MD3.2(ATH),After ATH.*

ISC 17 09:10:06.6±0.6**,3756N**±003×**2174E**±005**,h10**^{km}±8^{km}**,n12,** σ**0**^{s}**80**/20**,Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.41	158	*e*PB	Pg	09 10 14.6	0.0
ITM				*e*SB	Sg	09 10 20.7	+0.7
RLS	Riolos of Patr	0.54	337	*e*PN	Pg	09 10 16.6	-0.6
RLS				*e*SN	Sg	09 10 25.5	+1.2
VLX	Vlachokerasia	0.54	110	*e*Pg	Pg	09 10 16.6	-0.5
VLX				*e*Sg	Sg	09 10 25.3	+1.0
PYL	PYLOS	0.66	180	*e*Pg	Pg	09 10 18.6	-0.8
PYL				*e*Sg	Sg	09 10 28.4	+0.3
SELA	Sela	0.72	10	*e*Pg	Pg	09 10 19.6	-1.0
SELA				*e*Sg	Sg	09 10 30.8	+0.6
KFL	Anninata	0.93	306	*e*Pg	Pg	09 10 24.5	-0.1
LTK	Loutraki	1.08	64	*e*Pg	Pg	09 10 26.6	-0.7
LTK				*e*Sg	Sg	09 10 41.3	0.0
LTK	Loutraki	1.08	64	*e*Pg	Pg	09 10 26.5	-0.8
LTK				*e*Sg	Sg	09 10 41.3	0.0
VLS	Valsamata	1.10	304	*e*PN	Pn	09 10 28.1	+0.1
DID	Didima	1.19	92	*e*Pg	Pg	09 10 27.2	-2.3
DID				*e*Sg	Sg	09 10 45.8	+0.8
VLI	Veliai	1.27	131	*e*PN	Pn	09 10 30.5	+0.2
EVR	Evrytania	1.36	2	*e*PN	Pn	09 10 32.0	+0.5

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*TIR **17** 09:55:16.4±3.2,4095N×2029E,h16^{km}±142^{km},ML2.7*

*THE **17** 09:55:16.2,4091N×2033E,h14^{km},ML3.0*

*SKO **17** 09:55:17.5,4097N×2035E,h9^{km},M2.1,ML2.3*

*ISCJB **17** 09:55:18.7±0.5,4102N±003×2042E±003,h10^{km},Error ellipse: s-maj=4.8km s-min=2.8km az=38.4*

*PDG **17** 09:55:18.1±0.1,4089N×1997E,h4^{km},ML2.9/10,Error ellipse: s-maj=0.8km s-min=1.4km az=0.0*

*NEIC **17** 09:55:18.1,4089N×1997E,h4^{km},ML3.0(THE), ML2.9(PDG),After PDG.*

*CSEM **17** 09:55:20.0±0.1,4099N×2066E,h28^{km}±1^{km},ML2.3,Error ellipse: s-maj=3.9km s-min=3.3km az=51.0*

ISC 17 09:55:19.1±0.5**,4099N**±003×**2042E**±004**,h10**^{km}**,n33,** σ**1**^{s}**37**/62**,5C-6D,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.31	68	*e*Pg	Pg	09 55 24.1	-1.2
OHR				*e*Sg	Sg	09 55 30.5	+1.0
OHR				*e*Lg		09 55 30.6	
	comp=N,381nm,0.3s						
OHR				*e*Lg		09 55 30.6	
	comp=E,446nm,0.5s						
OHR	Ohrid	0.31	68	*i* PG	Pg	09 55 24.1	-1.2
OHR				*i* SG	Sg	09 55 30.3	+0.8
OHR	Ohrid	0.31	68	*e*Pg	Pg	09 55 24.1	-1.2
OHR				*e*Sg	Sg	09 55 30.3	+0.8
KBN	Korca	0.46	142	*i* PG	Pg	09 55 27.2	-0.9
KBN				*i* SG	Sg	09 55 35.8	+1.6
TIR	Tirane	0.55	311	*e*Pg	Pg	09 55 26.7	-3.0
TIR				*e*Sg	Sg	09 55 35.8	-1.1
TIR	Tirane	0.55	311	*i* Pg	Pg	09 55 26.8	-2.9
TIR				*i* Sg	Sg	09 55 35.8	-1.1
BIA	Bitola	0.69	87	*e*Pg	Pg	09 55 30.7	-1.7
BIA				*e*Sg	Sg	09 55 41.8	+0.5
BIA	Bitola	0.69	87	*e*Pg	Pg	09 55 30.8	-1.6
BIA				*e*Sg	Sg	09 55 41.8	+0.5
BIA				*e*Lg		09 55 41.9	
	comp=E,47nm,0.4s						
BIA				*e*Lg		09 55 42.0	
	comp=N,54nm,0.4s						
KRUS	Krusevo	0.73	59	*e*Pg	Pg	09 55 31.9	-1.4
KRUS				*e*Sg	Sg	09 55 43.0	+0.2
KRUS	Krusevo	0.73	59	*e*Pg	Pg	09 55 31.8	-1.4
KRUS				*e*Sg	Sg	09 55 42.9	+0.1
PUK	Puka	1.12	340	*i* PG	Pg	09 55 37.8	-2.8
PUK				*i* SG	Sg	09 55 55.2	0.0
SRN	Sarande	1.16	196	*i* PN	Pn	09 55 42.9	+1.6
SRN				*i* SN	Sn	09 56 00.5	+3.4
ULC	Ulcinj	1.31	318⇓	*i*Pg	Pn	09 55 40.1	-3.3
ULC				*e*Sg	Sn	09 55 58.7	-2.2
ULC	Ulcinj	1.31	318	*i* PG	Pn	09 55 40.1	-3.3
ULC				*i* SG	Sn	09 55 58.7	-2.2
PVY	Plav	1.64	348	*e*Pn	Pg	09 55 49.0	-1.4
PVY				*e*Sn	Sg	09 56 14.0	+2.3
PVY	Plav	1.64	348	*i* PG	Pg	09 55 49.0	-1.4
PDG	Podgorica	1.68	329	*i* PG	Pn	09 55 47.9	-0.6
PDG				*i* SG	Sg	09 56 12.7	-0.3
PDG	Podgorica	1.68	329⇓	*i*Pn	Pn	09 55 47.9	-0.6
PDG				*e*Sn	Sg	09 56 12.7	-0.3
TTG	Podgorica	1.68	329⇓	*i*Pn	Pn	09 55 47.9	-0.6
TTG				*e*Sn	Sg	09 56 12.7	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUM	Brajici-Budva	1.73	319	⇓iPn	Pn	09 55 48.0	-1.2
BUM				eSn	Sn	09 56 12.3	+0.9
BUM	Brajici-Budva	1.73	319	i PG	Pn	09 55 48.0	-1.2
BUM				i SG	Sn	09 56 12.3	+0.9
BEY	Berane	1.92	349	i PG	Pn	09 55 53.4	+1.6
BEY				i SG	Sg	09 56 20.9	+0.2
BEY	Berane	1.92	349	⇑iPn	Pn	09 55 53.4	+1.6
BEY				eSn	Sg	09 56 20.9	+0.2
IVA	Berane	1.92	349	⇑iPn	Pn	09 55 53.4	+1.6
IVA				eSn	Sg	09 56 20.9	+0.2
HCY	Herceg Novi	2.04	316	⇓iPn	Pn	09 55 52.4	-1.1
HCY				eSn	Sn	09 56 19.5	+0.5
HCY	Herceg Novi	2.04	316	i PG	Pn	09 55 52.4	-1.1
HCY				i SG	Sn	09 56 19.5	+0.5
NKY	Niksic	2.10	330	⇑iPn	Pn	09 55 54.2	-0.1
NKY				eSn	Sn	09 56 22.8	+2.3
BRY	Bratogost	2.36	324	⇓iPn	Pn	09 55 57.2	-0.7
BRY				eSn	Sn	09 56 28.3	+1.4
PLE	Pljevlja	2.46	342	⇑iPn	Pn	09 55 59.7	+0.5
PLE				eSn	Sn	09 56 32.5	+3.3
UPM	Unac-Piva	2.48	334	⇑iPn	Pn	09 55 59.8	+0.3
UPM				eSn	Sn	09 56 32.2	+2.5
GRUS	Gruza	2.90	4	Pn	Pn	09 56 00.9	-4.4
BBLS	Bajina Basta -	2.97	346	Pn	Pn	09 56 07.2	+1.0
DIVS	Divcibare	3.12	354	Pn	Pn	09 56 07.8	-0.5

IDC 17 09:57:35.3±4.8**,2396S**×**6632W,h148**km±60km**,mb3.8**/4**, mb1 3.7**/6**,mb1mx3.4**/19**,mbtmp3.6**/6**,Error ellipse: s-maj=84.5km s-min=28.2km az=95.0,Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	7.82	347	P	Pn	09 59 27.6	+1.2
	0.3nm,0.3s,baz=152,slow=8.1,SNR=9.3						
LPAZ				S	Sn	10 00 54.2	+0.5
	0.1nm,0.3s,baz=120,slow=20,SNR=2.9						
PLCA	Paso Flores	17.09	191	P	Pn	10 01 24.9	-0.4
	0.1nm,0.3s,baz=12,slow=11,SNR=4.7						
TORD	Torodi Ar. Bea	75.97	69	P	P	10 09 06.8	+0.3
	1.0nm,0.5s,baz=235,slow=5.1,SNR=21						
BOSA	Boshof	80.19	117	P	P	10 09 29.3	-0.3
	0.9nm,0.5s,baz=268,slow=7.2,SNR=3.8						
LBTB	Lobatse	81.83	114	P	P	10 09 38.4	0.0
	1.1nm,0.4s,baz=275,slow=6.6,SNR=4.5						
MATP	Matopo	86.10	110	P	P	10 10 00.6	+0.5
	3.3nm,1.0s,baz=270,slow=5.1,SNR=4.3						
MKAR	Makanchi Array	146.10	40	PKPbc	PKPbc	10 16 57.1	-0.7
	0.1nm,0.3s,baz=300,slow=3.9,SNR=4.6						

IDC 17 10:00:25.2±5.0**,2223S**×**6821W,h0**km**,mb4.1**/1**, mb1 4.0**/2**,mb1mx3.5**/16**,mbtmp3.9**/2**,Error ellipse: s-maj=149.2km s-min=53.6km az=67.0,Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	5.91	1	Pn	Pn	10 01 54.6	+0.6
	0.9nm,0.3s,baz=199,slow=7.7,SNR=16						
TORD	Torodi Ar. Bea	76.98	70	P	P	10 12 20.4	+0.1
	0.9nm,0.5s,baz=260,slow=5.2,SNR=12						
MKAR	Makanchi Array	145.82	37	PKPbc	PKPbc	10 20 05.5	-0.8
	0.4nm,0.4s,baz=324,slow=3.8,SNR=8.1						

*IDC **17** 10:04:55.8±6.2,2996N×80.19E,h0km,mb3.3/2,mb1 3.5/3, mb1mx3.2/22,mbtmp3.4/3,ML3.3/1,Error ellipse: s-maj=177.2km s-min=38.1km az=88.0*
*ISCJB **17** 10:04:56.5±0.7,3039N±005×7954E±005,h13km±7km, mb3.0/2,Error ellipse: s-maj=8.7km s-min=5.4km az=36.8*
*NDI **17** 10:04:56.7±4.3,3044N×7966E,h16km±12km,ML3.1*
ISC 17 10:04:56.9±0.7**,3043N**±005×**7961E**±005**,h18**km±5km**,n14,** σ1ˢ55/23**,mb3.0**/2**,Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOSI	Joshimath	0.14	339	eP	Pg	10 05 00.4	-0.6
JOSI				eS	Sg	10 05 03.9	+0.1
JOSI				AML	AML	10 05 09.6	
	comp=E,5μm,0.8s						
JOSI				AML	AML	10 05 10.8	
	comp=N,4μm,0.5s						
PTH	Pithoragarh	1.02	149	eP	Pb	10 05 17.9	+1.8
PTH				eS	Sb	10 05 29.9	+0.8
LGTI	Lohaghat	1.12	150	eP	Pn	10 05 15.5	-2.2
LGTI				eS	Sb	10 05 29.7	-2.3
DDI	Dehra Dun	1.35	266	eP	Pn	10 05 18.2	-2.7
DDI				eS	Sn	10 05 35.2	-3.2
SMLA	Simla	2.22	289	eP	Pn	10 05 32.9	+0.1
SMLA				eS	Sn	10 06 00.6	+0.8
SDNR	Sundarnagar	2.51	296	eP	Pn	10 05 40.0	+3.1
SDNR				ex	x	10 06 14.0	
NDI	New Delhi	2.72	231	eP	Pn	10 05 40.0	+0.3
NDI				eS	Sn	10 06 13.5	+1.4
SONA	Sohna	3.10	226	eP	Pn	10 05 45.8	+0.9
SONA				eS	Sn	10 06 23.3	+1.8
SONA				AML	AML	10 06 28.4	
	comp=E,87nm,0.3s						
SONA				AML	AML	10 06 29.0	
	comp=N,42nm,0.3s						
KUDL	Kundal	3.55	231	eP	Pn	10 05 51.2	0.0
KUDL				eS	Sn	10 06 31.4	-1.4
KUDL				AML	AML	10 06 44.6	
	comp=N,64nm,0.2s						
KUDL				AML	AML	10 06 44.7	
	comp=E,60nm,0.2s						
THN	Thein Dam	3.89	302	eP	Pn	10 05 55.5	-0.3
THN				eS	Sn	10 06 38.7	-2.3
KHET	Khetri	4.07	236	eP	Pn	10 05 58.7	+0.4
KHET				ex	x	10 06 50.7	
KHET				AML	AML	10 07 02.3	
	comp=E,36nm,0.3s						
KHET				AML	AML	10 07 02.5	
	comp=N,41nm,0.3s						
MKAR	Makanchi Array	16.47	6	Pn	Pn	10 08 50.0	+3.0
	comp=N,0.1nm,0.3s,baz=185,slow=12,SNR=12						
SONM	Songino Array	26.89	42	P	P	10 10 38.9	+2.2
	comp=N,0.4nm,0.6s,mb3.1,baz=236,slow=10.0,SNR=4.9						
WRA	Warramunga Arr	72.64	126	P	P	10 16 21.4	-2.3
	comp=N,0.1nm,0.6s,mb2.9,baz=320,slow=6.6,SNR=3.7						

PGC 17 10:23:56.8±2.3**,6151N**×**14020W,h1**km**,ML2.1**/3**,166km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada,Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HYT	Haines Junctio	1.48	117	Trac			
HYT	Haines Junctio	1.48	117	P	Pn	10 24 22.9	-1.6
HYT				S	Sg	10 24 42.6	-1.6
HYT	Haines Junctio	1.48	117	Trac			
HYT	Haines Junctio	1.48	117	P	Pn	10 24 22.9	-1.5
HYT				Sg	Sg	10 24 42.6	-1.6
DAWY	Dawson	2.59	8	Trac			
DAWY	Dawson	2.59	8	Pn	Pn	10 24 40.0	+0.2
DAWY				Sg	Sg	10 25 17.1	-2.8
DAWY	Dawson	2.59	8	Trac			
DAWY	Dawson	2.59	8	Pn	Pn	10 24 40.0	+0.2
DAWY				Sg	Sg	10 25 18.6	-1.4
WHY	Whitehorse	2.72	106	Trac			
WHY	Whitehorse	2.72	106	Pn	Pn	10 24 41.1	-0.5
WHY				Pg	Pg	10 24 45.7	-3.2
WHY				Sg	Sg	10 25 21.3	-2.8
WHY	Whitehorse	2.72	106	Trac			
WHY	Whitehorse	2.72	106	Pn	Pn	10 24 41.1	-0.5
WHY				Pg	Pg	10 24 45.6	-3.3
WHY				Sg	Sg	10 25 21.4	-2.8

MAN 17 10:51:56,971N×**12601E,h8**km**,mb4.3,ML3.1,MS2.9,1C, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.52	278	⇑eP	Pg	10 52 07.2	+1.2
SCPH				eS	Sg	10 52 20.1	+7.3

IDC 17 11:24:01.4±2.0**,062S**×**12802E,h0**km**,mb3.2**/3**,mb1 3.4**/3**, mb1mx3.3**/15**,mbtmp3.3**/3**,Error ellipse: s-maj=131.4km s-min=26.0km az=67.0,Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.18	163	P	P	11 28 37.3	-0.4
	0.5nm,1.0s,baz=342,slow=12,SNR=4.5						
ASAR	Alice Springs	23.61	166	P	P	11 29 14.6	+0.1
	0.4nm,0.7s,baz=341,slow=8.4,SNR=9.6						
MKAR	Makanchi Array	61.85	326	P	P	11 34 22.6	+0.1
	0.7nm,0.6s,baz=120,slow=8.6,SNR=6.4						

CASC 17 11:34:09.3±1.1**,932N**×**8372W,h25**km±4km**,MD3.6,6C-2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUS	Buena Vista	0.24	350	⇑iP	Pb	11 34 16.9	+1.3
BUS				eS	Sb	11 34 22.5	+2.7
BAR1		0.41	100	⇑iP	Pb	11 34 18.0	0.0
BAR1				eS	Sb	11 34 24.1	+0.2
QCR	Quepos	0.46	284	⇓eP	Pb	11 34 18.8	-0.1
QCR				eS	Sb	11 34 25.8	+0.6
LCR2	La Lucha 2	0.51	326	⇑iP	Pb	11 34 20.1	+0.4
LCR2				eS	Sb	11 34 27.4	+0.6
URSC	Urasca	0.52	353	⇑iP	Pb	11 34 20.3	+0.4
URSC				eS	Sb	11 34 28.3	+1.2
LAJ	Bijagual	0.68	324	eP	Pb	11 34 26.6	+4.1
LAJ				eS	Sb	11 34 39.9	+8.4
PRS1	Puriscal	0.89	319	⇑eP	Pb	11 34 25.3	-0.8
PRS1				eS	Sb	11 34 37.0	-0.5
CGA2	Cerro Gallo 2	1.02	313	⇓eP	Pn	11 34 27.9	-0.1
CGA2				eS	Sb	11 34 41.7	+0.5
CNI	Changuinola	1.19	85	⇑iP	Pn	11 34 30.6	+0.3
CNI				eS	Sn	11 34 46.1	+0.5

*NIED **17** 11:40:00,4100N×14200E,h53km,Mw4.1 Best double couple: M₀1.65000×10^15 NP1:φs174.00000°,δ23.00000°, λ59.00000°. NP2:φs28.00000°,δ70.00000°,λ103.00000°.*
*JMA **17** 11:40:22.9±0.1,4098N×14200E,h57km±2km,M4.0 Broadband fault plane solution: P waves. NP1: φs184.00000°,δ9.00000°,λ67.00000°. NP2:φs27.00000°, δ82.00000°,λ93.00000°. Principal axes: T Plg53.0000°, Azm301.0000°; N Plg3.0000°, Azm207.0000°; P Plg37.0000°, Azm114.0000°;*
JMA Felt II J1.
*ISCJB **17** 11:40:22.4±0.4,4099N±003×14195E±005,h71km±3km, mb4.2/24 Error ellipse: s-maj=6.7km s-min=4.2km az=26.6*
*MOS **17** 11:40:22.4±1.2,4096N×14201E,h75km,mb4.4/10,Error ellipse: s-maj=15.0km s-min=8.1km az=83.4*
*NEIC **17** 11:40:24.8±0.7,4102N×14195E,h78km±8km,mb4.8/3, MW4.1(NIED),Error ellipse: s-maj=12.4km s-min=7.7km az=127.0*
NEIC Recorded [2 JMA] in Aomori and Iwate Prefectures, Honshu. Recorded [1 JMA] in southwestern Hokkaido.
*BJI **17** 11:40:24.7,4129N×14227E,h102km,mB5.0,mb4.6*
*IDC **17** 11:40:24.7±1.8,4096N×14192E,h79km±15km,mb3.7/12, mb1 3.9/15,mb1mx3.7/24,mbtmp3.7/15,MS3.1/4, Ms1 3.1/4,ms1mx2.9/42,Error ellipse: s-maj=18.7km s-min=11.2km az=110.0*
ISC 17 11:40:23.4±0.4**,4100N**±003×**14195E**±005**,h63**km±3km**, n66,**σ0ˢ96/80**,mb4.3**/24**,3C-8D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTM	Tenmabayashi	0.70	253	⇓P	Pn	11 40 37.5	-0.2
JTM				S	Sn	11 40 47.8	-0.5
JANG	Nango	0.71	208	⇓P	Pn	11 40 37.0	-0.8
JANG				S	Sn	11 40 46.9	-1.6
JOT	Ohata	0.78	300	⇓P	Pn	11 40 38.4	-0.3
JOT				eS	Sn	11 40 49.9	-0.1
JKB	Kayabe	1.12	322	⇓P	Pn	11 40 43.0	-0.1
JKB				eS	Sn	11 40 57.4	-0.4
JSR	Shiriuchi	1.27	295	⇓P	Pn	11 40 45.2	+0.2
JSR				eS	Sn	11 41 00.9	-0.3
JAH	Hinai	1.29	231	⇓P	Pn	11 40 45.1	-0.1
JAH				eS	Sn	11 41 02.0	+0.4
ERM	Erimo	1.36	41	ePn	Pn	11 40 47.3	+1.1
ERM				eSn	Sn	11 41 04.2	+0.8
JEM	Erimo	1.36	41	P	Pn	11 40 46.5	+0.3
JNBK	Urakawa-nobuka	1.41	25	P	Pn	11 40 47.1	+0.2
JIW	Iwasaki	1.53	255	P	Pn	11 40 48.5	0.0
JOM	Ohasama	1.61	198	⇑P	Pn	11 40 49.2	-0.3
JOM				eS	Sn	11 41 08.3	-0.9
JNB	Noboribetsu	1.62	335	⇓P	Pn	11 40 49.1	-0.6
JNB				eS	Sn	11 41 09.2	-0.3
JYM2	Yakumo 2	1.63	314	⇓P	Pn	11 40 50.2	+0.4
ASAJ	Asahikawa	3.15	9	P	Pn	11 41 11.6	+1.1
ASAJ				S	Sn	11 41 50.1	+3.2
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,13nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,216nm,18.5s						
ASAJ	Asahikawa	3.15	9	P	Pn	11 41 11.6	+1.1
	comp=Z,12nm,0.3s,baz=214,slow=9.4,SNR=108						
ASAJ				S	Sn	11 41 50.0	+3.2
	comp=Z,13nm,0.3s,baz=350,slow=31,SNR=9.8						
ASAJ				LR	LR	11 42 52.3	
	comp=Z,216nm,18.5s,baz=173,slow=46						
YUK	Yuzh-Kuril'sk	4.19	42	eP	Pn	11 41 25.3	+0.6
YUK				i S	Sn	11 42 09.9	-2.4
YUK				pmax	pmax		
	comp=Z,350nm,0.3s						
YUK				smax			
	comp=N,800nm,0.5s						
YUK				smax			
	comp=E,360nm,0.3s						
YUK				smax			
	comp=N,3μm,0.4s						
YUK				smax			
	comp=E,2.0nm,0.6s						
MAJO	Matsushiro	5.32	214	ePn	Pn	11 41 42.9	+2.6
	comp=E,14nm,0.6s						
MAJO	Matsushiro	5.32	214	eP	Pn	11 41 42.9	+2.6
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s						
MAT	Matsushiro	5.32	214	P	Pn	11 41 42.7	+2.4
MAT				eS	Sn	11 42 45.0	+4.8
MJAR	Matsushiro Arr	5.32	214	P	Pn	11 41 42.2	+1.9
MJAR	Matsushiro Arr	5.32	214	P	Pn	11 41 42.2	+1.9
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	5.32	214	P	Pn	11 41 42.2	+1.9
	comp=Z,1.3nm,0.3s,baz=25,slow=14,SNR=16						
YSS	Yuzh-Sakhalins	5.98	5	⇑eP	Pn	11 41 53.0	+3.8
KUR	Kuril'sk	6.05	44	⇑iP	Pn	11 41 49.0	-1.2
KUR				i S	Sn	11 42 54.2	-3.8
KUR				pmax	pmax		
	comp=Z,150nm,0.7s						
KUR				smax			
	comp=N,150nm,0.8s						
KUR				smax			
	comp=E,140nm,0.8s						
MDJ	Mudanjiang	9.77	296	P	Pn	11 42 45.4	+4.4
MDJ				AMB	AMB		
	comp=Z,14nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,118nm,4.2s						
KSRS	Korea Array	11.44	257	P	Pn	11 43 06.9	+3.1
	comp=Z,0.4nm,0.3s,baz=65,slow=14,SNR=5.9						
KSRS				LR	LR	11 46 53.9	
	comp=Z,88nm,18.4s,baz=169,slow=34						
BOD	Bodaibo	24.51	323	eP	P	11 45 35.2	-1.3
BOD				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
SONM	Songino Array	26.13	297	P	P	11 45 50.1	-1.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,53nm,18.2s						
SONM	Songino Array	26.13	297	P	P	11 45 50.1	-1.2
	comp=Z,1.3nm,0.5s,mb3.7,baz=83,slow=8.5,SNR=17						
SONM				LR	LR	11 55 36.1	
	comp=Z,53nm,18.1s,baz=58,slow=35						
ZAK	Zakamensk	28.31	302	eP	P	11 46 10.7	-0.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.4						
MK31	Makanchi Array	42.48	299	eP	P	11 48 12.3	+0.3
MKAR	Makanchi Array	42.48	299	P	P	11 48 12.1	+0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,24nm,18.0s						
MKAR	Makanchi Array	42.48	299	P	P	11 48 12.1	+0.1
	comp=Z,1.5nm,0.4s,mb3.9,baz=85,slow=9.9,SNR=16						
MKAR				LR	LR	12 07 36.2	
	comp=Z,24nm,18.0s,baz=180,slow=38						
KURK	Kurchatov	43.91	305	eP	P	11 48 23.4	-0.2
	comp=Z,5.0nm,0.8s,mb4.3						
KURK	Kurchatov	43.91	305	eP	P	11 48 23.4	-0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
TAPN	Taplejung	46.20	270	eP	P	11 48 42.7	+0.6
	comp=Z,8.4nm,0.7s,mb4.8						
JIRN	Jiri	47.19	272	eP	P	11 48 50.9	+1.1
	comp=Z,7.4nm,0.3s,mb5.0						
KKN	Kakani	47.81	273	eP	P	11 48 55.3	+0.7
	comp=Z,19nm,0.6s,mb5.3						
GKN	Gorkha	48.19	273	eP	P	11 48 58.1	+0.6
	comp=Z,9.4nm,0.5s,mb5.1						
TKM2	Tokmak 2	48.20	296	eP	P	11 48 57.6	+0.2
	comp=Z,6.2nm,0.5s,mb4.9						
TKM2	Tokmak 2	48.20	296	eP	P	11 48 57.6	+0.2
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
KOLN	Koldanda	49.09	274	eP	P	11 49 03.3	-1.1
	comp=Z,15nm,0.9s,mb5.0						
INK	Inuvik	50.69	29	P	P	11 49 17.1	+1.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK	Inuvik	50.69	29	P	P	11 49 17.1	+1.1
	comp=Z,1.9nm,0.5s,mb4.3,baz=294,slow=6.7,SNR=27						
KEV	Kevo	59.90	339	ep	P	11 50 18.2	-3.9
	comp=Z,14nm,1.0s,mb4.9						
KEV	Kevo	59.90	339	eP	P	11 50 18.2	-3.9
KEV				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
YKA	Yellowknife Ar	60.19	31	P	P	11 50 24.5	+0.2
	comp=Z,0.2nm,0.4s,mb3.5,baz=302,slow=6.6,SNR=4.6						
ARCES	ARCESS Array B	60.45	339	P	P	11 50 25.9	0.0
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	ARCESS Array B	60.45	339	P	P	11 50 25.9	0.0
	comp=Z,4.1nm,0.9s,mb4.4,baz=52,slow=7.7,SNR=6.2						
WRA	Warramunga Arr	61.04	188	P	P	11 50 29.4	-1.0
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	61.04	188	P	P	11 50 29.4	-1.0
	comp=Z,0.5nm,0.4s,mb4.0,baz=7.8,slow=7.7,SNR=21						
JOF	Joensuu	62.68	331	ep	P	11 50 39.5	-1.5
	comp=Z,2.8nm,0.5s,mb4.7						
JOF	Joensuu	62.68	331	eP	P	11 50 39.5	-1.5
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
ASAR	Alice Springs	64.77	188	P	P	11 50 54.4	-0.7
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	64.77	188	P	P	11 50 54.4	-0.8
	comp=Z,0.5nm,0.5s,mb3.8,baz=7.2,slow=7.9,SNR=14						
KAF	Kangasniemi	64.99	332	ep	P	11 50 55.4	-0.8
	comp=Z,5.1nm,0.4s,mb4.9,baz=47,slow=6.2						
KAF	Kangasniemi	64.99	332	eP	P	11 50 55.4	-0.8
KAF				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
FINES	FINESS Array B	65.52	332	P	P	11 50 59.5	-0.1
FINES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FINES	FINESS Array B	65.52	332	P	P	11 50 59.5	-0.1
	comp=Z,5.6nm,0.5s,mb4.9,baz=49,slow=7.4,SNR=58						
NB2	NORSAR Subarra	70.70	337	P	P	11 51 32.1	0.0
	comp=Z,0.9nm,0.4s,mb4.0,baz=36,slow=6.5						
NOA	NORSAR Array B	70.70	337	P	P	11 51 32.3	+0.2
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	70.70	337	P	P	11 51 32.2	+0.2
	comp=Z,2.2nm,0.7s,mb4.2,baz=38,slow=6.2,SNR=6.9						
AKASG	Malin Array Be	71.43	322	P	P	11 51 36.6	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	71.43	322	P	P	11 51 36.6	-0.1
	comp=Z,1.9nm,0.5s,mb4.3,baz=44,slow=6.1,SNR=10						
NVAR	Mina Array Bea	72.31	54	P	P	11 51 42.0	-0.2
	comp=Z,0.4nm,0.7s,mb3.5,baz=297,slow=5.0,SNR=3.3						
PDAR	Pinedale Array	74.61	46	P	P	11 51 55.9	+0.2
	comp=Z,0.4nm,0.7s,mb3.5,baz=285,slow=2.8,SNR=5.9						

IDC 17 11:53:03.9±4.2**,405S**×**14000E,h170**km±52km**,mb3.0**/3**, mb1 3.4**/7**,mb1mx3.3**/13**,mbtmp3.3**/7**,1C,Error ellipse: s-maj=43.8km s-min=14.2km az=114.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.88	127	P	Pn	11 55 07.0	-1.8
	1.0nm,0.3s,baz=282,slow=14,SNR=4.9						
WB2	Warramunga Arr	16.73	199	eP	Pn	11 56 48.8	+0.3
WB2				eS	S	11 59 51.1	-2.9
WRA	Warramunga Arr	16.73	199	P	Pn	11 56 48.5	-0.1
	0.9nm,0.3s,baz=21,slow=12,SNR=40						
WRA				S	S	11 59 46.1	-8.0
	0.1nm,0.3s,baz=14,slow=22,SNR=6.0						
BATI	Kupang	17.32	248	P	Pn	11 56 53.1	-2.6
	3.6nm,0.3s,baz=27,slow=6.9,SNR=5.2						
FITZ	Fitzroy Crossi	19.82	224	⇑iP	P	11 57 21.5	0.0
	4.6nm,0.6s						
FITZ	Fitzroy Crossi	19.82	224	P	P	11 57 21.6	0.0
	0.5nm,0.3s,baz=44,slow=12,SNR=17						
FITZ				S	S	12 00 55.5	-0.1
	0.1nm,0.3s,baz=343,slow=19,SNR=3.2						
ASAR	Alice Springs	20.37	196	P	P	11 57 29.3	+1.8
	3.5nm,0.7s,baz=28,slow=10,SNR=67						
ASAR				S	S	12 01 20.4	+14
	2.4nm,0.9s,baz=16,slow=28,SNR=9.6						
SONM	Songino Array	59.48	334	P	P	12 02 49.7	+0.8
	0.3nm,1.0s,baz=86,slow=5.9,SNR=3.3						
MKAR	Makanchi Array	71.63	322	P	P	12 04 06.5	-0.4
	0.1nm,0.4s,baz=103,slow=4.6,SNR=2.1						

*MOS **17** 12:12:25.1±2.1,5656N×11793E,h7km,mb4.4/1,Error ellipse: s-maj=18.4km s-min=12.1km az=49.7*
BYKL 17 12:12:25.2±0.3**,5658N**×**11798E,h11**km±4km**,12C-8D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CRS	Chara	0.36	26	ePG	Pg	12 12 32.3	0.0
CRS				e		12 12 37.5	
CRS				pmax	pmax		
	comp=Z,527nm,0.3s						
CRS				smax			
	comp=E,8μm,0.3s						
CRS	Chara	0.36	26	⇓iPg	Pg	12 12 32.3	0.0
	comp=E,95nm,0.5s						
CRS				⇓iPg	Pg	12 12 32.3	0.0
	comp=E,30nm,0.5s						
CRS				⇓iPg	Pg	12 12 32.3	0.0
	comp=E,624nm,0.5s						
CRS				eSg	Sg	12 12 37.2	+0.1
CRS				Pmax			
	comp=E,592nm,0.7s						
CRS				Smax			
	comp=E,3μm,1.1s						
TUP	Tupik	2.43	152	ePN	Pn	12 13 05.8	+1.0
TUP				e		12 13 08.8	
TUP				eS	Sn	12 13 35.7	+1.2
TUP				e		12 13 41.2	
TUP				pmax	pmax		
	comp=Z,174nm,0.6s						
TUP				smax			
	comp=E,164nm,0.6s						
TUP	Tupik	2.43	152	⇑iPn	Pn	12 13 05.9	+1.1
TUP				⇑iPg	Pg	12 13 08.8	-3.0
TUP				eSg	Sg	12 13 41.2	-2.1
TUP				Pmax			
	comp=E,197nm,1.4s						
TUP				Smax			
	comp=E,169nm,0.7s						
BOD	Bodaibo	2.50	302	⇑ePN	Pn	12 13 06.6	+0.9
BOD				i		12 13 09.3	
BOD				eS	Sn	12 13 36.1	+0.1
BOD				e		12 13 41.4	
BOD				pmax	pmax		
	comp=Z,99nm,0.4s						
BOD				smax			
	comp=N,1μm,0.8s						

BOD	**Bodaibo**	**2.50**	**302**	⇑*i*Pg	Pg	12 13 09.4	-3.6
	comp=N,46nm,0.5s						
BOD				⇓*i*Pg	Pg	12 13 09.4	-3.6
	comp=N,103nm,0.5s						
BOD				⇑*i*Pg	Pg	12 13 09.4	-3.6
	comp=N,98nm,0.5s						
BOD				*e*Sg	Sg	12 13 41.6	-3.7
BOD				Pmax			
	comp=N,100nm,0.5s						
BOD				Smax			
	comp=N,1µm,0.9s						
SVKR	**Severomuysk**	**2.50**	**261**	*e*PN	Pn	12 13 09.4	+3.6
SVKR				*e*		12 13 42.0	
SVKR				pmax	pmax		
	comp=Z,133nm,0.6s						
SVKR				smax			
	comp=N,842nm,0.9s						
SVKR	**Severomuysk**	**2.50**	**261**	*e*Pg	Pg	12 13 09.8	-3.3
SVKR				*e*Sg	Sg	12 13 42.5	-3.1
SVKR				Pmax			
	comp=N,124nm,0.3s						
SVKR				Smax			
	comp=N,838nm,0.9s						
UKT	**Uakit**	**2.68**	**248**	*e*PN	Pn	12 13 08.4	+0.3
UKT				*e*		12 13 12.4	
UKT				*e*S	Sn	12 13 40.3	-0.2
UKT				*e*		12 13 46.5	
UKT				pmax	pmax		
	comp=Z,69nm,0.6s						
UKT				smax			
	comp=N,118nm,0.4s						
UKT	**Uakit**	**2.68**	**248**	⇓*i*Pn	Pn	12 13 08.9	+0.8
UKT				⇓*i*Pg	Pg	12 13 12.5	-3.9
UKT				*e*Sg	Sg	12 13 47.8	-3.3
UKT				Pmax			
	comp=N,70nm,0.8s						
UKT				Smax			
	comp=N,118nm,0.6s						
YOA	**Uoyan**	**3.51**	**265**	*e*PN	Pn	12 13 26.2	+6.6
YOA				*i*		12 14 14.6	
YOA				pmax	pmax		
	comp=Z,60nm,0.3s						
YOA				smax			
	comp=N,633nm,0.6s						
YOA	**Uoyan**	**3.51**	**265**	*e*Pg	Pg	12 13 27.7	-4.7
YOA				*e*Sg	Sg	12 14 14.7	-3.1
YOA				Pmax			
	comp=N,55nm,0.5s						
YOA				Smax			
	comp=N,582nm,0.9s						
CLNS	**Chul'man**	**3.82**	**83**	*e*PN	Pn	12 13 37.4	+14
CLNS				*e*		12 14 20.5	
CLNS				pmax	pmax		
	comp=Z,19nm,0.4s						
CLNS				pmax	pmax		
	comp=N,15nm,0.6s						
CLNS				pmax	pmax		
	comp=E,23nm,0.9s						
CLNS				smax			
	comp=E,39nm,0.3s						
CLNS				smax			
	comp=Z,15nm,0.3s						
CLNS				smax			
	comp=N,61nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,60nm,11.0s						
CLNS	**Chul'man**	**3.82**	**83**	*e*Pg	Pg	12 13 34.8	-3.5
CLNS				*e*Sn	Sn	12 14 07.6	-1.1
CLNS				*e*Sg	Sg	12 14 22.9	-4.8
IENR	**Iengra**	**3.84**	**92**	*e*Pn	Pn	12 13 26.9	+2.8
IENR				*e*Pg	Pg	12 13 35.7	-3.0
IENR				*e*Sn	Sn	12 14 10.7	+1.5
IENR				*e*Sg	Sg	12 14 23.9	-4.5
KMO	**Kumora**	**3.85**	**262**	*e*PN	Pn	12 13 23.4	-0.8
KMO				*e*		12 13 32.8	
KMO				*e*S	Sn	12 14 08.7	-0.7
KMO				*e*		12 14 22.4	
KMO				pmax	pmax		
	comp=Z,32nm,0.4s						
KMO				smax			
	comp=N,287nm,1.1s						
KMO	**Kumora**	**3.85**	**262**	⇑*i*Pn	Pn	12 13 25.4	+1.2
KMO				*e*Pg	Pg	12 13 33.4	-5.4
KMO				*e*		12 13 39.1	
KMO				*e*Sg	Sg	12 14 23.4	-5.2
KMO				max			
	comp=N,37nm,0.5s						
KMO				Smax			
	comp=N,286nm,1.2s						
YLYR	**Ulyunkhan**	**4.22**	**249**	*e*PN	Pn	12 13 30.3	+1.0
YLYR				*e*		12 13 38.4	
YLYR	**Ulyunkhan**	**4.22**	**249**	⇓*i*Pn	Pn	12 13 30.3	+1.0
YLYR				*e*Pg	Pg	12 13 41.0	-4.9
YLYR				*e*Sg	Sg	12 14 36.3	-4.1
YLYR				Pmax			
	comp=N,16nm,0.8s						
YLYR				Smax			
	comp=N,73nm,1.1s						
ALDR	**Aldan**	**4.49**	**60**	*e*Pg	Pg	12 13 45.9	-5.1
ALDR				*e*Sn	Sn	12 14 25.1	0.0
ALDR				*e*Sg	Sg	12 14 45.7	-3.4
NIZ	**Nizh Angarsk**	**4.78**	**264**	*e*PN	Pn	12 13 38.7	+1.6
NIZ				*e*		12 13 51.9	
NIZ				*e*		12 14 52.9	
NIZ				pmax	pmax		
	comp=Z,11nm,0.8s						
NIZ				smax			
	comp=N,91nm,1.0s						
NIZ	**Nizh Angarsk**	**4.78**	**264**	⇑*i*Pn	Pn	12 13 38.8	+1.7
NIZ				*e*Pg	Pg	12 13 50.4	-6.3
NIZ				*e*		12 13 52.6	
NIZ				*e*Sg	Sg	12 14 52.5	-6.2
NIZ				max			
	comp=N,25nm,2.0s						
NIZ				Smax			
	comp=N,68nm,1.0s						
CIT	**Chita**	**5.25**	**211**	*e*Sg	Sg	12 15 09.5	-4.2
CIT				Smax			
	comp=N,148nm,0.9s						
SYVR	**Suvo**	**5.43**	**241**	*e*PN	Pn	12 13 46.7	+0.7
SYVR				*e*		12 14 02.7	
SYVR				*e*		12 15 14.3	
SYVR				pmax	pmax		
	comp=Z,11nm,0.7s						
SYVR				smax			
	comp=E,47nm,0.6s						
SYVR	**Suvo**	**5.43**	**241**	*e*Pn	Pn	12 13 46.8	+0.8
SYVR				*e*		12 13 49.0	
SYVR				⇑*i*Pg	Pg	12 14 02.8	-6.4
SYVR				*e*Sg	Sg	12 15 14.4	-5.1
SYVR				Pmax			
	comp=E,15nm,1.0s						
SYVR				Smax			
	comp=E,67nm,1.5s						
KROS	**Kirovskiy**	**5.54**	**109**	*e*Pn	Pn	12 13 44.9	-2.6
KROS				*e*Pg	Pg	12 14 01.5	-10
KROS				*e*Sn	Sn	12 14 48.4	-2.8
KROS				*e*Sg	Sg	12 15 15.0	-8.0
ZEA	**Zeya**	**6.03**	**114**	*e*Pg	Pg	12 14 12.0	-8.5
ZEA				*e*Sn	Sn	12 15 02.3	-0.8
ZEA				*e*Sg	Sg	12 15 31.1	-7.4
MXMB	**Maximikha**	**6.28**	**242**	⇑*i*Pn	Pn	12 13 58.3	+0.7
MXMB				*e*Pg	Pg	12 14 17.6	-7.7
MXMB				*e*Sg	Sg	12 15 40.2	-6.2
MXMB				Pmax			
	comp=E,6.0nm,0.6s						
MXMB				Smax			
	comp=E,107nm,1.2s						
OGRR	**Ongureny**	**6.64**	**248**	*e*PN	Pn	12 14 03.1	+0.5
OGRR				*e*		12 14 23.7	
OGRR				*e*		12 15 48.0	
OGRR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
OGRR				smax			
	comp=N,26nm,1.3s						
OGRR	**Ongureny**	**6.64**	**248**	⇑*i*Pn	Pn	12 14 03.2	+0.6
OGRR				⇑*i*Pg	Pg	12 14 24.7	-7.6
OGRR				*e*Sg	Sg	12 15 51.0	-7.3
OGRR				Pmax			
	comp=N,4.0nm,0.8s						
OGRR				Smax			
	comp=N,26nm,1.3s						
HIA	**Hailar**	**7.40**	**171**	*e*Sg	Sg	12 16 14.5	-8.1
ZRHB	**Zarechye**	**7.47**	**242**	*e*Sg	Sg	12 16 15.9	-8.9
ZRHB				Smax			
	comp=N,69nm,1.4s						
KPC	**Khapcheranga**	**7.67**	**208**	*e*Pn	Pn	12 14 16.2	-0.4
KPC				*e*Pg	Pn	12 14 43.0	+26
KPC				*e*Sn	Sn	12 15 42.3	-1.1
KPC				*e*Sg	Sn	12 16 21.9	+39
KPC				Pmax			
	comp=N,1.0nm,0.3s						
KPC				Smax			
	comp=N,60nm,2.2s						
TRG	**Tyrgan**	**7.75**	**245**	⇑*i*Pn	Pn	12 14 18.8	+1.0
TRG				*e*Pg	Pn	12 14 45.1	+27
TRG				*e*Sg	Sn	12 16 26.3	+41
TRG				Smax			
	comp=N,10.0nm,1.1s						
YAK	**Yakutsk**	**8.10**	**43**	*e*PN	Pn	12 14 10.1	-12
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HRMR	**Khuramsha**	**8.16**	**237**	⇓*i*Pn	Pn	12 14 24.2	+0.8
HRMR				*e*Pg	Pn	12 14 51.3	+28
HRMR				*e*Sg	Sn	12 16 35.8	+40
HRMR				Pmax			
	comp=Z,8.0nm,1.4s						
HRMR				Smax			
	comp=Z,144nm,0.8s						
LSTR	**Listvyanka**	**9.03**	**244**	*e*Sg	Sn	12 17 05.0	+48
LSTR				Smax			
	comp=Z,15nm,1.5s						
TLY	**Talaya**	**9.73**	**246**	*e*Sg	Sn	12 17 28.0	+54
TLY				Smax			
	comp=Z,21nm,1.6s						
ARS	**Arshan**	**10.22**	**249**	*e*Sg	Sn	12 17 40.3	+54
ARS				Smax			
	comp=Z,39nm,1.3s						
MOY	**Mondy**	**11.11**	**251**	*e*Sg	Sn	12 18 08.3	+61
MOY				Smax			
	comp=Z,22nm,2.3s						
ORL	**Orlik**	**11.29**	**257**	*e*	Pn	12 15 26.4	+20
ORL				*e*Sg	Sn	12 18 14.6	+62
ORL				Smax			
	comp=Z,23nm,1.8s						

GII ***17*** *12:22:06.8±2.0, 2992N×3621E, h0km, ML1.8/2*
HLW ***17*** *12:23:02.5, 2981N×3671E, h20km, Mb3.1*
CSEM ***17*** *12:23:03.4±0.2, 2983N×3622E, h1km, ML1.8, Error ellipse: s-maj=4.7km s-min=3.1km az=109.0, Mining explosion.*
SGS ***17*** *12:23:03.6, 3000N×3625E, h6km*
ISC 17 12:23:02.0±1.0**, 2987N**±004×**3637E**±007**, h0km, n20, σ0.72**/24**, 2C, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.16**	**278**	Pg	**Pg**	**12 23 23.4**	**-1.0**
HRFI				Sg	**Sg**	**12 23 40.2**	**+0.8**
ZFRI	**Zfri**	**1.23**	**304**	Pg	**Pg**	**12 23 24.9**	**-0.8**
ZFRI	**Zfri**	**1.23**	**304**	Pg	**Pg**	**12 23 24.8**	**-0.9**
EIL	**Elat**	**1.25**	**261**	Pg	**Pg**	**12 23 25.4**	**-0.5**
EIL				Sg	**Sg**	**12 23 42.9**	**+0.8**
MBH	**Mount Berech**	**1.26**	**267**	Pg	**Pg**	**12 23 26.4**	**+0.2**
HQLS		**1.27**	**244**	P	**Pg**	**12 23 25.4**	**-0.9**
HQLS		**1.27**	**244**	P	**Pg**	**12 23 25.5**	**-0.9**
HQLS				S	**Sg**	**12 23 42.2**	**-0.6**
PRNI	**Paran**	**1.27**	**292**	Pg	**Pg**	**12 23 25.5**	**-1.0**
JLOS		**1.36**	**214**	P	**Pg**	**12 23 28.3**	**+0.1**
JLOS		**1.36**	**214**	P	**Pg**	**12 23 28.3**	**+0.1**
JLOS				S	**Sg**	**12 23 46.3**	**+0.4**
KRMI	**Paran Flat**	**1.44**	**280**	Pn	**Pn**	**12 23 28.5**	**-0.9**
HBST	**Basata**	**1.56**	**246**	⇑P	**Pn**	**12 23 31.8**	**+0.7**
MZDA	**Masada**	**1.67**	**329**	Pn	**Pn**	**12 23 33.2**	**+0.6**
YTIR	**Yattir**	**1.84**	**324**	Pn	**Pn**	**12 23 35.1**	**+0.3**
DSI	**Dead Sea**	**1.89**	**334**	Pn	**Pn**	**12 23 35.7**	**+0.1**
HDHB	**Dhahab**	**1.91**	**234**	P	**Pn**	**12 23 36.0**	**+0.2**
HNKL	**Nakhl**	**2.07**	**272**	P	**Pn**	**12 23 39.0**	**+1.0**
RSHS		**2.08**	**222**	P	**Pn**	**12 23 37.5**	**-0.7**
HKAT	**Jabal Katrina**	**2.47**	**238**	⇑P	**Pn**	**12 23 43.5**	**-0.1**
SUZ		**3.07**	**270**	P	**Pn**	**12 23 53.3**	**+1.5**

IDC 17 12:46:23.6±1.5**, 2616N**×**11013W, h0km, mb1 3.5**/4**, mb1mx3.3**/20**, mbtmp3.1**/4**, ML3.3**/4**, Error ellipse: s-maj=25.0km s-min=11.8km az=102.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**2.06**	**185**	Pg	Pg	12 47 00.5	-2.6
	31nm,0.3s,baz=352,slow=3.1,SNR=14						
LPIG				Lg		12 47 29.5	
	43nm,0.3s,baz=255,slow=12,SNR=6.7						
TXAR	**Lajitas Array**	**6.54**	**60**	Pn	Pn	12 48 03.4	+2.4
	0.2nm,0.3s,baz=232,slow=13,SNR=18						
TXAR				Lg		12 49 46.2	
	0.3nm,0.3s,baz=234,slow=34,SNR=3.6						
ANMO	**Albuquerque**	**9.31**	**19**	Pn	Pn	12 48 40.5	+1.5
	0.1nm,0.3s,baz=293,slow=7.7,SNR=2.6						
ANMO				Lg		12 51 20.9	
	0.1nm,0.3s,baz=106,slow=23,SNR=2.8						
NVAR	**Mina Array Bea**	**14.04**	**333**	Pn	Pn	12 49 45.0	+1.2
	0.0nm,0.3s,baz=147,slow=12,SNR=2.8						
PDAR	**Pinedale Array**	**16.57**	**1**	Pn	Pn	12 50 20.6	+3.4
	0.0nm,0.3s,baz=173,slow=11,SNR=7.3						

IDC 17 12:50:09.3±7.5**, 236N**×**12589E, h0km, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/17**, mbtmp3.8**/4**, Error ellipse: s-maj=123.4km s-min=103.1km az=122.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.34**	**181**	P	P	12 54 48.2	+0.8
	0.8nm,0.5s,baz=18,slow=9.6,SNR=5.2						
WRA	**Warramunga Arr**	**23.67**	**160**	P	P	12 55 23.2	+0.3
	2.7nm,0.5s,baz=337,slow=10,SNR=38						
WB2	**Warramunga Arr**	**23.67**	**160**	*e*P	P	12 55 22.6	-0.3
ASAR	**Alice Springs**	**27.02**	**164**	P	P	12 55 53.0	-0.4
	0.4nm,0.5s,baz=348,slow=7.5,SNR=18						
STKA	**Stephens Creek**	**37.18**	**158**	P	P	12 57 21.9	-0.4
	2.1nm,0.9s,baz=323,slow=15,SNR=3.2						

MAN 17 13:42:16, 973N×**12619E, h1km, mb3.9, ML2.7, MS2.4, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.69**	**274**	⇓*e*P	Pg	13 42 30.6	+1.3
SCPH				*e*S	Sg	13 42 43.8	+5.5
MSLP	**Maasin**	**1.37**	**287**	*e*P	Pn	13 42 42.1	-0.2
MSLP				*e*S	Sg	13 43 02.4	+2.3
BUKP	**Musuan**	**2.15**	**211**	*e*P	Pn	13 42 54.5	+1.4

BJI ***17*** *14:20:19.6, 2703N×5783E, h25km, mB5.0, mb4.6, Ms4.6, Msz4.3*
MOS ***17*** *14:20:21.7±0.9, 2677N×58.17E, h33km, mb4.9/76, Error ellipse: s-maj=6.8km s-min=4.2km az=125.2*
CSEM ***17*** *14:20:22.9±0.1, 2685N×5800E, h15km, mb5.0/7, Ms4.2, Error ellipse: s-maj=2.7km s-min=1.4km az=80.0*
THR ***17*** *14:20:23.8±0.4, 27.10N×5807E, h14km±11km, ML4.8*
ISCJB ***17*** *14:20:23.0±0.2, 2670N±002×58.17E±002, h47km, mb4.8/151, MS3.8/33, Error ellipse: s-maj=2.9km s-min=2.4km az=162.3*
IDC ***17*** *14:20:25.0±0.4, 2669N×58.18E, h47km±3km, mb4.3/25, mb1 4.3/26, mb1mx4.3/28, mbtmp4.3/26, MS3.7/16, Ms1 3.7/16, ms1mx3.6/30, Error ellipse: s-maj=11.8km s-min=9.6km az=178.0*
NEIC ***17*** *14:20:24.1, 2709N×5802E, h14km, mb4.9/93, ML4.8(THR), MN4.7(TEH), After THR.*
SZGRF ***17*** *14:20:29.5, 2723N×5805E, h33km, mb4.3, Southern Iran*
TEH ***17*** *14:20:42.9, 2678N×5808E, h30km, ML4.8*
ISC 17 14:20:24.9±0.1**, 2667N**±002×**5818E**±002**, h49km**±1.1km**: pP-P, n574, σ1.13**/600**, mb4.8**/150**, MS3.8**/33**, 17C-16D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBND		**1.66**	**298**	*e*Pg	**Pn**	**14 20 54.0**	**+2.5**
BANOM	**Banah**	**1.85**	**247**	⇑Pn	**Pn**	**14 20 53.7**	**-0.4**
	SNR=631						
HATD	**Hatta, Dubai**	**2.61**	**226**	Pn	**Pn**	**14 21 03.3**	**-1.3**
	SNR=118						
ASHO	**Ashiyiah**	**2.75**	**225**	Pn	**Pn**	**14 21 05.5**	**-1.1**
	SNR=550						
NAZ	**Nazwa, Dubai**	**2.82**	**234**	P	**Pn**	**14 21 09.0**	**+1.5**
	SNR=62						
FAQ	**Al Faqa, Dubai**	**3.02**	**231**	P	**Pn**	**14 21 11.7**	**+1.4**
	SNR=57						
BIDO	**Bidbid**	**3.14**	**181**	Pn	**Pn**	**14 21 10.7**	**-1.2**
	SNR=364						
HOQ	**Hoqain**	**3.17**	**195**	Pn	**Pn**	**14 21 11.2**	**-1.2**
	SNR=122						
ASUD	**Al Ashush, Dub**	**3.28**	**232**	P	**Pn**	**14 21 15.9**	**+2.0**
	SNR=346						
KRBR	**Kerman**	**3.53**	**340**	*e*Pg	**Pn**	**14 21 19.8**	**+2.5**
KRBR				*e*Sg	**Sn**	**14 22 00.6**	**+2.9**
KRBR	**Kerman**	**3.53**	**340**	*e*Pg	**Pn**	**14 21 19.6**	**+2.4**
KRBR				*e*Sg	**Sn**	**14 22 00.6**	**+2.9**
KRBR				AML	AML	14 22 03.9	
	comp=N,6µm,0.2s						
KRBR	**Kerman**	**3.53**	**340**	*e*Pg	**Pn**	**14 21 19.6**	**+2.4**
	SNR=90						
KRBR				*e*Sg	**Sn**	**14 22 00.6**	**+2.9**
	comp=N,6µm,0.2s,SNR=90						
SMDO	**Samad**	**3.60**	**182**	Pn	**Pn**	**14 21 18.0**	**-0.2**
	SNR=112						
BSY	**Bisya**	**4.01**	**193**	⇑P	**Pn**	**14 21 25.3**	**+1.5**
	SNR=48						
BSYO	**Bisya**	**4.01**	**193**	P	**Pn**	**14 21 25.3**	**+1.4**
	SNR=48						
WBK	**Wadi Bani Khal**	**4.11**	**170**	Pn	**Pn**	**14 21 24.8**	**-0.4**
	SNR=646						
WBK	**Wadi Bani Khal**	**4.11**	**170**	P	**Pn**	**14 21 24.8**	**-0.4**
	SNR=646						
JMDO	**Jabal Madar**	**4.28**	**181**	Pn	**Pn**	**14 21 27.9**	**+0.4**
	SNR=199						
ISRV	**Sarvestan**	**5.23**	**302**	Pn	**Pn**	**14 21 42.2**	**+1.6**
IBAF	**Bafgh**	**5.41**	**336**	*e*Pn	**Pn**	**14 21 43.1**	**+0.1**
IBAF				*e*		14 22 34.2	
	comp=Z,3µm,0.2s						
IBAF				*e*Sn	**Sn**	**14 22 39.5**	**-4.5**
IBAF	**Bafgh**	**5.41**	**336**	Pn	**Pn**	**14 21 42.8**	**-0.2**
IBAF				*e*Sn	**Sn**	**14 22 39.5**	**-4.5**
IMEH	**Mehriz**	**5.65**	**327**	*e*Pn	**Pn**	**14 21 46.6**	**+0.3**
IMEH				*e*		14 22 53.1	
	comp=Z,3µm,0.2s						
IMEH	**Mehriz**	**5.65**	**327**	Pn	**Pn**	**14 21 46.5**	**+0.2**
SHI	**Shiraz**	**5.81**	**302**	Pn	**Pn**	**14 21 48.5**	**-0.1**
SHI				Sn	**Sn**	**14 22 49.0**	**-4.9**
SHI	**Shiraz**	**5.81**	**302**	*e*Pn	**Pn**	**14 21 48.1**	**-0.5**
SHI				*e*		14 21 54.5	
	comp=Z,7µm,0.1s						
SHI				*e*Sn	**Sn**	**14 22 49.0**	**-4.9**
IDAH		**6.22**	**13**	*e*Pn	**Pn**	**14 21 54.9**	**+0.7**
ICHK	**Chekchek**	**6.46**	**330**	*e*Pn	**Pn**	**14 21 57.7**	**+0.3**
ICHK				*e*		14 23 45.7	
	comp=Z,3µm,0.2s						
ICHK	**Chekchek**	**6.46**	**330**	Pn	**Pn**	**14 21 57.6**	**+0.2**
ISAD	**Sadrabad**	**6.53**	**324**	*e*Sn	**Sn**	**14 23 05.3**	**-6.3**
IMON		**6.63**	**11**	*e*Pn	**Pn**	**14 21 59.9**	**+0.2**
SLWS		**7.05**	**256**	P	**Pn**	**14 22 04.1**	**-1.4**
BTHS		**7.13**	**250**	P	**Pn**	**14 22 04.5**	**-2.2**
IGAR	**Garneh**	**7.62**	**318**	*e*Sn	**Sn**	**14 23 36.5**	**-1.8**
IGAR				*e*		14 23 41.9	
	comp=Z,8µm,0.2s						
NASN	**Na'in**	**7.69**	**324**	*e*Pn	**Pn**	**14 22 12.4**	**-1.8**
NASN				AML	AML	14 23 39.4	
	comp=N,60nm,0.8s						
BOQSS		**7.95**	**266**	P	**Pn**	**14 22 16.1**	**-1.7**
IZEF	**Zefreh**	**8.02**	**322**	*e*Sn	**Sn**	**14 23 41.2**	**-6.9**
IZEF				*e*		14 23 46.3	
	comp=Z,2µm,0.4s						
IZEF	**Zefreh**	**8.02**	**322**	Pn	**Pn**	**14 22 18.0**	**-0.8**
IZEF				*e*Sn	**Sn**	**14 23 41.2**	**-6.9**
IPIR	**Pirpir**	**8.72**	**315**	*e*Pn	**Pn**	**14 22 27.7**	**-0.7**
IPIR				*e*Sn	**Sn**	**14 23 57.7**	**-7.7**
IPIR				*e*		14 24 05.5	
	comp=Z,7µm,0.4s						
IPIR	**Pirpir**	**8.72**	**315**	Pn	**Pn**	**14 22 27.6**	**-0.8**
IPIR				*e*Sn	**Sn**	**14 23 57.7**	**-7.7**
IKLH	**Kalahroud**	**8.75**	**321**	*e*Pn	**Pn**	**14 22 28.3**	**-0.6**
IKLH				*e*		14 24 07.2	
	comp=Z,1µm,0.2s						
IKLH	**Kalahroud**	**8.75**	**321**	Pn	**Pn**	**14 22 28.0**	**-0.9**
SHAO	**Shalim**	**8.93**	**196**	Pn	**Pn**	**14 22 30.8**	**-0.5**
	SNR=12						
QRN	**Al-Qurain**	**9.33**	**285**	*e*P	**Pn**	**14 22 33.5**	**-3.2**
QRN				AML	AML	14 24 14.9	
	comp=Z,196nm,0.3s						
IMOG	**Moghan**	**9.46**	**6**	*e*Pn	**Pn**	**14 22 38.7**	**+0.2**
IMOG				*e*		14 22 41.0	
	comp=Z,733nm,0.3s						
IANJ	**Anjiloo**	**9.50**	**338**	*e*Pn	**Pn**	**14 22 38.7**	**-0.4**
IANJ				*e*		14 23 01.2	
	comp=Z,587nm,0.3s						
IANJ	**Anjiloo**	**9.50**	**338**	Pn	**Pn**	**14 22 38.6**	**-0.5**
KBD	**Kabd**	**9.61**	**287**	*e*P	**Pn**	**14 22 37.1**	**-3.5**
KBD				AML	AML	14 24 19.9	
	comp=Z,310nm,0.3s						
WHFO	**Wadi Hawf**	**9.62**	**206**	P	**Pn**	**14 22 39.0**	**-1.8**
	SNR=8.2						
RDF	**Al-Radifah**	**9.68**	**286**	*e*P	**Pn**	**14 22 38.2**	**-3.3**
RDF				AML	AML	14 24 22.4	
	comp=Z,88nm,0.4s						
IMYA	**Miamay**	**9.78**	**9**	*e*	**Pn**	**14 22 45.6**	**+2.7**
	comp=Z,2µm,0.5s						
GHVR	**GHOM**	**9.79**	**324**	*e*Pn	**Pn**	**14 22 42.2**	**-0.8**
SHGR	**Shooshtar-Gavs**	**9.81**	**306**	*e*Pn	**Pn**	**14 22 42.2**	**-1.1**
IAKL	**Akhlamad**	**9.89**	**3**	*e*Pn	**Pn**	**14 22 44.2**	**-0.2**
IAKL	**Akhlamad**	**9.89**	**3**	Pn	**Pn**	**14 22 44.1**	**-0.3**
NAY	**Al-Naaiem**	**10.01**	**287**	*e*P	**Pn**	**14 22 43.3**	**-2.8**
NAY				AML	AML	14 24 31.8	
	comp=Z,73nm,0.5s						
ISHM	**Shahmirzad**	**10.02**	**337**	*e*Pn	**Pn**	**14 22 45.4**	**-0.8**
ISHM				*e*		14 23 07.8	
	comp=Z,1µm,0.4s						
MIB	**Mutribah**	**10.06**	**291**	*e*P	**Pn**	**14 22 44.1**	**-2.7**
MIB				AML	AML	14 24 31.8	
	comp=Z,137nm,0.5s						
IKRD	**Kardeh**	**10.07**	**2**	*e*Pn	**Pn**	**14 22 49.4**	**+2.5**
IKRD				*e*		14 23 22.0	
	comp=Z,388nm,0.3s						
RST	**Umm Al-Ruwaisa**	**10.27**	**288**	*e*P	**Pn**	**14 22 46.5**	**-3.2**
RST				AML	AML	14 24 36.5	
	comp=Z,85nm,0.5s						
IDMV	**Damavand**	**10.32**	**331**	*e*Pn	**Pn**	**14 22 51.0**	**+0.7**
IDMV				*e*		14 23 11.0	
	comp=Z,502nm,0.5s						
ISFR	**Esferayen**	**10.34**	**359**	*e*	**Pn**	**14 22 53.6**	**+3.0**
	comp=Z,2µm,0.3s						
DAMV	**Damavand**	**10.39**	**331**	*e*Pn	**Pn**	**14 22 49.6**	**-1.6**
IGLO	**Galoogah**	**10.40**	**339**	Pn	**Pn**	**14 22 53.1**	**+1.7**
IGLO	**Galoogah**	**10.40**	**339**	*e*Pn	**Pn**	**14 22 53.4**	**+2.0**
IGLO				*e*		14 22 56.6	
	comp=Z,713nm,0.4s						
ASAO	**Ashtian**	**10.53**	**320**	*e*Pn	**Pn**	**14 22 52.0**	**-1.2**
ISHV	**Shirvan**	**10.84**	**358**	*e*Pn	**Pn**	**14 22 57.5**	**+0.1**
ISHV				*e*		14 23 18.9	
	comp=Z,903nm,0.4s						
ISHV	**Shirvan**	**10.84**	**358**	Pn	**Pn**	**14 22 56.7**	**-0.7**
CHTH	**Charan**	**11.01**	**329**	*e*Pn	**Pn**	**14 22 58.0**	**-1.6**
IRAZ	**Razeghan**	**11.21**	**323**	*e*Pn	**Pn**	**14 23 02.1**	**-0.4**
IRAZ				*e*		14 23 15.7	
	comp=Z,564nm,0.2s						
IRAZ	**Razeghan**	**11.21**	**323**	Pn	**Pn**	**14 23 02.0**	**-0.5**
DRP	**Derazinda**	**11.65**	**61**	P	**Pn**	**14 23 10.4**	**+1.9**
IKOM	**Komasi**	**11.86**	**312**	*e*Pn	**Pn**	**14 23 09.4**	**-1.9**
IKOM				*e*Sn	**Sn**	**14 25 11.9**	**-10**
SBDP	**Sheikh Budin**	**12.34**	**60**	P	**Pn**	**14 23 16.8**	**-1.1**
SBDP				S	**Sn**	**14 25 21.0**	**-13**
ASYS		**12.36**	**277**	P	**Pn**	**14 23 12.6**	**-5.7**
IVIS	**Veys**	**12.50**	**311**	Pn	**Pn**	**14 23 16.3**	**-3.8**
IVIS	**Veys**	**12.50**	**311**	*e*	**Sn**	**14 25 34.5**	**-3.4**
	comp=Z,3µm,0.2s						
THW	**Thamme Wali**	**13.26**	**59**	P	**Pn**	**14 23 29.1**	**-1.4**
THW				S	**Sn**	**14 25 42.0**	**-15**
BHD	**Baghdad**	**13.65**	**302**	*e*x	x	14 23 29.0	
BHD				*e*x	x	14 25 47.0	
BHD				*e*x	x	14 27 30.0	
CEP	**Cherat**	**13.83**	**56**	P	**Pn**	**14 23 37.7**	**-0.6**
CHCP	**Chirah Chowk**	**14.78**	**58**	P	**Pn**	**14 23 47.6**	**-3.3**
MUKL	**Al Mukalla**	**14.84**	**217**	*e*P	**Pn**	**14 23 49.9**	**-2.0**
MUKL				*i* S	**Sn**	**14 26 37.3**	**+2.2**

MSL **Mosul** 16.04 310 *i* x x 14 24 03.5
MSL *ex* x 14 26 54.0
CUKT Cukurca 16.23 314 *e*P **Pn** **14 24 05.5 -4.1**
THN Thein Dam 16.30 65 *e*P **Pn** **14 24 10.1 -0.3**
comp=Z,150nm,0.8s
HKR Hakkari 16.35 315 *e*P **Pn** **14 24 09.1 -1.9**
HAKT HAKKARI 16.36 315 ⇓*i*P **Pn** **14 24 09.0 -2.2**
POO Poona 16.57 116 *e*P **Pn** **14 24 18.0 +4.0**
NDI New Delhi 16.98 79 *e*P **Pn** **14 24 19.0 -0.1**
SDNR Sundarnagar 17.11 69 *e*P **Pn** **14 24 20.0 -0.6**
SDNR *ex* x 14 27 17.8
SIRT Sirnak 17.14 313 *e*P **Pn** **14 24 18.1 -2.9**
TVAN Van 17.14 317 *i*P **Pn** **14 24 21.7 +0.7**
VANB Van 17.20 317 *e*P **Pn** **14 24 22.1 +0.5**
CLDR Caldiran 17.24 320 *e*P **Pn** **14 24 24.1 +2.0**
KAD Karad 17.51 119 *e*P **Pn** **14 24 29.0 +3.4**
LBOS 17.57 226⇑*e*P **Pn** **14 24 23.9 -2.5**
LBOS AMb AMB 14 24 25.0
comp=Z,137nm,1.4s
LBOS *i* S **S** **14 27 42.5 -4.5**
DHBB Dhamar BB 17.63 230 *e*P **Pn** **14 24 24.6 -2.6**
DHBB AMb AMB 14 24 25.8
comp=Z,89nm,1.0s
DDI Dehra Dun 17.84 74 *e*P **Pn** **14 24 28.0 -1.7**
TUTA Tutak 18.05 319 *i*P **Pn** **14 24 32.5 +0.4**
AGRB Hanur-Agry 18.06 319 *e*P **Pn** **14 24 35.7 +3.4**
BTMT Batman 18.15 313 *e*P **Pn** **14 24 30.6 -2.7**
MARD Mardin 18.15 310 *i*P **Pn** **14 24 27.8 -5.5**
UDYN Al 'Udayn 18.35 229 *e*P **Pn** **14 24 33.4 -2.5**
UDYN AMb AMB 14 24 34.8
comp=Z,71nm,1.7s
UDYN *i* S **S** **14 28 00.2 -2.6**
TRBA At Turbah 18.78 227 *e*P **Pn** **14 24 38.4 -2.7**
TRBA AMb AMB 14 24 39.9
comp=Z,90nm,1.8s
TRBA *i* S **S** **14 28 11.2 -0.2**
BINT Bingol 19.18 314 *e*P **Pn** **14 24 43.6 -2.2**
KK31 Karatay Array 19.23 28 *i*P **Pn** **14 24 43.0 -3.3**
KK31 pmax pmax
comp=Z,21nm,0.4s
ERZM Erzurum 19.24 318 *i*P **Pn** **14 24 47.3 +0.8**
EZM Erzurum 19.24 318 *e*P **Pn** **14 24 47.8 +1.3**
ASF Jabal al Asfar 19.32 292 P **Pn** **14 24 46.4 -1.1**
ASF S **S** **14 28 06.8 -15**
ASF pmax pmax
comp=Z,4.0nm,0.3s
ASF smax
comp=N,1.0nm,0.3s
ASF MLR MLR
comp=Z,169nm,21.6s
ASF Jabal al Asfar 19.32 292 P **Pn** **14 24 46.4 -1.1**
comp=Z,4.3nm,0.3s,baz=326,slow=6.7,SNR=48
ASF S **S** **14 28 06.8 -15**
comp=Z,0.6nm,0.3s,baz=311,slow=21,SNR=3.3
ASF LR LR 14 33 59.5
comp=Z,169nm,21.6s,baz=322,slow=42
URFA Urfa 19.57 308 *e*P **Pn** **14 24 50.0 -0.5**
ZEI Tsey 19.85 328 *e*P **Pn** **14 24 54.7 +1.1**
PTK Pertek 19.91 312 *e*P **Pn** **14 24 54.1 -0.3**
AML Almayashu 19.99 36 *e*P **Pn** **14 24 52.5 -2.9**
comp=Z,104nm,0.6s
AML *e*S **S** **14 28 32.3 -3.1**
AML Almayashu 19.99 36 P **Pn** **14 24 52.7 -2.6**
SNR=201
AML Almayashu 19.99 36 *e*S **S** **14 28 32.3 -3.1**
EZC Erzincan 20.11 315 *e*P **P** **14 24 58.6 +4.0**
MALT Malatya 20.26 310 *e*P **P** **14 24 57.7 +1.4**
MALT Malatya 20.26 310 *e*P **P** **14 24 57.6 +1.3**
comp=Z,135nm,1.5s
MALT Malatya 20.26 310 *e*P **P** **14 24 57.6 +1.3**
MALT pmax pmax
comp=Z,135nm,1.5s
MALT Malatya 20.26 310 *e*P **P** **14 24 57.6 +1.3**
comp=Z,135nm,1.5s
MYA Malataya 20.27 310 *e*P **P** **14 24 58.3 +1.9**
EKS2 Erkin-Say 20.41 35 *e*P **P** **14 24 57.6 -0.3**
comp=Z,194nm,0.8s
EKS2 *e*S **S** **14 28 43.0 -0.9**
EKS2 Erkin-Say 20.41 35 P **P** **14 24 57.9 0.0**
SNR=301
EKS2 Erkin-Say 20.41 35 *e*P **P** **14 24 57.6 -0.3**
comp=Z,194nm,0.8s
EKS2 *e*S **S** **14 28 43.0 -0.8**
GZT Gaziantep 20.43 307 *i*P **P** **14 24 59.2 +1.1**
RCY Rachaya 20.49 295 *e*P **P** **14 25 00.0 +1.2**
UCH Uchtor 20.49 37 *e*P **P** **14 24 58.0 -0.8**
comp=Z,91nm,1.1s
UCH *e*S **S** **14 28 42.8 -2.6**
UCH Uchtor 20.49 37 P **P** **14 24 58.3 -0.4**
SNR=83
UCH Uchtor 20.49 37 *e*S **S** **14 28 42.8 -2.5**
GAZ Gaziantep 20.61 306 *e*P **P** **14 25 01.8 +1.7**
KELT Kelkit 20.69 315 *i*P **P** **14 25 01.4 +0.5**
EIL Elat 20.69 284 P **P** **14 25 02.3 +1.3**
comp=Z,253nm,0.8s,baz=99,slow=3.7,SNR=177
EIL S **S** **14 28 47.0 -2.5**
comp=Z,5.6nm,0.7s,baz=126,slow=22,SNR=2.2
EIL LR LR 14 34 40.8
comp=Z,177nm,20.8s,MS3.4,baz=96,slow=41
BHL Bhannes 20.72 296 *e*P **P** **14 25 01.9 +0.6**
GUMT Gumushane 20.73 316 *e*P **P** **14 25 03.4 +2.1**
MMAI Mount Meron Ar 20.73 293 P **P** **14 25 02.8 +1.5**
comp=Z,48nm,0.7s,baz=97,slow=13,SNR=58
MMAI LR LR 14 35 06.5
comp=Z,159nm,19.2s,MS3.4,baz=110,slow=42
AAK Ala-Archa 20.77 36 *e*P **P** **14 25 00.6 -1.0**
comp=Z,96nm,0.7s
AAK *e*S **S** **14 28 50.5 -0.2**
AAK Ala-Archa 20.77 36⇑*i*P **P** **14 25 00.6 -1.1**
AAK pmax pmax
comp=Z,96nm,0.8s
AAK MLR MLR
comp=Z,200nm,18.0s,MS3.5
AAK Ala-Archa 20.77 36 P **P** **14 25 01.2 -0.4**
SNR=29
AAK Ala-Archa 20.77 36 P **P** **14 25 01.7 +0.1**
SNR=77
KZA Kyzart 20.79 38 P **P** **14 25 02.0 +0.1**
SNR=127
ATD Arta Tunnel 20.86 227 P **P** **14 25 01.6 -1.3**
comp=Z,16nm,0.7s,baz=215,slow=24,SNR=6.6
ATD Arta Tunnel 20.86 227 P **P** **14 25 01.6 -1.4**
FRU Bishkek 20.97 36 *e*P **P** **14 25 03.0 -0.9**
FRU pmax pmax
comp=Z,80nm,1.4s
FRU Bishkek 20.97 36 *e*P **P** **14 25 03.0 -0.9**
comp=Z,80nm,1.4s
KMRS Kahramanmaras 20.97 306 *e*P **P** **14 25 05.4 +1.4**
HYB Hyderabad 20.98 112 *e*P **P** **14 25 05.5 +1.3**
comp=Z,45nm,1.0s
HYB *e* 14 25 17.0
HYB Hyderabad 20.98 112 *e*P **P** **14 25 05.5 +1.3**
HYB *e* 14 25 17.0
HYB pmax pmax
comp=Z,45nm,1.0s
HYB Hyderabad 20.98 112 *i*P **P** **14 25 05.5 +1.3**
comp=Z,45nm,1.0s
HYB *e* 14 25 08.0
HYB *e*pP 14 25 17.0
KBK Karagaybulak 21.02 36 P **P** **14 25 04.5 +0.1**
SNR=51
COBT Iskenderun 21.06 303 *i*P **P** **14 25 06.5 +1.6**
CHMS Chumysh 21.16 35 P **P** **14 25 05.4 -0.4**
SNR=24
USP Ospenovka 21.22 35 P **P** **14 25 05.4 -1.2**
SNR=27
KIV Kislovodsk 21.32 328 *e*P **P** **14 25 09.5 +1.8**
comp=Z,34nm,1.0s,mb4.6
KIV Kislovodsk 21.32 328 P **P** **14 25 10.0 +2.4**
KIV *e* 14 25 22.8
KIV 14 25 33.0
KIV *e* 14 29 05.3
KIV pmax pmax
comp=Z,20nm,1.3s,mb4.3
KIV MLR MLR
comp=Z,100nm,12.0s,MS3.4
KIV Kislovodsk 21.32 328 *e*P **P** **14 25 09.5 +1.9**
comp=Z,34nm,1.0s,mb4.6
ANDN Andirin 21.41 306 ⇓*i*P **P** **14 25 10.2 +1.6**
ULHL Ulahol 21.45 39 P **P** **14 25 09.2 +0.1**
SNR=213
TKM2 Tokmak 2 21.55 37 *e*P **P** **14 25 09.3 -0.8**
comp=Z,60nm,0.8s,mb5.1
TKM2 Tokmak 2 21.55 37 *e*P **P** **14 25 09.3 -0.8**
TKM2 pmax pmax
comp=Z,60nm,0.8s,mb5.1
TKM2 Tokmak 2 21.55 37 P **P** **14 25 09.6 -0.4**
SNR=89
TKM2 Tokmak 2 21.55 37 *e*P **P** **14 25 09.3 -0.8**
comp=Z,60nm,0.8s,mb5.1
KOZT Kozan 21.74 305 *e*P **P** **14 25 14.4 +2.1**
GRSN GIRESUNGRSN 21.75 316 *i*P **P** **14 25 12.4 +0.2**
KARA Karaisali 22.23 304 *e*P **P** **14 25 17.7 +0.4**
BNN Bunyan 22.30 309 *e*P **P** **14 25 19.6 +1.5**
MERS Mersin 22.48 303 *e*P **P** **14 25 21.3 +1.2**
CSS Prodhromos 22.84 297 *e*P **P** **14 25 25.0 +1.1**
comp=Z,128nm,0.9s,mb5.3
CSS Prodhromos 22.84 297 *e*P **P** **14 25 25.0 +1.1**
comp=Z,128nm,0.9s,mb5.3
AVNT Avonos 22.97 308 ⇓*i*P **P** **14 25 26.0 +0.8**
CDAG Cicekdag 23.67 309 ⇓*i*P **P** **14 25 32.4 +0.4**
AKTK Aktyubinsk 23.73 360 P **P** **14 25 31.5 -0.9**
AKTO Aktyubinsk 23.73 360 P **P** **14 25 31.5 -0.9**
AKTO pmax pmax
comp=Z,76nm,0.7s,mb5.2
AKTO Aktyubinsk 23.73 360 P **P** **14 25 31.5 -0.9**
comp=Z,76nm,0.7s,mb5.3,baz=170,slow=10,SNR=187
CTKT Corum 23.84 312 *i*P **P** **14 25 34.6 +1.0**
BOYT Boyabat 24.16 313 *i*P **P** **14 25 37.4 +0.9**
BRTR Keskin Array B 24.23 309 *i*P **P** **14 25 38.0 +0.9**
BRTR pmax pmax
comp=Z,72nm,0.8s
BRTR Keskin Array B 24.23 309 P **P** **14 25 38.1 +1.0**
comp=Z,72nm,0.8s,mb5.1,baz=122,slow=11,SNR=174
BRTR LR LR 14 36 18.2
comp=Z,131nm,20.4s,MS3.4,baz=134,slow=39
ANN Anapa 24.60 323 *e*P **P** **14 25 47.0 +6.6**
ANN pmax pmax
comp=Z,37nm,1.0s,mb4.9
ANN MLR MLR
comp=Z,236nm,8.0s
ELDT Eldivan 24.70 310 *i*P **P** **14 25 43.5 +2.0**
ANTO Ankara 24.88 308 *e*P **P** **14 25 44.4 +1.4**
comp=Z,102nm,1.0s,mb5.3
ANTO Ankara 24.88 308 *e*P **P** **14 25 44.4 +1.4**
ANTO pmax pmax
comp=Z,103nm,1.0s,mb5.3
ANTO Ankara 24.88 308 *e*P **P** **14 25 44.4 +1.4**
comp=Z,102nm,1.0s,mb5.3
SGKT Sivrigoynuk 25.68 309⇑*i*P **P** **14 25 51.2 +0.9**
SGKT Sivrigoynuk 25.68 309 *i*P **P** **14 25 51.2 +0.9**
ISP Isparta 25.82 302 *i*P **P** **14 25 51.1 -0.6**
ESKT Eskisehir 26.13 306 ⇓*i*P **P** **14 25 55.0 +0.7**
SEYT Eskypehyr 26.13 306 *i*P **P** **14 25 55.0 +0.6**
GOLH Golhisar 26.38 301 *i*P **P** **14 25 57.1 +0.4**
BORA Eskisehir 26.54 307 *i*P **P** **14 25 59.0 +0.9**
GDZ Gediz 26.98 305 *i*P **P** **14 26 02.1 +0.1**
VRHR Novokhopersk 27.46 337 *e*P **P** **14 26 07.7 +1.5**
VRHR pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
VRHR pmax pmax
comp=N,8.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.6s
ULDT Uludag 27.58 306 *i*P **P** **14 26 08.7 +1.2**
ULDT Uludag 27.58 306 *i*P **P** **14 26 08.6 +1.2**
MK31 Makanchi Array 27.68 37 *i*P **P** **14 26 07.8 -0.4**
MK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
MKAR Makanchi Array 27.68 37 P **P** **14 26 07.8 -0.4**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,98nm,19.2s
MKAR Makanchi Array 27.68 37 P **P** **14 26 07.8 -0.5**
comp=Z,5.2nm,0.6s,mb4.3,baz=229,slow=7.6,SNR=36
MKAR LR LR 14 39 12.8
comp=Z,98nm,19.2s,MS3.4,baz=354,slow=41
BRVK Borovoye 27.86 16 P **P** **14 26 09.3 -0.5**
comp=Z,216nm,0.5s,mb6.0,SNR=23
BRVK Borovoye 27.86 16 *e*P **P** **14 26 09.1 -0.7**
comp=Z,19nm,0.5s,mb5.0
BRVK Borovoye 27.86 16 *e*P **P** **14 26 09.1 -0.7**
BRVK pmax pmax
comp=Z,19nm,0.5s,mb5.0
BRVK Borovoye 27.86 16 P **P** **14 26 09.5 -0.3**
SNR=8.4
BRVK Borovoye 27.86 16 *e*P **P** **14 26 09.1 -0.7**
comp=Z,19nm,0.5s,mb5.0
CHKZ Chkalovo 28.51 16 *i*P **P** **14 26 14.8 -0.7**
CHKZ pmax pmax
comp=Z,7.0nm,0.5s,mb4.7
KURK Kurchatov 28.64 28 *e*P **P** **14 26 16.5 -0.2**
comp=Z,7.0nm,0.7s,mb4.5
KURK Kurchatov 28.64 28 ⇓*i*P **P** **14 26 16.1 -0.6**
KURK Kurchatov 28.64 28 *e*P **P** **14 26 16.5 -0.2**
comp=Z,7.0nm,0.7s,mb4.5
WMQ Urumqi 29.34 47 ⇓*i*P **P** **14 26 24.3 +1.2**
WMQ AP pP 14 26 36.3 +0.6
WMQ PP PP 14 27 19.9 -10
WMQ PCP PcP 14 29 30.8 +2.3
WMQ S **S** **14 31 12.6 -0.5**
WMQ XS sS 14 31 32.4 -2.0
WMQ SS SS 14 32 44.8 -34
WMQ SCP ScP 14 33 07.5 +1.2
WMQ AMB AMB
comp=Z,17nm,0.7s,mb4.9
WMQ AMB AMB
comp=Z,134nm,5.0s
WMQ LR LR
comp=N,163nm,23.7s
WMQ LR LR
comp=E,123nm,29.0s
WMQ LR LR
comp=Z,116nm,27.7s,MS3.4
CHOS Chios island 29.36 302 *e*P **P** **14 26 24.8 +1.6**
IDI Anoyia 29.70 295 P **P** **14 26 27.5 +1.2**
comp=Z,28nm,0.7s,mb5.1,baz=92,slow=9.1,SNR=23
IDI pP pP 14 26 39.8 +0.9
comp=Z,13nm,0.6s,baz=96,slow=9.4,SNR=4.4
ARU Arti 29.74 0*d* *i*P **P** **14 26 25.3 -1.1**
ARU PPP 14 27 26.7
ARU S **S** **14 31 18.3 -0.7**
ARU SS SS 14 32 48.0 -39
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.4
SVE Sverdlovsk 30.18 3 *e*P **P** **14 26 29.8 -0.5**
SVE pmax pmax
comp=Z,7.0nm,0.6s,mb4.6
JMB Yambol 30.20 310 *e*P **P** **14 26 33.0 +2.3**
KARN Karanos 30.50 295 *e*P **P** **14 26 34.2 +0.8**
AOS Alonnisos 31.19 302 *e*P **P** **14 26 41.1 +1.6**
DID Didima 31.35 299 *e*P **P** **14 26 40.3 -0.6**
PLD Plovdiv 31.39 308 *e*P **P** **14 26 42.2 +1.1**
PAIG Paliouri 31.52 304 *e*P **P** **14 26 43.1 +0.8**
LTK Loutraki 31.66 300 *e*P **P** **14 26 43.1 -0.5**
PLG Polygyros 31.80 304 *e*P **P** **14 26 45.9 +1.1**
SOH Sokhos 31.99 305 *e*P **P** **14 26 47.6 +1.2**
VLX Viachokerasia 32.01 298 *e*P **P** **14 26 46.6 -0.1**
AGG Agios Georgios 32.34 301 *e*P **P** **14 26 49.1 -0.4**
OBN Obninsk 32.50 337 *e*P **P** **14 26 50.9 +0.2**
OBN e*PP pP 14 27 03.1 -0.3
OBN 14 28 09.0
OBN *e* 14 33 58.5
OBN pmax pmax
comp=Z,41nm,2.1s,mb5.0
OBN MLR MLR
comp=Z,100nm,16.0s,MS3.6
SELA Sela 32.53 300 *e*P **P** **14 26 51.4 +0.1**
VTS Vitosha 32.60 308 *e*P **P** **14 26 52.5 +0.8**
AKASG Malin Array Be 32.60 325 P **P** **14 26 51.1 -0.6**
AKASG *PP pP 14 27 03.0 -1.4
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG pmax pmax
comp=N,4.0nm,0.6s
AKASG Malin Array Be 32.60 325 P **P** **14 26 51.0 -0.6**
comp=N,2.3nm,0.4s,mb4.5,baz=131,slow=8.5,SNR=17
AKASG pP pP 14 27 03.0 -1.4
comp=N,3.7nm,0.6s,baz=129,slow=8.0,SNR=5.1
AKASG Malin Array Be 32.60 325 P **P** **14 26 51.0 -0.7**
AKASG pP pP 14 27 03.0 -1.4
KIEV Kiev 32.61 325 *e*P **P** **14 26 50.4 -1.3**
comp=N,10nm,0.7s,mb4.9
KIEV Kiev 32.61 325 *e*P **P** **14 26 50.4 -1.3**
KIEV pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
KIEV Kiev 32.61 325 *e*P **P** **14 26 50.4 -1.3**
comp=Z,10nm,0.7s,mb4.9

VAY Valandovo 32.69 306 *e*P **P** **14 26 52.7 +0.1**
GRG Griva 32.72 305 *e*P **P** **14 26 53.9 +1.0**
KFL Anninata 33.37 299 *e*P **P** **14 26 58.3 -0.2**
FNA Florina 33.43 304 *e*P **P** **14 27 00.5 +1.4**
LKD Levkas 33.57 300 *e*P **P** **14 26 59.6 -0.6**
NVS Novosibirsk 33.58 26 *e*P **P** **14 26 58.9 -1.3**
NVS *e*S **S** **14 32 17.2 -1.8**
NVS pmax pmax
comp=Z,34nm,1.2s,mb5.2
NVS pmax pmax
comp=N,29nm,1.3s
NVS pmax pmax
comp=E,13nm,1.1s
NVS smax
comp=N,15nm,1.6s
BARS Barje 33.64 308 P **P** **14 27 01.1 +0.3**
KRUS Krusevo 33.66 305 *e*P **P** **14 27 02.6 +1.5**
KRUS Krusevo 33.66 305 *e*P **P** **14 27 02.5 +1.4**
SKO Skopje 33.68 306 *e*P **P** **14 27 02.5 +1.3**
OHR Ohrid 33.93 305 *e*P **P** **14 27 03.3 -0.1**
OHR Ohrid 33.93 305 *e*P **P** **14 27 03.3 -0.1**
OHR Ohrid 33.93 305 *e*P **P** **14 27 03.3 -0.2**
KMBO Kilima Mbogo 34.22 219 P **P** **14 27 07.2 +1.1**
KMBO *PP pP 14 27 20.0 +1.1
KMBO pmax pmax
comp=Z,1.0nm,0.6s
KMBO pmax pmax
comp=N,6.0nm,0.9s
KMBO MLR MLR
comp=Z,73nm,19.3s
KMBO Kilima Mbogo 34.22 219 P **P** **14 27 07.2 +1.0**
comp=Z,0.9nm,0.6s,mb3.9,baz=33,slow=17,SNR=3.2
KMBO pP pP 14 27 20.0 +1.1
comp=Z,6.0nm,0.9s,baz=32,slow=12,SNR=9.3
KMBO LR LR 14 41 30.9
comp=Z,73nm,19.3s,MS3.4,baz=100,slow=37
GRUS Gruza 34.72 309 P **P** **14 27 09.7 -0.5**
DIVS Divcibare 35.28 310 P **P** **14 27 14.7 -0.3**
KOLS Kolonicke sedl 35.55 318 *e*P **P** **14 27 17.9 +0.6**
FGSL Fruska Gora 35.72 311 P **P** **14 27 19.9 +1.1**
PRGR Permogore 35.97 350 *e*P **P** **14 27 11.9 -8.8**
PRGR *e*S **S** **14 32 48.9 -6.7**
PRGR *e*SS SS 14 35 11.7 -22
PRGR pmax pmax
comp=Z,4.0nm,0.3s,mb4.8
CRVS Cervenica-Dubn 36.03 318 *e*P **P** **14 27 20.8 -0.6**
STHS Stebnicka Huta 36.37 319 *e*P **P** **14 27 27.7 +3.4**
STHS *e* pP 14 27 41.1 +4.0
KECS Kecovo 36.45 317 *e*P **P** **14 27 25.0 0.0**
comp=Z,2.9nm,0.6s,mb4.4
KECS Kecovo 36.45 317 *e*P **P** **14 27 25.0 0.0**
KECS pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TIP Timpagrande 36.64 300 *e*P **P** **14 27 27.6 +0.9**
comp=Z,21nm,0.7s,mb5.1
TIP Timpagrande 36.64 300 *e*P **P** **14 27 27.6 +0.9**
comp=Z,21nm,0.7s,mb5.1
GTA Gaotai 36.83 59 P **P** **14 27 30.1 +1.8**
GTA AP pP 14 27 38.8 -2.4
GTA XP sP 14 27 42.5 -4.4
GTA PP PP 14 28 57.3 +4.5
GTA S **S** **14 33 12.4 +3.1**
GTA SS SS 14 35 44.5 -7.2
GTA AMB AMB
comp=Z,12nm,1.1s,mb4.6
GTA AMB AMB
comp=Z,82nm,4.9s
GTA LR LR
comp=N,149nm,16.7s,MS4.0
GTA LR LR
comp=E,112nm,14.4s,MS4.0
GTA LR LR
comp=Z,85nm,17.1s,MS3.6
VYHS Vyhne 37.47 316 *e*P **P** **14 27 33.8 +0.2**
VYHS *e*sP sP 14 27 46.2 -6.0
OJC Ojcow 37.56 319 *e*P **P** **14 27 34.1 -0.3**
MORC Moravsky Berou 38.73 318 *e*P **P** **14 27 43.4 -0.8**
CRES Cresnjev 38.85 311 *e*P **P** **14 27 45.9 +0.7**
BOJS Bojanci 38.91 310 *e*P **P** **14 27 46.4 +0.7**
BOJS *e* pP 14 27 59.0 +0.3
LJU Ljubljana 39.53 311 *e*P **P** **14 27 52.0 +1.0**
AQU L'Aquila 39.60 305 *e*P **P** **14 27 53.3 +1.7**
comp=Z,28nm,0.8s,mb5.0
AQU L'Aquila 39.60 305 *e*P **P** **14 27 53.3 +1.7**
AQU pmax pmax
comp=Z,28nm,0.8s,mb5.0
AQU L'Aquila 39.60 305 *e*P **P** **14 27 53.3 +1.7**
comp=Z,28nm,0.8s,mb5.0
DPC Dobruska-Polom 39.67 318 *e*P **P** **14 27 49.2 -2.8**
LZH Lanzhou 39.79 65 *e*P **P** **14 27 55.0 +1.7**
LZH AP pP 14 28 07.3 +1.1
LZH PP PP 14 29 31.3 +6.0
LZH *e*S **S** **14 33 54.5 +0.3**
LZH XS sS 14 34 15.3 -0.5
LZH SS SS 14 36 44.3 -7.1
LZH AMB AMB
comp=Z,23nm,1.3s,mb4.8
LZH AMB AMB
comp=Z,91nm,5.2s
LZH LR LR
comp=N,639nm,13.5s
LZH LR LR
comp=Z,983nm,16.6s,MS4.7
JAVS Javornik 39.81 311 *e*P **P** **14 27 53.4 +0.1**
CD2 Chengdu 39.96 73 *e*P **P** **14 27 54.4 -0.3**
CD2 AP pP 14 28 06.6 -1.1
CD2 XP sP 14 28 12.1 -1.3
CD2 PP PP 14 29 30.8 +3.6
CD2 S **S** **14 33 55.3 -1.4**
CD2 XS sS 14 34 15.9 -2.5
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CD2 AMB AMB
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,390nm,19.2s,MS4.4
CD2 LR LR
comp=E,270nm,15.6s,MS4.4
CD2 LR LR
comp=Z,140nm,12.0s,MS4.0
VOY Vojsko 39.96 311 *e*P **P** **14 27 54.8 +0.3**
VOY *e* pP 14 28 07.1 -0.3
KMI Kunming 39.96 82 P **P** **14 27 58.3 +3.5**
KMI AP pP 14 28 06.1 -1.7
KMI XP sP 14 28 10.8 -2.7
KMI PP PP 14 29 28.5 +1.1
KMI S **S** **14 33 56.9 0.0**
KMI XS sS 14 34 15.5 -3.1
KMI AMB AMB
comp=Z,7.0nm,0.7s,mb4.5
KMI AMB AMB
comp=Z,76nm,3.2s
KMI LR LR
comp=Z,46nm,22.6s,MS3.3
MOA Molln 40.17 314 ⇓*i* pP 14 28 09.2 0.0
comp=Z,14nm,0.8s
MOA Molln 40.17 314 ⇓*i*P **P** **14 27 56.0 -0.2**
comp=Z,5.6nm,0.9s,mb4.3
MOA *i* pP 14 28 09.2 0.0
MOA Molln 40.17 314 P **P** **14 27 56.0 -0.2**
comp=Z,5.6nm,0.9s,mb4.3
JOF Joensuu 40.34 341 *ep* **P** **14 27 56.4 -1.0**
comp=Z,7.6nm,0.5s,mb4.7
JOF Joensuu 40.34 341 *e*P **P** **14 27 56.4 -1.0**
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb4.7
KBA Koelnbreinsper 40.57 312 ⇓*i* pP 14 28 12.6 +0.1
comp=Z,16nm,0.8s
KBA Koelnbreinsper 40.57 312⇑*i*P **P** **14 27 59.8 +0.2**
comp=Z,2.8nm,0.7s,mb4.0
KBA *i* pP 14 28 12.6 +0.1
KBA Koelnbreinsper 40.57 312⇑*i*P **P** **14 27 59.8 +0.2**
KBA *i* pP 14 28 12.6 +0.1
KBA pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
KBA Koelnbreinsper 40.57 312⇑*i*P **P** **14 27 59.8 +0.2**
MOY Mondy 40.70 40 *e*P **P** **14 28 01.7 +1.1**
GEC2 GERESS Array S 40.81 315 *e*P **P** **14 28 01.2 -0.3**
GEC2 pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
GEC2 GERESS Array S 40.81 315 *e*P **P** **14 28 01.2 -0.3**
comp=Z,4.0nm,0.9s,mb4.0
GERES GERESS Array B 40.81 315 P **P** **14 28 01.0 -0.5**
GERES *PP pP 14 28 14.0 -0.4

GERES pmax pmax
comp=Z,2.0nm,0.6s
GERES pmax pmax
comp=N,3.0nm,0.6s
GERES MLR MLR
comp=Z,147nm,18.7s
GERES GERESS Array B 40.81 315 P **P** **14 28 01.0 -0.4**
comp=Z,1.6nm,0.6s,mb3.8,baz=81,slow=8.2,SNR=8.9
GERES pP pP 14 28 14.0 -0.4
comp=Z,3.3nm,0.6s,baz=115,slow=7.9,SNR=9.6
GERES LR LR 14 48 18.6
comp=Z,146nm,18.7s,MS3.9,baz=353,slow=41
FINES FINESS Array B 40.91 337 P **P** **14 28 02.2 0.0**
FINES pP pP 14 28 14.8 -0.3
FINES LR LR 14 46 50.9
FINES FINESS Array B 40.91 337 P **P** **14 28 02.2 +0.1**
FINES *PP pP 14 28 14.9 -0.2
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES pmax pmax
comp=N,4.0nm,0.5s
FINES MLR MLR
comp=Z,103nm,19.3s
FINES FINESS Array B 40.91 337 P **P** **14 28 02.2 0.0**
comp=Z,6.2nm,0.6s,mb4.4,baz=134,slow=9.2,SNR=43
FINES pP pP 14 28 14.8 -0.3
comp=Z,4.3nm,0.5s,baz=133,slow=11,SNR=5.3
FINES LR LR 14 46 50.9
comp=Z,103nm,19.3s,MS3.7,baz=322,slow=39
KHC Kasperske Hory 40.97 315 *eP* **P** **14 28 02.0 -0.8**
KHC *e* pP 14 28 10.5 -5.3
KHC Kasperske Hory 40.97 315 *eP* **P** **14 28 02.0 -0.8**
KHC pP pP 14 28 10.5 -5.3
KAF Kangasniemi 41.30 338 *ep* **P** **14 28 05.4 +0.1**
comp=Z,4.6nm,0.7s,mb4.2
KAF Kangasniemi 41.30 338 *eP* **P** **14 28 05.4 +0.1**
KAF pmax pmax
comp=Z,5.0nm,0.7s,mb4.2
ZAK Zakamensk 41.64 43 *eP* **P** **14 28 08.4 +0.1**
ZAK *e* pP 14 28 21.7 +0.4
ZAK *e* 14 29 45.9
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.7
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
WTTA Wattenberg 41.75 312 ⇓*i* pP 14 28 21.9 -0.3
comp=Z,25nm,0.6s
WTTA Wattenberg 41.75 312 ⇑*i* **P** **14 28 09.8 +0.6**
comp=Z,5.4nm,0.6s,mb4.3
WTTA *i* pP 14 28 21.9 -0.3
WTTA Wattenberg 41.75 312 ⇑*i* **P** **14 28 09.8 +0.5**
WTTA *i* pP 14 28 21.9 -0.3
WTTA pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
WTTA Wattenberg 41.75 312 ⇑*i* **P** **14 28 09.8 +0.5**
CLL Collm 41.97 318 *eP* **P** **14 28 11.0 0.0**
CLL *e* pP 14 28 25.0 +1.0
CLL Collm 41.97 318 *eP* **P** **14 28 11.0 0.0**
CLL *e*(sP) sP 14 28 25.0 -4.7
CLL *ex* x 14 28 37.0
CLL Collm 41.97 318 *eP* **P** **14 28 10.0 -1.0**
comp=Z,4.0nm,0.7s,mb4.2
ROTZ Rotzenmuhle 42.00 316 *eP* **P** **14 28 11.1 -0.2**
comp=Z,3.0nm,0.7s,mb4.0
SQTA Sankt Quirin 42.03 312 ⇑*iP* **P** **14 28 10.9 -0.6**
comp=Z,6.8nm,0.4s,mb4.6
SQTA Sankt Quirin 42.03 312 ⇓*i* pP 14 28 23.8 -0.7
comp=Z,30nm,0.5s
TLY Talaya 42.26 41 *eP* **P** **14 28 14.0 +0.7**
TLY *e* 14 34 40.1
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
VSL Villasalto 42.37 300 *eP* **P** **14 28 16.2 +1.8**
comp=Z,31nm,0.9s,mb4.9
KEST Kesra 42.37 295 P **P** **14 28 15.7 +1.2**
comp=Z,2.1nm,0.5s,mb4.0,baz=46,slow=1.5,SNR=5.3
GRA1 Grafenberg Arr 42.60 315 *eP* **P** **14 28 16.0 -0.1**
comp=Z,8.0nm,0.8s,mb4.5
GRF Grafenberg Arr 42.60 315 *eP* **P** **14 28 16.0 -0.1**
GRF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
GRF Grafenberg Arr 42.60 315 *eP* **P** **14 28 16.0 -0.1**
GRF pmax pmax
comp=Z,8.0nm,0.8s,mb4.5
GRF Grafenberg Arr 42.60 315 *eP* **P** **14 28 16.0 -0.1**
comp=Z,8.0nm,0.8s,mb4.5
PGF Pioggiola 42.86 305 *eP* **P** **14 28 17.4 -1.0**
comp=Z,28nm,1.0s,mb4.7
PGF Pioggiola 42.86 305 *eP* **P** **14 28 17.4 -1.0**
PGF pmax pmax
comp=Z,14nm,1.0s,mb4.7
PGF Pioggiola 42.86 305 *eP* **P** **14 28 17.4 -1.0**
comp=Z,14nm,1.0s,mb4.7
DAVA Damuels 42.92 312 ⇓*i* pP 14 28 31.2 -0.7
comp=Z,54nm,0.6s
DAVA Damuels 42.92 312 ⇑*iP* **P** **14 28 18.3 -0.5**
comp=Z,11nm,0.6s,mb4.8
DAVA *i* pP 14 28 31.2 -0.7
DAVA Damuels 42.92 312 P **P** **14 28 18.3 -0.5**
comp=Z,11nm,0.6s,mb4.8
SONM Songino Array 42.98 47 P **P** **14 28 20.2 +1.0**
SONM pP pP 14 28 32.8 +0.6
SONM sP sP 14 28 39.3 +1.4
SONM LR LR 14 48 41.7
SONM Songino Array 42.98 47 P **P** **14 28 20.2 +1.0**
SONM *PP pP 14 28 32.8 +0.6
SONM pmax pmax
comp=Z,5.0nm,0.7s
SONM pmax pmax
comp=N,5.0nm,0.8s
SONM pmax pmax
comp=N,8.0nm,0.9s
SONM MLR MLR
comp=Z,129nm,21.2s
SONM Songino Array 42.98 47 P **P** **14 28 20.2 +1.0**
comp=Z,4.9nm,0.7s,mb4.3,baz=257,slow=9.0,SNR=42
SONM pP pP 14 28 32.8 +0.6
comp=Z,4.7nm,0.8s,baz=260,slow=7.2,SNR=14
SONM sP sP 14 28 39.3 +1.4
comp=Z,7.6nm,0.9s,baz=255,slow=8.4,SNR=10
SONM LR LR 14 48 41.7
comp=Z,129nm,21.2s,MS3.8,baz=241,slow=40
SONM Songino Array 42.98 47 P **P** **14 28 20.2 +1.0**
comp=Z,5.0nm,0.7s,mb4.3
SONM pP pP 14 28 32.8 +0.6
GYA Guiyang 43.15 79 *eP* **P** **14 28 21.3 +0.4**
GYA AP pP 14 28 33.8 -0.2
GYA XP sP 14 28 38.5 -1.2
GYA PP PP 14 30 04.4 +2.6
GYA PCP PcP 14 30 12.8 +2.9
GYA SCP ScP 14 33 58.5 +1.3
GYA S **S** **14 34 44.0 -0.1**
GYA XS sS 14 35 04.5 -1.5
GYA SCS ScS 14 38 16.3 -1.0
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,120nm,5.2s
GYA LR LR
comp=N,440nm,19.6s,MS4.5
GYA LR LR
comp=E,460nm,18.4s,MS4.5
GYA LR LR
comp=Z,490nm,18.9s,MS4.4
ULN Ulaanbaatar 43.42 48 *eP* **P** **14 28 23.5 +0.7**
comp=Z,17nm,1.2s,mb4.7
ULN Ulaanbaatar 43.42 48 ⇑*eP* **P** **14 28 23.1 +0.3**
ULN Ulaanbaatar 43.42 48 P **P** **14 28 23.6 +0.9**
SNR=7.9
ULN Ulaanbaatar 43.42 48 P **P** **14 28 23.6 +0.9**
SNR=7.9
ULN Ulaanbaatar 43.42 48 *eP* **P** **14 28 23.5 +0.7**
comp=Z,17nm,1.2s,mb4.7
CLZ Clausthal 43.70 318 *eP* **P** **14 28 25.3 +0.3**
CLZ pmax pmax
comp=Z,11nm,1.0s,mb4.5
CLZ Clausthal 43.70 318 *eP* **P** **14 28 25.3 +0.3**
comp=Z,11nm,1.0s,mb4.5
XAN Xi'an 44.03 68 P **P** **14 28 28.8 +0.9**
XAN AP pP 14 28 39.3 -1.7
XAN AMB AMB
comp=Z,5.0nm,1.1s,mb4.2
SBF Sospel 44.13 306 *eP* **P** **14 28 27.9 -0.6**
comp=Z,48nm,0.8s,mb5.0
SBF *epP* pP 14 28 41.5 -0.1
SBF Sospel 44.13 306 *eP* **P** **14 28 27.9 -0.6**
SBF *e**PP pP 14 28 41.5 -0.1
SBF pmax pmax
comp=Z,24nm,0.8s,mb5.0
SBF Sospel 44.13 306 *eP* **P** **14 28 27.9 -0.6**
comp=Z,24nm,0.8s,mb5.0
SBF *epP* pP 14 28 41.5 -0.1
TNS Taunus Mts 44.47 316 *eP* **P** **14 28 31.4 +0.2**
TNS pmax pmax
comp=Z,8.0nm,1.3s,mb4.3
TNS Taunus Mts 44.47 316 *eP* **P** **14 28 31.4 +0.2**
comp=Z,8.0nm,1.3s,mb4.3
MBDF Montbardon 44.69 308 *eP* **P** **14 28 32.8 -0.2**
comp=Z,15nm,0.6s,mb4.7
MBDF Montbardon 44.69 308 *eP* **P** **14 28 32.8 -0.2**
MBDF pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
MBDF Montbardon 44.69 308 *eP* **P** **14 28 32.8 -0.2**
comp=Z,7.4nm,0.6s,mb4.7
BTO Baotou 44.73 58 *eP* **P** **14 28 34.1 +0.7**
LPG La Plagne 44.79 309 *eP* **P** **14 28 33.1 -0.7**
comp=Z,22nm,0.9s,mb4.7
LPG La Plagne 44.79 309 *eP* **P** **14 28 33.1 -0.7**
LPG pmax pmax
comp=Z,11nm,0.9s,mb4.7
LPG La Plagne 44.79 309 *eP* **P** **14 28 33.1 -0.7**
comp=Z,11nm,0.9s,mb4.7
BNI Bardonecchia 44.79 308 *eP* **P** **14 28 33.4 -0.4**
comp=Z,21nm,0.9s,mb5.0
BNI Bardonecchia 44.79 308 *eP* **P** **14 28 33.4 -0.4**
BNI pmax pmax
comp=Z,21nm,0.9s,mb5.0
BNI Bardonecchia 44.79 308 *eP* **P** **14 28 33.4 -0.4**
comp=Z,21nm,0.9s,mb5.0
LPL La Plagne 44.80 309 *eP* **P** **14 28 33.1 -0.8**
comp=Z,18nm,0.6s,mb4.8
LPL La Plagne 44.80 309 *eP* **P** **14 28 33.1 -0.8**
LPL pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
LPL La Plagne 44.80 309 *eP* **P** **14 28 33.1 -0.8**
comp=Z,8.8nm,0.6s,mb4.8
HINF Hinteralfeld 45.04 312 *eP* **P** **14 28 34.3 -1.4**
CABF La Chapelle 45.38 310 *eP* **P** **14 28 37.8 -0.7**
comp=Z,9.5nm,0.4s,mb4.7
CABF *epP* pP 14 28 51.4 -0.2
CABF La Chapelle 45.38 310 *eP* **P** **14 28 37.8 -0.7**
comp=Z,4.8nm,0.4s,mb4.7
CABF *epP* pP 14 28 51.4 -0.2
HAU Haudompre 45.40 312 *eP* **P** **14 28 37.1 -1.5**
HAU *epP* pP 14 28 50.6 -1.1
HAU *e*MLR MLR
comp=Z,117nm,17.5s,MS3.6
HAU Haudompre 45.40 312 *eP* **P** **14 28 37.1 -1.5**
HAU *e**PP pP 14 28 50.6 -1.1
HAU MLR MLR
comp=Z,120nm,17.5s,MS3.9
PSI Prapat 45.67 114 LR LR 14 48 06.0
comp=Z,75nm,18.0s,MS3.7,baz=28,slow=36
HHC Hu-ho-hao-te 45.91 58 *eP* **P** **14 28 44.9 +2.1**
HHC AP pP 14 28 57.1 +1.2
HHC PCP PcP 14 30 22.8 +3.7
HHC PP PP 14 30 32.3 +1.4
HHC PCS PcS 14 34 16.3 +2.9
HHC eS **S** **14 35 23.4 -0.4**
HHC XS sS 14 35 44.9 -0.9
HHC SCS ScS 14 38 34.0 -0.4
HHC SS SS 14 38 38.9 -10
HHC AMB AMB
comp=Z,18nm,0.9s,mb5.0
HHC AMB AMB
comp=Z,120nm,5.1s
HHC LR LR
comp=N,165nm,15.5s,MS4.4
HHC LR LR
comp=E,201nm,10.7s,MS4.4
HHC LR LR
comp=Z,137nm,14.3s,MS4.0
VIVF Saint-Julien-l 46.19 308 *eP* **P** **14 28 43.4 -1.5**
comp=Z,24nm,0.9s,mb4.8
VIVF Saint-Julien-l 46.19 308 *eP* **P** **14 28 43.4 -1.5**
VIVF pmax pmax
comp=Z,12nm,0.9s,mb4.8
VIVF Saint-Julien-l 46.19 308 *eP* **P** **14 28 43.4 -1.5**
comp=Z,12nm,0.9s,mb4.8
NB2 NORSAR Subarra 46.59 331 P **P** **14 28 46.6 -1.2**
comp=Z,2.7nm,0.6s,mb4.3,baz=112,slow=8.6
NB2 NORSAR Subarra 46.59 331 P **P** **14 28 46.6 -1.2**
NB2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
NOA NORSAR Array B 46.59 331 P **P** **14 28 47.0 -0.8**
NOA pP pP 14 29 00.5 -0.5
NOA LR LR 14 50 06.3
NOA NORSAR Array B 46.59 331 P **P** **14 28 47.0 -0.8**
NOA *PP pP 14 29 00.5 -0.4
NOA pmax pmax
comp=Z,3.0nm,0.6s
NOA pmax pmax
comp=N,3.0nm,0.7s
NOA MLR MLR
comp=Z,79nm,18.3s
NOA NORSAR Array B 46.59 331 P **P** **14 28 47.0 -0.8**
comp=Z,2.8nm,0.6s,mb4.4,baz=114,slow=7.9,SNR=10
NOA pP pP 14 29 00.5 -0.5
comp=Z,2.9nm,0.7s,baz=115,slow=7.9,SNR=6.1
NOA LR LR 14 50 06.3
comp=Z,79nm,18.3s,MS3.7,baz=135,slow=38
LASF Ste Croix 46.72 306 *eP* **P** **14 28 47.9 -1.1**
comp=Z,27nm,0.7s,mb5.0
LASF Ste Croix 46.72 306 *eP* **P** **14 28 47.9 -1.1**
comp=Z,14nm,0.7s,mb5.0
KEV Kevo 46.76 346 *ep* **P** **14 28 47.4 -1.6**
comp=Z,18nm,0.9s,mb5.0
KEV Kevo 46.76 346 *eP* **P** **14 28 47.4 -1.6**
KEV pmax pmax
comp=Z,18nm,0.9s,mb5.0
SMF Signal de Mont 46.92 310 *eP* **P** **14 28 49.6 -1.0**
comp=Z,16nm,0.5s,mb4.9
SMF *epP* pP 14 29 03.3 -0.5
SMF Signal de Mont 46.92 310 *eP* **P** **14 28 49.6 -1.0**
SMF *e**PP pP 14 29 03.3 -0.5
SMF pmax pmax
comp=Z,8.0nm,0.5s,mb4.9
SMF Signal de Mont 46.92 310 *eP* **P** **14 28 49.6 -1.0**
comp=Z,8.1nm,0.5s,mb4.9
SMF *epP* pP 14 29 03.3 -0.5
ARCES ARCESS Array B 46.94 345 P **P** **14 28 48.8 -1.5**
ARCES pmax pmax
comp=Z,3.0nm,0.5s
ARCES ARCESS Array B 46.94 345 P **P** **14 28 48.8 -1.6**
comp=Z,3.4nm,0.5s,mb4.5,baz=137,slow=7.2,SNR=29
LOR Lormes 46.98 311 *eP* **P** **14 28 49.9 -1.1**
comp=Z,12nm,0.6s,mb4.7
LOR *epP* pP 14 29 03.5 -0.7
LOR *e*MLR MLR
comp=Z,151nm,17.2s,MS3.7
LOR Lormes 46.98 311 *eP* **P** **14 28 49.9 -1.1**
comp=Z,5.8nm,0.6s,mb4.7
LOR *epP* pP 14 29 03.5 -0.7
LOR LR LR
comp=Z,150nm,17.3s,MS4.0
LOR Lormes 46.98 311 *eP* **P** **14 28 49.9 -1.1**
LOR *e**PP pP 14 29 03.5 -0.7
LOR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LOR MLR MLR
comp=Z,150nm,17.3s,MS4.0
LOR Lormes 46.98 311 *eP* **P** **14 28 49.9 -1.1**
comp=Z,5.8nm,0.6s,mb4.7
LOR *epP* pP 14 29 03.5 -0.7
BAIF Baives 47.11 315 *eP* **P** **14 28 51.1 -0.9**
comp=Z,29nm,1.1s,mb4.8
BAIF Baives 47.11 315 *eP* **P** **14 28 51.1 -0.9**
BAIF pmax pmax
comp=Z,14nm,1.1s,mb4.8
BAIF Baives 47.11 315 *eP* **P** **14 28 51.1 -0.9**
comp=Z,14nm,1.1s,mb4.8
SSF Saint Saulge 47.19 311 *eP* **P** **14 28 51.9 -0.8**
comp=Z,22nm,0.6s,mb5.0
SSF *epP* pP 14 29 05.4 -0.5
SSF Saint Saulge 47.19 311 *eP* **P** **14 28 51.9 -0.8**
SSF *e**PP pP 14 29 05.4 -0.5
SSF pmax pmax
comp=Z,11nm,0.6s,mb5.0
SSF Saint Saulge 47.19 311 *eP* **P** **14 28 51.9 -0.8**
comp=Z,11nm,0.6s,mb5.0
SSF *epP* pP 14 29 05.4 -0.5
AVF Avril sur Loir 47.27 310 *eP* **P** **14 28 52.2 -1.1**
comp=Z,6.4nm,0.5s,mb4.5
AVF Avril sur Loir 47.27 310 *eP* **P** **14 28 52.2 -1.1**
AVF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
AVF Avril sur Loir 47.27 310 *eP* **P** **14 28 52.2 -1.1**
comp=Z,3.2nm,0.5s,mb4.5
ETOS Mallorca 47.44 301 P **P** **14 28 55.9 +1.1**
comp=Z,24nm,0.6s,mb5.3
ETOS Mallorca 47.44 301 P **P** **14 28 55.8 +1.1**
comp=Z,24nm,0.6s,mb5.3
BGF Bois d'Agland 47.60 310 *eP* **P** **14 28 55.0 -0.9**
comp=Z,20nm,0.7s,mb5.0
BGF *epP* pP 14 29 08.6 -0.5
BGF Bois d'Agland 47.60 310 *eP* **P** **14 28 55.0 -0.9**
BGF *e**PP pP 14 29 08.6 -0.5
BGF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
BGF Bois d'Agland 47.60 310 *eP* **P** **14 28 55.0 -0.9**
comp=Z,10nm,0.7s,mb5.0
BGF *epP* pP 14 29 08.6 -0.5
MTLF Montolieu 47.88 305 *eP* **P** **14 28 57.7 -0.4**
comp=Z,33nm,0.8s,mb5.1
MTLF *epP* pP 14 29 11.2 -0.1
MTLF Montolieu 47.88 305 *eP* **P** **14 28 57.7 -0.4**
MTLF *e**PP pP 14 29 11.2 -0.1
MTLF pmax pmax
comp=Z,17nm,0.8s,mb5.1
MTLF Montolieu 47.88 305 *eP* **P** **14 28 57.7 -0.4**
comp=Z,17nm,0.8s,mb5.1
MTLF *epP* pP 14 29 11.2 -0.1
TCF Toulx Ste Croi 48.02 309 *eP* **P** **14 28 58.4 -0.7**
comp=Z,7.6nm,0.5s,mb4.7
TCF *epP* pP 14 29 12.0 -0.3
TCF Toulx Ste Croi 48.02 309 *eP* **P** **14 28 58.4 -0.7**
TCF *e**PP pP 14 29 12.0 -0.3
TCF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
TCF Toulx Ste Croi 48.02 309 *eP* **P** **14 28 58.4 -0.7**
comp=Z,3.8nm,0.5s,mb4.7
TCF *epP* pP 14 29 12.0 -0.3
CAF Calviac 48.04 308 *eP* **P** **14 28 58.8 -0.5**
comp=Z,15nm,0.6s,mb4.9
CAF *epP* pP 14 29 12.3 -0.2
CAF Calviac 48.04 308 *eP* **P** **14 28 58.8 -0.5**
CAF *e**PP pP 14 29 12.3 -0.2
CAF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
CAF Calviac 48.04 308 *eP* **P** **14 28 58.8 -0.5**
comp=Z,7.5nm,0.6s,mb4.9
CAF *epP* pP 14 29 12.3 -0.2
EMIR Miracle 48.38 303 P **P** **14 29 03.2 +1.2**
comp=Z,35nm,0.7s,mb5.5
EMIR Miracle 48.38 303 P **P** **14 29 03.2 +1.2**
comp=Z,35nm,0.7s,mb5.5
RJF Les Rejaudoux 48.45 308 *eP* **P** **14 29 02.1 -0.3**
comp=Z,14nm,0.5s,mb4.9
RJF *e*MLR MLR
comp=Z,138nm,18.2s,MS3.7
RJF Les Rejaudoux 48.45 308 *eP* **P** **14 29 02.1 -0.3**
comp=Z,6.8nm,0.5s,mb4.9
RJF LR LR
comp=Z,140nm,18.3s,MS4.0
RJF Les Rejaudoux 48.45 308 *eP* **P** **14 29 02.1 -0.3**
RJF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
RJF MLR MLR
comp=Z,140nm,18.3s,MS4.0
EIBI Ibiza 48.61 300 P **P** **14 29 04.1 +0.3**
comp=Z,29nm,0.7s,mb5.4
EIBI Ibiza 48.61 300 P **P** **14 29 04.1 +0.3**
comp=Z,29nm,0.7s,mb5.4
EPOB Poblet 48.72 303 P **P** **14 29 05.2 +0.6**
comp=Z,26nm,1.0s,mb5.2
EPOB Poblet 48.72 303 P **P** **14 29 05.2 +0.6**
comp=Z,26nm,1.0s,mb5.2
LFF La Frestale 48.98 307 *eP* **P** **14 29 06.2 -0.4**
comp=Z,32nm,0.7s,mb5.2
LFF La Frestale 48.98 307 *eP* **P** **14 29 06.2 -0.4**
LFF pmax pmax
comp=Z,16nm,0.6s,mb5.2
LFF La Frestale 48.98 307 *eP* **P** **14 29 06.2 -0.4**
comp=Z,16nm,0.7s,mb5.2
WHN Wuhan 49.04 72 *eP* **P** **14 29 07.0 -0.2**
WHN AP pP 14 29 20.5 +0.1
EPF Esparros 49.25 305 *eP* **P** **14 29 06.9 -1.7**
comp=Z,5.6nm,0.6s,mb4.5
EPF Esparros 49.25 305 *eP* **P** **14 29 06.9 -1.7**
EPF pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
EPF Esparros 49.25 305 *eP* **P** **14 29 06.9 -1.7**
comp=Z,2.8nm,0.6s,mb4.5
ERTA Horta de San J 49.30 302 P **P** **14 29 09.7 +0.7**
comp=Z,20nm,3.0s
ERTA Horta de San J 49.30 302 P **P** **14 29 09.7 +0.7**
comp=Z,20nm,3.0s
BJI Beijing 49.44 59 P **P** **14 29 10.4 +0.2**
BJI S **S** **14 36 24.8 +11**
BJI AMB AMB
comp=Z,8.0nm,1.0s,mb4.7
BJI LR LR
comp=N,95nm,10.6s,MS4.3
BJI LR LR
comp=E,123nm,10.0s,MS4.3
BJI LR LR
comp=Z,43nm,30.7s
MFF Saint Martin d 49.66 310 *eP* **P** **14 29 10.6 -1.1**
MFF *epP* pP 14 29 24.1 -0.9
BOD Bodaibo 49.75 35 ⇓*iP* **P** **14 29 11.4 -0.8**
BOD pmax pmax
comp=Z,32nm,0.7s,mb5.5
LDF La Druitiere 49.76 312 *eP* **P** **14 29 11.3 -1.1**
comp=Z,16nm,0.6s,mb4.9
LDF La Druitiere 49.76 312 *eP* **P** **14 29 11.3 -1.1**
LDF pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
LDF La Druitiere 49.76 312 *eP* **P** **14 29 11.3 -1.1**
comp=Z,7.8nm,0.6s,mb4.9
EBEN Beniarda 49.85 299 P **P** **14 29 14.0 +0.7**
comp=Z,12nm,1.2s,mb4.8
EBEN Beniarda 49.85 299 P **P** **14 29 14.0 +0.7**
comp=Z,12nm,1.2s,mb4.8
ESAC San Caprasio 49.87 303 P **P** **14 29 14.2 +0.8**
comp=Z,30nm,0.7s,mb5.4
ESAC San Caprasio 49.87 303 P **P** **14 29 14.2 +0.8**
comp=Z,30nm,0.7s,mb5.4
ETSF Etsaut 49.91 305 *eP* **P** **14 29 13.4 -0.3**
comp=Z,20nm,0.6s,mb5.0
ETSF Etsaut 49.91 305 *eP* **P** **14 29 13.4 -0.3**
ETSF pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
ETSF Etsaut 49.91 305 *eP* **P** **14 29 13.4 -0.3**
comp=Z,10nm,0.6s,mb5.0
EMOS Mosqueruela 49.93 301 P **P** **14 29 15.4 +1.5**
comp=Z,18nm,0.7s,mb5.2
FLN La Foliniere 50.01 312 *eP* **P** **14 29 13.3 -1.0**
comp=Z,26nm,0.9s,mb5.0
FLN *epP* pP 14 29 26.9 -0.7
FLN *e*MLR MLR
comp=Z,97nm,17.5s,MS3.6
FLN La Foliniere 50.01 312 *eP* **P** **14 29 13.3 -1.0**
comp=Z,13nm,0.9s,mb5.0
FLN *epP* pP 14 29 26.9 -0.7
FLN LR LR
comp=Z,100nm,17.5s,MS3.9
FLN La Foliniere 50.01 312 *eP* **P** **14 29 13.3 -1.0**
FLN *e**PP pP 14 29 26.9 -0.7
FLN pmax pmax
comp=Z,13nm,0.9s,mb5.0
FLN MLR MLR
comp=Z,100nm,17.5s,MS3.9
FLN La Foliniere 50.01 312 *eP* **P** **14 29 13.3 -1.0**
comp=Z,13nm,0.9s,mb5.0
FLN *epP* pP 14 29 26.9 -0.7
ECHE Chera 50.36 301 P **P** **14 29 16.8 -0.3**
SJPF Ste Jean 50.39 305 *eP* **P** **14 29 17.2 -0.1**
comp=Z,25nm,0.6s,mb5.1
SJPF *epP* pP 14 29 30.7 +0.1
SJPF Ste Jean 50.39 305 *eP* **P** **14 29 17.2 -0.1**
SJPF *e**PP pP 14 29 30.7 +0.1
SJPF pmax pmax
comp=Z,12nm,0.6s,mb5.1
SJPF Ste Jean 50.39 305 *eP* **P** **14 29 17.2 -0.1**
comp=Z,12nm,0.6s,mb5.1
SJPF *epP* pP 14 29 30.7 +0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ETOB	Tobarra	50.89	299	P	P	14 29 22.1	+1.0
	comp=Z,16nm,0.6s,mb5.1						
ETOB	Tobarra	50.89	299	P	P	14 29 22.1	+1.0
	comp=Z,16nm,0.6s,mb5.1						
ETOR	Torete	51.11	302	P	P	14 29 23.4	+0.7
	comp=Z,8.8nm,0.5s,mb5.0						
ETOR	Torete	51.11	302	P	P	14 29 23.4	+0.6
ETOR				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
ETOR	Torete	51.11	302	P	P	14 29 23.4	+0.6
	comp=Z,8.8nm,0.5s,mb5.0						
ECRI	Cripan	51.35	304	P	P	14 29 24.8	+0.2
	comp=Z,207nm,2.8s,mb5.6						
ECRI	Cripan	51.35	304	P	P	14 29 24.8	+0.2
ECRI				pmax	pmax		
	comp=Z,207nm,2.8s,mb5.6						
ECRI	Cripan	51.35	304	P	P	14 29 24.8	+0.2
	comp=Z,207nm,2.8s,mb5.6						
SGMF	Saint Gilles	51.36	312	*e*P	P	14 29 23.8	-0.7
SGMF				*e*pP	pP	14 29 37.5	-0.3
EVIA	Vianos	51.63	299	P	P	14 29 27.8	+1.2
	comp=Z,28nm,0.6s,mb5.4						
EVIA	Vianos	51.63	299	P	P	14 29 27.8	+1.1
EVIA				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.4						
EVIA	Vianos	51.63	299	P	P	14 29 27.8	+1.1
	comp=Z,28nm,0.6s,mb5.4						
QUIF	Quistinic	51.76	311	*e*P	P	14 29 26.6	-0.9
ROSF	Rostrenen	51.84	312	*e*P	P	14 29 27.3	-0.8
ROSF				*e*pP	pP	14 29 41.0	-0.4
HIA	Hailar	51.94	47	*e*P	P	14 29 29.4	+0.6
	comp=Z,3.4nm,0.5s,mb4.5						
HIA	Hailar	51.94	47	*e*P	P	14 29 29.4	+0.6
HIA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HIA	Hailar	51.94	47	*e*P	P	14 29 29.4	+0.6
	comp=Z,3.4nm,0.5s,mb4.5						
ELAN	Lanestosa	52.00	305	P	P	14 29 28.9	-0.5
	comp=Z,8.0nm,0.6s,mb4.8						
ELAN	Lanestosa	52.00	305	P	P	14 29 28.9	-0.5
	comp=Z,8.0nm,0.6s,mb4.8						
EBER	Berja	52.13	297	P	P	14 29 29.7	-0.7
	comp=Z,56nm,1.7s,mb5.2						
EBER	Berja	52.13	297	P	P	14 29 29.7	-0.7
	comp=Z,56nm,1.7s,mb5.2						
EQES	Quesada	52.16	298	P	P	14 29 30.7	0.0
	comp=Z,17nm,0.6s,mb5.1						
EQES	Quesada	52.16	298	P	P	14 29 30.7	0.0
	comp=Z,17nm,0.6s,mb5.1						
EALB	Alboran	52.37	296	P	P	14 29 30.5	-1.8
	comp=Z,105nm,2.3s,mb5.4						
EALB	Alboran	52.37	296	P	P	14 29 30.5	-1.8
	comp=Z,105nm,2.3s,mb5.4						
NJ2	Nanjing	52.56	69	*e*P	P	14 29 34.9	+1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
ECOG	Cogollos-Vega	52.62	298	P	P	14 29 32.9	-1.2
	comp=Z,14nm,0.8s,mb5.0						
ECOG	Cogollos-Vega	52.62	298	P	P	14 29 32.9	-1.2
ECOG				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
ECOG	Cogollos-Vega	52.62	298	P	P	14 29 32.9	-1.2
	comp=Z,14nm,0.8s,mb5.0						
ESDC	Sonseca Array	52.66	301	P	P	14 29 34.6	+0.3
	comp=Z,3.5nm,0.5s,mb4.5						
ESDC	Sonseca Array	52.66	301	P	P	14 29 34.6	+0.3
	comp=Z,5.9nm,0.6s,mb4.7,baz=69,slow=7.5,SNR=25						
ESDC				pP	pP	14 29 47.4	-0.2
	comp=Z,3.0nm,0.6s,baz=77,slow=7.0,SNR=5.9						
ESLA	Sonseca Array	52.66	301	*e*P	P	14 29 34.2	-0.1
	comp=Z,1.1nm,0.6s,mb4.0						
ESLA	Sonseca Array	52.66	301	*e*P	P	14 29 34.2	-0.1
	comp=Z,1.1nm,0.6s,mb4.0						
EGUA	Guajares	52.68	297	P	P	14 29 34.5	0.0
	comp=Z,3.5nm,0.5s,mb4.5						
EGUA	Guajares	52.68	297	P	P	14 29 34.5	0.0
EGUA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
EGUA	Guajares	52.68	297	P	P	14 29 34.5	0.0
	comp=Z,3.5nm,0.5s,mb4.5						
EBAN	Banos Encina	52.68	299	P	P	14 29 35.0	+0.4
	comp=Z,34nm,0.6s,mb5.5						
EBAN	Banos Encina	52.68	299	P	P	14 29 35.0	+0.5
EBAN				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.5						
EBAN	Banos Encina	52.68	299	P	P	14 29 35.0	+0.5
	comp=Z,34nm,0.6s,mb5.5						
GUD	Guadarrama	52.71	302	P	P	14 29 34.9	+0.2
	comp=Z,5.3nm,0.7s,mb4.6						
GUD	Guadarrama	52.71	302	P	P	14 29 34.9	+0.2
GUD				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
GUD	Guadarrama	52.71	302	P	P	14 29 34.9	+0.2
	comp=Z,5.3nm,0.7s,mb4.6						
ERON	Agron	52.84	298	P	P	14 29 35.8	+0.1
	comp=Z,13nm,0.5s,mb5.1						
ERON	Agron	52.84	298	P	P	14 29 35.8	+0.1
	comp=Z,13nm,0.5s,mb5.1						
PAB	San Pablo	52.97	301	*e*P	P	14 29 37.0	+0.4
	comp=Z,13nm,0.7s,mb5.0						
PAB	San Pablo	52.97	301	*e*P	P	14 29 37.0	+0.4
PAB				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
PAB	San Pablo	52.97	301	*e*P	P	14 29 37.0	+0.4
	comp=Z,13nm,0.7s,mb5.0						
ELOJ	Sierra Loja	53.10	298	P	P	14 29 37.0	-0.6
	comp=Z,8.2nm,0.6s,mb4.8						
ELOJ	Sierra Loja	53.10	298	P	P	14 29 37.0	-0.6
ELOJ				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
ELOJ	Sierra Loja	53.10	298	P	P	14 29 37.0	-0.6
	comp=Z,8.2nm,0.6s,mb4.8						
ELUQ	Luque	53.14	298	P	P	14 29 37.3	-0.5
	comp=Z,14nm,0.5s,mb5.1						
ELUQ	Luque	53.14	298	P	P	14 29 37.3	-0.6
ELUQ				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
ELUQ	Luque	53.14	298	P	P	14 29 37.3	-0.6
	comp=Z,14nm,0.5s,mb5.1						
EARI	Arriondas	53.30	305	P	P	14 29 39.1	+0.2
	comp=Z,7.4nm,0.6s,mb4.8						
EARI	Arriondas	53.30	305	P	P	14 29 39.1	+0.2
	comp=Z,7.4nm,0.6s,mb4.8						
EADA	Adamuz	53.30	299	P	P	14 29 39.1	+0.1
	comp=Z,28nm,0.9s,mb5.2						
EADA	Adamuz	53.30	299	P	P	14 29 39.2	+0.1
	comp=Z,28nm,0.9s,mb5.2						
EMIJ	Mijas	53.67	297	P	P	14 29 41.0	-0.8
	comp=Z,16nm,0.6s,mb5.1						
EMIJ	Mijas	53.67	297	P	P	14 29 41.0	-0.8
	comp=Z,16nm,0.6s,mb5.1						
ZFT	Errachidia	54.11	292	*i* P	P	14 29 46.5	+1.4
TORD	Torodi Ar. Bea	54.40	267	P	P	14 29 46.9	-0.5
TORD				LR	LR	14 55 19.9	
TORD	Torodi Ar. Bea	54.40	267	P	P	14 29 46.9	-0.4
	comp=Z,18nm,0.5s,mb5.3,baz=64,slow=7.2,SNR=287						
TORD				LR	LR	14 55 19.9	
	comp=Z,87nm,18.2s,MS3.9,baz=75,slow=38						
ESPR	Espera	54.49	298	P	P	14 29 46.6	-1.1
	comp=Z,19nm,0.6s,mb5.2						
ESPR	Espera	54.49	298	P	P	14 29 46.6	-1.2
	comp=Z,19nm,0.6s,mb5.2						
PBRG	Braganca	54.55	304	*e*P	P	14 29 48.9	+0.8
	comp=Z,5.5nm,0.7s,mb4.7						
MVO	Moncorvo	54.83	303	*e*P	P	14 29 51.3	+1.1
	comp=Z,24nm,1.1s,mb5.2						
EMIN	Mina Concepcio	55.00	299	P	P	14 29 51.7	+0.3
	comp=Z,14nm,1.3s,mb4.8						
EMIN	Mina Concepcio	55.00	299	P	P	14 29 51.7	+0.3
	comp=Z,14nm,1.3s,mb4.8						
EBAD	Badajoz	55.12	300	P	P	14 29 51.8	-0.6
	comp=Z,7.6nm,0.7s,mb4.8						
EBAD	Badajoz	55.12	300	P	P	14 29 51.8	-0.5
	comp=Z,7.6nm,0.7s,mb4.8						
PBAR	Barrancos	55.22	299	*e*P	P	14 29 53.2	+0.1
	comp=Z,40nm,1.4s,mb5.3						
PCBR	Castelo Branco	55.33	301	*e*P	P	14 29 54.4	+0.6
	comp=Z,28nm,1.3s,mb5.1						
PVRL	Vila Real	55.33	303	*e*P	P	14 29 55.0	+1.2
	comp=Z,31nm,1.5s,mb5.1						
ELOB	Lobios	55.52	304	P	P	14 29 56.6	+1.4
	comp=Z,3.9nm,0.5s,mb4.7						
ELOB	Lobios	55.52	304	P	P	14 29 56.6	+1.5
	comp=Z,3.9nm,0.5s,mb4.7						
PVIS	Viseu	55.53	303	*e*P	P	14 29 56.9	+1.7
	comp=Z,21nm,1.4s,mb5.0						
PESTR	Estremoz	55.55	300	*e*P	P	14 29 55.5	+0.1
	comp=Z,18nm,1.5s,mb4.9						
PBEJ	Beja	55.89	299	*e*P	P	14 29 58.2	+0.3
	comp=Z,12nm,1.6s,mb4.7						
EVO	Evora	55.93	300	*e*P	P	14 29 57.9	-0.2
	comp=Z,18nm,0.9s,mb4.8						
EVO				*e*MLR	MLR		
	comp=Z,77nm,20.0s,MS3.5						
EVOP	Sao Brissos	56.02	300	*e*P	P	14 29 57.9	-0.8
	comp=Z,8.8nm,0.9s,mb4.8						
CN2	Changchun	56.06	54	*e*P	P	14 29 59.8	+0.8
CN2				*e*S	S	14 37 42.0	-2.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,17.0s,MS4.6						
PBDV	Barranco-do-Ve	56.07	298	*e*P	P	14 29 59.3	+0.2
	comp=Z,20nm,1.1s,mb5.1						
MORF	Marmelete	56.62	299	*e*P	P	14 30 03.5	+0.4
	comp=Z,42nm,1.5s,mb5.2						
PFVI	Vila Bisbo	56.79	298	*e*P	P	14 30 03.4	-0.9
	comp=Z,92nm,1.2s,mb5.7						
YAK	Yakutsk	58.16	32	*e*P	P	14 30 12.4	-1.0
	comp=Z,36nm,0.9s,mb5.4						
YAK	Yakutsk	58.16	32*c*	*i*P	P	14 30 12.1	-1.4
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.3						
YAK				pmax	pmax		
	comp=E,12nm,1.5s						
YAK	Yakutsk	58.16	32	*e*P	P	14 30 12.4	-1.1
	comp=E,36nm,0.9s,mb5.4						
TIXI	Tiksi	58.85	20	*e*P	P	14 30 17.1	-1.1
	comp=E,3.8nm,0.7s,mb4.5						
TIXI	Tiksi	58.85	20	*e*P	P	14 30 16.4	-1.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
TIXI	Tiksi	58.85	20	*e*P	P	14 30 17.1	-1.1
	comp=Z,3.8nm,0.7s,mb4.5						
KSRS	Korea Array	58.87	61	P	P	14 30 18.9	0.0
	comp=Z,3.0nm,0.8s,mb4.4,baz=276,slow=7.5,SNR=12						
KSRS				pP	pP	14 30 31.4	-1.0
	comp=Z,6.8nm,0.8s,baz=276,slow=7.2,SNR=17						
KSRS				sP	sP	14 30 37.8	-0.2
	comp=Z,4.0nm,0.8s,baz=278,slow=7.5,SNR=5.6						
KSRS				LR	LR	14 59 02.1	
	comp=Z,45nm,20.1s,MS3.6,baz=99,slow=39						
KLR	Kul'dur	59.80	47	*e*P	P	14 30 21.2	-3.8
HABR	Khabarovsk	62.06	47	*e*P	P	14 30 39.0	-1.4
HABR				*e*		14 32 54.4	
HABR				*e*S	S	14 39 01.3	-0.3
HABR				*e**SS	sS	14 39 23.7	-0.8
DBIC	Dimbokro	62.97	264	P	P	14 30 46.4	-0.6
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DBIC	Dimbokro	62.97	264	P	P	14 30 46.4	-0.7
	comp=Z,4.2nm,0.6s,mb4.7,baz=44,slow=7.1,SNR=11						
DBIC	Dimbokro	62.97	264	P	P	14 30 46.3	-0.7
LIC	Lamto	63.32	263	*e*P	P	14 30 49.1	-0.2
	comp=Z,12nm,0.6s,mb4.8						
LIC				*e*MLR	MLR		
	comp=Z,96nm,18.8s,MS3.7						
LIC	Lamto	63.32	263	*e*P	P	14 30 49.1	-0.2
	comp=Z,5.8nm,0.6s,mb4.9						
LIC				LR	LR		
	comp=Z,50nm,18.8s,MS3.7						
LIC	Lamto	63.32	263	*e*P	P	14 30 49.1	-0.2
	comp=Z,5.8nm,0.6s,mb4.9						
BOSA	Boshof	63.41	212	P	P	14 30 50.4	+0.9
BOSA				*PP	pP	14 31 02.2	-1.0
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
BOSA				pmax	pmax		
	comp=N,7.0nm,0.8s						
BOSA				MLR	MLR		
	comp=Z,49nm,20.6s,MS3.7						
BOSA	Boshof	63.41	212	P	P	14 30 50.4	+0.8
	comp=Z,4.7nm,1.0s,mb4.6,baz=20,slow=3.8,SNR=3.7						
BOSA				pP	pP	14 31 02.1	-1.0
	comp=Z,6.8nm,0.8s,baz=55,slow=8.4,SNR=4.3						
BOSA				LR	LR	15 03 02.6	
	comp=Z,49nm,20.6s,MS3.7,baz=165,slow=40						
BOSA	Boshof	63.41	212	P	P	14 30 50.3	+0.8
BOSA				pP	pP	14 31 02.2	-1.0
MJAR	Matsushiro Arr	67.08	59	P	P	14 31 13.3	-0.1
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJAR	Matsushiro Arr	67.08	59	P	P	14 31 13.3	-0.1
	comp=Z,1.1nm,0.8s,mb3.9,baz=289,slow=3.7,SNR=3.8						
YSS	Yuzh-Sakhalins	67.47	48⇑	*i*P	P	14 31 15.2	-0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
SEY	Seymchan	68.47	29⇑	*e*P	P	14 31 22.3	+0.7
BILL	Bilibino	71.99	22	⇓P	P	14 31 43.0	-0.1
BILL				*e*		14 32 02.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
TNA	Tin City	81.50	18	*e*P	P	14 32 36.8	+0.1
	comp=Z,2.7nm,0.7s,mb4.3						
TNA	Tin City	81.50	18	*e*P	P	14 32 36.8	+0.1
	comp=Z,2.7nm,0.7s,mb4.3						
NWAO	Narrogin (SRO)	81.63	133	P	P	14 32 38.2	+0.3
NWAO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NWAO	Narrogin (SRO)	81.63	133	P	P	14 32 38.2	+0.3
	comp=Z,8.7nm,1.0s,mb4.6,baz=240,slow=20,SNR=1.7						
IMA2	Indian Mountai	84.40	12	*e*P	P	14 32 51.1	-0.6
IMA2	Indian Mountai	84.40	12	*e*P	P	14 32 51.1	-0.6
INK	Inuvik	84.91	4	*e*P	P	14 32 53.7	-0.6
	comp=Z,63nm,0.7s,mb5.8						
INK	Inuvik	84.91	4	*e*P	P	14 32 53.7	-0.6
INK				pmax	pmax		
	comp=Z,63nm,0.7s						
INK	Inuvik	84.91	4	*e*P	P	14 32 53.7	-0.6
	comp=Z,63nm,0.7s,mb5.8						
SCHQ	Schefferville	86.15	332	P	P	14 33 00.9	+0.2
	comp=Z,3.4nm,1.2s,mb4.5,baz=11,slow=15,SNR=2.4						
WRA	Warramunga Arr	87.13	114	P	P	14 33 07.2	+1.2
WRA				*PP	pP	14 33 19.4	-0.9
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRA				pmax	pmax		
	comp=N,3.0nm,0.7s						
WRA	Warramunga Arr	87.13	114	P	P	14 33 07.2	+1.1
	comp=N,1.5nm,1.0s,mb4.2,baz=311,slow=4.5,SNR=8.4						
WRA				pP	pP	14 33 19.4	-0.9
	comp=N,2.8nm,0.7s,baz=313,slow=4.1,SNR=16						
WB2	Warramunga Arr	87.14	114	*e*P	pP	14 33 19.0	-1.3
MCK	McKinley	87.40	12	*e*P	P	14 33 07.1	+0.5
	comp=N,20nm,1.3s,mb5.2						
MCK	McKinley	87.40	12	*e*P	P	14 33 07.1	+0.5
MCK				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.2						
MCK	McKinley	87.40	12	*e*P	P	14 33 07.1	+0.5
	comp=Z,20nm,1.3s,mb5.2						
EGAK	Eagle	87.62	8	*e*P	P	14 33 08.6	+1.0
	comp=Z,12nm,1.4s,mb5.0						
EGAK	Eagle	87.62	8	*e*P	P	14 33 08.6	+1.0
	comp=Z,12nm,1.4s,mb5.0						
DAWY	Dawson	88.52	8	*e*P	P	14 33 12.8	+0.8
DAWY	Dawson	88.52	8	*e*P	P	14 33 12.8	+0.9
ASAR	Alice Springs	88.62	117	P	P	14 33 14.1	+1.1
ASAR				*PP	pP	14 33 26.9	-0.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=N,2.0nm,0.5s						
ASAR	Alice Springs	88.62	117	P	P	14 33 14.1	+1.0
	comp=N,0.5nm,0.8s,mb3.9,baz=315,slow=5.6,SNR=6.7						
ASAR				pP	pP	14 33 26.9	-0.5
	comp=N,1.8nm,0.5s,baz=305,slow=5.1,SNR=21						
YKA	Yellowknife Ar	90.96	357	P	P	14 33 24.7	+1.3
YKA				pP	pP	14 33 37.2	-0.5
YKA				sP	sP	14 33 44.8	+1.7
YKA	Yellowknife Ar	90.96	357	P	P	14 33 24.7	+1.3
YKA				*PP	pP	14 33 37.2	-0.5
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				pmax	pmax		
	comp=N,2.0nm,0.9s						
YKA				pmax	pmax		
	comp=N,2.0nm,0.8s						
YKA	Yellowknife Ar	90.96	357	P	P	14 33 24.7	+1.3
	comp=N,1.1nm,0.7s,mb4.3,baz=359,slow=5.1,SNR=30						
YKA				pP	pP	14 33 37.2	-0.5
	comp=N,1.6nm,0.8s,baz=357,slow=5.1,SNR=7.3						
YKA				sP	sP	14 33 44.8	+1.7
	comp=N,2.2nm,0.8s,baz=358,slow=5.2,SNR=8.2						
CTA	Charters Tower	97.13	109	LR	LR	15 16 26.3	
	comp=N,72nm,21.2s,MS4.1,baz=48,slow=35						
STKA	Stephens Creek	98.47	121	LR	LR	15 13 49.4	
	comp=N,77nm,21.5s,MS4.2,baz=206,slow=32						
TXAR	Lajitas Array	121.66	341	PKP	PKPdf	14 39 14.1	+0.3
	comp=N,0.2nm,0.6s,baz=143,slow=1.8,SNR=4.0						
TXAR				pPKP	pPKPdf	14 39 29.0	+0.4
	comp=N,0.3nm,0.6s,baz=190,slow=2.7,SNR=3.3						

NEIC ***17*** *15:03:59.3±0.5, 20.49S×169.95E, mb4.5/4, Error ellipse: s-maj=13.4km s-min=8.6km az=62.0*

ISCJB ***17*** *15:04:00.1±2.1, 20.58S±0.10×169.8E±0.2, h181km±17km, mb3.9/10, Error ellipse: s-maj=26.1km s-min=13.2km az=157.6*

IDC ***17*** *15:04:00.1±2.9, 20.56S×169.85E, h164km±24km, mb3.5/8, mb1 3.7/11, mb1mx3.6/17, mbtmp3.7/11, MS3.3/1, Ms1 3.3/1, ms1mx2.7/13, Error ellipse: s-maj=26.5km s-min=15.6km az=59.0*

ISC 17 15:04:00.8±2.1**, 20.56S**±0.10×**169.8E**±0.2**, h173**km±17km**, h162**km±4.1km**:pP-P, n24,** σ0.61s/26**, mb3.9**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.51	244	*e*P	Pn	15 04 55.8	+0.4
DZM				*e*S	Sn	15 05 37.9	+0.1
DZM	Mont Dzumac	3.51	244	*e*P	Pn	15 04 55.8	+0.4
DZM				*e*S	Sn	15 05 37.9	+0.1
DZM	Mont Dzumac	3.51	244	P	Pn	15 04 55.4	0.0
	24nm,0.3s,baz=60,slow=19,SNR=224						
DZM				S	Sn	15 05 36.4	-1.5
	11nm,0.3s,baz=95,slow=20,SNR=3.1						
DZM				LR	LR	15 05 52.3	
	comp=Z,369nm,18.0s,baz=192,slow=32						
HNR	Honiara	14.61	318	*e*Pn	Pn	15 07 18.7	-0.7
HNR	Honiara	14.61	318	P	Pn	15 07 19.3	-0.1
	1.6nm,0.3s,baz=47,slow=1.4,SNR=6.3						
URZ	Urewera	18.73	162	P	P	15 08 06.4	+0.1
	0.9nm,0.3s,baz=15,slow=5.6,SNR=8.3						
RPZ	Rata Peaks	23.11	178	P	P	15 08 52.3	+1.0
	6.6nm,0.8s,mb4.1,baz=68,slow=5.4,SNR=4.3						
PMG	Port Moresby	24.52	294	*e*P	P	15 09 05.6	+1.1
	15nm,0.7s,mb4.6						
PMG	Port Moresby	24.52	294	P	P	15 09 05.7	+1.2
	17nm,0.8s,mb4.6,baz=82,slow=5.5,SNR=9.2						
WRA	Warramunga Arr	33.27	265	P	P	15 10 22.0	0.0
	0.6nm,0.4s,mb3.7,baz=92,slow=8.6,SNR=5.0						
WRA				pP	pP	15 10 57.8	-0.4
	0.9nm,0.7s,baz=92,slow=8.3,SNR=4.8						
ASAR	Alice Springs	33.38	258	P	P	15 10 23.4	+0.5
	0.8nm,0.5s,mb3.7,baz=82,slow=8.0,SNR=24						
ASAR				pP	pP	15 10 56.0	-3.2
	1.4nm,0.8s,baz=84,slow=9.3,SNR=7.3						
VNDA	Vanda	57.14	182	*e*P	P	15 13 29.0	+0.2
	1.1nm,0.7s,mb3.8						
VNDA	Vanda	57.14	182	P	P	15 13 28.4	-0.4
	0.9nm,0.7s,mb3.7,baz=25,slow=8.4,SNR=8.7						
SBA	Scott Base	57.36	181	*e*P	P	15 13 30.6	+0.2
	6.7nm,0.8s,mb4.5						
MJAR	Matsushiro Arr	64.17	332	P	P	15 14 16.3	-0.6
MJAR	Matsushiro Arr	64.17	332	P	P	15 14 16.3	-0.6
	0.9nm,1.0s,mb3.6,baz=172,slow=7.8,SNR=4.5						
QSPA	South Pole Qui	69.50	180	*e*P	P	15 14 49.7	-0.3
	5.5nm,0.9s,mb4.3						
SNAA	Sanae	87.88	182	*e*	P	15 16 29.9	-0.4
SNAA				*e*		15 16 33.9	
SNAA				*e*		15 16 37.9	
SNAA				*e*		15 17 06.2	
VNA3	Neumayer Olymp	88.44	180	*e*	P	15 16 31.7	-1.2
VNA3				*e*		15 16 35.7	
VNA3				*e*		15 16 40.9	
VNA3				*e*		15 17 08.6	
VNA3				*e*		15 17 21.3	
VNA3				*e*		15 17 26.0	
SONM	Songino Array	88.61	323	P	P	15 16 34.0	0.0
	0.3nm,0.8s,mb3.3,baz=126,slow=7.3,SNR=3.0						
VNA2	Neumayer--Watz	88.74	181	*e*	P	15 16 34.0	-0.3
	baz=187,slow=6.0						
VNA2				*e*		15 16 38.6	
VNA2				*e*		15 16 44.6	
VNA2				*e*	pP	15 17 14.5	-3.0
VNA2				*e*		15 17 27.7	
VNA2				*e*		15 17 32.5	
VNA1	Neumayer--Stat	89.03	181	*e*	P	15 16 30.6	-5.1
VNA1				*e*		15 16 35.2	
VNA1				*e*		15 16 40.1	
VNA1				*e*		15 17 06.7	
VNA1				*e*		15 17 19.6	
VNA1				*e*		15 17 24.1	
NVAR	Mina Array Bea	89.25	48	P	P	15 16 37.8	+0.6
	0.2nm,0.5s,mb3.3,baz=232,slow=10,SNR=3.4						
GERES	GERESS Array B	145.91	332	PKPbc	PKPbc	15 23 19.9	+0.1
	0.7nm,0.7s,baz=114,slow=3.6,SNR=3.1						

TRN ***17*** *15:08:34.6, 18.36N×63.86W, h5km, MD3.6*

ISCJB ***17*** *15:08:35.2±1.2, 18.6N±0.1×64.05W±0.05, h44km±21km, Error ellipse: s-maj=25.5km s-min=4.3km az=15.5*

RSPR ***17*** *15:08:39.2, 18.61N×64.22W, h9km, MD3.7/9, MD3.7/9*

NEIC ***17*** *15:08:39.2, 18.61N×64.22W, h9km, MD3.7(RSPR), After RSPR.*

ISC 17 15:08:36.1±0.9**, 18.5N**±0.2×**64.06W**±0.05**, h31**km±10km**, n17,** σ**0.90**/26**, 7C-2D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	0.33	307⇓	*i*P	Pb	15 08 43.1	-1.0
TBVI	Tortola	0.54	258⇑	*i*P	Pb	15 08 47.3	-0.1
STMA	St. Maarten, A	1.02	118	*e*P	Pn	15 08 52.5	-1.8
STMA				*e*S	Sn	15 09 06.6	-1.0
SKI	Saint Kitts	1.73	133	*e*P	Pn	15 09 04.8	+0.7
SKI				*e*S	Sn	15 09 24.3	-0.8
SJG	San Juan	2.03	258⇑	*e*P	Pn	15 09 08.8	+0.6
SJG				*e*S	Sn	15 09 31.8	-0.7
SJG	San Juan	2.03	258⇑	*e*P	Pn	15 09 09.3	+1.1
SJG				*e*S	Sn	15 09 32.5	+0.1
CPB	Codrington	2.30	112	*e*P	Pn	15 09 14.7	+2.8
CELP	Cerrillos	2.44	260⇓	*i*P	Pn	15 09 14.4	+0.7
OBIP	Obispado Ponce	2.47	259⇑	*e*P	Pn	15 09 14.8	+0.6
OBIP				*e*S	Sn	15 09 42.8	-0.5
LRS	Lares	2.66	265⇑	*e*P	Pn	15 09 17.4	+0.6
LRS				*e*S	Sn	15 09 47.4	-0.5
GBPR	Guanica, Bosqu	2.74	259⇑	*e*P	Pn	15 09 19.5	+1.6
GBPR	Guanica, Bosqu	2.74	259	*e*S	Sn	15 09 50.5	+0.6
LSP	Las Mesas	2.90	263⇑	*e*P	Pn	15 09 20.8	+0.6
LSP				*e*S	Sn	15 09 53.2	-0.7
AGPR	Aguadilla, PR	2.90	269⇑	*e*P	Pn	15 09 20.1	0.0
AGPR				*e*S	Sn	15 09 52.4	-1.5
DEG	La Desirade	3.62	127	*e*P	Pn	15 09 29.8	-0.1
DEG				*e*S	Sn	15 10 12.0	+0.4
MGG	Marie-Galante	3.69	134	*e*P	Pn	15 09 31.2	+0.2
SDDR	Presa de Saban	6.87	275	*e*Pn	Pn	15 10 14.5	-0.2
	14nm,0.5s						

MAN 17 15:43:03, 9.87N×125.47E, h40km, mb4.2, ML3.0, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.09	166⇑	*e*P	Pn	15 43 10.9	+1.3
SCPH				*e*S	Sn	15 43 16.2	+2.1

ISCJB ***17*** *15:52:30.2±0.7, 0.72N±0.04×123.83E±0.06, h294km±7km, mb4.2/29, Error ellipse: s-maj=10.8km s-min=5.2km az=150.8*

NEIC ***17*** *15:52:31.9±0.4, 0.63N×123.65E, mb4.3/7, Error ellipse: s-maj=12.8km s-min=6.6km az=54.0*

IDC ***17*** *15:52:32.0±0.7, 0.59N×123.60E, h300km±7km, mb3.7/12, mb1 3.7/13, mb1mx3.6/19, mbtmp3.6/13, Error ellipse: s-maj=18.7km s-min=7.6km az=65.0*

BJI ***17*** *15:52:36.6, 148N×12358E, h300km, mB4.5, mb4.2*
ISC 17 15:52:31.1±0.7**, 066N**±004×**12380E**±006**, h289**km±7km**,**
h299km±2.9km**:pP-P, n59,** σ**0s98**/64**, mb4.2**/29**, 5C-9D,**
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**4.26**	**249**	P	**Pn**	**15 53 35.1**	**-4.6**
	795nm,1.0s						
AAI	**Ambon**	**6.16**	**135**	P	**Pn**	**15 54 02.5**	**+0.4**
	58nm,0.9s						
TSM	**Tawau**	**6.94**	**301**	⇑P	**Pn**	**15 54 10.0**	**-1.6**
SDKM	**Sandakan**	**8.24**	**307**	⇓P	**Pn**	**15 54 26.2**	**-1.5**
KKM	**Kota Kinabalu**	**9.27**	**305**	*e*Pn	**Pn**	**15 54 38.9**	**-1.5**
KKM	**Kota Kinabalu**	**9.27**	**305**	⇑P	**Pn**	**15 54 39.0**	**-1.4**
KDM	**Kudat**	**9.32**	**312**	⇑P	**Pn**	**15 54 41.8**	**+0.7**
BATI	**Kupang**	**10.80**	**181**	P	**Pn**	**15 54 59.8**	**+0.6**
	14nm,0.3s,baz=341,slow=1.5,SNR=76						
BATI				S	**S**	**15 57 00.2**	**-0.1**
	0.4nm,0.3s,baz=328,slow=13,SNR=5.0						
BTM	**Bintulu**	**11.00**	**283**	⇓P	**Pn**	**15 55 05.3**	**+3.5**
SBUM	**Sibu**	**11.71**	**279**	⇓P	**Pn**	**15 55 11.5**	**+1.0**
KMMI	**Kalianget**	**12.45**	**232**	P	**Pn**	**15 55 21.5**	**+2.1**
	139nm,0.8s						
KSM	**Kuching**	**13.51**	**274**	*e*Pn	**Pn**	**15 55 31.7**	**-0.7**
KSM	**Kuching**	**13.51**	**274**	⇓P	**Pn**	**15 55 34.3**	**+1.9**
KRKI	**Karangkates**	**14.31**	**232**	P	**Pn**	**15 55 42.4**	**+0.5**
	169nm,1.1s						
KAKA	**Kakadu**	**15.81**	**147**	⇑*i*P	**Pn**	**15 55 58.1**	**-1.5**
	69nm,0.8s						
KAKA				*e*S	**S**	**15 59 06.1**	**+17**
BJII	**Banjamegara**	**16.14**	**240**	P	**P**	**15 56 01.0**	**-0.5**
	39nm,1.0s						
TPI	**Tanjungpandan**	**16.50**	**258**	P	**P**	**15 56 03.9**	**-1.4**
	61nm,1.0s						
FITZ	**Fitzroy Crossi**	**18.73**	**175**	*e*P	**P**	**15 56 28.1**	**-1.3**
	9.4nm,0.6s						
FITZ				*e*		15 56 33.9	
FITZ				*e*S	**S**	**15 59 43.2**	**-3.9**
FITZ	**Fitzroy Crossi**	**18.73**	**175**	P	**P**	**15 56 28.3**	**-1.1**
	0.8nm,0.3s,baz=12,slow=7.2,SNR=32						
MYKOM	**Kota Tinggi**	**19.98**	**273**	⇓P	**P**	**15 56 43.1**	**+0.4**
KGM	**Kluang**	**20.52**	**274**	⇓P	**P**	**15 56 48.4**	**0.0**
KTGM	**Kuala Trenggan**	**21.15**	**283**	⇑P	**P**	**15 56 55.2**	**+0.8**
KSI	**Kapahiang**	**21.62**	**258**	P	**P**	**15 56 59.0**	**+0.2**
	48nm,0.8s,mb4.9						
FRIM	**Kepong**	**22.31**	**277**	⇓P	**P**	**15 57 06.0**	**+0.9**
WRA	**Warramunga Arr**	**22.93**	**154**	P	**P**	**15 57 10.6**	**0.0**
	44nm,0.6s,mb5.0,baz=332,slow=11,SNR=129						
WRA				S	**S**	**16 00 57.7**	**-1.1**
	3.2nm,0.7s,baz=334,slow=17,SNR=7.8						
WB2	**Warramunga Arr**	**22.94**	**154**	*e*P	**P**	**15 57 10.3**	**-0.4**
WB2				*e*S	**S**	**16 00 57.2**	**-1.7**
PPI	**Padang Panjang**	**23.43**	**267**	P	**P**	**15 57 16.4**	**+1.1**
	39nm,1.0s,mb4.7						
KULM	**Kulim**	**23.57**	**282**	*e*P	**P**	**15 57 16.1**	**-0.4**
KULM	**Kulim**	**23.57**	**282**	⇓P	**P**	**15 57 16.8**	**+0.3**
PSI	**Prapat**	**24.95**	**275**	P	**P**	**15 57 26.2**	**-2.8**
	3.5nm,0.4s,mb4.1,baz=87,slow=1.5,SNR=10						
PMG	**Port Moresby**	**25.32**	**114**	P	**P**	**15 57 33.2**	**+1.0**
	7.6nm,0.8s,mb4.2,baz=47,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**26.10**	**159**	P	**P**	**15 57 39.4**	**+0.3**
	4.0nm,0.6s,mb4.0,baz=344,slow=14,SNR=42						
ASAR				S	**S**	**16 01 49.2**	**+0.5**
	4.5nm,1.0s,baz=350,slow=21,SNR=12						
GYA	**Guiyang**	**30.50**	**329**	P	**P**	**15 58 18.8**	**+0.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
WHN	**Wuhan**	**31.05**	**344**	*e*P	**P**	**15 58 17.5**	**-5.2**
FORT	**Forrest**	**31.53**	**173**	*e*P	**P**	**15 58 27.2**	**+0.3**
	comp=Z,31nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**36.49**	**154**	*e*P	**P**	**15 59 10.4**	**+1.1**
	comp=Z,8.4nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**36.49**	**154**	P	**P**	**15 59 10.3**	**+1.0**
	comp=Z,9.7nm,0.5s,mb4.6,baz=328,slow=8.2,SNR=17						
MJAR	**Matsushiro Arr**	**38.12**	**19**	P	**P**	**15 59 23.8**	**+0.9**
	comp=Z,1.4nm,0.7s,mb3.5,baz=192,slow=10.0,SNR=5.7						
HHC	**Hu-ho-hao-te**	**41.51**	**346**	*e*P	**P**	**15 59 52.5**	**+1.9**
HHC				AMB	AMB		
	comp=Z,25nm,0.6s,mb4.6						
HHC				AMB	AMB		
	comp=Z,134nm,6.2s						
ODAN	**Odare**	**43.61**	**310**	*e*P	**P**	**16 00 08.7**	**+1.0**
	comp=Z,15nm,0.7s,mb4.3						
TAPN	**Taplejung**	**43.62**	**311**	*e*P	**P**	**16 00 07.5**	**-0.2**
	comp=Z,11nm,0.6s,mb4.2						
GTA	**Gaotai**	**44.36**	**333**	*e*P	**P**	**16 00 14.1**	**+0.8**
GTA				AMB	AMB		
	comp=Z,2.0nm,1.1s,mb3.3						
JIRN	**Jiri**	**44.94**	**310**	*e*P	**P**	**16 00 18.0**	**-0.1**
	comp=Z,18nm,0.6s,mb4.5						
KKN	**Kakani**	**45.70**	**310**	*e*P	**P**	**16 00 23.4**	**-0.7**
	comp=Z,12nm,0.7s,mb4.3						
GKN	**Gorkha**	**46.30**	**309**	*e*P	**P**	**16 00 28.0**	**-0.7**
	comp=Z,21nm,0.8s,mb4.5						
KOLN	**Koldanda**	**46.99**	**309**	*e*P	**P**	**16 00 34.0**	**-0.1**
	comp=Z,36nm,0.8s,mb4.8						
SONM	**Songino Array**	**49.36**	**345**	P	**P**	**16 00 50.9**	**-0.7**
	comp=Z,0.7nm,0.8s,mb3.0,baz=157,slow=7.9,SNR=6.8						
SONM				pP	pP	16 01 54.5	+1.9
	comp=Z,0.7nm,1.0s,baz=163,slow=8.7,SNR=3.1						
SONM				ScP	ScP	16 05 37.3	+0.5
	comp=Z,0.4nm,0.8s,baz=136,slow=2.7,SNR=3.6						
WMQ	**Urumqi**	**53.65**	**328**	⇓P	**P**	**16 01 23.8**	**+0.4**
WMQ				AP	pP	16 02 25.5	0.0
WMQ				XP	sP	16 02 56.8	-0.6
WMQ				PP	PP	16 03 30.0	+2.3
WMQ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.1						
WMQ				AMB	AMB		
	comp=Z,179nm,4.0s						
WMQ				LR	LR		
	comp=N,27nm,15.0s						
WMQ				LR	LR		
	comp=E,46nm,15.6s						
WMQ				LR	LR		
	comp=Z,36nm,14.0s						
MKAR	**Makanchi Array**	**58.48**	**328**	P	**P**	**16 01 56.9**	**-0.5**
	comp=Z,0.9nm,0.3s,mb3.7,baz=124,slow=7.8,SNR=15						
MKAR				pP	pP	16 03 03.3	+2.7
	comp=Z,3.1nm,0.9s,baz=118,slow=9.7,SNR=7.7						
MKAR				ScP	ScP	16 06 16.3	-0.4
	comp=Z,0.4nm,0.6s,baz=116,slow=5.5,SNR=3.7						
AAK	**Ala-Archa**	**60.73**	**320**	*e*P	**P**	**16 02 12.9**	**+0.2**
	comp=Z,2.6nm,0.8s,mb3.8						
KURK	**Kurchatov**	**62.81**	**330**	*e*P	**P**	**16 02 24.9**	**-1.5**
	comp=Z,4.0nm,0.6s,mb4.2						
TIXI	**Tiksi**	**70.95**	**2**	*e*P	**P**	**16 03 17.0**	**0.0**
	comp=Z,2.8nm,1.0s,mb3.9						
AKTK	**Aktyubinsk**	**74.27**	**323**	P	**P**	**16 03 35.9**	**-1.0**
AKTK				pP	pP	16 04 44.9	+1.5
AKTO	**Aktyubinsk**	**74.27**	**323**	P	**P**	**16 03 35.9**	**-1.0**
	comp=Z,1.9nm,0.7s,mb3.9,baz=103,slow=7.8,SNR=6.5						
AKTO				pP	pP	16 04 44.9	+1.5
	comp=Z,1.1nm,0.6s,baz=71,slow=3.1,SNR=3.2						
MAW	**Mawson**	**79.89**	**200**	P	**P**	**16 04 08.2**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.1,baz=302,slow=15,SNR=3.0						
KMBO	**Kilima Mbogo**	**86.56**	**269**	P	**P**	**16 04 42.2**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.7,baz=55,slow=9.4,SNR=5.1						
BRTR	**Keskin Array B**	**89.71**	**310**	P	**P**	**16 04 56.3**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.5,baz=101,slow=5.5,SNR=3.8						
ARCES	**ARCESS Array B**	**92.29**	**340**	P	**P**	**16 05 09.5**	**+1.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=79,slow=4.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**121.00**	**286**	PKP	PKPdf	16 10 49.6	-0.8
	comp=Z,0.7nm,0.7s,baz=80,slow=1.1,SNR=5.6						

IDC ***17*** *16:00:27.9±1.0, 1339N×9069W, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.2/23, mbtmp4.2/13, ML4.2/2, MS3.9/7, Ms1 3.9/7, ms1mx3.2/33, Error ellipse: s-maj=33.3km s-min=15.2km az=45.0*
CASC ***17*** *16:00:29.8±2.2, 1306N×91.13W, h20km±51km, MD4.1, mb4.1(NEIC)*
ISCJB ***17*** *16:00:32.8±1.0, 1325N±009×9076W±007, h59km±6km, mb4.2/26, MS3.9/7, Error ellipse: s-maj=17.8km s-min=6.2km az=34.8*
NEIC ***17*** *16:00:34.7±0.9, 1338N×9070W, h53km±7km, mb4.1/19, Error ellipse: s-maj=13.3km s-min=6.0km az=214.0*
ISC 17 16:00:35.1±0.9**, 1335N**±009×**9071W**±007**, h57**km±6km**, n75,** σ**1s10**/73**, mb4.2**/26**, MS3.9**/7**, 2C-3D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.05**	**5**	*e*P	**Pn**	**16 00 54.8**	**+1.2**
FUG	**Fuego 3**	**1.10**	**353**	⇑*e*P	**Pn**	**16 00 54.2**	**-0.2**
SBLS	**San Blas**	**1.17**	**65**	*e*P	x	16 01 05.8	
SBLS				*e*S	x	16 01 27.8	
FG6		**1.22**	**352**	⇓*e*P	**Pn**	**16 00 56.0**	**+0.1**
JAT	**Jato**	**1.32**	**317**	⇓*e*P	**Pn**	**16 00 54.3**	**-3.0**
SNET	**Serv Nac Est T**	**1.48**	**77**	*e*P	x	16 01 01.6	
MTO2	**Montecristo 2**	**1.68**	**51**	⇑*e*P	x	16 01 13.6	
MTO2				*e*S	x	16 01 40.8	
LCBS	**La Ceiba**	**1.71**	**79**	⇓*e*P	x	16 01 13.7	
LCBS				*e*S	x	16 01 40.8	
VSM	**San Miguel**	**2.37**	**88**	*e*P	x	16 01 23.2	
VSM				*e*S	x	16 01 59.2	
BLLM	**Bellamira**	**2.41**	**87**	*e*P	x	16 01 23.6	
BLLM				*e*S	x	16 01 58.1	
CCIG	**Comitan**	**3.23**	**335**	*e*P	**Pn**	**16 01 23.1**	**-0.2**
CCIG				*i* S	**Sn**	**16 02 08.2**	**+7.6**
TGUH	**Tegucigalpa,Un**	**3.41**	**78**	*e*Pn	**Pn**	**16 01 24.0**	**-1.9**
SCX	**San Cristobal**	**3.85**	**331**	*i* P	**Pn**	**16 01 35.2**	**+3.4**
SCX				*i* S	**Sn**	**16 02 26.8**	**+11**
CMIG	**Matias Romero**	**5.49**	**313**	*i* P	**Pn**	**16 01 48.2**	**-6.0**
CMIG				Pn	**Pn**	**16 01 50.4**	**-3.8**
CMIG				Sn	**Sn**	**16 02 56.1**	**+0.1**
CMIG				*i* S	**Sn**	**16 03 06.9**	**+11**
CMIG				Lg		16 03 11.1	
CMIG	**Matias Romero**	**5.49**	**313**	Pn	**Pn**	**16 01 50.4**	**-3.8**
	1.7nm,0.3s,baz=116,slow=12,SNR=13						
CMIG				Sn	**Sn**	**16 02 56.1**	**+0.1**
	2.5nm,0.3s,baz=198,slow=24,SNR=2.5						
CMIG				Lg		16 03 11.1	
	8.7nm,0.3s,baz=300,slow=16,SNR=6.8						
JTS	**JuntasAbangare**	**6.40**	**118**	*e*Pn	**Pn**	**16 02 07.7**	**+0.9**
	14nm,0.6s						
JTS				*e*Sn	**Sn**	**16 03 18.6**	**+0.1**
JTS	**JuntasAbangare**	**6.40**	**118**	Pn	**Pn**	**16 02 06.5**	**-0.2**
	1.1nm,0.3s,baz=324,slow=17,SNR=13						
JTS				Sn	**Sn**	**16 03 17.7**	**-0.8**
	0.3nm,0.3s,baz=89,slow=23,SNR=1.9						
VHO	**Vista Hermosa**	**6.89**	**303**	*e*P	**Pn**	**16 02 11.3**	**-2.2**
VHO				*i* S	**Sn**	**16 03 44.9**	**+14**
TEIG	**Tepich**	**7.23**	**18**	*e*Pn	**Pn**	**16 02 20.7**	**+2.6**
	53nm,0.5s						
TEIG	**Tepich**	**7.23**	**18**	Pn	**Pn**	**16 02 20.5**	**+2.4**
	13nm,0.3s,baz=190,slow=2.7,SNR=38						
PPM	**Popocatepetl**	**9.49**	**308**	*i* P	**Pn**	**16 02 49.7**	**+0.5**
PPM				*i* S	**Sn**	**16 04 52.2**	**+18**
ROSC	**El Rosal**	**18.23**	**116**	P	**Pn**	**16 04 48.5**	**+4.3**
ROSC	**El Rosal**	**18.23**	**116**	P	**Pn**	**16 04 48.5**	**+4.4**
	0.5nm,0.3s,baz=88,slow=22,SNR=6.4						
LTX	**Lajitas**	**19.94**	**325**	*e*P	**Pn**	**16 05 01.3**	**-3.2**
	6.1nm,0.9s						
TXAR	**Lajitas Array**	**19.94**	**325**	P	**Pn**	**16 05 03.1**	**-1.3**
	0.5nm,0.3s,baz=154,slow=13,SNR=41						
SDV	**Santo Domingo**	**20.19**	**101**	*e*P	**P**	**16 05 05.7**	**+0.5**
	6.8nm,0.8s						
SDV	**Santo Domingo**	**20.19**	**101**	P	**P**	**16 05 06.2**	**+1.0**
	6.5nm,0.7s,baz=259,slow=5.7,SNR=12						
GOGA	**Godfrey**	**21.04**	**17**	P	**P**	**16 05 15.2**	**+1.0**
	7.0nm,0.6s,mb4.2						
MIAR	**Mount Ida**	**21.27**	**353**	P	**P**	**16 05 16.2**	**-0.4**
	4.6nm,0.6s,mb4.0						
LPIG	**La Paz**	**21.40**	**303**	LR	LR	16 14 21.1	
	comp=Z,87nm,20.9s,MS3.1,baz=171,slow=39						
WMOK	**Wichita Mounta**	**22.52**	**342**	P	**P**	**16 05 28.4**	**-1.5**
	2.4nm,0.7s,mb3.7						
MNTX	**Cornudas Mount**	**22.70**	**326**	*e*P	**P**	**16 05 30.7**	**-1.3**
	10nm,0.8s,mb4.3						
WVT	**Waverly**	**22.84**	**6**	P	**P**	**16 05 33.8**	**+0.4**
	5.3nm,0.8s,mb4.0						
TKL	**Tuckaleechee C**	**23.08**	**15**	P	**P**	**16 05 35.9**	**0.0**
TKL				LR	LR	16 15 27.1	
TKL	**Tuckaleechee C**	**23.08**	**15**	P	**P**	**16 05 35.9**	**0.0**
	6.3nm,0.6s,mb4.2,baz=179,slow=9.8,SNR=10						
TKL				LR	LR	16 15 27.1	
	comp=Z,326nm,19.0s,MS3.8,baz=33,slow=39						
AMTX	**Amarillo**	**23.63**	**337**	*e*P	**P**	**16 05 39.2**	**-1.9**
	12nm,0.8s,mb4.4						
BNM	**Barren Site**	**25.26**	**328**	*e*P	**P**	**16 05 56.8**	**+0.9**
LENM	**Lemitar**	**25.45**	**327**	*e*P	**P**	**16 05 58.5**	**+0.8**
ANMO	**Albuquerque**	**25.80**	**329**	*e*P	**P**	**16 06 00.4**	**-0.4**
	2.3nm,0.8s,mb3.8						
ANMO	**Albuquerque**	**25.80**	**329**	P	**P**	**16 06 01.1**	**+0.2**
	1.7nm,0.7s,mb3.7,baz=165,slow=13,SNR=7.3						
TUC	**Tucson**	**26.34**	**319**	P	**P**	**16 06 06.9**	**+1.1**
	3.3nm,1.0s,mb3.8						
SDCO	**Great Sand Dun**	**27.65**	**334**	P	**P**	**16 06 17.8**	**+0.4**
MVCO	**Mesa Verde**	**28.59**	**329**	*e*P	**P**	**16 06 26.7**	**+0.9**
	3.0nm,0.8s,mb4.1						
WUAZ	**Wupatki**	**28.88**	**323**	*e*P	**P**	**16 06 29.9**	**+1.5**
	4.1nm,0.7s,mb4.3						
MSU	**Marysvale**	**31.48**	**327**	*e*P	**P**	**16 06 51.8**	**+0.5**
DAU	**Daniels Canyon**	**32.43**	**330**	P	**P**	**16 06 60.0**	**+0.3**
HWUT	**Hardware Ranch**	**33.51**	**331**	*e*P	**P**	**16 07 09.7**	**+0.7**
	4.7nm,1.0s,mb4.4						
PDAR	**Pinedale Array**	**33.54**	**334**	P	**P**	**16 07 09.6**	**+0.2**
	0.7nm,0.8s,mb3.6,baz=148,slow=8.6,SNR=5.2						
PDAR				PcP	PcP	16 09 50.3	+1.3
	0.3nm,0.7s,baz=152,slow=5.9,SNR=3.4						
EYMN	**Ely**	**34.50**	**359**	*e*P	**P**	**16 07 16.0**	**-1.6**
	3.4nm,0.6s,mb4.5						
REDW	**Red Top Meadow**	**34.58**	**334**	*e*P	**P**	**16 07 18.8**	**+0.5**
	16nm,1.1s,mb4.9						
SNOW	**Snow King Moun**	**34.61**	**334**	*e*P	**P**	**16 07 19.6**	**+0.9**
	7.2nm,0.7s,mb4.7						
NVAR	**Mina Array Bea**	**34.97**	**321**	P	**P**	**16 07 22.6**	**+0.8**
	6.8nm,0.8s,mb4.6,baz=127,slow=9.3,SNR=60						
NVAR				PcP	PcP	16 09 55.4	+2.2
	0.8nm,0.7s,baz=106,slow=4.2,SNR=4.8						
HLID	**Hailey**	**36.35**	**330**	*e*P	**P**	**16 07 33.7**	**+0.1**
	2.1nm,0.9s,mb4.1						
MCMT	**McKenzie Canyo**	**36.61**	**333**	*e*P	**P**	**16 07 37.5**	**+1.8**
ULM	**Lac du Bonnet**	**37.04**	**354**	P	**P**	**16 07 37.7**	**-1.6**
	4.0nm,0.7s,mb4.3,baz=170,slow=9.5,SNR=13						
ULM				LR	LR	16 27 15.6	
	comp=Z,63nm,18.6s,MS3.4,baz=227,slow=44						
WVOR	**Wild Horse Val**	**37.73**	**325**	*e*P	**P**	**16 07 46.6**	**+1.3**
	5.8nm,0.9s,mb4.3						
SIV	**San Ignacio**	**41.33**	**134**	P	**P**	**16 08 16.4**	**+0.9**
	2.3nm,0.8s,mb3.9,baz=294,slow=9.3,SNR=12						
EDM	**Edmonton**	**43.66**	**340**	*e*P	**P**	**16 08 33.0**	**-1.0**
SCHQ	**Schefferville**	**45.41**	**19**	P	**P**	**16 08 47.5**	**-0.4**
	5.4nm,0.7s,mb4.5,baz=209,slow=8.7,SNR=14						
SCHQ				LR	LR	16 28 39.2	
	comp=Z,156nm,18.9s,MS4.0,baz=301,slow=37						
YKA	**Yellowknife Ar**	**51.95**	**346**	P	**P**	**16 09 37.2**	**-0.8**
YKA				PcP	PcP	16 10 50.4	+0.5
YKA	**Yellowknife Ar**	**51.95**	**346**	P	**P**	**16 09 37.2**	**-0.8**
	1.9nm,0.9s,mb4.0,baz=146,slow=7.8,SNR=17						
YKA				PcP	PcP	16 10 50.3	+0.5
	0.5nm,0.7s,baz=146,slow=3.7,SNR=5.3						
DLBC	**Dease Lake**	**53.76**	**336**	*e*P	**P**	**16 09 52.2**	**+0.8**
PLCA	**Paso Flores**	**56.96**	**162**	LR	LR	16 30 52.8	
	comp=Z,59nm,19.3s,MS3.7,baz=184,slow=32						
RES	**Resolute Bay**	**61.37**	**359**	*e*P	**P**	**16 10 43.2**	**-1.5**
	104nm,0.6s						
INK	**Inuvik**	**61.42**	**343**	*e*P	**P**	**16 10 44.2**	**-0.8**
	72nm,0.7s						
SLKM	**Skilak Lake**	**63.66**	**332**	*e*P	**P**	**16 11 00.3**	**+0.1**
COLA	**College**	**64.35**	**337**	*e*P	**P**	**16 11 03.4**	**-1.2**
	2.5nm,0.8s,mb4.3						
SVW2	**Sparrevohn**	**66.34**	**331**	*e*P	**P**	**16 11 16.6**	**-0.9**
NOA	**NORSAR Array B**	**84.12**	**29**	LR	LR	16 55 47.0	
	comp=Z,133nm,18.4s,MS4.3,baz=295,slow=40						
DBIC	**Dimbokro**	**84.47**	**84**	P	**P**	**16 13 03.2**	**+0.8**
DBIC	**Dimbokro**	**84.47**	**84**	P	**P**	**16 13 03.2**	**+0.8**
	2.7nm,0.6s,mb4.5,baz=280,slow=5.2,SNR=7.2						
HFS	**Hagfors**	**85.56**	**29**	LR	LR	16 56 36.2	
	comp=Z,199nm,18.2s,MS4.5,baz=272,slow=39						
TORD	**Torodi Ar. Bea**	**89.31**	**77**	P	**P**	**16 13 25.2**	**-0.7**
	0.2nm,0.6s,mb3.6,baz=39,slow=9.3,SNR=3.2						
WRA	**Warramunga Arr**	**136.44**	**255**	PKP	PKPdf	16 19 50.6	-0.8
	0.6nm,0.9s,baz=96,slow=3.0,SNR=5.5						
ASAR	**Alice Springs**	**136.62**	**250**	PKP	PKPdf	16 19 50.9	-0.7
	0.3nm,0.9s,baz=126,slow=3.0,SNR=3.9						

IDC ***17*** *16:20:28.5±1.8, 739S×11163E, h0km, mb4.0/5, mb1 4.2/7, mb1mx3.9/18, mbtmp4.0/7, ML3.6/2, Error ellipse: s-maj=80.2km s-min=18.9km az=54.0*
ISCJB ***17*** *16:20:31.5±4.3, 73S±0.1×11187E±006, h28km±33km, mb4.2/10, Error ellipse: s-maj=18.7km s-min=9.1km az=6.3*
NEIC ***17*** *16:20:33.0±0.8, 771S×11142E, h35km, mb4.4/8, Error ellipse: s-maj=47.2km s-min=9.3km az=54.0*
ISC 17 16:20:34.4±4.0**, 74S**±01×**11182E**±006**, h34**km±31km**, n18,** σ**1s03**/20**, mb4.2**/10**, 1C-1D, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.57**	**255**	⇑*e*P	**Pn**	**16 20 58.5**	**-1.3**
YOGI				*e*S	**Sn**	**16 21 19.1**	**+0.1**
BJII	**Banjamegara**	**2.10**	**272**	⇓*i*P	**Pn**	**16 21 09.2**	**+2.1**
BJII				*i* S	**Sn**	**16 21 37.4**	**+5.4**
BATI	**Kupang**	**12.03**	**104**	Pn	**Pn**	**16 23 23.8**	**+0.3**
	0.7nm,0.3s,baz=94,slow=17,SNR=2.7						
MBWA	**Marble Bar**	**15.67**	**152**	P	**Pn**	**16 24 09.4**	**-3.2**
	8.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.15**	**130**	*e*P	**Pn**	**16 24 31.7**	**+0.2**
	5.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**17.15**	**130**	P	**Pn**	**16 24 31.1**	**-0.4**
	0.1nm,0.3s,baz=309,slow=9.3,SNR=4.9						
WRA	**Warramunga Arr**	**25.14**	**122**	P	**P**	**16 25 56.5**	**+0.1**
	8.6nm,0.9s,mb4.3,baz=296,slow=12,SNR=49						
WB2	**Warramunga Arr**	**25.15**	**122**	*e*P	**P**	**16 25 56.2**	**-0.3**
ASAR	**Alice Springs**	**26.65**	**130**	P	**P**	**16 26 10.3**	**+0.2**
	3.9nm,0.7s,mb4.0,baz=303,slow=8.1,SNR=80						
STKA	**Stephens Creek**	**36.90**	**135**	*e*P	**P**	**16 27 40.8**	**+0.8**
	4.0nm,0.5s,mb4.5						
STKA	**Stephens Creek**	**36.90**	**135**	P	**P**	**16 27 41.1**	**+1.1**
	6.0nm,0.7s,mb4.5,baz=303,slow=9.3,SNR=19						
MAJO	**Matsushiro**	**50.23**	**28**	P	**P**	**16 29 22.6**	**-4.5**
	7.6nm,1.1s,mb4.6						
SONM	**Songino Array**	**55.20**	**356**	P	**P**	**16 30 03.3**	**-0.4**
	0.3nm,0.6s,mb3.5,baz=173,slow=10,SNR=2.9						
UCH	**Uchtor**	**59.99**	**329**	P	**P**	**16 30 36.9**	**-0.5**
	3.2nm,1.2s,mb4.2						
MKAR	**Makanchi Array**	**60.01**	**337**	P	**P**	**16 30 36.0**	**-1.5**
	0.6nm,0.7s,mb3.7,baz=148,slow=7.1,SNR=5.2						
EKS2	**Erkin-Say**	**60.68**	**329**	*e*P	**P**	**16 30 41.5**	**-0.7**
	4.5nm,1.2s,mb4.5						
KURK	**Kurchatov**	**64.61**	**337**	P	**P**	**16 31 09.2**	**+0.9**
	2.6nm,0.9s,mb4.3						
BILL	**Bilibino**	**84.36**	**18**	*e*P	**P**	**16 33 04.0**	**+1.4**
	5.5nm,1.0s,mb4.6						

NEIC ***17*** *16:28:17.9, 16.12N×98.44W, h4km, MD4.0(MEX), After MEX.*
MEX 17 16:28:17.6±0.9**, 1614N**×**9847W, h2**km±6km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.42**	**53**	*i* P	Pg	16 28 25.7	+0.1
PNIG				*i* S	Sg	16 28 31.1	0.0
ACX	**Acapulco**	**1.56**	**298**	*i* P	Pn	16 28 42.5	-3.9
ACX				*i* S	Sn	16 28 57.5	-10
UTMO	**Huajuapan**	**1.80**	**21**	*e*P	Pn	16 28 45.8	-4.0
UTMO				*i* S	Sn	16 29 09.1	-4.1
VHO	**Vista Hermosa**	**1.91**	**61**	*i* P	Pn	16 28 48.8	-2.4
VHO				*i* S	Sn	16 29 12.6	-3.3
OXX	**Oaxaca**	**1.92**	**60**	*i* P	Pn	16 28 49.5	-1.9
OXX				*i* S	Sn	16 29 14.0	-2.2
CAIG	**El Cayaco**	**1.94**	**298**	*i* P	Pn	16 28 49.2	-2.4
CAIG				*i* S	Sn	16 29 13.7	-3.0
HUIG	**Huatulco**	**2.31**	**99**	*i* P	Pn	16 28 59.3	+2.6
HUIG				*i* S	Sn	16 29 19.7	-5.9
HUIG	**Huatulco**	**2.31**	**99**	*i* P	Pn	16 28 53.9	-2.7
HUIG				*i* S	Sn	16 29 20.8	-4.8
PLIG	**Platanillo**	**2.45**	**337**	*i* P	Pn	16 28 57.4	-1.2
PLIG				*i* S	Sn	16 29 25.3	-3.9
TPIG	**Tehuac#an**	**2.51**	**25**	*i* P	Pn	16 28 56.2	-3.2
TPIG				*i* S	Sn	16 29 27.4	-3.2
YAIG	**Yautepec**	**2.77**	**348**	*i* P	Pn	16 29 02.8	-0.3
YAIG				*i* S	Sn	16 29 34.4	-2.7
PPM	**Popocatepetl**	**2.92**	**357**	*i* P	Pn	16 29 06.3	+1.2
PPM				*i* S	Sn	16 29 41.5	+0.7
PPM	**Popocatepetl**	**2.92**	**357**	*i* P	Pn	16 29 02.0	-3.1
PPM				*i* S	Sn	16 29 37.2	-3.6
SZVM	**Salazar**	**3.29**	**345**	*i* P	Pn	16 29 08.6	-1.5
IIO	**Organos**	**3.44**	**356**	*i* P	Pn	16 29 12.8	+0.5
IIO				*i* S	Sn	16 29 54.9	+1.2
PTVM	**Pico Tres Padr**	**3.49**	**350**	*i* P	Pn	16 29 18.4	+5.4
PTVM				*i* S	Sn	16 29 56.5	+1.6
PTVM	**Pico Tres Padr**	**3.49**	**350**	*e*P	Pn	16 29 11.9	-1.1
PTVM				*i* S	Sn	16 29 54.4	-0.5
CMIG	**Matias Romero**	**3.57**	**74**	*i* P	Pn	16 29 11.9	-2.2
CMIG				*i* S	Sn	16 29 58.0	+1.2
CMIG	**Matias Romero**	**3.57**	**74**	*i* P	Pn	16 29 11.9	-2.2
CMIG				*i* S	Sn	16 29 55.0	-1.8

IDC ***17*** *16:40:47.2±0.8, 5153N×17561E, h0km, mb3.7/11, mb1 3.9/11, mb1mx3.8/24, mbtmp3.7/11, MS3.1/1, Ms1 3.1/1, ms1mx2.5/35, Error ellipse: s-maj=28.4km s-min=18.4km az=175.0*
ISCJB ***17*** *16:40:48.3±4.0, 515N±0.1×1757E±0.1, h20km±28km, mb3.9/16, Error ellipse: s-maj=19.7km s-min=9.6km az=24.5*
NEIC ***17*** *16:40:51.8, 5173N×17586E, h14km, mb4.1/6, ML3.6(AEIC), After AEIC.*
ISC 17 16:40:49.1±5.2**, 5146N**±009×**1756E**±01**, h12**km±32km**, n25,** σ**1s12**/25**, mb3.9**/16**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.58**	**324**	P	**Pn**	**16 41 16.8**	**0.0**
SMY				S	**Sn**	**16 41 37.3**	**+0.1**
ADK	**Adak**	**4.80**	**82**	P	**Pn**	**16 41 59.3**	**-1.8**
UNV	**Unalaska Valle**	**11.11**	**71**	*e*Pn	**Pn**	**16 43 28.8**	**+1.3**
TNA	**Tin City**	**16.45**	**25**	*e*Pn	**Pn**	**16 44 42.4**	**+3.0**
	8.1nm,1.1s						
KDAK	**Kodiak Island**	**19.33**	**58**	*e*P	**Pn**	**16 45 12.9**	**-2.0**
	13nm,1.0s						
KDAK	**Kodiak Island**	**19.33**	**58**	Pn	**Pn**	**16 45 11.8**	**-3.2**
	0.9nm,0.3s,baz=333,slow=21,SNR=13						
MCK	**McKinley**	**22.26**	**43**	P	**P**	**16 45 45.2**	**-0.3**
	3.9nm,1.0s,mb3.8						
COLA	**College**	**23.05**	**40**	P	**P**	**16 45 56.4**	**+2.5**
	4.8nm,1.0s,mb3.9						
DAWY	**Dawson**	**26.46**	**44**	*e*P	**P**	**16 46 25.1**	**-0.3**
INK	**Inuvik**	**29.42**	**36**	LR	LR	16 59 50.4	
	comp=Z,36nm,21.8s,baz=338,slow=39						
YKA	**Yellowknife Ar**	**37.68**	**45**	P	**P**	**16 48 02.4**	**-1.2**
YKA	**Yellowknife Ar**	**37.68**	**45**	P	**P**	**16 48 02.4**	**-1.2**
	0.8nm,0.9s,mb3.5,baz=288,slow=8.5,SNR=6.5						
RES	**Resolute Bay**	**41.09**	**24**	P	**P**	**16 48 31.2**	**-0.8**
	178nm,1.4s,mb5.5						
SONM	**Songino Array**	**43.45**	**294**	P	**P**	**16 48 52.3**	**+0.7**
	0.5nm,0.5s,mb3.5,baz=61,slow=8.4,SNR=8.6						
NVAR	**Mina Array Bea**	**46.98**	**79**	P	**P**	**16 49 20.9**	**+1.3**
	0.4nm,0.6s,mb3.5,baz=50,slow=26,SNR=5.8						
PDAR	**Pinedale Array**	**49.57**	**69**	P	**P**	**16 49 41.4**	**+1.8**
	0.4nm,0.6s,mb3.6,baz=5.0,slow=2.7,SNR=4.5						
KURK	**Kurchatov**	**56.38**	**311**	*e*P	**P**	**16 50 28.7**	**-1.0**
	3.0nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**57.19**	**305**	P	**P**	**16 50 34.7**	**-0.8**
	0.4nm,0.4s,mb3.8,baz=50,slow=6.9,SNR=6.4						
ARU	**Arti**	**60.62**	**325**	*e*P	**P**	**16 50 59.4**	**+0.2**
	3.2nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**62.06**	**77**	P	**P**	**16 51 08.7**	**-0.7**
	0.2nm,0.4s,mb3.6,baz=308,slow=6.3,SNR=9.1						
AKTO	**Aktyubinsk**	**65.52**	**321**	P	**P**	**16 51 32.4**	**+0.5**
	1.0nm,0.6s,mb4.0,baz=60,slow=5.6,SNR=8.9						
AKASG	**Malin Array Be**	**74.29**	**339**	P	**P**	**16 52 24.9**	**-0.8**
	0.3nm,0.4s,mb3.5,baz=20,slow=6.0,SNR=4.2						
WRA	**Warramunga Arr**	**79.77**	**219**	P	**P**	**16 52 57.0**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=31,slow=5.9,SNR=7.1						
ASAR	**Alice Springs**	**83.30**	**218**	P	**P**	**16 53 15.8**	**+0.5**
	0.5nm,0.8s,mb3.6,baz=25,slow=5.0,SNR=8.4						
BRTR	**Keskin Array B**	**83.31**	**331**	P	**P**	**16 53 15.2**	**-0.2**
	0.3nm,0.6s,mb3.5,baz=62,slow=2.9,SNR=3.6						

ISCJB ***17*** *16:41:58.8±0.8, 3177S±006×670W±0.1, h138km±8km, mb4.0/10, Error ellipse: s-maj=19.0km s-min=9.6km az=163.4*
IDC ***17*** *16:41:59.8±0.7, 3184S×6708W, h134km±5km, mb3.6/4, mb1 3.7/7, mb1mx3.6/18, mbtmp3.5/7, Error ellipse: s-maj=19.1km s-min=16.1km az=24.0*
NEIC ***17*** *16:41:60.0±0.8, 3182S×6704W, h138km±7km, mb4.6/8, Error ellipse: s-maj=15.6km s-min=7.8km az=76.0*
ISC 17 16:41:59.9±0.8**, 3178S**±006×**670W**±01**, h132**km±8km**, n26,** σ**0s94**/22**, mb4.0**/10**, 1C, San Juan Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**1.06**	**279**	P	**Pn**	**16 42 23.9**	**+0.4**
	41nm,0.3s,baz=91,slow=9.3,SNR=4046						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA				S	Sn	16 42 41.2	-0.2
	33nm,0.3s,baz=211,slow=19,SNR=6.4						
LCO	Las Campanas	4.22	310	ePn	Pn	16 43 03.2	+0.6
LCO				e		16 43 15.2	
LCO				eSn	Sn	16 43 37.5	-14
TRQA	Tornquist	7.50	148	⇑iPn	Pn	16 43 45.9	-0.6
	27nm,0.6s						
PLCA	Paso Flores	9.38	197	P	Pn	16 44 11.1	-0.7
	0.3nm,0.3s,baz=24,slow=11,SNR=8.5						
LPAZ	La Paz	15.45	356	P	Pn	16 45 34.0	+3.2
	0.3nm,0.3s,baz=173,slow=8.4,SNR=7.5						
SIV	San Ignacio	16.62	20	P	Pn	16 45 45.7	+0.6
	0.3nm,0.3s,baz=206,slow=13,SNR=6.6						
EFI	East Falkland	20.94	164	eP	P	16 46 30.8	-1.2
	25nm,0.7s						
USHA	Ushuaia	23.07	182	P	P	16 46 53.9	+0.4
	8.5nm,0.7s,mb4.3,baz=16,slow=9.2,SNR=5.6						
OTAV	Otavalo	33.63	339	P	P	16 48 25.5	-2.4
	1.6nm,0.6s,mb3.9						
RCBR	Riachuelo	38.89	55	P	P	16 49 11.6	-1.1
	22nm,1.3s,mb4.6						
VNA3	Neumayer Olymp	49.87	159	e	P	16 50 42.8	+3.6
VNA3				e		16 50 49.6	
VNA2	Neumayer--Watz	50.47	158	e	P	16 50 44.9	+1.2
	baz=287,slow=9.8						
VNA2				e		16 50 51.1	
SNAA	Sanae	52.08	159	e	P	16 50 56.5	+0.8
SNAA				e		16 51 03.6	
TEIG	Tepich	55.58	336	P	P	16 51 21.2	-0.5
	6.6nm,0.6s,mb4.6						
QSPA	South Pole Qui	58.46	180	eP	P	16 51 42.0	+0.8
	4.0nm,0.6s,mb4.4						
TXAR	Lajitas Array	70.05	326	P	P	16 52 57.3	-0.1
	0.5nm,0.7s,mb3.4,baz=159,slow=7.1,SNR=6.5						
WVT	Waverly	70.32	342	P	P	16 52 58.2	-0.7
	3.8nm,0.8s,mb4.2						
TORD	Torodi Ar. Bea	79.46	67	P	P	16 53 52.5	+0.5
	0.3nm,0.5s,mb3.2,baz=356,slow=4.3,SNR=3.1						
TORD				pP	pP	16 54 25.5	+0.5
	0.6nm,0.6s,baz=286,slow=6.0,SNR=2.9						
PDAR	Pinedale Array	83.83	330	P	P	16 54 14.3	+0.1
	0.2nm,0.4s,mb3.2,baz=127,slow=2.2,SNR=5.3						
HLID	Hailey	86.61	328	eP	P	16 54 28.3	+0.2
	2.8nm,1.0s,mb4.0						
YKA	Yellowknife Ar	101.39	340	P	Pdif	16 55 35.2	-0.9
YKA	Yellowknife Ar	101.39	340	P	Pdif	16 55 35.2	-0.9
	0.1nm,0.5s,baz=136,slow=4.1,SNR=6.7						
ASAR	Alice Springs	121.35	203	PKP	PKPdf	17 00 36.4	-1.6
	0.2nm,0.4s,baz=144,slow=1.4,SNR=7.0						
ASAR				pPKP	pPKPdf	17 01 11.8	-1.3
	0.4nm,1.1s,baz=59,slow=34,SNR=1.3						
WRA	Warramunga Arr	124.65	205	PKP	PKPdf	17 00 43.3	-1.1
	0.5nm,0.4s,baz=164,slow=1.6,SNR=25						
WRA				pPKP	pPKPdf	17 01 17.8	-1.8
	0.2nm,0.4s,baz=169,slow=1.7,SNR=2.4						
MKAR	Makanchi Array	152.12	49	PKPbc	PKPbc	17 01 39.4	+0.1
MKAR				pPKPbc	pPKPbc	17 02 15.4	+1.0
MKAR	Makanchi Array	152.12	49	PKPbc	PKPbc	17 01 39.4	+0.1
	0.8nm,0.6s,baz=304,slow=1.6,SNR=11						
MKAR				pPKPbc	pPKPbc	17 02 15.4	+1.0
	0.6nm,0.6s,baz=318,slow=1.3,SNR=3.5						

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*IDC **17** 17:12:21.6±1.0, 374S×13509E, h0^{km}, mb4.3/3, mb1 4.3/8, mb1mx4.1/14, mbtmp4.3/8, ML3.8/5, MS3.4/3, Ms1 3.4/3, ms1mx3.1/26, Error ellipse: s-maj=29.7km s-min=20.2km az=56.0*

*ISCJB **17** 17:12:23.6±0.7, 387S±008×13502E±007, h35^{km}, mb4.3/6, MS3.4/3, Error ellipse: s-maj=11.3km s-min=9.7km az=157.2*

*NEIC **17** 17:12:25.1±0.8, 396S×13503E, h35^{km}, mb4.4/4, Error ellipse: s-maj=17.1km s-min=12.5km az=61.0*

ISC 17 17:12:24.2±6.0**, 39S**±01×**13507E**±008**, h24**^{km}±47^{km}**, n19,** σ**1^{s}26**/20**, mb4.3**/6**, MS3.4**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	Kupang	12.95	240	Pn	Pn	17 15 28.7	+1.8
	3.6nm,0.3s,baz=92,slow=1.3,SNR=14						
BATI				Sn	Sn	17 17 50.0	-0.4
	0.4nm,0.3s,baz=264,slow=20,SNR=1.9						
PMG	Port Moresby	13.20	115	eP	Pn	17 15 29.2	-1.1
	15nm,0.9s						
PMG				Pn	Pn	17 15 29.3	-1.0
PMG				Lg		17 19 36.1	
PMG	Port Moresby	13.20	115	Pn	Pn	17 15 29.3	-1.0
	0.3nm,0.3s,baz=319,slow=9.3,SNR=2.3						
PMG				Lg		17 19 36.1	
	0.1nm,0.3s,baz=348,slow=15,SNR=1.9						
WB2	Warramunga Arr	16.00	182	eP	Pn	17 16 07.8	+0.1
WRA	Warramunga Arr	16.00	183	Pn	Pn	17 16 04.6	-3.2
	0.1nm,0.3s,baz=6.8,slow=13,SNR=11						
WRA				Sn	Sx	17 18 55.6	
	0.3nm,0.3s,baz=358,slow=24,SNR=4.6						
WRA				Lg		17 20 48.6	
	baz=7.1,slow=28,SNR=3.1						
FITZ	Fitzroy Crossi	16.90	212	eP	Pn	17 16 19.0	-0.2
	7.6nm,0.6s						
FITZ				eS	Sx	17 19 17.0	
FITZ	Fitzroy Crossi	16.90	212	Pn	Pn	17 16 19.4	+0.2
	0.5nm,0.3s,baz=41,slow=12,SNR=16						
FITZ				Sn	Sn	17 19 16.3	-10
	0.4nm,0.3s,baz=167,slow=14,SNR=5.0						
CTA	Charters Tower	19.46	147	P	Pn	17 16 51.9	+1.2
	0.2nm,0.3s,baz=330,slow=14,SNR=3.1						
CTAO	Charters Tower	19.46	147	P	Pn	17 16 48.0	-2.7
	20nm,1.2s						
ASAR	Alice Springs	19.72	183	P	Pn	17 16 54.6	+1.0
	0.7nm,0.3s,baz=5.8,slow=11,SNR=70						
MBWA	Marble Bar	22.76	220	P	P	17 17 30.3	+5.4
	23nm,1.3s,mb4.5						
HNR	Honiara	25.31	104	P	P	17 17 50.5	+1.3
	9.2nm,0.3s,mb4.8,baz=96,slow=23,SNR=5.8						
HNR				LR	LR	17 27 03.1	
	comp=Z,158nm,20.2s,MS3.5,baz=359,slow=35						
KSM	Kuching	25.31	282	eP	P	17 17 47.3	-2.0
STKA	Stephens Creek	28.53	168	P	P	17 18 22.9	+4.8
	1.0nm,0.6s,mb3.7,baz=0.1,slow=10,SNR=3.3						
CBIJ	Chichi jima	31.54	12	LR	LR	17 30 20.4	
	comp=Z,76nm,20.1s,MS3.4,baz=225,slow=34						
JNU	Nakatsue	37.00	354	LR	LR	17 32 11.5	
	comp=Z,32nm,18.1s,MS3.2,baz=50,slow=32						
BJT	Baijiatuau	47.00	340	P	P	17 20 52.5	-1.0
	11nm,0.9s,mb4.8						
SONM	Songino Array	57.30	337	P	P	17 22 10.8	+0.9
	0.8nm,0.7s,mb3.9,baz=149,slow=7.5,SNR=7.7						
MKAR	Makanchi Array	68.53	324	P	P	17 23 25.4	+0.7
	1.7nm,0.5s,mb4.2,baz=109,slow=8.6,SNR=24						

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*ISCJB **17** 17:15:37.8±2.7, 192N±0.1×1456E±04, h192^{km}±30^{km}, mb3.3/4, Error ellipse: s-maj=59.1km s-min=21.3km az=171.6*

*IDC **17** 17:15:38.9±2.7, 19.12N×14565E, h188^{km}±28^{km}, mb3.0/4, mb1 3.3/6, mb1mx3.2/21, mbtmp3.1/6, Error ellipse: s-maj=41.7km s-min=17.3km az=81.0*

ISC 17 17:15:38.8±2.5**, 192N**±0.1×**1457E**±04**, h187**^{km}±27^{km}**, n6,** σ**0^{s}75**/7**, mb3.3**/4**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.58	188	P	Pn	17 17 00.9	+0.5
	8.3nm,0.3s,baz=121,slow=22,SNR=9.3						
GUMO				S	Sn	17 18 04.5	-0.2
	4.8nm,0.3s,baz=56,slow=24,SNR=2.7						
MJAR	Matsushiro Arr	18.52	341	P	P	17 19 40.2	-0.9
	0.3nm,0.3s,baz=157,slow=8.5,SNR=7.2						
KSRS	Korea Array	23.93	323	P	P	17 20 35.8	+0.1
	0.8nm,0.6s,mb3.4,baz=146,slow=9.4,SNR=5.0						
WRA	Warramunga Arr	40.40	197	P	P	17 22 58.2	-0.5
	0.8nm,0.7s,mb3.5,baz=18,slow=8.9,SNR=5.9						
SONM	Songino Array	42.77	321	P	P	17 23 18.5	+0.8
	0.3nm,0.5s,mb3.2,baz=134,slow=8.3,SNR=3.1						
YKA	Yellowknife Ar	77.62	28	P	P	17 27 14.2	+0.2
	0.4nm,0.6s,mb3.3,baz=291,slow=5.5,SNR=6.8						

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*IDC **17** 17:42:20.9±0.3, 1.17N×12627E, h0^{km}, mb5.8/23, mb1 5.7/24, mb1mx5.7/25, mbtmp5.7/24, ML5.7/1, MS5.4/20, Ms1 5.4/20, ms1mx5.4/25, Error ellipse: s-maj=15.8km s-min=9.3km az=75.0*

*BJI **17** 17:42:20.2, 079N×12638E, h29^{km}, mB6.1, mb6.0, Ms5.8, Msz5.7*

*ISCJB **17** 17:42:22.5±0.1, 1.13N±002×12636E±002, h22^{km}, mb6.0/181, MS5.7/226, Error ellipse: s-maj=3.4km s-min=2.6km az=167.2*

*MOS **17** 17:42:24.7±1.0, 121N×126.19E, h33^{km}, mb6.3/71, MS5.7/84, Error ellipse: s-maj=8.6km s-min=4.4km az=116.2*

*NEIC **17** 17:42:26.3±0.1, 1.13N×12622E, h35^{km}, mb6.0/96, ME6.2, MS5.8/169, MW6.2, Error ellipse: s-maj=4.7km s-min=3.4km az=57.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.25; M$_{\theta\theta}$0.34; M$_{\phi\phi}$-2.59; M$_{r\theta}$-0.33; M$_{\theta\phi}$-0.62; M$_{\phi r}$0.33; Best double couple: M$_{0}$2.50000×10^{18} NP1:φ$_{s}$203.00000°, δ43.00000°, λ107.00000°. NP2:φ$_{s}$0.00000°, δ49.00000°, λ75.00000°. Principal axes: T 2.3400, Plg78.0000°, Azm205.0000°; N 0.3900, Plg12.0000°, Azm10.0000°; P -2.7300, Plg3.0000°, Azm101.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC Felt [IV] at Manado and on Ternate, Indonesia.

*GCMT **17** 17:42:26.3±0.1, 130N×12637E, h41^{km}, MW6.2/111, Moment Tensor Solution. s111,c242; s105,c404; Duration: 3^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$2.62±.02; M$_{\theta\theta}$-0.07±.01; M$_{\phi\phi}$-2.55±.01; M$_{r\theta}$-0.24±.01; M$_{\theta\phi}$-0.95±.01; M$_{\phi r}$0.21±.02; Best double couple: M$_{0}$2.76600×10^{18} NP1:φ$_{s}$206.00000°, δ44.00000°, λ100.00000°. NP2:φ$_{s}$12.00000°, δ47.00000°, λ80.00000°. Principal axes: T 2.6590, Plg83.0000°, Azm209.0000°; N 0.2110, Plg7.0000°, Azm18.0000°; P -2.8730, Plg1.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 17 17:42:24.5±0.1**, 113N**±002×**12634E**±002**, h23**^{km}±2.6^{km}**:pP-P, n1095,** σ**1^{s}15**/775**, mb6.0**/180**, MS5.7**/226**, 189C-42D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNI	Manado	1.53	282	P	Pn	17 42 52.6	+2.2
	0.0nm,0.0s						
LBMI	Labuha	2.10	146	P	Pn	17 43 01.0	+2.7
	0.0nm,0.0s						
SGSI	Sangihe	2.67	342	P	Pn	17 43 07.8	+1.7
	0.0nm,0.0s						
GSPH	General Santos	5.12	344	⇓eP	Pn	17 43 41.0	+1.1
GSPH				eS	Sn	17 44 34.7	-3.5
AAI	Ambon	5.13	159	P	Pn	17 43 44.8	+4.8
	0.0nm,0.0s						
MSAI	Masohi	5.14	150	P	Pn	17 43 48.6	+8.4
	0.0nm,0.0s						
DAV	Davao City (W)	5.95	353	⇓ePn	Pn	17 43 54.1	+2.8
	3μm,0.8s						
DAV	Davao City (W)	5.95	353	P	Pn	17 43 54.3	+3.0
	SNR=124						
DAV	Davao City (W)	5.95	353	P	Pn	17 43 54.3	+3.0
	SNR=124						
DAV	Davao City (W)	5.95	353	P	Pn	17 43 54.3	+3.0
	SNR=124						
DAV	Davao City (W)	5.95	353	P	Pn	17 43 54.3	+3.0
	SNR=124						
DAV	Davao City (W)	5.95	353	P	Pn	17 43 54.3	+3.0
	SNR=124						
DAV	Davao City (W)	5.95	353	⇓eP	Pn	17 43 54.0	+2.7
DMPH	Davao City--Mi	5.97	352	⇓iP	Pn	17 43 55.1	+3.5
DMPH				iS	Sn	17 44 49.3	-10
KDI	Kendari	6.27	216	P	Pn	17 43 59.5	+3.9
	0.0nm,0.0s						
PCI	Palu	6.80	253	P	Pn	17 44 07.8	+4.8
	0.0nm,0.0s						
BIPH	Bislig	7.01	0	⇑iP	Pn	17 44 07.9	+2.1
PAGZ	Pagadian	7.30	336	eP	Pn	17 44 11.0	+1.2
CGP	Cagayan de Oro	7.46	347	eP	Pn	17 44 14.5	+2.5
SCPH	Surigao	8.64	354	⇑eP	Pn	17 44 31.3	+3.1
TSM	Tawau	9.02	291	⇑P	Pn	17 44 37.0	+3.6
TARAI	Tarakan	9.03	284	P	Pn	17 44 38.2	+4.7
	0.0nm,0.0s						
SMKI	Samarinda	9.26	260	P	Pn	17 44 42.8	+6.1
	0.0nm,0.0s						
LLP	Lapu-Lapu	9.43	346	⇑eP	Pn	17 44 42.2	+3.1
LLP				eS	Sn	17 46 34.8	+10
OCLP	Ormoc	10.01	350	eP	Pn	17 44 49.3	+2.3
PLP	Palo	10.06	352	eP	Pn	17 44 49.5	+1.7
GUIM	Jordan	10.15	339	eP	Pn	17 44 52.6	+3.8
SDKM	Sandakan	10.16	296	⇑P	Pn	17 44 53.2	+4.0
RCP	Roxas	10.96	341	eP	Pn	17 45 04.4	+4.3
CUYO	Cuyo Island	11.01	332	eP	Pn	17 45 03.6	+2.9
KALP	Kalibo	11.21	339	eP	Pn	17 45 12.1	+8.6
KKM	Kota Kinabalu	11.22	296	ePn	Pn	17 45 03.2	-0.4
KKM	Kota Kinabalu	11.22	296	⇑P	Pn	17 45 09.4	+5.8
BATP	Bataraza	11.41	312	eP	Pn	17 45 08.0	+1.8
CNP	Catarman	11.43	352	eP	Pn	17 45 09.3	+2.9
PPR	Puerto Princes	11.45	319	eP	Pn	17 45 09.3	+2.6
BATI	Kupang	11.57	193	Pn	Pn	17 45 15.0	+6.6
	3.4nm,0.3s,baz=97,slow=1.1,SNR=20						
ENPP	El Nido	12.14	326	eP	Pn	17 45 18.7	+2.5
WSI	Waingapu	12.29	209	P	Pn	17 45 24.1	+5.8
	0.0nm,0.0s						
BBKI	Banjar Baru	12.36	248	P	Pn	17 45 24.8	+5.6
	0.0nm,0.0s						
BUSP	Coron	12.40	331	eP	Pn	17 45 22.0	+2.2
PVCP	Virac	12.58	350	eP	Pn	17 45 24.4	+2.3
PLKI	Palangkaraya	12.83	255	P	Pn	17 45 29.5	+3.9
	0.0nm,0.0s						
GQP	Guinayangan	13.27	343	⇓iP	Pn	17 45 36.1	+4.5
BTM	Bintulu	13.40	279	⇓P	Pn	17 45 38.8	+5.3
LUBP	Lubang	13.90	335	eP	Pn	17 45 44.2	+3.9
TGY	Tagaytay City	13.96	338	eP	Pn	17 45 46.4	+5.4
SBUM	Sibu	14.17	276	⇓P	Pn	17 45 49.5	+5.6
POLP	Polilio Island	14.20	342	eP	Pn	17 45 46.7	+2.4
DNP	Denpasar	14.76	228	P	Pn	17 46 00.9	+9.0
	0.0nm,0.0s						
KMMI	Kalianget	14.77	236	P	Pn	17 45 57.6	+5.4
	0.0nm,0.0s						
JAY	Jayapura	14.81	104	P	Pn	17 45 59.2	+6.5
	0.0nm,0.0s						
STKI	Sintang	14.89	266	P	Pn	17 45 57.3	+3.5
	0.0nm,0.0s						
PBKI	Pangkalan Bun	15.15	255	P	Pn	17 46 00.6	+3.4
	0.0nm,0.0s						
PCPH	Palayan	15.25	340	⇓eP	Pn	17 46 00.5	+2.1
BALP	Baler	15.26	342	eP	Pn	17 46 02.6	+4.0
KSM	Kuching	16.03	271	ePn	Pn	17 46 10.4	+1.8
KSM	Kuching	16.03	271	⇑P	Pn	17 46 13.7	+5.0
BCPH	Baguio City Da	16.18	340	⇓eP	Pn	17 46 14.2	+3.6
CAUP	Cauayan	16.33	344	eP	Pn	17 46 12.7	+0.2
BOLP	Bolinao	16.43	338	eP	Pn	17 46 14.9	+1.2
KRKI	Karangkates	16.63	236	P	Pn	17 46 20.6	+4.2
	4μm,1.4s						
MMPI	Merauke	16.94	124	P	Pn	17 46 26.7	+6.5
	2μm,1.2s						
SJI	Sawahan	16.99	239	P	Pn	17 46 24.0	+3.2
	828nm,1.0s						
CVP	Callao Caves	17.06	345	⇓eP	Pn	17 46 23.1	+1.4
ABRA	Dolores	17.32	342	eP	Pn	17 46 24.5	-0.5
APYP	Conner	17.37	344	eP	Pn	17 46 25.0	-0.5
SGCP	Mt. Cagua	17.52	346	eP	Pn	17 46 29.2	+1.8
YOGI	Yogyakarta	18.30	241	⇑eP	Pn	17 46 40.5	+3.4
YOGI				eS	Sn	17 49 58.8	-2.1
BJII	Banjamegara	18.59	243	P	Pn	17 46 43.1	+2.4
	1μm,1.6s						
BJII	Banjamegara	18.59	243	⇑iP	Pn	17 46 44.1	+3.4
BJII				iS	Sn	17 50 12.1	+4.0
TPI	Tanjungpandan	19.07	258	P	Pn	17 46 47.0	+0.6
	261nm,1.1s						
FITZ	Fitzroy Crossi	19.12	182	⇑iP	Pn	17 46 46.7	-0.2
	350nm,0.8s						
FITZ				iS	Sn	17 50 15.2	-5.4
FITZ	Fitzroy Crossi	19.12	182	P	Pn	17 46 46.9	-0.1
	16nm,0.3s,baz=14,slow=12,SNR=216						
FITZ				S	Sn	17 50 14.5	-6.2
	1.8nm,0.3s,baz=164,slow=14,SNR=2.4						
FITZ				LR	LR	17 54 41.9	
	comp=Z,5μm,21.2s,baz=11,slow=39						
LEM	Lembang	20.28	247	P	P	17 46 59.8	+1.0
	272nm,1.2s						
PPBI	Pangkal Pinang	20.46	261	P	P	17 47 00.9	+0.2
	262nm,1.2s						
DBJI	Dramaga	20.98	248	P	P	17 47 06.5	+0.1
	339nm,1.5s						
SKJI	Sukabumi	21.32	247	P	P	17 47 16.8	+6.7
	464nm,1.0s,mb5.8						
SBJI	Serang	21.42	250	P	P	17 47 14.4	+3.3
	325nm,1.3s,mb5.5						
DSRI	Dabo	21.81	266	P	P	17 47 16.6	+1.2
	308nm,1.3s,mb5.6						
GUMO	Guam	22.13	55	eP	P	17 47 18.2	-0.5
	558nm,1.1s,mb5.9						
GUMO				LR	LR		
	comp=Z,10μm,22.0s,MS5.2						
KLI	Kotabumi	22.27	254	P	P	17 47 21.7	+1.5
	comp=Z,324nm,1.0s,mb5.7						
WRA	Warramunga Arr	22.36	160	P	P	17 47 21.1	0.0
WRA				S	S	17 51 24.7	-1.3
WRA				ScP	ScP	17 54 55.1	+2.6
WRA	Warramunga Arr	22.36	160	P	P	17 47 21.1	0.0
WRA				S	S	17 51 24.7	-1.4
WRA				pmax	pmax		
	comp=Z,400nm,0.9s						
WRA				smax			
	comp=N,20nm,0.8s						
WRA	Warramunga Arr	22.36	160	P	P	17 47 21.1	0.0
	comp=N,400nm,0.9s,mb5.8,baz=335,slow=11,SNR=388						
WRA				S	S	17 51 24.7	-1.4
	comp=N,20nm,0.8s,baz=343,slow=14,SNR=8.1						
WRA				ScP	ScP	17 54 55.1	+2.6
	comp=N,15nm,1.0s,baz=331,slow=2.8,SNR=5.8						
WRA				PKiKP	PKiKP	17 59 01.1	-0.9
	comp=N,1.0nm,0.7s,baz=308,slow=1.3,SNR=5.2						
WRA				SKKS		18 21 02.8	
	comp=N,2.3nm,0.9s,baz=158,slow=4.3,SNR=8.6						
WB2	Warramunga Arr	22.36	160	⇑iP	P	17 47 21.3	+0.2
WB2				iS	S	17 51 17.5	-8.6
COEN	Coen	22.43	133	eP	P	17 47 20.4	-1.5
	comp=N,348nm,1.4s,mb5.6						
MYKOM	Kota Tinggi	22.49	272	⇑P	P	17 47 25.4	+2.9
KGM	Kluang	23.02	272	⇓P	P	17 47 30.8	+2.5
MBWA	Marble Bar	23.07	196	⇑iP	P	17 47 28.7	+0.2
	comp=N,283nm,0.8s,mb5.8						
MBWA				LR	LR		
	comp=Z,14μm,21.0s,MS5.4						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
MBWA	Marble Bar	23.07	196	P	P	17 47 29.4	+0.8
	SNR=22						
LWLI	Liwa	23.07	254	P	P	17 47 28.7	-0.1
	comp=Z,418nm,0.7s,mb6.0						
PMG	Port Moresby	23.23	117	⇑eP	P	17 47 29.0	-1.4
	comp=Z,232nm,0.9s,mb5.6						
PMG				LR	LR		
	comp=Z,27μm,19.0s,MS5.7						
PMG	Port Moresby	23.23	117	P	P	17 47 31.7	+1.3
PMG				S	S	17 51 36.5	-4.6
PMG				pmax	pmax		
	comp=Z,193nm,0.9s						
PMG				smax			
	comp=N,19nm,1.0s						
PMG	Port Moresby	23.23	117	P	P	17 47 31.7	+1.3
	comp=N,192nm,0.9s,mb5.5,baz=317,slow=7.4,SNR=61						
PMG				S	S	17 51 36.5	-4.6
	comp=N,19nm,1.0s,baz=348,slow=19,SNR=2.0						
NACB	Ninganchiao	23.37	349	eP	P	17 47 27.2	-4.5
KTGM	Kuala Trenggan	23.53	281	⇑P	P	17 47 35.6	+2.1
XMIS	Christmas Isla	23.59	240	⇑eP	P	17 47 32.2	-1.8
YHNB	Yeheng	23.89	349	eP	P	17 47 34.5	-2.1
QIZ	Qiongzhong	24.04	319	P	P	17 47 37.4	-0.7
QIZ				AP		17 47 40.8	
QIZ				XP	sP	17 47 44.8	-3.0
QIZ				S	S	17 51 49.0	-5.2
QIZ				AMB	AMB		
	comp=Z,144nm,1.6s,mb5.2						
QIZ				AMB	AMB		
	comp=Z,3μm,7.1s						
QIZ				LR	LR		
	comp=N,14μm,23.2s,MS5.5						
QIZ				LR	LR		
	comp=E,12μm,20.4s,MS5.5						
QIZ				LR	LR		
	comp=Z,36μm,25.9s						
QIZ	Qiongzhong	24.04	319	eP	P	17 47 37.1	-0.9
	comp=Z,748nm,1.5s,mb5.9						
QIZ				LR	LR		
	comp=Z,27μm,21.0s,MS5.7						
RGRI	Rengat	24.05	267	P	P	17 47 39.6	+1.4
	comp=Z,648nm,1.4s,mb5.9						
HKC	Hong Kong Obse	24.15	332	⇑iP	P	17 47 38.0	-1.0
HKC				iS	S	17 52 00.0	+4.2
KSI	Kapahiang	24.20	259	P	P	17 47 40.6	+1.0
	comp=Z,433nm,0.8s,mb5.9						
FRIM	Kepong	24.78	275	⇓P	P	17 47 47.1	+2.2
QZH	Quanzhou	24.83	343	⇑iP	P	17 47 41.8	-3.4
QZH				S	S	17 51 56.3	-11
QZH				AMB	AMB		
	comp=Z,1μm,1.2s,mb6.3						
QZH				AMB	AMB		
	comp=Z,9μm,6.2s						
QZH				LR	LR		
	comp=N,30μm,19.4s						
QZH				LR	LR		
	comp=E,3μm,12.0s						
QZH				LR	LR		
	comp=Z,55μm,22.6s,MS6.0						
GZH	Guangzhou	25.21	331	P	P	17 47 50.8	+2.1
GZH				S	S	17 52 12.3	-0.7
GZH				AMB	AMB		
	comp=Z,785nm,1.0s,mb6.2						
GZH				LR	LR		
	comp=N,9μm,22.1s,MS5.5						
GZH				LR	LR		
	comp=E,16μm,22.4s,MS5.5						
GZH				LR	LR		
	comp=Z,24μm,25.5s,MS5.6						
UBT	Ubonrachathani	25.29	305	⇓P	P	17 47 50.0	+0.5
JOW	Kunigami	25.63	4	P	P	17 47 53.8	+1.3
	comp=Z,888nm,1.0s,mb6.2,baz=178,slow=5.8,SNR=41						
ASAR	Alice Springs	25.72	164	P	P	17 47 54.0	+0.7
ASAR						17 51 24.0	
ASAR				S	S	17 52 24.9	+4.0
ASAR				pmax	pmax		
	comp=Z,85nm,0.5s						
ASAR				smax			
	comp=N,38nm,1.0s						
ASAR	Alice Springs	25.72	164	P	P	17 47 54.0	+0.7
	comp=N,85nm,0.5s,mb5.5,baz=347,slow=7.2,SNR=1345						
ASAR				PcP	PcP	17 51 24.0	+0.7
	comp=N,16nm,0.5s,baz=345,slow=2.0,SNR=5.0						
ASAR				S	S	17 52 24.9	+4.0
	comp=N,38nm,1.0s,baz=347,slow=19,SNR=5.5						
ASAR				SKKS		18 20 48.2	
	comp=N,1.1nm,0.9s,baz=161,slow=5.1,SNR=6.4						
KULM	Kulim	25.97	280	⇑iP	P	17 47 55.2	-0.6
KULM				eS	S	17 52 12.0	-13
KULM	Kulim	25.97	280	⇑P	P	17 47 56.8	+1.0
PPI	Padang Panjang	25.98	267	P	P	17 47 55.6	-0.3
	comp=N,237nm,1.2s,mb5.6						
SNG	Songkhla	26.33	284	P	P	17 47 59.0	0.0
	comp=N,476nm,1.0s,mb6.0						
TRSI	Tarutung	27.38	272	P	P	17 48 15.0	+6.6
	comp=N,361nm,1.3s,mb5.7						
PSI	Prapat	27.44	274	P	P	17 48 08.6	-0.4
PSI				S	S	17 52 44.7	-3.8
PSI				pmax	pmax		
	comp=Z,429nm,1.3s,mb5.8						
PSI				smax			
	comp=N,4.0nm,0.8s						
PSI	Prapat	27.44	274	P	P	17 48 08.6	-0.4
	comp=N,429nm,1.2s,mb5.8,baz=113,slow=3.7,SNR=127						
PSI				S	S	17 52 44.7	-3.9
	comp=N,3.6nm,0.8s,baz=356,slow=23,SNR=4.0						
PSI				ScP	ScP	17 55 06.4	-0.6
	comp=N,21nm,1.2s,baz=283,slow=2.8,SNR=3.9						
KKTK	Khon Kaen	27.66	304	P	P	17 48 10.5	-0.4
	comp=N,2μm,0.8s,mb6.8						
NNT	Nongplab	28.72	295	P	P	17 48 20.0	-0.4
CTA	Charters Tower	28.74	138	⇑iP	P	17 48 21.8	+1.4
	comp=N,93nm,1.4s,mb5.3						
CTA				iS	S	17 53 08.8	+0.1

CTA e 17 55 13.0
CTA Charters Tower 28.74 138 P P 17 48 20.8 +0.4
CTA S S 17 53 01.7 -7.0
CTA pmax pmax
comp=Z,130nm,1.1s
CTA smax
comp=N,10.0nm,0.8s
CTA Charters Tower 28.74 138 P P 17 48 20.8 +0.4
comp=N,130nm,1.1s,mb5.6,baz=321,slow=11,SNR=37
CTA S S 17 53 01.7 -6.9
comp=N,10nm,0.8s,baz=227,slow=22,SNR=1.3
CTA ScP ScP 17 55 11.5 +0.7
comp=N,34nm,1.1s,baz=253,slow=2.5,SNR=3.4
CTAO Charters Tower 28.74 138⇑iP P 17 48 21.7 +1.3
comp=N,163nm,1.1s,mb5.7
CTAO eScP ScP 17 55 12.5 +1.8
CTAO LR LR
comp=Z,12μm,20.0s,MS5.5
CTAO Charters Tower 28.74 138⇑iP P 17 48 21.7 +1.3
CTAO pmax pmax
comp=Z,163nm,1.1s,mb5.7
CTAO MLR MLR
comp=Z,12μm,20.0s,MS5.5
NST Nakhon Sawan 29.61 301 P P 17 48 27.6 -0.7
comp=Z,115nm,1.0s,mb5.6
CBIJ Chichi jima 29.97 29 P P 17 48 31.5 +0.2
comp=Z,489nm,0.8s,mb6.3,baz=307,slow=1.2,SNR=8.5
CBIJ LR LR 17 57 52.4
comp=Z,4μm,20.3s,MS5.0,baz=214,slow=31
SSE Sheshan 30.20 351 P P 17 48 35.3 +2.0
SSE S S 17 53 36.8 +5.3
SSE XS sS 17 53 42.1 -0.8
SSE AMB AMB
comp=Z,156nm,1.2s,mb5.6
SSE AMB AMB
comp=Z,2μm,6.7s
SSE LR LR
comp=N,12μm,25.4s,MS5.5
SSE LR LR
comp=E,4μm,25.4s,MS5.5
SSE LR LR
comp=Z,14μm,27.3s,MS5.5
BSI Banda Aceh 31.28 279 P P 17 48 41.7 -1.4
comp=Z,213nm,1.7s,mb5.7
BDT Bhumibol Dam 31.29 302 P P 17 48 43.0 -0.1
comp=Z,33nm,0.9s,mb5.2
WHN Wuhan 31.39 340 P P 17 48 43.5 -0.3
WHN LR LR
comp=Z,38μm,24.8s,MS6.0
GYA Guiyang 31.50 325⇑iP P 17 48 46.8 +1.9
GYA AP pP 17 48 50.8 -1.0
GYA XP sP 17 48 53.6 -1.0
GYA PP PP 17 49 52.0 -4.3
GYA PCP PcP 17 51 37.6 -0.1
GYA S S 17 53 55.0 +3.0
GYA SS SS 17 55 43.5 -24
GYA AMB AMB
comp=Z,120nm,1.2s,mb5.6
GYA AMB AMB
comp=Z,980nm,4.2s
GYA LR LR
comp=N,11μm,19.4s,MS5.6
GYA LR LR
comp=E,6μm,21.8s,MS5.6
GYA LR LR
comp=Z,13μm,20.3s,MS5.6
NJ2 Nanjing 31.56 348 eP P 17 48 46.5 +1.2
NJ2 AP pP 17 48 51.5 -0.7
NJ2 XP sP 17 48 54.1 -1.0
NJ2 PP PP 17 49 50.8 -6.0
NJ2 S S 17 53 54.0 +1.3
NJ2 AMB AMB
comp=Z,390nm,0.9s,mb6.2
NJ2 AMB AMB
comp=Z,2μm,8.0s
NJ2 LR LR
comp=Z,15μm,27.7s,MS5.5
FORT Forrest 31.77 177 eP P 17 48 48.0 +0.9
comp=Z,457nm,0.7s,mb6.4
FORT e 17 51 42.7
FORT eS S 17 53 53.0 -3.0
CM31 Chiang Mai Arr 31.92 304⇑eP pP 17 48 59.4 +3.8
CHRT Chiangrai 31.97 307 ⇑P P 17 48 49.0 0.0
comp=Z,724nm,1.0s,mb6.5
CHG Chiang Mai 32.10 305 P P 17 48 50.1 -0.1
comp=Z,150nm,0.9s,mb5.8
CHTO Chiang Mai 32.10 305⇑iP P 17 48 49.7 -0.5
comp=Z,161nm,1.1s,mb5.8
CHTO ePcP PcP 17 51 40.3 +0.9
CHTO eScP ScP 17 55 21.7 -0.1
CHTO LR LR
comp=Z,11μm,20.0s,MS5.6
CHTO Chiang Mai 32.10 305⇑iP P 17 48 49.7 -0.5
CHTO e 17 51 40.3
CHTO pmax pmax
comp=Z,161nm,1.1s,mb5.8
CHTO MLR MLR
comp=Z,11μm,20.0s,MS5.6
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
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SNR=34
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SNR=34
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
CHTO Chiang Mai 32.10 305 P P 17 48 50.4 +0.2
SNR=34
JNU Nakatsue 32.11 7 LR LR 18 01 05.3
comp=Z,4μm,21.6s,MS5.1,baz=346,slow=35
KMI Kunming 32.99 318 P P 17 48 58.6 +0.7
KMI AP pP 17 49 05.1 +0.2
KMI XP sP 17 49 08.1 +0.4
KMI PP PP 17 50 06.3 -6.5
KMI S S 17 54 09.8 -5.4
KMI AMB AMB
comp=Z,240nm,1.4s,mb5.9
KMI AMB AMB
comp=Z,2μm,4.9s
KMI LR LR
comp=N,12μm,20.3s,MS5.7
KMI LR LR
comp=E,12μm,22.8s,MS5.7
KMI LR LR
comp=Z,27μm,21.8s,MS5.9
KLBR Kellerberrin 33.54 193 eP P 17 49 03.2 +0.6
comp=Z,214nm,0.6s,mb6.2
JHJ Hachijo jima 2 34.24 20 LR LR 18 01 26.0
comp=Z,7μm,20.9s,MS5.4,baz=33,slow=33
MUN Mundaring 34.29 195 eP P 17 49 09.8 +0.6
MUN eS S 17 54 34.9 -0.3
PBA Port Blair 34.94 289 eP P 17 49 14.5 -0.5
PBA ex x 17 49 44.9
comp=Z,257nm,1.0s
PBA ex x 17 50 33.8
NWAO Narrogin (SRO) 34.94 193⇑iP P 17 49 15.6 +0.8
comp=Z,99nm,0.8s,mb5.8
NWAO LR LR
comp=Z,7μm,22.0s,MS5.3
NWAO Narrogin (SRO) 34.94 193 P P 17 49 14.0 -0.8
NWAO pmax pmax
comp=Z,99nm,0.9s
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 16.5 +1.7
SNR=12
NWAO Narrogin (SRO) 34.94 193 P P 17 49 15.7 +0.9
comp=Z,60nm,0.5s,mb5.8,baz=23,slow=8.3,SNR=88
NWAO S S 17 54 36.5 -8.7
comp=Z,16nm,0.9s,baz=218,slow=21,SNR=2.3
NWAO LR LR 18 06 12.5
comp=Z,5μm,19.4s,MS5.3,baz=12,slow=41
HNR Honiara 35.08 108⇑eP P 17 49 15.6 -0.6
comp=Z,497nm,0.9s,mb6.4
HNR LR LR
comp=Z,12μm,22.0s,MS5.6
HNR Honiara 35.08 108⇑eP P 17 49 15.6 -0.6
HNR pmax pmax
comp=Z,497nm,0.9s,mb6.4
HNR MLR MLR
comp=Z,12μm,22.0s,MS5.6
HNR Honiara 35.08 108 P P 17 49 15.8 -0.4
comp=Z,227nm,0.6s,mb6.3,baz=268,slow=1.8,SNR=46
HNR S S 17 54 38.8 -9.0
comp=Z,21nm,0.3s,baz=113,slow=21,SNR=8.2
EIDS Eidsvold 35.60 139⇑eP P 17 49 20.0 -0.6
comp=Z,100nm,1.3s,mb5.6
STKA Stephens Creek 35.87 158⇑iP P 17 49 23.4 +0.6
comp=Z,188nm,0.6s,mb6.2
STKA eS S 17 54 50.5 -8.9
STKA Stephens Creek 35.87 158 P P 17 49 23.5 +0.8
comp=Z,177nm,0.6s,mb6.2,baz=330,slow=8.6,SNR=326
STKA S S 17 54 49.2 -10
comp=Z,7.3nm,0.8s,baz=283,slow=8.1,SNR=1.9
TIA Tai'an 35.94 347 eP P 17 49 22.6 -0.7
TIA AMB AMB
comp=Z,69nm,0.8s,mb5.6
TIA AMB AMB
comp=Z,1μm,6.0s
TIA LR LR
comp=E,2μm,8.0s
KSRS Korea Array 36.18 2 P P 17 49 26.0 +0.7
comp=E,98nm,1.0s,mb5.7,baz=177,slow=9.8,SNR=61
KSRS PcP PcP 17 51 51.5 +0.8
comp=E,13nm,1.0s,baz=183,slow=2.6,SNR=5.5
KSRS ScP ScP 17 55 33.6 -2.2
comp=E,3.8nm,0.9s,baz=182,slow=4.1,SNR=4.3
INCN Inchon 36.18 0⇑iP P 17 49 25.3 0.0
comp=E,58nm,0.8s,mb5.6
INCN LR LR
comp=Z,7μm,22.0s,MS5.4
CD2 Chengdu 36.54 326⇑iP P 17 49 27.8 -0.7
CD2 PP PP 17 50 53.0 +1.0
CD2 PCP PcP 17 51 51.3 -0.6
CD2 S S 17 55 04.8 -5.0
CD2 SS SS 17 57 38.3 -12
CD2 SCS ScS 17 59 44.1 +0.2
CD2 AMB AMB
comp=Z,60nm,1.3s,mb5.3
CD2 AMB AMB
comp=Z,1μm,5.8s
CD2 LR LR
comp=N,15μm,22.8s,MS5.9
CD2 LR LR
comp=E,15μm,18.0s,MS5.9
CD2 LR LR
comp=Z,18μm,28.8s
XAN Xi'an 36.58 335 P P 17 49 27.3 -1.5
XAN PP PP 17 50 53.8 +1.5
XAN AMB AMB
comp=Z,139nm,1.5s,mb5.6
XAN AMB AMB
comp=Z,868nm,7.5s
XAN LR LR
comp=N,3μm,23.7s,MS5.5
XAN LR LR
comp=E,8μm,22.0s,MS5.5
XAN LR LR
comp=Z,12μm,29.4s
MJAR Matsushiro Arr 36.91 16 P P 17 49 30.7 -0.9
MJAR PP PP 17 50 56.7 +0.7
MJAR S S 17 55 11.1 -4.2
MJAR ScP ScP 17 55 35.8 -2.9
MJAR Matsushiro Arr 36.91 16 P P 17 49 30.7 -0.9
MJAR 17 50 56.7
MJAR S S 17 55 11.1 -4.2
MJAR pmax pmax
comp=Z,167nm,1.0s
MJAR pmax pmax
comp=Z,39nm,1.1s
MJAR smax
comp=N,1.0nm,0.9s
MJAR Matsushiro Arr 36.91 16 P P 17 49 30.7 -0.9
comp=N,167nm,0.9s,mb5.8,baz=191,slow=8.7,SNR=110
MJAR PP PP 17 50 56.7 +0.7
comp=N,39nm,1.1s,baz=187,slow=9.4,SNR=2.3
MJAR S S 17 55 11.1 -4.2
comp=N,1.3nm,0.9s,baz=135,slow=57,SNR=2.6
MJAR ScP ScP 17 55 35.8 -2.9
comp=N,16nm,1.2s,baz=229,slow=5.3,SNR=6.7
MAJO Matsushiro 36.92 16⇑iP P 17 49 30.4 -1.2
comp=N,536nm,1.4s,mb6.2
MAJO ePcP PcP 17 51 54.3 +1.3
MAJO LR LR
comp=Z,7μm,20.0s,MS5.5
MAJO Matsushiro 36.92 16⇑iP P 17 49 30.5 -1.1
MAJO e 17 51 54.3
MAJO pmax pmax
comp=Z,536nm,1.4s,mb6.2
MAJO MLR MLR
comp=Z,7μm,20.0s,MS5.5
MAT Matsushiro 36.92 16 P P 17 49 30.7 -0.9
MAT S S 17 55 08.0 -7.3
DL2 Dalian 37.85 354⇑iP P 17 49 40.4 +0.9
DL2 PCP PcP 17 51 56.3 +0.6
DL2 S S 17 55 29.6 +0.2
DL2 SS SS 17 58 05.4 -11
DL2 SCS ScS 17 59 49.8 -1.1
DL2 AMB AMB
comp=Z,570nm,1.0s,mb6.3
DL2 AMB AMB
comp=Z,1μm,5.3s
DL2 LR LR
comp=N,3μm,25.6s,MS5.3
DL2 LR LR
comp=E,4μm,20.8s,MS5.3
DL2 LR LR
comp=Z,6μm,24.2s,MS5.3
TIY Taiyuan 38.59 342⇑iP P 17 49 45.1 -0.7
TIY S S 17 55 32.1 -8.7
TIY AMB AMB
comp=Z,2μm,6.1s
TIY LR LR
comp=N,9μm,20.8s
TIY LR LR
comp=E,2μm,12.5s
TIY LR LR
comp=Z,17μm,24.3s,MS5.8
IMP Imphal 39.16 310 eP P 17 49 50.0 -0.7
IMP ex x 17 52 02.0
ARMA Armidale 39.55 145⇑iP P 17 49 55.3 +1.3
ARMA eS S 17 55 49.8 -5.6
BJT Baijiatuau 39.80 348⇑iP P 17 49 55.2 -0.7
comp=Z,297nm,1.0s,mb6.0
BJT LR LR
comp=Z,6μm,20.0s,MS5.5
BJT Baijiatuau 39.80 348⇑iP P 17 49 55.2 -0.7
BJT pmax pmax
comp=Z,297nm,1.0s
BJT MLR MLR
comp=Z,6μm,20.0s
BJI Beijing 39.82 348 P P 17 49 55.4 -0.6
BJI XP sP 17 50 10.3 +4.4
BJI PCP PcP 17 52 04.1 +2.2
BJI SS SS 17 58 46.6 -9.3
BJI SCS ScS 18 00 01.6 -0.7
BJI AMB AMB
comp=Z,166nm,1.0s,mb5.7
BJI AMB AMB
comp=Z,3μm,5.7s
BJI LR LR
comp=N,5μm,32.2s
LZH Lanzhou 40.56 332 ⇑P P 17 50 02.5 +0.2
LZH AP pP 17 50 07.0 -2.3
LZH XP sP 17 50 09.5 -2.6
LZH PP PP 17 51 40.3 +4.3
LZH PCP PcP 17 52 04.3 -0.1
LZH SCP ScP 17 55 52.1 -0.5
LZH PCS PcS 17 55 54.6 -0.4
LZH S S 17 56 12.5 +2.1
LZH SS SS 17 59 07.6 -3.2
LZH SCS ScS 18 00 05.0 -1.9
LZH AMB AMB
comp=Z,881nm,1.4s,mb6.2
LZH AMB AMB
comp=Z,3μm,6.8s
LZH LR LR
comp=E,13μm,15.4s
LZH LR LR
comp=Z,28μm,18.0s,MS6.2
SNY Shenyang 40.59 357⇑iP P 17 50 02.9 +0.5
SNY AMB AMB
comp=Z,448nm,1.1s,mb6.0
SNY AMB AMB
comp=Z,2μm,4.7s
SNY LR LR
comp=N,7μm,27.1s
SNY LR LR
comp=Z,10μm,25.1s,MS5.6
AGT Agartala 40.82 306 ex x 17 49 57.0
AGT ex x 17 50 53.0
SHL Shillong 41.15 309 eP P 17 50 04.0 -3.3
SHL AMb AMB 17 50 06.8
comp=Z,1μm,1.4s,mb6.4
SHL ex x 17 55 56.0
HHC Hu-ho-hao-te 41.74 343 eP P 17 50 11.8 -0.1
HHC AP pP 17 50 21.3 +2.3
HHC XP sP 17 50 25.8 +4.0
HHC PP PP 17 51 51.5 +2.8
HHC PCP PcP 17 52 07.8 -0.3
HHC PCS PcS 17 55 57.6 -1.9
HHC XS sS 17 56 42.8 +3.3
HHC SS SS 17 59 28.0 -6.1
HHC SCS ScS 18 00 09.8 -4.0
HHC AMB AMB
comp=Z,105nm,1.0s,mb5.4
HHC AMB AMB
comp=Z,3μm,5.5s
HHC LR LR
comp=N,9μm,26.2s,MS5.5
HHC LR LR
comp=E,4μm,25.0s,MS5.5
HHC LR LR
comp=Z,15μm,26.2s,MS5.8
RIV Riverview 41.88 148 eP P 17 50 11.3 -1.8
BTO Baotou 41.99 341 eP P 17 50 12.3 -1.6
BTO LR LR
comp=N,2μm,21.6s,MS5.1
BTO LR LR
comp=E,2μm,21.6s,MS5.1
CNB Canberra Magne 42.16 152 eP P 17 50 16.9 +1.5
comp=E,101nm,1.2s,mb5.3
CN2 Changchun 42.50 359 ⇑P P 17 50 17.6 -0.4
CN2 eS S 17 56 40.4 +1.6
CN2 eSS SS 17 59 45.0 -3.9
CN2 AMB AMB
comp=Z,90nm,1.3s,mb5.2
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,5μm,22.0s,MS5.5
CN2 LR LR
comp=E,6μm,22.0s,MS5.5
CN2 LR LR
comp=Z,7μm,21.0s,MS5.5
MDJ Mudanjiang 43.40 3 P P 17 50 26.3 +1.0
MDJ AP pP 17 50 29.3 -3.1
MDJ PP PP 17 52 07.3 +0.8
MDJ PCP PcP 17 52 14.1 +0.6
MDJ S S 17 56 53.0 +0.9
MDJ AMB AMB
comp=Z,378nm,1.0s,mb6.1
MDJ AMB AMB
comp=Z,2μm,5.0s
MDJ LR LR
comp=N,9μm,31.0s
MDJ LR LR
comp=E,4μm,23.8s
MDJ LR LR
comp=Z,11μm,34.1s,MS5.5
MDJ Mudanjiang 43.40 3⇑iP P 17 50 26.0 +0.7
comp=Z,454nm,1.1s,mb6.1
MDJ eS S 17 56 53.5 +1.4
MDJ LR LR
comp=Z,8μm,22.0s,MS5.6
ERM Erimo 43.43 18 P P 17 50 27.3 +1.7
comp=Z,1μm,1.1s,mb6.5,SNR=7.7
ERM Erimo 43.43 18⇓eP P 17 50 26.1 +0.5
comp=Z,303nm,1.3s,mb5.9
ERM LR LR
comp=Z,5μm,21.0s,MS5.4
ERM Erimo 43.43 18⇓eP P 17 50 26.1 +0.5
ERM pmax pmax
comp=Z,303nm,1.3s,mb5.9
ERM MLR MLR
comp=Z,5μm,21.0s,MS5.4
LSA Lhasa 43.90 314 P P 17 50 29.8 +0.2
LSA XP sP 17 50 43.8 +4.3
LSA PP PP 17 52 16.5 +4.4
LSA S S 17 56 53.1 -6.7
LSA XS sS 17 57 19.0 +7.5
LSA LR LR
comp=N,6μm,39.9s
LSA LR LR
comp=E,12μm,31.6s
LSA LR LR
comp=Z,17μm,34.6s
LSA Lhasa 43.90 314⇑iP P 17 50 30.1 +0.5
comp=Z,1μm,1.8s,mb6.3
LSA eS S 17 56 56.9 -2.9
LSA LR LR
comp=Z,7μm,22.0s,MS5.5
LSA Lhasa 43.90 314⇑iP P 17 50 30.1 +0.5
LSA eS S 17 56 56.9 -2.9
LSA pmax pmax
comp=Z,1μm,1.8s,mb6.3
LSA MLR MLR
comp=Z,7μm,22.0s,MS5.5
GTA Gaotai 45.14 331 ⇑P P 17 50 38.9 -0.4
GTA PCP PcP 17 52 21.3 +1.7
GTA PP PP 17 52 24.5 -0.6
GTA SCP ScP 17 56 12.0 +1.0
GTA PCS PcS 17 56 13.1 -0.2
GTA S S 17 57 15.3 -2.3
GTA SS SS 18 00 27.6 -13
GTA SCS ScS 18 00 33.1 -2.1
GTA AMB AMB
comp=Z,46nm,1.5s,mb5.1
GTA AMB AMB
comp=Z,1μm,5.7s
GTA LR LR
comp=N,6μm,25.9s,MS5.7
GTA LR LR
comp=E,8μm,22.1s,MS5.7
GTA LR LR
comp=Z,18μm,21.7s,MS6.0
ASAJ Asahikawa 45.18 17 LR LR 18 10 58.3
comp=Z,4μm,18.7s,MS5.4,baz=211,slow=38
BOK Bokaro 45.19 303 ex x 17 50 32.2
BOK ex x 17 52 07.2
TAPN Taplejung 45.28 309 eP P 17 50 40.1 -0.5
comp=Z,348nm,1.0s,mb6.1
ODAN Odare 45.30 308 eP P 17 50 40.1 -0.7
comp=Z,137nm,0.5s,mb6.0
NOUC Port Laguerre 45.30 123 eP P 17 50 42.3 +1.4
DZM Mont Dzumac 45.41 123 eP P 17 50 42.5 +0.8
DZM Mont Dzumac 45.41 123 eP P 17 50 42.5 +0.7
PALK Pallekele 45.89 279⇑eP P 17 50 43.9 -1.8
comp=Z,163nm,1.4s,mb5.8
PALK ePcP PcP 17 52 25.1 +2.3
PALK LR LR
comp=Z,17μm,21.0s,MS5.5
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4

SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
PALK Pallekele 45.89 279 P P 17 50 47.2 +1.4
SNR=16
YUK Yuzh-Kuril'sk 46.12 20 eP P 17 50 47.8 +0.8
YUK e 17 52 17.5
YUK pmax pmax
comp=N,2μm,2.0s
YUK pmax pmax
comp=E,2μm,2.0s
YUK pmax pmax
comp=Z,4μm,2.0s,mb7.0
YUK pmax pmax
comp=E,2μm,1.1s
YUK pmax pmax
comp=Z,1μm,1.1s,mb6.8
YUK pmax pmax
comp=N,2μm,1.4s
YUK MLR MLR
comp=Z,7μm,23.0s,MS5.6
JIRN Jiri 46.61 308 eP P 17 50 50.7 -0.5
comp=Z,155nm,0.4s,mb6.2
MDRS Chennai 47.15 287⇑ iP P 17 50 54.5 -1.1
MDRS ex x 17 57 36.5
KKN Kakani 47.39 308 eP P 17 50 56.1 -1.2
comp=Z,415nm,1.2s,mb6.2
TAU Tasmania Unive 47.73 159 eP P 17 51 00.7 +1.1
comp=Z,104nm,1.1s,mb5.8
TAU LR LR
comp=Z,11μm,20.0s,MS5.8
TAU Tasmania Unive 47.73 159 eP P 17 51 00.7 +1.1
TAU pmax pmax
comp=Z,104nm,1.1s,mb5.8
TAU MLR MLR
comp=Z,11μm,20.0s,MS5.8
HABR Khabarovsk 47.76 8⇑ iP P 17 51 00.8 +1.1
HABR e 17 52 29.0
HABR e 17 52 49.3
HABR eS S **17 57 55.6 +0.8**
HABR e*SS sS 17 58 10.6 +4.0
HABR e 18 00 49.7
HABR pmax pmax
comp=Z,1μm,1.3s,mb6.7
YSS Yuzh-Sakhalins 47.84 15⇑ iP P 17 51 00.4 0.0
comp=Z,584nm,1.3s,mb6.5
YSS ePcP PcP 17 52 29.9 +1.0
YSS ePP PP 17 52 49.2 -3.2
YSS LR LR
comp=Z,3μm,21.0s,MS5.3
YSS Yuzh-Sakhalins 47.84 15α iP P 17 51 01.6 +1.2
YSS e 17 52 30.5
YSS e 17 52 50.1
YSS iS S **17 57 54.0 -2.0**
YSS e 17 58 01.0
YSS e 18 00 48.0
YSS pmax pmax
comp=N,330nm,1.3s
YSS pmax pmax
comp=E,230nm,1.3s
YSS pmax pmax
comp=Z,620nm,1.3s,mb6.5
YSS pmax pmax
comp=Z,2μm,6.0s
YSS pmax pmax
comp=N,1μm,5.0s
YSS pmax pmax
comp=N,1μm,6.0s
YSS pmax pmax
comp=Z,2μm,6.0s
YSS MLR MLR
comp=N,5μm,23.0s
YSS MLR MLR
comp=Z,5μm,23.0s,MS5.4
GKN Gorkha 47.99 308 eP P 17 51 00.8 -1.1
comp=Z,146nm,0.5s,mb6.3
KLR Kul'dur 48.15 5 eP P 17 51 00.0 -2.7
KLR e 17 52 55.5
KLR eS S **17 57 49.5 -11**
KLR pmax pmax
comp=N,100nm,1.4s
KLR pmax pmax
comp=E,140nm,1.4s
KLR pmax pmax
comp=Z,740nm,1.4s,mb6.5
KLR pmax pmax
comp=N,2μm,8.0s
KLR pmax pmax
comp=Z,4μm,8.0s
KLR smax
comp=N,2μm,7.5s
KLR smax
comp=E,1μm,7.5s
KLR MLR MLR
comp=N,1μm,20.0s,MS5.2
KLR MLR MLR
comp=E,3μm,20.0s,MS5.2
HIA Hailar 48.29 354⇑ iP P 17 51 04.2 +0.4
comp=E,798nm,1.4s,mb6.6
HIA eS S **17 58 05.7 +3.4**
HIA LR LR
comp=Z,9μm,21.0s,MS5.7
HIA Hailar 48.29 354⇑ iP P 17 51 04.2 +0.4
HIA eS S **17 58 05.7 +3.4**
HIA pmax pmax
comp=Z,798nm,1.4s
HIA MLR MLR
comp=Z,9μm,21.0s
KOLN Koldanda 48.72 307 eP P 17 51 06.9 -0.6
comp=Z,596nm,0.7s,mb6.7
KOD Kodaikanal 49.40 282 eP P 17 51 12.4 -0.5
KOD AMb AMB 17 51 15.4
comp=Z,210nm,1.4s,mb6.0
ULN Ulaanbaatar 49.47 343⇑ eP P 17 51 12.8 -0.1
comp=Z,150nm,1.1s,mb5.9
ULN eS S **17 58 19.5 +0.6**
ULN LR LR
comp=Z,4μm,22.0s,MS5.4
ULN Ulaanbaatar 49.47 343⇑ eP P 17 51 12.8 -0.1
ULN eS S **17 58 19.5 +0.6**
ULN pmax pmax
comp=Z,150nm,1.1s,mb5.9
ULN MLR MLR
comp=Z,4μm,22.0s,MS5.4
SONM Songino Array 49.63 342 P P 17 51 14.0 -0.2
SONM 17 53 10.9
SONM S S **17 58 17.4 -3.9**
SONM pmax pmax
comp=Z,45nm,0.9s
SONM pmax pmax
comp=Z,16nm,0.8s
SONM smax
comp=N,1.0nm,1.0s
SONM MLR MLR
comp=Z,4μm,19.7s
SONM Songino Array 49.63 342 P P 17 51 14.0 -0.1
comp=Z,45nm,0.9s,mb5.5,baz=162,slow=5.3,SNR=22
SONM PP PP 17 53 10.9 +2.1
comp=Z,16nm,0.8s,baz=158,slow=8.3,SNR=2.7
SONM S S **17 58 17.4 -3.9**
comp=Z,1.3nm,1.0s,baz=150,slow=16,SNR=1.8
SONM LR LR 18 14 33.9
comp=Z,4μm,19.7s,MS5.5,baz=155,slow=39
SONM PKPPKP 18 22 05.6
comp=Z,2.2nm,1.2s,baz=257,slow=0.4,SNR=7.4
HYB Hyderabad 49.67 292 eP P 17 51 14.0 -1.0
comp=Z,275nm,1.0s,mb6.2
HYB eS S **17 58 14.0 -8.7**
HYB eLR LR 18 11 48.0
HYB Hyderabad 49.67 292 eP P 17 51 14.0 -1.0
HYB eS S **17 58 14.0 -8.7**
HYB pmax pmax
comp=Z,275nm,1.0s,mb6.2
HYB Hyderabad 49.67 292 iP P 17 51 14.0 -1.0
comp=Z,275nm,1.0s,mb6.2
HYB e 17 51 26.0
HYB eSP SP 17 51 34.0 +9.1
HYB ePP PP 17 53 12.0 +2.4
HYB e 17 56 33.0
HYB eS S **17 58 18.0 -4.7**
HYB LR LR 18 11 48.0
comp=Z,17nm,24.0s
TRD Trivandrum 49.70 280⇓ ix x 17 51 25.0
TRD i x x 17 56 17.0
JBP Jabalpur 50.00 300⇑ iP P 17 51 17.2 -0.3
JBP i x x 17 53 12.7
NGP Nagpur 50.20 297 eP P 17 51 17.1 -1.8
NGP eS S **17 58 23.5 -6.5**
CIT Chita 51.84 350⇑ iP P 17 51 32.0 +1.3
CIT e 17 51 43.4
CIT e 17 52 45.3
CIT eS S **17 58 53.0 +1.3**
CIT e 18 01 20.0
CIT pmax pmax
comp=Z,2μm,1.4s,mb6.9
AKL Akola 51.90 296⇑ iP P 17 51 31.9 +0.2
AKL ex x 17 51 36.3
comp=Z,542nm,1.8s
AKL i x x 17 58 44.5
LGTI Lohaghat 52.10 307 eP P 17 51 32.2 -0.9
LGTI ex x 17 52 28.7
BHPL Bhopal 52.26 299 i P P 17 51 33.1 -1.3
BHPL i x x 17 51 54.2
MNGI Mangalore 52.34 285 i P P 17 51 35.1 0.0
MNGI AMb AMB 17 51 36.8
comp=Z,149nm,1.6s,mb5.7
MNGI i x x 17 58 50.4
ZAK Zakamensk 52.85 342⇓ iP P 17 51 37.7 -0.5
ZAK e 17 51 55.6
ZAK e 17 52 49.1
ZAK e 18 01 16.4
ZAK pmax pmax
comp=Z,33nm,1.5s,mb5.0
FUNA Funafuti 53.55 101 eP P 17 51 42.7 -1.3
comp=Z,294nm,1.0s,mb6.2
FUNA LR LR
comp=Z,16μm,19.0s,MS6.1
GOA Goa 53.71 288 eP P 17 51 44.1 -1.1
GOA AMb AMB 17 51 47.4
comp=Z,251nm,1.6s,mb5.9
TLY Talaya 53.87 343 P P 17 51 46.9 +1.2
comp=Z,410nm,0.7s,mb6.5,SNR=28
TLY Talaya 53.87 343⇑ iP P 17 51 46.1 +0.4
comp=Z,44nm,0.7s,mb5.5
TLY eS S **17 59 10.0 -10**
TLY LR LR
comp=Z,4μm,22.0s,MS5.4
TLY Talaya 53.87 343c iP P 17 51 46.3 +0.6
TLY e 17 52 53.2
TLY e 17 53 45.2
TLY eS S **17 59 12.9 -6.6**
TLY ePS 17 59 22.2
TLY eSSS 18 04 51.8
TLY pmax pmax
comp=Z,84nm,1.1s,mb5.6
TLY MLR MLR
comp=Z,12μm,25.0s,MS5.9
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
TLY Talaya 53.87 343 P P 17 51 46.6 +0.9
SNR=62
IRK Irkutsk 54.19 343⇑ iP P 17 51 47.7 -0.3
IRK eS S **17 59 27.4 +3.7**
IRK pmax pmax
comp=Z,492nm,3.1s
DDI Dehra Dun 54.19 307 eP P 17 51 41.5 -7.0
DDI eS S **17 59 14.5 -10**
NDI New Delhi 54.25 305 eP P 17 51 47.6 -1.3
NDI AMb AMB 17 51 51.8
comp=Z,338nm,1.0s,mb6.2
POO Poona 54.28 292⇓ iP P 17 51 47.0 -2.3
comp=Z,188nm,1.1s,mb5.9
WMQ Urumqi 54.64 326⇑ iP P 17 51 51.3 -0.2
WMQ PCP PcP 17 52 54.3 0.0
WMQ PP PP 17 53 55.3 +1.1
WMQ SCP ScP 17 56 51.5 0.0
WMQ S S **17 59 30.3 +0.2**
WMQ AMB AMB
comp=Z,304nm,1.0s,mb6.3
WMQ AMB AMB
comp=Z,1μm,10.8s
WMQ LR LR
comp=N,14μm,33.8s
WMQ LR LR
comp=E,13μm,25.0s
MOY Mondy 54.69 341 eP P 17 51 52.4 +0.7
MOY pmax pmax
comp=Z,577nm,1.4s,mb6.4
SDNR Sundarnagar 55.51 308 eP P 17 51 59.0 +1.0
CLNS Chul'man 55.55 359 eP P 17 51 58.7 +0.9
CLNS e 17 54 00.9
CLNS eS S **17 59 36.8 -5.1**
CLNS ePS 18 00 01.7
CLNS pmax pmax
comp=Z,411nm,1.1s,mb6.4
CLNS pmax pmax
comp=N,330nm,1.2s
CLNS pmax pmax
comp=E,67nm,1.2s
CLNS pmax pmax
comp=N,115nm,1.3s
CLNS pmax pmax
comp=Z,87nm,1.3s,mb5.6
CLNS pmax pmax
comp=E,39nm,1.0s
CLNS smax
comp=E,23nm,1.2s
CLNS smax
comp=Z,25nm,1.5s
CLNS smax
comp=N,67nm,1.7s
CLNS MLR MLR
comp=N,2μm,26.0s,MS5.5
CLNS MLR MLR
comp=E,5μm,21.0s,MS5.5
DLH Dalhousie 56.70 309 eP P 17 52 05.0 -1.5
DLH ex x 17 52 16.0
THN Thein Dam 56.85 309 eP P 17 52 05.6 -2.0
THN eS S **17 59 55.3 -4.7**
BOD Bodaibo 57.37 352⇓ iP P 17 52 10.8 0.0
BOD pmax pmax
comp=Z,215nm,1.5s,mb6.0
PET Petropavlovsk 58.27 22⇑ iP P 17 52 17.8 +0.7
comp=Z,392nm,1.3s,mb6.3
PET LR LR
comp=Z,3μm,22.0s,MS5.4
PET Petropavlovsk 58.27 22α iP P 17 52 18.0 +0.8
PET e 17 53 06.6
PET i S S **18 00 19.0 +1.1**
PET ePS 18 00 34.1
PET eSS SS 18 04 13.5 +3.4
PET pmax pmax
comp=Z,266nm,1.2s,mb6.2
PET pmax pmax
comp=Z,2μm,13.6s
PET smax
comp=N,4μm,7.6s
PET smax
comp=N,4μm,18.7s
PET MLR MLR
comp=Z,3μm,20.0s,MS5.4
PET MLR MLR
comp=Z,3μm,18.0s
BHJ Bhuj 59.15 296⇓ ex x 17 52 18.2
BHJ eS S **18 00 24.0 -6.4**
QRZ Quartz Range 59.17 140 PN P 17 52 24.7 +1.0
MK31 Makanchi Array 59.47 326 i P P 17 52 24.8 -0.9
MK31 pmax pmax
comp=Z,29nm,0.3s,mb5.8
MKAR Makanchi Array 59.47 326 P P 17 52 25.1 -0.6
comp=Z,66nm,0.4s,mb6.0,baz=122,slow=7.8,SNR=241
MKAR S S **18 00 32.5 -1.3**
comp=Z,0.3nm,0.3s,baz=232,slow=12,SNR=2.1
MKAR LR LR 18 18 36.1
comp=Z,13μm,20.8s,MS6.0,baz=119,slow=37
MKAR PKPPKP 18 21 47.6
comp=Z,1.9nm,0.9s,baz=279,slow=2.3,SNR=7.8
KSH Kashi 59.62 316⇑ iP P 17 52 27.8 +1.0
KSH AP pP 17 52 37.6 +3.5
KSH XP sP 17 52 41.8 +4.9
KSH ePCP PcP 17 53 14.4 +0.5
KSH ePP PP 17 54 41.6 +3.0
KSH eSCP ScP 17 57 06.8 -6.8
KSH ePCS PcS 17 57 14.8 -1.2
KSH S S **18 00 34.3 -1.6**
KSH eXS sS 18 00 51.8 +3.8
KSH eSCS ScS 18 02 11.8 -4.2
KSH eSS SS 18 04 32.8 +1.0
KSH AMB AMB
comp=Z,633nm,1.2s,mb6.5
KSH LR LR
comp=N,21μm,17.9s,MS6.4
KSH LR LR
comp=E,14μm,16.0s,MS6.4
KSH LR LR
comp=Z,49μm,30.3s
LBZ Lake Benmore 59.78 145 PN P 17 52 27.9 +0.1
comp=Z,131nm,0.5s,mb6.2
RPZ Rata Peaks 59.89 144 LR LR 18 20 13.4
comp=Z,3μm,19.6s,MS5.4,baz=305,slow=38
RPZ Rata Peaks 59.89 144 PN P 17 52 29.9 +1.3
THZ Tophouse 59.91 141 PN P 17 52 28.9 +0.1
comp=Z,78nm,0.6s,mb5.9
NNZ Nelson 59.92 140 PN P 17 52 28.1 -0.8
TUWZ Tuamarina 60.40 140 PN P 17 52 31.9 -0.2
KHZ Kahutara 60.67 141 PN P 17 52 33.9 -0.1
comp=Z,89nm,0.5s,mb6.1
ULHL Ulahol 60.70 319 P P 17 52 34.0 -0.2
SNR=150
AAA Alma-Ata 60.75 321 i P P 17 52 35.2 +0.7
AAA i S S **18 00 49.0 -1.3**
AAA pmax pmax
comp=Z,3μm,5.2s
AAA smax
comp=N,3μm,13.9s
AAA MLR MLR
comp=Z,8μm,24.5s,MS5.8
YAK Yakutsk 60.81 2⇑ iP P 17 52 34.2 -0.3
comp=Z,661nm,1.0s,mb6.7
YAK ePP PP 17 54 42.0 -6.7
YAK eS S **18 00 45.8 -4.5**
YAK LR LR
comp=Z,5μm,22.0s,MS5.6
YAK Yakutsk 60.81 2c iP P 17 52 34.3 -0.2
YAK e*PP pP 17 52 45.4 +3.6
YAK e 17 53 18.1
YAK e 17 54 51.5
YAK eS S **18 00 50.5 +0.2**
YAK e*SS sS 18 01 01.1 -1.3
YAK e 18 02 21.2
YAK pmax pmax
comp=Z,846nm,1.4s,mb6.7
YAK pmax pmax
comp=N,376nm,1.3s
YAK pmax pmax
comp=E,151nm,1.3s
YAK pmax pmax
comp=N,320nm,1.6s
YAK pmax pmax
comp=Z,355nm,1.6s,mb6.2
YAK pmax pmax
comp=E,62nm,1.4s
YAK smax
comp=N,2μm,2.9s
YAK smax
comp=Z,705nm,3.2s
YAK smax
comp=E,3μm,2.8s
YAK MLR MLR
comp=N,5μm,23.0s,MS5.7
YAK MLR MLR
comp=E,4μm,22.0s,MS5.7
SNZO South Karori 60.82 140 eP P 17 52 35.6 +0.6
comp=E,225nm,1.0s,mb6.2
SNZO LR LR
comp=Z,5μm,20.0s,MS5.7
KZA Kyzart 61.28 319 P P 17 52 38.7 +0.6
SNR=246
MA2 Magadan 61.31 14⇑ iP P 17 52 38.9 +0.9
comp=Z,416nm,1.1s,mb6.5
MA2 LR LR
comp=Z,3μm,20.0s,MS5.4
MA2 Magadan 61.31 14c iP P 17 52 39.1 +1.1
MA2 eS S **18 00 58.0 +1.2**
MA2 eSS SS 18 04 58.2 +0.6
MA2 eSSS 18 07 39.7
MA2 pmax pmax
comp=Z,500nm,1.0s,mb6.6
MA2 MLR MLR
comp=Z,9μm,21.8s,MS5.9
TKM2 Tokmak 2 61.44 320⇑ eP P 17 52 38.7 -0.5
comp=Z,364nm,1.3s,mb6.3
TKM2 LR LR
comp=Z,6μm,22.0s,MS5.7
TKM2 Tokmak 2 61.44 320⇑ eP P 17 52 38.7 -0.5
TKM2 pmax pmax
comp=Z,364nm,1.3s,mb6.3
TKM2 MLR MLR
comp=Z,6μm,22.0s,MS5.7
TKM2 Tokmak 2 61.44 320 P P 17 52 38.9 -0.3
SNR=128
MCQ Macquarie Isla 61.62 159⇓ iP P 17 52 42.7 +2.6
MCQ Macquarie Isla 61.62 159 eP P 17 52 41.7 +1.6
KBK Karagaybulak 61.74 319 P P 17 52 42.0 +0.8
SNR=39
UCH Uchtor 61.83 319⇑ iP P 17 52 42.3 +0.4
comp=Z,329nm,1.1s,mb6.4
UCH LR LR
comp=Z,8μm,22.0s,MS5.9
UCH Uchtor 61.83 319 P P 17 52 42.0 +0.2
SNR=249
AAK Ala-Archa 62.03 319 P P 17 52 42.1 -1.1
comp=Z,725nm,1.1s,mb6.7,SNR=66
AAK Ala-Archa 62.03 319⇑ eP P 17 52 41.5 -1.6
comp=Z,473nm,1.6s,mb6.4
AAK LR LR
comp=Z,7μm,21.0s,MS5.8
AAK Ala-Archa 62.03 319 eP P 17 52 42.0 -1.2
AAK pmax pmax
comp=Z,470nm,1.6s,mb6.4
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 42.4 -0.8
SNR=107
AAK Ala-Archa 62.03 319 P P 17 52 43.4 +0.2
SNR=50
CHMS Chumysh 62.03 319 P P 17 52 42.6 -0.6
SNR=50
FRU Bishkek 62.04 319 eP P 17 52 42.0 -1.2
FRU e 18 01 04.0
FRU pmax pmax
comp=Z,200nm,1.6s,mb6.0
USP Ospenovka 62.31 320 P P 17 52 44.3 -0.8
SNR=167
AML Almayashu 62.33 318 PFAKE 17 53 00.0 +15
AML LR LR
comp=Z,7μm,21.0s,MS5.8
AML Almayashu 62.33 318 P P 17 52 45.6 +0.4
SNR=247

EKS2 Erkin-Say 62.51 319⇑eP P 17 52 46.3 -0.1
comp=Z,122nm,0.4s,mb6.4
EKS2 LR LR
comp=Z,6µm,20.0s,MS5.8
EKS2 Erkin-Say 62.51 319 P P 17 52 46.3 -0.1
SNR=184
KBL Kabul 62.81 309⇑iP P 17 52 47.3 -1.2
comp=Z,396nm,1.4s,mb6.3
AFI Afiamalu 63.08 106 eP P 17 52 52.4 +1.7
comp=Z,52nm,0.6s,mb5.8
AFI LR LR
comp=Z,4µm,21.0s,MS5.6
AFI Afiamalu 63.08 106 eP P 17 52 52.4 +1.7
AFI pmax pmax
comp=Z,52nm,0.6s,mb5.8
AFI MLR MLR
comp=Z,4µm,21.0s,MS5.6
KURK Kurchatov 63.72 328 P P 17 52 53.7 -0.6
comp=Z,3µm,1.0s,mb7.2
KURK Kurchatov 63.72 328⇑iP P 17 52 53.5 -0.7
comp=Z,341nm,0.8s,mb6.4
KURK eS S 18 01 23.1 -4.4
KURK LR LR
comp=Z,4µm,19.0s,MS5.6
KURK Kurchatov 63.72 328⇑eP P 17 52 53.6 -0.7
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
KURK Kurchatov 63.72 328 P P 17 52 54.0 -0.3
SNR=199
NVS Novosibirsk 64.01 334⇑iP P 17 52 54.9 -1.2
NVS iS S 18 01 20.7 -10
NVS i 18 02 38.0
NVS pmax pmax
comp=Z,400nm,1.5s,mb6.2
NVS pmax pmax
comp=N,390nm,1.7s
NVS pmax pmax
comp=E,304nm,1.6s
NVS smax
comp=N,345nm,2.5s
NVS smax
comp=E,290nm,2.3s
SEY Seymchan 64.64 13⇑iP P 17 53 01.7 +1.6
KK31 Karatay Array 64.87 318 iP P 17 53 01.0 -1.0
KK31 pmax pmax
comp=Z,220nm,1.1s,mb6.1
SMY Shemya 64.90 30 PFAKE 17 53 10.0 +8.1
SMY LR LR
comp=Z,4µm,22.0s,MS5.5
CASY Casey 68.20 187 eP P 17 53 22.6 -0.2
DRV Dumont d'Urvil 68.34 174 P P 17 53 26.0 +2.4
DRV Dumont d'Urvil 68.34 174 PP PP 17 56 01.0 +6.4
DRV S S 18 02 27.0 +3.9
DRV SS SS 18 07 04.0 +17
DRV L 18 10 00.0
DRV R 18 15 00.0
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
WBK Wadi Bani Khal 68.71 294 P P 17 53 26.6 -0.3
SNR=9.8
ADK Adak 69.33 34⇑eP P 17 53 30.3 +0.2
comp=Z,335nm,1.3s,mb6.1
ADK LR LR
comp=Z,5µm,22.0s,MS5.7
ADK Adak 69.33 34⇑eP P 17 53 30.3 +0.2
ADK pmax pmax
comp=Z,335nm,1.3s,mb6.1
ADK MLR MLR
comp=Z,5µm,22.0s,MS5.7
BRVK Borovoye 69.36 328⇑iP P 17 53 29.7 -0.6
comp=Z,418nm,1.3s,mb6.2
BRVK eS S 18 02 28.8 -6.9
BRVK LR LR
comp=Z,6µm,21.0s,MS5.8
BRVK Borovoye 69.36 328⇑iP P 17 53 29.7 -0.5
BRVK eS S 18 02 28.8 -6.9
BRVK pmax pmax
comp=Z,418nm,1.3s,mb6.2
BRVK MLR MLR
comp=Z,6µm,21.0s,MS5.8
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
BRVK Borovoye 69.36 328 P P 17 53 30.2 0.0
SNR=168
CHKZ Chkalovo 69.47 328 iP P 17 53 30.3 -0.6
CHKZ pmax pmax
comp=Z,266nm,1.5s,mb6.0
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
JMDO Jabal Madar 69.48 293 P P 17 53 31.2 -0.4
SNR=16
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
BIDO Bidbid 69.61 295 P P 17 53 32.2 -0.3
SNR=13
SMDO Samad 69.62 294 P P 17 53 32.0 -0.4
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SMDO Samad 69.62 294 P P 17 53 32.0 -0.4
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SMDO Samad 69.62 294 P P 17 53 32.0 -0.4
SNR=12
SMDO Samad 69.62 294 P P 17 53 32.0 -0.4
SNR=12
SMDO Samad 69.62 294 P P 17 53 32.0 -0.4
SNR=12

BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
BSY Bisya 70.35 294 P P 17 53 36.3 -0.7
SNR=12
TIXI Tiksi 70.43 1⇑iP P 17 53 35.3 -1.2
comp=Z,243nm,1.1s,mb6.0
TIXI ePP PP 17 56 03.7 -8.9
TIXI eS S 18 02 43.9 -3.9
TIXI LR LR
comp=Z,5µm,20.0s,MS5.8
TIXI Tiksi 70.43 1c iP P 17 53 35.1 -1.4
TIXI eS S 18 02 39.7 -8.0
TIXI e 18 03 17.0
TIXI pmax pmax
comp=Z,268nm,1.4s,mb6.0
TIXI smax
comp=N,1µm,8.6s
TIXI smax
comp=E,520nm,8.4s
MIR Mirnyy 71.55 193⇑iP P 17 53 47.0 +3.6
MIR i 17 53 58.0
MIR eS S 18 03 00.0 -0.8
MIR pmax pmax
comp=Z,400nm,2.0s,mb6.0
MIR MLR MLR
comp=Z,3µm,20.0s,MS5.5
BILL Bilibino 72.16 15⇑eP P 17 53 46.7 -0.3
comp=Z,197nm,1.5s,mb5.8
BILL LR LR
comp=Z,4µm,20.0s,MS5.7
BILL Bilibino 72.16 15α iP P 17 53 47.0 0.0
BILL e 17 54 04.7
BILL eS S 18 03 02.0 -5.8
BILL e 18 03 34.7
BILL e 18 03 47.3
BILL SS SS 18 07 52.0 +6.6
BILL pmax pmax
comp=Z,193nm,1.8s,mb5.7
BILL MLR MLR
comp=E,3µm,22.0s
ABKT Ailbek 72.22 310 P P 17 53 48.1 +0.1
comp=E,734nm,0.7s,mb6.7,SNR=43
VAN Vannovskaya 72.23 310 eP P 17 53 48.0 -0.1
VAN eS S 18 03 03.0 -6.8
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
WHFO Wadi Hawf 73.07 288 P P 17 53 52.9 -0.6
SNR=13
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
ABTO Aybut 73.48 288 P P 17 53 55.2 -0.6
SNR=6.8
AB31 Akbulak array 73.91 321 iP P 17 53 57.1 -0.7
RAR Rarotonga 75.42 112 LR LR 18 25 02.9
comp=E,2µm,21.3s,MS5.3,baz=237,slow=34
AKTK Aktyubinsk 75.45 322 iP P 17 54 06.4 -0.3
AKTO Aktyubinsk 75.45 322 iP P 17 54 06.4 -0.3
AKTO pmax pmax
comp=Z,43nm,1.7s,mb5.1
UNV Unalaska Valle 75.78 34⇑eP P 17 54 08.2 -0.2
comp=Z,902nm,1.6s,mb6.5
UNV LR LR
comp=Z,8µm,21.0s,MS6.0
SVE Sverdlovsk 75.97 329d iP P 17 54 09.2 -0.3
SVE e pP 17 54 17.9 +1.0
SVE e 17 57 04.4
SVE eS S 18 03 48.8 -2.2
SVE eSS SS 18 08 47.6 +3.8
SVE pmax pmax
comp=Z,518nm,0.7s,mb6.6
SVE pmax pmax
comp=Z,712nm,5.4s
SVE MLR MLR
comp=Z,4µm,19.0s,MS5.7
KIP Kipapa 76.23 68 PFAKE 17 54 20.0 +8.3
KIP LR LR
comp=Z,7µm,21.0s,MS5.9
AKUT Akutan 76.28 34⇑iP P 17 54 11.7 +0.4
comp=Z,809nm,1.2s,mb6.5
ARU Arti 76.92 328 P P 17 54 14.7 -0.2
comp=Z,3µm,0.7s,mb7.2
ARU Arti 76.92 328⇑iP P 17 54 14.1 -0.8
comp=Z,365nm,0.8s,mb6.4
ARU LR LR
comp=Z,3µm,22.0s,MS5.6
ARU Arti 76.92 328c iP P 17 54 14.1 -0.8
ARU e 17 54 26.8
ARU e 17 57 11.0
ARU ePPP 17 58 50.8
ARU eS S 18 03 58.9 -2.6
ARU 18 04 24.7
ARU SS SS 18 08 51.9 -6.4
ARU SSS 18 12 19.1
ARU pmax pmax
comp=Z,712nm,1.7s,mb6.3
ARU MLR MLR
comp=Z,6µm,24.0s,MS5.8
ARU MLR MLR
comp=N,4µm,20.0s,MS5.9
ARU MLR MLR
comp=E,4µm,23.0s,MS5.9
GAMB Gambell 76.92 24⇑iP P 17 54 15.5 +0.8
comp=E,320nm,1.3s,mb6.1
MUKL Al Mukalla 77.42 284⇑eP P 17 54 19.1 +0.5
MUKL AMb AMB 17 54 19.8
comp=Z,389nm,1.3s,mb6.2
POHA Pohakuloa 78.45 70 eP P 17 54 26.9 +2.7
comp=Z,224nm,0.9s,mb6.1
POHA LR LR
comp=Z,8µm,21.0s,MS6.0
SOKR Solikamsk 78.78 331c iP P 17 54 24.7 -0.4
SOKR S S 18 04 11.0 -10
SOKR pmax pmax
comp=Z,450nm,1.4s,mb6.2
SOKR MLR MLR
comp=Z,6µm,25.0s,MS5.8
TNA Tin City 79.13 23⇑iP P 17 54 27.6 +0.6
comp=Z,155nm,1.5s,mb5.7
TNA ePP PP 17 57 29.9 +3.5
TNA LR LR
comp=Z,1µm,22.0s,MS5.2
QRN Al-Qurain 79.30 299 eP P 17 54 28.2 -0.5
QRN AMb AMB 17 54 31.8
comp=Z,447nm,0.8s,mb6.4
KBD Kabd 79.53 299 eP P 17 54 29.1 -0.9
KBD AMb AMB 17 54 31.7
comp=Z,767nm,1.3s,mb6.5
UMR Umm Al-Rimmam 79.54 300 eP P 17 54 29.4 -0.6
UMR AMb AMB 17 54 34.5
comp=Z,377nm,1.1s,mb6.2
SDPT Sand Point 79.56 34⇑iP P 17 54 29.5 -0.1
comp=Z,259nm,0.6s,mb6.3
RDF Al-Radifah 79.64 299 eP P 17 54 30.0 -0.6
RDF AMb AMB 17 54 33.6
comp=Z,370nm,1.3s,mb6.1
MIB Mutribah 79.89 300 eP P 17 54 31.2 -0.7
MIB AMb AMB 17 54 35.1
comp=Z,431nm,0.9s,mb6.4
NAY Al-Naaiem 79.93 299 eP P 17 54 31.3 -0.9
NAY AMb AMB 17 54 33.5

comp=Z,168nm,1.2s,mb5.8
VNDA Vanda 80.91 173 P P 17 54 36.2 -0.2
VNDA pmax pmax
comp=Z,35nm,0.7s
VNDA MLR MLR
comp=Z,2µm,20.7s
VNDA Vanda 80.91 173 P P 17 54 36.2 -0.2
comp=Z,35nm,0.7s,mb5.4,baz=318,slow=5.7,SNR=90
VNDA LR LR 18 30 24.4
comp=Z,2µm,20.7s,MS5.5,baz=330,slow=36
LBOS 81.08 284⇑eP P 17 54 39.5 +0.9
LBOS AMb AMB 17 54 40.4
comp=Z,196nm,1.1s,mb5.9
MAW Mawson 81.19 200⇑iP P 17 54 39.1 +1.1
comp=Z,37nm,1.2s,mb5.2
MAW Mawson 81.19 200 P P 17 54 38.8 +0.8
MAW pmax pmax
comp=Z,19nm,0.5s
MAW MLR MLR
comp=Z,1µm,19.5s
MAW Mawson 81.19 200 P P 17 54 38.8 +0.7
comp=Z,19nm,0.5s,mb5.0,baz=70,slow=6.0,SNR=58
MAW LR LR 18 28 39.3
comp=Z,1µm,19.5s,MS5.3,baz=59,slow=34
SBA Scott Base 81.83 172⇑eP P 17 54 42.9 +1.6
comp=Z,0.4nm,1.2s
SBA LR LR
comp=Z,4µm,21.0s
DHBB Dhamar BB 81.92 284⇑eP P 17 54 44.0 +1.0
DHBB AMb AMB 17 54 45.6
comp=Z,210nm,1.0s,mb6.0
TRBA At Turbah 82.17 283⇑eP P 17 54 45.2 +0.8
TRBA AMb AMB 17 54 46.5
comp=Z,68nm,0.9s,mb5.5
DGRG David-gareji 82.48 312 P P 17 54 46.8 +1.4
DGRG S S 18 04 57.7 -3.2
BHD Baghdad 82.65 303 ix x 17 54 45.0
BHD Baghdad 82.65 303 ix x 18 05 01.0
BHD ex x 18 05 51.0
MTA Mtatsminda 82.93 312 P P 17 54 48.4 +0.6
MTA S S 18 04 55.8 -10
TBLG Delisi 82.97 312 P P 17 54 48.5 +0.5
SVW2 Sparrevohn 83.26 29 eP P 17 54 50.0 +1.0
TTA Tatalina 83.39 27 eP P 17 54 50.6 +1.0
comp=Z,997nm,1.5s,mb6.6
CLDR Caldiran 83.41 309 eP P 17 54 51.6 +1.3
HKR Hakkari 83.44 308 eP P 17 54 51.1 +0.6
HAKT HAKKARI 83.47 308⇑iP P 17 54 51.1 +0.5
CUKT Cukurca 83.53 307 eP P 17 54 51.3 +0.4
DYDN Diyadin 83.61 309⇑iP P 17 54 52.5 +1.2
ZEI Tsey 83.68 313 eP P 17 54 52.0 +0.4
ZEI e 17 58 06.8
ZEI eS S 18 05 11.9 -1.1
ZEI pmax pmax
comp=Z,327nm,1.2s,mb6.3
ZEI smax
comp=N,158nm,2.2s
TVAN Van 83.76 308 iP P 17 54 51.6 -0.5
VANB Van 83.78 309 eP P 17 54 53.1 +0.8
MSL Mosul 83.89 306 ix x 17 54 53.5
MSL ix x 17 55 02.0
MSL Mosul 83.89 306 ex x 18 05 13.0
DIGO Kars 83.91 310⇑iP P 17 54 53.7 +0.8
ONI Oni 84.00 313 P P 17 54 54.2 +1.0
ONI S S 18 05 11.7 -4.5
KARS Kars 84.13 311 eP P 17 54 55.8 +1.9
AGRB Hanur-Agry 84.15 309 eP P 17 54 55.7 +1.6
TUTA Tutak 84.28 309⇑iP P 17 54 56.1 +1.3
KDAK Kodiak Island 84.29 32⇑iP P 17 54 55.1 +0.8
comp=N,570nm,1.4s,mb6.5
KDAK ePP PP 17 58 06.1 -3.0
KDAK LR LR
comp=Z,750nm,22.0s,MS5.0
KDAK Kodiak Island 84.29 32 LR LR 18 31 11.0
comp=Z,3µm,21.2s,MS5.6,baz=256,slow=35
SIRT Sirnak 84.47 307 eP P 17 54 55.7 0.0
PRGR Permogore 84.59 332⇑iP P 17 54 55.4 -0.4
PRGR eS S 18 05 17.2 -4.2
PRGR pmax pmax
comp=Z,267nm,1.3s,mb6.2
KIV Kislovodsk 84.64 314 P P 17 54 56.6 +0.1
comp=Z,872nm,1.6s,mb6.6,SNR=30
KIV Kislovodsk 84.64 314 ⇑P P 17 54 56.3 -0.1
comp=Z,144nm,0.9s,mb6.1
KIV LR LR
comp=Z,2µm,20.0s,MS5.4
KIV Kislovodsk 84.64 314α iP P 17 54 56.6 +0.1
KIV i 17 55 08.2
KIV e 17 58 13.5
KIV i 18 05 13.3
KIV iPPS 18 06 40.7
KIV pmax pmax
comp=Z,418nm,1.8s,mb6.3
KIV MLR MLR
comp=Z,4µm,24.0s,MS5.7
KIV Kislovodsk 84.64 314 P P 17 54 57.1 +0.6
SNR=40
KIV Kislovodsk 84.64 314 P P 17 54 57.1 +0.6
SNR=40
KIV Kislovodsk 84.64 314 P P 17 54 57.1 +0.6
SNR=40
KIV Kislovodsk 84.64 314 P P 17 54 57.1 +0.6
SNR=40
KIV Kislovodsk 84.64 314⇓iP P 17 54 56.6 +0.1
PPT Papeete 84.70 108 ePP PP 17 58 07.3 -6.2
comp=Z,903nm,29.8s
PPT Papeete 84.70 108 eS S 18 05 20.6 -3.6
comp=Z,5µm,25.8s
PPT eSS SS 18 10 51.5 -4.7
comp=Z,6µm,33.2s
PPT eLR LR 18 21 42.9
comp=Z,12µm,29.0s
PPT Papeete 84.70 108 LR LR 18 26 18.9
comp=Z,2µm,21.6s,MS5.5,baz=264,slow=31
IMA2 Indian Mountai 84.91 24 eP P 17 54 58.3 +1.0
IMA2 e 17 58 11.1
ARTV Artvin 85.05 311⇑iP P 17 54 59.5 +0.9
TBI Tubuai 85.12 113 ePP PP 17 58 13.0 -3.8
comp=Z,612nm,31.8s
TBI Tubuai 85.12 113 eS S 18 05 22.1 -6.0
comp=Z,5µm,26.2s
TBI eSS SS 18 11 00.6 -1.6
comp=Z,5µm,34.5s
TBI eLR LR 18 21 54.3
comp=Z,12µm,34.2s
BTMT Batman 85.25 308 eP P 17 55 00.1 +0.4
ERZM Erzurum 85.42 310⇑iP P 17 55 01.7 +1.2
EZM Erzurum 85.42 310 eP P 17 55 02.6 +2.2
BNGL BINGOL 85.55 309⇑iP P 17 55 02.5 +1.3
MARD Mardin 85.78 307⇑iP P 17 55 02.8 +0.5
SLKM Skilak Lake 85.79 30 eP P 17 55 01.8 0.0
SLKM Skilak Lake 85.79 30 P P 17 55 02.2 +0.4
VRHR Novokhopersk 85.80 321 eP P 17 55 01.6 -0.5
VRHR e 18 05 23.2
VRHR eS S 18 05 28.1 -5.7
VRHR pmax pmax
comp=E,500nm,1.3s
VRHR pmax pmax
comp=Z,820nm,1.3s,mb6.8
VRHR pmax pmax
comp=N,120nm,2.0s
VRHR smax
comp=N,1µm,11.1s
VRHR smax
comp=Z,670nm,9.8s
VRHR smax
comp=E,2µm,10.3s
VRHR MLR MLR
comp=Z,3µm,17.0s,MS5.7
VRHR MLR MLR
comp=N,2µm,19.0s,MS5.7
VRHR MLR MLR
comp=E,3µm,24.0s,MS5.7
PZAR Pazar-Rize 85.82 311 eP P 17 55 02.7 +0.3
BINT Bingol 86.06 309 eP P 17 55 03.2 -0.5
DIY Diyarbakir 86.24 308 eP P 17 55 02.3 -2.3
DIYA Diyarbakir 86.32 308⇑iP P 17 55 05.8 +0.8
PMR Palmer 86.41 28⇑iP P 17 55 04.2 -0.7
comp=E,202nm,1.1s,mb6.3
PMR LR LR
comp=Z,2µm,22.0s,MS5.5
PMR Palmer 86.41 28⇑iP P 17 55 04.2 -0.7
PMR pmax pmax
comp=Z,202nm,1.1s,mb6.3
PMR MLR MLR

comp=Z,2µm,22.0s,MS5.5
DESE Dese 86.55 281 *i* P **P** **17 55 09.3 +2.8**
DESE S S 18 05 33.8 -8.6
EZC Erzincan 86.61 310 *e*P **P** **17 55 09.4 +3.1**
MCK McKinley 86.66 26⇑ *i*P **P** **17 55 05.2 -0.8**
comp=Z,98nm,1.3s,mb5.9
MCK *e*PP PP 17 58 23.4 -4.7
MCK LR LR
comp=Z,1µm,22.0s,MS5.2
MCK McKinley 86.66 26⇑ *i*P **P** **17 55 05.2 -0.8**
MCK *e* 17 58 23.4
MCK pmax pmax
comp=Z,97nm,1.3s,mb5.9
MCK MLR MLR
comp=Z,1µm,22.0s,MS5.2
MACK Trabzon 86.67 311 *i* P **P** **17 54 57.5 -9.2**
KTUT Trabzon 86.67 311 *e*P **P** **17 55 07.3 +0.7**
SOC Sochi 86.78 313*c i*P **P** **17 55 06.3 -0.8**
SOC *e**PP pP 17 55 13.0 -1.7
SOC *e* 17 58 27.2
SOC *e*S S 18 05 27.3 -16
SOC *e**SS sS 18 05 48.0 -8.1
SOC *e*SS SS 18 11 15.7 -10
SOC pmax pmax
comp=Z,335nm,1.3s,mb6.4
SOC pmax pmax
comp=Z,3µm,3.7s
SML Sawmill 86.80 28 *e*P **P** **17 55 06.5 -0.3**
GUMT Gumushane 86.88 310 *e*P **P** **17 55 09.1 +1.5**
PTK Pertek 86.92 309 *e*P **P** **17 55 09.2 +1.3**
KELT Kelkit 87.04 310⇑ *i*P **P** **17 55 09.4 +1.0**
COLA College 87.20 25⇑ *e*P **P** **17 55 07.1 -1.6**
comp=Z,14nm,0.8s,mb5.3
COLA *e*PP PP 17 58 28.9 -3.7
COLA LR LR
comp=Z,2µm,22.0s,MS5.5
COLA College 87.20 25⇑ *e*P **P** **17 55 07.1 -1.6**
COLA *e* 17 58 28.9
COLA pmax pmax
comp=Z,15nm,0.8s,mb5.3
COLA MLR MLR
comp=Z,2µm,22.0s,MS5.5
ELZG Elazig 87.23 308⇑ *i*P **P** **17 55 10.6 +1.1**
VORD Divnogorie 87.26 321 *e*P **P** **17 55 07.7 -1.6**
VORD pmax pmax
comp=Z,300nm,1.4s,mb6.3
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,220nm,1.9s
VORD MLR MLR
comp=N,3µm,24.0s,MS5.8
VORD MLR MLR
comp=E,4µm,26.0s,MS5.8
VRSR Storozhevoye 87.33 321 *e*P **P** **17 55 08.8 -0.8**
VRSR *e* 18 05 27.2
VRSR *e*S S 18 05 45.0 -3.7
VRSR pmax pmax
comp=N,4.0nm,1.0s
VRSR pmax pmax
comp=E,20nm,1.0s
VRSR pmax pmax
comp=Z,30nm,1.0s,mb5.5
VRSR smax
comp=N,340nm,4.7s
VRSR smax
comp=Z,170nm,5.6s
VRSR smax
comp=E,400nm,5.7s
VRSR MLR MLR
comp=N,230nm,21.0s,MS5.1
VRSR MLR MLR
comp=E,760nm,22.0s,MS5.1
VRSR MLR MLR
comp=Z,640nm,22.0s,MS5.0
VOR Voronezh 87.34 322⇓ *i*P **P** **17 55 09.0 -0.6**
VOR *e*S S 18 05 33.0 -16
VOR pmax pmax
comp=Z,1µm,2.0s,mb6.7
URFA Urfa 87.34 307 *e*P **P** **17 55 10.9 +1.0**
ESPY Espiye-Giresun 87.46 311 *e*P **P** **17 55 09.7 -0.7**
FURI Furi 87.51 279 *i*P **P** **17 55 14.3 +3.0**
MALT Malatya 87.66 308 *e*P **P** **17 55 12.4 +0.9**
MALT Malatya 87.66 308⇑ *i*P **P** **17 55 12.1 +0.6**
comp=Z,305nm,1.4s,mb6.3
MALT Malatya 87.66 308⇑ *i*P **P** **17 55 12.1 +0.6**
MALT pmax pmax
comp=Z,305nm,1.4s,mb6.3
MALT Malatya 87.66 308⇓ *i*P **P** **17 55 10.9 -0.6**
MYA Malatya 87.67 308 *e*P **P** **17 55 13.0 +1.5**
ATAB Bozova 87.76 307⇑ *i*P **P** **17 55 12.5 +0.5**
GRSN GIRESUNGRSN 87.81 311 *i*P **P** **17 55 07.7 -4.5**
EYAK Cordova Ski Ar 88.00 30 *e*P **P** **17 55 13.3 +0.7**
comp=Z,108nm,1.6s,mb5.8
GZT Gaziantep 88.34 307⇑ *i*P **P** **17 55 15.0 +0.2**
MOS Moscow 88.35 326 *e*P **P** **17 55 12.8 -1.5**
MOS *i* 17 58 44.6
MOS *e* 18 05 38.4
MOS *e*S S 18 05 52.2 -6.0
MOS pmax pmax
comp=Z,2µm,3.0s
MOS pmax pmax
comp=Z,293nm,1.4s,mb6.3
MOS pmax pmax
comp=N,118nm,1.0s
MOS pmax pmax
comp=E,108nm,1.0s
MOS MLR MLR
comp=E,4µm,23.0s
MOS MLR MLR
comp=Z,5µm,23.0s,MS5.9
ANN Anapa 88.43 315*c i*P **P** **17 55 13.8 -1.2**
ANN *e* 17 58 42.9
ANN *e* 18 05 40.1
ANN *i* 18 05 51.2
ANN pmax pmax
comp=Z,2µm,10.7s
ANN pmax pmax
comp=Z,523nm,1.2s,mb6.6
ANN MLR MLR
comp=N,2µm,20.0s,MS5.9
ANN MLR MLR
comp=E,4µm,20.0s,MS5.9
ANN MLR MLR
comp=Z,4µm,20.0s,MS5.9
GAZ Gaziantep 88.63 307 *e*P **P** **17 55 16.9 +0.8**
KMRS Kahramanmaras 88.87 307 *e*P **P** **17 55 17.7 +0.4**
OBN Obninsk 88.95 325 P **P** **17 55 16.1 -1.1**
comp=Z,2µm,0.6s,mb7.6,SNR=10
OBN Obninsk 88.95 325 *e*P **P** **17 55 16.4 -0.8**
comp=Z,318nm,1.0s,mb6.6
OBN LR LR
comp=Z,3µm,19.0s,MS5.8
OBN Obninsk 88.95 325*c i*P **P** **17 55 16.2 -1.0**
OBN *e* 17 55 29.0
OBN *e* 18 05 42.9
OBN *e* 18 06 00.3
OBN *e*PS 18 06 59.5
OBN pmax pmax
comp=Z,329nm,1.3s,mb6.5
OBN MLR MLR
comp=Z,6µm,21.0s,MS6.0
KMBO Kilima Mbogo 89.11 269⇑ *e*P **P** **17 55 20.2 +1.3**
KMBO LR LR
comp=Z,7µm,22.0s,MS6.0
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 19.8 +0.9**
KMBO pmax pmax
comp=Z,48nm,1.2s
KMBO MLR MLR
comp=Z,7µm,21.6s
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 20.7 +1.9**
SNR=47
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 20.7 +1.9**
SNR=47
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 20.7 +1.9**
SNR=47
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 20.7 +1.9**
SNR=47
KMBO Kilima Mbogo 89.11 269 P **P** **17 55 19.8 +0.9**
comp=Z,48nm,1.2s,mb5.7,baz=69,slow=5.1,SNR=60
KMBO LR LR 18 32 15.0
comp=Z,7µm,21.6s,MS6.0,baz=78,slow=34
ANDN Andirin 89.31 307⇑ *i*P **P** **17 55 19.6 +0.3**
FKH Fakeheh 89.32 304 *e*P **P** **17 55 20.1 +0.7**
KVT Kavak 89.49 311 *e*P **P** **17 55 20.7 +0.6**

HTY Hatay 89.50 306 *e*P **P** **17 55 19.5 -0.7**
LVZ Lovozero 89.60 338⇑ *e*P **P** **17 55 18.9 -1.1**
LVZ pmax pmax
comp=Z,62nm,1.1s,mb5.8
BNN Bunyan 89.68 309 *e*P **P** **17 55 21.5 +0.5**
KOZT Kozan 89.73 307 *e*P **P** **17 55 22.0 +0.7**
CEYT Ceyhan 89.80 307 *e*P **P** **17 55 22.2 +0.5**
RCY Rachaya 89.82 303 *e*P **P** **17 55 22.3 +0.5**
SYO Syowa Base 89.87 201⇓ *e*P **P** **17 55 20.5 -0.7**
BHL Bhannes 89.95 304 *e*P **P** **17 55 22.5 +0.1**
EGAK Eagle 90.06 25⇑ *i*P **P** **17 55 22.0 -0.2**
comp=Z,37nm,1.2s,mb5.6
EGAK LR LR
comp=Z,2µm,21.0s,MS5.5
DIKM Dikmen 90.07 311 *e*P **P** **17 55 22.8 0.0**
APA Apatity 90.09 337⇑ *i*P **P** **17 55 21.4 -0.9**
APA *i* 18 05 46.0
APA *e*S S 18 06 10.0 -4.0
APA MLR MLR
comp=Z,4µm,16.0s,MS6.0
KRTS Karatas 90.11 306 *e*P **P** **17 55 23.3 +0.2**
BOYT Boyabat 90.34 311 *i*P **P** **17 55 23.3 -0.8**
KARA Karaisali 90.35 307 *e*P **P** **17 55 24.3 +0.1**
AVNT Avonos 90.46 309⇑ *i*P **P** **17 55 24.1 -0.5**
GULE Gulek 90.57 307⇑ *i*P **P** **17 55 25.1 0.0**
NIG Nigde 90.67 308 *e*P **P** **17 55 24.2 -1.5**
MERS Mersin 90.79 307 *e*P **P** **17 55 26.3 0.0**
SIM Simferopol' 90.79 315*c e*P **P** **17 55 24.7 -1.3**
SIM 17 59 03.7
SIM *e* 18 05 54.0
SIM *e*S S 18 06 15.4 -6.0
SIM pmax pmax
comp=Z,68nm,0.9s,mb6.0
SIM pmax pmax
comp=Z,250nm,8.5s
SIM MLR MLR
comp=Z,4µm,22.0s,MS5.8
CDAG Cicekdag 90.81 309⇑ *i*P **P** **17 55 25.6 -0.6**
DAWY Dawson 90.87 26⇑ *i*P **P** **17 55 26.1 +0.1**
BZK Bozkurt 90.99 312 *e*P **P** **17 55 22.3 -4.7**
QSPA South Pole Qui 91.05 180 *e*P **P** **17 55 26.9 +0.4**
comp=Z,24nm,0.9s,mb5.5
QSPA LR LR
comp=Z,6µm,22.0s,MS6.0
QSPA South Pole Qui 91.05 180 P **P** **17 55 26.6 +0.1**
comp=Z,11nm,0.8s,mb5.2,baz=321,slow=1.6,SNR=3.0
JOF Joensuu 91.30 333 *ep* **P** **17 55 27.1 -0.9**
comp=Z,85nm,0.7s,mb6.2
JOF Joensuu 91.30 333 *e*P **P** **17 55 27.1 -0.9**
JOF pmax pmax
comp=Z,85nm,0.7s,mb6.2
BR131 Keskin Array S 91.37 310 *e*P **P** **17 55 28.4 -0.4**
comp=Z,4.8nm,0.5s,mb5.1
BRTR Keskin Array B 91.37 310 P **P** **17 55 27.9 -1.0**
comp=Z,13nm,1.0s,mb5.2,baz=108,slow=4.0,SNR=41
BRTR PKKPbc PKKPbc 18 12 52.5 +1.0
comp=Z,1.8nm,1.0s,baz=203,slow=1.9,SNR=5.7
BRTR LR LR 18 44 55.4
comp=Z,2µm,21.3s,MS5.5,baz=84,slow=41
BALT Daday 91.47 311⇑ *i*P **P** **17 55 29.3 0.0**
ELDT Eldivan 91.49 310 *i*P **P** **17 55 28.5 -0.9**
CSS Prodhromos 91.83 305 *e*P **P** **17 55 30.5 -0.6**
ANTO Ankara 92.01 310 *e*P **P** **17 55 30.5 -1.3**
comp=Z,69nm,1.5s,mb5.8
ANTO LR LR
comp=Z,2µm,20.0s,MS5.6
ANTO Ankara 92.01 310 *e*P **P** **17 55 30.5 -1.3**
ANTO pmax pmax
comp=Z,69nm,1.5s,mb5.8
ANTO MLR MLR
comp=Z,2µm,20.0s,MS5.6
ANTO Ankara 92.01 310 P **P** **17 55 31.2 -0.7**
SNR=9.3
ANTO Ankara 92.01 310 P **P** **17 55 31.2 -0.7**
SNR=9.3
ANTO Ankara 92.01 310 P **P** **17 55 31.2 -0.7**
SNR=9.3
ANTO Ankara 92.01 310 P **P** **17 55 31.2 -0.7**
SNR=9.3
ANTO Ankara 92.01 310⇑ *i*P **P** **17 55 31.2 -0.6**
KEV Kevo 92.19 340 *e*P **P** **17 55 32.3 +0.3**
comp=Z,36nm,0.9s,mb5.7
KEV LR LR
comp=Z,3µm,22.0s,MS5.7
SGKT Sivrigoynuk 92.53 311 *i*P **P** **17 55 31.0 -3.2**
INK Inuvik 92.72 21⇑ *i*P **P** **17 55 34.0 -0.4**
comp=Z,5µm,1.3s
INK Inuvik 92.72 21 PKKPbc PKKPbc 18 12 47.4 -1.6
comp=Z,2.0nm,0.6s,baz=89,slow=1.9,SNR=8.8
ARCES ARCESS Array B 92.74 340 P **P** **17 55 33.7 -0.8**
ARCES ARCESS Array B 92.74 340 P **P** **17 55 33.7 -0.8**
comp=Z,44nm,0.9s,mb5.9,baz=67,slow=2.1,SNR=30
ARCES PKiKP PKiKP 18 00 21.9 -0.7
comp=Z,5.2nm,0.9s,baz=64,slow=6.9,SNR=2.7
ARCES PKKPbc PKKPbc 18 12 47.5 -1.5
comp=Z,3.4nm,0.9s,baz=263,slow=2.2,SNR=10.0
ARCES LR LR 18 44 49.4
comp=Z,3µm,20.5s,MS5.7,baz=75,slow=40
SPB4 Spitsbergen Ar 92.94 349 *e*P **P** **17 55 34.9 -0.5**
SKAG Skagway 93.28 30⇑ *i*P **P** **17 55 38.0 +0.7**
comp=Z,94nm,1.0s,mb6.2
BJO Bjornoya 93.47 345 AMS AMS 18 41 35.5
comp=Z,2µm,23.3s,MS5.6
KBS Kingsbay 93.48 350 *e*P **P** **17 55 36.6 -1.3**
KBS LR LR
comp=Z,4µm,22.0s,MS5.8
ESKT Eskisehir 93.53 310 *i*P **P** **17 55 33.9 -4.9**
SIT Sitka 93.61 33 PFAKE 17 55 50.0 +11
SIT LR LR
comp=Z,3µm,22.0s,MS5.7
KTK1 Kautokeino 93.64 339 *e*P **P** **17 55 38.0 -0.7**
comp=Z,80nm,1.4s,mb6.0
KTK1 Kautokeino 93.64 339 *e*P **P** **17 55 38.0 -0.7**
KTK1 AMb AMB 17 55 39.8
comp=Z,80nm,1.4s,mb5.9
TAOE Nuku Hiva Isla 93.65 99 *e*LQ 18 21 54.9
comp=Z,10µm,26.7s
TAOE Nuku Hiva Isla 93.65 99 *e*PP PP 17 59 24.0 -1.1
comp=Z,1µm,30.9s
TAOE Nuku Hiva Isla 93.65 99 *e*SKSac SKSac 18 06 06.8 -7.0
comp=Z,6µm,24.3s
TAOE *e*SS SS 18 12 59.4 -7.1
comp=Z,5µm,31.9s
TAOE *e*LR LR 18 25 50.4
comp=Z,23µm,23.9s
AKASG Malin Array Be 93.65 321 P **P** **17 55 37.8 -1.3**
AKASG 17 59 22.7
AKASG pmax pmax
comp=Z,18nm,1.0s
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKASG MLR MLR
comp=Z,4µm,21.8s
AKASG Malin Array Be 93.65 321 P **P** **17 55 37.8 -1.4**
comp=Z,18nm,1.0s,mb5.5,baz=73,slow=4.1,SNR=76
AKASG PP PP 17 59 22.6 -1.4
comp=Z,4.8nm,1.0s,baz=78,slow=6.8,SNR=4.9
AKASG LR LR 18 41 03.4
comp=Z,4µm,21.8s,MS5.9,baz=85,slow=38
KIEV Kiev 93.66 321 *e*P **P** **17 55 37.5 -1.7**
comp=Z,76nm,1.4s,mb5.9
KIEV LR LR
comp=Z,5µm,22.0s,MS6.0
KIEV Kiev 93.66 321 *e*P **P** **17 55 37.5 -1.7**
KIEV pmax pmax
comp=Z,76nm,1.4s,mb5.9
KIEV MLR MLR
comp=Z,5µm,22.0s,MS6.0
KAF Kangasniemi 93.71 332 *ep* **P** **17 55 37.9 -1.2**
comp=Z,28nm,0.6s,mb5.9,baz=77,slow=4.3
KAF Kangasniemi 93.71 332 *e*P **P** **17 55 37.9 -1.2**
KAF pmax pmax
comp=Z,28nm,0.6s,mb5.9
BORA Eskisehir 93.81 310⇑ *i*P **P** **17 55 38.8 -1.4**
ISP Isparta 93.92 308 *e*P **P** **17 55 39.2 -1.5**
ISP Isparta 93.92 308*c i*P **P** **17 55 39.2 -1.5**
FINES FINESS Array B 93.92 332 P **P** **17 55 39.4 -0.8**
FINES PKKPbc PKKPbc 18 12 44.1 -1.5
FINES LR LR 18 43 47.3
FINES FINESS Array B 93.92 332 P **P** **17 55 39.4 -0.8**
comp=Z,6.1nm,0.7s,mb5.2,baz=69,slow=4.1,SNR=44
FINES PKKPbc PKKPbc 18 12 44.1 -1.5
comp=Z,1.0nm,0.6s,baz=262,slow=2.9,SNR=4.9
FINES LR LR 18 43 47.3
comp=Z,2µm,20.8s,MS5.5,baz=194,slow=39
MNK Minsk 94.03 325 *e*P **P** **17 55 37.0 -3.8**

MNK pmax pmax
comp=Z,280nm,1.2s,mb6.6
KIS Kishinev 94.32 317 *e*P **P** **17 55 40.0 -2.3**
KIS *e* pP 17 55 46.0 -3.9
KIS *e* 17 55 56.0
KIS *e*PPP 18 01 38.0
KIS *e* 18 06 12.0
KIS *e*S S 18 06 46.0 -6.8
KIS *e*PS PS 18 08 00.0 -11
KIS pmax pmax
comp=Z,530nm,3.0s
KIS Kishinev 94.32 317 *e*P **P** **17 55 40.0 -2.3**
comp=Z,500nm,3.0s
KIS Kishinev 94.32 317 *e*PP PP 17 59 42.0 +13
KIS Kishinev 94.32 317 *e*PS PS 18 08 00.0 -11
KIS Kishinev 94.32 317 *e*PPS PS 18 08 31.0 +20
KIS *e*SS SS 18 13 23.0 +8.7
KIS *e*SSS 18 17 20.0
KIS *e*L 18 32 54.0
KIS LRM 18 44 14.0
comp=Z,3µm,21.0s
GDZ Gediz 94.62 309⇑ *i*P **P** **17 55 42.3 -1.6**
GOLH Golhisar 94.72 307⇑ *i*P **P** **17 55 42.8 -1.6**
ULDT Uludag 94.79 310⇑ *i*P **P** **17 55 43.2 -1.5**
TIRR Tirgusor 94.88 315 P **P** **17 55 45.1 +0.1**
TIRR Tirgusor 94.88 315⇑ *i*P **P** **17 55 44.0 -0.9**
TRO Tromso 94.96 340 *e*P **P** **17 55 42.8 -1.9**
TRO *e*SKS 18 06 16.6
TRO AMS AMS 18 38 19.2
comp=Z,2µm,29.1s,MS5.3
PSN Preselentsi 95.13 314 *e*P **P** **17 55 45.4 -0.7**
HARR Harsova 95.20 315 P **P** **17 55 46.4 0.0**
HARR Harsova 95.20 315⇓ *i*P **P** **17 55 46.8 +0.4**
WRAK Wrangell Islan 95.33 33⇑ *e*P **P** **17 55 47.0 +0.3**
comp=Z,90nm,0.9s,mb6.2
WRAK LR LR
comp=Z,1µm,20.0s,MS5.5
MANT Manisa 95.40 309 *i*P **P** **17 55 44.8 -2.6**
PRD Provadia 95.75 313 *e*P **P** **17 55 48.0 -1.0**
DIB Dawson Inlet, 95.80 36 P **P** **17 55 47.1 -1.8**
DIB T 19 42 36.1
SNR=12
VRI Vrincioaia 95.89 316 P **P** **17 55 49.3 -0.2**
VRI Vrincioaia 95.89 316⇑ *i*P **P** **17 55 49.0 -0.5**
AKHS Akhisar 95.94 309⇑ *i*P **P** **17 55 48.4 -1.5**
PLOR Plostina 95.95 316 P **P** **17 55 49.7 -0.1**
DLBC Dease Lake 96.17 31⇑ *i*P **P** **17 55 51.0 +0.6**
DLBC *e*PP PP 17 59 43.5 +0.2
SART Tekirdag 96.22 311⇑ *i*P **P** **17 55 49.2 -1.9**
JMB Yambol 96.44 313 *e*P **P** **17 55 51.3 -0.8**
MLR Muntele Rosu 96.49 316 P **P** **17 55 52.0 -0.2**
MLR Muntele Rosu 96.49 316⇑ *i*P **P** **17 55 51.6 -0.6**
BLCB Balcova 96.59 309 *e*P **P** **17 55 51.9 -1.0**
SUW Suwalki 96.81 325 *e*P **P** **17 55 53.2 -0.3**
SZH Strazhica 96.81 314 *e*P **P** **17 55 52.8 -0.9**
URLA Izmir 96.94 309⇑ *i*P **P** **17 55 53.4 -1.1**
ALN Alexandroupoli 97.05 311 *e*P **P** **17 55 52.8 -2.1**
LVV L'vov 97.07 320 *i*P **P** **17 55 53.5 -1.3**
LVV *e* 17 59 49.7
LVV *e* 18 01 55.9
LVV *e* 18 06 29.3
LVV *i*S S 18 07 03.5 -13
LVV MLR MLR
comp=Z,3µm,22.0s,MS5.8
LVV MLR MLR
comp=N,600nm,20.0s,MS5.4
LVV MLR MLR
comp=E,1µm,21.0s,MS5.4
ZIMR 97.16 314 P **P** **17 55 55.5 +0.2**
BOZC Bozcaada 97.18 310⇑ *i*P **P** **17 55 54.4 -1.1**
DIM Dimitrovgrad 97.27 312 *e*P **P** **17 55 55.3 -0.6**
CHOS Chios island 97.36 309 *e*P **P** **17 55 55.2 -1.1**
KDZ Kurdzhali 97.41 312 *e*P **P** **17 55 55.2 -1.3**
MOR8 Moi Rana 97.68 338 *e*P **P** **17 55 56.0 -1.2**
comp=E,80nm,1.6s,mb6.0
MOR8 Moi Rana 97.68 338 *e*P **P** **17 55 56.0 -1.2**
MOR8 AMb AMB 17 55 58.7
comp=Z,80nm,1.6s,mb6.0
MATP Matopo 97.74 250 P **P** **17 55 58.2 -0.3**
MATP PP PP 17 59 53.5 -3.1
MATP Matopo 97.74 250 P **P** **17 55 58.2 -0.2**
comp=Z,13nm,1.1s,mb5.4,baz=120,slow=2.6,SNR=4.0
MATP PP PP 17 59 53.5 -3.1
comp=Z,11nm,1.1s,baz=109,slow=8.2,SNR=4.5
PLD Plovdiv 97.87 313 *e*P **P** **17 55 57.5 -1.1**
PLD Plovdiv 97.87 313 *e*P **P** **17 55 57.3 -1.3**
RZN Rozhen 97.93 312 *e*P **P** **17 55 57.7 -1.1**
APE Apeiranthos 97.94 308 *e*P **P** **17 55 57.2 -1.8**
APE Apeiranthos 97.94 308⇓ *i*P **P** **17 55 57.0 -2.0**
KWP Kalwaria 97.95 320 *e*P **P** **17 55 59.2 +0.4**
KWP Kalwaria 97.95 320 *e*P **P** **17 55 59.2 +0.5**
KWP Kalwaria 97.95 320 P **P** **17 55 58.9 +0.2**
KWP pmax pmax
comp=Z,100nm,1.1s,mb6.3
KWP Kalwaria 97.95 320⇑ *i*P **P** **17 55 59.5 +0.8**
SANT Santorini 98.09 307 *e*P **P** **17 55 57.9 -1.8**
LSZ Lusaka 98.16 255⇑ *e*P **P** **17 56 00.1 -0.3**
comp=Z,46nm,1.4s,mb5.8
LSZ *e*PP PP 17 59 55.9 -4.1
LSZ LR LR
comp=Z,4µm,21.0s,MS5.9
LSZ Lusaka 98.16 255⇑ *e*P **P** **17 56 00.1 -0.3**
LSZ *e* 17 59 55.9
LSZ pmax pmax
comp=Z,46nm,1.4s,mb5.8
LSZ MLR MLR
comp=Z,4µm,21.0s,MS5.9
LSZ Lusaka 98.16 255 P **P** **17 56 01.1 +0.7**
SNR=7.0
LSZ Lusaka 98.16 255 P **P** **17 56 01.1 +0.7**
SNR=7.0
LSZ Lusaka 98.16 255 P **P** **17 56 01.1 +0.7**
SNR=7.0
LSZ Lusaka 98.16 255 P **P** **17 56 00.4 +0.1**
baz=102,slow=5.0
LSZ PP PP 17 59 56.6 -3.4
comp=Z,11nm,1.2s,baz=62,slow=9.2,SNR=5.1
PGB Panagyurishte 98.20 313 *e*P **P** **17 55 58.8 -1.2**
LAST Lasithi 98.23 306 *e*P **P** **17 55 59.5 -0.8**
TRPA Tarpa 98.35 319⇑ *i*P **P** **17 56 00.2 -0.4**
KOLS Kolonicke sedl 98.37 320 *e*P **P** **17 56 00.5 -0.1**
KOLS Kolonicke sedl 98.37 320 *e* **P** **17 56 00.5 -0.1**
UZH Uzhgorod 98.42 319⇓ *i*P **P** **17 56 00.7 -0.1**
UZH *e* 18 00 01.8
UZH *i* 18 06 32.0
UZH *e*S S 18 07 20.0 -8.0
UZH *i*PS PS 18 08 52.0 -3.3
UZH *e*SS SS 18 14 05.0 -7.1
RKT Rikitea 98.44 113 *e*PP PP 18 00 00.7 -1.3
comp=Z,472nm,31.5s
RKT Rikitea 98.44 113 *e*SKSac SKSac 18 06 31.1 -7.6
comp=Z,2µm,26.0s
RKT *e*SP SP 18 08 47.3 -6.3
comp=Z,2µm,33.8s
RKT *e*SS SS 18 14 12.2 -1.8
comp=Z,2µm,28.8s
RKT *e*LR LR 18 28 04.8
comp=Z,11µm,35.8s
DRGR 98.49 318 P **P** **17 56 00.8 -0.4**
DRGR 98.49 318⇓ P **P** **17 56 01.0 -0.2**
DRGR 98.49 318⇓ *i*P **P** **17 56 00.9 -0.3**
BBB Bella Bella 98.61 37 LR LR 18 32 44.4
comp=Z,3µm,21.1s,MS5.8,baz=286,slow=31
MMB Musomiste 98.67 312 *e*P **P** **17 56 00.5 -1.7**
GZR Gura Zlata 98.70 316 P **P** **17 56 02.4 +0.2**
GZR Gura Zlata 98.70 316⇓ *i*P **P** **17 56 02.3 +0.1**
SIVA Sivas 98.79 306 *e*P **P** **17 56 02.4 -0.5**
VTS Vitosha 98.89 313 *e*P **P** **17 56 02.2 -0.9**
VTS Vitosha 98.89 313 P **P** **17 56 02.8 -0.3**
VTS Vitosha 98.89 313 *e*P **P** **17 56 01.9 -1.2**
VTS Vitosha 98.89 313⇓ *i*P **P** **17 56 02.1 -1.0**
CRVS Cervenica-Dubn 98.90 320 *e*P **P** **17 56 02.9 -0.1**
CRVS Cervenica-Dubn 98.90 320 PDIF **P** **17 56 02.9 -0.1**
STHS Stebnicka Huta 98.93 320 *e*P **P** **17 56 03.5 +0.4**
comp=Z,29nm,1.2s,mb5.7
STHS Stebnicka Huta 98.93 320 *e*P **P** **17 56 03.5 +0.4**
STHS pmax pmax
comp=Z,29nm,1.2s,mb5.7
STHS Stebnicka Huta 98.93 320 PDIF **P** **17 56 03.5 +0.4**
PAIG Paliouri 98.97 311 *e*P **P** **17 56 01.5 -2.1**
SOH Sokhos 99.08 312 *e*P **P** **17 56 02.2 -1.8**
PLG Polygyros 99.08 311 *e*P **P** **17 56 02.2 -1.9**
KKB Krupnik 99.10 313 *e*P **P** **17 56 02.8 -1.3**

NSS Namsos 99.25 336 *e*P **P** 17 56 08.0 +3.8
NSS AMS AMS 18 43 38.4
comp=Z,3µm,19.2s,MS5.9
KNT Kendrikon 99.36 312 *e*P **P** 17 56 03.5 -1.7
THE Thessaloniki 99.40 311 *e*P **P** 17 56 03.4 -2.1
BZS Buzias 99.46 317 ⇑P **P** 17 56 04.7 -0.9
BZS Buzias 99.46 317 ⇑*i*P **P** 17 56 04.7 -0.9
KARN Karanos 99.46 306 *e*P **P** 17 56 04.6 -1.3
VAY Valandovo 99.58 312 *e*P **P** 17 56 04.2 -2.0
VAY Valandovo 99.58 312 *e*P **P** 17 56 04.6 -1.6
KECS Kecovo 99.62 320 *e*P Pdif 17 56 05.8 -0.3
comp=Z,23nm,1.1s
KECS *e* 17 56 10.3
KECS Kecovo 99.62 320 *e*P Pdif 17 56 05.8 -0.3
KECS pmax pmax
comp=Z,23nm,1.1s,mb5.5
KECS Kecovo 99.62 320 PDIF Pdif 17 56 05.8 -0.3
KECS pPDIF 17 56 10.3
OJC Ojcow 99.66 321 *e*P Pdif 17 56 05.6 -0.7
DID Didima 99.69 308 *e*P Pdif 17 56 03.9 -2.5
DAG Danmarks Havn 99.77 352⇓*e*P Pdif 17 56 05.0 -1.7
DAG *i* 18 00 12.0
DAG pmax pmax
comp=Z,17nm,0.5s,mb5.7
DAG Danmarks Havn 99.77 352⇓*i*P Pdif 17 56 05.0 -1.7
DAG *i* 18 00 12.0
LIT Litokhoron 99.85 311 *e*P Pdif 17 56 05.4 -1.6
PSZ Piszkesteto 100.13 319⇑*e*Pdif Pdif 17 56 07.8 -0.5
comp=Z,60nm,1.4s
PSZ Piszkesteto 100.13 319⇑*e*P Pdif 17 56 07.8 -0.5
PSZ pmax pmax
comp=Z,60nm,1.4s
PSZ Piszkesteto 100.13 319⇑*i*P Pdif 17 56 08.6 +0.3
AGG Agios Georgios 100.15 310 *e*P Pdif 17 56 06.0 -2.4
BOSA Boshof 100.27 241 P Pdif 17 56 10.6 +1.6
BOSA Boshof 100.27 241 P Pdif 17 56 10.6 +1.7
BOSA pmax pmax
comp=Z,7.0nm,1.1s
BOSA Boshof 100.27 241 P Pdif 17 56 10.6 +1.6
comp=Z,7.3nm,1.1s,baz=126,slow=7.8,SNR=3.8
SKO Skopje 100.29 313 *e*P Pdif 17 56 08.6 -0.4
LIKS Likavka 100.38 320 *e*P Pdif 17 56 07.4 -2.0
comp=Z,28nm,1.0s
LIKS Likavka 100.38 320 *e*P Pdif 17 56 07.4 -2.0
LIKS pmax pmax
comp=Z,28nm,1.0s
LIKS Likavka 100.38 320 PDIF Pdif 17 56 07.4 -2.0
VLX Vlachokerasia 100.39 308 *e*P Pdif 17 56 08.0 -1.5
RES Resolute Bay 100.43 10⇑*e*Pdif Pdif 17 56 08.8 -0.9
comp=Z,1µm,1.1s
RES *e*PP PP 18 00 09.6 -5.8
RES Resolute Bay 100.43 10⇑*e*P Pdif 17 56 08.8 -0.9
RES pmax pmax
comp=Z,1µm,1.1s
KRUS Krusevo 100.55 312 *e*P Pdif 17 56 10.0 -0.2
SELA Sela 100.62 309 *e*P Pdif 17 56 09.4 -1.1
VYHS Vyhne 100.69 320 *e*P Pdif 17 56 10.9 +0.1
comp=Z,31nm,1.9s
VYHS *e* 17 56 15.3
VYHS *e* 17 59 25.0
VYHS *e*PP PP 18 00 21.3 +3.1
VYHS LR LR
comp=Z,2µm,29.3s,MS5.4
VYHS Vyhne 100.69 320 PDIF Pdif 17 56 10.8 0.0
VYHS pPDIF 17 56 15.3
VYHS *e* 17 59 25.0
VYHS *e*PP PP 18 00 21.3 +3.1
OKC Ostrava-Krasne 100.79 321 *e*Pdif Pdif 17 56 11.5 +0.2
OKC *e*pP 17 56 17.2
OKC Ostrava-Krasne 100.79 321 *e*PDIF Pdif 17 56 11.5 +0.2
OKC *e*pP 17 56 17.2
OKC AMS AMS 18 43 50.0
comp=Z,2µm,21.4s
DIVS Divcibare 100.90 315 *e*P Pdif 17 56 11.4 -0.3
NB2 NORSAR Subarra100.93 333 P Pdif 17 56 10.2 -1.7
comp=Z,30nm,1.2s,baz=70,slow=4.6
NB2 NORSAR Subarra100.93 333 P Pdif 17 56 10.2 -1.7
NB2 pmax pmax
comp=Z,30nm,1.2s
NOA NORSAR Array B100.93 333 P Pdif 17 56 11.0 -0.9
NOA PP PP 18 00 13.8 -5.8
NOA PKKPbc PKKPbc 18 12 26.4 +0.1
NOA NORSAR Array B100.93 333 P Pdif 17 56 11.0 -0.9
comp=Z,9.3nm,1.0s,baz=69,slow=4.5,SNR=10
NOA PP PP 18 00 13.8 -5.8
comp=Z,4.3nm,1.0s,baz=76,slow=9.3,SNR=3.3
NOA PKKPbc PKKPbc 18 12 26.4 +0.1
comp=Z,3.0nm,0.9s,baz=69,slow=2.9,SNR=4.9
BSD Bornholm Skovb 101.18 327 *i*P PKiKP 18 00 28.2 -10
BSD *i* 18 09 15.0
BSD
comp=Z,3µm,21.0s
MORC Moravsky Berou 101.18 321 *e*Pdif Pdif 17 56 12.7 -0.3
comp=Z,22nm,1.1s
MORC Moravsky Berou 101.18 321 *e*P Pdif 17 56 12.7 -0.3
MORC pmax pmax
comp=Z,22nm,1.1s
MORC Moravsky Berou 101.18 321⇑*i*P Pdif 17 56 13.4 +0.4
PKSM Moragy 101.36 318 P Pdif 17 56 13.9 +0.2
PKSM Moragy 101.36 318⇑P Pdif 17 56 13.5 -0.3
PKSM Moragy 101.36 318⇑*i*P Pdif 17 56 13.4 -0.4
LKD Levkas 101.50 310 *e*P Pdif 17 56 13.5 -0.9
TIR Tirane 101.57 313 *e*P Pdif 17 56 13.9 -0.8
IGT Igoumenitsa 101.58 311 *e*P Pdif 17 56 13.2 -1.6
KSP Ksiaz 101.66 323 *e*P Pdif 17 56 16.2 +1.1
KSP Ksiaz 101.66 323 *e*P Pdif 17 56 14.6 -0.5
KSP *e*PP PP 18 00 20.0 -5.5
KSP *e*SP SP 18 09 21.0 -5.6
KSP *e*SS SS 18 14 57.0 -0.2
KSP *e*SKKS SKKSdf 18 19 30.0 -10
KSP LR LR
comp=Z,11µm,23.0s,MS6.3
KSP Ksiaz 101.66 323 *e*P Pdif 17 56 14.6 -0.5
KSP *e* 18 00 20.0
KSP *e*SP SP 18 09 21.0 -5.6
KSP *e*SS SS 18 14 57.0 -0.2
KSP MLR MLR
comp=Z,11µm,23.0s,MS6.3
MODS Modra-Piesok 101.72 320 *e*P Pdif 17 56 15.9 +0.5
MODS *e* 17 56 20.4
MODS Modra-Piesok 101.72 320 PDIF Pdif 17 56 15.9 +0.5
MODS pPDIF 17 56 20.4
DPC Dobruska-Polom 101.78 322 *e*PDIF Pdif 17 56 15.4 -0.3
DPC *e*pP 17 56 21.1
DPC *e*SKS 18 06 51.8
DPC AMS AMS 18 44 40.0
comp=Z,4µm,21.5s
ZST Bratislava 101.88 320 *e*P Pdif 17 56 18.2 +2.1
comp=Z,13nm,1.2s
ZST *e* 17 56 38.9
ZST LR LR
comp=Z,2µm,20.1s,MS5.6
ZST Bratislava 101.88 320 PDIF Pdif 17 56 18.2 +2.1
ZST *e* 17 56 38.9
VRAC Vranov 101.91 321⇑P Pdif 17 56 16.7 +0.4
VRAC Vranov 101.91 321⇑*i*P Pdif 17 56 16.7 +0.5
UPC Upice 101.93 322 *e*PDIF Pdif 17 56 20.6 +4.3
YKA Yellowknife Ar 102.02 25 P Pdif 17 56 17.2 +0.5
YKA PP PP 18 00 24.6 -3.2
YKA Yellowknife Ar 102.02 25 P Pdif 17 56 17.2 +0.5
YKA 18 00 24.5
YKA pmax pmax
comp=Z,5.0nm,0.8s
YKA pmax pmax
comp=Z,3.0nm,1.0s
YKA Yellowknife Ar 102.02 25 P Pdif 17 56 17.2 +0.5
comp=Z,5.3nm,0.8s,baz=296,slow=4.7,SNR=40
YKA PP PP 18 00 24.5 -3.2
comp=Z,3.3nm,1.0s,baz=297,slow=7.3,SNR=5.7
YKA PKiKP PKiKP 18 00 39.1 +0.1
comp=Z,1.1nm,0.5s,baz=305,slow=1.7,SNR=11
YKA PKKPbc PKKPbc 18 12 18.0 -5.1
comp=Z,1.3nm,0.7s,baz=111,slow=2.6,SNR=9.1
KONO Kongsberg 102.22 332 PFAKE 17 56 30.0 +12
KONO LR LR
comp=Z,6µm,22.0s,MS6.1
COP Copenhagen 102.32 328 *i*P PKiKP 18 00 45.1 +5.3
COP *e* 18 01 47.4
COP *i* 18 09 28.1
COP
comp=Z,970nm,21.0s
NLWA Neilton Lookou 102.46 41 *e*Pdif Pdif 17 56 21.0 +2.3
comp=Z,18nm,1.0s
NLWA LR LR
comp=Z,3µm,22.0s,MS5.8
SNAA Sanae 102.61 195 Pdiff Pdif 17 56 21.0 +1.6
comp=Z,0.7nm,0.6s,baz=310,slow=21,SNR=5.6
SNAA PKKPbc PKKPbc 18 12 19.4 -2.3
comp=Z,3.0nm,1.1s,baz=342,slow=9.2,SNR=3.8
RUE Ruedersdorf 102.66 325 *e*Pdif Pdif 17 56 20.3 +0.7
comp=Z,35nm,0.8s
PVCC Panska Ves 102.80 323 *e*PDIF Pdif 17 56 21.0 +0.8
PVCC *e*pP 17 56 26.5
PVCC *e*SKS 18 06 53.1
PVCC AMS AMS 18 44 40.0
comp=Z,6µm,25.9s
KOGS Kog 102.90 318 *e*Pdiff Pdif 17 56 20.2 -0.4
HDW Hoodsport 102.92 40 P Pdif 17 56 23.0 +2.3
PRU Pruhonice 102.98 322 *e*PDIF Pdif 17 56 21.0 0.0
PRU *e*pP 17 56 26.6
PRU *ex* x 17 59 29.7
PRU *e*SKS 18 06 57.2
PRU *ex* x 18 09 33.6
PRU AMS AMS 18 43 50.0
comp=Z,4µm,22.0s
BRG Berggiesshubel 103.08 323 *e*Pdif Pdif 17 56 21.7 +0.2
comp=Z,14nm,1.3s
BRG *i* 17 56 27.4
BRG *e* 17 59 43.2
BRG *e* 18 00 35.6
BRG PP PP 18 00 47.0 +11
BRG SKS 18 07 01.0
BRG S Sdif 18 08 00.0 -6.7
BRG PS PS 18 09 29.0 -16
BRG SS SS 18 15 01.0 -16
BRG LR LR
comp=Z,3µm,22.6s,MS5.8
BRG Berggiesshubel 103.08 323 *e*P Pdif 17 56 21.7 +0.3
BRG *e* 18 00 35.6
BRG 18 07 01.0
BRG S Sdif 18 08 00.0 -6.7
BRG pmax pmax
comp=Z,14nm,1.3s
BRG pmax pmax
comp=Z,19nm,1.3s
BRG MLR MLR
comp=N,622nm,22.0s,MS5.7
BRG MLR MLR
comp=E,3µm,22.7s,MS5.7
BRG MLR MLR
comp=Z,3µm,22.7s,MS5.8
BRG Berggiesshubel 103.08 323 *e*PDIF Pdif 17 56 21.7 +0.2
comp=Z,24nm,1.3s
BRG *i* 17 56 27.4
comp=Z,29nm,1.0s
BRG *e* 17 59 43.2
comp=Z,28nm,1.6s
BRG *e* 18 00 35.6
comp=Z,32nm,1.3s
BRG PP PP 18 00 47.0 +11
BRG SKS 18 07 01.0
BRG S Sdif 18 08 00.0 -6.7
BRG PS PS 18 09 29.0 -16
BRG SS SS 18 15 01.0 -16
BRG
comp=N,1µm,22.0s
BRG
comp=E,4µm,22.7s
BRG
comp=Z,6µm,22.6s
VDB Vedder Mountai 103.13 39 P Pdif 17 56 22.9 +1.2
ARSA Arzberg 103.16 319⇑*i*P Pdif 17 56 22.9 +1.1
comp=Z,14nm,1.5s
JCW Jim Creek 103.49 40 P Pdif 17 56 25.1 +1.8
CLL Collm 103.50 324 *i* Pdif Pdif 17 56 22.6 -0.7
comp=Z,74nm,2.3s
CLL *i* 17 56 28.9
CLL LR LR
comp=Z,5µm,30.2s,MS5.9
CLL Collm 103.50 324 *i* P Pdif 17 56 22.6 -0.7
CLL pmax pmax
comp=Z,74nm,2.3s
CLL MLR MLR
comp=Z,5µm,24.9s,MS5.9
CLL Collm 103.50 324 *i* Pdif Pdif 17 56 22.6 -0.7
comp=Z,74nm,2.3s
CLL *i* x x 17 56 28.9
CLL *i* pPdif 17 56 34.1
CLL *ex* x 17 59 48.0
CLL *e*PP PP 18 00 25.0 -14
CLL *e*PPmax 18 00 43.0
CLL *es*SKSac 18 07 24.0
CLL *es*Sdiff 18 08 30.0
CLL *e*SP SP 18 09 42.0 -3.9
CLL *ex* x 18 10 18.0
CLL *e*SS SS 18 15 18.0 -4.4
CLL *ex* x 18 16 06.0
CLL *e*PPPrev 18 20 30.0
CLL *ex* x 18 23 36.0
CLL Collm 103.50 324 *i* Pdiff Pdif 17 56 23.0 -0.3
comp=Z,78nm,2.1s
CLL *e*pPdiff 17 56 28.8
CLL *e*PP PP 18 00 39.0 -0.2
CLL *e*SKKSac SKKSac 18 07 39.2 -4.4
CLL *e*SP SP 18 09 36.5 -9.4
CLL *e*SS SS 18 15 21.9 -0.5
CLL *e*SSS 18 19 58.1
CLL *e*SSSS 18 23 16.0
COR Corvallis 103.59 44 PFAKE 17 56 40.0 +16
COR LR LR
comp=Z,4µm,22.0s,MS5.9
CRES Cresnjev 103.60 318 *e*Pdiff Pdif 17 56 23.9 +0.1
CRES *e*SKSac SKSac 18 07 00.3 -2.4
CRES *e*Sdiff Sdif 18 08 09.9 -1.2
PERS Pernice 103.60 319 *e*Pdiff Pdif 17 56 23.2 -0.5
SUR Sutherland 103.70 237 Pdif Pdif 17 56 24.1 -0.1
SUR LR LR
comp=Z,4µm,22.0s,MS5.9
SUR Sutherland 103.70 237 Pdiff Pdif 17 56 24.1 -0.1
comp=Z,11nm,0.9s,baz=105,slow=4.6,SNR=3.4
MOA Molln 103.80 320⇑*i*P Pdif 17 56 24.9 +0.2
comp=Z,21nm,1.1s,SNR=7.3
BER Bergen 103.82 334 AMS AMS 18 45 30.0
comp=Z,4µm,19.0s,MS6.0
BOJS Bojanci 103.83 317 *e*Pdiff Pdif 17 56 24.9 +0.2
BOJS *e*Sdiff Sdif 18 08 13.3 +0.3
BOJS *e*SS SS 18 16 09.2 +42
PDKS Podkum 103.85 318 *e*Pdiff Pdif 17 56 24.9 +0.1
KHC Kasperske Hory 103.85 321 *e*Pdif Pdif 17 56 25.5 +0.6
KHC *e*pP 17 56 30.8
KHC *e* 17 56 44.5
KHC *e* 17 56 30.6
KHC *e*SKS 18 00 07.5
KHC *e* 18 07 02.3
KHC LR LR
comp=Z,4µm,25.9s,MS5.8
KHC Kasperske Hory 103.85 321 *e*PDIF Pdif 17 56 25.5 +0.6
KHC *e*pP 17 56 30.8
KHC *ex* x 17 56 44.5
KHC *ex* x 17 59 30.6
KHC *ex* x 18 00 07.5
KHC *e*SKS 18 07 02.3
KHC AMS AMS 18 44 20.0
comp=Z,4µm,25.9s
GEC2 GERESS Array S 103.86 321 *e*Pdif Pdif 17 56 25.0 +0.1
GERES GERESS Array B 103.86 321 Pdiff Pdif 17 56 25.6 +0.7
comp=Z,5.1nm,1.1s,baz=2.9,slow=2.7,SNR=11
GERES PKiKP PKiKP 18 00 43.0 +0.1
comp=Z,2.8nm,0.8s,baz=35,slow=3.6,SNR=4.1
GERES PKKPbc PKKPbc 18 12 17.0 -0.3
comp=Z,0.5nm,0.6s,baz=349,slow=1.4,SNR=4.3
VISS Visnje 104.03 318 *e*Pdiff Pdif 17 56 25.7 +0.1
LJU Ljubljana 104.17 318 *e*P Pdif 17 56 26.0 -0.3
LJU *e*S Sdif 18 08 15.0 -0.8
LJU *e*SP SP 18 09 51.3 -2.0
LJU Ljubljana 104.17 318 *e*Pdiff Pdif 17 56 26.0 -0.3
LJU *e*Sdiff Sdif 18 08 15.0 -0.7
LJU *e*SP SP 18 09 51.3 -1.9
LJU *e*SS SS 18 16 10.6 +39
NKC Novy Kostel 104.19 323 *e*PDIF Pdif 17 56 26.0 -0.4
NKC AMS AMS 18 45 40.0
comp=Z,6µm,20.5s
GUNZ Gunzen 104.21 323 *e*PP PP 18 00 48.9 +4.4
BROR Big Rock Looko 104.26 44 P Pdif 17 56 28.2 +1.5
TIP Timpagrande 104.37 311⇑*i*Pdif Pdif 17 56 26.9 -0.3
comp=Z,15nm,1.1s
TIP *e*PKPdf PKiKP 18 00 48.5 +4.5
JAVS Javornik 104.52 318 *e*Pdiff Pdif 17 56 27.5 -0.3
MOX Moxa 104.55 323 *e*PDIFF Pdif 17 56 28.6 +0.6
comp=Z,37nm,1.5s
MOX *e* 18 00 51.7
MOX
comp=Z,1µm,22.0s
MOX Moxa 104.55 323 *e*P Pdif 17 56 28.6 +0.6
MOX *e* 18 00 51.7
MOX pmax pmax
comp=Z,37nm,1.5s
MOX MLR MLR
comp=Z,1µm,22.0s,MS5.4
VOY Vojsko 104.59 318 *e*Pdiff Pdif 17 56 30.2 +2.0
CROR Criterion Ridg 105.06 43 P Pdif 17 56 31.7 +1.5
GRA1 Grafenberg Arr 105.11 322 *e*Pdif Pdif 17 56 31.0 +0.5
GRA1 *e*PKKPab PKKPab 18 12 31.5 +1.2
GRA1 LR LR
comp=Z,5µm,21.8s,MS6.0
GRF Grafenberg Arr 105.11 322 *e*Pdiff Pdif 17 56 31.0 +0.5
GRF *e*PKKPab PKKPab 18 12 31.5 +1.2
GRF *e*L 18 46 27.2
comp=Z,5µm,21.8s
GRFO Grafenberg 105.11 322 PFAKE 18 01 00.0 +15
GRFO LR LR
comp=Z,5µm,20.0s,MS6.0
HAWA Hanford 105.60 41 PFAKE 18 01 00.0 +14
HAWA LR LR
comp=Z,3µm,21.0s,MS5.9
WTTA Wattenberg 105.68 320⇑*i*P Pdif 17 56 32.6 -0.4
comp=Z,19nm,1.3s
WTTA Wattenberg 105.68 320⇑*i*P Pdif 17 56 32.6 -0.4
WTTA pmax pmax
comp=Z,19nm,1.3s
AQU L'Aquila 106.00 315 PKPdf PKiKP 18 00 51.1 +4.1
OHCM Honcut 106.28 48 PKPdf PKiKP 18 00 51.6 +4.0
NEW Newport 106.50 39 *e*Pdif Pdif 17 56 37.1 +0.5
comp=Z,5.7nm,0.9s
NEW LR LR
comp=Z,2µm,22.0s,MS5.5
NEW Newport 106.50 39 *e*P Pdif 17 56 37.2 +0.6
NEW pmax pmax
comp=Z,6.0nm,0.9s
NEW MLR MLR
comp=Z,2µm,22.0s
EDM Edmonton 106.73 33 *e*Pdif Pdif 17 56 39.1 +1.4
EDM *e*PKPdf PKiKP 18 00 49.0 +1.0
SPAK Spaichingen-Ko 107.19 322 *e*P PP 18 01 11.7 +5.1
BFO Black Forest 107.38 322 *e*Pdif Pdif 17 56 49.3 +8.8
BFO *e*PP PP 18 01 04.8 -3.2
BFO LR LR
comp=Z,3µm,20.0s,MS5.9
WVOR Wild Horse Val 107.46 45 *e*Pdif Pdif 17 56 42.9 +2.0
comp=Z,11nm,1.2s
WVOR *e*PKPdf PKiKP 18 00 54.0 +4.3
WVOR *e*PP PP 18 01 14.4 +5.6
WVOR LR LR
comp=Z,3µm,22.0s,MS5.7
WVOR Wild Horse Val 107.46 45 *e*P Pdif 17 56 42.9 +2.0
WVOR *e* 18 01 14.4
WVOR pmax pmax
comp=Z,11nm,1.2s
WVOR MLR MLR
comp=Z,3µm,22.0s,MS5.7
BMO Blue Mountains 107.58 42 PFAKE 18 01 00.0 +10
BMO LR LR
comp=Z,3µm,22.0s,MS5.8
PAHR Pah Rah Range 107.74 48 *e*PKPdf PKiKP 18 00 50.2 -0.1
CDF Champ du Feu 108.00 322 *e*P Pdif 17 56 43.3 0.0
comp=Z,29nm,1.3s
CDF Champ du Feu 108.00 322 *e*P Pdif 17 56 43.3 0.0
comp=Z,14nm,1.3s
CDF Champ du Feu 108.00 322 *e*P Pdif 17 56 43.3 0.0
CDF pmax pmax
comp=Z,15nm,1.3s
TSUM Tsumeb 108.07 250 PFAKE 18 01 00.0 +8.6
TSUM LR LR
comp=Z,5µm,20.0s,MS6.0
WALA Waterton Lakes 108.16 37 *e*Pdif Pdif 17 56 46.7 +2.6
comp=Z,16nm,1.2s
NVAR Mina Array Bea 108.92 49 Pdif Pdif 17 56 48.4 +1.0
NVAR PKPdf PKiKP 18 00 54.0 +1.4
NVAR PP PP 18 01 17.4 -2.2
NVAR PKKPbc PKKPbc 18 12 01.4 +0.1
NVAR Mina Array Bea 108.92 49 Pdiff Pdif 17 56 48.4 +1.0
comp=Z,4.4nm,1.0s,baz=272,slow=3.0,SNR=19
NVAR PKiKP PKiKP 18 00 54.0 +1.4
comp=Z,6.0nm,1.1s,baz=79,slow=0.6,SNR=7.2
NVAR PP PP 18 01 17.5 -2.2
comp=Z,11nm,1.1s,baz=258,slow=7.3,SNR=8.2
NVAR PKKPbc PKKPbc 18 12 01.4 +0.1
comp=Z,0.4nm,0.7s,baz=166,slow=4.2,SNR=3.3
PGF Pioggiola 109.03 316 *e*P Pdif 17 56 48.8 +0.9
comp=Z,30nm,1.3s
PGF Pioggiola 109.03 316 *e*P Pdif 17 56 48.8 +0.9
comp=Z,15nm,1.3s
PGF Pioggiola 109.03 316 *e*P Pdif 17 56 48.8 +0.9
PGF pmax pmax
comp=Z,15nm,1.3s
MSO Missoula 109.04 39 *e*PKPdf PKiKP 18 00 50.9 -1.6
MSO *e*PP PP 18 01 16.9 -3.2
MSO LR LR
comp=Z,1µm,21.0s,MS5.5
BMN Battle Mountai 109.10 46 PFAKE 18 01 00.0 +7.2
BMN LR LR
comp=Z,4µm,22.0s,MS5.9
BAIF Baives 109.13 325 *e*P Pdif 17 56 49.3 +0.9
MEZF Maizieres J'vi 109.31 323 *e*P Pdif 17 56 50.0 +0.8
CABF La Chapelle 109.45 321 *e*P Pdif 17 56 51.0 +1.2
comp=Z,16nm,1.0s
LPG La Plagne 109.47 320 *e*P Pdif 17 56 51.3 +1.5
LPL La Plagne 109.47 320 *e*P Pdif 17 56 51.0 +1.1
RSL Roselend 109.48 320 *e*P PP 18 01 25.8 +2.5
AUTN L'Aution 109.59 318 *e*P PP 18 01 28.9 +4.7
SBF Sospel 109.64 318 *e*P Pdif 17 56 51.5 +0.9
LUCF Luceram 109.68 318 *e*P PP 18 01 31.3 +6.4
TOUF Mont Tournerai 109.70 318 *e*P PP 18 01 30.0 +4.9
MBDF Montbardon 109.75 319 *e*P Pdif 17 56 52.2 +1.1
TPH Tonopah 109.84 49 PFAKE 18 01 10.0 +16
TPH LR LR
comp=Z,2µm,21.0s,MS5.7
HLID Hailey 109.98 42 *e*Pdif Pdif 17 56 54.0 +1.9
HLID *e*PKPdf PKiKP 18 00 47.4 -7.0
HLID LR LR
comp=Z,3µm,21.0s,MS5.9
GDM Grand'Maison 110.00 319 *e*P PP 18 01 30.5 +3.4
DAC Darwin (Calif) 110.09 51 *e*Pdif Pdif 17 56 54.9 +2.3
DAC LR LR
comp=Z,3µm,22.0s,MS5.8
BORG Borgarnes 110.17 346 PFAKE 18 01 10.0 +16
BORG LR LR
comp=Z,5µm,21.0s,MS6.0
GRN Grenoble 110.22 320 *e*P PP 18 01 31.1 +2.4
ORIF Oris-en-Rattie 110.26 319 *e*P Pdif 17 56 54.4 +1.0
comp=Z,6.1nm,0.6s
ORIF *e*MLR MLR
comp=Z,3µm,20.6s,MS5.5
FRF La Foret Royal 110.28 318 *e*P Pdif 17 56 54.2 +0.8
comp=Z,10nm,0.7s
ESK Eskdalemuir 110.36 332 PFAKE 18 01 10.0 +15
ESK LR LR
comp=Z,5µm,22.0s,MS6.1
ELK Elko 110.42 45 PFAKE 18 01 10.0 +15
ELK LR LR
comp=Z,76nm,21.0s,MS4.2
LMR La Mourre 110.46 317 *e*P Pdif 17 56 55.0 +0.8
LOR Lormes 110.57 322 *e*P Pdif 17 56 55.8 +1.1
LOR *e*MLR MLR
comp=Z,5µm,22.5s,MS5.8
LOR Lormes 110.57 322 *e*P Pdif 17 56 55.8 +1.1
LOR MLR MLR
comp=Z,5µm,22.5s,MS6.1
SMRF Simiane la Rot 110.83 318 *e*P Pdif 17 56 57.1 +1.2
SMF Signal de Mont 110.85 322 *e*P Pdif 17 56 57.0 +1.0
SSF Saint Saulge 110.88 322 *e*P Pdif 17 56 57.1 +1.0
comp=Z,10nm,1.1s
TPNV Topopah Spring 110.92 50 *e*Pdif Pdif 17 56 58.1 +1.8
TPNV LR LR
comp=Z,2µm,21.0s,MS5.7
KEST Kesra 110.97 309 PP PP 18 01 32.9 -1.6
comp=Z,8.5nm,1.1s,baz=1.0,slow=3.3,SNR=6.0
TRCR Troy Canyon 110.98 48 *e*PKPdf PKiKP 18 00 58.1 +1.7
BOZ Bozeman (W) 110.98 40 PFAKE 18 01 10.0 +14
BOZ LR LR
comp=Z,2µm,22.0s,MS5.7

VIVF Saint-Julien-l 111.07 320 *e*P Pdif 17 56 58.1 +1.1
AVF Avril sur Loir 111.09 322 *e*P Pdif 17 56 57.8 +0.8
comp=Z,19nm,1.2s
EGMT Eagleton 111.10 37 PFAKE 18 01 10.0 +14
EGMT LR LR
comp=Z,1μm,19.0s,MS5.6
QLMT Earthquake Lak 111.45 40 *e*Pdif Pdif 17 57 01.1 +2.4
QLMT *e*PKPdf PKiKP 18 00 58.9 +1.7
BGF Bois d'Agland 111.50 322 *e*P Pdif 17 56 59.8 +0.9
PYM Petit Puy Mans 111.76 321 *e*P PP 18 01 43.3 +3.3
PFO Pinyon Flat Ob 111.76 53 *e*PKPdf PKiKP 18 00 58.7 +0.7
PFO *e*PP PP 18 01 39.7 -0.7
PFO LR LR
comp=Z,4μm,20.0s,MS6.0
YMR Madison River 111.82 40 PFAKE 18 01 10.0 +12
YMR LR LR
comp=Z,4μm,22.0s,MS6.0
LBL Lubilhac 111.83 320 *e*P PP 18 01 43.9 +3.6
LASF Ste Croix 111.93 319 *e*P Pdif 17 57 01.6 +0.8
SFJD Kangerlussuaq 111.99 359 PFAKE 18 01 10.0 +13
SFJD LR LR
comp=Z,2μm,20.0s,MS5.8
TCF Toulx Ste Croi 112.02 322 *e*P Pdif 17 57 02.1 +0.9
SPUT South Promonto 112.18 44 *e*PKPdf PKiKP 18 00 59.3 +0.7
LKWY Lake 112.23 40 PFAKE 18 01 10.0 +11
LKWY LR LR
comp=Z,3μm,21.0s,MS5.8
FLWY Flagg Ranch 112.24 41 *e*PKPdf PKiKP 18 01 00.6 +1.9
LDF La Druitiere 112.32 325 *e*P Pdif 17 57 03.3 +0.8
TPAW Teton Pass 112.33 41 *e*PKPdf PKiKP 18 01 00.6 +1.8
TPAW *e*PP PP 18 01 44.0 +0.1
FCC Fort Churchill 112.33 21 *e*PKPdf PKiKP 18 00 57.0 -1.4
DUG Dugway 112.35 45 *e*PKPdf PKiKP 18 01 00.4 +1.4
DUG *e*PP PP 18 01 42.5 -1.7
DUG LR LR
comp=Z,2μm,20.0s,MS5.7
MOOW Moose Ponds 112.36 41 *e*PKPdf PKiKP 18 00 58.4 -0.4
MOOW *e*PP PP 18 01 44.9 +0.8
REDW Red Top Meadow 112.44 42 *e*PKPdf PKiKP 18 01 00.3 +1.3
FLN La Foliniere 112.45 325 *e*P Pdif 17 57 03.7 +0.6
comp=Z,28nm,0.9s
FLN *e*MLR MLR
comp=Z,4μm,22.0s,MS5.7
FLN La Foliniere 112.45 325 *e*P Pdif 17 57 03.7 +0.6
FLN MLR MLR
comp=Z,4μm,22.0s,MS6.0
SNOW Snow King Moun 112.47 41 *e*PKPdf PKiKP 18 01 01.2 +2.1
SNOW *e*PP PP 18 01 44.5 -0.4
AHID Auburn Hatcher 112.53 42 *e*PKPdf PKiKP 18 00 57.0 -2.3
AHID LR LR
comp=Z,1μm,20.0s,MS5.5
HWUT Hardware Ranch 112.68 44 *e*PKPdf PKiKP 18 00 59.8 +0.2
HWUT *e*PP PP 18 01 49.2 +2.7
HWUT LR LR
comp=Z,3μm,22.0s,MS5.8
RLMT Red Lodge 112.71 39 PFAKE 18 01 10.0 +10
RLMT LR LR
comp=Z,2μm,22.0s,MS5.7
MPU Maple Canyon 113.25 45 *e*PKPdf PKiKP 18 01 02.4 +1.7
MPU LR LR
comp=Z,3μm,21.0s,MS5.8
MFF Saint Martin d 113.31 323 *e*P Pdif 17 57 07.6 +0.7
MTLF Montolieu 113.32 319 *e*P Pdif 17 57 07.8 +0.8
comp=Z,12nm,1.0s
MSU Marysvale 113.43 47 *e*PKPdf PKiKP 18 01 03.1 +2.0
BW06 Boulder Array 113.56 42 PFAKE 18 01 10.0 +8.8
BW06 LR LR
comp=Z,3μm,22.0s,MS5.8
PDAR Pinedale Array 113.56 42 Pdiff Pdif 17 57 12.7 +4.6
comp=Z,0.5nm,0.4s,baz=310,slow=1.2,SNR=5.2
PDAR PKiKP PKiKP 18 01 01.9 +0.7
comp=Z,9.3nm,1.2s,baz=262,slow=3.0,SNR=14
PDAR PP PP 18 01 50.1 -2.6
comp=Z,2.8nm,0.9s,baz=305,slow=5.2,SNR=4.3
PDAR PKKPbc PKKPbc 18 11 45.9 -0.4
comp=Z,1.9nm,0.8s,baz=110,slow=4.4,SNR=5.9
TMUT Trail Mountain 113.83 46 *e*PKPdf PKiKP 18 01 03.7 +1.9
LAO LASA Array 113.85 37 *e*PKPdf PKiKP 18 01 03.0 +1.3
LAO LR LR
comp=Z,2μm,22.0s,MS5.7
SGMF Saint Gilles 113.89 325 *e*P Pdif 17 57 10.2 +0.7
DGMT Dagmar 114.10 34 PFAKE 18 01 10.0 +7.9
DGMT LR LR
comp=Z,3μm,22.0s,MS5.8
ROSF Rostrenen 114.25 326 *e*P Pdif 17 57 11.2 +0.1
WUAZ Wupatki 115.12 50 *e*PKPdf PKiKP 18 01 05.3 +0.9
WUAZ *e*PP PP 18 01 57.0 -7.0
WUAZ LR LR
comp=Z,3μm,22.0s,MS5.9
PV10 Paradox Valley 115.75 46 *e*PKPdf PKPdf 18 01 07.5 +2.0
PMSA Palmer Station 116.05 175 PFAKE 18 01 20.0 +15
PMSA LR LR
comp=Z,3μm,20.0s,MS5.9
PV01 Paradox Valley 116.19 46 *e*PKPdf PKPdf 18 01 07.3 +0.9
RSSD Black Hills 116.47 38 PFAKE 18 01 20.0 +13
RSSD LR LR
comp=Z,972nm,20.0s,MS5.4
MVCO Mesa Verde 116.61 47 *e*PKPdf PKPdf 18 01 09.4 +2.2
MVCO LR LR
comp=Z,3μm,21.0s,MS5.8
TUC Tucson 116.70 53 *e*PKPdf PKPdf 18 01 08.4 +0.8
TUC LR LR
comp=Z,3μm,22.0s,MS5.9
SMCO Snowmass 116.88 44 *e*PKP PKPdf 18 01 04.3 -3.4
SMCO *e*PP PP 18 02 11.0 -5.1
ULM Lac du Bonnet 117.42 29 PKP PKPdf 18 01 07.2 -1.2
ULM PP PP 18 02 17.9 -1.5
ULM PKKPbc PKKPbc 18 11 32.4 -0.7
ULM Lac du Bonnet 117.42 29 PKP PKPdf 18 01 07.2 -1.2
comp=Z,11nm,0.9s,baz=314,slow=2.4,SNR=19
ULM PP PP 18 02 17.9 -1.5
comp=Z,4.2nm,0.9s,baz=323,slow=4.9,SNR=4.8
ULM PKKPbc PKKPbc 18 11 32.4 -0.7
comp=Z,1.2nm,0.6s,baz=140,slow=4.5,SNR=3.8
ISCO Idaho Springs 117.54 43 PFAKE 18 01 20.0 +11
ISCO LR LR
comp=Z,2μm,20.0s,MS5.8
SDCO Great Sand Dun 118.55 45 *e*PKPdf PKPdf 18 01 12.2 +1.3
SDCO LR LR
comp=Z,3μm,20.0s,MS5.9
AGMN Agassiz Refuge 118.69 31 PFAKE 18 01 20.0 +9.1
AGMN LR LR
comp=Z,3μm,22.0s,MS5.8
LAZ Ladron 118.76 49 *e*PKPdf PKPdf 18 01 13.1 +1.6
LENM Lemitar 118.97 49 *e*PKPdf PKPdf 18 01 12.5 +0.6
ANMO Albuquerque 119.04 48 *e*PKPdf PKPdf 18 01 12.9 +0.9
ANMO LR LR
comp=Z,2μm,21.0s,MS5.8
ANMO Albuquerque 119.04 48 PKKPbc PKKPbc 18 11 28.0 +1.2
comp=Z,1.5nm,0.8s,baz=123,slow=9.2,SNR=5.0
ESDC Sonseca Array 119.12 318 PKP PKPdf 18 01 11.9 -0.1
comp=Z,0.5nm,0.5s,baz=45,slow=3.8,SNR=20
ESDC PP PP 18 02 28.2 -3.5
comp=Z,2.4nm,0.8s,baz=47,slow=7.2,SNR=3.4
ESDC PKKPbc PKKPbc 18 11 27.0 +0.4
comp=Z,4.7nm,0.9s,baz=252,slow=3.8,SNR=6.2
ESLA Sonseca Array 119.12 318 PFAKE 18 01 20.0 +8.0
ESLA LR LR
comp=Z,4μm,19.0s,MS6.0
LPM Los Pinos Moun 119.18 49 *e*PKPdf PKPdf 18 01 13.7 +1.4
BNM Barren Site 119.24 49 *e*PKPdf PKPdf 18 01 13.1 +0.7
PAB San Pablo 119.44 318 PFAKE 18 01 20.0 +7.4
PAB LR LR
comp=Z,1μm,21.0s,MS5.6
MVO Moncorvo 120.37 320 *e*PP PP 18 02 41.6 +1.5
MVO *i* P 18 12 15.8
MVO Moncorvo 120.37 320 *e*LR LR 18 47 35.1
comp=Z,2μm,22.0s
PVRL Vila Real 120.74 321 *e*PKPdf PKPdf 18 01 16.9 +1.8
RPN Rapa Nui 120.76 121 PFAKE 18 01 30.0 +15
RPN LR LR
comp=Z,3μm,19.0s,MS6.0
EYMN Ely 121.10 29 *e*PKPdf PKPdf 18 01 15.0 -0.6
EYMN LR LR
comp=Z,2μm,21.0s,MS5.7
MTE Manteigas 121.11 320 *e*PP PP 18 02 44.6 -0.6
MTE *i* P 18 12 24.0
MTE Manteigas 121.11 320 *e*LR LR 18 47 59.4
comp=Z,2μm,22.0s
ECSD EROS,Sioux Fal 121.13 35 *e*PKPdf PKPdf 18 01 15.3 -0.4
ECSD LR LR
comp=Z,2μm,21.0s,MS5.8
MNTX Cornudas Mount 121.19 51 *e*PKPdf PKPdf 18 01 17.0 +0.8
MNTX LR LR
comp=Z,3μm,22.0s,MS5.9
PCBR Castelo Branco 121.36 319 *e*PKPdf PKPdf 18 01 18.0 +1.7
PBAR Barrancos 121.95 318 *e*PKPdf PKPdf 18 01 19.3 +1.8
PBAR Barrancos 121.95 318 *e*PP PP 18 02 50.5 -0.5
PBAR *i* P 18 12 28.4
PBAR Barrancos 121.95 318 *e*LR LR 18 49 53.4
comp=Z,2μm,22.0s
PESTR Estremoz 121.96 318 *e*PP PP 18 02 56.0 +5.0
PESTR *i* P 18 12 29.1
PESTR Estremoz 121.96 318 *e*LR LR 18 49 11.5
comp=Z,1μm,22.0s
CBKS Cedar Bluff 121.99 42 *e*PKPdf PKPdf 18 01 16.8 -0.8
CBKS *e*PP PP 18 02 50.8 -0.4
CBKS LR LR
comp=Z,2μm,20.0s,MS5.8
EVO Evora 122.41 318 *e*PKIKP PKPdf 18 01 18.9 +0.5
comp=Z,157nm,1.6s
EVO *e*MLR MLR
comp=Z,950nm,21.8s,MS5.1
EVO Evora 122.41 318 *e*PKPdf PKPdf 18 01 18.3 -0.1
PBEJ Beja 122.58 318 *e*PKPdf PKPdf 18 01 20.5 +1.8
AMTX Amarillo 122.60 46 PFAKE 18 01 30.0 +11
AMTX LR LR
comp=Z,3μm,22.0s,MS5.8
PVAQ Vaqueiros 122.81 317 *e*PKPdf PKPdf 18 01 20.0 +0.8
PVAQ Vaqueiros 122.81 317 *e*PP PP 18 03 01.3 +4.4
PVAQ *i* P 18 12 36.5
PVAQ Vaqueiros 122.81 317 *e*LR LR 18 47 45.4
comp=Z,1μm,22.0s
PMAFR Mafra 123.02 319 *e*PP PP 18 02 56.0 -2.2
PMAFR *i* P 18 12 38.1
PMAFR Mafra 123.02 319 *e*LR LR 18 49 08.8
comp=Z,2μm,20.0s
PBDV Barranco-do-Ve 123.04 317 *e*PP PP 18 02 58.3 -0.1
PBDV *i* P 18 12 39.9
PBDV Barranco-do-Ve 123.04 317 *e*LR LR 18 48 03.9
comp=Z,1μm,22.0s
SCHQ Schefferville 123.19 9 PKP PKPdf 18 01 19.0 -0.4
comp=Z,6.4nm,0.4s,baz=351,slow=2.0,SNR=59
TORD Torodi Ar. Bea 123.31 286 PKP PKPdf 18 01 20.4 -0.3
TORD PP PP 18 03 02.3 +0.9
TORD PKKPbc PKKPbc 18 11 11.6 +1.4
TORD Torodi Ar. Bea 123.31 286 PKP PKPdf 18 01 20.4 -0.3
comp=Z,13nm,0.8s,baz=52,slow=1.6,SNR=38
TORD PP PP 18 03 02.3 +0.9
comp=Z,14nm,1.0s,baz=64,slow=5.5,SNR=5.9
TORD PKKPbc PKKPbc 18 11 11.6 +1.4
comp=Z,6.3nm,0.8s,baz=264,slow=4.3,SNR=10
LTX Lajitas 123.48 53 *e*PKPdf PKPdf 18 01 21.6 +1.0
LTX LR LR
comp=Z,5μm,20.0s,MS6.2
TXAR Lajitas Array 123.48 53 PKP PKPdf 18 01 20.4 -0.3
comp=Z,8.5nm,0.9s,baz=204,slow=2.8,SNR=25
TXAR PP PP 18 02 59.8 -2.1
comp=Z,0.2nm,0.3s,baz=209,slow=3.8,SNR=3.6
TXAR PKKPbc PKKPbc 18 11 11.2 +1.3
comp=Z,1.7nm,0.9s,baz=134,slow=5.4,SNR=5.3
TXAR SKKPbc 18 15 01.2
comp=Z,3.0nm,1.1s,baz=106,slow=4.0,SNR=5.1
MORF Marmelete 123.49 317 *e*PKPdf PKPdf 18 01 20.1 -0.4
MORF Marmelete 123.49 317 *e*PP PP 18 03 01.1 -0.4
MORF *i* P 18 12 41.6
MORF Marmelete 123.49 317 *e*LR LR 18 48 06.4
comp=Z,2μm,20.0s
COWI Conover 123.54 29 *e*PKPdf PKPdf 18 01 20.1 -0.2
COWI LR LR
comp=Z,3μm,21.0s,MS5.8
PFVI Vila Bisbo 123.70 317 *e*PP PP 18 03 01.8 -1.1
PFVI *i* P 18 12 45.9
PFVI Vila Bisbo 123.70 317 *e*LR LR 18 50 09.0
comp=Z,2μm,22.0s
KSU1 Kansas State U 123.86 40 *e*PKPdf PKPdf 18 01 20.7 -0.4
KSU1 LR LR
comp=Z,3μm,21.0s,MS6.0
WMOK Wichita Mounta 124.75 45 *e*PKPdf PKPdf 18 01 22.2 -0.8
WMOK *e*PP PP 18 03 05.2 -4.8
WMOK LR LR
comp=Z,2μm,22.0s,MS5.8
JFWS Jewell Farm 125.21 32 *e*PKPdf PKPdf 18 01 22.0 -1.6
JFWS LR LR
comp=Z,3μm,22.0s,MS5.9
JCT Junction City 126.03 50 *e*PKPdf PKPdf 18 01 26.4 +0.9
JCT LR LR
comp=Z,3μm,22.0s,MS5.9
GLMI Grayling 126.62 27 *e*PKPdf PKPdf 18 01 27.1 +0.9
GLMI LR LR
comp=Z,2μm,22.0s,MS5.7
HDIL Hopedale 127.34 34 *e*PKPdf PKPdf 18 01 26.8 -1.0
HDIL *e*PP PP 18 03 24.9 -1.9
HDIL LR LR
comp=Z,2μm,22.0s,MS5.8
TRIS Tristan da Cun 127.74 222 PFAKE 18 01 40.0 +11
TRIS LR LR
comp=Z,2μm,20.0s,MS5.9
FVM French Village 128.39 37 *e*PKPdf PKPdf 18 01 30.1 +0.3
MIAR Mount Ida 128.47 43 *e*PKPdf PKPdf 18 01 30.0 -0.1
MIAR *e*PP PP 18 03 34.4 -0.2
MIAR LR LR
comp=Z,4μm,22.0s,MS6.0
KVTX Kingsville 128.84 53 *e*PKPdf PKPdf 18 01 33.0 +2.0
KVTX LR LR
comp=Z,3μm,22.0s,MS5.9
AAM Ann Arbor 129.00 29 PFAKE 18 01 40.0 +9.1
AAM LR LR
comp=Z,2μm,21.0s,MS5.8
UALR University of 129.16 42 *e*PKPdf PKPdf 18 01 31.7 +0.3
NATX Nacogdoches 129.24 46 *e*PKPdf PKPdf 18 01 33.3 +1.7
NATX LR LR
comp=Z,3μm,22.0s,MS6.0
SIUC Southern Illin 129.29 37 *e*PKPdf PKPdf 18 01 32.6 +1.1
HKT Hockley 129.31 49 *e*PKPdf PKPdf 18 01 32.4 +0.6
HKT LR LR
comp=Z,2μm,21.0s,MS5.9
EFI East Falkland 129.49 176 PFAKE 18 01 40.0 +8.5
EFI LR LR
comp=Z,2μm,19.0s,MS5.9
PARMO Parma 129.65 38 *e*PKPdf PKPdf 18 01 33.2 +1.0
BLO Bloomington 129.84 33 *e*PKPdf PKPdf 18 01 33.1 +0.5
USIN University of 130.03 35 *e*PKPdf PKPdf 18 01 33.9 +0.9
WCI Wyandotte Cave 130.63 34 *e*PKPdf PKPdf 18 01 33.6 -0.4
WCI *e*PP PP 18 03 43.9 -4.4
WCI *e*SKP 18 04 54.3
WCI LR LR
comp=Z,2μm,20.0s,MS5.7
DBIC Dimbokro 130.68 280 PKP PKPdf 18 01 34.9 0.0
DBIC SKPbc SKPbc 18 04 56.5 -1.0
DBIC Dimbokro 130.68 280 PKIKP PKPdf 18 01 34.9 +0.1
DBIC pmax pmax
comp=Z,38nm,1.2s
DBIC pmax pmax
comp=N,36nm,0.9s
DBIC Dimbokro 130.68 280 PKP PKPdf 18 01 34.9 0.0
comp=N,38nm,1.1s,baz=80,slow=2.3,SNR=18
DBIC SKPbc SKPbc 18 04 56.5 -1.0
comp=N,36nm,0.9s,baz=74,slow=7.1,SNR=14
LONY Lake Ozonia 130.79 20 PFAKE 18 01 50.0 +16
LONY LR LR
comp=Z,4μm,22.0s,MS6.0
ERPA Erie 130.82 26 PFAKE 18 01 50.0 +16
ERPA LR LR
comp=Z,2μm,20.0s,MS5.8
LIC Lamto 130.90 279 *e*PKIKP PKPdf 18 01 35.1 -0.2
comp=Z,210nm,1.5s
LIC *e*MLR MLR
comp=Z,3μm,22.5s,MS5.6
LIC Lamto 130.90 279 *e*PKPdf PKPdf 18 01 35.1 -0.2
LIC LR LR
comp=Z,1μm,22.5s,MS5.6
ACSO Alum Creek Sta 130.91 30 *e*PKPdf PKPdf 18 01 33.9 -0.7
ACSO *e*SKP 18 04 54.4
ACSO LR LR
comp=Z,3μm,22.0s,MS6.0
WVT Waverly 131.17 37 *e*PKPdf PKPdf 18 01 33.7 -1.5
WVT *e*PP PP 18 03 51.0 -0.9
WVT *e*SKPbc SKPbc 18 04 56.8 -1.8
WVT *e*SKPdf SKPdf 18 05 08.9 -0.3
WVT LR LR
comp=Z,2μm,21.0s,MS5.8
WVT Waverly 131.17 37 *e*PKIKP PKPdf 18 01 33.7 -1.5
WVT *e* 18 03 51.0
WVT MLR MLR
comp=Z,2μm,21.0s,MS5.8
OXF Oxford 131.23 40 *e*PKPdf PKPdf 18 01 34.3 -1.1
OXF LR LR
comp=Z,3μm,22.0s,MS6.0
NCB Newcomb 131.49 20 PFAKE 18 01 50.0 +14
NCB LR LR
comp=Z,3μm,22.0s,MS5.9
PKME Peaks-Kenny Pk 131.77 15 PFAKE 18 01 50.0 +14
PKME LR LR
comp=Z,3μm,20.0s,MS6.0
PLAL Pickwick Lake 131.77 38 *e*PKPdf PKPdf 18 01 36.2 -0.1
PLAL *e*PP PP 18 03 52.2 -3.7
PLAL LR LR
comp=Z,3μm,21.0s,MS6.0
LBNH Lisbon 131.98 18 PFAKE 18 01 50.0 +14
LBNH LR LR
comp=Z,3μm,20.0s,MS5.9
BINY Binghamton 132.39 22 PFAKE 18 01 50.0 +13
BINY LR LR
comp=Z,3μm,22.0s,MS5.9
MCWV Mont Chateau 132.86 28 PFAKE 18 01 50.0 +12
MCWV LR LR
comp=Z,3μm,20.0s,MS6.0
SSPA Standing Stone 132.94 25 PFAKE 18 01 50.0 +12
SSPA LR LR
comp=Z,2μm,21.0s,MS5.9
TZTN Tazewell 133.36 33 *e*PKPdf PKPdf 18 01 39.4 +0.1
TZTN *e*SKP 18 05 04.6
TZTN LR LR
comp=Z,3μm,22.0s,MS6.0
CPCT Cooper Cave 133.59 35 *e*PKPdf PKPdf 18 01 37.7 -2.1
CPCT *e*PP PP 18 04 04.3 -3.1
CPCT *e*SKP 18 05 08.2
HRV Harvard--Oak R 133.66 18 PFAKE 18 01 50.0 +10
HRV LR LR
comp=Z,3μm,19.0s,MS6.0
LRAL Lakeview Retre 133.72 40 *e*PKPdf PKPdf 18 01 39.6 -0.4
LRAL *e*SKP 18 05 05.7
LRAL LR LR
comp=Z,3μm,22.0s,MS6.0
WES Weston 133.85 18 PFAKE 18 01 50.0 +10
WES LR LR
comp=Z,2μm,21.0s,MS5.8
ELN Prospectdale 134.33 31 *e*PKPdf PKPdf 18 01 42.5 +1.4
ELN *e*SKP 18 05 06.8
BLA Blacksburg 134.51 30 *e*PKPdf PKPdf 18 01 42.3 +0.9
BLA LR LR
comp=Z,4μm,21.0s,MS6.1
BRAL Brewton 134.97 42 PFAKE 18 01 50.0 +7.5
BRAL LR LR
comp=Z,4μm,22.0s,MS6.1
CBN Corbin 135.17 27 PFAKE 18 01 50.0 +7.4
CBN LR LR
comp=Z,2μm,22.0s,MS5.9
GOGA Godfrey 135.64 36 *e*PKPdf PKPdf 18 01 44.1 +0.4
GOGA LR LR
comp=Z,3μm,21.0s,MS6.0
JSC Jenkinsville 136.28 34 *e*PKPpre 18 01 40.1
JSC Jenkinsville 136.28 34 PKIKP PKPdf 18 01 48.0 +3.2
CNNC Cliffs of the 137.32 30 PFAKE 18 02 00.0 +13
CNNC LR LR
comp=Z,3μm,21.0s,MS5.9
NHSC New Hope 137.76 34 PFAKE 18 02 00.0 +12
NHSC LR LR
comp=Z,2μm,21.0s,MS5.9
TEIG Tepich 140.00 56 PFAKE 18 02 00.0 +8.0
TEIG LR LR
comp=Z,2μm,22.0s,MS5.8
ASCN Ascension 140.26 259 PFAKE 18 02 00.0 +7.3
ASCN LR LR
comp=Z,3μm,20.0s,MS6.0
DWPF Disney 140.56 40 PFAKE 18 02 00.0 +7.1
DWPF LR LR
comp=Z,3μm,22.0s,MS6.0
TRQA Tornquist 142.46 169 *e*PKPdf PKPdf 18 01 51.5 -4.5
TRQA LR LR
comp=Z,2μm,20.0s,MS5.8
PAYG Puerto Ayora 143.38 90 *e*PKPdf PKPdf 18 02 00.4 +2.1
PAYG LR LR
comp=Z,4μm,22.0s,MS6.1
TGUH Tegucigalpa,Un 143.45 64 *e*PKPdf PKPdf 18 01 57.2 -1.1
TGUH LR LR
comp=Z,2μm,22.0s,MS5.9
LMEL Las Melosas 143.95 156 ⇑ *i*P PKPdf 18 01 57.3 -1.4
FCH Farellones 144.37 156 ⇑ *i*P PKPdf 18 01 58.9 -0.6
BBSR BB Station 145.09 16 *e*PKPdf PKPdf 18 02 00.5 -0.2
BBSR LR LR
comp=Z,2μm,22.0s,MS5.9
MGV Manicaragua 145.47 46 *e*P PKPbc 18 02 04.9 +3.3
CMCH Combarbala 145.90 153 *e*P PKPdf 18 02 02.6 +0.4
LPA La Plata 146.16 174 *ce*PKP PKPdf 18 02 03.0 +0.5
LPA PKIKP PKPdf 18 02 06.0 +3.5
LPA *e*PP PP 18 05 24.0 +0.1
LPA *e*PKS 18 05 35.0
VCR Vista de Mar 146.28 70 *e*P PKPdf 18 02 05.0 +1.7
TLL Tololo Astron 146.84 152 ⇑ *i*P PKPdf 18 02 05.0 +1.2
JCR Jicaral 146.85 70 *e*P PKPdf 18 02 07.0 +2.8
JTS JuntasAbangare 146.87 69 *e*PKPdf PKPdf 18 02 04.0 -0.2
JTS LR LR
comp=Z,3μm,20.0s,MS6.1
JTS JuntasAbangare 146.87 69 PKIKP PKPdf 18 02 03.5 -0.7
JTS pmax pmax
comp=Z,170nm,1.0s
JTS JuntasAbangare 146.87 69 PKPbc PKPbc 18 02 03.5 -2.6
comp=Z,170nm,1.0s,baz=358,slow=3.1,SNR=38
PRS1 Puriscal 147.56 69 *e*P PKPdf 18 02 07.5 +2.1
LAJ Bijagual 147.78 70 *e*P PKPdf 18 02 06.8 +1.0
LCO Las Campanas 147.86 151 *e*PKPdf PKPdf 18 02 07.5 +2.0
LCO *e*PKPbc PKPdf 18 02 10.1 +1.7
LCO LR LR
comp=Z,2μm,22.0s,MS5.9
QCR Quepos 147.87 70 *e*P PKPdf 18 02 08.5 +2.6
LCR2 La Lucha 2 147.92 70 *e*P PKPdf 18 02 06.5 +0.5
URSC Urasca 148.10 69 *e*P PKPdf 18 02 07.0 +0.7
BAR1 148.72 70 *e*P PKPdf 18 02 09.1 +1.8
HLGC Holguin 149.03 44 *e*P PKPdf 18 02 09.2 +1.5
CVJ Coleyville 149.65 50 ‖ *i*P PKPbc 18 02 14.3 +1.0
MCJ Malvern 149.71 50 ‖ *i*P PKPbc 18 02 14.2 +0.7
BBJ Bamboo Saint A 149.76 49 ‖ *e*P PKPbc 18 02 14.5 +0.9
RCC Rio Carpintero 149.88 45 *e*P PKPdf 18 02 07.6 -1.4
STH Stony Hill 150.29 49 ‖ *i*P PKPbc 18 02 15.7 +0.8
GWJ Greenwich 150.35 49 ‖ *i*P PKPbc 18 02 16.0 +1.0
HOJ Hope 150.38 49 ‖ *i*P PKPbc 18 02 15.7 +0.7
CMJ Castle Mountai 150.58 48 ‖ *e*P PKPbc 18 02 16.1 +0.6
MASC Masc 150.77 43 *e*P PKPdf 18 02 12.1 +1.7
BCIP Isla Barro Col 152.00 68 *e*PKPdf PKPdf 18 02 12.6 +0.2
BCIP *e*PKPbc PKPbc 18 02 19.3 +0.4
CEN1 Los Morros 152.66 145 *i* P PKPdf 18 02 14.6 +1.4
SDDR Presa de Saban 153.56 40 *e*PKPdf PKPdf 18 02 15.4 +0.8
SDDR *e*PKPab PKPab 18 02 35.1 +0.5
SDDR LR LR
comp=Z,2μm,21.0s,MS5.9
NNA Nana 154.60 116 *e*PKPdf PKPdf 18 02 17.6 +1.5
NNA *e*PKPbc PKPbc 18 02 27.1 +2.4
NNA LR LR
comp=Z,3μm,22.0s,MS6.0
NNA Nana 154.60 116 PKP PKPdf 18 02 16.1 -0.1
comp=Z,30nm,1.1s,baz=283,slow=4.3,SNR=6.1
ATAH Atahualpa 154.66 104 PKP PKPdf 18 02 17.1 +0.8
comp=Z,33nm,1.1s,baz=208,slow=4.4,SNR=21
OTAV Otavalo 155.18 87 *e*PKPdf PKPdf 18 02 17.8 +0.7
ARE Arequipa 156.75 132 P PKPab 18 02 45.0 -3.3
SJG San Juan 157.28 32 *e*PKPdf PKPdf 18 02 19.9 +0.2
SJG *e*PKPab PKPab 18 02 51.1 +0.6
SJG LR LR
comp=Z,2μm,22.0s,MS6.0
SJG San Juan 157.28 32 PKP PKPdf 18 02 20.1 +0.5
comp=Z,6.0nm,0.3s,baz=344,slow=14,SNR=5.1
SJG PKPab PKPab 18 02 51.4 +0.9
comp=Z,19nm,0.3s,baz=242,slow=7.2,SNR=7.8
CPD Cerro la Pandu 157.46 32 *e*PKPdf PKPdf 18 02 20.3 +0.4
CPD *e*PKPab PKPab 18 02 52.1 +0.8
CPD *e*PP PP 18 06 27.8 -1.4
ROSC El Rosal 158.52 74 PKP PKPdf 18 02 21.9 +0.6
comp=Z,11nm,0.5s,baz=174,slow=2.5,SNR=17
ROSC PKPab PKPab 18 02 58.0 +1.8
comp=Z,35nm,0.9s,baz=83,slow=8.5,SNR=5.9
LPAZ La Paz 159.26 137 PKP PKPdf 18 02 22.9 +0.9
LPAZ LR LR
comp=Z,1μm,21.0s,MS5.7
LPAZ La Paz 159.26 137 PKP PKPdf 18 02 22.9 +0.9
comp=Z,11nm,0.9s,baz=349,slow=1.1,SNR=30
LPAZ La Paz 159.26 137 PKPdf PKPdf 18 02 24.0 +2.0
SDV Santo Domingo 160.38 59 *e*PKPdf PKPdf 18 02 23.3 -0.1
SDV LR LR
comp=Z,822nm,22.0s
SDV Santo Domingo 160.38 59 PKP PKPdf 18 02 22.7 -0.8
comp=Z,34nm,0.8s,baz=301,slow=1.3,SNR=38

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV				PKPab	PKPab	18 03 04.8	+0.6
	comp=Z,30nm,0.7s,baz=346,slow=4.9,SNR=6.1						
RCBR	**Riachuelo**	**161.67**	**255**	PFAKE		18 02 40.0	+15
RCBR				LR	LR		
	comp=Z,3μm,22.0s						
SIV	**San Ignacio**	**163.52**	**154**	PKP	PKPdf	18 02 26.8	+0.2
	comp=Z,12nm,1.0s,baz=240,slow=0.9,SNR=15						
SIV				PKPab	PKPab	18 03 19.4	+1.8
	comp=Z,29nm,0.8s,baz=218,slow=4.1,SNR=12						
BBGH	**Gun Hill**	**164.67**	**22**	PFAKE		18 02 40.0	+12
BBGH				LR	LR		
	comp=Z,5μm,22.0s						

MEX 17 17:50:56.2±0.6**, 16.73N**×**99.79W, h7**^{km}±3^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.18**	**319**	*i* P	Pg	17 50 59.5	-0.4
ACX				*i* S	Sg	17 51 02.5	+0.1
CAIG	**El Cayaco**	**0.56**	**305**	*i* P	Pg	17 51 06.3	-0.6
CAIG				*i* S	Sg	17 51 14.4	+0.2
PLIG	**Platanillo**	**1.68**	**9**	*i* P	Pn	17 51 22.1	-3.9
PLIG				*i* S	Sn	17 51 42.9	-4.9
UTMO	**Huajuapan**	**2.19**	**60**	*i* P	Pn	17 51 30.4	-2.7
UTMO				*i* S	Sn	17 51 56.5	-3.9
PPM	**Popocatepetl**	**2.58**	**25**	*i* P	Pn	17 51 35.1	-3.3
PPM				*i* S	Sn	17 52 07.9	-2.0

IDC 17 17:59:49.3±2.3**, 1.19N**×**127.02E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=198.2km s-min=25.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.19**	**162**	P	P	18 04 46.3	-1.0
	1.6nm,0.4s,baz=340,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**25.60**	**165**	P	P	18 05 21.2	+0.9
	0.3nm,0.4s,baz=346,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**59.80**	**326**	P	P	18 09 56.3	0.0
	0.2nm,0.3s,baz=117,slow=7.2,SNR=5.9						

IDC 17 18:31:22.4±3.6**, 5.60N**×**72.06W, h170**^{km}±28^{km}**, mb1 3.1**/2**, mb1mx2.8**/22**, mbtmp3.2**/2**, Error ellipse: s-maj=99.6km s-min=9.2km az=135.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.37**	**252**	P	Pn	18 32 05.2	+2.1
	6.1nm,0.3s,baz=92,slow=15,SNR=18						
ROSC				S	Sn	18 32 35.1	+0.6
	20nm,0.3s,baz=82,slow=20,SNR=7.7						
SDV	**Santo Domingo**	**3.56**	**23**	P	Pn	18 32 19.7	+2.1
	3.4nm,0.3s,baz=257,slow=7.5,SNR=31						
SDV				S	Sn	18 33 00.6	-0.1
	7.0nm,0.3s,baz=286,slow=19,SNR=31						
ASAR	**Alice Springs**	**149.22**	**232**	PKPbc	PKPbc	18 50 51.7	0.0
	0.3nm,1.0s,baz=121,slow=3.2,SNR=3.3						
WRA	**Warramunga Arr**	**150.64**	**239**	PKPbc	PKPbc	18 50 54.4	-0.8
	0.1nm,0.3s,baz=106,slow=3.1,SNR=12						

IDC 17 19:03:59.6±3.6**, 5.26N**×**95.01E, h0**^{km}**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/21**, mbtmp3.5**/4**, Error ellipse: s-maj=147.1km s-min=23.3km az=61.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**42.81**	**347**	P	P	19 11 59.1	0.0
	1.1nm,0.6s,baz=147,slow=7.3,SNR=19						
SONM	**Songino Array**	**43.53**	**11**	P	P	19 12 04.8	-0.1
	0.3nm,0.5s,baz=186,slow=9.2,SNR=4.4						
WRA	**Warramunga Arr**	**46.06**	**124**	P	P	19 12 25.9	+0.4
	0.8nm,0.6s,baz=302,slow=9.2,SNR=15						
ASAR	**Alice Springs**	**47.60**	**129**	P	P	19 12 37.0	-0.4
	0.2nm,0.6s,baz=301,slow=8.0,SNR=7.1						

*IDC **17** 19:24:46.5±1.2, 4.00N×126.62E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.7/18, mbtmp3.8/6, Error ellipse: s-maj=90.8km s-min=18.3km az=71.0*
*NEIC **17** 19:24:48.0±0.5, 4.05N×126.77E, h10^{km}, mb4.5/2, Error ellipse: s-maj=46.9km s-min=9.2km az=76.0*
*ISCJB **17** 19:24:53.3±2.3, 4.0N±0.1×126.8E±0.4, h71^{km}±22^{km}, mb3.8/7, Error ellipse: s-maj=69.9km s-min=12.2km az=164.4*
ISC 17 19:24:54.3±2.2**, 4.0N**±0.1×**126.7E**±0.4**, h62**^{km}±22^{km}**, n13,** σ**0^{s}82**/13**, mb3.9**/7**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**4.21**	**337**	*e*P	**Pn**	**19 25 56.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**21.98**	**183**	P	**P**	**19 29 42.2**	**-1.1**
	1.4nm,0.7s,mb3.5,baz=2.0,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**24.93**	**163**	P	**P**	**19 30 11.4**	**-0.5**
	6.7nm,0.8s,mb4.2,baz=343,slow=10,SNR=36						
WB2	**Warramunga Arr**	**24.93**	**163**	*e*P	**P**	**19 30 11.6**	**-0.3**
ASAR	**Alice Springs**	**28.36**	**166**	P	**P**	**19 30 43.6**	**+0.9**
	0.5nm,0.6s,mb3.3,baz=341,slow=11,SNR=10						
BJT	**Baijiatuau**	**37.12**	**346**	P	**P**	**19 31 58.7**	**-0.2**
STKA	**Stephens Creek**	**38.37**	**159**	*e*P	**P**	**19 32 09.6**	**0.0**
	3.1nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**38.37**	**159**	P	**P**	**19 32 09.6**	**0.0**
	2.4nm,0.7s,mb4.0,baz=339,slow=13,SNR=7.2						
SONM	**Songino Array**	**47.05**	**341**	P	**P**	**19 33 20.3**	**+0.6**
	0.4nm,0.6s,mb3.5,baz=154,slow=6.8,SNR=4.5						
MKAR	**Makanchi Array**	**57.35**	**325**	P	**P**	**19 34 35.4**	**-0.7**
	0.4nm,0.4s,mb3.8,baz=118,slow=7.9,SNR=9.7						
YAK	**Yakutsk**	**57.95**	**2**	P	**P**	**19 34 39.7**	**-0.4**
KURK	**Kurchatov**	**61.53**	**327**	*e*P	**P**	**19 35 04.5**	**-0.3**
CASY	**Casey**	**71.07**	**187**	P	**P**	**19 36 08.1**	**+2.6**
	6.8nm,0.6s,mb4.8						

NEIC 17 19:32:29.8±5.1**, 34.16S**×**179.49W, h282**^{km}±11^{km}**, mb4.8**/1**, Error ellipse: s-maj=83.4km s-min=30.4km az=165.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.84**	**207**	*e*P	Pn	19 33 33.0	-0.3
MXZ	**Matakaoa Point**	**3.84**	**207**	PN	Pn	19 33 32.5	-0.7
MXZ				SN	S	19 34 15.6	-8.3
PUZ	**Puketiti**	**4.31**	**204**	PN	Pn	19 33 39.0	+0.4
MWZ	**Matawai**	**4.82**	**209**	P	Pn	19 33 45.0	+0.6
MWZ	**Matawai**	**4.82**	**209**	PN	Pn	19 33 44.7	+0.3
MWZ				SN	S	19 34 38.2	-6.0
URZ	**Urewera**	**4.93**	**213**	P	Pn	19 33 45.7	-0.1
URZ	**Urewera**	**4.93**	**213**	PN	Pn	19 33 45.2	-0.6
KNZ	**Kokohu**	**5.37**	**204**	*e*P	Pn	19 33 51.1	+0.2
KNZ	**Kokohu**	**5.37**	**204**	PN	Pn	19 33 50.9	+0.1
BKZ	**Black Stump Fm**	**5.95**	**212**	*e*P	Pn	19 33 58.0	0.0
BKZ	**Black Stump Fm**	**5.95**	**212**	*e*PN	Pn	19 33 58.0	+0.1
BKZ				SN	S	19 35 02.1	-6.8
PXZ	**Pawanui**	**6.55**	**205**	PN	Pn	19 34 03.8	-1.4
TSZ	**Takapari Road**	**6.92**	**210**	P	Pn	19 34 10.0	+0.2
TSZ	**Takapari Road**	**6.92**	**210**	PN	Pn	19 34 09.4	-0.4
BFZ	**Birch Farm**	**7.34**	**206**	*e*P	Pn	19 34 15.0	0.0
BFZ	**Birch Farm**	**7.34**	**206**	PN	Pn	19 34 14.8	-0.2
KIW	**Kapiti Island**	**8.04**	**212**	P	Pn	19 34 23.3	-0.3
KIW	**Kapiti Island**	**8.04**	**212**	PN	Pn	19 34 22.5	-1.1
KIW				SN	S	19 35 47.0	-8.6
MTW	**Mount Morrison**	**8.04**	**208**	P	Pn	19 34 22.8	-0.8
MTW	**Mount Morrison**	**8.04**	**208**	PN	Pn	19 34 22.7	-0.8
MTW				SN	S	19 35 47.4	-8.3
CAW	**Cannon Point**	**8.17**	**210**	P	Pn	19 34 25.0	-0.2
MSWZ	**Moikau Station**	**8.36**	**208**	P	Pn	19 34 27.8	+0.3
MSWZ	**Moikau Station**	**8.36**	**208**	PN	Pn	19 34 27.8	+0.3
MRW	**Makara Radio**	**8.43**	**211**	P	Pn	19 34 28.9	+0.5
SNZO	**South Karori**	**8.49**	**211**	*e*Pn	Pn	19 34 29.1	-0.1
SNZO				*e*S	S	19 35 59.1	-6.9
TUWZ	**Tuamarina**	**8.93**	**214**	PN	Pn	19 34 34.1	-0.5
TUWZ				SN	S	19 36 07.2	-8.7
NNZ	**Nelson**	**9.03**	**217**	*e*P	Pn	19 34 35.8	-0.1
NNZ	**Nelson**	**9.03**	**217**	PN	Pn	19 34 34.9	-1.0
NNZ				SN	S	19 36 10.7	-7.6
BSWZ	**Blackbirch Sta**	**9.18**	**213**	P	Pn	19 34 38.1	+0.3
QRZ	**Quartz Range**	**9.19**	**221**	SN	S	19 36 15.0	-7.1
THZ	**Tophouse**	**9.68**	**216**	*e*P	Pn	19 34 43.7	-0.2
THZ	**Tophouse**	**9.68**	**216**	PN	Pn	19 34 43.5	-0.4
THZ				SN	S	19 36 25.0	-8.1
KHZ	**Kahutara**	**9.90**	**212**	*e*P	Pn	19 34 46.7	+0.1
KHZ	**Kahutara**	**9.90**	**212**	PN	Pn	19 34 46.7	+0.1
LTZ	**Lake Taylor**	**10.76**	**214**	*e*P	Pn	19 34 57.8	+0.5
LTZ	**Lake Taylor**	**10.76**	**214**	PN	Pn	19 34 57.8	+0.6
LTZ				SN	S	19 36 48.0	-10
MQZ	**McQueen's Vall**	**11.33**	**210**	SN	S	19 37 00.1	-11
SBA	**Scott Base**	**44.21**	**184**	*e*P	P	19 40 10.7	0.0
	46nm,0.9s						

*IDC **17** 19:38:12.4±9.6, 25.88S×179.53W, h489^{km}±54^{km}, mb3.1/4, mb1 3.4/6, mb1mx3.2/16, mbtmp3.3/6, Error ellipse: s-maj=148.6km s-min=40.6km az=68.0*
*NEIC **17** 19:38:17.7±3.1, 26.18S×179.92E, h509^{km}±21^{km}, mb4.4/3, Error ellipse: s-maj=61.2km s-min=18.0km az=66.0*
ISC 17 19:38:18.3±3.9**, 26.3S**±0.2×**179.8E**±0.5**, h509**^{km}±29^{km}**, n11,** σ**0^{s}50**/12**, mb3.9**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.18**	**190**	P	**P**	**19 40 58.9**	**+0.3**
	2.8nm,0.3s,baz=276,slow=1.6,SNR=12						
URZ				S	**S**	**19 43 10.3**	**-0.4**
	0.4nm,0.3s,baz=142,slow=19,SNR=4.7						
DZM	**Mont Dzumac**	**12.91**	**286**	P	**P**	**19 41 06.4**	**-0.1**
	0.8nm,0.3s,baz=244,slow=21,SNR=9.6						
HNR	**Honiara**	**25.20**	**308**	P	**P**	**19 43 03.0**	**-0.3**
CTA	**Charters Tower**	**31.41**	**274**	*e*P	**P**	**19 43 57.9**	**+0.5**
	4.1nm,0.3s,mb4.4						
CTAO	**Charters Tower**	**31.41**	**274**	*e*P	**P**	**19 43 57.8**	**+0.4**
	6.8nm,0.5s,mb4.4						
STKA	**Stephens Creek**	**33.76**	**251**	P	**P**	**19 44 18.1**	**+0.9**
	2.0nm,1.0s,mb3.6,baz=67,slow=16,SNR=4.5						
ASAR	**Alice Springs**	**41.55**	**263**	P	**P**	**19 45 21.2**	**+0.1**
	0.9nm,0.5s,mb3.6,baz=91,slow=7.4,SNR=44						
WB2	**Warramunga Arr**	**42.14**	**269**	*e*P	**P**	**19 45 24.8**	**-1.0**
WRA	**Warramunga Arr**	**42.15**	**269**	P	**P**	**19 45 25.4**	**-0.4**
	1.4nm,0.3s,mb4.0,baz=99,slow=6.9,SNR=114						
FITZ	**Fitzroy Crossi**	**50.54**	**268**	*e*P	**P**	**19 46 29.9**	**+0.3**
	3.0nm,0.5s,mb3.9						
FITZ	**Fitzroy Crossi**	**50.54**	**268**	P	**P**	**19 46 30.0**	**+0.4**
	1.8nm,0.5s,mb3.6,baz=135,slow=9.9,SNR=12						

*CSEM **17** 19:53:25.9±0.1, 42.68N×16.43E, h2^{km}, MD3.1/1, Error ellipse: s-maj=4.5km s-min=2.0km az=95.0*
*ROM **17** 19:53:25.5±0.3, 42.95N×16.42E, h10^{km}, Md3.1/1, Ml2.5/3, Error ellipse: s-maj=11.5km s-min=3.2km az=73.0*
*ISCJB **17** 19:53:28.6±0.5, 42.71N±0.02×16.46E±0.05, h10^{km}, Error ellipse: s-maj=5.7km s-min=3.3km az=2.3*
*VIE **17** 19:53:29.6±0.7, 42.63N×16.06E, h8^{km}, mb2.5/2, ML2.9/2, Error ellipse: s-maj=12.9km s-min=5.5km az=61.0*
ISC 17 19:53:29.7±0.5**, 42.70N**±0.02×**16.47E**±0.06**, h10**^{km}**, n17,** σ**1^{s}14**/30**, 2C, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.93**	**79**	*e*Pg	**Pg**	**19 53 45.6**	**-1.9**
STON				Sg	**Sg**	**19 54 00.4**	**+0.9**
STON	**Ston**	**0.93**	**79**	*e*Pg	**Pg**	**19 53 45.6**	**-1.9**
STON				Sg	**Sg**	**19 54 00.3**	**+0.8**
FGMS	**Monte Sant'Ang**	**1.06**	**201**	Pg	**Pg**	**19 53 49.3**	**-0.7**
FGMS				Sg	**Sg**	**19 54 06.5**	**+2.7**
	29nm,0.2s						
MSAG	**Monte S. Angel**	**1.07**	**203**	Pg	**Pg**	**19 53 49.0**	**-1.2**
	147nm,0.5s						
SGRT	**San Giovanni R**	**1.08**	**210**	Pg	**Pg**	**19 53 49.2**	**-1.3**
SGRT				Sg	**Sg**	**19 54 06.4**	**+1.9**
	148nm,0.9s						
RGNG	**Rignano Grg**	**1.21**	**213**	Pg	**Pg**	**19 53 51.5**	**-1.5**
SG1	**Sgolgore (BA)**	**1.86**	**175**	*e*Pn	**Pn**	**19 54 03.6**	**+2.0**
MCRV	**Calabrutti - M**	**2.15**	**207**	Pg	**Pn**	**19 54 04.9**	**-0.6**
	7.0nm,0.4s						
NVLJ	**Novalja**	**2.20**	**329**	*e*Pn	**Pn**	**19 54 05.0**	**-1.1**
NVLJ				Sn	**Sn**	**19 54 33.0**	**-0.4**
NVLJ				Sg	**Sg**	**19 54 35.8**	**-4.4**
NVLJ	**Novalja**	**2.20**	**329**	*e*Pn	**Pn**	**19 54 05.0**	**-1.2**
NVLJ				Sn	**Sn**	**19 54 32.9**	**-0.5**
NVLJ				Sg	**Sg**	**19 54 35.8**	**-4.4**
BOJS	**Bojanci**	**2.94**	**343**	*i* Pn	**Pn**	**19 54 16.1**	**-0.3**
BOJS				*i* Sn	**Sn**	**19 54 52.6**	**+0.9**
KNDS	**Knezji Dol**	**3.20**	**333**	*i* Pn	**Pn**	**19 54 19.8**	**-0.3**
KNDS				*i* Sn	**Sn**	**19 54 58.8**	**+0.6**
SKDS	**Skadanscina**	**3.35**	**329**	*i* Pn	**Pn**	**19 54 20.8**	**-1.2**
SKDS				*i* Sn	**Sn**	**19 55 01.8**	**-0.1**
GOLS	**Golise**	**3.37**	**350**	*i* Pn	**Pn**	**19 54 24.0**	**+1.7**
PDKS	**Podkum**	**3.52**	**343**	*i* Pn	**Pn**	**19 54 25.1**	**+0.7**
PDKS				*i* Sn	**Sn**	**19 55 05.6**	**-0.5**
VOY	**Vojsko**	**3.81**	**332**	*e*Pn	**Pn**	**19 54 28.0**	**-0.4**
VOY				*e*		19 55 30.2	
OBKA	**Obir**	**4.05**	**341**	⇑*i*Pn	**Pn**	**19 54 32.2**	**+0.5**
OBKA				⇑*i*Sn	**Sn**	**19 55 20.3**	**+1.2**

MAN 17 20:01:59, 10.34N×**125.96E, h20**^{km}**, mb4.2, ML3.0, MS2.8, 1C, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.72**	**220**	⇑*e*P	Pb	20 02 13.4	+0.5
SCPH				*e*S	Sb	20 02 24.1	+1.7
MSLP	**Maasin**	**1.11**	**259**	*e*P	Pn	20 02 19.6	+0.3
MSLP				*e*S	Sb	20 02 35.2	+1.8
PLP	**Palo**	**1.27**	**310**	*e*P	Pn	20 02 20.9	-0.7
PLP				*e*S	Sn	20 02 39.6	+1.5
BESP	**Borongan**	**1.35**	**338**	*e*P	Pn	20 02 23.6	+0.8
OCLP	**Ormoc**	**1.51**	**298**	*e*P	Pn	20 02 26.6	+1.7
BUKP	**Musuan**	**2.60**	**200**	*e*P	Pn	20 02 41.7	+1.7

IDC 17 20:19:14.8±9.0**, 5.96S**×**150.83E, h78**^{km}±64^{km}**, mb2.7**/2**, mb1 3.1**/3**, mb1mx2.9**/13**, mbtmp2.9**/3**, ML2.5**/1**, Error ellipse: s-maj=120.2km s-min=57.5km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.00**	**227**	P	Pn	20 20 27.9	+0.6
	1.3nm,0.3s,baz=105,slow=11,SNR=5.8						
PMG				S	Sn	20 21 23.8	0.0
	2.2nm,0.3s,baz=47,slow=23,SNR=7.6						
WRA	**Warramunga Arr**	**21.21**	**228**	P	P	20 23 54.6	+0.3
	0.3nm,0.5s,baz=55,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**23.98**	**221**	P	P	20 24 23.4	+1.2
	0.3nm,0.6s,baz=54,slow=7.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**148.76**	**285**	PKPbc	PKPbc	20 38 53.2	-1.1
	1.2nm,0.5s,baz=59,slow=2.3,SNR=13						

*ISCJB **17** 20:29:46.1±1.1, 38.11N±0.04×26.59E±0.06, h6^{km}±8^{km}, Error ellipse: s-maj=8.0km s-min=6.4km az=170.8*
*CSEM **17** 20:29:46.7±0.3, 38.16N×26.63E, h8^{km}, MD3.0, Error ellipse: s-maj=9.2km s-min=6.5km az=91.0*
*DDA **17** 20:29:46.9, 38.12N×26.57E, h4^{km}±1^{km}, Md3.0*
*ATH **17** 20:29:46.0, 38.12N×26.61E, h33^{km}±4^{km}, MD2.9/3*
ISC 17 20:29:46.5±0.9**, 38.14N**±0.04×**26.55E**±0.06**, h13**^{km}±5^{km}**, n8,** σ**0^{s}56**/15**, 3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.22**	**9**	*i* P	**Pg**	**20 29 51.3**	**0.0**
URLA				*i* S	**Sg**	**20 29 54.9**	**+0.3**
SMG	**Samos**	**0.49**	**153**	⇓*i*PB	**Pb**	**20 29 56.2**	**-0.7**
SMG				*e*SB	**Sg**	**20 30 03.4**	**+0.8**
KDAG	**Bornova**	**0.62**	**65**	*i* P	**Pg**	**20 29 57.7**	**-0.9**
KDAG				*i* S	**Sg**	**20 30 06.3**	**-0.4**
PRK	**Paraskevi**	**1.12**	**349**	⇓*i*PN	**Pb**	**20 30 07.8**	**0.0**
PRK				*e*SN	**Sn**	**20 30 23.3**	**+0.1**
PRK	**Paraskevi**	**1.12**	**349**	⇓*e*Pb	**Pb**	**20 30 07.8**	**0.0**
PRK				*e*Sb	**Sn**	**20 30 23.3**	**+0.1**
AKHS	**Akhisar**	**1.23**	**53**	*i* P	**Pn**	**20 30 09.3**	**-0.1**
AKHS				*i* S	**Sb**	**20 30 25.8**	**+0.4**
APE	**Apeiranthos**	**1.35**	**217**	*e*PN	**Pn**	**20 30 10.6**	**-0.4**
MANT	**Manisa**	**1.61**	**77**	*i* P	**Pn**	**20 30 15.9**	**+1.3**
MANT				*i* S	**Sn**	**20 30 35.1**	**-0.2**

IDC 17 21:12:31.9±9.3**, 7.38S**×**130.43E, h150**^{km}±97^{km}**, mb3.1**/1**, mb1 3.8**/5**, mb1mx3.4**/15**, mbtmp3.6**/5**, Error ellipse: s-maj=85.7km s-min=26.1km az=37.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**7.25**	**247**	P	Pn	21 14 16.4	+1.0
	2.9nm,0.3s,baz=104,slow=8.9,SNR=17						
BATI				S	Sn	21 15 36.5	0.0
	6.7nm,0.3s,baz=105,slow=18,SNR=8.2						
FITZ	**Fitzroy Crossi**	**11.63**	**203**	*e*P	Pn	21 15 12.9	-0.6
	12nm,0.4s						
FITZ				*e*S	Sn	21 17 16.8	-5.3
FITZ	**Fitzroy Crossi**	**11.63**	**203**	P	Pn	21 15 13.0	-0.4
	2.6nm,0.3s,baz=30,slow=11,SNR=54						
FITZ				S	Sn	21 17 19.0	-3.1
	1.4nm,0.3s,baz=310,slow=22,SNR=7.6						
WRA	**Warramunga Arr**	**13.05**	**163**	P	Pn	21 15 30.4	-1.4
	1.5nm,0.3s,baz=337,slow=14,SNR=64						
WRA				S	Sn	21 17 52.4	-3.9
	1.8nm,0.3s,baz=335,slow=22,SNR=10						
WB2	**Warramunga Arr**	**13.06**	**163**	*e*P	Pn	21 15 30.3	-1.6
WB2				*e*S	Sn	21 17 50.3	-6.1
ASAR	**Alice Springs**	**16.54**	**169**	P	Pn	21 16 16.9	+1.7
	1.1nm,0.3s,baz=339,slow=9.3,SNR=66						
ASAR				S	S	21 19 14.8	-4.4
	0.2nm,0.3s,baz=358,slow=28,SNR=5.9						
MKAR	**Makanchi Array**	**68.77**	**327**	P	P	21 23 19.6	0.0
	0.2nm,0.4s,baz=117,slow=8.2,SNR=5.1						

*SZGRF **17** 21:27:12.7, 23.80S×176.53W, h33^{km}, South of Fiji Islands*
*ISCJB **17** 21:28:15.8±1.0, 20.93S±0.10×178.56W±0.09, h523^{km}±12^{km}, mb4.1/23, Error ellipse: s-maj=17.8km s-min=8.7km az=141.8*
*NEIC **17** 21:28:17.0±0.9, 20.94S×178.53W, h533^{km}±10^{km}, mb4.3/14, Error ellipse: s-maj=13.4km s-min=7.8km az=147.0*
*BJI **17** 21:28:17.0, 20.90S×178.50W, h533^{km}, mB4.9, mb4.8*
*IDC **17** 21:28:21.1±1.4, 21.08S×178.66W, h575^{km}±15^{km}, mb3.4/12, mb1 3.7/14, mb1mx3.6/18, mbtmp3.5/14, Error ellipse: s-maj=17.6km s-min=10.4km az=155.0*
ISC 17 21:28:16.2±0.9**, 20.92S**±0.10×**178.52W**±0.09**, h516**^{km}±11^{km}**, n113,** σ**0^{s}86**/36**, mb4.0**/23**, 7C-11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.48**	**44**	*e*P	**P**	**21 30 28.4**	**0.0**
	71nm,0.6s						
AFI				*e*S	**S**	**21 32 16.2**	**-0.7**
DZM	**Mont Dzumac**	**14.05**	**263**	P	**P**	**21 31 18.0**	**+1.8**
	1.1nm,0.3s,baz=83,slow=18,SNR=10						
URZ	**Urewera**	**17.70**	**191**	P	**P**	**21 31 51.9**	**-0.9**
	1.5nm,0.3s,baz=358,slow=6.9,SNR=3.9						
RPZ	**Rata Peaks**	**24.34**	**199**	P	**P**	**21 32 53.1**	**+0.4**
	5.9nm,0.6s,mb4.4,baz=333,slow=4.5,SNR=2.9						
CTA	**Charters Tower**	**32.97**	**265**	*e*P	**P**	**21 34 08.2**	**+0.1**
	3.2nm,0.4s,mb4.2						
CTA	**Charters Tower**	**32.97**	**265**	P	**P**	**21 34 08.7**	**+0.5**
	4.3nm,0.4s,mb4.3,baz=85,slow=12,SNR=8.5						
CTAO	**Charters Tower**	**32.97**	**265**	*e*P	**P**	**21 34 08.5**	**+0.3**
	6.5nm,0.6s,mb4.3						
PMG	**Port Moresby**	**34.97**	**284**	*e*P	**P**	**21 34 25.0**	**0.0**
	9.9nm,0.8s,mb4.4						
PMG	**Port Moresby**	**34.97**	**284**	P	**P**	**21 34 26.0**	**+1.0**
	8.6nm,0.7s,mb4.4,baz=146,slow=7.3,SNR=4.4						
STKA	**Stephens Creek**	**37.17**	**245**	*e*P	**P**	**21 34 43.1**	**0.0**
	2.1nm,0.4s,mb4.0						
STKA	**Stephens Creek**	**37.17**	**245**	P	**P**	**21 34 43.2**	**+0.2**
	3.3nm,0.6s,mb4.1,baz=91,slow=11,SNR=12						
STKA				PcP	PcP	21 36 49.0	-0.6
	1.6nm,0.7s,baz=162,slow=5.3,SNR=3.0						
ASAR	**Alice Springs**	**43.95**	**257**	P	**P**	**21 35 37.1**	**-0.2**
	3.1nm,0.4s,mb4.2,baz=94,slow=8.0,SNR=91						
ASAR				PcP	PcP	21 37 11.3	-0.7
	3.0nm,0.6s,baz=104,slow=3.8,SNR=21						
ASAR				ScP	ScP	21 40 13.3	-1.3
	0.4nm,0.6s,baz=100,slow=4.7,SNR=4.2						
ASAR				S	**S**	**21 41 26.8**	**-4.7**
	1.5nm,0.9s,baz=92,slow=14,SNR=12						
WB2	**Warramunga Arr**	**44.05**	**263**	*e*P	**P**	**21 35 36.9**	**-1.3**
WRA	**Warramunga Arr**	**44.07**	**263**	P	**P**	**21 35 37.5**	**-0.8**
	1.6nm,0.3s,mb4.1,baz=97,slow=7.2,SNR=183						
WRA				PcP	PcP	21 37 12.0	-0.5
	1.8nm,0.9s,baz=94,slow=4.2,SNR=7.3						
WRA				S	**S**	**21 41 27.2**	**-5.9**
	0.7nm,0.9s,baz=98,slow=13,SNR=5.4						
MBWA	**Marble Bar**	**57.29**	**258**	*e*P	**P**	**21 37 13.6**	**-1.2**
	8.3nm,0.9s,mb4.0						
QSPA	**South Pole Qui**	**69.16**	**180**	*e*P	**P**	**21 38 30.1**	**+0.1**
	11nm,1.2s,mb4.2						
MJAR	**Matsushiro Arr**	**70.26**	**324**	P	**P**	**21 38 37.1**	**-0.1**
	2.6nm,0.8s,mb3.8,baz=151,slow=6.2,SNR=9.2						
KSRS	**Korea Array**	**76.88**	**319**	P	**P**	**21 39 15.9**	**+1.0**
	0.9nm,0.6s,mb3.4,baz=132,slow=5.2,SNR=4.2						
NVAR	**Mina Array Bea**	**81.66**	**44**	P	**P**	**21 39 41.3**	**+1.1**
	2.7nm,0.8s,mb3.7,baz=211,slow=6.5,SNR=12						
TPH	**Tonopah**	**82.16**	**44**	*e*P	**P**	**21 39 41.9**	**-0.9**
	6.8nm,0.5s,mb4.3						
KULM	**Kulim**	**83.35**	**278**	*e*P	**P**	**21 39 48.8**	**-0.6**
MCK	**McKinley**	**87.48**	**13**	*e*P	**P**	**21 40 07.1**	**-1.0**
	12nm,1.0s,mb4.5						
TXAR	**Lajitas Array**	**87.68**	**58**	P	**P**	**21 40 11.0**	**+1.1**
	1.4nm,0.8s,mb3.7,baz=216,slow=6.1,SNR=16						
ANMO	**Albuquerque**	**88.04**	**51**	*e*P	**P**	**21 40 11.9**	**+0.5**
	1.9nm,1.0s,mb3.8						
MCMT	**McKenzie Canyo**	**88.58**	**40**	*e*P	**P**	**21 40 14.5**	**+0.8**
COLA	**College**	**88.71**	**13**	*e*P	**P**	**21 40 12.4**	**-1.4**
	8.1nm,1.3s,mb4.4						
HIA	**Hailar**	**88.75**	**325**	P	**P**	**21 40 14.2**	**-0.1**
	2.9nm,0.7s,mb4.2						
BILL	**Bilibino**	**89.40**	**354**	*e*P	**P**	**21 40 16.7**	**-0.2**
	3.0nm,0.7s,mb4.2						
PDAR	**Pinedale Array**	**89.59**	**43**	P	**P**	**21 40 18.6**	**+0.1**
	2.5nm,0.7s,mb4.2,baz=211,slow=3.2,SNR=21						
SDCO	**Great Sand Dun**	**89.99**	**49**	P	**P**	**21 40 21.4**	**+1.0**
	1.1nm,0.8s,mb3.7						
CD2	**Chengdu**	**90.61**	**303**	*e*P	**P**	**21 40 23.1**	**-0.3**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SONM	**Songino Array**	**95.75**	**319**	P	**P**	**21 40 49.6**	**+3.1**
	comp=Z,0.1nm,0.5s,mb3.3,baz=116,slow=6.6,SNR=2.7						
YKA	**Yellowknife Ar**	**97.09**	**25**	P	**P**	**21 40 51.6**	**-0.6**
	comp=Z,0.2nm,0.6s,mb3.5,baz=243,slow=4.7,SNR=4.8						
MKAR	**Makanchi Array**	**111.13**	**313**	PKiKP	PKiKP	21 45 48.8	-2.0
	comp=Z,0.5nm,0.4s,baz=78,slow=1.6,SNR=7.4						
ARCES	**ARCESS Array B**	**129.24**	**349**	PKP	PKPdf	21 46 23.4	-1.4
	comp=Z,2.1nm,0.5s,baz=351,slow=1.6,SNR=15						
FINES	**FINESS Array B**	**136.03**	**343**	PKP	PKPdf	21 46 29.2	-8.5
FINES				PKP	PKPdf	21 46 36.4	-1.4
FINES				SKPbc	SKPbc	21 49 15.8	-5.4
FINES	**FINESS Array B**	**136.03**	**343**	PKhKP		21 46 29.2	
	comp=Z,1.6nm,0.8s,baz=46,slow=5.5,SNR=5.1						
FINES				PKP	PKPdf	21 46 36.4	-1.4
	comp=Z,1.2nm,0.7s,baz=62,slow=3.6,SNR=7.1						
FINES				SKPbc	SKPbc	21 49 15.8	-5.4
	comp=Z,1.1nm,0.7s,baz=75,slow=2.2,SNR=3.7						
NB2	**NORSAR Subarra**	**139.33**	**353**	PKP	PKPdf	21 46 36.0	-7.9
	comp=Z,0.1nm,0.5s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.33**	**353**	PKhKP		21 46 36.2	
	comp=Z,1.2nm,0.6s,baz=9.3,slow=2.3,SNR=4.2						
NOA				PKP	PKPdf	21 46 44.9	+1.0
	comp=Z,0.6nm,0.6s,baz=19,slow=3.9,SNR=2.8						
HFS	**Hagfors**	**139.87**	**351**	PKhKP		21 46 36.3	
	comp=Z,2.1nm,0.4s,baz=58,slow=3.9,SNR=19						
AKASG	**Malin Array Be**	**143.14**	**330**	PKP	PKPdf	21 46 47.3	-3.7
	comp=Z,13nm,0.5s,baz=42,slow=4.2,SNR=139						
MALT	**Malatya**	**143.79**	**307**	⇓P	PKPdf	21 46 51.8	-0.7
MALT	**Malatya**	**143.79**	**307**	⇓*i*P	PKPdf	21 46 51.8	-0.7
EKA	**Eskdalemuir Ar**	**145.46**	**5**	PKPbc	PKPbc	21 46 55.1	-0.9
	comp=Z,3.0nm,0.7s,baz=7.2,slow=2.6,SNR=6.4						
BSEG	**Bad Segeberg**	**146.35**	**351**	*e*PKPbc	PKPbc	21 46 58.3	-0.3
BRTR	**Keskin Array B**	**146.75**	**312**	PKPbc	PKPbc	21 46 59.1	-1.1
	comp=Z,4.2nm,0.7s,baz=123,slow=4.8,SNR=22						
BRTR				SKPbc	SKPbc	21 49 43.1	-6.0
	comp=Z,0.7nm,0.9s,baz=1.9,slow=3.7,SNR=3.9						
ANTO	**Ankara**	**147.28**	**312**	⇑P	PKPbc	21 47 00.6	-1.1
ANTO	**Ankara**	**147.28**	**312**	⇑*i*P	PKPbc	21 47 00.6	-1.0
KOLS	**Kolonicke sedl**	**147.48**	**334**	*e*PKP	PKPdf	21 46 59.1	+0.7
STHS	**Stebnicka Huta**	**147.50**	**336**	*e*PKP	PKPbc	21 46 59.8	-2.0
STHS				*e*	PKPab	21 47 06.3	+0.6
STHS	**Stebnicka Huta**	**147.50**	**336**	*e*PKP	PKPbc	21 46 59.8	-2.0
STHS				*e*		21 47 06.2	
VRI	**Vrincioaia**	**147.65**	**326**	⇑P	PKPbc	21 47 01.7	-0.7
VRI	**Vrincioaia**	**147.65**	**326**	⇑*i*P	PKPbc	21 47 01.7	-0.7
HARR	**Harsova**	**147.76**	**323**	⇓P	PKPbc	21 47 02.0	-0.7
HARR	**Harsova**	**147.76**	**323**	⇓*i*P	PKPbc	21 47 02.0	-0.7
CRVS	**Cervenica-Dubn**	**147.83**	**335**	*e*PKP	PKPbc	21 47 01.8	-0.9
CRVS				*e*	PKPab	21 47 06.9	-0.1

CRVS	Cervenica-Dubn	147.83	335	ePKP	PKPbc	21 47 01.8	-0.9
CRVS				e	PKPab	21 47 07.0	0.0
TRPA	Tarpa	147.99	333	⇓iP	PKPbc	21 47 02.7	-0.5
UPC	Upice	148.32	342	ePKPbc	PKPbc	21 47 02.6	-1.3
UPC				ePKPab	PKPab	21 47 08.8	-0.2
CLL	Collm	148.35	346	⇓iPKP	PKPbc	21 47 03.3	-0.7
CLL				i PKP	PKPab	21 47 08.4	-0.7
CLL	Collm	148.35	346	⇓iPKPbc	PKPbc	21 47 03.3	-0.7
	comp=Z,12nm,0.9s						
CLL				i PKPab	PKPab	21 47 08.4	-0.7
	comp=Z,8.0nm,0.7s						
CLL	Collm	148.35	346	ePKPbc	PKPbc	21 47 03.3	-0.7
CLZ	Clausthal	148.36	349	ePKPbc	PKPbc	21 47 03.8	-0.2
DPC	Dobruska-Polom	148.37	342	ePKPbc	PKPbc	21 47 03.8	-0.2
DPC				ePKPab	PKPab	21 47 09.6	+0.4
BRG	Berggiesshubel	148.54	345	ePKPbc	PKPbc	21 47 04.1	-0.3
BRG	Berggiesshubel	148.54	345	eP	PKPbc	21 47 03.7	-0.7
	comp=Z,5.7nm,0.9s						
BRG				e	PKPab	21 47 09.4	-0.4
	comp=Z,5.0nm,0.8s						
KECS	Kecovo	148.55	335	ePKP	PKPbc	21 47 04.2	-0.3
KECS				e	PKPab	21 47 09.7	-0.3
FBE	Freiberg	148.63	346	ePKPbc	PKPbc	21 47 04.2	-0.5
PVCC	Panska Ves	148.69	344	ePKPbc	PKPbc	21 47 04.1	-0.7
VYHS	Vyhne	149.16	337	ePKP	PKPbc	21 47 05.7	-0.3
VYHS				i	PKPab	21 47 12.8	+0.3
PRU	Pruhonice	149.19	343	ePKP	PKPbc	21 47 05.5	-0.6
VRAC	Vranov	149.21	341	⇓P	PKPbc	21 47 05.3	-0.9
VRAC	Vranov	149.21	341	PKPbc	PKPbc	21 47 05.4	-0.8
	comp=Z,5.0nm,1.1s,baz=38,slow=5.9,SNR=5.0						
VRAC	Vranov	149.21	341	⇓iP	PKPbc	21 47 05.3	-0.8
KOLL	Kolacno	149.24	338	ePKP	PKPbc	21 47 05.8	-0.4
MOX	Moxa	149.27	347	eP	PKPbc	21 47 05.1	-1.1
MOX	Moxa	149.27	347	ePKPbc	PKPbc	21 47 05.0	-1.2
TANN	Tannenbergstha	149.31	346	ePKPbc	PKPbc	21 47 06.0	-0.3
WERD	Werda	149.31	346	ePKPbc	PKPbc	21 47 06.0	-0.3
GUNZ	Gunzen	149.39	346	ePKPbc	PKPbc	21 47 06.4	-0.1
WERN	Wernitzgruen	149.45	346	ePKPbc	PKPbc	21 47 06.5	-0.2
NKC	Novy Kostel	149.48	346	ePKP	PKPbc	21 47 06.2	-0.5
NKC				e	PKPab	21 47 13.6	-0.2
NKC	Novy Kostel	149.48	346	ePKPbc	PKPbc	21 47 06.2	-0.5
NKC				ePKPab	PKPab	21 47 13.6	-0.2
MANZ	Manzenberg	149.79	346	ePKPbc	PKPbc	21 47 06.9	-0.6
GZR	Gura Zlata	149.95	329	⇑iP	PKPbc	21 47 06.6	-1.4
ROTZ	Rotzenmuhle	149.97	346	ePKPbc	PKPbc	21 47 07.4	-0.5
KHC	Kasperske Hory	150.23	344	ePKP	PKPbc	21 47 08.0	-0.5
KHC				e	PKPab	21 47 16.9	0.0
KHC	Kasperske Hory	150.23	344	ePKPbc	PKPbc	21 47 08.0	-0.5
KHC				ePKPab	PKPab	21 47 16.9	0.0
TNS	Taunus Mts	150.24	351	ePKPbc	PKPbc	21 47 07.6	-0.9
GRA1	Grafenberg Arr	150.26	347	ePKPbc	PKPbc	21 47 08.0	-0.6
GRF	Grafenberg Arr	150.26	347	ePKPbc	PKPbc	21 47 08.0	-0.6
GEC2	GERESS Array S	150.46	344	ePKPbc	PKPbc	21 47 08.6	-0.5
GERES	GERESS Array B	150.46	344	PKPbc	PKPbc	21 47 08.1	-1.0
	comp=Z,2.9nm,0.6s,baz=18,slow=1.7,SNR=18						
GIVF	Givet	150.75	356	ePKP1	PKPbc	21 47 08.8	-0.9
	comp=Z,23nm,0.8s						
BAIF	Baives	150.84	356	ePKP1	PKPbc	21 47 09.1	-0.8
	comp=Z,21nm,1.0s						
PKSM	Moragy	151.13	335	⇓P	PKPbc	21 47 09.3	-1.4
PKSM	Moragy	151.13	335	⇓iP	PKPbc	21 47 09.3	-1.4
FUR	Furstenfeldbru	151.69	346	ePKPbc	PKPbc	21 47 11.0	-0.9
VTS	Vitosha	151.72	325	⇑P	PKPbc	21 47 11.5	-0.7
VTS	Vitosha	151.72	325	⇑iP	PKPbc	21 47 11.5	-0.7
FLN	La Foliniere	152.17	3	ePKP1	PKPbc	21 47 11.4	-1.5
CDF	Champ du Feu	152.17	352	ePKP1	PKPbc	21 47 11.9	-1.1
	comp=Z,3.9nm,0.6s						
LDF	La Druitiere	152.35	2	ePKP1	PKPbc	21 47 11.9	-1.5
GRR	Gorron	152.53	3	ePKP1	PKPbc	21 47 12.4	-1.3
	comp=Z,6.9nm,0.7s						
SGMF	Saint Gilles	152.53	6	ePKP1	PKPbc	21 47 12.1	-1.7
HINF	Hinteralfeld	152.81	352	ePKP1	PKPbc	21 47 12.9	-1.5
DAVOX	Davos/Dischmat	153.31	347	PKPbc	PKPbc	21 47 15.0	-0.4
	comp=Z,3.5nm,0.6s,baz=210,slow=2.5,SNR=10						
DAVOX				PKPab	PKPab	21 47 30.5	+0.5
	comp=Z,2.9nm,0.7s,baz=327,slow=7.2,SNR=4.3						
LOR	Lormes	153.64	356	ePKP1	PKPbc	21 47 14.9	-1.3
CABF	La Chapelle	154.09	353	ePKP1	PKPbc	21 47 17.1	-0.1
SMF	Signal de Mont	154.26	356	ePKP1	PKPbc	21 47 17.1	-0.4
ESDC	Sonseca Array	160.73	13	PKPab	PKPab	21 48 01.8	-0.5
	comp=Z,0.2nm,0.6s,baz=8.6,slow=3.6,SNR=5.1						
DBIC	Dimbokro	164.56	156	PKP	PKPdf	21 47 19.4	-2.1
	comp=Z,1.4nm,0.9s,baz=228,slow=4.7,SNR=3.1						
TORD	Torodi Ar. Bea	172.27	182	PKP	PKPdf	21 47 23.9	-2.4
	comp=Z,1.5nm,0.9s,baz=191,slow=1.5,SNR=7.0						
TORD				PKPab	PKPab	21 48 52.2	-1.6
	comp=Z,0.7nm,1.0s,baz=186,slow=2.5,SNR=3.6						

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*ISCJB **17** 21:39:00.9±0.6, 26.6N±0.1×44.66W±0.09, h10km, mb4.3/17, MS3.6/7, Error ellipse: s-maj=17.6km s-min=11.4km az=177.1*

*IDC **17** 21:39:00.7±1.0, 26.49N×44.69W, h0km, mb4.0/10, mb1 4.2/10, mb1mx3.9/22, mbtmp4.0/10, MS3.6/7, Ms1 3.6/7, ms1mx3.2/30, Error ellipse: s-maj=26.9km s-min=20.2km az=167.0*

*NEIC **17** 21:39:02.5±0.5, 26.53N×44.64W, h10km, mb4.6/8, Error ellipse: s-maj=14.9km s-min=9.7km az=175.0*

ISC 17 21:39:02.8±0.6, 26.6N±0.1×44.65W±0.09, h10km, n31, σ0.80/25, mb4.3/17, MS3.6/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	21.57	251	P	P	21 43 54.7	+2.0
	33nm,1.1s,mb4.7						
TKL	Tuckaleechee C	34.51	295	LR	LR	21 57 14.4	
	comp=Z,93nm,21.2s,MS3.5,baz=230,slow=32						
MDT	Midelt	35.17	70	LR	LR	21 57 01.4	
	comp=Z,86nm,20.5s,MS3.5,baz=329,slow=31						
TEIG	Tepich	40.39	270	LR	LR	22 01 00.5	
	comp=Z,73nm,21.0s,MS3.5,baz=360,slow=33						
DBIC	Dimbokro	42.70	110	LR	LR	22 01 51.1	
	comp=Z,69nm,19.2s,MS3.6,baz=200,slow=32						
TOA0	Torodi Ar. Sit	45.35	98	eP	P	21 47 21.2	-0.2
TORD	Torodi Ar. Bea	45.35	98	P	P	21 47 21.4	-0.1
	1.6nm,0.9s,mb3.8,baz=311,slow=7.5,SNR=5.1						
TORD				LR	LR	22 05 57.8	
	comp=Z,99nm,19.1s,MS3.8,baz=320,slow=36						
ULM	Lac du Bonnet	45.48	315	P	P	21 47 22.0	-0.1
	1.9nm,0.9s,mb3.9,baz=146,slow=7.3,SNR=3.4						
WMOK	Wichita Mounta	46.80	294	P	P	21 47 32.4	-0.3
	3.0nm,1.0s,mb4.2						
DAVOX	Davos/Dischmat	47.13	50	LR	LR	22 03 41.7	
	comp=Z,63nm,19.0s,MS3.6,baz=326,slow=31						
LPAZ	La Paz	48.33	211	eP	P	21 47 43.4	-1.3
	4.9nm,1.1s,mb4.5						
LPAZ	La Paz	48.33	211	P	P	21 47 44.0	-0.7
	3.5nm,1.1s,mb4.3,baz=33,slow=9.0,SNR=6.9						
NOA	NORSAR Array B	50.71	31	P	P	21 48 03.5	+1.2
	2.3nm,0.9s,mb4.1,baz=253,slow=7.3,SNR=3.1						
TXAR	Lajitas Array	51.73	288	P	P	21 48 10.3	-0.2
	0.4nm,0.9s,baz=98,slow=5.5,SNR=3.1						
RLMT	Red Lodge	54.13	308	P	P	21 48 28.9	+1.0
	16nm,1.6s,mb4.7						
RES	Resolute Bay	54.47	345	eP	P	21 48 30.6	+0.6
	297nm,1.3s						
PDAR	Pinedale Array	54.50	305	P	P	21 48 30.8	0.0
	0.7nm,0.6s,mb3.9,baz=93,slow=9.4,SNR=4.9						
YKA	Yellowknife Ar	57.55	329	P	P	21 48 51.6	-0.6
	1.8nm,1.0s,mb4.1,baz=93,slow=7.6,SNR=16						
FINES	FINESS Array B	57.84	32	P	P	21 48 54.2	-0.1
FINES	FINESS Array B	57.84	32	P	P	21 48 54.2	-0.1
	3.7nm,0.8s,mb4.4,baz=219,slow=4.9,SNR=5.8						
ARCES	ARCESS Array B	58.44	23	P	P	21 48 58.5	+0.2
	2.0nm,0.6s,mb4.3,baz=258,slow=6.1,SNR=13						
AKASG	Malin Array Be	59.90	45	P	P	21 49 08.2	-0.6
	0.6nm,0.5s,mb3.9,baz=272,slow=6.4,SNR=7.3						
ANTO	Ankara	64.28	56	eP	P	21 49 39.6	+1.2
	3.5nm,0.6s,mb4.6						
INK	Inuvik	65.19	336	eP	P	21 49 42.7	-1.1
	243nm,1.5s,mb6.0						
DAWY	Dawson	68.47	332	P	P	21 50 04.6	-0.2
MALT	Malatya	68.92	57	P	P	21 50 08.8	+0.7
MCK	McKinley	72.53	333	P	P	21 50 28.3	-1.4
	5.5nm,1.2s,mb4.4						
TIXI	Tiksi	81.94	2	eP	P	21 51 22.5	+0.3
	6.0nm,1.1s,mb4.4						
BRVK	Borovoye	82.71	33	P	P	21 51 26.8	+0.2
	2.8nm,1.0s,mb4.2						
KMBO	Kilima Mbogo	83.25	95	LR	LR	22 27 01.6	
	comp=Z,61nm,18.6s,MS4.0,baz=9.9,slow=35						
EKS2	Erkin-Say	90.80	40	P	P	21 52 05.2	-1.2

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*NEIC **17** 21:56:17.4±2.8, 7.37S×128.67E, h95km±28km, mb3.8/2, Error ellipse: s-maj=31.7km s-min=14.0km az=51.0*

*ISCJB **17** 21:56:20.6±2.3, 7.5S±0.1×128.7E±0.1, h152km±23km, mb3.8/5, Error ellipse: s-maj=23.4km s-min=10.1km az=138.6*

*IDC **17** 21:56:21.0±4.3, 7.45S×128.66E, h131km±41km, mb3.7/4, mb1 3.8/8, mb1mx3.6/16, mbtmp3.7/8, Error ellipse: s-maj=35.9km s-min=17.7km az=55.0*

ISC 17 21:56:25.5±2.1, 7.9S±0.1×128.6E±0.1, h194km±21km, n14, σ0.54/20, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Kupang	5.37	244	P	Pn	21 57 44.2	-0.3
	12nm,0.3s,baz=101,slow=5.2,SNR=37						
BATI				S	Sn	21 58 47.0	+0.2
	14nm,0.3s,baz=91,slow=18,SNR=9.9						
FITZ	Fitzroy Crossi	10.58	195	eP	Pn	21 58 52.5	+0.2
	4.4nm,0.3s						
FITZ				eS	Sn	22 00 44.4	-5.9
FITZ	Fitzroy Crossi	10.58	195	P	Pn	21 58 52.7	+0.4
	1.4nm,0.3s,baz=33,slow=10,SNR=31						
FITZ				S	Sn	22 00 46.2	-4.0
	2.9nm,0.3s,baz=86,slow=21,SNR=8.1						
WRA	Warramunga Arr	13.26	156	P	Pn	21 59 26.6	+0.1
	0.7nm,0.3s,baz=341,slow=12,SNR=47						
WRA				S	Sn	22 01 48.8	-5.6
	2.7nm,0.3s,baz=325,slow=24,SNR=14						
WB2	Warramunga Arr	13.27	156	eP	Pn	21 59 26.3	-0.2
WB2				eS	Sn	22 01 43.2	-11
ASAR	Alice Springs	16.54	163	P	Pn	22 00 11.2	+4.5
	1.4nm,0.3s,baz=337,slow=9.8,SNR=173						
ASAR				S	S	22 03 08.2	-0.7
	0.9nm,0.3s,baz=329,slow=18,SNR=7.4						
KSM	Kuching	20.42	296	eP	P	22 00 46.8	-1.2
STKA	Stephens Creek	26.81	155	eP	P	22 01 52.8	+5.0
	1.1nm,0.5s,mb3.7						
STKA	Stephens Creek	26.81	155	P	P	22 01 52.6	+4.8
	1.5nm,0.5s,mb3.9,baz=332,slow=9.4,SNR=6.0						
NWAO	Narrogin (SRO)	27.07	201	P	P	22 01 54.6	+4.6
	4.5nm,0.9s,mb4.1,baz=52,slow=12,SNR=3.6						
SONM	Songino Array	58.80	343	P	P	22 06 03.4	+0.1
	0.4nm,0.7s,mb3.2,baz=165,slow=6.8,SNR=3.8						
MK31	Makanchi Array	68.16	328	eP	P	22 07 04.9	+0.3
MKAR	Makanchi Array	68.16	328	P	P	22 07 05.2	+0.6
	1.0nm,0.5s,mb3.7,baz=122,slow=8.2,SNR=16						
KURK	Kurchatov	72.50	329	P	P	22 07 30.7	-0.2
	1.4nm,0.5s,mb3.9						

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*NEIC **17** 22:08:34.0, 36.10S×178.67E, h208km, mb4.7/3, After WEL.*

WEL 17 22:08:33.6±0.5, 36.06S×178.56E, h208km±4km, ML4.1/9, Error ellipse: s-maj=12.0km s-min=6.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.51	188	P	Pn	22 09 08.3	+0.3
MXZ				S	Sn	22 09 35.1	+0.1
MXZ	Matakaoa Point	1.51	188	PN	Pn	22 09 08.1	+0.1
MXZ				SN	Sn	22 09 35.1	+0.1
PUZ	Puketiti	2.02	187	P	Pn	22 09 13.6	+0.8
PUZ				S	Sn	22 09 42.6	-1.0
PUZ	Puketiti	2.02	187	PN	Pn	22 09 13.3	+0.5
PUZ				SN	Sn	22 09 42.6	-1.0
MWZ	Matawai	2.41	200	P	Pn	22 09 17.8	+0.9
MWZ				S	Sn	22 09 50.8	-0.2
MWZ	Matawai	2.41	200	PN	Pn	22 09 17.5	+0.6
MWZ				SN	Sn	22 09 50.8	-0.2
URZ	Urewera	2.48	207	eP	Pn	22 09 17.6	0.0
URZ	Urewera	2.48	207	PN	Pn	22 09 17.6	0.0
URZ				SN	Sn	22 09 52.3	0.0
KNZ	Kokohu	3.04	193	P	Pn	22 09 24.0	+0.1
KNZ	Kokohu	3.04	193	PN	Pn	22 09 24.0	+0.1
BKZ	Black Stump Fm	3.51	207	eP	Pn	22 09 29.8	+0.3
BKZ	Black Stump Fm	3.51	207	ePN	Pn	22 09 29.8	+0.3
MOVZ	Moawhango	4.01	213	P	Pn	22 09 34.8	-0.9
MOVZ	Moawhango	4.01	213	PN	Pn	22 09 34.8	-0.9
PXZ	Pawanui	4.18	198	PN	Pn	22 09 37.2	-0.6
PXZ				SN	Sn	22 10 28.4	-0.1
TSZ	Takapari Road	4.49	206	P	Pn	22 09 40.5	-1.1
TSZ	Takapari Road	4.49	206	PN	Pn	22 09 40.5	-1.1
BFZ	Birch Farm	4.96	201	eP	Pn	22 09 47.3	-0.2
BFZ	Birch Farm	4.96	201	PN	Pn	22 09 47.3	-0.2
TIWZ	Tintock	5.15	203	PN	Pn	22 09 48.7	-1.3
TIWZ				SN	Sn	22 10 48.4	-2.1
MRZ	Mangatainoka R	5.16	206	P	Pn	22 09 48.5	-1.5
MRZ	Mangatainoka R	5.16	206	PN	Pn	22 09 48.5	-1.5
KIW	Kapiti Island	5.58	210	P	Pn	22 09 53.1	-2.4
KIW	Kapiti Island	5.58	210	PN	Pn	22 09 53.1	-2.4
MTW	Mount Morrison	5.62	204	P	Pn	22 09 53.6	-2.4
MTW	Mount Morrison	5.62	204	PN	Pn	22 09 53.6	-2.3
CAW	Cannon Point	5.73	207	P	Pn	22 09 55.0	-2.4
CAW	Cannon Point	5.73	207	PN	Pn	22 09 55.0	-2.4
TRWZ	Traveller	5.78	202	PN	Pn	22 09 55.7	-2.3
MSWZ	Moikau Station	5.94	205	P	Pn	22 09 57.4	-2.6
MSWZ	Moikau Station	5.94	205	PN	Pn	22 09 57.4	-2.6
MRW	Makara Radio	5.98	209	P	Pn	22 09 57.9	-2.6
MRW	Makara Radio	5.98	209	PN	Pn	22 09 57.9	-2.6
TUWZ	Tuamarina	6.46	213	PN	Pn	22 10 03.8	-3.0
BSWZ	Blackbirch Sta	6.72	211	P	Pn	22 10 07.7	-2.4
BSWZ	Blackbirch Sta	6.72	211	PN	Pn	22 10 07.7	-2.4
KHZ	Kahutara	7.45	210	eP	Pn	22 10 16.8	-2.7
KHZ	Kahutara	7.45	210	PN	Pn	22 10 16.8	-2.7
AFI	Afiamalu	23.70	24	P	P	22 13 20.8	-5.9
	9.3nm,0.5s						
CTAO	Charters Tower	32.46	291	P	P	22 14 48.8	+4.4
	67nm,1.6s						
WB2	Warramunga Arr	41.83	280	eP	P	22 16 01.1	-2.1
NWAO	Narrogin (SRO)	49.91	255	eP	P	22 17 12.8	+6.7
	31nm,1.4s						

IDC 17 22:35:13.7±21.0, 48.20S×137.81E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/12, mbtmp3.6/3, ML4.0/1, Error ellipse: s-maj=370.7km s-min=134.8km az=146.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	16.55	11	Pn	Pn	22 39 05.8	-1.3
	0.3nm,0.3s,baz=166,slow=4.2,SNR=4.1						
ASAR	Alice Springs	24.68	351	P	P	22 40 36.4	+0.2
	0.3nm,0.6s,baz=170,slow=9.1,SNR=6.2						
WRA	Warramunga Arr	28.33	353	P	P	22 41 09.4	+0.3
	1.3nm,0.8s,baz=176,slow=8.0,SNR=14						

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*BJI **17** 22:43:06.2, 4.60N×78.50W, h10km, mB6.1, Ms5.8, Msz5.5*

*CRAAG **17** 22:43:07.9, 4.71N×78.50W, Mb6.0*

*ISCJB **17** 22:43:08.5±0.1, 4.62N±0.02×78.53W±0.01, h10km, mb5.9/248, MS5.3/208, Error ellipse: s-maj=3.1km s-min=1.7km az=20.5*

*MOS **17** 22:43:08.6±0.9, 4.70N×78.57W, h10km, mb6.1/113, MS5.2/72, Error ellipse: s-maj=5.4km s-min=3.8km az=65.4*

*NEIC **17** 22:43:09.6±0.1, 4.55N×78.54W, h10km, mb6.0/182, ME5.8, MS5.3/166, MW5.9, Error ellipse: s-maj=3.8km s-min=2.3km az=198.0 Broadband fault plane solution: P waves. NP1: ϕ_s195.00000°, δ50.00000°, λ-130.00000°. NP2: ϕ_s68.00000°, δ54.00000°, λ-53.00000°. Principal axes: T Plg2.0000°, Azm132.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm38.0000°; Moment Tensor Solution. s69 Moment tensor: Scale 10^{17} Nm; M_{rr}-6.81; $M_{\theta\theta}$1.05; $M_{\phi\phi}$5.76; $M_{r\theta}$-3.81; $M_{\theta\phi}$5.26; $M_{\phi r}$1.47; Best double couple: $M_0$9.20000×10^{17} NP1: ϕ_s186.00000°, δ49.00000°, λ-131.00000°. NP2: ϕ_s60.00000°, δ55.00000°, λ-52.00000°. Principal axes: T 9.2200, Plg3.0000°, Azm124.0000°; N -0.0200, Plg30.0000°, Azm216.0000°; P -9.1900, Plg60.0000°, Azm28.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Buenaventura, Cali, Narino, Quindio, Risaralda and Valle del Cauca, Colombia.

*GCMT **17** 22:43:09.6±0.1, 4.61N×78.53W, h13km, MW6.0/110, Moment Tensor Solution. s100,c193; s110,c381; Duration: 2.5s Moment tensor: Scale 10^{18}Nm; M_{rr}-1.12±.01; $M_{\theta\theta}$0.45±.01; $M_{\phi\phi}$0.67±.01; $M_{r\theta}$0.03±.02; $M_{\theta\phi}$0.65±.01; $M_{\phi r}$0.51±.03; Best double couple: $M_0$1.27800×10^{18} NP1: ϕ_s55.00000°, δ37.00000°, λ-67.00000°. NP2: ϕ_s206.00000°, δ56.00000°, λ-107.00000°. Principal axes: T 1.2900, Plg10.0000°, Azm308.0000°; N -0.0260, Plg14.0000°, Azm216.0000°; P -1.2660, Plg73.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **17** 22:43:11.5±2.6, 4.64N×78.45W, h24km±16km, mb5.3/17, mb1 5.4/24, mb1mx5.4/26, mbtmp5.3/24, ML5.0/6, MS5.3/20, Ms1 5.2/20, ms1mx5.0/33 Error ellipse: s-maj=15.8km s-min=9.0km az=55.0*

*CASC **17** 22:43:11.3±2.1, 4.96N×78.47W, h5km, MD4.6, mb6.0(NEIC)*

*BGS **17** 22:43:18.3, 5.96N×77.65W, h10km, mb6.0, MS5.1*

*SZGRF **17** 22:43:20.2, 5.21N×77.02W, h33km, mb6.2, MS5.3, Near west coast of Colombia*

ISC 17 22:43:10.1±0.1, 4.61N±0.02×78.48W±0.01, h10km, (h10km±2.0km:pP-P), n1418, σ0.97/1223, mb5.9/248, MS5.3/208, 178C-300D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AZU	Azuero	3.63	331	eP	Pn	22 44 02.5	-4.0
UPD1	Univ de Panama	3.94	7	eP	Pn	22 44 07.7	-3.1
UPD1				eS	Sn	22 44 51.6	-5.5
ROSC	El Rosal	4.14	86	Pn	Pn	22 44 16.6	+3.1
	282nm,0.3s,baz=285,slow=3.3,SNR=326						
ROSC				Lg		22 45 12.4	
	95nm,0.3s,baz=266,slow=23,SNR=10						
ACH	Altos	4.28	340	eP	Px	22 44 04.0	
UPIG		4.48	346	⇑iP	Pn	22 44 14.8	-3.4
BCIP	Isla Barro Col	4.73	343	ePn	Pn	22 44 19.6	-2.0
DVD	David	5.48	314	eP	Pn	22 44 30.0	-1.9
BARC	Barichara	5.65	69	⇑eP	Px	22 44 46.1	
CNI	Changuinola	6.24	320	eP	Pn	22 44 40.8	-1.5
BAR1		6.65	314	⇑eP	Pn	22 44 46.1	-1.9
BUS	Buena Vista	7.19	313	eP	Pn	22 44 56.8	+1.4
URSC	Urasca	7.39	315	eP	Pn	22 44 57.0	-1.2
QCR	Quepos	7.40	311	eP	Pn	22 44 58.2	-0.2
LCR2	La Lucha 2	7.49	313	eP	Pn	22 44 57.7	-1.8
LAJ	Bijagual	7.66	313	eP	Pn	22 45 05.8	+4.0
SJS	Escuela Geolog	7.66	314	eP	Pn	22 45 02.1	+0.3
PRS1	Puriscal	7.88	313	eP	Pn	22 45 03.2	-1.6
CGA2	Cerro Gallo 2	8.01	312	eP	Pn	22 45 06.8	+0.2
JCR	Jicaral	8.39	309	eP	Pn	22 45 12.4	+0.4
JTS	JuntasAbangare	8.55	312	ePn	Pn	22 45 13.1	-1.0
JTS	JuntasAbangare	8.55	312	⇑iP	Pn	22 45 14.3	+0.2
JTS	JuntasAbangare	8.55	312	Pn	Pn	22 45 11.8	-2.3
	8.0nm,0.3s,baz=120,slow=17,SNR=28						
JTS				LR	LR	22 48 22.4	
	comp=Z,49μm,19.1s,baz=122,slow=36						
SDV	Santo Domingo	8.87	61	ePn	Pn	22 45 19.1	+0.6
SDV	Santo Domingo	8.87	61	Pn	Pn	22 45 18.6	+0.1
	67nm,0.3s,baz=255,slow=12,SNR=167						
SDV				Sn	Sn	22 46 56.6	-2.0
	25nm,0.3s,baz=108,slow=19,SNR=3.3						
SDV				LR	LR	22 48 37.8	
	comp=Z,21μm,21.3s,baz=23,slow=37						
VCR	Vista de Mar	8.97	308	eP	Pn	22 45 20.6	+0.8
MADN	Villa Maderas	9.72	314	⇓eP	Pn	22 45 32.9	+2.8
SSNN	San Juan del S	9.87	313	⇓eP	Pn	22 45 35.0	+2.8
CONN	Concepcion	9.89	315	⇓eP	Pn	22 45 34.9	+2.4
APON	Apoyo	10.45	315	eP	Pn	22 45 42.2	+2.1
TICN	Ticuantepe	10.64	314	eP	Pn	22 45 46.3	+3.5
MGAN	Managua	10.73	315	eP	Pn	22 45 47.1	+3.1
TISN	Laguna Tiscapa	10.74	315	eP	Pn	22 45 47.6	+3.4
XAVN	Gruta Xavier	10.79	314	⇓eP	Pn	22 45 47.6	+2.8
HUEN		10.81	316	⇓eP	Pn	22 45 47.3	+2.2
COPN	Copaltepe	11.00	314	eP	Pn	22 45 50.0	+2.4
MOMJ	Momotombo	11.12	315	⇓eP	Pn	22 45 51.6	+2.3
TEL3	Telica 3	11.45	314	⇓eP	Pn	22 45 56.0	+2.2
TELN	Telica	11.46	314	eP	Pn	22 45 56.3	+2.4
ATAH	Atahualpa	11.53	180	Pn	Pn	22 45 57.5	+2.6
	16nm,0.3s,baz=2.1,slow=8.4,SNR=36						
ATAH				Sn	Sn	22 48 05.0	+1.0
	1.2nm,0.3s,baz=138,slow=18,SNR=2.5						
TGUH	Tegucigalpa,Un	12.78	318	ePn	Pn	22 46 15.0	+2.9
PAYG	Puerto Ayora	12.91	246	ePn	Pn	22 46 11.9	-2.0
PCJ	Portland Cotta	13.12	6	⇑eP	Pn	22 46 18.1	+1.5
STH	Stony Hill	13.48	7	eP	Pn	22 46 22.2	+0.5
CMJ	Castle Mountai	13.60	9	⇓eP	Pn	22 46 26.0	+2.7
BBJ	Bamboo Saint A	13.74	5	⇑eP	Pn	22 46 26.7	+1.6
PCRV	Puerto La Cruz	14.79	67	Pn	Pn	22 46 37.6	-2.0
	6.8nm,0.3s,baz=207,slow=6.2,SNR=21						
PCRV				Sn	Sn	22 49 18.1	-5.6
	0.7nm,0.3s,baz=229,slow=18,SNR=2.5						
LMGC	Las Mercedes	15.43	5	eP	Pn	22 46 44.2	-3.8
RCC	Rio Carpintero	15.53	10	eP	Pn	22 46 50.2	+0.8
RCC				eS	Sn	22 49 42.3	+0.7
	comp=N,5μm,17.7s						
RCC				e			
	comp=E,4μm,17.2s						
SDDR	Presa de Saban	15.92	26	ePn	Pn	22 46 55.7	+1.3
MASC	Masc	16.02	15	eP	Pn	22 46 58.8	+3.2
MASC				eS	Sn	22 50 06.0	+13
	comp=N,6.9nm,4.6s						
MASC				e			
	comp=E,11nm,9.1s						
MOAC	Moa	16.32	12	eP	Pn	22 47 04.6	+5.0
MOAC				eS	Sn	22 49 58.5	-2.3
	comp=N,4μm,20.4s						
MOAC				e			
	comp=E,2μm,19.3s						
HLGC	Holguin	16.35	8	eP	Pn	22 47 01.4	+1.4
NNA	Nana	16.57	174	ePn	Pn	22 47 01.1	-1.6
NNA	Nana	16.57	174	Pn	Pn	22 47 01.4	-1.3
	comp=E,4.7nm,0.3s,baz=344,slow=11,SNR=45						
NNA				Sn	Sn	22 50 15.7	+8.9
	comp=E,0.9nm,0.3s,baz=108,slow=20,SNR=3.4						
MPR	Mayaguez	17.48	38	ePn	Pn	22 47 13.9	-0.3
TCE	Chacachacare	17.64	69	eP	Pn	22 47 17.4	+1.2
CCIG	Comitan	17.73	312	i P	Pn	22 47 15.3	-2.0
TPP	Pointe-a-Pierr	17.80	70	eP	Pn	22 47 17.1	-1.1
TRN	Trinidad (W)	17.95	69	eP	Pn	22 47 20.1	+0.1
SJG	San Juan	18.04	41	ePn	Pn	22 47 18.7	-2.4
SJG	San Juan	18.04	41	P	Pn	22 47 18.7	-2.4
SJG				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SJG	San Juan	18.04	41	P	Pn	22 47 18.7	-2.5
	comp=Z,4.7nm,0.3s,baz=212,slow=7.8,SNR=10						
CPD	Cerro la Pandu	18.14	42	ePn	Pn	22 47 20.5	-1.8
TBH	Brigand Hill	18.21	70	eP	Pn	22 47 17.6	-5.6
TEIG	Tepich	18.22	329	ePn	Pn	22 47 23.9	+0.5
	comp=Z,1μm,1.4s						
TEIG	Tepich	18.22	329	P	Pn	22 47 23.9	+0.6
	comp=Z,2.2nm,0.3s,baz=141,slow=10,SNR=45						
TEIG				S	Sn	22 50 51.3	+4.4
	comp=Z,0.3nm,0.3s,baz=256,slow=12,SNR=2.6						
TEIG				LR	LR	22 54 47.5	
	comp=Z,12μm,18.2s,baz=148,slow=38						
GRGR	Grenville	18.23	65	eP	Pn	22 47 22.8	-0.8
GRW	Mount Saint Ca	18.24	65	eP	Pn	22 47 24.1	+0.5
CBYP	Canovanas	18.35	41	ePn	Pn	22 47 26.4	+1.4
MTP	Monte Pirata	18.43	42	ePn	Pn	22 47 25.4	-0.5
SOR	Soroa	18.60	347	eP	Pn	22 47 27.9	-0.1
SOR				eS	Sn	22 50 52.0	-4.1
	comp=N,0.5nm,0.5s						
SOR				e			
	comp=E,0.5nm,0.5s						
SOR				e			
	comp=E,16nm,10.8s						
TPR	Prospect	18.70	68	eP	Pn	22 47 21.6	-7.7
FCV	Fort Charlotte	19.01	62	eP	Pn	22 47 33.4	+0.4
SVB	Belmont	19.05	62	eP	Pn	22 47 33.2	-0.4
SVV	Soufriere Volc	19.11	62	eP	Pn	22 47 35.7	+1.5
SSV	Crater Summit	19.13	62	eP	Pn	22 47 34.1	-0.3
BHS	Barnard House	19.17	62	eP	Pn	22 47 36.9	+1.9
SLB	Belfond	19.48	61	eP	Pn	22 47 40.5	+1.9
BIM	Bigot	19.77	59	eP	Pn	22 47 40.2	-1.9
FDF	Fort de France	19.80	58	eP	Pn	22 47 38.7	-3.8
DSHT	Scott's Head	19.85	57	eP	Pn	22 47 44.3	+1.2
MDN	Morne-Daniel	19.89	56	eP	Pn	22 47 43.0	-0.5
DBCT	Belle View Cho	19.90	57	eP	Pn	22 47 42.9	-0.8
MVM	Montagne Vaucl	19.93	59	eP	Pn	22 47 44.3	+0.2
SKI	Saint Kitts	19.94	49	e	Pn	22 47 43.7	-0.4
TBG	Guadaloupe-3	19.96	55	⇑iP	Pn	22 47 44.7	+0.4
HMG	Houelmont	19.98	54	eP	Pn	22 47 45.4	+0.8
LZG	Guadaloupe-1	20.01	54	⇑eP	P	22 47 45.9	+2.7

SCG **Saint Claude** 20.02 54⇑ *eP* **P** **22 47 46.0 +2.7**
DOG **Dongo Capester** 20.07 54⇑ *iP* **P** **22 47 46.7 +2.8**
DWS **Wesley** 20.08 56 *eP* **P** **22 47 40.1 -3.9**
BCG **Bois Riant Cap** 20.10 54⇑ *iP* **P** **22 47 47.5 +3.3**
STMA **St. Maarten, A** 20.11 47 *eP* **P** **22 47 45.4 +1.1**
MGG **Marie-Galante** 20.26 55⇑ *iP* **P** **22 47 47.7 +1.7**
CMIG **Matias Romero** 20.31 309 *eP* **P** **22 47 41.5 -5.0**
CMIG S **S** **22 51 27.5 -6.8**
CMIG Matias Romero 20.31 309 P **P** **22 47 45.6 -0.9**
comp=E,129nm,1.1s,baz=97,slow=8.1,SNR=30
CMIG S **S** **22 51 27.5 -6.8**
comp=E,13nm,1.2s,baz=75,slow=4.0,SNR=2.1
CMIG LR LR 22 55 35.6
comp=E,12µm,20.6s,MS5.2,baz=115,slow=37
BPA Boggy Peak 20.45 52 *eP* **P** **22 47 48.1 +0.1**
BBGH Gun Hill 20.51 64 PFAKE 22 48 00.0 +11
BBGH LR LR
comp=Z,16µm,20.0s,MS5.4
SFG Saint Francois 20.54 54⇑ *eP* **P** **22 47 51.3 +2.4**
HUIG Huatulco 20.57 304 *iP* **P** **22 47 49.2 -0.1**
DEG La Desirade 20.68 54⇑ *iP* **P** **22 47 51.6 +1.1**
CPB Codrington 20.82 50 *eP* **P** **22 47 51.8 -0.2**
VHO Vista Hermosa 21.76 306 *iP* **P** **22 48 03.5 +1.3**
ARE Arequipa 22.04 162 *eP* **P** **22 48 07.0 +1.9**
PNIG Pinotepa 22.56 303 *eP* **P** **22 48 11.1 +0.3**
LPAZ La Paz 23.15 154 *eP* **P** **22 48 16.4 -0.5**
comp=Z,94nm,0.8s,mb5.3
LPAZ LR LR 22 58 14.3
LPAZ La Paz 23.15 154 P **P** **22 48 16.7 -0.2**
LPAZ S **S** **22 52 24.0 -4.4**
LPAZ pmax pmax
comp=Z,67nm,0.7s
LPAZ smax
comp=N,7.0nm,0.9s
LPAZ MLR MLR
comp=Z,13µm,19.2s
LPAZ La Paz 23.15 154 P **P** **22 48 16.7 -0.1**
comp=Z,67nm,0.7s,mb5.2,baz=338,slow=11,SNR=106
LPAZ S **S** **22 52 24.0 -4.4**
comp=Z,7.2nm,0.8s,baz=60,slow=20,SNR=1.9
LPAZ LR LR 22 58 14.3
comp=Z,13µm,19.2s,MS5.4,baz=177,slow=39
DWPF Disney 23.54 353 *eP* **P** **22 48 22.4 +1.5**
DWPF LR LR
comp=Z,7µm,22.0s,MS5.1
PPM Popocatepetl 24.36 308 *iP* **P** **22 48 30.8 +2.3**
YAIG Yautepec 24.59 307 *iP* **P** **22 48 32.5 +1.8**
CAIG El Cayaco 24.68 302 *iP* **P** **22 48 31.5 +0.1**
PLIG Platanillo 24.70 305 *iP* **P** **22 48 32.1 +0.4**
IIO Organos 24.72 309 *eP* **P** **22 48 34.2 +2.4**
PBVM Pinon 24.92 308 *iP* **P** **22 48 34.8 +1.1**
PTVM Pico Tres Padr 25.03 308 *iP* **P** **22 48 31.9 -2.7**
ZIIG Zihuatanejo 25.95 302 *iP* **P** **22 48 43.8 +0.7**
MOIG Morelia 26.73 306 *iP* **P** **22 48 50.4 +0.4**
SIV San Ignacio 26.75 140 P **P** **22 48 49.1 -1.1**
comp=Z,44nm,0.8s,mb5.1,baz=324,slow=10,SNR=112
SIV S **S** **22 53 25.4 -0.8**
comp=Z,11nm,0.7s,baz=90,slow=20,SNR=2.1
BRAL Brewton 27.48 344 PFAKE 22 49 10.0 +13
BRAL LR LR
comp=Z,7µm,21.0s,MS5.2
NHSC New Hope 28.40 357 *eP* **P** **22 49 06.4 +1.5**
comp=Z,339nm,1.3s,mb5.8
NHSC LR LR
comp=Z,5µm,19.0s,MS5.1
CEN1 Los Morros 28.98 164 *eP* **P** **22 49 12.0 +2.0**
GOGA Godfrey 29.03 351 PFAKE 22 49 20.0 +10
GOGA LR LR
comp=Z,10µm,21.0s,MS5.4
KVTX Kingsville 29.37 323 *eP* **P** **22 49 14.4 +0.8**
KVTX LR LR
comp=Z,9µm,21.0s,MS5.4
LRAL Lakeview Retre 29.38 345 *eP* **P** **22 49 13.6 0.0**
LRAL LR LR
comp=Z,10µm,21.0s,MS5.4
ZAIG Zacatecas 29.47 310 *iP* **P** **22 49 16.2 +1.7**
LHS Liberty Hill 29.80 356 *eP* **P** **22 49 17.6 +0.4**
CJM Chamela 29.83 302 *iP* **P** **22 49 18.7 +0.9**
HKT Hockley 30.07 329 *eP* **P** **22 49 18.1 -1.7**
comp=Z,171nm,1.6s,mb5.5
HKT LR LR
comp=Z,4µm,20.0s,MS5.1
HKT Hockley 30.07 329 *eP* **P** **22 49 18.1 -1.7**
HKT pmax pmax
comp=Z,171nm,1.6s,mb5.5
HKT MLR MLR
comp=Z,4µm,20.0s,MS5.1
BBSR BB Station 30.48 23 *eP* **P** **22 49 23.9 +0.5**
comp=Z,36nm,0.6s,mb5.3
BBSR LR LR
comp=Z,3µm,21.0s,MS4.8
CNNC Cliffs of the 30.49 1 PFAKE 22 49 40.0 +17
CNNC LR LR
comp=Z,3µm,19.0s,MS5.0
NATX Nacogdoches 30.99 333 *eP* **P** **22 49 28.0 +0.2**
comp=Z,148nm,1.4s,mb5.6
NATX LR LR
comp=Z,4µm,20.0s,MS5.1
CPCT Cooper Cave 31.20 350 *eP* **P** **22 49 30.2 +0.6**
SWET Sewanee 31.23 348 *eP* **P** **22 49 29.8 -0.1**
OXF Oxford 31.44 343 *eP* **P** **22 49 31.9 +0.2**
comp=Z,192nm,1.3s,mb5.8
OXF LR LR
comp=Z,5µm,19.0s,MS5.2
OXF Oxford 31.44 343 *eP* **P** **22 49 31.9 +0.2**
OXF pmax pmax
comp=Z,192nm,1.3s,mb5.8
OXF MLR MLR
comp=Z,5µm,19.0s,MS5.2
PLAL Pickwick Lake 31.50 345 *eP* **P** **22 49 31.0 -1.3**
comp=Z,218nm,1.7s,mb5.7
PLAL LR LR
comp=Z,6µm,22.0s,MS5.3
TZTN Tazewell 32.12 352 *eP* **P** **22 49 38.2 +0.5**
comp=Z,152nm,1.1s,mb5.7
TZTN LR LR
comp=Z,4µm,19.0s,MS5.2
MET Memphis--Engin 32.16 342 *eP* **P** **22 49 41.2 +3.1**
BLA Blacksburg 32.50 357 *eP* **P** **22 49 41.8 +0.8**
comp=Z,552nm,1.5s,mb6.2
BLA LR LR
comp=Z,5µm,19.0s,MS5.2
BLA Blacksburg 32.50 357 *eP* **P** **22 49 41.8 +0.8**
BLA pmax pmax
comp=Z,552nm,1.5s,mb6.2
BLA MLR MLR
comp=Z,5µm,19.0s,MS5.2
WVT Waverly 32.53 346 *eP* **P** **22 49 40.1 -1.3**
WVT LR LR
comp=Z,6µm,21.0s,MS5.2
UALR University of 32.65 339 *eP* **P** **22 49 41.1 -1.4**
comp=Z,130nm,1.0s,mb5.8
JCT Junction City 32.66 324 *eP* **P** **22 49 41.4 -1.2**
comp=Z,116nm,1.1s,mb5.7
JCT LR LR
comp=Z,4µm,22.0s,MS5.0
JCT Junction City 32.66 324 *eP* **P** **22 49 41.4 -1.2**
JCT pmax pmax
comp=Z,116nm,1.1s,mb5.7
JCT MLR MLR
comp=Z,4µm,22.0s,MS5.0
MAIG Mazatlaan 32.70 307 *eP* **P** **22 49 45.1 +2.1**
MIAR Mount Ida 32.92 337 *eP* **P** **22 49 43.4 -1.3**
MIAR LR LR
comp=Z,3µm,20.0s,MS5.0
GNAR Gosnell 32.97 343 *eP* **P** **22 49 44.6 -0.6**
UTMT University of 33.00 344 *eP* **P** **22 49 44.8 -0.6**
GLAT Glass 33.04 344 *eP* **P** **22 49 45.0 -0.8**
CBN Corbin 33.46 2 *eP* **P** **22 49 50.5 +1.1**
comp=Z,174nm,1.3s,mb5.8
CBN LR LR
comp=Z,5µm,21.0s,MS5.2
WCI Wyandotte Cave 34.22 349 *eP* **P** **22 49 55.1 -0.9**
WCI LR LR
comp=Z,6µm,19.0s,MS5.3
USIN University of 34.24 347 *eP* **P** **22 49 55.3 -0.9**
LCO Las Campanas 34.25 168 *eP* **P** **22 49 56.3 -0.1**
comp=Z,88nm,1.3s,mb5.5
LCO LR LR
comp=Z,4µm,20.0s,MS5.1
LTX Lajitas 34.26 319 *eP* **P** **22 49 56.9 +0.4**
LTX LR LR
comp=Z,3µm,21.0s,MS5.0
TXAR Lajitas Array 34.26 319 P **P** **22 49 56.8 +0.3**
TXAR PcP PcP 22 52 33.1 +0.1
TXAR S **S** **22 55 22.3 -1.3**
TXAR LR LR 23 04 17.9
TXAR Lajitas Array 34.26 319 P **P** **22 49 56.8 +0.3**
TXAR 22 52 33.2
TXAR S **S** **22 55 22.3 -1.3**
TXAR pmax pmax
comp=Z,60nm,1.1s
TXAR pmax pmax
comp=Z,13nm,0.9s
TXAR smax
comp=N,1.0nm,1.1s
TXAR MLR MLR
comp=Z,3µm,20.5s
TXAR Lajitas Array 34.26 319 P **P** **22 49 56.8 +0.3**
comp=Z,60nm,1.1s,mb5.4,baz=141,slow=8.2,SNR=105
TXAR PcP PcP 22 52 33.1 +0.1
comp=Z,13nm,0.9s,baz=117,slow=7.2,SNR=6.3
TXAR S **S** **22 55 22.3 -1.3**
comp=Z,0.9nm,1.1s,baz=133,slow=26,SNR=2.4
TXAR LR LR 23 04 17.9
comp=Z,3µm,20.5s,MS5.0,baz=340,slow=37
SIUC Southern Illin 34.38 345 *eP* **P** **22 49 56.4 -1.1**
comp=Z,219nm,1.4s,mb5.9
MCWV Mont Chateau 34.91 358 *eP* **P** **22 50 03.1 +1.1**
comp=Z,446nm,1.7s,mb6.1
MCWV LR LR
comp=Z,8µm,22.0s,MS5.4
BLO Bloomington 35.17 349 *eP* **P** **22 50 03.5 -0.7**
comp=Z,197nm,1.2s,mb5.9
BLO Bloomington 35.17 349 *eP* **P** **22 50 03.5 -0.8**
BLO pmax pmax
comp=Z,197nm,1.2s,mb5.9
TLL Tololo Astrono 35.35 168 *iP* **P** **22 50 07.2 +1.3**
WMOK Wichita Mounta 35.40 330 *eP* **P** **22 50 04.1 -2.2**
WMOK LR LR
comp=Z,6µm,22.0s,MS5.3
SLM Saint Louis 35.52 344 *eP* **P** **22 50 06.0 -1.3**
comp=Z,267nm,1.6s,mb5.9
SLM Saint Louis 35.52 344 *eP* **P** **22 50 06.0 -1.3**
SLM pmax pmax
comp=Z,267nm,1.6s,mb5.9
ACSO Alum Creek Sta 35.70 354 *eP* **P** **22 50 08.8 +0.1**
comp=Z,174nm,1.2s,mb5.9
ACSO LR LR
comp=Z,4µm,19.0s,MS5.2
SSPA Standing Stone 35.87 1 PFAKE 22 50 20.0 +10
SSPA LR LR
comp=Z,2µm,19.0s,MS4.9
LPIG La Paz 36.26 305 *iP* **P** **22 50 13.6 -0.3**
LPIG La Paz 36.26 305 LR LR 23 04 44.3
comp=Z,5µm,19.7s,MS5.3,baz=105,slow=36
CMCH Combarbala 36.29 169 *iP* **P** **22 50 13.3 -0.6**
PAL Palisades 36.47 6 *eP* **P** **22 50 14.9 -0.4**
GDL2 Guadalupe Moun 36.62 322 *eP* **P** **22 50 16.3 -0.5**
ALLY Alegheny Colle 36.91 358 *eP* **P** **22 50 19.8 +0.7**
MNTX Cornudas Mount 36.92 320 *eP* **P** **22 50 18.9 -0.5**
comp=Z,170nm,1.1s,mb5.8
MNTX LR LR
comp=Z,4µm,22.0s,MS5.2
AMTX Amarillo 37.00 327 *eP* **P** **22 50 18.7 -1.3**
AMTX LR LR
comp=Z,5µm,22.0s,MS5.2
HDIL Hopedale 37.09 346 PFAKE 22 50 30.0 +9.3
HDIL LR LR
comp=Z,4µm,20.0s,MS5.2
CFAA Coronel Fontan 37.31 166 P **P** **22 50 23.2 +0.6**
CFAA PcP PcP 22 52 41.5 -0.4
CFAA Coronel Fontan 37.31 166 P **P** **22 50 23.2 +0.6**
comp=Z,6.5nm,0.9s,mb4.4,baz=341,slow=8.1,SNR=38
CFAA PcP PcP 22 52 41.5 -0.4
comp=Z,0.7nm,0.7s,baz=11,slow=5.2,SNR=2.1
ERPA Erie 37.37 358 *eP* **P** **22 50 23.6 +0.6**
ERPA LR LR
comp=Z,3µm,20.0s,MS5.1
BINY Binghamton 37.50 3 *eP* **P** **22 50 23.8 -0.3**
comp=Z,431nm,1.4s,mb6.1
BINY LR LR
comp=Z,5µm,22.0s,MS5.3
AAM Ann Arbor 37.82 354 *eP* **P** **22 50 26.2 -0.6**
comp=Z,466nm,1.8s,mb5.9
AAM LR LR
comp=Z,5µm,19.0s,MS5.3
AAM Ann Arbor 37.82 354 *eP* **P** **22 50 26.2 -0.6**
AAM pmax pmax
comp=Z,466nm,1.8s,mb5.9
AAM MLR MLR
comp=Z,5µm,19.0s,MS5.3
KSU1 Kansas State U 38.07 337 *eP* **P** **22 50 27.6 -1.4**
comp=Z,268nm,1.1s,mb5.9
KSU1 LR LR
comp=Z,3µm,20.0s,MS5.0
WES Weston 38.15 9 *eP* **P** **22 50 29.9 +0.3**
comp=Z,385nm,1.5s,mb5.9
WES LR LR
comp=Z,3µm,20.0s,MS5.1
WES Weston 38.15 9 *eP* **P** **22 50 30.0 +0.4**
WES pmax pmax
comp=Z,385nm,1.5s,mb5.9
WES MLR MLR
comp=Z,3µm,20.0s,MS5.1
HRV Harvard--Oak R 38.24 8 *eP* **P** **22 50 31.8 +1.4**
HRV LR LR
comp=Z,3µm,19.0s,MS5.1
FCH Farellones 38.52 169 *iP* **P** **22 50 34.4 +1.6**
ACCN Adirondack Com 38.85 6 *eP* **P** **22 50 34.4 -1.1**
CBKS Cedar Bluff 39.15 333 *eP* **P** **22 50 37.4 -0.6**
CBKS LR LR
comp=Z,4µm,21.0s,MS5.2
319A Douglas 39.32 316⇓ **P** **22 50 40.9 +1.3**
baz=39
BNM Barren Site 39.33 322 *eP* **P** **22 50 40.0 +0.3**
BNM *eP*P PP 22 52 13.1 +3.1
NCB Newcomb 39.38 5 *eP* **P** **22 50 39.4 -0.6**
comp=Z,366nm,1.4s,mb5.9
NCB LR LR
comp=Z,3µm,21.0s,MS5.1
LPM Los Pinos Moun 39.45 322 *eP* **P** **22 50 40.8 +0.2**
Y22C IRIS PASSCAL I 39.47 322⇑ **P** **22 50 42.4 +1.6**
baz=40
JFWS Jewell Farm 39.55 346 *eP* **P** **22 50 39.2 -2.2**
JFWS LR LR
comp=Z,8µm,22.0s,MS5.5
LENM Lemitar 39.56 322 *eP* **P** **22 50 42.5 +0.9**
ANMO Albuquerque 39.77 323 *eP* **P** **22 50 43.7 +0.4**
ANMO LR LR
comp=Z,3µm,22.0s,MS5.0
ANMO Albuquerque 39.77 323⇑ *eP* **P** **22 50 43.2 -0.1**
LAZ Ladron 39.82 322 *eP* **P** **22 50 44.4 +0.7**
LAZ *eP*P PP 22 52 17.5 +2.2
318A Bisbee 39.85 316⇑ **P** **22 50 45.0 +1.0**
baz=40
LBNH Lisbon 39.89 7 PFAKE 22 51 00.0 +16
LBNH LR LR
comp=Z,3µm,21.0s,MS5.1
LONY Lake Ozonia 40.00 4 *eP* **P** **22 50 45.8 +0.7**
comp=Z,317nm,1.4s,mb5.9
LONY LR LR
comp=Z,3µm,21.0s,MS5.2
218A Dragoon 40.20 316⇓ **P** **22 50 48.0 +1.1**
baz=40
FRNY Flat Rock 40.29 5 *eP* **P** **22 50 48.7 +1.2**
MSNY Massena 40.35 4 *eP* **P** **22 50 48.3 +0.3**
GLMI Grayling 40.42 353 *eP* **P** **22 50 47.3 -1.2**
comp=Z,95nm,0.9s,mb5.5
GLMI LR LR
comp=Z,4µm,19.0s,MS5.3
217A Green Valley 40.61 316⇑ **P** **22 50 51.2 +0.8**
baz=41
TUC Tucson 40.90 316 *eP* **P** **22 50 52.6 -0.1**
TUC LR LR
comp=Z,5µm,19.0s,MS5.4
SDCO Great Sand Dun 41.19 327 *eP* **P** **22 50 55.8 +0.7**
SDCO LR LR
comp=Z,4µm,22.0s,MS5.3
216A Three Points, 41.19 315⇑ **P** **22 50 55.8 +0.7**
baz=41
PKME Peaks-Kenny Pk 41.28 10 PFAKE 22 51 10.0 +14
PKME LR LR
comp=Z,3µm,20.0s,MS5.1
CCHI Chillan 41.43 172 *eP* **P** **22 50 57.0 0.0**
116A Eloy 41.68 316⇑ **P** **22 50 59.8 +0.6**
baz=42,SNR=19
115A Sonoran Desert 42.12 316⇓ **P** **22 51 03.6 +0.8**
baz=42,SNR=27
ECSD EROS,Sioux Fal 42.13 340 *eP* **P** **22 51 00.3 -2.3**
ECSD LR LR
comp=Z,3µm,22.0s,MS5.2
COWI Conover 42.36 349 *eP* **P** **22 51 02.9 -1.6**
COWI LR LR
comp=Z,6µm,21.0s,MS5.4
MVCO Mesa Verde 42.52 324 *eP* **P** **22 51 06.2 +0.3**
MVCO LR LR
comp=Z,4µm,20.0s,MS5.2
MVCO Mesa Verde 42.52 324⇑ **P** **22 51 06.3 +0.5**
baz=43
ISCO Idaho Springs 42.75 329 *eP* **P** **22 51 08.0 +0.2**
ISCO LR LR
comp=Z,5µm,22.0s,MS5.3
Z14A Wintersburg 42.99 316⇑ **P** **22 51 10.7 +0.8**
baz=43,SNR=49
X15A Humboldt 43.15 318⇓ **P** **22 51 12.0 +0.8**
baz=43,SNR=41
PV01 Paradox Valley 43.18 325 *eP* **P** **22 51 11.7 +0.4**
PV01 *eP*P PP 22 52 52.3 +0.7
WUAZ Wupatki 43.20 320 *eP* **P** **22 51 12.4 +0.9**
comp=Z,212nm,1.1s,mb5.8
WUAZ LR LR
comp=Z,4µm,20.0s,MS5.3
WUAZ Wupatki 43.20 320⇓ **P** **22 51 12.4 +0.9**
baz=43
Y14A Wickenburg 43.36 317⇑ **P** **22 51 13.3 +0.5**
baz=44,SNR=38
RPN Rapa Nui 43.41 222 PFAKE 22 51 20.0 +6.7
RPN LR LR
comp=Z,5µm,20.0s,MS5.5
RPN Rapa Nui 43.41 222 LR LR 23 04 23.4
comp=Z,5µm,21.1s,MS5.4,baz=53,slow=29
W15A Williams 43.58 319⇑ **P** **22 51 15.8 +1.3**
baz=44,SNR=37
X14A Yava 43.58 317⇓ **P** **22 51 15.5 +0.9**
baz=44,SNR=78
PV10 Paradox Valley 43.62 325 *eP* **P** **22 51 14.4 -0.4**
PV10 *eP*P PP 22 52 58.5 +2.2
RCBR Riachuelo 43.76 103 *eP* **P** **22 51 14.6 -1.7**
comp=Z,206nm,1.5s,mb5.6
RCBR LR LR
comp=Z,16µm,21.0s,MS5.9
PHWY Pilot Hill 43.80 330 *eP* **P** **22 51 16.2 0.0**
LPA La Plata 43.80 155 *ceP* **P** **22 51 15.0 -1.3**
LPA *es*P sP 22 51 19.4 -1.3
LPA *eP*P PP 22 52 57.0 -1.4
LPA *eP*P PP 22 53 02.0 +3.6
LPA *eP*CS PcS 22 56 54.0 -1.8
LPA *eS* **S** **22 57 45.0 -2.1**
LPA *es*S SS 23 01 17.0 +14
LPA *es*S SS 23 01 22.0 +19
LPA
comp=Z,13µm,21.0s
Y13A Salome 43.86 316⇑ **P** **22 51 18.0 +1.2**
baz=44,SNR=36
W14A Seligman 44.14 318⇓ **P** **22 51 20.0 +1.0**
baz=44,SNR=66
GLA Glamis 44.15 314⇑ **P** **22 51 19.7 +0.5**
baz=44,SNR=39
X13A Yucca 44.29 317⇓ **P** **22 51 20.7 +0.4**
baz=44,SNR=42
Y12C Blythe 44.30 315⇑ **P** **22 51 20.9 +0.4**
baz=44,SNR=29
PDMCI Parker Dam,Lak 44.34 316⇓ **P** **22 51 21.5 +0.8**
baz=44
EYMN Ely 44.60 348 *eP* **P** **22 51 20.5 -2.0**
comp=Z,179nm,1.4s,mb5.7
EYMN LR LR
comp=Z,7µm,21.0s,MS5.6
W13A Hualapai Mount 44.62 317⇓ **P** **22 51 23.9 +1.0**
baz=45,SNR=52
T15A Red Dirt Ranch 44.77 321⇓ **P** **22 51 24.8 +0.8**
baz=45
SWSC Sam W. Stewart 44.78 314⇓ **P** **22 51 24.8 +0.6**
baz=45,SNR=19
DVTC Desert V Tower 44.86 313⇑ **P** **22 51 25.4 +0.6**
baz=45,SNR=14
BC3 Big Chuckw Mtn 44.91 315⇑ **P** **22 51 25.7 +0.5**
baz=45,SNR=35
U14A Mt Trumbull 44.91 319⇓ **P** **22 51 25.9 +0.7**
baz=45
NEE2 Needles Airpor 44.93 317⇓ **P** **22 51 27.1 +1.7**
baz=45
IRM Iron Mountain 44.96 316 P **P** **22 51 26.2 +0.6**
baz=45,SNR=96
RWWY Rawlins 44.97 329 *eP* **P** **22 51 26.3 +0.7**
comp=Z,256nm,1.3s,mb5.9
TRQA Tornquist 45.13 162 *eP* **P** **22 51 26.4 -0.5**
comp=Z,144nm,1.4s,mb5.6
TRQA LR LR
comp=Z,6µm,20.0s,MS5.5
MONP Monument Peak 45.21 313⇓ **P** **22 51 28.9 +1.3**
baz=45
T14A Hurricane 45.24 320⇓ **P** **22 51 28.9 +1.1**
baz=45
RSSD Black Hills 45.33 334 PFAKE 22 51 40.0 +12
RSSD LR LR
comp=Z,3µm,19.0s,MS5.2
W12A Cal Nev Ari 45.40 317⇑ **P** **22 51 30.0 +0.9**
baz=46,SNR=16
U13A Pakoon Wash 45.42 319⇓ **P** **22 51 30.2 +0.9**
baz=46
BELC Belle Mtn. 45.48 315⇑ **P** **22 51 30.6 +0.9**
baz=46,SNR=66
TMUT Trail Mountain 45.49 324 *eP* **P** **22 51 30.1 +0.3**
MSU Marysvale 45.57 322 *eP* **P** **22 51 31.0 +0.6**
PFO Pinyon Flat Ob 45.60 314 *eP* **P** **22 51 30.7 0.0**
PFO LR LR
comp=Z,5µm,19.0s,MS5.5
PFO Pinyon Flat Ob 45.60 314⇑ **P** **22 51 31.3 +0.5**
baz=46,SNR=6.2
V12A Nelson 45.62 318⇑ **P** **22 51 31.5 +0.7**
baz=46,SNR=69
GMRC Granite Mounta 45.65 316 P **P** **22 51 31.9 +0.8**
baz=46,SNR=44
109C Camp Elliot, M 45.71 313⇓ **P** **22 51 32.8 +1.2**
baz=46,SNR=10.0
CCUT Cedar City 45.71 321 *eP* **P** **22 51 32.2 +0.7**
CCUT *e* 22 53 10.7
S14A Cedar City 45.71 321⇓ **P** **22 51 32.3 +0.8**
baz=46
T13A Saint George 45.74 320⇓ **P** **22 51 32.7 +0.9**
baz=46
U12A Valley of Fire 45.81 319⇓ **P** **22 51 32.8 +0.5**
baz=46
ARUT Antelope Range 45.90 321 *eP* **P** **22 51 32.9 -0.1**
ARUT *eP*P PP 22 53 21.3 +0.6
R14A James Farms, M 45.95 322⇑ **P** **22 51 33.9 +0.5**
baz=46
AGMN Agassiz Refuge 46.00 344 *eP* **P** **22 51 31.5 -2.2**
AGMN LR LR
comp=Z,3µm,21.0s,MS5.3
S13A Holt Ranch, En 46.04 320⇑ **P** **22 51 35.4 +1.3**
baz=46
V11A Goodsprings 46.07 317 P **P** **22 51 34.9 +0.5**
baz=46,SNR=41
T12A Moapa 46.10 319⇑ **P** **22 51 35.9 +1.3**
baz=46
MURC Murrieta 46.13 314⇓ **P** **22 51 35.7 +0.8**
baz=46,SNR=9.3
HEC Hector,Ludlow 46.15 316 P **P** **22 51 36.0 +0.9**
baz=46,SNR=21
TUQ Turquoise Mtn. 46.19 317⇑ **P** **22 51 35.7 +0.4**
baz=46,SNR=37
MPU Maple Canyon 46.21 324 *eP* **P** **22 51 35.8 +0.4**
MPU LR LR
comp=Z,7µm,22.0s,MS5.5
DAU Daniels Canyon 46.26 325 *eP* **P** **22 51 36.4 +0.6**
SHPR Sheep Range 46.27 318 *eP* **P** **22 51 36.5 +0.5**
BBRC Big Bear Sol-O 46.27 315⇑ **P** **22 51 37.9 +1.9**
baz=46
U11A Corn Creek 46.37 318⇓ **P** **22 51 37.9 +1.2**
baz=46,SNR=5.9
NLU North Lily Min 46.43 324 *eP* **P** **22 51 37.2 +0.1**
RRX Edison Barstow 46.64 315⇑ **P** **22 51 39.6 +0.7**
baz=47
SHOC Shoshone 46.68 317⇓ **P** **22 51 39.7 +0.5**
baz=47,SNR=7.1
S12A Delamar Landin 46.69 320⇑ **P** **22 51 40.6 +1.4**
baz=47
T11A Corn Creek, Al 46.72 319⇓ **P** **22 51 39.7 +0.2**
baz=47
CTU Camp Tracy 46.72 325 *eP* **P** **22 51 40.0 +0.6**
GSC Goldstone 46.73 316⇑ **P** **22 51 39.8 +0.3**
baz=47,SNR=47
BFSC Mount Baldy St 46.78 314⇓ **P** **22 51 40.4 +0.4**
baz=47,SNR=18
CIS Catalina Islan 46.91 313⇑ **P** **22 51 43.0 +1.9**

baz=47
NOQ North Oquirrh 46.91 325 eP P 22 51 40.5 -0.4
PDAR Pinedale Array 46.95 329 P P 22 51 40.5 -0.7
comp=Z,108nm,1.2s,mb5.7,baz=125,slow=10.0,SNR=84
PDAR LR LR 23 18 04.3
comp=Z,3µm,18.1s,MS5.2,baz=143,slow=45
BW06 Boulder Array 46.95 329 eP P 22 51 40.6 -0.5
BW06 LR LR
comp=Z,3µm,20.0s,MS5.2
R12A Pony Springs, 46.96 321 ⇑P P 22 51 42.2 +0.9
baz=47
Q13A Wheeler Ranch, 46.97 322 ⇓P P 22 51 42.2 +0.8
baz=47
U10A Ash Meadows, A 47.00 317 ⇑P P 22 51 42.7 +1.0
baz=47,SNR=18
DUG Dugway 47.02 324 eP P 22 51 42.1 +0.4
comp=Z,209nm,1.5s,mb5.8
DUG LR LR
comp=Z,7µm,19.0s,MS5.6
DUG Dugway 47.02 324 eP P 22 51 42.1 +0.3
DUG pmax pmax
comp=Z,209nm,1.5s,mb5.8
DUG MLR MLR
comp=Z,7µm,19.0s,MS5.6
DUG Dugway 47.02 324 ⇑P P 22 51 42.2 +0.5
baz=47
HWUT Hardware Ranch 47.23 326 eP P 22 51 43.0 -0.3
comp=Z,140nm,1.2s,mb5.8
HWUT LR LR
comp=Z,3µm,19.0s,MS5.3
TPNV Topopah Spring 47.24 318 eP P 22 51 44.2 +0.6
comp=Z,87nm,1.3s,mb5.5
TPNV LR LR
comp=Z,4µm,21.0s,MS5.3
TPNV Topopah Spring 47.24 318 eP P 22 51 44.2 +0.7
TPNV pmax pmax
comp=Z,87nm,1.3s,mb5.5
TPNV MLR MLR
comp=Z,4µm,21.0s,MS5.3
TPNV Topopah Spring 47.24 318 ⇑P P 22 51 44.1 +0.6
baz=47
DECC Green Verdugo 47.27 314 P P 22 51 45.0 +1.2
baz=47,SNR=10
P13A Bates Ranch, G 47.27 322 ⇑P P 22 51 44.7 +0.9
baz=47
N15A Stansbury Isla 47.30 325 ⇓P P 22 51 43.7 -0.2
baz=47
S11A Rachel 47.30 319 ⇑P P 22 51 45.4 +1.4
baz=47
EDW2 Edwards Air Fo 47.34 315 P P 22 51 44.5 +0.1
baz=47,SNR=49
FURC Furnace Creek, 47.39 317 ⇓P P 22 51 45.4 +0.7
baz=48,SNR=26
LRMC Laurel Mountai 47.43 316 P P 22 51 45.5 +0.4
baz=48,SNR=6.5
Q12A Willow Creek R 47.53 321 ⇓P P 22 51 46.4 +0.7
baz=48,SNR=39
SPUT South Promonto 47.53 325 eP P 22 51 45.7 0.0
R11A Troy Canyon, C 47.60 320 ⇓P P 22 51 46.9 +0.6
baz=48
TRCR Troy Canyon 47.60 320 eP P 22 51 46.8 +0.5
MPMC Manual Prospec 47.60 316 P P 22 51 46.5 +0.1
baz=48,SNR=46
BGU Big Grassy Mou 47.61 324 eP P 22 51 46.1 -0.2
BGU ePP PP 22 53 47.8 +10
M15A Larsen Ranch, 47.63 325 ⇑P P 22 51 46.1 -0.4
baz=48
N14A Grayback Hills 47.66 324 ⇑P P 22 51 46.6 -0.1
baz=48
O13A Hicks Ranch, I 47.67 323 ⇓P P 22 51 47.9 +1.1
baz=48
BLG Laguna Peak 47.73 313 ⇓P P 22 51 49.5 +2.1
baz=48
AHID Auburn Hatcher 47.76 328 eP P 22 51 47.5 0.0
comp=Z,131nm,1.1s,mb5.9
AHID LR LR
comp=Z,3µm,21.0s,MS5.2
DAC Darwin (Calif) 47.78 316 eP P 22 51 47.8 0.0
DAC LR LR
comp=Z,3µm,21.0s,MS5.2
ULM Lac du Bonnet 47.79 345 P P 22 51 45.2 -2.4
ULM S S 22 58 34.2 -10
ULM LR LR 23 10 10.4
ULM Lac du Bonnet 47.79 345 P P 22 51 45.2 -2.4
comp=Z,97nm,1.1s,mb5.8,baz=154,slow=7.8,SNR=128
ULM S S 22 58 34.2 -10
comp=Z,2.8nm,0.9s,baz=306,slow=8.7,SNR=2.2
ULM LR LR 23 10 10.4
comp=Z,3µm,21.2s,MS5.2,baz=154,slow=34
P12A McGill 47.83 322 P P 22 51 48.7 +0.6
baz=48,SNR=26
Q11A Duckwater 47.93 321 P P 22 51 49.3 +0.4
baz=48,SNR=75
S10A Tonopah Range, 48.01 319 ⇓P P 22 51 50.2 +0.7
baz=48
GRAC Grapevine Rang 48.02 317 P P 22 51 50.4 +0.8
baz=48,SNR=18
HVU Hansel Valley 48.02 325 eP P 22 51 49.4 -0.1
R10A Warm Springs 48.02 320 P P 22 51 50.7 +1.1
baz=48,SNR=46
REDW Red Top Meadow 48.04 328 eP P 22 51 49.5 -0.1
ARVC Arvin 48.06 314 P P 22 51 51.3 +1.3
baz=48,SNR=12
SNOW Snow King Moun 48.06 328 eP P 22 51 49.9 0.0
ISA Isabella 48.08 315 P P 22 51 50.9 +0.8
baz=48,SNR=17
LOHW Long Hollow 48.09 329 eP P 22 51 49.6 -0.4
M14A Sheep Mountain 48.17 325 ⇑P P 22 51 50.1 -0.6
baz=48
CWC Cottonwood Cre 48.20 316 ⇑P P 22 51 51.6 +0.5
baz=48,SNR=13
O12A Currie 48.22 323 P P 22 51 51.5 +0.5
baz=48,SNR=78
MOOW Moose Ponds 48.26 329 eP P 22 51 50.9 -0.4
comp=Z,127nm,1.0s,mb5.9
N13A Wendover, West 48.26 324 ⇑P P 22 51 51.8 +0.5
baz=48,SNR=13
LAO LASA Array 48.30 335 PFAKE 22 52 00.0 +8.4
LAO LR LR
comp=Z,3µm,19.0s,MS5.2
S09A Goldfield 48.31 318 ⇑P P 22 51 51.7 -0.2
baz=48,SNR=30
DCID1 Drake Creek 48.38 328 eP P 22 51 52.6 +0.3
Q10A Clear Creek Ra 48.39 320 ⇑P P 22 51 53.1 +0.7
baz=48
P11A Circle Ranch, 48.41 321 ⇓P P 22 51 53.5 +0.9
baz=48,SNR=6.5
FLWY Flagg Ranch 48.47 329 eP P 22 51 53.1 +0.2
R09A Tonopah 48.50 319 P P 22 51 53.7 +0.4
baz=49,SNR=110
RLMT Red Lodge 48.50 331 eP P 22 51 52.6 -0.6
RLMT LR LR
comp=Z,3µm,19.0s,MS5.2
TPH Tonopah 48.51 319 eP P 22 51 54.0 +0.7
comp=Z,100nm,1.3s,mb5.7
TPH LR LR
comp=Z,2µm,20.0s,MS5.2
TPH Tonopah 48.51 319 eP P 22 51 54.1 +0.8
TPH pmax pmax
comp=Z,100nm,1.3s,mb5.7
TPH MLR MLR
comp=Z,2µm,20.0s,MS5.2
M13A Montello 48.55 324 P P 22 51 53.6 0.0
baz=49,SNR=6.4
TIN Tinemaha 48.63 317 ⇓P P 22 51 55.5 +1.2
baz=49,SNR=9.1
PKM Peak Mountain 48.66 314 P P 22 51 55.4 +0.8
baz=49,SNR=23
LKWY Lake 48.66 330 eP P 22 51 55.2 +0.9
LKWY LR LR
comp=Z,6µm,22.0s,MS5.6
O11A Cowboy Ranch, 48.69 322 ⇓P P 22 51 55.0 +0.2
baz=49
K14A Jones Ranch, D 48.75 326 ⇑P P 22 51 54.3 -0.8
baz=49
N12A Clover Valley, 48.75 323 ⇓P P 22 51 54.8 -0.3
baz=49,SNR=13
YFT Old Faithful 48.80 329 eP P 22 51 57.0 +1.6
S08C White Mtn Res 48.82 318 ⇓P P 22 51 56.6 +0.8
baz=49,SNR=121
L13A Double Diamond 48.88 325 ⇓P P 22 51 55.9 -0.3
baz=49
P10A Eureka 48.89 321 ⇑P P 22 51 56.2 -0.1
baz=49,SNR=21
Q09A Carvers 48.90 320 ⇓P P 22 51 57.3 +0.9
baz=49
DGMT Dagmar 48.91 337 eP P 22 51 55.6 -0.7
DGMT LR LR
comp=Z,3µm,21.0s,MS5.2
RCTC Rector, Farmer 48.94 316 ⇑P P 22 51 55.8 -0.9
baz=49
HELL Mitchell Peak, 48.98 316 P P 22 51 57.2 +0.2
baz=49,SNR=51
MTUM Tungsten Hills 49.01 317 eP P 22 51 57.6 +0.4
YMR Madison River 49.02 329 eP P 22 51 57.5 +0.4
comp=Z,234nm,1.2s,mb6.1
YMR LR LR
comp=Z,3µm,20.0s,MS5.2
M12A Wells 49.02 324 P P 22 51 56.8 -0.5
baz=49,SNR=35
N11A Elko Archery C 49.15 323 ⇓P P 22 51 58.4 +0.2
baz=49
GCMT Greycliff 49.18 331 eP P 22 51 57.3 -1.1
R08A Mina 49.24 319 P P 22 51 59.7 +0.7
baz=49,SNR=122
P09A Austin 49.28 320 ⇓P P 22 52 00.3 +1.0
baz=49
O10A Cortez Mining, 49.30 322 P P 22 52 00.3 +0.8
baz=49,SNR=14
K13A Stover Farm, H 49.32 326 ⇑P P 22 51 59.0 -0.6
baz=50
MLAC Mammoth Lakes 49.34 317 ⇓P P 22 51 59.9 +0.1
baz=49
QLMT Earthquake Lak 49.37 329 eP P 22 52 00.7 +0.9
Q08A Gabbs 49.40 319 P P 22 52 00.4 +0.2
baz=50,SNR=63
NVAR Mina Array Bea 49.41 319 P P 22 52 00.7 +0.4
comp=Z,49nm,0.9s,mb5.5,baz=123,slow=7.7,SNR=131
KCC Kaiser Creek 49.51 317 ⇓P P 22 52 01.0 -0.1
baz=50,SNR=6.4
L12A House Creek Ra 49.54 324 ⇑P P 22 52 00.9 -0.3
baz=50
M11A Holland Ranch, 49.55 323 ⇓P P 22 52 01.3 0.0
baz=50,SNR=7.3
T06C Millerton Lake 49.62 316 ⇑P P 22 52 00.8 -1.1
baz=50,SNR=10
O09A Fish Creek Ran 49.66 321 P P 22 52 02.5 +0.4
baz=50,SNR=78
PKD Parkfield 49.68 315 ⇑P P 22 52 01.7 -0.7
baz=50
R07C Lee Vining 49.72 318 ⇓P P 22 52 03.4 +0.7
baz=50,SNR=45
V04C Ramage Ranch, 49.76 314 P P 22 52 04.6 +1.5
baz=50
K12A Draper Farm, C 49.78 325 ⇓P P 22 52 02.8 -0.2
baz=50
BMN Battle Mountai 49.84 321 eP P 22 52 03.8 +0.3
comp=Z,167nm,1.3s,mb5.9
BMN LR LR
comp=Z,5µm,19.0s,MS5.5
BMN Battle Mountai 49.84 321 eP P 22 52 03.8 +0.3
BMN pmax pmax
comp=Z,167nm,1.3s,mb5.9
BMN MLR MLR
comp=Z,5µm,19.0s,MS5.5
J13A Cove Ranch, Pi 49.86 326 ⇓P P 22 52 03.6 0.0
baz=50
P08A Dixie Valley 49.96 320 ⇓P P 22 52 05.0 +0.5
baz=50,SNR=14
Q07A Schurz 50.02 319 ⇓P P 22 52 05.2 +0.3
baz=50
BOZ Bozeman (W) 50.04 330 eP P 22 52 04.2 -0.7
comp=Z,134nm,1.2s,mb5.8
BOZ LR LR
comp=Z,3µm,22.0s,MS5.2
BOZ Bozeman (W) 50.04 330 eP P 22 52 04.2 -0.7
BOZ pmax pmax
comp=Z,134nm,1.2s,mb5.8
BOZ MLR MLR
comp=Z,3µm,22.0s,MS5.2
BOZ Bozeman (W) 50.04 330 ⇑P P 22 52 04.6 -0.4
baz=50
U04C Hernandez Rese 50.05 315 ⇑P P 22 52 05.2 0.0
baz=50
M10A I.L. Ranch, Tu 50.06 323 ⇓P P 22 52 04.9 -0.2
baz=50,SNR=7.1
MCMT McKenzie Canyo 50.09 328 eP P 22 52 05.6 +0.2
HLID Hailey 50.10 326 eP P 22 52 05.4 0.0
HLID LR LR
comp=Z,4µm,22.0s,MS5.4
HLID Hailey 50.10 326 ⇑P P 22 52 05.4 0.0
baz=50
G15A Dillon 50.14 329 P P 22 52 05.9 +0.2
baz=50,SNR=59
I13A Wildhorse Cree 50.16 327 ⇓P P 22 52 05.9 0.0
baz=50
WAKR Walker 50.20 318 eP P 22 52 06.9 +0.6
V03C Hunter Liggett 50.21 314 ⇑P P 22 52 07.2 +0.8
baz=50,SNR=5.8
S05C Merced 50.22 316 ⇑P P 22 52 06.4 -0.1
baz=50,SNR=19
R06C Coleville 50.22 318 P P 22 52 07.2 +0.7
baz=50,SNR=50
N09A Rock Creek Ran 50.27 322 ⇓P P 22 52 06.4 -0.3
baz=50,SNR=24
J12A Stokes Ranch, 50.28 325 ⇓P P 22 52 06.4 -0.4
baz=50
DLMT Dillon 50.33 329 eP P 22 52 07.5 +0.4
L10A Juniper Basin 50.35 323 ⇑P P 22 52 06.8 -0.6
baz=50
P07A Fallon 50.40 319 ⇓P P 22 52 08.4 +0.6
baz=50,SNR=7.7
K11A Parker Ranch, 50.52 324 ⇓P P 22 52 08.2 -0.4
baz=51
M09A Marrel Ranch, 50.55 322 ⇑P P 22 52 09.1 +0.2
baz=51
LRM Limekiln Ridge 50.57 330 eP P 22 52 08.8 -0.2
CMB Columbia Colle 50.60 317 ⇑P P 22 52 09.5 +0.2
baz=51,SNR=11
N08A GE Springer Mi 50.60 321 ⇓P P 22 52 08.4 -0.9
baz=51,SNR=35
HAST UC Hastings Re 50.60 315 ⇑P P 22 52 09.2 -0.2
baz=51,SNR=13
F15A Butte 50.61 330 ⇓P P 22 52 09.4 +0.2
baz=51,SNR=54
H13A Challis 50.66 327 ⇓P P 22 52 09.2 -0.5
baz=51
G14A Jackson 50.70 328 ⇑P P 22 52 09.7 -0.3
baz=51,SNR=64
PACP Pacheco Peak 50.71 315 ⇓P P 22 52 10.7 +0.4
baz=51,SNR=21
O07A Toulon 50.73 320 ⇑P P 22 52 10.2 -0.1
baz=51,SNR=42
R05C Kirkwood Meado 50.73 318 ⇑P P 22 52 10.6 +0.3
baz=51,SNR=51
MFID Camas Ranch 50.80 325 ⇑P P 22 52 10.6 -0.1
baz=51
PAHR Pah Rah Range 50.81 319 eP P 22 52 11.4 +0.5
comp=Z,170nm,1.3s,mb5.8
WCN Washoe City 50.84 319 ⇑P P 22 52 11.8 +0.7
baz=51,SNR=16
EGMT Eagleton 50.87 333 eP P 22 52 10.4 -0.8
comp=Z,142nm,1.4s,mb5.7
EGMT LR LR
comp=Z,3µm,22.0s,MS5.3
EGMT Eagleton 50.87 333 ⇓P P 22 52 09.7 -1.5
baz=51
SCHQ Schefferville 50.95 9 P P 22 52 11.6 -0.1
comp=Z,116nm,1.1s,mb5.7,baz=191,slow=6.2,SNR=61
SCHQ S S 22 59 23.1 -5.3
comp=Z,2.4nm,1.1s,baz=227,slow=19,SNR=1.9
SCHQ LR LR 23 15 42.3
comp=Z,944nm,18.2s,MS4.8,baz=191,slow=38
H12A Diamond D Ranc 50.98 327 ⇑P P 22 52 11.6 -0.4
baz=51,SNR=107
S04C Ingram Canyon, 50.98 316 ⇓P P 22 52 12.7 +0.4
baz=51,SNR=8.2
G13A Cobalt 51.00 328 ⇓P P 22 52 11.5 -0.7
baz=51,SNR=59
K10A MacKenzie Ranc 51.01 324 ⇓P P 22 52 12.3 0.0
baz=51
F14A Wisdom 51.03 329 ⇑P P 22 52 12.1 -0.3
baz=51,SNR=65
E15A Deer Lodge 51.09 330 ⇑P P 22 52 12.8 -0.1
baz=51,SNR=31
R04C Big Horse Ranc 51.09 317 ⇑P P 22 52 15.1 +2.1
baz=51
P06A Stead Airport, 51.13 319 ⇓P P 22 52 13.2 -0.1
baz=51,SNR=8.8
N07B Gerlach 51.13 321 ⇓P P 22 52 12.1 -1.2
baz=51,SNR=31
M08A Happy Creek Ra 51.14 322 ⇑P P 22 52 13.1 -0.2
baz=51,SNR=36
LAVA Lava Cap Winer 51.20 318 ⇓P P 22 52 13.7 -0.2
baz=51,SNR=16
WENL Wente Brothers 51.34 316 ⇓P P 22 52 15.2 +0.3
baz=51
O06A Flanigan 51.34 320 ⇑P P 22 52 14.6 -0.2
baz=51,SNR=101
BNLO Ben Lomond (Sa 51.40 315 ⇑P P 22 52 15.2 -0.2
baz=52
P05C Yuba Gap, Truc 51.40 318 ⇓P P 22 52 15.8 +0.5
baz=52,SNR=59
D15A Lincoln 51.46 331 ⇓P P 22 52 15.3 -0.3
baz=52,SNR=30
K09A Rome 51.47 323 P P 22 52 15.9 +0.1
baz=52,SNR=132
E14A Clinton 51.51 330 ⇓P P 22 52 15.4 -0.6
baz=52,SNR=39
F13A Darby 51.52 328 ⇓P P 22 52 15.4 -0.7
baz=52,SNR=120
BEKR Beckwourth 51.53 319 ⇑P P 22 52 16.3 +0.1
baz=52,SNR=7.7
L08A Fields 51.54 323 ⇓P P 22 52 16.2 -0.2
baz=52,SNR=39
JRSC Jasper Ridge 51.57 315 ⇑P P 22 52 17.0 +0.3
baz=52
BDM Black Diamond 51.58 316 ⇑P P 22 52 17.3 +0.6
baz=52,SNR=12
M07A Soldier Meadow 51.59 321 ⇑P P 22 52 16.3 -0.5
baz=52,SNR=51
N06A Buffalo Meadow 51.66 320 ⇓P P 22 52 16.4 -0.8
baz=52,SNR=28
Q04C Lincoln 51.68 317 ⇑P P 22 52 18.5 +1.1
baz=52,SNR=15
H11A Donnelly 51.71 326 P P 22 52 16.7 -0.9
baz=52,SNR=50
CHMT Chamberlain Mo 51.73 330 eP P 22 52 17.4 -0.3
I10A Payette 51.77 325 ⇓P P 22 52 17.5 -0.5
baz=52,SNR=12
WVOR Wild Horse Val 51.86 323 P P 22 52 18.5 -0.2
WVOR LR LR
comp=Z,4µm,20.0s,MS5.5
J09A Fry Pan Ranch, 51.87 324 P P 22 52 18.5 -0.3
baz=52,SNR=134
E13A Victor 51.88 329 ⇑P P 22 52 18.3 -0.5
baz=52,SNR=36
K08A Mann Creek Ran 51.94 323 P P 22 52 19.1 -0.2
baz=52,SNR=60
O05C Quincy 51.94 319 ⇓P P 22 52 20.0 +0.6
baz=52,SNR=22
D14A Greenough 51.97 330 ⇓P P 22 52 18.5 -1.0
baz=52,SNR=25
F12A Elk City 51.98 328 P P 22 52 19.1 -0.4
baz=52,SNR=206
OHCM Honcut 52.00 318 eP P 22 52 19.7 -0.1
MSO Missoula 52.02 330 eP P 22 52 19.2 -0.6
MSO LR LR
comp=Z,2µm,19.0s,MS5.1
H10A Noah's Angus R 52.05 326 P P 22 52 18.7 -1.4
baz=52,SNR=43
L07A Adell 52.05 322 ⇓P P 22 52 19.8 -0.3
baz=52,SNR=48
ORV Oroville 52.12 318 P P 22 52 20.8 0.0
baz=52,SNR=144
SUTB Sutter Butte 52.15 318 ⇓P P 22 52 20.6 -0.4
baz=52
ELFS Eagle Lake Fie 52.16 320 ⇑P P 22 52 21.0 -0.1
baz=52,SNR=7.8
I09A Lost Marbles R 52.24 325 ⇑P P 22 52 20.1 -1.4
baz=52,SNR=22
O04C Chester 52.24 319 P P 22 52 21.7 +0.1
baz=52,SNR=72
G11A Walters Elk Ra 52.29 327 P P 22 52 20.6 -1.3
baz=52,SNR=87
J08A Circle Bar Ran 52.30 324 ⇓P P 22 52 21.4 -0.5
baz=52,SNR=37
M06C Likely Place G 52.32 320 ⇓P P 22 52 21.8 -0.3
baz=52,SNR=13
NSHM Saint Helena R 52.36 316 eP P 22 52 21.8 -0.8
MCCM Marconi Confer 52.37 316 ⇓P P 22 52 21.8 -0.8
baz=52
K07A Rock Creek Ran 52.38 323 ⇑P P 22 52 21.9 -0.7
baz=52,SNR=47
MNRC McLaughlin Nat 52.42 317 ⇑P P 22 52 22.0 -1.0
baz=52,SNR=8.8
D13A Huson 52.45 330 P P 22 52 22.6 -0.5
baz=53,SNR=93
BMO Blue Mountains 52.52 326 eP P 22 52 22.1 -1.5
BMO LR LR
comp=Z,3µm,21.0s,MS5.3
F11A Grangeville 52.55 327 ⇑P P 22 52 22.5 -1.3
baz=53,SNR=72
C14A Swan Lake 52.56 331 ⇑P P 22 52 23.8 0.0
baz=53
MOD Modoc 52.59 321 P P 22 52 23.6 -0.5
baz=53,SNR=13
H09A Durkee 52.61 325 ⇓P P 22 52 23.6 -0.7
baz=53,SNR=7.2
LBCM Butte Creek Ri 52.68 320 P P 22 52 24.2 -0.6
G10A Bishop Farm, J 52.69 326 ⇑P P 22 52 23.8 -1.1
baz=53,SNR=19
HATC Hat Creek Radi 52.74 319 ⇓P P 22 52 25.2 -0.1
baz=53,SNR=19
J07A Hines 52.80 323 ⇓P P 22 52 24.6 -1.1
baz=53,SNR=13
M05C Lookout 52.83 320 ⇓P P 22 52 24.9 -1.0
baz=53,SNR=79
E11A Bogner Ranch, 52.87 328 P P 22 52 25.0 -1.2
baz=53,SNR=88
D12A Red Ives Fores 52.88 329 ⇑P P 22 52 25.3 -0.9
baz=53
C13A Hot Springs 52.91 330 ⇑P P 22 52 26.0 -0.4
baz=53,SNR=35
GASB Alder Springs 52.98 318 ⇑P P 22 52 27.9 +0.8
baz=53,SNR=11
L05A Lakeview 52.99 321 ⇑P P 22 52 26.6 -0.6
baz=53,SNR=7.8
K06A Valley Falls 53.05 322 ⇓P P 22 52 26.6 -0.9
baz=53,SNR=20
G09A Cove 53.05 326 ⇑P P 22 52 25.7 -1.8
baz=53,SNR=23
H08A Prairie City 53.10 325 ⇓P P 22 52 26.9 -1.0
baz=53,SNR=14
BSMT Bassoo Peak 53.13 330 P P 22 52 28.1 0.0
F10A Beach Ranch, E 53.18 327 P P 22 52 27.7 -0.7
baz=53,SNR=35
J06A Christmas Vall 53.24 323 P P 22 52 27.9 -1.0
baz=53,SNR=36
O02C Red Bluff 53.29 318 ⇑P P 22 52 27.5 -1.9
baz=53,SNR=15
P01C Double 8 Ranch 53.31 317 ⇓P P 22 52 27.4 -2.1
baz=53,SNR=8.6
I07A Izee 53.33 324 ⇑P P 22 52 28.3 -1.3
baz=53,SNR=28
WDC Whiskeytown Da 53.33 319 ⇑P P 22 52 27.3 -2.3
baz=53,SNR=7.2
B13A Whitefish 53.33 331 ⇑P P 22 52 29.0 -0.5
baz=54,SNR=92
F09A S2 Ranch, Elgi 53.39 326 P P 22 52 29.8 -0.2
baz=54,SNR=27
K05A Summer Lake 53.40 322 ⇑P P 22 52 29.3 -0.8
baz=54,SNR=23
M03C McCloud 53.41 320 ⇓P P 22 52 29.2 -1.0
baz=54,SNR=15
E10A Myers Farm, Un 53.44 328 P P 22 52 29.3 -1.0
baz=54,SNR=34
FFC Flin Flon 53.47 343⇓eP P 22 52 28.8 -1.6
comp=Z,146nm,1.1s,mb5.8
FFC LR LR
comp=Z,3µm,20.0s,MS5.4
FFC Flin Flon 53.47 343⇓eP P 22 52 28.8 -1.6
FFC pmax pmax
comp=Z,146nm,1.1s,mb5.8
FFC MLR MLR
comp=Z,3µm,20.0s,MS5.4
M04C Macdoel 53.49 320 ⇑P P 22 52 30.1 -0.7
baz=54,SNR=34
WALA Waterton Lakes 53.53 332 eP P 22 52 29.8 -1.2
KIPM Iron Peak 53.57 317 eP P 22 52 34.8 +3.3
KCPM Cahto Peak 53.58 317 eP P 22 52 31.7 +0.2
H07A Lands Inn, Kim 53.66 324 ⇑P P 22 52 30.0 -2.0
baz=54
I06A Prineville 53.66 323 ⇓P P 22 52 32.1 +0.1
baz=54
A13A Flathead Natio 53.69 331 ⇑P P 22 52 31.8 -0.3
baz=54
G08A Pilot Rock 53.72 325 ⇑P P 22 52 32.2 -0.2
baz=54,SNR=69
K04A Chilquin 53.86 321 ⇓P P 22 52 33.2 -0.3
baz=54
D10A Wagner Farm, O 53.89 328 ⇑P P 22 52 32.4 -1.2
baz=54,SNR=40

J05A **Fort Rock** 53.92 322 ⇓P P 22 52 33.9 -0.1
baz=54,SNR=45
F08A **Pendleton** 53.92 326 ⇓P P 22 52 32.8 -1.1
baz=54
M02C **Callahan** 53.94 319 ⇓P P 22 52 32.7 -1.4
baz=54,SNR=16
B12A **Libby** 53.94 330 P P 22 52 33.9 -0.1
baz=54,SNR=15
N02C **Big Bar** 53.95 319 ⇑P P 22 52 32.9 -1.3
baz=54
O01C **Eel River Cons** 53.96 318 ⇑P P 22 52 38.7 +4.4
baz=54,SNR=5.8
E09A **Wood Farm, Sta** 54.01 327 ⇑P P 22 52 33.5 -1.0
baz=54,SNR=62
YBH **Yreka Blue Hor** 54.02 320 ⇑P P 22 52 32.7 -2.0
baz=54,SNR=28
G07A **Ruggs Ranch, H** 54.11 325 ⇓P P 22 52 34.8 -0.5
baz=54,SNR=24
H06A **Lindquist Farm** 54.19 324 ⇓P P 22 52 35.3 -0.6
baz=54,SNR=33
KHMM **Horse Mountain** 54.26 318 eP P 22 52 36.8 +0.3
A12A **Yaak River Ran** 54.29 331 ⇓P P 22 52 36.5 0.0
baz=54,SNR=16
B11A **Sandpoint** 54.31 330 ⇑P P 22 52 36.2 -0.4
baz=54,SNR=79
C10A **Spilker Farm,** 54.39 329 ⇑P P 22 52 36.9 -0.4
baz=54
JCC **Jacoby Creek** 54.43 318 ⇑P P 22 52 38.1 +0.4
baz=54,SNR=7.1
J04A **Umpqua Nationa** 54.43 322 P P 22 52 37.6 0.0
baz=54,SNR=19
D09A **Jones Farm, Ri** 54.44 327 ⇑P P 22 52 36.8 -0.8
baz=55,SNR=24
E08A **Dider Farm, El** 54.50 326 ⇑P P 22 52 37.4 -0.7
baz=55
NEW **Newport** 54.58 329 eP P 22 52 37.6 -1.0
NEW comp=Z,138nm,1.4s,mb5.8 LR LR
comp=Z,2µm,20.0s,MS5.2
NEW **Newport** 54.58 329 eP P 22 52 37.6 -1.0
NEW pmax pmax
comp=Z,138nm,1.4s
NEW MLR MLR
comp=Z,2µm,20.0s
BBOR **Butler Butte** 54.60 321 P P 22 52 38.5 -0.4
F07A **Phinny Hill Vi** 54.63 325 ⇓P P 22 52 39.0 -0.1
baz=55,SNR=8.0
G06A **Carlson Farm,** 54.65 324 P P 22 52 39.6 +0.4
baz=55,SNR=33
A11A **Hall Mountain,** 54.65 330 ⇑P P 22 52 39.0 -0.1
baz=55,SNR=51
B10A **Chitwood Farm,** 54.66 329 ⇑P P 22 52 38.5 -0.7
baz=55
H05A **Madras** 54.66 324 ⇓P P 22 52 38.8 -0.6
baz=55
KRMB **Red Mountain** 54.69 319 eP P 22 52 39.3 -0.3
HAWA **Hanford** 54.70 326 eP P 22 52 38.6 -0.9
HAWA LR LR
comp=Z,2µm,21.0s,MS5.2
D08A **Wollman Farm,** 54.77 327 ⇓P P 22 52 39.6 -0.5
baz=55,SNR=36
L02A **Cave Junction** 54.81 320 ⇑P P 22 52 39.1 -1.3
baz=55
C09A **Chrisman Ranch** 54.88 328 ⇑P P 22 52 40.3 -0.5
baz=55
I04A **Tendick Farm,** 54.91 322 ⇓P P 22 52 39.9 -1.2
baz=55,SNR=24
E07A **Sunnyside** 54.98 326 ⇑P P 22 52 41.0 -0.6
baz=55
M01C **Crescent City** 54.99 319 ⇓P P 22 52 41.6 -0.2
baz=55,SNR=6.3
J03A **Ideyld Park** 55.03 321 ⇑P P 22 52 39.1 -2.9
baz=55
F06A **Goldendale** 55.04 325 ⇓P P 22 52 42.2 +0.2
baz=55,SNR=21
K02A **Glendale** 55.05 321 ⇓P P 22 52 41.3 -0.8
baz=55,SNR=16
G05A **Wamic** 55.05 324 P P 22 52 42.9 +0.8
baz=55,SNR=17
B09A **Rice** 55.21 329 ⇑P P 22 52 42.9 -0.3
baz=55,SNR=104
MXC **Moxie City** 55.23 326 P P 22 52 43.6 +0.2
H04A **Detroit Lake** 55.26 323 ⇑P P 22 52 42.8 -0.8
baz=55,SNR=21
A10A **Northport** 55.26 330 ⇓P P 22 52 42.7 -0.9
baz=55,SNR=8.2
C08A **Higginbotham F** 55.28 328 ⇑P P 22 52 43.6 -0.1
baz=55,SNR=16
HOOD **Mount Hood Mea** 55.29 324 eP P 22 52 44.6 +0.8
EPH **Ephrata** 55.31 327 P P 22 52 44.4 +0.4
FCC **Fort Churchill** 55.36 350 eP P 22 52 41.9 -2.2
J02A **Umpqua** 55.41 321 P P 22 52 44.2 -0.5
baz=56,SNR=22
D07A **Quincy** 55.42 327 ⇓P P 22 52 45.0 +0.2
baz=56,SNR=9.6
F05A **White Salmon** 55.49 325 ⇑P P 22 52 45.9 +0.6
baz=56,SNR=7.6
SSOR **Sweet Springs** 55.51 323 P P 22 52 44.8 -0.6
I03A **Eugene** 55.54 322 ⇑P P 22 52 44.1 -1.5
baz=56,SNR=8.2
E06A **Yakima** 55.60 326 P P 22 52 46.2 +0.2
baz=56,SNR=14
K01A **Sixes** 55.69 320 ⇑P P 22 52 46.0 -0.8
baz=56,SNR=7.0
G04A **Mulino** 55.71 324 ⇓P P 22 52 46.7 -0.2
baz=56
WTV **Waterville** 55.72 327 P P 22 52 46.5 -0.3
C07A **Waterville** 55.77 327 P P 22 52 46.8 -0.4
baz=56,SNR=56
A09A **Danville** 55.78 329 P P 22 52 46.6 -0.7
baz=56,SNR=40
B08A **Colville Reser** 55.78 328 ⇑P P 22 52 46.5 -0.8
baz=56,SNR=60
COR **Corvallis** 55.88 323 eP P 22 52 47.8 -0.3
COR LR LR
comp=Z,4µm,22.0s,MS5.5
I02A **Mapleton** 55.89 322 P P 22 52 48.1 -0.1
baz=56,SNR=11
D06A **Cle Elum** 55.90 326 P P 22 52 48.3 +0.1
baz=56,SNR=6.3
H03A **Soap Creek Ran** 55.92 323 ⇓P P 22 52 47.6 -0.8
baz=56,SNR=15
E05A **Randle** 56.05 325 ⇑P P 22 52 48.5 -0.8
baz=56,SNR=12
F04A **Amboy** 56.08 324 ⇓P P 22 52 48.8 -0.6
baz=56
A08A **Turner Farm, O** 56.12 329 ⇓P P 22 52 49.1 -0.6
baz=56,SNR=104
G03A **Yamhill** 56.25 323 ⇑P P 22 52 49.5 -1.2
baz=56
B07A **Winthrop** 56.26 328 ⇑P P 22 52 49.8 -1.0
baz=56,SNR=19
D05A **Enumclaw** 56.54 326 ⇓P P 22 52 52.2 -0.5
baz=57,SNR=14
E04A **Onalaska** 56.62 325 ⇑P P 22 52 53.1 -0.2
baz=57
C05A **Tolt Reservoir** 56.66 326 ⇓P P 22 52 53.0 -0.6
baz=57
A07A **Ashnola River,** 56.76 328 P P 22 52 54.5 +0.2
baz=57,SNR=96
B06A **Marblemount** 57.03 327 ⇓P P 22 52 55.6 -0.6
baz=57,SNR=11
E03A **Lebam** 57.08 324 ⇑P P 22 52 56.2 -0.4
baz=57
B05A **Bryant** 57.21 327 ⇓P P 22 52 56.0 -1.5
baz=57,SNR=12
GNW **Green Mountain** 57.22 326 eP P 22 52 56.5 -1.0
C04A **Brinnon** 57.39 326 ⇑P P 22 52 58.3 -0.4
baz=58,SNR=11
A05A **Maple Falls** 57.63 327 ⇑P P 22 52 59.9 -0.5
baz=58,SNR=17
NLWA **Neilton Lookou** 57.71 325 eP P 22 53 01.6 +0.5
NLWA LR LR
comp=Z,5µm,20.0s,MS5.6
A04A **Legoe Bay, Lum** 57.81 327 ⇓P P 22 53 01.1 -0.6
baz=58
B04A **Port Angeles** 57.87 326 ⇑P P 22 53 02.3 +0.1
baz=58,SNR=6.7
PGC **Sidney** 58.17 327 eP P 22 53 03.6 -0.7
EFI **East Falkland** 58.72 165 PFAKE 22 53 20.0 +12
EFI LR LR
comp=Z,7µm,20.0s,MS5.8
RKT **Rikitea** 61.62 241 eS S 23 01 47.5 -3.5
RKT comp=Z,3µm,29.8s eLQ 23 09 06.4
comp=Z,3µm,33.0s
RKT eLR LR 23 11 49.6
comp=Z,2µm,29.0s,baz=75

RKT **Rikitea** 61.62 241 eP P 22 53 28.1 -0.3
comp=Z,258nm,1.4s,mb6.2
RKT eS S 23 01 47.5 -3.5
RKT eLQ 23 09 06.4
RKT **Rikitea** 61.62 241 eP P 22 53 28.1 -0.3
RKT eS S 23 01 47.5 -3.5
RKT pmax pmax
comp=Z,258nm,1.4s,mb6.2
EHIG **Higuera** 62.13 60 P P 22 53 33.8 +2.0
comp=Z,789nm,1.8s,mb6.5
EGOM **La Gomera** 62.58 61 P P 22 53 35.2 +0.4
comp=Z,651nm,1.7s,mb6.5
CCAN **Las Canadas** 63.11 61 P P 22 53 39.2 +0.9
comp=Z,72nm,1.0s,mb5.8
EBAJ **Bajamar** 63.39 60 P P 22 53 42.0 +1.8
comp=Z,1µm,2.4s,mb6.5
YKA **Yellowknife Ar** 63.61 342 P P 22 53 39.2 -1.8
YKA **Yellowknife Ar** 63.61 342 P P 22 53 39.2 -1.8
YKA pmax pmax
comp=Z,53nm,0.9s
YKA **Yellowknife Ar** 63.61 342 P P 22 53 39.2 -1.8
comp=Z,53nm,0.9s,mb5.5,baz=134,slow=6.2,SNR=418
YKW3 **Yellowknife Ar** 63.66 342 eP P 22 53 39.4 -1.9
EOSO **Osorio** 64.00 61 P P 22 53 44.7 +0.4
comp=Z,1µm,2.7s,mb6.4
ASCN **Ascension** 65.16 101 PFAKE 22 54 00.0 +7.9
ASCN LR LR
comp=Z,4µm,20.0s,MS5.7
SFJD **Kangerlussuaq** 65.18 12 eP P 22 53 49.1 -2.1
comp=Z,237nm,1.7s,mb5.9
SFJD LR LR
comp=Z,2µm,19.0s,MS5.4
SFJD **Kangerlussuaq** 65.18 12 eP P 22 53 49.1 -2.1
SFJD pmax pmax
comp=Z,237nm,1.7s,mb5.9
SFJD MLR MLR
comp=Z,2µm,19.0s,MS5.4
CFTV **Fuerteventura** 65.34 61 P P 22 53 54.1 +1.1
comp=Z,20nm,0.7s,mb5.3
EFAM **Famara** 65.92 60 P P 22 53 58.7 +2.0
comp=Z,1µm,1.9s,mb6.7
DLBC **Dease Lake** 66.80 333 eP P 22 54 01.9 +0.1
WRAK **Wrangell Islan** 66.86 331 eP P 22 54 02.0 -0.3
comp=Z,48nm,0.9s,mb5.5
WRAK LR LR
comp=Z,2µm,19.0s,MS5.3
SIT **Sitka** 68.61 331 PFAKE 22 54 20.0 +6.7
SIT LR LR
comp=Z,3µm,20.0s,MS5.5
SKAG **Skagway** 69.70 333 eP P 22 54 21.4 +1.5
PMSA **Palmer Station** 70.03 173 PFAKE 22 54 30.0 +8.2
PMSA LR LR
comp=Z,2µm,19.0s,MS5.5
RES **Resolute Bay** 70.67 355 eP P 22 54 23.3 -2.3
PMAFR **Mafra** 70.97 50 eP P 22 54 27.8 -0.4
comp=Z,149nm,1.8s,mb5.6
PMAFR eS S 23 03 45.5 +1.3
PMAFR **Mafra** 70.97 50 eLR LR 23 16 51.3
comp=Z,1µm,16.0s
PFVI **Vila Bisbo** 71.03 52 eP P 22 54 28.5 -0.1
comp=Z,326nm,1.6s,mb6.0
PFVI eS S 23 03 49.9 +4.9
PFVI **Vila Bisbo** 71.03 52 eLR LR 23 16 52.4
comp=Z,844nm,18.0s
PTEO **Sao Teotonio** 71.18 52 eP P 22 54 27.9 -1.6
comp=Z,230nm,1.2s,mb6.0
MORF **Marmelete** 71.20 52 eP P 22 54 29.8 +0.2
comp=Z,427nm,1.6s,mb6.1
MORF eS S 23 03 55.2 +8.2
VAH **Vaihoa** 71.24 252 eP P 22 54 29.1 -1.1
comp=Z,158nm,1.4s,mb5.7
PMOR **Pomariorio Ree** 71.45 253 eP P 22 54 30.2 -1.3
comp=Z,198nm,1.5s,mb5.8
PBDV **Barranco-do-Ve** 71.76 52 eP P 22 54 33.2 +0.2
comp=Z,154nm,1.9s,mb5.6
PBDV eS S 23 03 58.0 +4.6
PBDV **Barranco-do-Ve** 71.76 52 eLR LR 23 17 15.2
comp=Z,1µm,20.0s
EVO **Evora** 71.88 51 ⇓iP P 22 54 32.5 -1.2
comp=Z,352nm,1.4s,mb5.8
EVO eMLR MLR
comp=Z,2µm,20.5s,MS5.1
EVO **Evora** 71.88 51 eP P 22 54 33.4 -0.3
comp=Z,170nm,1.7s,mb5.7
EMAZ **Mazaricos** 71.91 46 P P 22 54 34.3 +0.5
comp=Z,373nm,1.6s,mb6.1
PBEJ **Beja** 71.92 52 eP P 22 54 33.7 -0.2
comp=Z,159nm,1.8s,mb5.7
PVAQ **Vaqueiros** 71.95 52 eP P 22 54 33.6 -0.5
comp=Z,107nm,1.2s,mb5.7
PVAQ eS S 23 03 58.3 +2.7
PVAQ **Vaqueiros** 71.95 52 eLR LR 23 17 21.9
comp=Z,955nm,20.0s
EZAM **Zamans** 71.97 47 P P 22 54 34.4 +0.3
comp=Z,152nm,1.0s,mb5.9
EZAM **Zamans** 71.97 47 P P 22 54 34.4 +0.3
EZAM pmax pmax
comp=Z,153nm,1.0s,mb5.9
MEH **Mehetia** 72.14 250 eP P 22 54 34.6 -1.0
EGRO **El Granado** 72.15 52 P P 22 54 36.8 +1.4
comp=Z,342nm,2.1s,mb5.9
STS **Santiago** 72.21 46 P P 22 54 36.0 +0.5
comp=Z,238nm,1.6s,mb5.9
STS **Santiago** 72.21 46 P P 22 54 36.0 +0.5
STS pmax pmax
comp=Z,238nm,1.6s,mb5.9
PESTR **Estremoz** 72.26 51 eP P 22 54 35.6 -0.3
comp=Z,342nm,1.8s,mb6.0
PESTR eS S 23 04 00.0 +0.9
PESTR **Estremoz** 72.26 51 eLR LR 23 17 00.0
comp=Z,1µm,18.0s
PVIS **Viseu** 72.32 49 eP P 22 54 36.2 0.0
comp=Z,212nm,1.7s,mb5.8
PCAB **Cabril** 72.38 48 eP P 22 54 35.9 -0.7
comp=Z,212nm,1.5s,mb5.8
ELOB **Lobios** 72.38 48 P P 22 54 36.2 -0.4
comp=Z,476nm,2.0s,mb6.1
PCBR **Castelo Branco** 72.49 50 eP P 22 54 36.8 -0.5
comp=Z,214nm,1.7s,mb5.8
MTE **Manteigas** 72.53 49 eP P 22 54 37.0 -0.5
comp=Z,184nm,1.9s,mb5.7
MTE eS S 23 04 04.9 +2.7
MTE **Manteigas** 72.53 49 eLR LR 23 17 21.1
comp=Z,1µm,22.0s
MTE **Manteigas** 72.53 49 eP P 22 54 38.4 +0.9
comp=Z,208nm,1.6s,mb5.8
PVRL **Vila Real** 72.54 48 eP P 22 54 37.8 +0.2
comp=Z,238nm,1.6s,mb5.9
PBAR **Barrancos** 72.59 52 eP P 22 54 37.5 -0.4
comp=Z,200nm,1.7s,mb5.8
PBAR eS S 23 04 05.4 +2.5
PBAR **Barrancos** 72.59 52 eLR LR 23 18 05.3
comp=Z,1µm,18.0s
EBAD **Badajoz** 72.69 51 P P 22 54 36.8 -1.8
comp=Z,448nm,1.9s,mb6.1
EMIN **Mina Concepcio** 72.82 52 P P 22 54 38.1 -1.2
comp=Z,362nm,1.9s,mb6.0
MVO **Moncorvo** 73.03 48 eP P 22 54 40.1 -0.4
comp=Z,214nm,1.9s,mb5.8
MVO eS S 23 04 10.5 +2.6
MVO **Moncorvo** 73.03 48 eLR LR 23 17 17.3
comp=Z,816nm,22.0s
LIC **Lamto** 73.09 85 ⇓iP P 22 54 40.1 -1.2
comp=Z,544nm,1.2s,mb6.1
LIC eMLR MLR
comp=Z,4µm,22.2s,MS5.4
LIC **Lamto** 73.09 85 ⇓iP P 22 54 40.1 -1.2
comp=Z,272nm,1.2s,mb6.1
LIC LR LR
comp=Z,2µm,22.3s,MS5.4
TVO **Taravao** 73.23 250 eP P 22 54 40.6 -1.5
comp=Z,64nm,0.9s,mb5.6
TVO **Taravao** 73.23 250 eP P 22 54 40.6 -1.5
TVO pmax pmax
comp=Z,64nm,0.9s,mb5.5
DBIC **Dimbokro** 73.23 84 P P 22 54 41.0 -1.2
DBIC S S 23 04 06.6 -4.5
DBIC LR LR 23 24 39.8
DBIC **Dimbokro** 73.23 84 P P 22 54 41.0 -1.2
DBIC S S 23 04 06.6 -4.5
DBIC pmax pmax
comp=Z,78nm,0.8s
DBIC smax
comp=N,1.0nm,1.0s
DBIC MLR MLR
comp=Z,2µm,19.7s
DBIC **Dimbokro** 73.23 84 P P 22 54 41.0 -1.2
comp=Z,78nm,0.8s,mb5.7,baz=257,slow=6.2,SNR=99
DBIC S S 23 04 06.6 -4.5
comp=Z,1.4nm,1.0s,baz=211,slow=18,SNR=2.2
DBIC LR LR 23 24 39.8
comp=Z,2µm,19.7s,MS5.5,baz=248,slow=34
EPON **Pontenova** 73.29 46 P P 22 54 42.6 +0.6
comp=Z,671nm,2.0s,mb6.2
PBRG **Braganca** 73.35 48 eP P 22 54 42.0 -0.3
comp=Z,167nm,1.6s,mb5.7
ESPR **Espera** 73.35 53 P P 22 54 42.9 +0.4
comp=Z,422nm,1.5s,mb6.2
INK **Inuvik** 73.36 341 eP P 22 54 40.9 -1.0
ECAL **Calabor** 73.37 48 P P 22 54 41.4 -1.0
comp=Z,598nm,1.8s,mb6.2
PPT **Papeete** 73.50 250 eS S 23 04 08.8 -5.1
comp=Z,2µm,30.2s
PPT eSS SS 23 08 55.6 -1.2
comp=Z,1µm,25.5s
PPT eLQ 23 14 12.8
comp=Z,10µm,32.5s
PPT eLR LR 23 17 18.7
comp=Z,6µm,26.0s,baz=75
PPT **Papeete** 73.50 250 eP P 22 54 42.6 -1.1
comp=Z,156nm,1.6s,mb5.7
PPT eS S 23 04 08.8 -5.1
PPT eSS SS 23 08 55.6 -1.2
PPT eLQ 23 14 12.8
PPT **Papeete** 73.50 250 eP P 22 54 42.6 -1.1
PPT eS S 23 04 08.8 -5.1
PPT eSS SS 23 08 55.6 -1.2
PPT pmax pmax
comp=Z,156nm,1.6s
PPT **Papeete** 73.50 250 LR LR 23 19 30.7
comp=Z,3µm,20.9s,MS5.6,baz=78,slow=30
PAE **Paea** 73.52 250 eP P 22 54 42.6 -1.2
comp=Z,241nm,1.3s,mb6.0
PAE **Paea** 73.52 250 eP P 22 54 42.6 -1.2
PAE pmax pmax
comp=Z,241nm,1.3s,mb6.0
EJIF **Jimena Fronter** 73.61 53 P P 22 54 44.9 +0.8
comp=Z,265nm,1.5s,mb6.0
EJIF **Jimena Fronter** 73.61 53 P P 22 54 44.9 +0.9
EJIF pmax pmax
comp=Z,265nm,1.5s,mb6.0
TRIS **Tristan da Cun** 74.08 130 PFAKE 22 55 00.0 +13
TRIS LR LR
comp=Z,5µm,20.0s,MS5.8
EMIJ **Mijas** 74.19 53 P P 22 54 47.9 +0.5
comp=Z,391nm,1.9s,mb6.0
EGAK **Eagle** 74.45 337 eP P 22 54 47.5 -0.8
EGAK LR LR
comp=Z,2µm,20.0s,MS5.4
TBI **Tubuai** 74.51 244 eS S 23 04 20.8 -4.4
comp=Z,637nm,32.0s
TBI eSS SS 23 09 15.1 +3.0
comp=Z,1µm,27.8s
TBI eLQ 23 14 37.8
comp=Z,5µm,32.0s
TBI eLR LR 23 17 46.9
comp=Z,2µm,22.2s
EADA **Adamuz** 74.51 52 P P 22 54 47.8 -1.4
comp=Z,431nm,1.8s,mb6.1
EARI **Arriondas** 74.69 46 P P 22 54 51.5 +1.3
comp=Z,537nm,2.2s,mb6.1
ELUQ **Luque** 74.69 52 P P 22 54 51.6 +1.3
comp=Z,79nm,1.2s,mb5.5
ELUQ **Luque** 74.69 52 P P 22 54 51.6 +1.3
ELUQ pmax pmax
comp=Z,79nm,1.2s,mb5.5
ELOJ **Sierra Loja** 74.74 53 P P 22 54 51.4 +0.8
comp=Z,147nm,1.2s,mb5.8
ELOJ **Sierra Loja** 74.74 53 P P 22 54 51.4 +0.8
ELOJ pmax pmax
comp=Z,147nm,1.2s,mb5.8
PAB **San Pablo** 74.85 50 eP P 22 54 50.5 -0.6
comp=Z,190nm,1.4s,mb5.8
PAB LR LR
comp=Z,2µm,19.0s,MS5.3
PAB **San Pablo** 74.85 50 eP P 22 54 50.5 -0.7
PAB pmax pmax
comp=Z,189nm,1.4s,mb5.8
PAB MLR MLR
comp=Z,2µm,19.0s,MS5.3
EYAK **Cordova Ski Ar** 74.95 332 eP P 22 54 50.7 -0.6
comp=Z,218nm,1.5s,mb5.9
ERON **Agron** 75.00 53 P P 22 54 53.9 +1.8
comp=Z,62nm,1.1s,mb5.5
GUD **Guadarrama** 75.12 49 P P 22 54 52.6 -0.1
comp=Z,313nm,1.8s,mb5.9
GUD **Guadarrama** 75.12 49 P P 22 54 52.6 -0.1
GUD pmax pmax
comp=Z,313nm,1.8s,mb5.9
EBAN **Banos Encina** 75.13 52 P P 22 54 54.0 +1.1
comp=Z,81nm,1.2s,mb5.5
EBAN **Banos Encina** 75.13 52 P P 22 54 54.0 +1.2
EBAN pmax pmax
comp=Z,81nm,1.2s,mb5.5
DCN **Croghan** 75.14 36⇑iP P 22 54 51.6 -0.9
ESDC **Sonseca Array** 75.16 50 P P 22 54 52.7 -0.2
comp=Z,19nm,0.8s,mb5.1,baz=266,slow=5.1,SNR=91
EGUA **Guajares** 75.18 53 P P 22 54 52.9 -0.3
comp=Z,3.1nm,0.9s
EGUA **Guajares** 75.18 53 P P 22 54 52.9 -0.2
EGUA pmax pmax
comp=Z,3.0nm,0.9s
ECOG **Cogollos-Vega** 75.22 53 P P 22 54 53.1 -0.2
comp=Z,130nm,1.4s,mb5.7
ECOG **Cogollos-Vega** 75.22 53 P P 22 54 53.1 -0.3
ECOG pmax pmax
comp=Z,130nm,1.4s,mb5.7
DMUB **Kingscourt** 75.47 35⇑iP P 22 54 53.6 -0.8
EALB **Alboran** 75.52 54 P P 22 54 54.3 -0.8
comp=Z,476nm,1.6s,mb6.2
DLF **Lyons Farm** 75.56 36⇑iP P 22 54 53.7 -1.3
EQES **Quesada** 75.66 52 P P 22 54 55.8 -0.1
comp=Z,835nm,2.1s,mb6.3
EBER **Berja** 75.72 53 P P 22 54 55.8 -0.4
comp=Z,728nm,1.9s,mb6.3
CRQ2 **Rosemanowes 2** 75.80 39 eP P 22 54 55.8 -0.6
ELAN **Lanestosa** 75.97 47 P P 22 54 57.5 0.0
comp=Z,500nm,2.9s,mb5.9
CSA1 **St Austell** 76.01 39 eP P 22 54 56.6 -1.0
EVIA **Vianos** 76.18 51 P P 22 54 57.6 -1.3
comp=Z,143nm,1.5s,mb5.7
EVIA **Vianos** 76.18 51 P P 22 54 57.6 -1.2
EVIA pmax pmax
comp=Z,143nm,1.5s,mb5.7
ENIJ **Nijar** 76.27 53 P P 22 54 58.6 -0.8
comp=Z,60nm,1.1s,mb5.4
ENIJ **Nijar** 76.27 53 P P 22 54 58.6 -0.8
ENIJ pmax pmax
comp=Z,60nm,1.1s,mb5.4
POHA **Pohakuloa** 76.28 289 eP P 22 55 00.8 +1.0
comp=Z,207nm,1.3s,mb5.9
POHA LR LR
comp=Z,3µm,20.0s,MS5.6
SML **Sawmill** 76.51 333 eP P 22 54 59.8 -0.5
ECRI **Cripan** 76.57 47 P P 22 55 00.7 -0.2
comp=Z,33nm,0.8s,mb5.3
ECRI **Cripan** 76.57 47 P P 22 55 00.7 -0.2
ECRI pmax pmax
comp=Z,33nm,0.8s,mb5.3
ETOR **Torete** 76.73 49 P P 22 55 02.1 +0.2
comp=Z,108nm,1.7s,mb5.5
ETOR **Torete** 76.73 49 P P 22 55 02.1 +0.2
ETOR pmax pmax
comp=Z,108nm,1.7s,mb5.5
ROSF **Rostrenen** 76.74 42⇓iP P 22 55 01.5 -0.3
comp=Z,342nm,1.4s,mb5.8
ROSF **Rostrenen** 76.74 42⇓iP P 22 55 01.5 -0.3
comp=Z,171nm,1.4s,mb5.8
ROSF **Rostrenen** 76.74 42⇓iP P 22 55 01.5 -0.3
ROSF pmax pmax
comp=Z,171nm,1.4s,mb5.8
QUIF **Quistinic** 76.76 42⇓iP P 22 55 01.5 -0.4
comp=Z,662nm,1.9s,mb6.0
QUIF **Quistinic** 76.76 42⇓iP P 22 55 01.5 -0.4
comp=Z,331nm,1.9s,mb5.9
QUIF **Quistinic** 76.76 42⇓iP P 22 55 01.5 -0.4
QUIF pmax pmax
comp=Z,331nm,1.9s,mb5.9
PMR **Palmer** 76.82 332 eP P 22 55 01.2 -0.7
comp=Z,119nm,1.4s,mb5.6
PMR LR LR
comp=Z,3µm,21.0s,MS5.6
PMR **Palmer** 76.82 332 eP P 22 55 01.2 -0.8
PMR pmax pmax

comp=Z,119nm,1.4s,mb5.6
PMR MLR MLR

comp=Z,3µm,21.0s,MS5.6
KPL Plockton 76.90 32 *e*P **P 22 55 01.6 -0.9**
KPL AMb AMB 22 55 06.4

comp=Z,281nm,1.8s,mb5.9
KPL AMS AMS 23 24 56.1

comp=Z,843nm,20.4s,MS5.0
KPL Plockton 76.90 32 P **P 22 55 01.6 -0.9**
KPL AMb AMB 22 55 06.4

comp=Z,281nm,1.8s,mb5.9
GAL1 Galloway 76.92 35 *e*P **P 22 55 01.5 -1.2**
GAL1 AMb AMB 22 55 06.7

comp=Z,262nm,1.9s,mb5.8
GAL1 AMS AMS 23 34 17.9

comp=Z,832nm,18.1s,MS5.1
GAL1 Galloway 76.92 35 P **P 22 55 01.5 -1.2**
GAL1 AMb AMB 22 55 06.7

comp=Z,262nm,1.9s,mb5.8
ETOB Tobarra 76.93 52 P **P 22 55 03.4 +0.3**

comp=Z,1µm,2.0s,mb6.4
GIM North Isle of 76.96 35 *e*P **P 22 55 02.7 -0.2**
SLKM Skilak Lake 77.06 331 *e*P **P 22 55 01.8 -1.5**
EMUR La Murta 77.11 52 P **P 22 55 02.2 -1.9**

comp=Z,413nm,2.5s,mb5.9
COLA College 77.17 336 *i* P **P 22 55 02.4 -1.5**
COLA LR LR

comp=Z,1µm,20.0s,MS5.2
SGMF Saint Gilles 77.21 42⇓*i*P **P 22 55 03.9 -0.5**

comp=Z,475nm,1.5s,mb5.9
SGMF Saint Gilles 77.21 42⇓*i*P **P 22 55 03.9 -0.5**

comp=Z,238nm,1.5s,mb5.9
SGMF Saint Gilles 77.21 42⇓*i*P **P 22 55 03.9 -0.5**
SGMF pmax pmax

comp=Z,238nm,1.5s,mb5.9
PGBU Glenifferbraes 77.23 34 *e*P **P 22 55 04.5 +0.1**
PGBU AMb AMB 22 55 06.8

comp=Z,276nm,1.6s,mb6.0
PGBU AMS AMS 23 32 58.6

comp=Z,984nm,17.3s,MS5.2
PGBU Glenifferbraes 77.23 34 P **P 22 55 04.5 +0.1**
PGBU AMb AMB 22 55 06.8

comp=Z,276nm,1.6s,mb6.0
MCK McKinley 77.30 335 *e*P **P 22 55 03.7 -0.9**

comp=Z,171nm,1.3s,mb5.8
MCK LR LR

comp=Z,1µm,20.0s,MS5.2
MCK McKinley 77.30 335 *e*P **P 22 55 03.7 -0.9**
MCK pmax pmax

comp=Z,171nm,1.3s,mb5.8
MCK MLR MLR

comp=Z,1µm,20.0s,MS5.2
ELIZ Elizondo 77.34 47 P **P 22 55 04.0 -1.3**

comp=Z,126nm,1.5s,mb5.6
ELIZ Elizondo 77.34 47 P **P 22 55 04.0 -1.3**
ELIZ pmax pmax

comp=Z,126nm,1.5s,mb5.6
SBD1 Bryn Du 77.44 37 *e*P **P 22 55 05.0 -0.6**
ECHE Chera 77.45 51 P **P 22 55 05.5 -0.5**

comp=Z,101nm,1.4s,mb5.6
ECHE Chera 77.45 51 P **P 22 55 05.5 -0.5**
ECHE pmax pmax

comp=Z,101nm,1.4s,mb5.6
MCH1 Michaelchurch 77.45 38 *e*P **P 22 55 04.5 -1.2**
MCH1 AMb AMB 22 55 09.7

comp=Z,217nm,1.9s,mb5.8
MCH1 AMS AMS 23 24 17.3

comp=Z,1µm,20.3s,MS5.2
MCH1 Michaelchurch 77.45 38 P **P 22 55 04.5 -1.2**
MCH1 AMb AMB 22 55 09.7

comp=Z,217nm,1.9s,mb5.8
HGH Gray Hill 77.52 38 *e*P **P 22 55 05.4 -0.7**
OSSF Osses 77.55 47 *e*P **P 22 55 07.2 +0.8**
SJPF Ste Jean 77.56 47⇓*i*P **P 22 55 06.4 -0.1**

comp=Z,514nm,1.4s,mb6.0
SJPF Ste Jean 77.56 47⇓*i*P **P 22 55 06.4 -0.1**

comp=Z,257nm,1.4s,mb6.0
SJPF Ste Jean 77.56 47⇓*i*P **P 22 55 06.4 -0.1**
SJPF pmax pmax

comp=Z,257nm,1.4s,mb6.0
BWH Wardlaw 77.58 35 *e*P **P 22 55 06.2 -0.2**
HLM1 Long Mynd 77.60 37 *e*P **P 22 55 06.1 -0.4**
MDO Dochfour 77.60 32 *e*P **P 22 55 06.5 0.0**
JRS Jersey 77.63 41 *e*P **P 22 55 06.7 -0.1**
KDAK Kodiak Island 77.67 328 PFAKE 22 55 20.0 +13
KDAK LR LR

comp=Z,404nm,21.0s,MS4.7
LARF Larrau 77.72 47 *e*P **P 22 55 08.0 +0.6**
HAE Alders End 77.73 38 *e*P **P 22 55 06.8 -0.5**
MVH1 Achvaich 77.79 32 *e*P **P 22 55 07.8 +0.3**
SWK Warminster 77.79 39 *e*P **P 22 55 08.1 +0.5**
CKE Keswick 77.79 35 *e*P **P 22 55 07.0 -0.6**
ESK Eskdalemuir 77.86 34 *e*P **P 22 55 07.0 -0.9**
ESK AMb AMB 22 55 11.0

comp=Z,330nm,1.8s,mb6.0
ESK AMS AMS 23 34 44.5

comp=Z,833nm,17.9s,MS5.1
ESK Eskdalemuir 77.86 34 P **P 22 55 07.0 -0.9**
ESK AMb AMB 22 55 11.0

comp=Z,330nm,1.8s,mb6.0
ESK Eskdalemuir 77.86 34 *e*P **P 22 55 07.4 -0.5**
EMOS Mosqueruela 77.89 50 P **P 22 55 07.3 -1.2**

comp=Z,538nm,2.2s,mb6.1
ATE Arette 77.94 47 *e*P **P 22 55 10.0 +1.4**
EBEN Beniarda 77.97 52 P **P 22 55 08.1 -0.8**

comp=Z,1µm,2.5s,mb6.3
ESAC San Caprasio 78.00 48 P **P 22 55 07.7 -1.3**

comp=Z,1µm,1.8s,mb6.5
ETSF Etsaut 78.03 47⇓*i*P **P 22 55 09.1 0.0**

comp=Z,457nm,1.9s,mb5.8
ETSF Etsaut 78.03 47⇓*i*P **P 22 55 09.1 0.0**

comp=Z,228nm,1.9s,mb5.8
ETSF Etsaut 78.03 47⇓*i*P **P 22 55 09.1 0.0**
ETSF pmax pmax

comp=Z,228nm,1.9s,mb5.8
SSW Stow on the Wo 78.15 38 *e*P **P 22 55 10.1 +0.5**
REYF Montagne du Re 78.16 47 *e*P **P 22 55 10.1 +0.2**
ALE Alert 78.18 2 P **P 22 55 07.9 -1.4**

comp=Z,188nm,1.0s,mb6.0,SNR=11
MCD Coleburn Disti 78.22 32 *e*P **P 22 55 09.1 -0.7**
LCHF La Chataignera 78.25 43 *e*P **P 22 55 10.0 -0.3**
KWE Weaver Farm 78.30 37 *e*P **P 22 55 10.2 -0.2**
GRR Gorron 78.35 42⇓*i*P **P 22 55 10.2 -0.6**

comp=Z,576nm,1.4s,mb6.0
GRR Gorron 78.35 42⇓*i*P **P 22 55 10.2 -0.6**

comp=Z,288nm,1.4s,mb6.0
GRR Gorron 78.35 42⇓*i*P **P 22 55 10.2 -0.6**
GRR pmax pmax

comp=Z,288nm,1.4s,mb6.0
LHO Holmfirth 78.36 36 *e*P **P 22 55 11.2 +0.4**
VIEF Viey 78.45 47 *e*P **P 22 55 13.3 +1.8**
LABF Labassere 78.50 47 *e*P **P 22 55 13.3 +1.6**
KBI1 Birley Grange 78.52 37 *e*P **P 22 55 11.3 -0.3**
EBIE Bielsa 78.52 48 P **P 22 55 11.0 -0.9**

comp=Z,691nm,2.3s,mb6.2
ERTA Horta de San J 78.54 49 P **P 22 55 09.7 -2.3**

comp=Z,557nm,2.0s,mb6.1
CWF Charnwood Fore 78.58 37 *e*P **P 22 55 10.7 -1.3**
CWF AMb AMB 22 55 16.3

comp=Z,274nm,1.7s,mb5.9
KIP Kipapa 78.60 291 *e*P **P 22 55 16.5 +3.8**
KIP LR LR

comp=Z,5µm,20.0s,MS5.8
FLN La Foliniere 78.64 41⇓*i*P **P 22 55 12.0 -0.4**

comp=Z,522nm,1.4s,mb6.0
FLN *e*MLR MLR

comp=Z,1µm,21.5s,MS4.9
FLN La Foliniere 78.64 41⇓*i*P **P 22 55 12.0 -0.4**

comp=Z,261nm,1.4s,mb6.0
FLN LR LR

comp=Z,1µm,21.5s,MS5.2
FLN La Foliniere 78.64 41⇓*i*P **P 22 55 12.0 -0.4**
FLN pmax pmax

comp=Z,261nm,1.4s,mb6.0
FLN MLR MLR

comp=Z,1µm,21.5s,MS5.2
MFF Saint Martin d 78.65 44⇓*i*P **P 22 55 11.8 -0.7**

comp=Z,316nm,1.3s,mb5.8
MFF Saint Martin d 78.65 44⇓*i*P **P 22 55 11.8 -0.7**

comp=Z,158nm,1.3s,mb5.8
MFF Saint Martin d 78.65 44⇓*i*P **P 22 55 11.8 -0.7**
MFF pmax pmax

comp=Z,158nm,1.3s,mb5.8
RESF Ens 78.68 47 *e*P **P 22 55 14.6 +1.9**
EPF Esparros 78.69 47⇓*i*P **P 22 55 12.8 0.0**

comp=Z,807nm,1.8s,mb6.1
EPF Esparros 78.69 47⇓*i*P **P 22 55 12.8 0.0**

comp=Z,404nm,1.8s,mb6.0
EPF Esparros 78.69 47⇓*i*P **P 22 55 12.8 0.0**
EPF pmax pmax

comp=Z,404nm,1.8s,mb6.0
SKP1 Kophill 78.76 38 *e*P **P 22 55 12.4 -0.5**
LDF La Druitiere 78.86 42⇓*i*P **P 22 55 13.2 -0.4**

comp=Z,586nm,1.4s,mb6.0
LDF La Druitiere 78.86 42⇓*i*P **P 22 55 13.2 -0.4**

comp=Z,293nm,1.4s,mb6.0
LDF La Druitiere 78.86 42⇓*i*P **P 22 55 13.2 -0.4**
LDF pmax pmax

comp=Z,293nm,1.4s,mb6.0
DAG Danmarks Havn 78.87 12⇑*i*P **P 22 55 11.7 -1.4**
DAG pmax pmax

comp=Z,25nm,0.7s,mb5.2
DAG Danmarks Havn 78.87 12⇑*i*P **P 22 55 11.7 -1.4**

comp=Z,25nm,0.7s,mb5.2
EANR 'Ain N'Sour 78.87 54 P **P 22 55 14.0 0.0**
MELF Melles 78.99 47 *e*P **P 22 55 14.4 0.0**
ETRT Tiaret 79.01 55 P **P 22 55 15.0 +0.3**
ECHA Ech Chlef 79.10 54 P **P 22 55 17.0 +1.8**
LFF La Frestale 79.13 45⇓*i*P **P 22 55 14.6 -0.5**

comp=Z,558nm,1.6s,mb6.0
LFF La Frestale 79.13 45⇓*i*P **P 22 55 14.6 -0.5**

comp=Z,279nm,1.6s,mb5.9
LFF La Frestale 79.13 45⇓*i*P **P 22 55 14.6 -0.5**
LFF pmax pmax

comp=Z,279nm,1.6s,mb5.9
EPOB Poblet 79.13 49 P **P 22 55 16.1 +0.9**

comp=Z,345nm,2.0s,mb5.9
EIBI Ibiza 79.21 51 P **P 22 55 16.8 +1.1**

comp=Z,467nm,2.8s,mb5.9
EBNR Beni Rached 79.23 54 P **P 22 55 16.0 +0.1**
MLS Moulis 79.24 47 *e*P **P 22 55 17.2 +1.4**
SALF Salau 79.30 48 *e*P **P 22 55 17.9 +1.8**
TOA0 Torodi Ar. Sit 79.41 78 *e*P **P 22 55 15.6 -1.7**
TORD Torodi Ar. Bea 79.41 78 P **P 22 55 15.9 -1.3**

comp=Z,25nm,0.7s,mb5.3,baz=286,slow=4.5,SNR=69
TORD PKKPbc PKKPbc 23 14 05.5 -1.2

comp=Z,1.3nm,0.7s,baz=60,slow=1.5,SNR=5.2
TORD PKPPKP 23 22 12.9

comp=Z,2.8nm,1.1s,baz=64,slow=1.5,SNR=4.3
TORD LR LR 23 29 08.8

comp=Z,3µm,20.4s,MS5.7,baz=270,slow=35
EMIR Miracle 79.50 48 P **P 22 55 18.6 +1.3**

comp=Z,1µm,4.1s
RJF Les Rejaudoux 79.70 45⇓*i*P **P 22 55 17.7 -0.6**

comp=Z,573nm,1.6s,mb5.9
RJF *e*MLR MLR

comp=Z,1µm,22.2s,MS4.9
RJF Les Rejaudoux 79.70 45⇓*i*P **P 22 55 17.7 -0.6**

comp=Z,286nm,1.6s,mb6.0
RJF LR LR

comp=Z,1µm,22.3s,MS5.2
RJF Les Rejaudoux 79.70 45⇓*i*P **P 22 55 17.7 -0.6**
RJF pmax pmax

comp=Z,286nm,1.6s,mb6.0
RJF MLR MLR

comp=Z,1µm,22.3s,MS5.2
SVW2 Sparrevohn 79.76 331 *e*P **P 22 55 16.1 -2.2**
IMA2 Indian Mountai 79.83 336 *e*P **P 22 55 17.1 -1.4**
VALF Valcebollere 79.89 48 *e*P **P 22 55 21.1 +1.7**
CARF Carcanieres 79.97 48 *e*P **P 22 55 21.0 +1.2**
CAF Calviac 80.06 45⇓*i*P **P 22 55 19.7 -0.5**

comp=Z,684nm,1.7s,mb6.0
CAF Calviac 80.06 45⇓*i*P **P 22 55 19.7 -0.5**

comp=Z,342nm,1.7s,mb6.0
CAF Calviac 80.06 45⇓*i*P **P 22 55 19.7 -0.5**
CAF pmax pmax

comp=Z,342nm,1.7s,mb6.0
MTLF Montolieu 80.08 47⇓*i*P **P 22 55 19.7 -0.7**

comp=Z,517nm,1.6s,mb5.9
MTLF Montolieu 80.08 47⇓*i*P **P 22 55 19.7 -0.7**

comp=Z,259nm,1.6s,mb5.9
MTLF Montolieu 80.08 47⇓*i*P **P 22 55 19.7 -0.7**
MTLF pmax pmax

comp=Z,259nm,1.6s,mb5.9
AEU East Anglia Un 80.11 38 *e*P **P 22 55 19.8 -0.5**
TCF Toulx Ste Croi 80.25 44⇓*i*P **P 22 55 20.4 -0.8**

comp=Z,340nm,1.6s,mb5.7
TCF Toulx Ste Croi 80.25 44⇓*i*P **P 22 55 20.4 -0.8**

comp=Z,170nm,1.6s,mb5.7
TCF Toulx Ste Croi 80.25 44⇓*i*P **P 22 55 20.4 -0.8**
TCF pmax pmax

comp=Z,170nm,1.6s,mb5.7
TTA Tatalina 80.25 333 *e*P **P 22 55 19.0 -1.8**

comp=Z,390nm,1.8s,mb6.0
TTA Tatalina 80.25 333 *e*P **P 22 55 19.0 -1.8**
TTA pmax pmax

comp=Z,390nm,1.8s,mb6.0
FILF Fillols 80.30 48 *e*P **P 22 55 22.5 +0.9**
ETOS Mallorca 80.38 51 P **P 22 55 23.1 +1.1**

comp=Z,392nm,1.8s,mb6.0
EMHD Djebel Mahouad 80.38 54 P **P 22 55 20.0 -2.2**
ABA Alger-Bouzarea 80.46 54 P **P 22 55 23.5 +0.9**
MENF Mencas 80.50 40 *e*P **P 22 55 23.1 +0.6**
SJAF Saint Jean de 80.53 48 *e*P **P 22 55 24.3 +1.5**
EJON La Jonquera 80.53 48 P **P 22 55 22.9 +0.1**

comp=Z,592nm,1.9s,mb6.2
CHGN Chignik 80.60 326 *e*P **P 22 55 22.4 -0.5**
HYF Humbligny 80.60 43⇓*i*P **P 22 55 22.6 -0.5**
BGF Bois d'Agland 80.70 44⇓*i*P **P 22 55 22.9 -0.8**

comp=Z,687nm,1.7s,mb6.0
BGF Bois d'Agland 80.70 44⇓*i*P **P 22 55 22.9 -0.8**

comp=Z,334nm,1.7s,mb6.0
BGF Bois d'Agland 80.70 44⇓*i*P **P 22 55 22.9 -0.8**
BGF pmax pmax

comp=Z,334nm,1.7s,mb6.0
ADJB Djebel Djouab 80.77 54 P **P 22 55 26.0 +1.7**
PYM Petit Puy Mans 80.77 45 *e*P **P 22 55 24.8 +0.8**
AGO Saint Agoulin 80.88 44 *e*P **P 22 55 25.3 +0.7**
LBL Lubilhac 80.92 45 *e*P **P 22 55 25.9 +1.1**
AVF Avril sur Loir 81.06 44⇓*i*P **P 22 55 24.5 -1.1**

comp=Z,359nm,1.5s,mb5.8
AVF Avril sur Loir 81.06 44⇓*i*P **P 22 55 24.5 -1.1**

comp=Z,179nm,1.5s,mb5.8
AVF Avril sur Loir 81.06 44⇓*i*P **P 22 55 24.5 -1.1**
AVF pmax pmax

comp=Z,179nm,1.5s,mb5.8
AKET Djebel Ketaf 81.13 54 P **P 22 55 28.4 +2.2**
SSF Saint Saulge 81.18 43⇓*i*P **P 22 55 25.0 -1.2**

comp=Z,312nm,1.5s,mb5.7
SSF Saint Saulge 81.18 43⇓*i*P **P 22 55 25.0 -1.2**

comp=Z,156nm,1.5s,mb5.7
SSF Saint Saulge 81.18 43⇓*i*P **P 22 55 25.0 -1.2**
SSF pmax pmax

comp=Z,156nm,1.5s,mb5.7
PLDF La Plantade 81.21 44 *e*P **P 22 55 26.9 +0.5**
COLF Collangettes 81.24 45 *e*P **P 22 55 25.6 -1.0**
LASF Ste Croix 81.31 46⇓*i*P **P 22 55 26.8 -0.1**

comp=Z,596nm,1.8s,mb5.9
SMF Signal de Mont 81.39 44⇓*i*P **P 22 55 26.3 -1.0**

comp=Z,431nm,1.4s,mb5.9
SMF Signal de Mont 81.39 44⇓*i*P **P 22 55 26.3 -1.0**

comp=Z,216nm,1.4s,mb5.9
SMF Signal de Mont 81.39 44⇓*i*P **P 22 55 26.3 -1.0**
SMF pmax pmax

comp=Z,216nm,1.4s,mb5.9
LOR Lormes 81.43 43⇓*i*P **P 22 55 26.5 -1.0**

comp=Z,408nm,1.6s,mb5.8
LOR *e*MLR MLR

comp=Z,729nm,21.5s,MS4.7
LOR Lormes 81.43 43⇓*i*P **P 22 55 26.5 -1.0**

comp=Z,204nm,1.6s,mb5.8
LOR LR LR

comp=Z,730nm,21.5s,MS5.0
LOR Lormes 81.43 43⇓*i*P **P 22 55 26.5 -1.0**
LOR pmax pmax

comp=Z,204nm,1.6s,mb5.8
LOR MLR MLR

comp=Z,730nm,21.5s,MS5.0
ATAF Djebel Tarf 81.45 55 P **P 22 55 29.0 +1.1**
SDPT Sand Point 81.68 325 *e*P **P 22 55 31.5 +2.9**
BAIF Baives 81.79 40⇓*i*P **P 22 55 28.6 -0.7**

comp=Z,389nm,1.8s,mb5.7
BAIF Baives 81.79 40⇓*i*P **P 22 55 28.6 -0.7**

comp=Z,194nm,1.8s,mb5.7
BAIF Baives 81.79 40⇓*i*P **P 22 55 28.6 -0.7**
BAIF pmax pmax

comp=Z,195nm,1.8s,mb5.7
SNF Seneffe 81.86 40 P **P 22 55 30.2 +0.5**

comp=Z,66nm,1.9s,mb5.2
VIVF Saint-Julien-l 81.91 46⇓*i*P **P 22 55 30.1 0.0**

comp=Z,556nm,1.6s,mb5.9
VIVF Saint-Julien-l 81.91 46⇓*i*P **P 22 55 30.1 0.0**

comp=Z,278nm,1.6s,mb5.9
VIVF Saint-Julien-l 81.91 46⇓*i*P **P 22 55 30.1 0.0**
VIVF pmax pmax

comp=Z,278nm,1.6s,mb5.9
UCC Uccle 81.92 39 P **P 22 55 28.9 -1.1**

comp=Z,160nm,2.1s,mb5.6
DOU Dourbes 82.04 40 P **P 22 55 30.4 -0.3**

comp=Z,83nm,2.0s,mb5.3
GIVF Givet 82.19 40⇓*i*P **P 22 55 30.9 -0.5**

comp=Z,604nm,1.5s,mb6.0
GIVF Givet 82.19 40⇓*i*P **P 22 55 30.9 -0.5**

comp=Z,302nm,1.5s,mb6.0
GIVF Givet 82.19 40⇓*i*P **P 22 55 30.9 -0.5**
GIVF pmax pmax

comp=Z,302nm,1.5s,mb6.0
PRAF Pradon 82.25 47 *e*P **P 22 55 32.9 +1.0**
MEZF Maizieres J'vi 82.28 42⇓*i*P **P 22 55 31.3 -0.7**

comp=Z,509nm,1.5s,mb5.9
MEZF Maizieres J'vi 82.28 42⇓*i*P **P 22 55 31.3 -0.7**

comp=Z,509nm,1.5s,mb6.2
OCF Saint Nazaire 82.36 46 *e*P **P 22 55 33.7 +1.3**
OG26 St.-Nazaire-De 82.36 46 *e*P **P 22 55 33.7 +1.3**
SET Setif 82.36 54 P **P 22 55 35.0 +2.3**
TREF Trevaresse 82.40 47 *e*P **P 22 55 33.2 +0.5**
GELF Grande-Etoile 82.43 47 *e*P **P 22 55 33.4 +0.6**
CKHR Kef el Ahmar 82.45 54 P **P 22 55 34.0 +0.9**
BCLA Clavier 82.50 40 P **P 22 55 34.0 +0.9**

comp=Z,80nm,2.0s,mb5.4
SMRF Simiane la Rot 82.54 46⇓*i*P **P 22 55 33.4 0.0**

comp=Z,355nm,1.7s,mb5.8
SMRF Simiane la Rot 82.54 46⇓*i*P **P 22 55 33.4 0.0**

comp=Z,355nm,1.7s,mb6.1
BERF Bertagne 82.62 47 *e*P **P 22 55 34.5 +0.7**
PUYF Puyloubier 82.63 47 *e*P **P 22 55 34.4 +0.5**
VILF Villemus 82.64 47 *e*P **P 22 55 34.8 +0.8**
DFRA Djebel Bou Aff 82.74 54 P **P 22 55 37.0 +2.3**
BEBN Eben Emael 82.75 40 P **P 22 55 34.3 0.0**
CMER Merouana 82.77 55 P **P 22 55 36.5 +1.7**
ORIF Oris-en-Rattie 82.77 45⇓*i*P **P 22 55 34.8 +0.2**

comp=Z,466nm,1.6s,mb6.0
ORIF *e*MLR MLR

comp=Z,1µm,22.2s,MS5.0
ORIF Oris-en-Rattie 82.77 45⇓*i*P **P 22 55 34.8 +0.2**

comp=Z,233nm,1.6s,mb6.0
ORIF Oris-en-Rattie 82.77 45⇓*i*P **P 22 55 34.8 +0.2**
ORIF pmax pmax

comp=Z,233nm,1.6s,mb6.0
STOF St-Etienne Org 82.78 46 *e*P **P 22 55 35.1 +0.4**
KMY Karmoy 82.85 31 *e*P **P 22 55 34.8 +0.1**

comp=Z,258nm,1.7s,mb6.0
KMY Karmoy 82.85 31 *e*P **P 22 55 34.8 +0.1**
KMY AMb AMB 22 55 39.4

comp=Z,258nm,1.7s,mb6.0
TAVF Tavernes 82.89 47 *e*P **P 22 55 36.0 +0.8**
THEF They Montfort 82.90 42 *e*P **P 22 55 36.0 +0.8**
CABF La Chapelle 82.94 44⇓*i*P **P 22 55 35.0 -0.4**

comp=Z,441nm,1.6s,mb5.9
CABF La Chapelle 82.94 44⇓*i*P **P 22 55 35.0 -0.4**

comp=Z,221nm,1.6s,mb5.9
CABF La Chapelle 82.94 44⇓*i*P **P 22 55 35.0 -0.4**
CABF pmax pmax

comp=Z,221nm,1.6s,mb5.9
MEM Membach 82.96 40 P **P 22 55 36.4 +1.0**
WLF Walferdange 83.03 41 *e*P **P 22 55 35.6 -0.2**
WLF Walferdange 83.03 41 P **P 22 55 35.6 -0.3**

comp=Z,122nm,1.5s,mb5.7
WLF Walferdange 83.03 41 *e*P **P 22 55 35.5 -0.4**

comp=Z,257nm,1.4s,mb6.1
HAU Haudompre 83.14 42⇓*i*P **P 22 55 35.5 -0.9**

comp=Z,349nm,1.7s,mb5.8
HAU *e*MLR MLR

comp=Z,854nm,20.2s,MS4.8
HAU Haudompre 83.14 42⇓*i*P **P 22 55 35.5 -0.9**

comp=Z,175nm,1.7s,mb5.8
HAU LR LR

comp=Z,850nm,20.3s,MS5.1
HAU Haudompre 83.14 42⇓*i*P **P 22 55 35.5 -0.9**
HAU pmax pmax

comp=Z,175nm,1.7s,mb5.8
HAU MLR MLR

comp=Z,850nm,20.3s,MS5.1
CTEI Djebel Teioual 83.18 54 P **P 22 55 35.0 -1.9**
LMR La Mourre 83.22 47⇓*i*P **P 22 55 36.4 -0.5**

comp=Z,624nm,1.8s,mb6.0
LMR La Mourre 83.22 47⇓*i*P **P 22 55 36.4 -0.5**

comp=Z,312nm,1.8s,mb6.0
LMR La Mourre 83.22 47⇓*i*P **P 22 55 36.4 -0.5**
LMR pmax pmax

comp=Z,312nm,1.8s,mb6.0
CASM Ain Smara 83.24 54 P **P 22 55 38.0 +0.8**
RSL Roselend 83.31 45 *e*P **P 22 55 37.1 -0.3**
FRF La Foret Royal 83.31 47⇓*i*P **P 22 55 36.8 -0.7**

comp=Z,388nm,1.5s,mb5.9
FRF La Foret Royal 83.31 47⇓*i*P **P 22 55 36.8 -0.7**

comp=Z,194nm,1.5s,mb5.9
FRF La Foret Royal 83.31 47⇓*i*P **P 22 55 36.8 -0.7**
FRF pmax pmax

comp=Z,194nm,1.5s,mb5.9
BNI Bardonecchia 83.34 45 *e*P **P 22 55 38.3 +0.7**

comp=Z,97nm,1.3s,mb5.7
BNI Bardonecchia 83.34 45 *e*P **P 22 55 38.3 +0.8**
BNI pmax pmax

comp=Z,97nm,1.3s,mb5.7
FALS False Pass 83.34 325 *e*P **P 22 55 28.8 -8.5**
OG01 Vacheresse 83.35 44 *e*P **P 22 55 37.5 -0.1**
LPL La Plagne 83.38 45⇓*i*P **P 22 55 37.8 +0.1**

comp=Z,140nm,1.3s,mb5.5
LPL La Plagne 83.38 45⇓*i*P **P 22 55 37.8 +0.1**

comp=Z,70nm,1.3s,mb5.5
LPL La Plagne 83.38 45⇓*i*P **P 22 55 37.8 +0.1**
LPL pmax pmax

comp=Z,70nm,1.3s,mb5.5
LPG La Plagne 83.39 45⇓*i*P **P 22 55 38.2 +0.4**

comp=Z,346nm,1.6s,mb5.8
LPG La Plagne 83.39 45⇓*i*P **P 22 55 38.2 +0.4**

comp=Z,173nm,1.6s,mb5.8
LPG La Plagne 83.39 45⇓*i*P **P 22 55 38.2 +0.4**
LPG pmax pmax

comp=Z,173nm,1.6s,mb5.8
MBDF Montbardon 83.41 46⇓*i*P **P 22 55 38.1 +0.2**

comp=Z,331nm,1.7s,mb5.8
MBDF Montbardon 83.41 46⇓*i*P **P 22 55 38.1 +0.2**

comp=Z,166nm,1.7s,mb5.8
MBDF Montbardon 83.41 46⇓*i*P **P 22 55 38.1 +0.2**
MBDF pmax pmax

comp=Z,166nm,1.7s,mb5.8
HYA Hoyanger 83.41 29 *e*P **P 22 55 40.5 +3.0**
HYA Hoyanger 83.41 29 *e*P **P 22 55 39.1 +1.6**
WIT Witteveen 83.42 38⇑*e*P **P 22 55 39.6 +1.8**
CKFL Kef-Lekhel 83.42 54 P **P 22 55 40.0 +1.8**
LOMF Lomont 83.45 43 *e*P **P 22 55 38.8 +0.7**
HINF Hinteralfeld 83.47 43⇓*i*P **P 22 55 37.0 -1.2**

comp=Z,204nm,1.4s,mb5.7
HINF Hinteralfeld 83.47 43⇓*i*P **P 22 55 37.0 -1.2**

comp=Z,102nm,1.4s,mb5.7
HINF Hinteralfeld 83.47 43⇓*i*P **P 22 55 37.0 -1.2**
HINF pmax pmax

comp=Z,102nm,1.4s,mb5.7
BLS5 Blasjo 83.48 31 *e*P **P 22 55 39.1 +1.2**

comp=Z,107nm,1.7s,mb5.6
BLS5 Blasjo 83.48 31 *e*P **P 22 55 39.1 +1.2**
BLS5 AMb AMB 22 55 44.7

comp=Z,107nm,1.7s,mb5.6
CALN Calern 83.49 47 *e*P **P 22 55 39.6 +1.2**
CAEH 'Ain El Ouahch 83.52 54 P **P 22 55 40.5 +1.8**
RAR Rarotonga 83.57 248 LR LR 23 25 32.5

comp=Z,1µm,21.5s,MS5.2,baz=45,slow=30
ODD1 Odda 83.58 30 *e*P **P 22 55 38.5 +0.1**
RUP Ruprechtstein 83.62 41 *e*P **P 22 55 40.3 +1.4**
MOF Molkenrain 83.66 43 *e*P **P 22 55 39.6 +0.5**
ECH Echery 83.68 42 *e*P **P 22 55 39.9 +0.7**
MVIF Mont Vial 83.68 46 *e*P **P 22 55 40.2 +0.9**
TOUF Mont Tournerai 83.75 46 *e*P **P 22 55 41.0 +1.3**
CDF Champ du Feu 83.76 42⇓*i*P **P 22 55 38.9 -0.7**

comp=Z,445nm,1.7s,mb6.0
CDF Champ du Feu 83.76 42⇓*i*P **P 22 55 38.9 -0.7**

comp=Z,222nm,1.7s,mb6.0
CDF Champ du Feu 83.76 42⇓*i*P **P 22 55 38.9 -0.7**
CDF pmax pmax

comp=Z,222nm,1.7s,mb6.0
LUCF Luceram 83.82 46 *e*P **P 22 55 41.2 +1.2**
REVF Revere 83.84 47 *e*P **P 22 55 41.0 +0.9**
AUTN L'Aution 83.88 46 *e*P **P 22 55 41.4 +1.1**
SBF Sospel 83.89 47⇓*i*P **P 22 55 39.8 -0.6**

comp=Z,441nm,1.6s,mb6.0

SBF Sospel 83.89 47⇓ *i* P P 22 55 39.8 -0.6
comp=Z,221nm,1.6s,mb6.0
SBF Sospel 83.89 47⇓ *i* P P 22 55 39.8 -0.6
SBF pmax pmax
comp=Z,221nm,1.6s,mb6.0
BBS Basel-Blauen 83.92 43 *e* P P 22 55 40.7 +0.2
ABH Alteburg 83.94 40 *e* P P 22 55 41.8 +1.3
SAOF Saorge 83.97 46 *e* P P 22 55 41.8 +1.0
CMAH Djebel Manchou 83.98 54 P P 22 55 41.0 -0.1
ABSA Djebel Ababsia 84.04 54 P P 22 55 41.0 -0.3
IBBN Ibbenburen 84.08 38 *e* P P 22 55 40.7 -0.5
comp=Z,352nm,1.6s,mb6.2
STR Strasbourg 84.08 42 *e* P P 22 55 41.8 +0.5
LANF Langenberg 84.11 41 *e* P P 22 55 42.2 +0.8
FELD Feldberg im Sc 84.25 42 *e* P P 22 55 42.7 +0.6
KTD Kalmit 84.29 41 *e* P P 22 55 43.1 +0.8
BFO Black Forest 84.46 42 *e* P P 22 55 42.1 -1.1
comp=Z,76nm,1.5s,mb5.6
BFO LR LR
comp=Z,968nm,21.0s,MS5.2
TNS Taunus Mts 84.52 40 *e* P P 22 55 43.2 -0.2
TNS pmax pmax
comp=Z,309nm,1.7s,mb6.2
TNS Taunus Mts 84.52 40 *e* P P 22 55 43.2 -0.2
comp=Z,309nm,1.7s,mb6.2
TOD Tromm 84.76 41 *e* P P 22 55 45.3 +0.6
SPAK Spaichingen-Ko 84.77 42 *e* P P 22 55 45.0 +0.2
MUD Monsted U'grnd 84.89 34 *i* P P 22 55 45.6 +0.4
MUD pmax pmax
comp=Z,120nm,1.1s,mb5.9
MUD MLR MLR
comp=Z,520nm,18.0s,MS5.0
MUD Monsted U'grnd 84.89 34 *i* P P 22 55 45.6 +0.4
comp=Z,122nm,1.1s,mb5.9
MUD *e*S S 23 06 16.6 +2.9
MUD
comp=Z,520nm,18.0s
STU Stuttgart 85.03 42 *e* P P 22 55 45.3 -0.8
comp=Z,199nm,1.5s,mb6.0
PGF Pioggiola 85.05 48⇓ *i* P P 22 55 45.7 -0.6
comp=Z,396nm,1.5s,mb6.0
PGF Pioggiola 85.05 48⇓ *i* P P 22 55 45.7 -0.6
comp=Z,198nm,1.5s,mb6.0
PGF Pioggiola 85.05 48⇓ *i* P P 22 55 45.7 -0.6
PGF pmax pmax
comp=Z,198nm,1.5s,mb6.0
KONO Kongsberg 85.08 31 PFAKE 22 56 00.0 +14
KONO LR LR
comp=Z,2µm,21.0s,MS5.4
KONO Kongsberg 85.08 31 *e* P P 22 55 47.6 +1.6
KONO Kongsberg 85.08 31⇓ *i* P P 22 55 45.5 -0.6
UNV Unalaska Valle 85.15 324 *e* P P 22 55 46.6 +0.1
UNV LR LR
comp=Z,3µm,20.0s,MS5.7
CORF Corte 85.18 48 *e* P P 22 55 47.0 +0.1
VSL Villasalto 85.44 51 *e* P P 22 55 48.2 -0.2
NRDL Niedersach Rie 85.51 38 *e* P P 22 55 48.5 +0.1
comp=Z,306nm,1.7s,mb6.3
DAVA Damuels 85.53 43 *i* P P 22 55 48.7 +0.1
comp=Z,721nm,2.1s,mb6.5,SNR=32
KEST Kesra 85.57 55 P P 22 55 49.1 +0.1
comp=Z,10.0nm,0.9s,mb5.0,baz=180,slow=3.4,SNR=17
KBS Kingsbay 85.59 11 *e* P P 22 55 50.4 +2.1
KBS LR LR
comp=Z,2µm,20.0s,MS5.4
BSEG Bad Segeberg 85.60 36 *e* P P 22 55 48.6 -0.2
BSEG pmax pmax
comp=Z,464nm,1.9s,mb6.4
BSEG Bad Segeberg 85.60 36 *e* P P 22 55 48.6 -0.2
comp=Z,464nm,1.9s,mb6.4
TNA Tin City 85.61 335 *e* P P 22 55 48.0 -0.6
TNA LR LR
comp=Z,1µm,20.0s,MS5.2
CLZ Clausthal 85.70 38 *e* P P 22 55 49.3 0.0
NB2 NORSAR Subarra 85.85 29 P P 22 55 51.3 +1.4
comp=Z,1.9nm,0.8s,mb4.4,baz=275,slow=4.8
NB2 NORSAR Subarra 85.85 29 P P 22 55 51.3 +1.4
NB2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
NOA NORSAR Array B 85.85 29 P P 22 55 49.7 -0.2
NOA pmax pmax
comp=Z,53nm,1.1s
NOA MLR MLR
comp=Z,457nm,18.7s
NOA NORSAR Array B 85.85 29 P P 22 55 49.6 -0.2
comp=Z,53nm,1.1s,mb5.7,baz=271,slow=4.8,SNR=31
NOA LR LR 23 30 43.8
comp=Z,457nm,18.7s,MS4.9,baz=275,slow=33
VLC Villacollemand 86.01 46 *e* P P 22 55 51.1 +0.1
NSS Namsos 86.06 26 *e* P P 22 55 50.0 -0.8
comp=Z,382nm,1.8s,mb6.3
NSS Namsos 86.06 26 *e* P P 22 55 50.0 -0.8
NSS AMb AMB 22 55 53.5
comp=Z,382nm,1.8s,mb6.3
FETA Feichten 86.12 43 *i* P P 22 55 51.4 -0.2
comp=Z,635nm,2.2s,mb6.5,SNR=50
RETA Reutte 86.12 43⇓ *i* P P 22 55 51.2 -0.4
comp=Z,1µm,2.8s,mb6.6,SNR=15
GRFO Grafenberg 86.32 41 *e* P P 22 55 52.8 +0.3
comp=Z,136nm,1.4s,mb6.0
GRFO LR LR
comp=Z,1µm,22.0s,MS5.3
GRFO Grafenberg 86.32 41 *e* P P 22 55 52.8 +0.3
GRFO pmax pmax
comp=Z,136nm,1.4s,mb6.0
GRFO MLR MLR
comp=Z,1µm,22.0s,MS5.3
GRA1 Grafenberg Arr 86.33 41 *e* P P 22 55 52.3 -0.2
comp=Z,199nm,1.4s,mb6.2
GRA1 *e*S S 23 06 32.3 +4.2
GRA1 LR LR
comp=Z,1µm,21.7s,MS5.3
GRF Grafenberg Arr 86.33 41 *e* P P 22 55 52.3 -0.2
GRF *e*S S 23 06 32.3 +4.2
GRF pmax pmax
comp=Z,199nm,1.4s,mb6.2
GRF MLR MLR
comp=Z,1µm,21.7s,MS5.3
GRF Grafenberg Arr 86.33 41 *e* P P 22 55 52.3 -0.2
comp=Z,199nm,1.4s,mb6.2
GRF *e*S S 23 06 32.3 +4.2
GRF *e*L 23 29 46.1
comp=Z,1µm,21.7s
MOTA Moosalm 86.36 43⇓ *i* P P 22 55 52.1 -0.6
comp=Z,140nm,1.6s,mb6.0,SNR=24
MOTA Moosalm 86.36 43⇓ *i* P P 22 55 52.1 -0.6
MOTA pmax pmax
comp=Z,140nm,1.6s,mb5.9
STOK Stokkvaagen 86.42 24 *e* P P 22 55 52.8 +0.2
comp=Z,698nm,1.4s,mb6.7
STOK Stokkvaagen 86.42 24 *e* P P 22 55 52.8 +0.2
STOK AMb AMB 22 55 58.4
comp=Z,698nm,1.4s,mb6.7
FUR Furstenfeldbru 86.44 42 *e* P P 22 55 52.8 -0.3
FUR pmax pmax
comp=Z,568nm,1.9s,mb6.5
FUR Furstenfeldbru 86.44 42 *e* P P 22 55 52.8 -0.3
comp=Z,568nm,1.9s,mb6.5
SQTA Sankt Quirin 86.44 43⇓ *i* P P 22 55 52.9 -0.2
comp=Z,130nm,1.4s,mb6.0,SNR=25
SQTA Sankt Quirin 86.44 43⇓ *i* P P 22 55 52.9 -0.2
SQTA pmax pmax
comp=Z,130nm,1.4s,mb6.0
LOF Lofoten 86.51 22 *e* P P 22 55 55.4 +2.4
comp=Z,569nm,1.6s,mb6.5
LOF Lofoten 86.51 22 *e* P P 22 55 55.4 +2.4
LOF AMb AMB 22 56 00.6
comp=Z,569nm,1.6s,mb6.5
SPB4 Spitsbergen Ar 86.52 12 *e* P P 22 55 51.3 -1.6
MOX Moxa 86.53 40 *e* P P 22 55 53.0 -0.5
comp=Z,249nm,1.9s,mb6.1
MOX
comp=Z,600nm,22.0s
MOX Moxa 86.53 40 *e* P P 22 55 53.0 -0.5
MOX pmax pmax
comp=Z,249nm,1.9s,mb6.1
MOX MLR MLR
comp=Z,600nm,22.0s,MS5.0
MOX Moxa 86.53 40 *e* P P 22 55 53.2 -0.3
comp=Z,169nm,1.5s,mb6.0
WATA Walderalm 86.68 43⇓ *i* P P 22 55 53.8 -0.5
comp=Z,109nm,1.5s,mb5.8,SNR=20
WATA Walderalm 86.68 43⇓ *i* P P 22 55 53.8 -0.5
comp=Z,109nm,1.5s,mb5.9
WATA Walderalm 86.68 43⇓ *i* P P 22 55 53.8 -0.5
WATA pmax pmax
comp=Z,109nm,1.5s,mb5.9
WTTA Wattenberg 86.73 43 *i* P P 22 55 54.3 -0.2
comp=Z,945nm,2.6s,mb6.6,SNR=39
WTTA Wattenberg 86.73 43 *i* P P 22 55 54.3 -0.2
WTTA pmax pmax
comp=Z,945nm,2.6s,mb6.6
COP Copenhagen 86.74 35 *e* P P 22 55 53.2 -1.2
COP *i* S S 23 06 34.6 +2.7
COP pmax pmax
comp=Z,110nm,1.3s,mb5.9
COP MLR MLR
comp=Z,430nm,19.0s,MS4.9
COP Copenhagen 86.74 35 *i* P P 22 55 53.2 -1.2
comp=Z,111nm,1.3s,mb5.9
COP *i* S S 23 06 34.6 +2.7
COP
comp=Z,420nm,19.0s
MANZ Manzenberg 86.88 40 *e* P P 22 55 55.2 0.0
comp=Z,236nm,1.6s,mb6.2
MANZ *e*PP PP 22 59 14.5 -3.4
ROTZ Rotzenmuhle 86.96 40 *e* P P 22 55 55.7 +0.1
comp=Z,330nm,1.8s,mb6.3
ROTZ *e*PP PP 22 59 14.2 -4.3
WERD Werda 86.98 40 *e* P P 22 55 55.4 -0.3
comp=Z,191nm,1.5s,mb6.1
MOR8 Moi Rana 87.00 24 *e* P P 22 55 55.5 +0.1
MOR8 Moi Rana 87.00 24 *e* P P 22 55 55.6 +0.2
MOR8 AMb AMB 22 56 01.4
comp=Z,260nm,1.7s,mb6.2
GUNZ Gunzen 87.00 40 *e* P P 22 55 55.8 0.0
comp=Z,203nm,1.5s,mb6.1
WERN Wernitzgruen 87.04 40 *e* P P 22 55 56.0 +0.1
comp=Z,221nm,1.5s,mb6.2
TANN Tannenbergstha 87.08 40 *e* P P 22 55 56.1 -0.1
comp=Z,226nm,1.4s,mb6.2
NKC Novy Kostel 87.08 40 *e* P P 22 55 55.8 -0.4
NKC *e*SKS P 23 06 39.7
NKC Novy Kostel 87.08 40 *e* P P 22 55 55.8 -0.4
NKC *e*S S 23 06 39.7 +4.2
NKC AMS AMS 23 29 50.0
comp=Z,2µm,18.5s
GAMB Gambell 87.33 334 *e* P P 22 55 56.5 -0.6
ABTA Abfaltersbach 87.36 43 *i* P P 22 55 57.3 -0.3
comp=Z,745nm,2.3s,mb6.5,SNR=47
CLL Collm 87.36 39⇓ *i* P P 22 55 57.2 -0.3
comp=Z,257nm,1.7s,mb6.2
CLL *e*S S 23 06 36.0 -2.1
CLL LR LR
comp=Z,1µm,21.1s,MS5.3
CLL Collm 87.36 39⇓ *i* P P 22 55 57.2 -0.3
CLL *e*S S 23 06 36.0 -2.1
CLL pmax pmax
comp=Z,257nm,1.7s,mb6.2
CLL MLR MLR
comp=Z,1µm,21.1s,MS5.3
CLL Collm 87.36 39⇓ *i* P P 22 55 57.2 -0.3
comp=Z,257nm,1.7s,mb6.2
CLL *e*Plp pP 22 56 00.0 -0.9
comp=Z,700nm,16.2s
CLL *e*PP PP 22 59 18.0 -3.7
CLL *e*S S 23 06 36.0 -2.1
comp=N,500nm,19.6s
CLL *e*S S 23 06 36.0 -2.1
comp=E,700nm,20.6s
CLL *e*x x 23 07 24.0
CLL *e*PS 23 07 42.0
CLL *e*PPS 23 07 57.0
CLL *e*SS SS 23 12 31.0 +8.5
CLL *e*SSS 23 16 00.0
CLL *e*SSSS 23 19 06.0
CLL LmV 23 33 00.0
comp=Z,1µm,21.1s
CLL Collm 87.36 39⇓ *i* P P 22 55 56.9 -0.6
comp=Z,261nm,1.7s,mb6.2
CLL *e*PP PP 22 59 23.4 +1.7
CLL *e*S S 23 06 40.7 +2.6
CLL *e*SP 23 07 37.9
CLL *e*PPS 23 07 55.2
CLL *e*SS SS 23 12 26.2 +3.7
CLL *e*SSS 23 15 59.8
CLL *e*(SSSS) 23 19 07.5
CLL *e*LR LR 23 24 03.3
WET Wettzell 87.44 41 *e* P P 22 55 57.9 0.0
WET *e* 22 59 18.1
WET pmax pmax
comp=Z,264nm,1.4s,mb6.3
WET Wettzell 87.44 41 *e* P P 22 55 57.9 0.0
comp=Z,264nm,1.4s,mb6.3
WET *e*PP PP 22 59 18.1 -4.3
FBE Freiberg 87.61 39 *e* P P 22 55 58.8 +0.1
comp=Z,311nm,1.6s,mb6.3
VNA3 Neumayer Olymp 87.65 162 *e* P P 22 55 57.9 -0.5
VNA3 *e* pP 22 56 00.0 -1.8
VNA3 *e* pP 22 56 01.3 -0.5
VNA3 *e* 22 56 09.2
VNA3 *e* 22 56 23.1
VNA3 *e* 22 59 25.4
RUE Ruedersdorf 87.76 38 *e* P P 22 55 59.2 -0.2
comp=Z,534nm,1.8s,mb6.5
RUE Ruedersdorf 87.76 38 *e* P P 22 55 59.1 -0.3
comp=Z,351nm,1.6s,mb6.3
VNA1 Neumayer--Stat 87.86 162 *e* P P 22 56 00.4 +0.9
VNA1 *e* pP 22 56 02.1 -0.7
VNA1 *e* pP 22 56 03.5 +0.7
VNA1 *e* 22 56 14.0
VNA1 *e* 22 56 24.8
VNA1 *e* 22 59 27.3
KHC Kasperske Hory 87.90 41 *e* P P 22 56 00.0 -0.1
KHC *e* 22 56 06.5
KHC *e* 22 56 45.5
KHC *e*SKS 23 06 49.2
KHC Kasperske Hory 87.90 41 *e* P P 22 56 00.0 -0.1
KHC *e* 22 56 06.5
KHC *e* 23 06 49.2
KHC Kasperske Hory 87.90 41 *e* P P 22 56 00.0 -0.1
KHC pP pP 22 56 06.5 +3.0
KHC x x 22 56 45.5
KHC *e*S S 23 06 49.2 +5.9
KBA Koelnbreinsper 87.90 43⇓ *i* P P 22 55 60.0 -0.2
comp=Z,766nm,2.5s,mb6.5,SNR=40
KBA Koelnbreinsper 87.90 43⇓ *i* P P 22 56 00.0 -0.2
KBA pmax pmax
comp=Z,766nm,2.5s,mb6.5
BRG Berggiesshubel 87.99 39 *e* P P 22 56 00.3 -0.2
comp=Z,8.3nm,1.1s,mb4.9
BRG *i* pP 22 56 02.2 -1.7
BRG PP PP 22 59 23.1 -3.7
BRG S S 23 06 48.0 +3.9
BRG PS 23 07 48.0
BRG SS SS 23 12 30.0 -1.6
BRG *e*P'P' 23 21 57.6
BRG LR LR
comp=Z,950nm,20.2s,MS5.2
BRG Berggiesshubel 87.99 39 *e* P P 22 56 00.3 -0.2
BRG *i* pP 22 56 02.2 -1.7
BRG 22 59 23.1
BRG S S 23 06 48.0 +3.9
BRG PS 23 07 48.0
BRG SS SS 23 12 30.0 -1.6
BRG pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
BRG pmax pmax
comp=Z,129nm,1.6s,mb5.9
BRG pmax pmax
comp=Z,9.0nm,1.4s,mb4.8
BRG pmax pmax
comp=Z,16nm,2.0s,mb4.9
BRG MLR MLR
comp=N,403nm,20.9s,MS5.1
BRG MLR MLR
comp=E,616nm,22.3s,MS5.1
BRG MLR MLR
comp=Z,948nm,20.2s,MS5.2
BRG Berggiesshubel 87.99 39 *e* P P 22 56 00.5 0.0
comp=Z,216nm,1.6s,mb6.1
BRG *e*PP PP 22 59 22.7 -4.0
BRG Berggiesshubel 87.99 39 *e* P P 22 56 00.3 -0.2
comp=Z,14nm,1.1s,mb5.1
BRG *i* pP 22 56 02.2 -1.7
comp=Z,215nm,1.6s
BRG PP PP 22 59 23.1 -3.7
comp=Z,14nm,1.4s
BRG S S 23 06 48.0 +3.9
BRG PS 23 07 48.0
BRG SS SS 23 12 30.0 -1.6
BRG *e*PKPPKP 23 21 57.6
comp=Z,26nm,2.0s
BRG
comp=N,673nm,20.9s
BRG
comp=E,1µm,22.2s
BRG
comp=Z,2µm,20.2s
GEC2 GERESS Array S 88.00 41 *e* P P 22 56 00.3 -0.3
GEC2 pmax pmax
comp=Z,129nm,1.4s,mb6.0
GEC2 GERESS Array S 88.00 41 *e* P P 22 56 00.3 -0.3
comp=Z,129nm,1.4s,mb6.0
GEC2 *e*PP PP 22 59 20.8 -6.1
GERES GERESS Array B 88.00 41 P P 22 56 00.2 -0.4
GERES pmax pmax
comp=Z,32nm,1.1s
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES MLR MLR
comp=Z,508nm,19.7s
GERES GERESS Array B 88.00 41 P P 22 56 00.2 -0.4
comp=Z,32nm,1.1s,mb5.5,baz=264,slow=2.7,SNR=65
GERES PKKP PKKPbc 23 13 43.3 -4.5
comp=Z,0.9nm,0.9s,baz=160,slow=3.1,SNR=3.1
GERES LR LR 23 33 22.1
comp=Z,508nm,19.7s,MS4.9,baz=273,slow=34
MYKA Terra Mystica 88.14 44⇓ *i* P P 22 56 01.0 -0.4
comp=Z,3µm,2.4s
BSD Bornholm Skovb 88.20 35 *e* P P 22 56 03.2 +1.8
BSD *e*S S 23 06 45.5 -0.4
BSD pmax pmax
comp=Z,78nm,1.2s,mb5.8
BSD MLR MLR
comp=Z,830nm,21.0s,MS5.1
BSD Bornholm Skovb 88.20 35 *i* P P 22 56 03.2 +1.8
comp=Z,78nm,1.2s,mb5.8
BSD *e*S S 23 06 45.5 -0.4
BSD
comp=Z,830nm,21.0s
VNA2 Neumayer--Watz 88.23 162 *e* P P 22 56 00.6 -0.6
VNA2 *e* pP 22 56 02.6 -1.9
VNA2 *e* pP 22 56 04.5 0.0
VNA2 *e* 22 56 11.8
VNA2 *e* 22 56 26.1
VNA2 *e* 22 59 29.4
CADS Cadrg 88.24 44⇓ *e* P P 22 56 01.5 -0.3
TRO Tromso 88.29 20 *e* P P 22 56 00.6 -1.0
comp=Z,279nm,1.7s,mb6.2
TRO Tromso 88.29 20 *e* P P 22 56 00.6 -1.0
TRO AMb AMB 22 56 05.9
comp=Z,279nm,1.7s,mb6.2
TRO *e*SKSc 23 06 45.8
TRO Tromso 88.29 20 *e* P P 22 56 00.6 -1.0
TRO pmax pmax
comp=Z,279nm,1.7s,mb6.2
AQU L'Aquila 88.32 48 *e* P P 22 56 01.5 -0.8
VOY Vojsko 88.36 44 *e* P P 22 56 02.7 +0.3
VOY *e* 22 56 16.3
VOY *e* 22 56 24.3
VOY *e* 22 56 43.5
VOY *e* 22 56 54.8
PRA Prague 88.37 40 P P 22 56 02.0 -0.4
PVCC Panska Ves 88.42 40 *e* P P 22 56 02.4 -0.2
PVCC AMS AMS 23 30 30.0
comp=Z,2µm,25.5s
PRU Pruhonice 88.45 40 *e* P P 22 56 02.5 -0.2
PRU *e*SKS 23 06 50.3
PRU LR LR
comp=Z,2µm,21.0s,MS5.4
PRU Pruhonice 88.45 40 *e* P P 22 56 02.5 -0.2
PRU *e*S S 23 06 50.3 +1.8
PRU AMS AMS 23 30 20.0
comp=Z,2µm,21.0s
MOA Molln 88.46 42⇓ *i* P P 22 56 02.5 -0.4
comp=Z,535nm,2.4s,mb6.3,SNR=32
OBKA Obir 88.78 44⇑ *i* P P 22 56 04.5 +0.2
comp=Z,729nm,2.8s,mb6.5,SNR=23
OBKA Obir 88.78 44⇑ *i* PcP PcP 22 56 04.5 -1.4
comp=Z,729nm,2.8s,SNR=23
LJU Ljubljana 88.80 44⇓ *i* P P 22 56 04.5 0.0
VISS Visnje 89.04 44⇓ *e* P P 22 56 05.3 -0.3
VISS *e*S S 23 06 57.9 +3.6
PERS Pernice 89.15 43⇓ *e* P P 22 56 05.4 -0.8
NVLJ Novalja 89.19 46 P P 22 56 04.6 -1.8
UPC Upice 89.33 40 *e* P P 22 56 07.1 +0.2
BOJS Bojanci 89.36 45⇓ *e* P P 22 56 06.9 -0.2
ARSA Arzberg 89.37 43 *i* P P 22 56 06.7 -0.4
comp=Z,743nm,2.9s,mb6.5,SNR=30
CRES Cresnjev 89.47 44⇓ *e* P P 22 56 07.6 0.0
CRES *e*S S 23 06 58.8 +0.5
KSP Ksiaz 89.47 39 *e* P P 22 56 08.0 +0.4
KSP Ksiaz 89.47 39⇑ *e* P P 22 56 07.5 0.0
KSP *e*S S 23 07 00.0 +1.9
KSP *e*SP SP 23 08 04.0 +1.5
KSP *e*SS SS 23 12 55.0 +1.8
KSP *e* 23 19 40.0
KSP LR LR
comp=Z,4µm,23.4s,MS5.7
KSP Ksiaz 89.47 39⇑ *e* P P 22 56 07.5 0.0
KSP *e*S S 23 07 00.0 +1.9
KSP *e*SP SP 23 08 04.0 +1.5
KSP *e*SS SS 23 12 55.0 +1.8
KSP MLR MLR
comp=Z,4µm,23.4s,MS5.7
CONA Conrad Observa 89.52 42 *i* P P 22 56 07.8 0.0
comp=Z,936nm,3.1s,SNR=24
DPC Dobruska-Polom 89.55 40 *e* P P 22 56 08.1 +0.2
DPC *e*S S 23 07 04.7 +5.8
DPC AMS AMS 23 31 00.0
comp=Z,2µm,19.7s
VRAC Vranov 89.85 41 ⇓ P P 22 56 10.8 +1.5
VRAC Vranov 89.85 41 LR LR 23 34 57.9
comp=Z,844nm,19.1s,MS5.2,baz=258,slow=35
VRAC Vranov 89.85 41⇓ *i* P P 22 56 10.8 +1.5
SNAA Sanae 89.85 162 *e* P P 22 56 08.5 -0.3
SNAA *e* pP 22 56 10.2 -2.0
SNAA *e* pP 22 56 11.8 -0.4
SNAA *e* 22 56 18.7
SNAA *e* 22 56 28.3
SNAA *e* 22 59 41.4
SNAA Sanae 89.85 162⇑ *i* P P 22 56 09.1 +0.3
KOGS Kog 89.95 44⇓ *e* P P 22 56 09.8 -0.1
SOP Sopron 90.02 42⇑ *e* PcP PcP 22 56 11.4 0.0
SISC Sisak 90.15 45 P P 22 56 10.5 -0.3
ZST Bratislava 90.32 42 *e* P P 22 56 11.7 +0.2
comp=Z,60nm,1.4s,mb5.7
ZST Bratislava 90.32 42 *e* P P 22 56 11.7 +0.2
ZST *e* 22 56 12.4
ZST pmax pmax
comp=Z,61nm,1.4s,mb5.7
MORC Moravsky Berou 90.40 40 *e* P P 22 56 12.3 +0.4
MORC Moravsky Berou 90.40 40⇑ *i* P P 22 56 12.5 +0.6
MODS Modra-Piesok 90.41 42 *e* P P 22 56 13.5 +1.5
MODS *e*PP PP 22 59 42.5 -3.6
ARCES ARCESS Array B 90.57 20 P P 22 56 11.3 -1.0
ARCES pmax pmax
comp=Z,13nm,0.7s
ARCES MLR MLR
comp=Z,642nm,18.1s
ARCES ARCESS Array B 90.57 20 P P 22 56 11.2 -1.0
comp=Z,13nm,0.7s,mb5.4,baz=273,slow=2.6,SNR=35
ARCES LR LR 23 34 11.9
comp=Z,642nm,18.1s,MS5.1,baz=285,slow=34
RAC Raciborz 90.78 40 *e* P P 22 56 14.3 +0.7
RAC LR LR
comp=Z,2µm,23.1s,MS5.5
OKC Ostrava-Krasne 90.78 40 *e* P P 22 56 14.1 +0.5
OKC AMS AMS 23 31 50.0
comp=Z,2µm,24.0s
KEV Kevo 91.02 20 *e* P P 22 56 12.1 -2.2
comp=Z,41nm,1.1s,mb5.7
KEV LR LR
comp=Z,984nm,19.0s,MS5.3
KOLL Kolacno 91.12 41 *e* P P 22 56 15.5 +0.2
KOLL *e*pP pP 22 56 24.5 +5.9
TIP Timpagrande 91.17 51 *e* P P 22 56 15.4 -0.3
STON Ston 91.42 47 P P 22 56 14.6 -2.2
VYHS Vyhne 91.42 41 *e* P P 22 56 18.3 +1.6
comp=Z,93nm,1.9s,mb5.8
VYHS Vyhne 91.42 41 *e* P P 22 56 18.3 +1.6
VYHS pmax pmax
comp=Z,93nm,1.9s,mb5.8

ADK Adak 91.47 322 PFAKE 22 56 30.0 +13
ADK LR LR
comp=Z,2µm,20.0s,MS5.5
PKSM Moragy 91.62 44 ⇑P **P** **22 56 18.3 +0.7**
PKSM Moragy 91.62 44 ⇑*i*P **P** **22 56 18.3 +0.7**
BUD Budapest 91.70 42 ⇓*e*PcP PcP 22 56 17.7 -1.1
OJC Ojcow 91.78 39 *e*P **P** **22 56 17.8 -0.5**
BRY Bratogost 92.03 47 *e*P **P** **22 56 19.0 -0.6**
HCY Herceg Novi 92.06 47 ⇓*i*P **P** **22 56 19.9 +0.1**
PSZ Piszkesteto 92.21 42 *e*P **P** **22 56 22.7 +2.4**
PSZ Piszkesteto 92.21 42 ⇓*e*PcP PcP 22 56 21.0 -0.1
PSZ Piszkesteto 92.21 42 ⇑*i*P **P** **22 56 22.7 +2.3**
NIE Niedzica 92.24 40 *i*P **P** **22 56 22.9 +2.5**
UPM Unac-Piva 92.25 47 ⇓*i*P **P** **22 56 20.4 -0.2**
NKY Niksic 92.37 47 ⇓*i*P **P** **22 56 21.7 +0.5**
BUM Brajici-Budva 92.37 47 ⇓*i*P **P** **22 56 21.6 +0.4**
KECS Kecovo 92.51 41 *e*P **P** **22 56 23.5 +1.8**
comp=Z,24nm,1.7s,mb5.3
KECS Kecovo 92.51 41 *e*P **P** **22 56 23.5 +1.8**
KECS pmax pmax
comp=Z,24nm,1.7s,mb5.3
PLE Pljevlja 92.58 46 ⇓*i*P **P** **22 56 22.0 -0.1**
TTG Podgorica 92.62 47 ⇓*i*P **P** **22 56 22.1 -0.2**
ULC Ulcinj 92.68 48 ⇓*i*P **P** **22 56 22.9 +0.3**
KAF Kangasniemi 92.82 27 *ep* **P** **22 56 20.6 -2.2**
comp=Z,45nm,1.2s,mb5.8,baz=284,slow=4.3
KAF Kangasniemi 92.82 27 *e*P **P** **22 56 20.6 -2.2**
KAF pmax pmax
comp=Z,45nm,1.2s,mb5.8
STHS Stebnicka Huta 92.84 40 *e*P **P** **22 56 25.5 +2.3**
comp=Z,15nm,1.3s,mb5.3
STHS *e*PP PP 23 00 05.3 0.0
STHS Stebnicka Huta 92.84 40 *e*P **P** **22 56 25.5 +2.3**
STHS pmax pmax
comp=Z,15nm,1.3s,mb5.3
FINES FINESS Array B 92.89 28 P **P** **22 56 21.9 -1.2**
FINES pmax pmax
comp=Z,6.0nm,0.7s
FINES pmax pmax
comp=Z,5.0nm,1.1s
FINES MLR MLR
comp=Z,761nm,18.7s
FINES FINESS Array B 92.89 28 P **P** **22 56 21.9 -1.3**
comp=Z,6.3nm,0.7s,mb5.2,baz=288,slow=2.8,SNR=19
FINES PKKP PKKPbc 23 13 30.8 -5.3
comp=Z,4.9nm,1.1s,baz=284,slow=6.8,SNR=4.1
FINES LR LR 23 38 05.6
comp=Z,761nm,18.6s,MS5.2,baz=285,slow=36
DIVS Divcibare 92.89 46 *e*P **P** **22 56 23.9 +0.4**
IVA Berane 93.02 47 ⇓*i*P **P** **22 56 24.3 +0.1**
CRVS Cervenica-Dubn 93.07 41 *e*P **P** **22 56 25.2 +0.9**
PVY Plav 93.11 47 ⇓*i*P **P** **22 56 24.8 +0.2**
SUW Suwalki 93.12 35 *e*P **P** **22 56 25.4 +1.1**
TIR Tirane 93.23 48 *e*P **P** **22 56 24.8 -0.4**
KOLS Kolonicke sedl 93.59 40 *e*P **P** **22 56 28.4 +1.7**
UZH Uzhgorod 93.66 41 *e*P **P** **22 56 26.7 -0.3**
UZH *i* pP 22 56 28.5 -1.9
UZH *e* 23 00 11.0
UZH *e* 23 06 58.0
UZH *e*S S 23 07 34.9 -1.2
UZH *i* PS PS 23 08 52.0 +1.3
UZH *e*SS SS 23 14 04.0 +10
KWP Kalwaria 93.73 40 *e*P **P** **22 56 29.6 +2.3**
IGT Igoumenitsa 93.87 50 *e*P **P** **22 56 28.1 -0.1**
TRPA Tarpa 93.92 41 ⇓*i*P **P** **22 56 27.7 -0.5**
APA Apatity 93.95 21 ⇑*i*P **P** **22 56 27.6 -0.3**
APA pmax pmax
comp=Z,81nm,1.4s,mb6.0
APA MLR MLR
comp=Z,1µm,20.0s,MS5.3
OHR Ohrid 93.96 48 *e*P **P** **22 56 28.3 -0.3**
OHR Ohrid 93.96 48 *i* P **P** **22 56 28.4 -0.2**
OHR *i* PP PP 23 00 13.9 -0.4
LKD Levkas 94.24 51 *e*P **P** **22 56 29.5 -0.4**
KRUS Krusevo 94.25 48 *e*P **P** **22 56 29.8 -0.1**
KRUS *i* PP PP 23 00 17.3 +0.7
LVZ Lovozero 94.26 20 PFAKE 22 56 40.0 +11
LVZ LR LR
comp=Z,885nm,19.0s,MS5.2
AFI Afiamalu 94.29 256 PFAKE 22 56 40.0 +9.4
AFI LR LR
comp=Z,2µm,21.0s,MS5.6
SKO Skopje 94.29 47 *e*P **P** **22 56 29.7 -0.4**
SKO Skopje 94.29 47 *e*P **P** **22 56 29.8 -0.3**
SKO *i* PP PP 23 00 16.8 -0.1
MAIT Maitri 94.39 161 *e*P **P** **22 56 28.3 -1.5**
NVL N'lazarevskaya 94.42 161 *e*P **P** **22 56 29.7 -0.3**
NVL pmax pmax
comp=N,25nm,2.5s
NVL pmax pmax
comp=Z,76nm,2.5s,mb5.7
NVL pmax pmax
comp=E,3.0nm,0.5s
FNA Florina 94.45 49 *e*P **P** **22 56 30.7 -0.1**
LVV L'vov 94.53 39 *e*P **P** **22 56 31.8 +0.8**
GZR Gura Zlata 94.61 44 ⇑*i*P **P** **22 56 32.1 +0.6**
QSPA South Pole Qui 94.63 180 *e*P **P** **22 56 30.8 +0.1**
comp=E,95nm,0.9s,mb6.2
QSPA LR LR
comp=Z,3µm,22.0s,MS5.7
JOF Joensuu 94.79 26 *ep* **P** **22 56 29.5 -2.4**
comp=Z,47nm,1.2s,mb5.8
JOF Joensuu 94.79 26 *e*P **P** **22 56 29.5 -2.4**
JOF pmax pmax
comp=Z,47nm,1.2s,mb5.8
STIP Stip 94.89 48 *e*P **P** **22 56 34.0 +1.2**
STIP Stip 94.89 48 *e*P **P** **22 56 32.1 -0.7**
STIP *i* PP PP 23 00 20.7 -0.9
BILL Bilibino 94.94 340 *i* P **P** **22 56 31.5 -0.9**
BILL LR LR
comp=Z,1µm,19.0s,MS5.4
BILL Bilibino 94.94 340 ⇓*e*P **P** **22 56 31.1 -1.3**
BILL *e* 23 00 17.4
BILL *e* 23 07 08.7
BILL *e* 23 07 50.5
BILL *e*SS SS 23 14 09.6 -1.0
BILL *e*SSS 23 17 56.6
BILL pmax pmax
comp=Z,35nm,1.8s,mb5.5
BILL MLR MLR
comp=Z,2µm,22.0s,MS5.4
GRG Griva 95.18 48 *e*P **P** **22 56 34.3 +0.1**
VAY Valandovo 95.24 48 *e*P **P** **22 56 33.6 -0.8**
VAY Valandovo 95.24 48 *i* P **P** **22 56 33.3 -1.1**
VAY *i* PP PP 23 00 22.6 -1.7
SELA Sela 95.28 51 *e*P **P** **22 56 34.5 -0.1**
PUL Pulkovo 95.38 29 *i* P **P** **22 56 33.0 -1.6**
LIT Litokhoron 95.41 49 *e*P **P** **22 56 34.3 -0.9**
VTS Vitosha 95.47 47 ⇓P **P** **22 56 37.1 +1.7**
VTS Vitosha 95.47 47 *e*P **P** **22 56 35.5 +0.1**
VTS Vitosha 95.47 47 ⇓*i*P **P** **22 56 37.1 +1.7**
AGG Agios Georgios 95.48 50 *e*P **P** **22 56 35.4 -0.2**
KNT Kendrikon 95.52 48 *e*P **P** **22 56 35.5 -0.2**
KKB Krupnik 95.52 47 *e*P **P** **22 56 35.6 -0.1**
THE Thessaloniki 95.67 49 *e*P **P** **22 56 36.7 +0.3**
VLX Vlachokerasia 95.82 52 *e*P **P** **22 56 37.5 +0.3**
SOH Sokhos 95.92 48 *e*P **P** **22 56 37.4 -0.1**
MMB Musomiste 96.04 48 *e*P **P** **22 56 39.4 +1.3**
PLG Polygyros 96.08 49 *e*P **P** **22 56 38.1 -0.1**
LTK Loutraki 96.16 51 *e*P **P** **22 56 38.6 -0.1**
PGB Panagyurishte 96.17 46 *e*P **P** **22 56 38.2 -0.4**
DID Didima 96.46 52 *e*P **P** **22 56 38.7 -1.4**
PLD Plovdiv 96.65 47 *e*P **P** **22 56 40.4 -0.4**
PLD Plovdiv 96.65 47 *e*P **P** **22 56 41.6 +0.8**
RZN Rozhen 96.75 47 *e*P **P** **22 56 41.0 -0.3**
SMY Shemya 96.79 324 PFAKE 22 56 50.0 +8.8
SMY LR LR
comp=Z,2µm,20.0s,MS5.5
TSUM Tsumeb 97.21 109 *e*P **P** **22 56 42.8 -1.0**
comp=Z,336nm,2.3s,mb6.4
TSUM LR LR
comp=Z,7µm,20.0s,MS6.1
VRI Vrincioaia 97.21 43 ⇑P **P** **22 56 45.2 +1.9**
VRI Vrincioaia 97.21 43 ⇑*i*P **P** **22 56 45.2 +1.9**
DIM Dimitrovgrad 97.27 47 *e*P **P** **22 56 44.6 +1.0**
KDZ Kurdzhali 97.27 47 *e*P **P** **22 56 42.0 -1.6**
SZH Strazhica 97.28 46 *e*P **P** **22 56 44.8 +1.2**
KIEV Kiev 97.53 38 PFAKE 22 57 00.0 +15
KIEV LR LR
comp=Z,1µm,20.0s,MS5.4
AKASG Malin Array Be 97.54 38 P **P** **22 56 42.8 -1.8**
AKASG 23 00 40.3
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 97.54 38 P **P** **22 56 42.8 -1.9**
comp=Z,1.2nm,0.8s,mb4.5,baz=270,slow=4.3,SNR=14
AKASG PP PP 23 00 40.3 -1.4
comp=Z,0.4nm,0.5s,baz=283,slow=8.1,SNR=4.5
AKASG PKKPbc PKKPbc 23 13 19.4 -3.9
comp=Z,0.4nm,0.5s,baz=96,slow=2.4,SNR=5.1
AKASG PKPPKP 23 21 32.9
comp=Z,0.1nm,0.4s,baz=57,slow=3.4,SNR=6.8
JMB Yambol 97.93 46 *e*P **P** **22 56 47.7 +1.1**
KIS Kishinev 98.32 41 *e*P **P** **22 56 47.0 -1.2**
KIS *e* pP 22 56 51.0 -0.6
KIS Kishinev 98.32 41 *e*P **P** **22 56 47.0 -1.2**
KIS *e*L 23 29 00.0
KIS LRM 23 37 44.0
comp=Z,800nm,19.0s
CHOS Chios island 98.47 50 *e*P **P** **22 56 48.9 -0.2**
TIRR Tirgusor 98.72 44 ⇓P **P** **22 56 51.4 +1.3**
TIRR Tirgusor 98.72 44 ⇓*i*P **P** **22 56 51.4 +1.3**
PSN Preselentsi 98.77 45 *e*P **P** **22 56 50.0 -0.3**
BLCB Balcova 99.22 50 *e*P **P** **22 56 51.0 -1.5**
SBA Scott Base 99.58 191 PFAKE 22 57 00.0 +6.8
SBA LR LR
comp=Z,850nm,19.0s,MS5.3
OBN Obninsk 100.20 32 ⇓*i*P Pdif 22 56 55.7 -0.7
OBN LR LR
comp=Z,1µm,22.0s,MS5.3
OBN Obninsk 100.20 32 ⇓*i*P Pdif 22 56 56.8 +0.4
OBN PPP 23 03 12.0
OBN *e*PS PS 23 10 00.1 -1.5
OBN SS SS 23 15 30.0 +4.6
OBN pmax pmax
comp=Z,93nm,1.9s
OBN MLR MLR
comp=Z,1µm,22.0s,MS5.3
SUR Sutherland 100.29 122 PFAKE 22 57 10.0 +13
SUR LR LR
comp=Z,6µm,20.0s,MS6.1
MOS Moscow 100.50 31 *e*P Pdif 22 56 57.6 -0.1
MOS *e* 23 01 08.6
MOS pmax pmax
comp=Z,73nm,1.5s
MOS MLR MLR
comp=Z,1µm,20.0s,MS5.4
VNDA Vanda 100.67 191 P Pdif 22 56 57.7 -0.8
VNDA PKKPbc PKKPbc 23 13 08.6 -6.6
VNDA Vanda 100.67 191 P Pdif 22 56 57.7 -0.8
comp=Z,0.9nm,0.8s,baz=113,slow=3.9,SNR=3.2
VNDA PKKPbc PKKPbc 23 13 08.6 -6.6
comp=Z,0.4nm,0.6s,baz=243,slow=4.5,SNR=2.7
PRGR Permogore 101.35 24 *e*P Pdif 22 57 00.5 -1.0
PRGR pmax pmax
comp=Z,22nm,1.2s
TIXI Tiksi 101.82 351 *i* P Pdif 22 57 02.7 -0.9
TIXI LR LR
comp=Z,2µm,21.0s,MS5.5
TIXI Tiksi 101.82 351 *e*P Pdif 22 57 02.4 -1.2
TIXI *e* 23 01 10.5
TIXI *e*S SKSac 23 07 37.3 -5.3
TIXI *e*SS SS 23 15 41.5 -5.3
TIXI *i* SSS 23 19 41.0
TIXI pmax pmax
comp=Z,8.0nm,1.3s
ISP Isparta 102.00 50 *e*P Pdif 22 57 04.3 -0.1
FUNA Funafuti 102.84 262 PFAKE 22 57 20.0 +12
FUNA LR LR
comp=Z,6µm,19.0s,MS6.2
ANTO Ankara 103.14 47 PFAKE 22 57 20.0 +11
ANTO LR LR
comp=Z,543nm,21.0s,MS5.0
BRTR Keskin Array B 103.81 47 PKiKP PKiKP 23 01 28.5 -2.3
comp=Z,1.9nm,0.9s,baz=325,slow=2.0,SNR=6.4
BRTR PKKPbc PKKPbc 23 13 03.5 -1.4
comp=Z,1.1nm,1.0s,baz=123,slow=6.0,SNR=3.7
MA2 Magadan 105.22 336 PFAKE 23 01 40.0 +7.2
MA2 LR LR
comp=Z,712nm,19.0s,MS5.2
PET Petropavlovsk 105.26 328 PFAKE 23 01 40.0 +6.9
PET LR LR
comp=Z,2µm,21.0s,MS5.5
SNZO South Karori 105.65 228 PFAKE 23 01 40.0 +5.9
SNZO LR LR
comp=Z,2µm,20.0s,MS5.6
LSZ Lusaka 107.26 104 PFAKE 23 01 50.0 +12
LSZ LR LR
comp=Z,3µm,20.0s,MS5.9
KIV Kislovodsk 108.50 41 PFAKE 23 01 50.0 +11
KIV LR LR
comp=Z,761nm,22.0s,MS5.2
ARU Arti 109.81 24 PFAKE 23 01 50.0 +8.5
ARU LR LR
comp=Z,1µm,22.0s,MS5.4
ZEI Tsey 109.82 41 *e*P Pdif 22 57 35.9 -3.3
ZEI *e* 23 02 15.5
YAK Yakutsk 110.12 346 PFAKE 23 01 50.0 +8.1
YAK LR LR
comp=Z,707nm,19.0s,MS5.3
YAK Yakutsk 110.12 346 *i* PKIKP PKiKP 23 01 42.2 +0.3
KMBO Kilima Mbogo 115.73 89 PFAKE 23 02 10.0 +16
KMBO LR LR
comp=Z,3µm,22.0s,MS5.9
CLNS Chul'man 115.87 346 *e*PKIKP PKPdf 23 01 51.4 -1.6
CLNS pmax pmax
comp=N,7.0nm,1.2s
CLNS pmax pmax
comp=Z,18nm,1.2s
CLNS pmax pmax
comp=E,1.0nm,0.5s
BRVK Borovoye 116.80 21 PFAKE 23 02 10.0 +15
BRVK LR LR
comp=Z,1µm,20.0s,MS5.5
BOD Bodaibo 116.97 353 *e*PKIKP PKPdf 23 01 52.4 -2.7
BOD pmax pmax
comp=Z,6.0nm,1.8s
BOD pmax pmax
comp=Z,14nm,1.5s
YSS Yuzh-Sakhalins 117.09 330 PFAKE 23 02 10.0 +14
YSS LR LR
comp=Z,806nm,22.0s,MS5.3
CASY Casey 118.12 184 PFAKE 23 02 10.0 +13
CASY LR LR
comp=Z,2µm,20.0s,MS5.7
NVS Novosibirsk 118.84 12 ⇑*i*PKIKP PKPdf 23 01 57.2 -1.6
NVS pmax pmax
comp=Z,18nm,2.0s
NVS pmax pmax
comp=Z,41nm,1.6s
NVS pmax pmax
comp=N,35nm,1.7s
HABR Khabarovsk 119.57 335 *i* PKIKP PKPdf 23 01 59.0 -1.4
HABR *e* 23 03 19.9
HABR *e* 23 09 10.3
HABR *e*SS SS 23 19 44.8 +0.1
HABR *e*SSS 23 24 09.6
ERM Erimo 120.13 325 PFAKE 23 02 10.0 +8.3
ERM LR LR
comp=Z,1µm,22.0s,MS5.4
KLR Kul'dur 120.29 338 *e*PKIKP PKPdf 23 01 56.1 -5.7
KURK Kurchatov 121.48 17 ⇑*i*PKP PKPdf 23 02 03.3 -0.7
KURK LR LR
comp=Z,933nm,22.0s,MS5.4
KURK Kurchatov 121.48 17 P PKPdf 23 02 05.0 +1.0
SNR=9.4
KURK Kurchatov 121.48 17 PKPdf PKPdf 23 02 05.0 +1.0
SNR=9.4
HNR Honiara 121.87 262 PFAKE 23 02 20.0 +14
HNR LR LR
comp=Z,1µm,21.0s,MS5.5
CIT Chita 122.67 351 *e*PKIKP PKPdf 23 02 05.2 -1.0
CIT *e* 23 03 50.4
IRK Irkutsk 123.32 358 *e*PKIKP PKPdf 23 02 06.5 -1.0
IRK pmax pmax
comp=Z,72nm,1.5s
TLY Talaya 123.90 358 *i* PKP PKPdf 23 02 08.2 -0.4
TLY LR LR
comp=Z,801nm,22.0s,MS5.3
TLY Talaya 123.90 358 *i* PKIKP PKPdf 23 02 07.9 -0.7
TLY *e* 23 03 48.4
TLY *e*SS SS 23 20 41.5 +2.2
TLY pmax pmax
comp=Z,27nm,1.3s
TLY Talaya 123.90 358 P PKPdf 23 02 08.6 0.0
SNR=17
TLY Talaya 123.90 358 PKPdf PKPdf 23 02 08.6 0.0
SNR=17
MOY Mondy 123.94 0 *e*PKIKP PKPdf 23 02 07.9 -0.8
MOY pmax pmax
comp=Z,91nm,1.6s
HIA Hailar 124.05 346 *e*PKPdf PKPdf 23 02 07.0 -2.0
HIA LR LR
comp=Z,1µm,20.0s,MS5.5
TAU Tasmania Unive 124.39 220 PFAKE 23 02 20.0 +10
TAU LR LR
comp=Z,1µm,20.0s,MS5.5
MDJ Mudanjiang 124.91 336 *e*PKPdf PKPdf 23 02 10.3 -0.4
MDJ LR LR
comp=Z,1µm,22.0s,MS5.6
ZAK Zakamensk 125.21 359 *e*PKIKP PKPdf 23 02 10.0 -1.2
ZAK *e* 23 03 56.1
ZAK pmax pmax
comp=Z,15nm,1.3s
ZAK pmax pmax
comp=Z,5.0nm,2.0s
MK31 Makanchi Array 126.06 16 *e*PKPdf PKPdf 23 02 11.2 -1.7
MKAR Makanchi Array 126.06 16 PKIKP PKPdf 23 02 11.3 -1.6
MKAR pmax pmax
comp=Z,11nm,0.9s
MKAR Makanchi Array 126.06 16 PKP PKPdf 23 02 11.2 -1.7
comp=Z,11nm,0.9s,baz=6.5,slow=2.4,SNR=41
ARMA Armidale 126.33 235 *e*PKP PKPdf 23 02 13.8 -0.1
CNB Canberra Magne 126.38 229 *e*PKP PKPdf 23 02 12.6 -1.2
comp=Z,65nm,1.2s
USP Ospenovka 126.45 24 P PKPdf 23 02 13.3 -0.4
SNR=20
MAJO Matsushiro 126.62 323 PFAKE 23 02 30.0 +16
MAJO LR LR
comp=Z,1µm,21.0s,MS5.5
MAT Matsushiro 126.62 323 PKP PKPdf 23 02 11.7 -2.6
MJAR Matsushiro Arr 126.62 323 PKIKP PKPdf 23 02 12.2 -2.1
MJAR pmax pmax
comp=Z,8.0nm,1.0s
MJAR Matsushiro Arr 126.62 323 PKP PKPdf 23 02 12.2 -2.1
comp=Z,8.0nm,1.0s,baz=84,slow=1.3,SNR=11
EKS2 Erkin-Say 126.65 25 *e*PKPdf PKPdf 23 02 13.2 -0.9
EKS2 *e*PP PP 23 04 11.0 +1.5
EKS2 LR LR
comp=Z,1µm,22.0s,MS5.5
EKS2 Erkin-Say 126.65 25 P PKPdf 23 02 14.3 +0.1
SNR=44
CHMS Chumysh 126.78 24 P PKPdf 23 02 16.0 +1.6
SNR=8.1
FRU Bishkek 126.86 25 *e*PKIKP PKPdf 23 02 15.0 +0.4
FRU pmax pmax
comp=Z,130nm,2.0s
AAK Ala-Archa 126.97 25 PFAKE 23 02 30.0 +15
AAK LR LR
comp=Z,945nm,21.0s,MS5.5
AAK Ala-Archa 126.97 25 P PKPdf 23 02 14.9 +0.1
SNR=24
AML Almayashu 127.04 26 PFAKE 23 02 30.0 +15
AML LR LR
comp=Z,686nm,20.0s,MS5.3
AML Almayashu 127.04 26 P PKPdf 23 02 15.3 +0.4
SNR=22
KBK Karagaybulak 127.14 24 P PKPdf 23 02 15.1 0.0
SNR=20
TKM2 Tokmak 2 127.19 24 *e*PKPdf PKPdf 23 02 14.6 -0.6
TKM2 LR LR
comp=Z,639nm,21.0s,MS5.3
TKM2 Tokmak 2 127.19 24 P PKPdf 23 02 14.9 -0.3
SNR=20
CN2 Changchun 127.21 338 *e*PKP PKPdf 23 02 12.0 -3.2
CN2 *e*PP PP 23 04 14.6 +1.5
CN2 *e*SS SS 23 21 18.0 -3.4
CN2 PP PP
comp=Z,400nm,8.0s
CN2 LR LR
comp=Z,900nm,23.0s,MS5.4
UCH Uchtor 127.31 25 *e*PKPdf PKPdf 23 02 15.7 +0.2
UCH *e*PKPdf PP 23 04 13.9 0.0
UCH LR LR
comp=Z,881nm,21.0s,MS5.4
UCH Uchtor 127.31 25 P PKPdf 23 02 15.9 +0.5
SNR=44
ULN Ulaanbaatar 127.53 355 *i* PKP PKPdf 23 02 14.1 -1.6
ULN LR LR
comp=Z,1µm,20.0s,MS5.5
ULN Ulaanbaatar 127.53 355 P PKPdf 23 02 15.3 -0.4
SNR=37
ULN Ulaanbaatar 127.53 355 PKPdf PKPdf 23 02 15.3 -0.4
SNR=37
SONM Songino Array 127.61 356 PKIKP PKPdf 23 02 14.5 -1.3
SONM pmax pmax
comp=Z,30nm,0.9s
SONM Songino Array 127.61 356 PKP PKPdf 23 02 14.5 -1.3
comp=Z,30nm,0.9s,baz=330,slow=1.2,SNR=106
KZA Kyzart 127.75 25 P PKPdf 23 02 18.9 +2.6
SNR=18
ULHL Ulahol 128.01 24 P PKPdf 23 02 17.2 +0.4
SNR=17
KSH Kashi 130.17 26 PKP PKPdf 23 02 21.4 +0.4
KSH PP PP 23 04 32.8 +0.1
KSH *e*SKS SKSdf 23 09 28.6 -4.3
KSH PP PP
comp=Z,3µm,4.6s
KSH LR LR
comp=N,1µm,8.4s
KSH LR LR
comp=E,1µm,7.4s
KSH LR LR
comp=Z,3µm,14.9s,MS6.1
WMQ Urumqi 130.21 13 PKP PKPdf 23 02 20.3 -0.6
WMQ PP PP 23 04 37.8 +5.2
WMQ SKS SKSdf 23 09 26.4 -6.4
WMQ PP PP
comp=Z,875nm,8.6s
WMQ LR LR
comp=N,851nm,30.8s,MS5.5
WMQ LR LR
comp=E,1µm,29.0s,MS5.5
WMQ LR LR
comp=Z,1µm,27.4s,MS5.4
KSRS Korea Array 131.47 332 PKP PKPdf 23 02 22.1 -1.5
comp=Z,22nm,1.0s,baz=23,slow=1.4,SNR=17
INCN Inchon 132.04 333 PFAKE 23 02 40.0 +15
INCN LR LR
comp=Z,1µm,21.0s,MS5.6
DL2 Dalian 132.88 339 PKPR PKPdf 23 02 24.3 -1.8
DL2 PP PP 23 04 48.5 -1.5
DL2 SS SS 23 22 29.9 -1.2
DL2 PP PP
comp=Z,300nm,6.7s
DL2 LR LR
comp=N,390nm,23.9s,MS5.2
DL2 LR LR
comp=E,490nm,25.1s,MS5.2
DL2 LR LR
comp=Z,810nm,29.2s,MS5.3
GUMO Guam 133.34 293 PFAKE 23 02 40.0 +12
GUMO LR LR
comp=Z,1µm,21.0s,MS5.6
BJI Beijing 133.57 344 PKP PKPdf 23 02 24.8 -2.6
BJI PP PP 23 04 50.5 -3.8
BJI PKS 23 05 53.6
BJI PP PP
comp=Z,830nm,6.1s
BJI LR LR
comp=N,572nm,35.6s,MS5.4
BJI LR LR
comp=E,1µm,32.8s,MS5.4
BJI LR LR
comp=Z,2µm,31.8s,MS5.6
BJT Baijiatuau 133.59 344 *e*PKPdf PKPdf 23 02 25.6 -1.8
BJT LR LR
comp=Z,1µm,22.0s,MS5.6
STKA Stephens Creek 133.70 229 *e*PKP PKPdf 23 02 25.7 -2.2
comp=Z,24nm,1.5s
STKA Stephens Creek 133.70 229 PKP PKPdf 23 02 26.7 -1.2
comp=Z,13nm,0.7s,baz=92,slow=1.5,SNR=8.6
HHC Hu-ho-hao-te 133.84 349 *e*PKP PKPdf 23 02 27.3 -0.6
HHC PKS 23 05 57.3
HHC SKS SKSdf 23 09 31.4 -8.0
HHC PP PP
comp=Z,776nm,7.3s
HHC LR LR
comp=N,817nm,28.5s
HHC LR LR
comp=E,637nm,22.6s
HHC LR LR
comp=Z,1µm,28.5s,MS5.5
CTA Charters Tower 133.86 247 *e*P PKPdf 23 02 26.7 -1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,26nm,1.5s						
CTA				*i*		23 05 56.8	
CTAO	**Charters Tower**	**133.86**	**247**	PFAKE		23 02 40.0	+12
CTAO				LR	LR		
	comp=Z,830nm,19.0s,MS5.5						
BTO	**Baotou**	**134.34**	**351**	*e*PKP	PKPdf	23 02 27.5	-1.3
PMG	**Port Moresby**	**134.48**	**261**	PFAKE		23 02 40.0	+10
PMG				LR	LR		
	comp=Z,994nm,21.0s,MS5.5						
GTA	**Gaotai**	**136.17**	**2**	PKP	PKPdf	23 02 32.3	0.0
GTA				XPKP		23 02 36.4	
GTA				PKS		23 05 57.4	
GTA				PP	PP		
	comp=Z,379nm,9.1s						
GTA				LR	LR		
	comp=N,529nm,25.1s,MS5.4						
GTA				LR	LR		
	comp=E,691nm,25.1s,MS5.4						
GTA				LR	LR		
	comp=Z,1µm,26.6s,MS5.5						
COEN	**Coen**	**137.92**	**254**	*e*PKPdf	PKPdf	23 02 34.1	-2.0
DDI	**Dehra Dun**	**138.64**	**31**	*e*P	PKPdf	23 02 35.0	-2.1
NDI	**New Delhi**	**139.47**	**34**	*e*P	PKPdf	23 02 36.5	-2.2
SSE	**Sheshan**	**139.84**	**333**	PKP	PKPdf	23 02 37.3	-2.0
SSE				PP	PP	23 05 37.4	+3.5
SSE				SS	SS	23 23 55.5	+0.9
SSE				PP	PP		
	comp=Z,217nm,8.3s						
SSE				LR	LR		
	comp=N,692nm,19.2s,MS5.6						
SSE				LR	LR		
	comp=E,791nm,19.2s,MS5.6						
SSE				LR	LR		
	comp=Z,1µm,18.7s,MS5.7						
NJ2	**Nanjing**	**139.99**	**337**	*e*PKP	PKPdf	23 02 35.9	-3.6
NJ2				PP	PP	23 05 36.0	+1.3
NJ2				PKS		23 06 10.5	
NJ2				SKS	SKSdf	23 09 40.5	-10
NJ2				PP	PP		
	comp=Z,620nm,8.0s						
NJ2				LR	LR		
	comp=Z,2µm,31.7s,MS5.8						
WHN	**Wuhan**	**142.96**	**341**	PKP	PKPdf	23 02 41.3	-3.6
WHN				LR	LR		
	comp=Z,2µm,24.1s,MS5.8						
ASAR	**Alice Springs**	**143.49**	**236**	PKHKP		23 02 41.3	
ASAR				pmax	pmax		
	comp=Z,57nm,0.8s						
ASAR	**Alice Springs**	**143.49**	**236**	PKhKP		23 02 41.3	
	comp=Z,57nm,0.8s,baz=122,slow=3.6,SNR=359						
FORT	**Forrest**	**143.92**	**221**	*e*PKP	PKPdf	23 02 42.0	-4.5
	comp=Z,37nm,0.6s						
POO	**Poona**	**144.33**	**49**	⇓*i*P	PKPdf	23 02 44.0	-3.6
	comp=Z,266nm,1.1s						
LSA	**Lhasa**	**144.47**	**16**	PKP	PKPdf	23 02 41.5	-6.1
LSA				LR	LR		
	comp=E,1µm,36.5s						
LSA				LR	LR		
	comp=Z,1µm,33.7s,MS5.4						
LSA	**Lhasa**	**144.47**	**16**	*e*PKIKP	PKPdf	23 02 45.4	-2.2
LSA				*e*		23 06 00.6	
LSA				MLR	MLR		
	comp=Z,788nm,20.0s,MS5.5						
ENH	**Enshi**	**144.49**	**348**	PFAKE		23 03 00.0	+12
ENH				LR	LR		
	comp=Z,5.0nm,21.0s						
WB2	**Warramunga Arr**	**144.59**	**242**	*i* PKP	PKPdf	23 02 44.8	-3.2
WRA	**Warramunga Arr**	**144.60**	**242**	PKIKP	PKPdf	23 02 44.9	-3.1
WRA				pmax	pmax		
	comp=Z,267nm,1.1s						
WRA	**Warramunga Arr**	**144.60**	**242**	PKP	PKPdf	23 02 44.9	-3.1
	comp=Z,267nm,1.1s,baz=108,slow=3.0,SNR=535						
CD2	**Chengdu**	**144.62**	**357**	⇑*i*PKP	PKPdf	23 02 45.5	-2.3
CD2				APKP		23 02 50.3	
CD2				PP	PP	23 06 02.3	-0.1
CD2				PKS		23 06 21.3	
CD2				SKS	SKSdf	23 09 46.3	-11
CD2				SKKS	SKKSac	23 12 50.6	-6.3
CD2				SS	SS	23 24 47.8	-1.3
CD2				PP	PP		
	comp=Z,810nm,6.4s						
CD2				LR	LR		
	comp=N,770nm,25.8s,MS5.6						
CD2				LR	LR		
	comp=E,1µm,26.4s,MS5.6						
CD2				LR	LR		
	comp=Z,830nm,20.4s						
AKL	**Akola**	**145.19**	**43**	*e*P	PKPbc	23 02 47.4	-1.2
AKL				*e*x	x	23 02 52.6	
	comp=Z,624nm,1.6s						
AKL				*i* S		23 09 24.1	
JBP	**Jabalpur**	**145.29**	**36**	⇓*e*P	PKPbc	23 02 47.2	-1.6
JBP				*i* x	x	23 06 08.1	
NACB	**Ninganchiao**	**145.35**	**327**	*e*PKP	PKPdf	23 02 47.1	-2.1
QZH	**Quanzhou**	**146.26**	**331**	*i* PKPR	PKPdf	23 02 51.8	+1.0
QZH				LR	LR		
	comp=Z,2µm,22.1s,MS5.9						
NWAO	**Narrogin (SRO)**	**148.23**	**206**	PKP	PKPdf	23 02 52.8	-1.0
NWAO				PKPbc	PKPbc	23 02 55.6	-1.5
NWAO				LR	LR		
	comp=Z,881nm,20.0s,MS5.5						
NWAO	**Narrogin (SRO)**	**148.23**	**206**	PKP2	PKPab	23 02 55.6	-4.4
NWAO				pmax	pmax		
	comp=Z,89nm,1.1s						
NWAO	**Narrogin (SRO)**	**148.23**	**206**	P	PKPdf	23 02 57.8	+3.9
	SNR=13						
NWAO	**Narrogin (SRO)**	**148.23**	**206**	PKPdf	PKPdf	23 02 57.8	+3.9
	SNR=13						
NWAO	**Narrogin (SRO)**	**148.23**	**206**	PKP	PKPdf	23 02 52.8	-1.0
	comp=Z,89nm,1.1s,baz=154,slow=2.4,SNR=17						
NWAO				PKPbc	PKPbc	23 02 55.6	-1.5
	comp=Z,89nm,1.1s,baz=142,slow=2.6,SNR=17						
MNGI	**Mangalore**	**148.26**	**56**	*e*P	PKPdf	23 02 53.2	-1.1
MNGI				*e*x	x	23 03 01.6	
	comp=Z,250nm,1.5s						
MNGI				*i* x	x	23 06 26.1	
HYB	**Hyderabad**	**148.48**	**45**	*e*P	PKPdf	23 02 53.5	-1.1
HYB	**Hyderabad**	**148.48**	**45**	*i* PKP	PKPdf	23 02 53.5	-1.1
HYB				*e*		23 02 58.0	
HYB				*e*PP	PP	23 06 24.0	-2.5
HYB				*e*		23 09 44.0	
SHL	**Shillong**	**148.58**	**17**	*i* P	PKPdf	23 02 54.0	-0.6
GYA	**Guiyang**	**148.72**	**351**	*i* PKP	PKPdf	23 02 53.9	-0.9
GYA				PKP2	PKPab	23 03 02.8	+0.7
GYA				PKS		23 06 27.3	
GYA				PP	PP	23 06 30.3	+3.6
GYA				SKS	SKSdf	23 09 59.3	-4.3
GYA				SKKS	SKKSac	23 13 17.8	-2.3
GYA				SS	SS	23 25 36.9	+1.2
GYA				PP	PP		
	comp=Z,1µm,9.4s						
GYA				LR	LR		
	comp=N,3µm,22.4s,MS6.1						
GYA				LR	LR		
	comp=E,1µm,21.8s,MS6.1						
GYA				LR	LR		
	comp=Z,2µm,23.3s,MS5.9						
KLBR	**Kellerberrin**	**149.13**	**208**	*e*PKP	PKPdf	23 02 53.2	-2.1
	comp=Z,237nm,1.2s						
MUN	**Mundaring**	**149.49**	**205**	*e*PKP	PKPdf	23 02 54.4	-1.5
IMP	**Imphal**	**149.87**	**14**	*e*P	PKPdf	23 02 55.0	-1.7
AGT	**Agartala**	**149.96**	**19**	*e*P	PKPdf	23 02 52.0	-4.9
AGT				*e*x	x	23 03 29.0	
KMI	**Kunming**	**150.43**	**358**	PKP	PKPdf	23 02 56.8	-0.8
MDRS	**Chennai**	**152.52**	**50**	⇓*e*P	PKPdf	23 03 00.5	-0.5
FITZ	**Fitzroy Crossi**	**152.87**	**238**	*e*PKP	PKPdf	23 02 58.8	-2.6
	comp=Z,95nm,1.1s						
DAV	**Davao City (W)**	**153.34**	**296**	PFAKE		23 03 10.0	+7.8
DAV				LR	LR		
	comp=Z,771nm,19.0s,MS5.5						
QIZ	**Qiongzhong**	**155.12**	**341**	PKP	PKPdf	23 03 02.3	-2.3
QIZ				PP	PP	23 07 06.3	+2.9
QIZ				SS	SS	23 26 44.5	-2.3
QIZ				LR	LR		
	comp=E,809nm,26.0s						
QIZ				LR	LR		
	comp=Z,1µm,30.6s,MS5.5						
QIZ	**Qiongzhong**	**155.12**	**341**	*e*PKPbc	PKPdf	23 03 14.3	+10
QIZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
CHRT	**Chiangrai**	**155.62**	**4**	⇓P	PKPdf	23 03 04.0	-1.2
	comp=Z,158nm,1.1s						
MBWA	**Marble Bar**	**155.85**	**225**	*e*PKPdf	PKPdf	23 03 05.4	-0.1
MBWA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
PALK	**Pallekele**	**156.10**	**61**	*e*PKPdf	PKPdf	23 03 06.5	+0.5
PALK				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
PALK	**Pallekele**	**156.10**	**61**	P	PKPdf	23 03 07.7	+1.7
	SNR=6.0						
PALK	**Pallekele**	**156.10**	**61**	PKPdf	PKPdf	23 03 07.7	+1.7
	SNR=6.0						
CHG	**Chiang Mai**	**156.59**	**6**	⇓P	PKPdf	23 03 05.2	-1.3
	comp=Z,73nm,1.5s						
CHTO	**Chiang Mai**	**156.59**	**6**	*e*PKPdf	PKPdf	23 03 04.9	-1.6
CHTO				LR	LR		
	comp=Z,533nm,20.0s,MS5.4						
CHTO	**Chiang Mai**	**156.59**	**6**	P	PKPdf	23 03 05.4	-1.1
	SNR=16						
CHTO	**Chiang Mai**	**156.59**	**6**	PKPdf	PKPdf	23 03 05.4	-1.1
	SNR=16						
BDT	**Bhumibol Dam**	**158.15**	**6**	P	PKPdf	23 03 07.0	-1.5
KKTK	**Khon Kaen**	**159.15**	**356**	P	PKPdf	23 03 10.5	+0.8
NST	**Nakhon Sawan**	**159.80**	**4**	P	PKPdf	23 03 08.0	-2.5
KDM	**Kudat**	**160.91**	**307**	⇑P	PKPdf	23 03 11.6	-0.2
KDM	**Kudat**	**160.91**	**307**	⇓P	PKPdf	23 03 12.0	+0.1
SDKM	**Sandakan**	**161.33**	**303**	⇓P	PKPdf	23 03 11.7	-0.6
TSM	**Tawau**	**161.43**	**298**	⇑P	PKPdf	23 03 11.0	-1.4
TSM	**Tawau**	**161.43**	**298**	⇓P	PKPdf	23 03 12.5	+0.1
KKM	**Kota Kinabalu**	**161.91**	**306**	⇑P	PKPdf	23 03 12.3	-0.6
KKM	**Kota Kinabalu**	**161.91**	**306**	⇓P	PKPdf	23 03 13.1	+0.2
NNT	**Nongplab**	**162.82**	**6**	P	PKPdf	23 03 13.5	-0.2
SBUM	**Sibu**	**167.22**	**303**	⇑P	PKPdf	23 03 16.0	-1.6
SBUM	**Sibu**	**167.22**	**303**	⇑P	PKPdf	23 03 16.2	-1.4
KSM	**Kuching**	**169.35**	**304**	*e*PKPdf	PKPdf	23 03 17.0	-2.0
KSM	**Kuching**	**169.35**	**304**	⇑P	PKPdf	23 03 16.5	-2.5
KSM	**Kuching**	**169.35**	**304**	⇓P	PKPdf	23 03 17.3	-1.7
KSM	**Kuching**	**169.35**	**304**	⇓P	PKPdf	23 03 17.9	-1.1
KTGM	**Kuala Trenggan**	**170.00**	**351**	⇓P	PKPdf	23 03 18.9	-0.5
KTGM	**Kuala Trenggan**	**170.00**	**351**	⇑P	PKPdf	23 03 20.0	+0.6
KULM	**Kulim**	**170.13**	**5**	*e*PKPdf	PKPdf	23 03 16.8	-2.7
KULM	**Kulim**	**170.13**	**5**	⇑P	PKPdf	23 03 17.4	-2.0
KULM	**Kulim**	**170.13**	**5**	⇑P	PKPdf	23 03 17.7	-1.8
PSI	**Prapat**	**172.20**	**19**	PKP2	PKPab	23 04 43.0	-0.7
PSI				pmax	pmax		
	comp=Z,16nm,1.1s						
PSI	**Prapat**	**172.20**	**19**	PKP	PKPdf	23 03 18.3	-2.2
	comp=Z,23nm,1.2s,baz=39,slow=1.1,SNR=21						
PSI				PKPab	PKPab	23 04 43.0	-0.7
	comp=Z,16nm,1.1s,baz=266,slow=4.6,SNR=7.4						
FRIM	**Kepong**	**172.21**	**359**	⇑P	PKPdf	23 03 19.1	-1.5
FRIM	**Kepong**	**172.21**	**359**	⇓P	PKPdf	23 03 20.9	+0.3
KGM	**Kluang**	**173.18**	**345**	⇓P	PKPdf	23 03 20.4	-0.6
KGM	**Kluang**	**173.18**	**345**	⇑P	PKPdf	23 03 21.3	+0.3
MYKOM	**Kota Tinggi**	**173.23**	**340**	⇑P	PKPdf	23 03 17.5	-3.5
MYKOM	**Kota Tinggi**	**173.23**	**340**	⇑P	PKPdf	23 03 19.0	-2.0

ISCJB ***17*** *23:03:04.0±0.8, 4.47N±0.08×78.84W±0.07, h10km, mb4.0/6, Error ellipse: s-maj=12.2km s-min=10.4km az=5.1*
IDC ***17*** *23:03:04.2±1.1, 4.33N×78.80W, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, ML3.2/2, Error ellipse: s-maj=30.9km s-min=21.8km az=46.0*
NEIC ***17*** *23:03:05.5±0.6, 4.39N×78.77W, h10km, mb4.2/2, Error ellipse: s-maj=15.6km s-min=12.9km az=95.0*
ISC 17 23:03:06.0±0.8**, 4.42N**±0.09×**78.84W**±0.07**, h10**km**, n20,** σ**1.30**/16**, mb4.0**/6**, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**4.17**	**175**	*e*Pn	**Pn**	**23 04 10.0**	**+0.3**
ROSC	**El Rosal**	**4.52**	**84**	Pn	**Pn**	**23 04 15.5**	**+1.0**
	7.5nm,0.3s,baz=358,slow=3.4,SNR=13						
ROSC				Sn	**Sn**	**23 05 08.1**	**+1.0**
	1.1nm,0.3s,baz=84,slow=22,SNR=6.0						
SDV	**Santo Domingo**	**9.28**	**61**	Pn	**Pn**	**23 05 18.4**	**-1.5**
SDV	**Santo Domingo**	**9.28**	**61**	Pn	**Pn**	**23 05 18.4**	**-1.5**
	1.6nm,0.3s,baz=290,slow=4.9,SNR=11						
TEIG	**Tepich**	**18.20**	**330**	P	**Pn**	**23 07 25.8**	**+6.8**
	39nm,1.3s						
SJG	**San Juan**	**18.42**	**41**	P	**Pn**	**23 07 19.0**	**-2.7**
	12nm,0.9s						
LPAZ	**La Paz**	**23.14**	**153**	P	**P**	**23 08 11.2**	**-1.3**
	0.8nm,0.8s,mb3.2,baz=3.6,slow=16,SNR=2.0						
PDAR	**Pinedale Array**	**46.92**	**329**	P	**P**	**23 11 38.6**	**+1.8**
	0.4nm,0.5s,mb3.6,baz=123,slow=9.8,SNR=3.5						
ULM	**Lac du Bonnet**	**47.88**	**345**	P	**P**	**23 11 43.5**	**-0.6**
ULM	**Lac du Bonnet**	**47.88**	**345**	P	**P**	**23 11 43.5**	**-0.6**
	1.6nm,0.6s,mb4.2,baz=144,slow=14,SNR=5.6						
SCHQ	**Schefferville**	**51.20**	**9**	P	**P**	**23 12 09.8**	**+0.5**
SCHQ	**Schefferville**	**51.20**	**9**	P	**P**	**23 12 09.8**	**+0.5**
	2.2nm,0.8s,mb4.1,baz=248,slow=5.4,SNR=3.3						
YKA	**Yellowknife Ar**	**63.68**	**342**	P	**P**	**23 13 37.0**	**-0.2**
YKA	**Yellowknife Ar**	**63.68**	**342**	P	**P**	**23 13 37.0**	**-0.2**
	0.8nm,0.7s,mb3.8,baz=129,slow=6.9,SNR=20						
KAF	**Kangasniemi**	**93.15**	**27**	*e*p	**P**	**23 16 23.7**	**+3.5**
	4.2nm,0.6s,mb5.0						
MKAR	**Makanchi Array**	**126.35**	**16**	PKP	PKPdf	23 22 09.5	+0.2
	0.2nm,0.3s,baz=25,slow=2.2,SNR=4.1						
SONM	**Songino Array**	**127.77**	**356**	PKP	PKPdf	23 22 13.2	+1.2
	1.0nm,0.9s,baz=324,slow=1.6,SNR=7.3						
ASAR	**Alice Springs**	**143.08**	**236**	PKP	PKPdf	23 22 38.7	-2.4
	1.1nm,0.7s,baz=117,slow=3.5,SNR=14						
WB2	**Warramunga Arr**	**144.19**	**242**	*e*P	PKPdf	23 22 42.5	-0.6
WRA	**Warramunga Arr**	**144.20**	**242**	PKP	PKPdf	23 22 42.7	-0.4
	3.7nm,0.9s,baz=106,slow=3.0,SNR=32						

IDC 17 23:19:14.3±2.9**, 32.88S**×**178.43W, h0**km**, mb3.8**/2**, mb1 4.1**/3**, mb1mx3.8**/14**, mbtmp3.9**/3**, ML3.8**/1**, Error ellipse: s-maj=70.0km s-min=44.4km az=125.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.49**	**213**	Pn	Pn	23 20 49.9	-1.1
	2.1nm,0.3s,baz=315,slow=3.1,SNR=8.3						
URZ				Sn	Sn	23 22 02.3	-3.4
	1.1nm,0.3s,baz=330,slow=20,SNR=4.4						
ASAR	**Alice Springs**	**42.67**	**270**	P	P	23 27 13.1	+0.1
	0.6nm,0.6s,baz=110,slow=7.4,SNR=13						
WRA	**Warramunga Arr**	**43.89**	**275**	P	P	23 27 22.8	0.0
	1.1nm,0.4s,baz=114,slow=7.9,SNR=34						
FINES	**FINESS Array B**	**147.32**	**338**	PKPbc	PKPbc	23 38 58.3	-0.7
	0.9nm,0.6s,baz=11,slow=3.9,SNR=9.0						

NEIC ***17*** *23:21:20.9±0.8, 24.79N×122.44E, h35km, Error ellipse: s-maj=16.5km s-min=15.0km az=94.0*
BJI ***17*** *23:21:20.4, 24.93N×122.65E, h40km, mb3.9, ML3.6, Ms3.9, Msz3.9*
ISCJB ***17*** *23:21:24.8±1.0, 24.5N±0.1×121.9E±0.2, h78km±10km, mb3.5/5, Error ellipse: s-maj=35.1km s-min=17.1km az=173.8*
IDC ***17*** *23:21:35.6±5.8, 24.81N×122.38E, h177km±58km, mb3.2/5, mb1 3.4/6, mb1mx3.2/20, mbtmp3.2/6, MS3.9/1, Ms1 3.9/1, ms1mx3.2/11, Error ellipse: s-maj=39.6km s-min=17.9km az=70.0*
ISC 17 23:21:25.8±1.0**, 24.5N**±0.1×**121.8E**±0.2**, h69**km±10km**, n9,** σ**0.50**/9**, mb3.5**/5**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.42**	**213**	*e*P	**Pn**	**23 21 37.9**	**+0.1**
YHNB	**Yeheng**	**0.45**	**289**	*e*P	**Pn**	**23 21 38.0**	**-0.1**
QZH	**Quanzhou**	**2.98**	**279**	PG	**Pn**	**23 22 25.4**	**+15**
QZH				LR	LR		
	comp=N,1µm,7.9s						
QZH				LR	LR		
	comp=E,2µm,7.4s						
QZH				LR	LR		
	comp=Z,3µm,7.2s						
KSRS	**Korea Array**	**13.90**	**21**	P	**Pn**	**23 24 39.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=192,slow=12,SNR=12						
KSRS				LR	LR	23 29 09.6	
	comp=Z,503nm,21.0s,baz=307,slow=34						
SONM	**Songino Array**	**26.29**	**336**	P	**P**	**23 26 53.9**	**-0.8**
	comp=Z,0.9nm,0.9s,mb3.2,baz=143,slow=8.2,SNR=6.2						
MKAR	**Makanchi Array**	**38.51**	**315**	P	**P**	**23 28 42.0**	**+0.7**
	comp=Z,0.5nm,0.3s,mb3.8,baz=98,slow=10,SNR=8.9						
WRA	**Warramunga Arr**	**45.84**	**164**	P	**P**	**23 29 40.6**	**-0.5**
	comp=Z,2.4nm,1.2s,mb3.8,baz=345,slow=8.2,SNR=5.1						
ASAR	**Alice Springs**	**49.31**	**165**	P	**P**	**23 30 08.4**	**+0.5**
	comp=Z,0.3nm,0.7s,mb3.3,baz=352,slow=12,SNR=3.8						
YKA	**Yellowknife Ar**	**82.42**	**23**	P	**P**	**23 33 35.4**	**-4.8**
	comp=Z,0.3nm,0.5s,mb3.3,baz=307,slow=5.4,SNR=8.8						

IDC ***17*** *23:51:07.0±1.9, 31.48S×177.98W, h0km, mb4.3/2, mb1 4.4/3, mb1mx3.9/14, mbtmp4.1/3, ML3.5/1, Error ellipse: s-maj=61.3km s-min=37.5km az=140.0*
NEIC ***17*** *23:51:11.0±1.2, 31.71S×177.86W, h35km, mb4.6/1, Error ellipse: s-maj=30.9km s-min=17.9km az=111.0*
ISC 17 23:51:09.9±5.2**, 31.7S**±0.1×**177.7W**±0.8**, h35**km**, n8,** σ**0.35**/5**, mb4.3**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.81**	**212**	Pn	**Pn**	**23 53 00.9**	**-0.1**
	0.6nm,0.3s,baz=162,slow=20,SNR=4.5						
URZ				Sn	**Sn**	**23 54 28.2**	**0.0**
	1.9nm,0.3s,baz=176,slow=20,SNR=8.5						
CTAO	**Charters Tower**	**34.29**	**281**	P	**P**	**23 57 52.6**	**-0.4**
	8.0nm,0.9s,mb4.7						
ASAR	**Alice Springs**	**43.32**	**268**	P	**P**	**23 59 09.0**	**+0.4**
	1.5nm,0.5s,mb4.0,baz=106,slow=7.6,SNR=44						
WRA	**Warramunga Arr**	**44.43**	**273**	P	**P**	**23 59 17.7**	**+0.1**
	2.4nm,0.3s,mb4.4,baz=113,slow=8.1,SNR=63						
FINES	**FINESS Array B**	**146.46**	**339**	PKPbc	PKPbc	00 10 47.5	+1.0
FINES	**FINESS Array B**	**146.46**	**339**	PKPbc	PKPbc	00 10 47.5	+1.0
	1.3nm,0.5s,baz=69,slow=4.6,SNR=18						
HFS	**Hagfors**	**150.57**	**348**	PKPbc	PKPbc	00 10 58.4	+1.2
	2.7nm,0.9s,baz=39,slow=5.5,SNR=2.8						
MMAI	**Mount Meron Ar**	**152.08**	**282**	PKPbc	PKPbc	00 11 04.5	+2.9
	1.6nm,0.7s,baz=72,slow=11,SNR=4.2						

IDC ***17*** *23:59:40.8±4.9, 23.14S×66.03W, h178km±58km, mb3.2/1, Error ellipse: s-maj=77.9km s-min=21.1km az=105.0*
ISCJB ***17*** *23:59:41.4±1.8, 23.17S±0.09×66.3W±0.4, h205km±25km, mb3.7/2, Error ellipse: s-maj=58.0km s-min=13.3km az=174.9*
NEIC ***17*** *23:59:42.1±1.5, 23.15S×66.13W, h195km±18km, mb3.8/3, Error ellipse: s-maj=42.0km s-min=10.6km az=88.0*
ISC 17 23:59:41.8±1.8**, 23.18S**±0.08×**66.3W**±0.4**, h192**km±25km**, n8,** σ**1.28**/8**, mb3.7**/2**, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.07**	**346**	P	**Pn**	**00 01 23.9**	**+1.0**
	0.8nm,0.3s,baz=152,slow=9.9,SNR=19						
LPAZ				S	**Sn**	**00 02 42.6**	**-0.6**
	baz=304,slow=18						
TRQA	**Tornquist**	**15.28**	**167**	*e*Pn	**Pn**	**00 03 08.3**	**+0.6**
	1.6nm,0.4s						
PLCA	**Paso Flores**	**17.86**	**191**	*e*P	**Pn**	**00 03 36.8**	**-1.7**
	0.9nm,0.5s						
PLCA	**Paso Flores**	**17.86**	**191**	P	**Pn**	**00 03 37.4**	**-1.2**
	0.2nm,0.3s,baz=359,slow=12,SNR=5.5						
SJG	**San Juan**	**41.04**	**0**	P	**P**	**00 07 06.7**	**+0.2**
	4.4nm,0.6s,mb4.1						
QSPA	**South Pole Qui**	**67.02**	**180**	P	**P**	**00 10 14.6**	**+1.1**
	0.6nm,0.8s,mb3.3,baz=151,slow=2.3,SNR=11						
TORD	**Torodi Ar. Bea**	**75.67**	**69**	P	**P**	**00 11 05.4**	**-0.9**
	baz=258,slow=5.3						
MKAR	**Makanchi Array**	**145.48**	**39**	PKPbc	PKPbc	00 18 56.8	-0.4
	0.1nm,0.2s,baz=311,slow=3.5,SNR=4.0						

IDC ***18*** *00:03:13.1±1.3, 4.03N×126.88E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/18, mbtmp3.7/6, Error ellipse: s-maj=96.9km s-min=18.5km az=71.0*
NEIC ***18*** *00:03:14.5±0.8, 4.03N×126.94E, h10km, mb3.8/1, Error ellipse: s-maj=65.8km s-min=12.3km az=72.0*
ISCJB ***18*** *00:03:16.0±1.1, 4.0N±0.2×126.9E±0.6, h33km, mb3.7/6, Error ellipse: s-maj=84.9km s-min=14.8km az=161.6*
ISC 18 00:03:18.3±1.0**, 4.0N**±0.2×**126.9E**±0.5**, h35**km**, n9,** σ**0.54**/9**, mb3.7**/6**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.99**	**183**	*e*P	**P**	**00 08 09.4**	**0.0**
	5.7nm,1.6s,mb3.8						
FITZ	**Fitzroy Crossi**	**21.99**	**183**	P	**P**	**00 08 09.6**	**+0.1**
	0.7nm,0.4s,mb3.5,baz=22,slow=8.4,SNR=7.4						
WRA	**Warramunga Arr**	**24.89**	**163**	P	**P**	**00 08 38.1**	**+0.1**
	4.6nm,0.8s,mb4.1,baz=342,slow=10,SNR=28						
WB2	**Warramunga Arr**	**24.89**	**163**	*e*P	**P**	**00 08 37.6**	**-0.4**
WB2				*e*		00 09 12.1	
ASAR	**Alice Springs**	**28.33**	**166**	P	**P**	**00 09 09.8**	**+0.9**
	0.4nm,0.6s,mb3.2,baz=347,slow=13,SNR=6.7						
STKA	**Stephens Creek**	**38.32**	**160**	P	**P**	**00 10 35.0**	**-0.7**
STKA	**Stephens Creek**	**38.32**	**160**	P	**P**	**00 10 35.0**	**-0.7**
	0.9nm,0.4s,mb3.9,baz=336,slow=9.5,SNR=4.4						
SONM	**Songino Array**	**47.10**	**341**	P	**P**	**00 11 47.2**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=160,slow=7.5,SNR=5.2						
MKAR	**Makanchi Array**	**57.43**	**325**	P	**P**	**00 13 03.0**	**-0.5**
	0.6nm,0.4s,mb3.9,baz=122,slow=8.2,SNR=8.6						

MOS ***18*** *00:03:41.3±1.2, 53.33N×160.40E, h54km, mb4.3/20, Error ellipse: s-maj=14.0km s-min=6.9km az=85.2*
NEIC ***18*** *00:03:41.4±0.5, 53.43N×160.43E, h35km, mb4.3/6, Error ellipse: s-maj=11.7km s-min=7.5km az=165.0*
ISCJB ***18*** *00:03:42.6±0.5, 53.31N±0.03×160.40E±0.08, h69km±3km, mb4.0/36, Error ellipse: s-maj=8.8km s-min=3.2km az=28.9*
IDC ***18*** *00:03:42.8±6.6, 53.36N×160.43E, h51km±61km, mb3.7/23, mb1 3.9/23, mb1mx3.8/28, mbtmp3.7/23, Error ellipse: s-maj=18.4km s-min=14.1km az=157.0*
KRSC ***18*** *00:03:43.0±0.6, 53.33N×160.38E, h31km±30km, ML4.6*
ISC 18 00:03:44.0±0.5**, 53.32N**±0.03×**160.35E**±0.08**, h65**km±3km**, n93,** σ**0.96**/116**, mb4.0**/36**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.29**	**222**	*i* P	**Pn**	**00 03 50.3**	**-4.3**
SPN				*i* S	**Sn**	**00 03 55.7**	**-6.5**
NLC	**Nalytchevo**	**0.62**	**257**	*i* P	**Pn**	**00 03 55.7**	**-1.9**
NLC				*i* S	**Sn**	**00 04 05.3**	**-2.3**
AVH	**Avacha**	**0.97**	**268**	*i* P	**Pn**	**00 04 01.7**	**-0.1**
AVH				*i* S	**Sn**	**00 04 14.6**	**-0.4**
PET	**Petropavlovsk**	**1.06**	**255**	*e*PN	**Pn**	**00 04 01.7**	**-1.3**
PET				*e*S	**Sn**	**00 04 18.7**	**+1.6**
PET				pmax	pmax		
	comp=Z,276nm,0.4s						
PET				smax			
	comp=N,589nm,0.4s						
PET				smax			
	comp=E,711nm,0.4s						
PET	**Petropavlovsk**	**1.06**	**255**	*i* P	**Pn**	**00 04 02.0**	**-1.0**
PET				*i* S	**Sn**	**00 04 15.6**	**-1.5**
RUS	**Russkaya**	**1.42**	**232**	*e*P	**Pn**	**00 04 07.5**	**-0.2**
RUS				*i* S	**Sn**	**00 04 24.9**	**-0.7**
GNL	**Ganaly**	**1.49**	**286**	*i* P	**Pn**	**00 04 09.7**	**+1.1**
GNL				*i* S	**Sn**	**00 04 28.9**	**+1.8**
GRL	**Gorelyy**	**1.58**	**242**	*e*P	**Pn**	**00 04 09.8**	**0.0**
GRL				*i* S	**Sn**	**00 04 29.0**	**-0.2**
TUMR	**Tumrok**	**1.97**	**357**	*i* P	**Pn**	**00 04 15.0**	**-0.1**
TUMR				*i* S	**Sn**	**00 04 37.9**	**-0.9**
MIPR	**Malaya Ipel'ka**	**2.42**	**246**	P	**Pn**	**00 04 22.3**	**+1.2**
KMNR	**Kamenistaya**	**2.44**	**359**	*e*P	**Pn**	**00 04 22.3**	**+0.8**
KMNR				*i* S	**Sn**	**00 04 50.2**	**0.0**
BZMR	**Bezymyannaya**	**2.62**	**2**	P	**Pn**	**00 04 23.9**	**-0.1**
BZMR				*i* S	**Sn**	**00 04 53.8**	**-0.8**
KPT	**Kopyto**	**2.66**	**358**	P	**Pn**	**00 04 25.0**	**+0.6**
KPT				*i* S	**Sn**	**00 04 56.1**	**+0.7**
ZLN	**Zelenaya**	**2.72**	**5**	P	**Pn**	**00 04 25.8**	**+0.6**
ZLN				*i* S	**Sn**	**00 04 57.4**	**+0.5**
KOZ	**Kozyrevsk**	**2.76**	**354**	P	**Pn**	**00 04 26.3**	**+0.5**
KOZ				*i* S	**Sn**	**00 04 57.7**	**-0.2**
KOZR	**Kozyr**	**2.77**	**355**	PN	**Pn**	**00 04 26.3**	**+0.4**
KOZR				S	**Sn**	**00 04 57.7**	**-0.4**
KRSR	**Krestovskiy**	**2.91**	**2**	P	**Pn**	**00 04 28.0**	**+0.2**
KRSR				*i* S	**Sn**	**00 05 00.5**	**-1.1**
KLY	**Klyuchi**	**3.01**	**3**	*e*P	**Pn**	**00 04 29.7**	**+0.5**
KLY				*i* S	**Sn**	**00 05 03.2**	**-0.8**
SRDR	**Sredinnyy**	**3.03**	**353**	*i* P	**Pn**	**00 04 30.8**	**+1.3**
SRDR				*i* S	**Sn**	**00 05 05.5**	**+1.0**
KBTR	**Krutoberegovo**	**3.23**	**25**	*e*P	**Pn**	**00 04 31.4**	**-0.8**
KBTR				*i* S	**Sn**	**00 05 06.8**	**-2.6**
BDR	**Baidarnaya**	**3.30**	**8**	P	**Pn**	**00 04 34.3**	**+1.2**
BDR				*i* S	**Sn**	**00 05 12.2**	**+1.2**
SRKR	**Sorokina**	**3.38**	**8**	*e*P	**Pn**	**00 04 35.7**	**+1.5**
SRKR				*i* S	**Sn**	**00 05 14.0**	**+1.0**
SKR	**Severo-Kuril's**	**3.71**	**226**	*e*PN	**Pn**	**00 04 38.5**	**-0.3**
SKR				*e*S	**Sn**	**00 05 23.0**	**+1.7**
SKR				smax			

	comp=N,100nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=Z,50nm,0.5s						
BILL	**Bilibino**	**15.04**	**9**	*i* P	**Pn**	**00 07 11.6**	**-0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ERM	**Erimo**	**16.14**	**232**	*i* P	**Pn**	**00 07 30.3**	**+3.8**
YAK	**Yakutsk**	**18.41**	**310**	*e*Pn	**Pn**	**00 07 53.6**	**-0.7**
	comp=Z,38nm,0.7s						
YAK	**Yakutsk**	**18.41**	**310**	*e*P	**Pn**	**00 07 54.0**	**-0.3**
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,16nm,2.0s						
MAJO	**Matsushiro**	**22.81**	**232**	*e*P	**P**	**00 08 41.7**	**+0.6**
	comp=E,5.1nm,0.7s,mb4.0						
MAJO	**Matsushiro**	**22.81**	**232**	*e*P	**P**	**00 08 41.7**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	**22.81**	**232**	P	**P**	**00 08 42.5**	**+1.4**
MJAR	**Matsushiro Arr**	**22.81**	**232**	P	**P**	**00 08 42.5**	**+1.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	**Matsushiro Arr**	**22.81**	**232**	P	**P**	**00 08 42.5**	**+1.4**
	comp=Z,4.6nm,1.0s,mb3.8,baz=20,slow=12,SNR=8.3						
TIXI	**Tiksi**	**22.94**	**335**	*e*P	**P**	**00 08 41.2**	**-1.0**
	comp=Z,2.8nm,0.6s,mb3.8						
TIXI	**Tiksi**	**22.94**	**335**	*i* P	**P**	**00 08 40.8**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.7						
BOD	**Bodaibo**	**26.17**	**299**	*e*P	**P**	**00 09 11.4**	**-0.5**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.8						
INK	**Inuvik**	**33.60**	**38**	P	**P**	**00 10 17.1**	**-0.4**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	**Inuvik**	**33.60**	**38**	P	**P**	**00 10 17.1**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.1,baz=287,slow=5.8,SNR=10						
SONM	**Songino Array**	**34.00**	**283**	P	**P**	**00 10 22.4**	**+1.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**34.00**	**283**	P	**P**	**00 10 22.4**	**+1.2**
	comp=Z,0.7nm,0.8s,mb3.5,baz=56,slow=8.3,SNR=6.9						
YKA	**Yellowknife Ar**	**42.89**	**43**	P	**P**	**00 11 35.6**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**42.89**	**43**	P	**P**	**00 11 35.6**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.8,baz=298,slow=8.1,SNR=21						
NVS	**Novosibirsk**	**43.12**	**304**	*e*P	**P**	**00 11 36.0**	**-1.4**
KURK	**Kurchatov**	**47.75**	**302**	*i* P	**P**	**00 12 13.7**	**-0.3**
MKAR	**Makanchi Array**	**48.20**	**296**	*e*P	**P**	**00 12 21.3**	**+3.7**
MKAR	**Makanchi Array**	**48.20**	**296**	P	**P**	**00 12 17.6**	**0.0**
	comp=Z,0.5nm,0.4s,mb3.7,baz=57,slow=6.9,SNR=8.1						
ARCES	**ARCESS Array B**	**53.12**	**342**	P	**P**	**00 12 52.6**	**-1.7**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	**ARCESS Array B**	**53.12**	**342**	P	**P**	**00 12 52.6**	**-1.7**
	comp=Z,3.9nm,0.9s,mb4.4,baz=27,slow=5.7,SNR=5.1						
FCC	**Fort Churchill**	**53.21**	**39**	*e*P	**P**	**00 12 54.5**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.4						
FCC	**Fort Churchill**	**53.21**	**39**	*e*P	**P**	**00 12 54.5**	**-0.6**
FCC				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MCMT	**McKenzie Canyo**	**54.13**	**61**	*e*P	**P**	**00 13 02.0**	**0.0**
NVAR	**Mina Array Bea**	**55.52**	**70**	P	**P**	**00 13 10.6**	**-1.5**
	comp=Z,0.3nm,0.5s,mb3.6,baz=299,slow=5.5,SNR=4.4						
RLMT	**Red Lodge**	**55.80**	**59**	*e*P	**P**	**00 13 15.0**	**+1.0**
	comp=Z,5.2nm,1.1s,mb4.5						
PDAR	**Pinedale Array**	**57.28**	**61**	P	**P**	**00 13 25.4**	**+0.8**
	comp=Z,1.1nm,0.8s,mb3.9,baz=321,slow=2.1,SNR=8.2						
JOF	**Joensuu**	**57.43**	**335**	*e*p	**P**	**00 13 24.8**	**-0.5**
	comp=Z,0.5nm,0.3s,mb4.0						
JOF	**Joensuu**	**57.43**	**335**	*e*P	**P**	**00 13 24.8**	**-0.5**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
AKTK	**Aktyubinsk**	**57.79**	**312**	P	**P**	**00 13 27.9**	**-0.2**
AKTO	**Aktyubinsk**	**57.79**	**312**	P	**P**	**00 13 27.9**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
AKTO	**Aktyubinsk**	**57.79**	**312**	P	**P**	**00 13 27.9**	**-0.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=69,slow=9.2,SNR=4.2						
KAF	**Kangasniemi**	**59.34**	**337**	*e*p	**P**	**00 13 37.0**	**-1.6**
	comp=Z,0.6nm,0.3s,mb4.1,baz=33,slow=5.6						
KAF	**Kangasniemi**	**59.34**	**337**	*e*P	**P**	**00 13 37.0**	**-1.6**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**59.98**	**337**	P	**P**	**00 13 43.0**	**0.0**
FINES	**FINESS Array B**	**59.98**	**337**	*e*P	**P**	**00 13 42.9**	**-0.1**
FINES	**FINESS Array B**	**59.98**	**337**	P	**P**	**00 13 43.0**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.2,baz=40,slow=6.3,SNR=13						
OBN	**Obninsk**	**62.41**	**327**	*e*P	**P**	**00 13 59.2**	**-0.4**
OBN				*e*		00 14 39.5	
OBN				*e*S	**S**	**00 22 20.2**	**-0.9**
OBN				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
NB2	**NORSAR Subarra**	**63.37**	**344**	P	**P**	**00 14 06.0**	**+0.2**
	comp=Z,2.1nm,0.7s,mb4.2,baz=21,slow=6.9						
NB2	**NORSAR Subarra**	**63.37**	**344**	P	**P**	**00 14 06.0**	**+0.2**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NOA	**NORSAR Array B**	**63.37**	**344**	P	**P**	**00 14 06.3**	**+0.5**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**63.37**	**344**	P	**P**	**00 14 06.3**	**+0.4**
	comp=Z,2.4nm,0.6s,mb4.3,baz=21,slow=6.7,SNR=8.8						
HFS	**Hagfors**	**63.78**	**342**	P	**P**	**00 14 08.3**	**-0.3**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	**Hagfors**	**63.78**	**342**	P	**P**	**00 14 08.3**	**-0.3**
	comp=Z,1.9nm,0.6s,mb4.1,baz=46,slow=6.4,SNR=6.6						
SCHQ	**Schefferville**	**65.38**	**28**	P	**P**	**00 14 18.2**	**-0.8**
	comp=Z,1.3nm,0.6s,mb4.0,baz=78,slow=18,SNR=6.5						
AKASG	**Malin Array Be**	**68.50**	**329**	P	**P**	**00 14 38.9**	**-0.1**
	comp=Z,0.3nm,0.2s,mb3.7,baz=29,slow=6.9,SNR=4.3						
TXAR	**Lajitas Array**	**70.41**	**67**	P	**P**	**00 14 51.6**	**+0.6**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**70.41**	**67**	P	**P**	**00 14 51.5**	**+0.5**
	comp=Z,1.1nm,0.6s,mb3.9,baz=301,slow=4.2,SNR=22						
EKA	**Eskdalemuir Ar**	**70.86**	**350**	P	**P**	**00 14 54.5**	**+1.1**
EKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**70.86**	**350**	P	**P**	**00 14 54.5**	**+1.1**
	comp=Z,2.5nm,0.8s,mb4.1,baz=20,slow=5.3,SNR=3.8						
CLL	**Collm**	**72.20**	**339**	*e*P	**P**	**00 15 02.0**	**+0.5**
	comp=Z,8.0nm,1.3s,mb4.4						
VRAC	**Vranov**	**73.25**	**336**	P	**P**	**00 15 09.2**	**+1.4**
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VRAC	**Vranov**	**73.25**	**336**	P	**P**	**00 15 09.2**	**+1.4**
	comp=Z,1.9nm,0.6s,mb4.1,baz=7.1,slow=8.1,SNR=3.6						
KHC	**Kasperske Hory**	**74.12**	**338**	*e*P	**P**	**00 15 14.0**	**+1.1**
GERES	**GERESS Array B**	**74.36**	**338**	P	**P**	**00 15 14.4**	**+0.1**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**74.36**	**338**	P	**P**	**00 15 14.4**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.6,baz=35,slow=4.9,SNR=4.4						
WRA	**Warramunga Arr**	**76.35**	**205**	P	**P**	**00 15 25.4**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.2,baz=9.9,slow=5.9,SNR=3.4						
BRTR	**Keskin Array B**	**76.55**	**321**	P	**P**	**00 15 26.9**	**0.0**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**76.55**	**321**	P	**P**	**00 15 26.9**	**0.0**
	comp=Z,0.6nm,0.7s,mb3.5,baz=29,slow=5.6,SNR=3.6						
MIB	**Mutribah**	**78.94**	**305**	*e*P	**P**	**00 15 40.5**	**+0.1**
MIB				AMb	AMB	00 15 42.1	
	comp=Z,15nm,0.7s,mb4.9						
UMR	**Umm Al-Rimmam**	**78.97**	**305**	*e*P	**P**	**00 15 40.8**	**+0.2**
KBD	**Kabd**	**79.29**	**305**	*e*P	**P**	**00 15 42.1**	**-0.2**
KBD				AMb	AMB	00 15 51.8	
	comp=Z,34nm,0.8s,mb5.2						
NAY	**Al-Naaiem**	**79.45**	**305**	*e*P	**P**	**00 15 41.1**	**-2.1**
NAY				AMb	AMB	00 15 45.0	
	comp=Z,8.6nm,1.1s,mb4.5						
RDF	**Al-Radifah**	**79.56**	**305**	*e*P	**P**	**00 15 41.9**	**-2.0**
RDF				AMb	AMB	00 15 45.0	
	comp=Z,17nm,0.7s,mb5.0						
ASAR	**Alice Springs**	**80.03**	**204**	P	**P**	**00 15 47.5**	**+1.4**
	comp=Z,0.3nm,0.5s,mb3.4,baz=17,slow=5.0,SNR=5.2						
MMAI	**Mount Meron Ar**	**81.66**	**316**	P	**P**	**00 15 56.3**	**+1.4**
	comp=Z,0.9nm,0.5s,mb3.9,baz=44,slow=6.4,SNR=3.7						
ESDC	**Sonseca Array**	**86.39**	**348**	P	**P**	**00 16 18.8**	**-0.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=15,slow=4.3,SNR=5.8						

*IDC **18** 00:03:46.6±1.2, 409N×12686E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/19, mbtmp3.9/7, Error ellipse: s-maj=87.7km s-min=16.8km az=70.0*
*NEIC **18** 00:03:48.2±0.8, 406N×12681E, h10km, mb3.7/1, Error ellipse: s-maj=66.2km s-min=11.6km az=72.0*
*ISCJB **18** 00:03:49.7±1.1, 4.1N±02×1268E±05, h33km, mb3.8/7, Error ellipse: s-maj=83.2km s-min=13.3km az=160.5*
ISC 18 00:03:51.9±1.0, **40N**±02×**1268E**±05, **h35**km, **n10**, σ**0ˢ52**/10, **mb3.8**/7, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.03**	**183**	*e*P	**P**	**00 08 43.4**	**-0.1**
	1.7nm,0.5s,mb3.7						
FITZ	**Fitzroy Crossi**	**22.03**	**183**	P	**P**	**00 08 43.7**	**+0.2**
	1.4nm,0.6s,mb3.5,baz=21,slow=14,SNR=4.1						
FITZ	**Fitzroy Crossi**	**22.03**	**183**	*e*	**P**	**00 08 43.8**	**+0.3**
WRA	**Warramunga Arr**	**24.96**	**163**	P	**P**	**00 09 11.4**	**-0.9**
	6.7nm,0.8s,mb4.2,baz=343,slow=10,SNR=12						
ASAR	**Alice Springs**	**28.40**	**166**	P	**P**	**00 09 44.1**	**+1.0**
	0.3nm,0.5s,mb3.1,baz=354,slow=7.5,SNR=3.0						
STKA	**Stephens Creek**	**38.40**	**160**	P	**P**	**00 11 09.8**	**-0.2**
	2.4nm,0.7s,mb4.0,baz=343,slow=11,SNR=4.0						
SONM	**Songino Array**	**47.02**	**341**	P	**P**	**00 12 20.3**	**+0.5**
	0.3nm,0.3s,mb3.6,baz=164,slow=8.4,SNR=6.1						
MKAR	**Makanchi Array**	**57.34**	**325**	P	**P**	**00 13 36.2**	**-0.3**
	0.7nm,0.4s,mb4.1,baz=114,slow=8.1,SNR=6.8						
AKTK	**Aktyubinsk**	**73.45**	**322**	P	**P**	**00 15 20.6**	**-0.2**
AKTO	**Aktyubinsk**	**73.45**	**322**	P	**P**	**00 15 20.6**	**-0.2**
	0.6nm,0.5s,mb3.8,baz=73,slow=14,SNR=2.4						

*ISCJB **18** 00:16:27.2±0.4, 3621N±004×2985E±004, h67km±8km, Error ellipse: s-maj=6.1km s-min=4.7km az=17.9*
*CSEM **18** 00:16:27.0±0.1, 3635N×2988E, h60km, MD3.3*
*ATH **18** 00:16:27.8, 3638N×2976E, h39km±2km, MD3.3/5*
*ISK **18** 00:16:27.3, 3625N×2982E, h64km, ML3.7*
*NEIC **18** 00:16:27.0, 3616N×2982E, h29km, MD3.4(ISK), ML3.3(ATH), After ISK.*
*HLW **18** 00:16:31.0, 3607N×3037E, h18km, Mb3.4*
*DDA **18** 00:16:38.4, 3706N×2903E, h12km, Md3.4*
ISC 18 00:16:28.7±0.4, **3623N**±003×**2983E**±004, **h53**km±10km, **n38**, σ**0ˢ82**/47, **1C-4D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.21**	**249**	*e*PB	**Pn**	**00 16 36.0**	**-1.4**
ELL	**Elmali**	**0.52**	**7**	*i* PG	**Pn**	**00 16 39.8**	**-0.6**
ELL				*i* SG	**Sn**	**00 16 50.0**	**+1.2**
FETY	**Fethiye**	**0.73**	**304**	*i* PG	**Pn**	**00 16 42.4**	**-0.5**
FETY				*i* SG	**Sn**	**00 16 53.2**	**0.0**
ANTB	**Antalya**	**0.94**	**44**	PG	**Pn**	**00 16 46.3**	**+0.6**
ANTB				SG	**Sn**	**00 16 58.5**	**+0.3**
GOLH	**Golhisar**	**1.03**	**348**	*i* P	**Pn**	**00 16 47.2**	**+0.3**
GOLH				*i* S	**Sn**	**00 17 01.2**	**+0.9**
ARG	**Arkhangelos**	**1.38**	**270**	P	**Pn**	**00 16 51.7**	**+0.1**
ARG	**Arkhangelos**	**1.38**	**270**	⇑*i*PN	**Pn**	**00 16 51.6**	**0.0**
YER	**Yerkesik**	**1.54**	**306**	PN	**Pn**	**00 16 53.7**	**-0.1**
YER				SN	**Sn**	**00 17 12.2**	**-0.4**
DENT	**Denizli**	**1.65**	**337**	PN	**Pn**	**00 16 54.9**	**-0.4**
ISP	**Isparta**	**1.70**	**18**	PN	**Pn**	**00 16 56.2**	**+0.2**
DAT	**Datca**	**1.88**	**286**	PN	**Pn**	**00 16 58.6**	**+0.1**
MLSB	**Milas**	**1.96**	**303**	PN	**Pn**	**00 16 59.7**	**+0.2**
BDRM	**Kayabasi**	**2.09**	**294**	*i* P	**Pn**	**00 17 01.8**	**+0.4**
BDRM				*i* S	**Sn**	**00 17 25.8**	**-0.4**
BODT	**Bodrum**	**2.19**	**293**	PN	**Pn**	**00 17 03.1**	**+0.4**
KARP	**Karpathos**	**2.27**	**253**	*e*PN	**Pn**	**00 17 04.7**	**+0.9**
KARP				*e*SN	**Sn**	**00 17 31.9**	**+1.3**
SHUT	**Suhut-Afyon**	**2.39**	**14**	PN	**Pn**	**00 17 04.8**	**-0.6**
KULA	**Kula-Manisa**	**2.46**	**338**	PN	**Pn**	**00 17 05.4**	**-1.0**
MANT	**Manisa**	**2.48**	**336**	*i* P	**Pn**	**00 17 05.2**	**-1.3**
MANT				*i* S	**Sn**	**00 17 34.7**	**-0.9**
SMG	**Samos**	**2.82**	**303**	P	**Pn**	**00 17 11.4**	**+0.2**
SMG	**Samos**	**2.82**	**303**	*e*PN	**Pn**	**00 17 10.6**	**-0.6**
SMG				*e*SN	**Sn**	**00 17 42.0**	**-1.9**
AKS	**Akhisar**	**3.09**	**329**	*e*PN	**Pn**	**00 17 13.8**	**-1.2**
BLCB	**Balcova**	**3.10**	**315**	*e*PN	**Pn**	**00 17 14.6**	**-0.4**
KIZT	**Kizilcal**	**3.11**	**31**	*e*PN	**Pn**	**00 17 15.8**	**+0.6**
IKL	**Isikli**	**3.12**	**89**	*e*PN	**Pn**	**00 17 15.5**	**+0.2**
CSS	**Prodhromos**	**3.12**	**113**	*e*PN	**Pn**	**00 17 15.4**	**0.0**
ESKT	**Eskisehir**	**3.38**	**13**	*e*PN	**Pn**	**00 17 19.9**	**+0.9**
NPS	**Neapolis**	**3.56**	**256**	P	**Pn**	**00 17 22.6**	**+1.1**
NPS	**Neapolis**	**3.56**	**256**	*e*PN	**Pn**	**00 17 21.9**	**+0.4**
MERS	**Mersin**	**3.83**	**79**	*e*PN	**Pn**	**00 17 26.2**	**+1.1**
PRK	**Paraskevi**	**4.13**	**318**	*e*PN	**Pn**	**00 17 29.1**	**-0.1**
VAM	**Vamos**	**4.65**	**261**	*e*PN	**Pn**	**00 17 37.6**	**+1.3**
VLI	**Veliai**	**5.58**	**277**	P	**Pn**	**00 17 51.0**	**+1.9**
AMAG	**Maghara**	**6.24**	**152**	⇓P	**Pn**	**00 17 57.4**	**-0.8**
GLL	**Jalalah**	**6.82**	**166**	P	**Pn**	**00 18 06.1**	**0.0**
SUZ		**6.85**	**158**	⇓P	**Pn**	**00 18 06.3**	**-0.2**
NVR	**Nevrokopi**	**6.92**	**319**	P	**Pn**	**00 18 08.4**	**+1.0**
HNKL	**Nakhl**	**7.18**	**150**	⇓P	**Pn**	**00 18 09.8**	**-1.2**
HKAT	**Jabal Katrina**	**8.45**	**154**	⇓P	**Pn**	**00 18 27.6**	**-0.9**

MOS 18 00:19:10.7±0.3, **4327N**×**4536E**, **h115**km, **mb3.7**/1, **7C-2D**, **Error ellipse: s-maj=42.7km s-min=19.3km az=166.2**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJR	**Sundja**	**0.45**	**243**	⇓*i*P	Pn	00 19 29.1	+1.4
SNJR				*i* S	Sn	00 19 43.5	+2.9
VLKR	**Vladikavkaz**	**0.55**	**246**	*e*P	Pn	00 19 29.8	+1.4
VLKR				*e*S	Sn	00 19 44.3	+2.7
BTKR	**Batakoyurt**	**0.60**	**280**	⇑*i*P	Pn	00 19 30.2	+1.5
BTKR				*i* S	Sn	00 19 45.1	+2.7
TRKR	**Terskaya**	**0.64**	**315**	⇑*i*P	Pn	00 19 29.9	+0.9
TRKR				*i* S	Sn	00 19 44.8	+1.9
KMSR	**Komsomolskaya**	**0.78**	**277**	*i* P	Pn	00 19 31.9	+1.7
KMSR				*i* S	Sn	00 19 48.4	+3.5
ARNR	**Ardon**	**0.79**	**264**	⇓*i*P	Pn	00 19 31.5	+1.2
ARNR				*e*S	Sn	00 19 47.1	+2.0
LACR	**Lac**	**0.90**	**240**	⇑*i*P	Pn	00 19 32.1	+0.8
LACR				*i* S	Sn	00 19 48.8	+2.0
PRTR	**Priterechnaya**	**0.92**	**302**	⇑*i*P	Pn	00 19 32.2	+0.8
PRTR				*i* S	Sn	00 19 48.7	+1.6
LSNR	**Lesken**	**1.12**	**271**	⇑*i*P	Pn	00 19 34.3	+0.8
LSNR				*i* S	Sn	00 19 52.2	+1.3
ZEI	**Tsey**	**1.18**	**245**	⇑*i*P	Pn	00 19 34.6	+0.4
ZEI				*i* S	Sn	00 19 52.2	+0.3
DIGR	**Digorskoe uzhe**	**1.35**	**255**	⇑*i*P	Pn	00 19 36.5	+0.4
DIGR				*i* S	Sn	00 19 56.2	+0.9

MAN 18 00:19:42, 1043N×**12591E, h21**km**, mb4.0, ML2.8, MS2.5, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.77**	**213**	*e*P	Pb	00 19 57.6	+0.9
SCPH				*e*S	Sb	00 20 07.2	+0.5
MSLP	**Maasin**	**1.08**	**254**	*e*P	Pn	00 20 02.0	+0.2
MSLP				*e*S	Sb	00 20 17.9	+2.4
PLP	**Palo**	**1.17**	**309**	*e*P	Pn	00 20 03.9	+0.8
PLP				*e*S	Sb	00 20 19.2	+1.0
BUKP	**Musuan**	**2.67**	**198**	*e*P	Pn	00 20 25.3	+1.4
PVCP	**Virac**	**3.58**	**332**	*e*P	Pn	00 20 38.4	+2.1

*ISCJB **18** 00:30:13.0±0.3, 3759N±002×7230E±004, h132km±4km, mb4.2/55, Error ellipse: s-maj=4.9km s-min=3.1km az=176.2*
*BJI **18** 00:30:13.8, 3778N×7208E, h137km, mB4.7, mb4.8*
*MOS **18** 00:30:14.1±1.0, 3767N×7223E, h140km, mb4.2/36, Error ellipse: s-maj=8.4km s-min=5.2km az=111.9*
*NEIC **18** 00:30:14.2±0.8, 3759N×7220E, h126km±7km, mb4.4/25, Error ellipse: s-maj=8.1km s-min=4.9km az=205.0*
*IDC **18** 00:30:15.6±0.6, 3748N×7221E, h140km±5km, mb3.9/21, mb1 4.0/21, mb1mx4.0/24, mbtmp3.9/21, Error ellipse: s-maj=15.9km s-min=9.3km az=18.0*
*NNC **18** 00:30:22.4±3.0, 3835N×7208E, h226km±25km, mb3.5, mpv4.7, Error ellipse: s-maj=30.8km s-min=14.7km az=17.0*
ISC 18 00:30:13.9±0.3, **3757N**±002×**7227E**±004, **h124**km±3km, **h142**km±4.5km**:pP-P, n201,** σ**1ˢ19**/233, **mb4.3**/55, **10C-15D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.50**	**55**	P	**Pn**	**00 31 10.5**	**+3.7**
KSH				S	**Sn**	**00 31 50.8**	**+3.1**
KSH				Smax			
	comp=N,3µm,0.5s						
KSH				Smax			
	comp=E,3µm,0.7s						
CEP	**Cherat**	**3.75**	**185**	⇓P	**Pn**	**00 31 12.6**	**+2.5**
CEP				S	**Sn**	**00 31 55.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.98**	**168**	⇑P	**Pn**	**00 31 16.6**	**+3.3**
SRNI	**Srinagar**	**4.04**	**148**	*e*P	**Pn**	**00 31 20.5**	**+6.4**
SRNI				*e*S	**Sn**	**00 32 10.5**	**+10**
AML	**Almayashu**	**4.69**	**13**	*e*Pn	**Pn**	**00 31 23.1**	**+0.5**
AML				*e*Sn	**Sn**	**00 32 15.4**	**-0.7**
AML	**Almayashu**	**4.69**	**13**	P	**Pn**	**00 31 23.4**	**+0.8**
	SNR=254						
THW	**Thamme Wali**	**4.78**	**185**	⇑P	**Pn**	**00 31 25.4**	**+1.4**
UCH	**Uchtor**	**4.97**	**20**	⇓*i*Pn	**Pn**	**00 31 27.2**	**+0.8**
UCH				*e*Sn	**Sn**	**00 32 19.5**	**-3.3**
UCH	**Uchtor**	**4.97**	**20**	P	**Pn**	**00 31 27.5**	**+1.2**
	SNR=133						
KZA	**Kyzart**	**5.06**	**26**	P	**Pn**	**00 31 28.4**	**+0.8**
	SNR=51						
EKS2	**Erkin-Say**	**5.22**	**12**	⇓*i*Pn	**Pn**	**00 31 30.5**	**+0.7**
	comp=E,645nm,1.0s						
EKS2				*e*Sn	**Sn**	**00 32 28.1**	**-0.8**
EKS2	**Erkin-Say**	**5.22**	**12**	P	**Pn**	**00 31 30.4**	**+0.6**
	SNR=352						
AAK	**Ala-Archa**	**5.34**	**18**	⇓*i*Pn	**Pn**	**00 31 31.7**	**+0.3**
	comp=E,180nm,0.4s						
AAK				*e*Sn	**Sn**	**00 32 30.0**	**-1.8**
AAK	**Ala-Archa**	**5.34**	**18**	⇓*i*PN	**Pn**	**00 31 31.7**	**+0.3**
AAK				*e*		00 32 30.0	
AAK				pmax	pmax		
	comp=Z,180nm,0.4s						
AAK	**Ala-Archa**	**5.34**	**18**	P	**Pn**	**00 31 32.7**	**+1.3**
	SNR=139						
SBDP	**Sheikh Budin**	**5.39**	**193**	⇓P	**Pn**	**00 31 33.3**	**+1.2**
KBK	**Karagaybulak**	**5.48**	**21**	P	**Pn**	**00 31 34.6**	**+1.3**
	SNR=26						
FRU	**Bishkek**	**5.56**	**18**	*e*PN	**Pn**	**00 31 35.0**	**+0.7**
FRU				*i* S	**Sn**	**00 32 37.0**	**-0.1**
FRU				pmax	pmax		
	comp=Z,100nm,1.4s						
FRU				smax			
	comp=N,810nm,1.8s						
ULHL	**Ulahol**	**5.58**	**32**	P	**Pn**	**00 31 35.4**	**+0.8**
	SNR=12						
KK31	**Karatay Array**	**5.69**	**347**	⇑P	**Pn**	**00 31 35.6**	**-0.6**
	comp=N,138nm,0.4s,baz=160,slow=11,SNR=1488						
KK31				S	**Sn**	**00 32 35.5**	**-4.8**
	comp=N,184nm,0.5s,baz=158,slow=18,SNR=12						
KK31	**Karatay Array**	**5.69**	**347**	*i* PN	**Pn**	**00 31 35.5**	**-0.6**
KK31				pmax	pmax		
	comp=Z,158nm,0.3s						
CHMS	**Chumysh**	**5.75**	**18**	P	**Pn**	**00 31 37.8**	**+0.9**
	SNR=75						
THN	**Thein Dam**	**5.85**	**150**	*e*P	**Pn**	**00 31 39.3**	**+1.0**
THN				*e*S	**Sn**	**00 32 40.7**	**-3.4**
DLH	**Dalhousie**	**5.86**	**148**	*e*P	**Pn**	**00 31 39.0**	**+0.6**
DLH				*e*S	**Sn**	**00 32 42.0**	**-2.3**
TKM2	**Tokmak 2**	**5.92**	**24**	⇑P	**Pn**	**00 31 39.9**	**+0.7**
	comp=Z,34nm,0.5s						
TKM2				⇑S	**Sn**	**00 32 44.6**	**-1.2**
	comp=Z,98nm,0.7s						
TKM2	**Tokmak 2**	**5.92**	**24**	⇓*e*Pn	**Pn**	**00 31 39.9**	**+0.7**
	comp=Z,45nm,0.5s						
TKM2	**Tokmak 2**	**5.92**	**24**	⇓*e*PN	**Pn**	**00 31 39.9**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,45nm,0.5s						
TKM2	**Tokmak 2**	**5.92**	**24**	P	**Pn**	**00 31 40.1**	**+0.9**
	SNR=81						
USP	**Ospenovka**	**5.94**	**16**	P	**Pn**	**00 31 39.8**	**+0.3**
	SNR=22						
DRP	**Derazinda**	**6.05**	**197**	⇓P	**Pn**	**00 31 42.4**	**+1.3**
DRP				S	**Sn**	**00 32 47.0**	**-2.0**
KNDC	**Almaty**	**6.69**	**31**	⇓P	**Pn**	**00 31 51.8**	**+2.3**
	comp=Z,21nm,0.5s						
SDNR	**Sundarnagar**	**7.18**	**146**	*e*P	**Pn**	**00 31 57.0**	**+0.6**
SDNR				*e*S	**Sn**	**00 33 12.0**	**-4.5**
DDI	**Dehra Dun**	**8.67**	**145**	*e*P	**Pn**	**00 32 15.3**	**-1.2**
DDI				*e*S	**Sn**	**00 33 46.8**	**-5.7**
JOSI	**Joshimath**	**9.24**	**137**	*e*P	**Pn**	**00 32 24.2**	**+0.1**
JOSI				*e*S	**Sn**	**00 33 59.3**	**-6.9**
NDI	**New Delhi**	**9.78**	**154**	*e*P	**Pn**	**00 32 31.0**	**-0.3**
NDI				*e*S	**Sn**	**00 34 11.6**	**-7.7**
KUDL	**Kundal**	**10.04**	**158**	*e*P	**Pn**	**00 32 33.3**	**-1.5**
KUDL				*e*S	**Sn**	**00 34 18.1**	**-7.6**
SONA	**Sohna**	**10.13**	**155**	*e*P	**Pn**	**00 32 35.6**	**-0.5**
SONA				AMb	AMB	00 32 36.6	
	comp=Z,47nm,0.7s						
SONA				*e*S	**Sn**	**00 34 19.2**	**-8.6**
PTH	**Pithoragarh**	**10.38**	**138**	*e*P	**Pn**	**00 32 37.9**	**-1.5**
PTH				*e*S	**Sn**	**00 34 27.8**	**-6.1**
LGTI	**Lohaghat**	**10.47**	**138**	*e*P	**Pn**	**00 32 37.5**	**-3.2**
LGTI				*e*S	**Sn**	**00 34 25.3**	**-11**
AJM	**Ajmer**	**11.23**	**169**	*e*x	**Pn**	**00 32 56.0**	**+5.2**
AJM				*e*S	**Sn**	**00 34 47.0**	**-7.6**
AGRA	**Agra**	**11.36**	**153**	*e*P	**Pn**	**00 32 51.4**	**-1.1**
AGRA				*e*S	**Sn**	**00 34 48.4**	**-9.2**
MK31	**Makanchi Array**	**11.83**	**36**	P	**Pn**	**00 32 57.9**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=218,slow=16,SNR=24						
MK31	**Makanchi Array**	**11.83**	**36**	*i* P	**Pn**	**00 32 57.9**	**-0.6**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**11.83**	**36**	P	**Pn**	**00 32 58.6**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**11.83**	**36**	P	**Pn**	**00 32 58.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=223,slow=13,SNR=30						
WMQ	**Urumqi**	**13.26**	**57**	*e*P	**Pn**	**00 33 22.0**	**+4.8**
KOLN	**Koldanda**	**13.64**	**132**	*e*P	**Pn**	**00 33 20.4**	**-1.8**
	comp=Z,72nm,0.4s						
KURBB	**Kurchatov Arra**	**13.80**	**17**	⇓P	**Pn**	**00 33 20.5**	**-3.5**
	comp=Z,4.3nm,0.8s						
KURK	**Kurchatov**	**13.91**	**17**	P	**Pn**	**00 33 21.1**	**-4.3**
KURK	**Kurchatov**	**13.91**	**17**	*e*Pn	**Pn**	**00 33 22.3**	**-3.1**
KURK	**Kurchatov**	**13.91**	**17**	⇑*e*P	**Pn**	**00 33 21.8**	**-3.6**
GKN	**Gorkha**	**14.10**	**129**	*e*P	**Pn**	**00 33 25.8**	**-2.3**
	comp=Z,161nm,0.4s						
KKN	**Kakani**	**14.65**	**128**	*e*P	**Pn**	**00 33 32.6**	**-2.4**
	comp=Z,117nm,0.5s						
AB31	**Akbulak array**	**14.70**	**327**	⇑P	**Pn**	**00 33 31.8**	**-3.7**
	comp=Z,12nm,0.4s,baz=141,slow=12,SNR=392						
AB31				S	**Sn**	**00 36 03.1**	**-15**
	comp=Z,48nm,0.8s,baz=139,slow=22,SNR=13						
JIRN	**Jiri**	**15.32**	**126**	*e*P	**Pn**	**00 33 41.6**	**-1.8**
	comp=Z,239nm,0.4s						
BRVK	**Borovoye**	**15.56**	**356**	*e*Pn	**Pn**	**00 33 43.5**	**-2.6**
CHKZ	**Chkalovo**	**16.15**	**356**	*i* P	**Pn**	**00 33 51.1**	**-2.4**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.6s						
AKTK	**Aktyubinsk**	**16.41**	**326**	P	**Pn**	**00 33 55.5**	**-1.3**
AKTK				S	**S**	**00 36 45.6**	**-14**
AKTO	**Aktyubinsk**	**16.41**	**326**	⇓P	**Pn**	**00 33 55.0**	**-1.7**
	comp=Z,7.1nm,0.8s						
AKTO				⇑S	**S**	**00 36 42.2**	**-17**
	comp=Z,2.7nm,0.6s						
AKTO	**Aktyubinsk**	**16.41**	**326**	P	**Pn**	**00 33 55.5**	**-1.2**
AKTO				S	**S**	**00 36 45.6**	**-14**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.41**	**326**	P	**Pn**	**00 33 55.5**	**-1.3**
	comp=N,5.9nm,0.3s,baz=137,slow=13,SNR=52						
AKTO				S	**S**	**00 36 45.6**	**-14**
	comp=N,2.4nm,0.3s,baz=140,slow=16,SNR=6.4						
TAPN	**Taplejung**	**16.52**	**124**	*e*P	**Pn**	**00 33 56.8**	**-1.4**
	comp=N,120nm,0.6s						
ODAN	**Odare**	**16.64**	**126**	*e*P	**Pn**	**00 33 58.2**	**-1.5**
	comp=N,146nm,0.5s						
LSA	**Lhasa**	**17.55**	**111**	*e*P	**Pn**	**00 34 13.1**	**+2.3**
	comp=N,23nm,0.6s						
LSA	**Lhasa**	**17.55**	**111**	*e*P	**Pn**	**00 34 13.1**	**+2.4**
LSA				pmax	pmax		
	comp=Z,23nm,0.6s						
NVS	**Novosibirsk**	**18.83**	**20**	*e*P	**P**	**00 34 23.0**	**-0.7**
NVS				*e*S	**S**	**00 37 45.0**	**-6.1**
NVS				pmax	pmax		
	comp=Z,13nm,1.3s						

NVS pmax pmax
comp=N,18nm,1.5s
NVS smax
comp=N,34nm,1.8s
NVS smax
comp=E,16nm,1.8s
POO Poona 19.02 175 *e*P **P 00 34 28.0 +1.9**
SHL Shillong 20.50 120 *e*P **P 00 34 45.0 +2.9**
SVE Sverdlovsk 20.77 342↓*e*P **P 00 34 44.4 -0.3**
SVE *e* 00 35 24.8
SVE *e*S **S 00 38 21.9 -7.5**
SVE pmax pmax
comp=Z,23nm,0.9s
SVE MLR MLR
comp=Z,269nm,8.0s
HYB Hyderabad 20.82 163 *e*P **P 00 34 46.5 +1.0**
HYB *e*S **S 00 38 30.0 -0.9**
HYB Hyderabad 20.82 163 *i* P **P 00 34 46.5 +1.0**
HYB *e*S **S 00 38 30.0 -0.9**
ARU Arti 20.99 338 *e*P **P 00 34 46.6 -0.4**
comp=Z,28nm,0.8s
ARU Arti 20.99 338 *d i*P **P 00 34 46.1 -0.9**
ARU PPP 00 35 18.3
ARU S **S 00 38 32.7 -0.8**
ARU pmax pmax
comp=Z,46nm,1.2s
DGRG David-gareji 21.08 289 P **P 00 34 53.0 +4.9**
MTA Mtatsminda 21.52 290 P **P 00 34 54.8 +2.0**
TBLG Delisi 21.56 290 P **P 00 34 54.7 +1.4**
GTA Gaotai 21.61 77 P **P 00 34 56.3 +2.5**
GTA AMB AMB
comp=Z,34nm,0.8s,mb4.7
UMR Umm Al-Rimmam 21.93 256 *e*P **P 00 34 57.7 +0.5**
UMR AMb AMB 00 35 03.8
comp=Z,24nm,0.5s,mb4.8
GOR Gori 22.04 290 P **P 00 35 00.7 +2.3**
MIB Mutribah 22.10 257 *e*P **P 00 34 59.6 +0.5**
MIB AMb AMB 00 35 08.8
comp=Z,20nm,0.6s,mb4.6
ZEI Tsey 22.24 292 *e*P **P 00 34 59.7 -0.7**
ZEI pmax pmax
comp=Z,11nm,0.7s,mb4.3
RDF Al-Radifah 22.35 255 *e*P **P 00 35 01.9 +0.3**
RDF AMb AMB 00 35 04.4
comp=Z,16nm,1.0s,mb4.3
IMP Imphal 22.43 118 *e*P **P 00 35 05.0 +2.5**
NAY Al-Naaiem 22.43 256 *e*P **P 00 35 02.5 0.0**
NAY AMb AMB 00 35 05.0
comp=Z,6.8nm,0.6s,mb4.2
RST Umm Al-Ruwaisa 22.50 257 *e*P **P 00 35 03.0 -0.3**
RST AMb AMB 00 35 06.7
comp=Z,7.2nm,0.8s,mb4.1
KIV Kislovodsk 23.22 295 *e*P **P 00 35 10.3 +0.6**
comp=Z,28nm,0.6s,mb4.8
KIV Kislovodsk 23.22 295 *e*P **P 00 35 10.3 +0.5**
KIV pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
LZH Lanzhou 25.26 84 P **P 00 35 29.8 +1.4**
LZH AP pP 00 36 02.3 +7.4
LZH PP 00 36 16.4
LZH AMB AMB
comp=Z,18nm,1.1s,mb4.4
LZH AMB AMB
comp=Z,49nm,4.7s
ZAK Zakamensk 25.53 50 *e*P **P 00 35 32.3 +1.7**
ZAK *e* 00 36 05.6
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb3.5
ZAK pmax pmax
comp=Z,3.0nm,0.9s,mb3.7
MALT Malatya 26.62 282 *e*P **P 00 35 41.8 +1.2**
comp=Z,3.6nm,1.1s,mb3.8
MALT Malatya 26.62 282 *e*P **P 00 35 41.8 +1.2**
MALT pmax pmax
comp=Z,4.0nm,1.1s,mb3.9
SONM Songino Array 26.90 57 P **P 00 35 43.8 +0.8**
SONM pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 26.90 57 P **P 00 35 43.8 +0.8**
comp=Z,1.5nm,0.7s,mb3.6,baz=264,slow=10,SNR=16
VRSR Storozhevoye 27.03 311 *e*P **P 00 35 44.2 0.0**
VRSR pmax pmax
comp=Z,2.0nm,0.8s,mb3.7
VRSR pmax pmax
comp=N,2.0nm,1.0s
VRSR pmax pmax
comp=E,3.0nm,0.9s
ULN Ulaanbaatar 27.34 57 *e*P **P 00 35 47.8 +0.8**
PRGR Permogore 29.24 334 *e*P **P 00 36 10.5 +6.9**
PRGR *e* 00 39 09.5
XAN Xi'an 29.81 86 P **P 00 36 10.4 +1.4**
XAN AMB AMB
comp=Z,7.0nm,0.7s,mb4.4
OBN Obninsk 29.82 318 *e*P **P 00 36 08.9 +0.1**
comp=Z,32nm,0.5s,mb5.2
OBN Obninsk 29.82 318↑*e*P **P 00 36 08.7 -0.1**
OBN *e**PP pP 00 36 35.0 -0.8
OBN *e* 00 37 07.9
OBN pmax pmax
comp=Z,25nm,0.6s,mb5.0
BR131 Keskin Array S 30.10 286 *e*P **P 00 36 12.2 +0.7**
comp=Z,1.3nm,0.5s,mb3.8
BRTR Keskin Array B 30.10 286 P **P 00 36 12.8 +1.3**
BRTR 00 37 10.3
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 30.10 286 P **P 00 36 12.8 +1.3**
comp=Z,2.4nm,0.7s,mb4.0,baz=92,slow=7.2,SNR=23
BRTR PP PP 00 37 10.2 -11
comp=Z,1.3nm,0.7s,baz=97,slow=10,SNR=4.6
AKASG Malin Array Be 33.09 307 P **P 00 36 37.6 0.0**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 33.09 307 P **P 00 36 37.6 0.0**
comp=Z,3.6nm,0.5s,mb4.5,baz=110,slow=8.8,SNR=20
MLR Muntele Rosu 35.16 298 P **P 00 36 56.0 +0.4**
MLR pmax pmax
comp=Z,15nm,0.9s
MLR Muntele Rosu 35.16 298 P **P 00 36 56.0 +0.5**
comp=Z,15nm,0.9s,mb4.8,baz=180,slow=3.8,SNR=10
JOF Joensuu 35.47 329 *ep* **P 00 36 57.8 -0.1**
comp=Z,8.0nm,0.4s,mb4.9
JOF Joensuu 35.47 329 *e*P **P 00 36 57.8 -0.1**
JOF pmax pmax
comp=Z,8.0nm,0.4s,mb4.9
FIA1 FINESS Array S 37.18 325 *e*P **P 00 37 12.1 -0.4**
FINES FINESS Array B 37.18 325 P **P 00 37 12.6 +0.1**
FINES 00 38 37.3
FINES pmax pmax
comp=Z,4.0nm,0.5s
FINES pmax pmax
comp=Z,2.0nm,0.6s
FINES FINESS Array B 37.18 325 P **P 00 37 12.6 +0.1**
comp=Z,4.0nm,0.5s,mb4.7,baz=117,slow=9.7,SNR=58
FINES PP PP 00 38 37.3 -2.3
comp=Z,2.4nm,0.6s,baz=102,slow=8.8,SNR=3.8
KAF Kangasniemi 37.30 326 *ep* **P 00 37 13.3 -0.1**
comp=Z,2.6nm,0.5s,mb4.4,baz=109,slow=8.6
KAF Kangasniemi 37.30 326 *e*P **P 00 37 13.3 -0.1**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
KOLS Kolonicke sedl 37.51 304 *e*P **P 00 37 15.2 -0.2**
KOLS *e*PP PP 00 38 41.7 -1.7
CRVS Cervenica-Dubn 38.05 304 *e*PP PP 00 38 47.4 -1.8
STHS Stebnicka Huta 38.17 305 *e*P **P 00 37 21.6 +0.6**
comp=Z,2.3nm,1.0s,mb4.0
STHS *e*PP PP 00 38 55.7 +5.1
STHS Stebnicka Huta 38.17 305 *e*P **P 00 37 21.6 +0.6**
STHS pmax pmax
comp=Z,2.0nm,1.0s,mb3.9
NJ2 Nanjing 38.34 84 *e*P **P 00 37 24.3 +1.7**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.9
KEV Kevo 40.20 337 *ep* **P 00 37 37.5 -0.1**
comp=Z,0.4nm,0.3s,mb3.7
ARCES ARCESS Array B 40.56 337 P **P 00 37 40.9 +0.4**
ARCES pmax pmax
comp=Z,6.0nm,0.7s
ARCES ARCESS Array B 40.56 337 P **P 00 37 40.9 +0.4**
comp=Z,6.0nm,0.7s,mb4.5,baz=119,slow=9.5,SNR=35
DPC Dobruska-Polom 41.31 306 *e*P **P 00 37 47.8 +0.9**
UPC Upice 41.49 307 *e*P **P 00 37 49.5 +1.1**
PSI Prapat 42.37 138 P **P 00 37 55.8 -0.1**
PSI pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
PSI Prapat 42.37 138 P **P 00 37 55.8 -0.1**
comp=Z,3.5nm,0.6s,mb4.2,baz=263,slow=7.9,SNR=5.7
GERES GERESS Array B 43.16 305 P **P 00 38 02.7 +0.8**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 43.16 305 P **P 00 38 02.7 +0.8**
comp=Z,0.8nm,0.5s,mb3.7,baz=79,slow=6.9,SNR=4.5
KHC Kasperske Hory 43.20 305 *e*P **P 00 38 03.2 +1.0**
KHC *e* 00 38 13.0
KHC Kasperske Hory 43.20 305 *e*P **P 00 38 03.2 +1.0**
KHC x x 00 38 13.0
KSRS Korea Array 43.58 72 P **P 00 38 06.7 +1.2**
comp=Z,1.2nm,0.3s,mb4.1,baz=284,slow=6.3,SNR=7.8
NB2 NORSAR Subarra 44.15 322 P **P 00 38 09.3 -0.4**
comp=Z,3.5nm,0.5s,mb4.3,baz=92,slow=7.9
NB2 NORSAR Subarra 44.15 322 P **P 00 38 09.3 -0.4**
NB2 pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
NOA NORSAR Array B 44.15 322 P **P 00 38 09.6 -0.1**
NOA 00 39 52.6
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA pmax pmax
comp=Z,2.0nm,0.9s
NOA NORSAR Array B 44.15 322 P **P 00 38 09.6 -0.1**
comp=Z,4.6nm,0.6s,mb4.4,baz=93,slow=7.7,SNR=22
NOA PP PP 00 39 52.5 -2.2
comp=Z,1.9nm,0.9s,baz=105,slow=9.5,SNR=3.4
TIXI Tiksi 44.41 22 *e*P **P 00 38 12.0 +0.4**
comp=Z,8.7nm,1.1s,mb4.4
TIXI Tiksi 44.41 22 *e*P **P 00 38 10.8 -0.8**
TIXI pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
KONO Kongsberg 44.91 320 *e*P **P 00 38 15.1 -0.7**
comp=Z,10nm,0.8s,mb4.6
KONO Kongsberg 44.91 320 *e*P **P 00 38 15.1 -0.6**
KONO pmax pmax
comp=Z,10.0nm,0.8s,mb4.6
DAVA Damuels 45.94 303↓*i*P **P 00 38 24.5 +0.4**
comp=Z,9.5nm,0.5s,mb4.8
CDF Champ du Feu 47.43 305 *e*P **P 00 38 34.7 -0.9**
comp=Z,2.5nm,0.6s,mb3.8
CDF Champ du Feu 47.43 305 *e*P **P 00 38 34.7 -0.9**
comp=Z,1.3nm,0.6s,mb3.8
CDF Champ du Feu 47.43 305 *e*P **P 00 38 34.7 -0.9**
CDF pmax pmax
comp=Z,1.0nm,0.6s,mb3.7
PGF Pioggiola 47.69 297 *e*P **P 00 38 36.2 -1.5**
comp=Z,13nm,0.9s,mb4.5
PGF Pioggiola 47.69 297 *e*P **P 00 38 36.2 -1.5**
comp=Z,6.3nm,0.9s,mb4.5
PGF Pioggiola 47.69 297 *e*P **P 00 38 36.2 -1.5**
PGF pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
HINF Hinteralfeld 47.83 304 *e*P **P 00 38 37.9 -0.8**
comp=Z,4.0nm,0.7s,mb4.1
HINF Hinteralfeld 47.83 304 *e*P **P 00 38 37.9 -0.8**
comp=Z,2.0nm,0.7s,mb4.1
HINF Hinteralfeld 47.83 304 *e*P **P 00 38 37.9 -0.8**
HINF pmax pmax
comp=Z,2.0nm,0.7s,mb4.1
JOW Kunigami 47.97 86 P **P 00 38 41.0 +1.0**
comp=Z,11nm,0.4s,mb5.0,baz=132,slow=12,SNR=5.5
LPG La Plagne 48.46 301 *e*P **P 00 38 43.7 +0.1**
LPL La Plagne 48.47 301 *e*P **P 00 38 43.7 +0.1**
comp=Z,2.9nm,0.4s,mb4.2
LPL La Plagne 48.47 301 *e*P **P 00 38 43.7 +0.1**
comp=Z,1.5nm,0.4s,mb4.2
LPL La Plagne 48.47 301 *e*P **P 00 38 43.7 +0.1**
LPL pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
CABF La Chapelle 48.62 303 *e*P **P 00 38 44.3 -0.5**
comp=Z,11nm,0.8s,mb4.6
CABF La Chapelle 48.62 303 *e*P **P 00 38 44.3 -0.5**
comp=Z,5.6nm,0.8s,mb4.5
CABF La Chapelle 48.62 303 *e*P **P 00 38 44.3 -0.5**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
GIVF Givet 48.65 308 *e*P **P 00 38 44.2 -0.7**
MBDF Montbardon 48.65 300 *e*P **P 00 38 44.2 -0.8**
comp=Z,9.9nm,0.8s,mb4.5
MBDF Montbardon 48.65 300 *e*P **P 00 38 44.2 -0.8**
comp=Z,4.9nm,0.8s,mb4.5
MBDF Montbardon 48.65 300 *e*P **P 00 38 44.2 -0.8**
MBDF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
MEZF Maizieres J'vi 48.85 305 *e*P **P 00 38 45.7 -0.8**
FRF La Foret Royal 49.06 299 *e*P **P 00 38 47.0 -1.2**
comp=Z,9.0nm,0.7s,mb4.5
FRF La Foret Royal 49.06 299 *e*P **P 00 38 47.0 -1.2**
comp=Z,4.5nm,0.7s,mb4.5
FRF La Foret Royal 49.06 299 *e*P **P 00 38 47.0 -1.2**
FRF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KEST Kesra 49.67 288 P **P 00 38 54.8 +1.8**
comp=Z,0.9nm,0.7s,mb3.8,baz=58,slow=8.9,SNR=8.1
VIVF Saint-Julien-l 50.05 301 *e*P **P 00 38 55.1 -0.6**
comp=Z,8.8nm,0.8s,mb4.4
VIVF Saint-Julien-l 50.05 301 *e*P **P 00 38 55.1 -0.6**
comp=Z,3.4nm,0.8s,mb4.3
VIVF Saint-Julien-l 50.05 301 *e*P **P 00 38 55.1 -0.6**
VIVF pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
SMF Signal de Mont 50.11 303 *e*P **P 00 38 55.4 -0.7**
comp=Z,12nm,1.0s,mb4.5
SMF Signal de Mont 50.11 303 *e*P **P 00 38 55.4 -0.7**
comp=Z,5.9nm,1.0s,mb4.5
SMF Signal de Mont 50.11 303 *e*P **P 00 38 55.4 -0.7**
SMF pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
SSF Saint Saulge 50.22 304 *e*P **P 00 38 55.3 -1.6**
KMBO Kilima Mbogo 50.30 228 *i* P **P 00 39 00.6 +2.7**
KMBO pmax pmax
comp=Z,1.0nm,0.7s
KMBO Kilima Mbogo 50.30 228 P **P 00 38 58.4 +0.5**
comp=Z,0.6nm,0.7s,mb3.7,baz=42,slow=14,SNR=3.6
AVF Avril sur Loir 50.40 304 *e*P **P 00 38 57.6 -0.7**
comp=Z,7.2nm,0.8s,mb4.4
AVF Avril sur Loir 50.40 304 *e*P **P 00 38 57.6 -0.7**
comp=Z,3.6nm,0.8s,mb4.3
AVF Avril sur Loir 50.40 304 *e*P **P 00 38 57.6 -0.7**
AVF pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
BGF Bois d'Agland 50.80 304 *e*P **P 00 39 00.0 -1.3**
TCF Toulx Ste Croi 51.29 303 *e*P **P 00 39 03.9 -1.1**
comp=Z,26nm,1.2s,mb4.8
TCF Toulx Ste Croi 51.29 303 *e*P **P 00 39 03.9 -1.1**
comp=Z,13nm,1.2s,mb4.8
TCF Toulx Ste Croi 51.29 303 *e*P **P 00 39 03.9 -1.1**
TCF pmax pmax
comp=Z,13nm,1.2s,mb4.8
MJAR Matsushiro Arr 51.62 70 P **P 00 39 08.6 +1.0**
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR Matsushiro Arr 51.62 70 P **P 00 39 08.6 +1.0**
comp=Z,2.4nm,0.7s,mb4.3,baz=292,slow=9.4,SNR=7.0
MTLF Montolieu 52.20 300 *e*P **P 00 39 11.3 -0.4**
ETSF Etsaut 54.26 300 *e*P **P 00 39 25.7 -1.1**
BILL Bilibino 57.20 27↑*i*P **P 00 39 47.0 -0.4**
BILL 00 40 40.6
BILL *e* 00 41 54.7
BILL pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
ESDC Sonseca Array 57.86 298 P **P 00 39 52.8 +0.3**
comp=Z,0.8nm,0.6s,mb4.0,baz=58,slow=7.3,SNR=10
TORD Torodi Ar. Bea 66.76 269 P **P 00 40 51.1 -1.0**
comp=Z,6.1nm,0.6s,mb4.6,baz=48,slow=5.7,SNR=122
TORD pP pP 00 41 24.3 +1.8
comp=Z,2.6nm,0.8s,baz=49,slow=4.5,SNR=4.3
INK Inuvik 72.69 10 *e*P **P 00 41 28.3 +0.7**
DBIC Dimbokro 75.76 267 P **P 00 41 44.8 -1.5**
DBIC pmax pmax
comp=Z,3.0nm,0.8s
DBIC Dimbokro 75.76 267 P **P 00 41 44.8 -1.5**
comp=Z,2.6nm,0.8s,mb4.0,baz=47,slow=6.7,SNR=5.4
YKW3 Yellowknife Ar 80.06 3 *e*P **P 00 42 09.7 +0.4**
YKA Yellowknife Ar 80.13 3 P **P 00 42 10.2 +0.5**
YKA pP pP 00 42 44.2 +3.2
YKA Yellowknife Ar 80.13 3 P **P 00 42 10.1 +0.5**
YKA *PP pP 00 42 44.2 +3.2
YKA pmax pmax
comp=Z,4.0nm,0.4s
YKA pmax pmax
comp=N,1.0nm,0.6s
YKA Yellowknife Ar 80.13 3 P **P 00 42 10.1 +0.5**
comp=N,4.2nm,0.4s,mb4.6,baz=350,slow=5.5,SNR=106
YKA pP pP 00 42 44.2 +3.2
comp=N,0.8nm,0.6s,baz=349,slow=5.4,SNR=2.5
SCHQ Schefferville 81.51 337 P **P 00 42 18.0 +0.9**
comp=N,2.4nm,0.8s,mb4.1,baz=307,slow=3.1,SNR=4.0
WRA Warramunga Arr 81.70 123 P **P 00 42 17.9 -0.6**
WRA *PP pP 00 42 53.6 +3.5
WRA pmax pmax
comp=Z,1.0nm,0.4s
WRA pmax pmax
comp=N,1.0nm,0.8s
WRA Warramunga Arr 81.70 123 P **P 00 42 17.9 -0.7**
comp=N,1.3nm,0.4s,mb4.2,baz=324,slow=4.9,SNR=78
WRA pP pP 00 42 53.6 +3.5
comp=N,1.4nm,0.8s,baz=322,slow=5.3,SNR=4.8
WB2 Warramunga Arr 81.71 123 *e*P **P 00 42 18.1 -0.5**
ASAR Alice Springs 84.04 126 P **P 00 42 30.6 +0.1**
ASAR *PP pP 00 43 07.2 +5.0
ASAR *SP sP 00 43 21.9 +6.5
ASAR pmax pmax
comp=N,1.0nm,0.7s
ASAR pmax pmax
comp=N,1.0nm,0.7s
ASAR Alice Springs 84.04 126 P **P 00 42 30.6 +0.1**
comp=N,0.4nm,0.6s,mb3.4,baz=310,slow=4.7,SNR=9.6
ASAR pP pP 00 43 07.2 +4.9
comp=N,0.6nm,0.7s,baz=317,slow=5.7,SNR=4.3
ASAR sP sP 00 43 21.9 +6.5
comp=N,0.5nm,0.7s,baz=318,slow=5.5,SNR=3.1

WEL 18 00:36:35.1±0.4,3811S×17616E,h148km±3km,ML3.6/5, Error ellipse: s-maj=4.8km s-min=3.6km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.77**	**102**	PN	Pn	00 36 57.7	-0.2
URZ				SN	Sn	00 37 15.5	+0.3
BKZ	**Black Stump Fm**	**1.09**	**166**	PN	Pn	00 37 00.7	+0.2
BKZ				SN	Sn	00 37 20.3	+0.3
MWZ	**Matawai**	**1.10**	**102**	PN	Pn	00 37 00.8	+0.2
MWZ				SN	Sn	00 37 19.7	-0.3
KNZ	**Kokohu**	**1.50**	**128**	PN	Pn	00 37 04.5	0.0
TSZ	**Takapari Road**	**1.96**	**184**	PN	Pn	00 37 08.9	-0.7
PXZ	**Pawanui**	**2.00**	**164**	PN	Pn	00 37 09.7	-0.4
PXZ				SN	Sn	00 37 36.4	-0.6
MRZ	**Mangatainoka R**	**2.59**	**190**	PN	Pn	00 37 15.5	-1.7
TIWZ	**Tintock**	**2.67**	**184**	PN	Pn	00 37 16.5	-1.7
KIW	**Kapiti Island**	**2.92**	**199**	PN	Pn	00 37 19.2	-2.1
MTW	**Mount Morrison**	**3.09**	**189**	PN	Pn	00 37 20.7	-2.8
CAW	**Cannon Point**	**3.11**	**195**	PN	Pn	00 37 21.4	-2.4
TRWZ	**Traveller**	**3.31**	**186**	PN	Pn	00 37 23.7	-2.6
MRW	**Makara Radio**	**3.31**	**199**	PN	Pn	00 37 23.9	-2.5
MSWZ	**Moikau Station**	**3.38**	**192**	PN	Pn	00 37 24.2	-3.0
TUWZ	**Tuamarina**	**3.73**	**206**	PN	Pn	00 37 28.6	-3.1

*CSEM **18** 00:44:54.4±0.1,3840N×3926E,h2km,MD3.0,Error ellipse: s-maj=1.7km s-min=1.4km az=146.0*
*ISK **18** 00:44:54.2,3840N×3924E,h5km,MD3.0*
*ISCJB **18** 00:44:55.2±0.4,3839N±003×3928E±004,h5km,Error ellipse: s-maj=4.3km s-min=3.9km az=154.6*
*DDA **18** 00:44:55.4,3836N×3926E,h5km,Md3.0*

ISC 18 00:44:55.7±0.6,3840N±003×3927E±005,h8km±7km,n15, σ0s89/22,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.25**	**294**	*i* P	**Pg**	**00 45 00.3**	**-0.3**
ELZG				*i* S	**Sg**	**00 45 05.0**	**+0.9**
PTK	**Pertek**	**0.50**	**11**	PG	**Pg**	**00 45 04.5**	**-1.0**
PTK				SG	**Sg**	**00 45 13.3**	**+1.3**
MALT	**Malatya**	**0.67**	**263**	PG	**Pg**	**00 45 07.2**	**-1.4**
MALT				SG	**Sg**	**00 45 18.0**	**+0.6**
MYA	**Malataya**	**0.67**	**264**	PG	**Pg**	**00 45 08.0**	**-0.6**
DIY	**Diyarbakir**	**0.90**	**123**	PG	**Pg**	**00 45 12.8**	**-0.3**
URFA	**Urfa**	**1.02**	**201**	PG	**Pg**	**00 45 15.2**	**-0.1**
URFA				SG	**Sg**	**00 45 29.5**	**+0.9**
BINT	**Bingol**	**1.06**	**63**	PN	**Pn**	**00 45 16.3**	**-0.6**
ATAB	**Bozova**	**1.21**	**220**	*i* P	**Pb**	**00 45 18.1**	**-0.7**
ATAB				*i* S	**Sb**	**00 45 35.6**	**+1.0**
EZC	**Erzincan**	**1.41**	**17**	PN	**Pn**	**00 45 21.4**	**-0.3**
MARD	**Mardin**	**1.61**	**132**	*i* P	**Pn**	**00 45 23.7**	**-0.7**
MARD				*i* S	**Sn**	**00 45 46.0**	**+0.6**
GZT	**Gaziantep**	**1.71**	**233**	*i* P	**Pn**	**00 45 24.0**	**-1.8**
GZT				*i* S	**Sn**	**00 45 52.7**	**+4.9**
BTMT	**Batman**	**1.76**	**96**	PN	**Pn**	**00 45 25.9**	**-0.5**
KMRS	**Kahramanmaras**	**2.08**	**245**	*e*PN	**Pn**	**00 45 31.5**	**+0.7**
EZM	**Erzurum**	**2.21**	**47**	*e*PN	**Pn**	**00 45 33.8**	**+1.1**
SIRT	**Sirnak**	**2.66**	**109**	*e*PN	**Pn**	**00 45 40.1**	**+1.3**

IDC 18 00:45:09.1±2.1,102S×12745E,h0km,mb3.1/2,mb1 3.2/3, mb1mx3.1/15,mbtmp3.1/3,ML3.2/1,Error ellipse: s-maj=149.4km s-min=27.5km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.98**	**161**	P	Pn	00 49 43.4	-1.4
	0.1nm,0.3s,baz=340,slow=11,SNR=9.8						
ASAR	**Alice Springs**	**23.36**	**165**	P	P	00 50 19.4	-0.1
	0.2nm,0.4s,baz=347,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**61.87**	**326**	P	P	00 55 30.2	0.0
	0.2nm,0.4s,baz=119,slow=7.6,SNR=4.3						

*IDC **18** 01:02:54.3±1.2,4.06N×12695E,h0km,mb3.5/6,mb1 3.7/6, mb1mx3.6/18,mbtmp3.6/6,Error ellipse: s-maj=97.0km s-min=18.1km az=72.0*
*NEIC **18** 01:02:55.5±0.7,4.12N×127.13E,h10km,mb3.6/1,Error ellipse: s-maj=56.2km s-min=11.1km az=73.0*
*ISCJB **18** 01:02:57.3±1.1,4.1N±02×1270E±06,h33km,mb3.5/6, Error ellipse: s-maj=85.6km s-min=14.9km az=161.6*

ISC 18 01:02:59.5±1.1,41N±02×1270E±05,h35km,n9,σ0s27/9, mb3.5/6,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.05**	**183**	*e*P	**P**	**01 07 51.4**	**0.0**
	1.4nm,0.6s,mb3.6						
FITZ	**Fitzroy Crossi**	**22.05**	**183**	P	**P**	**01 07 51.5**	**+0.2**
	0.7nm,0.6s,mb3.3,baz=11,slow=10,SNR=4.4						
WRA	**Warramunga Arr**	**24.91**	**163**	P	**P**	**01 08 19.5**	**+0.1**
	3.4nm,0.8s,mb3.9,baz=342,slow=11,SNR=17						
WB2	**Warramunga Arr**	**24.91**	**163**	*e*P	**P**	**01 08 19.7**	**+0.3**
ASAR	**Alice Springs**	**28.36**	**167**	P	**P**	**01 08 50.4**	**-0.1**
	0.1nm,0.4s,mb2.8,baz=343,slow=8.7,SNR=3.2						
STKA	**Stephens Creek**	**38.33**	**160**	P	**P**	**01 10 16.6**	**-0.4**
	1.9nm,0.8s,mb3.9,baz=0.0,slow=6.1,SNR=3.4						
SONM	**Songino Array**	**47.08**	**341**	P	**P**	**01 11 28.2**	**+0.3**
SONM	**Songino Array**	**47.08**	**341**	P	**P**	**01 11 28.2**	**+0.3**
	0.2nm,0.5s,mb3.3,baz=144,slow=5.2,SNR=2.7						
MKAR	**Makanchi Array**	**57.45**	**325**	P	**P**	**01 12 44.5**	**-0.3**
	0.5nm,0.5s,mb3.8,baz=123,slow=8.3,SNR=9.3						

*TRN **18** 01:22:19.9,1191N×6003W,h30km,MD3.7,M3.3(FDF)*
*ISCJB **18** 01:22:21.3±0.7,1187N±003×6019W±006,h78km±7km, mb3.8/5,Error ellipse: s-maj=9.8km s-min=3.9km az=13.1*
*IDC **18** 01:22:22.8±3.8,1196N×6026W,h58km±38km,mb3.5/5, mb1 3.9/7,mb1mx3.5/23,mbtmp3.7/7,ML4.9/2,Error ellipse: s-maj=32.3km s-min=24.8km az=4.0*
*NEIC **18** 01:22:22.1,1188N×6033W,h22km,MD3.6(TRN),After TRN.*
*FUNV **18** 01:22:23.5,1166N×6011W,h120km,MW3.8*

ISC 18 01:22:22.1±0.7,1187N±002×6016W±006,h62km±8km,n46, σ1s23/73,mb3.9/5,2D,Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPR	**Prospect**	**0.91**	**222**	*e*P	**Pn**	**01 22 39.3**	**+0.2**
TPR				*e*S	**Sn**	**01 22 45.9**	**-5.8**
GRGR	**Grenville**	**1.49**	**280**	*e*Pn	**Pn**	**01 22 45.6**	**-1.1**
GRGR				*e*Sn	**Sn**	**01 23 04.7**	**-0.6**
GRW	**Mount Saint Ca**	**1.50**	**281**	*e*P	**Pn**	**01 22 47.2**	**+0.4**
GRW				*e*S	**Sn**	**01 23 02.0**	**-3.6**
TBH	**Brigand Hill**	**1.64**	**213**	*e*P	**Pn**	**01 22 50.1**	**+1.3**
TBH				*e*S	**Sn**	**01 23 06.9**	**-2.1**
FCV	**Fort Charlotte**	**1.66**	**320**	*e*P	**Pn**	**01 22 49.6**	**+0.5**
FCV				*e*S	**Sn**	**01 23 10.8**	**+1.3**

BHS **Barnard House** **1.71 326** *e*P **Pn** **01 22 50.2 +0.6**
BHS *e*S **Sn** **01 23 12.0 +1.6**
TRN **Trinidad (W)** **1.73 225** *e*P **Pn** **01 22 58.5 +8.6**
TRN *e*S **Sn** **01 23 12.4 +1.5**
TRN **Trinidad (W)** **1.73 225** *e*P **Pn** **01 22 50.9 +1.0**
TRN **Trinidad (W)** **1.73 225** *e*P **Pn** **01 22 50.9 +1.0**
TRN **Trinidad (W)** **1.73 225** *e* **Pn** **01 22 58.5 +8.6**
TRN *e*S **Sn** **01 23 12.4 +1.5**
SVB **Belmont** **1.76 323** *e*P **Pn** **01 22 50.7 +0.4**
SVB *e*S **Sn** **01 23 10.9 -0.8**
SSV **Crater Summit** **1.77 325** *e*P **Pn** **01 22 50.1 -0.4**
SSV *e*S **Sn** **01 23 15.3 +3.3**
SSV **Crater Summit** **1.77 325** *e*P **Pn** **01 22 50.9 +0.5**
SSV *e*S **Sn** **01 23 15.3 +3.3**
SVV **Soufriere Volc** **1.77 324** *e*P **Pn** **01 22 50.9 +0.3**
SVV *e*S **Sn** **01 23 12.8 +0.7**
SVV **Soufriere Volc** **1.77 324** *e*P **Pn** **01 22 50.9 +0.3**
SVV *e*S **Sn** **01 23 12.8 +0.7**
TCE **Chacachacare** **1.95 233** *e*P **Pn** **01 22 54.9 +1.9**
TCE *e*S **Sn** **01 23 18.4 +1.9**
TPP **Pointe-a-Pierr** **2.00 220** *e*P **Pn** **01 22 55.8 +2.1**
SLB **Belfond** **2.13 336** *e*P **Pn** **01 22 55.8 +0.4**
SLB *e*S **Sn** **01 23 22.5 +1.8**
GUIV **Guiria** **2.37 239** *e*P **Pn** **01 22 59.3 +0.7**
GUIV *e*S **Sn** **01 23 27.4 +0.9**
MVM **Montagne Vaucl** **2.76 345** *e*P **Pn** **01 23 02.3 -1.7**
BIM **Bigot** **2.78 341** *e*P **Pn** **01 23 02.9 -1.3**
BIM *e*S **Sn** **01 23 35.0 -1.6**
ITEV **Isla Los Testi** **2.96 260** *e*P **Pn** **01 23 08.3 +1.6**
ITEV *e*S **Sn** **01 23 41.4 +0.3**
FDF **Fort de France** **3.01 341** *e*P **Pn** **01 23 06.0 -1.3**
FDF *e*S **Sn** **01 23 39.9 -2.3**
GUNV **Guanoco** **3.22 238** *e*P **Pn** **01 23 11.3 +1.0**
GUNV *e*S **Sn** **01 23 46.7 -0.8**
CRUV **Carupano** **3.25 249** *e*P **Pn** **01 23 10.9 +0.2**
CRUV *e*S **Sn** **01 23 46.7 -1.4**
RIOV **Rio Grande** **4.12 204** *e*P **Pn** **01 23 21.4 -1.1**
RIOV *e*S **Sn** **01 24 03.3 -6.2**
TBG **Guadaloupe-3** **4.21 340** *e*P **Pn** **01 23 24.9 +1.0**
ORIV **Oritupano** **4.24 229**⇓*e*P **Pn** **01 23 24.0 -0.3**
ORIV *e*S **Sn** **01 24 07.9 -4.6**
SCG **Saint Claude** **4.39 340** *e*P **Pn** **01 23 26.2 -0.1**
DEG **La Desirade** **4.50 349** *e*P **Pn** **01 23 27.7 -0.1**
DEG *e*S **Sn** **01 24 15.7 -3.2**
PCRV **Puerto La Cruz** **4.71 249** *e*P **Pn** **01 23 30.2 -0.4**
PCRV *e*S **Sn** **01 24 19.2 -4.9**
PCRV **Puerto La Cruz** **4.71 249** P **Pn** **01 23 30.7 0.0**
3.5nm,0.3s,baz=83,slow=4.3,SNR=21
PCRV S **Sn** **01 24 22.2 -1.8**
3.8nm,0.3s,baz=341,slow=17,SNR=6.1
GURV **El Guri** **5.00 216**⇓*e*P **Pn** **01 23 33.2 -1.5**
PRGV **PARIAGUAN** **5.39 235** *e*P **Pn** **01 23 38.8 -1.3**
CUPV **Cœpira** **5.82 252** *e*P **Pn** **01 23 46.1 +0.2**
CUPV *e*S **Sn** **01 24 45.6 -5.6**
LUEV **Luepa** **6.13 192** *e*P **Pn** **01 23 46.5 -3.6**
BIRV **Birongo** **6.16 258** *e*P **Pn** **01 23 50.4 -0.2**
CAOV **Caicara del Or** **7.57 234** *e*P **Pn** **01 24 07.9 -2.1**
BAUV **El Baul** **8.29 250** *e*P **Pn** **01 24 16.5 -3.1**
SJG **San Juan** **8.49 318** P **Pn** **01 24 21.4 -1.0**
4.0nm,0.3s,baz=126,slow=20,SNR=8.5
TXAR **Lajitas Array** **43.99 300** P **P** **01 30 24.3 +0.7**
TXAR **Lajitas Array** **43.99 300** P **P** **01 30 24.3 +0.7**
0.3nm,0.6s,mb3.2,baz=119,slow=7.3,SNR=4.8
ULM **Lac du Bonnet** **48.17 330** P **P** **01 30 55.6 -0.5**
3.4nm,0.3s,mb4.8,baz=129,slow=7.8,SNR=24
PDAR **Pinedale Array** **52.60 315** P **P** **01 31 30.3 +0.6**
0.8nm,0.5s,mb3.9,baz=115,slow=9.5,SNR=10.0
TORD **Torodi Ar. Bea** **60.26 82** P **P** **01 32 26.3 +1.7**
0.4nm,0.6s,mb3.7,baz=293,slow=7.7,SNR=2.1
YKA **Yellowknife Ar** **63.56 335** P **P** **01 32 45.9 0.0**
0.4nm,0.5s,mb3.7,baz=110,slow=7.4,SNR=7.0

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*NIED **18** 01:25:00, 42.10N×144.30E, h29km, Mw5.6 Best double couple: $M_0$2.51000$\times10^{17}$ NP1:ϕ_s245.00000°, δ26.00000°, λ129.00000°. NP2:ϕ_s23.00000°, δ70.00000°, λ73.00000°.*
*BJI **18** 01:25:21.9, 42.08N×143.89E, h26km, mB5.9, mb5.7, Ms5.5, Msz5.4*
*MOS **18** 01:25:22.5±0.8, 42.17N×144.01E, h33km, mb5.8/134, MS5.6/50, Error ellipse: s-maj=6.4km s-min=3.4km az=107.7*
MOS Felt (II) at Yuzhno-Kuril'sk.
*JMA **18** 01:25:22.6±0.1, 42.06N×144.18E, h59km±2km, M5.6*
JMA Felt III J1.
*ISCJB **18** 01:25:23.2±0.1, 42.08N±0.02×144.04E±0.02, h42km, mb5.5/294, MS5.6/149, Error ellipse: s-maj=3.0km s-min=1.8km az=139.1*
*NEIC **18** 01:25:24.1±0.1, 42.16N×144.00E, h35km, mb5.6/177, MS5.6/108, MW5.5, MW5.5(NIED), Error ellipse: s-maj=3.6km s-min=2.2km az=165.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}1.82; $M_{\theta\theta}$-1.30; $M_{\phi\phi}$-0.52; $M_{r\theta}$0.24; $M_{\theta\phi}$-1.28; $M_{\phi r}$1.48; Best double couple: $M_0$2.60000$\times10^{17}$ NP1:ϕ_s257.00000°, δ36.00000°, λ132.00000°. NP2:ϕ_s29.00000°, δ64.00000°, λ64.00000°. Principal axes: T 2.5700, Plg62.0000°, Azm258.0000°; N -0.0300, Plg23.0000°, Azm41.0000°; P -2.5400, Plg15.0000°, Azm138.0000°;*
NEIC Felt at Misawa, Honshu and at Obihiro, Hokkaido. Felt [II] at Yuzhno-Kuril'sk, Kunashir. Recorded [3 JMA] in Kushiro-Urahore area; [2 JMA] in south-central and eastern Hokkaido; [1 JMA] in southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate Prefectures, Honshu.
*IDC **18** 01:25:24.6±0.4, 42.11N×144.03E, h43km±3km, mb4.8/22, mb1 5.0/28, mb1mx5.0/29, mbtmp4.9/28, ML4.5/5, MS5.3/15, Ms1 5.3/15, ms1mx4.9/32 Error ellipse: s-maj=11.9km s-min=9.3km az=136.0*
*GCMT **18** 01:25:24.1±0.2, 42.00N×144.29E, h42km, MW5.5/85, Moment Tensor Solution. s71,c126; s85,c183; Duration: 1^s4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.80±.05; $M_{\theta\theta}$-0.68±.04; $M_{\phi\phi}$-1.12±.04; $M_{r\theta}$0.84±.04; $M_{\theta\phi}$-1.14±.03; $M_{\phi r}$1.50±.04; Best double couple: $M_0$2.58600$\times10^{17}$ NP1:ϕ_s228.00000°, δ25.00000°, λ105.00000°. NP2:ϕ_s32.00000°, δ66.00000°, λ83.00000°. Principal axes: T 2.4730, Plg68.0000°, Azm289.0000°; N 0.2300, Plg6.0000°, Azm35.0000°; P -2.6980, Plg21.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*SZGRF **18** 01:25:28.1, 42.79N×144.06E, h46km, mb5.5, MS5.6, Hokkaido, Japan, region*
ISC 18 01:25:25.2±0.1**, 42.15N**±0.02×**144.02E**±0.02**, h44**km**, h44**km±.7km**:pP-P, n1013,** σ0^s**90**/982**, mb5.5**/294**, MS5.6**/149**, 237C-38D, Hokkaido region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ERM **Erimo** **0.65 259**⇑*i*P **Pn** **01 25 37.5 -0.6**
ERM *e*S **Sn** **01 25 48.0 +0.7**
JEM **Erimo** **0.65 259** ⇓P **Pn** **01 25 37.5 -0.6**
JCH **Churui** **0.67 314** ⇓P **Pn** **01 25 38.5 +0.1**
JCH *e*S **Sn** **01 25 49.8 +2.0**
JOB **Onbets** **0.77 350** ⇓P **Pn** **01 25 39.5 -0.2**
JOB *e*S **Sn** **01 25 52.2 +2.1**
JNBK **Urakawa-nobuka** **0.95 279** ⇓P **Pn** **01 25 41.9 -0.2**
JAK **Akkeshi** **0.99 30** ⇓P **Pn** **01 25 41.0 -1.6**
JAK *e*S **Sn** **01 25 54.7 -0.7**
JAR **Ashorobuto** **1.16 351** ⇓P **Pn** **01 25 44.6 -0.4**
JAR *e*S **Sn** **01 26 00.9 +1.2**
JBT2 **Biratori 2** **1.38 298** ⇓P **Pn** **01 25 47.4 -0.5**
JFR **Furan** **1.46 315** ⇑P **Pn** **01 25 48.4 -0.7**
JNK **Nakash** **1.53 20** ⇑P **Pn** **01 25 48.5 -1.5**
JNK *e*S **Sn** **01 26 07.6 -1.1**
NEM2 **Nemuro 2** **1.76 46** P **Pn** **01 25 50.7 -2.5**
NEM2 *e*S **Sn** **01 26 11.8 -2.6**
JTKR **Abashiri--Toko** **1.82 358** ⇑P **Pn** **01 25 54.3 +0.2**
JMP **Maruseppu** **1.92 346** ⇑P **Pn** **01 25 55.5 +0.1**
JKK2 **Kamakawa 2** **1.96 332** ⇑P **Pn** **01 25 56.6 +0.7**
ASAJ **Asahikawa** **2.23 333** ⇑P **Pn** **01 26 00.5 +0.9**
ASAJ **Asahikawa** **2.23 333** PN **Pn** **01 26 00.6 +1.0**
ASAJ pmax pmax
comp=Z,184nm,0.3s
ASAJ MLR MLR
comp=Z,97µm,21.4s
ASAJ **Asahikawa** **2.23 333** P **Pn** **01 26 00.6 +1.0**
comp=Z,184nm,0.3s,baz=186,slow=15,SNR=816
ASAJ LR LR 01 27 16.0
comp=Z,97µm,21.4s,baz=196,slow=49
JNB **Noboribetsu** **2.23 279** ⇑P **Pn** **01 26 00.6 +0.9**
JKB **Kayabe** **2.24 264** ⇑P **Pn** **01 26 00.3 +0.6**
YUK **Yuzh-Kuril'sk** **2.32 35** PN **Pn** **01 26 00.5 -0.4**
YUK *i* S **Sn** **01 26 25.0 -3.2**
YUK pmax pmax
comp=N,600nm,0.5s
YUK pmax pmax
comp=Z,960nm,0.5s
YUK pmax pmax
comp=E,200nm,0.4s
YUK pmax pmax
comp=Z,14µm,1.2s
YUK pmax pmax
comp=N,7µm,2.8s
YUK smax
comp=N,2µm,0.5s
YUK smax
comp=E,15nm,0.4s
YUK smax
comp=N,160µm,2.0s
YUK smax
comp=E,68µm,2.0s
YUK MLR MLR
comp=N,38µm,22.0s
YUK MLR MLR
comp=Z,5µm,15.7s
JYM2 **Yakumo 2** **2.71 271** ⇑P **Pn** **01 26 07.1 +0.9**
JSR **Shiriuchi** **2.76 258** ⇑P **Pn** **01 26 07.2 +0.3**
JSK **Shakotan** **2.87 296** ⇑P **Pn** **01 26 09.5 +1.1**
JSE **Soyaes** **3.00 340** ⇑P **Pn** **01 26 10.4 +0.2**
JOSM **Okushiri--Mats** **3.38 270** P **Pn** **01 26 16.1 +0.7**
KUR **Kuril'sk** **4.16 41**⇓*i*P **Pn** **01 26 24.5 -1.6**
KUR **Kuril'sk** **4.16 41**⇓*i*PN **Pn** **01 26 24.4 -1.7**
KUR *i* S **Sn** **01 27 16.0 +2.5**
KUR pmax pmax
comp=N,7µm,4.0s
KUR pmax pmax
comp=E,6µm,4.0s
KUR pmax pmax
comp=Z,7µm,4.0s
KUR pmax pmax
comp=N,320nm,0.8s
KUR pmax pmax
comp=E,280nm,0.8s
KUR pmax pmax
comp=Z,2µm,0.8s
KUR smax
comp=N,8µm,1.0s
KUR smax
comp=E,3µm,1.0s
YSS **Yuzh-Sakhalins** **4.89 350** *e*Pn **Pn** **01 26 35.9 -0.3**
YSS **Yuzh-Sakhalins** **4.89 350**α*e*PN **Pn** **01 26 36.8 +0.7**
YSS *i* S **Sn** **01 27 33.0 +1.6**
YSS pmax pmax
comp=Z,290nm,1.1s
YSS pmax pmax
comp=Z,1µm,6.0s
YSS smax
comp=N,1µm,0.7s
YSS MLR MLR
comp=Z,23µm,16.0s
YSS MLR MLR
comp=N,20µm,18.0s
YSS MLR MLR
comp=E,38µm,19.0s
JNS **Sasagawa** **5.63 221** P **Pn** **01 26 46.4 +0.1**
JSD **Sado** **6.03 229** ⇑P **Pn** **01 26 51.1 -0.7**
JIZZ **Izumozaki** **6.16 223** P **Pn** **01 26 54.1 +0.5**
JHK **Hiroka** **6.23 220** ⇑P **Pn** **01 26 53.8 -0.7**
JKT **Katashina** **6.51 216** P **Pn** **01 26 58.1 -0.4**
JAG **Ashikaga** **6.72 213** ⇑P **Pn** **01 26 59.3 -2.0**
JJN **Nakama** **6.76 224** P **Pn** **01 27 02.2 +0.3**
JSZ **Suzu** **6.94 230** P **Pn** **01 27 04.5 +0.1**
UGL **Uglegorsk** **7.07 350**⇑*i*PN **Pn** **01 27 07.1 +1.1**
UGL *i* 01 28 35.6
UGL pmax pmax
comp=Z,110nm,0.6s
UGL pmax pmax
comp=N,2µm,8.0s
UGL pmax pmax
comp=Z,2µm,8.0s
UGL MLR MLR
comp=Z,25µm,17.0s
UGL MLR MLR
comp=N,18µm,18.0s
UGL MLR MLR
comp=E,40µm,18.0s
MJAR **Matsushiro Arr** **7.18 221** P **Pn** **01 27 06.6 -1.0**
comp=E,10nm,0.3s,baz=28,slow=13,SNR=315
MJAR S **Sn** **01 28 26.9 -0.9**
comp=E,3.2nm,0.3s,baz=255,slow=28,SNR=6.0
MJAR LR LR 01 30 34.1
comp=E,19µm,20.5s,baz=45,slow=43
MAJO **Matsushiro** **7.18 221** *e*Pn **Pn** **01 27 06.6 -1.0**
MAT **Matsushiro** **7.18 221** P **Pn** **01 27 06.4 -1.2**
MAT S **Sn** **01 28 27.4 -0.4**
MAT **Matsushiro** **7.18 221** P **Pn** **01 27 06.5 -1.1**
JNG **Nsakai** **7.34 221** P **Pn** **01 27 09.4 -0.4**
JTT **Ttatey** **7.57 225** P **Pn** **01 27 13.2 +0.2**
JGN **Niukaw** **7.88 224** P **Pn** **01 27 17.3 +0.2**
JYN **Shimob** **7.89 215** P **Pn** **01 27 16.7 -0.7**
JGM **Miyama** **8.59 224** P **Pn** **01 27 26.8 -0.1**
HABR **Khabarovsk** **8.94 318** *i* PN **Pn** **01 27 33.6 +2.0**
HABR pmax pmax
comp=Z,528nm,2.5s
VLA **Vladivostok** **8.99 280** *i* PN **Pn** **01 27 33.6 +1.2**
VLA pmax pmax
comp=Z,401nm,1.1s
VLA MLR MLR
comp=Z,32µm,20.0s
JFM **Mihama** **9.10 226** P **Pn** **01 27 34.4 +0.4**
JKY **Yasaka** **9.52 230** P **Pn** **01 27 39.7 +0.1**
JWT **Wachi** **9.60 227** ⇑P **Pn** **01 27 40.8 0.0**
JHJ **Hachijo jima 2** **9.61 202** P **Pn** **01 27 38.2 -2.8**
comp=Z,25nm,0.3s,baz=30,slow=8.3,SNR=3.9
JHJ S **Sn** **01 29 16.3 -11**
comp=Z,70nm,0.3s,baz=54,slow=22,SNR=7.6
JAD **Aida** **10.54 230** P **Pn** **01 27 53.2 -0.4**
MDJ **Mudanjiang** **10.79 288** P **Pn** **01 27 56.0 -0.9**
MDJ S **Sn** **01 29 54.5 -1.7**
MDJ PCP PcP 01 33 54.8 -0.5
MDJ SCP ScP 01 37 27.3 +3.3
MDJ PCS PcS 01 37 30.3 +1.5
MDJ SCS ScS 01 41 02.5 +3.5
MDJ AMB AMB
comp=Z,82nm,1.9s
MDJ AMB AMB
comp=Z,2µm,6.8s
MDJ LR LR
comp=N,8µm,17.3s
MDJ LR LR
comp=E,15µm,20.3s
MDJ LR LR
comp=Z,25µm,18.0s
MDJ **Mudanjiang** **10.79 288** *e*Pn **Pn** **01 27 58.9 +2.0**
comp=Z,173nm,0.9s
KLR **Kul'dur** **11.12 314** *e*PN **Pn** **01 28 00.0 -1.4**
KLR *e* 01 30 17.0
KLR pmax pmax
comp=N,180nm,2.2s
KLR pmax pmax
comp=E,740nm,2.2s
KLR pmax pmax
comp=Z,610nm,2.2s
KLR pmax pmax
comp=N,2µm,7.5s
KLR pmax pmax
comp=E,2µm,7.5s
KLR pmax pmax
comp=Z,4µm,7.5s
KLR MLR MLR
comp=E,77µm,13.0s
OKH **Okha** **11.43 357** *e*PN **Pn** **01 28 06.9 +1.2**
OKH pmax pmax
comp=N,2µm,4.0s
SKR **Severo-Kuril's** **11.93 40** *e*PN **Pn** **01 28 11.0 -1.5**
SKR pmax pmax
comp=E,80nm,0.6s
SKR pmax pmax
comp=Z,100nm,0.6s
SKR pmax pmax
comp=Z,3µm,3.0s
SKR MLR MLR
comp=N,11µm,18.0s
SKR MLR MLR
comp=E,15µm,18.0s
SKR MLR MLR
comp=Z,8µm,18.0s
JTO **Tosashimizu** **12.84 227** P **Pn** **01 28 22.7 -2.4**
KSRS **Korea Array** **13.23 255** P **Pn** **01 28 30.6 +0.3**
comp=Z,1.0nm,0.3s,baz=67,slow=12,SNR=94
KSRS S **Sn** **01 31 01.8 +5.9**
comp=Z,0.6nm,0.3s,baz=66,slow=24,SNR=5.8
KSRS LR LR 01 33 38.0
comp=Z,14µm,18.9s,baz=66,slow=37
CN2 **Changchun** **13.70 283** ⇑P **Pn** **01 28 35.9 -0.8**
CN2 *e*AP 01 28 44.0
CN2 *e*S **Sn** **01 31 05.8 -1.5**
CN2 AMB AMB
comp=Z,70nm,0.9s
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,14µm,16.0s
CN2 LR LR
comp=E,20µm,16.0s
CN2 LR LR
comp=Z,26µm,18.0s
JNU **Nakatsue** **13.75 233** P **Pn** **01 28 35.1 -2.3**
comp=Z,0.7nm,0.3s,baz=27,slow=17,SNR=12
INCN **Inchon** **14.14 257** *e*Pn **Pn** **01 28 42.2 -0.6**
PET **Petropavlovsk** **14.66 37** *e*P **Pn** **01 28 58.1 +8.5**
PET **Petropavlovsk** **14.66 37** *e*P **Pn** **01 28 52.4 +2.8**
PET *e*S **Sn** **01 31 34.2 +3.6**
PET pmax pmax
comp=Z,116nm,1.0s
PET smax
comp=E,67nm,1.3s
PET MLR MLR
comp=Z,8µm,17.0s
CBIJ **Chichi jima** **15.09 186** LR LR 01 34 43.7
comp=Z,2µm,19.7s,baz=345,slow=37
SNY **Shenyang** **15.20 276** ⇑P **Pn** **01 28 56.3 -0.5**
SNY AMB AMB
comp=Z,77nm,1.1s
SNY LR LR
comp=N,3µm,21.6s
SNY LR LR
comp=E,9µm,20.7s
SNY LR LR
comp=Z,12µm,21.2s
DL2 **Dalian** **17.32 267**⇑*i*P **Pn** **01 29 22.5 -1.1**
DL2 PP 01 29 36.1
DL2 S **S** **01 32 37.8 -4.5**
DL2 AMB AMB
comp=Z,240nm,0.9s
DL2 AMB AMB
comp=Z,810nm,4.1s
DL2 LR LR
comp=N,3µm,16.5s
DL2 LR LR
comp=E,4µm,18.7s
DL2 LR LR
comp=Z,5µm,17.5s
MA2 **Magadan** **17.95 11** *e*Pn **Pn** **01 29 27.9 -3.2**
comp=Z,114nm,1.0s
MA2 **Magadan** **17.95 11***c i*P **Pn** **01 29 28.6 -2.5**
MA2 *e*S **S** **01 32 45.0 -10**
MA2 pmax pmax
comp=N,90nm,0.8s
MA2 pmax pmax
comp=E,50nm,0.8s
MA2 pmax pmax
comp=Z,100nm,0.8s
MA2 MLR MLR
comp=Z,2µm,17.0s
HIA **Hailar** **18.34 301** *e*P **Pn** **01 29 34.5 -1.5**
comp=Z,56nm,0.5s
HIA **Hailar** **18.34 301***c i*P **Pn** **01 29 34.4 -1.6**
CLNS **Chul'man** **19.14 327**⇑*i*P **Pn** **01 29 41.9 -3.8**
CLNS *e*S **S** **01 33 05.6 -13**
CLNS pmax pmax
comp=Z,227nm,0.7s
CLNS pmax pmax
comp=N,144nm,0.9s
CLNS pmax pmax
comp=E,37nm,0.8s
CLNS smax
comp=N,303nm,12.8s
CLNS smax
comp=Z,1µm,13.8s
CLNS smax
comp=E,2µm,14.4s
CLNS MLR MLR
comp=N,4µm,15.0s
CLNS MLR MLR
comp=Z,16µm,15.0s
CLNS MLR MLR
comp=E,12µm,18.0s
JOW **Kunigami** **19.99 225** P **Pn** **01 29 52.6 -3.3**
comp=E,3.4nm,0.3s,baz=48,slow=10,SNR=10
JOW LR LR 01 38 19.7
comp=E,4µm,19.4s,baz=281,slow=39
BJI **Beijing** **21.05 274** P **P** **01 30 03.0 -2.3**
BJI AP 01 30 09.9
BJI S **S** **01 33 48.3 -8.9**
BJI XS sS 01 34 11.1 -3.3
BJI AMB AMB
comp=Z,124nm,1.2s,mb5.1
BJI AMB AMB
comp=Z,854nm,3.0s
BJI LR LR
comp=N,5µm,17.1s,MS5.4
BJI LR LR
comp=E,14µm,17.5s,MS5.4
BJI LR LR
comp=Z,12µm,27.3s
BJT **Baijiatuau** **21.07 274** *e*P **P** **01 30 03.3 -2.1**
comp=Z,189nm,0.9s,mb5.4
BJT LR LR
comp=Z,17µm,19.0s,MS5.5
BJT **Baijiatuau** **21.07 274** *e*P **P** **01 30 03.3 -2.2**
BJT pmax pmax
comp=Z,189nm,0.9s
BJT MLR MLR
comp=Z,17µm,19.0s
SSE **Sheshan** **21.32 246** ⇑P **P** **01 30 06.8 -1.5**
SSE AP 01 30 15.9
SSE XP sP 01 30 20.1 -4.4
SSE S **S** **01 34 01.8 -0.7**
SSE AMB AMB
comp=Z,35nm,0.8s,mb4.7
SSE AMB AMB
comp=Z,819nm,9.3s
SSE LR LR
comp=N,6µm,19.3s,MS5.1
SSE LR LR
comp=E,3µm,19.3s,MS5.1
SSE LR LR
comp=Z,5µm,16.3s,MS5.0
TIA **Tai'an** **21.62 263** ⇑P **P** **01 30 09.0 -2.5**
TIA S **S** **01 34 04.0 -4.4**
TIA AMB AMB
comp=Z,205nm,0.8s,mb5.6
YAK **Yakutsk** **21.68 342** *e*P **P** **01 30 07.6 -4.3**
YAK **Yakutsk** **21.68 342***c i*P **P** **01 30 07.6 -4.2**
YAK *e* 01 30 24.6
YAK *e*S **S** **01 34 00.4 -8.6**
YAK *e* 01 34 09.5
YAK *e*SSS 01 34 36.9
YAK *e* 01 41 26.4
YAK pmax pmax
comp=Z,312nm,0.9s,mb5.7
YAK pmax pmax
comp=N,106nm,1.1s
YAK pmax pmax
comp=E,55nm,1.2s
YAK smax
comp=N,1µm,1.8s
YAK smax
comp=E,575nm,1.8s
YAK MLR MLR
comp=N,3µm,18.0s,MS5.2
YAK MLR MLR
comp=Z,8µm,18.0s,MS5.2
YAK MLR MLR
comp=E,7µm,16.0s,MS5.2
NJ2 **Nanjing** **22.38 251** *e*P **P** **01 30 17.3 -2.3**
NJ2 AP 01 30 27.3
NJ2 XP sP 01 30 30.3 -5.6
NJ2 PP 01 30 44.5

NJ2 S **S** **01 34 16.5 -6.7**
NJ2 XS sS 01 34 34.5 -6.2
NJ2 AMB AMB
comp=Z,160nm,0.9s,mb5.5
NJ2 AMB AMB
comp=Z,2μm,6.2s
NJ2 LR LR
comp=N,30μm,18.9s,MS5.8
NJ2 LR LR
comp=E,18μm,17.4s,MS5.8
NJ2 LR LR
comp=Z,18μm,17.4s,MS5.5
CIT Chita 22.82 306 *e*P **P** **01 30 23.6 -0.4**
CIT *e* 01 30 38.0
CIT *e* 01 30 51.0
CIT pmax pmax
comp=Z,344nm,1.2s,mb5.7
HHC Hu-ho-hao-te 24.27 278 *e*P **P** **01 30 36.3 -1.7**
HHC AP 01 30 45.3
HHC XP sP 01 30 49.5 -5.5
HHC PP 01 31 10.4
HHC S **S** **01 34 49.8 -3.9**
HHC XS sS 01 35 04.0 -9.3
HHC SS 01 35 38.8
HHC PCS PcS 01 37 57.3 +0.5
HHC AMB AMB
comp=Z,81nm,0.9s,mb5.2
HHC AMB AMB
comp=Z,2μm,6.8s
HHC LR LR
comp=N,4μm,14.2s,MS5.4
HHC LR LR
comp=E,9μm,17.4s,MS5.4
HHC LR LR
comp=Z,10μm,17.4s,MS5.4
TIY Taiyuan 24.54 270 *e*P **P** **01 30 43.1 +2.5**
TIY S **S** **01 35 01.4 +3.2**
TIY AMB AMB
comp=Z,1μm,7.2s
TIY LR LR
comp=N,3μm,14.6s,MS5.4
TIY LR LR
comp=E,8μm,16.6s,MS5.4
TIY LR LR
comp=Z,10μm,17.2s,MS5.4
BOD Bodaibo 24.58 320 *e*P **P** **01 30 37.8 -2.9**
BOD pmax pmax
comp=Z,67nm,1.4s,mb5.0
BTO Baotou 25.46 278 *e*P **P** **01 30 49.0 +0.1**
BTO AMB AMB
comp=Z,49nm,1.0s,mb5.0
WHN Wuhan 26.42 254 P **P** **01 30 57.0 -0.7**
WHN S **S** **01 35 17.9 -10**
WHN AMB AMB
comp=Z,773nm,0.9s,mb6.2
WHN AMB AMB
comp=Z,2μm,6.1s
WHN LR LR
comp=Z,16μm,19.6s,MS5.6
ULN Ulaanbaatar 26.57 295⇑ *i*P **P** **01 30 59.7 +0.8**
ULN Ulaanbaatar 26.57 295 P **P** **01 30 58.7 -0.2**
ULN pmax pmax
comp=Z,280nm,1.1s,mb5.7
ULN Ulaanbaatar 26.57 295 P **P** **01 30 59.6 +0.8**
SNR=136
ULN Ulaanbaatar 26.57 295 P **P** **01 30 59.6 +0.8**
SNR=136
ULN Ulaanbaatar 26.57 295 P **P** **01 30 59.6 +0.8**
SNR=136
ULN Ulaanbaatar 26.57 295 P **P** **01 30 59.6 +0.8**
SNR=136
SONM Songino Array 27.01 295 P **P** **01 31 03.0 +0.2**
SONM *PP pP 01 31 14.1 -0.5
SONM pmax pmax
comp=Z,90nm,0.8s
SONM MLR MLR
comp=Z,12μm,18.1s
SONM Songino Array 27.01 295 P **P** **01 31 03.0 +0.2**
comp=Z,90nm,0.8s,mb5.3,baz=89,slow=5.9,SNR=61
SONM pP pP 01 31 14.1 -0.5
comp=Z,126nm,1.1s,baz=88,slow=8.1,SNR=9.6
SONM LR LR 01 42 58.6
comp=Z,12μm,18.1s,MS5.5,baz=89,slow=39
QZH Quanzhou 27.11 239⇑ *i*P **P** **01 31 06.8 +2.9**
QZH S **S** **01 35 44.0 +4.9**
QZH AMB AMB
comp=Z,250nm,1.0s,mb5.7
QZH AMB AMB
comp=Z,3μm,4.5s
QZH LR LR
comp=N,7μm,18.0s,MS5.5
QZH LR LR
comp=E,7μm,15.0s,MS5.5
QZH LR LR
comp=Z,8μm,17.3s,MS5.4
ADK Adak 28.20 56 PFAKE 01 31 30.0 +17
ADK LR LR
comp=Z,4μm,20.0s,MS5.0
GUMO Guam 28.46 178 PFAKE 01 31 30.0 +14
GUMO LR LR
comp=Z,2μm,22.0s,MS4.7
IRK Irkutsk 28.50 305⇑ *i*P **P** **01 31 16.1 0.0**
IRK *e* pP 01 31 27.0 -0.8
IRK *e*S **S** **01 36 08.6 +8.1**
IRK *e* 01 36 22.3
IRK pmax pmax
comp=Z,354nm,3.1s
BILL Bilibino 28.56 17⇑ *i*P **P** **01 31 13.6 -2.8**
BILL LR LR
comp=Z,5μm,21.0s,MS5.1
BILL Bilibino 28.56 17⇑ *i*P **P** **01 31 13.5 -2.9**
BILL *e**PP pP 01 31 23.9 -4.3
BILL *e* 01 32 05.2
BILL *e* 01 34 26.1
BILL *e*S **S** **01 35 59.9 -1.2**
BILL pmax pmax
comp=Z,23nm,1.3s,mb4.8
XAN Xi'an 28.62 265 P **P** **01 31 16.9 -0.5**
XAN AP pP 01 31 29.0 -0.2
XAN AMB AMB
comp=Z,54nm,1.1s,mb5.2
XAN LR LR
comp=N,2μm,21.5s,MS5.1
XAN LR LR
comp=E,4μm,17.8s,MS5.1
XAN LR LR
comp=Z,4μm,19.0s,MS5.1
TLY Talaya 28.85 303 *e*P **P** **01 31 18.7 -0.5**
TLY Talaya 28.85 303*c i*P **P** **01 31 19.7 +0.5**
TLY *e* pP 01 31 31.8 +0.8
TLY *e* 01 32 13.4
TLY *e*S **S** **01 36 12.2 +6.2**
TLY *e*SS SS 01 37 47.2 -22
TLY pmax pmax
comp=Z,233nm,1.6s,mb5.7
TLY MLR MLR
comp=Z,5μm,16.0s,MS5.2
TLY Talaya 28.85 303 P **P** **01 31 20.2 +1.1**
SNR=80
TLY Talaya 28.85 303 P **P** **01 31 20.2 +1.1**
SNR=80
TLY Talaya 28.85 303 P **P** **01 31 20.2 +1.1**
SNR=80
TLY Talaya 28.85 303 P **P** **01 31 20.2 +1.1**
SNR=80
ZAK Zakamensk 29.03 301⇓ *i*P **P** **01 31 21.1 +0.3**
ZAK *e* pP 01 31 32.9 +0.3
ZAK pmax pmax
comp=Z,73nm,1.0s,mb5.4
MOY Mondy 30.50 303 *e*P **P** **01 31 34.6 +0.9**
MOY pmax pmax
comp=Z,463nm,2.5s,mb5.8
TIXI Tiksi 30.52 351 *e*P **P** **01 31 29.3 -4.4**
TIXI Tiksi 30.52 351 *e*P **P** **01 31 29.0 -4.7**
TIXI *e* 01 32 28.8
TIXI *e*S **S** **01 36 28.0 -3.7**
TIXI pmax pmax
comp=Z,11nm,0.9s,mb4.7
TIXI MLR MLR
comp=Z,4μm,14.0s,MS5.2
LZH Lanzhou 31.53 272⇑ *i*P **P** **01 31 44.5 +1.4**
LZH AP pP 01 31 56.6 +1.7
LZH PP PP 01 32 49.8 -4.9
LZH S **S** **01 36 47.8 -0.6**
LZH XS sS 01 37 08.0 -0.2
LZH SS SS 01 38 37.3 -27
LZH AMB AMB
comp=Z,175nm,1.0s,mb5.8
LZH AMB AMB
comp=Z,1μm,5.3s
LZH LR LR
comp=E,5μm,15.4s
LZH LR LR
comp=Z,8μm,17.2s,MS5.4
GZH Guangzhou 31.82 243 P **P** **01 31 41.5 -4.2**
GZH S **S** **01 36 48.0 -5.1**
GZH LR LR
comp=N,7μm,17.7s,MS5.5
GZH LR LR
comp=E,7μm,17.7s,MS5.5
GZH LR LR
comp=Z,9μm,18.0s,MS5.5
GTA Gaotai 33.30 280⇑ P **P** **01 31 59.8 +1.3**
GTA AP pP 01 32 07.1 -3.3
GTA XP sP 01 32 10.3 -5.4
GTA PP PP 01 33 12.1 -2.2
GTA PCP PcP 01 34 40.8 +1.1
GTA S **S** **01 37 17.8 +1.9**
GTA XS sS 01 37 30.6 -5.2
GTA SCP ScP 01 38 22.8 +2.4
GTA PCS PcS 01 38 25.8 +0.5
GTA SS SS 01 39 22.4 -18
GTA SCS ScS 01 42 22.3 +1.2
GTA AMB AMB
comp=Z,115nm,1.0s,mb5.8
GTA AMB AMB
comp=Z,1μm,6.1s
GTA LR LR
comp=N,5μm,19.8s,MS5.5
GTA LR LR
comp=E,7μm,19.8s,MS5.5
GTA LR LR
comp=Z,10μm,19.0s,MS5.5
CD2 Chengdu 33.95 264 P **P** **01 32 04.6 +0.3**
CD2 AP pP 01 32 13.9 -2.3
CD2 XP sP 01 32 19.3 -2.1
CD2 PP PP 01 33 20.8 -0.8
CD2 PCP PcP 01 34 43.5 +1.8
CD2 S **S** **01 37 22.3 -3.7**
CD2 XS sS 01 37 41.0 -5.0
CD2 SS SS 01 39 27.4 -27
CD2 SCS ScS 01 42 24.6 -0.2
CD2 AMB AMB
comp=Z,300nm,1.0s,mb6.2
CD2 AMB AMB
comp=Z,990nm,3.8s
CD2 LR LR
comp=N,5μm,15.0s,MS5.5
CD2 LR LR
comp=E,4μm,14.4s,MS5.5
CD2 LR LR
comp=Z,5μm,15.6s,MS5.3
GYA Guiyang 34.29 255⇑ *i*P **P** **01 32 07.6 +0.4**
GYA AP pP 01 32 17.8 -1.3
GYA XP sP 01 32 23.6 -0.8
GYA PP PP 01 33 25.4 0.0
GYA PCP PcP 01 34 45.8 +3.1
GYA S **S** **01 37 32.8 +1.5**
GYA XS sS 01 37 49.9 -1.3
GYA SCP ScP 01 38 27.4 +3.4
GYA SS SS 01 39 42.6 -18
GYA SCS ScS 01 42 27.6 +0.9
GYA AMB AMB
comp=Z,130nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,510nm,3.8s
GYA LR LR
comp=N,3μm,18.0s,MS5.2
GYA LR LR
comp=E,3μm,19.5s,MS5.2
GYA LR LR
comp=Z,4μm,18.8s,MS5.2
TNA Tin City 35.44 32 *e*P **P** **01 32 16.5 -0.2**
comp=Z,35nm,1.1s,mb5.2
QIZ Qiongzhong 36.99 242 P **P** **01 32 32.6 +2.2**
QIZ PP PP 01 33 59.4 +4.1
QIZ S **S** **01 38 18.0 +5.2**
QIZ SS SS 01 40 44.9 -11
QIZ AMB AMB
comp=Z,959nm,3.9s
QIZ LR LR
comp=N,4μm,18.3s,MS5.5
QIZ LR LR
comp=E,6μm,19.9s,MS5.5
QIZ LR LR
comp=Z,5μm,17.6s,MS5.4
KMI Kunming 37.91 257⇑ P **P** **01 32 39.4 +1.2**
KMI AP pP 01 32 48.8 -1.4
KMI XP sP 01 32 53.3 -2.2
KMI PP PP 01 34 06.4 +1.0
KMI PCP PcP 01 34 54.8 +1.2
KMI S **S** **01 38 26.6 -0.2**
KMI PCS PcS 01 38 42.4 -0.2
KMI XS sS 01 38 43.8 -3.1
KMI SS SS 01 41 02.9 -11
KMI SCS ScS 01 42 46.3 -0.4
KMI AMB AMB
comp=Z,264nm,1.0s,mb5.9
KMI AMB AMB
comp=Z,2μm,3.2s
KMI LR LR
comp=N,3μm,17.4s,MS5.4
KMI LR LR
comp=E,4μm,18.6s,MS5.4
KMI LR LR
comp=Z,5μm,18.8s,MS5.3
DAV Davao City (W) 38.56 210 PFAKE 01 33 00.0 +16
DAV LR LR
comp=Z,2μm,22.0s,MS4.9
TTA Tatalina 40.12 38 *e*P **P** **01 32 56.6 +0.4**
TTA Tatalina 40.12 38 *e*P **P** **01 32 56.1 -0.1**
TTA pmax pmax
comp=Z,57nm,1.3s,mb5.1
SVW2 Sparrevohn 40.29 41 *e*P **P** **01 32 58.2 +0.6**
WMQ Urumqi 40.55 292 *i*P **P** **01 33 00.8 +0.8**
WMQ AP pP 01 33 10.8 -1.3
WMQ XP sP 01 33 14.8 -2.6
WMQ PP PP 01 34 38.3 +4.4
WMQ PCP PcP 01 35 03.8 +2.2
WMQ SCP ScP 01 38 45.3 -2.0
WMQ S **S** **01 39 06.8 +0.7**
WMQ AMB AMB
comp=Z,171nm,1.0s,mb5.6
WMQ AMB AMB
comp=Z,224nm,8.5s
WMQ LR LR
comp=N,2μm,19.0s,MS5.6
WMQ LR LR
comp=E,7μm,18.7s,MS5.6
WMQ LR LR
comp=Z,9μm,18.3s,MS5.7
NVS Novosibirsk 40.95 310⇑ *i*P **P** **01 33 02.9 -0.2**
NVS *i* PPP 01 34 41.7
NVS *e*SSS 01 42 13.5
NVS *e* 01 43 04.7
NVS pmax pmax
comp=N,140nm,2.0s
NVS pmax pmax
comp=Z,440nm,2.0s,mb5.7
NVS pmax pmax
comp=E,285nm,1.7s
IMA2 Indian Mountai 41.29 33 *e*P **P** **01 33 05.5 -0.3**
KDAK Kodiak Island 42.02 46 *e*P **P** **01 33 11.4 -0.5**
KDAK LR LR
comp=Z,534nm,21.0s,MS4.4
KDAK Kodiak Island 42.02 46 P **P** **01 33 10.7 -1.2**
comp=Z,37nm,0.8s,mb5.1,baz=320,slow=3.2,SNR=24
KDAK pP pP 01 33 22.9 -1.2
comp=Z,48nm,0.7s,baz=294,slow=5.1,SNR=8.7
KDM Kudat 42.54 222⇓ P **P** **01 33 19.0 +2.4**
SLKM Skilak Lake 42.95 41 *e*P **P** **01 33 17.7 -1.6**
MYLDM Lahad Datu 43.25 219⇑ P **P** **01 33 24.5 +2.2**
MK31 Makanchi Array 43.30 298 *i* P **P** **01 33 22.6 +0.2**
MK31 Makanchi Array 43.30 298 *i* P **P** **01 33 22.5 +0.1**
MK31 pmax pmax
comp=Z,159nm,0.7s,mb5.9
MKAR Makanchi Array 43.30 298 P **P** **01 33 22.6 +0.2**
MKAR *PP pP 01 33 34.3 -0.3
MKAR pmax pmax
comp=Z,54nm,0.8s
MKAR MLR MLR
comp=Z,4μm,19.0s
MKAR Makanchi Array 43.30 298 P **P** **01 33 22.6 +0.2**
comp=Z,54nm,0.8s,mb5.3,baz=76,slow=10,SNR=389
MKAR pP pP 01 33 34.3 -0.3
comp=Z,141nm,0.9s,baz=78,slow=6.6,SNR=18
MKAR LR LR 01 52 34.4
comp=Z,4μm,19.0s,MS5.3,baz=93,slow=38
MCK McKinley 43.30 37 *e*P **P** **01 33 21.7 -0.5**
comp=Z,46nm,1.0s,mb5.2
MCK McKinley 43.30 37 *e*P **P** **01 33 21.7 -0.5**
MCK pmax pmax
comp=Z,46nm,1.0s,mb5.2
PMR Palmer 43.37 40 *e*P **P** **01 33 22.2 -0.6**
comp=Z,241nm,2.5s,mb5.5
PMR Palmer 43.37 40 *e*P **P** **01 33 22.2 -0.6**
PMR pmax pmax
comp=Z,241nm,2.5s,mb5.5
SDKM Sandakan 43.47 221⇑ P **P** **01 33 25.1 +1.0**
KKTK Khon Kaen 43.60 246 P **P** **01 33 26.0 +0.9**
comp=Z,2μm,0.5s
KKM Kota Kinabalu 43.60 222 *e*P **P** **01 33 26.2 +1.0**
KKM Kota Kinabalu 43.60 222⇓ P **P** **01 33 27.0 +1.8**
COLA College 43.71 35⇓ *i*P **P** **01 33 23.7 -1.8**
COLA LR LR
comp=Z,3μm,20.0s,MS5.2
COLA College 43.71 35 P **P** **01 33 25.7 +0.2**
COLA pmax pmax
comp=Z,69nm,0.8s,mb5.4
SML Sawmill 43.73 39 *e*P **P** **01 33 25.9 +0.3**
LSA Lhasa 43.93 271 P **P** **01 33 30.0 +2.3**
LSA AP pP 01 33 38.8 -1.1
LSA XP sP 01 33 45.6 +0.5
LSA SCS ScS 01 43 22.6 -0.2
LSA AMB AMB
comp=Z,620nm,11.0s
LSA LR LR
comp=N,2μm,18.9s,MS5.5
LSA LR LR
comp=E,5μm,18.5s,MS5.5
LSA LR LR
comp=Z,8μm,17.5s,MS5.7
LSA Lhasa 43.93 271 *e*P **P** **01 33 29.5 +1.8**
comp=Z,124nm,1.1s,mb5.5
LSA LR LR
comp=Z,5μm,19.0s,MS5.5
LSA Lhasa 43.93 271 *e*P **P** **01 33 29.5 +1.8**
LSA pmax pmax
comp=Z,124nm,1.1s,mb5.5
LSA MLR MLR
comp=Z,5μm,19.0s,MS5.5
TSM Tawau 44.32 219⇓ P **P** **01 33 32.2 +1.3**
KURK Kurchatov 44.53 304 *e*P **P** **01 33 32.2 0.0**
KURK LR LR
comp=Z,2μm,19.0s,MS5.1
KURK Kurchatov 44.53 304*c i*P **P** **01 33 32.4 +0.2**
KURK Kurchatov 44.53 304 P **P** **01 33 32.5 +0.3**
SNR=94
KURK Kurchatov 44.53 304 P **P** **01 33 32.5 +0.3**
SNR=94
KURK Kurchatov 44.53 304 P **P** **01 33 32.5 +0.3**
SNR=94
KURK Kurchatov 44.53 304 P **P** **01 33 32.5 +0.3**
SNR=94
KURK Kurchatov 44.53 304 P **P** **01 33 32.5 +0.3**
SNR=94
IMP Imphal 44.56 263 *e*P **P** **01 33 35.0 +2.2**
CHG Chiang Mai 44.62 253⇑ P **P** **01 33 34.4 +1.1**
comp=Z,150nm,0.9s,mb5.8
CHTO Chiang Mai 44.62 253⇑ *i*P **P** **01 33 34.1 +0.8**
comp=Z,103nm,0.9s,mb5.7
CHTO *e* 01 35 15.7
CHTO LR LR
comp=Z,4μm,20.0s,MS5.4
CHTO Chiang Mai 44.62 253⇑ *i*P **P** **01 33 34.2 +0.9**
CHTO *e* 01 35 15.7
CHTO pmax pmax
comp=Z,103nm,0.9s,mb5.7
CHTO MLR MLR
comp=Z,4μm,20.0s,MS5.4
CHTO Chiang Mai 44.62 253 P **P** **01 33 34.7 +1.4**
SNR=28
CHTO Chiang Mai 44.62 253 P **P** **01 33 34.7 +1.4**
SNR=28
CHTO Chiang Mai 44.62 253 P **P** **01 33 34.7 +1.4**
SNR=28
CHTO Chiang Mai 44.62 253 P **P** **01 33 34.7 +1.4**
SNR=28
CHTO Chiang Mai 44.62 253 P **P** **01 33 34.7 +1.4**
SNR=28
EYAK Cordova Ski Ar 45.13 41 *e*P **P** **01 33 36.9 0.0**
comp=Z,110nm,1.2s,mb5.6
BDT Bhumibol Dam 45.62 251 P **P** **01 33 42.5 +1.2**
comp=Z,24nm,0.9s,mb5.1
SHL Shillong 45.63 266 *i* P **P** **01 33 43.0 +1.7**
comp=Z,48nm,1.0s,mb5.4
SHL *e*S **S** **01 40 24.0 +3.1**
NST Nakhon Sawan 45.91 248⇑ P **P** **01 33 44.5 +1.0**
comp=Z,93nm,1.0s,mb5.7
EGAK Eagle 46.57 35 *e*P **P** **01 33 47.3 -0.9**
comp=Z,182nm,1.6s,mb5.8
EGAK LR LR
comp=Z,2μm,20.0s,MS5.0
AGT Agartala 47.07 264 *ex* **P** **01 33 49.0 -3.6**
DAWY Dawson 47.45 35 *e*P **P** **01 33 54.8 -0.2**
BTM Bintulu 47.62 224⇓ P **P** **01 33 58.0 +1.1**
TAPN Taplejung 47.74 271 *e*P **P** **01 33 58.9 +1.1**
comp=Z,225nm,0.8s,mb6.2
AAA Alma-Ata 48.07 295 *e*P **P** **01 34 00.5 +0.4**
AAA *e*S **S** **01 41 00.5 +5.3**
AAA pmax pmax
comp=Z,1μm,6.0s
AAA smax
comp=E,1μm,10.0s
AAA MLR MLR
comp=Z,7μm,19.0s,MS5.7
ODAN Odare 48.25 270 *e*P **P** **01 34 02.6 +0.9**
comp=Z,227nm,1.0s,mb6.2
JIRN Jiri 48.70 272 *e*P **P** **01 34 06.1 +0.9**
comp=Z,144nm,0.9s,mb6.0
SBUM Sibu 48.71 224⇓ P **P** **01 34 07.0 +1.7**
BRVK Borovoye 48.79 310⇑ *e*P **P** **01 34 05.8 +0.3**
BRVK LR LR
comp=Z,4μm,19.0s,MS5.4
BRVK Borovoye 48.79 310 P **P** **01 34 06.2 +0.7**
SNR=58
BRVK Borovoye 48.79 310 P **P** **01 34 06.2 +0.7**
SNR=58
BRVK Borovoye 48.79 310 P **P** **01 34 06.2 +0.7**
SNR=58
BRVK Borovoye 48.79 310 P **P** **01 34 06.2 +0.7**
SNR=58
BRVK Borovoye 48.79 310 P **P** **01 34 06.2 +0.7**
SNR=58
INK Inuvik 48.94 29 *e*P **P** **01 34 06.0 -0.4**
comp=Z,629nm,0.6s,mb6.8
ULHL Ulahol 48.95 294 P **P** **01 34 07.7 +0.8**
SNR=16
TKM2 Tokmak 2 49.11 295⇑ *i*P **P** **01 34 09.0 +0.9**
comp=Z,212nm,0.9s,mb6.2
TKM2 Tokmak 2 49.11 295⇑ *i*P **P** **01 34 09.0 +0.9**
TKM2 pmax pmax
comp=Z,212nm,0.9s,mb6.2
TKM2 Tokmak 2 49.11 295 P **P** **01 34 09.2 +1.1**
SNR=182
KKN Kakani 49.31 273 *e*P **P** **01 34 10.5 +0.7**
comp=Z,289nm,1.0s,mb6.3
CHMS Chumysh 49.65 296 P **P** **01 34 12.6 +0.4**
SNR=16
KBK Karagaybulak 49.66 295 P **P** **01 34 13.0 +0.7**
SNR=172
GKN Gorkha 49.67 273 *e*P **P** **01 34 13.0 +0.4**
comp=Z,297nm,1.1s,mb6.2
KZA Kyzart 49.69 294 P **P** **01 34 14.4 +1.8**
SNR=85
USP Ospenovka 49.71 296 P **P** **01 34 12.9 +0.3**
SNR=98
FRU Bishkek 49.81 296⇑ *i*P **P** **01 34 13.8 +0.4**
FRU *i* 01 34 20.0
FRU pmax pmax
comp=Z,400nm,2.2s,mb6.1
FRU MLR MLR
comp=Z,6μm,19.0s,MS5.6
AAK Ala-Archa 49.97 295⇑ *i*P **P** **01 34 14.0 -0.7**
comp=Z,98nm,1.3s,mb5.7
AAK LR LR

comp=Z,9μm,19.0s,MS5.8
AAK Ala-Archa 49.97 295 ⇑*i*P P **01 34 14.0 -0.7**
AAK pmax pmax
comp=Z,98nm,1.3s,mb5.7
AAK MLR MLR
comp=Z,9μm,19.0s,MS5.8
AAK Ala-Archa 49.97 295 P P **01 34 15.2 +0.5**
SNR=59
UCH Uchtor 50.13 295 ⇑*e*P P **01 34 16.6 +0.8**
comp=Z,56nn,1.0s,mb5.5
UCH Uchtor 50.13 295 P P **01 34 17.0 +1.1**
SNR=38
KSH Kashi 50.30 291 ⇑*i*P P **01 34 18.5 +1.3**
KSH AP pP 01 34 28.3 -1.3
KSH XP sP 01 34 32.4 -2.3
KSH *e*PCP PcP 01 35 35.9 +0.4
KSH *e*PP PP 01 36 15.6 +2.9
KSH *e*SCP ScP 01 39 27.1 -0.5
KSH *e*PCS PcS 01 39 31.4 -1.2
KSH S **S 01 41 30.1 +3.5**
KSH *e*XS sS 01 41 47.3 0.0
KSH *e*SCS ScS 01 44 04.1 -0.3
KSH *e*SS SS 01 45 03.0 +2.8
KSH AMB AMB
comp=Z,834nm,1.0s,mb6.7
KSH AMB AMB
comp=Z,4μm,3.7s
KSH LR LR
comp=N,7μm,11.6s
KSH LR LR
comp=E,7μm,9.5s
KSH LR LR
comp=Z,11μm,20.5s
EKS2 Erkin-Say 50.44 296 ⇑*i*P P **01 34 18.4 +0.2**
comp=Z,65nm,0.9s,mb5.7
EKS2 *e*PcP PcP 01 35 35.6 -0.3
EKS2 LR LR
comp=Z,5μm,20.0s,MS5.6
EKS2 Erkin-Say 50.44 296 P P **01 34 18.8 +0.6**
SNR=79
SKAG Skagway 50.47 41 *e*P P **01 34 18.8 +0.6**
comp=Z,33nm,1.4s,mb5.2
KSM Kuching 50.54 226 ⇑*i*P P **01 34 20.0 +0.7**
KSM Kuching 50.54 226 ⇓P P **01 34 20.4 +1.2**
KOLN Koldanda 50.57 274 *e*P P **01 34 20.0 +0.6**
comp=Z,472nm,1.4s,mb6.2
AML Almayashu 50.72 295 PFAKE 01 34 30.0 +10
AML LR LR
comp=Z,9μm,19.0s,MS5.8
AML Almayashu 50.72 295 P P **01 34 21.2 +0.8**
SNR=83
KTGM Kuala Trenggan 51.57 236 ⇑P P **01 34 29.4 +2.3**
PTH Pithoragarh 52.11 278 *e*P P **01 34 31.1 +0.2**
LGTI Lohaghat 52.14 278 *e*P P **01 34 31.0 -0.2**
LGTI *ex* x 01 34 57.8
KIP Kipapa 52.39 94 PFAKE 01 34 50.0 +17
KIP LR LR
comp=Z,4μm,21.0s,MS5.5
KK31 Karatay Array 52.42 298 *i*P P **01 34 32.0 -1.0**
KK31 Karatay Array 52.42 298 *i*P P **01 34 32.9 -0.1**
KK31 pmax pmax
comp=Z,100nm,0.8s,mb5.8
SVE Sverdlovsk 52.73 317 ⇓*e*P P **01 34 35.6 +0.5**
SVE *e* 01 35 44.0
SVE *e*S S **01 42 07.4 +7.8**
SVE pmax pmax
comp=Z,257nm,1.0s,mb6.1
SVE MLR MLR
comp=Z,5μm,14.0s,MS5.7
KULM Kulim 53.16 239 *e*P P **01 34 39.7 +0.9**
KULM Kulim 53.16 239 ⇑P P **01 34 40.0 +1.2**
DDI Dehra Dun 53.29 280 *e*P P **01 34 39.6 0.0**
HNR Honiara 53.36 160 PFAKE 01 34 50.0 +10
HNR LR LR
comp=Z,2μm,21.0s,MS5.2
DLBC Dease Lake 53.41 41 *e*P P **01 34 40.7 +0.6**
SDNR Sundarnagar 53.46 282 *e*P P **01 34 41.3 +0.4**
SOKR Solikamsk 53.57 321 *c i*P P **01 34 41.0 -0.3**
SOKR S S **01 42 22.8 +12**
SOKR pmax pmax
comp=Z,140nm,1.1s,mb5.8
SOKR MLR MLR
comp=Z,7μm,18.0s,MS5.8
DLH Dalhousie 53.65 283 *e*P P **01 34 42.0 -0.2**
THN Thein Dam 53.89 283 *e*P P **01 34 43.2 -0.8**
MYKOM Kota Tinggi 53.93 233 ⇑P P **01 34 45.7 +1.2**
ARU Arti 53.94 317 ⇑*i*P P **01 34 42.7 -1.3**
ARU LR LR
comp=Z,7μm,19.0s,MS5.7
ARU Arti 53.94 317 *c i*P P **01 34 42.9 -1.1**
ARU *e* 01 35 50.5
ARU *e* 01 36 47.1
ARU *e*PPP 01 37 51.9
ARU *e*S S **01 42 16.2 +0.2**
ARU *e* 01 44 35.8
ARU pmax pmax
comp=Z,282nm,1.2s,mb6.1
ARU MLR MLR
comp=E,4μm,18.0s,MS5.7
ARU MLR MLR
comp=Z,6μm,18.0s,MS5.7
ARU MLR MLR
comp=N,5μm,18.0s,MS5.7
KGM Kluang 54.07 234 ⇑P P **01 34 47.1 +1.7**
FRIM Kepong 54.13 236 ⇓P P **01 34 47.3 +1.4**
NDI New Delhi 54.78 279 *e*P P **01 34 49.0 -1.6**
ALE Alert 54.88 4 P P **01 34 49.8 -0.8**
comp=N,220nm,1.5s,mb6.0,SNR=13
KAKA Kakadu 55.61 194 *e*P P **01 34 55.5 -1.0**
comp=N,24nm,0.8s,mb5.3
KAKA Kakadu 55.61 194 *e*P P **01 34 55.6 -0.9**
JBP Jabalpur 55.86 271 ⇑*i*P P **01 34 58.6 +0.3**
JBP *ex* x 01 35 14.7
comp=Z,140nm,1.2s
JBP *ex* x 01 42 20.1
SPB4 Spitsbergen Ar 55.91 349 *e*P P **01 34 56.6 -1.3**
KBS Kingsbay 55.97 350 PFAKE 01 35 10.0 +12
KBS LR LR
comp=Z,1μm,19.0s,MS5.0
PSI Prapat 56.16 238 LR LR 02 01 56.8
comp=Z,1μm,18.2s,MS5.1,baz=30,slow=39
AB31 Akbulak array 56.26 308 ⇑*e*P P **01 35 00.0 -0.9**
AKTK Aktyubinsk 56.83 310 *i*P P **01 35 04.8 -0.1**
AKTO Aktyubinsk 56.83 310 *i*P P **01 35 04.7 -0.2**
AKTO pmax pmax
comp=Z,13nm,1.7s,mb4.7
RES Resolute Bay 57.15 16 *e*P P **01 35 05.5 -1.2**
comp=Z,2μm,0.7s
PRGR Permogore 57.62 326 ⇑*i*P P **01 35 09.4 -0.8**
PRGR *e* 01 36 01.1
PRGR *e* 01 37 15.5
PRGR *e*S S **01 43 06.9 +2.1**
PRGR pmax pmax
comp=Z,94nm,1.1s,mb5.7
AJM Ajmer 57.91 278 *e*P P **01 35 12.0 -0.8**
BJO Bjornoya 58.01 345 AMS AMS 02 03 48.6
comp=Z,3μm,20.7s,MS5.3
LVZ Lovozero 58.30 335 PFAKE 01 35 30.0 +15
LVZ LR LR
comp=Z,3μm,19.0s,MS5.4
YKA Yellowknife Ar 58.40 32 P P **01 35 15.3 -0.4**
YKA *PP pP 01 35 28.0 -0.3
YKA pmax pmax
comp=Z,13nm,0.8s
YKA MLR MLR
comp=Z,707nm,19.1s
YKA Yellowknife Ar 58.40 32 P P **01 35 15.3 -0.4**
comp=Z,13nm,0.8s,mb5.0,baz=305,slow=6.6,SNR=209
YKA pP pP 01 35 28.0 -0.3
comp=Z,19nm,0.9s,baz=309,slow=7.0,SNR=12
YKA LR LR 02 04 57.1
comp=Z,707nm,19.1s,MS4.8,baz=225,slow=41
KEV Kevo 59.39 339 *e*P P **01 35 21.1 -1.4**
comp=Z,5.4nm,0.4s,mb4.9
KEV LR LR
comp=Z,4μm,19.0s,MS5.5
AKL Akola 59.54 271 ⇑*i*P P **01 35 24.5 +0.3**
AKL *ex* x 01 35 26.1
comp=Z,138nm,0.9s
AKL *i* x x 01 43 53.5
FUNA Funafuti 59.82 139 PFAKE 01 35 40.0 +14
FUNA LR LR
comp=Z,9μm,19.0s,MS5.9
ARCES ARCESS Array B 59.94 339 P P **01 35 26.0 -0.2**
ARCES *PP pP 01 35 39.1 +0.2
ARCES pmax pmax
comp=Z,11nm,0.5s
ARCES MLR MLR
comp=Z,3μm,20.0s
ARCES ARCESS Array B 59.94 339 P P **01 35 25.9 -0.3**
comp=Z,10nm,0.5s,mb5.1,baz=37,slow=7.2,SNR=99
ARCES pP pP 01 35 39.1 +0.3
comp=Z,12nm,0.7s,baz=58,slow=9.3,SNR=4.9
ARCES LR LR 02 05 11.0
comp=Z,3μm,20.0s,MS5.4,baz=27,slow=40
ARE0 ARCESS Array S 59.94 339 *e*P P **01 35 25.4 -0.8**
HYB Hyderabad 60.41 267 *e*P P **01 35 30.5 +0.3**
comp=Z,50nm,1.0s,mb5.5
HYB *e*S sS 01 44 04.0 +0.7
HYB Hyderabad 60.41 267 *e*P P **01 35 30.5 +0.3**
HYB *e*S sS 01 44 04.0 +0.7
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.5
HYB Hyderabad 60.41 267 *i*P P **01 35 30.5 +0.3**
comp=Z,50nm,1.0s,mb5.5
HYB *e*S sS 01 44 04.0 +0.7
DAG Danmarks Havn 60.85 355 ⇑*e*P P **01 35 30.5 -1.9**
DAG pmax pmax
comp=Z,27nm,0.8s,mb5.4
DAG Danmarks Havn 60.85 355 ⇑*i*P P **01 35 30.5 -1.9**
comp=Z,27nm,0.8s,mb5.4
KTK1 Kautokeino 60.89 339 *e*P P **01 35 32.5 -0.2**
comp=Z,82nm,2.1s,mb5.5
KTK1 Kautokeino 60.89 339 *e*P P **01 35 32.5 -0.2**
KTK1 AMb AMB 01 35 34.8
comp=Z,82nm,2.1s,mb5.5
TRO Tromso 61.54 341 *e*P P **01 35 34.9 -2.3**
TRO *e*S S **01 43 56.3 +1.2**
TRO AMS AMS 02 08 05.4
comp=Z,3μm,21.4s,MS5.4
TRO Tromso 61.54 341 *e*P P **01 35 34.9 -2.2**
TRO *e* 01 44 14.7
TRO MLR MLR
comp=Z,3μm,21.4s,MS5.4
MDRS Chennai 61.93 262 ⇑*e*P P **01 35 40.8 +0.2**
CTA Charters Tower 61.95 178 *e*P pP 01 35 51.3 -1.8
comp=Z,7.4nm,0.9s
CTAO Charters Tower 61.95 178 PFAKE
CTAO LR LR 01 35 50.0 +10
comp=Z,866nm,22.0s,MS4.9
VDB Vedder Mountai 61.96 48 P P **01 35 40.3 0.0**
MBW Mount Baker 62.20 48 P P **01 35 42.2 +0.3**
FITZ Fitzroy Crossi 62.30 200 *e*P P **01 35 40.9 -1.9**
comp=Z,26nm,1.1s,mb5.3
FITZ *e*S S **01 44 05.2 -0.6**
JOF Joensuu 62.42 332 *ep* P **01 35 40.7 -2.4**
comp=Z,6.7nm,0.4s,mb5.1
JOF Joensuu 62.42 332 *e*P P **01 35 40.7 -2.4**
JOF pmax pmax
comp=Z,7.0nm,0.4s,mb5.1
WB2 Warramunga Arr 62.42 190 ⇑*i*P P **01 35 42.0 -1.5**
WRA Warramunga Arr 62.42 190 P P **01 35 42.2 -1.3**
comp=Z,16nm,1.0s,mb5.1,baz=7.8,slow=7.0,SNR=85
WRA PKPPKP 02 04 53.0
comp=Z,2.8nm,1.0s,baz=200,slow=2.3,SNR=8.7
POO Poona 63.22 271 ⇑*i*P P **01 35 49.0 -0.1**
comp=Z,80nm,1.0s,mb5.8
FMW Mount Fremont 63.35 50 P P **01 35 50.6 +1.0**
COR Corvallis 63.72 53 PFAKE 01 36 00.0 +8.0
COR LR LR
comp=Z,1μm,20.0s,MS5.1
KAD Karad 63.73 270 *e*P P **01 35 52.2 -0.3**
EBG Ellensburg 63.99 49 P P **01 35 55.0 +1.2**
EDM Edmonton 64.13 41 *e*P P **01 35 54.4 -0.2**
TDH Tom, Dick, Har 64.21 51 P P **01 35 56.3 +1.1**
MOS Moscow 64.36 323 *e*P P **01 35 54.8 -1.3**
MOS *e* pP 01 36 08.1 -0.7
MOS *e* 01 36 26.8
MOS *e*S S **01 44 32.8 +2.0**
MOS *e* 01 44 53.4
MOS pmax pmax
comp=Z,800nm,2.5s,mb6.3
MOS pmax pmax
comp=Z,223nm,1.6s,mb5.9
MOS pmax pmax
comp=N,90nm,1.3s
MOS MLR MLR
comp=N,4μm,17.0s,MS5.9
MOS MLR MLR
comp=E,4μm,18.0s,MS5.9
MOS MLR MLR
comp=Z,8μm,18.0s,MS5.9
KAF Kangasniemi 64.69 333 *ep* P **01 35 56.7 -1.4**
comp=Z,5.3nm,0.4s,mb4.9,baz=46,slow=6.2
KAF Kangasniemi 64.69 333 *e*P P **01 35 56.7 -1.4**
KAF pmax pmax
comp=Z,5.0nm,0.4s,mb4.9
HAWA Hanford 64.87 49 *e*P P **01 35 59.8 +0.2**
comp=Z,102nm,1.6s,mb5.6
HAWA *e* pP 01 36 12.1 -0.3
HAWA LR LR
comp=Z,1μm,20.0s,MS5.0
KRMB Red Mountain 65.08 56 *e*P P **01 36 02.3 +1.3**
KRMB *e* pP 01 36 12.2 -1.6
NEW Newport 65.11 47 *e*P P **01 36 01.1 0.0**
comp=Z,194nm,1.9s,mb5.8
NEW *e* pP 01 36 12.8 -1.1
NEW Newport 65.11 47 *e*P P **01 36 01.1 0.0**
NEW *e* pP 01 36 12.8 -1.1
NEW pmax pmax
comp=Z,194nm,1.9s
OBN Obninsk 65.22 323 ⇑*i*P P **01 36 01.1 -0.6**
OBN LR LR
comp=Z,9μm,19.0s,MS6.0
OBN Obninsk 65.22 323 *c i*P P **01 36 01.0 -0.7**
OBN *e* pP 01 36 15.0 +0.5
OBN *e* 01 36 33.9
OBN *e*S S 01 44 41.9 +0.5
OBN pmax pmax
comp=Z,242nm,1.8s,mb5.9
OBN MLR MLR
comp=Z,9μm,19.0s,MS6.0
FINES FINESS Array B 65.24 332 P P **01 36 01.0 -0.7**
FINES *PP pP 01 36 13.9 -0.5
FINES pmax pmax
comp=Z,35nm,0.5s
FINES FINESS Array B 65.24 332 P P **01 36 01.0 -0.7**
comp=Z,35nm,0.5s,mb5.6,baz=53,slow=7.6,SNR=319
FINES pP pP 01 36 13.9 -0.5
comp=Z,45nm,0.6s,baz=53,slow=7.6,SNR=15
MOR8 Moi Rana 65.27 340 *e*P P **01 35 59.9 -1.9**
comp=Z,104nm,1.1s,mb5.8
MOR8 Moi Rana 65.27 340 *e*P P **01 35 59.9 -1.9**
MOR8 AMb AMB 01 36 02.2
comp=Z,104nm,1.1s,mb5.8
VRHR Novokhopersk 65.28 317 *e*P P **01 36 00.0 -2.1**
VRHR pmax pmax
comp=Z,40nm,0.7s,mb5.6
VRHR pmax pmax
comp=N,40nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.9s
PALK Pallekele 65.45 257 *e*P P **01 36 03.4 -0.4**
comp=E,21nm,1.0s,mb5.1
MNGI Mangalore 66.03 266 *i*P P **01 36 07.2 -0.2**
VOR Voronezh 66.09 319 *e*P P **01 36 07.0 -0.4**
VOR pmax pmax
comp=Z,200nm,2.0s,mb5.8
ASAR Alice Springs 66.14 190 P P **01 36 07.8 0.0**
comp=Z,9.0nm,1.0s,mb4.8,baz=7.5,slow=5.2,SNR=63
ASAR PKPPKP 02 04 39.3
comp=Z,0.6nm,0.8s,baz=166,slow=3.2,SNR=4.5
WALA Waterton Lakes 66.35 45 *e*P P **01 36 09.2 +0.2**
comp=Z,85nm,1.6s,mb5.5
WALA *e* pP 01 36 20.2 -1.7
VRSR Storozhevoye 66.42 318 *c i*P P **01 36 09.4 0.0**
VRSR *e*PP pP 01 36 17.5 -4.8
VRSR *e*S S 01 44 49.1 -7.0
VRSR *e*SS sS 01 45 12.8 -4.7
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRSR pmax pmax
comp=N,10.0nm,0.9s
VRSR pmax pmax
comp=E,10.0nm,0.9s
VRSR smax
comp=N,130nm,5.1s
VRSR smax
comp=Z,130nm,4.6s
VRSR smax
comp=E,70nm,4.5s
VRSR MLR MLR
comp=N,550nm,18.0s,MS5.0
VRSR MLR MLR
comp=Z,890nm,18.0s,MS5.0
VRSR MLR MLR
comp=E,620nm,20.0s,MS5.0
VORD Divnogorie 66.52 318 *e*P P **01 36 08.4 -1.7**
VORD pmax pmax
comp=Z,100nm,1.2s,mb5.7
VORD pmax pmax
comp=N,60nm,1.0s
VORD pmax pmax
comp=E,70nm,1.0s
MBWA Marble Bar 66.87 205 PFAKE 01 36 20.0 +7.4
MBWA LR LR
comp=Z,634nm,21.0s,MS4.8
MAK Makhachkala 66.92 308 *e*P P **01 36 10.2 -2.6**
MAK *e* 01 36 35.8
MAK *e* 01 38 38.2
MAK *e*PPP 01 40 22.5
MAK *e*S S 01 45 08.0 +5.6
MAK *i* 01 46 07.3
MAK *e*SS SS 01 49 25.1 +4.5
MAK pmax pmax
comp=Z,126nm,2.0s,mb5.6
BMO Blue Mountains 67.04 50 *e*P P **01 36 13.8 +0.3**
comp=Z,80nm,1.7s,mb5.5
BMO *e* pP 01 36 26.4 +0.1
BMO LR LR
comp=Z,1μm,21.0s,MS5.0
BMO Blue Mountains 67.04 50 *e*P P **01 36 13.8 +0.3**
BMO *e* pP 01 36 26.4 0.0
BMO pmax pmax
comp=Z,80nm,1.7s,mb5.5
BMO MLR MLR
comp=Z,1μm,21.0s,MS5.0
NSS Namsos 67.20 340 *e*P P **01 36 11.8 -2.5**
NSS AMS AMS 02 10 49.1
comp=Z,7μm,18.4s,MS5.9
MSO Missoula 67.70 47 *e*P P **01 36 17.3 -0.3**
comp=Z,61nm,1.6s,mb5.4
MSO *e* pP 01 36 29.9 -0.6
MSO LR LR
comp=Z,463nm,19.0s,MS4.7
WVOR Wild Horse Val 67.73 53 *e*P P **01 36 18.1 +0.2**
comp=Z,97nm,1.7s,mb5.5
WVOR Wild Horse Val 67.73 53 *e*P P **01 36 18.1 +0.2**
WVOR pmax pmax
comp=Z,97nm,1.7s,mb5.6
OHCM Honcut 67.86 57 *e*P P **01 36 18.8 -0.1**
CHMT Chamberlain Mo 68.02 46 *e*P P **01 36 19.4 -0.2**
CHMT *e* pP 01 36 31.5 -1.0
FFC Flin Flon 68.34 35 *e*P P **01 36 21.1 -0.5**
comp=Z,68nm,1.1s,mb5.6
FFC LR LR
comp=Z,2μm,20.0s,MS5.2
FFC Flin Flon 68.34 35 *e*P P **01 36 21.1 -0.5**
FFC pmax pmax
comp=Z,68nm,1.1s,mb5.6
FFC MLR MLR
comp=Z,2μm,20.0s,MS5.2
FCC Fort Churchill 68.55 28 ⇑*i*P P **01 36 22.3 -0.4**
comp=Z,51nm,0.8s,mb5.5
FCC Fort Churchill 68.55 28 ⇑*i*P P **01 36 22.3 -0.4**
FCC pmax pmax
comp=Z,51nm,0.8s,mb5.5
PAHR Pah Rah Range 68.93 55 *e*P P **01 36 25.8 +0.2**
comp=Z,281nm,2.0s,mb5.8
AFI Afiamalu 69.03 134 PFAKE 01 36 40.0 +14
AFI LR LR
comp=Z,1μm,19.0s,MS5.2
KIV Kislovodsk 69.09 311 ⇑P P **01 36 27.4 +1.0**
KIV LR LR
comp=Z,4μm,19.0s,MS5.7
KIV Kislovodsk 69.09 311 *c i*P P **01 36 27.2 +0.8**
KIV *e* 01 36 51.6
KIV *e* 01 38 56.1
KIV *e*S S 01 45 30.3 +2.0
KIV *e*SS SS 01 49 54.3 +0.2
KIV pmax pmax
comp=Z,230nm,1.1s,mb6.0
KIV pmax pmax
comp=Z,281nm,5.6s
KIV MLR MLR
comp=Z,5μm,17.0s,MS5.8
KIV Kislovodsk 69.09 311 P P **01 36 27.6 +1.2**
SNR=38
KIV Kislovodsk 69.09 311 P P **01 36 27.6 +1.2**
SNR=38
KIV Kislovodsk 69.09 311 P P **01 36 27.6 +1.2**
SNR=38
KIV Kislovodsk 69.09 311 P P **01 36 27.6 +1.2**
SNR=38
KIV Kislovodsk 69.09 311 P P **01 36 27.6 +1.2**
SNR=38
KIV Kislovodsk 69.09 311 ⇑*i*P P **01 36 27.4 +1.0**
DGRG David-gareji 69.09 307 P P **01 36 27.4 +0.9**
DGRG S S 01 45 37.1 +8.6
ZEI Tsey 69.14 309 *e*P P **01 36 26.5 -0.2**
ZEI *e* 01 38 58.9
ZEI pmax pmax
comp=Z,54nm,0.9s,mb5.5
EGMT Eagleton 69.15 44 *e*P P **01 36 26.6 -0.1**
comp=Z,179nm,1.8s,mb5.7
EGMT LR LR
comp=Z,1μm,22.0s,MS5.1
IZAR Zarasai 69.17 328 *e*P P **01 36 26.5 -0.2**
IZAR AMb AMB 01 36 30.4
comp=Z,18nm,1.4s,mb4.8
MTA Mtatsminda 69.28 308 P P **01 36 28.5 +0.9**
MTA S sS 01 45 54.9 +2.7
IDID Didziasalis 69.29 327 *e*P P **01 36 27.3 -0.1**
IDID AMb AMB 01 36 29.4
comp=Z,16nm,1.3s,mb4.8
TBLG Delisi 69.29 308 P P **01 36 28.9 +1.2**
TBLG S sS 01 45 54.0 +1.8
DLMT Dillon 69.35 47 *e*P P **01 36 28.3 +0.3**
comp=Z,81nm,1.2s,mb5.5
MNK Minsk 69.41 326 *e*P P **01 36 27.0 -1.2**
MNK pmax pmax
comp=Z,310nm,0.9s,mb6.2
IIGN Ignalina 69.47 327 *e*P P **01 36 28.5 -0.1**
IIGN AMb AMB 01 36 32.5
comp=Z,31nm,1.5s,mb5.0
HLID Hailey 69.47 50 *e*P P **01 36 29.2 +0.4**
comp=Z,42nm,1.5s,mb5.1
HLID LR LR
comp=Z,1μm,21.0s,MS5.1
ONI Oni 69.51 309 P P **01 36 30.3 +1.2**
ONI S sS 01 45 52.1 -2.8
MCMT McKenzie Canyo 69.55 48 *e*P P **01 36 29.4 +0.2**
BOZ Bozeman (W) 69.69 46 *e*P P **01 36 30.8 +0.7**
comp=Z,16nm,0.6s,mb5.1
BOZ LR LR
comp=Z,800nm,19.0s,MS5.0
BOZ Bozeman (W) 69.69 46 P P **01 36 24.8 -5.3**
BOZ pmax pmax
comp=Z,16nm,0.6s,mb5.1
BMN Battle Mountai 69.79 54 *e*P P **01 36 31.7 +0.9**
comp=Z,5.5nm,0.6s,mb4.7
BMN *e* pP 01 36 43.1 -0.6
BMN LR LR
comp=Z,934nm,21.0s,MS5.0
BMN Battle Mountai 69.79 54 *e*P P **01 36 31.7 +0.9**
BMN *e* pP 01 36 43.1 -0.6
BMN pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
BMN MLR MLR
comp=Z,934nm,21.0s,MS5.0
DOMB Dombas 70.00 339 *e*P P **01 36 32.3 +0.6**
comp=Z,95nm,1.9s,mb5.4
DOMB Dombas 70.00 339 *e*P P **01 36 32.3 +0.6**
DOMB AMb AMB 01 36 33.8
comp=Z,95nm,1.9s,mb5.4
NB2 NORSAR Subarra 70.24 338 P P **01 36 32.7 -0.5**
comp=Z,40nm,0.8s,mb5.4,baz=36,slow=6.5
NB2 NORSAR Subarra 70.24 338 P P **01 36 32.7 -0.5**
NB2 pmax pmax
comp=Z,40nm,0.8s,mb5.4
NOA NORSAR Array B 70.24 338 P P **01 36 32.6 -0.6**
NOA *PP pP 01 36 46.3 +0.2
NOA pmax pmax
comp=Z,27nm,0.8s
NOA MLR MLR
comp=Z,3μm,18.7s

NOA NORSAR Array B 70.24 338 P **P** **01 36 32.6 -0.6**
comp=Z,27nm,0.8s,mb5.2,baz=36,slow=6.1,SNR=84
NOA pP pP 01 36 46.3 +0.2
comp=Z,26nm,0.8s,baz=35,slow=6.1,SNR=8.9
NOA LR LR 02 11 36.5
comp=Z,3μm,18.7s,MS5.6,baz=10.0,slow=39
QLMT Earthquake Lak 70.32 47 *eP* **P** **01 36 34.7 +0.8**
NVAR Mina Array Bea 70.38 56 P **P** **01 36 35.6 +1.2**
NVAR pP pP 01 36 47.7 +0.3
NVAR Mina Array Bea 70.38 56 P **P** **01 36 35.6 +1.2**
comp=Z,6.0nm,0.7s,mb4.6,baz=304,slow=4.7,SNR=53
NVAR pP pP 01 36 47.7 +0.3
comp=Z,10nm,0.7s,baz=297,slow=6.0,SNR=18
SFJD Kangerlussuaq 70.61 6 P **P** **01 36 34.8 -0.6**
SFJD pmax pmax
comp=Z,21nm,0.8s,mb5.1
SFJD Kangerlussuaq 70.61 6 P **P** **01 36 34.8 -0.6**
comp=Z,21nm,0.8s,mb5.2,baz=336,slow=5.2,SNR=10
SFJD Kangerlussuaq 70.61 6 *i* P **P** **01 36 31.1 -4.3**
comp=Z,26nm,0.9s,mb5.2
GCMT Greycliff 70.64 45 *eP* **P** **01 36 36.8 +0.9**
GCMT *e* pP 01 36 49.4 +0.6
YMR Madison River 70.68 47 *eP* **P** **01 36 36.7 +0.5**
comp=Z,22nm,0.8s,mb5.1
YFT Old Faithful 70.89 47 *eP* **P** **01 36 39.3 +1.9**
MTUM Tungsten Hills 70.89 57 *eP* **P** **01 36 38.6 +1.0**
MTUM *e* pP 01 36 50.5 0.0
SOC Sochi 70.99 312 *c iP* **P** **01 36 38.1 +0.1**
SOC *e**SP sP 01 36 48.0 -8.0
SOC *e* 01 39 11.3
SOC *e*PPP 01 40 56.8
SOC *e*S S 01 45 51.9 +1.4
SOC *e* 01 46 38.7
SOC *e*SS SS 01 50 24.6 +1.4
SOC pmax pmax
comp=Z,84nm,1.1s,mb5.6
SOC MLR MLR
comp=Z,4μm,17.0s,MS5.7
LKWY Lake 71.05 47 *eP* **P** **01 36 40.2 +1.8**
comp=Z,25nm,1.1s,mb5.1
LKWY LR LR
comp=Z,2μm,21.0s,MS5.3
LKWY Lake 71.05 47 *eP* **P** **01 36 40.2 +1.8**
LKWY pmax pmax
comp=Z,25nm,1.1s,mb5.1
LKWY MLR MLR
comp=Z,2μm,21.0s,MS5.3
IMW Indian Meadow 71.19 48 *eP* **P** **01 36 40.4 +1.1**
comp=Z,38nm,1.0s,mb5.3
IMW *e* pP 01 36 53.3 +1.1
FLWY Flagg Ranch 71.20 47 *eP* **P** **01 36 40.5 +1.2**
comp=Z,259nm,1.9s,mb5.8
FLWY *e* pP 01 36 53.1 +0.9
DCID1 Drake Creek 71.26 48 *eP* **P** **01 36 40.7 +1.0**
TPH Tonopah 71.27 55 *eP* **P** **01 36 40.1 +0.3**
comp=Z,102nm,1.4s,mb5.6
TPH *e* pP 01 36 52.0 -0.7
TPH Tonopah 71.27 55 *eP* **P** **01 36 40.1 +0.3**
TPH *e* pP 01 36 52.0 -0.8
TPH pmax pmax
comp=Z,102nm,1.4s,mb5.6
ARTV Artvin 71.28 309 *i* P **P** **01 36 33.7 -6.2**
DYDN Diyadin 71.29 307 *i* P **P** **01 36 31.5 -8.4**
RLMT Red Lodge 71.30 46 *eP* **P** **01 36 40.5 +0.7**
comp=Z,108nm,1.7s,mb5.5
RLMT *e* pP 01 36 53.4 +0.6
MOOW Moose Ponds 71.40 48 *eP* **P** **01 36 41.3 +0.8**
comp=Z,88nm,1.5s,mb5.5
MOOW *e* pP 01 36 53.6 +0.2
TPAW Teton Pass 71.45 48 *eP* **P** **01 36 41.0 +0.2**
comp=Z,106nm,1.5s,mb5.5
AKASG Malin Array Be 71.48 322 P **P** **01 36 40.4 -0.5**
AKASG pP pP 01 36 53.0 -0.8
AKASG LR LR 02 11 24.6
AKASG Malin Array Be 71.48 322 P **P** **01 36 40.4 -0.5**
AKASG *PP pP 01 36 53.0 -0.8
AKASG pmax pmax
comp=Z,42nm,0.7s
AKASG MLR MLR
comp=Z,8μm,18.3s
AKASG Malin Array Be 71.48 322 P **P** **01 36 40.4 -0.5**
comp=Z,42nm,0.7s,mb5.5,baz=42,slow=6.2,SNR=153
AKASG pP pP 01 36 53.0 -0.8
comp=Z,38nm,0.8s,baz=43,slow=5.9,SNR=12
AKASG LR LR 02 11 24.6
comp=Z,8μm,18.3s,MS6.0,baz=35,slow=39
KIEV Kiev 71.49 322 *eP* **P** **01 36 40.4 -0.6**
comp=Z,72nm,0.9s,mb5.6
KIEV *e* pP 01 36 52.8 -1.1
KIEV LR LR
comp=Z,6μm,20.0s,MS5.9
KIEV Kiev 71.49 322 *eP* **P** **01 36 40.4 -0.6**
KIEV *e* pP 01 36 52.8 -1.1
KIEV pmax pmax
comp=Z,72nm,0.9s,mb5.6
KIEV MLR MLR
comp=Z,6μm,20.0s,MS5.9
HVU Hansel Valley 71.54 50 *eP* **P** **01 36 41.1 -0.3**
comp=Z,13nm,1.4s,mb4.7
HVU *ep*P pP 01 36 51.2 -3.1
HVU Hansel Valley 71.54 50 *eP* **P** **01 36 41.1 -0.3**
HVU *e**PP pP 01 36 51.2 -3.1
HVU pmax pmax
comp=Z,13nm,1.4s,mb4.7
LOHW Long Hollow 71.56 48 *eP* **P** **01 36 42.5 +0.9**
comp=Z,381nm,2.3s,mb5.9
LOHW *e* pP 01 36 55.0 +0.5
SNOW Snow King Moun 71.58 48 *eP* **P** **01 36 42.5 +0.9**
comp=Z,21nm,1.2s,mb5.0
SNOW *e* pP 01 36 55.2 +0.7
REDW Red Top Meadow 71.59 48 *eP* **P** **01 36 42.7 +1.0**
comp=Z,72nm,1.5s,mb5.4
DGMT Dagmar 71.62 41 *eP* **P** **01 36 40.9 -0.9**
comp=Z,36nm,0.9s,mb5.3
DGMT LR LR
comp=Z,2μm,20.0s,MS5.3
WBK Wadi Bani Khal 71.64 284 P **P** **01 36 44.3 +2.0**
SNR=6.1
WBK Wadi Bani Khal 71.64 284 P **P** **01 36 44.3 +2.0**
SNR=6.1
WBK Wadi Bani Khal 71.64 284 P **P** **01 36 44.3 +2.0**
SNR=6.1
WBK Wadi Bani Khal 71.64 284 P **P** **01 36 44.3 +2.0**
SNR=6.1
WBK Wadi Bani Khal 71.64 284 P **P** **01 36 44.3 +2.0**
SNR=6.1
SUW Suwalki 71.66 328 *eP* **P** **01 36 41.3 -0.6**
LAO LASA Array 71.83 43 *eP* **P** **01 36 43.2 +0.1**
comp=Z,441nm,2.2s,mb6.0
LAO LR LR
comp=Z,1μm,22.0s,MS5.2
AHID Auburn Hatcher 71.84 49 PFAKE 01 37 00.0 +17
AHID LR LR
comp=Z,1μm,20.0s,MS5.2
KONO Kongsberg 71.84 338 PFAKE 01 36 50.0 +7.1
KONO LR LR
comp=Z,5μm,19.0s,MS5.8
KONO Kongsberg 71.84 338 *eS* S 01 46 01.3 +1.4
TUTA Tutak 71.90 307 *i* P **P** **01 36 40.2 -3.4**
BGU Big Grassy Mou 71.95 51 *eP* **P** **01 36 45.5 +1.6**
SPUT South Promonto 72.03 50 *eP* **P** **01 36 45.2 +0.8**
TRCR Troy Canyon 72.09 54 *eP* **P** **01 36 45.6 +0.9**
TRCR *e* pP 01 36 56.8 -0.9
TVAN Van 72.10 306 *i* P **P** **01 36 44.4 -0.4**
DAC Darwin (Calif) 72.17 57 *eP* **P** **01 36 45.9 +0.6**
comp=Z,89nm,1.8s,mb5.4
DAC *e* pP 01 36 57.2 -1.0
DAC LR LR
comp=Z,702nm,21.0s,MS4.9
HOQ Hoqain 72.23 286 P **P** **01 36 46.9 +1.1**
SNR=10.0
HOQ Hoqain 72.23 286 P **P** **01 36 46.9 +1.1**
SNR=10.0
HOQ Hoqain 72.23 286 P **P** **01 36 46.9 +1.1**
SNR=10.0
HOQ Hoqain 72.23 286 P **P** **01 36 46.9 +1.1**
SNR=10.0
HOQ Hoqain 72.23 286 P **P** **01 36 46.9 +1.1**
SNR=10.0
RUND Rundenannen 72.34 340 *eP* **P** **01 36 42.0 -3.8**
HWUT Hardware Ranch 72.34 50 *eP* **P** **01 36 46.4 +0.1**
comp=Z,320nm,2.2s,mb5.9
HWUT *e* pP 01 36 59.5 +0.4
HWUT LR LR
comp=Z,830nm,19.0s,MS5.0

BER Bergen 72.37 340 *eP* **P** **01 36 46.6 +0.6**
BER AMS AMS 02 13 47.1
comp=Z,4μm,19.6s,MS5.7
JMDO Jabal Madar 72.42 284 P **P** **01 36 48.1 +1.1**
SNR=6.7
JMDO Jabal Madar 72.42 284 P **P** **01 36 48.1 +1.1**
SNR=6.7
JMDO Jabal Madar 72.42 284 P **P** **01 36 48.1 +1.1**
SNR=6.7
JMDO Jabal Madar 72.42 284 P **P** **01 36 48.1 +1.1**
SNR=6.7
ERZM Erzurum 72.43 308 *i* P **P** **01 36 40.2 -6.5**
ASHO Ashiyiah 72.44 288 P **P** **01 36 47.8 +0.7**
SNR=8.5
ASHO Ashiyiah 72.44 288 P **P** **01 36 47.8 +0.7**
SNR=8.5
ASHO Ashiyiah 72.44 288 P **P** **01 36 47.8 +0.7**
SNR=8.5
ASHO Ashiyiah 72.44 288 P **P** **01 36 47.8 +0.7**
SNR=8.5
HAKT HAKKARI 72.54 305 *i* P **P** **01 36 46.0 -1.4**
DUG Dugway 72.55 51 *eP* **P** **01 36 47.8 +0.3**
comp=Z,89nm,1.5s,mb5.5
DUG LR LR
comp=Z,1μm,22.0s,MS5.1
DUG Dugway 72.55 51 *eP* **P** **01 36 47.8 +0.3**
DUG pmax pmax
comp=Z,89nm,1.5s,mb5.5
DUG MLR MLR
comp=Z,1μm,22.0s,MS5.1
TPNV Topopah Spring 72.58 56 *eP* **P** **01 36 48.6 +0.9**
comp=Z,424nm,2.0s,mb6.0
TPNV Topopah Spring 72.58 56 *eP* **P** **01 36 48.6 +0.9**
TPNV pmax pmax
comp=Z,424nm,2.0s,mb6.0
NOQ North Oquirrh 72.65 51 *eP* **P** **01 36 48.8 +0.7**
comp=Z,216nm,1.6s,mb5.8
BW06 Boulder Array 72.70 48 PFAKE 01 37 00.0 +12
BW06 LR LR
comp=Z,1μm,19.0s,MS5.2
PDAR Pinedale Array 72.70 48 P **P** **01 36 48.5 +0.1**
comp=Z,5.8nm,0.5s,mb4.7,baz=262,slow=1.3,SNR=62
PDAR pP pP 01 37 01.1 -0.2
comp=Z,5.6nm,0.6s,baz=287,slow=1.3,SNR=11
CTU Camp Tracy 72.83 50 *eP* **P** **01 36 49.8 +0.6**
comp=Z,337nm,2.3s,mb5.9
CTU *e* pP 01 37 01.7 -0.5
BSY Bisya 72.83 285 P **P** **01 36 50.8 +1.4**
SNR=6.3
BSY Bisya 72.83 285 P **P** **01 36 50.8 +1.4**
SNR=6.3
BSY Bisya 72.83 285 P **P** **01 36 50.8 +1.4**
SNR=6.3
BSY Bisya 72.83 285 P **P** **01 36 50.8 +1.4**
SNR=6.3
SIM Simferopol' 73.08 316 *ce*P **P** **01 36 49.9 -0.7**
SIM pmax pmax
comp=Z,43nm,0.9s,mb5.4
SIM MLR MLR
comp=Z,4μm,16.0s,MS5.8
NLU North Lily Min 73.13 51 *eP* **P** **01 36 50.6 -0.3**
BNGL BINGOL 73.17 307 *i* P **P** **01 36 44.6 -6.6**
DAU Daniels Canyon 73.30 50 *eP* **P** **01 36 53.0 +1.1**
DAU Daniels Canyon 73.30 50 P **P** **01 36 53.2 +1.3**
MPU Maple Canyon 73.35 51 *eP* **P** **01 36 53.2 +1.0**
comp=Z,168nm,1.8s,mb5.7
MPU LR LR
comp=Z,4μm,20.0s,MS5.7
KELT Kelkit 73.49 309 *i* P **P** **01 36 51.9 -1.2**
STKA Stephens Creek 73.69 182 *eP* **P** **01 36 53.8 -0.2**
comp=Z,4.5nm,1.0s,mb4.3
STKA *e*S S 01 46 22.1 +0.8
STKA Stephens Creek 73.69 182 P **P** **01 36 53.8 -0.2**
comp=Z,5.8nm,1.0s,mb4.5,baz=345,slow=8.6,SNR=5.7
STKA LR LR 02 11 17.7
comp=Z,836nm,20.0s,MS5.0,baz=5.8,slow=37
MSL Mosul 73.73 304 *i* x x 01 36 56.0
MSL *i* x x 01 37 09.0
MSL *ex* x 01 46 45.0
ARUT Antelope Range 73.74 54 *eP* **P** **01 36 55.1 +0.5**
ARUT Antelope Range 73.74 54 P **P** **01 36 55.3 +0.7**
CCUT Cedar City 73.94 54 *eP* **P** **01 36 56.6 +0.8**
CCUT *e* pP 01 37 08.3 -0.5
MSU Marysvale 74.02 52 *eP* **P** **01 36 57.6 +1.5**
MSU *e* pP 01 37 09.9 +0.8
FORT Forrest 74.04 194 *eP* **P** **01 36 56.3 +0.2**
comp=Z,2.8nm,0.8s,mb4.4
TMUT Trail Mountain 74.07 51 *eP* **P** **01 36 57.2 +0.8**
TMUT *e* pP 01 37 09.3 -0.1
ULM Lac du Bonnet 74.15 35 P **P** **01 36 56.2 -0.5**
comp=Z,5.1nm,0.7s,mb4.6,baz=320,slow=7.2,SNR=21
KIS Kishinev 74.30 320 *eP* **P** **01 36 56.0 -1.6**
KIS *e* pP 01 37 06.0 -4.6
KIS *e* 01 37 15.0
KIS *e*S S 01 46 25.0 -3.1
KIS *e*PS 01 46 53.0
KIS pmax pmax
comp=Z,280nm,2.2s,mb5.8
KIS MLR MLR
comp=Z,4μm,19.0s,MS5.8
KIS MLR MLR
comp=N,1μm,18.0s
KIS MLR MLR
comp=Z,4μm,20.0s
KIS Kishinev 74.30 320 *eP* **P** **01 36 56.0 -1.6**
comp=Z,300nm,2.2s,mb5.8
KIS Kishinev 74.30 320 *e*PcP PcP 01 37 06.0 -6.3
KIS *e*S S 01 46 25.0 -3.1
LVV L'vov 74.42 324 ⇓*iP* **P** **01 36 58.2 -0.1**
LVV *e*S S 01 46 30.4 +1.0
LVV *i* 01 46 55.8
LVV MLR MLR
comp=Z,6μm,18.0s,MS5.9
LVV MLR MLR
comp=N,3μm,19.0s,MS5.9
LVV MLR MLR
comp=E,5μm,17.0s,MS5.9
MARD Mardin 74.47 306 *i* P **P** **01 36 58.9 +0.1**
PFO Pinyon Flat Ob 74.60 59 *eP* **P** **01 37 01.2 +1.6**
comp=E,86nm,1.8s,mb5.4
PFO Pinyon Flat Ob 74.60 59 *eP* **P** **01 37 01.2 +1.6**
PFO pmax pmax
comp=Z,86nm,1.8s,mb5.4
RWWY Rawlins 74.71 47 *eP* **P** **01 37 00.1 -0.1**
comp=Z,227nm,1.9s,mb5.8
RWWY *e* pP 01 37 12.3 -0.8
RSSD Black Hills 74.72 44 *eP* **P** **01 36 59.8 -0.4**
comp=Z,16nm,0.8s,mb5.0
RSSD *e* pP 01 37 11.7 -1.4
RSSD Black Hills 74.72 44 *eP* **P** **01 36 59.8 -0.3**
RSSD *e* pP 01 37 11.7 -1.4
RSSD pmax pmax
comp=Z,16nm,0.8s,mb5.0
ELZG Elazig 74.75 308 *i* P **P** **01 36 57.7 -2.7**
BHD Baghdad 74.89 301 *i* x x 01 36 56.0
BHD *i* x x 01 37 09.0
BHD *ex* x 01 46 45.0
BHD Baghdad 74.89 301 *ex* x 01 37 05.0
BHD *ex* x 01 46 55.0
BOYT Boyabat 75.08 313 *i* P **P** **01 36 57.7 -4.5**
UMR Umm Al-Rimmam 75.11 296 *eP* **P** **01 37 02.3 -0.3**
UMR AMb AMB 01 37 03.2
comp=Z,129nm,0.9s,mb5.8
KWP Kalwaria 75.13 325 *eP* **P** **01 37 03.2 +0.8**
KWP LMZ 02 13 27.4
comp=Z,10μm,18.6s
KWP Kalwaria 75.13 325 ⇑*iP* **P** **01 37 03.2 +0.8**
MALT Malatya 75.19 308 ⇑P **P** **01 37 04.6 +1.6**
MALT Malatya 75.19 308 P **P** **01 37 04.6 +1.6**
MALT pmax pmax
comp=Z,68nm,1.1s,mb5.5
MALT Malatya 75.19 308 ⇑*iP* **P** **01 37 04.6 +1.6**
MIB Mutribah 75.20 297 *eP* **P** **01 37 02.9 -0.3**
MIB AMb AMB 01 37 03.7
comp=Z,162nm,1.0s,mb5.9
KBD Kabd 75.37 296 *eP* **P** **01 37 03.4 -0.7**
KBD AMb AMB 01 37 04.8
comp=Z,339nm,1.1s,mb6.2
QRN Al-Qurain 75.49 296 *eP* **P** **01 37 04.7 -0.1**
QRN AMb AMB 01 37 07.5
comp=Z,118nm,0.7s,mb6.0
AGMN Agassiz Refuge 75.62 37 *eP* **P** **01 37 04.2 -1.0**
comp=Z,40nm,1.3s,mb5.2
AGMN LR LR
comp=Z,3μm,22.0s,MS5.5

NAY Al-Naaiem 75.62 296 *eP* **P** **01 37 05.1 -0.5**
NAY AMb AMB 01 37 06.1
comp=Z,71nm,0.8s,mb5.6
RDF Al-Radifah 75.62 296 *eP* **P** **01 37 05.7 0.0**
RDF AMb AMB 01 37 06.4
comp=Z,203nm,0.9s,mb6.0
ATAB Bozova 75.84 308 *i* P **P** **01 37 04.3 -2.4**
KOLS Kolonicke sedl 75.84 325 *eP* **P** **01 37 06.8 +0.3**
KOLS *e*PP PP 01 39 53.9 -2.5
OJC Ojcow 75.89 327 *eP* **P** **01 37 07.3 +0.5**
STHS Stebnicka Huta 75.91 326 *eP* **P** **01 37 07.5 +0.6**
comp=Z,33nm,1.1s,mb5.2
STHS Stebnicka Huta 75.91 326 *eP* **P** **01 37 07.5 +0.6**
STHS pmax pmax
comp=Z,33nm,1.1s,mb5.2
PHWY Pilot Hill 75.93 47 *eP* **P** **01 37 07.1 -0.1**
PV10 Paradox Valley 75.94 51 *eP* **P** **01 37 08.3 +1.1**
UZH Uzhgorod 76.06 324 ⇓*iP* **P** **01 37 07.5 -0.3**
UZH *e* pP 01 37 22.5 +1.7
UZH *e* 01 39 57.7
UZH *e*S S 01 46 46.5 -1.2
UZH *e*PS 01 47 34.0
UZH MLR MLR
comp=Z,8μm,16.0s,MS6.1
VRI Vrincioaia 76.11 320 ⇑P **P** **01 37 08.9 +0.8**
VRI Vrincioaia 76.11 320 ⇑*iP* **P** **01 37 08.9 +0.8**
CRVS Cervenica-Dubn 76.22 325 *eP* **P** **01 37 08.7 +0.1**
NIE Niedzica 76.30 326 *eP* **P** **01 37 09.7 +0.6**
TIRR Tirgusor 76.32 318 ⇑P **P** **01 37 09.4 +0.1**
TIRR Tirgusor 76.32 318 ⇑*iP* **P** **01 37 09.4 +0.1**
TRPA Tarpa 76.34 324 ⇑*iP* **P** **01 37 10.1 +0.8**
GZT Gaziantep 76.34 308 *i* P **P** **01 37 09.7 +0.1**
PV01 Paradox Valley 76.37 51 *eP* **P** **01 37 10.4 +0.7**
BSEG Bad Segeberg 76.39 334 *eP* **P** **01 37 09.7 +0.2**
BSEG pmax pmax
comp=Z,74nm,1.3s,mb5.5
BSEG Bad Segeberg 76.39 334 *eP* **P** **01 37 09.7 +0.2**
comp=Z,74nm,1.3s,mb5.5
HARR Harsova 76.39 319 ⇑P **P** **01 37 09.9 +0.2**
HARR Harsova 76.39 319 ⇑*iP* **P** **01 37 09.9 +0.2**
RUE Ruedersdorf 76.40 331 *eP* **P** **01 37 09.2 -0.4**
comp=Z,13nm,0.5s,mb5.1
RUE Ruedersdorf 76.40 331 *eP* **P** **01 37 09.8 +0.2**
comp=Z,102nm,1.2s,mb5.6
WUAZ Wupatki 76.49 54 *eP* **P** **01 37 11.0 +0.6**
comp=Z,95nm,1.6s,mb5.5
ELDT Eldivan 76.53 313 *i* P **P** **01 37 04.3 -6.3**
SMCO Snowmass 76.57 49 *eP* **P** **01 37 06.3 -4.5**
comp=Z,138nm,1.9s,mb5.6
CDAG Cicekdag 76.61 312 *i* P **P** **01 37 06.5 -4.6**
RAC Raciborz 76.65 328 *eP* **P** **01 37 10.2 -0.8**
RAC LR LR
comp=Z,4μm,18.0s,MS5.7
KSP Ksiaz 76.79 329 *eP* **P** **01 37 12.5 +0.7**
KSP LMZ 02 14 11.4
comp=Z,10μm,20.2s
KSP Ksiaz 76.79 329 ⇑*eP* **P** **01 37 12.3 +0.5**
KSP *e**PP pP 01 37 24.7 -0.2
KSP *e* 01 47 14.0
KSP MLR MLR
comp=Z,12μm,20.2s,MS6.2
OKC Ostrava-Krasne 76.86 327 ⇑*iP* **P** **01 37 12.7 +0.5**
OKC *ep*P pP 01 37 25.5 +0.2
OKC Ostrava-Krasne 76.86 327 ⇑*iP* **P** **01 37 12.7 +0.5**
OKC *ep*P pP 01 37 25.5 +0.2
ISCO Idaho Springs 76.89 48 *eP* **P** **01 37 13.3 +0.6**
comp=Z,131nm,1.9s,mb5.5
ISCO LR LR
comp=Z,4μm,19.0s,MS5.8
ISCO Idaho Springs 76.89 48 *eP* **P** **01 37 13.3 +0.7**
ISCO pmax pmax
comp=Z,131nm,1.9s,mb5.5
ISCO MLR MLR
comp=Z,4μm,19.0s,MS5.8
BR131 Keskin Array S 76.95 312 *eP* **P** **01 37 13.2 +0.2**
comp=Z,6.3nm,0.8s,mb4.6
BR131 LR LR
comp=Z,847nm,19.0s,MS5.1
BRTR Keskin Array B 76.95 312 P **P** **01 37 13.3 +0.4**
BRTR PP PP 01 40 06.0 +0.1
BRTR LR LR 02 19 16.1
BRTR Keskin Array B 76.95 312 ⇑*eP* **P** **01 37 13.3 +0.4**
BRTR Keskin Array B 76.95 312 P **P** **01 37 13.3 +0.4**
comp=Z,12nm,1.1s,mb4.8,baz=62,slow=5.7,SNR=39
BRTR PP PP 01 40 06.0 +0.1
comp=Z,4.7nm,0.9s,baz=60,slow=7.3,SNR=4.3
BRTR LR LR 02 19 16.1
comp=Z,2μm,18.1s,MS5.4,baz=217,slow=42
KECS Kecovo 76.95 325 *eP* **P** **01 37 12.1 -0.7**
comp=Z,8.9nm,0.9s,mb4.7
KECS *e* pP 01 37 25.7 -0.1
KECS Kecovo 76.95 325 *eP* **P** **01 37 12.1 -0.7**
KECS *e* pP 01 37 25.7 -0.1
KECS pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MVCO Mesa Verde 77.05 51 *eP* **P** **01 37 14.1 +0.6**
comp=Z,108nm,1.7s,mb5.5
LIKS Likavka 77.09 326 *eP* **P** **01 37 15.0 +1.5**
MORC Moravsky Berou 77.15 328 ⇑P **P** **01 37 14.5 +0.6**
MORC Moravsky Berou 77.15 328 P **P** **01 37 14.5 +0.6**
MORC pmax pmax
comp=Z,61nm,1.0s,mb5.5
MORC Moravsky Berou 77.15 328 ⇑*iP* **P** **01 37 14.5 +0.6**
UPC Upice 77.17 329 ⇑*iP* **P** **01 37 14.5 +0.5**
UPC *ep*P pP 01 37 27.3 +0.3
DPC Dobruska-Polom 77.17 329 ⇑*iP* **P** **01 37 14.8 +0.8**
DPC *ep*P pP 01 37 27.7 +0.7
DPC *e*SKS 01 47 23.5
DPC AMS AMS 02 14 00.0
comp=Z,4μm,19.3s
SGKT Sivrigoynuk 77.21 314 *i* P **P** **01 37 12.8 -1.6**
KLBR Kellerberrin 77.25 203 *eP* **P** **01 37 14.3 -0.2**
comp=Z,23nm,0.9s,mb5.1
DRGR 77.28 323 ⇓P **P** **01 37 15.1 +0.5**
DRGR 77.28 323 ⇓*iP* **P** **01 37 15.1 +0.4**
ANTO Ankara 77.31 313 ⇑P **P** **01 37 15.8 +0.8**
ANTO LR LR
comp=Z,1μm,20.0s,MS5.2
ANTO Ankara 77.31 313 P **P** **01 37 16.1 +1.1**
SNR=13
ANTO Ankara 77.31 313 P **P** **01 37 16.1 +1.1**
SNR=13
ANTO Ankara 77.31 313 P **P** **01 37 16.1 +1.1**
SNR=13
ANTO Ankara 77.31 313 ⇑*iP* **P** **01 37 15.8 +0.8**
VYHS Vyhne 77.63 326 *iP* **P** **01 37 17.1 +0.5**
comp=Z,21nm,1.1s,mb5.0
VYHS *e* pP 01 37 28.0 -1.7
VYHS *e*PP PP 01 40 11.3 -0.1
VYHS LR LR
comp=Z,2μm,18.6s,MS5.5
VYHS Vyhne 77.63 326 *iP* **P** **01 37 17.1 +0.5**
VYHS *e* pP 01 37 28.0 -1.7
VYHS *e* 01 40 11.3
VYHS pmax pmax
comp=Z,21nm,1.1s,mb5.0
VYHS MLR MLR
comp=Z,2μm,18.6s,MS5.5
VYHS Vyhne 77.63 326 *iP* **P** **01 37 17.1 +0.5**
VYHS *ep*P pP 01 37 28.0 -1.7
VYHS *e*PP PP 01 40 11.3 -0.1
CLL Collm 77.64 331 ⇑*iP* **P** **01 37 16.3 -0.3**
comp=Z,65nm,1.0s,mb5.5
CLL *i* pP 01 37 30.3 +0.7
CLL *e*S S 01 47 24.0 +19
CLL LR LR
comp=Z,9μm,18.8s,MS6.1
CLL Collm 77.64 331 ⇑*iP* **P** **01 37 16.3 -0.3**
CLL *i* pP 01 37 30.3 +0.7
CLL *e*S S 01 47 24.0 +19
CLL pmax pmax
comp=Z,65nm,1.0s,mb5.5
CLL MLR MLR
comp=Z,9μm,18.8s,MS6.1
CLL Collm 77.64 331 ⇑*iP* **P** **01 37 16.3 -0.3**
comp=Z,65nm,1.0s,mb5.5
CLL *i* sP sP 01 37 30.3 -4.3
CLL *e*S S 01 47 12.0 +7.2
CLL *e*PS 01 47 55.0
CLL *e*(SS) 01 53 06.0
CLL *e*(SSS) 01 56 30.0
CLL Lm 02 14 00.0
comp=N,6μm,18.8s
CLL Lm 02 14 00.0

comp=E,4µm,18.8s
CLL Lm 02 14 00.0
comp=E,9µm,18.8s
CLL Collm 77.64 331 *e*P **P 01 37 16.2 -0.4**
comp=Z,54nm,0.9s,mb5.5
PSZ Piszkesteto 77.64 325 ⇑P **P 01 37 17.4 +0.7**
PSZ Piszkesteto 77.64 325 P **P 01 37 17.4 +0.7**
PSZ pmax pmax
comp=Z,37nm,1.1s,mb5.2
PSZ Piszkesteto 77.64 325⇑*e*P **P 01 37 17.4 +0.7**
PSZ Piszkesteto 77.64 325⇑*i*P **P 01 37 17.4 +0.7**
BRG Berggiesshubel 77.65 330 *i* P **P 01 37 16.7 +0.1**
comp=Z,24nm,1.2s,mb5.0
BRG *e* pP 01 37 29.6 -0.1
BRG S S 01 47 28.0 +23
BRG LR LR
comp=Z,6µm,20.1s,MS5.9
BRG Berggiesshubel 77.65 330 *i* P **P 01 37 16.7 0.0**
BRG *e* pP 01 37 29.6 -0.1
BRG S S 01 47 28.0 +23
BRG pmax pmax
comp=Z,24nm,1.2s,mb5.0
BRG MLR MLR
comp=N,3µm,19.2s,MS5.8
BRG MLR MLR
comp=E,2µm,18.0s,MS5.8
BRG MLR MLR
comp=Z,6µm,20.1s,MS5.9
BRG Berggiesshubel 77.65 330 *e*P **P 01 37 16.6 -0.1**
comp=Z,39nm,1.2s,mb5.2
BRG Berggiesshubel 77.65 330 *i* P **P 01 37 16.7 +0.1**
comp=Z,39nm,1.2s,mb5.2
BRG *e* pP 01 37 29.6 -0.1
comp=Z,40nm,1.3s
BRG S S 01 47 28.0 +23
BRG
comp=N,6µm,19.2s
BRG
comp=E,3µm,18.0s
BRG
comp=Z,9µm,20.1s
NRDL Niedersach Rie 77.66 333 *e*P **P 01 37 16.8 +0.1**
comp=Z,71nm,1.6s,mb5.3
COBT Iskenderun 77.68 308 *i* P **P 01 37 10.9 -6.2**
PVCC Panska Ves 77.70 330⇑*i*P **P 01 37 17.2 +0.3**
PVCC *e*pP pP 01 37 31.2 +1.2
PVCC AMS AMS 02 14 40.0
comp=Z,8µm,18.6s
KOLL Kolacno 77.75 326 *i* P **P 01 37 17.9 +0.7**
KOLL *e*pP pP 01 37 31.6 +1.3
EYMN Ely 77.77 35 *e*P **P 01 37 16.3 -1.1**
comp=Z,194nm,1.8s,mb5.7
EYMN LR LR
comp=Z,1µm,21.0s,MS5.2
FBE Freiberg 77.83 331 *e*P **P 01 37 17.8 +0.2**
comp=Z,52nm,1.0s,mb5.4
VRAC Vranov 77.90 328⇑*i*P **P 01 37 18.1 0.0**
CLZ Clausthal 78.12 333 *e*P **P 01 37 19.6 +0.4**
CLZ pmax pmax
comp=Z,88nm,1.3s,mb5.5
CLZ Clausthal 78.12 333 *e*P **P 01 37 19.6 +0.4**
comp=Z,88nm,1.3s,mb5.5
PRA Prague 78.12 330 ⇑P **P 01 37 19.0 -0.3**
PRU Pruhonice 78.14 329⇑*i*P **P 01 37 19.7 +0.3**
PRU *e*pP pP 01 37 32.6 +0.1
PRU *e*SKS 01 47 31.3
PRU AMS AMS 02 15 10.0
comp=Z,6µm,19.6s
SMOL Smolenice 78.19 327 *e*P **P 01 37 21.1 +1.4**
GZR Gura Zlata 78.31 322 ⇑P **P 01 37 20.8 +0.4**
GZR Gura Zlata 78.31 322⇑*i*P **P 01 37 20.8 +0.4**
BUD Budapest 78.35 325⇑*e*P **P 01 37 21.4 +0.8**
MODS Modra-Piesok 78.37 327 *i* P **P 01 37 21.7 +1.0**
SDCO Great Sand Dun 78.39 49 *e*P **P 01 37 21.4 +0.4**
comp=Z,207nm,2.3s,mb5.7
SZH Strazhica 78.41 319 *e*P **P 01 37 20.9 -0.1**
TANN Tannenbergstha 78.57 331 *e*P **P 01 37 22.0 +0.3**
comp=Z,60nm,2.0s,mb5.2
ZST Bratislava 78.58 327 *e*P **P 01 37 22.7 +0.8**
comp=Z,22nm,1.1s,mb5.0
ZST LR LR
comp=Z,2µm,17.8s,MS5.4
IBBN Ibbenburen 78.59 334 *e*P **P 01 37 21.8 -0.1**
comp=Z,111nm,1.6s,mb5.5
WERD Werda 78.60 331 *e*P **P 01 37 22.0 +0.1**
comp=Z,38nm,1.2s,mb5.2
ESKT Eskisehir 78.61 313 *i* P **P 01 37 21.2 -1.0**
GUNZ Gunzen 78.66 331 *e*P **P 01 37 22.5 +0.3**
comp=Z,36nm,1.1s,mb5.2
MOX Moxa 78.68 331 *e*P **P 01 37 22.3 -0.1**
comp=Z,96nm,1.9s,mb5.4
MOX *e* pP 01 37 31.0 -4.5
comp=Z,116nm,1.9s
MOX
comp=Z,6µm,20.0s
MOX Moxa 78.68 331 *e*P **P 01 37 22.3 -0.1**
MOX *e* pP 01 37 31.0 -4.5
MOX pmax pmax
comp=Z,96nm,1.9s,mb5.4
MOX MLR MLR
comp=Z,6µm,20.0s,MS5.9
MOX Moxa 78.68 331 *e*P **P 01 37 22.4 0.0**
comp=Z,46nm,1.2s,mb5.3
JMB Yambol 78.69 318 *e*P **P 01 37 23.0 +0.5**
ECSD EROS,Sioux Fal 78.69 40 *e*P **P 01 37 21.8 -0.8**
comp=Z,135nm,1.7s,mb5.6
ECSD LR LR
comp=Z,2µm,19.0s,MS5.5
WERN Wernitzgruen 78.70 331 *e*P **P 01 37 22.8 +0.3**
comp=Z,37nm,1.1s,mb5.2
NKC Novy Kostel 78.72 331⇑*i*P **P 01 37 22.7 +0.1**
NKC *e*pP pP 01 37 35.2 -0.5
NKC Novy Kostel 78.72 331⇑*i*P **P 01 37 22.7 +0.1**
NKC *e*pP pP 01 37 35.2 -0.5
NKC AMS AMS 02 15 10.0
comp=Z,8µm,17.8s
PVL Pavlikeni 78.74 319 *e*P **P 01 37 23.6 +0.7**
TUC Tucson 79.02 56 *e*P **P 01 37 24.8 +0.2**
comp=Z,145nm,2.1s,mb5.5
TUC Tucson 79.02 56 *e*P **P 01 37 24.8 +0.2**
TUC pmax pmax
comp=Z,145nm,2.1s,mb5.5
MANZ Manzenberg 79.05 331 *e*P **P 01 37 24.6 +0.2**
comp=Z,36nm,1.2s,mb5.2
ULDT Uludag 79.08 315 *i* P **P 01 37 24.1 -0.7**
WTSB Winterswijk 79.19 335 *e*P **P 01 37 24.9 -0.3**
comp=Z,69nm,1.9s,mb5.3
WTSB ⇓*i*P 02 23 34.2
comp=Z,859nm,2.1s
ROTZ Rotzenmuhle 79.19 331 *e*P **P 01 37 25.6 +0.4**
comp=Z,62nm,1.2s,mb5.4
KHC Kasperske Hory 79.21 329⇑*i*P **P 01 37 25.8 +0.5**
KHC *e*pP pP 01 37 38.4 0.0
KHC *e*SKS 01 47 45.1
KHC AMS AMS 02 15 30.0
comp=Z,6µm,19.3s
SOP Sopron 79.21 327⇑*e*P **P 01 37 26.4 +1.1**
CONA Conrad Observa 79.29 327 *i* P **P 01 37 26.6 +0.8**
comp=Z,488nm,3.3s,SNR=29
GEC2 GERESS Array S 79.39 329 *e*P **P 01 37 26.4 +0.1**
GEC2 pmax pmax
comp=Z,29nm,1.1s,mb5.1
GEC2 GERESS Array S 79.39 329 *e*P **P 01 37 26.4 +0.1**
comp=Z,29nm,1.1s,mb5.1
GERES GERESS Array B 79.39 329 P **P 01 37 26.1 -0.2**
GERES *PP pP 01 37 39.3 -0.1
GERES pmax pmax
comp=Z,11nm,0.8s
GERES MLR MLR
comp=Z,4µm,19.2s
GERES GERESS Array B 79.39 329 P **P 01 37 26.1 -0.2**
comp=Z,11nm,0.8s,mb4.8,baz=53,slow=5.2,SNR=36
GERES pP pP 01 37 39.3 -0.1
comp=Z,9.7nm,0.7s,baz=26,slow=6.4,SNR=9.6
GERES LR LR 02 16 14.2
comp=Z,4µm,19.2s,MS5.8,baz=25,slow=38
WET Wettzell 79.46 330 *e*P **P 01 37 27.2 +0.5**
WET pmax pmax
comp=Z,64nm,1.1s,mb5.5
WET Wettzell 79.46 330 *e*P **P 01 37 27.2 +0.5**
comp=Z,64nm,1.1s,mb5.5
PKSM Moragy 79.51 325 ⇑P **P 01 37 26.6 -0.4**
PKSM Moragy 79.51 325⇑*i*P **P 01 37 26.6 -0.4**
GRA1 Grafenberg Arr 79.61 331 *e*P **P 01 37 28.0 +0.5**
comp=Z,97nm,1.1s,mb5.7
GRA1 *e*pP pP 01 37 41.2 +0.6
GRA1 *e*PP PP 01 40 33.2 +5.4
GRA1 *e*S S 01 47 28.7 +2.8
GRF Grafenberg Arr 79.61 331 *e*P **P 01 37 28.0 +0.5**
comp=Z,97nm,1.1s,mb5.7
GRF *e*pP pP 01 37 41.2 +0.6
GRF *e*PP PP 01 40 33.2 +5.4
GRF *e*S S 01 47 28.7 +2.8
GRF Grafenberg Arr 79.61 331 *e*P **P 01 37 28.0 +0.5**
GRF *e**PP pP 01 37 41.2 +0.6
GRF *e* 01 40 33.2
GRF *e*S S 01 47 28.7 +2.8
GRF pmax pmax
comp=Z,97nm,1.1s,mb5.7
GRF MLR MLR
comp=E,3µm,18.6s
GRF Grafenberg Arr 79.61 331 *e*P **P 01 37 28.0 +0.5**
comp=Z,97nm,1.1s,mb5.7
GRF *e*pP pP 01 37 41.2 +0.6
GRF *e*PP PP 01 40 33.2 +5.4
GRF *e*S S 01 47 28.7 +2.8
GRF *e*L 02 14 09.6
comp=E,3µm,18.6s
GRFO Grafenberg 79.62 331 *e*P **P 01 37 27.9 +0.4**
comp=E,83nm,1.0s,mb5.6
GRFO *e* pP 01 37 41.0 +0.4
GRFO LR LR
comp=Z,7µm,19.0s,MS6.0
GRFO Grafenberg 79.62 331 *e*P **P 01 37 27.9 +0.4**
GRFO *e* pP 01 37 41.0 +0.4
GRFO pmax pmax
comp=Z,83nm,1.0s,mb5.6
GRFO MLR MLR
comp=Z,7µm,19.0s,MS6.0
GDZ Gediz 79.66 314 *i* P **P 01 37 21.8 -6.1**
LAZ Ladron 79.78 53 *e*P **P 01 37 29.7 +1.0**
ANMO Albuquerque 79.80 52 *e*P **P 01 37 29.9 +1.1**
comp=Z,101nm,1.8s,mb5.5
ANMO LR LR
comp=Z,3µm,20.0s,MS5.6
ANMO Albuquerque 79.80 52 *e*P **P 01 37 29.9 +1.1**
ANMO pmax pmax
comp=Z,101nm,1.8s
ANMO MLR MLR
comp=Z,3µm,20.0s
PGB Panagyurishte 79.81 319 *e*P **P 01 37 28.9 +0.2**
BHL Bhannes 79.84 307 *e*P **P 01 37 27.5 -1.6**
SCHQ Schefferville 79.87 18 P **P 01 37 28.5 -0.3**
SCHQ Schefferville 79.87 18 P **P 01 37 28.5 -0.2**
comp=Z,28nm,0.8s,mb5.3,baz=359,slow=5.3,SNR=50
KDZ Kurdzhali 79.87 318 *e*P **P 01 37 29.8 +0.8**
PLD Plovdiv 79.88 319 *e*P **P 01 37 29.6 +0.5**
PLD Plovdiv 79.88 319 *e*P **P 01 37 29.4 +0.3**
ARSA Arzberg 79.98 327⇑*i*P **P 01 37 30.0 +0.5**
comp=Z,582nm,3.9s,SNR=12
MOA Molln 79.99 328⇑*i*P **P 01 37 30.0 +0.5**
comp=Z,349nm,4.2s,SNR=16
ISP Isparta 80.00 313 *e*P **P 01 37 29.7 -0.1**
LENM Lemitar 80.05 53 *e*P **P 01 37 30.9 +0.8**
ALN Alexandroupoli 80.12 317 *e*P **P 01 37 30.7 +0.3**
TNS Taunus Mts 80.14 333 *e*P **P 01 37 30.4 +0.1**
TNS pmax pmax
comp=Z,39nm,1.2s,mb5.2
TNS Taunus Mts 80.14 333 *e*P **P 01 37 30.4 +0.1**
comp=Z,39nm,1.2s,mb5.2
LPM Los Pinos Moun 80.15 52 *e*P **P 01 37 30.8 +0.1**
RDO Rodhopi 80.19 318 *e*P **P 01 37 31.4 +0.6**
COWI Conover 80.22 34 *e*P **P 01 37 29.7 -1.2**
comp=Z,51nm,1.3s,mb5.3
COWI LR LR
comp=Z,3µm,19.0s,MS5.7
VTS Vitosha 80.24 320 *e*P **P 01 37 31.7 +0.7**
VTS Vitosha 80.24 320 *e*P **P 01 37 31.5 +0.5**
VTS Vitosha 80.24 320⇓*i*P **P 01 37 32.0 +1.0**
BNM Barren Site 80.26 53 *e*P **P 01 37 32.3 +1.0**
CSS Prodhromos 80.47 309 *e*P **P 01 37 32.6 +0.2**
HGN Heimansgroeve 80.50 335⇑*e*P **P 01 37 31.9 -0.4**
comp=Z,77nm,2.2s,mb5.2
HGN *ex* pP 01 37 45.6 +0.2
TOD Tromm 80.54 332 *e*P **P 01 37 32.6 +0.1**
BEBN Eben Emael 80.56 335 P **P 01 37 32.0 -0.6**
comp=Z,13nm,1.2s,mb4.7
DIVS Divcibare 80.57 323 *e*P **P 01 37 32.7 -0.1**
MANT Manisa 80.59 314 *i* P **P 01 37 31.4 -1.5**
MEM Membach 80.61 334 P **P 01 37 33.0 +0.1**
comp=Z,32nm,2.2s,mb4.9
PERS Pernice 80.64 327 *i* P **P 01 37 33.5 +0.4**
PERS *i* pP 01 37 47.3 +1.1
AKHS Akhisar 80.70 315 *i* P **P 01 37 24.0 -10**
ABH Alteburg 80.73 333 *e*P **P 01 37 33.4 -0.1**
MMB Musomiste 80.75 319 *e*P **P 01 37 34.2 +0.4**
CBKS Cedar Bluff 80.77 45 *e*P **P 01 37 32.9 -1.1**
comp=Z,12nm,0.6s,mb5.0
CBKS LR LR
comp=Z,2µm,22.0s,MS5.4
CBKS Cedar Bluff 80.77 45 *e*P **P 01 37 32.9 -1.0**
CBKS pmax pmax
comp=Z,12nm,0.6s,mb5.0
CBKS MLR MLR
comp=Z,2µm,22.0s,MS5.4
KKB Krupnik 80.85 320 *e*P **P 01 37 34.8 +0.5**
NVR Nevrokopi 80.87 319 *e*P **P 01 37 34.8 +0.4**
FUR Furstenfeldbru 80.87 330 *e*P **P 01 37 34.6 +0.3**
FUR pmax pmax
comp=Z,98nm,1.0s,mb5.7
FUR Furstenfeldbru 80.87 330 *e*P **P 01 37 34.6 +0.3**
comp=Z,98nm,1.0s,mb5.7
GOLH Golhisar 80.96 313 *i* P **P 01 37 32.7 -2.2**
OBKA Obir 80.97 327 *i* P **P 01 37 34.9 +0.1**
comp=Z,417nm,3.3s,SNR=26
KBA Koelnbreinsper 80.98 328⇓*i*P **P 01 37 35.2 +0.3**
comp=Z,516nm,3.3s,SNR=26
KBA Koelnbreinsper 80.98 328⇓*i*P **P 01 37 35.2 +0.3**
KBA pmax pmax
comp=Z,517nm,3.3s
BCLA Clavier 81.00 335 P **P 01 37 34.0 -0.9**
comp=Z,31nm,2.3s,mb4.8
RUP Ruppelstein 81.05 333 *e*P **P 01 37 35.2 0.0**
STU Stuttgart 81.11 332 *e*P **P 01 37 35.5 0.0**
comp=Z,54nm,0.9s,mb5.5
PDKS Podkum 81.15 327⇑*i*P **P 01 37 35.7 -0.1**
MYKA Terra Mystica 81.23 328⇑*i*P **P 01 37 35.7 -0.5**
comp=Z,14µm,5.0s
SNF Seneffe 81.25 335 P **P 01 37 36.0 -0.2**
comp=Z,27nm,1.8s,mb4.9
WLF Walferdange 81.38 334 *e*P **P 01 37 35.8 -1.2**
comp=Z,98nm,1.7s,mb5.5
WLF Walferdange 81.38 334 *e*P **P 01 37 35.8 -1.2**
WLF pmax pmax
comp=Z,98nm,1.7s,mb5.5
WLF Walferdange 81.38 334 P **P 01 37 37.0 0.0**
comp=Z,38nm,2.0s,mb5.0
WLF Walferdange 81.38 334 *e*P **P 01 37 37.5 +0.5**
comp=Z,71nm,1.5s,mb5.4
STIP Stip 81.42 320 *e*P **P 01 37 37.0 -0.2**
STIP Stip 81.42 320⇑*i*P **P 01 37 36.8 -0.5**
VISS Visnje 81.42 327 *i* P **P 01 37 36.9 -0.4**
VISS *i* pP 01 37 50.8 +0.4
GIVF Givet 81.43 335⇑*i*P **P 01 37 36.6 -0.6**
PLE Pljevlja 81.44 323⇓*i*P **P 01 37 38.7 +1.3**
WATA Walderalm 81.45 329⇓*i*P **P 01 37 37.7 +0.3**
comp=Z,45nm,1.1s,mb5.3,SNR=27
WATA Walderalm 81.45 329⇓*i*P **P 01 37 37.7 +0.3**
WATA pmax pmax
comp=Z,45nm,1.1s,mb5.3
BLCB Balcova 81.47 315 *e*P **P 01 37 37.6 0.0**
KNT Kendrikon 81.48 319 *e*P **P 01 37 37.8 +0.2**
WTTA Wattenberg 81.48 329 *i* P **P 01 37 38.0 +0.5**
comp=Z,651nm,3.5s,SNR=20
WTTA Wattenberg 81.48 329 *i* P **P 01 37 38.0 +0.5**
comp=Z,651nm,3.5s
WTTA Wattenberg 81.48 329 *i* P **P 01 37 38.0 +0.5**
WTTA pmax pmax
comp=Z,651nm,3.5s
BOJS Bojanci 81.50 326 *i* P **P 01 37 37.6 0.0**
DOU Dourbes 81.51 335 P **P 01 37 37.6 0.0**
comp=Z,34nm,3.3s
SOH Sokhos 81.52 319 *e*P **P 01 37 37.6 -0.2**
VAY Valandovo 81.52 319 *e*P **P 01 37 37.8 0.0**
VAY Valandovo 81.52 319⇑*i*P **P 01 37 37.4 -0.4**
SKO Skopje 81.56 321 *e*P **P 01 37 39.2 +1.2**
SKO Skopje 81.56 321⇑*i*P **P 01 37 39.0 +0.9**
IVA Berane 81.57 322⇓*i*P **P 01 37 38.5 +0.4**
ABTA Abfaltersbach 81.58 329⇑*i*P **P 01 37 37.6 -0.5**
comp=Z,215nm,3.1s,SNR=19
MOTA Moosalm 81.62 330 *i* P **P 01 37 38.6 +0.4**
comp=Z,72nm,1.0s,mb5.6,SNR=76
MOTA Moosalm 81.62 330 *i* P **P 01 37 38.6 +0.4**
MOTA pmax pmax
comp=Z,72nm,1.0s,mb5.6
VOY Vojsko 81.62 327 *e*P **P 01 37 37.3 -1.0**
VOY *e* pP 01 37 51.7 +0.3
RETA Reutte 81.62 330 *i* P **P 01 37 38.7 +0.4**
comp=Z,473nm,3.3s,SNR=29
BAIF Baives 81.66 335⇑*i*P **P 01 37 38.0 -0.4**
comp=Z,112nm,1.6s,mb5.2
BAIF *e*pP pP 01 37 51.8 +0.2
BAIF Baives 81.66 335⇑*i*P **P 01 37 38.0 -0.4**
comp=Z,56nm,1.6s,mb5.2
BAIF *e*pP pP 01 37 51.8 +0.2
BAIF Baives 81.66 335⇑*i*P **P 01 37 38.0 -0.4**
BAIF *e**PP pP 01 37 51.8 +0.2
BAIF pmax pmax
comp=Z,56nm,1.6s,mb5.2
JAVS Javornik 81.67 327 *i* P **P 01 37 37.8 -0.7**
JAVS *i* pP 01 37 51.7 0.0
SQTA Sankt Quirin 81.68 330 *i* P **P 01 37 39.1 +0.5**
comp=Z,45nm,1.1s,mb5.3,SNR=33
SQTA Sankt Quirin 81.68 330 *i* P **P 01 37 39.1 +0.5**
SQTA pmax pmax
comp=Z,45nm,1.1s,mb5.3
URLA Izmir 81.72 315 *i* P **P 01 37 36.8 -2.2**
PVY Plav 81.75 322 *e*P **P 01 37 39.0 -0.1**
UPM Unac-Piva 81.76 323⇓*i*P **P 01 37 38.6 -0.5**
BFO Black Forest 81.79 332 *e*P **P 01 37 39.2 +0.1**
comp=Z,56nm,1.3s,mb5.3
BFO LR LR
comp=Z,3µm,20.0s,MS5.6
PLG Polygyros 81.81 318 *e*P **P 01 37 39.4 0.0**
PLG Polygyros 81.81 318 *e*P **P 01 37 39.1 -0.3**
SPAK Spaichingen-Ko 81.82 332 *e*P **P 01 37 39.7 +0.4**
THE Thessaloniki 81.85 319 *e*P **P 01 37 40.0 +0.4**
GRG Griva 81.88 319 *e*P **P 01 37 39.8 0.0**
CHOS Chios island 81.99 315 *e*P **P 01 37 40.5 +0.1**
FETA Feichten 82.03 330 *i* P **P 01 37 40.8 +0.4**
comp=Z,356nm,3.0s,SNR=38
NKY Niksic 82.03 323⇓*i*P **P 01 37 39.7 -0.8**
PAIG Paliouri 82.04 318 *e*P **P 01 37 40.4 -0.2**
CDF Champ du Feu 82.08 333⇑*i*P **P 01 37 40.5 -0.2**
comp=Z,159nm,1.4s,mb5.5
CDF *e*pP pP 01 37 54.3 +0.5
CDF Champ du Feu 82.08 333⇑*i*P **P 01 37 40.5 -0.2**
comp=Z,79nm,1.4s,mb5.5
CDF *e*pP pP 01 37 54.3 +0.5
CDF Champ du Feu 82.08 333⇑*i*P **P 01 37 40.5 -0.2**
CDF *e**PP pP 01 37 54.3 +0.5
CDF pmax pmax
comp=Z,79nm,1.4s,mb5.5
KRUS Krusevo 82.11 320⇑*i*P **P 01 37 41.5 +0.5**
DAVA Damuels 82.12 330 *i* P **P 01 37 41.2 +0.3**
comp=Z,84nm,1.4s,mb5.5,SNR=26
BRY Bratogost 82.16 323⇓*i*P **P 01 37 40.5 -0.7**
KSU1 Kansas State U 82.18 43 *e*P **P 01 37 40.4 -1.0**
comp=Z,22nm,0.7s,mb5.2
KSU1 LR LR
comp=Z,5µm,20.0s,MS5.9
FAU Forcella Aurin 82.21 329 *e*Pg **P 01 37 40.8 -0.6**
TTG Podgorica 82.21 322⇓*i*P **P 01 37 41.1 -0.4**
JFWS Jewell Farm 82.27 37 PFAKE 01 37 50.0 +8.2
JFWS LR LR
comp=Z,5µm,20.0s,MS5.8
FELD Feldberg im Sc 82.29 332 *e*P **P 01 37 41.4 -0.4**
ECH Echery 82.29 333 *e*P **P 01 37 41.4 -0.4**
NVLJ Novalja 82.42 326 P **P 01 37 41.5 -1.1**
BUM Brajici-Budva 82.48 322⇓*i*P **P 01 37 43.0 +0.1**
ARG Arkhangelos 82.49 313 *e*P **P 01 37 43.2 +0.1**
LIT Litokhoron 82.49 319 *e*P **P 01 37 42.5 -0.5**
FNA Florina 82.51 320 *e*P **P 01 37 42.6 -0.4**
OHR Ohrid 82.53 320 *e*P **P 01 37 42.5 -0.6**
OHR Ohrid 82.53 320⇑*i*P **P 01 37 42.4 -0.7**
HCY Herceg Novi 82.54 323⇓*i*P **P 01 37 42.6 -0.6**
STON Ston 82.56 323 P **P 01 37 42.2 -1.1**
ULC Ulcinj 82.58 322⇓*i*P **P 01 37 43.2 -0.2**
AMTX Amarillo 82.59 49 *e*P **P 01 37 43.9 +0.3**
comp=Z,40nm,1.0s,mb5.4
AMTX *e* pP 01 37 56.5 -0.2
AMTX LR LR
comp=Z,3µm,19.0s,MS5.7
MOF Molkenrain 82.62 332 *e*P **P 01 37 43.4 -0.1**
THEF They Montfort 82.68 333 *e*P **P 01 37 43.6 -0.2**
KZN Kozani 82.68 319 *e*P **P 01 37 43.3 -0.7**
XOR Xorichti 82.71 318 *e*P **P 01 37 43.6 -0.5**
MNTX Cornudas Mount 82.73 54 *e*P **P 01 37 44.4 0.0**
comp=Z,78nm,1.7s,mb5.5
MNTX LR LR
comp=Z,6µm,19.0s,MS6.0
NEO Neokhori 82.74 318 *e*P **P 01 37 43.5 -0.8**
HINF Hinteralfeld 82.74 332⇑*i*P **P 01 37 43.4 -0.7**
HAU Haudompre 82.75 333⇑*i*P **P 01 37 43.6 -0.6**
comp=Z,42nm,1.1s,mb5.1
HAU *e*MLR MLR
comp=Z,4µm,22.2s,MS5.5
HAU Haudompre 82.75 333⇑*i*P **P 01 37 43.6 -0.6**
comp=Z,21nm,1.1s,mb5.1
HAU LR LR
comp=Z,4µm,22.3s,MS5.8
HAU Haudompre 82.75 333⇑*i*P **P 01 37 43.6 -0.6**
HAU pmax pmax
comp=Z,21nm,1.1s,mb5.1
HAU MLR MLR
comp=Z,4µm,22.3s,MS5.8
MEZF Maizieres J'vi 82.75 334⇑*i*P **P 01 37 44.1 -0.1**
comp=Z,147nm,1.3s,mb5.5
MEZF Maizieres J'vi 82.75 334⇑*i*P **P 01 37 44.1 -0.1**
comp=Z,147nm,1.3s,mb5.8
TIR Tirane 82.78 321 *e*P **P 01 37 44.5 +0.1**
BBS Basel-Blauen 82.82 332 *e*P **P 01 37 44.5 0.0**
GLMI Grayling 83.11 33 *e*P **P 01 37 44.6 -1.5**
comp=Z,42nm,0.8s,mb5.5
GLMI LR LR
comp=Z,3µm,19.0s,MS5.7
LOMF Lomont 83.15 332 *e*P **P 01 37 46.2 -0.1**
APE Apeiranthos 83.25 315 *e*P **P 01 37 45.4 -1.5**
LKR Lokris 83.35 317 *e*P **P 01 37 46.4 -1.1**
AGG Agios Georgios 83.40 318 *e*P **P 01 37 46.5 -1.3**
KAP Karpathos 83.50 313 *e*P **P 01 37 48.3 0.0**
JAN Janina 83.63 319 *e*P **P 01 37 49.3 +0.4**
IGT Igoumenitsa 83.98 320 *e*P **P 01 37 50.2 -0.5**
CABF La Chapelle 84.05 332⇑*i*P **P 01 37 50.7 -0.2**
comp=Z,78nm,1.2s,mb5.4
CABF La Chapelle 84.05 332⇑*i*P **P 01 37 50.7 -0.2**
comp=Z,39nm,1.2s,mb5.4
CABF La Chapelle 84.05 332⇑*i*P **P 01 37 50.7 -0.2**
CABF pmax pmax
comp=Z,39nm,1.2s,mb5.4
LOR Lormes 84.22 334⇑*i*P **P 01 37 51.3 -0.4**
comp=Z,134nm,1.1s,mb5.7
LOR *e*pP pP 01 38 05.2 +0.3
LOR *e*MLR MLR
comp=Z,4µm,18.8s,MS5.5
LOR Lormes 84.22 334⇑*i*P **P 01 37 51.3 -0.4**
comp=Z,67nm,1.1s,mb5.7
LOR *e*pP pP 01 38 05.2 +0.3
LOR LR LR
comp=Z,4µm,18.8s,MS5.8
LOR Lormes 84.22 334⇑*i*P **P 01 37 51.3 -0.4**
LOR *e**PP pP 01 38 05.2 +0.3
LOR pmax pmax
comp=Z,67nm,1.1s,mb5.7
LOR MLR MLR
comp=Z,4µm,18.8s,MS5.8
FLN La Foliniere 84.22 337 *e*P **P 01 37 51.7 0.0**
comp=Z,91nm,0.9s,mb5.6
FLN *e*MLR MLR
comp=Z,3µm,19.0s,MS5.4
FLN La Foliniere 84.22 337 *e*P **P 01 37 51.7 0.0**
comp=Z,45nm,0.9s,mb5.6
FLN LR LR
comp=Z,3µm,19.0s,MS5.7
FLN La Foliniere 84.22 337 *e*P **P 01 37 51.7 0.0**
FLN pmax pmax
comp=Z,45nm,0.9s,mb5.6
FLN MLR MLR
comp=Z,3µm,19.0s,MS5.7
LDF La Druitiere 84.27 337⇑*i*P **P 01 37 51.9 -0.1**
comp=Z,31nm,0.7s,mb5.2
LDF La Druitiere 84.27 337⇑*i*P **P 01 37 51.9 -0.1**
comp=Z,15nm,0.7s,mb5.2
LDF La Druitiere 84.27 337⇑*i*P **P 01 37 51.9 -0.1**
LDF pmax pmax

comp=Z,15nm,0.7s,mb5.2
WMOK Wichita Mounta 84.31 47 *e*P **P 01 37 52.1 -0.3**
comp=Z,260nm,2.1s,mb6.0
WMOK *e* pP 01 38 04.2 -1.4
WMOK Wichita Mounta 84.31 47 *e*P **P 01 37 52.1 -0.3**
WMOK *e* pP 01 38 04.2 -1.4
WMOK pmax pmax
comp=Z,260nm,2.1s,mb6.0
ZKR Zakros 84.35 313 *e*P **P 01 37 52.7 +0.1**
LKD Levkas 84.47 319 *e*P **P 01 37 52.9 -0.3**
SSF Saint Saulge 84.52 334⇑*i*P **P 01 37 52.9 -0.3**
comp=Z,51nm,1.0s,mb5.3
SSF Saint Saulge 84.52 334⇑*i*P **P 01 37 52.9 -0.3**
comp=Z,26nm,1.0s,mb5.3
SSF Saint Saulge 84.52 334⇑*i*P **P 01 37 52.9 -0.3**
SSF pmax pmax
comp=Z,25nm,1.0s,mb5.3
VLC Villacollemand 84.56 328 *e*P **P 01 37 50.1 -3.4**
comp=Z,87nm,1.3s,mb5.7
NPS Neapolis 84.56 314 *e*P **P 01 37 52.8 -0.9**
RLS Riolos of Patr 84.57 318 *e*P **P 01 37 53.6 -0.1**
HDIL Hopedale 84.58 38 *e*P **P 01 37 53.4 -0.3**
comp=Z,164nm,1.5s,mb5.9
HDIL LR LR
comp=Z,3µm,22.0s,MS5.7
HYF Humbligny 84.61 335⇑*i*P **P 01 37 53.8 +0.1**
VLX Vlachokerasia 84.65 317 *e*P **P 01 37 53.0 -1.1**
RSL Roselend 84.66 332 *e*P **P 01 37 53.9 -0.1**
GRR Gorron 84.67 337⇑*i*P **P 01 37 53.7 -0.3**
comp=Z,78nm,0.8s,mb5.6
GRR Gorron 84.67 337⇑*i*P **P 01 37 53.7 -0.3**
comp=Z,39nm,0.8s,mb5.6
GRR Gorron 84.67 337⇑*i*P **P 01 37 53.7 -0.3**
GRR pmax pmax
comp=Z,39nm,0.8s,mb5.6
LAST Lasithi 84.71 314 *e*P **P 01 37 54.3 -0.1**
LPL La Plagne 84.77 331⇑*i*P **P 01 37 55.0 +0.5**
comp=Z,99nm,1.0s,mb5.6
LPL *e*pP pP 01 38 08.7 +1.0
LPL La Plagne 84.77 331⇑*i*P **P 01 37 55.0 +0.5**
comp=Z,49nm,1.0s,mb5.6
LPL *e*pP pP 01 38 08.7 +1.0
LPL La Plagne 84.77 331⇑*i*P **P 01 37 55.0 +0.5**
LPL *e**PP pP 01 38 08.7 +1.0
LPL pmax pmax
comp=Z,49nm,1.0s,mb5.6
SMF Signal de Mont 84.78 334⇑*i*P **P 01 37 54.3 -0.3**
comp=Z,159nm,1.1s,mb5.7
SMF Signal de Mont 84.78 334⇑*i*P **P 01 37 54.3 -0.3**
comp=Z,80nm,1.1s,mb5.8
SMF Signal de Mont 84.78 334⇑*i*P **P 01 37 54.3 -0.3**
SMF pmax pmax
comp=Z,80nm,1.1s,mb5.8
LPG La Plagne 84.78 331⇑*i*P **P 01 37 55.1 +0.5**
comp=Z,152nm,1.1s,mb5.7
LPG La Plagne 84.78 331⇑*i*P **P 01 37 55.1 +0.5**
comp=Z,76nm,1.1s,mb5.7
LPG La Plagne 84.78 331⇑*i*P **P 01 37 55.1 +0.5**
LPG pmax pmax
comp=Z,76nm,1.1s,mb5.7
AVF Avril sur Loir 84.81 334⇑*i*P **P 01 37 54.5 -0.2**
comp=Z,178nm,1.1s,mb5.8
AVF *e*pP pP 01 38 08.4 +0.5
AVF Avril sur Loir 84.81 334⇑*i*P **P 01 37 54.5 -0.2**
comp=Z,89nm,1.1s,mb5.8
AVF *e*pP pP 01 38 08.4 +0.5
AVF Avril sur Loir 84.81 334⇑*i*P **P 01 37 54.5 -0.2**
AVF *e**PP pP 01 38 08.4 +0.5
AVF pmax pmax
comp=Z,89nm,1.1s,mb5.8
XRY Khrisi 84.81 313 *e*P **P 01 37 54.5 -0.5**
AQU L'Aquila 84.84 326 *e*P **P 01 37 55.2 +0.3**
comp=Z,75nm,1.2s,mb5.7
AQU L'Aquila 84.84 326 *e*P **P 01 37 55.2 +0.2**
AQU pmax pmax
comp=Z,75nm,1.2s,mb5.7
VLI Velíai 84.86 316 *e*P **P 01 37 53.5 -1.7**
KFL Anninata 84.87 319 *e*P **P 01 37 54.9 -0.3**
VLS Valsamata 84.92 319 *e*P **P 01 37 54.9 -0.5**
ITM Ithomi 85.02 317 *e*P **P 01 37 54.9 -1.1**
BGF Bois d'Agland 85.18 334⇑*i*P **P 01 37 56.4 -0.2**
comp=Z,39nm,0.9s,mb5.3
BGF *e*pP pP 01 38 10.3 +0.5
BGF Bois d'Agland 85.18 334⇑*i*P **P 01 37 56.4 -0.2**
comp=Z,20nm,0.9s,mb5.2
BGF *e*pP pP 01 38 10.3 +0.5
BGF Bois d'Agland 85.18 334⇑*i*P **P 01 37 56.4 -0.2**
BGF *e**PP pP 01 38 10.3 +0.5
BGF pmax pmax
comp=Z,20nm,0.9s,mb5.2
SIVA Sivas 85.18 314 *e*P **P 01 37 56.6 -0.2**
BNI Bardonecchia 85.19 331 *e*P **P 01 37 56.8 +0.2**
comp=Z,47nm,1.0s,mb5.6
BNI Bardonecchia 85.19 331 *e*P **P 01 37 56.8 +0.2**
BNI pmax pmax
comp=Z,47nm,1.0s,mb5.6
VAM Vamos 85.21 315 *e*P **P 01 37 56.7 -0.2**
PPT Papeete 85.22 119 *e*S S 01 48 24.1 +0.1
comp=Z,700nm,24.8s
PPT *e*SS SS 01 54 07.1 +7.8
comp=Z,532nm,25.0s
PPT *e*LR LR 02 04 34.8
comp=Z,4µm,23.8s,baz=317
SGMF Saint Gilles 85.27 338⇑*i*P **P 01 37 57.0 0.0**
comp=Z,289nm,1.3s,mb5.9
SGMF Saint Gilles 85.27 338⇑*i*P **P 01 37 57.0 0.0**
comp=Z,145nm,1.3s,mb6.0
SGMF Saint Gilles 85.27 338⇑*i*P **P 01 37 57.0 0.0**
SGMF pmax pmax
comp=Z,145nm,1.3s,mb6.0
PYL PYLOS 85.34 317 *e*P **P 01 37 56.2 -1.3**
KARN Karanos 85.36 315 *e*P **P 01 37 57.5 -0.2**
ROSF Rostrenen 85.39 339⇑*i*P **P 01 37 57.7 +0.1**
comp=Z,258nm,1.4s,mb5.9
ROSF *e*pP pP 01 38 11.6 +0.8
ROSF Rostrenen 85.39 339⇑*i*P **P 01 37 57.7 +0.1**
comp=Z,129nm,1.4s,mb5.9
ROSF *e*pP pP 01 38 11.6 +0.8
ROSF Rostrenen 85.39 339⇑*i*P **P 01 37 57.7 +0.1**
ROSF *e**PP pP 01 38 11.6 +0.8
ROSF pmax pmax
comp=Z,129nm,1.4s,mb5.9
MBDF Montbardon 85.43 331⇑*i*P **P 01 37 57.6 -0.3**
comp=Z,67nm,0.9s,mb5.5
MBDF Montbardon 85.43 331⇑*i*P **P 01 37 57.6 -0.3**
comp=Z,33nm,0.9s,mb5.5
MBDF Montbardon 85.43 331⇑*i*P **P 01 37 57.6 -0.3**
MBDF pmax pmax
comp=Z,33nm,0.9s,mb5.5
PLDF La Plantade 85.44 334 *e*P **P 01 37 59.2 +1.3**
LTX Lajitas 85.45 54 *e*P **P 01 37 58.6 +0.3**
comp=Z,61nm,1.4s,mb5.5
LTX LR LR
comp=Z,7µm,22.0s,MS6.0
LTX Lajitas 85.45 54 *e*P **P 01 37 58.6 +0.3**
LTX pmax pmax
comp=Z,61nm,1.4s,mb5.5
LTX MLR MLR
comp=Z,7µm,22.0s,MS6.0
TXAR Lajitas Array 85.45 54 P **P 01 37 58.5 +0.2**
TXAR pP pP 01 38 10.7 -0.8
TXAR PKKPbc PKKPbc 01 56 00.8 +0.7
TXAR Lajitas Array 85.45 54 P **P 01 37 58.5 +0.2**
comp=Z,5.8nm,0.8s,mb4.8,baz=296,slow=3.4,SNR=92
TXAR pP pP 01 38 10.7 -0.8
comp=Z,13nm,0.8s,baz=292,slow=3.7,SNR=12
TXAR PKKPbc PKKPbc 01 56 00.8 +0.7
comp=Z,0.5nm,0.8s,baz=134,slow=3.6,SNR=5.0
AGO Saint Agoulin 85.53 334 *e*P **P 01 37 58.8 +0.5**
ORIF Oris-en-Rattie 85.59 332⇑*i*P **P 01 37 58.9 +0.3**
comp=Z,100nm,1.0s,mb5.7
ORIF *e*MLR MLR
comp=Z,3µm,22.8s,MS5.3
ORIF Oris-en-Rattie 85.59 332⇑*i*P **P 01 37 58.9 +0.3**
comp=Z,50nm,1.0s,mb5.7
ORIF Oris-en-Rattie 85.59 332⇑*i*P **P 01 37 58.9 +0.3**
ORIF pmax pmax
comp=Z,50nm,1.0s,mb5.7
AAM Ann Arbor 85.60 33 PFAKE 01 38 10.0 +11
AAM LR LR
comp=Z,5µm,22.0s,MS5.8
TCF Toulx Ste Croi 85.62 335⇑*i*P **P 01 37 58.9 +0.1**
comp=Z,84nm,1.2s,mb5.5
TCF *e*pP pP 01 38 12.8 +0.8
TCF Toulx Ste Croi 85.62 335⇑*i*P **P 01 37 58.9 +0.1**
comp=Z,42nm,1.2s,mb5.5
TCF *e*pP pP 01 38 12.8 +0.8
TCF Toulx Ste Croi 85.62 335⇑*i*P **P 01 37 58.9 +0.1**
TCF *e**PP pP 01 38 12.8 +0.8
TCF pmax pmax
comp=Z,42nm,1.2s,mb5.5
GVD Gavdhos 85.70 314 *e*P **P 01 37 58.9 -0.5**
QUIF Quistinic 85.74 339⇑*i*P **P 01 37 59.2 -0.2**
comp=Z,38nm,0.9s,mb5.3
QUIF Quistinic 85.74 339⇑*i*P **P 01 37 59.2 -0.2**
comp=Z,19nm,0.9s,mb5.3
QUIF Quistinic 85.74 339⇑*i*P **P 01 37 59.2 -0.2**
QUIF pmax pmax
comp=Z,19nm,0.9s,mb5.3
SAOF Saorge 85.78 330 *e*P **P 01 37 59.0 -0.6**
AUTN L'Aution 85.82 330 *e*P **P 01 37 59.7 -0.1**
PYM Petit Puy Mans 85.84 334 *e*P **P 01 38 00.4 +0.5**
TOUF Mont Tournerai 85.87 330 *e*P **P 01 37 59.8 -0.3**
SBF Sospel 85.93 330⇑*i*P **P 01 37 59.7 -0.7**
comp=Z,129nm,0.9s,mb5.9
SBF Sospel 85.93 330⇑*i*P **P 01 37 59.7 -0.7**
comp=Z,65nm,0.9s,mb5.9
SBF Sospel 85.93 330⇑*i*P **P 01 37 59.7 -0.7**
SBF pmax pmax
comp=Z,65nm,0.9s,mb5.9
LUCF Luceram 85.94 330 *e*P **P 01 38 00.1 -0.3**
TIP Timpagrande 85.95 322 *e*P **P 01 38 00.6 0.0**
comp=Z,63nm,1.3s,mb5.7
MVIF Mont Vial 86.01 330 *e*P **P 01 38 00.3 -0.5**
VIVF Saint-Julien-l 86.06 332⇑*i*P **P 01 38 01.2 +0.2**
comp=Z,161nm,1.1s,mb5.9
VIVF Saint-Julien-l 86.06 332⇑*i*P **P 01 38 01.2 +0.2**
comp=Z,80nm,1.1s,mb5.9
VIVF Saint-Julien-l 86.06 332⇑*i*P **P 01 38 01.2 +0.2**
VIVF pmax pmax
comp=Z,80nm,1.1s,mb5.9
REVF Revere 86.06 330 *e*P **P 01 38 00.6 -0.4**
MFF Saint Martin d 86.07 336⇑*i*P **P 01 38 01.2 +0.2**
comp=Z,170nm,1.1s,mb5.9
MFF *e*pP pP 01 38 15.0 +0.8
MFF Saint Martin d 86.07 336⇑*i*P **P 01 38 01.2 +0.2**
comp=Z,85nm,1.1s,mb5.9
MFF *e*pP pP 01 38 15.0 +0.8
MFF Saint Martin d 86.07 336⇑*i*P **P 01 38 01.2 +0.2**
MFF *e**PP pP 01 38 15.0 +0.8
MFF pmax pmax
comp=Z,85nm,1.1s,mb5.9
OCF Saint Nazaire 86.08 332 *e*P **P 01 38 01.7 +0.6**
OG26 St.-Nazaire-De 86.08 332 *e*P **P 01 38 01.7 +0.6**
FVM French Village 86.10 40 *e*P **P 01 38 01.0 -0.3**
comp=Z,118nm,1.6s,mb5.9
FVM French Village 86.10 40 *e*P **P 01 38 01.0 -0.3**
FVM pmax pmax
comp=Z,118nm,1.6s,mb5.9
LCHF La Chataignera 86.19 337 *e*P **P 01 38 01.8 +0.2**
LBL Lubilhac 86.22 333 *e*P **P 01 38 02.7 +1.0**
CALN Calern 86.23 330 *e*P **P 01 38 01.6 -0.3**
STOF St-Etienne Org 86.37 331 *e*P **P 01 38 02.2 -0.4**
PGF Pioggiola 86.46 328⇑*i*P **P 01 38 02.4 -0.6**
comp=Z,61nm,1.2s,mb5.4
PGF Pioggiola 86.46 328⇑*i*P **P 01 38 02.4 -0.6**
comp=Z,30nm,1.2s,mb5.4
PGF Pioggiola 86.46 328⇑*i*P **P 01 38 02.4 -0.6**
PGF pmax pmax
comp=Z,31nm,1.2s,mb5.4
FRF La Foret Royal 86.48 330⇑*i*P **P 01 38 02.5 -0.6**
comp=Z,118nm,1.2s,mb5.7
FRF *e*pP pP 01 38 16.3 0.0
FRF La Foret Royal 86.48 330⇑*i*P **P 01 38 02.5 -0.6**
comp=Z,59nm,1.2s,mb5.7
FRF *e*pP pP 01 38 16.3 0.0
FRF La Foret Royal 86.48 330⇑*i*P **P 01 38 02.5 -0.6**
FRF *e**PP pP 01 38 16.3 0.0
FRF pmax pmax
comp=Z,59nm,1.2s,mb5.7
SMRF Simiane la Rot 86.51 331⇑*i*P **P 01 38 03.3 +0.1**
comp=Z,165nm,1.5s,mb5.7
SMRF Simiane la Rot 86.51 331⇑*i*P **P 01 38 03.3 +0.1**
comp=Z,165nm,1.5s,mb6.0
CORF Corte 86.61 328 *e*P **P 01 38 03.0 -0.8**
TAVF Tavernes 86.65 331 *e*P **P 01 38 03.5 -0.4**
RJF Les Rejaudoux 86.72 335⇑*i*P **P 01 38 04.5 +0.3**
comp=Z,115nm,1.1s,mb5.7
RJF *e*MLR MLR
comp=Z,5µm,23.0s,MS5.6
RJF Les Rejaudoux 86.72 335⇑*i*P **P 01 38 04.5 +0.3**
comp=Z,58nm,1.1s,mb5.7
RJF LR LR
comp=Z,5µm,23.0s,MS5.9
RJF Les Rejaudoux 86.72 335⇑*i*P **P 01 38 04.5 +0.3**
RJF pmax pmax
comp=Z,58nm,1.1s,mb5.7
RJF MLR MLR
comp=Z,5µm,23.0s,MS5.9
LMR La Mourre 86.73 330⇑*i*P **P 01 38 03.9 -0.4**
comp=Z,181nm,1.0s,mb6.0
LMR La Mourre 86.73 330⇑*i*P **P 01 38 03.9 -0.4**
comp=Z,90nm,1.0s,mb6.0
LMR La Mourre 86.73 330⇑*i*P **P 01 38 03.9 -0.4**
LMR pmax pmax
comp=Z,91nm,1.0s,mb6.0
PRAF Pradon 86.81 331 *e*P **P 01 38 04.2 -0.5**
CAF Calviac 86.88 334⇑*i*P **P 01 38 05.8 +0.8**
comp=Z,232nm,1.1s,mb6.0
CAF Calviac 86.88 334⇑*i*P **P 01 38 05.8 +0.8**
comp=Z,116nm,1.1s,mb6.0
CAF Calviac 86.88 334⇑*i*P **P 01 38 05.8 +0.8**
CAF pmax pmax
comp=Z,116nm,1.1s,mb6.0
SIUC Southern Illin 86.89 40 *e*P **P 01 38 04.8 -0.4**
comp=Z,66nm,0.8s,mb5.9
JCT Junction City 86.90 51 *e*P **P 01 38 05.1 -0.3**
comp=Z,186nm,1.7s,mb6.0
JCT *e* pP 01 38 17.0 -1.6
JCT LR LR
comp=Z,6µm,21.0s,MS6.0
JCT Junction City 86.90 51 P **P 01 38 05.4 0.0**
JCT pmax pmax
comp=Z,190nm,1.7s,mb6.0
BLO Bloomington 86.95 37 *e*P **P 01 38 05.4 -0.1**
comp=Z,81nm,1.6s,mb5.7
BLO Bloomington 86.95 37 *e*P **P 01 38 05.4 -0.1**
BLO pmax pmax
comp=Z,81nm,1.6s,mb5.7
LONY Lake Ozonia 86.97 26 PFAKE 01 38 20.0 +15
LONY LR LR
comp=Z,7µm,22.0s,MS6.0
LASF Ste Croix 87.03 332⇑*i*P **P 01 38 06.2 +0.5**
comp=Z,140nm,1.3s,mb5.7
ERPA Erie 87.21 31 PFAKE 01 38 20.0 +13
ERPA LR LR
comp=Z,10µm,22.0s,MS6.2
MIAR Mount Ida 87.23 44 *e*P **P 01 38 06.8 -0.1**
comp=Z,81nm,1.4s,mb5.8
MIAR *e* pP 01 38 18.2 -1.9
MIAR Mount Ida 87.23 44 *e*P **P 01 38 06.8 -0.1**
MIAR *e* pP 01 38 18.2 -2.0
MIAR pmax pmax
comp=Z,81nm,1.4s,mb5.8
LFF La Frestale 87.29 335⇑*i*P **P 01 38 07.6 +0.6**
comp=Z,234nm,1.1s,mb6.0
LFF *e*pP pP 01 38 21.5 +1.3
LFF La Frestale 87.29 335⇑*i*P **P 01 38 07.6 +0.6**
comp=Z,117nm,1.1s,mb6.0
LFF *e*pP pP 01 38 21.5 +1.3
LFF La Frestale 87.29 335⇑*i*P **P 01 38 07.6 +0.6**
LFF *e**PP pP 01 38 21.5 +1.3
LFF pmax pmax
comp=Z,117nm,1.1s,mb6.0
PARMO Parma 87.48 40 *e*P **P 01 38 08.3 +0.3**
PARMO *e* pP 01 38 21.1 -0.2
ALLY Alegheny Colle 87.55 32 *e*P **P 01 37 58.9 -9.5**
ACSO Alum Creek Sta 87.61 34 *e*P **P 01 38 08.0 -0.6**
comp=Z,39nm,1.2s,mb5.5
ACSO LR LR
comp=Z,8µm,19.0s,MS6.1
NCB Newcomb 87.66 27 PFAKE 01 38 20.0 +11
NCB LR LR
comp=Z,4µm,20.0s,MS5.8
WCI Wyandotte Cave 87.83 37 *e*P **P 01 38 09.2 -0.5**
comp=Z,22nm,0.8s,mb5.4
WCI Wyandotte Cave 87.83 37 P **P 01 38 09.2 -0.5**
WCI pmax pmax
comp=Z,22nm,0.8s,mb5.4
HBAR Harrisburg 87.92 42 *e*P **P 01 38 10.5 +0.4**
GLAT Glass 88.02 40 *e*P **P 01 38 10.4 -0.2**
LBNH Lisbon 88.17 25 PFAKE 01 38 20.0 +8.8
LBNH LR LR
comp=Z,8µm,22.0s,MS6.1
MTLF Montolieu 88.23 333⇑*i*P **P 01 38 12.1 +0.6**
comp=Z,152nm,1.3s,mb5.8
MTLF *e*pP pP 01 38 26.1 +1.3
MTLF Montolieu 88.23 333⇑*i*P **P 01 38 12.1 +0.6**
comp=Z,76nm,1.3s,mb5.8
MTLF *e*pP pP 01 38 26.1 +1.3
MTLF Montolieu 88.23 333⇑*i*P **P 01 38 12.1 +0.6**
MTLF *e**PP pP 01 38 26.1 +1.3
MTLF pmax pmax
comp=Z,76nm,1.3s,mb5.8
MET Memphis--Engin 88.62 42 *e*P **P 01 38 12.4 -1.1**
BINY Binghamton 88.62 29 PFAKE 01 38 20.0 +6.6
BINY LR LR
comp=Z,12µm,21.0s,MS6.3
NATX Nacogdoches 88.81 47 *e*P **P 01 38 14.7 +0.2**
comp=Z,428nm,2.1s,mb6.4
NATX LR LR
comp=Z,8µm,19.0s,MS6.1
WVT Waverly 88.83 40 *e*P **P 01 38 13.3 -1.1**
comp=Z,14nm,0.9s,mb5.3
WVT Waverly 88.83 40 *e*P **P 01 38 13.3 -1.2**
WVT pmax pmax
comp=Z,14nm,0.9s,mb5.3
MLS Moulis 88.95 334 *e*P **P 01 38 15.5 +0.6**
EPF Esparros 89.13 334⇑*i*P **P 01 38 15.6 -0.2**
comp=Z,25nm,0.9s,mb5.2
EPF *e*pP pP 01 38 29.4 +0.4
EPF Esparros 89.13 334⇑*i*P **P 01 38 15.6 -0.2**
comp=Z,13nm,0.9s,mb5.2
EPF *e*pP pP 01 38 29.4 +0.4
EPF Esparros 89.13 334⇑*i*P **P 01 38 15.6 -0.2**
EPF *e**PP pP 01 38 29.4 +0.4
EPF pmax pmax
comp=Z,13nm,0.9s,mb5.3
RESF Ens 89.33 334 *e*P **P 01 38 18.6 +1.9**
OXF Oxford 89.36 42 *e*P **P 01 38 16.5 -0.6**
comp=Z,25nm,0.8s,mb5.6
OXF Oxford 89.36 42 *e*P **P 01 38 16.5 -0.5**
OXF pmax pmax
comp=Z,25nm,0.8s,mb5.6
MCWV Mont Chateau 89.37 32 PFAKE 01 38 30.0 +13
MCWV LR LR
comp=Z,17µm,21.0s,MS6.5
TBI Tubuai 89.50 123 *e*LR LR 02 06 35.0
comp=Z,2µm,23.2s,baz=319
EBIE Bielsa 89.50 334 P **P 01 38 17.8 +0.3**
comp=Z,356nm,3.3s
ETSF Etsaut 89.53 335⇑*i*P **P 01 38 18.4 +0.7**
comp=Z,36nm,0.7s,mb5.5
ETSF Etsaut 89.53 335⇑*i*P **P 01 38 18.4 +0.7**
comp=Z,18nm,0.7s,mb5.5
ETSF Etsaut 89.53 335⇑*i*P **P 01 38 18.4 +0.7**
ETSF pmax pmax
comp=Z,18nm,0.7s,mb5.5
HKT Hockley 89.55 49 *e*P **P 01 38 17.5 -0.4**
comp=Z,87nm,2.1s,mb5.7
HKT LR LR
comp=Z,9µm,20.0s,MS6.2
HKT Hockley 89.55 49 *e*P **P 01 38 17.5 -0.5**
HKT pmax pmax
comp=Z,87nm,2.1s,mb5.7
HKT MLR MLR
comp=Z,9µm,20.0s,MS6.2
SJPF Ste Jean 89.55 335⇑*i*P **P 01 38 17.4 -0.3**
comp=Z,29nm,1.2s,mb5.2
SJPF Ste Jean 89.55 335⇑*i*P **P 01 38 17.4 -0.3**
comp=Z,14nm,1.2s,mb5.2
SJPF Ste Jean 89.55 335⇑*i*P **P 01 38 17.4 -0.3**
SJPF pmax pmax
comp=Z,14nm,1.2s,mb5.2
ELIZ Elizondo 89.60 336 P **P 01 38 18.6 +0.7**
comp=Z,63nm,1.7s,mb5.7
ELIZ Elizondo 89.60 336 P **P 01 38 18.6 +0.6**
ELIZ pmax pmax
comp=Z,63nm,1.7s,mb5.7
PLAL Pickwick Lake 89.64 40 *e*P **P 01 38 17.1 -1.1**
comp=Z,17nm,1.0s,mb5.3
HRV Harvard--Oak R 89.84 25 PFAKE 01 38 30.0 +11
HRV LR LR
comp=Z,6µm,22.0s,MS6.0
ELAN Lanestosa 90.11 337 P **P 01 38 20.3 0.0**
comp=Z,87nm,1.5s,mb5.9
KVTX Kingsville 90.19 52 PFAKE 01 38 30.0 +9.0
KVTX LR LR
comp=Z,17µm,19.0s,MS6.5
EPOB Poblet 90.39 333 P **P 01 38 21.9 +0.2**
comp=Z,140nm,1.8s,mb6.0
ECRI Cripan 90.40 336 P **P 01 38 21.9 +0.2**
comp=Z,21nm,1.0s,mb5.4
ECRI Cripan 90.40 336 P **P 01 38 21.9 +0.2**
ECRI pmax pmax
comp=Z,21nm,1.0s,mb5.4
EARI Arriondas 90.55 338 P **P 01 38 20.6 -1.8**
comp=Z,288nm,2.2s,mb6.2
ESAC San Caprasio 90.57 334 P **P 01 38 23.9 +1.4**
comp=Z,70nm,1.2s,mb5.9
ERTA Horta de San J 90.99 333 P **P 01 38 24.4 -0.1**
comp=Z,77nm,1.4s,mb5.8
EPON Pontenova 91.05 339 P **P 01 38 22.4 -2.3**
comp=Z,64nm,1.2s,mb5.8
TKL Tuckaleechee C 91.08 37 P **P 01 38 23.8 -1.2**
TKL pmax pmax
comp=Z,11nm,0.9s,mb5.2
TKL Tuckaleechee C 91.08 37 P **P 01 38 23.8 -1.2**
comp=Z,11nm,0.9s,mb5.2,baz=139,slow=0.9,SNR=8.8
ETOS Mallorca 91.19 331 P **P 01 38 24.7 -0.8**
comp=Z,122nm,1.6s,mb6.0
BLA Blacksburg 91.22 34 PFAKE 01 38 40.0 +14
BLA LR LR
comp=Z,14µm,21.0s,MS6.4
CBN Corbin 91.59 31 PFAKE 01 38 40.0 +13
CBN LR LR
comp=Z,9µm,20.0s,MS6.2
LRAL Lakeview Retre 91.74 41 PFAKE 01 38 40.0 +12
LRAL LR LR
comp=Z,20µm,21.0s,MS6.5
EMOS Mosqueruela 91.79 334 P **P 01 38 28.7 +0.5**
comp=Z,22nm,0.8s,mb5.5
ETOR Torete 91.89 335 P **P 01 38 29.3 +0.6**
comp=Z,26nm,1.0s,mb5.5
ETOR Torete 91.89 335 P **P 01 38 29.3 +0.6**
ETOR pmax pmax
comp=Z,26nm,1.0s,mb5.5
KEST Kesra 92.10 325 P **P 01 38 29.2 -0.5**
comp=Z,3.0nm,0.9s,mb4.6,baz=14,slow=4.2,SNR=11
PBRG Braganca 92.36 339 *e*P **P 01 38 30.6 -0.2**
comp=Z,22nm,1.4s,mb5.3
ECHE Chera 92.65 334 P **P 01 38 32.2 0.0**
comp=Z,4.4nm,0.7s,mb5.0
ECHE Chera 92.65 334 P **P 01 38 32.2 0.0**
ECHE pmax pmax
comp=Z,4.0nm,0.7s,mb5.0
GUD Guadarrama 92.70 336 P **P 01 38 31.5 -0.9**
comp=Z,9.7nm,1.2s,mb5.1
GUD Guadarrama 92.70 336 P **P 01 38 31.5 -0.9**
GUD pmax pmax
comp=Z,10.0nm,1.2s,mb5.1
PCAB Cabril 92.79 339 *e*P **P 01 38 32.1 -0.7**
comp=Z,28nm,1.1s,mb5.6
MVO Moncorvo 93.03 339 *e*P **P 01 38 33.4 -0.5**
comp=Z,42nm,1.5s,mb5.7
GOGA Godfrey 93.09 38 PFAKE 01 38 50.0 +16
GOGA LR LR
comp=Z,14µm,19.0s,MS6.4
PVRL Vila Real 93.12 339 *e*P **P 01 38 33.7 -0.6**
comp=Z,28nm,1.4s,mb5.5
EBEN Beniarda 93.20 333 P **P 01 38 34.6 -0.1**
comp=Z,266nm,2.7s,mb6.2
BRAL Brewton 93.35 42 PFAKE 01 38 50.0 +14
BRAL LR LR
comp=Z,15µm,19.0s,MS6.5
ESDC Sonseca Array 93.53 336 P **P 01 38 36.4 +0.1**
comp=Z,3.7nm,0.9s,mb4.8
ESDC Sonseca Array 93.53 336 P **P 01 38 35.6 -0.6**
comp=Z,2.4nm,0.7s,mb4.7,baz=17,slow=3.9,SNR=21
ESDC pP pP 01 38 48.1 -1.4
comp=Z,4.4nm,0.8s,baz=15,slow=4.4,SNR=9.9
ESDC PP PP 01 42 17.4 -2.7
comp=Z,1.3nm,0.7s,baz=28,slow=8.6,SNR=4.7
PVIS Viseu 93.69 339 *e*P **P 01 38 36.6 -0.3**
comp=Z,31nm,1.6s,mb5.5
ETOB Tobarra 93.70 334 P **P 01 38 37.9 +0.9**
comp=Z,87nm,2.1s,mb5.8

MTE	**Manteigas**	**93.89**	**339**	*e*P	**P**	**01 38 37.4**	**-0.5**
	comp=Z,27nm,1.3s,mb5.5						
CNNC	**Cliffs of the**	**93.96**	**33**	PFAKE		01 38 50.0	+12
CNNC				LR	LR		
	comp=Z,9µm,19.0s,MS6.3						
EVIA	**Vianos**	**94.02**	**334**	P	**P**	**01 38 39.1**	**+0.6**
	comp=Z,12nm,0.7s,mb5.4						
EVIA	**Vianos**	**94.02**	**334**	P	**P**	**01 38 39.1**	**+0.6**
EVIA				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.4						
EMUR	**La Murta**	**94.32**	**333**	P	**P**	**01 38 38.5**	**-1.4**
	comp=Z,62nm,1.8s,mb5.7						
PCBR	**Castelo Branco**	**94.39**	**338**	*e*P	**P**	**01 38 39.2**	**-1.0**
	comp=Z,18nm,1.4s,mb5.3						
NHSC	**New Hope**	**94.83**	**36**	PFAKE		01 38 50.0	+7.7
NHSC				LR	LR		
	comp=Z,17µm,20.0s,MS6.5						
EBAN	**Banos Encina**	**94.86**	**335**	P	**P**	**01 38 41.1**	**-1.2**
	comp=Z,16nm,1.2s,mb5.3						
EBAN	**Banos Encina**	**94.86**	**335**	P	**P**	**01 38 41.1**	**-1.3**
EBAN				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.3						
ELUQ	**Luque**	**95.56**	**335**	P	**P**	**01 38 47.1**	**+1.5**
	comp=Z,5.7nm,0.9s,mb5.0						
ELUQ	**Luque**	**95.56**	**335**	P	**P**	**01 38 47.1**	**+1.5**
ELUQ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
DWPF	**Disney**	**98.48**	**40**	PFAKE		01 39 10.0	+11
DWPF				LR	LR		
	comp=Z,14µm,21.0s,MS6.4						
RKT	**Rikitea**	**98.86**	**113**	*e*SKSac	SKSac	01 49 37.1	+2.0
	comp=Z,463nm,28.5s						
RKT				*e*SP	SP	01 51 53.6	+0.3
	comp=Z,442nm,29.5s						
RKT				*e*SS	SS	01 57 16.4	+1.0
	comp=Z,458nm,27.2s						
RKT				*e*LR	LR	02 11 00.4	
	comp=Z,3µm,24.0s,baz=310						
MDT	**Midelt**	**100.03**	**334**	P	Pdif	01 39 05.6	-0.1
	comp=Z,2.1nm,1.0s,baz=34,slow=11,SNR=2.4						
MDT				PP	PP	01 43 10.9	+0.6
	comp=Z,1.8nm,0.8s,baz=120,slow=2.2,SNR=4.4						
BBSR	**BB Station**	**101.29**	**24**	PFAKE		01 39 20.0	+8.7
BBSR				LR	LR		
	comp=Z,7µm,20.0s,MS6.2						
KMBO	**Kilima Mbogo**	**103.15**	**281**	Pdif	Pdif	01 39 19.8	+0.2
KMBO				PP	PP	01 43 33.4	-1.7
KMBO				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
KMBO	**Kilima Mbogo**	**103.15**	**281**	P	Pdif	01 39 19.8	+0.2
KMBO						01 43 33.4	
KMBO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KMBO	**Kilima Mbogo**	**103.15**	**281**	Pdiff	Pdif	01 39 19.8	+0.2
	comp=Z,3.6nm,0.9s,baz=35,slow=7.6,SNR=10						
KMBO				PP	PP	01 43 33.4	-1.7
	comp=Z,2.3nm,1.0s,baz=44,slow=12,SNR=5.2						
TORD	**Torodi Ar. Bea**	**114.98**	**319**	PKP	PKiKP	01 44 01.1	-0.6
	comp=Z,2.9nm,0.9s,baz=14,slow=1.8,SNR=13						
TORD				PP	PP	01 44 54.6	-5.5
	comp=Z,20nm,1.2s,baz=32,slow=5.1,SNR=12						
BCIP	**Isla Barro Col**	**115.07**	**49**	PFAKE		01 44 10.0	+8.2
BCIP				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
LSZ	**Lusaka**	**119.19**	**276**	PFAKE		01 44 20.0	+10
LSZ				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
VNDA	**Vanda**	**119.90**	**176**	PKIKP	PKPdf	01 44 08.9	-0.3
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**119.90**	**176**	PKP	PKPdf	01 44 08.9	-0.3
	comp=Z,1.6nm,0.8s,baz=328,slow=4.7,SNR=5.8						
MSKU	**Masuku**	**120.07**	**298**	PFAKE		01 44 20.0	+8.5
MSKU				LR	LR		
	comp=Z,85nm,22.0s,MS4.3						
SDV	**Santo Domingo**	**120.13**	**41**	*e*PKPdf	PKPdf	01 44 11.4	-0.2
DBIC	**Dimbokro**	**123.72**	**322**	PKP	PKPdf	01 44 17.9	-0.6
DBIC				PP	PP	01 45 57.0	-3.4
DBIC	**Dimbokro**	**123.72**	**322**	PKIKP	PKPdf	01 44 17.9	-0.6
DBIC						01 45 57.1	
DBIC				pmax	pmax		
	comp=Z,13nm,1.0s						
DBIC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DBIC	**Dimbokro**	**123.72**	**322**	PKP	PKPdf	01 44 17.9	-0.6
	comp=Z,13nm,1.0s,baz=23,slow=3.0,SNR=16						
DBIC				PP	PP	01 45 57.0	-3.4
	comp=Z,10.0nm,1.0s,baz=2.3,slow=8.9,SNR=4.7						
LIC	**Lamto**	**124.20**	**322**⇑	*i*PKIKP	PKPdf	01 44 18.8	-0.6
	comp=Z,13nm,0.8s						
MAW	**Mawson**	**125.00**	**208**	PKIKP	PKPdf	01 44 18.0	-1.2
MAW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAW	**Mawson**	**125.00**	**208**	PKP	PKPdf	01 44 18.0	-1.1
	comp=Z,2.8nm,0.6s,baz=303,slow=19,SNR=4.2						
ATAH	**Atahualpa**	**128.75**	**59**	PKP	PKPdf	01 44 28.2	+0.2
	comp=Z,6.3nm,0.8s,baz=289,slow=6.3,SNR=4.1						
BOSA	**Boshof**	**129.28**	**265**	PKIKP	PKPdf	01 44 29.2	+0.6
BOSA				pmax	pmax		
	comp=Z,11nm,1.2s						
BOSA	**Boshof**	**129.28**	**265**	PKP	PKPdf	01 44 29.1	+0.6
	comp=Z,11nm,1.2s,baz=0.7,slow=6.8,SNR=4.1						
ASCN	**Ascension**	**140.94**	**325**	PFAKE		01 45 00.0	+9.2
ASCN				LR	LR		
	comp=Z,8µm,20.0s,MS6.5						
LPAZ	**La Paz**	**142.28**	**57**	PKP	PKPdf	01 44 54.2	+1.2
LPAZ				LR	LR		
	comp=Z,899nm,21.0s,MS5.5						
LPAZ	**La Paz**	**142.28**	**57**	PKP	PKPdf	01 44 54.2	+1.2
	comp=Z,2.3nm,0.6s,baz=359,slow=6.5,SNR=7.7						
MAIT	**Maitri**	**142.80**	**204**	*e*PKPdf	PKPdf	01 44 46.3	-6.0
SIV	**San Ignacio**	**146.18**	**47**	PKPbc	PKPbc	01 45 00.6	-0.3
	comp=Z,10nm,0.6s,baz=312,slow=2.0,SNR=69						
SNAA	**Sanae**	**146.22**	**198**	*e*PKPdf	PKPdf	01 44 59.3	+1.0
SNAA				*e*		01 45 02.9	
SNAA				*e*		01 45 10.1	
SNAA				*e*		01 45 18.2	
SNAA				*e*		01 45 24.0	
SNAA				*e*		01 45 40.0	
VNA2	**Neumayer--Watz**	**147.79**	**197**	*e*PKPdf	PKPbc	01 45 04.1	+0.3
	baz=86,slow=1.1						
VNA2				*e*		01 45 08.0	
VNA2				*e*		01 45 15.9	
VNA2				*e*		01 45 24.1	
VNA2				*e*		01 45 30.0	
VNA2				*e*		01 45 35.7	
VNA2				*e*		01 45 44.0	
VNA3	**Neumayer Olymp**	**148.02**	**196**	*e*PKPdf	PKPbc	01 45 04.3	-0.2
VNA3				*e*		01 45 07.5	
VNA3				*e*		01 45 16.0	
VNA3				*e*		01 45 24.4	
VNA3				*e*		01 45 30.1	
VNA3				*e*		01 45 36.3	
VNA3				*e*		01 45 44.4	
VNA1	**Neumayer--Stat**	**148.18**	**197**	*e*PKPdf	PKPbc	01 45 05.6	+0.7
VNA1				*e*		01 45 09.1	
VNA1				*e*		01 45 16.5	
VNA1				*e*		01 45 25.6	
VNA1				*e*		01 45 32.3	
VNA1				*e*		01 45 37.0	
VNA1				*e*		01 45 42.3	
LCO	**Las Campanas**	**149.09**	**76**	*e*PKPdf	PKPdf	01 45 05.3	+1.0
LCO				*e*PKPbc	PKPbc	01 45 09.2	+0.7
LCO				LR	LR		
	comp=Z,9µm,21.0s,MS6.5						
PLCA	**Paso Flores**	**154.15**	**99**	PKPbc	PKPbc	01 45 18.3	-1.5
PLCA	**Paso Flores**	**154.15**	**99**	PKIKP	PKPbc	01 45 18.3	-1.5
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PLCA	**Paso Flores**	**154.15**	**99**	PKPbc	PKPbc	01 45 18.3	-1.5
	comp=Z,2.4nm,0.9s,baz=242,slow=4.2,SNR=6.2						
EFI	**East Falkland**	**162.22**	**130**	PFAKE		01 45 30.0	+9.0
EFI				LR	LR		
	comp=Z,19µm,20.0s						
HOPE	**Hope Point**	**167.85**	**179**	PFAKE		01 45 40.0	+14
HOPE				LR	LR		
	comp=Z,5.0nm,20.0s						

IDC 18 01:50:09.6±1.3**, 3109N**×**8279E, h0**^{km}**, mb3.6**/3**, mb1 3.7**/4**, mb1mx3.4**/23**, mbtmp3.6**/4**, ML3.3**/1**, Error ellipse: s-maj=61.2km s-min=28.7km az=40.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.68**	**359**	Pn	Pn	01 53 52.1	+0.3
	0.1nm,0.3s,baz=172,slow=13,SNR=8.3						
AKASG	**Malin Array Be**	**43.90**	**312**	P	P	01 58 16.1	-1.6
	0.2nm,0.3s,baz=84,slow=7.4,SNR=4.5						
WRA	**Warramunga Arr**	**70.88**	**129**	P	P	02 01 28.6	0.0
	0.3nm,0.6s,baz=320,slow=6.3,SNR=8.8						
TORD	**Torodi Ar. Bea**	**75.79**	**277**	P	P	02 01 58.7	+0.9
	0.4nm,0.4s,baz=48,slow=6.4,SNR=2.4						

*ISCJB **18** 02:05:12.2±0.3, 4693N±002×060W±003, h3^{km}, Error ellipse: s-maj=3.2km s-min=2.1km az=140.5*
*CSEM **18** 02:05:14.6±0.1, 4689N×070W, h2^{km}, ML2.5/16, Error ellipse: s-maj=1.3km s-min=0.7km az=45.0*
*LDG **18** 02:05:14.7±0.1, 4689N×070W, h3^{km}, Md2.5/1, Ml2.5/18, Error ellipse: s-maj=1.3km s-min=0.8km az=47.0*
*STR **18** 02:05:16.1±0.9, 4680N×084W, h5^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **18** 02:05:16.1, 4680N×084W, h5^{km}, ML2.5(LDG), ML2.2(STR), After STR.*
ISC 18 02:05:13.6±0.3**, 4690N**±002×**066W**±003**, h10**^{km}±3^{km}**, n48,** σ**0^{s}81**/113**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCHF	**La Chataignera**	**0.24**	**193**	Pg	**Pg**	**02 05 19.2**	**+0.7**
LCHF				Sg	**Sg**	**02 05 22.2**	**+0.4**
MFF	**Saint Martin d**	**0.47**	**130**	*e*Pg	**Pg**	**02 05 24.0**	**+1.3**
MFF				*e*Sg	**Sg**	**02 05 29.4**	**+0.6**
	38nm,0.2s						
MFF	**Saint Martin d**	**0.47**	**130**	*e*Pg	**Pg**	**02 05 24.0**	**+1.3**
MFF				*e*Sg	**Sg**	**02 05 29.4**	**+0.6**
	19nm,0.2s						
CHIF	**Chize**	**0.79**	**167**	Pg	**Pg**	**02 05 30.3**	**+1.5**
CHIF				Sg	**Sg**	**02 05 40.0**	**+0.9**
GRR	**Gorron**	**1.49**	**355**	*e*Pg	**Pg**	**02 05 42.8**	**+0.6**
GRR				*e*Sg	**Sg**	**02 06 02.2**	**+0.6**
	10nm,0.2s						
GRR	**Gorron**	**1.49**	**355**	*e*Pn	**Pn**	**02 05 40.8**	**+0.4**
GRR				*e*Pg	**Pg**	**02 05 42.8**	**+0.6**
GRR				*e*Sg	**Sg**	**02 06 02.2**	**+0.6**
GRR	**Gorron**	**1.49**	**355**	*e*Pg	**Pg**	**02 05 42.8**	**+0.6**
GRR				*e*Sg	**Sg**	**02 06 02.2**	**+0.6**
	5.2nm,0.2s						
LDF	**La Druitiere**	**1.73**	**12**	*e*Pg	**Pg**	**02 05 47.0**	**+0.2**
LDF				*e*Sn	**Sn**	**02 06 05.5**	**-0.3**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**02 06 09.4**	**+0.2**
	6.4nm,0.2s						
LDF	**La Druitiere**	**1.73**	**12**	*e*Pn	**Pn**	**02 05 44.0**	**+0.3**
LDF				*e*Pg	**Pg**	**02 05 47.0**	**+0.2**
LDF				*e*Sn	**Sn**	**02 06 05.5**	**-0.3**
LDF				*e*Sg	**Sg**	**02 06 09.4**	**+0.2**
LDF	**La Druitiere**	**1.73**	**12**	*e*Pg	**Pg**	**02 05 47.0**	**+0.2**
LDF				*e*Sn	**Sn**	**02 06 05.5**	**-0.3**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**02 06 09.4**	**+0.2**
	3.2nm,0.2s						
SGMF	**Saint Gilles**	**1.86**	**317**	*e*P	**Pn**	**02 05 48.1**	**+2.6**
	SNR=1.0						
SGMF	**Saint Gilles**	**1.86**	**317**	*e*Pg	**Pg**	**02 05 49.3**	**0.0**
SGMF				*e*Sn	**Sn**	**02 06 08.1**	**-1.0**
	4.0nm,0.4s,SNR=1.0						
SGMF				*e*Sg	**Sg**	**02 06 12.8**	**-0.7**
	3.2nm,0.3s						
SGMF	**Saint Gilles**	**1.86**	**317**	*e*Pn	**Pn**	**02 05 45.5**	**0.0**
SGMF				*e*P		02 05 48.1	
SGMF				*e*Pg	**Pg**	**02 05 49.3**	**0.0**
SGMF				*e*Sn	**Sn**	**02 06 08.1**	**-1.0**
SGMF				*e*Sg	**Sg**	**02 06 12.8**	**-0.7**
SGMF	**Saint Gilles**	**1.86**	**317**	*e*P	**Pn**	**02 05 48.1**	**+2.6**
	SNR=1.0						
SGMF	**Saint Gilles**	**1.86**	**317**	*e*Pg	**Pg**	**02 05 49.3**	**0.0**
SGMF				*e*Sn	**Sn**	**02 06 08.1**	**-1.0**
	2.0nm,0.4s,SNR=1.0						
SGMF				*e*Sg	**Sg**	**02 06 12.8**	**-0.7**
	1.6nm,0.3s						
FLN	**La Foliniere**	**1.86**	**4**	*e*Pn	**Pn**	**02 05 46.0**	**+0.5**
FLN				*e*Sg	**Sg**	**02 06 14.1**	**+0.6**
	9.4nm,0.3s,SNR=1.0						
FLN	**La Foliniere**	**1.86**	**4**	*e*Pn	**Pn**	**02 05 46.0**	**+0.5**
FLN				*e*Sg	**Sg**	**02 06 14.1**	**+0.6**
	4.7nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	**1.98**	**302**	*e*Pg	**Pg**	**02 05 50.9**	**-0.6**
QUIF				*e*Sg	**Sg**	**02 06 16.7**	**-0.5**
	7.7nm,0.3s						
QUIF	**Quistinic**	**1.98**	**302**	*e*Pn	**Pn**	**02 05 47.0**	**-0.1**
QUIF				*e*Pg	**Pg**	**02 05 50.9**	**-0.6**
QUIF				*e*Sg	**Sg**	**02 06 16.7**	**-0.5**
QUIF	**Quistinic**	**1.98**	**302**	*e*Pg	**Pg**	**02 05 50.9**	**-0.6**
QUIF				*e*Sg	**Sg**	**02 06 16.7**	**-0.5**
	3.8nm,0.3s						
TCF	**Toulx Ste Croi**	**2.07**	**106**	*e*Pg	**Pg**	**02 05 53.8**	**+0.5**
TCF				*e*Sg	**Sg**	**02 06 19.6**	**-0.6**
	6.7nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**2.07**	**106**	*e*Pn	**Pn**	**02 05 49.4**	**+1.0**
TCF				*e*Pg	**Pg**	**02 05 53.8**	**+0.5**
TCF				*e*Sg	**Sg**	**02 06 19.6**	**-0.6**
TCF	**Toulx Ste Croi**	**2.07**	**106**	*e*Pg	**Pg**	**02 05 53.8**	**+0.5**
TCF				*e*Sg	**Sg**	**02 06 19.6**	**-0.6**
	3.3nm,0.3s,SNR=1.0						
LFF	**La Frestale**	**2.19**	**153**	*e*Pg	**Pg**	**02 05 55.6**	**0.0**
LFF				*e*Sg	**Sg**	**02 06 23.1**	**-1.0**
	4.3nm,0.2s,SNR=1.0						
LFF	**La Frestale**	**2.19**	**153**	*e*Pn	**Pn**	**02 05 50.4**	**+0.3**
LFF				*e*Pg	**Pg**	**02 05 55.6**	**0.0**
LFF				*e*Sg	**Sg**	**02 06 23.1**	**-1.0**
LFF	**La Frestale**	**2.19**	**153**	*e*Pg	**Pg**	**02 05 55.6**	**0.0**
LFF				*e*Sg	**Sg**	**02 06 23.1**	**-1.0**
	2.2nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.20**	**136**	*e*Pg	**Pg**	**02 05 55.5**	**-0.3**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**02 06 23.7**	**-0.7**
	9.9nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.20**	**136**	*e*Pn	**Pn**	**02 05 50.5**	**+0.3**
RJF				*e*Pg	**Pg**	**02 05 55.5**	**-0.3**
RJF				*e*Sg	**Sg**	**02 06 23.7**	**-0.7**
RJF	**Les Rejaudoux**	**2.20**	**136**	*e*Pg	**Pg**	**02 05 55.5**	**-0.3**
	SNR=1.0						
RJF				*e*Sg	**Sg**	**02 06 23.7**	**-0.7**
	4.9nm,0.2s,SNR=1.0						
ROSF	**Rostrenen**	**2.27**	**310**	*e*Pg	**Pg**	**02 05 56.2**	**-1.0**
ROSF				*e*Sg	**Sg**	**02 06 25.0**	**-1.7**
	13nm,0.9s,SNR=1.0						
ROSF	**Rostrenen**	**2.27**	**310**	*e*Pn	**Pn**	**02 05 51.3**	**+0.1**
ROSF				*e*Pg	**Pg**	**02 05 56.2**	**-1.0**
ROSF				*e*Sg	**Sg**	**02 06 25.0**	**-1.7**
ROSF	**Rostrenen**	**2.27**	**310**	*e*Pg	**Pg**	**02 05 56.2**	**-1.0**
ROSF				*e*Sg	**Sg**	**02 06 25.0**	**-1.7**
	6.4nm,0.9s,SNR=1.0						
BGF	**Bois d'Agland**	**2.44**	**97**	*e*Pg	**Pg**	**02 06 00.0**	**-0.3**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**02 06 31.7**	**-0.2**
	18nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**2.44**	**97**	*e*Pn	**Pn**	**02 05 54.7**	**+1.3**
BGF				*e*Pg	**Pg**	**02 06 00.0**	**-0.3**
BGF				*e*Sg	**Sg**	**02 06 31.7**	**-0.2**
BGF	**Bois d'Agland**	**2.44**	**97**	*e*Pg	**Pg**	**02 06 00.0**	**-0.3**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**02 06 31.7**	**-0.2**
	8.9nm,0.4s,SNR=1.0						
CAF	**Calviac**	**2.75**	**135**	*e*Pg	**Pg**	**02 06 05.8**	**-0.4**
CAF				*e*Sn	**Sn**	**02 06 29.2**	**-1.6**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**02 06 41.2**	**-0.5**
	4.2nm,0.3s,SNR=1.0						
CAF	**Calviac**	**2.75**	**135**	*e*Pn	**Pn**	**02 05 58.3**	**+0.7**
CAF				*e*Pg	**Pg**	**02 06 05.8**	**-0.4**
CAF				*e*Sn	**Sn**	**02 06 29.2**	**-1.6**
CAF				*e*Sg	**Sg**	**02 06 41.2**	**-0.5**
CAF	**Calviac**	**2.75**	**135**	*e*Pg	**Pg**	**02 06 05.8**	**-0.4**
CAF				*e*Sn	**Sn**	**02 06 29.2**	**-1.6**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**02 06 41.2**	**-0.5**
	2.1nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**2.76**	**91**	*e*Pn	**Pn**	**02 05 58.7**	**+0.9**
AVF				*e*Sg	**Sg**	**02 06 41.5**	**-0.6**
	1.9nm,0.3s						
AVF	**Avril sur Loir**	**2.76**	**91**	*e*Pn	**Pn**	**02 05 58.7**	**+0.9**
AVF				*e*Sg	**Sg**	**02 06 41.5**	**-0.6**
	0.9nm,0.3s						
SSF	**Saint Saulge**	**2.86**	**85**	*e*Pg	**Pg**	**02 06 08.1**	**-0.2**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**02 06 44.7**	**-0.6**
	3.4nm,0.4s						
SSF	**Saint Saulge**	**2.86**	**85**	*e*Pn	**Pn**	**02 05 59.8**	**+0.6**
SSF				*e*Pg	**Pg**	**02 06 08.1**	**-0.2**
SSF				*e*Sg	**Sg**	**02 06 44.7**	**-0.6**
SSF	**Saint Saulge**	**2.86**	**85**	*e*Pg	**Pg**	**02 06 08.1**	**-0.2**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**02 06 44.7**	**-0.6**
	1.7nm,0.4s						
SMF	**Signal de Mont**	**3.10**	**93**	*e*Pg	**Pg**	**02 06 12.5**	**-0.6**
SMF				*e*Sg	**Sg**	**02 06 52.5**	**-0.8**
	1.9nm,0.3s						
SMF	**Signal de Mont**	**3.10**	**93**	*e*Pg	**Pg**	**02 06 12.5**	**-0.6**
SMF				*e*Sg	**Sg**	**02 06 52.5**	**-0.8**
	0.9nm,0.3s						
LOR	**Lormes**	**3.11**	**82**	*e*Pn	**Pn**	**02 06 03.6**	**+0.9**
LOR				*e*Sg	**Sg**	**02 06 52.7**	**-0.7**
	2.5nm,0.2s,SNR=1.0						
LOR	**Lormes**	**3.11**	**82**	*e*Pn	**Pn**	**02 06 03.6**	**+0.9**
LOR				*e*Sg	**Sg**	**02 06 52.7**	**-0.7**
	1.2nm,0.2s,SNR=1.0						
EPF	**Esparros**	**3.94**	**169**	*e*Sn	**Sn**	**02 06 57.7**	**-2.5**
	1.1nm,0.3s,SNR=1.0						

*BGS **18** 02:11:00.7, 503N×8036W, h10^{km}, mb6.3, MS5.6*
*BJI **18** 02:11:02.4, 460N×7850W, h8^{km}, mB6.6, Ms6.1, Msz5.9*
*CRAAG **18** 02:11:03.2, 453N×7856W, Mb6.4*
*ISCJB **18** 02:11:03.2±0.7, 465N±002×7850W±002, h1^{km}±4^{km}, mb6.3/372, MS5.7/213, Error ellipse: s-maj=3.4km s-min=2.3km az=26.6*
*MOS **18** 02:11:04.9±0.9, 474N×7855W, h10^{km}, mb6.5/125, MS5.6/70, Error ellipse: s-maj=5.2km s-min=3.6km az=66.4*
*IGIL **18** 02:11:04.1, 453N×7850W, h10^{km}, MS5.6*
*GCMT **18** 02:11:05.5±0.1, 469N×7853W, h12^{km}, MW6.2/107, Moment Tensor Solution. s102,c223; s107,c409; Duration: $3^{s}2$ Moment tensor: Scale 10^{18}Nm; M_{rr}-2.46±.01; $M_{\theta\theta}$0.45±.01; $M_{\phi\phi}$2.02±.02; $M_{r\theta}$-0.15±.04; $M_{\theta\phi}$1.01±.01; $M_{\phi r}$1.10±.04; Best double couple: $M_0$2.72300×10^{18} NP1:ϕ_s38.00000°, δ36.00000°, λ-69.00000°. NP2:ϕ_s193.00000°, δ57.00000°, λ-104.00000°. Principal axes: T 2.6840, Plg10.0000°, Azm294.0000°; N 0.0830, Plg12.0000°, Azm201.0000°; P -2.7610, Plg74.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **18** 02:11:05.3±0.1, 459N×7849W, h7^{km}, mb6.4/291, ME6.3, MS5.7/163, MW6.1 Error ellipse: s-maj=2.8km s-min=1.8km az=205.0 Broadband fault plane solution: P waves. NP1:ϕ_s195.00000°, δ50.00000°, λ-130.00000°. NP2:ϕ_s68.00000°, δ54.00000°, λ-53.00000°. Principal axes: T Plg2.0000°, Azm132.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm38.0000°; Moment Tensor Solution. s71 Moment tensor: Scale 10^{18} Nm; M_{rr}-1.48; $M_{\theta\theta}$0.83; $M_{\phi\phi}$0.65; $M_{r\theta}$-0.92; $M_{\theta\phi}$1.28; $M_{\phi r}$0.47; Best double couple: $M_0$2.10000×10^{18} NP1:ϕ_s199.00000°, δ47.00000°, λ-135.00000°. NP2:ϕ_s75.00000°, δ59.00000°, λ-53.00000°. Principal axes: T 2.0600, Plg6.0000°, Azm139.0000°; N 0.0500, Plg31.0000°, Azm233.0000°; P -2.1100, Plg58.0000°, Azm39.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Armenia, Buenaventura, Cali, Manizales and Pizarro, Colombia.
*CASC **18** 02:11:07.5±1.4, 480N×7823W, h35^{km}±332^{km}, MD5.0, mb6.4(NEIC)*
*IDC **18** 02:11:07.2±1.5, 467N×7836W, h18^{km}±8^{km}, mb5.5/23, mb1 5.7/26, mb1mx5.7/26, mbtmp5.6/26, ML5.8/3, MS5.7/22, Ms1 5.7/22, ms1mx5.5/28, Error ellipse: s-maj=11.7km s-min=6.3km az=56.0*
*SZGRF **18** 02:11:14.4, 603N×7862W, h33^{km}, mb6.7, MS5.7, South of Panama*
ISC 18 02:11:07.6±0.8**, 465N**±002×**7846W**±002**, h18**^{km}±4^{km}**, h18**^{km}±3.7^{km}**: pP-P, n1442,** σ**0^{s}93**/1174**, mb6.3**/372**, MS5.7**/213**, 62C-456D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**1.28**	**119**	*e*P	**Pn**	**02 11 30.1**	**-0.6**
MALC				*e*S	**Sn**	**02 11 49.5**	**+2.1**
SOLC	**Bahia Solano**	**1.98**	**30**	*e*P	**Pn**	**02 11 35.8**	**-4.5**
SOLC				*e*S	**Sn**	**02 11 56.3**	**-8.4**
TUMC	**Tumaco**	**2.80**	**185**	*e*P	**Pn**	**02 11 49.6**	**-2.0**
TUMC				*i*		02 12 37.1	
TOLC	**Tolima**	**3.11**	**91**	*e*P	**Pn**	**02 11 56.4**	**+0.6**
CRUC	**La Cruz**	**3.47**	**154**	*e*P	**Pn**	**02 12 00.3**	**-0.4**
AZU	**Azuero**	**3.61**	**330**	*e*P	**Pn**	**02 11 58.3**	**-4.3**
UPD1	**Univ de Panama**	**3.90**	**6**⇓	*i*P	**Pn**	**02 12 03.2**	**-3.5**
UPD1				*e*S	**Sn**	**02 12 45.8**	**-6.4**
ROSC	**El Rosal**	**4.12**	**87**	*e*Pn	**Pn**	**02 12 12.5**	**+2.8**
ROSC	**El Rosal**	**4.12**	**87**	Pn	**Pn**	**02 12 12.2**	**+2.5**
	336nm,0.3s,baz=277,slow=12,SNR=590						
ROSC				Sn	**Sn**	**02 13 04.2**	**+6.7**
	113nm,0.3s,baz=90,slow=20,SNR=2.5						
FLOC	**Florencia**	**4.20**	**138**	*e*P	**Pn**	**02 12 11.3**	**+0.6**
FLOC				*i*		02 13 01.6	
OTAV	**Otavalo**	**4.38**	**180**⇑	*i*Pn	**Pn**	**02 12 10.6**	**-2.6**
BCIP	**Isla Barro Col**	**4.70**	**343**	*e*Pn	**Pn**	**02 12 13.7**	**-3.9**
BCIP				*e*Sn	**Sn**	**02 13 06.3**	**-5.4**
BARC	**Barichara**	**5.62**	**69**⇑	*e*P	**Pb**	**02 12 41.6**	**-3.6**
BARC				*e*S	**Sb**	**02 14 00.4**	**+8.1**
CNI	**Changuinola**	**6.22**	**320**	*e*P	**Pn**	**02 12 33.8**	**-4.8**
BAR1		**6.64**	**314**⇑	*e*P	**Pn**	**02 12 41.6**	**-2.7**
BAR1				*e*S	**Sn**	**02 14 00.4**	**+0.8**
BUS	**Buena Vista**	**7.17**	**313**	*e*P	**Pn**	**02 12 48.9**	**-2.8**
URSC	**Urasca**	**7.38**	**315**	*e*P	**Pn**	**02 12 51.5**	**-2.9**
QCR	**Quepos**	**7.39**	**310**	*e*P	**Pn**	**02 12 54.5**	**-0.1**
LCR2	**La Lucha 2**	**7.48**	**313**	*e*P	**Pn**	**02 12 52.8**	**-3.0**
LAJ	**Bijagual**	**7.64**	**313**	*e*P	**Pn**	**02 12 59.6**	**+1.5**
SJS	**Escuela Geolog**	**7.64**	**314**	*e*P	**Pn**	**02 12 56.9**	**-1.2**
PRS1	**Puriscal**	**7.86**	**313**	*e*P	**Pn**	**02 12 59.0**	**-2.2**
CGA2	**Cerro Gallo 2**	**8.00**	**312**	*e*P	**Pn**	**02 13 01.8**	**-1.1**
JCR	**Jicaral**	**8.38**	**308**	*e*P	**Pn**	**02 13 08.5**	**+0.2**
JCR				*e*S	**Sn**	**02 14 48.8**	**+6.2**
JTS	**JuntasAbangare**	**8.54**	**311**	Pn	**Pn**	**02 13 07.0**	**-3.4**
	6µm,1.5s						
JTS	**JuntasAbangare**	**8.54**	**311**	*e*Pn	**Pn**	**02 13 07.1**	**-3.3**
JTS	**JuntasAbangare**	**8.54**	**311**	P	**Pn**	**02 13 06.6**	**-3.8**
JTS						02 14 40.6	
JTS				pmax	pmax		
	comp=Z,4.0nm,0.3s						
JTS				smax			
	comp=N,4.0nm,0.3s						
JTS				MLR	MLR		
	comp=Z,123µm,19.5s						
JTS	**JuntasAbangare**	**8.54**	**311**	Pn	**Pn**	**02 13 06.6**	**-3.8**
	comp=Z,3.8nm,0.3s,baz=106,slow=8.9,SNR=59						
JTS				Sn	**Sn**	**02 14 40.6**	**-5.8**
	comp=Z,3.8nm,0.3s,baz=8.4,slow=18,SNR=2.9						
JTS				LR	LR	02 16 16.1	
	comp=Z,123µm,19.5s,baz=127,slow=36						
SDV	**Santo Domingo**	**8.84**	**61**	*e*Pn	**Pn**	**02 13 15.2**	**+0.6**
SDV				*e*Sn	**Sn**	**02 14 54.5**	**+0.7**
SDV	**Santo Domingo**	**8.84**	**61**	Pn	**Pn**	**02 13 15.5**	**+0.9**
	comp=Z,57nm,0.3s,baz=240,slow=12,SNR=357						
SDV				Sn	**Sn**	**02 14 50.8**	**-3.0**
	comp=Z,38nm,0.3s,baz=35,slow=20,SNR=8.7						
SDV				LR	LR	02 16 33.4	
	comp=Z,85µm,20.9s,baz=262,slow=37						
VCR	**Vista de Mar**	**8.96**	**308**	*e*P	**Pn**	**02 13 16.0**	**-0.2**
MADN	**Villa Maderas**	**9.71**	**314**⇓	*e*P	**Pn**	**02 13 28.2**	**+1.7**
SSNN	**San Juan del S**	**9.85**	**312**	*e*P	**Pn**	**02 13 30.2**	**+1.7**
CONN	**Concepcion**	**9.88**	**315**⇓	*i*P	**Pn**	**02 13 29.6**	**+0.9**
APON	**Apoyo**	**10.43**	**314**⇓	*i*P	**Pn**	**02 13 37.8**	**+1.4**
TICN	**Ticuantepe**	**10.63**	**314**⇓	*i*P	**Pn**	**02 13 40.7**	**+1.6**
MGAN	**Managua**	**10.72**	**315**⇓	*e*P	**Pn**	**02 13 41.9**	**+1.6**
TISN	**Laguna Tiscapa**	**10.73**	**314**	*e*P	**Pn**	**02 13 41.8**	**+1.3**
XAVN	**Gruta Xavier**	**10.77**	**314**⇓	*e*P	**Pn**	**02 13 42.6**	**+1.5**
HUEN		**10.79**	**316**⇑	*e*P	**Pn**	**02 13 42.1**	**+0.7**
APYN	**Apoyeque**	**10.85**	**315**⇑	*e*P	**Pn**	**02 13 43.4**	**+1.3**
COPN	**Copaltepe**	**10.99**	**313**	*e*P	**Pn**	**02 13 45.3**	**+1.3**
MOMJ	**Momotombo**	**11.10**	**315**	*e*P	**Pn**	**02 13 46.5**	**+0.9**
TEL3	**Telica 3**	**11.43**	**314**⇑	*e*P	**Pn**	**02 13 51.0**	**+0.9**
TELN	**Telica**	**11.44**	**314**⇑	*e*P	**Pn**	**02 13 51.1**	**+0.9**

ATAH Atahualpa 11.57 180 Pn **Pn** **02 13 54.4 +2.4**
comp=Z,58nm,0.3s,baz=7.3,slow=9.5,SNR=101
ATAH Sn **Sn** **02 16 02.9 +2.1**
comp=Z,4.8nm,0.3s,baz=226,slow=16,SNR=3.9
TGUH Tegucigalpa,Un 12.77 318 *e*Pn **Pn** **02 14 07.6 -0.8**
PAYG Puerto Ayora 12.94 246⇑ *i*Pn **Pn** **02 14 09.4 -1.3**
PCJ Portland Cotta 13.08 5 *e*P **Pn** **02 14 09.8 -2.8**
MCJ Malvern 13.22 3⇓ *e*P **Pn** **02 14 19.5 +4.9**
CVJ Coleyville 13.53 4⇓ *e*P **Pn** **02 14 18.9 +0.2**
CMJ Castle Mountai 13.56 8⇓ *e*P **Pn** **02 14 19.4 -0.3**
BNJ Bonny Gate 13.67 6⇓ *e*P **Pn** **02 14 20.4 -0.3**
BBJ Bamboo Saint A 13.70 5⇓ *e*P **Pn** **02 14 21.7 +0.6**
PCRV Puerto La Cruz 14.76 67 Pn **Pn** **02 14 31.7 -3.9**
comp=Z,4.7nm,0.3s,baz=261,slow=5.6,SNR=15
PCRV Sn **Sn** **02 17 13.7 -5.3**
comp=Z,1.3nm,0.3s,baz=47,slow=23,SNR=3.0
PCRV LR LR 02 20 40.6
comp=Z,40µm,21.1s,baz=243,slow=39
RCC Rio Carpintero 15.49 10 *e*P **Pn** **02 14 45.0 -0.3**
RCC *e*S **Sn** **02 17 40.0 +3.4**
comp=N,12µm,19.3s
RCC *e*
comp=E,11µm,17.7s
SDDR Presa de Saban 15.88 26 *e*Pn **Pn** **02 14 49.1 -1.2**
comp=E,2µm,1.2s
MASC Masc 15.98 15 *e*P **Pn** **02 14 53.6 +2.1**
MOAC Moa 16.28 12 *e*P **Pn** **02 14 57.9 +2.5**
MOAC *e*S **Sn** **02 17 50.9 -4.8**
comp=N,372nm,4.6s
MOAC *e*
comp=E,476nm,5.5s
HLGC Holguin 16.32 8 *e*P **Pn** **02 14 56.4 +0.5**
NNA Nana 16.60 174 Pn **Pn** **02 14 58.0 -1.6**
comp=E,6µm,1.3s,SNR=15
NNA Nana 16.60 174 *e*Pn **Pn** **02 14 56.3 -3.3**
comp=E,2µm,1.1s
NNA *e*Sn **Sn** **02 17 57.8 -5.8**
NNA Nana 16.60 174 Pn **Pn** **02 14 56.5 -3.1**
comp=E,8.0nm,0.3s,baz=346,slow=10,SNR=40
NNA Sn **Sn** **02 18 14.8 +11**
comp=E,1.1nm,0.3s,baz=287,slow=17,SNR=2.7
MGV Manicaragua 17.43 355 *e*P **Pn** **02 15 11.4 +1.5**
MGV *e*S **Sn** **02 18 21.3 -2.2**
comp=N,18nm,5.5s
MGV *e*
comp=E,26nm,6.8s
MPR Mayaguez 17.45 38 *e*Pn **Pn** **02 15 09.3 -0.8**
TCE Chacachacare 17.61 69 *e*P **Pn** **02 15 12.7 +0.5**
CCIG Comitan 17.72 312 *i* P **Pn** **02 15 13.4 -0.2**
TPP Pointe-a-Pierr 17.77 71 *e*P **Pn** **02 15 13.3 -0.9**
TRN Trinidad (W) 17.92 70 *e*P **Pn** **02 15 14.8 -1.2**
SJG San Juan 18.00 41 *e*Pn **Pn** **02 15 16.6 -0.4**
comp=E,10µm,2.8s
SJG San Juan 18.00 41 P **Pn** **02 15 15.1 -2.0**
SJG S **Sn** **02 18 43.9 +6.3**
SJG pmax pmax
comp=Z,4.0nm,0.3s
SJG smax
comp=N,1.0nm,0.3s
SJG MLR MLR
comp=Z,19µm,21.0s
SJG San Juan 18.00 41 P **Pn** **02 15 15.1 -2.0**
comp=Z,3.7nm,0.3s,baz=234,slow=7.7,SNR=35
SJG S **Sn** **02 18 43.9 +6.3**
comp=Z,0.5nm,0.3s,baz=180,slow=20,SNR=1.5
SJG LR LR 02 21 53.3
comp=Z,19µm,21.0s,baz=212,slow=36
CPD Cerro la Pandu 18.10 42 *e*Pn **Pn** **02 15 17.5 -0.8**
CPD Cerro la Pandu 18.10 42 *e*P **Pn** **02 15 16.0 -2.3**
TBH Brigand Hill 18.18 70 *e*P **Pn** **02 15 18.1 -1.3**
TEIG Tepich 18.20 329 P **Pn** **02 15 18.3 -1.2**
comp=Z,4.3nm,0.3s,baz=145,slow=9.2,SNR=60
TEIG S **Sn** **02 18 46.9 +4.6**
baz=344,slow=16,SNR=2.0
TEIG PcP PcP 02 19 51.4 -0.9
comp=Z,2.1nm,0.3s,baz=284,slow=6.0,SNR=6.5
TEIG LR LR 02 22 40.0
comp=Z,31µm,18.2s,baz=300,slow=38
GRGR Grenville 18.20 65 *e*Pn **Pn** **02 15 18.3 -1.3**
comp=Z,2µm,1.1s
GRGR *e*Sn **Sn** **02 18 41.3 -1.2**
GRW Mount Saint Ca 18.21 65 *e*P **Pn** **02 15 18.8 -0.8**
CBYP Canovanas 18.31 41 *e*Pn **Pn** **02 15 21.1 +0.3**
SCX San Cristobal 18.38 312 *i* P **Pn** **02 15 19.4 -2.2**
MTP Monte Pirata 18.39 42 *e*P **Pn** **02 15 21.1 -0.7**
SOR Soroa 18.57 347 *e*P **Pn** **02 15 24.1 +0.1**
SOR *e*S **Sn** **02 18 56.6 +5.4**
comp=N,72nm,4.8s
SOR *e*
comp=E,48nm,7.0s
TPR Prospect 18.67 69 *e*P **Pn** **02 15 23.2 -2.1**
BIM Bigot 19.73 59 *e*P **Pn** **02 15 36.2 -1.8**
FDF Fort de France 19.77 58 *e*P **Pn** **02 15 37.9 -0.6**
DSHT Scott's Head 19.82 57 *e* **Pn** **02 15 40.2 +1.2**
DSHT Scott's Head 19.82 57 *e*P **Pn** **02 15 40.5 +1.4**
MDN Morne-Daniel 19.86 56 *e*P **Pn** **02 15 39.9 +0.4**
MDN Morne-Daniel 19.86 56 *e* **Pn** **02 15 40.1 +0.7**
DBCT Belle View Cho 19.87 57 *e*P **Pn** **02 15 41.3 +1.6**
DBCT Belle View Cho 19.87 57 *e* **Pn** **02 15 41.5 +1.8**
MVM Montagne Vaucl 19.90 59⇓ *e*P **Pn** **02 15 38.7 -1.4**
SKI Saint Kitts 19.90 49 *e* **Pn** **02 15 40.5 +0.5**
TBG Guadaloupe-3 19.92 55⇓ *i*P **Pn** **02 15 39.6 -0.6**
HMG Houelmont 19.95 54⇓ *i*P **Pn** **02 15 40.2 -0.4**
LZG Guadaloupe-1 19.97 54⇓ *i*P **Pn** **02 15 40.4 -0.4**
SCG Saint Claude 19.99 54⇓ *i*P **Pn** **02 15 40.7 -0.4**
DOG Dongo Capester 20.04 54⇓ *e*P **P** **02 15 41.4 +1.5**
DWS Wesley 20.05 56 *e*P **P** **02 15 40.2 +0.2**
STMA St. Maarten, A 20.07 47 *e*P **P** **02 15 40.9 +0.7**
MGG Marie-Galante 20.23 55⇓ *i*P **P** **02 15 43.6 +1.7**
CMIG Matias Romero 20.30 309 P **P** **02 15 41.1 -1.6**
comp=E,97nm,1.0s,baz=96,slow=8.9,SNR=26
CMIG S **S** **02 19 33.5 +3.7**
comp=E,8.8nm,1.1s,baz=234,slow=18,SNR=1.9
CMIG PcP PcP 02 19 56.0 -0.1
comp=E,11nm,0.9s,baz=96,slow=3.1,SNR=4.7
CMIG LR LR 02 23 29.0
comp=E,32µm,21.2s,MS5.7,baz=116,slow=36
BPA Boggy Peak 20.41 52 *e*P **P** **02 15 43.8 -0.1**
BPA Boggy Peak 20.41 52 *e* **P** **02 15 43.8 -0.1**
BBGH Gun Hill 20.48 64 *e*P **P** **02 15 44.3 -0.3**
comp=E,5µm,1.8s
BBGH LR LR
comp=Z,56µm,22.0s,MS5.9
SFG Saint Francois 20.50 54 *e*P **P** **02 15 46.1 +1.2**
BBSP Saint Philip 20.55 65 *e*P **P** **02 15 45.9 +0.4**
BBSP Saint Philip 20.55 65 *e* **P** **02 15 45.9 +0.4**
HUIG Huatulco 20.57 304 *e*P **P** **02 15 46.0 +0.4**
DEG La Desirade 20.64 55 *e*P **P** **02 15 46.1 -0.3**
OXX Oaxaca 21.75 306 *e*P **P** **02 15 59.1 +0.8**
VHO Vista Hermosa 21.75 306 *i* P **P** **02 15 59.6 +1.2**
ARE Arequipa 22.07 162 *i* P **P** **02 16 04.9 +3.1**
PNIG Pinotepa 22.56 303 *e*P **P** **02 16 06.8 -0.2**
LVIG Laguna Verde 23.04 312 *e*P **P** **02 16 07.8 -4.2**
LPAZ La Paz 23.17 154⇑ *e*P **P** **02 16 13.0 -0.5**
comp=Z,830nm,1.6s,mb5.9
LPAZ LR LR
comp=Z,27µm,22.0s,MS5.7
LPAZ La Paz 23.17 154 P **P** **02 16 13.0 -0.4**
LPAZ S **S** **02 20 26.2 +1.9**
LPAZ pmax pmax
comp=Z,129nm,1.0s
LPAZ smax
comp=N,14nm,1.0s
LPAZ MLR MLR
comp=Z,21µm,21.7s
LPAZ La Paz 23.17 154 P **P** **02 16 13.0 -0.4**
comp=Z,129nm,1.0s,mb5.3,baz=339,slow=10,SNR=124
LPAZ S **S** **02 20 26.2 +1.9**
comp=Z,14nm,1.0s,baz=166,slow=19,SNR=3.0
LPAZ LR LR 02 26 13.9
comp=Z,21µm,21.7s,MS5.6,baz=177,slow=39
DWPF Disney 23.51 353 *e*P **P** **02 16 17.6 +0.7**
DWPF LR LR
comp=Z,14µm,21.0s,MS5.4
ACX Acapulco 24.29 302 *e*P **P** **02 16 21.3 -2.9**
PPM Popocatepetl 24.35 308 *i* P **P** **02 16 28.0 +3.3**
PPM *i* S **S** **02 20 46.1 +2.6**
YAIG Yautepec 24.59 307 *e*P **P** **02 16 28.0 +1.2**
CAIG El Cayaco 24.67 302 *e*P **P** **02 16 27.9 +0.3**
PLIG Plataniillo 24.69 305 *e*P **P** **02 16 29.7 +1.9**
IIO Organos 24.71 309 *e*P **P** **02 16 29.2 +1.2**
PBVM Pinon 24.91 308 *e*P **P** **02 16 31.9 +2.1**
PTVM Pico Tres Padr 25.02 308 *i* P **P** **02 16 30.0 -0.8**
ZIIG Zihuatanejo 25.94 302 *i* P **P** **02 16 39.5 +0.3**

MOIG Morelia 26.72 306 *e*P **P** **02 16 47.2 +1.1**
SIV San Ignacio 26.77 140 P **P** **02 16 45.7 -0.9**
comp=Z,163nm,1.1s,mb5.5,baz=321,slow=9.4,SNR=113
SIV S **S** **02 21 22.4 +0.5**
comp=Z,13nm,0.9s,baz=52,slow=20,SNR=1.7
BRAL Brewton 27.45 344⇓ *i*P **P** **02 16 54.6 +2.0**
comp=Z,3µm,1.9s,mb6.5
BRAL *e*PcP PcP 02 20 10.1 -1.1
BRAL LR LR
comp=Z,15µm,19.0s,MS5.6
NHSC New Hope 28.36 357⇓ *i*P **P** **02 17 02.1 +1.3**
comp=Z,2µm,1.4s,mb6.6
NHSC *e*PcP PcP 02 20 12.8 -0.5
NHSC LR LR
comp=Z,21µm,20.0s,MS5.7
COW Cow Castle Cre 28.67 356 *e*P **P** **02 17 04.7 +1.2**
GOGA Godfrey 29.00 351⇓ *i*P **P** **02 17 07.0 +0.6**
comp=Z,364nm,1.1s,mb6.0
GOGA *e*PcP PcP 02 20 14.1 -0.8
GOGA LR LR
comp=Z,14µm,19.0s,MS5.6
GOGA Godfrey 29.00 351⇓ *i*P **P** **02 17 07.0 +0.6**
GOGA *e* 02 20 14.1
GOGA pmax pmax
comp=Z,363nm,1.1s,mb6.0
GOGA MLR MLR
comp=Z,14µm,19.0s,MS5.6
CEN1 Los Morros 29.01 164 *e*P **P** **02 17 09.8 +3.2**
LRAL Lakeview Retre 29.35 345⇓ *i*P **P** **02 17 09.5 0.0**
comp=Z,798nm,1.5s,mb6.2
LRAL *e*PcP PcP 02 20 16.0 +0.2
LRAL LR LR
comp=Z,20µm,21.0s,MS5.7
KVTX Kingsville 29.35 323⇓ *i*P **P** **02 17 09.8 +0.1**
comp=Z,517nm,1.2s,mb6.1
KVTX LR LR
comp=Z,17µm,19.0s,MS5.7
ZAIG Zacatecas 29.46 310 *i* P **P** **02 17 12.8 +2.2**
JSC Jenkinsville 29.60 355 *e*P **P** **02 17 12.8 +1.0**
JSC *e*PcP PcP 02 20 15.7 -0.7
LHS Liberty Hill 29.76 356 *e*P **P** **02 17 13.8 +0.7**
LHS *e*PcP PcP 02 20 16.1 -0.7
CJM Chamela 29.82 302 *i* P **P** **02 17 13.3 -0.6**
HKT Hockley 30.05 329⇓ *i*P **P** **02 17 15.0 -0.8**
comp=Z,635nm,1.8s,mb6.0
HKT *e*PcP PcP 02 20 17.8 +0.1
HKT LR LR
comp=Z,9µm,20.0s,MS5.4
HKT Hockley 30.05 329⇓ *i*P **P** **02 17 15.0 -0.8**
HKT *e* 02 20 17.8
HKT pmax pmax
comp=Z,635nm,1.8s,mb6.0
HKT MLR MLR
comp=Z,9µm,20.0s,MS5.4
BBSR BB Station 30.44 23 *e*P **P** **02 17 20.0 +0.7**
comp=Z,476nm,1.5s,mb6.0
BBSR LR LR
comp=Z,7µm,20.0s,MS5.3
CNNC Cliffs of the 30.45 1⇓ *i*P **P** **02 17 19.8 +0.6**
comp=Z,656nm,1.6s,mb6.1
CNNC *e*PcP PcP 02 20 18.2 -0.4
CNNC LR LR
comp=Z,9µm,19.0s,MS5.5
NATX Nacogdoches 30.96 332⇓ *i*P **P** **02 17 23.2 -0.7**
comp=Z,528nm,1.5s,mb6.2
NATX *e*PcP PcP 02 20 21.6 +1.5
NATX LR LR
comp=Z,8µm,19.0s,MS5.4
CPCT Cooper Cave 31.16 350⇓ *i*P **P** **02 17 26.2 +0.7**
SWET Sewanee 31.20 348⇓ *i*P **P** **02 17 25.8 0.0**
SWET *e*PcP PcP 02 20 19.6 -1.0
OXF Oxford 31.41 342⇓ *i*P **P** **02 17 26.4 -1.3**
comp=Z,643nm,1.4s,mb6.3
OXF *e*PcP PcP 02 20 20.5 -0.7
OXF LR LR
comp=Z,10µm,22.0s,MS5.4
OXF Oxford 31.41 342⇓ *i*P **P** **02 17 26.4 -1.3**
OXF *e* 02 20 20.5
OXF pmax pmax
comp=Z,643nm,1.4s,mb6.3
OXF MLR MLR
comp=Z,10µm,22.0s,MS5.4
PLAL Pickwick Lake 31.47 345⇓ *i*P **P** **02 17 27.4 -0.9**
comp=Z,817nm,1.5s,mb6.3
PLAL *e*PcP PcP 02 20 20.2 -1.1
PLAL LR LR
comp=Z,10µm,22.0s,MS5.5
TZTN Tazewell 32.09 352⇓ *i*P **P** **02 17 34.3 +0.7**
comp=Z,1µm,1.4s,mb6.5
TZTN *e*PcP PcP 02 20 22.6 -0.4
TZTN LR LR
comp=Z,11µm,19.0s,MS5.6
MET Memphis--Engin 32.13 342 *e*P **P** **02 17 33.5 -0.6**
BLA Blacksburg 32.46 357⇓ *i*P **P** **02 17 37.9 +0.9**
comp=Z,614nm,1.5s,mb6.2
BLA *e*PcP PcP 02 20 23.8 -0.1
BLA LR LR
comp=Z,14µm,21.0s,MS5.6
BLA Blacksburg 32.46 357 *e*P **P** **02 17 34.6 -2.3**
BLA pmax pmax
comp=Z,610nm,1.5s,mb6.2
ELN Prospectdale 32.50 357 *e*P **P** **02 17 38.6 +1.4**
ELN *e*PcP PcP 02 20 22.4 -1.6
WVT Waverly 32.50 346⇓ *i*P **P** **02 17 36.2 -1.1**
comp=Z,276nm,1.3s,mb5.9
WVT *e*PcP PcP 02 20 22.7 -1.4
WVT LR LR
comp=Z,14µm,22.0s,MS5.6
WVT Waverly 32.50 346⇓ *i*P **P** **02 17 36.2 -1.1**
WVT *e* 02 20 22.7
WVT pmax pmax
comp=Z,276nm,1.3s,mb5.9
WVT MLR MLR
comp=Z,14µm,22.0s,MS5.6
UALR University of 32.62 339⇓ *i*P **P** **02 17 37.3 -1.1**
comp=Z,294nm,1.0s,mb6.2
UALR *e*PcP PcP 02 20 23.8 -0.7
JCT Junction City 32.64 324⇓ *i*P **P** **02 17 37.5 -1.1**
comp=Z,192nm,1.2s,mb5.9
JCT *e*PcP PcP 02 20 24.6 0.0
JCT LR LR
comp=Z,8µm,22.0s,MS5.4
JCT Junction City 32.64 324⇓ *i*P **P** **02 17 37.5 -1.1**
JCT *e* 02 20 24.6
JCT pmax pmax
comp=Z,192nm,1.2s,mb5.9
JCT MLR MLR
comp=Z,8µm,22.0s,MS5.4
HALT Halls 32.69 344⇓ *i*P **P** **02 17 37.9 -1.1**
HALT *e*PcP PcP 02 20 24.1 -0.5
MAIG Mazatlaan 32.69 307 *i* P **P** **02 17 40.3 +1.1**
HBAR Harrisburg 32.76 341⇓ *i*P **P** **02 17 38.9 -0.7**
HBAR *e*PcP PcP 02 20 24.4 -0.4
URVA University of 32.78 1⇓ *i*P **P** **02 17 40.3 +0.6**
URVA *e*PcP PcP 02 20 24.6 -0.2
MIAR Mount Ida 32.89 337⇓ *i*P **P** **02 17 39.4 -1.4**
comp=Z,157nm,1.2s,mb5.8
MIAR *e*PcP PcP 02 20 24.3 -0.9
MIAR Mount Ida 32.89 337⇓ *i*P **P** **02 17 39.4 -1.3**
MIAR *e* 02 20 24.3
MIAR pmax pmax
comp=Z,157nm,1.2s,mb5.8
GNAR Gosnell 32.94 343⇓ *i*P **P** **02 17 40.5 -0.6**
comp=Z,14µm,1.3s
GNAR *e*PcP PcP 02 20 25.0 -0.3
UTMT University of 32.97 344⇓ *i*P **P** **02 17 40.5 -0.9**
comp=Z,636nm,1.1s,mb6.5
GLAT Glass 33.01 344⇓ *i*P **P** **02 17 41.0 -0.8**
CBN Corbin 33.42 2⇓ *i*P **P** **02 17 46.2 +0.9**
comp=Z,1µm,1.6s,mb6.6
CBN *e*PcP PcP 02 20 25.0 -1.6
CBN LR LR
comp=Z,9µm,20.0s,MS5.5
PARMO Parma 33.51 343⇓ *i*P **P** **02 17 45.3 -0.8**
PARMO *e*PcP PcP 02 20 26.2 -0.7
WCI Wyandotte Cave 34.18 349⇓ *i*P **P** **02 17 51.2 -0.7**
comp=Z,311nm,1.0s,mb6.2
WCI *e*PcP PcP 02 20 27.8 -1.0
WCI LR LR
comp=Z,14µm,20.0s,MS5.7
WCI Wyandotte Cave 34.18 349⇓ *i*P **P** **02 17 51.2 -0.7**
WCI *e* 02 20 27.8
WCI pmax pmax
comp=Z,311nm,1.0s,mb6.2
WCI MLR MLR
comp=Z,14µm,20.0s,MS5.7
USIN University of 34.21 347⇓ *i*P **P** **02 17 51.2 -1.0**
comp=Z,1µm,1.3s,mb6.8
USIN *e*PcP PcP 02 20 27.7 -1.2
TXAR Lajitas Array 34.24 319 P **P** **02 17 51.8 -0.8**
TXAR PcP PcP 02 20 29.4 +0.2
TXAR S **S** **02 23 19.8 +1.0**
TXAR LR LR 02 32 12.1
TXAR *e* 02 48 54.5
TXAR Lajitas Array 34.24 319 P **P** **02 17 51.8 -0.8**
TXAR 02 20 29.4
TXAR S **S** **02 23 19.8 +1.0**
TXAR pmax pmax
comp=Z,73nm,1.1s
TXAR smax
comp=N,2.0nm,1.1s
TXAR MLR MLR
comp=Z,6µm,21.9s
TXAR Lajitas Array 34.24 319 P **P** **02 17 51.8 -0.8**
comp=Z,72nm,1.1s,mb5.5,baz=141,slow=8.1,SNR=133
TXAR PcP PcP 02 20 29.4 +0.2
comp=Z,14nm,0.9s,baz=145,slow=3.5,SNR=6.9
TXAR S **S** **02 23 19.8 +1.0**
comp=Z,1.5nm,1.1s,baz=130,slow=25,SNR=2.4
TXAR LR LR 02 32 12.1
comp=Z,6µm,21.9s,MS5.3,baz=40,slow=37
TXAR P3KPbc 02 48 54.5
comp=Z,0.6nm,0.9s,baz=328,slow=4.4,SNR=4.1
LTX Lajitas 34.24 319⇓ *e*P **P** **02 17 52.8 +0.2**
comp=Z,2µm,2.8s,mb6.5
LTX *e*PP PP 02 19 05.3 -5.1
LTX *e*PcP PcP 02 20 29.1 0.0
LTX LR LR
comp=Z,7µm,21.0s,MS5.4
LTX Lajitas 34.24 319⇓ *e*P **P** **02 17 52.8 +0.2**
LTX *e* 02 19 05.3
LTX *e* 02 20 29.1
LTX pmax pmax
comp=Z,2µm,2.8s,mb6.5
LTX MLR MLR
comp=Z,7µm,21.0s,MS5.4
LCO Las Campanas 34.28 168 *e*P **P** **02 17 53.2 +0.3**
comp=Z,142nm,1.4s,mb5.7
LCO *e*PcP PcP 02 20 28.9 -0.3
LCO LR LR
comp=Z,9µm,21.0s,MS5.5
SIUC Southern Illin 34.35 345⇓ *i*P **P** **02 17 52.3 -1.1**
comp=Z,1µm,1.4s,mb6.6
SIUC *e*PcP PcP 02 20 28.5 -0.7
MCWV Mont Chateau 34.88 358⇓ *i*P **P** **02 17 59.2 +1.2**
comp=Z,1µm,1.4s,mb6.6
MCWV *e*PP PP 02 19 18.3 +1.1
MCWV LR LR
comp=Z,17µm,21.0s,MS5.8
FVM French Village 34.93 343⇓ *i*P **P** **02 17 57.1 -1.3**
comp=Z,1µm,1.4s,mb6.7
FVM *e*PcP PcP 02 20 30.0 -0.9
FVM French Village 34.93 343⇓ *i*P **P** **02 17 57.1 -1.4**
FVM *e* 02 20 30.0
FVM pmax pmax
comp=Z,1µm,1.4s,mb6.7
BLO Bloomington 35.14 349⇓ *i*P **P** **02 17 59.6 -0.6**
comp=Z,2µm,1.4s,mb6.8
BLO *e*PcP PcP 02 20 30.8 -0.7
BLO Bloomington 35.14 349⇓ *i*P **P** **02 17 59.6 -0.6**
BLO *e* 02 20 30.8
BLO pmax pmax
comp=Z,2µm,1.4s,mb6.8
MVL Millersville 35.25 3⇓ *i*P **P** **02 18 02.4 +1.3**
comp=Z,2µm,1.7s,mb6.7
MVL *e*PcP PcP 02 20 31.7 -0.1
WMOK Wichita Mounta 35.37 330⇓ *i*P **P** **02 18 00.4 -1.9**
comp=Z,76nm,1.0s,mb5.6
WMOK *e*PP PP 02 19 19.8 -2.9
WMOK *e*PcP PcP 02 20 31.5 -0.8
WMOK LR LR
comp=Z,14µm,22.0s,MS5.7
WMOK Wichita Mounta 35.37 330⇓ *i*P **P** **02 18 00.4 -1.9**
WMOK *e* 02 19 19.8
WMOK *e* 02 20 31.5
WMOK pmax pmax
comp=Z,76nm,1.0s,mb5.6
WMOK MLR MLR
comp=Z,14µm,22.0s,MS5.7
TLL Tololo Astrono 35.38 169⇓ *i*P **P** **02 18 03.4 +1.0**
SLM Saint Louis 35.49 344⇓ *i*P **P** **02 18 01.9 -1.4**
comp=Z,1µm,1.5s,mb6.6
SLM *e*PcP PcP 02 20 31.9 -0.7
SLM Saint Louis 35.49 344⇓ *i*P **P** **02 18 01.9 -1.3**
SLM *e* 02 20 31.9
SLM pmax pmax
comp=Z,1µm,1.5s,mb6.6
ACSO Alum Creek Sta 35.66 354⇓ *i*P **P** **02 18 04.7 0.0**
comp=Z,1µm,1.4s,mb6.6
ACSO *e*PcP PcP 02 20 32.2 -0.8
ACSO LR LR
comp=Z,10µm,19.0s,MS5.6
BRNJ Basking Ridge 36.05 5⇓ *i*P **P** **02 18 09.6 +1.6**
comp=Z,2µm,2.0s,mb6.8
CPNY Central Park 36.21 6⇓ *i*P **P** **02 18 10.2 +0.8**
comp=Z,2µm,2.3s,mb6.7
LPIG La Paz 36.25 305 *i* P **P** **02 18 10.3 +0.3**
CMCH Combarbala 36.32 169⇑ *i*P **P** **02 18 11.8 +1.3**
PAL Palisades 36.43 6⇓ *i*P **P** **02 18 12.1 +0.8**
comp=Z,355nm,1.3s,mb6.1
PAL *e*PcP PcP 02 20 29.4
PAL pmax pmax
comp=Z,355nm,1.3s,mb6.1
GDL2 Guadalupe Moun 36.60 322 *e*P **P** **02 18 12.9 +0.1**
ALLY Alegheny Colle 36.88 358 *e*P **P** **02 18 16.0 +0.9**
MNTX Cornudas Mount 36.91 320⇓ *i*P **P** **02 18 15.2 -0.3**
comp=Z,291nm,1.2s,mb6.0
MNTX LR LR
comp=Z,6µm,20.0s,MS5.3
AMTX Amarillo 36.98 327⇓ *i*P **P** **02 18 14.8 -1.2**
comp=Z,97nm,1.0s,mb5.6
AMTX *e*PcP PcP 02 20 36.5 -0.6
AMTX LR LR
comp=Z,9µm,22.0s,MS5.5
HDIL Hopedale 37.06 346⇓ *i*P **P** **02 18 14.8 -1.9**
comp=Z,464nm,1.2s,mb6.2
HDIL *e*PcP PcP 02 20 36.9 -0.3
HDIL LR LR
comp=Z,11µm,21.0s,MS5.6
ERPA Erie 37.34 358⇑ *i*P **P** **02 18 19.6 +0.6**
comp=Z,2µm,1.2s,mb6.8
ERPA *e*PcP PcP 02 20 37.8 -0.2
ERPA LR LR
comp=Z,10µm,22.0s,MS5.6
CFAA Coronel Fontan 37.34 166 P **P** **02 18 20.0 +0.9**
comp=Z,11nm,1.1s,baz=342,slow=7.8,SNR=57
BINY Binghamton 37.46 3⇓ *i*P **P** **02 18 21.0 +1.0**
comp=Z,2µm,1.5s,mb6.7
BINY *e*PcP PcP 02 20 37.9 -0.5
BINY LR LR
comp=Z,12µm,21.0s,MS5.7
BRYW Bryant College 37.62 8⇓ *i*P **P** **02 18 22.3 +0.9**
comp=Z,10µm,2.1s
BRYW *e*PcP PcP 02 20 38.3 -0.6
AAM Ann Arbor 37.78 354⇓ *i*P **P** **02 18 22.4 -0.4**
comp=Z,1µm,1.5s,mb6.5
AAM *e*PcP PcP 02 20 38.8 -0.6
AAM Ann Arbor 37.78 354⇓ *i*P **P** **02 18 22.4 -0.3**
AAM *e* 02 20 38.8
AAM pmax pmax
comp=Z,1µm,1.5s,mb6.5
QUA2 Belchertown 37.87 7⇓ *i*P **P** **02 18 24.1 +0.7**
comp=Z,1µm,1.5s,mb6.5
QUA2 *e*PP PP 02 19 51.4 +1.3
KSU1 Kansas State U 38.05 337⇓ *i*P **P** **02 18 23.4 -1.6**
comp=Z,293nm,0.7s,mb6.1
KSU1 *e*PcP PcP 02 20 39.2 -1.0
KSU1 LR LR
comp=Z,6µm,20.0s,MS5.4
WES Weston 38.11 9⇓ *i*P **P** **02 18 26.8 +1.3**
comp=Z,4µm,1.6s,mb6.9
WES LR LR
comp=Z,5µm,20.0s,MS5.3
WES Weston 38.11 9⇓ *i*P **P** **02 18 26.8 +1.3**
WES pmax pmax
comp=Z,4µm,1.6s,mb6.9
WES MLR MLR
comp=Z,5µm,20.0s,MS5.3
HRV Harvard--Oak R 38.20 8⇓ *i*P **P** **02 18 27.3 +1.0**
comp=Z,169nm,1.0s,mb5.7
HRV LR LR

comp=Z,6µm,22.0s,MS5.4
HRV Harvard--Oak R 38.20 8⇓iP P 02 18 27.3 +1.1
HRV pmax pmax
comp=Z,169nm,1.0s,mb5.7
HRV MLR MLR
comp=Z,6µm,22.0s,MS5.4
FCH Farellones 38.55 169⇓iP P 02 18 31.6 +2.3
ACCN Adirondack Com 38.81 6⇓iP P 02 18 32.1 +0.8
comp=Z,501nm,1.4s,mb6.0
ACCN ePP PP 02 19 59.5 -1.0
ACCN ePcP PcP 02 20 41.8 -0.7
LMEL Las Melosas 39.07 169⇓iP P 02 18 35.6 +1.9
CBKS Cedar Bluff 39.12 333⇓iP P 02 18 33.5 -0.6
comp=Z,739nm,1.4s,mb6.2
CBKS ePP PP 02 20 05.7 +1.8
CBKS ePcP PcP 02 20 42.6 -1.0
CBKS LR LR
comp=Z,11µm,21.0s,MS5.7
CBKS Cedar Bluff 39.12 333⇓iP P 02 18 33.5 -0.5
CBKS e 02 20 05.7
CBKS e 02 20 42.6
CBKS pmax pmax
comp=Z,739nm,1.4s,mb6.2
CBKS MLR MLR
comp=Z,11µm,21.0s,MS5.7
FFD Franklin Falls 39.13 8⇓iP P 02 18 35.1 +1.1
comp=Z,1µm,1.4s,mb6.5
FFD ePcP PcP 02 20 40.8 -2.7
HNH Hanover 39.28 7⇓iP P 02 18 36.7 +1.4
comp=Z,1µm,1.7s,mb6.4
HNH ePP PP 02 20 10.3 +4.7
HNH ePcP PcP 02 20 43.8 -0.2
BNM Barren Site 39.31 322 eP P 02 18 36.2 +0.4
BNM ePP PP 02 20 09.2 +3.1
NCB Newcomb 39.34 5⇓iP P 02 18 36.8 +1.0
comp=Z,2µm,1.8s,mb6.6
NCB LR LR
comp=Z,6µm,19.0s,MS5.4
LPM Los Pinos Moun 39.43 322 eP P 02 18 37.3 +0.6
LPM ePP PP 02 20 10.2 +2.9
JFWS Jewell Farm 39.52 346⇓iP P 02 18 35.3 -2.1
comp=Z,444nm,1.2s,mb6.1
JFWS ePcP PcP 02 20 44.2 -0.6
JFWS LR LR
comp=Z,12µm,21.0s,MS5.7
JFWS Jewell Farm 39.52 346⇓iP P 02 18 35.3 -2.0
JFWS e 02 20 44.2
JFWS pmax pmax
comp=Z,444nm,1.2s,mb6.1
JFWS MLR MLR
comp=Z,12µm,21.0s,MS5.7
LENM Lemitar 39.54 322 eP P 02 18 38.6 +1.0
LENM ePP PP 02 20 09.4 +0.8
ANMO Albuquerque 39.75 323⇓iP P 02 18 40.0 +0.6
comp=Z,326nm,1.4s,mb5.9
ANMO ePP PP 02 20 10.6 -0.3
ANMO LR LR
comp=Z,6µm,20.0s,MS5.4
ANMO Albuquerque 39.75 323⇓iP P 02 18 40.0 +0.6
ANMO e 02 20 10.6
ANMO pmax pmax
comp=Z,326nm,1.4s
ANMO MLR MLR
comp=Z,6µm,20.0s
LAZ Ladron 39.80 322 eP P 02 18 40.9 +1.1
LAZ ePP PP 02 20 14.9 +3.5
LBNH Lisbon 39.85 7⇓iP P 02 18 41.0 +0.9
comp=Z,593nm,1.4s,mb6.1
LBNH ePcP PcP 02 20 44.8 -1.0
LBNH LR LR
comp=Z,8µm,22.0s,MS5.5
LBNH Lisbon 39.85 7⇓iP P 02 18 41.0 +1.0
LBNH e 02 20 44.8
LBNH pmax pmax
comp=Z,593nm,1.4s,mb6.1
LBNH MLR MLR
comp=Z,8µm,22.0s,MS5.5
LONY Lake Ozonia 39.96 4⇓iP P 02 18 41.8 +0.9
comp=Z,1µm,1.5s,mb6.4
LONY LR LR
comp=Z,7µm,19.0s,MS5.5
FRNY Flat Rock 40.26 5⇓iP P 02 18 44.3 +0.9
comp=Z,2µm,1.7s,mb6.5
MSNY Massena 40.31 4 eP P 02 18 44.6 +0.8
GLMI Grayling 40.38 353 PFAKE 02 18 50.0 +5.6
GLMI LR LR
comp=Z,4µm,19.0s,MS5.3
WVL Waterville 40.50 10 eP P 02 18 47.2 +1.8
TUC Tucson 40.88 316⇓iP P 02 18 49.7 +0.9
comp=Z,261nm,1.4s,mb5.7
TUC ePcP PcP 02 20 45.3 -4.1
TUC eS S 02 25 02.1 +2.4
TUC LR LR
comp=Z,11µm,20.0s,MS5.7
TUC Tucson 40.88 316⇓iP P 02 18 49.7 +0.9
TUC e 02 20 45.3
TUC eS S 02 25 02.1 +2.5
TUC pmax pmax
comp=Z,261nm,1.4s,mb5.7
TUC MLR MLR
comp=Z,11µm,20.0s,MS5.7
EMMW East Machias 41.06 12 eP P 02 18 51.0 +1.0
SDCO Great Sand Dun 41.17 327⇓iP P 02 18 52.1 +1.0
comp=Z,604nm,1.4s,mb6.0
SDCO ePP PP 02 20 29.9 +3.7
SDCO LR LR
comp=Z,7µm,20.0s,MS5.5
PKME Peaks-Kenny Pk 41.24 10⇓iP P 02 18 52.5 +1.0
comp=Z,1µm,2.2s,mb6.2
CCHI Chillan 41.46 172 iP P 02 18 53.5 0.0
ECSD EROS,Sioux Fal 42.10 340⇓iP P 02 18 56.3 -2.3
comp=Z,555nm,1.2s,mb6.1
ECSD ePP PP 02 20 37.3 +1.1
ECSD LR LR
comp=Z,7µm,19.0s,MS5.6
COWI Conover 42.33 349⇓iP P 02 18 59.1 -1.3
comp=Z,842nm,1.6s,mb6.1
COWI ePP PP 02 20 36.8 -1.8
COWI LR LR
comp=Z,14µm,21.0s,MS5.8
MVCO Mesa Verde 42.49 324⇓iP P 02 19 02.5 +0.6
comp=Z,792nm,1.6s,mb6.1
MVCO LR LR
comp=Z,7µm,19.0s,MS5.6
ISCO Idaho Springs 42.73 329⇓iP P 02 19 04.2 +0.3
comp=Z,424nm,1.5s,mb6.0
ISCO ePP PP 02 20 42.3 -0.8
ISCO ePcP PcP 02 20 55.4 +0.1
ISCO LR LR
comp=Z,7µm,22.0s,MS5.5
ISCO Idaho Springs 42.73 329⇓iP P 02 19 04.2 +0.4
ISCO e 02 20 42.3
ISCO e 02 20 55.4
ISCO pmax pmax
comp=Z,424nm,1.5s,mb6.0
ISCO MLR MLR
comp=Z,7µm,22.0s,MS5.5
SMCO Snowmass 43.00 327⇓iP P 02 19 01.6 -4.3
comp=Z,207nm,1.4s,mb5.7
SMCO ePP PP 02 20 46.6 +0.6
PV01 Paradox Valley 43.16 325 eP P 02 19 08.0 +0.7
WUAZ Wupatki 43.19 320⇓iP P 02 19 08.6 +1.1
comp=Z,554nm,1.3s,mb6.1
WUAZ LR LR
comp=Z,7µm,19.0s,MS5.6
RPN Rapa Nui 43.45 222 P P 02 19 09.7 -0.1
RPN LR LR
comp=Z,15µm,19.0s,MS5.9
RPN Rapa Nui 43.45 222 P P 02 19 09.6 -0.1
comp=Z,24nm,0.3s,mb5.3,baz=334,slow=5.0,SNR=4.8
PV10 Paradox Valley 43.60 325 eP P 02 19 10.8 0.0
RCBR Riachuelo 43.75 103 eP P 02 19 11.3 -1.2
comp=Z,135nm,0.9s,mb5.7
RCBR e 02 20 54.9
RCBR LR LR
comp=Z,31µm,20.0s,MS6.2
PHWY Pilot Hill 43.78 330⇓iP P 02 19 12.4 +0.2
comp=Z,467nm,1.8s,mb5.9
PHWY ePP PP 02 20 53.3 -1.0
LPA La Plata 43.83 155ceP P 02 19 11.0 -1.7
LPA epP pP 02 19 13.7 -4.6
LPA ePCP PcP 02 20 58.0 -1.1
LPA ePP PP 02 20 59.0 +4.0
LPA ePCS PcS 02 24 51.0 -1.0
LPA eS S 02 25 43.0 0.0
LPA eSS SS 02 29 13.0 +13
EYMN Ely 44.57 348⇓iP P 02 19 16.6 -1.9
comp=Z,761nm,1.5s,mb6.3
EYMN e 02 21 00.2
EYMN LR LR
comp=Z,11µm,21.0s,MS5.7
RWWY Rawlins 44.94 329⇓iP P 02 19 21.9 +0.4
comp=Z,532nm,1.4s,mb6.2
TRQA Tornquist 45.16 162 eP P 02 19 20.9 -2.4
comp=Z,129nm,1.3s,mb5.6
TRQA eS S 02 26 02.1 0.0
TRQA LR LR
comp=Z,12µm,22.0s,MS5.8
RSSD Black Hills 45.30 334⇓iP P 02 19 24.3 -0.1
comp=Z,1µm,1.5s,mb6.5
RSSD LR LR
comp=Z,6µm,20.0s,MS5.5
TMUT Trail Mountain 45.47 324⇓iP P 02 19 26.5 +0.7
TMUT ePcP PcP 02 21 04.9 +0.2
MSU Marysvale 45.55 322 eP P 02 19 26.2 -0.2
MVU Marysvale 45.56 322 PFAKE 02 19 40.0 +13
MVU LR LR
comp=Z,11µm,19.0s,MS5.8
PFO Pinyon Flat Ob 45.59 314 P P 02 19 27.6 +0.8
comp=Z,191nm,0.9s,mb6.0,SNR=22
PFO Pinyon Flat Ob 45.59 314⇓iP P 02 19 27.6 +0.8
comp=Z,126nm,1.4s,mb5.7
PFO ePcP PcP 02 21 05.2 0.0
PFO LR LR
comp=Z,12µm,19.0s,MS5.8
PFO Pinyon Flat Ob 45.59 314⇓iP P 02 19 27.6 +0.8
PFO e 02 21 05.2
PFO pmax pmax
comp=Z,126nm,1.4s,mb5.7
PFO MLR MLR
comp=Z,12µm,19.0s,MS5.8
CCUT Cedar City 45.69 321⇓iP P 02 19 28.8 +1.2
PLCA Paso Flores 45.73 172 eP P 02 19 28.3 +0.5
comp=Z,190nm,1.2s,mb5.9
PLCA Paso Flores 45.73 172 eP P 02 19 28.3 +0.5
PLCA pmax pmax
comp=Z,190nm,1.2s
PLCA Paso Flores 45.73 172 P P 02 19 28.5 +0.7
comp=Z,80nm,1.0s,mb5.6,baz=345,slow=9.0,SNR=68
ARUT Antelope Range 45.88 321 eP P 02 19 29.4 +0.3
ARUT Antelope Range 45.88 321 P P 02 19 30.0 +0.9
AGMN Agassiz Refuge 45.97 344⇓iP P 02 19 27.9 -1.7
comp=Z,742nm,1.6s,mb6.4
AGMN ePcP PcP 02 21 05.1 -1.1
AGMN ePP PP 02 21 16.9 -0.6
AGMN LR LR
comp=Z,6µm,19.0s,MS5.6
MPU Maple Canyon 46.19 324⇓iP P 02 19 31.9 +0.4
comp=Z,519nm,1.4s,mb6.3
MPU LR LR
comp=Z,10µm,20.0s,MS5.8
DAU Daniels Canyon 46.23 325 eP P 02 19 32.1 +0.3
DAU ePcP PcP 02 21 07.7 +0.4
NLU North Lily Min 46.41 324⇓iP P 02 19 33.5 +0.3
CTU Camp Tracy 46.70 325⇓iP P 02 19 35.8 +0.3
comp=Z,406nm,1.3s,mb6.2
CTU ePcP PcP 02 21 08.9 0.0
NOQ North Oquirrh 46.89 325⇓iP P 02 19 37.2 +0.2
comp=Z,507nm,1.5s,mb6.2
BW06 Boulder Array 46.93 329⇓iP P 02 19 36.5 -0.6
comp=Z,298nm,2.0s,mb5.9
BW06 LR LR
comp=Z,5µm,21.0s,MS5.5
PDAR Pinedale Array 46.93 329 P P 02 19 36.8 -0.4
comp=Z,206nm,1.2s,mb6.0,baz=139,slow=4.9,SNR=308
PDAR LR LR 02 41 13.0
comp=Z,4µm,19.4s,MS5.4,baz=143,slow=38
DUG Dugway 47.00 324⇓iP P 02 19 38.1 +0.4
comp=Z,413nm,1.4s,mb6.2
DUG LR LR
comp=Z,13µm,19.0s,MS5.9
HWUT Hardware Ranch 47.21 326⇓iP P 02 19 39.2 -0.2
comp=Z,498nm,1.4s,mb6.2
HWUT ePcP PcP 02 21 10.3 -0.4
HWUT LR LR
comp=Z,8µm,19.0s,MS5.7
TPNV Topopah Spring 47.22 318⇓iP P 02 19 40.6 +1.0
comp=Z,93nm,1.0s,mb5.7
TPNV LR LR
comp=Z,8µm,21.0s,MS5.7
TPNV Topopah Spring 47.22 318⇓iP P 02 19 40.6 +1.0
TPNV pmax pmax
comp=Z,93nm,1.0s,mb5.7
TPNV MLR MLR
comp=Z,8µm,21.0s,MS5.7
SPUT South Promonto 47.51 325⇓iP P 02 19 41.8 +0.1
TRCR Troy Canyon 47.58 320⇓iP P 02 19 43.2 +0.8
BGU Big Grassy Mou 47.59 324⇓iP P 02 19 42.5 +0.1
BGU ePcP PcP 02 21 11.7 -0.4
AHID Auburn Hatcher 47.74 328⇓iP P 02 19 43.3 -0.3
comp=Z,450nm,1.4s,mb6.3
AHID LR LR
comp=Z,5µm,22.0s,MS5.4
ULM Lac du Bonnet 47.76 345 P P 02 19 41.2 -2.3
ULM PP PP 02 21 35.9 +0.4
ULM LR LR 02 38 03.7
ULM Lac du Bonnet 47.76 345 P P 02 19 41.2 -2.3
comp=Z,122nm,0.7s,mb6.1,baz=155,slow=7.7,SNR=188
ULM PP PP 02 21 35.9 +0.4
comp=Z,46nm,1.1s,baz=149,slow=8.4,SNR=5.9
ULM LR LR 02 38 03.7
comp=Z,6µm,21.3s,MS5.6,baz=156,slow=34
DAC Darwin (Calif) 47.77 316⇓iP P 02 19 44.1 +0.2
comp=Z,100nm,1.5s,mb5.6
DAC ePcP PcP 02 21 12.7 -0.1
DAC LR LR
comp=Z,5µm,20.0s,MS5.5
DAC Darwin (Calif) 47.77 316⇓iP P 02 19 44.1 +0.2
DAC e 02 21 12.7
DAC pmax pmax
comp=Z,100nm,1.5s,mb5.6
DAC MLR MLR
comp=Z,5µm,20.0s,MS5.5
HVU Hansel Valley 48.00 325⇓iP P 02 19 45.1 -0.4
comp=Z,670nm,1.9s,mb6.3
HVU ePcP PcP 02 21 13.0 -0.5
HVU ePP PP 02 21 38.8 +1.1
HVU Hansel Valley 48.00 325⇓iP P 02 19 45.1 -0.5
HVU e 02 21 13.0
HVU e 02 21 38.8
HVU pmax pmax
comp=Z,670nm,1.9s,mb6.3
REDW Red Top Meadow 48.02 328⇓iP P 02 19 45.7 0.0
comp=Z,1µm,1.4s,mb6.7
SNOW Snow King Moun 48.04 328⇓iP P 02 19 46.0 +0.2
comp=Z,530nm,1.3s,mb6.4
SNOW eS S 02 26 45.4 +2.1
LOHW Long Hollow 48.06 329⇓iP P 02 19 45.9 -0.1
comp=Z,624nm,1.4s,mb6.5
TPAW Teton Pass 48.16 328⇓iP P 02 19 46.8 0.0
comp=Z,290nm,1.4s,mb6.1
TPAW ePP PP 02 21 38.3 -0.9
MOOW Moose Ponds 48.23 329⇓iP P 02 19 47.2 -0.1
comp=Z,396nm,1.4s,mb6.2
LAO LASA Array 48.28 335⇓iP P 02 19 46.7 -1.0
comp=Z,732nm,1.6s,mb6.5
LAO ePP PP 02 21 38.9 -1.3
LAO LR LR
comp=Z,6µm,21.0s,MS5.6
DCID1 Drake Creek 48.35 328⇓iP P 02 19 48.3 0.0
comp=Z,392nm,1.2s,mb6.3
IMW Indian Meadow 48.44 329⇓iP P 02 19 48.9 -0.1
comp=Z,482nm,1.3s,mb6.4
IMW ePcP PcP 02 21 14.5 -0.6
FLWY Flagg Ranch 48.44 329⇓iP P 02 19 49.2 +0.2
comp=Z,859nm,1.4s,mb6.6
RLMT Red Lodge 48.48 331⇓iP P 02 19 48.8 -0.4
comp=Z,400nm,1.5s,mb6.2
RLMT LR LR
comp=Z,5µm,21.0s,MS5.5
TPH Tonopah 48.49 319⇓iP P 02 19 50.0 +0.6
comp=Z,209nm,1.3s,mb6.0
TPH LR LR
comp=Z,7µm,19.0s,MS5.7
TPH Tonopah 48.49 319⇓iP P 02 19 50.0 +0.6
TPH pmax pmax
comp=Z,209nm,1.3s,mb6.0
TPH MLR MLR
comp=Z,7µm,19.0s,MS5.7
LKWY Lake 48.63 330⇓iP P 02 19 50.9 +0.5
comp=Z,190nm,1.6s,mb5.9
LKWY LR LR
comp=Z,11µm,22.0s,MS5.8
LKWY Lake 48.63 330⇓iP P 02 19 50.9 +0.5
LKWY pmax pmax
comp=Z,190nm,1.6s,mb5.9
LKWY MLR MLR
comp=Z,11µm,22.0s,MS5.8
YFT Old Faithful 48.77 329⇓iP P 02 19 52.8 +1.3
DGMT Dagmar 48.88 337⇓iP P 02 19 51.8 -0.5
comp=Z,785nm,1.2s,mb6.6
DGMT ePcP PcP 02 21 15.9 -0.7
DGMT ePP PP 02 21 45.5 -0.3
DGMT LR LR
comp=Z,5µm,20.0s,MS5.5
YMR Madison River 48.99 329⇓iP P 02 19 53.7 +0.6
comp=Z,414nm,1.2s,mb6.3
YMR LR LR
comp=Z,6µm,21.0s,MS5.5
MTUM Tungsten Hills 48.99 317 eP P 02 19 53.9 +0.6
GCMT Greycliff 49.16 331 eP P 02 19 53.9 -0.5
PTRM Twissleman Ran 49.29 314 eP P 02 19 56.2 +0.6
QLMT Earthquake Lak 49.34 329 eP P 02 19 56.6 +0.8
QLMT ePcP PcP 02 21 18.1 -0.2
NVAR Mina Array Bea 49.39 318 P P 02 19 56.3 -0.1
NVAR ⇑e 02 51 13.1
NVAR Mina Array Bea 49.39 318 P P 02 19 56.3 -0.1
comp=Z,103nm,0.9s,mb5.8,baz=118,slow=6.8,SNR=255
NVAR PKP2bc 02 51 13.1
comp=Z,1.0nm,0.8s,baz=224,slow=3.7,SNR=4.6
BMN Battle Mountai 49.82 321⇓iP P 02 19 59.6 0.0
comp=Z,429nm,1.5s,mb6.3
BMN LR LR
comp=Z,9µm,19.0s,MS5.8
BMN Battle Mountai 49.82 321⇓iP P 02 19 59.6 +0.1
BMN pmax pmax
comp=Z,429nm,1.5s,mb6.3
BMN MLR MLR
comp=Z,9µm,19.0s,MS5.8
BOZ Bozeman (W) 50.01 330⇓iP P 02 20 00.6 -0.3
comp=Z,401nm,1.4s,mb6.3
BOZ LR LR
comp=Z,6µm,20.0s,MS5.6
BOZ Bozeman (W) 50.01 330⇓iP P 02 20 00.6 -0.3
BOZ pmax pmax
comp=Z,401nm,1.4s,mb6.3
BOZ MLR MLR
comp=Z,6µm,20.0s,MS5.6
MCMT McKenzie Canyo 50.07 328 eP P 02 20 02.1 +0.7
HLID Hailey 50.08 326⇓iP P 02 20 01.6 +0.2
comp=Z,298nm,1.5s,mb6.1
HLID LR LR
comp=Z,9µm,21.0s,MS5.8
DLMT Dillon 50.31 329⇓iP P 02 20 03.2 0.0
comp=Z,487nm,1.6s,mb6.3
PAHR Pah Rah Range 50.79 319⇓iP P 02 20 07.2 +0.3
comp=Z,376nm,1.4s,mb6.1
EGMT Eagleton 50.85 333⇓iP P 02 20 06.8 -0.5
comp=Z,621nm,1.5s,mb6.3
EGMT LR LR
comp=Z,7µm,22.0s,MS5.6
SCHQ Schefferville 50.91 9 P P 02 20 07.8 +0.2
comp=Z,234nm,1.1s,mb6.0,baz=192,slow=6.0,SNR=129
SCHQ LR LR 02 39 54.1
comp=Z,4µm,21.6s,MS5.4,baz=197,slow=34
CHMT Chamberlain Mo 51.70 330 eP P 02 20 13.2 -0.4
CHMT ePcP PcP 02 21 26.6 -0.4
WVOR Wild Horse Val 51.84 323⇓iP P 02 20 14.6 -0.2
comp=Z,893nm,1.5s,mb6.5
WVOR LR LR
comp=Z,12µm,20.0s,MS5.9
OHCM Honcut 51.98 318 eP P 02 20 15.9 0.0
OHCM ePcP PcP 02 21 27.7 -0.5
MSO Missoula 51.99 330⇓iP P 02 20 15.5 -0.3
comp=Z,199nm,1.4s,mb5.8
MSO LR LR
comp=Z,4µm,20.0s,MS5.4
NSHM Saint Helena R 52.34 316 eP P 02 20 18.9 +0.3
BMO Blue Mountains 52.50 326⇓iP P 02 20 18.2 -1.5
comp=Z,115nm,1.4s,mb5.6
BMO LR LR
comp=Z,4µm,20.0s,MS5.5
LBCM Butte Creek Ri 52.66 319 P P 02 20 20.8 -0.1
FFC Flin Flon 53.44 343 P P 02 20 25.0 -1.3
comp=Z,2µm,1.6s,mb6.7
FFC Flin Flon 53.44 343⇓iP P 02 20 25.1 -1.3
comp=Z,105nm,0.7s,mb5.9
FFC LR LR
comp=Z,7µm,20.0s,MS5.7
FFC Flin Flon 53.44 343⇓iP P 02 20 25.1 -1.2
FFC pmax pmax
comp=Z,105nm,0.7s,mb5.9
FFC MLR MLR
comp=Z,7µm,20.0s,MS5.7
WALA Waterton Lakes 53.51 332⇓iP P 02 20 26.4 -0.6
comp=Z,280nm,1.4s,mb6.0
KIPM Iron Peak 53.56 317 eP P 02 20 28.5 +1.0
KCPM Cahto Peak 53.57 317⇓iP P 02 20 28.4 +0.8
VIPM Ingram Point 54.21 324 P P 02 20 32.3 +0.1
NEW Newport 54.56 329⇓iP P 02 20 33.9 -0.8
comp=Z,286nm,1.2s,mb6.2
NEW LR LR
comp=Z,6µm,19.0s,MS5.7
NEW Newport 54.56 329⇓iP P 02 20 33.9 -0.8
NEW pmax pmax
comp=Z,286nm,1.2s
NEW MLR MLR
comp=Z,6µm,19.0s
WIFE Three Sisters- 54.67 323 P P 02 20 36.1 +0.5
KRMB Red Mountain 54.68 319⇓iP P 02 20 35.6 -0.1
HAWA Hanford 54.68 326⇓iP P 02 20 34.9 -0.7
comp=Z,203nm,1.3s,mb6.0
HAWA LR LR
comp=Z,7µm,22.0s,MS5.7
BKCOR Black Crater 54.73 323 P P 02 20 36.6 +0.6
OD2 Odessa Site #2 54.84 328 P P 02 20 36.5 -0.2
MXC Moxie City 55.21 326 P P 02 20 40.0 +0.6
FCC Fort Churchill 55.33 350⇓iP P 02 20 37.9 -2.1
comp=Z,1µm,1.4s,mb6.7
FCC ePP PP 02 22 43.8 0.0
FCC Fort Churchill 55.33 350⇓iP P 02 20 37.9 -2.1
FCC e 02 22 43.8
FCC pmax pmax
comp=Z,1µm,1.4s,mb6.7
EUO Eugene 55.42 322 P P 02 20 40.1 -0.9
SSOR Sweet Springs 55.49 323 P P 02 20 41.1 -0.4
LTY Liberty 55.82 326 P P 02 20 43.8 -0.1
COR Corvallis 55.86 322⇓iP P 02 20 44.2 +0.1
comp=Z,650nm,1.6s,mb6.4
COR LR LR
comp=Z,5µm,22.0s,MS5.6
COR Corvallis 55.86 322⇓iP P 02 20 44.2 +0.1
COR pmax pmax
comp=Z,650nm,1.6s,mb6.4
COR MLR MLR
comp=Z,5µm,22.0s,MS5.6
EDM Edmonton 56.23 336⇓iP P 02 20 45.4 -1.2
EDM Edmonton 56.23 336 P P 02 20 45.0 -1.6
PTCA Ponta do Capel 56.25 46 eP P 02 20 49.5 +2.5
PLUZ Luz 56.30 45 eP P 02 20 55.2 +7.8
comp=Z,271nm,1.0s,mb6.2
PCND Candelaria 56.44 46 eP P 02 20 50.9 +2.5
comp=Z,415nm,1.1s,mb6.4
PBOI Pico dos Bois 56.49 46 eP P 02 20 51.5 +2.7
comp=Z,316nm,1.0s,mb6.3
PTEI Pico do Teixo 56.53 46 eP P 02 20 52.0 +3.0
PIED Piedade 56.72 46 eP P 02 20 51.9 +1.5
PAMA Santo Amaro 56.73 46 eP P 02 20 54.0 +3.5
comp=Z,584nm,1.2s,mb6.5
PVIA Vitoria 56.98 46 eP P 02 20 54.5 +2.3
STGR Santa Cruz 57.01 46 eP P 02 20 54.6 +2.1
comp=Z,319nm,1.1s,mb6.3
ASBA Santa Barbara 57.36 46 eP P 02 20 56.2 +1.3
comp=Z,271nm,0.9s,mb6.3
PPAD Pico dos Padre 57.38 46 eP P 02 20 57.3 +2.2
ADH Angra Heroismo 57.40 46 eP P 02 20 56.6 +1.4
PBIS Biscoitos 57.43 46 eP P 02 20 57.9 +2.5
comp=Z,228nm,0.7s,mb6.3
RIB2 Ribeirinha 57.45 46 eP P 02 20 57.8 +2.2
comp=Z,294nm,1.2s,mb6.2
PVNV Vila Nova 57.50 46 eP P 02 20 58.5 +2.6
PFAV Pico das Favas 57.53 46 eP P 02 20 58.1 +2.0
comp=Z,329nm,1.2s,mb6.2
NLWA Neilton Lookou 57.69 325⇓iP P 02 20 57.6 +0.5
comp=Z,567nm,1.4s,mb6.4
NLWA LR LR
comp=Z,8µm,20.0s,MS5.8

PGC **Sidney** 58.15 326 ⇓*i*P P 02 21 00.1 -0.1
comp=Z,2µm,1.8s,mb6.9
PTCN **Pitcairn Islan** 58.19 237 PFAKE 02 21 10.0 +9.0
PTCN LR LR
comp=Z,9µm,20.0s,MS5.9
PDA **Ponta Delgada** 58.21 48 *i*P P 02 21 03.0 +2.1
PDA *i*pP pP 02 21 11.2 +4.6
PDA *i*sP sP 02 21 19.0 +10
PDA **Ponta Delgada** 58.21 48 *e*LR LR 02 38 33.2
CML **Cha da Macela** 58.31 48 *e*P P 02 21 03.3 +1.7
PVER **Pico Vermelho** 58.34 48 *e*P P 02 21 04.2 +2.4
comp=Z,514nm,1.3s,mb6.4
PRCH **Ribeira Ch** 58.34 48 *e*P P 02 21 03.4 +1.6
comp=Z,360nm,1.1s,mb6.3
LFA **Lagoa do Fogo** 58.35 48 *e*P P 02 21 04.2 +2.3
VIF **Vila Franca** 58.38 48 *e*P P 02 21 04.0 +1.9
comp=Z,435nm,1.3s,mb6.3
PMAT **Coroa da Mata** 58.38 48 *e*P P 02 21 04.1 +2.0
comp=Z,432nm,1.1s,mb6.4
MESC **Monte Escuro** 58.39 48 *e*P P 02 21 04.2 +2.0
PSMN **Pico do Norte,** 58.40 49 *e*P P 02 20 56.1 -6.2
PCNG **Congro** 58.42 48 *e*P P 02 21 04.5 +2.1
comp=Z,492nm,1.2s,mb6.4
FRA1 **Furnas** 58.44 48 *e*P P 02 21 05.0 +2.5
PFAD **Fenais da Ajud** 58.49 48 *e*P P 02 21 05.2 +2.3
EFI **East Falkland** 58.75 165 *e*P P 02 21 04.7 +0.4
comp=Z,71nm,1.1s,mb5.6
EFI LR LR
comp=Z,19µm,20.0s,MS6.2
USHA **Ushuaia** 59.85 173 P P 02 21 11.8 0.0
baz=326,slow=8.6
RKT **Rikitea** 61.65 241 *e*S S 02 29 44.6 -2.1
comp=Z,10µm,29.8s
RKT *e*SS SS 02 33 48.6 +0.1
RKT *e*LQ 02 37 02.7
comp=Z,2µm,32.2s
RKT *e*LR LR 02 39 45.7
comp=Z,7µm,33.2s
RKT **Rikitea** 61.65 241 *e*P P 02 21 24.7 -0.1
comp=Z,7µm,30.5s,baz=68
RKT *e*S S 02 29 44.6 -2.1
comp=Z,359nm,1.4s,mb6.3
RKT *e*SS SS 02 33 48.6 +0.1
RKT **Rikitea** 61.65 241 *e*P P 02 21 24.7 -0.1
RKT *e*S S 02 29 44.6 -2.1
RKT *e*SS SS 02 33 48.6 +0.1
RKT pmax pmax
comp=Z,359nm,1.4s,mb6.3
EHIG **Higuera** 62.10 60 P P 02 21 27.4 -0.4
comp=Z,3µm,2.5s,mb7.0
EGOM **La Gomera** 62.54 61 P P 02 21 29.4 -1.4
comp=Z,4µm,2.8s,mb7.0
CCAN **Las Canadas** 63.08 61 P P 02 21 34.6 +0.3
comp=Z,1µm,2.0s,mb6.7
EBAJ **Bajamar** 63.36 60 P P 02 21 35.7 -0.5
comp=Z,4µm,2.7s,mb7.1
YKA **Yellowknife Ar** 63.58 342 P P 02 21 35.3 -1.7
YKA S S 02 30 08.7 -1.1
YKA P'P' 02 50 18.2
YKA ⇑*e* 02 50 37.5
YKA LR LR 02 52 53.3
YKA **Yellowknife Ar** 63.58 342 P P 02 21 35.3 -1.7
YKA S S 02 30 08.7 -1.0
YKA pmax pmax
comp=Z,153nm,1.0s
YKA **Yellowknife Ar** 63.58 342 P P 02 21 35.3 -1.7
comp=Z,153nm,1.0s,mb6.0,baz=132,slow=7.0,SNR=657
YKA S S 02 30 08.7 -1.1
comp=Z,0.1nm,0.3s,baz=128,slow=14,SNR=3.2
YKA PKPPKP 02 50 18.2
comp=Z,0.3nm,0.8s,baz=291,slow=2.8,SNR=4.0
YKA PKP2bc 02 50 37.5
comp=Z,0.7nm,1.0s,baz=299,slow=3.3,SNR=4.7
YKA LR LR 02 52 53.3
comp=Z,2µm,19.4s,MS5.4,baz=210,slow=39
EOSO **Osorio** 63.97 61 P P 02 21 40.4 +0.2
comp=Z,4µm,2.8s,mb6.9
SFJD **Kangerlussuaq** 65.14 12 ⇓*i*P P 02 21 45.6 -1.5
comp=Z,481nm,1.5s,mb6.3
SFJD LR LR
comp=Z,4µm,20.0s,MS5.6
SFJD **Kangerlussuaq** 65.14 12 ⇓*i*P P 02 21 45.6 -1.5
SFJD pmax pmax
comp=Z,481nm,1.5s,mb6.3
SFJD MLR MLR
comp=Z,4µm,20.0s,MS5.6
SFJD **Kangerlussuaq** 65.14 12 P P 02 21 45.7 -1.4
comp=Z,94nm,1.1s,mb5.7,baz=187,slow=5.8,SNR=36
SFJD **Kangerlussuaq** 65.14 12 ⇓*i*P P 02 21 45.8 -1.3
comp=Z,214nm,1.3s,mb6.0
SFJD
comp=Z,2µm,22.0s
ASCN **Ascension** 65.15 101 P P 02 21 46.3 -1.9
comp=Z,1µm,1.2s,mb6.9,SNR=5.6
ASCN **Ascension** 65.15 101 *e*P P 02 21 46.7 -1.4
comp=Z,527nm,1.4s,mb6.4
ASCN LR LR
comp=Z,8µm,20.0s,MS5.9
CFTV **Fuerteventura** 65.31 61 P P 02 21 49.0 +0.1
comp=Z,384nm,1.7s,mb6.2
EFAM **Famara** 65.89 60 P P 02 21 52.7 -0.1
comp=Z,6µm,2.6s
CRAG **Craig** 66.77 330 *e*P P 02 21 57.6 -0.2
comp=Z,347nm,1.6s,mb6.1
CRAG LR LR
comp=Z,4µm,19.0s,MS5.7
DLBC **Dease Lake** 66.78 333 ⇓*i*P P 02 21 58.1 +0.3
DLBC *e*PP PP 02 24 25.0 0.0
WRAK **Wrangell Islan** 66.84 331 ⇓*i*P P 02 21 58.0 -0.2
comp=Z,663nm,1.8s,mb6.4
WRAK LR LR
comp=Z,4µm,21.0s,MS5.5
SIT **Sitka** 68.59 331 *e*P P 02 22 09.3 0.0
comp=Z,400nm,1.7s,mb6.1
SIT LR LR
comp=Z,3µm,20.0s,MS5.5
SIT **Sitka** 68.59 331 *e*P P 02 22 09.3 0.0
SIT pmax pmax
comp=Z,400nm,1.7s,mb6.1
SIT MLR MLR
comp=Z,3µm,20.0s,MS5.5
SKAG **Skagway** 69.67 333 *e*P P 02 22 15.8 -0.1
comp=Z,513nm,1.6s,mb6.2
SKAG LR LR
comp=Z,3µm,19.0s,MS5.6
PMSA **Palmer Station** 70.06 173 *e*P P 02 22 17.5 -0.6
comp=Z,93nm,1.1s,mb5.6
PMSA LR LR
comp=Z,5µm,22.0s,MS5.7
RES **Resolute Bay** 70.63 355 ⇓*i*P P 02 22 19.7 -1.9
comp=Z,19nm,0.8s,mb5.1
RES *e*PP PP 02 24 56.1 -1.9
PMAFR **Mafra** 70.94 50 *e*P P 02 22 23.7 -0.4
comp=Z,394nm,1.7s,mb6.1
PMAFR *e*S S 02 31 42.2 +3.0
PMAFR **Mafra** 70.94 50 *e*LR LR 02 44 37.2
comp=Z,2µm,20.0s
LIS **Lisbon** 71.00 51 *e*P P 02 22 23.1 -1.4
LIS *e*S S 02 31 40.1 +0.2
LIS *e*S S 02 31 40.5 +0.6
LIS AMS AMS 02 56 30.4
comp=Z,3µm,20.7s,MS5.6
LIS **Lisbon** 71.00 51 *e*P P 02 22 23.1 -1.4
LIS *e*S S 02 31 40.1 +0.2
LIS A 02 56 30.4
comp=Z,3µm,20.7s
PFVI **Vila Bisbo** 71.00 52 *e*P P 02 22 25.1 +0.6
comp=Z,624nm,1.8s,mb6.2
PFVI *e*S S 02 31 44.2 +4.2
PFVI **Vila Bisbo** 71.00 52 *e*LR LR 02 44 50.0
PTEO **Sao Teotonio** 71.14 52 *e*P P 02 22 25.8 +0.4
comp=Z,492nm,1.7s,mb6.2
MORF **Marmelete** 71.16 52 *e*P P 02 22 26.1 +0.6
comp=Z,921nm,1.4s,mb6.5
MORF *e*S S 02 31 48.3 +6.4
VAH **Vaihoa** 71.27 252 *e*P P 02 22 25.6 -0.9
comp=Z,215nm,1.4s,mb5.9
PMOR **Pomariorio Ree** 71.48 253 *e*P P 02 22 27.1 -0.7
comp=Z,267nm,1.4s,mb6.0
PBDV **Barranco-do-Ve** 71.72 52 *e*P P 02 22 29.2 +0.3
comp=Z,428nm,1.6s,mb6.1
PBDV *e*S S 02 31 53.2 +4.9
PBDV **Barranco-do-Ve** 71.72 52 *e*LR LR 02 45 03.5
PTO **Porto** 71.82 48 *e*P P 02 22 29.3 -0.1
comp=Z,782nm,2.0s,mb6.3

EVO **Evora** 71.85 51 ⇓*i*P P 02 22 29.1 -0.5
comp=Z,1µm,1.9s,mb6.3
EVO *e*MLR MLR
comp=Z,5µm,20.2s,MS5.5
EVO **Evora** 71.85 51 *e*P P 02 22 29.5 -0.1
EMAZ **Mazaricos** 71.87 46 P P 02 22 28.4 -1.3
comp=Z,3µm,2.6s,mb6.7
PBEJ **Beja** 71.89 52 *e*P P 02 22 30.0 +0.1
comp=Z,349nm,1.5s,mb6.1
PVAQ **Vaqueiros** 71.91 52 *e*P P 02 22 30.3 +0.2
comp=Z,319nm,1.9s,mb5.9
PVAQ *e*S S 02 31 51.7 +1.2
PVAQ **Vaqueiros** 71.91 52 *e*LR LR 02 45 14.0
EZAM **Zamans** 71.93 47 P P 02 22 29.9 -0.1
comp=Z,1µm,1.7s,mb6.5
EZAM **Zamans** 71.93 47 P P 02 22 29.9 -0.2
EZAM pmax pmax
comp=Z,1µm,1.7s,mb6.5
EGRO **El Granado** 72.12 52 P P 02 22 30.5 -0.8
comp=Z,2µm,2.4s,mb6.6
STS **Santiago** 72.17 46 P P 02 22 31.8 +0.3
comp=Z,262nm,1.3s,mb6.0
STS **Santiago** 72.17 46 P P 02 22 31.8 +0.3
STS pmax pmax
comp=Z,262nm,1.3s,mb6.0
PESTR **Estremoz** 72.22 51 *e*P P 02 22 32.0 +0.1
comp=Z,819nm,1.6s,mb6.4
PESTR *e*S S 02 31 56.9 +2.8
PESTR **Estremoz** 72.22 51 *e*LR LR 02 45 14.3
comp=Z,3µm,20.0s
BORG **Borgarnes** 72.26 22 *e*P P 02 22 32.1 +0.6
comp=Z,2µm,2.2s,mb6.6
PVIS **Viseu** 72.28 49 *e*P P 02 22 32.1 -0.1
comp=Z,486nm,1.7s,mb6.2
PCAB **Cabril** 72.35 48 *e*P P 02 22 32.3 -0.2
comp=Z,473nm,1.5s,mb6.2
ELOB **Lobios** 72.35 48 P P 02 22 31.0 -1.5
comp=Z,3µm,3.0s
PCBR **Castelo Branco** 72.46 50 *e*P P 02 22 33.0 -0.3
comp=Z,499nm,1.9s,mb6.1
MTE **Manteigas** 72.49 49 *e*P P 02 22 32.8 -0.7
comp=Z,485nm,2.1s,mb6.1
MTE *e*S S 02 31 55.6 -1.5
MTE **Manteigas** 72.49 49 *e*LR LR 02 45 30.1
comp=Z,3µm,24.0s
MTE **Manteigas** 72.49 49 ⇓*i*P P 02 22 32.5 -0.9
comp=Z,541nm,1.8s,mb6.2
PVRL **Vila Real** 72.50 48 *e*P P 02 22 33.3 -0.2
comp=Z,622nm,1.9s,mb6.2
PBAR **Barrancos** 72.55 52 *e*P P 02 22 33.8 -0.1
comp=Z,429nm,1.7s,mb6.1
PBAR **Barrancos** 72.55 52 *e*LR LR 02 45 33.6
EBAD **Badajoz** 72.66 51 P P 02 22 33.4 -1.0
comp=Z,3µm,3.0s
EMIN **Mina Concepcio** 72.79 52 P P 02 22 33.9 -1.3
comp=Z,738nm,2.1s,mb6.2
SFS **San Fernando** 72.99 53 ⇓*i*P P 02 22 37.1 +0.6
MVO **Moncorvo** 73.00 48 *e*P P 02 22 36.3 -0.1
comp=Z,514nm,1.9s,mb6.1
MVO *e*S S 02 32 07.5 +4.7
MVO **Moncorvo** 73.00 48 *e*LR LR 02 45 26.1
comp=Z,2µm,20.0s
LIC **Lamto** 73.07 85 ⇓*i*P P 02 22 36.7 -0.7
comp=Z,1µm,1.4s,mb6.3
LIC *e*MLR MLR
comp=Z,9µm,20.5s,MS5.7
LIC **Lamto** 73.07 85 ⇓*i*P P 02 22 36.7 -0.7
comp=Z,573nm,1.4s,mb6.3
LIC LR LR
comp=Z,4µm,20.5s,MS5.7
DBIC **Dimbokro** 73.22 84 P P 02 22 37.6 -0.6
DBIC S S 02 32 04.1 -2.1
DBIC ⇑*e* 02 50 08.8
DBIC LR LR 02 52 35.8
DBIC **Dimbokro** 73.22 84 P P 02 22 37.6 -0.6
comp=Z,137nm,1.0s,mb5.8,baz=258,slow=6.2,SNR=127
DBIC S S 02 32 04.1 -2.1
comp=Z,1.4nm,0.9s,baz=37,slow=19,SNR=6.2
DBIC PKP2bc 02 50 08.8
comp=Z,3.4nm,1.0s,baz=85,slow=4.3,SNR=3.7
DBIC LR LR 02 52 35.8
comp=Z,9µm,20.1s,MS6.0,baz=242,slow=34
EPON **Pontenova** 73.26 46 P P 02 22 36.8 -1.2
comp=Z,3µm,2.4s,mb6.8
TVO **Taravao** 73.26 250 *e*P P 02 22 37.3 -1.1
comp=Z,206nm,1.3s,mb5.9
TVO **Taravao** 73.26 250 *e*P P 02 22 37.3 -1.1
TVO pmax pmax
comp=Z,206nm,1.3s,mb5.9
PBRG **Braganca** 73.31 48 *e*P P 02 22 38.4 +0.1
comp=Z,416nm,1.8s,mb6.1
ESPR **Espera** 73.32 53 P P 02 22 37.4 -1.0
comp=Z,4µm,3.7s
INK **Inuvik** 73.33 341 ⇓*i*P P 02 22 37.1 -0.7
comp=Z,30µm,1.5s
INK *e*PP PP 02 25 19.9 -1.3
INK **Inuvik** 73.33 341 LR LR 02 56 39.7
comp=Z,7µm,18.2s,MS6.0,baz=116,slow=37
ECAL **Calabor** 73.33 48 P P 02 22 37.2 -1.3
comp=Z,3µm,2.3s,mb6.8
DAWY **Dawson** 73.43 336 ⇓*i*P P 02 22 37.9 -0.7
PPT **Papeete** 73.53 250 *e*S S 02 32 05.5 -4.0
comp=Z,11µm,30.8s
PPT *e*SS SS 02 36 52.1 -0.6
comp=Z,3µm,26.0s
PPT *e*LQ 02 42 07.3
comp=Z,27µm,32.2s
PPT *e*LR LR 02 45 17.2
comp=Z,23µm,26.8s,baz=75
PPT **Papeete** 73.53 250 P P 02 22 41.0 +1.0
comp=Z,49nm,0.8s,mb5.5,baz=300,slow=6.0,SNR=3.7
PPT LR LR 02 47 26.2
comp=Z,9µm,19.6s,MS6.1,baz=79,slow=30
PAE **Paea** 73.55 250 *e*P P 02 22 39.1 -1.0
comp=Z,231nm,1.4s,mb5.9
PAE **Paea** 73.55 250 *e*P P 02 22 39.1 -1.0
PAE pmax pmax
comp=Z,231nm,1.4s,mb5.9
EJIF **Jimena Fronter** 73.58 53 P P 02 22 40.3 +0.3
comp=Z,304nm,1.3s,mb6.1
EJIF **Jimena Fronter** 73.58 53 P P 02 22 40.3 +0.3
EJIF pmax pmax
comp=Z,304nm,1.3s,mb6.1
TRIS **Tristan da Cun** 74.09 130 PFAKE 02 22 50.0 +7.1
TRIS LR LR
comp=Z,12µm,22.0s,MS6.1
EMIJ **Mijas** 74.15 53 P P 02 22 42.1 -1.2
comp=Z,2µm,2.8s,mb6.5
EGAK **Eagle** 74.42 337 ⇓*i*P P 02 22 43.9 -0.4
comp=Z,1000nm,1.6s,mb6.5
EGAK LR LR
comp=Z,5µm,20.0s,MS5.8
EADA **Adamuz** 74.48 52 P P 02 22 44.0 -1.2
comp=Z,2µm,2.8s,mb6.6
TBI **Tubuai** 74.54 244 *e*S S 02 32 18.5 -2.3
comp=Z,8µm,30.0s
TBI *e*SS SS 02 37 12.6 +4.6
comp=Z,3µm,27.5s
TBI *e*LQ 02 42 33.1
comp=Z,12µm,32.2s
TBI *e*LR LR 02 45 46.4
comp=Z,10µm,24.0s,baz=71
EARI **Arriondas** 74.65 46 P P 02 22 45.3 -0.8
comp=Z,4µm,3.7s
ELUQ **Luque** 74.66 52 P P 02 22 46.6 +0.4
comp=Z,192nm,1.4s,mb5.8
ELUQ **Luque** 74.66 52 P P 02 22 46.6 +0.4
ELUQ pmax pmax
comp=Z,192nm,1.4s,mb5.8
ELOJ **Sierra Loja** 74.70 53 P P 02 22 46.9 +0.4
comp=Z,594nm,1.5s,mb6.3
ELOJ **Sierra Loja** 74.70 53 P P 02 22 46.9 +0.4
ELOJ pmax pmax
comp=Z,594nm,1.5s,mb6.3
MENT **Mentasta** 74.79 335 *e*P P 02 22 46.6 +0.1
PAB **San Pablo** 74.81 50 ⇓*i*P P 02 22 47.3 +0.2
comp=Z,551nm,1.6s,mb6.2
PAB *e*PP PP 02 25 34.9 +0.4
PAB LR LR
comp=Z,3µm,22.0s,MS5.6
PAB **San Pablo** 74.81 50 ⇓*i*P P 02 22 47.3 +0.2
PAB *e* 02 25 34.9
PAB pmax pmax
comp=Z,551nm,1.6s,mb6.2
PAB MLR MLR
comp=Z,3µm,22.0s,MS5.6
EYAK **Cordova Ski Ar** 74.92 332 ⇓*i*P P 02 22 47.0 -0.3
comp=Z,626nm,1.6s,mb6.3
EYAK *e*PP PP 02 25 34.8 -0.2
ERON **Agron** 74.97 53 P P 02 22 48.8 +0.7
comp=Z,113nm,1.2s,mb5.7
GUD **Guadarrama** 75.09 49 P P 02 22 49.0 +0.3
comp=Z,700nm,1.9s,mb6.3
GUD **Guadarrama** 75.09 49 P P 02 22 49.0 +0.3
GUD pmax pmax
comp=Z,700nm,1.9s,mb6.3
EBAN **Banos Encina** 75.10 52 P P 02 22 48.8 0.0
comp=Z,95nm,1.0s,mb5.7
EBAN **Banos Encina** 75.10 52 P P 02 22 48.8 0.0
EBAN pmax pmax
comp=Z,95nm,1.0s,mb5.7
DCN **Croghan** 75.10 36 ⇑*i*P P 02 22 48.2 -0.3
ESDC **Sonseca Array** 75.12 50 P P 02 22 48.4 -0.4
comp=Z,810nm,1.9s,mb6.3
ESDC **Sonseca Array** 75.12 50 P P 02 22 49.1 +0.3
comp=Z,94nm,1.1s,mb5.6,baz=271,slow=5.1,SNR=204
ESDC PKP2bc 02 50 01.7
comp=Z,0.1nm,0.2s,baz=29,slow=3.4,SNR=4.3
EGUA **Guajares** 75.14 53 P P 02 22 49.0 -0.1
ECOG **Cogollos-Vega** 75.18 53 P P 02 22 49.7 +0.4
comp=Z,113nm,1.1s,mb5.7
ECOG **Cogollos-Vega** 75.18 53 P P 02 22 49.7 +0.4
ECOG pmax pmax
comp=Z,113nm,1.1s,mb5.7
DMUB **Kingscourt** 75.43 35 ⇓*i*P P 02 22 50.1 -0.3
EALB **Alboran** 75.49 54 P P 02 22 50.6 -0.5
comp=Z,2µm,2.2s,mb6.7
DLF **Lyons Farm** 75.53 36 ⇑*i*P P 02 22 50.3 -0.6
EQES **Quesada** 75.62 52 P P 02 22 51.4 -0.4
comp=Z,5µm,3.4s
EBER **Berja** 75.69 53 P P 02 22 51.5 -0.7
comp=Z,3µm,2.4s,mb6.8
CCA1 **Carnmenellis** 75.73 39 ⇑*e*P P 02 22 52.1 -0.1
CRQ2 **Rosemanowes 2** 75.77 39 ⇑*e*P P 02 22 52.0 -0.4
ELAN **Lanestosa** 75.93 47 P P 02 22 52.3 -1.1
comp=Z,4µm,3.8s
CSA1 **St Austell** 75.97 39 *e*P P 02 22 53.3 -0.3
GMM **Mts of Mourne** 76.06 35 *e*P P 02 22 53.6 -0.3
GCL **Cushendall** 76.12 34 *e*P P 02 22 53.5 -0.8
EVIA **Vianos** 76.15 51 P P 02 22 54.9 +0.1
comp=Z,380nm,1.5s,mb6.1
EVIA **Vianos** 76.15 51 P P 02 22 54.9 +0.1
EVIA pmax pmax
comp=Z,380nm,1.5s,mb6.1
ENIJ **Nijar** 76.24 53 P P 02 22 54.8 -0.5
comp=Z,76nm,1.0s,mb5.6
ENIJ **Nijar** 76.24 53 P P 02 22 54.8 -0.5
ENIJ pmax pmax
comp=Z,77nm,1.0s,mb5.6
POHA **Pohakuloa** 76.29 289 *e*P P 02 22 56.3 +0.4
comp=Z,228nm,1.1s,mb6.0
POHA LR LR
comp=Z,7µm,20.0s,MS6.0
HTL **Hartland** 76.34 39 *e*P P 02 22 55.2 -0.4
HTL AMb AMB 02 22 59.4
comp=Z,760nm,1.8s,mb6.3
HTL AMS AMS 02 50 57.9
comp=Z,4µm,21.7s,MS5.7
HTL **Hartland** 76.34 39 P P 02 22 55.2 -0.4
HTL AMb AMB 02 22 59.4
comp=Z,760nm,1.8s,mb6.3
RRH **Rhenigidale** 76.44 31 *e*P P 02 22 55.0 -1.1
SML **Sawmill** 76.49 333 *e*P P 02 22 55.4 -0.8
SML **Sawmill** 76.49 333 P P 02 22 55.3 -0.9
ECRI **Cripan** 76.53 47 P P 02 22 57.6 +0.7
comp=Z,649nm,1.8s,mb6.3
ECRI **Cripan** 76.53 47 P P 02 22 57.6 +0.7
ECRI pmax pmax
comp=Z,649nm,1.8s,mb6.3
DYA **Yadsworthy** 76.59 39 *e*P P 02 22 56.8 -0.2
DYA AMb AMB 02 23 00.7
comp=Z,540nm,1.7s,mb6.2
DYA AMS AMS 02 50 49.6
comp=Z,3µm,22.7s,MS5.6
DYA **Yadsworthy** 76.59 39 P P 02 22 56.8 -0.2
DYA AMb AMB 02 23 00.7
comp=Z,540nm,1.7s,mb6.2
KAR1 **Arisaig** 76.68 33 ⇑*e*P P 02 22 56.3 -1.1
ETOR **Torete** 76.69 49 P P 02 22 56.9 -0.9
comp=Z,233nm,1.8s,mb5.8
ETOR **Torete** 76.69 49 P P 02 22 56.9 -0.9
ETOR pmax pmax
comp=Z,233nm,1.8s,mb5.8
ROSF **Rostrenen** 76.70 42 ⇓*i*P P 02 22 57.6 -0.1
comp=Z,2µm,1.9s,mb6.4
ROSF **Rostrenen** 76.70 42 ⇓*i*P P 02 22 57.6 -0.1
comp=Z,934nm,1.9s,mb6.4
ROSF **Rostrenen** 76.70 42 ⇓*i*P P 02 22 57.6 -0.1
ROSF pmax pmax
comp=Z,934nm,1.9s,mb6.4
QUIF **Quistinic** 76.72 42 ⇓*i*P P 02 22 57.8 0.0
comp=Z,2µm,1.9s,mb6.4
QUIF **Quistinic** 76.72 42 ⇓*i*P P 02 22 57.8 0.0
comp=Z,853nm,1.9s,mb6.3
QUIF **Quistinic** 76.72 42 ⇓*i*P P 02 22 57.8 0.0
QUIF pmax pmax
comp=Z,853nm,1.9s,mb6.3
HEX **Exmoor** 76.77 39 *e*P P 02 22 57.5 -0.6
RTO **Tolsta** 76.79 31 *e*P P 02 22 56.2 -1.8
PMR **Palmer** 76.80 332 *e*P P 02 22 57.0 -1.0
comp=Z,469nm,1.5s,mb6.2
PMR LR LR
comp=Z,2µm,23.0s,MS5.4
PMR **Palmer** 76.80 332 *e*P P 02 22 57.0 -1.0
PMR pmax pmax
comp=Z,469nm,1.5s,mb6.2
PMR MLR MLR
comp=Z,2µm,23.0s,MS5.4
KPL **Plockton** 76.86 32 *e*P P 02 22 57.0 -1.4
KPL AMb AMB 02 23 01.4
comp=Z,567nm,1.9s,mb6.2
KPL AMS AMS 02 52 50.0
comp=Z,4µm,21.2s,MS5.7
KPL **Plockton** 76.86 32 P P 02 22 57.0 -1.4
KPL AMb AMB 02 23 01.4
comp=Z,567nm,1.9s,mb6.2
GAL1 **Galloway** 76.89 35 *e*P P 02 22 56.9 -1.7
GAL1 AMb AMB 02 23 00.9
comp=Z,655nm,1.6s,mb6.3
GAL1 AMS AMS 03 02 03.3
comp=Z,2µm,17.7s,MS5.5
GAL1 **Galloway** 76.89 35 P P 02 22 56.9 -1.7
GAL1 AMb AMB 02 23 00.9
comp=Z,655nm,1.6s,mb6.3
RRR **Rubha Reidh** 76.89 32 *e*P P 02 22 56.5 -2.1
ETOB **Tobarra** 76.89 52 P P 02 22 58.3 -0.7
comp=Z,5µm,2.7s,mb6.9
GIM **North Isle of** 76.92 35 ⇑*e*P P 02 22 58.6 -0.2
KSB **Sheil Bridge** 76.95 32 *e*P P 02 22 57.6 -1.4
SLKM **Skilak Lake** 77.04 331 *e*P P 02 22 58.5 -0.8
EMUR **La Murta** 77.07 52 P P 02 22 58.9 -1.2
comp=Z,2µm,3.4s
KAC **Achnashellach** 77.08 32 ⇑*e*P P 02 22 58.5 -1.2
COLA **College** 77.14 336 ⇓*i*P P 02 22 58.6 -1.2
comp=Z,418nm,1.5s,mb6.2
COLA *e*PP PP 02 25 50.5 -3.1
COLA LR LR
comp=Z,3µm,22.0s,MS5.6
COLA **College** 77.14 336 ⇓*i*P P 02 22 58.6 -1.3
COLA *e* 02 25 50.5
COLA pmax pmax
comp=Z,418nm,1.5s,mb6.2
COLA MLR MLR
comp=Z,3µm,22.0s,MS5.6
SGMF **Saint Gilles** 77.17 42 ⇓*i*P P 02 23 00.2 -0.1
comp=Z,2µm,1.7s,mb6.4
SGMF **Saint Gilles** 77.17 42 ⇓*i*P P 02 23 00.2 -0.1
comp=Z,933nm,1.7s,mb6.4
SGMF **Saint Gilles** 77.17 42 ⇓*i*P P 02 23 00.2 -0.1
SGMF pmax pmax
comp=Z,933nm,1.7s,mb6.4
PGBU **Glenifferbraes** 77.19 34 *e*P P 02 22 59.6 -0.7
PGBU AMb AMB 02 23 02.6
comp=Z,771nm,1.6s,mb6.4
REB **Eisghbrachaidh** 77.22 31 ⇑*e*P P 02 22 59.0 -1.4
CART **Cartagena** 77.24 53 ⇓*i*P P 02 22 59.2 -1.8
comp=Z,290nm,1.9s,mb5.9
HTR **Trewern Hill** 77.26 38 *e*P P 02 22 59.9 -0.9
MCK **McKinley** 77.28 335 ⇓*i*P P 02 22 60.0 -0.6
comp=Z,513nm,1.4s,mb6.3
MCK *e*PP PP 02 25 53.8 -0.9
MCK LR LR
comp=Z,2µm,21.0s,MS5.5

MCK **McKinley** 77.28 335⇓*iP* P 02 23 00.0 -0.6
MCK *e* 02 25 53.8
MCK pmax pmax
comp=Z,513nm,1.4s,mb6.3
MCK MLR MLR
comp=Z,2µm,21.0s,MS5.5
ELIZ Elizondo 77.31 47 P **P 02 23 01.2 -0.1**
comp=Z,429nm,1.7s,mb6.1
ELIZ Elizondo 77.31 47 P **P 02 23 01.2 0.0**
ELIZ pmax pmax
comp=Z,429nm,1.7s,mb6.1
GCD Castle Douglas 77.32 35 *eP* **P 02 23 00.2 -0.8**
EAB Aberfoyle 77.34 33 *eP* **P 02 23 00.1 -1.0**
SBD1 Bryn Du 77.40 37⇑*eP* **P 02 23 00.8 -0.7**
MCH1 Michaelchurch 77.41 38 *eP* **P 02 23 01.0 -0.7**
MCH1 AMb AMB 02 23 03.9
comp=Z,452nm,1.7s,mb6.1
ECHE Chera 77.42 51 P **P 02 23 01.7 -0.3**
comp=Z,475nm,1.6s,mb6.2
ECHE Chera 77.42 51 P **P 02 23 01.7 -0.2**
ECHE pmax pmax
comp=Z,475nm,1.6s,mb6.2
HGH Gray Hill 77.48 38 *eP* **P 02 23 01.5 -0.5**
OSSF Osses 77.51 47 *eP* **P 02 23 02.3 -0.1**
SJPF Ste Jean 77.52 47⇓*iP* **P 02 23 02.9 +0.5**
comp=Z,2µm,1.8s,mb6.5
SJPF Ste Jean 77.52 47⇓*iP* **P 02 23 02.9 +0.5**
comp=Z,1µm,1.8s,mb6.5
SJPF Ste Jean 77.52 47⇓*iP* **P 02 23 02.9 +0.5**
SJPF pmax pmax
comp=Z,1µm,1.8s,mb6.5
BWH Wardlaw 77.54 35⇑*eP* **P 02 23 00.7 -1.6**
HLM1 Long Mynd 77.56 37 *eP* **P 02 23 02.0 -0.5**
MDO Dochfour 77.56 32 *eP* **P 02 23 00.7 -1.7**
JRS Jersey 77.59 41⇑*eP* **P 02 23 02.2 -0.5**
KDAK Kodiak Island 77.64 328 P **P 02 23 02.2 -0.6**
comp=Z,669nm,1.6s,mb6.3,SNR=5.8
KDAK Kodiak Island 77.64 328 PFAKE 02 23 10.0 +7.2
KDAK LR LR
comp=Z,662nm,22.0s,MS4.9
KDAK Kodiak Island 77.64 328 LR LR 02 59 51.9
comp=Z,2µm,18.4s,MS5.5,baz=12,slow=38
HAE Alders End 77.69 38 *eP* **P 02 23 02.2 -1.0**
OLEF Ile d'Oleron 77.72 44 *eP* **P 02 23 03.6 +0.1**
MVH1 Achvaich 77.75 32 *eP* **P 02 23 01.1 -2.3**
CKE Keswick 77.75 35⇑*eP* **P 02 23 02.5 -1.0**
SWK Warminster 77.75 39⇑*eP* **P 02 23 03.2 -0.4**
EBH Black Hill 77.81 33 *eP* **P 02 23 03.0 -0.7**
ESK Eskdalemuir 77.82 34 P **P 02 23 03.7 -0.1**
comp=Z,1µm,1.6s,mb6.7,SNR=12
ESK Eskdalemuir 77.82 34 *eP* **P 02 23 02.7 -1.2**
ESK AMb AMB 02 23 06.1
comp=Z,850nm,1.7s,mb6.4
ESK AMS AMS 02 53 49.9
comp=Z,2µm,19.6s,MS5.5
ESK Eskdalemuir 77.82 34 P **P 02 23 02.7 -1.2**
ESK AMb AMB 02 23 06.1
comp=Z,850nm,1.7s,mb6.4
ESK Eskdalemuir 77.82 34⇓*iP* **P 02 23 03.1 -0.7**
comp=Z,695nm,1.5s,mb6.4
ESK LR LR
comp=Z,2µm,22.0s,MS5.4
ESK Eskdalemuir 77.82 34⇓*iP* **P 02 23 03.1 -0.7**
ESK pmax pmax
comp=Z,695nm,1.5s,mb6.4
ESK MLR MLR
comp=Z,2µm,22.0s,MS5.4
ECK Cauldkaine Hil 77.84 35 *eP* **P 02 23 02.7 -1.2**
EMOS Mosqueruela 77.85 50 P **P 02 23 04.1 -0.3**
comp=Z,3µm,3.1s
ATE Arette 77.90 47 *eP* **P 02 23 05.0 +0.4**
EBEN Beniarda 77.93 52 P **P 02 23 04.4 -0.4**
comp=Z,3µm,2.6s,mb6.8
EDI Edinburgh 77.93 34 *eP* **P 02 23 03.0 -1.4**
EDI AMb AMB 02 23 06.6
comp=Z,454nm,1.6s,mb6.2
EDI AMS AMS 02 53 19.4
comp=Z,2µm,21.9s,MS5.5
EDI Edinburgh 77.93 34 P **P 02 23 03.0 -1.4**
EDI AMb AMB 02 23 06.6
comp=Z,454nm,1.6s,mb6.2
ESAC San Caprasio 77.96 48 P **P 02 23 04.3 -0.6**
comp=Z,5µm,2.6s,mb7.0
ETSF Etsaut 77.99 47⇓*iP* **P 02 23 05.7 +0.6**
comp=Z,976nm,1.8s,mb6.1
ETSF Etsaut 77.99 47⇓*iP* **P 02 23 05.7 +0.6**
comp=Z,488nm,1.8s,mb6.1
ETSF Etsaut 77.99 47⇓*iP* **P 02 23 05.7 +0.6**
ETSF pmax pmax
comp=Z,488nm,1.8s,mb6.1
SSW Stow on the Wo 78.11 38⇑*eP* **P 02 23 05.3 -0.2**
ALE Alert 78.14 2 P **P 02 23 04.0 -1.2**
comp=Z,647nm,1.6s,mb6.3,SNR=29
LCHF La Chataignera 78.21 43 *eP* **P 02 23 06.5 +0.3**
KWE Weaver Farm 78.26 37 *eP* **P 02 23 06.1 -0.2**
GRR Gorron 78.31 42⇓*iP* **P 02 23 06.5 -0.2**
comp=Z,2µm,1.8s,mb6.5
GRR Gorron 78.31 42⇓*iP* **P 02 23 06.5 -0.2**
comp=Z,1µm,1.8s,mb6.5
GRR Gorron 78.31 42⇓*iP* **P 02 23 06.5 -0.2**
GRR pmax pmax
comp=Z,1µm,1.8s,mb6.5
LHO Holmfirth 78.33 36⇑*eP* **P 02 23 06.0 -0.6**
VIEF Viey 78.42 47 *eP* **P 02 23 08.2 +0.8**
MATF Mathat 78.44 44 *eP* **P 02 23 07.7 +0.2**
LABF Labassere 78.47 47 *eP* **P 02 23 08.2 +0.5**
KBI1 Birley Grange 78.48 37 *eP* **P 02 23 07.0 -0.5**
EBIE Bielsa 78.49 48 P **P 02 23 07.6 -0.3**
comp=Z,3µm,3.0s
ERTA Horta de San J 78.51 49 P **P 02 23 07.5 -0.5**
comp=Z,2µm,2.6s,mb6.7
FLN La Foliniere 78.60 41⇓*iP* **P 02 23 08.2 -0.1**
comp=Z,2µm,1.8s,mb6.5
FLN *e*MLR MLR
comp=Z,4µm,22.5s,MS5.4
FLN La Foliniere 78.60 41⇓*iP* **P 02 23 08.2 -0.1**
comp=Z,1µm,1.8s,mb6.5
FLN LR LR
comp=Z,4µm,22.5s,MS5.7
FLN La Foliniere 78.60 41⇓*iP* **P 02 23 08.2 -0.1**
FLN pmax pmax
comp=Z,1µm,1.8s,mb6.5
FLN MLR MLR
comp=Z,4µm,22.5s,MS5.7
KIP Kipapa 78.61 291 PFAKE 02 23 20.0 +11
KIP LR LR
comp=Z,9µm,20.0s,MS6.1
KIP Kipapa 78.61 291⇓*iP* **P 02 23 07.5 -1.4**
MFF Saint Martin d 78.61 44⇓*iP* **P 02 23 08.5 +0.1**
comp=Z,2µm,1.8s,mb6.5
MFF Saint Martin d 78.61 44⇓*iP* **P 02 23 08.5 +0.1**
comp=Z,1µm,1.8s,mb6.5
MFF Saint Martin d 78.61 44⇓*iP* **P 02 23 08.5 +0.1**
MFF pmax pmax
comp=Z,1µm,1.8s,mb6.5
RESF Ens 78.64 47 *eP* **P 02 23 09.5 +0.8**
EPF Esparros 78.66 47⇓*iP* **P 02 23 09.2 +0.4**
comp=Z,3µm,1.8s,mb6.5
EPF Esparros 78.66 47⇓*iP* **P 02 23 09.2 +0.4**
comp=Z,1µm,1.8s,mb6.5
EPF Esparros 78.66 47⇓*iP* **P 02 23 09.2 +0.4**
EPF pmax pmax
comp=Z,1µm,1.8s,mb6.5
SKP1 Kophill 78.72 38⇑*eP* **P 02 23 07.7 -1.2**
LDF La Druitiere 78.82 42⇓*iP* **P 02 23 09.3 -0.2**
comp=Z,2µm,1.9s,mb6.5
LDF La Druitiere 78.82 42⇓*iP* **P 02 23 09.3 -0.2**
comp=Z,1µm,1.9s,mb6.5
LDF La Druitiere 78.82 42⇓*iP* **P 02 23 09.3 -0.2**
LDF pmax pmax
comp=Z,1µm,1.9s,mb6.5
DAG Danmarks Havn 78.83 12⇑*iP* **P 02 23 07.9 -1.2**
DAG pmax pmax
comp=Z,260nm,1.3s,mb6.0
DAG MLR MLR
comp=Z,8µm,18.0s,MS6.1
DAG Danmarks Havn 78.83 12⇑*iP* **P 02 23 07.9 -1.2**
comp=Z,257nm,1.3s,mb6.0
DAG
comp=Z,8µm,18.0s
EANR 'Ain N'Sour 78.84 54 P **P 02 23 10.9 +1.0**
ETRT Tiaret 78.98 55 P **P 02 23 11.5 +0.8**
ECHA Ech Chlef 79.06 54 P **P 02 23 13.0 +1.9**
LFF La Frestale 79.09 45⇓*iP* **P 02 23 11.0 -0.1**
comp=Z,2µm,1.8s,mb6.4

LFF La Frestale 79.09 45⇓*iP* **P 02 23 11.0 -0.1**
comp=Z,814nm,1.8s,mb6.4
LFF La Frestale 79.09 45⇓*iP* **P 02 23 11.0 -0.1**
LFF pmax pmax
comp=Z,815nm,1.8s,mb6.4
EPOB Poblet 79.09 49 P **P 02 23 10.2 -1.0**
comp=Z,3µm,5.3s
JMIC Jan Mayen 79.16 18 *eP* **P 02 23 12.9 +2.0**
EIBI Ibiza 79.17 51 P **P 02 23 10.9 -0.7**
comp=Z,2µm,2.7s,mb6.6
EBNR Beni Rached 79.20 54 P **P 02 23 12.0 +0.1**
MLS Moulis 79.20 47 *eP* **P 02 23 12.0 +0.2**
SALF Salau 79.26 48 *eP* **P 02 23 12.9 +0.8**
TOA0 Torodi Ar. Sit 79.39 78⇓*iP* **P 02 23 12.5 -0.8**
TORD Torodi Ar. Bea 79.39 78 P **P 02 23 12.6 -0.7**
TORD S S 02 33 12.8 -1.2
TORD PKKPbc PKKPbc 02 42 01.5 -1.3
TORD P'P' 02 49 59.8
TORD LR LR 02 56 44.1
TORD Torodi Ar. Bea 79.39 78 P **P 02 23 12.6 -0.7**
comp=Z,47nm,1.0s,mb5.4,baz=278,slow=5.0,SNR=194
TORD S S 02 33 12.8 -1.2
comp=Z,1.0nm,0.8s,baz=287,slow=15,SNR=3.8
TORD PKKPbc PKKPbc 02 42 01.5 -1.3
comp=Z,1.7nm,0.8s,baz=130,slow=1.2,SNR=4.6
TORD PKPPKP 02 49 59.8
comp=Z,1.9nm,0.9s,baz=47,slow=6.7,SNR=5.8
TORD LR LR 02 56 44.2
comp=Z,12µm,20.1s,MS6.2,baz=275,slow=34
EMIR Miracle 79.46 48 P **P 02 23 12.8 -0.4**
comp=Z,46nm,1.0s,mb5.4
RJF Les Rejaudoux 79.66 45⇓*iP* **P 02 23 14.0 -0.2**
comp=Z,2µm,1.8s,mb6.4
RJF *e*MLR MLR
comp=Z,4µm,20.8s,MS5.4
RJF Les Rejaudoux 79.66 45⇓*iP* **P 02 23 14.0 -0.2**
comp=Z,911nm,1.8s,mb6.4
RJF LR LR
comp=Z,4µm,20.8s,MS5.7
RJF Les Rejaudoux 79.66 45⇓*iP* **P 02 23 14.0 -0.2**
RJF pmax pmax
comp=Z,911nm,1.8s,mb6.4
RJF MLR MLR
comp=Z,4µm,20.8s,MS5.7
SVW2 Sparrevohn 79.73 331 *eP* **P 02 23 12.5 -1.7**
IMA2 Indian Mountai 79.80 336 *eP* **P 02 23 13.5 -1.0**
VALF Valcebollere 79.85 48 *eP* **P 02 23 16.0 +0.7**
CARF Carcanieres 79.93 48 *eP* **P 02 23 15.8 +0.1**
CAF Calviac 80.03 45⇓*iP* **P 02 23 16.0 -0.2**
comp=Z,2µm,1.8s,mb6.4
CAF Calviac 80.03 45⇓*iP* **P 02 23 16.0 -0.2**
comp=Z,960nm,1.8s,mb6.4
CAF Calviac 80.03 45⇓*iP* **P 02 23 16.0 -0.2**
CAF pmax pmax
comp=Z,960nm,1.8s,mb6.4
MTLF Montolieu 80.05 47⇓*iP* **P 02 23 16.1 -0.2**
comp=Z,2µm,1.8s,mb6.3
MTLF Montolieu 80.05 47⇓*iP* **P 02 23 16.1 -0.2**
comp=Z,755nm,1.8s,mb6.3
MTLF Montolieu 80.05 47⇓*iP* **P 02 23 16.1 -0.2**
MTLF pmax pmax
comp=Z,755nm,1.8s,mb6.3
AEU East Anglia Un 80.07 38⇑*eP* **P 02 23 15.4 -0.8**
TCF Toulx Ste Croi 80.21 44⇓*iP* **P 02 23 16.7 -0.4**
AWI1 Witton 80.22 37⇑*eP* **P 02 23 16.8 -0.2**
TTA Tatalina 80.22 333 *eP* **P 02 23 15.5 -1.3**
FILF Fillols 80.26 48 *eP* **P 02 23 17.6 +0.1**
LRDF Laroque-de-Fa 80.26 47 *eP* **P 02 23 17.0 -0.5**
ETOS Mallorca 80.34 51 P **P 02 23 16.9 -1.1**
comp=Z,2µm,2.4s,mb6.6
EMHD Djebel Mahouad 80.35 54 P **P 02 23 18.5 +0.4**
ABA Alger-Bouzarea 80.43 54 P **P 02 23 18.0 -0.5**
MENF Mencas 80.47 40 *eP* **P 02 23 18.0 -0.4**
SJAF Saint Jean de 80.50 48 *eP* **P 02 23 19.0 +0.2**
EJON La Jonquera 80.50 48 P **P 02 23 18.3 -0.5**
comp=Z,3µm,2.6s,mb6.7
HYF Humbligny 80.56 43⇓*iP* **P 02 23 19.0 0.0**
CHGN Chignik 80.58 326 *eP* **P 02 23 18.0 -0.9**
BGF Bois d'Agland 80.67 44⇓*iP* **P 02 23 19.4 -0.2**
comp=Z,2µm,1.8s,mb6.5
BGF Bois d'Agland 80.67 44⇓*iP* **P 02 23 19.4 -0.2**
comp=Z,1µm,1.8s,mb6.5
BGF Bois d'Agland 80.67 44⇓*iP* **P 02 23 19.4 -0.2**
BGF pmax pmax
comp=Z,1µm,1.8s,mb6.5
ADJB Djebel Djouab 80.74 54 P **P 02 23 20.6 +0.4**
AGO Saint Agoulin 80.84 44 *eP* **P 02 23 20.0 -0.5**
LBL Lubilhac 80.88 45⇓*eP* **P 02 23 21.2 +0.4**
AVF Avril sur Loir 81.03 44⇓*iP* **P 02 23 20.8 -0.7**
comp=Z,1µm,1.8s,mb6.2
AVF Avril sur Loir 81.03 44⇓*iP* **P 02 23 20.8 -0.7**
comp=Z,616nm,1.8s,mb6.2
AVF Avril sur Loir 81.03 44⇓*iP* **P 02 23 20.8 -0.7**
AVF pmax pmax
comp=Z,616nm,1.8s,mb6.2
AKET Djebel Ketaf 81.10 54 P **P 02 23 23.6 +1.5**
SSF Saint Saulge 81.14 43⇓*iP* **P 02 23 21.3 -0.8**
comp=Z,1µm,1.8s,mb6.2
SSF Saint Saulge 81.14 43⇓*iP* **P 02 23 21.3 -0.8**
comp=Z,603nm,1.8s,mb6.2
SSF Saint Saulge 81.14 43⇓*iP* **P 02 23 21.3 -0.8**
SSF pmax pmax
comp=Z,603nm,1.8s,mb6.2
PLDF La Plantade 81.17 44⇓*eP* **P 02 23 22.2 -0.1**
COLF Collangettes 81.21 45 *eP* **P 02 23 22.9 +0.4**
LASF Ste Croix 81.27 46⇓*iP* **P 02 23 23.3 +0.4**
comp=Z,2µm,1.9s,mb6.3
SMF Signal de Mont 81.36 44⇓*iP* **P 02 23 22.7 -0.6**
comp=Z,2µm,1.8s,mb6.4
SMF Signal de Mont 81.36 44⇓*iP* **P 02 23 22.7 -0.6**
comp=Z,837nm,1.8s,mb6.4
SMF Signal de Mont 81.36 44⇓*iP* **P 02 23 22.7 -0.6**
SMF pmax pmax
comp=Z,837nm,1.8s,mb6.4
LOR Lormes 81.39 43⇓*iP* **P 02 23 22.8 -0.7**
comp=Z,2µm,1.8s,mb6.3
LOR *e*MLR MLR
comp=Z,3µm,21.0s,MS5.3
LOR Lormes 81.39 43⇓*iP* **P 02 23 22.8 -0.7**
comp=Z,792nm,1.8s,mb6.3
LOR LR LR
comp=Z,3µm,21.0s,MS5.6
LOR Lormes 81.39 43⇓*iP* **P 02 23 22.8 -0.7**
LOR pmax pmax
comp=Z,792nm,1.8s,mb6.3
LOR MLR MLR
comp=Z,3µm,21.0s,MS5.6
ATAF Djebel Tarf 81.42 55 P **P 02 23 23.0 -0.8**
SDPT Sand Point 81.66 325 *eP* **P 02 23 23.9 -0.8**
comp=Z,1µm,1.6s,mb6.7
BAIF Baives 81.75 40⇓*iP* **P 02 23 25.0 -0.3**
comp=Z,1µm,1.9s,mb6.2
BAIF Baives 81.75 40⇓*iP* **P 02 23 25.0 -0.3**
comp=Z,547nm,1.9s,mb6.2
BAIF Baives 81.75 40⇓*iP* **P 02 23 25.0 -0.3**
BAIF pmax pmax
comp=Z,547nm,1.9s,mb6.2
SNF Seneffe 81.82 40 P **P 02 23 25.3 -0.3**
comp=Z,242nm,2.3s,mb5.7
VIVF Saint-Julien-l 81.88 46⇓*iP* **P 02 23 26.6 +0.5**
comp=Z,2µm,1.7s,mb6.4
VIVF Saint-Julien-l 81.88 46⇓*iP* **P 02 23 26.6 +0.5**
comp=Z,866nm,1.7s,mb6.4
VIVF Saint-Julien-l 81.88 46⇓*iP* **P 02 23 26.6 +0.5**
VIVF pmax pmax
comp=Z,866nm,1.7s,mb6.4
UCC Uccle 81.88 39 P **P 02 23 25.6 -0.3**
comp=Z,525nm,2.5s,mb6.0
DOU Doubes 82.00 40 P **P 02 23 26.5 -0.1**
comp=Z,234nm,2.2s,mb5.7
GIVF Givet 82.15 40⇓*iP* **P 02 23 27.1 -0.3**
comp=Z,2µm,1.7s,mb6.5
GIVF Givet 82.15 40⇓*iP* **P 02 23 27.1 -0.3**
comp=Z,1µm,1.7s,mb6.5
GIVF Givet 82.15 40⇓*iP* **P 02 23 27.1 -0.3**
GIVF pmax pmax
comp=Z,1µm,1.7s,mb6.5
PRAF Pradon 82.21 47⇓*eP* **P 02 23 27.6 -0.2**
MEZF Maizieres J'vi 82.24 42⇓*iP* **P 02 23 27.7 -0.2**
comp=Z,1µm,1.7s,mb6.3
MEZF Maizieres J'vi 82.24 42⇓*iP* **P 02 23 27.7 -0.2**
comp=Z,1µm,1.7s,mb6.6
OCF Saint Nazaire 82.32 46 *eP* **P 02 23 29.1 +0.7**
OG26 St.-Nazaire-De 82.32 46 *eP* **P 02 23 29.1 +0.7**
SET Setif 82.33 54 P **P 02 23 29.0 +0.4**
GELF Grande-Etoile 82.39 47 *eP* **P 02 23 28.3 -0.5**

CKHR Kef el Ahmar 82.42 54 P **P 02 23 30.5 +1.4**
BCLA Clavier 82.47 40 P **P 02 23 29.0 0.0**
comp=Z,280nm,2.3s,mb5.8
SMRF Simiane la Rot 82.50 46⇓*iP* **P 02 23 29.9 +0.5**
comp=Z,792nm,1.8s,mb6.2
SMRF Simiane la Rot 82.50 46⇓*iP* **P 02 23 29.9 +0.5**
comp=Z,792nm,1.8s,mb6.4
DFRA Djebel Bou Aff 82.71 54 P **P 02 23 32.0 +1.4**
BEBN Eben Emael 82.72 40 P **P 02 23 30.1 -0.3**
comp=Z,150nm,2.3s,mb5.6
CMER Merouana 82.73 55 P **P 02 23 32.0 +1.2**
ORIF Oris-en-Rattie 82.73 45⇓*iP* **P 02 23 31.1 +0.5**
comp=Z,1µm,1.8s,mb6.4
ORIF *e*MLR MLR
comp=Z,4µm,22.2s,MS5.4
ORIF Oris-en-Rattie 82.73 45⇓*iP* **P 02 23 31.1 +0.5**
comp=Z,716nm,1.8s,mb6.4
ORIF Oris-en-Rattie 82.73 45⇓*iP* **P 02 23 31.1 +0.5**
ORIF pmax pmax
comp=Z,715nm,1.8s,mb6.4
STOF St-Etienne Org 82.75 46⇓*eP* **P 02 23 30.5 -0.1**
TAVF Tavernes 82.85 47⇓*eP* **P 02 23 31.2 0.0**
ASK Askoy 82.85 30 *eP* **P 02 23 31.1 +0.3**
THEF They Montfort 82.86 42⇓*eP* **P 02 23 32.1 +1.0**
HGN *e*S S 02 33 59.3 +10
HGN Heimansgroeve 82.88 40 *eP* **P 02 23 30.3 -0.9**
comp=Z,214nm,2.2s,mb5.8
CABF La Chapelle 82.90 44⇓*iP* **P 02 23 31.3 -0.1**
comp=Z,1µm,1.8s,mb6.4
CABF La Chapelle 82.90 44⇓*iP* **P 02 23 31.3 -0.1**
comp=Z,734nm,1.8s,mb6.4
CABF La Chapelle 82.90 44⇓*iP* **P 02 23 31.3 -0.1**
CABF pmax pmax
comp=Z,719nm,1.8s,mb6.4
BER Bergen 82.92 30 *eP* **P 02 23 33.9 +2.7**
comp=Z,537nm,2.8s,mb6.1
BER *e* 02 33 59.5
BER Bergen 82.92 30 *eP* **P 02 23 31.6 +0.5**
BER *eP* 02 23 33.9
BER AMb AMB 02 23 35.1
comp=Z,537nm,2.8s,mb6.1
BER *e*S S 02 33 50.6 +1.6
BER Bergen 82.92 30 *eP* **P 02 23 33.9 +2.8**
BER pmax pmax
comp=Z,537nm,2.8s,mb6.1
MEM Membach 82.92 40 P **P 02 23 31.4 0.0**
WLF Walferdange 83.00 41⇓*iP* **P 02 23 31.9 +0.1**
comp=Z,653nm,1.5s,mb6.4
WLF Walferdange 83.00 41⇓*iP* **P 02 23 31.9 +0.1**
WLF pmax pmax
comp=Z,653nm,1.5s,mb6.4
WLF Walferdange 83.00 41 P **P 02 23 32.2 +0.4**
comp=Z,386nm,2.2s,mb6.0
WLF Walferdange 83.00 41 *eP* **P 02 23 31.8 0.0**
comp=Z,854nm,1.6s,mb6.5
HAU Haudompre 83.10 42⇓*iP* **P 02 23 31.8 -0.6**
comp=Z,1µm,1.9s,mb6.3
HAU *e*MLR MLR
comp=Z,2µm,20.2s,MS5.1
HAU Haudompre 83.10 42⇓*iP* **P 02 23 31.8 -0.6**
comp=Z,615nm,1.9s,mb6.3
HAU LR LR
comp=Z,2µm,20.3s,MS5.4
HAU Haudompre 83.10 42⇓*iP* **P 02 23 31.8 -0.6**
HAU pmax pmax
comp=Z,615nm,1.9s,mb6.3
HAU MLR MLR
comp=Z,2µm,20.3s,MS5.4
CTEI Djebel Teioual 83.14 54 P **P 02 23 33.0 +0.1**
LMR La Mourre 83.18 47⇓*iP* **P 02 23 32.7 -0.2**
comp=Z,2µm,1.9s,mb6.5
LMR La Mourre 83.18 47⇓*iP* **P 02 23 32.7 -0.2**
comp=Z,1µm,1.9s,mb6.5
LMR La Mourre 83.18 47⇓*iP* **P 02 23 32.7 -0.2**
LMR pmax pmax
comp=Z,1µm,1.9s,mb6.5
CASM Ain Smara 83.21 54 P **P 02 23 34.0 +0.8**
RSL Roselend 83.27 45 *eP* **P 02 23 33.6 +0.3**
FRF La Foret Royal 83.28 47⇓*iP* **P 02 23 33.2 -0.2**
comp=Z,1µm,1.7s,mb6.3
FRF La Foret Royal 83.28 47⇓*iP* **P 02 23 33.2 -0.2**
comp=Z,587nm,1.7s,mb6.3
FRF La Foret Royal 83.28 47⇓*iP* **P 02 23 33.2 -0.2**
FRF pmax pmax
comp=Z,587nm,1.7s,mb6.3
BNI Bardonecchia 83.30 45⇓*iP* **P 02 23 34.0 +0.5**
comp=Z,434nm,1.7s,mb6.2
BNI *e*PP PP 02 26 42.0 -3.2
BNI Bardonecchia 83.30 45 P **P 02 23 34.0 +0.5**
BNI pmax pmax
comp=Z,430nm,1.7s,mb6.2
OG01 Vacheresse 83.31 44 *eP* **P 02 23 33.6 +0.1**
FALS False Pass 83.32 325⇓*iP* **P 02 23 32.3 -1.1**
comp=Z,800nm,1.4s,mb6.6
LPL La Plagne 83.34 45⇓*iP* **P 02 23 34.4 +0.7**
comp=Z,824nm,1.9s,mb6.2
LPL La Plagne 83.34 45⇓*iP* **P 02 23 34.4 +0.7**
comp=Z,412nm,1.9s,mb6.1
LPL La Plagne 83.34 45⇓*iP* **P 02 23 34.4 +0.7**
LPL pmax pmax
comp=Z,412nm,1.9s,mb6.1
LPG La Plagne 83.36 45⇓*iP* **P 02 23 34.5 +0.7**
comp=Z,1µm,1.8s,mb6.3
LPG La Plagne 83.36 45⇓*iP* **P 02 23 34.5 +0.7**
comp=Z,521nm,1.8s,mb6.3
LPG La Plagne 83.36 45⇓*iP* **P 02 23 34.5 +0.7**
LPG pmax pmax
comp=Z,521nm,1.8s,mb6.3
MBDF Montbardon 83.37 46⇓*iP* **P 02 23 34.3 +0.5**
comp=Z,1µm,1.9s,mb6.2
MBDF Montbardon 83.37 46⇓*iP* **P 02 23 34.3 +0.5**
comp=Z,536nm,1.9s,mb6.2
MBDF Montbardon 83.37 46⇓*iP* **P 02 23 34.3 +0.5**
MBDF pmax pmax
comp=Z,536nm,1.9s,mb6.2
HYA Hoyanger 83.37 29⇓*iP* **P 02 23 34.2 +0.7**
comp=Z,542nm,1.4s,mb6.4
HYA Hoyanger 83.37 29⇓*iP* **P 02 23 34.2 +0.7**
HYA AMb AMB 02 23 37.7
comp=Z,542nm,1.4s,mb6.4
CKFL Kef-Lekhel 83.39 54 P **P 02 23 35.0 +0.9**
LOMF Lomont 83.42 43⇓*eP* **P 02 23 35.0 +1.0**
HINF Hinteralfeld 83.44 43⇓*iP* **P 02 23 33.4 -0.7**
comp=Z,647nm,1.7s,mb6.1
HINF Hinteralfeld 83.44 43⇓*iP* **P 02 23 33.4 -0.7**
comp=Z,324nm,1.7s,mb6.1
HINF Hinteralfeld 83.44 43⇓*iP* **P 02 23 33.4 -0.7**
HINF pmax pmax
comp=Z,324nm,1.7s,mb6.1
BLS5 Blasjo 83.44 31 *eP* **P 02 23 34.4 +0.5**
CALN Calern 83.45 47⇓*eP* **P 02 23 34.7 +0.4**
CAEH 'Ain El Ouahch 83.49 54 P **P 02 23 35.0 +0.4**
ODD1 Odda 83.54 30⇓*iP* **P 02 23 33.8 -0.6**
comp=Z,642nm,1.7s,mb6.5
ODD1 Odda 83.54 30⇓*iP* **P 02 23 33.8 -0.6**
ODD1 AMb AMB 02 23 37.4
comp=Z,642nm,1.7s,mb6.5
RUP Ruppelstein 83.58 41⇓*eP* **P 02 23 36.2 +1.4**
RAR Rarotonga 83.60 248 LR LR 02 53 10.5
comp=Z,4µm,19.9s,MS5.8,baz=82,slow=30
PZZ Prazzo 83.60 46 P **P 02 23 35.8 +0.7**
MOF Molkenrain 83.62 43⇓*eP* **P 02 23 35.5 +0.4**
ECH Echery 83.64 42⇓*eP* **P 02 23 35.9 +0.7**
MVIF Mont Vial 83.64 46⇓*eP* **P 02 23 35.6 +0.3**
DOI San Damiano 83.71 46 P **P 02 23 35.1 -0.5**
TOUF Mont Tournerai 83.71 46⇓*eP* **P 02 23 35.9 +0.3**
RSP Reno Superiore 83.71 45 P **P 02 23 36.7 +1.1**
CDF Champ du Feu 83.72 42⇓*iP* **P 02 23 35.3 -0.3**
comp=Z,1µm,1.9s,mb6.5
CDF Champ du Feu 83.72 42⇓*iP* **P 02 23 35.3 -0.3**
comp=Z,687nm,1.9s,mb6.5
CDF Champ du Feu 83.72 42⇓*iP* **P 02 23 35.3 -0.3**
CDF pmax pmax
comp=Z,687nm,1.9s,mb6.5
LUCF Luceram 83.78 46⇓*eP* **P 02 23 36.1 +0.1**
REVF Revere 83.80 47⇓*eP* **P 02 23 36.2 +0.1**
AUTN L'Aution 83.84 46 *eP* **P 02 23 36.5 +0.2**
SBF Sospel 83.85 47⇓*iP* **P 02 23 36.1 -0.2**
comp=Z,1µm,1.8s,mb6.5
SBF Sospel 83.85 47⇓*iP* **P 02 23 36.1 -0.2**
comp=Z,706nm,1.8s,mb6.5
SBF Sospel 83.85 47⇓*iP* **P 02 23 36.1 -0.2**
SBF pmax pmax
comp=Z,706nm,1.8s,mb6.5
BBS Basel-Blauen 83.88 43⇓*eP* **P 02 23 37.1 +0.7**

ABH	**Alteburg**	**83.90**	**40⇓**	eP	**P**	**02 23 37.5**	**+1.1**
SAOF	**Saorge**	**83.93**	**46⇓**	eP	**P**	**02 23 36.8**	**0.0**
CMAH	**Djebel Manchou**	**83.95**	**54**	P	**P**	**02 23 37.0**	**0.0**
ABSA	**Djebel Ababsia**	**84.00**	**54**	P	**P**	**02 23 36.0**	**-1.3**
IBBN	**Ibbenburen**	**84.04**	**38**	eP	**P**	**02 23 36.9**	**-0.2**
	comp=Z,1µm,1.8s,mb6.8						
STR	**Strasbourg**	**84.05**	**42**	eP	**P**	**02 23 38.2**	**+1.0**
MOL	**Molde**	**84.06**	**28**	eP	**P**	**02 23 37.4**	**+0.4**
LANF	**Langenberg**	**84.07**	**41⇓**	eP	**P**	**02 23 38.4**	**+1.1**
IMI	**Imperia**	**84.18**	**46**	P	**P**	**02 23 37.8**	**-0.2**
FELD	**Feldberg im Sc**	**84.21**	**42⇓**	eP	**P**	**02 23 38.7**	**+0.6**
ORO	**Oropa**	**84.22**	**45**	P	**P**	**02 23 38.0**	**-0.2**
	comp=Z,3µm,3.2s						
ORX	**Oropa**	**84.22**	**45**	P	**P**	**02 23 38.2**	**0.0**
KTD	**Kalmit**	**84.25**	**41**	eP	**P**	**02 23 39.2**	**+0.9**
FIN	**Finale Ligure**	**84.40**	**46**	P	**P**	**02 23 37.9**	**-1.2**
BFO	**Black Forest**	**84.42**	**42**	P	**P**	**02 23 38.3**	**-0.8**
	comp=Z,293nm,1.8s,mb6.1,SNR=14						
BFO	**Black Forest**	**84.42**	**42**	eP	**P**	**02 23 38.4**	**-0.7**
BFO				e		02 26 51.7	
BFO				eS	S	02 34 04.4	-0.3
BFO				pmax	pmax		
	comp=Z,372nm,1.9s,mb6.2						
BFO	**Black Forest**	**84.42**	**42**	eP	**P**	**02 23 38.4**	**-0.7**
	comp=Z,372nm,1.9s,mb6.2						
BFO				ePP	PP	02 26 51.7	-2.5
BFO				eS	S	02 34 04.4	-0.3
BFO				ePKKPdf	PKKPdf	02 41 49.1	+4.9
TNS	**Taunus Mts**	**84.48**	**40**	eP	**P**	**02 23 39.4**	**0.0**
TNS				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.7						
TNS	**Taunus Mts**	**84.48**	**40**	eP	**P**	**02 23 39.4**	**0.0**
	comp=Z,1µm,1.8s,mb6.7						
QLNO	**Quiliano**	**84.50**	**46**	P	**P**	**02 23 39.4**	**-0.2**
PCP	**Pian Castagno**	**84.64**	**46**	P	**P**	**02 23 40.1**	**-0.2**
AKUT	**Akutan**	**84.69**	**324⇓**	iP	**P**	**02 23 39.3**	**-1.1**
	comp=Z,352nm,1.6s,mb6.2						
TOD	**Tromm**	**84.72**	**41⇓**	eP	**P**	**02 23 41.1**	**+0.5**
SPAK	**Spaichingen-Ko**	**84.73**	**42⇓**	eP	**P**	**02 23 41.3**	**+0.6**
VAI	**Varese**	**84.77**	**44**	P	**P**	**02 23 40.6**	**-0.3**
	comp=Z,953nm,1.9s,mb6.6						
MUD	**Monsted U'grnd**	**84.85**	**34⇓**	iP	**P**	**02 23 41.6**	**+0.5**
MUD				pmax	pmax		
	comp=Z,680nm,1.5s,mb6.6						
MUD				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.4						
MUD	**Monsted U'grnd**	**84.85**	**34⇓**	iP	**P**	**02 23 41.6**	**+0.5**
	comp=Z,683nm,1.5s,mb6.6						
MUD				i S	S	02 34 20.5	+12
MUD							
	comp=Z,2µm,18.0s						
STU	**Stuttgart**	**84.99**	**42**	eP	**P**	**02 23 41.5**	**-0.5**
	comp=Z,979nm,1.9s,mb6.6						
PGF	**Pioggiola**	**85.02**	**48⇓**	iP	**P**	**02 23 42.1**	**-0.2**
	comp=Z,1µm,1.8s,mb6.4						
PGF	**Pioggiola**	**85.02**	**48⇓**	iP	**P**	**02 23 42.1**	**-0.2**
	comp=Z,634nm,1.8s,mb6.5						
PGF	**Pioggiola**	**85.02**	**48⇓**	iP	**P**	**02 23 42.1**	**-0.2**
PGF				pmax	pmax		
	comp=Z,634nm,1.8s,mb6.5						
KONO	**Kongsberg**	**85.04**	**31⇓**	iP	**P**	**02 23 41.0**	**-1.0**
	comp=Z,1µm,2.4s,mb6.7						
KONO				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
KONO	**Kongsberg**	**85.04**	**31**	eP	**P**	**02 23 42.2**	**+0.2**
KONO				eSKS		02 34 06.5	
KONO	**Kongsberg**	**85.04**	**31**	P	**P**	**02 23 42.6**	**+0.6**
KONO				pmax	pmax		
	comp=Z,2µm,2.4s,mb6.7						
UNV	**Unalaska Valle**	**85.13**	**324⇓**	iP	**P**	**02 23 41.5**	**-1.0**
	comp=Z,320nm,1.5s,mb6.2						
UNV				LR	LR		
	comp=Z,7µm,22.0s,MS6.0						
CORF	**Corte**	**85.14**	**48⇓**	eP	**P**	**02 23 42.7**	**-0.2**
TUE	**Stuetta**	**85.15**	**44**	P	**P**	**02 23 43.6**	**+0.7**
OSPF	**L'Ospedale**	**85.19**	**49**	eP	**P**	**02 23 42.4**	**-0.8**
BOB	**Bobbio (Coli)**	**85.28**	**46**	P	**P**	**02 23 43.9**	**+0.4**
SC2M	**Scurtabr**	**85.35**	**46**	P	**P**	**02 23 43.3**	**-0.6**
VSL	**Villasalto**	**85.41**	**51⇓**	iP	**P**	**02 23 44.4**	**+0.1**
	comp=Z,2µm,1.8s,mb6.9						
NRDL	**Niedersach Rie**	**85.47**	**38**	eP	**P**	**02 23 44.7**	**+0.4**
	comp=Z,1µm,1.9s,mb6.7						
NRDL				ePP	PP	02 26 59.3	-3.3
NRDL				eS	S	02 34 10.6	-4.3
DAVA	**Damuels**	**85.49**	**43**	i P	**P**	**02 23 45.0**	**+0.5**
	comp=Z,5µm,3.9s,SNR=70						
KEST	**Kesra**	**85.54**	**55**	P	**P**	**02 23 45.3**	**+0.2**
	comp=Z,15nm,1.0s,mb5.2,baz=181,slow=3.6,SNR=31						
KEST				PKKPbc	PKKPbc	02 41 46.9	-2.5
	comp=Z,2.0nm,1.0s,baz=292,slow=12,SNR=3.5						
KBS	**Kingsbay**	**85.55**	**11⇓**	iP	**P**	**02 23 44.8**	**+0.6**
	comp=Z,777nm,1.6s,mb6.7						
KBS				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
KBS	**Kingsbay**	**85.55**	**11**	eP	**P**	**02 23 45.4**	**+1.1**
DGI	**Dorgali Grotta**	**85.55**	**50**	P	**P**	**02 23 45.1**	**+0.1**
BSEG	**Bad Segeberg**	**85.56**	**36**	eP	**P**	**02 23 44.8**	**+0.1**
	comp=Z,1µm,1.8s,mb6.9						
BSEG				ePP	PP	02 26 59.4	-3.9
BSEG				eS	S	02 34 11.4	-4.3
TNA	**Tin City**	**85.58**	**335⇓**	iP	**P**	**02 23 44.1**	**-0.5**
	comp=Z,335nm,1.6s,mb6.3						
TNA				ePP	PP	02 26 57.0	-6.2
TNA				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
NAO01	**NORSAR Array S**	**85.66**	**29⇓**	iP	**P**	**02 23 45.0**	**-0.1**
	comp=Z,763nm,1.5s,mb6.7						
CLZ	**Clausthal**	**85.66**	**38**	eP	**P**	**02 23 45.5**	**+0.2**
CLZ				eS	S	02 34 13.8	-3.0
CLZ				pmax	pmax		
	comp=Z,954nm,1.8s,mb6.7						
CLZ	**Clausthal**	**85.66**	**38**	eP	**P**	**02 23 45.5**	**+0.2**
	comp=Z,954nm,1.8s,mb6.7						
CLZ				eS	S	02 34 13.8	-3.0
NB2	**NORSAR Subarra**	**85.81**	**29**	P	**P**	**02 23 45.8**	**0.0**
	comp=Z,3.2nm,0.8s,baz=271,slow=4.6						
NB2	**NORSAR Subarra**	**85.81**	**29**	P	**P**	**02 23 45.8**	**0.0**
	comp=Z,3.2nm,0.8s						
NOA	**NORSAR Array B**	**85.81**	**29**	P	**P**	**02 23 45.5**	**-0.4**
NOA				LR	LR	02 59 58.2	
NOA	**NORSAR Array B**	**85.81**	**29**	P	**P**	**02 23 45.5**	**-0.3**
	comp=Z,236nm,1.3s,mb6.3,baz=270,slow=4.8,SNR=58						
NOA				LR	LR	02 59 58.2	
	comp=Z,2µm,20.6s,MS5.4,baz=255,slow=34						
BRMO	**Bormio**	**85.86**	**44**	P	**P**	**02 23 46.9**	**+0.5**
VLC	**Villacollemand**	**85.97**	**46⇓**	iP	**P**	**02 23 45.8**	**-1.2**
	comp=Z,630nm,1.6s,mb6.6						
ERBM	**Eremo**	**85.98**	**46**	P	**P**	**02 23 47.0**	**0.0**
MABI	**Malga Bissina**	**85.98**	**44**	P	**P**	**02 23 46.5**	**-0.5**
NSS	**Namsos**	**86.03**	**26**	eP	**P**	**02 23 46.0**	**-0.8**
	comp=Z,1µm,1.6s,mb6.8						
NSS	**Namsos**	**86.03**	**26**	eP	**P**	**02 23 46.0**	**-0.8**
NSS				AMb	AMB	02 23 50.0	
	comp=Z,1µm,1.6s,mb6.8						
NSS				eSKS		02 34 14.4	
MAIM		**86.06**	**46**	P	**P**	**02 23 46.5**	**-0.9**
FETA	**Feichten**	**86.08**	**43**	i P	**P**	**02 23 47.9**	**+0.4**
	comp=Z,3µm,3.1s,SNR=79						
RETA	**Reutte**	**86.08**	**43**	i P	**P**	**02 23 47.5**	**0.0**
	comp=Z,4µm,3.1s,SNR=37						
BDI	**Bagni Di Lucca**	**86.12**	**46**	P	**P**	**02 23 46.6**	**-1.2**
GRFO	**Grafenberg**	**86.29**	**41⇓**	iP	**P**	**02 23 48.7**	**+0.3**
	comp=Z,765nm,1.8s,mb6.6						
GRFO				LR	LR		
	comp=Z,4µm,22.0s,MS5.8						
GRFO	**Grafenberg**	**86.29**	**41⇓**	iP	**P**	**02 23 48.7**	**+0.3**
GRFO				pmax	pmax		
	comp=Z,765nm,1.8s,mb6.6						
GRFO				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.8						
GRA1	**Grafenberg Arr**	**86.29**	**41**	eP	**P**	**02 23 48.5**	**+0.1**
	comp=Z,894nm,1.7s,mb6.7						
GRA1				eS	S	02 34 20.2	-2.8
GRA1				ePKKP	PKKPbc	02 41 46.3	-1.8
GRA1				LR	LR		
	comp=Z,4µm,21.9s,MS5.7						
GRF	**Grafenberg Arr**	**86.29**	**41**	eP	**P**	**02 23 48.5**	**+0.1**
GRF				eS	S	02 34 20.2	-2.8
GRF				pmax	pmax		
	comp=Z,894nm,1.7s,mb6.7						
GRF				MLR	MLR		
	comp=Z,4µm,21.9s,MS5.7						
GRF	**Grafenberg Arr**	**86.29**	**41**	eP	**P**	**02 23 48.5**	**+0.1**
GRF				eS	S	02 34 20.2	-2.8
GRF				pmax	pmax		
	comp=Z,894nm,1.7s,mb6.7						
GRF	**Grafenberg Arr**	**86.29**	**41**	eP	**P**	**02 23 48.5**	**+0.1**
	comp=Z,894nm,1.7s,mb6.7						
GRF				eS	S	02 34 20.2	-2.8
GRF				ePKKPdf	PKKPdf	02 41 46.3	+5.3
GRF				eL		02 57 40.7	
	comp=Z,4µm,21.9s						
MOTA	**Moosalm**	**86.32**	**43**	i P	**P**	**02 23 48.7**	**0.0**
	comp=Z,679nm,1.8s,mb6.6,SNR=22						
MOTA	**Moosalm**	**86.32**	**43**	i P	**P**	**02 23 48.7**	**0.0**
MOTA				pmax	pmax		
	comp=Z,679nm,1.8s,mb6.6						
STOK	**Stokkvaagen**	**86.38**	**24⇓**	iP	**P**	**02 23 49.1**	**+0.6**
	comp=Z,2µm,1.5s						
STOK	**Stokkvaagen**	**86.38**	**24⇓**	iP	**P**	**02 23 49.1**	**+0.6**
STOK				AMb	AMB	02 23 52.5	
	comp=Z,2µm,1.5s,mb7.1						
ZCCA	**Zocca**	**86.38**	**46**	P	**P**	**02 23 49.5**	**+0.5**
FUR	**Furstenfeldbru**	**86.40**	**42**	eP	**P**	**02 23 49.0**	**0.0**
	comp=Z,2µm,1.9s,mb6.9						
FUR				ePP	PP	02 27 08.6	-1.6
FUR				eS	S	02 34 21.3	-2.9
SQTA	**Sankt Quirin**	**86.40**	**43**	i P	**P**	**02 23 49.2**	**+0.2**
	comp=Z,663nm,1.8s,mb6.6,SNR=24						
SQTA	**Sankt Quirin**	**86.40**	**43**	i P	**P**	**02 23 49.2**	**+0.2**
SQTA				pmax	pmax		
	comp=Z,663nm,1.8s,mb6.6						
APPI	**Appiano**	**86.45**	**44**	P	**P**	**02 23 48.5**	**-0.8**
LOF	**Lofoten**	**86.47**	**22⇓**	iP	**P**	**02 23 51.3**	**+2.4**
	comp=Z,1µm,1.6s,mb6.9						
LOF	**Lofoten**	**86.47**	**22⇓**	iP	**P**	**02 23 51.3**	**+2.4**
LOF				AMb	AMB	02 23 54.8	
	comp=Z,1µm,1.6s,mb6.9						
SPB4	**Spitsbergen Ar**	**86.47**	**12**	eP	**P**	**02 23 48.4**	**-0.4**
MOX	**Moxa**	**86.49**	**40⇓**	iP	**P**	**02 23 49.5**	**+0.1**
	comp=Z,837nm,2.0s,mb6.6						
MOX							
	comp=Z,2µm,21.0s						
MOX	**Moxa**	**86.49**	**40⇓**	iP	**P**	**02 23 49.5**	**+0.1**
MOX				pmax	pmax		
	comp=Z,837nm,2.0s,mb6.6						
MOX				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.5						
MOX	**Moxa**	**86.49**	**40**	eP	**P**	**02 23 49.4**	**0.0**
	comp=Z,761nm,1.8s,mb6.6						
MOX				eS	S	02 34 19.3	-5.7
MOX				ePKKPdf	PKKPdf	02 41 45.7	+5.0
FNVD	**Fontana Vidola**	**86.50**	**46**	P	**P**	**02 23 50.0**	**+0.4**
MAON	**Monte Argentar**	**86.60**	**48**	P	**P**	**02 23 49.7**	**-0.4**
WATA	**Walderalm**	**86.64**	**43⇓**	iP	**P**	**02 23 50.1**	**-0.1**
	comp=Z,538nm,1.8s,mb6.5,SNR=30						
WATA	**Walderalm**	**86.64**	**43⇓**	iP	**P**	**02 23 50.1**	**-0.1**
WATA				pmax	pmax		
	comp=Z,539nm,1.8s,mb6.5						
SEI	**Scarperia**	**86.67**	**46**	P	**P**	**02 23 49.7**	**-0.8**
	comp=Z,2µm,2.4s,mb6.9						
WTTA	**Wattenberg**	**86.69**	**43**	i P	**P**	**02 23 50.7**	**+0.2**
	comp=Z,3µm,2.7s,mb7.0,SNR=35						
WTTA	**Wattenberg**	**86.69**	**43**	i P	**P**	**02 23 50.6**	**+0.2**
	comp=Z,3µm,2.7s,mb7.0						
COP	**Copenhagen**	**86.70**	**35⇓**	iP	**P**	**02 23 50.7**	**+0.4**
COP				pmax	pmax		
	comp=Z,240nm,1.6s,mb6.2						
COP				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
COP	**Copenhagen**	**86.70**	**35⇓**	iP	**P**	**02 23 50.7**	**+0.4**
	comp=Z,244nm,1.6s,mb6.2						
COP				i S	S	02 34 39.6	+13
COP							
	comp=Z,1µm,19.0s						
CTI	**Castel Tesino**	**86.77**	**44**	P	**P**	**02 23 50.9**	**0.0**
VMG	**Vicchio**	**86.81**	**46**	P	**P**	**02 23 50.1**	**-1.0**
	comp=Z,329nm,1.5s,mb6.3						
MANZ	**Manzenberg**	**86.84**	**40**	eP	**P**	**02 23 51.5**	**+0.4**
	comp=Z,1µm,2.1s,mb6.8						
MANZ				ePP	PP	02 27 11.6	-2.2
MANZ				eS	S	02 34 21.5	-6.9
ROTZ	**Rotzenmuhle**	**86.92**	**40**	eP	**P**	**02 23 51.9**	**+0.4**
	comp=Z,1µm,1.9s,mb6.8						
ROTZ				eS	S	02 34 24.7	-4.5
WERD	**Werda**	**86.94**	**40**	eP	**P**	**02 23 51.7**	**+0.1**
	comp=Z,807nm,1.7s,mb6.7						
MOR8	**Moi Rana**	**86.96**	**24⇓**	iP	**P**	**02 23 52.1**	**+0.7**
	comp=Z,744nm,1.6s,mb6.7						
MOR8	**Moi Rana**	**86.96**	**24⇓**	iP	**P**	**02 23 52.1**	**+0.7**
MOR8				AMb	AMB	02 23 55.5	
	comp=Z,744nm,1.6s,mb6.7						
GUNZ	**Gunzen**	**86.96**	**40**	eP	**P**	**02 23 52.0**	**+0.3**
	comp=Z,885nm,1.8s,mb6.7						
WERN	**Wernitzgruen**	**87.00**	**40**	eP	**P**	**02 23 52.2**	**+0.3**
	comp=Z,972nm,1.7s,mb6.8						
SFI	**Santa Sofia**	**87.03**	**46**	P	**P**	**02 23 51.7**	**-0.5**
	comp=Z,1µm,1.8s,mb6.8						
TANN	**Tannenbergstha**	**87.04**	**40**	eP	**P**	**02 23 52.3**	**+0.2**
	comp=Z,941nm,1.7s,mb6.7						
TANN				eS	S	02 34 23.0	-7.3
NKC	**Novy Kostel**	**87.05**	**40⇓**	iP	**P**	**02 23 52.7**	**+0.6**
NKC				eSKS		02 34 15.3	
HFS	**Hagfors**	**87.08**	**30**	P	**P**	**02 23 51.5**	**-0.6**
HFS				pmax	pmax		
	comp=Z,50nm,0.9s						
HFS	**Hagfors**	**87.08**	**30**	P	**P**	**02 23 51.5**	**-0.6**
	comp=Z,50nm,0.9s,mb5.8,baz=259,slow=3.0,SNR=37						
SEST	**Monte Rota**	**87.12**	**44**	P	**P**	**02 23 52.8**	**+0.2**
CRE	**Caprese Michel**	**87.13**	**47**	P	**P**	**02 23 51.5**	**-1.2**
	comp=Z,291nm,1.8s,mb6.2						
BRSN	**Barisano**	**87.18**	**46**	P	**P**	**02 23 53.5**	**+0.6**
	comp=Z,2µm,1.7s,mb7.0						
TOLF	**Tolfa**	**87.26**	**48**	P	**P**	**02 23 52.3**	**-1.1**
RGN	**Rugen**	**87.29**	**36⇓**	iP	**P**	**02 23 53.8**	**+0.6**
	comp=Z,660nm,1.4s,mb6.7						
GAMB	**Gambell**	**87.31**	**334⇓**	iP	**P**	**02 23 52.7**	**-0.4**
	comp=Z,536nm,1.6s,mb6.5						
ABTA	**Abfaltersbach**	**87.32**	**43**	i P	**P**	**02 23 53.4**	**-0.1**
	comp=Z,3µm,3.0s,SNR=92						
CLL	**Collm**	**87.33**	**39⇓**	iP	**P**	**02 23 53.7**	**+0.2**
	comp=Z,916nm,1.8s,mb6.7						
CLL				e		02 24 04.0	
CLL				eS	S	02 34 35.0	+2.0
CLL				LR	LR		
	comp=Z,5µm,25.2s,MS5.8						
CLL	**Collm**	**87.33**	**39⇓**	iP	**P**	**02 23 53.7**	**+0.2**
CLL				eS	S	02 34 35.0	+2.0
CLL				pmax	pmax		
	comp=Z,916nm,1.8s,mb6.7						
CLL				MLR	MLR		
	comp=Z,5µm,25.2s,MS5.8						
CLL	**Collm**	**87.33**	**39⇓**	iP	**P**	**02 23 53.7**	**+0.2**
	comp=Z,916nm,1.8s,mb6.7						
CLL				ex	x	02 24 04.0	
CLL				ex	x	02 24 25.0	
CLL				eS	S	02 34 35.0	+2.0
CLL				ePS		02 35 44.0	
CLL				ePPS		02 35 57.0	
CLL				ex	x	02 36 17.0	
CLL				eSS	SS	02 40 23.0	+5.7
CLL				e(SSSS)		02 46 36.0	
CLL	**Collm**	**87.33**	**39⇓**	iP	**P**	**02 23 53.5**	**0.0**
	comp=Z,929nm,1.8s,mb6.7						
CLL				ePP	PP	02 27 18.5	+0.9
CLL				eS	S	02 34 43.4	+10
CLL				ePS		02 35 36.0	
CLL				ePPS		02 35 51.9	
CLL				eSSS		02 43 54.5	
CLL				eSSSS		02 46 52.3	
CLL				eLR	LR	02 51 49.1	
CDCA	**Citt' di Caste**	**87.34**	**47**	P	**P**	**02 23 52.4**	**-1.3**
	comp=Z,165nm,1.8s,mb6.0						
BADI	**Badiali**	**87.35**	**47**	P	**P**	**02 23 52.5**	**-1.3**
WET	**Wettzell**	**87.40**	**41**	eP	**P**	**02 23 54.1**	**+0.2**
	comp=Z,1µm,1.8s,mb6.9						
WET				ePP	PP	02 27 15.9	-2.4
WET				eS	S	02 34 26.6	-7.2
RSM	**Repubblica di**	**87.47**	**46**	P	**P**	**02 23 54.0**	**-0.3**
BJO1	**Bjornoya**	**87.55**	**15**	eP	**P**	**02 23 56.6**	**+2.5**
BJO1				e		02 34 43.5	
MURB	**Monte Urbino**	**87.57**	**47**	P	**P**	**02 23 53.9**	**-0.9**
FBE	**Freiberg**	**87.58**	**39**	eP	**P**	**02 23 54.9**	**+0.2**
FBE				ePP	PP	02 27 16.2	-3.4
BJO	**Bjornoya**	**87.60**	**15**	eP	**P**	**02 23 56.6**	**+2.2**
BJO				e		02 34 43.5	
PTS	**Pantelleria**	**87.61**	**53**	P	**P**	**02 23 56.1**	**+0.9**
	comp=Z,1µm,2.0s,mb6.8						
ASS	**Assisi**	**87.68**	**47**	P	**P**	**02 23 54.5**	**-0.8**
	comp=Z,28nm,1.5s,mb5.3						
VNA3	**Neumayer Olymp**	**87.68**	**162**	eP	**P**	**02 23 55.0**	**+0.3**
VNA3				e	pP	02 23 58.6	-2.0
VNA3				e	pP	02 24 01.6	+1.0
VNA3				e		02 24 09.8	
VNA3				e		02 24 17.5	
VNA3				e		02 24 25.6	
VNA3				e		02 24 37.8	
VNA3				e		02 27 20.2	
VNA3				e		02 27 28.3	
VNA3				e		02 27 34.4	
RUE	**Ruedersdorf**	**87.72**	**38⇓**	iP	**P**	**02 23 55.5**	**+0.2**
	comp=Z,1µm,1.8s,mb6.8						
RUE	**Ruedersdorf**	**87.72**	**38**	eP	**P**	**02 23 55.4**	**+0.1**
	comp=Z,1µm,1.7s,mb6.8						
RUE				eS	S	02 34 27.5	-9.2
FSSB	**Fossombrone**	**87.72**	**47**	P	**P**	**02 23 54.7**	**-0.8**
	comp=Z,530nm,2.0s,mb6.4						
MNS	**Montasola**	**87.75**	**48**	P	**P**	**02 23 55.6**	**-0.1**
PESA	**Pesaro**	**87.75**	**46**	P	**P**	**02 23 55.3**	**-0.4**
LAV9	**Lanuvio**	**87.81**	**49**	P	**P**	**02 23 56.4**	**+0.4**
	comp=Z,940nm,1.6s,mb6.8						
RDP	**Rocca di Papa**	**87.82**	**48**	P	**P**	**02 23 56.2**	**+0.1**
GMNA	**Gemona**	**87.85**	**44**	P	**P**	**02 23 55.9**	**-0.2**
	comp=Z,4µm,1.6s						
KHC	**Kasperske Hory**	**87.86**	**41⇓**	iP	**P**	**02 23 56.4**	**+0.3**
KHC				e	pP	02 24 03.0	+1.0
KHC				e		02 24 44.0	
KHC				eSKS		02 34 26.1	
KHC				LR	LR		
	comp=Z,4µm,23.2s,MS5.8						
KHC	**Kasperske Hory**	**87.86**	**41⇓**	iP	**P**	**02 23 56.4**	**+0.3**
KHC				e	pP	02 24 03.0	+1.0
KHC				e		02 34 26.1	
KHC				MLR	MLR		
	comp=Z,4µm,23.2s,MS5.8						
KHC	**Kasperske Hory**	**87.86**	**41⇓**	iP	**P**	**02 23 56.4**	**+0.3**
KHC				pP	pP	02 24 03.0	+1.0
KHC				x	x	02 24 44.0	
KHC				eSKS		02 34 26.1	
KHC				AMS	AMS	02 57 00.0	
	comp=Z,4µm,23.2s						
KBA	**Koelnbreinsper**	**87.86**	**43**	i P	**P**	**02 23 56.2**	**+0.1**
	comp=Z,2µm,2.5s,mb7.0,SNR=71						
SNTG	**Esanatoglia**	**87.87**	**47**	P	**P**	**02 23 55.6**	**-0.7**
	comp=Z,533nm,1.7s,mb6.5						
VNA1	**Neumayer--Stat**	**87.89**	**162**	eP	**P**	**02 23 56.4**	**+0.7**
VNA1				e		02 23 59.4	
VNA1				e		02 24 04.1	
VNA1				e		02 24 11.1	
VNA1				e		02 24 20.5	
VNA1				e		02 24 26.8	
VNA1				e		02 24 40.0	
BRG	**Berggiesshubel**	**87.95**	**39⇓**	iP	**P**	**02 23 57.0**	**+0.5**
	comp=Z,517nm,1.9s,mb6.4						
BRG				ePP	PP	02 27 18.6	-4.1
BRG				S	S	02 34 47.0	+8.0
BRG				SS	SS	02 40 27.0	+0.5
BRG				e		02 41 42.4	
BRG				e		02 44 11.9	
BRG				eP'P'		02 49 46.3	
BRG				LR	LR		
	comp=Z,3µm,20.6s,MS5.7						
BRG	**Berggiesshubel**	**87.95**	**39⇓**	iP	**P**	**02 23 57.0**	**+0.5**
BRG				e		02 27 18.6	
BRG				S	S	02 34 47.0	+8.0
BRG				SS	SS	02 40 27.0	+0.5
BRG				pmax	pmax		
	comp=Z,517nm,1.9s,mb6.4						
BRG				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.2						
BRG				MLR	MLR		
	comp=N,1µm,21.3s,MS5.6						
BRG				MLR	MLR		
	comp=E,2µm,25.8s,MS5.6						
BRG				MLR	MLR		
	comp=Z,3µm,20.6s						
BRG	**Berggiesshubel**	**87.95**	**39**	eP	**P**	**02 23 56.7**	**+0.2**
	comp=Z,919nm,1.9s,mb6.7						
BRG				ePP	PP	02 27 17.8	-4.8
BRG				eS	S	02 34 28.6	-10
BRG				ePKKPdf	PKKPdf	02 41 41.0	+2.8
BRG	**Berggiesshubel**	**87.95**	**39⇓**	iP	**P**	**02 23 57.0**	**+0.5**
	comp=Z,863nm,1.9s,mb6.7						
BRG				ePP	PP	02 27 18.6	-4.1
	comp=Z,46nm,1.6s						
BRG				S	S	02 34 47.0	+8.0
BRG				SS	SS	02 40 27.0	+0.5
BRG				e		02 41 42.4	
	comp=Z,26nm,1.8s						
BRG				e		02 44 11.9	
	comp=Z,27nm,1.8s						
BRG				ePKPPKP		02 49 46.3	
	comp=Z,104nm,2.5s						
BRG							
	comp=N,2µm,21.3s						
BRG							
	comp=E,4µm,25.8s						
BRG							
	comp=Z,6µm,20.6s						
GEC2	**GERESS Array S**	**87.96**	**41**	eP	**P**	**02 23 56.5**	**-0.1**
GEC2				eS	S	02 34 29.1	-10
GEC2				pmax	pmax		
	comp=Z,410nm,1.6s,mb6.4						
GEC2	**GERESS Array S**	**87.96**	**41**	eP	**P**	**02 23 56.5**	**-0.1**
	comp=Z,410nm,1.6s,mb6.4						
GEC2				eS	S	02 34 29.1	-10
GEC2				ePKKPdf	PKKPdf	02 41 40.2	+2.1
GERES	**GERESS Array B**	**87.96**	**41**	P	**P**	**02 23 56.6**	**0.0**
GERES				PKKPbc	PKKPbc	02 41 40.3	-3.8
GERES				LR	LR	02 58 48.8	
GERES	**GERESS Array B**	**87.96**	**41**	P	**P**	**02 23 56.6**	**0.0**
	comp=Z,38nm,1.0s,mb5.6,baz=259,slow=3.5,SNR=102						
GERES				PKKPbc	PKKPbc	02 41 40.3	-3.8
	comp=Z,0.8nm,0.6s,baz=96,slow=1.3,SNR=4.1						
GERES				LR	LR	02 58 48.8	
	comp=Z,1µm,18.7s,MS5.4,baz=257,slow=33						
ERC	**Erice**	**88.00**	**52**	P	**P**	**02 23 56.3**	**-0.7**
	comp=Z,1µm,2.0s,mb6.8						
CING	**Cingoli**	**88.05**	**47**	P	**P**	**02 23 56.4**	**-0.7**
MYKA	**Terra Mystica**	**88.10**	**44⇓**	iP	**P**	**02 23 57.5**	**+0.2**
	comp=Z,57µm,4.0s						
BSD	**Bornholm Skovb**	**88.16**	**35⇓**	iP	**P**	**02 23 57.4**	**0.0**
BSD				pmax	pmax		
	comp=Z,170nm,1.5s,mb6.0						
BSD				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.7						
BSD	**Bornholm Skovb**	**88.16**	**35⇓**	iP	**P**	**02 23 57.4**	**0.0**
	comp=Z,167nm,1.5s,mb6.0						
BSD				eS	S	02 34 49.9	+9.1
BSD							
	comp=Z,3µm,20.0s						
TRO	**Tromso**	**88.25**	**20⇓**	iP	**P**	**02 23 56.4**	**-1.1**
TRO				AMb	AMB	02 23 59.8	
	comp=Z,636nm,0.0s						
TRO				ePP	PP	02 27 23.6	-0.9
TRO				eSKS		02 34 25.6	
GUAR	**Guarcino**	**88.26**	**48**	P	**P**	**02 23 57.5**	**-0.7**
VNA2	**Neumayer--Watz**	**88.26**	**162**	eP	**P**	**02 23 57.4**	**-0.1**
VNA2				e	pP	02 24 01.2	-2.2
VNA2				e		02 24 04.9	
VNA2				e		02 24 12.6	
VNA2				e		02 24 20.5	
VNA2				e		02 24 28.2	
VNA2				e		02 24 41.2	
VNA2				e		02 27 25.7	
VNA2				e		02 27 32.9	
VNA2				e		02 27 38.8	
AQU	**L'Aquila**	**88.28**	**48⇓**	iP	**P**	**02 23 57.9**	**-0.4**
	comp=Z,576nm,1.8s,mb6.5						
AQU	**L'Aquila**	**88.28**	**48⇓**	iP	**P**	**02 23 57.9**	**-0.3**
AQU				pmax	pmax		
	comp=Z,576nm,1.8s,mb6.5						
AQU	**L'Aquila**	**88.28**	**48⇑**	iP	**P**	**02 23 58.6**	**+0.4**
VOY	**Vojsko**	**88.33**	**44**	eP	**P**	**02 23 58.8**	**+0.4**
VOY				e		02 24 44.3	
VOY				e		02 24 56.2	
AOI	**Ancona**	**88.33**	**47**	P	**P**	**02 23 58.2**	**-0.2**
PRA	**Prague**	**88.33**	**40**	⇓P	**P**	**02 23 59.0**	**+0.7**
PVCC	**Panska Ves**	**88.38**	**40⇓**	iP	**P**	**02 23 59.1**	**+0.6**
PVCC				AMS	AMS	02 56 50.0	
	comp=Z,6µm,24.2s						
USI	**Ustica**	**88.41**	**51**	P	**P**	**02 23 58.1**	**-0.8**
	comp=Z,143nm,1.4s,mb6.0						
PRU	**Pruhonice**	**88.41**	**40⇓**	iP	**P**	**02 23 59.0**	**+0.3**

PRU eS S 02 34 40.7 -2.7
PRU AMS AMS 02 57 00.0
comp=Z,6µm,22.9s
MOA Molln 88.42 42 *i* P **P 02 23 58.8 +0.1**
comp=Z,5µm,4.8s,SNR=57
VENT Ventotene 88.42 49 P **P 02 23 59.6 +0.7**
JAVS Javornik 88.46 44 *i* P **P 02 23 59.6 +0.6**
VVLD Villa Vallelon 88.48 48 P **P 02 23 59.1 -0.1**
CLTB Caltabellotta 88.53 53 P **P 02 23 59.6 +0.1**
comp=Z,4µm,4.2s
OBKA Obir 88.74 44 *i* P **P 02 24 00.3 0.0**
comp=Z,3µm,3.4s,SNR=45
LJU Ljubljana 88.77 44 *i* P **P 02 24 01.9 +1.5**
LJU eSKSac SKSac 02 34 29.9 +0.7
LJU eS S 02 34 52.9 +6.0
RNI2 Rionero Sannit 88.89 48 P **P 02 24 00.2 -0.9**
MIDA Miranda 88.98 48 P **P 02 24 01.6 +0.1**
PERS Pernice 89.11 43 *i* P **P 02 24 01.8 -0.3**
BISS Bistriski jare 89.12 43⇓*i* P **P 02 24 01.5 -0.6**
GIB Gibilmanna 89.13 52 P **P 02 24 01.7 -0.7**
NVLJ Novalja 89.15 46 P **P 02 24 01.9 -0.4**
CSLB Castelbuono 89.16 52 P **P 02 24 01.9 -0.6**
comp=Z,131nm,1.7s,mb6.0
UPC Upice 89.30 40⇓*i* P **P 02 24 03.5 +0.7**
BOJS Bojanci 89.32 45 *i* P **P 02 24 03.5 +0.4**
BOJS eSKSac SKSac 02 34 34.3 +1.8
BOJS eS S 02 34 57.0 +4.8
ARSA Arzberg 89.33 43 *i* P **P 02 24 02.9 -0.1**
comp=Z,3µm,3.2s,SNR=61
PSB1 Pescosannita 89.43 49 P **P 02 24 03.5 -0.2**
KSP Ksiaz 89.44 39 *i* P **P 02 24 04.4 +0.9**
KSP LMZ 02 58 05.7
comp=Z,8µm,24.1s
KSP Ksiaz 89.44 39⇓*e*P **P 02 24 04.0 +0.5**
KSP ePP PP 02 27 32.5 -2.0
KSP eSKS 02 34 34.0
KSP eS S 02 34 55.5 +2.4
KSP eSS SS 02 40 53.0 +4.9
KSP LR LR
comp=Z,9µm,24.1s,MS6.1
KSP Ksiaz 89.44 39⇓*e*P **P 02 24 04.0 +0.5**
KSP *e* 02 27 32.5
KSP *e* 02 34 34.0
KSP eS S 02 34 55.5 +2.4
KSP eSS SS 02 40 53.0 +4.9
RAFF Raffo Rosso 89.47 53 P **P 02 24 04.3 +0.4**
CONA Conrad Observa 89.48 42 *i* PcP PcP 02 24 04.0 -1.1
comp=Z,3µm,3.3s,SNR=50
DPC Dobruska-Polom 89.51 40⇓*i* P **P 02 24 04.7 +0.9**
DPC eSKS 02 34 29.0
DPC AMS AMS 02 59 10.0
comp=Z,5µm,22.6s
FG2 Serracapriola 89.64 48 P **P 02 24 03.8 -0.8**
comp=Z,718nm,1.9s,mb6.7
VRAC Vranov 89.81 41 P **P 02 24 06.2 +1.0**
VRAC Vranov 89.81 41 P **P 02 24 05.0 -0.2**
VRAC pmax pmax
comp=Z,80nm,1.3s
VRAC Vranov 89.81 41 P **P 02 24 05.0 -0.2**
comp=Z,80nm,1.3s,mb5.9,baz=280,slow=6.7,SNR=9.3
VRAC Vranov 89.81 41⇓*i* P **P 02 24 06.0 +0.8**
HMDC Modica 89.83 53 P **P 02 24 06.8 +1.2**
KTK1 Kautokeino 89.87 21⇓*i* P **P 02 24 05.4 +0.2**
comp=Z,498nm,1.7s,mb6.6
KTK1 Kautokeino 89.87 21⇓*i* P **P 02 24 05.4 +0.2**
KTK1 AMb AMB 02 24 08.8
comp=Z,498nm,1.7s,mb6.6
SNAA Sanae 89.89 162 *e*P **P 02 24 05.4 +0.3**
SNAA *e* 02 24 08.4
SNAA *e* 02 24 13.0
SNAA *e* 02 24 19.6
SNAA *e* 02 24 28.5
SNAA *e* 02 24 35.2
SNAA *e* 02 24 44.6
SNAA *e* 02 27 38.8
SNAA *e* 02 27 46.6
SNAA *e* 02 27 52.3
SNAA Sanae 89.89 162 *i* P **P 02 24 04.9 -0.2**
RGNG Rignano Grg 89.97 48 P **P 02 24 04.7 -1.5**
FG4 Candela 89.97 49 P **P 02 24 05.4 -0.8**
comp=Z,2µm,2.5s,mb6.9
SOP Sopron 89.98 42⇓*e*PcP PcP 02 24 06.4 -0.9
SSY Sortino 90.04 53 P **P 02 24 06.8 +0.2**
SISC Sisak 90.11 45 P **P 02 24 07.3 +0.6**
FGMS Monte Sant'Ang 90.24 48 P **P 02 24 06.0 -1.4**
comp=Z,364nm,1.9s,mb6.4
ZST Bratislava 90.28 42 *e*P **P 02 24 07.7 +0.2**
comp=Z,144nm,1.8s,mb6.0
ZST ePP PP 02 27 37.7 -3.6
ZST eS S 02 35 05.5 +4.5
ZST LR LR
comp=Z,2µm,18.1s,MS5.5
ZST Bratislava 90.28 42 *e*P **P 02 24 07.7 +0.2**
ZST ePP PP 02 27 37.7 -3.6
ZST eS S 02 35 05.4 +4.4
MORC Moravsky Berou 90.36 40⇓*i* P **P 02 24 08.7 +0.9**
comp=Z,1µm,2.3s,mb6.8
MORC Moravsky Berou 90.36 40⇓*i* P **P 02 24 08.5 +0.7**
MODS Modra-Piesok 90.37 42 *e*P **P 02 24 08.2 +0.3**
MODS ePP PP 02 27 38.9 -3.1
MODS eS S 02 35 02.3 +0.4
MODS Modra-Piesok 90.37 42 *e*P **P 02 24 08.2 +0.3**
MODS ePP PP 02 27 38.9 -3.1
MODS eS S 02 35 02.1 +0.3
ARCES ARCESS Array B 90.53 20 P **P 02 24 07.5 -0.7**
ARCES PP PP 02 27 40.4 -2.3
ARCES PKKPbc PKKPbc 02 41 34.2 -4.2
ARCES LR LR 03 00 34.8
ARCES ARCESS Array B 90.53 20 P **P 02 24 07.5 -0.7**
comp=Z,19nm,0.6s,mb5.6,baz=283,slow=3.0,SNR=55
ARCES PP PP 02 27 40.4 -2.3
comp=Z,8.4nm,1.0s,baz=260,slow=4.8,SNR=4.1
ARCES PKKPbc PKKPbc 02 41 34.2 -4.2
comp=Z,6.0nm,1.0s,baz=300,slow=2.4,SNR=5.4
ARCES LR LR 03 00 34.8
comp=Z,2µm,21.7s,MS5.5,baz=285,slow=33
RAC Raciborz 90.74 40 *e*P **P 02 24 10.1 +0.5**
RAC LR LR
comp=Z,6µm,24.2s,MS5.9
OKC Ostrava-Krasne 90.74 40⇓*i* P **P 02 24 10.2 +0.6**
OKC eSKS 02 34 45.4
OKC Ostrava-Krasne 90.74 40⇓*i* P **P 02 24 10.2 +0.6**
OKC eSKS 02 34 45.4
OKC AMS AMS 02 58 30.0
comp=Z,4µm,23.3s
ORI Oriolo Calabro 90.80 50 P **P 02 24 09.6 -0.5**
KEV Kevo 90.98 20 *e*p **P 02 24 08.5 -1.8**
comp=Z,8.4nm,0.7s,mb5.2
KEV Kevo 90.98 20⇓*i* P **P 02 24 09.5 -0.8**
KEV pmax pmax
comp=Z,350nm,1.6s,mb6.4
KOLL Kolacno 91.09 41 *i* P **P 02 24 12.4 +1.2**
KOLL ePP PP 02 27 44.6 -3.1
TIP Timpagrande 91.14 51⇓*i* P **P 02 24 10.2 -1.4**
comp=Z,294nm,1.8s,mb6.3
STON Ston 91.38 47 P **P 02 24 12.3 -0.5**
VYHS Vyhne 91.38 41 *e*P **P 02 24 13.4 +0.8**
comp=Z,469nm,2.3s,mb6.4
VYHS ePP PP 02 27 48.2 -1.9
VYHS eS S 02 35 05.5 -5.6
VYHS LR LR
comp=Z,2µm,24.1s,MS5.3
VYHS Vyhne 91.38 41 *e*P **P 02 24 13.4 +0.8**
VYHS ePP PP 02 27 48.2 -1.9
VYHS eS S 02 35 05.4 -5.7
ADK Adak 91.45 322⇓*i* P **P 02 24 11.6 -1.2**
comp=Z,440nm,1.5s,mb6.6
ADK LR LR
comp=Z,3µm,21.0s,MS5.7
ADK Adak 91.45 322 P **P 02 24 12.6 -0.2**
ADK pmax pmax
comp=Z,440nm,1.5s,mb6.6
PKSM Moragy 91.59 44⇓*i* P **P 02 24 14.2 +0.6**
BUD Budapest 91.66 42⇓*e*PcP PcP 02 24 14.0 -0.8
OJC Ojcow 91.74 39 *i* P **P 02 24 15.0 +0.8**
OJC ePP PP 02 27 49.7 -3.1
OJC eSKSac SKSac 02 34 49.4 +3.1
OJC L 03 02 54.9
comp=Z,3.4nm,21.4s
OJC Ojcow 91.74 39⇓*i* P **P 02 24 15.0 +0.8**
OJC *e* 02 27 49.7
OJC *e* 02 34 49.4
BRY Bratogost 91.99 47⇓*i* P **P 02 24 16.0 +0.4**

HCY Herceg Novi 92.02 47⇓*i* P **P 02 24 16.0 +0.3**
WAR Warsaw 92.15 37 *e*P **P 02 24 16.9 +0.8**
WAR LMZ 02 59 14.3
comp=Z,5µm,25.7s
WAR Warsaw 92.15 37⇓*e*P **P 02 24 16.9 +0.8**
WAR LR LR
comp=Z,5µm,25.7s,MS5.9
PSZ Piszkesteto 92.17 42⇓*i* P **P 02 24 17.2 +1.0**
comp=Z,606nm,1.9s,mb6.6
PSZ ePP PP 02 27 55.5 -0.8
PSZ Piszkesteto 92.17 42⇑dPcP 02 24 17.3
PSZ Piszkesteto 92.17 42⇑*i* P **P 02 24 17.6 +1.3**
MSKU Masuku 92.20 91 PFAKE 02 24 30.0 +13
MSKU LR LR
comp=Z,98nm,20.0s
NIE Niedzica 92.20 40 *e*P **P 02 24 17.8 +1.4**
UPM Unac-Piva 92.21 47⇓*i* P **P 02 24 17.0 +0.4**
NKY Niksic 92.33 47⇓*i* P **P 02 24 16.9 -0.2**
BUM Brajici-Budva 92.34 47⇓*i* P **P 02 24 17.9 +0.7**
KECS Kecovo 92.47 41 *e*P **P 02 24 18.4 +0.8**
comp=Z,78nm,1.7s,mb5.8
KECS Kecovo 92.47 41 *e*P **P 02 24 18.4 +0.8**
KECS pmax pmax
comp=Z,78nm,1.7s,mb5.8
PLE Pljevlja 92.54 46⇓*i* P **P 02 24 18.8 +0.7**
TTG Podgorica 92.58 47⇓*i* P **P 02 24 18.4 +0.1**
ULC Ulcinj 92.64 48⇓*i* P **P 02 24 18.6 0.0**
KAF Kangasniemi 92.78 27 *e*p **P 02 24 16.8 -1.9**
comp=Z,10nm,0.9s,mb5.2,baz=283,slow=4.5
KAF Kangasniemi 92.78 27 *e*P **P 02 24 16.8 -1.9**
KAF pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
STHS Stebnicka Huta 92.80 40 *e*P **P 02 24 20.9 +1.8**
comp=Z,97nm,2.1s,mb5.9
STHS ePP PP 02 28 00.3 -0.9
STHS Stebnicka Huta 92.80 40 *e*P **P 02 24 20.9 +1.8**
STHS pmax pmax
comp=Z,97nm,2.1s,mb5.9
STHS Stebnicka Huta 92.80 40 *e*P **P 02 24 20.8 +1.7**
STHS ePP PP 02 28 00.3 -0.9
FINES FINESS Array B 92.85 28 P **P 02 24 18.4 -0.7**
comp=Z,12nm,0.6s,mb5.5,baz=271,slow=2.1,SNR=45
FINES PKiKP PKiKP 02 29 08.0 +1.2
comp=Z,2.1nm,0.8s,baz=228,slow=4.9,SNR=3.6
FINES PKKPbc PKKPbc 02 41 25.8 -6.4
comp=Z,0.9nm,0.6s,baz=127,slow=3.1,SNR=8.1
FINES PKPPKP 02 49 39.6
comp=Z,1.6nm,0.8s,baz=123,slow=5.1,SNR=3.5
DIVS Divcibare 92.85 46 *e*P **P 02 24 20.2 +0.7**
IVA Berane 92.98 47⇓*i* P **P 02 24 20.5 +0.4**
CRVS Cervenica-Dubn 93.03 41 *e*P **P 02 24 21.1 +0.9**
CRVS eS S 02 35 31.2 +5.4
PVY Plav 93.08 47⇓*i* P **P 02 24 21.1 +0.5**
SUW Suwalki 93.08 35 *i* P **P 02 24 20.2 -0.2**
TIR Tirane 93.19 48 *e*P **P 02 24 21.9 +0.8**
KOLS Kolonicke sedl 93.55 40 *e*P **P 02 24 23.6 +1.0**
UZH Uzhgorod 93.62 41⇑*i* P **P 02 24 23.3 +0.4**
UZH *i* 02 34 51.0
UZH *i* S S 02 35 33.0 +1.9
UZH *i* PS PS 02 36 44.0 -2.6
UZH *i* SS SS 02 41 51.0 +2.6
KWP Kalwaria 93.69 40 *i* P **P 02 24 24.3 +1.0**
KWP LMZ 03 00 03.0
comp=Z,4µm,24.0s
KWP Kalwaria 93.69 40⇑*i* P **P 02 24 24.4 +1.2**
BZS Buzias 93.73 44⇓*i* P **P 02 24 24.3 +0.8**
IGT Igoumenitsa 93.83 50 *e*P **P 02 24 24.6 +0.4**
TRPA Tarpa 93.88 41⇑*i* P **P 02 24 24.4 +0.3**
OHR Ohrid 93.93 48 *e*P **P 02 24 25.0 +0.5**
OHR Ohrid 93.93 48⇓*i* P **P 02 24 25.0 +0.5**
OHR ePP PP 02 28 09.0 -1.3
LKD Levkas 94.21 51 *e*P **P 02 24 26.1 +0.2**
KRUS Krusevo 94.22 48⇓*i* P **P 02 24 26.4 +0.5**
KRUS ePP PP 02 28 09.1 -3.5
LVZ Lovozero 94.22 20 P **P 02 24 25.8 +0.5**
comp=Z,655nm,1.5s,mb6.8,SNR=7.1
LVZ Lovozero 94.22 20 PFAKE 02 24 40.0 +15
LVZ LR LR
comp=Z,2µm,22.0s,MS5.6
SKO Skopje 94.25 47 *e*P **P 02 24 26.9 +0.9**
SKO Skopje 94.25 47⇓*i* P **P 02 24 26.7 +0.7**
SKO ePP PP 02 28 11.9 -0.9
DRGR 94.26 43 P **P 02 24 26.5 +0.6**
DRGR 94.26 43⇑*i* P **P 02 24 26.8 +0.9**
AFI Afiamalu 94.31 256 PFAKE 02 24 40.0 +13
AFI LR LR
comp=Z,6µm,19.0s,MS6.0
BIA Bitola 94.33 48 *e*P **P 02 24 26.2 -0.2**
BIA Bitola 94.33 48⇓*i* P **P 02 24 26.0 -0.4**
BIA ePP PP 02 28 12.1 -1.4
IZAR Zarasai 94.40 33 *e*P **P 02 24 25.9 -0.5**
IZAR AMb AMB 02 24 29.2
comp=Z,50nm,1.6s,mb5.7
KFL Anninata 94.41 51 *e*P **P 02 24 26.8 0.0**
FNA Florina 94.41 49 *e*P **P 02 24 27.1 +0.3**
MAIT Maitri 94.42 161 *e*P **P 02 24 25.0 -1.1**
IIGN Ignalina 94.49 34 *e*P **P 02 24 26.5 -0.3**
IIGN AMb AMB 02 24 29.8
comp=Z,60nm,1.5s,mb5.8
LVV L'vov 94.49 39*c i*P **P 02 24 27.2 +0.3**
LVV *e* 02 35 01.0
LVV eS S 02 35 39.0 +0.4
LVV MLR MLR
comp=Z,2µm,22.0s,MS5.5
GZR Gura Zlata 94.58 44⇑*i* P **P 02 24 28.5 +1.1**
QSPA South Pole Qui 94.67 180 PKKPbc PKKPbc 02 41 22.3 -5.8
comp=Z,6.4nm,1.0s,baz=276,slow=2.2,SNR=13
QSPA PKPPKP 02 49 33.5
comp=Z,1.6nm,0.9s,baz=315,slow=1.4,SNR=2.9
JOF Joensuu 94.75 26 *e*p **P 02 24 25.6 -2.2**
comp=Z,13nm,1.0s,mb5.3
JOF Joensuu 94.75 26 *e*P **P 02 24 25.6 -2.2**
JOF pmax pmax
comp=Z,13nm,1.0s,mb5.3
IDID Didziasalis 94.78 34 *e*P **P 02 24 27.8 -0.3**
IDID AMb AMB 02 24 30.9
comp=Z,30nm,1.7s,mb5.5
STIP Stip 94.85 48 *e*P **P 02 24 28.7 -0.1**
STIP Stip 94.85 48⇓*i* P **P 02 24 28.4 -0.3**
STIP ePP PP 02 28 13.4 -4.1
BILL Bilibino 94.91 340⇓*i* P **P 02 24 27.2 -1.2**
BILL LR LR
comp=Z,3µm,19.0s,MS5.7
BILL Bilibino 94.91 340 *e*P **P 02 24 26.8 -1.6**
BILL *e* 02 28 11.8
BILL *e* 02 34 58.1
BILL pmax pmax
comp=Z,33nm,1.1s,mb5.7
BILL MLR MLR
comp=Z,3µm,20.0s,MS5.8
GRG Griva 95.15 48 *e*P **P 02 24 30.7 +0.6**
VAY Valandovo 95.21 48⇓*i* P **P 02 24 29.9 -0.5**
VAY ePP PP 02 28 18.3 -1.9
SELA Sela 95.24 51 *e*P **P 02 24 31.2 +0.5**
PUL Pulkovo 95.33 29⇑*e*P **P 02 24 30.5 0.0**
PYL PYLOS 95.36 52 *e*P **P 02 24 30.7 -0.5**
LIT Litokhoron 95.37 49 *e*P **P 02 24 30.7 -0.4**
VTS Vitosha 95.43 47 *e*P **P 02 24 32.0 +0.6**
VTS Vitosha 95.43 47 P **P 02 24 31.8 +0.4**
VTS Vitosha 95.43 47 *e*P **P 02 24 31.0 -0.4**
VTS Vitosha 95.43 47⇓*i* P **P 02 24 32.4 +1.0**
AGG Agios Georgios 95.45 50 *e*P **P 02 24 31.8 +0.3**
KNT Kendrikon 95.48 48 *e*P **P 02 24 32.0 +0.4**
KKB Krupnik 95.48 47 *e*P **P 02 24 31.0 -0.6**
CRAR CRAIOVA 95.50 45 P **P 02 24 32.8 +1.1**
MNK Minsk 95.61 34 *e*P **P 02 24 31.0 -0.9**
MNK pmax pmax
comp=Z,500nm,1.0s,mb6.9
THE Thessaloniki 95.63 49 *e*P **P 02 24 32.4 0.0**
VLX Vlachokerasia 95.78 52 *e*P **P 02 24 33.9 +0.8**
MMB Musomiste 96.01 48 *e*P **P 02 24 34.0 0.0**
PLG Polygyros 96.04 49 *e*P **P 02 24 34.5 +0.3**
XOR Xorichti 96.04 50 *e*P **P 02 24 33.9 -0.3**
PGB Panagyurishte 96.13 46 *e*P **P 02 24 35.0 +0.4**
DID Didima 96.43 52 *e*P **P 02 24 35.2 -0.8**
MLR Muntele Rosu 96.73 43 P **P 02 24 38.0 +0.7**
MLR Muntele Rosu 96.73 43 P **P 02 24 37.8 +0.6**
MLR pmax pmax
comp=Z,178nm,1.3s
MLR Muntele Rosu 96.73 43 P **P 02 24 37.8 +0.6**
comp=Z,178nm,1.3s,mb6.3,baz=325,slow=2.8,SNR=76
MLR Muntele Rosu 96.73 43⇑*i* P **P 02 24 38.0 +0.8**
ZIMR 96.75 45⇓*i* P **P 02 24 37.7 +0.3**

ZIMR 96.75 45⇓*i* P **P 02 24 37.7 +0.3**
SMY Shemya 96.77 324 PFAKE 02 24 50.0 +13
SMY LR LR
comp=Z,3µm,21.0s,MS5.7
PVL Pavlikeni 96.83 46 *e*P **P 02 24 37.5 -0.2**
VRI Vrincioaia 97.18 43 P **P 02 24 40.0 +0.7**
VRI Vrincioaia 97.18 43⇑*i* P **P 02 24 40.3 +1.1**
TSUM Tsumeb 97.21 109⇓*i* P **P 02 24 39.8 -0.1**
comp=Z,176nm,1.5s,mb6.3
TSUM LR LR
comp=Z,18µm,20.0s,MS6.5
KDZ Kurdzhali 97.23 47 *e*P **P 02 24 39.0 -0.6**
KARN Karanos 97.36 54 *e*P **P 02 24 40.0 -0.3**
KIEV Kiev 97.49 38 PFAKE 02 24 50.0 +9.5
KIEV LR LR
comp=Z,3µm,22.0s,MS5.8
AKASG Malin Array Be 97.50 38 P **P 02 24 39.0 -1.5**
comp=Z,4.2nm,1.0s,mb4.8,baz=271,slow=4.6,SNR=37
AKASG PP PP 02 28 32.1 -5.4
comp=Z,0.2nm,0.3s,baz=277,slow=8.5,SNR=5.5
AKASG PKKPbc PKKPbc 02 41 16.9 -2.6
comp=Z,1.1nm,0.6s,baz=84,slow=3.1,SNR=7.1
AKASG PKPPKP 02 49 28.1
comp=Z,0.4nm,0.5s,baz=91,slow=1.2,SNR=9.9
AKASG LR LR 03 07 32.1
comp=Z,3µm,19.1s,MS5.8,baz=295,slow=35
GVD Gavdhos 97.61 54 *e*P **P 02 24 40.9 -0.5**
JMB Yambol 97.89 46 *e*P **P 02 24 42.1 -0.5**
SIVA Sivas 98.15 54 *e*P **P 02 24 43.5 -0.4**
KIS Kishinev 98.28 41 *e*P **P 02 24 42.0 -2.2**
KIS *e* 02 24 50.0
KIS *e* 02 28 40.0
KIS ePPP 02 30 53.0
KIS *i* 02 35 21.0
KIS eS S 02 36 05.0 -6.4
KIS ePS PS 02 37 34.0 -3.6
KIS ePPS 02 38 14.0
KIS pmax pmax
comp=Z,410nm,2.0s,mb6.6
KIS pmax pmax
comp=Z,1µm,9.0s
KIS pmax pmax
comp=Z,2µm,12.0s
KIS Kishinev 98.28 41 *e*P **P 02 24 42.0 -2.2**
comp=Z,400nm,2.0s,mb6.6
KIS Kishinev 98.28 41 *e*PP PP 02 28 40.0 -3.7
KIS Kishinev 98.28 41 *e*PS PS 02 37 34.0 -3.6
KIS Kishinev 98.28 41 *e*PPS 02 38 14.0
KIS *e*L 02 56 08.0
KIS LRM 03 02 52.0
comp=Z,3µm,24.0s
HARR Harsova 98.29 44 P **P 02 24 44.5 +0.2**
APE Apeiranthos 98.31 52 *e*P **P 02 24 43.1 -1.5**
SANT Santorini 98.40 52 *e*P **P 02 24 43.9 -1.0**
CHOS Chios island 98.43 50 *e*P **P 02 24 45.1 0.0**
LAST Lasithi 98.66 54 *e*P **P 02 24 45.9 -0.3**
TIRR Tirgusor 98.69 44 P **P 02 24 47.2 +1.1**
TIRR Tirgusor 98.69 44⇑*i* P **P 02 24 46.2 +0.1**
PSN Preselentsi 98.73 45 *e*P **P 02 24 46.0 -0.3**
BLCB Balcova 99.19 50 *e*P **P 02 24 47.8 -0.6**
ZKR Zakros 99.26 53 *e*P **P 02 24 47.9 -1.0**
SBA Scott Base 99.62 191 PFAKE 02 25 00.0 +10
SBA LR LR
comp=Z,2µm,19.0s,MS5.7
OBN Obninsk 100.16 32 *e*Pdif Pdif 02 24 50.9 -1.5
comp=Z,400nm,1.8s
OBN LR LR
comp=Z,4µm,22.0s,MS5.9
OBN Obninsk 100.16 32⇑*i* P Pdif 02 24 51.3 -1.1
OBN *e* 02 28 56.1
OBN *e* 02 35 25.8
OBN eSS SS 02 43 19.1 -1.1
OBN pmax pmax
comp=Z,240nm,1.8s
SUR Sutherland 100.30 122 *e*Pdif Pdif 02 24 54.2 +1.2
comp=Z,574nm,2.2s
SUR LR LR
comp=Z,22µm,20.0s,MS6.7
SUR Sutherland 100.30 122 PKKPbc PKKPbc 02 41 08.1 -2.9
comp=Z,21nm,1.2s,baz=33,slow=16,SNR=3.3
MOS Moscow 100.46 31 *e*P Pdif 02 24 51.1 -2.6
MOS *e* 02 28 59.6
MOS *e*PPP 02 31 08.0
MOS *e* 02 35 25.4
MOS eSS SS 02 43 21.5 -2.8
MOS pmax pmax
comp=Z,500nm,2.0s
MOS pmax pmax
comp=Z,176nm,1.5s
MOS MLR MLR
comp=Z,2µm,19.0s,MS5.7
VNDA Vanda 100.71 191 P Pdif 02 24 53.3 -1.5
VNDA 02 29 02.7
VNDA pmax pmax
comp=Z,4.0nm,1.4s
VNDA pmax pmax
comp=Z,6.0nm,1.2s
VNDA Vanda 100.71 191 P Pdif 02 24 53.3 -1.5
comp=Z,3.5nm,1.4s,baz=133,slow=6.6,SNR=3.3
VNDA PP PP 02 29 02.7 +1.2
comp=Z,5.5nm,1.2s,baz=94,slow=0.6,SNR=3.8
PRGR Permogore 101.31 24 *e*P Pdif 02 24 54.6 -2.9
PRGR *i* 02 29 02.3
PRGR pmax pmax
comp=Z,61nm,1.1s
TIXI Tiksi 101.78 351 *i* Pdif Pdif 02 24 57.1 -2.4
comp=Z,16nm,1.3s
TIXI ePP PP 02 29 06.2 -3.2
TIXI LR LR
comp=Z,3µm,21.0s,MS5.8
TIXI Tiksi 101.78 351*d i*P Pdif 02 24 57.1 -2.5
TIXI *e* 02 29 04.9
TIXI eS SKSac 02 35 37.4 -0.3
TIXI ePS PS 02 38 09.3 -4.9
TIXI eSSS 02 47 38.8
TIXI pmax pmax
comp=Z,31nm,1.9s
TIXI MLR MLR
comp=Z,3µm,20.0s,MS5.8
ISP Isparta 101.97 50 *e*P Pdif 02 25 00.2 -0.2
FUNA Funafuti 102.86 262 PFAKE 02 25 10.0 +5.6
FUNA LR LR
comp=Z,10µm,19.0s,MS6.3
ANTO Ankara 103.10 47 *i* Pdif Pdif 02 25 05.8 +0.3
comp=Z,102nm,1.8s
ANTO LR LR
comp=Z,1µm,20.0s,MS5.5
ANTO Ankara 103.10 47 *i* P Pdif 02 25 05.8 +0.4
ANTO pmax pmax
comp=Z,103nm,1.8s
ANTO MLR MLR
comp=Z,1µm,20.0s,MS5.5
ANTO Ankara 103.10 47 Pdiff Pdif 02 25 06.3 +0.9
SNR=13
ANTO Ankara 103.10 47 P Pdif 02 25 06.3 +0.9
SNR=13
ANTO Ankara 103.10 47 P Pdif 02 25 06.3 +0.9
SNR=13
ANTO Ankara 103.10 47 P Pdif 02 25 06.3 +0.9
SNR=13
ANTO Ankara 103.10 47 P Pdif 02 25 06.3 +0.9
SNR=13
ANTO Ankara 103.10 47 P Pdif 02 25 06.3 +0.9
SNR=13
BR131 Keskin Array S 103.77 47 PFAKE 02 25 20.0 +12
BR131 LR LR
comp=Z,813nm,20.0s,MS5.3
BRTR Keskin Array B 103.77 47 Pdiff Pdif 02 25 08.4 +0.1
comp=Z,6.3nm,1.3s,baz=323,slow=1.9,SNR=11
BRTR PKiKP PKiKP 02 29 25.5 -1.4
comp=Z,2.9nm,1.0s,baz=287,slow=3.1,SNR=9.0
BRTR PKKPbc PKKPbc 02 40 59.5 -1.6
comp=Z,1.1nm,0.6s,baz=135,slow=3.7,SNR=6.7
MA2 Magadan 105.19 336 PFAKE 02 29 40.0 +11
MA2 LR LR
comp=Z,3µm,19.0s,MS5.8
PET Petropavlovsk 105.24 328 PFAKE 02 29 40.0 +11
PET LR LR
comp=Z,2µm,19.0s,MS5.8
SNZO South Karori 105.69 228 PFAKE 02 29 40.0 +10
SNZO LR LR
comp=Z,4µm,19.0s,MS6.0
LSZ Lusaka 107.26 104 *e*PKP PKiKP 02 29 35.4 +1.5
LSZ *e*PP PP 02 29 49.2 -3.0
LSZ LR LR

comp=Z,7μm,20.0s,MS6.2
MALT Malatya 107.75 47 *e*PKP PKiKP 02 29 34.2 -0.1
MALT *e*PP PP 02 29 53.4 -1.4
EIL Elat 107.76 57 PP PP 02 29 52.0 -3.3
comp=Z,1.6nm,0.7s,baz=292,slow=9.6,SNR=4.7
KIV Kislovodsk 108.46 41 PFAKE 02 29 50.0 +15
KIV LR LR
comp=Z,1μm,22.0s,MS5.5
KIV Kislovodsk 108.46 41 *e*P Pdif 02 25 29.8 +0.5
KIV *e* 02 29 57.0
KIV *e* 02 36 06.8
KIV *e*PS PS 02 39 23.5 -1.3
KIV *e*SS SS 02 45 09.5 -5.1
KIV pmax pmax
comp=Z,9.0nm,0.8s
ARU Arti 109.77 24 *e*PKP PKiKP 02 29 36.7 -0.8
ARU *e*PP PP 02 30 05.8 -2.8
ARU LR LR
comp=Z,2μm,19.0s,MS5.7
YAK Yakutsk 110.09 346 *e*PKP PKiKP 02 29 36.4 -1.6
YAK *e*PP PP 02 30 07.8 -3.0
YAK LR LR
comp=Z,2μm,19.0s,MS5.8
MSL Mosul 111.96 48 *ex* x 02 29 40.0
MSL *ex* x 02 30 26.0
MSL *ex* x 02 36 25.0
MSL *ex* x 02 40 02.0
AKTO Aktyubinsk 113.60 29 PKKPbc PKKPbc 02 40 27.2 -3.0
comp=Z,2.2nm,0.6s,baz=102,slow=3.2,SNR=7.2
BHD Baghdad 114.14 50 *ex* x 02 29 45.0
BHD *i* x x 02 30 37.0
BHD *ex* x 02 36 27.0
KMBO Kilima Mbogo 115.72 89 *e*PKPdf PKPdf 02 29 51.0 +0.9
KMBO *e*PP PP 02 30 53.5 +0.4
KMBO LR LR
comp=Z,8μm,22.0s,MS6.3
KMBO Kilima Mbogo 115.72 89 PKPdf PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 P PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 P PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 P PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 P PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 P PKPdf 02 29 52.0 +2.0
SNR=7.3
KMBO Kilima Mbogo 115.72 89 PKP PKPdf 02 29 51.7 +1.7
comp=Z,3.3nm,1.1s,baz=47,slow=1.6,SNR=12
KMBO PP PP 02 30 50.9 -2.1
comp=Z,3.2nm,1.1s,baz=263,slow=6.8,SNR=6.0
DESE Dese 116.44 75 *e*P PKPdf 02 29 52.8 +1.4
BRVK Borovoye 116.75 21 *e*PKPdf PKPdf 02 29 49.8 -1.1
BRVK *e*PP PP 02 30 56.5 -1.8
BRVK LR LR
comp=Z,3μm,21.0s,MS5.8
BOD Bodaibo 116.93 353 *e*PKIKP PKPdf 02 29 48.5 -2.6
BOD pmax pmax
comp=Z,14nm,1.5s
YSS Yuzh-Sakhalins 117.07 330 PFAKE 02 30 00.0 +8.3
YSS LR LR
comp=Z,2μm,21.0s,MS5.7
CASY Casey 118.15 184 PFAKE 02 30 00.0 +6.8
CASY LR LR
comp=Z,1μm,19.0s,MS5.6
NVS Novosibirsk 118.80 12 *e*PKIKP PKPdf 02 29 53.2 -1.6
NVS pmax pmax
comp=Z,100nm,2.0s
NVS pmax pmax
comp=E,23nm,1.6s
ASAJ Asahikawa 119.05 327 PP PP 02 31 11.8 -2.7
comp=E,23nm,1.1s,baz=69,slow=13,SNR=3.9
ATD Arta Tunnel 119.45 74 PP PP 02 31 18.0 -0.9
comp=E,4.4nm,0.3s,baz=286,slow=23,SNR=3.7
HABR Khabarovsk 119.54 335 *e*P Pdif 02 26 15.7 -2.8
HABR *i* 02 29 54.1
HABR *e* 02 31 15.7
HABR *e*PPP 02 33 46.8
HABR 02 37 06.3
HABR *e*SS SS 02 47 43.9 +4.2
HABR *e*SSS 02 52 08.9
HABR MLR MLR
comp=Z,2μm,20.5s,MS5.7
ERM Erimo 120.11 325 PFAKE 02 30 10.0 +12
ERM LR LR
comp=Z,2μm,22.0s,MS5.7
KLR Kul'dur 120.26 338 *e*PKIKP PKPdf 02 29 51.3 -6.5
KLR pmax pmax
comp=Z,50nm,1.6s
KURK Kurchatov 121.44 17 *e*PKPdf PKPdf 02 29 58.9 -1.1
KURK *e*PP PP 02 31 26.0 -4.5
KURK LR LR
comp=Z,2μm,19.0s,MS5.8
KURK Kurchatov 121.44 17 P PKPdf 02 29 59.7 -0.3
SNR=18
KURK Kurchatov 121.44 17 PKPdf PKPdf 02 29 59.7 -0.3
SNR=18
KURK Kurchatov 121.44 17 P PKPdf 02 29 59.7 -0.3
SNR=18
KURK Kurchatov 121.44 17 P PKPdf 02 29 59.7 -0.3
SNR=18
KURK Kurchatov 121.44 17 P PKPdf 02 29 59.7 -0.3
SNR=18
KURK Kurchatov 121.44 17 P PKPdf 02 29 59.7 -0.3
SNR=18
HNR Honiara 121.89 262 PFAKE 02 30 10.0 +8.1
HNR LR LR
comp=Z,3μm,21.0s,MS6.0
CIT Chita 122.63 351 *e*PKIKP PKPdf 02 30 01.8 -0.5
CIT pmax pmax
comp=Z,183nm,1.6s
IRK Irkutsk 123.28 358 ⇓ *i*PKIKP PKPdf 02 30 02.4 -1.1
IRK *e* 02 43 06.4
IRK pmax pmax
comp=Z,213nm,1.8s
TLY Talaya 123.86 358 *e*PKPdf PKPdf 02 30 04.0 -0.6
TLY *e*PP PP 02 31 41.7 -5.0
TLY LR LR
comp=Z,3μm,21.0s,MS5.9
TLY Talaya 123.86 358 *i* PKIKP PKPdf 02 30 04.3 -0.3
TLY *e*PS PS 02 41 40.0 -5.2
TLY *e*PPS 02 43 09.7
TLY *e*SS SS 02 48 37.7 +3.5
TLY pmax pmax
comp=Z,51nm,1.1s
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 PKPdf PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
TLY Talaya 123.86 358 P PKPdf 02 30 04.7 +0.1
SNR=20
MOY Mondy 123.91 0 *e*PKIKP PKPdf 02 30 04.8 +0.1
MOY pmax pmax
comp=Z,229nm,2.7s
HIA Hailar 124.02 346 *e*PKPdf PKPdf 02 30 02.8 -2.2
HIA *e*PP PP 02 31 40.7 -7.2
HIA LR LR
comp=Z,3μm,20.0s,MS5.9
TAU Tasmania Unive 124.42 220 PFAKE 02 30 20.0 +14
TAU LR LR
comp=Z,4μm,20.0s,MS6.1
MDJ Mudanjiang 124.89 336 PKP PKPdf 02 30 05.4 -1.4
MDJ XPKP 02 30 10.3
MDJ PP PP 02 31 52.9 -1.1
MDJ PKS 02 33 41.8
MDJ SKS SKSdf 02 37 17.1 -1.0
MDJ SS SS 02 48 48.8 +1.0
MDJ PP PP
comp=Z,904nm,9.2s
MDJ LR LR
comp=N,693nm,37.0s,MS5.8
MDJ LR LR
comp=E,3μm,33.9s,MS5.8
MDJ LR LR
comp=Z,2μm,35.5s,MS5.6
MDJ Mudanjiang 124.89 336 *e*PKPdf PKPdf 02 30 05.2 -1.7
MDJ LR LR
comp=Z,3μm,22.0s,MS5.9
ZAK Zakamensk 125.17 359 ⇑ *i*PKIKP PKPdf 02 30 06.2 -1.0
ZAK pmax pmax
comp=Z,34nm,1.8s
OPO Ambohidratompo 125.20 109 PKP PKPdf 02 30 06.4 -1.8
comp=Z,8.6nm,1.0s,baz=324,slow=2.2,SNR=6.1
MKAR Makanchi Array 126.02 16 PKP PKPdf 02 30 07.9 -1.1
MKAR PP PP 02 31 54.0 -7.3
MKAR Makanchi Array 126.02 16 PKP PKPdf 02 30 07.9 -1.1
comp=Z,16nm,0.8s,baz=336,slow=2.1,SNR=89
MKAR PP PP 02 31 54.0 -7.3
comp=Z,1.4nm,0.8s,baz=332,slow=8.8,SNR=2.6
ARMA Armidale 126.37 235 *e*PKP PKPdf 02 30 09.3 -0.8
USP Ospenovka 126.41 24 P PKPdf 02 30 10.1 +0.3
SNR=66
CNB Canberra Magne 126.41 229 *e*PKP PKPdf 02 30 09.5 -0.5
comp=Z,127nm,1.4s
MAJO Matsushiro 126.60 323 *e*PKPdf PKPdf 02 30 08.7 -1.7
MAJO LR LR
comp=Z,2μm,22.0s,MS5.8
MAT Matsushiro 126.60 323 PKP PKPdf 02 30 08.5 -1.9
MJAR Matsushiro Arr 126.60 323 PKP PKPdf 02 30 09.2 -1.2
comp=Z,8.8nm,1.0s,baz=296,slow=0.6,SNR=21
MJAR PP PP 02 31 58.6 -7.2
comp=Z,5.6nm,1.2s,baz=11,slow=6.0,SNR=4.1
EKS2 Erkin-Say 126.61 25 *e*PKPdf PKPdf 02 30 10.7 +0.5
EKS2 *e*PP PP 02 32 05.3 -0.1
EKS2 LR LR
comp=Z,2μm,21.0s,MS5.8
EKS2 Erkin-Say 126.61 25 P PKPdf 02 30 10.9 +0.7
SNR=63
CHMS Chumysh 126.74 24 P PKPdf 02 30 10.7 +0.2
SNR=17
FRU Bishkek 126.82 25 ⇓ *i*PKIKP PKPdf 02 30 11.0 +0.4
FRU pmax pmax
comp=Z,405nm,2.0s
AAK Ala-Archa 126.93 25 *e*PKPdf PKPdf 02 30 10.1 -0.7
AAK *e*PP PP 02 32 07.4 -0.2
AAK Ala-Archa 126.93 25 P PKPdf 02 30 11.2 +0.4
SNR=54
AML Almayashu 127.00 26 PFAKE 02 30 20.0 +9.0
AML LR LR
comp=Z,2μm,21.0s,MS5.7
AML Almayashu 127.00 26 P PKPdf 02 30 12.1 +1.1
SNR=39
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 PKPdf PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
HATD Hatta, Dubai 127.03 54 P PKPdf 02 30 11.5 0.0
SNR=6.7
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 PKPdf PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
ASHO Ashiyiah 127.04 54 P PKPdf 02 30 11.4 -0.1
SNR=5.3
KBK Karagaybulak 127.10 24 P PKPdf 02 30 11.6 +0.5
SNR=30
TKM2 Tokmak 2 127.14 24 *e*PKPdf PKPdf 02 30 10.7 -0.5
TKM2 *e*PP PP 02 32 08.1 -0.8
TKM2 LR LR
comp=Z,2μm,22.0s,MS5.8
TKM2 Tokmak 2 127.14 24 P PKPdf 02 30 11.5 +0.3
SNR=31
CN2 Changchun 127.18 338 PKP PKPdf 02 30 09.3 -1.9
CN2 *e*PP PP 02 32 10.4 +1.3
CN2 *e*SS SS 02 49 13.4 -3.0
CN2 PP PP
comp=Z,400nm,8.0s
CN2 LR LR
comp=N,2μm,21.0s,MS5.8
CN2 LR LR
comp=E,1μm,21.0s,MS5.8
CN2 LR LR
comp=Z,2μm,22.0s,MS5.8
UCH Uchtor 127.27 25 *e*PKPdf PKPdf 02 30 12.6 +1.2
UCH *e*PP PP 02 32 11.4 +1.6
UCH LR LR
comp=Z,2μm,21.0s,MS5.8
UCH Uchtor 127.27 25 P PKPdf 02 30 12.9 +1.4
SNR=90
ULN Ulaanbaatar 127.49 355 *e*PKPdf PKPdf 02 30 11.2 -0.5
ULN *e*PP PP 02 32 03.6 -7.3
ULN LR LR
comp=Z,2μm,21.0s,MS5.9
ULN Ulaanbaatar 127.49 355 *d i*PKIKP PKPdf 02 30 11.1 -0.6
ULN Ulaanbaatar 127.49 355 P PKPdf 02 30 11.6 -0.1
SNR=72
ULN Ulaanbaatar 127.49 355 PKPdf PKPdf 02 30 11.6 -0.1
SNR=72
ULN Ulaanbaatar 127.49 355 P PKPdf 02 30 11.6 -0.1
SNR=72
ULN Ulaanbaatar 127.49 355 P PKPdf 02 30 11.6 -0.1
SNR=72
SONM Songino Array 127.57 356 PKhKP 02 30 02.4
comp=Z,1.3nm,0.9s,baz=326,slow=1.3,SNR=6.6
SONM PKP PKPdf 02 30 11.5 -0.3
comp=Z,44nm,0.9s,baz=320,slow=1.1,SNR=179
SONM PP PP 02 32 03.2 -8.2
comp=Z,13nm,1.3s,baz=339,slow=3.6,SNR=3.2
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 PKPdf PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
ABTO Aybut 127.60 64 P PKPdf 02 30 12.7 0.0
SNR=6.0
KZA Kyzart 127.71 25 P PKPdf 02 30 13.4 +1.1
SNR=38
ULHL Ulahol 127.97 24 P PKPdf 02 30 13.4 +0.6
SNR=24
EIDS Eidsvold 128.27 241 *e*PKPdf PKPdf 02 30 07.9 -6.0
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 PKPdf PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SMDO Samad 129.40 55 P PKPdf 02 30 15.4 -0.7
SNR=12
SNY Shenyang 129.58 339 PKPR PKPdf 02 30 14.8 -1.1
SNY SS SS 02 49 41.6 -4.5
SNY PP PP
comp=Z,1μm,9.0s
SNY LR LR
comp=N,2μm,23.1s,MS5.9
SNY LR LR
comp=E,2μm,20.1s,MS5.9
SNY LR LR
comp=Z,3μm,22.8s,MS5.9
KSH Kashi 130.13 26 *i* PKP PKPdf 02 30 17.6 +0.6
KSH *e*PP PP 02 32 23.8 -4.8
KSH *e*SKS SKSdf 02 37 24.1 -3.9
KSH PP PP
comp=Z,5μm,5.1s
KSH LR LR
comp=Z,4μm,13.4s,MS6.2
WMQ Urumqi 130.17 13 *i* PKP PKPdf 02 30 16.8 -0.1
WMQ PP PP 02 32 34.3 +5.8
WMQ SKS SKSdf 02 37 22.9 -5.0
WMQ PP PP
comp=Z,811nm,7.2s
WMQ LR LR
comp=N,2μm,24.3s,MS5.9
WMQ LR LR
comp=E,3μm,23.5s,MS5.9
WMQ LR LR
comp=Z,2μm,23.5s,MS5.7
KSRS Korea Array 131.45 332 PKP PKPdf 02 30 18.6 -1.0
comp=Z,31nm,1.0s,baz=23,slow=1.4,SNR=74
KSRS PP PP 02 32 36.6 -0.6
comp=Z,4.8nm,1.1s,baz=26,slow=6.7,SNR=3.3
INCN Inchon 132.02 333 *e*PKPdf PKPdf 02 30 18.7 -1.9
INCN *e*PP PP 02 32 41.8 +0.9
INCN LR LR
comp=Z,3μm,22.0s,MS5.9
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 PKPdf PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
INCN Inchon 132.02 333 P PKPdf 02 30 19.8 -0.8
SNR=6.0
DL2 Dalian 132.85 339 *i* PKPR PKPdf 02 30 20.8 -1.4
DL2 PP PP 02 32 44.0 -2.0
DL2 PP PP
comp=Z,1μm,6.7s
DL2 LR LR
comp=N,580nm,26.4s,MS5.4
DL2 LR LR
comp=E,820nm,22.9s,MS5.4
DL2 LR LR
comp=Z,1μm,27.6s,MS5.5
JNU Nakatsue 133.27 326 PKP PKPdf 02 30 21.4 -1.7
comp=Z,32nm,1.3s,baz=345,slow=10,SNR=5.5
GUMO Guam 133.34 293 PKP PKPdf 02 30 21.4 -2.3
GUMO LR LR
comp=Z,3μm,22.0s,MS5.9
GUMO Guam 133.34 293 PKP PKPdf 02 30 21.4 -2.3
comp=Z,36nm,0.7s,baz=124,slow=4.2,SNR=3.7
BJI Beijing 133.54 344 PKP PKPdf 02 30 22.6 -0.8
BJI PP PP 02 32 48.8 -1.5
BJI SS SS 02 50 34.3 +0.1
BJI LR LR
comp=N,2μm,26.5s,MS6.0
BJI LR LR
comp=E,3μm,23.8s,MS6.0
BJI LR LR
comp=Z,4μm,33.0s
BJT Baijiatuau 133.56 344 *e*PKPdf PKPdf 02 30 22.4 -1.1
BJT *e*PP PP 02 32 46.6 -3.8
BJT LR LR
comp=Z,3μm,21.0s,MS5.9
STKA Stephens Creek 133.74 229 *e*PKP PKPdf 02 30 15.9 -8.1
comp=Z,3.7nm,0.8s
STKA *i* 02 30 23.1
STKA *e*PP PP 02 33 07.4 +15
STKA *e*PKS 02 33 49.4
STKA Stephens Creek 133.74 229 *e*PKP PKPdf 02 30 15.9 -8.1
STKA PKP PKPdf 02 30 21.9 -2.1
STKA *i* 02 30 23.1
STKA *e*PP PP 02 33 07.4 +15
STKA *e*PKS 02 33 49.4
STKA Stephens Creek 133.74 229 PKP PKPdf 02 30 21.9 -2.1
comp=Z,31nm,0.9s,baz=107,slow=2.3,SNR=36
HHC Hu-ho-hao-te 133.81 349 ⇓ PKP PKPdf 02 30 24.3 +0.4
HHC PP PP 02 32 50.3 -1.6
HHC PKS 02 33 54.1
HHC SKS SKSdf 02 37 29.3 -5.3
HHC SKKS SKKSac 02 39 45.9 -2.3
HHC SS SS 02 50 41.6 +4.4
HHC PP PP
comp=Z,1μm,4.7s
HHC LR LR
comp=N,2μm,20.2s,MS5.9
HHC LR LR
comp=E,1μm,21.4s,MS5.9
HHC LR LR
comp=Z,3μm,28.5s
CTA Charters Tower 133.89 247 *e*PKP PKPdf 02 30 23.3 -1.3
comp=Z,42nm,1.5s
CTA *e*PKS 02 33 52.2
CTA Charters Tower 133.89 247 PKP PKPdf 02 30 23.6 -0.9
comp=Z,25nm,0.7s,baz=70,slow=2.6,SNR=14
CTA SKPbc SKPbc 02 33 51.6 -1.4
comp=Z,8.9nm,0.8s,baz=52,slow=5.8,SNR=4.3
CTAO Charters Tower 133.89 247 *e*PKPdf PKPdf 02 30 23.3 -1.3
CTAO *e*SKP 02 33 52.6
CTAO LR LR
comp=Z,2μm,22.0s,MS5.8
BTO Baotou 134.30 351 *e*PKP PKPdf 02 30 22.8 -2.0
PMG Port Moresby 134.51 261 *e*PKPdf PKPdf 02 30 25.6 -0.3
PMG LR LR
comp=Z,3μm,19.0s,MS6.0
PMG Port Moresby 134.51 261 ⇑ *i*PKIKP PKPdf 02 30 26.6 +0.7
PMG Port Moresby 134.51 261 PKP PKPdf 02 30 24.8 -1.1
comp=Z,20nm,1.0s,baz=156,slow=7.2,SNR=7.8
THN Thein Dam 135.71 32 *e*P PKPdf 02 30 26.0 -1.7
GTA Gaotai 136.14 2 PKP PKPdf 02 30 28.1 -0.2
TIA Tai'an 136.82 341 *e*PKP PKPdf 02 30 28.5 -1.2
BHJ Bhuj 138.32 47 *e*P PKPdf 02 30 31.7 -1.1
DDI Dehra Dun 138.60 31 *ex* x 02 30 20.4
LZH Lanzhou 139.43 357 *e*PKP PKPdf 02 30 24.8 -10
LZH XPKP 02 30 29.3
LZH PKS 02 34 00.3
LZH PP PP
comp=Z,1μm,8.5s
LZH LR LR
comp=E,2μm,18.2s
LZH LR LR
comp=Z,4μm,20.3s,MS6.2
NDI New Delhi 139.43 34 *e*P PKPdf 02 30 33.5 -1.2
NDI *ex* x 02 33 10.5
AJM Ajmer 139.56 39 *e*P PKPdf 02 30 32.8 -2.2
SSE Sheshan 139.81 333 *e*PKP PKPdf 02 30 34.3 -1.0
SSE PP PP 02 33 31.9 +2.0
SSE SS SS 02 51 49.1 -0.5
SSE PP PP
comp=Z,2μm,5.7s
SSE LR LR
comp=N,2μm,21.8s,MS5.9
SSE LR LR
comp=E,2μm,21.8s,MS5.9
SSE LR LR
comp=Z,4μm,22.2s,MS6.1
NJ2 Nanjing 139.96 337 *e*PKP PKPdf 02 30 34.6 -1.0
NJ2 PP PP 02 33 35.0 +4.3
NJ2 PKS 02 34 09.5
NJ2 SKS SKSdf 02 37 40.5 -5.0
NJ2 PP PP
comp=Z,430nm,7.0s
NJ2 LR LR
comp=Z,6μm,30.0s,MS6.1
LGTI Lohaghat 140.41 30 *e*P PKPdf 02 30 32.0 -4.5
XAN Xi'an 140.90 350 PKP PKPdf 02 30 28.8 -8.4
XAN PKS 02 34 05.8
XAN PP PP
comp=Z,2μm,7.4s
XAN LR LR
comp=N,1μm,23.1s,MS5.8
XAN LR LR
comp=E,2μm,23.1s,MS5.8

WHN	Wuhan	142.93	342	PKP	PKPdf	02 30 35.5	-5.4
WHN				LR	LR		
	comp=Z,5µm,28.5s,MS6.1						
BOM	Bombay	143.29	50	ex	PKPdf	02 30 33.6	-8.3
BOM				ex	x	02 30 41.2	
	comp=Z,128nm,2.0s						
ASAR	Alice Springs	143.52	236	PKHKP		02 30 37.5	
ASAR				pmax	pmax		
	comp=Z,80nm,0.8s						
ASAR	Alice Springs	143.52	236	PKhKP		02 30 37.5	
	comp=Z,80nm,0.8s,baz=119,slow=3.8,SNR=59						
BHPL	Bhopal	143.63	39	eP	PKPdf	02 30 39.5	-2.9
FORT	Forrest	143.96	221	⇑iPKP	PKPdf	02 30 38.4	-4.3
	comp=Z,87nm,0.6s						
POO	Poona	144.29	49	⇓iP	PKPdf	02 30 40.0	-3.6
	comp=Z,977nm,1.2s						
POO				eP		02 30 40.5	
LSA	Lhasa	144.43	16	PKP	PKPdf	02 30 39.1	-4.5
LSA				LR	LR		
	comp=E,2µm,44.3s						
LSA				LR	LR		
	comp=Z,3µm,31.4s						
LSA	Lhasa	144.43	16	ePKPdf	PKPdf	02 30 41.8	-1.8
LSA				eSKPbc	SKPbc	02 34 24.3	+2.2
LSA				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
CD2	Chengdu	144.58	357	PKP	PKPdf	02 30 41.4	-2.4
CD2				PP	PP	02 33 58.9	+0.6
CD2				PKS		02 34 15.6	
CD2				SKS	SKSdf	02 37 48.6	-4.2
CD2				SKKS	SKKSac	02 40 51.0	-0.9
CD2				SS	SS	02 52 43.0	-1.0
CD2				PP	PP		
	comp=Z,3µm,5.6s						
CD2				LR	LR		
	comp=N,2µm,20.4s,MS6.0						
CD2				LR	LR		
	comp=E,2µm,22.2s,MS6.0						
CD2				LR	LR		
	comp=Z,2µm,19.2s,MS6.0						
WB2	Warramunga Arr	144.63	242	ePKP	PKPdf	02 30 41.6	-2.5
WRA	Warramunga Arr	144.64	242	PKIKP	PKPdf	02 30 41.3	-2.9
WRA				pmax	pmax		
	comp=Z,243nm,1.0s						
WRA	Warramunga Arr	144.64	242	PKP	PKPdf	02 30 41.3	-2.9
	comp=Z,242nm,1.0s,baz=108,slow=3.5,SNR=174						
AKL	Akola	145.16	43	⇓iP	PKPbc	02 30 44.0	-0.6
AKL				ex	x	02 30 46.9	
	comp=Z,2µm,1.7s						
JBP	Jabalpur	145.26	36	⇓iP	PKPbc	02 30 43.7	-1.1
KAD	Karad	145.28	50	eP	PKPbc	02 30 43.5	-1.5
KAD				eP		02 30 43.9	
NACB	Ninganchiao	145.33	327	ePKPbc	PKPbc	02 30 43.1	-2.0
GOA	Goa	146.04	53	eP	PKPdf	02 30 47.2	+0.6
NGP	Nagpur	146.18	40	eP	PKPdf	02 30 45.7	-1.1
BLSP	Bilaspur	147.31	35	eP	PKPdf	02 30 47.6	-1.1
BOK	Bokaro	147.88	28	eP	PKPdf	02 30 48.9	-0.7
BOK				eP		02 30 49.6	
MNGI	Mangalore	148.22	56	eP	PKPdf	02 30 50.4	+0.1
MNGI				ex	x	02 30 58.8	
	comp=Z,519nm,1.7s						
NWAO	Narrogin (SRO)	148.27	206	ePKPdf	PKPdf	02 30 49.0	-1.0
NWAO				ePKPbc	PKPbc	02 30 52.5	-0.8
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
NWAO	Narrogin (SRO)	148.27	206	P	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	PKPdf	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	P	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	P	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	P	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	P	PKPdf	02 30 49.5	-0.5
	SNR=28						
NWAO	Narrogin (SRO)	148.27	206	PKP	PKPdf	02 30 49.1	-0.9
	comp=Z,75nm,0.9s,baz=149,slow=3.6,SNR=33						
NWAO				PKPbc	PKPbc	02 30 52.4	-1.0
	comp=Z,75nm,0.9s,baz=150,slow=4.3,SNR=33						
HYB	Hyderabad	148.44	45	⇓eP	PKPdf	02 30 50.0	-0.7
HYB	Hyderabad	148.44	45	⇓iPKP	PKPdf	02 30 50.0	-0.7
HYB				e		02 30 53.0	
HYB				ePP	PP	02 34 20.0	-2.5
KAKA	Kakadu	148.45	253	ePKP	PKPdf	02 30 49.6	-1.1
	comp=Z,2µm,1.8s						
SHL	Shillong	148.54	17	eP	PKPdf	02 30 49.1	-1.5
GYA	Guiyang	148.69	351	i PKP	PKPdf	02 30 49.8	-1.1
GYA				PKP2	PKPab	02 30 57.9	-0.2
GYA				PKS		02 34 22.3	
GYA				PP	PP	02 34 25.4	+2.8
GYA				SKS	SKSdf	02 37 54.3	-4.5
GYA				SKKS	SKKSac	02 41 12.9	-2.2
GYA				SS	SS	02 53 32.0	+1.3
GYA				PP	PP		
	comp=Z,3µm,9.2s						
GYA				LR	LR		
	comp=N,5µm,21.4s,MS6.3						
GYA				LR	LR		
	comp=E,3µm,24.8s,MS6.3						
GYA				LR	LR		
	comp=Z,4µm,22.3s,MS6.2						
KLBR	Kellerberrin	149.17	208	i PKP	PKPdf	02 30 50.0	-1.5
	comp=Z,2µm,1.8s						
MUN	Mundaring	149.53	205	i PKP	PKPdf	02 30 51.1	-0.9
IMP	Imphal	149.83	14	i P	PKPdf	02 30 54.0	+1.3
AGT	Agartala	149.92	19	ex	x	02 30 46.0	
KMI	Kunming	150.39	358	PKP	PKPdf	02 30 53.8	+0.2
HKC	Hong Kong Obse	150.50	336	PKPdf	PKPdf	02 30 51.0	-2.8
VIS	Vishakhapatnam	151.42	39	eP	PKPdf	02 30 55.1	-0.2
KOD	Kodaikanal	151.83	58	eP	PKPdf	02 30 56.6	+0.6
TRD	Trivandrum	152.22	62	eP	PKPdf	02 30 54.9	-1.7
MDRS	Chennai	152.49	50	eP	PKPdf	02 30 56.1	-0.9
MDRS				⇓eP		02 30 56.5	
FITZ	Fitzroy Crossi	152.91	238	ePKP	PKPdf	02 30 56.4	-1.1
	comp=Z,170nm,1.6s						
FITZ	Fitzroy Crossi	152.91	238	PKP	PKPdf	02 30 56.5	-1.0
	comp=Z,20nm,1.0s,baz=331,slow=0.3,SNR=19						
FITZ				PKPbc	PKPbc	02 31 03.4	-1.3
	comp=Z,75nm,1.0s,baz=92,slow=2.6,SNR=13						
DAV	Davao City (W)	153.34	296	PFAKE		02 31 10.0	+12
DAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
QIZ	Qiongzhong	155.10	341	PKP	PKPdf	02 30 57.5	-3.1
QIZ				PP	PP	02 35 02.6	+3.2
QIZ				SS	SS	02 54 41.0	-0.7
QIZ				LR	LR		
	comp=E,2µm,26.1s						
QIZ				LR	LR		
	comp=Z,3µm,30.9s,MS5.9						
QIZ	Qiongzhong	155.10	341	PFAKE		02 31 10.0	+9.4
QIZ				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
CHRT	Chiangrai	155.58	4	P	PKPdf	02 31 00.0	-1.3
	comp=Z,290nm,1.2s						
MBWA	Marble Bar	155.89	225	ePKPdf	PKPdf	02 31 00.3	-1.3
MBWA				ePKPab	PKPab	02 31 26.8	-1.6
MBWA				LR	LR		
	comp=Z,3µm,20.0s,MS6.1						
PALK	Pallekele	156.07	60	ePKPdf	PKPdf	02 31 01.7	-0.4
PALK				ePKPab	PKPab	02 31 28.9	-0.5
PALK				ePP	PP	02 35 03.0	-3.5
PALK				LR	LR		
	comp=Z,5µm,21.0s,MS6.3						
PALK	Pallekele	156.07	60	P	PKPdf	02 31 02.0	-0.1
	SNR=15						
PALK	Pallekele	156.07	60	PKPdf	PKPdf	02 31 02.0	-0.1
	SNR=15						
PALK	Pallekele	156.07	60	P	PKPdf	02 31 02.0	-0.1
	SNR=15						
PALK	Pallekele	156.07	60	P	PKPdf	02 31 02.0	-0.1
	SNR=15						
PALK	Pallekele	156.07	60	P	PKPdf	02 31 02.0	-0.1
	SNR=15						
PALK	Pallekele	156.07	60	P	PKPdf	02 31 02.0	-0.1
	SNR=15						
CHG	Chiang Mai	156.55	6	⇓P	PKPdf	02 31 01.1	-1.5
	comp=Z,110nm,1.7s						
CHTO	Chiang Mai	156.55	6	ePKPdf	PKPdf	02 31 01.5	-1.0
CHTO				ePKPab	PKPab	02 31 29.2	-1.9
CHTO				ePP	PP	02 35 04.4	-2.9
CHTO				LR	LR		
	comp=Z,2µm,21.0s,MS5.8						
CHTO	Chiang Mai	156.55	6	P	PKPdf	02 31 01.6	-1.0
	SNR=43						
CHTO	Chiang Mai	156.55	6	PKPdf	PKPdf	02 31 01.6	-1.0
	SNR=43						
CHTO	Chiang Mai	156.55	6	P	PKPdf	02 31 01.6	-1.0
	SNR=43						
CHTO	Chiang Mai	156.55	6	P	PKPdf	02 31 01.6	-1.0
	SNR=43						
CHTO	Chiang Mai	156.55	6	P	PKPdf	02 31 01.6	-1.0
	SNR=43						
BATI	Kupang	157.39	255	PKP	PKPdf	02 31 01.9	-1.8
	comp=Z,28nm,1.0s,baz=218,slow=3.6,SNR=7.9						
BDT	Bhumibol Dam	158.11	7	⇓P	PKPdf	02 31 04.0	-0.6
	comp=Z,24nm,1.0s						
NST	Nakhon Sawan	159.77	4	⇓P	PKPdf	02 31 06.2	-0.4
MYLDM	Lahad Datu	160.45	300	⇑P	PKPdf	02 31 07.2	-0.2
KDM	Kudat	160.90	307	⇑P	PKPdf	02 31 07.4	-0.5
SDKM	Sandakan	161.32	303	⇑P	PKPdf	02 31 07.2	-1.2
TSM	Tawau	161.43	298	⇑P	PKPdf	02 31 07.4	-1.1
PBA	Port Blair	161.59	28	eP	PKPdf	02 31 03.8	-4.8
KKM	Kota Kinabalu	161.91	306	ePKPdf	PKPdf	02 31 08.5	-0.5
KKM	Kota Kinabalu	161.91	306	⇑P	PKPdf	02 31 08.4	-0.6
BTM	Bintulu	166.08	304	⇑P	PKPdf	02 31 12.4	-0.4
SBUM	Sibu	167.21	303	⇓P	PKPdf	02 31 13.2	-0.4
KSM	Kuching	169.34	305	ePKPdf	PKPdf	02 31 13.5	-1.6
KSM				ePKPab	PKPab	02 32 26.5	-1.0
KSM				ePP	PP	02 36 13.5	-3.3
KSM	Kuching	169.34	305	⇑P	PKPdf	02 31 13.7	-1.4
KTGM	Kuala Trenggan	169.97	351	⇓P	PKPdf	02 31 14.9	-0.6
KULM	Kulim	170.09	5	ePKPdf	PKPdf	02 31 14.1	-1.5
KULM				ePKPab	PKPab	02 32 28.4	-2.1
KULM				ePP	PP	02 36 18.9	+0.1
KULM	Kulim	170.09	5	⇑P	PKPdf	02 31 14.6	-0.9
PSI	Prapat	172.16	20	PKP2	PKPab	02 32 38.5	-1.2
PSI				pmax	pmax		
	comp=Z,30nm,1.1s						
PSI	Prapat	172.16	20	PKP	PKPdf	02 31 14.7	-1.9
	comp=Z,48nm,1.2s,baz=228,slow=3.1,SNR=55						
PSI				PKPab	PKPab	02 32 38.5	-1.2
	comp=Z,30nm,1.1s,baz=309,slow=3.9,SNR=9.5						
PSI				PP	PP	02 36 22.7	-6.6
	comp=Z,3.1nm,0.8s,baz=307,slow=5.1,SNR=3.4						
FRIM	Kepong	172.17	359	⇑P	PKPdf	02 31 15.1	-1.5
KGM	Kluang	173.15	345	⇓P	PKPdf	02 31 15.6	-1.5
MYKOM	Kota Tinggi	173.21	340	⇑P	PKPdf	02 31 15.5	-1.6

*ISCJB **18** 02:24:50.3±0.8, 394S±009×13997E±010, h14km, mb4.1/3, Error ellipse: s-maj=14.8km s-min=11.8km az=154.7*
*IDC **18** 02:24:50.0±1.1, 378S×13997E, h0km, mb4.2/3, mb1 4.6/7, mb1mx4.4/13, mbtmp4.5/7, ML4.1/4, Error ellipse: s-maj=33.1km s-min=22.5km az=75.0*
*NEIC **18** 02:24:52.1±8.9, 391S×13991E, h14km±56km, mb4.3/4, Error ellipse: s-maj=23.4km s-min=16.3km az=173.0*
ISC 18 02:24:55.1±4.6**, 40S**±01×**13986E**±010**, h31**km±35km**, n21, σ1º22**/19**, mb4.1**/3**, 2D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	9.02	127	ePn	Pn	02 27 02.0	-1.3
	44nm,1.0s						
PMG	Port Moresby	9.02	127	Pn	Pn	02 27 01.4	-1.9
	1.7nm,0.3s,baz=305,slow=12,SNR=8.1						
COEN	Coen	10.42	162	ePn	Pn	02 27 23.0	+0.5
	9.0nm,0.6s						
KAKA	Kakadu	11.35	220	⇓iP	Pn	02 27 35.7	+0.5
	67nm,0.4s						
KAKA				eS	Sn	02 29 39.9	-1.2
WB2	Warramunga Arr	16.74	198	eP	Pn	02 28 50.5	+3.1
WB2				eS	PcP	02 33 36.5	+1.0
WB2	Warramunga Arr	16.74	198	ePn	Pn	02 28 46.3	-1.0
WB2				eP		02 28 50.5	
WB2				eS	PcP	02 33 36.5	+1.0
WRA	Warramunga Arr	16.74	198	Pn	Pn	02 28 45.8	-1.7
	0.9nm,0.3s,baz=21,slow=13,SNR=31						
CTA	Charters Tower	17.16	159	eP	Pn	02 28 56.3	+3.5
	10nm,0.9s						
CTA	Charters Tower	17.16	159	P	Pn	02 28 54.0	+1.2
	0.6nm,0.3s,baz=332,slow=12,SNR=7.7						
CTAO	Charters Tower	17.16	159	eP	Pn	02 28 55.9	+3.1
	18nm,0.9s						
BATI	Kupang	17.21	248	P	Pn	02 28 54.4	+1.0
	1.4nm,0.3s,baz=90,slow=8.1,SNR=3.8						
FITZ	Fitzroy Crossi	19.76	224	eP	Pn	02 29 23.6	-0.7
	17nm,0.4s						
FITZ	Fitzroy Crossi	19.76	224	P	Pn	02 29 23.8	-0.5
	0.8nm,0.3s,baz=46,slow=13,SNR=38						
ASAR	Alice Springs	20.38	196	P	P	02 29 31.4	+2.0
	66nm,0.8s,baz=28,slow=9.5,SNR=115						
SONM	Songino Array	59.37	334	P	P	02 34 53.2	-1.2
	0.7nm,0.6s,mb3.9,baz=137,slow=5.8,SNR=2.2						
MKAR	Makanchi Array	71.50	322	P	P	02 36 12.3	-0.6
	1.3nm,0.7s,mb4.0,baz=112,slow=7.1,SNR=4.7						
EKS2	Erkin-Say	75.43	316	eP	P	02 36 36.9	+0.8
	5.8nm,1.2s,mb4.4						
SYO	Syowa Base	89.97	201	⇓eP	P	02 37 52.0	+0.9
DBIC	Dimbokro	144.78	276	PKP	PKPdf	02 44 28.8	-1.3
DBIC	Dimbokro	144.78	276	PKP	PKPdf	02 44 28.8	-1.3
	2.5nm,0.5s,baz=75,slow=5.4,SNR=12						
LPAZ	La Paz	145.76	127	PKPbc	PKPbc	02 44 32.8	+0.7
	2.2nm,0.8s,baz=221,slow=2.3,SNR=5.6						

*IDC **18** 02:31:56.8±1.0, 1302S×16879E, h632km±13km, mb3.8/20, mb1 3.9/22, mb1mx3.8/25, mbtmp3.8/22, Error ellipse: s-maj=11.9km s-min=9.1km az=165.0*
*NEIC **18** 02:31:56.7±0.6, 1298S×16881E, h633km±7km, mb4.5/19, Error ellipse: s-maj=6.8km s-min=5.7km az=164.0*
*ISCJB **18** 02:31:57.2±0.9, 1308S±007×16875E±007, h660km±12km, mb4.3/34, Error ellipse: s-maj=11.1km s-min=9.7km az=160.2*
ISC 18 02:31:57.6±0.8**, 1297S**±006×**16878E**±006**, h643**km±10km**, n67, σ0º65**/55**, mb4.3**/34**, 8D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.32	193	P	P	02 34 09.8	-0.9
	1.2nm,0.3s,baz=32,slow=22,SNR=13						
DZM				S	S	02 36 01.6	+1.8
	baz=308,slow=18,SNR=2.5						
HNR	Honiara	9.35	291	P	P	02 34 10.2	-1.0
	22nm,0.3s,baz=146,slow=1.3,SNR=5.0						
HNR				S	S	02 36 00.5	0.0
	4.6nm,0.3s,baz=92,slow=23,SNR=7.7						
PMG	Port Moresby	21.50	277	eP	P	02 36 03.2	+0.1
	18nm,0.9s,mb4.4						
PMG	Port Moresby	21.50	277	P	P	02 36 03.4	+0.4
	15nm,0.8s,mb4.4,baz=65,slow=8.7,SNR=6.4						
CTA	Charters Tower	22.71	249	eP	P	02 36 13.7	0.0
	10nm,0.6s,mb4.4						
CTA	Charters Tower	22.71	249	P	P	02 36 13.8	+0.2
	12nm,0.6s,mb4.5,baz=94,slow=8.8,SNR=7.3						
CTAO	Charters Tower	22.71	249	eP	P	02 36 13.7	0.0
	13nm,0.7s,mb4.5						
ARMA	Armidale	23.51	220	⇓iP	P	02 36 21.1	+0.5
URZ	Urewera	26.26	165	P	P	02 36 44.3	-0.4
	6.5nm,0.7s,mb4.3,baz=330,slow=14,SNR=4.6						
CNB	Canberra Magne	28.33	215	eP	P	02 37 02.8	+0.1
	11nm,0.6s,mb4.6						
RAR	Rarotonga	31.11	110	P	P	02 37 25.9	-0.9
	12nm,0.4s,mb4.8,baz=150,slow=16,SNR=4.0						
STKA	Stephens Creek	31.25	229	⇓iP	P	02 37 28.1	+0.4
	11nm,0.4s,mb4.7						
STKA	Stephens Creek	31.25	229	P	P	02 37 28.2	+0.5
	14nm,0.4s,mb4.8,baz=54,slow=7.9,SNR=53						
STKA				ScP	ScP	02 42 47.9	+3.2
	2.9nm,0.5s,baz=358,slow=3.0,SNR=7.0						
WB2	Warramunga Arr	33.69	254	⇓iP	P	02 37 47.8	-0.6
WRA	Warramunga Arr	33.70	254	P	P	02 37 47.7	-0.8
	45nm,0.5s,mb5.3,baz=84,slow=8.6,SNR=234						
WRA				S	S	02 42 27.0	-1.7
	3.2nm,1.0s,baz=90,slow=13,SNR=5.5						
WRA				ScP	ScP	02 42 57.1	+3.5
	2.4nm,0.7s,baz=82,slow=3.8,SNR=6.7						
ASAR	Alice Springs	34.68	247	P	P	02 37 56.4	-0.2
	62nm,0.5s,mb5.4,baz=75,slow=9.8,SNR=303						
ASAR				S	S	02 42 42.6	-0.6
	2.5nm,0.7s,baz=72,slow=16,SNR=6.4						
ASAR				ScP	ScP	02 43 00.6	+3.5
	3.5nm,0.6s,baz=84,slow=3.9,SNR=13						
KAKA	Kakadu	35.41	266	⇓iP	P	02 38 02.6	-0.1
	60nm,0.4s						
FORT	Forrest	41.46	238	⇓iP	P	02 38 51.1	+0.1
	75nm,0.5s,mb5.4						
FITZ	Fitzroy Crossi	41.80	257	⇓iP	P	02 38 54.1	+0.2
	12nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	41.80	257	P	P	02 38 54.2	+0.3
	4.9nm,0.3s,mb4.4,baz=73,slow=8.1,SNR=34						
BATI	Kupang	44.24	269	P	P	02 39 14.4	+1.7
	128nm,0.5s,baz=159,slow=2.5,SNR=35						
MBWA	Marble Bar	47.44	253	eP	P	02 39 36.8	0.0
	30nm,0.7s,mb4.7						
KLBR	Kellerberrin	50.24	240	⇓iP	P	02 39 56.5	-0.7
	13nm,0.4s,mb4.6						
NWAO	Narrogin (SRO)	50.91	238	P	P	02 40 01.5	-0.5
	15nm,0.5s,mb4.5,baz=81,slow=5.2,SNR=19						
KKM	Kota Kinabalu	55.53	287	eP	P	02 40 34.9	+0.1
MJAR	Matsushiro Arr	57.06	331	P	P	02 40 44.7	-0.1
MJAR	Matsushiro Arr	57.06	331	P	P	02 40 44.7	-0.1
	4.8nm,0.7s,mb3.8,baz=166,slow=8.2,SNR=17						
MAJO	Matsushiro	57.06	331	eP	P	02 40 44.9	+0.1
	6.4nm,0.6s,mb3.9						
MAT	Matsushiro	57.06	331	P	P	02 40 44.7	-0.1
KSRS	Korea Array	63.14	324	P	P	02 41 25.8	+1.1
	2.8nm,0.8s,mb3.5,baz=142,slow=6.1,SNR=9.5						
CASY	Casey	65.70	202	eP	P	02 41 39.9	-0.4
	6.0nm,0.7s,mb4.0						
PSI	Prapat	71.06	278	P	P	02 42 13.4	-0.1
	9.8nm,0.7s,mb4.4,baz=106,slow=5.5,SNR=9.4						
BJT	Baijiatuau	71.83	320	eP	P	02 42 18.2	+0.8
	11nm,0.6s,mb4.5						
CHTO	Chiang Mai	75.71	293	eP	P	02 42 40.7	+1.0
	3.1nm,0.8s,mb3.9						
QSPA	South Pole Qui	77.05	180	P	P	02 42 45.8	0.0
	3.3nm,0.8s,mb3.9,baz=7.9,slow=0.8,SNR=9.2						
PMR	Palmer	81.37	19	eP	P	02 43 08.3	-0.3
	5.1nm,0.6s,mb4.1						
SONM	Songino Array	81.97	323	P	P	02 43 12.4	+0.4
	2.3nm,0.6s,mb3.9,baz=144,slow=5.6,SNR=13						
MCK	McKinley	83.04	18	eP	P	02 43 16.1	-0.9
	46nm,1.9s,mb4.7						
OHCM	Honcut	83.05	47	eP	P	02 43 17.3	-0.3
COLA	College	84.21	17	eP	P	02 43 21.8	-0.9
	5.7nm,0.8s,mb4.2						
PFO	Pinyon Flat Ob	84.79	54	P	P	02 43 26.9	+0.6
PFO	Pinyon Flat Ob	84.79	54	P	P	02 43 26.9	+0.6
	1.5nm,0.6s,mb3.8,baz=334,slow=4.1,SNR=3.9						
NVAR	Mina Array Bea	85.02	49	P	P	02 43 28.0	+0.7
	1.7nm,0.8s,mb3.7,baz=220,slow=5.0,SNR=10						
TPNV	Topopah Spring	86.05	51	eP	P	02 43 32.5	+0.3
	4.3nm,1.1s,mb4.0						
TUC	Tucson	88.94	57	eP	P	02 43 46.4	+0.6
	2.9nm,0.7s,mb4.1						
SYO	Syowa Base	90.80	196	⇓eX		02 43 49.2	
PDAR	Pinedale Array	92.68	47	P	P	02 44 02.9	+0.1
	0.4nm,0.3s,mb3.9,baz=194,slow=3.7,SNR=4.9						
ANMO	Albuquerque	93.10	55	eP	P	02 44 05.1	+0.1
	1.9nm,1.0s,mb4.1						
TXAR	Lajitas Array	94.15	61	P	P	02 44 10.0	+0.1
	0.7nm,0.8s,mb3.7,baz=230,slow=4.0,SNR=7.9						
YKA	Yellowknife Ar	95.32	27	P	P	02 44 13.3	-1.0
	2.8nm,0.7s,mb4.5,baz=256,slow=4.6,SNR=44						
MKAR	Makanchi Array	96.95	316	P	P	02 44 22.6	+0.6
MKAR				PKKPbc	PKKPbc	03 00 58.2	-3.1
MKAR	Makanchi Array	96.95	316	P	P	02 44 22.6	+0.6
	1.2nm,0.5s,mb4.3,baz=87,slow=6.0,SNR=5.3						
MKAR				PKKPbc	PKKPbc	03 00 58.2	-3.1
	0.1nm,0.3s,baz=278,slow=3.6,SNR=3.7						
LPAZ	La Paz	116.68	116	PKP	PKPdf	02 49 31.3	-0.1
LPAZ	La Paz	116.68	116	PKP	PKPdf	02 49 31.3	-0.1
	1.0nm,0.7s,baz=282,slow=9.3,SNR=3.1						
ARCES	ARCESS Array B	118.92	346	PKP	PKPdf	02 49 33.1	-0.9
	1.6nm,0.5s,baz=56,slow=2.0,SNR=12						
ARCES				PKKPbc	PKKPbc	02 59 49.4	-4.3
	2.5nm,0.9s,baz=207,slow=3.8,SNR=5.3						
FINES	FINESS Array B	124.62	339	PKKPbc	PKKPbc	02 59 29.8	-2.5
	2.6nm,1.0s,baz=180,slow=3.8,SNR=3.4						
MATP	Matopo	128.74	230	SKPbc		02 52 19.1	
	5.0nm,0.6s,baz=97,slow=5.2,SNR=18						
NOA	NORSAR Array B	129.30	346	SKPbc	SKPbc	02 52 19.9	+2.8
	1.1nm,0.7s,baz=30,slow=3.1,SNR=4.4						
KMBO	Kilima Mbogo	129.92	257	SKPbc	SKPbc	02 52 23.1	+2.2
	1.0nm,0.6s,baz=57,slow=7.9,SNR=4.8						
AKASG	Malin Array Be	130.08	327	SKPbc	SKPbc	02 52 22.1	+1.8
	2.0nm,0.6s,baz=44,slow=4.3,SNR=9.8						
BRTR	Keskin Array B	132.44	313	SKPbc	SKPbc	02 52 29.6	+0.5
	1.0nm,0.8s,baz=52,slow=5.7,SNR=5.3						
SSF	Saint Saulge	143.83	343	ePKP1	PKPdf	02 50 21.1	-0.2
SMF	Signal de Mont	144.11	342	ePKP1	PKPdf	02 50 22.7	+0.9
AVF	Avril sur Loir	144.12	343	ePKP1	PKPdf	02 50 22.4	+0.6
MFF	Saint Martin d	145.20	347	ePKP1	PKPbc	02 50 25.2	+0.3
	16nm,0.8s						
LFF	La Frestale	146.54	345	ePKP1	PKPbc	02 50 29.3	+0.6
	7.4nm,0.6s						
TORD	Torodi Ar. Bea	167.41	272	PKPab	PKPab	02 52 02.3	-0.5
	1.2nm,0.8s,baz=86,slow=3.6,SNR=13						

IDC 18 02:34:30.1±5.1**, 1299S**×**16892E, h617**km±79km**, mb3.7**/6**, mb1 3.8**/7**, mb1mx3.3**/17**, mbtmp3.6**/7**, Error ellipse: s-maj=76.0km s-min=29.3km az=165.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.34	194	P	P	02 36 43.5	+0.9
	0.6nm,0.3s,baz=66,slow=20,SNR=2.8						
STKA	Stephens Creek	31.34	229	P	P	02 40 02.2	-0.1
	3.6nm,0.4s,baz=60,slow=12,SNR=5.5						
WRA	Warramunga Arr	33.83	254	P	P	02 40 22.7	-0.7
	12nm,0.5s,baz=84,slow=8.7,SNR=13						
ASAR	Alice Springs	34.80	247	P	P	02 40 30.9	-0.5
	16nm,0.5s,baz=73,slow=9.7,SNR=25						
FITZ	Fitzroy Crossi	41.93	257	P	P	02 41 29.1	+0.2
	2.0nm,0.6s,baz=117,slow=9.0,SNR=2.9						
BATI	Kupang	44.37	269	P	P	02 41 49.5	+1.6
	27nm,0.5s,baz=154,slow=2.8,SNR=5.9						
YKA	Yellowknife Ar	95.27	27	P	P	02 46 48.3	-0.5
	0.7nm,0.7s,baz=256,slow=4.5,SNR=11						

*IDC **18** 02:39:42.7±1.9, 1301S×16885E, h621km±23km, mb3.2/9, mb1 3.3/10, mb1mx3.2/17, mbtmp3.2/10, Error ellipse: s-maj=24.3km s-min=15.1km az=162.0*
*LDG **18** 02:39:43.8±0.1, 1351S×17026E, h650km, Mb3.8/1, Error ellipse: s-maj=21.2km s-min=4.1km az=107.0*
*ISCJB **18** 02:39:44.6±2.1, 132S±02×1689E±01, h673km±32km, mb3.8/12, Error ellipse: s-maj=33.6km s-min=17.2km az=159.9*
*NEIC **18** 02:39:44.0±1.5, 1308S×16890E, h643km±19km, mb4.0/3, Error ellipse: s-maj=20.9km s-min=15.6km az=165.0*
ISC 18 02:39:44.1±1.9**, 131S**±02×**1689E**±01**, h643**km±28km**, n38, σ0º52**/15**, mb3.8**/12**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.26	194	P	P	02 41 56.8	+0.3
	0.5nm,0.3s,baz=78,slow=20,SNR=6.0						
URZ	Urewera	26.14	165	P	P	02 44 29.7	-0.4
	5.8nm,0.5s,mb4.4,baz=272,slow=6.7,SNR=5.3						
STKA	Stephens Creek	31.27	229	P	P	02 45 15.1	+0.7
	1.1nm,0.4s,mb3.8,baz=75,slow=6.1,SNR=4.8						
WRA	Warramunga Arr	33.78	254	P	P	02 45 34.6	-1.1
	1.4nm,0.3s,mb3.9,baz=84,slow=8.6,SNR=20						
WRA				PcP	PcP	02 47 55.3	+0.1
	0.3nm,0.5s,baz=76,slow=3.5,SNR=4.9						
ASAR	Alice Springs	34.75	247	P	P	02 45 43.5	-0.1
	2.6nm,0.5s,mb4.0,baz=73,slow=9.5,SNR=19						
ASAR				PcP	PcP	02 47 58.0	0.0
	0.4nm,0.7s,baz=72,slow=3.0,SNR=4.1						
ASAR				S	S	02 50 30.9	0.0
	0.9nm,0.9s,baz=75,slow=15,SNR=4.6						
ASAR				ScP	ScP	02 50 48.3	+4.5
	0.3nm,0.5s,baz=89,slow=3.6,SNR=6.8						
FITZ	Fitzroy Crossi	41.90	257	P	P	02 46 41.0	0.0
	0.4nm,0.4s,mb3.2,baz=90,slow=6.1,SNR=3.2						
BILL	Bilibino	80.91	359	eP	P	02 50 52.9	+0.3
	3.5nm,0.6s,mb4.0						
SONM	Songino Array	82.11	323	P	P	02 50 59.8	+0.6
	0.6nm,0.6s,mb3.3,baz=145,slow=6.4,SNR=5.6						
MCK	McKinley	83.09	18	eP	P	02 51 03.4	-0.4
	1.8nm,0.5s,mb3.9						
COLA	College	84.27	17	eP	P	02 51 08.7	-0.8
	3.5nm,0.8s,mb3.9						
TXAR	Lajitas Array	94.10	61	P	P	02 51 56.7	+0.6
	0.1nm,0.5s,mb3.1,baz=225,slow=8.9,SNR=3.2						
YKA	Yellowknife Ar	95.35	27	P	P	02 52 00.6	-0.3
YKA	Yellowknife Ar	95.35	27	P	P	02 52 00.6	-0.3
	1.4nm,0.7s,mb4.2,baz=256,slow=4.6,SNR=22						
MKAR	Makanchi Array	97.10	316	P	P	02 52 09.7	+0.5
	0.1nm,0.2s,mb3.6,baz=101,slow=6.4,SNR=3.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	119.04	346	PKP	PKPdf	02 57 20.9	+0.1
	1.5nm,0.6s,baz=61,slow=2.0,SNR=16						
FINES	FINESS Array B	124.75	339	PKP	PKPdf	02 57 32.7	+0.7
FINES	FINESS Array B	124.75	339	PKP	PKPdf	02 57 32.7	+0.7
	0.5nm,0.5s,baz=349,slow=1.9,SNR=3.7						
HAU	Haudompre	142.25	341	ePKP1	PKPdf	02 58 02.7	-2.3
HINF	Hinteralfeld	142.25	340	ePKP1	PKPdf	02 58 03.1	-1.9
	2.8nm,0.6s						
FLN	La Foliniere	143.34	348	ePKP1	PKPdf	02 58 05.4	-1.5
LDF	La Druitiere	143.42	348	ePKP1	PKPdf	02 58 06.3	-0.7
CABF	La Chapelle	143.56	340	ePKP1	PKPdf	02 58 07.8	+0.5
GRR	Gorron	143.77	348	ePKP1	PKPdf	02 58 07.2	-0.4
	9.3nm,0.5s						
SSF	Saint Saulge	143.96	343	ePKP1	PKPdf	02 58 08.1	+0.1
	11nm,0.8s						
TIP	Timpagrande	144.19	322	ePKPdf	PKPdf	02 58 09.5	+0.9
SGMF	Saint Gilles	144.20	350	ePKP1	PKPdf	02 58 09.0	+0.6
SMF	Signal de Mont	144.24	342	ePKP1	PKPdf	02 58 09.1	+0.6
AVF	Avril sur Loir	144.25	343	ePKP1	PKPdf	02 58 09.1	+0.6
	3.8nm,0.6s						
BGF	Bois d'Agland	144.60	343	ePKP1	PKPdf	02 58 09.9	+0.8
	6.7nm,0.5s						
TCF	Toulx Ste Croi	145.03	344	ePKP1	PKPbc	02 58 11.1	+0.2
ORIF	Oris-en-Rattie	145.10	339	ePKP1	PKPbc	02 58 11.7	+0.5
MFF	Saint Martin d	145.32	347	ePKP1	PKPbc	02 58 12.0	+0.3
	26nm,0.9s						
RJF	Les Rejaudoux	146.12	344	ePKP1	PKPbc	02 58 15.0	+1.0
	9.8nm,0.7s						
LFF	La Frestale	146.66	345	ePKP1	PKPbc	02 58 15.9	+0.4
	13nm,0.6s						
MTLF	Montolieu	147.72	342	ePKP1	PKPbc	02 58 18.8	+0.5
	6.7nm,0.7s						
ETSF	Etsaut	148.91	345	ePKP1	PKPbc	02 58 22.2	+1.0
KEST	Kesra	150.86	324	PKPbc	PKPbc	02 58 26.9	+0.8
	2.5nm,1.1s,baz=209,slow=1.5,SNR=11						
TORD	Torodi Ar. Bea	167.53	272	PKP	PKPdf	02 58 39.0	0.0
	0.5nm,0.8s,baz=129,slow=0.3,SNR=4.2						

IDC 18 02:51:27.0±9.9, 1510S×17422W, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.6/15, mbtmp4.0/2, Error ellipse: s-maj=430.1km s-min=62.0km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.14	257	P	P	03 00 16.9	-0.1
	0.5nm,0.4s,baz=90,slow=7.0,SNR=30						
ASAR	Alice Springs	49.45	252	P	P	03 00 19.2	0.0
	2.9nm,0.5s,baz=86,slow=8.1,SNR=62						
BRTR	Keskin Array B	145.42	321	PKPbc	PKPbc	03 11 06.6	-0.6
	0.8nm,0.7s,baz=52,slow=3.5,SNR=5.4						

IDC 18 03:22:59.0±1.7, 2362S×17865W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/14, mbtmp4.1/3, Error ellipse: s-maj=59.2km s-min=38.9km az=154.0
ISCJB 18 03:24:05.3±2.4, 247S±04×1795E±04, h600km, mb4.2/8, Error ellipse: s-maj=66.3km s-min=26.8km az=147.3
NEIC 18 03:24:05.5±7.2, 2472S×17952E, h589km±68km, mb4.4/5, Error ellipse: s-maj=68.7km s-min=33.4km az=124.0
ISC 18 03:24:06.5±2.4, 247S±04×1795E±04, h600km, n14, σ0s43/10, mb4.2/8, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.01	272	⇓iP	P	03 29 37.3	+0.3
	8.0nm,0.3s,mb4.8						
CTAO	Charters Tower	31.01	272	eP	P	03 29 37.3	+0.3
	11nm,0.4s,mb4.8						
STKA	Stephens Creek	33.99	249	P	P	03 30 01.9	-0.1
	0.9nm,0.4s,mb3.7,baz=90,slow=5.1,SNR=2.3						
PMG	Port Moresby	34.31	291	eP	P	03 30 04.9	+0.1
	6.5nm,0.6s,mb4.4						
ASAR	Alice Springs	41.44	262	P	P	03 31 02.5	0.0
	0.8nm,0.5s,mb3.5,baz=103,slow=7.7,SNR=20						
WB2	Warramunga Arr	41.87	267	eP	P	03 31 05.5	-0.4
WRA	Warramunga Arr	41.88	267	P	P	03 31 05.7	-0.3
	2.4nm,0.3s,mb4.2,baz=103,slow=8.2,SNR=165						
KAKA	Kakadu	45.91	276	eP	P	03 31 36.6	-0.5
	2.2nm,0.2s,mb4.3						
FITZ	Fitzroy Crossi	50.30	266	eP	P	03 32 10.6	+1.0
	3.3nm,0.7s,mb3.9						
MCK	McKinley	91.56	13	eP	P	03 36 09.6	0.0
	3.9nm,0.9s,mb4.4						
AKASG	Malin Array Be	145.36	326	PKPbc	PKPbc	03 42 38.8	+0.7
	0.7nm,0.4s,baz=45,slow=3.8,SNR=7.4						
BRTR	Keskin Array B	147.66	306	PKPbc	PKPbc	03 42 45.7	+1.1
	0.3nm,0.4s,baz=108,slow=3.4,SNR=3.4						
BRTR				PKPab	PKPab	03 42 51.0	+1.8
	0.4nm,0.5s,baz=109,slow=2.6,SNR=4.4						
CSS	Prodhromos	149.03	297	ePKPbc	PKPbc	03 42 47.4	-0.7
TORD	Torodi Ar. Bea	168.33	191	PKPab	PKPab	03 44 22.1	+3.1
	0.4nm,0.5s,baz=191,slow=5.7,SNR=4.7						

ISCJB 18 04:19:08.6±3.9, 65S±0.1×1546E±02, h68km±35km, mb4.1/13, Error ellipse: s-maj=29.0km s-min=19.9km az=35.7
IDC 18 04:19:12.2±5.4, 670S×15460E, h90km±44km, mb3.8/8, mb1 4.0/10, mb1mx3.9/16, mbtmp3.8/10, Error ellipse: s-maj=40.0km s-min=23.4km az=110.0
NEIC 18 04:19:12.7±2.6, 663S×15452E, h94km±23km, mb4.4/7, Error ellipse: s-maj=28.4km s-min=15.3km az=120.0
ISC 18 04:19:11.2±3.2, 67S±01×1547E±02, h80km±28km, n25, σ0s87/25, mb4.1/13, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.92	249	ePn	Pn	04 21 02.3	-1.3
	25nm,0.7s						
PMG				eSn	Sn	04 22 33.4	+1.7
PMG	Port Moresby	7.92	249	P	Pn	04 21 02.9	-0.7
	1.8nm,0.3s,baz=51,slow=8.0,SNR=13						
PMG				S	Sn	04 22 32.3	+0.5
	1.6nm,0.3s,baz=131,slow=18,SNR=7.4						
CTA	Charters Tower	15.65	211	eP	Pn	04 22 52.1	+5.0
	6.5nm,0.8s						
CTA	Charters Tower	15.65	211	P	Pn	04 22 48.7	+1.6
CTA				eP		04 22 52.1	
CTA	Charters Tower	15.65	211	P	Pn	04 22 48.7	+1.6
	0.5nm,0.3s,baz=37,slow=10,SNR=5.8						
CTAO	Charters Tower	15.65	211	eP	Pn	04 22 51.9	+4.8
	16nm,1.0s						
WB2	Warramunga Arr	23.73	234	eP	P	04 24 16.1	0.0
WRA	Warramunga Arr	23.74	234	P	P	04 24 16.3	0.0
	11nm,1.0s,mb4.2,baz=58,slow=9.7,SNR=47						
ASAR	Alice Springs	26.15	228	P	P	04 24 37.6	-0.5
	1.2nm,0.6s,mb3.5,baz=59,slow=8.5,SNR=40						
FITZ	Fitzroy Crossi	30.50	245	eP	P	04 25 14.6	-2.2
	3.8nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	30.50	245	P	P	04 25 15.5	-1.4
	1.5nm,0.7s,mb3.7,baz=124,slow=6.6,SNR=7.7						
KSRS	Korea Array	50.49	332	P	P	04 28 00.4	-0.7
	1.9nm,0.8s,mb4.1,baz=147,slow=7.5,SNR=10						
HIA	Hailar	63.49	335	eP	P	04 29 32.1	-0.5
	9.2nm,1.0s,mb4.7						
ULN	Ulaanbaatar	68.55	328	eP	P	04 30 05.2	0.0
	5.7nm,1.2s,mb4.3						
SONM	Songino Array	68.88	327	P	P	04 30 08.0	+0.7
SONM	Songino Array	68.88	327	P	P	04 30 08.0	+0.8
	1.6nm,0.8s,mb3.9,baz=148,slow=9.0,SNR=17						
BILL	Bilibino	74.97	4	eP	P	04 30 43.8	+0.6
	2.7nm,0.3s,mb4.5						
SVW2	Sparrevohn	77.81	22	eP	P	04 31 00.4	+0.9
MCK	McKinley	81.87	22	eP	P	04 31 21.2	-0.2
	4.8nm,0.7s,mb4.4						
COLA	College	82.89	21	eP	P	04 31 25.3	-1.4
	2.4nm,0.6s,mb4.2						
MKAR	Makanchi Array	82.94	319	P	P	04 31 28.1	+0.8
	0.7nm,0.7s,mb3.6,baz=92,slow=6.1,SNR=7.9						
NVAR	Mina Array Bea	91.77	52	P	P	04 32 10.1	-0.2
	0.6nm,0.7s,mb4.0,baz=249,slow=4.1,SNR=4.9						
YKA	Yellowknife Ar	96.19	28	P	P	04 32 31.1	+1.2
	0.2nm,0.8s,mb3.6,baz=271,slow=4.6,SNR=4.3						
TOA0	Torodi Ar. Sit	152.62	286	ePKPbc	PKPbc	04 38 58.0	-1.6
TOA0				ePKPab	PKPab	04 39 07.9	-2.5
TORD	Torodi Ar. Bea	152.62	286	PKPbc	PKPbc	04 38 58.1	-1.5
	0.6nm,0.9s,baz=29,slow=3.3,SNR=4.0						

IDC 18 04:19:58.2±1.9, 3200S×17743W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/13, mbtmp3.9/2, Error ellipse: s-maj=70.9km s-min=43.6km az=12.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.53	268	P	P	04 28 03.6	-0.1
	0.6nm,0.5s,baz=108,slow=7.2,SNR=15						
WRA	Warramunga Arr	44.67	273	P	P	04 28 12.8	-0.1
	0.8nm,0.3s,baz=112,slow=8.0,SNR=30						
FINES	FINESS Array B	146.81	340	PKPbc	PKPbc	04 39 40.8	-0.7
	0.8nm,0.5s,baz=42,slow=3.6,SNR=10						
TORD	Torodi Ar. Bea	161.22	177	PKPab	PKPab	04 40 44.1	-0.4
	0.7nm,0.6s,baz=190,slow=6.5,SNR=5.3						

IDC 18 04:24:36.0±1.6, 263S×13923E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.9/12, mbtmp3.9/6, ML4.1/2, MS3.5/1, Ms1 3.5/1, ms1mx3.2/21, Error ellipse: s-maj=53.5km s-min=20.5km az=89.0
ISCJB 18 04:24:43.9±3.2, 28S±0.1×1386E±0.1, h61km±33km, mb4.1/10, Error ellipse: s-maj=22.2km s-min=14.4km az=37.6
NEIC 18 04:24:45.7±1.8, 277S×13858E, h60km±19km, mb4.2/6, Error ellipse: s-maj=15.9km s-min=12.9km az=102.0
ISC 18 04:24:45.9±2.2, 28S±01×1386E±01, h61km±24km, n17, σ0s72/18, mb4.1/10, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	10.77	128	ePn	Pn	04 27 18.1	+0.7
KAKA	Kakadu	11.58	211	ePn	Pn	04 27 27.5	-1.1
	39nm,0.7s						
KAKA				eSn	Sn	04 29 36.6	+0.3
BATI	Kupang	16.55	243	P	Pn	04 28 39.4	+5.3
	5.7nm,0.3s,baz=106,slow=1.9,SNR=7.7						
WB2	Warramunga Arr	17.55	193	eP	Pn	04 28 46.3	0.0
WRA	Warramunga Arr	17.55	193	P	Pn	04 28 46.4	0.0
	0.3nm,0.3s,baz=16,slow=12,SNR=14						
FITZ	Fitzroy Crossi	19.82	219	P	Pn	04 29 12.7	-0.9
	1.9nm,0.8s,baz=34,slow=13,SNR=5.2						
FITZ				LR	LR	04 38 44.0	
	comp=Z,137nm,18.2s,baz=277,slow=42						
ASAR	Alice Springs	21.24	192	P	P	04 29 26.9	-0.1
	2.4nm,0.8s,mb3.6,baz=20,slow=10,SNR=21						
KKM	Kota Kinabalu	24.00	291	eP	P	04 29 56.8	+1.7
MBWA	Marble Bar	25.89	224	eP	P	04 30 13.9	+1.6
	15nm,1.1s,mb4.4						
ULN	Ulaanbaatar	57.48	335	eP	P	04 34 28.4	-0.2
	1.3nm,0.6s,mb4.1						
SONM	Songino Array	57.73	335	P	P	04 34 29.8	-0.5
	0.5nm,0.7s,mb3.7,baz=140,slow=4.7,SNR=3.3						
MKAR	Makanchi Array	69.77	322	P	P	04 35 49.9	+0.2
	2.0nm,0.5s,mb4.3,baz=108,slow=7.9,SNR=28						
TKM2	Tokmak 2	72.51	317	eP	P	04 36 06.2	-0.1
	1.4nm,0.6s,mb4.1						
AAK	Ala-Archa	73.17	316	eP	P	04 36 10.2	0.0
	2.6nm,1.3s,mb4.0						
KURK	Kurchatov	73.71	325	eP	P	04 36 12.8	-0.4
	1.9nm,0.8s,mb4.1						
VNDA	Vanda	75.72	175	P	P	04 36 23.9	-0.5
	1.1nm,0.8s,mb3.8,baz=313,slow=8.3,SNR=4.9						
BRVK	Borovoye	79.37	325	eP	P	04 36 44.8	-0.4
	3.3nm,0.6s,mb4.4						

ISC 18 04:28:57.0±0.7, 4497N±003×1499E±006, h10km, n9, σ0s63/16, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVLJ	Novalja	0.41	192	ePg	Pg	04 29 04.8	-0.3
NVLJ				Sg	Sg	04 29 11.4	+0.9
BOJS	Bojanci	0.57	19	i Pg	Pg	04 29 07.5	-0.5
BOJS				i Sg	Sg	04 29 15.9	+0.5
BOJS							
	comp=Z,5.0nm,0.1s						
KNDS	Knezji Dol	0.70	323	i Pg	Pg	04 29 09.8	-0.8
KNDS				i Sg	Sg	04 29 20.0	+0.2
VISS	Visnje	0.84	353	i Pg	Pg	04 29 12.0	-1.1
VISS				i Sg	Sg	04 29 24.6	+0.5
CEY	Cerknica	0.86	333	i Pg	Pg	04 29 12.3	-1.3
CEY				i Sg	Sg	04 29 25.7	+0.8
SKDS	Skadanscina	0.90	310	i Sg	Sg	04 29 25.6	-0.3
CRES	Cresnjev	0.92	21	i Pg	Pg	04 29 14.8	+0.2
CRES				i Sg	Sg	04 29 26.8	+0.2
GCIS	Gornji Cirnik	1.00	26	i Pg	Pg	04 29 16.4	+0.1
VOJS	Vojsko	1.31	324	i Pg	Pg	04 29 22.4	+0.2
VOJS				i Sg	Sg	04 29 40.0	+0.7

CSEM 18 04:41:39.6±0.1, 3507N×3330E, h69km±1km, Mw3.8, Error ellipse: s-maj=1.7km s-min=1.5km az=79.0
ISCJB 18 04:41:40.3±0.3, 3502N±002×3332E±002, h69km±4km, Error ellipse: s-maj=4.2km s-min=3.1km az=22.7
ISK 18 04:41:40.9, 35.11N×3327E, h57km, MD3.6
HLW 18 04:41:40.5, 35.12N×3339E, h33km, Mb4.0
GRAL 18 04:41:41.2±1.6, 3500N×33.17E, h60km±15km, MD3.8
NIC 18 04:41:42.8±0.2, 35.11N×3330E, h50km, ML3.5, MW3.8
NIC Felt earthquake; Maximum Intensity 2; Felt I=II MM at Nicosia.
NSSC 18 04:41:48.1, 3491N×34.17E, h10km±5km
ATH 18 04:42:35.3, 3625N×28.11E, h62km±33km
ISC 18 04:41:41.7±0.3, 3502N±002×3333E±002, h59km±5km, n74, σ1s03/111, 2C-13D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSS	Prodhromos	0.06	182	i PG	Pn	04 41 49.9	-0.7
CSS				i SG	Sn	04 41 56.7	-0.2
CSS	Prodhromos	0.06	182	⇑P	Pn	04 41 50.8	+0.2
	32nm,0.2s						
CSS				i Sg	Sn	04 41 56.7	-0.2
MAMC	Mammari	0.18	328	P	Pn	04 41 50.9	-0.1
LFK	Lefkose	0.30	32	PG	Pn	04 41 51.7	-0.1
LFK				SG	Sn	04 41 58.7	-0.4
MAGT	Magosa	0.45	80	PG	Pn	04 41 53.7	+0.6
SZAC	Souni-Zanaja	0.46	234	⇓P	Pn	04 41 54.1	+1.0
PHNC	Paralimni	0.57	92	P	Pn	04 41 55.3	+0.9
PHNC				S	Sn	04 42 05.4	+1.7
ALFC	Alevga	0.62	283	⇓P	Pn	04 41 54.7	-0.2
	52nm,0.3s						
ALFC				S	Sn	04 41 59.6	-4.9
PPCY	Paphos	0.82	261	⇓P	Pn	04 41 58.1	+0.7
	38nm,0.2s						
PPCY				S	Sn	04 42 06.5	-2.5
AKMC	Akamas	0.82	271	⇓P	Pn	04 41 58.1	+0.7
IKL	Isikli	1.25	13	PN	Pn	04 42 02.3	-0.7
IKL				SN	Sn	04 42 16.7	-2.2
ERMK	Ermenek	1.65	348	i P	Pn	04 42 09.6	+1.1
ERMK	Ermenek	1.65	348	i P	Pn	04 42 09.6	+1.2
ERMK				i S	Sn	04 42 29.6	+1.0
MERS	Mersin	2.08	27	PN	Pn	04 42 14.2	0.0
MERS				SN	Sn	04 42 38.0	-1.0
BHL	Bhannes	2.22	120	eP	Pn	04 42 15.6	-0.5
BHL				eS	Sn	04 42 41.1	-1.3
KRTS	Karatas	2.27	46	PN	Pn	04 42 17.5	+0.7
HWQ	Hawqa	2.28	108	eP	Pn	04 42 17.2	+0.3
HWQ				eS	Sn	04 42 43.8	-0.1
ARNB	Al Arnab	2.31	68	⇑P	Pn	04 42 18.1	+0.7
ARNB				⇑S	Sn	04 42 42.5	-2.1
ARNB	Al Arnab	2.31	68	⇑iP	Pn	04 42 18.1	+0.7
ARNB				⇑iS	Sn	04 42 42.5	-2.2
SLNF	Slenfeh	2.43	76	⇑P	Pn	04 42 18.4	-0.6
SLNF				⇑S	Sn	04 42 43.2	-4.3
SLNF	Slenfeh	2.43	76	⇑iP	Pn	04 42 18.4	-0.6
SLNF				⇑iS	Sn	04 42 43.2	-4.4
BIDA	Albida	2.45	89	⇓P	Pn	04 42 19.0	-0.3
BIDA				⇑S	Sn	04 42 42.4	-5.7
BIDA	Albida	2.45	89	⇓iP	Pn	04 42 19.0	-0.3
HTY	Hatay	2.54	64	PN	Pn	04 42 20.5	+0.1
HTY				SN	Sn	04 42 50.2	+0.1
WRDH	Warideh	2.56	78	⇑P	Pn	04 42 20.6	-0.2
WRDH				⇑S	Sn	04 42 46.2	-4.6
WRDH	Warideh	2.56	78	⇑iP	Pn	04 42 20.6	-0.2
WRDH				⇑iS	Sn	04 42 46.2	-4.7
RCY	Rachaya	2.57	126	eP	Pn	04 42 21.2	+0.4
RCY				eS	Sn	04 42 50.5	-0.4
KARA	Karaisali	2.63	31	PN	Pn	04 42 22.2	+0.4
KARA				SN	Sn	04 42 51.8	-0.7
FKH	Fakeheh	2.65	106	eP	Pn	04 42 22.6	+0.7
FKH				eS	Sn	04 42 54.0	+1.0
BRBR	Barbar	2.70	126	⇑P	Pn	04 42 23.4	+0.8
BRBR				⇑S	Sn	04 42 50.9	-3.3
BRBR	Barbar	2.70	126	⇑iP	Pn	04 42 23.4	+0.7
BRBR				⇑iS	Sn	04 42 50.9	-3.3
BTCH	Batrach	2.74	67	⇓P	Pn	04 42 23.9	+0.6
BTCH				⇓S	Sn	04 42 52.6	-2.6
BTCH	Batrach	2.74	67	⇓iP	Pn	04 42 23.9	+0.6
BTCH				⇓iS	Sn	04 42 52.6	-2.6
CEYT	Ceyhan	2.79	44	PN	Pn	04 42 23.6	-0.3
COBT	Iskenderun	2.81	57	i P	Pn	04 42 24.0	-0.1
COBT				i S	Sn	04 43 00.2	+3.4
QASN	Qassioun	2.85	121	⇑P	Pn	04 42 24.5	-0.2
QASN				⇑S	Sn	04 42 53.3	-4.6
QASN	Qassioun	2.85	121	⇑iP	Pn	04 42 24.5	-0.3
TOTH	TOTAH	3.05	122	⇑P	Pn	04 42 28.7	+1.2
TOTH				⇓S	Sn	04 42 58.0	-4.8
TOTH	TOTAH	3.05	122	⇑iP	Pn	04 42 28.7	+1.2
DRWC	Darouich	3.14	59	⇑P	Pn	04 42 31.0	+2.2
DRWC				⇑S	Sn	04 43 03.7	-1.3
DRWC	Darouich	3.14	59	⇑iP	Pn	04 42 31.0	+2.3
DRWC				⇑iS	Sn	04 43 03.7	-1.3
KOZT	Kozan	3.17	39	ePN	Pn	04 42 29.4	+0.2
TCHB	Talchebab	3.21	136	⇑P	Pn	04 42 30.6	+1.0
TCHB				⇑S	Sn	04 43 05.2	-1.6
TCHB	Talchebab	3.21	136	⇑iP	Pn	04 42 30.6	+0.9
TCHB				⇑iS	Sn	04 43 05.2	-1.5
RABH	Abou Rabah	3.24	99	⇑P	Pn	04 42 29.7	-0.4
RABH	Abou Rabah	3.24	99	⇑iP	Pn	04 42 29.7	-0.4
NIG	Nigde	3.25	18	ePN	Pn	04 42 30.9	+0.7
ELL	Elmali	3.27	303	ePN	Pn	04 42 30.0	-0.5
ROOS	tl_alroos	3.37	103	⇑P	Pn	04 42 31.2	-0.7
ROOS				⇓S	Sn	04 43 04.1	-6.5
ROOS	tl_alroos	3.37	103	⇑iP	Pn	04 42 31.2	-0.7
ISP	Isparta	3.62	322	ePN	Pn	04 42 35.4	+0.1
SALA	Sala	3.65	128	⇑P	Pn	04 42 37.2	+1.6
SALA				⇑S	Sn	04 43 14.7	-2.8
SALA	Sala	3.65	128	⇑iP	Pn	04 42 37.2	+1.5
GOLH	Golhisar	3.77	307	i P	Pn	04 42 38.8	+1.5
GOLH	Golhisar	3.77	307	i P	Pn	04 42 38.8	+1.5
GOLH				i S	Sn	04 43 21.5	+1.1
KMRS	Kahramanmaras	3.80	48	ePN	Pn	04 42 38.3	+0.6
GAZ	Gaziantep	3.80	55	ePN	Pn	04 42 39.2	+1.4
FETY	Fethiye	3.81	296	ePN	Pn	04 42 37.3	-0.6
KIZT	Kizilcal	4.02	344	ePN	Pn	04 42 40.5	-0.3
SHUT	Suhut-Afyon	4.17	328	ePN	Pn	04 42 43.4	+0.6
ARG	Arkhangelos	4.41	287	eP	Pn	04 42 45.0	-1.0
DENT	Denizli	4.41	309	ePN	Pn	04 42 46.0	-0.1
ESKT	Eskisehir	4.91	337	ePN	Pn	04 42 53.5	+0.6
KARP	Karpathos	5.08	278	eP	Pn	04 42 54.8	-0.4
HNKL	Nakhl	5.11	174	⇓P	Pn	04 42 56.2	+0.6
HNKL	Nakhl	5.11	174	P	Pn	04 42 56.2	+0.5
SUZ		5.18	185	P	Pn	04 42 57.2	+0.5
BDRM	Kayabasi	5.19	295	i P	Pn	04 42 55.0	-1.8
BDRM	Kayabasi	5.19	295	i P	Pn	04 42 55.0	-1.7
BDRM				i S	Sn	04 43 51.5	-3.7
MALT	Malatya	5.25	50	ePN	Pn	04 42 59.0	+1.5
SMG	Samos	5.89	299	eP	Pn	04 43 05.0	-1.3
NPS	Neapolis	6.33	274	eP	Pn	04 43 11.9	-0.5
HKAT	Jabal Katrina	6.50	175	⇑P	Pn	04 43 15.8	+1.1
VAM	Vamos	7.49	276	eP	Pn	04 43 26.1	-2.1

IDC 18 04:48:20.7±2.5, 446N×7877W, h0km, mb3.2/1, mb1 3.5/2, mb1mx3.3/19, mbtmp3.4/2, ML2.1/1, Error ellipse: s-maj=78.0km s-min=42.6km az=16.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	4.44	85	Pn	Pn	04 49 29.8	+0.4
	2.0nm,0.3s,baz=31,slow=3.1,SNR=10.0						
YKA	Yellowknife Ar	63.66	342	P	P	04 58 53.5	0.0
	0.2nm,0.7s,baz=137,slow=6.8,SNR=6.1						
ASAR	Alice Springs	143.16	236	PKP	PKPdf	05 07 55.9	-1.8
	0.7nm,0.9s,baz=119,slow=3.5,SNR=5.1						
WRA	Warramunga Arr	144.28	242	PKP	PKPdf	05 07 59.9	+0.2
	1.0nm,0.8s,baz=104,slow=2.9,SNR=9.3						

NEIC 18 04:58:55.1, 1928N×6701W, h25km, MD3.6(RSPR), After RSPR.
RSPR 18 04:58:55.1, 1928N×6701W, h25km±27km, MD3.6/16, MD3.6/16, 10C-7D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.81	187	⇑eP	Pb	04 59 08.1	-2.6
AGPR				eS	Sb	04 59 19.3	-1.9
LRS	Lares	1.00	171	⇑eP	Pn	04 59 10.6	-2.9
LRS				eS	Sb	04 59 23.6	-2.9
MPR	Mayaguez	1.07	186	⇑eP	Pn	04 59 11.8	-2.6
MPR				eS	Sn	04 59 25.8	-2.8
LSP	Las Mesas	1.10	184	⇓eP	Pn	04 59 12.5	-2.5
CELP	Cerrillos	1.27	161	⇑eP	Pn	04 59 15.4	-1.8
CELP				eS	Sn	04 59 31.0	-2.4
CRPR	Cabo Rojo, PR	1.27	184	⇑eP	Pn	04 59 14.9	-2.3
CRPR				eS	Sn	04 59 30.4	-3.1
OBIP	Obispado Ponce	1.29	163	⇓eP	Pn	04 59 15.5	-2.0
OBIP				eS	Sn	04 59 30.7	-3.3
GBPR	Guanica, Bosqu	1.30	174	⇓eP	Pn	04 59 16.2	-1.5
GBPR	Guanica, Bosqu	1.30	174	eS	Sn	04 59 31.7	-2.6
SJG	San Juan	1.42	145	⇓eP	Pn	04 59 17.1	-2.2
SJG				eS	Sn	04 59 35.0	-2.2
SJG	San Juan	1.42	145	⇓eP	Pn	04 59 17.2	-2.1
SJG				eS	Sn	04 59 34.7	-2.5
ICM	Isla Caja Muer	1.46	161	⇑eP	Pn	04 59 18.5	-1.3
ICM				eS	Sn	04 59 35.6	-2.5
CBYP	Canovanas	1.49	132	⇓eP	Pn	04 59 18.4	-1.8
CBYP				eS	Sn	04 59 35.9	-2.9
CPD	Cerro la Pandu	1.62	140	⇑eP	Pn	04 59 20.0	-2.0
CPD				eS	Sn	04 59 40.0	-2.0
MTP	Monte Pirata	1.82	130	⇑eP	Pn	04 59 22.7	-2.1
MTP				eS	Sn	04 59 43.8	-3.2
TBVI	Tortola	2.43	110	⇑eP	Pn	04 59 31.0	-2.1
TBVI				eS	Sn	04 59 59.5	-2.5
STDO	Santo Domingo	2.88	254	⇓eP	Pn	04 59 38.4	-1.0
STDO				eS	Sn	05 00 11.1	-2.1
SDDR	Presa de Saban	4.05	266	⇑eP	Pn	04 59 55.6	+0.1
SDDR				eS	Sn	05 00 40.5	-1.7

BJI 18 05:08:49.2, 4590N×15450E, h10km, mB4.8, mb4.5, Ms4.4, Msz4.1
NEIC 18 05:08:52.2±0.6, 4586N×15448E, h10km, mb4.1/5, Error ellipse: s-maj=18.3km s-min=11.2km az=166.0
ISCJB 18 05:08:53.8±0.6, 458N±0.1×15441E±008, h33km, mb4.0/26, Error ellipse: s-maj=16.5km s-min=6.7km az=165.7
MOS 18 05:08:56.4±2.5, 4608N×154.18E, h50km, mb4.1/13, Error ellipse: s-maj=13.3km s-min=11.1km az=115.4
IDC 18 05:08:59.1±6.7, 4579N×15466E, h60km±62km, mb3.5/13, mb1 3.7/14, mb1mx3.6/24, mbtmp3.5/14, ML3.3/1, Error ellipse: s-maj=22.1km s-min=16.4km az=136.0
ISC 18 05:08:56.2±0.6, 459N±01×15443E±008, h35km, n52, σ1s18/53, mb4.0/26, 1C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.66	264	ePN	Pn	05 10 00.5	-3.5
KUR				i S	Sn	05 10 55.7	-1.1
KUR				smax			
	comp=N,190nm,1.0s						
KUR				smax			
	comp=E,150nm,1.0s						
YSS	Yuzh-Sakhalins	8.14	282	⇑ePN	Pn	05 10 52.0	+0.2
MJAR	Matsushiro Arr	15.35	238	P	Pn	05 12 33.9	+3.9
	comp=E,0.1nm,0.3s,baz=40,slow=9.0,SNR=8.2						
KLR	Kul'dur	15.66	291	eP	Pn	05 12 28.6	-5.4
KSRS	Korea Array	21.45	256	P	P	05 13 42.9	+1.6
	comp=E,2.0nm,0.9s,mb3.5,baz=65,slow=8.7,SNR=5.2						
BILL	Bilibino	23.04	11	eP	P	05 13 58.5	+0.6
BILL				e		05 14 07.8	
BILL				e		05 17 57.4	
BILL				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.2						
BOD	Bodaibo	27.24	311	eP	P	05 14 31.6	-5.0
TIXI	Tiksi	28.55	343	eP	P	05 14 43.4	-4.8
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.4						
ULN	Ulaanbaatar	32.05	291	i P	P	05 15 20.7	+1.4
BTO	Baotou	32.45	277	eP	P	05 15 27.6	+4.7
SONM	Songino Array	32.49	291	P	P	05 15 26.8	+3.6
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SONM	**Songino Array**	**32.49**	**291**	P	**P**	**05 15 26.8**	**+3.6**
	comp=Z,1.2nm,1.0s,mb3.7,baz=80,slow=6.8,SNR=5.7						
ZAK	**Zakamensk**	**33.88**	**297**	*e*P	**P**	**05 15 32.9**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
COLA	**College**	**36.25**	**38**	*e*P	**P**	**05 15 55.6**	**+0.1**
EGAK	**Eagle**	**39.11**	**38**	*e*P	**P**	**05 16 19.2**	**-0.5**
	comp=Z,3.2nm,1.0s,mb4.0						
DAWY	**Dawson**	**39.93**	**39**	*e*P	**P**	**05 16 26.9**	**+0.4**
GTA	**Gaotai**	**40.02**	**281**	*e*P	**P**	**05 16 27.6**	**0.0**
GTA				AP	pP	05 16 34.3	-3.5
GTA				XP	sP	05 16 37.1	-4.9
GTA				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.4						
INK	**Inuvik**	**41.89**	**32**	*e*P	**P**	**05 16 42.5**	**-0.1**
INK	**Inuvik**	**41.89**	**32**	P	**P**	**05 16 42.6**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.4,baz=333,slow=3.8,SNR=6.0						
KURK	**Kurchatov**	**48.60**	**305**	*e*P	**P**	**05 17 34.0**	**-2.1**
	comp=Z,2.9nm,0.7s,mb4.4						
YKA	**Yellowknife Ar**	**51.07**	**37**	P	**P**	**05 17 54.3**	**-0.2**
	comp=Z,0.6nm,0.8s,mb3.5,baz=295,slow=7.4,SNR=7.2						
TKM2	**Tokmak 2**	**54.20**	**297**	*e*P	**P**	**05 18 18.7**	**+0.7**
	comp=Z,1.5nm,0.5s,mb4.2						
TKM2	**Tokmak 2**	**54.20**	**297**	*e*P	**P**	**05 18 18.7**	**+0.7**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
AAK	**Ala-Archa**	**55.04**	**298**	*e*P	**P**	**05 18 23.5**	**-0.6**
	comp=Z,2.9nm,1.4s,mb4.1						
AAK	**Ala-Archa**	**55.04**	**298**	*e*P	**P**	**05 18 23.5**	**-0.6**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
EKS2	**Erkin-Say**	**55.47**	**298**	*e*P	**P**	**05 18 27.5**	**+0.3**
	comp=Z,5.3nm,1.4s,mb4.4						
KBO	**Bosley Butte**	**56.14**	**62**	*e*P	**P**	**05 18 30.8**	**-1.2**
EDM	**Edmonton**	**56.25**	**46**	*e*P	**P**	**05 18 31.3**	**-1.3**
ARU	**Arti**	**56.26**	**318**	*e*P	**P**	**05 18 31.3**	**-1.4**
	comp=Z,4.8nm,0.7s,mb4.6						
ARU	**Arti**	**56.26**	**318**	*d i*P	**P**	**05 18 31.2**	**-1.5**
ARU						05 20 31.5	
ARU				pmax	pmax		
	comp=Z,19nm,2.4s,mb4.7						
PRGR	**Permogore**	**58.58**	**328**	*e*P	**P**	**05 18 45.7**	**-3.2**
AKTK	**Aktyubinsk**	**59.98**	**313**	P	**P**	**05 19 01.8**	**+3.0**
AKTO	**Aktyubinsk**	**59.98**	**313**	P	**P**	**05 19 01.8**	**+3.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
AKTO	**Aktyubinsk**	**59.98**	**313**	P	**P**	**05 19 01.8**	**+3.0**
	comp=Z,0.5nm,0.4s,mb3.9,baz=48,slow=6.9,SNR=4.4						
NVAR	**Mina Array Bea**	**62.02**	**63**	P	**P**	**05 19 13.7**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.8,baz=305,slow=4.0,SNR=4.1						
BW06	**Boulder Array**	**64.51**	**54**	*e*P	**P**	**05 19 29.1**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.8						
PDAR	**Pinedale Array**	**64.51**	**54**	P	**P**	**05 19 29.2**	**0.0**
	comp=Z,0.7nm,0.8s,mb3.7,baz=323,slow=0.7,SNR=6.3						
FINES	**FINESS Array B**	**65.20**	**335**	*i* P	**P**	**05 19 36.0**	**+2.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**65.20**	**335**	P	**P**	**05 19 33.4**	**-0.1**
	comp=Z,0.9nm,0.5s,mb4.1,baz=37,slow=6.8,SNR=10						
OBN	**Obninsk**	**66.53**	**326**	*e*P	**P**	**05 19 42.8**	**+0.7**
OBN				*e*		05 22 07.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**68.01**	**200**	P	**P**	**05 19 51.4**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**68.01**	**200**	P	**P**	**05 19 51.4**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=18,slow=7.0,SNR=8.6						
ASAR	**Alice Springs**	**71.70**	**200**	P	**P**	**05 20 14.4**	**+0.1**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**71.70**	**200**	P	**P**	**05 20 14.4**	**+0.1**
	comp=Z,0.9nm,0.8s,mb3.8,baz=19,slow=5.8,SNR=9.7						
AKASG	**Malin Array Be**	**72.77**	**327**	P	**P**	**05 20 22.5**	**+2.0**
AKASG	**Malin Array Be**	**72.77**	**327**	*i* P	**P**	**05 20 23.3**	**+2.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**72.77**	**327**	P	**P**	**05 20 22.5**	**+2.0**
	comp=Z,0.5nm,0.4s,mb3.8,baz=34,slow=6.2,SNR=4.8						
TXAR	**Lajitas Array**	**77.11**	**61**	P	**P**	**05 20 45.9**	**-0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**77.11**	**61**	P	**P**	**05 20 45.9**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.9,baz=309,slow=4.2,SNR=18						
CLL	**Collm**	**77.62**	**336**	*e*P	**P**	**05 20 48.0**	**-0.5**
	comp=Z,9.0nm,1.0s,mb4.7						
BRTR	**Keskin Array B**	**79.64**	**318**	P	**P**	**05 20 59.7**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**79.64**	**318**	P	**P**	**05 20 59.7**	**-0.1**
	comp=Z,1.1nm,0.9s,mb3.8,baz=67,slow=6.9,SNR=5.3						

*BJI **18** 05:15:34.2, 37.19N×134.83E, h372km, mB4.4, mb4.3*
*MOS **18** 05:15:35.9±0.6, 37.51N×134.72E, h371km, mb3.9/18, Error ellipse: s-maj=15.8km s-min=10.2km az=80.2*
*JMA **18** 05:15:36.1±0.2, 37.29N×134.94E, h392km±2km, M3.4*
*ISCJB **18** 05:15:36.3±0.3, 37.38N±0.06×134.83E±0.06, h380km±4km, mb3.8/32, Error ellipse: s-maj=10.4km s-min=6.4km az=153.7*
*NEIC **18** 05:15:36.9±0.3, 37.39N×134.78E, h372km±4km, mb3.9/18, Error ellipse: s-maj=8.2km s-min=5.7km az=160.0*
*IDC **18** 05:15:37.2±0.7, 37.33N×134.77E, h380km±8km, mb3.4/14, mb1 3.6/18, mb1mx3.4/27, mbtmp3.4/18, Error ellipse: s-maj=14.7km s-min=12.2km az=179.0*

ISC 18 05:15:37.2±0.3**, 37.36N**±0.06×**134.86E**±0.06**, h376**km±4km**, n87, σ0.76**/100**, mb3.8**/32**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**1.59**	**105**	P	**Pn**	**05 16 28.8**	**+0.4**
JJH				*e*S	**S**	**05 17 10.1**	**+0.5**
SAI	**Saigo**	**1.68**	**227**	P	**Pn**	**05 16 29.7**	**+0.8**
JHG	**Hegura jima**	**1.71**	**73**	P	**Pn**	**05 16 29.5**	**+0.5**
JSZ	**Suzu**	**2.00**	**87**	P	**Pn**	**05 16 31.2**	**+0.4**
JSZ				S	**S**	**05 17 15.1**	**+1.1**
JWT	**Wachi**	**2.12**	**168**	P	**Pn**	**05 16 31.7**	**0.0**
JWT				S	**S**	**05 17 14.8**	**-0.8**
JGM	**Miyama**	**2.23**	**137**	P	**Pn**	**05 16 32.4**	**-0.1**
JGM				*e*S	**S**	**05 17 16.1**	**-0.9**
JHS	**Saijyo**	**2.74**	**211**	P	**Pn**	**05 16 36.3**	**-0.1**
JSD	**Sado**	**2.78**	**75**	P	**Pn**	**05 16 36.5**	**-0.1**
MAJO	**Matsushiro**	**2.80**	**106**	*e*Pn	**Pn**	**05 16 36.6**	**-0.2**
MAT	**Matsushiro**	**2.80**	**106**	P	**Pn**	**05 16 36.5**	**-0.3**
MAT				S	**S**	**05 17 24.7**	**-0.2**
MAT	**Matsushiro**	**2.80**	**106**	P	**Pn**	**05 16 36.4**	**-0.4**
MAT				*e*S	**S**	**05 17 25.0**	**+0.1**
MJAR	**Matsushiro Arr**	**2.80**	**106**	P	**Pn**	**05 16 37.1**	**+0.3**
MJAR				S	**S**	**05 17 27.8**	**+2.9**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**2.80**	**106**	P	**Pn**	**05 16 37.1**	**+0.3**
	comp=N,2.9nm,0.3s,baz=284,slow=9.5,SNR=121						
MJAR				S	**S**	**05 17 27.8**	**+2.9**
	comp=N,0.5nm,0.3s,baz=285,slow=14,SNR=5.8						
JIE	**Ise**	**3.32**	**153**	P	**Pn**	**05 16 41.6**	**+0.3**
JRY	**Ryogami san**	**3.51**	**111**	P	**Pn**	**05 16 45.5**	**+2.5**
JWZ	**Kozaga**	**3.88**	**169**	P	**Pn**	**05 16 46.2**	**-0.4**
JOD2	**Odawara 2**	**4.00**	**120**	P	**Pn**	**05 16 47.3**	**-0.4**
JOD2				S	**S**	**05 17 44.2**	**-0.6**
JTO	**Tosashimizu**	**4.79**	**201**	P	**Pn**	**05 16 55.9**	**+0.1**
JMK	**Ichinoseki**	**5.26**	**70**	P	**Pn**	**05 16 59.9**	**-0.7**
JMK				*e*S	**S**	**05 18 06.4**	**-2.0**
JNU	**Nakatsue**	**5.33**	**219**	P	**Pn**	**05 17 01.9**	**+0.4**
	comp=N,1.0nm,0.3s,baz=26,slow=21,SNR=6.8						
KSRS	**Korea Array**	**5.52**	**273**	P	**Pn**	**05 17 04.9**	**+1.4**
	comp=N,0.9nm,0.3s,baz=93,slow=11,SNR=43						
BSO1	**Boso 1**	**5.64**	**117**	P	**Pn**	**05 17 02.7**	**-2.2**
BSO1				S	**S**	**05 18 11.8**	**-4.4**
JOT	**Ohata**	**6.26**	**48**	P	**Pn**	**05 17 11.4**	**-0.2**
ERM	**Erimo**	**7.91**	**51**	*e*Pn	**Pn**	**05 17 29.6**	**-0.9**
	comp=N,41nm,0.6s						
ERM	**Erimo**	**7.91**	**51**	*e*P	**Pn**	**05 17 29.6**	**-0.9**
ERM				pmax	pmax		
	comp=Z,41nm,0.6s						
ASAJ	**Asahikawa**	**8.95**	**39**	P	**Pn**	**05 17 41.6**	**-0.9**
ASAJ				S	**S**	**05 19 17.5**	**-7.8**
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
ASAJ	**Asahikawa**	**8.95**	**39**	P	**Pn**	**05 17 41.6**	**-0.9**
	comp=N,10nm,0.3s,baz=229,slow=8.3,SNR=43						
ASAJ				S	**S**	**05 19 17.5**	**-7.8**
	comp=N,3.9nm,0.3s,baz=79,slow=29,SNR=12						
YSS	**Yuzh-Sakhalins**	**11.23**	**29**	*e*Pn	**Pn**	**05 18 09.0**	**-0.3**
SONM	**Songino Array**	**23.30**	**306**	P	**P**	**05 20 12.7**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**23.30**	**306**	P	**P**	**05 20 12.7**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.1,baz=111,slow=9.4,SNR=10						
LZH	**Lanzhou**	**24.84**	**277**	*e*P	**P**	**05 20 26.1**	**-0.9**
LZH				AMB	AMB		
	comp=Z,17nm,1.3s,mb4.1						
LZH				AMB	AMB		
	comp=Z,70nm,4.1s						
GYA	**Guiyang**	**26.19**	**254**	P	**P**	**05 20 38.8**	**-0.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
GTA	**Gaotai**	**27.45**	**285**	*e*P	**P**	**05 20 50.1**	**0.0**
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb3.7						
TIXI	**Tiksi**	**34.50**	**357**	*e*P	**P**	**05 21 50.0**	**-0.9**
	comp=Z,6.9nm,0.6s,mb4.1						
TIXI	**Tiksi**	**34.50**	**357**	*e*P	**P**	**05 21 50.0**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.1						
BILL	**Bilibino**	**35.35**	**20**	*e*P	**P**	**05 21 58.7**	**+0.7**
	comp=Z,3.2nm,0.5s,mb3.8						
BILL	**Bilibino**	**35.35**	**20**	*e*P	**P**	**05 21 58.7**	**+0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.8						
MK31	**Makanchi Array**	**39.49**	**301**	*e*P	**P**	**05 22 33.0**	**+0.4**
MKAR	**Makanchi Array**	**39.49**	**301**	P	**P**	**05 22 32.1**	**-0.5**
	comp=Z,0.4nm,0.3s,mb3.1,baz=89,slow=10,SNR=8.4						
MKAR				ScP	ScP	05 27 43.0	-0.8
	comp=Z,0.2nm,0.2s,baz=80,slow=7.3,SNR=3.8						
KURK	**Kurchatov**	**41.59**	**307**	*e*P	**P**	**05 22 49.0**	**-0.6**
	comp=Z,2.3nm,0.9s,mb3.3						
KURK	**Kurchatov**	**41.59**	**307**	*e*P	**P**	**05 22 49.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.2						
MCK	**McKinley**	**51.27**	**34**	*e*P	**P**	**05 24 04.4**	**+0.7**
	comp=Z,6.8nm,1.0s,mb3.8						
MCK	**McKinley**	**51.27**	**34**	*e*P	**P**	**05 24 04.4**	**+0.7**
MCK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb3.9						
COLA	**College**	**51.60**	**32**	*e*P	**P**	**05 24 06.6**	**+0.6**
	comp=Z,1.4nm,0.4s,mb3.6						
COLA	**College**	**51.60**	**32**	*e*P	**P**	**05 24 06.6**	**+0.6**
COLA				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
DAWY	**Dawson**	**55.35**	**32**	*e*P	**P**	**05 24 33.3**	**+0.3**
INK	**Inuvik**	**56.46**	**26**	*e*P	**P**	**05 24 40.9**	**+0.2**
INK	**Inuvik**	**56.46**	**26**	P	**P**	**05 24 41.2**	**+0.5**
	comp=Z,1.9nm,0.4s,mb3.8,baz=294,slow=6.3,SNR=33						
WRA	**Warramunga Arr**	**56.99**	**181**	P	**P**	**05 24 44.1**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**56.99**	**181**	P	**P**	**05 24 44.1**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.3,baz=359,slow=7.5,SNR=14						
ARCES	**ARCESS Array B**	**61.79**	**338**	P	**P**	**05 25 16.0**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	**ARCESS Array B**	**61.79**	**338**	P	**P**	**05 25 15.9**	**-0.9**
	comp=Z,4.0nm,0.9s,mb4.0,baz=62,slow=8.4,SNR=5.8						
RES	**Resolute Bay**	**63.53**	**13**	*e*P	**P**	**05 25 27.6**	**-0.5**
FINES	**FINESS Array B**	**66.01**	**330**	P	**P**	**05 25 43.3**	**-0.8**
FINES						05 26 10.6	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**66.01**	**330**	P	**P**	**05 25 43.3**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.6,baz=134,slow=27,SNR=13						
FINES				PcP	PcP	05 26 10.6	-0.8
	comp=Z,2.7nm,1.0s,baz=57,slow=1.5,SNR=5.5						
YKA	**Yellowknife Ar**	**66.09**	**28**	P	**P**	**05 25 44.6**	**0.0**
YKA						05 26 12.4	
YKA	**Yellowknife Ar**	**66.09**	**28**	P	**P**	**05 25 44.6**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.5,baz=307,slow=6.7,SNR=19						
YKA				PcP	PcP	05 26 12.4	+0.7
	comp=Z,0.3nm,0.7s,baz=310,slow=4.2,SNR=5.3						
AKASG	**Malin Array Be**	**70.75**	**320**	P	**P**	**05 26 12.9**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.75**	**320**	P	**P**	**05 26 12.8**	**-0.5**
	comp=Z,1.0nm,0.3s,mb4.0,baz=51,slow=6.1,SNR=7.5						
HFS	**Hagfors**	**71.54**	**333**	P	**P**	**05 26 17.1**	**-0.8**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**71.54**	**333**	P	**P**	**05 26 17.1**	**-0.7**
	comp=Z,1.9nm,0.4s,mb4.2,baz=68,slow=5.6,SNR=14						
NB2	**NORSAR Subarra**	**71.77**	**335**	P	**P**	**05 26 18.8**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.9,baz=44,slow=5.9						
NB2	**NORSAR Subarra**	**71.77**	**335**	P	**P**	**05 26 18.8**	**-0.4**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
NOA	**NORSAR Array B**	**71.77**	**335**	P	**P**	**05 26 18.9**	**-0.3**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**71.77**	**335**	P	**P**	**05 26 18.9**	**-0.3**
	comp=Z,1.7nm,0.6s,mb3.9,baz=45,slow=6.1,SNR=4.4						
NEW	**Newport**	**73.45**	**42**	*e*P	**P**	**05 26 29.9**	**+0.6**
	comp=Z,2.4nm,0.9s,mb3.9						
NEW	**Newport**	**73.45**	**42**	*e*P	**P**	**05 26 29.9**	**+0.6**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FCC	**Fort Churchill**	**75.94**	**24**	*e*P	**P**	**05 26 43.2**	**0.0**
	comp=Z,3.2nm,0.7s,mb4.2						
FCC	**Fort Churchill**	**75.94**	**24**	*e*P	**P**	**05 26 43.2**	**0.0**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
FFC	**Flin Flon**	**76.16**	**30**	*e*P	**P**	**05 26 44.2**	**-0.3**
	comp=Z,3.2nm,0.6s,mb4.2						
FFC	**Flin Flon**	**76.16**	**30**	*e*P	**P**	**05 26 44.2**	**-0.3**
FFC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
HLID	**Hailey**	**77.89**	**44**	*e*P	**P**	**05 26 55.3**	**+1.1**
	comp=Z,2.3nm,0.9s,mb3.9						
BOZ	**Bozeman (W)**	**78.02**	**41**	*e*P	**P**	**05 26 55.8**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.6						
BOZ	**Bozeman (W)**	**78.02**	**41**	*e*P	**P**	**05 26 55.8**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MOOW	**Moose Ponds**	**79.76**	**42**	*e*P	**P**	**05 27 04.9**	**+0.6**
	comp=Z,1.7nm,1.0s,mb3.7						
HWUT	**Hardware Ranch**	**80.75**	**44**	*e*P	**P**	**05 27 10.3**	**+0.7**
	comp=Z,2.1nm,1.0s,mb3.8						
EKA	**Eskdalemuir Ar**	**80.95**	**337**	P	**P**	**05 27 10.1**	**-0.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKA	**Eskdalemuir Ar**	**80.95**	**337**	P	**P**	**05 27 10.1**	**-0.2**
	comp=Z,1.2nm,0.4s,mb3.9,baz=31,slow=4.6,SNR=5.9						
DUG	**Dugway**	**81.00**	**46**	*e*P	**P**	**05 27 11.7**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.7						
DUG	**Dugway**	**81.00**	**46**	*e*P	**P**	**05 27 11.7**	**+0.8**
DUG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
BW06	**Boulder Array**	**81.06**	**42**	*e*P	**P**	**05 27 11.4**	**+0.2**
	comp=Z,1.5nm,0.9s,mb3.7						
PDAR	**Pinedale Array**	**81.06**	**42**	P	**P**	**05 27 11.8**	**+0.6**
	comp=Z,1.1nm,0.8s,mb3.6,baz=310,slow=1.7,SNR=11						
ULM	**Lac du Bonnet**	**81.98**	**30**	*e*P	**P**	**05 27 15.4**	**-0.4**
	comp=Z,2.7nm,0.8s,mb4.1						
ULM	**Lac du Bonnet**	**81.98**	**30**	P	**P**	**05 27 15.8**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.1,baz=320,slow=6.8,SNR=8.6						
SDCO	**Great Sand Dun**	**86.80**	**44**	*e*P	**P**	**05 27 40.7**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.6						
TXAR	**Lajitas Array**	**93.95**	**48**	P	**P**	**05 28 14.1**	**+0.8**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**93.95**	**48**	P	**P**	**05 28 14.1**	**+0.8**
	comp=Z,0.7nm,0.7s,mb3.8,baz=276,slow=3.3,SNR=10						

*ISK **18** 05:24:24.8, 34.40N×33.29E, h32km, MD3.5*
*CSEM **18** 05:24:25.7±0.0, 34.53N×33.40E, h60km, Mw2.8, Error ellipse: s-maj=1.6km s-min=0.8km az=90.0*
*ISCJB **18** 05:24:26.2±0.3, 34.45N±0.02×33.64E±0.03, h20km, Error ellipse: s-maj=4.1km s-min=2.5km az=158.0*
*NIC **18** 05:24:26.5±0.3, 34.46N×33.63E, h20km, ML3.2, MW3.6*
*HLW **18** 05:24:28.8, 34.41N×33.48E, h33km, Mb3.6*
*GRAL **18** 05:24:29.7±2.2, 34.50N×33.69E, h35km±576km, MD3.6*
*GII **18** 05:24:30.8±2.9, 34.41N×33.54E, h31km±6km, ML2.2/3, Mw2.1/3*

ISC 18 05:24:27.8±0.6**, 34.49N**±0.02×**33.60E**±0.04**, h31**km±6km**, n58, σ1.03**/78**, 1C-13D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Prodhromos**	**0.52**	**334**	*i* PG	**Pb**	**05 24 37.2**	**-1.3**
CSS				*i* SG	**Sb**	**05 24 45.3**	**-0.6**
PHNC	**Paralimni**	**0.62**	**35**	P	**Pb**	**05 24 39.1**	**-1.1**
	38nm,0.3s						
PHNC				S	**Sb**	**05 24 48.7**	**+0.1**
MAGT	**Magosa**	**0.64**	**20**	*e*PG	**Pn**	**05 24 41.7**	**+0.9**
SZAC	**Souni-Zanaja**	**0.65**	**294**	P	**Pn**	**05 24 39.5**	**-1.3**
MAMC	**Mammari**	**0.74**	**335**	P	**Pn**	**05 24 40.8**	**-1.4**
	24nm,0.4s						
MAMC				S	**Sn**	**05 24 52.7**	**+0.2**
LFK	**Lefkose**	**0.79**	**356**	PG	**Pn**	**05 24 42.4**	**-0.3**
ALFC	**Alevga**	**1.06**	**309**	⇑P	**Pn**	**05 24 45.9**	**-0.6**
PPCY	**Paphos**	**1.11**	**291**	⇓P	**Pn**	**05 24 46.3**	**-0.8**
IKL	**Isikli**	**1.74**	**2**	PN	**Pn**	**05 24 55.3**	**-0.6**
IKL				SN	**Sn**	**05 25 16.9**	**-0.1**
BHL	**Bhannes**	**1.80**	**109**	*e*P	**Pn**	**05 24 57.7**	**+1.0**
BHL				*e*S	**Sn**	**05 25 14.7**	**-3.7**
HNTI	**Hanita**	**1.92**	**137**	Pn	**Pn**	**05 24 58.7**	**+0.4**
HWQ	**Hawqa**	**1.95**	**96**	*e*P	**Pn**	**05 24 59.2**	**+0.4**
HWQ				*e*S	**Sn**	**05 25 20.7**	**-1.5**
RCY	**Rachaya**	**2.10**	**118**	*e*P	**Pn**	**05 25 01.0**	**+0.2**
RCY				*e*S	**Sn**	**05 25 24.0**	**-1.9**
MMA0	**Mount Meron ar**	**2.10**	**134**	Pn	**Pn**	**05 25 01.3**	**+0.4**
MMA0				Sn	**Sn**	**05 25 26.5**	**+0.5**
KSDI	**Kefar Szold**	**2.15**	**127**	Pn	**Pn**	**05 25 02.0**	**+0.5**
KSDI				Sn	**Sn**	**05 25 26.1**	**-0.9**
HRI	**Mount Hermon**	**2.15**	**124**	Pn	**Pn**	**05 25 02.7**	**+1.1**
BRBR	**Barbar**	**2.23**	**118**	⇓P	**Pn**	**05 25 04.0**	**+1.4**
BRBR				⇑S	**Sn**	**05 25 26.9**	**-2.2**
BRBR	**Barbar**	**2.23**	**118**	⇓*i*P	**Pn**	**05 25 04.0**	**+1.4**
BIDA	**Albida**	**2.30**	**76**	⇑P	**Pn**	**05 25 01.7**	**-1.8**
BIDA				⇓S	**Sn**	**05 25 22.4**	**-8.3**
BIDA	**Albida**	**2.30**	**76**	⇑*i*P	**Pn**	**05 25 01.7**	**-1.8**
FKH	**Fakeheh**	**2.33**	**96**	*e*P	**Pn**	**05 25 04.4**	**+0.5**
FKH				*e*S	**Sn**	**05 25 29.6**	**-2.0**
ARNB	**Al Arnab**	**2.37**	**54**	⇑P	**Pn**	**05 25 04.3**	**-0.3**
ARNB				⇑S	**Sn**	**05 25 26.1**	**-6.5**
ARNB	**Al Arnab**	**2.37**	**54**	⇑*i*P	**Pn**	**05 25 04.3**	**-0.3**
KSHT	**Keshet**	**2.38**	**129**	Pn	**Pn**	**05 25 05.9**	**+1.3**
SLNF	**Slenfeh**	**2.41**	**62**	⇓P	**Pn**	**05 25 04.5**	**-0.6**
SLNF				⇑S	**Sn**	**05 25 25.6**	**-8.0**
SLNF	**Slenfeh**	**2.41**	**62**	⇓*i*P	**Pn**	**05 25 04.6**	**-0.5**
MERS	**Mersin**	**2.48**	**17**	*e*PN	**Pn**	**05 25 06.6**	**+0.5**
MERS				*e*SN	**Sn**	**05 25 36.2**	**+0.9**
WRDH	**Warideh**	**2.52**	**66**	⇑P	**Pn**	**05 25 05.6**	**-1.0**
WRDH				⇓S	**Sn**	**05 25 29.2**	**-7.0**
WRDH	**Warideh**	**2.52**	**66**	⇑*i*P	**Pn**	**05 25 05.6**	**-1.0**
KRTS	**Karatas**	**2.53**	**34**	*e*PN	**Pn**	**05 25 07.7**	**+1.0**
SLTI	**Sal'it**	**2.55**	**151**	Pn	**Pn**	**05 25 07.4**	**+0.4**
MMLI	**Mount Malkishu**	**2.55**	**143**	Pn	**Pn**	**05 25 07.6**	**+0.5**
MMLI				Sn	**Sn**	**05 25 36.6**	**-0.4**
HTY	**Hatay**	**2.63**	**51**	*e*PN	**Pn**	**05 25 09.8**	**+1.7**
BTCH	**Batrach**	**2.80**	**56**	⇑P	**Pn**	**05 25 09.4**	**-1.1**
BTCH				⇓S	**Sn**	**05 25 36.9**	**-6.2**
BTCH	**Batrach**	**2.80**	**56**	⇑*i*P	**Pn**	**05 25 09.4**	**-1.0**
KARA	**Karaisali**	**3.00**	**23**	*e*PN	**Pn**	**05 25 13.8**	**+0.6**
CEYT	**Ceyhan**	**3.06**	**34**	*e*PN	**Pn**	**05 25 15.0**	**+1.0**
SALA	**Sala**	**3.16**	**123**	⇑P	**Pn**	**05 25 17.0**	**+1.6**
SALA				⇓S	**Sn**	**05 25 49.9**	**-2.2**
SALA	**Sala**	**3.16**	**123**	⇑*i*P	**Pn**	**05 25 17.0**	**+1.6**
DSI	**Dead Sea**	**3.28**	**152**	Pn	**Pn**	**05 25 18.1**	**+1.1**
YTIR	**Yattir**	**3.37**	**157**	Pn	**Pn**	**05 25 19.3**	**+1.0**
KOZT	**Kozan**	**3.48**	**31**	*e*PN	**Pn**	**05 25 20.9**	**+1.1**
MZDA	**Masada**	**3.50**	**155**	Pn	**Pn**	**05 25 21.1**	**+0.9**
KZIT	**Kziot**	**3.64**	**169**	Pn	**Pn**	**05 25 22.6**	**+0.6**
AMAG	**Maghara**	**3.85**	**185**	⇓P	**Pn**	**05 25 24.5**	**-0.5**
GAZ	**Gaziantep**	**3.97**	**47**	*e*PN	**Pn**	**05 25 28.5**	**+2.0**
RMNI	**Mount Ramon**	**4.01**	**166**	Pn	**Pn**	**05 25 27.5**	**+0.5**
KMRS	**Kahramanmaras**	**4.02**	**41**	*e*PN	**Pn**	**05 25 28.8**	**+1.6**
FETY	**Fethiye**	**4.26**	**301**	*e*PN	**Pn**	**05 25 26.7**	**-3.8**
PRNI	**Paran**	**4.30**	**164**	Pn	**Pn**	**05 25 31.6**	**+0.6**
HNKL	**Nakhl**	**4.56**	**176**	⇓P	**Pn**	**05 25 34.8**	**+0.1**
HRFI	**Mount Harif**	**4.61**	**164**	Pn	**Pn**	**05 25 35.6**	**+0.3**
HRFI				Sn	**Sn**	**05 26 26.8**	**-1.0**
SUZ		**4.69**	**188**	P	**Pn**	**05 25 36.1**	**-0.3**
EIL	**Elat**	**4.94**	**166**	Pn	**Pn**	**05 25 40.3**	**+0.4**
YER	**Yerkesik**	**5.06**	**303**	*e*PN	**Pn**	**05 25 37.8**	**-3.7**
GLL	**Jalalah**	**5.16**	**199**	⇓P	**Pn**	**05 25 42.3**	**-0.6**
DAT	**Datca**	**5.39**	**296**	*e*PN	**Pn**	**05 25 42.0**	**-4.0**
HKAT	**Jabal Katrina**	**5.96**	**177**	⇓P	**Pn**	**05 25 53.7**	**-0.2**

*NEIC **18** 05:29:03.3±0.5, 46.79N×152.60E, h10km, mb3.9/3, Error ellipse: s-maj=14.6km s-min=8.9km az=155.0*
*ISCJB **18** 05:29:07.6±1.2, 46.8N±0.1×152.8E±0.1, h58km±11km, mb3.7/13, Error ellipse: s-maj=21.8km s-min=8.1km az=142.1*
*MOS **18** 05:29:09.6±1.9, 47.00N×152.65E, h76km, mb4.1/7, Error ellipse: s-maj=20.8km s-min=13.0km az=55.2*
*IDC **18** 05:29:15.0±3.8, 46.84N×152.58E, h106km±36km, mb3.3/10, mb1 3.6/12, mb1mx3.4/24, mbtmp3.3/12, Error ellipse: s-maj=24.2km s-min=15.6km az=123.0*

ISC 18 05:29:10.0±1.1**, 46.7N**±0.1×**152.8E**±0.1**, h63**km±11km**, n45, σ1.31**/52**, mb3.7**/13**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.74**	**248**	⇓*i*PN	**Pn**	**05 30 03.8**	**-1.4**
KUR				*i* S	**Sn**	**05 30 49.0**	**+1.0**
KUR				pmax	pmax		
	comp=Z,180nm,0.5s						
KUR				smax			
	comp=N,680nm,0.6s						
SKR	**Severo-Kuril's**	**4.54**	**28**	*e*PN	**Pn**	**05 30 13.5**	**-2.6**
SKR				*e*S	**Sn**	**05 31 01.2**	**-6.3**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,70nm,0.5s						
SKR				pmax	pmax		
	comp=Z,130nm,0.5s						
SKR				smax			
	comp=N,100nm,0.4s						
SKR				smax			
	comp=E,210nm,0.4s						
SKR				smax			
	comp=Z,50nm,0.5s						
NEM2	**Nemuro 2**	**6.01**	**239**	P	**Pn**	**05 30 34.3**	**-2.0**
NEM2				*e*S	**Sn**	**05 31 39.8**	**-3.9**
JRA	**Rausu**	**6.08**	**246**	P	**Pn**	**05 30 38.7**	**+1.5**
JNK	**Nakash**	**6.51**	**244**	P	**Pn**	**05 30 43.2**	**+0.1**
JNK				*e*S	**Sn**	**05 31 56.0**	**+0.1**
JAK	**Akkeshi**	**6.85**	**240**	P	**Pn**	**05 30 45.8**	**-1.9**
JAK				*e*S	**Sn**	**05 32 00.5**	**-3.7**
YSS	**Yuzh-Sakhalins**	**6.89**	**276**	*e*PN	**Pn**	**05 30 49.6**	**+1.3**
JMP	**Maruseppu**	**7.17**	**251**	P	**Pn**	**05 30 54.0**	**+1.8**
JAR	**Ashorobuto**	**7.25**	**245**	P	**Pn**	**05 30 53.6**	**+0.4**
JAR				*e*S	**Sn**	**05 32 13.8**	**-0.2**
JOB	**Onbets**	**7.42**	**242**	P	**Pn**	**05 30 55.2**	**-0.4**
JOB				*e*S	**Sn**	**05 32 15.5**	**-2.7**
ASAJ	**Asahikawa**	**7.63**	**254**	P	**Pn**	**05 30 58.5**	**+0.1**
ASAJ	**Asahikawa**	**7.63**	**254**	PN	**Pn**	**05 31 01.1**	**+2.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.63**	**254**	P	**Pn**	**05 31 01.1**	**+2.7**
	comp=Z,1.4nm,0.3s,baz=74,slow=13,SNR=14						
JKK2	**Kamakawa 2**	**7.63**	**252**	P	**Pn**	**05 31 00.1**	**+1.7**
JWK2	**Keihoku**	**7.71**	**264**	P	**Pn**	**05 31 04.4**	**+4.9**
JCH	**Churui**	**7.87**	**242**	*e*S	**Sn**	**05 32 25.4**	**-3.9**
JNBK	**Urakawa-nobuka**	**8.43**	**242**	*e*S	**Sn**	**05 32 37.9**	**-5.1**
MJAR	**Matsushiro Arr**	**14.88**	**232**	P	**Pn**	**05 32 41.3**	**+4.6**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**14.88**	**232**	P	**Pn**	**05 32 41.3**	**+4.6**
	comp=Z,0.5nm,0.3s,baz=33,slow=8.8,SNR=12						
SEY	**Seymchan**	**16.26**	**359**	*i* P	**Pn**	**05 32 56.8**	**+2.8**
MDJ	**Mudanjiang**	**16.34**	**271**	*e*P	**Pn**	**05 32 50.6**	**-4.6**
	comp=Z,6.0nm,0.7s						
KSRS	**Korea Array**	**20.58**	**252**	P	**P**	**05 33 44.6**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=62,slow=10,SNR=5.0						
BILL	**Bilibino**	**22.48**	**13**	*e*P	**P**	**05 34 12.2**	**+8.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
COLA	**College**	**36.30**	**38**	*e*P	**P**	**05 36 06.6**	**-0.4**
	comp=Z,2.6nm,0.6s,mb4.3						
COLA	**College**	**36.30**	**38**	*e*P	**P**	**05 36 06.6**	**-0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
EGAK	**Eagle**	**39.16**	**38**	*e*P	**P**	**05 36 30.4**	**-0.7**
	comp=Z,1.1nm,0.6s,mb3.8						
INK	**Inuvik**	**41.80**	**32**	*e*P	**P**	**05 36 53.1**	**+0.3**
INK	**Inuvik**	**41.80**	**32**	P	**P**	**05 36 53.2**	**+0.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=264,slow=3.7,SNR=7.8						
MK31	**Makanchi Array**	**46.76**	**297**	*e*P	**P**	**05 37 31.7**	**-1.0**
MKAR	**Makanchi Array**	**46.76**	**297**	P	**P**	**05 37 31.8**	**-0.9**
	comp=Z,0.2nm,0.3s,mb3.6,baz=67,slow=8.4,SNR=3.6						
YKA	**Yellowknife Ar**	**51.09**	**37**	P	**P**	**05 38 15.0**	**+9.5**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.09**	**37**	P	**P**	**05 38 05.9**	**+0.4**
	comp=Z,0.1nm,0.6s,mb2.9,baz=298,slow=7.2,SNR=3.6						
NVAR	**Mina Array Bea**	**62.65**	**62**	P	**P**	**05 39 29.0**	**+1.3**
	comp=Z,0.3nm,0.7s,mb3.6,baz=304,slow=8.6,SNR=2.5						
FINES	**FINESS Array B**	**63.98**	**335**	P	**P**	**05 39 35.2**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.98**	**335**	P	**P**	**05 39 35.1**	**-1.0**
	comp=Z,0.6nm,0.4s,mb4.0,baz=51,slow=7.0,SNR=12						
OBN	**Obninsk**	**65.22**	**325**	*e*P	**P**	**05 39 39.7**	**-4.6**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**05 40 02.4**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**68.19**	**341**	P	**P**	**05 40 02.4**	**-0.8**
	comp=Z,0.6nm,0.6s,mb3.8,baz=27,slow=6.1,SNR=2.9						
WRA	**Warramunga Arr**	**68.41**	**199**	P	**P**	**05 40 04.7**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**68.41**	**199**	P	**P**	**05 40 04.7**	**-0.1**
	comp=Z,0.7nm,0.8s,mb3.7,baz=20,slow=6.7,SNR=6.4						
ASAR	**Alice Springs**	**72.10**	**198**	P	**P**	**05 40 28.6**	**+1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**72.10**	**198**	P	**P**	**05 40 28.6**	**+1.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=14,slow=5.3,SNR=15						
TXAR	**Lajitas Array**	**77.70**	**60**	P	**P**	**05 41 00.2**	**+0.3**
TXAR				pP	pP	05 41 14.7	-2.6
TXAR	**Lajitas Array**	**77.70**	**60**	P	**P**	**05 41 00.2**	**+0.3**
TXAR				*PP	pP	05 41 14.7	-2.5
TXAR				pmax	pmax		
	comp=N,1.0nm,0.5s						
TXAR	**Lajitas Array**	**77.70**	**60**	P	**P**	**05 41 00.2**	**+0.3**
	comp=N,0.2nm,0.5s,mb3.3,baz=296,slow=4.3,SNR=7.4						
TXAR				pP	pP	05 41 14.7	-2.6
	comp=N,0.8nm,0.5s,baz=301,slow=4.7,SNR=16						

JMA 18 05:30:25.1±0.6**,4143N**×**14452E,h32**km**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.18**	**300**	*e*Pn	Pn	05 30 52.4	+7.1
JCH	**Churui**	**1.46**	**324**	P	Pn	05 30 49.6	+0.3

IDC 18 05:53:44.9±5.7**,483N**×**7776W,h149**km±61km**,mb3.0**/2**, mb1 3.3**/4**,mb1mx3.1**/20**,mbtmp3.0**/4**,Error ellipse: s-maj=74.3km s-min=37.8km az=75.0,Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**3.42**	**89**	P	Pn	05 54 38.1	+0.4
	1.7nm,0.3s,baz=293,slow=7.0,SNR=11						
SDV	**Santo Domingo**	**8.14**	**60**	P	Pn	05 55 40.6	+0.3
	0.7nm,0.3s,baz=294,slow=6.1,SNR=9.2						
NVAR	**Mina Array Bea**	**49.72**	**318**	P	P	06 02 21.9	-0.1
	0.2nm,0.5s,baz=128,slow=5.8,SNR=3.2						
YKA	**Yellowknife Ar**	**63.62**	**342**	P	P	06 03 59.9	+0.3
	0.5nm,0.7s,baz=128,slow=7.0,SNR=16						
ASAR	**Alice Springs**	**144.20**	**235**	PKP	PKPdf	06 13 02.1	-1.8
	0.4nm,0.8s,baz=114,slow=3.6,SNR=4.9						
WRA	**Warramunga Arr**	**145.34**	**242**	PKPbc	PKPbc	06 13 05.6	-0.5
	0.9nm,0.8s,baz=104,slow=3.0,SNR=7.2						

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*NIED **18** 05:53:00,2260N×12290E,h5km,Mw4.2 Best double couple: M0 2.43000×10^15 NP1:φs123.00000°,δ31.00000°, λ-30.00000°. NP2:φs239.00000°,δ75.00000°, λ-117.00000°.*
*BJI **18** 05:53:45.1,2172N×12286E,h10km,mB4.3,mb4.4,ML4.1, Ms3.9*
*IDC **18** 05:53:50.6±1.0,2244N×12297E,h0km,mb3.9/5, mb1 4.1/8,mb1mx3.9/21,mbtmp4.0/8,ML3.6/3,MS3.4/3, Ms1 3.4/3,ms1mx3.0/30,Error ellipse: s-maj=32.6km s-min=18.6km az=81.0*
*NEIC **18** 05:53:51.6±0.7,2257N×12291E,h10km,mb4.0/5,Error ellipse: s-maj=14.4km s-min=12.6km az=49.0*
*JMA **18** 05:53:53.7±0.2,2257N×12294E,h87km,M4.1*
*ISCJB **18** 05:53:53.2±2.1,2257N±005×12284E±004,h32km±16km, mb3.8/9,Error ellipse: s-maj=8.9km s-min=5.6km az=150.2*
ISC 18 05:53:53.4±2.1**,2259N**±005×**12287E**±004**,h21**km±17km**, n25,**σ**1**ˢ**03**/35**,mb3.8**/9**,Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.69**	**30**	P	**Pn**	**05 54 22.0**	**+0.2**
HATJ				S	**Sn**	**05 54 43.3**	**+0.5**
YOJ	**Yonaguni jima**	**1.87**	**4**	P	**Pn**	**05 54 24.6**	**+0.4**
YOJ				*e*S	**Sn**	**05 54 48.3**	**+1.1**
IRIF	**Iriomote-Funau**	**1.91**	**24**	P	**Pn**	**05 54 25.1**	**+0.4**
IRIF				S	**Sn**	**05 54 48.7**	**+0.6**
JKRS	**Kuro-shima**	**1.94**	**32**	P	**Pn**	**05 54 25.6**	**+0.4**
JKRS				S	**Sn**	**05 54 48.9**	**-0.1**
NACB	**Ninganchiao**	**1.97**	**324**	*e*Pn	**Pn**	**05 54 23.9**	**-1.6**
NACB				*e*Sn	**Sn**	**05 54 47.1**	**-2.5**
JIJ	**Ishigaki jima**	**2.12**	**33**	P	**Pn**	**05 54 27.4**	**-0.2**
JIJ				S	**Sn**	**05 54 52.8**	**-0.5**
YHNB	**Yeheng**	**2.48**	**327**	*e*Pn	**Pn**	**05 54 32.1**	**-0.6**
YHNB				*e*Sn	**Sn**	**05 54 54.4**	**-8.0**
JTJ	**Tarama**	**2.64**	**39**	P	**Pn**	**05 54 34.6**	**-0.2**
JTJ				S	**Sn**	**05 55 05.8**	**-0.5**
JMJ	**Miyako jima 2**	**3.13**	**45**	*e*S	**Sn**	**05 55 18.1**	**-0.3**
JOGS	**Gusukube**	**3.17**	**47**	*e*S	**Sn**	**05 55 19.9**	**+0.6**
QZH	**Quanzhou**	**4.57**	**302**	P	**Pn**	**05 55 02.3**	**+1.0**
QZH				S	**Sn**	**05 55 52.9**	**-0.9**
QZH				Smax			
	comp=N,230nm,0.7s						
QZH				Smax			
	comp=E,180nm,0.6s						
JOW	**Kunigami**	**6.48**	**48**	Pn	**Pn**	**05 55 25.7**	**-1.9**
	comp=E,1.9nm,0.3s,baz=272,slow=17,SNR=3.5						
JOW				Sn	**Sn**	**05 56 38.9**	**-2.0**
	comp=E,2.2nm,0.3s,baz=177,slow=27,SNR=3.5						
JOW				LR	LR	05 58 27.2	
	comp=E,152nm,18.4s,baz=237,slow=42						
KSRS	**Korea Array**	**15.44**	**15**	Pn	**Pn**	**05 57 31.4**	**+1.4**
	comp=E,0.2nm,0.3s,baz=194,slow=12,SNR=21						
KSRS				LR	LR	06 03 59.5	
	comp=E,137nm,18.3s,baz=339,slow=39						
MAJO	**Matsushiro**	**19.23**	**40**	*e*P	**Pn**	**05 58 17.0**	**-0.3**
	comp=E,5.8nm,0.7s						
MJAR	**Matsushiro Arr**	**19.23**	**40**	P	**Pn**	**05 58 18.7**	**+1.4**
	comp=E,0.4nm,0.3s,baz=229,slow=9.8,SNR=18						
CHTO	**Chiang Mai**	**22.69**	**265**	*e*P	**P**	**05 58 54.5**	**+0.7**
	comp=E,3.3nm,0.9s,mb3.8						
ULN	**Ulaanbaatar**	**28.23**	**337**	*e*P	**P**	**05 59 44.7**	**0.0**
	comp=E,1.2nm,0.6s,mb3.7						
SONM	**Songino Array**	**28.44**	**336**	P	**P**	**05 59 48.7**	**+2.1**
	comp=E,1.1nm,0.8s,mb3.5,baz=148,slow=9.9,SNR=7.6						
SONM				LR	LR	06 11 18.8	
	comp=E,120nm,18.1s,baz=168,slow=37						
MKAR	**Makanchi Array**	**40.56**	**317**	P	**P**	**06 01 32.9**	**+1.6**
	comp=E,1.4nm,0.7s,mb3.7,baz=111,slow=9.4,SNR=17						
WRA	**Warramunga Arr**	**43.73**	**164**	P	**P**	**06 01 56.1**	**-1.2**
	comp=E,2.6nm,0.7s,mb4.0,baz=346,slow=8.8,SNR=13						
TKM2	**Tokmak 2**	**43.97**	**309**	*e*P	**P**	**06 01 59.5**	**+0.4**
	comp=E,2.1nm,0.7s,mb4.0						
KURK	**Kurchatov**	**44.30**	**321**	*e*P	**P**	**06 02 00.5**	**-1.2**
	comp=E,2.8nm,0.7s,mb4.1						
ASAR	**Alice Springs**	**47.21**	**166**	P	**P**	**06 02 24.2**	**-0.7**
	comp=E,1.0nm,0.8s,mb3.8,baz=349,slow=7.6,SNR=11						
YKA	**Yellowknife Ar**	**83.83**	**23**	P	**P**	**06 06 22.3**	**+1.3**
YKA	**Yellowknife Ar**	**83.83**	**23**	P	**P**	**06 06 22.3**	**+1.3**
	comp=E,0.3nm,0.6s,mb3.6,baz=304,slow=5.1,SNR=9.9						

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*ISCJB **18** 06:07:04.1±2.9,50N±05×789W±02,h10km,mb4.2/2, Error ellipse: s-maj=71.9km s-min=15.1km az=13.6*
*NEIC **18** 06:07:04.2±0.9,472N×7893W,h10km,mb4.9/1,Error ellipse: s-maj=28.2km s-min=12.9km az=6.0*
*IDC **18** 06:07:25.7±7.4,463N×7725W,h191km±82km,mb2.9/1, mb1 3.1/3,mb1mx2.9/20,mbtmp3.0/3,Error ellipse: s-maj=121.8km s-min=39.5km az=91.0*
ISC 18 06:07:04.8±3.2**,48N**±05×**789W**±02**,h10**km**,n8,**σ**0**ˢ**64**/6**, mb4.2**/2**,South of Panama**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**4.58**	**89**	P	**Pn**	**06 08 14.1**	**0.0**
	2.8nm,0.3s,baz=88,slow=3.3,SNR=17						
SDV	**Santo Domingo**	**9.19**	**63**	P	**Pn**	**06 09 17.5**	**0.0**
	1.1nm,0.3s,baz=230,slow=9.5,SNR=14						
HWUT	**Hardware Ranch**	**46.85**	**326**	*e*P	**P**	**06 15 34.4**	**-0.7**
	6.1nm,0.5s,mb4.8						
DCID1	**Drake Creek**	**48.01**	**329**	*e*P	**P**	**06 15 44.1**	**+0.1**
MCMT	**McKenzie Canyo**	**49.73**	**329**	*e*P	**P**	**06 15 57.8**	**+0.6**
YKA	**Yellowknife Ar**	**63.32**	**342**	P	**P**	**06 17 38.1**	**+4.4**
	0.4nm,0.8s,mb3.6,baz=131,slow=6.6,SNR=7.7						
ASAR	**Alice Springs**	**143.21**	**236**	PKP	PKPdf	06 26 38.5	-1.6
	0.3nm,0.6s,baz=137,slow=3.7,SNR=4.0						
WRA	**Warramunga Arr**	**144.29**	**242**	PKPbc	PKPdf	06 26 42.6	+0.5
	0.7nm,0.5s,baz=106,slow=3.1,SNR=9.3						

IDC 18 06:10:42.8±2.1**,440N**×**12715E,h0**km**,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.4**/17**,mbtmp3.5**/3**,Error ellipse: s-maj=162.9km s-min=25.4km az=66.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.20**	**164**	P	P	06 16 09.3	-1.0
	1.8nm,0.7s,baz=344,slow=11,SNR=17						
ASAR	**Alice Springs**	**28.66**	**167**	P	P	06 16 42.9	+1.4
	0.3nm,0.4s,baz=346,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**57.25**	**325**	P	P	06 20 32.1	+0.1
	0.2nm,0.5s,baz=127,slow=7.8,SNR=2.4						

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*NEIC **18** 06:19:16.9,1805N×6608W,h6km,MD2.6(RSPR),After RSPR.*
RSPR 18 06:19:16.9,1805N×**6608W,h6**km**,MD2.6**/3**,MD2.6**/3**, 7C-4D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**0.09**	**312**	⇑*e*P	Pg	06 19 18.9	+0.1
SJG	**San Juan**	**0.09**	**312**	*e*S	Sg	06 19 20.9	+0.7
SJG	**San Juan**	**0.09**	**312**	⇑*i*P	Pg	06 19 19.2	+0.3
SJG				*e*S	Sg	06 19 20.1	-0.1
SJG	**San Juan**	**0.09**	**312**	⇑*e*P	Pg	06 19 18.9	0.0
SJG	**San Juan**	**0.09**	**312**	⇑*e*P	Pg	06 19 18.9	+0.1
SJG				*e*S	Sg	06 19 20.9	+0.7
CPD	**Cerro la Pandu**	**0.16**	**96**	⇓*e*P	Pg	06 19 20.7	+0.5
CPD				*e*S	Sg	06 19 23.2	+1.0
CPD	**Cerro la Pandu**	**0.16**	**96**	⇑*e*P	Pg	06 19 20.6	+0.5
CPD	**Cerro la Pandu**	**0.16**	**96**	*e*S	Sg	06 19 23.2	+0.9
CPD	**Cerro la Pandu**	**0.16**	**96**	⇑*e*P	Pg	06 19 20.6	+0.5
CPD				*e*S	Sg	06 19 23.2	+1.0
CBYP	**Canovanas**	**0.30**	**45**	⇓*e*P	Pg	06 19 23.4	+0.6
CBYP	**Canovanas**	**0.30**	**45**	*e*S	Sg	06 19 28.3	+1.4
CBYP	**Canovanas**	**0.30**	**45**	⇑*e*P	Pg	06 19 23.4	+0.5
CBYP	**Canovanas**	**0.30**	**45**	*e*S	Sg	06 19 27.9	+1.1
CBYP	**Canovanas**	**0.30**	**45**	⇑*e*P	Pg	06 19 23.4	+0.5
CBYP				*e*S	Sg	06 19 28.3	+1.4
MTP	**Monte Pirata**	**0.51**	**85**	⇓*e*P	Pg	06 19 26.9	+0.2
MTP				*e*S	Sg	06 19 34.2	+0.9
MTP	**Monte Pirata**	**0.51**	**85**	⇓*e*P	Pg	06 19 26.7	+0.1
MTP	**Monte Pirata**	**0.51**	**85**	*e*S	Sg	06 19 34.0	+0.8
CRPR	**Cabo Rojo, PR**	**0.98**	**267**	*e*S	Sg	06 19 48.6	+0.2

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*NEIC **18** 06:22:01.6,1928N×6708W,h36km,MD3.2(RSPR),After RSPR.*
RSPR 18 06:22:01.6,1928N×**6708W,h36**km±16km**,MD3.2**/11**, MD3.2**/11**,24C-5D,Mona Passage**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.81**	**182**	⇓*e*P	Pn	06 22 15.2	-1.3
AGPR	**Aguadilla, PR**	**0.81**	**182**	*e*S	Sn	06 22 25.1	-2.2
AGPR	**Aguadilla, PR**	**0.81**	**182**	⇓*e*P	Pn	06 22 15.2	-1.4
AGPR	**Aguadilla, PR**	**0.81**	**182**	*e*S	Sn	06 22 26.7	-0.6
AGPR	**Aguadilla, PR**	**0.81**	**182**	⇓*e*P	Pn	06 22 15.2	-1.4
AGPR				*e*S	Sn	06 22 25.1	-2.2
LRS	**Lares**	**1.01**	**167**	⇑*e*P	Pn	06 22 17.5	-1.8
LRS				*e*S	Sn	06 22 30.6	-1.6
LSP	**Las Mesas**	**1.10**	**180**	⇑*e*P	Pn	06 22 19.9	-0.6
LSP	**Las Mesas**	**1.10**	**180**	*e*S	Sn	06 22 31.6	-2.9
LSP	**Las Mesas**	**1.10**	**180**	⇑*e*P	Pn	06 22 19.5	-1.0
LSP	**Las Mesas**	**1.10**	**180**	*e*S	Sn	06 22 32.7	-1.7
LSP	**Las Mesas**	**1.10**	**180**	⇑*e*P	Pn	06 22 19.5	-1.0
LSP				⇑*e*P		06 22 19.9	
LSP				*e*S	Sn	06 22 31.6	-2.9
CRPR	**Cabo Rojo, PR**	**1.27**	**181**	⇑*e*P	Pn	06 22 21.6	-1.3
CRPR	**Cabo Rojo, PR**	**1.27**	**181**	*e*S	Sn	06 22 36.7	-1.9
CRPR	**Cabo Rojo, PR**	**1.27**	**181**	⇑*e*P	Pn	06 22 21.3	-1.5
CRPR	**Cabo Rojo, PR**	**1.27**	**181**	*e*S	Sn	06 22 36.8	-1.9
CRPR	**Cabo Rojo, PR**	**1.27**	**181**	⇑*e*P	Pn	06 22 21.3	-1.5
CRPR				⇑*e*P		06 22 21.6	
CRPR				*e*S	Sn	06 22 36.7	-1.9
CELP	**Cerrillos**	**1.29**	**158**	⇑*e*P	Pn	06 22 22.1	-1.1
CELP				*e*S	Sn	06 22 37.6	-1.6
OBIP	**Obispado Ponce**	**1.31**	**160**	⇑*e*P	Pn	06 22 23.2	-0.2
OBIP	**Obispado Ponce**	**1.31**	**160**	*e*S	Sn	06 22 38.5	-1.2
OBIP	**Obispado Ponce**	**1.31**	**160**	⇑*e*P	Pn	06 22 23.0	-0.4
OBIP	**Obispado Ponce**	**1.31**	**160**	*e*S	Sn	06 22 39.0	-0.7
OBIP	**Obispado Ponce**	**1.31**	**160**	⇑*e*P	Pn	06 22 23.0	-0.4
OBIP				⇑*e*P		06 22 23.2	
OBIP				*e*S	Sn	06 22 38.5	-1.2
SJG	**San Juan**	**1.46**	**143**	⇑*e*P	Pn	06 22 24.4	-1.1
SJG				*e*S	Sn	06 22 42.2	-1.1
SJG	**San Juan**	**1.46**	**143**	⇑*e*P	Pn	06 22 24.6	-0.8
SJG				*e*S	Sn	06 22 41.9	-1.4
ICM	**Isla Caja Muer**	**1.48**	**159**	*e*S	Sn	06 22 43.2	-0.6
CBYP	**Canovanas**	**1.53**	**131**	*e*S	Sn	06 22 43.3	-1.8
CBYP	**Canovanas**	**1.53**	**131**	⇑*e*P	Pn	06 22 25.2	-1.3
CBYP	**Canovanas**	**1.53**	**131**	*e*S	Sn	06 22 43.3	-1.8
CBYP	**Canovanas**	**1.53**	**131**	⇑*e*P	Pn	06 22 25.0	-1.5
CBYP				⇑*e*P		06 22 25.2	
CBYP				*e*S	Sn	06 22 43.3	-1.8
CPD	**Cerro la Pandu**	**1.66**	**138**	⇑*e*P	Pn	06 22 27.7	-0.5
CPD	**Cerro la Pandu**	**1.66**	**138**	*e*S	Sn	06 22 47.0	-1.2
CPD	**Cerro la Pandu**	**1.66**	**138**	⇑*e*P	Pn	06 22 27.1	-1.1
CPD				⇑*e*P		06 22 27.7	
CPD				*e*S	Sn	06 22 46.3	-2.0
MTP	**Monte Pirata**	**1.86**	**129**	⇓*e*P	Pn	06 22 30.2	-0.9
MTP				*e*S	Sn	06 22 52.4	-1.0
MTP	**Monte Pirata**	**1.86**	**129**	⇑*e*P	Pn	06 22 29.7	-1.3
MTP	**Monte Pirata**	**1.86**	**129**	*e*S	Sn	06 22 52.1	-1.2
MTP	**Monte Pirata**	**1.86**	**129**	⇑*e*P	Pn	06 22 29.7	-1.3
MTP				⇓*e*P		06 22 30.2	
MTP				*e*S	Sn	06 22 52.1	-1.2

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*BJI **18** 06:48:06.1,1047S×12541E,h25km,mB5.0,mb4.9,Ms4.7, Msz4.4*
*IDC **18** 06:48:13.6±0.5,932S×12462E,h0km,mb4.6/13, mb1 4.7/13,mb1mx4.7/15,mbtmp4.6/13,MS4.6/16, Ms1 4.6/16,ms1mx4.4/25,Error ellipse: s-maj=17.9km s-min=14.0km az=77.0*
*ISCJB **18** 06:48:14.4±0.2,944S±003×12478E±004,h23km, mb4.9/65,MS4.5/28,Error ellipse: s-maj=6.3km s-min=4.8km az=160.1*
*GCMT **18** 06:48:17.5±0.2,949S×12467E,h18km±1km,MW5.1/78, Moment Tensor Solution. s41,c53; s78,c121; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.00±.20; Mθθ-5.27±.18; Mφφ5.27±.19; Mrθ-1.50±.37; Mθφ-2.79±.14; Mφr-1.30±.42; Best double couple: M0 6.27700×10^16 NP1:φs122.00000°,δ73.00000°,λ-175.00000°. NP2: φs30.00000°,δ85.00000°,λ-17.00000°. Principal axes: T 6.1020, Plg9.0000°, Azm77.0000°; N 0.3490, Plg72.0000°, Azm196.0000°; P -6.4530, Plg15.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **18** 06:48:17.4±0.2,951S×12453E,h25km,mb5.0/30 Error ellipse: s-maj=9.0km s-min=6.0km az=64.0*
NEIC Felt [III] at Kupang.
*MOS **18** 06:48:17.2±1.5,933S×12443E,h33km,mb5.1/23,Error ellipse: s-maj=13.9km s-min=7.8km az=106.8*
ISC 18 06:48:16.5±0.2**,950S**±003×**12474E**±004**,h24**km**, h24**km±1.1km**:pP-P,n204,**σ**1**ˢ**25**/175**,mb4.9**/65**,MS4.5**/28**, 9C-2D,Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.27**	**236**	Pg	**Pn**	**06 48 40.0**	**+1.2**
	5µm,0.3s,baz=98,slow=2.2,SNR=2856						
WSI	**Waingapu**	**4.38**	**267**	P	**Pn**	**06 49 21.1**	**-0.5**
	3µm,0.5s						
KAPI	**Kappang**	**6.66**	**312**	Pn	**Pn**	**06 49 57.2**	**+4.3**
	392nm,0.6s,SNR=6.4						
AAI	**Ambon**	**6.71**	**31**	P	**Pn**	**06 49 59.5**	**+5.8**
	206nm,0.9s						
KAKA	**Kakadu**	**8.20**	**114**	*e*P	**Pn**	**06 50 14.9**	**+0.8**
	79nm,0.4s						
KAKA				*e*S	**Sn**	**06 51 50.9**	**+4.8**
FITZ	**Fitzroy Crossi**	**8.60**	**174**	*e*P	**Pn**	**06 50 17.1**	**-2.4**
	220nm,0.3s						
FITZ				*e*S	**Sn**	**06 51 49.6**	**-6.2**
FITZ	**Fitzroy Crossi**	**8.60**	**174**	Pn	**Pn**	**06 50 18.4**	**-1.2**
	52nm,0.3s,baz=5.4,slow=12,SNR=590						
FITZ				Sn	**Sn**	**06 51 48.0**	**-7.7**
	36nm,0.3s,baz=276,slow=23,SNR=16						
FITZ				LR	LR	06 54 18.7	
	comp=Z,4µm,18.8s,baz=348,slow=42						
NBBI	**Negara**	**10.06**	**276**	P	**Pn**	**06 50 40.8**	**+1.2**
	166nm,1.2s						
KMMI	**Kalianget**	**10.94**	**282**	P	**Pn**	**06 50 55.3**	**+3.7**
	97nm,1.1s						
KRKI	**Karangkates**	**12.22**	**275**	P	**Pn**	**06 51 12.5**	**+3.4**
	283nm,0.9s						
MBWA	**Marble Bar**	**12.56**	**202**	*e*Pn	**Pn**	**06 51 11.8**	**-2.0**
WRA	**Warramunga Arr**	**13.92**	**139**	Pn	**Pn**	**06 51 28.6**	**-3.8**
	6.3nm,0.3s,baz=310,slow=14,SNR=176						
WRA				Sn	**Sn**	**06 53 56.6**	**-10**
	11nm,0.3s,baz=311,slow=23,SNR=24						
WRA				LR	LR	06 57 59.2	
	comp=Z,2µm,18.1s,baz=315,slow=41						
WB2	**Warramunga Arr**	**13.93**	**139**	*e*P	**Pn**	**06 51 28.0**	**-4.5**
WB2				*e*S	**Sn**	**06 53 56.2**	**-10**
BJII	**Banjamegara**	**15.02**	**277**	P	**Pn**	**06 51 46.2**	**-1.2**
	97nm,0.7s						
BJII	**Banjamegara**	**15.02**	**277**	⇑*i*P	**Pn**	**06 51 51.6**	**+4.2**
BJII				*i* S	**Sn**	**06 54 47.8**	**+15**
ASAR	**Alice Springs**	**16.59**	**149**	Pn	**Pn**	**06 52 04.5**	**-3.1**
	5.4nm,0.3s,baz=319,slow=12,SNR=174						
ASAR				Sn	**Sn**	**06 54 59.6**	**-12**
	5.6nm,0.3s,baz=322,slow=21,SNR=10						
LEM	**Lembang**	**17.16**	**278**	P	**Pn**	**06 52 15.5**	**+0.7**
	206nm,0.7s						
KKM	**Kota Kinabalu**	**17.62**	**331**	*e*Pn	**Pn**	**06 52 24.7**	**+4.1**
KSM	**Kuching**	**18.04**	**306**	*e*Pn	**Pn**	**06 52 26.1**	**+0.3**
TPI	**Tanjungpandan**	**18.25**	**290**	P	**Pn**	**06 52 27.4**	**-1.0**
	31nm,1.1s						
COEN	**Coen**	**18.58**	**106**	*e*P	**Pn**	**06 52 32.7**	**+0.3**
	35nm,0.9s						
FORT	**Forrest**	**21.40**	**172**	*e*P	**P**	**06 53 02.8**	**+0.2**
	190nm,0.9s,mb5.4						
FORT				*e*S	**S**	**06 56 49.9**	**-9.0**
PMG	**Port Moresby**	**22.11**	**92**	*e*P	**P**	**06 53 14.4**	**+4.0**
PMG	**Port Moresby**	**22.11**	**92**	⇑*e*P	**P**	**06 53 16.1**	**+5.7**
PMG	**Port Moresby**	**22.11**	**92**	P	**P**	**06 53 14.0**	**+3.6**
	26nm,0.8s,mb4.7,baz=242,slow=6.5,SNR=7.2						
KSI	**Kapahiang**	**22.75**	**283**	P	**P**	**06 53 20.9**	**+3.8**
	165nm,0.8s,mb5.5						
KLBR	**Kellerberrin**	**22.92**	**195**	*e*P	**P**	**06 53 17.5**	**-1.3**
	29nm,0.6s,mb4.9						
KLBR				*e*S	**S**	**06 57 24.1**	**-3.4**
CTA	**Charters Tower**	**23.28**	**119**	*e*P	**P**	**06 53 24.0**	**+1.2**
	25nm,1.0s,mb4.6						
CTA				*e*S	**S**	**06 57 39.9**	**+6.2**
CTA	**Charters Tower**	**23.28**	**119**	*e*P	**P**	**06 53 24.0**	**+1.2**
CTA				*e*S	**S**	**06 57 39.9**	**+6.2**
CTA				pmax	pmax		
	comp=Z,25nm,1.0s						
CTA	**Charters Tower**	**23.28**	**119**	P	**P**	**06 53 24.9**	**+2.1**
	comp=Z,34nm,1.1s,mb4.7,baz=293,slow=10,SNR=7.8						
CTA				LR	LR	07 03 15.7	
	comp=Z,2µm,20.1s,MS4.5,baz=295,slow=38						
CTAO	**Charters Tower**	**23.28**	**119**	*e*P	**P**	**06 53 24.8**	**+2.1**
	comp=Z,52nm,1.1s,mb4.9						
CTAO	**Charters Tower**	**23.28**	**119**	*e*P	**P**	**06 53 24.8**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,53nm,1.1s,mb4.9						
MUN	**Mundaring**	**23.73**	**198**	*e*P	**P**	**06 53 25.5**	**-1.4**
MUN				*e*S	**S**	**06 57 43.9**	**+3.3**
NWAO	**Narrogin (SRO)**	**24.32**	**195**	*e*P	**P**	**06 53 32.4**	**0.0**
NWAO	**Narrogin (SRO)**	**24.32**	**195**	P	**P**	**06 53 32.1**	**-0.2**
	comp=Z,23nm,0.7s,mb4.7,baz=26,slow=10.0,SNR=13						
NWAO				S	**S**	**06 57 55.8**	**+5.6**
	comp=Z,23nm,0.7s,baz=271,slow=15,SNR=3.9						
NWAO				LR	LR	07 04 28.9	
	comp=Z,1µm,18.4s,MS4.5,baz=16,slow=40						
STKA	**Stephens Creek**	**27.21**	**147**	*e*P	**P**	**06 53 59.9**	**+1.4**
	comp=Z,22nm,0.8s,mb4.8						
STKA				*e*S	**S**	**06 58 54.8**	**+19**
STKA	**Stephens Creek**	**27.21**	**147**	P	**P**	**06 54 00.2**	**+1.7**
	comp=Z,9.3nm,0.7s,mb4.5,baz=312,slow=8.0,SNR=20						
STKA				LR	LR	07 05 59.6	
	comp=Z,2µm,18.0s,MS4.7,baz=318,slow=39						
KULM	**Kulim**	**28.14**	**300**	*e*P	**P**	**06 54 06.4**	**-0.7**
PSI	**Prapat**	**28.48**	**294**	P	**P**	**06 54 09.4**	**-0.7**
	comp=Z,9.3nm,0.8s,mb4.5,baz=2.3,slow=3.9,SNR=7.3						
QIZ	**Qiongzhong**	**31.93**	**333**	*e*P	**P**	**06 54 39.6**	**-0.9**
QIZ				LR	LR		
	comp=Z,711nm,15.8s,MS4.5						
NACB	**Ninganchiao**	**33.61**	**355**	P	**P**	**06 54 54.6**	**-0.5**
CNB	**Canberra Magne**	**34.13**	**143**	*e*P	**P**	**06 55 03.4**	**+3.8**
	comp=Z,12nm,0.7s,mb4.9						
HNR	**Honiara**	**34.72**	**93**	LR	LR	07 11 13.5	
	comp=Z,545nm,18.1s,MS4.3,baz=182,slow=40						
BDT	**Bhumibol Dam**	**36.79**	**316**	P	**P**	**06 55 23.0**	**+0.4**
CHTO	**Chiang Mai**	**37.93**	**318**	*e*P	**P**	**06 55 32.6**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**37.93**	**318**	*e*P	**P**	**06 55 32.6**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
CHRT	**Chiangrai**	**38.15**	**320**	⇑P	**P**	**06 55 35.0**	**+0.8**
GYA	**Guiyang**	**39.82**	**334**	P	**P**	**06 55 52.3**	**+4.2**
GYA				AP	pP	06 55 59.8	+4.4
GYA				XP	sP	06 56 03.4	+5.0
GYA				PP	PP	06 57 28.3	+8.4
GYA				S	**S**	**07 01 56.3**	**+5.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,480nm,19.4s,MS4.5						
GYA				LR	LR		
	comp=E,430nm,18.8s,MS4.5						
GYA				LR	LR		
	comp=Z,590nm,19.3s,MS4.4						
SSE	**Sheshan**	**40.50**	**355**	*e*P	**P**	**06 55 55.3**	**+1.7**
SSE				AP	pP	06 56 02.4	+1.4
SSE				XP	sP	06 56 06.4	+2.4
SSE				S	**S**	**07 02 05.5**	**+4.2**
SSE				XS	sS	07 02 19.8	+6.4
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,186nm,4.3s						
SSE				LR	LR		
	comp=N,60nm,27.2s,MS3.8						
SSE				LR	LR		
	comp=E,188nm,27.2s,MS3.8						
SSE				LR	LR		
	comp=Z,125nm,26.2s,MS3.6						
KMI	**Kunming**	**40.55**	**329**	P	**P**	**06 55 57.9**	**+3.8**
KMI				AP	pP	06 56 05.4	+3.9
KMI				XP	sP	06 56 08.3	+3.9
KMI				PP	PP	06 57 38.4	+11
KMI				S	**S**	**07 02 05.6**	**+3.5**
KMI				AMB	AMB		
	comp=Z,12nm,0.7s,mb4.6						
KMI				AMB	AMB		
	comp=Z,104nm,3.8s						
KMI				LR	LR		
	comp=N,432nm,18.1s,MS4.5						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				LR	LR		
	comp=E,512nm,18.1s,MS4.5						
KMI				LR	LR		
	comp=Z,362nm,18.5s,MS4.3						
WHN	Wuhan	41.04	346	P	P	06 55 58.8	+0.7
NJ2	Nanjing	41.70	352	eP	P	06 56 07.3	+3.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
DZM	Mont Dzumac	41.89	112	LR	LR	07 14 07.4	
	comp=Z,943nm,18.3s,MS4.7,baz=285,slow=37						
CD2	Chengdu	44.94	334	P	P	06 56 31.8	+2.1
CD2				AP	pP	06 56 39.3	+2.2
CD2				XP	sP	06 56 42.8	+2.7
CD2				PP	PP	06 58 17.8	+2.8
CD2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.2						
CD2				AMB	AMB		
	comp=Z,80nm,5.8s						
CD2				LR	LR		
	comp=N,470nm,19.2s,MS4.7						
CD2				LR	LR		
	comp=E,720nm,19.2s,MS4.7						
CD2				LR	LR		
	comp=Z,360nm,18.0s,MS4.3						
XAN	Xi'an	45.83	342	P	P	06 56 34.4	-2.3
XAN				SS	SS	07 06 41.6	-2.8
XAN				AMB	AMB		
	comp=Z,3.0nm,0.6s,mb4.4						
XAN				LR	LR		
	comp=N,237nm,18.9s,MS4.3						
XAN				LR	LR		
	comp=E,281nm,18.9s,MS4.3						
XAN				LR	LR		
	comp=Z,415nm,20.4s,MS4.4						
KSRS	Korea Array	46.80	3	P	P	06 56 42.8	-1.5
	comp=Z,2.7nm,0.5s,mb4.4,baz=179,slow=9.4,SNR=13						
KSRS				LR	LR	07 19 01.3	
	comp=Z,222nm,19.3s,MS4.1,baz=285,slow=40						
PALK	Pallekele	46.93	289	eP	P	06 56 48.1	+2.4
SHL	Shillong	47.30	318	eP	P	06 56 47.0	-1.4
MAJO	Matsushiro	47.51	15	eP	P	06 56 50.8	+1.0
	comp=Z,20nm,1.3s,mb5.0						
MAJO	Matsushiro	47.51	15	eP	P	06 56 50.8	+1.0
MAJO				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
MJAR	Matsushiro Arr	47.51	15	P	P	06 56 49.0	-0.9
	comp=Z,3.6nm,0.6s,mb4.6,baz=189,slow=8.8,SNR=12						
MJAR				LR	LR	07 15 46.0	
	comp=Z,173nm,19.5s,MS4.0,baz=200,slow=35						
DL2	Dalian	48.24	357	P	P	06 56 53.6	-1.8
DL2				eS	S	07 03 48.8	-4.7
DL2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
DL2				LR	LR		
	comp=N,150nm,16.8s,MS4.3						
DL2				LR	LR		
	comp=E,170nm,14.4s,MS4.3						
DL2				LR	LR		
	comp=Z,270nm,15.1s,MS4.3						
LZH	Lanzhou	49.43	338	⇑P	P	06 57 05.0	+0.4
LZH				AP	pP	06 57 12.6	+0.5
LZH				XP	sP	06 57 16.3	+1.3
LZH				PP	PP	06 59 00.3	+1.3
LZH				eS	S	07 04 10.5	+0.1
LZH				AMB	AMB		
	comp=Z,31nm,1.2s,mb5.2						
LZH				AMB	AMB		
	comp=Z,132nm,6.8s						
LZH				LR	LR		
	comp=N,745nm,14.5s						
LZH				LR	LR		
	comp=Z,1μm,17.9s,MS4.9						
BJT	Baijiatuau	49.90	351	eP	P	06 57 08.3	+0.2
	comp=Z,9.3nm,0.6s,mb5.0						
BJT	Baijiatuau	49.90	351	eP	P	06 57 08.3	+0.2
BJT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI	Beijing	49.92	351	P	P	06 57 07.8	-0.5
BJI				AP	pP	06 57 13.8	-2.0
BJI				XP	sP	06 57 16.6	-2.1
BJI				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.9						
BJI				AMB	AMB		
	comp=Z,107nm,3.8s						
BJI				LR	LR		
	comp=N,252nm,19.4s,MS4.4						
BJI				LR	LR		
	comp=E,231nm,20.0s,MS4.4						
BJI				LR	LR		
	comp=Z,527nm,35.3s						
LSA	Lhasa	50.64	321	P	P	06 57 15.3	+1.4
LSA				LR	LR		
	comp=E,560nm,30.4s						
LSA	Lhasa	50.64	321	eP	P	06 57 14.2	+0.3
	comp=E,16nm,0.7s,mb5.1						
LSA	Lhasa	50.64	321	eP	P	06 57 14.2	+0.3
LSA				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
ODAN	Odare	51.18	316	eP	P	06 57 16.4	-1.6
	comp=Z,48nm,0.9s,mb5.4						
TAPN	Taplejung	51.28	317	eP	P	06 57 17.0	-1.7
	comp=Z,66nm,1.0s,mb5.5						
HHC	Hu-ho-hao-te	51.55	347	eP	P	06 57 22.0	+1.5
HHC				AP	pP	06 57 26.4	-1.7
HHC				XP	sP	06 57 29.0	-2.0
HHC				PP	PP	06 59 19.9	+1.7
HHC				S	S	07 04 43.0	+3.3
HHC				SCS	ScS	07 07 09.8	+0.4
HHC				SS	SS	07 08 16.8	+0.5
HHC				AMB	AMB		
	comp=Z,18nm,0.8s,mb5.0						
HHC				AMB	AMB		
	comp=Z,202nm,4.6s						
HHC				LR	LR		
	comp=N,275nm,19.0s,MS4.5						
HHC				LR	LR		
	comp=E,195nm,14.3s,MS4.5						
HHC				LR	LR		
	comp=Z,180nm,21.4s						
JIRN	Jiri	52.51	316	eP	P	06 57 26.5	-1.5
	comp=Z,58nm,0.9s,mb5.5						
RPZ	Rata Peaks	52.63	139	LR	LR	07 22 06.2	
	comp=Z,1μm,19.7s,MS4.9,baz=316,slow=38						
CN2	Changchun	53.05	1	eP	P	06 57 34.6	+3.0
CN2				eXP	sP	06 57 41.0	-1.1
CN2				eS	S	07 05 04.0	+3.9
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,300nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,18.0s,MS4.5						
KKN	Kakani	53.22	315	eP	P	06 57 32.3	-0.9
	comp=Z,51nm,1.1s,mb5.4						
GKN	Gorkha	53.80	315	eP	P	06 57 36.9	-0.5
	comp=Z,55nm,0.8s,mb5.5						
GTA	Gaotai	53.89	336	eP	P	06 57 37.9	+0.1
GTA				AP	pP	06 57 42.5	-2.9
GTA				PP	PP	06 59 41.4	+2.0
GTA				S	S	07 05 12.5	+0.8
GTA				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,57nm,5.3s						
GTA				LR	LR		
	comp=N,314nm,19.0s,MS4.6						
GTA				LR	LR		
	comp=E,353nm,18.2s,MS4.6						
GTA				LR	LR		
	comp=Z,346nm,19.8s,MS4.4						
MDJ	Mudanjiang	54.04	4	P	P	06 57 38.5	-0.3
MDJ				AP	pP	06 57 44.9	-1.5
MDJ				XP	sP	06 57 47.1	-2.2
MDJ				PCP	PcP	06 58 41.3	-2.4
MDJ				PP	PP	06 59 36.4	-4.2
MDJ				SCP	ScP	07 02 38.3	-2.1
MDJ				PCS	PcS	07 02 40.5	-2.3
MDJ				S	S	07 05 18.9	+5.4
MDJ				SCS	ScS	07 07 26.6	-0.1
MDJ				AMB	AMB		
	comp=Z,23nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,77nm,4.6s						
MDJ				LR	LR		
	comp=N,66nm,27.6s						
MDJ				LR	LR		
	comp=E,200nm,37.8s						
MDJ				LR	LR		
	comp=Z,236nm,23.2s,MS4.2						
MDJ	Mudanjiang	54.04	4	eP	P	06 57 38.9	0.0
	comp=Z,35nm,1.0s,mb5.2						
KOLN	Koldanda	54.38	314	eP	P	06 57 41.2	-0.5
	comp=Z,62nm,0.8s,mb5.6						
URZ	Urewera	54.88	130	LR	LR	07 19 37.9	
	comp=Z,676nm,21.6s,MS4.7,baz=128,slow=34						
CASY	Casey	57.53	187	eP	P	06 58 04.1	+0.5
	comp=Z,7.7nm,0.9s,mb4.7						
HABR	Khabarovsk	58.43	8	eP	P	06 58 09.6	-0.5
HABR				e		06 59 00.1	
HABR				e		07 00 17.6	
HABR				eS	S	07 06 10.9	-0.8
HIA	Hailar	58.68	356	eP	P	06 58 10.8	-1.0
	comp=Z,12nm,0.9s,mb4.9						
HIA	Hailar	58.68	356	eP	P	06 58 10.8	-1.0
HIA				pmax	pmax		
	comp=Z,12nm,0.9s						
ULN	Ulaanbaatar	59.23	346	eP	P	06 58 16.4	+0.7
	comp=Z,15nm,1.1s,mb4.9						
ULN	Ulaanbaatar	59.23	346	i P	P	06 58 15.2	-0.5
SONM	Songino Array	59.35	346	P	P	06 58 15.0	-1.6
	comp=Z,6.7nm,0.7s,mb4.8,baz=161,slow=8.0,SNR=48						
CIT	Chita	62.02	352	eP	P	06 58 34.2	-0.5
ZAK	Zakamensk	62.49	345	eP	P	06 58 37.0	-0.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
THN	Thein Dam	62.64	314	eP	P	06 58 36.9	-2.4
WMQ	Urumqi	62.82	331	eP	P	06 58 40.4	+0.2
WMQ				AP	pP	06 58 48.0	+0.1
WMQ				XP	sP	06 58 52.5	+1.7
WMQ				PCP	PcP	06 59 18.4	0.0
WMQ				PP	PP	07 01 00.4	+1.7
WMQ				SCP	ScP	07 03 17.4	-1.9
WMQ				S	S	07 07 06.4	-1.6
WMQ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,261nm,5.0s						
WMQ				LR	LR		
	comp=N,251nm,26.2s,MS4.5						
WMQ				LR	LR		
	comp=E,301nm,23.1s,MS4.5						
WMQ				LR	LR		
	comp=Z,196nm,23.0s,MS4.2						
TLY	Talaya	63.59	346	eP	P	06 58 45.5	+0.4
TLY	Talaya	63.59	346	eP	P	06 58 45.4	+0.3
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
MOY	Mondy	64.27	344	eP	P	06 58 50.4	+0.8
MOY				pmax	pmax		
	comp=Z,27nm,3.1s						
MKAR	Makanchi Array	67.60	330	i P	P	06 59 09.6	-1.6
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MKAR	Makanchi Array	67.60	330	P	P	06 59 09.7	-1.4
	comp=Z,3.6nm,0.5s,mb4.7,baz=134,slow=6.9,SNR=44						
BOD	Bodaibo	67.65	354	eP	P	06 59 09.8	-1.4
BOD				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
KZA	Kyzart	68.43	323	P	P	06 59 17.9	+1.4
	SNR=6.0						
TKM2	Tokmak 2	68.73	323	eP	P	06 59 18.1	-0.2
	comp=Z,6.2nm,0.7s,mb4.7						
TKM2	Tokmak 2	68.73	323	eP	P	06 59 18.1	-0.2
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TKM2	Tokmak 2	68.73	323	P	P	06 59 18.1	-0.2
	SNR=9.4						
KBK	Karagaybulak	68.95	323	P	P	06 59 21.2	+1.5
	SNR=8.2						
UCH	Uchtor	68.96	322	eP	P	06 59 20.1	+0.3
	comp=Z,7.7nm,0.8s,mb4.7						
UCH	Uchtor	68.96	322	P	P	06 59 21.5	+1.7
	SNR=15						
AAK	Ala-Archa	69.21	323	P	P	06 59 20.2	-1.1
	comp=Z,141nm,0.5s,mb6.2,SNR=21						
AAK	Ala-Archa	69.21	323	eP	P	06 59 19.9	-1.4
	comp=Z,13nm,0.6s,mb5.0						
AAK	Ala-Archa	69.21	323	eP	P	06 59 19.9	-1.4
AAK				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
AAK	Ala-Archa	69.21	323	P	P	06 59 20.9	-0.4
	SNR=23						
AML	Almayashu	69.40	322	eP	P	06 59 22.2	-0.3
	comp=Z,16nm,0.7s,mb5.1						
AML	Almayashu	69.40	322	P	P	06 59 22.4	-0.1
	SNR=22						
USP	Ospenovka	69.58	323	P	P	06 59 24.5	+0.9
	SNR=6.5						
EKS2	Erkin-Say	69.66	322	eP	P	06 59 24.2	+0.1
	comp=Z,14nm,1.0s,mb4.8						
EKS2	Erkin-Say	69.66	322	P	P	06 59 25.6	+1.5
	SNR=8.9						
VNDA	Vanda	70.66	172	P	P	06 59 30.7	+1.0
	comp=Z,2.4nm,0.5s,mb4.3,baz=312,slow=6.1,SNR=20						
VNDA				LR	LR	07 30 08.8	
	comp=Z,1μm,18.0s,MS5.2,baz=335,slow=36						
MAW	Mawson	70.75	201	eP	P	06 59 31.2	+0.8
	comp=Z,4.4nm,0.7s,mb4.5						
MAW	Mawson	70.75	201	eP	P	06 59 31.2	+0.8
MAW				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAW	Mawson	70.75	201	P	P	06 59 31.3	+0.9
	comp=Z,4.8nm,0.6s,mb4.6,baz=77,slow=4.5,SNR=7.4						
MAW				LR	LR	07 28 50.7	
	comp=Z,356nm,20.1s,MS4.6,baz=58,slow=34						
YAK	Yakutsk	71.41	2	eP	P	06 59 35.1	+0.8
	comp=Z,22nm,0.6s,mb5.2						
YAK	Yakutsk	71.41	2	eP	P	06 59 32.5	-1.8
YAK				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.2						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
SBA	Scott Base	71.61	171	eP	P	06 59 37.4	+1.9
	comp=E,47nm,1.8s,mb5.1						
SBA	Scott Base	71.61	171	eP	P	06 59 37.4	+1.9
SBA				pmax	pmax		
	comp=Z,47nm,1.8s,mb5.1						
MA2	Magadan	71.94	14	eP	P	06 59 39.1	+1.5
	comp=Z,13nm,0.9s,mb4.8						
MA2	Magadan	71.94	14	eP	P	06 59 38.8	+1.2
MA2				e	pP	06 59 44.9	-0.5
MA2				e		06 59 50.6	
MA2				eS	S	07 08 55.4	-1.7
MA2				eSS	SS	07 13 36.7	+2.4
MA2				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
KURK	Kurchatov	72.05	331	P	P	06 59 36.4	-2.1
	comp=Z,91nm,1.2s,mb5.6,SNR=6.6						
KURK	Kurchatov	72.05	331	eP	P	06 59 37.3	-1.2
	comp=Z,17nm,1.0s,mb4.9						
KURK	Kurchatov	72.05	331c	iP	P	06 59 36.9	-1.6
NVS	Novosibirsk	72.92	336⇑	iP	P	06 59 41.8	-1.8
NVS				eS	S	07 08 59.0	-10
NVS				pmax	pmax		
	comp=Z,24nm,2.1s,mb4.8						
NVS				pmax	pmax		
	comp=N,11nm,1.6s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.5s						
NVS				smax			
	comp=N,29nm,2.8s						
NVS				smax			
	comp=E,21nm,2.3s						
SEY	Seymchan	75.29	13⇑	eP	P	06 59 57.2	0.0
BRVK	Borovoye	77.56	330	eP	P	07 00 10.3	0.0
SYO	Syowa Base	79.46	201⇓	eP	P	07 00 19.6	-1.0
SYO	Syowa Base	79.46	201⇑	ePcP	PcP	07 00 27.0	-1.6
QSPA	South Pole Qui	80.50	180	eP	P	07 00 28.1	+2.1
QSPA	South Pole Qui	80.50	180	P	P	07 00 27.7	+1.6
	comp=E,16nm,0.8s,mb5.0,baz=322,slow=1.9,SNR=36						
TIXI	Tiksi	81.02	1	eP	P	07 00 30.4	+1.6
	comp=E,16nm,1.3s,mb4.8						
TIXI	Tiksi	81.02	1	eP	P	07 00 29.0	+0.2
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
TBI	Tubuai	82.47	112	eLR	LR	07 26 44.6	
	comp=Z,350nm,24.2s						
BILL	Bilibino	82.77	15	eP	P	07 00 33.8	-4.3
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.1						
PPT	Papeete	83.11	107	eLR	LR	07 27 03.6	
	comp=Z,489nm,26.5s						
ATD	Arta Tunnel	84.04	283	LR	LR	07 40 02.9	
	comp=Z,94nm,18.5s,MS4.2,baz=100,slow=37						
SVE	Sverdlovsk	84.27	330⇑	eP	P	07 00 46.1	+0.1
SVE				e		07 04 05.3	
SVE				ePPP		07 05 49.9	
SVE				eS	S	07 11 00.7	-9.2
SVE				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.9						
ARU	Arti	85.12	329	eP	P	07 00 50.5	+0.2
	comp=Z,12nm,1.1s,mb4.9						
ARU	Arti	85.12	329d	iP	P	07 00 50.5	+0.2
ARU						07 04 06.3	
ARU				S	S	07 11 12.7	-5.7
ARU				SS	SS	07 16 43.6	-9.0
ARU				pmax	pmax		
	comp=Z,18nm,1.8s,mb4.9						
KMBO	Kilima Mbogo	87.34	269	eP	P	07 01 02.6	+0.3
	comp=Z,4.0nm,0.7s,mb4.8						
KMBO	Kilima Mbogo	87.34	269	eP	P	07 01 02.6	+0.3
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMBO	Kilima Mbogo	87.34	269	P	P	07 01 03.3	+1.0
	comp=Z,5.0nm,0.8s,mb4.8,baz=50,slow=7.6,SNR=18						
KMBO				LR	LR	07 36 37.3	
	comp=Z,307nm,20.3s,MS4.7,baz=274,slow=33						
SNAA	Sanae	92.00	195	eP	P	07 01 23.6	+0.7
SNAA				e		07 01 26.6	
SNAA				e	pP	07 01 32.7	+1.8
SNAA				e		07 01 37.2	
SNAA				e		07 01 45.1	
SNAA				e		07 01 58.7	
SNAA	Sanae	92.00	195	i P	P	07 01 25.4	+2.5
MALT	Malatya	92.94	308	eP	P	07 01 27.9	0.0
	comp=Z,1.3nm,0.6s,mb4.5						
MALT	Malatya	92.94	308	eP	P	07 01 27.9	0.0
MALT				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.4						
VNA2	Neumayer--Watz	93.60	194	eP	P	07 01 30.9	+0.6
VNA2				e		07 01 34.4	
VNA2				e	pP	07 01 39.3	+1.0
VNA2				e		07 01 44.1	
VNA2				e		07 01 52.9	
VNA2				e		07 01 57.8	
VNA2				e		07 02 02.3	
VNA2				e		07 02 07.7	
BOSA	Boshof	93.72	240	LR	LR	07 36 34.5	
	comp=Z,251nm,18.5s,MS4.7,baz=103,slow=31						
VNA3	Neumayer Olymp	93.91	193	eP	P	07 01 33.6	+1.8
VNA3				e		07 01 36.8	
VNA3				e	pP	07 01 40.8	+1.1
VNA3				e		07 01 46.6	
VNA3				e		07 01 55.6	
VNA3				e		07 02 01.6	
VNA3				e		07 02 08.5	
VNA3				e		07 02 10.5	
VNA1	Neumayer--Stat	94.00	194	eP	P	07 01 40.8	+8.6
VNA1				e		07 01 43.4	
VNA1				e	pP	07 01 49.4	+9.3
VNA1				e		07 01 54.5	
VNA1				e		07 02 02.2	
VNA1				e		07 02 08.0	
VNA1				e		07 02 12.7	
VNA1				e		07 02 16.1	
RKT	Rikitea	95.63	114	eLR	LR	07 32 50.1	
	comp=Z,261nm,24.2s						
OBN	Obninsk	96.67	325	eP	P	07 01 41.5	-3.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9						
MCK	McKinley	96.82	27	eP	P	07 01 40.1	-4.9
	comp=Z,13nm,1.5s,mb5.1						
MCK	McKinley	96.82	27	eP	P	07 01 40.1	-4.9
MCK				pmax	pmax		
	comp=Z,13nm,1.5s,mb5.1						
BRTR	Keskin Array B	96.83	309	P	P	07 01 45.4	-0.3
	comp=Z,1.1nm,0.8s,mb4.4,baz=56,slow=3.6,SNR=5.6						
AKASG	Malin Array Be	100.77	320	P	Pdif	07 02 02.6	-0.4
	comp=Z,0.4nm,0.4s,baz=74,slow=4.7,SNR=3.1						
ARCES	ARCESS Array B	102.07	339	PKiKP	PKiKP	07 06 32.2	+1.5
	comp=Z,2.5nm,1.0s,baz=103,slow=1.1,SNR=6.3						
FINES	FINESS Array B	102.42	331	PKiKP	PKiKP	07 06 33.7	+2.1
	comp=Z,1.0nm,0.7s,baz=131,slow=5.8,SNR=5.3						
YKA	Yellowknife Ar	112.25	26	PKPdf	PKiKP	07 06 51.5	+1.6
YKA				PKKPbc	PKKPbc	07 17 42.4	-0.5
YKA	Yellowknife Ar	112.25	26	PKiKP	PKiKP	07 06 51.5	+1.7
	comp=Z,0.6nm,0.5s,baz=298,slow=1.9,SNR=12						
YKA				PKKPbc	PKKPbc	07 17 42.4	-0.5
	comp=Z,0.3nm,0.7s,baz=108,slow=3.4,SNR=6.4						
EDM	Edmonton	116.39	35	ePKPdf	PKPdf	07 06 59.1	+1.1
NVAR	Mina Array Bea	116.92	52	PKP	PKPdf	07 07 03.0	+3.5
	comp=Z,1.0nm,0.9s,baz=221,slow=1.1,SNR=6.3						
HLID	Hailey	118.70	45	ePKPdf	PKPdf	07 07 04.4	+1.6
MCMT	McKenzie Canyo	119.44	44	ePKPdf	PKPdf	07 07 05.2	+1.1
BGU	Big Grassy Mou	120.37	48	ePKPdf	PKPdf	07 07 09.6	+3.5
EGMT	Eagleton	120.41	39	ePKPdf	PKPdf	07 07 08.3	+2.3
DUG	Dugway	120.72	49	ePKPdf	PKPdf	07 07 08.8	+2.0
IMW	Indian Meadow	121.02	44	ePKPdf	PKPdf	07 07 09.6	+2.4
TPAW	Teton Pass	121.14	45	ePKPdf	PKPdf	07 07 10.8	+3.3
REDW	Red Top Meadow	121.25	45	ePKPdf	PKPdf	07 07 09.7	+2.0
HWUT	Hardware Ranch	121.26	47	ePKPdf	PKPdf	07 07 08.9	+1.1
SNOW	Snow King Moun	121.28	45	ePKPdf	PKPdf	07 07 09.8	+2.1
LOHW	Long Hollow	121.34	44	ePKPdf	PKPdf	07 07 09.8	+1.9
MSU	Marysvale	121.61	51	ePKPdf	PKPdf	07 07 10.6	+2.0
PDAR	Pinedale Array	122.33	45	PKP	PKPdf	07 07 11.4	+1.6
	comp=Z,2.3nm,0.9s,baz=136,slow=0.5,SNR=11						
FCC	Fort Churchill	122.71	23	ePKPdf	PKPdf	07 07 10.6	+0.5
LAO	LASA Array	123.14	40	ePKPdf	PKPdf	07 07 14.1	+2.8
TORD	Torodi Ar. Bea	124.13	279	PKP	PKPdf	07 07 14.6	+0.5
	comp=Z,3.9nm,0.8s,baz=56,slow=1.7,SNR=22						
PV01	Paradox Valley	124.44	50	ePKPdf	PKPdf	07 07 15.8	+1.8
MVCO	Mesa Verde	124.75	51	ePKPdf	PKPdf	07 07 17.2	+2.6
ESDC	Sonseca Array	125.47	312	PKP	PKPdf	07 07 17.6	+1.7
	comp=Z,0.1nm,0.3s,baz=23,slow=3.4,SNR=4.5						
SDCO	Great Sand Dun	126.88	50	ePKPdf	PKPdf	07 07 21.8	+3.1
BNM	Barren Site	127.04	54	ePKPdf	PKPdf	07 07 23.3	+4.2
ULM	Lac du Bonnet	127.33	32	PKP	PKPdf	07 07 20.6	+1.5
	comp=Z,2.8nm,0.7s,baz=320,slow=3.3,SNR=9.0						
MNTX	Cornudas Mount	128.67	57	ePKPdf	PKPdf	07 07 24.3	+2.0
DBIC	Dimbokro	130.05	271	PKP	PKPdf	07 07 28.1	+2.6
	comp=Z,2.3nm,0.7s,baz=54,slow=4.7,SNR=4.4						
ECSD	EROS,Sioux Fal	130.52	39	ePKPdf	PKPdf	07 07 26.5	+1.1
TXAR	Lajitas Array	130.67	59	PKP	PKPdf	07 07 29.1	+2.9
	comp=Z,0.4nm,0.7s,baz=161,slow=2.5,SNR=6.6						
JCT	Junction City	133.61	57	ePKPdf	PKPdf	07 07 33.4	+1.8
SCHQ	Schefferville	133.86	9	PKP	PKPdf	07 07 33.1	+1.7
	comp=Z,2.5nm,0.6s,baz=244,slow=5.9,SNR=6.8						
BLO	Bloomington	139.34	38	ePKPdf	PKPdf	07 07 43.2	+1.2
LRAL	Lakeview Retre	142.53	47	ePKPdf	PKPdf	07 07 46.9	-1.1
ELN	Prospectdale	144.05	36	ePKPdf	PKPdf	07 07 51.8	+1.2
GOGA	Godfrey	144.78	43	ePKPdf	PKPdf	07 07 53.2	+1.3
URVA	University of	145.57	32	ePKPdf	PKPdf	07 07 54.7	+1.5
LHS	Liberty Hill	145.86	39	ePKPdf	PKPdf	07 07 55.0	+1.2
TEIG	Tepich	146.42	68	ePKPab	PKPab	07 08 00.1	+2.8
NNA	Nana	149.74	134	ePKPdf	PKPdf	07 08 01.3	+0.6
NNA				ePKPbc	PKPbc	07 08 06.7	+1.3
NNA				ePKPab	PKPab	07 08 11.7	+1.0
LPAZ	La Paz	151.39	153	PKPbc	PKPbc	07 08 10.4	+1.2
	comp=Z,1.4nm,0.6s,baz=201,slow=8.6,SNR=2.2						

MOS ***18*** *07:00:32.4±1.0, 7.71S×126.64E, h33km, mb4.9/7, Error ellipse: s-maj=20.6km s-min=9.3km az=108.3*
BJI ***18*** *07:00:36.2, 8.37S×127.10E, h119km, mB5.1, mb4.8*
NEIC ***18*** *07:00:39.8±1.4, 7.85S×126.81E, h89km±13km, mb4.7/9, Error ellipse: s-maj=13.3km s-min=9.4km az=64.0*
ISCJB ***18*** *07:00:40.7±1.0, 7.88S±0.05×126.72E±0.05, h114km±10km, mb4.8/31, Error ellipse: s-maj=8.8km s-min=7.8km az=147.7*
IDC ***18*** *07:00:42.9±2.0, 7.84S×126.64E, h113km±18km, mb4.4/12, mb1 4.5/14, mb1mx4.4/18, mbtmp4.4/14, MS3.6/1, Ms1 3.6/1, ms1mx3.2/25, Error ellipse: s-maj=15.6km s-min=11.3km az=77.0*
ISC 18 07:00:41.9±0.8, **7.91S**±0.05×**126.75E**±0.05, **h109**km±9km, **n75**, σ**1.16**/71, **mb4.8**/31, **5C-5D, Banda Sea**

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

BATI Kupang 3.81 233 P **Pn 07 01 40.1 +1.4**
470nm,0.3s,baz=81,slow=2.7,SNR=200
BATI S **Sn 07 02 22.8 +0.1**
601nm,0.3s,baz=103,slow=22,SNR=6.4
BATI LR LR 07 02 59.6
comp=Z,794nm,18.1s,baz=90,slow=36
AAI Ambon 4.44 19 P **Pn 07 01 50.5 +3.3**
120nm,0.7s
KAKA Kakadu 7.35 131 *e*P **Pn 07 02 25.7 -1.0**
198nm,0.3s
KAKA *e*S **Sn 07 03 43.6 -4.9**
FITZ Fitzroy Crossi 10.18 186 ⇓*i*P **Pn 07 03 02.4 -2.7**
22nm,0.3s
FITZ *e*S **Sn 07 04 49.3 -8.1**
FITZ Fitzroy Crossi 10.18 186 P **Pn 07 03 02.8 -2.3**
2.5nm,0.3s,baz=18,slow=12,SNR=28
FITZ S **Sn 07 04 49.5 -7.9**
16nm,0.3s,baz=73,slow=17,SNR=14
BAKI Biak 11.47 55 P **Pn 07 03 24.7 +2.3**
271nm,1.3s
MMPI Merauke 13.50 93 P **Pn 07 03 49.4 +0.2**
525nm,0.5s
WRA Warramunga Arr 14.04 149 P **Pn 07 03 53.1 -2.9**
29nm,0.3s,baz=319,slow=14,SNR=94
WRA S **Sn 07 06 19.7 -11**
21nm,0.3s,baz=324,slow=25,SNR=13
WB2 Warramunga Arr 14.04 149 *e*P **Pn 07 03 53.4 -2.7**
WB2 *e*S **Sn 07 06 19.7 -11**
MBWA Marble Bar 14.81 207 *e*Pn **Pn 07 04 06.3 +0.4**
14nm,0.5s
ASAR Alice Springs 17.10 157 P **Pn 07 04 34.3 0.0**
8.4nm,0.3s,baz=325,slow=9.7,SNR=105
ASAR S **S 07 07 32.1 -13**
6.7nm,0.3s,baz=315,slow=17,SNR=10
KSM Kuching 18.87 299 *e*P **P 07 04 55.6 +1.8**
PMG Port Moresby 20.23 96 *c i*P **P 07 05 13.2 +4.6**
PMG Port Moresby 20.23 96 P **P 07 05 11.4 +2.8**
85nm,0.8s,baz=268,slow=8.5,SNR=27
CTA Charters Tower 22.43 125 ⇓*i*P **P 07 05 33.4 +1.5**
13nm,0.7s,mb4.4
CTA Charters Tower 22.43 125 ⇓*i*P **P 07 05 33.4 +1.5**
CTA pmax pmax
comp=Z,13nm,0.7s
CTA Charters Tower 22.43 125 P **P 07 05 33.5 +1.5**
comp=Z,13nm,0.8s,mb4.3,baz=311,slow=11,SNR=11
FORT Forrest 22.78 177 *e*P **P 07 05 35.8 +0.4**
comp=Z,40nm,0.5s,mb5.0
FORT *e*S **S 07 09 45.4 +9.5**
KLBR Kellerberrin 25.01 198 *e*P **P 07 05 54.9 -0.8**
comp=Z,41nm,1.0s,mb4.8
KLBR *e*S S 07 10 36.4 +25
MUN Mundaring 25.88 201 *e*P **P 07 06 04.4 +0.8**
MUN *e*S S 07 10 54.2 +29
NWAO Narrogin (SRO) 26.41 198 P **P 07 06 09.3 +1.0**
NWAO Narrogin (SRO) 26.41 198 P **P 07 06 09.3 +1.0**
comp=Z,28nm,0.6s,mb4.9,baz=25,slow=8.0,SNR=35
STKA Stephens Creek 27.56 152 *e*P **P 07 06 20.4 +1.8**
comp=Z,5.5nm,0.4s,mb4.4
STKA Stephens Creek 27.56 152 P **P 07 06 19.9 +1.3**
comp=Z,3.6nm,0.4s,mb4.3,baz=323,slow=12,SNR=7.7
PSI Prapat 29.73 290 P **P 07 06 37.9 -0.3**
comp=Z,5.2nm,0.5s,mb4.5,baz=308,slow=4.3,SNR=6.8
PBA Port Blair 39.02 299 *e*P x 07 08 57.2
PBA *e*S x 07 09 11.2
PBA *ex* x 07 09 16.4
comp=E,135nm,0.4s
PBA *ex* x 07 09 16.6
comp=N,181nm,0.4s
WHN Wuhan 40.05 343 *e*P **P 07 08 07.5 +1.0**
NJ2 Nanjing 40.45 350 *e*P **P 07 08 07.3 -2.5**
NJ2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.8
KSRS Korea Array 45.14 1 P **P 07 08 48.5 +0.9**
comp=Z,7.5nm,0.8s,mb4.5,baz=178,slow=9.9,SNR=26
KSRS PcP PcP 07 10 25.9 -0.3
comp=Z,1.8nm,0.7s,baz=186,slow=3.7,SNR=5.2
MJAR Matsushiro Arr 45.51 13 P **P 07 08 49.9 -0.6**
comp=Z,1.6nm,0.5s,mb4.0,baz=194,slow=8.3,SNR=8.2
LZH Lanzhou 48.78 335 *e*P **P 07 09 15.8 -0.1**
LZH AMB AMB
comp=Z,21nm,1.3s,mb4.9
LZH AMB AMB
comp=Z,82nm,4.1s
LSA Lhasa 50.70 319 P **P 07 09 31.0 +0.4**
LSA Lhasa 50.70 319 *e*P **P 07 09 31.4 +0.8**
comp=Z,12nm,0.8s,mb5.0
LSA Lhasa 50.70 319 *e*P **P 07 09 31.4 +0.8**
LSA pmax pmax
comp=Z,12nm,0.8s,mb5.0
ODAN Odare 51.48 314 *e*P **P 07 09 35.8 -0.7**
comp=Z,29nm,0.8s,mb5.4
TAPN Taplejung 51.55 314 *e*P **P 07 09 36.8 -0.2**
comp=Z,29nm,0.9s,mb5.3
JIRN Jiri 52.82 314 *e*P **P 07 09 46.2 -0.2**
comp=Z,31nm,0.9s,mb5.3
GTA Gaotai 53.30 334 P **P 07 09 50.4 +0.8**
GTA AMB AMB
comp=Z,15nm,1.0s,mb5.0
KKN Kakani 53.55 313 *e*P **P 07 09 51.1 -0.6**
comp=Z,40nm,0.9s,mb5.5
GKN Gorkha 54.14 313 *e*P **P 07 09 55.4 -0.6**
comp=Z,31nm,0.3s,mb5.8
KOLN Koldanda 54.76 312 *e*P **P 07 10 00.0 -0.5**
comp=Z,22nm,0.5s,mb5.5
ULN Ulaanbaatar 58.21 345 *e*P **P 07 10 25.0 +0.4**
comp=Z,15nm,1.1s,mb4.9
ULN Ulaanbaatar 58.21 345⇑*e*P **P 07 10 24.9 +0.4**
SONM Songino Array 58.35 344 P **P 07 10 25.9 +0.3**
comp=Z,5.4nm,0.8s,mb4.6,baz=160,slow=8.5,SNR=44
SONM PcP PcP 07 11 14.7 -0.7
comp=Z,1.4nm,0.6s,baz=162,slow=3.7,SNR=5.0
ZAK Zakamensk 61.53 343 *e*P **P 07 10 45.3 -2.0**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb4.0
MOY Mondy 63.34 342 *e*P **P 07 11 00.0 +0.7**
MKAR Makanchi Array 67.27 329⇑*e*P **P 07 11 24.3 -0.4**
MKAR Makanchi Array 67.27 329 P **P 07 11 24.4 -0.4**
comp=Z,15nm,0.5s,mb5.0,baz=128,slow=7.8,SNR=142
AAK Ala-Archa 69.20 321 *e*P **P 07 11 35.9 -1.0**
comp=Z,2.7nm,0.4s,mb4.4
AAK Ala-Archa 69.20 321 *e*P **P 07 11 35.9 -1.0**
AAK pmax pmax
comp=Z,3.0nm,0.4s,mb4.5
YAK Yakutsk 69.77 1⇑*e*P **P 07 11 39.7 -0.3**
YAK pmax pmax
comp=Z,16nm,0.5s,mb5.1
KURK Kurchatov 71.66 330 *e*P **P 07 11 50.9 -0.8**
comp=Z,6.6nm,0.6s,mb4.6
KURK Kurchatov 71.66 330 *e*P **P 07 11 50.9 -0.7**
KURK pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
VNDA Vanda 71.95 172 P **P 07 11 54.3 +1.2**
comp=Z,2.0nm,0.8s,mb4.0,baz=309,slow=8.0,SNR=12
NVS Novosibirsk 72.31 335 *e*P **P 07 11 53.7 -1.7**
MAW Mawson 72.94 201 P **P 07 12 00.7 +1.7**
comp=Z,7.3nm,0.7s,mb4.7,baz=80,slow=6.6,SNR=18
SEY Seymchan 73.32 12⇓*e*P **P 07 12 01.2 -0.1**
TIXI Tiksi 79.41 1 *e*P **P 07 12 34.5 -1.0**
comp=Z,4.5nm,0.4s,mb4.7
TIXI Tiksi 79.41 1 *i*P **P 07 12 34.6 -0.9**
TIXI pmax pmax
comp=Z,4.0nm,0.5s,mb4.5
BILL Bilibino 80.75 14 *e*P **P 07 12 43.7 +0.9**
BILL pmax pmax
comp=Z,9.0nm,1.1s,mb4.5
SYO Syowa Base 81.65 201⇓*e*P **P 07 12 47.0 -0.6**
QSPA South Pole Qui 82.07 180 P **P 07 12 51.3 +1.6**
comp=Z,8.4nm,0.7s,mb4.7,baz=309,slow=1.7,SNR=58
ARU Arti 84.79 329 *e*P **P 07 13 03.1 -0.8**
ARU 07 16 20.7
OBN Obninsk 96.53 325 *e*P **P 07 13 55.0 -4.0**
OBN pmax pmax
comp=Z,1.0nm,0.8s,mb4.3
YKA Yellowknife Ar 109.97 26 PKPdf PKiKP 07 19 00.1 0.0
YKA Yellowknife Ar 109.97 26 PKiKP PKiKP 07 19 00.1 0.0
comp=Z,0.2nm,0.5s,baz=303,slow=1.8,SNR=7.3
KONO Kongsberg 110.33 331⇑*i*PKIKP PKiKP 07 19 00.2 -0.7
PDAR Pinedale Array 119.81 45 PKP PKPdf 07 19 19.4 -0.2
comp=Z,0.4nm,0.7s,baz=220,slow=1.2,SNR=4.3
ULM Lac du Bonnet 124.94 32 PKP PKPdf 07 19 28.3 -0.9
ULM Lac du Bonnet 124.94 32 PKP PKPdf 07 19 28.3 -0.9
comp=Z,0.8nm,0.5s,baz=319,slow=3.2,SNR=6.4
TORD Torodi Ar. Bea 125.82 280 PKP PKPdf 07 19 30.6 -1.3
comp=Z,0.9nm,0.7s,baz=19,slow=2.6,SNR=5.0
TXAR Lajitas Array 128.16 59 PKP PKPdf 07 19 36.2 +0.2
TXAR Lajitas Array 128.16 59 PKP PKPdf 07 19 36.2 +0.2
comp=Z,0.2nm,0.4s,baz=192,slow=3.1,SNR=11
LPAZ La Paz 151.80 149 PKPbc PKPbc 07 20 26.4 +1.6
LPAZ PKPab PKPab 07 20 36.5 +2.5
LPAZ La Paz 151.80 149 PKPbc PKPbc 07 20 26.4 +1.6
comp=Z,1.2nm,0.3s,baz=286,slow=3.9,SNR=4.6
LPAZ PKPab PKPab 07 20 36.5 +2.5
comp=Z,2.7nm,0.6s,baz=171,slow=4.4,SNR=6.6

MOS ***18*** *07:09:05.2±1.5,5736N×12074E,h15km,mb4.3/1,Error ellipse: s-maj=25.9km s-min=18.7km az=46.1*
BYKL 18 07:09:04.8±0.4,5735N×12080E,h8km±26km,1C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.45**	**253**	*e*P	Pn	Pn	07 09 31.2	-0.1
CRS				*e*			07 09 49.7	
CRS				pmax	pmax			
	comp=Z,160nm,0.5s							
CRS				smax				
	comp=E,474nm,0.5s							
CRS	**Chara**	**1.45**	**253**	⇓*i*Pg	Pg		07 09 31.1	-1.5
CRS				*e*Pb	Pb		07 09 32.6	+0.6
CRS				*e*Sg	Sg		07 09 49.7	-1.7
CRS				max				
	comp=E,164nm,1.0s							
CRS				Smax				
	comp=E,484nm,0.6s							
NRGR	**Nerungri**	**2.26**	**106**	*e*P	Pn		07 09 44.4	+2.1
NRGR				S	Sn		07 10 05.3	-5.0
NRGR				smax				
	comp=E,73nm,0.2s							
CLNS	**Chul'man**	**2.29**	**101**	*e*P	Pn		07 09 44.9	+2.1
CLNS				*e*S	Sn		07 10 12.9	+1.7
CLNS				pmax	pmax			
	comp=Z,13nm,0.2s							
CLNS				pmax	pmax			
	comp=N,8.0nm,0.3s							
CLNS				pmax	pmax			
	comp=E,7.0nm,0.3s							
CLNS				pmax	pmax			
	comp=Z,52nm,0.3s							
CLNS				pmax	pmax			
	comp=N,37nm,0.4s							
CLNS				pmax	pmax			
	comp=E,43nm,0.3s							
CLNS				smax				
	comp=E,43nm,0.3s							
CLNS				smax				
	comp=Z,7.0nm,0.2s							
CLNS				smax				
	comp=N,41nm,0.4s							
CLNS				smax				
	comp=E,367nm,0.4s							
CLNS				smax				
	comp=Z,237nm,0.6s							
CLNS				smax				
	comp=N,496nm,0.4s							
CLNS				MLR	MLR			
	comp=Z,50nm,13.0s							
CLNS	**Chul'man**	**2.29**	**101**	*e*Pn	Pn		07 09 44.6	+1.8
CLNS				⇑*i*Pg	Pg		07 09 46.4	-2.3
CLNS				*e*Sg	Sg		07 10 16.7	-1.7
IENR	**Iengra**	**2.50**	**115**	*e*Pn	Pn		07 09 47.0	+1.3
IENR				*e*Pg	Pg		07 09 50.5	-2.2
IENR				*e*Sg	Sg		07 10 23.1	-2.0
ALDR	**Aldan**	**2.76**	**61**	*e*Pn	Pn		07 09 51.4	+2.1
ALDR				*e*Pg	Pg		07 09 55.4	-2.2
ALDR				*e*Sg	Sg		07 10 28.4	-5.0
TUP	**Tupik**	**2.97**	**190**	*e*P	Pn		07 09 52.2	+0.1
TUP				*e*S	Sn		07 10 28.1	+0.2
TUP				pmax	pmax			
	comp=Z,97nm,0.5s							
TUP				smax				
	comp=E,244nm,0.7s							
TUP	**Tupik**	**2.97**	**190**	*e*Pn	Pn		07 09 52.9	+0.8
TUP				*e*Pg	Pg		07 09 57.9	-3.8
TUP				*e*Sg	Sg		07 10 36.8	-3.3
TUP				Pmax				
	comp=E,142nm,0.8s							
TUP				Smax				
	comp=E,275nm,0.9s							
BOD	**Bodaibo**	**3.69**	**280**	*e*Pn	Pn		07 10 02.3	+0.3
BOD				*e*Pg	Pg		07 10 12.0	-3.4
BOD				*e*Sg	Sg		07 10 58.0	-5.1
BOD				Pmax				
	comp=E,22nm,0.4s							
BOD				Smax				
	comp=E,152nm,1.0s							
SVKR	**Severomuysk**	**4.18**	**256**	*e*Sg	Sg		07 11 13.7	-5.0
SVKR				Smax				
	comp=E,229nm,1.1s							
UKT	**Uakit**	**4.40**	**248**	*e*P	Pn		07 10 11.5	-0.3
UKT				*e*S	Sn		07 11 01.7	-1.4
UKT				pmax	pmax			
	comp=Z,15nm,0.5s							
UKT				smax				
	comp=N,69nm,0.7s							
UKT	**Uakit**	**4.40**	**248**	*e*Pn	Pn		07 10 13.5	+1.7
UKT				*e*Pg	Pg		07 10 24.3	-4.7
UKT				*e*Sg	Sg		07 11 20.8	-5.1
UKT				Pmax				
	comp=N,13nm,0.8s							
UKT				Smax				
	comp=N,76nm,1.7s							
KROS	**Kirovskiy**	**4.54**	**127**	*e*Pn	Pn		07 10 11.2	-2.5
KROS				*i*Pg	Pg		07 10 23.0	-8.7
KROS				*e*Sn	Sn		07 11 04.1	-2.5
KROS				*i*Sg	Sg		07 11 23.0	-7.4
YOA	**Uoyan**	**5.14**	**260**	*e*Sg	Sg		07 11 44.5	-5.3
YOA				Smax				
	comp=N,453nm,2.2s							
ZEA	**Zeya**	**5.15**	**132**	*e*Pn	Pn		07 10 20.6	-1.5
ZEA				*e*Pg	Pg		07 10 36.1	-7.2
ZEA				*e*Sn	Sn		07 11 19.1	-2.5
ZEA				*e*Sg	Sg		07 11 42.9	-7.1
CGD	**Chagda**	**5.40**	**71**	*e*Pn	Pn		07 10 26.0	+0.5
CGD				*e*Pg	Pg		07 10 43.2	-4.9
CGD				*e*Sg	Sg		07 11 51.0	-7.0
KMO	**Kumora**	**5.50**	**259**	*e*	Pn		07 10 30.7	+3.8
KMO				*e*Pg	Pg		07 10 44.2	-5.8
KMO				*e*Sg	Sg		07 11 53.6	-7.6
KMO				Pmax				
	comp=N,6.0nm,0.5s							
KMO				Smax				
	comp=N,100nm,1.3s							
YLYR	**Ulyunkhan**	**5.93**	**249**	*e*P	Pn		07 10 51.1	+18
YLYR				pmax	pmax			
	comp=Z,7.0nm,0.6s							
YLYR	**Ulyunkhan**	**5.93**	**249**	*e*Pn	Pn		07 10 35.0	+2.2
YLYR				*e*Pg	Pg		07 10 51.4	-7.0
YLYR				*e*Sg	Sg		07 12 07.7	-7.4
YLYR				Pmax				
	comp=Z,3.0nm,0.9s							
YLYR				Smax				
	comp=Z,78nm,1.9s							
NIZ	**Nizh Angarsk**	**6.42**	**261**	*e*P	Pn		07 11 01.1	+22
NIZ				pmax	pmax			
	comp=Z,5.0nm,1.2s							
NIZ	**Nizh Angarsk**	**6.42**	**261**	*e*Pn	Pn		07 10 40.6	+1.1
NIZ				*e*Pg	Pg		07 11 01.2	-6.5
NIZ				*e*Sg	Sg		07 12 22.1	-8.6
NIZ				Pmax				
	comp=Z,8.0nm,1.2s							
NIZ				Smax				
	comp=Z,46nm,1.8s							
YAK	**Yakutsk**	**6.50**	**40**	*e*P	Pn		07 10 39.7	-0.8
YAK				*e*			07 11 48.1	
YAK				pmax	pmax			
	comp=Z,10.0nm,0.5s							
YAK				pmax	pmax			
	comp=N,1.0nm,0.3s							
YAK				pmax	pmax			
	comp=E,2.0nm,0.4s							
YAK				pmax	pmax			
	comp=Z,8.0nm,0.3s							
YAK				pmax	pmax			
	comp=N,2.0nm,0.2s							
YAK				pmax	pmax			
	comp=E,3.0nm,0.4s							
YAK				smax				
	comp=N,17nm,0.5s							
YAK				smax				
	comp=Z,18nm,0.5s							
YAK				smax				
	comp=E,15nm,0.7s							
YAK				smax				
	comp=N,139nm,0.8s							
YAK				smax				
	comp=Z,82nm,0.9s							
YAK				smax				
	comp=E,126nm,0.7s							
YAK				MLR	MLR			
	comp=Z,43nm,5.0s							
CIT	**Chita**	**6.79**	**221**	*e*Pg	Pg		07 11 07.1	-7.7
CIT				*e*Sg	Sg		07 12 33.1	-10
CIT				Pmax				
	comp=Z,21nm,1.6s							
CIT				Smax				
	comp=Z,82nm,1.5s							
SYVR	**Suvo**	**7.16**	**243**	*e*Pg	Pg		07 11 14.9	-6.9
SYVR				*e*Sg	Sg		07 12 47.1	-7.4
SYVR				Pmax				
	comp=Z,3.0nm,0.8s							
SYVR				Smax				
	comp=Z,111nm,1.6s							
HIA	**Hailar**	**8.12**	**185**	*e*Sg	Sn		07 13 18.0	+43
OGRR	**Ongureny**	**8.36**	**249**	*e*Pg	Pn		07 11 37.2	+31
OGRR				*e*Sg	Sn		07 13 23.8	+43
OGRR				Smax				
	comp=Z,23nm,1.8s							
KPC	**Khapcheranga**	**9.15**	**217**	*e*Pn	Pn		07 11 16.7	-0.2
KPC				*e*Sg	Sn		07 13 47.1	+47
KPC				Smax				
	comp=Z,40nm,1.4s							
TRG	**Tyrgan**	**9.48**	**247**	*e*Sg	Sn		07 13 57.1	+49
TRG				Smax				
	comp=Z,17nm,1.7s							
ARS	**Arshan**	**11.94**	**251**	*e*Sg	Sn		07 15 14.2	+66
ARS				Smax				
	comp=Z,23nm,1.2s							
ULN	**Ulaanbaatar**	**12.62**	**227**	*e*Sg			07 15 36.8	
MOY	**Mondy**	**12.81**	**252**	*e*Sg			07 15 40.6	
MOY				Smax				
	comp=Z,22nm,1.8s							
ORL	**Orlik**	**12.97**	**257**	*e*Sg			07 15 44.7	
ORL				Smax				
	comp=Z,18nm,1.7s							

WEL 18 07:12:51.4±0.3,4125S×17259E,h193km±2km,ML3.5/9, Error ellipse: s-maj=2.7km s-min=2.2km az=90.0,South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.43**	**354**	PN	Pn	Pn	07 13 17.4	-0.1
QRZ				SN	Sn		07 13 36.8	-0.7
THZ	**Tophouse**	**0.56**	**155**	PN	Pn	Pn	07 13 18.3	+0.3
THZ				SN	Sn		07 13 38.1	-0.6
NNZ	**Nelson**	**0.60**	**87**	PN	Pn	Pn	07 13 18.0	-0.1
NNZ				SN	Sn		07 13 38.1	-0.6
DSZ	**Denniston Nort**	**0.77**	**230**	PN	Pn	Pn	07 13 18.8	-0.2
DSZ				SN	Sn		07 13 38.8	-1.5
TUWZ	**Tuamarina**	**1.04**	**100**	PN	Pn	Pn	07 13 20.8	+0.1
BSWZ	**Blackbirch Sta**	**1.07**	**116**	PN	Pn	Pn	07 13 21.0	0.0
DUWZ	**D'Urville Isla**	**1.11**	**67**	PN	Pn	Pn	07 13 21.1	-0.2
KHZ	**Kahutara**	**1.37**	**149**	PN	Pn	Pn	07 13 23.2	0.0
LTZ	**Lake Taylor**	**1.55**	**189**	PN	Pn	Pn	07 13 24.9	0.0
MRW	**Makara Radio**	**1.59**	**90**	PN	Pn	Pn	07 13 24.8	-0.6
KIW	**Kapiti Island**	**1.80**	**78**	PN	Pn	Pn	07 13 26.0	-0.5
CAW	**Cannon Point**	**1.88**	**86**	PN	Pn	Pn	07 13 27.5	-0.6
MSWZ	**Moikau Station**	**2.01**	**96**	PN	Pn	Pn	07 13 28.9	-0.6
PAWZ	**Paruwai Farm**	**2.14**	**94**	PN	Pn	Pn	07 13 30.3	-0.6
MTW	**Mount Morrison**	**2.20**	**89**	PN	Pn	Pn	07 13 30.9	-0.7
WVZ	**Waitaha Valley**	**2.28**	**216**	PN	Pn	Pn	07 13 31.3	-1.1
FOZ	**Fox Glacier**	**3.15**	**222**	PN	Pn	Pn	07 13 39.6	-2.8

IDC ***18*** *07:15:07.7±1.4,0.16S×12695E,h0km,mb4.0/5,mb1 4.2/5, mb1mx3.9/15,mbtmp4.0/5,Error ellipse: s-maj=186.0km s-min=19.1km az=68.0*
NEIC ***18*** *07:15:09.2±0.9,005S×12726E,h10km,mb4.2/1,Error ellipse: s-maj=138.0km s-min=11.4km az=68.0*
ISCJB ***18*** *07:15:10.4±0.9,00S±0.1×1273E±0.2,h33km,mb4.1/5, Error ellipse: s-maj=31.8km s-min=14.0km az=147.9*
ISC 18 07:15:12.9±0.9,01S±01×1272E±02,h35km,n8,σ0§14/7, mb4.1/5,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSM	**Kuching**	**16.96**	**275**	*e*Pn	**Pn**		**07 19 07.7**	**0.0**
WRA	**Warramunga Arr**	**20.93**	**161**	P	**P**		**07 19 52.7**	**0.0**
	4.6nm,0.8s,baz=342,slow=12,SNR=10							
ASAR	**Alice Springs**	**24.32**	**165**	P	**P**		**07 20 27.6**	**+0.2**
	8.5nm,0.9s,mb4.2,baz=344,slow=12,SNR=22							
STKA	**Stephens Creek**	**34.42**	**158**	P	**P**		**07 21 56.8**	**-0.3**
	3.4nm,0.5s,mb4.5,baz=320,slow=5.3,SNR=5.3							
SONM	**Songino Array**	**51.05**	**342**	P	**P**		**07 24 11.7**	**+0.1**
	0.6nm,0.7s,mb3.6,baz=157,slow=7.0,SNR=5.7							
MKAR	**Makanchi Array**	**60.96**	**326**	P	**P**		**07 25 22.5**	**0.0**
	0.5nm,0.3s,mb4.1,baz=115,slow=8.1,SNR=12							
KURK	**Kurchatov**	**65.21**	**328**	*e*P	**P**		**07 25 50.6**	**0.0**
	1.2nm,0.6s,mb4.1							
TORD	**Torodi Ar. Bea**	**124.48**	**286**	PKP	PKPdf		07 34 08.7	-0.8
	1.3nm,0.8s,baz=77,slow=1.6,SNR=6.8							

IDC ***18*** *07:15:51.0±4.1,9645S×12497E,h46km±51km,mb3.2/1, mb1 3.8/4,mb1mx3.5/14,mbtmp3.6/4,ML3.8/3,MS3.9/1, Ms1 3.9/1,ms1mx3.0/15,Error ellipse: s-maj=43.0km s-min=13.3km az=23.0*
ISCJB ***18*** *07:15:53.3±1.2,99S±0.1×1248E±0.1,h90km±16km, mb3.2/1,Error ellipse: s-maj=21.0km s-min=13.1km az=139.6*
ISC 18 07:15:54.5±1.2,98S±01×1248E±01,h84km±16km,n9, σ1§20/14,mb3.2/1,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.14**	**251**	P	**Pn**		**07 16 13.1**	**-2.2**
	127nm,0.3s,baz=109,slow=1.8,SNR=108							
BATI				S	**Sn**		**07 16 31.8**	**+0.8**
	100nm,0.3s,baz=96,slow=20,SNR=14							
KAKA	**Kakadu**	**8.06**	**111**	*e*P	**Pn**		**07 17 50.0**	**+1.2**
	5.3nm,0.6s							
KAKA				*e*S	Sx		07 19 24.0	
FITZ	**Fitzroy Crossi**	**8.25**	**174**	*e*P	**Pn**		**07 17 52.2**	**+0.7**
	5.1nm,0.3s							
FITZ				*e*S	**Sn**		**07 19 22.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**8.25**	**174**	P	**Pn**		**07 17 51.7**	**+0.3**
	1.1nm,0.3s,baz=4.9,slow=12,SNR=27							
FITZ				S	**Sn**		**07 19 24.7**	**+1.6**
	2.4nm,0.3s,baz=274,slow=19,SNR=17							
WRA	**Warramunga Arr**	**13.65**	**138**	P	**Pn**		**07 19 03.2**	**-1.4**
	0.5nm,0.3s,baz=316,slow=15,SNR=15							
WRA				S	**Sn**		**07 21 27.8**	**-6.9**
	0.3nm,0.3s,baz=312,slow=22,SNR=4.7							
WB2	**Warramunga Arr**	**13.66**	**138**	*e*P	**Pn**		**07 19 03.4**	**-1.2**
WB2				*e*S	**Sn**		**07 21 28.8**	**-6.1**
ASAR	**Alice Springs**	**16.29**	**149**	P	**Pn**		**07 19 39.3**	**+1.1**
	0.2nm,0.3s,baz=319,slow=12,SNR=15							
ASAR				S	**S**		**07 22 40.5**	**-5.6**
	0.3nm,0.3s,baz=308,slow=21,SNR=5.1							
MJAR	**Matsushiro Arr**	**47.84**	**15**	LR	LR		07 43 04.9	
	comp=Z,106nm,18.0s,baz=325,slow=34							
MKAR	**Makanchi Array**	**67.91**	**330**	P	**P**		**07 26 44.4**	**+0.3**
	0.2nm,0.5s,mb3.2,baz=148,slow=8.5,SNR=2.5							

IDC ***18*** *07:22:41.0±0.7,003N×12734E,h0km,mb4.1/8,mb1 4.2/9, mb1mx4.1/17,mbtmp4.1/9,ML3.7/1,Error ellipse: s-maj=52.5km s-min=12.1km az=75.0*
NEIC ***18*** *07:22:42.5±0.5,000S×12728E,h10km,mb4.7/6,Error ellipse: s-maj=24.6km s-min=7.4km az=78.0*
ISCJB ***18*** *07:22:43.8±0.5,002S±007×1273E±02,h33km,mb4.3/11, Error ellipse: s-maj=30.1km s-min=8.8km az=169.3*
ISC 18 07:22:46.1±0.5,002S±007×1273E±02,h35km,n19, σ0§68/19,mb4.3/11,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.04**	**185**	*e*P	**Pn**		**07 26 54.1**	**-0.1**
	5.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**18.04**	**185**	P	**Pn**		**07 26 54.2**	**0.0**
	0.2nm,0.3s,baz=28,slow=12,SNR=4.1							
WRA	**Warramunga Arr**	**20.96**	**161**	P	**P**		**07 27 26.0**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	4.3nm,0.6s,baz=340,slow=11,SNR=15						
WB2	**Warramunga Arr**	**20.96**	**161**	eP	**P**	**07 27 26.3**	**0.0**
ASAR	**Alice Springs**	**24.36**	**165**	P	**P**	**07 28 01.6**	**+0.7**
	7.5nm,0.8s,mb4.2,baz=344,slow=12,SNR=30						
ASAR				S	**S**	**07 32 22.8**	**+4.6**
	1.2nm,1.0s,baz=345,slow=23,SNR=8.7						
FORT	**Forrest**	**30.59**	**179**	eP	**P**	**07 28 56.6**	**-0.2**
	10nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**32.68**	**195**	eP	**P**	**07 29 13.6**	**-1.5**
	66nm,1.6s,mb5.3						
MUN	**Mundaring**	**33.48**	**197**	eP	**P**	**07 29 21.8**	**-0.3**
STKA	**Stephens Creek**	**34.44**	**158**	eP	**P**	**07 29 31.7**	**+1.2**
	4.1nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**34.44**	**158**	P	**P**	**07 29 31.8**	**+1.3**
	4.3nm,0.8s,mb4.5,baz=325,slow=8.8,SNR=8.3						
KSRS	**Korea Array**	**37.29**	**1**	P	**P**	**07 29 54.7**	**-0.2**
	1.2nm,0.7s,mb3.9,baz=184,slow=10,SNR=4.6						
MJAR	**Matsushiro Arr**	**37.76**	**14**	P	**P**	**07 29 57.5**	**-1.3**
	2.1nm,0.8s,mb3.9,baz=182,slow=9.5,SNR=5.4						
SONM	**Songino Array**	**51.02**	**342**	P	**P**	**07 31 44.9**	**+0.3**
	0.8nm,0.6s,mb3.8,baz=157,slow=8.2,SNR=8.4						
MKAR	**Makanchi Array**	**60.97**	**326**	P	**P**	**07 32 56.3**	**+0.5**
	2.1nm,0.7s,mb4.4,baz=123,slow=8.1,SNR=11						
AML	**Almayashu**	**63.84**	**318**	eP	**P**	**07 33 16.1**	**+1.0**
	2.9nm,0.9s,mb4.3						
KURK	**Kurchatov**	**65.21**	**328**	eP	**P**	**07 33 23.6**	**-0.2**
	6.5nm,0.8s,mb4.7						
AKTK	**Aktyubinsk**	**76.95**	**322**	P	**P**	**07 34 35.2**	**+0.1**
AKTO	**Aktyubinsk**	**76.95**	**322**	P	**P**	**07 34 35.2**	**+0.1**
	0.7nm,0.4s,mb4.0,baz=84,slow=10,SNR=3.0						
TORD	**Torodi Ar. Bea**	**124.57**	**286**	PKP	PKPdf	07 41 42.0	-0.9
	1.4nm,0.8s,baz=79,slow=1.4,SNR=7.2						

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*IDC **18** 07:32:35.5±1.0, 9.42S×124.88E, h0km, mb3.8/3, mb1 4.2/6, mb1mx4.0/14, mbtmp4.1/6, ML4.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.8/16, Error ellipse: s-maj=24.2km s-min=20.4km az=91.0*

*NEIC **18** 07:32:36.8±0.8, 9.44S×125.05E, h10km, mb4.6/2, Error ellipse: s-maj=28.7km s-min=12.2km az=67.0*

*ISCJB **18** 07:32:42.8±1.1, 9.95S±0.08×124.98E±0.05, h33km, mb4.0/4, Error ellipse: s-maj=11.9km s-min=6.2km az=14.4*

ISC 18 07:32:40.3±1.8, **9.6S**±0.1×**125.04E**±0.07, **h43**km±21km, **n15**, σ0.97/20, **mb4.1**/5, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.48**	**247**	Pn	**Pn**	**07 33 03.5**	**-1.0**
	379nm,0.3s,baz=114,slow=2.3,SNR=261						
BATI				Sn	**Sn**	**07 33 22.4**	**-0.1**
	475nm,0.3s,baz=248,slow=23,SNR=54						
KAKA	**Kakadu**	**7.88**	**114**	eP	**Pn**	**07 34 39.1**	**+6.7**
	13nm,0.4s						
KAKA				eS	**Sn**	**07 36 06.3**	**+5.9**
FITZ	**Fitzroy Crossi**	**8.45**	**176**	eP	**Pn**	**07 34 41.3**	**+1.1**
	32nm,0.5s						
FITZ				eS	**Sn**	**07 36 13.2**	**-1.1**
FITZ	**Fitzroy Crossi**	**8.45**	**176**	Pn	**Pn**	**07 34 41.5**	**+1.3**
	5.8nm,0.3s,baz=6.7,slow=11,SNR=81						
FITZ				Sn	**Sn**	**07 36 13.6**	**-0.6**
	4.6nm,0.3s,baz=191,slow=6.9,SNR=14						
FITZ				LR	LR	07 38 31.8	
	comp=Z,102nm,19.2s,baz=105,slow=41						
WRA	**Warramunga Arr**	**13.63**	**140**	Pn	**Pn**	**07 35 52.0**	**+0.9**
	1.8nm,0.3s,baz=312,slow=14,SNR=44						
WRA				Sn	**Sn**	**07 38 20.8**	**-0.5**
	2.0nm,0.3s,baz=310,slow=23,SNR=8.1						
WB2	**Warramunga Arr**	**13.64**	**140**	eP	**Pn**	**07 35 51.7**	**+0.5**
WB2				eS	**Sn**	**07 38 20.2**	**-1.3**
ASAR	**Alice Springs**	**16.33**	**150**	Pn	**Pn**	**07 36 27.8**	**+1.1**
	1.0nm,0.3s,baz=322,slow=11,SNR=72						
ASAR				Sn	**Sn**	**07 39 26.4**	**-0.5**
	0.7nm,0.3s,baz=313,slow=19,SNR=8.5						
FORT	**Forrest**	**21.24**	**173**	eP	**P**	**07 37 27.0**	**+4.3**
	10.0nm,0.6s,mb4.3						
KLBR	**Kellerberrin**	**22.88**	**196**	eP	**P**	**07 37 42.0**	**+1.8**
	40nm,1.4s,mb4.7						
STKA	**Stephens Creek**	**26.94**	**148**	eP	**P**	**07 38 30.7**	**+13**
	3.6nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**26.94**	**148**	P	**P**	**07 38 21.6**	**+3.9**
	0.6nm,0.5s,mb3.4,baz=299,slow=18,SNR=3.5						
SONM	**Songino Array**	**59.55**	**346**	P	**P**	**07 42 38.7**	**-0.5**
	0.4nm,0.5s,mb3.7,baz=166,slow=9.4,SNR=4.9						
MKAR	**Makanchi Array**	**67.86**	**330**	P	**P**	**07 43 33.2**	**-0.8**
	0.6nm,0.5s,mb3.9,baz=128,slow=6.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**124.44**	**279**	PKP	PKPdf	07 51 37.5	+1.7
	0.7nm,0.7s,baz=92,slow=1.0,SNR=4.9						
TXAR	**Lajitas Array**	**130.48**	**60**	PKP	PKPdf	07 51 50.8	+3.8
	0.4nm,1.1s,baz=252,slow=4.0,SNR=3.1						

WEL 18 07:48:55.0±0.7, **37.45S×179.85W**, **h33**km, **ML3.6**/6, **Error ellipse: s-maj=6.4km s-min=5.7km az=90.0, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.47**	**265**	PN	Pn	07 49 18.4	-0.7
MXZ				SN	Sn	07 49 35.5	-1.7
PUZ	**Puketiti**	**1.62**	**247**	PN	Pn	07 49 20.6	-0.7
PUZ				SN	Sn	07 49 40.5	-0.5
MWZ	**Matawai**	**2.25**	**246**	PN	Pn	07 49 29.3	-0.7
MWZ				SN	Sn	07 49 55.2	-1.4
KNZ	**Kokohu**	**2.50**	**230**	PN	Pn	07 49 32.3	-1.1
URZ	**Urewera**	**2.54**	**250**	PN	Pn	07 49 33.8	-0.1
BKZ	**Black Stump Fm**	**3.35**	**238**	PN	Pn	07 49 44.4	-0.6

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*BJI **18** 07:52:53.5, 28.89S×71.19W, h30km, mB5.1, Ms5.1, Msz5.0*

*GUC **18** 07:52:54.4±0.7, 28.83S×71.47W, h30km±3km, ML4.9*

*MOS **18** 07:52:54.3±1.1, 28.87S×71.45W, h33km, mb5.1/10, Error ellipse: s-maj=23.9km s-min=7.4km az=102.4*

*NEIC **18** 07:52:54.4, 28.83S×71.47W, h30km, mb5.0/32, ML4.9(GUC), After GUC.*

*ISCJB **18** 07:52:55.4±0.5, 28.85S±0.02×71.31W±0.08, h47km±5km, mb4.8/47, MS4.5/10, Error ellipse: s-maj=11.0km s-min=3.5km az=0.0*

*IDC **18** 07:52:59.9±2.2, 28.84S×71.39W, h71km±19km, mb4.3/14, mb1 4.4/17, mb1mx4.3/21, mbtmp4.3/17, MS4.2/9, Ms1 4.2/9, ms1mx3.9/22, Error ellipse: s-maj=24.0km s-min=11.0km az=64.0*

ISC 18 07:52:56.1±1.4, **28.82S**±0.02×**71.32W**±0.06, **h35**km±10km, **h28**km±1.2km**:pP-P**, **n200**, σ0.93/168, **mb4.8**/47, **MS4.5**/10, **13C-11D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.55**	**64**	⇓iP	**Pn**	**07 53 07.4**	**-0.1**
VACH				i S	**Sn**	**07 53 16.9**	**+1.4**
VACH	**Vallenar**	**0.55**	**64**	⇓iP	**Pn**	**07 53 07.4**	**-0.1**
VACH				i S	**Sn**	**07 53 16.9**	**+1.4**
VACH				AML	AML	07 53 17.7	
	comp=E,296μm,0.4s						
LCO	**Las Campanas**	**0.58**	**110**	eP	**Pn**	**07 53 08.1**	**+0.1**
LSCH	**La Serena**	**1.09**	**176**	⇑iP	**Pn**	**07 53 13.7**	**-1.2**
LSCH				i S	**Sn**	**07 53 28.3**	**-0.5**
LSCH	**La Serena**	**1.09**	**176**	⇑iP	**Pn**	**07 53 13.7**	**-1.2**
LSCH				i S	**Sn**	**07 53 28.3**	**-0.5**
LSCH				AML	AML	07 53 32.3	
	comp=N,6μm,0.5s						
TLL	**Tololo Astrono**	**1.42**	**162**	⇓iP	**Pn**	**07 53 19.9**	**+0.4**
TLL				i S	**Sn**	**07 53 39.6**	**+2.7**
TLL	**Tololo Astrono**	**1.42**	**162**	⇓iP	**Pn**	**07 53 19.9**	**+0.4**
TLL				i S	**Sn**	**07 53 39.6**	**+2.7**
TLL				AML	AML	07 53 43.9	
	comp=E,30μm,0.5s						
CPCH	**Copiapo**	**1.69**	**31**	⇓iP	**Pn**	**07 53 24.5**	**+1.3**
CPCH				S	**Sn**	**07 53 48.5**	**+5.0**
CPCH	**Copiapo**	**1.69**	**31**	⇓iP	**Pn**	**07 53 24.5**	**+1.3**
CPCH				i S	**Sn**	**07 53 48.5**	**+5.0**
CPCH				AML	AML	07 53 51.5	
	comp=E,49μm,0.2s						
OVCH	**Ovalle**	**1.79**	**177**	⇑iP	**Pn**	**07 53 24.6**	**0.0**
OVCH				AML	AML	07 54 05.0	
	comp=N,12μm,0.4s						
CDCH	**Caldera**	**1.79**	**14**	⇑iP	**Pn**	**07 53 22.8**	**-1.8**
CDCH				eS	**Sn**	**07 53 45.8**	**-0.3**
CDCH	**Caldera**	**1.79**	**14**	⇑iP	**Pn**	**07 53 22.8**	**-1.8**
CDCH				eS	**Sn**	**07 53 45.8**	**-0.3**
CDCH				AML	AML	07 53 58.2	
	comp=N,9μm,0.4s						
CMCH	**Combarbala**	**2.37**	**173**	⇓iP	**Pn**	**07 53 31.6**	**-0.9**
CMCH				i S	**Sn**	**07 54 01.1**	**+0.8**
CMCH	**Combarbala**	**2.37**	**173**	⇓iP	**Pn**	**07 53 31.6**	**-0.9**
CMCH				i S	**Sn**	**07 54 01.1**	**+0.8**
CMCH				AML	AML	07 54 16.6	
	comp=E,50μm,0.9s						
CHNG	**Los Chungos**	**3.06**	**183**	⇓iP	**Pn**	**07 53 24.7**	**-17**
CHNG				eS	**Sn**	**07 54 00.2**	**-17**
CHNG				AML	AML	07 54 18.8	
	comp=E,3μm,0.7s						
CFAA	**Coronel Fontan**	**3.85**	**137**	P	**Pn**	**07 53 56.0**	**+3.0**
CFAA				S	**Sn**	**07 54 43.4**	**+6.4**
CFAA	**Coronel Fontan**	**3.85**	**137**	P	**Pn**	**07 53 56.0**	**+3.0**
	comp=E,4.5nm,0.3s,baz=318,slow=12,SNR=403						
CFAA				S	**Sn**	**07 54 43.4**	**+6.4**
	comp=E,14nm,0.3s,baz=60,slow=17,SNR=5.6						
PEL	**Peldehue**	**4.35**	**173**	⇑iP	**Pn**	**07 53 59.5**	**-0.2**
PEL				eS	**Sn**	**07 54 49.9**	**+0.7**
FCH	**Farellones**	**4.58**	**169**	⇑iP	**Pn**	**07 54 04.0**	**+1.0**
FSR	**Penalolen**	**4.70**	**172**	eP	**Pn**	**07 54 05.0**	**+0.4**
FSR				i S	**Sn**	**07 54 58.4**	**+0.6**
ANTU	**Antumapu**	**4.78**	**173**	⇓iP	**Pn**	**07 54 05.0**	**-0.6**
ANTU				i S	**Sn**	**07 54 59.3**	**-0.4**
TACH	**Talagante**	**4.83**	**176**	⇑iP	**Pn**	**07 54 05.5**	**-0.9**
LMEL	**Las Melosas**	**5.11**	**169**	eP	**Pn**	**07 54 11.0**	**+0.9**
LMEL				i S	**Sn**	**07 55 08.7**	**+0.8**
CICH	**Cipreses**	**5.54**	**172**	i P	**Pn**	**07 54 16.1**	**0.0**
PLCA	**Paso Flores**	**11.90**	**177**	P	**Pn**	**07 55 41.4**	**-1.9**
PLCA				LR	LR	08 00 30.8	
PLCA	**Paso Flores**	**11.90**	**177**	P	**Pn**	**07 55 41.4**	**-1.9**
	comp=E,0.1nm,0.3s,baz=136,slow=13,SNR=5.2						
PLCA				LR	LR	08 00 30.8	
	comp=E,1μm,19.9s,baz=349,slow=38						
TRQA	**Tornquist**	**12.07**	**142**	ePn	**Pn**	**07 55 45.1**	**-0.5**
ARE	**Arequipa**	**12.30**	**359**	eP	**Pn**	**07 55 51.0**	**+2.2**
LPAZ	**La Paz**	**12.81**	**14**	P	**Pn**	**07 55 59.0**	**+3.2**
	comp=E,1.8nm,0.3s,baz=195,slow=8.7,SNR=22						
SIV	**San Ignacio**	**15.88**	**39**	P	**Pn**	**07 56 31.5**	**-5.6**
	comp=E,0.6nm,0.3s,baz=231,slow=13,SNR=18						
NNA	**Nana**	**17.52**	**342**	ePn	**Pn**	**07 56 56.9**	**-0.8**
	comp=E,11nm,0.9s						
NNA	**Nana**	**17.52**	**342**	P	**Pn**	**07 56 57.6**	**-0.1**
	comp=E,0.5nm,0.3s,baz=192,slow=14,SNR=4.4						
NNA				LR	LR	08 02 12.1	
	comp=E,354nm,20.5s,baz=143,slow=32						
ATAH	**Atahualpa**	**22.70**	**342**	P	**P**	**07 57 54.0**	**-0.9**
	comp=E,7.7nm,0.8s,mb4.2,baz=197,slow=12,SNR=5.2						
EFI	**East Falkland**	**24.90**	**160**	eP	**P**	**07 58 15.2**	**-0.4**
	comp=E,43nm,1.1s,mb4.9						
EFI				epP		07 58 22.6	
EFI	**East Falkland**	**24.90**	**160**	eP	**P**	**07 58 15.2**	**-0.4**
EFI				e*PP		07 58 22.6	
EFI				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.9						
USHA	**Ushuaia**	**26.08**	**176**	P	**P**	**07 58 25.3**	**-1.0**
	comp=Z,21nm,0.9s,mb4.7,baz=337,slow=7.8,SNR=3.7						
USHA				LR	LR	08 09 41.9	
	comp=Z,857nm,18.4s,MS4.3,baz=154,slow=38						
OTAV	**Otavalo**	**29.68**	**345**	eP	**P**	**07 58 59.3**	**+0.4**
	comp=Z,8.1nm,1.2s,mb4.3						
PAYG	**Puerto Ayora**	**33.34**	**324**	eP	**P**	**07 59 32.3**	**+1.3**
	comp=Z,36nm,1.3s,mb5.1						
ROSC	**El Rosal**	**33.60**	**355**	P	**P**	**07 59 35.4**	**+2.2**
	comp=Z,6.2nm,0.5s,mb4.8,baz=115,slow=8.0,SNR=5.8						
PMSA	**Palmer Station**	**36.27**	**175**	eP	**P**	**07 59 55.9**	**+0.1**
	comp=Z,54nm,1.1s,mb5.4						
SDV	**Santo Domingo**	**37.49**	**1**	eP	**P**	**08 00 05.2**	**-1.4**
RCBR	**Riachuelo**	**40.55**	**62**	eP	**P**	**08 00 27.6**	**-4.8**
	comp=Z,5.9nm,0.8s,mb4.3						
JTS	**JuntasAbangare**	**41.05**	**339**	eP	**P**	**08 00 35.1**	**-1.3**
	comp=Z,9.6nm,0.9s,mb4.4						
JTS				epP	pP	08 00 43.2	-3.3
JTS	**JuntasAbangare**	**41.05**	**339**	eP	**P**	**08 00 35.1**	**-1.2**
JTS				e*PP	pP	08 00 43.2	-3.4
JTS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SJG	**San Juan**	**46.92**	**7**	eP	**P**	**08 01 20.1**	**-3.3**
	comp=Z,11nm,0.7s,mb4.9						
SJG				pP	pP	08 01 29.1	-4.7
SJG	**San Juan**	**46.92**	**7**	eP	**P**	**08 01 20.1**	**-3.3**
SJG				*PP	pP	08 01 29.1	-4.6
SJG				pmax	pmax		
	comp=Z,11nm,0.7s						
TEIG	**Tepich**	**51.43**	**339**	eP	**P**	**08 01 57.4**	**-0.5**
	comp=Z,21nm,0.6s,mb5.2						
TEIG				epP	pP	08 02 05.6	-2.7
VNA3	**Neumayer Olymp**	**53.95**	**159**	eP	**P**	**08 02 16.1**	**+0.2**
VNA3				e	pP	08 02 23.9	-2.5
VNA3				e	pP	08 02 27.2	+0.8
VNA3				e		08 02 32.6	
VNA3				e		08 02 36.6	
VNA1	**Neumayer--Stat**	**54.23**	**159**	eP	**P**	**08 02 16.6**	**-1.4**
VNA1				e	pP	08 02 25.2	-3.2
VNA1				e	pP	08 02 28.7	+0.3
VNA1				e		08 02 32.3	
VNA1				e		08 02 34.5	
VNA1				e		08 02 38.2	
VNA1				e		08 02 39.8	
VNA2	**Neumayer--Watz**	**54.58**	**159**	eP	**P**	**08 02 20.6**	**+0.1**
VNA2				e	pP	08 02 28.2	-2.8
VNA2				e	pP	08 02 31.8	+0.8
VNA2				e		08 02 35.6	
VNA2				e		08 02 37.1	
VNA2				e		08 02 40.4	
VNA2				e		08 02 42.9	
SNAA	**Sanae**	**56.17**	**159**	eP	**P**	**08 02 31.7**	**-0.3**
SNAA				e	pP	08 02 39.7	-2.8
SNAA				e	pP	08 02 44.5	+2.0
SNAA				e		08 02 50.5	
SNAA				e		08 02 54.2	
SNAA	**Sanae**	**56.17**	**159**	P	**P**	**08 02 31.4**	**-0.6**
	comp=Z,3.1nm,0.8s,mb4.4,baz=283,slow=7.4,SNR=13						
RKT	**Rikitea**	**56.92**	**260**	eS	**S**	**08 10 36.8**	**+7.0**
	comp=Z,150nm,30.8s						
QSPA	**South Pole Qui**	**61.41**	**180**	eP	**P**	**08 03 08.0**	**-0.2**
	comp=Z,22nm,1.0s,mb5.2						
LHS	**Liberty Hill**	**63.59**	**351**	epP	pP	08 03 32.4	-1.5
JCT	**Junction City**	**64.92**	**333**	eP	**P**	**08 03 32.3**	**+0.2**
	comp=Z,71nm,1.8s,mb5.4						
JCT	**Junction City**	**64.92**	**333**	eP	**P**	**08 03 32.3**	**+0.2**
JCT				pmax	pmax		
	comp=Z,71nm,1.8s,mb5.4						
CPCT	**Cooper Cave**	**65.12**	**348**	eP	**P**	**08 03 32.7**	**-0.6**
SWET	**Sewanee**	**65.16**	**347**	eP	**P**	**08 03 32.7**	**-0.9**
	comp=Z,3.2nm,0.6s,mb4.5						
SWET				epP	pP	08 03 40.4	-3.9
OXF	**Oxford**	**65.27**	**344**	eP	**P**	**08 03 33.3**	**-0.9**
	comp=Z,0.9nm,0.8s,mb3.9						
OXF				epP	pP	08 03 41.0	-4.0
OXF	**Oxford**	**65.27**	**344**	eP	**P**	**08 03 33.3**	**-0.9**
OXF				e*PP	pP	08 03 41.0	-3.9
OXF				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
PLAL	**Pickwick Lake**	**65.40**	**345**	eP	**P**	**08 03 33.5**	**-1.6**
TXAR	**Lajitas Array**	**65.56**	**329**	P	**P**	**08 03 36.4**	**+0.1**
	comp=Z,3.3nm,0.7s,mb4.5,baz=152,slow=8.5,SNR=47						
WVT	**Waverly**	**66.44**	**345**	eP	**P**	**08 03 40.6**	**-1.2**
PARMO	**Parma**	**67.40**	**344**	eP	**P**	**08 03 47.5**	**-0.3**
SBA	**Scott Base**	**68.26**	**191**	eP	**P**	**08 03 53.8**	**+0.9**
	comp=Z,8.6nm,2.5s,mb4.3						
SBA	**Scott Base**	**68.26**	**191**	eP	**P**	**08 03 53.8**	**+0.9**
SBA				pmax	pmax		
	comp=Z,9.0nm,2.5s,mb4.4						
SIUC	**Southern Illin**	**68.27**	**345**	eP	**P**	**08 03 52.7**	**-0.6**
WMOK	**Wichita Mounta**	**68.33**	**336**	eP	**P**	**08 03 53.1**	**-0.7**
	comp=Z,108nm,2.9s,mb5.4						
WMOK	**Wichita Mounta**	**68.33**	**336**	eP	**P**	**08 03 53.1**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,108nm,2.9s,mb5.4						
MNTX	**Cornudas Mount**	**68.35**	**329**	eP	**P**	**08 03 52.9**	**-1.1**
	comp=Z,6.2nm,0.8s,mb4.7						
MCWV	**Mont Chateau**	**68.58**	**353**	eP	**P**	**08 03 54.4**	**-0.9**
FVM	**French Village**	**68.82**	**344**	eP	**P**	**08 03 56.2**	**-0.5**
BRNJ	**Basking Ridge**	**69.21**	**357**	eP	**P**	**08 03 57.7**	**-1.4**
	comp=Z,20nm,0.5s,mb5.3						
TBI	**Tubuai**	**69.22**	**254**	eLR	LR	08 25 13.5	
	comp=Z,91nm,27.2s						
VNDA	**Vanda**	**69.29**	**191**	P	**P**	**08 03 59.1**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=132,slow=7.5,SNR=3.2						
AMTX	**Amarillo**	**69.54**	**334**	eP	**P**	**08 04 01.4**	**+0.1**
ACSO	**Alum Creek Sta**	**69.55**	**350**	eP	**P**	**08 04 00.5**	**-0.7**
	comp=Z,21nm,0.9s,mb5.1						
SYO	**Syowa Base**	**70.46**	**159**	⇑eP	**P**	**08 04 04.2**	**-2.4**
SYO	**Syowa Base**	**70.46**	**159**	⇑epP	pP	08 04 11.8	-5.6
SYO	**Syowa Base**	**70.46**	**159**	⇑esP	sP	08 04 16.0	-5.4
HDIL	**Hopedale**	**71.01**	**346**	eP	**P**	**08 04 09.3**	**-0.9**
ERPA	**Erie**	**71.03**	**353**	eP	**P**	**08 04 10.0**	**-0.2**
	comp=Z,22nm,1.0s,mb5.0						
TUC	**Tucson**	**71.42**	**325**	eP	**P**	**08 04 12.7**	**-0.1**
KSU1	**Kansas State U**	**71.57**	**339**	eP	**P**	**08 04 12.6**	**-0.9**
	comp=Z,4.2nm,0.5s,mb4.6						
ANMO	**Albuquerque**	**71.58**	**330**	eP	**P**	**08 04 14.3**	**+0.6**
ANMO	**Albuquerque**	**71.58**	**330**	i P	**P**	**08 04 14.7**	**+1.0**
PPT	**Papeete**	**71.68**	**260**	eLR	LR	08 26 15.3	
	comp=Z,200nm,22.8s						
DBIC	**Dimbokro**	**72.98**	**72**	P	**P**	**08 04 22.3**	**-0.3**
	comp=Z,14nm,0.8s,mb5.0,baz=202,slow=6.9,SNR=20						
DBIC				LR	LR	08 36 47.3	
	comp=Z,99nm,19.0s,MS4.1,baz=274,slow=36						
JFWS	**Jewell Farm**	**73.47**	**346**	eP	**P**	**08 04 24.3**	**-0.5**
SDCO	**Great Sand Dun**	**73.55**	**332**	eP	**P**	**08 04 26.2**	**+0.8**
WUAZ	**Wupatki**	**74.30**	**327**	eP	**P**	**08 04 30.9**	**+1.1**
	comp=Z,12nm,1.0s,mb4.8						
MVCO	**Mesa Verde**	**74.36**	**330**	eP	**P**	**08 04 31.0**	**+0.8**
PV01	**Paradox Valley**	**75.17**	**330**	eP	**P**	**08 04 35.5**	**+0.8**
ISCO	**Idaho Springs**	**75.35**	**333**	eP	**P**	**08 04 36.7**	**+0.9**
SMCO	**Snowmass**	**75.37**	**332**	eP	**P**	**08 04 32.5**	**-3.5**
	comp=Z,12nm,0.7s,mb4.9						
PV10	**Paradox Valley**	**75.57**	**330**	eP	**P**	**08 04 37.5**	**+0.4**
ECSD	**EROS,Sioux Fal**	**75.83**	**341**	eP	**P**	**08 04 38.1**	**-0.3**
PHWY	**Pilot Hill**	**76.58**	**334**	eP	**P**	**08 04 43.8**	**+1.0**
SUR	**Sutherland**	**76.83**	**120**	eP	**P**	**08 04 42.9**	**-1.7**
	comp=Z,52nm,1.4s,mb5.3						
CCUT	**Cedar City**	**76.88**	**327**	eP	**P**	**08 04 45.7**	**+1.1**
CCUT				pP	pP	08 04 54.1	-1.4
SHPR	**Sheep Range**	**76.94**	**325**	eP	**P**	**08 04 45.8**	**+0.9**
MSU	**Marysvale**	**77.09**	**328**	eP	**P**	**08 04 46.8**	**+1.0**
RWWY	**Rawlins**	**77.60**	**333**	eP	**P**	**08 04 48.5**	**0.0**
	comp=Z,25nm,0.9s,mb5.2						
TPNV	**Topopah Spring**	**77.83**	**325**	eP	**P**	**08 04 51.0**	**+1.1**
MAW	**Mawson**	**77.97**	**164**	LR	LR	08 41 17.8	
	comp=Z,181nm,18.6s,MS4.4,baz=349,slow=37						
DAC	**Darwin (Calif)**	**78.01**	**323**	eP	**P**	**08 04 51.9**	**+1.0**
DAC				epP	pP	08 04 59.7	-2.2
MPU	**Maple Canyon**	**78.06**	**329**	eP	**P**	**08 04 52.1**	**+1.0**
DAU	**Daniels Canyon**	**78.22**	**330**	eP	**P**	**08 04 53.2**	**+1.3**
DUG	**Dugway**	**78.74**	**329**	eP	**P**	**08 04 55.3**	**+0.5**
	comp=Z,16nm,1.4s,mb4.8						
DUG	**Dugway**	**78.74**	**329**	eP	**P**	**08 04 55.3**	**+0.4**
DUG				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
TPH	**Tonopah**	**79.19**	**325**	eP	**P**	**08 04 58.2**	**+0.8**
	comp=Z,6.6nm,0.8s,mb4.6						
TPH	**Tonopah**	**79.19**	**325**	eP	**P**	**08 04 58.3**	**+0.9**
TPH				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
HWUT	**Hardware Ranch**	**79.33**	**330**	eP	**P**	**08 04 58.2**	**+0.1**
	comp=Z,16nm,0.7s,mb5.0						
HWUT				e	pP	08 05 06.3	-2.7
BW06	**Boulder Array**	**79.44**	**332**	eP	**P**	**08 04 58.5**	**-0.1**
PDAR	**Pinedale Array**	**79.44**	**332**	P	**P**	**08 04 58.5**	**-0.1**
	comp=Z,3.1nm,0.7s,mb4.3,baz=134,slow=7.0,SNR=22						
SPUT	**South Promonto**	**79.47**	**330**	eP	**P**	**08 04 59.2**	**+0.3**
AGMN	**Agassiz Refuge**	**79.86**	**344**	eP	**P**	**08 05 00.1**	**-0.6**
HVU	**Hansel Valley**	**80.00**	**330**	eP	**P**	**08 05 01.8**	**+0.2**
NVAR	**Mina Array Bea**	**80.01**	**324**	P	**P**	**08 05 02.6**	**+0.7**
	comp=Z,1.8nm,0.8s,mb4.1,baz=147,slow=7.1,SNR=15						
TSUM	**Tsumeb**	**80.06**	**106**	eP	**P**	**08 05 02.9**	**+0.2**
TSUM				e	pP	08 05 11.4	-2.2
REDW	**Red Top Meadow**	**80.47**	**332**	eP	**P**	**08 05 04.5**	**+0.3**
SNOW	**Snow King Moun**	**80.51**	**332**	eP	**P**	**08 05 04.5**	**+0.1**
LOHW	**Long Hollow**	**80.57**	**332**	eP	**P**	**08 05 05.3**	**+0.6**
TPAW	**Teton Pass**	**80.61**	**332**	eP	**P**	**08 05 05.7**	**+0.8**
MOOW	**Moose Ponds**	**80.74**	**332**	eP	**P**	**08 05 06.0**	**+0.4**
FLWY	**Flagg Ranch**	**81.00**	**332**	eP	**P**	**08 05 04.2**	**-2.8**
	comp=Z,10nm,0.9s,mb4.8						
RLMT	**Red Lodge**	**81.30**	**334**	eP	**P**	**08 05 09.0**	**+0.4**
	comp=Z,4.7nm,0.9s,mb4.4						
LAO	**LASA Array**	**81.51**	**337**	eP	**P**	**08 05 10.0**	**+0.4**
LAO				epP	pP	08 05 17.8	-2.8
PAHR	**Pah Rah Range**	**81.53**	**325**	eP	**P**	**08 05 11.0**	**+1.1**
YMR	**Madison River**	**81.59**	**333**	eP	**P**	**08 05 11.0**	**+0.8**
	comp=Z,13nm,1.0s,mb4.8						
YMR				ePcP	PcP	08 05 16.7	+0.8
YMR				epP	pP	08 05 19.2	-1.9
ULM	**Lac du Bonnet**	**81.67**	**344**	P	**P**	**08 05 09.6**	**-0.8**
	comp=Z,12nm,0.9s,mb4.8,baz=152,slow=5.4,SNR=28						
TORD	**Torodi Ar. Bea**	**81.88**	**70**	P	**P**	**08 05 12.1**	**-0.3**
TORD				LR	LR	08 37 52.5	
TORD	**Torodi Ar. Bea**	**81.88**	**70**	P	**P**	**08 05 12.1**	**-0.3**
	comp=Z,11nm,0.7s,mb4.9,baz=260,slow=5.0,SNR=60						
TORD				LR	LR	08 37 52.5	
	comp=Z,119nm,19.8s,MS4.2,baz=240,slow=33						
QLMT	**Earthquake Lak**	**81.91**	**332**	eP	**P**	**08 05 12.8**	**+0.9**
QLMT				epP	pP	08 05 21.0	-1.8
BOSA	**Boshof**	**81.95**	**118**	P	**P**	**08 05 12.3**	**-0.3**
BOSA				LR	LR	08 36 36.4	
BOSA	**Boshof**	**81.95**	**118**	P	**P**	**08 05 12.3**	**-0.3**
	comp=Z,7.6nm,0.8s,mb4.7,baz=145,slow=7.6,SNR=13						
BOSA				LR	LR	08 36 36.4	
	comp=Z,201nm,18.2s,MS4.5,baz=248,slow=32						
GCMT	**Greycliff**	**82.01**	**334**	eP	**P**	**08 05 12.2**	**-0.1**
HLID	**Hailey**	**82.15**	**330**	eP	**P**	**08 05 13.7**	**+0.6**
DGMT	**Dagmar**	**82.38**	**339**	eP	**P**	**08 05 14.1**	**0.0**
	comp=Z,57nm,1.4s,mb5.3						
DGMT				epP	pP	08 05 22.5	-2.6
MCMT	**McKenzie Canyo**	**82.50**	**332**	eP	**P**	**08 05 15.5**	**+0.6**
DLMT	**Dillon**	**82.82**	**332**	eP	**P**	**08 05 17.3**	**+0.7**
SCHQ	**Schefferville**	**83.39**	**3**	P	**P**	**08 05 18.9**	**-0.3**
SCHQ	**Schefferville**	**83.39**	**3**	P	**P**	**08 05 18.9**	**-0.3**
	comp=Z,3.1nm,0.8s,mb4.4,baz=166,slow=5.1,SNR=3.8						
CASY	**Casey**	**85.20**	**181**	eP	**P**	**08 05 28.8**	**+0.2**
	comp=Z,8.5nm,0.9s,mb4.9						
CASY				epP	pP	08 05 36.7	-2.9
BSMT	**Bassoo Peak**	**85.72**	**332**	eP	**P**	**08 05 31.5**	**+0.3**
WALA	**Waterton Lakes**	**86.34**	**334**	eP	**P**	**08 05 34.5**	**+0.3**
NEW	**Newport**	**87.02**	**331**	eP	**P**	**08 05 37.8**	**+0.3**
	comp=Z,3.8nm,0.9s,mb4.6						
NEW	**Newport**	**87.02**	**331**	eP	**P**	**08 05 37.8**	**+0.2**
NEW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MDT	**Midelt**	**88.08**	**51**	LR	LR	08 45 13.3	
	comp=Z,164nm,18.4s,MS4.5,baz=235,slow=36						
FCC	**Fort Churchill**	**89.28**	**348**	eP	**P**	**08 05 47.7**	**-0.4**
EDM	**Edmonton**	**89.49**	**336**	eP	**P**	**08 05 48.0**	**-1.2**
EDM				epP	pP	08 05 55.8	-4.5
LSZ	**Lusaka**	**90.83**	**108**	eP	**P**	**08 05 54.5**	**-2.0**
	comp=Z,18nm,1.5s,mb5.2						
LSZ	**Lusaka**	**90.83**	**108**	eP	**P**	**08 05 54.5**	**-1.9**
LSZ				pmax	pmax		
	comp=Z,18nm,1.5s,mb5.2						
YKA	**Yellowknife Ar**	**97.36**	**341**	P	**P**	**08 06 24.1**	**-1.1**
YKA	**Yellowknife Ar**	**97.36**	**341**	P	**P**	**08 06 24.1**	**-1.1**
	comp=Z,1.1nm,0.8s,mb4.3,baz=138,slow=4.2,SNR=24						
KEST	**Kesra**	**99.38**	**54**	LR	LR	08 50 42.8	
	comp=Z,93nm,20.9s,MS4.3,baz=211,slow=35						
AKASG	**Malin Array Be**	**118.18**	**45**	PKP	PKPdf	08 11 37.6	-1.5
	comp=Z,1.4nm,0.7s,baz=262,slow=2.9,SNR=7.9						
BRTR	**Keskin Array B**	**118.68**	**58**	PKP	PKPdf	08 11 39.6	-0.8
	comp=Z,1.5nm,0.8s,baz=243,slow=0.3,SNR=5.9						
ASAR	**Alice Springs**	**122.44**	**208**	PKP	PKPdf	08 11 46.9	-1.5
	comp=Z,1.9nm,0.8s,baz=148,slow=2.3,SNR=11						
OBN	**Obninsk**	**123.19**	**41**	ePKIKP	PKPdf	08 11 47.6	-1.0
OBN				e		08 11 57.0	
OBN				e		08 18 42.3	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.9						
WB2	**Warramunga Arr**	**125.55**	**210**	ePKP	PKPdf	08 11 53.2	-1.2
WB2				epPKP	pPKPdf	08 12 01.7	-4.0
WRA	**Warramunga Arr**	**125.56**	**210**	PKP	PKPdf	08 11 53.2	-1.2
	comp=Z,4.3nm,0.6s,baz=159,slow=1.6,SNR=51						
PRGR	**Permogore**	**127.68**	**33**	ePKIKP	PKPdf	08 11 55.5	-1.5
BILL	**Bilibino**	**128.40**	**336**	i PKIKP	PKPdf	08 11 56.9	-1.3
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.6						
FITZ	**Fitzroy Crossi**	**130.56**	**201**	ePKP	PKPdf	08 12 03.2	-0.7
	comp=Z,3.5nm,0.9s						
FITZ				epPKP	pPKPdf	08 12 11.8	-3.5
ARU	**Arti**	**135.34**	**37**	i PKIKP	PKPdf	08 12 12.0	+0.3
ARU						08 14 44.6	
TIXI	**Tiksi**	**135.70**	**351**	⇑iPKIKP	PKPdf	08 12 10.3	-1.6
SEY	**Seymchan**	**135.77**	**333**	d iPKIKP	PKPdf	08 12 12.7	+0.4
YAK	**Yakutsk**	**144.01**	**343**	⇑iPKIKP	PKPdf	08 12 24.6	-2.6
NVS	**Novosibirsk**	**148.16**	**28**	ePKIKP	PKPdf	08 12 34.6	+0.1
NVS				pmax	pmax		
	comp=Z,45nm,1.5s						

KURK	**Kurchatov**	**148.54**	**38**	*e*PKPdf	PKPdf	08 12 35.9	+0.6
KURK				*e*PKPbc	PKPbc	08 12 39.1	+0.1
KURK				*ep*PKPdf	pPKPdf	08 12 43.2	-3.4
AML	**Almayashu**	**148.79**	**55**	*e*PKPbc	PKPbc	08 12 38.0	-1.9
AML				*e*PKPab	PKPab	08 12 41.0	-2.7
AML	**Almayashu** SNR=5.8	**148.79**	**55**	P	PKPdf	08 12 41.3	+5.3
AAK	**Ala-Archa** SNR=12	**149.24**	**54**	P	PKPdf	08 12 42.1	+5.4
UCH	**Uchtor**	**149.36**	**55**	*e*PKPbc	PKPbc	08 12 38.8	-2.5
UCH				*e*PKPab	PKPab	08 12 42.7	-3.3
UCH	**Uchtor** SNR=13	**149.36**	**55**	P	PKPdf	08 12 42.8	+5.9
KBK	**Karagaybulak** SNR=7.4	**149.56**	**54**	P	PKPdf	08 12 42.7	+5.6
KZA	**Kyzart** SNR=10	**149.93**	**55**	P	PKPdf	08 12 44.1	+6.3
TKM2	**Tokmak 2** SNR=9.2	**149.94**	**53**	P	PKPdf	08 12 43.3	+5.5
HYB	**Hyderabad**	**150.15**	**106**	*i* PKP	PKPdf	08 12 44.0	+5.2
HYB				*e*PKPAB	PKPab	08 12 50.0	0.0
ULHL	**Ulahol** SNR=8.4	**150.59**	**54**	P	PKPdf	08 12 45.5	+6.7
MKAR	**Makanchi Array** comp=Z,1.3nm,0.9s,baz=276,slow=1.8,SNR=8.6	**152.69**	**42**	PKP	PKPdf	08 12 41.5	-0.3
MKAR	comp=Z,9.1nm,0.7s,baz=324,slow=2.1,SNR=54			PKPbc	PKPbc	08 12 48.6	-0.3
KLR	**Kul'dur**	**153.04**	**325**	*e*PKIKP	PKPdf	08 12 37.0	-5.3
MJAR	**Matsushiro Arr** comp=Z,1.9nm,0.7s,baz=106,slow=2.7,SNR=5.6	**154.05**	**295**	PKPab	PKPab	08 13 05.4	-0.4
MDJ	**Mudanjiang**	**157.08**	**319**	PKP	PKPdf	08 12 47.8	-0.1
PBA	**Port Blair**	**157.35**	**136**	*e*P	x	08 13 27.8	
PBA				*e*S	x	08 13 42.7	
PBA	comp=N,358nm,0.3s			*ex*	x	08 13 43.9	
PBA	comp=E,478nm,0.5s			*ex*	x	08 13 44.6	
WMQ	**Urumqi**	**157.51**	**43**	PKP	PKPdf	08 12 45.8	-2.7
WMQ				APKP		08 12 54.0	
WMQ				XPKP		08 12 58.3	
WMQ	comp=Z,179nm,7.0s			PP	PP		
WMQ	comp=N,38nm,20.5s			LR	LR		
WMQ	comp=E,107nm,15.0s			LR	LR		
WMQ	comp=Z,68nm,19.0s,MS4.5			LR	LR		
ZAK	**Zakamensk**	**158.08**	**9**	*e*PKIKP	PKPdf	08 12 49.2	+0.2
ZAK				*e*		08 13 22.1	
ZAK	comp=Z,2.0nm,1.3s			pmax	pmax		
ZAK	comp=Z,3.0nm,1.3s			pmax	pmax		
CN2	**Changchun**	**159.90**	**323**	*e*PKP	PKPdf	08 12 50.4	-0.9
SONM	**Songino Array** comp=Z,1.2nm,0.8s,baz=320,slow=0.8,SNR=11	**160.93**	**5**	PKP	PKPdf	08 12 51.9	-0.5
SONM	comp=Z,1.4nm,0.9s,baz=334,slow=4.7,SNR=6.7			PKPab	PKPab	08 13 35.5	+0.5
KSRS	**Korea Array** comp=Z,1.6nm,0.9s,baz=99,slow=3.2,SNR=5.4	**161.75**	**303**	PKP	PKPdf	08 12 53.0	-0.5
GTA	**Gaotai**	**167.14**	**32**	*e*PKP	PKPdf	08 12 58.8	+0.5
GTA				APKP		08 13 07.0	
GTA				XPKP		08 13 11.3	
BJI	**Beijing**	**167.21**	**333**	PKP	PKPdf	08 12 58.8	+0.5
BJI				SS	SS	08 38 37.3	+4.1
BJI	comp=N,44nm,25.7s			LR	LR		
BJI	comp=E,46nm,20.9s			LR	LR		
BJI	comp=Z,68nm,30.5s			LR	LR		
HHC	**Hu-ho-hao-te**	**167.76**	**350**	*e*PKP	PKPdf	08 12 53.8	-4.9
HHC				APKP		08 13 04.8	
HHC				XPKP		08 13 08.1	
HHC				PKP2	PKPab	08 14 03.0	-2.2
HHC				PKS		08 16 24.5	
HHC				PP	PP	08 17 53.9	+0.8
HHC				SKS	SKSdf	08 19 51.5	-8.3
HHC				SKKS	SKKSac	08 24 35.0	-3.3
HHC				SS	SS	08 38 36.6	-1.5
HHC	comp=Z,173nm,8.0s			PP	PP		
HHC	comp=N,170nm,14.3s			LR	LR		
HHC	comp=E,123nm,16.6s			LR	LR		
HHC	comp=Z,112nm,14.3s			LR	LR		
NJ2	**Nanjing**	**170.64**	**293**	*e*PKP	PKPdf	08 12 59.3	-1.4
LZH	**Lanzhou**	**171.68**	**28**	*e*PKP	PKPdf	08 12 59.0	-2.1
LZH				APKP		08 13 09.6	
LZH				XPKP		08 13 13.5	
LZH				PKS		08 16 30.3	
LZH				*e*PP	PP	08 18 12.4	-0.8
LZH				*e*SS	SS	08 39 11.8	-5.9
LZH	comp=E,195nm,18.5s			LR	LR		
LZH	comp=Z,278nm,20.3s			LR	LR		
KMI	**Kunming**	**173.55**	**123**	PKP	PKPdf	08 13 01.5	-0.8
CD2	**Chengdu**	**175.25**	**63**	*e*PKP	PKPdf	08 12 59.4	-3.2
CD2				APKP		08 13 08.3	
CD2				XPKP		08 13 13.9	
CD2				PKP2	PKPab	08 14 35.9	-3.1
CD2				PP	PP	08 18 29.4	-2.4
CD2				SKS	SKSdf	08 19 57.3	-5.8
CD2				SKKS	SKKSac	08 25 10.1	-5.3
CD2				SS	SS	08 39 45.4	-9.1
CD2	comp=Z,120nm,10.8s			PP	PP		
CD2	comp=E,580nm,16.2s			LR	LR		
CD2	comp=Z,120nm,14.8s			LR	LR		
GYA	**Guiyang**	**177.05**	**142**	PKP	PKPdf	08 13 02.4	-0.8
GYA				APKP		08 13 11.8	
GYA				XPKP		08 13 15.3	
GYA				PKP2	PKPab	08 14 48.0	+1.1
GYA				PKS		08 16 33.5	
GYA				PP	PP	08 18 41.8	+2.4
GYA				SKS	SKSdf	08 20 01.3	-2.3
GYA				SKKS	SKKSac	08 25 24.0	+0.3
GYA				SS	SS	08 40 08.8	-1.2
GYA	comp=Z,120nm,8.4s			PP	PP		
GYA	comp=N,380nm,20.4s			LR	LR		
GYA	comp=E,230nm,19.8s			LR	LR		
GYA	comp=Z,390nm,21.3s			LR	LR		

*IDC **18** 07:57:52.5±2.0, 004N×12763E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/15, mbtmp3.7/3, MS3.6/1, Ms1 3.5/1, ms1mx2.9/18, Error ellipse: s-maj=163.7km s-min=24.7km az=67.0*

*NEIC **18** 07:57:54.3±0.6, 005S×12759E, h10km, mb4.1/2, Error ellipse: s-maj=17.5km s-min=10.6km az=46.0*

*ISCJB **18** 07:57:55.3±0.8, 00S±01×1275E±01, h33km, mb4.1/5, Error ellipse: s-maj=23.2km s-min=13.8km az=137.1*

ISC 18 07:57:57.7±0.8,**01S**±01×**1276E**±01,**h35**km,**n7**,**σ0°70**/**7**, **mb4.1**/**5**,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**12.86**	**298**	*e*Pn	**Pn**	**08 00 57.4**	**-0.8**
WRA	**Warramunga Arr** 1.3nm,0.7s,baz=341,slow=12,SNR=10	**20.85**	**162**	P	**P**	**08 02 36.5**	**-0.1**
PMG	**Port Moresby** 5.4nm,1.0s,mb3.9	**21.59**	**116**	*e*P	**P**	**08 02 43.6**	**-1.0**
GUMO	**Guam** 39nm,1.0s,mb4.8	**21.84**	**51**	*e*P	**P**	**08 02 47.5**	**+0.2**
ASAR	**Alice Springs** 1.9nm,0.7s,mb3.6,baz=343,slow=12,SNR=17	**24.27**	**166**	P	**P**	**08 03 12.4**	**+0.8**
MKAR	**Makanchi Array** 0.9nm,0.7s,mb4.0,baz=123,slow=7.8,SNR=9.9	**61.14**	**326**	P	**P**	**08 08 08.4**	**-0.2**
KURK	**Kurchatov** 0.8nm,0.4s,mb4.1	**65.37**	**328**	*e*P	**P**	**08 08 37.5**	**+1.0**

*IDC **18** 08:00:32.5±2.0, 9.19S×12533E, h0km, mb3.5/1, mb1 3.9/3, mb1mx3.6/13, mbtmp3.7/3, ML4.0/2, Error ellipse: s-maj=178.1km s-min=33.0km az=58.0*

*ISCJB **18** 08:00:57.9±0.9, 11.16S±010×12568E±008, h33km, mb4.3/3, Error ellipse: s-maj=14.2km s-min=10.8km az=22.1*

*NEIC **18** 08:00:57.1±0.7, 11.11S×12562E, h10km, mb3.8/2, Error ellipse: s-maj=12.2km s-min=9.3km az=61.0*

ISC 18 08:01:00.3±0.9,**1115S**±010×**12564E**±008,**h35**km,**n10**, **σ0°42**/**12**,**mb4.3**/**3**,**Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu** 7.0nm,0.5s	**6.83**	**104**	*e*P	**Pn**	**08 02 37.2**	**-0.9**
KAKA				*e*S	Sx	08 04 07.9	
KAKA	**Kakadu**	**6.83**	**104**	*e*Pn	**Pn**	**08 02 37.3**	**-0.8**
KAKA				*e*Sn	**Sn**	**08 03 54.9**	**+0.2**
FITZ	**Fitzroy Crossi** 14nm,0.4s	**6.91**	**180**	*e*P	**Pn**	**08 02 39.2**	**+0.1**
FITZ				*e*S	Sx	08 04 08.4	
WRA	**Warramunga Arr** 0.8nm,0.3s,baz=321,slow=14,SNR=30	**12.10**	**137**	Pn	**Pn**	**08 03 50.1**	**-0.3**
WRA	1.0nm,0.3s,baz=323,slow=24,SNR=7.5			Sn	Sx	08 06 18.2	
WB2	**Warramunga Arr**	**12.11**	**137**	*e*P	**Pn**	**08 03 50.7**	**+0.2**
WB2				*e*S	Sx	08 06 17.9	
ASAR	**Alice Springs** 0.5nm,0.3s,baz=318,slow=11,SNR=16	**14.72**	**149**	Pn	**Pn**	**08 04 25.8**	**-0.4**
ASAR	0.4nm,0.3s,baz=312,slow=20,SNR=7.2			Sn	**Sn**	**08 07 24.4**	**+16**
PMG	**Port Moresby** 3.4nm,0.6s,mb3.9	**21.25**	**87**	*e*P	**P**	**08 05 44.0**	**+0.5**
CTAO	**Charters Tower** 3.8nm,0.9s,mb3.8	**21.73**	**117**	*e*P	**P**	**08 05 49.4**	**+0.7**
KULM	**Kulim**	**29.76**	**302**	*e*P	**P**	**08 07 03.8**	**+0.1**
GUMO	**Guam** 43nm,0.8s,mb5.3	**31.11**	**38**	*e*P	**P**	**08 07 15.4**	**-0.3**

IDC 18 08:11:10.4±1.9,**302N**×**12442E**,**h0**km,**mb3.2**/**3**,**mb1 3.4**/**3**, **mb1mx3.3**/**17**,**mbtmp3.2**/**3**,**Error ellipse: s-maj=206.0km s-min=26.0km az=64.0**,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.9nm,0.6s,baz=335,slow=11,SNR=14	**24.81**	**157**	P	P	08 16 33.4	-1.0
ASAR	**Alice Springs** 0.1nm,0.6s,baz=336,slow=7.0,SNR=3.0	**28.09**	**161**	P	P	08 17 05.2	+1.3
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=117,slow=8.3,SNR=5.9	**56.84**	**327**	P	P	08 20 56.8	0.0

*IDC **18** 08:36:55.3±29.0, 38.14N×7422E, h98km±161km, mb3.4/4, mb1 3.4/5, mb1mx3.1/23, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=316.3km s-min=32.4km az=12.0*

*ISCJB **18** 08:36:56.4±0.6, 3820N±004×743E±02, h120km±10km, mb3.6/4, Error ellipse: s-maj=20.1km s-min=5.4km az=170.3*

ISC 18 08:36:57.7±0.6,**3822N**±004×**743E**±02,**h117**km±9km,**n19**, **σ1°19**/**26**,**mb3.6**/**4**,**2D**,**Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	**Kyzart** SNR=14	**3.92**	**10**	P	**Pn**	**08 37 56.0**	**-0.1**
AML	**Almayashu** SNR=19	**3.94**	**353**	P	**Pn**	**08 37 56.1**	**-0.2**
UCH	**Uchtor** SNR=22	**4.01**	**2**	P	**Pn**	**08 37 57.1**	**-0.1**
ULHL	**Ulahol** SNR=6.4	**4.29**	**19**	P	**Pn**	**08 38 02.0**	**+1.1**
EKS2	**Erkin-Say** SNR=14	**4.46**	**355**	P	**Pn**	**08 38 04.0**	**+0.7**
KBK	**Karagaybulak** SNR=8.7	**4.46**	**6**	P	**Pn**	**08 38 04.0**	**+0.7**
TKM2	**Tokmak 2** 1.4nm,0.4s	**4.80**	**11**	⇓P	**Pn**	**08 38 08.2**	**+0.3**
TKM2	26nm,0.6s			⇓S	**Sn**	**08 38 59.7**	**-2.7**
TKM2	**Tokmak 2** SNR=5.9	**4.80**	**11**	P	**Pn**	**08 38 09.2**	**+1.4**
KK31	**Karatay Array** 0.8nm,0.2s,baz=133,slow=12,SNR=70	**5.68**	**331**	P	**Pn**	**08 38 18.0**	**-1.7**
KK31	3.5nm,0.2s,baz=133,slow=21,SNR=9.3			S	**Sn**	**08 39 17.0**	**-6.6**
DLH	**Dalhousie**	**5.82**	**166**	*e*P	**Pn**	**08 38 24.0**	**+2.3**
DLH				*e*S	**Sn**	**08 39 27.0**	**-0.1**
THN	**Thein Dam**	**5.88**	**168**	*e*P	**Pn**	**08 38 24.4**	**+1.9**
THN				*e*S	**Sn**	**08 39 26.7**	**-1.9**
JOSI	**Joshimath**	**8.78**	**149**	*e*P	**Pn**	**08 39 08.1**	**+6.4**
JOSI	comp=Z,17nm,0.7s			AMb	AMB	08 39 12.8	
JOSI				*e*S	**Sn**	**08 40 37.3**	**-1.5**
SONA	**Sohna**	**10.20**	**166**	*e*P	**Pn**	**08 39 22.8**	**+1.8**
SONA	comp=Z,6.6nm,0.3s			AMb	AMB	08 39 24.8	
SONA				*e*S	**Sn**	**08 41 06.4**	**-7.1**
KUDL	**Kundal**	**10.21**	**169**	*e*P	**Pn**	**08 39 20.6**	**-0.5**
KUDL	comp=Z,2.9nm,0.5s			AMb	AMB	08 39 21.2	
KUDL				*e*S	**Sn**	**08 41 05.1**	**-8.4**
MKAR	**Makanchi Array** comp=Z,0.1nm,0.3s,baz=216,slow=15,SNR=7.1	**10.39**	**32**	P	**Pn**	**08 39 22.3**	**-1.0**
SONM	**Songino Array** comp=Z,0.7nm,0.7s,mb3.2,baz=254,slow=8.4,SNR=6.0	**25.18**	**57**	P	**P**	**08 42 12.9**	**+0.9**
FINES	**FINESS Array B** comp=Z,2.0nm,0.9s,mb3.9,baz=124,slow=10,SNR=5.3	**37.60**	**324**	P	**P**	**08 44 00.1**	**-0.4**
ARCES	**ARCESS Array B** comp=Z,1.2nm,0.7s,mb3.8,baz=109,slow=9.0,SNR=11	**40.62**	**336**	P	**P**	**08 44 25.3**	**-0.2**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.4s,mb3.3,baz=347,slow=5.3,SNR=5.4	**79.38**	**4**	P	**P**	**08 48 50.0**	**-0.2**

*IDC **18** 08:45:23.7±1.9, 9.22S×10895E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.8/16, mbtmp3.9/5, Error ellipse: s-maj=104.1km s-min=19.7km az=53.0*

*NEIC **18** 08:45:23.9±0.5, 9.45S×10861E, h10km, mb4.6/1, Error ellipse: s-maj=16.1km s-min=11.8km az=202.0*

*ISCJB **18** 08:45:26.9±1.4, 9.58S±009×1085E±01, h53km±15km, mb3.9/6, Error ellipse: s-maj=19.9km s-min=12.7km az=37.1*

ISC 18 08:45:28.1±1.4,**959S**±009×**1085E**±01,**h44**km±15km,**n9**, **σ0°68**/**9**,**mb3.9**/**6**,**1C**,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.53**	**28**	⇑*i*P	**Pn**	**08 46 05.5**	**-1.2**
BJII				*i* S	**Sn**	**08 46 37.3**	**+0.9**
XMIS	**Christmas Isla**	**2.95**	**252**	*e*Pn	**Pn**	**08 46 12.7**	**+0.2**
WRA	**Warramunga Arr** 0.9nm,0.5s,mb3.5,baz=289,slow=12,SNR=7.9	**26.98**	**115**	P	**P**	**08 51 05.8**	**-0.2**
WRA	0.3nm,0.6s,baz=296,slow=1.9,SNR=5.3			PcP	PcP	08 54 28.6	+1.6
ASAR	**Alice Springs** 0.4nm,0.6s,mb3.2,baz=299,slow=8.5,SNR=8.5	**28.01**	**123**	P	**P**	**08 51 15.0**	**-0.1**
ASAR	0.3nm,0.6s,baz=304,slow=1.7,SNR=7.0			PcP	PcP	08 54 31.5	+2.1
STKA	**Stephens Creek** 2.6nm,0.6s,mb4.1,baz=302,slow=6.1,SNR=14	**37.82**	**131**	P	**P**	**08 52 41.2**	**+0.7**
SONM	**Songino Array** 0.8nm,0.6s,mb3.9,baz=173,slow=11,SNR=6.6	**57.19**	**358**	P	**P**	**08 55 10.0**	**-0.6**
MKAR	**Makanchi Array** 1.8nm,0.5s,mb4.5,baz=146,slow=7.9,SNR=28	**60.81**	**340**	P	**P**	**08 55 36.5**	**+0.8**
TIXI	**Tiksi** 2.3nm,0.4s,mb4.5	**82.19**	**6**	*e*P	**P**	**08 57 43.4**	**-0.6**
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=299,slow=1.7,SNR=4.6	**118.74**	**21**	PKP	PKPdf	09 04 12.0	+0.9

*ISCJB **18** 09:09:39.9±0.9, 603S±007×14222E±007, h33km, mb3.8/4, MS3.0/2, Error ellipse: s-maj=11.3km s-min=9.4km az=41.1*

*IDC **18** 09:09:40.7±1.4, 5.52S×14162E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.9/10, mbtmp4.0/6, ML4.3/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/19, Error ellipse: s-maj=47.0km s-min=14.7km az=99.0*

*NEIC **18** 09:09:53.0±4.6, 6.72S×14141E, h10km, mb3.9/2, Error ellipse: s-maj=59.6km s-min=31.9km az=198.0*

ISC 18 09:09:42.3±0.9,**604S**±007×**14222E**±006,**h35**km,**n13**, **σ1°12**/**17**,**mb3.8**/**4**,**MS3.0**/**2**,**New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 1.9nm,0.3s,baz=329,slow=22,SNR=6.6	**5.93**	**125**	Pn	**Pn**	**09 11 08.8**	**+1.1**
PMG	3.5nm,0.3s,baz=243,slow=22,SNR=6.6			Sn	**Sn**	**09 12 13.8**	**-0.7**
PMG	0.3nm,0.3s,baz=146,slow=19,SNR=3.9			Lg		09 13 20.3	
PMG	comp=Z,89nm,20.7s,baz=68,slow=35			LR	LR	09 13 33.0	
KAKA	**Kakadu** 22nm,0.4s	**11.70**	**235**	*e*P	**Pn**	**09 12 27.5**	**+0.6**
KAKA				*e*S	**Sn**	**09 14 31.5**	**-4.8**
CTA	**Charters Tower** 0.2nm,0.3s,baz=56,slow=23,SNR=3.6	**14.50**	**165**	Lg		09 17 34.2	
CTA	comp=Z,169nm,20.3s,baz=232,slow=37			LR	LR	09 19 05.5	
WB2	**Warramunga Arr**	**15.79**	**208**	*e*P	**Pn**	**09 13 22.4**	**+0.3**
WB2				*e*S	**Sn**	**09 16 14.4**	**-1.7**
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=28,slow=13,SNR=52	**15.80**	**208**	Pn	**Pn**	**09 13 22.4**	**+0.2**
WRA	0.5nm,0.3s,baz=31,slow=22,SNR=4.4			Sn	**Sn**	**09 16 15.7**	**-0.6**
WRA	0.8nm,0.3s,baz=34,slow=26,SNR=9.1			Lg		09 18 09.6	
WRA	comp=Z,329nm,19.5s,baz=20,slow=40			LR	LR	09 20 21.8	
ASAR	**Alice Springs** 0.9nm,0.3s,baz=33,slow=12,SNR=80	**19.26**	**204**	P	**Pn**	**09 14 08.3**	**+3.2**
ASAR	0.3nm,0.3s,baz=22,slow=28,SNR=5.1			S	**S**	**09 17 51.8**	**+11**
ASAR	baz=16,slow=28,SNR=4.6			Lg		09 19 51.6	
FITZ	**Fitzroy Crossi** 8.8nm,1.2s	**20.14**	**232**	*e*P	**P**	**09 14 14.7**	**+1.2**
FITZ	**Fitzroy Crossi** 1.7nm,0.4s,baz=61,slow=10,SNR=7.8	**20.14**	**232**	P	**P**	**09 14 15.2**	**+1.7**
FITZ	8.6nm,1.0s,baz=147,slow=14,SNR=3.3			Lg		09 20 18.9	
FITZ	comp=Z,48nm,19.7s,MS2.9,baz=51,slow=37			LR	LR	09 22 00.7	
STKA	**Stephens Creek** 1.8nm,0.7s,mb3.7	**25.71**	**181**	*e*P	**P**	**09 15 17.7**	**+8.3**
STKA	**Stephens Creek** 2.0nm,0.7s,mb3.8,baz=329,slow=8.6,SNR=6.3	**25.71**	**181**	P	**P**	**09 15 18.1**	**+8.7**
STKA	comp=Z,62nm,19.5s,MS3.1,baz=204,slow=37			LR	LR	09 25 43.5	
KSRS	**Korea Array** 2.3nm,1.0s,mb4.0,baz=162,slow=9.1,SNR=6.5	**45.28**	**344**	P	**P**	**09 17 55.5**	**-1.0**
VNDA	**Vanda** 0.6nm,0.6s,mb3.7,baz=330,slow=7.6,SNR=5.5	**72.19**	**176**	P	**P**	**09 21 10.2**	**+7.0**
MKAR	**Makanchi Array** 0.7nm,0.5s,mb3.9,baz=108,slow=7.8,SNR=6.0	**74.55**	**322**	P	**P**	**09 21 16.5**	**-1.0**

*ISCJB **18** 09:12:34.4±1.4, 4008N±006×198E±02, h10km, Error ellipse: s-maj=23.1km s-min=4.9km az=17.0*

*CSEM **18** 09:12:34.1±0.2, 4011N×1993E, h15km, MD3.0, Error ellipse: s-maj=7.5km s-min=2.7km az=105.0*

*ATH **18** 09:12:36.5, 3993N×1999E, h20km, MD3.0/3*

ISC 18 09:12:34.7±1.4,**4008N**±005×**198E**±02,**h10**km,**n8**, **σ1°25**/**14**,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPE	**Tepelena**	**0.25**	**32**	*i* Pg	**Pg**	**09 12 38.9**	**-0.9**
TPE				*i* Sg	**Sg**	**09 12 42.0**	**-1.3**
KEK	**Kerkira**	**0.37**	**184**	*e*PB	**Pg**	**09 12 42.2**	**+0.3**
KEK				*e*SB	**Sg**	**09 12 47.0**	**+0.2**
JAN	**Janina**	**0.89**	**118**	*e*PN	**Pg**	**09 12 50.1**	**-1.7**
OHR	**Ohrid**	**1.27**	**35**	*e*Pn	**Pn**	**09 12 57.2**	**-1.2**
OHR				*e*Sn	**Sn**	**09 13 16.8**	**+1.4**
OHR	**Ohrid**	**1.27**	**35**	*e*Pn	**Pn**	**09 12 57.1**	**-1.3**
OHR				*e*Sn	**Sn**	**09 13 16.7**	**+1.3**
KZN	**Kozani**	**1.50**	**81**	*e*PN	**Pn**	**09 13 03.6**	**+2.0**
KRUS	**Krusevo**	**1.68**	**39**	*e*Pn	**Pn**	**09 13 03.9**	**-0.1**
KRUS				*e*Sn	**Sn**	**09 13 27.4**	**+1.9**
KRUS	**Krusevo**	**1.68**	**39**	*e*Pn	**Pn**	**09 13 03.9**	**-0.2**
KRUS				*e*Sn	**Sn**	**09 13 27.4**	**+1.8**

*ISCJB **18** 09:36:06.8±0.4, 2530N±004×10039E±004, h10km, mb4.2/16, Error ellipse: s-maj=5.5km s-min=5.0km az=152.1*

*IDC **18** 09:36:07.8±0.7, 2542N×10046E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.9/23, mbtmp3.9/11, MS3.1/1, Ms1 3.1/1, ms1mx2.8/28, Error ellipse: s-maj=29.3km s-min=15.7km az=63.0*

*BJI **18** 09:36:08.7, 2542N×10046E, h10km, mB4.5, mb4.2, ML3.9, Ms3.9, Msz3.7*

*NEIC **18** 09:36:09.6±0.5, 2544N×10050E, h10km, mb4.4/1, Error ellipse: s-maj=26.1km s-min=10.9km az=66.0*

ISC 18 09:36:09.2±0.3,**2539N**±003×**10038E**±004,**h10**km,**n33**, **σ1°22**/**40**,**mb4.2**/**16**,**2C**,**Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.16**	**96**	P	**Pn**	**09 36 47.6**	**+2.4**
KMI				PG	**Pg**	**09 36 50.0**	**-0.6**
KMI				SG	**Sg**	**09 37 18.9**	**+0.3**
KMI	comp=N,2μm,0.7s			Smax			
KMI	comp=E,1μm,0.7s			Smax			
CHRT	**Chiangrai**	**5.51**	**186**	PG	**Pg**	**09 37 53.0**	**-1.9**
CHRT				SG	**Sg**	**09 39 07.0**	**+0.6**
GYA	**Guiyang**	**5.76**	**78**	⇑*i*P	**Pn**	**09 37 37.1**	**+2.3**
GYA				PG	**Pg**	**09 37 48.0**	**-12**
GYA				S	**Sn**	**09 38 44.5**	**+3.5**
GYA	comp=N,60nm,0.7s			Smax			
GYA	comp=E,50nm,0.7s			Smax			
GYA	comp=N,380nm,7.3s			LR	LR		
GYA	comp=E,760nm,7.7s			LR	LR		
GYA	comp=Z,840nm,8.4s			LR	LR		
CD2	**Chengdu**	**6.26**	**28**	*e*P	**Pn**	**09 37 42.8**	**+1.1**
CD2				PG	**Pg**	**09 38 03.1**	**-6.1**
CD2				S	**Sn**	**09 38 53.1**	**-0.2**
CD2				SG	**Sg**	**09 39 22.6**	**-7.7**
CD2	comp=N,130nm,1.4s			Smax			
CD2	comp=E,120nm,1.1s			Smax			
CD2	comp=N,940nm,6.6s			LR	LR		
CD2	comp=E,700nm,9.0s			LR	LR		
CD2	comp=Z,920nm,6.6s			LR	LR		
CHG	**Chiang Mai** comp=Z,85nm,0.8s	**6.67**	**192**	⇑P	**Pg**	**09 38 16.3**	**-0.8**
SHL	**Shillong**	**7.68**	**273**	*e*P	**Pn**	**09 38 03.0**	**+1.8**
LZH	**Lanzhou**	**11.07**	**15**	*e*P	**Pn**	**09 38 51.6**	**+3.9**
LZH				AP		09 38 54.9	
LZH				XP		09 38 58.0	
LZH				PP		09 39 00.3	
LZH	comp=Z,16nm,1.0s			AMB	AMB		
LZH	comp=Z,65nm,4.2s			AMB	AMB		
LZH	comp=N,216nm,8.3s			LR	LR		
LZH	comp=E,196nm,5.6s			LR	LR		
LZH	comp=Z,298nm,5.8s			LR	LR		
XAN	**Xi'an**	**11.38**	**39**	P	**Pn**	**09 38 50.0**	**-1.8**
XAN	comp=Z,2.0nm,0.3s			AMB	AMB		
XAN	comp=N,159nm,5.6s			LR	LR		
XAN	comp=E,196nm,5.6s			LR	LR		
XAN	comp=Z,298nm,5.8s			LR	LR		
WHN	**Wuhan**	**13.37**	**64**	*e*P	**Pn**	**09 39 18.0**	**-1.1**
NJ2	**Nanjing**	**17.50**	**63**	*e*P	**Pn**	**09 40 09.9**	**-3.6**
NJ2				AP	pP	09 40 17.3	-0.1
NJ2				XP	sP	09 40 21.1	+2.4
NJ2				PP		09 40 23.0	
NJ2				S	**Sn**	**09 43 20.5**	**-7.9**

NJ2				XS	sS	09 43 35.5	-5.5
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,180nm,6.2s						
NJ2				LR	LR		
	comp=N,710nm,19.0s						
NJ2				LR	LR		
	comp=E,600nm,16.6s						
NJ2				LR	LR		
	comp=Z,600nm,16.6s						
PSI	**Prapat**	**22.50**	**184**	P	**P**	**09 41 11.3**	**+2.3**
PSI	**Prapat**	**22.50**	**184**	P	**P**	**09 41 11.3**	**+2.3**
	comp=Z,4.0nm,0.7s,mb3.9,baz=347,slow=11,SNR=6.2						
SONM	**Songino Array**	**22.91**	**10**	P	**P**	**09 41 13.1**	**0.0**
	comp=Z,1.4nm,0.7s,mb3.5,baz=189,slow=11,SNR=7.1						
MKAR	**Makanchi Array**	**25.77**	**331**	P	**P**	**09 41 41.2**	**+1.1**
MKAR	**Makanchi Array**	**25.77**	**331**	P	**P**	**09 41 41.2**	**+1.1**
	comp=Z,4.6nm,0.7s,mb4.1,baz=139,slow=10.0,SNR=32						
KSRS	**Korea Array**	**26.31**	**56**	P	**P**	**09 41 44.0**	**-1.1**
	comp=Z,0.8nm,0.6s,mb3.4,baz=244,slow=9.6,SNR=4.3						
KSRS				LR	LR	09 53 07.0	
	comp=Z,35nm,18.5s,baz=290,slow=39						
AML	**Almayashu**	**27.61**	**314**	*e*P	**P**	**09 41 58.7**	**+1.9**
	comp=Z,3.6nm,0.5s,mb4.3						
AKTK	**Aktyubinsk**	**40.96**	**319**	P	**P**	**09 43 51.7**	**-0.3**
AKTO	**Aktyubinsk**	**40.96**	**319**	P	**P**	**09 43 51.7**	**-0.3**
	comp=Z,1.6nm,0.9s,mb3.7,baz=105,slow=7.4,SNR=5.8						
KBD	**Kabd**	**46.66**	**287**	*e*P	**P**	**09 44 37.2**	**-1.0**
KBD				AMb	AMB	09 44 41.1	
	comp=Z,95nm,1.0s						
RDF	**Al-Radifah**	**46.82**	**287**	*e*P	**P**	**09 44 38.7**	**-0.7**
RDF				AMb	AMB	09 44 40.0	
	comp=Z,28nm,0.6s,mb5.4						
MIB	**Mutribah**	**46.88**	**288**	*e*P	**P**	**09 44 39.4**	**-0.5**
MIB				AMb	AMB	09 44 40.3	
	comp=Z,33nm,0.5s,mb5.5						
NAY	**Al-Naaiem**	**47.04**	**287**	*e*P	**P**	**09 44 40.8**	**-0.3**
NAY				AMb	AMB	09 44 41.9	
	comp=Z,24nm,0.8s,mb5.2						
RST	**Umm Al-Ruwaisa**	**47.21**	**288**	*e*P	**P**	**09 44 41.3**	**-1.2**
RST				AMb	AMB	09 44 42.5	
	comp=Z,21nm,0.7s,mb5.2						
WRA	**Warramunga Arr**	**55.86**	**141**	P	**P**	**09 45 46.9**	**-0.3**
	comp=Z,2.9nm,0.8s,mb4.3,baz=332,slow=7.9,SNR=27						
WB2	**Warramunga Arr**	**55.86**	**141**	*e*P	**P**	**09 45 47.0**	**-0.2**
ASAR	**Alice Springs**	**58.59**	**144**	P	**P**	**09 46 06.7**	**+0.2**
	comp=Z,1.2nm,0.9s,mb3.9,baz=322,slow=6.5,SNR=11						
FINES	**FINESS Array B**	**60.56**	**328**	P	**P**	**09 46 18.6**	**-1.0**
	comp=Z,1.3nm,0.7s,mb4.2,baz=106,slow=11,SNR=5.1						
NOA	**NORSAR Array B**	**67.74**	**328**	P	**P**	**09 47 08.9**	**+2.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=78,slow=6.5,SNR=3.5						
GERES	**GERESS Array B**	**69.22**	**315**	P	**P**	**09 47 15.8**	**-0.4**
	comp=Z,0.7nm,0.5s,mb3.9,baz=103,slow=3.1,SNR=2.8						
YKA	**Yellowknife Ar**	**88.08**	**15**	P	**P**	**09 48 59.9**	**+0.2**
	comp=Z,0.2nm,0.7s,mb3.5,baz=328,slow=4.8,SNR=3.9						
SBA	**Scott Base**	**109.87**	**168**	*e*PKP	PKiKP	09 54 42.0	+2.3
TXAR	**Lajitas Array**	**120.90**	**24**	PKP	PKPdf	09 55 01.7	-0.7
	comp=Z,0.1nm,0.4s,baz=277,slow=0.7,SNR=3.3						

*TIF **18** 09:46:42.0, 4264N×48.14E, h10km±3km*
*CSEM **18** 09:46:45.5, 4247N×4781E, h11km, mb3.9, Error ellipse: s-maj=28.6km s-min=15.2km az=240.0, After OBN*
MOS 18 09:46:45.5±1.3**, 4247N×4781E, h11km, mb3.9**/1**, 1C-1D, Error ellipse: s-maj=28.6km s-min=15.2km az=114.0, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URKR	**Urkarakh**	**0.33**	**204**⇑	*i*PG	Pg	09 46 54.0	+1.9
URKR				*e*S	Sg	09 47 03.0	+6.4
URKR				pmax	pmax		
	comp=Z,114nm,0.1s						
URKR	**Urkarakh**	**0.33**	**204**	*i* Pg	Pg	09 46 54.0	+1.9
	comp=Z,114nm,0.1s						
URKR				*e*Sg	Sg	09 47 03.0	+6.4
MAK	**Makhachkala**	**0.54**	**335**	*e*PG	Pg	09 46 58.1	+2.1
MAK				*e*		09 47 08.7	
MAK				pmax	pmax		
	comp=Z,189nm,0.3s						
MAK				smax			
	comp=N,242nm,0.3s						
MAK				smax			
	comp=E,119nm,0.1s						
MAK	**Makhachkala**	**0.54**	**335**	*e*Pg	Pg	09 46 58.1	+2.1
	comp=E,189nm,0.3s						
MAK				*e*Sg	Sg	09 47 08.7	+5.5
	comp=E,242nm,0.3s						
KRNR	**Karanay**	**0.76**	**298**⇓	*i*PG	Pg	09 46 59.7	-0.4
KRNR				*i* S	Sg	09 47 14.0	+4.0
KRNR				pmax	pmax		
	comp=Z,25nm,0.2s						
KRNR	**Karanay**	**0.76**	**298**	*i* Pg	Pg	09 46 59.7	-0.4
	comp=Z,25nm,0.2s						
KRNR				*i* Sg	Sg	09 47 14.0	+4.0
KSMR	**Kasumkent**	**0.90**	**165**	*i* PG	Pg	09 47 02.7	-0.1
KSMR				*e*S	Sg	09 47 17.5	+3.0
KSMR				pmax	pmax		
	comp=Z,104nm,0.2s						
KSMR	**Kasumkent**	**0.90**	**165**	*i* Pg	Pg	09 47 02.7	-0.1
	comp=Z,104nm,0.2s						
KSMR				*e*Sg	Sg	09 47 17.5	+3.0
DBC	**Dubki**	**0.91**	**307**	*e*PG	Pg	09 47 02.0	-1.0
DBC				*i* S	Sg	09 47 18.5	+3.6
BTLR	**Botlikh**	**1.19**	**280**	*e*PG	Pg	09 47 09.0	+0.6
BTLR				*e*S	Sb	09 47 29.0	+5.5
DGRG	**David-gareji**	**2.09**	**242**	P	Pg	09 47 26.6	+1.1
DGRG				S	Sg	09 47 59.5	+7.0

IDC 18 09:47:59.2±0.9**, 2120N×14526E, h66km**±9km**, mb3.0**/4**, mb1 3.2**/4**, mb1mx3.0**/20**, mbtmp3.0**/4**, Error ellipse: s-maj=48.0km s-min=18.6km az=99.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**40.96**	**320**	P	P	09 55 35.9	+0.6
	0.3nm,0.5s,baz=117,slow=8.5,SNR=2.3						
WRA	**Warramunga Arr**	**42.26**	**195**	P	P	09 55 45.2	-1.0
	0.4nm,0.9s,baz=10,slow=9.6,SNR=2.6						
WRA				pP	pP	09 56 03.4	+0.7
	0.7nm,0.9s,baz=11,slow=9.1,SNR=4.3						
ASAR	**Alice Springs**	**45.94**	**195**	P	P	09 56 15.7	0.0
	0.2nm,0.8s,baz=16,slow=8.7,SNR=6.1						
ASAR				pP	pP	09 56 33.0	+0.7
	0.3nm,0.6s,baz=17,slow=8.4,SNR=3.1						
YKA	**Yellowknife Ar**	**75.99**	**28**	P	P	09 59 39.3	+0.4
	0.2nm,0.4s,baz=292,slow=5.9,SNR=5.2						
YKA				pP	pP	09 59 55.9	-0.8
	0.2nm,0.4s,baz=293,slow=5.8,SNR=5.7						

*IDC **18** 09:56:17.8±1.2, 943S×12485E, h0km, mb3.8/3, mb1 4.2/6, mb1mx3.9/14, mbtmp4.0/6, ML4.3/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=24.7km s-min=20.6km az=87.0*
*NEIC **18** 09:56:21.4±1.0, 948S×12498E, h25km, mb4.8/1, Error ellipse: s-maj=41.9km s-min=12.9km az=63.0*
*ISCJB **18** 09:56:22.6±1.8, 97S±01×1250E±01, h68km±19km, mb3.9/4, Error ellipse: s-maj=23.2km s-min=8.6km az=137.8*
ISC 18 09:56:23.5±1.7**, 97S**±01×**12498E**±008**, h55km**±18km**, n10,** σ**1**^{s}**18**/15**, mb4.0**/4**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Kupang**	**1.40**	**248**	Pn	**Pn**	**09 56 45.0**	**-1.7**
	453nm,0.3s,baz=90,slow=2.6,SNR=49						
BATI				Sn	**Sn**	**09 57 03.8**	**-0.2**
	440nm,0.3s,baz=186,slow=20,SNR=4.2						
FITZ	**Fitzroy Crossi**	**8.39**	**176**	*e*P	**Pn**	**09 58 24.1**	**+1.6**
	16nm,0.3s						
FITZ	**Fitzroy Crossi**	**8.39**	**176**	Pn	**Pn**	**09 58 24.2**	**+1.7**
	4.3nm,0.3s,baz=3.9,slow=10,SNR=26						
FITZ				Sn	**Sn**	**09 59 57.5**	**+1.6**
	4.5nm,0.3s,baz=179,slow=5.9,SNR=8.0						
FITZ				LR	LR	10 02 13.6	
	comp=Z,101nm,18.0s,baz=359,slow=41						
WRA	**Warramunga Arr**	**13.63**	**139**	Pn	**Pn**	**09 59 34.9**	**+0.8**
	1.6nm,0.3s,baz=318,slow=14,SNR=22						
WRA				Sn	**Sn**	**10 02 02.8**	**-1.1**
	1.4nm,0.3s,baz=311,slow=23,SNR=14						
WB2	**Warramunga Arr**	**13.64**	**139**	*e*P	**Pn**	**09 59 34.7**	**+0.5**
WB2				*e*S	**Sn**	**10 02 02.6**	**-1.6**
ASAR	**Alice Springs**	**16.31**	**150**	Pn	**Pn**	**10 00 10.8**	**+1.8**
	0.8nm,0.3s,baz=320,slow=11,SNR=19						
ASAR				Sn	**Sn**	**10 03 08.2**	**-1.0**
	0.6nm,0.3s,baz=308,slow=19,SNR=12						
STKA	**Stephens Creek**	**26.93**	**147**	P	**P**	**10 02 04.4**	**+4.8**
	1.4nm,0.7s,mb3.6,baz=333,slow=6.8,SNR=3.9						
CASY	**Casey**	**57.38**	**187**	*e*P	**P**	**10 06 05.0**	**-0.9**
	2.4nm,0.3s,mb4.7						
SONM	**Songino Array**	**59.59**	**346**	P	**P**	**10 06 22.4**	**+0.9**
	0.6nm,0.8s,mb3.7,baz=158,slow=8.8,SNR=4.7						
MKAR	**Makanchi Array**	**67.88**	**330**	P	**P**	**10 07 15.6**	**-0.5**
	0.8nm,0.6s,mb4.0,baz=141,slow=7.4,SNR=5.9						

IDC 18 10:08:41.8±2.4**, 2219S×6852W, h71km**±22km**, mb3.2**/4**, mb1 3.5**/7**, mb1mx3.4**/18**, mbtmp3.2**/7**, Error ellipse: s-maj=28.6km s-min=18.6km az=102.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.88**	**4**	P	Pn	10 10 08.7	+2.2
	0.2nm,0.3s,baz=299,slow=25,SNR=2.5						
SIV	**San Ignacio**	**9.36**	**50**	P	Pn	10 10 54.7	+0.7
	0.9nm,0.3s,baz=237,slow=10,SNR=40						
SIV				S	Sn	10 12 33.9	-3.7
	0.1nm,0.3s,baz=316,slow=22,SNR=2.6						
CFAA	**Coronel Fontan**	**9.38**	**179**	P	Pn	10 10 56.0	+1.8
	0.0nm,0.3s,baz=344,slow=9.0,SNR=3.4						
CFAA				S	Sn	10 12 35.3	-2.7
	0.0nm,0.3s,baz=286,slow=16,SNR=2.0						
TXAR	**Lajitas Array**	**61.40**	**325**	P	P	10 18 50.2	-0.4
	0.1nm,0.6s,baz=140,slow=7.3,SNR=4.1						
PDAR	**Pinedale Array**	**74.89**	**330**	P	P	10 20 15.1	+0.3
	0.2nm,0.6s,baz=139,slow=6.0,SNR=2.5						
TORD	**Torodi Ar. Bea**	**77.25**	**70**	P	P	10 20 29.9	+1.1
	0.7nm,0.7s,baz=250,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	**91.96**	**340**	P	P	10 21 41.0	-1.0
	0.4nm,0.8s,baz=134,slow=4.0,SNR=5.6						
MKAR	**Makanchi Array**	**145.97**	**37**	PKPbc	PKPbc	10 28 13.0	-0.3
	0.6nm,0.8s,baz=327,slow=2.4,SNR=6.5						

IDC 18 10:18:12.5±2.8**, 1921N×14534E, h182km**±28km**, mb3.2**/8**, mb1 3.5**/9**, mb1mx3.3**/20**, mbtmp3.2**/9**, Error ellipse: s-maj=31.5km s-min=19.1km az=92.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.61**	**185**	P	Pn	10 19 35.6	+1.1
	4.4nm,0.3s,baz=203,slow=23,SNR=4.9						
GUMO				S	Sn	10 20 38.1	-0.8
	2.2nm,0.3s,baz=196,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**40.38**	**196**	P	P	10 25 33.1	+0.4
	0.5nm,0.5s,baz=19,slow=8.9,SNR=8.7						
SONM	**Songino Array**	**42.53**	**321**	P	P	10 25 50.4	+0.4
	0.1nm,0.4s,baz=116,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**44.05**	**195**	P	P	10 26 02.2	-0.1
	0.2nm,0.5s,baz=14,slow=7.4,SNR=4.8						
YKA	**Yellowknife Ar**	**77.70**	**28**	P	P	10 29 48.9	+0.2
	0.4nm,0.5s,baz=289,slow=5.4,SNR=8.7						
ARCES	**ARCESS Array B**	**81.90**	**342**	P	P	10 30 11.4	+0.3
	1.9nm,0.8s,baz=40,slow=7.4,SNR=3.3						
NVAR	**Mina Array Bea**	**83.09**	**52**	P	P	10 30 18.7	+0.8
	0.3nm,0.6s,baz=263,slow=7.0,SNR=3.7						
FINES	**FINESS Array B**	**86.28**	**335**	P	P	10 30 32.0	-1.4
	3.3nm,1.1s,baz=74,slow=5.9,SNR=5.4						
PDAR	**Pinedale Array**	**87.71**	**45**	P	P	10 30 40.6	-0.1
	0.2nm,0.5s,baz=270,slow=0.8,SNR=3.2						

IDC 18 10:26:17.9±9.4**, 2184N×14287E, h170km**±89km**, mb3.1**/9**, mb1 3.4**/9**, mb1mx3.3**/20**, mbtmp3.1**/9**, Error ellipse: s-maj=37.7km s-min=15.3km az=84.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.23**	**324**	P	P	10 30 40.4	+0.5
	1.7nm,0.8s,baz=144,slow=7.9,SNR=6.7						
SONM	**Songino Array**	**39.05**	**321**	P	P	10 33 27.7	-0.3
	0.6nm,0.5s,baz=132,slow=8.2,SNR=6.2						
WRA	**Warramunga Arr**	**42.35**	**192**	P	P	10 33 55.3	0.0
	0.5nm,0.8s,baz=15,slow=9.1,SNR=5.7						
ASAR	**Alice Springs**	**46.06**	**191**	P	P	10 34 24.7	-0.1
	0.5nm,0.6s,baz=16,slow=11,SNR=14						
MKAR	**Makanchi Array**	**54.39**	**313**	P	P	10 35 27.4	+0.2
	0.4nm,0.6s,baz=81,slow=10,SNR=3.2						
YKA	**Yellowknife Ar**	**76.47**	**28**	P	P	10 37 48.2	-0.4
	0.4nm,0.5s,baz=292,slow=5.9,SNR=14						
FINES	**FINESS Array B**	**82.93**	**334**	P	P	10 38 23.6	+0.1
	1.2nm,0.8s,baz=57,slow=7.0,SNR=4.4						
NVAR	**Mina Array Bea**	**83.28**	**51**	P	P	10 38 26.1	+0.3
	0.4nm,0.7s,baz=257,slow=3.7,SNR=3.6						
PDAR	**Pinedale Array**	**87.50**	**45**	P	P	10 38 47.7	+1.1
	0.3nm,0.9s,baz=315,slow=0.1,SNR=2.3						

*NIED **18** 10:36:00, 3190N×14190E, h8km, Mw3.7 Best double couple: M0 3.90000×10^14 NP1:φs184.00000°, δ41.00000°, λ96.00000°. NP2:φs357.00000°, δ50.00000°, λ85.00000°.*
*JMA **18** 10:36:03.7±0.3, 3195N×14191E, h0km, M3.9*
*ISCJB **18** 10:36:04.7±0.7, 3185N±006×1417E±01, h10km, mb3.6/7, Error ellipse: s-maj=13.7km s-min=7.0km az=160.4*
*IDC **18** 10:36:05.2±0.9, 3177N×14168E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.7/21, mbtmp3.5/9, ML3.2/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/28, Error ellipse: s-maj=27.4km s-min=20.0km az=70.0*
ISC 18 10:36:06.7±0.7**, 3186N**±006×**1417E**±01**, h10km, n21,** σ**1**^{s}**12**/24**, mb3.6**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.01**	**309**	P	**Pn**	**10 36 41.2**	**+0.6**
JHJ	**Hachijo jima 2**	**2.04**	**309**	Pn	**Pn**	**10 36 40.8**	**-0.2**
	37nm,0.3s,baz=81,slow=21,SNR=11						
JHJ				Sn	**Sn**	**10 37 04.3**	**-2.1**
	14nm,0.3s,baz=33,slow=16,SNR=3.0						
BSO1	**Boso 1**	**2.85**	**348**	P	**Pn**	**10 36 51.1**	**-1.1**
BSO1				*e*S	**Sn**	**10 37 26.3**	**-0.3**
BSO3	**Boso 3**	**3.10**	**342**	*e*S	**Sn**	**10 37 33.4**	**+0.8**
JOD2	**Odawara 2**	**4.03**	**328**	P	**Pn**	**10 37 08.8**	**+0.4**
JHU	**Hanno**	**4.46**	**334**	P	**Pn**	**10 37 14.9**	**+0.6**
JYT	**Yasato**	**4.53**	**345**	*e*S	**Sn**	**10 38 09.3**	**+1.3**
JRY	**Ryogami san**	**4.75**	**332**	P	**Pn**	**10 37 19.6**	**+1.3**
JHO	**Hitachi**	**4.83**	**349**	P	**Pn**	**10 37 17.6**	**-1.8**
JHO				*e*S	**Sn**	**10 38 11.0**	**-4.4**
JAG	**Ashikaga**	**4.92**	**339**	P	**Pn**	**10 37 21.1**	**+0.5**
MJAR	**Matsushiro Arr**	**5.49**	**329**	Pn	**Pn**	**10 37 28.8**	**+0.4**
	0.4nm,0.3s,baz=153,slow=12,SNR=7.4						
JFK	**Kawauchi**	**5.54**	**353**	P	**Pn**	**10 37 27.0**	**-2.1**
JMK	**Ichinoseki**	**7.09**	**357**	P	**Pn**	**10 37 48.7**	**-1.7**
JMK				*e*S	**Sn**	**10 39 03.6**	**-7.5**
JNU	**Nakatsue**	**9.21**	**281**	LR	LR	10 41 27.9	
	comp=Z,32nm,19.2s,baz=213,slow=35						
SONM	**Songino Array**	**31.11**	**311**	P	**P**	**10 42 26.7**	**+1.5**
	0.6nm,0.8s,mb3.5,baz=119,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**47.20**	**306**	P	**P**	**10 44 40.0**	**+0.5**
	0.7nm,0.8s,mb3.7,baz=89,slow=10,SNR=6.0						
WRA	**Warramunga Arr**	**51.98**	**189**	P	**P**	**10 45 15.7**	**-0.3**
	1.0nm,0.7s,mb3.8,baz=5.9,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**55.70**	**189**	P	**P**	**10 45 42.2**	**-1.1**
	0.3nm,0.7s,mb3.4,baz=18,slow=13,SNR=5.7						
YKA	**Yellowknife Ar**	**68.20**	**29**	P	**P**	**10 47 06.4**	**-0.5**
	0.2nm,0.8s,mb3.2,baz=313,slow=6.3,SNR=4.2						
NVAR	**Mina Array Bea**	**77.95**	**52**	P	**P**	**10 48 06.3**	**+1.2**
	0.3nm,0.7s,mb3.4,baz=330,slow=3.2,SNR=3.6						
TXAR	**Lajitas Array**	**93.10**	**53**	P	**P**	**10 49 22.2**	**+1.2**
	1.0nm,1.1s,mb4.2,baz=303,slow=3.6,SNR=5.6						

IDC 18 10:49:26.8±2.2**, 084S×12732E, h0km, mb3.2**/3**, mb1 3.5**/3**, mb1mx3.3**/15**, mbtmp3.3**/3**, Error ellipse: s-maj=196.0km s-min=25.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.19**	**161**	P	P	10 54 02.6	-0.6
	0.3nm,0.4s,baz=343,slow=12,SNR=5.9						
ASAR	**Alice Springs**	**23.58**	**165**	P	P	10 54 39.7	+0.3
	0.7nm,0.6s,baz=343,slow=11,SNR=15						
MKAR	**Makanchi Array**	**61.64**	**326**	P	P	10 59 46.4	0.0
	0.1nm,0.4s,baz=124,slow=8.9,SNR=2.7						

*IDC **18** 10:49:34.3±1.4, 051S×12834E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.8/15, mbtmp3.8/4, Error ellipse: s-maj=110.9km s-min=21.8km az=71.0*
*ISCJB **18** 10:49:37.1±1.2, 07S±02×1280E±04, h33km, mb4.6/8, Error ellipse: s-maj=67.3km s-min=10.3km az=151.5*
ISC 18 10:49:39.7±1.1**, 07S**±02×**1279E**±04**, h35km, n11,** σ**0**^{s}**34**/11**, mb4.6**/8**, 1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.72**	**159**	*e*P	**Pn**	**10 52 37.5**	**-0.7**
	5.4nm,0.6s						
WRA	**Warramunga Arr**	**20.10**	**162**	P	**P**	**10 54 10.8**	**+0.3**
	2.1nm,0.6s,baz=344,slow=12,SNR=24						
WB2	**Warramunga Arr**	**20.10**	**162**⇓	*i*P	**P**	**10 54 10.5**	**-0.1**
ASAR	**Alice Springs**	**23.52**	**166**	P	**P**	**10 54 47.6**	**+0.7**
	5.1nm,0.6s,mb4.1,baz=344,slow=11,SNR=68						
TAPN	**Taplejung**	**47.66**	**309**	*e*P	**P**	**10 58 13.0**	**+0.1**
	11nm,0.9s,mb4.9						
ODAN	**Odare**	**47.67**	**308**	*e*P	**P**	**10 58 12.8**	**-0.2**
	19nm,0.9s,mb5.1						
JIRN	**Jiri**	**48.99**	**309**	*e*P	**P**	**10 58 23.5**	**+0.3**
	13nm,0.7s,mb5.1						
GKN	**Gorkha**	**50.37**	**308**	*e*P	**P**	**10 58 33.5**	**-0.2**
	15nm,0.9s,mb5.0						
KOLN	**Koldanda**	**51.09**	**307**	*e*P	**P**	**10 58 39.1**	**0.0**
	26nm,0.8s,mb5.2						
SONM	**Songino Array**	**51.88**	**342**	P	**P**	**10 58 44.8**	**+0.2**
	0.6nm,0.9s,mb3.5,baz=152,slow=9.4,SNR=4.9						
MKAR	**Makanchi Array**	**61.88**	**326**	P	**P**	**10 59 55.3**	**-0.3**
	0.3nm,0.3s,mb3.9,baz=116,slow=8.6,SNR=6.6						

*NIED **18** 11:23:00, 2350N×12580E, h8km, Mw4.1 Best double couple: M0 1.58000×10^15 NP1:φs56.00000°, δ34.00000°, λ-118.00000°. NP2:φs269.00000°, δ60.00000°, λ-73.00000°.*
*IDC **18** 11:23:16.0±0.9, 2339N×126.16E, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML3.7/2, MS3.1/3, Ms1 3.1/3, ms1mx2.9/21, Error ellipse: s-maj=33.7km s-min=17.6km az=88.0*
*ISCJB **18** 11:23:17.6±1.8, 2350N±005×12600E±003, h32km±15km, mb3.9/7, Error ellipse: s-maj=7.6km s-min=5.2km az=176.2*
*JMA **18** 11:23:18.9±0.3, 2350N×12576E, h13km, M3.7*
ISC 18 11:23:18.8±1.9**, 2352N**±004×**12595E**±003**, h27km**±15km**, n29,** σ**1**^{s}**11**/39**, mb3.9**/7**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**1.33**	**338**	P	**Pn**	**11 23 42.7**	**+1.1**
JOGS				S	**Sn**	**11 24 00.3**	**+2.0**
JMJ	**Miyako jima 2**	**1.42**	**335**	P	**Pn**	**11 23 44.0**	**+1.2**
JMJ				S	**Sn**	**11 24 01.9**	**+1.3**
JTJ	**Tarama**	**1.59**	**315**	P	**Pn**	**11 23 45.5**	**+0.3**
JTJ				S	**Sn**	**11 24 04.4**	**-0.5**
JIJ	**Ishigaki jima**	**1.85**	**297**	P	**Pn**	**11 23 48.7**	**-0.1**
JIJ				S	**Sn**	**11 24 10.9**	**-0.4**
JKRS	**Kuro-shima**	**1.91**	**292**	P	**Pn**	**11 23 49.9**	**+0.3**
JKRS				*e*S	**Sn**	**11 24 11.4**	**-1.4**
HATJ	**Hateruma jima**	**2.03**	**286**	P	**Pn**	**11 23 51.8**	**+0.5**
HATJ				*e*S	**Sn**	**11 24 14.9**	**-0.9**
IRIF	**Iriomote-Funau**	**2.19**	**292**	P	**Pn**	**11 23 53.7**	**+0.3**
IRIF				*e*S	**Sn**	**11 24 18.9**	**-0.6**
YOJ	**Yonaguni jima**	**2.84**	**290**	*e*S	**Sn**	**11 24 34.1**	**-1.7**
JKE	**Kume jima 2**	**2.89**	**15**	P	**Pn**	**11 24 02.9**	**-0.2**
JJT2	**Tamagusuku 2**	**3.07**	**32**	P	**Pn**	**11 24 05.5**	**-0.1**
JAGN	**Aguni-jima**	**3.27**	**21**	P	**Pn**	**11 24 08.4**	**+0.1**
JAGN				*e*S	**Sn**	**11 24 46.3**	**0.0**
JOW	**Kunigami**	**3.91**	**32**	P	**Pn**	**11 24 16.8**	**-0.3**
JOW				*e*S	**Sn**	**11 24 59.8**	**-2.3**
JOW	**Kunigami**	**3.91**	**32**	Pn	**Pn**	**11 24 16.9**	**-0.2**
	16nm,0.3s,baz=191,slow=11,SNR=53						
JOW				Sn	**Sn**	**11 24 59.8**	**-2.3**
	15nm,0.3s,baz=102,slow=26,SNR=15						
JOW				LR	LR	11 26 06.5	
	comp=Z,177nm,18.8s,baz=349,slow=43						
JIH	**Iheya**	**3.94**	**27**	P	**Pn**	**11 24 17.5**	**-0.1**
JIH				*e*S	**Sn**	**11 25 00.8**	**-2.2**
JTK	**Tokunoshima**	**5.04**	**32**	P	**Pn**	**11 24 32.0**	**-0.6**
JTK				*e*S	Sx	11 25 25.0	
JMZ	**Minamidaito 2**	**5.31**	**63**	P	**Pn**	**11 24 33.1**	**-3.3**
JMZ				*e*S	Sx	11 25 29.8	
JAM	**Amami Oshima**	**5.88**	**33**	P	**Pn**	**11 24 43.4**	**-0.7**
JAM				*e*S	Sx	11 25 45.6	
JZK	**Kikaishima**	**5.99**	**36**	P	**Pn**	**11 24 45.8**	**+0.1**
JNU	**Nakatsue**	**10.50**	**23**	Pn	**Pn**	**11 25 47.2**	**-0.3**
	0.3nm,0.3s,baz=339,slow=35,SNR=5.2						
KSRS	**Korea Array**	**13.99**	**7**	LR	LR	11 32 37.7	
	comp=Z,31nm,18.0s,baz=344,slow=40						
MJAR	**Matsushiro Arr**	**16.74**	**36**	Pn	**Pn**	**11 27 18.0**	**+6.6**
	baz=216,slow=10,SNR=6.6						
ASAJ	**Asahikawa**	**24.67**	**30**	P	**P**	**11 28 39.2**	**+1.9**
	14nm,0.8s,mb4.5,baz=240,slow=14,SNR=7.1						
SONM	**Songino Array**	**28.83**	**332**	P	**P**	**11 29 19.5**	**+4.8**
	0.2nm,0.3s,mb3.3,baz=157,slow=7.8,SNR=3.3						
MKAR	**Makanchi Array**	**41.87**	**315**	P	**P**	**11 31 08.6**	**+2.0**
	0.7nm,0.7s,mb3.4,baz=109,slow=9.5,SNR=8.3						
WRA	**Warramunga Arr**	**43.97**	**169**	P	**P**	**11 31 23.6**	**-0.2**
	2.5nm,0.4s,mb4.3,baz=347,slow=8.9,SNR=41						
WB2	**Warramunga Arr**	**43.97**	**169**	*e*P	**P**	**11 31 22.2**	**-1.6**
ASAR	**Alice Springs**	**47.54**	**170**	P	**P**	**11 31 51.9**	**0.0**
	0.6nm,0.5s,mb3.9,baz=353,slow=13,SNR=22						
YKA	**Yellowknife Ar**	**81.84**	**24**	P	**P**	**11 35 36.9**	**+1.6**
	0.6nm,0.7s,mb3.6,baz=300,slow=5.3,SNR=14						
NVAR	**Mina Array Bea**	**93.87**	**45**	P	**P**	**11 36 36.0**	**+2.0**
	0.6nm,0.9s,mb4.0,baz=298,slow=1.9,SNR=3.5						

*IDC **18** 11:42:26.6±1.1, 5138N×17929W, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.7/25, mbtmp3.6/10, ML3.9/1, Error ellipse: s-maj=34.0km s-min=18.9km az=169.0*
*ISCJB **18** 11:42:28.3±5.2, 514N±02×1795W±01, h23km±36km, mb3.7/12, Error ellipse: s-maj=29.9km s-min=14.4km az=173.6*
*NEIC **18** 11:42:32.1, 51.15N×17923W, h15km, mb3.8/5, ML3.4(AEIC), After AEIC.*
ISC 18 11:42:28.4±5.1**, 514N**±02×**1794W**±01**, h11km**±31km**, n19,** σ**1**^{s}**07**/20**, mb3.7**/12**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADK	**Adak**	**1.77**	**73**	P	**Pn**	**11 42 59.8**	**+0.8**
ADK				S	**Sn**	**11 43 22.4**	**+0.9**
SDPT	**Sand Point**	**11.98**	**63**	*e*P	**Pn**	**11 45 19.5**	**+0.6**
	66nm,1.1s						
KDAK	**Kodiak Island**	**16.74**	**57**	Pn	**Pn**	**11 46 21.4**	**-1.2**
KDAK	**Kodiak Island**	**16.74**	**57**	Pn	**Pn**	**11 46 21.4**	**-1.2**
	0.4nm,0.3s,baz=156,slow=19,SNR=4.6						
PMR	**Palmer**	**19.40**	**47**	*e*P	**Pn**	**11 46 53.7**	**-1.5**
	2.7nm,0.4s						
MCK	**McKinley**	**20.24**	**41**	*e*P	**P**	**11 47 06.5**	**+3.2**
	2.0nm,0.6s						
COLA	**College**	**21.14**	**38**	*e*P	**P**	**11 47 15.9**	**+2.9**
	2.0nm,0.9s,mb3.5						
EGAK	**Eagle**	**23.79**	**41**	*e*P	**P**	**11 47 41.0**	**+0.2**
	1.3nm,0.5s,mb3.6						
DAWY	**Dawson**	**24.36**	**43**	*e*P	**P**	**11 47 45.6**	**-0.4**
INK	**Inuvik**	**27.67**	**35**	P	**P**	**11 48 14.7**	**-1.2**
	0.5nm,0.6s,mb3.3,baz=249,slow=10,SNR=5.5						
YKA	**Yellowknife Ar**	**35.50**	**46**	P	**P**	**11 49 24.2**	**-0.4**
	0.5nm,0.7s,mb3.6,baz=282,slow=8.2,SNR=10						
YKA				PcP	PcP	11 51 53.1	-0.5
	0.1nm,0.5s,baz=284,slow=3.3,SNR=5.0						
SONM	**Songino Array**	**46.29**	**296**	P	**P**	**11 50 55.9**	**+2.2**
	0.3nm,0.7s,mb3.3,baz=60,slow=12,SNR=2.9						
BW06	**Boulder Array**	**46.67**	**72**	*e*P	**P**	**11 50 56.5**	**-0.2**
	1.8nm,0.9s,mb4.0						
PDAR	**Pinedale Array**	**46.67**	**72**	P	**P**	**11 50 57.0**	**+0.2**
	1.5nm,0.6s,mb4.1,baz=302,slow=3.6,SNR=20						
ARCES	**ARCESS Array B**	**58.01**	**350**	P	**P**	**11 52 20.2**	**-0.3**
	3.3nm,1.0s,mb4.3,baz=17,slow=6.6,SNR=3.2						
TXAR	**Lajitas Array**	**59.04**	**81**	P	**P**	**11 52 27.9**	**-0.4**
	0.2nm,0.6s,mb3.4,baz=308,slow=4.4,SNR=5.4						
MKAR	**Makanchi Array**	**59.72**	**308**	P	**P**	**11 52 32.9**	**+0.2**
	0.2nm,0.4s,mb3.5,baz=42,slow=5.6,SNR=3.3						
SCHQ	**Schefferville**	**60.23**	**38**	P	**P**	**11 52 34.7**	**-1.4**
	2.2nm,0.9s,mb4.2,baz=259,slow=6.4,SNR=3.7						
ASAR	**Alice Springs**	**85.24**	**222**	P	**P**	**11 55 04.5**	**-0.3**
	0.2nm,0.7s,mb3.4,baz=24,slow=4.2,SNR=3.2						

*NEIC **18** 11:45:36.4, 38.16S×176.10E, h175km, MG3.7(WEL), After WEL.*

WEL 18 11:45:36.3±0.5**, 3815S×17611E, h176**km±4km**, ML3.7**/9**, Error ellipse: s-maj=6.2km s-min=6.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.79**	**98**	PN	Pn	11 46 01.9	-0.2
URZ				SN	Sn	11 46 21.9	0.0
BKZ	**Black Stump Fm**	**1.06**	**164**	eP	Pn	11 46 02.9	-1.0
BKZ				S	Sn	11 46 25.4	0.0
BKZ	**Black Stump Fm**	**1.06**	**164**	PN	Pn	11 46 02.9	-1.0
BKZ				SN	Sn	11 46 25.4	0.0
MWZ	**Matawai**	**1.13**	**100**	P	Pn	11 46 04.9	+0.4
MWZ				S	Sn	11 46 26.6	+0.4
MWZ	**Matawai**	**1.13**	**100**	PN	Pn	11 46 04.9	+0.4
MWZ				SN	Sn	11 46 26.6	+0.3
TUVZ	**Tukino**	**1.17**	**198**	P	Pn	11 46 05.2	+0.3
TUVZ	**Tukino**	**1.17**	**198**	PN	Pn	11 46 05.2	+0.4
TUVZ				SN	Sn	11 46 27.9	+0.9
MOVZ	**Moawhango**	**1.29**	**193**	P	Pn	11 46 05.6	-0.2
MOVZ	**Moawhango**	**1.29**	**193**	PN	Pn	11 46 05.6	-0.2
MOVZ				SN	Sn	11 46 28.1	-0.7
KNZ	**Kokohu**	**1.50**	**126**	eP	Pn	11 46 08.3	+0.5
KNZ	**Kokohu**	**1.50**	**126**	PN	Pn	11 46 08.3	+0.5
PUZ	**Puketiti**	**1.69**	**88**	PN	Pn	11 46 09.8	0.0
WAZ	**Wanganui**	**1.83**	**208**	PN	Pn	11 46 11.5	+0.4
TSZ	**Takapari Road**	**1.91**	**183**	P	Pn	11 46 11.5	-0.5
TSZ				S	Sn	11 46 37.2	-2.6
TSZ	**Takapari Road**	**1.91**	**183**	PN	Pn	11 46 11.5	-0.5
PXZ	**Pawanui**	**1.97**	**163**	PN	Pn	11 46 12.5	-0.1
BFZ	**Birch Farm**	**2.53**	**178**	eP	Pn	11 46 17.6	-1.4
BFZ	**Birch Farm**	**2.53**	**178**	PN	Pn	11 46 17.6	-1.4
MRZ	**Mangatainoka R**	**2.54**	**189**	P	Pn	11 46 17.4	-1.7
MRZ	**Mangatainoka R**	**2.54**	**189**	PN	Pn	11 46 17.4	-1.7
TIWZ	**Tintock**	**2.63**	**184**	PN	Pn	11 46 18.6	-1.5
KIW	**Kapiti Island**	**2.86**	**199**	P	Pn	11 46 20.7	-2.3
KIW	**Kapiti Island**	**2.86**	**199**	PN	Pn	11 46 20.7	-2.3
MTW	**Mount Morrison**	**3.04**	**189**	P	Pn	11 46 22.6	-2.5
MTW	**Mount Morrison**	**3.04**	**189**	PN	Pn	11 46 22.6	-2.6
CAW	**Cannon Point**	**3.06**	**195**	PN	Pn	11 46 23.0	-2.4
TRWZ	**Traveller**	**3.26**	**186**	PN	Pn	11 46 25.5	-2.3
MSWZ	**Moikau Station**	**3.33**	**191**	P	Pn	11 46 25.8	-2.9
MSWZ	**Moikau Station**	**3.33**	**191**	PN	Pn	11 46 25.8	-2.9
TUWZ	**Tuamarina**	**3.68**	**206**	PN	Pn	11 46 30.0	-3.1
NNZ	**Nelson**	**3.72**	**214**	eP	Pn	11 46 30.1	-3.5
THZ	**Tophouse**	**4.37**	**213**	eP	Pn	11 46 39.4	-2.5
THZ	**Tophouse**	**4.37**	**213**	PN	Pn	11 46 39.4	-2.5
KHZ	**Kahutara**	**4.69**	**204**	eP	Pn	11 46 42.6	-3.5
KHZ	**Kahutara**	**4.69**	**204**	PN	Pn	11 46 42.6	-3.4

*ISCJB **18** 12:02:20.7±0.6, 1976N±004×1214E±0.1, h44km±8km, mb3.9/12, Error ellipse: s-maj=17.4km s-min=5.9km az=7.0*
*NEIC **18** 12:02:21.8±1.6, 1952N×12162E, h52km±13km, mb4.2/3, Error ellipse: s-maj=18.8km s-min=11.2km az=65.0*
*IDC **18** 12:02:22.4±4.8, 1951N×12166E, h56km±43km, mb3.6/9, mb1 3.9/11, mb1mx3.7/21, mbtmp3.8/11, ML4.1/2, MS2.9/3, Ms1 2.9/3, ms1mx2.7/30, Error ellipse: s-maj=36.8km s-min=15.3km az=72.0*
*MAN **18** 12:02:23, 1948N×12131E, h17km, mb4.3, ML3.1, MS2.9*

ISC 18 12:02:22.1±0.6**, 1967N**±004×**1215E**±01**, h47**km±7km**, n26, σ1s28**/30**, mb3.9**/12**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.53**	**158**	eP	**Pn**	**12 02 47.5**	**+0.6**
PIP	**Pasuquin**	**1.55**	**211**⇓	iP	**Pn**	**12 02 47.0**	**-0.3**
PIP				i S	**Sn**	**12 03 04.5**	**-1.7**
APYP	**Conner**	**1.81**	**186**	eP	**Pn**	**12 02 51.2**	**+0.3**
APYP				eS	**Sn**	**12 03 15.9**	**+3.4**
ABRA	**Dolores**	**2.12**	**199**	eP	**Pn**	**12 02 53.8**	**-1.4**
CAUP	**Cauayan**	**2.73**	**172**	eP	**Pn**	**12 03 06.0**	**+2.4**
BALP	**Baler**	**3.91**	**178**	eP	**Pn**	**12 03 21.2**	**+1.6**
NACB	**Ninganchiao**	**4.49**	**2**	ePn	**Pn**	**12 03 28.0**	**+0.4**
NACB				eSn	**Sn**	**12 04 17.1**	**-1.4**
YHNB	**Yeheng**	**4.98**	**359**	ePn	**Pn**	**12 03 37.4**	**+3.0**
YHNB				eSn	**Sn**	**12 04 28.5**	**-2.1**
JOW	**Kunigami**	**9.50**	**40**	P	**Pn**	**12 04 36.0**	**-0.3**
	3.4nm,0.3s,baz=225,slow=13,SNR=8.8						
JOW				S	**Sn**	**12 06 16.6**	**-5.0**
	1.5nm,0.3s,baz=114,slow=18,SNR=3.3						
JOW				LR	LR	12 08 27.4	
	comp=Z,55nm,18.8s,baz=65,slow=38						
JNU	**Nakatsue**	**15.83**	**30**	LR	LR	12 12 29.4	
	comp=Z,58nm,18.4s,baz=79,slow=38						
KSRS	**Korea Array**	**18.60**	**16**	P	**Pn**	**12 06 35.8**	**-0.3**
	1.0nm,0.3s,baz=197,slow=11,SNR=31						
KSRS				LR	LR	12 14 11.4	
	comp=Z,32nm,18.3s,baz=190,slow=38						
MJAR	**Matsushiro Arr**	**22.33**	**38**	P	**P**	**12 07 15.9**	**+0.1**
	1.3nm,0.8s,mb3.4,baz=224,slow=7.7,SNR=4.0						
ULN	**Ulaanbaatar**	**30.46**	**341**	eP	**P**	**12 08 30.7**	**+0.4**
	1.1nm,0.7s,mb3.7						
SONM	**Songino Array**	**30.64**	**340**	P	**P**	**12 08 33.5**	**+1.7**
	1.1nm,0.8s,mb3.7,baz=156,slow=8.6,SNR=11						
SONM				PcP	PcP	12 11 29.4	+0.2
	0.5nm,1.0s,baz=141,slow=4.8,SNR=3.8						
WRA	**Warramunga Arr**	**41.34**	**161**	P	**P**	**12 10 00.8**	**-2.8**
	0.8nm,0.6s,mb3.5,baz=342,slow=9.0,SNR=12						
WRA				PcP	PcP	12 11 58.9	-2.4
	0.5nm,0.9s,baz=344,slow=3.6,SNR=3.6						
MKAR	**Makanchi Array**	**41.83**	**319**	P	**P**	**12 10 09.1**	**+1.8**
	1.4nm,0.8s,mb3.7,baz=110,slow=10,SNR=12						
MKAR				PcP	PcP	12 12 02.8	+0.3
	0.5nm,0.7s,baz=101,slow=3.7,SNR=3.2						
ASAR	**Alice Springs**	**44.75**	**164**	P	**P**	**12 10 29.4**	**-1.6**
	0.4nm,0.5s,mb3.5,baz=342,slow=6.8,SNR=19						
TIXI	**Tiksi**	**52.17**	**3**	eP	**P**	**12 11 27.1**	**-0.5**
	1.3nm,0.5s,mb4.1						
ARU	**Arti**	**58.88**	**325**	eP	**P**	**12 12 16.3**	**+0.3**
	2.1nm,0.5s,mb4.4						
ARCES	**ARCESS Array B**	**73.81**	**339**	P	**P**	**12 13 52.7**	**+1.4**
ARCES	**ARCESS Array B**	**73.81**	**339**	P	**P**	**12 13 52.7**	**+1.4**
	3.0nm,0.9s,mb4.2,baz=93,slow=7.3,SNR=4.9						
FINES	**FINESS Array B**	**75.46**	**330**	P	**P**	**12 14 01.6**	**+0.6**
	1.7nm,0.9s,mb4.0,baz=84,slow=5.9,SNR=6.3						
AKASG	**Malin Array Be**	**76.41**	**319**	P	**P**	**12 14 06.0**	**-0.6**
AKASG	**Malin Array Be**	**76.41**	**319**	P	**P**	**12 14 06.0**	**-0.6**
	0.8nm,0.6s,mb3.9,baz=64,slow=6.3,SNR=4.0						
INK	**Inuvik**	**77.31**	**22**	eP	**P**	**12 14 10.7**	**-0.6**
YKA	**Yellowknife Ar**	**87.02**	**23**	P	**P**	**12 15 01.6**	**-0.7**
	1.7nm,0.6s,mb4.4,baz=306,slow=4.6,SNR=52						

IDC 18 12:09:57.4±11.0**, 2265N×14443E, h0**km**, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.3**/18**, mbtmp3.2**/4**, Error ellipse: s-maj=449.5km s-min=23.9km az=75.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.49**	**320**	P	P	12 14 44.1	+7.3
	0.8nm,0.6s,baz=142,slow=8.7,SNR=5.5						
SONM	**Songino Array**	**39.36**	**319**	P	P	12 17 27.6	-0.9
	0.1nm,0.4s,baz=110,slow=8.4,SNR=2.3						
WRA	**Warramunga Arr**	**43.46**	**194**	P	P	12 18 02.3	-0.1
	0.2nm,0.3s,baz=14,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**47.16**	**193**	P	P	12 18 31.7	-0.1
	0.1nm,0.7s,baz=16,slow=7.0,SNR=3.2						
MKAR	**Makanchi Array**	**54.91**	**312**	P	P	12 19 30.9	+1.0
	0.4nm,0.4s,baz=94,slow=8.3,SNR=3.3						

JMA 18 12:13:09.7±0.3**, 3216N×13851E, h361**km**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.46**	**49**	P	Pn	12 13 59.1	+0.5
HMMJ	**Hamamatsu 2**	**2.77**	**346**	P	Pn	12 14 08.7	+0.9
BSO3	**Boso 3**	**3.12**	**32**	P	Pn	12 14 10.5	-0.3
BSO3				eS	S	12 14 58.6	-1.5
JOD2	**Odawara 2**	**3.13**	**9**	P	Pn	12 14 11.7	+0.8
BSO4	**Boso 4**	**3.21**	**28**	eS	S	12 15 00.9	-0.7
BSO1	**Boso 1**	**3.23**	**39**	P	Pn	12 14 12.0	+0.2
JYN	**Shimob**	**3.33**	**0**	P	Pn	12 14 14.2	+1.5
JHU	**Hanno**	**3.74**	**10**	P	Pn	12 14 16.9	+0.3
JHU				eS	S	12 15 08.0	-2.7
JRY	**Ryogami san**	**3.86**	**5**	P	Pn	12 14 19.1	+1.3
JYT	**Yasato**	**4.29**	**19**	P	Pn	12 14 21.3	-0.9
JYT				S	S	12 15 15.5	-5.3
JAG	**Ashikaga**	**4.33**	**10**	P	Pn	12 14 22.2	-0.3
JHO	**Hitachi**	**4.75**	**20**	P	Pn	12 14 25.5	-1.5
JHO				eS	S	12 15 24.9	-4.8
JFK	**Kawauchi**	**5.55**	**20**	P	Pn	12 14 35.9	+0.2
JFK				eS	S	12 15 41.1	-4.3

*HLW **18** 12:13:20.9, 2990N×3664E, h25km, Mb3.2*
*GII **18** 12:13:21.1±0.0, 2990N×3630E, h0km, ML1.8/2*
*CSEM **18** 12:13:22.2±0.1, 2981N×3616E, h2km, ML1.8, Error ellipse: s-maj=3.4km s-min=1.8km az=100.0, Mining explosion.*
*SGS **18** 12:13:22.1, 2996N×3623E, h5km*

ISC 18 12:13:20.1±1.1**, 2986N**±004×**3636E**±007**, h0**km**, n22, σ0s63**/26**, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.16**	**279**	Pg	**Pg**	**12 13 41.6**	**-0.8**
ZFRI	**Zfri**	**1.23**	**304**	Pg	**Pg**	**12 13 42.8**	**-1.0**
EIL	**Elat**	**1.24**	**262**	Pg	**Pg**	**12 13 43.7**	**-0.2**
EIL				Sg	**Sg**	**12 14 01.6**	**+1.6**
HQLS		**1.26**	**244**	P	**Pg**	**12 13 43.6**	**-0.7**
HQLS		**1.26**	**244**	P	**Pg**	**12 13 43.6**	**-0.7**
HQLS				S	**Sg**	**12 14 00.2**	**-0.5**
PRNI	**Paran**	**1.27**	**293**	Pg	**Pg**	**12 13 43.8**	**-0.8**
PRNI				Sg	**Sg**	**12 14 01.2**	**+0.2**
JLOS		**1.35**	**214**	S	**Sg**	**12 14 04.0**	**+0.3**
JLOS		**1.35**	**214**	P	**Pg**	**12 13 46.4**	**+0.3**
JLOS		**1.35**	**214**	P	**Pg**	**12 13 46.4**	**+0.3**
JLOS				S	**Sg**	**12 14 04.0**	**+0.3**
KRMI	**Paran Flat**	**1.44**	**281**	Pn	**Pn**	**12 13 47.0**	**-0.5**
KRMI	**Paran Flat**	**1.44**	**281**	Pn	**Pn**	**12 13 46.9**	**-0.6**
HBST	**Basata**	**1.56**	**246**	P	**Pn**	**12 13 49.3**	**+0.2**
MZDA	**Masada**	**1.68**	**329**	Pn	**Pn**	**12 13 51.5**	**+0.7**
YTIR	**Yattir**	**1.84**	**325**	Pn	**Pn**	**12 13 53.6**	**+0.6**
HDHB	**Dhahab**	**1.90**	**234**	P	**Pn**	**12 13 53.7**	**0.0**
DSI	**Dead Sea**	**1.90**	**334**	Pn	**Pn**	**12 13 54.5**	**+0.6**
HNKL	**Nakhl**	**2.07**	**272**	P	**Pn**	**12 13 56.4**	**+0.2**
HNKL	**Nakhl**	**2.07**	**272**	P	**Pn**	**12 13 56.3**	**+0.2**
RSHS		**2.07**	**222**	P	**Pn**	**12 13 55.6**	**-0.5**
HKAT	**Jabal Katrina**	**2.46**	**238**	P	**Pn**	**12 14 01.6**	**+0.1**
SUZ		**3.06**	**271**	P	**Pn**	**12 14 10.2**	**+0.4**
SUZ		**3.06**	**271**	P	**Pn**	**12 14 10.2**	**+0.4**

*NEIC **18** 12:18:16.5±0.5, 002N×12741E, h10km, mb4.3/6, Error ellipse: s-maj=21.1km s-min=7.9km az=78.0*
*ISCJB **18** 12:18:17.6±7.9, 002S±009×1274E±02, h30km±58km, mb4.3/14, Error ellipse: s-maj=28.3km s-min=14.0km az=168.3*
*IDC **18** 12:18:22.8±5.7, 003S×12742E, h60km±54km, mb4.0/11, mb1 4.0/12, mb1mx3.9/18, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=32.3km s-min=14.7km az=79.0*

ISC 18 12:18:20.7±4.1**, 003S**±009×**1274E**±02**, h39**km±41km**, n22, σ0s81**/21**, mb4.3**/14**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.04**	**185**	eP	**Pn**	**12 22 28.5**	**0.0**
	2.2nm,0.4s						
FITZ	**Fitzroy Crossi**	**18.04**	**185**	P	**Pn**	**12 22 27.4**	**-1.1**
	0.3nm,0.3s,baz=15,slow=12,SNR=11						
WRA	**Warramunga Arr**	**20.93**	**161**	P	**P**	**12 23 00.0**	**-0.1**
	6.5nm,0.6s,baz=340,slow=11,SNR=111						
WB2	**Warramunga Arr**	**20.93**	**161**	eP	**P**	**12 23 00.1**	**0.0**
MBWA	**Marble Bar**	**22.30**	**199**	eP	**P**	**12 23 14.1**	**-0.7**
	15nm,1.3s,mb4.3						
ASAR	**Alice Springs**	**24.33**	**165**	P	**P**	**12 23 35.7**	**+0.8**
	7.5nm,0.7s,mb4.2,baz=343,slow=11,SNR=129						
ASAR				PcP	PcP	12 27 13.2	-0.8
	0.3nm,0.5s,baz=355,slow=1.0,SNR=4.9						
PSI	**Prapat**	**28.60**	**276**	P	**P**	**12 24 14.2**	**+0.7**
	1.5nm,0.5s,mb4.0,baz=96,slow=18,SNR=4.5						
NWAO	**Narrogin (SRO)**	**34.09**	**195**	P	**P**	**12 25 01.1**	**-0.5**
	4.7nm,0.6s,mb4.6,baz=20,slow=9.9,SNR=5.4						
STKA	**Stephens Creek**	**34.41**	**158**	eP	**P**	**12 25 05.6**	**+1.3**
	3.8nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**34.41**	**158**	P	**P**	**12 25 05.3**	**+1.0**
	4.0nm,0.8s,mb4.4,baz=335,slow=6.5,SNR=10						
KSRS	**Korea Array**	**37.30**	**1**	P	**P**	**12 25 29.1**	**+0.1**
	1.0nm,0.8s,mb3.7,baz=192,slow=11,SNR=4.5						
MJAR	**Matsushiro Arr**	**37.75**	**14**	P	**P**	**12 25 31.9**	**-0.9**
	0.5nm,0.4s,mb3.6,baz=186,slow=8.9,SNR=5.1						
ULN	**Ulaanbaatar**	**50.88**	**342**	eP	**P**	**12 27 18.3**	**+0.7**
	1.4nm,0.6s,mb4.1						
SONM	**Songino Array**	**51.05**	**342**	P	**P**	**12 27 20.0**	**+1.0**
	0.9nm,0.6s,mb3.9,baz=155,slow=7.9,SNR=8.8						
MKAR	**Makanchi Array**	**61.01**	**326**	P	**P**	**12 28 30.9**	**+0.8**
MKAR				PcP	PcP	12 29 11.4	-1.7
MKAR	**Makanchi Array**	**61.01**	**326**	P	**P**	**12 28 30.9**	**+0.8**
	0.7nm,0.3s,mb4.3,baz=116,slow=7.8,SNR=20						
MKAR				PcP	PcP	12 29 11.4	-1.7
	0.9nm,0.6s,baz=140,slow=3.2,SNR=4.0						
KURK	**Kurchatov**	**65.25**	**328**	eP	**P**	**12 28 58.2**	**-0.1**
	5.2nm,0.8s,mb4.6						
QSPA	**South Pole Qui**	**89.90**	**180**	eP	**P**	**12 31 15.4**	**+0.3**
	6.9nm,1.3s,mb4.8						
ARCES	**ARCESS Array B**	**94.18**	**340**	P	**P**	**12 31 33.8**	**-1.2**
ARCES	**ARCESS Array B**	**94.18**	**340**	P	**P**	**12 31 33.8**	**-1.2**
	2.2nm,0.9s,mb4.6,baz=50,slow=3.8,SNR=5.1						
FINES	**FINESS Array B**	**95.44**	**332**	P	**P**	**12 31 39.2**	**-1.7**
	3.2nm,1.1s,mb4.7,baz=60,slow=5.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**124.65**	**286**	PKP	PKPdf	12 37 16.9	-0.2
	1.1nm,0.8s,baz=94,slow=1.4,SNR=6.0						

IDC 18 12:23:06.5±2.0**, 098N×12583E, h0**km**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/16**, mbtmp3.5**/3**, Error ellipse: s-maj=167.8km s-min=26.1km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.41**	**159**	P	P	12 28 06.4	-0.5
	1.1nm,0.6s,baz=337,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**25.73**	**163**	P	P	12 28 39.3	+0.5
	0.8nm,0.8s,baz=346,slow=9.9,SNR=8.3						
MKAR	**Makanchi Array**	**59.31**	**327**	P	P	12 33 10.1	0.0
	0.1nm,0.3s,baz=128,slow=7.0,SNR=5.0						

*NIED **18** 12:45:00, 2970N×14250E, h17km, Mw4.4 Best double couple: M0 4.36000×10^15 NP1: φs 306.00000°, δ15.00000°, λ-114.00000°. NP2: φs 151.00000°, δ76.00000°, λ-84.00000°.*
*ISCJB **18** 12:45:52.3±1.8, 2954N±004×1422E±0.1, h23km±13km, mb4.3/20, MS3.8/3, Error ellipse: s-maj=16.9km s-min=5.0km az=164.4*
*JMA **18** 12:45:52.2±0.2, 2946N×14229E, h53km, M4.3*
*MOS **18** 12:45:53.4±1.8, 2941N×14247E, h41km, mb4.4/10, Error ellipse: s-maj=25.1km s-min=10.6km az=114.0*
*IDC **18** 12:45:55.8±2.7, 2939N×14223E, h38km±23km, mb3.8/11, mb1 4.0/14, mb1mx3.9/21, mbtmp3.8/14, ML3.9/3, MS3.5/7, Ms1 3.5/7, ms1mx3.3/26, Error ellipse: s-maj=25.6km s-min=13.0km az=81.0*

ISC 18 12:45:54.6±1.9**, 2945N**±004×**1422E**±01**, h29**km±13km**, n58, σ1s02**/65**, mb4.4**/20**, MS3.8**/3**, 3C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.35**	**180**	P	**Pn**	**12 46 29.7**	**-1.5**
CBIJ				eS	**Sn**	**12 46 56.2**	**-2.8**
CBIJ	**Chichi jima**	**2.35**	**180**	Pn	**Pn**	**12 46 32.8**	**+1.6**
	24nm,0.3s,baz=293,slow=23,SNR=6.2						
CBIJ				Sn	**Sn**	**12 46 56.5**	**-2.6**
	83nm,0.3s,baz=106,slow=24,SNR=17						
JHJ2	**Mitsune**	**4.17**	**331**	eS	**Sn**	**12 47 43.6**	**-0.4**
JHJ	**Hachijo jima 2**	**4.19**	**331**	Pn	**Pn**	**12 46 58.2**	**+1.8**
	14nm,0.3s,baz=221,slow=20,SNR=4.3						
JHJ				Sn	**Sn**	**12 47 44.2**	**-0.3**
	29nm,0.3s,baz=273,slow=22,SNR=4.4						
JHJ				LR	LR	12 47 49.4	
	comp=Z,500nm,21.4s,baz=144,slow=27						
BSO1	**Boso 1**	**5.28**	**349**	P	**Pn**	**12 47 09.5**	**-2.0**
BSO1				eS	**Sn**	**12 48 08.7**	**-2.7**
BSO2	**Boso 2**	**5.42**	**347**	eS	**Sn**	**12 48 15.1**	**+0.4**
BSO3	**Boso 3**	**5.52**	**345**	eS	**Sn**	**12 48 16.7**	**-0.4**
BSO4	**Boso 4**	**5.74**	**345**	P	**Pn**	**12 47 18.4**	**+0.7**
BSO4				eS	**Sn**	**12 48 23.1**	**+0.6**
JOD2	**Odawara 2**	**6.36**	**336**	P	**Pn**	**12 47 27.0**	**+0.8**
JOD2				eS	**Sn**	**12 48 38.1**	**+0.3**
JHU	**Hanno**	**6.83**	**340**	P	**Pn**	**12 47 32.6**	**-0.2**
JHU				eS	**Sn**	**12 48 47.6**	**-1.9**
JYT	**Yasato**	**6.96**	**347**	S	**Sn**	**12 48 51.4**	**-1.2**
JRY	**Ryogami san**	**7.11**	**338**	P	**Pn**	**12 47 37.0**	**+0.5**
JRY				eS	**Sn**	**12 48 56.0**	**-0.2**
JHO	**Hitachi**	**7.26**	**350**	P	**Pn**	**12 47 36.6**	**-2.1**
JHO				eS	**Sn**	**12 48 53.6**	**-6.5**
JAG	**Ashikaga**	**7.32**	**342**	P	**Pn**	**12 47 38.5**	**-1.0**
MJAR	**Matsushiro Arr**	**7.82**	**336**	P	**Pn**	**12 47 46.7**	**+0.4**
MJAR						12 49 13.6	
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR				smax			
	comp=N,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**7.82**	**336**	Pn	**Pn**	**12 47 46.7**	**+0.5**
	comp=N,2.6nm,0.3s,baz=160,slow=11,SNR=40						
MJAR				Sn	**Sn**	**12 49 13.6**	**-0.1**
	comp=N,0.8nm,0.3s,baz=162,slow=18,SNR=5.6						
MAT	**Matsushiro**	**7.82**	**336**	P	**Pn**	**12 47 46.3**	**0.0**
MAT				S	**Sn**	**12 49 12.0**	**-1.8**
MAT	**Matsushiro**	**7.82**	**336**	P	**Pn**	**12 47 47.2**	**+0.9**
MAT				eS	**Sn**	**12 49 13.8**	**0.0**
JFK	**Kawauchi**	**7.97**	**352**	eS	**Sn**	**12 49 09.6**	**-7.8**
JNU	**Nakatsue**	**10.34**	**294**	LR	LR	12 52 07.7	
	comp=N,340nm,18.9s,baz=90,slow=36						
JOW	**Kunigami**	**12.55**	**261**	LR	LR	12 53 16.5	
	comp=N,216nm,18.4s,baz=133,slow=35						
KSRS	**Korea Array**	**14.32**	**308**	Pn	**Pn**	**12 49 22.0**	**+6.7**
	comp=N,0.3nm,0.3s,baz=117,slow=11,SNR=8.4						
KSRS				LR	LR	12 54 34.3	
	comp=N,139nm,20.7s,baz=120,slow=36						
ASAJ	**Asahikawa**	**14.64**	**1**	LR	LR	12 53 50.9	
	comp=N,83nm,21.9s,baz=10,slow=32						
KLR	**Kul'dur**	**21.30**	**341**	eP	**P**	**12 50 40.3**	**+1.7**
ULN	**Ulaanbaatar**	**32.65**	**314**⇑	eP	**P**	**12 52 26.1**	**+2.3**
SONM	**Songino Array**	**33.05**	**314**	P	**P**	**12 52 28.4**	**+1.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM				MLR	MLR		
	comp=Z,82nm,18.6s						
SONM	**Songino Array**	**33.05**	**314**	P	**P**	**12 52 28.4**	**+1.0**
	comp=Z,1.0nm,0.4s,mb4.1,baz=124,slow=9.2,SNR=16						
SONM				LR	LR	13 05 31.7	
	comp=Z,82nm,18.6s,MS3.5,baz=50,slow=36						
SEY	**Seymchan**	**34.13**	**8**	i P	**P**	**12 52 37.6**	**+1.1**
ZAK	**Zakamensk**	**35.87**	**317**	i P	**P**	**12 52 52.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
BILL	**Bilibino**	**41.17**	**13**	eP	**P**	**12 53 31.5**	**-4.4**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
MKAR	**Makanchi Array**	**49.00**	**308**	P	**P**	**12 54 39.3**	**+0.8**
MKAR						12 56 03.2	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,63nm,18.3s						
MKAR	**Makanchi Array**	**49.00**	**308**	P	**P**	**12 54 39.3**	**+0.8**
	comp=Z,0.6nm,0.4s,mb3.9,baz=91,slow=8.2,SNR=9.6						
MKAR				PcP	PcP	12 56 03.2	+1.1
	comp=Z,0.2nm,0.3s,baz=82,slow=4.9,SNR=2.6						
MKAR				LR	LR	13 17 44.0	
	comp=Z,63nm,18.3s,MS3.6,baz=244,slow=39						
WB2	**Warramunga Arr**	**49.69**	**190**	eP	**P**	**12 54 42.7**	**-1.2**
WRA	**Warramunga Arr**	**49.69**	**190**	P	**P**	**12 54 42.7**	**-1.2**
WRA						12 56 05.0	
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**49.69**	**190**	P	**P**	**12 54 42.7**	**-1.2**
	comp=Z,3.3nm,0.7s,mb4.5,baz=9.3,slow=8.0,SNR=52						
WRA				PcP	PcP	12 56 05.0	+0.2
	comp=Z,0.7nm,0.5s,baz=4.1,slow=3.8,SNR=6.5						
KURK	**Kurchatov**	**51.36**	**313**c	i P	**P**	**12 54 57.0**	**+0.8**
ASAR	**Alice Springs**	**53.41**	**189**	P	**P**	**12 55 10.8**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.6,baz=359,slow=5.2,SNR=19						
ARU	**Arti**	**62.58**	**322**⇑	eP	**P**	**12 56 16.4**	**+0.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.7						
ARU				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.3						
YKA	**Yellowknife Ar**	**70.08**	**29**	P	**P**	**12 57 02.9**	**-0.6**
YKA	**Yellowknife Ar**	**70.08**	**29**	P	**P**	**12 57 02.9**	**-0.6**
	comp=Z,0.4nm,0.6s,mb3.5,baz=294,slow=6.1,SNR=8.4						
ARCES	**ARCESS Array B**	**71.32**	**341**	P	**P**	**12 57 11.8**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**71.32**	**341**	P	**P**	**12 57 11.8**	**+0.8**
	comp=Z,2.3nm,0.8s,mb4.2,baz=51,slow=6.4,SNR=4.4						
FINES	**FINESS Array B**	**75.84**	**334**	i P	**P**	**12 57 38.0**	**+0.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**75.84**	**334**	P	**P**	**12 57 37.9**	**+0.2**
	comp=Z,2.6nm,1.0s,mb4.1,baz=73,slow=3.8,SNR=8.5						
NVAR	**Mina Array Bea**	**79.07**	**52**	P	**P**	**12 57 56.9**	**+0.7**
	comp=Z,0.9nm,0.8s,mb3.7,baz=289,slow=3.3,SNR=7.6						
UMR	**Umm Al-Rimmam**	**79.58**	**298**	eP	**P**	**12 57 59.0**	**-0.1**
UMR				AMb	AMB	12 58 01.0	
	comp=Z,19nm,0.6s,mb5.2						
KBD	**Kabd**	**79.78**	**298**	eP	**P**	**12 58 00.2**	**0.0**
KBD				AMb	AMB	12 58 03.6	
	comp=Z,46nm,0.7s,mb5.5						
QRN	**Al-Qurain**	**79.80**	**297**	eP	**P**	**12 57 59.5**	**-0.8**
QRN				AMb	AMB	12 58 02.3	
	comp=Z,16nm,0.7s,mb5.0						
RDF	**Al-Radifah**	**80.00**	**297**	eP	**P**	**12 58 01.5**	**+0.1**
RDF				AMb	AMB	12 58 03.5	
	comp=Z,22nm,0.6s,mb5.3						
NAY	**Al-Naaiem**	**80.09**	**298**	eP	**P**	**12 58 02.3**	**+0.4**
NAY				AMb	AMB	12 58 04.0	
	comp=Z,12nm,0.7s,mb4.9						
RST	**Umm Al-Ruwaisa**	**80.16**	**298**	eP	**P**	**12 58 02.3**	**0.0**
RST				AMb	AMB	12 58 06.2	
	comp=Z,9.9nm,0.6s,mb5.0						
PDAR	**Pinedale Array**	**82.54**	**45**	P	**P**	**12 58 15.1**	**+0.4**
	comp=Z,0.6nm,0.9s,mb3.6,baz=276,slow=4.0,SNR=4.2						
BRTR	**Keskin Array B**	**84.41**	**313**	i P	**P**	**12 58 24.8**	**+0.5**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**84.41**	**313**	P	**P**	**12 58 24.9**	**+0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=102,slow=4.4,SNR=4.0						
TXAR	**Lajitas Array**	**94.19**	**53**	P	**P**	**12 59 11.5**	**+0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR	**Lajitas Array**	**94.19**	**53**	P	**P**	**12 59 11.4**	**+0.5**
	comp=Z,1.0nm,0.9s,mb4.2,baz=323,slow=2.6,SNR=10						
QSPA	**South Pole Qui**	**119.22**	**180**	PKP	PKPdf	13 04 39.2	-0.3
	comp=Z,1.8nm,1.1s,baz=282,slow=2.4,SNR=5.8						
TORD	**Torodi Ar. Bea**	**123.02**	**312**	PKP	PKPdf	13 04 48.4	-0.4
	comp=Z,0.2nm,0.6s,baz=39,slow=1.2,SNR=4.6						

*MEX **18** 13:10:06.7±0.5, 14.10N×9385W, h20km, MD4.5*
*IDC **18** 13:10:14.5±9.1, 1485N×9326W, h38km±50km, mb3.4/3, mb1 3.8/6, mb1mx3.5/21, mbtmp3.5/6, ML3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.2/25, Error ellipse: s-maj=88.3km s-min=33.8km az=0.0*

ISC 18 13:10:11.3±1.7**, 145N**±01×**9363W**±008**, h35**km**, n13, σ1s49**/19**, mb3.5**/3**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.26**	**39**	eP	**Pn**	**13 10 47.1**	**+0.9**
CCIG				i S	**Sn**	**13 11 19.1**	**+6.2**
SCX	**San Cristobal**	**2.39**	**24**	i P	**Pn**	**13 10 46.0**	**-2.0**
SCX				i S	**Sn**	**13 11 20.5**	**+4.3**
CMIG	**Matias Romero**	**2.82**	**335**	Pn	**Pn**	**13 10 54.2**	**+0.4**
	2.8nm,0.3s,baz=140,slow=9.2,SNR=30						
CMIG				Sn	**Sn**	**13 11 27.8**	**+1.2**
	7.5nm,0.3s,baz=123,slow=8.2,SNR=7.9						
CMIG	**Matias Romero**	**2.82**	**335**	i P	**Pn**	**13 10 54.1**	**+0.3**
CMIG				i S	**Sn**	**13 11 28.4**	**+1.8**
VHO	**Vista Hermosa**	**3.91**	**311**	i P	**Pn**	**13 11 08.6**	**-0.3**
VHO				i S	**Sn**	**13 11 51.6**	**-2.0**
UTMO	**Huajuapan**	**5.18**	**310**	i P	**Pn**	**13 11 24.8**	**-1.6**
TPIG	**Tehuac#an**	**5.27**	**318**	i S	**Sn**	**13 12 27.4**	**+0.3**
PPM	**Popocatepetl**	**6.57**	**314**	i S	**Sn**	**13 12 59.2**	**-0.1**
TEIG	**Tepich**	**7.63**	**41**	Pn	**Pn**	**13 11 57.6**	**-2.4**
	4.7nm,0.3s,baz=69,slow=0.9,SNR=21						
TEIG				Sn	**Sn**	**13 13 16.6**	**-8.7**
	baz=290,slow=16,SNR=1.6						
TEIG				LR	LR	13 15 19.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,120nm,21.6s,baz=251,slow=43						
TXAR	**Lajitas Array**	**17.41**	**329**	P	**Pn**	**13 14 15.5**	**+4.0**
	0.0nm,0.3s,baz=154,slow=12,SNR=6.2						
PDAR	**Pinedale Array**	**31.30**	**337**	P	**P**	**13 16 30.5**	**+2.4**
	0.1nm,0.4s,mb3.0,baz=123,slow=11,SNR=3.9						
NVAR	**Mina Array Bea**	**32.27**	**322**	P	**P**	**13 16 39.9**	**+3.2**
	0.4nm,0.7s,mb3.4,baz=130,slow=10.0,SNR=4.1						
YKA	**Yellowknife Ar**	**50.16**	**348**	P	**P**	**13 19 03.6**	**+0.5**
	1.3nm,0.7s,mb4.1,baz=152,slow=7.2,SNR=26						

*ISCJB **18** 13:15:18.5±0.7, 34.84N±0.07×24.47E±0.05, h48km±6km, mb3.4/4, Error ellipse: s-maj=12.4km s-min=6.7km az=2.7*
*ATH **18** 13:15:18.5, 34.87N×24.52E, h34km±3km, MD3.6/7*
*NEIC **18** 13:15:18.4, 34.87N×24.51E, h35km, MD3.6(ATH), After ATH.*
*CSEM **18** 13:15:19.2±0.1, 34.88N×24.58E, h25km, MD3.6, Error ellipse: s-maj=4.7km s-min=2.3km az=178.0*
*IDC **18** 13:15:23.3±9.8, 34.89N×24.55E, h85km±97km, mb3.1/4, mb1 3.3/6, mb1mx3.2/21, mbtmp3.2/6, ML4.1/2, Error ellipse: s-maj=47.8km s-min=24.0km az=142.0*
ISC 18 13:15:19.3±0.7**, 34.85N**±0.07×**24.48E**±0.05**, h40**km±7km**, n16, σ1.00**/20**, mb3.4**/4**, 1C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.32**	**267**	*e*PB	**Pn**	**13 15 27.5**	**-0.3**
GVD				*e*SB	**Sn**	**13 15 33.5**	**-0.2**
IDI	**Anoyia**	**0.55**	**38**	P	**Pn**	**13 15 29.3**	**-1.4**
VAM	**Vamos**	**0.60**	**338**	⇑*i*PN	**Pn**	**13 15 30.5**	**-0.8**
VAM				*e*SN	**Sn**	**13 15 40.9**	**+1.0**
LAST	**Lasithi**	**0.88**	**69**	P	**Pn**	**13 15 34.3**	**-0.8**
XRY	**Khrisi**	**1.00**	**88**	*e*PN	**Pn**	**13 15 36.5**	**-0.3**
XRY				*e*SN	**Sn**	**13 15 51.0**	**+1.3**
NPS	**Neapolis**	**1.02**	**66**	⇓*i*PN	**Pn**	**13 15 37.2**	**+0.2**
NPS				*e*SN	**Sn**	**13 15 49.6**	**-0.5**
KYTH	**Kithira**	**1.85**	**321**	*e*PN	**Pn**	**13 15 50.0**	**+1.6**
VLI	**Veliai**	**2.24**	**326**	P	**Pn**	**13 15 51.8**	**-2.1**
KARP	**Karpathos**	**2.30**	**72**	*e*PN	**Pn**	**13 15 56.0**	**+1.3**
APE	**Apeiranthos**	**2.37**	**21**	⇓*i*PN	**Pn**	**13 15 56.5**	**+0.9**
GERES	**GERESS Array B**	**16.10**	**334**	P	**Pn**	**13 19 05.9**	**+3.4**
	0.2nm,0.3s,baz=133,slow=8.2,SNR=4.2						
AKASG	**Malin Array Be**	**16.21**	**11**	P	**Pn**	**13 19 03.8**	**-0.1**
	1.0nm,0.3s,baz=201,slow=10,SNR=4.8						
ESDC	**Sonseca Array**	**23.09**	**290**	P	**P**	**13 20 22.1**	**+0.6**
	0.3nm,0.4s,mb3.0,baz=66,slow=8.8,SNR=5.2						
TORD	**Torodi Ar. Bea**	**29.86**	**229**	P	**P**	**13 21 23.4**	**+0.4**
	0.2nm,0.3s,mb3.3,baz=28,slow=8.9,SNR=4.3						
ARCES	**ARCESS Array B**	**34.74**	**1**	P	**P**	**13 22 04.3**	**-0.8**
	2.4nm,1.0s,mb4.1,baz=185,slow=9.9,SNR=3.2						
MKAR	**Makanchi Array**	**44.41**	**56**	P	**P**	**13 23 25.0**	**-0.9**
	0.1nm,0.3s,mb3.0,baz=264,slow=8.4,SNR=4.8						

*ISCJB **18** 13:37:59.0±4.7, 24.2S±0.1×180.0W±0.2, h446km±53km, mb4.2/12, Error ellipse: s-maj=25.1km s-min=14.2km az=155.7*
*IDC **18** 13:38:03.2±2.2, 24.17S×179.99W, h482km±23km, mb3.6/9, mb1 3.7/9, mb1mx3.4/16, mbtmp3.6/9, Error ellipse: s-maj=21.0km s-min=16.8km az=169.0*
*NEIC **18** 13:38:04.1±2.1, 24.37S×179.96W, h499km±25km, mb4.4/6, Error ellipse: s-maj=22.3km s-min=16.4km az=209.0*
ISC 18 13:38:03.3±2.6**, 24.4S**±0.1×**180.0W**±0.1**, h486**km±31km**, n19, σ0.95**/19**, mb4.2**/12**, 4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**13 40 52.5**	**+3.0**
	0.6nm,0.3s,baz=81,slow=16,SNR=7.6						
URZ	**Urewera**	**14.07**	**190**	P	**P**	**13 41 02.7**	**-0.9**
	0.8nm,0.3s,baz=64,slow=16,SNR=5.4						
URZ				S	**S**	**13 43 32.1**	**-0.4**
	0.2nm,0.3s,baz=317,slow=16,SNR=4.2						
HNR	**Honiara**	**24.25**	**304**	P	**P**	**13 42 39.9**	**-1.1**
	31nm,0.7s,mb4.9,baz=260,slow=8.7,SNR=3.7						
CTA	**Charters Tower**	**31.52**	**271**	⇓*i*P	**P**	**13 43 45.5**	**+0.8**
	22nm,0.3s,mb5.1						
STKA	**Stephens Creek**	**34.58**	**249**	⇓*i*P	**P**	**13 44 11.4**	**+0.8**
	2.0nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**34.58**	**249**	P	**P**	**13 44 11.5**	**+0.9**
	2.3nm,0.5s,mb3.8,baz=98,slow=11,SNR=16						
PMG	**Port Moresby**	**34.69**	**290**	*e*P	**P**	**13 44 11.2**	**-0.5**
	11nm,0.7s,mb4.4						
PMG	**Port Moresby**	**34.69**	**290**	P	**P**	**13 44 11.6**	**0.0**
	14nm,0.8s,mb4.4,baz=121,slow=17,SNR=5.9						
ASAR	**Alice Springs**	**41.99**	**261**	P	**P**	**13 45 11.2**	**+0.1**
	2.0nm,0.4s,mb3.9,baz=94,slow=7.2,SNR=139						
ASAR				ScP	ScP	13 49 59.1	0.0
	0.8nm,0.9s,baz=109,slow=4.2,SNR=6.2						
WB2	**Warramunga Arr**	**42.40**	**267**	⇓*i*P	**P**	**13 45 13.8**	**-0.6**
WRA	**Warramunga Arr**	**42.41**	**267**	P	**P**	**13 45 14.0**	**-0.5**
	6.6nm,0.3s,mb4.5,baz=97,slow=8.4,SNR=306						
WRA				ScP	ScP	13 50 01.6	+0.7
	1.7nm,0.9s,baz=102,slow=4.3,SNR=8.3						
KAKA	**Kakadu**	**46.39**	**276**	⇓*i*P	**P**	**13 45 44.4**	**-1.0**
	5.3nm,0.2s,mb4.6						
FITZ	**Fitzroy Crossi**	**50.83**	**266**	*e*P	**P**	**13 46 18.3**	**-0.2**
	6.3nm,0.6s,mb4.1						
QSPA	**South Pole Qui**	**65.71**	**180**	*e*P	**P**	**13 48 00.4**	**+2.0**
	3.6nm,0.7s,mb4.1						
QSPA	**South Pole Qui**	**65.71**	**180**	P	**P**	**13 48 00.4**	**+2.0**
	2.1nm,0.6s,mb3.9,baz=88,slow=5.6,SNR=21						
NVAR	**Mina Array Bea**	**85.07**	**44**	P	**P**	**13 49 46.3**	**-0.7**
	0.3nm,0.7s,mb3.0,baz=213,slow=4.2,SNR=3.1						
TXAR	**Lajitas Array**	**90.65**	**58**	P	**P**	**13 50 14.2**	**+0.7**
	1.2nm,0.7s,mb3.9,baz=215,slow=6.6,SNR=19						
PDAR	**Pinedale Array**	**93.00**	**44**	P	**P**	**13 50 24.0**	**0.0**
	0.4nm,0.8s,mb3.5,baz=256,slow=3.6,SNR=3.3						
BRTR	**Keskin Array B**	**147.89**	**307**	PKPab	PKPab	13 56 57.4	-0.2
	0.9nm,0.6s,baz=109,slow=3.1,SNR=3.9						

IDC 18 13:50:43.9±12.0**, 0.01S**×**126.78E, h118**km±125km**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.5**/15**, mbtmp3.6**/6**, Error ellipse: s-maj=157.8km s-min=25.7km az=68.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.15**	**160**	P	P	13 55 18.8	-0.9
	1.2nm,0.5s,baz=336,slow=10,SNR=26						
ASAR	**Alice Springs**	**24.51**	**164**	P	P	13 55 52.9	+0.5
	0.7nm,0.3s,baz=344,slow=11,SNR=48						
STKA	**Stephens Creek**	**34.66**	**158**	P	P	13 57 22.5	+0.4
	1.5nm,0.6s,baz=335,slow=8.9,SNR=7.8						
SONM	**Songino Array**	**50.84**	**342**	P	P	13 59 33.0	+0.7
	0.7nm,0.6s,baz=157,slow=8.7,SNR=8.0						
MKAR	**Makanchi Array**	**60.66**	**326**	P	P	14 00 42.5	+0.1
	0.9nm,0.4s,baz=121,slow=7.3,SNR=27						
ARCES	**ARCESS Array B**	**93.95**	**340**	P	P	14 03 46.8	-1.2
	2.3nm,0.9s,baz=79,slow=4.7,SNR=2.9						

*IDC **18** 13:54:09.4±1.1, 4.19S×129.72E, h0km, mb4.0/4, mb1 4.0/7, mb1mx3.8/16, mbtmp3.9/7, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/25, Error ellipse: s-maj=49.8km s-min=18.9km az=71.0*
*NEIC **18** 13:54:10.6±0.7, 4.24S×129.71E, h10km, mb4.4/2, Error ellipse: s-maj=24.6km s-min=9.9km az=71.0*
*ISCJB **18** 13:54:13.2±3.7, 4.4S±0.1×129.6E±0.2, h49km±39km, mb4.1/6, Error ellipse: s-maj=31.6km s-min=14.7km az=146.6*
ISC 18 13:54:09.3±5.0**, 4.25S**±0.08×**129.7E**±0.2**, h1**km±32km**, n14, σ0.99**/15**, mb4.1**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**8.43**	**225**	LR	LR	14 00 00.4	
	comp=Z,175nm,19.9s,baz=54,slow=41						
KAKA	**Kakadu**	**8.83**	**162**	*e*P	**Pn**	**13 56 20.2**	**+2.1**
	8.4nm,0.4s						
KAKA				*e*S	**Sn**	**13 57 58.3**	**0.0**
FITZ	**Fitzroy Crossi**	**14.34**	**196**	Pn	**Pn**	**13 57 32.5**	**-1.1**
	0.1nm,0.3s,baz=23,slow=15,SNR=2.8						
WRA	**Warramunga Arr**	**16.24**	**164**	Pn	**Pn**	**13 57 57.7**	**-1.1**
	0.3nm,0.3s,baz=347,slow=14,SNR=5.8						
WRA				Sn	**Sn**	**14 00 52.1**	**-7.5**
	0.1nm,0.3s,baz=353,slow=24,SNR=3.7						
WB2	**Warramunga Arr**	**16.24**	**164**	*e*P	**Pn**	**13 57 57.4**	**-1.4**
ASAR	**Alice Springs**	**19.72**	**169**	P	**Pn**	**13 58 42.6**	**+0.8**
	0.5nm,0.3s,baz=347,slow=9.6,SNR=32						
KSM	**Kuching**	**20.21**	**286**	*e*P	**P**	**13 58 46.7**	**+0.9**
CTA	**Charters Tower**	**22.53**	**136**	P	**P**	**13 59 11.8**	**+1.0**
	9.7nm,1.1s,mb4.2,baz=315,slow=11,SNR=3.4						
MJAR	**Matsushiro Arr**	**41.35**	**10**	P	**P**	**14 01 55.4**	**-1.4**
MJAR	**Matsushiro Arr**	**41.35**	**10**	P	**P**	**14 01 55.4**	**-1.4**
	1.2nm,0.7s,mb3.6,baz=183,slow=9.3,SNR=4.4						
ULN	**Ulaanbaatar**	**55.58**	**342**	*e*P	**P**	**14 03 46.3**	**0.0**
	1.8nm,0.8s,mb4.2						
SONM	**Songino Array**	**55.76**	**341**	P	**P**	**14 03 48.3**	**+0.7**
	0.9nm,0.7s,mb3.9,baz=149,slow=5.7,SNR=8.7						
MKAR	**Makanchi Array**	**65.79**	**326**	P	**P**	**14 04 56.1**	**0.0**
	2.2nm,0.8s,mb4.2,baz=122,slow=8.0,SNR=22						
KURK	**Kurchatov**	**70.04**	**328**	*e*P	**P**	**14 05 22.4**	**-0.3**
	4.7nm,0.9s,mb4.4						

*ISCJB **18** 14:18:19.7±0.7, 38.36N±0.04×39.21E±0.05, h8km, Error ellipse: s-maj=6.6km s-min=5.0km az=41.2*
*CSEM **18** 14:18:19.0±0.1, 38.36N×39.20E, h9km±1km, MD2.7, Error ellipse: s-maj=2.3km s-min=1.5km az=117.0*
*ISK **18** 14:18:19.2, 38.35N×39.20E, h8km, MD2.7*
*DDA **18** 14:18:20.4, 38.41N×39.18E, h19km, Md2.6*
ISC 18 14:18:19.7±1.0**, 38.36N**±0.05×**39.25E**±0.06**, h2**km±8km**, n8, σ0.69**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.25**	**304**	*i* P	**Pg**	**14 18 24.8**	**+0.3**
ELZG				*i* S	**Sg**	**14 18 28.1**	**+0.5**
PTK	**Pertek**	**0.54**	**12**	PG	**Pg**	**14 18 30.6**	**+0.5**
MALT	**Malatya**	**0.65**	**266**	PG	**Pg**	**14 18 31.2**	**-0.8**
MALT				SG	**Sg**	**14 18 40.6**	**+0.2**
MYA	**Malataya**	**0.65**	**267**	PG	**Pg**	**14 18 31.4**	**-0.6**
URFA	**Urfa**	**0.98**	**200**	PG	**Pg**	**14 18 38.2**	**-0.2**
URFA				SG	**Sg**	**14 18 51.8**	**+0.7**
MARD	**Mardin**	**1.60**	**130**	*i* P	**Pn**	**14 18 48.9**	**-0.1**
MARD				*i* S	**Sn**	**14 19 10.5**	**+0.2**
GZT	**Gaziantep**	**1.67**	**233**	*i* P	**Pn**	**14 18 48.6**	**-1.3**
GZT				*i* S	**Sn**	**14 19 13.1**	**+1.3**
KMRS	**Kahramanmaras**	**2.04**	**246**	*e*PN	**Pn**	**14 18 54.3**	**-0.8**

*ISCJB **18** 14:19:01.9±1.0, 18.04S±0.07×178.51W±0.06, h559km±12km, mb4.5/64, Error ellipse: s-maj=12.1km s-min=6.5km az=146.7*
*NEIC **18** 14:19:03.5±0.7, 18.00S×178.49W, h569km±8km, mb4.6/46, Error ellipse: s-maj=9.3km s-min=4.6km az=147.0*
*BJI **18** 14:19:03.5, 18.00S×178.50W, h568km, mB4.9, mb4.5*
*IDC **18** 14:19:04.2±1.5, 18.02S×178.55W, h577km±17km, mb4.0/17, mb1 4.2/18, mb1mx4.1/21, mbtmp4.0/18, Error ellipse: s-maj=13.2km s-min=10.0km az=136.0*
ISC 18 14:19:03.1±1.0**, 18.02S**±0.07×**178.48W**±0.06**, h561**km±12km**, n132, σ0.86**/111**, mb4.5**/64**, 2C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.63**	**59**	*e*Pn	**P**	**14 20 56.9**	**-0.8**
	113nm,0.6s						
AFI				*e*S	**S**	**14 22 25.1**	**-6.4**
DZM	**Mont Dzumac**	**14.73**	**252**	*e*P	**P**	**14 22 10.5**	**+0.8**
DZM				*e*S		14 24 06.0	
DZM	**Mont Dzumac**	**14.73**	**252**	*e*P	**P**	**14 22 10.5**	**+0.8**
DZM				*e*S		14 24 06.0	
DZM	**Mont Dzumac**	**14.73**	**252**	P	**P**	**14 22 10.0**	**+0.3**
	5.2nm,0.3s,baz=81,slow=17,SNR=36						
URZ	**Urewera**	**20.53**	**190**	P	**P**	**14 23 02.4**	**-0.9**
	6.5nm,0.3s,baz=302,slow=5.7,SNR=14						
HNR	**Honiara**	**22.61**	**289**	*e*P	**P**	**14 23 24.2**	**+1.9**
	35nm,0.7s,mb5.1						
HNR	**Honiara**	**22.61**	**289**	P	**P**	**14 23 21.2**	**-1.0**
	46nm,0.6s,mb5.3,baz=347,slow=1.6,SNR=7.5						
RPZ	**Rata Peaks**	**27.10**	**197**	P	**P**	**14 24 00.5**	**-1.0**
RPZ	**Rata Peaks**	**27.10**	**197**	P	**P**	**14 24 00.5**	**-1.0**
	12nm,0.7s,mb4.6,baz=330,slow=5.1,SNR=5.9						
ARMA	**Armidale**	**29.82**	**240**	⇓*i*P	**P**	**14 24 27.1**	**+1.7**
CNB	**Canberra Magne**	**33.30**	**232**	⇓*i*P	**P**	**14 24 56.5**	**+1.5**
	103nm,0.6s,mb5.5						
CTA	**Charters Tower**	**33.36**	**261**	⇓*i*P	**P**	**14 24 56.2**	**+0.5**
	30nm,0.5s,mb5.1						
CTAO	**Charters Tower**	**33.36**	**261**	*e*P	**P**	**14 24 55.7**	**0.0**
	45nm,0.6s,mb5.2						
PMG	**Port Moresby**	**34.41**	**280**	*e*P	**P**	**14 25 05.9**	**+1.3**
	139nm,0.9s,mb5.5						
STKA	**Stephens Creek**	**38.52**	**241**	⇓*i*P	**P**	**14 25 39.4**	**+1.3**
	40nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**14 25 39.1**	**+1.0**
	44nm,0.5s,mb5.3,baz=90,slow=9.5,SNR=329						
STKA				PcP	PcP	14 27 34.4	-2.0
	4.0nm,0.6s,baz=106,slow=7.4,SNR=2.6						
WB2	**Warramunga Arr**	**44.53**	**260**	⇓*i*P	**P**	**14 26 25.2**	**-0.6**
WRA	**Warramunga Arr**	**44.54**	**260**	P	**P**	**14 26 25.3**	**-0.6**
	34nm,0.5s,mb5.1,baz=94,slow=7.2,SNR=457						
WRA				PcP	PcP	14 27 55.7	-1.1
	3.2nm,0.6s,baz=89,slow=4.1,SNR=4.2						
WRA				ScP	ScP	14 30 54.9	-1.0
	2.3nm,1.1s,baz=88,slow=3.9,SNR=4.7						
ASAR	**Alice Springs**	**44.69**	**254**	P	**P**	**14 26 27.3**	**+0.4**
	255nm,0.6s,baz=87,slow=8.6,SNR=4563						
ASAR				PcP	PcP	14 27 56.6	-0.6
	5.3nm,0.5s,baz=103,slow=3.8,SNR=4.2						
ASAR				ScP	ScP	14 30 56.1	-0.3
	0.9nm,0.7s,baz=115,slow=4.0,SNR=4.3						
ASAR				S	**S**	**14 32 19.2**	**-4.0**
	1.3nm,0.9s,baz=88,slow=15,SNR=8.0						
KAKA	**Kakadu**	**47.51**	**269**	*e*P	**P**	**14 26 47.6**	**-0.8**
	109nm,0.4s,mb5.7						
GUMO	**Guam**	**47.89**	**309**	P	**P**	**14 26 51.3**	**+0.1**
	95nm,0.9s,mb5.3,baz=114,slow=10.0,SNR=5.0						
FORT	**Forrest**	**49.90**	**245**	⇓*i*P	**P**	**14 27 05.4**	**-0.5**
	64nm,0.5s,mb5.3						
FITZ	**Fitzroy Crossi**	**52.94**	**261**	⇓*i*P	**P**	**14 27 28.0**	**0.0**
	14nm,0.4s,mb4.6						
MBWA	**Marble Bar**	**57.98**	**256**	*e*P	**P**	**14 28 02.4**	**-0.5**
	33nm,0.7s,mb4.7						
KLBR	**Kellerberrin**	**58.72**	**244**	⇓*i*P	**P**	**14 28 07.1**	**-0.6**
	42nm,0.6s,mb4.8						
NWAO	**Narrogin (SRO)**	**59.10**	**242**	*e*P	**P**	**14 28 09.3**	**-1.0**
	7.1nm,0.6s,mb4.1						
MUN	**Mundaring**	**60.01**	**243**	⇑*i*P	**P**	**14 28 16.5**	**+0.1**
VNDA	**Vanda**	**60.33**	**185**	P	**P**	**14 28 18.4**	**+0.8**
	1.6nm,0.6s,baz=344,slow=6.7,SNR=14						
CASY	**Casey**	**66.01**	**205**	*e*P	**P**	**14 28 52.8**	**-1.3**
	9.8nm,0.5s,mb4.6						
MJAR	**Matsushiro Arr**	**67.95**	**323**	P	**P**	**14 29 05.9**	**-0.7**
	1.5nm,0.5s,mb3.8,baz=149,slow=6.2,SNR=6.9						
QSPA	**South Pole Qui**	**72.03**	**180**	*e*P	**P**	**14 29 30.8**	**+0.7**
	13nm,1.0s,mb4.3						
UNV	**Unalaska Valle**	**72.31**	**7**	*e*P	**P**	**14 29 29.8**	**-2.2**
KSM	**Kuching**	**72.63**	**277**	*e*P	**P**	**14 29 35.0**	**+0.2**
KSRS	**Korea Array**	**74.74**	**318**	P	**P**	**14 29 46.9**	**+0.7**
	0.8nm,0.6s,baz=142,slow=6.4,SNR=5.5						
PFO	**Pinyon Flat Ob**	**78.28**	**49**	P	**P**	**14 30 05.5**	**-0.2**
	4.5nm,0.8s,mb3.9,baz=289,slow=4.9,SNR=7.1						
KDAK	**Kodiak Island**	**78.53**	**14**	P	**P**	**14 30 05.4**	**-1.0**
	16nm,0.7s,mb4.5,baz=146,slow=16,SNR=9.1						
MTUM	**Tungsten Hills**	**78.80**	**45**	*e*P	**P**	**14 30 08.8**	**+0.4**
LBCM	**Butte Creek Ri**	**78.96**	**40**	P	**P**	**14 30 09.5**	**+0.4**
BUOR	**Burton Butte**	**79.26**	**39**	P	**P**	**14 30 11.3**	**+0.6**
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**14 30 12.9**	**+0.6**
	8.5nm,0.7s,mb4.2,baz=214,slow=6.9,SNR=85						
PAHR	**Pah Rah Range**	**79.55**	**42**	*e*P	**P**	**14 30 12.7**	**+0.4**
	17nm,1.3s,mb4.2						
HBO	**Huckleberry Mo**	**80.15**	**38**	P	**P**	**14 30 15.5**	**+0.2**
TPNV	**Topopah Spring**	**80.15**	**46**	*e*P	**P**	**14 30 15.7**	**+0.3**
	16nm,1.2s,mb4.2						
SVW2	**Sparrevohn**	**80.96**	**11**	*e*P	**P**	**14 30 17.9**	**-1.2**
BMN	**Battle Mountai**	**81.34**	**43**	*e*P	**P**	**14 30 21.6**	**+0.1**
	19nm,1.0s,mb4.5						
LVP	**Lakeview Peak**	**81.43**	**36**	P	**P**	**14 30 22.0**	**+0.2**
VIPM	**Ingram Point**	**81.53**	**38**	P	**P**	**14 30 22.8**	**+0.4**
WVOR	**Wild Horse Val**	**81.54**	**40**	*e*P	**P**	**14 30 22.8**	**+0.3**
	21nm,1.0s,mb4.5						
FL2	**Flat Top 2**	**81.54**	**36**	P	**P**	**14 30 23.3**	**+0.9**
TUC	**Tucson**	**81.82**	**52**	*e*P	**P**	**14 30 25.1**	**+0.9**
	14nm,1.1s,mb4.3						
HDW	**Hoodsport**	**82.04**	**34**	P	**P**	**14 30 25.4**	**+0.5**
CCUT	**Cedar City**	**82.44**	**47**	*e*P	**P**	**14 30 27.8**	**+0.6**
TTA	**Tatalina**	**82.59**	**10**	*e*P	**P**	**14 30 26.9**	**-0.5**
	25nm,1.3s,mb4.6						
PMR	**Palmer**	**82.73**	**14**	*e*P	**P**	**14 30 26.8**	**-1.3**
	9.7nm,0.5s,mb4.6						
WUAZ	**Wupatki**	**82.87**	**49**	*e*P	**P**	**14 30 29.9**	**+0.4**
	17nm,1.0s,mb4.5						
MDW	**Midway**	**83.23**	**36**	P	**P**	**14 30 31.1**	**+0.2**
HAWA	**Hanford**	**83.24**	**37**	*e*P	**P**	**14 30 30.9**	**0.0**
	39nm,1.4s,mb4.7						
BMO	**Blue Mountains**	**83.67**	**39**	*e*P	**P**	**14 30 32.7**	**-0.4**
	2.4nm,0.7s,mb3.8						
TNA	**Tin City**	**83.71**	**4**	*e*P	**P**	**14 30 32.0**	**-0.9**
	4.9nm,0.9s,mb4.0						
MSU	**Marysvale**	**83.72**	**46**	*e*P	**P**	**14 30 33.6**	**0.0**
MAW	**Mawson**	**83.73**	**200**	P	**P**	**14 30 32.6**	**-0.6**
	3.2nm,0.5s,mb4.1,baz=129,slow=10,SNR=13						
PSI	**Prapat**	**83.83**	**275**	P	**P**	**14 30 33.4**	**-1.3**
	19nm,0.9s,mb4.6,baz=126,slow=1.3,SNR=18						
MCK	**McKinley**	**84.67**	**13**	*e*P	**P**	**14 30 35.8**	**-1.8**
	10μm,0.6s						
HLID	**Hailey**	**84.76**	**41**	*e*P	**P**	**14 30 39.0**	**+0.4**
	8.9nm,0.8s,mb4.3						
TMUT	**Trail Mountain**	**84.76**	**46**	*e*P	**P**	**14 30 39.5**	**+0.8**
SKAG	**Skagway**	**84.83**	**21**	*e*P	**P**	**14 30 38.7**	**+0.2**
	28nm,1.8s,mb4.5						
GYA	**Guiyang**	**85.03**	**300**	P	**P**	**14 30 39.8**	**-0.5**
GYA				AP	pP	14 32 43.8	+2.5
GYA				XP	sP	14 33 39.0	+1.0
GYA				PP	PP	14 34 10.6	+2.6
GYA				SKS		14 40 10.3	
GYA				S	S	14 40 23.4	-0.1
GYA				XS	sS	14 43 59.0	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GYA				AMB	AMB		
	comp=Z,60nm,6.5s						
MENT	**Mentasta**	**85.17**	**15**	*e*P	**P**	**14 30 39.4**	**-0.7**
HWUT	**Hardware Ranch**	**85.62**	**44**	*e*P	**P**	**14 30 42.0**	**-0.8**
	comp=Z,3.3nm,0.7s,mb4.1						
MNTX	**Cornudas Mount**	**85.70**	**55**	*e*P	**P**	**14 30 43.6**	**+0.2**
	comp=Z,9.6nm,1.3s,mb4.3						
BNM	**Barren Site**	**85.76**	**52**	*e*P	**P**	**14 30 43.7**	**+0.1**
LPM	**Los Pinos Moun**	**85.82**	**52**	*e*P	**P**	**14 30 44.2**	**+0.3**
PV10	**Paradox Valley**	**85.84**	**48**	*e*P	**P**	**14 30 43.5**	**-0.4**
COLA	**College**	**85.90**	**13**	*e*P	**P**	**14 30 41.5**	**-2.0**
	comp=Z,4.9nm,0.6s,mb4.3						
PV01	**Paradox Valley**	**86.06**	**48**	*e*P	**P**	**14 30 43.7**	**-1.3**
LTX	**Lajitas**	**86.11**	**58**	*e*P	**P**	**14 30 46.4**	**+1.0**
	comp=Z,15nm,0.8s,mb4.7						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**14 30 46.6**	**+1.2**
	comp=Z,12nm,0.8s,mb4.6,baz=219,slow=6.1,SNR=159						
ANMO	**Albuquerque**	**86.22**	**52**	*e*P	**P**	**14 30 45.9**	**+0.1**
	comp=Z,6.1nm,1.0s,mb4.2						
XAN	**Xi'an**	**86.27**	**307**	P	**P**	**14 30 46.4**	**+0.4**
XAN				AMB	AMB		
	comp=Z,8.0nm,1.0s,mb4.3						
MCMT	**McKenzie Canyo**	**86.37**	**41**	*e*P	**P**	**14 30 46.6**	**+0.4**
DLMT	**Dillon**	**86.79**	**40**	*e*P	**P**	**14 30 48.5**	**+0.3**
	comp=Z,14nm,1.1s,mb4.5						
DCID1	**Drake Creek**	**86.81**	**42**	P	**P**	**14 30 49.3**	**+0.9**
TPAW	**Teton Pass**	**86.92**	**42**	*e*P	**P**	**14 30 49.2**	**+0.4**
	comp=Z,9.8nm,1.0s,mb4.4						
REDW	**Red Top Meadow**	**86.92**	**42**	*e*P	**P**	**14 30 49.2**	**+0.4**
	comp=Z,19nm,1.0s,mb4.7						
SNOW	**Snow King Moun**	**87.03**	**42**	*e*P	**P**	**14 30 49.8**	**+0.4**
	comp=Z,18nm,0.9s,mb4.7						
IMW	**Indian Meadow**	**87.12**	**42**	*e*P	**P**	**14 30 50.3**	**+0.6**
	comp=Z,16nm,0.8s,mb4.7						
CHMT	**Chamberlain Mo**	**87.17**	**39**	*e*P	**P**	**14 30 49.4**	**-0.5**
MOOW	**Moose Ponds**	**87.17**	**42**	*e*P	**P**	**14 30 50.1**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.1						
LOHW	**Long Hollow**	**87.19**	**42**	*e*P	**P**	**14 30 50.4**	**+0.2**
	comp=Z,3.7nm,0.5s,mb4.3						
QLMT	**Earthquake Lak**	**87.25**	**41**	*e*P	**P**	**14 30 51.2**	**+0.9**
HHC	**Hu-ho-hao-te**	**87.30**	**314**	*e*P	**P**	**14 30 53.1**	**+2.4**
HHC				AP	pP	14 32 51.0	-1.6
HHC				XP	sP	14 33 45.8	-3.3
HHC				PP	PP	14 34 29.5	+3.7
HHC				SKS		14 40 26.6	
HHC				S	S	14 40 46.8	+2.5
HHC				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.3						
HHC				AMB	AMB		
	comp=Z,122nm,5.3s						
EGAK	**Eagle**	**87.34**	**15**	*e*P	**P**	**14 30 49.3**	**-1.0**
	comp=Z,2.6nm,0.7s,mb4.0						
FLWY	**Flagg Ranch**	**87.36**	**42**	*e*P	**P**	**14 30 50.9**	**0.0**
	comp=Z,16nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**87.48**	**43**	P	**P**	**14 30 51.4**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.5,baz=218,slow=3.2,SNR=80						
PDAR				PP	PP	14 34 24.3	-2.9
	comp=Z,1.0nm,0.9s,baz=240,slow=5.0,SNR=6.1						
LKWY	**Lake**	**87.77**	**42**	*e*P	**P**	**14 30 54.4**	**+1.6**
	comp=Z,7.1nm,1.1s,mb4.3						
KMI	**Kunming**	**87.82**	**297**	P	**P**	**14 30 52.9**	**-0.6**
KMI				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.4						
SYO	**Syowa Base**	**89.03**	**193**	⇓*e*P	**P**	**14 30 56.0**	**-2.3**
CD2	**Chengdu**	**89.07**	**303**	*e*P	**P**	**14 31 00.8**	**+1.6**
CD2				XP	sP	14 33 59.8	+1.8
CD2				PP	PP	14 34 43.8	+3.9
CD2				SKS		14 40 35.8	
CD2				S	S	14 41 01.0	0.0
CD2				XS	sS	14 44 40.8	+1.4
CD2				SS	SS	14 47 16.3	+4.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,20nm,5.8s						
PHWY	**Pilot Hill**	**89.59**	**46**	*e*P	**P**	**14 31 01.3**	**-0.1**
JCT	**Junction City**	**89.65**	**58**	*e*P	**P**	**14 31 02.0**	**+0.1**
	comp=Z,3.2nm,0.6s,mb4.3						
AMTX	**Amarillo**	**89.80**	**53**	*e*P	**P**	**14 31 01.1**	**-1.4**
	comp=Z,8.7nm,0.9s,mb4.6						
VNA3	**Neumayer Olymp**	**90.63**	**176**	*e*	**P**	**14 31 05.6**	**-0.1**
VNA3				*e*		14 31 09.1	
VNA3				*e*		14 31 11.8	
LZH	**Lanzhou**	**90.91**	**308**	⇑P	**P**	**14 31 10.5**	**+2.9**
LZH				AMB	AMB		
	comp=Z,18nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,92nm,4.9s						
VNA2	**Neumayer--Watz**	**91.07**	**177**	*e*	**P**	**14 31 08.2**	**+0.5**
VNA2				*e*		14 31 11.3	
VNA2				*e*		14 31 14.2	
INK	**Inuvik**	**92.01**	**15**	*e*P	**P**	**14 31 10.3**	**-1.6**
	comp=Z,273nm,1.0s						
DGMT	**Dagmar**	**93.32**	**40**	*e*P	**P**	**14 31 18.2**	**-0.2**
	comp=Z,28nm,1.0s,mb5.2						
SONM	**Songino Array**	**93.59**	**319**	P	**P**	**14 31 19.7**	**+0.1**
	comp=Z,0.3nm,0.6s,mb3.6,baz=120,slow=5.8,SNR=4.3						
YKA	**Yellowknife Ar**	**94.46**	**25**	P	**P**	**14 31 22.0**	**-1.2**
	comp=Z,1.4nm,0.5s,mb4.3,baz=242,slow=4.5,SNR=29						
YKA				PP	PP	14 35 16.9	-4.0
	comp=Z,0.6nm,0.9s,baz=242,slow=7.3,SNR=4.3						
KSU1	**Kansas State U**	**95.08**	**51**	*e*P	**P**	**14 31 26.7**	**+0.1**
	comp=Z,12nm,0.9s,mb5.0						
MKAR	**Makanchi Array**	**109.16**	**314**	PKiKP	PKiKP	14 36 27.1	-2.4
	comp=Z,0.2nm,0.5s,baz=125,slow=1.2,SNR=6.8						
ARCES	**ARCESS Array B**	**126.41**	**350**	PKP	PKPdf	14 37 00.8	-1.2
	comp=Z,5.0nm,1.0s,baz=330,slow=4.2,SNR=4.7						
FINES	**FINESS Array B**	**133.28**	**344**	SKPbc	SKPbc	14 39 49.9	-1.3
	comp=Z,1.3nm,0.8s,baz=104,slow=0.8,SNR=3.3						
BRTR	**Keskin Array B**	**144.81**	**315**	PKP	PKPdf	14 37 36.0	-0.8
	comp=Z,2.2nm,0.9s,baz=94,slow=3.4,SNR=8.0						
ASF	**Jabal al Asfar**	**145.18**	**301**	PKPbc	PKPbc	14 37 37.7	-0.9
	comp=Z,1.7nm,0.6s,baz=297,slow=8.7,SNR=3.6						
CLL	**Collm**	**145.56**	**347**	*i* PKPbc	PKPbc	14 37 38.4	-0.7
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**145.76**	**346**	*e*(P)	PKPbc	14 37 40.9	+1.2
	comp=Z,7.2nm,0.9s						
MMAI	**Mount Meron Ar**	**146.15**	**303**	PKPbc	PKPbc	14 37 40.9	-0.5
	comp=Z,3.6nm,0.5s,baz=69,slow=5.4,SNR=6.3						
KHC	**Kasperske Hory**	**147.47**	**345**	*e*P	PKPbc	14 37 43.5	-0.9
KHC				*e*		14 37 47.5	
KHC	**Kasperske Hory**	**147.47**	**345**	*e*PKPbc	PKPbc	14 37 43.5	-0.9
KHC				PKPab	PKPab	14 37 47.5	-0.8
GERES	**GERESS Array B**	**147.70**	**345**	PKPbc	PKPbc	14 37 44.0	-1.0
	comp=Z,2.0nm,0.6s,baz=30,slow=3.3,SNR=10						
GIVF	**Givet**	**147.89**	**356**	*e*PKP1	PKPbc	14 37 44.1	-1.3
BAIF	**Baives**	**147.97**	**357**	*e*PKP1	PKPbc	14 37 44.7	-0.9
	comp=Z,4.2nm,0.5s						
FLN	**La Foliniere**	**149.29**	**3**	*e*PKP1	PKPbc	14 37 48.1	-0.8
CDF	**Champ du Feu**	**149.33**	**352**	*e*PKP1	PKPbc	14 37 48.6	-0.4
	comp=Z,5.2nm,0.6s						
LDF	**La Druitiere**	**149.48**	**2**	*e*PKP1	PKPbc	14 37 48.3	-1.0
GRR	**Gorron**	**149.65**	**3**	*e*PKP1	PKPbc	14 37 48.9	-0.9
HAU	**Haudompre**	**149.84**	**354**	*e*PKP1	PKPbc	14 37 49.6	-0.6
HINF	**Hinteralfeld**	**149.97**	**353**	*e*PKP1	PKPbc	14 37 49.7	-0.8
DAVOX	**Davos/Dischmat**	**150.50**	**348**	PKPbc	PKPbc	14 37 51.0	-0.8
	comp=Z,4.7nm,0.6s,baz=156,slow=1.9,SNR=8.2						
LOR	**Lormes**	**150.77**	**357**	*e*PKP1	PKPbc	14 37 51.8	-0.6
	comp=Z,15nm,0.8s						
SSF	**Saint Saulge**	**150.99**	**357**	*e*PKP1	PKPbc	14 37 52.4	-0.5

ESDC	**Sonseca Array**	**157.91**	**11**	PKPab	PKPab	14 38 31.6	-1.2
	comp=Z,0.7nm,0.5s,baz=350,slow=3.1,SNR=7.5						

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*TEH **18** 14:19:16.2, 2839N×5191E, h19^{km}, ML4.0*
*IDC **18** 14:19:38.8±0.6, 2807N×5195E, h0^{km}, mb4.3/26, mb1 4.3/28, mb1mx4.3/31, mbtmp4.2/28, ML4.2/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/37, Error ellipse: s-maj=16.2km s-min=11.9km az=14.0*
*CSEM **18** 14:19:39.8±0.1, 28.12N×5186E, h15^{km}, mb4.3/30, Error ellipse: s-maj=3.0km s-min=2.0km az=140.0*
*MOS **18** 14:19:39.5±0.9, 2796N×5187E, h17^{km}, mb4.5/24, Error ellipse: s-maj=9.8km s-min=5.4km az=115.3*
*BJI **18** 14:19:40.7, 28.10N×5190E, h39^{km}, mB5.2, mb4.6, Msz4.1*
*THR **18** 14:19:42.1±0.3, 2830N×5184E, h15^{km}, ML4.1*
*ISCJB **18** 14:19:43.5±0.4, 28.17N±002×5186E±003, h38^{km}±4^{km}, mb4.2/45, MS3.9/4, Error ellipse: s-maj=4.9km s-min=3.6km az=30.8*
*NEIC **18** 14:19:44.8±0.8, 28.13N×5194E, h39^{km}±6^{km}, mb4.3/10, ML3.8(THR), MN4.0(TEH), Error ellipse: s-maj=8.5km s-min=4.8km az=183.0*
ISC 18 14:19:45.4±0.4**, 2817N**±002×**5188E**±003**, h39**^{km}±3^{km}**, h8**^{km}±6.2^{km}**:pP-P, n194,** σ**0^{s}95**/205**, mb4.2**/45**, MS3.9**/4**, 2C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mook**	**1.15**	**40**	*e*Pg	**Pn**	**14 20 02.7**	**-2.3**
IMOK				*e*Sg	**Sn**	**14 20 17.9**	**-1.5**
IMOK				*e*		14 20 24.8	
	comp=Z,44µm,0.4s						
IMOK	**Mook**	**1.15**	**40**	Pg	**Pn**	**14 20 02.6**	**-2.4**
IMOK				Sg	**Sn**	**14 20 17.8**	**-1.6**
SHI	**Shiraz**	**1.57**	**21**	Pn	**Pn**	**14 20 11.9**	**+1.1**
SHI	**Shiraz**	**1.57**	**21**	*e*Pn	**Pn**	**14 20 12.0**	**+1.2**
SHI				*e*		14 20 38.3	
	comp=Z,53µm,0.3s						
ISRV	**Sarvestan**	**1.63**	**42**	Pn	**Pn**	**14 20 11.9**	**+0.3**
ISRV	**Sarvestan**	**1.63**	**42**	*e*Pn	**Pn**	**14 20 12.0**	**+0.4**
ISRV				*e*		14 20 43.4	
	comp=Z,41µm,0.3s						
BOQSS		**3.20**	**225**	P	**Pn**	**14 20 33.4**	**+0.2**
KFJS		**3.47**	**271**	P	**Pn**	**14 20 49.8**	**+13**
SLWS		**3.53**	**199**	P	**Pn**	**14 20 38.8**	**+1.0**
SLWS		**3.53**	**199**	P	**Pn**	**14 20 38.8**	**+1.0**
SLWS				S	**Sn**	**14 21 19.5**	**+1.2**
QRN	**Al-Qurain**	**3.53**	**280**	*e*P	**Pn**	**14 20 37.5**	**-0.2**
KBD	**Kabd**	**3.81**	**286**	*e*P	**Pn**	**14 20 40.9**	**-0.7**
KBD				AML	AML	14 21 29.9	
	comp=Z,232nm,0.3s						
RDF	**Al-Radifah**	**3.88**	**282**	*e*P	**Pn**	**14 20 42.4**	**-0.1**
RDF				AML	AML	14 21 32.6	
	comp=Z,99nm,0.4s						
UMR	**Umm Al-Rimmam**	**3.90**	**292**	*e*P	**Pn**	**14 20 42.1**	**-0.7**
UMR				AML	AML	14 21 35.6	
	comp=Z,85nm,0.5s						
IMEH	**Mehriz**	**4.00**	**36**	*e*Pn	**Pn**	**14 20 45.4**	**+1.2**
IMEH				*e*		14 20 47.4	
	comp=Z,4µm,0.1s						
ISAD	**Sadrabad**	**4.05**	**22**	*e*Pn	**Pn**	**14 20 45.8**	**+0.9**
ISAD				*e*		14 21 37.3	
	comp=N,1µm,0.1s						
IGAR	**Garneh**	**4.07**	**4**	*e*Pn	**Pn**	**14 20 47.4**	**+2.2**
IGAR				*e*Sn	**Sn**	**14 21 31.6**	**0.0**
BTHS		**4.21**	**193**	P	**Pn**	**14 20 46.6**	**-0.4**
BTHS		**4.21**	**193**	P	**Pn**	**14 20 46.6**	**-0.5**
BTHS				S	**Sn**	**14 21 36.3**	**+1.3**
NAY	**Al-Naaiem**	**4.21**	**286**	*e*P	**Pn**	**14 20 46.6**	**-0.5**
NAY				AML	AML	14 21 37.5	
	comp=Z,30nm,0.5s						
MIB	**Mutribah**	**4.30**	**293**	*e*P	**Pn**	**14 20 47.8**	**-0.5**
MIB				AML	AML	14 21 40.3	
	comp=Z,116nm,0.5s						
ICHK	**Chekchek**	**4.62**	**28**	Pn	**Pn**	**14 20 53.3**	**+0.6**
ICHK				Sn	**Sn**	**14 21 40.7**	**-4.3**
ICHK	**Chekchek**	**4.62**	**28**	*e*Pn	**Pn**	**14 20 53.3**	**+0.6**
ICHK				*e*Sn	**Sn**	**14 21 40.8**	**-4.2**
ICHK				*e*		14 21 50.6	
	comp=Z,2µm,0.3s						
ICHK	**Chekchek**	**4.62**	**28**	*e*Pn	**Pn**	**14 20 53.3**	**+0.6**
ICHK				*e*Sn	**Sn**	**14 21 40.8**	**-4.2**
KRBR	**Kerman**	**4.64**	**66**	*e*Pn	**Pn**	**14 20 52.0**	**-1.0**
KRBR				*e*Sg	**Sn**	**14 21 51.0**	**+5.3**
KRBR	**Kerman**	**4.64**	**66**	*e*Pn	**Pn**	**14 20 53.8**	**+0.8**
KRBR				AML	AML	14 21 54.4	
	comp=N,201nm,0.7s						
IBAF	**Bafgh**	**4.68**	**42**	Pn	**Pn**	**14 20 53.9**	**+0.3**
IBAF				Sn	**Sn**	**14 21 44.4**	**-2.2**
IBAF	**Bafgh**	**4.68**	**42**	*e*Pn	**Pn**	**14 20 53.9**	**+0.3**
IBAF				*e*		14 20 55.0	
	comp=Z,3µm,0.1s						
IBAF				*e*Sn	**Sn**	**14 21 44.5**	**-2.1**
NASN	**Na'in**	**4.69**	**10**	*e*Pn	**Pn**	**14 20 50.0**	**-3.6**
NASN				*e*Sg	**Sn**	**14 21 48.0**	**+1.2**
NASN	**Na'in**	**4.69**	**10**	*e*P	**Pn**	**14 20 52.9**	**-0.7**
NASN	**Na'in**	**4.69**	**10**	*e*P	**Pn**	**14 20 52.9**	**-0.7**
	SNR=52						
IZEF	**Zefreh**	**4.73**	**5**	*e*Pn	**Pn**	**14 20 53.6**	**-0.6**
IZEF				*e*		14 21 55.1	
	comp=Z,590nm,0.3s						
SHGR	**Shooshtar-Gavs**	**4.75**	**327**	*e*Pn	**Pn**	**14 20 58.0**	**+3.6**
SHGR				Sn	**Sn**	**14 21 48.0**	**-0.2**
IKLH	**Kalahroud**	**5.14**	**357**	Pn	**Pn**	**14 20 59.7**	**-0.2**
IKLH	**Kalahroud**	**5.14**	**357**	*e*Pn	**Pn**	**14 20 59.8**	**-0.1**
IKLH				*e*		14 22 02.5	
	comp=Z,570nm,0.2s						
HRDDS		**5.65**	**203**	S	**Sn**	**14 22 10.6**	**-0.1**
HRDDS		**5.65**	**203**	P	**Pn**	**14 21 05.8**	**-1.2**
ASAO	**Ashtian**	**6.56**	**346**	*e*Pn	**Pn**	**14 21 19.0**	**-0.3**
ASAO				Sn	**Sn**	**14 22 24.0**	**-8.8**
ASAO	**Ashtian**	**6.56**	**346**	*e*Pn	**Pn**	**14 21 18.6**	**-0.7**
ASAO				AML	AML	14 22 38.1	
	comp=N,43nm,0.6s						
ASAO				AML	AML	14 22 41.1	
	comp=E,39nm,0.6s						
ASYS		**6.71**	**266**	P	**Pn**	**14 21 18.6**	**-2.8**
IKOM	**Komasi**	**7.06**	**329**	Pn	**Pn**	**14 21 26.3**	**+0.1**
IKOM	**Komasi**	**7.06**	**329**	*e*Pn	**Pn**	**14 21 26.4**	**+0.2**
IDMV	**Damavand**	**7.39**	**1**	Pn	**Pn**	**14 21 30.2**	**-0.5**
IDMV	**Damavand**	**7.39**	**1**	*e*Pn	**Pn**	**14 21 30.3**	**-0.4**
IDMV				*e*		14 21 30.8	
	comp=Z,222nm,0.2s						
DAMV	**Damavand**	**7.44**	**1**	*e*Pn	**Pn**	**14 21 29.0**	**-2.4**
DAMV	**Damavand**	**7.44**	**1**	*e*Pn	**Pn**	**14 21 30.9**	**-0.6**
IANJ	**Anjiloo**	**7.48**	**13**	*e*Pn	**Pn**	**14 21 31.6**	**-0.4**
IANJ				*e*		14 21 32.6	
	comp=Z,181nm,0.2s						
ITEG		**7.57**	**50**	*e*Pn	**Pn**	**14 21 32.9**	**-0.3**
IGHG	**Ghaleghazi**	**7.64**	**325**	*e*Pn	**Pn**	**14 21 34.4**	**+0.2**
IGHG				*e*		14 23 35.2	
	comp=Z,767nm,0.4s						
IVIS	**Veys**	**7.66**	**327**	*e*Pn	**Pn**	**14 21 34.6**	**+0.2**
IVIS				*e*		14 23 07.8	
	comp=Z,426nm,0.4s						
ISHM	**Shahmirzad**	**7.71**	**9**	*e*Pn	**Pn**	**14 21 34.6**	**-0.5**
ISHM				*e*		14 21 38.4	
	comp=Z,201nm,0.2s						
SNGE	**Sanandaj**	**7.91**	**332**	*e*P	**Pn**	**14 21 37.2**	**-0.7**
ILIN	**Laeen**	**7.93**	**329**	Pn	**Pn**	**14 21 37.9**	**-0.2**
ILIN	**Laeen**	**7.93**	**329**	*e*Pn	**Pn**	**14 21 38.0**	**-0.1**
ILIN				*e*		14 21 45.0	
	comp=Z,642nm,0.1s						
BHD	**Baghdad**	**8.21**	**310**	*e*x	x	14 22 20.0	
BHD				*e*x	x	14 24 25.0	
ASF	**Jabal al Asfar**	**13.56**	**291**	Pn	**Pn**	**14 22 56.2**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=349,slow=10,SNR=4.7						
ASF				Sn	**Sn**	**14 25 16.2**	**-8.3**
	comp=Z,0.2nm,0.3s,baz=287,slow=19,SNR=1.8						
ASF				Lg		14 27 06.1	
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=2.0						
DGRG	**David-gareji**	**14.28**	**340**	P	**Pn**	**14 23 13.3**	**+8.3**
EIL	**Elat**	**14.90**	**280**	Pn	**Pn**	**14 23 16.3**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=65,slow=3.6,SNR=9.1						
EIL				Lg		14 27 57.5	
	baz=156,slow=20,SNR=2.6						
EIL				LR	LR	14 28 24.7	
	comp=Z,26nm,19.2s,baz=288,slow=35						
MMAI	**Mount Meron Ar**	**14.98**	**293**	Pn	**Pn**	**14 23 14.5**	**+0.1**
	baz=112,slow=12,SNR=1.4						
MALT	**Malatya**	**15.12**	**315**	*e*Pn	**Pn**	**14 23 15.3**	**-0.8**
	comp=Z,17nm,1.0s						
MALT	**Malatya**	**15.12**	**315**	*e*P	**Pn**	**14 23 15.4**	**-0.7**
MALT				pmax	pmax		
	comp=Z,17nm,1.0s						
MALT	**Malatya**	**15.12**	**315**	*e*P	**Pn**	**14 23 15.4**	**-0.7**
	comp=Z,17nm,1.0s						
ONI	**Oni**	**15.93**	**337**	P	**Pn**	**14 23 27.8**	**+1.3**
ZEI	**Tsey**	**15.94**	**338**	*e*P	**Pn**	**14 23 28.3**	**+1.5**
KIV	**Kislovodsk**	**17.40**	**337**	P	**Pn**	**14 23 46.2**	**+1.1**
KIV	**Kislovodsk**	**17.40**	**337**	*e*P	**Pn**	**14 23 46.8**	**+1.7**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV	**Kislovodsk**	**17.40**	**337**	*e*P	**Pn**	**14 23 46.8**	**+1.7**
	comp=Z,13nm,1.1s						
ATD	**Arta Tunnel**	**18.59**	**209**	LR	LR	14 32 07.1	
	comp=Z,94nm,19.9s,baz=9.1,slow=40						
BRTR	**Keskin Array B**	**18.98**	**312**	P	**Pn**	**14 24 04.4**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR	**Keskin Array B**	**18.98**	**312**	P	**Pn**	**14 24 04.3**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=131,slow=13,SNR=42						
AML	**Almayashu**	**22.55**	**46**	P	**P**	**14 24 42.1**	**+0.1**
	SNR=12						
AKTK	**Aktyubinsk**	**22.73**	**10**	P	**P**	**14 24 43.0**	**-0.8**
AKTK	**Aktyubinsk**	**22.73**	**10**	P	**P**	**14 24 43.0**	**-0.7**
	comp=Z,5.0nm,0.6s,mb4.1						
AKTO	**Aktyubinsk**	**22.73**	**10**	P	**P**	**14 24 43.0**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.1						
AKTO	**Aktyubinsk**	**22.73**	**10**	P	**P**	**14 24 43.0**	**-0.8**
	comp=Z,5.3nm,0.6s,mb4.2,baz=190,slow=11,SNR=16						
DDI	**Dehra Dun**	**22.93**	**78**	*e*x	x	14 24 46.7	
UCH	**Uchtor**	**23.12**	**47**	P	**P**	**14 24 52.0**	**+3.9**
	SNR=15						
AAK	**Ala-Archa**	**23.32**	**46**⇓	*e*P	**P**	**14 24 51.4**	**+1.3**
AAK				pmax	pmax		
	comp=Z,14nm,2.2s,mb4.0						
AAK	**Ala-Archa**	**23.32**	**46**	P	**P**	**14 24 52.6**	**+2.5**
	SNR=5.5						
AAK	**Ala-Archa**	**23.32**	**46**	*e*P	**P**	**14 24 51.4**	**+1.3**
	comp=Z,14nm,2.2s,mb4.0						
KZA	**Kyzart**	**23.53**	**48**	P	**P**	**14 24 54.5**	**+2.4**
	SNR=22						
KBK	**Karagaybulak**	**23.62**	**46**	P	**P**	**14 24 55.5**	**+2.6**
	SNR=7.6						
USP	**Ospenovka**	**23.65**	**44**	P	**P**	**14 24 53.9**	**+0.7**
	SNR=12						
IDI	**Anoyia**	**23.98**	**294**	P	**P**	**14 24 57.0**	**+0.7**
	comp=Z,15nm,0.7s,mb4.5,baz=114,slow=7.4,SNR=8.4						
TKM2	**Tokmak 2**	**24.16**	**46**	P	**P**	**14 24 48.0**	**-10**
	SNR=9.2						
VRHR	**Novokhopersk**	**24.18**	**344**	*e*P	**P**	**14 24 57.9**	**0.0**
VRHR				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.8						
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
VRHR	**Novokhopersk**	**24.18**	**344**	*e*P	**P**	**14 24 57.9**	**0.0**
	comp=E,30nm,0.7s,mb4.8						
VRSR	**Storozhevoye**	**24.93**	**341**	*e*P	**P**	**14 25 05.1**	**+0.3**
VRSR				pmax	pmax		
	comp=N,4.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
MLR	**Muntele Rosu**	**26.84**	**317**	P	**P**	**14 25 24.6**	**+2.5**
MLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MLR	**Muntele Rosu**	**26.84**	**317**	P	**P**	**14 25 24.6**	**+2.5**
	comp=Z,5.1nm,0.8s,mb4.1,baz=275,slow=3.7,SNR=10						
AKASG	**Malin Array Be**	**28.29**	**329**	*i* P	**P**	**14 25 34.7**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**28.29**	**329**	P	**P**	**14 25 33.6**	**-1.4**
	comp=Z,1.2nm,0.6s,mb3.7,baz=135,slow=8.0,SNR=12						
AKASG	**Malin Array Be**	**28.29**	**329**	*i* P	**P**	**14 25 34.7**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.6						
KIEV	**Kiev**	**28.30**	**329**	*e*P	**P**	**14 25 34.7**	**-0.4**
KIEV	**Kiev**	**28.30**	**329**	*e*P	**P**	**14 25 34.7**	**-0.4**
BRVK	**Borovoye**	**28.35**	**24**	P	**P**	**14 25 35.1**	**-0.4**
BRVK	**Borovoye**	**28.35**	**24**	P	**P**	**14 25 35.1**	**-0.5**
OBN	**Obninsk**	**29.12**	**342**	*e*P	**P**	**14 25 42.4**	**+0.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
OBN	**Obninsk**	**29.12**	**342**	*e*P	**P**	**14 25 42.4**	**+0.1**
	comp=Z,4.0nm,0.7s,mb4.3						
MKAR	**Makanchi Array**	**30.20**	**44**	P	**P**	**14 25 52.2**	**+0.2**
MKAR				LR	LR	14 39 47.1	
MKAR	**Makanchi Array**	**30.20**	**44**	P	**P**	**14 25 52.2**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,76nm,18.2s						
MKAR	**Makanchi Array**	**30.20**	**44**	P	**P**	**14 25 52.2**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.1,baz=254,slow=7.3,SNR=46						
MKAR				LR	LR	14 39 47.1	
	comp=Z,76nm,18.2s,MS3.4,baz=78,slow=40						
KURK	**Kurchatov**	**30.27**	**35**	*e*P	**P**	**14 25 53.4**	**+0.9**
KOLS	**Kolonicke sedl**	**30.77**	**320**	*e*P	**P**	**14 25 58.0**	**+1.0**
CRVS	**Cervenica-Dubn**	**31.21**	**320**	*e*P	**P**	**14 26 02.5**	**+1.6**
KECS	**Kecovo**	**31.57**	**319**	*e*P	**P**	**14 26 04.9**	**+0.8**
	comp=Z,3.3nm,1.0s,mb4.1						
KECS	**Kecovo**	**31.57**	**319**	*e*P	**P**	**14 26 04.9**	**+0.8**
KECS				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
STHS	**Stebnicka Huta**	**31.60**	**321**	*e*P	**P**	**14 26 08.7**	**+4.4**
KMBO	**Kilima Mbogo**	**32.33**	**208**	P	**P**	**14 26 08.9**	**-2.2**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KMBO	**Kilima Mbogo**	**32.33**	**208**	P	**P**	**14 26 08.8**	**-2.2**
	comp=Z,0.7nm,0.4s,mb3.8,baz=16,slow=7.4,SNR=2.2						
VYHS	**Vyhne**	**32.55**	**318**	*e*P	**P**	**14 26 13.7**	**+1.0**
WMQ	**Urumqi**	**32.63**	**52**	*e*P	**P**	**14 26 14.1**	**+0.7**
WMQ				AP	pP	14 26 18.5	-5.8
WMQ				PP	PP	14 27 19.1	-8.4
WMQ				S	**S**	**14 31 22.0**	**-4.6**
WMQ				AMB	AMB		
	comp=Z,11nm,0.4s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,300nm,5.0s						
WMQ				LR	LR		
	comp=Z,311nm,16.0s,MS4.1						
OJC	**Ojcow**	**32.81**	**321**	*e*P	**P**	**14 26 15.6**	**+0.7**
GERES	**GERESS Array B**	**35.80**	**316**	P	**P**	**14 26 39.9**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=126,slow=7.9,SNR=2.4						
KHC	**Kasperske Hory**	**35.98**	**316**	*i* P	**P**	**14 26 42.9**	**+0.5**
KHC	**Kasperske Hory**	**35.98**	**316**	*e*P	**P**	**14 26 42.5**	**+0.1**
KEST	**Kesra**	**36.64**	**293**	P	**P**	**14 26 47.5**	**-0.7**
	comp=Z,2.9nm,1.0s,mb4.1,baz=42,slow=6.6,SNR=4.8						
JOF	**Joensuu**	**37.27**	**345**	*e*p	**P**	**14 26 52.9**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.8						
JOF	**Joensuu**	**37.27**	**345**	*e*P	**P**	**14 26 52.9**	**-0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1						
FINES	**FINESS Array B**	**37.46**	**340**	*i* P	**P**	**14 26 54.7**	**-0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**37.46**	**340**	P	**P**	**14 26 54.8**	**0.0**
	comp=Z,3.5nm,0.6s,mb4.4,baz=134,slow=6.2,SNR=16						
FINES	**FINESS Array B**	**37.46**	**340**	*i* P	**P**	**14 26 54.7**	**-0.1**
	comp=Z,4.0nm,0.6s,mb4.4						
DAVOX	**Davos/Dischmat**	**37.62**	**311**	P	**P**	**14 26 56.0**	**-0.3**
	comp=Z,3.2nm,0.5s,mb4.3,baz=115,slow=9.7,SNR=6.6						
KAF	**Kangasniemi**	**37.92**	**341**	*e*p	**P**	**14 26 58.5**	**-0.1**
MBDF	**Montbardon**	**39.33**	**307**	*e*P	**P**	**14 27 10.5**	**-0.2**
	comp=Z,13nm,0.7s,mb4.5						
MBDF	**Montbardon**	**39.33**	**307**	*e*P	**P**	**14 27 10.5**	**-0.2**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
MBDF	**Montbardon**	**39.33**	**307**	*e*P	**P**	**14 27 10.5**	**-0.2**
	comp=Z,6.5nm,0.7s,mb4.5						
LPG	**La Plagne**	**39.47**	**308**	*e*P	**P**	**14 27 11.7**	**-0.2**
	comp=Z,8.7nm,0.8s,mb4.2						
LPG	**La Plagne**	**39.47**	**308**	*e*P	**P**	**14 27 11.7**	**-0.2**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
LPG	**La Plagne**	**39.47**	**308**	*e*P	**P**	**14 27 11.7**	**-0.2**
	comp=Z,4.3nm,0.8s,mb4.2						
LPL	**La Plagne**	**39.49**	**308**	*e*P	**P**	**14 27 11.7**	**-0.4**
	comp=Z,5.1nm,0.5s,mb4.2						
LPL	**La Plagne**	**39.49**	**308**	*e*P	**P**	**14 27 11.7**	**-0.4**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
LPL	**La Plagne**	**39.49**	**308**	*e*P	**P**	**14 27 11.7**	**-0.4**
	comp=Z,2.5nm,0.5s,mb4.2						
CDF	**Champ du Feu**	**39.74**	**313**	*e*P	**P**	**14 27 13.6**	**-0.5**
HINF	**Hinteralfeld**	**39.87**	**312**	*e*P	**P**	**14 27 14.7**	**-0.5**
ORIF	**Oris-en-Rattie**	**39.98**	**307**	*e*P	**P**	**14 27 15.6**	**-0.6**
CABF	**La Chapelle**	**40.13**	**310**	*e*P	**P**	**14 27 17.3**	**-0.1**
GTA	**Gaotai**	**40.96**	**61**	*e*P	**P**	**14 27 25.6**	**+1.2**
GTA				AP	pP	14 27 30.3	-5.1
GTA				XP	sP	14 27 32.9	-7.2
GTA				AMB	AMB		
	comp=Z,5.0nm,1.1s,mb4.1						
HFS	**Hagfors**	**41.07**	**332**	P	**P**	**14 27 24.8**	**-0.1**
HFS	**Hagfors**	**41.07**	**332**	P	**P**	**14 27 24.8**	**-0.2**
HFS				pmax	pmax		
	comp=Z,6.0nm,0.4s						
HFS	**Hagfors**	**41.07**	**332**	P	**P**	**14 27 24.8**	**-0.1**
	comp=Z,5.5nm,0.4s,mb4.5,baz=120,slow=9.0,SNR=34						
HFS	**Hagfors**	**41.07**	**332**	P	**P**	**14 27 24.8**	**-0.2**
	comp=Z,6.0nm,0.4s,mb4.6						
MEZF	**Maizieres J'vi**	**41.20**	**313**	*e*P	**P**	**14 27 26.0**	**-0.2**
SMF	**Signal de Mont**	**41.66**	**310**	*e*P	**P**	**14 27 29.4**	**-0.6**
	comp=Z,30nm,1.1s,mb4.5						
SMF	**Signal de Mont**	**41.66**	**310**	*e*P	**P**	**14 27 29.4**	**-0.6**
SMF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.5						
SMF	**Signal de Mont**	**41.66**	**310**	*e*P	**P**	**14 27 29.4**	**-0.6**
	comp=Z,15nm,1.1s,mb4.5						
SSF	**Saint Saulge**	**41.95**	**310**	*e*P	**P**	**14 27 31.9**	**-0.5**
	comp=Z,42nm,1.4s,mb4.6						
SSF	**Saint Saulge**	**41.95**	**310**	*e*P	**P**	**14 27 31.9**	**-0.5**
SSF				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.6						
SSF	**Saint Saulge**	**41.95**	**310**	*e*P	**P**	**14 27 31.9**	**-0.5**
	comp=Z,21nm,1.4s,mb4.6						
BGF	**Bois d'Agland**	**42.33**	**309**	*e*P	**P**	**14 27 35.0**	**-0.4**
MTLF	**Montolieu**	**42.43**	**304**	*e*P	**P**	**14 27 36.9**	**+0.6**
NB2	**NORSAR Subarra**	**42.59**	**332**	P	**P**	**14 27 36.7**	**-0.7**
	comp=Z,2.4nm,0.5s,mb4.2,baz=120,slow=8.6						
NB2	**NORSAR Subarra**	**42.59**	**332**	P	**P**	**14 27 36.7**	**-0.7**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
NOA	**NORSAR Array B**	**42.59**	**332**	P	**P**	**14 27 36.9**	**-0.4**
NOA	**NORSAR Array B**	**42.59**	**332**	P	**P**	**14 27 36.9**	**-0.5**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA	**NORSAR Array B**	**42.59**	**332**	P	**P**	**14 27 36.9**	**-0.4**
	comp=Z,4.0nm,0.7s,mb4.3,baz=121,slow=8.2,SNR=10						
ARCES	**ARCESS Array B**	**44.13**	**347**	P	**P**	**14 27 48.7**	**-0.9**
ARCES	**ARCESS Array B**	**44.13**	**347**	P	**P**	**14 27 48.7**	**-0.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**44.13**	**347**	P	**P**	**14 27 48.7**	**-0.9**
	comp=Z,2.0nm,0.7s,mb4.0,baz=139,slow=7.6,SNR=12						
LZH	**Lanzhou**	**44.28**	**66**	*e*P	**P**	**14 27 52.8**	**+1.5**
LZH				AP	pP	14 27 56.3	-6.2
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.6						
LZH				AMB	AMB		
	comp=Z,69nm,4.1s						
ZAK	**Zakamensk**	**44.49**	**46**	*e*P	**P**	**14 27 53.2**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.3						
ZAK	**Zakamensk**	**44.49**	**46**	*e*P	**P**	**14 27 53.2**	**+0.4**
	comp=Z,1.0nm,1.5s,mb3.3						
SONM	**Songino Array**	**46.19**	**49**	P	**P**	**14 28 06.5**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM	**Songino Array**	**46.19**	**49**	P	**P**	**14 28 06.5**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.0,baz=263,slow=9.2,SNR=16						
ULN	**Ulaanbaatar**	**46.63**	**49**	*e*P	**P**	**14 28 09.9**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**46.63**	**49**	*i* P	**P**	**14 28 10.0**	**+0.2**
ESDC	**Sonseca Array**	**47.06**	**299**	P	**P**	**14 28 12.6**	**-0.7**
	comp=Z,0.2nm,0.4s,mb3.4,baz=86,slow=6.1,SNR=4.7						
EKA	**Eskdalemuir Ar**	**47.59**	**321**	P	**P**	**14 28 16.8**	**-0.3**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**47.59**	**321**	P	**P**	**14 28 16.8**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.2,baz=98,slow=10,SNR=3.3						
MDT	**Midelt**	**48.42**	**290**	P	**P**	**14 28 24.6**	**+0.7**
	comp=Z,4.5nm,0.9s,mb4.5,baz=76,slow=6.5,SNR=7.7						
TORD	**Torodi Ar. Bea**	**48.94**	**263**	P	**P**	**14 28 27.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**48.94**	**263**	P	**P**	**14 28 27.8**	**-0.3**
	comp=Z,5.7nm,0.7s,mb4.7,baz=57,slow=7.0,SNR=39						
PSI	**Prapat**	**51.41**	**111**	P	**P**	**14 28 45.5**	**-1.3**
PSI				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
PSI	**Prapat**	**51.41**	**111**	P	**P**	**14 28 45.5**	**-1.3**
	comp=Z,7.2nm,0.7s,mb4.7,baz=287,slow=3.3,SNR=9.6						
BOD	**Bodaibo**	**51.86**	**37**	*e*P	**P**	**14 28 48.3**	**-1.3**
DBIC	**Dimbokro**	**57.64**	**259**	P	**P**	**14 29 32.0**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,13nm,0.6s						
DBIC	**Dimbokro**	**57.64**	**259**	P	**P**	**14 29 31.9**	**-0.1**
	comp=Z,13nm,0.6s,mb5.1,baz=39,slow=8.2,SNR=32						
LIC	**Lamto**	**58.00**	**259**⇑	*i*P	**P**	**14 29 34.6**	**0.0**
	comp=Z,29nm,0.6s,mb5.2						
LIC	**Lamto**	**58.00**	**259**⇑	*i*P	**P**	**14 29 34.6**	**0.0**
	comp=Z,14nm,0.6s,mb5.2						
KSRS	**Korea Array**	**63.02**	**60**	P	**P**	**14 30 07.1**	**-1.4**
	comp=Z,1.7nm,0.6s,mb4.4,baz=281,slow=6.6,SNR=15						
JOW	**Kunigami**	**66.65**	**71**	LR	LR	15 00 44.3	
	comp=Z,126nm,21.1s,MS4.1,baz=106,slow=37						
SEY	**Seymchan**	**69.89**	**29**⇓	*e*P	**P**	**14 30 52.7**	**+0.7**
MJAR	**Matsushiro Arr**	**71.10**	**58**	P	**P**	**14 30 58.9**	**-1.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	**Matsushiro Arr**	**71.10**	**58**	P	**P**	**14 30 58.9**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=277,slow=3.7,SNR=2.8						
ASAJ	**Asahikawa**	**71.47**	**49**	LR	LR	15 05 10.2	
	comp=Z,61nm,18.5s,MS3.9,baz=28,slow=38						
SCHQ	**Schefferville**	**82.09**	**329**	P	**P**	**14 32 01.7**	**+0.1**
	comp=Z,2.4nm,0.7s,mb4.3,baz=30,slow=5.5,SNR=6.2						
FITZ	**Fitzroy Crossi**	**84.85**	**114**	P	**P**	**14 32 15.8**	**-0.5**
	comp=Z,1.8nm,0.6s,mb4.4,baz=299,slow=10,SNR=4.8						
YKA	**Yellowknife Ar**	**89.01**	**354**	*i* P	**P**	**14 32 36.5**	**+0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**89.01**	**354**	P	**P**	**14 32 35.5**	**-0.4**
	comp=Z,1.3nm,0.7s,mb4.4,baz=8.7,slow=5.3,SNR=24						
YKA	**Yellowknife Ar**	**89.01**	**354**	*i* P	**P**	**14 32 36.5**	**+0.6**
	comp=Z,1.0nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**92.88**	**111**	P	**P**	**14 32 53.1**	**-1.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**92.88**	**111**	P	**P**	**14 32 53.1**	**-1.5**
	comp=Z,0.5nm,0.6s,mb4.1,baz=308,slow=4.3,SNR=5.3						
ASAR	**Alice Springs**	**94.31**	**114**	P	**P**	**14 32 59.9**	**-1.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**94.31**	**114**	P	**P**	**14 32 59.9**	**-1.1**
	comp=Z,0.5nm,0.7s,mb4.1,baz=299,slow=3.9,SNR=4.5						

IDC 18 14:31:47.5±1.9**, 014N**×**12769E, h0**^{km}**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/15**, mbtmp3.2**/3**, Error ellipse: s-maj=137.9km s-min=25.7km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.00**	**162**	P	P	14 36 32.7	-0.1
	0.5nm,0.7s,baz=342,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**24.43**	**166**	P	P	14 37 08.1	+0.2
	0.6nm,0.7s,baz=347,slow=10,SNR=9.3						
MKAR	**Makanchi Array**	**61.03**	**326**	P	P	14 42 03.1	+0.1
	0.2nm,0.7s,baz=120,slow=8.1,SNR=3.7						

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*CSEM **18** 14:52:07.3±0.2, 3281N×5.11W, h5^{km}, ML3.9/9, Error ellipse: s-maj=5.2km s-min=3.8km az=109.0*
*ISCJB **18** 14:52:09.6±0.4, 3309N±002×538W±003, h10^{km}, Error ellipse: s-maj=3.7km s-min=3.2km az=41.6*
*MDD **18** 14:52:09.7±0.6, 3284N×522W, h5^{km}±4^{km}, mb4.0/10, Error ellipse: s-maj=5.4km s-min=3.8km az=109.0, PRXIMO*
*CNRM **18** 14:52:10.1, 3283N×520W, h2^{km}, MD3.7*
*NEIC **18** 14:52:10.2, 3295N×528W, h0^{km}, MN2.5(MDD), After MDD.*
*INMG **18** 14:52:12.1±2.0, 3304N×531W, h10^{km}, ML2.7, Error ellipse: s-maj=7.7km s-min=6.9km az=22.0*
ISC 18 14:52:10.6±0.4**, 3302N**±003×**534W**±003**, h10**^{km}**, n90,** σ**1^{s}24**/163**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CZD	**Col de Zad**	**0.25**	**86**	P	**Pg**	**14 52 14.0**	**-1.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CZD				S	Sg	14 52 18.0	-1.2
CZD	Col de Zad	0.25	86	iP	Pg	14 52 14.0	-1.7
MIF	Mishlifen	0.40	13	P	Pg	14 52 20.0	+1.5
MIF				S	Sg	14 52 29.0	+5.1
MIF	Mishlifen	0.40	13	iP	Pg	14 52 20.0	+1.5
TGT	Taghat	1.08	13	iP	Pg	14 52 32.0	+0.7
TGT				iS	Sg	14 52 49.0	+3.6
ZFT	Errachidia	1.29	139	iP	Pn	14 52 29.0	-5.6
ZFT				iS	Sb	14 52 45.0	-6.5
TZC	Tazercounte	1.30	229	eP	Pn	14 52 33.0	-1.8
TZC				iS	Sb	14 52 52.0	+0.1
TZK	Tazeka	1.44	42	eP	Pn	14 52 37.0	+0.2
TZK				iS	Sn	14 52 57.0	+1.2
RSA	Sarsar	1.90	348	eP	Pn	14 52 46.0	+2.9
RSA				iS	Sn	14 53 11.0	+3.9
TOU	Touzarine	2.35	34	eP	Pn	14 52 50.0	+0.8
TOU				iS	Sn	14 53 20.0	+1.9
TSY	Tnine Yamani	2.41	348	P	Pn	14 52 52.0	+1.9
TSY				S	Sn	14 53 22.0	+2.4
TSY	Tnine Yamani	2.41	348	eP	Pn	14 52 52.0	+1.9
DKH	Dar Kharkhour	2.47	360	eP	Pn	14 52 53.0	+2.1
DKH				iS	Sn	14 53 24.0	+3.0
OUK	Oukaimeden	2.80	231	P	Pn	14 52 54.0	-1.5
OUK				S	Sn	14 53 26.0	-3.3
OUK	Oukaimeden	2.80	231	iP	Pn	14 52 54.0	-1.5
ZAI	Zaio	2.91	47	eP	Pn	14 52 56.0	-0.9
ZAI				eS	Sn	14 53 30.0	-1.9
CIA	Chichaoua	3.24	244	P	Pn	14 53 01.0	-0.4
CIA				S	Sn	14 53 38.0	-2.0
CIA	Chichaoua	3.24	244	iP	Pn	14 53 01.0	-0.4
EJIF	Jimena Fronter	3.43	358	P	Pn	14 53 06.7	+2.6
EJIF				S	Sn	14 53 40.6	-4.1
EJIF	Jimena Fronter	3.43	358	P	Pn	14 53 04.9	+0.8
	0.9nm,0.1s,SNR=7.9						
EJIF				S	Sn	14 53 44.8	0.0
	1.6nm,0.4s,SNR=7.9						
EJIF	Jimena Fronter	3.43	358	P	Pn	14 53 06.7	+2.6
	0.9nm,0.1s,SNR=7.9						
EALB	Alboran	3.48	33	P	Pn	14 53 05.0	+0.2
	3.2nm,0.3s,SNR=7.9						
EALB				S	Sn	14 53 44.5	-1.6
	3.3nm,0.2s,SNR=7.9						
EALB	Alboran	3.48	33	P	Pn	14 53 05.0	+0.2
	3.2nm,0.3s,SNR=7.9						
EALB				S	Sn	14 53 44.5	-1.6
	3.3nm,0.2s,SNR=7.9						
EMIJ	Mijas	3.57	7	P	Pn	14 53 05.4	-0.6
EMIJ				S	Sn	14 53 45.3	-3.0
EMIJ	Mijas	3.57	7	P	Pn	14 53 05.4	-0.6
	0.4nm,0.1s,SNR=8.2						
EMIJ				S	Sn	14 53 48.4	+0.1
	6.3nm,0.3s,SNR=6.0						
ESPR	Espera	3.87	354	P	Pn	14 53 10.8	+0.7
ESPR				S	Sn	14 53 52.8	-2.8
ESPR	Espera	3.87	354	P	Pn	14 53 10.8	+0.7
	2.8nm,0.4s,SNR=5.6						
ESPR				S	Sn	14 53 56.2	+0.6
	3.0nm,0.2s						
ESPR	Espera	3.87	354	P	Pn	14 53 10.8	+0.7
	2.8nm,0.4s,SNR=5.6						
EGUA	Guajares	4.08	20	P	Pn	14 53 12.8	-0.3
EGUA				S	Sn	14 53 58.0	-2.8
EGUA	Guajares	4.08	20	P	Pn	14 53 12.8	-0.3
	1.1nm,0.2s,SNR=7.9						
EGUA				S	Sn	14 53 60.0	-0.8
	1.0nm,0.2s,SNR=7.9						
ERON	Agron	4.19	17	P	Pn	14 53 14.8	+0.3
	1.6nm,0.4s,SNR=7.9						
ERON				S	Sn	14 54 03.6	+0.1
	0.4nm,0.4s,SNR=7.9						
ELOJ	Sierra Loja	4.24	13	P	Pn	14 53 15.8	+0.6
ELOJ				S	Sn	14 54 08.1	+3.4
ELOJ	Sierra Loja	4.24	13	P	Pn	14 53 15.8	+0.6
	0.6nm,0.2s,SNR=7.9						
ELOJ				S	Sn	14 54 04.8	+0.1
	0.4nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	4.24	13	P	Pn	14 53 15.8	+0.6
	0.6nm,0.2s,SNR=7.9						
ELOJ				S	Sn	14 54 08.1	+3.4
	0.4nm,0.3s,SNR=7.9						
EBER	Berja	4.36	27	P	Pn	14 53 17.2	+0.2
	0.4nm,0.1s,SNR=7.9						
EBER				S	Sn	14 54 07.3	-0.6
	2.5nm,0.3s,SNR=7.9						
EBER	Berja	4.36	27	P	Pn	14 53 17.2	+0.2
	0.4nm,0.1s,SNR=7.9						
EBER				S	Sn	14 54 07.3	-0.6
	2.5nm,0.3s,SNR=7.9						
EQUE	Quentar	4.46	20	P	Pn	14 53 18.6	+0.3
	0.5nm,0.2s,SNR=4.6						
EQUE				S	Sn	14 54 08.8	-1.4
	0.9nm,0.2s,SNR=7.9						
ELUQ	Luque	4.62	11	P	Pn	14 53 21.1	+0.7
ELUQ				S	Sn	14 54 11.6	-2.5
ELUQ	Luque	4.62	11	P	Pn	14 53 21.1	+0.7
	1.6nm,0.2s,SNR=7.9						
ELUQ				S	Sn	14 54 14.1	0.0
	2.3nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	4.72	334	ePn	Pn	14 53 22.6	+0.8
PBDV				eSn	Sn	14 54 15.7	-0.9
PBDV				A		14 54 21.9	
	5.7nm,0.2s						
PBDV	Barranco-do-Ve	4.72	334	ePn	Pn	14 53 22.6	+0.8
PBDV				eSn	Sn	14 54 15.7	-0.9
	5.7nm,0.2s						
PVAQ	Vaqueiros	4.79	337	ePn	Pn	14 53 23.5	+0.7
PVAQ				eSn	Sn	14 54 16.8	-1.5
PVAQ				A		14 54 21.0	
	9.1nm,0.3s						
PVAQ	Vaqueiros	4.79	337	ePn	Pn	14 53 23.5	+0.7
PVAQ				eSn	Sn	14 54 16.8	-1.5
	9.1nm,0.3s						
EGRO	El Granado	4.84	339	P	Pn	14 53 23.9	+0.4
EGRO				S	Sn	14 54 16.2	-3.3
EGRO	El Granado	4.84	339	P	Pn	14 53 23.9	+0.4
	7.9nm,0.1s,SNR=73						
EGRO				S	Sn	14 54 19.5	+0.1
	5.4nm,0.6s						
EGRO	El Granado	4.84	339	P	Pn	14 53 23.9	+0.5
	7.9nm,0.1s,SNR=73						
EMIN	Mina Concepcio	4.86	347	P	Pn	14 53 23.5	-0.3
EMIN				S	Sn	14 54 15.9	-4.3
EMIN	Mina Concepcio	4.86	347	P	Pn	14 53 23.5	-0.3
	2.6nm,0.5s,SNR=27						
EMIN				S	Sn	14 54 19.9	-0.2
	4.1nm,0.8s						
EMIN	Mina Concepcio	4.86	347	P	Pn	14 53 23.5	-0.3
	2.6nm,0.5s,SNR=27						
PFVI	Vila Bisbo	5.00	326	ePn	Pn	14 53 26.6	+0.9
PFVI				eSn	Sn	14 54 23.5	-0.1
PFVI				A		14 54 29.9	
	5.8nm,0.2s						
PFVI	Vila Bisbo	5.00	326	ePn	Pn	14 53 26.6	+0.9
PFVI				eSn	Sn	14 54 23.5	-0.1
	5.8nm,0.2s						
MORF	Marmelete	5.07	329	ePn	Pn	14 53 27.3	+0.7
MORF				eSn	Sn	14 54 24.7	-0.5
MORF				A		14 54 30.2	
	9.6nm,0.1s						
MORF	Marmelete	5.07	329	Pn	Pn	14 53 27.3	+0.7
MORF				P		14 53 27.7	
MORF				Sn	Sn	14 54 24.7	-0.5
	9.6nm,0.1s						
MORF				S	Sn	14 54 24.9	-0.3
MORF	Marmelete	5.07	329	ePn	Pn	14 53 27.3	+0.7
MORF				eSn	Sn	14 54 24.7	-0.5
	9.6nm,0.1s						
EQES	Quesada	5.12	21	P	Pn	14 53 28.3	+1.0
	2.2nm,0.4s,SNR=5.9						
EQES				S	Sn	14 54 25.1	-1.5
	5.5nm,0.8s						
EQES	Quesada	5.12	21	P	Pn	14 53 28.3	+0.9
	2.2nm,0.4s,SNR=5.9						
EADA	Adamuz	5.18	7	P	Pn	14 53 28.1	0.0
EADA				S	Sn	14 54 24.5	-3.4
EADA	Adamuz	5.18	7	P	Pn	14 53 28.1	0.0
	0.8nm,0.2s,SNR=7.9						
EADA				S	Sn	14 54 27.0	-0.9
	3.3nm,0.2s,SNR=7.9						
EADA	Adamuz	5.18	7	P	Pn	14 53 28.1	0.0
	0.8nm,0.2s,SNR=7.9						
EBAN	Banos Encina	5.29	13	P	Pn	14 53 30.1	+0.4
EBAN				S	Sn	14 54 27.0	-3.7
EBAN	Banos Encina	5.29	13	P	Pn	14 53 30.1	+0.4
	2.7nm,0.2s,SNR=7.9						
EBAN				S	Sn	14 54 28.7	-2.0
	1.4nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	5.30	329	ePn	Pn	14 53 30.7	+0.9
PTEO				eSn	Sn	14 54 30.8	-0.1
PTEO				A		14 54 35.0	
	6.0nm,0.2s						
PTEO	Sao Teotonio	5.30	329	ePn	Pn	14 53 30.7	+0.9
PTEO				eSn	Sn	14 54 30.8	-0.1
	6.0nm,0.2s						
PBAR	Barrancos	5.33	345	ePn	Pn	14 53 30.9	+0.7
PBAR				eSn	Sn	14 54 29.7	-2.0
PBAR				A		14 54 34.0	
	8.5nm,0.2s						
PBAR	Barrancos	5.33	345	ePn	Pn	14 53 30.9	+0.7
PBAR				eSn	Sn	14 54 29.7	-2.0
	8.5nm,0.2s						
PBEJ	Beja	5.41	338	ePn	Pn	14 53 32.6	+1.3
PBEJ				eSn	Sn	14 54 32.3	-1.2
PBEJ				A		14 54 36.0	
	4.4nm,0.1s						
PBEJ	Beja	5.41	338	Pn	Pn	14 53 32.6	+1.3
PBEJ				Sn	Sn	14 54 32.3	-1.2
	2.2nm,0.1s						
EBAD	Badajoz	5.89	347	P	Pn	14 53 38.7	+0.8
	8.4nm,0.4s,SNR=63						
EBAD				S	Sn	14 54 43.8	-1.5
	0.1nm,0.1s						
EBAD	Badajoz	5.89	347	P	Pn	14 53 38.7	+0.9
	8.4nm,0.4s,SNR=63						
EVO	Evora	5.92	339	ePn	Pn	14 53 39.2	+0.9
EVO				eSn	Sn	14 54 45.1	-1.0
EVO				A		14 54 49.4	
	6.6nm,0.1s						
EVO	Evora	5.92	339	Pn	Pn	14 53 39.2	+0.9
EVO				Sn	Sn	14 54 45.1	-1.0
	3.3nm,0.1s						
PESTR	Estremoz	6.12	343	ePn	Pn	14 53 41.8	+0.8
PESTR				eSn	Sn	14 54 49.1	-1.9
PESTR				A		14 54 53.0	
	3.6nm,0.2s						
ETOB	Tobarra	6.41	28	P	Pn	14 53 45.6	+0.6
	2.0nm,0.5s,SNR=4.7						
ETOB	Tobarra	6.41	28	P	Pn	14 53 45.6	+0.6
	2.0nm,0.5s,SNR=4.7						
PMAFR	Mafra	6.73	333	ePn	Pn	14 53 51.1	+1.6
PMAFR				eSn	Sn	14 55 05.8	-0.4
ESDC	Sonseca Array	6.74	9	P	Pn	14 53 48.9	-0.7
ESDC				S	Sn	14 55 00.6	-5.7
ESDC	Sonseca Array	6.74	9	P	Pn	14 53 48.9	-0.7
	0.3nm,0.2s,baz=193,slow=13,SNR=3.7						
ESDC				S	Sn	14 55 03.8	-2.5
	0.2nm,0.2s,baz=191,slow=23,SNR=4.0						
PCBR	Castelo Branco	7.02	346	ePn	Pn	14 53 54.1	+0.6
PCBR				eSn	Sn	14 55 10.3	-3.1
PCBR				A		14 55 12.0	
	3.8nm,0.3s						
PCBR	Castelo Branco	7.02	346	Pn	Pn	14 53 54.1	+0.6
PCBR				Sn	Sn	14 55 10.3	-3.1
	1.9nm,0.3s						
PVIS	Viseu	7.95	346	ePn	Pn	14 54 07.3	+1.1
ETOR	Torete	8.22	18	P	Pn	14 54 10.0	+0.1
	2.1nm,0.1s,SNR=7.9						
ETOR				S	Sn	14 55 39.3	-3.5
	1.1nm,0.2s,SNR=7.9						
PVRL	Vila Real	8.46	348	ePn	Pn	14 54 14.2	+1.0
PVRL				eSn	Sn	14 55 44.9	-3.8
PVRL				A		14 55 48.0	
	3.7nm,0.2s						
PVRL	Vila Real	8.46	348	Pn	Pn	14 54 14.2	+1.0
PVRL				Sn	Sn	14 55 44.9	-3.8
	1.9nm,0.2s						
PBRG	Braganca	8.84	353	ePn	Pn	14 54 19.4	+1.0
ECAL	Calabor	8.98	353	P	Pn	14 54 20.9	+0.6
ECAL				S	Sn	14 55 55.7	-5.8
ECAL	Calabor	8.98	353	P	Pn	14 54 20.8	+0.6
	1.3nm,0.1s,SNR=7.9						
ECAL				S	Sn	14 55 58.1	-3.3
	0.9nm,0.1s,SNR=7.9						
ELOB	Lobios	9.10	347	P	Pn	14 54 22.6	+0.7
ELOB				S	Sn	14 55 56.4	-7.9
ELOB	Lobios	9.10	347	P	Pn	14 54 22.6	+0.7
	1.3nm,0.3s,SNR=5.1						
ELOB				S	Sn	14 56 00.6	-3.7
	0.9nm,0.3s,SNR=7.9						
EZAM	Zamans	9.50	345	P	Pn	14 54 27.9	+0.5
EMAZ	Mazaricos	10.32	345	P	Pn	14 54 38.9	+0.2
	0.7nm,0.1s						

MEX 18 15:01:58.3±0.4**, 1617N**×**9795W, h12**km±10km**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.28	322	iP	Pg	15 02 03.8	-0.3
PNIG				iS	Sg	15 02 07.9	-0.1
VHO	Vista Hermosa	1.47	52	iP	Pn	15 02 20.7	-4.0
VHO				iS	Sn	15 02 39.6	-4.3
ACX	Acapulco	2.01	290	iP	Pn	15 02 29.0	-3.1

*IDC **18** 15:02:37.3±0.7, 58.02S×9.38W, h0km, mb4.2/10, mb1 4.3/11, mb1mx4.2/19, mbtmp4.2/11, ML4.7/1, MS3.8/12, Ms1 3.8/12, ms1mx3.7/28, Error ellipse: s-maj=26.0km s-min=18.6km az=74.0*

*ISCJB **18** 15:02:38.5±0.5, 58.10S±0.07×9.4W±02, h18km, mb4.0/11, MS3.9/11, Error ellipse: s-maj=17.6km s-min=9.0km az=169.7*

*NEIC **18** 15:02:39.7±6.1, 57.99S×9.32W, h18km±38km, mb4.2/1, Error ellipse: s-maj=18.3km s-min=11.2km az=72.0*

ISC 18 15:02:40.9±4.0**, 5808S**±008×**93W**±02**, h21**km±29km**, n30,** σ**0.64**/20**, mb4.0**/11**, MS3.9**/11**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.63	178	e	Pn	15 05 39.1	+0.1
VNA1				e		15 05 40.2	
VNA1				e		15 05 41.7	
VNA1				e		15 05 42.8	
VNA1				e		15 05 45.4	
VNA1				e		15 05 51.3	
VNA1				e		15 05 54.1	
VNA1				e		15 05 56.0	
VNA1				e		15 07 53.1	
VNA1				e		15 07 57.4	
VNA1				e		15 08 01.7	
VNA2	Neumayer--Watz	12.93	177	e	Pn	15 05 42.9	-0.1
	baz=352,slow=14						
VNA2				e		15 05 43.9	
VNA2				e		15 05 44.8	
VNA2				e		15 05 46.3	
VNA2				e		15 05 48.4	
VNA2				e		15 05 53.9	
VNA2				e		15 05 56.0	
VNA2				e		15 07 55.2	
VNA2				e		15 07 59.4	
VNA2				e		15 08 03.3	
VNA3	Neumayer Olymp	13.22	181	e	Pn	15 05 47.1	+0.1
VNA3				e		15 05 47.9	
VNA3				e		15 05 49.0	
VNA3				e		15 05 50.0	
VNA3				e		15 05 52.9	
VNA3				e		15 05 59.3	
VNA3				e		15 06 01.4	
VNA3				e		15 08 02.7	
VNA3				e		15 08 07.3	
VNA3				e		15 08 12.2	
SNAA	Sanae	13.91	171	e	Pn	15 05 55.2	-1.2
SNAA				e		15 05 57.5	
SNAA				e		15 05 58.4	
SNAA				e		15 05 59.6	
SNAA				e		15 06 02.5	
SNAA				e		15 06 09.1	
SNAA				e		15 06 11.0	
SNAA				e		15 08 17.8	
SNAA				e		15 08 21.0	
SNAA				e		15 08 26.3	
SNAA	Sanae	13.91	171	Pn	Pn	15 05 56.0	-0.4
	3.6nm,0.3s,baz=353,slow=14,SNR=42						
SNAA				LR	LR	15 10 14.9	
	comp=Z,64nm,18.9s,baz=352,slow=33						
TRIS	Tristan da Cun	21.11	353	Pn	P	15 07 24.0	+0.1
PMSA	Palmer Station	26.25	232	LR	LR	15 17 11.5	
	comp=Z,301nm,20.1s,MS3.8,baz=135,slow=33						
USHA	Ushuaia	31.93	250	LR	LR	15 19 25.3	
	comp=Z,290nm,18.2s,MS4.0,baz=185,slow=32						
QSPA	South Pole Qui	32.16	180	P	P	15 09 07.1	+0.7
	5.9nm,0.8s,mb4.5,baz=218,slow=5.1,SNR=22						
MAW	Mawson	32.35	137	P	P	15 09 08.8	+0.6
	10nm,0.9s,mb4.6,baz=242,slow=10.0,SNR=9.4						
MAW				LR	LR	15 19 47.3	
	comp=Z,171nm,20.9s,MS3.7,baz=254,slow=32						
SUR	Sutherland	32.82	52	LR	LR	15 18 57.1	
	comp=Z,214nm,18.2s,MS3.9,baz=144,slow=30						
BOSA	Boshof	37.97	54	LR	LR	15 21 51.7	
	comp=Z,175nm,18.7s,MS3.9,baz=207,slow=30						
TRQA	Tornquist	39.25	277	eP	P	15 10 07.5	-0.1
	4.4nm,0.9s,mb4.2						
PLCA	Paso Flores	41.85	267	LR	LR	15 23 58.6	
	comp=Z,128nm,20.9s,MS3.8,baz=336,slow=31						
TSUM	Tsumeb	43.55	38	P	P	15 10 43.5	+0.5
	2.4nm,1.0s,mb3.9,baz=203,slow=13,SNR=3.3						
VNDA	Vanda	44.55	177	P	P	15 10 51.8	+1.4
	1.4nm,0.6s,mb3.9,baz=208,slow=6.6,SNR=7.2						
VNDA				LR	LR	15 28 54.0	
	comp=Z,98nm,18.6s,MS3.8,baz=7.2,slow=35						
CFAA	Coronel Fontan	47.48	277	P	P	15 11 13.6	-0.5
CFAA	Coronel Fontan	47.48	277	P	P	15 11 13.6	-0.5
	0.7nm,0.8s,mb3.6,baz=139,slow=7.8,SNR=3.9						
LPAZ	La Paz	59.98	288	P	P	15 12 46.2	+0.6
LPAZ				LR	LR	15 36 04.3	
LPAZ	La Paz	59.98	288	P	P	15 12 46.2	+0.6
	1.3nm,0.6s,mb4.1,baz=189,slow=13,SNR=3.5						
LPAZ				LR	LR	15 36 04.3	
	comp=Z,49nm,19.8s,MS3.6,baz=262,slow=34						
KMBO	Kilima Mbogo	67.56	52	LR	LR	15 40 14.4	
	comp=Z,76nm,18.6s,MS4.0,baz=105,slow=33						
TORD	Torodi Ar. Bea	71.54	11	P	P	15 13 59.5	-0.5
	0.3nm,0.7s,mb3.3,baz=212,slow=5.1,SNR=3.5						
ROSC	El Rosal	81.23	294	LR	LR	15 50 51.5	
	comp=Z,65nm,18.3s,MS4.0,baz=0.3,slow=36						
STKA	Stephens Creek	87.12	156	P	P	15 15 24.5	-0.4
STKA				LR	LR	15 51 31.6	
STKA	Stephens Creek	87.12	156	P	P	15 15 24.5	-0.4
	0.6nm,0.6s,mb4.0,baz=154,slow=7.0,SNR=3.6						
STKA				LR	LR	15 51 31.6	
	comp=Z,69nm,18.9s,MS4.1,baz=205,slow=34						
ASAR	Alice Springs	92.98	147	P	P	15 15 51.9	-0.6
	1.3nm,0.9s,mb4.3,baz=194,slow=5.1,SNR=13						
WRA	Warramunga Arr	96.63	146	P	P	15 16 08.1	-1.1
	0.7nm,1.0s,mb4.0,baz=202,slow=4.1,SNR=3.6						
YKA	Yellowknife Ar	144.62	309	PKP	PKPdf	15 22 11.0	-3.1
	0.6nm,0.8s,baz=112,slow=3.6,SNR=12						
KSRS	Korea Array	145.43	108	PKPbc	PKPbc	15 22 16.2	-0.3
	1.2nm,0.9s,baz=197,slow=3.8,SNR=3.8						
MJAR	Matsushiro Arr	149.68	121	PKPbc	PKPbc	15 22 27.6	-0.6
	1.5nm,0.9s,baz=177,slow=1.1,SNR=4.1						

*NEIC **18** 15:19:58.6, 1950N×6600W, h53km, MD3.6(RSPR), After RSPR.*

RSPR 18 15:19:58.6, 1950N×**6600W, h53**km±14km**, MD3.6**/14**, MD3.6**/14**, 9C-5D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBYP	Canovanas	1.23	173⇑	eP	Pn	15 20 17.8	-1.6
CBYP				eS	Sn	15 20 34.3	-0.6
SJG	San Juan	1.38	186⇓	iP	Pn	15 20 20.4	-1.2
SJG				eS	Sn	15 20 37.8	-1.0
SJG	San Juan	1.38	186⇑	eP	Pn	15 20 20.4	-1.2
SJG				eS	Sn	15 20 37.2	-1.5
LRS	Lares	1.44	214⇑	iP	Pn	15 20 21.4	-0.9
LRS				eS	Sn	15 20 39.3	-0.7
CPD	Cerro la Pandu	1.45	177⇑	eP	Pn	15 20 21.2	-1.3
CPD	Cerro la Pandu	1.45	177	eS	Sn	15 20 39.6	-0.9
CPD	Cerro la Pandu	1.45	177	ePn	Pn	15 20 21.0	-1.5
CPD				eS	Sn	15 20 39.4	-1.1
MTP	Monte Pirata	1.46	163⇑	eP	Pn	15 20 21.0	-1.6
MTP				eS	Sn	15 20 39.9	-0.6
AGPR	Aguadilla, PR	1.46	226⇑	eP	Pn	15 20 21.7	-0.9
AGPR				eS	Sn	15 20 40.1	-0.6
CELP	Cerrillos	1.52	201⇑	eP	Pn	15 20 22.6	-0.8
CELP				eS	Sn	15 20 41.6	-0.4
OBIP	Obispado Ponce	1.55	202⇑	eP	Pn	15 20 23.5	-0.4
OBIP				eS	Sn	15 20 42.2	-0.7
LSP	Las Mesas	1.67	218⇓	eP	Pn	15 20 25.1	-0.3
LSP				eS	Sn	15 20 44.9	-0.7
ICM	Isla Caja Muer	1.67	197⇓	eP	Pn	15 20 25.1	-0.4
ICM				eS	Sn	15 20 44.5	-1.1
GBPR	Guanica, Bosqu	1.73	209⇑	eP	Pn	15 20 26.1	-0.1
GBPR	Guanica, Bosqu	1.73	209	eS	Sn	15 20 47.0	-0.1
ABV	Anegada	1.75	115⇓	eP	Pn	15 20 25.9	-0.7
ABV	Anegada	1.75	115	eS	Sn	15 20 47.0	-0.8
CRPR	Cabo Rojo, PR	1.81	215⇓	eP	Pn	15 20 27.4	0.0
CRPR				eS	Sn	15 20 47.8	-1.5
SDDR	Presa de Saban	5.02	265⇑	eP	Pn	15 21 13.2	+1.8
SDDR				eS	Sn	15 22 07.8	-0.2

*ISCJB **18** 15:28:57.9±0.4, 4688N±002×077W±003, h3km±3km, Error ellipse: s-maj=4.0km s-min=2.3km az=138.2*

*CSEM **18** 15:29:00.6±0.1, 4685N×087W, h2km, ML2.8/15, Error ellipse: s-maj=1.3km s-min=0.7km az=44.0*

*LDG **18** 15:29:00.7±0.0, 4685N×087W, h3km, Md2.8/1, Ml2.7/17, Error ellipse: s-maj=1.2km s-min=0.6km az=46.0*

*NEIC **18** 15:29:00.7, 4685N×087W, h3km, ML2.7(LDG), After LDG.*

*STR **18** 15:29:01.3±0.9, 4683N×075W, h2km, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 18 15:28:59.4±0.3**, 4685N**±002×**084W**±003**, h10**km±3km**, n49,** σ**0.83**/131**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCHF	La Chataignera	0.20	161	Pg	Pg	15 29 04.3	+0.7
LCHF				Sg	Sg	15 29 07.2	+0.8
MFF	Saint Martin d	0.54	118	ePg	Pg	15 29 11.1	+1.2
MFF				eSg	Sg	15 29 18.5	+1.5
	30nm,0.2s,SNR=1.0						
MFF	Saint Martin d	0.54	118	ePg	Pg	15 29 11.1	+1.2
MFF				eSg	Sg	15 29 18.5	+1.5
	15nm,0.2s,SNR=1.0						
CHIF	Chize	0.78	158	Pg	Pg	15 29 15.5	+1.0
CHIF				Sg	Sg	15 29 25.3	+0.7
GRR	Gorron	1.54	359	ePg	Pg	15 29 29.2	+0.3
GRR				eSn	Sn	15 29 47.0	+0.2
	SNR=1.0						
GRR				eSg	Sg	15 29 49.5	+0.7
	16nm,0.3s						
GRR	Gorron	1.54	359	ePn	Pn	15 29 27.6	+0.8
GRR				ePg	Pg	15 29 29.2	+0.3
GRR				eSn	Sn	15 29 47.0	+0.2
GRR				eSg	Sg	15 29 49.5	+0.7
GRR	Gorron	1.54	359	ePg	Pg	15 29 29.2	+0.3
GRR				eSn	Sn	15 29 47.0	+0.2
	SNR=1.0						
GRR				eSg	Sg	15 29 49.5	+0.7
	7.9nm,0.3s						
LDF	La Druitiere	1.81	15	ePg	Pg	15 29 34.4	+0.3
LDF				eSg	Sg	15 29 57.1	-0.4
	18nm,0.2s,SNR=1.0						
LDF	La Druitiere	1.81	15	ePn	Pn	15 29 31.2	+0.7
LDF				ePg	Pg	15 29 34.4	+0.3
LDF				eSg	Sg	15 29 57.1	-0.4
LDF	La Druitiere	1.81	15	ePg	Pg	15 29 34.4	+0.3
LDF				eSg	Sg	15 29 57.1	-0.4
	9.1nm,0.2s,SNR=1.0						
SGMF	Saint Gilles	1.82	321	ePg	Pg	15 29 34.6	+0.2
SGMF				eSg	Sg	15 29 57.0	-1.0
	9.6nm,0.2s,SNR=1.0						
SGMF	Saint Gilles	1.82	321	eP	Pn	15 29 33.3	+2.5
SGMF				ePg	Pg	15 29 34.6	+0.2
SGMF				eSg	Sg	15 29 57.0	-1.0
SGMF	Saint Gilles	1.82	321	ePg	Pg	15 29 34.6	+0.2
SGMF				eSg	Sg	15 29 57.0	-1.0
	4.8nm,0.2s,SNR=1.0						
QUIF	Quistinic	1.91	305	ePg	Pg	15 29 35.7	-0.3
QUIF				eSn	Sn	15 29 55.4	-0.5
	SNR=1.0						
QUIF				eSg	Sg	15 29 59.8	-0.9
	5.0nm,0.1s						
QUIF	Quistinic	1.91	305	ePn	Pn	15 29 32.3	+0.4
QUIF				ePg	Pg	15 29 35.7	-0.3
QUIF				eSn	Sn	15 29 55.4	-0.5

QUIF					*e*Sg	**Sg**	**15 29 59.8**	**-0.9**
	comp=Z,7.0nm,1.0s								
CN2	**Changchun**	**20.91**	**269**	*e*P	**P**	**16 00 39.9**	**-4.1**
CN2					AMB	AMB		
	comp=Z,10.0nm,0.8s								
KSRS	**Korea Array**	**22.50**	**251**	P	**P**	**16 00 59.5**	**-1.4**
	comp=Z,7.3nm,0.7s,mb4.2,baz=49,slow=9.9,SNR=23								
KSRS					LR	LR	16 09 16.9		
	comp=Z,120nm,18.8s,MS3.4,baz=45,slow=36								
GAMB	**Gambell**	**23.78**	**37**	*e*P	**P**	**16 01 13.4**	**0.0**
BOD	**Bodaibo**	**25.99**	**307**	*e*P	**P**	**16 01 31.2**	**-2.3**
TNA	**Tin City**	**26.00**	**35**	*e*P	**P**	**16 01 33.5**	**0.0**
	comp=Z,13nm,1.1s,mb4.4								
TIXI	**Tiksi**	**26.31**	**342**↑	*e*P	**P**	**16 01 35.6**	**-0.7**
TIXI					pmax	pmax			
	comp=Z,2.0nm,0.5s,mb3.9								
TIXI					MLR	MLR			
	comp=Z,100nm,18.0s,MS3.4								
HHC	**Hu-ho-hao-te**	**31.46**	**273**	*e*P	**P**	**16 02 21.4**	**-1.0**
HHC					S	**S**	**16 07 32.5**	**+6.0**
HHC					AMB	AMB			
	comp=Z,19nm,0.7s,mb5.0								
HHC					AMB	AMB			
	comp=Z,121nm,6.1s								
HHC					LR	LR			
	comp=N,132nm,14.2s,MS3.9								
HHC					LR	LR			
	comp=E,132nm,13.1s,MS3.9								
HHC					LR	LR			
	comp=Z,148nm,15.3s,MS3.8								
ULN	**Ulaanbaatar**	**31.59**	**287**	P	**P**	**16 02 20.5**	**-3.0**
	comp=Z,3.7nm,1.3s,mb4.0								
ULN	**Ulaanbaatar**	**31.59**	**287**‖	*e*P	**P**	**16 02 21.8**	**-1.7**
SONM	**Songino Array**	**32.02**	**288**	P	**P**	**16 02 24.5**	**-2.7**
SONM					pmax	pmax			
	comp=Z,1.0nm,0.8s								
SONM					MLR	MLR			
	comp=Z,163nm,18.1s								
SONM	**Songino Array**	**32.02**	**288**	P	**P**	**16 02 24.5**	**-2.7**
	comp=Z,0.7nm,0.8s,mb3.5,baz=56,slow=7.9,SNR=7.4								
SONM					LR	LR	16 16 29.0		
	comp=Z,163nm,18.1s,MS3.8,baz=184,slow=39								
ZAK	**Zakamensk**	**33.17**	**293**	*e*P	**P**	**16 02 35.7**	**-1.6**
ZAK					pmax	pmax			
	comp=Z,2.0nm,1.2s,mb3.9								
COLA	**College**	**34.10**	**40**	*i* P	**P**	**16 02 46.1**	**+1.0**
LZH	**Lanzhou**	**39.11**	**271**	*e*P	**P**	**16 03 23.5**	**-4.6**
LZH					AP	pP	16 03 28.3	-13	
LZH					XP	sP	16 03 30.8	-17	
LZH					PP	PP	16 04 57.6	-0.8	
LZH					AMB	AMB			
	comp=Z,21nm,1.3s,mb4.7								
LZH					AMB	AMB			
	comp=Z,104nm,5.2s								
LZH					LR	LR			
	comp=N,287nm,14.7s								
LZH					LR	LR			
	comp=Z,356nm,18.2s,MS4.2								
INK	**Inuvik**	**39.62**	**34**	*e*P	**P**	**16 03 32.7**	**+0.8**
	comp=Z,188nm,1.2s,mb5.7								
INK	**Inuvik**	**39.62**	**34**	*e*P	**P**	**16 03 32.7**	**+0.7**
INK					pmax	pmax			
	comp=Z,188nm,1.2s								
INK	**Inuvik**	**39.62**	**34**	P	**P**	**16 03 32.5**	**+0.5**
	comp=Z,2.3nm,0.6s,mb4.1,baz=294,slow=7.2,SNR=32								
CD2	**Chengdu**	**42.28**	**265**	*e*P	**P**	**16 03 53.6**	**-0.7**
CD2					AP	pP	16 03 59.0	-8.9	
CD2					XP	sP	16 04 01.5	-12	
CD2					PP	PP	16 05 34.3	+1.5	
CD2					AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.6								
CD2					AMB	AMB			
	comp=Z,20nm,4.2s								
CD2					LR	LR			
	comp=E,100nm,12.4s								
CD2					LR	LR			
	comp=Z,80nm,14.2s,MS3.8								
GYA	**Guiyang**	**43.29**	**257**	P	**P**	**16 04 02.9**	**+0.3**
GYA					AP	pP	16 04 06.4	-10	
GYA					XP	sP	16 04 10.3	-12	
GYA					PP	PP	16 05 45.0	+1.2	
GYA					PCP	PcP	16 05 52.5	+1.8	
GYA					SCP	ScP	16 09 42.6	+5.1	
GYA					S	**S**	**16 10 28.6**	**+2.4**	
GYA					AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.6								
GYA					AMB	AMB			
	comp=Z,60nm,5.8s								
WMQ	**Urumqi**	**45.53**	**291**	*e*P	**P**	**16 04 19.5**	**-0.7**
WMQ					AP	pP	16 04 23.9	-10	
WMQ					XP	sP	16 04 26.5	-13	
WMQ					PP	PP	16 06 06.5	-0.8	
WMQ					AMB	AMB			
	comp=Z,5.0nm,0.4s,mb4.8								
WMQ					AMB	AMB			
	comp=Z,190nm,5.2s								
WMQ					LR	LR			
	comp=N,133nm,18.1s,MS3.9								
WMQ					LR	LR			
	comp=E,54nm,22.3s,MS3.9								
WMQ					LR	LR			
	comp=Z,73nm,20.0s,MS3.6								
KMI	**Kunming**	**46.77**	**260**	P	**P**	**16 04 30.1**	**-0.1**
KMI					AP	pP	16 04 33.8	-10	
KMI					LR	LR			
	comp=Z,251nm,25.9s,MS4.1								
MK31	**Makanchi Array**	**47.34**	**297**	*e*P	**P**	**16 04 32.8**	**-1.5**
MKAR	**Makanchi Array**	**47.34**	**297**	*i* P	**P**	**16 04 33.0**	**-1.3**
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**47.34**	**297**	P	**P**	**16 04 32.3**	**-2.0**
	comp=Z,1.8nm,0.6s,mb4.2,baz=63,slow=7.8,SNR=22								
MKAR					LR	LR	16 25 49.9		
	comp=Z,113nm,21.4s,MS3.8,baz=173,slow=38								
KURK	**Kurchatov**	**47.54**	**303**	*e*P	**P**	**16 04 33.3**	**-2.5**
	comp=Z,6.3nm,1.1s,mb4.6								
KURK	**Kurchatov**	**47.54**	**303**‖	*e*P	**P**	**16 04 34.3**	**-1.5**
YKA	**Yellowknife Ar**	**48.88**	**38**	P	**P**	**16 04 46.4**	**+0.4**
YKA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
YKA	**Yellowknife Ar**	**48.88**	**38**	P	**P**	**16 04 46.4**	**+0.4**
	comp=Z,2.3nm,0.8s,mb4.2,baz=298,slow=7.7,SNR=31								
RES	**Resolute Bay**	**48.91**	**19**	*e*P	**P**	**16 04 46.5**	**+0.5**
	comp=Z,71nm,0.5s								
RES	**Resolute Bay**	**48.91**	**19**	*e*P	**P**	**16 04 46.6**	**+0.5**
RES					pmax	pmax			
	comp=Z,71nm,0.5s								
BRVK	**Borovoye**	**50.86**	**309**	*e*P	**P**	**16 04 59.7**	**-1.4**
LSA	**Lhasa**	**51.45**	**273**	P	**P**	**16 05 06.8**	**+0.9**
LSA	**Lhasa**	**51.45**	**273**	*e*P	**P**	**16 05 06.7**	**+0.8**
	comp=Z,6.3nm,0.6s,mb4.7								
LSA	**Lhasa**	**51.45**	**273**	*e*P	**P**	**16 05 06.7**	**+0.8**
LSA					pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.7								
SHL	**Shillong**	**53.67**	**269**	*e*P	**P**	**16 05 23.0**	**+0.6**
AAK	**Ala-Archa**	**54.26**	**296**‖	*e*P	**P**	**16 05 24.6**	**-1.8**
AAK					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2								
AAK					MLR	MLR			
	comp=Z,100nm,16.0s,MS4.0								
TAPN	**Taplejung**	**55.27**	**273**	*e*P	**P**	**16 05 33.8**	**-0.1**
	comp=Z,6.4nm,0.6s,mb4.8								
ODAN	**Odare**	**55.80**	**273**	*e*P	**P**	**16 05 39.4**	**+1.6**
	comp=Z,9.7nm,1.0s,mb4.8								
JIRN	**Jiri**	**56.07**	**275**	*e*P	**P**	**16 05 39.7**	**0.0**
	comp=Z,14nm,0.7s,mb5.1								
KKN	**Kakani**	**56.59**	**276**	*e*P	**P**	**16 05 43.6**	**+0.2**
	comp=Z,12nm,0.7s,mb5.0								
GKN	**Gorkha**	**56.88**	**276**	*e*P	**P**	**16 05 45.1**	**-0.3**
	comp=Z,14nm,0.6s,mb5.2								
KOLN	**Koldanda**	**57.72**	**277**	*e*P	**P**	**16 05 51.5**	**+0.1**
	comp=Z,14nm,0.7s,mb5.1								
PMG	**Port Moresby**	**57.92**	**189**	LR	LR	16 29 52.1		
	comp=Z,50nm,18.5s,MS3.7,baz=186,slow=35								
HLID	**Hailey**	**59.57**	**57**	*e*P	**P**	**16 06 05.3**	**+1.3**
NVAR	**Mina Array Bea**	**60.59**	**64**	P	**P**	**16 06 12.0**	**+1.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=295,slow=7.7,SNR=5.2								
RLMT	**Red Lodge**	**61.39**	**53**	P	**P**	**16 06 16.4**	**0.0**
	comp=Z,8.3nm,1.3s,mb4.7								
BW06	**Boulder Array**	**62.79**	**56**	*e*P	**P**	**16 06 27.0**	**+1.2**
	comp=Z,5.9nm,1.4s,mb4.5								
PDAR	**Pinedale Array**	**62.79**	**56**	P	**P**	**16 06 26.7**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.3,baz=284,slow=2.0,SNR=17								
FINES	**FINESS Array B**	**63.12**	**335**	P	**P**	**16 06 26.8**	**-0.9**
FINES					pmax	pmax			
	comp=Z,1.0nm,0.6s								
FINES	**FINESS Array B**	**63.12**	**335**	P	**P**	**16 06 26.8**	**-0.9**

ISC 18 15:56:06.0±0.8, 4835N±005×15498E±007, h52km±6km, h8km±4.9km: pP-P, n168, σ1s00/177, mb4.5/59, MS3.8/13, 4C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.45**	**17**	*e*PN		**Pn**	**15 56 40.5**	**-2.9**
SKR				*e*S		**Sn**	**15 57 07.4**	**-4.7**
SKR				pmax		pmax		
	comp=N,80nm,0.5s							
SKR				pmax		pmax		
	comp=E,80nm,0.5s							
SKR				pmax		pmax		
	comp=Z,260nm,0.5s							
SKR				smax				
	comp=N,1μm,0.5s							
SKR				smax				
	comp=E,650nm,0.5s							
SKR	**Severo-Kuril's**	**2.45**	**17**	*e*P		**Pn**	**15 56 40.5**	**-2.9**
SKR				AMB		AMB	15 56 43.5	
	comp=E,80nm,0.5s							
SKR				AMB		AMB	15 56 43.5	
	comp=E,260nm,0.5s							
SKR				*e*S		**Sn**	**15 57 07.4**	**-4.7**
SKR				A			15 57 22.4	
	comp=E,1μm,0.5s							
SKR				A			15 57 22.4	
	comp=E,650nm,0.5s							
SKR				A			15 57 22.4	
	comp=E,800nm,0.5s							
PET	**Petropavlovsk**	**5.23**	**25**	*e*Pn		**Pn**	**15 57 20.1**	**-1.4**
	comp=E,40nm,0.4s							
PET				*e*Sn		**Sn**	**15 58 20.9**	**+0.5**
PET	**Petropavlovsk**	**5.23**	**25**	*e*PN		**Pn**	**15 57 20.3**	**-1.2**
PET				pmax		pmax		
	comp=Z,50nm,0.5s							
PET				MLR		MLR		
	comp=Z,400nm,20.0s							
KUR	**Kuril'sk**	**5.79**	**240**↑	*i* P		**Pn**	**15 57 29.0**	**-0.3**
KUR				AMB		AMB	15 57 29.4	
	comp=Z,200nm,0.6s							
KUR				*i* S		**Sn**	**15 58 34.8**	**+0.5**
KUR				A			15 58 45.0	
	comp=Z,600nm,1.0s							
KUR				A			15 58 45.0	
	comp=Z,570nm,1.0s							
YSS	**Yuzh-Sakhalins**	**8.37**	**265**	*e*Pn		**Pn**	**15 58 05.6**	**+1.0**
	comp=Z,26nm,0.9s							
YSS	**Yuzh-Sakhalins**	**8.37**	**265**	*i* PN		**Pn**	**15 58 05.9**	**+1.3**
YSS	**Yuzh-Sakhalins**	**8.37**	**265**	*e*P		**Pn**	**15 58 06.2**	**+1.6**
YSS				*e*S		**Sn**	**15 59 40.0**	**+2.4**
YSS				*e*LQ			16 00 36.0	
YSS				AMS		AMS	16 02 24.0	
	comp=Z,300nm,15.0s							
TYV	**Tymovskoe**	**8.39**	**292**	*e*P		**Pn**	**15 58 06.0**	**+1.2**
TYV				*e*S		**Sn**	**15 59 41.0**	**+3.0**
TYV				A			15 59 42.0	
	comp=Z,11nm,0.8s							
UGL	**Uglegorsk**	**8.57**	**280**	PN		**Pn**	**15 58 08.8**	**+1.5**
UGL				pmax		pmax		
	comp=Z,54nm,0.8s							
UGL				MLR		MLR		
	comp=N,450nm,15.0s							
UGL				MLR		MLR		
	comp=E,500nm,15.0s							
UGL				MLR		MLR		
	comp=Z,500nm,15.0s							
UGL	**Uglegorsk**	**8.57**	**280**	*e*P		**Pn**	**15 58 08.8**	**+1.5**
UGL				AMB		AMB	15 58 13.5	
	comp=Z,54nm,0.8s							
UGL				*e*L			16 00 20.0	
UGL				AMS		AMS	16 01 46.0	
	comp=Z,450nm,15.0s							
UGL				AMS		AMS	16 01 46.0	
	comp=Z,500nm,15.0s							
UGL				AMS		AMS	16 01 46.0	
	comp=Z,500nm,15.0s							
OKH	**Okha**	**9.21**	**309**	*e*P		**Pn**	**15 58 16.1**	**+0.1**
OKH				*e*S		**Sn**	**16 00 02.1**	**+4.1**
OKH				*e*L			16 01 08.0	
OKH				AMS		AMS	16 03 16.2	
	comp=Z,600nm,12.0s							
OKH				AMS		AMS	16 03 16.2	
	comp=Z,700nm,14.0s							
ASAJ	**Asahikawa**	**9.57**	**248**	PN		**Pn**	**15 58 21.6**	**+0.7**
ASAJ				pmax		pmax		
	comp=Z,2.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,294nm,20.9s							
ASAJ	**Asahikawa**	**9.57**	**248**	Pn		**Pn**	**15 58 21.6**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=93,slow=11,SNR=14							
ASAJ				LR		LR	16 01 34.2	
	comp=Z,294nm,20.9s,baz=165,slow=36							
NKL	**Nikolayevsk**	**10.25**	**303**	*e*P		**Pn**	**15 58 25.5**	**-4.7**
NKL				AMB		AMB	15 58 27.8	
	comp=Z,20nm,1.2s							
NKL				AMB		AMB	15 58 27.8	
	comp=Z,28nm,1.2s							
NKL				AMB		AMB	15 58 27.8	
	comp=Z,35nm,1.2s							
NKL				*e*L			16 01 28.0	
NKL				AMS		AMS	16 03 24.0	
	comp=Z,400nm,15.0s							
NKL				AMS		AMS	16 03 24.0	
	comp=Z,600nm,15.0s							
ERM	**Erimo**	**10.47**	**237**	P		**Pn**	**15 58 31.4**	**-1.9**
ERM	**Erimo**	**10.47**	**237**	*i* PN		**Pn**	**15 58 31.8**	**-1.5**
MA2	**Magadan**	**11.51**	**349**	*e*P		**Pn**	**15 58 47.6**	**+0.2**
MA2	**Magadan**	**11.51**	**349**	*e*PN		**Pn**	**15 58 48.0**	**+0.6**
MA2				pmax		pmax		
	comp=Z,20nm,1.0s							
HABR	**Khabarovsk**	**13.24**	**278**	*e*PN		**Pn**	**15 59 11.2**	**+0.2**
SEY	**Seymchan**	**14.69**	**355**‖	*e*P		**Pn**	**15 59 30.2**	**-0.1**
KLR	**Kul'dur**	**15.32**	**282**	*e*P		**Pn**	**15 59 38.2**	**-0.5**
KLR				MLR		MLR		
	comp=E,500nm,13.0s							
KLR				MLR		MLR		
	comp=Z,1μm,13.0s							
MAJO	**Matsushiro**	**17.06**	**232**	*e*P		**Pn**	**15 59 56.7**	**-4.0**
MJAR	**Matsushiro Arr**	**17.06**	**232**	*i* Pn		**Pn**	**15 59 55.9**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=8.5							
MDJ	**Mudanjiang**	**17.85**	**267**	P		**Pn**	**16 00 04.4**	**-6.0**
MDJ				AMB		AMB		
	comp=Z,7.0nm,1.2s							
MDJ				AMB		AMB		
	comp=Z,137nm,5.1s							
MDJ	**Mudanjiang**	**17.85**	**267**	P		**Pn**	**16 00 09.2**	**-1.1**
ZEA	**Zeya**	**18.18**	**298**	*e*P		**Pn**	**16 00 14.6**	**+0.2**
ZEA				AMS		AMS	16 08 08.0	
	comp=Z,300nm,16.0s							
ZEA				AMS		AMS	16 08 08.0	
	comp=Z,200nm,14.0s							
YAK	**Yakutsk**	**19.72**	**323**	*e*P		**Pn**	**16 00 29.5**	**-3.2**
	comp=Z,7.2nm,0.6s							
YAK	**Yakutsk**	**19.72**	**323**	*e*P		**Pn**	**16 00 32.4**	**-0.3**
YAK				*e*S		**S**	**16 04 14.3**	**+4.2**
YAK				pmax		pmax		
	comp=Z,15nm,0.8s							
YAK				pmax		pmax		
	comp=N,9.0nm,1.0s							
YAK				pmax		pmax		
	comp=E,12nm,1.1s							
YAK				smax				
	comp=N,104nm,4.6s							
YAK				smax				
	comp=E,118nm,4.6s							
CLNS	**Chul'man**	**20.01**	**306**	*e*P		**P**	**16 00 43.9**	**+10**
CLNS				pmax		pmax		
	comp=Z,28nm,1.0s							
CLNS				pmax		pmax		
	comp=N,16nm,0.9s							
CLNS				pmax		pmax		
	comp=E,18nm,1.0s							
CLNS				MLR		MLR		
	comp=Z,200nm,12.0s,MS3.7							
CLNS				MLR		MLR		
	comp=N,100nm,15.0s,MS3.6							
CLNS				MLR		MLR		
	comp=E,200nm,15.0s,MS3.6							
BILL	**Bilibino**	**20.55**	**12**	*e*P		**P**	**16 00 37.7**	**-2.1**
	comp=E,5.2nm,0.6s							
BILL	**Bilibino**	**20.55**	**12**‖	*e*P		**P**	**16 00 37.9**	**-1.9**
BILL				*e**PP			16 00 50.8	
BILL				*e**SP		sP	16 00 59.5	+1.4
BILL				*e*S		**S**	**16 04 26.1**	**-0.4**
BILL				pmax		pmax		

IDC 18 15:36:19.6±46.0, 1382S×17338W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=892.6km s-min=178.7km az=76.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.85**	**239**	P		P	15 44 36.1	+0.2
	2.3nm,0.7s,baz=56,slow=8.4,SNR=6.1							
WRA	**Warramunga Arr**	**50.24**	**255**	P		P	15 45 17.3	-0.7
	0.3nm,0.6s,baz=93,slow=7.0,SNR=10							
ASAR	**Alice Springs**	**50.63**	**251**	P		P	15 45 21.2	+0.3
	3.2nm,0.3s,baz=85,slow=8.2,SNR=311							

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*IDC **18** 15:55:58.7±0.6, 4838N×15473E, h0km, mb4.2/20, mb1 4.4/21, mb1mx4.3/26, mbtmp4.2/21, ML3.3/1, MS3.7/6, Ms1 3.7/6, ms1mx3.1/41, Error ellipse: s-maj=18.3km s-min=13.2km az=136.0*

*BJI **18** 15:55:58.2, 4836N×15482E, h10km, mB4.8, mb4.5, Ms4.3, Msz4.0*

*NEIC **18** 15:56:00.3±0.3, 4831N×15482E, h10km, mb4.7/29, Error ellipse: s-maj=8.0km s-min=5.0km az=134.0*

*ISCJB **18** 15:56:01.1±1.5, 4827N±004×15504E±005, h28km±10km, mb4.5/59, MS3.8/13, Error ellipse: s-maj=7.5km s-min=4.5km az=144.2*

*SKHL **18** 15:56:02.3±2.0, 4827N×15532E, h55km±22km, mb5.0/4, Ms4.0/2*

*MOS **18** 15:56:03.0±1.2, 4832N×15488E, h41km, mb4.7/29, Error ellipse: s-maj=10.1km s-min=6.3km az=98.4*

*SZGRF **18** 15:56:06.2, 4885N×15606E, h33km, mb4.7, East of Kuril Islands, Russia*

	comp=Z,1.1nm,0.6s,mb4.2,baz=40,slow=7.2,SNR=9.9						
KAKA	**Kakadu**	**64.00**	**205**	eP	**P**	**16 06 33.0**	**-1.0**
	comp=Z,13nm,0.7s,mb5.1						
ULM	**Lac du Bonnet**	**64.48**	**42**	P	**P**	**16 06 36.8**	**0.0**
	comp=Z,2.4nm,0.8s,mb4.3,baz=316,slow=7.4,SNR=6.2						
OBN	**Obninsk**	**64.69**	**326**	eP	**P**	**16 06 34.9**	**-3.2**
OBN				e		16 08 56.0	
OBN				eSS	SS	16 19 22.2	-2.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
NB2	**NORSAR Subarra**	**67.11**	**342**	P	**P**	**16 06 53.3**	**-0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=26,slow=6.5						
NB2	**NORSAR Subarra**	**67.11**	**342**	P	**P**	**16 06 53.3**	**-0.2**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
NOA	**NORSAR Array B**	**67.11**	**342**	P	**P**	**16 06 53.0**	**-0.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**67.11**	**342**	P	**P**	**16 06 53.0**	**-0.5**
	comp=Z,1.1nm,0.7s,mb4.0,baz=26,slow=6.2,SNR=4.1						
HFS	**Hagfors**	**67.39**	**340**	P	**P**	**16 06 55.6**	**+0.3**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HFS	**Hagfors**	**67.39**	**340**	P	**P**	**16 06 55.6**	**+0.3**
	comp=Z,3.7nm,0.8s,mb4.5,baz=66,slow=3.6,SNR=6.2						
WB2	**Warramunga Arr**	**70.44**	**201**	eP	**P**	**16 07 13.9**	**-0.8**
WRA	**Warramunga Arr**	**70.45**	**201**	P	**P**	**16 07 14.0**	**-0.7**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**70.45**	**201**	P	**P**	**16 07 14.0**	**-0.7**
	comp=Z,4.2nm,0.9s,mb4.4,baz=15,slow=6.5,SNR=22						
AKASG	**Malin Array Be**	**70.91**	**327**	P	**P**	**16 07 15.9**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**70.91**	**327**	P	**P**	**16 07 15.9**	**-1.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=35,slow=5.6,SNR=4.9						
FITZ	**Fitzroy Crossi**	**71.16**	**209**	eP	**P**	**16 07 19.4**	**+0.4**
	comp=Z,5.4nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**71.16**	**209**	P	**P**	**16 07 19.2**	**+0.2**
	comp=Z,3.2nm,0.6s,mb4.4,baz=358,slow=5.0,SNR=13						
SCHQ	**Schefferville**	**71.34**	**24**	P	**P**	**16 07 20.1**	**+0.3**
	comp=Z,3.6nm,0.8s,mb4.4,baz=344,slow=4.6,SNR=5.9						
ASAR	**Alice Springs**	**74.14**	**200**	P	**P**	**16 07 36.9**	**+0.3**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAR	**Alice Springs**	**74.14**	**200**	P	**P**	**16 07 36.9**	**+0.3**
	comp=Z,2.6nm,0.9s,mb4.2,baz=14,slow=5.4,SNR=32						
STHS	**Stebnicka Huta**	**74.75**	**331**	eP	**P**	**16 07 40.6**	**+0.6**
	comp=Z,3.6nm,1.0s,mb4.3						
STHS	**Stebnicka Huta**	**74.75**	**331**	eP	**P**	**16 07 40.6**	**+0.6**
STHS				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KOLS	**Kolonicke sedl**	**74.83**	**330**	eP	**P**	**16 07 41.0**	**+0.5**
CRVS	**Cervenica-Dubn**	**75.12**	**330**	eP	**P**	**16 07 47.8**	**+5.6**
DPC	**Dobruska-Polom**	**75.45**	**334**	eP	**P**	**16 07 44.5**	**+0.4**
CLL	**Collm**	**75.52**	**336**	i P	**P**	**16 07 44.0**	**-0.4**
TXAR	**Lajitas Array**	**75.62**	**62**	P	**P**	**16 07 46.1**	**+0.7**
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TXAR	**Lajitas Array**	**75.62**	**62**	P	**P**	**16 07 46.1**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.4,baz=298,slow=4.2,SNR=52						
KECS	**Kecovo**	**75.81**	**331**	eP	**P**	**16 07 50.2**	**+4.0**
PRU	**Pruhonice**	**76.28**	**335**	eP	**P**	**16 07 49.1**	**+0.3**
VYHS	**Vyhne**	**76.33**	**332**	eP	**P**	**16 07 49.3**	**+0.2**
MLR	**Muntele Rosu**	**76.47**	**326**	P	**P**	**16 07 50.3**	**+0.4**
MLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**76.47**	**326**	P	**P**	**16 07 50.3**	**+0.3**
	comp=Z,5.3nm,0.7s,mb4.6,baz=223,slow=2.9,SNR=12						
MODS	**Modra-Piesok**	**76.92**	**333**	eP	**P**	**16 07 52.6**	**+0.1**
KHC	**Kasperske Hory**	**77.33**	**335**	eP	**P**	**16 07 55.2**	**+0.5**
GRA1	**Grafenberg Arr**	**77.46**	**337**	eP	**P**	**16 07 55.8**	**+0.4**
	comp=Z,9.0nm,1.3s,mb4.5						
GRF	**Grafenberg Arr**	**77.46**	**337**	eP	**P**	**16 07 55.8**	**+0.4**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
GRF	**Grafenberg Arr**	**77.46**	**337**	eP	**P**	**16 07 55.8**	**+0.4**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
GRF	**Grafenberg Arr**	**77.46**	**337**	eP	**P**	**16 07 55.8**	**+0.4**
	comp=Z,9.0nm,1.3s,mb4.5						
GERES	**GERESS Array B**	**77.55**	**335**	P	**P**	**16 07 55.9**	**-0.1**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GERES	**GERESS Array B**	**77.55**	**335**	P	**P**	**16 07 55.9**	**-0.1**
	comp=Z,2.1nm,0.5s,mb4.3,baz=35,slow=5.6,SNR=16						
BRTR	**Keskin Array B**	**78.07**	**318**	i P	**P**	**16 07 59.4**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR	**Keskin Array B**	**78.07**	**318**	P	**P**	**16 07 58.3**	**-0.7**
	comp=Z,2.9nm,1.0s,mb4.2,baz=51,slow=5.3,SNR=5.8						
CDF	**Champ du Feu**	**79.64**	**339**	eP	**P**	**16 08 06.7**	**-0.7**
	comp=Z,15nm,0.9s,mb4.6						
CDF	**Champ du Feu**	**79.64**	**339**	eP	**P**	**16 08 06.7**	**-0.7**
	comp=Z,7.3nm,0.9s,mb4.6						
CDF	**Champ du Feu**	**79.64**	**339**	eP	**P**	**16 08 06.7**	**-0.7**
CDF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MEZF	**Maizieres J'vi**	**80.07**	**340**	eP	**P**	**16 08 10.1**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7						
MEZF	**Maizieres J'vi**	**80.07**	**340**	eP	**P**	**16 08 10.1**	**+0.3**
	comp=Z,14nm,0.8s,mb5.0						
HAU	**Haudompre**	**80.24**	**339**	eP	**P**	**16 08 10.7**	**0.0**
STKA	**Stephens Creek**	**80.76**	**192**	LR	LR	16 41 22.5	
	comp=Z,63nm,19.3s,MS4.0,baz=205,slow=34						
LOR	**Lormes**	**81.50**	**341**	eP	**P**	**16 08 17.5**	**0.0**
	comp=Z,7.1nm,0.7s,mb4.4						
LOR	**Lormes**	**81.50**	**341**	eP	**P**	**16 08 17.5**	**0.0**
	comp=Z,3.5nm,0.7s,mb4.4						
LOR	**Lormes**	**81.50**	**341**	eP	**P**	**16 08 17.5**	**0.0**
LOR				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
CABF	**La Chapelle**	**81.61**	**339**	eP	**P**	**16 08 18.3**	**+0.3**
	comp=Z,4.3nm,0.6s,mb4.2						
CABF	**La Chapelle**	**81.61**	**339**	eP	**P**	**16 08 18.3**	**+0.3**
	comp=Z,2.2nm,0.6s,mb4.3						
CABF	**La Chapelle**	**81.61**	**339**	eP	**P**	**16 08 18.3**	**+0.3**
CABF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SSF	**Saint Saulge**	**81.78**	**341**	eP	**P**	**16 08 19.0**	**+0.1**
	comp=Z,11nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**81.78**	**341**	eP	**P**	**16 08 19.0**	**+0.1**
	comp=Z,5.3nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**81.78**	**341**	eP	**P**	**16 08 19.0**	**+0.1**
SSF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**82.07**	**341**	eP	**P**	**16 08 20.6**	**+0.2**
	comp=Z,12nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**82.07**	**341**	eP	**P**	**16 08 20.6**	**+0.2**
	comp=Z,5.8nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**82.07**	**341**	eP	**P**	**16 08 20.6**	**+0.2**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**82.10**	**340**	eP	**P**	**16 08 20.8**	**+0.2**
	comp=Z,7.7nm,0.7s,mb4.5						
SMF	**Signal de Mont**	**82.10**	**340**	eP	**P**	**16 08 20.8**	**+0.2**
	comp=Z,3.8nm,0.7s,mb4.4						
SMF	**Signal de Mont**	**82.10**	**340**	eP	**P**	**16 08 20.8**	**+0.2**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FORT	**Forrest**	**82.38**	**203**	eP	**P**	**16 08 22.5**	**+0.5**
	comp=Z,8.9nm,0.6s,mb4.9						
LPL	**La Plagne**	**82.47**	**338**	eP	**P**	**16 08 23.7**	**+1.1**
	comp=Z,17nm,0.8s,mb4.7						
LPL	**La Plagne**	**82.47**	**338**	eP	**P**	**16 08 23.7**	**+1.1**
	comp=Z,8.3nm,0.8s,mb4.7						
LPL	**La Plagne**	**82.47**	**338**	eP	**P**	**16 08 23.7**	**+1.1**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
LPG	**La Plagne**	**82.49**	**338**	eP	**P**	**16 08 24.0**	**+1.3**
	comp=Z,21nm,0.9s,mb4.7						
LPG	**La Plagne**	**82.49**	**338**	eP	**P**	**16 08 24.0**	**+1.3**
	comp=Z,10nm,0.9s,mb4.8						
LPG	**La Plagne**	**82.49**	**338**	eP	**P**	**16 08 24.0**	**+1.3**
LPG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**82.79**	**341**	eP	**P**	**16 08 24.7**	**+0.5**
MFF	**Saint Martin d**	**82.97**	**343**	eP	**P**	**16 08 25.5**	**+0.3**
	comp=Z,22nm,0.9s,mb4.9						
MFF	**Saint Martin d**	**82.97**	**343**	eP	**P**	**16 08 25.5**	**+0.3**
	comp=Z,11nm,0.9s,mb4.9						
MFF	**Saint Martin d**	**82.97**	**343**	eP	**P**	**16 08 25.5**	**+0.3**
MFF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
MBDF	**Montbardon**	**83.20**	**338**	eP	**P**	**16 08 28.1**	**+1.7**
	comp=Z,32nm,1.3s,mb4.9						
MBDF	**Montbardon**	**83.20**	**338**	eP	**P**	**16 08 28.1**	**+1.7**
	comp=Z,16nm,1.3s,mb4.9						
MBDF	**Montbardon**	**83.20**	**338**	eP	**P**	**16 08 28.1**	**+1.7**
MBDF				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
ORIF	**Oris-en-Rattie**	**83.25**	**338**	eP	**P**	**16 08 27.5**	**+0.9**
	comp=Z,7.5nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.25**	**338**	eP	**P**	**16 08 27.5**	**+0.9**
	comp=Z,3.8nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**83.25**	**338**	eP	**P**	**16 08 27.5**	**+0.9**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
VIVF	**Saint-Julien-l**	**83.59**	**339**	eP	**P**	**16 08 28.3**	**-0.1**
LASF	**Ste Croix**	**84.52**	**340**	eP	**P**	**16 08 34.4**	**+1.3**
	comp=Z,72nm,1.6s,mb5.2						
MTLF	**Montolieu**	**85.59**	**340**	eP	**P**	**16 08 38.4**	**-0.1**
	comp=Z,16nm,1.0s,mb4.9						
MTLF	**Montolieu**	**85.59**	**340**	eP	**P**	**16 08 38.4**	**-0.1**
	comp=Z,8.3nm,1.0s,mb4.9						
MTLF	**Montolieu**	**85.59**	**340**	eP	**P**	**16 08 38.4**	**-0.1**
MTLF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						

IDC 18 16:11:30.1±4.0**,828S×15508E,h0km,mb3.5**/3**,mb1 3.7**/3**, mb1mx3.4**/13**,mbtmp3.5**/3**,MS2.9**/1**,Ms1 2.9**/1**, ms1mx2.5**/14**,Error ellipse: s-maj=112.7km s-min=37.2km az=116.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.90**	**261**	LR	LR	16 16 21.6	
	comp=Z,84nm,20.7s,baz=122,slow=37						
WRA	**Warramunga Arr**	**23.18**	**238**	P	P	16 16 37.2	-1.4
	1.3nm,0.6s,baz=62,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**25.41**	**231**	P	P	16 16 59.9	+0.4
	0.3nm,0.5s,baz=61,slow=9.9,SNR=10						
MKAR	**Makanchi Array**	**84.41**	**319**	P	P	16 24 05.3	+0.8
	0.1nm,0.3s,baz=127,slow=3.8,SNR=2.3						

*ISCJB **18** 16:27:16.7±1.5,2651S±006×706W±02,h44km±15km, mb3.9/4,Error ellipse: s-maj=25.6km s-min=9.9km az=1.3*
*NEIC **18** 16:27:17.9±0.6,2649S×7081W,Error ellipse: s-maj=22.5km s-min=10.2km az=89.0*
*IDC **18** 16:27:19.5±3.3,2654S×7097W,h56km±28km,mb3.7/4, mb1 4.1/6,mb1mx3.7/17,mbtmp3.8/6,ML4.3/2,Error ellipse: s-maj=43.1km s-min=23.2km az=80.0*
ISC 18 16:27:18.5±1.3**,2652S**±006×**707W**±02**,h45**km±13km**,n15,** σ**1^{s}09**/12**,mb3.9**/4**,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**2.48**	**180**	ePn	**Pn**	**16 27 55.8**	**-0.5**
LCO				eSn	**Sn**	**16 28 25.2**	**-0.2**
CFAA	**Coronel Fontan**	**5.51**	**157**	P	**Pn**	**16 28 40.5**	**+2.5**
	1.4nm,0.3s,baz=340,slow=12,SNR=191						
CFAA				S	**Sn**	**16 29 39.7**	**-0.4**
	1.0nm,0.3s,baz=309,slow=20,SNR=3.0						
LPAZ	**La Paz**	**10.47**	**14**	P	**Pn**	**16 29 47.6**	**+1.6**
	3.3nm,0.3s,baz=207,slow=6.7,SNR=50						
TRQA	**Tornquist**	**13.66**	**149**	ePn	**Pn**	**16 30 29.1**	**-0.4**
TRQA				e		16 30 38.3	
SIV	**San Ignacio**	**13.80**	**43**	P	**Pn**	**16 30 29.4**	**-2.2**
	2.4nm,0.3s,baz=247,slow=8.8,SNR=33						
TXAR	**Lajitas Array**	**63.89**	**328**	P	**P**	**16 37 46.4**	**-0.3**
	0.3nm,0.6s,mb3.5,baz=152,slow=8.1,SNR=5.2						
MAW	**Mawson**	**80.01**	**164**	P	**P**	**16 39 23.0**	**+0.3**
	1.9nm,0.7s,mb4.2,baz=286,slow=4.7,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**80.60**	**70**	eP	**P**	**16 39 27.5**	**+0.7**
TOA0				epP	pP	16 39 40.4	+0.2
TORD	**Torodi Ar. Bea**	**80.60**	**70**	P	**P**	**16 39 27.2**	**+0.4**
	0.6nm,0.5s,mb3.8,baz=260,slow=4.8,SNR=8.6						
TORD				pP	pP	16 39 40.0	-0.2
	1.3nm,0.5s,baz=270,slow=4.8,SNR=8.4						
YKA	**Yellowknife Ar**	**95.37**	**341**	P	**P**	**16 40 36.2**	**-1.1**
	0.2nm,0.4s,mb3.9,baz=129,slow=4.4,SNR=6.4						
ASAR	**Alice Springs**	**124.71**	**208**	PKP	PKPdf	16 46 12.1	-1.7
	0.3nm,0.8s,baz=151,slow=2.1,SNR=5.2						
WRA	**Warramunga Arr**	**127.80**	**210**	PKP	PKPdf	16 46 18.6	-1.2
	0.5nm,0.7s,baz=149,slow=1.8,SNR=6.9						
MKAR	**Makanchi Array**	**150.61**	**39**	PKPbc	PKPbc	16 47 05.7	+0.4
MKAR				PKPab	PKPab	16 47 12.8	+0.6
MKAR				pPKPbc	pPKPbc	16 47 20.4	+1.2
MKAR	**Makanchi Array**	**150.61**	**39**	PKPbc	PKPbc	16 47 05.7	+0.4
	2.7nm,0.7s,baz=323,slow=2.2,SNR=35						
MKAR				PKPab	PKPab	16 47 12.8	+0.6
	0.9nm,0.6s,baz=310,slow=2.7,SNR=7.4						
MKAR				pPKPbc	pPKPbc	16 47 20.4	+1.2
	1.8nm,0.6s,baz=322,slow=2.4,SNR=7.4						
SONM	**Songino Array**	**158.61**	**5**	PKP	PKPdf	16 47 10.8	-0.1
	0.5nm,0.9s,baz=20,slow=1.7,SNR=3.4						

IDC 18 16:29:45.6±1.8**,245N×12395E,h0km,mb3.4**/3**,mb1 3.5**/3**, mb1mx3.3**/17**,mbtmp3.4**/3**,Error ellipse: s-maj=200.3km s-min=25.4km az=63.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.48**	**156**	P	P	16 35 06.4	-0.2
	0.2nm,0.3s,baz=334,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.71**	**160**	P	P	16 35 36.4	+0.6
	0.2nm,0.8s,baz=339,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**57.06**	**327**	P	P	16 39 33.5	-0.1
	0.3nm,0.3s,baz=123,slow=7.0,SNR=6.8						

*NEIC **18** 16:46:46.9,3790S×17674E,h5km,ML4.0(WEL),After WEL.*
WEL 18 16:46:47.0±0.1**,3791S×17674E,h5km,ML4.0**/9**,Error ellipse: s-maj=0.6km s-min=0.6km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.09**	**213**	P	Pg	16 46 49.4	+0.5
MARZ				S	Sg	16 46 51.5	+1.2
MARZ	**Manawahe**	**0.09**	**213**	PG	Pg	16 46 49.4	+0.4
MARZ				SG	Sg	16 46 51.5	+1.2
OPRZ	**Ohinepanea**	**0.16**	**293**	PG	Pg	16 46 50.4	+0.2
OPRZ				SG	Sg	16 46 52.8	+0.6
EDRZ	**Edgecumbe**	**0.20**	**180**	P	Pg	16 46 51.3	+0.4
EDRZ	**Edgecumbe**	**0.20**	**180**	PG	Pg	16 46 51.3	+0.5
LIRZ	**Lichensteins R**	**0.30**	**251**	P	Pg	16 46 53.3	+0.6
LIRZ	**Lichensteins R**	**0.30**	**251**	PG	Pg	16 46 53.3	+0.6
MKRZ	**Makatiti**	**0.32**	**223**	P	Pg	16 46 53.9	+0.8
MKRZ	**Makatiti**	**0.32**	**223**	PG	Pg	16 46 53.9	+0.8
TAZ	**Tarawera**	**0.37**	**209**	P	Pg	16 46 55.2	+1.1
TAZ	**Tarawera**	**0.37**	**209**	PG	Pg	16 46 55.2	+1.1
KARZ	**Kaharoa**	**0.41**	**254**	P	Pg	16 46 55.2	+0.4
KARZ	**Kaharoa**	**0.41**	**254**	PG	Pg	16 46 55.2	+0.4
TGRZ	**Tauranga**	**0.42**	**295**	P	Pg	16 46 55.4	+0.4
TGRZ	**Tauranga**	**0.42**	**295**	PG	Pg	16 46 55.4	+0.3
URZ	**Urewera**	**0.46**	**140**	P	Pg	16 46 56.0	+0.2
URZ	**Urewera**	**0.46**	**140**	PG	Pg	16 46 56.0	+0.2
URZ				SG	Sg	16 47 02.2	+0.5
UTU	**Utuhina**	**0.51**	**238**	P	Pg	16 46 57.4	+0.7
UTU	**Utuhina**	**0.51**	**238**	PG	Pg	16 46 57.4	+0.6
WIZ	**White Island**	**0.52**	**43**	P	Pg	16 46 57.5	+0.5
WIZ	**White Island**	**0.52**	**43**	PG	Pg	16 46 57.5	+0.5
MYRZ	**Mayor Island**	**0.74**	**328**	P*	Pb	16 47 01.5	-0.8
MWZ	**Matawai**	**0.75**	**125**	P	Pg	16 47 01.4	0.0
MWZ	**Matawai**	**0.75**	**125**	P*	Pb	16 47 01.4	-1.1
TOZ	**Tahuroa Road**	**0.99**	**280**	P	Pg	16 47 04.5	-1.5
TOZ	**Tahuroa Road**	**0.99**	**280**	P*	Pb	16 47 04.5	-2.1
PUZ	**Puketiti**	**1.21**	**98**	P	Pg	16 47 09.6	-0.6
PUZ	**Puketiti**	**1.21**	**98**	P*	Pb	16 47 09.6	-0.7
MXZ	**Matakaoa Point**	**1.29**	**75**	eP*	Pb	16 47 11.3	-0.4
KUZ	**Kuaotunu**	**1.42**	**325**	eP	Pn	16 47 11.4	-1.9
KUZ	**Kuaotunu**	**1.42**	**325**	PN	Pn	16 47 11.4	-2.0

*IDC **18** 16:53:37.2±1.6,379N×12703E,h0km,mb3.7/5,mb1 3.9/5, mb1mx3.7/18,mbtmp3.7/5,MS3.2/2,Ms1 3.2/2, ms1mx2.8/24,Error ellipse: s-maj=93.6km s-min=25.4km az=75.0*
*ISCJB **18** 16:53:40.1±1.3,39N±02×1275E±03,h33km,mb3.6/5, MS3.1/2,Error ellipse: s-maj=53.2km s-min=13.3km az=152.1*
ISC 18 16:53:42.3±1.3**,39N**±02×**1274E**±03**,h35**km**,n8,**σ**0^{s}52**/6**, mb3.6**/5**,MS3.1**/2**,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**3.32**	**312**	eP	**Pn**	**16 54 32.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**21.89**	**185**	P	**P**	**16 58 32.1**	**-0.4**
	1.2nm,0.8s,mb3.4,baz=2.9,slow=9.4,SNR=4.4						
WRA	**Warramunga Arr**	**24.60**	**164**	P	**P**	**16 58 59.2**	**-0.2**
	7.0nm,0.7s,mb4.3,baz=343,slow=10,SNR=44						
ASAR	**Alice Springs**	**28.07**	**167**	P	**P**	**16 59 30.7**	**0.0**
	0.3nm,0.5s,mb3.1,baz=342,slow=7.0,SNR=15						
JNU	**Nakatsue**	**29.29**	**6**	LR	LR	17 12 33.8	
	comp=Z,51nm,18.6s,MS3.2,baz=46,slow=39						
KSRS	**Korea Array**	**33.44**	**1**	LR	LR	17 14 55.1	
	comp=Z,28nm,18.1s,MS3.0,baz=342,slow=38						
STKA	**Stephens Creek**	**38.00**	**160**	P	**P**	**17 00 57.8**	**+0.7**
	2.1nm,0.8s,mb3.9,baz=333,slow=9.7,SNR=6.0						
SONM	**Songino Array**	**47.41**	**341**	P	**P**	**17 02 12.8**	**-0.4**
	0.4nm,0.8s,mb3.4,baz=154,slow=4.6,SNR=3.5						

BJI 18 16:58:42.2,3726N×7831E,h15km,ML3.7,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.91**	**322**	eP	Pg	16 59 28.5	-9.4
KSH				S	Sg	17 00 04.5	-11
KSH				Smax			
	comp=N,422nm,0.7s						
KSH				Smax			
	comp=E,516nm,0.5s						
DLH	**Dalhousie**	**5.09**	**203**	eP	Pn	16 59 38.0	-20
DLH				eS	Sn	17 00 22.0	-34
ULHL	**Ulahol**	**5.23**	**343**	P	Pg	17 00 02.8	-20
	SNR=6.9						
THN	**Thein Dam**	**5.27**	**205**	eP	Pn	16 59 39.3	-21
THN				eS	Sn	17 00 24.8	-36
KZA	**Kyzart**	**5.36**	**335**	P	Pg	17 00 03.0	-22
	SNR=11						
UCH	**Uchtor**	**5.76**	**331**	P	Pg	17 00 07.9	-25
	SNR=11						
SDNR	**Sundarnagar**	**5.85**	**191**	eP	Pn	16 59 48.2	-20
SDNR				eS	Sn	17 00 40.0	-35
KBK	**Karagaybulak**	**5.98**	**335**	P	Pg	17 00 12.0	-25
	SNR=6.0						
AAK	**Ala-Archa**	**6.11**	**333**	P	Pg	17 00 13.2	-26
	SNR=7.2						
SMLA	**Simla**	**6.19**	**189**	eP	Pn	16 59 52.3	-21
SMLA				eS	Sn	17 00 47.0	-37
CHMS	**Chumysh**	**6.35**	**336**	P	Sn	17 00 48.6	-39
	SNR=7.4						
JOSI	**Joshimath**	**6.77**	**171**	eP	Pn	17 00 02.4	-19
JOSI				ex	x	17 00 28.1	
JOSI				AML	AML	17 01 11.3	
	comp=N,62nm,0.8s						
JOSI				AML	AML	17 01 12.1	
	comp=E,46nm,0.4s						
NDI	**New Delhi**	**8.60**	**186**	eP	Pn	17 00 22.5	-24
SONA	**Sohna**	**9.04**	**187**	eP	Pn	17 00 29.4	-23
SONA				eS	Sn	17 01 53.2	-41
SONA				AML	AML	17 01 55.9	
	comp=E,29nm,0.3s						
SONA				AML	AML	17 01 56.1	
	comp=N,15nm,0.3s						
KUDL	**Kundal**	**9.22**	**190**	eP	Pn	17 00 31.3	-23
KUDL				eS	Sn	17 01 56.6	-41
KUDL				AML	AML	17 01 58.9	
	comp=N,11nm,0.2s						
KUDL				AML	AML	17 02 00.7	
	comp=E,15nm,0.2s						

*ISCJB **18** 17:06:49.5±0.5,3835N±003×2178E±004,h12km±5km, Error ellipse: s-maj=5.1km s-min=4.6km az=14.2*
*ATH **18** 17:06:49.8,3837N×2177E,h14km±7km,MD3.1/6*
*NEIC **18** 17:06:49.8,3837N×2177E,h13km,MD3.1(ATH), ML2.8(THE),After ATH.*
*CSEM **18** 17:06:50.2±0.1,3837N×2175E,h5km,ML2.8,Error ellipse: s-maj=2.2km s-min=1.8km az=6.0*
*THE **18** 17:06:50.2,3836N×2175E,h3km,ML2.8*
ISC 18 17:06:49.9±0.5**,3837N**±003×**2177E**±004**,h14**km±6km**,n15,** σ**0^{s}90**/23**,1C-3D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SELA	**Sela**	**0.14**	**133**	ePg	**Pg**	**17 06 53.0**	**-0.4**
SELA				eSg	**Sg**	**17 06 55.3**	**-0.6**
RLS	**Riolos of Patr**	**0.39**	**217**	⇓iPB	**Pg**	**17 06 57.6**	**-0.1**
RLS				eSB	**Sg**	**17 07 03.5**	**+0.5**
EVR	**Evrytania**	**0.55**	**3**	⇓iPB	**Pb**	**17 07 00.8**	**-0.5**
EVR				eSB	**Sb**	**17 07 07.8**	**-1.2**
AGG	**Agios Georgios**	**0.79**	**34**	ePg	**Pg**	**17 07 05.0**	**-0.2**
AGG				eSg	**Sg**	**17 07 17.5**	**+2.0**
KFL	**Anninata**	**0.81**	**252**	ePg	**Pg**	**17 07 05.5**	**-0.1**
LKD	**Levkas**	**0.94**	**291**	ePg	**Pg**	**17 07 07.7**	**-0.3**
LKD				eSg	**Sg**	**17 07 23.8**	**+3.5**
VLS	**Valsamata**	**0.95**	**259**	⇑iPG	**Pg**	**17 07 07.5**	**-0.7**
VLS				eSB	**Sb**	**17 07 21.7**	**+1.2**
LTK	**Loutraki**	**1.01**	**110**	ePg	**Pg**	**17 07 09.6**	**+0.3**
LKR	**Lokris**	**1.01**	**73**	ePB	**Pb**	**17 07 08.9**	**-0.2**
VLX	**Vlachokerasia**	**1.11**	**154**	ePg	**Pg**	**17 07 10.6**	**-0.6**
VLX				eSg	**Sg**	**17 07 26.9**	**+1.2**
ITM	**Ithomi**	**1.19**	**174**	⇓iPG	**Pg**	**17 07 12.2**	**-0.7**
THL	**Klokotos Trika**	**1.21**	**9**	ePB	**Pb**	**17 07 12.9**	**+0.3**
DID	**Didima**	**1.45**	**126**	ePg	**Pg**	**17 07 16.5**	**-1.2**
DID				eSg	**Sg**	**17 07 37.9**	**+1.5**
PYL	**PYLOS**	**1.47**	**181**	ePg	**Pg**	**17 07 17.2**	**-0.9**
PYL	**PYLOS**	**1.47**	**181**	ePg	**Pg**	**17 07 17.2**	**-0.9**

*NEIC **18** 17:18:22.8,1861N×10468W,h13km,MD4.0(MEX),After MEX.*
MEX 18 17:18:22.8±0.6**,1861N×10468W,h13**km±12km**,MD4.0, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.95**	**339**	i P	Pb	17 18 38.1	-3.1
CJM				i S	Sg	17 18 49.8	-3.8
MMIG	**Aquila**	**1.30**	**104**	eP	Pn	17 18 42.8	-4.0
MMIG				i S	Sb	17 19 00.5	-3.4
SFJM	**Santa Fe**	**2.42**	**39**	i P	Pn	17 18 59.3	-2.9
MOIG	**Morelia**	**3.47**	**72**	i P	Pn	17 19 15.0	-1.5
MOIG				i S	Sn	17 19 52.8	-4.7
ZAIG	**Zacatecas**	**4.59**	**25**	i P	Pn	17 19 30.1	-1.8
ZAIG				i S	Sn	17 20 21.4	-3.8
SZVM	**Salazar**	**5.06**	**81**	i P	Pn	17 19 36.4	-2.1
SZVM				i S	Sn	17 20 35.1	-1.8

MEX 18 17:41:07.1±0.8**,1851N×10481W,h14**km±17km**,MD3.8, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.01**	**348**	eP	Pb	17 41 23.4	-3.0
CJM				i S	Sb	17 41 35.1	-4.4
MMIG	**Aquila**	**1.41**	**99**	eP	Pn	17 41 28.2	-4.0
MMIG				i S	Sn	17 41 45.7	-4.9
SFJM	**Santa Fe**	**2.58**	**40**	i P	Pn	17 41 44.8	-3.6
SFJM				i S	Sn	17 42 16.2	-3.4
MOIG	**Morelia**	**3.62**	**71**	i P	Pn	17 42 02.3	-0.4
MOIG				i S	Sn	17 42 43.2	-2.0
ZAIG	**Zacatecas**	**4.73**	**26**	i S	Sn	17 43 08.3	-4.4

*NEIC **18** 17:48:06.3,1849N×10480W,h16km,MD4.2(MEX),After MEX.*
MEX 18 17:48:06.7±1.2**,1850N×10478W,h16**km±24km**,MD4.2, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.02**	**346**	i P	Pb	17 48 22.7	-3.3
CJM				i S	Sb	17 48 34.3	-4.8
MMIG	**Aquila**	**1.38**	**99**	eP	Pn	17 48 27.6	-3.7
MMIG				i S	Sn	17 48 42.6	-6.6
SFJM	**Santa Fe**	**2.57**	**40**	i P	Pn	17 48 44.5	-3.2
SFJM				i S	Sn	17 49 13.8	-4.8
ZIIG	**Zihuatanejo**	**3.28**	**105**	i S	Sn	17 49 31.1	-5.1
MOIG	**Morelia**	**3.59**	**70**	i P	Pn	17 49 01.0	-0.8
MOIG				i S	Sn	17 49 41.8	-2.2
ZAIG	**Zacatecas**	**4.72**	**26**	i P	Pn	17 49 14.7	-2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZAIG				*i* S	Sn	17 50 09.5	-2.3
ACX	Acapulco	4.92	109	*e*P	Pn	17 49 20.5	+0.5
SZVM	Salazar	5.18	80	*i* P	Pn	17 49 22.9	-0.7
SZVM				*i* S	Sn	17 50 22.8	-0.2

*IDC **18** 17:55:54.3±0.9, 051S×11995E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/19, mbtmp3.9/9, ML3.1/1, MS3.4/8, Ms1 3.4/8, ms1mx3.3/32, Error ellipse: s-maj=48.4km s-min=15.2km az=70.0*
*ISCJB **18** 17:55:57.2±3.5, 051S±009×1199E±0.1, h28km±27km, mb4.2/14, MS3.4/7, Error ellipse: s-maj=22.9km s-min=8.4km az=144.4*
*BJI **18** 17:55:57.8, 050S×11990E, h10km, mB5.0, mb4.6*
*NEIC **18** 17:55:59.9±1.3, 051S×11986E, h39km±15km, mb4.9/2, Error ellipse: s-maj=21.4km s-min=7.5km az=58.0*
ISC 18 17:55:59.3±3.8**, 056S**±009×**1199E**±01**, h30**km±29km**, n32,** σ**0s88**/28**, mb4.2**/14**, MS3.4**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	7.51	331	*e*Pn	Pn	17 57 46.2	-0.7
KSM	Kuching	9.79	282	P	Pn	17 58 17.1	-1.0
BATI	Kupang	10.29	159	Pn	Pn	17 58 29.4	+4.4
	0.2nm,0.3s,baz=255,slow=20,SNR=1.8						
BATI				LR	LR	18 03 45.8	
	comp=Z,252nm,18.6s,baz=276,slow=46						
KAKA	Kakadu	17.34	135	*e*P	Pn	18 00 00.8	+1.6
FITZ	Fitzroy Crossi	18.33	162	*e*P	Pn	18 00 12.3	+0.9
FITZ	Fitzroy Crossi	18.33	162	P	Pn	18 00 11.1	-0.3
	0.1nm,0.3s,baz=7.5,slow=19,SNR=3.0						
PSI	Prapat	21.22	279	LR	LR	18 10 01.7	
	comp=Z,63nm,18.1s,MS3.0,baz=117,slow=40						
WRA	Warramunga Arr	23.90	145	P	P	18 01 09.9	-0.7
	3.5nm,0.8s,mb3.9,baz=325,slow=10,SNR=35						
WB2	Warramunga Arr	23.91	145	*e*P	P	18 01 10.2	-0.5
ASAR	Alice Springs	26.70	150	P	P	18 01 35.6	-0.4
	1.4nm,0.7s,mb3.6,baz=344,slow=16,SNR=15						
ASAR				PcP	PcP	18 04 58.4	-1.0
	0.2nm,0.6s,baz=337,slow=3.2,SNR=4.3						
JOW	Kunigami	28.40	16	LR	LR	18 11 55.1	
	comp=Z,94nm,20.1s,MS3.4,baz=267,slow=34						
CTA	Charters Tower	32.29	129	LR	LR	18 16 51.6	
	comp=Z,61nm,19.1s,MS3.3,baz=50,slow=39						
NJ2	Nanjing	32.45	358	*e*P	P	18 02 28.3	+1.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
STKA	Stephens Creek	37.30	149	P	P	18 03 08.7	-0.2
	comp=Z,2.5nm,1.0s,mb4.0,baz=271,slow=11,SNR=3.9						
STKA				LR	LR	18 19 35.8	
	comp=Z,71nm,18.5s,MS3.5,baz=25,slow=38						
KSRS	Korea Array	38.54	10	P	P	18 03 19.1	-0.2
	comp=Z,0.6nm,0.6s,mb3.5,baz=181,slow=9.0,SNR=3.2						
KSRS				LR	LR	18 21 26.9	
	comp=Z,28nm,19.7s,MS3.1,baz=170,slow=40						
MJAR	Matsushiro Arr	40.64	23	P	P	18 03 34.6	-2.2
	comp=Z,1.7nm,0.9s,mb3.7,baz=196,slow=8.6,SNR=3.4						
LSA	Lhasa	40.70	320	P	P	18 03 38.8	+1.4
ODAN	Odare	41.49	314	*e*P	P	18 03 44.6	+0.7
TAPN	Taplejung	41.55	314	*e*P	P	18 03 45.2	+0.8
JIRN	Jiri	42.82	314	*e*P	P	18 03 55.1	+0.3
	comp=Z,40nm,1.2s,mb5.0						
KKN	Kakani	43.56	313	*e*P	P	18 04 00.7	0.0
GTA	Gaotai	43.82	337	*e*P	P	18 04 03.8	+1.2
GTA				AP	pP	18 04 10.5	-1.0
GTA				XP	sP	18 04 13.5	-1.6
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
GKN	Gorkha	44.15	313	*e*P	P	18 04 05.6	+0.2
	comp=Z,26nm,1.1s,mb4.8						
KOLN	Koldanda	44.79	312	*e*P	P	18 04 11.3	+0.7
ASAJ	Asahikawa	48.87	22	LR	LR	18 26 52.2	
	comp=Z,72nm,18.1s,MS3.7,baz=173,slow=38						
SONM	Songino Array	49.61	348	P	P	18 04 47.7	0.0
	comp=Z,0.6nm,0.5s,mb3.9,baz=167,slow=8.2,SNR=11						
SONM				LR	LR	18 25 08.8	
	comp=Z,53nm,19.1s,MS3.6,baz=338,slow=35						
MKAR	Makanchi Array	57.50	330	P	P	18 05 45.7	0.0
MKAR	Makanchi Array	57.50	330	P	P	18 05 45.7	+0.1
	comp=Z,1.4nm,0.9s,mb4.0,baz=136,slow=8.1,SNR=11						
KURK	Kurchatov	61.94	332	*e*P	P	18 06 15.6	-0.6
	comp=Z,11nm,1.0s,mb5.0						
BRVK	Borovoye	67.45	330	*e*P	P	18 06 51.8	-0.3
	comp=Z,11nm,1.2s,mb4.8						
AKTK	Aktyubinsk	72.90	324	P	P	18 07 24.4	-1.1
AKTO	Aktyubinsk	72.90	324	P	P	18 07 24.4	-1.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=123,slow=5.9,SNR=5.8						

IDC 18 18:04:31.8±2.3**, 2041S**×**6886W, h0**km**, mb3.7**/2**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, ML3.7**/2**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/26**, Error ellipse: s-maj=48.7km s-min=42.9km az=83.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.16	10	Pn	Pn	18 05 38.5	+2.0
	3.0nm,0.3s,baz=179,slow=12,SNR=40						
LPAZ				Sn	Sn	18 06 25.6	-0.3
	1.9nm,0.3s,baz=298,slow=22,SNR=2.1						
SIV	San Ignacio	8.61	61	Pn	Pn	18 06 37.4	-0.2
	0.6nm,0.3s,baz=250,slow=9.4,SNR=8.2						
SDV	Santo Domingo	29.17	356	LR	LR	18 24 29.5	
	comp=Z,33nm,18.6s,baz=22,slow=41						
TORD	Torodi Ar. Bea	76.95	71	P	P	18 16 26.8	+0.1
	0.8nm,0.7s,baz=248,slow=5.4,SNR=5.9						
YKA	Yellowknife Ar	90.18	341	P	P	18 17 33.3	-0.2
	0.2nm,0.6s,baz=135,slow=4.5,SNR=3.3						

IDC 18 18:10:43.8±2.2**, 548N**×**12666E, h0**km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/17**, mbtmp3.2**/3**, Error ellipse: s-maj=167.8km s-min=25.2km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.37	164	P	P	18 16 23.3	+1.4
	0.2nm,0.4s,baz=344,slow=10,SNR=6.5						
ASAR	Alice Springs	29.82	167	P	P	18 16 51.3	-1.4
	0.1nm,0.3s,baz=342,slow=6.9,SNR=4.9						
MKAR	Makanchi Array	56.09	325	P	P	18 20 24.9	0.0
	0.4nm,0.5s,baz=112,slow=8.6,SNR=12						

IDC 18 18:36:44.8±4.1**, 5339S**×**16201E, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/11**, mbtmp3.9**/3**, Error ellipse: s-maj=370.8km s-min=75.9km az=47.0, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	26.05	317	P	P	18 42 21.4	+1.9
	1.1nm,0.8s,baz=163,slow=14,SNR=2.9						
ASAR	Alice Springs	36.48	313	P	P	18 43 50.8	-0.6
	2.7nm,0.7s,baz=156,slow=8.7,SNR=59						
ASAR				PcP	PcP	18 46 15.6	+0.3
	0.6nm,1.1s,baz=144,slow=4.0,SNR=5.3						
WRA	Warramunga Arr	39.59	317	P	P	18 44 16.9	-0.8
	1.3nm,0.6s,baz=154,slow=7.2,SNR=22						

*NEIC **18** 18:39:11.4, 3807S×17640E, h149km, MG3.8(WEL), After WEL.*
WEL 18 18:39:11.3±0.2**, 3806S**×**17639E, h150**km±2km**, ML3.8**/16**, Error ellipse: s-maj=3.5km s-min=2.9km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.60	110	P	Pn	18 39 33.0	-0.1
URZ	Urewera	0.60	110	PN	Pn	18 39 33.0	-0.1
URZ				SN	Sn	18 39 49.6	-0.1
MWZ	Matawai	0.94	107	P	Pn	18 39 35.8	+0.4
MWZ	Matawai	0.94	107	PN	Pn	18 39 35.8	+0.3
MWZ				SN	Sn	18 39 54.0	+0.2
BKZ	Black Stump Fm	1.11	176	P	Pn	18 39 37.0	+0.1
BKZ	Black Stump Fm	1.11	176	PN	Pn	18 39 37.0	+0.1
BKZ				SN	Sn	18 39 56.7	+0.2
KNZ	Kokohu	1.39	134	P	Pn	18 39 40.0	+0.4
KNZ	Kokohu	1.39	134	PN	Pn	18 39 40.0	+0.4
TRVZ	Turoa	1.40	208	PN	Pn	18 39 40.2	+0.4
MOVZ	Moawhango	1.44	200	P	Pn	18 39 39.8	-0.3
MOVZ	Moawhango	1.44	200	PN	Pn	18 39 39.8	-0.2
PUZ	Puketiti	1.47	91	*e*P	Pn	18 39 40.3	-0.2
PUZ	Puketiti	1.47	91	PN	Pn	18 39 40.3	-0.2
PKVZ	Pokaka	1.48	213	PN	Pn	18 39 40.7	+0.2
MTVZ	Mangateitei	1.51	208	PN	Pn	18 39 41.0	+0.2
MXZ	Matakaoa Point	1.60	72	*e*P	Pn	18 39 41.9	+0.1
MXZ	Matakaoa Point	1.60	72	PN	Pn	18 39 41.9	+0.1
VRZ	Vera Road	1.66	230	P	Pn	18 39 42.9	+0.4
VRZ	Vera Road	1.66	230	PN	Pn	18 39 42.9	+0.4
PXZ	Pawanui	2.00	170	PN	Pn	18 39 46.0	-0.3
WAZ	Wanganui	2.02	212	P	Pn	18 39 46.3	-0.2
WAZ	Wanganui	2.02	212	PN	Pn	18 39 46.3	-0.2
TSZ	Takapari Road	2.02	189	P	Pn	18 39 45.9	-0.7
TSZ	Takapari Road	2.02	189	PN	Pn	18 39 45.9	-0.7
MRZ	Mangatainoka R	2.67	193	P	Pn	18 39 52.8	-1.6
MRZ	Mangatainoka R	2.67	193	PN	Pn	18 39 52.8	-1.7
TIWZ	Tintock	2.74	188	PN	Pn	18 39 53.7	-1.5
KIW	Kapiti Island	3.02	202	P	Pn	18 39 56.4	-2.4
KIW	Kapiti Island	3.02	202	PN	Pn	18 39 56.4	-2.4
MTW	Mount Morrison	3.17	192	P	Pn	18 39 58.1	-2.6
MTW	Mount Morrison	3.17	192	PN	Pn	18 39 58.1	-2.6
CAW	Cannon Point	3.21	198	P	Pn	18 39 58.8	-2.4
CAW	Cannon Point	3.21	198	PN	Pn	18 39 58.8	-2.5
DUWZ	D'Urville Isla	3.34	214	PN	Pn	18 40 00.3	-2.6
TRWZ	Traveller	3.38	189	PN	Pn	18 40 01.0	-2.4
MRW	Makara Radio	3.42	202	P	Pn	18 40 01.2	-2.8
MRW	Makara Radio	3.42	202	PN	Pn	18 40 01.2	-2.7
WEL	Wellington	3.46	201	P	Pn	18 40 01.7	-2.7
WEL	Wellington	3.46	201	PN	Pn	18 40 01.7	-2.7
MSWZ	Moikau Station	3.46	194	P	Pn	18 40 01.6	-2.9
MSWZ	Moikau Station	3.46	194	PN	Pn	18 40 01.6	-2.8
SNZO	South Karori	3.50	201	P	Pn	18 40 01.8	-3.1
SNZO	South Karori	3.50	201	PN	Pn	18 40 01.8	-3.1
BHW	Baring Head	3.54	199	P	Pn	18 40 02.4	-3.1
BHW	Baring Head	3.54	199	PN	Pn	18 40 02.4	-3.1
TUWZ	Tuamarina	3.86	208	PN	Pn	18 40 06.2	-3.4
NNZ	Nelson	3.92	215	P	Pn	18 40 07.5	-2.9
NNZ	Nelson	3.92	215	PN	Pn	18 40 07.5	-2.9
QRZ	Quartz Range	4.07	226	*e*P	Pn	18 40 08.8	-3.6
QRZ	Quartz Range	4.07	226	PN	Pn	18 40 08.8	-3.6
BSWZ	Blackbirch Sta	4.13	207	*e*P	Pn	18 40 09.9	-3.2
BSWZ	Blackbirch Sta	4.13	207	*e*PN	Pn	18 40 09.9	-3.2
THZ	Tophouse	4.57	215	*e*P	Pn	18 40 15.4	-3.5
THZ	Tophouse	4.57	215	PN	Pn	18 40 15.4	-3.5
KHZ	Kahutara	4.87	206	P	Pn	18 40 19.0	-3.8
KHZ	Kahutara	4.87	206	PN	Pn	18 40 19.0	-3.9

WEL 18 19:18:26.6±0.1**, 3787S**×**17680E, h2**km**, ML3.6**/6**, 1D, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.15	221	P*	Pg	19 18 30.3	+0.7
MARZ				S*	Sg	19 18 33.0	+1.3
OPRZ	Ohinepanea	0.20	277	⇓P*	Pg	19 18 31.0	+0.6
OPRZ				S*	Sg	19 18 34.1	+1.1
EDRZ	Edgecumbe	0.24	192	PG	Pg	19 18 32.0	+0.7
EDRZ				SG	Sg	19 18 35.8	+1.3
LIRZ	Lichensteins R	0.36	248	PG	Pg	19 18 34.4	+0.9
MKRZ	Makatiti	0.38	224	PG	Pg	19 18 35.0	+1.1
MKRZ				SG	Sg	19 18 41.2	+2.4
TAZ	Tarawera	0.43	213	PG	Pg	19 18 36.2	+1.3
TGRZ	Tauranga	0.45	288	PG	Pg	19 18 36.0	+0.7
TGRZ				SG	Sg	19 18 41.5	+0.4
WIZ	White Island	0.46	42	PG	Pg	19 18 36.3	+0.9
URZ	Urewera	0.46	148	PG	Pg	19 18 35.7	+0.3
KARZ	Kaharoa	0.47	251	PG	Pg	19 18 36.3	+0.7
PATZ	Paeroa	0.67	220	P*	Pg	19 18 40.8	+1.4
MWZ	Matawai	0.74	129	P*	Pb	19 18 40.9	-1.2
MYRZ	Mayor Island	0.74	323	P*	Pb	19 18 41.2	-0.9
TOZ	Tahuroa Road	1.04	277	P*	Pb	19 18 46.4	-0.9
PUZ	Puketiti	1.17	101	P*	Pb	19 18 49.3	-0.2

*IDC **18** 19:25:16.0±1.1, 29.14S×7139W, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.9/16, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=45.7km s-min=35.8km az=54.0*
*ISCJB **18** 19:25:21.7±0.7, 2883S±003×7138W±009, h44km±9km, mb3.6/4, Error ellipse: s-maj=12.7km s-min=4.9km az=6.8*
*GUC **18** 19:25:21.2±0.9, 2885S×7141W, h37km±5km, ML4.1*
*NEIC **18** 19:25:21.2, 2885S×7141W, h37km, ML4.1(GUC), After GUC.*
ISC 18 19:25:21.6±1.3**, 2881S**±003×**7142W**±007**, h28**km±9km**, n29,** σ**0s90**/43**, mb3.6**/4**, 6C-6D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VACH	Vallenar	0.62	68	⇓*i*P	Pb	19 25 33.6	-0.4
VACH				*i* S	Sb	19 25 43.3	+0.9
VACH	Vallenar	0.62	68	⇓*i*P	Pb	19 25 33.6	-0.4
VACH				*i* S	Sb	19 25 43.3	+0.9
VACH				AML	AML	19 25 43.7	
	comp=E,23µm,0.1s						
LCO	Las Campanas	0.66	108	*e*Pn	Pn	19 25 34.1	-0.9
LCO				*e*		19 25 40.3	
LCO				*e*Sn	Sn	19 25 43.6	-0.9
LSCH	La Serena	1.10	172	⇑*i*P	Pn	19 25 40.4	-0.8
LSCH				*i* S	Sn	19 25 54.6	-0.9
LSCH	La Serena	1.10	172	⇑*i*P	Pn	19 25 40.4	-0.8
LSCH				*i* S	Sn	19 25 54.6	-0.9
LSCH				AML	AML	19 26 01.2	
	comp=E,1µm,0.5s						
TLL	Tololo Astrono	1.45	159	⇓*i*P	Pn	19 25 46.2	+0.2
TLL				*i* S	Sn	19 26 05.8	+1.7
TLL	Tololo Astrono	1.45	159	⇓*i*P	Pn	19 25 46.2	+0.2
TLL				*i* S	Sn	19 26 05.8	+1.7
TLL				AML	AML	19 26 08.2	
	comp=E,6µm,0.6s						
CPCH	Copiapo	1.73	33	⇓*i*P	Pn	19 25 50.9	+1.1
CPCH				S	Sn	19 26 14.7	+3.9
CPCH	Copiapo	1.73	33	⇓*i*P	Pn	19 25 50.9	+1.1
CPCH				*i* S	Sn	19 26 14.7	+3.9
CPCH				AML	AML	19 26 17.8	
	comp=E,8µm,0.1s						
OVCH	Ovalle	1.80	174	*e*P	Pn	19 25 50.6	-0.2
OVCH				*i* S	Sn	19 26 12.6	-0.1
OVCH	Ovalle	1.80	174	*e*P	Pn	19 25 50.6	-0.2
OVCH				*i* S	Sn	19 26 12.6	-0.1
OVCH				AML	AML	19 26 23.9	
	comp=N,2µm,0.4s						
CDCH	Caldera	1.81	17	⇑*i*P	Pn	19 25 49.3	-1.5
CDCH				*i* S	Sn	19 26 12.0	-0.8
CDCH	Caldera	1.81	17	⇑*i*P	Pn	19 25 49.3	-1.5
CDCH				*i* S	Sn	19 26 12.0	-0.8
CDCH				AML	AML	19 26 22.3	
	comp=E,840nm,0.8s						
CMCH	Combarbala	2.38	171	⇑*i*P	Pn	19 25 58.1	-0.6
CMCH				*e*S	Sn	19 26 26.8	-0.2
CMCH	Combarbala	2.38	171	⇑*i*P	Pn	19 25 58.1	-0.6
CMCH				*e*S	Sn	19 26 26.8	-0.2
CMCH				AML	AML	19 26 36.5	
	comp=E,7µm,0.5s						
CHNG	Los Chungos	3.06	181	*e*P	Pn	19 25 50.7	-17
CHNG				*i* S	Sn	19 26 26.5	-17
CHNG				AML	AML	19 26 43.6	
	comp=E,412nm,0.4s						
PEL	Peldehue	4.37	172	*e*P	Pn	19 26 25.6	-0.4
FCH	Farellones	4.61	168	*e*P	Pn	19 26 30.6	+1.3
LMEL	Las Melosas	5.13	169	*e*P	Pn	19 26 36.9	+0.4
TRQA	Tornquist	12.12	142	*e*Pn	Pn	19 28 11.4	-0.9
	comp=E,5.1nm,0.7s						
TRQA				Sn	Sn	19 30 27.7	+1.1
LPAZ	La Paz	12.83	14	Pn	Pn	19 28 26.7	+4.6
	comp=E,0.2nm,0.3s,baz=193,slow=12,SNR=3.8						
TXAR	Lajitas Array	65.52	329	P	P	19 36 03.2	+0.8
TXAR	Lajitas Array	65.52	329	P	P	19 36 03.2	+0.8
	comp=E,0.2nm,0.5s,mb3.4,baz=163,slow=7.2,SNR=3.8						
PDAR	Pinedale Array	79.40	332	P	P	19 37 25.0	+0.2
	comp=E,0.3nm,0.5s,mb3.5,baz=128,slow=5.8,SNR=3.5						
NVAR	Mina Array Bea	79.96	324	P	P	19 37 29.2	+1.2
	comp=E,0.5nm,0.8s,mb3.5,baz=179,slow=6.2,SNR=3.3						
TORD	Torodi Ar. Bea	81.95	70	P	P	19 37 38.3	-0.9
	comp=E,1.4nm,0.7s,mb4.0,baz=250,slow=6.0,SNR=9.6						
ASAR	Alice Springs	122.41	208	PKP	PKPdf	19 44 13.3	-1.4
	comp=E,0.2nm,0.9s,baz=116,slow=2.2,SNR=4.2						
WRA	Warramunga Arr	125.52	210	PKP	PKPdf	19 44 19.6	-1.2
	comp=E,0.6nm,0.5s,baz=160,slow=1.7,SNR=14						
MKAR	Makanchi Array	152.74	42	PKPbc	PKPbc	19 45 15.1	-0.4
	comp=E,0.9nm,0.6s,baz=315,slow=2.5,SNR=12						

*ISCJB **18** 19:37:00.8±1.8, 22.13N±007×1438E±02, h120km±17km, mb4.1/15, Error ellipse: s-maj=28.3km s-min=10.8km az=175.8*
*IDC **18** 19:37:03.9±0.7, 22.13N×14369E, h131km±6km, mb3.7/13, mb1 3.8/15, mb1mx3.7/24, mbtmp3.7/15, Error ellipse: s-maj=23.7km s-min=10.8km az=82.0*
*NEIC **18** 19:37:03.1±0.3, 22.16N×14377E, mb4.4/5, Error ellipse: s-maj=15.5km s-min=5.9km az=84.0*
ISC 18 19:37:02.4±1.7**, 2215N**±007×**1438E**±02**, h118**km±16km**, h132**km±5.1km**:pP-P, n26,** σ**0s72**/26**, mb4.1**/15**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	5.15	343	P	Pn	19 38 18.4	+1.2
	46nm,0.3s,baz=96,slow=19,SNR=15						
CBIJ				S	Sn	19 39 14.3	-1.3
	76nm,0.3s,baz=333,slow=22,SNR=12						
MJAR	Matsushiro Arr	15.15	342	P	Pn	19 40 30.5	+0.4
	0.5nm,0.3s,baz=162,slow=9.9,SNR=8.0						
MAJO	Matsushiro	15.15	342	*e*Pn	Pn	19 40 29.1	-1.0
KSRS	Korea Array	20.53	322	P	P	19 41 33.0	+1.7
	1.3nm,0.7s,baz=145,slow=8.2,SNR=5.3						
PMG	Port Moresby	31.53	174	*e*P	P	19 43 13.3	-0.2
PMG	Port Moresby	31.53	174	P	P	19 43 13.2	-0.2
	8.5nm,0.8s,mb4.5,baz=352,slow=14,SNR=3.0						
ULN	Ulaanbaatar	39.00	320	*e*P	P	19 44 17.6	+0.4
	0.8nm,0.7s,mb3.7						
SONM	Songino Array	39.38	320	P	P	19 44 20.7	+0.4
	0.4nm,0.5s,mb3.5,baz=128,slow=7.7,SNR=10						
SONM				pP	pP	19 44 48.2	+1.3
	0.3nm,0.6s,baz=122,slow=6.1,SNR=2.1						
CTA	Charters Tower	42.05	177	*e*P	P	19 44 43.1	+0.7
	7.6nm,0.8s,mb4.5						
CTA	Charters Tower	42.05	177	P	P	19 44 43.1	+0.7
	9.5nm,0.8s,mb4.6,baz=16,slow=6.2,SNR=8.0						
WB2	Warramunga Arr	42.85	193	*e*P	P	19 44 48.9	0.0
WRA	Warramunga Arr	42.85	193	P	P	19 44 48.5	-0.5
	1.3nm,0.3s,mb4.2,baz=8.9,slow=8.2,SNR=88						
WRA				PcP	PcP	19 46 36.8	-1.2
	0.3nm,0.4s,baz=6.3,slow=3.4,SNR=4.1						
FITZ	Fitzroy Crossi	43.79	205	*e*P	P	19 44 56.1	-0.4
	3.5nm,0.8s,mb4.1						
ASAR	Alice Springs	46.55	193	P	P	19 45 17.9	-0.3
	0.8nm,0.4s,mb3.8,baz=9.9,slow=7.6,SNR=27						
STKA	Stephens Creek	53.76	182	*e*P	P	19 46 11.9	-0.6
	2.4nm,0.4s,mb4.6						
STKA	Stephens Creek	53.76	182	P	P	19 46 12.2	-0.4
	2.7nm,0.4s,mb4.7,baz=350,slow=6.9,SNR=22						
MKAR	Makanchi Array	54.84	312	P	P	19 46 20.2	0.0
	0.5nm,0.5s,mb3.8,baz=89,slow=8.2,SNR=5.2						
MKAR				pP	pP	19 46 49.3	+1.0
	0.3nm,0.2s,baz=88,slow=11,SNR=1.8						
NWAO	Narrogin (SRO)	60.37	206	P	P	19 46 59.5	+0.4
	8.0nm,0.9s,mb4.7,baz=7.1,slow=16,SNR=3.9						
INK	Inuvik	66.91	24	*e*P	P	19 47 41.7	+0.1
	26nm,0.6s,mb5.2						
YKA	Yellowknife Ar	75.77	28	P	P	19 48 35.0	+0.1
YKA				pP	pP	19 49 09.9	+5.3
YKA	Yellowknife Ar	75.77	28	P	P	19 48 35.0	+0.1
	0.5nm,0.5s,mb3.5,baz=294,slow=5.5,SNR=6.8						
YKA				pP	pP	19 49 09.9	+5.3
	0.2nm,0.5s,baz=295,slow=5.8,SNR=1.8						
ARCES	ARCESS Array B	78.69	342	P	P	19 48 51.0	-0.2
	2.4nm,0.8s,mb4.1,baz=85,slow=10,SNR=3.5						
NVAR	Mina Array Bea	82.39	52	P	P	19 49 12.0	+0.5
NVAR	Mina Array Bea	82.39	52	P	P	19 49 12.0	+0.5
	0.4nm,0.6s,mb3.5,baz=291,slow=4.9,SNR=5.4						
FINES	FINESS Array B	83.03	335	P	P	19 49 12.9	-1.4
	1.7nm,0.9s,mb3.9,baz=70,slow=2.2,SNR=5.5						
FINES				pP	pP	19 49 47.1	+2.7
	0.6nm,0.4s,baz=42,slow=3.1,SNR=1.3						
PLCA	Paso Flores	145.59	131	PKPbc	PKPbc	19 56 27.7	+0.5
	1.4nm,0.6s,baz=271,slow=5.0,SNR=5.3						

*MOS **18** 19:37:15.4±0.7, 36.10N×7074E, h153km, mb4.0/5, Error ellipse: s-maj=31.1km s-min=14.7km az=87.9*
*IDC **18** 19:37:18.1±10.0, 3621N×7099E, h162km±94km, mb3.4/5, mb1 3.4/7, mb1mx3.1/23, mbtmp3.3/7, Error ellipse: s-maj=55.3km s-min=27.3km az=31.0*
*ISCJB **18** 19:37:23.0±0.5, 3664N±003×7107E±006, h207km±7km, mb3.4/5, Error ellipse: s-maj=8.2km s-min=5.5km az=172.1*
*NEIC **18** 19:37:23.6±0.8, 3653N×7122E, h210km±8km, mb4.2/4, Error ellipse: s-maj=17.2km s-min=9.1km az=124.0*
*NNC **18** 19:37:31.2±2.8, 3728N×71.16E, h233km±29km, mb2.9, mpv4.1, Error ellipse: s-maj=36.4km s-min=9.7km az=40.0*
ISC 18 19:37:24.0±0.5**, 3662N**±004×**7108E**±007**, h201**km±6km**, n41,** σ**1s07**/48**, mb3.4**/5**, 1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.66	219	*e*Pn	Pn	19 38 10.8	+1.1
KBL				*e*		19 38 33.6	
KBL				*e*S	Sn	19 38 44.9	-0.5
THN	Thein Dam	5.66	136	*e*P	Pn	19 38 47.7	+0.8
THN				*e*S	Sn	19 39 50.1	-2.3
AML	Almayashu	5.87	19	*e*Pn	Pn	19 38 49.7	+0.3
	80nm,0.5s						
AML				*e*S	Sn	19 39 53.7	-3.4
AML	Almayashu	5.87	19	P	Pn	19 38 49.9	+0.5
	SNR=103						
UCH	Uchtor	6.20	24	*e*Pn	Pn	19 38 54.2	+0.5
	25nm,0.6s						
UCH				*e*S	Sn	19 40 01.3	-3.6
UCH	Uchtor	6.20	24	P	Pn	19 38 54.5	+0.7
	SNR=44						
KZA	Kyzart	6.34	29	P	Pn	19 38 55.5	0.0
	SNR=7.8						
EKS2	Erkin-Say	6.38	18	*e*Pn	Pn	19 38 56.3	+0.2
	9.9nm,0.4s						
EKS2				*e*S	Sn	19 40 06.1	-3.1
EKS2	Erkin-Say	6.38	18	P	Pn	19 38 56.4	+0.3
	SNR=23						
KK31	Karatay Array	6.49	356	P	Pn	19 38 57.4	-0.1
	5.3nm,0.4s,baz=182,slow=12,SNR=357						
KK31				S	Sn	19 40 05.3	-6.4
	10nm,0.6s,baz=174,slow=18,SNR=9.1						
AAK	Ala-Archa	6.56	23	*e*Pn	Pn	19 38 58.0	-0.4
	7.0nm,0.6s						
AAK	Ala-Archa	6.56	23	*e*PN	Pn	19 38 58.0	-0.4
AAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AAK	Ala-Archa	6.56	23	P	Pn	19 38 59.1	+0.7
	SNR=13						
KBK	Karagaybulak	6.73	25	P	Pn	19 39 01.4	+0.9
	SNR=14						
ULHL	Ulahol	6.89	34	P	Pn	19 39 03.2	+0.4
	SNR=5.3						
CHMS	Chumysh	6.97	23	P	Pn	19 39 04.5	+0.8
	SNR=7.2						
USP	Ospenovka	7.14	21	P	Pn	19 39 06.3	+0.3
	SNR=6.4						
TKM2	Tokmak 2	7.19	28	⇓P	Pn	19 39 06.4	-0.1
	comp=Z,11nm,0.5s						
TKM2	Tokmak 2	7.19	28	*e*Pn	Pn	19 39 06.8	+0.2
	comp=Z,32nm,1.0s						
TKM2	Tokmak 2	7.19	28	*e*PN	Pn	19 39 06.8	+0.2
TKM2				pmax	pmax		
	comp=Z,32nm,1.0s						
TKM2	Tokmak 2	7.19	28	P	Pn	19 39 07.0	+0.4
	SNR=17						
MKAR	Makanchi Array	13.16	36	P	Pn	19 40 23.4	+0.2
	comp=Z,0.1nm,0.3s,baz=225,slow=16,SNR=3.7						
KOLN	Koldanda	13.78	126	*e*P	Pn	19 40 35.3	+4.1
	comp=Z,12nm,0.5s						
GKN	Gorkha	14.31	123	*e*P	Pn	19 40 37.8	0.0
	comp=Z,15nm,0.6s						
KKN	Kakani	14.89	122	*e*P	Pn	19 40 44.2	-0.6
	comp=Z,11nm,0.5s						
AB31	Akbulak array	15.01	331	⇓P	Pn	19 40 45.0	-1.1
	comp=Z,1.3nm,0.5s,baz=147,slow=12,SNR=18						
AB31				⇑S	S	19 43 26.6	-6.1
	comp=Z,0.3nm,0.5s						
JIRN	Jiri	15.59	121	*e*P	Pn	19 40 53.2	-0.2
	comp=Z,16nm,0.5s						
AKTK	Aktyubinsk	16.71	330	P	P	19 41 05.8	+0.3
AKTO	Aktyubinsk	16.71	330	P	P	19 41 05.8	+0.3
	comp=Z,0.3nm,0.3s,baz=128,slow=12,SNR=2.9						
TAPN	Taplejung	16.85	119	*e*P	P	19 41 09.1	+1.9
	comp=Z,5.2nm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ODAN	Odare	16.92	120	eP	P	19 41 11.6	+3.6
	comp=Z,6.5nm,0.6s						
FINES	FINESS Array B	37.42	326	P	P	19 44 17.9	+0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	FINESS Array B	37.42	326	P	P	19 44 17.9	+0.5
	comp=Z,3.2nm,0.9s,mb3.8,baz=118,slow=11,SNR=4.3						
ARCES	ARCESS Array B	41.06	338	P	P	19 44 48.0	+0.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	41.06	338	P	P	19 44 48.0	+0.6
	comp=Z,2.9nm,1.0s,mb3.7,baz=120,slow=7.3,SNR=6.2						
NB2	NORSAR Subarra	44.33	323	P	P	19 45 14.0	+0.3
	comp=Z,1.2nm,0.5s,mb3.5,baz=98,slow=7.9						
NB2	NORSAR Subarra	44.33	323	P	P	19 45 14.0	+0.3
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
NOA	NORSAR Array B	44.33	323	P	P	19 45 13.4	-0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	44.33	323	P	P	19 45 13.4	-0.3
	comp=Z,1.6nm,0.7s,mb3.5,baz=96,slow=7.7,SNR=3.9						
TORD	Torodi Ar. Bea	65.78	269	P	P	19 47 45.6	-2.2
	comp=Z,0.3nm,0.4s,mb3.3,baz=53,slow=5.8,SNR=5.5						
ASAR	Alice Springs	84.27	125	P	P	19 49 31.0	-2.2
	comp=Z,0.2nm,0.6s,mb3.0,baz=298,slow=4.6,SNR=4.5						

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*ATH **18** 20:15:07.6, 38.14N×26.54E, h25^{km}±17^{km}, MD2.8/3*
*ISCJB **18** 20:15:08.4±0.7, 38.18N±0.04×26.73E±0.07, h19^{km}±11^{km}, Error ellipse: s-maj=9.2km s-min=7.3km az=2.3*
*CSEM **18** 20:15:08.3±0.5, 38.16N×26.72E, h15^{km}, ML2.5, Error ellipse: s-maj=9.6km s-min=7.0km az=92.0*
*THE **18** 20:15:08.3, 38.31N×26.75E, h20^{km}, ML2.5*
*NEIC **18** 20:15:08.1, 38.13N×26.48E, h10^{km}, MD2.8(ATH), ML2.5(THE), After ATH.*
ISC 18 20:15:08.2±0.8, **38.16N**±0.05×**26.72E**±0.06, **h16**^{km}±7^{km}, **n7**, σ0^{s}37/11, **2C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.34	49	ePg	Pg	20 15 15.2	-0.1
BLCB				eSg	Sg	20 15 20.1	+0.1
SMG	Samos	0.46	168	⇑iPB	Pb	20 15 17.8	-0.2
SMG				eSB	Sb	20 15 25.2	+0.6
CHOS	Chios island	0.57	293	ePg	Pg	20 15 18.9	-0.5
CHOS				eSg	Sg	20 15 27.5	+0.5
PRK	Paraskevi	1.14	342	⇑iPN	Pn	20 15 29.5	+0.1
PRK				eSN	Sn	20 15 44.8	+0.1
APE	Apeiranthos	1.44	221	ePg	Pn	20 15 33.3	-0.4
APE	Apeiranthos	1.44	221	ePb	Pn	20 15 32.8	-0.9
APE	Apeiranthos	1.44	221	ePg	Pn	20 15 33.3	-0.4

IDC 18 20:40:09.7±50.0, **19.03S**×**176.64W**, **h0**^{km}, **mb3.8**/3, **mb1 3.9**/3, **mb1mx3.6**/15, **mbtmp3.8**/3, **Error ellipse: s-maj=937.2km s-min=154.0km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.59	243	P	P	20 47 43.0	+0.1
	0.4nm,0.4s,baz=78,slow=9.3,SNR=2.5						
WRA	Warramunga Arr	46.09	260	P	P	20 48 35.9	+0.1
	0.5nm,0.3s,baz=96,slow=7.5,SNR=52						
ASAR	Alice Springs	46.12	255	P	P	20 48 35.6	-0.4
	0.7nm,0.4s,baz=97,slow=7.5,SNR=18						

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*IDC **18** 20:40:57.6±1.4, 27.96N×55.04E, h0^{km}, mb3.7/10, mb1 3.8/10, mb1mx3.7/22, mbtmp3.7/10, Error ellipse: s-maj=33.8km s-min=25.0km az=2.0*
*CSEM **18** 20:41:01.3±0.2, 28.05N×55.12E, h35^{km}, mb3.4, Error ellipse: s-maj=4.7km s-min=3.2km az=154.0*
*KISR **18** 20:41:02.0±0.7, 28.34N×54.90E, h29^{km}±999^{km}, ML3.4*
*ISCJB **18** 20:41:04.9±1.3, 28.22N±0.07×54.92E±0.06, h61^{km}±10^{km}, mb3.5/9, Error ellipse: s-maj=13.5km s-min=6.9km az=153.6*
*NEIC **18** 20:41:04.5, 28.19N×55.14E, h21^{km}, MN3.4(TEH), After TEH.*
ISC 18 20:41:05.9±1.3, **28.20N**±0.08×**55.00E**±0.06, **h55**^{km}±10^{km}, **n29**, σ0^{s}86/40, **mb3.5**/10, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISRV	Sarvestan	2.03	306	Pn	Pn	20 41 38.7	+1.0
ISRV				Lg		20 42 11.5	
IMOK	Mook	2.18	293	Pn	Pn	20 41 40.9	+1.2
IMEH	Mehriz	3.20	354	Pn	Pn	20 41 53.8	+0.1
IBAF	Bafgh	3.42	8	Pn	Pn	20 41 55.5	-1.2
ISAD	Sadrabad	3.88	343	Pn	Pn	20 42 03.9	+1.0
ISAD				Sn	Sn	20 42 47.9	+0.7
ICHK	Chekchek	4.07	353	Pn	Pn	20 42 04.7	-0.8
IZEF	Zefreh	5.22	334	Pn	Pn	20 42 20.1	-1.2
IZEF				Sn	Sn	20 43 19.2	-1.0
QRN	Al-Qurain	6.26	277	eP	Pn	20 42 35.1	-0.5
QRN				eS	Sn	20 43 45.7	0.0
QRN				AML	AML	20 43 48.4	
	comp=Z,22nm,0.3s						
KBD	Kabd	6.49	280	eP	Pn	20 42 39.2	+0.4
KBD				eS	Sn	20 43 51.5	0.0
KBD				AML	AML	20 43 52.4	
	comp=Z,12nm,0.3s						
KBD	Kabd	6.49	280	eP	Pn	20 42 39.2	+0.4
KBD				eS	Sn	20 43 51.5	0.0
	comp=Z,12nm,0.3s						
UMR	Umm Al-Rimmam	6.53	284	eP	Pn	20 42 39.6	+0.3
UMR				eS	Sn	20 43 51.9	-0.5
UMR				AML	AML	20 43 52.4	
	comp=Z,6.0nm,0.3s						
UMR	Umm Al-Rimmam	6.53	284	eP	Pn	20 42 39.6	+0.3
UMR				eS	Sn	20 43 51.9	-0.5
RDF	Al-Radifah	6.59	278	eP	Pn	20 42 40.2	+0.1
RDF				AML	AML	20 43 53.9	
	comp=Z,5.8nm,0.4s						
RDF				eS	Sn	20 43 54.1	+0.2
RDF	Al-Radifah	6.59	278	eP	Pn	20 42 40.2	0.0
RDF				eS	Sn	20 43 54.1	+0.1
NAY	Al-Naaiem	6.89	281	eP	Pn	20 42 44.2	-0.1
NAY				AML	AML	20 44 04.1	
	comp=Z,5.0nm,0.3s						
MIB	Mutribah	6.90	285	eP	Pn	20 42 44.4	0.0
MIB				eS	Sn	20 44 00.9	-0.6
MIB				AML	AML	20 44 03.0	
	comp=Z,8.3nm,0.5s						
MIB	Mutribah	6.90	285	eP	Pn	20 42 44.4	0.0
MIB				eS	Sn	20 44 00.9	-0.6
	comp=Z,8.3nm,0.5s						
BRTR	Keskin Array B	21.07	309	P	P	20 45 46.5	+1.1
	comp=Z,0.8nm,0.7s,mb3.2,baz=118,slow=12,SNR=6.5						
BRTR	Keskin Array B	21.07	309	P	P	20 45 46.5	+1.1
MKAR	Makanchi Array	28.30	42	P	P	20 46 54.2	0.0
	comp=Z,0.1nm,0.3s,mb2.9,baz=213,slow=5.0,SNR=2.7						
AKASG	Malin Array Be	29.75	326	P	P	20 47 05.9	-1.0
	comp=Z,0.1nm,0.3s,mb3.1,baz=115,slow=9.3,SNR=3.4						
FINES	FINESS Array B	38.42	338	P	P	20 48 22.4	+0.6
	comp=Z,2.1nm,0.8s,mb3.9,baz=145,slow=10,SNR=3.8						
NOA	NORSAR Array B	43.88	331	P	P	20 49 06.2	-0.4
	comp=Z,1.6nm,0.8s,mb3.8,baz=138,slow=6.8,SNR=2.8						
SONM	Songino Array	44.08	49	P	P	20 49 10.3	+1.9
	comp=Z,0.4nm,1.0s,mb3.1,baz=267,slow=8.7,SNR=2.8						
ARCES	ARCESS Array B	44.75	346	P	P	20 49 15.4	+1.9
	comp=Z,2.2nm,0.9s,mb4.0,baz=149,slow=9.1,SNR=2.7						
TORD	Torodi Ar. Bea	51.68	265	P	P	20 50 07.5	-0.2
	comp=Z,0.4nm,0.3s,mb3.8,baz=61,slow=7.9,SNR=13						
YKA	Yellowknife Ar	89.24	355	P	P	20 53 54.7	-0.9
YKA	Yellowknife Ar	89.24	355	P	P	20 53 54.7	-0.9
	comp=Z,0.1nm,0.6s,mb3.3,baz=20,slow=3.1,SNR=4.1						
ASAR	Alice Springs	91.83	116	P	P	20 54 06.5	-1.7
	comp=Z,0.2nm,0.6s,mb3.6,baz=297,slow=4.7,SNR=4.4						

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*NEIC **18** 20:44:19.1, 41.74N×55.51W, h18^{km}, MG4.2(OTT), After OTT.*
OTT 18 20:44:19.1±1.0, **41.74N**×**55.51W**, **h18**^{km}, **ML4.2**/11, **Atlantic Ocean, southeast of Nova Scotia. 586km southeast from Louisbourg, Ns, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBN	Guysborough	5.70	312	Pn	Pn	20 45 42.0	-0.8
GBN				Sn	Sn	20 46 43.4	-4.2
GBN	Guysborough	5.70	312	PN	Pn	20 45 42.0	-0.8
GBN				SN	Sn	20 46 43.4	-4.2
GBN				Trac		20 46 51.8	
	comp=Z,14nm,0.1s						
SJNN	Saint John’s	6.19	18	Pn	Pn	20 45 48.1	-1.4
SJNN				Sn	Sn	20 46 54.0	-5.8
SJNN	Saint John’s	6.19	18	PN	Pn	20 45 48.1	-1.4
SJNN				SN	Sn	20 46 54.0	-5.8
SJNN				Trac		20 47 00.3	
	comp=Z,30nm,0.1s						
CHEG	Cheticamp, Nov	6.28	326	Pn	Pn	20 45 50.2	-0.5
CHEG				Sn	Sn	20 46 56.1	-5.8
CHEG	Cheticamp, Nov	6.28	326	PN	Pn	20 45 50.2	-0.5
CHEG				SN	Sn	20 46 56.1	-5.8
CHEG				Trac		20 47 07.4	
	comp=Z,21nm,0.1s						
HAL	Halifax	6.58	299	Pn	Pn	20 45 53.4	-1.5
HAL				Sn	Sn	20 47 01.1	-8.2
HAL	Halifax	6.58	299	PN	Pn	20 45 53.4	-1.5
HAL				SN	Sn	20 47 01.1	-8.2
HAL				Trac		20 47 08.2	
	comp=Z,9.2nm,0.1s						
CODG	Codroy Newfoun	6.65	338	Pn	Pn	20 45 55.6	-0.3
CODG				Sn	Sn	20 47 06.9	-4.3
CODG	Codroy Newfoun	6.65	338	PN	Pn	20 45 55.6	-0.3
CODG				SN	Sn	20 47 06.9	-4.3
CODG				Trac		20 47 09.3	
	comp=Z,9.7nm,0.1s						
MALG	Malagash, Nova	6.96	308	SN	Sn	20 47 14.8	-3.9
MALG				Trac		20 47 20.7	
	comp=Z,131nm,0.3s						
MADG	Magdalen Islan	7.08	323	Pn	Pn	20 46 02.4	+0.7
MADG				Sn	Sn	20 47 19.3	-2.4
MADG	Magdalen Islan	7.08	323	PN	Pn	20 46 02.4	+0.7
MADG				SN	Sn	20 47 19.3	-2.4
MADG				Trac		20 47 25.9	
	comp=Z,34nm,0.2s						
TIGG	Tignish, PEI	7.51	317	Pn	Pn	20 46 13.3	+5.6
TIGG				Sn	Sn	20 47 38.7	+6.3
TIGG	Tignish, PEI	7.51	317	PN	Pn	20 46 13.3	+5.6
TIGG				SN	Sn	20 47 38.7	+6.3
TIGG				Trac		20 47 44.2	
	comp=Z,3.8nm,0.0s						
DRLN	Deer Lake	7.64	350	Pn	Pn	20 46 08.7	-0.8
DRLN				Sn	Sn	20 47 29.8	-5.8
DRLN	Deer Lake	7.64	350	PN	Pn	20 46 08.7	-0.8
DRLN				SN	Sn	20 47 29.8	-5.8
DRLN				Trac		20 47 34.9	
	comp=Z,43nm,0.4s						
LMN	Caledonia Moun	7.88	305	Pn	Pn	20 46 11.7	-1.1
LMN				Sn	Sn	20 47 34.3	-7.1
LMN	Caledonia Moun	7.88	305	PN	Pn	20 46 11.7	-1.1
LMN				SN	Sn	20 47 34.3	-7.1
LMN				Trac		20 47 40.1	
	comp=Z,19nm,0.1s						
GGN	Saint George	8.91	296	Pn	Pn	20 46 24.2	-2.6
GGN				Sn	Sn	20 47 55.4	-11
GGN	Saint George	8.91	296	PN	Pn	20 46 24.2	-2.6
GGN				SN	Sn	20 47 55.4	-11
GGN				Trac		20 48 06.7	
	comp=Z,54nm,0.5s						
BATG	Bathurst New B	9.35	310	Pn	Pn	20 46 31.2	-1.6
BATG				Sn	Sn	20 48 09.8	-7.7
BATG	Bathurst New B	9.35	310	PN	Pn	20 46 31.2	-1.6
BATG				SN	Sn	20 48 09.8	-7.7
BATG				Trac		20 48 17.3	
	comp=Z,3.9nm,0.0s						
NATG	Natashquan Que	9.94	332	Pn	Pn	20 46 40.4	-0.5
NATG				Sn	Sn	20 48 25.1	-6.8
NATG	Natashquan Que	9.94	332	PN	Pn	20 46 40.4	-0.5
NATG				SN	Sn	20 48 25.1	-6.8
NATG				Trac		20 48 28.7	
	comp=Z,8.8nm,0.2s						
GASG	Gaspe, Quebec	10.37	318	Pn	Pn	20 46 44.8	-2.0
GASG				Sn	Sn	20 48 34.1	-8.4
GASG	Gaspe, Quebec	10.37	318	PN	Pn	20 46 44.8	-2.0
GASG				SN	Sn	20 48 34.1	-8.4
GASG				Trac		20 48 42.5	
	comp=Z,11nm,0.1s						
PKME	Peaks-Kenny Pk	10.61	294	ePn	Pn	20 46 46.2	-4.0
PKME				eSn	Sn	20 48 36.0	-13
PKME	Peaks-Kenny Pk	10.61	294	PN	Pn	20 46 46.1	-4.1
PKME				SN	Sn	20 48 34.9	-14
GSQ	Grosses Roches	10.86	315	Pn	Pn	20 46 51.2	-2.4
GSQ				Sn	Sn	20 48 49.6	-4.9
GSQ	Grosses Roches	10.86	315	PN	Pn	20 46 51.2	-2.4
GSQ				SN	Sn	20 48 49.6	-4.9
GSQ				Trac		20 48 54.8	
	comp=Z,9.2nm,0.3s						
SMQ	Clarke City	11.50	321	Pn	Pn	20 46 59.0	-3.4
SMQ				Sn	Sn	20 49 01.9	-8.4
SMQ	Clarke City	11.50	321	PN	Pn	20 46 59.0	-3.4
SMQ				SN	Sn	20 49 01.9	-8.4
SMQ				Trac		20 49 04.8	
	comp=Z,6.6nm,0.2s						
CNQ	Baie Comeau	11.60	315	Pn	Pn	20 47 00.1	-3.6
CNQ				Sn	Sn	20 49 02.4	-10
CNQ	Baie Comeau	11.60	315	PN	Pn	20 47 00.1	-3.6
CNQ				SN	Sn	20 49 02.4	-10
CNQ				Trac		20 49 12.9	
	comp=Z,3.1nm,0.1s						
A21	Saint Andre	11.71	305	Pn	Pn	20 47 02.1	-3.1
A21				Sn	Sn	20 49 04.2	-11
A21	Saint Andre	11.71	305	PN	Pn	20 47 02.1	-3.1
A21				SN	Sn	20 49 04.2	-11
A21				Trac		20 49 10.9	
	comp=Z,26nm,0.5s						
A16	Riviere Ouelle	11.81	304	PN	Pn	20 47 02.5	-4.0
A16				SN	Sn	20 49 06.1	-12
HRV	Harvard--Oak R	11.95	279	PN	Pn	20 46 59.2	-9.2
HRV				SN	Sn	20 49 01.9	-19
A61	Sainte Mathild	11.95	305	Pn	Pn	20 47 05.8	-2.6
A61				Sn	Sn	20 49 10.4	-11
A61	Sainte Mathild	11.95	305	PN	Pn	20 47 05.8	-2.6
A61				SN	Sn	20 49 10.4	-11
A61				Trac		20 49 18.0	
	comp=Z,4.6nm,0.1s						
LMQ	La Malbaie	12.04	304	Pn	Pn	20 47 05.9	-3.8
LMQ				Sn	Sn	20 49 09.4	-14
LMQ	La Malbaie	12.04	304	PN	Pn	20 47 05.9	-3.8
LMQ				SN	Sn	20 49 09.4	-14
LMQ				Trac		20 49 18.8	
	comp=Z,6.7nm,0.2s						
LBNH	Lisbon	12.28	287	ePn	Pn	20 47 10.8	-2.2
LBNH				eSn	Sn	20 49 26.1	-3.2
LBNH	Lisbon	12.28	287	PN	Pn	20 47 09.4	-3.6
LBNH				SN	Sn	20 49 19.8	-9.5
MOQ	Mont Orford	12.66	292	SN	Sn	20 49 28.1	-11
MNQ	Manicouagan	12.71	318	Pn	Pn	20 47 14.3	-4.5
MNQ				Sn	Sn	20 49 29.0	-11
MNQ	Manicouagan	12.71	318	PN	Pn	20 47 14.3	-4.5
MNQ				SN	Sn	20 49 29.0	-11
MNQ				Trac		20 49 34.7	
	comp=Z,3.7nm,0.2s						
DAQ	Lac Daran	12.77	304	Pn	Pn	20 47 15.8	-3.9
DAQ				Sn	Sn	20 49 30.4	-11
DAQ	Lac Daran	12.77	304	PN	Pn	20 47 15.8	-3.9
DAQ				SN	Sn	20 49 30.4	-11
DAQ				Trac		20 49 38.5	
	comp=Z,3.9nm,0.2s						
DPQ	Saint Jean	13.33	298	SN	Sn	20 49 42.1	-13
NCB	Newcomb	13.91	285	Pn	Pn	20 47 29.9	-5.3
NCB	Newcomb	13.91	285	PN	Pn	20 47 25.9	-9.3
NCB				SN	Sn	20 50 02.8	-6.4
SCHQ	Schefferville	15.08	334	Pn	Pn	20 47 47.4	-3.7
SCHQ				Sn	Sn	20 50 23.5	-14
SCHQ	Schefferville	15.08	334	PN	Pn	20 47 47.4	-3.7
SCHQ				SN	Sn	20 50 23.5	-14
LG4Q	La Grande 4	17.20	320	PN	Pn	20 48 12.2	-6.1
LG4Q				SN	Sn	20 51 13.9	-15
MALO	McAlpine Lake	18.75	304	PN	Pn	20 48 27.2	-10
MALO				SN	Sn	20 51 51.8	-15
SILO	Sutton Inlier	23.20	313	PN	P	20 49 22.6	-2.3
SILO				SN	S	20 53 35.2	-0.3

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*IDC **18** 21:03:19.8±2.3, 43.46N×105.32W, h0^{km}, mb4.2/3, mb1 3.9/7, mb1mx3.6/23, mbtmp3.7/7, ML3.2/4, Error ellipse: s-maj=70.8km s-min=11.0km az=146.0*
*ISCJB **18** 21:03:20.3±0.3, 43.64N±0.03×105.29W±0.03, h0^{km}, mb4.1/3, Error ellipse: s-maj=3.6km s-min=2.7km az=176.3*
*NEIC **18** 21:03:22.6±0.4, 43.70N×105.20W, h0^{km}, ML3.2, Error ellipse: s-maj=5.8km s-min=4.4km az=131.0, Suspected Mining explosion.*
NEIC 70 km [45 miles] SSE of Gillette.
ISC 18 21:03:21.9±0.4, **43.66N**±0.02×**105.17W**±0.03, **h0**^{km}, **n46**, σ1^{s}35/122, **mb4.1**/3, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHWY	Pilot Hill	2.37	185	Pn	Pn	21 04 01.5	-0.5
RWWY	Rawlins	2.48	218	eP	Pn	21 04 05.4	+1.9
RWWY				eS	Sn	21 04 32.6	-1.9
LAO	LASA Array	3.12	347	Pn	Pn	21 04 12.0	-0.2
LAO				Sn	Sn	21 04 50.5	+0.3
RLMT	Red Lodge	3.28	298	Pn	Pn	21 04 11.2	-3.3
RLMT				ePg	Pg	21 04 25.7	+0.9
RLMT				eSn	Sn	21 04 52.8	-1.4
RLMT				eSg	Sg	21 05 06.1	-1.2
BW06	Boulder Array	3.33	256	ePn	Pn	21 04 12.2	-3.0
BW06				ePg	Pg	21 04 23.6	-2.1
BW06				Sn	Sn	21 04 50.3	-5.2
BW06				eSg	Sg	21 05 02.5	-6.5
PDAR	Pinedale Array	3.33	256	Pn	Pn	21 04 15.4	+0.2
	5.7nm,0.3s,baz=71,slow=16,SNR=76						
PDAR				Lg		21 05 02.3	
	13nm,0.3s,baz=66,slow=25,SNR=8.5						
GCMT	Greycliff	3.85	305	ePn	Pn	21 04 22.7	+0.4
GCMT				eSn	Sn	21 05 10.8	+2.6
GCMT				eSg	Sg	21 05 23.2	-2.3
ISCO	Idaho Springs	3.88	185	ePn	Pn	21 04 19.4	-3.3
ISCO				ePg	Pg	21 04 25.8	-10
ISCO				Sn	Sn	21 05 00.6	-8.2
LOHW	Long Hollow	3.95	271	ePn	Pn	21 04 24.8	+1.1
LOHW				ePg	Pg	21 04 33.3	-4.2
LOHW				eSn	Sn	21 05 11.4	+0.8
LOHW				eSg	Sg	21 05 29.4	+0.8
FLWY	Flagg Ranch	4.02	278	ePn	Pn	21 04 24.6	-0.1
FLWY				ePg	Pg	21 04 34.8	-4.1
FLWY				Sn	Sn	21 05 08.4	-4.1
FLWY				eSg	Sg	21 05 31.0	0.0
MOOW	Moose Ponds	4.04	273	ePn	Pn	21 04 26.1	+1.1
MOOW				ePg	Pg	21 04 40.0	+0.6
MOOW				eSn	Sn	21 05 13.6	+0.5
SNOW	Snow King Moun	4.07	269	ePn	Pn	21 04 26.4	+1.1
SNOW				ePg	Pg	21 04 38.2	-1.6
SNOW				Sn	Sn	21 05 12.1	-1.5
SNOW				eSg	Sg	21 05 30.8	-1.6
REDW	Red Top Meadow	4.15	268	ePn	Pn	21 04 26.7	+0.3
REDW				ePg	Pg	21 04 40.8	-0.5
REDW				eSn	Sn	21 05 13.2	-2.4
REDW				eSg	Sg	21 05 35.3	+0.3
YFT	Old Faithful	4.16	283	ePn	Pn	21 04 31.0	+4.4
YFT				ePg	Pg	21 04 46.8	+5.1
YFT				eSn	Sn	21 05 19.9	+4.0
IMW	Indian Meadow	4.19	275	ePn	Pn	21 04 27.5	+0.5
IMW				ePg	Pg	21 04 43.2	+1.1
IMW				eSn	Sn	21 05 15.8	-0.7
IMW				eSg	Sg	21 05 34.5	-1.9
TPAW	Teton Pass	4.21	270	ePn	Pn	21 04 28.2	+1.0
TPAW				ePg	Pg	21 04 43.4	+0.9
TPAW				eSn	Sn	21 05 12.1	-4.9
TPAW				eSg	Sg	21 05 36.4	-0.6
DCID1	Drake Creek	4.37	271	ePn	Pn	21 04 31.0	+1.5
DCID1				ePg	Pg	21 04 45.2	-0.4
DCID1				eSn	Sn	21 05 23.4	+2.4
DCID1				eSg	Sg	21 05 47.6	+5.4
AHID	Auburn Hatcher	4.43	260	ePn	Pn	21 04 31.2	+0.9
AHID				ePg	Pg	21 04 44.3	-2.4
AHID				eSn	Sn	21 05 23.6	+1.1
AHID				eSg	Sg	21 05 43.2	-0.9
SMCO	Snowmass	4.68	197	ePn	Pn	21 04 29.8	-4.0
SMCO				ePg	Pg	21 04 44.4	-7.2
SMCO				Sn	Sn	21 05 22.3	-6.5
SMCO				eSg	Sg	21 05 43.6	-8.7
DGMT	Dagmar	4.86	8	ePn	Pn	21 04 37.7	+1.6
DGMT				ePg	Pg	21 04 50.1	-4.8
DGMT				Sn	Sn	21 05 28.8	-4.2
BOZ	Bozeman (W)	5.02	296	ePn	Pn	21 04 37.8	-0.6
BOZ				ePg	Pg	21 04 50.9	-7.2
BOZ				eSn	Sn	21 05 39.1	+2.1
BOZ				eSg	Sg	21 05 53.6	-9.5
HWUT	Hardware Ranch	5.15	249	ePn	Pn	21 04 40.4	+0.2
	9.7nm,0.3s						
HWUT				eSn	Sn	21 05 41.0	+0.7
EGMT	Eagleton	5.41	325	ePn	Pn	21 04 43.0	-0.8
	15nm,0.6s						
EGMT				ePg	Pg	21 04 57.8	-7.8
EGMT				eSn	Sn	21 05 46.3	-0.4
EGMT				Sg	Sg	21 06 10.9	-4.8
DAU	Daniels Canyon	5.58	236	ePn	Pn	21 04 47.3	+1.2
DAU				ePg	Pg	21 05 00.1	-8.7
DLMT	Dillon	5.58	290	Pn	Pn	21 04 47.2	+1.2
	8.3nm,0.9s						
DLMT				ePg	Pg	21 05 03.3	-5.4
MCMT	McKenzie Canyo	5.64	285	Pn	Pn	21 04 47.9	+1.0
MCMT				ePg	Pg	21 05 10.7	+0.8
MCMT				Sn	Sn	21 05 55.7	+3.3
CTU	Camp Tracy	5.72	241	Pn	Pn	21 04 42.7	-5.3
CTU				Pg	Pg	21 04 49.4	-22
CTU				Sn	Sn	21 05 45.9	-8.5
CTU				eSg	Sg	21 06 17.8	-7.8
SPUT	South Promonto	5.88	249	ePn	Pn	21 04 51.1	+1.0
SPUT				ePg	Pg	21 05 15.8	+1.3
SPUT				eSn	Sn	21 05 59.9	+1.8
HVU	Hansel Valley	5.91	254	ePn	Pn	21 04 51.8	+1.1
	3.7nm,0.4s						
HVU				ePg	Pg	21 05 09.6	-5.6
HVU				eSn	Sn	21 06 04.1	+5.1
PV10	Paradox Valley	6.04	210	Pn	Pn	21 04 55.1	+2.7
PV01	Paradox Valley	6.09	206	ePn	Pn	21 04 53.6	+0.4
PV01				ePg	Pg	21 05 17.8	-0.9
PV01				eSn	Sn	21 06 01.6	-1.9
ECSD	EROS,Sioux Fal	6.20	86	ePn	Pn	21 04 56.9	+2.3
	5.4nm,0.5s						
ECSD				ePg	Pg	21 05 26.1	+5.4
ECSD				eSn	Sn	21 06 11.8	+5.6
ECSD				eSg	Sg	21 06 38.4	-2.6
BGU	Big Grassy Mou	6.44	248	ePn	Pn	21 04 57.8	-0.1
BGU				ePg	Pg	21 05 23.5	-1.8
BGU				eSn	Sn	21 06 15.3	+3.2
BGU				eSg	Sg	21 06 40.3	-8.4
CHMT	Chamberlain Mo	6.56	302	ePn	Pn	21 04 59.4	-0.2
CHMT				eSn	Sn	21 06 15.8	+0.7
DUG	Dugway	6.67	241	ePn	Pn	21 05 01.8	+0.7
	3.6nm,0.3s						
DUG				ePg	Pg	21 05 30.7	+1.0
DUG				eSn	Sn	21 06 11.7	-6.1
HLID	Hailey	6.71	272	ePn	Pn	21 05 01.3	-0.4
HLID				ePg	Pg	21 05 25.9	-4.5
MVCO	Mesa Verde	6.93	203	ePn	Pn	21 05 06.5	+1.9
MVCO				Sn	Sn	21 06 38.6	+14
MVU	Marysvale	7.41	228	ePn	Pn	21 05 10.6	-0.6
	1.8nm,0.4s						
AGMN	Agassiz Refuge	7.97	51	Pn	Pn	21 05 20.0	+1.1
	8.6nm,0.6s						
AGMN				Pg	Pg	21 05 49.5	-5.0
ULM	Lac du Bonnet	9.15	41	Pn	Pn	21 05 34.2	-0.9
ULM				Lg		21 08 03.4	
ULM	Lac du Bonnet	9.15	41	Pn	Pn	21 05 34.2	-0.9
	0.8nm,0.3s,baz=240,slow=9.6,SNR=12						
ULM				Lg		21 08 03.4	
	0.1nm,0.3s,baz=22,slow=14,SNR=4.2						
NVAR	Mina Array Bea	11.21	247	Pn	Pn	21 06 00.8	-2.6
	0.1nm,0.3s,baz=58,slow=17,SNR=2.4						
YKA	Yellowknife Ar	19.66	347	P	Pn	21 07 51.1	-2.2
	0.0nm,0.3s,baz=165,slow=13,SNR=2.4						
ARCES	ARCESS Array B	61.47	18	P	P	21 13 38.5	-1.1
	2.3nm,0.9s,mb4.3,baz=325,slow=6.7,SNR=6.3						
FINES	FINESS Array B	68.07	23	P	P	21 14 22.3	-0.5
	1.3nm,0.6s,mb4.3,baz=315,slow=8.6,SNR=4.5						
MKAR	Makanchi Array	89.69	355	P	P	21 16 19.5	-2.1
	0.1nm,0.2s,mb3.6,baz=26,slow=2.9,SNR=3.5						

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*MOS **18** 21:16:47.8±1.5, 54.39N×161.88E, h22^{km}, mb4.2/10, Error ellipse: s-maj=13.6km s-min=7.2km az=83.4*
*ISCJB **18** 21:16:51.9±0.6, 54.47N±0.03×161.59E±0.08, h61^{km}±5^{km}, mb3.9/15, Error ellipse: s-maj=8.6km s-min=3.5km az=21.4*
*KRSC **18** 21:16:53.0±0.0, 54.50N×161.45E, h31^{km}±19^{km}, ML4.2*

*NEIC **18** 21:16:53.9±1.1, 54.50N×161.59E, h62km±10km, mb4.2/6, Error ellipse: s-maj=10.5km s-min=6.8km az=133.0*
*IDC **18** 21:16:55.5±11.0, 54.57N×161.50E, h75km±103km, mb3.5/10, mb1 3.7/10, mb1mx3.5/22, mbtmp3.5/10, Error ellipse: s-maj=25.1km s-min=17.4km az=128.0*
ISC 18 21:16:52.8±0.6**, 54.47N**±0.03×**161.61E**±0.08**, h51**km±6km**, n64,** σ0.95/82**, mb3.9**/15**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.11**	**37**	*i* P	**Pn**	**21 16 57.1**	**-3.7**
TUMR	**Tumrok**	**1.18**	**315**	*i* P	**Pn**	**21 17 12.7**	**-0.2**
TUMR				S	**Sn**	**21 17 26.8**	**-1.0**
KII	**Karymskiy**	**1.34**	**252**	*e*P	**Pn**	**21 17 14.9**	**-0.2**
KMNR	**Kamenistaya**	**1.52**	**329**	*i* P	**Pn**	**21 17 18.1**	**+0.6**
KMNR				*e*S	**Sn**	**21 17 35.9**	**-0.1**
ZLN	**Zelenaya**	**1.62**	**344**	*e*P	**Pn**	**21 17 19.1**	**+0.2**
ZLN				S	**Sn**	**21 17 37.0**	**-1.6**
SPN	**Mys Shipunski**	**1.66**	**215**	P	**Pn**	**21 17 17.1**	**-2.3**
SPN				*e*S	**Sn**	**21 17 34.6**	**-5.0**
KPT	**Kopyto**	**1.70**	**333**	*e*P	**Pn**	**21 17 20.8**	**+0.8**
KPT				S	**Sn**	**21 17 40.7**	**+0.1**
KRSR	**Krestovskiy**	**1.85**	**342**	P	**Pn**	**21 17 22.3**	**+0.2**
KRSR				S	**Sn**	**21 17 43.4**	**-0.9**
NLC	**Nalytchevo**	**1.87**	**227**	P	**Pn**	**21 17 22.0**	**-0.2**
NLC				*e*S	**Sn**	**21 17 42.5**	**-2.1**
KBTR	**Krutoberegovo**	**1.88**	**21**	*e*P	**Pn**	**21 17 22.2**	**-0.2**
KBTR				*e*S	**Sn**	**21 17 43.4**	**-1.5**
KOZ	**Kozyrevsk**	**1.88**	**329**	*e*P	**Pn**	**21 17 23.6**	**+1.2**
KOZ				S	**Sn**	**21 17 46.0**	**+1.0**
KOZR	**Kozyr**	**1.88**	**329**	PN	**Pn**	**21 17 23.6**	**+1.2**
KOZR				S	**Sn**	**21 17 46.0**	**+1.0**
KLY	**Klyuchi**	**1.93**	**344**	*e*P	**Pn**	**21 17 22.9**	**-0.2**
KLY				*e*S	**Sn**	**21 17 44.3**	**-1.9**
AVH	**Avacha**	**2.08**	**236**	*i* P	**Pn**	**21 17 25.7**	**+0.5**
AVH				*e*S	**Sn**	**21 17 49.2**	**-0.7**
SRDR	**Sredinnyy**	**2.15**	**331**	*i* P	**Pn**	**21 17 26.5**	**+0.4**
SRDR				S	**Sn**	**21 17 50.9**	**-0.6**
SRKR	**Sorokina**	**2.21**	**354**	*e*P	**Pn**	**21 17 28.4**	**+1.5**
SRKR				S	**Sn**	**21 17 54.0**	**+1.0**
PET	**Petropavlovsk**	**2.27**	**232**	*e*Pn	**Pn**	**21 17 28.4**	**+0.5**
PET				*e*Sn	**Sn**	**21 17 54.9**	**+0.3**
PET	**Petropavlovsk**	**2.27**	**232**	P	**Pn**	**21 17 28.2**	**+0.4**
PET				*e*S	**Sn**	**21 17 53.2**	**-1.4**
GNL	**Ganaly**	**2.30**	**252**	*i* P	**Pn**	**21 17 29.1**	**+1.0**
GNL				*e*S	**Sn**	**21 17 55.6**	**+0.5**
RUS	**Russkaya**	**2.75**	**224**	S	**Sn**	**21 18 05.3**	**-1.0**
GRL	**Gorelyy**	**2.85**	**229**	P	**Pn**	**21 17 37.6**	**+1.9**
GRL				*e*S	**Sn**	**21 18 09.9**	**+1.1**
MA2	**Magadan**	**7.82**	**315**	Pn	**Pn**	**21 18 44.6**	**+0.9**
BILL	**Bilibino**	**13.80**	**7**	*e*Pn	**Pn**	**21 20 06.5**	**+1.2**
BILL	**Bilibino**	**13.80**	**7**	*e*P	**Pn**	**21 20 06.5**	**+1.2**
YAK	**Yakutsk**	**18.27**	**307**	P	**Pn**	**21 21 01.5**	**-0.6**
	9.0nm,0.5s						
YAK	**Yakutsk**	**18.27**	**307**	P	**Pn**	**21 21 01.5**	**-0.6**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MAJO	**Matsushiro**	**24.11**	**232**	P	**P**	**21 22 04.2**	**+0.8**
MJAR	**Matsushiro Arr**	**24.11**	**232**	P	**P**	**21 22 04.2**	**+0.8**
MJAR	**Matsushiro Arr**	**24.11**	**232**	P	**P**	**21 22 04.2**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MJAR	**Matsushiro Arr**	**24.11**	**232**	P	**P**	**21 22 04.2**	**+0.8**
	comp=Z,1.1nm,0.7s,mb3.4,baz=39,slow=7.9,SNR=3.4						
MCK	**McKinley**	**26.37**	**50**	P	**P**	**21 22 24.2**	**+0.6**
COLA	**College**	**26.80**	**47**	P	**P**	**21 22 26.5**	**-1.0**
	comp=Z,4.9nm,0.4s,mb4.4						
COLA	**College**	**26.80**	**47**	P	**P**	**21 22 26.5**	**-1.0**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.4						
INK	**Inuvik**	**32.23**	**39**	*e*P	**P**	**21 23 15.7**	**+0.1**
	comp=Z,15nm,0.5s,mb5.1						
INK	**Inuvik**	**32.23**	**39**	*e*P	**P**	**21 23 15.7**	**+0.1**
INK				pmax	pmax		
	comp=Z,15nm,0.5s						
INK	**Inuvik**	**32.23**	**39**	P	**P**	**21 23 15.5**	**-0.1**
	comp=Z,0.6nm,0.6s,mb3.6,baz=298,slow=7.0,SNR=5.0						
BJT	**Baijiatuau**	**33.43**	**263**	P	**P**	**21 23 25.8**	**-0.6**
TLY	**Talaya**	**34.09**	**290**	*e*P	**P**	**21 23 31.8**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.2						
TLY	**Talaya**	**34.09**	**290**	*e*P	**P**	**21 23 31.8**	**-0.2**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SONM	**Songino Array**	**34.48**	**282**	P	**P**	**21 23 38.3**	**+3.0**
SONM	**Songino Array**	**34.48**	**282**	P	**P**	**21 23 38.3**	**+3.0**
	comp=Z,0.2nm,0.6s,mb3.3,baz=72,slow=9.3,SNR=2.4						
YKA	**Yellowknife Ar**	**41.55**	**44**	P	**P**	**21 24 34.4**	**-0.2**
YKA	**Yellowknife Ar**	**41.55**	**44**	P	**P**	**21 24 34.4**	**-0.2**
	comp=Z,0.4nm,0.7s,mb3.2,baz=300,slow=8.0,SNR=6.4						
GUMO	**Guam**	**42.85**	**204**	P	**P**	**21 24 45.8**	**+0.1**
KURK	**Kurchatov**	**47.78**	**302**	*e*P	**P**	**21 25 23.3**	**-1.2**
	comp=Z,0.9nm,0.6s,mb4.0						
KURK	**Kurchatov**	**47.78**	**302**	*e*P	**P**	**21 25 23.3**	**-1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**48.38**	**295**	P	**P**	**21 25 28.5**	**-0.6**
	comp=Z,0.1nm,0.2s,mb3.4,baz=50,slow=7.1,SNR=2.5						
BRVK	**Borovoye**	**50.27**	**308**	P	**P**	**21 25 42.9**	**-0.5**
	comp=Z,0.9nm,0.5s,mb4.1						
BRVK	**Borovoye**	**50.27**	**308**	P	**P**	**21 25 42.9**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
FCC	**Fort Churchill**	**51.85**	**40**	P	**P**	**21 25 54.9**	**-0.2**
ARCES	**ARCESS Array B**	**52.26**	**342**	P	**P**	**21 25 58.1**	**0.0**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**52.26**	**342**	P	**P**	**21 25 58.1**	**0.0**
	comp=Z,3.1nm,1.0s,mb4.2,baz=22,slow=9.8,SNR=4.3						
AML	**Almayashu**	**56.05**	**296**	P	**P**	**21 26 26.2**	**+0.1**
FINES	**FINESS Array B**	**59.22**	**337**	P	**P**	**21 26 47.2**	**-0.8**
FINES	**FINESS Array B**	**59.22**	**337**	P	**P**	**21 26 47.2**	**-0.8**
FINES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FINES	**FINESS Array B**	**59.22**	**337**	P	**P**	**21 26 47.2**	**-0.8**
	comp=Z,6.3nm,1.1s,mb4.5,baz=38,slow=7.0,SNR=15						
NOA	**NORSAR Array B**	**62.47**	**344**	P	**P**	**21 27 09.1**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**62.47**	**344**	P	**P**	**21 27 09.1**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.1,baz=21,slow=6.9,SNR=2.8						
TXAR	**Lajitas Array**	**69.28**	**68**	P	**P**	**21 27 55.1**	**+0.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR	**Lajitas Array**	**69.28**	**68**	P	**P**	**21 27 55.1**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.6,baz=282,slow=3.8,SNR=7.5						
WRA	**Warramunga Arr**	**77.71**	**206**	P	**P**	**21 28 43.6**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**77.71**	**206**	P	**P**	**21 28 43.6**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.6,baz=21,slow=5.9,SNR=6.0						
ASAR	**Alice Springs**	**81.38**	**206**	P	**P**	**21 29 04.5**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**81.38**	**206**	P	**P**	**21 29 04.5**	**+0.8**
	comp=Z,0.7nm,0.8s,mb3.6,baz=8.6,slow=5.0,SNR=7.1						

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*IDC **18** 21:27:10.3±1.2, 6.70S×143.34E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.9/11, mbtmp3.9/6, ML3.6/2, Error ellipse: s-maj=37.4km s-min=22.7km az=79.0*
*ISCJB **18** 21:27:13.1±0.5, 6.95S±0.05×143.21E±0.06, h35km, mb4.0/8, Error ellipse: s-maj=8.7km s-min=7.8km az=7.3*
*NEIC **18** 21:27:15.1±0.5, 6.88S×143.17E, h35km, mb4.2/7, Error ellipse: s-maj=12.3km s-min=9.7km az=95.0*
ISC 18 21:27:12.7±5.2**, 6.86S**±0.08×**143.27E**±0.08**, h18**km±32km**, n28,** σ1.14/32**, mb4.0**/8**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.61**	**124**	*e*Pn	**Pn**	**21 28 22.5**	**+1.0**
PMG				*e*Sn	**Sn**	**21 29 13.3**	**-1.4**
PMG	**Port Moresby**	**4.61**	**124**	Pn	**Pn**	**21 28 21.8**	**+0.2**
	8.4nm,0.3s,baz=336,slow=7.5,SNR=22						
PMG				Sn	**Sn**	**21 29 12.8**	**-1.8**
	11nm,0.3s,baz=204,slow=22,SNR=11						
KAKA	**Kakadu**	**12.15**	**241**	*e*P	**Pn**	**21 30 04.2**	**-0.8**
	18nm,0.3s						
WB2	**Warramunga Arr**	**15.62**	**213**	*e*P	**Pn**	**21 30 50.8**	**-1.3**
WB2				*e*S	**Sn**	**21 33 54.0**	**+9.1**
WRA	**Warramunga Arr**	**15.63**	**213**	Pn	**Pn**	**21 30 50.9**	**-1.3**
	0.9nm,0.3s,baz=28,slow=13,SNR=60						
WRA				Sn	**Sn**	**21 33 41.3**	**-3.8**
	0.4nm,0.3s,baz=38,slow=23,SNR=3.1						
WRA				Lg		21 35 25.6	
	0.5nm,0.3s,baz=40,slow=30,SNR=5.4						
ASAR	**Alice Springs**	**18.98**	**207**	P	**Pn**	**21 31 36.0**	**+2.0**
	0.6nm,0.3s,baz=34,slow=9.5,SNR=45						
FITZ	**Fitzroy Crossi**	**20.50**	**235**	*e*P	**P**	**21 31 51.4**	**+1.5**
	11nm,0.6s						
FITZ				*e*S	**S**	**21 35 29.6**	**-9.2**
FITZ	**Fitzroy Crossi**	**20.50**	**235**	P	**P**	**21 31 51.8**	**+1.9**
	4.4nm,0.7s,baz=59,slow=14,SNR=10						
STKA	**Stephens Creek**	**24.94**	**183**	*e*P	**P**	**21 32 39.8**	**+4.8**
	2.1nm,1.0s,mb3.6						
STKA	**Stephens Creek**	**24.94**	**183**	P	**P**	**21 32 37.0**	**+1.9**
	1.3nm,0.8s,mb3.5,baz=356,slow=13,SNR=2.3						
MBWA	**Marble Bar**	**26.84**	**236**	P	**P**	**21 32 52.9**	**+0.5**
KKM	**Kota Kinabalu**	**29.88**	**295**	P	**P**	**21 33 19.7**	**+0.1**
KSM	**Kuching**	**33.92**	**283**	*e*P	**P**	**21 33 52.9**	**-2.2**
NACB	**Ninganchiao**	**37.39**	**326**	P	**P**	**21 34 23.3**	**-1.4**
LSA	**Lhasa**	**61.83**	**309**	P	**P**	**21 37 30.7**	**-0.3**
SONM	**Songino Array**	**63.41**	**333**	P	**P**	**21 37 41.4**	**+0.3**
	0.3nm,0.6s,mb3.6,baz=151,slow=7.6,SNR=4.2						
CASY	**Casey**	**63.49**	**194**	*e*P	**P**	**21 37 41.8**	**+0.4**
	7.2nm,0.6s,mb5.0						
MK31	**Makanchi Array**	**75.83**	**322**	*e*P	**P**	**21 38 57.2**	**-0.6**
MKAR	**Makanchi Array**	**75.83**	**322**	P	**P**	**21 38 58.7**	**+0.9**
MKAR	**Makanchi Array**	**75.83**	**322**	P	**P**	**21 38 58.7**	**+0.9**
	1.0nm,0.6s,mb3.9,baz=103,slow=7.2,SNR=11						
TKM2	**Tokmak 2**	**78.66**	**316**	*e*P	**P**	**21 39 12.2**	**-1.6**
	1.5nm,0.6s,mb4.1						
UCH	**Uchtor**	**79.17**	**315**	*e*P	**P**	**21 39 17.9**	**+1.3**
AAK	**Ala-Archa**	**79.32**	**316**	P	**P**	**21 39 17.5**	**+0.1**
KURK	**Kurchatov**	**79.70**	**324**	*e*P	**P**	**21 39 19.5**	**+0.2**
	0.5nm,0.4s,mb3.8						
EKS2	**Erkin-Say**	**79.83**	**315**	*e*P	**P**	**21 39 20.5**	**+0.3**
	1.1nm,0.7s,mb3.9						
QSPA	**South Pole Qui**	**83.12**	**180**	P	**P**	**21 39 38.4**	**+1.4**
PMR	**Palmer**	**85.59**	**26**	*e*P	**P**	**21 39 50.2**	**+0.5**
	1.8nm,0.8s,mb4.3						
DBIC	**Dimbokro**	**148.35**	**272**	PKPbc	PKPbc	21 46 57.9	-1.3
	2.8nm,0.8s,baz=158,slow=5.4,SNR=4.7						

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*IDC **18** 21:38:16.4±2.2, 4.56S×133.63E, h0km, mb4.2/1, mb1 4.3/5, mb1mx3.9/13, mbtmp4.2/5, ML4.0/4, MS3.2/3, Ms1 3.2/3, ms1mx2.9/17, Error ellipse: s-maj=65.5km s-min=27.0km az=86.0*
*ISCJB **18** 21:38:20.1±0.7, 4.72S±0.05×133.36E±0.09, h33km, mb4.3/4, MS3.2/1, Error ellipse: s-maj=12.4km s-min=6.7km az=1.3*
*NEIC **18** 21:38:21.3±0.8, 4.50S×134.01E, h35km, mb4.3/3, Error ellipse: s-maj=23.7km s-min=9.1km az=78.0*
ISC 18 21:38:22.2±0.7**, 4.67S**±0.05×**133.49E**±0.09**, h35**km**, n19,** σ1.09/21**, mb4.3**/4**, MS3.2**/1**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**8.05**	**187**	*e*Pn	**Pn**	**21 40 18.4**	**+1.6**
	28nm,0.5s						
KAKA				*e*Sn	**Sn**	**21 41 45.9**	**-0.7**
BATI	**Kupang**	**11.18**	**240**	Pn	**Pn**	**21 41 01.4**	**+1.8**
	1.6nm,0.3s,baz=112,slow=5.4,SNR=2.8						
BATI				Sn	**Sn**	**21 43 03.0**	**-0.5**
	1.0nm,0.3s,baz=180,slow=12,SNR=2.6						
PMG	**Port Moresby**	**14.36**	**110**	LR	LR	21 47 58.1	
	comp=Z,62nm,20.2s,baz=214,slow=41						
WRA	**Warramunga Arr**	**15.20**	**177**	Pn	**Pn**	**21 41 53.0**	**-1.3**
	0.5nm,0.3s,baz=352,slow=14,SNR=29						
WRA				Sn	**Sn**	**21 44 33.4**	**-8.2**
	0.3nm,0.3s,baz=354,slow=23,SNR=6.2						
FITZ	**Fitzroy Crossi**	**15.40**	**209**	Pn	**Pn**	**21 41 55.3**	**-1.6**
	1.0nm,0.3s,baz=37,slow=14,SNR=20						
FITZ				Sn	**Sn**	**21 44 41.7**	**-4.7**
	1.4nm,0.3s,baz=170,slow=13,SNR=11						
ASAR	**Alice Springs**	**18.89**	**179**	P	**Pn**	**21 42 40.6**	**+0.1**
	0.4nm,0.3s,baz=3.0,slow=10,SNR=21						
ASAR				S	**S**	**21 46 05.6**	**-6.6**
	0.1nm,0.3s,baz=357,slow=27,SNR=4.8						
CTA	**Charters Tower**	**19.73**	**142**	LR	LR	21 50 38.7	
	comp=Z,85nm,18.8s,baz=331,slow=38						
KKM	**Kota Kinabalu**	**20.27**	**302**	*e*P	**P**	**21 42 59.4**	**+4.5**
MBWA	**Marble Bar**	**21.14**	**218**	*e*P	**P**	**21 43 08.6**	**+4.3**
	2.9nm,0.5s,mb3.9						
KSM	**Kuching**	**23.95**	**284**	*e*P	**P**	**21 43 36.7**	**+3.3**
STKA	**Stephens Creek**	**28.11**	**165**	P	**P**	**21 44 11.9**	**+1.1**
NWAO	**Narrogin (SRO)**	**31.95**	**206**	LR	LR	21 57 44.0	
	comp=Z,52nm,18.3s,MS3.2,baz=138,slow=36						
QIZ	**Qiongzhong**	**33.12**	**316**	P	**P**	**21 44 54.0**	**-1.2**
BJT	**Baijiatuau**	**47.24**	**342**	P	**P**	**21 46 51.3**	**-0.5**
CASY	**Casey**	**63.56**	**190**	P	**P**	**21 48 49.8**	**+1.0**
MKAR	**Makanchi Array**	**68.26**	**325**	P	**P**	**21 49 19.1**	**-0.3**
	1.9nm,0.7s,mb4.2,baz=117,slow=8.1,SNR=16						
KURK	**Kurchatov**	**72.41**	**327**	P	**P**	**21 49 44.1**	**-0.6**
BRVK	**Borovoye**	**78.07**	**327**	*e*P	**P**	**21 50 17.0**	**-0.3**
	1.5nm,0.5s,mb4.2						
KIV	**Kislovodsk**	**93.78**	**314**	*e*P	**P**	**21 51 35.9**	**+0.2**
	3.6nm,0.5s,mb5.1						

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*IDC **18** 21:55:57.7±7.1, 26.27N×95.54E, h65km±65km, mb3.7/17, mb1 3.8/17, mb1mx3.7/25, mbtmp3.7/17, MS3.3/1, Ms1 3.3/1, ms1mx2.8/29, Error ellipse: s-maj=37.6km s-min=12.5km az=52.0*
*BJI **18** 21:55:58.0, 26.36N×95.45E, h76km, mB4.7, mb4.2*
*ISCJB **18** 21:55:59.4±0.9, 26.16N±0.06×95.36E±0.07, h95km±9km, mb4.0/25, Error ellipse: s-maj=11.7km s-min=6.9km az=139.6*
*NEIC **18** 21:55:59.7±0.8, 26.29N×95.58E, h85km±7km, mb3.8/8, Error ellipse: s-maj=10.3km s-min=5.2km az=53.0*
ISC 18 21:55:59.8±1.0**, 26.29N**±0.06×**95.50E**±0.08**, h82**km±10km**, n41,** σ0.83/46**, mb4.0**/25**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	**Imphal**	**2.06**	**224**	*e*P	**Pn**	**21 56 31.0**	**-1.6**
IMP				*e*S	**Sn**	**21 57 00.0**	**+2.4**
SHL	**Shillong**	**3.34**	**258**	*i* PN	**Pn**	**21 56 49.0**	**-0.7**
SHL				*i* SN	**Sn**	**21 57 25.0**	**-3.2**
LSA	**Lhasa**	**5.13**	**312**	P	**Pn**	**21 57 14.3**	**+0.2**
LSA				S	**Sn**	**21 58 11.4**	**-0.6**
LSA				Smax			
	comp=E,60nm,0.8s						
LSA	**Lhasa**	**5.13**	**312**	*e*Pn	**Pn**	**21 57 14.8**	**+0.7**
	comp=E,20nm,0.6s						
LSA				*e*Sn	**Sn**	**21 58 04.0**	**-8.0**
CHTO	**Chiang Mai**	**8.09**	**156**	*e*Pn	**Pn**	**21 57 54.5**	**-0.1**
	comp=E,7.2nm,1.0s						
CHTO				*e*Sn	**Sn**	**21 59 25.9**	**+1.4**
XAN	**Xi'an**	**13.93**	**53**	P	**Pn**	**21 59 17.8**	**+4.3**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**22.99**	**336**	P	**P**	**22 00 56.6**	**-0.9**
	comp=Z,1.3nm,0.5s,mb3.5,baz=144,slow=10,SNR=13						
MKAR				PcP	PcP	22 04 44.5	+0.1
	comp=Z,0.3nm,0.4s,baz=127,slow=3.8,SNR=4.1						
SONM	**Songino Array**	**23.15**	**19**	P	**P**	**22 00 59.6**	**+0.7**
	comp=Z,1.0nm,0.4s,mb3.5,baz=204,slow=9.3,SNR=7.2						
SONM				LR	LR	22 10 37.8	
	comp=Z,63nm,18.6s,baz=288,slow=38						
TKM2	**Tokmak 2**	**23.22**	**321**	*e*P	**P**	**22 01 00.3**	**+0.6**
	comp=Z,1.2nm,0.5s,mb3.5						
ULN	**Ulaanbaatar**	**23.37**	**20**	*e*P	**P**	**22 01 00.8**	**-0.2**
	comp=Z,1.0nm,0.4s,mb3.5						
AAK	**Ala-Archa**	**23.68**	**319**	*e*P	**P**	**22 01 04.3**	**+0.4**
	comp=Z,1.0nm,0.6s,mb3.3						
EKS2	**Erkin-Say**	**24.13**	**318**	*e*P	**P**	**22 01 08.2**	**+0.2**
	comp=Z,2.1nm,0.7s,mb3.6						
KURK	**Kurchatov**	**27.60**	**337**	*e*P	**P**	**22 01 39.9**	**+0.7**
	comp=Z,1.9nm,0.6s,mb3.8						
BRVK	**Borovoye**	**32.70**	**332**	P	**P**	**22 02 25.3**	**+1.0**
	comp=Z,1.4nm,0.4s,mb4.1						
AKTK	**Aktyubinsk**	**37.42**	**320**	P	**P**	**22 03 05.4**	**+0.7**
AKTO	**Aktyubinsk**	**37.42**	**320**	P	**P**	**22 03 05.4**	**+0.7**
	comp=Z,1.9nm,0.5s,mb4.2,baz=93,slow=8.5,SNR=7.7						
ARU	**Arti**	**40.10**	**329**	*e*P	**P**	**22 03 27.6**	**+0.6**
	comp=Z,2.6nm,0.6s,mb4.2						
YSS	**Yuzh-Sakhalins**	**42.41**	**48**	P	**P**	**22 03 44.0**	**-2.2**
OBN	**Obninsk**	**51.19**	**321**	P	**P**	**22 04 54.5**	**0.0**
BRTR	**Keskin Array B**	**52.63**	**301**	P	**P**	**22 05 06.0**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.9,baz=104,slow=9.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**52.96**	**143**	P	**P**	**22 05 07.2**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.9,baz=349,slow=16,SNR=1.4						
CSS	**Prodhromos**	**53.45**	**295**	P	**P**	**22 05 11.7**	**+0.1**
AKASG	**Malin Array Be**	**55.27**	**315**	P	**P**	**22 05 24.2**	**-0.3**
AKASG	**Malin Array Be**	**55.27**	**315**	P	**P**	**22 05 24.2**	**-0.3**
	comp=Z,1.6nm,0.4s,mb4.4,baz=81,slow=6.1,SNR=5.0						
FINES	**FINESS Array B**	**57.45**	**328**	P	**P**	**22 05 39.8**	**0.0**
	comp=Z,3.4nm,1.0s,mb4.3,baz=113,slow=7.3,SNR=6.1						
ARCES	**ARCESS Array B**	**58.64**	**337**	P	**P**	**22 05 48.4**	**+0.4**
	comp=Z,2.9nm,0.9s,mb4.3,baz=96,slow=8.2,SNR=3.8						
WRA	**Warramunga Arr**	**59.44**	**137**	P	**P**	**22 05 53.6**	**-0.5**
	comp=Z,0.8nm,0.4s,mb4.1,baz=321,slow=7.6,SNR=28						
SANT	**Santorini**	**59.51**	**298**	P	**P**	**22 05 54.1**	**-0.4**
GVD	**Gavdhos**	**60.93**	**297**	*e*P	**P**	**22 06 03.6**	**-0.7**
	comp=Z,20nm,0.8s,mb5.2						
PSZ	**Piszkesteto**	**61.57**	**312**	P	**P**	**22 06 08.8**	**+0.4**
ASAR	**Alice Springs**	**62.02**	**140**	P	**P**	**22 06 11.2**	**-0.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=321,slow=6.8,SNR=15						
NWAO	**Narrogin (SRO)**	**62.42**	**159**	P	**P**	**22 06 13.6**	**-0.5**
	comp=Z,3.8nm,0.6s,mb4.6,baz=0.0,slow=8.1,SNR=3.8						
NB2	**NORSAR Subarra**	**64.64**	**328**	P	**P**	**22 06 28.2**	**-0.2**
	comp=Z,0.8nm,0.5s,mb3.8,baz=81,slow=6.5						
NOA	**NORSAR Array B**	**64.64**	**328**	P	**P**	**22 06 27.0**	**-1.4**
	comp=Z,0.7nm,0.5s,mb3.8,baz=83,slow=6.1,SNR=3.2						
GERES	**GERESS Array B**	**65.46**	**314**	P	**P**	**22 06 34.6**	**+0.6**
	comp=Z,1.0nm,0.5s,mb3.9,baz=64,slow=6.1,SNR=5.9						
ESDC	**Sonseca Array**	**80.43**	**309**	P	**P**	**22 08 02.7**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=51,slow=5.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**87.62**	**283**	P	**P**	**22 08 40.0**	**+0.5**
	comp=Z,1.0nm,0.6s,mb4.0,baz=75,slow=4.3,SNR=15						
YKA	**Yellowknife Ar**	**88.31**	**13**	P	**P**	**22 08 41.4**	**-0.5**
YKA	**Yellowknife Ar**	**88.31**	**13**	P	**P**	**22 08 41.4**	**-0.5**
	comp=Z,0.1nm,0.4s,mb3.2,baz=327,slow=4.6,SNR=4.1						
DBIC	**Dimbokro**	**96.28**	**281**	P	**P**	**22 09 19.8**	**0.0**
DBIC	**Dimbokro**	**96.28**	**281**	P	**P**	**22 09 19.8**	**0.0**
	comp=Z,1.1nm,0.7s,mb4.4,baz=69,slow=8.6,SNR=3.6						

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*ISCJB **18** 22:45:58.4±0.7, 37.2N±0.1×135.2E±0.1, h384km±13km, mb2.7/2, Error ellipse: s-maj=20.1km s-min=15.5km az=2.1*
*IDC **18** 22:45:59.2±1.2, 37.18N×135.10E, h373km±18km, mb2.4/2, mb1 2.7/5, mb1mx2.5/24, mbtmp2.6/5, Error ellipse: s-maj=31.2km s-min=20.3km az=48.0*
*JMA **18** 22:46:01.1±0.2, 37.14N×135.27E, h360km, M3.0*
ISC 18 22:45:59.4±0.7**, 37.2N**±0.1×**135.2E**±0.1**, h375**km±13km**, n13,** σ1.08/15**, mb2.6**/2**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**2.51**	**105**	P	**Pn**	**22 46 57.5**	**+0.9**
	0.7nm,0.3s,baz=279,slow=9.5,SNR=13						
JHK	**Hiroka**	**3.04**	**89**	P	**Pn**	**22 47 01.7**	**+0.8**
HMMJ	**Hamamatsu 2**	**3.13**	**139**	P	**Pn**	**22 47 01.4**	**-0.5**
JRY	**Ryogami san**	**3.21**	**111**	P	**Pn**	**22 47 05.8**	**+3.3**
JHU	**Hanno**	**3.56**	**112**	P	**Pn**	**22 47 06.4**	**+0.7**
JYT	**Yasato**	**4.13**	**103**	P	**Pn**	**22 47 11.3**	**+0.1**
JHO	**Hitachi**	**4.34**	**97**	P	**Pn**	**22 47 12.9**	**-0.4**
JHO				*e*S	**S**	**22 48 10.3**	**-2.8**
JMM	**Marumori**	**4.48**	**80**	P	**Pn**	**22 47 15.4**	**+0.7**
JMM				*e*S	**S**	**22 48 13.2**	**-2.5**
BSO4	**Boso 4**	**4.72**	**117**	P	**Pn**	**22 47 17.8**	**+0.5**
KSRS	**Korea Array**	**5.81**	**274**	P	**Pn**	**22 47 27.9**	**-1.0**
	0.2nm,0.3s,baz=92,slow=12,SNR=4.8						
ASAJ	**Asahikawa**	**8.87**	**37**	P	**Pn**	**22 48 04.4**	**+0.5**
	0.6nm,0.3s,baz=236,slow=15,SNR=4.8						
SONM	**Songino Array**	**23.59**	**306**	P	**P**	**22 50 37.9**	**-0.1**
	0.1nm,0.5s,mb2.3,baz=96,slow=7.4,SNR=3.5						
WRA	**Warramunga Arr**	**56.88**	**181**	P	**P**	**22 55 06.1**	**-0.5**
	0.2nm,0.3s,mb2.9,baz=358,slow=7.6,SNR=9.7						

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*NEIC **18** 22:48:46.6, 31.39S×69.12W, h151km, MD3.5(GUC), After GUC.*
GUC 18 22:48:46.6±0.7**, 31.39S**×**69.12W, h151**km±27km**, MD3.5, ML3.4, 3C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.62**	**277**	⇑*i*P	Pn	22 49 17.8	+0.3
CMCH				*i* S	Sn	22 49 41.9	+0.7
CMCH	**Combarbala**	**1.62**	**277**	⇑*i*P	Pn	22 49 17.8	+0.3
CMCH				*i* S	Sn	22 49 41.9	+0.7
CMCH				AML	AML	22 49 43.4	
	comp=E,2μm,0.6s						
TLL	**Tololo Astrono**	**1.90**	**310**	*e*P	Pn	22 49 21.4	+0.9
TLL				*i* S	Sn	22 49 48.4	+1.8
TLL	**Tololo Astrono**	**1.90**	**310**	*e*P	Pn	22 49 21.4	+0.9
TLL				*i* S	Sn	22 49 48.4	+1.8
TLL				AML	AML	22 49 50.8	
	comp=N,96nm,0.3s						
FCH	**Farellones**	**2.17**	**207**	*e*P	Pn	22 49 24.7	+1.0
FCH				*i* S	Sn	22 49 54.3	+2.0
FCH				AML	AML	22 50 01.0	
	comp=E,90nm,0.3s						
PEL	**Peldehue**	**2.19**	**217**	⇑*e*P	Pn	22 49 24.4	+0.4
PEL				*i* S	Sn	22 49 53.0	+0.1
PEL				AML	AML	22 49 54.5	
	comp=N,251nm,0.3s						
LMEL	**Las Melosas**	**2.62**	**200**	*e*P	Pn	22 49 30.3	+1.2
LMEL				AML	AML	22 50 14.6	
	comp=N,66nm,0.2s						
TACH	**Talagante**	**2.73**	**214**	*e*P	Pn	22 49 31.5	+1.0
TACH				*i* S	Sn	22 50 05.3	+0.8
LCO	**Las Campanas**	**2.74**	**330**	*e*Pn	Pn	22 49 31.1	+0.4
LCO				*e*Sn	Sn	22 49 59.6	-5.1

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*NEIC **18** 22:52:29.3, 32.23S×71.59W, h2km, ML2.9(GUC), After GUC.*
GUC 18 22:52:29.3±1.0**, 32.23S**×**71.59W, h2**km±8km**, MD3.6, ML2.9, 5C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.35**	**12**	⇑*i*P	Pg	22 52 22.8	-13
CHNG				*i* S	Sg	22 52 27.7	-13
CHNG				AML	AML	22 52 30.0	
	comp=E,918nm,0.4s						
CMCH	**Combarbala**	**1.17**	**25**	⇓*i*P	Pg	22 52 51.0	-0.6
CMCH				*i* S	Sg	22 53 07.6	+0.8
CMCH	**Combarbala**	**1.17**	**25**	⇓*i*P	Pg	22 52 51.0	-0.6
CMCH				*i* S	Sg	22 53 07.6	+0.8
CMCH				AML	AML	22 53 13.8	
	comp=N,1μm,0.5s						
PEL	**Peldehue**	**1.19**	**140**	⇑*i*P	Pg	22 52 51.6	-0.4
PEL				*i* S	Sg	22 53 08.8	+1.3
PEL				AML	AML	22 53 11.5	
	comp=E,690nm,0.2s						
TACH	**Talagante**	**1.52**	**159**	*e*P	Pn	22 52 56.9	-0.6
TACH				*i* S	Sn	22 53 17.0	-0.9
FCH	**Farellones**	**1.54**	**135**	⇑*i*P	Pn	22 52 57.5	-0.3
FCH				*i* S	Sn	22 53 19.6	+1.2
FCH				AML	AML	22 53 20.9	
	comp=E,109nm,0.3s						
ANTU	**Antumapu**	**1.56**	**149**	*i* S	Sn	22 53 18.4	-0.3
ANTU				AML	AML	22 53 24.7	
	comp=E,270nm,0.5s						
LNV	**Longovilo**	**1.73**	**175**	*e*P	Pn	22 52 58.7	-1.6
LNV				*i* S	Sn	22 53 21.9	-1.1
CHCH	**Chadas Angostu**	**1.87**	**155**	*e*P	Pn	22 53 02.2	0.0
CHCH				*i* S	Sn	22 53 27.8	+1.3
LMEL	**Las Melosas**	**1.99**	**145**	*i* P	Pn	22 53 04.1	+0.2
LMEL				*i* S	Sn	22 53 31.0	+1.6
LMEL	**Las Melosas**	**1.99**	**145**	*i* P	Pn	22 53 04.1	+0.2
LMEL				*i* S	Sn	22 53 31.0	+1.6
LMEL				AML	AML	22 53 38.0	
	comp=N,180nm,0.3s						
CACH	**El Canelo**	**2.06**	**157**	*e*S	Sn	22 53 34.5	+3.4
TLL	**Tololo Astrono**	**2.16**	**18**	⇑*i*P	Pn	22 53 07.8	+1.5
TLL				S	Sn	22 53 37.6	+3.9
TLL	**Tololo Astrono**	**2.16**	**18**	⇑*i*P	Pn	22 53 07.8	+1.5
TLL				*i* S	Sn	22 53 37.6	+3.9
TLL				AML	AML	22 53 42.0	
	comp=N,144nm,0.4s						
TLL				AML	AML	22 53 45.0	
	comp=E,161nm,0.3s						
CICH	**Cipreses**	**2.30**	**155**	*e*S	Sn	22 53 39.4	+2.3
LCO	**Las Campanas**	**3.30**	**14**	*e*Pn	Pn	22 53 20.9	-1.1
LCO				*e*Sn	Sn	22 54 04.6	+2.9

IDC 18 22:53:32.7±1.8**, 0.71N**×**96.99E, h0**km**, mb3.5**/4**, mb1 3.6**/5**, mb1mx3.4**/20**, mbtmp3.5**/5**, ML3.1**/1**, Error ellipse: s-maj=54.0km s-min=23.6km az=62.0, Off west coast of northern Sumatera**

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

PSI	**Prapat**	**2.83**	**43**	Pn	Pn	22 54 19.1	-0.1
	3.0nm,0.3s,baz=260,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**41.96**	**121**	P	P	23 01 25.3	-0.4
	0.4nm,0.5s,baz=305,slow=8.9,SNR=9.4						
ASAR	**Alice Springs**	**43.27**	**127**	P	P	23 01 36.9	+0.5
	0.2nm,0.4s,baz=299,slow=7.8,SNR=5.5						
SONM	**Songino Array**	**47.64**	**9**	P	P	23 02 10.8	+0.2
	0.5nm,0.8s,baz=191,slow=8.2,SNR=5.3						
SONM				PcP	PcP	23 03 39.1	-1.1
	0.2nm,0.5s,baz=189,slow=3.3,SNR=3.4						
MKAR	**Makanchi Array**	**47.66**	**346**	P	P	23 02 11.2	+0.5
	0.6nm,0.5s,baz=160,slow=8.9,SNR=9.5						

IDC 18 23:16:09.5±3.9, 257S×14083E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/12, mbtmp3.6/4, ML3.8/1, MS3.3/3, Ms1 3.3/3, ms1mx3.0/21, Error ellipse: s-maj=118.1km s-min=30.5km az=92.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.39**	**200**	P	Pn	23 20 26.1	-0.1
	0.3nm,0.3s,baz=22,slow=12,SNR=8.8						
FITZ	**Fitzroy Crossi**	**21.45**	**223**	P	P	23 20 58.8	-0.8
	2.8nm,0.9s,baz=66,slow=9.8,SNR=5.6						
FITZ				LR	LR	23 29 22.2	
	comp=Z,48nm,21.0s,baz=319,slow=37						
ASAR	**Alice Springs**	**22.02**	**197**	P	P	23 21 06.5	+0.8
	1.4nm,0.5s,baz=27,slow=10,SNR=11						
STKA	**Stephens Creek**	**29.16**	**179**	LR	LR	23 35 25.6	
	comp=Z,77nm,20.6s,baz=199,slow=40						
JOW	**Kunigami**	**31.64**	**338**	LR	LR	23 34 15.4	
	comp=Z,81nm,20.4s,baz=112,slow=34						
MKAR	**Makanchi Array**	**70.98**	**322**	P	P	23 27 29.2	+0.1
	0.2nm,0.3s,baz=120,slow=5.2,SNR=3.7						

*ISCJB **19** 00:00:58.2±0.2, 3621N×2366E×003, h86km±3km, mb3.5/8, Error ellipse: s-maj=5.3km s-min=2.7km az=146.3*
*IDC **19** 00:00:58.6±2.3, 3630N×2376E, h64km±27km, mb3.4/8, mb1 3.5/9, mb1mx3.4/20, mbtmp3.4/9, ML3.8/1, Error ellipse: s-maj=25.0km s-min=22.4km az=36.0*
*CSEM **19** 00:00:58.4±0.1, 3624N×2372E, h80km, ML3.4, Error ellipse: s-maj=2.4km s-min=1.4km az=45.0*
*ATH **19** 00:00:59.2, 3628N×2375E, h39km±1km, MD3.7/21, ML3.4*
*NEIC **19** 00:00:59.2, 3628N×2375E, h39km, MD3.7(ATH), After ATH.*
*HLW **19** 00:01:00.7, 3601N×2391E, h20km, Mb4.2*
*THE **19** 00:01:00.6, 3628N×2369E, h57km, ML3.8*

ISC 19 00:00:59.5±0.2, 3621N±002×2368E±003, h75km±4km, n83, σ1§14/107, mb3.5/8, 2C-5D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.52**	**278**	*e*Pn	**Pn**	**00 01 12.0**	**-0.9**
KYTH				*e*Sn	**Sn**	**00 01 21.0**	**-1.8**
VLI	**Veliai**	**0.78**	**311**	⇓*i*Pn	**Pn**	**00 01 15.0**	**-0.6**
VLI				*e*Sn	**Sn**	**00 01 25.8**	**-1.8**
KARN	**Karanos**	**0.83**	**166**	*e*Pg	**Pn**	**00 01 16.8**	**+0.6**
KARN				*e*Sg	**Sn**	**00 01 29.4**	**+0.9**
VAM	**Vamos**	**0.91**	**152**	⇓*i*Pn	**Pn**	**00 01 17.4**	**+0.3**
VAM				*e*SB	**Sn**	**00 01 30.1**	**0.0**
DID	**Didima**	**1.34**	**345**	*e*Pg	**Pn**	**00 01 22.1**	**-0.4**
DID				*e*Sg	**Sn**	**00 01 38.8**	**-1.0**
IDI	**Anoyia**	**1.35**	**133**	P	**Pn**	**00 01 22.3**	**-0.3**
	23nm,0.3s,baz=319,slow=16,SNR=286						
IDI				S	**Sn**	**00 01 38.7**	**-1.3**
	76nm,0.3s,baz=299,slow=19,SNR=35						
GVD	**Gavdhos**	**1.41**	**166**	*e*Pg	**Pn**	**00 01 25.4**	**+2.0**
GVD	**Gavdhos**	**1.41**	**166**	*e*PB	**Pn**	**00 01 25.0**	**+1.6**
GVD				*e*SN	**Sn**	**00 01 43.5**	**+2.2**
GVD	**Gavdhos**	**1.41**	**166**	*e*Pg	**Pn**	**00 01 25.4**	**+2.0**
GVD				*e*Sn	**Sn**	**00 01 43.5**	**+2.2**
SANT	**Santorini**	**1.45**	**83**	*e*Pg	**Pn**	**00 01 24.5**	**+0.7**
SANT				*e*Sg	**Sn**	**00 01 42.6**	**+0.3**
SIVA	**Sivas**	**1.50**	**142**	*e*Pg	**Pn**	**00 01 26.1**	**+1.5**
SIVA				*e*Sg	**Sn**	**00 01 45.3**	**+1.7**
NAIG	**Nisos Aigina**	**1.55**	**354**	*e*PN	**Pn**	**00 01 25.0**	**-0.3**
NAIG				*e*SN	**Sn**	**00 01 44.0**	**-0.7**
VLX	**Vlachokerasia**	**1.56**	**318**	*e*Pg	**Pn**	**00 01 25.7**	**+0.4**
VLX				*e*Sg	**Sn**	**00 01 44.1**	**-0.8**
PYL	**PYLOS**	**1.70**	**294**	*e*Pb	**Pn**	**00 01 27.3**	**+0.1**
ITM	**Ithomi**	**1.71**	**305**	⇓*i*PN	**Pn**	**00 01 28.4**	**+1.1**
ITM				*e*SN	**Sn**	**00 01 49.6**	**+1.2**
ITM	**Ithomi**	**1.71**	**305**	⇓*e*Pn	**Pn**	**00 01 28.4**	**+1.1**
ITM				*e*Sn	**Sn**	**00 01 49.6**	**+1.2**
APE	**Apeiranthos**	**1.72**	**60**	*e*PB	**Pn**	**00 01 27.7**	**+0.3**
APE				*e*SN	**Sn**	**00 01 48.2**	**-0.5**
ATH	**Athens Observa**	**1.76**	**1**	⇑*i*PN	**Pn**	**00 01 27.7**	**-0.3**
ATH				*e*SN	**Sn**	**00 01 48.0**	**-1.6**
LAST	**Lasithi**	**1.80**	**125**	*e*Pb	**Pn**	**00 01 29.3**	**+0.8**
NPS	**Neapolis**	**1.84**	**120**	*e*PN	**Pn**	**00 01 29.4**	**+0.4**
NPS				*e*SN	**Sn**	**00 01 50.7**	**-0.7**
PTL	**Penteli**	**1.84**	**5**	*e*PN	**Pn**	**00 01 28.5**	**-0.6**
LTK	**Loutraki**	**1.90**	**343**	*e*Pb	**Pn**	**00 01 29.9**	**+0.1**
LTK				*e*Sb	**Sn**	**00 01 52.1**	**-0.8**
XRY	**Khrisi**	**2.12**	**128**	*e*PN	**Pn**	**00 01 34.5**	**+1.8**
ZKR	**Zakros**	**2.34**	**117**	*e*Pn	**Pn**	**00 01 37.0**	**+1.2**
LKR	**Lokris**	**2.50**	**348**	*e*PN	**Pn**	**00 01 37.9**	**+0.1**
LKR				*e*SN	**Sn**	**00 02 06.5**	**-0.8**
SELA	**Sela**	**2.51**	**326**	*e*Pn	**Pn**	**00 01 38.7**	**+0.7**
RLS	**Riolos of Patr**	**2.55**	**317**	*e*PN	**Pn**	**00 01 40.5**	**+1.9**
CHOS	**Chios island**	**2.88**	**40**	*e*Pn	**Pn**	**00 01 43.3**	**+0.2**
KARP	**Karpathos**	**2.91**	**102**	*e*PN	**Pn**	**00 01 44.6**	**+1.2**
SMG	**Samos**	**2.94**	**58**	⇑*i*PN	**Pn**	**00 01 44.9**	**+1.0**
AOS	**Alonnisos**	**2.96**	**3**	*e*Pn	**Pn**	**00 01 43.9**	**-0.2**
AGG	**Agios Georgios**	**3.00**	**340**	*e*Pn	**Pn**	**00 01 45.7**	**+0.9**
AGG				*e*Sn	**Sn**	**00 02 19.9**	**+0.3**
EVR	**Evrytania**	**3.08**	**332**	*e*PN	**Pn**	**00 01 47.2**	**+1.4**
NEO	**Neokhori**	**3.11**	**354**	⇓*i*PN	**Pn**	**00 01 46.5**	**+0.3**
VLS	**Valsamata**	**3.15**	**309**	*e*PN	**Pn**	**00 01 47.0**	**+0.3**
XOR	**Xorichti**	**3.17**	**353**	*e*Pn	**Pn**	**00 01 47.5**	**+0.4**
LKD	**Levkas**	**3.47**	**317**	*e*Pn	**Pn**	**00 01 52.1**	**+1.1**
ARG	**Arkhangelos**	**3.60**	**89**	*e*PN	**Pn**	**00 01 54.8**	**+2.0**
THL	**Klokotos Trika**	**3.60**	**339**	*e*PN	**Pn**	**00 01 53.6**	**+0.8**
PRK	**Paraskevi**	**3.66**	**33**	P	**Pn**	**00 01 54.2**	**+0.5**
PAIG	**Paliouri**	**3.71**	**0**	*e*Pn	**Pn**	**00 01 54.4**	**0.0**
PAIG	**Paliouri**	**3.71**	**0**	*e*Pn	**Pn**	**00 01 54.3**	**0.0**
LIA	**Limnos Island**	**3.87**	**17**	P	**Pn**	**00 02 00.6**	**+4.1**
OUR	**Ouranopolis**	**4.12**	**3**	*e*Pn	**Pn**	**00 02 00.1**	**+0.1**
LTBQ	**Tobruq**	**4.15**	**177**	*i* P	**Pn**	**00 02 01.0**	**+0.7**
	SNR=36						
PLG	**Polygyros**	**4.16**	**358**	*e*Pn	**Pn**	**00 02 00.3**	**-0.2**
PLG	**Polygyros**	**4.16**	**358**	*e*PN	**Pn**	**00 02 00.6**	**+0.1**
IGT	**Igoumenitsa**	**4.24**	**322**	*e*Pn	**Pn**	**00 02 01.6**	**0.0**
SOH	**Sokhos**	**4.61**	**357**	*e*Pn	**Pn**	**00 02 07.4**	**+0.7**
KEK	**Kerkira**	**4.65**	**320**	*e*PN	**Pn**	**00 02 06.9**	**-0.2**
SRN	**Sarande**	**4.67**	**323**	*i* Pn	**Pn**	**00 02 07.8**	**+0.3**
SRN				*i* Sn	**Sn**	**00 02 56.9**	**-3.5**
SLUM		**4.88**	**164**	P	**Pn**	**00 02 09.3**	**-1.0**
FNA	**Florina**	**4.91**	**339**	*e*Pn	**Pn**	**00 02 10.8**	**+0.1**
KNT	**Kendrikon**	**4.98**	**353**	*e*Pn	**Pn**	**00 02 12.9**	**+1.2**
ALN	**Alexandroupoli**	**5.04**	**21**	*e*Pn	**Pn**	**00 02 12.6**	**+0.2**
NVR	**Nevrokopi**	**5.13**	**2**	P	**Pn**	**00 02 15.7**	**+2.0**
KRUS	**Krusevo**	**5.49**	**341**	*e*Pn	**Pn**	**00 02 17.5**	**-1.1**
KRUS				*e*Sn	**Sn**	**00 03 16.7**	**-3.6**
TIP	**Timpagrande**	**6.24**	**300**	P	**Pn**	**00 02 30.0**	**+1.2**
PE1	**Pezze di Greco**	**6.71**	**315**	*e*Pn	**Pn**	**00 02 34.5**	**-0.8**
SG1	**Sgolgore (BA)**	**7.17**	**312**	*e*Pn	**Pn**	**00 02 40.8**	**-0.8**
VAE	**Valguarnera**	**7.54**	**282**	S	**Sn**	**00 04 05.2**	**-5.2**
	0.8nm,0.3s,baz=54,slow=8.7,SNR=3.2						
BRTR	**Keskin Array B**	**8.61**	**63**	P	**Pn**	**00 03 04.4**	**+3.2**
	0.1nm,0.3s,baz=253,slow=12,SNR=3.7						
GLL	**Jalalah**	**9.45**	**132**	P	**Pn**	**00 03 10.4**	**-2.3**
AMAG	**Maghara**	**9.71**	**122**	P	**Pn**	**00 03 14.4**	**-1.8**
HFRF	**Wahat Farafira**	**9.86**	**155**	P	**Pn**	**00 03 16.0**	**-2.3**
SUZ		**9.97**	**127**	P	**Pn**	**00 03 17.9**	**-1.9**
MMAI	**Mount Meron Ar**	**10.18**	**105**	P	**Pn**	**00 03 20.5**	**-2.1**
	0.8nm,0.3s,baz=309,slow=12,SNR=7.1						
MMAI				S	**Sn**	**00 05 05.8**	**-9.2**
	1.6nm,0.3s,baz=45,slow=19,SNR=7.6						
ASUT		**11.05**	**140**	P	**Pn**	**00 03 32.5**	**-2.0**
EIL	**Elat**	**11.49**	**121**	P	**Pn**	**00 03 37.5**	**-3.2**
	0.2nm,0.3s,baz=31,slow=12,SNR=8.2						
EIL				S	**Sn**	**00 05 35.0**	**-12**
	0.5nm,0.3s,baz=273,slow=23,SNR=9.6						
HDK1	**Dakhla**	**11.71**	**154**	P	**Pn**	**00 03 41.5**	**-2.0**
AKRG	**Al Kharijah**	**12.17**	**149**	P	**Pn**	**00 03 47.5**	**-2.3**
GTR	**Jabal at Tayr**	**12.19**	**149**	P	**Pn**	**00 03 48.1**	**-2.0**
GERES	**GERESS Array B**	**14.60**	**333**	P	**Pn**	**00 04 25.8**	**+3.9**
	0.1nm,0.3s,baz=146,slow=11,SNR=4.8						
AKASG	**Malin Array Be**	**15.03**	**14**	P	**Pn**	**00 04 30.0**	**+2.6**
	1.1nm,0.3s,baz=199,slow=10,SNR=5.9						
HFS	**Hagfors**	**24.79**	**348**	P	**P**	**00 06 13.2**	**-0.8**
	3.1nm,0.9s,mb3.7,baz=178,slow=40,SNR=3.3						
FINES	**FINESS Array B**	**25.30**	**3**	P	**P**	**00 06 17.3**	**-1.3**
	1.6nm,0.9s,mb3.5,baz=172,slow=11,SNR=2.9						
EKA	**Eskdalemuir Ar**	**26.49**	**325**	P	**P**	**00 06 28.9**	**-0.5**
	3.5nm,1.1s,mb3.7,baz=151,slow=9.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**30.29**	**226**	P	**P**	**00 07 04.6**	**+1.0**
	0.2nm,0.6s,mb2.9,baz=39,slow=9.6,SNR=2.7						
ARCES	**ARCESS Array B**	**33.40**	**1**	P	**P**	**00 07 30.6**	**+0.3**
	2.8nm,1.0s,mb4.1,baz=189,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**44.21**	**57**	P	**P**	**00 09 00.4**	**-0.6**
	0.6nm,0.3s,mb3.8,baz=269,slow=8.0,SNR=6.9						
MKAR				PcP	PcP	00 10 44.5	+0.1
	0.2nm,0.3s,baz=284,slow=2.7,SNR=2.9						
SONM	**Songino Array**	**59.76**	**51**	P	**P**	**00 10 56.3**	**0.0**
	0.2nm,0.6s,mb3.3,baz=281,slow=7.8,SNR=3.5						
SCHQ	**Schefferville**	**61.61**	**319**	P	**P**	**00 11 09.3**	**+0.5**
	baz=59,slow=5.9,SNR=3.6						
YKA	**Yellowknife Ar**	**76.08**	**341**	P	**P**	**00 12 38.4**	**-0.1**
	0.2nm,0.6s,mb3.0,baz=29,slow=5.8,SNR=3.2						

*MOS **19** 00:25:32.7±1.9, 3612N×7120E, h33km, mb4.4/14, Error ellipse: s-maj=15.7km s-min=8.8km az=92.9*
*NEIC **19** 00:25:33.1±0.7, 3585N×7124E, h35km, mb4.2/5, Error ellipse: s-maj=13.5km s-min=9.2km az=136.0*
*BJI **19** 00:25:33.3, 3621N×7093E, h57km, mb4.0, ML4.2*
*IDC **19** 00:25:37.4±6.1, 3610N×7136E, h75km±54km, mb3.6/13, mb1 3.8/15, mb1mx3.7/20, mbtmp3.7/15, ML3.9/2, Error ellipse: s-maj=25.5km s-min=17.2km az=15.0*
*ISCJB **19** 00:25:39.0±0.5, 3628N±002×7153E±006, h106km±7km, mb4.1/22, Error ellipse: s-maj=7.4km s-min=3.6km az=3.5*
*NNC **19** 00:25:47.2±4.2, 3684N×7126E, h178km±47km, mb3.3, mpv4.7, Error ellipse: s-maj=46.3km s-min=25.9km az=22.0*

ISC 19 00:25:40.3±0.4, 3626N±002×7151E±005, h103km±6km, n94, σ1§32/116, mb4.1/22, 5C-10D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.46**	**172**	⇓P	**Pn**	**00 26 21.6**	**+2.7**
CEP				S	**Sn**	**00 26 56.0**	**+7.5**
CHCP	**Chirah Chowk**	**2.97**	**150**	⇓P	**Pn**	**00 26 28.8**	**+3.1**
CHCP				S	**Sn**	**00 27 07.0**	**+6.3**
THW	**Thamme Wali**	**3.47**	**177**	⇓P	**Pn**	**00 26 34.2**	**+1.9**
SRNI	**Srinagar**	**3.48**	**127**	*e*P	**Pn**	**00 26 34.5**	**+1.9**
SRNI				*e*S	**Sn**	**00 27 12.5**	**-0.5**
SBDP	**Sheikh Budin**	**4.00**	**189**	⇑P	**Pn**	**00 26 40.2**	**+0.7**
DRP	**Derazinda**	**4.64**	**194**	P	**Pn**	**00 26 49.7**	**+1.6**
DRP				S	**Sn**	**00 27 40.0**	**-0.8**
KSH	**Kashi**	**4.80**	**46**	*e*P	**Pn**	**00 26 52.5**	**+2.3**
KSH				*e*S	**Sn**	**00 27 42.8**	**-1.8**
KSH				Smax			
	comp=N,677nm,0.3s						
KSH				Smax			
	comp=E,925nm,0.4s						
THN	**Thein Dam**	**5.17**	**136**	*e*P	**Pn**	**00 26 56.0**	**+0.7**
THN				*e*S	**Sn**	**00 27 53.7**	**0.0**
DLH	**Dalhousie**	**5.23**	**134**	*e*P	**Pn**	**00 26 57.0**	**+0.9**
DLH				*ex*	x	00 27 57.0	
AML	**Almayashu**	**6.10**	**15**	*e*Pn	**Pn**	**00 27 08.4**	**+0.6**
	comp=E,73nm,0.5s						
AML				*e*Sn	**Sn**	**00 28 14.9**	**-1.3**
AML	**Almayashu**	**6.10**	**15**	P	**Pn**	**00 27 08.4**	**+0.5**
	SNR=114						
UCH	**Uchtor**	**6.40**	**20**	*e*Pn	**Pn**	**00 27 12.3**	**+0.5**
	comp=E,36nm,0.8s						
UCH				*e*Sn	**Sn**	**00 28 21.1**	**-2.3**
UCH	**Uchtor**	**6.40**	**20**	P	**Pn**	**00 27 12.6**	**+0.7**
	SNR=47						
KZA	**Kyzart**	**6.49**	**25**	P	**Pn**	**00 27 13.9**	**+0.7**
	SNR=16						
SDNR	**Sundarnagar**	**6.57**	**135**	*e*P	**Pn**	**00 27 14.4**	**+0.1**
SDNR				*e*S	**Sn**	**00 28 23.6**	**-4.2**
EKS2	**Erkin-Say**	**6.63**	**15**	*e*Pn	**Pn**	**00 27 15.4**	**+0.4**
	comp=E,17nm,0.5s						
EKS2				*e*Sn	**Sn**	**00 28 25.3**	**-3.7**
EKS2	**Erkin-Say**	**6.63**	**15**	P	**Pn**	**00 27 15.6**	**+0.6**
	SNR=48						
AAK	**Ala-Archa**	**6.77**	**19**	*e*Pn	**Pn**	**00 27 16.7**	**-0.3**
	comp=E,39nm,0.4s						
AAK				*e*Sn	**Sn**	**00 28 31.0**	**-1.5**
AAK	**Ala-Archa**	**6.77**	**19**	*e*PN	**Pn**	**00 27 16.7**	**-0.2**
AAK				pmax	pmax		
	comp=Z,39nm,0.4s						
AAK	**Ala-Archa**	**6.77**	**19**	P	**Pn**	**00 27 17.9**	**+0.9**
	SNR=78						
KK31	**Karatay Array**	**6.88**	**354**	⇓P	**Pn**	**00 27 17.8**	**-0.6**
	comp=Z,35nm,0.3s,baz=180,slow=13						
KK31				⇓S	**Sn**	**00 28 30.2**	**-4.8**
	comp=Z,21nm,0.4s,baz=174,slow=22						
KBK	**Karagaybulak**	**6.92**	**22**	P	**Pn**	**00 27 20.5**	**+1.6**
	SNR=24						
ULHL	**Ulahol**	**7.01**	**30**	P	**Pn**	**00 27 20.7**	**+0.5**
	SNR=17						
CHMS	**Chumysh**	**7.18**	**19**	P	**Pn**	**00 27 23.1**	**+0.6**
	SNR=8.7						
TKM2	**Tokmak 2**	**7.36**	**24**	⇑Pn	**Pn**	**00 27 26.1**	**+1.1**
	comp=Z,23nm,0.6s						
TKM2				⇓Sn	**Sn**	**00 28 48.5**	**+1.7**
	comp=Z,13nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**24**	*e*Pn	**Pn**	**00 27 26.2**	**+1.3**
	comp=Z,32nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**24**	*e*P	**Pn**	**00 27 26.2**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,32nm,0.6s						
TKM2	**Tokmak 2**	**7.36**	**24**	P	**Pn**	**00 27 26.2**	**+1.3**
	SNR=16						
USP	**Ospenovka**	**7.36**	**17**	P	**Pn**	**00 27 25.9**	**+0.8**
	SNR=13						
DDI	**Dehra Dun**	**8.07**	**135**	*e*P	**Pn**	**00 27 34.4**	**-0.3**
DDI				*e*S	**Sn**	**00 28 59.0**	**-5.2**
RTK	**Rohtak**	**8.31**	**149**	*ex*	**Pn**	**00 27 43.8**	**+5.8**
RTK				*ex*	x	00 29 20.6	
RTK				AML	AML	00 29 26.5	
	comp=Z,45nm,0.3s						
JOSI	**Joshimath**	**8.81**	**128**	*e*P	**Pn**	**00 27 42.6**	**-2.2**
JOSI				*ex*	x	00 29 12.5	
JOSI				AML	AML	00 29 24.9	
	comp=E,389nm,0.3s						
JOSI				AML	AML	00 29 26.8	
	comp=N,434nm,0.4s						
NDI	**New Delhi**	**8.96**	**146**	*e*P	**Pn**	**00 27 46.0**	**-0.9**
NDI				*e*S	**Sn**	**00 29 20.0**	**-6.0**
KUDL	**Kundal**	**9.13**	**151**	*e*P	**Pn**	**00 27 46.7**	**-2.4**
KUDL				*e*S	**Sn**	**00 29 20.4**	**-10**
KUDL				AML	AML	00 29 29.7	
	comp=N,42nm,0.3s						
KUDL				AML	AML	00 29 29.8	
	comp=E,42nm,0.3s						
SONA	**Sohna**	**9.28**	**148**	*e*P	**Pn**	**00 27 47.5**	**-3.6**
SONA				*e*S	**Sn**	**00 29 27.0**	**-6.6**
SONA				AML	AML	00 29 33.4	
	comp=N,53nm,0.3s						
SONA				AML	AML	00 29 33.8	
	comp=E,73nm,0.3s						
JASL	**Jaisalmer**	**9.32**	**183**	*e*P	**Pn**	**00 27 48.5**	**-3.2**
LGTI	**Lohaghat**	**10.00**	**130**	*e*P	**Pn**	**00 27 58.3**	**-2.7**
LGTI				*e*S	**Sn**	**00 29 44.4**	**-6.9**
AJM	**Ajmer**	**10.11**	**164**	*e*P	**Pn**	**00 28 01.0**	**-1.5**
AJM				*ex*	x	00 29 48.0	
AGRA	**Agra**	**10.54**	**147**	*ex*	x	00 28 03.1	
AGRA				*e*S	**Sn**	**00 29 55.2**	**-9.1**
AGRA				AML	AML	00 30 01.1	
	comp=N,84nm,0.5s						
AGRA				AML	AML	00 30 01.3	
	comp=E,105nm,0.1s						
MK31	**Makanchi Array**	**13.25**	**34**	⇓Pn	**Pn**	**00 28 43.6**	**-0.6**
	comp=E,1.4nm,0.6s,baz=215,slow=13,SNR=20						
MKAR	**Makanchi Array**	**13.25**	**34**	P	**Pn**	**00 28 43.0**	**-1.1**
	comp=E,0.2nm,0.3s,baz=216,slow=14,SNR=21						
JBP	**Jabalpur**	**14.97**	**148**	⇓*e*P	**Pn**	**00 29 11.1**	**+4.5**
KURBB	**Kurchatov Arra**	**15.22**	**17**	⇓Pn	**Pn**	**00 29 06.2**	**-3.3**
	comp=E,0.8nm,0.8s						
KURK	**Kurchatov**	**15.33**	**17**	*e*Pn	**Pn**	**00 29 12.6**	**+1.8**
	comp=E,4.4nm,0.8s						
KURK	**Kurchatov**	**15.33**	**17**	*e*P	**Pn**	**00 29 12.6**	**+1.8**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AB31	**Akbulak array**	**15.49**	**331**	⇑P	**Pn**	**00 29 09.6**	**-3.3**
	comp=Z,4.7nm,0.3s,baz=130,slow=12,SNR=353						
AB31				⇑S	S	00 31 51.1	-22
	comp=Z,4.1nm,0.6s,baz=153,slow=21,SNR=6.3						
AKTK	**Aktyubinsk**	**17.19**	**330**	P	**Pn**	**00 29 32.9**	**-0.9**
AKTK				S	**S**	**00 32 33.9**	**-12**
AKTO	**Aktyubinsk**	**17.19**	**330**	⇓P	**Pn**	**00 29 32.3**	**-1.5**
	comp=Z,2.0nm,0.8s						
AKTO				⇑S	**S**	**00 32 29.9**	**-16**
	comp=Z,0.9nm,0.8s						
AKTO	**Aktyubinsk**	**17.19**	**330**	P	**Pn**	**00 29 32.9**	**-0.9**
AKTO				S	**S**	**00 32 33.9**	**-12**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	**Aktyubinsk**	**17.19**	**330**	P	**Pn**	**00 29 32.9**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=136,slow=14,SNR=36						
AKTO				S	**S**	**00 32 33.9**	**-12**
	comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=4.0						
HYB	**Hyderabad**	**19.78**	**160**	*e*P	**P**	**00 30 05.5**	**+3.1**
HYB	**Hyderabad**	**19.78**	**160**	*i* P	**P**	**00 29 58.0**	**-4.4**
HYB				*e*		00 30 05.5	
HYB				*e*		00 33 32.0	
UMR	**Umm Al-Rimmam**	**21.04**	**258**	*e*P	**P**	**00 30 15.6**	**-0.3**
UMR				AMb	AMB	00 30 23.3	
	comp=Z,34nm,0.9s,mb4.7						
KBD	**Kabd**	**21.22**	**257**	*e*P	**P**	**00 30 16.9**	**-0.9**
KBD				AMb	AMB	00 30 21.9	
	comp=Z,80nm,0.7s,mb5.2						
QRN	**Al-Qurain**	**21.23**	**256**	*e*P	**P**	**00 30 17.2**	**-0.8**
MIB	**Mutribah**	**21.23**	**259**	*e*P	**P**	**00 30 17.8**	**-0.2**
MIB				AMb	AMB	00 30 19.4	
	comp=Z,37nm,0.8s,mb4.8						
RDF	**Al-Radifah**	**21.44**	**257**	*e*P	**P**	**00 30 19.9**	**-0.3**
RDF				AMb	AMB	00 30 28.3	
	comp=Z,54nm,1.3s,mb4.7						
NAY	**Al-Naaiem**	**21.54**	**258**	*e*P	**P**	**00 30 21.1**	**-0.2**
NAY				AMb	AMB	00 30 23.9	
	comp=Z,14nm,0.7s,mb4.4						
ARU	**Arti**	**21.99**	**341**	*e*P	**P**	**00 30 23.5**	**-2.2**
	comp=Z,7.4nm,0.8s,mb4.1						
ARU	**Arti**	**21.99**	**341**	*e*P	**P**	**00 30 23.5**	**-2.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
KIV	**Kislovodsk**	**23.26**	**298**	*e*P	**P**	**00 30 38.5**	**0.0**
	comp=Z,7.1nm,0.8s,mb4.0						
KIV	**Kislovodsk**	**23.26**	**298**	*e*P	**P**	**00 30 38.6**	**+0.1**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**28.13**	**55**	P	**P**	**00 31 24.8**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=265,slow=8.6,SNR=3.4						
BRTR	**Keskin Array B**	**29.90**	**288**	P	**P**	**00 31 38.2**	**0.0**
	comp=Z,0.4nm,0.6s,mb3.2,baz=100,slow=7.9,SNR=2.4						
OBN	**Obninsk**	**30.38**	**319**	*e*P	**P**	**00 31 43.8**	**+1.5**
	comp=Z,9.5nm,0.8s,mb4.5						
AKASG	**Malin Array Be**	**33.41**	**309**	P	**P**	**00 32 09.4**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**33.41**	**309**	P	**P**	**00 32 09.4**	**+0.5**
	comp=Z,1.2nm,0.4s,mb4.0,baz=106,slow=9.8,SNR=11						
JOF	**Joensuu**	**36.28**	**330**	*e*p	**P**	**00 32 33.9**	**+0.6**
	comp=Z,3.1nm,0.4s,mb4.6						
JOF	**Joensuu**	**36.28**	**330**	*e*P	**P**	**00 32 33.9**	**+0.6**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
FINES	**FINESS Array B**	**37.91**	**326**	P	**P**	**00 32

GRS	**Goris**	**1.24**	**87**	P	**Pn**	**00 41 38.0**	**+1.6**
GRS				S	**Sb**	**00 41 53.0**	**+0.5**
ISHB	**Shabestar**	**1.35**	**149**	*e*Pg	**Pg**	**00 41 37.2**	**-1.9**
ISHB				*e*Sg	**Sg**	**00 41 55.6**	**-1.0**
ISHB				*e*		00 41 58.5	
	comp=Z,27µm,0.3s						
VANB	**Van**	**1.35**	**231**	PN	**Pg**	**00 41 38.9**	**-0.2**
AGRB	**Hanur-Agry**	**1.36**	**276**	PN	**Pn**	**00 41 37.8**	**-0.3**
TVAN	**Van**	**1.39**	**229**	*i* P	**Pn**	**00 41 39.6**	**+1.1**
TVAN				*i* S	**Sg**	**00 42 02.6**	**+4.9**
DIGO	**Kars**	**1.42**	**313**	*i* S	**Sg**	**00 42 04.5**	**+5.6**
VANT	**Van**	**1.45**	**227**	PN	**Pg**	**00 41 42.0**	**+1.0**
TUTA	**Tutak**	**1.49**	**269**	*i* P	**Pn**	**00 41 40.0**	**+0.1**
TUTA				*i* S	**Sn**	**00 41 59.6**	**+0.2**
STE	**Stepanavan**	**1.57**	**350**	P	**Pn**	**00 41 42.0**	**+0.9**
STE				S	**Sn**	**00 42 05.0**	**+3.5**
ITBZ	**Tabriz**	**1.64**	**137**	*e*Pn	**Pn**	**00 41 42.7**	**+0.7**
ITBZ				*e*Sn	**Sn**	**00 42 04.4**	**+1.3**
ITBZ				*e*		00 42 06.7	
	comp=Z,6µm,0.1s						
ITBZ	**Tabriz**	**1.64**	**137**	*e*Pn	**Pn**	**00 41 42.7**	**+0.7**
ITBZ				*e*Sn	**Sn**	**00 42 04.4**	**+1.3**
KARS	**Kars**	**1.71**	**313**	PN	**Pg**	**00 41 45.9**	**-0.1**
MTKZ	**Martakert**	**1.77**	**64**	P	**Pn**	**00 41 43.2**	**-0.6**
MTKZ				S	**Sn**	**00 42 07.4**	**+1.1**
IAZR	**Azarshahr**	**2.02**	**151**	*e*Pn	**Pn**	**00 41 48.9**	**+1.7**
IAZR				*e*Sn	**Sn**	**00 42 14.0**	**+1.5**
IAZR				*e*		00 42 21.8	
	comp=Z,7µm,0.1s						
IAZR	**Azarshahr**	**2.02**	**151**	*e*Pn	**Pn**	**00 41 48.9**	**+1.7**
IAZR				*e*Sn	**Sn**	**00 42 14.0**	**+1.5**
HKR	**Hakkari**	**2.03**	**203**	PN	**Pg**	**00 41 50.4**	**-1.6**
DGRG	**David-gareji**	**2.06**	**13**	P	**Pg**	**00 41 52.4**	**-0.1**
DGRG				S	**Sg**	**00 42 23.1**	**+3.9**
DIGO	**Kars**	**2.06**	**13**	*i* S	**Sn**	**00 42 04.5**	**-8.9**
HAKT	**HAKKARI**	**2.06**	**203**	*i* P	**Pn**	**00 41 50.5**	**+2.8**
HAKT				*i* S	**Sn**	**00 42 15.2**	**+1.9**
MTA	**Mtatsminda**	**2.24**	**1**	P	**Pg**	**00 41 55.4**	**-0.6**
MTA				S	**Sg**	**00 42 24.2**	**-0.9**
CUKT	**Cukurca**	**2.37**	**202**	PN	**Pg**	**00 41 56.2**	**-2.4**
GRMI	**Germi**	**2.54**	**104**	*e*Pg	**Pg**	**00 41 58.7**	**-3.0**
GRMI				*e*Sg	**Sg**	**00 42 33.1**	**-1.4**
GRMI				AML	AML	00 42 35.0	
	comp=E,154nm,0.5s						
GRMI				AML	AML	00 42 37.0	
	comp=N,185nm,0.4s						
GRMI	**Germi** SNR=91	**2.54**	**104**	*e*Pg	**Pg**	**00 41 58.7**	**-3.0**
GRMI				*e*Sg	**Sg**	**00 42 33.2**	**-1.4**
	SNR=91						
GOR	**Gori**	**2.58**	**350**	P	**Pg**	**00 42 00.9**	**-1.6**
GOR				S	**Sg**	**00 42 36.3**	**+0.5**
BTMT	**Batman**	**2.83**	**245**	PN	**Pg**	**00 42 02.7**	**-4.7**
SNGE	**Sanandaj**	**4.82**	**154**	*e*Pn	**Pn**	**00 42 24.7**	**-1.0**

*IDC **19** 00:41:13.2±1.9, 443N×12707E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/18, mbtmp3.7/4, Error ellipse: s-maj=107.0km s-min=25.7km az=68.0*
*NEIC **19** 00:41:13.8±0.9, 453N×12728E, h10km, mb4.8/3, Error ellipse: s-maj=30.4km s-min=12.5km az=60.0*
*ISCJB **19** 00:41:15.4±1.0, 45N±02×1272E±02, h33km, mb4.0/7, Error ellipse: s-maj=34.8km s-min=14.6km az=149.5*
ISC 19 00:41:17.4±1.0,**45N**±02×**1273E**±02,**h35**km,**n8,** σ0**87**/8, **mb4.0**/7,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIZ	**Qiongzhong**	**22.30**	**312**	P	**P**	**00 46 11.2**	**-0.7**
	69nm,1.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**22.54**	**184**	P	**P**	**00 46 14.1**	**-0.2**
	0.9nm,0.5s,mb3.5,baz=0.0,slow=8.1,SNR=3.2						
PMG	**Port Moresby**	**24.18**	**125**	P	**P**	**00 46 29.4**	**-1.3**
	34nm,1.3s,mb4.6						
WRA	**Warramunga Arr**	**25.29**	**164**	P	**P**	**00 46 40.7**	**+0.1**
	1.9nm,0.7s,mb3.8,baz=343,slow=10,SNR=16						
WB2	**Warramunga Arr**	**25.29**	**164**	*e*P	**P**	**00 46 41.7**	**+1.0**
MBWA	**Marble Bar**	**26.57**	**196**	*e*P	**P**	**00 46 51.4**	**-0.9**
	13nm,1.1s,mb4.4						
STKA	**Stephens Creek**	**38.68**	**160**	P	**P**	**00 48 39.0**	**+1.1**
	1.1nm,0.7s,mb3.7,baz=342,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**57.22**	**325**	P	**P**	**00 51 02.0**	**+0.9**
	0.2nm,0.5s,mb3.4,baz=123,slow=5.3,SNR=5.2						

*NIED **19** 01:04:00, 3820N×14470E, h5km, Mw3.9 Best double couple: M0 8.70000×10^14 NP1:φs 5.00000°, δ31.00000°, λ-80.00000°. NP2:φs 173.00000°, δ59.00000°, λ-96.00000°.*
*ISCJB **19** 01:04:39.0±0.4, 3819N±003×14476E±004, h35km, mb4.0/13, Error ellipse: s-maj=5.1km s-min=4.3km az=41.8*
*IDC **19** 01:04:40.7±6.7, 3813N×14491E, h32km±50km, mb3.7/12, mb1 3.9/14, mb1mx3.8/22, mbtmp3.7/14, ML4.0/2, MS2.8/4, Ms1 2.8/4, ms1mx2.8/26, Error ellipse: s-maj=21.9km s-min=15.1km az=113.0*
*JMA **19** 01:04:40.5±0.2, 3822N×14470E, h56km, M4.5*
*NEIC **19** 01:04:41.0±0.4, 3813N×14488E, h35km, mb4.8/1, MW3.9(NIED), Error ellipse: s-maj=10.7km s-min=8.4km az=128.0*
ISC 19 01:04:41.1±1.6,**3821N**±003×**14475E**±004,**h35**km±12km, **n40,** σ1**917**/55,**mb4.0**/13,**1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.56**	**291**	P	**Pn**	**01 05 20.2**	**+0.1**
OFUJ				*e*S	**Sn**	**01 05 50.0**	**-0.1**
MIYJ	**Miyakonagasawa**	**2.66**	**302**	P	**Pn**	**01 05 21.3**	**-0.2**
MIYJ				*e*S	**Sn**	**01 05 51.7**	**-0.8**
JIO	**Ouri**	**2.69**	**276**	P	**Pn**	**01 05 21.8**	**0.0**
JIO				*e*S	**Sn**	**01 05 52.7**	**-0.4**
JMK	**Ichinoseki**	**2.86**	**286**	P	**Pn**	**01 05 24.6**	**+0.4**
JMK				*e*S	**Sn**	**01 05 57.5**	**+0.1**
ERM	**Erimo**	**3.99**	**343**	*e*Pn	**Pn**	**01 05 39.5**	**-0.2**
JOT	**Ohata**	**4.26**	**319**	P	**Pn**	**01 05 43.3**	**-0.1**
JOT				*e*S	**Sn**	**01 06 30.2**	**-1.7**
JCH	**Churui**	**4.53**	**347**	P	**Pn**	**01 05 46.3**	**-0.8**
JCH				*e*S	**Sn**	**01 06 35.4**	**-3.0**
JKB	**Kayabe**	**4.65**	**323**	P	**Pn**	**01 05 49.3**	**+0.5**
JKB				*e*S	**Sn**	**01 06 39.1**	**-2.4**
BSO1	**Boso 1**	**4.67**	**222**	P	**Pn**	**01 05 47.1**	**-2.0**
BSO1				*e*S	**Sn**	**01 06 40.6**	**-1.5**
JRY	**Ryogami san**	**5.16**	**247**	P	**Pn**	**01 05 55.6**	**-0.2**
JRY				*e*S	**Sn**	**01 06 51.2**	**-2.9**
NEM2	**Nemuro 2**	**5.21**	**8**	P	**Pn**	**01 05 52.7**	**-3.7**
NEM2				*e*S	**Sn**	**01 06 47.2**	**-8.0**
JOD2	**Odawara 2**	**5.41**	**239**	P	**Pn**	**01 05 59.8**	**+0.5**
JOD2				*e*S	**Sn**	**01 06 57.1**	**-3.3**
MJAR	**Matsushiro Arr** 3.6nm,0.3s,baz=80,slow=15,SNR=15	**5.47**	**254**	Pn	**Pn**	**01 06 01.4**	**+1.3**
MJAR				Sn	**Sn**	**01 07 03.0**	**+1.3**
	4.4nm,0.3s,baz=339,slow=16,SNR=6.0						
MAJO	**Matsushiro** 22nm,0.6s	**5.47**	**254**	*e*Pn	**Pn**	**01 06 00.7**	**+0.6**
MAJO				Sn	**Sn**	**01 07 05.0**	**+3.2**
MAT	**Matsushiro**	**5.47**	**254**	P	**Pn**	**01 06 01.4**	**+1.3**
MAT				S	**Sn**	**01 07 02.7**	**+1.0**
JOSM	**Okushiri--Mats**	**5.59**	**315**	P	**Pn**	**01 06 02.1**	**+0.4**
JTKR	**Abashiri--Toko**	**5.79**	**354**	P	**Pn**	**01 06 03.3**	**-1.1**
JTKR				*e*S	**Sn**	**01 07 05.0**	**-4.6**
JHR	**Hokuryu**	**5.98**	**338**	P	**Pn**	**01 06 08.2**	**+1.1**
JHR				*e*S	**Sn**	**01 07 13.0**	**-1.3**
ASAJ	**Asahikawa** 3.1nm,0.3s,baz=196,slow=19,SNR=7.2	**6.12**	**345**	Pn	**Pn**	**01 06 09.8**	**+0.9**
ASAJ				Sn	**Sn**	**01 07 19.1**	**+1.4**
	2.5nm,0.3s,baz=170,slow=30,SNR=6.6						
ASAJ				LR	LR	01 09 28.2	
	comp=Z,94nm,19.9s,baz=133,slow=46						
JHJ2	**Mitsune**	**6.48**	**220**	P	**Pn**	**01 06 12.0**	**-1.9**
JHJ2				*e*S	**Sn**	**01 07 21.8**	**-4.8**
JNU	**Nakatsue** comp=Z,37nm,18.6s,baz=278,slow=38	**12.37**	**250**	LR	LR	01 12 39.1	
KSRS	**Korea Array** comp=Z,37nm,21.4s,baz=75,slow=34	**13.33**	**272**	LR	LR	01 12 15.0	
JOW	**Kunigami** comp=Z,46nm,20.5s,baz=126,slow=31	**17.91**	**236**	LR	LR	01 14 02.4	
SONM	**Songino Array** 0.3nm,0.6s,mb3.2,baz=97,slow=8.5,SNR=3.1	**29.38**	**302**	P	**P**	**01 10 43.0**	**+2.3**
KDAK	**Kodiak Island** 5.8nm,0.7s,mb4.4,baz=237,slow=9.8,SNR=3.1	**44.45**	**43**	P	**P**	**01 12 48.3**	**0.0**
MK31	**Makanchi Array**	**45.75**	**302**	*e*P	**P**	**01 13 00.6**	**+1.8**
MKAR	**Makanchi Array** 0.5nm,0.4s,mb3.8,baz=86,slow=9.4,SNR=7.5	**45.75**	**302**	P	**P**	**01 13 00.2**	**+1.4**
KAKA	**Kakadu** 9.6nm,0.8s,mb4.8	**51.95**	**195**	*e*P	**P**	**01 13 46.3**	**-0.3**
INK	**Inuvik**	**52.13**	**28**	P	**P**	**01 13 47.7**	**+0.3**
INK	**Inuvik** 1.4nm,1.0s,mb3.8,baz=245,slow=6.4,SNR=8.7	**52.13**	**28**	P	**P**	**01 13 47.7**	**+0.4**
WB2	**Warramunga Arr**	**58.66**	**191**	‖ *i*P	**P**	**01 14 33.3**	**-1.6**
WRA	**Warramunga Arr** 3.1nm,0.8s,mb4.4,baz=11,slow=7.3,SNR=25	**58.66**	**191**	P	**P**	**01 14 34.1**	**-0.8**
WRA				PcP	PcP	01 15 25.4	+0.8
	0.7nm,0.6s,baz=4.6,slow=4.3,SNR=6.0						
YKA	**Yellowknife Ar** 0.7nm,0.7s,mb3.9,baz=302,slow=6.8,SNR=16	**61.45**	**31**	P	**P**	**01 14 53.6**	**0.0**
ASAR	**Alice Springs** 1.4nm,0.8s,mb4.1,baz=13,slow=6.5,SNR=14	**62.38**	**191**	P	**P**	**01 14 60.0**	**-0.3**
FINES	**FINESS Array B** 1.7nm,0.7s,mb4.1,baz=55,slow=10.0,SNR=5.3	**68.99**	**333**	P	**P**	**01 15 43.5**	**+1.1**
PDAR	**Pinedale Array** 0.7nm,0.8s,mb3.6,baz=289,slow=4.5,SNR=5.2	**74.94**	**47**	P	**P**	**01 16 17.8**	**-0.7**
AKASG	**Malin Array Be** 0.3nm,0.2s,mb3.8,baz=50,slow=5.4,SNR=6.1	**74.96**	**324**	P	**P**	**01 16 18.1**	**-0.3**
PV10	**Paradox Valley**	**78.00**	**50**	*e*P	**P**	**01 16 37.1**	**+1.3**
GERES	**GERESS Array B** 0.3nm,0.5s,mb3.6,baz=31,slow=4.6,SNR=2.7	**83.07**	**330**	P	**P**	**01 17 04.0**	**+1.1**
TXAR	**Lajitas Array** 0.4nm,0.8s,mb3.7,baz=292,slow=2.8,SNR=4.7	**87.30**	**54**	P	**P**	**01 17 24.3**	**-0.1**

IDC 19 01:07:18.0±1.1,**2172S**×**6999W**,**h58**km±6km,**mb3.2**/3, **mb1 3.7**/4,**mb1mx3.5**/13,**mbtmp3.4**/4,**MS2.8**/1,**Ms1 3.0**/1, **ms1mx2.8**/4,**Error ellipse: s-maj=44.4km s-min=40.1km az=81.0,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.68**	**18**	P	Pn	01 08 41.0	+1.1
	2.5nm,0.3s,baz=186,slow=7.8,SNR=68						
LPAZ				LR	LR	01 11 14.3	
	comp=Z,106nm,21.8s,baz=211,slow=42						
TXAR	**Lajitas Array**	**60.24**	**326**	P	P	01 17 20.3	0.0
TXAR	**Lajitas Array** 0.1nm,0.6s,baz=157,slow=7.7,SNR=2.5	**60.24**	**326**	P	P	01 17 20.3	0.0
TORD	**Torodi Ar. Bea** 0.6nm,0.7s,baz=249,slow=6.4,SNR=3.6	**78.37**	**71**	P	P	01 19 12.0	-0.7
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=133,slow=4.8,SNR=6.7	**91.06**	**341**	P	P	01 20 15.2	-0.3
YKA				pP	pP	01 20 31.5	-0.7
	0.3nm,0.6s,baz=143,slow=4.3,SNR=5.2						
WRA	**Warramunga Arr**	**132.25**	**212**	PKP	PKPdf	01 26 26.4	+0.2
	0.3nm,0.8s,baz=47,slow=1.2,SNR=4.7						
WRA				pPKP	pPKPdf	01 26 42.7	-0.8
	0.3nm,0.7s,baz=138,slow=2.8,SNR=1.8						
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=321,slow=1.3,SNR=5.5	**146.39**	**35**	PKPbc	PKPbc	01 26 51.9	-0.4
MKAR				pPKPbc	pPKPbc	01 27 09.2	-0.2
	1.1nm,0.6s,baz=330,slow=3.1,SNR=5.1						
SONM	**Songino Array** 0.2nm,0.5s,baz=332,slow=1.9,SNR=2.8	**153.78**	**6**	PKPbc	PKPbc	01 27 11.3	+0.9
SONM				pPKPbc	pPKPbc	01 27 27.9	+0.2
	0.4nm,0.6s,baz=14,slow=0.8,SNR=3.6						

*NEIC **19** 01:14:39.0, 3884N×2612E, h14km, MD3.6(ATH), MD3.4(ISK), After ISK.*
*ATH **19** 01:14:40.7, 3890N×2619E, h23km±2km, MD3.6/6*
*ISK **19** 01:14:40.0, 3886N×2615E, h15km, MD3.3*
*CSEM **19** 01:14:41.6±0.1, 3892N×2630E, h15km, MD3.6, Error ellipse: s-maj=1.9km s-min=1.4km az=66.0*
*ISCJB **19** 01:14:41.0±0.5, 3890N±002×2623E±003, h10km±4km, Error ellipse: s-maj=4.3km s-min=2.9km az=159.8*
*THE **19** 01:14:42.9, 3887N×2631E, h14km, ML3.3*
*DDA **19** 01:14:43.2, 3897N×2627E, h3km, Md3.2*
*SOF **19** 01:14:51.0, 3972N×2604E, h10km, MD2.6*
ISC 19 01:14:41.9±0.4,**3890N**±002×**2626E**±003,**h12**km±3km,**n53,** σ0**85**/69,**2C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.35**	**1**	‖ *i*PB	**Pg**	**01 14 48.8**	**-0.1**
PRK				*e*SB	**Sg**	**01 14 53.7**	**+0.1**
AYVA	**Ayvalik**	**0.53**	**39**	*i* P	**Pg**	**01 14 52.0**	**-0.3**
AYVA				*i* S	**Sg**	**01 14 58.4**	**-0.9**
CHOS	**Chios island**	**0.54**	**198**	*e*Pg	**Pg**	**01 14 52.8**	**+0.4**
CHOS				*e*Sg	**Sg**	**01 15 00.9**	**+1.5**
URLA	**Izmir**	**0.60**	**154**	*i* P	**Pg**	**01 14 53.3**	**-0.3**
URLA				*i* S	**Sg**	**01 15 01.7**	**+0.3**
BLCB	**Balcova**	**0.80**	**130**	PG	**Pg**	**01 14 57.1**	**-0.2**
BLCB				SG	**Sg**	**01 15 08.7**	**+0.9**
BLCB	**Balcova**	**0.80**	**130**	*e*Pg	**Pg**	**01 14 57.3**	**-0.1**
BLCB				*e*Sg	**Sg**	**01 15 08.1**	**+0.4**
BLCB	**Balcova**	**0.80**	**130**	*e*Pg	**Pg**	**01 14 57.3**	**0.0**
BLCB				*e*Sg	**Sg**	**01 15 08.7**	**+0.9**
EZN	**Ezine**	**0.93**	**3**	PG	**Pg**	**01 14 59.3**	**-0.5**
EZN				SG	**Sg**	**01 15 13.1**	**+1.2**
IZM	**Izmir**	**0.93**	**122**	PG	**Pg**	**01 14 59.7**	**-0.1**
KDAG	**Bornova**	**0.93**	**122**	*i* P	**Pg**	**01 14 59.5**	**-0.3**
KDAG				*i* S	**Sg**	**01 15 11.6**	**-0.4**
BOZC	**Bozcaada**	**0.96**	**350**	*i* P	**Pg**	**01 15 00.3**	**-0.1**
BOZC				*i* S	**Sg**	**01 15 13.3**	**+0.5**
AKHS	**Akhisar**	**1.21**	**90**	*i* P	**Pn**	**01 15 05.4**	**+0.8**
AKHS				*i* S	**Sb**	**01 15 20.1**	**-0.3**
AKS	**Akhisar**	**1.21**	**90**	PN	**Pn**	**01 15 04.1**	**-0.5**
SMG	**Samos**	**1.27**	**159**	*e*PN	**Pn**	**01 15 05.2**	**-0.2**
SMG				*e*SN	**Sn**	**01 15 23.3**	**+0.9**
GADA	**Gvkgeada**	**1.32**	**348**	PN	**Pn**	**01 15 05.3**	**-0.9**
LOS	**Limnos**	**1.38**	**319**	*e*Pg	**Pg**	**01 15 07.9**	**-0.6**
BALB	**Balikesir**	**1.46**	**59**	PN	**Pn**	**01 15 07.7**	**-0.3**
LPK	**Lapseki**	**1.52**	**15**	PN	**Pn**	**01 15 08.0**	**-0.9**
BTOK	**Tokmak**	**1.62**	**57**	*i* P	**Pn**	**01 15 09.8**	**-0.5**
BTOK				*i* S	**Sn**	**01 15 33.6**	**+2.5**
ENEZ	**Enez**	**1.84**	**357**	PN	**Pn**	**01 15 12.3**	**-0.9**
EDC	**Edincik**	**1.90**	**40**	PN	**Pn**	**01 15 13.8**	**-0.4**
APE	**Apeiranthos**	**1.92**	**198**	*e*Pb	**Pb**	**01 15 13.8**	**-3.0**
APE	**Apeiranthos**	**1.92**	**198**	‖ *i*PB	**Pb**	**01 15 13.6**	**-3.1**
KULA	**Kula-Manisa**	**1.92**	**101**	*e*PN	**Pn**	**01 15 14.4**	**+0.1**
BNT	**Bandirma**	**1.94**	**41**	*e*PN	**Pn**	**01 15 14.1**	**-0.5**
DST	**Dursunbey**	**1.97**	**68**	*e*PN	**Pn**	**01 15 15.5**	**+0.4**
MRMT	**Marmara Adasi**	**1.99**	**31**	*e*PN	**Pn**	**01 15 15.6**	**+0.3**
MLSB	**Milas**	**2.00**	**143**	*e*PN	**Pn**	**01 15 13.8**	**-1.7**
ALN	**Alexandroupoli**	**2.00**	**355**	*e*Pn	**Pn**	**01 15 15.2**	**-0.3**
BODT	**Bodrum**	**2.01**	**155**	*e*PN	**Pn**	**01 15 14.2**	**-1.4**
MFT	**Murefte**	**2.04**	**22**	*e*PN	**Pn**	**01 15 16.2**	**+0.2**
BDRM	**Kayabasi**	**2.06**	**153**	*i* P	**Pn**	**01 15 22.2**	**+6.0**
BDRM				*i* S	**Sn**	**01 15 47.1**	**+5.3**
PAIG	**Paliouri**	**2.25**	**298**	*e*Pn	**Pn**	**01 15 19.0**	**+0.1**
OUR	**Ouranopolis**	**2.27**	**310**	*e*Pn	**Pn**	**01 15 19.8**	**+0.6**
RDO	**Rodhopi**	**2.31**	**346**	‖ *i*PB	**Pb**	**01 15 20.2**	**-3.3**
RDO				*e*SN	**Sn**	**01 15 47.3**	**-0.8**
NEO	**Neokhori**	**2.40**	**281**	*e*PB	**Pb**	**01 15 20.4**	**-4.6**
DAT	**Datca**	**2.40**	**154**	*e*PN	**Pn**	**01 15 19.3**	**-1.7**
ULDT	**Uludag**	**2.55**	**60**	*i* P	**Pn**	**01 15 28.1**	**+5.1**
ULDT				*i* S	**Sn**	**01 16 01.4**	**+7.5**
PLG	**Polygyros**	**2.63**	**305**	*e*Pn	**Pn**	**01 15 24.8**	**+0.7**
PLG	**Polygyros**	**2.63**	**305**	*e*Pn	**Pn**	**01 15 23.5**	**-0.6**
GEMT	**Gemlik**	**2.73**	**55**	*e*PN	**Pn**	**01 15 25.8**	**+0.3**
DID	**Didima**	**2.76**	**241**	*e*Pn	**Pn**	**01 15 26.3**	**+0.4**
KDZ	**Kurdzhali**	**2.82**	**347**	*i* P	**Pn**	**01 15 26.8**	**0.0**
IZI	**Iznik**	**2.87**	**59**	*e*PN	**Pn**	**01 15 28.2**	**+0.8**
YLV	**Yalova**	**2.92**	**54**	*e*PN	**Pn**	**01 15 29.4**	**+1.2**
EDRB	**Edirne**	**2.97**	**7**	*e*PN	**Pn**	**01 15 28.7**	**-0.1**
RZN	**Rozhen**	**3.03**	**338**	*i* P	**Pn**	**01 15 28.5**	**-1.1**
NVR	**Nevrokopi**	**3.06**	**324**	*e*PN	**Pn**	**01 15 30.7**	**+0.6**
ADVT	**Abdulvahap**	**3.09**	**59**	*e*PN	**Pn**	**01 15 31.3**	**+0.8**
MMB	**Musomiste**	**3.31**	**325**	*i* P	**Pn**	**01 15 34.3**	**+0.8**
GRG	**Griva**	**3.61**	**306**	*e*Pn	**Pn**	**01 15 39.2**	**+1.6**
GULT	**Gulveren**	**3.62**	**64**	*e*PN	**Pn**	**01 15 38.9**	**+1.1**
SZH	**Strazhica**	**4.37**	**357**	P	**Pn**	**01 15 48.6**	**+0.5**

*NEIC **19** 01:15:54.9, 3595S×17824E, h208km, MG3.7(WEL), After WEL.*
WEL 19 01:15:54.8±0.4,**3598S**×**17831E**,**h213**km±5km,**ML3.8**/6, **Error ellipse: s-maj=9.9km s-min=6.5km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.58**	**180**	P	Pn	01 16 30.6	+0.3
MXZ				S	S	01 16 57.4	-0.7
MXZ	**Matakaoa Point**	**1.58**	**180**	PN	Pn	01 16 30.6	+0.3
MXZ				SN	S	01 16 57.4	-0.7
PUZ	**Puketiti**	**2.09**	**181**	*e*P	Pn	01 16 35.2	+0.1
PUZ				S	S	01 17 05.5	-1.3
PUZ	**Puketiti**	**2.09**	**181**	*e*PN	Pn	01 16 35.2	+0.2
PUZ				SN	S	01 17 05.5	-1.3
MWZ	**Matawai**	**2.43**	**195**	P	Pn	01 16 39.1	+0.4
MWZ				S	S	01 17 13.6	+0.4
MWZ	**Matawai**	**2.43**	**195**	PN	Pn	01 16 39.1	+0.4
MWZ				SN	S	01 17 13.6	+0.4
URZ	**Urewera**	**2.47**	**202**	PN	Pn	01 16 39.1	0.0
URZ				SN	S	01 17 14.0	+0.1
KNZ	**Kokohu**	**3.08**	**189**	PN	Pn	01 16 45.8	-0.1
BKZ	**Black Stump Fm**	**3.49**	**204**	*e*PN	Pn	01 16 50.9	+0.1
BKZ				SN	S	01 17 34.4	-0.6
MRZ	**Mangatainoka R**	**5.14**	**204**	PN	Pn	01 17 09.3	-1.9
MRZ				SN	S	01 18 07.0	-4.7
MQZ	**McQueen's Vall**	**8.85**	**208**	SN	S	01 19 29.7	-8.8

*ISCJB **19** 01:16:13.6±1.4, 3534N±008×2329E±0.10, h15km, Error ellipse: s-maj=14.6km s-min=7.5km az=43.0*
*CSEM **19** 01:16:14.7±0.2, 3536N×2327E, h15km, ML3.6, Error ellipse: s-maj=5.6km s-min=2.4km az=43.0*
*THE **19** 01:16:14.9, 3532N×2331E, h13km, ML3.6*
*ATH **19** 01:16:14.6, 3534N×2338E, h30km, MD3.0/3*
ISC 19 01:16:15.9±1.9,**353N**±01×**234E**±01,**h30**km±9km,**n7,** σ0**59**/10,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARN	**Karanos**	**0.45**	**82**	*e*Pg	**Pb**	**01 16 24.7**	**-0.7**
KARN				*e*Sg	**Sb**	**01 16 32.5**	**+0.6**
VAM	**Vamos**	**0.68**	**84**	*e*PN	**Pn**	**01 16 28.5**	**-0.9**
VAM				*e*SN	**Sn**	**01 16 38.6**	**-0.4**
GVD	**Gavdhos**	**0.77**	**130**	*e*Pg	**Pn**	**01 16 29.9**	**-0.7**
GVD				*e*Sg	**Sn**	**01 16 42.0**	**+0.7**
LAST	**Lasithi**	**1.73**	**95**	*e*Pb	**Pn**	**01 16 44.3**	**+0.4**
NPS	**Neapolis**	**1.83**	**92**	*e*PN	**Pn**	**01 16 45.8**	**+0.5**
DID	**Didima**	**2.16**	**357**	*e*Pn	**Pn**	**01 16 50.0**	**+0.1**
LTK	**Loutraki**	**2.70**	**353**	*e*Pn	**Pn**	**01 16 57.6**	**+0.4**

*IDC **19** 01:16:27.4±1.3, 399N×12609E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.6/17, mbtmp3.5/6, Error ellipse: s-maj=103.3km s-min=20.0km az=70.0*
*NEIC **19** 01:16:28.4±0.8, 4.16N×12661E, h10km, Error ellipse: s-maj=61.5km s-min=11.3km az=72.0*
*ISCJB **19** 01:16:29.9±1.1, 42N±02×1265E±06, h33km, mb3.5/6, Error ellipse: s-maj=88.8km s-min=15.4km az=161.3*
ISC 19 01:16:32.2±1.1,**41N**±02×**1266E**±06,**h35**km,**n7,** σ0**29**/7, **mb3.5**/6,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.10**	**182**	P	**P**	**01 21 24.4**	**-0.1**
	0.6nm,0.4s,mb3.4,baz=13,slow=15,SNR=3.8						
WRA	**Warramunga Arr**	**25.11**	**163**	P	**P**	**01 21 53.4**	**-0.5**
	1.1nm,0.4s,mb3.8,baz=337,slow=11,SNR=20						
WB2	**Warramunga Arr**	**25.11**	**162**	*e*P	**P**	**01 21 53.9**	**0.0**
ASAR	**Alice Springs**	**28.54**	**166**	P	**P**	**01 22 24.9**	**+0.2**
	0.2nm,0.5s,mb3.1,baz=334,slow=6.2,SNR=4.3						
STKA	**Stephens Creek**	**38.56**	**159**	P	**P**	**01 23 52.0**	**+0.4**
	1.4nm,0.6s,mb3.9,baz=336,slow=10,SNR=4.3						
SONM	**Songino Array**	**46.87**	**341**	P	**P**	**01 24 58.6**	**-0.3**
	0.2nm,0.8s,mb3.1,baz=157,slow=9.3,SNR=2.4						
MKAR	**Makanchi Array**	**57.13**	**325**	P	**P**	**01 26 15.6**	**+0.3**
	0.3nm,0.5s,mb3.6,baz=123,slow=7.3,SNR=4.8						

IDC 19 01:23:38.0±3.2,**587S**×**15104E**,**h0**km,**mb3.7**/3,**mb1 4.0**/3, **mb1mx3.6**/13,**mbtmp3.7**/3,**Error ellipse: s-maj=109

	4.3nm,1.1s,mb4.4,baz=61,slow=7.3,SNR=3.4							
FINES	**FINESS Array B**	**70.61**	**331**	P		**P**	**01 38 02.4**	**-0.5**
	0.6nm,0.4s,mb3.8,baz=68,slow=7.0,SNR=8.9							
YKA	**Yellowknife Ar**	**73.52**	**26**	P		**P**	**01 38 20.8**	**+0.6**
YKA	**Yellowknife Ar**	**73.52**	**26**	P		**P**	**01 38 20.8**	**+0.6**
	0.5nm,0.8s,mb3.5,baz=303,slow=5.5,SNR=7.8							
AKASG	**Malin Array Be**	**74.18**	**320**	P		**P**	**01 38 24.1**	**-0.2**
	0.8nm,0.3s,mb4.1,baz=5,slow=6.2,SNR=4.1							
BRTR	**Keskin Array B**	**76.69**	**308**	P		**P**	**01 38 39.1**	**+0.2**
	1.7nm,0.8s,mb4.0,baz=82,slow=4.3,SNR=8.4							
NOA	**NORSAR Array B**	**76.78**	**334**	P		**P**	**01 38 38.8**	**-0.3**
	1.7nm,0.9s,mb4.0,baz=99,slow=6.2,SNR=3.0							
GERES	**GERESS Array B**	**83.53**	**324**	P		**P**	**01 39 16.9**	**+1.3**
	0.6nm,0.7s,mb3.9,baz=58,slow=6.0,SNR=3.6							
NVAR	**Mina Array Bea**	**85.56**	**48**	P		**P**	**01 39 27.1**	**+1.0**
	1.0nm,0.7s,mb4.2,baz=278,slow=7.3,SNR=9.2							
PDAR	**Pinedale Array**	**88.12**	**40**	P		**P**	**01 39 39.1**	**+0.6**
	0.5nm,0.8s,mb3.8,baz=270,slow=0.1,SNR=4.6							
TORD	**Torodi Ar. Bea**	**115.10**	**304**	PKP	PKiKP		01 45 30.5	+1.0
TORD	**Torodi Ar. Bea**	**115.10**	**304**	PKP	PKiKP		01 45 30.5	+1.0
	0.5nm,1.0s,baz=48,slow=2.1,SNR=3.0							

*ISCJB **19** 01:52:58.0±0.9, 1835S±008×6960W±007, h127km±9km, mb3.9/8, Error ellipse: s-maj=13.3km s-min=10.2km az=27.7*

*NEIC **19** 01:52:59.3±1.0, 1831S×6956W, h120km±10km, mb3.9/2, Error ellipse: s-maj=16.3km s-min=11.4km az=60.0*

*IDC **19** 01:53:00.8±0.7, 1825S×6945W, h132km±5km, mb3.6/8, mb1 3.9/10, mb1mx3.8/16, mbtmp3.6/10, Error ellipse: s-maj=17.7km s-min=12.5km az=129.0*

ISC 19 01:52:59.0±0.8, 1836S±007×6960W±007, h120km±8km, h135km±2.8km; pP-P, n23, σ1§25/28, mb3.9/8, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.49**	**35**	P	**Pn**	**01 53 41.4**	**+2.7**
LPAZ				S	**Sn**	**01 54 10.0**	**+0.9**
LPAZ	**La Paz**	**2.49**	**35**	P	**Pn**	**01 53 41.4**	**+2.7**
	30nm,0.3s,baz=228,slow=8.0,SNR=601						
LPAZ				S	**Sn**	**01 54 10.0**	**+0.9**
	4.2nm,0.3s,baz=195,slow=21,SNR=6.0						
ARE	**Arequipa**	**2.61**	**316**	i/P	**Pn**	**01 53 41.2**	**+1.0**
ARE				*i* S	**Sn**	**01 54 11.3**	**-0.6**
SIV	**San Ignacio**	**8.48**	**75**	P	**Pn**	**01 54 57.6**	**-1.5**
	2.4nm,0.3s,baz=268,slow=11,SNR=33						
SIV				S	**Sn**	**01 56 26.7**	**-6.4**
	0.2nm,0.3s,baz=176,slow=23,SNR=10.0						
NNA	**Nana**	**9.43**	**311**	eP	**Pn**	**01 55 10.6**	**-1.4**
NNA				eSn	**Sn**	**01 56 47.4**	**-8.7**
NNA	**Nana**	**9.43**	**311**	P	**Pn**	**01 55 10.7**	**-1.3**
	3.6nm,0.3s,baz=128,slow=11,SNR=8.5						
NNA				S	**Sn**	**01 56 49.4**	**-6.8**
	0.9nm,0.3s,baz=224,slow=17,SNR=2.3						
CFAA	**Coronel Fontan**	**13.25**	**175**	P	**Pn**	**01 56 01.0**	**-1.5**
CFAA				S	**Sn**	**01 58 21.3**	**-7.2**
CFAA	**Coronel Fontan**	**13.25**	**175**	P	**Pn**	**01 56 01.0**	**-1.5**
	0.1nm,0.3s,baz=356,slow=14,SNR=8.3						
CFAA				S	**Sn**	**01 58 21.3**	**-7.2**
	0.1nm,0.3s,baz=227,slow=13,SNR=3.8						
OTAV	**Otavalo**	**20.42**	**334**	eP	**P**	**01 57 26.6**	**-0.3**
	1.2nm,0.6s						
TRQA	**Tornquist**	**20.73**	**163**	eP	**P**	**01 57 31.3**	**+1.3**
	11nm,0.8s						
PLCA	**Paso Flores**	**22.32**	**182**	P	**P**	**01 57 49.5**	**+2.7**
	0.9nm,0.7s,mb3.2,baz=349,slow=7.4,SNR=3.6						
TXAR	**Lajitas Array**	**57.70**	**325**	P	**P**	**02 02 36.7**	**-0.5**
TXAR				pP	pP	02 03 08.3	+2.4
TXAR	**Lajitas Array**	**57.70**	**325**	P	**P**	**02 02 36.7**	**-0.5**
	0.9nm,1.0s,mb3.7,baz=134,slow=8.9,SNR=4.2						
TXAR				pP	pP	02 03 08.3	+2.4
	0.3nm,0.6s,baz=128,slow=8.1,SNR=3.1						
DBIC	**Dimbokro**	**68.50**	**75**	P	**P**	**02 03 47.9**	**-1.1**
	4.7nm,0.7s,mb4.4,baz=252,slow=9.8,SNR=11						
PDAR	**Pinedale Array**	**71.08**	**330**	P	**P**	**02 04 04.9**	**+0.8**
	0.3nm,0.6s,mb3.3,baz=131,slow=4.1,SNR=3.6						
ULM	**Lac du Bonnet**	**72.14**	**343**	pP	pP	02 04 42.1	+2.0
	1.2nm,0.7s,baz=141,slow=2.6,SNR=4.4						
NVAR	**Mina Array Bea**	**72.63**	**322**	P	**P**	**02 04 14.8**	**+1.2**
NVAR	**Mina Array Bea**	**72.63**	**322**	P	**P**	**02 04 14.8**	**+1.2**
	0.9nm,0.8s,mb3.6,baz=134,slow=7.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**76.94**	**71**	P	**P**	**02 04 37.4**	**-1.5**
	2.8nm,0.7s,mb4.1,baz=248,slow=5.0,SNR=15						
TORD				pP	pP	02 05 12.2	+3.3
	1.1nm,0.9s,baz=246,slow=4.9,SNR=2.1						
MAW	**Mawson**	**87.52**	**164**	P	**P**	**02 05 33.7**	**+0.7**
	1.7nm,0.7s,mb4.2,baz=321,slow=7.2,SNR=3.2						
YKA	**Yellowknife Ar**	**88.02**	**341**	P	**P**	**02 05 35.3**	**+0.1**
	1.9nm,0.6s,mb4.3,baz=134,slow=4.8,SNR=41						
YKA				pP	pP	02 06 08.5	+2.4
	0.9nm,0.7s,baz=132,slow=4.7,SNR=4.1						
YKA				sP	sP	02 06 22.3	+3.6
	1.3nm,0.8s,baz=135,slow=4.8,SNR=5.8						
WRA	**Warramunga Arr**	**135.28**	**213**	PKP	PKPdf	02 12 07.7	+2.2
	0.3nm,0.7s,baz=169,slow=3.2,SNR=2.6						
SONM	**Songino Array**	**150.41**	**5**	PKPbc	PKPbc	02 12 37.2	+0.8
	0.4nm,0.7s,baz=331,slow=1.8,SNR=3.8						
SONM				pPKPbc	pPKPbc	02 13 11.5	+2.9
	0.5nm,0.9s,baz=28,slow=3.4,SNR=2.7						

IDC 19 01:55:21.2±6.3, 537S×14879E, h64km±68km, mb3.3/4, mb1 3.6/5, mb1mx3.4/13, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=107.8km s-min=41.0km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.32**	**202**	P	Pn	01 56 25.7	+1.3
	7.9nm,0.3s,baz=21,slow=14,SNR=15						
PMG				S	Sn	01 57 08.7	-4.9
	8.6nm,0.3s,baz=351,slow=21,SNR=8.5						
WRA	**Warramunga Arr**	**20.19**	**223**	P	P	01 59 50.5	-0.3
	1.0nm,0.4s,baz=50,slow=11,SNR=14						
ASAR	**Alice Springs**	**23.16**	**217**	P	P	02 00 21.9	-0.5
	0.8nm,0.6s,baz=52,slow=9.3,SNR=11						
FITZ	**Fitzroy Crossi**	**25.91**	**239**	P	P	02 00 48.2	+0.7
	1.4nm,0.6s,baz=278,slow=4.7,SNR=7.0						
MKAR	**Makanchi Array**	**78.16**	**320**	P	P	02 07 13.5	-0.1
	0.1nm,0.3s,baz=125,slow=7.2,SNR=2.7						

*NIED **19** 02:02:00, 25.10N×12700E, h29km, Mw4.2 Best double couple: M0 2.02000×10^15 NP1:φs147.00000°, δ44.00000°, λ-7.00000°. NP2:φs242.00000°, δ85.00000°, λ-133.00000°.*

*IDC **19** 02:02:27.2±0.7, 2517N×12681E, h0km, mb4.0/11, mb1 4.1/12, mb1mx4.0/19, mbtmp4.0/12, ML3.3/2, MS3.5/4, Ms1 3.6/4, ms1mx3.1/33, Error ellipse: s-maj=29.2km s-min=15.6km az=80.0*

*ISCJB **19** 02:02:30.7±0.7, 2511N±007×12704E±006, h38km±7km, mb4.1/15, MS4.0/2, Error ellipse: s-maj=12.8km s-min=5.6km az=145.6*

*JMA **19** 02:02:30.4±0.3, 2510N×12701E, h29km, M3.8*

*NEIC **19** 02:02:32.0±0.6, 2520N×12686E, h35km, MG3.8(JMA), Error ellipse: s-maj=19.9km s-min=10.3km az=99.0*

ISC 19 02:02:30.4±2.0, 2513N±006×12701E±006, h21km±15km, n29, σ0§73/31, mb4.1/15, MS4.0/2, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**1.21**	**350**	P	**Pn**	**02 02 52.1**	**0.0**
JAGN	**Aguni-jima**	**1.47**	**8**	P	**Pn**	**02 02 56.1**	**+0.5**
JOGS	**Gusukube**	**1.50**	**256**	P	**Pn**	**02 02 56.2**	**0.0**
JMJ	**Miyako jima 2**	**1.59**	**259**	P	**Pn**	**02 02 57.4**	**0.0**
JMJ				eS	**Sn**	**02 03 17.7**	**+0.4**
JOW	**Kunigami**	**2.04**	**34**	P	**Pn**	**02 03 04.6**	**+1.1**
JOW	**Kunigami**	**2.04**	**34**	Pn	**Pn**	**02 03 04.8**	**+1.3**
	8.0nm,0.3s,baz=219,slow=15,SNR=27						
JOW				Sn	**Sn**	**02 03 28.6**	**+0.3**
	59nm,0.3s,baz=139,slow=21,SNR=7.2						
JTJ	**Tarama**	**2.15**	**257**	P	**Pn**	**02 03 04.8**	**-0.3**
JTJ				eS	**Sn**	**02 03 31.2**	**0.0**
JIJ	**Ishigaki jima**	**2.72**	**254**	P	**Pn**	**02 03 12.3**	**-0.6**
JKRS	**Kuro-shima**	**2.87**	**253**	P	**Pn**	**02 03 15.0**	**0.0**
JTK	**Tokunoshima**	**3.16**	**33**	P	**Pn**	**02 03 20.1**	**+1.1**
JMZ	**Minamidaito 2**	**3.86**	**79**	P	**Pn**	**02 03 26.8**	**-1.8**
JAM	**Amami Oshima**	**4.00**	**35**	P	**Pn**	**02 03 30.6**	**0.0**
JNU	**Nakatsue**	**8.65**	**22**	Pn	**Pn**	**02 04 33.8**	**-0.6**
	0.6nm,0.3s,baz=243,slow=14,SNR=3.4						
JNU				LR	LR	02 08 16.9	
	comp=Z,145nm,21.9s,baz=329,slow=40						
KSRS	**Korea Array**	**12.31**	**3**	LR	LR	02 10 34.4	
	comp=Z,93nm,19.5s,baz=6.0,slow=40						
SONM	**Songino Array**	**27.91**	**330**	P	**P**	**02 08 17.5**	**-1.4**
	1.7nm,0.5s,mb3.9,baz=144,slow=10,SNR=14						
SONM				LR	LR	02 21 02.5	
	comp=Z,156nm,18.6s,MS3.6,baz=151,slow=40						
TAPN	**Taplejung**	**35.23**	**282**	eP	**P**	**02 09 24.5**	**+1.1**
	12nm,0.8s,mb4.9						
ODAN	**Odare**	**35.56**	**282**	eP	**P**	**02 09 26.5**	**+0.2**
	22nm,0.7s,mb5.2						
JIRN	**Jiri**	**36.54**	**283**	eP	**P**	**02 09 35.5**	**+0.8**
	7.5nm,0.7s,mb4.6						
KOLN	**Koldanda**	**38.81**	**284**	eP	**P**	**02 09 54.1**	**+0.2**
	14nm,0.9s,mb4.7						
MKAR	**Makanchi Array**	**41.46**	**313**	P	**P**	**02 10 14.7**	**-1.0**
	4.7nm,0.6s,mb4.3,baz=98,slow=10,SNR=54						
FITZ	**Fitzroy Crossi**	**42.99**	**182**	P	**P**	**02 10 27.9**	**-0.4**
	1.4nm,0.7s,mb3.8,baz=46,slow=7.1,SNR=5.2						
WRA	**Warramunga Arr**	**45.37**	**170**	P	**P**	**02 10 47.9**	**+0.6**
	1.7nm,0.7s,mb4.0,baz=351,slow=8.4,SNR=11						
ASAR	**Alice Springs**	**48.97**	**172**	P	**P**	**02 11 16.3**	**+0.9**
	0.7nm,0.6s,mb3.9,baz=357,slow=13,SNR=12						
ARCES	**ARCESS Array B**	**70.62**	**339**	P	**P**	**02 13 43.0**	**-0.8**
	2.3nm,0.9s,mb4.1,baz=60,slow=7.3,SNR=6.5						
FINES	**FINESS Array B**	**73.28**	**330**	P	**P**	**02 13 59.5**	**-0.4**
	3.9nm,1.1s,mb4.2,baz=78,slow=5.1,SNR=7.6						
AKASG	**Malin Array Be**	**75.65**	**319**	P	**P**	**02 14 13.1**	**-0.8**
	0.3nm,0.4s,mb3.6,baz=57,slow=6.0,SNR=5.8						
BRTR	**Keskin Array B**	**76.84**	**308**	P	**P**	**02 14 21.7**	**+0.8**
	0.3nm,0.4s,mb3.6,baz=76,slow=6.1,SNR=5.6						
NOA	**NORSAR Array B**	**79.81**	**334**	P	**P**	**02 14 36.0**	**-0.9**
	1.0nm,0.7s,mb3.8,baz=53,slow=5.5,SNR=4.0						
NOA				LR	LR	02 54 20.3	
	comp=Z,129nm,19.6s,MS4.3,baz=275,slow=39						
YKA	**Yellowknife Ar**	**79.98**	**25**	P	**P**	**02 14 38.3**	**+0.6**
	0.5nm,0.7s,mb3.5,baz=296,slow=5.5,SNR=8.1						

IDC 19 02:10:07.4±4.9, 907S×12422E, h95km±58km, mb3.1/1, mb1 3.3/4, mb1mx3.1/14, mbtmp3.2/4, ML3.4/3, Error ellipse: s-maj=81.9km s-min=29.8km az=41.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**1.26**	**206**	P	Pn	02 10 30.7	+0.3
	6.3nm,0.3s,baz=259,slow=16,SNR=14						
BATI				S	Sn	02 10 47.8	0.0
	36nm,0.3s,baz=12,slow=7.6,SNR=25						
FITZ	**Fitzroy Crossi**	**9.08**	**171**	P	Pn	02 12 14.1	-1.5
	0.5nm,0.3s,baz=3.6,slow=19,SNR=38						
FITZ				S	Sn	02 13 48.7	-7.5
	1.0nm,0.3s,baz=37,slow=0.3,SNR=12						
WRA	**Warramunga Arr**	**14.58**	**139**	P	Pn	02 13 28.3	-0.6
	0.2nm,0.3s,baz=319,slow=14,SNR=8.4						
WRA				S	Sn	02 15 59.5	-10
	0.3nm,0.3s,baz=312,slow=24,SNR=8.0						
ASAR	**Alice Springs**	**17.22**	**149**	P	Pn	02 14 03.2	+1.3
	0.2nm,0.3s,baz=318,slow=11,SNR=8.7						
ASAR				S	S	02 17 06.1	-8.2
	0.1nm,0.3s,baz=320,slow=23,SNR=3.3						
MKAR	**Makanchi Array**	**66.98**	**330**	P	P	02 20 50.0	+0.1
	0.1nm,0.4s,baz=115,slow=6.5,SNR=3.7						

*ISCJB **19** 02:12:01.4±1.2, 557S±01×1465E±06, h10km, mb4.2/7, MS3.9/4, Error ellipse: s-maj=46.4km s-min=17.2km az=173.3*

*IDC **19** 02:12:01.7±1.9, 5578S×14614E, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.1/12, mbtmp4.1/5, MS4.0/5, Ms1 4.0/5, ms1mx3.7/14, Error ellipse: s-maj=140.6km s-min=22.9km az=82.0*

*NEIC **19** 02:12:03.0±0.8, 5577S×14621E, h10km, mb4.3/5, Error ellipse: s-maj=39.7km s-min=15.0km az=81.0*

ISC 19 02:12:03.6±1.2, 557S±01×1464E±06, h10km, n24, σ0§71/11, mb4.2/7, MS3.9/4, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**19.85**	**63**	LR	LR	02 22 33.5	
	comp=Z,558nm,20.8s,baz=194,slow=32						
CNB	**Canberra Magne**	**20.50**	**7**	eP	**P**	**02 16 41.8**	**+0.2**
	14nm,1.1s						
STKA	**Stephens Creek**	**24.06**	**350**	eP	**P**	**02 17 19.6**	**+0.8**
	6.8nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**24.06**	**350**	P	**P**	**02 17 19.1**	**+0.3**
	6.8nm,0.9s,mb4.1,baz=166,slow=7.5,SNR=12						
URZ	**Urewera**	**26.96**	**63**	LR	LR	02 27 32.9	
	comp=Z,182nm,18.5s,MS3.7,baz=132,slow=34						
FORT	**Forrest**	**28.09**	**325**	eP	**P**	**02 17 55.3**	**+0.1**
	11nm,0.8s,mb4.5						
NWAO	**Narrogin (SRO)**	**30.48**	**306**	LR	LR	02 28 08.9	
	comp=Z,294nm,18.2s,MS4.0,baz=62,slow=32						
ASAR	**Alice Springs**	**33.31**	**339**	P	**P**	**02 18 41.6**	**+0.3**
	1.4nm,0.6s,mb4.0,baz=166,slow=9.5,SNR=16						
QSPA	**South Pole Qui**	**34.40**	**180**	P	**P**	**02 18 50.2**	**0.0**
	2.6nm,1.1s,mb4.1,baz=0.2,slow=9.2,SNR=3.8						
CTA	**Charters Tower**	**35.57**	**360**	LR	LR	02 32 12.1	
	comp=Z,189nm,21.1s,MS3.8,baz=215,slow=34						
WB2	**Warramunga Arr**	**36.84**	**341**	eP	**P**	**02 19 10.9**	**-0.9**
WRA	**Warramunga Arr**	**36.84**	**341**	P	**P**	**02 19 11.3**	**-0.5**
	5.0nm,0.7s,mb4.5,baz=165,slow=7.6,SNR=29						
MAW	**Mawson**	**38.18**	**218**	LR	LR	02 35 09.5	
	comp=Z,235nm,19.6s,MS4.0,baz=319,slow=36						
MBWA	**Marble Bar**	**39.82**	**319**	eP	**P**	**02 19 37.7**	**+0.9**
	8.0nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**40.71**	**329**	eP	**P**	**02 19 41.5**	**-2.7**
	3.4nm,0.9s,mb4.0						
FITZ	**Fitzroy Crossi**	**40.71**	**329**	P	**P**	**02 19 44.4**	**+0.2**
	2.0nm,1.0s,mb3.7,baz=132,slow=14,SNR=3.1						
TBI	**Tubuai**	**56.53**	**83**	eLR	LR	02 21 28.8	
	328nm,30.2s						
PPT	**Papeete**	**61.09**	**79**	eLR	LR	02 22 18.0	
	314nm,25.8s,baz=247						
YKA	**Yellowknife Ar**	**140.48**	**46**	PKP	PKPdf	02 31 31.5	0.0
	0.1nm,0.5s,baz=244,slow=2.6,SNR=3.2						
AKASG	**Malin Array Be**	**143.17**	**289**	PKhKP		02 31 32.3	
	0.3nm,0.4s,baz=100,slow=2.7,SNR=3.7						
KEST	**Kesra**	**144.71**	**254**	PKP	PKPdf	02 31 40.5	+0.7
	3.1nm,1.0s,baz=252,slow=4.5,SNR=5.4						
FINES	**FINESS Array B**	**149.34**	**306**	PKPbc	PKPbc	02 31 50.7	-0.4
	0.6nm,0.4s,baz=111,slow=8.4,SNR=5.0						
GERES	**GERESS Array B**	**150.73**	**277**	PKPbc	PKPbc	02 31 53.1	-1.8
	1.4nm,0.9s,baz=122,slow=1.7,SNR=5.0						
ARCES	**ARCESS Array B**	**150.91**	**322**	PKPbc	PKPbc	02 31 52.8	-1.9
	2.6nm,0.9s,baz=64,slow=5.5,SNR=4.9						

IDC 19 03:06:20.5±7.2, 439N×7809W, h99km±71km, mb3.0/1, mb1 3.3/3, mb1mx3.1/18, mbtmp3.2/3, ML2.8/2, Error ellipse: s-maj=75.6km s-min=48.6km az=105.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**3.77**	**83**	P	Pn	03 07 17.9	+1.3
	3.6nm,0.3s,baz=282,slow=16,SNR=8.2						
SDV	**Santo Domingo**	**8.65**	**59**	P	Pn	03 08 21.3	-1.5
	0.9nm,0.3s,baz=226,slow=12,SNR=8.2						
SDV				S	Sn	03 10 00.3	+1.6
	0.2nm,0.3s,baz=62,slow=18,SNR=2.5						
YKA	**Yellowknife Ar**	**63.33**	**342**	P	P	03 16 43.0	+0.3
	3.8nm,0.8s,baz=128,slow=7.4,SNR=6.7						
ASAR	**Alice Springs**	**143.68**	**235**	PKP	PKPdf	03 25 42.4	-2.3
	0.4nm,0.6s,baz=132,slow=4.1,SNR=3.8						
WRA	**Warramunga Arr**	**144.84**	**241**	PKP	PKPdf	03 25 46.6	-0.2
	0.8nm,0.7s,baz=108,slow=3.0,SNR=6.4						

*IDC **19** 03:23:53.3±0.6, 4.19N×12682E, h0km, mb4.4/14, mb1 4.4/14, mb1mx4.4/19, mbtmp4.3/14, MS4.2/3, Ms1 4.2/3, ms1mx3.3/25, Error ellipse: s-maj=43.6km s-min=13.3km az=77.0*

*NEIC **19** 03:23:54.8±0.4, 4.22N×12694E, h10km, mb4.6/11, Error ellipse: s-maj=27.3km s-min=7.6km az=77.0*

*BJI **19** 03:23:54.7, 4.20N×12690E, h10km, mB4.8, mb4.3*

*MOS **19** 03:23:58.8±1.3, 4.51N×12660E, h33km, mb4.7/6, Error ellipse: s-maj=52.4km s-min=12.9km az=112.4*

*ISCJB **19** 03:24:04.1±1.9, 4.15N±006×1267E±01.1, h103km±17km, mb4.4/33, Error ellipse: s-maj=22.8km s-min=8.6km az=162.3*

ISC 19 03:24:06.9±1.5, 412N±006×1267E±01, h114km±14km, n60, σ1§10/54, mb4.4/33, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**3.22**	**214**	P	**Pn**	**03 24 54.8**	**-1.2**
	0.0nm,0.0s						
LBMI	**Labuha**	**4.79**	**170**	P	**Pn**	**03 25 19.2**	**+2.1**
	0.0nm,0.0s						
KDI	**Kendari**	**8.98**	**207**	P	**Pn**	**03 26 14.9**	**+1.1**
	0.0nm,0.0s						
MTNI	**Mataram**	**16.43**	**220**	P	**Pn**	**03 27 58.2**	**+7.3**
	57nm,0.9s						
KMMI	**Kalianget**	**16.84**	**229**	P	**Pn**	**03 28 02.5**	**+6.5**
	46nm,1.5s						
KAKA	**Kakadu**	**17.68**	**161**	eP	**Pn**	**03 27 59.0**	**-7.0**
	14nm,0.6s						
KNA	**Kununurra**	**19.85**	**174**	P	**P**	**03 28 29.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**22.10**	**183**	eP	**P**	**03 28 50.4**	**-2.7**
	7.9nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**22.10**	**183**	P	**P**	**03 28 51.8**	**-1.3**
	7.7nm,1.0s,mb4.0,baz=6.0,slow=11,SNR=18						
PMG	**Port Moresby**	**24.45**	**123**	LR	LR	03 38 11.7	
	comp=Z,125nm,19.1s,baz=129,slow=35						
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**03 29 18.9**	**-2.1**
	17nm,0.7s,mb4.6,baz=342,slow=11,SNR=67						
WB2	**Warramunga Arr**	**25.07**	**163**	eP	**P**	**03 29 19.0**	**-2.0**
ASAR	**Alice Springs**	**28.50**	**166**	P	**P**	**03 29 50.8**	**-0.9**
	1.2nm,0.5s,mb3.8,baz=350,slow=7.5,SNR=18						
ASAR				PcP	PcP	03 33 03.0	+2.1
	0.7nm,0.6s,baz=355,slow=2.8,SNR=4.6						
NJ2	**Nanjing**	**28.74**	**346**	eP	**P**	**03 29 54.3**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
KSRS	**Korea Array**	**33.20**	**2**	P	**P**	**03 30 31.8**	**-1.0**
	comp=Z,1.4nm,0.6s,mb4.0,baz=179,slow=10,SNR=3.4						
XAN	**Xi'an**	**34.04**	**333**	P	**P**	**03 30 38.8**	**-1.4**
XAN				AP	pP	03 30 45.9	-20
XAN				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.3						
FORT	**Forrest**	**34.72**	**178**	eP	**P**	**03 30 47.2**	**+1.1**
	comp=Z,8.9nm,0.6s,mb4.8						
KLBR	**Kellerberrin**	**36.51**	**193**	eP	**P**	**03 31 01.9**	**+0.5**
	comp=Z,12nm,0.7s,mb5.0						
BJT	**Baijiatuau**	**36.98**	**347**	eP	**P**	**03 31 04.6**	**-0.7**
	comp=Z,10nm,0.8s,mb4.8						
BJT	**Baijiatuau**	**36.98**	**347**	eP	**P**	**03 31 04.6**	**-0.7**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MUN	**Mundaring**	**37.25**	**195**	eP	**P**	**03 31 08.3**	**+0.7**
NWAO	**Narrogin (SRO)**	**37.91**	**193**	P	**P**	**03 31 13.9**	**+0.7**
	comp=Z,14nm,1.1s,mb4.7,baz=34,slow=8.5,SNR=4.3						
STKA	**Stephens Creek**	**38.51**	**159**	eP	**P**	**03 31 16.9**	**-1.4**
	comp=Z,5.3nm,0.5s,mb4.6						
STKA	**Stephens Creek**	**38.51**	**159**	P	**P**	**03 31 17.5**	**-0.8**
	comp=Z,8.4nm,0.6s,mb4.8,baz=334,slow=8.9,SNR=24						
STKA				PcP	PcP	03 33 30.6	+1.7
	comp=Z,1.8nm,0.6s,baz=336,slow=5.2,SNR=3.5						
ARMA	**Armidale**	**41.82**	**147**	eP	**P**	**03 31 46.0**	**+0.4**
TAPN	**Taplejung**	**43.74**	**306**	eP	**P**	**03 32 01.5**	**+0.3**
	comp=Z,8.3nm,0.7s,mb4.6						
ODAN	**Odare**	**43.79**	**305**	eP	**P**	**03 32 00.7**	**-0.9**
	comp=Z,16nm,0.6s,mb4.9						
JIRN	**Jiri**	**45.09**	**306**	eP	**P**	**03 32 12.0**	**0.0**
	comp=Z,9.7nm,0.7s,mb4.6						
ULN	**Ulaanbaatar**	**46.73**	**342**	eP	**P**	**03 32 24.3**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.0						
ULN	**Ulaanbaatar**	**46.73**	**342**	i/eP	**P**	**03 32 25.8**	**+1.3**
SONM	**Songino Array**	**46.91**	**341**	P	**P**	**03 32 25.8**	**-0.1**
	comp=Z,1.4nm,0.5s,mb3.9,baz=155,slow=7.9,SNR=10						
SONM				PcP	PcP	03 33 58.9	+2.2
	comp=Z,0.7nm,0.8s,baz=143,slow=4.4,SNR=3.8						
KOLN	**Koldanda**	**47.25**	**305**	eP	**P**	**03 32 27.3**	**-1.6**
	comp=Z,20nm,0.6s,mb5.0						
BOD	**Bodaibo**	**54.48**	**352**	eP	**P**	**03 33 21.7**	**-0.8**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
MKAR	**Makanchi Array**	**57.20**	**325**	P	**P**	**03 33 42.5**	**+0.4**
	comp=Z,3.0nm,0.6s,mb4.5,baz=119,slow=8.1,SNR=21						
**

URZ	**Urewera**	**16.73 196**	P	**P**	**04 46 01.5**	**-2.6**
	5.2nm,0.3s,baz=20,slow=3.2,SNR=22					
URZ			S	**S**	**04 49 03.0**	**-0.1**
	1.4nm,0.3s,baz=354,slow=19,SNR=6.8					
RPZ	**Rata Peaks**	**23.57 202**	P	**P**	**04 47 12.3**	**-0.1**
	25nm,0.6s,mb4.7,baz=319,slow=11,SNR=5.4					
CTA	**Charters Tower**	**34.25 267**	*eP*	**P**	**04 48 46.8**	**+0.2**
	4.6nm,0.7s,mb4.1					
CTA	**Charters Tower**	**34.25 267**	P	**P**	**04 48 45.7**	**-0.9**
	2.9nm,0.6s,mb4.0,baz=94,slow=14,SNR=6.6					
CTAO	**Charters Tower**	**34.25 267**	*eP*	**P**	**04 48 46.1**	**-0.6**
	5.6nm,0.6s,mb4.3					
TAU	**Tasmania Unive**	**36.04 227**	P	**P**	**04 49 03.8**	**+2.3**
	4.4nm,0.6s,mb4.2					
STKA	**Stephens Creek**	**37.87 246**	*eP*	**P**	**04 49 17.3**	**+0.3**
	1.4nm,0.4s,mb3.7					
STKA	**Stephens Creek**	**37.87 246**	P	**P**	**04 49 18.2**	**+1.1**
	1.5nm,0.4s,mb3.8,baz=111,slow=14,SNR=7.1					
ASAR	**Alice Springs**	**45.02 258**	P	**P**	**04 50 14.7**	**-0.1**
	4.0nm,0.7s,mb3.8,baz=100,slow=7.9,SNR=29					
WB2	**Warramunga Arr**	**45.26 264**	*eP*	**P**	**04 50 15.7**	**-1.0**
WRA	**Warramunga Arr**	**45.27 264**	P	**P**	**04 50 15.7**	**-1.1**
	1.0nm,0.3s,mb3.6,baz=95,slow=8.3,SNR=40					
KAKA	**Kakadu**	**48.92 272**	*eP*	**P**	**04 50 43.5**	**-1.4**
	2.1nm,0.4s,mb3.8					
FORT	**Forrest**	**49.45 248**	*eP*	**P**	**04 50 48.3**	**-0.3**
	35nm,0.6s,mb4.9					
FITZ	**Fitzroy Crossi**	**53.70 263**	*eP*	**P**	**04 51 20.0**	**-0.1**
	5.3nm,1.4s,mb3.7					
FITZ	**Fitzroy Crossi**	**53.70 263**	P	**P**	**04 51 20.2**	**+0.1**
	1.7nm,0.6s,mb3.6,baz=102,slow=10.0,SNR=9.9					
KLBR	**Kellerberrin**	**58.14 246**	*eP*	**P**	**04 51 53.3**	**+2.1**
	6.9nm,0.5s,mb4.3					
MBWA	**Marble Bar**	**58.36 258**	*eP*	**P**	**04 51 52.1**	**-0.8**
	2.6nm,0.6s,mb3.8					
NWAO	**Narrogin (SRO)**	**58.40 244**	*eP*	**P**	**04 51 55.0**	**+2.0**
	3.1nm,0.6s,mb3.9					
NWAO	**Narrogin (SRO)**	**58.40 244**	P	**P**	**04 51 54.6**	**+1.6**
	9.1nm,1.0s,mb4.2,baz=129,slow=10,SNR=3.5					
MKAR	**Makanchi Array**	**113.05 313**	PKiKP	PKiKP	05 00 28.2	-1.3
	0.2nm,0.2s,baz=96,slow=1.4,SNR=2.1					
AKASG	**Malin Array Be**	**144.98 331**	PKPbc	PKPdf	05 01 25.0	-4.3
	0.9nm,0.4s,baz=40,slow=4.2,SNR=7.8					
BRTR	**Keskin Array B**	**148.67 311**	PKPbc	PKPbc	05 01 37.5	-2.6
	0.7nm,0.7s,baz=134,slow=4.9,SNR=5.9					

ISCJB ***19*** *04:46:12.4±0.6, 954N±004×7825W±004, h33km, Error ellipse: s-maj=7.2km s-min=5.2km az=44.9*
CASC ***19*** *04:46:14.6±2.1, 938N×7839W, h20km±13km, MD4.6*

ISC 19 04:46:14.3±0.6, 945N±004×7825W±004, h35km, n18, σ0§93/24, 4C-5D, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD1	**Univ de Panama**	**0.93**	**165**	*e*P	**Pn**	**04 46 30.4**	**-0.5**
UPD1				*e*S	**Sn**	**04 46 43.4**	**+0.5**
UPIG		**1.35**	**250**	⇑*i*P	**Pn**	**04 46 36.1**	**-0.5**
UPIG				*e*S	**Sn**	**04 46 52.0**	**-1.2**
BCIP	**Isla Barro Col**	**1.59**	**260**	⇑*e*P	**Pn**	**04 46 39.9**	**0.0**
BCIP				*e*S	**Sn**	**04 46 59.7**	**+0.5**
AZU	**Azuero**	**2.59**	**231**	⇑*i*P	**Pn**	**04 46 53.7**	**0.0**
AZU				*e*S	**Sn**	**04 47 23.4**	**-0.7**
CNI	**Changuinola**	**4.21**	**270**	*e*P	**Pn**	**04 47 15.6**	**-0.3**
CNI				*e*S	**Sn**	**04 48 00.5**	**-3.4**
BRU2	**Volcan**	**4.43**	**262**	*e*P	**Pn**	**04 47 19.6**	**+0.6**
BAR1		**5.00**	**268**	*e*P	**Pn**	**04 47 27.9**	**+1.1**
URSC	**Urasca**	**5.46**	**274**	*e*P	**Pn**	**04 47 33.5**	**+0.3**
LCR2	**La Lucha 2**	**5.68**	**273**	⇑*e*P	**Pn**	**04 47 37.0**	**+0.8**
LAJ	**Bijagual**	**5.80**	**275**	*e*P	**Pn**	**04 47 45.7**	**+7.9**
PRS1	**Puriscal**	**6.00**	**276**	*e*P	**Pn**	**04 47 42.5**	**+2.0**
PRS1				*e*S	**Sn**	**04 48 47.4**	**-0.6**
CGA2	**Cerro Gallo 2**	**6.15**	**276**	*e*P	**Pn**	**04 47 44.4**	**+1.8**
JTS	**JuntasAbangare**	**6.65**	**278**	*e*P	**Pn**	**04 47 48.3**	**-1.3**
PCJ	**Portland Cotta**	**8.31**	**7**	⇓*e*P	**Pn**	**04 48 11.1**	**-1.2**
HOJ	**Hope**	**8.62**	**10**	⇓*e*P	**Pn**	**04 48 17.4**	**+0.7**
STH	**Stony Hill**	**8.69**	**9**	⇓*e*P	**Pn**	**04 48 17.2**	**-0.3**
CMJ	**Castle Mountai**	**8.82**	**12**	⇓*e*P	**Pn**	**04 48 19.6**	**+0.3**
SDDR	**Presa de Saban**	**11.63**	**35**	*e*P	**Pn**	**04 48 56.9**	**-0.9**

IDC ***19*** *05:11:41.5±1.0, 2246N×9370E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/22, mbtmp3.9/8, MS3.3/1, Ms1 3.3/1, ms1mx2.8/37, Error ellipse: s-maj=51.5km s-min=18.1km az=54.0*
ISCJB ***19*** *05:11:45.0±1.8, 2246N±009×9369E±010, h38km±15km, mb3.9/9, Error ellipse: s-maj=16.4km s-min=14.3km az=42.8*
BJI ***19*** *05:11:45.4, 2250N×9370E, h32km*
NEIC ***19*** *05:11:46.8±0.6, 2249N×9373E, h35km, mb3.7/1, Error ellipse: s-maj=26.5km s-min=10.2km az=58.0*

ISC 19 05:11:47.5±1.6, 2251N±008×938E±01, h40km±13km, n20, σ0§60/22, mb3.9/9, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**2.26**	**4**	*e*P	**Pn**	**05 12 21.0**	**-1.4**
IMP				*e*S	**Sn**	**05 12 50.0**	**+0.9**
SHL	**Shillong**	**3.49**	**331**	*e*P	**Pn**	**05 12 39.7**	**+0.4**
ODAN	**Odare**	**7.23**	**308**	*e*P	**Pn**	**05 13 31.8**	**+1.1**
	35nm,0.5s						
TAPN	**Taplejung**	**7.30**	**312**	*e*P	**Pn**	**05 13 32.2**	**+0.5**
	20nm,0.3s						
LSA	**Lhasa**	**7.53**	**342**	P	**Pn**	**05 13 35.6**	**+0.8**
LSA	**Lhasa**	**7.53**	**342**	*e*P	**Pn**	**05 13 34.6**	**-0.2**
	9.8nm,0.4s						
LSA				*e*Sn	**Sn**	**05 14 58.0**	**-0.9**
JIRN	**Jiri**	**8.56**	**308**	*e*P	**Pn**	**05 13 49.0**	**0.0**
	19nm,0.3s						
KKN	**Kakani**	**9.31**	**306**	*e*P	**Pn**	**05 13 58.9**	**-0.2**
	8.0nm,0.2s						
GKN	**Gorkha**	**9.90**	**305**	*e*P	**Pn**	**05 14 06.8**	**-0.5**
	27nm,0.3s						
KOLN	**Koldanda**	**10.59**	**302**	*e*P	**Pn**	**05 14 16.1**	**-0.6**
	15nm,0.2s						
AAK	**Ala-Archa**	**25.70**	**326**	*e*P	**P**	**05 17 13.7**	**-0.1**
	1.5nm,0.7s,mb3.6						
MKAR	**Makanchi Array**	**25.94**	**342**	P	**P**	**05 17 16.2**	**+0.3**
	4.2nm,0.6s,mb4.1,baz=150,slow=9.8,SNR=38						
SONM	**Songino Array**	**27.22**	**19**	P	**P**	**05 17 27.7**	**+0.3**
	0.6nm,0.7s,mb3.2,baz=196,slow=8.8,SNR=4.5						
SONM				LR	LR	05 28 53.8	
	comp=Z,61nm,18.1s,baz=166,slow=38						
AKTK	**Aktyubinsk**	**39.41**	**324**	P	**P**	**05 19 13.7**	**+0.4**
AKTO	**Aktyubinsk**	**39.41**	**324**	P	**P**	**05 19 13.7**	**+0.4**
	1.3nm,0.5s,mb3.9,baz=134,slow=6.8,SNR=4.3						
AKASG	**Malin Array Be**	**56.87**	**317**	P	**P**	**05 21 27.6**	**-0.5**
	1.1nm,0.6s,mb4.1,baz=84,slow=6.2,SNR=5.5						
WRA	**Warramunga Arr**	**57.88**	**134**	P	**P**	**05 21 35.1**	**-0.5**
	1.0nm,0.8s,mb3.9,baz=319,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**60.25**	**137**	P	**P**	**05 21 52.4**	**+0.5**
	0.5nm,0.5s,mb3.9,baz=320,slow=6.6,SNR=7.6						
ARCES	**ARCESS Array B**	**61.52**	**338**	P	**P**	**05 21 59.4**	**-0.6**
	2.4nm,0.9s,mb4.3,baz=108,slow=7.8,SNR=8.0						
GERES	**GERESS Array B**	**66.97**	**315**	P	**P**	**05 22 36.0**	**0.0**
	0.4nm,0.5s,mb3.7,baz=70,slow=5.8,SNR=7.6						

IDC 19 05:17:52.0±29.0, 2094S×17805W, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/14, mbtmp4.2/4, 1D, Error ellipse: s-maj=557.0km s-min=141.1km az=90.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.40**	**265**	*e*P	P	05 24 37.1	+4.6
	2.6nm,0.4s						
STKA	**Stephens Creek**	**37.55**	**245**	⇓*i*P	P	05 25 08.2	0.0
	1.6nm,0.4s						
STKA	**Stephens Creek**	**37.55**	**245**	P	P	05 25 07.5	-0.6
	1.7nm,0.4s,baz=94,slow=9.9,SNR=6.1						
ASAR	**Alice Springs**	**44.37**	**257**	P	P	05 26 04.5	+0.1
	2.3nm,0.7s,baz=95,slow=7.9,SNR=22						
WB2	**Warramunga Arr**	**44.48**	**262**	*e*P	P	05 26 05.8	+0.4
WRA	**Warramunga Arr**	**44.49**	**262**	P	P	05 26 05.9	+0.4
	1.3nm,0.3s,baz=96,slow=8.2,SNR=103						
FITZ	**Fitzroy Crossi**	**52.92**	**263**	*e*P	P	05 27 10.0	-0.4
	3.1nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.92**	**263**	P	P	05 27 10.2	-0.2
	1.0nm,0.3s,baz=75,slow=12,SNR=22						

CASC 19 05:31:33.5±1.6, 1367N×9079W, h36km±506km, MD3.6, 4C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.74**	**14**	⇑*e*P	Pn	05 31 48.7	+1.3
FUG	**Fuego 3**	**0.77**	**356**	⇑*e*P	Pn	05 31 48.7	+0.8
JAT	**Jato**	**1.04**	**308**	⇑*e*P	Pn	05 31 52.8	+1.1
JAT				*e*S	Sn	05 32 03.8	-1.2
RTR	**El Retiro**	**1.14**	**79**	*e*P	x	05 31 53.4	
RTR				*e*S	x	05 32 08.8	
SBLS	**San Blas**	**1.15**	**82**	⇓*e*P	x	05 31 53.3	
SBLS				*e*S	x	05 32 08.4	
RBDL	**Robledal**	**1.16**	**68**	*e*P	x	05 31 53.1	
RBDL				*e*S	x	05 32 09.0	
SNJE	**San Jose**	**1.17**	**80**	⇑*e*P	x	05 31 53.8	
SNJE				*e*S	x	05 32 08.8	
BOQS	**Boqueron**	**1.47**	**87**	*e*P	x	05 31 57.3	
BOQS				*e*S	x	05 32 17.7	
MTO2	**Montecristo 2**	**1.56**	**62**	*e*P	x	05 32 00.4	
LFRS	**El Faro**	**1.68**	**91**	*e*P	x	05 32 01.0	
LFRS				*e*S	x	05 32 21.3	
LBRS	**Las Brisas**	**1.70**	**88**	*e*P	x	05 32 00.9	
LCBS	**La Ceiba**	**1.76**	**90**	*e*P	x	05 32 02.0	
LCBS				*e*S	x	05 32 23.2	
SNVI	**San Vicente**	**1.90**	**92**	*e*P	x	05 32 03.6	
SNVI				*e*S	x	05 32 27.7	

MOS ***19*** *05:40:38.3±1.8, 5503N×11059E, h24km, mb4.2/1, Error ellipse: s-maj=71.2km s-min=38.8km az=53.1*

BYKL 19 05:40:38.2±0.2, 5507N×11053E, h7km±5km, 8C-1D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YLYR	**Ulyunkhan**	**0.41**	**118**	⇑*i*PG	Pg	05 40 45.8	-0.4
YLYR				*i*		05 40 51.7	
YLYR				pmax	pmax		
	comp=Z,90nm,0.1s						
YLYR				smax			
	comp=N,968nm,0.2s						
YLYR	**Ulyunkhan**	**0.41**	**118**	⇓*i*Pg	Pg	05 40 45.8	-0.4
	comp=N,401nm,0.2s						
YLYR				⇑*i*Pg	Pg	05 40 45.8	-0.4
	comp=N,615nm,0.2s						
YLYR				⇑*i*Pg	Pg	05 40 45.8	-0.4
	comp=N,973nm,0.2s						
YLYR				*e*Sg	Sg	05 40 51.7	+0.1
YLYR				Pmax			
	comp=N,687nm,0.2s						
YLYR				Smax			
	comp=N,958nm,0.2s						
KMO	**Kumora**	**0.90**	**25**	*e*Pg	Pg	05 40 54.7	-0.8
KMO				*e*Sg	Sg	05 41 06.5	-0.8
KMO				Pmax			
	comp=N,37nm,0.2s						
KMO				Smax			
	comp=N,102nm,0.3s						
NIZ	**Nizh Angarsk**	**0.90**	**322**	⇑*i*Pg	Pg	05 40 54.8	-0.7
NIZ				*e*Sg	Sg	05 41 07.3	0.0
NIZ				*e*Sb	Sb	05 41 11.1	+2.7
NIZ				Pmax			
	comp=N,76nm,0.3s						
NIZ				max			
	comp=N,167nm,0.3s						
YOA	**Uoyan**	**1.26**	**32**	*e*PN	Pn	05 41 01.8	-0.4
YOA				*i*		05 41 18.4	
YOA				pmax	pmax		
	comp=Z,212nm,0.2s						
YOA				smax			
	comp=E,479nm,0.3s						
YOA	**Uoyan**	**1.26**	**32**	*e*Sg	Sg	05 41 19.7	+0.9
YOA				Smax			
	comp=E,479nm,0.5s						
SYVR	**Suvo**	**1.45**	**193**	⇑*i*Pg	Pg	05 41 04.4	-1.5
SYVR				*e*		05 41 11.4	
SYVR				*e*Sg	Sg	05 41 24.5	-0.2
SYVR				max			
	comp=E,30nm,0.5s						
SYVR				Smax			
	comp=E,183nm,0.7s						
UKT	**Uakit**	**1.82**	**75**	⇑*e*PN	Pn	05 41 08.8	-1.1
UKT				*i*		05 41 10.1	
UKT				*e*		05 41 33.0	
UKT				pmax	pmax		
	comp=Z,49nm,0.4s						
UKT				smax			
	comp=N,188nm,0.5s						
UKT	**Uakit**	**1.82**	**75**	⇑*i*Pg	Pg	05 41 10.2	-2.9
UKT				*e*Sg	Sg	05 41 34.4	-2.2
UKT				Pmax			
	comp=N,55nm,0.5s						
UKT				Smax			
	comp=N,187nm,0.4s						
SVKR	**Severomuysk**	**2.01**	**57**	*e*PN	Pn	05 41 14.4	+1.9
SVKR				*e*		05 41 40.8	
SVKR				pmax	pmax		
	comp=Z,98nm,0.3s						
SVKR				smax			
	comp=E,652nm,0.6s						
SVKR	**Severomuysk**	**2.01**	**57**	*e*Pg	Pg	05 41 14.3	-2.5
SVKR				*e*Sg	Sg	05 41 41.4	-1.4
SVKR				Pmax			
	comp=E,107nm,0.4s						
SVKR				Smax			
	comp=E,654nm,0.8s						
MXMB	**Maximikha**	**2.09**	**211**	*e*Pn	Pn	05 41 13.3	-0.3
MXMB				*e*Pg	Pg	05 41 15.7	-2.6
MXMB				*e*Sg	Sg	05 41 45.0	-0.4
MXMB				Pmax			
	comp=E,19nm,0.5s						
MXMB				Smax			
	comp=E,249nm,0.7s						
OGRR	**Ongureny**	**2.23**	**231**	⇑*i*Pn	Pn	05 41 16.2	+0.6
OGRR				*e*Pg	Pg	05 41 17.9	-3.1
OGRR				*e*Sg	Sg	05 41 47.5	-2.4
OGRR				Pmax			
	comp=E,29nm,0.5s						
OGRR				Smax			
	comp=E,93nm,0.8s						
NLYR	**Nelyaty**	**3.25**	**62**	*e*Pg	Pg	05 41 37.5	-2.9
NLYR				*e*Sg	Sg	05 42 18.3	-4.2
BOD	**Bodaibo**	**3.36**	**34**	*e*Pg	Pg	05 41 37.4	-5.2
BOD				*e*Sn	Sn	05 42 10.4	-0.8
BOD				*e*Sg	Sg	05 42 21.7	-4.4
BOD				Pmax			
	comp=E,4.0nm,0.3s						
BOD				Smax			
	comp=E,29nm,0.4s						
TRG	**Tyrgan**	**3.39**	**229**	*e*Pn	Pn	05 41 32.4	+1.0
TRG				*e*Pg	Pg	05 41 40.0	-3.0
TRG				*e*Sg	Sg	05 42 21.8	-5.1
TRG				Pmax			
	comp=E,3.0nm,0.2s						
TRG				Smax			
	comp=E,23nm,0.5s						
CIT	**Chita**	**3.55**	**148**	*e*Pg	Pg	05 41 42.2	-3.9
CIT				*e*Sg	Sg	05 42 27.0	-5.0
CIT				Pmax			
	comp=E,21nm,0.8s						
CIT				Smax			
	comp=E,47nm,0.8s						
FFNB	**Fofonovo**	**3.77**	**218**	*e*Pn	Pn	05 41 37.2	+0.5
FFNB				*e*Sg	Sg	05 42 34.0	-5.2
FFNB				Smax			
	comp=E,63nm,0.8s						
HRMR	**Khuramsha**	**4.06**	**213**	*e*Pg	Pg	05 41 49.9	-6.0
HRMR				*e*Sg	Sg	05 42 44.0	-4.4
HRMR				Pmax			
	comp=E,8.0nm,0.6s						
HRMR				Smax			
	comp=E,100nm,0.6s						
LSTR	**Listvyanka**	**4.68**	**229**	*e*Sg	Sg	05 43 02.9	-5.3
LSTR				Smax			
	comp=E,25nm,1.3s						
CRS	**Chara**	**4.72**	**64**	*e*PN	Pn	05 42 04.1	+14
CRS				*e*		05 43 04.6	
CRS				pmax	pmax		
	comp=Z,25nm,0.6s						
CRS				smax			
	comp=E,44nm,0.9s						
CRS	**Chara**	**4.72**	**64**	*e*Pn	Pn	05 41 51.3	+1.6
CRS				*e*Pg	Pg	05 42 04.1	-4.4
CRS				*e*		05 42 07.7	
CRS				*e*Sg	Sg	05 43 03.4	-6.1
CRS				max			
	comp=E,11nm,1.1s						
CRS				Smax			
	comp=E,45nm,1.6s						
TLY	**Talaya**	**5.34**	**233**	*e*Pg	Pg	05 42 15.7	-4.7
TLY				*e*Sg	Sg	05 43 21.7	-7.8
TLY				Pmax			
	comp=E,4.0nm,0.9s						
TLY				Smax			
	comp=E,17nm,1.5s						
KPC	**Khapcheranga**	**5.49**	**167**	*e*Pn	Pn	05 41 59.5	-0.8
KPC				*e*Pg	Pg	05 42 15.6	-7.7
KPC				*e*		05 42 38.4	
KPC				*e*Sg	Sg	05 43 27.9	-6.5
KPC				Pmax			
	comp=E,2.0nm,0.3s						
KPC				Smax			
	comp=E,38nm,1.3s						
ARS	**Arshan**	**5.78**	**240**	*e*Pn	Pn	05 42 05.4	+1.2
ARS				*e*Sg	Sg	05 43 34.8	-8.7
ARS				max			
	comp=E,4.0nm,0.2s						
ARS				Smax			
	comp=E,60nm,0.6s						
MOY	**Mondy**	**6.65**	**243**	*e*	Pn	05 42 21.4	+5.2
MOY				*e*Sg	Sg	05 44 03.7	-7.7
MOY				Smax			
	comp=E,31nm,1.9s						
ORL	**Orlik**	**6.84**	**253**	*e*Pn	Pn	05 42 19.9	+1.1
ORL				*e*Sn	Sn	05 43 34.1	-2.6
ORL				*e*Sg	Sg	05 44 09.2	-8.3
ORL				max			
	comp=E,1.0nm,0.4s						
ORL				Smax			
	comp=E,25nm,1.0s						

WEL 19 05:42:14.4±0.1, 4093S×17541E, h18km±2km, ML3.7/37, 5C-2D, Error ellipse: s-maj=1.1km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTW	**Mount Morrison**	**0.24**	**163**	⇑P*	Pg	05 42 19.9	0.0
MTW				S*	Sg	05 42 24.2	+0.6
MRZ	**Mangatainoka R**	**0.30**	**25**	⇑P*	Pg	05 42 20.8	-0.1
MRZ				S*	Sg	05 42 25.3	+0.1
CAW	**Cannon Point**	**0.31**	**236**	⇓P*	Pg	05 42 21.3	+0.1
KIW	**Kapiti Island**	**0.39**	**280**	⇓P*	Pg	05 42 22.8	+0.3
TIWZ	**Tintock**	**0.39**	**67**	P*	Pg	05 42 22.3	-0.2
TIWZ				*S*	Sg	05 42 28.2	+0.3
PAWZ	**Paruwai Farm**	**0.45**	**179**	⇑P*	Pb	05 42 23.5	-0.4
PAWZ				S*	Sb	05 42 30.7	+0.5
MSWZ	**Moikau Station**	**0.50**	**194**	⇑P*	Pb	05 42 24.4	-0.3
TRWZ	**Traveller**	**0.51**	**156**	P*	Pb	05 42 24.9	0.0
TRWZ				*e*S*	Sb	05 42 32.5	+0.5
MRW	**Makara Radio**	**0.61**	**241**	P*	Pb	05 42 26.2	-0.4
BHW	**Baring Head**	**0.63**	**220**	P*	Pb	05 42 26.3	-0.6
SNZO	**South Karori**	**0.65**	**234**	P*	Pb	05 42 26.8	-0.5
BFZ	**Birch Farm**	**0.68**	**69**	P*	Pb	05 42 27.7	-0.1
TSZ	**Takapari Road**	**0.97**	**26**	⇑P*	Pb	05 42 32.2	-0.5
DUWZ	**D'Urville Isla**	**1.14**	**276**	P*	Pb	05 42 35.8	+0.2
TUWZ	**Tuamarina**	**1.22**	**245**	P*	Pb	05 42 35.4	-1.5
MOVZ	**Moawhango**	**1.54**	**10**	PN	Pn	05 42 40.9	-0.1
VRZ	**Vera Road**	**1.87**	**344**	PN	Pn	05 42 47.0	+1.4
BKZ	**Black Stump Fm**	**1.95**	**26**	PN	Pn	05 42 45.4	-1.2
THZ	**Tophouse**	**2.06**	**245**	*e*PN	Pn	05 42 46.4	-1.8
HIZ	**Hauiti**	**2.45**	**350**	*e*PN	Pn	05 42 53.9	+0.3
MQZ	**McQueen's Vall**	**3.45**	**216**	SN	Sn	05 43 40.7	-6.9

IDC 19 05:57:47.6±2.7, 2063S×6909W, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.5/15, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=61.6km s-min=49.2km az=178.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.42**	**12**	Pn	Pn	05 58 55.8	-0.1
	0.7nm,0.3s,baz=191,slow=12,SNR=10.0						
SIV	**San Ignacio**	**8.90**	**60**	Pn	Pn	05 59 58.8	+1.2
	0.2nm,0.3s,baz=239,slow=15,SNR=8.5						
TORD	**Torodi Ar. Bea**	**77.23**	**71**	P	P	06 09 43.7	-0.4
	0.2nm,0.6s,baz=263,slow=5.8,SNR=2.8						
YKA	**Yellowknife Ar**	**90.31**	**341**	P	P	06 10 50.3	+0.3
	0.5nm,0.8s,baz=130,slow=4.5,SNR=9.7						

IDC 19 06:36:39.5±1.9, 829S×11809E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.6/16, mbtmp3.5/6, ML3.4/3, Error ellipse: s-maj=91.1km s-min=18.9km az=53.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**5.82**	**110**	Pn	Pn	06 38 08.1	+0.9
	2.9nm,0.3s,baz=56,slow=9.0,SNR=2.2						
FITZ	**Fitzroy Crossi**	**12.21**	**144**	Pn	Pn	06 39 34.5	-0.3
	0.1nm,0.3s,baz=116,slow=18,SNR=3.0						
FITZ				Sn	Sn	06 41 51.3	-0.5
	0.1nm,0.3s,baz=8.7,slow=23,SNR=3.4						
WRA	**Warramunga Arr**	**19.54**	**128**	P	Pn	06 41 08.8	-1.3
	0.1nm,0.3s,baz=303,slow=13,SNR=13						
ASAR	**Alice Springs**	**21.53**	**137**	P	P	06 41 30.7	+0.3
	0.8nm,0.5s,baz=309,slow=9.2,SNR=16						
SONM	**Songino Array**	**56.83**	**351**	P	P	06 46 24.8	-0.8
	0.3nm,0.6s,baz=181,slow=6.5,SNR=3.0						
MKAR	**Makanchi Array**	**63.42**	**333**	P	P	06 47 12.0	+1.0
	0.2nm,0.4s,baz=136,slow=7.7,SNR=5.0						

IDC 19 07:18:26.9±3.1, 448N×7872W, h0km, mb3.3/1, mb1 3.4/2, mb1mx3.2/17, mbtmp3.3/2, ML1.8/1, Error ellipse: s-maj=93.4km s-min=43.7km az=17.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**4.39**	**85**	Pn	Pn	07 19 35.5	+0.6
	1.1nm,0.3s,baz=80,slow=10,SNR=5.0						
YKA	**Yellowknife Ar**	**63.66**	**342**	P	P	07 28 59.8	+0.1
	0.3nm,0.9s,baz=131,slow=7.6,SNR=6.0						
WRA	**Warramunga Arr**	**144.33**	**242**	PKP	PKPdf	07 38 05.2	-0.9
	0.8nm,0.7s,baz=105,slow=3.1,SNR=6.8						

IDC ***19*** *08:02:17.8±0.9, 558N×8266W, h0km, mb3.9/9, mb1 4.2/13, mb1mx4.1/24, mbtmp4.1/13, ML3.8/4, MS4.1/26, Ms1 4.1/26, ms1mx3.9/46, Error ellipse: s-maj=30.6km s-min=15.3km az=49.0*
GCMT ***19*** *08:02:19.4±0.3, 571N×8261W, h22km±1km

BCIP				*e*Sn	**Sn**	**08 04 20.0**	**+5.7**
SJS	**Escuela Geolog**	**4.12**	**339**	*e*P	**Pn**	**08 03 26.0**	**-0.1**
PRS1	**Puriscal**	**4.26**	**336**⇓	*e*P	**Pn**	**08 03 25.9**	**-2.0**
PRS1				*e*S	**Sn**	**08 04 17.3**	**-0.7**
CGA2	**Cerro Gallo 2**	**4.35**	**335**	*e*P	**Pn**	**08 03 28.6**	**-0.6**
CGA2				*e*S	**Sn**	**08 04 20.1**	**-0.1**
JCR	**Jicaral**	**4.52**	**326**	*e*P	**Pn**	**08 03 29.7**	**-1.9**
JCR				*e*S	**Sn**	**08 04 23.3**	**-1.1**
JTS	**JuntasAbangare**	**4.81**	**331**	Pn	**Pn**	**08 03 33.7**	**-1.9**
	71nm,0.3s,baz=151,slow=8.2,SNR=174						
JTS				Sn	**Sn**	**08 04 30.8**	**-0.9**
	124nm,0.3s,baz=303,slow=21,SNR=17						
JTS				LR	LR	08 05 25.5	
	comp=Z,3µm,20.6s,baz=158,slow=36						
FORC	**Fortuna**	**4.85**	**335**⇓	*i*P	**Pn**	**08 03 36.1**	**+0.1**
CUI		**5.25**	**331**⇓	*i*P	**Pn**	**08 03 41.7**	**+0.1**
MADN	**Villa Maderas**	**6.06**	**331**	*e*P	**Pn**	**08 03 54.1**	**+1.3**
SSNN	**San Juan del S**	**6.12**	**328**	*e*P	**Pn**	**08 03 53.6**	**+0.1**
CONN	**Concepcion**	**6.24**	**331**	*e*P	**Pn**	**08 03 56.8**	**+1.6**
TICN	**Ticuantepe**	**6.94**	**329**	*e*P	**Pn**	**08 04 06.3**	**+1.4**
MGAN	**Managua**	**7.05**	**329**	*e*P	**Pn**	**08 04 07.5**	**+1.1**
MGAN				*e*S	**Sn**	**08 05 28.7**	**+1.9**
XAVN	**Gruta Xavier**	**7.09**	**329**	*e*S	**Sn**	**08 05 28.9**	**+1.1**
OTAV	**Otavalo**	**7.10**	**144**	*e*Pn	**Pn**	**08 03 56.8**	**-10**
	10nm,0.6s						
COPN	**Copaltepe**	**7.26**	**327**	*e*P	**Pn**	**08 04 11.4**	**+2.2**
COPN				*e*S	**Sn**	**08 05 31.6**	**-0.3**
TEL3	**Telica 3**	**7.72**	**327**	*e*P	**Pn**	**08 04 16.5**	**+1.0**
TEL3				*e*S	**Sn**	**08 05 43.6**	**+0.3**
TELN	**Telica**	**7.74**	**327**	*e*P	**Pn**	**08 04 18.3**	**+2.5**
ROSC	**El Rosal**	**8.30**	**98**	Pn	**Pn**	**08 04 23.5**	**0.0**
	3.2nm,0.3s,baz=103,slow=5.9,SNR=13						
TGUH	**Tegucigalpa,Un**	**9.19**	**330**	Pn	**Pn**	**08 04 36.2**	**+0.5**
	61nm,0.9s						
TGUH				*e*Sn	**Sn**	**08 06 27.2**	**+7.7**
LCBS	**La Ceiba**	**9.83**	**321**	*e*P	x	08 05 10.8	
LCBS				*e*S	x	08 07 03.4	
SDV	**Santo Domingo**	**12.17**	**76**	Pn	**Pn**	**08 05 17.0**	**+0.4**
	1.4nm,0.3s,baz=259,slow=13,SNR=20						
SDV				Sn	**Sn**	**08 07 28.4**	**-4.3**
	1.1nm,0.3s,baz=23,slow=15,SNR=4.7						
ATAH	**Atahualpa**	**13.63**	**162**	Pn	**Pn**	**08 05 38.0**	**+1.4**
	0.2nm,0.3s,baz=313,slow=6.3,SNR=8.8						
ATAH				LR	LR	08 10 12.4	
	comp=Z,974nm,19.9s,baz=86,slow=36						
TEIG	**Tepich**	**15.13**	**339**	LR	LR	08 11 38.3	
	comp=Z,808nm,19.2s,baz=102,slow=36						
CMIG	**Matias Romero**	**16.28**	**313**	Pn	**Pn**	**08 06 10.8**	**-1.1**
	0.1nm,0.3s,baz=83,slow=12,SNR=2.5						
CMIG				Sn	**Sn**	**08 09 20.1**	**+7.2**
	0.1nm,0.3s,baz=58,slow=19,SNR=3.0						
CMIG				LR	LR	08 11 28.0	
	comp=Z,684nm,21.4s,baz=115,slow=33						
SDDR	**Presa de Saban**	**16.91**	**40**	*e*Pn	**Pn**	**08 06 22.1**	**+2.2**
	69nm,1.4s						
PCRV	**Puerto La Cruz**	**18.23**	**76**	P	**Pn**	**08 06 35.5**	**-0.8**
	0.2nm,0.3s,baz=297,slow=6.8,SNR=2.1						
NNA	**Nana**	**18.82**	**162**	P	**Pn**	**08 06 35.3**	**-8.2**
	0.6nm,0.3s,baz=349,slow=13,SNR=4.6						
NNA				LR	LR	08 13 05.0	
	comp=Z,218nm,20.4s,baz=132,slow=35						
SJG	**San Juan**	**20.01**	**52**	P	**P**	**08 06 57.0**	**+0.9**
	29nm,0.8s,baz=262,slow=6.1,SNR=9.6						
SJG				LR	LR	08 14 15.6	
	comp=Z,243nm,21.5s,MS3.5,baz=245,slow=35						
MTP	**Monte Pirata**	**20.48**	**53**	*e*P	**P**	**08 07 01.4**	**+0.2**
LPAZ	**La Paz**	**26.41**	**147**	*e*P	**P**	**08 07 54.7**	**-5.4**
	6.8nm,1.3s,mb4.0						
LPAZ	**La Paz**	**26.41**	**147**	P	**P**	**08 07 54.4**	**-5.7**
	1.5nm,0.7s,mb3.7,baz=312,slow=12,SNR=5.3						
LPAZ				LR	LR	08 19 18.2	
	comp=Z,454nm,20.4s,MS4.0,baz=290,slow=39						
TKL	**Tuckaleechee C**	**29.48**	**358**	LR	LR	08 22 32.6	
	comp=Z,243nm,18.1s,MS3.9,baz=169,slow=41						
TXAR	**Lajitas Array**	**30.53**	**322**	P	**P**	**08 08 37.2**	**+0.5**
	0.4nm,0.8s,mb3.3,baz=153,slow=6.7,SNR=2.8						
TXAR				LR	LR	08 21 38.9	
	comp=Z,148nm,19.9s,MS3.6,baz=40,slow=38						
SIV	**San Ignacio**	**30.55**	**136**	P	**P**	**08 08 29.8**	**-7.2**
	1.5nm,0.8s,mb3.9,baz=304,slow=12,SNR=7.2						
SIV				LR	LR	08 20 35.9	
	comp=Z,514nm,21.3s,MS4.2,baz=281,slow=36						
MNTX	**Cornudas Mount**	**33.25**	**323**	*e*P	**P**	**08 08 59.7**	**-1.0**
	8.8nm,1.2s,mb4.6						
BNM	**Barren Site**	**35.73**	**325**	*e*P	**P**	**08 09 22.8**	**+0.7**
ANMO	**Albuquerque**	**36.22**	**326**	*e*P	**P**	**08 09 26.7**	**+0.4**
	7.1nm,1.1s,mb4.5						
ANMO	**Albuquerque**	**36.22**	**326**	P	**P**	**08 09 26.2**	**0.0**
	0.4nm,0.5s,mb3.6,baz=167,slow=14,SNR=2.8						
ANMO				LR	LR	08 26 00.8	
	comp=Z,198nm,21.6s,MS3.9,baz=61,slow=39						
MVCO	**Mesa Verde**	**38.99**	**326**	*e*P	**P**	**08 09 50.8**	**+1.0**
	11nm,1.2s,mb4.5						
PV10	**Paradox Valley**	**40.13**	**327**	*e*P	**P**	**08 09 58.6**	**-0.6**
PFO	**Pinyon Flat Ob**	**41.68**	**316**	LR	LR	08 26 56.0	
	comp=Z,204nm,19.6s,MS4.0,baz=63,slow=35						
RPN	**Rapa Nui**	**41.94**	**217**	LR	LR	08 23 00.0	
	comp=Z,176nm,19.5s,MS4.0,baz=25,slow=30						
PDAR	**Pinedale Array**	**43.65**	**331**	P	**P**	**08 10 27.8**	**-0.2**
	0.4nm,0.8s,mb3.2,baz=134,slow=5.9,SNR=3.6						
PDAR				LR	LR	08 30 02.2	
	comp=Z,146nm,21.5s,MS3.9,baz=326,slow=38						
HWUT	**Hardware Ranch**	**43.80**	**328**	*e*P	**P**	**08 10 29.2**	**+0.1**
	6.8nm,1.1s,mb4.3						
TPAW	**Teton Pass**	**44.87**	**331**	*e*P	**P**	**08 10 38.6**	**+1.0**
	4.2nm,1.0s,mb4.2						
FLWY	**Flagg Ranch**	**45.19**	**331**	*e*P	**P**	**08 10 40.5**	**+0.3**
	20nm,1.6s,mb4.7						
RLMT	**Red Lodge**	**45.32**	**333**	*e*P	**P**	**08 10 41.1**	**-0.2**
	17nm,1.6s,mb4.6						
ULM	**Lac du Bonnet**	**45.43**	**348**	P	**P**	**08 10 38.5**	**-3.5**
	baz=175,slow=11,SNR=7.8						
NVAR	**Mina Array Bea**	**45.65**	**320**	P	**P**	**08 10 44.0**	**-0.1**
	1.1nm,0.8s,mb3.9,baz=126,slow=8.3,SNR=7.7						
NEW	**Newport**	**51.29**	**331**	LR	LR	08 37 25.1	
	comp=Z,111nm,19.1s,MS3.9,baz=126,slow=41						
EDM	**Edmonton**	**53.30**	**337**	*e*P	**P**	**08 11 40.9**	**-1.3**
RKT	**Rikitea**	**58.82**	**238**	*e*S	**S**	**08 20 37.9**	**+10**
	79nm,28.2s						
RKT				*e*LR	LR	08 30 06.3	
	265nm,28.0s,baz=75						
BBB	**Bella Bella**	**59.23**	**329**	LR	LR	08 40 03.9	
	comp=Z,109nm,19.5s,MS4.0,baz=164,slow=38						
YKA	**Yellowknife Ar**	**61.03**	**344**	P	**P**	**08 12 34.4**	**-2.2**
YKA	**Yellowknife Ar**	**61.03**	**344**	P	**P**	**08 12 34.4**	**-2.2**
	3.7nm,0.9s,mb4.5,baz=140,slow=6.6,SNR=41						
PPT	**Papeete**	**70.17**	**249**	*e*S	S	08 23 00.0	+11
	28nm,25.2s						
PPT				*e*LR	LR	08 35 23.1	
	129nm,24.2s						
INK	**Inuvik**	**70.71**	**342**	*e*P	**P**	**08 13 38.4**	**-0.6**
	854nm,1.9s,mb6.3						
INK	**Inuvik**	**70.71**	**342**	P	**P**	**08 13 37.7**	**-1.2**
	1.7nm,0.7s,mb4.1,baz=125,slow=8.0,SNR=14						
TBI	**Tubuai**	**71.48**	**243**	*e*S	S	08 23 13.6	+10
	151nm,33.8s						
TBI				*e*LR	LR	08 35 58.3	
	229nm,31.5s						
KDAK	**Kodiak Island**	**74.29**	**328**	LR	LR	08 45 36.3	
	comp=Z,112nm,20.0s,MS4.2,baz=192,slow=35						
MDT	**Midelt**	**76.64**	**58**	LR	LR	08 44 54.3	
	comp=Z,107nm,19.8s,MS4.2,baz=156,slow=33						
DBIC	**Dimbokro**	**77.17**	**85**	LR	LR	08 47 31.0	
	comp=Z,74nm,18.9s,MS4.0,baz=162,slow=35						
ESDC	**Sonseca Array**	**77.40**	**51**	LR	LR	08 43 18.9	
	comp=Z,163nm,20.7s,MS4.3,baz=30,slow=32						
TORD	**Torodi Ar. Bea**	**83.09**	**78**	LR	LR	08 50 31.9	
	comp=Z,82nm,18.3s,MS4.1,baz=340,slow=35						
NOA	**NORSAR Array B**	**86.58**	**29**	LR	LR	08 50 57.0	
	comp=Z,234nm,19.9s,MS4.6,baz=5.0,slow=34						
GERES	**GERESS Array B**	**89.61**	**41**	LR	LR	08 51 13.4	
	comp=Z,160nm,18.9s,MS4.5,baz=268,slow=33						
VRAC	**Vranov**	**91.40**	**40**	LR	LR	08 49 20.8	
	comp=Z,277nm,21.2s,MS4.7,baz=330,slow=31						
VAE	**Valguarnera**	**91.88**	**52**	LR	LR	08 52 58.2	
	comp=Z,373nm,18.2s,MS4.9,baz=139,slow=33						
QSPA	**South Pole Qui**	**96.07**	**180**	LR	LR	08 51 12.1	
	comp=Z,106nm,18.2s,MS4.4,baz=24,slow=31						
ASAR	**Alice Springs**	**140.81**	**240**	PKP	PKPdf	08 21 47.9	-6.3
	0.2nm,0.7s,baz=119,slow=3.4,SNR=3.0						
WRA	**Warramunga Arr**	**141.59**	**245**	PKP	PKPdf	08 21 52.6	-3.1
	1.0nm,1.2s,baz=103,slow=2.6,SNR=4.1						

WEL 19 08:03:02.1±0.3, 3687S×17762E, h134km±3km, ML3.5/4, Error ellipse: s-maj=2.2km s-min=1.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.89**	**142**	PN	Pn	08 03 24.2	-0.1
MXZ				SN	Sn	08 03 41.5	+0.3
PUZ	**Puketiti**	**1.31**	**158**	PN	Pn	08 03 28.3	0.0
PUZ				SN	Sn	08 03 48.9	+0.5
URZ	**Urewera**	**1.45**	**196**	*e*PN	Pn	08 03 30.2	+0.3
URZ				SN	Sn	08 03 51.0	-0.1
MWZ	**Matawai**	**1.47**	**183**	*e*PN	Pn	08 03 30.2	+0.1
MWZ				SN	Sn	08 03 51.2	-0.3
KUZ	**Kuaotunu**	**1.53**	**274**	PN	Pn	08 03 30.7	0.0
KNZ	**Kokohu**	**2.15**	**179**	PN	Pn	08 03 37.9	-0.2
BKZ	**Black Stump Fm**	**2.47**	**201**	*e*PN	Pn	08 03 42.0	0.0
PXZ	**Pawanui**	**3.22**	**190**	*e*PN	Pn	08 03 49.9	-1.7
PXZ				SN	Sn	08 04 27.8	-2.1
THZ	**Tophouse**	**6.11**	**215**	*e*PN	Pn	08 04 27.7	-2.3

IDC 19 08:08:19.4±2.2, 094S×12767E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/12, mbtmp3.5/3, ML3.8/1, Error ellipse: s-maj=187.6km s-min=25.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.98**	**161**	P	Pn	08 12 53.7	-1.5
	0.3nm,0.3s,baz=340,slow=12,SNR=5.9						
ASAR	**Alice Springs**	**23.39**	**165**	P	P	08 13 30.1	0.0
	0.3nm,0.4s,baz=346,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**61.92**	**326**	P	P	08 18 40.9	0.0
	0.4nm,0.4s,baz=116,slow=8.1,SNR=7.6						

IDC 19 08:47:29.5±3.6, 2031N×12193E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=276.8km s-min=25.1km az=61.0
ISCJB 19 08:47:35.2±4.9, 202N±03×1217E±06, h55km±38km, mb3.8/3, Error ellipse: s-maj=109.1km s-min=22.3km az=157.4
ISC 19 08:47:37.0±5.3, 202N±03×1216E±08, h53km±43km, n7, σ0§76/7, mb3.8/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**2.33**	**188**	*e*P	**Pn**	**08 48 11.8**	**-1.0**
CVP	**Callao Caves**	**2.47**	**175**	*e*P	**Pn**	**08 48 15.0**	**+0.2**
CVP				*e*S	**Sn**	**08 48 44.4**	**+0.5**
BALP	**Baler**	**4.41**	**180**	*e*P	**Pn**	**08 48 41.7**	**+0.3**
SONM	**Songino Array**	**30.21**	**339**	PcP	PcP	08 56 44.5	+2.3
	0.2nm,0.5s,baz=151,slow=3.4,SNR=3.6						
MKAR	**Makanchi Array**	**41.53**	**319**	P	**P**	**08 55 19.4**	**+0.4**
	0.6nm,0.5s,mb3.5,baz=115,slow=9.4,SNR=8.8						
WRA	**Warramunga Arr**	**41.78**	**162**	P	**P**	**08 55 20.8**	**-0.6**
	1.9nm,0.5s,mb4.0,baz=343,slow=9.1,SNR=27						
ASAR	**Alice Springs**	**45.20**	**164**	P	**P**	**08 55 49.0**	**+0.2**
	1.0nm,0.4s,mb4.0,baz=347,slow=7.0,SNR=35						

IDC 19 08:56:42.9±0.9, 3591N×7117E, h0km, mb4.0/10, mb1 4.2/12, mb1mx4.0/21, mbtmp4.1/12, ML4.0/2, Error ellipse: s-maj=25.7km s-min=18.4km az=32.0
MOS 19 08:56:46.5±1.2, 3596N×7125E, h33km, mb4.4/11, Error ellipse: s-maj=19.5km s-min=10.7km az=97.0
BJI 19 08:56:48.8, 3636N×7071E, h71km, mb4.2
NEIC 19 08:56:52.6±2.9, 3613N×7130E, h72km±22km, mb4.5/3, Error ellipse: s-maj=26.8km s-min=13.7km az=196.0
ISCJB 19 08:56:55.7±0.5, 3635N±002×7165E±006, h106km±6km, mb4.0/14, Error ellipse: s-maj=8.1km s-min=3.8km az=168.7
NNC 19 08:57:02.7±1.6, 3713N×6998E, h0km, mb4.7, mpv4.8, Error ellipse: s-maj=18.7km s-min=12.6km az=127.0
ISC 19 08:56:57.1±0.5, 3634N±002×7163E±006, h108km±6km, n74, σ1§21/90, mb4.0/14, 1C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.52**	**175**	⇓P	**Pn**	**08 57 38.8**	**+2.0**
CHCP	**Chirah Chowk**	**3.00**	**153**	⇓P	**Pn**	**08 57 46.1**	**+3.1**
CHCP				S	**Sn**	**08 58 24.0**	**+5.7**
THW	**Thamme Wali**	**3.54**	**178**	P	**Pn**	**08 57 51.5**	**+1.2**
SBDP	**Sheikh Budin**	**4.09**	**190**	P	**Pn**	**08 57 57.6**	**0.0**
JMU	**Jammu**	**4.51**	**142**	*e*S	**Sn**	**08 58 56.0**	**+1.2**
KSH	**Kashi**	**4.68**	**46**	*e*P	**Pn**	**08 58 09.8**	**+4.3**
KSH				S	**Sn**	**08 58 58.1**	**-0.5**
KSH				Smax			
	comp=N,927nm,0.2s						
KSH				Smax			
	comp=E,747nm,0.2s						
DRP	**Derazinda**	**4.74**	**195**	P	**Pn**	**08 58 06.1**	**-0.2**
DRP				S	**Sn**	**08 58 56.0**	**-4.1**
THN	**Thein Dam**	**5.16**	**138**	*e*P	**Pn**	**08 58 14.3**	**+2.2**
THN				*e*x	x	08 59 13.1	
DLH	**Dalhousie**	**5.22**	**135**	*e*P	**Pn**	**08 58 14.0**	**+1.1**
DLH				*e*x	x	08 59 15.0	
AML	**Almayashu**	**6.00**	**15**	*e*Pn	**Pn**	**08 58 23.6**	**+0.2**
AML				*e*Sn	**Sn**	**08 59 29.0**	**-1.7**
AML	**Almayashu**	**6.00**	**15**	P	**Pn**	**08 58 23.6**	**+0.2**
	SNR=140						
UCH	**Uchtor**	**6.29**	**20**	*e*Pn	**Pn**	**08 58 27.9**	**+0.5**
UCH				*e*Sn	**Sn**	**08 59 37.4**	**-0.3**
UCH	**Uchtor**	**6.29**	**20**	P	**Pn**	**08 58 27.9**	**+0.6**
	SNR=33						
KZA	**Kyzart**	**6.38**	**25**	P	**Pn**	**08 58 29.0**	**+0.5**
	SNR=25						
EKS2	**Erkin-Say**	**6.53**	**14**	P	**Pn**	**08 58 30.8**	**+0.3**
	SNR=50						
SDNR	**Sundarnagar**	**6.56**	**136**	*e*P	**Pn**	**08 58 32.1**	**+1.0**
SDNR				*e*S	**Sn**	**08 59 43.5**	**-0.9**
AAK	**Ala-Archa**	**6.66**	**19**	P	**Pn**	**08 58 33.0**	**+0.6**
	SNR=50						
KK31	**Karatay Array**	**6.81**	**353**	P	**Pn**	**08 58 32.4**	**-1.9**
	comp=E,38nm,0.3s,baz=186,slow=14,SNR=82						
KK31				⇓S	**Sn**	**08 59 43.2**	**-7.0**
	comp=E,14nm,0.3s,baz=186,slow=25,SNR=8.7						
KBK	**Karagaybulak**	**6.81**	**21**	P	**Pn**	**08 58 35.4**	**+1.1**
	SNR=14						
CHMS	**Chumysh**	**7.07**	**19**	P	**Pn**	**08 58 38.2**	**+0.3**
	SNR=20						
TKM2	**Tokmak 2**	**7.25**	**24**	P	**Pn**	**08 58 40.9**	**+0.5**
	SNR=31						
USP	**Ospenovka**	**7.26**	**17**	P	**Pn**	**08 58 40.2**	**-0.2**
	SNR=15						
KLP	**Kalpa**	**7.30**	**129**	*e*P	**Pn**	**08 58 43.1**	**+2.0**
KLP				*e*S	**Sn**	**08 59 60.0**	**-2.4**
KLP				AML	AML	09 00 11.2	
	comp=N,440nm,0.4s						
KLP				AML	AML	09 00 11.8	
	comp=E,556nm,0.4s						
DDI	**Dehra Dun**	**8.06**	**136**	*e*P	**Pn**	**08 58 51.6**	**+0.2**
DDI				*e*x	**Sn**	**09 00 20.5**	**-0.3**
RTK	**Rohtak**	**8.33**	**150**	*e*P	**Pn**	**08 59 01.0**	**+5.9**
JOSI	**Joshimath**	**8.79**	**129**	*e*P	**Pn**	**08 59 00.9**	**-0.4**
JOSI				AML	AML	09 00 46.9	
	comp=N,324nm,0.8s						
JOSI				AML	AML	09 00 48.0	
	comp=E,264nm,0.6s						
NDI	**New Delhi**	**8.97**	**147**	*e*P	**Pn**	**08 59 02.5**	**-1.4**
NDI				*e*S	**Sn**	**09 00 38.0**	**-5.1**
KUDL	**Kundal**	**9.15**	**152**	*e*P	**Pn**	**08 59 05.4**	**-0.8**
KUDL				*e*S	**Sn**	**09 00 40.5**	**-6.9**
SONA	**Sohna**	**9.29**	**149**	*e*P	**Pn**	**08 59 07.5**	**-0.7**
AJM	**Ajmer**	**10.16**	**164**	*e*P	**Pn**	**08 59 19.0**	**-1.0**
AGRA	**Agra**	**10.55**	**148**	*ex*	x	08 59 15.7	
MKAR	**Makanchi Array**	**13.13**	**34**	Pn	**Pn**	**08 59 58.5**	**-0.8**
	comp=E,0.2nm,0.3s,baz=226,slow=11,SNR=21						
KOLN	**Koldanda**	**13.26**	**127**	*e*P	**Pn**	**09 00 00.3**	**-0.9**
	comp=E,28nm,0.4s						
GKN	**Gorkha**	**13.79**	**123**	*e*P	**Pn**	**09 00 06.9**	**-1.2**
	comp=E,41nm,0.3s						
KKN	**Kakani**	**14.37**	**123**	*e*P	**Pn**	**09 00 14.1**	**-1.3**
	comp=E,23nm,0.4s						
JIRN	**Jiri**	**15.07**	**121**	*e*P	**Pn**	**09 00 23.3**	**-1.1**
	comp=E,58nm,0.4s						
KURK	**Kurchatov**	**15.23**	**17**	*e*P	**Pn**	**09 00 28.2**	**+2.1**
AB31	**Akbulak array**	**15.47**	**330**	P	**Pn**	**09 00 24.5**	**-4.7**
	comp=E,5.6nm,0.3s,baz=134,slow=12,SNR=310						
AB31				⇑S	S	09 03 01.0	-28
	comp=E,2.8nm,0.5s,baz=162,slow=22,SNR=3.7						
TAPN	**Taplejung**	**16.33**	**119**	*e*P	**Pn**	**09 00 38.9**	**-1.1**
	comp=E,20nm,0.3s						
ODAN	**Odare**	**16.41**	**121**	*e*P	**Pn**	**09 00 40.0**	**-1.0**
	comp=E,31nm,0.6s						
AKTK	**Aktyubinsk**	**17.17**	**329**	P	**Pn**	**09 00 47.5**	**-2.7**
AKTK				S	**S**	**09 03 48.1**	**-13**
AKTO	**Aktyubinsk**	**17.17**	**329**	⇓P	**Pn**	**09 00 47.0**	**-3.2**
	comp=E,2.8nm,0.7s						
AKTO				⇓S	**S**	**09 03 45.1**	**-16**
	comp=E,2.1nm,1.8s						
AKTO	**Aktyubinsk**	**17.17**	**329**	P	**Pn**	**09 00 47.5**	**-2.6**
AKTO				S	**S**	**09 03 48.1**	**-13**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	**Aktyubinsk**	**17.17**	**329**	P	**Pn**	**09 00 47.5**	**-2.7**
	comp=Z,2.2nm,0.3s,baz=135,slow=12,SNR=28						
AKTO				S	**S**	**09 03 48.1**	**-13**
	comp=Z,0.2nm,0.3s,baz=163,slow=19,SNR=3.8						
ARU	**Arti**	**21.95**	**340**	*d* iP	**P**	**09 01 43.4**	**+1.7**
ARU						09 02 01.3	
ARU				S	**S**	**09 05 32.8**	**-4.4**
ARU				pmax	pmax		
	comp=E,18nm,1.2s,mb4.3						
SOC	**Sochi**	**25.39**	**296**	*e*P	**P**	**09 02 15.3**	**+1.0**
SOC				*e*S	**S**	**09 06 31.5**	**-1.4**
SOC				pmax	pmax		
	comp=Z,51nm,1.1s,mb4.9						
ZAK	**Zakamensk**	**26.72**	**48**	*e*P	**P**	**09 02 28.3**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.1						
SONM	**Songino Array**	**28.01**	**55**	P	**P**	**09 02 40.5**	**+2.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	**Songino Array**	**28.01**	**55**	P	**P**	**09 02 40.5**	**+2.8**
	comp=Z,0.6nm,0.7s,mb3.3,baz=257,slow=9.3,SNR=6.2						
AKASG	**Malin Array Be**	**33.44**	**309**	P	**P**	**09 03 23.4**	**-2.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**33.44**	**309**	P	**P**	**09 03 23.4**	**-2.1**
	comp=Z,0.7nm,0.4s,mb3.9,baz=77,slow=7.5,SNR=5.0						
FINES	**FINESS Array B**	**37.90**	**326**	P	**P**	**09 04 03.6**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**37.90**	**326**	P	**P**	**09 04 03.6**	**+0.2**
	comp=Z,1.1nm,0.4s,mb4.1,baz=121,slow=8.9,SNR=10						
ARCES	**ARCESS Array B**	**41.48**	**337**	P	**P**	**09 04 33.5**	**+0.5**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ARCES	**ARCESS Array B**	**41.48**	**337**	P	**P**	**09 04 33.5**	**+0.5**
	comp=Z,2.8nm,0.5s,mb4.3,baz=114,slow=7.8,SNR=24						
NB2	**NORSAR Subarra**	**44.81**	**323**	P	**P**	**09 04 59.4**	**-0.5**
	comp=Z,3.5nm,0.5s,mb4.3,baz=96,slow=7.9						
NB2	**NORSAR Subarra**	**44.81**	**323**	P	**P**	**09 04 59.4**	**-0.5**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
NOA	**NORSAR Array B**	**44.81**	**323**	P	**P**	**09 04 59.7**	**-0.2**
NOA	**NORSAR Array B**	**44.81**	**323**	P	**P**	**09 04 59.7**	**-0.2**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NOA	**NORSAR Array B**	**44.81**	**323**	P	**P**	**09 04 59.7**	**-0.2**
	comp=Z,3.9nm,0.5s,mb4.4,baz=96,slow=7.7,SNR=18						
TIXI	**Tiksi**	**45.73**	**22**	*e*P	**P**	**09 05 07.1**	**+0.1**
	comp=Z,2.0nm,0.3s,mb4.3						
TIXI	**Tiksi**	**45.73**	**22**	*e*P	**P**	**09 05 07.1**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
EKA	**Eskdalemuir Ar**	**52.75**	**316**	P	**P**	**09 06 00.8**	**+0.1**
EKA	**Eskdalemuir Ar**	**52.75**	**316**	P	**P**	**09 06 00.8**	**+0.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**52.75**	**316**	P	**P**	**09 06 00.8**	**+0.2**
	comp=Z,1.2nm,0.5s,mb4.2,baz=94,slow=7.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**66.22**	**269**	P	**P**	**09 07 29.3**	**-4.4**
	comp=Z,1.2nm,0.5s,mb4.0,baz=46,slow=6.4,SNR=19						
INK	**Inuvik**	**73.98**	**9**	*e*P	**P**	**09 08 21.2**	**+0.9**
YKA	**Yellowknife Ar**	**81.38**	**3**	P	**P**	**09 09 01.6**	**+0.2**
YKA	**Yellowknife Ar**	**81.38**	**3**	P	**P**	**09 09 01.6**	**+0.2**
YKA				pmax	pmax

MORC				*e*Sg	Sg	09 13 07.3	-1.7	
	16nm,0.3s							
CLL	**Collm**	**1.98**	**269**	*e*Pn	Pn	**09 12 45.0**	**+0.3**	
CLL				*e*Pg	Pg	**09 12 48.0**	**+0.1**	
CLL				*e*Sg	Sg	**09 13 14.0**	**+0.5**	
OKC	**Ostrava-Krasne**	**2.00**	**140**	*e*SG	Sg	**09 13 13.3**	**-1.0**	
VRAC	**Vranov**	**2.10**	**172**	*e*Pn	Pn	**09 12 45.8**	**-0.5**	
VRAC				*e*Sg	Sg	**09 13 17.4**	**0.0**	
	9.9nm,0.3s							
KRUC	**Moravsky**	**2.33**	**176**	*e*Sg	Sg	**09 13 24.8**	**-0.1**	
	7.2nm,0.2s							
OJC	**Ojcow**	**2.59**	**115**	*e*Pg	Pg	**09 12 59.5**	**-0.1**	
OJC				*e*Sg	Sg	**09 13 34.2**	**+1.1**	
NKC	**Novy Kostel**	**2.62**	**245**	*e*SG	Sg	**09 13 34.7**	**+0.6**	
	19nm,0.4s							
JAVC	**Velka Javorina**	**2.71**	**158**	*e*Pn	Pn	**09 12 56.6**	**+1.9**	
KHC	**Kasperske Hory**	**2.80**	**217**	*e*PN	Pn	**09 12 55.8**	**-0.1**	
KHC				*e*PG	Pg	**09 13 01.7**	**-1.9**	
KHC				*e*SN	Sn	**09 13 29.0**	**-1.4**	
KHC				*e*SG	Sg	**09 13 38.8**	**-1.0**	
MOX	**Moxa**	**2.96**	**257**	*e*PG	Pg	**09 13 06.5**	**-0.2**	
MOX				*e*SG	Sg	**09 13 45.4**	**+0.3**	
MODS	**Modra-Piesok**	**3.10**	**166**	*e*SG	Sg	**09 13 49.0**	**-0.6**	
MODS	**Modra-Piesok**	**3.10**	**166**	*e*Sg	Sg	**09 13 49.1**	**-0.5**	
CONA	**Conrad Observa**	**3.47**	**183**	⇑*i*Sg	Sg	**09 14 02.6**	**+1.3**	
	5.8nm,0.4s							
MOA	**Molln**	**3.75**	**200**	⇓*i*Pn	Pn	**09 13 08.5**	**-0.5**	
MOA				⇑*i*Sg	Sg	**09 14 10.1**	**-0.2**	
	comp=Z,2.2nm,0.3s							
STHS	**Stebnicka Huta**	**3.81**	**119**	*e*SG	Sg	**09 14 17.0**	**+4.8**	

IDC 19 09:17:14.5±4.1, 145N×9729E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.5/4, Error ellipse: s-maj=161.9km s-min=25.4km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.09**	**122**	P	P	09 25 08.4	-0.2
	0.5nm,0.9s,baz=302,slow=9.1,SNR=3.1						
ASAR	**Alice Springs**	**43.47**	**127**	P	P	09 25 19.8	0.0
	0.1nm,0.3s,baz=299,slow=8.1,SNR=4.0						
SONM	**Songino Array**	**46.87**	**8**	P	P	09 25 46.7	+0.4
	0.8nm,0.8s,baz=188,slow=8.7,SNR=7.8						
MKAR	**Makanchi Array**	**47.02**	**346**	P	P	09 25 47.3	-0.2
	0.8nm,0.6s,baz=159,slow=7.6,SNR=9.2						

*IDC **19** 09:43:12.9±1.7, 45.16N×164.6E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.5/18, mbtmp3.5/5, ML3.8/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=22.0km s-min=15.1km az=87.0*
*BEO **19** 09:43:13.9±0.3, 45.03N×166.6E, h3km±2km, ML3.3/8*
*ISCJB **19** 09:43:14.1±0.4, 45.20N±002×166.6E±002, h8km±3km, mb3.4/2, Error ellipse: s-maj=3.3km s-min=2.1km az=143.9*
*PRU **19** 09:43:15.4, 45.20N×164.3E, h0km*
*CSEM **19** 09:43:16.6±0.1, 45.18N×163.7E, h10km, ML3.6, Error ellipse: s-maj=2.0km s-min=1.1km az=59.0*
*NEIC **19** 09:43:16.3, 45.18N×166.6E, h21km, ML3.6(PDG), ML3.3(BUC), ML3.6(SZGRF), After PDG.*
*PDG **19** 09:43:16.3±0.6, 45.18N×166.6E, h21km±2km, ML3.6/10, Error ellipse: s-maj=1.0km s-min=2.6km az=0.0*
*SZGRF **19** 09:43:18.1, 45.15N×164.6E, h10km, mb3.6, Northwestern Balkan Peninsula*
ISC 19 09:43:15.9±0.4, 4518N±001×1662E±003, h12km±3km, n101, σ1$28/170, mb3.4/2, 12C-30D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISC	**Sisak**	**0.34**	**329**	*e*Pg	Pg	**09 43 22.2**	**-0.4**
SISC				Sg	Sg	**09 43 30.1**	**+2.8**
BOJS	**Bojanci**	**1.02**	**289**	*i* Pg	Pg	**09 43 33.5**	**-2.0**
BOJS				*e*Sg	Sg	**09 43 49.7**	**+1.0**
BOJS	**Bojanci**	**1.02**	**289**	*i* Pg	Pg	**09 43 33.5**	**-2.0**
BOJS				*e*Sg	Sg	**09 43 49.7**	**+1.0**
BOJS							
	comp=Z,911nm,0.5s						
BOJS	**Bojanci**	**1.02**	**289**	*i* Pg	Pg	**09 43 33.5**	**-2.0**
BOJS				*e*Sg	Sg	**09 43 49.7**	**+1.0**
CRES	**Cresnjev**	**1.04**	**309**	*e*Pg	Pg	**09 43 35.0**	**-0.9**
CRES				*e*Sg	Sg	**09 43 50.9**	**+1.4**
CRES	**Cresnjev**	**1.04**	**309**	*e*Pg	Pg	**09 43 35.0**	**-0.9**
CRES				*e*Sg	Sg	**09 43 51.0**	**+1.5**
CRES	**Cresnjev**	**1.04**	**309**	*e*Pg	Pg	**09 43 35.0**	**-0.9**
CRES				*e*Sg	Sg	**09 43 51.0**	**+1.5**
RHK3	**Tenkes**	**1.35**	**58**	*e*Sn	Sn	**09 43 58.6**	**+0.3**
NVLJ	**Novalja**	**1.39**	**244**	*e*Pn	Pn	**09 43 38.6**	**-2.4**
NVLJ				Sg	Sg	**09 43 58.3**	**-2.3**
NVLJ	**Novalja**	**1.39**	**244**	*e*Pn	Pn	**09 43 38.6**	**-2.4**
NVLJ				Sg	Sg	**09 43 58.2**	**-2.3**
VISS	**Visnje**	**1.40**	**297**	*i* Pg	Pg	**09 43 40.1**	**-2.6**
CEY	**Cerknica**	**1.64**	**291**	*e*Pn	Pn	**09 43 45.4**	**+0.9**
CEY				*e*Sg	Sg	**09 44 08.2**	**-0.4**
CEY	**Cerknica**	**1.64**	**291**	*i* Pn	Pn	**09 43 45.2**	**+0.6**
CEY				*e*Sn	Sn	**09 44 07.3**	**+1.7**
LJU	**Ljubljana**	**1.70**	**301**	*e*Pn	Pn	**09 43 46.6**	**+1.2**
LJU				*e*Sg	Sg	**09 44 11.5**	**+0.9**
PKSM	**Moragy**	**1.75**	**53**	⇓P	Pn	**09 43 47.8**	**+1.8**
PKSM				S	Sn	**09 44 11.0**	**+2.7**
PKSM	**Moragy**	**1.75**	**53**	*e*Pn	Pn	**09 43 46.9**	**+0.9**
PKSM				*e*Sg	Sg	**09 44 11.1**	**-1.1**
PKSM	**Moragy**	**1.75**	**53**	⇓*i*P	Pn	**09 43 47.8**	**+1.8**
PKSM	**Moragy**	**1.75**	**53**	S	Sn	**09 44 11.0**	**+2.7**
PKSM	**Moragy**	**1.75**	**53**	⇓*i*Pn	Pn	**09 43 47.5**	**+1.5**
PKSM				*e*Sn	Sn	**09 44 11.2**	**+2.9**
PERS	**Pernice**	**1.79**	**325**	*i* Pn	Pn	**09 43 46.0**	**-0.7**
PERS							
	comp=Z,107nm,0.3s						
OBKA	**Obir**	**1.96**	**313**	⇑*i*Pn	Pn	**09 43 47.3**	**-1.7**
OBKA				⇓*e*Pg	Pg	**09 43 51.8**	**-1.7**
	SNR=34						
OBKA				⇓*i*Sn	Sn	**09 44 13.7**	**+0.2**
OBKA				⇑*i*Sg	Sg	**09 44 20.8**	**+1.8**
	comp=Z,376nm,0.7s						
VOY	**Vojsko**	**2.10**	**295**	*e*Pn	Pn	**09 43 50.9**	**+0.1**
VOY				*e*Sn	Sn	**09 44 21.0**	**+4.3**
ARSA	**Arzberg**	**2.21**	**340**	⇓*e*Pn	Pn	**09 43 51.7**	**-0.6**
ARSA				*i* Sn	Sn	**09 44 20.9**	**+1.4**
ARSA				*i* Sg	Sg	**09 44 28.6**	**+1.8**
ARSA	**Arzberg**	**2.21**	**340**	⇓*e*Pn	Pn	**09 43 51.7**	**-0.6**
	SNR=25						
ARSA				⇑*i*Sn	Sn	**09 44 20.9**	**+1.4**
ARSA				⇓*i*Sg	Sg	**09 44 28.6**	**+1.8**
	comp=Z,46nm,0.4s						
ARSA	**Arzberg**	**2.21**	**340**	*e*Pn	Pn	**09 43 52.7**	**+0.4**
FGSL	**Fruska Gora**	**2.26**	**89**	*e*Pn	Pn	**09 43 51.3**	**-1.7**
FGSL				*e*Sg	Sg	**09 44 25.4**	**-3.0**
FGSL	**Fruska Gora**	**2.26**	**89**	Pn	Pn	**09 43 51.4**	**-1.6**
BBLS	**Bajina Basta -**	**2.39**	**122**	*e*Pn	Pn	**09 43 53.3**	**-1.5**
BBLS				*e*Sg	Sg	**09 44 26.7**	**-5.9**
STON	**Ston**	**2.44**	**161**	*e*Pn	Pn	**09 43 53.3**	**-2.1**
STON				Sn	Sn	**09 44 23.2**	**-1.9**
SOP	**Sopron**	**2.50**	**359**	*i* Pnd		09 43 57.0	
SOP				*e*SB	Sb	**09 44 35.0**	**+3.5**
PKSG		**2.53**	**28**	*e*Pn	Pn	**09 43 56.5**	**-0.2**
UPM	**Unac-Piva**	**2.57**	**139**	⇓*i*Pn	Pn	**09 43 58.0**	**+0.7**
UPM				*e*Sn	Sn	**09 44 29.1**	**+0.6**
DIVS	**Divcibare**	**2.64**	**113**	*e*Pn	Pn	**09 43 57.1**	**-1.1**
DIVS				*e*Sg	Sg	**09 44 35.5**	**-5.1**
DIVS	**Divcibare**	**2.64**	**113**	Pn	Pn	**09 43 57.1**	**-1.1**
BRY	**Bratogost**	**2.67**	**148**	⇓*i*Pn	Pn	**09 43 58.6**	**0.0**
BRY				*e*Sn	Sn	**09 44 31.5**	**+0.6**
PLE	**Pljevlja**	**2.72**	**132**	⇓*i*Pn	Pn	**09 44 00.3**	**+1.0**
PLE				*e*Sn	Sn	**09 44 33.2**	**+1.1**
BEO	**Belgrade**	**2.74**	**96**	*e*Sg	Sg	**09 44 39.8**	**-4.2**
CONA	**Conrad Observa**	**2.80**	**349**	*e*Pn	Pn	**09 44 00.6**	**+0.2**
	SNR=53						
CONA				⇑*i*Sn	Sn	**09 44 34.3**	**+0.2**
BUD	**Budapest**	**2.84**	**35**	*i* PB	Pb	**09 44 09.4**	**+2.9**
BUD				*e*Sg	Sg	**09 44 47.8**	**+0.7**
NKY	**Niksic**	**2.92**	**143**	⇓*i*Pn	Pn	**09 44 03.0**	**+0.9**
NKY				*e*Sn	Sn	**09 44 37.7**	**+0.5**
KBA	**Koelnbreinsper**	**2.96**	**311**	⇓*e*Pg	Pg	**09 44 11.7**	**-0.9**
	SNR=5.4						
KBA				⇓*i*Sn	Sn	**09 44 40.3**	**+2.1**
KBA				⇑*i*Sg	Sg	**09 44 50.6**	**-0.5**
	comp=Z,52nm,0.8s						
ZST	**Bratislava**	**3.04**	**6**	*e*PN	Pn	**09 44 03.0**	**-0.7**
ZST				*e*SN	Sn	**09 44 38.6**	**-1.3**
HCY	**Herceg Novi**	**3.05**	**153**	⇓*i*Pn	Pn	**09 44 04.1**	**+0.2**
HCY				*e*Sn	Sn	**09 44 40.5**	**+0.2**
MOA	**Molln**	**3.13**	**330**	⇑*i*Pn	Pn	**09 44 05.5**	**+0.5**
	SNR=33						
MOA				⇓*i*Sn	Sn	**09 44 42.4**	**+0.2**
GRUS	**Gruza**	**3.20**	**112**	*e*Pn	Pn	**09 44 03.2**	**-2.7**
GRUS				*e*Sg	Sg	**09 44 53.6**	**-5.0**
GRUS	**Gruza**	**3.20**	**112**	Pn	Pn	**09 44 03.3**	**-2.6**
MODS	**Modra-Piesok**	**3.23**	**8**	*e*Pn	Pn	**09 44 05.7**	**-0.6**
MODS				*e*SN	Sn	**09 44 44.0**	**-0.6**
BEY	**Berane**	**3.30**	**133**	⇓*i*Pn	Pn	**09 44 08.3**	**+0.9**
BEY				*e*Sn	Sn	**09 44 47.4**	**+0.9**
IVA	**Berane**	**3.30**	**133**	⇓*i*Pn	Pn	**09 44 08.3**	**+0.9**
IVA				*e*Sn	Sn	**09 44 47.4**	**+0.9**
BUM	**Brajici-Budva**	**3.32**	**149**	⇓*i*Pn	Pn	**09 44 08.4**	**+0.8**
BUM				*e*Sn	Sn	**09 44 47.1**	**+0.2**
PDG	**Podgorica**	**3.35**	**144**	⇓*i*Pn	Pn	**09 44 08.5**	**+0.5**
PDG				*e*Sn	Sn	**09 44 47.7**	**0.0**
TTG	**Podgorica**	**3.35**	**144**	⇓*i*Pn	Pn	**09 44 08.5**	**+0.5**
TTG				*e*Sn	Sn	**09 44 47.7**	**0.0**
SMOL	**Smolenice**	**3.38**	**9**	*e*PN	Pn	**09 44 08.7**	**+0.3**
SMOL				*e*SN	Sn	**09 44 46.5**	**-1.9**
PVY	**Plav**	**3.54**	**136**	⇓*i*Pn	Pn	**09 44 11.4**	**+0.7**
PVY				*e*Sn	Sn	**09 44 53.0**	**+0.5**
BZS	**Buzias**	**3.55**	**81**	⇓P	Pn	**09 44 12.7**	**+1.9**
BZS	**Buzias**	**3.55**	**81**	⇓*i*P	Pn	**09 44 12.6**	**+1.9**
BZS	**Buzias**	**3.55**	**81**	S	Sg	**09 45 03.3**	**-6.4**
PSZ	**Piszkesteto**	**3.55**	**38**	⇑P	Pn	**09 44 10.7**	**0.0**
PSZ				*e*Pn	Pn	**09 44 11.0**	**+0.3**
PSZ	**Piszkesteto**	**3.55**	**38**	⇑*e*PB	Pb	**09 44 22.6**	**+4.0**
PSZ				*e*SB	Sb	**09 45 10.1**	**+8.5**
PSZ	**Piszkesteto**	**3.55**	**38**	⇑*i*P	Pn	**09 44 10.7**	**0.0**
PSZ	**Piszkesteto**	**3.55**	**38**	*e*Pn	Pn	**09 44 11.0**	**+0.3**
KOLL	**Kolacno**	**3.61**	**19**	*e*PN	Pn	**09 44 11.2**	**-0.4**
KOLL				*e*SN	Sn	**09 44 53.4**	**-0.8**
KOLL	**Kolacno**	**3.61**	**19**	*e*Pn	Pn	**09 44 11.3**	**-0.3**
KOLL				*e*Sn	Sn	**09 44 53.4**	**-0.8**
VYHS	**Vyhne**	**3.65**	**24**	*e*PN	Pn	**09 44 12.5**	**+0.4**
VYHS				*e*SN	Sn	**09 44 54.1**	**-0.9**
ULC	**Ulcinj**	**3.74**	**148**	⇓*i*Pn	Pn	**09 44 13.5**	**+0.1**
ULC				*e*Sn	Sn	**09 44 57.8**	**+0.5**
WTTA	**Wattenberg**	**4.04**	**303**	⇑*i*Pn	Pn	**09 44 16.4**	**-1.0**
VRAC	**Vranov**	**4.13**	**360**	⇑P	Pn	**09 44 19.0**	**+0.3**
VRAC	**Vranov**	**4.13**	**360**	Pn	Pn	**09 44 17.8**	**-0.9**
	comp=Z,2.3nm,0.3s,baz=195,slow=13,SNR=6.4						
VRAC				Sn	Sn	**09 45 04.5**	**-2.5**
	comp=Z,2.5nm,0.3s,baz=286,slow=20,SNR=5.7						
VRAC				LR	LR	09 45 49.2	
	comp=Z,98nm,19.9s,baz=197,slow=38						
VRAC	**Vranov**	**4.13**	**360**	⇑*i*P	Pn	**09 44 19.0**	**+0.3**
VRAC	**Vranov**	**4.13**	**360**	*e*Pn	Pn	**09 44 18.1**	**-0.6**
VRAC				*e*Sn	Sn	**09 45 03.8**	**-3.1**
GEC2	**GERESS Array S**	**4.17**	**332**	*e*Pn	Pn	**09 44 19.9**	**+0.6**
GEC2				*e*Sn	Sn	**09 45 06.9**	**-1.1**
GERES	**GERESS Array B**	**4.17**	**332**	Pn	Pn	**09 44 19.5**	**+0.2**
	comp=Z,4.2nm,0.3s,baz=154,slow=14,SNR=5.9						
GERES				Sn	Sn	**09 45 07.6**	**-0.4**
	comp=Z,8.8nm,0.3s,baz=155,slow=26,SNR=17						
GERES				Lg		09 45 24.2	
	comp=Z,2.5nm,0.3s,baz=135,slow=32,SNR=5.7						
KECS	**Kecovo**	**4.24**	**37**	*e*PN	Pn	**09 44 20.5**	**+0.3**
KECS				*e*		09 44 35.7	
GZR	**Gura Zlata**	**4.35**	**85**	⇓P	Pn	**09 44 23.6**	**+1.9**
GZR	**Gura Zlata**	**4.35**	**85**	⇓*i*P	Pn	**09 44 23.6**	**+1.9**
BARS	**Barje**	**4.43**	**120**	*e*Pn	Pn	**09 44 20.4**	**-2.5**
BARS				*e*Sn	Sn	**09 45 10.4**	**-4.0**
KHC	**Kasperske Hory**	**4.46**	**333**	*e*Pn	Pn	**09 44 23.7**	**+0.4**
KHC				*e*		09 44 31.5	
KHC				*e*Sn	Sn	**09 45 13.7**	**-1.4**
KHC	**Kasperske Hory**	**4.46**	**333**	*e*PN	Pn	**09 44 23.7**	**+0.4**
KHC				x	x	09 44 31.5	
KHC				x	x	09 44 59.0	
KHC				*e*SN	Sn	**09 45 13.7**	**-1.4**
MORC	**Moravsky Berou**	**4.64**	**7**	⇓P	Pn	**09 44 26.1**	**+0.4**
MORC				S	Sn	**09 45 18.4**	**-1.2**
MORC	**Moravsky Berou**	**4.64**	**7**	⇓*i*P	Pn	**09 44 26.1**	**+0.4**
MORC	**Moravsky Berou**	**4.64**	**7**	S	Sn	**09 45 18.4**	**-1.1**
MORC	**Moravsky Berou**	**4.64**	**7**	⇓P	Pn	**09 44 26.1**	**+0.4**
MORC				*e*Sn	Sn	**09 45 17.9**	**-1.6**
WET	**Wettzell**	**4.71**	**329**	*e*Sn	Sn	**09 45 18.9**	**-2.4**
OKC	**Ostrava-Krasne**	**4.77**	**12**	*e*PN	Pn	**09 44 28.3**	**+0.8**
OKC				*e*SN	Sn	**09 45 21.1**	**-1.6**
DAVOX	**Davos/Dischmat**	**4.96**	**291**	Pn	Pn	**09 44 30.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=135,slow=19,SNR=2.5						
DAVOX				Sn	Sn	**09 45 31.1**	**+3.7**
	comp=Z,0.7nm,0.3s,baz=289,slow=8,SNR=2.8						
DAVOX				Lg		09 45 50.1	
	comp=Z,0.6nm,0.3s,baz=168,slow=20,SNR=2.5						
PRU	**Pruhonice**	**5.01**	**344**	*e*PN	Pn	**09 44 29.8**	**-1.0**
KRUS	**Krusevo**	**5.09**	**137**	*e*Pn	Pn	**09 44 32.9**	**+1.0**
KRUS				*e*Sn	Sn	**09 45 26.1**	**-4.5**
DPC	**Dobruska-Polom**	**5.18**	**358**	*e*PN	Pn	**09 44 33.1**	**0.0**
STHS	**Stebnicka Huta**	**5.28**	**35**	*e*Pn	Pn	**09 44 35.8**	**+1.3**
STHS				*e*		10 09 48.6	
ROTZ	**Rotzenmuhle**	**5.48**	**328**	*e*Sn	Sn	**09 45 36.0**	**-4.1**
NKC	**Novy Kostel**	**5.79**	**332**	*e*PN	Pn	**09 44 41.2**	**-0.2**
NKC				*e*SN	Sn	**09 45 43.0**	**-4.7**
GRF	**Grafenberg Arr**	**5.81**	**323**	*e*Sn	Sn	**09 45 45.1**	**-3.2**
WERN	**Wernitzgruen**	**5.86**	**332**	*e*Pn	Pn	**09 44 44.1**	**+1.7**
WERN				*e*Sn	Sn	**09 45 44.6**	**-4.8**
GUNZ	**Gunzen**	**5.94**	**332**	*e*Pn	Pn	**09 44 44.4**	**+0.9**
TANN	**Tannenbergstha**	**5.94**	**333**	*e*Sn	Sn	**09 45 47.8**	**-3.7**
BRG	**Berggiesshubel**	**5.97**	**343**	SG	Sn	**09 45 54.1**	**+1.8**
	comp=Z,15nm,0.9s						
FBE	**Freiberg**	**6.15**	**340**	*e*Sn	Sn	**09 45 53.8**	**-2.8**
CLL	**Collm**	**6.59**	**340**	*e*(Pn)	Pn	**09 44 54.0**	**+1.5**
CLL				*e*Sb	Sb	**09 46 34.0**	**+5.1**
CLL				*e*Sg	Sg	**09 46 49.0**	**+1.8**
FINES	**FINESS Array B**	**17.21**	**15**	P	Pn	**09 47 17.1**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=200,slow=16,SNR=4.7						
TORD	**Torodi Ar. Bea**	**34.36**	**206**	P	P	**09 49 59.8**	**-2.9**
	comp=Z,0.4nm,0.6s,mb3.5,baz=23,slow=10,SNR=2.8						
YKA	**Yellowknife Ar**	**65.81**	**337**	P	P	**09 53 59.8**	**-0.6**
	comp=Z,0.3nm,0.8s,mb3.4,baz=38,slow=7.1,SNR=3.8						

*NEIC **19** 10:17:37.3, 31.05S×67.62W, h140km, MG3.9(GUC), After GUC.*
GUC 19 10:17:37.3±0.7, 3105S×6762W, h140km, ML3.9, 1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**2.89**	**287**	*e*P	Pn	10 18 27.7	+4.9
TLL				*i* S	Sn	10 19 03.1	+5.2
TLL	**Tololo Astrono**	**2.89**	**287**	*e*P	Pn	10 18 27.7	+4.9
TLL				*i* S	Sn	10 19 03.1	+5.2
TLL				AML	AML	10 19 14.1	
	comp=N,141nm,0.6s						
CMCH	**Combarbala**	**2.91**	**267**	*e*P	Pn	10 18 24.2	+1.1
CMCH				*i* S	Sn	10 18 58.8	+0.5
CMCH	**Combarbala**	**2.91**	**267**	*e*P	Pn	10 18 24.2	+1.1
CMCH				*i* S	Sn	10 18 58.8	+0.5
CMCH				AML	AML	10 19 04.2	
	comp=N,1μm,0.9s						
FCH	**Farellones**	**3.21**	**224**	*e*P	Pn	10 18 28.0	+1.1
FCH				*i* S	Sn	10 19 07.3	+2.0
FCH				AML	AML	10 19 11.7	
	comp=E,89nm,0.2s						
PEL	**Peldehue**	**3.34**	**230**	*e*P	Pn	10 18 29.3	+0.8
PEL				*i* S	Sn	10 19 08.2	0.0
PEL				AML	AML	10 19 18.3	
	comp=N,131nm,0.5s						
PCH	**Pirque**	**3.55**	**223**	*e*P	Pn	10 18 32.2	+0.9
TACH	**Talagante**	**3.83**	**226**	⇓*i*P	Pn	10 18 35.8	+0.8
CHCH	**Chadas Angostu**	**3.85**	**221**	*e*P	Pn	10 18 35.7	+0.4
CACH	**El Canelo**	**3.96**	**219**	*e*P	Pn	10 18 38.1	+1.4

IDC 19 10:27:32.8±4.2, 288S×10070E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.5/16, mbtmp3.4/3, Error ellipse: s-maj=217.5km s-min=26.7km az=52.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**36.95**	**120**	P	P	10 34 43.7	-0.3
	0.4nm,0.4s,baz=295,slow=8.2,SNR=10						
ASAR	**Alice Springs**	**38.17**	**126**	P	P	10 34 54.8	+0.4
	0.2nm,0.5s,baz=299,slow=7.7,SNR=8.1						
MKAR	**Makanchi Array**	**52.06**	**344**	P	P	10 36 44.7	+0.4
	0.1nm,0.3s,baz=144,slow=7.6,SNR=3.4						
TXAR	**Lajitas Array**	**144.96**	**39**	PKP	PKPdf	10 47 11.2	-1.6
	0.1nm,0.5s,baz=316,slow=1.4,SNR=4.2						

*MOS **19** 10:46:44.5±2.3, 4701N×152.15E, h33km, mb4.3/2, Error ellipse: s-maj=84.0km s-min=27.8km az=72.2*
*ISCJB **19** 10:46:47.2±1.0, 47.1N±02×1528E±03, h56km, mb3.5/7, Error ellipse: s-maj=32.2km s-min=25.8km az=136.6*
*IDC **19** 10:46:49.3±1.0, 47.12N×152.81E, h58km±7km, mb3.3/7, mb1 3.6/7, mb1mx3.4/18, mbtmp3.3/7, Error ellipse: s-maj=35.5km s-min=22.5km az=127.0*
ISC 19 10:46:49.3±1.0, 471N±02×1527E±03, h58km, h58km±9km:pP-P, n10, σ0$77/10, mb3.5/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.23**	**31**	*e*PN	Pn	**10 47 54.6**	**+3.4**
YKA	**Yellowknife Ar**	**50.81**	**37**	P	P	**10 55 43.6**	**+0.3**
	0.1nm,0.7s,mb2.9,baz=298,slow=7.2,SNR=5.1						
YKA				pP	pP	10 55 58.9	+0.4
	0.4nm,0.6s,baz=296,slow=7.0,SNR=6.4						
NVAR	**Mina Array Bea**	**62.50**	**62**	P	P	**10 57 06.2**	**-0.4**
	0.2nm,0.6s,mb3.5,baz=294,slow=7.8,SNR=3.4						
PDAR	**Pinedale Array**	**64.75**	**54**	P	P	**10 57 20.6**	**-0.7**
	0.5nm,0.8s,mb3.6,baz=270,slow=0.4,SNR=4.0						
NOA	**NORSAR Array B**	**67.82**	**341**	P	P	**10 57 41.0**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**67.82**	**341**	P	P	**10 57 41.0**	**+0.3**
	comp=Z,1.4nm,0.8s,mb4.0,baz=26,slow=5.9,SNR=2.5						
AKASG	**Malin Array Be**	**71.12**	**326**	P	P	**10 58 00.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**71.12**	**326**	P	P	**10 58 00.4**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.1,baz=34,slow=6.4,SNR=4.1						
ASAR	**Alice Springs**	**72.45**	**198**	P	P	**10 58 10.1**	**+0.7**
	comp=Z,0.3nm,0.8s,mb3.3,baz=15,slow=6.2,SNR=4.9						
ASAR				pP	pP	10 58 25.8	+0.4
	comp=Z,0.2nm,0.5s,baz=7.8,slow=5.6,SNR=1.9						
TXAR	**Lajitas Array**	**77.55**	**60**	P	P	**10 58 38.6**	**-0.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=299,slow=5.2,SNR=14						
TXAR				pP	pP	10 58 54.1	-1.0
	comp=Z,0.4nm,0.6s,baz=296,slow=3.7,SNR=4.2						

CASC 19 10:57:49.9±1.9, 1385N×9141W, h39km±42km, MD3.6, 5C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.51**	**335**	⇑*e*P	Pn	10 58 01.5	+0.7
JAT				*e*S	Sn	10 58 09.0	+0.6
FUG	**Fuego 3**	**0.81**	**43**	⇓*e*P	Pn	10 58 04.7	-0.2
PCG	**Pacaya**	**0.95**	**55**	*e*P	Pn	10 58 07.3	+0.5
PCG				⇑*i*P		10 58 07.3	
RBDL	**Robledal**	**1.70**	**81**	⇑*e*P	x	10 58 43.3	
RBDL				*e*S	x	10 59 04.8	
RTR	**El Retiro**	**1.72**	**88**	⇓*e*P	x	10 58 43.7	
RTR				*e*S	x	10 59 05.2	
SBLS	**San Blas**	**1.74**	**90**	⇓*e*P	x	10 58 43.5	
SBLS				*e*S	x	10 59 05.7	
SNJE	**San Jose**	**1.75**	**89**	⇓*e*P	x	10 58 43.1	
SNJE				*e*S	x	10 59 05.5	
BOQS	**Boqueron**	**2.08**	**93**	⇓*e*P	x	10 58 48.3	
BOQS				*e*S	x	10 59 13.4	
LFRS	**El Faro**	**2.30**	**95**	⇑*e*P	x	10 58 51.5	
LFRS				*e*S	x	10 59 19.0	
LCBS	**La Ceiba**	**2.37**	**94**	⇑*e*P	x	10 58 52.7	
LCBS				*e*S	x	10 59 20.6	
SNVI	**San Vicente**	**2.

0.6nm,0.4s,mb3.6,baz=116,slow=8.4,SNR=8.1

ISC 19 11:54:03.6±0.8, 4885N±004×2050E±006, h7km±7km, n6, σ1°00/11, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KECS	**Kecovo**	**0.37**	**181**	*e*PG	**Pg**	**11 54 10.7**	**-0.1**
KECS				*e*SG	**Sg**	**11 54 16.5**	**+0.8**
CRVS	**Cervenica-Dubn**	**0.64**	**85**	*e*PG	**Pg**	**11 54 15.4**	**-0.5**
CRVS				*e*SG	**Sg**	**11 54 24.2**	**+0.1**
STHS	**Stebnicka Huta**	**0.75**	**41**	*e*PG	**Pg**	**11 54 15.5**	**-2.4**
VYHS	**Vyhne**	**1.16**	**253**	*e*PN	**Pn**	**11 54 26.7**	**+0.5**
VYHS				*e*SN	**Sn**	**11 54 41.2**	**-1.1**
KOLS	**Kolonicke sedl**	**1.17**	**85**	*e*PN	**Pn**	**11 54 25.9**	**-0.5**
KOLS				*e*SN	**Sn**	**11 54 44.0**	**+1.3**
OJC	**Ojcow**	**1.44**	**342**	*e*Pg	**Pg**	**11 54 31.2**	**0.0**
OJC				*e*Sg	**Sg**	**11 54 51.4**	**+1.5**

*ISCJB **19** 12:02:22.0±4.7, 02N±0.1×974E±03, h40km±38km, mb3.7/5, Error ellipse: s-maj=44.4km s-min=21.6km az=163.2*
*IDC **19** 12:02:23.8±8.0, 0.14N×9731E, h41km±64km, mb3.5/5, mb1 3.5/6, mb1mx3.4/20, mbtmp3.4/6, ML2.7/1, Error ellipse: s-maj=58.5km s-min=20.0km az=66.0*

ISC 19 12:02:22.4±7.5, 016N±009×974E±02, h27km±54km, n7, σ0°76/7, mb3.7/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.05**	**31**	P	**Pn**	**12 03 09.0**	**+0.1**
	1.0nm,0.3s,baz=170,slow=15,SNR=8.0						
PSI				S	**Sn**	**12 03 44.5**	**0.0**
	1.6nm,0.3s,baz=24,slow=2.4,SNR=5.2						
WRA	**Warramunga Arr**	**41.34**	**121**	P	**P**	**12 10 05.9**	**-0.5**
	0.7nm,0.8s,mb3.4,baz=305,slow=9.0,SNR=2.4						
ASAR	**Alice Springs**	**42.64**	**126**	P	**P**	**12 10 16.4**	**-0.6**
	0.3nm,0.6s,mb3.2,baz=305,slow=7.9,SNR=8.0						
SONM	**Songino Array**	**48.13**	**8**	P	**P**	**12 11 00.6**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=177,slow=8.0,SNR=5.2						
SONM				PcP	PcP	12 12 26.4	-0.9
	0.3nm,0.6s,baz=193,slow=3.3,SNR=2.4						
MKAR	**Makanchi Array**	**48.29**	**346**	P	**P**	**12 11 00.8**	**-0.5**
	1.9nm,0.7s,mb4.2,baz=157,slow=8.1,SNR=18						
STKA	**Stephens Creek**	**52.53**	**132**	P	**P**	**12 11 34.7**	**+1.0**
	1.1nm,0.8s,mb3.8,baz=270,slow=3.0,SNR=2.2						
TXAR	**Lajitas Array**	**144.45**	**33**	PKP	PKPdf	12 21 55.2	-1.9
	0.2nm,0.5s,baz=124,slow=0.6,SNR=6.7						

JMA 19 12:11:07.3±0.2, 3022N×13197E, h56km±4km, M3.7, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**0.96**	**297**	P	Pn	12 11 24.9	+0.3
JTN				*e*S	Sn	12 11 38.3	+0.9
JTSR	**Tashiro 2**	**1.31**	**317**	P	Pn	12 11 29.3	0.0
JTSR				*e*S	Sn	12 11 46.6	+0.9
JNAR	**Kushima--Naru**	**1.43**	**335**	P	Pn	12 11 32.0	+1.0
JNAR				S	Sn	12 11 49.8	+1.0
JKC	**Kuchinoerabu**	**1.55**	**279**	P	Pn	12 11 33.7	+1.1
JKC				*e*S	Sn	12 11 53.3	+1.6
JTZ	**Takazaki**	**1.84**	**336**	P	Pn	12 11 37.6	+1.1
JTZ				S	Sn	12 11 59.8	+1.2
JSJ	**Shimokoshiki**	**2.42**	**307**	P	Pn	12 11 44.7	+0.3
JSJ				*e*S	Sn	12 12 13.3	+0.4
JIU2	**Izumi 2**	**2.52**	**337**	P	Pn	12 11 47.2	+1.4

*ISCJB **19** 12:12:53.3±0.3, 6715N×002×2076E±005, h0km, mb3.9/2, Error ellipse: s-maj=2.9km s-min=2.5km az=143.6*
*CSEM **19** 12:12:54.1±0.1, 6713N×2076E, h1km, ML3.0, Error ellipse: s-maj=2.8km s-min=2.4km az=148.0, Suspected Mining explosion.*
*IDC **19** 12:12:55.5±0.8, 6714N×2077E, h0km, mb3.8/2, mb1 3.7/7, mb1mx3.5/21, mbtmp3.7/7, ML3.4/5, Error ellipse: s-maj=13.9km s-min=7.6km az=116.0*
*HEL **19** 12:12:55.4±0.0, 6718N×2068E, h0km, ML3.2, mb3.9(NEIC), ML3.0(UPP)*
*UPP **19** 12:12:55.1, 67.19N×2066E, h16km, ML3.0, Suspected Mining explosion.*
*NAO **19** 12:12:55.3±0.8, 6713N×2094E, ML3.2*
*BER **19** 12:12:57.2±3.6, 6713N×2076E, h0km, ML3.1, ML3.2(NAO), Suspected explosion*
*NEIC **19** 12:12:57.3, 6715N×2090E, h0km, mb3.9/3, ML3.1(BER), After BER.*

ISC 19 12:12:54.8±0.3, 6715N±002×2079E±004, h0km, n76, σ1°01/144, mb3.9/2, 1C-2D, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.09**	**249**	⇑*i*P	**Pg**	**12 12 56.7**	**+0.2**
MASU	**Masugnsbyn**	**0.56**	**56**	⇓*i*P	**Pg**	**12 13 06.1**	**+0.6**
MASU				*i* S	**Sg**	**12 13 14.3**	**+1.6**
ERTU	**Ertsjaerv**	**0.82**	**137**	*i* P	**Pg**	**12 13 11.0**	**+0.5**
KUA	**Kurravaara**	**0.82**	**348**	*i* P	**Pg**	**12 13 09.3**	**-1.2**
SALU	**Saltoluokta**	**0.92**	**285**	*i* P	**Pg**	**12 13 11.1**	**-1.3**
PAJU	**Pajala**	**0.92**	**97**	*e*P	**Pg**	**12 13 12.8**	**+0.4**
NIKU	**Nikkaluokta**	**0.98**	**317**	⇓*e*P	**Pg**	**12 13 12.1**	**-1.5**
HEF	**Hetta**	**1.67**	**40**	*e*P	**Pn**	**12 13 25.0**	**-0.1**
HEF				*e*S	**Sn**	**12 13 46.6**	**-0.6**
HEF	**Hetta**	**1.67**	**40**	P	**Pn**	**12 13 25.0**	**-0.2**
HEF				S	**Sn**	**12 13 46.5**	**-0.7**
KIF	**Kilpisjarvi**	**1.86**	**0**	*e*P	**Pn**	**12 13 28.3**	**+0.4**
KIF				*e*S	**Sn**	**12 13 52.1**	**+0.2**
KIF	**Kilpisjarvi**	**1.86**	**0**	P	**Pn**	**12 13 28.2**	**+0.4**
KIF				S	**Sn**	**12 13 52.1**	**+0.1**
KTK1	**Kautokeino**	**2.08**	**25**	*e*P	**Pn**	**12 13 31.9**	**+1.1**
KTK1				*e*SG	**Sg**	**12 14 00.7**	**-0.8**
KTK1				AML	AML	12 14 01.8	
	comp=Z,405nm,0.5s						
KTK1	**Kautokeino**	**2.08**	**25**	*e*P	**Pn**	**12 13 31.9**	**+1.1**
KTK1				*e*Sg	**Sg**	**12 14 00.7**	**-0.8**
KTK1	**Kautokeino**	**2.08**	**25**	P	**Pn**	**12 13 31.9**	**+1.1**
KTK1				Sg	**Sg**	**12 14 00.7**	**-0.8**
SGF	**Sodankyl**	**2.24**	**80**	*e*P	**Pn**	**12 13 34.2**	**+1.1**
SGF				*e*PB	**Pb**	**12 13 35.3**	**-0.8**
SGF				*e*SG	**Sg**	**12 14 04.9**	**-1.9**
SGF	**Sodankyl**	**2.24**	**80**	P	**Pn**	**12 13 34.2**	**+1.1**
SGF				Sg	**Sg**	**12 14 04.8**	**-2.0**
TRO	**Tromso**	**2.58**	**345**	*e*P	**Pn**	**12 13 37.9**	**+0.2**
TRO				*e*S	**Sn**	**12 14 10.5**	**+0.7**
TRO				AML	AML	12 14 15.2	
	comp=Z,228nm,0.6s						
TRO	**Tromso**	**2.58**	**345**	*e*P	**Pn**	**12 13 37.9**	**+0.2**
TRO				*e*S	**Sn**	**12 14 10.5**	**+0.7**
TRO	**Tromso**	**2.58**	**345**	*e*P	**Pn**	**12 13 37.9**	**+0.1**
TRO				S	**Sn**	**12 14 10.5**	**+0.7**
	comp=Z,228nm,0.6s						
MOR8	**Moi Rana**	**2.71**	**252**	*e*P	**Pn**	**12 13 38.2**	**-1.4**
MOR8				*e*SG	**Sg**	**12 14 15.3**	**-6.6**
MOR8				AML	AML	12 14 19.5	
	comp=Z,187nm,0.4s						
MOR8	**Moi Rana**	**2.71**	**252**	*e*P	**Pn**	**12 13 39.1**	**-0.4**
MOR8				*e*S	**Sn**	**12 14 13.1**	**0.0**
MOR8	**Moi Rana**	**2.71**	**252**	*e*P	**Pn**	**12 13 39.1**	**-0.5**
MOR8				*e*S	**Sn**	**12 14 13.1**	**+0.1**
OUL	**Oulu**	**2.94**	**133**	*e*P	**Pn**	**12 13 44.2**	**+1.6**
OUL				*e*SG	**Sg**	**12 14 26.4**	**-2.6**
OUL				MSG		12 14 35.5	
	comp=Z,131nm,0.3s						
OUL	**Oulu**	**2.94**	**133**	P	**Pn**	**12 13 44.1**	**+1.5**
OUL				Sg	**Sg**	**12 14 26.4**	**-2.6**
	comp=Z,131nm,0.3s						
LOF	**Lofoten**	**2.94**	**293**	*e*Pg	**Pg**	**12 13 50.7**	**-0.3**
LOF				*e*Sg	**Sg**	**12 14 29.3**	**+0.2**
LOF				AML	AML	12 14 44.5	
	comp=Z,100nm,0.4s						
LOF	**Lofoten**	**2.94**	**293**	*e*Pg	**Pg**	**12 13 50.7**	**-0.4**
	SNR=90						
LOF				*e*Sg	**Sg**	**12 14 29.3**	**+0.2**
	comp=Z,100nm,0.4s,SNR=90						
ARA0	**ARCESS Array S**	**2.96**	**34**	Pn	**Pn**	**12 13 43.4**	**+0.4**
	baz=217,slow=14						
ARA0				Sn	**Sn**	**12 14 19.4**	**+0.2**
	baz=214,slow=22						
ARA0	**ARCESS Array S**	**2.96**	**34**	*e*P	**Pn**	**12 13 43.4**	**+0.4**
ARA0				*e*S	**Sn**	**12 14 19.4**	**+0.2**
ARA0	**ARCESS Array S**	**2.96**	**34**	Pn	**Pn**	**12 13 43.3**	**+0.3**
	SNR=50						
ARA0				Sn	**Sn**	**12 14 19.4**	**+0.3**
ARCES	**ARCESS Array B**	**2.96**	**34**	Pn	**Pn**	**12 13 44.2**	**+1.2**
	comp=Z,5.6nm,0.3s,baz=210,slow=14,SNR=400						
ARCES				Sn	**Sn**	**12 14 19.3**	**+0.2**
	comp=Z,28nm,0.3s,baz=216,slow=23,SNR=14						
STOK2	**Flostrand**	**3.06**	**258**	*e*P	**Pn**	**12 13 45.0**	**+0.6**
STOK1	**Konsvik**	**3.10**	**261**	*e*P	**Pn**	**12 13 44.7**	**-0.2**
STOK	**Stokkvaagen**	**3.19**	**259**	*e*P	**Pn**	**12 13 46.6**	**+0.5**
STOK				*e*SG	**Sg**	**12 14 31.7**	**-5.5**
STOK				AML	AML	12 14 45.3	
	comp=Z,196nm,0.7s						
STOK	**Stokkvaagen**	**3.19**	**259**	*e*P	**Pn**	**12 13 46.6**	**+0.5**
STOK				*e*		12 14 31.7	
STOK	**Stokkvaagen**	**3.19**	**259**	*e*P	**Pn**	**12 13 46.6**	**+0.5**
STOK				Sg	**Sg**	**12 14 31.7**	**-5.5**
KEV	**Kevo**	**3.48**	**38**	*e*P	**Pn**	**12 13 50.5**	**+0.5**
KEV				*e*S	**Sn**	**12 14 30.9**	**-0.9**
KEV				*e*SB	**Sb**	**12 14 37.9**	**-1.9**
KEV				MSG		12 14 49.9	
	comp=Z,96nm,0.4s						
KEV	**Kevo**	**3.48**	**38**	*e*Pn	**Pn**	**12 13 50.0**	**0.0**
KEV				*e*Pg	**Pg**	**12 13 58.1**	**-3.2**
KEV				*e*Sn	**Sn**	**12 14 31.4**	**-0.4**
KEV				*e*Sg	**Sg**	**12 14 47.3**	**+1.1**
KEV	**Kevo**	**3.48**	**38**	*e*Pn	**Pn**	**12 13 50.0**	**0.0**
KEV	**Kevo**	**3.48**	**38**	*e*Pg	**Pg**	**12 13 58.1**	**-3.2**
KEV				S	**Sn**	**12 14 30.8**	**-1.0**
MSF	**Maaselka**	**3.53**	**107**	*e*P	**Pn**	**12 13 51.6**	**+0.8**
MSF				*e*SB	**Sb**	**12 14 42.3**	**+1.0**
MSF				MSG		12 14 46.2	
	comp=Z,85nm,0.3s						
MSF	**Maaselka**	**3.53**	**107**	P	**Pn**	**12 13 51.5**	**+0.8**
KU6	**Riekki**	**3.80**	**103**	*e*P	**Pn**	**12 13 55.5**	**+1.0**
KU6				*e*S	**Sn**	**12 14 40.7**	**+0.8**
KU6				*e*SG	**Sg**	**12 14 53.5**	**-3.4**
KU6				MSG		12 14 56.9	
	comp=Z,111nm,0.3s						
KU6	**Riekki**	**3.80**	**103**	P	**Pn**	**12 13 55.4**	**+0.9**
KU6				S	**Sn**	**12 14 40.7**	**+0.8**
KU6				Sg	**Sg**	**12 14 53.4**	**-3.4**
	comp=Z,111nm,0.3s						
VAF	**Ylistaro**	**4.21**	**168**	*e*P	**Pn**	**12 14 01.3**	**+1.2**
VAF				*e*S	**Sn**	**12 14 48.7**	**-1.1**
VAF				*e*SG	**Sg**	**12 15 05.9**	**-3.8**
VAF				MSG		12 15 11.1	
	comp=Z,45nm,0.3s						
VAF	**Ylistaro**	**4.21**	**168**	P	**Pn**	**12 14 01.2**	**+1.2**
VAF				S	**Sn**	**12 14 48.7**	**-1.1**
VAF				Sg	**Sg**	**12 15 05.8**	**-3.9**
	comp=Z,45nm,0.3s						
KJN	**Kajaani**	**4.21**	**134**	*e*P	**Pn**	**12 14 01.3**	**+1.2**
KJN				*e*S	**Sn**	**12 14 50.2**	**+0.3**
KJN				*e*SG	**Sg**	**12 15 05.6**	**-4.2**
KJN				MSG		12 15 10.5	
	comp=Z,63nm,0.3s						
KJN	**Kajaani**	**4.21**	**134**	P	**Pn**	**12 14 01.3**	**+1.2**
KJN				S	**Sn**	**12 14 50.1**	**+0.3**
KJN				Sg	**Sg**	**12 15 05.6**	**-4.2**
	comp=Z,63nm,0.3s						
NSS	**Namsos**	**4.48**	**238**	*e*P	**Pn**	**12 14 03.9**	**+0.1**
NSS				*e*S	**Sn**	**12 14 56.8**	**+0.2**
NSS				*e*SG	**Sg**	**12 15 13.4**	**-5.1**
NSS				AML	AML	12 15 16.6	
	comp=Z,76nm,0.6s						
NSS	**Namsos**	**4.48**	**238**	*e*P	**Pn**	**12 14 03.9**	**+0.1**
NSS				*e*S	**Sn**	**12 14 56.8**	**+0.3**
NSS	**Namsos**	**4.48**	**238**	*e*P	**Pn**	**12 14 03.9**	**+0.1**
NSS				*e*S	**Sn**	**12 14 56.8**	**+0.2**
	SNR=49						
NSS				Sg	**Sg**	**12 15 13.4**	**-5.2**
APA0	**Apatity Array**	**4.73**	**79**	Pn	**Pn**	**12 14 06.0**	**-1.3**
	baz=278,slow=12						
APA0				Sn	**Sn**	**12 15 01.7**	**-1.0**
	baz=270,slow=28						
APA0				Lg		12 15 19.2	
	baz=274,slow=37						
APA0	**Apatity Array**	**4.73**	**79**	*e*P	**Pn**	**12 14 06.0**	**-1.3**
APA0				*e*S	**Sn**	**12 15 01.7**	**-1.0**
APA0				*e*SG	**Sg**	**12 15 19.2**	**-7.4**
APA0	**Apatity Array**	**4.73**	**79**	Pn	**Pn**	**12 14 06.0**	**-1.3**
	SNR=50						
APA0				Sn	**Sn**	**12 15 01.7**	**-1.1**
	SNR=50						
FIA0	**FINESS Array S**	**6.17**	**156**	Pn	**Pn**	**12 14 28.2**	**+1.2**
	baz=345,slow=12						
FIA0				Sn	**Sn**	**12 15 37.3**	**-1.0**
	baz=346,slow=28						
FIA0				Lg		12 16 08.4	
	baz=345,slow=37						
FIA0	**FINESS Array S**	**6.17**	**156**	*e*P	**Pn**	**12 14 28.2**	**+1.2**
FIA0				*e*S	**Sn**	**12 15 37.3**	**-1.0**
FIA0				*e*SG	**Sg**	**12 16 08.4**	**-4.5**
FIA0	**FINESS Array S**	**6.17**	**156**	P	**Pn**	**12 14 28.2**	**+1.1**
FIA0				S	**Sn**	**12 15 37.3**	**-1.0**
FINES	**FINESS Array B**	**6.17**	**156**	Pn	**Pn**	**12 14 28.5**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=349,slow=13,SNR=37						
FINES				Sn	**Sn**	**12 15 36.8**	**-1.5**
	comp=Z,3.5nm,0.3s,baz=347,slow=21,SNR=16						
FINES				Lg		12 16 07.9	
	comp=Z,7.2nm,0.3s,baz=349,slow=28,SNR=14						
NB2	**NORSAR Subarra**	**7.42**	**219**	*e*P	**Pn**	**12 14 44.2**	**0.0**
NB2				*e*SG	**Sg**	**12 16 46.3**	**-6.7**
NB2	**NORSAR Subarra**	**7.42**	**219**	Pn	**Pn**	**12 14 44.2**	**0.0**
	baz=32,slow=14						
NB2				Lg		12 16 46.3	
	baz=25,slow=37						
NB2	**NORSAR Subarra**	**7.42**	**219**	Pn	**Pn**	**12 14 44.2**	**0.0**
NB2				Sg	**Sg**	**12 16 46.2**	**-6.7**
NOA	**NORSAR Array B**	**7.42**	**219**	Pn	**Pn**	**12 14 44.5**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=26,slow=11,SNR=4.6						
NOA				Sn	**Sn**	**12 16 03.1**	**-5.9**
	comp=Z,2.4nm,0.3s,baz=18,slow=8.9,SNR=9.7						
NOA				Lg		12 16 47.6	
	comp=Z,3.9nm,0.3s,baz=73,slow=19,SNR=5.8						
NOA	**NORSAR Array B**	**7.42**	**219**	Pn	**Pn**	**12 14 44.5**	**+0.3**
NOA				Sn	**Sn**	**12 16 03.1**	**-5.9**
HFS	**Hagfors**	**7.72**	**207**	Pn	**Pn**	**12 14 47.5**	**-0.7**
	baz=29,slow=11						
HFS				Sn	**Sn**	**12 16 11.6**	**-4.6**
	baz=30,slow=22						
HFS				Lg		12 16 52.1	
	baz=28,slow=37						
HFS	**Hagfors**	**7.72**	**207**	*e*P	**Pn**	**12 14 47.5**	**-0.7**
HFS				*e*S	**Sn**	**12 16 11.6**	**-4.6**
HFS				*e*SG	**Sg**	**12 16 52.1**	**-10**
HFS	**Hagfors**	**7.72**	**207**	Pn	**Pn**	**12 14 47.4**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=22,slow=13,SNR=33						
HFS				Sn	**Sn**	**12 16 03.4**	**-13**
	comp=Z,1.1nm,0.3s,baz=22,slow=16,SNR=4.3						
HFS				Lg		12 16 53.1	
	comp=Z,2.2nm,0.3s,baz=28,slow=29,SNR=7.2						
SPA0	**Spitsbergen Ar**	**11.15**	**355**	Pn	**Pn**	**12 15 34.6**	**-0.6**
	baz=179,slow=18						
SPA0	**Spitsbergen Ar**	**11.15**	**355**	*e*P	**Pn**	**12 15 34.6**	**-0.6**
AKASG	**Malin Array Be**	**17.04**	**161**	Pn	**Pn**	**12 16 48.3**	**-5.7**
	comp=Z,0.5nm,0.3s,baz=344,slow=13,SNR=5.5						
AKASG				Lg		12 21 47.4	
	comp=Z,0.9nm,0.3s,baz=348,slow=30,SNR=4.1						
KIEV	**Kiev**	**17.04**	**161**	*e*P	**Pn**	**12 16 54.7**	**+0.6**
	comp=Z,6.1nm,0.6s						
KIEV	**Kiev**	**17.04**	**161**	*e*P	**Pn**	**12 16 54.7**	**+0.6**
MORC	**Moravsky Berou**	**17.51**	**187**	*e*P	**Pn**	**12 16 55.1**	**-4.9**
	comp=Z,2.2nm,0.4s						
ARU	**Arti**	**20.45**	**103**	*e*P	**P**	**12 17 32.9**	**-0.5**
	comp=Z,3.8nm,0.6s						
AKTK	**Aktyubinsk**	**24.96**	**114**	P	**P**	**12 18 21.0**	**+1.5**
AKTK	**Aktyubinsk**	**24.96**	**114**	P	**P**	**12 18 21.0**	**+1.6**
AKTO	**Aktyubinsk**	**24.96**	**114**	P	**P**	**12 18 21.0**	**+1.5**
	comp=Z,2.6nm,0.6s,mb4.1,baz=318,slow=14,SNR=12						
TORD	**Torodi Ar. Bea**	**55.42**	**203**	P	**P**	**12 22 29.7**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=351,slow=4.6,SNR=3.5						

MAN 19 12:25:25, 1352N×12377E, h26km, mb4.7, ML3.5, MS3.5, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.39**	**78**	*e*P	Pb	12 25 35.0	+1.7
PVCP	**Virac**	**0.39**	**78**	*e*P	Pb	12 25 35.1	+1.7
PVCP				*e*S	Sb	12 25 43.5	+4.3
PVCP	**Virac**	**0.39**	**78**	⇓*i*P	Pb	12 25 35.1	+1.7
PVCP				*i* S	Sb	12 25 43.9	+4.8
CNP	**Catarman**	**1.33**	**139**	*e*P	Pn	12 25 49.4	+1.6
CNP	**Catarman**	**1.33**	**139**	*e*P	Pn	12 25 49.4	+1.5
GQP	**Guinayangan**	**1.34**	**287**	⇑*i*P	Pn	12 25 46.7	-1.3
GQP				*i* S	Sn	12 26 05.1	+0.1
OTRP	**Odiongan**	**2.05**	**236**	*e*P	Pn	12 25 58.4	+0.6
OTRP	**Odiongan**	**2.05**	**236**	*e*P	Pn	12 25 58.7	+0.8
POLP	**Polillo Island**	**2.14**	**304**	*e*P	Pn	12 26 00.8	+1.7
BALP	**Baler**	**3.06**	**316**	*e*P	Pn	12 26 17.5	+5.7
BALP	**Baler**	**3.06**	**316**	*e*P	Pn	12 26 18.5	+6.8
LUBP	**Lubang**	**3.43**	**274**	*e*P	Pn	12 26 18.2	+1.4
LUBP	**Lubang**	**3.43**	**274**	*e*P	Pn	12 26 18.3	+1.5
CUYO	**Cuyo Island**	**3.77**	**226**	*e*P	Pn	12 26 22.0	+0.5
CUYO	**Cuyo Island**	**3.77**	**226**	*e*P	Pn	12 26 21.8	+0.2

IDC 19 12:33:44.2±9.8, 2597S×17952E, h671km±144km, mb2.7/4, mb1 3.0/5, mb1mx2.9/13, mbtmp2.8/5, Error ellipse: s-maj=81.8km s-min=31.7km az=18.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.42**	**189**	P	P	12 36 26.4	+0.3
	1.3nm,0.3s,baz=311,slow=0.9,SNR=9.6						
URZ				S	S	12 38 33.7	-4.7
	0.4nm,0.3s,baz=312,slow=16,SNR=3.5						
STKA	**Stephens Creek**	**33.59**	**251**	P	P	12 39 34.2	+1.5
	1.0nm,0.5s,baz=85,slow=8.0,SNR=6.8						
ASAR	**Alice Springs**	**41.31**	**263**	P	P	12 40 35.4	+0.4
	0.3nm,0.5s,baz=97,slow=8.0,SNR=16						
WRA	**Warramunga Arr**	**41.88**	**269**	P	P	12 40 38.5	-1.0
	0.4nm,0.3s,baz=100,slow=6.7,SNR=28						
TXAR	**Lajitas Array**	**91.89**	**58**	P	P	12 45 44.0	+0.5
	0.5nm,1.0s,baz=205,slow=4.0,SNR=3.8						

*IDC **19** 12:37:27.0±8.3, 6.10N×12582E, h144km±74km, mb3.9/6, mb1 4.0/6, mb1mx3.6/18, mbtmp3.8/6, Error ellipse: s-maj=71.4km s-min=20.2km az=64.0*
*ISCJB **19** 12:37:28.0±0.7, 62N±02×1260E±03, h178km±11km, mb4.1/6, Error ellipse: s-maj=55.7km s-min=19.0km az=152.1*

ISC 19 12:37:29.2±0.7, 62N±02×1260E±03, h170km±11km, n14, σ0°36/13, mb4.1/6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.83**	**17**	*e*P	**Pn**	**12 37 54.6**	**0.0**
DMPH	**Davao City--Mi**	**1.06**	**332**	⇓*e*P	**Pn**	**12 37 56.0**	**-0.3**
DMPH				*i* S	**Sn**	**12 38 17.6**	**+0.3**
BUKP	**Musuan**	**1.96**	**331**	*e*P	**Pn**	**12 38 05.0**	**-0.1**
KAKA	**Kakadu**	**19.79**	**161**	⇑*i*P	**P**	**12 41 47.0**	**+0.4**
	18nm,0.6s						
FITZ	**Fitzroy Crossi**	**24.10**	**181**	P	**P**	**12 42 29.0**	**-0.2**
	2.6nm,0.5s,mb4.0,baz=359,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**27.19**	**163**	P	**P**	**12 42 56.7**	**-0.4**
	0.8nm,0.4s,mb3.7,baz=342,slow=9.4,SNR=13						
WRA				PcP	PcP	12 46 14.1	+0.9
	0.2nm,0.7s,baz=334,slow=2.4,SNR=4.6						
WB2	**Warramunga Arr**	**27.19**	**163**	*e*P	**P**	**12 42 56.5**	**-0.6**
ASAR	**Alice Springs**	**30.61**	**166**	P	**P**	**12 43 27.5**	**+0.1**
	2.5nm,0.4s,mb4.3,baz=338,slow=7.1,SNR=97						
ASAR				PcP	PcP	12 46 22.6	+0.8
	0.7nm,0.4s,baz=342,slow=2.2,SNR=11						
NWAO	**Narrogin (SRO)**	**39.74**	**192**	P	**P**	**12 44 45.4**	**+0.1**
	30nm,1.4s,mb4.7,baz=333,slow=6.8,SNR=3.5						
STKA	**Stephens Creek**	**40.63**	**159**	*e*P	**P**	**12 44 52.8**	**+0.2**
	2.5nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**40.63**	**159**	P	**P**	**12 44 53.6**	**+1.0**
	4.3nm,0.7s,mb4.2,baz=327,slow=8.6,SNR=16						
SONM	**Songino Array**	**44.80**	**341**	PcP	PcP	12 47 06.1	+1.2
	0.2nm,0.7s,baz=169,slow=2.7,SNR=3.5						
MKAR	**Makanchi Array**	**55.18**	**325**	P	**P**	**12 46 44.2**	**+0.1**
	0.4nm,0.4s,mb3.5,baz=118,slow=7.5,SNR=9.5						
TORD	**Torodi Ar. Bea**	**121.47**	**289**	PKP	PKPdf	12 56 03.1	-0.3
	0.4nm,0.4s,baz=65,slow=2.2,SNR=4.0						

*NEIC **19** 12:47:02.0, 3397S×7200W, h30km, MD3.5(GUC), After GUC.*

GUC 19 12:47:02.0±0.6, 3397S×7200W, h30km±10km, MD3.5, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.49**	**88**	⇓*i*P	Pb	12 47 12.2	-0.1
LNV				*i* S	Sb	12 47 19.4	+0.1
SFDO	**San Fernando**	**1.04**	**128**	*e*P	Pn	12 47 20.7	+0.2
CHCH	**Chadas Angostu**	**1.12**	**88**	⇑*i*P	Pn	12 47 21.9	+0.2
CHCH				*i* S	Sn	12 47 37.3	+1.3
CACH	**El Canelo**	**1.17**	**97**	*e*P	Pn	12 47 23.1	+0.8
CACH				*i* S	Sn	12 47 39.6	+2.3
PCH	**Pirque**	**1.29**	**75**	⇑*i*P	Pn	12

13nm,0.5s
KAKA eS Sn 13 27 56.5 -12
WB2 Warramunga Arr 17.71 199 eP Pn 13 27 02.7 +1.0
WB2 eS Sn 13 30 03.0 -17
WRA Warramunga Arr 17.72 199 P Pn 13 27 02.1 +0.4
0.6nm,0.3s,baz=20,slow=12,SNR=25
WRA S Sn 13 30 06.4 -13
0.2nm,0.3s,baz=9.8,slow=24,SNR=5.0
BATI Kupang 18.03 246 P Pn 13 27 06.8 +1.2
3.0nm,0.3s,baz=18,slow=13,SNR=5.6
FITZ Fitzroy Crossi 20.74 223 eP P 13 27 34.9 -0.9
4.1nm,1.1s
FITZ Fitzroy Crossi 20.74 223 P P 13 27 35.1 -0.7
6.6nm,1.2s,baz=50,slow=13,SNR=6.5
FITZ S S 13 31 14.4 -14
1.9nm,0.6s,baz=24,slow=21,SNR=5.4
ASAR Alice Springs 21.35 197 P P 13 27 42.4 0.0
1.7nm,0.7s,baz=31,slow=10,SNR=35
ASAR S S 13 31 34.6 -5.8
1.5nm,0.9s,baz=10,slow=28,SNR=6.1
MKAR Makanchi Array 71.15 322 P P 13 34 14.1 +0.1
0.2nm,0.4s,baz=103,slow=6.7,SNR=3.2

IDC 19 13:27:04.4±4.5, 632N×12727E, h91km±33km, mb3.6/5, mb1 3.9/6, mb1mx3.6/17, mbtmp3.8/6, Error ellipse: s-maj=87.0km s-min=24.3km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**16.80**	**192**	P	Pn	13 30 56.2	+2.0
	4.8nm,0.3s,baz=109,slow=4.0,SNR=9.6						
FITZ	**Fitzroy Crossi**	**24.32**	**184**	P	P	13 32 13.6	0.0
	1.4nm,0.5s,baz=15,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**27.00**	**165**	P	P	13 32 37.4	-0.5
	1.8nm,0.4s,baz=343,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**29.30**	**168**	P	P	13 33 08.3	-0.6
	1.5nm,0.4s,baz=351,slow=7.4,SNR=24						
ASAR				ScP	ScP	13 39 40.6	0.0
	0.4nm,0.6s,baz=340,slow=2.8,SNR=5.0						
STKA	**Stephens Creek**	**40.36**	**161**	P	P	13 34 34.2	+0.8
	0.6nm,0.3s,baz=349,slow=5.9,SNR=5.1						
MKAR	**Makanchi Array**	**55.77**	**324**	P	P	13 36 31.9	0.0
	0.5nm,0.9s,baz=121,slow=5.6,SNR=3.5						

IDC 19 13:48:30.7±3.4, 284N×9545W, h0km, mb3.6/6, mb1 4.0/6, mb1mx3.8/15, mbtmp3.6/6, MS3.7/13, Ms1 3.7/13, ms1mx3.6/22, Error ellipse: s-maj=141.3km s-min=26.7km az=51.0, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**JuntasAbangare**	**12.79**	**54**	LR	LR	13 55 15.0	
	comp=Z,252nm,21.3s,baz=250,slow=32						
CMIG	**Matias Romero**	**14.17**	**2**	LR	LR	13 56 13.8	
	comp=Z,148nm,20.2s,baz=285,slow=33						
TEIG	**Tepich**	**18.65**	**22**	LR	LR	13 58 33.2	
	comp=Z,72nm,21.1s,baz=190,slow=32						
ATAH	**Atahualpa**	**19.63**	**120**	P	Pn	13 53 08.2	+5.9
	baz=300,slow=16,SNR=2.7						
ATAH				LR	LR	13 58 53.1	
	comp=Z,301nm,20.3s,baz=106,slow=32						
ROSC	**El Rosal**	**21.17**	**84**	LR	LR	14 00 31.1	
	comp=Z,163nm,18.9s,baz=37,slow=34						
NNA	**Nana**	**23.65**	**129**	LR	LR	14 01 20.8	
	comp=Z,103nm,18.4s,baz=320,slow=33						
SDV	**Santo Domingo**	**25.40**	**75**	LR	LR	14 03 03.5	
	comp=Z,153nm,21.7s,baz=218,slow=34						
LPIG	**La Paz**	**25.55**	**327**	LR	LR	14 01 49.1	
	comp=Z,271nm,18.5s,baz=15,slow=31						
TXAR	**Lajitas Array**	**27.48**	**344**	P	P	13 54 19.8	+1.1
	0.6nm,0.7s,baz=165,slow=10,SNR=9.3						
TXAR				LR	LR	14 03 56.1	
	comp=Z,108nm,18.6s,baz=215,slow=34						
SIV	**San Ignacio**	**38.80**	**120**	P	P	13 55 57.5	-0.1
	1.9nm,1.1s,baz=325,slow=13,SNR=4.2						
NVAR	**Mina Array Bea**	**41.12**	**332**	P	P	13 56 15.8	-0.8
	0.2nm,0.4s,baz=145,slow=8.3,SNR=4.7						
PDAR	**Pinedale Array**	**41.70**	**344**	P	P	13 56 21.2	0.0
	0.8nm,0.9s,baz=149,slow=6.9,SNR=7.7						
PDAR				LR	LR	14 12 26.4	
	comp=Z,130nm,18.9s,baz=162,slow=34						
RKT	**Rikitea**	**46.36**	**234**	eLR	LR	14 09 36.4	
	135nm,29.2s						
ULM	**Lac du Bonnet**	**47.24**	**360**	P	P	13 57 04.5	-1.0
	baz=173,slow=8.1						
NEW	**Newport**	**48.94**	**341**	LR	LR	14 17 01.2	
	comp=Z,66nm,20.5s,baz=305,slow=35						
PLCA	**Paso Flores**	**48.97**	**155**	LR	LR	14 13 23.1	
	comp=Z,182nm,19.1s,baz=104,slow=30						
PPT	**Papeete**	**57.07**	**247**	eLR	LR	14 14 34.7	
	87nm,25.0s						
PPT	**Papeete**	**57.07**	**247**	LR	LR	14 15 29.3	
	comp=Z,227nm,18.9s,baz=42,slow=28						
TBI	**Tubuai**	**58.66**	**241**	eLR	LR	14 15 22.5	
	154nm,33.2s						
TBI	**Tubuai**	**58.66**	**241**	eT		15 01 41.8	
	4.6nm,0.3s						
YKA	**Yellowknife Ar**	**61.21**	**350**	P	P	13 58 48.8	+1.7
	0.3nm,0.7s,baz=156,slow=7.1,SNR=5.5						
INK	**Inuvik**	**70.24**	**346**	P	P	13 59 44.6	-0.7
	1.1nm,0.8s,baz=157,slow=7.7,SNR=4.2						

FUNV 19 13:53:32.1, 979N×7140W, h5km, MW3.6, 3C-2D, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	**El Vigia**	**0.95**	**178**	⇑*i*P	Pg	13 53 49.5	-0.8
VIGV				eS	Sg	13 54 02.5	-0.1
QARV	**Quebrada Arrib**	**0.96**	**64**	⇓*i*P	Pg	13 53 49.2	-1.4
QARV				eS	Sg	13 54 02.6	-0.4
VIRV	**Villa del Rosa**	**1.21**	**306**	⇑*i*P	Pg	13 53 54.4	-1.0
VIRV				eS	Sg	13 54 11.1	-0.1
DABV	**Dabajuro**	**1.35**	**34**	⇓*e*P	Pn	13 53 57.5	-0.2
DABV				eS	Sb	13 54 15.2	-0.4
CURV	**Curarigua**	**1.44**	**81**	eP	Pn	13 53 57.5	-1.4
SOCV	**Socops**	**1.59**	**160**	⇑*i*P	Pn	13 54 00.3	-0.7
SIQV	**Siquisique**	**1.79**	**61**	eP	Pn	13 54 03.5	-0.1
SIQV				eS	Sn	13 54 26.1	-0.6
SANV	**Sanarito**	**1.86**	**99**	eP	Pn	13 54 04.9	+0.2
SANV				eS	Sn	13 54 28.6	-0.1
CAPV	**Capacho**	**2.12**	**205**	eP	Pn	13 54 07.7	-0.4
CAPV				eS	Sn	13 54 34.5	-0.3
TEPV	**Terepaima**	**2.19**	**85**	eP	Pn	13 54 09.3	+0.1
TEPV				eS	Sn	13 54 35.4	-1.2
IMOV	**Isla Los Monje**	**2.60**	**11**	eP	Pn	13 54 12.7	-2.2
IMOV				eS	Sn	13 54 45.7	-1.0
JACV	**Jacura**	**2.84**	**63**	eP	Pn	13 54 17.5	-0.6
JACV				eS	Sn	13 54 50.4	-2.3
BAUV	**El Baul**	**3.42**	**104**	eP	Pn	13 54 24.5	-1.7
BAUV				eS	Sn	13 55 04.5	-2.6
TURV	**Turiamo**	**3.57**	**79**	eP	Pn	13 54 27.3	-0.9
TURV				eS	Sn	13 55 07.7	-3.1
CUPV	**Cœpira**	**5.54**	**87**	eP	Pn	13 54 54.2	-1.0
CAOV	**Caicara del Or**	**5.59**	**116**	eP	Pn	13 54 54.0	-2.0

*ISCJB **19** 14:01:10.9±0.5, 5836N±005×15259W±0.10, h63km±8km, mb3.6/2, Error ellipse: s-maj=9.6km s-min=7.1km az=44.6*
*IDC **19** 14:01:12.0±1.1, 5812N×15279W, h64km±35km, mb3.2/2, mb1 3.3/4, mb1mx3.2/17, mbtmp3.1/4, ML3.1/2, Error ellipse: s-maj=67.7km s-min=25.8km az=158.0*
*NEIC **19** 14:01:13.2, 5834N×15260W, h40km, ML3.8(PMR), ML3.4(AEIC), After AEIC.*

ISC 19 14:01:12.5±0.5, 5833N±005×15259W±010, h56km±9km, n35, σ0§88/35, mb3.6/2, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**0.55**	**180**	P	**Pn**	**14 01 24.2**	**-0.5**
KDAK				S	**Sn**	**14 01 33.0**	**-0.6**
KDAK	**Kodiak Island**	**0.55**	**180**	P	**Pn**	**14 01 24.2**	**-0.5**
	227nm,0.3s,baz=21,slow=9.1,SNR=3498						
KDAK				S	**Sn**	**14 01 33.2**	**-0.3**
	2μm,0.3s,baz=151,slow=19,SNR=268						
AUL	**Augustine Lava**	**1.14**	**338**	P	**Pn**	**14 01 32.4**	**+0.3**
SEW	**Seward**	**2.40**	**41**	P	**Pn**	**14 01 48.4**	**-0.9**
SLKM	**Skilak Lake**	**2.50**	**28**	P	**Pn**	**14 01 50.3**	**-0.2**
FIB	**Fire Island**	**3.09**	**22**	P	**Pn**	**14 01 59.4**	**+0.7**
RC01	**Rabbit Creek A**	**3.12**	**26**	P	**Pn**	**14 01 59.2**	**+0.2**
SVW2	**Sparrevohn**	**3.16**	**333**	eP	**Pn**	**14 01 58.4**	**-1.2**
PMR	**Palmer**	**3.70**	**27**	eP	**Pn**	**14 02 07.2**	**+0.2**
CHGN	**Chignik**	**3.76**	**240**	eP	**Pn**	**14 02 07.8**	**0.0**
SML	**Sawmill**	**4.09**	**30**	eP	**Pn**	**14 02 11.9**	**-0.4**
EYAK	**Cordova Ski Ar**	**4.14**	**55**	eP	**Pn**	**14 02 11.9**	**-1.1**
TTA	**Tatalina**	**4.91**	**341**	eP	**Pn**	**14 02 22.7**	**-0.9**
TRF	**Thorofare Moun**	**5.26**	**11**	P	**Pn**	**14 02 28.5**	**+0.2**
SDPT	**Sand Point**	**5.26**	**239**	eP	**Pn**	**14 02 29.5**	**+1.1**
	28nm,0.6s						
KTH	**Kantishna Hill**	**5.30**	**8**	P	**Pn**	**14 02 29.0**	**+0.1**
MENT	**Mentasta**	**6.35**	**40**	eP	**Pn**	**14 02 44.6**	**+1.3**
COLA	**College**	**6.94**	**17**	P	**Pn**	**14 02 50.1**	**-1.2**
	8.4nm,0.6s						
PNL	**Peninsula**	**6.95**	**73**	P	**Pn**	**14 02 51.1**	**-0.3**
IL1	**Eielson Array**	**7.01**	**20**	P	**Pn**	**14 02 52.0**	**-0.2**
BCA3	**Beaver Creek A**	**7.11**	**44**	P	**Pn**	**14 02 53.2**	**-0.5**
IM3	**Indian Mountai**	**7.70**	**356**	P	**Pn**	**14 03 00.8**	**-0.9**
IMA2	**Indian Mountai**	**7.78**	**357**	P	**Pn**	**14 03 02.2**	**-0.6**
EGAK	**Eagle**	**8.45**	**35**	eP	**Pn**	**14 03 13.0**	**+1.1**
	3.6nm,0.6s						
TNA	**Tin City**	**10.21**	**322**	eP	**Pn**	**14 03 38.1**	**+2.1**
	3.0nm,0.5s						
GAMB	**Gambell**	**10.72**	**309**	eP	**Pn**	**14 03 43.8**	**+0.8**
DLBC	**Dease Lake**	**11.83**	**80**	P	**Pn**	**14 03 59.2**	**+1.1**
	baz=216,slow=9.3						
INK	**Inuvik**	**13.09**	**32**	P	**Pn**	**14 04 17.8**	**+2.5**
INK	**Inuvik**	**13.09**	**32**	P	**Pn**	**14 04 17.9**	**+2.6**
	0.0nm,0.3s,baz=246,slow=9.8,SNR=3.0						
YKA	**Yellowknife Ar**	**19.01**	**61**	P	**Pn**	**14 05 30.8**	**+0.3**
YKA				pP	pP	14 05 44.8	+3.3
YKA	**Yellowknife Ar**	**19.01**	**61**	P	**Pn**	**14 05 30.7**	**+0.3**
	0.1nm,0.3s,baz=273,slow=9.8,SNR=8.3						
YKA				pP	pP	14 05 44.8	+3.3
	0.1nm,0.3s,baz=277,slow=10,SNR=6.1						
PDAR	**Pinedale Array**	**30.83**	**101**	pP	pP	14 07 37.5	+0.8
	0.5nm,0.6s,baz=293,slow=4.8,SNR=4.6						
TXAR	**Lajitas Array**	**44.22**	**109**	pP	pP	14 09 33.3	+2.9
	0.4nm,0.9s,baz=327,slow=9.0,SNR=3.4						
SONM	**Songino Array**	**55.95**	**307**	P	**P**	**14 10 43.8**	**-0.6**
	0.2nm,0.5s,mb3.4,baz=37,slow=6.1,SNR=2.5						
MKAR	**Makanchi Array**	**65.88**	**322**	P	**P**	**14 11 50.8**	**-0.9**
	0.2nm,0.2s,mb3.7,baz=39,slow=5.9,SNR=2.6						

*ISCJB **19** 14:12:59.7±1.0, 2987N±005×3629E±007, h0km, Error ellipse: s-maj=8.5km s-min=6.6km az=7.1*
*SGS **19** 14:12:59.2, 3005N×3630E, h4km*
*CSEM **19** 14:13:01.1±0.4, 2975N×3620E, h2km, ML1.7, Error ellipse: s-maj=8.0km s-min=6.0km az=104.0, Mining explosion.*
*GII **19** 14:13:01.1±0.0, 2992N×3623E, h0km, ML1.7/2*
*HLW **19** 14:13:02.0, 2961N×3638E, h11km, Mb2.7*

ISC 19 14:12:59.7±1.1, 2986N±004×3633E±007, h0km, n19, σ0§97/25, 4C-1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.14**	**279**	Pg	**Pg**	**14 13 20.6**	**-0.9**
HRFI				Sg	**Sg**	**14 13 35.8**	**-0.5**
EIL	**Elat**	**1.21**	**261**	Pg	**Pg**	**14 13 22.5**	**-0.5**
EIL				Sg	**Sg**	**14 13 39.5**	**+0.8**
ZFRI	**Zfri**	**1.22**	**305**	Pg	**Pg**	**14 13 21.6**	**-1.4**
HQLS		**1.24**	**244**	P	**Pg**	**14 13 22.3**	**-1.1**
HQLS		**1.24**	**244**	P	**Pg**	**14 13 22.3**	**-1.1**
HQLS				S	**Sg**	**14 13 39.7**	**+0.3**
PRNI	**Paran**	**1.25**	**294**	Pg	**Pg**	**14 13 23.0**	**-0.7**
JLOS		**1.34**	**213**	S	**Sg**	**14 13 44.0**	**+1.3**
JLOS		**1.34**	**213**	P	**Pg**	**14 13 25.4**	**0.0**
JLOS		**1.34**	**213**	P	**Pg**	**14 13 25.4**	**+0.1**
JLOS				S	**Sg**	**14 13 44.0**	**+1.3**
HBST	**Basata**	**1.53**	**246**	⇑*i*P	**Pn**	**14 13 27.9**	**-0.4**
MZDA	**Masada**	**1.67**	**330**	Pn	**Pn**	**14 13 30.7**	**+0.5**
HDHB	**Dhahab**	**1.87**	**233**	⇑*e*P	**Pn**	**14 13 31.8**	**-1.2**
HDHB				S	**Sn**	**14 13 53.6**	**-3.8**
DSI	**Dead Sea**	**1.89**	**335**	Pn	**Pn**	**14 13 34.3**	**+1.0**
HNKL	**Nakhl**	**2.04**	**273**	P	**Pn**	**14 13 36.2**	**+0.9**
HNKL				S	**Sn**	**14 14 02.0**	**+0.5**
RSHS		**2.05**	**221**	P	**Pn**	**14 13 34.5**	**-0.9**
HKAT	**Jabal Katrina**	**2.44**	**238**	⇑*e*P	**Pn**	**14 13 40.2**	**-0.5**
AMAG	**Maghara**	**2.81**	**287**	⇓P	**Pn**	**14 13 48.2**	**+2.3**
SUZ		**3.04**	**271**	⇑*e*P	**Pn**	**14 13 50.2**	**+1.2**
SUZ		**3.04**	**271**	P	**Pn**	**14 13 50.2**	**+1.2**

*ISCJB **19** 14:36:33.7±1.1, 183S±02×1780W±02, h632km±18km, mb3.4/6, Error ellipse: s-maj=39.1km s-min=15.3km az=147.5*
*IDC **19** 14:36:34.6±3.9, 1825S×17801W, h628km±50km, mb3.0/7, mb1 3.3/8, mb1mx3.1/15, mbtmp3.0/8, Error ellipse: s-maj=38.1km s-min=19.8km az=168.0*
*NEIC **19** 14:36:34.5±0.9, 1821S×17799W, h626km±14km, Error ellipse: s-maj=30.7km s-min=12.0km az=146.0*

ISC 19 14:36:34.4±1.2, 183S±02×1780W±02, h622km±18km, n13, σ0§53/11, mb3.4/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.37**	**55**	eP	**P**	**14 38 28.8**	**0.0**
DZM	**Mont Dzumac**	**15.10**	**253**	P	**P**	**14 39 43.1**	**+0.4**
	0.2nm,0.3s,baz=73,slow=11,SNR=2.8						
URZ	**Urewera**	**20.39**	**191**	P	**P**	**14 40 30.3**	**-0.3**
	8.8nm,0.9s,baz=143,slow=20,SNR=4.4						
STKA	**Stephens Creek**	**38.81**	**242**	eP	**P**	**14 43 08.8**	**+0.7**
STKA	**Stephens Creek**	**38.81**	**242**	P	**P**	**14 43 08.2**	**0.0**
	1.1nm,0.7s,mb3.5,baz=80,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**44.96**	**260**	P	**P**	**14 43 55.9**	**-0.5**
	0.4nm,0.3s,mb3.4,baz=96,slow=7.5,SNR=29						
WRA				PcP	PcP	14 45 23.3	-0.6
	0.3nm,0.6s,baz=90,slow=3.8,SNR=9.5						
ASAR	**Alice Springs**	**45.08**	**255**	P	**P**	**14 43 57.1**	**-0.1**
	1.0nm,0.3s,mb3.8,baz=88,slow=8.6,SNR=70						
ASAR				PcP	PcP	14 45 23.6	-0.7
	0.5nm,0.4s,baz=106,slow=4.0,SNR=15						
NVAR	**Mina Array Bea**	**79.40**	**44**	P	**P**	**14 47 37.2**	**-0.4**
NVAR	**Mina Array Bea**	**79.40**	**44**	P	**P**	**14 47 37.2**	**-0.4**
	0.2nm,0.5s,mb2.7,baz=220,slow=8.3,SNR=5.6						
TXAR	**Lajitas Array**	**85.84**	**57**	P	**P**	**14 48 11.2**	**+1.1**
	0.9nm,0.7s,mb3.5,baz=216,slow=6.0,SNR=13						
PDAR	**Pinedale Array**	**87.33**	**43**	P	**P**	**14 48 16.1**	**-0.6**
	0.6nm,0.6s,mb3.5,baz=203,slow=3.5,SNR=5.3						
CLL	**Collm**	**145.88**	**348**	ePKPbc	PKPbc	14 55 05.0	-0.5
GERES	**GERESS Array B**	**148.05**	**345**	PKPbc	PKPbc	14 55 10.0	-1.2
	0.2nm,0.3s,baz=0.0,slow=2.7,SNR=5.9						

*IDC **19** 14:40:18.6±0.9, 420N×12679E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/16, mbtmp4.1/9, MS3.8/2, Ms1 3.9/2, ms1mx3.1/27, Error ellipse: s-maj=96.5km s-min=15.2km az=71.0*
*NEIC **19** 14:40:20.0±0.5, 424N×12698E, h10km, mb4.4/6, Error ellipse: s-maj=20.0km s-min=8.5km az=71.0*
*BJI **19** 14:40:19.9, 420N×12700E, h10km, mb4.4*
*ISCJB **19** 14:40:26.4±1.3, 4.15N±006×1269E±0.1, h77km±12km, mb4.2/15, Error ellipse: s-maj=22.6km s-min=8.5km az=164.9*

ISC 19 14:40:28.0±1.2, 416N±006×1269E±01, h76km±12km, n30, σ1§01/27, mb4.2/15, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.84**	**348**	eP	**Pn**	**14 41 10.1**	**-1.0**
BUKP	**Musuan**	**4.11**	**334**	eP	**Pn**	**14 41 29.0**	**+0.6**
BATI	**Kupang**	**14.62**	**193**	Pn	**Pn**	**14 43 53.5**	**+2.5**
	0.5nm,0.3s,baz=18,slow=3.2,SNR=2.6						
KSM	**Kuching**	**16.74**	**261**	eP	**Pn**	**14 44 17.9**	**+0.1**
KAKA	**Kakadu**	**17.65**	**162**	eP	**Pn**	**14 44 26.0**	**-3.0**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.15**	**183**	eP	**P**	**14 45 18.3**	**+0.7**
	9.7nm,1.1s,mb4.0						
FITZ	**Fitzroy Crossi**	**22.15**	**183**	P	**P**	**14 45 17.3**	**-0.3**
	3.1nm,0.7s,mb3.8,baz=25,slow=14,SNR=8.9						
WRA	**Warramunga Arr**	**25.05**	**163**	P	**P**	**14 45 44.7**	**-0.6**
	8.3nm,0.6s,mb4.3,baz=344,slow=10,SNR=74						
WB2	**Warramunga Arr**	**25.05**	**163**	eP	**P**	**14 45 44.6**	**-0.8**
MBWA	**Marble Bar**	**26.11**	**195**	eP	**P**	**14 45 53.4**	**-1.5**
ASAR	**Alice Springs**	**28.49**	**166**	P	**P**	**14 46 16.1**	**-0.2**
	0.9nm,0.5s,mb3.6,baz=348,slow=7.5,SNR=30						
KSRS	**Korea Array**	**33.16**	**2**	LR	LR	14 59 29.1	
	comp=Z,44nm,19.3s,baz=175,slow=35						
XAN	**Xi'an**	**34.10**	**333**	P	**P**	**14 47 04.0**	**-1.4**
XAN				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.1						
FORT	**Forrest**	**34.76**	**178**	eP	**P**	**14 47 11.3**	**+0.2**
	comp=Z,5.8nm,0.6s,mb4.6						
BJI	**Beijing**	**37.01**	**346**	P	**P**	**14 47 30.8**	**+0.6**
BJI				AMB	AMB		
	comp=Z,14nm,1.0s,mb4.8						
STKA	**Stephens Creek**	**38.48**	**160**	eP	**P**	**14 47 43.5**	**+0.7**
	comp=Z,5.4nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**38.48**	**160**	P	**P**	**14 47 43.5**	**+0.8**
	comp=Z,4.3nm,0.7s,mb4.4,baz=332,slow=9.2,SNR=14						
SHL	**Shillong**	**39.73**	**306**	eP	**P**	**14 47 54.0**	**+0.6**
ARMA	**Armidale**	**41.75**	**147**	eP	**P**	**14 48 11.6**	**+1.7**
ULN	**Ulaanbaatar**	**46.76**	**342**	eP	**P**	**14 48 50.8**	**+1.2**
	comp=Z,2.0nm,0.8s,mb3.9						
SONM	**Songino Array**	**46.94**	**341**	P	**P**	**14 48 52.1**	**+1.1**
	comp=Z,0.7nm,0.7s,mb3.5,baz=158,slow=7.5,SNR=5.0						
SONM				PcP	PcP	14 50 24.4	+1.9
	comp=Z,0.5nm,0.8s,baz=113,slow=3.7,SNR=2.9						
MKAR	**Makanchi Array**	**57.28**	**325**	P	**P**	**14 50 07.8**	**0.0**
	comp=Z,1.2nm,0.6s,mb4.1,baz=120,slow=8.2,SNR=16						
KURK	**Kurchatov**	**61.45**	**327**	eP	**P**	**14 50 36.4**	**-0.1**
	comp=Z,7.3nm,0.9s,mb4.7						
BRVK	**Borovoye**	**67.11**	**327**	eP	**P**	**14 51 12.0**	**-1.4**
	comp=Z,3.0nm,0.8s,mb4.2						
IMA2	**Indian Mountai**	**81.94**	**24**	eP	**P**	**14 52 39.8**	**+0.7**
ARCES	**ARCESS Array B**	**90.10**	**340**	P	**P**	**14 53 18.9**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.3,baz=40,slow=7.1,SNR=4.5						
FINES	**FINESS Array B**	**91.52**	**332**	P	**P**	**14 53 25.6**	**-0.3**
	comp=Z,0.6nm,0.5s,mb4.1,baz=72,slow=10,SNR=3.1						
AKASG	**Malin Array Be**	**91.64**	**321**	P	**P**	**14 53 26.4**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.8,baz=75,slow=3.9,SNR=3.4						
NOA	**NORSAR Array B**	**98.47**	**334**	LR	LR	15 43 28.8	
	comp=Z,125nm,19.5s,baz=340,slow=38						
TORD	**Torodi Ar. Bea**	**122.91**	**288**	PKP	PKPdf	14 59 18.0	+1.5
	comp=Z,0.5nm,0.7s,baz=88,slow=1.0,SNR=3.6						

*IDC **19** 14:51:43.1±0.7, 4707N×15390E, h0km, mb3.9/13, mb1 4.1/14, mb1mx4.1/19, mbtmp3.9/14, MS3.7/1, Ms1 3.7/1, ms1mx2.7/30, Error ellipse: s-maj=21.6km s-min=19.2km az=120.0*
*NEIC **19** 14:51:44.8±0.5, 4706N×15403E, h10km, mb4.5/6, Error ellipse: s-maj=15.4km s-min=9.7km az=131.0*
*BJI **19** 14:51:45.1, 4746N×15456E, h37km, mB4.6, mb4.2, Ms4.3, Msz3.9*
*ISCJB **19** 14:51:45.3±2.5, 4707N±008×154.1E±0.1, h22km±17km, mb4.4/33, Error ellipse: s-maj=16.5km s-min=7.7km az=140.1*
*MOS **19** 14:51:47.6±1.5, 4709N×15387E, h41km, mb4.6/12, Error ellipse: s-maj=12.2km s-min=8.6km az=83.8*
*SZGRF **19** 14:51:48.0, 4662N×15477E, h33km, mb4.7, East of Kuril Islands, Russia*

ISC 19 14:51:48.1±2.5, 4710N±008×1541E±01, h27km±17km, n82, σ1§10/84, mb4.4/33, 4C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.83**	**20**	ePN	**Pn**	**14 52 45.5**	**+0.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.3s						
KUR	**Kuril'sk**	**4.71**	**249**	ePN	**Pn**	**14 52 56.5**	**-0.7**
KUR				eS	**Sn**	**14 53 51.8**	**+1.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,190nm,0.7s						
KUR				smax			
	comp=E,380nm,0.7s						
PET	**Petropavlovsk**	**6.62**	**25**	Pn	**Pn**	**14 53 17.4**	**-6.1**
PET				eSn	**Sn**	**14 54 30.1**	**-7.8**
YSS	**Yuzh-Sakhalins**	**7.75**	**273**	eP	**Pn**	**14 53 43.5**	**+4.6**
	comp=E,9.6nm,0.4s						
YSS	**Yuzh-Sakhalins**	**7.75**	**273**	⇑*i*PN	**Pn**	**14 53 44.3**	**+5.4**
YSS				eS	**Sn**	**14 55 12.0**	**+6.3**
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
ASAJ	**Asahikawa**	**8.59**	**254**	PN	**Pn**	**14 53 51.2**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.59**	**254**	Pn	**Pn**	**14 53 51.1**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=82,slow=16,SNR=7.3						
ERM	**Erimo**	**9.31**	**241**	eP	**Pn**	**14 53 58.0**	**-2.3**
HABR	**Khabarovsk**	**12.88**	**283**	PN	**Pn**	**14 54 51.4**	**+2.3**
KLR	**Kul'dur**	**15.05**	**286**	eP	**Pn**	**14 55 23.3**	**+4.7**
KLR				MLR	MLR		
	comp=Z,1μm,12.0s						
MAJO	**Matsushiro**	**15.82**	**234**	P	**Pn**	**14 55 29.8**	**+1.0**
MJAR	**Matsushiro Arr**	**15.82**	**234**	Pn	**Pn**	**14 55 25.6**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=23,slow=12,SNR=5.3						
MDJ	**Mudanjiang**	**17.23**	**271**	P	**Pn**	**14 55 46.0**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,82nm,5.3s				

JOF Joensuu 61.32 334 *e*P **P** **15 01 58.7 -1.9**
JOF pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
NVAR Mina Array Bea 61.68 63 P **P** **15 02 03.1 -0.3**
comp=Z,0.2nm,0.5s,mb3.5,baz=294,slow=4.8,SNR=2.8
KAF Kangasniemi 63.41 335 *e*p **P** **15 02 13.6 -1.0**
comp=Z,1.1nm,0.4s,mb4.3,baz=36,slow=6.3
KAF Kangasniemi 63.41 335 *e*P **P** **15 02 13.6 -1.0**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.3
FINES FINESS Array B 64.01 335 P **P** **15 02 17.2 -1.4**
FINES FINESS Array B 64.01 335 *i* P **P** **15 02 18.0 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 64.01 335 P **P** **15 02 17.2 -1.4**
comp=Z,2.5nm,0.5s,mb4.5,baz=41,slow=7.2,SNR=27
NB2 NORSAR Subarra 68.11 342 P **P** **15 02 44.5 -0.4**
comp=Z,1.5nm,0.6s,mb4.2,baz=25,slow=6.5
NB2 NORSAR Subarra 68.11 342 P **P** **15 02 44.5 -0.4**
comp=Z,1.5nm,0.6s,mb4.2
NB2 NORSAR Subarra 68.11 342 P **P** **15 02 44.5 -0.4**
NB2 pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
NOA NORSAR Array B 68.11 342 P **P** **15 02 44.2 -0.7**
NOA NORSAR Array B 68.11 342 P **P** **15 02 44.2 -0.7**
NOA pmax pmax
comp=Z,5.0nm,0.8s
NOA NORSAR Array B 68.11 342 P **P** **15 02 44.2 -0.7**
comp=Z,4.5nm,0.8s,mb4.5,baz=27,slow=6.1,SNR=8.5
WRA Warramunga Arr 69.06 200 P **P** **15 02 49.7 -1.5**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 69.06 200 P **P** **15 02 49.7 -1.5**
comp=Z,0.9nm,1.1s,mb3.6,baz=17,slow=6.4,SNR=3.6
AKASG Malin Array Be 71.63 327 P **P** **15 03 05.7 -1.0**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 71.63 327 P **P** **15 03 05.7 -1.0**
comp=Z,3.1nm,0.6s,mb4.4,baz=33,slow=6.2,SNR=14
ASAR Alice Springs 72.75 199 P **P** **15 03 13.3 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 72.75 199 P **P** **15 03 13.2 -0.3**
comp=Z,0.5nm,0.7s,mb3.6,baz=9.6,slow=5.6,SNR=12
TRPA Tarpa 76.20 329⇑ *i*P **P** **15 03 34.6 +1.1**
CLL Collm 76.42 336 *i* P **P** **15 03 35.2 +0.5**
CLL pmax pmax
comp=Z,13nm,0.7s,mb5.0
CLL Collm 76.42 336 *i* P **P** **15 03 35.2 +0.5**
comp=Z,13nm,0.7s,mb5.0
MORC Moravsky Berou 76.44 333⇑ *i*P **P** **15 03 35.7 +0.9**
TXAR Lajitas Array 76.74 61 P **P** **15 03 37.1 +0.2**
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR Lajitas Array 76.74 61 P **P** **15 03 37.1 +0.2**
comp=Z,1.5nm,0.7s,mb4.0,baz=280,slow=5.4,SNR=2.5
TIRR Tirgusor 77.04 323⇓ *i*P **P** **15 03 39.4 +1.1**
MLR Muntele Rosu 77.16 325⇓ *i*P **P** **15 03 40.5 +1.5**
KHC Kasperske Hory 78.21 335 *e*P **P** **15 03 45.5 +0.8**
GRA1 Grafenberg Arr 78.37 336 *e*P **P** **15 03 47.1 +1.5**
comp=Z,6.0nm,0.8s,mb4.6
GRF Grafenberg Arr 78.37 336 *e*P **P** **15 03 47.1 +1.5**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
GRF Grafenberg Arr 78.37 336 *e*P **P** **15 03 47.1 +1.5**
GRF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
GRF Grafenberg Arr 78.37 336 *e*P **P** **15 03 47.1 +1.5**
comp=Z,6.0nm,0.8s,mb4.6
GERES GERESS Array B 78.43 335 P **P** **15 03 46.1 +0.1**
GERES pmax pmax
comp=Z,2.0nm,0.7s
GERES GERESS Array B 78.43 335 P **P** **15 03 46.1 +0.1**
comp=Z,1.7nm,0.7s,mb4.1,baz=38,slow=5.5,SNR=9.5
MIB Mutribah 79.05 302 *e*P **P** **15 03 49.6 -0.1**
MIB AMb AMB 15 03 50.9
comp=Z,20nm,0.6s,mb5.3
KBD Kabd 79.31 301 *e*P **P** **15 03 51.6 +0.5**
KBD AMb AMB 15 03 57.2
comp=Z,45nm,0.7s,mb5.5
QRN Al-Qurain 79.50 301 *e*P **P** **15 03 52.2 +0.1**
QRN AMb AMB 15 03 55.4
comp=Z,36nm,1.1s,mb5.2
NAY Al-Naaiem 79.52 302 *e*P **P** **15 03 51.7 -0.6**
NAY AMb AMB 15 03 54.2
comp=Z,10nm,1.1s,mb4.7
RDF Al-Radifah 79.58 301 *e*P **P** **15 03 52.5 -0.1**
RDF AMb AMB 15 03 54.9
comp=Z,33nm,1.1s,mb5.2
CFAA Coronel Fontan 144.27 80 PKP PKPdf 15 11 18.9 -2.3
comp=Z,0.2nm,0.4s,baz=34,slow=3.6,SNR=3.1
PLCA Paso Flores 147.57 95 PKPbc PKPbc 15 11 28.2 -0.9
comp=Z,1.6nm,0.9s,baz=277,slow=6.8,SNR=3.3

*ISCJB **19** 15:04:14.6±1.3,28.10S±0.07×176.8W±0.1,h77km±13km, mb3.9/8, Error ellipse: s-maj=21.3km s-min=6.2km az=30.4*
*IDC **19** 15:04:18.3±0.7,2820S×17682W,h103km±5km,mb3.6/6, mb1 4.0/9,mb1mx3.8/14,mbtmp3.8/9,MS3.0/1,Ms1 3.0/1, ms1mx2.7/14, Error ellipse: s-maj=29.0km s-min=15.5km az=156.0*
*NEIC **19** 15:04:18.8±0.6,2809S×17677W,Error ellipse: s-maj=23.8km s-min=12.5km az=136.0*
ISC 19 15:04:17.9±1.5,2822S±010×1768W±01,h99km±16km, h109km±1.4km:pP-P,n52,σ1§15/49,mb3.9/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**10.20**	**203**	Op PN		**Pn**	**15 06 42.7**	**+1.4**
MXZ				SN		**Sn**	**15 08 42.8**	**+9.1**
PUZ	**Puketiti**	**10.68**	**202**	*e*Pn		**Pn**	**15 06 48.1**	**+0.4**
PUZ				SN		**Sn**	**15 08 52.1**	**+6.9**
MWZ	**Matawai**	**11.16**	**204**	PN		**Pn**	**15 06 54.4**	**+0.1**
MWZ				SN		**Sn**	**15 09 04.9**	**+7.9**
URZ	**Urewera**	**11.25**	**206**	P		**Pn**	**15 06 56.3**	**+0.8**
	0.7nm,0.3s,baz=334,slow=18,SNR=19							
URZ				S		**Sn**	**15 09 06.5**	**+7.3**
	3.8nm,0.3s,baz=84,slow=21,SNR=12							
URZ	**Urewera**	**11.25**	**206**	PN		**Pn**	**15 06 56.1**	**+0.5**
URZ				SN		**Sn**	**15 09 06.3**	**+7.1**
KNZ	**Kokohu**	**11.73**	**202**	*e*PN		**Pn**	**15 07 03.2**	**+1.3**
KNZ				SN		**Sn**	**15 09 16.9**	**+6.1**
BKZ	**Black Stump Fm**	**12.28**	**205**	PN		**Pn**	**15 07 08.9**	**-0.3**
BKZ				SN		**Sn**	**15 09 30.8**	**+6.7**
TSZ	**Takapari Road**	**13.26**	**205**	*e*PN		**Pn**	**15 07 19.6**	**-2.5**
TSZ				SN		**Sn**	**15 09 45.6**	**-2.2**
MRZ	**Mangatainoka R**	**13.92**	**205**	*e*PN		**Pn**	**15 07 28.3**	**-2.5**
MRZ				SN		**Sn**	**15 10 03.8**	**-0.2**
KIW	**Kapiti Island**	**14.35**	**206**	SN		**Sn**	**15 10 15.4**	**+1.1**
MTW	**Mount Morrison**	**14.38**	**204**	*e*PN		**Pn**	**15 07 35.2**	**-1.5**
MTW				SN		**Sn**	**15 10 16.1**	**+1.0**
CAW	**Cannon Point**	**14.50**	**205**	SN		**Sn**	**15 10 18.2**	**+0.2**
PAWZ	**Paruwai Farm**	**14.61**	**204**	SN		**Sn**	**15 10 22.2**	**+1.6**
MSWZ	**Moikau Station**	**14.70**	**204**	SN		**Sn**	**15 10 22.5**	**-0.3**
MRW	**Makara Radio**	**14.75**	**206**	SN		**Sn**	**15 10 24.6**	**+0.7**
SNZO	**South Karori**	**14.81**	**206**	*e*P		**Pn**	**15 07 47.0**	**+4.7**
SNZO				*e*Sn		**Sn**	**15 10 25.2**	**-0.3**
TUWZ	**Tuamarina**	**15.22**	**208**	*e*PN		**Pn**	**15 07 45.9**	**-1.5**
NNZ	**Nelson**	**15.28**	**209**	*e*PN		**Pn**	**15 07 48.5**	**+0.4**
NNZ				SN		**Sn**	**15 10 36.7**	**-0.1**
QRZ	**Quartz Range**	**15.35**	**212**	PN		**Pn**	**15 07 52.6**	**+3.6**
THZ	**Tophouse**	**15.93**	**209**	PN		**Pn**	**15 07 56.8**	**+0.5**
THZ				SN		**Sn**	**15 10 52.3**	**-0.2**
KHZ	**Kahutara**	**16.21**	**207**	PN		**Pn**	**15 07 58.5**	**-1.3**
DZM	**Mont Dzumac**	**16.40**	**288**	LR		LR	15 13 07.2	
	comp=Z,61nm,21.3s,baz=200,slow=32							
RAR	**Rarotonga**	**16.92**	**69**	P		**Pn**	**15 08 08.3**	**-0.3**
	1.8nm,0.3s,baz=258,slow=9.3,SNR=5.9							
LTZ	**Lake Taylor**	**17.04**	**209**	SN		**Sn**	**15 11 14.8**	**-4.3**
MQZ	**McQueen's Vall**	**17.65**	**206**	SN		**Sn**	**15 11 26.9**	**-7.0**
RPZ	**Rata Peaks**	**18.31**	**209**	P		**Pn**	**15 08 24.4**	**-0.9**
RPZ	**Rata Peaks**	**18.31**	**209**	P		**Pn**	**15 08 24.4**	**-0.8**
	0.4nm,0.3s,baz=45,slow=1.4,SNR=3.3							
TBI	**Tubuai**	**25.02**	**85**	*e*T			15 35 16.0	
	12nm,0.3s							
PAE	**Paea**	**27.08**	**73**	*e*T			15 37 32.5	
	42nm,0.3s							
PPT	**Papeete**	**27.12**	**73**	*e*LR		LR	15 16 25.4	
	116nm,32.8s							
PPT	**Papeete**	**27.12**	**73**	*e*T			15 37 35.9	
	6.2nm,0.3s							
TVO	**Taravao**	**27.30**	**74**	*e*T			15 37 50.1	
	8.8nm,0.3s							
VAH	**Vaihoa**	**29.89**	**71**	*e*T			15 40 59.3	
	8.5nm,0.2s							
STKA	**Stephens Creek**	**36.09**	**254**	P		**P**	**15 11 12.2**	**+2.0**
	1.5nm,0.7s,mb4.0,baz=93,slow=11,SNR=3.0							
ASAR	**Alice Springs**	**44.37**	**264**	P		**P**	**15 12 18.4**	**-0.2**
	0.8nm,0.6s,mb3.6,baz=92,slow=6.8,SNR=22							
ASAR				pP		pP	15 12 43.8	+1.9
	0.6nm,0.5s,baz=92,slow=6.5,SNR=3.5							
WRA	**Warramunga Arr**	**45.16**	**269**	P		**P**	**15 12 24.1**	**-0.9**
	1.7nm,0.6s,mb4.0,baz=107,slow=7.7,SNR=17							
WRA				pP		pP	15 12 48.3	0.0
	1.6nm,0.4s,baz=107,slow=6.1,SNR=7.3							
QSPA	**South Pole Qui**	**61.88**	**180**	*e*P		**P**	**15 14 35.4**	**+9.2**
MAW	**Mawson**	**74.72**	**200**	P		**P**	**15 15 51.3**	**+4.8**
	4.5nm,0.8s,mb4.3,baz=139,slow=10,SNR=4.0							
PLCA	**Paso Flores**	**83.18**	**133**	P		**P**	**15 16 32.9**	**-0.3**
PLCA	**Paso Flores**	**83.18**	**133**	P		**P**	**15 16 32.9**	**-0.3**
	0.4nm,0.4s,mb3.6,baz=207,slow=6.8,SNR=3.3							
NVAR	**Mina Array Bea**	**85.90**	**42**	P		**P**	**15 16 47.8**	**+1.1**
	1.0nm,0.8s,mb3.8,baz=208,slow=7.3,SNR=9.3							
NVAR				pP		pP	15 17 15.8	+3.1
	0.4nm,0.5s,baz=154,slow=6.6,SNR=3.3							
TXAR	**Lajitas Array**	**90.29**	**57**	P		**P**	**15 17 09.8**	**+2.0**
	0.7nm,0.8s,mb3.8,baz=196,slow=8.6,SNR=6.3							
PDAR	**Pinedale Array**	**93.80**	**43**	P		**P**	**15 17 22.6**	**-1.2**
	0.5nm,0.9s,mb3.8,baz=227,slow=3.3,SNR=4.0							
PDAR				pP		pP	15 17 51.7	+1.8
	0.7nm,1.0s,baz=197,slow=3.1,SNR=3.2							
MKAR	**Makanchi Array**	**117.20**	**311**	PKP		PKPdf	15 22 50.6	-0.7
	0.1nm,0.2s,baz=94,slow=2.0,SNR=3.1							
ARCES	**ARCESS Array B**	**136.69**	**349**	PKP		PKPdf	15 23 27.6	-0.1
	1.7nm,0.9s,baz=5.4,slow=2.6,SNR=4.3							
FINES	**FINESS Array B**	**143.45**	**342**	PKhKP			15 23 35.6	
	1.7nm,0.7s,baz=66,slow=3.4,SNR=4.4							
NB2	**NORSAR Subarra**	**146.75**	**353**	PKP		PKPdf	15 23 46.6	+0.8
	comp=Z,2.6nm,0.9s,baz=19,slow=2.0							
NOA	**NORSAR Array B**	**146.75**	**353**	PKPbc		PKPbc	15 23 46.2	-1.5
NOA				pPKPbc		pPKPbc	15 24 13.3	-1.4
NOA	**NORSAR Array B**	**146.75**	**353**	PKPbc		PKPbc	15 23 46.2	-1.5
	comp=Z,1.5nm,0.8s,baz=16,slow=4.8,SNR=3.2							
NOA				pPKPbc		pPKPbc	15 24 13.3	-1.4
	comp=Z,1.4nm,0.7s,baz=10,slow=2.9,SNR=2.8							
AKASG	**Malin Array Be**	**150.17**	**326**	PKPbc		PKPbc	15 23 56.4	-0.5
AKASG				pPKPbc		pPKPbc	15 24 23.2	-0.8
AKASG	**Malin Array Be**	**150.17**	**326**	PKPbc		PKPbc	15 23 56.4	-0.5
	comp=Z,0.7nm,0.5s,baz=45,slow=4.5,SNR=4.7							
AKASG				pPKPbc		pPKPbc	15 24 23.2	-0.8
	comp=Z,2.1nm,0.7s,baz=41,slow=3.2,SNR=3.8							
TORD	**Torodi Ar. Bea**	**164.93**	**174**	PKPab		PKPab	15 25 13.6	+6.1
	comp=Z,0.3nm,0.8s,baz=196,slow=0.8,SNR=3.8							

*ATH **19** 15:31:10.6,3676N×2234E,h44km,MD3.0/3*
*NEIC **19** 15:31:10.6,3675N×2234E,h44km,MD3.0(ATH),After ATH.*
*ISCJB **19** 15:31:11.5±0.9,3666N±006×2226E±006,h33km±6km, Error ellipse: s-maj=10.7km s-min=5.8km az=36.7*
*CSEM **19** 15:31:11.4±0.2,3666N×2232E,h30km,MD3.0,Error ellipse: s-maj=5.5km s-min=4.2km az=35.0*
*THE **19** 15:31:11.3,3668N×2237E,h10km,ML3.1*
ISC 19 15:31:11.9±0.9,3668N±006×2228E±006,h27km±7km,n10, σ0§81/17,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**297**	*e*Pg		**Pb**	**15 31 21.5**	**-0.4**
PYL				*e*Sg		**Sb**	**15 31 30.1**	**+1.4**
VLI	**Veliai**	**0.53**	**85**	*e*P		**Pb**	**15 31 21.9**	**-0.8**
VLI				*e*S		**Sb**	**15 31 30.5**	**+0.5**
ITM	**Ithomi**	**0.58**	**331**	*e*P		**Pb**	**15 31 22.7**	**-0.8**
ITM				*e*S		**Sb**	**15 31 31.7**	**+0.4**
VLX	**Vlachokerasia**	**0.70**	**7**	*e*Pg		**Pb**	**15 31 24.5**	**-1.0**
VLX				*e*Sg		**Sb**	**15 31 34.6**	**-0.2**
KYTH	**Kithira**	**0.73**	**123**	*e*P		**Pb**	**15 31 25.5**	**-0.4**
KYTH				*e*S		**Sb**	**15 31 36.5**	**+1.0**
DID	**Didima**	**1.13**	**42**	*e*Pg		**Pn**	**15 31 31.4**	**-0.5**
DID				*e*Sg		**Sn**	**15 31 47.0**	**+0.5**
LTK	**Loutraki**	**1.45**	**22**	*e*Pg		**Pn**	**15 31 36.2**	**-0.1**
LTK				*e*Sg		**Sn**	**15 31 55.8**	**+1.3**
LKR	**Lokris**	**2.05**	**16**	*e*P		**Pn**	**15 31 42.9**	**-1.7**
AGG	**Agios Georgios**	**2.34**	**1**	*e*Pn		**Pn**	**15 31 49.4**	**+0.8**
APE	**Apeiranthos**	**2.64**	**80**	*e*Pn		**Pn**	**15 31 52.5**	**-0.1**

IDC 19 15:44:02.4±35.0,1816S×17762W,h588km±325km, mb3.5/2,mb1 3.8/2,mb1mx3.0/13,mbtmp3.5/2,Error ellipse: s-maj=336.6km s-min=96.3km az=120.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**45.31**	**260**	*e*P		P	15 51 28.7	-0.4
WRA	**Warramunga Arr**	**45.32**	**260**	P		P	15 51 29.0	-0.3
	2.2nm,0.3s,baz=95,slow=7.0,SNR=128							
ASAR	**Alice Springs**	**45.44**	**254**	P		P	15 51 30.2	+0.1
	5.8nm,0.7s,baz=90,slow=8.1,SNR=202							
ASAR				PcP		PcP	15 52 56.4	-0.2
	0.5nm,0.5s,baz=107,slow=3.7,SNR=6.0							
KAKA	**Kakadu**	**48.33**	**269**	*e*P		P	15 51 51.5	-0.4
	4.2nm,0.3s							
GERES	**GERESS Array B**	**148.04**	**346**	PKPbc		PKPbc	16 02 42.1	-0.3
	0.5nm,0.6s,baz=21,slow=4.2,SNR=3.9							

IDC 19 16:26:56.0±2.4,490N×12826E,h0km,mb3.3/3,mb1 3.5/3, mb1mx3.3/15,mbtmp3.3/3,Error ellipse: s-maj=157.8km s-min=29.0km az=67.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.40**	**167**	P		P	16 32 24.2	-1.1
	0.8nm,0.6s,baz=346,slow=11,SNR=13							
ASAR	**Alice Springs**	**28.92**	**169**	P		P	16 32 58.3	+1.4
	0.1nm,0.4s,baz=344,slow=10,SNR=6.8							
MKAR	**Makanchi Array**	**57.49**	**324**	P		P	16 36 47.0	+0.1
	0.1nm,0.4s,baz=122,slow=8.1,SNR=2.2							

*NEIC **19** 16:33:38.7, 1607N×9723W,h16km,MD3.7(MEX),After MEX.*
MEX 19 16:33:38.6±1.2,1606N×9723W,h16km±14km,MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.92**	**291**	*i* P		Pb	16 33 53.2	-3.0
PNIG				*i* S		Sb	16 34 02.8	-5.4
PNIG				*i* S		Sb	16 34 03.1	-5.2
VHO	**Vista Hermosa**	**1.11**	**25**	*i* P		Pb	16 33 55.5	-4.0
VHO				*i* S		Sb	16 34 09.2	-4.5
HUIG	**Huatulco**	**1.12**	**105**	*e*P		Pb	16 33 56.8	-2.7
HUIG				*i* S		Sb	16 34 09.8	-4.0
OXX	**Oaxaca**	**1.12**	**26**	*i* P		Pb	16 33 55.1	-4.6
OXX				*i* S		Sb	16 34 08.7	-5.4
UTMO	**Huajuapan**	**1.84**	**343**	*i* P		Pn	16 34 07.5	-2.0
UTMO				*i* S		Sn	16 34 29.2	-3.4
TPIG	**Tehuac#an**	**2.35**	**357**	*i* P		Pn	16 34 15.3	-1.3
TPIG				*i* S		Sn	16 34 41.0	-4.0
CMIG	**Matias Romero**	**2.47**	**65**	*i* P		Pn	16 34 14.8	-3.4
CMIG				*i* S		Sn	16 34 42.4	-5.7
PPM	**Popocatepetl**	**3.27**	**336**	*i* P		Pn	16 34 34.7	+5.5
PPM				*i* S		Sn	16 35 07.5	-0.4
PPM	**Popocatepetl**	**3.27**	**336**	*i* P		Pn	16 34 27.5	-1.7
PPM				*i* S		Sn	16 35 05.8	-2.0

*IDC **19** 16:38:08.6±0.8, 5595S×2746W, h0km, mb4.2/6, mb1 4.2/6, mb1mx4.0/14, mbtmp4.1/6, Error ellipse: s-maj=38.8km s-min=22.5km az=73.0*
*ISCJB **19** 16:38:22.3±4.3, 560S±02×275W±04, h120km±39km, mb4.1/7, Error ellipse: s-maj=41.5km s-min=23.7km az=159.4*
*NEIC **19** 16:38:26.7±5.5, 5603S×2757W, h150km±48km, mb4.5/1, Error ellipse: s-maj=26.2km s-min=14.0km az=67.0*
ISC 19 16:38:25.0±4.2,561S±02×275W±04,h130km±38km,n19, σ0§42/13,mb3.9/7,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**17.04**	**160**	*e*P		**Pn**	**16 42 14.8**	**-0.1**
VNA3				*e*			16 42 18.0	
VNA3				*e*			16 42 22.8	
VNA3				*e*			16 42 28.1	
VNA3				*e*			16 42 33.2	
VNA3				*e*			16 42 42.6	
VNA2	**Neumayer--Watz**	**17.25**	**158**	*e*P		**Pn**	**16 42 17.4**	**-0.1**
	baz=314,slow=12							
VNA2				*e*			16 42 20.2	
VNA2				*e*			16 42 24.8	
VNA2				*e*			16 42 29.4	
VNA2				*e*			16 42 34.7	
VNA2				*e*			16 42 44.1	
SNAA	**Sanae**	**18.80**	**156**	*e*P		**P**	**16 42 34.0**	**+0.1**
SNAA				*e*			16 42 36.9	
SNAA				*e*			16 42 42.3	
SNAA				*e*			16 42 51.9	
QSPA	**South Pole Qui**	**34.20**	**180**	*e*P		**P**	**16 44 57.6**	**+0.3**
	4.8nm,0.5s,mb4.5							
MAW	**Mawson**	**40.24**	**144**	P		**P**	**16 45 47.9**	**-0.3**
	1.9nm,0.5s,mb4.0,baz=247,slow=7.7,SNR=4.3							
VNDA	**Vanda**	**46.57**	**183**	P		**P**	**16 46 39.5**	**+0.6**
VNDA	**Vanda**	**46.57**	**183**	P		**P**	**16 46 39.5**	**+0.6**
	1.0nm,0.5s,mb3.7,baz=192,slow=8.4,SNR=8.8							
LPAZ	**La Paz**	**50.26**	**305**	P		**P**	**16 47 07.5**	**-0.3**
	0.6nm,0.5s,mb3.5,baz=180,slow=5.1,SNR=3.9							
TORD	**Torodi Ar. Bea**	**73.13**	**30**	P		**P**	**16 49 41.5**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.13**	**30**	P		**P**	**16 49 41.5**	**+0.5**
	1.5nm,0.5s,mb4.0,baz=201,slow=6.5,SNR=17							
STKA	**Stephens Creek**	**91.93**	**171**	P		**P**	**16 51 18.7**	**+0.2**
STKA	**Stephens Creek**	**91.93**	**171**	P		**P**	**16 51 18.7**	**+0.2**
	0.4nm,0.3s,mb3.9,baz=225,slow=5.7,SNR=2.2							
ASAR	**Alice Springs**	**99.03**	**163**	P		**P**	**16 51 50.0**	**-0.9**
	0.4nm,0.6s,mb4.0,baz=187,slow=4.1,SNR=12							
WRA	**Warramunga Arr**	**102.75**	**162**	P		Pdif	16 52 07.1	-0.4
	0.2nm,0.7s,baz=197,slow=4.4,SNR=2.9							
FINES	**FINESS Array B**	**124.45**	**28**	PKP		PKPdf	16 57 06.0	-1.0
	5.0nm,1.1s,baz=151,slow=3.2,SNR=3.8							
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP		PKPdf	16 57 28.2	-0.9
YKA	**Yellowknife Ar**	**136.07**	**318**	PKP		PKPdf	16 57 28.2	-0.9
	0.5nm,0.5s,baz=126,slow=2.2,SNR=8.4							
INK	**Inuvik**	**145.71**	**321**	PKPbc		PKPbc	16 57 46.0	-0.9
	2.7nm,0.5s,baz=124,slow=3.9,SNR=8.8							
SONM	**Songino Array**	**150.87**	**87**	PKPbc		PKPbc	16 58 00.9	-0.1
	4.4nm,0.6s,baz=223,slow=3.5,SNR=46							

IGQ 19 16:39:40.0,148S×8156W,h10km±3km,Mb4.4,Ms4.2, 14C-7D,Error ellipse: s-maj=8.3km s-min=4.2km az=51.2,Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.94**	**63**	Op ⇓P		Pg	**16 39 58.6**	**+0.5**
CHIS				⇓S		Sg	16 40 08.6	-1.7
IGUA	**Igualata**	**2.92**	**90**	P		Pn	16 40 28.3	+1.7
BILB	**Tungurahua vol**	**3.06**	**89**	P		Pn	16 40 30.8	+2.3
JUIV	**Juive**	**3.10**	**89**	P		Pn	16 40 31.7	+2.8
ARRY	**Arrayan**	**3.10**	**91**	⇑P		Pn	16 40 30.8	+1.7
ARRY	**Arrayan**	**3.10**	**91**	⇑S		Sn	16 41 00.8	-5.5
PATA	**Patacocha**	**3.12**	**91**	P		Pn	16 40 31.0	+1.6
PATA	**Patacocha**	**3.12**	**91**	S		Sn	16 41 03.6	-3.2
RUN5	**Runtun**	**3.13**	**89**	⇓P		Pn	16 40 32.8	+3.3
RUN5	**Runtun**	**3.13**	**89**	⇓S		Sn	16 41 09.7	+2.6
ULBA	**Ulba**	**3.15**	**90**	P		Pn	16 40 31.8	+2.1
ULBA	**Ulba**	**3.15**	**90**	S		Sn	16 41 07.1	-0.3
CAMI	**Rancho Maria**	**3.16**	**75**	⇑P		Pn	16 40 32.7	+2.9
CAMI	**Rancho Maria**	**3.16**	**75**	⇑S		Sn	16 41 10.1	+2.5
TERV	**Terraza Guagua**	**3.23**	**66**	⇑P		Pn	16 40 32.9	+2.1
TERV	**Terraza Guagua**	**3.23**	**66**	⇑S		Sn	16 41 12.2	+2.9
PINO	**Pino**	**3.23**	**66**	⇑P		Pn	16 40 32.8	+2.0
PINO	**Pino**	**3.23**	**66**	⇑S		Sn	16 41 11.1	+1.7
VC1	**Cotopaxi 1**	**3.26**	**75**	⇓P		Pn	16 40 35.0	+3.7
VC1	**Cotopaxi 1**	**3.26**	**75**	⇓S		Sn	16 41 17.0	+6.7
YANA	**Yana**	**3.28**	**66**	⇑P		Pn	16 40 33.6	+2.1
YANA	**Yana**	**3.28**	**66**	⇑S		Sn	16 41 12.2	+1.6
TAMB	**Tambo**	**3.29**	**76**	P		Pn	16 40 34.5	+2.9
TAMB	**Tambo**	**3.29**	**76**	S		Sn	16 41 14.4	+3.6
ANTI	**Antisana**	**3.55**	**73**	⇑P		Pn	16 40 39.5	+4.2
ANTI	**Antisana**	**3.55**	**73**	⇑S		Sn	16 41 19.9	+2.6
CAYR	**Refugio Cayamb**	**3.85**	**67**	⇑P		Pn	16 40 43.7	+4.4
CAYR	**Refugio Cayamb**	**3.85**	**67**	⇑S		Sn	16 41 27.6	+2.9
ANGU	**Angureal**	**3.86**	**67**	P		Pn	16 40 45.6	+6.1
LAV3	**Lava3-Reventad**	**4.16**	**71**	⇓P		Pn	16 40 51.1	+7.4

*NEIC **19** 16:45:29.9±0.5, 4823N×15464E, h10km, mb4.2/1, Error ellipse: s-maj=15.7km s-min=10.3km az=131.0*
*MOS **19** 16:45:32.8±1.6, 4820N×15488E, h54km, mb4.0/4, Error ellipse: s-maj=23.0km s-min=11.8km az=62.6*
*ISCJB **19** 16:45:33.0±1.2, 4825N±009×1548E±02, h47km±10km, mb3.8/10, Error ellipse: s-maj=21.6km s-min=6.6km az=40.9*
*IDC **19** 16:45:37.8±4.7, 4826N×15471E, h73km±43km, mb3.4/9, mb1 3.7/10, mb1mx3.6/20, mbtmp3.5/10, ML3.8/1, Error ellipse: s-maj=26.9km s-min=18.3km az=125.0*
ISC 19 16:45:35.6±1.1,4833N±009×1547E±02,h53km±9km,n25, σ0§99/28,mb3.8/10,1D,Kuril Islands

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

comp=Z,0.6nm,0.7s,mb3.7,baz=13,slow=5.4,SNR=17
CLL Collm 75.46 336 *e*P **P 16 57 12.0 -1.6**
TXAR Lajitas Array 75.79 62 P **P 16 57 16.2 +0.3**
comp=Z,0.6nm,0.7s,mb3.6,baz=305,slow=5.4,SNR=6.6
GERES GERESS Array B 77.50 335 P **P 16 57 26.1 +0.9**
comp=Z,0.3nm,0.4s,mb3.6,baz=23,slow=5.3,SNR=3.3

ISCJB ***19*** *16:46:33.1±0.5, 27.21N×006×1404E±0.1, h491km±6km, mb3.5/14, Error ellipse: s-maj=20.1km s-min=9.5km az=171.8*
IDC ***19*** *16:46:33.4±0.5, 27.17N×140.40E, h478km±7km, mb3.3/12, mb1 3.4/14, mb1mx3.3/19, mbtmp3.3/14, Error ellipse: s-maj=23.6km s-min=11.4km az=78.0*
NEIC ***19*** *16:46:34.5±1.4, 27.20N×140.34E, h493km±13km, mb3.5/2, Error ellipse: s-maj=21.3km s-min=11.6km az=88.0*
JMA ***19*** *16:46:35.0±0.1, 27.45N×141.03E, h493km, M3.7*
ISC 19 16:46:33.9±0.5, 2716N±007×1405E±01, h491km±5km, n34, σ1§03/37, mb3.5/14, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.47**	**92**	P	**P**	**16 47 36.0**	**+0.2**
CBIJ	**Chichi jima**	**1.47**	**92**	P	**P**	**16 47 36.2**	**+0.4**
	61nm,0.3s,baz=247,slow=18,SNR=56						
CBIJ				S	**S**	**16 48 24.0**	**-2.0**
	52nm,0.3s,baz=290,slow=23,SNR=8.1						
JHHJ	**Haha-jima-NKT**	**1.56**	**110**	P	**P**	**16 47 37.2**	**+1.0**
JHHJ				*e*S	**S**	**16 48 26.3**	**-0.3**
BSO1	**Boso 1**	**7.48**	**3**	P	**P**	**16 48 24.9**	**+0.4**
JIE	**Ise**	**7.92**	**336**	P	**P**	**16 48 31.2**	**+2.1**
JKN2	**Miekihoku**	**7.95**	**334**	P	**P**	**16 48 31.7**	**+2.3**
JRY	**Ryogami san**	**8.94**	**351**	P	**P**	**16 48 40.6**	**+0.9**
JAG	**Ashikaga**	**9.28**	**355**	P	**P**	**16 48 42.4**	**-1.0**
JAG				*e*S	**S**	**16 50 24.6**	**-5.2**
JHO	**Hitachi**	**9.42**	**0**	P	**P**	**16 48 45.5**	**+0.7**
JHO				*e*S	**S**	**16 50 29.2**	**-3.4**
MJAR	**Matsushiro Arr**	**9.56**	**349**	P	**P**	**16 48 46.3**	**0.0**
	0.3nm,0.3s,baz=164,slow=11,SNR=3.1						
JOW	**Kunigami**	**10.94**	**271**	P	**P**	**16 49 00.3**	**-0.8**
	3.6nm,0.3s,baz=127,slow=5.1,SNR=4.0						
KSRS	**Korea Array**	**14.78**	**317**	P	**P**	**16 49 43.8**	**+2.0**
	0.3nm,0.3s,baz=146,slow=8.9,SNR=6.7						
MDJ	**Mudanjiang**	**19.51**	**336**	*e*P	**P**	**16 50 25.5**	**-2.8**
ULN	**Ulaanbaatar**	**33.27**	**317**	*e*P	**P**	**16 52 29.1**	**-0.5**
	1.0nm,0.7s,mb3.4						
SONM	**Songino Array**	**33.65**	**317**	P	**P**	**16 52 32.8**	**-0.1**
	0.5nm,0.5s,mb3.2,baz=116,slow=7.1,SNR=12						
WRA	**Warramunga Arr**	**47.21**	**188**	P	**P**	**16 54 22.0**	**+0.3**
	0.8nm,0.3s,mb3.7,baz=4.8,slow=7.4,SNR=46						
WRA				PcP	PcP	16 55 44.9	+1.3
	0.1nm,0.4s,baz=360,slow=7.5,SNR=3.1						
MKAR	**Makanchi Array**	**49.30**	**310**	P	**P**	**16 54 37.0**	**0.0**
	0.8nm,0.4s,mb3.4,baz=87,slow=10,SNR=10.0						
MKAR				PcP	PcP	16 55 51.4	+0.5
	0.2nm,0.3s,baz=74,slow=8.4,SNR=3.8						
ASAR	**Alice Springs**	**50.94**	**188**	P	**P**	**16 54 49.7**	**+0.4**
	0.2nm,0.3s,mb2.9,baz=359,slow=4.9,SNR=24						
KURK	**Kurchatov**	**51.89**	**315**	*e*P	**P**	**16 54 55.6**	**-0.3**
BRVK	**Borovoye**	**57.06**	**317**	*e*P	**P**	**16 55 31.9**	**-0.3**
	1.9nm,0.8s,mb3.5						
AKTK	**Aktyubinsk**	**64.96**	**316**	P	**P**	**16 56 23.3**	**-1.1**
AKTO	**Aktyubinsk**	**64.96**	**316**	P	**P**	**16 56 23.3**	**-1.1**
	1.3nm,0.6s,mb3.7,baz=75,slow=13,SNR=4.6						
KEV	**Kevo**	**72.43**	**340**	*e*p	**P**	**16 57 08.8**	**-0.5**
YKA	**Yellowknife Ar**	**72.78**	**28**	P	**P**	**16 57 13.3**	**+1.9**
	0.3nm,0.4s,mb3.2,baz=292,slow=5.7,SNR=5.4						
ARCES	**ARCESS Array B**	**72.99**	**341**	P	**P**	**16 57 13.6**	**+1.1**
	1.9nm,0.7s,mb3.8,baz=40,slow=7.9,SNR=11						
JOF	**Joensuu**	**74.37**	**333**	*e*p	**P**	**16 57 20.4**	**-0.1**
KAF	**Kangasniemi**	**76.77**	**334**	*e*p	**P**	**16 57 33.1**	**-0.8**
	baz=55,slow=5.2						
FINES	**FINESS Array B**	**77.23**	**333**	P	**P**	**16 57 36.9**	**+0.4**
	3.7nm,0.4s,mb4.3,baz=76,slow=5.0,SNR=37						
AKASG	**Malin Array Be**	**81.69**	**323**	P	**P**	**16 58 00.2**	**0.0**
	1.4nm,0.4s,mb3.8,baz=52,slow=5.2,SNR=12						
HFS	**Hagfors**	**82.78**	**336**	P	**P**	**16 58 05.3**	**-0.3**
	1.3nm,0.4s,mb3.8,baz=53,slow=5.3,SNR=12						
NOA	**NORSAR Array B**	**83.00**	**338**	P	**P**	**16 58 06.6**	**-0.1**
NOA	**NORSAR Array B**	**83.00**	**338**	P	**P**	**16 58 06.6**	**-0.1**
	2.2nm,0.6s,mb3.9,baz=46,slow=5.0,SNR=4.9						
GERES	**GERESS Array B**	**90.68**	**328**	P	**P**	**16 58 43.3**	**-0.3**
	0.1nm,0.3s,mb3.2,baz=36,slow=7.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**123.42**	**310**	PKP	PKPdf	17 04 35.0	-0.5
	0.3nm,0.6s,baz=12,slow=1.4,SNR=3.0						

NIED ***19*** *16:48:00, 44.60N×147.20E, h280km, Mw4.4 Best double couple: M0 3.98000×10^15 NP1: φ 186.00000°, δ 59.00000°, λ -27.00000°. NP2: φ 290.00000°, δ 67.00000°, λ -146.00000°.*
ISCJB ***19*** *16:48:56.7±0.2, 44.56N±003×141.72E±005, h261km±2km, mb3.8/24, Error ellipse: s-maj=6.2km s-min=4.6km az=14.9*
MOS ***19*** *16:48:56.5±1.0, 44.64N×141.52E, h257km, mb3.8/12, Error ellipse: s-maj=16.0km s-min=8.4km az=92.7*
BJI ***19*** *16:48:56.6, 44.47N×141.53E, h230km, mB4.5, mb4.6*
NEIC ***19*** *16:48:57.1, 44.60N×141.71E, h261km, mb4.3/6, After JMA.*
JMA ***19*** *16:48:57.1±0.2, 44.60N×141.71E, h261km±2km, M4.1*
IDC ***19*** *16:48:57.6±0.5, 44.63N×141.61E, h249km±5km, mb3.6/19, mb1 3.8/22, mb1mx3.7/26, mbtmp3.6/22, Error ellipse: s-maj=12.0km s-min=9.2km az=108.0*
ISC 19 16:48:57.7±0.2, 4455N±003×14172E±005, h255km±2km, n94, σ0§98/112, mb3.8/24, 4C-15D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSS	**Shosan**	**0.18**	**148**	⇓P	**Pn**	**16 49 31.2**	**+0.6**
JSS				*e*S	**S**	**16 49 57.2**	**+0.8**
JYG	**Yagishiri**	**0.24**	**239**	⇓P	**Pn**	**16 49 30.8**	**+0.2**
JYG				*e*S	**S**	**16 49 56.7**	**+0.2**
JRR	**Rishiri**	**0.65**	**334**	⇓P	**Pn**	**16 49 31.8**	**+0.2**
JRR				*e*S	**S**	**16 49 59.3**	**+0.9**
JSE	**Soyaes**	**0.74**	**56**	⇓P	**Pn**	**16 49 31.9**	**0.0**
JSE				*e*S	**S**	**16 49 57.9**	**-1.0**
ASAJ	**Asahikawa**	**0.77**	**124**	⇓P	**Pn**	**16 49 32.4**	**+0.3**
ASAJ	**Asahikawa**	**0.77**	**124**	PN	**Pn**	**16 49 32.5**	**+0.4**
ASAJ				S	**S**	**16 49 59.1**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,91nm,0.3s						
ASAJ				smax			
	comp=N,8.0nm,0.3s						
ASAJ	**Asahikawa**	**0.77**	**124**	P	**Pn**	**16 49 32.5**	**+0.3**
	comp=N,91nm,0.3s,baz=279,slow=7.8,SNR=686						
ASAJ				S	**S**	**16 49 59.0**	**-0.1**
	comp=N,7.7nm,0.3s,baz=0.0,slow=20,SNR=3.8						
JWK2	**Keihoku**	**0.77**	**9**	⇓P	**Pn**	**16 49 31.9**	**-0.2**
JWK2				*e*S	**S**	**16 49 58.7**	**-0.5**
JHR	**Hokuryu**	**0.81**	**180**	⇓P	**Pn**	**16 49 33.2**	**+0.8**
JHR				*e*S	**S**	**16 50 01.6**	**+2.0**
JKK2	**Kamakawa 2**	**1.00**	**132**	⇓P	**Pn**	**16 49 33.9**	**+0.6**
JKK2				*e*S	**S**	**16 50 01.9**	**+0.6**
JSK	**Shakotan**	**1.50**	**217**	P	**Pn**	**16 49 36.9**	**+0.4**
JSK				*e*S	**S**	**16 50 06.7**	**-0.4**
JFR	**Furan**	**1.53**	**155**	⇓P	**Pn**	**16 49 36.9**	**+0.2**
JFR				*e*S	**S**	**16 50 08.3**	**+0.8**
JTKR	**Abashiri--Toko**	**1.68**	**110**	⇓P	**Pn**	**16 49 38.8**	**+0.9**
JTKR				*e*S	**S**	**16 50 10.5**	**+1.0**
JEW	**Eniwo**	**1.72**	**187**	⇑P	**Pn**	**16 49 39.1**	**+0.8**
JEW				*e*S	**S**	**16 50 11.2**	**+0.9**
JAR	**Ashorobuto**	**1.94**	**130**	⇓P	**Pn**	**16 49 40.7**	**+0.6**
JAR				*e*S	**S**	**16 50 14.4**	**+0.9**
JCH	**Churui**	**2.28**	**148**	P	**Pn**	**16 49 42.3**	**-0.9**
JCH				*e*S	**S**	**16 50 15.8**	**-3.3**
JNBK	**Urakawa-nobuka**	**2.39**	**161**	P	**Pn**	**16 49 44.8**	**+0.5**
JNBK				*e*S	**S**	**16 50 20.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	**2.51**	**16**	*e*Pn	**Pn**	**16 49 44.7**	**-0.6**
YSS				*e*S	**S**	**16 50 21.0**	**-2.0**
YSS	**Yuzh-Sakhalins**	**2.51**	**16**	*i*PN	**Pn**	**16 49 45.5**	**+0.2**
YSS				*i* S	**S**	**16 50 21.8**	**-1.2**
YSS				pmax	pmax		
	comp=N,190nm,0.5s						
YSS				pmax	pmax		
	comp=Z,330nm,0.5s						
YSS				smax			
	comp=N,620nm,0.6s						
YSS				smax			
	comp=E,670nm,0.6s						
YSS				smax			
	comp=N,2μm,3.0s						
YSS				smax			
	comp=E,1μm,4.0s						
JRA	**Rausu**	**2.52**	**103**	P	**Pn**	**16 49 46.8**	**+1.3**
JAK	**Akkeshi**	**2.66**	**125**	P	**Pn**	**16 49 46.1**	**-0.8**
JAK				*e*S	**S**	**16 50 23.4**	**-2.4**
JKB	**Kayabe**	**2.71**	**191**	⇑P	**Pn**	**16 49 47.1**	**-0.4**
JKB				*e*S	**S**	**16 50 24.5**	**-2.4**
ERM	**Erimo**	**2.75**	**157**	*e*P	**Pn**	**16 49 48.8**	**+1.0**
JOSM	**Okushiri--Mats**	**2.96**	**214**	⇑P	**Pn**	**16 49 50.0**	**-0.1**
NEM2	**Nemuro 2**	**3.14**	**111**	P	**Pn**	**16 49 51.6**	**-0.4**
NEM2				*e*S	**S**	**16 50 32.1**	**-2.9**
JOT	**Ohata**	**3.21**	**189**	⇓P	**Pn**	**16 49 52.2**	**-0.6**
JOT				*e*S	**S**	**16 50 34.6**	**-1.8**
HABR	**Khabarovsk**	**6.04**	**313**	⇓PN	**Pn**	**16 50 25.7**	**-0.6**
HABR				*e*		16 51 36.8	
KLR	**Kul'dur**	**8.27**	**308**	*e*PN	**Pn**	**16 50 49.0**	**-5.3**
MAJO	**Matsushiro**	**8.44**	**200**	*e*P	**Pn**	**16 50 55.6**	**-1.0**
	comp=E,13nm,0.6s						
MAJO	**Matsushiro**	**8.44**	**200**	*e*PN	**Pn**	**16 50 55.6**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,13nm,0.6s						
MAT	**Matsushiro**	**8.44**	**200**	P	**Pn**	**16 50 55.5**	**-1.0**
MAT				S	**S**	**16 52 29.0**	**-3.4**
MJAR	**Matsushiro Arr**	**8.44**	**200**	PN	**Pn**	**16 50 56.0**	**-0.5**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	**8.44**	**200**	P	**Pn**	**16 50 56.0**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=1.3,slow=15,SNR=19						
MDJ	**Mudanjiang**	**8.66**	**275**	P	**Pn**	**16 50 58.8**	**-0.4**
MDJ				AMB	AMB		
	comp=Z,39nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,68nm,4.6s						
MDJ	**Mudanjiang**	**8.66**	**275**	*e*Pn	**Pn**	**16 50 58.7**	**-0.5**
	comp=Z,40nm,1.0s						
SKR	**Severo-Kuril's**	**11.48**	**53**	*e*PN	**Pn**	**16 51 34.6**	**+0.1**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
JHJ	**Hachijo jima 2**	**11.52**	**188**	P	**Pn**	**16 51 33.5**	**-1.6**
	comp=Z,21nm,0.3s,baz=75,slow=18,SNR=6.4						
KSRS	**Korea Array**	**12.60**	**240**	P	**Pn**	**16 51 48.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=58,slow=11,SNR=11						
JNU	**Nakatsue**	**14.18**	**220**	P	**Pn**	**16 52 08.7**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=50,slow=23,SNR=7.5						
DL2	**Dalian**	**16.01**	**256**	P	**P**	**16 52 29.9**	**+1.7**
DL2				AMB	AMB		
	comp=Z,20nm,0.8s						
MA2	**Magadan**	**16.02**	**17**	*e*P	**P**	**16 52 27.8**	**-0.2**
YAK	**Yakutsk**	**18.87**	**342**	P	**P**	**16 52 58.1**	**-0.9**
BJT	**Baijiatuau**	**19.41**	**265**	P	**P**	**16 53 03.5**	**-1.5**
	comp=Z,4.9nm,0.4s						
BJT	**Baijiatuau**	**19.41**	**265**	P	**P**	**16 53 03.5**	**-1.5**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.4s						
SEY	**Seymchan**	**19.41**	**15**	⇑P	**P**	**16 53 03.9**	**-0.9**
SONM	**Songino Array**	**24.54**	**290**	P	**P**	**16 53 54.9**	**+0.8**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	**24.54**	**290**	P	**P**	**16 53 54.9**	**+0.8**
	comp=Z,1.8nm,0.5s,mb3.7,baz=88,slow=8.6,SNR=22						
ZAK	**Zakamensk**	**26.41**	**297**	*e*P	**P**	**16 54 12.8**	**+2.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.2						
GTA	**Gaotai**	**31.31**	**275**	*e*P	**P**	**16 54 57.5**	**+3.3**
GTA				AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.2						
IMA2	**Indian Mountai**	**40.23**	**35**	*e*P	**P**	**16 56 07.9**	**-1.3**
MKAR	**Makanchi Array**	**40.73**	**295**	P	**P**	**16 56 13.6**	**0.0**
MKAR						16 58 09.7	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**40.73**	**295**	P	**P**	**16 56 13.6**	**0.0**
	comp=Z,1.1nm,0.7s,mb3.2,baz=82,slow=9.0,SNR=7.1						
MKAR				PcP	PcP	16 58 09.7	+0.1
	comp=Z,0.7nm,0.7s,baz=76,slow=2.4,SNR=4.4						
MKAR				ScP	ScP	17 01 34.9	+0.6
	comp=Z,0.2nm,0.3s,baz=64,slow=3.1,SNR=3.5						
KDAK	**Kodiak Island**	**41.58**	**47**	P	**P**	**16 56 20.4**	**0.0**
	comp=Z,7.8nm,0.5s,mb4.2,baz=299,slow=3.0,SNR=18						
EGAK	**Eagle**	**45.57**	**36**	*e*P	**P**	**16 56 51.3**	**-0.6**
	comp=Z,4.5nm,0.6s,mb4.0						
INK	**Inuvik**	**47.68**	**30**	*e*P	**P**	**16 57 07.3**	**-0.8**
	comp=Z,72nm,0.5s,mb5.3						
INK	**Inuvik**	**47.68**	**30**	*e*P	**P**	**16 57 07.3**	**-0.9**
INK				pmax	pmax		
	comp=Z,72nm,0.5s						
INK	**Inuvik**	**47.68**	**30**	P	**P**	**16 57 07.9**	**-0.3**
	comp=Z,2.3nm,0.3s,mb3.9,baz=293,slow=7.6,SNR=14						
AKTK	**Aktyubinsk**	**54.01**	**308**	P	**P**	**16 57 55.3**	**-0.2**
AKTO	**Aktyubinsk**	**54.01**	**308**	P	**P**	**16 57 55.3**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.4						
AKTO	**Aktyubinsk**	**54.01**	**308**	P	**P**	**16 57 55.3**	**-0.2**
	comp=Z,0.9nm,0.5s,mb3.4,baz=44,slow=12,SNR=4.5						
BATI	**Kupang**	**56.90**	**201**	P	**P**	**16 58 16.9**	**+0.6**
	comp=Z,7.6nm,0.5s,mb4.4,baz=0.0,slow=2.0,SNR=4.5						
YKA	**Yellowknife Ar**	**57.27**	**32**	P	**P**	**16 58 18.8**	**+0.4**
YKA				PcP	PcP	16 59 10.0	+0.6
YKA	**Yellowknife Ar**	**57.27**	**32**	P	**P**	**16 58 18.7**	**+0.4**
	comp=Z,1.3nm,0.5s,mb3.6,baz=306,slow=6.7,SNR=23						
YKA				PcP	PcP	16 59 10.0	+0.6
	comp=Z,0.5nm,0.7s,baz=308,slow=3.8,SNR=3.8						
KAKA	**Kakadu**	**57.61**	**191**	*e*P	**P**	**16 58 22.0**	**+0.8**
	comp=Z,8.4nm,0.6s,mb4.3						
JOF	**Joensuu**	**59.50**	**330**	*e*p	**P**	**16 58 32.3**	**-1.4**
	comp=Z,1.4nm,0.3s,mb4.0						
JOF	**Joensuu**	**59.50**	**330**	*e*P	**P**	**16 58 32.3**	**-1.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						
FINES	**FINESS Array B**	**62.32**	**331**	P	**P**	**16 58 52.0**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**62.32**	**331**	P	**P**	**16 58 52.0**	**-0.7**
	comp=Z,1.3nm,0.6s,mb3.8,baz=72,slow=6.2,SNR=4.4						
WB2	**Warramunga Arr**	**64.53**	**188**	*e*P	**P**	**16 59 07.7**	**+0.2**
WRA	**Warramunga Arr**	**64.53**	**188**	P	**P**	**16 59 07.8**	**+0.3**
WRA						16 59 39.8	
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**64.53**	**188**	P	**P**	**16 59 07.8**	**+0.3**
	comp=Z,3.1nm,0.9s,mb4.0,baz=6.0,slow=6.8,SNR=27						
WRA				PcP	PcP	16 59 39.8	+0.6
	comp=Z,0.7nm,0.6s,baz=359,slow=4.7,SNR=7.7						
HFS	**Hagfors**	**67.36**	**335**	P	**P**	**16 59 24.6**	**-0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
HFS	**Hagfors**	**67.36**	**335**	P	**P**	**16 59 24.6**	**-0.4**
	comp=Z,2.1nm,0.4s,mb4.2,baz=46,slow=6.4,SNR=16						
NB2	**NORSAR Subarra**	**67.37**	**336**	P	**P**	**16 59 24.4**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.5,baz=35,slow=6.5						
NOA	**NORSAR Array B**	**67.37**	**336**	P	**P**	**16 59 24.4**	**-0.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**67.37**	**336**	P	**P**	**16 59 24.4**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.6,baz=39,slow=6.3,SNR=3.1						
ASAR	**Alice Springs**	**68.26**	**188**	P	**P**	**16 59 32.4**	**+1.4**
ASAR						16 59 55.8	
ASAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**68.26**	**188**	P	**P**	**16 59 32.4**	**+1.4**
	comp=Z,6.0nm,0.8s,mb4.4,baz=1.8,slow=5.1,SNR=93						
ASAR				PcP	PcP	16 59 55.8	+1.1
	comp=Z,0.5nm,0.7s,baz=352,slow=4.0,SNR=3.1						
AKASG	**Malin Array Be**	**68.55**	**321**	P	**P**	**16 59 32.1**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**68.55**	**321**	P	**P**	**16 59 32.0**	**-0.5**
	comp=Z,0.6nm,0.4s,mb3.7,baz=42,slow=5.9,SNR=8.0						
NVAR	**Mina Array Bea**	**70.40**	**55**	P	**P**	**16 59 46.3**	**+2.2**
	comp=Z,0.7nm,0.7s,mb3.5,baz=288,slow=7.9,SNR=5.8						
PDAR	**Pinedale Array**	**72.30**	**47**	P	**P**	**16 59 56.4**	**+1.1**
	comp=Z,1.8nm,0.4s,mb4.0,baz=311,slow=0.5,SNR=20						
STKA	**Stephens Creek**	**76.06**	**180**	P	**P**	**17 00 18.0**	**+1.1**
STKA	**Stephens Creek**	**76.06**	**180**	P	**P**	**17 00 18.0**	**+1.1**
	comp=Z,0.9nm,0.4s,mb3.7,baz=342,slow=3.7,SNR=5.9						
EKA	**Eskdalemuir Ar**	**76.14**	**340**	P	**P**	**17 00 17.2**	**0.0**
EKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**76.14**	**340**	P	**P**	**17 00 17.2**	**+0.1**
	comp=Z,2.0nm,0.9s,mb3.7,baz=24,slow=4.0,SNR=2.9						
GERES	**GERESS Array B**	**76.47**	**328**	P	**P**	**17 00 18.8**	**-0.4**
	comp=Z,0.2nm,0.3s,mb3.2,baz=16,slow=5.4,SNR=3.0						
TXAR	**Lajitas Array**	**85.37**	**53**	P	**P**	**17 01 07.6**	**+1.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TXAR	**Lajitas Array**	**85.37**	**53**	P	**P**	**17 01 07.5**	**+1.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=299,slow=2.6,SNR=7.6						
SNAA	**Sanae**	**147.94**	**200**	PKP2	PKPbc	17 08 11.6	+0.2
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SNAA	**Sanae**	**147.94**	**200**	PKPbc	PKPbc	17 08 11.6	+0.2
	comp=Z,1.4nm,0.8s,baz=149,slow=5.9,SNR=6.1						
VNA2	**Neumayer--Watz**	**149.54**	**199**	*e*	PKPbc	17 08 16.4	+1.0
	baz=118,slow=1.5						
VNA3	**Neumayer Olymp**	**149.84**	**198**	*e*	PKPbc	17 08 16.8	+0.7
PLCA	**Paso Flores**	**156.04**	**92**	PKPbc	PKPdf	17 08 33.9	+13
	comp=Z,0.7nm,0.5s,baz=297,slow=2.3,SNR=3.4						

CSEM ***19*** *16:49:30.7, 68.98N×154.0W, h5km, ML3.5, After REY*
REY 19 16:49:30.7, 68.98N×154.0W, h5km, ML2.8, ML3.5, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILEI	**Leirhofn**	**2.62**	**190**	P	Pn	16 50 12.8	-0.7
ILEI				S	Sn	16 50 45.5	-0.1
IGIL	**Gilhagi**	**2.94**	**188**	P	Pn	16 50 17.4	-0.5
IGIL				S	Sn	16 50 53.5	0.0
IHED	**Heoinshofoi**	**3.00**	**195**	P	Pn	16 50 18.2	-0.6
IGRA	**Granastaoir**	**3.19**	**196**	P	Pn	16 50 21.0	-0.3
IGRA				S	Sn	16 50 59.5	-0.1
IKVO	**Krokottuvotn**	**3.33**	**191**	P	Pn	16 50 23.3	0.0
IKVO				S	Sn	16 51 05.1	+2.0
IGRS	**Grimsstaoir**	**3.37**	**185**	P	Pn	16 50 24.0	+0.2
IGRS				S	Sn	16 51 05.9	+1.8
IREN	**Reynihlio**	**3.40**	**191**	P	Pn	16 50 24.5	+0.3
IREN				S	Sn	16 51 05.7	+0.9
ISVA	**Svartarkot**	**3.73**	**192**	P	Pn	16 50 29.3	+0.5
ISVA				S	Sn	16 51 14.8	+1.8
IADA	**Aoalbol**	**3.98**	**181**	P	Pn	16 50 32.5	+0.3
IGLU	**Glumsstadir**	**4.02**	**178**	P	Pn	16 50 33.4	+0.6
IHVA	**Hvannstoosfjoi**	**4.04**	**183**	P	Pn	16 50 33.8	+0.7

IDC ***19*** *17:00:45.6±2.3, 637S×147.96E, h0km, mb4.1/3, mb1 4.2/5, mb1mx3.8/13, mbtmp4.0/5, ML3.3/2, Error ellipse: s-maj=52.7km s-min=26.4km az=115.0*
NEIC ***19*** *17:00:45.4±1.8, 6.25S×148.07E, h10km, mb4.1/2, Error ellipse: s-maj=38.2km s-min=21.8km az=92.0*
ISC 19 17:00:46.4±2.5, 60S±01×1481E±03, h35km, n10, σ1§20/12, mb4.0/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.48**	**195**	*e*Pn	**Pn**	**17 01 36.9**	**-1.2**
PMG				*e*S	**Sn**	**17 02 19.6**	**+1.5**
PMG	**Port Moresby**	**3.48**	**195**	Pn	**Pn**	**17 01 36.7**	**-1.3**
	5.3nm,0.3s,baz=11,slow=8.7,SNR=33						
PMG				Sn	**Sn**	**17 02 18.2**	**+0.1**
	14nm,0.3s,baz=183,slow=22,SNR=9.8						
WB2	**Warramunga Arr**	**19.22**	**223**	*e*P	**Pn**	**17 05 07.2**	**-1.6**
WRA	**Warramunga Arr**	**19.23**	**223**	P	**Pn**	**17 05 08.0**	**-0.9**
	0.3nm,0.3s,baz=47,slow=11,SNR=15						
ASAR	**Alice Springs**	**22.22**	**216**	P	**P**	**17 05 40.2**	**+0.2**
	3.3nm,0.5s,mb4.0,baz=52,slow=9.9,SNR=83						
ASAR				S	**S**	**17 09 43.4**	**+0.4**
	1.2nm,1.0s,baz=32,slow=21,SNR=6.2						
FITZ	**Fitzroy Crossi**	**24.98**	**239**	*e*P	**P**	**17 06 09.0**	**+2.1**
	6.7nm,0.6s,mb4.3						
FITZ	**Fitzroy Crossi**	**24.98**	**239**	P	**P**	**17 06 09.4**	**+2.5**
	3.1nm,0.3s,mb4.2,baz=78,slow=9.1,SNR=35						
STKA	**Stephens Creek**	**26.43**	**192**	*e*P	**P**	**17 06 20.4**	**+0.5**
	2.0nm,0.9s,mb3.6						
**

*CSEM **19** 17:27:40.0±0.2,2680N×5535E,h20km,ML3.6/2,Error ellipse: s-maj=4.8km s-min=2.0km az=57.0*

ISC 19 17:27:37.5±1.8,2680N±007×556E±01,h6km±20km,n21, σ1§02/32,1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANOM	**Banah**	**1.09**	**143**	P	**Pg**	**17 27 55.5**	**-2.9**
	SNR=923						
BANOM				⇓S	**Sg**	**17 28 11.2**	**-1.2**
BANOM	**Banah**	**1.09**	**143**	P	**Pg**	**17 27 55.5**	**-2.9**
	SNR=923						
BANOM				S	**Sg**	**17 28 11.2**	**-1.3**
NAZ	**Nazwa, Dubai**	**1.81**	**178**	P	**Pn**	**17 28 09.9**	**+0.7**
HATD	**Hatta, Dubai**	**2.03**	**166**	P	**Pn**	**17 28 11.6**	**-0.7**
	SNR=9.8						
HATD	**Hatta, Dubai**	**2.03**	**166**	P	**Pn**	**17 28 11.7**	**-0.5**
	SNR=7.0						
FAQ	**Al Faqa, Dubai**	**2.05**	**180**	P	**Pn**	**17 28 12.9**	**+0.4**
	SNR=29						
ASHO	**Ashiyiah**	**2.15**	**168**	P	**Pn**	**17 28 13.7**	**-0.3**
	SNR=27						
ASUD	**Al Ashush, Dub**	**2.18**	**186**	P	**Pn**	**17 28 15.7**	**+1.4**
	SNR=76						
BTHS		**5.08**	**238**	P	**Pn**	**17 28 54.7**	**+0.4**
BTHS		**5.08**	**238**	P	**Pn**	**17 28 54.7**	**+0.4**
BTHS				S	**Sn**	**17 29 53.6**	**+0.3**
HRDDS		**6.76**	**237**	S	**Sn**	**17 30 34.3**	**-0.4**
HRDDS		**6.76**	**237**	P	**Pn**	**17 29 18.5**	**+1.1**
QRN	**Al-Qurain**	**7.06**	**288**	*e*P	**Pn**	**17 29 22.1**	**+0.7**
QRN				*e*S	**Sn**	**17 30 40.4**	**-1.6**
KBD	**Kabd**	**7.36**	**291**	*e*P	**Pn**	**17 29 26.5**	**+0.9**
KBD				*e*S	**Sn**	**17 30 49.0**	**-0.5**
KBD				AML	AML	17 30 49.9	
	comp=Z,38nm,0.3s						
KBD	**Kabd**	**7.36**	**291**	*e*P	**Pn**	**17 29 26.5**	**+0.9**
KBD				*e*S	**Sn**	**17 30 49.0**	**-0.5**
	comp=Z,38nm,0.3s						
RDF	**Al-Radifah**	**7.42**	**288**	*e*P	**Pn**	**17 29 27.6**	**+1.3**
RDF				*e*S	**Sn**	**17 30 50.2**	**-0.6**
RDF				AML	AML	17 30 50.8	
	comp=Z,5.3nm,0.3s						
RDF	**Al-Radifah**	**7.42**	**288**	*e*P	**Pn**	**17 29 27.6**	**+1.3**
RDF				*e*S	**Sn**	**17 30 50.2**	**-0.6**
NAY	**Al-Naaiem**	**7.76**	**290**	*e*P	**Pn**	**17 29 32.2**	**+1.2**
NAY				*e*S	**Sn**	**17 30 58.0**	**-1.3**
NAY				AML	AML	17 30 58.3	
	comp=Z,1.8nm,0.3s						
NAY	**Al-Naaiem**	**7.76**	**290**	*e*P	**Pn**	**17 29 32.2**	**+1.1**
NAY				*e*S	**Sn**	**17 30 58.0**	**-1.3**
	comp=Z,1.8nm,0.3s						
MIB	**Mutribah**	**7.86**	**294**	*e*P	**Pn**	**17 29 33.4**	**+1.1**
MIB				AML	AML	17 31 00.1	
	comp=Z,5.9nm,0.4s						
MIB				*e*S	**Sn**	**17 31 00.7**	**-0.9**
ASYS		**10.03**	**277**	P	**Pn**	**17 30 01.2**	**-1.1**

IDC 19 17:30:19.3±2.2,510S×12989E,h0km,mb3.7/1,mb1 3.7/4, mb1mx3.6/12,mbtmp3.6/4,ML3.3/3,Error ellipse: s-maj=98.3km s-min=27.5km az=75.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.57**	**197**	Pn	Pn	17 33 31.9	-1.4
	0.1nm,0.3s,baz=34,slow=14,SNR=6.4						
WRA	**Warramunga Arr**	**15.37**	**164**	Pn	Pn	17 33 55.7	-2.1
	0.1nm,0.3s,baz=348,slow=13,SNR=13						
ASAR	**Alice Springs**	**18.86**	**169**	P	Pn	17 34 42.7	+1.1
	0.1nm,0.3s,baz=347,slow=11,SNR=13						
MKAR	**Makanchi Array**	**66.59**	**326**	P	P	17 41 11.5	+0.1
	0.4nm,0.4s,baz=122,slow=7.3,SNR=6.8						

*IDC **19** 17:43:46.5±0.5, 141N×126.19E, h0km, mb4.6/15, mb1 4.6/16, mb1mx4.5/19, mbtmp4.6/16, ML4.3/1, MS4.0/2, Ms1 4.0/2, ms1mx3.2/23, Error ellipse: s-maj=24.0km s-min=12.3km az=72.0*

*ISCJB **19** 17:43:49.9±0.8, 135N±004×126.10E±006, h33km±7km, mb4.8/56, MS4.1/10, Error ellipse: s-maj=11.1km s-min=5.2km az=162.1*

*MOS **19** 17:43:49.7±1.8, 146N×126.18E, h33km, mb5.1/14, Error ellipse: s-maj=18.3km s-min=9.7km az=108.6*

*NEIC **19** 17:43:51.5±1.8, 139N×126.17E, h37km±17km, mb4.8/17, Error ellipse: s-maj=15.3km s-min=7.4km az=63.0*

*BJI **19** 17:43:54.1, 121N×12595E, h80km, mB4.9, mb4.7, Ms4.4, Msz4.1*

ISC 19 17:43:52.4±0.7,133N±003×12614E±006,h42km±6km, h89km±2.7km:pP-P,n118,σ1§38/120,mb4.8/56,MS4.1/10, 9C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**5.58**	**1**	*e*P	**Pn**	**17 45 12.2**	**-0.8**
BUKP	**Musuan**	**6.59**	**351**	*e*P	**Pn**	**17 45 26.2**	**-0.7**
PCI	**Palu**	**6.69**	**251**	P	**Pn**	**17 45 35.4**	**+7.2**
	148nm,1.2s						
PAGZ	**Pagadian**	**7.04**	**337**	*e*P	**Pn**	**17 45 31.3**	**-1.7**
CGP	**Cagayan de Oro**	**7.22**	**349**	⇑*i*P	**Pn**	**17 45 37.7**	**+2.2**
CUYO	**Cuyo Island**	**10.74**	**332**	*e*P	**Pn**	**17 46 23.5**	**-0.3**
KKM	**Kota Kinabalu**	**10.96**	**296**	*e*P	**Pn**	**17 46 27.9**	**+1.2**
BATP	**Bataraza**	**11.13**	**312**	*e*P	**Pn**	**17 46 37.1**	**+7.9**
BATI	**Kupang**	**11.72**	**192**	Pn	**Pn**	**17 46 39.5**	**+2.3**
	1.7nm,0.3s,baz=336,slow=14,SNR=4.2						
LUBP	**Lubang**	**13.64**	**335**	*e*P	**Pn**	**17 47 10.2**	**+6.9**
BALP	**Baler**	**15.01**	**343**	*e*P	**Pn**	**17 47 16.8**	**-5.0**
KAKA	**Kakadu**	**15.29**	**156**	*e*P	**Pn**	**17 47 24.7**	**-0.7**
	58nm,0.9s						
KSM	**Kuching**	**15.83**	**271**	*e*P	**Pn**	**17 47 37.6**	**+5.1**
CAUP	**Cauayan**	**16.09**	**345**	*e*P	**Pn**	**17 47 34.1**	**-1.7**
APYP	**Conner**	**17.12**	**344**	*e*P	**Pn**	**17 47 48.2**	**-0.5**
BJII	**Banjamegara**	**18.52**	**242**	P	**Pn**	**17 48 14.6**	**+8.7**
	28nm,1.9s						
FITZ	**Fitzroy Crossi**	**19.32**	**181**	⇑*i*P	**Pn**	**17 48 14.0**	**-1.5**
	15nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.32**	**181**	P	**Pn**	**17 48 14.2**	**-1.3**
	0.7nm,0.3s,baz=18,slow=8.5,SNR=33						
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**17 48 49.2**	**-0.5**
	51nm,0.7s,mb5.0,baz=338,slow=11,SNR=177						
WRA				S	**S**	**17 52 53.8**	**-1.3**
	2.0nm,0.8s,baz=332,slow=20,SNR=8.2						
WB2	**Warramunga Arr**	**22.62**	**160**	⇑*i*P	**P**	**17 48 48.6**	**-1.2**
WB2				*e*S	**S**	**17 52 53.7**	**-1.5**
MBWA	**Marble Bar**	**23.21**	**195**	*e*P	**P**	**17 48 55.8**	**-0.2**
	9.9nm,0.7s,mb4.3						
PMG	**Port Moresby**	**23.49**	**117**	P	**P**	**17 48 57.4**	**-1.4**
	9.7nm,0.8s,mb4.3,baz=334,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**25.97**	**164**	P	**P**	**17 49 21.2**	**0.0**
	6.7nm,0.7s,mb4.3,baz=345,slow=6.3,SNR=124						
ASAR				PcP	PcP	17 52 49.6	+0.5
	2.3nm,0.6s,baz=339,slow=2.3,SNR=9.2						
ASAR				S	**S**	**17 53 50.9**	**+1.9**
	1.0nm,0.8s,baz=354,slow=22,SNR=4.3						
PSI	**Prapat**	**27.24**	**274**	P	**P**	**17 49 31.9**	**-0.9**
	2.9nm,0.4s,mb4.1,baz=129,slow=16,SNR=2.5						
GYA	**Guiyang**	**31.23**	**325**	P	**P**	**17 50 09.8**	**+1.7**
GYA				AP	pP	17 50 30.9	+11
GYA				PP	PP	17 51 16.4	-2.8
GYA				PCP	PcP	17 53 02.5	+0.3
GYA				S	**S**	**17 55 08.6**	**-3.1**
GYA				XS	sS	17 55 44.8	+14
GYA				SCP	ScP	17 56 36.0	-6.0
GYA				SCS	ScS	18 00 32.0	-7.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,430nm,18.4s,MS4.3						
GYA				LR	LR		
	comp=E,460nm,17.8s,MS4.3						
GYA				LR	LR		
	comp=Z,390nm,18.3s,MS4.1						
NJ2	**Nanjing**	**31.32**	**348**	*e*P	**P**	**17 50 10.3**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
FORT	**Forrest**	**31.98**	**177**	*e*P	**P**	**17 50 15.4**	**+0.8**
	comp=Z,24nm,0.6s,mb5.2						
KMI	**Kunming**	**32.71**	**318**	P	**P**	**17 50 22.8**	**+1.7**
KMI				AP	pP	17 50 43.3	+11
KMI				XP	sP	17 50 54.1	+16
KMI				PP	PP	17 51 34.5	-1.2
KMI				S	**S**	**17 55 30.8**	**-4.1**
KMI				XS	sS	17 56 07.5	+13
KMI				SS	SS	17 57 34.8	-22
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KMI				AMB	AMB		
	comp=Z,107nm,3.1s						
KMI				LR	LR		
	comp=N,168nm,13.1s,MS4.1						
KMI				LR	LR		
	comp=E,214nm,15.5s,MS4.1						
KMI				LR	LR		
	comp=Z,263nm,15.8s,MS4.0						
NWAO	**Narrogin (SRO)**	**35.10**	**193**	P	**P**	**17 50 43.4**	**+1.6**
	comp=Z,9.9nm,0.7s,mb4.9,baz=358,slow=8.4,SNR=8.2						
HNR	**Honiara**	**35.32**	**108**	P	**P**	**17 50 42.8**	**-1.1**
	comp=Z,20nm,0.7s,mb5.2,baz=232,slow=1.7,SNR=3.6						
KSRS	**Korea Array**	**35.98**	**2**	P	**P**	**17 50 49.8**	**+0.5**
	comp=Z,3.3nm,0.8s,mb4.3,baz=173,slow=10,SNR=6.2						
STKA	**Stephens Creek**	**36.13**	**157**	⇑*i*P	**P**	**17 50 50.5**	**-0.1**
	comp=Z,8.0nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**36.13**	**157**	P	**P**	**17 50 51.0**	**+0.4**
	comp=Z,9.9nm,0.9s,mb4.8,baz=332,slow=9.2,SNR=25						
STKA				PcP	PcP	17 53 15.9	0.0
	comp=Z,2.3nm,0.6s,baz=315,slow=8.7,SNR=3.0						
CD2	**Chengdu**	**36.27**	**326**	P	**P**	**17 50 53.6**	**+1.8**
CD2				AP	pP	17 51 11.6	+8.2
CD2				XP	sP	17 51 24.5	+16
CD2				PP	PP	17 52 19.1	+4.2
CD2				S	**S**	**17 56 25.9**	**-3.7**
CD2				SS	SS	17 58 54.9	-14
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,5.8s						
CD2				LR	LR		
	comp=N,430nm,16.8s,MS4.4						
CD2				LR	LR		
	comp=E,420nm,19.2s,MS4.4						
CD2				LR	LR		
	comp=Z,180nm,12.0s						
MAT	**Matsushiro**	**36.77**	**16**	P	**P**	**17 50 56.3**	**+0.2**
MJAR	**Matsushiro Arr**	**36.77**	**16**	P	**P**	**17 50 54.9**	**-1.1**
MJAR	**Matsushiro Arr**	**36.77**	**16**	P	**P**	**17 50 54.9**	**-1.1**
	comp=Z,2.8nm,0.7s,mb4.2,baz=194,slow=10,SNR=6.0						
BJT	**Baijiatuan**	**39.56**	**348**	P	**P**	**17 51 20.9**	**+1.4**
	comp=Z,4.2nm,0.4s,mb4.5						
BJT	**Baijiatuan**	**39.56**	**348**	P	**P**	**17 51 20.9**	**+1.4**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BJI	**Beijing**	**39.58**	**348**	P	**P**	**17 51 20.8**	**+1.1**
BJI				AP	pP	17 51 41.1	+10
BJI				XP	sP	17 51 52.3	+16
BJI				PP	PP	17 52 53.8	+2.6
BJI				S	**S**	**17 57 19.8**	**+0.2**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
BJI				AMB	AMB		
	comp=Z,58nm,4.5s						
BJI				LR	LR		
	comp=N,248nm,8.5s						
BJI				LR	LR		
	comp=E,158nm,9.1s						
BJI				LR	LR		
	comp=Z,135nm,47.0s,MS3.4						
ARMA	**Armidale**	**39.83**	**145**	*e*P	**P**	**17 51 22.3**	**+0.4**
LZH	**Lanzhou**	**40.29**	**332**	⇑P	**P**	**17 51 24.8**	**-0.8**
LZH				AP	pP	17 51 46.9	+10
LZH				XP	sP	17 51 58.6	+16
LZH				PP	PP	17 53 05.3	+6.3
LZH				*e*S	**S**	**17 57 25.3**	**-5.1**
LZH				XS	sS	17 58 04.5	+15
LZH				*e*SS	SS	18 00 22.6	-7.6
LZH				AMB	AMB		
	comp=Z,27nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,92nm,5.7s						
LZH				LR	LR		
	comp=E,486nm,14.3s						
LZH				LR	LR		
	comp=Z,826nm,17.6s,MS4.6						
SNY	**Shenyang**	**40.38**	**357**	⇑P	**P**	**17 51 28.9**	**+2.6**
SNY				AMB	AMB		
	comp=Z,24nm,0.9s,mb4.9						
SHL	**Shillong**	**40.87**	**309**	*e*P	**P**	**17 51 30.0**	**-0.6**
HHC	**Hu-ho-hao-te**	**41.50**	**343**	*e*P	**P**	**17 51 36.9**	**+1.4**
HHC				AP	pP	17 51 59.6	+12
HHC				PP	PP	17 53 16.9	+4.9
HHC				*e*S	**S**	**17 57 40.0**	**-8.1**
HHC				SS	SS	18 00 48.0	-5.9
HHC				SCS	ScS	18 01 27.9	-7.8
HHC				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.1						
HHC				AMB	AMB		
	comp=Z,51nm,4.3s						
HHC				LR	LR		
	comp=N,168nm,16.7s,MS4.2						
HHC				LR	LR		
	comp=E,154nm,14.3s,MS4.2						
HHC				LR	LR		
	comp=Z,180nm,16.7s,MS4.0						
CN2	**Changchun**	**42.29**	**359**	*e*P	**P**	**17 51 44.4**	**+2.5**
MDJ	**Mudanjiang**	**43.21**	**4**	P	**P**	**17 51 51.0**	**+1.7**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,79nm,4.1s						
MDJ	**Mudanjiang**	**43.21**	**4**	*e*P	**P**	**17 51 51.1**	**+1.8**
	comp=Z,5.7nm,0.6s,mb4.5						
LSA	**Lhasa**	**43.62**	**314**	P	**P**	**17 51 51.0**	**-1.9**
LSA	**Lhasa**	**43.62**	**314**	*e*P	**P**	**17 51 52.1**	**-0.8**
	comp=Z,22nm,1.4s,mb4.7						
LSA	**Lhasa**	**43.62**	**314**	*e*P	**P**	**17 51 52.1**	**-0.8**
LSA				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
GTA	**Gaotai**	**44.87**	**331**	*e*P	**P**	**17 52 04.5**	**+1.8**
GTA				AP	pP	17 52 23.6	+9.1
GTA				XP	sP	17 52 31.8	+12
GTA				PCP	PcP	17 53 47.8	+3.9
GTA				PP	PP	17 53 50.9	+2.7
GTA				S	**S**	**17 58 33.8**	**-3.8**
GTA				XS	sS	17 59 05.8	+8.6
GTA				SS	SS	18 01 46.3	-14
GTA				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,134nm,4.9s						
GTA				LR	LR		
	comp=N,145nm,14.5s,MS4.3						
GTA				LR	LR		
	comp=E,218nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,173nm,13.7s,MS4.1						
TAPN	**Taplejung**	**45.00**	**309**	*e*P	**P**	**17 52 03.4**	**-0.6**
	comp=Z,24nm,1.3s,mb4.9						
ODAN	**Odare**	**45.02**	**308**	*e*P	**P**	**17 52 02.5**	**-1.7**
	comp=Z,16nm,0.9s,mb4.8						
JIRN	**Jiri**	**46.34**	**308**	*e*P	**P**	**17 52 14.0**	**-0.6**
	comp=Z,13nm,0.7s,mb4.9						
KKN	**Kakani**	**47.12**	**308**	*e*P	**P**	**17 52 19.8**	**-0.9**
	comp=Z,9.2nm,0.7s,mb4.8						
YSS	**Yuzh-Sakhalins**	**47.70**	**15**	*e*P	**P**	**17 52 26.6**	**+1.8**
GKN	**Gorkha**	**47.72**	**308**	*e*P	**P**	**17 52 24.3**	**-1.0**
	comp=Z,18nm,0.9s,mb5.1						
KLR	**Kul'dur**	**47.96**	**5**	*e*P	**P**	**17 52 24.2**	**-2.6**
HIA	**Hailar**	**48.07**	**354**	*e*P	**P**	**17 52 30.2**	**+2.6**
	comp=Z,9.6nm,0.8s,mb4.9						
HIA	**Hailar**	**48.07**	**354**	*e*P	**P**	**17 52 30.2**	**+2.5**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLN	**Koldanda**	**48.44**	**307**	*e*P	**P**	**17 52 29.6**	**-1.4**
	comp=Z,45nm,0.9s,mb5.5						
ULN	**Ulaanbaatar**	**49.22**	**343**	*e*P	**P**	**17 52 34.0**	**-2.5**
	comp=Z,4.8nm,0.9s,mb4.5						
ULN	**Ulaanbaatar**	**49.22**	**343**	*e*P	**P**	**17 52 34.1**	**-2.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
SONM	**Songino Array**	**49.38**	**343**	P	**P**	**17 52 36.9**	**-0.9**
SONM						17 54 02.4	
SONM	**Songino Array**	**49.38**	**343**	P	**P**	**17 52 36.9**	**-0.9**
	comp=Z,3.5nm,0.8s,mb4.4,baz=161,slow=6.6,SNR=17						
SONM				PcP	PcP	17 54 02.4	+2.6
	comp=Z,1.9nm,0.8s,baz=167,slow=3.5,SNR=5.5						
SONM				LR	LR	18 13 22.4	
	comp=Z,123nm,21.0s,MS3.9,baz=259,slow=36						
ZAK	**Zakamensk**	**52.59**	**342**	*e*P	**P**	**17 52 59.4**	**-2.5**
ZAK				*e*		17 54 11.7	
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
TLY	**Talaya**	**53.62**	**343**	*e*P	**P**	**17 53 09.8**	**+0.4**
TLY				*e*		17 55 11.2	
TLY				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
WMQ	**Urumqi**	**54.36**	**326**	⇓P	**P**	**17 53 14.8**	**-0.2**
WMQ				AP	pP	17 53 37.8	+11
WMQ				XP	sP	17 53 48.8	+17
WMQ				PCP	PcP	17 54 17.8	-0.7
WMQ				PP	PP	17 55 19.4	+2.0
WMQ				*e*S	**S**	**18 00 42.8**	**-7.5**
WMQ				AMB	AMB		
	comp=Z,13nm,0.7s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,89nm,6.8s						
WMQ				LR	LR		
	comp=N,66nm,19.0s,MS4.0						
WMQ				LR	LR		
	comp=E,133nm,21.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,120nm,16.0s,MS4.1						
BOD	**Bodaibo**	**57.14**	**352**	*e*P	**P**	**17 53 33.0**	**-1.6**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
MK31	**Makanchi Array**	**59.20**	**326**	*e*P	**P**	**17 53 47.1**	**-2.1**
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**17 53 47.5**	**-1.8**
	comp=Z,2.6nm,0.4s,mb4.6,baz=122,slow=8.1,SNR=28						
YAK	**Yakutsk**	**60.61**	**2**	*e*P	**P**	**17 53 57.2**	**-1.4**
	comp=Z,21nm,0.8s,mb5.3						
YAK	**Yakutsk**	**60.61**	**2**	*e*P	**P**	**17 53 57.5**	**-1.1**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.4s						
KZA	**Kyzart**	**61.00**	**319**	P	**P**	**17 54 05.2**	**+3.6**
	SNR=9.8						
TKM2	**Tokmak 2**	**61.16**	**320**	P	**P**	**17 54 05.7**	**+2.9**
	SNR=6.6						
UCH	**Uchtor**	**61.55**	**319**	*e*P	**P**	**17 54 03.7**	**-1.7**
	comp=E,11nm,1.0s,mb4.9						
UCH	**Uchtor**	**61.55**	**319**	P	**P**	**17 54 08.4**	**+3.0**
	SNR=12						
USP	**Ospenovka**	**62.04**	**320**	P	**P**	**17 54 11.2**	**+2.6**
	SNR=8.0						
AML	**Almayashu**	**62.05**	**318**	*e*P	**P**	**17 54 09.6**	**+0.8**
	comp=E,13nm,1.0s,mb5.0						
AML	**Almayashu**	**62.05**	**318**	P	**P**	**17 54 11.5**	**+2.7**
	SNR=12						
EKS2	**Erkin-Say**	**62.23**	**319**	P	**P**	**17 54 08.7**	**-1.3**
	SNR=7.7						
KBL	**Kabul**	**62.53**	**309**	P	**P**	**17 54 10.2**	**-1.9**
KURK	**Kurchatov**	**63.45**	**328**	*e*P	**P**	**17 54 14.8**	**-3.1**
	comp=E,22nm,0.7s,mb5.4						
KURK	**Kurchatov**	**63.45**	**328**	⇑*e*P	**P**	**17 54 16.0**	**-1.9**
NVS	**Novosibirsk**	**63.74**	**334**	*i* P	**P**	**17 54 20.7**	**+0.9**
NVS				*i*		17 54 51.5	
NVS				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
NVS				pmax	pmax		
	comp=N,7.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.2s						
SEY	**Seymchan**	**64.49**	**13**	⇑*e*P	**P**	**17 54 24.9**	**+0.4**
TIXI	**Tiksi**	**70.23**	**1**	*e*P	**P**	**17 54 59.7**	**-1.0**
	comp=E,5.8nm,0.7s,mb4.6						
TIXI	**Tiksi**	**70.23**	**1**	*e*P	**P**	**17 55 02.1**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
SVE	**Sverdlovsk**	**75.69**	**329**	*e*P	**P**	**17 55 35.5**	**+2.2**
SVE				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.2						
ARU	**Arti**	**76.64**	**328**	*e*P	**P**	**17 55 36.5**	**-2.2**
	comp=Z,14nm,0.8s,mb4.9						
ARU	**Arti**	**76.64**	**328**	*c i*P	**P**	**17 55 39.6**	**+0.9**
ARU				*e*		17 58 37.7	
ARU				PPP		18 00 15.3	
ARU				S	S	18 05 26.5	+4.4
ARU				SS	SS	18 10 20.0	+1.9
ARU				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
QRN	**Al-Qurain**	**79.04**	**299**	*e*P	**P**	**17 55 51.8**	**-0.8**
QRN				AMb	AMB	17 55 58.9	
	comp=Z,19nm,0.7s,mb5.1						
MIB	**Mutribah**	**79.62**	**300**	*e*P	**P**	**17 55 54.8**	**-1.0**
MIB				AMb	AMB	17 56 01.2	
	comp=Z,26nm,0.7s,mb5.3						
NAY	**Al-Naaiem**	**79.67**	**299**	*e*P	**P**	**17 55 56.0**	**-0.1**
NAY				AMb	AMB	17 56 01.3	
	comp=Z,11nm,0.7s,mb4.9						
VNDA	**Vanda**	**81.14**	**173**	P	**P**	**17 56 03.8**	**+0.9**
	comp=Z,4.4nm,0.7s,mb4.5,baz=314,slow=7.2,SNR=15						
SVW2	**Sparrevohn**	**83.17**	**29**	*e*P	**P**	**17 56 14.9**	**+1.0**
ZEI	**Tsey**	**83.40**	**313**	*e*P	**P**	**17 56 16.5**	**+1.0**
ZEI				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
PRGR	**Permogore**	**84.32**	**332**	*e*P	**P**	**17 56 20.3**	**+0.5**
PRGR				*e*		17 59 33.6	
PRGR				*e*S	S	18 06 42.5	+0.2
IMA2	**Indian Mountai**	**84.80**	**24**	*e*P	**P**	**17 56 22.0**	**-0.1**
VRHR	**Novokhopersk**	**85.52**	**321**	*e*P	**P**	**17 56 27.9**	**+1.9**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.4						
VRHR				pmax	pmax		
	comp=N,30nm,1.1s						
VRHR				pmax	pmax		
	comp=E,20nm,0.5s						
MALT	**Malatya**	**87.39**	**308**	*e*P	**P**	**17 56 35.7**	**+0.2**
	comp=E,9.4nm,1.0s,mb5.0						
MALT	**Malatya**	**87.39**	**308**	*e*P	**P**	**17 56 35.7**	**+0.2**
MALT				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
OBN	**Obninsk**	**88.67**	**325**	⇓*e*P	**P**	**17 56 42.1**	**+0.9**
OBN				*e*S	S	18 07 08.4	-16
OBN				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
KMBO	**Kilima Mbogo**	**88.92**	**269**	P	**P**	**17 56 45.2**	**+1.9**
	comp=Z,2.5nm,0.9s,mb4.5,baz=56,slow=22,SNR=4.1						
ARCES	**ARCESS Array B**	**92.48**	**340**	P	**P**	**17 56 59.5**	**+0.8**
ARCES	**ARCESS Array B**	**92.48**	**340**	P	**P**	**17 56 59.5**	**+0.8**
	comp=Z,5.4nm,1.0s,mb4.8,baz=79,slow=2.6,SNR=5.1						
**A

2.3nm,0.7s,baz=106,slow=3.0,SNR=25

MAN 19 18:15:04,899N×12567E,h17km,mb4.6,ML3.5,MS3.4, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.81**	**347**	*e*P	Pb	18 15 19.5	-0.1
SCPH				*e*S	Sb	18 15 32.3	+2.1
CGP	**Cagayan de Oro**	**1.10**	**241**	↓*e*P	Pb	18 15 22.4	-2.2
CGP				*i* S	Sb	18 15 29.0	-10
BUKP	**Musuan**	**1.26**	**209**	*e*P	Pn	18 15 25.8	-1.0
MSLP	**Maasin**	**1.39**	**325**	*e*P	Pn	18 15 28.3	-0.4
PAGZ	**Pagadian**	**2.53**	**244**	*e*P	Pn	18 15 45.6	+1.3

IDC 19 18:20:36.1±1.4,055N×12421E,h0km,mb3.7/4,mb1 3.9/4, mb1mx3.6/14,mbtmp3.7/4,Error ellipse: s-maj=183.0km s-min=22.9km az=63.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.66**	**155**	P	P	18 25 38.7	-0.4
	3.1nm,0.8s,baz=332,slow=11,SNR=29						
ASAR	**Alice Springs**	**25.85**	**159**	P	P	18 26 10.3	+0.8
	0.5nm,0.5s,baz=347,slow=12,SNR=16						
ASAR				PcP	PcP	18 29 38.1	-0.9
	0.2nm,0.6s,baz=342,slow=3.1,SNR=4.5						
STKA	**Stephens Creek**	**36.21**	**155**	P	P	18 27 40.6	-0.2
	1.3nm,0.9s,baz=342,slow=9.6,SNR=3.1						
MKAR	**Makanchi Array**	**58.79**	**328**	P	P	18 30 36.4	+0.2
	0.3nm,0.3s,baz=112,slow=9.1,SNR=8.1						

IDC 19 18:24:57.3±2.2,153N×12614E,h0km,mb3.5/3,mb1 3.7/3, mb1mx3.4/13,mbtmp3.5/13,Error ellipse: s-maj=196.5km s-min=26.0km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.80**	**160**	P	P	18 30 01.8	0.0
	2.5nm,0.8s,baz=338,slow=10,SNR=13						
ASAR	**Alice Springs**	**26.16**	**164**	P	P	18 30 33.5	0.0
	0.3nm,0.4s,baz=348,slow=12,SNR=9.3						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	18 34 59.3	+0.2
	0.2nm,0.5s,baz=122,slow=7.3,SNR=4.8						

KRSC 19 18:42:12.5±0.5,5376N×16074E,h20km±15km,ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.79**	**213**	*i* P	Pb	18 42 27.5	0.0
SPN				*i* S	Sb	18 42 37.6	-0.1
KII	**Karymskiy**	**0.81**	**290**	*e*P	Pb	18 42 28.7	+0.8
KII				*i* S	Sb	18 42 39.8	+1.4
MKZ	**Mys Kozlova**	**0.99**	**36**	*i* P	Pb	18 42 30.1	-0.8
MKZ				*i* S	Sb	18 42 42.6	-0.9
NLC	**Nalytchevo**	**1.02**	**235**	*i* P	Pb	18 42 31.1	-0.4
NLC				*i* S	Sb	18 42 44.6	+0.2
AVH	**Avacha**	**1.29**	**248**	*i* P	Pn	18 42 36.0	+0.6
AVH				*i* S	Sn	18 42 52.6	+0.5
PET	**Petropavlovsk**	**1.45**	**240**	*i* P	Pn	18 42 37.5	0.0
PET				*i* S	Sn	18 42 55.5	-0.4
TUMR	**Tumrok**	**1.56**	**347**	*i* P	Pn	18 42 39.7	+0.6
GNL	**Ganaly**	**1.66**	**269**	*e*P	Pn	18 42 41.9	+1.4
RUS	**Russkaya**	**1.89**	**226**	*e*P	Pn	18 42 43.5	-0.1
RUS				*i* S	Sn	18 43 06.6	-0.2
GRL	**Gorelyy**	**2.01**	**234**	*e*P	Pn	18 42 45.9	+0.7
GRL				*i* S	Sn	18 43 10.8	+1.1
KMNR	**Kamenistaya**	**2.02**	**352**	*e*P	Pn	18 42 46.8	+1.4
KOZ	**Kozyrevsk**	**2.36**	**348**	*e*P	Pn	18 42 50.8	+0.8
KOZ				*e*S	Sn	18 43 18.3	0.0
KLY	**Klyuchi**	**2.56**	**359**	*e*P	Pn	18 42 53.7	+0.9
KLY				*i* S	Sn	18 43 23.4	+0.1
SRDR	**Sredinnyy**	**2.63**	**347**	*e*P	Pn	18 42 54.1	+0.4
KBTR	**Krutoberegovo**	**2.73**	**25**	*e*P	Pn	18 42 55.8	+0.7
KBTR				*i* S	Sn	18 43 27.1	-0.4
MIPR	**Malaya Ipel'ka**	**2.83**	**240**	P	Pn	18 42 57.0	+0.5
SRKR	**Sorokina**	**2.91**	**5**	*e*P	Pn	18 42 58.8	+1.2
SRKR				*e*S	Sn	18 43 32.0	+0.1

IDC 19 18:59:58.0±2.5,437N×12725E,h0km,mb3.2/3,mb1 3.4/3, mb1mx3.2/15,mbtmp3.2/3,Error ellipse: s-maj=193.6km s-min=29.3km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.15**	**164**	P	P	19 05 24.9	-0.1
	1.4nm,1.0s,baz=344,slow=9.9,SNR=9.2						
ASAR	**Alice Springs**	**28.61**	**167**	P	P	19 05 56.5	+0.2
	0.1nm,0.4s,baz=346,slow=7.9,SNR=4.0						
MKAR	**Makanchi Array**	**57.33**	**325**	P	P	19 09 48.0	+0.1
	0.2nm,0.4s,baz=130,slow=7.6,SNR=2.2						

IDC ***19*** *19:13:00.4±0.9,2190N×143.10E,h0km,mb3.6/7, mb1 3.9/7,mb1mx3.8/16,mbtmp3.7/7,MS2.8/2,Ms1 2.8/2, ms1mx2.5/32,Error ellipse: s-maj=33.3km s-min=20.6km az=83.0*
NEIC ***19*** *19:13:01.9±0.7,2192N×14299E,h10km,Error ellipse: s-maj=23.8km s-min=15.2km az=84.0*
ISCJB ***19*** *19:13:03.8±0.9,219N±0.1×1429E±02,h33km,mb3.6/6, Error ellipse: s-maj=29.2km s-min=17.2km az=166.4*
ISC 19 19:13:05.8±0.9,219N±01×1430E±02,h35km,n10,σ0§66/8, mb3.6/6,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**11.57**	**346**	LR	LR	19 19 12.6	
	comp=Z,73nm,18.9s,baz=116,slow=32						
KSRS	**Korea Array**	**20.29**	**323**	P	**P**	**19 17 39.7**	**+1.2**
	1.0nm,0.8s,baz=135,slow=11,SNR=3.6						
KSRS				LR	LR	19 24 19.7	
	comp=Z,18nm,19.4s,baz=335,slow=33						
SONM	**Songino Array**	**39.11**	**320**	P	**P**	**19 20 29.2**	**-0.5**
	1.1nm,0.8s,mb3.6,baz=130,slow=7.6,SNR=9.2						
WRA	**Warramunga Arr**	**42.41**	**192**	P	**P**	**19 20 57.4**	**+0.2**
	1.2nm,0.8s,mb3.6,baz=13,slow=8.7,SNR=8.6						
ASAR	**Alice Springs**	**46.12**	**192**	P	**P**	**19 21 26.9**	**0.0**
	0.7nm,0.6s,mb3.8,baz=15,slow=10,SNR=23						
MKAR	**Makanchi Array**	**54.47**	**313**	P	**P**	**19 22 29.6**	**-0.2**
	0.2nm,0.2s,mb3.6,baz=90,slow=9.0,SNR=5.4						
KBL	**Kabul**	**65.12**	**299**	P	**P**	**19 23 42.7**	**-0.6**
YKA	**Yellowknife Ar**	**76.37**	**28**	P	**P**	**19 24 50.3**	**-0.9**
	0.3nm,0.6s,mb3.4,baz=290,slow=5.7,SNR=4.4						
NVAR	**Mina Array Bea**	**83.16**	**51**	P	**P**	**19 25 29.2**	**+0.8**
	0.9nm,0.8s,mb3.9,baz=264,slow=3.4,SNR=7.6						
LPAZ	**La Paz**	**150.07**	**85**	PKPbc	PKPbc	19 32 53.9	+0.3
	0.8nm,0.7s,baz=279,slow=5.7,SNR=4.7						

IDC ***19*** *19:24:14.4±1.3,2761N×9262E,h0km,mb3.3/5,mb1 3.6/5, mb1mx3.4/20,mbtmp3.3/5,Error ellipse: s-maj=55.4km s-min=23.1km az=61.0*
ISCJB ***19*** *19:24:18.0±0.9,2785N±008×930E±02,h33km,mb3.4/4, Error ellipse: s-maj=25.0km s-min=10.6km az=14.4*
ISC 19 19:24:20.6±0.8,2781N±008×929E±02,h35km,n6,σ0§83/7, mb3.4/4,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.42**	**203**	*e*PN	**Pn**	**19 24 58.0**	**+0.3**
SHL				*e*SN	**Sn**	**19 25 26.5**	**+0.5**
MKAR	**Makanchi Array**	**20.71**	**339**	P	**P**	**19 28 58.1**	**+0.3**
	0.3nm,0.3s,baz=146,slow=13,SNR=6.1						
SONM	**Songino Array**	**22.59**	**24**	P	**P**	**19 29 19.2**	**+1.4**
	0.2nm,0.4s,mb2.9,baz=231,slow=9.1,SNR=3.0						
WRA	**Warramunga Arr**	**62.13**	**135**	P	**P**	**19 34 38.0**	**-0.4**
	0.2nm,0.4s,mb3.6,baz=316,slow=8.1,SNR=7.5						
GERES	**GERESS Array B**	**62.75**	**313**	P	**P**	**19 34 40.8**	**-1.4**
	0.4nm,0.6s,mb3.8,baz=77,slow=7.0,SNR=4.1						
ASAR	**Alice Springs**	**64.67**	**138**	P	**P**	**19 34 54.4**	**-0.7**
	0.2nm,0.5s,mb3.4,baz=321,slow=6.2,SNR=5.8						

CSEM 19 19:26:45.4±0.5,2847N×5554E,h10km,ML3.9,Error ellipse: s-maj=14.2km s-min=6.5km az=31.0,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAQ	**Al Faqa, Dubai**	**3.71**	**179**	P	Pn	19 27 44.1	+1.3
	SNR=15						
ASUD	**Al Ashush, Dub**	**3.84**	**183**	P	Pn	19 27 46.9	+2.4
	SNR=19						
BTHS		**6.10**	**225**	P	Pn	19 28 19.0	+3.4
BTHS		**6.10**	**225**	P	Pn	19 28 19.0	+3.4
BTHS				S	Sn	19 29 29.3	+3.8
HRDDS		**7.78**	**226**	S	Sn	19 30 07.1	+0.2
HRDDS		**7.78**	**226**	P	Pn	19 28 41.2	+2.5
ASYS		**9.95**	**267**	P	Pn	19 29 11.8	+3.4
ASYS		**9.95**	**267**	P	Pn	19 29 11.8	+3.4
ASYS				S	Sn	19 31 02.7	+2.6

SKO ***19*** *19:42:54.9,4178N×2289E,h29km,M1.5,ML1.6*
CSEM ***19*** *19:42:56.4±0.5,4175N×2285E,h15km,ML2.7,Error ellipse: s-maj=8.5km s-min=4.2km az=30.0*
THE ***19*** *19:42:57.6,4170N×2290E,h4km,ML2.7*
ISC 19 19:42:55.3±1.9,4180N±008×2293E±008,h10km,n10, σ0§33/18,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.55**	**210**	*e*Pg	**Pg**	**19 43 06.2**	**+0.3**
VAY				*e*Sg	**Sg**	**19 43 12.7**	**-0.3**
VAY	**Valandovo**	**0.55**	**210**	*e*Pg	**Pg**	**19 43 06.5**	**+0.5**
VAY				*e*Sg	**Sg**	**19 43 12.8**	**-0.3**
VAY				*e*Lg		19 43 13.9	
	comp=E,34nm,0.2s						
VAY				*e*Lg		19 43 14.1	
	comp=N,37nm,0.2s						
VAY	**Valandovo**	**0.55**	**210**	*e*Pg	**Pg**	**19 43 06.2**	**+0.3**
VAY				*e*Sg	**Sg**	**19 43 12.8**	**-0.3**
STIP	**Stip**	**0.57**	**260**	*e*Pg	**Pg**	**19 43 06.4**	**+0.2**
STIP				*e*Sg	**Sg**	**19 43 13.7**	**0.0**
STIP				*e*Lg		19 43 14.0	
	comp=E,11nm,0.2s						
STIP				*e*Lg		19 43 14.1	
	comp=N,19nm,0.3s						
STIP	**Stip**	**0.57**	**260**	*e*Pg	**Pg**	**19 43 06.4**	**+0.1**
STIP				*e*Sg	**Sg**	**19 43 13.6**	**-0.1**
KNT	**Kendrikon**	**0.63**	**182**	*e*Pg	**Pg**	**19 43 07.7**	**+0.1**
GRG	**Griva**	**0.93**	**206**	*e*Pg	**Pg**	**19 43 12.9**	**-0.3**
GRG				*e*Sg	**Sg**	**19 43 25.4**	**+0.2**
SOH	**Sokhos**	**1.02**	**162**	*e*Pg	**Pg**	**19 43 14.9**	**-0.1**
SOH				*e*Sg	**Sg**	**19 43 28.9**	**+0.6**
HORT	**Hortiatis**	**1.20**	**174**	*e*Pg	**Pg**	**19 43 18.6**	**+0.2**
PLG	**Polygyros**	**1.47**	**164**	*e*Pg	**Pg**	**19 43 23.0**	**-0.5**
PLG				*e*Sg	**Sg**	**19 43 42.2**	**-0.4**

IDC ***19*** *19:47:15.2±2.1,1447S×16734E,h168km±17km,mb4.1/11, mb1 4.3/13,mb1mx4.1/18,mbtmp4.2/13,Error ellipse: s-maj=17.5km s-min=15.7km az=66.0*
ISCJB ***19*** *19:47:16.9±1.4,1450S±007×16720E±008,h197km±13km, mb4.3/21,Error ellipse: s-maj=12.8km s-min=10.8km az=172.9*
MOS ***19*** *19:47:16.0±0.9,1448S×16720E,h189km,mb4.5/6,Error ellipse: s-maj=16.9km s-min=13.1km az=8.3*
NEIC ***19*** *19:47:16.9±1.4,1444S×16726E,h188km±12km,mb4.8/10, Error ellipse: s-maj=11.0km s-min=9.8km az=70.0*
BJI ***19*** *19:47:18.2,1404S×16677E,h177km,mB5.2,mb4.3*
ISC 19 19:47:17.6±1.4,1449S±007×16722E±008,h190km±12km, h185km±8.6km:pP-P,n72,σ0§90/50,mb4.4/21,4D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.58**	**185**	*e*P	**Pn**	**19 49 05.1**	**-0.3**
DZM				*e*S	**Sn**	**19 50 26.5**	**-4.4**
DZM	**Mont Dzumac**	**7.58**	**185**	P	**Pn**	**19 49 05.2**	**-0.2**
	6.5nm,0.3s,baz=38,slow=18,SNR=32						
DZM				S	**Sn**	**19 50 30.3**	**-0.6**
	2.7nm,0.3s,baz=130,slow=22,SNR=2.7						
HNR	**Honiara**	**8.71**	**304**	*e*Pn	**Pn**	**19 49 19.0**	**-1.3**
	138nm,0.6s						
HNR	**Honiara**	**8.71**	**304**	*e*P	**Pn**	**19 49 19.0**	**-1.2**
HNR				pmax	pmax		
	comp=Z,138nm,0.6s						
HNR	**Honiara**	**8.71**	**304**	P	**Pn**	**19 49 20.5**	**+0.3**
	comp=Z,46nm,0.3s,baz=141,slow=2.8,SNR=13						
EIDS	**Eidsvold**	**18.62**	**232**	*e*P	**P**	**19 51 22.8**	**+1.9**
PMG	**Port Moresby**	**20.26**	**282**	*e*P	**P**	**19 51 39.0**	**+0.3**
	comp=Z,49nm,1.1s						
PMG	**Port Moresby**	**20.26**	**282**	*i* P	**P**	**19 51 39.1**	**+0.4**
PMG	**Port Moresby**	**20.26**	**282**	P	**P**	**19 51 39.3**	**+0.6**
	comp=Z,37nm,1.0s,baz=90,slow=5.9,SNR=8.8						
CTA	**Charters Tower**	**20.77**	**251**	*e*P	**P**	**19 51 44.4**	**+0.3**
	comp=Z,22nm,0.8s						
CTA	**Charters Tower**	**20.77**	**251**	*e*P	**P**	**19 51 44.4**	**+0.3**
CTA				pmax	pmax		
	comp=Z,23nm,0.8s						
CTA	**Charters Tower**	**20.77**	**251**	P	**P**	**19 51 44.8**	**+0.7**
	comp=Z,33nm,0.8s,baz=79,slow=12,SNR=16						
CTAO	**Charters Tower**	**20.77**	**251**	*e*P	**P**	**19 51 44.6**	**+0.5**
	comp=Z,35nm,0.8s						
CTAO	**Charters Tower**	**20.77**	**251**	*e*P	**P**	**19 51 44.6**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,35nm,0.8s						
ARMA	**Armidale**	**21.38**	**220**	*e*P	**P**	**19 51 51.4**	**+1.0**
COEN	**Coen**	**23.31**	**268**	*e*P	**P**	**19 52 09.7**	**+0.8**
URZ	**Urewera**	**25.25**	**162**	P	**P**	**19 52 26.0**	**-0.1**
	comp=Z,2.3nm,0.5s,mb4.0,baz=256,slow=4.2,SNR=2.9						
STKA	**Stephens Creek**	**29.11**	**229**	↓*i*P	**P**	**19 53 01.5**	**+0.7**
	comp=Z,14nm,0.3s,mb5.2						
STKA	**Stephens Creek**	**29.11**	**229**	P	**P**	**19 53 02.0**	**+1.2**
	comp=Z,18nm,0.3s,mb5.2,baz=50,slow=8.2,SNR=124						
WB2	**Warramunga Arr**	**31.83**	**256**	↓*i*P	**P**	**19 53 23.4**	**-1.4**
WRA	**Warramunga Arr**	**31.84**	**256**	P	**P**	**19 53 23.5**	**-1.4**
	comp=Z,4.3nm,0.3s,mb4.6,baz=84,slow=8.6,SNR=136						
WRA				S	**S**	**19 58 19.0**	**-2.5**
	comp=Z,1.9nm,1.0s,baz=83,slow=14,SNR=4.7						
ASAR	**Alice Springs**	**32.72**	**249**	P	**P**	**19 53 31.3**	**-1.2**
	comp=Z,9.1nm,0.3s,mb4.9,baz=74,slow=9.2,SNR=206						
KAKA	**Kakadu**	**33.83**	**269**	*e*P	**P**	**19 53 41.6**	**-0.7**
	comp=Z,18nm,0.9s,mb4.8						
FORT	**Forrest**	**39.38**	**239**	*e*P	**P**	**19 54 29.0**	**0.0**
	comp=Z,33nm,0.5s,mb5.2						
FITZ	**Fitzroy Crossi**	**40.02**	**259**	↓*i*P	**P**	**19 54 33.9**	**-0.4**
	comp=Z,15nm,0.5s,mb4.9						
BATI	**Kupang**	**42.72**	**271**	P	**P**	**19 54 58.1**	**+1.7**
	comp=Z,100nm,0.8s,mb5.5,baz=135,slow=3.2,SNR=34						
MBWA	**Marble Bar**	**45.56**	**255**	*e*P	**P**	**19 55 19.0**	**+0.1**
	comp=Z,33nm,1.1s,mb4.9						
KLBR	**Kellerberrin**	**48.18**	**240**	*e*P	**P**	**19 55 37.4**	**-1.7**
	comp=Z,6.4nm,0.3s,mb4.7						
MUN	**Mundaring**	**49.54**	**240**	*e*P	**P**	**19 55 49.5**	**+0.1**
MJAR	**Matsushiro Arr**	**57.67**	**332**	P	**P**	**19 56 47.9**	**-0.3**
	comp=Z,2.5nm,0.7s,mb4.1,baz=161,slow=6.8,SNR=6.0						
SBA	**Scott Base**	**63.38**	**180**	P	**P**	**19 57 26.9**	**+0.6**
YSS	**Yuzh-Sakhalins**	**64.98**	**342**	*e*P	**P**	**19 57 38.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
KMI	**Kunming**	**74.14**	**302**	P	**P**	**19 58 34.5**	**+0.9**
KMI				AP	pP	19 59 18.8	-0.2
KMI				AMB	AMB		
	comp=Z,6.0nm,1.1s,mb4.2						
QSPA	**South Pole Qui**	**75.54**	**180**	*e*P	**P**	**19 58 40.4**	**-0.2**
	comp=Z,6.7nm,0.9s,mb4.3						
YAK	**Yakutsk**	**81.78**	**343**	*e*P	**P**	**19 59 14.1**	**-0.7**
YAK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.4						
ULN	**Ulaanbaatar**	**81.91**	**324**	*e*P	**P**	**19 59 16.2**	**+0.4**
ULN	**Ulaanbaatar**	**81.91**	**324**	*e*P	**P**	**19 59 15.7**	**-0.1**
ULN				*e**PP	pP	19 59 58.1	-4.0
SONM	**Songino Array**	**82.27**	**324**	P	**P**	**19 59 18.6**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.5,baz=140,slow=6.0,SNR=8.0						
BILL	**Bilibino**	**82.30**	**360**	↓*e*P	**P**	**19 59 17.4**	**0.0**
BILL				*e*S	S	20 09 17.5	+0.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
ZAK	**Zakamensk**	**85.33**	**325**	*e*P	**P**	**19 59 23.8**	**-9.3**
ZAK				*e*	pP	20 00 14.2	-5.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.8						
NVAR	**Mina Array Bea**	**87.15**	**49**	P	**P**	**19 59 42.2**	**-0.1**
NVAR	**Mina Array Bea**	**87.15**	**49**	P	**P**	**19 59 42.2**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.3,baz=216,slow=4.9,SNR=4.8						

GII ***19*** *19:59:07.3±1.4,2889N×3498E,h0km±3km,ML3.4/3, Mw2.2/3*
SGS ***19*** *19:59:27.0,2885N×3463E,h3km*
ISCJB ***19*** *19:59:28.8±0.8,2879N±003×348E±01,h10km,Error ellipse: s-maj=13.2km s-min=4.9km az=176.7*
ISC 19 19:59:29.3±0.8,2878N±003×348E±01,h10km,n13, σ1§02/18,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**0.48**	**183**	P	**Pg**	**19 59 38.2**	**-0.4**
HQLS		**0.56**	**22**	S	**Sg**	**19 59 47.4**	**-0.1**
HQLS		**0.56**	**22**	P	**Pg**	**19 59 38.9**	**-1.3**
JLOS		**0.59**	**94**	P	**Pg**	**19 59 42.1**	**+1.4**
GLFJ		**0.74**	**13**	*e*P	**Pg**	**19 59 43.6**	**0.0**
	SNR=35						
EIL	**Elat**	**0.89**	**7**	Pg	**Pg**	**19 59 45.9**	**-0.6**
EIL				Sg	**Sg**	**19 59 57.7**	**-0.4**
HRFI	**Mount Harif**	**1.26**	**9**	Pg	**Pg**	**19 59 52.2**	**-1.4**
HRFI				Sg	**Sg**	**20 00 09.5**	**-0.5**
KRMI	**Paran Flat**	**1.33**	**356**	Pg	**Pg**	**19 59 53.5**	**-1.4**
KRMI				Sg	**Sg**	**20 00 11.9**	**-0.4**
PRNI	**Paran**	**1.57**	**6**	Pn	**Pn**	**19 59 57.8**	**+0.5**
PRNI				Sn	**Sn**	**20 00 19.5**	**+1.8**
ZFRI	**Zfri**	**1.79**	**10**	Pn	**Pn**	**20 00 00.9**	**+0.6**
RMNI	**Mount Ramon**	**1.81**	**358**	Pn	**Pn**	**20 00 01.6**	**+1.0**
KZIT	**Kziot**	**2.15**	**350**	Pn	**Pn**	**20 00 06.0**	**+0.8**
KZIT				Sn	**Sn**	**20 00 34.9**	**+3.0**
WJHS		**2.47**	**145**	P	**Pn**	**20 00 08.8**	**-0.9**

JMA ***19*** *20:08:32.8±0.7,4690N×15293E,h30km,M4.3*
ISCJB ***19*** *20:08:34.2±0.9,4674N±009×1527E±0.1,h63km±8km, mb4.1/18,Error ellipse: s-maj=17.6km s-min=6.7km az=140.5*
MOS ***19*** *20:08:35.5±1.1,4680N×15275E,h76km,mb4.3/6,Error ellipse: s-maj=17.1km s-min=11.6km az=67.8*
BJI ***19*** *20:08:36.6,4653N×15268E,h83km,mB4.5,mb4.2*
NEIC ***19*** *20:08:38.0±1.4,4689N×15265E,h77km±12km,Error ellipse: s-maj=15.2km s-min=9.2km az=123.0*
IDC ***19*** *20:08:39.5±3.7,4688N×15271E,h91km±33km,mb3.5/13, mb1 3.7/15,mb1mx3.7/21,mbtmp3.5/15,Error ellipse: s-maj=20.3km s-min=15.9km az=125.0*
ISC 19 20:08:36.1±0.8,4675N±008×1528E±01,h61km±7km,n65, σ1§21/76,mb4.1/18,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.73**	**248**	*e*PN	**Pn**	**20 09 30.5**	**-0.7**
KUR				*e*S	**Sn**	**20 10 14.0**	**+0.2**
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
KUR				smax			
	comp=N,430nm,0.7s						
KUR				smax			
	comp=E,260nm,0.7s						
SKR	**Severo-Kuril's**	**4.52**	**28**	*e*PN	**Pn**	**20 09 41.5**	**-0.4**
SKR				*e*S	**Sn**	**20 10 28.4**	**-4.7**
SKR				pmax	pmax		
	comp=Z,180nm,1.0s						
SKR				smax			
	comp=E,160nm,0.9s						
SKR				smax			
	comp=N,110nm,0.5s						
SKR				smax			
	comp=Z,160nm,0.9s						
NEM2	**Nemuro 2**	**6.01**	**238**	P	**Pn**	**20 10 01.2**	**-1.2**
NEM2				*e*S	**Sn**	**20 11 06.7**	**-3.1**
JRA	**Rausu**	**6.07**	**245**	P	**Pn**	**20 10 05.3**	**+2.1**
JNK	**Nakash**	**6.50**	**244**	P	**Pn**	**20 10 09.8**	**+0.7**
JNK				*e*S	**Sn**	**20 11 22.2**	**+0.4**
JTKR	**Abashiri--Toko**	**6.83**	**249**	P	**Pn**	**20 10 15.2**	**+1.7**
JAK	**Akkeshi**	**6.85**	**240**	P	**Pn**	**20 10 12.4**	**-1.4**
JAK				*e*S	**Sn**	**20 11 26.0**	**-4.2**
YSS	**Yuzh-Sakhalins**	**6.86**	**275**	*e*P	**Pn**	**20 10 14.5**	**+0.4**
	comp=Z,23nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.86**	**275**	↑*i*PN	**Pn**	**20 10 18.5**	**+4.5**
YSS				pmax	pmax		
	comp=E,30nm,1.0s						
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
JMP	**Maruseppu**	**7.16**	**251**	P	**Pn**	**20 10 20.5**	**+2.4**
JAR	**Ashorobuto**	**7.24**	**245**	P	**Pn**	**20 10 20.0**	**+0.8**
JAR				*e*S	**Sn**	**20 11 41.8**	**+1.8**
JOB	**Onbets**	**7.42**	**242**	P	**Pn**	**20 10 21.8**	**+0.2**
JOB				*e*S	**Sn**	**20 11 42.3**	**-1.9**
ASAJ	**Asahikawa**	**7.62**	**253**	P	**Pn**	**20 10 27.8**	**+3.5**
ASAJ	**Asahikawa**	**7.62**	**253**	PN	**Pn**	**20 10 27.1**	**+2.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**7.62**	**253**	P	**Pn**	**20 10 27.1**	**+2.7**
	comp=Z,1.8nm,0.3s,baz=83,slow=18,SNR=12						
JKK2	**Kamakawa 2**	**7.62**	**251**	P	**Pn**	**20 10 26.6**	**+2.2**
JCH	**Churui**	**7.87**	**242**	P	**Pn**	**20 10 27.0**	**-0.8**
JCH				*e*S	**Sn**	**20 11 51.6**	**-3.7**
JFR	**Furan**	**8.05**	**247**	P	**Pn**	**20 10 31.5**	**+1.2**
ERM	**Erimo**	**8.35**	**239**	*e*P	**Pn**	**20 10 34.9**	**+0.6**
JBT2	**Biratori 2**	**8.39**	**246**	P	**Pn**	**20 10 35.4**	**+0.5**
JNBK	**Urakawa-nobuka**	**8.43**	**242**	P	**Pn**	**20 10 34.0**	**-1.4**
JNBK				*e*S	**Sn**	**20 12 05.1**	**-3.9**
JNB	**Noboribetsu**	**9.39**	**247**	P	**Pn**	**20 10 48.6**	**0.0**
JNB				*e*S	**Sn**	**20 12 30.9**	**-1.6**
JSH	**Shimam**	**9.94**	**250**	P	**Pn**	**20 10 57.0**	**+0.9**
JYM2	**Yakumo 2**	**9.99**	**247**	P	**Pn**	**20 10 56.2**	**-0.6**
JTM	**Tenmabayashi**	**10.34**	**239**	P	**Pn**	**20 10 58.6**	**-2.9**
JANG	**Nango**	**10.35**	**236**	P	**Pn**	**20 10 58.0**	**-3

JTH	**Tanohata**	**10.45**	**233**	*e*S		**Sn**	**20 12 47.9**	**-11**
JOSM	**Okushiri--Mats**	**10.58**	**249**	P		**Pn**	**20 11 04.3**	**-0.6**
JRG	**Rokugo**	**11.51**	**235**	P		**Pn**	**20 11 14.7**	**-2.8**
JIO	**Ouri**	**11.80**	**229**	*e*S		**Sn**	**20 13 20.3**	**-11**
MA2	**Magadan**	**12.90**	**355**	*e*P		**Pn**	**20 11 36.1**	**-0.2**
MAJO	**Matsushiro**	**14.89**	**232**	*e*P		**Pn**	**20 12 08.8**	**+5.9**
MJAR	**Matsushiro Arr**	**14.89**	**232**	P		**Pn**	**20 12 07.2**	**+4.3**
MJAR	comp=Z,1.0nm,0.3s			pmax	pmax			
MJAR	**Matsushiro Arr**	**14.89**	**232**	P		**Pn**	**20 12 07.2**	**+4.3**
	comp=Z,0.5nm,0.3s,baz=38,slow=8.9,SNR=9.3							
KSRS	**Korea Array**	**20.56**	**252**	P		**P**	**20 13 12.2**	**+2.5**
	comp=Z,2.5nm,0.9s,baz=54,slow=10.0,SNR=5.5							
SONM	**Songino Array**	**31.10**	**289**	P		**P**	**20 14 48.2**	**-0.2**
	comp=Z,0.3nm,0.7s,mb3.3,baz=78,slow=9.0,SNR=2.3							
IMA2	**Indian Mountai**	**33.95**	**36**	*e*P		**P**	**20 15 13.2**	**+0.2**
INK	**Inuvik**	**41.78**	**32**	*e*P		**P**	**20 16 19.2**	**+0.2**
INK	**Inuvik**	**41.78**	**32**	P		**P**	**20 16 18.1**	**-0.9**
	comp=Z,1.6nm,0.6s,mb3.8,baz=300,slow=4.2,SNR=6.2							
MKAR	**Makanchi Array**	**46.73**	**297**	P		**P**	**20 16 57.9**	**-0.8**
MKAR							20 18 31.2	
MKAR	comp=Z,1.0nm,0.6s			pmax	pmax			
MKAR	**Makanchi Array**	**46.73**	**297**	P		**P**	**20 16 57.9**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.6,baz=71,slow=6.9,SNR=3.8							
MKAR				PcP	PcP		20 18 31.2	0.0
	comp=Z,0.3nm,0.4s,baz=57,slow=3.5,SNR=3.1							
LSA	**Lhasa**	**50.03**	**273**	P		**P**	**20 17 26.3**	**+1.9**
YKA	**Yellowknife Ar**	**51.07**	**37**	P		**P**	**20 17 31.8**	**+0.1**
	comp=Z,0.4nm,0.7s,mb3.5,baz=300,slow=7.6,SNR=5.8							
TAPN	**Taplejung**	**53.86**	**273**	*e*P		**P**	**20 17 53.3**	**+0.5**
	comp=Z,8.5nm,0.9s,mb4.7							
ODAN	**Odare**	**54.39**	**273**	*e*P		**P**	**20 17 58.4**	**+1.7**
	comp=Z,7.9nm,0.8s,mb4.7							
JIRN	**Jiri**	**54.70**	**274**	*e*P		**P**	**20 17 58.9**	**-0.1**
	comp=Z,1.0nm,0.7s,mb5.0							
KKN	**Kakani**	**55.24**	**275**	*e*P		**P**	**20 18 02.7**	**-0.2**
	comp=Z,7.1nm,0.7s,mb4.8							
GKN	**Gorkha**	**55.55**	**276**	*e*P		**P**	**20 18 04.2**	**-0.9**
	comp=Z,12nm,0.8s,mb5.0							
KOLN	**Koldanda**	**56.41**	**276**	*e*P		**P**	**20 18 11.8**	**+0.6**
	comp=Z,10nm,0.8s,mb4.9							
NVAR	**Mina Array Bea**	**62.65**	**62**	P		**P**	**20 18 54.6**	**+0.6**
	comp=Z,0.2nm,0.4s,mb3.6,baz=286,slow=6.5,SNR=3.7							
KAF	**Kangasniemi**	**63.34**	**335**	*e*p		**P**	**20 18 57.3**	**-0.9**
FINES	**FINESS Array B**	**63.94**	**335**	P		**P**	**20 19 01.4**	**-0.8**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.4s							
FINES	**FINESS Array B**	**63.94**	**335**	P		**P**	**20 19 01.4**	**-0.8**
	comp=Z,1.8nm,0.4s,mb4.4,baz=43,slow=7.1,SNR=22							
NB2	**NORSAR Subarra**	**68.15**	**341**	P		**P**	**20 19 28.3**	**-0.9**
	comp=Z,1.6nm,0.6s,mb4.2,baz=27,slow=6.2							
NOA	**NORSAR Array B**	**68.15**	**341**	P		**P**	**20 19 28.5**	**-0.7**
NOA	**NORSAR Array B**	**68.15**	**341**	P		**P**	**20 19 28.5**	**-0.7**
NOA				pmax	pmax			
	comp=Z,3.0nm,0.7s							
NOA	**NORSAR Array B**	**68.15**	**341**	P		**P**	**20 19 28.5**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.4,baz=28,slow=6.2,SNR=7.5							
WRA	**Warramunga Arr**	**68.43**	**199**	P		**P**	**20 19 31.2**	**-0.1**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**68.43**	**199**	P		**P**	**20 19 31.2**	**-0.1**
	comp=Z,0.6nm,0.8s,mb3.7,baz=18,slow=7.0,SNR=6.3							
AKASG	**Malin Array Be**	**71.41**	**326**	P		**P**	**20 19 48.4**	**-1.0**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.5s							
AKASG	**Malin Array Be**	**71.41**	**326**	P		**P**	**20 19 48.4**	**-1.0**
	comp=Z,2.5nm,0.5s,mb4.4,baz=31,slow=6.3,SNR=9.0							
ASAR	**Alice Springs**	**72.13**	**198**	P		**P**	**20 19 55.0**	**+1.1**
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**72.13**	**198**	P		**P**	**20 19 55.0**	**+1.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=11,slow=5.4,SNR=20							
TXAR	**Lajitas Array**	**77.71**	**60**	P		**P**	**20 20 25.8**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.4,baz=295,slow=5.2,SNR=6.3							
GERES	**GERESS Array B**	**78.35**	**334**	P		**P**	**20 20 29.0**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.5,baz=45,slow=5.7,SNR=3.1							

IDC 19 20:25:03.4±52.0, **1950S**×**17717W, h0**km, **mb3.8**/3, **mb1 3.9**/3, **mb1mx3.7**/13, **mbtmp3.8**/3, **Error ellipse: s-maj=965.4km s-min=164.6km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.93**	**243**	P	P	20 32 31.1	0.0
	1.3nm,0.9s,baz=95,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**45.51**	**256**	P	P	20 33 24.9	-0.1
	1.0nm,0.5s,baz=96,slow=7.7,SNR=25						
WRA	**Warramunga Arr**	**45.52**	**261**	P	P	20 33 25.2	+0.1
	0.4nm,0.4s,baz=97,slow=7.5,SNR=27						

*ISCJB **19** 20:53:58.6±0.4, 3837N±002×2208E±002, h3km±3km, mb3.9/10, Error ellipse: s-maj=3.2km s-min=2.4km az=150.0*
*IDC **19** 20:53:59.4±0.8, 3835N×22.17E, h0km, mb3.9/10, mb1 4.0/15, mb1mx3.9/24, mbtmp3.8/15, ML3.5/5, MS3.5/2, Ms1 3.5/2, ms1mx2.8/30, Error ellipse: s-maj=17.2km s-min=14.6km az=86.0*
*CSEM **19** 20:53:59.8±0.0, 3838N×2206E, h8km, ML4.2, Error ellipse: s-maj=1.1km s-min=1.0km az=65.0*
*THE **19** 20:53:59.5, 3837N×2208E, h3km, ML4.2*
*ATH **19** 20:53:59.4, 3836N×2206E, h19km±1km, MD3.9/27, ML3.6*
*NEIC **19** 20:53:59.5, 3837N×2208E, h0km, mb3.9/2, ML4.2(THE), ML3.5(ATH), After THE.*
*TIR **19** 20:54:06.8±10.0, 3976N×1783E, h0km±999km*
*NAO **19** 20:54:20.3, 3965N×1970E, h33km, mb3.7*
ISC 19 20:53:59.8±0.4, **3836N**±001×**2209E**±002, **h1**km±3km, **n122,** σ1§13/158, **mb3.9**/10, **11C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SELA	**Sela**	**0.18**	**243**	*e*Pg	**Pg**	**20 54 03.0**	**-0.1**
SELA				*e*Sg	**Sg**	**20 54 06.0**	**+0.6**
RLS	**Riolos of Patr**	**0.58**	**239**	⇑*i*PN	**Pg**	**20 54 10.4**	**-0.4**
RLS				*e*SN	**Sg**	**20 54 18.9**	**+0.6**
EVR	**Evrytania**	**0.60**	**338**	⇑*i*PN	**Pg**	**20 54 10.8**	**-0.5**
EVR				*e*SN	**Sg**	**20 54 20.0**	**+0.9**
AGG	**Agios Georgios**	**0.69**	**16**	*e*Pg	**Pg**	**20 54 12.2**	**-0.8**
LTK	**Loutraki**	**0.77**	**116**	*e*Pg	**Pg**	**20 54 14.7**	**+0.2**
LTK				*e*Sg	**Sg**	**20 54 26.0**	**+1.6**
LKR	**Lokris**	**0.77**	**67**	⇑*i*PN	**Pn**	**20 54 13.6**	**-4.1**
LKR				*e*SN	**Sg**	**20 54 26.0**	**+1.5**
VLX	**Vlachokerasia**	**1.01**	**167**	*e*Pg	**Pg**	**20 54 18.4**	**-0.7**
VLX				*e*Sg	**Sg**	**20 54 34.1**	**+1.9**
KFL	**Anninata**	**1.06**	**257**	*e*Pg	**Pg**	**20 54 19.1**	**-0.9**
KFL	**Anninata**	**1.06**	**257**	*e*Pg	**Pg**	**20 54 19.1**	**-0.9**
ITM	**Ithomi**	**1.18**	**186**	*e*PN	**Pn**	**20 54 21.3**	**-2.1**
ITM				*e*SN	**Sn**	**20 54 39.1**	**-1.0**
LKD	**Levkas**	**1.19**	**288**	*e*Pg	**Pg**	**20 54 21.5**	**-1.0**
VLS	**Valsamata**	**1.20**	**262**	*e*PB	**Pb**	**20 54 20.6**	**-2.6**
VLS				*e*SN	**Sn**	**20 54 38.5**	**-1.9**
THL	**Klokotos Trika**	**1.21**	**357**	⇓*i*PN	**Pn**	**20 54 21.9**	**-1.8**
THL				*e*SN	**Sn**	**20 54 39.3**	**-1.4**
DID	**Didima**	**1.24**	**133**	*e*Pg	**Pg**	**20 54 23.3**	**-0.3**
DID				*e*Sg	**Sg**	**20 54 41.4**	**+1.8**
NAIG	**Nisos Aigina**	**1.25**	**118**	*e*PN	**Pn**	**20 54 24.0**	**-0.3**
NAIG				*e*SN	**Sn**	**20 54 42.0**	**+0.2**
NEO	**Neokhori**	**1.30**	**43**	*e*PN	**Pn**	**20 54 23.9**	**-1.1**
NEO				*e*SN	**Sn**	**20 54 42.4**	**-0.5**
XOR	**Xorichti**	**1.32**	**40**	*e*Pg	**Pg**	**20 54 24.4**	**-0.8**
ATH	**Athens Observa**	**1.34**	**106**	⇓*i*PN	**Pn**	**20 54 25.2**	**-0.3**
ATH				*e*SN	**Sn**	**20 54 42.9**	**-1.0**
KVR	**Kavouri**	**1.42**	**111**	*e*PN	**Pn**	**20 54 26.3**	**-0.4**
KVR				*e*SN	**Sn**	**20 54 47.0**	**+1.0**
PTL	**Penteli**	**1.43**	**102**	*e*PN	**Pn**	**20 54 26.5**	**-0.3**
PTL				*e*SN	**Sn**	**20 54 46.5**	**+0.3**
PYL	**PYLOS**	**1.48**	**191**	*e*Pg	**Pg**	**20 54 26.8**	**-1.4**
PYL				*e*Sg	**Sg**	**20 54 47.9**	**+0.5**
AOS	**Alonnisos**	**1.62**	**59**	*e*Pg	**Pg**	**20 54 28.2**	**-2.6**
JAN	**Janina**	**1.62**	**324**	*e*PN	**Pn**	**20 54 30.0**	**+0.6**
VLI	**Veliai**	**1.77**	**157**	*e*PB	**Pb**	**20 54 30.6**	**-2.3**
VLI				*e*SN	**Sn**	**20 54 55.0**	**+0.5**
LIT	**Litokhoron**	**1.77**	**10**	*e*Pb	**Pb**	**20 54 30.6**	**-2.3**
LIT				*e*Sb	**Sb**	**20 54 54.3**	**-1.3**
LIT	**Litokhoron**	**1.77**	**10**	*e*Pb	**Pb**	**20 54 30.6**	**-2.4**
LIT				*e*Sb	**Sb**	**20 54 54.3**	**-1.3**
KZN	**Kozani**	**1.96**	**353**	*e*PN	**Pn**	**20 54 33.9**	**-0.2**
PAIG	**Paliouri**	**2.00**	**38**	*e*Pn	**Pn**	**20 54 33.2**	**-1.3**
KYTH	**Kithira**	**2.20**	**160**	*e*PN	**Pn**	**20 54 38.5**	**+1.1**
SRN	**Sarande**	**2.23**	**314**	*i* PN	**Pn**	**20 54 39.4**	**+1.6**
SRN				*i* SN	**Sn**	**20 55 07.1**	**+1.2**
KEK	**Kerkira**	**2.24**	**308**	*e*PB	**Pb**	**20 54 37.3**	**-3.7**
PLG	**Polygyros**	**2.27**	**27**	*e*Pn	**Pn**	**20 54 37.1**	**-1.2**
PLG	**Polygyros**	**2.27**	**27**	*e*Pn	**Pn**	**20 54 37.4**	**-1.0**
HORT	**Hortiatis**	**2.37**	**19**	*e*Pn	**Pn**	**20 54 38.8**	**-1.0**
THE	**Thessaloniki**	**2.37**	**16**	*e*Pn	**Pn**	**20 54 38.9**	**-0.8**
OUR	**Ouranopolis**	**2.46**	**36**	*e*Pn	**Pn**	**20 54 40.1**	**-0.8**
KBN	**Korca**	**2.48**	**336**	*i* PN	**Pn**	**20 54 45.0**	**+3.8**
FNA	**Florina**	**2.49**	**347**	*e*Pn	**Pn**	**20 54 40.9**	**-0.4**
FNA				*e*Sn	**Sn**	**20 55 12.5**	**+0.2**
GRG	**Griva**	**2.61**	**5**	*e*Pn	**Pn**	**20 54 42.0**	**-1.0**
SOH	**Sokhos**	**2.65**	**21**	*e*Pn	**Pn**	**20 54 43.1**	**-0.4**
BIA	**Bitola**	**2.73**	**348**	*e*Pn	**Pn**	**20 54 44.4**	**-0.2**
BIA				*e*Sn	**Sn**	**20 55 21.1**	**+3.0**
BIA	**Bitola**	**2.73**	**348**	*e*Pn	**Pn**	**20 54 44.4**	**-0.2**
BIA				*e*Sn	**Sn**	**20 55 21.9**	**+3.8**
BIA	**Bitola**	**2.73**	**348**	*e*Pn	**Pn**	**20 54 44.3**	**-0.3**
BIA				*e*Sn	**Sn**	**20 55 21.1**	**+2.9**
LIA	**Limnos Island**	**2.85**	**56**	*e*PN	**Pn**	**20 54 46.9**	**+0.5**
KNT	**Kendrikon**	**2.87**	**12**	*e*Pn	**Pn**	**20 54 46.1**	**-0.5**
OHR	**Ohrid**	**2.93**	**340**	*e*Pn	**Pn**	**20 54 51.0**	**+3.6**
OHR				*e*Sn	**Sn**	**20 55 26.7**	**+3.5**
OHR	**Ohrid**	**2.93**	**340**	*e*Pn	**Pn**	**20 54 48.1**	**+0.7**
OHR				*e*Sn	**Sn**	**20 55 26.6**	**+3.4**
OHR	**Ohrid**	**2.93**	**340**	*e*Pn	**Pn**	**20 54 48.0**	**+0.6**
OHR				*e*Sn	**Sn**	**20 55 26.5**	**+3.4**
VAY	**Valandovo**	**2.98**	**7**	*e*Pn	**Pn**	**20 54 46.7**	**-1.4**
VAY				*e*Sn	**Sn**	**20 55 20.3**	**-4.2**
VAY				*e*Sn	**Sn**	**20 55 21.0**	**-3.6**
VAY	**Valandovo**	**2.98**	**7**	*e*Pn	**Pn**	**20 54 47.2**	**-0.9**
APE	**Apeiranthos**	**3.01**	**114**	*e*Pn	**Pn**	**20 54 48.5**	**-0.1**
APE	**Apeiranthos**	**3.01**	**114**	*e*PN	**Pn**	**20 54 48.7**	**+0.1**
KRUS	**Krusevo**	**3.08**	**348**	*e*Pn	**Pn**	**20 54 51.3**	**+1.9**
KRUS				*e*Sn	**Sn**	**20 55 30.9**	**+4.0**
KRUS	**Krusevo**	**3.08**	**348**	*e*Pn	**Pn**	**20 54 51.2**	**+1.7**
KRUS				*e*Sn	**Sn**	**20 55 30.8**	**+3.9**
KRUS				*e*Sn	**Sn**	**20 55 31.0**	**+4.2**
KRUS	**Krusevo**	**3.08**	**348**	*e*Pn	**Pn**	**20 54 51.2**	**+1.8**
CHOS	**Chios island**	**3.11**	**88**	*e*Pn	**Pn**	**20 54 50.1**	**+0.1**
NVR	**Nevrokopi**	**3.29**	**24**	*e*PN	**Pn**	**20 54 51.5**	**-0.8**
KARN	**Karanos**	**3.29**	**153**	*e*Pn	**Pn**	**20 54 52.4**	**0.0**
KARN	**Karanos**	**3.29**	**153**	*e*Pn	**Pn**	**20 54 52.3**	**-0.1**
PRK	**Paraskevi**	**3.38**	**73**	*e*PN	**Pn**	**20 54 53.2**	**-0.4**
VAM	**Vamos**	**3.39**	**150**	*e*PN	**Pn**	**20 54 53.9**	**+0.1**
TIR	**Tirane**	**3.44**	**331**	*i* PN	**Pn**	**20 54 54.7**	**+0.2**
TIR				*i* SN	**Pg**	**20 55 16.3**	**+11**
SKO	**Skopje**	**3.65**	**352**	*e*Pn	**Pn**	**20 54 59.6**	**+2.4**
SKO	**Skopje**	**3.65**	**352**	*e*Pn	**Pn**	**20 54 59.0**	**+1.8**
SKO	**Skopje**	**3.65**	**352**	*e*Pn	**Pn**	**20 54 59.0**	**+1.7**
IDI	**Anoyia**	**3.80**	**143**	Pn	**Pn**	**20 54 59.0**	**-0.3**
	3.3nm,0.3s,baz=159,slow=22,SNR=24							
IDI					Sn	**Sn**	**20 55 42.9**	**-1.7**
	2.6nm,0.3s,baz=333,slow=17,SNR=4.5							
IDI	**Anoyia**	**3.80**	**143**	Pn	**Pn**	**20 54 59.0**	**-0.3**
IDI					Sn	**Sn**	**20 55 42.8**	**-1.8**
SMG	**Samos**	**3.80**	**98**	*e*PN	**Pn**	**20 55 00.2**	**+0.8**
RDO	**Rodhopi**	**3.85**	**43**	*e*PN	**Pn**	**20 54 59.0**	**-1.0**
GVD	**Gavdhos**	**3.86**	**155**	*e*Pn	**Pn**	**20 54 60.0**	**-0.2**
GVD				*e*Pb	**Pb**	**20 55 03.0**	**-5.6**
GVD	**Gavdhos**	**3.86**	**155**	*e*PB	**Pb**	**20 55 03.0**	**-5.6**
GVD	**Gavdhos**	**3.86**	**155**	*e*Pn	**Pn**	**20 55 00.0**	**-0.2**
NPS	**Neapolis**	**4.18**	**136**	*e*PN	**Pn**	**20 55 05.7**	**+1.0**
LAST	**Lasithi**	**4.19**	**139**	*e*Pn	**Pn**	**20 55 05.0**	**+0.3**
TIP	**Timpagrande**	**4.25**	**283**	P	**Pn**	**20 55 06.2**	**+0.6**
VTS	**Vitosha**	**4.32**	**11**	P	**Pn**	**20 55 07.6**	**+1.2**
BARS	**Barje**	**4.46**	**357**	Pn	**Pn**	**20 55 12.1**	**+3.6**
XRY	**Khrisi**	**4.52**	**139**	*e*PN	**Pn**	**20 55 12.0**	**+2.7**
KARP	**Karpathos**	**4.93**	**123**	P	**Pn**	**20 55 21.4**	**+6.5**
GRUS	**Gruza**	**5.62**	**350**	Pn	**Pn**	**20 55 24.1**	**-0.3**
DIVS	**Divcibare**	**5.95**	**345**	Pn	**Pn**	**20 55 30.5**	**+1.6**
DIVS					Sn	**Sn**	**20 56 38.0**	**+0.3**
MLR	**Muntele Rosu**	**7.68**	**21**	⇑P	**Pn**	**20 55 54.1**	**+1.4**
MLR	**Muntele Rosu**	**7.68**	**21**	Pn	**Pn**	**20 55 54.1**	**+1.4**
	0.4nm,0.3s,baz=223,slow=7.7,SNR=12							
MLR					LR	LR	20 58 50.6	
	comp=Z,256nm,21.4s,baz=243,slow=38							
MLR	**Muntele Rosu**	**7.68**	**21**	⇑P	**Pn**	**20 55 54.1**	**+1.4**
PLOR	**Plostina**	**8.22**	**23**	⇓*i*P	**Pn**	**20 56 02.0**	**+2.0**
PKSM	**Moragy**	**8.26**	**343**	⇑P	**Pn**	**20 56 01.6**	**+1.1**
PKSM	**Moragy**	**8.26**	**343**	⇑*i*P	**Pn**	**20 56 01.6**	**+1.1**
VRI	**Vrincioaia**	**8.26**	**23**	⇑P	**Pn**	**20 56 02.5**	**+1.9**
VRI	**Vrincioaia**	**8.26**	**23**	⇑*i*P	**Pn**	**20 56 02.5**	**+2.0**
PSZ	**Piszkesteto**	**9.69**	**351**	⇑P	**Pn**	**20 56 21.1**	**+0.9**
PSZ	**Piszkesteto**	**9.69**	**351**	⇑*i*P	**Pn**	**20 56 21.1**	**+0.9**
VYHS	**Vyhne**	**10.40**	**348**	*e*P	**Pn**	**20 56 30.5**	**+0.5**
VYHS				*e*		20 58 29.7		
VYHS	**Vyhne**	**10.40**	**348**	*e*	**Pn**	**20 56 30.5**	**+0.5**
VYHS				*e*		20 58 29.7		
MODS	**Modra-Piesok**	**10.61**	**342**	*e*	**Pn**	**20 56 33.5**	**+0.8**
MMAI	**Mount Meron Ar**	**12.06**	**112**	Pn	**Pn**	**20 56 53.4**	**+0.7**
	0.2nm,0.3s,baz=299,slow=15,SNR=2.4							
GERES	**GERESS Array B**	**12.11**	**333**	Pn	**Pn**	**20 56 54.9**	**+1.6**
	0.1nm,0.3s,baz=167,slow=13,SNR=3.4							
KHC	**Kasperske Hory**	**12.39**	**333**	*e*P	**Pn**	**20 57 01.5**	**+4.3**
FRF	**La Foret Royal**	**12.78**	**299**	*e*P	**Pn**	**20 57 04.7**	**+2.3**
	121nm,1.5s							
EIL	**Elat**	**13.73**	**125**	Pn	**Pn**	**20 57 14.8**	**-0.7**
EIL	**Elat**	**13.73**	**125**	Pn	**Pn**	**20 57 14.8**	**-0.7**
	0.3nm,0.3s,baz=344,slow=18,SNR=2.5							
CLL	**Collm**	**14.45**	**337**	*e*PP		20 57 35.0		
HINF	**Hinteralfeld**	**14.58**	**315**	*e*P	**Pn**	**20 57 26.2**	**-0.9**
HAU	**Haudompre**	**14.97**	**315**	*e*P	**Pn**	**20 57 27.3**	**-5.0**
SMF	**Signal de Mont**	**15.78**	**307**	*e*P	**Pn**	**20 57 48.9**	**+5.9**
	19nm,0.9s							
SMF	**Signal de Mont**	**15.78**	**307**	*e*P	**Pn**	**20 57 48.9**	**+5.9**
	9.1nm,0.9s							
AVF	**Avril sur Loir**	**16.15**	**307**	*e*P	**Pn**	**20 57 54.4**	**+6.6**
	26nm,1.1s							
SSF	**Saint Saulge**	**16.17**	**308**	*e*P	**Pn**	**20 57 52.4**	**+4.4**
	17nm,0.9s							
SSF	**Saint Saulge**	**16.17**	**308**	*e*P	**Pn**	**20 57 52.4**	**+4.4**
	8.6nm,0.9s							
ESDC	**Sonseca Array**	**20.27**	**282**	P	**P**	**20 58 36.9**	**+0.4**
	3.1nm,0.3s,baz=74,slow=11,SNR=7.8							
HFS	**Hagfors**	**22.44**	**349**	P	**P**	**20 59 00.0**	**+0.3**
	1.8nm,0.5s,mb3.8,baz=150,slow=13,SNR=5.8							
NB2	**NORSAR Subarra**	**23.71**	**347**	P	**P**	**20 59 11.7**	**-1.2**
	comp=Z,3.5nm,0.8s,mb3.8,baz=162,slow=11							
NOA	**NORSAR Array B**	**23.71**	**347**	P	**P**	**20 59 11.6**	**-1.3**
	comp=Z,1.7nm,0.7s,mb3.6,baz=156,slow=8.3,SNR=5.3							
EKA	**Eskdalemuir Ar**	**24.01**	**323**	P	**P**	**20 59 16.7**	**+0.9**
	comp=Z,6.0nm,0.8s,mb4.1,baz=133,slow=8.9,SNR=10							
TORD	**Torodi Ar. Bea**	**30.96**	**221**	P	**P**	**21 00 18.6**	**+0.1**
	comp=Z,3.5nm,0.9s,mb4.2,baz=32,slow=9.3,SNR=18							
DBIC	**Dimbokro**	**39.88**	**225**	P	**P**	**21 01 35.1**	**0.0**
	comp=Z,2.3nm,0.6s,mb4.1,baz=16,slow=12,SNR=6.5							
LIC	**Lamto**	**40.34**	**224**	*e*P	**P**	**21 01 38.2**	**-0.8**
	comp=Z,5.9nm,0.5s,mb4.3							
MKAR	**Makanchi Array**	**44.15**	**59**	P	**P**	**21 02 08.8**	**-0.9**
	comp=Z,2.7nm,0.6s,mb4.2,baz=276,slow=7.5,SNR=28							
SONM	**Songino Array**	**59.39**	**51**	P	**P**	**21 04 02.8**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=287,slow=8.4,SNR=5.5							
YKA	**Yellowknife Ar**	**73.64**	**341**	P	**P**	**21 05 34.3**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=31,slow=5.7,SNR=5.6							
YKA	**Yellowknife Ar**	**73.64**	**341**	P	**P**	**21 05 34.3**	**-0.1**
TXAR	**Lajitas Array**	**95.74**	**315**	P	**P**	**21 07 29.3**	**+1.7**
TXAR	**Lajitas Array**	**95.74**	**315**	P	**P**	**21 07 29.3**	**+1.7**
	comp=Z,0.4nm,0.8s,mb3.9,baz=50,slow=7.2,SNR=3.2							

IDC 19 21:12:23.7±1.4, **1150N**×**14184E, h0**km, **mb3.5**/5, **mb1 3.7**/5, **mb1mx3.6**/15, **mbtmp3.5**/5, **Error ellipse: s-maj=62.1km s-min=23.1km az=86.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.10**	**193**	P	P	21 18 51.6	-1.1
	1.4nm,0.9s,baz=11,slow=9.6,SNR=7.2						
ASAR	**Alice Springs**	**35.80**	**193**	P	P	21 19 25.9	+1.0
	0.4nm,0.6s,baz=14,slow=13,SNR=7.6						
SONM	**Songino Array**	**46.81**	**328**	P	P	21 20 55.2	0.0
	0.4nm,0.5s,baz=132,slow=6.6,SNR=3.8						
MKAR	**Makanchi Array**	**60.98**	**317**	P	P	21 22 39.7	+0.9
	0.2nm,0.8s,baz=101,slow=7.5,SNR=2.7						
YKA	**Yellowknife Ar**	**86.06**	**27**	P	P	21 25 05.1	-1.0
	0.2nm,0.5s,baz=292,slow=5.3,SNR=4.8						

*IDC **19** 21:20:36.5±0.5, 6068S×15386E, h0km, mb4.9/13, mb1 4.9/14, mb1mx4.9/15, mbtmp4.9/14, ML4.0/1, MS5.1/13, Ms1 5.1/13, ms1mx5.0/18, Error ellipse: s-maj=22.6km s-min=13.6km az=91.0*
*ISCJB **19** 21:20:36.9±0.3, 6066S×004×1539E±0.1, h10km, mb5.1/30, MS5.2/149, Error ellipse: s-maj=9.0km s-min=6.2km az=5.2*
*GCMT **19** 21:20:38.1±0.1, 6074S×15354E, h17km, MW5.7/103, Moment Tensor Solution. s91,c176; s103,c288; Duration: 1§8 Moment tensor: Scale 10^17^Nm; Mrr-0.48±.05; Mθθ3.69±.05; Mϕϕ-3.21±.05; Mrθ0.84±.11; Mθϕ-2.99±.04; Mϕr1.26±.13; Best double couple: Mo4.82700×10^17^ NP1:ϕs154.00000°, δ74.00000°, λ-11.00000°. NP2:ϕs247.00000°, δ80.00000°, λ-164.00000°. Principal axes: T 4.8290, Plg4.0000°, Azm20.0000°; N -0.0020, Plg71.0000°, Azm279.0000°; P -4.8260, Plg19.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **19** 21:20:38.1±0.3, 6070S×15409E, h10km, mb5.2/23, MS5.3/134, MW5.7 Error ellipse: s-maj=11.2km s-min=7.4km az=88.0, Moment Tensor Solution. s6 Moment tensor: Scale 10^17^Nm; Mrr1.03; Mθθ2.86; Mϕϕ-3.89; Mrθ0.72; Mθϕ-1.80; Mϕr-2.27; Best double couple: Mo4.50000×10^17^ NP1:ϕs59.00000°, δ57.00000°, λ174.00000°. NP2:ϕs153.00000°, δ85.00000°, λ34.00000°. Principal axes: T 3.9600, Plg27.0000°, Azm21.0000°; N 1.0900, Plg56.0000°, Azm160.0000°; P -5.0400, Plg19.0000°, Azm281.0000°;*
*BJI **19** 21:20:38.1, 6070S×154.10E, h10km, mB5.9, mb5.7, Ms5.4, Msz5.1*
*MOS **19** 21:20:41.5±1.9, 6046S×15431E, h33km, mb5.3/6, MS5.2/5, Error ellipse: s-maj=35.7km s-min=9.9km az=90.3*
ISC 19 21:20:38.5±0.3, **6069S**±004×**1540E**±01, **h10**km, **(h13**km±2.9km**:pP-P), n276,** σ1§25/83, **mb5.1**/30, **MS5.2**/149, **7C-9D, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**6.75**	**25**	*e*P	**Pn**	**21 22 14.5**	**-2.9**
MCQ				*e*S	**Sn**	**21 23 27.9**	**-6.3**
DRV	**Dumont d'Urvil**	**8.63**	**220**	P	**Pn**	**21 22 45.0**	**+1.8**
DRV				R		21

SNAA e 21 29 21.9
SNAA e 21 29 28.1
SNAA Sanae 46.95 190 *e*P **P 21 29 09.7 +1.0**
FITZ Fitzroy Crossi 47.11 322 *e*P **P 21 29 10.6 +0.1**
comp=Z,22nm,0.9s,mb5.1
FITZ *e*S **S 21 35 53.8 -8.7**
VNA3 Neumayer Olymp 47.86 187 *e*P **P 21 29 15.0 -0.8**
VNA3 e pP 21 29 17.6 -1.3
VNA3 e pP 21 29 19.3 +0.4
VNA3 e 21 29 21.4
VNA3 e 21 29 24.9
VNA3 e 21 29 27.9
VNA3 e 21 29 33.8
VNA2 Neumayer--Watz 48.03 188 *e*P **P 21 29 16.0 -1.0**
VNA2 e pP 21 29 18.7 -1.5
VNA2 e 21 29 20.9
VNA2 e 21 29 23.4
VNA2 e 21 29 24.7
VNA2 e 21 29 28.0
VNA2 e 21 29 34.3
VNA1 Neumayer--Stat 48.36 188 *e*P **P 21 29 15.7 -3.9**
VNA1 e pP 21 29 18.3 -4.4
VNA1 e 21 29 20.8
VNA1 e 21 29 23.0
VNA1 e 21 29 25.9
VNA1 e 21 29 28.7
VNA1 e 21 29 35.4
KAKA Kakadu 50.44 332 *e*P **P 21 29 35.5 -0.6**
comp=Z,19nm,0.8s,mb5.2
RAR Rarotonga 50.88 60 LR LR 21 47 00.4
comp=Z,1µm,19.1s,MS4.9,baz=216,slow=31
HNR Honiara 51.34 7 *e*P **P 21 29 41.7 -1.1**
comp=Z,111nm,1.0s,mb5.8
HNR LR LR
comp=Z,4µm,19.0s,MS5.5
HNR Honiara 51.34 7 *e*P **P 21 29 41.7 -1.2**
HNR pmax pmax
comp=Z,111nm,1.0s,mb5.8
HNR MLR MLR
comp=Z,4µm,19.0s,MS5.5
HNR Honiara 51.34 7 P **P 21 29 42.7 -0.2**
comp=Z,83nm,0.9s,mb5.7,baz=83,slow=0.9,SNR=6.4
HNR LR LR 21 48 30.1
comp=Z,5µm,18.1s,MS5.5,baz=172,slow=33
PMG Port Moresby 51.43 351 *e*P **P 21 29 43.2 -0.3**
comp=Z,23nm,0.9s,mb5.1
PMG LR LR
comp=Z,4µm,19.0s,MS5.4
PMG Port Moresby 51.43 351 *e*P **P 21 29 43.4 -0.2**
PMG Port Moresby 51.43 351 P **P 21 29 42.3 -1.3**
comp=Z,25nm,0.9s,mb5.1,baz=188,slow=8.1,SNR=5.9
PMSA Palmer Station 51.64 160 PFAKE 21 30 00.0 +15
PMSA LR LR
comp=Z,3µm,21.0s,MS5.3
AFI Afiamalu 52.90 43 P **P 21 29 55.3 +0.8**
TBI Tubuai 53.66 72 *e*S **S 21 37 34.6 +1.0**
comp=Z,1µm,28.5s
TBI *e*LR LR 21 45 31.4
comp=Z,3µm,26.5s,baz=209
BATI Kupang 55.16 323 P **P 21 30 11.1 +0.1**
comp=Z,28nm,1.0s,mb5.2,baz=106,slow=2.8,SNR=6.4
FUNA Funafuti 55.34 31 PFAKE 21 30 20.0 +7.7
FUNA LR LR
comp=Z,4µm,20.0s,MS5.5
PPT Papeete 58.60 69 *e*S **S 21 38 41.1 +1.7**
comp=Z,348nm,26.0s
PPT *e*LR LR 21 47 47.7
comp=Z,2µm,23.0s,baz=208
RKT Rikitea 60.83 85 *e*S **S 21 39 07.7 -0.3**
comp=Z,849nm,25.2s
RKT *e*LQ 21 46 15.0
comp=Z,1µm,28.0s
RKT *e*LR LR 21 48 41.5
comp=Z,4µm,28.5s,baz=208
KSM Kuching 70.53 313 *e*P **P 21 31 53.4 0.0**
DAV Davao City (W) 71.16 330 PFAKE 21 32 10.0 +13
DAV LR LR
comp=Z,646nm,22.0s,MS4.8
PLCA Paso Flores 72.57 146 *e*P **P 21 32 04.8 -0.6**
comp=Z,86nm,1.8s,mb5.4
PLCA Paso Flores 72.57 146 *e*P **P 21 32 04.8 -0.6**
PLCA pmax pmax
comp=Z,86nm,1.8s
PLCA Paso Flores 72.57 146 P **P 21 32 04.6 -0.8**
comp=Z,7.4nm,0.8s,mb4.7,baz=207,slow=6.7,SNR=11
KKM Kota Kinabalu 72.81 320 *e*P **P 21 32 05.4 -1.6**
GUMO Guam 74.39 351 PFAKE 21 32 30.0 +14
GUMO LR LR
comp=Z,936nm,22.0s,MS5.0
TRQA Tornquist 77.28 152 *e*P **P 21 32 30.3 -2.3**
comp=Z,22nm,1.3s,mb4.9
TRQA LR LR
comp=Z,1µm,20.0s,MS5.2
KULM Kulim 77.72 305 *e*P **P 21 32 34.5 -0.8**
SUR Sutherland 79.70 219 P **P 21 32 48.0 +1.9**
comp=Z,184nm,1.9s,mb5.7
SUR LR LR
comp=Z,2µm,20.0s,MS5.4
BOSA Boshof 81.73 224 P **P 21 32 58.2 +1.2**
BOSA LR LR 22 07 00.9
BOSA Boshof 81.73 224 P **P 21 32 58.2 +1.2**
comp=Z,6.3nm,1.0s,mb4.5,baz=162,slow=4.7,SNR=6.0
BOSA LR LR 22 07 00.9
comp=Z,728nm,18.5s,MS5.1,baz=159,slow=34
LCO Las Campanas 83.47 142 *e*P **P 21 33 05.2 -0.8**
comp=Z,28nm,1.3s,mb5.1
QIZ Qiongzhong 87.04 319 P **P 21 33 22.9 -0.9**
QIZ S S 21 43 58.3 -4.1
QIZ XS sS 21 44 15.3 +7.4
QIZ SS SS 21 49 44.0 -2.0
QIZ AMB AMB
comp=Z,243nm,6.0s
QIZ LR LR
comp=N,552nm,23.7s,MS5.2
QIZ LR LR
comp=E,958nm,27.7s,MS5.2
QIZ LR LR
comp=Z,491nm,32.3s,MS4.7
QIZ Qiongzhong 87.04 319 *e*P **P 21 33 25.1 +1.3**
comp=Z,54nm,1.2s,mb5.7
QIZ LR LR
comp=Z,529nm,20.0s,MS4.9
PALK Pallekele 88.25 288 PFAKE 21 33 40.0 +10
PALK LR LR
comp=Z,527nm,20.0s,MS5.0
CHTO Chiang Mai 90.70 309 PFAKE 21 33 50.0 +8.9
CHTO LR LR
comp=Z,858nm,22.0s,MS5.1
LSZ Lusaka 92.87 232 P **P 21 33 53.3 +1.9**
comp=Z,4.1nm,1.0s,mb4.8
LSZ LR LR
comp=Z,722nm,20.0s,MS5.1
LSZ Lusaka 92.87 232 P **P 21 33 53.3 +1.9**
LSZ pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
LSZ MLR MLR
comp=Z,722nm,20.0s,MS5.1
TSUM Tsumeb 93.00 221 P **P 21 33 55.1 +3.1**
comp=Z,8.6nm,1.3s,mb5.0
TSUM LR LR
comp=Z,1µm,22.0s,MS5.4
KMI Kunming 95.08 315 P **P 21 34 02.5 +1.3**
KMI AP pP 21 34 08.9 +4.4
KMI XP sP 21 34 10.8 +5.1
KMI PP PP 21 37 50.8 -0.3
KMI SKS 21 44 38.5
KMI S S 21 45 16.8 +1.1
KMI XS sS 21 45 23.8 +2.6
KMI SS SS 21 51 49.9 +7.8
KMI AMB AMB
comp=Z,5.0nm,1.1s,mb4.9
KMI AMB AMB
comp=Z,102nm,5.2s
KMI LR LR
comp=N,400nm,25.9s,MS5.1
KMI LR LR
comp=E,620nm,20.9s,MS5.1
KMI LR LR
comp=Z,681nm,24.6s,MS5.0
SSE Sheshan 95.32 332 P **P 21 34 02.0 -0.1**
SSE PP PP 21 37 56.6 +3.6
SSE S S 21 45 14.8 -2.7
SSE AMB AMB
comp=Z,20nm,0.8s,mb5.6
SSE AMB AMB
comp=Z,45nm,3.4s
SSE LR LR
comp=N,188nm,29.7s,MS4.6
SSE LR LR
comp=E,279nm,30.2s,MS4.6
SSE LR LR
comp=Z,264nm,20.5s
LPAZ La Paz 96.18 140 P **P 21 34 06.4 -0.2**
comp=Z,2.0nm,0.8s,mb4.6,baz=203,slow=6.4,SNR=7.5
LPAZ LR LR 22 10 40.9
comp=Z,496nm,20.2s,MS5.0,baz=267,slow=31
WHN Wuhan 96.51 326 *e*P **P 21 34 07.0 -0.6**
NJ2 Nanjing 96.79 330 *e*P **P 21 34 07.1 -1.7**
NJ2 AP pP 21 34 16.9 +4.8
NJ2 XP sP 21 34 20.6 +7.3
NJ2 PP PP 21 38 03.5 -0.8
NJ2 S S 21 45 22.0 -8.1
NJ2 XS sS 21 45 38.0 +2.3
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.7
NJ2 AMB AMB
comp=Z,360nm,4.8s
NJ2 LR LR
comp=N,1µm,20.8s,MS5.5
NJ2 LR LR
comp=E,600nm,16.5s,MS5.5
NJ2 LR LR
comp=Z,600nm,16.5s,MS5.2
ENH Enshi 97.65 322 PFAKE 21 34 20.0 +7.2
ENH LR LR
comp=Z,4.0nm,21.0s
MJAR Matsushiro Arr 97.75 347 LR LR 22 21 37.7
comp=Z,317nm,18.3s,MS4.8,baz=115,slow=38
MAJO Matsushiro 97.75 347 PFAKE 21 34 20.0 +7.0
MAJO LR LR
comp=Z,449nm,19.0s,MS5.0
INCN Inchon 100.36 338 PFAKE 21 34 40.0 +14
INCN LR LR
comp=Z,514nm,21.0s,MS5.0
KMBO Kilima Mbogo 101.81 246 PFAKE 21 34 40.0 +8.1
KMBO LR LR
comp=Z,506nm,22.0s,MS5.0
LSA Lhasa 103.53 307 PFAKE 21 34 50.0 +10
LSA LR LR
comp=Z,286nm,21.0s,MS4.8
BJT Baijiatuau 105.02 331 PFAKE 21 39 10.0 +10
BJT LR LR
comp=Z,630nm,20.0s,MS5.2
MDJ Mudanjiang 106.82 342 PFAKE 21 39 10.0 +7.0
MDJ LR LR
comp=Z,466nm,21.0s,MS5.0
YSS Yuzh-Sakhalins 107.67 352 PFAKE 21 39 20.0 +15
YSS LR LR
comp=Z,996nm,20.0s,MS5.4
MSKU Masuku 110.74 223 PFAKE 21 39 20.0 +8.5
MSKU LR LR
comp=Z,77nm,22.0s,MS4.2
ASCN Ascension 110.98 192 PFAKE 21 39 20.0 +8.1
ASCN LR LR
comp=Z,3µm,21.0s,MS5.8
HIA Hailar 113.04 336 PFAKE 21 39 30.0 +15
HIA LR LR
comp=Z,486nm,22.0s,MS5.0
RCBR Riachuelo 113.23 169 PFAKE 21 39 30.0 +14
RCBR LR LR
comp=Z,181nm,19.0s,MS4.7
PET Petropavlovsk 113.42 3 PFAKE 21 39 30.0 +15
PET LR LR
comp=Z,1µm,19.0s,MS5.5
JTS JuntasAbangare 113.83 113 PFAKE 21 39 30.0 +13
JTS LR LR
comp=Z,785nm,22.0s,MS5.3
ULN Ulaanbaatar 114.68 327 PFAKE 21 39 30.0 +12
ULN LR LR
comp=Z,431nm,19.0s,MS5.1
SONM Songino Array 114.83 327 PKP PKiKP 21 39 18.0 0.0
SONM PKKPbc PKKPbc 21 50 00.1 +5.9
SONM Songino Array 114.83 327 PKP PKiKP 21 39 18.0 0.0
comp=Z,0.5nm,1.1s,baz=240,slow=2.8,SNR=3.5
SONM PKKPbc PKKPbc 21 50 00.1 +5.9
comp=Z,0.9nm,1.1s,baz=20,slow=4.7,SNR=4.6
TGUH Tegucigalpa,Un 116.07 109 PFAKE 21 39 30.0 +8.5
TGUH LR LR
comp=Z,288nm,19.0s,MS4.9
ZAK Zakamensk 118.00 326 *e*PKIKP PKPdf 21 39 20.3 -3.8
ZAK pmax pmax
comp=Z,1.0nm,1.6s
UNV Unalaska Valle 118.44 25 PFAKE 21 39 40.0 +15
UNV LR LR
comp=Z,5µm,21.0s,MS6.1
SDV Santo Domingo 118.65 128 PFAKE 21 39 40.0 +13
SDV LR LR
comp=Z,473nm,20.0s,MS5.1
SAO San Andreas Ge 118.76 66 PFAKE 21 39 40.0 +14
SAO LR LR
comp=Z,801nm,20.0s,MS5.3
MCCM Marconi Confer 119.26 64 PFAKE 21 39 40.0 +13
MCCM LR LR
comp=Z,617nm,20.0s,MS5.2
HOPS Hopland 119.88 63 PFAKE 21 39 40.0 +12
HOPS LR LR
comp=Z,739nm,19.0s,MS5.3
MA2 Magadan 119.95 358 PFAKE 21 39 40.0 +12
MA2 LR LR
comp=Z,401nm,19.0s,MS5.1
TUC Tucson 120.05 77 PFAKE 21 39 40.0 +11
TUC LR LR
comp=Z,488nm,20.0s,MS5.1
DAC Darwin (Calif) 120.11 69 PFAKE 21 39 40.0 +11
DAC LR LR
comp=Z,1µm,19.0s,MS5.6
CMB Columbia Colle 120.28 66 PFAKE 21 39 40.0 +11
CMB LR LR
comp=Z,422nm,21.0s,MS5.1
TEIG Tepich 120.93 104 PFAKE 21 39 40.0 +9.3
TEIG LR LR
comp=Z,382nm,22.0s,MS5.0
LTX Lajitas 121.06 85 PFAKE 21 39 40.0 +9.3
LTX LR LR
comp=Z,894nm,20.0s,MS5.4
TXAR Lajitas Array 121.06 85 PKKPbc PKKPbc 21 49 42.0 +11
comp=Z,0.3nm,0.7s,baz=58,slow=4.7,SNR=3.6
UCH Uchtor 121.09 301 *e*PKPdf PKPdf 21 39 30.7 +0.4
TKM2 Tokmak 2 121.21 303 PFAKE 21 39 40.0 +9.5
TKM2 LR LR
comp=Z,483nm,19.0s,MS5.2
TPNV Topopah Spring 121.27 70 PFAKE 21 39 40.0 +9.2
TPNV LR LR
comp=Z,907nm,19.0s,MS5.4
AML Almayashu 121.36 301 PKPdf PKPdf 21 39 31.4 +0.6
AML LR LR
comp=Z,464nm,20.0s,MS5.1
WDC Whiskeytown Da 121.41 62 PFAKE 21 39 40.0 +9.0
WDC LR LR
comp=Z,662nm,19.0s,MS5.3
NVAR Mina Array Bea 121.54 67 PKP PKPdf 21 39 32.1 +0.8
comp=Z,0.9nm,0.7s,baz=167,slow=3.5,SNR=7.7
TPH Tonopah 121.75 68 PFAKE 21 39 40.0 +8.3
TPH LR LR
comp=Z,675nm,19.0s,MS5.3
EKS2 Erkin-Say 121.76 301 *e*PKPdf PKPdf 21 39 31.3 -0.3
EKS2 LR LR
comp=Z,433nm,19.0s,MS5.1
MKAR Makanchi Array 121.77 310 PKP PKPdf 21 39 29.3 -2.2
MKAR Makanchi Array 121.77 310 PKP PKPdf 21 39 29.3 -2.2
comp=Z,2.1nm,1.1s,baz=123,slow=2.0,SNR=7.7
MNTX Cornudas Mount 122.16 82 *e*PKPdf PKPdf 21 39 32.4 -0.3
MNTX LR LR
comp=Z,798nm,19.0s,MS5.4
YBH Yreka Blue Hor 122.28 62 PFAKE 21 39 40.0 +7.4
YBH LR LR
comp=Z,565nm,20.0s,MS5.2
WUAZ Wupatki 122.39 74 PFAKE 21 39 40.0 +7.0
WUAZ LR LR
comp=Z,592nm,20.0s,MS5.2
KVTX Kingsville 122.42 91 PFAKE 21 39 40.0 +6.7
KVTX LR LR
comp=Z,2µm,19.0s,MS5.8
MOD Modoc 123.47 63 PFAKE 21 39 50.0 +15
MOD LR LR
comp=Z,623nm,19.0s,MS5.3
BMN Battle Mountai 123.66 66 PFAKE 21 39 50.0 +15
BMN LR LR
comp=Z,346nm,20.0s,MS5.0
YAK Yakutsk 123.80 346 PFAKE 21 39 50.0 +15
YAK LR LR
comp=Z,614nm,20.0s,MS5.3
JCT Junction City 123.89 87 PFAKE 21 39 50.0 +14
JCT LR LR
comp=Z,450nm,20.0s,MS5.1
ANMO Albuquerque 124.28 79 PFAKE 21 39 50.0 +13
ANMO LR LR
comp=Z,677nm,20.0s,MS5.3
COR Corvallis 124.34 59 PFAKE 21 39 50.0 +14
COR LR LR
comp=Z,689nm,19.0s,MS5.3
MVU Marysvale 124.41 72 PFAKE 21 39 50.0 +13
MVU LR LR
comp=Z,856nm,19.0s,MS5.4
WVOR Wild Horse Val 124.63 64 PFAKE 21 39 50.0 +13
WVOR LR LR
comp=Z,630nm,19.0s,MS5.3
ELK Elko 124.81 68 PFAKE 21 39 50.0 +13
ELK LR LR
comp=Z,46nm,20.0s,MS4.1
MVCO Mesa Verde 125.12 75 PFAKE 21 39 50.0 +12
MVCO LR LR
comp=Z,452nm,19.0s,MS5.2
KDAK Kodiak Island 125.30 32 PFAKE 21 39 50.0 +12
KDAK LR LR
comp=Z,193nm,20.0s,MS4.8
HKT Hockley 125.41 91 PFAKE 21 39 50.0 +11
HKT LR LR
comp=Z,641nm,19.0s,MS5.3
DUG Dugway 125.48 70 PFAKE 21 39 50.0 +11
DUG LR LR
comp=Z,841nm,19.0s,MS5.4
MPU Maple Canyon 125.88 71 PFAKE 21 39 50.0 +10
MPU LR LR
comp=Z,1µm,20.0s,MS5.6
NLWA Neilton Lookou 126.36 57 PFAKE 21 39 50.0 +10
NLWA LR LR
comp=Z,516nm,20.0s,MS5.2
KURK Kurchatov 126.38 310 *e*PKPdf PKPdf 21 39 37.9 -2.2
AMTX Amarillo 126.55 83 PFAKE 21 39 50.0 +9.0
AMTX LR LR
comp=Z,702nm,19.0s,MS5.4
SDCO Great Sand Dun 126.98 77 *e*PKPdf PKPdf 21 39 41.6 -0.1
SDCO LR LR
comp=Z,446nm,20.0s,MS5.1
BMO Blue Mountains 127.14 63 PFAKE 21 39 50.0 +8.2
BMO LR LR
comp=Z,571nm,20.0s,MS5.2
HWUT Hardware Ranch 127.17 70 PKPdf PKPdf 21 39 40.6 -1.4
HWUT LR LR
comp=Z,871nm,19.0s,MS5.5
HAWA Hanford 127.39 60 PFAKE 21 39 50.0 +7.8
HAWA LR LR
comp=Z,471nm,20.0s,MS5.2
HLID Hailey 127.41 66 PFAKE 21 39 50.0 +7.6
HLID LR LR
comp=Z,486nm,20.0s,MS5.2
NATX Nacogdoches 127.47 91 PFAKE 21 39 50.0 +7.1
NATX LR LR
comp=Z,723nm,19.0s,MS5.4
SDDR Presa de Saban 127.51 122 PFAKE 21 39 50.0 +6.7
SDDR LR LR
comp=Z,386nm,19.0s,MS5.1
WMOK Wichita Mounta 127.85 85 PFAKE 21 39 50.0 +6.5
WMOK LR LR
comp=Z,908nm,19.0s,MS5.5
AHID Auburn Hatcher 128.30 69 PFAKE 21 40 00.0 +16
AHID LR LR
comp=Z,876nm,20.0s,MS5.4
TORD Torodi Ar. Bea 128.41 215 PKP PKPdf 21 39 44.6 -0.6
comp=Z,1.1nm,1.0s,baz=4.8,slow=1.7,SNR=3.3
ISCO Idaho Springs 128.55 76 PFAKE 21 40 00.0 +15
ISCO LR LR
comp=Z,572nm,20.0s,MS5.3
BILL Bilibino 128.74 6 PFAKE 21 40 00.0 +16
BILL LR LR
comp=Z,965nm,21.0s,MS5.5
SJG San Juan 128.80 128 PFAKE 21 40 00.0 +14
SJG LR LR
comp=Z,415nm,20.0s,MS5.1
BW06 Boulder Array 129.01 70 PFAKE 21 40 00.0 +15
BW06 LR LR
comp=Z,804nm,19.0s,MS5.4
PDAR Pinedale Array 129.01 70 PKP PKPdf 21 39 45.3 -0.1
comp=Z,0.2nm,0.7s,baz=123,slow=3.3,SNR=3.1
TNA Tin City 129.08 19 PFAKE 21 40 00.0 +15
TNA LR LR
comp=Z,562nm,21.0s,MS5.2
PMR Palmer 129.48 31 PFAKE 21 40 00.0 +14
PMR LR LR
comp=Z,629nm,20.0s,MS5.3
FLWY Flagg Ranch 129.50 68 *e*PKPdf PKPdf 21 39 48.4 +2.1
SIT Sitka 129.79 42 PFAKE 21 40 00.0 +14
SIT LR LR
comp=Z,1µm,20.0s,MS5.5
YMR Madison River 129.83 68 PFAKE 21 40 00.0 +13
YMR LR LR
comp=Z,1µm,21.0s,MS5.5
NEW Newport 129.87 61 PFAKE 21 40 00.0 +13
NEW LR LR
comp=Z,587nm,20.0s,MS5.3
LKWY Lake 130.01 68 PFAKE 21 40 00.0 +13
LKWY LR LR
comp=Z,1µm,19.0s,MS5.6
MSO Missoula 130.16 64 PFAKE 21 40 00.0 +13
MSO LR LR
comp=Z,355nm,20.0s,MS5.1
MIAR Mount Ida 130.25 90 PFAKE 21 40 00.0 +12
MIAR LR LR
comp=Z,446nm,21.0s,MS5.1
BOZ Bozeman (W) 130.28 66 PFAKE 21 40 00.0 +12
BOZ LR LR
comp=Z,579nm,20.0s,MS5.3
WRAK Wrangell Islan 130.29 44 PFAKE 21 40 00.0 +13
WRAK LR LR
comp=Z,616nm,21.0s,MS5.3
BRAL Brewton 130.59 98 PFAKE 21 40 00.0 +11
BRAL LR LR
comp=Z,572nm,20.0s,MS5.3
CBKS Cedar Bluff 130.61 81 PFAKE 21 40 00.0 +11
CBKS LR LR
comp=Z,586nm,19.0s,MS5.3
DWPF Disney 130.88 106 PFAKE 21 40 00.0 +11
DWPF LR LR
comp=Z,511nm,20.0s,MS5.2
RLMT Red Lodge 130.96 69 PFAKE 21 40 00.0 +11
RLMT LR LR
comp=Z,840nm,20.0s,MS5.4
MCK McKinley 131.34 30 *e*PKPdf PKPdf 21 39 48.0 -1.1
MCK LR LR
comp=Z,376nm,21.0s,MS5.1
BRVK Borovoye 131.43 307 PKPdf PKPdf 21 39 49.9 +0.2
LRAL Lakeview Retre 132.27 97 PFAKE 21 40 00.0 +8.0
LRAL LR LR
comp=Z,375nm,19.0s,MS5.1
OXF Oxford 132.28 93 PFAKE 21 40 00.0 +8.1
OXF LR LR
comp=Z,376nm,21.0s,MS5.1
KSU1 Kansas State U 132.36 83 PFAKE 21 40 00.0 +8.1
KSU1 LR LR
comp=Z,1µm,19.0s,MS5.6
COLA College 132.55 29 PFAKE 21 40 00.0 +8.6
COLA LR LR
comp=Z,750nm,21.0s,MS5.4
EGMT Eagleton 132.92 66 PFAKE 21 40 00.0 +7.3
EGMT LR LR
comp=Z,692nm,19.0s,MS5.4
TIXI Tiksi 133.21 349 PFAKE 21 40 00.0 +7.5
TIXI LR LR
comp=Z,534nm,19.0s,MS5.3
PLAL Pickwick Lake 133.31 94 PFAKE 21 40 10.0 +16
PLAL LR LR
comp=Z,410nm,19.0s,MS5.2
LAO LASA Array 133.53 69 PFAKE 21 40 10.0 +16
LAO LR LR
comp=Z,721nm,19.0s,MS5.4
EGAK Eagle 134.18 33 PFAKE 21 40 10.0 +16
EGAK LR LR
comp=Z,574nm,21.0s,MS5.3
GOGA Godfrey 134.29 100 PFAKE 21 40 10.0 +14
GOGA LR LR
comp=Z,302nm,20.0s,MS5.0
WVT Waverly 134.34 93 PFAKE 21 40 10.0 +14
WVT LR LR
comp=Z,396nm,19.0s,MS5.2

NHSC	**New Hope**	**135.63**	**103**	PFAKE			21 40 10.0	+12
NHSC				LR	LR			
	comp=Z,323nm,19.0s,MS5.1							
DGMT	**Dagmar**	**135.78**	**69**	PFAKE			21 40 10.0	+12
DGMT				LR	LR			
	comp=Z,783nm,19.0s,MS5.5							
ECSD	**EROS,Sioux Fal**	**135.88**	**79**	PFAKE			21 40 10.0	+12
ECSD				LR	LR			
	comp=Z,732nm,20.0s,MS5.4							
WCI	**Wyandotte Cave**	**136.75**	**93**	*e*PKPdf	PKPdf		21 40 00.1	0.0
WCI				LR	LR			
	comp=Z,497nm,21.0s,MS5.2							
TZTN	**Tazewell**	**136.77**	**97**	PFAKE			21 40 10.0	+10
TZTN				LR	LR			
	comp=Z,319nm,21.0s,MS5.0							
KIV	**Kislovodsk**	**137.01**	**279**	*e*PKPdf	PKPdf		21 40 00.8	+0.4
KIV	**Kislovodsk**	**137.01**	**279**	*i* PKIKP	PKPdf		21 40 00.6	+0.1
KIV				pmax	pmax			
	comp=Z,13nm,1.2s							
HDIL	**Hopedale**	**137.07**	**88**	PFAKE			21 40 10.0	+9.3
HDIL				LR	LR			
	comp=Z,673nm,19.0s,MS5.4							
JFWS	**Jewell Farm**	**138.38**	**85**	PFAKE			21 40 10.0	+7.0
JFWS				LR	LR			
	comp=Z,1μm,20.0s,MS5.6							
CNNC	**Cliffs of the**	**138.46**	**104**	PFAKE			21 40 10.0	+6.6
CNNC				LR	LR			
	comp=Z,579nm,22.0s,MS5.3							
ARU	**Arti**	**138.58**	**303**	PKPdf	PKPdf		21 40 03.4	+0.5
ARU	**Arti**	**138.58**	**303**	PKIKP	PKPdf		21 40 03.4	+0.5
ANTO	**Ankara**	**138.78**	**267**	PFAKE			21 40 20.0	+16
ANTO				LR	LR			
	comp=Z,283nm,20.0s,MS5.0							
BLA	**Blacksburg**	**138.82**	**99**	PFAKE			21 40 20.0	+16
BLA				LR	LR			
	comp=Z,400nm,20.0s,MS5.2							
INK	**Inuvik**	**138.85**	**33**	PKPdf	PKPdf		21 40 03.5	+0.4
ACSO	**Alum Creek Sta**	**139.93**	**94**	PFAKE			21 40 20.0	+14
ACSO				LR	LR			
	comp=Z,428nm,19.0s,MS5.2							
YKA	**Yellowknife Ar**	**140.94**	**47**	PKP	PKPdf		21 39 60.0	-7.0
YKA				PKP	PKPdf		21 40 06.6	-0.4
YKA	**Yellowknife Ar**	**140.94**	**47**	PKhKP			21 39 60.0	
	comp=Z,0.3nm,0.6s,baz=228,slow=3.0,SNR=4.8							
YKA				PKP	PKPdf		21 40 06.6	-0.4
	comp=Z,0.8nm,0.6s,baz=225,slow=3.0,SNR=9.1							
CBN	**Corbin**	**141.08**	**101**	PFAKE			21 40 20.0	+12
CBN				LR	LR			
	comp=Z,571nm,20.0s,MS5.3							
AAM	**Ann Arbor**	**141.16**	**91**	PFAKE			21 40 20.0	+12
AAM				LR	LR			
	comp=Z,490nm,19.0s,MS5.3							
COWI	**Conover**	**141.24**	**83**	PFAKE			21 40 20.0	+12
COWI				LR	LR			
	comp=Z,822nm,19.0s,MS5.5							
EYMN	**Ely**	**141.40**	**79**	PFAKE			21 40 20.0	+12
EYMN				LR	LR			
	comp=Z,740nm,19.0s,MS5.5							
GLMI	**Grayling**	**142.54**	**88**	PFAKE			21 40 20.0	+10
GLMI				LR	LR			
	comp=Z,1μm,22.0s,MS5.6							
SSPA	**Standing Stone**	**142.72**	**98**	PFAKE			21 40 20.0	+9.0
SSPA				LR	LR			
	comp=Z,359nm,20.0s,MS5.1							
ERPA	**Erie**	**142.82**	**95**	PFAKE			21 40 20.0	+8.9
ERPA				LR	LR			
	comp=Z,579nm,21.0s,MS5.3							
HARR	**Harsova**	**144.78**	**268**	⇑*i*P	PKPdf		21 40 16.5	+2.1
BINY	**Binghamton**	**144.84**	**99**	*e*PKPdf	PKPdf		21 40 10.4	-4.2
VAY	**Valandovo**	**144.88**	**259**	*e*PKP	PKPdf		21 40 15.3	+0.6
KKB	**Krupnik**	**145.05**	**260**	*i* P	PKPbc		21 40 12.6	-1.9
VTS	**Vitosha**	**145.54**	**261**	*i* P	PKPdf		21 40 14.7	-1.1
KRUS	**Krusevo**	**145.56**	**258**	*e*PKP	PKPdf		21 40 17.3	+1.4
KIS	**Kishinev**	**145.98**	**272**	*e*PKP	PKPdf		21 40 16.0	-0.4
VRI	**Vrincioaia**	**146.21**	**268**	⇓P	PKPdf		21 40 17.6	+0.7
VRI	**Vrincioaia**	**146.21**	**268**	⇓*i*P	PKPdf		21 40 17.5	+0.7
PLOR	**Plostina**	**146.24**	**268**	⇑*i*P	PKPdf		21 40 18.9	+2.0
MLR	**Muntele Rosu**	**146.33**	**267**	⇑P	PKPdf		21 40 15.6	-1.5
MLR	**Muntele Rosu**	**146.33**	**267**	PKPbc	PKPbc		21 40 17.3	-1.0
	comp=Z,7.1nm,1.0s,baz=245,slow=4.7,SNR=5.2							
MLR	**Muntele Rosu**	**146.33**	**267**	⇑*i*P	PKPdf		21 40 15.6	-1.4
KEST	**Kesra**	**146.39**	**238**	PKPbc	PKPbc		21 40 17.5	-1.3
	comp=Z,1.5nm,0.9s,baz=153,slow=4.5,SNR=2.7							
NCB	**Newcomb**	**147.02**	**98**	PFAKE			21 40 30.0	+12
NCB				LR	LR			
	comp=Z,628nm,22.0s,MS5.3							
PRGR	**Permogore**	**147.04**	**304**	*i* PKP2	PKPab		21 40 19.2	-2.2
HRV	**Harvard--Oak R**	**147.22**	**103**	PFAKE			21 40 30.0	+11
HRV				LR	LR			
	comp=Z,549nm,20.0s,MS5.3							
WES	**Weston**	**147.24**	**103**	PFAKE			21 40 30.0	+11
WES				LR	LR			
	comp=Z,863nm,20.0s,MS5.5							
MOS	**Moscow**	**147.32**	**290**	*e*PKIKP	PKPdf		21 40 19.8	+1.4
MOS				*e*			21 40 29.8	
MOS				pmax	pmax			
	comp=Z,62nm,1.4s							
LONY	**Lake Ozonia**	**147.32**	**97**	PFAKE			21 40 30.0	+11
LONY				LR	LR			
	comp=Z,630nm,19.0s,MS5.4							
OBN	**Obninsk**	**147.44**	**289**	*e*PKPbc	PKPbc		21 40 20.2	-0.9
OBN	**Obninsk**	**147.44**	**289**	⇑*i*PKP2	PKPab		21 40 21.0	-2.2
OBN				*e*SS	SS		22 03 26.1	+35
OBN				pmax	pmax			
	comp=Z,81nm,1.4s							
AKASG	**Malin Array Be**	**148.26**	**277**	PKP	PKPdf		21 40 19.6	-0.5
AKASG				PKPbc	PKPbc		21 40 22.4	-1.1
AKASG	**Malin Array Be**	**148.26**	**277**	PKP	PKPdf		21 40 19.6	-0.5
	comp=Z,0.3nm,0.2s,baz=139,slow=1.0,SNR=10							
AKASG				PKPbc	PKPbc		21 40 22.4	-1.1
	comp=Z,0.3nm,0.3s,baz=99,slow=2.1,SNR=12							
LBNH	**Lisbon**	**148.34**	**100**	PFAKE			21 40 30.0	+10
LBNH				LR	LR			
	comp=Z,741nm,21.0s,MS5.5							
BZS	**Buzias**	**148.54**	**263**	⇓P	PKPab		21 40 31.3	+3.4
BZS	**Buzias**	**148.54**	**263**	⇓*i*P	PKPab		21 40 31.3	+3.4
DRGR		**148.84**	**266**	⇓P	PKPbc		21 40 26.1	+1.1
DRGR		**148.84**	**266**	⇓*i*P	PKPbc		21 40 26.1	+1.0
TRPA	**Tarpa**	**149.85**	**268**	⇓*i*P	PKPbc		21 40 28.5	+0.9
UZH	**Uzhgorod**	**150.31**	**268**	*e*	PKPbc		21 40 29.0	+0.4
UZH				*e*			21 40 37.0	
PKME	**Peaks-Kenny Pk**	**150.36**	**102**	PFAKE			21 40 30.0	+6.4
PKME				LR	LR			
	comp=Z,744nm,21.0s,MS5.5							
PKSM	**Moragy**	**150.42**	**261**	⇓P	PKPbc		21 40 29.8	+0.8
PKSM	**Moragy**	**150.42**	**261**	⇓*i*P	PKPbc		21 40 29.8	+0.8
KOLS	**Kolonicke sedl**	**150.52**	**269**	*e*PKP	PKPbc		21 40 28.1	-1.0
KOLS				*e*			21 40 41.8	
KWP	**Kalwaria**	**150.77**	**270**	*e*PKPbc	PKPbc		21 40 29.2	-0.5
KWP				*e*PKPab	PKPab		21 40 37.5	+0.5
KWP	**Kalwaria**	**150.77**	**270**	⇑*i*P	PKPbc		21 40 30.8	+1.1
CRVS	**Cervenica-Dubn**	**150.90**	**268**	*e*PKP	PKPbc		21 40 30.0	0.0
KECS	**Kecovo**	**151.10**	**266**	*e*PKP	PKPbc		21 40 29.0	-1.5
KECS				*e*			21 40 38.5	
KECS	**Kecovo**	**151.10**	**266**	*e*PKP	PKPbc		21 40 29.0	-1.5
KECS				*e*			21 40 38.5	
VYHS	**Vyhne**	**151.91**	**265**	*e*PKP	PKPbc		21 40 32.0	-0.4
KOLL	**Kolacno**	**152.18**	**264**	*e*PKP	PKPbc		21 40 32.2	-0.8
KOLL				*e*			21 40 40.8	
RES	**Resolute Bay**	**152.41**	**32**	*e*PKPbc	PKPbc		21 40 30.3	-2.5
ZST	**Bratislava**	**152.56**	**263**	*e*PKP	PKPbc		21 40 35.8	+2.0
ZST				*e*			21 40 51.2	
ZST				LR	LR			
	comp=Z,400nm,20.0s,MS5.2							
ZST	**Bratislava**	**152.56**	**263**	*e*PKP	PKPbc		21 40 35.8	+2.0
ZST				*e*			21 40 51.2	
JOF	**Joensuu**	**153.60**	**300**	*e*p	PKPbc		21 40 42.4	+6.7
	comp=Z,3.1nm,0.7s							
JOF	**Joensuu**	**153.60**	**300**	*e*PKIKP	PKPbc		21 40 42.4	+6.7
JOF				pmax	pmax			
	comp=Z,3.0nm,0.7s							
DPC	**Dobruska-Polom**	**154.37**	**265**	*e*PKP	PKPab		21 41 00.0	+7.9
UPC	**Upice**	**154.62**	**265**	*e*PKP	PKPab		21 41 04.2	+11
GERES	**GERESS Array B**	**154.66**	**260**	PKP	PKPdf		21 40 30.1	+0.3
	comp=Z,0.1nm,0.3s,baz=249,slow=0.8,SNR=2.7							
GERES				PKPbc	PKPbc		21 40 37.8	-0.6
	comp=Z,1.3nm,0.8s,baz=50,slow=2.1,SNR=7.0							
KHC	**Kasperske Hory**	**154.91**	**261**	*e*PKP	PKPab		21 40 52.0	-2.4
KHC				*ex*	x		21 41 02.5	
ESDC	**Sonseca Array**	**154.91**	**223**	PKPbc	PKPbc		21 40 40.3	+1.1
	comp=Z,0.7nm,0.8s,baz=68,slow=11,SNR=2.8							
ESLA	**Sonseca Array**	**154.91**	**223**	PFAKE			21 40 40.0	+9.5
ESLA				LR	LR			
	comp=Z,5μm,20.0s,MS6.3							
PRU	**Pruhonice**	**155.01**	**263**	*e*PKP	PKPab		21 41 05.0	+10
NKC	**Novy Kostel**	**156.19**	**261**	*e*PKP	PKPab		21 41 04.7	+4.8
CLL	**Collm**	**156.61**	**264**	*e*(PKPab)	PKPab		21 41 06.0	+4.4
CLL				*ex*	x		21 41 12.0	
CLL				*e*SS	SS		22 04 42.0	+10
CLL				*e*SSS			22 11 36.0	
CLL				LmV			23 01 00.0	
	comp=Z,800nm,21.4s							
BFO	**Black Forest**	**156.87**	**253**	PFAKE			21 40 40.0	+7.2
BFO				LR	LR			
	comp=Z,995nm,19.0s,MS5.7							
ARCES	**ARCESS Array B**	**157.33**	**314**	PKPab	PKPab		21 41 03.0	-1.2
	comp=Z,8.0nm,1.1s,baz=76,slow=5.1,SNR=7.3							
KBS	**Kingsbay**	**158.31**	**341**	PFAKE			21 40 40.0	+6.2
KBS				LR	LR			
	comp=Z,809nm,22.0s,MS5.5							
DAG	**Danmarks Havn**	**163.65**	**354**	⇑*i*P	PKPab		21 41 30.0	-1.7
	comp=Z,16nm,1.1s							

IDC 19 21:30:11.0±45.0, 1610S×17518W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.9/12, mbtmp4.3/3, Error ellipse: s-maj=849.8km s-min=163.3km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.20**	**240**	P	P	21 38 06.0	+0.2
	0.5nm,0.2s,baz=80,slow=11,SNR=6.8						
WRA	**Warramunga Arr**	**48.02**	**257**	P	P	21 38 52.2	-0.1
	0.8nm,0.5s,baz=94,slow=7.2,SNR=42						
ASAR	**Alice Springs**	**48.27**	**252**	P	P	21 38 53.8	-0.3
	7.8nm,0.6s,baz=88,slow=8.4,SNR=146						

*JMA **19** 22:13:54.7±0.7, 4645N×15360E, h30km, M4.3*
*ISCJB **19** 22:13:55.7±0.3, 4589N±005×15370E±005, h33km, mb4.7/68, MS4.2/10, Error ellipse: s-maj=8.0km s-min=3.8km az=151.3*
*BJI **19** 22:13:55.9, 4575N×15377E, h57km, mB4.9, mb4.7, Ms4.6, Msz4.3*
*MOS **19** 22:13:56.5±1.4, 4609N×15374E, h33km, mb4.7/26, MS4.1/7, Error ellipse: s-maj=8.8km s-min=5.9km az=102.3*
*IDC **19** 22:13:58.9±3.7, 4604N×15382E, h46km±35km, mb3.9/15, mb1 4.1/17, mb1mx4.1/20, mbtmp3.9/17, MS4.0/2, Ms1 4.0/2, ms1mx3.3/27, Error ellipse: s-maj=19.7km s-min=15.2km az=111.0*
*NEIC **19** 22:14:00.5±1.1, 4601N×15385E, h57km±9km, mb4.8/34, Error ellipse: s-maj=8.6km s-min=5.7km az=159.0*

ISC 19 22:13:57.9±0.3, 4591N±005×15371E±005, h35km, n214, σ1s24/222, mb4.7/68, MS4.2/10, 16C-6D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.16**	**263**	⇑*i*PN	**Pn**	**22 14 58.2**	**-0.6**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,240nm,0.5s						
SKR	**Severo-Kuril's**	**5.04**	**18**	*e*PN	**Pn**	**22 15 06.5**	**-4.4**
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
NEM2	**Nemuro 2**	**6.23**	**249**	P	**Pn**	**22 15 25.6**	**-1.6**
NEM2				*e*S	**Sn**	**22 16 33.2**	**-3.9**
JRA	**Rausu**	**6.41**	**255**	P	**Pn**	**22 15 30.0**	**+0.3**
JNK	**Nakash**	**6.81**	**253**	P	**Pn**	**22 15 34.9**	**-0.3**
JNK				*e*S	**Sn**	**22 16 49.2**	**-2.2**
JAK	**Akkeshi**	**7.08**	**249**	P	**Pn**	**22 15 37.2**	**-1.7**
JAK				*e*S	**Sn**	**22 16 53.2**	**-4.8**
JAR	**Ashorobuto**	**7.56**	**253**	P	**Pn**	**22 15 45.4**	**-0.1**
JAR				*e*S	**Sn**	**22 17 08.0**	**-1.9**
JMP	**Maruseppu**	**7.58**	**259**	P	**Pn**	**22 15 47.0**	**+1.2**
YSS	**Yuzh-Sakhalins**	**7.64**	**282**	*e*Pn	**Pn**	**22 15 49.6**	**+3.0**
YSS	**Yuzh-Sakhalins**	**7.64**	**282**	⇑*i*PN	**Pn**	**22 15 50.0**	**+3.4**
YSS				pmax	pmax		
	comp=E,90nm,1.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
PET	**Petropavlovsk**	**7.81**	**23**	*e*Pn	**Pn**	**22 15 51.4**	**+2.5**
	comp=Z,11nm,0.3s						
PET	**Petropavlovsk**	**7.81**	**23**	*e*PN	**Pn**	**22 15 51.4**	**+2.4**
PET				pmax	pmax		
	comp=Z,11nm,0.3s						
JKK2	**Kamakawa 2**	**8.04**	**259**	P	**Pn**	**22 15 53.2**	**+1.0**
ASAJ	**Asahikawa**	**8.08**	**261**	PN	**Pn**	**22 15 55.7**	**+3.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.08**	**261**	P	**Pn**	**22 15 55.6**	**+3.1**
	comp=Z,0.9nm,0.3s,baz=64,slow=13,SNR=5.5						
JCH	**Churui**	**8.12**	**250**	P	**Pn**	**22 15 52.5**	**-0.7**
JCH				*e*S	**Sn**	**22 17 19.0**	**-4.7**
ERM	**Erimo**	**8.55**	**247**	*e*PN	**Pn**	**22 16 01.6**	**+2.6**
JNBK	**Urakawa-nobuka**	**8.68**	**249**	P	**Pn**	**22 15 59.6**	**-1.2**
JNBK				*e*S	**Sn**	**22 17 31.6**	**-5.8**
JNB	**Noboribetsu**	**9.73**	**254**	P	**Pn**	**22 16 15.3**	**+0.1**
JNB				*e*S	**Sn**	**22 17 59.5**	**-3.7**
JKB	**Kayabe**	**9.99**	**251**	*e*S	**Sn**	**22 18 02.5**	**-7.1**
JANG	**Nango**	**10.48**	**242**	P	**Pn**	**22 16 22.2**	**-3.4**
JANG				*e*S	**Sn**	**22 18 11.7**	**-10**
JTM	**Tenmabayashi**	**10.53**	**245**	P	**Pn**	**22 16 24.6**	**-1.6**
JTM				*e*S	**Sn**	**22 18 15.7**	**-7.1**
JTH	**Tanohata**	**10.53**	**240**	*e*S	**Sn**	**22 18 13.8**	**-9.1**
OFUJ	**Ofunato**	**11.20**	**237**	P	**Pn**	**22 16 32.3**	**-3.1**
OFUJ				*e*S	**Sn**	**22 18 29.7**	**-10**
JIO	**Ouri**	**11.80**	**235**	*e*S	**Sn**	**22 18 42.2**	**-12**
HABR	**Khabarovsk**	**12.95**	**288**	*e*PN	**Pn**	**22 16 56.4**	**-2.8**
MAJO	**Matsushiro**	**14.93**	**237**	*e*Pn	**Pn**	**22 17 33.7**	**+7.5**
	comp=Z,52nm,1.2s						
MAJO	**Matsushiro**	**14.93**	**237**	*e*P	**Pn**	**22 17 33.7**	**+7.5**
MAJO				pmax	pmax		
	comp=Z,52nm,1.2s						
MAT	**Matsushiro**	**14.93**	**237**	P	**Pn**	**22 17 25.2**	**-1.0**
MJAR	**Matsushiro Arr**	**14.93**	**237**	P	**Pn**	**22 17 30.1**	**+3.8**
	comp=Z,0.3nm,0.3s,baz=34,slow=9.0,SNR=12						
KLR	**Kul'dur**	**15.18**	**291**	*e*P	**Pn**	**22 17 27.0**	**-2.4**
KLR				pmax	pmax		
	comp=Z,63nm,2.0s						
KLR				MLR	MLR		
	comp=E,500nm,14.0s						
KLR				MLR	MLR		
	comp=Z,2μm,14.0s						
MDJ	**Mudanjiang**	**17.02**	**274**	P	**Pn**	**22 17 53.5**	**+0.6**
MDJ				AMB	AMB		
	comp=Z,37nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,285nm,7.9s						
MDJ	**Mudanjiang**	**17.02**	**274**	*e*Pn	**Pn**	**22 17 52.5**	**-0.4**
SEY	**Seymchan**	**17.08**	**358**	*e*P	**Pn**	**22 17 53.4**	**-0.2**
CN2	**Changchun**	**20.11**	**274**	*e*P	**P**	**22 18 30.9**	**+2.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
CLNS	**Chul'man**	**20.89**	**312**	*e*P	**P**	**22 18 35.3**	**-1.4**
CLNS				pmax	pmax		
	comp=Z,29nm,1.0s						
CLNS				pmax	pmax		
	comp=N,15nm,0.9s						
CLNS				pmax	pmax		
	comp=E,19nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.0						
CLNS				MLR	MLR		
	comp=N,100nm,11.0s,MS4.0						
CLNS				MLR	MLR		
	comp=E,400nm,13.0s,MS4.0						
NRGR	**Nerungri**	**20.92**	**311**	*e*P	**P**	**22 18 36.0**	**-1.1**
KSRS	**Korea Array**	**20.96**	**255**	P	**P**	**22 18 40.3**	**+2.6**
	comp=E,1.6nm,0.6s,baz=59,slow=11,SNR=4.6						
KSRS				LR	LR	22 25 50.2	
	comp=E,197nm,20.4s,MS3.5,baz=254,slow=34						
YAK	**Yakutsk**	**21.25**	**328**	*e*P	**P**	**22 18 38.7**	**-1.9**
	comp=E,29nm,0.8s,mb4.7						
YAK	**Yakutsk**	**21.25**	**328**	*e*P	**P**	**22 18 38.3**	**-2.4**
YAK				*i* *PP		22 18 48.4	
YAK				*e*S	**S**	**22 22 29.2**	**-5.4**
YAK				*i* SS		22 22 52.5	
YAK				pmax	pmax		
	comp=N,12nm,1.0s						
YAK				pmax	pmax		
	comp=Z,38nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=E,11nm,1.1s						
YAK				smax			
	comp=E,137nm,3.2s						
YAK				smax			
	comp=Z,178nm,4.3s						
YAK				smax			
	comp=N,148nm,2.2s						
YAK				MLR	MLR		
	comp=Z,575nm,23.0s,MS3.9						
YAK				MLR	MLR		
	comp=N,611nm,28.0s,MS3.9						
YAK				MLR	MLR		
	comp=E,299nm,23.0s,MS3.9						
INCN	**Inchon**	**21.82**	**257**	P	**P**	**22 18 48.8**	**+1.9**
SNY	**Shenyang**	**22.03**	**270**	⇑P	**P**	**22 18 49.5**	**+0.3**
SNY				AMB	AMB		
	comp=Z,23nm,1.7s,mb4.3						
HIA	**Hailar**	**23.04**	**291**	*e*P	**P**	**22 19 01.4**	**+1.6**
BILL	**Bilibino**	**23.12**	**12**	*e*P	**P**	**22 18 59.7**	**-0.8**
	comp=Z,117nm,2.0s,mb5.0						
BILL	**Bilibino**	**23.12**	**12**	⇑*e*P	**P**	**22 19 00.0**	**-0.5**
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
BILL				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.1						
DL2	**Dalian**	**24.58**	**265**	P	**P**	**22 19 16.9**	**+2.5**
DL2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
BOD	**Bodaibo**	**26.85**	**311**	*e*P	**P**	**22 19 31.1**	**-3.7**
BOD				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.4						
BJI	**Beijing**	**27.89**	**271**	P	**P**	**22 19 45.9**	**+1.6**
BJI				AMB	AMB		
	comp=Z,17nm,2.0s,mb4.3						
BJT	**Baijiatuau**	**27.91**	**271**	*e*P	**P**	**22 19 48.2**	**+3.7**
	comp=Z,20nm,1.1s,mb4.7						
BJT	**Baijiatuau**	**27.91**	**271**	*e*P	**P**	**22 19 48.2**	**+3.7**
BJT				pmax	pmax		
	comp=Z,20nm,1.1s						
TIXI	**Tiksi**	**28.39**	**344**	P	**P**	**22 19 44.0**	**-4.4**
	comp=Z,12nm,1.4s,mb4.3						
TIXI	**Tiksi**	**28.39**	**344**	P	**P**	**22 19 44.1**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.3						
NJ2	**Nanjing**	**30.16**	**255**	*e*P	**P**	**22 20 06.1**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,270nm,6.0s						
NJ2				LR	LR		
	comp=N,960nm,23.0s,MS4.4						
NJ2				LR	LR		
	comp=E,580nm,24.3s,MS4.4						
NJ2				LR	LR		
	comp=Z,490nm,22.3s,MS4.1						
ULN	**Ulaanbaatar**	**31.57**	**291**	*e*P	**P**	**22 20 18.1**	**+1.2**
ULN	**Ulaanbaatar**	**31.57**	**291**	⇑*e*P	**P**	**22 20 16.6**	**-0.2**
SONM	**Songino Array**	**32.01**	**291**	P	**P**	**22 20 19.6**	**-1.1**
SONM						22 23 10.1	
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	**Songino Array**	**32.01**	**291**	P	**P**	**22 20 19.6**	**-1.1**
	comp=Z,3.1nm,1.0s,mb4.1,baz=74,slow=8.5,SNR=10						
SONM				PcP	PcP	22 23 10.1	+0.3
	comp=Z,0.6nm,1.0s,baz=86,slow=5.9,SNR=2.5						
TLY	**Talaya**	**32.94**	**299**	*e*P	**P**	**22 20 29.2**	**+0.5**
	comp=Z,3.3nm,0.4s,mb4.6						
TLY	**Talaya**	**32.94**	**299**	*e*P	**P**	**22 20 29.6**	**+0.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TLY				MLR	MLR		
	comp=Z,264nm,14.0s,MS4.1						
ZAK	**Zakamensk**	**33.41**	**296**	*e*P	**P**	**22 20 32.6**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
XAN	**Xi'an**	**35.87**	**267**	P	**P**	**22 20 54.6**	**+0.3**
XAN				AMB	AMB		
	comp=Z,4.0nm,1.2s,mb4.2						
COLA	**College**	**36.55**	**38**	*e*P	**P**	**22 20 59.1**	**-0.6**
	comp=Z,1.8nm,0.4s,mb4.2						
COLA	**College**	**36.55**	**38**	*e*P	**P**	**22 20 59.1**	**-0.6**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.3						
LZH	**Lanzhou**	**38.34**	**273**	*e*P	**P**	**22 21 17.0**	**+1.8**
LZH				AP	pP	22 21 25.3	-0.1
LZH				XP	sP	22 21 29.5	-0.1
LZH				AMB	AMB		
	comp=Z,32nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,75nm,7.2s						
LZH				LR	LR		
	comp=N,533nm,15.3s						
LZH				LR	LR		
	comp=Z,887nm,18.5s,MS4.6						
GTA	**Gaotai**	**39.52**	**280**	*e*P	**P**	**22 21 26.6**	**+1.5**
GTA				AP	pP	22 21 34.3	-1.0
GTA				PP	PP	22 23 04.3	+8.3
GTA				XS	sS	22 27 47.1	+5.3
GTA				AMB	AMB		
	comp=Z,16nm,1.9s,mb4.4						
GTA				AMB	AMB		
	comp=Z,217nm,4.2s						
GTA				LR	LR		
	comp=N,336nm,13.7s,MS4.4						
GTA				LR	LR		
	comp=E,252nm,14.8s,MS4.4						
GTA				LR	LR		
	comp=Z,292nm,14.5s,MS4.2						
INK	**Inuvik**	**42.15**	**32**	*e*P	**P**	**22 21 46.2**

USP	Ospenovka	54.24	298	P		P	22 23 21.6	+1.6
	SNR=19							
KBK	Karagaybulak	54.29	297	P		P	22 23 22.1	+1.8
	SNR=9.9							
KZA	Kyzart	54.41	296	P		P	22 23 23.8	+2.5
	SNR=16							
TAPN	Taplejung	54.57	274	*e*P		P	22 23 23.3	+0.7
AAK	Ala-Archa	54.58	297	P		P	22 23 23.6	+1.1
	SNR=13							
UCH	Uchtor	54.79	297	*e*P		P	22 23 25.6	+1.6
	comp=Z,2.0nm,0.8s,mb4.2							
EKS2	Erkin-Say	55.01	298	*e*P		P	22 23 26.9	+1.4
	comp=Z,16nm,1.0s,mb5.0							
EKS2	Erkin-Say	55.01	298	P		P	22 23 27.2	+1.6
	SNR=16							
ODAN	Odare	55.09	274	*e*P		P	22 23 27.7	+1.3
	comp=Z,20nm,1.2s,mb5.0							
AML	Almayashu	55.35	297	*e*P		P	22 23 29.7	+1.6
	comp=Z,11nm,1.0s,mb4.8							
AML	Almayashu	55.35	297	P		P	22 23 30.2	+2.1
	SNR=8.6							
JIRN	Jiri	55.43	276	*e*P		P	22 23 29.1	+0.3
	comp=Z,53nm,1.3s,mb5.4							
ARU	Arti	55.91	318	*e*P		P	22 23 31.5	-0.3
	comp=Z,11nm,1.0s,mb4.8							
ARU	Arti	55.91	318	*e*P		P	22 23 30.3	-1.6
ARU							22 25 31.4	
ARU					S	S	22 31 12.4	-4.4
ARU					SS	SS	22 34 55.2	-7.0
KKN	Kakani	55.98	276	*e*P		P	22 23 32.4	-0.4
	comp=Z,74nm,1.4s,mb5.5							
GKN	Gorkha	56.30	277	*e*P		P	22 23 34.5	-0.5
KOLN	Koldanda	57.16	277	*e*P		P	22 23 40.5	-0.7
	comp=Z,56nm,1.2s,mb5.5							
NEW	Newport	57.36	53	P		P	22 23 42.2	-0.1
KEV	Kevo	58.27	341	*ep*		P	22 23 46.9	-1.5
	comp=Z,10nm,0.9s,mb4.8							
KEV	Kevo	58.27	341	*e*P		P	22 23 46.9	-1.5
KEV					pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
PRGR	Permogore	58.30	328	*e*P		P	22 23 47.5	-1.1
PRGR					pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0							
ARCES	ARCESS Array B	58.78	341	P		P	22 23 51.1	-0.8
ARCES					pmax	pmax		
	comp=Z,8.0nm,0.9s							
ARCES	ARCESS Array B	58.78	341	P		P	22 23 51.1	-0.8
	comp=Z,8.1nm,0.9s,mb4.7,baz=50,slow=9.6,SNR=9.2							
ARE0	ARCESS Array S	58.78	341	*e*P		P	22 23 51.0	-0.9
HLID	Hailey	61.64	56	P		P	22 24 11.0	-0.9
FCC	Fort Churchill	61.74	33	*e*P		P	22 24 11.2	-1.0
BOZ	Bozeman (W)	61.94	52	*e*P		P	22 24 09.0	-4.8
	comp=Z,8.2nm,0.7s,mb5.0							
BOZ	Bozeman (W)	61.94	52	*e*P		P	22 24 09.0	-4.8
BOZ					pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0							
JOF	Joensuu	62.27	334	*ep*		P	22 24 13.9	-1.9
KAF	Kangasniemi	64.38	336	*ep*		P	22 24 29.0	-0.7
	baz=37,slow=6.2							
TPNV	Topopah Spring	64.66	62	*e*P		P	22 24 32.0	+0.1
	comp=Z,2.0nm,0.8s,mb4.2							
TPNV	Topopah Spring	64.66	62	*e*P		P	22 24 32.0	0.0
TPNV					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2							
BW06	Boulder Array	64.91	54	P		P	22 24 33.0	-0.5
PDAR	Pinedale Array	64.91	54	P		P	22 24 31.5	-2.0
	comp=Z,0.9nm,1.1s,mb3.7,baz=28,slow=3.5,SNR=5.1							
FINES	FINESS Array B	64.98	335	*i* P		P	22 24 33.2	-0.4
FINES					pmax	pmax		
	comp=Z,4.0nm,0.8s							
FINES	FINESS Array B	64.98	335	P		P	22 24 32.5	-1.1
	comp=Z,4.1nm,0.8s,mb4.5,baz=46,slow=7.2,SNR=16							
MOS	Moscow	65.37	326	*e*P		P	22 24 34.3	-2.0
CTAO	Charters Tower	66.03	188	P		P	22 24 39.9	-0.9
OBN	Obninsk	66.24	326	*e*P		P	22 24 42.1	+0.3
	comp=Z,15nm,0.8s,mb5.1							
OBN	Obninsk	66.24	326	⇑*e*P		P	22 24 41.6	-0.3
OBN				*e*			22 27 09.0	
OBN				*e*S		S	22 33 23.6	-4.6
OBN					pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2							
RSSD	Black Hills	67.05	50	*e*P		P	22 24 46.7	-0.6
	comp=Z,4.4nm,1.1s,mb4.4							
RSSD	Black Hills	67.05	50	*e*P		P	22 24 46.7	-0.6
RSSD					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4							
WRA	Warramunga Arr	67.85	200	P		P	22 24 52.5	+0.1
WRA					pmax	pmax		
	comp=Z,3.0nm,1.0s							
WRA	Warramunga Arr	67.85	200	P		P	22 24 52.5	0.0
	comp=Z,3.2nm,1.0s,mb4.3,baz=16,slow=6.8,SNR=13							
PV10	Paradox Valley	68.08	57	P		P	22 24 53.6	-0.2
ISCO	Idaho Springs	69.10	54	*e*P		P	22 25 00.4	+0.2
NB2	NORSAR Subarra	69.16	342	P		P	22 25 00.1	-0.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=28,slow=6.2							
NB2	NORSAR Subarra	69.16	342	P		P	22 25 00.1	-0.1
NB2					pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9							
NOA	NORSAR Array B	69.16	342	P		P	22 25 00.2	0.0
NOA					pmax	pmax		
	comp=Z,3.0nm,0.8s							
NOA	NORSAR Array B	69.16	342	P		P	22 25 00.2	0.0
	comp=Z,2.8nm,0.8s,mb4.2,baz=29,slow=6.3,SNR=4.6							
SDCO	Great Sand Dun	70.56	56	*e*P		P	22 25 08.5	-0.8
	comp=Z,3.2nm,1.1s,mb4.2							
ASAR	Alice Springs	71.54	199	P		P	22 25 16.0	+0.9
ASAR					pmax	pmax		
	comp=Z,3.0nm,1.0s							
ASAR	Alice Springs	71.54	199	P		P	22 25 16.0	+0.9
	comp=Z,3.1nm,0.9s,mb4.2,baz=12,slow=5.5,SNR=24							
KIV	Kislovodsk	71.69	315	*e*P		P	22 25 17.9	+2.0
KIV	Kislovodsk	71.69	315	*c i*P		P	22 25 17.9	+2.0
KIV					pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9							
KIV					MLR	MLR		
	comp=Z,228nm,19.0s,MS4.5							
KIV	Kislovodsk	71.69	315	⇑*i*P		P	22 25 18.6	+2.7
ANMO	Albuquerque	71.92	58	*e*P		P	22 25 17.3	-0.2
AKASG	Malin Array Be	72.48	327	P		P	22 25 20.3	-0.2
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.4s							
AKASG	Malin Array Be	72.48	327	P		P	22 25 20.3	-0.2
	comp=Z,2.0nm,0.4s,mb4.4,baz=33,slow=6.2,SNR=16							
ANN	Anapa	73.58	318	*e*P		pP	22 25 37.4	-0.6
ANN					pmax	pmax		
	comp=Z,88nm,2.2s,mb5.3							
MNTX	Cornudas Mount	74.83	60	*e*P		P	22 25 35.3	+0.7
	comp=Z,22nm,2.1s,mb4.7							
KWP	Kalwaria	75.76	330	⇓P		P	22 25 40.6	+0.9
KWP	Kalwaria	75.76	330	⇓*i*P		P	22 25 40.6	+0.9
STHS	Stebnicka Huta	76.45	330	*e*P		P	22 25 44.0	+0.4
	comp=Z,5.4nm,1.0s,mb4.4							
STHS	Stebnicka Huta	76.45	330	*e*P		P	22 25 44.0	+0.4
STHS					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4							
KOLS	Kolonicke sedl	76.50	329	*e*P		P	22 25 44.2	+0.3
WMOK	Wichita Mounta	76.52	54	*e*P		P	22 25 42.9	-1.4
	comp=Z,2.4nm,0.9s,mb4.1							
WMOK	Wichita Mounta	76.52	54	*e*P		P	22 25 42.9	-1.4
WMOK					pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0							
CRVS	Cervenica-Dubn	76.81	330	*e*P		P	22 25 48.3	+2.6
TRPA	Tarpa	77.08	329	⇓*i*P		P	22 25 47.8	+0.6
OKC	Ostrava-Krasne	77.13	332	*e*P		P	22 25 48.0	+0.6
HDIL	Hopedale	77.17	44	P		P	22 25 47.3	-0.5
UPC	Upice	77.22	334	*e*P		P	22 25 53.9	+6.0
DPC	Dobruska-Polom	77.26	334	*e*P		P	22 25 49.0	+0.8
MORC	Moravsky Berou	77.38	333	⇑P		P	22 25 48.8	0.0
MORC	Moravsky Berou	77.38	333	⇑*i*P		P	22 25 48.8	0.0
CLL	Collm	77.40	336	*i* P		P	22 25 49.8	+0.9
KECS	Kecovo	77.51	330	*e*P		P	22 25 49.7	+0.1
	comp=Z,2.5nm,1.0s,mb4.1							
KECS	Kecovo	77.51	330	*e*P		P	22 25 49.7	+0.1
KECS					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2							
LTX	Lajitas	77.55	61	*e*P		P	22 25 50.1	-0.1
TXAR	Lajitas Array	77.55	61	P		P	22 25 49.7	-0.4
TXAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
TXAR	Lajitas Array	77.55	61	P		P	22 25 49.7	-0.4
	comp=Z,1.2nm,0.6s,mb4.0,baz=296,slow=4.0,SNR=16							
MLR	Muntele Rosu	77.99	325	⇑P		P	22 25 52.3	0.0
MLR	Muntele Rosu	77.99	325	⇑*i*P		P	22 25 52.3	0.0
MALT	Malatya	78.03	313	*e*P		P	22 25 54.2	+1.5
	comp=Z,32nm,2.0s,mb4.9							
MALT	Malatya	78.03	313	⇓*i*P		P	22 25 54.3	+1.6
VYHS	Vyhne	78.06	331	*e*P		P	22 25 52.6	-0.1
VRAC	Vranov	78.09	333	⇓P		P	22 25 51.4	-1.4
VRAC	Vranov	78.09	333	⇓*i*P		P	22 25 51.4	-1.4
PRU	Pruhonice	78.13	334	*e*P		P	22 25 56.3	+3.3
KOLL	Kolacno	78.14	331	*e*P		P	22 25 54.2	+1.1
STKA	Stephens Creek	78.19	191	P		P	22 25 54.0	+0.6
STKA	Stephens Creek	78.19	191	P		P	22 25 54.0	+0.6
	comp=Z,0.4nm,0.4s,mb3.7,baz=342,slow=9.6,SNR=3.3							
PSZ	Piszkesteto	78.20	330	P		P	22 25 52.8	-0.6
KHC	Kasperske Hory	79.18	335	⇑*e*P		P	22 26 00.2	+1.4
KHC	Kasperske Hory	79.18	335	*e*P		P	22 26 02.5	+3.7
GERES	GERESS Array B	79.39	334	P		P	22 26 00.5	+0.5
GERES					pmax	pmax		
	comp=Z,2.0nm,0.8s							
GERES	GERESS Array B	79.39	334	P		P	22 26 00.5	+0.5
	comp=Z,1.6nm,0.8s,mb4.0,baz=47,slow=2.7,SNR=9.6							
MIB	Mutribah	79.46	302	*e*P		P	22 26 00.3	-0.3
MIB					AMb	AMB	22 26 04.4	
	comp=Z,20nm,0.9s,mb5.1							
BZS	Buzias	79.55	328	⇑P		P	22 25 59.4	-1.5
BZS	Buzias	79.55	328	⇑*i*P		P	22 25 59.4	-1.5
QRN	Al-Qurain	79.89	301	*e*P		P	22 26 03.3	+0.3
QRN					AMb	AMB	22 26 08.6	
	comp=Z,26nm,0.9s,mb5.2							
NAY	Al-Naaiem	79.92	302	*e*P		P	22 26 03.3	+0.1
NAY					AMb	AMB	22 26 06.9	
	comp=Z,15nm,1.0s,mb4.9							
RDF	Al-Radifah	79.97	301	*e*P		P	22 26 03.7	+0.2
RDF					AMb	AMB	22 26 07.5	
	comp=Z,38nm,1.2s,mb5.2							
CDF	Champ du Feu	81.59	338	*e*P		P	22 26 12.3	+0.5
	comp=Z,46nm,1.3s,mb4.9							
CDF	Champ du Feu	81.59	338	*e*P		P	22 26 12.3	+0.5
	comp=Z,23nm,1.3s,mb5.0							
CDF	Champ du Feu	81.59	338	*e*P		P	22 26 12.3	+0.5
CDF					pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0							
LOR	Lormes	83.51	340	*e*P		P	22 26 21.2	-0.6
	comp=Z,81nm,1.5s,mb5.3							
LOR	Lormes	83.51	340	*e*P		P	22 26 21.2	-0.6
	comp=Z,41nm,1.5s,mb5.3							
LOR	Lormes	83.51	340	*e*P		P	22 26 21.2	-0.6
LOR					pmax	pmax		
	comp=Z,41nm,1.5s,mb5.3							
SSF	Saint Saulge	83.79	340	*e*P		P	22 26 23.5	+0.3
	comp=Z,44nm,1.3s,mb5.1							
SSF	Saint Saulge	83.79	340	*e*P		P	22 26 23.5	+0.3
	comp=Z,22nm,1.3s,mb5.1							
SSF	Saint Saulge	83.79	340	*e*P		P	22 26 23.5	+0.3
SSF					pmax	pmax		
	comp=Z,22nm,1.3s,mb5.1							
AVF	Avril sur Loir	84.08	340	*e*P		P	22 26 24.2	-0.5
	comp=Z,33nm,1.1s,mb5.1							
AVF	Avril sur Loir	84.08	340	*e*P		P	22 26 24.2	-0.5
	comp=Z,16nm,1.1s,mb5.1							
AVF	Avril sur Loir	84.08	340	*e*P		P	22 26 24.2	-0.5
AVF					pmax	pmax		
	comp=Z,17nm,1.1s,mb5.1							
SMF	Signal de Mont	84.10	340	*e*P		P	22 26 24.4	-0.4
	comp=Z,48nm,1.2s,mb5.2							
SMF	Signal de Mont	84.10	340	*e*P		P	22 26 24.4	-0.4
	comp=Z,24nm,1.2s,mb5.2							
SMF	Signal de Mont	84.10	340	*e*P		P	22 26 24.4	-0.4
SMF					pmax	pmax		
	comp=Z,24nm,1.2s,mb5.2							
LPL	La Plagne	84.41	337	*e*P		P	22 26 27.8	+1.4
	comp=Z,69nm,1.5s,mb5.3							
LPL	La Plagne	84.41	337	*e*P		P	22 26 27.8	+1.4
	comp=Z,34nm,1.5s,mb5.3							
LPL	La Plagne	84.41	337	*e*P		P	22 26 27.8	+1.4
LPL					pmax	pmax		
	comp=Z,35nm,1.5s,mb5.3							
LPG	La Plagne	84.42	337	*e*P		P	22 26 27.3	+0.8
	comp=Z,80nm,1.4s,mb5.3							
LPG	La Plagne	84.42	337	*e*P		P	22 26 27.3	+0.8
	comp=Z,40nm,1.4s,mb5.4							
LPG	La Plagne	84.42	337	*e*P		P	22 26 27.3	+0.8
LPG					pmax	pmax		
	comp=Z,40nm,1.4s,mb5.4							
FRF	La Foret Royal	86.24	337	*e*P		P	22 26 35.4	-0.2
TORD	Torodi Ar. Bea	116.03	329	PP		PP	22 33 39.9	-1.1
	comp=Z,0.7nm,1.0s,baz=3.3,slow=7.5,SNR=4.0							
PLCA	Paso Flores	147.71	97	PKPbc		PKPbc	22 33 38.2	-0.1
PLCA	Paso Flores	147.71	97	PKPbc		PKPbc	22 33 38.2	-0.1
	comp=Z,2.3nm,0.8s,baz=281,slow=4.0,SNR=4.2							

NIED ***19*** *22:31:00,46.50N×153.50E,h11km,Mw4.6 Best double couple: M0 1.03000×10^16 NP1:φ=299.00000°,δ=31.00000°, λ=150.00000°. NP2:φ=55.00000°,δ=75.00000°,λ=62.00000°.*

ISCJB ***19*** *22:31:10.0±1.6,45.88N±0.06×153.70E±0.05,h6km±10km, mb4.5/62,MS4.0/5,Error ellipse: s-maj=9.8km s-min=5.0km az=156.9*

NEIC ***19*** *22:31:12.6±0.3,45.97N×153.77E,h10km,mb4.7/31,Error ellipse: s-maj=9.1km s-min=5.4km az=160.0*

BJI ***19*** *22:31:13.6,46.55N×153.58E,h14km,mB4.8,mb4.5,Ms4.5, Msz4.3*

JMA ***19*** *22:31:13.4±0.8,46.51N×153.50E,h30km,M4.5*

MOS ***19*** *22:31:15.2±1.6,46.09N×153.64E,h38km±34km,mb4.6/32, MS4.2/4,Error ellipse: s-maj=9.1km s-min=7.0km az=97.8*

IDC ***19*** *22:31:17.4±3.6,46.02N×153.71E,h48km±34km,mb4.0/15, mb1 4.2/16,mb1mx4.2/19,mbtmp4.0/16,ML3.9/1,MS3.8/4, Ms1 3.8/4,ms1mx3.6/24,Error ellipse: s-maj=18.2km s-min=14.1km az=139.0*

ISC 19 22:31:13.4±1.7,4600N±005×15367E±005,h14km±10km, n176,σ1$11/185,mb4.5/62,MS4.0/5,1C-3D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.14	261	*e*PN	Pn	22 32 15.0	-1.2
KUR				pmax	pmax		
	comp=N,110nm,0.4s						
KUR				pmax	pmax		
	comp=E,50nm,0.4s						
KUR				pmax	pmax		
	comp=Z,320nm,0.4s						
SKR	Severo-Kuril's	4.96	18	*e*PN	Pn	22 32 25.4	-2.1
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
NEM2	Nemuro 2	6.23	248	P	Pn	22 32 43.1	-1.9
NEM2				*e*S	Sn	22 33 50.6	-5.4
JNK	Nakash	6.81	252	P	Pn	22 32 52.5	-0.4
JNK				*e*S	Sn	22 34 07.5	-2.7
JAK	Akkeshi	7.08	248	P	Pn	22 32 55.4	-1.2
JAK				*e*S	Sn	22 34 10.9	-6.0
JTKR	Abashiri--Toko	7.21	257	P	Pn	22 32 58.9	+0.5
JAR	Ashorobuto	7.56	253	P	Pn	22 33 03.3	+0.1
JAR				*e*S	Sn	22 34 27.0	-1.6
JMP	Maruseppu	7.58	258	P	Pn	22 33 05.1	+1.7
YSS	Yuzh-Sakhalins	7.60	281	*e*Pn	Pn	22 33 06.9	+3.2
YSS	Yuzh-Sakhalins	7.60	281	*e*PN	Pn	22 33 08.2	+4.5
YSS				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
YSS				MLR	MLR		
	comp=Z,800nm,15.0s						
JOB	Onbets	7.69	250	P	Pn	22 33 04.8	-0.1
JOB				*e*S	Sn	22 34 27.0	-4.8
PET	Petropavlovsk	7.74	23	*e*PN	Pn	22 33 00.8	-4.8
JKK2	Kamakawa 2	8.04	259	P	Pn	22 33 10.6	+0.9
ASAJ	Asahikawa	8.06	260	P	Pn	22 33 11.8	+1.7
ASAJ	Asahikawa	8.06	260	PN	Pn	22 33 11.6	+1.5
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,387nm,20.4s						
ASAJ	Asahikawa	8.06	260	P	Pn	22 33 11.6	+1.5
	comp=Z,1.7nm,0.3s,baz=55,slow=5.2,SNR=8.8						
ASAJ				LR	LR	22 36 34.7	
	comp=Z,387nm,20.4s,baz=50,slow=39						
JCH	Churui	8.13	249	P	Pn	22 33 10.0	-1.0
JCH				*e*S	Sn	22 34 37.2	-5.4
ERM	Erimo	8.56	246	*e*PN	Pn	22 33 18.3	+1.4
JNBK	Urakawa-nobuka	8.69	249	P	Pn	22 33 18.1	-0.5
JNBK				*e*S	Sn	22 34 48.9	-7.4
JNB	Noboribetsu	9.73	253	P	Pn	22 33 32.7	-0.2
JNB				*e*S	Sn	22 35 17.4	-4.5
JKB	Kayabe	10.00	250	P	Pn	22 33 33.9	-2.7
JKB				*e*S	Sn	22 35 20.4	-8.1
JANG	Nango	10.50	242	*e*S	Sn	22 35 30.3	-11
JTM	Tenmabayashi	10.54	245	P	Pn	22 33 42.2	-1.9
JTM				*e*S	Sn	22 35 32.2	-10
MA2	Magadan	13.71	354	Pn	Pn	22 34 31.7	+4.5
MAJO	Matsushiro	14.96	236	*e*Pn	Pn	22 34 51.9	+7.6
	comp=Z,31nm,0.9s						
MAJO	Matsushiro	14.96	236	*e*P	Pn	22 34 51.9	+7.5
MAJO				pmax	pmax		
	comp=Z,31nm,0.9s						
MJAR	Matsushiro Arr	14.96	236	P	Pn	22 34 48.9	+4.5
	comp=Z,0.3nm,0.3s,baz=37,slow=8.6,SNR=20						
KLR	Kul'dur	15.12	290	*e*P	Pn	22 34 46.1	-0.4
KLR				MLR	MLR		
	comp=E,700nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2μm,13.0s						
MDJ	Mudanjiang	16.98	274	P	Pn	22 35 10.6	+0.2
MDJ				AMB	AMB		
	comp=Z,18nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,116nm,6.7s						
MDJ	Mudanjiang	16.98	274	*e*Pn	Pn	22 35 10.8	+0.4
CN2	Changchun	20.07	274	*e*P	P	22 35 48.3	+2.1
KSRS	Korea Array	20.96	255	P	P	22 35 57.1	+1.2
	comp=Z,2.4nm,0.7s,baz=58,slow=12,SNR=7.9						
KSRS				LR	LR	22 42 27.3	
	comp=Z,140nm,21.6s,MS3.3,baz=245,slow=32						
YAK	Yakutsk	21.16	328	*e*P	P	22 35 57.1	-0.8
	comp=Z,17nm,0.7s,mb4.5						
YAK	Yakutsk	21.16	328	*e*P	P	22 35 56.5	-1.4
YAK				*e*		22 36 15.1	
YAK				*e*PPP		22 36 21.2	
YAK				*e*S	S	22 39 51.5	-1.1
YAK				*e*		22 40 01.1	
YAK				*i* SS		22 40 14.1	
YAK				*e*SSS		22 40 29.2	
YAK				*e*		22 47 24.2	
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.3						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,177nm,5.6s						
YAK				pmax	pmax		
	comp=N,65nm,2.6s						
YAK				pmax	pmax		
	comp=E,58nm,3.5s						
YAK				smax			
	comp=N,233nm,5.8s						
YAK				smax			
	comp=E,154nm,4.1s						
INCN	Inchon	21.82	257	*e*P	P	22 36 06.5	+1.4
	comp=E,12nm,0.4s,mb4.7						
HIA	Hailar	22.98	291	*e*P	P	22 36 16.4	-1.0
	comp=E,3.2nm,0.5s,mb4.0						
HIA	Hailar	22.98	291	*e*P	P	22 36 16.4	-1.0
HIA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BILL	Bilibino	23.04	12	*e*P	P	22 36 18.1	+0.2
	comp=Z,11nm,0.8s,mb4.3						
BILL	Bilibino	23.04	12	⇓*e*P	P	22 36 16.1	-1.8
BILL				*e**PP		22 36 27.9	
BILL				*e*S	S	22 40 26.7	-1.2
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
BOD	Bodaibo	26.77	311	*e*P	P	22 36 49.3	-3.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
BJT	Baijiatuan	27.88	271	P	P	22 37 05.0	+2.4
	comp=Z,12nm,0.8s,mb4.6						
BJT	Baijiatuan	27.88	271	P	P	22 37 05.1	+2.4
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
TIXI	Tiksi	28.30	344	*e*P	P	22 37 03.9	-2.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.0						
ULN	Ulaanbaatar	31.52	291	*e*P	P	22 37 34.0	-0.8
ULN	Ulaanbaatar	31.52	291	*e*P	P	22 37 36.8	+2.0
SONM	Songino Array	31.95	291	P	P	22 37 38.9	+0.3
SONM						22 40 27.1	
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,270nm,18.1s						
SONM	Songino Array	31.95	291	P	P	22 37 38.9	+0.3
	comp=Z,1.1nm,0.7s,mb3.8,baz=68,slow=8.1,SNR=7.1						
SONM				PcP	PcP	22 40 27.1	-1.3
	comp=Z,0.3nm,0.8s,baz=62,slow=1.1,SNR=3.5						
SONM				LR	LR	22 51 14.7	
	comp=Z,270nm,18.1s,MS4.0,baz=268,slow=38						
TLY	Talaya	32.87	298	*e*P	P	22 37 45.5	-1.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TLY				MLR	MLR		
	comp=Z,312nm,14.0s,MS4.2						
GUMO	Guam	33.15	196	*e*P	P	22 37 48.2	-1.2
ZAK	Zakamensk	33.35	296	*e*P	P	22 37 50.1	-0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.8						
YHNB	Yeheng	33.52	242	*e*P	P	22 37 53.6	+1.1
NACB	Ninganchiao	33.75	241	*e*P	P	22 37 54.7	+0.1
IMA2	Indian Mountai	34.19	35	*e*P	P	22 37 57.9	-0.1
PMR	Palmer	35.88	43	P	P	22 38 14.7	+2.1
	comp=Z,3.7nm,0.8s,mb4.4						
P

YKA	**Yellowknife Ar**	**51.30**	**36**	P		**P**		**22 40 16.3**	**-0.2**
YKA	**Yellowknife Ar**	**51.30**	**36**	*i* P		**P**		**22 40 16.2**	**-0.4**
YKA				pmax	pmax				
	comp=Z,3.0nm,0.7s								
YKA	**Yellowknife Ar**	**51.30**	**36**	P		**P**		**22 40 16.3**	**-0.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=295,slow=7.1,SNR=40								
RES	**Resolute Bay**	**51.43**	**18**	*e*P		**P**		**22 40 18.6**	**+1.2**
TKM2	**Tokmak 2**	**53.68**	**297**	*e*P		**P**		**22 40 35.9**	**+1.4**
	comp=Z,2.0nm,0.9s,mb4.0								
TKM2	**Tokmak 2**	**53.68**	**297**	*e*P		**P**		**22 40 35.9**	**+1.4**
TKM2				pmax	pmax				
	comp=Z,2.0nm,0.9s,mb4.0								
TAPN	**Taplejung**	**54.53**	**274**	*e*P		**P**		**22 40 42.0**	**+1.1**
	comp=Z,11nm,0.9s,mb4.9								
UCH	**Uchtor**	**54.73**	**297**	*e*P		**P**		**22 40 43.2**	**+1.0**
	comp=Z,1.1nm,0.8s,mb3.9								
EKS2	**Erkin-Say**	**54.95**	**297**	*e*P		**P**		**22 40 44.8**	**+1.1**
	comp=Z,5.1nm,0.7s,mb4.7								
AML	**Almayashu**	**55.29**	**297**	*e*P		**P**		**22 40 47.4**	**+1.2**
	comp=Z,3.7nm,0.7s,mb4.5								
JIRN	**Jiri**	**55.40**	**275**	*e*P		**P**		**22 40 48.2**	**+1.0**
	comp=Z,12nm,0.7s,mb5.0								
ARU	**Arti**	**55.83**	**318**	*d i*P		**P**		**22 40 49.5**	**-0.4**
ARU								22 42 49.2	
ARU				PPP				22 44 05.7	
ARU				S		**S**		**22 48 36.5**	**+0.2**
ARU				SS		SS		22 52 19.8	-1.4
ARU				pmax	pmax				
	comp=Z,6.0nm,0.9s,mb4.6								
KKN	**Kakani**	**55.95**	**276**	*e*P		**P**		**22 40 52.0**	**+0.9**
	comp=Z,25nm,1.0s,mb5.2								
GKN	**Gorkha**	**56.26**	**277**	*e*P		**P**		**22 40 54.1**	**+0.7**
	comp=Z,24nm,0.9s,mb5.2								
KOLN	**Koldanda**	**57.12**	**277**	*e*P		**P**		**22 41 00.3**	**+0.8**
	comp=Z,18nm,0.9s,mb5.1								
KEV	**Kevo**	**58.18**	**341**	*e*p		**P**		**22 41 05.3**	**-1.0**
	comp=Z,5.5nm,0.7s,mb4.7								
KEV	**Kevo**	**58.18**	**341**	*e*P		**P**		**22 41 05.3**	**-1.0**
KEV				pmax	pmax				
	comp=Z,6.0nm,0.7s,mb4.7								
PRGR	**Permogore**	**58.21**	**328**	*e*P		**P**		**22 41 05.9**	**-0.7**
PRGR				pmax	pmax				
	comp=Z,11nm,0.4s,mb5.2								
WALA	**Waterton Lakes**	**58.62**	**50**	*e*P		**P**		**22 41 09.9**	**+0.2**
	comp=Z,5.8nm,0.9s,mb4.6								
ARCES	**ARCESS Array B**	**58.69**	**341**	P		**P**		**22 41 10.1**	**+0.2**
ARCES	**ARCESS Array B**	**58.69**	**341**	P		**P**		**22 41 10.1**	**+0.2**
ARCES				pmax	pmax				
	comp=Z,6.0nm,0.9s								
ARCES	**ARCESS Array B**	**58.69**	**341**	P		**P**		**22 41 10.1**	**+0.2**
	comp=Z,6.3nm,0.8s,mb4.7,baz=31,slow=6.2,SNR=20								
HLID	**Hailey**	**61.61**	**56**	*e*P		**P**		**22 41 30.4**	**+0.1**
FCC	**Fort Churchill**	**61.68**	**33**	*e*P		**P**		**22 41 29.9**	**-0.6**
	comp=Z,3.4nm,0.6s,mb4.7								
FCC	**Fort Churchill**	**61.68**	**33**	*e*P		**P**		**22 41 30.0**	**-0.5**
FCC				pmax	pmax				
	comp=Z,3.0nm,0.6s,mb4.6								
JOF	**Joensuu**	**62.18**	**334**	*e*p		**P**		**22 41 32.8**	**-1.0**
	comp=Z,4.8nm,0.7s,mb4.7								
JOF	**Joensuu**	**62.18**	**334**	*e*P		**P**		**22 41 32.8**	**-1.0**
JOF				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.8								
NVAR	**Mina Array Bea**	**62.44**	**62**	P		**P**		**22 41 33.7**	**-2.3**
NVAR	**Mina Array Bea**	**62.44**	**62**	P		**P**		**22 41 33.7**	**-2.3**
	comp=Z,0.9nm,0.5s,mb4.1,baz=304,slow=5.0,SNR=7.6								
MOOW	**Moose Ponds**	**63.59**	**54**	*e*P		**P**		**22 41 44.2**	**+0.7**
	comp=Z,38nm,2.8s,mb4.9								
KAF	**Kangasniemi**	**64.29**	**335**	*e*p		**P**		**22 41 45.5**	**-2.3**
	comp=Z,2.3nm,0.5s,mb4.5								
KAF	**Kangasniemi**	**64.29**	**335**	*e*P		**P**		**22 41 45.5**	**-2.3**
KAF				pmax	pmax				
	comp=Z,2.0nm,0.5s,mb4.4								
TPNV	**Topopah Spring**	**64.64**	**62**	P		**P**		**22 41 50.0**	**-0.5**
BW06	**Boulder Array**	**64.88**	**54**	*e*P		**P**		**22 41 52.4**	**+0.4**
	comp=Z,3.4nm,0.9s,mb4.4								
PDAR	**Pinedale Array**	**64.88**	**54**	P		**P**		**22 41 52.2**	**+0.3**
	comp=Z,2.5nm,0.9s,mb4.2,baz=264,slow=2.0,SNR=15								
FINES	**FINESS Array B**	**64.88**	**335**	*i* P		**P**		**22 41 50.0**	**-1.7**
FINES				pmax	pmax				
	comp=Z,3.0nm,0.8s								
FINES	**FINESS Array B**	**64.88**	**335**	P		**P**		**22 41 50.1**	**-1.6**
	comp=Z,3.0nm,0.8s,mb4.4,baz=47,slow=8.4,SNR=18								
OBN	**Obninsk**	**66.15**	**326**	*e*P		**P**		**22 41 58.9**	**-1.1**
OBN				*e**PP		pP		22 42 15.0	+11
OBN				*e*S		S		22 50 51.0	+3.2
OBN				pmax	pmax				
	comp=Z,4.0nm,1.4s,mb4.3								
ULM	**Lac du Bonnet**	**66.84**	**41**	P		**P**		**22 42 02.9**	**-1.6**
	baz=306,slow=7.9								
RSSD	**Black Hills**	**67.01**	**50**	*e*P		**P**		**22 42 05.8**	**+0.1**
WB2	**Warramunga Arr**	**67.93**	**200**	*e*P		**P**		**22 42 10.9**	**-0.7**
WRA	**Warramunga Arr**	**67.93**	**200**	P		**P**		**22 42 10.6**	**-1.0**
WRA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
WRA	**Warramunga Arr**	**67.93**	**200**	P		**P**		**22 42 10.6**	**-1.0**
	comp=Z,3.1nm,0.9s,mb4.3,baz=16,slow=6.7,SNR=18								
NOA	**NORSAR Array B**	**69.06**	**341**	P		**P**		**22 42 17.4**	**-0.9**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.5s								
NOA	**NORSAR Array B**	**69.06**	**341**	P		**P**		**22 42 17.4**	**-0.9**
	comp=Z,0.8nm,0.5s,mb3.9,baz=28,slow=6.4,SNR=3.3								
ISCO	**Idaho Springs**	**69.07**	**54**	*e*P		**P**		**22 42 18.9**	**+0.2**
	comp=Z,2.0nm,0.6s,mb4.2								
ISCO	**Idaho Springs**	**69.07**	**54**	*e*P		**P**		**22 42 18.9**	**+0.2**
ISCO				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.2								
KIV	**Kislovodsk**	**71.60**	**315**	*e*P		**P**		**22 42 37.0**	**+2.9**
KIV				pmax	pmax				
	comp=Z,6.0nm,1.8s,mb4.2								
ASAR	**Alice Springs**	**71.62**	**199**	P		**P**		**22 42 34.7**	**+0.4**
ASAR				pmax	pmax				
	comp=Z,4.0nm,0.9s								
ASAR	**Alice Springs**	**71.62**	**199**	P		**P**		**22 42 34.6**	**+0.4**
	comp=Z,4.0nm,0.9s,mb4.3,baz=14,slow=6.0,SNR=26								
ANMO	**Albuquerque**	**71.90**	**58**	P		**P**		**22 42 35.2**	**-0.8**
AKASG	**Malin Array Be**	**72.39**	**327**	*i* P		**P**		**22 42 41.0**	**+2.3**
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.5s								
AKASG	**Malin Array Be**	**72.39**	**327**	P		**P**		**22 42 38.0**	**-0.7**
	comp=Z,2.5nm,0.5s,mb4.4,baz=34,slow=6.2,SNR=14								
MBWA	**Marble Bar**	**73.59**	**213**	P		**P**		**22 42 45.4**	**-0.7**
MNTX	**Cornudas Mount**	**74.81**	**60**	*e*P		**P**		**22 42 53.4**	**+0.2**
	comp=Z,45nm,3.0s								
WMOK	**Wichita Mounta**	**76.49**	**54**	*e*P		**P**		**22 43 02.1**	**-0.7**
	comp=Z,3.1nm,0.9s,mb4.2								
WMOK	**Wichita Mounta**	**76.49**	**54**	*e*P		**P**		**22 43 02.1**	**-0.8**
WMOK				pmax	pmax				
	comp=Z,3.0nm,0.9s,mb4.2								
UPC	**Upice**	**77.13**	**334**	*e*P		**P**		**22 43 12.1**	**+6.0**
DPC	**Dobruska-Polom**	**77.17**	**334**	*e*P		**P**		**22 43 11.4**	**+5.0**
MORC	**Moravsky Berou**	**77.28**	**333**	*e*P		**P**		**22 43 07.6**	**+0.5**
	comp=Z,1.6nm,0.6s,mb4.1								
MORC	**Moravsky Berou**	**77.28**	**333**	*e*P		**P**		**22 43 07.6**	**+0.6**
MORC				pmax	pmax				
	comp=Z,2.0nm,0.6s,mb4.2								
CLL	**Collm**	**77.31**	**336**	*e*P		**P**		**22 43 08.0**	**+0.8**
LTX	**Lajitas**	**77.53**	**61**	*e*P		**P**		**22 43 08.3**	**-0.4**
	comp=Z,7.0nm,0.7s,mb4.7								
LTX	**Lajitas**	**77.53**	**61**	*e*P		**P**		**22 43 08.4**	**-0.4**
LTX				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.7								
TXAR	**Lajitas Array**	**77.53**	**61**	P		**P**		**22 43 08.1**	**-0.7**
TXAR				pmax	pmax				
	comp=Z,7.0nm,0.7s								
TXAR	**Lajitas Array**	**77.53**	**61**	P		**P**		**22 43 08.1**	**-0.6**
	comp=Z,7.3nm,0.7s,mb4.7,baz=304,slow=4.2,SNR=76								
MALT	**Malatya**	**77.95**	**313**	P		**P**		**22 43 11.3**	**+0.4**
PSZ	**Piszkesteto**	**78.11**	**330**	*e*P		**P**		**22 43 11.8**	**+0.1**
KHC	**Kasperske Hory**	**79.08**	**335**	*e*P		**P**		**22 43 21.2**	**+4.2**
KHC	**Kasperske Hory**	**79.08**	**335**	*e*P		**P**		**22 43 16.5**	**-0.5**
KHC				*e*pP		pP		22 43 21.2	-0.3
GERES	**GERESS Array B**	**79.30**	**334**	P		**P**		**22 43 17.6**	**-0.6**
GERES				pmax	pmax				
	comp=Z,1.0nm,0.5s								
GERES	**GERESS Array B**	**79.30**	**334**	P		**P**		**22 43 17.6**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.0,baz=36,slow=6.4,SNR=11								
MIB	**Mutribah**	**79.39**	**302**	*e*P		**P**		**22 43 18.9**	**-0.2**
MIB				AMb		AMB		22 43 21.1	
	comp=Z,17nm,0.7s,mb5.1								
NAY	**Al-Naaiem**	**79.85**	**302**	*e*P		**P**		**22 43 21.2**	**-0.3**
NAY				AMb		AMB		22 43 23.6	
	comp=Z,6.1nm,0.8s,mb4.6								
RDF	**Al-Radifah**	**79.90**	**301**	*e*P		**P**		**22 43 21.6**	**-0.2**
RDF				AMb		AMB		22 43 25.1	
	comp=Z,17nm,1.0s,mb4.9								
CDF	**Champ du Feu**	**81.50**	**338**	*e*P		**P**		**22 43 30.6**	**+0.6**
	comp=Z,12nm,1.0s,mb4.5								
CDF	**Champ du Feu**	**81.50**	**338**	*e*P		**P**		**22 43 30.6**	**+0.6**
	comp=Z,6.2nm,1.0s,mb4.5								
CDF	**Champ du Feu**	**81.50**	**338**	*e*P		**P**		**22 43 30.6**	**+0.6**
CDF				pmax	pmax				
	comp=Z,6.0nm,1.0s,mb4.5								
MEZF	**Maizieres J'vi**	**81.97**	**340**	*e*P		**P**		**22 43 33.7**	**+1.1**
	comp=Z,2.0nm,0.8s,mb4.8								
MEZF	**Maizieres J'vi**	**81.97**	**340**	*e*P		**P**		**22 43 33.7**	**+1.1**
	comp=Z,21nm,0.8s,mb5.1								
SSF	**Saint Saulge**	**83.69**	**340**	*e*P		**P**		**22 43 41.8**	**+0.3**
	comp=Z,30nm,1.1s,mb5.0								
SSF	**Saint Saulge**	**83.69**	**340**	*e*P		**P**		**22 43 41.8**	**+0.3**
	comp=Z,15nm,1.1s,mb5.0								
SSF	**Saint Saulge**	**83.69**	**340**	*e*P		**P**		**22 43 41.8**	**+0.3**
SSF				pmax	pmax				
	comp=Z,15nm,1.1s,mb5.0								
AVF	**Avril sur Loir**	**83.98**	**340**	*e*P		**P**		**22 43 43.1**	**+0.1**
	comp=Z,17nm,0.8s,mb4.9								
AVF	**Avril sur Loir**	**83.98**	**340**	*e*P		**P**		**22 43 43.1**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.9								
AVF	**Avril sur Loir**	**83.98**	**340**	*e*P		**P**		**22 43 43.1**	**+0.1**
AVF				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb5.0								
SMF	**Signal de Mont**	**84.00**	**340**	*e*P		**P**		**22 43 43.5**	**+0.4**
	comp=Z,69nm,1.2s,mb5.3								
SMF	**Signal de Mont**	**84.00**	**340**	*e*P		**P**		**22 43 43.5**	**+0.4**
	comp=Z,34nm,1.2s,mb5.4								
SMF	**Signal de Mont**	**84.00**	**340**	*e*P		**P**		**22 43 43.5**	**+0.4**
SMF				pmax	pmax				
	comp=Z,35nm,1.2s,mb5.4								
LPL	**La Plagne**	**84.31**	**337**	*e*P		**P**		**22 43 46.8**	**+2.1**
	comp=Z,23nm,1.0s,mb5.0								
LPL	**La Plagne**	**84.31**	**337**	*e*P		**P**		**22 43 46.8**	**+2.1**
	comp=Z,11nm,1.0s,mb5.0								
LPL	**La Plagne**	**84.31**	**337**	*e*P		**P**		**22 43 46.8**	**+2.1**
LPL				pmax	pmax				
	comp=Z,11nm,1.0s,mb4.9								
BGF	**Bois d'Agland**	**84.32**	**340**	*e*P		**P**		**22 43 46.7**	**+2.0**
	comp=Z,27nm,0.9s,mb5.1								
BGF	**Bois d'Agland**	**84.32**	**340**	*e*P		**P**		**22 43 46.7**	**+2.0**
	comp=Z,13nm,0.9s,mb5.1								
BGF	**Bois d'Agland**	**84.32**	**340**	*e*P		**P**		**22 43 46.7**	**+2.0**
BGF				pmax	pmax				
	comp=Z,13nm,0.9s,mb5.1								
LPG	**La Plagne**	**84.33**	**337**	*e*P		**P**		**22 43 46.2**	**+1.4**
	comp=Z,26nm,1.1s,mb5.0								
LPG	**La Plagne**	**84.33**	**337**	*e*P		**P**		**22 43 46.2**	**+1.4**
	comp=Z,13nm,1.1s,mb5.0								
LPG	**La Plagne**	**84.33**	**337**	*e*P		**P**		**22 43 46.2**	**+1.4**
LPG				pmax	pmax				
	comp=Z,13nm,1.1s,mb5.0								
ORIF	**Oris-en-Rattie**	**85.09**	**338**	*e*P		**P**		**22 43 49.5**	**+0.8**
	comp=Z,15nm,0.7s,mb4.9								
ORIF	**Oris-en-Rattie**	**85.09**	**338**	*e*P		**P**		**22 43 49.5**	**+0.8**
	comp=Z,7.3nm,0.7s,mb4.9								
ORIF	**Oris-en-Rattie**	**85.09**	**338**	*e*P		**P**		**22 43 49.5**	**+0.8**
ORIF				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.9								
CPD	**Cerro la Pandu**	**106.89**	**39**	*e*Pdif		Pdif		22 45 34.2	+5.4
TORD	**Torodi Ar. Bea**	**115.94**	**329**	PKP		PKPdf		22 49 54.0	-2.1
	comp=Z,0.2nm,0.5s,baz=37,slow=2.2,SNR=4.6								
CFAA	**Coronel Fontan**	**144.74**	**81**	PKP		PKPdf		22 50 46.4	-3.2
	comp=Z,0.4nm,0.5s,baz=282,slow=4.0,SNR=6.0								
PLCA	**Paso Flores**	**147.75**	**97**	PKPbc		PKPbc		22 50 56.5	-0.7
PLCA	**Paso Flores**	**147.75**	**97**	PKPbc		PKPbc		22 50 56.5	-0.7
	comp=Z,3.2nm,0.6s,baz=263,slow=3.3,SNR=13								

ISCJB ***19*** *23:21:12.3±0.6, 2432S±004×6709W±006, h166km±6km, mb4.2/22, Error ellipse: s-maj=9.3km s-min=6.1km az=169.7*

IDC ***19*** *23:21:13.8±1.7, 2425S×6709W, h167km±14km, mb3.7/7, mb1 4.0/10, mb1mx3.8/15, mbtmp3.7/10, Error ellipse: s-maj=21.0km s-min=14.6km az=95.0*

NEIC ***19*** *23:21:13.4±0.7, 2430S×6709W, h161km±6km, mb4.4/18, Error ellipse: s-maj=9.6km s-min=6.7km az=80.0*

GUC ***19*** *23:21:14.9±1.1, 2434S×6752W, h200km, ML4.7*

BJI ***19*** *23:21:15.6, 2430S×6710W, h160km, mB5.2*

ISC 19 23:21:13.3±0.6, 2429S±004×6708W±006, h158km±5km, n74, σ1§07/75, mb4.2/22, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.00**	**287**	*i* P		P	**Pn**	**23 22 02.8**	**+1.9**
CEN1				*i* S		S	**Sn**	**23 22 38.8**	**+1.0**
CEN1				AML		AML		23 22 41.5	
	comp=N,1μm,0.8s								
CPN1	**Cerro Paranal**	**3.05**	**263**	*i* P		P	**Pn**	**23 22 02.4**	**+0.8**
CPN1				*i* S		S	**Sn**	**23 22 38.3**	**-0.6**
CPN1				AML		AML		23 22 40.3	
	comp=E,1μm,0.5s								
ANCH	**Antofagasta**	**3.11**	**281**	*e*P		P	**Pn**	**23 22 04.3**	**+2.0**
ANCH				*i* S		S	**Sn**	**23 22 40.6**	**+0.3**
ANCH	**Antofagasta**	**3.11**	**281**	*e*P		P	**Pn**	**23 22 04.3**	**+2.0**
ANCH				*i* S		S	**Sn**	**23 22 40.6**	**+0.3**
ANCH				AML		AML		23 22 44.2	
	comp=E,2μm,0.7s								
CPCH	**Copiapo**	**4.25**	**223**	*e*P		P	**Pn**	**23 22 16.1**	**-0.8**
CPCH				*i* S		S	**Sn**	**23 23 04.9**	**-1.6**
CDCH	**Caldera**	**4.37**	**230**	*e*P		P	**Pn**	**23 22 17.0**	**-1.6**
CDCH				*i* S		S	**Sn**	**23 23 05.4**	**-4.0**
LCO	**Las Campanas**	**5.71**	**214**	*e*Pn		P	**Pn**	**23 22 35.0**	**-1.1**
	comp=E,51nm,0.3s								
LCO				*e*Sn		S	**Sn**	**23 23 32.5**	**-8.6**
CFAA	**Coronel Fontan**	**7.36**	**188**	P		P	**Pn**	**23 22 57.5**	**-0.5**
	comp=E,0.1nm,0.3s,baz=355,slow=11,SNR=14								
CFAA						S	**Sn**	**23 24 16.9**	**-3.6**
	comp=E,0.3nm,0.3s,baz=188,slow=17,SNR=12								
LPAZ	**La Paz**	**8.03**	**353**	*e*Pn		P	**Pn**	**23 23 09.1**	**+2.0**
	comp=E,10nm,0.4s								
LPAZ				*e*Sn		S	**Sn**	**23 24 34.9**	**-1.7**
LPAZ	**La Paz**	**8.03**	**353**	P		P	**Pn**	**23 23 08.8**	**+1.7**
	comp=E,4.4nm,0.3s,baz=146,slow=11,SNR=75								
LPAZ						S	**Sn**	**23 24 35.0**	**-1.6**
	comp=E,0.1nm,0.3s,baz=238,slow=10,SNR=1.7								
SIV	**San Ignacio**	**10.00**	**35**	P		P	**Pn**	**23 23 32.6**	**-0.6**
	comp=E,2.9nm,0.3s,baz=227,slow=14,SNR=84								
SIV						S	**Sn**	**23 25 12.7**	**-11**
	comp=E,0.3nm,0.3s,baz=219,slow=16,SNR=3.7								
TRQA	**Tornquist**	**14.39**	**164**	*e*Pn		P	**Pn**	**23 24 30.8**	**+1.1**
	comp=E,10.0nm,0.9s								
TRQA				*e*Sn		S	**Sn**	**23 27 11.3**	**+1.8**
PLCA	**Paso Flores**	**16.65**	**189**	*e*P		P	**Pn**	**23 24 58.1**	**+0.7**
PLCA				*e*				23 25 05.5	
PLCA	**Paso Flores**	**16.65**	**189**	P		P	**Pn**	**23 24 57.6**	**+0.2**
	comp=E,0.3nm,0.3s,baz=9.1,slow=15,SNR=7.3								
SPB	**Sao Paulo**	**17.97**	**92**	P		P	**Pn**	**23 25 13.7**	**+0.3**
OTAV	**Otavalo**	**26.76**	**334**	P		P		**23 26 39.7**	**+1.2**
SDV	**Santo Domingo**	**33.16**	**354**	*e*P		P		**23 27 32.4**	**-2.4**
	comp=E,2.9nm,0.6s,mb4.2								
JTS	**JuntasAbangare**	**38.55**	**331**	P		P		**23 28 20.9**	**+0.1**
CPD	**Cerro la Pandu**	**42.09**	**2**	*e*P		P		**23 28 39.8**	**-10**
SWET	**Sewanee**	**61.82**	**343**	*e*P		P		**23 31 14.6**	**-0.8**
OXF	**Oxford**	**62.21**	**339**	*e*P		P		**23 31 16.5**	**-1.5**
	comp=E,12nm,0.9s,mb4.7								
WVT	**Waverly**	**63.22**	**341**	P		P		**23 31 22.8**	**-1.8**
MIAR	**Mount Ida**	**63.69**	**336**	*e*P		P		**23 31 27.3**	**-0.6**
	comp=E,4.1nm,0.7s,mb4.4								
TXAR	**Lajitas Array**	**63.87**	**325**	P		P		**23 31 29.1**	**0.0**
	comp=E,0.7nm,0.7s,mb3.6,baz=159,slow=8.6,SNR=8.6								
SIUC	**Southern Illin**	**65.10**	**341**	*e*P		P		**23 31 35.9**	**-1.0**
QSPA	**South Pole Qui**	**65.91**	**180**	*e*P		P		**23 31 42.5**	**+0.9**
	comp=E,8.7nm,0.7s,mb4.7								
WMOK	**Wichita Mounta**	**65.97**	**332**	P		P		**23 31 41.0**	**-1.5**
MNTX	**Cornudas Mount**	**66.64**	**325**	*e*P		P		**23 31 46.1**	**-0.8**
DBIC	**Dimbokro**	**67.96**	**71**	P		P		**23 31 55.5**	**-0.2**
	comp=E,1.9nm,0.8s,mb3.9,baz=236,slow=5.7,SNR=3.7								
ANMO	**Albuquerque**	**69.75**	**326**	*e*P		P		**23 32 05.5**	**-0.7**
	comp=E,6.8nm,1.0s,mb4.3								
TUC	**Tucson**	**70.06**	**322**	*e*P		P		**23 32 09.8**	**+1.7**
SDCO	**Great Sand Dun**	**71.50**	**329**	*e*P		P		**23 32 18.0**	**+1.3**
	comp=E,5.5nm,1.0s,mb4.2								
ISCO	**Idaho Springs**	**73.20**	**330**	*e*P		P		**23 32 27.6**	**+0.8**
	comp=E,11nm,1.7s,mb4.3								
PV01	**Paradox Valley**	**73.30**	**327**	*e*P		P		**23 32 26.8**	**-0.6**
SMCO	**Snowmass**	**73.34**	**329**	*e*P		P		**23 32 27.1**	**-0.5**
	comp=E,18nm,1.8s,mb4.5								
SBA	**Scott Base**	**73.40**	**190**	*e*P		P		**23 32 27.3**	**-0.2**
PV10	**Paradox Valley**	**73.72**	**327**	*e*P		P		**23 32 30.2**	**+0.4**
VNDA	**Vanda**	**74.40**	**190**	P		P		**23 32 33.9**	**+0.6**
	comp=E,3.1nm,0.9s,mb4.0,baz=152,slow=3.7,SNR=13								
MSU	**Marysvale**	**75.43**	**325**	*e*P		P		**23 32 40.0**	**+0.3**

TMUT	**Trail Mountain**	**75.51**	**326**	*e*P		**P**		**23 32 37.1**	**-3.0**
TPNV	**Topopah Spring**	**76.52**	**321**	*e*P		**P**		**23 32 46.8**	**+0.9**
	comp=E,8.0nm,1.0s,mb4.3								
JLU	**Jordanelle**	**76.62**	**327**	*e*P		**P**		**23 32 47.8**	**+1.5**
TOA0	**Torodi Ar. Sit**	**76.74**	**69**	*e*P		**P**		**23 32 47.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**76.74**	**69**	P		**P**		**23 32 47.0**	**-0.6**
	comp=E,4.2nm,0.8s,mb4.1,baz=265,slow=5.9,SNR=29								
DAC	**Darwin (Calif)**	**76.83**	**320**	*e*P		**P**		**23 32 49.0**	**+1.3**
	comp=E,7.0nm,1.1s,mb4.2								
DUG	**Dugway**	**77.00**	**326**	*e*P		**P**		**23 32 49.2**	**+0.6**
PDAR	**Pinedale Array**	**77.36**	**329**	P		**P**		**23 32 48.8**	**-1.6**
	comp=E,0.9nm,0.8s,mb3.5,baz=134,slow=4.3,SNR=4.9								
HWUT	**Hardware Ranch**	**77.43**	**327**	*e*P		**P**		**23 32 51.2**	**+0.3**
TSUM	**Tsumeb**	**77.64**	**106**	P		**P**		**23 32 52.7**	**+0.1**
	comp=E,1.4nm,0.7s,mb3.7								
NVAR	**Mina Array Bea**	**78.72**	**321**	P		**P**		**23 32 57.5**	**-0.6**
	comp=E,1.1nm,0.9s,mb3.5,baz=137,slow=7.3,SNR=6.9								
IMW	**Indian Meadow**	**78.87**	**329**	*e*P		**P**		**23 32 59.0**	**+0.2**
FLWY	**Flagg Ranch**	**78.91**	**330**	*e*P		**P**		**23 32 59.0**	**+0.1**
	comp=E,12nm,1.1s,mb4.4								
CMB	**Columbia Colle**	**79.66**	**320**	*e*P		**P**		**23 33 02.8**	**-0.4**
	comp=E,0.8nm,0.4s,mb3.7								
PAHR	**Pah Rah Range**	**80.21**	**322**	*e*P		**P**		**23 33 07.3**	**+1.2**
HLID	**Hailey**	**80.29**	**327**	*e*P		**P**		**23 33 07.3**	**+0.8**
	comp=E,7.7nm,0.9s,mb4.3								
MCMT	**McKenzie Canyo**	**80.47**	**329**	*e*P		**P**		**23 33 08.6**	**+1.3**
LRM	**Limekiln Ridge**	**81.04**	**330**	*e*P		**P**		**23 33 11.0**	**+0.7**
BMO	**Blue Mountains**	**82.67**	**327**	*e*P		**P**		**23 33 19.7**	**+0.8**
WALA	**Waterton Lakes**	**84.12**	**331**	P		**P**		**23 33 24.7**	**-1.5**
NEW	**Newport**	**85.00**	**329**	P		**P**		**23 33 30.9**	**+0.3**
FCC	**Fort Churchill**	**85.72**	**346**	*e*P		**P**		**23 33 33.9**	**0.0**
	comp=E,6.7nm,0.6s,mb4.5								
YKA	**Yellowknife Ar**	**94.37**	**340**	P		**P**		**23 34 13.7**	**-0.7**
YKA	**Yellowknife Ar**	**94.37**	**340**	P		**P**		**23 34 13.7**	**-0.7**
	comp=E,2.3nm,0.9s

YAK smax
comp=N,96nm,1.8s
YAK smax
comp=E,120nm,2.9s
HIA Hailar 22.92 290 *eP* **P 23 29 22.5 -2.7**
comp=E,7.4nm,1.2s,mb4.0
HIA Hailar 22.92 290 *eP* **P 23 29 20.5 -4.7**
BILL Bilibino 22.96 12 *eP* **P 23 29 24.2 -1.2**
comp=E,50nm,1.4s,mb4.8
BILL Bilibino 22.96 12⇓ *iP* **P 23 29 24.2 -1.2**
BILL *eS* **S 23 33 29.5 -3.4**
BILL pmax pmax
comp=E,18nm,1.7s,mb4.2
BOD Bodaibo 26.69 311 *eP* **P 23 29 56.0 -4.0**
BOD pmax pmax
comp=E,6.0nm,1.4s,mb3.9
TIXI Tiksi 28.20 344 *eP* **P 23 30 11.4 -2.0**
TIXI Tiksi 28.20 344 *eP* **P 23 30 10.5 -2.9**
TIXI pmax pmax
comp=E,11nm,1.6s,mb4.2
TNA Tin City 28.39 33 P P **23 30 22.6 +7.5**
comp=E,4.5nm,0.8s,mb4.2
NJ2 Nanjing 30.16 255 *eP* **P 23 30 31.3 +0.2**
NJ2 AMB AMB
comp=E,10.0nm,0.6s,mb4.7
ULN Ulaanbaatar 31.46 290 *eP* **P 23 30 43.3 +0.8**
comp=E,3.6nm,1.1s,mb4.1
ULN Ulaanbaatar 31.46 290⇑ *eP* **P 23 30 42.5 +0.1**
SONM Songino Array 31.89 291 P **P 23 30 45.9 -0.4**
comp=E,0.4nm,0.5s,mb3.5,baz=64,slow=6.8,SNR=5.2
SONM PcP PcP 23 33 37.6 +1.5
comp=E,0.4nm,0.8s,baz=90,slow=4.3,SNR=2.9
SONM LR LR 23 43 13.5
comp=E,192nm,19.6s,MS3.8,baz=8.0,slow=36
TLY Talaya 32.80 298 *eP* **P 23 30 53.7 -0.5**
TLY pmax pmax
comp=E,3.0nm,1.0s,mb4.2
TLY MLR MLR
comp=Z,232nm,13.0s,MS4.1
IMA2 Indian Mountai 34.13 35 *eP* **P 23 31 06.0 +0.3**
SML Sawmill 36.20 43 *eP* **P 23 31 23.3 -0.2**
COLA College 36.44 38 *eP* **P 23 31 25.1 -0.3**
comp=E,2.4nm,0.4s,mb4.5
COLA College 36.44 38 *eP* **P 23 31 24.2 -1.2**
LZH Lanzhou 38.27 273⇑ *iP* **P 23 31 43.5 +2.2**
LZH AP pP 23 31 54.6 +3.1
LZH AMB AMB
comp=E,25nm,1.3s,mb4.8
LZH AMB AMB
comp=E,83nm,6.7s
LZH LR LR
comp=E,335nm,13.9s
LZH LR LR
comp=E,597nm,18.6s,MS4.4
EGAK Eagle 39.30 38 *eP* **P 23 31 49.3 -0.3**
GTA Gaotai 39.43 280 P **P 23 31 52.8 +1.8**
GTA AP pP 23 32 01.1 -0.1
GTA XP sP 23 32 05.6 +0.2
GTA PP PP 23 33 29.5 +7.8
GTA PCP PcP 23 34 01.0 +2.5
GTA S **S 23 37 57.6 +7.3**
GTA AMB AMB
comp=E,8.0nm,1.7s,mb4.2
GTA AMB AMB
comp=E,252nm,6.1s
GTA LR LR
comp=N,203nm,12.9s,MS4.3
GTA LR LR
comp=E,170nm,11.4s,MS4.3
GTA LR LR
comp=E,283nm,15.2s,MS4.2
INK Inuvik 42.02 32 P **P 23 32 10.7 -1.3**
INK pmax pmax
comp=E,3.0nm,0.8s
INK Inuvik 42.02 32 P **P 23 32 10.7 -1.3**
comp=E,3.4nm,0.8s,mb4.0,baz=280,slow=7.2,SNR=14
NVS Novosibirsk 43.88 308 *eP* **P 23 32 25.7 -1.4**
DLBC Dease Lake 45.80 45 P **P 23 32 41.7 -0.7**
MKAR Makanchi Array 47.56 298 P **P 23 32 55.8 -0.6**
MKAR 23 34 25.9
MKAR pmax pmax
comp=E,1.0nm,0.6s
MKAR MLR MLR
comp=E,179nm,19.1s
MKAR Makanchi Array 47.56 298 P **P 23 32 55.8 -0.6**
comp=Z,1.1nm,0.6s,mb4.0,baz=69,slow=6.6,SNR=15
MKAR PcP PcP 23 34 25.9 +0.1
comp=E,0.2nm,0.3s,baz=68,slow=2.6,SNR=3.5
MKAR LR LR 23 53 59.0
comp=E,179nm,19.1s,MS4.1,baz=239,slow=37
KURK Kurchatov 48.03 304⇑ *eP* **P 23 33 00.1 +0.2**
LSA Lhasa 50.67 274 *eP* **P 23 33 20.0 -0.4**
comp=E,6.9nm,1.3s,mb4.4
LSA Lhasa 50.67 274 *eP* **P 23 33 20.0 -0.4**
LSA pmax pmax
comp=E,7.0nm,1.3s,mb4.4
YKW3 Yellowknife Ar 51.21 36 *eP* **P 23 33 23.0 -0.9**
YKA Yellowknife Ar 51.24 37 P **P 23 33 24.2 0.0**
YKA pmax pmax
comp=E,2.0nm,0.7s
YKA Yellowknife Ar 51.24 37 P **P 23 33 24.2 0.0**
comp=E,1.8nm,0.7s,mb4.1,baz=296,slow=7.2,SNR=21
RES Resolute Bay 51.35 18 *eP* **P 23 33 25.6 +0.7**
TKM2 Tokmak 2 53.61 297 *eP* **P 23 33 40.7 -1.3**
comp=E,3.4nm,1.0s,mb4.2
TKM2 Tokmak 2 53.61 297 *eP* **P 23 33 40.7 -1.4**
TKM2 pmax pmax
comp=E,3.0nm,1.0s,mb4.2
UCH Uchtor 54.66 297 *eP* **P 23 33 49.1 -0.6**
comp=E,9.1nm,1.8s,mb4.5
EKS2 Erkin-Say 54.88 297 *eP* **P 23 33 51.9 +0.6**
comp=E,4.1nm,1.0s,mb4.4
AML Almayashu 55.22 297 *eP* **P 23 33 54.2 +0.5**
comp=E,3.7nm,0.9s,mb4.4
JIRN Jiri 55.36 275 *eP* **P 23 33 56.5 +1.5**
comp=E,39nm,1.5s,mb5.2
ARU Arti 55.74 318*c iP* **P 23 33 55.9 -1.4**
ARU 23 35 58.1
ARU S **S 23 41 43.4 +2.3**
ARU SS SS 23 45 27.8 +1.7
ARU pmax pmax
comp=E,23nm,2.5s,mb4.8
KKN Kakani 55.91 276 *eP* **P 23 34 00.2 +1.3**
comp=E,79nm,1.6s,mb5.5
GKN Gorkha 56.22 277 *eP* **P 23 34 02.4 +1.3**
comp=Z,54nm,1.3s,mb5.4
HOOD Mount Hood Mea 56.35 58 *eP* **P 23 33 57.6 -4.2**
EDM Edmonton 56.52 46 *eP* **P 23 34 02.9 0.0**
KOLN Koldanda 57.08 277 *eP* **P 23 34 08.5 +1.2**
comp=Z,42nm,1.5s,mb5.2
NEW Newport 57.29 53 P **P 23 34 07.4 -1.1**
comp=E,10nm,1.5s,mb4.6
NEW Newport 57.29 53 P **P 23 34 07.4 -1.0**
NEW pmax pmax
comp=E,10.0nm,1.5s
KEV Kevo 58.08 341 *ep* **P 23 34 12.5 -1.2**
comp=Z,7.8nm,0.8s,mb4.8
KEV Kevo 58.08 341 *eP* **P 23 34 12.5 -1.2**
KEV pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
PRGR Permogore 58.12 328 *eP* **P 23 34 13.2 -0.8**
ARCES ARCESS Array B 58.59 341 P **P 23 34 17.6 +0.4**
ARCES pmax pmax
comp=Z,7.0nm,0.8s
ARCES ARCESS Array B 58.59 341 P **P 23 34 17.6 +0.4**
comp=Z,6.9nm,0.8s,mb4.7,baz=33,slow=5.8,SNR=11
MSO Missoula 59.88 52 *eP* **P 23 34 26.8 +0.3**
comp=Z,22nm,1.6s,mb4.9
HRY Holter Researc 61.11 52 *eP* **P 23 34 34.7 -0.2**
LRM Limekiln Ridge 61.31 53 *eP* **P 23 34 37.2 +0.9**
CMB Columbia Colle 61.38 64 *eP* **P 23 34 36.4 -0.4**
comp=Z,4.8nm,1.2s,mb4.5
CMB Columbia Colle 61.38 64 *eP* **P 23 34 36.4 -0.4**
CMB pmax pmax
comp=Z,5.0nm,1.2s,mb4.5
HLID Hailey 61.59 56 *eP* **P 23 34 38.6 +0.5**
comp=Z,11nm,1.7s,mb4.7
FCC Fort Churchill 61.62 33 *eP* **P 23 34 38.0 -0.1**
comp=Z,9.3nm,1.1s,mb4.8
FCC Fort Churchill 61.62 33 *eP* **P 23 34 38.0 -0.1**
FCC pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BOZ Bozeman (W) 61.87 52 *eP* **P 23 34 41.0 +0.9**
comp=Z,5.7nm,0.6s,mb4.9
BOZ Bozeman (W) 61.87 52 *eP* **P 23 34 41.0 +1.0**
BOZ pmax pmax
comp=Z,6.0nm,0.6s,mb4.9
JOF Joensuu 62.08 334 *ep* **P 23 34 40.8 -0.4**
comp=Z,14nm,0.9s,mb5.1
JOF Joensuu 62.08 334 *eP* **P 23 34 40.8 -0.4**
JOF pmax pmax
comp=Z,14nm,0.9s,mb5.1
NVAR Mina Array Bea 62.42 62 P **P 23 34 43.0 -0.8**
comp=Z,0.6nm,0.5s,mb4.0,baz=332,slow=28,SNR=4.0
IMW Indian Meadow 63.35 54 *eP* **P 23 34 50.7 +0.8**
RLMT Red Lodge 63.50 52 *eP* **P 23 34 52.5 +1.6**
MOOW Moose Ponds 63.55 54 *eP* **P 23 34 52.8 +1.6**
comp=Z,11nm,1.4s,mb4.7
TPAW Teton Pass 63.60 54 *eP* **P 23 34 53.5 +1.9**
LOHW Long Hollow 63.72 54 *eP* **P 23 34 54.1 +1.7**
comp=Z,24nm,1.6s,mb5.0
REDW Red Top Meadow 63.74 54 *eP* **P 23 34 54.1 +1.6**
TPNV Topopah Spring 64.62 62 *eP* **P 23 34 59.0 +0.6**
comp=Z,17nm,1.6s,mb4.8
TPNV Topopah Spring 64.62 62 *eP* **P 23 34 59.0 +0.6**
TPNV pmax pmax
comp=Z,17nm,1.6s,mb4.8
DUG Dugway 64.62 58 *eP* **P 23 34 58.8 +0.4**
FINES FINESS Array B 64.79 335 *iP* **P 23 34 59.7 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 64.79 335 P **P 23 34 57.6 -1.5**
comp=Z,2.2nm,0.7s,mb4.3,baz=41,slow=6.8,SNR=14
BW06 Boulder Array 64.85 54 *eP* **P 23 34 59.8 0.0**
comp=Z,18nm,1.6s,mb4.8
PDAR Pinedale Array 64.85 54 P **P 23 34 59.5 -0.3**
comp=Z,3.6nm,1.1s,mb4.3,baz=276,slow=2.8,SNR=12
JLU Jordanelle 65.16 57 *eP* **P 23 35 01.4 -0.5**
OBN Obninsk 66.06 326⇓ *eP* **P 23 35 06.8 -0.6**
OBN *e**PP pP 23 35 39.7 +22
OBN *e* 23 37 31.1
OBN *eS* S 23 43 43.6 -9.0
OBN pmax pmax
comp=Z,15nm,1.7s,mb4.8
ULM Lac du Bonnet 66.79 41 P **P 23 35 11.3 -0.8**
ULM Lac du Bonnet 66.79 41 P **P 23 35 11.3 -0.8**
baz=292,slow=10.0
RSSD Black Hills 66.98 50 *eP* **P 23 35 13.3 -0.1**
WB2 Warramunga Arr 68.00 200 *eP* **P 23 35 19.5 -0.5**
WRA Warramunga Arr 68.01 200 P **P 23 35 19.2 -0.8**
WRA pmax pmax
comp=Z,7.0nm,1.2s
WRA Warramunga Arr 68.01 200 P **P 23 35 19.2 -0.9**
comp=Z,6.5nm,1.2s,mb4.5,baz=18,slow=5.5,SNR=10
PV10 Paradox Valley 68.03 57 *eP* **P 23 35 20.5 +0.3**
PV01 Paradox Valley 68.46 57 *eP* **P 23 35 23.4 +0.5**
SMCO Snowmass 68.69 55 *eP* **P 23 35 20.9 -3.3**
NB2 NORSAR Subarra 68.97 341 P **P 23 35 27.0 +1.4**
comp=Z,20nm,1.4s,mb4.8,baz=28,slow=6.2
NB2 NORSAR Subarra 68.97 341 P **P 23 35 27.0 +1.4**
NB2 pmax pmax
comp=Z,20nm,1.4s,mb4.8
NOA NORSAR Array B 68.97 341 P **P 23 35 27.0 +1.4**
NOA pmax pmax
comp=Z,3.0nm,1.0s
NOA NORSAR Array B 68.97 341 P **P 23 35 27.0 +1.4**
comp=Z,3.1nm,1.0s,mb4.2,baz=26,slow=6.3,SNR=3.3
ISCO Idaho Springs 69.04 54 *eP* **P 23 35 26.6 +0.1**
comp=Z,14nm,1.5s,mb4.7
ISCO Idaho Springs 69.04 54 *eP* **P 23 35 26.6 +0.1**
ISCO pmax pmax
comp=Z,14nm,1.5s,mb4.7
KIV Kislovodsk 71.52 315⇑ *eP* **P 23 35 41.0 -0.5**
KIV pmax pmax
comp=Z,12nm,1.9s,mb4.5
ASAR Alice Springs 71.70 199 P **P 23 35 41.7 -1.0**
ASAR pmax pmax
comp=Z,6.0nm,1.2s
ASAR Alice Springs 71.70 199 P **P 23 35 41.6 -1.0**
comp=Z,5.7nm,1.1s,mb4.4,baz=9.4,slow=5.5,SNR=19
ANMO Albuquerque 71.87 58 *eP* **P 23 35 45.5 +1.7**
ANMO Albuquerque 71.87 58⇑ *eP* **P 23 35 42.5 -1.3**
AKASG Malin Array Be 72.29 327 P **P 23 35 45.4 -0.7**
AKASG Malin Array Be 72.29 327 *iP* **P 23 35 46.5 +0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 72.29 327 P **P 23 35 45.4 -0.6**
comp=Z,1.2nm,0.5s,mb4.1,baz=33,slow=6.0,SNR=16
MNTX Cornudas Mount 74.79 60 *eP* **P 23 36 01.0 -0.1**
comp=Z,14nm,1.5s,mb4.7
WMOK Wichita Mounta 76.46 54 *eP* **P 23 36 08.7 -1.9**
comp=Z,9.9nm,1.0s,mb4.2
WMOK Wichita Mounta 76.46 54 *eP* **P 23 36 08.7 -1.9**
WMOK pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
DPC Dobruska-Polom 77.07 334 *eP* **P 23 36 15.2 +1.4**
MORC Moravsky Berou 77.19 333 *eP* **P 23 36 14.2 -0.3**
comp=Z,1.8nm,0.7s,mb4.1
MORC Moravsky Berou 77.19 333 *eP* **P 23 36 14.2 -0.2**
MORC pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
CLL Collm 77.21 336 *eP* **P 23 36 15.0 +0.5**
CLL *epP* pP 23 36 17.0 -8.5
LTX Lajitas 77.50 61 *eP* **P 23 36 16.5 -0.1**
TXAR Lajitas Array 77.50 61 P **P 23 36 15.9 -0.7**
TXAR pmax pmax
comp=Z,3.0nm,0.6s
TXAR Lajitas Array 77.50 61 P **P 23 36 15.9 -0.6**
comp=Z,3.0nm,0.6s,mb4.4,baz=304,slow=4.0,SNR=45
MALT Malatya 77.86 313 P **P 23 36 18.7 +0.3**
PSZ Piszkesteto 78.01 330 *eP* **P 23 36 18.4 -0.6**
KHC Kasperske Hory 78.99 335 *eP* **P 23 36 25.7 +1.3**
KHC *e* 23 36 30.0
KHC Kasperske Hory 78.99 335 *eP* **P 23 36 25.7 +1.3**
KHC *epP* pP 23 36 30.0 -5.4
GERES GERESS Array B 79.20 334 P **P 23 36 26.6 +1.0**
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES MLR MLR
comp=Z,199nm,18.4s
GERES GERESS Array B 79.20 334 P **P 23 36 26.6 +1.0**
comp=Z,1.4nm,0.9s,mb3.9,baz=35,slow=4.9,SNR=7.3
GERES LR LR 00 13 10.1
comp=Z,199nm,18.4s,MS4.5,baz=43,slow=37
GIVF Givet 80.44 340 *eP* **P 23 36 33.1 +0.8**
CDF Champ du Feu 81.40 338 *eP* **P 23 36 37.6 +0.2**
comp=Z,98nm,1.7s,mb5.2
CDF Champ du Feu 81.40 338 *eP* **P 23 36 37.6 +0.2**
comp=Z,49nm,1.7s,mb5.2
CDF Champ du Feu 81.40 338 *eP* **P 23 36 37.6 +0.2**
CDF pmax pmax
comp=Z,49nm,1.7s,mb5.2
MEZF Maizieres J'vi 81.88 339 *eP* **P 23 36 41.2 +1.3**
HAU Haudompre 82.02 338 *eP* **P 23 36 41.7 +1.0**
HINF Hinteralfeld 82.06 338 *eP* **P 23 36 41.1 +0.2**
SWET Sewanee 82.90 45 *eP* **P 23 36 43.3 -2.3**
LOR Lormes 83.32 340 *eP* **P 23 36 46.9 -0.6**
SSF Saint Saulge 83.60 340 *eP* **P 23 36 48.7 -0.2**
comp=Z,24nm,1.1s,mb4.9
SSF Saint Saulge 83.60 340 *eP* **P 23 36 48.7 -0.2**
comp=Z,12nm,1.1s,mb4.9
SSF Saint Saulge 83.60 340 *eP* **P 23 36 48.7 -0.2**
SSF pmax pmax
comp=Z,12nm,1.1s,mb4.9
AVF Avril sur Loir 83.89 340 *eP* **P 23 36 50.3 -0.1**
comp=Z,89nm,1.5s,mb5.4
AVF Avril sur Loir 83.89 340 *eP* **P 23 36 50.3 -0.1**
comp=Z,45nm,1.5s,mb5.4
AVF Avril sur Loir 83.89 340 *eP* **P 23 36 50.3 -0.1**
AVF pmax pmax
comp=Z,45nm,1.5s,mb5.4
SMF Signal de Mont 83.91 340 *eP* **P 23 36 50.9 +0.4**
comp=Z,56nm,1.2s,mb5.3
SMF Signal de Mont 83.91 340 *eP* **P 23 36 50.9 +0.4**
comp=Z,28nm,1.2s,mb5.3
SMF Signal de Mont 83.91 340 *eP* **P 23 36 50.9 +0.4**
SMF pmax pmax
comp=Z,28nm,1.2s,mb5.3
LPL La Plagne 84.22 337 *eP* **P 23 36 53.8 +1.7**
comp=Z,31nm,1.1s,mb5.0
LPL La Plagne 84.22 337 *eP* **P 23 36 53.8 +1.7**
comp=Z,16nm,1.1s,mb5.0
LPL La Plagne 84.22 337 *eP* **P 23 36 53.8 +1.7**
LPL pmax pmax
comp=Z,16nm,1.1s,mb5.1
LPG La Plagne 84.23 337 *eP* **P 23 36 54.3 +2.1**
comp=Z,50nm,1.3s,mb5.2
LPG La Plagne 84.23 337 *eP* **P 23 36 54.3 +2.1**
comp=Z,25nm,1.3s,mb5.2
LPG La Plagne 84.23 337 *eP* **P 23 36 54.3 +2.1**
LPG pmax pmax
comp=Z,25nm,1.3s,mb5.2
MBDF Montbardon 84.94 337 *eP* **P 23 36 55.9 +0.2**
ORIF Oris-en-Rattie 85.00 338 *eP* **P 23 36 56.8 +0.8**
comp=Z,66nm,1.4s,mb5.3
ORIF Oris-en-Rattie 85.00 338 *eP* **P 23 36 56.8 +0.8**
comp=Z,33nm,1.4s,mb5.3
ORIF Oris-en-Rattie 85.00 338 *eP* **P 23 36 56.8 +0.8**
ORIF pmax pmax
comp=Z,33nm,1.4s,mb5.3
CFAA Coronel Fontan 144.76 81 PKP PKPdf 23 43 55.0 -2.4
comp=Z,0.2nm,0.5s,baz=321,slow=2.2,SNR=6.1
PLCA Paso Flores 147.78 97 PKPbc PKPbc 23 44 04.8 -0.3
comp=Z,2.5nm,0.9s,baz=311,slow=4.6,SNR=7.6

IDC 20 00:01:17.3±1.8, 366N×12314E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/16, mbtmp3.3/3, Error ellipse: s-maj=207.3km s-min=25.4km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.91**	**155**	P	P	00 06 50.8	-0.4
	0.2nm,0.3s,baz=332,slow=11,SNR=11						
ASAR	**Alice Springs**	**29.12**	**159**	P	P	00 07 20.9	+0.8
	0.2nm,0.5s,baz=347,slow=7.9,SNR=4.7						
MKAR	**Makanchi Array**	**55.61**	**327**	P	P	00 10 54.9	0.0
	0.1nm,0.4s,baz=141,slow=8.1,SNR=3.2						

CSEM ***20*** *00:24:28.2, 1586N×4424E, h5km, ML3.7, After DHMR*
DHMR 20 00:24:28.2±0.9, 1586N×4424E, h5km±9km, ML3.7, 4C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAJJ	**Hajjah**	**0.64**	**256**	*i* P	Pg	00 24 40.2	-0.2
HAJJ				*i* S	Sg	00 24 49.1	+0.4
HAJJ				AML	AML	00 24 50.6	
	comp=Z,3μm,0.2s						
HAJJ	**Hajjah**	**0.64**	**256**	*i* P	Pg	00 24 40.2	-0.2
HAJJ				*i* S	Sg	00 24 49.1	+0.4
	comp=Z,2μm,0.2s						
DHBB	**Dhamar BB**	**1.29**	**173**⇓	*i* P	Pn	00 24 52.9	0.0
DHBB				*i* S	Sg	00 25 10.8	+1.1
UDYN	**Al 'Udayn**	**1.90**	**188**⇑	*i* P	Pn	00 25 02.0	+0.7
UDYN				*i* S	Sn	00 25 28.9	+3.3
LBOS		**2.21**	**154**⇑	*i* P	Pn	00 25 07.2	+1.8
LBOS				*i* S	Sn	00 25 37.3	+4.2
BDHA	**Al Bayda'**	**2.27**	**145**⇑	*i* P	Pn	00 25 07.8	+1.4
BDHA				*i* S	Sn	00 25 39.7	+4.9
BDHA				AML	AML	00 25 41.1	
	comp=E,722nm,0.6s						
BDHA	**Al Bayda'**	**2.27**	**145**⇑	*i* P	Pn	00 25 07.8	+1.4
BDHA				*i* S	Sn	00 25 39.7	+4.9
	comp=E,361nm,0.6s						
TRBA	**At Turbah**	**2.62**	**183**⇓	*i* P	Pn	00 25 14.0	+2.9
TRBA				*i* S	Sn	00 25 49.3	+6.0

NNC ***20*** *00:34:09.9±1.7, 3971N×7703E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=19.2km s-min=12.9km az=50.0*
ISC 20 00:34:19.1±3.7, 403N±03×767E±01, h10km, n13, σ0s73/13, 3C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**2.01**	**350**	P	**Pn**	**00 34 54.5**	**+1.4**
	SNR=38						
KZA	**Kyzart**	**2.12**	**329**	P	**Pn**	**00 34 53.9**	**-0.6**
	SNR=61						
UCH	**Uchtor**	**2.56**	**321**	P	**Pn**	**00 34 59.9**	**-0.7**
	SNR=11						
KBK	**Karagaybulak**	**2.73**	**332**	P	**Pg**	**00 35 11.3**	**0.0**
	SNR=21						
TKM2	**Tokmak 2**	**2.78**	**343**	⇓Pn	**Pn**	**00 35 03.6**	**0.0**
	6.9nm,0.5s						
TKM2				⇑Lg		00 35 57.6	
	32nm,0.6s						
TKM2	**Tokmak 2**	**2.78**	**343**	P	**Pn**	**00 35 03.6**	**0.0**
	SNR=13						
AAK	**Ala-Archa**	**2.89**	**326**	P	**Pg**	**00 35 13.5**	**-1.0**
	SNR=15						
AML	**Almayashu**	**2.94**	**310**	P	**Pn**	**00 35 05.9**	**+0.2**
	SNR=18						
KNDC	**Almaty**	**2.95**	**4**	⇓Pn	**Pn**	**00 35 06.3**	**+0.3**
	22nm,0.6s						
KNDC				⇓Lg		00 36 01.6	
	92nm,0.5s						
CHMS	**Chumysh**	**3.10**	**332**	P	**Pn**	**00 35 07.6**	**-0.4**
	SNR=11						
EKS2	**Erkin-Say**	**3.25**	**318**	P	**Pb**	**00 35 18.4**	**+1.5**
	SNR=15						
MK31	**Makanchi Array**	**7.68**	**30**	⇑Pn	**Pn**	**00 36 10.6**	**-0.3**
	1.9nm,0.9s,baz=215,slow=12,SNR=4.6						
MK31				⇓Lg		00 38 19.2	
	6.2nm,1.1s,baz=206,slow=25,SNR=3.7						
KURBB	**Kurchatov Arra**	**10.44**	**6**	⇑Pn	**Pn**	**00 36 48.4**	**-0.2**
	0.3nm,1.1s						
KURBB				⇓Lg		00 39 56.6	
	2.0nm,0.9s						

ISCJB ***20*** *00:34:25.1±0.8, 3637N×006×708E±0.1, h177km±10km, mb3.6/7, Error ellipse: s-maj=16.5km s-min=5.3km az=145.7*
IDC ***20*** *00:34:25.7±6.6, 3632N×7096E, h170km±60km, mb3.5/7, mb1 3.7/9, mb1mx3.4/20, mbtmp3.5/9, Error ellipse: s-maj=29.1km s-min=20.3km az=30.0*
NNC ***20*** *00:34:32.1±9.8, 3685N×6998E, h148km±92km, mb3.2, mpv3.9, Error ellipse: s-maj=80.9km s-min=53.7km az=25.0*
ISC 20 00:34:25.3±1.0, 3634N±006×708E±01, h161km±12km, n27, σ1s43/39, mb3.6/7, 5C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**5.74**	**130**	*eP*	**Pn**	**00 35 51.0**	**+2.4**
DLH				*eS*	**Sn**	**00 36 57.0**	**+3.2**
KK31	**Karatay Array**	**6.76**	**358**	P	**Pn**	**00 36 02.4**	**+0.4**
	4.1nm,0.3s,baz=180,slow=12,SNR=4.9						
KK31				⇑S	**Sn**	**00 37 12.8**	**-5.2**
	10nm,0.3s,baz=188,slow=25,SNR=19						
SDNR	**Sundarnagar**	**7.07**	**131**	*eP*	**Pn**	**00 36 09.0**	**+2.8**
SDNR				*eS*	**Sn**	**00 37 25.1**	**-0.5**
KHET	**Khetri**	**9.28**	**151**	*eP*	**Pn**	**00 36 33.2**	**-2.5**
KHET				*eS*	**Sn**	**00 38 10.3**	**-8.5**
KHET				AML	AML	00 38 19.7	
	comp=E,20nm,0.4s						
KHET				AML	AML	00 38 20.4	
	comp=N,21nm,0.3s						
JOSI	**Joshimath**	**9.35**	**126**	*eP*	**Pn**	**00 36 38.3**	**+1.9**
JOSI				*eS*	**Sn**	**00 38 18.6**	**-1.7**
JOSI				AML	AML	00 38 20.0	
	comp=N,80nm,0.8s						
JOSI				AML	AML	00 38 23.3	
	comp=E,88nm,0.9s						
NDI	**New Delhi**	**9.38**	**143**	*eP*	**Pn**	**00 36 38.0**	**+1.1**
NDI				*eS*	**Sn**	**00 38 17.0**	**-4.1**
KUDL	**Kundal**	**9.50**	**148**	*eP*	**Pn**	**00 36 37.5**	**-1.0**
KUDL				*eS*	**Sn**	**00 38 17.6**	**-6.5**
KUDL				AML	AML	00 38 22.6	
	comp=E,12nm,0.5s						
KUDL				AML	AML	00 38 22.7	
	comp=N,9.3nm,0.5s						
SONA	**Sohna**	**9.68**	**145**	*eP*	**Pn**	**00 36 40.1**	**-0.7**
SONA				*eS*	**Sn**	**00 38 21.6**	**-6.7**
SONA				AML	AML	00 38 26.9	
	comp=E,9.6nm,0.2s						
SONA				AML	AML	00 38 27.4	
	comp=N,6.6nm,0.2s						
AGRA	**Agra**	**10.95**	**144**	*eP*	**Pn**	**00 36 56.3**	**-1.2**
MKAR	**Makanchi Array**	**13.54**	**36**	P	**Pn**	**00 37 29.7**	**-1.0**
	comp=N,0.2nm,0.3s,baz=211,slow=11,SNR=3.6						
KOLN	**Koldanda**	**13.83**	**125**	*eP*	**Pn**	**00 37 35.6**	**+1.0**
	comp=N,5.9nm,0.3s						
GKN	**Gorkha**	**14.39**	**121**	*eP*	**Pn**	**00 37 43.4**	**+1.8**
	comp=N,14nm,0.3s						
GKN				*eS*	**Sn**	**00 40 11.9**	**-10**
KKN	**Kakani**	**14.96**	**121**	*eP*	**Pn**	**00 37 50.3**	**+1.6**
	comp=N,14nm,0.5s						
AB31	**Akbulak array**	**15.13**	**332**	P	**Pn**	**00 37 49.9**	**-0.7**
	comp=N,4.3nm,0.6s,baz=146,slow=12,SNR=39						
AB31				S	**S**	**00 40 30.6**	**-8.4**
	comp=N,1.4nm,0.5s,baz=156,slow=22,SNR=7.9						
JIRN	**Jiri**	**15.68**	**119**	*eP*	**Pn**	**00 38 00.3**	**+2.7**

comp=N,23nm,0.4s

JIRN				*e*S	**S**	**00 40 44.1**	**-8.1**
BRVK	**Borovoye**	**16.72**	**359**	⇑P	**Pn**	**00 38 09.6**	**-0.3**
	comp=N,1.7nm,0.8s						
AKTO	**Aktyubinsk**	**16.82**	**331**	⇑P	**Pn**	**00 38 11.4**	**+0.3**
	comp=N,1.0nm,0.6s						
AKTO				⇑S	**S**	**00 41 11.4**	**-6.3**
	comp=N,0.4nm,0.9s						
AKTO	**Aktyubinsk**	**16.82**	**331**	P	**Pn**	**00 38 12.1**	**+0.9**
	comp=N,1.1nm,0.3s,baz=144,slow=14,SNR=24						
TAPN	**Taplejung**	**16.95**	**117**	*e*P	**Pn**	**00 38 15.5**	**+2.6**
	comp=N,16nm,0.6s						
CHKZ	**Chkalovo**	**17.34**	**360**	⇑P	**Pn**	**00 38 16.2**	**-1.1**
	comp=N,1.3nm,0.5s						
ARCES	**ARCESS Array B**	**41.22**	**338**	P	**P**	**00 41 53.2**	**-0.6**
	comp=N,2.0nm,0.9s,mb3.8,baz=123,slow=7.6,SNR=3.8						
NOA	**NORSAR Array B**	**44.39**	**323**	P	**P**	**00 42 21.1**	**+1.7**
	comp=N,1.0nm,0.9s,mb3.5,baz=102,slow=5.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**65.52**	**269**	P	**P**	**00 44 51.3**	**-0.3**
	comp=N,0.2nm,0.3s,mb3.4,baz=51,slow=6.0,SNR=7.2						
BOSA	**Boshof**	**77.50**	**220**	P	**P**	**00 46 04.3**	**+1.4**
	comp=N,1.8nm,0.8s,mb3.8,baz=19,slow=5.7,SNR=3.3						
YKA	**Yellowknife Ar**	**81.42**	**3**	P	**P**	**00 46 23.3**	**-0.4**
	comp=N,0.6nm,0.3s,mb3.6,baz=351,slow=5.5,SNR=16						
WRA	**Warramunga Arr**	**82.08**	**122**	P	**P**	**00 46 26.2**	**-1.6**
	comp=N,0.9nm,0.4s,mb3.7,baz=324,slow=5.0,SNR=32						
ASAR	**Alice Springs**	**84.33**	**125**	P	**P**	**00 46 38.2**	**-1.0**
	comp=N,1.2nm,0.6s,mb3.8,baz=311,slow=5.0,SNR=23						

CASC 20 00:41:36.3±3.9, 1391N×9089W, h31km±14km, MD4.0, 2C-6D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**0.54**	**5**	⇓*e*P	Pb	00 41 47.8	+0.3
PCG	**Pacaya**	**0.56**	**30**	⇓*e*P	Pb	00 41 48.1	+0.3
JAT	**Jato**	**0.83**	**300**	⇓*e*P	Pn	00 41 51.8	-0.1
JAT				*e*S	Sn	00 42 04.2	+1.2
RBDL	**Robledal**	**1.19**	**80**	⇓*e*P	x	00 42 25.8	
RBDL				*e*S	x	00 42 42.5	
SBLS	**San Blas**	**1.23**	**93**	*e*P	x	00 42 26.6	
SBLS				*e*S	x	00 42 41.8	
SNJE	**San Jose**	**1.25**	**92**	⇑*e*P	x	00 42 27.2	
SNJE				*e*S	x	00 42 43.6	
BOQS	**Boqueron**	**1.58**	**96**	*e*P	x	00 42 30.8	
BOQS				*e*S	x	00 42 49.7	
LFRS	**El Faro**	**1.80**	**99**	⇓*e*P	x	00 42 33.7	
LFRS				*e*S	x	00 42 55.2	
LCBS	**La Ceiba**	**1.88**	**97**	*e*P	x	00 42 34.5	
LCBS				*e*S	x	00 42 56.1	
SNVI	**San Vicente**	**2.02**	**98**	⇓*e*P	x	00 42 38.2	
SNVI				*e*S	x	00 43 04.1	
BLLM	**Bellamira**	**2.62**	**100**	⇑*e*P	x	00 42 45.5	
BLLM				*e*S	x	00 43 19.3	

JMA 20 00:46:53.4±0.3, 4341N×14679E, h39km±3km, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.77**	**267**	P	Pn	00 47 07.8	+0.1
NEM2				*e*S	Sn	00 47 18.4	+0.4
JRA	**Rausu**	**1.32**	**294**	P	Pn	00 47 16.1	+0.8
JRA				*e*S	Sn	00 47 32.4	+0.7
JNK	**Nakash**	**1.52**	**277**	P	Pn	00 47 18.4	+0.4
JNK				*e*S	Sn	00 47 37.1	+0.6
JAK	**Akkeshi**	**1.59**	**256**	P	Pn	00 47 19.5	+0.6
JAK				*e*S	Sn	00 47 39.0	+0.8
JTKR	**Abashiri--Toko**	**2.16**	**286**	P	Pn	00 47 28.6	+1.7
JAR	**Ashorobuto**	**2.21**	**268**	P	Pn	00 47 28.9	+1.4
JAR				*e*S	Sn	00 47 55.4	+1.9
JOB	**Onbets**	**2.22**	**258**	P	Pn	00 47 28.9	+1.2
JOB				*e*S	Sn	00 47 56.3	+2.4
JCH	**Churui**	**2.64**	**254**	P	Pn	00 47 34.3	+0.9

*ISCJB **20** 01:15:30.4±1.4, 1028S±007×11793E±009, h72km±15km, mb4.0/9, Error ellipse: s-maj=16.1km s-min=9.3km az=143.2*
*IDC **20** 01:15:30.1±6.2, 994S×1178E, h34km±54km, mb3.8/6, mb1 3.9/9, mb1mx3.7/17, mbtmp3.8/9, ML3.9/3, Error ellipse: s-maj=32.6km s-min=21.9km az=62.0*
*NEIC **20** 01:15:31.9±1.1, 1031S×1178E, h66km±12km, mb4.3/4, Error ellipse: s-maj=15.9km s-min=7.6km az=60.0*

ISC 20 01:15:32.1±1.1, 1030S±007×11793E±008, h72km±12km, n26, σ1§07/29, mb4.0/9, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**5.64**	**90**	Pn	**Pn**	**01 16 54.1**	**+0.6**
	11nm,0.3s,baz=87,slow=0.9,SNR=9.0						
BATI				Sn	**Sn**	**01 17 54.4**	**-2.5**
	3.0nm,0.3s,baz=137,slow=9.3,SNR=2.8						
FITZ	**Fitzroy Crossi**	**10.77**	**137**	*e*P	**Pn**	**01 18 03.9**	**+0.4**
	6.1nm,0.4s						
FITZ				*e*S	**Sn**	**01 19 58.6**	**-3.7**
FITZ	**Fitzroy Crossi**	**10.77**	**137**	Pn	**Pn**	**01 18 04.1**	**+0.6**
	1.0nm,0.3s,baz=335,slow=10,SNR=25						
FITZ				Sn	**Sn**	**01 19 56.7**	**-5.6**
	0.2nm,0.3s,baz=182,slow=21,SNR=3.6						
MBWA	**Marble Bar**	**10.94**	**171**	*e*Pn	**Pn**	**01 18 05.1**	**-0.7**
	3.7nm,0.3s						
KSM	**Kuching**	**13.94**	**327**	*e*Pn	**Pn**	**01 18 46.4**	**-0.1**
KAKA	**Kakadu**	**14.42**	**101**	Pn	**Pn**	**01 18 59.9**	**+7.3**
KKM	**Kota Kinabalu**	**16.33**	**354**	*e*P	**Pn**	**01 19 17.8**	**+0.8**
WRA	**Warramunga Arr**	**18.50**	**123**	P	**Pn**	**01 19 45.4**	**+1.8**
	0.2nm,0.3s,baz=288,slow=14,SNR=8.4						
WRA				S	**S**	**01 22 58.3**	**-12**
	0.1nm,0.3s,baz=279,slow=20,SNR=3.1						
ASAR	**Alice Springs**	**20.22**	**133**	P	**P**	**01 20 06.4**	**+5.0**
	0.9nm,0.6s,baz=309,slow=10.0,SNR=15						
ASAR				S	**S**	**01 23 42.6**	**-1.8**
	0.2nm,0.5s,baz=306,slow=24,SNR=3.3						
NWAO	**Narrogin (SRO)**	**22.53**	**182**	P	**P**	**01 20 27.2**	**+1.2**
NWAO	**Narrogin (SRO)**	**22.53**	**182**	P	**P**	**01 20 31.3**	**+5.3**
	2.6nm,0.7s,mb3.7,baz=216,slow=20,SNR=2.7						
PSI	**Prapat**	**22.97**	**304**	P	**P**	**01 20 29.1**	**-1.7**
	2.2nm,0.3s,mb4.0,baz=165,slow=8.7,SNR=3.5						
KULM	**Kulim**	**23.15**	**311**	*e*P	**P**	**01 20 31.0**	**-1.6**
PMG	**Port Moresby**	**28.80**	**91**	P	**P**	**01 21 23.7**	**+0.1**
NACB	**Ninganchiao**	**34.45**	**6**	P	**P**	**01 22 13.1**	**+0.1**
YHNB	**Yeheng**	**34.92**	**5**	P	**P**	**01 22 18.7**	**+1.7**
LSA	**Lhasa**	**47.41**	**328**	P	**P**	**01 23 59.3**	**-0.1**
KSRS	**Korea Array**	**48.42**	**11**	P	**P**	**01 24 06.4**	**-0.6**
	2.0nm,0.8s,mb4.0,baz=188,slow=8.6,SNR=6.7						
SONM	**Songino Array**	**51.78**	**351**	P	**P**	**01 25 22.0**	**-0.6**
	0.9nm,0.5s,mb4.1,baz=169,slow=8.2,SNR=23						
MKAR	**Makanchi Array**	**65.14**	**334**	P	**P**	**01 26 05.2**	**-0.1**
	0.9nm,0.3s,mb4.0,baz=148,slow=7.5,SNR=14						
TKM2	**Tokmak 2**	**65.55**	**327**	*e*P	**P**	**01 26 08.6**	**+0.5**
	1.0nm,0.3s,mb4.1						
UCH	**Uchtor**	**65.67**	**326**	*e*P	**P**	**01 26 10.4**	**+1.5**
	4.8nm,1.6s,mb4.1						
SBA	**Scott Base**	**71.89**	**170**	*e*P	**P**	**01 26 47.4**	**+0.4**
	4.8nm,1.0s,mb4.3						
TIXI	**Tiksi**	**82.09**	**3**	*e*P	**P**	**01 27 43.5**	**-0.6**
	2.7nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**115.80**	**24**	PKP	PKPdf	01 34 08.2	+2.2
YKA	**Yellowknife Ar**	**115.80**	**24**	PKP	PKPdf	01 34 08.2	+2.2
	0.2nm,0.5s,baz=299,slow=1.7,SNR=3.8						

*ISCJB **20** 01:26:41.7±1.0, 3754N±004×21103E±008, h9km, Error ellipse: s-maj=9.6km s-min=5.4km az=153.8*
*ATH **20** 01:26:42.8, 3756N×2097E, h9km±3km, MD3.5/12*
*NEIC **20** 01:26:42.8, 3756N×2097E, h9km, MD3.5(ATH), ML3.2(THE), After ATH.*
*CSEM **20** 01:26:43.1±0.2, 3757N×2099E, h2km, MD3.5, Error ellipse: s-maj=5.2km s-min=2.0km az=55.0*
*THE **20** 01:26:43.1, 3754N×2099E, h3km, ML3.2*

ISC 20 01:26:41.6±1.2, 3754N±005×2093E±008, h2km±10km, n13, σ1§19/16, 1C, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.58**	**349**	*e*Pg	**Pg**	**01 26 54.0**	**+1.2**
RLS	**Riolos of Patr**	**0.67**	**39**	⇑*i*PG	**Pg**	**01 26 54.9**	**+0.4**
RLS				*e*SB	**Sg**	**01 27 04.4**	**+1.2**
VLS	**Valsamata**	**0.70**	**337**	*e*PG	**Pg**	**01 26 55.8**	**+0.9**
VLS				*e*SB	**Sb**	**01 27 06.4**	**-0.1**
ITM	**Ithomi**	**0.87**	**114**	*e*PG	**Pg**	**01 26 58.8**	**+0.6**
EVR	**Evrytania**	**1.54**	**26**	*e*PG	**Pg**	**01 27 10.5**	**-0.7**
EVR				*e*SB	**Sg**	**01 27 32.1**	**+0.9**
VLI	**Veliai**	**1.80**	**116**	*e*PG	**Pg**	**01 27 16.2**	**+0.2**
LKR	**Lokris**	**1.98**	**55**	*e*PN	**Pg**	**01 27 18.1**	**-1.3**
KYTH	**Kithira**	**2.10**	**126**	*e*PG	**Pg**	**01 27 21.5**	**-0.3**
THL	**Klokotos Trika**	**2.20**	**22**	*e*PN	**Pg**	**01 27 21.3**	**-2.4**
KEK	**Kerkira**	**2.35**	**338**	*e*PN	**Pg**	**01 27 23.7**	**-2.9**
NEO	**Neokhori**	**2.52**	**45**	*e*PB	**Pb**	**01 27 25.1**	**-2.5**
VAM	**Vamos**	**3.38**	**128**	*e*PN	**Pn**	**01 27 36.2**	**+0.8**
PLG	**Polygyros**	**3.45**	**34**	*e*PN	**Pn**	**01 27 37.1**	**+0.9**

KRSC 20 01:36:59.2±0.3, 5315N×15792E, h183km±32km, ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PET	**Petropavlovsk**	**0.46**	**106**	S	Sn	01 37 45.8	+2.6
AVH	**Avacha**	**0.51**	**76**	*i* P	Pn	01 37 26.2	+1.9
GNL	**Ganaly**	**0.55**	**1**	*i* P	Pn	01 37 25.7	+1.3
GNL				*e*S	Sn	01 37 44.6	+0.6
SDLR	**Sedlovina**	**0.59**	**77**	*i* P	Pn	01 37 26.3	+1.6
SDLR				S	Sn	01 37 45.4	+1.1
GRL	**Gorelyy**	**0.61**	**171**	*i* P	Pn	01 37 25.9	+1.1
RUS	**Russkaya**	**0.80**	**153**	P	Pn	01 37 26.0	+0.1
RUS				*e*S	Sn	01 37 45.9	-0.4
NLC	**Nalytchevo**	**0.86**	**88**	P	Pn	01 37 27.2	+1.0
NLC				*e*S	Sn	01 37 48.3	+1.4
MIPR	**Malaya Ipel'ka**	**1.12**	**219**	*e*P	Pn	01 37 27.3	-0.8
SPN	**Mys Shipunski**	**1.27**	**92**	P	Pn	01 37 30.4	+1.1
SPN				*e*S	Sn	01 37 52.7	+0.3
MKZ	**Mys Kozlova**	**2.66**	**57**	P	Pn	01 37 44.7	+0.9
MKZ				S	Sn	01 38 18.0	-0.6
KMNR	**Kamenistaya**	**2.94**	**26**	P	Pn	01 37 49.3	+2.2
KBTR	**Krutoberegovo**	**4.18**	**41**	P	Pn	01 38 04.1	+1.6

*ISCJB **20** 02:29:45.3±1.0, 2086N±010×1457E±03, h33km, mb3.6/8, Error ellipse: s-maj=36.4km s-min=13.8km az=175.2*
*NEIC **20** 02:29:47.1±0.6, 2095N×14565E, h35km, Error ellipse: s-maj=27.1km s-min=13.1km az=85.0*
*IDC **20** 02:29:51.3±7.3, 2091N×14554E, h69km±65km, mb3.4/8, mb1 3.5/8, mb1mx3.5/17, mbtmp3.4/8, MS3.1/2, Ms1 3.1/2, ms1mx2.6/23, Error ellipse: s-maj=42.6km s-min=18.6km az=86.0*

ISC 20 02:29:47.1±0.9, 2089N±010×1458E±03, h35km, n13, σ0§87/10, mb3.6/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**17.98**	**316**	LR	LR	02 40 44.6	
	comp=Z,72nm,18.9s,baz=17,slow=37						
KSRS	**Korea Array**	**22.63**	**321**	P	**P**	**02 34 45.9**	**+1.0**
	1.1nm,0.5s,mb3.6,baz=143,slow=8.0,SNR=5.7						
KSRS				LR	LR	02 42 56.1	
	comp=Z,30nm,18.7s,baz=335,slow=35						
ASAJ	**Asahikawa**	**23.31**	**354**	P	**P**	**02 34 53.4**	**+1.3**
	6.5nm,0.4s,mb4.4,baz=150,slow=26,SNR=5.3						
SONM	**Songino Array**	**41.49**	**320**	P	**P**	**02 37 29.3**	**-1.5**
	0.4nm,0.5s,mb3.3,baz=136,slow=8.9,SNR=4.2						
WB2	**Warramunga Arr**	**42.09**	**196**	P	**P**	**02 37 36.0**	**+0.2**
WRA	**Warramunga Arr**	**42.09**	**196**	P	**P**	**02 37 36.0**	**+0.2**
	0.6nm,0.5s,mb3.5,baz=17,slow=8.7,SNR=9.9						
ASAR	**Alice Springs**	**45.77**	**195**	P	**P**	**02 38 05.6**	**+0.3**
	0.3nm,0.7s,mb3.4,baz=17,slow=7.1,SNR=4.4						
MK31	**Makanchi Array**	**57.01**	**313**	P	**P**	**02 39 28.9**	**-0.4**
MKAR	**Makanchi Array**	**57.01**	**313**	P	**P**	**02 39 29.8**	**+0.5**
	0.3nm,0.4s,mb3.6,baz=91,slow=7.6,SNR=4.6						
MKAR				PcP	PcP	02 40 23.2	-1.0
	0.4nm,0.5s,baz=75,slow=5.3,SNR=4.2						
YKA	**Yellowknife Ar**	**76.04**	**28**	P	**P**	**02 41 30.4**	**-0.2**
	0.2nm,0.7s,mb3.2,baz=294,slow=6.2,SNR=3.4						
FINES	**FINESS Array B**	**84.93**	**335**	P	**P**	**02 42 16.8**	**-1.5**
	0.7nm,0.4s,mb4.2,baz=72,slow=5.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**131.10**	**311**	PKP	PKPdf	02 48 56.1	-0.1
	0.9nm,1.2s,baz=5.7,slow=2.9,SNR=3.1						
LPAZ	**La Paz**	**147.59**	**88**	PKPbc	PKPbc	02 49 30.4	+1.9
	0.7nm,0.6s,baz=315,slow=4.3,SNR=4.5						

IDC 20 02:34:27.3±2.9, 851S×11084E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/14, mbtmp3.5/3, 1C, Error ellipse: s-maj=154.6km s-min=27.8km az=49.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJII	**Banjamegara**	**1.62**	**316**	⇑*i*P	Pn	02 35 06.0	+8.8
BJII				*i* S	Sn	02 35 26.8	+8.0
WRA	**Warramunga Arr**	**25.42**	**119**	P	P	02 39 57.3	+0.4
	0.9nm,0.7s,baz=292,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**26.73**	**127**	P	P	02 40 08.5	-0.3
	0.4nm,0.7s,baz=307,slow=10,SNR=5.5						
MKAR	**Makanchi Array**	**60.65**	**338**	P	P	02 44 40.2	+0.1
	0.4nm,0.5s,baz=159,slow=8.1,SNR=5.5						

*ISCJB **20** 02:39:29.3±3.0, 471N±006×785W±0.1, h15km±24km, mb3.8/8, Error ellipse: s-maj=17.0km s-min=10.3km az=169.1*
*NEIC **20** 02:39:33.2±1.1, 459N×7863W, h35km±11km, Error ellipse: s-maj=14.9km s-min=9.3km az=75.0*
*IDC **20** 02:39:35.2±2.3, 462N×7851W, h50km±23km, mb3.6/8, mb1 4.0/12, mb1mx3.8/20, mbtmp3.8/12, ML4.0/3, MS3.1/3, Ms1 3.1/3, ms1mx2.8/25, Error ellipse: s-maj=24.7km s-min=15.4km az=61.0*

ISC 20 02:39:33.6±3.2, 469N±006×7847W±007, h33km±26km, n23, σ1§18/18, mb3.8/8, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**4.13**	**88**	P	**Pn**	**02 40 38.0**	**+3.6**
	5.4nm,0.3s,baz=90,slow=21,SNR=15						
OTAV	**Otavalo**	**4.43**	**180**	*e*Pn	**Pn**	**02 40 36.4**	**-2.2**
BCIP	**Isla Barro Col**	**4.65**	**343**	*e*Pn	**Pn**	**02 40 40.0**	**-1.6**
BCIP				*e*Sn	**Sn**	**02 41 29.2**	**-5.2**
JTS	**JuntasAbangare**	**8.50**	**311**	LR	LR	02 44 43.7	
	comp=Z,73nm,19.1s,baz=103,slow=36						
SDV	**Santo Domingo**	**8.82**	**61**	P	**Pn**	**02 41 40.2**	**+1.3**
	1.2nm,0.3s,baz=264,slow=10,SNR=22						
SDV				S	**Sn**	**02 43 16.0**	**-1.3**
	1.0nm,0.3s,baz=354,slow=10,SNR=3.7						
SDV				LR	LR	02 44 58.5	
	comp=Z,211nm,21.7s,baz=296,slow=36						
ATAH	**Atahualpa**	**11.62**	**180**	P	**Pn**	**02 42 19.2**	**+2.0**
	1.4nm,0.3s,baz=18,slow=7.7,SNR=5.7						
NNA	**Nana**	**16.65**	**174**	P	**Pn**	**02 43 23.3**	**-1.3**
	0.4nm,0.3s,baz=328,slow=15,SNR=2.6						
SJG	**San Juan**	**17.97**	**41**	LR	LR	02 49 55.1	
	comp=Z,72nm,21.1s,baz=92,slow=34						
LPAZ	**La Paz**	**23.22**	**154**	P	**P**	**02 44 38.8**	**+0.7**
	2.2nm,0.9s,mb3.6,baz=351,slow=15,SNR=6.4						
SIV	**San Ignacio**	**26.81**	**140**	P	**P**	**02 45 10.5**	**-0.5**
	2.1nm,1.0s,mb3.6,baz=314,slow=12,SNR=5.2						
TXAR	**Lajitas Array**	**34.20**	**319**	P	**P**	**02 46 17.4**	**+1.2**
	1.0nm,1.1s,mb3.7,baz=108,slow=8.0,SNR=4.9						
TXAR				PcP	PcP	02 48 52.4	-0.4
	0.8nm,1.1s,baz=134,slow=2.6,SNR=3.5						
PDAR	**Pinedale Array**	**46.88**	**329**	P	**P**	**02 48 02.0**	**+1.2**
	0.7nm,0.8s,mb3.6,baz=121,slow=11,SNR=6.1						
ULM	**Lac du Bonnet**	**47.71**	**345**	P	**P**	**02 48 05.9**	**-1.2**
	baz=157,slow=9.4						
NVAR	**Mina Array Bea**	**49.35**	**318**	P	**P**	**02 48 20.2**	**+0.2**
	0.5nm,0.6s,mb3.7,baz=136,slow=7.1,SNR=5.1						
SCHQ	**Schefferville**	**50.87**	**9**	P	**P**	**02 48 31.7**	**+0.6**
	baz=187,slow=8.1						
YKA	**Yellowknife Ar**	**63.53**	**342**	P	**P**	**02 50 00.0**	**-0.5**
	2.4nm,0.8s,mb4.3,baz=132,slow=6.5,SNR=45						
DBIC	**Dimbokro**	**73.22**	**84**	P	**P**	**02 51 02.0**	**-0.1**
	2.9nm,0.9s,mb4.2,baz=236,slow=9.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**79.38**	**78**	P	**P**	**02 51 37.2**	**+0.2**
	0.5nm,0.6s,mb3.7,baz=286,slow=6.6,SNR=10						
MKAR	**Makanchi Array**	**125.98**	**16**	PKP	PKPdf	02 58 31.4	-1.2
	0.6nm,0.7s,baz=333,slow=1.9,SNR=4.9						
SONM	**Songino Array**	**127.52**	**356**	PKP	PKPdf	02 58 36.2	+0.7
	1.5nm,0.9s,baz=352,slow=1.0,SNR=6.6						
ASAR	**Alice Springs**	**143.54**	**236**	PKP	PKPdf	02 59 02.4	-3.5
	2.7nm,0.8s,baz=119,slow=4.0,SNR=20						
WB2	**Warramunga Arr**	**144.64**	**242**	*e*P	PKPdf	02 59 06.4	-1.5
WRA	**Warramunga Arr**	**144.65**	**242**	PKP	PKPdf	02 59 06.4	-1.5
	7.1nm,1.0s,baz=106,slow=3.6,SNR=32						

*NEIC **20** 02:49:33.9±0.5, 1344N×12059E, h35km, mb4.6/4, Error ellipse: s-maj=26.4km s-min=10.3km az=61.0*
*ISCJB **20** 02:49:34.1±0.6, 1329N±004×12018E±007, h51km±5km, mb4.3/12, MS2.8/1, Error ellipse: s-maj=10.7km s-min=5.9km az=0.5*
*MAN **20** 02:49:34, 1329N×12018E, h31km, mb4.0, ML2.7, MS2.4*
*IDC **20** 02:49:40.4±8.8, 1343N×12064E, h92km±82km, mb3.8/8, mb1 4.0/8, mb1mx3.7/17, mbtmp3.8/8, MS2.9/1, Ms1 2.9/1, ms1mx2.7/34, Error ellipse: s-maj=78.4km s-min=16.5km az=67.0*

ISC 20 02:49:34.9±0.6, 1329N±004×12018E±007, h43km±7km, n24, σ0§87/28, mb4.3/12, MS2.8/1, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.45**	**8**	*e*P	**Pn**	**02 49 44.3**	**-0.8**
LUBP				*e*S	**Sn**	**02 49 50.9**	**-1.4**
TGY	**Tagaytay City**	**1.09**	**42**	⇓*i*P	**Pn**	**02 49 54.6**	**+0.8**
TGY				*i* S	**Sn**	**02 50 08.7**	**+1.0**
BUSP	**Coron**	**1.28**	**179**	*e*P	**Pn**	**02 49 56.8**	**+0.5**
BUSP				*e*S	**Sn**	**02 50 12.4**	**+0.1**
BOAC	**Boac**	**1.63**	**84**	*e*P	**Pn**	**02 50 01.3**	**+0.2**
BOAC				*e*S	**Sn**	**02 50 20.9**	**0.0**
OTRP	**Odiongan**	**2.02**	**117**	*e*P	**Pn**	**02 50 05.5**	**-0.9**
PCPH	**Palayan**	**2.43**	**21**	⇓*e*P	**Pn**	**02 50 11.9**	**-0.3**
PCPH				*e*S	**Sn**	**02 50 40.5**	**-0.1**
SCZP	**Santa Cruz**	**2.49**	**354**	*e*P	**Pn**	**02 50 13.5**	**+0.6**
CUYO	**Cuyo Island**	**2.56**	**161**	*e*P	**Pn**	**02 50 14.2**	**+0.3**
BALP	**Baler**	**2.79**	**29**	*e*P	**Pn**	**02 50 18.1**	**+1.1**
GUMO	**Guam**	**24.01**	**86**	*e*P	**P**	**02 54 42.0**	**-4.0**
	153nm,1.1s,mb5.3						
KSRS	**Korea Array**	**25.04**	**15**	LR	LR	03 05 04.0	
	comp=Z,28nm,19.1s,MS2.8,baz=165,slow=37						
WRA	**Warramunga Arr**	**35.84**	**157**	P	**P**	**02 56 30.4**	**-0.3**
	2.5nm,0.6s,mb4.3,baz=336,slow=9.6,SNR=23						
WB2	**Warramunga Arr**	**35.84**	**157**	*e*P	**P**	**02 56 30.2**	**-0.5**
ULN	**Ulaanbaatar**	**36.17**	**345**	*e*P	**P**	**02 56 33.4**	**+0.2**
	6.7nm,1.0s,mb4.5						
SONM	**Songino Array**	**36.31**	**344**	P	**P**	**02 56 35.1**	**+0.7**
	5.2nm,0.8s,mb4.5,baz=159,slow=9.9,SNR=54						
ASAR	**Alice Springs**	**39.10**	**160**	P	**P**	**02 56 59.0**	**+0.8**
	2.1nm,0.6s,mb4.1,baz=339,slow=7.1,SNR=22						
MK31	**Makanchi Array**	**46.06**	**324**	*e*P	**P**	**02 57 56.2**	**+1.6**
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**02 57 56.5**	**+2.0**
	0.7nm,0.5s,mb3.6,baz=131,slow=9.1,SNR=11						
MKAR				PcP	PcP	02 59 31.5	+1.1
	0.6nm,0.6s,baz=123,slow=3.6,SNR=4.8						
JOF	**Joensuu**	**77.77**	**332**	*e*p	**P**	**03 01 26.4**	**-0.9**
	2.6nm,0.4s,mb4.5						
ARCES	**ARCESS Array B**	**79.29**	**339**	P	**P**	**03 01 35.4**	**-0.2**
	1.1nm,0.4s,mb4.1,baz=75,slow=7.3,SNR=20						
KAF	**Kangasniemi**	**80.18**	**332**	*e*p	**P**	**03 01 39.1**	**-1.4**
	1.1nm,0.4s,mb4.1						
FINES	**FINESS Array B**	**80.40**	**331**	P	**P**	**03 01 41.5**	**-0.3**
	1.3nm,0.5s,mb4.1,baz=71,slow=4.7,SNR=11						
NOA	**NORSAR Array B**	**87.39**	**333**	P	**P**	**03 02 16.9**	**-0.6**
	2.3nm,0.8s,mb4.5,baz=69,slow=4.6,SNR=4.8						
YKA	**Yellowknife Ar**	**93.35**	**22**	P	**P**	**03 02 43.8**	**-1.4**
	0.1nm,0.4s,mb3.6,baz=305,slow=4.5,SNR=3.4						

*IDC **20** 03:03:39.9±1.0, 085S×13374E, h0km, mb4.0/7, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, ML4.4/3, Error ellipse: s-maj=45.4km s-min=17.1km az=75.0*
*ISCJB **20** 03:03:44.5±2.7, 107S±007×1336E±0.1, h39km±24km, mb4.2/10, Error ellipse: s-maj=23.0km s-min=11.4km az=178.0*
*NEIC **20** 03:03:45.3±0.7, 092S×13372E, h35km, mb4.5/5, Error ellipse: s-maj=22.3km s-min=10.2km az=83.0*

ISC 20 03:03:44.9±4.7, 098S±008×1337E±02, h31km±34km, n20, σ1§00/25, mb4.2/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**11.73**	**186**	*e*P	**Pn**	**03 06 30.8**	**+0.6**
	24nm,0.4s						
KAKA				*e*S	**Sn**	**03 08 38.3**	**-1.8**
BATI	**Kupang**	**13.55**	**227**	Pn	**Pn**	**03 06 55.2**	**0.0**
	1.1nm,0.3s,baz=89,slow

SURIGAO DEL SUR.
IDC ***20*** *03:10:33.2±1.1,9.19N×126.31E,h59km,8km,mb5.0/29, mb1 5.0/30,mb1mx5.0/30,mbtmp5.0/30,MS4.6/14, Ms1 4.6/14,ms1mx4.5/21,Error ellipse: s-maj=10.0km s-min=6.1km az=88.0*
ISC 20 03:10:30.8±0.1,921N±002×12645E±002,h39km, h39km±1.7km:pP-P,n628,σ1§26/588,mb5.5/131,MS4.8/93, 51C-39D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.02**	**185**	*eP*		**Pn**	**Pn**	**03 10 48.5**	**-0.2**
BIPH				*i* S		**Sn**	**Sn**	**03 11 00.6**	**-1.2**
SCPH	**Surigao**	**1.10**	**301**	*eP*		**Pn**	**Pn**	**03 10 50.7**	**+1.0**
SCPH				*eS*		**Sn**	**Sn**	**03 11 05.0**	**+1.2**
MSLP	**Maasin**	**1.81**	**300**	*eP*		**Pn**	**Pn**	**03 11 01.8**	**+2.3**
MSLP				*eS*		**Sn**	**Sn**	**03 11 26.7**	**+5.4**
CGP	**Cagayan de Oro**	**1.89**	**247**	⇓*i*P		**Pn**	**Pn**	**03 11 00.8**	**+0.3**
CGP				*i* S		**Sn**	**Sn**	**03 11 23.4**	**+0.3**
BUKP	**Musuan**	**1.91**	**226**	*eP*		**Pn**	**Pn**	**03 11 02.7**	**+1.9**
BUKP				*eS*		**Sn**	**Sn**	**03 11 27.4**	**+3.8**
MATI	**Mati**	**2.26**	**185**	*eP*		**Pn**	**Pn**	**03 11 08.8**	**+3.1**
MATI				*eS*		**Sn**	**Sn**	**03 11 36.9**	**+4.6**
DAV	**Davao City (W)**	**2.29**	**202**	*eP*	n	**Pn**	**Pn**	**03 11 09.3**	**+3.2**
DAV	**Davao City (W)** SNR=124	**2.29**	**202**	P		**Pn**	**Pn**	**03 11 09.4**	**+3.3**
DAV	**Davao City (W)**	**2.29**	**202**	*eP*		**Pn**	**Pn**	**03 11 09.0**	**+2.8**
DMPH	**Davao City--Mi**	**2.31**	**204**	⇓*i*P		**Pn**	**Pn**	**03 11 09.0**	**+2.6**
DMPH				*i* S		**Sn**	**Sn**	**03 11 19.8**	**-14**
PLP	**Palo**	**2.42**	**323**	*eP*		**Pn**	**Pn**	**03 11 10.6**	**+2.7**
PLP				*i* S		**Sn**	**Sn**	**03 11 39.6**	**+3.3**
OCLP	**Ormoc**	**2.57**	**315**	*eP*		**Pn**	**Pn**	**03 11 13.7**	**+3.7**
TBP	**Tagbilaran**	**2.59**	**281**	*eP*		**Pn**	**Pn**	**03 11 12.0**	**+1.7**
TBP				*eS*		**Sn**	**Sn**	**03 11 42.8**	**+2.2**
LLP	**Lapu-Lapu**	**2.68**	**294**	⇓*i*P		**Pn**	**Pn**	**03 11 14.6**	**+3.1**
LLP				*i* S		**Sn**	**Sn**	**03 11 46.6**	**+3.9**
CTBH	**Cotabato--PC H**	**2.94**	**228**	⇓*eP*		**Pn**	**Pn**	**03 11 16.4**	**+1.3**
CTBH				*eS*		**Sn**	**Sn**	**03 11 50.7**	**+1.5**
SNPH	**Sibulan**	**3.17**	**273**	⇓*eP*		**Pn**	**Pn**	**03 11 20.0**	**+1.8**
SNPH				*i* S		**Sn**	**Sn**	**03 11 55.0**	**+0.1**
PAGZ	**Pagadian**	**3.32**	**246**	*eP*		**Pn**	**Pn**	**03 11 22.0**	**+1.7**
CNP	**Catarman**	**3.72**	**332**	*eP*		**Pn**	**Pn**	**03 11 27.4**	**+1.7**
CNP				*eS*		**Sn**	**Sn**	**03 12 12.6**	**+4.2**
GUIM	**Jordan**	**4.05**	**291**	*eP*		**Pn**	**Pn**	**03 11 32.4**	**+2.0**
GUIM				*eS*		**Sn**	**Sn**	**03 12 17.3**	**+0.7**
PVCP	**Virac**	**4.90**	**333**	*eP*		**Pn**	**Pn**	**03 11 43.7**	**+1.6**
PVCP				*eS*		**Sn**	**Sn**	**03 12 40.7**	**+3.1**
OTRP	**Odiongan**	**5.36**	**306**	*eP*		**Pn**	**Pn**	**03 11 51.1**	**+2.8**
GQP	**Guinayangan**	**6.09**	**320**	⇑*eP*		**Pn**	**Pn**	**03 12 01.3**	**+2.9**
BOAC	**Boac**	**6.18**	**314**	*eP*		**Pn**	**Pn**	**03 12 02.9**	**+3.3**
BUSP	**Coron**	**6.74**	**295**	*eP*		**Pn**	**Pn**	**03 12 09.8**	**+2.5**
POLP	**Polilio Island**	**7.04**	**322**	*eP*		**Pn**	**Pn**	**03 12 14.1**	**+2.8**
TGY	**Tagaytay City**	**7.26**	**313**	⇓*eP*		**Pn**	**Pn**	**03 12 20.0**	**+5.5**
LUBP	**Lubang**	**7.56**	**307**	*eP*		**Pn**	**Pn**	**03 12 22.6**	**+4.1**
PPR	**Puerto Princes**	**7.63**	**275**	⇓*i*P		**Pn**	**Pn**	**03 12 21.4**	**+1.9**
BALP	**Baler**	**8.05**	**324**	*eP*		**Pn**	**Pn**	**03 12 25.2**	**0.0**
PCPH	**Palayan**	**8.19**	**321**	⇓*eP*		**Pn**	**Pn**	**03 12 28.3**	**+1.1**
BATP	**Bataraza**	**8.55**	**268**	*eP*		**Pn**	**Pn**	**03 12 37.4**	**+5.3**
MYLDM	**Lahad Datu**	**8.84**	**244**	⇓P		**Pn**	**Pn**	**03 12 42.6**	**+6.5**
CAUP	**Cauayan**	**8.91**	**330**	*eP*		**Pn**	**Pn**	**03 12 37.0**	**0.0**
SCZP	**Santa Cruz**	**9.12**	**316**	*eP*		**Pn**	**Pn**	**03 12 45.1**	**+5.1**
BOLP	**Bolinao**	**9.56**	**319**	*eP*		**Pn**	**Pn**	**03 12 49.5**	**+3.6**
CVP	**Callao Caves**	**9.56**	**332**	*eP*		**Pn**	**Pn**	**03 12 46.9**	**+0.9**
KDM	**Kudat**	**9.79**	**257**	⇑P		**Pn**	**Pn**	**03 12 56.4**	**+7.3**
TSM	**Tawau**	**9.81**	**241**	⇓P		**Pn**	**Pn**	**03 12 54.6**	**+5.1**
SDKM	**Sandakan**	**9.84**	**250**	⇓P		**Pn**	**Pn**	**03 12 54.7**	**+4.9**
APYP	**Conner**	**9.98**	**330**	*eP*		**Pn**	**Pn**	**03 12 53.6**	**+2.0**
ABRA	**Dolores**	**10.07**	**327**	*eP*		**Pn**	**Pn**	**03 12 53.8**	**+0.9**
KKM	**Kota Kinabalu**	**10.62**	**253**	⇓*i*Pn		**Pn**	**Pn**	**03 13 05.2**	**+4.7**
KKM				*eS*	n	**Sn**	**Sn**	**03 14 53.2**	**-5.0**
KKM	**Kota Kinabalu**	**10.62**	**253**	⇓P		**Pn**	**Pn**	**03 13 05.9**	**+5.4**
BTM	**Bintulu**	**14.56**	**247**	⇑P		**Pn**	**Pn**	**03 14 00.2**	**+5.8**
NACB	**Ninganchiao**	**15.58**	**343**	*eP*	n	**Pn**	**Pn**	**03 14 10.6**	**+2.8**
KAPI	**Kappang** 326nm,1.2s,SNR=8.3	**15.63**	**206**	P	n	**Pn**	**Pn**	**03 14 10.6**	**+2.3**
SBUM	**Sibu**	**15.66**	**245**	⇓P		**Pn**	**Pn**	**03 14 11.7**	**+2.9**
QZH	**Quanzhou**	**17.34**	**335**	P		**Pn**	**Pn**	**03 14 34.6**	**+4.6**
QZH	comp=Z,190nm,1.1s			AMB		AMB			
QZH	comp=Z,2μm,4.8s			LR		LR			
QZH	comp=N,4μm,17.5s			LR		LR			
QZH	comp=E,2μm,10.8s			LR		LR			
HKC	comp=Z,5μm,19.1s **Hong Kong Obse**	**17.56**	**319**	P		**Pn**	**Pn**	**03 14 32.0**	**-0.6**
JOW	**Kunigami**	**17.61**	**5**	P		**Pn**	**Pn**	**03 14 33.4**	**+0.1**
JOW	comp=Z,0.8nm,0.3s,baz=260,slow=25,SNR=2.5			S		**S**	**S**	**03 17 54.3**	**-0.5**
JOW	comp=Z,1.8nm,0.3s,baz=116,slow=19,SNR=2.2			LR		LR	LR	03 21 06.8	
KSM	comp=Z,2μm,20.4s,baz=313,slow=36 **Kuching**	**17.80**	**245**	*eP*		**Pn**	**Pn**	**03 14 37.1**	**+1.4**
KSM	**Kuching**	**17.80**	**245**	⇑P		**Pn**	**Pn**	**03 14 38.6**	**+2.8**
GZH	**Guangzhou**	**18.65**	**319**	P		**Pn**	**Pn**	**03 14 46.9**	**+0.9**
GZH				S		**S**	**S**	**03 18 15.6**	**-0.4**
GZH	comp=N,3μm,21.8s			LR		LR	LR		
GZH	comp=E,2μm,21.5s			LR		LR	LR		
GZH	comp=Z,5μm,22.4s			LR		LR	LR		
QIZ	**Qiongzhong**	**18.81**	**303**	P		**Pn**	**Pn**	**03 14 48.3**	**+0.3**
QIZ				AP		pP		03 14 56.8	-0.3
QIZ				XP		sP		03 15 00.5	-1.6
QIZ				PP				03 15 04.0	
QIZ				S		**S**	**S**	**03 18 12.0**	**-6.9**
QIZ				XS		sS		03 18 24.4	-11
QIZ	comp=Z,213nm,1.2s			AMB		AMB	AMB		
QIZ	comp=Z,2μm,11.8s			AMB		AMB	AMB		
QIZ	comp=N,2μm,20.7s			LR		LR	LR		
QIZ	comp=E,2μm,20.2s			LR		LR	LR		
QIZ	comp=Z,5μm,25.4s **Qiongzhong**	**18.81**	**303**	*eP*		**Pn**	**Pn**	**03 14 44.2**	**-3.8**
BATI	comp=Z,248nm,1.1s **Kupang**	**19.49**	**188**	P		**Pn**	**Pn**	**03 14 57.6**	**+1.5**
BATI	comp=Z,29nm,0.3s,baz=268,slow=0.4,SNR=33			S		**S**	**S**	**03 18 29.6**	**-3.2**
BATI	comp=Z,1.8nm,0.3s,baz=76,slow=17,SNR=1.7			LR		LR	LR	03 23 25.7	
SSE	comp=Z,1μm,21.4s,baz=352,slow=40 **Sheshan**	**22.32**	**348**	P		**P**	**P**	**03 15 25.4**	**+0.4**
SSE				XP		sP		03 15 37.8	-2.2
SSE				S		**S**	**S**	**03 19 27.6**	**-0.9**
SSE	comp=Z,283nm,0.9s,mb5.7			AMB		AMB	AMB		
SSE	comp=Z,528nm,4.3s			AMB		AMB	AMB		
SSE	comp=N,789nm,25.1s			LR		LR	LR		
SSE	comp=E,396nm,25.5s			LR		LR	LR		
SSE	comp=Z,1μm,24.0s			LR		LR	LR		
KAKA	**Kakadu** comp=Z,66nm,0.4s,mb5.4	**22.58**	**165**	*eP*		**P**	**P**	**03 15 27.5**	**-0.4**
KAKA				*eS*		**S**	**S**	**03 19 28.7**	**-4.6**
KAKA				*eSCP*		ScP	ScP	03 23 00.9	+5.6
CBIJ	**Chichi jima** comp=Z,312nm,1.2s,mb5.6,baz=278,slow=23,SNR=6.9	**23.19**	**38**	P		**P**	**P**	**03 15 37.4**	**+3.1**
CBIJ	comp=Z,128nm,0.9s,baz=237,slow=13,SNR=2.4			S		**S**	**S**	**03 19 43.6**	**+0.4**
CBIJ	comp=Z,1μm,21.9s,MS4.3,baz=258,slow=31			LR		LR	LR	03 22 43.5	
KTGM	**Kuala Trenggan**	**23.44**	**262**	⇑P		**P**	**P**	**03 15 38.5**	**+1.6**
MYKOM	**Kota Tinggi**	**23.66**	**253**	⇓P		**P**	**P**	**03 15 40.2**	**+1.3**
NJ2	**Nanjing**	**23.80**	**344**	*eP*		**P**	**P**	**03 15 40.6**	**+0.6**
NJ2				AP				03 15 51.6	
NJ2				XP		sP		03 15 53.8	-1.7
NJ2				PP				03 16 12.3	
NJ2	comp=Z,210nm,0.8s,mb5.6			AMB		AMB	AMB		
NJ2	comp=Z,770nm,7.4s			AMB		AMB	AMB		
NJ2	comp=N,2μm,22.6s,MS4.7			LR		LR	LR		
NJ2	comp=E,2μm,19.5s,MS4.7			LR		LR			
NJ2	comp=Z,2μm,19.5s,MS4.6			LR		LR			
WHN	**Wuhan**	**24.04**	**334**	⇓P		**P**	**P**	**03 15 42.1**	**-0.2**
WHN				AP				03 15 55.9	
WHN				S		**S**	**S**	**03 19 57.8**	**+0.8**
WHN				AMB		AMB	AMB		
WHN	comp=Z,318nm,1.6s,mb5.5			AMB		AMB	AMB		
WHN	comp=Z,639nm,9.1s			LR		LR	LR		
KGM	comp=Z,4μm,25.1s,MS4.8 **Kluang**	**24.09**	**254**	⇓P		**P**	**P**	**03 15 44.0**	**+1.1**
JNU	**Nakatsue**	**24.14**	**9**	P		**P**	**P**	**03 15 43.9**	**+0.7**
JNU	comp=Z,161nm,1.1s,mb5.3,baz=190,slow=11,SNR=25			S		**S**	**S**	**03 19 59.5**	**+0.9**
JNU	comp=Z,10nm,1.1s,baz=166,slow=13,SNR=1.7			LR		LR	LR	03 24 05.9	
FRIM	comp=Z,1μm,20.8s,MS4.3,baz=181,slow=34 **Kepong**	**25.37**	**258**	⇓P		**P**	**P**	**03 15 55.9**	**+1.4**
GYA	**Guiyang**	**25.41**	**315**	P		**P**	**P**	**03 15 56.8**	**+2.0**
GYA				AP		pP		03 16 06.6	+1.0
GYA				PP				03 16 36.5	
GYA				S		**S**	**S**	**03 20 18.3**	**-0.7**
GYA				XS		sS		03 20 34.9	-2.1
GYA				SS				03 21 20.3	
GYA	comp=Z,40nm,1.0s,mb4.9			AMB		AMB	AMB		
GYA	comp=Z,420nm,5.8s			AMB		AMB	AMB		
GYA	comp=N,880nm,20.4s,MS4.4			LR		LR	LR		
GYA	comp=E,930nm,19.8s,MS4.4			LR		LR	LR		
GYA	comp=Z,690nm,21.3s			LR		LR	LR		
KULM	**Kulim**	**25.88**	**263**	*eP*		**P**	**P**	**03 15 59.7**	**+0.5**
KULM				*ePcP*		PcP	PcP	03 19 26.5	-1.3
KULM	**Kulim**	**25.88**	**263**	⇑P		**P**	**P**	**03 16 00.4**	**+1.2**
ENH	**Enshi**	**26.27**	**325**	PFAKE				03 16 10.0	+7.5
ENH	comp=Z,2.0nm,21.0s			LR		LR	LR		
JHJ	**Hachijo jima 2**	**26.79**	**25**	LR		LR	LR	03 25 28.3	
FITZ	comp=Z,1μm,18.6s,MS4.4,baz=243,slow=33 **Fitzroy Crossi**	**27.15**	**182**	*eP*		**P**	**P**	**03 16 10.2**	**-0.3**
FITZ	comp=Z,72nm,1.0s,mb5.2			*eS*		**S**	**S**	**03 20 56.1**	**+10**
FITZ				*eSCP*		ScP	ScP	03 23 13.3	+5.3
FITZ	**Fitzroy Crossi**	**27.15**	**182**	P		**P**	**P**	**03 16 10.8**	**+0.2**
FITZ	comp=Z,76nm,1.2s,mb5.1,baz=10,slow=11,SNR=33			S		**S**	**S**	**03 20 45.6**	**-0.9**
FITZ	comp=Z,3.9nm,0.9s,baz=231,slow=15,SNR=1.8			ScP		ScP	ScP	03 23 05.7	-2.3
KMI	comp=Z,9.9nm,1.1s,baz=24,slow=8.5,SNR=3.9 **Kunming**	**27.55**	**308**	P		**P**	**P**	**03 16 14.4**	**+0.2**
KMI				AP		pP		03 16 25.9	+0.9
KMI				XP		sP		03 16 31.3	+1.5
KMI				PP				03 17 00.6	
KMI				PCP		PcP		03 19 32.8	+1.3
KMI				S		**S**	**S**	**03 20 48.5**	**-4.4**
KMI				XS		sS		03 21 08.1	-2.9
KMI	comp=Z,22nm,1.2s,mb4.7			AMB		AMB	AMB		
KMI	comp=N,727nm,23.5s,MS4.8			LR		LR	LR		
KMI	comp=E,3μm,20.7s,MS4.8			LR		LR	LR		
KMI	comp=Z,3μm,20.7s,MS4.8			LR		LR	LR		
PMG	**Port Moresby** comp=Z,21nm,0.4s,mb5.1	**27.70**	**131**	*eP*		**P**	**P**	**03 16 16.3**	**+0.8**
PMG	comp=Z,2μm,20.0s,MS4.6			LR		LR	LR		
PMG	**Port Moresby**	**27.70**	**131**	P		**P**	**P**	**03 16 16.4**	**+0.9**
PMG				S		**S**	**S**	**03 20 57.4**	**+2.0**
PMG	comp=Z,6.0nm,0.5s			pmax		pmax			
PMG	comp=N,2.0nm,0.3s			smax					
PMG	**Port Moresby** comp=N,6.2nm,0.5s,baz=350,slow=8.9,SNR=4.2	**27.70**	**131**	P		**P**	**P**	**03 16 16.4**	**+0.9**
PMG	comp=N,2.3nm,0.3s,baz=324,slow=5.6,SNR=2.0			S		**S**	**S**	**03 20 57.4**	**+2.0**
PSI	**Prapat**	**28.09**	**259**	P		**P**	**P**	**03 16 19.4**	**+0.4**
PSI				PcP		PcP	PcP	03 19 31.5	-1.6
PSI				S		**S**	**S**	**03 21 03.9**	**+2.3**
PSI	**Prapat**	**28.09**	**259**	P		**P**	**P**	**03 16 19.4**	**+0.3**
PSI								03 19 31.5	
PSI				S		**S**	**S**	**03 21 03.9**	**+2.3**
PSI	comp=Z,59nm,0.9s,mb5.2			pmax		pmax			
PSI	comp=Z,20nm,0.9s,mb4.8			pmax		pmax			
PSI	comp=N,1.0nm,0.3s			smax					
PSI	**Prapat** comp=N,59nm,0.9s,mb5.2,baz=60,slow=5.9,SNR=34	**28.09**	**259**	P		**P**	**P**	**03 16 19.4**	**+0.4**
PSI	comp=N,20nm,0.9s,baz=181,slow=6.2,SNR=5.1			PcP		PcP	PcP	03 19 31.5	-1.6
PSI	comp=N,1.1nm,0.3s,baz=241,slow=21,SNR=3.6			S		**S**	**S**	**03 21 03.9**	**+2.3**
INCN	**Inchon**	**28.15**	**0**	*eP*		**P**	**P**	**03 16 20.2**	**+0.9**
INCN	comp=N,42nm,0.8s,mb5.1			LR		LR	LR		
KSRS	comp=Z,1μm,22.0s,MS4.5 **Korea Array**	**28.15**	**2**	P		**P**	**P**	**03 16 20.4**	**+1.1**
KSRS	comp=Z,108nm,0.9s,mb5.5,baz=181,slow=10,SNR=200			PcP		PcP	PcP	03 19 31.3	-1.4
KSRS	comp=Z,1.8nm,0.7s,baz=191,slow=13,SNR=4.0			ScP		ScP	ScP	03 23 10.3	-0.5
KSRS	comp=Z,8.8nm,1.0s,baz=185,slow=2.4,SNR=21			LR		LR	LR	03 26 35.5	
CM31	comp=Z,788nm,21.6s,MS4.3,baz=181,slow=34 **Chiang Mai Arr**	**28.21**	**292**	PFAKE				03 16 30.0	+10
CM31	comp=Z,1μm,19.0s,MS4.5			LR		LR			
CHTO	**Chiang Mai**	**28.30**	**293**	*eP*		**P**	**P**	**03 16 20.7**	**-0.2**
CHTO	comp=Z,1μm,19.0s,MS4.6			LR		LR	LR		
CHTO	**Chiang Mai** SNR=10	**28.30**	**293**	P		**P**	**P**	**03 16 20.9**	**0.0**

CTA smax
comp=N,5.0nm,0.8s
CTA pmax pmax
comp=N,4.0nm,0.9s
CTA Charters Tower 35.04 146 P **P** **03 17 20.7 +0.7**
comp=N,9.8nm,0.7s,mb4.9,baz=329,slow=12,SNR=6.1
CTA S **S** **03 22 54.1 +4.3**
comp=N,4.7nm,0.8s,baz=28,slow=19,SNR=2.3
CTA ScP ScP 03 23 33.6 -0.7
comp=N,4.3nm,0.9s,baz=204,slow=10,SNR=2.5
CTAO Charters Tower 35.04 146 PFAKE 03 17 30.0 +10
CTAO LR LR
comp=Z,1μm,20.0s,MS4.6
MDJ Mudanjiang 35.38 4 P **P** **03 17 24.1 +1.5**
MDJ AP pP 03 17 31.4 -2.3
MDJ XP sP 03 17 35.3 -3.1
MDJ PP PP 03 18 44.6 +1.1
MDJ S **S** **03 22 53.3 -1.2**
MDJ AMB AMB
comp=Z,356nm,1.3s,mb6.1
MDJ AMB AMB
comp=Z,322nm,4.0s
MDJ LR LR
comp=N,854nm,33.3s
MDJ LR LR
comp=Z,861nm,27.4s
MDJ Mudanjiang 35.38 4⇑ *iP* **P** **03 17 24.3 +1.6**
comp=Z,442nm,1.1s,mb6.3
ERM Erimo 35.84 21 *eP* **P** **03 17 29.1 +2.5**
SHL Shillong 36.62 301 *i P* **P** **03 17 33.0 -0.6**
comp=Z,31nm,1.0s,mb5.1
SHL *e*PCP PcP 03 19 56.0 -0.2
SHL *e*S **S** **03 23 11.0 -3.1**
SHL *e*SCS ScS 03 27 47.0 +0.1
AGT Agartala 36.63 298 *ex* x 03 17 01.0
ASAJ Asahikawa 37.50 19 P **P** **03 17 43.3 +2.5**
ASAJ pmax pmax
comp=Z,104nm,0.9s
ASAJ Asahikawa 37.50 19 P **P** **03 17 43.3 +2.5**
comp=Z,104nm,0.9s,mb5.7,baz=230,slow=13,SNR=49
HNR Honiara 38.15 118 PFAKE 03 18 00.0 +13
HNR LR LR
comp=Z,1μm,20.0s,MS4.7
HNR Honiara 38.15 118 LR LR 03 31 33.4
comp=Z,752nm,21.1s,MS4.5,baz=356,slow=33
GTA Gaotai 38.35 326 P **P** **03 17 46.8 -1.2**
GTA AP pP 03 17 56.8 -2.3
GTA XP sP 03 18 01.4 -2.4
GTA PP PP 03 19 17.8 +1.6
GTA PCP PcP 03 20 02.4 +1.2
GTA S **S** **03 23 36.3 -3.6**
GTA SCP ScP 03 23 46.0 -0.2
GTA SCS ScS 03 27 54.5 -1.6
GTA AMB AMB
comp=Z,19nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,325nm,7.2s
GTA LR LR
comp=N,1μm,19.8s,MS4.9
GTA LR LR
comp=E,1μm,20.5s,MS4.9
GTA LR LR
comp=Z,2μm,22.8s,MS4.9
LSA Lhasa 38.79 307 P **P** **03 17 50.6 -1.3**
LSA AP pP 03 18 05.8 +2.9
LSA S **S** **03 23 40.3 -6.6**
LSA XS sS 03 24 00.6 -4.7
LSA SS SS 03 26 34.8 -4.1
LSA LR LR
comp=E,980nm,23.1s
LSA LR LR
comp=Z,1μm,24.6s,MS4.7
LSA Lhasa 38.79 307 *eP* **P** **03 17 52.5 +0.6**
comp=Z,124nm,1.2s,mb5.5
LSA LR LR
comp=Z,2μm,22.0s,MS4.8
LSA Lhasa 38.79 307 *eP* **P** **03 17 52.5 +0.6**
LSA pmax pmax
comp=Z,124nm,1.2s,mb5.5
LSA MLR MLR
comp=Z,2μm,22.0s,MS4.8
FORT Forrest 39.79 178⇑ *iP* **P** **03 18 00.7 +0.6**
comp=Z,226nm,0.5s,mb6.2
FORT *e*SCP ScP 03 23 48.9 -2.9
HABR Khabarovsk 39.80 9⇑ *iP* **P** **03 18 02.0 +2.0**
YSS Yuzh-Sakhalins 40.10 17 *eP* **P** **03 18 04.8 +2.3**
comp=Z,131nm,1.3s,mb5.5
YSS LR LR
comp=Z,747nm,20.0s,MS4.5
YSS Yuzh-Sakhalins 40.10 17⇑ *iP* **P** **03 18 05.0 +2.5**
YSS *e* 03 18 21.0
YSS *e* 03 19 38.0
YSS *e* 03 27 06.0
YSS pmax pmax
comp=Z,130nm,1.2s,mb5.5
YSS MLR MLR
comp=N,500nm,17.0s
YSS MLR MLR
comp=Z,500nm,17.0s,MS4.4
KLR Kul'dur 40.13 5 *eP* **P** **03 18 00.0 -2.8**
KLR pmax pmax
comp=N,64nm,1.8s
KLR pmax pmax
comp=E,60nm,1.8s
KLR pmax pmax
comp=Z,60nm,1.8s,mb5.0
HIA Hailar 40.32 353 *eP* **P** **03 18 04.5 +0.3**
comp=Z,26nm,0.9s,mb5.0
HIA *e*PP PP 03 19 38.2 +0.6
HIA *e*PcP PcP 03 20 07.5 +0.3
HIA LR LR
comp=Z,1μm,21.0s,MS4.7
HIA Hailar 40.32 353 *eP* **P** **03 18 04.6 +0.3**
HIA *e* 03 19 38.2
HIA *e* 03 20 07.6
HIA pmax pmax
comp=Z,25nm,0.9s
HIA MLR MLR
comp=Z,1μm,21.0s
TAPN Taplejung 40.74 301 *eP* **P** **03 18 08.0 -0.1**
comp=Z,442nm,1.1s,mb6.0
ODAN Odare 40.86 301 *eP* **P** **03 18 08.9 -0.2**
comp=Z,459nm,0.9s,mb6.1
BOK Bokaro 41.34 296 *eP* **P** **03 18 12.6 -0.5**
BOK *ex* x 03 19 06.6
KLBR Kellerberrin 41.41 191 *eP* **P** **03 18 12.0 -1.5**
comp=Z,10nm,0.4s,mb4.8
ULN Ulaanbaatar 41.87 340 *eP* **P** **03 18 16.8 -0.3**
ULN LR LR
comp=Z,1μm,19.0s,MS4.8
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
ULN Ulaanbaatar 41.87 340 P **P** **03 18 17.2 +0.1**
SNR=18
SONM Songino Array 42.07 340 P **P** **03 18 18.1 -0.6**
SONM 03 20 12.8
SONM pmax pmax
comp=Z,15nm,0.8s
SONM pmax pmax
comp=Z,9.0nm,0.9s
SONM pmax pmax
comp=N,2.0nm,1.0s
SONM Songino Array 42.07 340 P **P** **03 18 18.1 -0.5**
comp=N,15nm,0.8s,mb4.7,baz=160,slow=8.1,SNR=58
SONM PcP PcP 03 20 12.8 -0.2
comp=N,9.1nm,0.9s,baz=176,slow=2.5,SNR=4.5
SONM ScP ScP 03 23 59.1 -1.4
comp=N,1.5nm,1.0s,baz=158,slow=4.7,SNR=3.2
MUN Mundaring 42.11 193⇑ *iP* **P** **03 18 19.6 +0.4**
MUN *e*S PcS 03 24 00.0 -5.1
JIRN Jiri 42.12 301 *eP* **P** **03 18 19.3 -0.2**
comp=N,176nm,0.6s,mb5.9
NWAO Narrogin (SRO) 42.81 191 *eP* **P** **03 18 25.8 +1.0**
comp=N,61nm,1.1s,mb5.2
NWAO LR LR
comp=Z,489nm,20.0s,MS4.4

NWAO Narrogin (SRO) 42.81 191 P **P** **03 18 25.4 +0.5**
NWAO S **S** **03 24 42.3 -4.2**
NWAO pmax pmax
comp=Z,20nm,0.6s
NWAO smax
comp=N,3.0nm,0.8s
NWAO Narrogin (SRO) 42.81 191 P **P** **03 18 25.4 +0.5**
comp=N,20nm,0.6s,mb5.0,baz=12,slow=8.5,SNR=19
NWAO S **S** **03 24 42.3 -4.2**
comp=N,3.2nm,0.8s,baz=281,slow=17,SNR=1.8
KKN Kakani 42.93 301 *eP* **P** **03 18 25.3 -0.7**
comp=N,288nm,1.0s,mb6.0
STKA Stephens Creek 43.35 161 *eP* **P** **03 18 29.2 0.0**
comp=N,9.8nm,0.4s,mb4.9
STKA *e*SCP ScP 03 24 11.7 +5.8
STKA *e*S **S** **03 24 49.7 -4.7**
STKA Stephens Creek 43.35 161 *eP* **P** **03 18 29.9 +0.7**
STKA Stephens Creek 43.35 161 P **P** **03 18 29.1 -0.1**
comp=N,9.5nm,0.3s,mb4.9,baz=343,slow=7.7,SNR=53
STKA ScP ScP 03 24 03.5 -2.5
comp=N,3.8nm,1.0s,baz=156,slow=4.8,SNR=2.4
STKA LR LR 03 38 20.0
comp=N,646nm,21.3s,MS4.5,baz=106,slow=38
GKN Gorkha 43.53 301 *eP* **P** **03 18 29.9 -1.0**
comp=N,240nm,1.2s,mb5.8
CIT Chita 43.97 349 *eP* **P** **03 18 34.8 +0.8**
CIT *e* pP 03 18 44.7 -0.5
CIT *e* 03 18 53.2
CIT *e* 03 20 14.5
CIT pmax pmax
comp=Z,176nm,1.3s,mb5.6
KOLN Koldanda 44.35 300 *eP* **P** **03 18 37.0 -0.4**
comp=Z,462nm,0.9s,mb6.2
PALK Pallekele 45.29 271 P **P** **03 18 46.9 +1.7**
comp=Z,206nm,1.6s,mb5.7,SNR=6.6
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
PALK Pallekele 45.29 271 P **P** **03 18 46.3 +1.1**
SNR=8.4
ZAK Zakamensk 45.31 339 *eP* **P** **03 18 43.5 -1.2**
ZAK *e* 03 20 23.8
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
ZAK pmax pmax
comp=Z,15nm,1.0s,mb4.8
ZAK pmax pmax
comp=Z,10.0nm,1.2s,mb4.5
MDRS Chennai 45.45 279⇑ *eP* **P** **03 18 46.2 -0.2**
MDRS *ex* x 03 20 39.2
ARMA Armidale 46.24 149 *eP* **P** **03 18 56.0 +3.7**
TLY Talaya 46.28 340 P **P** **03 18 52.9 +0.5**
comp=Z,168nm,0.8s,mb6.0,SNR=10
TLY Talaya 46.28 340 *eP* **P** **03 18 52.2 -0.2**
TLY *e* 03 20 43.1
TLY *e*PPP 03 21 23.2
TLY pmax pmax
comp=Z,38nm,1.2s,mb5.2
TLY MLR MLR
comp=Z,733nm,19.0s,MS4.7
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
TLY Talaya 46.28 340 P **P** **03 18 52.5 +0.2**
SNR=14
IRK Irkutsk 46.56 341⇑ *iP* **P** **03 18 53.9 -0.6**
IRK pmax pmax
comp=Z,41nm,1.1s,mb5.3
NGP Nagpur 47.09 290⇑ *iP* **P** **03 18 57.5 -1.7**
NGP *ex* x 03 18 59.4
comp=Z,164nm,1.6s
NGP *e*S **S** **03 25 45.5 -3.5**
MOY Mondy 47.19 339 *eP* **P** **03 18 59.4 0.0**
MOY pmax pmax
comp=Z,45nm,2.2s,mb5.0
HYB Hyderabad 47.21 285 *i* P **P** **03 19 00.5 +0.3**
comp=Z,271nm,1.2s,mb6.0
HYB *e*sP sP 03 19 12.0 -4.1
HYB *e*ScP ScP 03 24 25.0 +2.7
HYB *e*S **S** **03 25 50.0 -0.7**
NRGR Nerungri 47.35 359 *eP* **P** **03 19 02.2 +1.6**
NRGR S **S** **03 25 50.3 -1.2**
NRGR smax
comp=N,53nm,0.7s
CLNS Chul'man 47.52 359 *eP* **P** **03 19 03.2 +1.2**
CLNS *e* 03 20 32.7
CLNS *e* 03 20 48.9
CLNS *e*S **S** **03 25 55.7 +1.7**
CLNS *e*SS SS 03 29 18.8 -3.5
CLNS pmax pmax
comp=Z,193nm,0.8s,mb6.2
CLNS pmax pmax
comp=N,141nm,1.1s
CLNS pmax pmax
comp=E,47nm,0.6s
CLNS pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
CLNS pmax pmax
comp=N,28nm,1.3s
CLNS pmax pmax
comp=E,21nm,0.9s
CLNS smax
comp=N,96nm,11.8s
CLNS smax
comp=Z,117nm,12.4s
CLNS smax
comp=E,165nm,14.6s
CLNS MLR MLR
comp=Z,500nm,17.0s,MS4.5
CLNS MLR MLR
comp=N,200nm,15.0s,MS4.4
CLNS MLR MLR
comp=E,200nm,15.0s,MS4.4
LGTI Lohaghat 47.64 302 *eP* **P** **03 19 00.6 -2.8**
LGTI *ex* x 03 20 31.2
WMQ Urumqi 48.16 323⇓ *iP* **P** **03 19 06.9 -0.3**
WMQ AP pP 03 19 16.9 -1.6
WMQ XP sP 03 19 20.9 -2.2
WMQ PCP PcP 03 20 34.9 +0.8
WMQ PP PP 03 20 58.4 -1.3
WMQ SCP ScP 03 24 25.4 -0.4
WMQ PCS PcS 03 24 29.4 -0.4
WMQ AMB AMB
comp=Z,65nm,1.0s,mb5.6
WMQ LR LR
comp=N,1μm,20.0s,MS4.9
WMQ LR LR
comp=E,673nm,20.0s,MS4.9
WMQ LR LR
comp=Z,941nm,21.4s,MS4.7
BHPL Bhopal 48.86 293 *i* x **P** **03 19 13.8 +0.9**
AKL Akola 48.93 289⇓ *iP* **P** **03 19 13.8 +0.3**
AKL *ex* x 03 19 15.2
comp=Z,147nm,1.5s
AKL *i* S **S** **03 26 13.0 -2.0**
LATR Latur 49.17 286 *eP* **P** **03 19 14.7 -0.6**
CNB Canberra Magne 49.29 155 *eP* **P** **03 19 18.0 +2.1**
comp=Z,57nm,1.3s,mb5.4
BOD Bodaibo 49.44 351⇓ *iP* **P** **03 19 16.6 -0.1**
BOD pmax pmax
comp=Z,51nm,1.2s,mb5.4
DDI Dehra Dun 49.70 302 *eP* **P** **03 19 17.4 -1.8**
DDI *ex* x 03 24 35.4
NDI New Delhi 50.03 300 *eP* **P** **03 19 18.0 -3.7**
NDI *ex* x 03 24 36.0
DZM Mont Dzumac 50.05 129 P **P** **03 19 24.2 +2.3**
comp=Z,6.6nm,0.7s,mb4.8,baz=318,slow=16,SNR=6.2
MNGI Mangalore 50.73 279 *i* P **P** **03 19 27.3 +0.1**

PET Petropavlovsk 50.85 25 *eP* **P** **03 19 30.3 +2.8**
PET *eS* **S** **03 26 43.2 +2.4**
PET pmax pmax
comp=Z,85nm,1.9s,mb5.3
PET pmax pmax
comp=Z,200nm,19.4s
PET MLR MLR
comp=Z,700nm,20.0s,MS4.7
KAD Karad 51.37 285 *eP* **P** **03 19 31.6 -0.4**
POO Poona 51.74 286⇑ *iP* **P** **03 19 34.0 -0.8**
comp=Z,150nm,1.0s,mb5.9
AJM Ajmer 51.85 296 *eP* **P** **03 19 34.0 -1.5**
THN Thein Dam 52.17 304 *eP* **P** **03 19 35.9 -1.8**
YAK Yakutsk 52.77 2 *eP* **P** **03 19 42.5 +0.8**
YAK LR LR
comp=Z,590nm,19.0s,MS4.7
YAK Yakutsk 52.77 2 *eP* **P** **03 19 43.4 +1.7**
YAK *e* 03 20 51.5
YAK *e* 03 21 41.4
YAK *e*PPP 03 22 48.4
YAK *e*S **S** **03 27 05.5 -1.5**
YAK *e* 03 29 22.2
YAK *e*SS SS 03 30 44.4 -1.6
YAK pmax pmax
comp=Z,197nm,1.1s,mb6.0
YAK pmax pmax
comp=N,110nm,1.3s
YAK pmax pmax
comp=E,37nm,1.3s
YAK pmax pmax
comp=Z,483nm,8.6s
YAK pmax pmax
comp=N,296nm,5.2s
YAK pmax pmax
comp=E,64nm,2.4s
YAK smax
comp=N,195nm,3.3s
YAK smax
comp=E,208nm,4.6s
MKAR Makanchi Array 52.97 323 P **P** **03 19 42.9 -0.5**
MKAR 03 20 51.6
MKAR pmax pmax
comp=Z,86nm,0.7s
MKAR pmax pmax
comp=Z,21nm,0.6s
MKAR Makanchi Array 52.97 323 P **P** **03 19 42.9 -0.6**
comp=Z,86nm,0.7s,mb5.8,baz=122,slow=8.2,SNR=185
MKAR PcP PcP 03 20 51.6 -0.2
comp=Z,21nm,0.6s,baz=123,slow=4.5,SNR=6.0
MA2 Magadan 53.50 15 *eP* **P** **03 19 48.6 +1.5**
comp=Z,58nm,0.8s,mb5.6
MA2 LR LR
comp=Z,455nm,20.0s,MS4.5
MA2 Magadan 53.50 15 *c iP* **P** **03 19 48.7 +1.6**
MA2 *e* 03 20 49.3
MA2 *e*S **S** **03 27 15.3 -1.7**
MA2 pmax pmax
comp=Z,80nm,0.7s,mb5.8
MA2 pmax pmax
comp=N,40nm,0.7s
FUNA Funafuti 55.41 107 PFAKE 03 20 20.0 +18
FUNA LR LR
comp=Z,6μm,19.0s,MS5.7
UCH Uchtor 56.04 315 *eP* **P** **03 20 06.5 +0.7**
comp=Z,87nm,0.8s,mb5.8
AML Almayashu 56.58 315 PFAKE 03 20 20.0 +10
AML LR LR
comp=Z,3μm,22.0s,MS5.4
EKS2 Erkin-Say 56.70 315 PFAKE 03 20 20.0 +10
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.0
SEY Seymchan 56.80 14⇑ *eP* **P** **03 20 13.5 +2.7**
NVS Novosibirsk 56.91 332 *i* P **P** **03 20 10.3 -1.4**
NVS *e* 03 20 27.1
NVS *e* 03 21 04.7
NVS pmax pmax
comp=N,44nm,1.3s
NVS pmax pmax
comp=E,53nm,1.3s
NVS pmax pmax
comp=Z,89nm,1.3s,mb5.6
KURK Kurchatov 57.03 326 P **P** **03 20 11.9 -0.8**
comp=Z,1μm,0.8s,SNR=40
KURK Kurchatov 57.03 326⇑ *eP* **P** **03 20 11.6 -1.1**
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
KURK Kurchatov 57.03 326 P **P** **03 20 12.2 -0.5**
SNR=37
TIXI Tiksi 62.40 1 *eP* **P** **03 20 49.6 +0.4**
comp=Z,112nm,0.7s,mb6.1
TIXI LR LR
comp=Z,685nm,21.0s,MS4.8
TIXI Tiksi 62.40 1 *eP* **P** **03 20 48.9 -0.4**
TIXI *e* pP 03 21 00.8 -0.1
TIXI *e* 03 23 04.3
TIXI *e*S **S** **03 29 10.4 -2.6**
TIXI *e* 03 29 32.4
TIXI pmax pmax
comp=N,54nm,0.9s
TIXI pmax pmax
comp=Z,166nm,0.9s,mb6.2
TIXI pmax pmax
comp=E,31nm,1.2s
TIXI pmax pmax
comp=Z,128nm,6.1s
TIXI MLR MLR
comp=Z,520nm,18.0s,MS4.7
BRVK Borovoye 62.70 326 P **P** **03 20 50.3 -1.3**
comp=Z,873nm,0.9s,SNR=34
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BRVK Borovoye 62.70 326 P **P** **03 20 51.1 -0.5**
SNR=28
BILL Bilibino 64.37 15⇑ *iP* **P** **03 21 03.4 +1.0**
comp=Z,74nm,1.2s,mb5.6
BILL LR LR
comp=Z,598nm,21.0s,MS4.8
BILL Bilibino 64.37 15⇑ *iP* **P** **03 21 03.1 +0.8**
BILL *i* pP 03 21 15.5 +1.5
BILL *e* 03 23 24.9
BILL pmax pmax
comp=Z,55nm,1.2s,mb5.5
BILL MLR MLR
comp=Z,400nm,20.0s,MS4.6
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
BIDO Bidbid 66.56 292 P **P** **03 21 17.0 -0.3**
SNR=12
JMDO Jabal Madar 66.58 290 P **P** **03 21 16.4 -1.1**
SNR=10
JMDO Jabal Madar 66.58 290 P **P** **03 21 16.4 -1.1**
SNR=10
JMDO Jabal Madar 66.58 290 P **P** **03 21 16.4 -1.1**
SNR=10

JMDO **Jabal Madar** 66.58 290 P P 03 21 16.4 -1.1
SNR=10
JMDO **Jabal Madar** 66.58 290 P P 03 21 16.4 -1.1
SNR=10
JMDO **Jabal Madar** 66.58 290 P P 03 21 16.4 -1.1
SNR=10
JMDO **Jabal Madar** 66.58 290 P P 03 21 16.4 -1.1
SNR=10
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
SMDO **Samad** 66.63 291 P P 03 21 17.1 -0.6
SNR=6.6
URZ **Urewera** 66.76 138 P P 03 21 19.7 +1.5
comp=Z,2.7nm,0.4s,mb4.7,baz=14,slow=22,SNR=2.3
SNZO **South Karori** 67.01 142 PFAKE 03 21 30.0 +10
SNZO LR LR
comp=Z,1μm,20.0s,MS5.0
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
HOQ **Hoqain** 67.30 292 P P 03 21 21.6 -0.4
SNR=12
ABKT **Ailbek** 67.32 307 P P 03 21 21.6 -0.3
comp=Z,267nm,0.9s,mb6.3,SNR=6.4
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
BSY **Bisya** 67.41 291 P P 03 21 22.4 -0.4
SNR=5.7
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
ASHO **Ashiyiah** 68.44 293 P P 03 21 29.1 -0.1
SNR=6.4
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
SHAO **Shalim** 69.05 286 P P 03 21 33.5 +0.3
SNR=9.7
UNV **Unalaska Valle** 69.13 36 *e*P P 03 21 34.0 +1.0
SVE **Sverdlovsk** 69.19 328⇑ *e*P P 03 21 32.9 -0.3
SVE pmax pmax
comp=Z,123nm,0.8s,mb5.9
AKTK **Aktyubinsk** 69.25 321 P P 03 21 32.9 -0.8
AKTK S S 03 30 32.2 -4.9
AKTO **Aktyubinsk** 69.25 321 P P 03 21 32.9 -0.8
AKTO S S 03 30 32.2 -4.9
AKTO pmax pmax
comp=Z,20nm,0.8s,mb5.1
AKTO smax
comp=N,4.0nm,0.8s
AKTO **Aktyubinsk** 69.25 321 P P 03 21 32.9 -0.8
comp=N,20nm,0.8s,mb5.1
AKTO S S 03 30 32.2 -4.9
comp=N,3.6nm,0.8s,baz=224,slow=18,SNR=2.0
GAMB **Gambell** 69.55 25 *e*P P 03 21 37.5 +2.2
ARU **Arti** 70.20 327 P P 03 21 38.4 -1.1
comp=N,708nm,0.6s,SNR=23
ARU **Arti** 70.20 327*c* *i*P P 03 21 38.0 -1.5
ARU 03 21 58.6
ARU 03 24 10.7
ARU PPP 03 25 50.2
ARU S S 03 30 47.9 -0.2
ARU *e*SS SS 03 35 16.2 -2.3
ARU pmax pmax
comp=Z,78nm,0.7s,mb5.8
RBK **Rabkut** 70.44 285 P P 03 21 41.6 0.0
SNR=9.8
RBK **Rabkut** 70.44 285 P P 03 21 41.6 0.0
SNR=9.8
RBK **Rabkut** 70.44 285 P P 03 21 41.6 0.0
SNR=9.8
RBK **Rabkut** 70.44 285 P P 03 21 41.6 0.0
SNR=9.8
RBK **Rabkut** 70.44 285 P P 03 21 41.6 0.0
SNR=9.8
WHFO **Wadi Hawf** 70.82 286 P P 03 21 42.8 -1.2
SNR=7.4
WHFO **Wadi Hawf** 70.82 286 P P 03 21 42.8 -1.2
SNR=7.4
WHFO **Wadi Hawf** 70.82 286 P P 03 21 42.8 -1.2
SNR=7.4
WHFO **Wadi Hawf** 70.82 286 P P 03 21 42.8 -1.2
SNR=7.4
WHFO **Wadi Hawf** 70.82 286 P P 03 21 42.8 -1.2
SNR=7.4
FALS **False Pass** 71.11 35 *e*P P 03 21 46.9 +1.9
ABTO **Aybut** 71.31 285 P P 03 21 46.7 -0.2
SNR=9.6
ABTO **Aybut** 71.31 285 P P 03 21 46.7 -0.2
SNR=9.6
ABTO **Aybut** 71.31 285 P P 03 21 46.7 -0.2
SNR=9.6
ABTO **Aybut** 71.31 285 P P 03 21 46.7 -0.2
SNR=9.6
TNA **Tin City** 71.69 24 *e*P P 03 21 50.2 +1.8
CHGN **Chignik** 74.15 34 *e*P P 03 22 05.0 +1.9
QRN **Al-Qurain** 75.61 297 *e*P P 03 22 10.3 -1.8
QRN AMb AMB 03 22 11.5
comp=Z,201nm,0.8s,mb6.1
UMR **Umm Al-Rimmam** 75.75 298 *e*P P 03 22 11.9 -1.0
UMR AMb AMB 03 22 12.4
comp=Z,145nm,0.7s,mb6.0
KBD **Kabd** 75.79 298 *e*P P 03 22 11.9 -1.2
KBD AMb AMB 03 22 12.7
comp=Z,440nm,0.8s,mb6.5
RDF **Al-Radifah** 75.93 298 *e*P P 03 22 12.5 -1.4
RDF AMb AMB 03 22 14.4
comp=Z,215nm,1.1s,mb6.0
MIB **Mutribah** 76.07 298 *e*P P 03 22 13.4 -1.3
MIB AMb AMB 03 22 14.9
comp=Z,249nm,0.7s,mb6.2
SVW2 **Sparrevohn** 76.18 29 *e*P P 03 22 17.1 +2.4
NAY **Al-Naaiem** 76.18 298 *e*P P 03 22 13.8 -1.5
NAY AMb AMB 03 22 15.7
comp=Z,135nm,1.0s,mb5.8
TTA **Tatalina** 76.18 27 *e*P P 03 22 17.3 +2.7
TTA **Tatalina** 76.18 27 *e*P P 03 22 16.6 +2.0
TTA pP 03 22 29.7 +3.1
CASY **Casey** 76.19 187 *e*P P 03 22 15.6 +1.1
KDAK **Kodiak Island** 77.45 33 P P 03 22 23.2 +1.3
comp=Z,654nm,1.0s,mb6.5,SNR=11
KDAK **Kodiak Island** 77.45 33 *e*P P 03 22 23.4 +1.5
KDAK LR LR
comp=Z,181nm,22.0s,MS4.3
KDAK **Kodiak Island** 77.45 33 S S 03 32 09.3 -0.4
comp=Z,2.6nm,0.9s,baz=172,slow=18,SNR=1.9
IMA2 **Indian Mountai** 77.52 24 *e*P P 03 22 24.1 +1.9
PRGR **Permogore** 77.59 331⇓ *i*P P 03 22 21.3 -1.3
PRGR *e*PPP 03 27 05.6
PRGR *e*S S 03 32 11.0 -0.1
PRGR *e*SSS 03 40 30.6
PRGR pmax pmax
comp=Z,89nm,0.8s,mb5.8
MTA **Mtatsminda** 77.72 311 P P 03 22 23.7 -0.1
TBLG **Delisi** 77.76 311 P P 03 22 23.6 -0.4
GOR **Gori** 78.22 311 P P 03 22 26.9 +0.3
ZEI **Tsey** 78.35 312 *e*P P 03 22 26.7 -0.6
ZEI *e*S S 03 32 18.8 -1.3
ZEI pmax pmax
comp=Z,116nm,1.0s,mb5.8
ZEI smax
comp=N,21nm,1.8s
BHD **Baghdad** 78.41 302 *i* x x 03 22 25.0
DYDN **Diyadin** 78.64 309 *i*P P 03 22 29.0 +0.2
HAKT **HÅKKARI** 78.72 306 *i*P P 03 22 28.9 -0.5
SLKM **Skilak Lake** 78.76 30 *e*P P 03 22 29.8 +0.7
DIGO **Kars** 78.84 309 *i*P P 03 22 28.9 -1.1
GOF **Gofitskoye** 78.90 314 *e*P P 03 22 25.3 -4.9
GOF pmax pmax
comp=Z,80nm,1.3s,mb5.5
KIV **Kislovodsk** 79.19 313 P P 03 22 31.7 -0.1
comp=Z,731nm,0.7s,mb6.7,SNR=15
KIV **Kislovodsk** 79.19 313⇑ P P 03 22 30.9 -1.0
KIV **Kislovodsk** 79.19 313 *e*P P 03 22 30.6 -1.2
KIV *e*S S 03 32 27.9 -1.1
KIV pmax pmax
comp=Z,111nm,0.9s,mb5.8
KIV pmax pmax
comp=Z,291nm,7.2s
KIV MLR MLR
comp=Z,550nm,20.0s,MS4.9
KIV **Kislovodsk** 79.19 313 P P 03 22 31.5 -0.4
SNR=15
KIV **Kislovodsk** 79.19 313 P P 03 22 31.5 -0.4
SNR=15
KIV **Kislovodsk** 79.19 313 P P 03 22 31.5 -0.4
SNR=15
KIV **Kislovodsk** 79.19 313 P P 03 22 31.5 -0.4
SNR=15
KIV **Kislovodsk** 79.19 313⇑ *i*P P 03 22 30.9 -0.9
MSL **Mosul** 79.28 305 *i* x x 03 22 31.5
PMR **Palmer** 79.31 29 *e*P P 03 22 33.1 +1.0
comp=Z,79nm,1.0s,mb5.6
PMR **Palmer** 79.31 29 *e*P P 03 22 33.1 +1.0
PMR pmax pmax
comp=Z,79nm,1.0s,mb5.6
TUTA **Tutak** 79.32 308 *i*P P 03 22 33.1 +0.5
MCK **McKinley** 79.42 27 *e*P P 03 22 33.8 +1.2
comp=Z,131nm,0.9s,mb5.9
MCK **McKinley** 79.42 27 *e*P P 03 22 33.8 +1.2
MCK pmax pmax
comp=Z,64nm,0.9s,mb5.5
VRHR **Novokhopersk** 79.65 320 *e*P P 03 22 32.6 -1.6
VRHR pmax pmax
comp=Z,30nm,0.6s,mb5.4
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.5s
SML **Sawmill** 79.69 29 *e*P P 03 22 36.1 +2.0
ARTV **Artvin** 79.89 310 *i*P P 03 22 35.2 -0.5
COLA **College** 79.90 26 *e*P P 03 22 35.9 +0.6
comp=E,28nm,0.9s,mb5.2
COLA LR LR
comp=Z,413nm,19.0s,MS4.8
COLA **College** 79.90 26*c* *i*P P 03 22 36.0 +0.8
ERZM **Erzurum** 80.40 309 *i*P P 03 22 38.2 -0.3
BNGL **BINGOL** 80.64 308 *i*P P 03 22 39.9 +0.1
EYAK **Cordova Ski Ar** 80.97 30 *e*P P 03 22 42.5 +1.5
comp=Z,53nm,1.2s,mb5.3
EYAK *e*PP PP 03 25 45.9 0.0
MARD **Mardin** 81.06 306 *i*P P 03 22 41.6 -0.5
VRSR **Storozhevoye** 81.18 321*c* *i*P P 03 22 40.6 -1.8
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRSR pmax pmax
comp=N,2.0nm,0.8s
VRSR pmax pmax
comp=E,10.0nm,0.8s
SOC **Sochi** 81.36 313 *e*P P 03 22 40.5 -3.0
SOC *e**PP pP 03 22 50.4 -5.2
SOC *e* 03 25 45.8
SOC *e*PPP 03 27 44.5
SOC *e*S S 03 32 48.8 -3.0
SOC pmax pmax
comp=Z,49nm,0.6s,mb5.6
SOC MLR MLR
comp=Z,737nm,16.0s,MS5.1
MENT **Mentasta** 81.79 28 *e*P P 03 22 47.4 +2.0
MOS **Moscow** 81.80 325 *e*P P 03 22 43.4 -2.2
MOS *e* pP 03 22 56.4 -1.2
MOS pmax pmax
comp=Z,168nm,0.9s,mb6.0
KELT **Kelkit** 82.00 309 *i*P P 03 22 47.3 +0.3
LVZ **Lovozero** 82.21 338 P P 03 22 47.8 +0.3
comp=Z,734nm,0.9s,mb6.6,SNR=12
LVZ **Lovozero** 82.21 338⇑ *e*P P 03 22 47.4 -0.1
LVZ pmax pmax
comp=Z,142nm,1.2s,mb5.8
ELZG **Elazig** 82.36 308 *i*P P 03 22 49.6 +0.7
OBN **Obninsk** 82.45 325 P P 03 22 48.5 -0.5
comp=Z,540nm,0.9s,mb6.5,SNR=5.6
OBN **Obninsk** 82.45 325⇑ *i*P P 03 22 47.7 -1.3
OBN *e* 03 23 03.4
OBN *e* 03 25 58.3
OBN pmax pmax
comp=Z,103nm,1.1s,mb5.7
OBN MLR MLR
comp=Z,700nm,20.0s,MS5.0
GRSN **GIRESUNGRSN** 82.67 310 *i*P P 03 22 45.6 -4.9
APA **Apatity** 82.72 337⇓ *i*P P 03 22 49.5 -0.6
APA *i* 03 23 07.0
APA pmax pmax
comp=Z,210nm,1.0s,mb6.1
EGAK **Eagle** 82.76 26 *e*P P 03 22 51.9 +1.5
MALT **Malatya** 82.82 308⇑ *i*P P 03 22 51.3 +0.1
comp=Z,48nm,0.8s,mb5.6
MALT **Malatya** 82.82 308⇑ *i*P P 03 22 51.5 +0.2
ANN **Anapa** 82.89 314 *e*P P 03 22 49.7 -1.8
ANN *e*S S 03 33 05.3 -2.1
ANN pmax pmax
comp=Z,184nm,1.0s,mb6.1
ATAB **Bozova** 83.01 307 *i*P P 03 22 51.8 -0.5
GZT **Gaziantep** 83.60 307 *i*P P 03 22 55.7 +0.3
DAWY **Dawson** 83.61 26 *e*P P 03 22 57.0 +2.2
JOF **Joensuu** 84.21 333 *e*p P 03 22 56.4 -1.5
comp=Z,141nm,0.9s,mb6.1
JOF **Joensuu** 84.21 333 *e*P P 03 22 56.4 -1.5
JOF pmax pmax
comp=Z,141nm,0.9s,mb6.1
KEV **Kevo** 84.68 340 *e*p P 03 22 59.5 -0.6
comp=Z,55nm,0.8s,mb5.7
KEV **Kevo** 84.68 340 *e*P P 03 22 59.5 -0.6
KEV pmax pmax
comp=Z,55nm,0.8s,mb5.7
ASF **Jabal al Asfar** 84.79 302 P P 03 23 01.7 +0.2
ASF S S 03 33 21.0 -6.0
ASF pmax pmax
comp=Z,20nm,0.9s
ASF smax
comp=N,1.0nm,0.7s
ASF **Jabal al Asfar** 84.79 302 P P 03 23 01.7 +0.2
comp=N,20nm,0.9s,mb5.2,baz=345,slow=2.3,SNR=32
ASF S S 03 33 21.0 -6.1
comp=N,0.7nm,0.7s,baz=348,slow=15,SNR=1.9
FKH **Fakeheh** 84.93 304 *e*P P 03 23 02.3 +0.1
SPB4 **Spitsbergen Ar** 85.09 349 *e*P P 03 23 01.9 -0.1
BOYT **Boyabat** 85.14 311 *i*P P 03 23 02.0 -1.0
INK **Inuvik** 85.20 22 *e*P P 03 23 03.9 +1.1
INK **Inuvik** 85.20 22 PKKPbc PKKPbc 03 41 08.3 -2.9
comp=N,0.6nm,0.6s,baz=90,slow=1.8,SNR=5.1
SIM **Simferopol'** 85.21 315*c* *e*P P 03 23 01.6 -1.7
SIM pmax pmax
comp=Z,173nm,0.8s,mb6.2
SIM MLR MLR
comp=Z,630nm,21.8s,MS5.0
ARCES **ARCESS Array B** 85.24 340 P P 03 23 02.7 -0.3
ARCES pmax pmax
comp=Z,98nm,0.7s
ARCES **ARCESS Array B** 85.24 340 P P 03 23 02.7 -0.2
comp=Z,98nm,0.7s,mb6.1,baz=80,slow=6.4,SNR=325
ARE0 **ARCESS Array S** 85.24 340 *e*P P 03 23 02.4 -0.5
CTKT **Corum** 85.33 310 *i*P P 03 23 04.0 0.0
AVNT **Avonos** 85.54 308 *i*P P 03 23 04.4 -0.8
BHL **Bhannes** 85.59 303 *e*P P 03 23 05.2 -0.3
KBS **Kingsbay** 85.59 350 PFAKE 03 23 20.0 +15
KBS LR LR
comp=Z,666nm,20.0s,MS5.0
KBS **Kingsbay** 85.59 350⇑ *e*P P 03 23 04.5 -0.1
CDAG **Cicekdag** 85.79 309 *i*P P 03 23 03.2 -3.1
MMAI **Mount Meron Ar** 85.92 303 S S 03 33 30.4 -7.8
comp=Z,0.3nm,0.3s,baz=315,slow=57,SNR=2.2
KTK1 **Kautokeino** 86.16 339 *e*P P 03 23 07.5 0.0
comp=Z,70nm,1.6s,mb5.6
KTK1 **Kautokeino** 86.16 339 *e*P P 03 23 07.5 0.0
KTK1 AMb AMB 03 23 09.7
comp=Z,70nm,1.6s,mb5.7
BALT **Daday** 86.25 311 *i*P P 03 23 08.0 -0.5
SKAG **Skagway** 86.30 30 *e*P P 03 23 10.9 +2.6
ELDT **Eldivan** 86.38 310 *i*P P 03 23 07.5 -1.7
KAF **Kangasniemi** 86.64 332 *e*p P 03 23 08.2 -1.8
comp=Z,89nm,0.9s,mb6.0,baz=73,slow=4.4
KAF **Kangasniemi** 86.64 332 *e*P P 03 23 08.2 -1.8
KAF pmax pmax
comp=Z,89nm,0.9s,mb6.0
EIL **Elat** 86.80 299 S S 03 33 35.1 -12
comp=Z,3.4nm,1.0s,baz=31,slow=12,SNR=2.3
FINES **FINESS Array B** 86.90 332 P P 03 23 10.6 -0.7
FINES pmax pmax
comp=Z,49nm,0.9s
FINES **FINESS Array B** 86.90 332 P P 03 23 10.6 -0.7
comp=Z,49nm,0.9s,mb5.7,baz=104,slow=6.9,SNR=58
ANTO **Ankara** 86.96 310 *e*P P 03 23 10.1 -1.9
comp=Z,15nm,0.7s,mb5.3
ANTO LR LR
comp=Z,318nm,19.0s,MS4.7
ANTO **Ankara** 86.96 310 *e*P P 03 23 10.1 -2.0
ANTO pmax pmax
comp=Z,15nm,0.7s,mb5.3
ANTO MLR MLR
comp=Z,318nm,19.0s,MS4.7
ANTO **Ankara** 86.96 310⇓ *i*P P 03 23 11.0 -1.1
PPT **Papeete** 87.07 108 *e*S S 03 33 48.6 -1.2
comp=Z,202nm,25.2s
PPT *e*SS SS 03 39 37.7 +3.8
comp=Z,300nm,26.0s
PPT **Papeete** 87.07 108 *e*LR LR 03 50 48.8
comp=Z,744nm,23.2s
CSS **Prodhromos** 87.33 305 *e*P P 03 23 12.2 -1.8
comp=Z,72nm,0.7s,mb6.0
ERMK **Ermenek** 87.39 307 *i*P P 03 23 14.0 -0.2
SGKT **Sivrigoynuk** 87.39 311 *i*P P 03 23 12.2 -2.0
TRO **Tromso** 87.43 340 *e*P P 03 23 11.6 -2.1
comp=Z,66nm,2.1s,mb5.5
TRO **Tromso** 87.43 340 *e*P P 03 23 11.6 -2.1
TRO *e*pP pP 03 23 22.0 -3.8
TRO AMb AMB 03 23 24.8
comp=Z,66nm,2.1s,mb5.5
AKASG **Malin Array Be** 87.49 321 *i*P P 03 23 12.6 -1.8
AKASG pmax pmax
comp=Z,15nm,0.7s
AKASG **Malin Array Be** 87.49 321 P P 03 23 12.7 -1.7
comp=Z,15nm,0.7s,mb5.4,baz=72,slow=4.5,SNR=54
AKBB **Malin Array Si** 87.49 321 *e*P P 03 23 12.5 -1.9
KIEV **Kiev** 87.50 321 *e*P P 03 23 12.4 -2.0
comp=Z,14nm,0.7s,mb5.3
KIEV **Kiev** 87.50 321 *e*P P 03 23 12.4 -2.0
KIEV pmax pmax
comp=Z,14nm,0.7s,mb5.3
HENT **Hendek** 88.22 311 *i*P P 03 23 15.1 -3.0
TBI **Tubuai** 88.24 114 *e*S S 03 34 00.3 -0.5
comp=Z,168nm,28.6s
TBI *e*SS SS 03 39 55.6 +4.8
comp=Z,449nm,31.0s
TBI *e*LQ 03 47 48.8
comp=Z,478nm,38.5s
TBI *e*LR LR 03 51 23.2
comp=Z,859nm,24.2s
ALE **Alert** 88.31 1 P P 03 23 18.2 +0.4
comp=Z,145nm,1.5s,mb6.0,SNR=12
ESKT **Eskisehir** 88.49 310 *i*P P 03 23 17.2 -2.2
MAW **Mawson** 88.77 200 *e*P P 03 23 18.2 -1.8
comp=Z,31nm,1.0s,mb5.6
MAW **Mawson** 88.77 200 *e*P P 03 23 18.2 -1.8
MAW pmax pmax
comp=Z,31nm,1.0s
MAW **Mawson** 88.77 200 P P 03 23 19.6 -0.4
comp=Z,41nm,1.1s,mb5.7,baz=64,slow=7.3,SNR=21
MAW LR LR 03 56 16.0
comp=Z,487nm,21.2s,MS4.9,baz=214,slow=31
VNDA **Vanda** 88.86 173 P P 03 23 20.7 +0.4
VNDA pmax pmax
comp=Z,13nm,0.8s
VNDA MLR MLR
comp=Z,491nm,21.4s
VNDA **Vanda** 88.86 173 P P 03 23 20.7 +0.4
comp=Z,12nm,0.8s,mb5.3,baz=319,slow=5.8,SNR=46
VNDA LR LR 04 01 24.5
comp=Z,491nm,21.4s,MS4.9,baz=342,slow=34
ISP **Isparta** 89.07 308 *e*P P 03 23 19.5 -2.6
comp=Z,37nm,0.7s,mb5.8
ISP **Isparta** 89.07 308 *e*P P 03 23 19.5 -2.7
ISP pmax pmax
comp=Z,37nm,0.7s,mb5.8
ISP **Isparta** 89.07 308⇑ *i*P P 03 23 20.5 -1.7
CFR **Carcaliu** 89.34 316 P P 03 23 24.2 +0.9
KMBO **Kilima Mbogo** 89.38 269 P P 03 23 24.2 +0.1
KMBO pmax pmax
comp=Z,36nm,1.0s
KMBO MLR MLR
comp=Z,274nm,18.3s
KMBO **Kilima Mbogo** 89.38 269 P P 03 23 24.5 +0.4
SNR=17
KMBO **Kilima Mbogo** 89.38 269 P P 03 23 24.5 +0.4
SNR=17
KMBO **Kilima Mbogo** 89.38 269 P P 03 23 24.5 +0.4
SNR=17
KMBO **Kilima Mbogo** 89.38 269 P P 03 23 24.2 +0.1
comp=Z,36nm,1.0s,mb5.7,baz=47,slow=6.2,SNR=69
KMBO LR LR 04 04 38.7
comp=Z,274nm,18.3s,MS4.7,baz=92,slow=36
HARR **Harsova** 89.59 315 P P 03 23 24.1 -0.4
HARR **Harsova** 89.59 315⇑ *i*P P 03 23 23.4 -1.1
GDZ **Gediz** 89.62 309 *i*P P 03 23 23.1 -1.6
SBA **Scott Base** 89.77 172 *e*P P 03 23 26.4 +1.9
comp=Z,34nm,1.1s,mb5.6
SBA **Scott Base** 89.77 172 *e*P P 03 23 26.4 +1.9
SBA pmax pmax
comp=Z,34nm,1.1s,mb5.6
VRI **Vrincioaia** 90.16 316 ⇑P P 03 23 26.8 -0.3
VRI **Vrincioaia** 90.16 316⇑ *i*P P 03 23 26.8 -0.3
PLOR **Plostina** 90.21 316⇓ *i*P P 03 23 26.8 -0.5
MOR8 **Moi Rana** 90.29 338 *e*P P 03 23 24.8 -2.5
comp=Z,98nm,1.6s,mb5.9
MOR8 **Moi Rana** 90.29 338 *e*P P 03 23 24.8 -2.5
MOR8 AMb AMB 03 23 26.4
comp=Z,98nm,1.6s,mb5.9
SUW **Suwalki** 90.31 325 *e*P P 03 23 25.9 -1.7
MLR **Muntele Rosu** 90.78 316 P P 03 23 29.4 -0.6
MLR **Muntele Rosu** 90.78 316⇑ *i*P P 03 23 29.1 -0.9
LVV **L'vov** 90.94 321 *e*P P 03 23 29.9 -0.7
KWP **Kalwaria** 91.81 321 *e*P P 03 23 34.1 -0.5
KWP **Kalwaria** 91.81 321⇓ *i*P P 03 23 34.2 -0.5
DAG **Danmarks Havn** 91.82 352⇓ *e*P P 03 23 33.8 -0.4
DAG pmax pmax
comp=Z,54nm,1.0s,mb5.8
DAG **Danmarks Havn** 91.82 352⇓ *i*P P 03 23 33.8 -0.4
comp=Z,54nm,1.0s,mb5.8
NSS **Namsos** 91.92 337 *e*P P 03 23 32.0 -2.8
KOLS **Kolonicke sedl** 92.29 320 *e*P P 03 23 36.6 -0.3
UZH **Uzhgorod** 92.36 320 *i*P P 03 23 36.6 -0.6
RES **Resolute Bay** 92.50 10 *e*P P 03 23 38.2 +0.9
DRGR 92.61 318 P P 03 23 37.3 -1.2
DRGR 92.61 318⇓ *i*P P 03 23 37.3 -1.1
STHS **Stebnicka Huta** 92.79 321 *e*P P 03 23 40.3 +1.1
comp=Z,15nm,0.8s,mb5.5
STHS **Stebnicka Huta** 92.79 321 *e*P P 03 23 40.3 +1.1
STHS pmax pmax
comp=Z,15nm,0.8s,mb5.5
STHS **Stebnicka Huta** 92.79 321 *e*P P 03 23 40.2 +1.0
CRVS **Cervenica-Dubn** 92.81 320 *e*P P 03 23 39.0 -0.3
NIE **Niedzica** 93.37 321 *e*P P 03 23 41.5 -0.4
OJC **Ojcow** 93.43 322 *e*P P 03 23 41.7 -0.4
NPS **Neapolis** 93.47 306 P P 03 23 42.5 -0.2
KECS **Kecovo** 93.55 320 *e*P P 03 23 41.8 -0.9
comp=Z,13nm,1.3s,mb5.2
KECS **Kecovo** 93.55 320 *e*P P 03 23 41.8 -0.9
KECS pmax pmax

comp=Z,13nm,1.3s,mb5.2
KECS Kecovo 93.55 320 *e*P **P 03 23 41.8 -0.9**
KECS *e* 04 05 29.9
BZS Buzias 93.67 317 ⇓P **P 03 23 41.6 -1.7**
BZS Buzias 93.67 317 ⇓*i*P **P 03 23 41.6 -1.8**
NB2 NORSAR Subarra 93.78 334 P **P 03 23 41.6 -1.9**
comp=Z,19nm,1.0s,mb5.5,baz=66,slow=4.8
NB2 NORSAR Subarra 93.78 334 P **P 03 23 41.6 -1.9**
NB2 pmax pmax
comp=Z,19nm,1.0s,mb5.5
NOA NORSAR Array B 93.78 334 P **P 03 23 42.1 -1.4**
NOA pmax pmax
comp=Z,12nm,0.9s
NOA MLR MLR
comp=Z,500nm,21.4s
NOA NORSAR Array B 93.78 334 P **P 03 23 42.0 -1.4**
comp=Z,12nm,0.9s,mb5.3,baz=64,slow=4.6,SNR=19
NOA LR LR 04 09 02.1
comp=Z,500nm,21.4s,MS4.9,baz=25,slow=37
IDI Anoyia 94.03 307 P **P 03 23 45.0 -0.3**
PSZ Piszkesteto 94.10 320 ⇓P **P 03 23 44.8 -0.5**
PSZ Piszkesteto 94.10 320 ⇓*i*P **P 03 23 44.8 -0.5**
VAY Valandovo 94.23 313 *e*P **P 03 23 43.4 -2.6**
LIKS Likavka 94.23 321 *e*P **P 03 23 46.0 +0.1**
OKC Ostrava-Krasne 94.56 322 *e*P **P 03 23 46.5 -0.8**
VYHS Vyhne 94.59 321 *e*P **P 03 23 46.6 -0.9**
comp=Z,5.7nm,1.3s,mb4.8
VYHS Vyhne 94.59 321 *e*P **P 03 23 46.6 -0.9**
VYHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.9
YKW3 Yellowknife Ar 94.61 24 *e*P **P 03 23 48.4 +1.1**
YKA Yellowknife Ar 94.65 24 P **P 03 23 48.4 +0.9**
YKA PP PP 03 27 38.5 +3.1
YKA PKKP PKKPbc 03 40 42.4 -5.0
YKA Yellowknife Ar 94.65 24 P **P 03 23 48.3 +0.8**
YKA 03 27 38.5
YKA pmax pmax
comp=Z,9.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 94.65 24 P **P 03 23 48.3 +0.9**
comp=Z,9.1nm,0.9s,mb5.2,baz=301,slow=4.4,SNR=108
YKA PP PP 03 27 38.5 +3.1
comp=Z,1.1nm,0.9s,baz=300,slow=7.5,SNR=4.2
YKA PKKP PKKPbc 03 40 42.4 -5.0
comp=Z,0.6nm,0.7s,baz=120,slow=2.6,SNR=10
TAOE Nuku Hiva Isla 94.72 98 *e*SS SS 03 41 19.9 -4.7
comp=Z,456nm,25.3s
TAOE Nuku Hiva Isla 94.72 98 *e*LR LR 03 54 21.9
comp=Z,2μm,29.5s
KOLL Kolacno 94.83 321 *e*P **P 03 23 47.9 -0.7**
MORC Moravsky Berou 94.95 322 ⇓*i*P **P 03 23 48.8 -0.3**
KRUS Krusevo 95.17 313 *e*P **P 03 23 48.2 -2.1**
VLI Veliai 95.20 308 P **P 03 23 48.3 -2.3**
KSP Ksiaz 95.32 323 *e*P **P 03 23 50.1 -0.7**
EVR Evrytania 95.46 311 P **P 03 23 50.0 -1.7**
PKSM Moragy 95.46 318 ⇓P **P 03 23 50.3 -1.2**
PKSM Moragy 95.46 318 ⇓*i*P **P 03 23 50.3 -1.3**
DPC Dobruska-Polom 95.48 323 *e*P **P 03 23 51.0 -0.5**
MODS Modra-Piesok 95.60 321 *e*P **P 03 23 51.2 -0.9**
UPC Upice 95.61 323 *e*P **P 03 23 51.5 -0.6**
VRAC Vranov 95.69 322 P **P 03 23 52.3 -0.2**
VRAC Vranov 95.69 322 ⇓*i*P **P 03 23 52.4 -0.1**
ZST Bratislava 95.78 321 *e*P **P 03 23 52.5 -0.4**
ZST LR LR
comp=Z,300nm,18.2s,MS4.8
PVCC Panska Ves 96.45 323 *e*P **P 03 23 55.3 -0.7**
PRU Pruhonice 96.68 323 *e*P **P 03 23 55.7 -1.3**
BRG Berggiesshubel 96.68 324 *e*P **P 03 23 56.3 -0.7**
BRG *e* pP 03 24 07.4 -1.8
BRG pmax pmax
comp=Z,12nm,1.2s,mb5.2
BRG pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
BRG Berggiesshubel 96.68 324 *e*P **P 03 23 56.3 -0.7**
comp=Z,20nm,1.2s,mb5.4
BRG *e* pP 03 24 07.4 -1.8
comp=Z,9.9nm,1.1s
CLL Collm 97.05 325 *e*P **P 03 23 57.0 -1.6**
BSEG Bad Segeberg 97.40 328 *e*P **P 03 23 59.6 -0.6**
KHC Kasperske Hory 97.59 322 *e*P **P 03 24 00.3 -0.8**
KHC *e* 03 24 22.0
KHC Kasperske Hory 97.59 322 *e*P **P 03 24 00.3 -0.8**
KHC x x 03 24 22.0
GEC2 GERESS Array S 97.63 322 *e*P **P 03 24 00.9 -0.4**
GERES GERESS Array B 97.63 322 P **P 03 24 00.6 -0.7**
comp=Z,9.8nm,0.8s,mb5.4,baz=60,slow=5.3,SNR=47
GERES LR LR 04 15 42.5
comp=Z,319nm,21.2s,MS4.8,baz=78,slow=40
COR Corvallis 97.64 43 PFAKE 03 24 10.0 +8.5
COR LR LR
comp=Z,430nm,22.0s,MS4.9
MOA Molln 97.67 321 ⇑*i*P **P 03 24 01.1 -0.5**
comp=Z,27nm,0.9s,mb5.8
MOA Molln 97.67 321 ⇑*i*PcP PcP 03 24 01.1 -0.5
comp=Z,27nm,0.9s
NKC Novy Kostel 97.82 324 *e*P **P 03 24 01.8 -0.3**
BOJS Bojanci 97.93 319 *i* P **P 03 24 02.8 0.0**
WET Wettzell 98.01 323 *e*P **P 03 24 03.0 0.0**
VISS Visnje 98.09 319 *e*P **P 03 24 02.7 -0.7**
MOX Moxa 98.13 324 *e*P **P 03 24 02.9 -0.6**
comp=Z,22nm,1.5s,mb5.5
MOX Moxa 98.13 324 *e*P **P 03 24 02.9 -0.6**
MOX pmax pmax
comp=Z,22nm,1.5s,mb5.5
CLZ Clausthal 98.31 326 *e*P **P 03 24 04.4 +0.1**
KBA Koelnbreinsper 98.55 321 ⇑*i*P **P 03 24 04.9 -0.6**
comp=Z,15nm,1.5s,mb5.3
KBA Koelnbreinsper 98.55 321 ⇑*i*PcP PcP 03 24 04.9 -0.6
comp=Z,15nm,1.5s
KBA Koelnbreinsper 98.55 321 ⇑*i*P **P 03 24 04.9 -0.6**
KBA pmax pmax
comp=Z,15nm,1.5s,mb5.3
JAVS Javornik 98.56 319 *i* P **P 03 24 01.4 -4.1**
GRA1 Grafenberg Arr 98.76 324 *e*P **P 03 24 05.0 -1.4**
comp=Z,7.0nm,0.9s,mb5.2
GRF Grafenberg Arr 98.76 324 *e*P **P 03 24 05.0 -1.4**
comp=Z,7.0nm,0.9s,mb5.2
GRF Grafenberg Arr 98.76 324 *e*P **P 03 24 05.0 -1.4**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb5.2
GRF Grafenberg Arr 98.76 324 *e*P **P 03 24 05.0 -1.4**
GRF pmax pmax
comp=Z,7.0nm,0.9s,mb5.2
QSPA South Pole Qui 99.08 180 P **P 03 24 06.7 -0.4**
comp=Z,10nm,1.1s,mb5.3,baz=328,slow=3.0,SNR=8.5
WTTA Wattenberg 99.54 321 ⇑*i*P **P 03 24 08.7 -1.2**
comp=Z,16nm,0.8s,mb5.5
WTTA Wattenberg 99.54 321 ⇑*i*P **P 03 24 08.7 -1.2**
WTTA pmax pmax
comp=Z,17nm,0.8s,mb5.5
HOPS Hopland 99.76 48 PFAKE 03 24 20.0 +9.3
HOPS LR LR
comp=Z,525nm,21.0s,MS5.0
SQTA Sankt Quirin 99.82 321 ⇑*i*P Pdif 03 24 10.2 -0.8
comp=Z,17nm,1.1s
SQTA Sankt Quirin 99.82 321 ⇑*i*P Pdif 03 24 10.2 -0.8
SQTA pmax pmax
comp=Z,17nm,1.1s,mb5.4
MOTA Moosalm 99.83 321 ⇑*i*P Pdif 03 24 09.8 -1.2
comp=Z,7.5nm,1.1s
MOTA Moosalm 99.83 321 ⇑*i*P Pdif 03 24 09.8 -1.2
MOTA pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
EDM Edmonton 99.88 32 *e*P Pdif 03 24 12.8 +1.6
NEW Newport 100.10 37 *e*P Pdif 03 24 13.9 +1.7
comp=Z,12nm,1.1s
NEW Newport 100.10 37 *e*P Pdif 03 24 13.9 +1.7
NEW pmax pmax
comp=Z,13nm,1.1s
TNS Taunus Mts 100.13 325 *e*P Pdif 03 24 12.0 -0.3
MCCM Marconi Confer 100.19 49 PFAKE 03 24 30.0 +17
MCCM LR LR
comp=Z,570nm,20.0s,MS5.1
MOD Modoc 100.67 44 PFAKE 03 24 30.0 +15
MOD LR LR
comp=Z,384nm,21.0s,MS4.9
RKT Rikitea 101.40 112 *e*SS SS 03 43 04.4 +6.2
comp=Z,163nm,32.5s
RKT Rikitea 101.40 112 *e*LR LR 03 57 33.1
comp=Z,503nm,27.5s
BMO Blue Mountains 101.47 41 PFAKE 03 24 30.0 +12
BMO LR LR
comp=Z,522nm,21.0s,MS5.0
CMB Columbia Colle 102.07 48 *e*Pdif Pdif 03 24 22.8 +1.9
comp=Z,3.3nm,1.0s
CMB LR LR
comp=Z,432nm,20.0s,MS5.0
CMB Columbia Colle 102.07 48 *e*P Pdif 03 24 22.8 +1.8
CMB pmax pmax
comp=Z,3.0nm,1.0s
CMB MLR MLR
comp=Z,432nm,20.0s,MS5.0
LPG La Plagne 103.35 321 *e*P Pdif 03 24 26.7 0.0
comp=Z,31nm,1.1s
LPG La Plagne 103.35 321 *e*P Pdif 03 24 26.7 0.0
comp=Z,16nm,1.1s
LPG La Plagne 103.35 321 *e*P Pdif 03 24 26.7 0.0
LPG pmax pmax
comp=Z,16nm,1.1s
LPL La Plagne 103.36 321 *e*P Pdif 03 24 26.7 0.0
BMN Battle Mountai 103.39 45 PFAKE 03 24 40.0 +13
BMN LR LR
comp=Z,374nm,19.0s,MS4.9
NVAR Mina Array Bea 103.43 47 Pdif Pdif 03 24 28.8 +1.8
NVAR PKKPbc PKKPbc 03 40 20.3 -1.7
NVAR Mina Array Bea 103.43 47 Pdiff Pdif 03 24 28.8 +1.8
comp=Z,1.8nm,0.8s,baz=270,slow=3.3,SNR=8.6
NVAR PKKPbc PKKPbc 03 40 20.3 -1.7
comp=Z,2.0nm,0.9s,baz=129,slow=4.7,SNR=8.3
HLID Hailey 103.90 41 *e*Pdif Pdif 03 24 31.9 +2.8
comp=Z,5.2nm,1.1s
ELK Elko 104.62 44 PFAKE 03 24 50.0 +18
ELK LR LR
comp=Z,36nm,19.0s
BOZ Bozeman (W) 104.65 38 PFAKE 03 24 50.0 +18
BOZ LR LR
comp=Z,281nm,20.0s,MS4.8
DAC Darwin (Calif) 104.81 49 PFAKE 03 29 00.0 +11
DAC LR LR
comp=Z,574nm,19.0s,MS5.1
YMR Madison River 105.55 39 PFAKE 03 29 00.0 +10
YMR LR LR
comp=Z,888nm,19.0s,MS5.3
LKWY Lake 105.95 38 PFAKE 03 29 00.0 +9.3
LKWY LR LR
comp=Z,604nm,19.0s,MS5.2
PTCN Pitcairn Islan 105.98 113 PFAKE 03 29 00.0 +8.7
PTCN LR LR
comp=Z,2μm,20.0s,MS5.6
TPAW Teton Pass 106.15 40 *e*PKPdf PKiKP 03 28 51.5 +0.4
AHID Auburn Hatcher 106.41 40 PFAKE 03 29 00.0 +8.4
AHID LR LR
comp=Z,350nm,21.0s,MS4.9
HWUT Hardware Ranch 106.68 42 *e*Pdif Pdif 03 24 43.5 +2.0
comp=Z,3.0nm,1.1s
HWUT LR LR
comp=Z,507nm,19.0s,MS5.1
BW06 Boulder Array 107.39 40 PFAKE 03 29 10.0 +17
BW06 LR LR
comp=Z,535nm,22.0s,MS5.1
PDAR Pinedale Array 107.39 40 PKKPbc PKKPbc 03 40 09.1 -1.1
comp=Z,1.2nm,0.9s,baz=124,slow=4.4,SNR=7.8
PDAR PKKP PKKPbc 03 40 21.5 +11
comp=Z,1.0nm,0.9s,baz=121,slow=4.7,SNR=5.9
MPU Maple Canyon 107.40 43 PFAKE 03 29 10.0 +16
MPU LR LR
comp=Z,715nm,19.0s,MS5.2
MVU Marysvale 107.72 45 *e*PKP PKiKP 03 29 00.9 +6.8
MSU Marysvale 107.74 45 *e*PKPdf PKiKP 03 28 57.7 +3.5
TUC Tucson 111.59 50 PFAKE 03 29 10.0 +8.4
TUC LR LR
comp=Z,298nm,20.0s,MS4.9
AGMN Agassiz Refuge 111.66 29 PFAKE 03 29 10.0 +8.7
AGMN LR LR
comp=Z,380nm,19.0s,MS5.0
ANMO Albuquerque 113.48 46 PFAKE 03 29 20.0 +15
ANMO LR LR
comp=Z,376nm,22.0s,MS4.9
ANMO Albuquerque 113.48 46⇑*i*PKIKP PKiKP 03 29 05.1 -0.1
CBKS Cedar Bluff 115.77 39 PFAKE 03 29 20.0 +11
CBKS LR LR
comp=Z,359nm,21.0s,MS5.0
MNTX Cornudas Mount 115.91 48 PFAKE 03 29 20.0 +10
MNTX LR LR
comp=Z,324nm,19.0s,MS5.0
EVO Evora 116.34 321 *e*PKIKP PKPdf 03 29 10.3 -0.3
comp=Z,121nm,1.6s
LTX Lajitas 118.38 50 PFAKE 03 29 30.0 +15
LTX LR LR
comp=Z,564nm,19.0s,MS5.2
TXAR Lajitas Array 118.38 50 PKIKP PKPdf 03 29 16.1 +1.3
TXAR pmax pmax
comp=Z,2.0nm,0.9s
TXAR pmax pmax
comp=Z,1.0nm,0.8s
TXAR Lajitas Array 118.38 50 PKP PKPdf 03 29 16.1 +1.4
comp=Z,1.9nm,0.9s,baz=247,slow=1.2,SNR=16
TXAR PKKPab PKKPab 03 39 34.3 -1.9
comp=Z,0.6nm,0.8s,baz=144,slow=4.7,SNR=5.2
GLMI Grayling 119.35 25 PFAKE 03 29 30.0 +14
GLMI LR LR
comp=Z,1μm,20.0s,MS5.5
JCT Junction City 120.61 46 *e*PKPdf PKPdf 03 29 19.6 +0.6
TORD Torodi Ar. Bea 120.82 291 PKP PKPdf 03 29 18.4 -1.3
comp=Z,18nm,0.8s,baz=53,slow=1.7,SNR=90
TORD PKKPab PKKPab 03 39 25.6 +0.2
comp=Z,0.5nm,0.7s,baz=265,slow=3.6,SNR=5.5
AAM Ann Arbor 121.80 26 PFAKE 03 29 30.0 +9.0
AAM LR LR
comp=Z,499nm,21.0s,MS5.1
MIAR Mount Ida 122.30 39 *e*PKPdf PKPdf 03 29 22.3 +0.2
ERPA Erie 123.47 23 PFAKE 03 29 40.0 +16
ERPA LR LR
comp=Z,364nm,21.0s,MS5.0
WVT Waverly 124.55 34 *e*PKPdf PKPdf 03 29 26.1 -0.4
PLAL Pickwick Lake 125.25 35 *e*PKPdf PKPdf 03 29 27.6 -0.2
WES Weston 126.14 16 PFAKE 03 29 40.0 +11
WES LR LR
comp=Z,457nm,20.0s,MS5.2
LRAL Lakeview Retre 127.28 36 PFAKE 03 29 40.0 +8.3
LRAL LR LR
comp=Z,495nm,19.0s,MS5.2
BLA Blacksburg 127.40 27 PFAKE 03 29 40.0 +8.1
BLA LR LR
comp=Z,341nm,19.0s,MS5.0
CBN Corbin 127.85 24 PFAKE 03 29 40.0 +7.3
CBN LR LR
comp=Z,510nm,20.0s,MS5.2
BRAL Brewton 128.70 37 PFAKE 03 29 50.0 +15
BRAL LR LR
comp=Z,264nm,19.0s,MS4.9
DBIC Dimbokro 128.97 286 PKIKP PKPdf 03 29 35.8 +0.3
DBIC pmax pmax
comp=Z,20nm,0.9s
DBIC Dimbokro 128.97 286 PKP PKPdf 03 29 35.8 +0.4
comp=Z,20nm,0.9s,baz=41,slow=3.8,SNR=18
LIC Lamto 129.27 286⇑*i*PKIKP PKPdf 03 29 36.4 +0.4
comp=Z,64nm,0.9s
CNNC Cliffs of the 130.17 26 PFAKE 03 29 50.0 +13
CNNC LR LR
comp=Z,668nm,22.0s,MS5.3
JTS JuntasAbangare 143.23 59 PFAKE 03 30 10.0 +8.2
JTS LR LR
comp=Z,238nm,19.0s,MS5.0
PLCA Paso Flores 145.17 157 PKIKP PKPdf 03 30 05.1 +0.6
PLCA pmax pmax
comp=Z,19nm,0.8s
PLCA Paso Flores 145.17 157 PKPbc PKPbc 03 30 05.1 +1.1
comp=Z,19nm,0.8s,baz=209,slow=4.3,SNR=36
SDDR Presa de Saban 146.97 32 *e*PKPbc PKPbc 03 30 11.1 +1.0
SJG San Juan 150.14 25 PFAKE 03 30 30.0 +17
SJG LR LR
comp=Z,312nm,19.0s,MS5.1
TRQA Tornquist 150.29 166 *e*PKPbc PKPbc 03 30 17.4 -0.8
CPD Cerro la Pandu 150.30 24 *e*PKPbc PKPbc 03 30 18.9 +0.1
MTP Monte Pirata 150.39 24 *e*PKPbc PKPbc 03 30 19.6 +0.6
OTAV Otavalo 153.49 71 *e*PKPdf PKPdf 03 30 19.0 +0.5
OTAV *e*PKPbc PKPbc 03 30 28.2 +2.0
OTAV LR LR
comp=Z,379nm,20.0s,MS5.2
CFAA Coronel Fontan 153.87 151 PKP PKPdf 03 30 18.4 -0.2
comp=Z,0.7nm,1.0s,baz=213,slow=5.5,SNR=7.4
CFAA PKPbc PKPbc 03 30 27.0 +0.5
comp=Z,0.6nm,0.7s,baz=207,slow=2.9,SNR=8.2
ROSC El Rosal 155.02 57 PKP PKPdf 03 30 22.7 +2.0
comp=Z,3.8nm,0.7s,baz=88,slow=23,SNR=4.6
SDV Santo Domingo 155.25 44 PKP PKPdf 03 30 21.8 +0.9
SDV PKPbc PKPdf 03 30 31.1 +10
SDV LR LR
comp=Z,125nm,19.0s,MS4.8
SDV Santo Domingo 155.25 44 PKP PKPdf 03 30 21.8 +0.9
comp=Z,4.8nm,0.9s,baz=98,slow=3.7,SNR=4.4
SDV PKPbc PKPdf 03 30 31.1 +10
comp=Z,9.6nm,0.8s,baz=33,slow=2.1,SNR=3.6
ATAH Atahualpa 155.31 87 PKP PKPdf 03 30 23.4 +2.4
comp=Z,2.2nm,0.5s,baz=225,slow=4.7,SNR=3.3
ATAH PKPab PKPab 03 30 49.5 +3.2
comp=Z,9.0nm,0.9s,baz=308,slow=6.6,SNR=4.3
LPAZ La Paz 164.14 118 PKIKP PKPdf 03 30 32.5 +1.6
LPAZ pmax pmax
comp=Z,6.0nm,0.9s
LPAZ La Paz 164.14 118 PKP PKPdf 03 30 32.5 +1.6
comp=Z,5.9nm,0.9s,baz=0.4,slow=0.6,SNR=17
LPAZ La Paz 164.14 118 PKPdf PKPdf 03 30 32.6 +1.6
SIV San Ignacio 170.04 133 PKP PKPdf 03 30 36.1 +0.8
comp=Z,12nm,1.0s,baz=212,slow=1.1,SNR=36

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*NNC **20** 03:13:52.6±0.6, 42.90N×7.131E, h0km, mb3.5, mpv3.6, Error ellipse: s-maj=14.7km s-min=2.2km az=11.0*
*ISCJB **20** 03:13:54.3±0.4, 43.1N±0.1×7.127E±003, h10km, Error ellipse: s-maj=16.9km s-min=2.6km az=5.1*
ISC 20 03:13:54.4±0.9, 428N±01×7117E±008, h10km, n21,
σ0§69/31, 12C-13D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK06	**Karatay Array**	**0.56**	**304**	⇓P	**Pg**	**03 14 04.7**	**-0.6**
KK06				⇑S	**Sg**	**03 14 13.5**	**+0.8**
KK07	**Karatay Array**	**0.57**	**302**	⇓P	**Pg**	**03 14 04.9**	**-0.7**
KK07				⇑S	**Sg**	**03 14 13.5**	**+0.4**
KK02	**Karatay Array**	**0.58**	**304**	⇓P	**Pg**	**03 14 04.9**	**-0.6**
KK02				⇑S	**Sg**	**03 14 13.7**	**+0.6**
KK31	**Karatay Array**	**0.58**	**304**	⇓P	**Pg**	**03 14 04.7**	**-0.8**
	89nm,0.3s,baz=117,slow=15,SNR=39						
KK31				⇓S	**Sg**	**03 14 13.5**	**+0.4**
	203nm,0.4s,baz=192,slow=28,SNR=4.0						
KK05	**Karatay Array**	**0.58**	**305**	⇓P	**Pg**	**03 14 05.0**	**-0.6**
KK05				⇓S	**Sg**	**03 14 13.8**	**+0.7**
KK01	**Karatay Array**	**0.58**	**304**	⇑P	**Pg**	**03 14 05.0**	**-0.7**
KK01				⇑S	**Sg**	**03 14 13.8**	**+0.5**
KK03	**Karatay Array**	**0.58**	**303**	⇓P	**Pg**	**03 14 05.1**	**-0.6**
KK03				⇑S	**Sg**	**03 14 13.8**	**+0.5**
KK04	**Karatay Array**	**0.58**	**304**	⇓P	**Pg**	**03 14 05.1**	**-0.7**
KK04				⇑S	**Sg**	**03 14 14.0**	**+0.6**
KK08	**Karatay Array**	**0.59**	**303**	⇓P	**Pg**	**03 14 05.2**	**-0.7**
KK08				⇑S	**Sg**	**03 14 14.0**	**+0.4**
KK09	**Karatay Array**	**0.59**	**305**	⇓P	**Pg**	**03 14 05.3**	**-0.7**
KK09				⇑S	**Sg**	**03 14 13.9**	**+0.1**
EKS2	**Erkin-Say**	**1.93**	**93**	P	**Pn**	**03 14 27.5**	**+0.3**
	SNR=60						
AML	**Almayashu**	**1.98**	**108**	P	**Pn**	**03 14 28.4**	**+0.4**
	SNR=54						
AAK	**Ala-Archa**	**2.46**	**92**	P	**Pn**	**03 14 34.9**	**+0.4**
	SNR=18						
USP	**Ospenovka**	**2.49**	**78**	P	**Pn**	**03 14 34.1**	**-0.8**
	SNR=5.6						
UCH	**Uchtor**	**2.54**	**102**	P	**Pn**	**03 14 37.0**	**+1.4**
	SNR=25						
KBK	**Karagaybulak**	**2.79**	**91**	P	**Pn**	**03 14 39.1**	**+0.1**
	SNR=14						
KZA	**Kyzart**	**3.10**	**102**	P	**Pn**	**03 14 44.8**	**+1.4**
	SNR=17						
TKM2	**Tokmak 2**	**3.26**	**86**	⇓Pn	**Pn**	**03 14 44.9**	**-0.6**
	17nm,0.5s						
TKM2				⇑Lg		03 15 32.8	
	106nm,0.5s						
TKM2	**Tokmak 2**	**3.26**	**86**	P	**Pn**	**03 14 45.2**	**-0.3**
	SNR=6.1						
MK31	**Makanchi Array**	**8.87**	**59**	Pn	**Pn**	**03 16 01.2**	**-1.3**
	0.5nm,0.4s,baz=238,slow=13,SNR=13						
MK31				⇑Lg		03 18 29.7	
	2.6nm,0.6s,baz=239,slow=26,SNR=4.3						
KURBB	**Kurchatov Arra**	**9.33**	**30**	⇓Pn	**Pn**	**03 16 09.2**	**+0.4**
	0.2nm,0.7s						
KURBB				⇑Lg		03 18 48.6	
	5.1nm,0.7s						

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*NNC **20** 03:17:56.0±6.8, 41.32N×7.342E, h0km, mb4.7, mpv4.3, Error ellipse: s-maj=85.7km s-min=36.7km az=167.0*
*KNET **20** 03:17:56.6±0.6, 4141N×7362E, h14km, 3km, ml3.6, Error ellipse: s-maj=3.8km s-min=3.2km az=77.0*
ISC 20 03:17:54.3±1.6, 4128N±007×737E±01, h10km, n12,
σ1§10/20, 14C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.85**	**2**	P	**Pg**	**03 18 10.6**	**-0.1**
	436nm,0.2s,SNR=190						
AML				⇑S	**Sg**	**03 18 22.3**	**+0.5**
	2μm,0.3s						
UCH	**Uchtor**	**1.15**	**34**	⇑P	**Pb**	**03 18 16.6**	**+0.4**
	260nm,0.2s,SNR=807						
UCH				⇓S	**Sb**	**03 18 32.9**	**+1.7**
	1μm,0.2s						
EKS2	**Erkin-Say**	**1.39**	**4**	⇓P	**Pn**	**03 18 20.1**	**+0.5**
	95nm,0.2s,SNR=28						
EKS2				⇓S	**Sb**	**03 18 37.5**	**-0.4**
	318nm,0.2s						
KZA	**Kyzart**	**1.44**	**56**	⇑P	**Pn**	**03 18 22.0**	**+1.6**
	309nm,0.2s,SNR=167						
KZA				⇓S	**Sn**	**03 18 43.1**	**+3.7**
	275nm,0.2s						
AAK	**Ala-Archa**	**1.49**	**25**	⇑P	**Pg**	**03 18 22.7**	**-0.2**
	232nm,0.1s,SNR=638						
AAK				⇑S	**Sg**	**03 18 43.1**	**+0.8**
	723nm,0.3s						
KBK	**Karagaybulak**	**1.68**	**35**	⇑P	**Pg**	**03 18 26.3**	**-0.3**
	481nm,0.3s,SNR=151						
KBK				⇓S	**Sg**	**03 18 48.2**	**-0.2**
	814nm,0.2s						
CHMS	**Chumysh**	**1.91**	**25**	⇑P	**Pg**	**03 18 30.1**	**-0.7**
	270nm,0.3s,SNR=150						
CHMS				⇑S	**Sg**	**03 18 55.6**	**+0.1**
	326nm,0.2s						
USP	**Ospenovka**	**2.08**	**17**	⇑P	**Pg**	**03 18 32.3**	**-1.9**
	85nm,0.2s,SNR=58						
USP				⇑S	**Sg**	**03 19 00.9**	**-0.4**
	328nm,0.2s						
TKM2	**Tokmak 2**	**2.19**	**41**	⇑Pn	**Pg**	**03 18 34.4**	**-1.8**
	233nm,0.4s						
TKM2				⇑Lg		03 19 04.6	
	305nm,0.7s						
TKM2	**Tokmak 2**	**2.19**	**41**	P	**Pg**	**03 18 34.6**	**-1.6**
	357nm,0.3s,SNR=381						
KK31	**Karatay Array**	**2.96**	**309**	⇑Pn	**Pn**	**03 18 44.9**	**+3.7**
	11nm,0.2s,baz=121,slow=17						
KK31				⇓Lg		03 19 23.7	
	69nm,0.3s,baz=136,slow=29						
KNDC	**Almaty**	**3.13**	**51**	⇑Pn	**Pg**	**03 18 51.2**	**-3.1**
	66nm,0.5s						
KNDC				⇓Lg		03 19 35.2	
	905nm,1.1s						

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*ASRS **20** 03:22:53.4±1.1, 50.43N×87.18E, h15km, Ms4.0*
*BJI **20** 03:22:54.7, 50.68N×87.23E, h12km, ML4.8, Ms4.8, Msz4.2*
*IDC **20** 03:22:55.4±0.6, 50.62N×87.49E, h0km, mb4.0/19, mb1 4.2/21, mb1mx4.2/26, mbtmp4.1/21, ML4.7/2, Error ellipse: s-maj=14.4km s-min=10.5km az=136.0*
*NEIC **20** 03:22:56.4±0.4, 50.60N×87.46E, h10km, mb4.6/5, Error ellipse: s-maj=10.3km s-min=6.5km az=171.0*
*NNC **20** 03:23:01.9±6.0, 50.46N×86.72E, h18km±46km, mb4.6, mpv4.7, Error ellipse: s-maj=59.4km s-min=29.4km az=75.0*
MOS 20 03:22:55.4±1.5, 5054N×8762E, h18km, mb4.3/13,
12C-11D, Error ellipse: s-maj=10.0km s-min=8.0km az=87.5, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.22**	**181**	*i* Pg	Pg	03 23 00.0	-0.7
AKAR				*i* Sg	Sg	03 23 03.4	-0.9
TASR	**Tashtagol**	**2.23**	**4**	*e*PN	Pg	03 23 36.4	-1.7
TASR				*e*	Sg	03 24 07.8	+0.9
TASR	**Tashtagol**	**2.23**	**4**	*i* Pg	Pg	03 23 36.4	-1.7
TASR				*i* Sg	Sg	03 24 07.8	+0.9
ELT	**Yel'tsovka**	**2.85**	**343**	*e*PN	Pg	03 23 45.3	-4.8
ELT				*e*	Sg	03 24 23.6	-3.4
ELT	**Yel'tsovka**	**2.85**	**343**	*i* Pg	Pg	03 23 45.3	-4.8
ELT				*i* Sg	Sg	03 24 23.6	-3.4

KZLR	**Kyzyl**	**4.46**	**72**	*e*Pg		Pg	03 24 20.2	-0.5
NVS	**Novosibirsk**	**5.06**	**330**	*e*PN		Pn	03 24 12.5	+2.2
NVS				*e*			03 25 30.2	
NVS	**Novosibirsk**	**5.06**	**330**	*i* Pn		Pn	03 24 12.5	+2.2
NVS				*i* Pg		Pg	03 24 23.8	-8.5
NVS				*i* Sg		Sg	03 25 30.2	-7.6
MK31	**Makanchi Array**	**5.15**	**225**	⇓Pn		Pn	03 24 16.3	+4.7
	186nm,0.7s,baz=53,slow=9.8,SNR=590							
MK31				⇓Sn		Sn	03 25 13.9	+3.3
	157nm,0.5s,baz=57,slow=23,SNR=8.6							
MK31				⇓Lg			03 25 32.5	
	330nm,0.5s,baz=41,slow=30,SNR=11							
MK31	**Makanchi Array**	**5.15**	**225**	*e*PN		Pn	03 24 15.7	+4.1
MK31				pmax	pmax			
	comp=Z,156nm,0.5s							
MKAR	**Makanchi Array**	**5.15**	**225**	P		Pn	03 24 15.6	+4.0
MKAR	**Makanchi Array**	**5.15**	**225**	Pn		Pn	03 24 16.2	+4.6
	comp=Z,37nm,0.3s,baz=42,slow=12,SNR=192							
MKAR				Sn		Sn	03 25 13.6	+3.0
	comp=Z,90nm,0.3s,baz=58,slow=26,SNR=14							
MKAR				Lg			03 25 34.7	
	comp=Z,145nm,0.3s,baz=47,slow=33,SNR=18							
KURK	**Kurchatov**	**5.73**	**275**	P		Pn	03 24 20.9	+1.4
KURK	**Kurchatov**	**5.73**	**275**	*i* PN		Pn	03 24 20.5	+1.0
KURK				pmax	pmax			
	comp=Z,50nm,0.7s							
KURBB	**Kurchatov Arra**	**5.79**	**274**	⇑Pn		Pn	03 24 22.0	+1.7
	comp=Z,27nm,0.5s							
KURBB				⇓Sn		Sn	03 25 25.0	-1.3
	comp=Z,37nm,0.5s							
KURBB				⇑Lg			03 25 52.2	
	comp=Z,265nm,0.7s							
WMQ	**Urumqi**	**6.73**	**180**	P		Pn	03 24 38.3	+5.1
WMQ				S		Sn	03 25 53.3	+4.0
WMQ				Smax				
	comp=N,373nm,1.0s							
WMQ				Smax				
	comp=E,458nm,1.0s							
TLY	**Talaya**	**10.14**	**77**	P		Pn	03 25 23.2	+3.3
CHKZ	**Chkalovo**	**10.92**	**293**	⇓Pn		Pn	03 25 29.7	-0.9
	comp=E,23nm,0.9s							
CHKZ				⇓Sn		Sn	03 27 25.6	-6.5
	comp=E,71nm,0.8s							
BRVK	**Borovoye**	**11.03**	**290**	Pn		Pn	03 25 31.4	-0.7
	comp=E,6,6nm,0.6s							
BRVK				⇓Sn		Sn	03 27 29.6	-5.2
	comp=E,17nm,0.6s							
BRVK	**Borovoye**	**11.03**	**290**	P		Pn	03 25 31.2	-0.9
TKM2	**Tokmak 2**	**11.23**	**232**	⇓Pn		Pn	03 25 37.0	+2.2
	comp=E,19nm,0.8s							
TKM2				⇑Lg			03 28 42.0	
	comp=E,261nm,1.4s							
TKM2	**Tokmak 2**	**11.23**	**232**	*e*Pn		Pn	03 25 36.5	+1.7
	comp=E,12nm,0.5s							
TKM2	**Tokmak 2**	**11.23**	**232**	*e*P		Pn	03 25 36.5	+1.7
TKM2				pmax	pmax			
	comp=Z,12nm,0.5s							
TKM2	**Tokmak 2**	**11.23**	**232**	P		Pn	03 25 37.8	+2.9
	SNR=6.8							
ULHL	**Ulahol**	**11.42**	**228**	P		Pn	03 25 41.5	+4.0
	SNR=7.8							
USP	**Ospenovka**	**11.55**	**236**	P		Pn	03 25 39.8	+0.6
	SNR=7.3							
KBK	**Karagaybulak**	**11.75**	**233**	P		Pn	03 25 43.0	+1.0
	SNR=7.9							
KZA	**Kyzart**	**12.02**	**230**	P		Pn	03 25 48.6	+2.9
	SNR=9.5							
UCH	**Uchtor**	**12.28**	**232**	*e*Pn		Pn	03 25 48.1	-1.1
	comp=Z,487nm,0.6s							
EKS2	**Erkin-Say**	**12.35**	**236**	*e*Pn		Pn	03 25 49.7	-0.4
	comp=Z,9.8nm,0.6s							
SONM	**Songino Array**	**12.57**	**95**	Pn		Pn	03 25 59.2	+6.0
	comp=Z,0.1nm,0.3s,baz=288,slow=13,SNR=2.9							
SONM				Lg			03 29 32.8	
	comp=Z,0.6nm,0.3s,baz=277,slow=25,SNR=5.4							
AML	**Almayashu**	**12.77**	**234**	*e*Pn		Pn	03 25 57.2	+1.3
	comp=Z,8.5nm,0.6s							
AML	**Almayashu**	**12.77**	**234**	P		Pn	03 25 58.5	+2.6
	SNR=6.5							
ULN	**Ulaanbaatar**	**12.98**	**94**	*e*P		Pn	03 26 00.0	+1.2
KK31	**Karatay Array**	**13.86**	**244**	⇑Pn		Pn	03 26 09.0	-1.8
	comp=Z,3.7nm,0.5s,baz=48,slow=13,SNR=6.8							
KK31				⇑Sn		Sn	03 28 39.4	-4.7
	comp=Z,11nm,0.6s,baz=43,slow=27,SNR=3.5							
KK31				⇑Lg			03 30 06.6	
	comp=Z,106nm,1.1s,baz=44,slow=31,SNR=6.5							
CIT	**Chita**	**16.26**	**75**	*e*P		Pn	03 26 45.9	+3.2
BOD	**Bodaibo**	**16.99**	**54**	*e*P		Pn	03 26 57.5	+5.7
BOD				pmax	pmax			
	comp=Z,6.0nm,1.8s							
AB31	**Akbulak array**	**17.84**	**277**	⇑Pn		Pn	03 27 01.2	-1.3
	comp=Z,6.9nm,0.5s,baz=68,slow=9.4,SNR=6.1							
AB31	**Akbulak array**	**17.84**	**277**	P		Pn	03 27 03.5	+1.0
ARU	**Arti**	**18.18**	**300**	P		Pn	03 27 03.5	-3.1
ARU	**Arti**	**18.18**	**300***c*	*i*P		Pn	03 27 03.6	-3.0
ARU				S		Sn	03 30 26.2	-2.6
ARU				pmax	pmax			
	comp=Z,24nm,1.7s							
AKTK	**Aktyubinsk**	**18.79**	**281**	P		Pn	03 27 11.5	-2.5
AKTO	**Aktyubinsk**	**18.79**	**281**	⇑Pn		Pn	03 27 12.4	-1.6
	comp=Z,1.9nm,0.8s							
AKTO	**Aktyubinsk**	**18.79**	**281**	*e*P		Pn	03 27 11.5	-2.5
AKTO	**Aktyubinsk**	**18.79**	**281**	Pn		Pn	03 27 12.0	-1.9
	comp=Z,1.4nm,0.3s,baz=83,slow=11,SNR=20							
AKTO				Lg			03 32 45.2	
	comp=Z,0.1nm,0.3s,baz=205,slow=18,SNR=5.1							
HIA	**Hailar**	**20.64**	**81**	*e*P		P	03 27 37.2	+3.5
	comp=Z,16nm,1.0s							
HIA	**Hailar**	**20.64**	**81**	*e*P		P	03 27 36.4	+2.7
GKN	**Gorkha**	**22.63**	**187**	*e*P		P	03 27 59.2	+4.1
	comp=Z,15nm,0.7s							
KKN	**Kakani**	**22.79**	**185**	*e*P		P	03 28 01.4	+4.5
JIRN	**Jiri**	**22.88**	**183**	*e*P		P	03 28 03.6	+5.8
	comp=Z,10nm,0.6s							
KOLN	**Koldanda**	**22.95**	**189**	*e*P		P	03 28 02.0	+3.5
	comp=Z,38nm,1.2s							
TAPN	**Taplejung**	**23.16**	**180**	*e*P		P	03 28 08.4	+7.6
ODAN	**Odare**	**23.65**	**181**	*e*P		P	03 28 12.4	+6.7
YAK	**Yakutsk**	**25.52**	**47**⇑	*e*P		P	03 28 24.0	+1.5
YAK				pmax	pmax			
	comp=Z,17nm,1.0s							
TIXI	**Tiksi**	**28.08**	**26**	P		P	03 28 45.5	+0.1
TIXI	**Tiksi**	**28.08**	**26**	*e*P		P	03 28 46.7	+1.3
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KSRS	**Korea Array**	**31.40**	**99**	P		P	03 29 20.3	+5.2
	comp=Z,1.4nm,0.8s,baz=313,slow=9.5,SNR=4.5							
JOF	**Joensuu**	**32.16**	**314**	*e*p		P	03 29 22.9	+1.4
ARCES	**ARCESS Array B**	**34.34**	**327**	P		P	03 29 43.5	+3.1
ARCES							03 32 18.3	
ARCES				pmax	pmax			
	comp=Z,2.0nm,1.0s							
ARCES				pmax	pmax			
	comp=Z,4.0nm,1.0s							
ARCES	**ARCESS Array B**	**34.34**	**327**	P		P	03 29 43.5	+3.1
	comp=Z,2.4nm,0.9s,baz=88,slow=8.9,SNR=3.6							
ARCES				PcP	PcP		03 32 18.3	+2.4
	comp=Z,4.0nm,1.0s,baz=80,slow=3.1,SNR=5.3							
KAF	**Kangasniemi**	**34.56**	**313**	*e*p		P	03 29 43.8	+1.4
FINES	**FINESS Array B**	**34.78**	**312**	P		P	03 29 46.2	+1.8
FINES	**FINESS Array B**	**34.78**	**312**	P		P	03 29 46.2	+1.9
FINES				pmax	pmax			
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**34.78**	**312**	P		P	03 29 46.2	+1.8
	comp=Z,2.6nm,0.9s,baz=67,slow=6.8,SNR=4.2							
AKASG	**Malin Array Be**	**36.21**	**294**	P		P	03 29 58.1	+1.3
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**36.21**	**294**	P		P	03 29 58.1	+1.3
	comp=Z,1.2nm,0.4s,baz=58,slow=8.7,SNR=9.0							
UMR	**Umm Al-Rimmam**	**36.46**	**250**	*e*P		P	03 29 58.6	-0.5
UMR				AMb		AMB	03 30 02.2	
	comp=Z,22nm,0.7s							
MIB	**Mutribah**	**36.50**	**251**	*e*P		P	03 29 59.1	-0.3
MIB				AMb		AMB	03 30 04.9	
	comp=Z,15nm,0.7s							
MALT	**Malatya**	**36.55**	**270**	*e*P		P	03 30 02.9	+3.1
MALT	**Malatya**	**36.55**	**270**	⇓*i*P		P	03 30 04.0	+4.2
RDF	**Al-Radifah**	**37.01**	**250**	*e*P		P	03 30 01.6	-2.2
RDF				AMb		AMB	03 30 03.8	
	comp=Z,15nm,1.1s							
KWP	**Kalwaria**	**40.46**	**295**	*e*P		P	03 30 35.8	+3.3
	comp=Z,28nm,1.2s							
KWP	**Kalwaria**	**40.46**	**295**	*e*P		P	03 30 35.8	+3.3
KWP				pmax	pmax			
	comp=Z,28nm,1.2s							
KWP	**Kalwaria**	**40.46**	**295**	⇑*i*P		P	03 30 36.9	+4.4
MLR	**Muntele Rosu**	**40.52**	**288**	⇑*i*P		P	03 30 37.3	+4.3
ASF	**Jabal al Asfar**	**41.36**	**263**	P		P	03 30 43.3	+3.1
ASF				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ASF	**Jabal al Asfar**	**41.36**	**263**	P		P	03 30 43.3	+3.2
	comp=Z,5.0nm,0.9s,baz=340,slow=4.0,SNR=7.5							
MMAI	**Mount Meron Ar**	**41.76**	**266**	P		P	03 30 46.1	+2.7
	comp=Z,1.1nm,0.5s,baz=42,slow=11,SNR=4.1							
NB2	**NORSAR Subarra**	**41.79**	**315**	P		P	03 30 44.9	+1.6
	comp=Z,2.9nm,0.6s,baz=66,slow=7.9							
NB2	**NORSAR Subarra**	**41.79**	**315**	P		P	03 30 44.9	+1.6
NB2				pmax	pmax			
	comp=Z,3.0nm,0.6s							
NOA	**NORSAR Array B**	**41.79**	**315**	P		P	03 30 45.1	+1.8
NOA				pmax	pmax			
	comp=Z,3.0nm,0.6s							
NOA	**NORSAR Array B**	**41.79**	**315**	P		P	03 30 45.1	+1.8
	comp=Z,2.9nm,0.6s,baz=64,slow=7.8,SNR=9.7							
DRGR		**41.81**	**291**	⇓*i*P		P	03 30 50.7	+7.0
BZS	**Buzias**	**43.06**	**290**	⇓*i*P		P	03 30 55.3	+1.4
EIL	**Elat**	**44.28**	**262**	P		P	03 31 06.0	+2.2
	comp=Z,5.9nm,1.1s,baz=331,slow=4.9,SNR=4.0							
CLL	**Collm**	**45.12**	**301**	*e*P		P	03 31 12.0	+1.7
CLL				*i* sP		sP	03 31 17.1	-1.0
GERES	**GERESS Array B**	**45.99**	**298**	P		P	03 31 21.8	+4.6
GERES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
GERES	**GERESS Array B**	**45.99**	**298**	P		P	03 31 21.8	+4.6
	comp=Z,0.6nm,0.7s,baz=90,slow=14,SNR=4.2							
LPL	**La Plagne**	**51.79**	**298**	*e*P		P	03 32 02.7	+1.0
LPG	**La Plagne**	**51.79**	**298**	*e*P		P	03 32 02.7	+1.0
	comp=Z,26nm,1.0s							
LPG	**La Plagne**	**51.79**	**298**	*e*P		P	03 32 02.7	+1.0
	comp=Z,13nm,1.0s							
LPG	**La Plagne**	**51.79**	**298**	*e*P		P	03 32 02.7	+1.0
LPG				pmax	pmax			
	comp=Z,13nm,1.0s							
MBDF	**Montbardon**	**52.24**	**297**	*e*P		P	03 32 06.0	+0.9
	comp=Z,18nm,0.8s							
MBDF	**Montbardon**	**52.24**	**297**	*e*P		P	03 32 06.0	+0.9
	comp=Z,8.8nm,0.8s							
MBDF	**Montbardon**	**52.24**	**297**	*e*P		P	03 32 06.0	+0.9
MBDF				pmax	pmax			
	comp=Z,9.0nm,0.8s							
KEST	**Kesra**	**56.42**	**287**	P		P	03 32 37.4	+1.8
	comp=Z,2.0nm,1.0s,baz=34,slow=3.6,SNR=3.3							
INK	**Inuvik**	**57.58**	**17**	P		P	03 32 46.0	+2.7
INK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
INK	**Inuvik**	**57.58**	**17**	P		P	03 32 46.0	+2.7
	comp=Z,1.5nm,0.6s,baz=321,slow=6.7,SNR=10							
ESDC	**Sonseca Array**	**61.58**	**299**	P		P	03 33 13.6	+2.3
	comp=Z,1.2nm,0.6s,baz=42,slow=7.3,SNR=4.1							
YKA	**Yellowknife Ar**	**65.94**	**11**	P		P	03 33 41.4	+1.8
YKA	**Yellowknife Ar**	**65.94**	**11**	P		P	03 33 41.4	+1.7
YKA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**65.94**	**11**	P		P	03 33 41.4	+1.8
	comp=Z,0.8nm,0.7s,baz=340,slow=6.7,SNR=8.7							
KMBO	**Kilima Mbogo**	**66.93**	**237**	P		P	03 33 49.0	+2.3
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KMBO	**Kilima Mbogo**	**66.93**	**237**	P		P	03 33 49.0	+2.3
	comp=Z,0.8nm,0.7s,baz=41,slow=18,SNR=3.0							
FITZ	**Fitzroy Crossi**	**76.09**	**143**	P		P	03 34 45.3	+3.5
	comp=Z,1.7nm,1.0s,baz=309,slow=6.5,SNR=4.3							
TORD	**Torodi Ar. Bea**	**77.40**	**275**	P		P	03 34 50.6	+1.2
	comp=Z,0.8nm,0.7s,baz=38,slow=5.1,SNR=5.5							
WRA	**Warramunga Arr**	**81.34**	**136**	P		P	03 35 13.4	+2.8
WRA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
WRA	**Warramunga Arr**	**81.34**	**136**	P		P	03 35 13.4	+2.8
	comp=Z,0.9nm,0.7s,baz=341,slow=5.9,SNR=8.3							
ASAR	**Alice Springs**	**84.44**	**138**	P		P	03 35 29.3	+2.7
ASAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**84.44**	**138**	P		P	03 35 29.3	+2.7
	comp=Z,0.5nm,0.6s,baz=334,slow=5.3,SNR=6.2							
PDAR	**Pinedale Array**	**85.87**	**13**	P		P	03 35 36.6	+2.9
	comp=Z,0.4nm,0.6s,baz=87,slow=4.0,SNR=2.8							
STKA	**Stephens Creek**	**94.90**	**136**	P		P	03 36 20.2	+4.2
	comp=Z,0.8nm,0.6s,baz=341,slow=5.8,SNR=3.5							

NEIC ***20*** *03:57:10.5, 3359N×2481E, h5km, MD3.5(ATH), After ATH.*
ATH ***20*** *03:57:10.7, 3335N×2482E, h46km, MD3.5/4*
THE ***20*** *03:57:17.2, 3394N×2482E, h3km*

CSEM 20 03:57:15.6±0.9, 3383N×2493E, h2km, MD3.5, Error ellipse: s-maj=16.8km s-min=8.6km az=1.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIVA	**Sivas**	**1.19**	**355**	*e*Pg		Pg	03 57 37.2	-1.2
SIVA				*e*Sg		Sg	03 57 53.7	-0.1
XRY	**Khrisi**	**1.22**	**31**	*e*P		Pg	03 57 37.5	-1.4
XRY				*e*S		Sg	03 57 59.5	+4.8
GVD	**Gavdhos**	**1.22**	**325**	*e*Pg		Pg	03 57 37.9	-1.1
GVD	**Gavdhos**	**1.22**	**325**	*e*P		Pg	03 57 37.5	-1.6
GVD				*e*S		Sg	03 57 55.5	+0.5
GVD	**Gavdhos**	**1.22**	**325**	*e*Pg		Pg	03 57 37.9	-1.2
GVD				*e*Sb		Sb	03 57 55.5	-0.2
LAST	**Lasithi**	**1.40**	**19**	*e*Pg		Pg	03 57 42.0	-0.4
NPS	**Neapolis**	**1.53**	**21**	*e*P		Pn	03 57 44.5	+0.5
VAM	**Vamos**	**1.68**	**339**	*e*P		Pn	03 57 46.5	+0.5
VAM				*e*S		Sn	03 58 12.5	+4.3
KARN	**Karanos**	**1.78**	**332**	*e*Pb		Pb	03 57 46.0	-2.9

IDC ***20*** *04:00:34.1±1.0, 2966S×176.15W, h0km, mb3.7/4, mb1 4.1/6, mb1mx3.9/13, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=43.0km s-min=25.0km az=145.0*
ISCJB ***20*** *04:00:39.8±5.7, 300S±02×176.1W±02, h52km±54km, mb3.8/5, Error ellipse: s-maj=45.5km s-min=25.9km az=142.6*

ISC 20 04:00:40.5±5.0, 299S±03×1761W±02, h44km±50km, n11, σ0§37/9, mb3.8/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**10.04**	**212**	Pn		**Pn**	**04 03 02.1**	**+0.1**
	0.4nm,0.3s,baz=49,slow=11,SNR=2.0							
URZ				Sn		**Sn**	**04 04 53.3**	**0.0**
	4.5nm,0.3s,baz=174,slow=23,SNR=14							
RPZ	**Rata Peaks**	**17.16**	**213**	P		**Pn**	**04 04 36.7**	**-0.2**
	0.5nm,0.3s,baz=5.2,slow=11,SNR=2.5							
RPZ				S		**S**	**04 07 34.4**	**-20**
	0.5nm,0.3s,baz=10,slow=19,SNR=4.1							
STKA	**Stephens Creek**	**36.18**	**256**	P		**P**	**04 07 43.6**	**+4.8**
	1.3nm,0.6s,mb4.0,baz=113,slow=8.6,SNR=5.1							
ASAR	**Alice Springs**	**44.77**	**266**	P		**P**	**04 08 50.6**	**+0.7**
	0.4nm,0.6s,mb3.5,baz=97,slow=7.2,SNR=4.5							
WRA	**Warramunga Arr**	**45.72**	**271**	P		**P**	**04 08 56.9**	**-0.6**
	0.4nm,0.4s,mb3.7,baz=110,slow=7.6,SNR=13							
WRA				PcP	PcP		04 10 34.2	-0.7
	0.4nm,0.7s,baz=112,slow=2.6,SNR=5.5							
NVAR	**Mina Array Bea**	**86.78**	**42**	P		**P**	**04 13 20.0**	**+0.1**
	0.9nm,0.7s,mb4.1,baz=209,slow=8.1,SNR=5.4							
TXAR	**Lajitas Array**	**90.76**	**56**	P		**P**	**04 13 38.9**	**0.0**
	0.4nm,0.9s,mb3.8,baz=219,slow=7.0,SNR=3.4							
FINES	**FINESS Array B**	**145.22**	**341**	PKP		PKPdf	04 20 11.7	-0.8
	2.4nm,0.8s,baz=83,slow=6.0,SNR=5.6							
NOA	**NORSAR Array B**	**148.49**	**353**	PKPbc		PKPbc	04 20 20.2	-1.4
	1.6nm,0.9s,baz=15,slow=4.7,SNR=3.4							
AKASG	**Malin Array Be**	**151.87**	**325**	PKPbc		PKPbc	04 20 29.4	-0.7
	0.6nm,0.5s,baz=42,slow=3.1,SNR=4.1							
TORD	**Torodi Ar. Bea**	**163.19**	**173**	PKPab		PKPab	04 21 30.6	+1.7
	0.6nm,0.7s,baz=194,slow=5.6,SNR=3.9							

TIF ***20*** *04:02:42.1, 41.37N×4425E, h12km±2km*
ISCJB ***20*** *04:02:42.2±0.4, 4142N±002×4417E±004, h4km±6km, Error ellipse: s-maj=5.0km s-min=2.8km az=31.2*
ISK ***20*** *04:02:45.6, 4131N×4437E, h32km, MD3.4*
CSEM ***20*** *04:02:46.2±0.2, 4122N×4434E, h30km, MD3.0, Error ellipse: s-maj=6.5km s-min=2.6km az=111.0*
MOS ***20*** *04:02:47.2±0.3, 4152N×4426E, h19km, mb3.9/1, Error ellipse: s-maj=68.7km s-min=9.7km az=89.6*
DDA ***20*** *04:02:53.4, 41.10N×4365E, h13km, Md3.0*

ISC 20 04:02:43.2±0.4, 4142N±002×4420E±004, h16km±6km, n19, σ1§05/35, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TBLG	**Delisi**	**0.51**	**52**	P		**Pg**	**04 02 53.1**	**-0.3**
TBLG				S		**Sg**	**04 02 59.9**	**-0.3**
MTA	**Mtatsminda**	**0.52**	**58**	P		**Pg**	**04 02 53.1**	**-0.5**
MTA				S		**Sg**	**04 02 60.0**	**-0.6**
GOR	**Gori**	**0.57**	**353**	P		**Pg**	**04 02 55.5**	**+1.0**
GOR				S		**Sg**	**04 03 04.1**	**+1.9**
DGRG	**David-gareji**	**0.88**	**87**	P		**Pb**	**04 03 00.2**	**+0.1**
DGRG				S		**Sb**	**04 03 13.5**	**+1.8**
KARS	**Kars**	**1.16**	**227**	PN		**Pg**	**04 03 06.6**	**+1.0**
KARS				SN		**Sg**	**04 03 21.6**	**+0.8**
DIGO	**Kars**	**1.18**	**212**	*i* P		**Pg**	**04 03 06.0**	**0.0**
DIGO				*i* S		**Sg**	**04 03 22.5**	**+1.1**
ZEI	**Tsey**	**1.37**	**351**	*i* Pg		**Pg**	**04 03 10.2**	**+0.6**
ZEI				*i* Sg		**Sg**	**04 03 29.1**	**+1.6**
LACR	**Lac**	**1.41**	**3**	*i* Pg		**Pg**	**04 03 10.3**	**0.0**
LACR				*i* Sg		**Sg**	**04 03 29.3**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.55**	**343**	*e*Pg		**Pg**	**04 03 13.3**	**+0.2**
DIGR				*e*Sg		**Sg**	**04 03 34.3**	**+1.1**
VLKR	**Vladikavkaz**	**1.67**	**12**	*i* Pg		**Pg**	**04 03 14.5**	**-0.7**
VLKR				*i* Sg		**Sg**	**04 03 36.5**	**-0.4**
SNJR	**Sundja**	**1.71**	**15**	*e*Pg		**Pg**	**04 03 15.2**	**-0.9**
SNJR				*e*Sg		**Sg**	**04 03 37.7**	**-0.6**
ARTV	**Artvin**	**1.73**	**263**	*i* P		**Pg**	**04 03 16.3**	**-0.2**
ARTV				*i* S		**Sg**	**04 03 39.2**	**+0.3**
BCA	**Borcka**	**1.94**	**272**	PN		**Pg**	**04 03 19.0**	**-1.4**
BCA				SN		**Sg**	**04 03 43.4**	**-2.2**
KMSR	**Komsomolskaya**	**1.95**	**2**	*e*Pn		**Pn**	**04 03 18.8**	**+3.1**
KMSR				*e*Sg		**Sg**	**04 03 44.2**	**-1.9**
BTKR	**Batakoyurt**	**1.97**	**7**	*e*Pn		**Pb**	**04 03 19.1**	**+0.4**
AGRB	**Hanur-Agry**	**2.06**	**207**	*e*PN		**Pb**	**04 03 18.8**	**-1.4**
TUTA	**Tutak**	**2.27**	**208**	*i* P		**Pg**	**04 03 24.8**	**-2.0**
TUTA				*i* S		**Sg**	**04 03 57.4**	**+1.0**
CLDR	**Caldiran**	**2.28**	**186**	*e*PN		**Pn**	**04 03 20.0**	**-0.2**
PRTR	**Priterechnaya**	**2.33**	**1**	*e*Pn		**Pb**	**04 03 24.0**	**-0.9**
PRTR				*e*Sn		**Sb**	**04 03 53.0**	**-0.5**

MAN 20 04:07:47, 915N×12639E, h45km, mb4.4, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BIPH	**Bislig**	**0.96**	**182**	*e*P		Pn	04 08 04.5	+0.3
BIPH				*i* S		Sn	04 08 16.6	-0.1
SCPH	**Surigao**	**1.09**	**305**	*e*P		Pn	04 08 06.6	+0.7
SCPH				*i* S		Sn	04 08 21.0	+1.3
MSLP	**Maasin**	**1.80**	**303**	*e*P		Pn	04 08 18.7	+3.2
MSLP				*e*S		Sn	04 08 42.8	+5.6
BUKP	**Musuan**	**1.83**	**226**	*e*P		Pn	04 08 18.6	+2.7
BUKP				*e*S		Sn	04 08 39.4	+1.5
TBP	**Tagbilaran**	**2.55**	**282**	*e*P		Pn	04 08 28.2	+2.3
PAGZ	**Pagadian**	**3.25**	**247**	*e*P		Pn	04 08 36.5	+1.1

MEX 20 04:19:14.2±0.9, 1608N×9725W, h14km±14km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PNIG	**Pinotepa**	**0.90**	**290**	*i* P		Pb	04 19 28.5	-3.1
PNIG				*i* S		Sg	04 19 39.1	-4.3
OXX	**Oaxaca**	**1.11**	**27**	*i* P		Pb	04 19 31.5	-3.8
OXX				*i* S		Sb	04 19 44.5	-5.1
HUIG	**Huatulco**	**1.14**	**106**	*e*P		Pb	04 19 33.7	-2.0
HUIG				*i* S		Sb	04 19 46.9	-3.5
UTMO	**Huajuapan**	**1.82**	**343**	*e*P		Pn	04 19 42.3	-2.8
UTMO				*i* S		Sn	04 20 04.3	-3.6
TPIG	**Tehuac#an**	**2.33**	**357**	*i* P		Pn	04 19 48.2	-3.9
TPIG				*i* S		Sn	04 20 16.4	-4.1
CMIG	**Matias Romero**	**2.48**	**66**	*i* P		Pn	04 19 50.8	-3.4
CMIG				*i* S		Sn	04 20 20.6	-3.6

**IDC 20 04:22:36.9±7.3, 740S×12142E, h528km±17km, mb3

MKAR	**Makanchi Array**	**59.60**	**13**	P	P	04 59 40.8	+0.3
	0.4nm,0.8s,baz=189,slow=5.7,SNR=2.7							
AKTO	**Aktyubinsk**	**61.98**	**354**	P	P	04 59 57.0	+0.3
	1.2nm,0.8s,baz=165,slow=7.7,SNR=5.5							
ASAR	**Alice Springs**	**64.96**	**111**	P	P	05 00 17.6	+0.5
	0.4nm,0.7s,baz=281,slow=6.5,SNR=4.8							
WRA	**Warramunga Arr**	**65.54**	**107**	P	P	05 00 20.8	-0.2
	0.7nm,0.8s,baz=274,slow=5.7,SNR=3.6							
SONM	**Songino Array**	**68.77**	**28**	P	P	05 00 40.8	0.0
	0.8nm,0.7s,baz=215,slow=6.3,SNR=8.0							
PDAR	**Pinedale Array**	**148.53**	**354**	PKPbc	PKPbc	05 09 23.4	-0.7
	0.4nm,0.7s,baz=352,slow=3.0,SNR=3.4							

IDC 20 04:50:45.1±2.3, 2966S×17626W, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.8/13, mbtmp3.8/3, ML4.2/1, Error ellipse: s-maj=60.3km s-min=48.2km az=24.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**17.30**	**212**	P	Pn	04 54 47.5	-0.5
	0.8nm,0.3s,baz=45,slow=11,SNR=3.8						
RPZ				S	Sn	04 57 45.6	-16
	0.6nm,0.3s,baz=22,slow=19,SNR=3.3						
ASAR	**Alice Springs**	**44.66**	**265**	P	P	04 58 58.7	-1.1
	0.3nm,0.4s,baz=101,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**45.59**	**270**	P	P	04 59 08.1	+0.9
	0.4nm,0.4s,baz=111,slow=7.6,SNR=6.9						
FINES	**FINESS Array B**	**144.94**	**341**	PKP	PKPdf	05 10 22.7	-0.8
	2.0nm,0.8s,baz=90,slow=2.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**163.46**	**173**	PKPab	PKPab	05 11 41.2	-0.2
	0.7nm,0.7s,baz=191,slow=5.3,SNR=3.5						

IDC 20 05:03:30.0±3.8, 4591N×15520E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=134.1km s-min=34.8km az=180.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**48.61**	**299**	P	P	05 12 15.1	0.0
	0.4nm,0.8s,baz=64,slow=6.6,SNR=3.3						
YKA	**Yellowknife Ar**	**50.73**	**37**	P	P	05 12 31.0	-0.1
	0.4nm,0.7s,baz=296,slow=7.0,SNR=4.6						
TXAR	**Lajitas Array**	**76.63**	**62**	P	P	05 15 22.8	+0.2
	0.8nm,0.6s,baz=306,slow=4.1,SNR=11						

MEX 20 05:04:20.1±0.8, 1606N×9724W, h15km±12km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.92**	**291**	*i* P	Pb	05 04 34.2	-3.5
PNIG				*i* S	Sb	05 04 45.9	-3.7
HUIG	**Huatulco**	**1.12**	**105**	*i* P	Pb	05 04 38.3	-2.9
HUIG				*i* S	Sb	05 04 51.4	-4.3
OXX	**Oaxaca**	**1.13**	**26**	*i* P	Pb	05 04 37.5	-3.8
OXX				*i* S	Sb	05 04 51.0	-4.8
UTMO	**Huajuapan**	**1.84**	**343**	*e*P	Pn	05 04 48.7	-2.4
UTMO				*i* S	Sn	05 05 10.7	-3.5
CMIG	**Matias Romero**	**2.48**	**65**	*e*P	Pn	05 04 56.4	-3.5
CMIG				*i* S	Sn	05 05 25.7	-4.2

IDC 20 05:24:38.0±10.0, 1182N×14042E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=430.2km s-min=28.8km az=77.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.12**	**191**	P	P	05 31 06.6	-0.6
	0.8nm,0.7s,baz=12,slow=9.5,SNR=3.9						
ASAR	**Alice Springs**	**35.84**	**190**	P	P	05 31 40.2	+0.8
	0.3nm,0.4s,baz=20,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**59.80**	**318**	P	P	05 34 45.1	0.0
	0.3nm,0.7s,baz=100,slow=7.9,SNR=3.3						

*ISCJB **20** 05:35:40.8±0.4, 3724N±003×2386E±003, h1km, Error ellipse: s-maj=4.0km s-min=3.3km az=30.5*
*CSEM **20** 05:35:41.9±0.1, 3722N×2384E, h2km, ML3.5, Error ellipse: s-maj=2.0km s-min=1.8km az=171.0*
*ATH **20** 05:35:41.5, 3725N×2384E, h12km±1km, MD3.5/16*
*NEIC **20** 05:35:41.5, 3725N×2384E, h12km, MD3.5(ATH), After ATH.*
*THE **20** 05:35:42.2, 3722N×2383E, h1km, ML3.5*
ISC 20 05:35:41.3±0.6, 3723N±003×2385E±003, h1km±6km, n27, σ1§11/36, 2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DID	**Didima**	**0.56**	**300**	*e*Pg	**Pg**	**05 35 52.3**	**+0.1**
DID				*e*Sg	**Sg**	**05 36 00.8**	**+1.4**
KVR	**Kavouri**	**0.60**	**354**	*e*PB	**Pg**	**05 35 53.5**	**+0.6**
NAIG	**Nisos Aigina**	**0.60**	**331**	*e*PB	**Pg**	**05 35 53.5**	**+0.6**
ATH	**Athens Observa**	**0.75**	**352**	*e*PB	**Pb**	**05 35 54.9**	**-2.3**
ATH				*e*SB	**Sb**	**05 36 05.8**	**-2.1**
PTL	**Penteli**	**0.82**	**1**	*e*PG	**Pg**	**05 35 57.0**	**-0.1**
VLI	**Veliai**	**0.89**	**235**	*e*PG	**Pg**	**05 35 57.9**	**-0.6**
VLI				*e*SB	**Sb**	**05 36 10.9**	**-1.1**
LTK	**Loutraki**	**1.06**	**319**	*e*Pg	**Pg**	**05 36 01.8**	**+0.1**
LTK				*e*Sg	**Sg**	**05 36 17.3**	**+1.9**
KYTH	**Kithira**	**1.15**	**215**	*e*PG	**Pg**	**05 36 03.0**	**-0.4**
VLX	**Vlachokerasia**	**1.18**	**277**	*e*Pg	**Pg**	**05 36 03.5**	**-0.5**
VLX				*e*Sg	**Sg**	**05 36 19.7**	**+0.3**
APE	**Apeiranthos**	**1.35**	**96**	*e*Pg	**Pg**	**05 36 07.0**	**-0.2**
APE				*e*Sg	**Sg**	**05 36 25.7**	**+1.0**
APE	**Apeiranthos**	**1.35**	**96**	*e*Pb	**Pb**	**05 36 07.4**	**0.0**
APE				*e*Sg	**Sg**	**05 36 25.7**	**+1.0**
ITM	**Ithomi**	**1.54**	**269**	ǁ *i*PB	**Pb**	**05 36 10.4**	**-0.2**
LKR	**Lokris**	**1.57**	**335**	*e*PG	**Pg**	**05 36 10.3**	**-1.2**
LKR				*e*SB	**Sb**	**05 36 31.4**	**-0.2**
PYL	**PYLOS**	**1.72**	**259**	*e*Pb	**Pb**	**05 36 12.6**	**-1.1**
KARN	**Karanos**	**1.82**	**178**	*e*Pb	**Pb**	**05 36 14.3**	**-1.2**
VAM	**Vamos**	**1.84**	**171**	*e*PN	**Pn**	**05 36 15.1**	**+1.1**
VAM				*e*SN	**Sn**	**05 36 40.9**	**+3.0**
SELA	**Sela**	**1.87**	**305**	*e*Pb	**Pb**	**05 36 14.2**	**-2.1**
RLS	**Riolos of Patr**	**2.07**	**294**	*e*PN	**Pn**	**05 36 18.2**	**+1.1**
CHOS	**Chios island**	**2.09**	**56**	*e*Pn	**Pn**	**05 36 17.9**	**+0.4**
NEO	**Neokhori**	**2.13**	**347**	ǁ *i*PN	**Pn**	**05 36 18.3**	**+0.2**
AGG	**Agios Georgios**	**2.16**	**327**	*e*Pn	**Pn**	**05 36 18.8**	**+0.4**
XOR	**Xorichti**	**2.20**	**347**	*e*Pn	**Pn**	**05 36 19.1**	**+0.1**
EVR	**Evrytania**	**2.33**	**317**	*e*PN	**Pn**	**05 36 22.3**	**+1.5**
SMG	**Samos**	**2.42**	**78**	*e*PB	**Pb**	**05 36 22.7**	**-3.0**
THL	**Klokotos Trika**	**2.74**	**329**	*e*PB	**Pb**	**05 36 26.8**	**-4.4**
VLS	**Valsamata**	**2.76**	**291**	*e*PN	**Pn**	**05 36 28.0**	**+1.4**
ZKR	**Zakros**	**2.85**	**137**	P	**Pn**	**05 36 34.0**	**+6.1**

IDC 20 05:42:39.8±1.4, 1739N×14777E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, Error ellipse: s-maj=165.5km s-min=25.6km az=116.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.37**	**200**	P	P	05 50 11.1	-0.1
	0.5nm,0.5s,baz=28,slow=7.9,SNR=14						
FITZ	**Fitzroy Crossi**	**41.44**	**213**	P	P	05 50 27.4	-1.0
	0.8nm,0.9s,baz=18,slow=15,SNR=3.3						
ASAR	**Alice Springs**	**42.99**	**199**	P	P	05 50 41.7	+0.8
	0.6nm,0.7s,baz=12,slow=8.8,SNR=6.4						
YKA	**Yellowknife Ar**	**78.22**	**28**	P	P	05 54 41.2	+0.1
	0.1nm,0.6s,baz=287,slow=5.1,SNR=2.8						

*NNC **20** 05:47:09.8±15.0, 3918N×7360E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=122.7km s-min=71.4km az=170.0*
ISC 20 05:47:08.1±2.7, 388N±02×740E±02, h164km±41km, n8, σ0§63/11, 4C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.38**	**357**	P	**Pn**	**05 48 00.6**	**-0.1**
	SNR=11						
KZA	**Kyzart**	**3.47**	**16**	P	**Pn**	**05 48 00.9**	**-0.9**
	SNR=29						
UCH	**Uchtor**	**3.50**	**7**	P	**Pn**	**05 48 03.1**	**+0.9**
	SNR=12						
ULHL	**Ulahol**	**3.90**	**26**	P	**Pn**	**05 48 06.9**	**-0.5**
	SNR=7.9						
EKS2	**Erkin-Say**	**3.91**	**358**	P	**Pn**	**05 48 08.8**	**+1.4**
	SNR=9.9						
TKM2	**Tokmak 2**	**4.35**	**16**	ǁ Pn	**Pn**	**05 48 12.8**	**-0.3**
	1.7nm,0.5s						
TKM2				⇑Sn	**Sn**	**05 49 04.1**	**+0.1**
	27nm,0.7s						
KK31	**Karatay Array**	**5.07**	**330**	ǁ Pn	**Pn**	**05 48 22.3**	**-0.2**
	1.1nm,0.2s,baz=143,slow=11,SNR=114						
KK31				⇑Sn	**Sn**	**05 49 20.5**	**-0.3**
	3.0nm,0.3s,baz=129,slow=20,SNR=4.2						
AB31	**Akbulak array**	**14.53**	**321**	⇑ Pn	**Pn**	**05 50 25.8**	**0.0**
	0.1nm,0.3s,baz=128,slow=14,SNR=5.5						
AB31				⇑Sn	**Sn**	**05 53 00.8**	**-6.4**
	0.6nm,0.8s						

*ISCJB **20** 05:50:03.4±0.6, 4040N±002×3500E±006, h4km±7km, Error ellipse: s-maj=7.3km s-min=4.1km az=172.4*
*CSEM **20** 05:50:03.0±0.2, 4039N×3496E, h5km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.4km az=90.0*
*ISK **20** 05:50:03.3, 4040N×3498E, h8km, MD2.7*
*DDA **20** 05:50:04.9, 4039N×3490E, h3km, Md2.8*
ISC 20 05:50:04.0±0.6, 4041N±003×3498E±005, h3km±8km, n12, σ0§67/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTKT	**Corum**	**0.26**	**326**	*i* P	**Pg**	**05 50 09.2**	**+0.2**
CTKT				*i* S	**Sg**	**05 50 13.9**	**+1.4**
CTKT	**Corum**	**0.26**	**326**	*i* P	**Pg**	**05 50 09.2**	**+0.1**
CORM	**Corum**	**0.35**	**230**	*i* PG	**Pg**	**05 50 10.5**	**-0.3**
CORM				*i* SG	**Sg**	**05 50 16.3**	**+1.0**
YOZ	**Yozgat**	**0.81**	**161**	PG	**Pg**	**05 50 19.2**	**-0.3**
YOZ				SG	**Sg**	**05 50 30.6**	**+0.6**
CDAG	**Cicekdag**	**0.91**	**211**	*i* P	**Pg**	**05 50 20.9**	**-0.6**
CDAG				*i* S	**Sg**	**05 50 33.7**	**+0.4**
TOS	**Tosya**	**0.96**	**311**	PG	**Pg**	**05 50 21.9**	**-0.6**
BOYT	**Boyabat**	**1.01**	**357**	*i* P	**Pg**	**05 50 36.6**	**-0.1**
KVT	**Kavak**	**1.05**	**50**	*e*PG	**Pg**	**05 50 24.4**	**+0.2**
ELDT	**Eldivan**	**1.19**	**275**	*i* P	**Pg**	**05 50 25.1**	**-1.7**
ELDT				*i* S	**Sg**	**05 50 41.8**	**-0.4**
DIKM	**Dikmen**	**1.26**	**9**	*e*PN	**Pn**	**05 50 28.0**	**-0.5**
AVNT	**Avonos**	**1.63**	**183**	*i* P	**Pb**	**05 50 34.8**	**+0.1**
AVNT				*i* S	**Sg**	**05 50 56.2**	**-0.1**
BALT	**Daday**	**1.65**	**314**	*i* P	**Pn**	**05 50 33.9**	**0.0**
BALT				*i* S	**Sn**	**05 50 56.3**	**+0.7**

*NEIC **20** 06:14:20.5, 16.17N×9836W, h5km, MD3.7(MEX), After MEX.*
MEX 20 06:14:20.1±1.0, 1616N×9837W, h5km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.33**	**45**	*e*P	Pg	06 14 25.5	-1.0
PNIG				*i* S	Sg	06 14 30.2	-0.6
ACX	**Acapulco**	**1.64**	**296**	*i* P	Pn	06 14 45.6	-4.1
ACX				*i* S	Sn	06 15 06.1	-5.1
UTMO	**Huajuapan**	**1.75**	**18**	*e*P	Pn	06 14 48.9	-2.2
UTMO				*i* S	Sn	06 15 10.2	-3.7
VHO	**Vista Hermosa**	**1.81**	**60**	*i* P	Pn	06 14 49.7	-2.3
VHO				*i* S	Sn	06 15 10.1	-5.3
CAIG	**El Cayaco**	**2.02**	**296**	*i* P	Pn	06 14 52.9	-2.1
CAIG				*i* S	Sn	06 15 14.7	-5.9
HUIG	**Huatulco**	**2.21**	**100**	*i* P	Pn	06 15 00.6	+3.2
HUIG				*i* S	Sn	06 15 29.3	+4.2
HUIG	**Huatulco**	**2.21**	**100**	*i* P	Pn	06 14 55.0	-2.5
HUIG				*i* S	Sn	06 15 19.9	-5.3
TPIG	**Tehuac#an**	**2.45**	**23**	*i* P	Pn	06 14 58.4	-2.4
TPIG				*i* S	Sn	06 15 28.3	-2.7
PPM	**Popocatepetl**	**2.91**	**355**	*i* P	Pn	06 15 06.0	-1.0
PPM				*i* S	Sn	06 15 42.8	+0.5
CMIG	**Matias Romero**	**3.47**	**74**	*i* P	Pn	06 15 12.7	-2.1
CMIG				*i* S	Sn	06 15 54.5	-1.8

*IDC **20** 06:44:52.4±8.8, 1858S×17333W, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.0/18, mbtmp4.3/7, ML4.0/1, Error ellipse: s-maj=161.8km s-min=39.1km az=59.0*
NEIC 20 06:44:55.3±5.3, 1848S×17305W, h35km, Error ellipse: s-maj=97.8km s-min=27.8km az=58.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**19.56**	**256**	P	Pn	06 49 21.0	-0.7
	0.4nm,0.3s,baz=109,slow=20,SNR=4.1						
URZ	**Urewera**	**21.50**	**202**	P	P	06 49 40.0	-1.0
	5.4nm,0.3s,baz=18,slow=7.3,SNR=9.4						
RPZ	**Rata Peaks**	**28.50**	**205**	P	P	06 50 49.0	+1.8
	3.7nm,0.5s,baz=9.0,slow=19,SNR=2.7						
CTA	**Charters Tower**	**38.38**	**261**	P	P	06 52 14.0	+0.6
	5.1nm,0.7s,baz=96,slow=9.3,SNR=5.2						
STKA	**Stephens Creek**	**42.86**	**243**	P	P	06 52 48.8	-1.5
	0.6nm,0.4s,baz=93,slow=11,SNR=4.1						
WB2	**Warramunga Arr**	**49.52**	**259**	*e*P	P	06 53 43.1	+0.3
WRA	**Warramunga Arr**	**49.53**	**259**	P	P	06 53 42.8	-0.2
	1.2nm,0.5s,baz=96,slow=7.6,SNR=34						
ASAR	**Alice Springs**	**49.54**	**254**	P	P	06 53 42.7	-0.2
	1.8nm,0.6s,baz=95,slow=8.4,SNR=33						

JMA 20 07:32:50.5±0.2, 3949N×14447E, h57km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.05**	**273**	P	Pn	07 33 23.6	+1.0
MIYJ				*e*S	Sn	07 33 47.9	+0.9
JTH	**Tanohata**	**2.06**	**283**	P	Pn	07 33 23.5	+0.8
JTH				*e*S	Sn	07 33 48.6	+1.4
OFUJ	**Ofunato**	**2.21**	**260**	P	Pn	07 33 25.6	+0.8
OFUJ				*e*S	Sn	07 33 51.2	+0.3
JANG	**Nango**	**2.44**	**292**	P	Pn	07 33 28.4	+0.6
JOM	**Ohasama**	**2.46**	**271**	P	Pn	07 33 29.6	+1.5
JOM				*e*S	Sn	07 33 58.6	+1.6
JMK	**Ichinoseki**	**2.58**	**259**	P	Pn	07 33 30.8	+1.0
JMK				*e*S	Sn	07 34 00.7	+0.7
JOT	**Ohata**	**3.22**	**307**	P	Pn	07 33 40.0	+1.4
JOT				*e*S	Sn	07 34 17.4	+1.7
JCH	**Churui**	**3.23**	**345**	P	Pn	07 33 39.2	+0.5
JCH				*e*S	Sn	07 34 17.2	+1.3
NEM2	**Nemuro 2**	**3.99**	**13**	P	Pn	07 33 47.2	-1.9
NEM2				*e*S	Sn	07 34 30.9	-3.6
JTKR	**Abashiri--Toko**	**4.50**	**355**	P	Pn	07 33 56.5	+0.5
JTKR				*e*S	Sn	07 34 46.0	-1.0
JHR	**Hokuryu**	**4.72**	**335**	P	Pn	07 34 02.5	+3.4
JHR				*e*S	Sn	07 34 56.8	+4.3
JRY	**Ryogami san**	**5.61**	**234**	P	Pn	07 34 11.1	-0.2
JRY				*e*S	Sn	07 35 11.8	-2.6

*NNC **20** 07:33:49.0±4.1, 3724N×7015E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=40.9km s-min=31.9km az=94.0*
ISC 20 07:33:46.5±2.6, 366N±02×704E±02, h118km±58km, n9, σ0§61/11, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.09**	**24**	P	**Pn**	**07 35 14.3**	**+0.3**
	SNR=59						
UCH	**Uchtor**	**6.46**	**28**	P	**Pn**	**07 35 19.0**	**-0.1**
	SNR=14						
KK31	**Karatay Array**	**6.49**	**1**	Pn	**Pn**	**07 35 20.5**	**+1.0**
	2.7nm,0.3s,baz=187,slow=15,SNR=40						
KK31				ǁ Sn	**Sn**	**07 36 31.4**	**-0.6**
	1.6nm,0.3s,baz=186,slow=20,SNR=8.7						
EKS2	**Erkin-Say**	**6.59**	**22**	P	**Pn**	**07 35 21.2**	**+0.3**
	SNR=6.2						
AAK	**Ala-Archa**	**6.81**	**27**	P	**Pn**	**07 35 23.8**	**0.0**
	SNR=6.9						
KBK	**Karagaybulak**	**7.00**	**29**	P	**Pn**	**07 35 26.1**	**-0.2**
	SNR=5.6						
TKM2	**Tokmak 2**	**7.48**	**31**	⇑ Pn	**Pn**	**07 35 31.3**	**-1.6**
	4.6nm,0.4s						
TKM2				ǁ Sn	**Sn**	**07 36 56.7**	**+0.6**
	1.9nm,0.5s						
TKM2	**Tokmak 2**	**7.48**	**31**	P	**Pn**	**07 35 31.9**	**-1.0**
	SNR=7.3						
AB31	**Akbulak array**	**14.75**	**332**	⇑ Pn	**Pn**	**07 37 09.1**	**0.0**
	0.6nm,0.6s,baz=143,slow=12,SNR=4.1						

*MAN **20** 07:36:40, 983N×12665E, h1km, mb4.2, ML3.1, MS2.8*
*ISCJB **20** 07:36:46.7±1.1, 966N±006×12618E±007, h0km, mb3.5/5, Error ellipse: s-maj=10.5km s-min=8.3km az=14.1*
*IDC **20** 07:36:46.5±1.4, 904N×12574E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.6/16, mbtmp3.5/5, Error ellipse: s-maj=170.1km s-min=20.6km az=70.0*
ISC 20 07:36:46.3±1.1, 965N±006×12629E±006, h0km, n10, σ1§73/13, mb3.5/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.80**	**280**	*e*P	**Pg**	**07 37 00.6**	**-0.9**
SCPH				*e*S	**Sg**	**07 37 10.4**	**-1.5**
MSLP	**Maasin**	**1.49**	**289**	*e*P	**Pn**	**07 37 12.5**	**-1.8**
MSLP				*e*S	**Sg**	**07 37 36.2**	**+2.1**
PLP	**Palo**	**1.98**	**320**	*e*P	**Pn**	**07 37 17.4**	**-3.8**
BUKP	**Musuan**	**2.13**	**215**	*e*P	**Pn**	**07 37 22.6**	**-0.5**
BUKP				*e*S	**Sg**	**07 37 56.4**	**+1.6**
GUIM	**Jordan**	**3.77**	**285**	*e*P	**Pn**	**07 37 45.2**	**-0.5**
WRA	**Warramunga Arr**	**30.45**	**165**	P	**P**	**07 42 58.3**	**-2.5**
	0.2nm,0.6s,mb3.1,baz=341,slow=8.0,SNR=3.6						
ASAR	**Alice Springs**	**33.93**	**167**	P	**P**	**07 43 26.6**	**-4.8**
	0.1nm,0.4s,mb3.1,baz=347,slow=7.5,SNR=2.7						
SONM	**Songino Array**	**41.61**	**340**	P	**P**	**07 44 39.1**	**+3.2**
	0.2nm,0.5s,mb3.1,baz=138,slow=7.2,SNR=3.3						
MKAR	**Makanchi Array**	**52.53**	**323**	P	**P**	**07 46 03.4**	**+2.0**
	0.7nm,0.6s,mb3.8,baz=121,slow=8.1,SNR=5.7						
ARCES	**ARCESS Array B**	**84.78**	**340**	P	**P**	**07 49 24.2**	**+2.1**
	3.5nm,0.9s,mb4.6,baz=65,slow=6.8,SNR=3.7						

IDC 20 07:37:46.6±4.3, 1781S×17363E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/13, mbtmp4.1/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/18, Error ellipse: s-maj=149.1km s-min=50.0km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**32.13**	**238**	P	P	07 44 16.2	+0.3
	1.4nm,0.7s,baz=67,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**37.18**	**260**	P	P	07 44 59.0	-0.8
	0.2nm,0.4s,baz=95,slow=7.7,SNR=8.5						
ASAR	**Alice Springs**	**37.52**	**254**	P	P	07 45 03.0	+0.4
	5.6nm,0.3s,baz=84,slow=8.6,SNR=146						
FITZ	**Fitzroy Crossi**	**45.55**	**262**	LR	LR	08 02 19.9	
	comp=Z,69nm,19.5s,baz=304,slow=32						
GERES	**GERESS Array B**	**145.01**	**337**	PKPbc	PKPbc	07 57 24.7	-0.5
	0.2nm,0.2s,baz=13,slow=1.8,SNR=4.1						

*IDC **20** 07:38:19.9±0.8, 4745N×15576E, h0km, mb3.6/11, mb1 3.9/11, mb1mx3.8/17, mbtmp3.6/11, MS2.9/1, Ms1 2.9/1, ms1mx2.5/22, Error ellipse: s-maj=25.3km s-min=17.8km az=143.0*
*MOS **20** 07:38:21.4±1.5, 4737N×15564E, h23km, mb4.0/4, Error ellipse: s-maj=38.9km s-min=17.9km az=85.7*
*ISCJB **20** 07:38:25.9±2.9, 475N±02×1557E±02, h56km±24km, mb3.5/11, Error ellipse: s-maj=29.8km s-min=17.1km az=146.2*
ISC 20 07:38:26.9±2.7, 475N±02×1557E±02, h50km±24km, n17, σ0§84/16, mb3.5/11, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.22**	**5**	*e*PN	**Pn**	**07 39 15.2**	**+0.3**
ASAJ	**Asahikawa**	**9.75**	**255**	LR	LR	07 43 59.3	
	comp=Z,70nm,19.4s,baz=319,slow=35						
KSRS	**Korea Array**	**22.70**	**254**	P	**P**	**07 43 24.3**	**+0.2**
	1.3nm,0.7s,mb3.5,baz=61,slow=10.0,SNR=4.5						
SONM	**Songino Array**	**32.76**	**289**	P	**P**	**07 44 53.4**	**-1.3**
	0.1nm,0.5s,mb3.0,baz=76,slow=6.7,SNR=2.9						
INK	**Inuvik**	**40.08**	**33**	P	**P**	**07 45 55.6**	**-1.3**
	0.3nm,0.6s,mb3.2,baz=283,slow=7.3,SNR=4.3						
MKAR	**Makanchi Array**	**48.17**	**298**	P	**P**	**07 47 01.7**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**48.17**	**298**	P	**P**	**07 47 01.7**	**-0.2**
	comp=Z,0.9nm,0.6s,mb4.0,baz=57,slow=9.0,SNR=7.2						
YKA	**Yellowknife Ar**	**49.27**	**38**	P	**P**	**07 47 09.6**	**-0.5**
	comp=Z,0.2nm,0.5s,mb3.4,baz=296,slow=7.1,SNR=3.4						
PDAR	**Pinedale Array**	**62.88**	**56**	P	**P**	**07 48 48.0**	**+0.5**
	comp=Z,0.5nm,0.9s,mb3.6,baz=286,slow=3.4,SNR=3.2						
FINES	**FINESS Array B**	**64.12**	**336**	P	**P**	**07 48 55.7**	**+0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**64.12**	**336**	P	**P**	**07 48 55.6**	**+0.3**
	comp=Z,1.3nm,0.5s,mb4.2,baz=34,slow=6.6,SNR=10.0						
WRA	**Warramunga Arr**	**69.81**	**201**	P	**P**	**07 49 31.3**	**-0.6**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**69.81**	**201**	P	**P**	**07 49 31.3**	**-0.6**
	comp=Z,0.5nm,0.8s,mb3.5,baz=22,slow=6.5,SNR=3.8						
ASAR	**Alice Springs**	**73.49**	**201**	P	**P**	**07 49 54.7**	**+0.8**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**73.49**	**201**	P	**P**	**07 49 54.6**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.6,baz=16,slow=7.0,SNR=6.5						
TXAR	**Lajitas Array**	**75.59**	**62**	P	**P**	**07 50 06.3**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.4,baz=289,slow=4.6,SNR=4.9						
GERES	**GERESS Array B**	**78.55**	**335**	P	**P**	**07 50 24.6**	**+2.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz

SKR pmax pmax
comp=Z,150nm,0.5s
SKR pmax pmax
comp=N,150nm,0.4s
SKR smax
comp=E,950nm,0.6s
SKR smax
comp=N,750nm,0.5s
SKR smax
comp=N,2µm,3.0s
SKR smax
comp=E,2µm,3.0s
SKR Severo-Kuril's 2.72 25 *e*P **Pn 08 38 56.3 -1.1**
SKR AMB AMB 08 39 02.5
comp=E,150nm,0.4s
SKR AMB AMB 08 39 02.5
comp=E,80nm,0.5s
SKR AMB AMB 08 39 02.5
comp=E,150nm,0.5s
SKR *e*S **Sn 08 39 27.5 -1.6**
SKR A 08 39 42.5
comp=E,2µm,3.0s
SKR A 08 39 42.5
comp=E,2µm,3.0s
SKR A 08 39 42.5
comp=E,750nm,0.5s
SKR A 08 39 42.5
comp=E,950nm,0.6s
SKR A 08 39 42.5
comp=E,380nm,0.6s
KUR Kuril'sk 5.36 238⇑ *i*PN **Pn 08 39 34.4 +0.8**
KUR *e*S **Sn 08 40 36.0 +2.1**
KUR pmax pmax
comp=N,180nm,0.8s
KUR pmax pmax
comp=E,110nm,0.8s
KUR pmax pmax
comp=Z,220nm,0.8s
KUR smax
comp=N,430nm,0.8s
KUR smax
comp=E,320nm,0.8s
KUR Kuril'sk 5.36 238⇑ *i*P **Pn 08 39 34.4 +0.8**
KUR AMB AMB 08 39 41.5
comp=E,180nm,0.8s
KUR AMB AMB 08 39 41.5
comp=E,110nm,0.8s
KUR AMB AMB 08 39 41.5
comp=E,220nm,0.8s
KUR *e*S **Sn 08 40 36.0 +2.1**
KUR A 08 40 59.0
comp=E,430nm,0.8s
KUR A 08 40 59.0
comp=E,320nm,0.8s
PET Petropavlovsk 5.53 28 *e*Pn **Pn 08 39 37.1 +1.2**
PET *e*Sn **Sn 08 40 37.8 -0.3**
PET Petropavlovsk 5.53 28⇑ *i*PN **Pn 08 39 37.4 +1.5**
PET pmax pmax
comp=Z,72nm,0.5s
PET MLR MLR
comp=Z,200nm,18.0s
NEM2 Nemuro 2 7.72 234 P **Pn 08 40 03.3 -2.6**
NEM2 *e*S **Sn 08 41 26.8 -5.1**
YSS Yuzh-Sakhalins 7.94 265 *e*Pn **Pn 08 40 08.6 -0.1**
YSS *e*Sn **Sn 08 41 36.4 -0.6**
YSS Yuzh-Sakhalins 7.94 265⇓ *e*P **Pn 08 40 11.8 +3.0**
YSS AMB AMB 08 40 12.2
comp=Z,70nm,0.7s
YSS *e*S **Sn 08 41 36.5 -0.5**
YSS A 08 41 39.0
comp=Z,50nm,0.8s
YSS AMS AMS 08 42 58.0
comp=Z,300nm,14.0s
TYV Tymovskoe 8.04 294 *e*P **Pn 08 40 11.5 +1.2**
TYV AMB AMB 08 40 16.0
comp=Z,44nm,1.0s
TYV AMB AMB 08 40 16.0
comp=Z,55nm,1.0s
TYV AMB AMB 08 40 16.0
comp=Z,22nm,0.8s
JNK Nakash 8.15 239 P **Pn 08 40 11.2 -0.6**
UGL Uglegorsk 8.17 281 *e*P **Pn 08 40 15.0 +3.0**
UGL AMB AMB 08 40 15.5
comp=Z,74nm,0.7s
UGL *e*rx rx 08 40 23.2
UGL AMS AMS 08 43 37.0
comp=Z,500nm,17.0s
UGL AMS AMS 08 43 37.0
comp=Z,200nm,16.0s
UGL AMS AMS 08 43 37.0
comp=Z,300nm,16.0s
JTKR Abashiri--Toko 8.40 243 P **Pn 08 40 17.9 +2.7**
JAK Akkeshi 8.54 236 P **Pn 08 40 14.9 -2.2**
JAK *e*S **Sn 08 41 46.4 -5.5**
JMP Maruseppu 8.71 245 P **Pn 08 40 20.9 +1.5**
JAR Ashorobuto 8.88 240 P **Pn 08 40 21.6 -0.1**
JWK2 Keihoku 9.02 256 P **Pn 08 40 27.8 +4.2**
JOB Onbets 9.09 238 P **Pn 08 40 23.5 -1.0**
ASAJ Asahikawa 9.12 248 P **Pn 08 40 27.6 +2.6**
ASAJ Asahikawa 9.12 248 PN **Pn 08 40 27.3 +2.3**
ASAJ pmax pmax
comp=Z,4.0nm,0.3s
ASAJ Asahikawa 9.12 248 P **Pn 08 40 27.2 +2.2**
comp=Z,4.2nm,0.3s,baz=74,slow=12,SNR=20
JKK2 Kamakawa 2 9.16 246 P **Pn 08 40 27.2 +1.7**
JCH Churui 9.54 238 P **Pn 08 40 28.8 -1.9**
JCH *e*S **Sn 08 42 11.0 -5.3**
JFR Furan 9.65 243 P **Pn 08 40 32.3 +0.1**
NKL Nikolayevsk 9.97 305 *i* P **Pn 08 40 33.8 -2.7**
NKL AMB AMB 08 40 34.7
comp=Z,25nm,1.0s
NKL AMB AMB 08 40 34.7
comp=Z,20nm,1.0s
NKL AMB AMB 08 40 34.7
comp=Z,30nm,1.0s
NKL *e*L 08 43 55.0
NKL AMS AMS 08 45 13.0
comp=Z,400nm,14.0s
JNB Noboribetsu 10.98 243 P **Pn 08 40 49.4 -1.0**
JKB Kayabe 11.34 241 P **Pn 08 40 52.8 -2.5**
JSH Shimam 11.48 246 P **Pn 08 40 58.2 +0.9**
MA2 Magadan 11.56 351 *e*Pn **Pn 08 40 58.4 +0.1**
MA2 Magadan 11.56 351 *e*PN **Pn 08 40 58.9 +0.6**
MA2 pmax pmax
comp=N,20nm,0.8s
MA2 pmax pmax
comp=Z,30nm,0.8s
JYM2 Yakumo 2 11.59 243 P **Pn 08 40 57.7 -1.0**
JOSM Okushiri--Mats 12.15 245 P **Pn 08 41 05.8 -0.5**
JRG Rokugo 13.24 233 P **Pn 08 41 17.3 -4.0**
SMY Shemya 13.36 63 *e*Pn **Pn 08 41 21.0 -1.7**
SEY Seymchan 14.78 356⇑ *e*P **Pn 08 41 43.3 +1.8**
KLR Kul'dur 14.94 282 *e*P **Pn 08 41 44.3 +0.7**
KLR MLR MLR
comp=Z,1µm,13.0s
MAJO Matsushiro 16.64 231 *e*Pn **Pn 08 42 06.0 +0.6**
comp=Z,13nm,0.9s
MAJO Matsushiro 16.64 231 *e*P **Pn 08 42 06.0 +0.6**
MAJO pmax pmax
comp=Z,13nm,0.9s
MAT Matsushiro 16.64 231 P **Pn 08 42 06.7 +1.3**
MJAR Matsushiro Arr 16.64 231 P **Pn 08 42 03.2 -2.2**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR MLR MLR
comp=Z,101nm,18.9s
MJAR Matsushiro Arr 16.64 231 P **Pn 08 42 03.1 -2.2**
comp=Z,0.5nm,0.3s,baz=28,slow=11,SNR=16
MJAR LR LR 08 49 28.3
comp=Z,100nm,18.9s,baz=75,slow=40
JRY Ryogami san 16.69 229 P **Pn 08 42 07.6 +1.6**
MDJ Mudanjiang 17.41 267 P **Pn 08 42 14.9 0.0**
MDJ XP sP 08 42 40.4 +4.8
MDJ S **S 08 45 26.8 -6.5**
MDJ PCS PcS 08 50 29.3 +0.2
MDJ AMB AMB
comp=Z,6.0nm,1.1s
MDJ AMB AMB
comp=Z,89nm,6.8s
MDJ Mudanjiang 17.41 267 *e*Pn **Pn 08 42 15.4 +0.5**
comp=Z,4.4nm,0.5s
ZEA Zeya 17.86 298 *e*P **Pn 08 42 21.5 +1.2**
YAK Yakutsk 19.57 324 *e*P **Pn 08 42 38.7 -2.0**
comp=Z,26nm,0.6s
YAK Yakutsk 19.57 324 *e*P **Pn 08 42 40.4 -0.3**

YAK *e*S **S 08 46 19.1 +2.7**
YAK pmax pmax
comp=Z,23nm,0.8s
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,16nm,1.2s
YAK smax
comp=N,69nm,4.7s
YAK smax
comp=E,59nm,2.4s
CN2 Changchun 20.49 268 *e*P **P 08 42 46.5 -2.5**
CN2 AMB AMB
comp=Z,20nm,0.8s
BILL Bilibino 20.77 13 *e*P **P 08 42 52.1 +0.3**
comp=Z,6.2nm,0.8s
BILL Bilibino 20.77 13⇑ *e*P **P 08 42 53.2 +1.4**
BILL pmax pmax
comp=Z,4.0nm,1.2s
KSRS Korea Array 22.05 251 P **P 08 43 05.7 -0.1**
comp=Z,14nm,0.8s,mb4.5,baz=46,slow=10,SNR=33
KSRS LR LR 08 52 45.3
comp=Z,27nm,18.9s,MS2.7,baz=341,slow=40
JNU Nakatsue 23.20 238 LR LR 08 51 55.8
comp=Z,55nm,19.2s,MS3.0,baz=197,slow=36
BOD Bodaibo 25.73 307 *e*P pP 08 43 57.6 +2.5
BOD pmax pmax
comp=Z,4.0nm,1.3s,mb3.8
TIXI Tiksi 26.30 342⇑ *e*P **P 08 43 47.2 +1.4**
TIXI pmax pmax
comp=Z,1.0nm,0.5s,mb3.6
TNA Tin City 26.35 35 *e*P **P 08 43 46.4 +0.2**
comp=Z,5.2nm,0.8s,mb4.1
TNA *e*pP pP 08 44 00.4 -0.3
HHC Hu-ho-hao-te 31.04 272 *e*P **P 08 44 27.9 -0.3**
HHC AP pP 08 44 44.9 +2.0
HHC XP sP 08 44 54.8 +5.0
HHC PP PP 08 45 31.6 -7.4
HHC PCP PcP 08 47 22.4 -0.2
HHC *e*S **S 08 49 24.3 -4.6**
HHC XS sS 08 49 54.4 +0.6
HHC PCS PcS 08 51 05.9 -0.7
HHC AMB AMB
comp=Z,9.0nm,1.2s,mb4.5
HHC AMB AMB
comp=Z,88nm,1.8s,mb5.3
HHC LR LR
comp=N,114nm,12.9s,MS4.1
HHC LR LR
comp=E,245nm,12.9s,MS4.1
HHC LR LR
comp=Z,155nm,16.9s,MS3.7
SONM Songino Array 31.65 288 P **P 08 44 30.9 -2.6**
SONM 08 47 23.1
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM MLR MLR
comp=Z,109nm,18.7s
SONM Songino Array 31.65 288 P **P 08 44 30.9 -2.6**
comp=Z,0.5nm,0.8s,mb3.4,baz=149,slow=3.1,SNR=3.6
SONM PcP PcP 08 47 23.1 -1.0
comp=Z,0.8nm,0.7s,baz=95,slow=2.1,SNR=7.2
SONM LR LR 08 56 33.3
comp=Z,109nm,18.7s,MS3.6,baz=10,slow=35
IMA2 Indian Mountai 32.13 37 *e*P **P 08 44 37.9 +0.4**
IMA2 *e*pP pP 08 44 54.5 +2.4
IMA2 *e*sP sP 08 45 06.5 +7.4
TLY Talaya 32.27 296 *e*P pP 08 44 54.5 +1.0
TLY *e* **S 08 49 56.3 +8.5**
TLY pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
TLY MLR MLR
comp=Z,98nm,17.0s,MS3.6
MCK McKinley 33.99 42 *e*P **P 08 44 54.9 +1.1**
comp=Z,4.5nm,1.2s,mb4.3
MCK McKinley 33.99 42 *e*P **P 08 44 54.9 +1.2**
MCK pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
SML Sawmill 34.34 45 *e*P **P 08 44 57.5 +0.8**
COLA College 34.47 40 *e*P **P 08 44 58.7 +0.9**
comp=Z,4.8nm,0.8s,mb4.5
COLA *e*pP pP 08 45 17.9 +5.3
COLA College 34.47 40 *e*P **P 08 44 58.7 +0.9**
COLA *e**PP pP 08 45 17.9 +5.3
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
YHNB Yeheng 35.01 240 *e*P **P 08 45 05.3 +2.4**
WHN Wuhan 35.12 255 ⇓P **P 08 45 02.9 -0.9**
EGAK Eagle 37.33 40 *e*P **P 08 45 22.7 +0.4**
LZH Lanzhou 38.69 271 *e*P **P 08 45 35.0 +1.0**
LZH AP pP 08 45 54.0 +5.0
LZH XP sP 08 46 02.0 +6.1
LZH AMB AMB
comp=Z,15nm,1.1s,mb4.6
LZH AMB AMB
comp=Z,65nm,4.1s
INK Inuvik 39.96 33 P **P 08 45 44.6 +0.3**
INK pmax pmax
comp=Z,2.0nm,0.4s
INK Inuvik 39.96 33 P **P 08 45 44.5 +0.3**
comp=Z,1.8nm,0.4s,mb4.1,baz=290,slow=6.2,SNR=6.1
CD2 Chengdu 41.84 264 *e*P **P 08 46 02.4 +2.2**
CD2 XP sP 08 46 29.8 +7.7
CD2 PP PP 08 47 43.4 +5.6
CD2 S **S 08 52 14.1 +0.5**
CD2 SS SS 08 55 16.9 -4.6
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,80nm,12.8s
CD2 LR LR
comp=Z,120nm,14.2s,MS3.9
GYA Guiyang 42.85 257 P **P 08 46 09.6 +1.2**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
WMQ Urumqi 45.18 290 ⇑P **P 08 46 26.6 -0.3**
WMQ AP pP 08 46 45.8 +3.7
WMQ XP sP 08 46 54.8 +5.8
WMQ PCP PcP 08 48 08.1 +1.9
WMQ PP PP 08 48 13.8 +0.6
WMQ S **S 08 52 58.8 -3.3**
WMQ AMB AMB
comp=Z,2.0nm,0.4s,mb4.3
WMQ AMB AMB
comp=Z,292nm,6.5s
WMQ LR LR
comp=N,99nm,18.0s,MS3.8
WMQ LR LR
comp=E,39nm,17.0s,MS3.8
WMQ LR LR
comp=Z,98nm,19.0s,MS3.8
KMI Kunming 46.33 259 P **P 08 46 36.8 +0.6**
KMI AP pP 08 46 57.8 +6.3
KMI PP PP 08 48 27.0 +1.3
KMI S **S 08 53 16.4 -2.7**
KMI SS SS 08 56 35.1 -10
KMI AMB AMB
comp=Z,13nm,0.9s,mb4.9
KMI AMB AMB
comp=Z,78nm,5.9s
KMI LR LR
comp=N,151nm,15.3s,MS4.2
KMI LR LR
comp=E,134nm,15.3s,MS4.2
KMI LR LR
comp=Z,180nm,14.6s,MS4.2
MKAR Makanchi Array 47.01 297 P **P 08 46 38.8 -2.4**
MKAR 08 48 11.3
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR MLR MLR
comp=Z,90nm,19.4s
MKAR Makanchi Array 47.01 297 P **P 08 46 38.8 -2.4**
comp=Z,1.1nm,0.6s,mb3.9,baz=69,slow=7.9,SNR=12
MKAR PcP PcP 08 48 11.3 -1.3
comp=Z,1.1nm,0.8s,baz=52,slow=4.8,SNR=4.8
MKAR LR LR 09 08 03.1
comp=Z,90nm,19.4s,MS3.7,baz=230,slow=38
RES Resolute Bay 49.17 19 *e*P **P 08 46 57.9 +0.3**

YKW3 Yellowknife Ar 49.21 38 *e*P **P 08 46 58.7 +0.7**
YKA Yellowknife Ar 49.25 38 P **P 08 46 58.9 +0.7**
YKA Yellowknife Ar 49.25 38 P **P 08 46 58.9 +0.7**
YKA pmax pmax
comp=Z,4.0nm,0.8s
YKA Yellowknife Ar 49.25 38 P **P 08 46 58.9 +0.7**
comp=Z,4.0nm,0.8s,mb4.5,baz=298,slow=7.3,SNR=51
CHTO Chiang Mai 53.27 257 *e*P **P 08 47 29.1 +0.2**
comp=Z,6.7nm,0.7s,mb4.7
CHTO Chiang Mai 53.27 257 *e*P **P 08 47 29.1 +0.2**
CHTO pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
ARU Arti 54.49 317 *c* iP **P 08 47 37.1 -0.2**
ARU 08 49 35.8
ARU S **S 08 55 09.7 -1.8**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
ARCES ARCESS Array B 56.73 341 P **P 08 47 50.7 -2.5**
ARCES pmax pmax
comp=Z,9.0nm,1.2s
ARCES MLR MLR
comp=Z,192nm,19.1s
ARCES ARCESS Array B 56.73 341 P **P 08 47 50.7 -2.5**
comp=Z,8.5nm,1.2s,mb4.6,baz=329,slow=14,SNR=2.8
ARCES LR LR 09 17 18.6
comp=Z,192nm,19.1s,MS4.2,baz=211,slow=41
HNR Honiara 57.62 173 LR LR 09 10 41.1
comp=Z,88nm,19.4s,MS3.9,baz=179,slow=34
FCC Fort Churchill 59.58 34 *e*P **P 08 48 12.9 -0.3**
comp=Z,6.8nm,0.8s,mb4.7
FCC *e*pP pP 08 48 26.3 -2.7
FCC Fort Churchill 59.58 34 *e*P **P 08 48 12.9 -0.3**
FCC *e**PP pP 08 48 26.3 -2.7
FCC pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
FINES FINESS Array B 63.06 335 P **P 08 48 35.4 -1.3**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 63.06 335 P **P 08 48 35.4 -1.3**
comp=Z,1.6nm,0.5s,mb4.4,baz=43,slow=8.0,SNR=7.4
PDAR Pinedale Array 63.21 55 P **P 08 48 39.0 +1.0**
comp=Z,1.2nm,0.9s,mb4.0,baz=321,slow=1.9,SNR=10
ULM Lac du Bonnet 64.87 42 P **P 08 48 48.5 -0.2**
baz=344,slow=5.4
NOA NORSAR Array B 67.10 342 P **P 08 49 00.9 -2.0**
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,94nm,20.4s
NOA NORSAR Array B 67.10 342 P **P 08 49 00.9 -1.9**
comp=Z,1.1nm,0.8s,mb4.0,baz=25,slow=6.5,SNR=3.0
NOA LR LR 09 21 30.3
comp=Z,94nm,20.4s,MS4.0,baz=325,slow=39
HFS Hagfors 67.36 340 P **P 08 49 03.5 -1.1**
HFS pmax pmax
comp=Z,2.0nm,0.7s
HFS Hagfors 67.36 340 P **P 08 49 03.5 -1.1**
comp=Z,1.9nm,0.7s,mb4.3,baz=84,slow=4.6,SNR=7.1
WB2 Warramunga Arr 70.18 200 *e*P **P 08 49 21.9 -0.5**
WRA Warramunga Arr 70.18 200 P **P 08 49 21.9 -0.5**
WRA pmax pmax
comp=Z,7.0nm,0.7s
WRA Warramunga Arr 70.18 200 P **P 08 49 21.9 -0.6**
comp=Z,6.9nm,0.7s,mb4.7,baz=15,slow=6.3,SNR=46
FITZ Fitzroy Crossi 70.83 209 *e*P **P 08 49 26.9 +0.4**
comp=Z,7.7nm,1.2s,mb4.5
FITZ Fitzroy Crossi 70.83 209 P **P 08 49 26.7 +0.3**
comp=Z,4.5nm,1.0s,mb4.3,baz=13,slow=6.3,SNR=4.8
ASAR Alice Springs 73.87 199 P **P 08 49 44.8 +0.3**
ASAR pmax pmax
comp=Z,2.0nm,0.6s
ASAR Alice Springs 73.87 199 P **P 08 49 44.8 +0.3**
comp=Z,2.3nm,0.6s,mb4.3,baz=13,slow=5.6,SNR=43
MBWA Marble Bar 75.70 213 *e*P **P 08 49 54.8 -0.3**
comp=Z,12nm,1.2s,mb4.7
TXAR Lajitas Array 76.05 62 P **P 08 49 57.9 +0.7**
TXAR pmax pmax
comp=Z,2.0nm,0.7s
TXAR Lajitas Array 76.05 62 P **P 08 49 57.9 +0.7**
comp=Z,1.7nm,0.7s,mb4.1,baz=301,slow=5.0,SNR=22
KHC Kasperske Hory 77.27 335 *e*P **P 08 50 03.5 -0.2**
GERES GERESS Array B 77.49 335 P **P 08 50 04.1 -0.9**
GERES pmax pmax
comp=Z,1.0nm,0.6s
GERES MLR MLR
comp=Z,168nm,18.1s
GERES GERESS Array B 77.49 335 P **P 08 50 04.1 -0.9**
comp=Z,0.9nm,0.6s,mb3.9,baz=30,slow=6.2,SNR=4.5
GERES LR LR 09 26 54.8
comp=Z,168nm,18.1s,MS4.4,baz=290,slow=38
STKA Stephens Creek 80.55 191 P **P 08 50 20.9 -0.8**
comp=Z,1.3nm,0.9s,mb3.9,baz=3.1,slow=12,SNR=3.9
FORT Forrest 82.10 203 *e*P **P 08 50 30.4 +0.5**
comp=Z,17nm,0.7s,mb5.1
TORD Torodi Ar. Bea 114.24 331 PKP PKiKP 08 56 47.6 -1.6
comp=Z,0.5nm,0.5s,baz=2.2,slow=2.3,SNR=8.0
DBIC Dimbokro 122.35 335 PKIKP PKPdf 08 57 03.2 -1.6
DBIC pmax pmax
comp=Z,2.0nm,0.5s
DBIC Dimbokro 122.35 335 PKP PKPdf 08 57 03.1 -1.7
comp=Z,1.5nm,0.5s,baz=65,slow=1.0,SNR=4.0
CFAA Coronel Fontan 143.89 78 PKP PKPdf 08 57 41.9 -2.6
comp=Z,0.6nm,0.8s,baz=293,slow=4.0,SNR=14
PLCA Paso Flores 147.49 94 PKP2 PKPab 08 57 52.6 -2.6
PLCA pmax pmax
comp=Z,2.0nm,0.8s
PLCA Paso Flores 147.49 94 PKPbc PKPbc 08 57 52.6 -0.3
comp=Z,2.1nm,0.8s,baz=312,slow=2.4,SNR=5.0

NEIC ***20*** *08:39:01.1, 3265S×7156W, h14km, ML2.7(GUC), After GUC.*

GUC 20 08:39:01.5±0.7, 3265S×7154W, h15km±7km, MD3.8, ML2.7, 4C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.38**	**193**	⇑*i*P		P	Pg	08 39 09.6	+0.2
IHA				*i* S			Sg	08 39 15.2	+0.6
IHA	**Instituto Hidr**	**0.38**	**193**	⇑*i*P		P	Pg	08 39 09.6	+0.2
IHA				*i* S			Sg	08 39 15.0	+0.4
CHNG	**Los Chungos**	**0.77**	**2**	*e*P		P	Pg	08 39 00.0	-16
CHNG				*i* S			Sg	08 39 10.7	-16
PEL	**Peldehue**	**0.87**	**125**	⇑*e*P		P	Pb	08 39 17.4	-0.9
PEL				*i* S			Sb	08 39 29.2	-0.4
PEL					AML	AML		08 39 30.5	
	comp=E,659nm,0.2s								
STL	**Santa Lucia**	**1.08**	**136**	*e*P		P	Pb	08 39 20.0	-2.0
STL				*i* S			Sb	08 39 34.4	-1.5
TACH	**Talagante**	**1.12**	**153**	⇓*i*P		P	Pb	08 39 21.0	-1.5
FSR	**Penalolen**	**1.18**	**134**	*e*P		P	Pn	08 39 22.0	-1.4
FSR				*i* S			Sb	08 39 38.2	-0.5
FSR	**Penalolen**	**1.18**	**134**	*e*P		P	Pn	08 39 22.0	-1.4
FSR				*i* S			Sb	08 39 37.9	-0.8
FSR					AML	AML		08 39 42.8	
	comp=N,160nm,0.3s								
ANTU	**Antumapu**	**1.19**	**141**	⇓*i*P		P	Pn	08 39 21.9	-1.6
ANTU				*i* S			Sb	08 39 37.9	-0.9
ANTU	**Antumapu**	**1.19**	**141**	⇓*i*P		P	Pn	08 39 22.0	-1.5
ANTU				*i* S			Sb	08 39 37.9	-0.9
ANTU					AML	AML		08 39 41.5	
	comp=N,383nm,0.4s								
FCH	**Farellones**	**1.25**	**123**	⇓*i*P		P	Pn	08 39 23.1	-1.2
FCH				*i* S			Sb	08 39 39.6	-0.8
FCH					AML	AML		08 39 40.6	
	comp=E,135nm,0.2s								
PCH	**Pirque**	**1.29**	**139**	⇑*i*P		P	Pn	08 39 23.8	-1.1
LNV	**Longovilo**	**1.30**	**175**	*i* P		P	Pn	08 39 22.7	-2.4
CHCH	**Chadas Angostu**	**1.48**	**150**	⇓*i*P		P	Pn	08 39 27.0	-0.5
CMCH	**Combarbala**	**1.54**	**17**	*e*P		P	Pn	08 39 27.9	-0.5
CMCH				*i* S			Sn	08 39 47.6	-0.6
CMCH	**Combarbala**	**1.54**	**17**	⇓*e*P		P	Pn	08 39 27.8	-0.6
CMCH				*i* S			Sn	08 39 47.6	-0.6
CMCH					AML	AML		08 39 51.3	
	comp=E,487nm,0.8s								
LMEL	**Las Melosas**	**1.63**	**137**	*e*P		P	Pn	08 39 28.9	-0.7
LMEL				*i* S			Sn	08 39 50.6	+0.2
LMEL	**Las Melosas**	**1.63**	**137**	*e*P		P	Pn	08 39 28.9	-0.7
LMEL				*i* S			Sn	08 39 50.5	+0.2
LMEL					AML	AML		08 39 52.9	
	comp=N,196nm,0.4s								
CICH	**Cipreses**	**1.91**	**151**	*e*P		P	Pn	08 39 33.2	-0.2
TLL	**Tololo Astrono**	**2.56**	**14**	*e*P		P	Pn	08 39 44.0	+1.6
TLL				*i* S			Sn	08 40 15.9	+2.8

MOS ***20*** *08:50:30.1±1.3,3772N×7397E,h140km,mb4.4/10,Error ellipse: s-maj=15.4km s-min=7.6km az=97.0*
IDC ***20*** *08:50:32.1±5.1,3789N×7405E,h132km±44km,mb3.9/10, mb1 3.9/12,mb1mx3.7/23,mbtmp3.8/12,Error ellipse: s-maj=28.4km s-min=17.0km az=11.0*
ISCJB ***20*** *08:50:34.2±0.3,3806N±002×7407E±006,h163km±4km, mb4.2/16,Error ellipse: s-maj=8.3km s-min=3.2km az=167.8*
NEIC ***20*** *08:50:36.0±1.3,3810N×7406E,h161km±10km,mb4.4/3, Error ellipse: s-maj=15.0km s-min=11.8km az=203.0*
BJI ***20*** *08:50:35.3,3820N×7406E,h163km,mB5.0,mb4.3*
NNC ***20*** *08:50:41.7±5.7,3858N×7385E,h164km±51km,mb3.2, mpv4.5,Error ellipse: s-maj=53.3km s-min=26.0km az=7.0*

ISC 20 08:50:35.1±0.3,3804N±002×7407E±006,h156km±4km, n94,σ1§18/117,mb4.2/16,8C-10D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.09**	**45**	⇑*i*P	**Pn**	**08 51 13.0**	**+1.4**
KSH				S	**Sn**	**08 51 39.8**	**+0.1**
KSH				Smax			
	comp=N,19μm,0.3s						
KSH				Smax			
	comp=E,14μm,0.6s						
AML	**Almayashu**	**4.09**	**356**	*e*Pn	**Pn**	**08 51 36.9**	**+0.3**
AML				*e*Sn	**Sn**	**08 52 20.9**	**-3.7**
AML	**Almayashu**	**4.09**	**356**	P	**Pn**	**08 51 37.0**	**+0.3**
	SNR=1364						
KZA	**Kyzart**	**4.13**	**12**	P	**Pn**	**08 51 37.2**	**+0.1**
	SNR=108						
UCH	**Uchtor**	**4.19**	**4**	*e*Pn	**Pn**	**08 51 38.3**	**+0.3**
UCH				*e*Sn	**Sn**	**08 52 26.0**	**-0.9**
UCH	**Uchtor**	**4.19**	**4**	P	**Pn**	**08 51 38.4**	**+0.4**
	SNR=158						
CHCP	**Chirah Chowk**	**4.42**	**189**	⇑P	**Pn**	**08 51 46.5**	**+5.4**
ULHL	**Ulahol**	**4.51**	**21**	P	**Pn**	**08 51 44.0**	**+1.8**
	SNR=28						
CEP	**Cherat**	**4.56**	**203**	⇓P	**Pn**	**08 51 47.0**	**+4.1**
CEP				S	**Sn**	**08 52 26.0**	**-10**
AAK	**Ala-Archa**	**4.60**	**4**	P	**Pn**	**08 51 43.6**	**+0.4**
	SNR=50						
EKS2	**Erkin-Say**	**4.62**	**357**	*e*Pn	**Pn**	**08 51 43.8**	**+0.2**
EKS2				*e*Sn	**Sn**	**08 52 34.1**	**-2.8**
EKS2	**Erkin-Say**	**4.62**	**357**	P	**Pn**	**08 51 43.8**	**+0.3**
	SNR=73						
KBK	**Karagaybulak**	**4.66**	**8**	P	**Pn**	**08 51 44.5**	**+0.5**
	SNR=163						
CHMS	**Chumysh**	**4.98**	**6**	P	**Pn**	**08 51 48.5**	**+0.3**
	SNR=60						
TKM2	**Tokmak 2**	**5.01**	**13**	⇑P	**Pn**	**08 51 48.4**	**-0.3**
	comp=E,28nm,0.5s						
TKM2				⇑S	**Sn**	**08 52 42.6**	**-3.5**
	comp=E,109nm,0.7s						
TKM2	**Tokmak 2**	**5.01**	**13**	*e*Pn	**Pn**	**08 51 48.8**	**+0.1**
TKM2				*e*Sn	**Sn**	**08 52 43.5**	**-2.6**
TKM2	**Tokmak 2**	**5.01**	**13**	P	**Pn**	**08 51 48.9**	**+0.3**
	SNR=45						
USP	**Ospenovka**	**5.23**	**3**	P	**Pn**	**08 51 51.6**	**+0.1**
	SNR=14						
THW	**Thamme Wali**	**5.57**	**201**	P	**Pn**	**08 51 59.4**	**+3.2**
DLH	**Dalhousie**	**5.70**	**164**	*e*P	**Pn**	**08 51 59.0**	**+1.1**
DLH				*e*S	**Sn**	**08 53 02.0**	**-0.7**
KK31	**Karatay Array**	**5.74**	**333**	⇑P	**Pn**	**08 51 57.9**	**-0.3**
	comp=E,22nm,0.2s,baz=142,slow=13,SNR=566						
KK31				⇓S	**Sn**	**08 52 58.0**	**-5.3**
	comp=E,83nm,0.5s,baz=174,slow=26,SNR=5.1						
KK31	**Karatay Array**	**5.74**	**333**	*i* PN	**Pn**	**08 51 57.9**	**-0.3**
KK31				pmax	pmax		
	comp=Z,83nm,0.1s						
THN	**Thein Dam**	**5.76**	**166**	*e*P	**Pn**	**08 52 00.0**	**+1.4**
THN				*e*S	**Sn**	**08 53 02.9**	**-1.1**
PONG	**Pong**	**6.27**	**165**	*e*P	**Pn**	**08 52 10.5**	**+5.1**
PONG				*e*S	**Sn**	**08 53 15.5**	**-0.7**
SBDP	**Sheikh Budin**	**6.32**	**206**	⇓P	**Pn**	**08 52 08.5**	**+2.3**
SDNR	**Sundarnagar**	**6.95**	**159**	*e*P	**Pn**	**08 52 15.5**	**+1.0**
KLP	**Kalpa**	**7.35**	**151**	*e*P	**Pn**	**08 52 20.3**	**+0.5**
KLP				*e*S	**Sn**	**08 53 38.4**	**-3.6**
KLP				AML	AML	08 53 43.5	
	comp=E,328nm,0.6s						
KLP				AML	AML	08 53 45.0	
	comp=N,356nm,0.3s						
DDI	**Dehra Dun**	**8.38**	**156**	*i* P	**Pn**	**08 52 34.8**	**+1.3**
DDI				*ex*	x	08 54 11.0	
JOSI	**Joshimath**	**8.74**	**147**	*e*P	**Pn**	**08 52 38.6**	**+0.3**
JOSI				*e*S	**Sn**	**08 54 09.4**	**-6.1**
JOSI				AML	AML	08 54 17.8	
	comp=N,745nm,0.8s						
JOSI				AML	AML	08 54 17.8	
	comp=E,918nm,0.6s						
BHGR	**Bahadurgarh**	**9.63**	**165**	*e*P	**Pn**	**08 52 49.7**	**-0.5**
BHGR				*e*S	**Sn**	**08 54 30.6**	**-6.4**
BHGR				AML	AML	08 54 33.1	
	comp=Z,160nm,0.2s						
NDI	**New Delhi**	**9.70**	**163**	*e*P	**Pn**	**08 52 51.0**	**0.0**
NDI				*e*S	**Sn**	**08 54 31.0**	**-7.6**
ASOR	**Ausora**	**9.76**	**160**	*e*P	**Pn**	**08 52 52.5**	**+0.6**
ASOR				*ex*	x	08 54 26.1	
ASOR				AML	AML	08 54 34.0	
	comp=Z,240nm,0.3s						
LGTI	**Lohaghat**	**9.99**	**147**	*e*P	**Pn**	**08 52 53.0**	**-1.9**
LGTI				*e*S	**Sn**	**08 54 37.0**	**-8.6**
KHET	**Khetri**	**10.05**	**171**	*e*P	**Pn**	**08 52 55.1**	**-0.6**
KHET				*e*S	**Sn**	**08 54 41.0**	**-6.0**
KHET				AML	AML	08 54 45.3	
	comp=E,37nm,0.3s						
KHET				AML	AML	08 54 45.5	
	comp=N,54nm,0.5s						
KUDL	**Kundal**	**10.08**	**168**	*e*P	**Pn**	**08 52 56.8**	**+0.8**
KUDL				*e*S	**Sn**	**08 54 39.5**	**-8.2**
KUDL				AML	AML	08 54 46.0	
	comp=E,81nm,0.3s						
KUDL				AML	AML	08 54 47.2	
	comp=N,58nm,0.3s						
SONA	**Sohna**	**10.09**	**165**	*e*P	**Pn**	**08 52 56.4**	**+0.2**
SONA				*e*S	**Sn**	**08 54 40.7**	**-7.2**
SONA				AML	AML	08 54 46.7	
	comp=N,86nm,0.3s						
SONA				AML	AML	08 54 47.6	
	comp=E,108nm,0.3s						
MK31	**Makanchi Array**	**10.64**	**32**	P	**Pn**	**08 53 01.8**	**-1.5**
	comp=E,1.8nm,0.5s,baz=205,slow=14,SNR=14						
MKAR	**Makanchi Array**	**10.64**	**32**	P	**Pn**	**08 53 02.1**	**-1.2**
	comp=E,0.4nm,0.3s,baz=215,slow=15,SNR=14						
AJM	**Ajmer**	**11.54**	**177**	*e*S	**Sn**	**08 55 15.0**	**-8.0**
KURBB	**Kurchatov Arra**	**12.97**	**13**	⇓P	**Pn**	**08 53 37.4**	**+3.9**
	comp=E,4.7nm,0.9s						
KOLN	**Koldanda**	**12.99**	**139**	*e*P	**Pn**	**08 53 33.2**	**-0.8**
	comp=E,69nm,0.5s						
KURK	**Kurchatov**	**13.08**	**13**	P	**Pn**	**08 53 38.5**	**+3.6**
KURK	**Kurchatov**	**13.08**	**13**	⇓*i*P	**Pn**	**08 53 37.1**	**+2.2**
GKN	**Gorkha**	**13.36**	**135**	*e*P	**Pn**	**08 53 37.7**	**-1.0**
	comp=E,73nm,0.3s						
KKN	**Kakani**	**13.88**	**134**	*e*P	**Pn**	**08 53 44.6**	**-0.7**
	comp=E,47nm,0.5s						
JIRN	**Jiri**	**14.51**	**132**	*e*P	**Pn**	**08 53 52.6**	**-0.6**
	comp=E,58nm,0.3s						
AB31	**Akbulak array**	**15.14**	**322**	⇓P	**Pn**	**08 54 00.9**	**+0.1**
	comp=E,3.6nm,0.4s,baz=129,slow=12,SNR=148						
AB31				⇓S	**S**	**08 56 38.3**	**-11**
	comp=E,2.4nm,0.5s,baz=150,slow=21,SNR=6.7						
BVA0	**Borovoye Array**	**15.20**	**351**	⇓P	**Pn**	**08 54 03.0**	**+1.5**
	comp=E,0.6nm,0.6s						
BRVK	**Borovoye**	**15.24**	**351**	P	**Pn**	**08 54 03.6**	**+1.6**
TAPN	**Taplejung**	**15.65**	**129**	*e*P	**Pn**	**08 54 06.2**	**-1.1**
	comp=E,71nm,0.8s						
ODAN	**Odare**	**15.81**	**131**	*e*P	**Pn**	**08 54 08.6**	**-0.7**
	comp=E,49nm,0.6s						
CHKZ	**Chkalovo**	**15.82**	**352**	⇑P	**Pn**	**08 54 07.7**	**-1.4**
	comp=E,4.4nm,1.2s						
LSA	**Lhasa**	**16.43**	**115**	P	**Pn**	**08 54 19.3**	**+2.6**
AKTK	**Aktyubinsk**	**16.86**	**322**	P	**Pn**	**08 54 20.6**	**-1.2**
AKTO	**Aktyubinsk**	**16.86**	**322**	⇑P	**Pn**	**08 54 20.6**	**-1.1**
	comp=E,0.7nm,0.8s						
AKTO				⇓S	**S**	**08 57 20.7**	**-8.2**
	comp=E,0.8nm,0.6s						
AKTO	**Aktyubinsk**	**16.86**	**322**	*i* P	**Pn**	**08 54 20.6**	**-1.2**
AKTO	**Aktyubinsk**	**16.86**	**322**	P	**Pn**	**08 54 21.0**	**-0.8**
	comp=E,1.0nm,0.3s,baz=107,slow=12,SNR=13						
NVS	**Novosibirsk**	**17.92**	**17**	*i* P	**Pn**	**08 54 32.7**	**-1.7**
NVS				*i* S	**S**	**08 57 52.7**	**+2.4**
NVS				pmax	pmax		
	comp=N,16nm,0.9s						
NVS				pmax	pmax		
	comp=Z,16nm,0.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.7s						
NVS				smax			
	comp=N,17nm,1.8s						
NVS				smax			
	comp=E,6.0nm,1.2s						
HYB	**Hyderabad**	**20.92**	**168**	*e*P	**P**	**08 55 09.0**	**+3.5**
HYB	**Hyderabad**	**20.92**	**168**	*i* P	**P**	**08 55 09.0**	**+3.5**
HYB				*e*S	**S**	**08 58 53.0**	**+3.0**
ARU	**Arti**	**21.11**	**336**	P	**P**	**08 55 08.9**	**+1.8**
ARU	**Arti**	**21.11**	**336**	*e*P	**P**	**08 55 09.1**	**+2.0**
ARU						08 55 33.3	
ZAK	**Zakamensk**	**24.13**	**50**	⇓*i*P	**P**	**08 55 37.5**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
KIV	**Kislovodsk**	**24.32**	**294**	⇑*e*P	**P**	**08 55 35.4**	**-2.8**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
SONM	**Songino Array**	**25.44**	**57**	P	**P**	**08 55 48.8**	**+0.5**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**25.44**	**57**	P	**P**	**08 55 48.8**	**+0.5**
	comp=Z,2.2nm,0.8s,mb3.8,baz=253,slow=10.0,SNR=22						
ANN	**Anapa**	**28.12**	**296**	*e*P	**P**	**08 56 10.1**	**-2.1**
ANN				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.1						
HIA	**Hailar**	**34.40**	**56**	*e*P	**P**	**08 57 05.2**	**-2.0**
	comp=Z,3.4nm,0.3s,mb4.5						
HIA	**Hailar**	**34.40**	**56**	*e*P	**P**	**08 57 05.2**	**-2.0**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JOF	**Joensuu**	**35.81**	**328**	*ep*	**P**	**08 57 19.5**	**+0.4**
	comp=Z,6.9nm,0.6s,mb4.5						
JOF	**Joensuu**	**35.81**	**328**	*e*P	**P**	**08 57 19.5**	**+0.4**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**37.62**	**324**	P	**P**	**08 57 35.1**	**+0.7**
FINES	**FINESS Array B**	**37.62**	**324**	*e*P	**P**	**08 57 35.2**	**+0.8**
FINES	**FINESS Array B**	**37.62**	**324**	P	**P**	**08 57 35.3**	**+0.9**
	comp=Z,1.8nm,0.4s,mb4.0,baz=113,slow=9.3,SNR=21						
ARCES	**ARCESS Array B**	**40.69**	**336**	P	**P**	**08 58 00.4**	**+0.6**
ARCES	**ARCESS Array B**	**40.69**	**336**	P	**P**	**08 58 00.8**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ARCES	**ARCESS Array B**	**40.69**	**336**	P	**P**	**08 58 00.8**	**+1.0**
	comp=Z,4.1nm,0.4s,mb4.4,baz=109,slow=8.0,SNR=48						
HFS	**Hagfors**	**43.40**	**321**	P	**P**	**08 58 21.9**	**+0.1**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HFS	**Hagfors**	**43.40**	**321**	P	**P**	**08 58 21.9**	**+0.1**
	comp=Z,4.4nm,0.6s,mb4.3,baz=87,slow=9.2,SNR=12						
TIXI	**Tiksi**	**43.43**	**22**	*e*P	**P**	**08 58 21.9**	**0.0**
	comp=Z,10.0nm,0.6s,mb4.6						
TIXI	**Tiksi**	**43.43**	**22**	*i* P	**P**	**08 58 21.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
NB2	**NORSAR Subarra**	**44.65**	**322**	P	**P**	**08 58 32.1**	**+0.3**
	comp=Z,1.8nm,0.6s,mb3.9,baz=91,slow=7.9						
NB2	**NORSAR Subarra**	**44.65**	**322**	P	**P**	**08 58 32.1**	**+0.3**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
NOA	**NORSAR Array B**	**44.65**	**322**	P	**P**	**08 58 31.7**	**-0.1**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**44.65**	**322**	P	**P**	**08 58 31.6**	**-0.1**
	comp=Z,1.9nm,0.6s,mb3.9,baz=91,slow=7.7,SNR=7.1						
TORD	**Torodi Ar. Bea**	**68.19**	**270**	P	**P**	**09 01 18.1**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.7,baz=50,slow=5.8,SNR=12						
IMA2	**Indian Mountai**	**69.89**	**19**	*e*P	**P**	**09 01 28.0**	**-0.6**
INK	**Inuvik**	**71.97**	**10**	P	**P**	**09 01 41.6**	**+0.5**
INK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
INK	**Inuvik**	**71.97**	**10**	P	**P**	**09 01 41.6**	**+0.5**
	comp=Z,3.5nm,0.5s,mb4.3,baz=0.8,slow=6.4,SNR=52						
KDAK	**Kodiak Island**	**76.83**	**24**	P	**P**	**09 02 09.6**	**+0.2**
	comp=Z,4.4nm,0.9s,mb4.1,baz=353,slow=7.9,SNR=4.6						
YKA	**Yellowknife Ar**	**79.56**	**4**	P	**P**	**09 02 24.5**	**+0.2**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA	**Yellowknife Ar**	**79.56**	**4**	P	**P**	**09 02 24.5**	**+0.2**
	comp=Z,2.6nm,0.6s,mb4.1,baz=348,slow=5.4,SNR=55						
WRA	**Warramunga Ar**	**80.77**	**124**	P	**P**	**09 02 31.2**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=323,slow=4.8,SNR=7.3						
EDM	**Edmonton**	**88.88**	**4**	*e*P	**P**	**09 03 10.7**	**-0.7**

IDC 20 08:50:38.3±3.1,3312S×17850W,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.7/13,mbtmp3.7/3,ML3.7/1,Error ellipse: s-maj=71.2km s-min=36.5km az=116.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.25**	**214**	Pn	Pn	08 52 12.2	+0.4
	1.6nm,0.3s,baz=320,slow=6.5,SNR=14						
URZ				Sn	Sn	08 53 22.9	-1.0
	1.3nm,0.3s,baz=128,slow=20,SNR=6.7						
ASAR	**Alice Springs**	**42.62**	**270**	P	P	08 58 36.5	+0.1
	0.7nm,0.6s,baz=110,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**43.85**	**275**	P	P	08 58 46.3	-0.1
	0.4nm,0.3s,baz=112,slow=8.1,SNR=20						
FINES	**FINESS Array B**	**147.53**	**338**	PKPbc	PKPbc	09 10 22.8	-0.8
	0.7nm,0.5s,baz=96,slow=1.9,SNR=5.0						

IDC 20 08:53:53.5±8.2,2192N×14454E,h198km±68km,mb3.2/5, mb1 3.3/6,mb1mx3.1/16,mbtmp3.1/6,Error ellipse: s-maj=103.8km s-min=19.8km az=79.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.58**	**338**	S	Sn	08 56 11.6	-8.3
	7.9nm,0.3s,baz=252,slow=19,SNR=3.2						
MJAR	**Matsushiro Arr**	**15.58**	**341**	P	Pn	08 57 21.5	-1.2
	0.4nm,0.3s,baz=34,slow=33,SNR=3.4						
KSRS	**Korea Array**	**21.12**	**321**	P	P	08 58 23.6	+0.8
	7.4nm,0.8s,baz=144,slow=8.6,SNR=22						
SONM	**Songino Array**	**39.98**	**320**	P	P	09 01 08.3	-0.4
	0.3nm,0.4s,baz=127,slow=7.5,SNR=6.5						
WRA	**Warramunga Arr**	**42.78**	**194**	P	P	09 01 31.6	-0.1
	0.1nm,0.3s,baz=12,slow=8.7,SNR=8.0						
MKAR	**Makanchi Array**	**55.48**	**312**	P	P	09 03 07.5	-0.2
	0.5nm,0.6s,baz=105,slow=7.6,SNR=4.3						
FINES	**FINESS Array B**	**83.52**	**335**	P	P	09 05 59.2	+0.3
	2.7nm,1.0s,baz=94,slow=5.2,SNR=7.5						

CASC 20 08:54:05.6±2.2,1199N×8392W,h0km±4km,MD3.8,ML3.1, 1C-3D,Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CONN	**Concepcion**	**1.72**	**256**	⇓*i*P	Pn	08 54 36.4	-0.5
SSNN	**San Juan del S**	**2.02**	**250**	⇓*i*P	Pn	08 54 41.2	+0.3
SSNN				*e*S	Sn	08 55 08.2	+1.4
PRS1	**Puriscal**	**2.03**	**191**	*e*P	Pn	08 54 43.3	+2.2
PRS1				*e*S	Sn	08 55 13.6	+6.4
APON	**Apoyo**	**2.10**	**268**	*e*P	Pn	08 54 41.7	-0.3
LAJ	**Bijagual**	**2.12**	**185**	*e*P	Pn	08 54 45.4	+3.0
LAJ				*e*S	Sn	08 55 18.4	+8.9
URSC	**Urasca**	**2.15**	**176**	*e*P	Pn	08 54 43.2	+0.5
URSC				*e*S	Sn	08 55 11.9	+1.8
HUEN		**2.23**	**279**	*e*P	Pn	08 54 44.4	+0.6
HUEN				*e*S	Sn	08 55 13.3	+1.3
LCR2	**La Lucha 2**	**2.24**	**182**	*e*P	Pn	08 54 44.7	+0.7
LCR2				*e*S	Sn	08 55 13.2	+0.9
MGAN	**Managua**	**2.28**	**274**	⇑*e*P	Pn	08 54 45.0	+0.5
MGAN				*e*S	Sn	08 55 15.4	+2.1
	comp=N,162nm,0.3s						
TISN	**Laguna Tiscapa**	**2.30**	**274**	*e*P	Pn	08 54 45.4	+0.5
XAVN	**Gruta Xavier**	**2.36**	**274**	*e*P	Pn	08 54 45.9	+0.3
XAVN				*e*S	Sn	08 55 15.8	+0.5
JCR	**Jicaral**	**2.43**	**209**	*e*P	Pn	08 54 46.6	+0.1
JCR				*e*S	Sn	08 55 20.3	+3.3
COPN	**Copaltepe**	**2.62**	**274**	⇓*e*P	Pn	08 54 49.6	+0.4
BAR1		**2.80**	**168**	*e*P	Pn	08 54 51.5	-0.1
BAR1				*e*S	Sn	08 55 27.7	+1.6

IDC ***20*** *08:57:15.4±0.8,2006N×12142E,h0km,mb4.1/8, mb1 4.2/10,mb1mx4.1/17,mbtmp4.1/10,ML4.1/2,MS3.6/5, Ms1 3.6/5,ms1mx3.2/36,Error ellipse: s-maj=40.3km s-min=16.1km az=74.0*
NEIC ***20*** *08:57:17.2±0.5,2003N×12145E,h10km,MG3.8(JMA), Error ellipse: s-maj=21.9km s-min=9.7km az=82.0*
ISCJB ***20*** *08:57:21.7±0.7,2012N±003×1217E±0.2,h63km,g9km, mb4.1/9,Error ellipse: s-maj=23.7km s-min=5.8km az=0.4*
MAN ***20*** *08:57:23,1993N×12142E,h20km,mb4.3,ML3.2,MS3.0*

ISC 20 08:57:23.2±0.7,2010N±004×1217E±02,h59km±8km,n20, σ0§96/20,mb4.1/9,MS3.9/3,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**2.26**	**190**	*e*P	**Pn**	**08 57 57.4**	**-0.9**
APYP				*e*S	**Sn**	**08 58 23.2**	**-1.8**
CVP	**Callao Caves**	**2.39**	**176**	*e*P	**Pn**	**08 58 00.0**	**0.0**
CVP				*e*S	**Sn**	**08 58 29.0**	**+0.8**
BALP	**Baler**	**4.34**	**181**	*e*P	**Pn**	**08 58 28.9**	**+2.2**
BALP				*e*S	**Sn**	**08 59 16.6**	**+0.6**
YHNB	**Yeheng**	**4.55**	**357**	*e*Pn	**Pn**	**08 58 29.8**	**+0.2**
YHNB				*e*Sn	**Sn**	**08 59 22.7**	**+1.5**
JOW	**Kunigami**	**9.04**	**41**	Pn	**Pn**	**08 59 29.6**	**-1.5**
	5.1nm,0.3s,baz=143,slow=16,SNR=5.5						
JNU	**Nakatsue**	**15.36**	**31**	LR	LR	09 06 13.6	
	comp=Z,74nm,21.1s,baz=349,slow=35						
KSRS	**Korea Array**	**18.13**	**16**	P	**Pn**	**09 01 29.9**	**-1.0**
	0.3nm,0.3s,baz=202,slow=10,SNR=4.5						
KSRS				LR	LR	09 09 30.1	
	comp=Z,36nm,18.1s,baz=215,slow=40						
JHJ	**Hachijo jima 2**	**20.72**	**48**	LR	LR	09 08 09.4	
	comp=Z,73nm,20.7s,MS3.0,baz=110,slow=31						
SONM	**Songino Array**	**30.30**	**339**	P	**P**	**09 03 29.1**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=158,slow=9.9,SNR=5.2						
PMG	**Port Moresby**	**38.60**	**137**	LR	LR	09 19 12.9	
	comp=Z,320nm,20.3s,MS4.1,baz=201,slow=34						
MKAR	**Makanchi Array**	**41.62**	**319**	P	**P**	**09 05 04.6**	**-0.9**
	0.7nm,0.7s,mb3.4,baz=110,slow=10,SNR=6.6						
WRA	**Warramunga Arr**	**41.69**	**162**	P	**P**	**09 05 05.6**	**-0.8**
	3.6nm,0.7s,mb4.1,baz=343,slow=9.1,SNR=27						
WB2	**Warramunga Arr**	**41.70**	**162**	*e*P	**P**	**09 05 05.9**	**-0.5**
ASAR	**Alice Springs**	**45.11**	**164**	P	**P**	**09 05 34.3**	**+0.5**
	1.7nm,0.4s,mb4.2,baz=344,slow=6.8,SNR=27						
FORT	**Forrest**	**50.96**	**173**	*e*P	**P**	**09 06 19.5**	**+0.6**
	12nm,0.7s,mb4.9						
STKA	**Stephens Creek**	**55.10**	**159**	P	**P**	**09 06 50.0**	**+0.6**
	1.7nm,1.1s,mb4.0,baz=97,slow=5.0,SNR=4.9						
ARCES	**ARCESS Array B**	**73.47**	**339**	P	**P**	**09 08 48.6**	**-0.4**
	8.4nm,1.2s,mb4.6,baz=61,slow=8.4,SNR=3.3						
FINES	**FINESS Array B**	**75.18**	**330**	P	**P**	**09 08 58.9**	**-0.3**
	3.0nm,1.0s,mb4.2,baz=64,slow=4.4,SNR=5.3						
YKA	**Yellowknife Ar**	**86.55**	**23**	P	**P**	**09 10 01.0**	**+1.3**
	0.6nm,0.5s,mb4.0,baz=307,slow=4.6,SNR=19						
BORG	**Borgarnes**	**90.76**	**345**	LR	LR	10 00 39.1	
	comp=Z,171nm,18.1s,MS4.5,baz=223,slow=42						

NEIC ***20*** *09:07:09.9,3921S×17483E,h174km,MG3.9(WEL),After WEL.*

WEL 20 09:07:09.9±0.4,3922S×17484E,h174km±3km,ML3.9/18, Error ellipse: s-maj=3.5km s-min=2.2km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.11**	**326**	P	Pn	09 07 32.6	-0.4
VRZ				S	Sn	09 07 50.1	-0.5
VRZ	**Vera Road**	**0.11**	**326**	PN	Pn	09 07 32.6	-0.4
VRZ				SN	Sn	09 07 50.1	-0.5
PKVZ	**Pokaka**	**0.40**	**101**	PN	Pn	09 07 33.6	+0.1
PKVZ				SN	Sn	09 07 51.0	-0.2
TWVZ	**Taurewa**	**0.49**	**73**	P	Pn	09 07 33.8	-0.1
TWVZ				S	Sn	09 07 51.7	-0.6
TWVZ	**Taurewa**	**0.49**	**73**	PN	Pn	09 07 33.8	-0.2
TWVZ				SN	Sn	09 07 51.7	-0.7
MTVZ	**Mangateitei**	**0.52**	**109**	PN	Pn	09 07 34.2	+0.1
WAZ	**Wanganui**	**0.55**	**168**	P	Pn	09 07 34.8	+0.6
WAZ	**Wanganui**	**0.55**	**168**	PN	Pn	09 07 34.8	+0.6
WPVZ	**Whakapapa**	**0.55**	**89**	P	Pn	09 07 34.3	+0.1
WPVZ	**Whakapapa**	**0.55**	**89**	PN	Pn	09 07 34.3	+0.1
FWVZ	**Far West T-bar**	**0.56**	**94**	P	Pn	09 07 34.5	+0.3
FWVZ	**Far West T-bar**	**0.56**	**94**	PN	Pn	09 07 34.5	+0.2
TRVZ	**Turoa**	**0.56**	**99**	PN	Pn	09 07 34.5	+0.3
WTVZ	**West Tongariro**	**0.59**	**81**	P	Pn	09 07 34.5	+0.1
WTVZ	**West Tongariro**	**0.59**	**81**	PN	Pn	09 07 34.5	+0.1
NGZ	**Ngauruhoe**	**0.60**	**86**	P	Pn	09 07 34.5	+0.1
NGZ	**Ngauruhoe**	**0.60**	**86**	PN	Pn	09 07 34.5	+0.1
WNVZ	**Wahianoa**	**0.60**	**101**	P	Pn	09 07 34.8	+0.4
WNVZ	**Wahianoa**	**0.60**	**

mb1 3.6/7,mb1mx3.3/16,mbtmp3.4/7, Error ellipse: s-maj=55.4km s-min=24.6km az=22.0
NEIC ***20*** *09:11:46.9±3.7, 2380S×17991W, h546km±47km, mb3.9/3, Error ellipse: s-maj=37.7km s-min=16.5km az=193.0*

ISC 20 09:11:43.4±1.2, 236S±02×1799W±02, h500km, n11, σ0°50/11, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.84**	**189**	P	**P**	**09 14 52.2**	**+0.5**
	1.1nm,0.3s,baz=14,slow=16,SNR=9.2						
RPZ	**Rata Peaks**	**21.41**	**198**	P	**P**	**09 15 54.2**	**-0.4**
	3.4nm,0.4s,mb4.2,baz=36,slow=8.7,SNR=4.6						
EIDS	**Eidsvold**	**26.47**	**260**	*e*P	**P**	**09 16 40.7**	**+0.7**
	1.4nm,0.6s,mb3.6						
CTA	**Charters Tower**	**31.59**	**270**	P	**P**	**09 17 25.6**	**+0.9**
	9.3nm,0.3s,mb4.6,baz=96,slow=11,SNR=27						
ASAR	**Alice Springs**	**42.20**	**260**	P	**P**	**09 18 51.6**	**-0.3**
	2.1nm,0.6s,mb3.8,baz=100,slow=7.2,SNR=29						
WB2	**Warramunga Arr**	**42.53**	**266**	*e*P	**P**	**09 18 54.3**	**-0.3**
WRA	**Warramunga Arr**	**42.55**	**266**	P	**P**	**09 18 54.4**	**-0.4**
	3.2nm,0.3s,mb4.2,baz=96,slow=8.4,SNR=202						
FORT	**Forrest**	**46.53**	**249**	*e*P	**P**	**09 19 24.7**	**-0.7**
	5.9nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**50.97**	**265**	*e*P	**P**	**09 19 58.5**	**-0.1**
	3.4nm,0.7s,mb3.8						
FITZ	**Fitzroy Crossi**	**50.97**	**265**	P	**P**	**09 19 58.4**	**-0.1**
	1.6nm,0.6s,mb3.6,baz=80,slow=7.6						
TXAR	**Lajitas Array**	**90.17**	**58**	P	**P**	**09 23 50.2**	**+0.1**
	0.2nm,0.8s,mb3.0,baz=235,slow=4.4,SNR=3.8						

NIED ***20*** *09:17:00,2690N×12950E,h5km,Mw4.3 Best double couple: Mo3.52000×10^15 NP1:φ=165.00000°,δ50.00000°, λ-3.00000°. NP2:φ=257.00000°,δ88.00000°, λ-139.00000°.*
ISCJB ***20*** *09:17:24.3±0.4,2686N±003×12948E±003,h26km, mb4.3/19,MS4.1/4, Error ellipse: s-maj=5.1km s-min=3.8km az=155.6*
BJI ***20*** *09:17:24.4,2690N×12950E,h29km,mB4.4,mb4.3,Ms4.3, Msz4.2*
JMA ***20*** *09:17:25.2±0.1,2688N×12947E,h57km,M4.1*
NEIC ***20*** *09:17:26.4±0.6,2688N×12948E,mb4.4/5, Error ellipse: s-maj=15.2km s-min=11.6km az=99.0*
IDC ***20*** *09:17:27.9±2.1,2693N×12936E,h41km±19km,mb3.8/11, mb1 3.9/13,mb1mx3.9/18,mbtmp3.8/13,ML3.7/2,MS3.9/3, Ms1 3.9/3,ms1mx3.4/27, Error ellipse: s-maj=19.7km s-min=14.0km az=120.0*

ISC 20 09:17:26.0±0.4, 2686N±004×12945E±003, h28km, h28km±1.9km:pP-P,n46,σ0°95/53, mb4.3/19, MS4.1/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.02**	**334**	P	**Pn**	**09 17 43.6**	**-0.9**
JTK				*e*S	**Sn**	**09 17 56.9**	**-1.0**
JOW	**Kunigami**	**1.05**	**269**	P	**Pn**	**09 17 44.3**	**-0.5**
JOW				*e*S	**Sn**	**09 17 58.4**	**-0.1**
JOW	**Kunigami**	**1.05**	**269**	P	**Pn**	**09 17 44.5**	**-0.4**
	172nm,0.3s,baz=112,slow=20,SNR=90						
JOW				S	**Sn**	**09 17 58.0**	**-0.6**
	256nm,0.3s,baz=94,slow=24,SNR=29						
JIH	**Iheya**	**1.33**	**278**	P	**Pn**	**09 17 48.4**	**-0.3**
JIH				*e*S	**Sn**	**09 18 05.6**	**0.0**
JZK	**Kikaishima**	**1.52**	**18**	P	**Pn**	**09 17 50.6**	**-0.7**
JZK				*e*S	**Sn**	**09 18 09.8**	**-0.4**
JAM	**Amami Oshima**	**1.55**	**5**	P	**Pn**	**09 17 50.3**	**-1.4**
JJT2	**Tamagusuku 2**	**1.68**	**245**	P	**Pn**	**09 17 52.6**	**-1.0**
JJT2				*e*S	**Sn**	**09 18 13.6**	**-0.6**
NAH1	**Naha**	**1.71**	**248**	P	**Pn**	**09 17 54.1**	**+0.2**
NAH1				*e*S	**Sn**	**09 18 15.1**	**+0.3**
JMZ	**Minamidaito 2**	**1.90**	**123**	P	**Pn**	**09 17 55.9**	**-0.6**
JMZ				*e*S	**Sn**	**09 18 18.1**	**-1.4**
JAGN	**Aguni-jima**	**1.99**	**263**	P	**Pn**	**09 17 57.6**	**-0.2**
JAGN				*e*S	**Sn**	**09 18 21.1**	**-0.7**
JKE	**Kume jima 2**	**2.44**	**258**	P	**Pn**	**09 18 03.5**	**-0.5**
JKE				*e*S	**Sn**	**09 18 32.7**	**-0.2**
JNU	**Nakatsue**	**6.36**	**11**	P	**Pn**	**09 18 58.1**	**+0.3**
	3.5nm,0.3s,baz=229,slow=1.1,SNR=28						
KSRS	**Korea Array**	**10.64**	**353**	P	**Pn**	**09 19 57.2**	**+0.7**
	0.2nm,0.3s,baz=173,slow=14,SNR=6.5						
JHJ	**Hachijo jima 2**	**10.91**	**53**	LR	LR	09 23 31.5	
	comp=Z,230nm,20.2s,baz=228,slow=33						
BJT	**Baijiatuan**	**17.15**	**323**	*e*Pn	**Pn**	**09 21 25.6**	**+2.1**
	7.3nm,0.6s						
BJI	**Beijing**	**17.16**	**323**	P	**Pn**	**09 21 25.8**	**+2.1**
BJI				AMB	AMB		
	comp=Z,10.0nm,0.7s						
BJI				LR	LR		
	comp=Z,180nm,15.3s						
XAN	**Xi'an**	**19.07**	**297**	P	**Pn**	**09 21 46.8**	**-0.4**
XAN				AMB	AMB		
	comp=Z,15nm,2.1s						
XAN				AMB	AMB		
	comp=Z,60nm,6.8s						
XAN				LR	LR		
	comp=N,130nm,11.8s						
XAN				LR	LR		
	comp=E,400nm,13.2s						
XAN				LR	LR		
	comp=Z,527nm,12.8s						
ASAJ	**Asahikawa**	**20.23**	**28**	P	**P**	**09 21 59.7**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=232,slow=15,SNR=5.3						
ASAJ				LR	LR	09 29 59.4	
	comp=Z,218nm,21.7s,MS3.5,baz=352,slow=37						
CD2	**Chengdu**	**22.84**	**286**	P	**P**	**09 22 24.6**	**-2.3**
KMI	**Kunming**	**24.06**	**272**	P	**P**	**09 22 39.4**	**+0.5**
KMI				AP		09 22 48.8	
KMI				AMB	AMB		
	comp=Z,11nm,0.5s,mb4.5						
KMI				LR	LR		
	comp=N,262nm,11.4s,MS4.4						
KMI				LR	LR		
	comp=E,632nm,12.1s,MS4.4						
KMI				LR	LR		
	comp=Z,582nm,13.4s,MS4.2						
SONM	**Songino Array**	**27.64**	**325**	P	**P**	**09 23 11.4**	**+0.3**
	comp=Z,1.9nm,1.0s,mb3.7,baz=128,slow=10,SNR=11						
GTA	**Gaotai**	**27.66**	**304**	*e*P	**P**	**09 23 10.6**	**-0.8**
GTA				AP	pP	09 23 16.8	-2.8
GTA				XP	sP	09 23 19.8	-3.2
GTA				PP		09 24 05.8	
GTA				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,93nm,4.6s						
GTA				LR	LR		
	comp=N,394nm,14.5s,MS4.3						
GTA				LR	LR		
	comp=E,430nm,13.3s,MS4.3						
GTA				LR	LR		
	comp=Z,623nm,14.1s,MS4.3						
TAPN	**Taplejung**	**37.03**	**281**	*e*P	**P**	**09 24 33.8**	**+0.2**
	comp=Z,18nm,1.2s,mb4.8						
ODAN	**Odare**	**37.39**	**280**	*e*P	**P**	**09 24 36.1**	**-0.5**
	comp=Z,24nm,0.5s,mb5.3						
PSI	**Prapat**	**37.77**	**236**	P	**P**	**09 24 41.6**	**+1.7**
	comp=Z,1.5nm,0.4s,mb4.1,baz=315,slow=10.0,SNR=4.5						
JIRN	**Jiri**	**38.32**	**281**	*e*P	**P**	**09 24 45.3**	**+0.9**
KKN	**Kakani**	**39.09**	**282**	*e*P	**P**	**09 24 51.6**	**+0.7**
GKN	**Gorkha**	**39.62**	**282**	*e*P	**P**	**09 24 55.7**	**+0.4**
	comp=Z,27nm,0.8s,mb5.0						
KOLN	**Koldanda**	**40.56**	**282**	*e*P	**P**	**09 25 04.0**	**+0.8**
	comp=Z,11nm,0.7s,mb4.6						
MKAR	**Makanchi Array**	**41.94**	**311**	P	**P**	**09 25 12.5**	**-1.7**
	comp=Z,1.0nm,0.7s,mb3.5,baz=100,slow=9.9,SNR=9.3						
TIXI	**Tiksi**	**44.83**	**360**	*e*P	**P**	**09 25 36.8**	**-0.4**
	comp=Z,2.0nm,0.8s,mb4.0						
HNR	**Honiara**	**46.66**	**136**	LR	LR	09 43 30.5	
	comp=Z,492nm,19.0s,MS4.5,baz=180,slow=33						
WRA	**Warramunga Arr**	**46.77**	**174**	P	**P**	**09 25 53.2**	**+0.2**
	comp=Z,1.4nm,0.9s,mb3.9,baz=354,slow=8.3,SNR=6.9						
ASAR	**Alice Springs**	**50.41**	**175**	P	**P**	**09 26 22.1**	**+1.0**
	comp=Z,0.8nm,0.8s,mb3.8,baz=0.7,slow=6.6,SNR=8.0						
KBL	**Kabul**	**51.84**	**294**	*e*P	**P**	**09 26 34.0**	**+2.2**
	comp=Z,12nm,0.8s,mb4.9						
KBL				*e*pP	pP	09 26 42.4	+2.1
ARCES	**ARCESS Array B**	**69.82**	**339**	P	**P**	**09 28 33.8**	**+0.3**
	comp=Z,4.6nm,1.0s,mb4.4,baz=56,slow=7.6,SNR=3.3						
FINES	**FINESS Array B**	**72.85**	**331**	P	**P**	**09 28 51.0**	**-0.9**
	comp=Z,7.0nm,1.2s,mb4.5,baz=121,slow=9.2,SNR=4.3						
MALT	**Malatya**	**74.64**	**305**	*e*P	**P**	**09 29 04.8**	**+1.9**
	comp=Z,3.8nm,1.1s,mb4.2						
MALT				*e*pP	pP	09 29 14.5	+2.8
YKA	**Yellowknife Ar**	**77.49**	**25**	P	**P**	**09 29 18.2**	**-0.5**
YKA	**Yellowknife Ar**	**77.49**	**25**	P	**P**	**09 29 18.2**	**-0.5**
	comp=Z,0.7nm,0.9s,mb3.6,baz=301,slow=5.5,SNR=10						
NB2	**NORSAR Subarra**	**79.23**	**334**	P	**P**	**09 29 28.4**	**+0.1**
	comp=Z,18nm,1.7s,mb4.7,baz=49,slow=5.9						
NB2	**NORSAR Subarra**	**79.23**	**334**	P	**P**	**09 29 28.4**	**+0.1**
	comp=Z,18nm,1.7s,mb4.7						
NOA	**NORSAR Array B**	**79.23**	**334**	P	**P**	**09 29 27.4**	**-0.8**
	comp=Z,1.5nm,0.7s,mb4.0,baz=50,slow=5.4,SNR=5.3						
CLL	**Collm**	**84.25**	**326**	*e*P	**P**	**09 29 56.0**	**+1.0**
CLL				*e*pP	pP	09 30 04.0	+0.1
PDAR	**Pinedale Array**	**91.99**	**39**	P	**P**	**09 30 33.0**	**+0.7**
	comp=Z,0.6nm,0.9s,mb3.9,baz=340,slow=1.7,SNR=4.2						
ELN	**Prospectdale**	**110.22**	**25**	*e*PKPdf	PKiKP	09 35 52.1	-3.4

ISCJB ***20*** *09:25:48.7±1.0,3381S±006×178.17W±009,h79km±9km, mb4.5/19, Error ellipse: s-maj=13.4km s-min=7.7km az=30.3*
GCMT ***20*** *09:25:49.2±0.3,3310S×17793W,h21km±1km,MW5.2/68, Moment Tensor Solution. s45,c63; s68,c113; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr4.71±.23; Mθθ-0.21±.16; Mφφ-4.50±.17; Mrθ1.12±.30; Mrφ-1.81±.12; Mθφ5.84±.38; Best double couple: Mo7.73100×10^16 NP1:φ=209.00000°,δ20.00000°,λ105.00000°. NP2: φ=13.00000°,δ70.00000°,λ85.00000°. Principal axes: T 7.5490, Plg64.0000°, Azm274.0000°; N 0.3690, Plg5.0000°, Azm15.0000°; P -7.9140, Plg25.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***20*** *09:25:49.2±1.3,3350S×17827W,h52km±13km,mb5.0/10 Error ellipse: s-maj=15.9km s-min=12.0km az=153.0*
IDC ***20*** *09:25:50.6±2.3,3298S×17858W,h50km±19km,mb4.3/15, mb1 4.3/15,mb1mx4.3/18,mbtmp4.3/15,MS4.7/15, Ms1 4.7/15,ms1mx4.5/25, Error ellipse: s-maj=17.9km s-min=13.7km az=12.0*

ISC 20 09:25:49.7±0.9, 3372S±006×17816W±009, h72km±9km, h85km±1.8km:pP-P,n86,σ1°14/82, mb4.5/19, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.80**	**216**	P	**Pn**	**09 26 59.7**	**+0.3**
MXZ				S	**Sn**	**09 27 59.6**	**+5.9**
MXZ	**Matakaoa Point**	**4.80**	**216**	PN	**Pn**	**09 26 59.7**	**+0.3**
MXZ				SN	**Sn**	**09 27 59.6**	**+6.0**
PUZ	**Puketiti**	**5.23**	**213**	*e*P	**Pn**	**09 27 06.6**	**+1.3**
PUZ				S	**Sn**	**09 28 09.5**	**+5.3**
PUZ	**Puketiti**	**5.23**	**213**	*e*PN	**Pn**	**09 27 06.6**	**+1.3**
PUZ				SN	**Sn**	**09 28 09.5**	**+5.3**
MWZ	**Matawai**	**5.79**	**216**	P	**Pn**	**09 27 13.0**	**+0.1**
MWZ	**Matawai**	**5.79**	**216**	PN	**Pn**	**09 27 13.0**	**+0.2**
KUZ	**Kuaotunu**	**5.85**	**237**	*e*P	**Pn**	**09 27 14.8**	**+1.0**
KUZ	**Kuaotunu**	**5.85**	**237**	*e*PN	**Pn**	**09 27 14.8**	**+1.0**
URZ	**Urewera**	**5.94**	**219**	P	**Pn**	**09 27 15.7**	**+0.7**
URZ	**Urewera**	**5.94**	**219**	P	**Pn**	**09 27 16.8**	**+1.8**
	35nm,0.3s,baz=290,slow=1.9,SNR=79						
URZ				S	**Sn**	**09 28 26.8**	**+5.2**
	48nm,0.3s,baz=152,slow=19,SNR=11						
URZ	**Urewera**	**5.94**	**219**	PN	**Pn**	**09 27 15.7**	**+0.8**
URZ				SN	**Sn**	**09 28 27.1**	**+5.5**
KNZ	**Kokohu**	**6.27**	**211**	*e*PN	**Pn**	**09 27 19.3**	**-0.2**
WCZ	**Waipu Caves**	**6.55**	**248**	*e*PN	**Pn**	**09 27 24.0**	**+0.6**
BKZ	**Black Stump Fm**	**6.94**	**217**	*e*PN	**Pn**	**09 27 29.1**	**+0.5**
BKZ				SN	**Sn**	**09 28 50.2**	**+4.1**
OUZ	**Omahuta**	**6.98**	**255**	*e*P	**Pn**	**09 27 30.2**	**+1.0**
OUZ	**Omahuta**	**6.98**	**255**	*e*PN	**Pn**	**09 27 30.2**	**+1.1**
BFZ	**Birch Farm**	**8.26**	**211**	*e*PN	**Pn**	**09 27 45.7**	**-1.0**
BFZ				SN	**Sn**	**09 29 19.4**	**+1.0**
TIWZ	**Tintock**	**8.50**	**212**	SN	**Sn**	**09 29 25.9**	**+1.7**
MRZ	**Mangatainoka R**	**8.54**	**214**	SN	**Sn**	**09 29 24.9**	**-0.4**
MSWZ	**Moikau Station**	**9.29**	**212**	SN	**Sn**	**09 29 43.9**	**+0.3**
MRW	**Makara Radio**	**9.40**	**215**	SN	**Sn**	**09 29 45.2**	**-1.0**
SNZO	**South Karori**	**9.46**	**215**	*e*Pn	**Pn**	**09 28 04.2**	**+1.1**
SNZO				*e*Sn	**Sn**	**09 29 42.2**	**-5.6**
NNZ	**Nelson**	**10.06**	**219**	*e*PN	**Pn**	**09 28 09.8**	**-1.4**
NNZ				SN	**Sn**	**09 30 01.8**	**-0.6**
THZ	**Tophouse**	**10.70**	**219**	*e*PN	**Pn**	**09 28 16.4**	**-3.6**
THZ				SN	**Sn**	**09 30 14.8**	**-3.2**
KHZ	**Kahutara**	**10.87**	**215**	*e*PN	**Pn**	**09 28 20.1**	**-2.2**
KHZ				SN	**Sn**	**09 30 17.4**	**-4.7**
LTZ	**Lake Taylor**	**11.76**	**217**	*e*PN	**Pn**	**09 28 32.2**	**-2.2**
LTZ				SN	**Sn**	**09 30 36.8**	**-7.1**
MOZ	**McQueen's Vall**	**12.28**	**213**	SN	**Sn**	**09 30 50.8**	**-5.6**
WVZ	**Waitaha Valley**	**12.76**	**220**	SN	**Sn**	**09 31 02.6**	**-5.7**
RPZ	**Rata Peaks**	**13.05**	**217**	P	**Pn**	**09 28 49.1**	**-2.8**
	1.7nm,0.3s,baz=61,slow=9.5,SNR=6.5						
RPZ				S	**Sn**	**09 31 09.7**	**-5.4**
	3.0nm,0.3s,baz=330,slow=19,SNR=11						
DZM	**Mont Dzumac**	**17.86**	**307**	*e*P	**Pn**	**09 29 48.8**	**-4.5**
DZM	**Mont Dzumac**	**17.86**	**307**	P	**Pn**	**09 29 52.5**	**-0.8**
	0.6nm,0.3s,baz=111,slow=16,SNR=10						
DZM				LR	LR	09 35 15.5	
	comp=Z,4μm,18.7s,baz=312,slow=33						
RAR	**Rarotonga**	**20.48**	**57**	P	**P**	**09 30 21.7**	**+0.1**
	18nm,0.7s,baz=264,slow=8.4,SNR=4.4						
RAR				LR	LR	09 36 40.0	
	comp=Z,1μm,20.8s,baz=224,slow=32						
AFI	**Afiamalu**	**20.55**	**18**	*e*P	**P**	**09 30 21.4**	**-1.1**
	24nm,0.3s						
ARMA	**Armidale**	**25.77**	**269**	*e*P	**P**	**09 31 16.7**	**+3.0**
CNB	**Canberra Magne**	**26.75**	**257**	*e*P	**P**	**09 31 26.1**	**+3.6**
	14nm,1.0s,mb4.5						
TBI	**Tubuai**	**27.16**	**75**	*e*LQ		09 36 40.8	
	1μm,25.8s						
TBI				*e*LR	LR	09 37 59.2	
	1μm,26.2s,baz=233						
EIDS	**Eidsvold**	**27.95**	**279**	*e*P	**P**	**09 31 33.4**	**+0.1**
	11nm,1.0s,mb4.3						
PPT	**Papeete**	**30.23**	**65**	*e*S	**S**	**09 36 41.0**	**-7.1**
	190nm,25.2s						
PPT				*e*LQ		09 37 49.5	
	1μm,23.0s						
PPT				*e*LR	LR	09 39 33.9	
	834nm,21.0s,baz=229						
PPT	**Papeete**	**30.23**	**65**	LR	LR	09 42 02.8	
	comp=Z,929nm,18.6s,baz=244,slow=32						
STKA	**Stephens Creek**	**33.74**	**262**	*e*P	**P**	**09 32 26.1**	**+1.9**
	3.1nm,1.2s,mb4.0						
STKA	**Stephens Creek**	**33.74**	**262**	P	**P**	**09 32 24.8**	**+0.5**
	1.2nm,0.4s,mb4.1,baz=71,slow=6.5,SNR=9.0						
STKA				LR	LR	09 45 45.8	
	comp=Z,3μm,18.3s,baz=91,slow=36						
CTA	**Charters Tower**	**34.34**	**284**	*e*P	**P**	**09 32 30.0**	**+0.5**
	13nm,0.6s,mb4.9						
CTA	**Charters Tower**	**34.34**	**284**	P	**P**	**09 32 29.2**	**-0.3**
	12nm,0.6s,mb4.9,baz=101,slow=11,SNR=14						
CTAO	**Charters Tower**	**34.34**	**284**	*e*P	**P**	**09 32 30.2**	**+0.7**
	14nm,0.6s,mb5.0						
RKT	**Rikitea**	**39.17**	**86**	*e*S	**S**	**09 39 05.6**	**+0.1**
	214nm,31.8s						
RKT				*e*LR	LR	09 43 48.2	
	1μm,30.2s,baz=246						
PMG	**Port Moresby**	**40.01**	**299**	P	**P**	**09 33 16.0**	**-1.6**
	8.4nm,0.9s,mb4.6,baz=162,slow=8.8,SNR=4.0						
TAOE	**Nuku Hiva Isla**	**42.82**	**64**	*e*S	**S**	**09 39 55.8**	**-3.9**
	513nm,23.8s						
TAOE				*e*LQ		09 43 16.1	
	3μm,27.3s						
TAOE				*e*LR	LR	09 45 11.3	
	1μm,22.7s						
ASAR	**Alice Springs**	**42.91**	**271**	P	**P**	**09 33 41.4**	**+0.2**
	16nm,0.8s,mb4.8,baz=110,slow=7.5,SNR=194						
ASAR				S	**S**	**09 40 01.0**	**+0.1**
	3.3nm,0.9s,baz=112,slow=16,SNR=14						
WB2	**Warramunga Arr**	**44.18**	**276**	↑*i*P	**P**	**09 33 50.6**	**-0.9**
WRA	**Warramunga Arr**	**44.19**	**276**	P	**P**	**09 33 51.0**	**-0.6**
	25nm,0.9s,mb4.9,baz=114,slow=7.8,SNR=108						
WRA				ScP	ScP	09 39 26.9	+6.1
	1.3nm,0.9s,baz=123,slow=4.2,SNR=3.9						
WRA				S	**S**	**09 40 18.0**	**-1.7**
	1.8nm,1.0s,baz=113,slow=16,SNR=5.3						
WRA				LR	LR	09 50 49.1	
	comp=Z,594nm,18.9s,baz=115,slow=34						
VNDA	**Vanda**	**44.79**	**186**	P	**P**	**09 34 05.6**	**+10**
	0.8nm,0.7s,mb3.5,baz=353,slow=2.1,SNR=4.9						
FORT	**Forrest**	**45.16**	**258**	*e*P	**P**	**09 33 59.7**	**+0.5**
	23nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**52.30**	**273**	↑*i*P	**P**	**09 34 53.7**	**-0.4**
	15nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**52.30**	**273**	P	**P**	**09 34 53.9**	**-0.2**
	6.1nm,0.7s,mb4.7,baz=148,slow=7.0,SNR=12						
FITZ				LR	LR	09 57 15.2	
	comp=Z,920nm,18.4s,baz=293,slow=36						
NWAO	**Narrogin (SRO)**	**53.17**	**252**	LR	LR	09 57 11.2	
	comp=Z,760nm,18.2s,baz=105,slow=35						
KLBR	**Kellerberrin**	**53.21**	**253**	*e*P	**P**	**09 35 00.9**	**+0.2**
	2μm,6.3s						
QSPA	**South Pole Qui**	**56.40**	**180**	P	**P**	**09 35 31.6**	**+8.7**
	27nm,1.0s,mb5.2,baz=44,slow=1.9,SNR=39						
QSPA				LR	LR	09 59 02.2	
	comp=Z,763nm,18.1s,baz=42,slow=35						
POHA	**Pohakuloa**	**57.39**	**25**	*e*P	**P**	**09 35 35.9**	**+5.3**
	75nm,1.0s,mb5.7						
BATI	**Kupang**	**58.01**	**280**	LR	LR	10 00 60.0	
	comp=Z,486nm,19.0s,baz=136,slow=37						
MAW	**Mawson**	**69.17**	**201**	P	**P**	**09 36 55.2**	**+7.3**
	2.4nm,0.5s,mb4.3,baz=122,slow=9.5,SNR=2.6						
CBIJ	**Chichi jima**	**71.23**	**323**	LR	LR	10 02 21.4	
	comp=Z,126nm,19.1s,baz=70,slow=31						
SNAA	**Sanae**	**74.85**	**178**	*e*	**P**	**09 37 28.9**	**+7.1**
SNAA				*e*		09 37 39.1	
SNAA				*e*		09 37 42.3	
SNAA				*e*	pP	09 37 52.0	+11
SNAA				*e*		09 37 56.4	
SNAA				*e*		09 38 04.3	
VNA3	**Neumayer Olymp**	**75.01**	**176**	*e*	**P**	**09 37 29.8**	**+7.0**
VNA3				*e*		09 37 39.9	
VNA3				*e*		09 37 43.5	
VNA3				*e*	pP	09 37 51.7	+10
VNA3				*e*		09 37 57.7	
VNA3				*e*		09 38 07.0	
VNA2	**Neumayer--Watz**	**75.44**	**177**	*e*	**P**	**09 37 32.8**	**+7.6**
	baz=195,slow=4.6						
VNA2				*e*		09 37 43.2	
VNA2				*e*		09 37 46.1	
VNA2				*e*	pP	09 37 54.3	+10
VNA2				*e*		09 38 00.7	
VNA2				*e*		09 38 09.7	
MAIT	**Maitri**	**75.56**	**183**	*e*P	pP	09 37 41.1	-4.2
PLCA	**Paso Flores**	**80.35**	**133**	P	**P**	**09 38 00.7**	**+7.6**
	5.8nm,1.1s,mb4.3,baz=225,slow=9.5,SNR=4.6						
PLCA				LR	LR	10 08 09.8	
	comp=Z,416nm,18.2s,baz=209,slow=31						
MJAR	**Matsushiro Arr**	**80.89**	**326**	P	**P**	**09 37 54.9**	**-0.8**
	1.5nm,0.9s,mb3.8,baz=93,slow=33,SNR=4.2						
MJAR				LR	LR	10 13 35.2	
	comp=Z,312nm,18.2s,baz=125,slow=36						
ASAJ	**Asahikawa**	**85.32**	**333**	P	**P**	**09 38 19.4**	**+1.0**
	2.2nm,0.5s,mb4.3,baz=105,slow=22,SNR=4.4						
ASAJ				LR	LR	10 14 44.1	
	comp=Z,460nm,18.4s,baz=171,slow=35						
KSRS	**Korea Array**	**86.79**	**320**	P	**P**	**09 38 26.1**	**+0.4**
	1.3nm,0.7s,mb4.0,baz=150,slow=4.9,SNR=5.5						
KSRS				LR	LR	10 15 56.2	
	comp=Z,148nm,18.2s,baz=298,slow=35						
YSS	**Yuzh-Sakhalins**	**87.67**	**334**	*e*P	**P**	**09 38 30.8**	**+1.0**
	11nm,0.7s,mb5.0						
TXAR	**Lajitas Array**	**94.28**	**58**	P	**P**	**09 39 05.7**	**+4.7**
TXAR				LR	LR	10 17 02.7	
TXAR	**Lajitas Array**	**94.28**	**58**	P	**P**	**09 39 05.7**	**+4.7**
	1.2nm,1.2s,mb4.1,baz=184,slow=8.3,SNR=4.8						
TXAR				LR	LR	10 17 02.7	
	comp=Z,409nm,18.2s,baz=115,slow=33						
YKA	**Yellowknife Ar**	**108.48**	**26**	PKPdf	PKiKP	09 44 09.7	+0.7
YKA	**Yellowknife Ar**	**108.48**	**26**	PKiKP	PKiKP	09 44 09.7	+0.7
	0.0nm,0.3s,baz=170,slow=6.5,SNR=3.9						
MKAR	**Makanchi Array**	**119.77**	**309**	PKP	PKPdf	09 44 32.5	+1.4
MKAR	**Makanchi Array**	**119.77**	**309**	PKP	PKPdf	09 44 32.5	+1.4
	0.3nm,0.5s,baz=66,slow=1.8,SNR=3.3						
ARCES	**ARCESS Array B**	**141.79**	**347**	PKhKP		09 45 07.5	
	2.2nm,0.7s,baz=54,slow=3.1,SNR=6.1						
JOF	**Joensuu**	**145.43**	**337**	*e*pkp	PKPdf	09 45 15.6	-2.8
KAF	**Kangasniemi**	**147.60**	**339**	*e*pkp	PKPdf	09 45 24.9	+2.8
FINES	**FINESS Array B**	**148.19**	**338**	PKPbc	PKPbc	09 45 27.1	+0.6
	23nm,0.8s,baz=93,slow=4.0,SNR=36						
NB2	**NORSAR Subarra**	**152.00**	**350**	PKP	PKPbc	09 45 37.2	+1.6
	comp=Z,20nm,1.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**152.00**	**350**	PKPbc	PKPbc	09 45 36.7	+1.0
NOA	**NORSAR Array B**	**152.00**	**350**	PKPbc	PKPbc	09 45 36.7	+1.0
	comp=Z,4.0nm,0.9s,baz=19,slow=4.6,SNR=13						
DBIC	**Dimbokro**	**152.38**	**166**	PKPbc	PKPbc	09 45 43.0	+5.1
	comp=Z,4.4nm,0.9s,baz=275,slow=4.7,SNR=3.9						
TORD	**Torod

IDC 20 09:39:53.1±1.7, 290S×12851E, h0km, mb4.0/3, mb1 4.3/4, mb1mx3.9/13, mbtmp4.1/4, MS3.3/1, Ms1 3.3/1, ms1mx2.9/26, Error ellipse: s-maj=129.2km s-min=23.4km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**8.71**	**213**	LR	LR	09 45 02.4	
	comp=Z,186nm,18.8s,baz=221,slow=36						
FITZ	**Fitzroy Crossi**	**15.37**	**190**	Pn	Pn	09 43 23.7	-7.8
	0.1nm,0.3s,baz=27,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**17.87**	**162**	P	Pn	09 44 01.4	-1.9
	0.8nm,0.3s,baz=341,slow=12,SNR=19						
WB2	**Warramunga Arr**	**17.87**	**162**	*eP*	Pn	09 44 01.7	-1.7
ASAR	**Alice Springs**	**21.29**	**166**	P	P	09 44 41.3	-0.2
	25nm,0.8s,baz=345,slow=12,SNR=196						
STKA	**Stephens Creek**	**31.34**	**158**	P	P	09 46 16.1	+0.6
	0.7nm,0.7s,baz=344,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**64.01**	**327**	P	P	09 50 28.8	+0.3
	0.7nm,0.6s,baz=129,slow=7.4,SNR=7.1						

IDC 20 09:40:25.0±2.9, 3309S×17857W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/13, mbtmp3.8/3, ML3.6/1, MS4.8/1, Ms1 4.8/1, ms1mx3.5/25, Error ellipse: s-maj=70.4km s-min=35.6km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.25**	**213**	Pn	Pn	09 41 58.8	+0.4
	1.3nm,0.3s,baz=104,slow=1.5,SNR=24						
URZ				Sn	Sn	09 43 09.7	-0.8
	1.4nm,0.3s,baz=168,slow=20,SNR=6.9						
PMG	**Port Moresby**	**39.40**	**299**	LR	LR	09 59 55.2	
	comp=Z,1μm,18.8s,baz=204,slow=30						
ASAR	**Alice Springs**	**42.55**	**270**	P	P	09 48 23.1	+0.4
	0.9nm,0.7s,baz=113,slow=7.4,SNR=7.2						
WRA	**Warramunga Arr**	**43.79**	**275**	P	P	09 48 32.3	-0.3
	1.1nm,0.7s,baz=116,slow=7.8,SNR=6.9						
FINES	**FINESS Array B**	**147.47**	**338**	PKPbc	PKPbc	10 00 09.3	-0.8
	1.6nm,0.7s,baz=134,slow=6.0,SNR=3.5						

*ISCJB **20** 09:45:07.0±0.4, 3068N×4176W±007, h10km, mb4.5/33, MS4.2/13, Error ellipse: s-maj=11.6km s-min=8.2km az=178.0*

*IDC **20** 09:45:06.3±0.7, 3081N×4167W, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.1/21, mbtmp4.1/12, MS4.1/9, Ms1 4.1/9, ms1mx3.8/29, Error ellipse: s-maj=18.9km s-min=16.3km az=178.0*

*MOS **20** 09:45:07.0±1.2, 3063N×4182W, h10km, mb4.8/7, Error ellipse: s-maj=14.9km s-min=11.4km az=130.3*

*NEIC **20** 09:45:08.6±0.3, 3064N×4174W, h10km, mb4.7/20, Error ellipse: s-maj=7.9km s-min=6.2km az=183.0*

*BJI **20** 09:45:08.6, 3060N×4170W, h10km, mB5.4, Ms4.9, Msz4.5*

ISC 20 09:45:08.8±0.4, 3067N±008×4171W±007, h10km, n85, σ0§83/73, mb4.5/33, MS4.2/13, 3C-1D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**25.46**	**246**	LR	LR	09 58 52.8	
	comp=Z,128nm,18.3s,MS3.5,baz=272,slow=32						
BBTS	**Babate**	**28.07**	**119**	LR	LR	09 59 11.9	
	comp=Z,416nm,22.0s,MS4.0,baz=351,slow=30						
SCHQ	**Schefferville**	**30.08**	**331**	P	**P**	**09 51 17.0**	**-1.1**
	baz=145,slow=12						
MDT	**Midelt**	**31.52**	**76**	LR	LR	10 00 56.0	
	comp=Z,228nm,20.5s,MS3.8,baz=344,slow=30						
ESDC	**Sonseca Array**	**31.94**	**63**	LR	LR	10 01 35.1	
	comp=Z,143nm,22.0s,MS3.6,baz=325,slow=31						
SDV	**Santo Domingo**	**34.60**	**237**	*eP*	**P**	**09 51 58.5**	**+0.3**
	11nm,1.1s,mb4.7						
SDV	**Santo Domingo**	**34.60**	**237**	P	**P**	**09 51 58.8**	**+0.7**
	6.6nm,0.9s,mb4.6,baz=38,slow=6.0,SNR=6.3						
WVT	**Waverly**	**38.61**	**291**	*eP*	**P**	**09 52 31.9**	**-0.3**
	3.0nm,0.7s,mb4.1						
WVT	**Waverly**	**38.61**	**291**	*eP*	**P**	**09 52 31.9**	**-0.2**
WVT				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
PLAL	**Pickwick Lake**	**38.93**	**289**	*eP*	**P**	**09 52 34.9**	**+0.1**
	comp=Z,98nm,2.7s,mb5.1						
DBIC	**Dimbokro**	**41.98**	**117**	P	**P**	**09 53 00.2**	**0.0**
DBIC				LR	LR	10 08 07.8	
DBIC	**Dimbokro**	**41.98**	**117**	P	**P**	**09 53 00.2**	**0.0**
	comp=Z,3.8nm,1.0s,mb4.0,baz=298,slow=9.7,SNR=4.7						
DBIC				LR	LR	10 08 07.8	
	comp=Z,232nm,19.0s,MS4.1,baz=293,slow=33						
UALR	**University of**	**42.44**	**289**	*eP*	**P**	**09 53 03.8**	**0.0**
	comp=Z,43nm,1.7s,mb4.8						
TORD	**Torodi Ar. Bea**	**43.57**	**104**	P	**P**	**09 53 12.7**	**-0.5**
	comp=Z,5.5nm,1.2s,mb4.2,baz=282,slow=2.1,SNR=9.2						
TORD				LR	LR	10 09 58.0	
	comp=Z,106nm,18.8s,MS3.8,baz=290,slow=34						
ULM	**Lac du Bonnet**	**44.52**	**312**	P	**P**	**09 53 18.6**	**-1.8**
	baz=83,slow=9.1						
JTS	**JuntasAbangare**	**44.95**	**253**	P	**P**	**09 53 23.5**	**-0.7**
CLL	**Collm**	**44.96**	**46**	*es*P	sP	09 53 28.0	-0.3
FCC	**Fort Churchill**	**44.99**	**324**	*eP*	**P**	**09 53 24.4**	**+0.4**
	comp=Z,19nm,1.5s,mb4.7						
FCC	**Fort Churchill**	**44.99**	**324**	*eP*	**P**	**09 53 24.4**	**+0.4**
FCC				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.7						
KSU1	**Kansas State U**	**45.23**	**296**	*eP*	**P**	**09 53 25.9**	**-0.3**
	comp=Z,9.0nm,0.6s,mb4.8						
GERES	**GERESS Array B**	**45.24**	**50**	P	**P**	**09 53 22.4**	**-3.7**
	comp=Z,0.4nm,0.5s,mb3.5,baz=238,slow=25,SNR=2.4						
OTAV	**Otavalo**	**46.17**	**236**	*eP*	**P**	**09 53 34.2**	**+0.3**
JCT	**Junction City**	**49.51**	**286**	*eP*	**P**	**09 53 58.4**	**-1.3**
	comp=Z,1.0nm,1.1s,mb4.8						
JCT	**Junction City**	**49.51**	**286**	*eP*	**P**	**09 53 58.4**	**-1.3**
JCT				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
SIV	**San Ignacio**	**49.99**	**205**	P	**P**	**09 54 02.5**	**-0.8**
	comp=Z,1.3nm,1.0s,mb3.9,baz=22,slow=13,SNR=5.5						
RES	**Resolute Bay**	**51.21**	**344**	*eP*	**P**	**09 54 12.2**	**+0.3**
FINES	**FINESS Array B**	**53.01**	**34**	P	**P**	**09 54 22.1**	**-3.4**
	comp=Z,2.4nm,0.9s,mb4.1,baz=206,slow=21,SNR=2.2						
TXAR	**Lajitas Array**	**53.05**	**285**	P	**P**	**09 54 24.3**	**-2.0**
TXAR	**Lajitas Array**	**53.05**	**285**	P	**P**	**09 54 24.3**	**-2.0**
	comp=Z,2.1nm,1.0s,mb4.0,baz=96,slow=10,SNR=8.0						
LPAZ	**La Paz**	**53.16**	**212**	P	**P**		
	comp=Z,1.6nm,0.8s,mb4.0,baz=44,slow=10,SNR=4.4						
VSU	**Vasula**	**53.26**	**38**	P	**P**	**09 54 27.3**	**0.0**
ANMO	**Albuquerque**	**53.75**	**293**	*eP*	**P**	**09 54 31.4**	**0.0**
ANMO	**Albuquerque**	**53.75**	**293**	*eP*	**P**	**09 54 31.8**	**+0.5**
RLMT	**Red Lodge**	**53.75**	**306**	*eP*	**P**	**09 54 30.8**	**-0.3**
	comp=Z,10nm,1.3s,mb4.6						
GCMT	**Greycliff**	**53.92**	**307**	*eP*	**P**	**09 54 32.6**	**+0.2**
BNM	**Barren Site**	**54.09**	**292**	*eP*	**P**	**09 54 34.8**	**+0.9**
PDAR	**Pinedale Array**	**54.37**	**303**	P	**P**	**09 54 35.4**	**-0.3**
	comp=Z,3.7nm,0.7s,mb4.4,baz=84,slow=7.1,SNR=37						
LKWY	**Lake**	**54.64**	**305**	*eP*	**P**	**09 54 37.7**	**0.0**
	comp=Z,18nm,0.5s,mb5.4						
LKWY	**Lake**	**54.64**	**305**	*eP*	**P**	**09 54 37.7**	**+0.1**
LKWY				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.4						
FLWY	**Flagg Ranch**	**54.94**	**305**	*eP*	**P**	**09 54 40.2**	**+0.4**
	comp=Z,17nm,1.5s,mb4.8						
LOHW	**Long Hollow**	**54.96**	**304**	*eP*	**P**	**09 54 39.4**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.1						
MOOW	**Moose Ponds**	**55.03**	**304**	*eP*	**P**	**09 54 40.8**	**+0.3**
SNOW	**Snow King Moun**	**55.09**	**304**	*eP*	**P**	**09 54 41.4**	**+0.4**
	comp=Z,8.2nm,0.5s,mb5.0						
IMW	**Indian Meadow**	**55.14**	**305**	*eP*	**P**	**09 54 41.9**	**+0.6**
	comp=Z,16nm,1.4s,mb4.9						
REDW	**Red Top Meadow**	**55.18**	**304**	*eP*	**P**	**09 54 41.8**	**+0.2**
TPAW	**Teton Pass**	**55.23**	**304**	*eP*	**P**	**09 54 42.2**	**+0.2**
	comp=Z,10nm,1.1s,mb4.8						
EDM	**Edmonton**	**55.34**	**316**	*eP*	**P**	**09 54 42.1**	**-0.5**
YKA	**Yellowknife Ar**	**55.45**	**327**	P	**P**	**09 54 41.7**	**-1.5**
YKA	**Yellowknife Ar**	**55.45**	**327**	P	**P**	**09 54 41.7**	**-1.4**
	comp=Z,1.4nm,0.8s,mb4.1,baz=87,slow=7.4,SNR=25						
SRU	**San Rafael**	**55.87**	**299**	*eP*	**P**	**09 54 46.9**	**+0.3**
HWUT	**Hardware Ranch**	**56.06**	**302**	*eP*	**P**	**09 54 47.7**	**-0.3**
	comp=Z,7.6nm,1.1s,mb4.6						
JLU	**Jordanelle**	**56.21**	**301**	*eP*	**P**	**09 54 50.1**	**+1.1**
NLU	**North Lily Min**	**56.83**	**300**	*eP*	**P**	**09 54 53.5**	**0.0**
BSMT	**Bassoo Peak**	**57.04**	**310**	*eP*	**P**	**09 54 55.0**	**+0.2**
MSU	**Marysvale**	**57.27**	**298**	*eP*	**P**	**09 54 57.5**	**+1.0**
DUG	**Dugway**	**57.32**	**301**	*eP*	**P**	**09 54 57.1**	**+0.2**
	comp=Z,9.7nm,1.3s,mb4.7						
DUG	**Dugway**	**57.32**	**301**	*eP*	**P**	**09 54 57.1**	**+0.2**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7						
OBN	**Obninsk**	**58.94**	**41**	P	**P**	**09 55 09.3**	**+1.3**
OBN	**Obninsk**	**58.94**	**41**	*eP*	**P**	**09 55 09.2**	**+1.2**
OBN				pmax	pmax		
	comp=Z,28nm,1.6s,mb5.0						
TPNV	**Topopah Spring**	**60.81**	**298**	*eP*	**P**	**09 55 22.1**	**+0.9**
	comp=Z,4.4nm,1.0s,mb4.5						
TPNV	**Topopah Spring**	**60.81**	**298**	*eP*	**P**	**09 55 22.1**	**+0.9**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5						
DAC	**Darwin (Calif)**	**62.05**	**297**	*eP*	**P**	**09 55 30.1**	**+0.6**
	comp=Z,6.6nm,1.4s,mb4.6						
DAC	**Darwin (Calif)**	**62.05**	**297**	*eP*	**P**	**09 55 30.1**	**+0.5**
DAC				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.6						
INK	**Inuvik**	**62.55**	**335**	*eP*	**P**	**09 55 31.6**	**-0.7**
	comp=Z,385nm,1.1s						
INK	**Inuvik**	**62.55**	**335**	*eP*	**P**	**09 55 31.7**	**-0.7**
INK				pmax	pmax		
	comp=Z,385nm,1.1s						
GOF	**Gofitskoye**	**65.54**	**51**	*eP*	**P**	**09 55 50.8**	**-1.7**
COLA	**College**	**69.11**	**334**	P	**P**	**09 56 15.2**	**+0.5**
AKTK	**Aktyubinsk**	**72.72**	**41**	P	**P**	**09 56 36.5**	**-0.4**
AKTO	**Aktyubinsk**	**72.72**	**41**	P	**P**	**09 56 36.5**	**-0.4**
	comp=Z,2.1nm,0.7s,mb4.2,baz=304,slow=8.9,SNR=8.5						
TIXI	**Tiksi**	**77.75**	**3**	*eP*	**P**	**09 57 06.8**	**+1.3**
	comp=Z,1.2nm,0.4s,mb4.2						
TIXI	**Tiksi**	**77.75**	**3**	*eP*	**P**	**09 57 08.1**	**+2.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
BRVK	**Borovoye**	**77.88**	**35**	P	**P**	**09 57 09.5**	**+2.9**
BILL	**Bilibino**	**79.39**	**350**	*eP*	**P**	**09 57 14.6**	**0.0**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
KMBO	**Kilima Mbogo**	**81.08**	**97**	LR	LR	10 31 51.1	
	comp=Z,266nm,19.5s,MS4.6,baz=97,slow=35						
NVS	**Novosibirsk**	**82.61**	**29**	*eP*	**P**	**09 57 32.8**	**+0.8**
KURK	**Kurchatov**	**83.39**	**34**	P	**P**	**09 57 36.5**	**+0.4**
LBTB	**Lobatse**	**84.94**	**123**	LR	LR	10 32 22.6	
	comp=Z,275nm,19.9s,MS4.6,baz=254,slow=33						
AML	**Almayashu**	**86.31**	**42**	*eP*	**P**	**09 57 52.1**	**+1.1**
	comp=Z,7.6nm,1.2s,mb4.8						
BOSA	**Boshof**	**86.87**	**126**	LR	LR	10 31 01.6	
	comp=Z,372nm,19.8s,MS4.8,baz=168,slow=32						
MKAR	**Makanchi Array**	**87.84**	**35**	P	**P**	**09 57 57.9**	**-0.5**
	comp=Z,0.4nm,0.8s,mb3.7,baz=335,slow=5.4,SNR=4.2						
WMQ	**Urumqi**	**92.62**	**34**	*eP*	**P**	**09 58 20.4**	**-0.3**
WMQ				AP	pP	09 58 24.8	+0.7
WMQ				XP	sP	09 58 27.4	+2.1
WMQ				AMB	AMB		
	comp=Z,75nm,7.0s						
WMQ				LR	LR		
	comp=N,165nm,20.4s,MS4.5						
WMQ				LR	LR		
	comp=E,97nm,25.2s,MS4.5						
WMQ				LR	LR		
	comp=Z,91nm,19.0s						
CD2	**Chengdu**	**110.53**	**31**	*e*PKP	PKiKP	10 03 40.5	-1.4
CD2				XPKP		10 03 50.3	
CD2				PP	PP	10 04 20.3	+3.8
CD2				SKS	SKSdf	10 10 48.4	-5.8
CD2				SKKS	SKKSac	10 11 10.0	-11
CD2				PP	PP		
	comp=Z,90nm,8.2s						
CD2				LR	LR		
	comp=N,100nm,20.8s						
CD2				LR	LR		
	comp=Z,120nm,20.4s,MS4.5						
KMI	**Kunming**	**114.91**	**36**	PKP	PKiKP	10 03 49.8	-0.5
KMI				XPKP		10 03 54.3	
KMI				LR	LR		
	comp=Z,132nm,34.6s,MS4.3						
NJ2	**Nanjing**	**114.96**	**18**	*e*PKP	PKiKP	10 03 46.5	-3.8
GYA	**Guiyang**	**115.64**	**31**	*e*PDIF	Pdif	10 00 02.8	-0.9
GYA				PKP	PKPdf	10 03 51.3	-0.4
GYA				PP	PP	10 04 57.4	+4.4
GYA				PKS		10 07 26.8	
GYA				SKS	SKSdf	10 11 01.5	-2.7
GYA				SKKS	SKKSac	10 11 49.0	-6.8
GYA				S	Sdif	10 12 35.3	-4.0
GYA				PP	PP		
	comp=Z,100nm,7.9s						
GYA				LR	LR		
	comp=N,230nm,20.4s,MS4.9						
GYA				LR	LR		
	comp=E,160nm,19.8s,MS4.9						
GYA				LR	LR		
	comp=Z,290nm,21.3s,MS4.9						

SKHL 20 09:46:57.3±0.2, 5249N×14250E, h10km, mb3.7/5, 1C-1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKH	**Okha**	**1.09**	**14**	*i*Pg	Pg	09 47 20.3	+2.0
OKH				AMB	AMB	09 47 20.9	
	200nm,0.8s						
OKH				*i*Sg	Sg	09 47 36.2	+3.7
OKH				A		09 47 36.9	
	700nm,0.6s						
OKH				A		09 47 36.9	
	300nm,0.6s						
NKL	**Nikolayevsk**	**1.29**	**302**	*eP*	Pn	09 47 20.3	-1.0
NKL				AMB	AMB	09 47 20.6	
	6.0nm,0.4s						
NKL				AMB	AMB	09 47 20.6	
	17nm,0.4s						
NKL				*e*Pg	Pg	09 47 23.0	+1.0
NKL				*e*Sg	Sg	09 47 40.0	+1.3
NKL				*er*x	rx	09 47 48.3	
TYV	**Tymovskoe**	**1.63**	**177**	*e*Pg	Pg	09 47 29.4	+0.8
TYV				AMB	AMB	09 47 33.2	
	21nm,0.3s						
TYV				*e*Sg	Sg	09 47 52.0	+2.3
TYV				A		09 47 54.0	
	36nm,0.8s						
GRNR	**Gornyy**	**4.16**	**248**	*eP*	Pn	09 48 02.8	+2.0
GRNR				*e*Pg	Pg	09 48 19.4	+2.5
GRNR				AMB	AMB	09 48 24.0	
	5.0nm,0.4s						
GRNR				*e*Sg	Sg	09 49 17.4	+6.6
GRNR				A		09 49 21.0	
	15nm,0.4s						
GRNR				A		09 49 21.0	
	17nm,0.4s						
EKMR	**Ekimchan**	**5.83**	**280**	*e*Pg	Pg	09 48 52.7	+3.9
EKMR				AMB	AMB	09 48 56.0	
	2.0nm,0.4s						
EKMR				AMB	AMB	09 48 56.0	
	3.0nm,0.4s						
EKMR				AMB	AMB	09 48 56.0	
	4.0nm,0.4s						
EKMR				*e*S	Sn	09 49 32.0	+1.6
EKMR				*e*Sg	Sg	09 50 12.5	+8.3
EKMR				A		09 50 15.5	
	12nm,0.5s						
EKMR				A		09 50 15.5	
	8.0nm,0.5s						

*IDC **20** 10:07:31.5±0.8, 5170N×17669W, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.9/21, mbtmp3.8/9, ML4.3/1, Error ellipse: s-maj=36.5km s-min=16.8km az=159.0*

*ISCJB **20** 10:07:37.8±1.2, 515N±0.1×1764W±0.1, h54km±10km, mb4.0/10, Error ellipse: s-maj=22.8km s-min=10.7km az=161.0*

*NEIC **20** 10:07:38.8±1.6, 5140N×17653W, h55km±12km, mb3.7/2, ML4.3(AEIC), Error ellipse: s-maj=27.6km s-min=11.9km az=173.0*

NEIC Felt [II] at Adak.

*BJI **20** 10:07:43.4, 5166N×17697W, h33km, mB4.8, mb4.3, Ms4.4, Msz4.1*

ISC 20 10:07:39.4±1.1, 515N±01×1765W±01, h56km±8km, n28, σ1§10/28, mb4.0/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADK	**Adak**	**0.36**	**346**	P	**Pn**	**10 07 48.4**	**-1.1**
ADK				S	**Sn**	**10 07 56.4**	**-0.5**
AMKA	**Amchitka**	**2.60**	**268**	P	**Pn**	**10 08 20.2**	**+1.3**
AMKA				S	**Sn**	**10 08 55.8**	**+6.5**
UNV	**Unalaska Valle**	**6.53**	**65**	P	**Pn**	**10 09 13.1**	**+0.4**
SDPT	**Sand Point**	**10.31**	**62**	*eP*	**Pn**	**10 10 04.3**	**-0.1**
	23nm,0.5s						
SVW2	**Sparrevohn**	**14.99**	**42**	*e*Pn	**Pn**	**10 11 10.3**	**+2.7**
KDAK	**Kodiak Island**	**15.16**	**56**	Pn	**Pn**	**10 11 06.2**	**-3.6**
	1.3nm,0.3s,baz=301,slow=4.4,SNR=21						
KDAK				Sn	**Sn**	**10 14 01.7**	**+5.5**
	0.3nm,0.3s,baz=316,slow=19,SNR=3.2						
PMR	**Palmer**	**18.01**	**45**	*eP*	**Pn**	**10 11 45.9**	**+0.6**
	3.6nm,0.7s						
BILL	**Bilibino**	**18.55**	**340**	*eP*	**Pn**	**10 11 53.1**	**+1.3**
	4.9nm,1.0s						
IMA2	**Indian Mountai**	**18.59**	**30**	*eP*	**Pn**	**10 11 54.1**	**+1.7**
DAWY	**Dawson**	**23.03**	**43**	*eP*	**P**	**10 12 38.9**	**-0.4**
INK	**Inuvik**	**26.52**	**35**	P	**P**	**10 13 09.2**	**-2.1**
	0.5nm,0.5s,mb3.3,baz=213,slow=9.4,SNR=13						
YKA	**Yellowknife Ar**	**34.10**	**47**	P	**P**	**10 14 16.5**	**-1.6**
YKA				PcP	PcP	10 16 54.8	+0.7
YKA	**Yellowknife Ar**	**34.10**	**47**	P	**P**	**10 14 16.5**	**-1.6**
	0.8nm,0.8s,mb3.7,baz=279,slow=8.6,SNR=10						
YKA				PcP	PcP	10 16 54.8	+0.7
	0.8nm,0.5s,baz=288,slow=3.1,SNR=18						
MDJ	**Mudanjiang**	**35.94**	**281**	P	**P**	**10 14 40.3**	**+6.2**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,100nm,6.3s						
NEW	**Newport**	**37.50**	**71**	P	**P**	**10 14 47.2**	**-0.2**
NEW	**Newport**	**37.50**	**71**	P	**P**	**10 14 47.2**	**-0.2**
	comp=Z,4.6nm,0.8s,mb4.2,baz=305,slow=6.8,SNR=6.9						
MCMT	**McKenzie Canyo**	**41.78**	**73**	*eP*	**P**	**10 15 23.1**	**+0.1**
PDAR	**Pinedale Array**	**44.91**	**74**	P	**P**	**10 15 48.5**	**+0.3**
	comp=Z,4.0nm,0.7s,mb4.4,baz=300,slow=4.2,SNR=36						
SONM	**Songino Array**	**47.83**	**298**	P	**P**	**10 16 09.3**	**-1.7**
	comp=Z,0.2nm,0.6s,mb3.3,baz=99,slow=8.9,SNR=2.3						
SONM				PcP	PcP	10 17 38.5	-0.5
	comp=Z,0.7nm,0.9s,baz=339,slow=2.8,SNR=5.0						
PV01	**Paradox Valley**	**48.32**	**78**	*eP*	**P**	**10 16 15.2**	**+0.3**
TXAR	**Lajitas Array**	**57.23**	**83**	P	**P**	**10 17 20.7**	**-0.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=298,slow=5.2,SNR=15						
GYA	**Guiyang**	**61.71**	**278**	P	**P**	**10 17 59.0**	**+7.3**
KMI	**Kunming**	**65.10**	**279**	P	**P**	**10 18 21.4**	**+7.3**
KMI				AMB	AMB		
	comp=Z,13nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**83.12**	**226**	P	**P**	**10 19 58.8**	**-0.2**
	comp=Z,0.5nm,1.0s,mb3.5,baz=31,slow=5.4,SNR=3.3						
ASAR	**Alice Springs**	**86.57**	**224**	P	**P**	**10 20 16.8**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.6,baz=30,slow=4.6,SNR=5.9						
TORD	**Torodi Ar. Bea**	**115.57**	**2**	PKP	PKPdf	10 26 14.4	-0.8
	comp=Z,1.0nm,0.4s,baz=330,slow=2.6,SNR=4.8						
LBTB	**Lobatse**	**148.57**	**319**	PKPbc	PKPbc	10 27 20.1	+0.4
	comp=Z,2.8nm,0.6s,baz=278,slow=2.0,SNR=3.6						
BOSA	**Boshof**	**151.88**	**316**	PKPbc	PKPbc	10 27 27.7	+0.1
	comp=Z,3.6nm,1.1s,baz=79,slow=5.2,SNR=3.4						

*CSEM **20** 10:08:17.1±0.4, 3844N×3918E, h30km, MD2.8, Error ellipse: s-maj=10.9km s-min=6.5km az=117.0*

*ISK **20** 10:08:17.4, 3838N×3923E, h5km, MD2.8*

*ISCJB **20** 10:08:18.4±0.7, 3836N±003×3929E±005, h5km, Error ellipse: s-maj=5.3km s-min=4.8km az=162.5*

*DDA **20** 10:08:18.3, 3839N×3932E, h11km, Md3.0*

ISC 20 10:08:18.7±0.9, 3836N±004×3931E±006, h2km±9km, n7, σ1§10/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.29**	**298**	*i* P	**Pg**	**10 08 23.6**	**-0.6**
ELZG				*i* S	**Sg**	**10 08 28.4**	**+0.4**
PTK	**Pertek**	**0.53**	**7**	PG	**Pg**	**10 08 28.4**	**-0.5**
PTK				SG	**Sg**	**10 08 37.5**	**+1.7**
MALT	**Malatya**	**0.70**	**266**	PG	**Pg**	**10 08 30.2**	**-1.8**
MYA	**Malataya**	**0.70**	**267**	PG	**Pg**	**10 08 30.9**	**-1.1**
MYA				SG	**Sg**	**10 08 41.0**	**-0.1**
URFA	**Urfa**	**1.00**	**203**	*e*PG	**Pg**	**10 08 38.0**	**+0.2**
URFA				*e*SG	**Sg**	**10 08 52.3**	**+1.5**
MARD	**Mardin**	**1.56**	**132**	*i* P	**Pn**	**10 08 46.8**	**-0.7**
MARD				*i* S	**Sn**	**10 09 07.6**	**-0.7**
GZT	**Gaziantep**	**1.71**	**234**	*i* P	**Pn**	**10 08 51.9**	**+2.4**
GZT				*i* S	**Sn**	**10 09 11.9**	**0.0**

*NEIC **20** 10:10:00.9, 1848N×10140W, h46km, MD4.0(MEX), After MEX.*

MEX 20 10:10:00.7±0.8, 1848N×10139W, h52km±17km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.87**	**185**	*i* P	Pn	10 10 14.4	-2.3
ZIIG				*i* S	Sn	10 10 26.9	-1.5
MOIG	**Morelia**	**1.21**	**9**	*i* P	Pn	10 10 19.9	-1.4
MOIG				*i* S	Sn	10 10 34.9	-1.7
CAIG	**El Cayaco**	**1.78**	**143**	*i* P	Pn	10 10 27.5	-1.5
CAIG				*i* S	Sn	10 10 48.9	-1.5
MMIG	**Aquila**	**1.87**	**265**	*i* P	Pn	10 10 29.0	-1.3
MMIG				*i* S	Sn	10 10 51.0	-1.7
SZVM	**Salazar**	**2.08**	**66**	*i* P	Pn	10 10 30.8	-2.3
SZVM				*i* S	Sn	10 10 54.6	-3.2
ACX	**Acapulco**	**2.13**	**139**	*eP*	Pn	10 10 32.8	-1.1
ACX				*i* S	Sn	10 10 58.5	-0.6
PPM	**Popocatepetl**	**2.68**	**77**	*i* P	Pn	10 10 38.1	-3.2
UTMO	**Huajuapan**	**3.47**	**100**	*i* P	Pn	10 10 51.0	-1.2
UTMO				*i* S	Sn	10 11

MRZ	**Mangatainoka R**	**8.45**	**211**	*e*PN		**Pn**	**10 16 18.5**	**-1.8**
CAW	**Cannon Point**	**9.04**	**211**	*e*PN		**Pn**	**10 16 27.7**	**-0.7**
MRW	**Makara Radio**	**9.30**	**212**	SN		**Sn**	**10 18 14.7**	**-0.5**
BHW	**Baring Head**	**9.37**	**211**	SN		**Sn**	**10 18 16.4**	**-0.6**
TUWZ	**Tuamarina**	**9.81**	**214**	SN		**Sn**	**10 18 27.5**	**-0.2**
QRZ	**Quartz Range**	**10.08**	**221**	SN		**Sn**	**10 18 34.6**	**+0.2**
THZ	**Tophouse**	**10.56**	**216**	*e*PN		**Pn**	**10 16 48.3**	**-0.9**
THZ				SN		**Sn**	**10 18 45.1**	**-1.1**
KHZ	**Kahutara**	**10.77**	**212**	*e*PN		**Pn**	**10 16 50.4**	**-1.7**
KHZ				*e*SN		**Sn**	**10 18 48.6**	**-2.7**
LTZ	**Lake Taylor**	**11.64**	**215**	*e*PN		**Pn**	**10 17 03.4**	**-0.5**
LTZ				SN		**Sn**	**10 19 08.8**	**-3.8**
MQZ	**McQueen's Vall**	**12.19**	**211**	SN		**Sn**	**10 19 20.4**	**-5.7**
WVZ	**Waitaha Valley**	**12.62**	**218**	SN		**Sn**	**10 19 32.3**	**-4.1**
RPZ	**Rata Peaks**	**12.93**	**215**	Pn		**Pn**	**10 17 17.4**	**-4.1**
	3.4nm,0.3s,baz=4.0,slow=3.2,SNR=18							
RPZ				Sn		**Sn**	**10 19 38.1**	**-5.9**
	3.2nm,0.3s,baz=342,slow=19,SNR=12							
RPZ	**Rata Peaks**	**12.93**	**215**	*e*PN		**Pn**	**10 17 17.3**	**-4.3**
RPZ				*e*SN		**Sn**	**10 19 38.4**	**-5.7**
ODZ	**Otahua Downs**	**14.13**	**212**	SN		**Sn**	**10 20 08.0**	**-5.5**
DZM	**Mont Dzumac**	**17.34**	**307**	P		**Pn**	**10 18 20.7**	**+1.0**
	0.2nm,0.3s,baz=126,slow=19,SNR=2.5							
DZM				LR		LR	10 23 27.1	
	comp=Z,2µm,20.8s,baz=166,slow=32							
RAR	**Rarotonga**	**20.80**	**59**	LR		LR	10 25 21.8	
	comp=Z,688nm,19.1s,MS4.0,baz=220,slow=33							
ARMA	**Armidale**	**25.28**	**269**	*e*P		**P**	**10 19 48.8**	**+5.3**
CNB	**Canberra Magne**	**26.31**	**257**	*e*P		**P**	**10 19 57.5**	**+4.7**
	38nm,1.7s,mb4.7							
TBI	**Tubuai**	**27.59**	**76**	*e*LR		LR	10 26 41.4	
	967nm,31.5s,baz=237							
PPT	**Papeete**	**30.60**	**66**	*e*S		**S**	**10 25 15.1**	**-16**
	142nm,24.0s							
PPT				*e*LR		LR	10 28 04.2	
	743nm,21.2s,baz=232							
PPT	**Papeete**	**30.60**	**66**	LR		LR	10 30 34.7	
	comp=Z,1µm,18.1s,MS4.5,baz=236,slow=32							
STKA	**Stephens Creek**	**33.27**	**262**	P		**P**	**10 20 55.5**	**+0.9**
	2.5nm,0.8s,mb4.2,baz=87,slow=7.1,SNR=7.1							
STKA				LR		LR	10 34 15.8	
	comp=Z,3µm,18.0s,MS5.0,baz=81,slow=36							
CTA	**Charters Tower**	**33.80**	**284**	*e*P		**P**	**10 21 00.9**	**+1.6**
	9.4nm,0.6s,mb4.9							
CTA	**Charters Tower**	**33.80**	**284**	P		**P**	**10 20 59.5**	**+0.2**
	5.2nm,0.5s,mb4.7,baz=114,slow=9.8,SNR=12							
CTAO	**Charters Tower**	**33.80**	**284**	*e*P		**P**	**10 21 01.2**	**+1.9**
	11nm,0.6s,mb5.0							
PMG	**Port Moresby**	**39.47**	**300**	P		**P**	**10 21 47.6**	**0.0**
	10nm,1.0s,mb4.5,baz=174,slow=4.8,SNR=4.3							
RKT	**Rikitea**	**39.66**	**86**	*e*LR		LR	10 32 20.8	
	950nm,29.8s							
ASAR	**Alice Springs**	**42.40**	**271**	P		**P**	**10 22 12.2**	**+0.4**
	16nm,0.8s,mb4.7,baz=112,slow=8.2,SNR=214							
TAOE	**Nuku Hiva Isla**	**43.17**	**64**	*e*S		**S**	**10 28 28.0**	**-14**
	535nm,24.1s							
TAOE				*e*LQ			10 32 02.1	
	2µm,28.2s							
TAOE				*e*LR		LR	10 33 52.0	
	998nm,21.8s							
WB2	**Warramunga Arr**	**43.66**	**276**	*e*P		**P**	**10 22 21.8**	**-0.1**
WRA	**Warramunga Arr**	**43.67**	**276**	P		**P**	**10 22 21.9**	**-0.1**
	13nm,0.7s,mb4.8,baz=117,slow=7.9,SNR=176							
WRA				LR		LR	10 39 19.7	
	comp=Z,505nm,18.6s,MS4.5,baz=120,slow=34							
FORT	**Forrest**	**44.71**	**258**	*e*P		**P**	**10 22 30.4**	**+0.2**
	15nm,0.6s,mb5.0							
VNDA	**Vanda**	**44.95**	**186**	P		**P**	**10 22 35.2**	**+3.7**
	0.7nm,0.8s,mb3.5,baz=32,slow=9.1,SNR=3.3							
VNDA				LR		LR	10 38 03.4	
	comp=Z,626nm,18.4s,MS4.6,baz=28,slow=32							
FITZ	**Fitzroy Crossi**	**51.79**	**273**	*e*P		**P**	**10 23 25.1**	**+0.1**
	7.7nm,0.6s,mb4.8							
KLBR	**Kellerberrin**	**52.80**	**253**	*e*P		**P**	**10 23 31.8**	**-0.5**
	58nm,1.7s,mb5.2							
QSPA	**South Pole Qui**	**56.61**	**180**	*e*P		**P**	**10 24 01.9**	**+2.7**
	22nm,0.8s,mb5.2							
QSPA	**South Pole Qui**	**56.61**	**180**	P		**P**	**10 24 02.1**	**+2.8**
	15nm,0.9s,mb5.0,baz=36,slow=1.7,SNR=74							
QSPA				LR		LR	10 44 54.4	
	comp=Z,698nm,18.5s,MS4.8,baz=215,slow=32							
RPN	**Rapa Nui**	**59.27**	**104**	LR		LR	10 45 46.8	
	comp=Z,587nm,18.4s,MS4.8,baz=302,slow=32							
MAW	**Mawson**	**69.18**	**201**	P		**P**	**10 25 27.4**	**+4.4**
	1.2nm,0.3s,mb4.2,baz=130,slow=11,SNR=6.6							
SNAA	**Sanae**	**75.07**	**179**	*e*PKPdf		**P**	**10 26 04.5**	**+6.4**
SNAA				*e*			10 26 09.8	
SNAA				*e*		pP	10 26 14.3	+5.3
SNAA				*e*			10 26 19.2	
SNAA				*e*			10 26 25.3	
VNA3	**Neumayer Olymp**	**75.25**	**176**	*e*PKPdf		**P**	**10 26 00.6**	**+1.4**
VNA3				*e*			10 26 05.7	
VNA3				*e*		pP	10 26 12.0	+1.9
VNA3				*e*			10 26 17.5	
VNA3				*e*			10 26 21.6	
VNA3				*e*			10 26 28.2	
VNA2	**Neumayer--Watz**	**75.68**	**177**	*e*PKPdf		**P**	**10 26 03.4**	**+1.8**
	baz=172,slow=4.0							
VNA2				*e*			10 26 08.5	
VNA2				*e*		pP	10 26 14.5	+2.0
VNA2				*e*			10 26 20.5	
VNA2				*e*			10 26 23.8	
VNA2				*e*			10 26 30.6	
VNA1	**Neumayer--Stat**	**75.91**	**177**	*e*PKPdf		**P**	**10 25 58.6**	**-4.4**
VNA1				*e*			10 26 05.9	
VNA1				*e*		pP	10 26 10.4	-3.5
VNA1				*e*			10 26 14.9	
VNA1				*e*			10 26 24.4	
MJAR	**Matsushiro Arr**	**80.44**	**326**	LR		LR	10 57 44.5	
	comp=Z,197nm,19.1s,MS4.5,baz=310,slow=33							
PLCA	**Paso Flores**	**80.86**	**133**	LR		LR	10 56 01.7	
	comp=Z,335nm,19.2s,MS4.7,baz=223,slow=31							
ASAJ	**Asahikawa**	**84.91**	**333**	P		**P**	**10 26 50.2**	**-1.2**
	5.8nm,0.8s,mb4.8,baz=317,slow=17,SNR=4.1							
KSRS	**Korea Array**	**86.31**	**320**	P		**P**	**10 26 57.5**	**-1.1**
	0.7nm,0.6s,mb4.1,baz=146,slow=6.3,SNR=4.0							
KSRS				LR		LR	11 05 40.9	
	comp=Z,160nm,18.1s,MS4.5,baz=307,slow=36							
TXAR	**Lajitas Array**	**94.59**	**58**	P		**P**	**10 27 35.9**	**-1.7**
TXAR				LR		LR	11 05 44.3	
TXAR	**Lajitas Array**	**94.59**	**58**	P		**P**	**10 27 35.9**	**-1.7**
	0.5nm,0.9s,mb3.9,baz=191,slow=6.0,SNR=4.2							
TXAR				LR		LR	11 05 44.3	
	comp=Z,282nm,18.2s,MS4.8,baz=10.0,slow=33							
LPAZ	**La Paz**	**97.44**	**115**	LR		LR	11 01 12.2	
	comp=Z,139nm,20.9s,MS4.4,baz=321,slow=29							
PDAR	**Pinedale Array**	**98.81**	**44**	P		**P**	**10 27 55.5**	**-0.9**
	0.4nm,0.8s,mb4.0,baz=160,slow=2.9,SNR=3.7							
PDAR				LR		LR	11 10 20.7	
	comp=Z,338nm,18.3s,MS4.9,baz=257,slow=34							
MKAR	**Makanchi Array**	**119.25**	**309**	PKP		PKPdf	10 33 05.5	0.0
	0.7nm,0.7s,baz=132,slow=2.1,SNR=2.6							
AKTK	**Aktyubinsk**	**135.66**	**310**	PKP		PKPdf	10 33 37.1	+0.5
AKTO	**Aktyubinsk**	**135.66**	**310**	PKP		PKPdf	10 33 37.1	+0.5
	0.8nm,0.5s,baz=87,slow=7.2,SNR=5.2							
ARCES	**ARCESS Array B**	**141.47**	**347**	PKhKP			10 33 38.0	
	4.9nm,1.0s,baz=20,slow=4.0,SNR=10							
JOF	**Joensuu**	**145.04**	**336**	*e*pkp		PKPdf	10 33 49.8	-3.3
KAF	**Kangasniemi**	**147.23**	**338**	*e*pkp		PKPdf	10 33 56.4	-0.5
FINES	**FINESS Array B**	**147.81**	**338**	PKPbc		PKPbc	10 33 58.7	-2.1
	5.6nm,0.5s,baz=70,slow=4.6,SNR=32							
MALT	**Malatya**	**149.65**	**290**	*e*PKPdf		PKPdf	10 34 00.6	-1.0
MALT				*e*PKPbc		PKPbc	10 34 06.1	-0.1
MALT				*e*PKPab		PKPab	10 34 10.9	-0.6
NB2	**NORSAR Subarra**	**151.71**	**350**	PKP		PKPbc	10 34 09.1	-1.3
	comp=Z,44nm,1.7s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**151.71**	**350**	PKPbc		PKPbc	10 34 08.0	-2.3
NOA	**NORSAR Array B**	**151.71**	**350**	PKPbc		PKPbc	10 34 08.0	-2.3
	comp=Z,1.3nm,0.5s,baz=14,slow=4.1,SNR=6.7							
DBIC	**Dimbokro**	**152.70**	**167**	PKPbc		PKPbc	10 34 14.0	-0.1
	comp=Z,2.4nm,0.6s,baz=171,slow=4.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**159.73**	**181**	PKPab		PKPab	10 34 55.1	+0.4
	comp=Z,1.7nm,0.8s,baz=184,slow=2.5,SNR=6.1							

*IDC **20** 10:20:02.7±1.0,3299S×17833W,h0km,mb4.6/6, mb1 4.7/6,mb1mx4.4/13,mbtmp4.6/6,Error ellipse: s-maj=30.9km s-min=23.8km az=52.0*
*NEIC **20** 10:20:09.7±3.5,3334S×17842W,h49km±27km,mb4.9/4, Error ellipse: s-maj=32.1km s-min=17.3km az=60.0*
*ISCJB **20** 10:20:12.1±1.6,3362S±007×1789W±0.1,h60km±14km, mb4.5/9,Error ellipse: s-maj=20.4km s-min=9.7km az=16.3*
ISC 20 10:20:11.6±1.6,3351S±007×1788W±01,h44km±14km,
h45km±5.0km:pP-P,n43,σ1§20/39,mb4.5/9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**5.15**	**207**	*e*PN	**Pn**	**10 21 27.4**	**+1.3**
MWZ	**Matawai**	**5.66**	**211**	*e*PN	**Pn**	**10 21 34.1**	**+0.9**
OPRZ	**Ohinepanea**	**5.75**	**220**	SN	**Sn**	**10 22 48.5**	**+10**
URZ	**Urewera**	**5.79**	**214**	Pn	**Pn**	**10 21 35.9**	**+1.0**
	12nm,0.3s,baz=38,slow=3.8,SNR=15						
URZ				Sn	**Sn**	**10 22 46.3**	**+6.3**
	10nm,0.3s,baz=155,slow=19,SNR=7.5						
URZ	**Urewera**	**5.79**	**214**	PN	**Pn**	**10 21 36.0**	**+1.1**
URZ				SN	**Sn**	**10 22 46.8**	**+6.8**
KOKO	**Kokohu**	**6.20**	**206**	*e*PN	**Pn**	**10 21 40.1**	**-0.4**
BKZ	**Black Stump Fm**	**6.81**	**213**	*e*PN	**Pn**	**10 21 48.9**	**0.0**
BKZ				SN	**Sn**	**10 23 08.6**	**+3.6**
BFZ	**Birch Farm**	**8.18**	**207**	*e*PN	**Pn**	**10 22 05.4**	**-2.3**
BFZ				SN	**Sn**	**10 23 39.9**	**+1.2**
MRZ	**Mangatainoka R**	**8.43**	**211**	SN	**Sn**	**10 23 45.5**	**+0.5**
TUWZ	**Tuamarina**	**9.78**	**214**	SN	**Sn**	**10 24 17.6**	**-0.6**
NNZ	**Nelson**	**9.89**	**217**	SN	**Sn**	**10 24 20.2**	**-0.6**
QRZ	**Quartz Range**	**10.06**	**221**	SN	**Sn**	**10 24 25.0**	**+0.2**
THZ	**Tophouse**	**10.54**	**216**	*e*PN	**Pn**	**10 22 37.6**	**-2.4**
THZ				SN	**Sn**	**10 24 36.1**	**-0.5**
KHZ	**Kahutara**	**10.75**	**212**	SN	**Sn**	**10 24 37.7**	**-4.1**
LTZ	**Lake Taylor**	**11.62**	**215**	SN	**Sn**	**10 24 58.6**	**-4.4**
MQZ	**McQueen's Vall**	**12.17**	**211**	SN	**Sn**	**10 25 10.2**	**-6.4**
RPZ	**Rata Peaks**	**12.90**	**215**	Pn	**Pn**	**10 23 10.4**	**-1.8**
	0.5nm,0.3s,baz=41,slow=6.4,SNR=2.9						
DZM	**Mont Dzumac**	**17.30**	**307**	P	**Pn**	**10 24 11.7**	**+1.7**
	0.5nm,0.3s,baz=115,slow=16,SNR=5.3						
STKA	**Stephens Creek**	**33.23**	**262**	*e*P	**P**	**10 26 46.3**	**+1.8**
	2.4nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**33.23**	**262**	P	**P**	**10 26 46.1**	**+1.6**
	3.2nm,0.9s,mb4.2,baz=63,slow=11,SNR=4.7						
CTA	**Charters Tower**	**33.76**	**284**	*e*P	**P**	**10 26 50.3**	**+1.1**
	8.0nm,0.6s,mb4.8						
CTA	**Charters Tower**	**33.76**	**284**	P	**P**	**10 26 49.3**	**+0.1**
	10nm,0.6s,mb4.9,baz=107,slow=11,SNR=12						
ASAR	**Alice Springs**	**42.36**	**271**	P	**P**	**10 28 01.6**	**0.0**
	17nm,0.8s,mb4.8,baz=108,slow=7.4,SNR=91						
ASAR				PcP	PcP	10 29 53.0	-1.5
	2.7nm,0.9s,baz=126,slow=5.2,SNR=4.2						
WB2	**Warramunga Arr**	**43.62**	**276**	*e*P	**P**	**10 28 11.4**	**-0.4**
WRA	**Warramunga Arr**	**43.63**	**276**	P	**P**	**10 28 11.4**	**-0.5**
	16nm,0.9s,mb4.7,baz=116,slow=7.4,SNR=36						
FORT	**Forrest**	**44.67**	**258**	*e*P	**P**	**10 28 19.9**	**-0.2**
	12nm,0.6s,mb4.9						
FORT				*e*	pP	10 28 31.5	-0.8
VNDA	**Vanda**	**44.95**	**186**	P	**P**	**10 28 21.8**	**+0.1**
	0.3nm,0.6s,mb3.3,baz=12,slow=6.9,SNR=2.5						
FITZ	**Fitzroy Crossi**	**51.74**	**273**	*e*P	**P**	**10 29 13.8**	**-1.1**
	10nm,0.8s,mb4.8						
QSPA	**South Pole Qui**	**56.61**	**180**	*e*P	**P**	**10 29 50.5**	**+1.0**
QSPA				*e*	pP	10 30 02.7	+0.7
QSPA	**South Pole Qui**	**56.61**	**180**	P	**P**	**10 29 51.4**	**+2.0**
	7.9nm,0.9s,mb4.7,baz=46,slow=2.9,SNR=11						
SNAA	**Sanae**	**75.08**	**179**	*e*	**P**	**10 31 59.0**	**+11**
SNAA				*e*		10 32 01.9	
SNAA				*e*	pP	10 32 10.4	+9.1
SNAA				*e*	pP	10 32 15.4	+14
SNAA				*e*		10 32 23.5	
VNA3	**Neumayer Olymp**	**75.26**	**176**	*e*	**P**	**10 32 00.4**	**+11**
VNA3				*e*		10 32 04.6	
VNA3				*e*	pP	10 32 11.9	+10
VNA3				*e*		10 32 18.2	
VNA3				*e*		10 32 26.0	
VNA2	**Neumayer--Watz**	**75.69**	**177**	*e*	**P**	**10 32 03.5**	**+12**
	baz=176,slow=4.5						
VNA2				*e*		10 32 07.3	
VNA2				*e*	pP	10 32 14.4	+10
VNA2				*e*	pP	10 32 19.8	+15
VNA2				*e*		10 32 27.3	
KSRS	**Korea Array**	**86.28**	**320**	P	**P**	**10 32 45.9**	**-2.6**
	0.9nm,0.7s,mb4.1,baz=159,slow=6.4,SNR=3.8						
ARCES	**ARCESS Array B**	**141.46**	**347**	PKhKP		10 39 25.6	
	4.3nm,1.0s,baz=276,slow=26,SNR=2.9						
ARCES				PKP	PKPdf	10 39 33.1	-3.6
	3.1nm,0.9s,baz=348,slow=1.6,SNR=5.1						
JOF	**Joensuu**	**145.01**	**336**	*e*pkp	PKPdf	10 39 37.8	-5.3
KAF	**Kangasniemi**	**147.21**	**338**	*e*pkp	PKPdf	10 39 45.2	-1.7
FINES	**FINESS Array B**	**147.79**	**338**	PKPbc	PKPbc	10 39 46.9	-3.9
	7.6nm,0.7s,baz=90,slow=4.0,SNR=19						
MALT	**Malatya**	**149.60**	**290**	*e*PKPbc	PKPbc	10 39 54.6	-1.6
NB2	**NORSAR Subarra**	**151.69**	**350**	PKP	PKPdf	10 39 57.7	+3.6
	comp=Z,12nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.69**	**350**	PKPbc	PKPbc	10 39 57.8	-2.6
NOA				PKPab	PKPab	10 40 04.2	-5.1
NOA	**NORSAR Array B**	**151.69**	**350**	PKPbc	PKPbc	10 39 57.8	-2.6
	comp=Z,2.7nm,0.8s,baz=14,slow=4.2,SNR=4.4						
NOA				PKPab	PKPab	10 40 04.2	-5.1
	comp=Z,5.4nm,0.9s,baz=24,slow=4.2,SNR=8.8						
TORD	**Torodi Ar. Bea**	**159.73**	**181**	PKPab	PKPab	10 40 45.1	+0.3
	comp=Z,1.1nm,0.6s,baz=175,slow=3.7,SNR=6.5						

*IDC **20** 10:22:18.0±1.3,4930N×9960E,h0km,mb3.7/3,mb1 3.6/5, mb1mx3.5/20,mbtmp3.6/5,ML3.2/2,Error ellipse: s-maj=52.3km s-min=14.8km az=11.0*
*BYKL **20** 10:22:18.2±0.8,4943N×9945E,h1km±27km*
*MOS **20** 10:22:18.1±2.1,4942N×9949E,h10km,mb4.0/1,Error ellipse: s-maj=12.8km s-min=8.6km az=60.4*
*ASRS **20** 10:22:22.3±1.5,4983N×9952E,h15km,Ms3.7*
*NNC **20** 10:23:27.3±13.0,5016N×9620E,h0km,mb3.5,Error ellipse: s-maj=137.8km s-min=81.3km az=75.0*
ISC 20 10:22:18.7±0.6,4973N±005×9951E±003,h10km,n58,σ1§64/76,mb3.4/3,5C-12D,Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**2.15**	**25**	*e*PN	**Pn**	**10 23 00.6**	**+6.0**
MOY				*e*S	**Sg**	**10 23 35.3**	**+7.5**
MOY				pmax	pmax		
	comp=Z,386nm,0.4s						
MOY				smax			
	comp=E,2µm,0.7s						
MOY	**Mondy**	**2.15**	**25**	⇓*i*Pn	**Pn**	**10 23 00.6**	**+6.0**
MOY				⇑*i*Pg	**Pg**	**10 23 02.5**	**+2.6**
MOY				Pmax		10 23 02.8	
	comp=E,384nm,0.5s						
MOY				*e*Sg	**Sg**	**10 23 35.6**	**+7.8**
MOY				Smax		10 23 37.5	
	comp=E,2µm,0.8s						
ZAK	**Zakamensk**	**2.51**	**74**	*e*PN	**Pn**	**10 23 01.7**	**+2.1**
ZAK				*e*		10 23 04.7	
ZAK				*e*		10 23 40.2	
ZAK				pmax	pmax		
	comp=Z,473nm,0.4s						
ZAK				smax			
	comp=N,1µm,0.5s						
ZAK	**Zakamensk**	**2.51**	**74**	*e*Pn	**Pn**	**10 23 02.1**	**+2.5**
ZAK				*e*Pg	**Pg**	**10 23 04.8**	**-2.0**
ZAK				Pmax		10 23 05.2	
	comp=N,472nm,0.5s						
ZAK				*e*Sg	**Sg**	**10 23 40.4**	**+1.0**
ZAK				Smax		10 23 42.8	
	comp=N,1µm,0.8s						
ORL	**Orlik**	**2.82**	**4**	*e*PN	**Pg**	**10 23 14.0**	**+1.4**
ORL				*e*		10 23 55.9	
ORL				pmax	pmax		
	comp=Z,272nm,0.7s						
ORL				smax			
	comp=E,660nm,1.0s						
ORL	**Orlik**	**2.82**	**4**	⇓*i*Pn	**Pn**	**10 23 10.5**	**+6.8**
ORL				⇑*i*Pg	**Pg**	**10 23 14.1**	**+1.5**
ORL				Pmax		10 23 15.3	
	comp=E,262nm,1.2s						
ORL				*e*Sg	**Sg**	**10 23 56.0**	**+6.9**
ORL				Smax		10 23 58.0	
	comp=E,659nm,1.0s						
ARS	**Arshan**	**2.86**	**39**	*e*PN	**Pg**	**10 23 14.4**	**+0.9**
ARS				*e*		10 23 55.9	
ARS				pmax	pmax		
	comp=Z,77nm,0.3s						
ARS				smax			
	comp=E,1µm,0.9s						
ARS	**Arshan**	**2.86**	**39**	⇓*i*Pn	**Pn**	**10 23 09.8**	**+5.4**
ARS				*e*Pg	**Pg**	**10 23 15.0**	**+1.5**
ARS				Pmax		10 23 26.5	
	comp=E,82nm,0.7s						
ARS				*e*Sg	**Sg**	**10 23 55.9**	**+5.3**
ARS				Smax		10 24 10.3	
	comp=E,1µm,0.8s						

TLY	**Talaya**	**3.27**	**52**	*e*PN		**Pg**	**10 23 20.0**	**-1.3**
TLY				*e*			10 24 06.2	
TLY				pmax	pmax			
	comp=Z,69nm,0.5s							
TLY				smax				
	comp=E,836nm,0.8s							
TLY	**Talaya**	**3.27**	**52**	⇑*i*Pn		**Pn**	**10 23 14.0**	**+4.0**
TLY				⇓*i*Pg		**Pg**	**10 23 20.0**	**-1.3**
TLY				Pmax			10 23 26.0	
	comp=E,68nm,0.5s							
TLY				*e*Sg		**Sg**	**10 24 05.7**	**+2.0**
TLY				Smax			10 24 07.9	
	comp=E,874nm,1.5s							
TDJR	**Todzha**	**3.43**	**322**	*e*Pg		**Pg**	**10 23 23.6**	**-0.8**
TDJR				*e*Sg		**Sg**	**10 24 12.7**	**+3.9**
KZLR	**Kyzyl**	**3.77**	**303**	*i* Pg		**Pg**	**10 23 29.9**	**-1.0**
KZLR				*i* Sg		**Sg**	**10 24 19.2**	**-0.5**
IRK	**Irkutsk**	**3.92**	**48**	*e*PN		**Pg**	**10 23 34.4**	**+0.7**
IRK				*e*			10 24 24.8	
IRK				pmax	pmax			
	comp=Z,102nm,0.3s							
IRK				smax				
	comp=N,1µm,0.7s							
IRK	**Irkutsk**	**3.92**	**48**	*e*Sg		**Sg**	**10 24 25.1**	**+0.7**
IRK				Smax			10 24 27.4	
	comp=N,1µm,0.7s							
LSTR	**Listvyanka**	**3.99**	**56**	*e*Pn		**Pn**	**10 23 23.3**	**+3.4**
LSTR				*e*Pg		**Pg**	**10 23 34.1**	**-1.1**
LSTR				Pmax			10 23 34.9	
	comp=N,28nm,1.4s							
LSTR				*e*Sg		**Sg**	**10 24 27.9**	**+1.0**
LSTR				Smax			10 24 30.0	
	comp=N,262nm,1.6s							
ARDR	**Aradan**	**4.77**	**309**	*i* Pg		**Pg**	**10 23 46.3**	**-3.7**
ARDR				*e*Sg		**Sg**	**10 24 50.8**	**-1.0**
SONM	**Songino Array**	**4.93**	**110**	PN		**Pb**	**10 23 40.9**	**-4.1**
SONM				pmax	pmax			
	comp=Z,16nm,0.3s							
SONM	**Songino Array**	**4.93**	**110**	Pn		**Pn**	**10 23 31.4**	**-1.4**
	comp=Z,1.8nm,0.3s,baz=291,slow=15,SNR=47							
SONM				Pg		**Pb**	**10 23 40.9**	**-4.2**
	comp=Z,16nm,0.3s,baz=288,slow=15,SNR=59							
SONM				Lg			10 24 47.2	
	comp=Z,62nm,0.3s,baz=301,slow=26,SNR=19							
KAB	**Kabansk**	**5.08**	**60**	*e*PN		**Pg**	**10 23 53.7**	**-2.2**
KAB				*e*			10 25 02.3	
KAB				pmax	pmax			
	comp=Z,68nm,0.2s							
KAB				smax				
	comp=E,1µm,0.7s							
KAB	**Kabansk**	**5.08**	**60**	*e*Sg		**Sg**	**10 25 03.0**	**+1.3**
KAB				Smax			10 25 08.0	
	comp=E,968nm,1.1s							
HRMR	**Khuramsha**	**5.10**	**65**	⇓*i*Pn		**Pn**	**10 23 37.8**	**+2.8**
HRMR				⇓*i*Pg		**Pg**	**10 23 52.1**	**-4.2**
HRMR				Pmax			10 23 52.8	
	comp=E,234nm,0.9s							
HRMR				*e*Sg		**Sg**	**10 25 00.2**	**-2.1**
HRMR				Smax			10 25 15.0	
	comp=E,1µm,1.2s							
FFNB	**Fofonovo**	**5.14**	**60**	*e*Pg		**Pg**	**10 23 53.2**	**-3.9**
FFNB				*e*Sg		**Sg**	**10 25 02.9**	**-0.7**
FFNB				Smax			10 25 19.3	
	comp=E,326nm,0.9s							
TRG	**Tyrgan**	**5.25**	**52**	*e*PN		**Pn**	**10 23 41.2**	**+4.0**
TRG				*e*			10 23 54.7	
TRG				*e*S		**Sn**	**10 24 40.6**	**+2.8**
TRG	**Tyrgan**	**5.25**	**52**	*e*Pn		**Pn**	**10 23 41.2**	**+4.0**
TRG				*e*Pg		**Pg**	**10 23 55.1**	**-4.2**
TRG				Pmax			10 23 57.3	
	comp=E,18nm,0.7s							
TRG				*e*Sg		**Sg**	**10 25 06.4**	**-0.9**
TRG				Smax			10 25 10.5	
	comp=E,251nm,0.8s							
ZRHB	**Zarechye**	**5.58**	**57**	*e*Pg		**Pg**	**10 24 03.7**	**-1.7**
ZRHB				Pmax			10 24 07.5	
	comp=E,144nm,0.4s							
ZRHB				*e*Sg		**Sg**	**10 25 17.8**	**+0.2**
ZRHB				Smax			10 26 03.3

MKAR Lg 10 28 32.7
comp=N,0.3nm,0.3s,baz=81,slow=31,SNR=6.8
HIA Hailar 13.16 84 *i* P **Pn 10 25 30.1 +4.7**
HIA Hailar 13.16 84 *e*Sg Sx 10 29 09.2
CRS Chara 13.28 50 *e*Sg Sx 10 29 17.1
CRS Smax 10 29 47.1
comp=N,64nm,2.2s
TUP Tupik 13.40 62 *e*Sg Sx 10 29 17.6
TUP Smax 10 29 35.5
comp=N,76nm,1.7s
KURK Kurchatov 13.41 282 ⇓Pn Px 10 26 10.0
comp=N,6.3nm,2.6s
KURK ⇓Lg 10 29 19.6
comp=N,6.8nm,1.0s
KURK Kurchatov 13.41 282 *i* P **Pn 10 25 30.1 +1.2**
KURBB Kurchatov Arra 13.47 282 ⇑Pn Px 10 26 12.5
comp=N,0.3nm,0.9s,baz=84,slow=13
KURBB ⇓Lg 10 29 27.9
comp=N,4.6nm,1.0s,baz=79,slow=30
KSRS Korea Array 23.80 110 P **P 10 27 30.6 -0.9**
comp=N,0.7nm,0.6s,mb3.3,baz=308,slow=8.5,SNR=4.1
ARU Arti 25.18 301 *i* P **Pn 10 27 40.6 -3.4**
AKTO Aktyubinsk 26.39 288 P **P 10 27 57.3 +2.3**
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb3.5
AKTO Aktyubinsk 26.39 288 P **P 10 27 57.3 +2.3**
comp=Z,1.4nm,0.7s,mb3.6,baz=85,slow=10,SNR=5.2
FINES FINESS Array B 40.87 315 P **P 10 30 04.0 +3.7**
comp=Z,0.3nm,0.4s,mb3.3,baz=80,slow=10,SNR=4.1

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*IDC **20** 10:28:55.7±3.0, 3320S×17841W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.8/13, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=70.2km s-min=35.9km az=118.0*
ISC 20 10:29:05.4±3.0, 3336S±010×1791W±05, h35km, n11, σ0§31/13, mb3.7/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**5.67**	**208**	*e*PN		**Pn**	**10 30 26.7**	**-0.5**
MWZ				SN		**Sn**	**10 31 36.8**	**+5.7**
URZ	**Urewera**	**5.78**	**211**	Pn		**Pn**	**10 30 28.9**	**+0.2**
	2.2nm,0.3s,baz=8.8,slow=22,SNR=19							
URZ				Sn		**Sn**	**10 31 40.6**	**+6.9**
	2.4nm,0.3s,baz=145,slow=20,SNR=12							
URZ	**Urewera**	**5.78**	**211**	*e*PN		**Pn**	**10 30 29.1**	**+0.4**
URZ				SN		**Sn**	**10 31 41.1**	**+7.3**
BFZ	**Birch Farm**	**8.20**	**206**	SN		**Sn**	**10 32 33.7**	**+0.4**
MRZ	**Mangatainoka R**	**8.44**	**209**	SN		**Sn**	**10 32 39.1**	**-0.1**
THZ	**Tophouse**	**10.52**	**215**	SN		**Sn**	**10 33 30.0**	**-0.2**
MQZ	**McQueen's Vall**	**12.18**	**210**	SN		**Sn**	**10 34 04.3**	**-6.5**
ASAR	**Alice Springs**	**42.13**	**271**	P		**P**	**10 36 54.2**	**-0.3**
	1.3nm,0.6s,mb3.7,baz=110,slow=7.9,SNR=28							
WB2	**Warramunga Arr**	**43.38**	**276**	*e*P		**P**	**10 37 04.9**	**+0.3**
WRA	**Warramunga Arr**	**43.39**	**276**	P		**P**	**10 37 04.8**	**+0.1**
	0.7nm,0.5s,mb3.6,baz=115,slow=7.1,SNR=24							
FINES	**FINESS Array B**	**147.57**	**338**	PKPbc		PKPbc	10 48 40.6	-4.5
	1.0nm,0.6s,baz=59,slow=8.3,SNR=6.4							

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*IDC **20** 10:45:17.9±1.2, 3321S×17872W, h0km, mb4.6/3, mb1 4.1/4, mb1mx4.1/14, mbtmp4.5/4, ML3.9/1, MS4.1/3, Ms1 4.1/3, ms1mx3.5/25, Error ellipse: s-maj=33.8km s-min=28.2km az=91.0*
*NEIC **20** 10:45:22.9±1.1, 3343S×17869W, h35km, mb4.6/2, Error ellipse: s-maj=27.3km s-min=18.2km az=103.0*
ISC 20 10:45:24.5±1.3, 3348S±006×1789W±02, h35km, (h39km±1.3km: pP-P), n29, σ1§04/28, mb4.5/5, MS4.2/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.67**	**208**	PN		**Pn**	**10 46 33.2**	**+0.8**
MXZ				*e*SN		**Sn**	**10 47 31.2**	**+5.8**
MWZ	**Matawai**	**5.65**	**210**	PN		**Pn**	**10 46 45.6**	**-0.3**
MWZ				*e*SN		**Sn**	**10 47 55.2**	**+5.7**
URZ	**Urewera**	**5.77**	**213**	Pn		**Pn**	**10 46 48.2**	**+0.6**
	3.1nm,0.3s,baz=31,slow=12,SNR=46							
URZ				Sn		**Sn**	**10 47 58.2**	**+5.8**
	8.9nm,0.3s,baz=340,slow=24,SNR=9.7							
URZ	**Urewera**	**5.77**	**213**	*e*PN		**Pn**	**10 46 46.9**	**-0.7**
URZ				SN		**Sn**	**10 47 57.0**	**+4.6**
BKZ	**Black Stump Fm**	**6.79**	**212**	*e*PN		**Pn**	**10 47 02.4**	**+0.8**
BKZ				SN		**Sn**	**10 48 21.3**	**+3.8**
BFZ	**Birch Farm**	**8.17**	**207**	*e*PN		**Pn**	**10 47 18.7**	**-1.8**
BFZ				SN		**Sn**	**10 48 52.5**	**+1.0**
TIWZ	**Tintock**	**8.39**	**208**	SN		**Sn**	**10 48 57.6**	**+0.7**
MRZ	**Mangatainoka R**	**8.42**	**210**	*e*PN		**Pn**	**10 47 22.7**	**-1.2**
MRZ				SN		**Sn**	**10 48 57.3**	**-0.4**
TUWZ	**Tuamarina**	**9.76**	**214**	SN		**Sn**	**10 49 29.1**	**-1.6**
NNZ	**Nelson**	**9.87**	**216**	SN		**Sn**	**10 49 34.3**	**+1.1**
MQZ	**McQueen's Vall**	**12.16**	**210**	SN		**Sn**	**10 50 22.8**	**-6.5**
RPZ	**Rata Peaks**	**12.88**	**215**	Pn		**Pn**	**10 48 23.6**	**-1.3**
	0.5nm,0.3s,baz=359,slow=6.2,SNR=2.8							
DZM	**Mont Dzumac**	**17.22**	**308**	LR		LR	10 54 39.8	
	comp=Z,332nm,18.8s,baz=140,slow=33							
PPT	**Papeete**	**30.70**	**66**	LR		LR	11 01 18.5	
	comp=Z,397nm,18.2s,MS4.1,baz=357,slow=32							
STKA	**Stephens Creek**	**33.16**	**262**	LR		LR	11 05 35.6	
	comp=Z,471nm,18.2s,MS4.2,baz=25,slow=36							
CTA	**Charters Tower**	**33.68**	**284**	*e*P		**P**	**10 52 04.1**	**+1.9**
	16nm,1.9s,mb4.6							
ASAR	**Alice Springs**	**42.28**	**271**	P		**P**	**10 53 14.8**	**+0.1**
	9.8nm,0.7s,mb4.5,baz=110,slow=7.3,SNR=109							
ASAR				PcP		PcP	10 55 06.5	-1.7
	1.6nm,0.8s,baz=124,slow=3.9,SNR=6.0							
WB2	**Warramunga Arr**	**43.54**	**276**	*e*P		**P**	**10 53 24.5**	**-0.5**
WRA	**Warramunga Arr**	**43.55**	**276**	P		**P**	**10 53 24.8**	**-0.3**
	6.9nm,0.9s,mb4.4,baz=116,slow=8.1,SNR=48							
FITZ	**Fitzroy Cosmy**	**51.66**	**273**	*e*P		**P**	**10 54 27.5**	**-0.6**
	4.4nm,0.6s,mb4.6							
QSPA	**South Pole Qui**	**56.64**	**180**	P		**P**	**10 55 04.6**	**+1.1**
	4.9nm,1.0s,mb4.5,baz=80,slow=3.9,SNR=6.6							
VNA3	**Neumayer Olymp**	**75.29**	**176**	*e*		**P**	**10 57 13.9**	**+10**
VNA3				*e*			10 57 20.1	
VNA3				*e*		pP	10 57 24.8	+10
VNA3				*e*			10 57 27.6	
VNA2	**Neumayer--Watz**	**75.72**	**177**	*e*		**P**	**10 57 16.5**	**+11**
VNA2				*e*			10 57 23.0	
VNA2				*e*		pP	10 57 28.4	+12
VNA2				*e*			10 57 30.7	
VNA1	**Neumayer--Stat**	**75.95**	**177**	*e*		**P**	**10 57 12.5**	**+5.3**
VNA1				*e*			10 57 19.1	
VNA1				*e*		pP	10 57 23.2	+5.0
VNA1				*e*			10 57 25.9	
KAF	**Kangasniemi**	**147.15**	**338**	*e*p		PKPdf	11 04 58.0	-2.8
FINES	**FINESS Array B**	**147.73**	**338**	PKPbc		PKPbc	11 05 01.5	-3.2
	4.3nm,0.7s,baz=47,slow=3.8,SNR=12							
NB2	**NORSAR Subarra**	**151.65**	**350**	PKP		PKPdf	11 05 10.7	+2.7
	comp=Z,9.2nm,1.1s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**151.65**	**350**	PKPbc		PKPbc	11 05 13.6	-0.7
	comp=Z,1.5nm,0.8s,baz=16,slow=4.2,SNR=2.9							
TORD	**Torodi Ar. Bea**	**159.75**	**182**	PKPab		PKPab	11 05 59.1	+0.2
	comp=Z,0.5nm,0.8s,baz=184,slow=3.6,SNR=3.7							

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*ISK **20** 11:08:55.5, 3850N×3905E, h5km, MD3.3*
*CSEM **20** 11:08:56.9±0.1, 3853N×3902E, h10km, MD3.3, Error ellipse: s-maj=2.7km s-min=1.6km az=149.0*
*ISCJB **20** 11:08:57.2±0.5, 3840N±003×3907E±004, h8km±5km, Error ellipse: s-maj=6.2km s-min=3.3km az=136.3*
*DDA **20** 11:08:58.3, 3843N×3905E, h9km, Md3.3*
*NSSC **20** 11:09:05.3, 3815N×3935E, h20km±1km*
ISC 20 11:08:57.3±0.5, 3840N±003×3908E±003, h7km±4km, n30, σ1§22/47, 1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.13**	**323**	*i* P		**Pg**	**11 09 00.4**	**+0.4**
ELZG				*i* S		**Sg**	**11 09 04.0**	**+2.1**
MALT	**Malatya**	**0.52**	**261**	*i* PG		**Pg**	**11 09 06.4**	**-1.0**
MALT				*i* SG		**Sg**	**11 09 14.9**	**+0.8**
MYA	**Malataya**	**0.52**	**262**	PG		**Pg**	**11 09 07.3**	**0.0**
PTK	**Pertek**	**0.55**	**26**	*i* PG		**Pg**	**11 09 06.1**	**-1.8**
PTK				*i* SG		**Sg**	**11 09 14.0**	**-1.1**
URFA	**Urfa**	**0.97**	**192**	PG		**Pg**	**11 09 17.1**	**+1.1**
DIY	**Diyarbakir**	**1.03**	**119**	PN		**Pn**	**11 09 17.7**	**-0.5**
BINT	**Bingol**	**1.20**	**66**	PN		**Pn**	**11 09 19.0**	**-1.6**
EZC	**Erzincan**	**1.47**	**23**	*e*PN		**Pn**	**11 09 20.9**	**-3.2**
GZT	**Gaziantep**	**1.59**	**230**	*i* P		**Pn**	**11 09 25.8**	**0.0**
GZT				*i* S		**Sg**	**11 09 50.8**	**+2.5**
DRBT	**Darb Altahta**	**1.65**	**159**	⇑P		**Pg**	**11 09 34.9**	**+6.0**
DRBT				⇑S		**Sg**	**11 09 58.1**	**+7.8**
DRBT	**Darb Altahta**	**1.65**	**159**	⇑*i*P		**Pg**	**11 09 34.9**	**+6.0**
BNGL	**BINGOL**	**1.71**	**70**	*i* P		**Pn**	**11 09 28.8**	**+1.2**
BNGL				*i* S		**Sb**	**11 09 51.6**	**+0.8**
MARD	**Mardin**	**1.72**	**128**	*i* P		**Pn**	**11 09 28.1**	**+0.4**
MARD				*i* S		**Sn**	**11 09 50.8**	**+0.8**
KELT	**Kelkit**	**1.75**	**4**	*i* P		**Pn**	**11 09 28.4**	**+0.3**
KELT				*i* S		**Sb**	**11 09 52.5**	**+0.4**
KBSD	**Kabsdagh**	**1.81**	**140**	⇑P		**Pn**	**11 09 30.9**	**+2.0**
KBSD				⇑S		**Sn**	**11 09 51.0**	**-1.1**
KBSD	**Kabsdagh**	**1.81**	**140**	⇑*i*P		**Pn**	**11 09 31.0**	**+2.1**
KBSD				⇑*i*S		**Sn**	**11 09 51.0**	**-1.1**
BTMT	**Batman**	**1.91**	**95**	*e*PN		**Pn**	**11 09 29.1**	**-1.1**
GAZ	**Gaziantep**	**1.92**	**231**	*e*PN		**Pn**	**11 09 31.5**	**+1.1**
KMRS	**Kahramanmaras**	**1.94**	**243**	*e*PN		**Pn**	**11 09 31.3**	**+0.6**
GUMT	**Gumushane**	**2.08**	**8**	*e*PN		**Pn**	**11 09 31.6**	**-1.1**
EZM	**Erzurum**	**2.33**	**49**	*e*PN		**Pn**	**11 09 35.8**	**-0.2**
ERZM	**Erzurum**	**2.33**	**49**	*i* P		**Pn**	**11 09 36.9**	**+0.8**
ERZM				*i* S		**Sg**	**11 10 18.0**	**+5.8**
DRWC	**Darouich**	**2.61**	**228**	⇑P		**Pg**	**11 09 46.8**	**-0.6**
DRWC				⇑S		**Sg**	**11 10 18.9**	**-2.3**
KOZT	**Kozan**	**2.73**	**251**	*e*PN		**Pn**	**11 09 42.3**	**+0.7**
SIRT	**Sirnak**	**2.80**	**108**	*e*PN		**Pn**	**11 09 44.3**	**+1.8**
COBT	**Iskenderun**	**2.93**	**231**	*i* P		**Pn**	**11 09 45.5**	**+1.2**
COBT				*i* S		**Sg**	**11 10 29.8**	**-1.5**
TUTA	**Tutak**	**3.08**	**70**	*i* P		**Pn**	**11 09 46.3**	**-0.1**
TUTA				*i* S		**Sg**	**11 10 34.8**	**-1.4**
BTCH	**Batrach**	**3.15**	**222**	⇑P		**Pb**	**11 09 53.9**	**+0.3**
BTCH				⇑S		**Sb**	**11 10 31.5**	**-0.7**
SLNF	**Slenfeh**	**3.61**	**220**	⇓P		**Pb**	**11 09 60.0**	**-1.5**
SLNF				⇑S		**Sb**	**11 10 42.8**	**-2.7**
HAKT	**HAKKARI**	**3.75**	**101**	*i* P		**Pn**	**11 09 59.2**	**+3.6**
HAKT				*i* S		**Sg**	**11 10 58.3**	**+0.6**

IDC 20 11:09:45.1±7.3, 1751S×17865W, h588km±96km, mb3.1/5, mb1 3.4/6, mb1mx3.1/14, mbtmp3.1/6, Error ellipse: s-maj=126.7km s-min=33.2km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.75**	**250**	P		P	11 12 52.1	+0.6
	0.2nm,0.3s,baz=79,slow=19,SNR=2.7							
STKA	**Stephens Creek**	**38.63**	**241**	P		P	11 16 19.5	+0.1
	1.6nm,0.5s,baz=103,slow=10,SNR=2.9							
WRA	**Warramunga Arr**	**44.48**	**259**	P		P	11 17 05.5	0.0
	1.1nm,0.5s,baz=94,slow=7.0,SNR=32							
ASAR	**Alice Springs**	**44.69**	**254**	P		P	11 17 06.7	-0.4
	5.7nm,0.5s,baz=88,slow=8.5,SNR=113							
TXAR	**Lajitas Array**	**85.97**	**58**	P		P	11 21 24.6	+0.3
	0.8nm,0.7s,baz=222,slow=6.1,SNR=9.4							
PDAR	**Pinedale Array**	**87.22**	**44**	P		P	11 21 29.4	-0.4
	0.4nm,0.7s,baz=195,slow=3.2,SNR=5.2							
GERES	**GERESS Array B**	**147.17**	**345**	PKPbc		PKPbc	11 28 23.0	+0.1
	0.6nm,0.4s,baz=36,slow=5.0,SNR=4.4							

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*IDC **20** 11:33:05.7±1.2, 1729N×9186W, h0km, mb3.9/4, mb1 4.2/9, mb1mx4.1/19, mbtmp4.1/9, ML4.2/5, MS3.8/6, Ms1 3.9/6, ms1mx3.4/30, Error ellipse: s-maj=24.1km s-min=20.3km az=16.0*
*ISCJB **20** 11:33:08.3±0.8, 1723N±004×9208W±003, h28km±8km, mb4.1/14, MS4.0/3, Error ellipse: s-maj=6.0km s-min=4.1km az=168.6*
*BJI **20** 11:33:08.3, 1720N×9210W, h7km, mB4.2, Ms4.7, Msz4.4*
*NEIC **20** 11:33:10.3, 1719N×9209W, h8km, mb4.2/17, MD4.5(MEX), After MEX.*
*MEX **20** 11:33:11.4±0.5, 1718N×9208W, h13km±8km, MD4.5*
ISC 20 11:33:08.9±1.0, 1721N±003×9206W±003, h18km±7km, n71, σ1§31/79, mb4.1/14, MS4.0/3, 1C, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**0.72**	**229**	*e*P		**Pg**	**11 33 21.8**	**-1.2**
SCX				*i* S		**Sg**	**11 33 32.5**	**-0.2**
CCIG	**Comitan**	**0.93**	**184**	*e*P		**Pb**	**11 33 25.8**	**-0.6**
CCIG				*i* S		**Sb**	**11 33 37.2**	**-1.1**
SCIG	**Sabancuy**	**1.94**	**25**	*i* P		**Pn**	**11 33 40.3**	**-0.5**
SCIG				*i* S		**Sn**	**11 34 04.6**	**-0.1**
CMIG	**Matias Romero**	**2.70**	**268**	*e*P		**Pn**	**11 33 51.7**	**+0.3**
CMIG				Pn		**Pn**	**11 33 54.7**	**+3.4**
CMIG				*i* S		**Sn**	**11 34 22.9**	**-0.7**
CMIG				Sn		**Sn**	**11 34 33.3**	**+10**
CMIG	**Matias Romero**	**2.70**	**268**	Pn		**Pn**	**11 33 54.7**	**+3.4**
	16nm,0.3s,baz=76,slow=15,SNR=66							
CMIG				Sn		**Sn**	**11 34 33.3**	**+10**
	76nm,0.3s,baz=320,slow=9.2,SNR=12							
CMIG	**Matias Romero**	**2.70**	**268**	*e*P		**Pn**	**11 33 51.7**	**+0.3**
CMIG				*i* S		**Sn**	**11 34 22.9**	**-0.7**
JAT	**Jato**	**2.90**	**172**	*e*P		**Pn**	**11 33 58.4**	**+4.3**
FUG	**Fuego 3**	**2.99**	**157**	*e*P		**Pn**	**11 33 57.3**	**+2.0**
HUIG	**Huatulco**	**4.14**	**250**	*e*P		**Pn**	**11 34 11.6**	**+0.5**
HUIG				*i* S		**Sn**	**11 34 58.5**	**-0.5**
OXX	**Oaxaca**	**4.46**	**269**	*i* P		**Pn**	**11 34 16.4**	**+0.9**
OXX				*i* S		**Sn**	**11 35 06.8**	**-0.1**
VHO	**Vista Hermosa**	**4.47**	**269**	*i* P		**Pn**	**11 34 16.8**	**+1.1**
VHO				*i* S		**Sn**	**11 35 06.2**	**-1.0**
TEIG	**Tepich**	**4.68**	**50**	*e*Pn		**Pn**	**11 34 16.6**	**-2.0**
TEIG				*e*Sn		**Sn**	**11 35 16.5**	**+4.1**
TEIG	**Tepich**	**4.68**	**50**	Pn		**Pn**	**11 34 16.2**	**-2.3**
	82nm,0.3s,baz=271,slow=1.9,SNR=246							
TEIG				Sn		**Sn**	**11 35 08.3**	**-4.1**
	82nm,0.3s,baz=29,slow=20,SNR=10							
TPIG	**Tehuac#an**	**5.19**	**284**	*i* P		**Pn**	**11 34 24.8**	**-0.8**
TPIG				*i* S		**Sn**	**11 35 23.1**	**-1.9**
UTMO	**Huajuapan**	**5.51**	**277**	*e*P		**Pn**	**11 34 29.2**	**-0.8**
UTMO				*i* S		**Sn**	**11 35 32.4**	**-0.5**
TGUH	**Tegucigalpa,Un**	**5.58**	**124**	*e*Pn		**Pn**	**11 34 31.3**	**+0.3**
	172nm,0.6s							
PPM	**Popocatepetl**	**6.51**	**287**	*i* P		**Pn**	**11 34 45.5**	**+1.8**
PPM				*i* S		**Sn**	**11 35 56.4**	**-1.1**
ACX	**Acapulco**	**7.52**	**269**	*e*P		**Pn**	**11 35 02.0**	**+4.4**
JTS	**JuntasAbangare**	**9.74**	**134**	LR		LR	11 40 15.9	
	comp=Z,356nm,18.4s,baz=304,slow=44							
MGV	**Managua**	**12.38**	**65**	*e*P		**Pn**	**11 36 04.7**	**+0.4**
TXAR	**Lajitas Array**	**16.09**	**321**	Pn		**Pn**	**11 36 55.0**	**+0.9**
	0.0nm,0.3s,baz=130,slow=15,SNR=5.6							
LRAL	**Lakeview Retre**	**16.41**	**15**	*e*P		**Pn**	**11 36 58.2**	**+0.1**
	5.7nm,0.4s							
MIAR	**Mount Ida**	**17.32**	**356**	*e*P		**Pn**	**11 37 09.5**	**-0.1**
	6.7nm,0.6s							
MIAR				*e*S		**Sn**	**11 40 06.6**	**-15**
OXF	**Oxford**	**17.39**	**7**	*e*P		**Pn**	**11 37 10.6**	**0.0**
	48nm,1.0s							
GOGA	**Godfrey**	**17.89**	**24**	*e*P		**Pn**	**11 37 15.8**	**-1.0**
PLAL	**Pickwick Lake**	**18.05**	**11**	*e*P		**Pn**	**11 37 18.6**	**-0.1**
	16nm,1.0s							
LPIG	**La Paz**	**18.39**	**295**	P		**Pn**	**11 37 24.5**	**+1.5**
	6.0nm,0.3s,baz=83,slow=6.8,SNR=4.0							
LPIG				LR		LR	11 44 43.1	
	comp=Z,216nm,18.2s,baz=3.9,slow=38							
WMOK	**Wichita Mounta**	**18.46**	**342**	*e*P		**Pn**	**11 37 22.5**	**-1.2**
	6.3nm,0.8s							
SWET	**Sewanee**	**18.75**	**16**	*e*P		**Pn**	**11 37 26.4**	**-0.9**
MNTX	**Cornudas Mount**	**18.82**	**322**	*e*P		**Pn**	**11 37 31.5**	**+3.4**
	4.4nm,1.0s							
WVT	**Waverly**	**19.22**	**10**	*e*P		**Pn**	**11 37 30.9**	**-1.9**
CPCT	**Copper Cave**	**19.37**	**19**	*e*P		**Pn**	**11 37 34.1**	**-0.6**
TKL	**Tuckaleechee C**	**19.80**	**20**	P		**Pn**	**11 37 37.9**	**-1.9**
	0.3nm,0.3s,baz=193,slow=13,SNR=5.2							
TKL				LR		LR	11 46 31.2	
	comp=Z,171nm,18.9s,baz=132,slow=41							
SIUC	**Southern Illin**	**20.58**	**6**	*e*P		**P**	**11 37 46.4**	**-0.3**
	29nm,0.8s							
TZTN	**Tazewell**	**20.68**	**20**	*e*P		**P**	**11 37 50.5**	**+2.7**
	12nm,0.8s							
ROSC	**El Rosal**	**21.27**	**123**	P		**P**	**11 37 55.5**	**+1.1**
	3.6nm,0.4s,mb4.1,baz=97,slow=20,SNR=2.6							
BNM	**Barren Site**	**21.33**	**325**	*e*P		**P**	**11 37 56.7**	**+1.8**
OTAV	**Otavalo**	**21.54**	**140**	*e*P		**P**	**11 37 59.3**	**+2.0**
	11nm,0.8s,mb4.3							
LAZ	**Ladron**	**21.80**	**325**	P		**P**	**11 37 58.8**	**-1.1**
ANMO	**Albuquerque**	**21.85**	**327**	P		**P**	**11 38 03.4**	**+3.0**
ANMO				*e*P			11 38 06.2	
ANMO	**Albuquerque**	**21.85**	**327**	P		**P**	**11 38 03.4**	**+3.0**
	1.3nm,0.7s,mb3.4,baz=149,slow=10,SNR=7.7							
KSU1	**Kansas State U**	**22.17**	**351**	*e*P		**P**	**11 38 05.8**	**+2.0**
	14nm,0.8s,mb4.4							
SDV	**Santo Domingo**	**22.44**	**109**	*e*P		**P**	**11 38 06.8**	**0.0**
	9.4nm,0.8s,mb4.3							
SDV	**Santo Domingo**	**22.44**	**109**	P		**P**	**11 38 08.3**	**+1.4**
	9.3nm,0.8s,mb4.3,baz=314,slow=6.3,SNR=10							
TUC	**Tucson**	**22.64**	**315**	*e*P		**P**	**11 38 11.0**	**+2.1**
	3.2nm,1.0s,mb3.7							
SDCO	**Great Sand Dun**	**23.63**	**333**	*e*P		**P**	**11 38 22.7**	**+3.7**
	3.9nm,0.8s,mb3.9							
MVCO	**Mesa Verde**	**24.64**	**327**	*e*P		**P**	**11 38 31.2**	**+2.9**
	7.8nm,1.0s,mb4.2							
SJG	**San Juan**	**24.70**	**84**	P		**P**	**11 38 27.5**	**-1.6**
	6.2nm,0.3s,mb4.7,baz=50,slow=23,SNR=3.7							
CPD	**Cerro la Pandu**	**24.93**	**84**	P		**P**	**11 38 29.6**	**-1.6**
	524nm,0.1s							
WUAZ	**Wupatki**	**25.05**	**320**	*e*P		**P**	**11 38 36.4**	**+4.3**
	4.9nm,0.9s,mb4.0							
MTP	**Monte Pirata**	**25.27**	**84**	*e*P		**P**	**11 38 33.0**	**-1.2**
PV01	**Paradox Valley**	**25.38**	**328**	*e*P		**P**	**11 38 36.3**	**+1.2**
JFWS	**Jewell Farm**	**25.67**	**3**	*e*P		**P**	**11 38 37.1**	**-0.5**
PV10	**Paradox Valley**	**25.80**	**328**	*e*P		**P**	**11 38 41.9**	**+3.1**
ATAH	**Atahualpa**	**27.59**	**150**	LR		LR	11 47 54.9	
	comp=Z,164nm,21.7s,MS3.6,baz=274,slow=32							
PDAR	**Pinedale Array**	**29.52**	**333**	P		**P**	**11 39 12.7**	**+0.7**
	0.3nm,0.9s,baz=146,slow=5.3,SNR=2.8							
MOOW	**Moose Ponds**	**30.82**	**333**	P		**P**	**11 39 24.6**	**+1.0**
	5.6nm,0.5s,mb4.7							
HLID	**Hailey**	**32.38**	**329**	*e*P		**P**	**11 39 41.2**	**+3.9**
MCMT	**McKenzie Canyo**	**32.60**	**332**	*e*P		**P**	**11 39 42.5**	**+3.2**
ULM	**Lac du Bonnet**	**33.10**	**356**	P		**P**	**11 39 42.0**	**-1.5**
	baz=186,slow=14							
EGMT	**Eagleton**	**33.98**	**339**	*e*P		**P**	**11 39 50.9**	**-0.3**
	5.7nm,0.8s,mb4.5							
EDM	**Edmonton**	**39.60**	**340**	*e*P		**P**	**11 40 38.1**	**-0.9**
LPAZ	**La Paz**	**40.80**	**143**	P		**P**	**11 40 48.8**	**-0.5**
	0.5nm,0.5s,mb3.4,baz=303,slow=14,SNR=3.6							
YKA	**Yellowknife Ar**	**47.91**	**346**	P		**P**	**11 41 43.9**	**-1.8**
	1.8nm,0.8s,mb4.1,baz=144,slow=7.4,SNR=19							
PLCA	**Paso Flores**	**61.01**	**161**	LR		LR	12 05 16.1	
	comp=Z,141nm,20.2s,MS4.1,baz=5.4,slow=32							
NOA	**NORSAR Array B**	**81.37**	**29**	LR		LR	12 20 15.1	
	comp=Z,188nm,18.7s,MS4.5,baz=280,slow=35							
HHC	**Hu-ho-hao-te**	**118.21**	**340**	*e*PKP		PKPdf	11 51 56.4	+1.2
WMQ	**Urumqi**	**119.27**	**0**	⇑PKP		PKPdf	11 51 59.0	+1.9
LZH	**Lanzhou**	**124.90**	**344**	*e*PKP		PKPdf	11 52 08.5	+0.3
WRA	**Warramunga Arr**	**136.04**	**259**	PKP		PKPdf	11 52 28.9	-0.7
	0.9nm,0.8s,baz=87,slow=2.8,SNR=7.1							
ASAR	**Alice Springs**	**136.59**	**254**	PKP		PKPdf	11 52 30.6	0.0
	0.6nm,0.9s,baz=98,slow=2.2,SNR=4.9							

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*NEIC **20** 11:33:11.4±3.5, 3332S×17842W, h36km±27km, mb4.6/2, Error ellipse: s-maj=33.3km s-min=18.8km az=59.0*
*ISCJB **20** 11:33:12.1±2.3, 3354S±006×1789W±02, h31km±19km, mb4.3/6, Error ellipse: s-maj=29.0km s-min=9.3km az=8.1*
*IDC **20** 11:33:12.2±2.8, 3325S×17848W, h41km±23km, mb4.1/5, mb1 4.2/8, mb1mx3.9/17, mbtmp4.1/8, ML3.7/3, MS3.8/2, Ms1 3.8/2, ms1mx3.2/21, Error ellipse: s-maj=22.3km s-min=19.8km az=160.0*
ISC 20 11:33:13.1±2.3, 3346S±006×1788W±02, h29km±19km, n31, σ0§78/30, mb4.3/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.74**	**209**	*e*PN		**Pn**	**11 34 22.2**	**-0.3**
MXZ				SN		**Sn**	**11 35 24.1**	**+7.6**
PUZ	**Puketiti**	**5.20**	**207**	*e*PN		**Pn**	**11 34 28.0**	**-0.8**
PUZ				SN		**Sn**	**11 35 33.5**	**+5.7**
MWZ	**Matawai**	**5.72**	**

14nm,0.5s,mb4.7,baz=97,slow=7.6,SNR=368
ASAR PcP PcP 12 00 16.2 -0.2
2.3nm,0.5s,baz=104,slow=3.9,SNR=5.8
ASAR S **S** **12 04 36.3 +0.4**
1.0nm,0.8s,baz=92,slow=15,SNR=7.6
WB2 Warramunga Arr 44.19 262 *eP* **P** **11 58 44.3 -0.3**
WRA Warramunga Ar 44.20 262 P **P** **11 58 44.4 -0.3**
6.3nm,0.3s,mb4.6,baz=97,slow=7.4,SNR=493
WRA PcP PcP 12 00 17.9 +1.2
1.1nm,0.8s,baz=100,slow=3.8,SNR=3.4
WRA S **S** **12 04 35.2 -2.0**
0.9nm,0.9s,baz=95,slow=13,SNR=3.2
FORT Forrest 48.88 247 *eP* **P** **11 59 19.8 0.0**
8.7nm,0.6s,mb4.4
KLBR Kellerberrin 57.64 245 *eP* **P** **12 00 22.1 +0.3**
21nm,1.0s,mb4.2
TXAR Lajitas Array 87.47 57 P **P** **12 03 13.8 +0.8**
TXAR Lajitas Array 87.47 57 P **P** **12 03 13.8 +0.8**
1.3nm,0.8s,mb3.7,baz=216,slow=6.4,SNR=14
PDAR Pinedale Array 89.35 43 P **P** **12 03 21.8 +0.4**
1.8nm,0.6s,mb4.1,baz=216,slow=3.0,SNR=19
YKA Yellowknife Ar 96.83 25 P **P** **12 03 53.5 -1.5**
0.1nm,0.7s,mb3.1,baz=243,slow=4.7,SNR=4.4
MKAR Makanchi Array 111.05 313 PKiKP PKiKP 12 08 53.5 -0.7
0.9nm,0.6s,baz=57,slow=1.1,SNR=13
ARCES ARCESS Array B 129.03 349 PKP PKPdf 12 09 27.5 -0.5
ARCES ARCESS Array B 129.03 349 PKP PKPdf 12 09 27.5 -0.5
1.7nm,0.6s,baz=77,slow=1.7,SNR=17
NB2 NORSAR Subarra139.12 353 PKP 12 09 38.2
comp=Z,3.1nm,0.8s,baz=21,slow=3.6
NOA NORSAR Array B139.12 353 PKhKP 12 09 40.6
comp=Z,2.0nm,0.7s,baz=16,slow=5.0,SNR=4.1
BRTR Keskin Array B 146.68 312 PKPbc PKPbc 12 10 03.6 -0.1
comp=Z,3.3nm,0.5s,baz=111,slow=3.3,SNR=14
KOLS Kolonicke sedl 147.32 334 *e*PKP PKPbc 12 10 06.5 +1.4
STHS Stebnicka Huta 147.33 336 *e*PKP PKPbc 12 10 05.6 +0.5
STHS *e* PKPab 12 10 09.8 +0.9
CRVS Cervenica-Dubn 147.66 335 *e*PKP PKPbc 12 10 06.6 +0.7
CRVS *e* PKPab 12 10 10.9 +0.6
UPC Upice 148.13 342 *e*PKPbc PKPbc 12 10 07.7 +0.6
CLL Collm 148.16 346 ⇓*i*PKP PKPbc 12 10 07.3 +0.2
CLL ⇑*i*PKP PKPab 12 10 11.9 -0.3
CLL Collm 148.16 346 ⇓*i*PKPbc PKPbc 12 10 07.3 +0.2
comp=Z,17nm,0.7s
CLL ⇑*i*PKPab PKPab 12 10 11.9 -0.3
comp=Z,7.0nm,0.5s
DPC Dobruska-Polom 148.19 342 *e*PKPbc PKPbc 12 10 07.7 +0.5
BRG Berggiesshubel 148.34 345 *i* P PKPdf 12 10 08.1 +4.8
comp=Z,12nm,1.0s
KECS Kecovo 148.38 336 *e*PKP PKPbc 12 10 08.7 +0.9
KECS *e* PKPab 12 10 13.1 -0.1
PVCC Panska Ves 148.50 344 *e*PKPbc PKPbc 12 10 08.4 +0.4
VYHS Vyhne 148.99 338 *e*PKP PKPbc 12 10 09.4 +0.2
VYHS *i* PKPab 12 10 16.3 +0.6
PRU Pruhonice 149.01 344 *e*PKPbc PKPbc 12 10 09.6 +0.4
NKC Novy Kostel 149.29 346 *e*PKPbc PKPbc 12 10 10.5 +0.6
MODS Modra-Piesok 149.63 339 *e*PKP PKPbc 12 10 07.3 -3.5
MODS *e* PKPab 12 10 12.0 -6.4
KHC Kasperske Hory 150.04 344 *e*PKP PKPbc 12 10 12.2 +0.5
KHC *e* PKPab 12 10 20.0 -0.1
KHC Kasperske Hory 150.04 344 *e*PKPbc PKPbc 12 10 12.2 +0.5
KHC PKPab PKPab 12 10 20.0 -0.1
GERES GERESS Array B 150.28 344 PKPbc PKPbc 12 10 12.2 -0.1
comp=Z,2.8nm,0.6s,baz=28,slow=3.2,SNR=13

ISCJB ***20*** *11:55:06.6±0.5, 3686N±002×2658E±003, h12km±4km, Error ellipse: s-maj=4.0km s-min=3.1km az=143.4*
CSEM ***20*** *11:55:06.9±0.1, 3686N×2661E, h12km, MD3.4, Error ellipse: s-maj=1.8km s-min=1.6km az=166.0*
DDA ***20*** *11:55:06.7, 3683N×2653E, h9km, Md3.1*
ISK ***20*** *11:55:06.6, 3688N×2658E, h9km, MD3.2*
NEIC ***20*** *11:55:06.4, 3683N×2660E, h29km, MD3.4(ATH), After ATH.*
ATH ***20*** *11:55:06.4, 3683N×2660E, h29km±1km, MD3.4/9*
THE ***20*** *11:55:07.2, 3691N×2658E, h2km, ML4.0*
ISC 20 11:55:07.3±0.4, 3684N±002×2658E±003, h16km±3km, n35, σ1§01/50, 1C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.49**	**117**	*e*PB	**Pb**	**11 55 16.5**	**-1.1**
BODT	**Bodrum**	**0.63**	**69**	PG	**Pg**	**11 55 18.8**	**-0.9**
BODT				SG	**Sg**	**11 55 28.0**	**0.0**
BDRM	**Kayabasi**	**0.73**	**72**	*i* P	**Pg**	**11 55 20.5**	**-1.1**
BDRM				*i* S	**Sg**	**11 55 30.7**	**-0.5**
DAT	**Datca**	**0.81**	**97**	PG	**Pg**	**11 55 22.8**	**-0.3**
DAT				SG	**Sg**	**11 55 34.4**	**+0.7**
APE	**Apeiranthos**	**0.87**	**286**	*e*Pg	**Pg**	**11 55 23.7**	**-0.6**
APE				*e*Sg	**Sg**	**11 55 36.6**	**+0.8**
APE	**Apeiranthos**	**0.87**	**286**	⇑*i*PN	**Pn**	**11 55 23.9**	**-1.0**
APE				*e*SN	**Sn**	**11 55 37.0**	**-0.3**
SMG	**Samos**	**0.89**	**13**	⇓*i*PN	**Pn**	**11 55 23.6**	**-1.6**
SMG				*e*SN	**Sn**	**11 55 37.0**	**-0.8**
SANT	**Santorini**	**1.01**	**243**	*e*Pg	**Pg**	**11 55 27.6**	**+0.6**
SANT				*e*Sg	**Sg**	**11 55 42.7**	**+2.4**
SANT	**Santorini**	**1.01**	**243**	*e*Pg	**Pg**	**11 55 26.8**	**-0.2**
SANT				*e*Sg	**Sg**	**11 55 42.1**	**+1.8**
MLSB	**Milas**	**1.06**	**64**	PG	**Pg**	**11 55 27.0**	**-0.9**
MLSB				SG	**Sg**	**11 55 42.0**	**+0.3**
KARP	**Karpathos**	**1.37**	**160**	*e*PN	**Pn**	**11 55 31.9**	**+0.1**
KARP				*e*SN	**Sn**	**11 55 49.8**	**+0.2**
ARG	**Arkhangelos**	**1.39**	**116**	*e*PN	**Pn**	**11 55 32.0**	**0.0**
YER	**Yerkesik**	**1.40**	**77**	*e*PN	**Pn**	**11 55 32.1**	**0.0**
URLA	**Izmir**	**1.52**	**0**	*i* P	**Pn**	**11 55 32.8**	**-1.1**
URLA				*i* S	**Sn**	**11 55 53.4**	**+0.1**
BLCB	**Balcova**	**1.59**	**13**	PN	**Pn**	**11 55 35.3**	**+0.5**
BLCB	**Balcova**	**1.59**	**13**	*e*Pg	**Pn**	**11 55 33.8**	**-1.0**
BLCB	**Balcova**	**1.59**	**13**	*e*Pn	**Pn**	**11 55 35.3**	**+0.5**
CHOS	**Chios island**	**1.60**	**345**	*e*Pg	**Pn**	**11 55 34.4**	**-0.6**
IZM	**Izmir**	**1.65**	**19**	PN	**Pn**	**11 55 35.8**	**+0.2**
KDAG	**Bornova**	**1.66**	**19**	*i* P	**Pn**	**11 55 36.3**	**+0.6**
KDAG				*i* S	**Sg**	**11 55 59.9**	**-0.8**
ZKR	**Zakros**	**1.74**	**190**	*e*Pb	**Pb**	**11 55 38.3**	**-0.6**
ZKR	**Zakros**	**1.74**	**190**	P	**Pn**	**11 55 39.9**	**+3.0**
NPS	**Neapolis**	**1.76**	**207**	*e*PN	**Pn**	**11 55 36.4**	**-0.7**
NPS				*e*SN	**Sn**	**11 55 57.8**	**-1.3**
LAST	**Lasithi**	**1.90**	**208**	*e*Pb	**Pb**	**11 55 40.0**	**-1.5**
LAST	**Lasithi**	**1.90**	**208**	P	**Pn**	**11 55 42.0**	**+3.0**
FETY	**Fethiye**	**2.02**	**95**	*e*PN	**Pn**	**11 55 42.7**	**+2.0**
XRY	**Khrisi**	**2.09**	**200**	*e*PB	**Pn**	**11 55 42.0**	**+0.4**
DENT	**Denizli**	**2.16**	**64**	*e*PN	**Pn**	**11 55 43.8**	**+1.2**
AKHS	**Akhisar**	**2.26**	**25**	*i* P	**Pn**	**11 55 45.3**	**+1.3**
AKHS				*i* S	**Sg**	**11 56 20.6**	**+0.6**
AKS	**Akhisar**	**2.26**	**25**	*e*PN	**Pn**	**11 55 44.9**	**+0.9**
MANT	**Manisa**	**2.28**	**43**	*i* P	**Pg**	**11 55 49.9**	**-1.2**
MANT				*i* S	**Sg**	**11 56 23.1**	**+2.5**
KULA	**Kula-Manisa**	**2.35**	**44**	*e*PN	**Pn**	**11 55 46.4**	**+1.1**
PRK	**Paraskevi**	**2.42**	**354**	*e*PN	**Pn**	**11 55 45.8**	**-0.4**
VLI	**Veliai**	**2.93**	**269**	*e*PN	**Pn**	**11 55 53.0**	**-0.2**
EZN	**Ezine**	**2.99**	**356**	*e*PN	**Pn**	**11 55 54.8**	**+0.8**

NEIC ***20*** *12:00:30.2±2.8, 4458N×12939W, h10km, mb3.8/1, Error ellipse: s-maj=31.5km s-min=7.9km az=79.0*
ISC 20 12:00:26.5±1.8, 4450N±003×1298W±02, h10km, n153, σ0§91/153, 55C-48D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02A	**Mapleton** baz=4.5	**4.30**	**95**	⇓P	**Pn**	**12 01 30.4**	**-1.6**
J02A	**Umpqua** baz=4.8	**4.62**	**102**	⇑P	**Pn**	**12 01 34.6**	**-1.7**
F03A	**Seaside** baz=4.9	**4.62**	**70**	⇓P	**Pn**	**12 01 35.6**	**-0.7**
COR	**Corvallis**	**4.63**	**87**	P	**Pn**	**12 01 35.7**	**-0.7**
H03A	**Soap Creek Ran** baz=4.9	**4.63**	**86**	⇑P	**Pn**	**12 01 35.7**	**-0.9**
G03A	**Yamhill** baz=4.9	**4.68**	**78**	⇑P	**Pn**	**12 01 36.4**	**-0.8**
I03A	**Eugene** baz=4.9	**4.70**	**94**	⇓P	**Pn**	**12 01 35.8**	**-1.6**
NLO	**Nicolai Mounta**	**4.74**	**68**	P	**Pn**	**12 01 37.5**	**-0.4**
E03A	**Lebam** baz=5.1,SNR=20	**4.82**	**63**	P	**Pn**	**12 01 38.4**	**-0.8**
K02A	**Glendale** baz=5.1	**4.88**	**109**	⇑P	**Pn**	**12 01 39.4**	**-0.5**
D03A	**Wishkah Elem.** baz=5.2,SNR=55	**4.95**	**56**	P	**Pn**	**12 01 40.8**	**0.0**
C03A	**Quillayute Air** baz=5.3	**5.00**	**44**	⇓P	**Pn**	**12 01 41.4**	**-0.1**
BMW	**Boistfort Moun**	**5.01**	**64**	P	**Pn**	**12 01 41.0**	**-0.7**
NLWA	**Neilton Lookou** baz=5.3,SNR=15	**5.03**	**53**	⇑P	**Pn**	**12 01 41.6**	**-0.4**
J03A	**Ideyld Park** baz=5.3	**5.04**	**101**	⇑P	**Pn**	**12 01 41.1**	**-1.1**
G04A	**Mulino** baz=5.5,SNR=9.8	**5.24**	**80**	⇓P	**Pn**	**12 01 44.2**	**-0.6**
RRHS	**Rochester High**	**5.25**	**62**	P	**Pn**	**12 01 44.8**	**-0.3**
BROR	**Big Rock Looko**	**5.25**	**90**	P	**Pn**	**12 01 44.7**	**-0.3**
CPW	**Capitol Peak**	**5.26**	**90**	P	**Pn**	**12 01 44.9**	**-0.3**
I04A	**Tendick Farm,** baz=5.6	**5.34**	**95**	⇑P	**Pn**	**12 01 45.6**	**-0.7**
E04A	**Onalaska** baz=5.6,SNR=7.1	**5.38**	**65**	⇓P	**Pn**	**12 01 46.8**	**0.0**
F04A	**Amboy** baz=5.7,SNR=36	**5.39**	**72**	P	**Pn**	**12 01 46.3**	**-0.6**
LCW	**Lucas Creek**	**5.42**	**64**	P	**Pn**	**12 01 47.0**	**-0.4**
H04A	**Detroit Lake** baz=5.7,SNR=27	**5.42**	**85**	P	**Pn**	**12 01 46.9**	**-0.5**
IRO	**Indian Ridge**	**5.42**	**93**	P	**Pn**	**12 01 47.2**	**-0.2**
FL2	**Flat Top 2**	**5.50**	**69**	P	**Pn**	**12 01 48.4**	**-0.1**
FRIS	**Frissel Point**	**5.51**	**90**	P	**Pn**	**12 01 48.5**	**0.0**
D04A	**Dobbs Creek Ra** baz=5.8,SNR=70	**5.53**	**59**	P	**Pn**	**12 01 49.1**	**+0.2**
MTMW	**Mount Mitchell**	**5.55**	**71**	P	**Pn**	**12 01 48.8**	**-0.4**
B04A	**Port Angeles** baz=5.9,SNR=15	**5.62**	**48**	P	**Pn**	**12 01 49.9**	**-0.2**
MEW	**McNeil Island**	**5.67**	**59**	P	**Pn**	**12 01 51.3**	**+0.6**
J04A	**Umpqua Nationa** baz=5.9	**5.68**	**100**	⇑P	**Pn**	**12 01 52.1**	**+0.3**
HUOR	**Husband**	**5.70**	**91**	P	**Pn**	**12 01 51.2**	**0.0**
C04A	**Brinnon** baz=6.0	**5.72**	**53**	⇑P	**Pn**	**12 01 52.1**	**+0.6**
PCMD	**Pierce County**	**5.75**	**63**	P	**Pn**	**12 01 51.9**	**0.0**
GHW	**Garrison Hill**	**5.83**	**61**	P	**Pn**	**12 01 52.9**	**-0.1**
VFP	**Flag Point**	**5.96**	**79**	P	**Pn**	**12 01 55.1**	**+0.3**
E05A	**Randle** baz=6.3,SNR=68	**6.00**	**67**	P	**Pn**	**12 01 55.5**	**+0.2**
ASR	**Mount Adams--S**	**6.00**	**71**	P	**Pn**	**12 01 55.5**	**+0.2**
PGC	**Sidney**	**6.02**	**44**	*e*Pn	**Pn**	**12 01 54.8**	**-0.7**
LON	**Longmire**	**6.02**	**65**	P	**Pn**	**12 01 55.7**	**+0.1**
F05A	**White Salmon** baz=6.3,SNR=22	**6.04**	**74**	P	**Pn**	**12 01 56.4**	**+0.5**
G05A	**Wamic** baz=6.3,SNR=20	**6.06**	**80**	P	**Pn**	**12 01 56.6**	**+0.5**
D05A	**Enumclaw** baz=6.3,SNR=71	**6.07**	**61**	P	**Pn**	**12 01 57.3**	**+1.1**
GLK	**Glacier Lake**	**6.10**	**67**	P	**Pn**	**12 01 57.3**	**+0.7**
H05A	**Madras** baz=6.4	**6.11**	**86**	⇓P	**Pn**	**12 01 56.6**	**-0.2**
I05A	**Bend** baz=6.4	**6.11**	**90**	⇓P	**Pn**	**12 01 56.6**	**-0.2**
C05A	**Toll Reservoir** baz=6.7,SNR=12	**6.47**	**58**	P	**Pn**	**12 02 01.9**	**+0.2**
E06A	**Yakima** baz=6.8	**6.51**	**69**	⇑P	**Pn**	**12 02 02.8**	**+0.5**
B05A	**Bryant** baz=6.8	**6.51**	**52**	⇑P	**Pn**	**12 02 02.8**	**+0.5**
G06A	**Carlson Farm,** baz=6.8,SNR=20	**6.54**	**80**	P	**Pn**	**12 02 02.5**	**-0.2**
VIPM	**Ingram Point**	**6.55**	**87**	P	**Pn**	**12 02 02.5**	**-0.3**
JCW	**Jim Creek**	**6.57**	**53**	P	**Pn**	**12 02 03.5**	**+0.4**
H06A	**Lindquist Farm** baz=7.0,SNR=24	**6.74**	**85**	⇑P	**Pn**	**12 02 05.1**	**-0.4**
D06A	**Cle Elum** baz=7.1,SNR=14	**6.79**	**63**	⇓P	**Pn**	**12 02 06.5**	**+0.3**
EBG	**Ellensburg**	**6.88**	**66**	P	**Pn**	**12 02 08.1**	**+0.7**
I06A	**Prineville** baz=7.1	**6.89**	**91**	⇑P	**Pn**	**12 02 07.0**	**-0.5**
RPW	**Rockport**	**6.94**	**52**	P	**Pn**	**12 02 08.7**	**+0.5**
A05A	**Maple Falls** baz=7.2,SNR=18	**6.94**	**47**	P	**Pn**	**12 02 08.8**	**+0.7**
VDB	**Vedder Mountai**	**6.95**	**47**	P	**Pn**	**12 02 08.6**	**+0.3**
B06A	**Marblemount** baz=7.2	**6.99**	**52**	⇓P	**Pn**	**12 02 09.4**	**+0.5**
WRW	**Wenatchee Ridg**	**7.03**	**58**	P	**Pn**	**12 02 10.1**	**+0.6**
C06A	**Tall Timber Ra** baz=7.3	**7.05**	**58**	⇑P	**Pn**	**12 02 10.2**	**+0.5**
F07A	**Phinny Hill Vi** baz=7.4	**7.10**	**75**	⇓P	**Pn**	**12 02 10.2**	**-0.2**
G07A	**Ruggs Ranch, H** baz=7.5,SNR=12	**7.22**	**80**	P	**Pn**	**12 02 12.0**	**0.0**
E07A	**Sunnyside** baz=7.5	**7.26**	**70**	⇑P	**Pn**	**12 02 12.5**	**-0.2**
H07A	**Lands Inn, Kim** baz=7.5	**7.30**	**86**	⇑P	**Pn**	**12 02 13.3**	**+0.3**
D07A	**Quincy** baz=7.6	**7.36**	**65**	⇑P	**Pn**	**12 02 14.3**	**+0.4**
I07A	**Izee** baz=7.6	**7.38**	**90**	⇑P	**Pn**	**12 02 14.8**	**+0.5**
NLW	**Nelson Butte**	**7.45**	**58**	P	**Pn**	**12 02 15.4**	**+0.2**
C07A	**Waterville** baz=7.7,SNR=16	**7.47**	**61**	P	**Pn**	**12 02 15.6**	**+0.2**
G08A	**Pilot Rock** baz=8.0,SNR=12	**7.72**	**80**	P	**Pn**	**12 02 18.6**	**-0.4**
B07A	**Winthrop** baz=8.0	**7.75**	**56**	⇓P	**Pn**	**12 02 19.8**	**+0.5**
E08A	**Dider Farm, El** baz=8.0	**7.79**	**71**	⇑P	**Pn**	**12 02 20.1**	**+0.2**
ORV	**Oroville** baz=8.0	**7.89**	**126**	⇓P	**Pn**	**12 02 19.5**	**-1.8**
D08A	**Wollman Farm,** baz=8.3	**8.01**	**68**	⇓P	**Pn**	**12 02 22.9**	**+0.1**
C08A	**Higginbotham F** baz=8.4	**8.14**	**62**	⇓P	**Pn**	**12 02 24.3**	**-0.4**
B08A	**Colville Reser** baz=8.4	**8.18**	**58**	⇑P	**Pn**	**12 02 25.3**	**+0.1**
BEKR	**Beckwourth** baz=8.5	**8.38**	**120**	⇓P	**Pn**	**12 02 28.2**	**+0.2**
D09A	**Jones Farm, Ri** baz=8.7	**8.41**	**68**	⇓P	**Pn**	**12 02 28.3**	**-0.1**
A08A	**Turner Farm, O** baz=8.7	**8.48**	**55**	⇑P	**Pn**	**12 02 29.7**	**+0.4**
O06A	**Flanigan** baz=8.7	**8.54**	**117**	⇑P	**Pn**	**12 02 30.5**	**+0.3**
G09A	**Cove** baz=8.8	**8.55**	**81**	⇓P	**Pn**	**12 02 30.3**	**0.0**
C09A	**Chrisman Ranch** baz=8.9	**8.64**	**63**	⇑P	**Pn**	**12 02 30.9**	**-0.6**
LAVA	**Lava Cap Winer** baz=9.0	**8.87**	**127**	⇓P	**Pn**	**12 02 34.4**	**-0.2**
A09A	**Danville** baz=9.1	**8.89**	**56**	⇓P	**Pn**	**12 02 35.1**	**+0.1**
B09A	**Rice** baz=9.2	**8.93**	**60**	⇑P	**Pn**	**12 02 34.8**	**-0.7**
G10A	**Bishop Farm, J** baz=9.3	**9.02**	**81**	⇓P	**Pn**	**12 02 37.0**	**+0.3**
I10A	**Payette** baz=9.5	**9.31**	**88**	⇓P	**Pn**	**12 02 39.0**	**-1.8**
K10A	**MacKenzie Ranc** baz=9.7	**9.51**	**96**	⇑P	**Pn**	**12 02 45.9**	**+2.4**
G11A	**Walters Elk Ra** baz=9.9	**9.62**	**80**	⇑P	**Pn**	**12 02 47.7**	**+2.8**
F11A	**Grangeville** baz=10.0	**9.72**	**77**	⇑P	**Pn**	**12 02 48.7**	**+2.4**
E11A	**Bogner Ranch,** baz=10.0	**9.72**	**74**	⇑P	**Pn**	**12 02 46.8**	**+0.5**
L10A	**Juniper Basin** baz=10	**10.00**	**99**	⇑P	**Pn**	**12 02 53.2**	**+3.1**
B11A	**Sandpoint** baz=10	**10.05**	**62**	⇑P	**Pn**	**12 02 50.2**	**-0.7**
K11A	**Parker Ranch,** baz=10	**10.11**	**95**	⇑P	**Pn**	**12 02 55.0**	**+3.3**
M10A	**I.L. Ranch, Tu** baz=10	**10.14**	**102**	⇑P	**Pn**	**12 02 54.5**	**+2.4**
A11A	**Hall Mountain,** baz=10	**10.23**	**59**	⇑P	**Pn**	**12 02 53.3**	**+0.1**
O09A	**Fish Creek Ran** baz=10	**10.27**	**111**	⇑P	**Pn**	**12 02 52.6**	**-1.3**
D12A	**Red Ives Fores** baz=11	**10.39**	**71**	⇓P	**Pn**	**12 02 55.2**	**-0.3**
H12A	**Diamond D Ranc** baz=11	**10.66**	**84**	⇑P	**Pn**	**12 03 00.3**	**+1.2**
J12A	**Stokes Ranch,** baz=11	**10.67**	**92**	⇓P	**Pn**	**12 03 00.0**	**+0.7**
M11A	**Holland Ranch,** baz=11	**10.70**	**102**	⇓P	**Pn**	**12 03 00.7**	**+1.0**
K12A	**Draper Farm, C** baz=11	**10.95**	**95**	⇓P	**Pn**	**12 03 04.6**	**+1.4**
F13A	**Darby** baz=11	**10.99**	**78**	⇓P	**Pn**	**12 03 03.4**	**-0.3**
D13A	**Huson** baz=11	**11.01**	**71**	⇑P	**Pn**	**12 03 03.6**	**-0.3**
L12A	**House Creek Ra** baz=11	**11.01**	**97**	⇑P	**Pn**	**12 03 03.9**	**0.0**
C13A	**Hot Springs** baz=11	**11.03**	**68**	⇓P	**Pn**	**12 03 04.2**	**0.0**
G13A	**Cobalt** baz=11	**11.06**	**81**	⇓P	**Pn**	**12 03 04.4**	**-0.3**
H13A	**Challis** baz=11	**11.08**	**84**	⇓P	**Pn**	**12 03 04.1**	**-0.9**
HLID	**Hailey** baz=11	**11.10**	**89**	⇑P	**Pn**	**12 03 04.2**	**-1.0**
E13A	**Victor** baz=11	**11.12**	**74**	⇓P	**Pn**	**12 03 05.8**	**+0.4**
B13A	**Whitefish** baz=12	**11.25**	**64**	⇓P	**Pn**	**12 03 06.9**	**-0.4**
I13A	**Wildhorse Cree** baz=12	**11.26**	**87**	⇑P	**Pn**	**12 03 07.6**	**+0.2**
J13A	**Cove Ranch, Pi** baz=12	**11.30**	**90**	⇑P	**Pn**	**12 03 09.9**	**+1.9**
M12A	**Wells** baz=12	**11.32**	**101**	⇓P	**Pn**	**12 03 09.1**	**+0.9**
MSO	**Missoula** 2.4nm,0.8s	**11.32**	**73**	*e*Pn	**Pn**	**12 03 08.7**	**+0.4**
A13A	**Flathead Natio** baz=12	**11.44**	**62**	⇓P	**Pn**	**12 03 09.6**	**-0.2**
N12A	**Clover Valley,** baz=12	**11.44**	**103**	⇓P	**Pn**	**12 03 10.7**	**+0.8**
Q10A	**Clear Creek Ra** baz=12	**11.49**	**115**	⇑P	**Pn**	**12 03 10.8**	**+0.2**
K13A	**Stover Farm, H** baz=12	**11.53**	**94**	⇑P	**Pn**	**12 03 12.2**	**+1.1**
C14A	**Swan Lake** baz=12	**11.59**	**68**	⇓P	**Pn**	**12 03 10.2**	**-1.7**
E14A	**Clinton** baz=12	**11.60**	**75**	⇑P	**Pn**	**12 03 10.4**	**-1.6**
D14A	**Greenough** baz=12	**11.65**	**71**	⇑P	**Pn**	**12 03 11.5**	**-1.2**
L13A	**Double Diamond** baz=12	**11.79**	**96**	⇓P	**Pn**	**12 03 15.6**	**+1.0**
M13A	**Montello** baz=12	**11.86**	**100**	⇑P	**Pn**	**12 03 14.9**	**-0.8**
O12A	**Currie** baz=12	**11.89**	**106**	⇓P	**Pn**	**12 03 18.3**	**+2.3**
Q11A	**Duckwater** baz=12	**11.97**	**113**	⇓P	**Pn**	**12 03 15.0**	**-2.1**
N13A	**Wendover, West** baz=12	**12.02**	**102**	⇓P	**Pn**	**12 03 20.4**	**+2.6**
MCMT	**McKenzie Canyo**	**12.06**	**82**	*e*Pn	**Pn**	**12 03 17.4**	**-0.9**
P12A	**McGill** baz=12	**12.14**	**109**	⇓P	**Pn**	**12 03 21.8**	**+2.3**
F15A	**Butte** baz=12	**12.27**	**78**	⇓P	**Pn**	**12 03 19.7**	**-1.6**
G15A	**Dillon** baz=12	**12.29**	**81**	⇓P	**Pn**	**12 03 19.5**	**-2.0**
D15A	**Lincoln** baz=13	**12.31**	**72**	⇑P	**Pn**	**12 03 21.6**	**-0.2**
FURC	**Furnace Creek,** baz=13	**12.67**	**125**	⇑P	**Pn**	**12 03 27.9**	**+1.1**
R12A	**Pony Springs,** baz=13	**12.94**	**113**	⇑P	**Pn**	**12 03 30.4**	**0.0**
S13A	**Holt Ranch, En** baz=14	**13.84**	**114**	⇓P	**Pn**	**12 03 42.7**	**0.0**
EGMT	**Eagleton** 4.7nm,0.8s	**14.29**	**69**	*e*P	**Pn**	**12 03 57.0**	**+8.3**
MSU	**Marysvale**	**14.47**	**108**	*e*P	**Pn**	**12 03 53.6**	**+2.4**
U13A	**Pakoon Wash** baz=15	**14.47**	**118**	⇑P	**Pn**	**12 03 51.1**	**-0.2**
RLMT	**Red Lodge** 5.9nm,1.2s	**14.57**	**80**	*e*P	**Pn**	**12 04 00.6**	**+8.0**
T15A	**Red Dirt Ranch** baz=15	**15.13**	**114**	⇑P	**Pn**	**12 04 02.0**	**+1.7**
IRM	**Iron Mountain** baz=15	**15.29**	**127**	⇑P	**Pn**	**12 04 00.8**	**-1.6**
SRU	**San Rafael** 3.5nm,0.8s	**15.32**	**104**	*e*P	**Pn**	**12 04 09.0**	**+6.3**
W13A	**Hualapai Mount** baz=16	**15.38**	**122**	⇓P	**Pn**	**12 04 02.7**	**-0.8**
X13A	**Yucca** baz=16	**15.76**	**123**	⇓P	**Pn**	**12 04 06.1**	**-2.3**
PDMCI	**Parker Dam,Lak** baz=16	**15.78**	**125**	⇓P	**Pn**	**12 04 07.9**	**-0.8**
W14A	**Seligman** baz=16	**15.79**	**120**	⇑P	**Pn**	**12 04 08.3**	**-0.6**
W15A	**Williams** baz=16	**16.32**	**119**	⇑P	**Pn**	**12 04 16.8**	**+1.0**
WUAZ	**Wupatki** baz=17	**16.68**	**116**	⇑P	**Pn**	**12 04 21.0**	**+0.7**
216A	**Three Points,** baz=19	**18.99**	**125**	⇑P	**Pn**	**12 04 48.7**	**-0.1**
LAZ	**Ladron**	**20.12**	**112**	*e*P	**P**	**12 05 01.6**	**+1.2**
318A	**Bisbee** baz=20	**20.26**	**123**	⇓P	**P**	**12 05 02.1**	**+0.1**

IDC 20 12:05:22.1±1.3, 3077N×4180W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, MS3.9/8, Ms1 4.0/8, ms1mx3.7/24, Error ellipse: s-maj=88.4km s-min=22.4km az=28.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan** comp=Z,116nm,20.9s,baz=90,slow=28	**25.43**	**246**	LR	LR	12 17 26.4	
BBTS	**Babate** comp=Z,341nm,19.3s,baz=32,slow=31	**28.19**	**119**	LR	LR	12 19 49.4	
DBIC	**Dimbokro** 1.6nm,0.6s,baz=331,slow=10,SNR=3.5	**42.09**	**117**	P	P	12 13 15.8	-0.3
DBIC				LR	LR	12 27 54.0	
TORD	**Torodi Ar. Bea** 2.1nm,1.1s,baz=286,slow=8.0,SNR=3.7	**43.67**	**104**	P	P	12 13 29.1	+0.1
TORD				LR	LR	12 29 53.2	
TXAR	**Lajitas Array** 0.4nm,0.8s,baz=90,slow=8.8,SNR=3.6	**52.95**	**285**	P	P	12 14 40.6	+0.1
TXAR				LR	LR	12 34 25.7	
LPAZ	**La Paz** comp=Z,78nm,20.8s,baz=240,slow=32	**53.20**	**212**	LR	LR	12 34 10.4	
PDAR	**Pinedale Array** 1.7nm,0.8s,baz=79,slow=7.7,SNR=10	**54.24**	**303**	P	P	12 14 49.9	+0.2
PDAR				LR	LR	12 36 05.8	
YKA	**Yellowknife Ar** 0.9nm,1.0s,baz=86,slow=7.2,SNR=9.3	**55.32**	**327**	P	P	12 14 57.2	0.0
KMBO	**Kilima Mbogo** comp=Z,180nm,18.2s,baz=278,slow=34	**81.17**	**97**	LR	LR	12 51 54.7	

IDC ***20*** *12:10:26.5±1.2, 5500N×16204E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.4/5, Error ellipse: s-maj=48.8km s-min=27.0km az=160.0*
MOS ***20*** *12:10:29.5±0.4, 5490N×16246E, h27km, mb3.8/1, Error ellipse: s-maj=24.0km s-min=11.6km az=73.3*
ISCJB ***20*** *12:10:30.0±0.8, 5490N±002×16243E±007, h32km±6km, mb3.4/5, Error ellipse: s-maj=6.4km s-min=3.6km az=12.4*
*KRS

KII				*e*S		**Sn**	12 11 24.8	-0.6
SRDR	**Sredinnyy**	**2.06**	**314**	*e*P		**Pn**	12 11 03.3	-0.3
SRDR				*e*S		**Sn**	12 11 27.5	-1.0
SPN	**Mys Shipunski**	**2.30**	**218**	*e*P		**Pn**	12 11 06.6	-0.3
SPN				*e*S		**Sn**	12 11 32.4	-2.1
NLC	**Nalytchevo**	**2.51**	**227**	*e*P		**Pn**	12 11 09.5	-0.3
NLC				*e*S		**Sn**	12 11 38.3	-1.4
AVH	**Avacha**	**2.72**	**234**	*e*P		**Pn**	12 11 13.6	+1.0
AVH				*e*S		**Sn**	12 11 45.8	+1.0
GNL	**Ganaly**	**2.88**	**247**	*e*P		**Pn**	12 11 15.6	+0.7
GNL				*e*S		**Sn**	12 11 48.9	+0.1
PET	**Petropavlovsk**	**2.92**	**231**	⇓*i*PN		**Pn**	12 11 16.0	+0.7
PET				*e*S		**Sn**	12 11 49.7	+0.1
PET				pmax	pmax			
	comp=Z,65nm,0.6s							
PET				smax				
	comp=N,558nm,0.6s							
PET				smax				
	comp=E,426nm,0.4s							
PET	**Petropavlovsk**	**2.92**	**231**	*e*P		**Pn**	12 11 15.7	+0.4
PET				*e*S		**Sn**	12 11 49.4	-0.2
RUS	**Russkaya**	**3.40**	**224**	S		**Sn**	12 12 01.6	+0.1
GRL	**Gorelyy**	**3.50**	**229**	*e*P		**Pn**	12 11 24.7	+1.4
GRL				*e*S		**Sn**	12 12 03.7	-0.2
MIPR	**Malaya Ipel'ka**	**4.28**	**234**	P		**Pn**	12 11 35.5	+1.5
YKA	**Yellowknife Ar**	**40.90**	**45**	P		**P**	12 18 10.1	-0.1
YKA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**40.90**	**45**	P		**P**	12 18 10.1	-0.1
	comp=Z,0.5nm,0.6s,mb3.3,baz=300,slow=7.9,SNR=7.7							
MKAR	**Makanchi Array**	**48.59**	**296**	P		**P**	12 19 09.6	-2.1
MKAR	**Makanchi Array**	**48.59**	**296**	P		**P**	12 19 09.6	-2.0
	comp=Z,0.3nm,0.6s,mb3.5,baz=53,slow=7.7,SNR=3.7							
PDAR	**Pinedale Array**	**55.47**	**63**	P		**P**	12 20 04.2	+1.3
	comp=Z,0.3nm,0.7s,mb3.4,baz=290,slow=2.6,SNR=3.7							
TXAR	**Lajitas Array**	**68.69**	**69**	P		**P**	12 21 33.0	+1.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=295,slow=4.5,SNR=4.2							
ASAR	**Alice Springs**	**82.00**	**206**	P		**P**	12 22 47.9	-0.2
	comp=Z,0.2nm,0.6s,mb3.2,baz=21,slow=5.8,SNR=4.3							

*NSSC **20** 12:16:42.9,3877N×3924E, h29km±8km*
*CSEM **20** 12:16:43.4±0.1,3848N×3912E, h8km, MD3.1, Error ellipse: s-maj=2.5km s-min=1.6km az=139.0*
*ISK **20** 12:16:43.6, 3850N×3909E, h5km, MD3.3*
*ISCJB **20** 12:16:44.1±0.6,3846N±003×3913E±004, h7km±5km, Error ellipse: s-maj=6.6km s-min=3.7km az=142.1*
*DDA **20** 12:16:45.1, 3845N×3915E, h5km, Md3.1*

ISC 20 12:16:44.6±0.5, 3848N±003×3914E±004, h6km±4km, n29, σ0°93/46, 4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.12**	**279**	*i* P	**Pg**	**12 16 47.4**	**+0.2**
ELZG				*i* S	**Sg**	**12 16 53.3**	**+4.4**
ELZG	**Elazig**	**0.12**	**279**	*i* P	**Pg**	**12 16 47.3**	**+0.1**
PTK	**Pertek**	**0.46**	**26**	*i* PG	**Pg**	**12 16 53.1**	**-0.4**
PTK				*i* SG	**Sg**	**12 17 00.0**	**+0.6**
MYA	**Malataya**	**0.58**	**255**	*i* PG	**Pg**	**12 16 55.3**	**-0.5**
MALT	**Malatya**	**0.58**	**254**	*i* PG	**Pg**	**12 16 54.6**	**-1.1**
MALT				*i* SG	**Sg**	**12 17 03.0**	**-0.3**
DIY	**Diyarbakir**	**1.03**	**124**	PG	**Pg**	**12 17 04.5**	**0.0**
URFA	**Urfa**	**1.06**	**194**	PG	**Pg**	**12 17 04.5**	**-0.5**
BINT	**Bingol**	**1.13**	**69**	PN	**Pn**	**12 17 06.0**	**-0.9**
ATAB	**Bozova**	**1.21**	**214**	*i* P	**Pg**	**12 17 07.5**	**-0.2**
ATAB				*i* S	**Sg**	**12 17 24.0**	**+0.6**
EZC	**Erzincan**	**1.37**	**22**	*e*PN	**Pn**	**12 17 07.7**	**-2.6**
BNGL	**BINGOL**	**1.64**	**73**	*i* P	**Pn**	**12 17 15.4**	**+1.5**
BNGL				*i* S	**Sg**	**12 17 46.0**	**+8.6**
KELT	**Kelkit**	**1.67**	**3**	*i* P	**Pn**	**12 17 15.3**	**+1.0**
KELT				*i* S	**Sg**	**12 17 44.2**	**+5.9**
GZT	**Gaziantep**	**1.68**	**229**	*i* P	**Pg**	**12 17 14.9**	**+0.6**
GZT				*i* S	**Sg**	**12 17 40.5**	**+2.1**
MARD	**Mardin**	**1.74**	**131**	*i* P	**Pn**	**12 17 14.5**	**-0.8**
MARD				*i* S	**Sn**	**12 17 40.1**	**+2.3**
KBSD	**Kabsdagh**	**1.85**	**143**	⇓P	**Pn**	**12 17 15.5**	**-1.2**
KBSD				⇓S	**Sn**	**12 17 39.1**	**-1.2**
KBSD	**Kabsdagh**	**1.85**	**143**	⇓*i*P	**Pn**	**12 17 15.5**	**-1.2**
KBSD				⇓*i*S	**Sn**	**12 17 39.2**	**-1.2**
BTMT	**Batman**	**1.87**	**98**	PN	**Pn**	**12 17 16.7**	**-0.4**
GUMT	**Gumushane**	**2.00**	**7**	*e*PN	**Pn**	**12 17 19.1**	**+0.2**
GAZ	**Gaziantep**	**2.01**	**230**	*e*PN	**Pn**	**12 17 18.9**	**-0.1**
KMRS	**Kahramanmaras**	**2.02**	**242**	*e*PN	**Pn**	**12 17 19.2**	**+0.1**
EZM	**Erzurum**	**2.24**	**50**	*e*PN	**Pn**	**12 17 23.2**	**+1.1**
DRWC	**Darouich**	**2.70**	**227**	⇑P	**Pn**	**12 17 28.0**	**-0.5**
DRWC				⇑S	**Sn**	**12 18 01.4**	**-0.1**
DRWC	**Darouich**	**2.70**	**227**	⇑*i*P	**Pn**	**12 17 28.0**	**-0.5**
DRWC				⇑*i*S	**Sn**	**12 18 01.4**	**-0.1**
KOZT	**Kozan**	**2.80**	**259**	*e*PN	**Pn**	**12 17 29.8**	**0.0**
BSHR	**Al Beshri**	**2.86**	**169**	⇑P	**Pn**	**12 17 34.1**	**+3.5**
BSHR				⇑S	**Sn**	**12 18 10.8**	**+5.5**
BSHR	**Al Beshri**	**2.86**	**169**	⇑*i*P	**Pn**	**12 17 34.1**	**+3.5**
BSHR				⇑*i*S	**Sn**	**12 18 10.8**	**+5.5**
BTCH	**Batrach**	**3.24**	**222**	⇑*i*P	**Pn**	**12 17 35.8**	**-0.1**
BTCH				⇑*i*S	**Sn**	**12 18 14.7**	**-0.1**
SLNF	**Slenfeh**	**3.70**	**220**	⇑P	**Pn**	**12 17 42.5**	**+0.2**
SLNF				⇑S	**Sn**	**12 18 26.1**	**-0.1**
SLNF	**Slenfeh**	**3.70**	**220**	⇑*i*P	**Pn**	**12 17 42.5**	**+0.2**
SLNF				⇑*i*S	**Sn**	**12 18 26.1**	**-0.1**

MEX 20 12:18:47.8±0.7, 1601N×9768W, h24km±33km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.57**	**311**	*i* P	Pb	12 18 57.5	-1.8
PNIG				*i* S	Sb	12 19 04.5	-2.5
OXX	**Oaxaca**	**1.40**	**41**	*e*P	Pn	12 19 01.5	-10
HUIG	**Huatulco**	**1.53**	**99**	*i* P	Pn	12 19 11.4	-2.2
HUIG				*i* S	Sn	12 19 28.3	-4.4
UTMO	**Huajuapan**	**1.81**	**356**	*e*P	Pn	12 19 15.6	-1.8
UTMO				*i* S	Sn	12 19 36.8	-2.8
ACX	**Acapulco**	**2.31**	**292**	*i* P	Pn	12 19 29.0	+4.6
CMIG	**Matias Romero**	**2.88**	**68**	*i* P	Pn	12 19 29.6	-2.6
CMIG				*i* S	Sn	12 20 03.4	-2.7

*IDC **20** 12:42:34.8±6.6, 3347S×17858W, h38km±51km, mb4.2/7, mb1 4.4/9, mb1mx4.2/16, mbtmp4.3/9, ML4.2/2, MS4.0/2, Ms1 4.0/2, ms1mx3.3/23, Error ellipse: s-maj=36.3km s-min=21.2km az=56.0*
*ISCJB **20** 12:42:35.1±1.7, 3379S±006×179.0W±0.1, h36km±14km, mb4.4/10, Error ellipse: s-maj=20.3km s-min=10.1km az=11.6*
*NEIC **20** 12:42:35.8±2.8, 3380S×17854W, h54km±22km, mb4.8/4, Error ellipse: s-maj=24.5km s-min=17.5km az=53.0*

ISC 20 12:42:33.8±2.5, 3371S±005×1789W±01, h18km±16km, n49, σ1°23/45, mb4.5/10, 1C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.49**	**210**	PN	**Pn**	**12 43 42.3**	**+1.5**
MXZ				SN	**Sn**	**12 44 38.6**	**+6.1**
PUZ	**Puketiti**	**4.94**	**207**	*e*PN	**Pn**	**12 43 47.3**	**+0.1**
PUZ				SN	**Sn**	**12 44 50.7**	**+6.8**
URZ	**Urewera**	**5.59**	**215**	Pn	**Pn**	**12 43 59.3**	**+3.2**
	11nm,0.3s,baz=29,slow=8.5,SNR=68						
URZ				Sn	**Sn**	**12 45 07.1**	**+7.2**
	7.7nm,0.3s,baz=167,slow=22,SNR=10.0						
URZ	**Urewera**	**5.59**	**215**	PN	**Pn**	**12 43 57.2**	**+1.1**
URZ				SN	**Sn**	**12 45 06.3**	**+6.4**
KNZ	**Kokohu**	**5.99**	**207**	PN	**Pn**	**12 44 02.0**	**+0.4**
BKZ	**Black Stump Fm**	**6.61**	**213**	PN	**Pn**	**12 44 10.8**	**+0.7**
BKZ				SN	**Sn**	**12 45 29.9**	**+5.0**
BFZ	**Birch Farm**	**7.98**	**208**	PN	**Pn**	**12 44 26.8**	**-2.1**
BFZ				SN	**Sn**	**12 46 00.3**	**+1.7**
MRZ	**Mangatainoka R**	**8.23**	**211**	PN	**Pn**	**12 44 30.9**	**-1.5**
MRZ				SN	**Sn**	**12 46 04.1**	**-0.8**
NNZ	**Nelson**	**9.70**	**217**	SN	**Sn**	**12 46 40.8**	**-0.2**
THZ	**Tophouse**	**10.35**	**217**	*e*PN	**Pn**	**12 44 59.6**	**-1.7**
THZ				SN	**Sn**	**12 46 56.7**	**-0.1**
LTZ	**Lake Taylor**	**11.42**	**215**	SN	**Sn**	**12 47 19.1**	**-4.1**
MQZ	**McQueen's Vall**	**11.97**	**211**	SN	**Sn**	**12 47 30.1**	**-6.6**
RPZ	**Rata Peaks**	**12.71**	**215**	Pn	**Pn**	**12 45 33.3**	**-0.3**
RPZ				Sn	**Sn**	**12 47 49.9**	**-4.7**
RPZ	**Rata Peaks**	**12.71**	**215**	Pn	**Pn**	**12 45 33.3**	**-0.3**
	1.4nm,0.3s,baz=26,slow=4.2,SNR=8.2						
RPZ				Sn	**Sn**	**12 47 49.9**	**-4.7**
	0.6nm,0.3s,baz=327,slow=11,SNR=6.1						

DZM	**Mont Dzumac**	**17.39**	**308**	P		**Pn**	**12 46 36.1**	**+0.6**
	0.4nm,0.3s,baz=126,slow=17,SNR=4.1							
DZM				LR		LR	12 52 03.1	
	comp=Z,374nm,19.3s,baz=185,slow=33							
EIDS	**Eidsvold**	**27.36**	**280**	*e*P		**P**	**12 48 19.6**	**+1.5**
	13nm,1.2s,mb4.3							
TBI	**Tubuai**	**27.73**	**76**	*e*LR		LR	12 54 59.6	
	101nm,32.2s							
PPT	**Papeete**	**30.77**	**66**	*e*LR		LR	12 56 34.2	
	84nm,22.0s							
HNR	**Honiara**	**31.04**	**316**	*e*P		**P**	**12 48 53.2**	**+2.5**
STKA	**Stephens Creek**	**33.16**	**262**	*e*P		**P**	**12 49 09.8**	**+0.6**
	0.7nm,0.8s,mb3.6							
STKA	**Stephens Creek**	**33.16**	**262**	P		**P**	**12 49 10.5**	**+1.3**
	1.1nm,0.7s,mb3.9,baz=85,slow=13,SNR=5.1							
STKA				LR		LR	13 02 18.2	
	comp=Z,283nm,18.3s,baz=25,slow=35							
CTA	**Charters Tower**	**33.77**	**285**	⇓*i*P		**P**	**12 49 15.6**	**+1.0**
	8.4nm,0.6s,mb4.8							
CTA	**Charters Tower**	**33.77**	**285**	P		**P**	**12 49 15.6**	**+1.0**
	8.0nm,0.5s,mb4.9,baz=117,slow=9.2,SNR=14							
CTAO	**Charters Tower**	**33.77**	**285**	*e*P		**P**	**12 49 15.6**	**+1.0**
RKT	**Rikitea**	**39.76**	**86**	*e*LR		LR	13 00 55.3	
	120nm,24.0s							
ASAR	**Alice Springs**	**42.31**	**271**	P		**P**	**12 50 26.4**	**-0.3**
	16nm,0.7s,mb4.8,baz=111,slow=7.4,SNR=312							
WB2	**Warramunga Arr**	**43.59**	**276**	*e*P		**P**	**12 50 35.8**	**-1.3**
WRA	**Warramunga Arr**	**43.60**	**276**	P		**P**	**12 50 36.3**	**-0.9**
	12nm,0.6s,mb4.8,baz=117,slow=7.7,SNR=178							
FORT	**Forrest**	**44.58**	**259**	⇑*i*P		**P**	**12 50 44.0**	**-0.9**
	7.2nm,0.5s,mb4.8							
VNDA	**Vanda**	**44.74**	**186**	pP		pP	12 50 56.6	+5.5
	0.7nm,0.9s,baz=359,slow=9.6,SNR=5.8							
FITZ	**Fitzroy Crossi**	**51.71**	**273**	⇓*i*P		**P**	**12 51 39.2**	**-0.9**
	10.0nm,0.6s,mb4.9							
QSPA	**South Pole Qui**	**56.41**	**180**	P		**P**	**12 52 15.4**	**+1.8**
QSPA				*e*P			12 52 15.9	
QSPA				pP		pP	12 52 26.2	+6.9
QSPA				*e*pP		pP	12 52 26.4	+7.1
QSPA	**South Pole Qui**	**56.41**	**180**	P		**P**	**12 52 15.4**	**+1.8**
	3.2nm,0.9s,mb4.3,baz=178,slow=1.2,SNR=11							
QSPA				pP		pP	12 52 26.2	+6.9
	6.4nm,0.8s,baz=352,slow=0.8,SNR=13							
SNAA	**Sanae**	**74.88**	**179**	*e*		**P**	**12 54 23.1**	**+10**
SNAA				*e*			12 54 43.6	
VNA3	**Neumayer Olymp**	**75.06**	**176**	*e*		**P**	**12 54 24.8**	**+11**
VNA3				*e*			12 54 27.9	
VNA3				*e*			12 54 47.1	
VNA2	**Neumayer--Watz**	**75.48**	**177**	*e*		**P**	**12 54 16.6**	**+0.2**
	baz=178,slow=4.4							
VNA2				*e*			12 54 27.4	
VNA2				*e*			12 54 30.0	
VNA2				*e*			12 54 49.7	
KSRS	**Korea Array**	**86.40**	**320**	P		**P**	**12 55 14.7**	**-0.2**
	0.9nm,0.7s,mb4.1,baz=115,slow=5.7,SNR=4.2							
YSS	**Yuzh-Sakhalins**	**87.41**	**335**	*e*P		**P**	**12 55 17.5**	**-2.1**
NVAR	**Mina Array Bea**	**91.15**	**43**	P		**P**	**12 55 33.8**	**-3.6**
	0.2nm,0.4s,mb3.8,baz=215,slow=11,SNR=2.6							
MKAR	**Makanchi Array**	**119.30**	**309**	PKP		PKPdf	13 01 17.3	-4.2
	0.4nm,0.8s,baz=112,slow=1.6,SNR=3.8							
ARCES	**ARCESS Array B**	**141.64**	**346**	PKhKP			13 01 55.6	
	3.0nm,0.9s,baz=29,slow=2.1,SNR=5.2							
FINES	**FINESS Array B**	**147.96**	**338**	PKPbc	PKPbc		13 02 13.8	-3.4
FINES	**FINESS Array B**	**147.96**	**338**	PKPbc	PKPbc		13 02 13.8	-3.4
	3.2nm,0.6s,baz=100,slow=4.5,SNR=5.5							
NB2	**NORSAR Subarra**	**151.88**	**350**	PKP	PKPbc		13 02 25.6	-1.2
	comp=Z,1.6nm,0.6s,baz=14,slow=2.6							
NOA	**NORSAR Array B**	**151.88**	**350**	PKPbc	PKPbc		13 02 25.7	-1.1
NOA	**NORSAR Array B**	**151.88**	**350**	PKPbc	PKPbc		13 02 25.7	-1.1
	comp=Z,1.8nm,0.7s,baz=14,slow=4.1,SNR=5.4							
DBIC	**Dimbokro**	**152.53**	**167**	PKPab	PKPab		13 02 36.8	-3.1
	comp=Z,1.6nm,0.5s,baz=66,slow=4.2,SNR=5.0							
BRTR	**Keskin Array B**	**153.36**	**292**	PKPbc	PKPbc		13 02 28.6	-2.2
	comp=Z,1.2nm,0.6s,baz=132,slow=3.5,SNR=6.5							
BRTR				PKPab	PKPab		13 02 40.4	-2.5
	comp=Z,3.8nm,1.1s,baz=140,slow=4.0,SNR=6.2							
TORD	**Torodi Ar. Bea**	**159.53**	**182**	PKPab	PKPab		13 03 08.5	-1.3
	comp=Z,1.2nm,0.6s,baz=154,slow=2.6,SNR=8.7							

*ISCJB **20** 12:44:11.9±0.6, 4587N±003×1186E±002, h14km±4km, Error ellipse: s-maj=5.2km s-min=2.4km az=8.8*
*CSEM **20** 12:44:12.5±0.1, 4586N×1186E, h12km±1km, ML3.2/12, Error ellipse: s-maj=2.6km s-min=1.2km az=5.0*
*VIE **20** 12:44:12.8±0.1, 4591N×1187E, h9km±1km, mb2.1/8, ML2.9/13, Error ellipse: s-maj=1.2km s-min=0.7km az=26.0 36 km ESE of Borgo*
*ROM **20** 12:44:13.6±0.3, 4592N×1185E, h7km±2km, Md2.6/5, Ml2.3/6, Error ellipse: s-maj=3.3km s-min=1.5km az=157.0*

ISC 20 12:44:12.5±0.6, 4584N±003×1185E±002, h11km±5km, n33, σ0°63/62, 19C-14D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGRP	**Cima Grappa**	**0.06**	**320**	⇑*i*Pg	**Pg**	**12 44 15.1**	**+0.4**
CGRP				Sg	**Sg**	**12 44 16.8**	**+0.5**
CTI	**Castel Tesino**	**0.25**	**326**	Pg	**Pg**	**12 44 18.1**	**+0.4**
CTI				Sg	**Sg**	**12 44 21.6**	**+0.4**
	459nm,0.2s						
FAU	**Forcella Aurin**	**0.40**	**13**	⇓*i*Pg	**Pg**	**12 44 19.6**	**-0.9**
CAE	**Caneva**	**0.44**	**67**	⇓*i*Pg	**Pg**	**12 44 20.5**	**-0.7**
CAE				*i* Sg	**Sg**	**12 44 26.6**	**-0.5**
CSO	**Casso**	**0.55**	**37**	⇓*i*Pg	**Pg**	**12 44 22.6**	**-0.6**
CSO				*e*Sg	**Sg**	**12 44 29.4**	**-0.9**
MLNI	**Malnisio**	**0.61**	**59**	⇑*i*Pg	**Pg**	**12 44 24.9**	**+0.5**
MLNI				*i* Sg	**Sg**	**12 44 33.2**	**+0.7**
MLNI	**Malnisio**	**0.61**	**59**	*i* Pg	**Pg**	**12 44 24.9**	**+0.5**
MLNI				*i* Sg	**Sg**	**12 44 33.2**	**+0.7**
APPI	**Appiano**	**0.77**	**326**	Pg	**Pg**	**12 44 27.5**	**+0.1**
APPI				Sg	**Sg**	**12 44 37.4**	**-0.2**
	129nm,0.3s						
MAGA	**Magasa**	**0.86**	**266**	Pg	**Pg**	**12 44 30.0**	**+1.0**
	218nm,0.2s						
CSMI	**Casera Mimoias**	**0.87**	**39**	⇑*i*Pg	**Pg**	**12 44 29.1**	**-0.3**
CSMI				*e*Sg	**Sg**	**12 44 41.4**	**+0.7**
SEST	**Monte Rota**	**0.95**	**15**	Pg	**Pg**	**12 44 30.5**	**-0.2**
	4μm,7.8s						
MABI	**Malga Bissina**	**0.96**	**284**	Pg	**Pg**	**12 44 31.8**	**+0.9**
BUA	**Buia**	**0.96**	**66**	⇓*i*Pg	**Pg**	**12 44 30.9**	**-0.2**
BUA				*e*Sg	**Sg**	**12 44 45.1**	**+1.5**
BOO	**Bordano**	**0.99**	**61**	⇓*i*Pg	**Pg**	**12 44 31.4**	**-0.3**
FVI	**Forni Avoltri**	**1.00**	**40**	Pg	**Pg**	**12 44 31.4**	**-0.3**
FVI				Sg	**Sg**	**12 44 45.0**	**+0.4**
	47nm,0.2s						
BAD	**Bernadia**	**1.05**	**67**	⇓*i*Pg	**Pg**	**12 44 32.0**	**-0.6**
BAD				*i* Sg	**Sg**	**12 44 47.3**	**+1.0**
ZOU	**Zoufplan**	**1.06**	**47**	⇑*i*Pg	**Pg**	**12 44 32.7**	**-0.2**
ZOU				*e*Sg	**Sg**	**12 44 47.7**	**+1.0**
COLI	**Coloredo**	**1.10**	**74**	⇑*i*Pg	**Pg**	**12 44 33.9**	**+0.1**
COLI				*e*Sg	**Sg**	**12 44 49.2**	**+1.1**
PLRO	**Paularo**	**1.15**	**51**	⇓*i*Pg	**Pg**	**12 44 34.3**	**-0.3**
PLRO				*e*Sg	**Sg**	**12 44 50.3**	**+0.8**
PTCC	**Patocco-Chiusa**	**1.19**	**61**	Pg	**Pg**	**12 44 34.9**	**-0.5**
PTCC				Sg	**Sg**	**12 44 51.7**	**+0.9**
	27nm,0.4s						
BRMO	**Bormio**	**1.21**	**302**	Pg	**Pg**	**12 44 36.0**	**+0.3**
BRMO				Sg	**Sg**	**12 44 51.2**	**-0.3**
	32nm,0.3s						
DRE	**Drenchia**	**1.29**	**74**	⇑*i*Pg	**Pg**	**12 44 37.2**	**-0.2**
DRE				*e*Sg	**Sg**	**12 44 54.5**	**+0.4**
LSR	**Lussari**	**1.33**	**61**	⇑*e*Pg	**Pg**	**12 44 37.3**	**-0.7**
LSR				*e*Sg	**Sg**	**12 44 55.7**	**+0.4**
FETA	**Feichten**	**1.42**	**327**	⇑*e*Pg	**Pg**	**12 44 39.1**	**-0.6**
	1.3nm,0.1s,SNR=9.2						
FETA				⇑*i*Sg	**Sg**	**12 44 57.8**	**-0.3**
	9.5nm,0.1s						
WTTA	**Wattenberg**	**1.43**	**354**	⇓*e*Pg	**Pg**	**12 44 39.7**	**-0.4**
	5.5nm,0.1s,SNR=9.7						
WTTA				⇑*i*Sg	**Sg**	**12 44 58.6**	**0.0**
	29nm,0.3s						
VOY	**Vojsko**	**1.44**	**82**	*e*Pg	**Pg**	**12 44 38.5**	**-1.6**
VOY				*e*Sg	**Sg**	**12 44 57.7**	**-1.1**
SQTA	**Sankt Quirin**	**1.45**	**342**	⇑*e*Pg	**Pg**	**12 44 39.8**	**-0.6**
	9.6nm,0.2s,SNR=13						
SQTA				⇑*i*Sg	**Sg**	**12 44 58.4**	**-0.8**
	27nm,0.2s						
MYKA	**Terra Mystica**	**1.47**	**57**	⇓*i*Pg	**Pg**	**12 44 40.3**	**-0.5**
	2.7nm,0.2s						
MYKA				⇑*i*Sg	**Sg**	**12 44 60.0**	**+0.1**
	7.7nm,0.2s						
WATA	**Walderalm**	**1.51**	**353**	⇓*i*Pg	**Pg**	**12 44 41.1**	**-0.4**
	5.2nm,0.1s						
WATA				⇑*i*Sg	**Sg**	**12 45 00.8**	**-0.3**
	13nm,0.2s						
MOTA	**Moosalm**	**1.59**	**341**	⇓*i*Pg	**Pg**	**12 44 42.5**	**-0.5**
	4.0nm,0.1s						
MOTA				⇑*i*Sg	**Sg**	**12 45 03.5**	**-0.2**
	21nm,0.2s						
KBA	**Koelnbreinsper**	**1.61**	**39**	⇓*e*Pg	**Pg**	**12 44 42.9**	**-0.6**
	6.3nm,0.2s,SNR=7.5						
KBA				⇑*i*Sg	**Sg**	**12 45 04.5**	**+0.1**
	17nm,0.4s						
RETA	**Reutte**	**1.81**	**336**	⇑*i*Pg	**Pg**	**12 44 46.8**	**-0.5**
RETA				⇑*i*Sg	**Sg**	**12 45 11.1**	**+0.4**
	14nm,0.3s						
DAVA	**Damuels**	**1.99**	**318**	⇑*i*Pn	**Pn**	**12 44 46.6**	**+0.6**
DAVA				⇓*i*Sn	**Sn**	**12 45 11.8**	**+1.0**
DAVA				⇓*i*Sg	**Sg**	**12 45 17.3**	**+0.9**
	14nm,0.3s						

*MOS **20** 13:24:58.4±1.6, 4703N×14262E, h14km, mb3.7/5, Error ellipse: s-maj=16.3km s-min=9.8km az=104.1*
MOS Felt (IV) at Dal'nee, Troizkoe, (III-IV) at Lugovoe, Yuzhno-Sakhalinsk, (III) at Novo-Aleksandrovsk, (II-III) at Sanatorny.
*ISCJB **20** 13:25:00.6±0.6, 4700N±003×14282E±009, h24km±4km, mb3.4/7, Error ellipse: s-maj=10.5km s-min=4.6km az=167.5*
*SKHL **20** 13:25:00.8±0.1, 4690N×14254E, h10km, mb5.1/1*
SKHL Felt (III) at Lugovoe, Novoaleksandrovsk, (II-III) at Sanatornyy. Felt (IV) at Dal'neye, Troitskoye, (III-IV) at Yushno-Sakhalinsk.
*NIED **20** 13:25:00, 47.10N×142.60E, h5km, Mw3.9 Best double couple: M0 8.29000×10^14 NP1:φs200.00000°, δ8.00000°, λ138.00000°. NP2:φs332.00000°, δ85.00000°, λ84.00000°.*
*IDC **20** 13:25:08.2±3.1, 4563N×140.32E, h0km, mb3.2/4, mb1 3.4/5, mb1mx3.3/20, mbtmp3.2/5, ML3.4/1, Error ellipse: s-maj=101.1km s-min=23.8km az=40.0*

ISC 20 13:25:02.4±0.5, 4692N±002×14276E±007, h18km±3km, n37, σ1°27/49, mb3.4/7, 6C-5D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**0.03**	**353**	⇓*i*PN	**Pg**	**13 25 04.8**	**-0.8**
YSS				*i*		13 25 07.7	
YSS				pmax	pmax		
	comp=Z,2μm,0.4s						
YSS				pmax	pmax		
	comp=N,690nm,0.3s						
YSS				pmax	pmax		
	comp=E,2μm,0.3s						
YSS				smax			
	comp=E,14μm,0.4s						
YSS				smax			
	comp=E,18μm,0.3s						
YSS	**Yuzh-Sakhalins**	**0.03**	**353**	⇓*i*Pg	**Pg**	**13 25 04.9**	**-0.7**
YSS				AMB	AMB	13 25 06.2	
	comp=E,690nm,0.4s						
YSS				AMB	AMB	13 25 06.2	
	comp=E,2μm,0.4s						
YSS				AMB	AMB	13 25 06.2	
	comp=E,2μm,0.4s						
YSS				*i* Sg	**Sg**	**13 25 07.7**	**0.0**
YSS				A		13 25 08.6	
	comp=E,18μm,0.3s						
YSS				A		13 25 10.0	
	comp=E,17μm,0.5s						
YSS				AMS	AMS	13 25 18.0	
	comp=E,4μm,2.3s						
JWK2	**Keihoku**	**1.71**	**201**	P	**Pn**	**13 25 30.7**	**-0.6**
JSE	**Soyaes**	**1.97**	**184**	P	**Pn**	**13 25 34.3**	**-0.5**
JSE				*e*S	**Sn**	**13 25 59.7**	**+0.8**
JRR	**Rishiri**	**2.05**	**210**	P	**Pn**	**13 25 34.5**	**-1.4**
UGL	**Uglegorsk**	**2.21**	**348**	*e*P	**Pn**	**13 25 39.0**	**+0.9**
UGL				*e*Pg	**Pg**	**13 25 44.3**	**-0.5**
UGL				AMB	AMB	13 25 45.0	
	comp=E,154nm,

ASAR	**Alice Springs**	**70.71**	**189**	P	**P**	**13 36 17.2**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**70.71**	**189**	P	**P**	**13 36 17.1**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=357,slow=5.1,SNR=10						

WEL 20 13:49:01.1±0.1, 3782S×17680E, h5km, ML3.5/11, 2C, Error ellipse: s-maj=1.1km s-min=1.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.19**	**210**	PG	Pg	13 49 05.0	+0.1
MARZ				SG	Sg	13 49 07.8	+0.4
OPRZ	**Ohinepanea**	**0.19**	**263**	PG	Pg	13 49 05.2	+0.3
OPRZ				SG	Sg	13 49 08.3	+0.8
EDRZ	**Edgecumbe**	**0.29**	**189**	PG	Pg	13 49 06.8	0.0
LIRZ	**Lichensteins R**	**0.37**	**240**	PG	Pg	13 49 08.9	+0.6
MKRZ	**Makatiti**	**0.41**	**219**	PG	Pg	13 49 09.8	+0.7
WIZ	**White Island**	**0.43**	**47**	PG	Pg	13 49 09.9	+0.5
TGRZ	**Tauranga**	**0.43**	**282**	PG	Pg	13 49 10.0	+0.5
TAZ	**Tarawera**	**0.47**	**209**	PG	Pg	13 49 10.9	+0.8
KARZ	**Kaharoa**	**0.48**	**245**	PG	Pg	13 49 10.8	+0.4
URZ	**Urewera**	**0.50**	**151**	⇑PG	Pg	13 49 10.4	-0.5
UTU	**Utuhina**	**0.59**	**233**	*e*PG	Pg	13 49 13.2	+0.6
MYRZ	**Mayor Island**	**0.70**	**321**	P*	Pb	13 49 14.8	-1.0
PATZ	**Paeroa**	**0.70**	**217**	P*	Pb	13 49 15.3	-0.5
MWZ	**Matawai**	**0.77**	**132**	⇑P*	Pb	13 49 15.5	-1.6
TOZ	**Tahuroa Road**	**1.03**	**275**	P*	Pb	13 49 20.3	-1.1
PUZ	**Puketiti**	**1.18**	**103**	P*	Pb	13 49 23.2	-0.8
MXZ	**Matakaoa Point**	**1.23**	**78**	P*	Pb	13 49 23.7	-1.1
KUZ	**Kuaotunu**	**1.37**	**321**	PN	Pn	13 49 23.7	-3.2
KNZ	**Kokohu**	**1.38**	**150**	PN	Pn	13 49 27.3	+0.2
HIZ	**Hauiti**	**1.68**	**245**	PN	Pn	13 49 29.2	-1.9
WCZ	**Waipu Caves**	**2.72**	**313**	PN	Pn	13 49 43.4	-2.1

*CSEM **20** 14:37:11.9±0.1, 6971N×1576W, h2km, mb4.2/5, Error ellipse: s-maj=2.5km s-min=1.6km az=108.0*
*ISCJB **20** 14:37:13.7±0.3, 6970N±003×158W±0.1, h10km, mb4.1/18, MS3.6/9, Error ellipse: s-maj=7.3km s-min=3.3km az=17.8*
*BJI **20** 14:37:14.1, 6980N×1570W, h10km, mb4.5*
*IDC **20** 14:37:14.4±0.7, 6980N×1566W, h0km, mb3.9/9, mb1 4.1/13, mb1mx4.0/20, mbtmp3.9/13, ML3.1/4, MS3.6/13, Ms1 3.6/13, ms1mx3.4/33, Error ellipse: s-maj=22.4km s-min=15.5km az=14.0*
*REY **20** 14:37:14.2, 6956N×1448W, h10km, ML3.2, ML3.9*
*NEIC **20** 14:37:16.1±0.4, 6982N×1574W, h10km, mb4.4/5, Error ellipse: s-maj=7.8km s-min=7.0km az=44.0*
*MOS **20** 14:37:18.8±1.2, 6990N×1546W, h37km, mb4.5/9, Error ellipse: s-maj=21.7km s-min=9.7km az=89.4*

ISC 20 14:37:15.6±0.3, 6969N±003×158W±0.1, h10km, n83, σ1§19/84, mb4.1/18, MS3.6/9, 2C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRI	**Grimsey**	**3.27**	**196**	P	**Pn**	**14 38 06.6**	**-0.2**
IGRI				S	**Sn**	**14 38 47.2**	**+1.5**
ILEI	**Leirhofn**	**3.31**	**185**	P	**Pn**	**14 38 05.7**	**-1.6**
IGIL	**Gilhagi**	**3.64**	**183**	P	**Pn**	**14 38 10.0**	**-1.8**
IHED	**Heoinshofoi**	**3.67**	**190**	P	**Pn**	**14 38 11.4**	**-0.9**
IHED				S	**Sn**	**14 38 55.3**	**-0.3**
IGRA	**Granastaoir**	**3.85**	**191**	P	**Pn**	**14 38 14.1**	**-0.7**
IGRA				S	**Sn**	**14 39 00.8**	**+0.8**
IHLA	**Hella**	**3.89**	**196**	P	**Pn**	**14 38 15.6**	**+0.3**
IHLA				S	**Sn**	**14 39 01.6**	**+0.7**
IHRN	**Hraun**	**3.95**	**206**	P	**Pn**	**14 38 17.1**	**+1.0**
IKVO	**Krokottuvotn**	**4.02**	**186**	P	**Pn**	**14 38 16.2**	**-0.8**
IGRS	**Grimsstaoir**	**4.07**	**182**	P	**Pn**	**14 38 16.2**	**-1.6**
ISVA	**Svartarkot**	**4.41**	**188**	P	**Pn**	**14 38 21.9**	**-0.5**
IADA	**Aoalbol**	**4.70**	**179**	P	**Pn**	**14 38 24.8**	**-1.6**
IGLU	**Glumsstadir**	**4.74**	**176**	P	**Pn**	**14 38 25.4**	**-1.6**
IGLU				S	**Sn**	**14 39 21.9**	**0.0**
IHVA	**Hvannstoosfjol**	**4.76**	**180**	P	**Pn**	**14 38 25.5**	**-1.7**
IBRU	**Bruarjokull**	**4.89**	**181**	P	**Pn**	**14 38 27.4**	**-1.6**
IVSH	**V-Sauoahnukur**	**4.91**	**180**	P	**Pn**	**14 38 27.9**	**-1.4**
ISKR	**Skrokkalda**	**5.25**	**192**	P	**Pn**	**14 38 35.9**	**+1.9**
BORG	**Borgarnes** 4.9nm,0.3s,baz=16,slow=7.8,SNR=10	**5.41**	**206**	Pn	**Pn**	**14 38 38.8**	**+2.7**
KBS	**Kingsbay**	**11.73**	**26**	Pn	**Pn**	**14 40 00.7**	**-1.9**
KBS	**Kingsbay**	**11.73**	**26**	P	**Pn**	**14 40 00.7**	**-1.9**
SPB4	**Spitsbergen Ar**	**12.07**	**32**	*e*Pn	**Pn**	**14 40 06.3**	**-1.1**
SPB4	**Spitsbergen Ar**	**12.07**	**32**	*e*Pn	**Pn**	**14 40 06.3**	**-1.0**
SFJD	**Kangerlussuaq** comp=Z,379nm,18.4s,baz=48,slow=35	**13.01**	**275**	LR	LR	14 44 56.5	
NOA	**NORSAR Array B** comp=Z,196nm,19.6s,baz=300,slow=36	**14.09**	**115**	LR	LR	14 45 42.3	
ARCES	**ARCESS Array B** 0.1nm,0.3s,baz=348,slow=15,SNR=2.4	**14.21**	**71**	Pn	**Pn**	**14 40 35.9**	**-0.5**
ARCES				LR	LR	14 44 53.5	
	comp=Z,112nm,20.4s,baz=286,slow=32						
HFS	**Hagfors** 0.1nm,0.3s,baz=305,slow=18,SNR=3.2	**15.56**	**113**	Pn	**Pn**	**14 40 54.0**	**-0.7**
HFS				LR	LR	14 45 59.0	
	comp=Z,242nm,19.7s,baz=267,slow=34						
KAF	**Kangasniemi** 2.7nm,0.6s	**18.41**	**93**	*e*p	**Pn**	**14 41 26.0**	**-4.5**
KAF	**Kangasniemi**	**18.41**	**93**	*e*P	**Pn**	**14 41 26.0**	**-4.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	**FINESS Array B**	**18.79**	**95**	P	**Pn**	**14 41 34.5**	**-0.7**
FINES				LR	LR	14 47 55.5	
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=316,slow=8.0,SNR=7.2	**18.79**	**95**	P	**Pn**	**14 41 34.5**	**-0.6**
FINES				LR	LR	14 47 55.5	
	comp=Z,224nm,19.1s,baz=280,slow=34						
VSU	**Vasula**	**21.19**	**100**	P	**P**	**14 42 03.2**	**+2.5**
PUL	**Pulkovo**	**21.46**	**94**	P	**P**	**14 42 04.6**	**+1.0**
CLL	**Collm**	**22.86**	**129**	*i* P	**P**	**14 42 19.8**	**+1.2**
CLL				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
CLL	**Collm** comp=Z,17nm,1.0s,mb4.4	**22.86**	**129**	*i* P	**P**	**14 42 19.8**	**+1.2**
BRG	**Berggiesshubel**	**23.50**	**128**	P	**P**	**14 42 27.0**	**+1.6**
BRG				pmax	pmax		
	comp=Z,19nm,1.8s,mb4.2						
BRG	**Berggiesshubel** comp=Z,32nm,1.8s,mb4.4	**23.50**	**128**	*e*(P)	**P**	**14 42 27.0**	**+1.6**
KHC	**Kasperske Hory**	**24.99**	**130**	⇑*e*P	**P**	**14 42 40.8**	**+1.8**
KHC	**Kasperske Hory**	**24.99**	**130**	*e*P	**P**	**14 42 39.5**	**+0.5**
GERES	**GERESS Array B** comp=Z,3.2nm,1.0s,mb3.8,baz=333,slow=7.9,SNR=9.6	**25.28**	**130**	P	**P**	**14 42 42.4**	**+0.7**
GERES				LR	LR	14 53 01.9	
	comp=Z,109nm,18.1s,MS3.4,baz=271,slow=37						
VRAC	**Vranov** comp=Z,103nm,18.5s,MS3.4,baz=155,slow=36	**25.66**	**126**	LR	LR	14 52 25.4	
OJC	**Ojcow**	**25.78**	**121**	*e*P	**P**	**14 42 46.1**	**0.0**
DAVOX	**Davos/Dischmat** comp=Z,144nm,20.6s,MS3.5,baz=260,slow=36	**26.24**	**138**	LR	LR	14 53 07.3	
OBN	**Obninsk**	**27.20**	**95**	⇑*e*P	**P**	**14 43 01.4**	**+2.5**
OBN				*e*		14 43 41.7	
OBN				*e*		14 46 19.0	
OBN				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.5						
OBN	**Obninsk**	**27.20**	**95**	*e*PcP	PcP	14 46 19.0	+0.4
ARU	**Arti**	**33.76**	**74**	*d* iP	**P**	**14 43 56.3**	**-0.5**
ARU						14 45 06.5	
ARU				S	**S**	**14 49 18.2**	**-1.6**
ARU				SS	SS	14 51 18.9	-26
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
ARU	**Arti**	**33.76**	**74**	P	**P**	**14 43 56.6**	**-0.2**
ARU				S	**S**	**14 49 18.2**	**-1.6**
YKA	**Yellowknife Ar**	**36.37**	**309**	P	**P**	**14 44 19.9**	**+0.7**
YKA				LR	LR	14 59 42.1	
YKA	**Yellowknife Ar** comp=Z,2.1nm,0.9s,mb4.0,baz=35,slow=8.5,SNR=17	**36.37**	**309**	P	**P**	**14 44 19.9**	**+0.7**
YKA				LR	LR	14 59 42.2	
	comp=Z,69nm,18.5s,MS3.5,baz=100,slow=37						
YKA	**Yellowknife Ar**	**36.37**	**309**	P	**P**	**14 44 19.9**	**+0.6**
TIXI	**Tiksi** comp=Z,14nm,1.6s,mb4.5	**37.01**	**18**	*e*P	**P**	**14 44 24.7**	**+0.2**
TIXI	**Tiksi**	**37.01**	**18**	*e*P	**P**	**14 44 24.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.4						
TIXI	**Tiksi** comp=Z,9.0nm,1.4s,mb4.4	**37.01**	**18**	*e*P	**P**	**14 44 24.6**	**+0.1**
KIV	**Kislovodsk**	**38.75**	**100**	P	**P**	**14 44 42.1**	**+2.6**
KIV	**Kislovodsk**	**38.75**	**100**	*e*P	**P**	**14 44 42.2**	**+2.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
KIV				MLR	MLR		
	comp=Z,77nm,16.0s,MS3.6						
BRVK	**Borovoye**	**40.41**	**68**	P	**P**	**14 44 53.0**	**-0.2**
COLA	**College**	**41.62**	**331**	*e*P	**P**	**14 45 03.0**	**-0.1**
MALT	**Malatya**	**42.35**	**109**	*e*P	**P**	**14 45 10.4**	**+1.0**
	comp=Z,5.7nm,0.9s,mb4.2						
MALT	**Malatya**	**42.35**	**109**	*e*P	**P**	**14 45 10.4**	**+1.0**
MALT				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
MALT	**Malatya**	**42.35**	**109**	*e*P	**P**	**14 45 10.4**	**+1.0**
	comp=Z,5.7nm,0.9s,mb4.2						
BILL	**Bilibino**	**42.52**	**359**	*e*P	**P**	**14 45 09.4**	**-1.0**
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
BILL	**Bilibino** comp=Z,6.0nm,1.4s,mb4.1	**42.52**	**359**	*e*P	**P**	**14 45 09.4**	**-1.0**
NVS	**Novosibirsk**	**42.89**	**57**	*i* P	**P**	**14 45 15.0**	**+1.4**
KURK	**Kurchatov**	**45.08**	**64**	P	**P**	**14 45 30.9**	**-0.2**
YAK	**Yakutsk**	**46.31**	**22**	P	**P**	**14 45 39.1**	**-1.7**
SEY	**Seymchan**	**47.40**	**7**	P	**P**	**14 45 49.4**	**+0.2**
MKAR	**Makanchi Array** comp=Z,2.9nm,1.0s,mb4.2,baz=341,slow=6.4,SNR=17	**49.68**	**63**	P	**P**	**14 46 07.1**	**+0.1**
MOY	**Mondy**	**50.57**	**46**	*e*P	**P**	**14 46 15.1**	**+1.4**
PDAR	**Pinedale Array** comp=Z,2.0nm,1.1s,mb4.0,baz=46,slow=4.3,SNR=6.6	**51.89**	**291**	P	**P**	**14 46 23.9**	**+0.2**
PDAR				LR	LR	15 07 04.7	
	comp=Z,51nm,21.2s,MS3.5,baz=199,slow=34						
ZAK	**Zakamensk**	**52.33**	**45**	*e*P	**P**	**14 46 25.5**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
ZAK	**Zakamensk** comp=Z,2.0nm,1.3s,mb3.9	**52.33**	**45**	*e*P	**P**	**14 46 25.5**	**-1.3**
SONM	**Songino Array** comp=Z,0.9nm,1.0s,mb3.8,baz=339,slow=11,SNR=8.4	**55.45**	**44**	P	**P**	**14 46 49.5**	**-0.2**
SONM				LR	LR	15 14 59.8	
	comp=Z,42nm,19.7s,MS3.5,baz=356,slow=41						
ULN	**Ulaanbaatar**	**55.58**	**43**	*i* P	**P**	**14 46 51.2**	**+0.5**
HIA	**Hailar**	**56.99**	**33**	*i* P	**P**	**14 47 00.6**	**-0.1**
TORD	**Torodi Ar. Bea** comp=Z,1.6nm,1.1s,mb4.0,baz=338,slow=4.3,SNR=4.8	**57.58**	**160**	P	**P**	**14 47 05.2**	**+0.1**
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.8s,mb3.7,baz=46,slow=5.8,SNR=5.9	**58.62**	**296**	P	**P**	**14 47 13.2**	**+0.9**
NVAR	**Mina Array Bea**	**58.62**	**296**	P	**P**	**14 47 13.1**	**+0.8**
HABR	**Khabarovsk**	**60.23**	**22**	*e*P	**P**	**14 47 22.0**	**-1.3**
HABR				*e*		14 49 33.9	
HABR				*e*S	**S**	**14 55 35.3**	**-1.3**
HABR				*e*		14 57 10.9	
TXAR	**Lajitas Array** comp=Z,0.4nm,0.6s,mb3.7,baz=23,slow=4.1,SNR=5.5	**62.09**	**279**	P	**P**	**14 47 37.4**	**+1.3**
TXAR				LR	LR	15 14 45.7	
	comp=Z,87nm,18.4s,MS4.0,baz=85,slow=36						
TXAR	**Lajitas Array**	**62.09**	**279**	P	**P**	**14 47 37.3**	**+1.2**
ERM	**Erimo**	**67.54**	**17**	*e*P	**P**	**14 48 13.0**	**+1.5**
CMIG	**Matias Romero** comp=Z,51nm,19.0s,MS3.8,baz=68,slow=35	**70.31**	**266**	LR	LR	15 18 46.0	
MJAR	**Matsushiro Arr** comp=Z,3.0nm,0.9s,mb4.2,baz=342,slow=6.0,SNR=5.5	**72.38**	**22**	P	**P**	**14 48 40.0**	**-1.2**
NJ2	**Nanjing**	**73.35**	**39**	*e*P	**P**	**14 48 49.5**	**+2.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
ASAR	**Alice Springs** comp=Z,0.4nm,0.6s,baz=6.4,slow=1.7,SNR=8.2	**130.58**	**37**	PKP	PKPdf	14 56 25.6	-0.4

*IDC **20** 14:45:23.0±1.5, 3243S×17868W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/13, mbtmp4.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.9/22, Error ellipse: s-maj=43.3km s-min=34.9km az=54.0*
*NEIC **20** 14:45:28.9±1.1, 3289S×17872W, h35km, mb4.3/2, Error ellipse: s-maj=31.6km s-min=26.4km az=54.0*

ISC 20 14:45:30.7±1.3, 3340S±007×1791W±02, h35km, n23, σ0§85/26, mb4.2/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.66**	**206**	*e*PN	**Pn**	**14 46 38.4**	**-0.1**
MXZ				SN	**Sn**	**14 47 37.8**	**+6.4**
PUZ	**Puketiti**	**5.13**	**204**	*e*PN	**Pn**	**14 46 44.4**	**-0.6**
PUZ				SN	**Sn**	**14 47 48.4**	**+5.5**
MWZ	**Matawai**	**5.63**	**208**	PN	**Pn**	**14 46 52.4**	**+0.6**
MWZ				SN	**Sn**	**14 48 01.6**	**+6.3**
URZ	**Urewera**	**5.74**	**211**	Pn	**Pn**	**14 46 54.4**	**+1.0**
	5.7nm,0.3s,baz=294,slow=2.5,SNR=32						
URZ				Sn	**Sn**	**14 48 05.6**	**+7.6**
	9.8nm,0.3s,baz=182,slow=20,SNR=11						
URZ	**Urewera**	**5.74**	**211**	*e*PN	**Pn**	**14 46 54.2**	**+0.8**
URZ				SN	**Sn**	**14 48 05.1**	**+7.1**
BKZ	**Black Stump Fm**	**6.76**	**210**	*e*PN	**Pn**	**14 47 07.1**	**-0.4**
BFZ	**Birch Farm**	**8.16**	**206**	*e*PN	**Pn**	**14 47 23.4**	**-3.2**
BFZ				SN	**Sn**	**14 48 58.3**	**+0.8**
MRZ	**Mangatainoka R**	**8.40**	**209**	PN	**Pn**	**14 47 28.5**	**-1.4**
MRZ				SN	**Sn**	**14 49 04.7**	**+1.2**
SNZO	**South Karori**	**9.30**	**210**	*e*Sn	**Sn**	**14 49 24.6**	**-1.0**
THZ	**Tophouse**	**10.48**	**215**	*e*PN	**Pn**	**14 47 54.1**	**+0.8**
THZ				SN	**Sn**	**14 49 54.0**	**-0.4**
MQZ	**McQueen's Vall**	**12.14**	**210**	SN	**Sn**	**14 50 29.8**	**-5.2**
DZM	**Mont Dzumac** comp=Z,142nm,19.6s,baz=104,slow=33	**17.04**	**308**	LR	LR	14 54 33.1	
MCQ	**Macquarie Isla**	**26.14**	**210**	*e*P	**P**	**14 51 06.9**	**+5.5**
CTAO	**Charters Tower**	**33.49**	**284**	*e*P	**P**	**14 52 07.2**	**+0.3**
ASAR	**Alice Springs** 4.5nm,0.7s,mb4.2,baz=110,slow=7.5,SNR=90	**42.11**	**271**	P	**P**	**14 53 19.6**	**+0.1**
WRA	**Warramunga Arr** 3.9nm,0.7s,mb4.3,baz=115,slow=8.2,SNR=31	**43.37**	**276**	P	**P**	**14 53 29.7**	**-0.2**
SBA	**Scott Base** 1.7nm,0.8s,mb3.9	**44.98**	**184**	P	**P**	**14 53 47.9**	**+5.9**
VNDA	**Vanda** 0.8nm,0.3s,mb4.0,baz=12,slow=8.0,SNR=15	**45.02**	**186**	P	**P**	**14 53 47.7**	**+5.3**
QSPA	**South Pole Qui** 4.2nm,0.7s,mb4.6	**56.72**	**180**	*e*P	**P**	**14 55 10.7**	**+0.5**
ARCES	**ARCESS Array B** 3.1nm,0.9s,baz=27,slow=3.0,SNR=4.0	**141.30**	**346**	PKP	PKPdf	15 04 55.0	-1.6
KAF	**Kangasniemi**	**147.02**	**338**	*e*pkp	PKPdf	15 05 03.8	-3.0
FINES	**FINESS Array B** 1.9nm,0.6s,baz=75,slow=3.6,SNR=10.0	**147.60**	**338**	PKPbc	PKPdf	15 05 06.1	-1.7
NOA	**NORSAR Array B** 1.2nm,0.8s,baz=14,slow=4.4,SNR=3.5	**151.55**	**349**	PKPbc	PKPdf	15 05 15.0	+0.9

IDC 20 14:49:08.0±48.0, 2329S×17713W, h0km, mb4.4/3, mb1 4.5/3, mb1mx3.9/14, mbtmp4.4/3, 2C-1D, Error ellipse: s-maj=884.8km s-min=149.0km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMA	**Armidale**	**28.70**	**249**	⇑*i* P	P	14 55 08.1	+1.1
CTA	**Charters Tower** 8.8nm,0.4s	**34.12**	**268**	⇓*i* P	P	14 55 58.5	+3.7
STKA	**Stephens Creek** 1.5nm,0.5s	**37.39**	**248**	⇑*i* P	P	14 56 21.8	-1.0
STKA	**Stephens Creek** 1.7nm,0.6s,baz=98,slow=13,SNR=9.5	**37.39**	**248**	P	P	14 56 21.9	-0.8
ASAR	**Alice Springs** 2.4nm,0.5s,baz=94,slow=7.2,SNR=54	**44.73**	**259**	P	P	14 57 23.2	-0.1
WB2	**Warramunga Arr**	**45.07**	**265**	*e*P	P	14 57 26.5	+0.4
WRA	**Warramunga Arr** 2.6nm,0.6s,baz=101,slow=8.3,SNR=47	**45.08**	**265**	P	P	14 57 26.9	+0.7
FITZ	**Fitzroy Crossi** 2.9nm,0.5s	**53.51**	**264**	*e*P	P	14 58 30.3	-0.4

*ISCJB **20** 15:04:24.8±0.7, 5244S±0.10×184E±02, h10km, mb4.0/9, MS3.7/5, Error ellipse: s-maj=21.3km s-min=12.9km az=18.3*
*IDC **20** 15:04:24.3±0.7, 5246S×1829E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/19, mbtmp4.0/10, MS3.8/5, Ms1 3.7/5, ms1mx3.4/24, Error ellipse: s-maj=24.3km s-min=19.6km az=90.0*
*NEIC **20** 15:04:25.8±0.6, 5243S×1832E, h10km, mb4.5/2, Error ellipse: s-maj=20.7km s-min=14.2km az=103.0*

ISC 20 15:04:26.7±0.7, 5247S±010×185E±02, h10km, n27, σ1§00/18, mb4.0/9, MS3.7/5, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland** 2.9nm,0.8s,baz=176,slow=13,SNR=3.0	**20.15**	**6**	P	**P**	**15 09 01.9**	**+1.1**
SUR				LR	LR	15 14 29.4	
	comp=Z,252nm,21.5s,MS3.5,baz=164,slow=30						
SNAA	**Sanae**	**21.46**	**198**	*e*	**P**	**15 09 14.2**	**-0.5**
SNAA				*e*		15 09 20.7	
SNAA				*e*		15 09 25.0	
SNAA				*e*		15 09 31.2	
SNAA	**Sanae** 1.7nm,0.7s,mb3.5,baz=72,slow=8.5,SNR=6.3	**21.46**	**198**	P	**P**	**15 09 13.9**	**-0.8**
VNA2	**Neumayer--Watz** baz=24,slow=9.8	**21.88**	**203**	*e*	**P**	**15 09 20.2**	**+1.0**
VNA2				*e*		15 09 26.6	
VNA2				*e*		15 09 30.0	
VNA2				*e*		15 09 36.8	
VNA3	**Neumayer Olymp**	**22.64**	**203**	*e*	**P**	**15 09 31.2**	**+3.9**
VNA3				*e*		15 09 34.9	
VNA3				*e*		15 09 40.8	
BOSA	**Boshof** comp=Z,204nm,21.4s,MS3.6,baz=161,slow=32	**24.35**	**14**	LR	LR	15 17 19.9	
MAW	**Mawson** 2.2nm,0.8s,mb3.8,baz=285,slow=10.0,SNR=3.9	**26.07**	**142**	P	**P**	**15 10 00.2**	**+0.4**
LBTB	**Lobatse** comp=Z,210nm,20.8s,MS3.7,baz=26,slow=32	**27.94**	**14**	LR	LR	15 19 15.4	
QSPA	**South Pole Qui** 10nm,0.6s,mb4.7	**37.76**	**180**	*e*P	**P**	**15 11 41.9**	**-0.2**
QSPA				*e*		15 11 47.9	
QSPA	**South Pole Qui** 5.9nm,0.7s,mb4.4,baz=256,slow=3.5,SNR=51	**37.76**	**180**	P	**P**	**15 11 41.9**	**-0.2**
OPO	**Ambohidratompo** 2.1nm,0.3s,mb4.2,baz=34,slow=2.1,SNR=6.2	**40.57**	**44**	P	**P**	**15 12 05.5**	**-0.7**
PMSA	**Palmer Station**	**41.53**	**220**	*e*P	**P**	**15 12 15.2**	**+1.6**
VNDA	**Vanda**	**48.29**	**170**	P	**P**	**15 13 07.0**	**-0.3**
VNDA				LR	LR	15 32 03.6	
VNDA	**Vanda** 4.2nm,1.3s,mb4.3,baz=224,slow=8.8,SNR=5.3	**48.29**	**170**	P	**P**	**15 13 07.0**	**-0.3**
VNDA				LR	LR	15 32 03.6	
	comp=Z,128nm,21.1s,MS3.9,baz=194,slow=34						
PLCA	**Paso Flores**	**58.55**	**243**	P	**P**	**15 14 20.2**	**-2.9**
PLCA	**Paso Flores** 1.0nm,0.9s,mb3.9,baz=134,slow=8.1,SNR=2.9	**58.55**	**243**	P	**P**	**15 14 20.2**	**-2.9**
DBIC	**Dimbokro** comp=Z,49nm,19.4s,MS3.7,baz=114,slow=29	**62.19**	**334**	LR	LR	15 34 26.4	
LPAZ	**La Paz** 1.1nm,0.4s,mb4.1	**75.24**	**263**	P	**P**	**15 16 08.6**	**-1.0**
LPAZ	**La Paz** 1.3nm,0.4s,mb4.2,baz=77,slow=6.5,SNR=7.8	**75.24**	**263**	P	**P**	**15 16 09.1**	**-0.5**
ASAR	**Alice Springs** 0.5nm,0.6s,mb3.9,baz=205,slow=4.6,SNR=17	**85.68**	**124**	P	**P**	**15 17 05.8**	**+0.1**
WRA	**Warramunga Arr** 0.7nm,1.1s,mb3.9,baz=215,slow=4.5,SNR=5.5	**89.00**	**122**	P	**P**	**15 17 21.4**	**-0.3**
PDAR	**Pinedale Array** 1.7nm,0.7s,baz=131,slow=4.9,SNR=20	**144.39**	**275**	PKP	PKPdf	15 23 59.0	-3.2
TIXI	**Tiksi**	**144.85**	**31**	*e*PKPdf	PKPdf	15 24 00.3	-1.8
BGU	**Big Grassy Mou**	**145.45**	**270**	*e*PKP	PKPdf	15 24 03.3	-0.8
NVAR	**Mina Array Bea** 2.3nm,0.7s,baz=124,slow=5.0,SNR=22	**147.14**	**262**	PKPbc	PKPbc	15 24 09.1	-0.2
YKA	**Yellowknife Ar**	**153.48**	**311**	PKPbc	PKPbc	15 24 22.2	-1.6
YKA				PKPab	PKPab	15 24 35.4	-0.9
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=82,slow=1.9,SNR=8.2	**153.48**	**311**	PKPbc	PKPbc	15 24 22.2	-1.6
YKA				PKPab	PKPab	15 24 35.4	-0.9
	0.5nm,0.7s,baz=92,slow=5.1,SNR=7.0						

*ISCJB **20** 15:14:17.6±0.5, 3835N±003×3935E±003, h7km±6km, Error ellipse: s-maj=5.9km s-min=3.9km az=160.1*
*CSEM **20** 15:14:17.1±0.2, 3835N×3933E, h5km, MD3.2, Error ellipse: s-maj=4.5km s-min=3.3km az=164.0*
*ISK **20** 15:14:17.6, 3835N×3930E, h18km, MD3.0*
*DDA **20** 15:14:19.8, 3840N×3927E, h20km, Md3.2*

ISC 20 15:14:18.4±0.5, 3836N±004×3933E±003, h10km±5km, n18, σ1§00/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.31**	**298**	*i* P	**Pg**	**15 14 24.4**	**-0.1**
ELZG				*i* S	**Sg**	**15 14 27.8**	**-0.9**
PTK	**Pertek**	**0.54**	**5**	PG	**Pg**	**15 14 29.0**	**+0.2**
PTK				SG	**Sg**	**15 14 37.9**	**+2.0**
MALT	**Malatya**	**0.71**	**267**	PG	**Pg**	**15 14 30.6**	**-1.5**
MYA	**Malatya**	**0.71**	**268**	PG	**Pg**	**15 14 31.4**	**-0.7**
MYA				SG	**Sg**	**15 14 41.8**	**+0.4**
DIY	**Diyarbakir**	**0.84**	**123**	PG	**Pg**	**15 14 34.4**	**-0.2**
URFA	**Urfa**	**1.00**	**204**	PG	**Pg**	**15 14 37.7**	**+0.2**
URFA				SG	**Sg**	**15 14 52.0**	**+1.5**
BINT	**Bingol**	**1.05**	**60**	PG	**Pg**	**15 14 37.3**	**-1.2**
ATAB	**Bozova**	**1.21**	**223**	*i* P	**Pn**	**15 14 41.8**	**+0.6**
ATAB				*i* S	**Sb**	**15 14 57.9**	**+1.1**
BNGL	**BINGOL**	**1.54**	**67**	*i* P	**Pg**	**15 14 48.5**	**+0.5**
BNGL				*i* S	**Sg**	**15 15 11.8**	**+3.8**
**

SCX	**San Cristobal**	**2.53**	**19**	*i* P	Pn	15 19 27.2	-1.8
SCX				*i* S	Sn	15 19 57.5	-1.7
CMIG	**Matias Romero**	**3.06**	**334**	*i* P	Pn	15 19 34.4	-2.0
CMIG				*i* S	Sn	15 20 08.8	-3.7
UTMO	**Huajuapan**	**5.42**	**310**	*i* P	Pn	15 20 07.0	-1.9
UTMO				*i* S	Sn	15 21 08.2	-2.6
PPM	**Popocatepetl**	**6.82**	**314**	*i* S	Sn	15 21 44.6	-0.6
TEIG	**Tepich**	**7.68**	**40**	*i* P	Pn	15 20 35.3	-5.6
TEIG	**Tepich**	**7.68**	**40**	*i* P	Pn	15 20 35.8	-4.1

*ISCJB **20** 15:34:04.2±1.6, 33N±02×1229E±02, h555km±24km, mb4.2/9, Error ellipse: s-maj=36.2km s-min=15.2km az=144.7*

*NEIC **20** 15:34:04.6±1.3, 330N×12293E, h536km±20km, mb4.6/4, Error ellipse: s-maj=26.0km s-min=12.2km az=56.0*

*IDC **20** 15:34:06.6±3.0, 331N×12303E, h567km±39km, mb3.3/6, mb1 3.4/7, mb1mx3.1/20, mbtmp3.4/7, Error ellipse: s-maj=54.1km s-min=13.0km az=63.0*

ISC 20 15:34:05.1±1.6, 33N±02×1229E±02, h544km±23km, n21, σ0§68/22, mb4.2/9, 3D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**7.21**	**293**		*e*P		**P**	**15 35 54.4**	**-0.4**
KSM	**Kuching**	**12.72**	**262**		*e*P		**P**	**15 36 51.3**	**+0.2**
BATI	**Kupang**	**13.43**	**177**	P			**P**	**15 36 58.9**	**+0.5**
	3.7nm,0.3s,baz=58,slow=2.8,SNR=13								
KAKA	**Kakadu**	**18.50**	**149**		*e*P		**P**	**15 37 47.6**	**-0.3**
	11nm,0.4s								
KAKA	**Kakadu**	**18.50**	**149**		*e*P		**P**	**15 37 47.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**21.43**	**173**		*e*P		**P**	**15 38 14.3**	**-0.1**
	4.2nm,0.8s,mb4.1								
FITZ	**Fitzroy Crossi**	**21.43**	**173**		*e*P		**P**	**15 38 14.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**21.43**	**173**	P			**P**	**15 38 14.4**	**+0.1**
	4.1nm,1.0s,mb4.0,baz=5.9,slow=14,SNR=10								
MBWA	**Marble Bar**	**24.50**	**187**		*e*P		**P**	**15 38 41.4**	**-0.4**
WRA	**Warramunga Arr**	**25.67**	**155**	P			**P**	**15 38 51.4**	**-0.8**
	3.7nm,0.3s,mb4.5,baz=336,slow=9.6,SNR=89								
WRA				S			**S**	**15 42 40.9**	**-1.8**
	0.3nm,0.6s,baz=336,slow=16,SNR=5.8								
WB2	**Warramunga Arr**	**25.68**	**154**		⇓*i*P		**P**	**15 38 51.5**	**-0.7**
WB2	**Warramunga Arr**	**25.68**	**154**		*e*P		**P**	**15 38 51.6**	**-0.7**
ASAR	**Alice Springs**	**28.86**	**159**	P			**P**	**15 39 20.2**	**+0.2**
	1.9nm,0.3s,mb4.1,baz=335,slow=7.8,SNR=99								
FORT	**Forrest**	**34.23**	**172**		⇓*i*P		**P**	**15 40 06.1**	**+0.3**
	11nm,0.5s,mb4.7								
KLBR	**Kellerberrin**	**35.03**	**188**		*e*P		**P**	**15 40 12.2**	**-0.3**
	3.5nm,0.2s,mb4.5								
NWAO	**Narrogin (SRO)**	**36.42**	**188**	P			**P**	**15 40 24.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**36.42**	**188**	P			**P**	**15 40 24.4**	**+0.5**
	4.5nm,0.6s,mb4.2,baz=38,slow=7.3,SNR=7.6								
STKA	**Stephens Creek**	**39.23**	**154**		⇓*i*P		**P**	**15 40 47.6**	**+0.8**
	1.9nm,0.3s,mb4.1								
STKA	**Stephens Creek**	**39.23**	**154**		*e*P		**P**	**15 40 47.7**	**+0.9**
	2.6nm,0.4s,mb4.2,baz=336,slow=8.3,SNR=19								
CNB	**Canberra Magne**	**45.72**	**149**		*e*P		**P**	**15 41 39.4**	**+1.7**
	32nm,1.7s,mb4.6								
MKAR	**Makanchi Array**	**55.80**	**327**	P			**P**	**15 42 50.6**	**-0.2**
	0.4nm,0.3s,mb3.1,baz=126,slow=7.9,SNR=10.0								
MKAR				PcP		PcP	PcP	15 43 41.1	-0.7
	0.3nm,0.6s,baz=112,slow=4.2,SNR=4.4								

*NEIC **20** 15:53:15.2, 1803N×9455W, h45km, MD3.7(MEX), After MEX.*

MEX 20 15:53:15.2±0.5, 1803N×9455W, h46km±42km, MD3.7, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.98**	**199**		*i* P		Pn	15 53 30.8	-1.8
CMIG					*i* S		Sn	15 53 43.5	-1.9
OXX	**Oaxaca**	**2.28**	**246**		*i* P		Pn	15 53 50.1	-0.2
OXX					*i* S		Sn	15 54 15.0	-2.1
OXX	**Oaxaca**	**2.28**	**246**		*i* P		Pn	15 53 49.5	-0.8
OXX					*i* S		Sn	15 54 15.0	-2.1
VHO	**Vista Hermosa**	**2.29**	**246**		*i* P		Pn	15 53 49.6	-0.9
VHO					*i* S		Sn	15 54 15.6	-1.9
HUIG	**Huatulco**	**2.70**	**214**		*i* P		Pn	15 53 54.1	-2.0
HUIG					*i* S		Sn	15 54 25.4	-2.1
UTMO	**Huajuapan**	**3.10**	**267**		*i* P		Pn	15 54 00.2	-1.4
UTMO					*i* S		Sn	15 54 35.2	-2.2
PPM	**Popocatepetl**	**4.00**	**286**		*i* P		Pn	15 54 14.1	+0.1
PPM					*i* S		Sn	15 54 59.4	-0.3
TEIG	**Tepich**	**6.32**	**69**		*e*Pn		Pn	15 54 41.8	-4.1
TEIG					Sn		Sn	15 55 46.0	-11

*BJI **20** 16:00:46.9, 160S×12823E, h10km, mB5.4, mb5.2, Ms4.7, Msz4.5*

*IDC **20** 16:00:54.7±0.4, 081S×127.45E, h0km, mb4.9/25, mb1 4.8/26, mb1mx4.8/28, mbtmp4.9/26, ML4.2/1, MS4.4/14, Ms1 4.4/14, ms1mx4.3/26, Error ellipse: s-maj=17.6km s-min=8.4km az=73.0*

*ISCJB **20** 16:00:55.6±0.2, 080S±002×12760E±003, h15km, mb5.2/97, MS4.5/35, Error ellipse: s-maj=4.7km s-min=3.4km az=171.9*

*GCMT **20** 16:00:56.4±0.1, 076S×12757E, h12km, MW5.3/92, Moment Tensor Solution. s65,c93; s92,c182; Duration: 1§1 Moment tensor: Scale 10^17Nm; Mrr=1.16±.02; Mθθ=0.06±.01; Mϕϕ=1.10±.02; Mrθ=-0.28±.05; Mϕθ=0.41±.01; Mrϕ=0.00±.05; Best double couple: M0=1.23500×10^17 NP1:φs=187.00000°, δ=44.00000°, λ=-109.00000°. NP2: φs=32.00000°, δ=49.00000°, λ=-73.00000°. Principal axes: T 1.2470, Plg2.0000°, Azm110.0000°; N -0.0280, Plg13.0000°, Azm200.0000°; P -1.2240, Plg77.0000°, Azm11.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 16:00:56.4±0.2, 076S×12751E, h10km, mb5.3/37 Error ellipse: s-maj=7.2km s-min=4.3km az=71.0*

NEIC Felt [IV] at Labuha.

*MOS **20** 16:00:58.5±1.3, 070S×127.46E, h33km, mb5.5/28, Error ellipse: s-maj=12.6km s-min=6.6km az=111.4*

ISC 20 16:00:57.6±0.2, 080S±002×12761E±003, h16km, h16km±1.7km:pP-P, n335, σ1§11/341, mb5.2/97, MS4.5/35, 11C-20D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.92**	**168**		P		**Pn**	**16 01 45.3**	**+1.8**
	1μm,1.0s								
PCI	**Palu**	**7.77**	**269**		P		**Pn**	**16 02 48.8**	**-1.4**
	563nm,0.7s								
MATI	**Mati**	**7.82**	**350**		*e*P		**Pn**	**16 02 53.2**	**+2.4**
MATI					*e*S		**Sn**	**16 04 24.8**	**+5.8**
DAV	**Davao City (W)**	**8.08**	**346**		Pn		**Pn**	**16 02 58.7**	**+4.4**
	315nm,0.7s								
DAV	**Davao City (W)**	**8.08**	**346**		P		**Pn**	**16 02 57.2**	**+2.8**
	SNR=17								
DAV	**Davao City (W)**	**8.08**	**346**		P		**Pn**	**16 02 57.2**	**+2.8**
	SNR=17								
DAV	**Davao City (W)**	**8.08**	**346**		P		**Pn**	**16 02 57.2**	**+2.8**
	SNR=17								
KAPI	**Kappang**	**8.89**	**242**		Pn		**Pn**	**16 03 05.3**	**-0.2**
	1μm,0.6s,SNR=12								
BUKP	**Musuan**	**8.99**	**344**		*e*P		**Pn**	**16 03 07.1**	**+0.2**
BUKP					*e*S		**Sn**	**16 04 51.8**	**+3.9**
BATI	**Kupang**	**10.13**	**203**		Pn		**Pn**	**16 03 26.1**	**+3.6**
	1.0nm,0.3s,baz=314,slow=2.0,SNR=5.8								
BATI					LR		LR	16 07 29.1	
	comp=Z,3μm,20.3s,baz=1.1,slow=39								
TSM	**Tawau**	**10.97**	**298**		⇓P		**Pn**	**16 03 34.0**	**0.0**
MSLP	**Maasin**	**11.21**	**346**		*e*P		**Pn**	**16 03 28.7**	**-8.5**
OCLP	**Ormoc**	**12.15**	**346**		*e*P		**Pn**	**16 03 50.9**	**+0.8**
SDKM	**Sandakan**	**12.21**	**302**		⇑P		**Pn**	**16 03 53.0**	**+1.9**
KAKA	**Kakadu**	**12.76**	**158**		*e*P		**Pn**	**16 03 57.3**	**-1.2**
	23nm,0.6s								
KAKA					*e*S		**Sn**	**16 06 15.5**	**-4.9**
KDM	**Kudat**	**13.21**	**306**		⇓P		**Pn**	**16 04 08.4**	**+3.8**
KKM	**Kota Kinabalu**	**13.26**	**301**		*e*P		**Pn**	**16 04 06.8**	**+1.5**
KKM	**Kota Kinabalu**	**13.26**	**301**		⇓P		**Pn**	**16 04 07.6**	**+2.3**
KMMI	**Kalianget**	**14.95**	**245**		P		**Pn**	**16 04 34.7**	**+6.2**
	170nm,1.2s								
BTM	**Bintulu**	**15.05**	**285**		⇓P		**Pn**	**16 04 29.3**	**-0.6**
SBUM	**Sibu**	**15.72**	**282**		⇓P		**Pn**	**16 04 38.5**	**0.0**
FITZ	**Fitzroy Crossi**	**17.30**	**186**		*e*P		**Pn**	**16 05 00.7**	**+2.1**
	44nm,1.0s								
FITZ					*e*S		**Sn**	**16 08 07.5**	**-3.3**
FITZ	**Fitzroy Crossi**	**17.30**	**186**		P		**Pn**	**16 04 59.2**	**+0.7**
	0.6nm,0.3s,baz=19,slow=14,SNR=9.8								
FITZ					S		**Sn**	**16 08 17.1**	**+6.2**
	0.0nm,0.3s,baz=61,slow=19,SNR=2.7								
FITZ					LR		LR	16 12 39.5	
	comp=Z,617nm,19.1s,baz=15,slow=41								
KSM	**Kuching**	**17.45**	**277**		*e*P		**Pn**	**16 04 57.9**	**-2.6**
KSM	**Kuching**	**17.45**	**277**		⇓P		**Pn**	**16 05 00.4**	**-0.1**
BJII	**Banjamegara**	**18.99**	**250**		P		**Pn**	**16 05 19.1**	**-0.3**
	452nm,1.9s								
BJII	**Banjamegara**	**18.99**	**250**		⇓*i*P		**Pn**	**16 05 19.1**	**-0.3**
BJII					*i* S			16 05 26.1	
TPI	**Tanjungpandan**	**20.04**	**264**		P		**P**	**16 05 30.8**	**+0.6**
	198nm,1.2s								
WRA	**Warramunga Arr**	**20.13**	**161**		P		**P**	**16 05 29.1**	**-1.9**
WRA					S		**S**	**16 09 24.0**	**+7.3**
WRA								16 09 45.4	
WRA	**Warramunga Arr**	**20.13**	**161**		P		**P**	**16 05 29.1**	**-2.0**
	7.2nm,0.5s,baz=340,slow=11,SNR=86								
WRA					S		**S**	**16 09 24.0**	**+7.3**
	12nm,1.1s,baz=343,slow=20,SNR=5.3								
WRA					PcP		PcP	16 09 45.4	-0.6
	7.3nm,0.9s,baz=320,slow=2.1,SNR=4.5								
WRA					LR		LR	16 13 51.3	
	comp=Z,2μm,18.4s,MS4.4,baz=340,slow=38								
WB2	**Warramunga Arr**	**20.13**	**161**		*e*P		**P**	**16 05 30.3**	**-0.8**
WB2					*e*S		**S**	**16 09 10.0**	**-6.8**
LEM	**Lembang**	**20.82**	**253**		P		**P**	**16 05 41.0**	**+2.4**
	221nm,1.0s								
PMG	**Port Moresby**	**21.25**	**114**		*e*P		**P**	**16 05 45.5**	**+2.2**
	103nm,1.2s,mb5.0								
PMG	**Port Moresby**	**21.25**	**114**		*e*P		**P**	**16 05 45.5**	**+2.2**
PMG					pmax		pmax		
	comp=Z,103nm,1.2s								
PMG	**Port Moresby**	**21.25**	**114**		P		**P**	**16 05 43.6**	**+0.3**
	comp=Z,9.0nm,0.8s,mb4.1,baz=276,slow=10,SNR=3.3								
MBWA	**Marble Bar**	**21.64**	**200**		*e*P		**P**	**16 05 46.9**	**-0.5**
	comp=Z,48nm,1.0s,mb4.9								
MBWA	**Marble Bar**	**21.64**	**200**		P		**P**	**16 05 47.9**	**+0.5**
	SNR=9.3

SNY AMB AMB
comp=Z,21nm,0.6s,mb5.0
SNY AMB AMB
comp=Z,123nm,5.7s
SNY LR LR
comp=N,164nm,15.9s,MS4.5
SNY LR LR
comp=E,565nm,17.7s,MS4.5
SNY LR LR
comp=Z,356nm,18.6s,MS4.3
LZH Lanzhou 42.85 331 *e*P **P 16 08 56.6 +1.5**
LZH AP pP 16 09 00.0 -0.2
LZH XP sP 16 09 02.1 -0.2
LZH PP PP 16 10 36.1 +1.3
LZH PCP PcP 16 10 44.6 -1.5
LZH *e*S **S 16 15 20.3 +1.2**
LZH AMB AMB
comp=Z,167nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,545nm,4.6s
LZH LR LR
comp=E,1μm,14.0s
LZH LR LR
comp=Z,2μm,16.0s,MS5.0
JTM Tenmabayashi 43.17 15 P **P 16 08 58.1 +0.5**
SHL Shillong 43.35 310 *e*P **P 16 09 00.0 +0.7**
comp=Z,13nm,0.8s,mb4.7
SHL *e*S **S 16 15 26.0 -0.7**
JOT Ohata 43.73 15 P **P 16 09 02.4 +0.3**
HHC Hu-ho-hao-te 43.95 342 *e*P **P 16 09 04.0 +0.1**
HHC AP pP 16 09 08.3 -0.7
HHC XP sP 16 09 10.6 -0.5
HHC PP PP 16 10 46.5 0.0
HHC SCP ScP 16 14 40.6 -0.4
HHC S **S 16 15 34.1 -0.9**
HHC SCS ScS 16 19 00.8 -1.7
HHC AMB AMB
comp=Z,25nm,1.4s,mb4.8
HHC AMB AMB
comp=Z,285nm,3.6s
HHC LR LR
comp=N,299nm,19.0s,MS4.4
HHC LR LR
comp=E,292nm,17.8s,MS4.4
HHC LR LR
comp=Z,740nm,27.3s
BTO Baotou 44.22 341 *e*P **P 16 09 06.3 +0.2**
CN2 Changchun 44.45 358 *e*P **P 16 09 06.0 -1.8**
CN2 *e*XP sP 16 09 13.0 -2.0
CN2 PP PP 16 10 51.3 -0.4
CN2 *e*S **S 16 15 40.9 -1.2**
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,13.0s,MS4.5
CN2 LR LR
comp=E,300nm,13.0s,MS4.5
CN2 LR LR
comp=Z,300nm,16.0s,MS4.3
MDJ Mudanjiang 45.26 2 P **P 16 09 13.9 -0.4**
MDJ AP pP 16 09 16.8 -2.6
MDJ XP sP 16 09 18.3 -3.1
MDJ PP PP 16 10 59.3 -1.0
MDJ S **S 16 15 57.1 +3.3**
MDJ AMB AMB
comp=Z,20nm,1.4s,mb4.8
MDJ AMB AMB
comp=Z,164nm,6.5s
MDJ LR LR
comp=N,299nm,20.1s
MDJ LR LR
comp=Z,430nm,22.9s,MS4.3
MDJ Mudanjiang 45.26 2 *e*P **P 16 09 14.0 -0.3**
comp=Z,38nm,1.1s,mb5.1
LSA Lhasa 46.15 314 P **P 16 09 23.9 +2.3**
LSA AP pP 16 09 31.5 +4.8
LSA PP PP 16 11 10.5 +0.5
LSA SS SS 16 19 34.5 +1.9
LSA Lhasa 46.15 314 *e*P **P 16 09 23.4 +1.8**
comp=Z,84nm,0.6s,mb5.8
LSA Lhasa 46.15 314 *e*P **P 16 09 23.4 +1.8**
LSA pmax pmax
comp=Z,84nm,0.6s,mb5.8
ASAJ Asahikawa 46.68 15 P **P 16 09 26.1 +0.6**
ASAJ Asahikawa 46.68 15 P **P 16 09 26.1 +0.6**
comp=Z,25nm,0.9s,mb5.2,baz=235,slow=15,SNR=18
ASAJ LR LR 16 30 44.2
comp=Z,594nm,18.1s,MS4.6,baz=343,slow=38
JMP Maruseppu 46.78 16 P **P 16 09 27.0 +0.7**
VIS Vishakhapatnam 47.30 295 *i* P **P 16 09 32.1 +1.3**
VIS *ex* x 16 09 36.3
comp=Z,125nm,1.5s
VIS *i* S **S 16 16 24.2 +0.1**
GTA Gaotai 47.43 331 P **P 16 09 32.0 +0.5**
GTA AP pP 16 09 35.8 -0.8
GTA XP sP 16 09 38.5 -0.1
GTA PCP PcP 16 11 02.6 +0.7
GTA PP PP 16 11 22.5 -0.4
GTA SCP ScP 16 14 55.6 +0.1
GTA S **S 16 16 26.3 +1.1**
GTA AMB AMB
comp=Z,75nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,348nm,5.3s
GTA LR LR
comp=N,341nm,20.2s,MS4.5
GTA LR LR
comp=E,385nm,20.5s,MS4.5
GTA LR LR
comp=Z,472nm,18.6s,MS4.5
PALK Pallekele 47.47 281 *e*P **P 16 09 32.4 +0.2**
comp=Z,14nm,0.9s,mb4.9
TAPN Taplejung 47.47 309 *e*P **P 16 09 31.9 -0.1**
comp=Z,399nm,1.0s,mb6.3
ODAN Odare 47.48 309 *e*P **P 16 09 32.0 -0.1**
comp=Z,402nm,0.9s,mb6.4
JIRN Jiri 48.80 309 *e*P **P 16 09 42.5 +0.2**
comp=Z,366nm,0.8s,mb6.5
MDRS Chennai 48.94 288⇑ *e*P **P 16 09 44.5 +1.0**
MDRS *ex* x 16 11 42.0
YSS Yuzh-Sakhalins 49.38 14 *e*P **P 16 09 45.5 -0.9**
comp=Z,18nm,0.9s,mb5.1
YSS Yuzh-Sakhalins 49.38 14 *e*P **P 16 09 46.2 -0.2**
YSS pmax pmax
comp=Z,30nm,0.9s,mb5.3
HABR Khabarovsk 49.50 7⇓ *i*P **P 16 09 47.6 +0.3**
HABR *e* 16 11 06.5
HABR *e*S **S 16 16 58.0 +3.8**
HABR pmax pmax
comp=Z,70nm,1.6s,mb5.4
KKN Kakani 49.58 308 *e*P **P 16 09 48.0 -0.2**
comp=Z,381nm,1.0s,mb6.4
KLR Kul'dur 49.97 4 *e*P **P 16 09 46.0 -4.8**
KLR pmax pmax
comp=Z,45nm,1.6s,mb5.2
GKN Gorkha 50.18 308 *e*P **P 16 09 52.9 +0.1**
comp=Z,357nm,0.9s,mb6.4
HIA Hailar 50.34 353 *e*P **P 16 09 53.0 -0.6**
comp=Z,13nm,0.8s,mb5.0
HIA Hailar 50.34 353 *i* P **P 16 09 52.6 -1.0**
KOLN Koldanda 50.89 307 *e*P **P 16 09 58.3 +0.1**
comp=Z,823nm,0.8s
HYB Hyderabad 51.58 293⇓ *e*P **P 16 10 04.0 +0.5**
comp=Z,125nm,1.0s,mb5.8
HYB *e* pP 16 10 10.5 +1.8
HYB *e* 16 10 19.0
HYB *e*S **S 16 17 20.0 -4.0**
HYB Hyderabad 51.58 293⇓ *e*P **P 16 10 04.0 +0.5**
HYB *e* pP 16 10 10.5 +1.8
HYB *e* 16 10 19.0
HYB *e*S **S 16 17 20.0 -4.0**
HYB pmax pmax
comp=Z,125nm,1.0s,mb5.8
HYB Hyderabad 51.58 293⇓ *i*P **P 16 10 04.0 +0.5**
comp=Z,125nm,1.0s,mb5.8
HYB *e* pP 16 10 10.5 +1.8
HYB *e* 16 10 19.0
HYB *e*S **S 16 17 20.0 -4.0**
ULN Ulaanbaatar 51.67 342 *e*P **P 16 10 03.0 -0.6**
comp=Z,71nm,1.3s,mb5.4
ULN Ulaanbaatar 51.67 342 *i* P **P 16 10 03.5 -0.2**
ULN Ulaanbaatar 51.67 342 P **P 16 10 03.7 0.0**
SNR=44
ULN Ulaanbaatar 51.67 342 P **P 16 10 03.7 0.0**
SNR=44
SONM Songino Array 51.85 342 P **P 16 10 04.3 -0.7**
comp=Z,17nm,0.9s,mb5.0,baz=157,slow=6.4,SNR=6.5
SONM LR LR 16 35 20.9
comp=Z,254nm,18.7s,MS4.3,baz=158,slow=40
NGP Nagpur 52.21 298 *e*P **P 16 10 06.8 -1.4**
NGP *ex* x 16 10 08.4
comp=Z,81nm,1.6s
NGP *e*S **S 16 17 30.7 -1.9**
AKL Akola 53.89 296 *e*P **P 16 10 20.4 -0.1**
AKL *ex* x 16 10 22.2
comp=Z,138nm,1.3s
AKL *i* S **S 16 17 53.4 -2.1**
LGTI Lohaghat 54.27 308 *e*P **P 16 10 21.8 -1.4**
BHPL Bhopal 54.31 300 *i* P **P 16 10 24.1 +0.5**
ZAK Zakamensk 55.07 341⇓ *i*P **P 16 10 28.2 -0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.1s,mb4.7
KAD Karad 55.59 292 *e*P **P 16 10 31.9 -1.1**
TLY Talaya 56.08 342 *e*P **P 16 10 35.0 -0.9**
comp=Z,29nm,1.1s,mb5.2
TLY Talaya 56.08 342⇑ *i*P **P 16 10 36.2 +0.3**
TLY *e*S **S 16 18 26.8 +2.9**
TLY *e* 16 18 41.4
TLY pmax pmax
comp=Z,31nm,1.2s,mb5.2
TLY Talaya 56.08 342 P **P 16 10 36.1 +0.3**
SNR=12
TLY Talaya 56.08 342 P **P 16 10 36.1 +0.3**
SNR=12
TLY Talaya 56.08 342 P **P 16 10 36.1 +0.3**
SNR=12
TLY Talaya 56.08 342 P **P 16 10 36.1 +0.3**
SNR=12
TLY Talaya 56.08 342 P **P 16 10 36.1 +0.3**
SNR=12
POO Poona 56.19 293 *ex* x 16 10 36.0
DDI Dehra Dun 56.37 308 *i* P **P 16 10 39.0 +0.7**
IRK Irkutsk 56.39 343⇓ *i*P **P 16 10 37.6 -0.4**
IRK pmax pmax
comp=Z,45nm,2.0s,mb5.2
NDI New Delhi 56.40 306 *e*P **P 16 10 37.0 -1.6**
MOY Mondy 56.92 341 *e*P **P 16 10 42.0 +0.2**
MOY pmax pmax
comp=Z,87nm,1.6s,mb5.5
WMQ Urumqi 56.94 326⇑ *i*P **P 16 10 42.4 +0.3**
WMQ AP pP 16 10 46.9 -0.5
WMQ XP sP 16 10 49.4 +0.1
WMQ PCP PcP 16 11 37.9 +0.5
WMQ PP PP 16 12 49.6 +0.8
WMQ *e*S **S 16 18 33.4 -2.2**
WMQ AMB AMB
comp=Z,74nm,1.1s,mb5.6
WMQ LR LR
comp=N,559nm,23.8s,MS4.7
WMQ LR LR
comp=E,431nm,26.4s,MS4.7
WMQ LR LR
comp=Z,355nm,25.1s,MS4.4
CLNS Chul'man 57.50 358 *e*P **P 16 10 45.5 -0.3**
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=Z,18nm,0.9s,mb5.1
CLNS pmax pmax
comp=E,10.0nm,1.0s
AJM Ajmer 57.75 302 *e*P **P 16 10 47.0 -1.2**
THN Thein Dam 59.04 309 *e*P **P 16 10 56.1 -1.0**
BOD Bodaibo 59.45 352 *e*P **P 16 10 58.4 -1.0**
BOD pmax pmax
comp=Z,18nm,1.2s,mb5.0
PET Petropavlovsk 59.58 21⇑ *e*P **P 16 11 00.4 0.0**
PET Petropavlovsk 59.58 21 *e*P **P 16 11 03.2 +2.8**
PET *e*S **S 16 19 09.5 -0.1**
PET *e*SS SS 16 23 09.2 +3.9
PET pmax pmax
comp=Z,70nm,1.4s,mb5.5
PET smax
comp=N,700nm,18.5s
PET MLR MLR
comp=Z,500nm,16.0s,MS4.7
MK31 Makanchi Array 61.77 326 *e*P **P 16 11 14.6 -0.9**
MK31 Makanchi Array 61.77 326 *i* P **P 16 11 14.6 -0.9**
MK31 pmax pmax
comp=Z,52nm,0.8s,mb5.7
MKAR Makanchi Array 61.77 326 P **P 16 11 14.4 -1.0**
comp=Z,35nm,0.8s,mb5.6,baz=120,slow=7.3,SNR=177
MKAR LR LR 16 37 47.9
comp=Z,345nm,21.5s,MS4.5,baz=114,slow=36
KSH Kashi 61.89 317 P **P 16 11 17.9 +1.5**
KSH *e*AP pP 16 11 22.5 +0.8
KSH *e*XP sP 16 11 25.3 +1.6
KSH *e*PCP PcP 16 11 57.5 +0.3
KSH *e*PP PP 16 13 37.4 +4.6
KSH *e*SCP ScP 16 15 56.6 -2.0
KSH *e*PCS PcS 16 15 58.8 -1.4
KSH *e*S **S 16 19 43.0 +3.3**
KSH *e*XS sS 16 19 51.4 +3.0
KSH *e*SCS ScS 16 21 06.1 -1.7
KSH *e*SS SS 16 23 48.9 +6.8
YAK Yakutsk 62.69 1 *e*P **P 16 11 19.9 -1.4**
comp=Z,136nm,0.8s,mb6.1
YAK Yakutsk 62.69 1 *e*P **P 16 11 20.2 -1.1**
YAK *e* 16 11 59.5
YAK *e* 16 13 39.3
YAK *e*S **S 16 19 50.5 +1.5**
YAK *e**SS sS 16 19 57.5 -0.2
YAK *e* 16 21 14.1
YAK *e*SS SS 16 23 55.5 +1.7
YAK pmax pmax
comp=Z,78nm,0.7s,mb6.0
YAK pmax pmax
comp=N,28nm,1.2s
YAK pmax pmax
comp=E,11nm,0.9s
YAK pmax pmax
comp=Z,117nm,5.1s
YAK pmax pmax
comp=N,45nm,2.1s
YAK pmax pmax
comp=E,136nm,5.6s
YAK smax
comp=N,97nm,3.8s
YAK smax
comp=E,104nm,4.1s
MA2 Magadan 62.88 13 *e*P **P 16 11 23.4 +0.7**
comp=E,56nm,0.9s,mb5.7
MA2 Magadan 62.88 13 *d* *i*P **P 16 11 23.4 +0.8**
MA2 *e*S **S 16 19 53.2 +1.8**
MA2 *e* 16 21 11.5
MA2 pmax pmax
comp=Z,90nm,0.9s,mb5.9
KZA Kyzart 63.56 319 P **P 16 11 28.4 +0.9**
SNR=28
TKM2 Tokmak 2 63.73 320 P **P 16 11 28.9 +0.3**
SNR=23
KBK Karagaybulak 64.03 319 P **P 16 11 31.1 +0.5**
SNR=17
UCH Uchtor 64.11 319 *e*P **P 16 11 31.7 +0.5**
comp=Z,84nm,1.4s,mb5.6
UCH Uchtor 64.11 319 P **P 16 11 32.3 +1.1**
SNR=34
AAK Ala-Archa 64.31 319 P **P 16 11 32.5 +0.1**
comp=Z,136nm,1.0s,mb5.9,SNR=14
AAK Ala-Archa 64.31 319 P **P 16 11 33.4 +1.0**
SNR=14
CHMS Chumysh 64.31 320 P **P 16 11 32.6 +0.1**
SNR=6.3
FRU Bishkek 64.32 319⇓ *e*P **P 16 11 32.0 -0.5**
FRU *e* 16 12 04.5
FRU pmax pmax
comp=Z,70nm,2.1s,mb5.3
USP Ospenovka 64.60 320 P **P 16 11 34.3 0.0**
SNR=32
AML Almayashu 64.61 318 *e*P **P 16 11 34.3 -0.1**
comp=Z,74nm,1.2s,mb5.6
AML Almayashu 64.61 318 P **P 16 11 35.3 +0.9**
SNR=33
EKS2 Erkin-Say 64.79 319 *e*P **P 16 11 35.6 0.0**
comp=Z,50nm,1.2s,mb5.4
EKS2 Erkin-Say 64.79 319 P **P 16 11 35.8 +0.2**
SNR=33
KBL Kabul 65.00 309 *e*P **P 16 11 36.8 -0.3**
KURK Kurchatov 66.02 328 P **P 16 11 42.8 -0.6**
comp=Z,547nm,1.1s,mb6.5,SNR=78
KURK Kurchatov 66.02 328 *e*P **P 16 11 42.1 -1.3**
comp=Z,111nm,1.0s,mb5.8
KURK Kurchatov 66.02 328⇑ *e*P **P 16 11 42.4 -1.0**
KURK Kurchatov 66.02 328 P **P 16 11 43.0 -0.4**
SNR=38
KURK Kurchatov 66.02 328 P **P 16 11 43.0 -0.4**
SNR=38
KURK Kurchatov 66.02 328 P **P 16 11 43.0 -0.4**
SNR=38
KURK Kurchatov 66.02 328 P **P 16 11 43.0 -0.4**
SNR=38
KURK Kurchatov 66.02 328 P **P 16 11 43.0 -0.4**
SNR=38
SEY Seymchan 66.24 12⇑ *e*P **P 16 11 45.5 +1.0**
NVS Novosibirsk 66.29 334 *i* P **P 16 11 43.1 -1.9**
NVS *i* 16 14 05.9
NVS *i* PPP 16 15 49.1
NVS *i* S S 16 20 29.7 -4.1
NVS pmax pmax
comp=N,61nm,1.4s
NVS pmax pmax
comp=Z,76nm,1.4s,mb5.5
NVS pmax pmax
comp=E,51nm,1.3s
NVS pmax pmax
comp=Z,16nm,1.7s,mb4.8
NVS pmax pmax
comp=N,9.0nm,1.3s
NVS pmax pmax
comp=E,8.0nm,1.0s
NVS smax
comp=N,25nm,1.6s
NVS smax
comp=E,40nm,1.9s
KK31 Karatay Array 67.15 318 *i* P **P 16 11 49.8 -1.0**
KK31 pmax pmax
comp=Z,47nm,1.2s,mb5.4
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
JMDO Jabal Madar 71.41 294 P **P 16 12 17.8 +0.2**
SNR=10
SMDO Samad 71.57 295 P **P 16 12 18.7 +0.2**
SNR=7.0
SMDO Samad 71.57 295 P **P 16 12 18.7 +0.2**
SNR=7.0
SMDO Samad 71.57 295 P **P 16 12 18.7 +0.2**
SNR=7.0
SMDO Samad 71.57 295 P **P 16 12 18.7 +0.2**
SNR=7.0
SMDO Samad 71.57 295 P **P 16 12 18.7 +0.2**
SNR=7.0
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BIDO Bidbid 71.57 295 P **P 16 12 18.6 0.0**
SNR=10
BRVK Borovoye 71.66 328 P **P 16 12 17.6 -0.8**
comp=Z,304nm,1.0s,mb6.2,SNR=23
BRVK Borovoye 71.66 328 *e*P **P 16 12 17.3 -1.1**
comp=Z,71nm,1.1s,mb5.5
BRVK Borovoye 71.66 328 *e*P **P 16 12 17.3 -1.1**
BRVK pmax pmax
comp=Z,71nm,1.1s,mb5.5
BRVK Borovoye 71.66 328 P **P 16 12 17.9 -0.6**
SNR=26
BRVK Borovoye 71.66 328 P **P 16 12 17.9 -0.6**
SNR=26
BRVK Borovoye 71.66 328 P **P 16 12 17.9 -0.6**
SNR=26
BRVK Borovoye 71.66 328 P **P 16 12 17.9 -0.6**
SNR=26
CHKZ Chkalovo 71.77 328 *i* P **P 16 12 17.5 -1.6**
CHKZ Chkalovo 71.77 328 *i* P **P 16 12 17.4 -1.7**
CHKZ pmax pmax
comp=Z,35nm,1.2s,mb5.2
BSY Bisya 72.29 294 P **P 16 12 23.2 +0.3**
SNR=12
BSY Bisya 72.29 294 P **P 16 12 23.2 +0.3**
SNR=12
BSY Bisya 72.29 294 P **P 16 12 23.2 +0.3**
SNR=12
BSY Bisya 72.29 294 P **P 16 12 23.2 +0.3**
SNR=12
BSY Bisya 72.29 294 P **P 16 12 23.2 +0.3**
SNR=12
HOQ Hoqain 72.32 295 P **P 16 12 23.3 +0.3**
SNR=8.4
HOQ Hoqain 72.32 295 P **P 16 12 23.3 +0.3**
SNR=8.4
HOQ Hoqain 72.32 295 P **P 16 12 23.3 +0.3**
SNR=8.4
HOQ Hoqain 72.32 295 P **P 16 12 23.3 +0.3**
SNR=8.4
HOQ Hoqain 72.32 295 P **P 16 12 23.3 +0.3**
SNR=8.4
TIXI Tiksi 72.34 0 *e*P **P 16 12 20.3 -1.9**
comp=Z,19nm,0.6s,mb5.2
TIXI Tiksi 72.34 0 *e*P **P 16 12 20.4 -1.8**
TIXI pmax pmax
comp=Z,43nm,1.8s,mb5.1
HATD Hatta, Dubai 73.57 296 P **P 16 12 30.9 +0.5**
SNR=7.3
HATD Hatta, Dubai 73.57 296 P **P 16 12 30.9 +0.5**
SNR=7.3
HATD Hatta, Dubai 73.57 296 P **P 16 12 30.9 +0.5**
SNR=7.3
HATD Hatta, Dubai 73.57 296 P **P 16 12 30.9 +0.5**
SNR=7.3
HATD Hatta, Dubai 73.57 296 P **P 16 12 30.9 +0.5**
SNR=7.3
ASHO Ashiyiah 73.62 296 P **P 16 12 30.8 +0.1**
SNR=11
ASHO Ashiyiah 73.62 296 P **P 16 12 30.8 +0.1**
SNR=11
ASHO Ashiyiah 73.62 296 P **P 16 12 30.8 +0.1**
SNR=11
ASHO Ashiyiah 73.62 296 P **P 16 12 30.8 +0.1**
SNR=11
BILL Bilibino 73.69 14 *e*P **P 16 12 28.6 -1.6**
comp=Z,3.9nm,0.8s,mb4.4
BILL Bilibino 73.69 14 *e*P **P 16 12 28.8 -1.5**
BILL *e* pP 16 12 34.6 -1.0
BILL pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
BILL MLR MLR
comp=Z,300nm,20.0s,MS4.6
ABKT Ailbek 74.42 310 P **P 16 12 35.3 +0.1**
comp=Z,166nm,0.9s,mb6.0,SNR=8.8
AB31 Akbulak array 76.21 321 *i* P **P 16 12 43.6 -1.6**
AKTK Aktyubinsk 77.75 322 P **P 16 12 52.7 -1.1**
AKTO Aktyubinsk 77.75 322 *i* P **P 16 12 52.3 -1.5**
AKTO pmax pmax
comp=Z,1.0nm,0.9s
AKTO Aktyubinsk 77.75 322 P **P 16 12 52.7 -1.1**
comp=Z,19nm,0.9s,mb5.0,baz=121,slow=6.0,SNR=7.3
SVE Sverdlovsk 78.27 329 *e*P **P 16 12 55.9 -0.6**
SVE pmax pmax
comp=Z,64nm,1.4s,mb5.4
VNDA Vanda 78.85 173 P **P 16 12 59.6 +0.1**
comp=Z,7.3nm,1.0s,mb4.6,baz=321,slow=5.5,SNR=22
ARU Arti 79.22 328 P **P 16 13 00.0 -1.8**
comp=Z,190nm,0.9s,mb6.0,SNR=8.2
ARU Arti 79.22 328 *e*P **P 16 12 59.8 -2.0**
comp=Z,31nm,0.9s,mb5.2
ARU Arti 79.22 328 *d* *i*P **P 16 12 59.9 -1.9**
ARU *e* 16 16 02.5
ARU PPP 16 17 44.8

ARU					S	S	16 23 00.2	-0.9
ARU					SS	SS	16 28 03.3	-4.4
ARU					pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1							
SBA	**Scott Base**	**79.75**	**172**	*eP*	**P**		**16 13 05.7**	**+1.4**
	comp=Z,12nm,1.1s,mb4.8							
SBA	**Scott Base**	**79.75**	**172**	*eP*	**P**		**16 13 05.7**	**+1.3**
SBA					pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7							
MAW	**Mawson**	**79.84**	**201**	P	**P**		**16 13 04.1**	**-0.9**
	comp=Z,4.6nm,1.0s,mb4.3,baz=57,slow=14,SNR=3.0							
MAW					LR	LR	16 46 25.0	
	comp=Z,219nm,18.7s,MS4.5,baz=206,slow=34							
OPO	**Ambohidratompo**	**80.66**	**251**	P	**P**		**16 13 09.3**	**-1.2**
	comp=Z,18nm,0.9s,mb5.0,baz=64,slow=3.8,SNR=20							
PPT	**Papeete**	**82.91**	**107**	*eS*	S		16 23 36.5	-4.5
	comp=Z,89nm,23.0s							
PPT	**Papeete**	**82.91**	**107**	*eLR*	LR		16 39 21.4	
	comp=Z,1μm,31.5s							
TBI	**Tubuai**	**83.19**	**113**	*eS*	S		16 23 34.9	-8.8
	comp=Z,88nm,29.5s							
TBI	**Tubuai**	**83.19**	**113**	*eLR*	LR		16 39 37.1	
	comp=Z,546nm,30.8s							
SVW2	**Sparrevohn**	**84.34**	**28**	*eP*	**P**		**16 13 28.4**	**-0.3**
TTA	**Tatalina**	**84.53**	**27**	*eP*	**P**		**16 13 31.5**	**+1.9**
	comp=Z,25nm,1.2s,mb5.2							
TTA	**Tatalina**	**84.53**	**27**	*eP*	**P**		**16 13 31.5**	**+1.9**
TTA					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.2							
BHD	**Baghdad**	**84.77**	**303**	*ex*	x		16 13 29.0	
BHD	**Baghdad**	**84.77**	**303**	*ex*	x		16 23 58.5	
ZEI	**Tsey**	**85.92**	**313**	*eP*	**P**		**16 13 37.9**	**+0.9**
ZEI					pmax	pmax		
	comp=N,19nm,1.2s							
MSL	**Mosul**	**86.05**	**306**	*ex*	x		16 13 36.5	
IMA2	**Indian Mountai**	**86.15**	**24**	P	**P**		**16 13 37.2**	**-0.5**
PRGR	**Permogore**	**86.88**	**332**	*eP*	**P**		**16 13 42.5**	**+1.1**
PRGR				*eS*	S		16 24 13.4	-5.4
KIV	**Kislovodsk**	**86.89**	**314**	P	**P**		**16 13 41.5**	**-0.3**
	comp=N,56nm,1.6s,mb5.5							
KIV	**Kislovodsk**	**86.89**	**314**	*eP*	**P**		**16 13 40.3**	**-1.5**
KIV				*e*			16 17 03.1	
KIV				*eSS*	SS		16 30 02.8	+0.8
KIV					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9							
KIV					MLR	MLR		
	comp=Z,104nm,21.0s,MS4.2							
VRHR	**Novokhopersk**	**88.09**	**321**	*eP*	**P**		**16 13 45.2**	**-2.2**
VRHR					pmax	pmax		
	comp=Z,4.0nm,0.4s,mb5.0							
VRHR					pmax	pmax		
	comp=N,10.0nm,0.6s							
VRHR					pmax	pmax		
	comp=E,5.0nm,0.6s							
QSPA	**South Pole Qui**	**89.13**	**180**	*eP*	**P**		**16 13 52.5**	**+0.7**
	comp=E,24nm,1.1s,mb5.4							
MALT	**Malatya**	**89.85**	**308**	*eP*	**P**		**16 13 55.2**	**-0.8**
	comp=E,9.9nm,1.4s,mb5.0							
MALT	**Malatya**	**89.85**	**308**	*eP*	**P**		**16 13 55.2**	**-0.8**
MALT					pmax	pmax		
	comp=Z,10.0nm,1.4s,mb5.0							
KMBO	**Kilima Mbogo**	**90.34**	**269**	*eP*	**P**		**16 13 59.4**	**+0.5**
	comp=Z,25nm,1.1s,mb5.5							
KMBO	**Kilima Mbogo**	**90.34**	**269**	*eP*	**P**		**16 13 59.4**	**+0.6**
KMBO					pmax	pmax		
	comp=Z,25nm,1.1s							
KMBO	**Kilima Mbogo**	**90.34**	**269**	P	**P**		**16 14 00.1**	**+1.3**
	SNR=12							
KMBO	**Kilima Mbogo**	**90.34**	**269**	P	**P**		**16 14 00.1**	**+1.3**
	SNR=12							
KMBO	**Kilima Mbogo**	**90.34**	**269**	P	**P**		**16 14 00.1**	**+1.3**
	SNR=12							
KMBO	**Kilima Mbogo**	**90.34**	**269**	P	**P**		**16 13 59.8**	**+1.0**
	comp=Z,16nm,1.1s,mb5.3,baz=62,slow=6.3,SNR=29							
KMBO					LR	LR	16 54 46.9	
	comp=Z,154nm,19.7s,MS4.4,baz=96,slow=36							
ASF	**Jabal al Asfar**	**91.03**	**302**	P	**P**		**16 14 01.2**	**-0.4**
	comp=Z,3.5nm,0.9s,mb4.7,baz=173,slow=0.4,SNR=8.3							
OBN	**Obninsk**	**91.25**	**325**	*eP*	**P**		**16 13 59.2**	**-2.9**
OBN				*e*			16 14 07.1	
OBN					pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2							
OBN					MLR	MLR		
	comp=Z,100nm,17.0s,MS4.3							
DAWY	**Dawson**	**92.04**	**26**	*eP*	**P**		**16 14 05.5**	**-0.1**
TAOE	**Nuku Hiva Isla**	**92.09**	**99**	*eSS*	SS		16 31 13.7	-5.3
	comp=Z,476nm,30.8s							
MMAI	**Mount Meron Ar**	**92.29**	**303**	P	**P**		**16 14 07.0**	**-0.4**
	comp=Z,0.4nm,0.3s,mb4.2,baz=60,slow=4.0,SNR=6.4							
EIL	**Elat**	**92.71**	**300**	LR	LR		17 02 47.8	
	comp=Z,115nm,19.7s,MS4.3,baz=63,slow=40							
BRTR	**Keskin Array B**	**93.57**	**310**	P	**P**		**16 14 11.7**	**-1.5**
	comp=Z,1.1nm,0.9s,mb4.3,baz=97,slow=6.9,SNR=4.7							
ARCES	**ARCESS Array B**	**94.98**	**340**	P	**P**		**16 14 19.6**	**+0.6**
	comp=Z,4.6nm,0.9s,mb4.9,baz=88,slow=6.6,SNR=5.8							
AKASG	**Malin Array Be**	**95.94**	**321**	PP	PP		16 18 16.9	+0.9
	comp=Z,0.6nm,0.4s,baz=74,slow=6.5,SNR=5.5							
RKT	**Rikitea**	**96.51**	**113**	*eS*	S		16 25 38.8	-8.9
	comp=Z,86nm,29.8s							
RKT	**Rikitea**	**96.51**	**113**	*eLR*	LR		16 45 51.6	
	comp=Z,346nm,36.8s							
MLR	**Muntele Rosu**	**98.75**	**316**	PP	PP		16 18 43.3	+5.5
	comp=Z,17nm,1.0s,baz=118,slow=14,SNR=4.6							
LSZ	**Lusaka**	**98.88**	**255**	P	**P**		**16 14 37.2**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.8,baz=34,slow=3.5,SNR=4.7							
YKA	**Yellowknife Ar**	**103.22**	**25**	Pdif	Pdif		16 14 56.0	-0.2
YKA				PP	PP		16 19 05.3	-5.7
YKA				PKKPbc	PKKPbc		16 30 49.9	-4.0
YKA	**Yellowknife Ar**	**103.22**	**25**	Pdiff	Pdif		16 14 56.0	-0.2
	comp=Z,0.4nm,0.8s,baz=296,slow=4.8,SNR=4.2							
YKA				PP	PP		16 19 05.3	-5.7
	comp=Z,0.1nm,0.4s,baz=295,slow=5.8,SNR=4.9							
YKA				PKKPbc	PKKPbc		16 30 49.8	-4.0
	comp=Z,0.7nm,0.9s,baz=109,slow=2.2,SNR=6.0							
CLL	**Collm**	**105.80**	**324**	*es*PP			16 19 34.0	
CLL				Lm			17 03 00.0	
	comp=N,400nm,21.5s							
CLL				Lm			17 03 00.0	
	comp=E,500nm,18.9s							
GERES	**GERESS Array B**	**106.15**	**321**	PP	PP		16 19 33.5	+0.4
	comp=E,0.8nm,0.8s,baz=100,slow=5.5,SNR=4.8							
LPG	**La Plagne**	**111.75**	**319**	*e*PP	PP		16 20 10.7	-3.2
	comp=E,74nm,1.6s							
LPL	**La Plagne**	**111.76**	**319**	*e*PP	PP		16 20 10.8	-3.2
MBDF	**Montbardon**	**112.03**	**319**	*e*PP	PP		16 20 13.0	-3.0
	comp=E,62nm,1.4s							
KEST	**Kesra**	**113.16**	**309**	PP	PP		16 20 24.4	-0.1
	comp=E,3.7nm,0.8s,baz=53,slow=1.7,SNR=4.8							
PDAR	**Pinedale Array**	**114.12**	**43**	PKP	PKiKP		16 19 36.1	-0.4
	comp=E,0.8nm,0.9s,baz=318,slow=2.0,SNR=5.4							
PDAR				PP	PP		16 20 34.1	+3.2
	comp=E,0.6nm,1.0s,baz=289,slow=8.5,SNR=3.8							
PDAR				PKKPbc	PKKPbc		16 30 17.6	-1.0
	comp=E,0.5nm,0.7s,baz=118,slow=5.7,SNR=4.1							
SDCO	**Great Sand Dun**	**118.97**	**46**	PKPdf	PKPdf		16 19 45.8	-0.1
ANMO	**Albuquerque**	**119.34**	**50**	i/PKIKP	PKPdf		16 19 47.7	+0.9
ESDC	**Sonseca Array**	**121.40**	**317**	PP	PP		16 21 22.8	+1.4
	comp=E,1.1nm,0.6s,baz=60,slow=7.1,SNR=4.7							
TXAR	**Lajitas Array**	**123.57**	**55**	PKP	PKPdf		16 19 55.7	+0.6
	comp=E,1.1nm,0.9s,baz=191,slow=0.7,SNR=6.2							
TORD	**Torodi Ar. Bea**	**125.06**	**285**	PKP	PKPdf		16 19 57.8	-0.5
	comp=E,7.4nm,0.9s,baz=75,slow=1.6,SNR=32							
TORD				PP	PP		16 21 43.6	-3.7
	comp=E,1.6nm,1.0s,baz=61,slow=5.7,SNR=3.5							
JCT	**Junction City**	**126.24**	**52**	*e*PKPdf	PKPdf		16 19 59.9	-0.2
DBIC	**Dimbokro**	**132.24**	**278**	PKP	PKPdf		16 20 12.5	+0.5
DBIC	**Dimbokro**	**132.24**	**278**	PKP	PKPdf		16 20 12.5	+0.5
	comp=E,7.0nm,1.0s,baz=62,slow=4.2,SNR=4.7							
PLCA	**Paso Flores**	**135.47**	**160**	PKP	PKPdf		16 20 18.7	+1.3
PLCA	**Paso Flores**	**135.47**	**160**	PKP	PKPdf		16 20 18.7	+1.3
	comp=E,5.5nm,0.9s,baz=175,slow=5.1,SNR=13							
LCO	**Las Campanas**	**145.56**	**151**	*e*PKP	PKPdf		16 20 36.7	+0.8
NNA	**Nana**	**152.59**	**118**	*e*PKPbc	PKPbc		16 20 55.5	+0.9
LPAZ	**La Paz**	**156.98**	**138**	PKP	PKPdf		16 20 54.2	+0.8
	comp=E,6.2nm,1.2s,baz=4.6,slow=1.9,SNR=13							
SDV	**Santo Domingo**	**160.14**	**66**	*e*PKPdf	PKPdf		16 20 56.9	-0.5

*IDC **20** 16:10:02.5±2.2, 0.49S×128.31E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/14, mbtmp3.2/3, Error ellipse: s-maj=166.2km s-min=25.8km az=68.0*

*ISCJB **20** 16:10:05.0±2.6, 0.4S±05×128.4E±0.8, h33km, mb4.0/4, Error ellipse: s-maj=137.9km s-min=15.1km az=150.8*

ISC 20 16:10:07.8±2.5, 06S±05×1282E±09, h35km, n7, σ0§28/7, mb4.0/4, Halmahera

WRA	**Warramunga Arr**	**20.18**	**163**	P	**P**		**16 14 39.8**	**+0.3**
	0.3nm,0.6s,baz=344,slow=12,SNR=3.1							
ASAR	**Alice Springs**	**23.62**	**167**	P	**P**		**16 15 15.6**	**-0.4**
	0.6nm,0.8s,mb3.1,baz=346,slow=11,SNR=4.6							
TAPN	**Taplejung**	**47.80**	**309**	*eP*	**P**		**16 18 42.2**	**+0.1**
	4.0nm,0.5s,mb4.7							
JIRN	**Jiri**	**49.13**	**308**	*eP*	**P**		**16 18 52.6**	**+0.3**
	5.3nm,0.6s							
KKN	**Kakani**	**49.91**	**308**	*eP*	**P**		**16 18 57.8**	**-0.5**
	5.4nm,0.6s,mb4.7							
KOLN	**Koldanda**	**51.23**	**307**	*eP*	**P**		**16 19 08.4**	**+0.1**
	7.4nm,0.6s							
MKAR	**Makanchi Array**	**61.91**	**326**	P	**P**		**16 20 23.9**	**0.0**
	0.2nm,0.5s,mb3.5,baz=116,slow=8.1,SNR=9.0							

IDC 20 16:12:49.9±2.1, 070S×12768E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/14, mbtmp3.2/3, Error ellipse: s-maj=153.2km s-min=27.4km az=67.0, Halmahera

WRA	**Warramunga Arr**	**20.20**	**162**	P	P		16 17 26.1	-0.3
	0.2nm,0.3s,baz=340,slow=12,SNR=7.4							
ASAR	**Alice Springs**	**23.61**	**166**	P			16 18 03.0	+0.2
	0.2nm,0.4s,baz=345,slow=11,SNR=8.8							
MKAR	**Makanchi Array**	**61.73**	**326**	P	P		16 23 10.1	0.0
	0.1nm,0.2s,baz=106,slow=8.5,SNR=4.1							

*NEIC **20** 16:18:23.6±0.8, 4.701N×152.77E, h10km, Error ellipse: s-maj=27.1km s-min=14.8km az=142.0*

*ISCJB **20** 16:18:27.6±1.1, 4.67N±0.1×152.8E±0.1, h65km±10km, mb3.8/11, Error ellipse: s-maj=23.2km s-min=8.4km az=143.8*

*MOS **20** 16:18:28.9±1.6, 4.697N×152.70E, h70km, mb4.2/4, Error ellipse: s-maj=21.6km s-min=12.3km az=51.7*

*IDC **20** 16:18:32.9±4.2, 4.689N×152.68E, h92km±40km, mb3.4/10, mb1 3.6/12, mb1mx3.4/20, mbtmp3.4/12, Error ellipse: s-maj=27.8km s-min=23.3km az=156.0*

ISC 20 16:18:29.3±0.9, 4.67N±01×152.8E±01, h62km±8km, n49, σ1§33/56, mb3.9/11, Kuril Islands

KUR	**Kuril'sk**	**3.78**	**248**	*e*PN	**Pn**		**16 19 25.0**	**+0.1**
KUR				*eS*	**Sn**		**16 20 11.0**	**+2.9**
KUR				pmax	pmax			
	comp=Z,80nm,0.5s							
KUR				smax				
	comp=N,220nm,0.8s							
KUR				smax				
	comp=E,320nm,0.8s							
SKR	**Severo-Kuril's**	**4.50**	**28**	*e*PN	**Pn**		**16 19 33.4**	**-1.4**
SKR				*e*			16 20 18.6	
NEM2	**Nemuro 2**	**6.05**	**239**	P	**Pn**		**16 19 54.8**	**-1.3**
NEM2				*eS*	**Sn**		**16 21 00.5**	**-3.4**
JRA	**Rausu**	**6.12**	**245**	P	**Pn**		**16 19 59.0**	**+2.1**
JNK	**Nakash**	**6.55**	**244**	P	**Pn**		**16 20 03.5**	**+0.6**
JTKR	**Abashiri--Toko**	**6.87**	**249**	P	**Pn**		**16 20 09.1**	**+1.8**
JAK	**Akkeshi**	**6.89**	**240**	P	**Pn**		**16 20 06.1**	**-1.4**
JAK				*eS*	**Sn**		**16 21 20.8**	**-3.6**
YSS	**Yuzh-Sakhalins**	**6.92**	**275**	Pn	**Pn**		**16 20 09.4**	**+1.6**
JMP	**Maruseppu**	**7.21**	**251**	P	**Pn**		**16 20 13.4**	**+1.5**
JAR	**Ashorobuto**	**7.29**	**245**	P	**Pn**		**16 20 13.6**	**+0.6**
JAR				*eS*	**Sn**		**16 21 36.1**	**+1.9**
JOB	**Onbets**	**7.46**	**242**	P	**Pn**		**16 20 14.7**	**-0.6**
JOB				*eS*	**Sn**		**16 21 36.9**	**-1.5**
ASAJ	**Asahikawa**	**7.67**	**254**	P	**Pn**		**16 20 21.1**	**+3.0**
ASAJ	**Asahikawa**	**7.67**	**254**	PN	**Pn**		**16 20 21.0**	**+2.9**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	**7.67**	**254**	P	**Pn**		**16 20 20.9**	**+2.8**
	comp=Z,0.9nm,0.3s,baz=87,slow=16,SNR=15							
JKK2	**Kamakawa 2**	**7.67**	**252**	P	**Pn**		**16 20 20.4**	**+2.2**
JCH	**Churui**	**7.91**	**242**	P	**Pn**		**16 20 20.9**	**-0.6**
JCH				*eS*	**Sn**		**16 21 46.2**	**-3.3**
ERM	**Erimo**	**8.39**	**239**	*e*Pn	**Pn**		**16 20 28.3**	**+0.3**
JEM	**Erimo**	**8.39**	**239**	P	**Pn**		**16 20 28.2**	**+0.2**
JNBK	**Urakawa-nobuka**	**8.47**	**242**	P	**Pn**		**16 20 27.6**	**-1.6**
JNB	**Noboribetsu**	**9.43**	**247**	P	**Pn**		**16 20 42.0**	**-0.3**
JNB				*eS*	**Sn**		**16 22 24.4**	**-2.4**
JKB	**Kayabe**	**9.75**	**244**	P	**Pn**		**16 20 44.8**	**-1.8**
JSH	**Shimam**	**9.98**	**250**	P	**Pn**		**16 20 50.7**	**+0.8**
JYM2	**Yakumo 2**	**10.04**	**247**	P	**Pn**		**16 20 50.1**	**-0.5**
JANG	**Nango**	**10.39**	**236**	P	**Pn**		**16 20 51.9**	**-3.5**
JOSM	**Okushiri--Mats**	**10.63**	**249**	P	**Pn**		**16 20 58.0**	**-0.6**
MJAR	**Matsushiro Arr**	**14.92**	**232**	P	**Pn**		**16 22 00.4**	**+3.9**
	comp=Z,0.2nm,0.3s,baz=32,slow=9.8,SNR=4.7							
KSRS	**Korea Array**	**20.61**	**252**	P	**P**		**16 23 03.8**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=66,slow=7.3,SNR=3.0							
INK	**Inuvik**	**41.76**	**32**	*eP*	**P**		**16 26 12.1**	**+0.2**
MKAR	**Makanchi Array**	**46.77**	**297**	P	**P**		**16 26 50.2**	**-2.0**
	comp=Z,0.2nm,0.3s,mb3.5,baz=64,slow=9.8,SNR=2.3							
YKA	**Yellowknife Ar**	**51.05**	**37**	P	**P**		**16 27 24.9**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.5,baz=296,slow=7.2,SNR=6.4							
TAPN	**Taplejung**	**53.91**	**273**	*eP*	**P**		**16 27 48.0**	**+1.7**
JIRN	**Jiri**	**54.76**	**274**	*eP*	**P**		**16 27 53.3**	**+0.8**
	comp=Z,5.3nm,0.5s,mb4.8							
KKN	**Kakani**	**55.30**	**275**	*eP*	**P**		**16 27 56.4**	**0.0**
GKN	**Gorkha**	**55.60**	**276**	*eP*	**P**		**16 27 58.4**	**-0.2**
	comp=Z,7.1nm,0.6s,mb4.9							
KOLN	**Koldanda**	**56.46**	**276**	*eP*	**P**		**16 28 03.6**	**-1.1**
FINES	**FINESS Array B**	**63.97**	**335**	P	**P**		**16 28 55.2**	**-0.3**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
FINES	**FINESS Array B**	**63.97**	**335**	P	**P**		**16 28 55.1**	**-0.3**
	comp=Z,0.9nm,0.4s,mb4.1,baz=47,slow=6.7,SNR=10							
PDAR	**Pinedale Array**	**64.91**	**54**	P	**P**		**16 29 02.9**	**+0.9**
	comp=Z,0.4nm,0.9s,mb3.4,baz=344,slow=5.2,SNR=3.0							
NB2	**NORSAR Subarra**	**68.17**	**341**	P	**P**		**16 29 22.0**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.1,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.17**	**341**	P	**P**		**16 29 21.7**	**-0.8**
NOA	**NORSAR Array B**	**68.17**	**341**	P	**P**		**16 29 21.7**	**-0.7**
NOA				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NOA	**NORSAR Array B**	**68.17**	**341**	P	**P**		**16 29 21.7**	**-0.8**
	comp=Z,1.5nm,0.6s,mb4.2,baz=27,slow=6.4,SNR=4.9							
AKASG	**Malin Array Be**	**71.45**	**326**	P	**P**		**16 29 41.0**	**-1.7**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**71.45**	**326**	P	**P**		**16 29 41.0**	**-1.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=34,slow=6.6,SNR=4.7							
ASAR	**Alice Springs**	**72.14**	**198**	P	**P**		**16 29 48.2**	**+1.2**
	comp=Z,0.3nm,0.8s,mb3.3,baz=14,slow=5.8,SNR=4.2							
TXAR	**Lajitas Array**	**77.66**	**60**	P	**P**		**16 30 18.9**	**-0.2**
TXAR	**Lajitas Array**	**77.66**	**60**	P	**P**		**16 30 18.9**	**-0.2**
	comp=Z,0.4nm,0.5s,mb3.6,baz=304,slow=4.7,SNR=7.1							
BRTR	**Keskin Array B**	**78.26**	**317**	P	**P**		**16 30 23.2**	**+0.9**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BRTR	**Keskin Array B**	**78.26**	**317**	P	**P**		**16 30 23.2**	**+0.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=26,slow=6.9,SNR=3.9							

IDC 20 16:19:03.4±2.1, 045S×12825E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.2/14, mbtmp3.1/3, Error ellipse: s-maj=159.0km s-min=25.8km az=67.0, Halmahera

WRA	**Warramunga Arr**	**20.27**	**163**	P	P		16 23 41.1	+0.5
	0.2nm,0.6s,baz=343,slow=12,SNR=3.1							
ASAR	**Alice Springs**	**23.72**	**167**	P	P		16 24 17.1	-0.3
	0.3nm,0.7s,baz=346,slow=12,SNR=6.0							
MKAR	**Makanchi Array**	**61.84**	**326**	P	P		16 29 24.4	0.0
	0.1nm,0.3s,baz=121,slow=8.2,SNR=2.9							

IDC 20 16:21:02.2±2.1, 099S×12708E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/15, mbtmp3.5/3, Error ellipse: s-maj=192.4km s-min=25.5km az=66.0, Halmahera

WRA	**Warramunga Arr**	**20.13**	**160**	P	P		16 25 37.5	-0.5
	0.9nm,0.8s,baz=342,slow=12,SNR=16							
ASAR	**Alice Springs**	**23.49**	**164**	P	P		16 26 14.3	+0.3
	2.0nm,0.8s,baz=345,slow=12,SNR=27							
MKAR	**Makanchi Array**	**61.63**	**327**	P	P		16 31 21.8	0.0
	0.3nm,0.4s,baz=116,slow=7.9,SNR=6.1							

*MAN **20** 16:24:26, 2085N×119.91E, h87km, mb4.3, ML3.1, MS2.9*

*ISCJB **20** 16:24:29.4±1.9, 2066N±009×119.8E±0.2, h46km±18km, mb3.8/6, Error ellipse: s-maj=26.4km s-min=14.2km az=165.2*

*IDC **20** 16:24:29.1±1.0, 2066N×119.79E, h27km±6km, mb3.6/5, mb1 3.8/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=37.7km s-min=17.3km az=74.0*

ISC 20 16:24:29.7±3.8, 2069N±008×1198E±01, h32km±30km, h28km±.5km: pP-P, n10, σ0§92/13, mb3.8/6, Philippine Islands region

APYP	**Conner**	**3.14**	**153**	*eP*	**Pn**		**16 25 16.6**	**-0.4**
APYP				*eS*	**Sn**		**16 25 54.3**	**+0.9**
ABRA	**Dolores**	**3.16**	**163**	*eP*	**Pn**		**16 25 16.6**	**-0.6**
ABRA				*eS*	**Sn**		**16 25 54.6**	**+0.9**
SGCP	**Mt. Cagua**	**3.25**	**138**	*eP*	**Pn**		**16 25 17.6**	**-0.9**
SGCP				*eS*	**Sn**		**16 25 55.0**	**-1.0**
CAUP	**Cauayan**	**4.21**	**152**	*eP*	**Pn**		**16 25 34.1**	**+2.5**
MJAR	**Matsushiro Arr**	**22.55**	**42**	P	**P**		**16 29 27.8**	**+0.8**
	1.6nm,0.7s,mb3.5,baz=230,slow=10,SNR=3.9							
BATI	**Kupang**	**30.94**	**173**	P	**P**		**16 30 42.8**	**-1.2**
	9.6nm,0.5s,mb4.8,baz=8.8,slow=5.9,SNR=7.0							
FITZ	**Fitzroy Crossi**	**38.98**	**171**	P	**P**		**16 31 52.4**	**-0.7**
	2.4nm,1.1s,mb3.9,baz=7.1,slow=8.1,SNR=2.9							
MKAR	**Makanchi Array**	**40.03**	**319**	P	**P**		**16 32 01.8**	**+0.2**
	0.5nm,0.5s,mb3.5,baz=115,slow=10,SNR=4.5							
MKAR				pP	pP		16 32 09.7	-1.5
	0.5nm,0.5s,baz=115,slow=8.8,SNR=3.1							
WRA	**Warramunga Arr**	**42.83**	**160**	P	**P**		**16 32 24.7**	**-0.1**
	1.1nm,0.6s,mb3.8,baz=342,slow=9.2,SNR=11							
WRA				pP	pP		16 32 32.5	-1.8
	2.3nm,0.8s,baz=342,slow=9.1,SNR=10.0							
ASAR	**Alice Springs**	**46.19**	**162**	P	**P**		**16 32 52.0**	**+0.4**
	0.5nm,0.8s,mb3.5,baz=346,slow=6.9,SNR=16							
ASAR				pP	pP		16 33 00.5	-0.8
	0.7nm,0.7s,baz=349,slow=7.4,SNR=5.6							

*ISCJB **20** 16:29:30.4±0.7, 3685N±004×725W±0.04, h58km±9km, Error ellipse: s-maj=7.4km s-min=4.7km az=12.4*

*CSEM **20** 16:29:31.0±0.2, 3688N×729W, h40km, mb3.9/6, Error ellipse: s-maj=4.6km s-min=2.7km az=12.0*

*MDD **20** 16:29:32.0±0.7, 3681N×728W, h42km±16km, mb4.2/9, Error ellipse: s-maj=7.8km s-min=4.4km az=7.0, PRXIMO*

*NEIC **20** 16:29:32.5, 3686N×725W, h47km, MG3.9(MDD), After MDD.*

*INMG **20** 16:29:32.5±1.0, 3681N×729W, h31km±7km, ML2.1, Error ellipse: s-maj=3.2km s-min=2.1km az=17.0*

ISC 20 16:29:31.3±0.7, 3684N±004×725W±003, h48km±13km, n37, σ0§76/69, 1C-4D, Strait of Gibraltar

ERIP	**Rio Piedras**	**0.53**	**359**	⇓P	**Pn**		**16 29 43.1**	**+0.3**
	SNR=18							
ERIP					Sn	**Sn**	**16 29 51.2**	**+0.2**
	197nm,0.2s,SNR=7.9							
ERIP	**Rio Piedras**	**0.53**	**359**	P		**Pn**	**16 29 43.1**	**+0.3**
	115nm,0.1s,SNR=18							
ERIP					S	**Sn**	**16 29 51.2**	**+0.2**
	197nm,0.2s,SNR=7.9							
PVAQ	**Vaqueiros**	**0.68**	**326**	*i* P		**Pn**	**16 29 44.9**	**+0.3**
PVAQ				*eS*		**Sn**	**16 29 54.2**	**-0.1**
PVAQ				A			16 29 55.7	
	52nm,0.1s							
PVAQ	**Vaqueiros**	**0.68**	**326**	⇓Pn		**Pn**	**16 29 44.9**	**+0.3**
PVAQ				Sn		**Sn**	**16 29 54.2**	**-0.1**
	26nm,0.1s							
PBDV	**Barranco-do-Ve**	**0.68**	**307**	*eP*		**Pn**	**16 29 44.6**	**-0.1**
PBDV				*eS*		**Sn**	**16 29 53.7**	**-0.6**
PBDV				A			16 29 55.5	
	40nm,0.2s							
PBDV	**Barranco-do-Ve**	**0.68**	**307**	*eP*		**Pn**	**16 29 44.6**	**-0.1**
PBDV				*eS*		**Sn**	**16 29 53.7**	**-0.6**
	40nm,0.2s							
EGRO	**El Gran

2.1nm,0.1s,SNR=7.9
EGUA Guajares 2.96 89 Pn Pn 16 30 16.4 +0.7
EGUA Sn Sn 16 30 45.0 -4.9
PCBR Castelo Branco 3.00 357 *e*Sn Sn 16 30 51.3 +0.3
EBAN Banos Encina 3.05 63 ⇑Pn Pn 16 30 17.5 +0.4
8.2nm,0.1s,SNR=18
EBAN Sn Sn 16 30 49.5 -2.9
1.3nm,0.1s,SNR=5.0
EVIA Vianos 4.17 63 ⇓Pn Pn 16 30 32.3 0.0
4.4nm,0.1s,SNR=18
EVIA Sn Sn 16 31 18.1 -1.6
3.0nm,0.1s,SNR=5.0
ETOB Tobarra 4.86 67 Pn Pn 16 30 41.9 0.0
1.1nm,0.1s,SNR=7.9
ETOB Sn Sn 16 31 35.0 -1.9
5.2nm,0.2s,SNR=7.9
ETOB Tobarra 4.86 67 P Pn 16 30 41.9 0.0
1.1nm,0.1s,SNR=7.9

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*IDC **20** 16:31:06.5±1.7, 066S×12765E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/14, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=92.5km s-min=24.6km az=68.0*
*ISCJB **20** 16:31:10.4±1.3, 08S±02×1275E±04, h33km, mb4.0/5, Error ellipse: s-maj=56.7km s-min=11.9km az=153.5*

ISC 20 16:31:12.9±1.3, 09S±02×1274E±04, h35km, n9, σ0575/9, mb4.0/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**17.19**	**186**	P		**Pn**	**16 35 10.0**	**-0.4**
	0.2nm,0.3s,baz=9.1,slow=17,SNR=4.6							
WRA	**Warramunga Arr**	**20.10**	**161**	P		**P**	**16 35 43.5**	**-0.2**
	0.4nm,0.7s,baz=343,slow=12,SNR=5.1							
ASAR	**Alice Springs**	**23.49**	**165**	P		**P**	**16 36 19.4**	**-0.4**
	0.3nm,0.5s,mb2.9,baz=343,slow=11,SNR=11							
STKA	**Stephens Creek**	**33.60**	**158**	P		**P**	**16 37 51.1**	**+1.2**
	0.9nm,0.8s,mb3.7,baz=323,slow=15,SNR=3.1							
TAPN	**Taplejung**	**47.39**	**309**	*e*P		**P**	**16 39 44.3**	**+0.4**
ODAN	**Odare**	**47.40**	**309**	*e*P		**P**	**16 39 44.0**	**0.0**
	4.5nm,0.6s,mb4.6							
GKN	**Gorkha**	**50.09**	**308**	*e*P		**P**	**16 40 04.9**	**+0.2**
	3.2nm,0.4s,mb4.7							
KOLN	**Koldanda**	**50.80**	**308**	*e*P		**P**	**16 40 10.9**	**+0.8**
	12nm,0.7s							
MKAR	**Makanchi Array**	**61.75**	**326**	P		**P**	**16 41 26.3**	**-1.6**
	0.3nm,0.3s,mb3.9,baz=116,slow=6.6,SNR=4.8							

IDC 20 16:36:21.1±2.1, 065S×12790E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/14, mbtmp3.4/3, Error ellipse: s-maj=164.8km s-min=25.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.18**	**162**	P		P	16 40 57.4	0.0
	0.4nm,0.5s,baz=341,slow=12,SNR=7.5							
ASAR	**Alice Springs**	**23.61**	**166**	P		P	16 41 34.0	0.0
	0.9nm,0.6s,baz=344,slow=12,SNR=32							
MKAR	**Makanchi Array**	**61.81**	**326**	P		P	16 46 41.8	0.0
	0.2nm,0.3s,baz=134,slow=8.4,SNR=3.1							

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*ISCJB **20** 16:48:39.2±0.8, 3135N±004×13133E±009, h53km±5km, mb3.6/4, Error ellipse: s-maj=13.1km s-min=6.1km az=11.6*
*JMA **20** 16:48:39.7±0.1, 3133N×13134E, h42km±1km, M3.4*
JMA Felt I J1.
*IDC **20** 16:48:44.6±6.0, 3156N×13068E, h66km±38km, mb3.4/4, mb1 3.5/5, mb1mx3.2/18, mbtmp3.4/5, ML2.8/1, Error ellipse: s-maj=51.1km s-min=36.7km az=155.0*

ISC 20 16:48:39.9±0.8, 3135N±004×13134E±009, h47km±6km, n15, σ0975/23, mb3.6/4, 2C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.19**	**342**	⇓P		**Pn**	**16 48 47.0**	**-0.8**
JNAR				S		**Sn**	**16 48 52.6**	**-0.8**
JTSR	**Tashiro 2**	**0.40**	**243**	⇓P		**Pn**	**16 48 49.1**	**-0.7**
JTSR				S		**Sn**	**16 48 56.2**	**-0.6**
JTZ	**Takazaki**	**0.59**	**339**	⇓P		**Pn**	**16 48 51.9**	**-0.2**
JTZ				S		**Sn**	**16 49 00.9**	**+0.1**
JTN	**Tanegashima 3**	**0.76**	**204**	⇓P		**Pn**	**16 48 54.6**	**+0.4**
JTN				*e*S		**Sn**	**16 49 05.9**	**+1.2**
JSU	**Suzuyama**	**0.77**	**282**	P		**Sn**	**16 48 54.2**	**-0.2**
JSU				*e*S		**Sn**	**16 49 05.3**	**+0.3**
JTSN	**Tsuno**	**0.91**	**9**	⇓P		**Pn**	**16 48 56.2**	**0.0**
JTSN				S		**Sn**	**16 49 09.2**	**+1.0**
JZO	**Okuchi**	**1.01**	**322**	⇑P		**Pn**	**16 48 57.7**	**+0.1**
JZO				*e*S		**Sn**	**16 49 11.2**	**+0.5**
JIU2	**Izumi 2**	**1.27**	**340**	⇑P		**Pn**	**16 49 01.8**	**+0.6**
JKC	**Kuchinoerabu**	**1.32**	**228**	P		**Pn**	**16 49 02.0**	**+0.1**
JNU	**Nakatsue**	**1.81**	**348**	P		**Pn**	**16 49 09.5**	**+0.9**
	5.4nm,0.3s,baz=178,slow=11,SNR=45							
JNU				S		**Sn**	**16 49 29.6**	**-0.7**
	11nm,0.3s,baz=91,slow=12,SNR=8.1							
KSRS	**Korea Array**	**6.71**	**336**	P		**Pn**	**16 50 16.6**	**+0.9**
	0.2nm,0.3s,baz=172,slow=14,SNR=7.4							
SONM	**Songino Array**	**25.15**	**318**	P		**P**	**16 54 00.6**	**+0.2**
	0.7nm,0.7s,mb3.3,baz=134,slow=9.5,SNR=8.2							
FINES	**FINESS Array B**	**69.77**	**330**	P		**P**	**16 59 43.2**	**-1.6**
	3.4nm,0.9s,mb4.3,baz=79,slow=7.5,SNR=7.1							
YKA	**Yellowknife Ar**	**72.75**	**26**	P		**P**	**17 00 06.6**	**+3.9**
	0.2nm,0.8s,mb3.1,baz=300,slow=6.2,SNR=3.3							
AKASG	**Malin Array Be**	**73.42**	**320**	P		**P**	**17 00 05.6**	**-1.3**
	0.6nm,0.5s,mb3.8,baz=58,slow=6.1,SNR=4.1							

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*BEO **20** 16:54:37.2±1.1, 3820N×2315E, h9km±5km, ML4.5/5*
*BJI **20** 16:54:38.9, 3866N×2214E, h15km, mB4.7, mb4.6, Ms4.9, Msz4.6*
*ISCJB **20** 16:54:42.1±0.3, 3872N±001×2279E±002, h11km±2km, mb4.4/45, MS4.2/5, Error ellipse: s-maj=2.6km s-min=1.8km az=152.8*
*THE **20** 16:54:42.6, 3871N×2278E, h3km, ML4.8*
*ATH **20** 16:54:42.2, 3874N×2280E, h17km, MD4.2/24, ML4.6*
*PDG **20** 16:54:43.0±0.5, 3872N×2283E, h11km±1km, ML4.2/10, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
*CSEM **20** 16:54:43.3±0.1, 3873N×2276E, h20km, mb4.4/23, Error ellipse: s-maj=1.4km s-min=1.2km az=71.0*
*NEIC **20** 16:54:43.0±0.2, 3872N×2283E, h5km, mb4.4/16, ML4.2(ATH), ML4.2(PDG), Error ellipse: s-maj=3.8km s-min=2.8km az=45.0*
*MOS **20** 16:54:44.9±1.1, 3875N×2276E, h38km, mb4.5/25, Error ellipse: s-maj=5.4km s-min=2.9km az=103.7*
*IDC **20** 16:54:46.2±2.0, 3876N×2274E, h32km±15km, mb4.1/19, mb1 4.3/30, mb1mx4.3/32, mbtmp4.1/30, ML4.0/11, MS3.5/3, Ms1 3.6/3, ms1mx3.0/36, Error ellipse: s-maj=11.3km s-min=10.3km az=79.0*
*SKO **20** 16:54:48.8, 3908N×2263E, h9km*
*SOF **20** 16:54:49.9, 3935N×2321E, h2km, MD4.1*
*NAO **20** 16:55:02.8, 4026N×2178E, h33km, mb3.3*

ISC 20 16:54:43.2±0.4, 3872N±001×2283E±002, h6km±2km, h25km±5.9km:pP-P, n361, σ1921/420, mb4.4/45, MS4.2/5, 38C-27D, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LKR	**Lokris**	**0.15**	**116**	*e*PB		**Pg**	**16 54 47.1**	**+0.9**
AGG	**Agios Georgios**	**0.49**	**308**	*e*Pg		**Pg**	**16 54 51.5**	**-1.3**
AGG				*e*Sg		**Sg**	**16 54 58.0**	**-1.2**
AGG	**Agios Georgios**	**0.49**	**308**	P		**Pg**	**16 54 51.4**	**-1.3**
LTK	**Loutraki**	**0.70**	**171**	*e*Pg		**Pg**	**16 54 55.9**	**-0.7**
LTK				*e*Sg		**Sg**	**16 55 06.6**	**+0.9**
XOR	**Xorichti**	**0.71**	**23**	*e*Pg		**Pg**	**16 54 56.5**	**-0.3**
EVR	**Evrytania**	**0.82**	**284**	*e*PN		**Pn**	**16 54 56.9**	**-4.3**
AOS	**Alonnisos**	**0.94**	**61**	P		**Pg**	**16 55 00.8**	**-0.3**
AOS	**Alonnisos**	**0.94**	**61**	*e*Pg		**Pg**	**16 55 00.9**	**-0.3**
ATH	**Athens Observa**	**1.02**	**137**	*e*PN		**Pn**	**16 55 02.4**	**-1.5**
ATH				*e*SN		**Sn**	**16 55 17.1**	**-1.4**
PTL	**Penteli**	**1.05**	**129**	*e*PN		**Pn**	**16 55 02.5**	**-1.9**
THL	**Klokotos Trika**	**1.06**	**323**	*e*PN		**Pn**	**16 55 01.7**	**-2.7**
THL				*e*SN		**Sn**	**16 55 16.3**	**-3.2**
NAIG	**Nisos Aigina**	**1.09**	**151**	*e*PN		**Pn**	**16 55 04.0**	**-0.9**
KVR	**Kavouri**	**1.16**	**140**	*e*PN		**Pn**	**16 55 05.0**	**-0.8**
DID	**Didima**	**1.25**	**165**	*e*Pg		**Pg**	**16 55 05.7**	**-1.5**
DID				*e*Sg		**Sg**	**16 55 24.2**	**+0.8**
RLS	**Riolos of Patr**	**1.26**	**239**	*e*PN		**Pn**	**16 55 05.5**	**-1.7**
RLS				*e*SN		**Sn**	**16 55 22.9**	**-1.4**
PAIG	**Paliouri**	**1.38**	**28**	*e*Pg		**Pg**	**16 55 08.0**	**-1.6**
PAIG				*e*Sg		**Sg**	**16 55 28.8**	**+1.4**
VLX	**Vlachokerasia**	**1.39**	**195**	*e*Pg		**Pg**	**16 55 07.7**	**-2.2**
VLX				*e*Sg		**Sg**	**16 55 28.2**	**+0.4**
LIT	**Litokhoron**	**1.41**	**349**	*e*Pg		**Pg**	**16 55 08.3**	**-1.9**
LIT				*e*Sg		**Sg**	**16 55 28.9**	**+0.6**
LIT	**Litokhoron**	**1.41**	**349**	P		**Pn**	**16 55 08.2**	**-1.1**
MEV	**Metsovon**	**1.64**	**311**	*e*Pg		**Pg**	**16 55 11.9**	**-2.6**
ITM	**Ithomi**	**1.69**	**205**	*e*PN		**Pn**	**16 55 13.2**	**0.0**
ITM				*e*SN		**Sn**	**16 55 36.5**	**+1.4**
PLG	**Polygyros**	**1.72**	**16**	*e*PN		**Pn**	**16 55 12.8**	**-0.8**
PLG				*e*SN		**Sn**	**16 55 35.2**	**-0.7**
KZN	**Kozani**	**1.79**	**333**	*e*PN		**Pn**	**16 55 14.5**	**0.0**
JAN	**Janina**	**1.80**	**302**	*e*PN		**Pn**	**16 55 14.4**	**-0.3**
VLS	**Valsamata**	**1.84**	**254**	*e*PN		**Pn**	**16 55 15.9**	**+0.7**
HORT	**Hortiatis**	**1.89**	**6**	P		**Pn**	**16 55 15.1**	**-0.8**
HORT				S		**Sn**	**16 55 40.0**	**0.0**
HORT	**Hortiatis**	**1.89**	**6**	*e*Pb		**Pb**	**16 55 15.1**	**-2.9**
HORT				*e*Sb		**Sb**	**16 55 40.1**	**-1.8**
THE	**Thessaloniki**	**1.92**	**3**	*e*Pb		**Pb**	**16 55 15.2**	**-3.3**
THE	**Thessaloniki**	**1.92**	**3**	P		**Pn**	**16 55 15.1**	**-1.1**
VLI	**Veliai**	**2.00**	**178**	*e*PN		**Pn**	**16 55 17.8**	**+0.4**
VLI				*e*SN		**Sn**	**16 55 43.6**	**+1.0**
IGT	**Igoumenitsa**	**2.11**	**294**	P		**Pn**	**16 55 20.3**	**+1.4**
SOH	**Sokhos**	**2.14**	**11**	*e*Pn		**Pn**	**16 55 19.3**	**0.0**
LIA	**Limnos Island**	**2.17**	**56**	P		**Pn**	**16 55 25.0**	**+5.2**
GRG	**Griva**	**2.26**	**352**	*e*Pn		**Pn**	**16 55 19.9**	**-1.1**
FNA	**Florina**	**2.35**	**332**	*e*Pn		**Pn**	**16 55 22.2**	**0.0**
FNA	**Florina**	**2.35**	**332**	P		**Pn**	**16 55 22.1**	**-0.1**
KYTH	**Kithira**	**2.44**	**176**	*e*PN		**Pn**	**16 55 23.5**	**+0.1**
KNT	**Kendrikon**	**2.44**	**1**	*e*Pn		**Pn**	**16 55 23.6**	**+0.2**
KNT	**Kendrikon**	**2.44**	**1**	*e*Pn		**Pn**	**16 55 23.6**	**+0.1**
SRS	**Serrai**	**2.47**	**14**	P		**Pn**	**16 55 23.6**	**-0.2**
KBN	**Korca**	**2.47**	**321**	*i* PN		**Pn**	**16 55 25.4**	**+1.5**
KBN				*i* SN		**Sg**	**16 56 08.0**	**+5.4**
SRN	**Sarande**	**2.48**	**299**	*i* PN		**Pn**	**16 55 25.2**	**+1.2**
SRN				*i* SN		**Sg**	**16 56 07.0**	**+4.1**
CHOS	**Chios island**	**2.55**	**96**	*e*Pn		**Pn**	**16 55 24.8**	**-0.1**
KEK	**Kerkira**	**2.56**	**294**	*e*PB		**Pb**	**16 55 25.6**	**-3.7**
VAY	**Valandovo**	**2.61**	**356**	*e*Pn		**Pn**	**16 55 25.6**	**-0.2**
VAY				*e*Sn		**Sn**	**16 55 53.7**	**-4.0**
APE	**Apeiranthos**	**2.70**	**127**	*e*Pn		**Pn**	**16 55 27.1**	**+0.1**
APE	**Apeiranthos**	**2.70**	**127**	*e*PN		**Pn**	**16 55 27.3**	**+0.3**
APE	**Apeiranthos**	**2.70**	**127**	⇑*i*P		**Pn**	**16 55 27.2**	**+0.2**
PRK	**Paraskevi**	**2.73**	**78**	*e*PN		**Pn**	**16 55 28.0**	**+0.5**
NVR	**Nevrokopi**	**2.75**	**16**	*e*PN		**Pn**	**16 55 27.4**	**-0.3**
OHR	**Ohrid**	**2.86**	**328**	*e*Pn		**Pn**	**16 55 30.1**	**+1.0**
OHR				*e*Sn		**Sn**	**16 55 59.2**	**-4.6**
OHR	**Ohrid**	**2.86**	**328**	*e*Pn		**Pn**	**16 55 30.1**	**+0.9**
OHR				*e*Sn		**Sn**	**16 55 59.2**	**-4.6**
KRUS	**Krusevo**	**2.91**	**336**	*e*Pn		**Pn**	**16 55 30.8**	**+0.8**
KRUS				*e*Sn		**Sn**	**16 56 00.8**	**-4.5**
KRUS	**Krusevo**	**2.91**	**336**	*e*Pn		**Pn**	**16 55 30.7**	**+0.7**
KRUS				*e*Sn		**Sn**	**16 56 00.7**	**-4.5**
MMB	**Musomiste**	**2.95**	**13**	P		**Pn**	**16 55 29.8**	**-0.7**
SANT	**Santorini**	**3.14**	**137**	*e*Pn		**Pn**	**16 55 34.4**	**+1.3**
SANT	**Santorini**	**3.14**	**137**	*e*Pn		**Pn**	**16 55 34.4**	**+1.3**
KKB	**Krupnik**	**3.15**	**3**	P		**Pn**	**16 55 33.6**	**+0.4**
RDO	**Rodhopi**	**3.20**	**40**	*e*PN		**Pn**	**16 55 33.8**	**-0.1**
ALN	**Alexandroupoli**	**3.30**	**48**	*e*Pn		**Pn**	**16 55 34.4**	**-0.9**
ALN	**Alexandroupoli**	**3.30**	**48**	P		**Pn**	**16 55 34.3**	**-1.0**
RZN	**Rozhen**	**3.30**	**25**	P		**Pn**	**16 55 35.5**	**+0.2**
SMG	**Samos**	**3.31**	**106**	*e*PN		**Pn**	**16 55 36.4**	**+0.9**
SKO	**Skopje**	**3.42**	**342**	*e*Pn		**Pn**	**16 55 37.0**	**+0.1**
TIR	**Tirane**	**3.48**	**320**	P		**Pn**	**16 55 42.7**	**+5.0**
TIR	**Tirane**	**3.48**	**320**	*i* PN		**Pn**	**16 55 39.7**	**+2.0**
TIR				*i* SN		**Sn**	**16 56 22.8**	**+3.7**
VAM	**Vamos**	**3.48**	**161**	*e*PN		**Pn**	**16 55 38.3**	**+0.5**
KDZ	**Kurdzhali**	**3.54**	**33**	P		**Pn**	**16 55 37.3**	**-1.2**
PLD	**Plovdiv**	**3.67**	**22**	*e*Pn		**Pn**	**16 55 41.3**	**+0.9**
IDI	**Anoyia**	**3.80**	**154**	Pn		**Pn**	**16 55 42.7**	**+0.6**
	27nm,0.3s,baz=311,slow=14,SNR=69							
IDI				Sn		**Sn**	**16 56 27.6**	**+0.5**
	16nm,0.3s,baz=38,slow=20,SNR=5.2							
VTS	**Vitosha**	**3.88**	**4**	*e*Pn		**Pn**	**16 55 44.1**	**+0.9**
VTS	**Vitosha**	**3.88**	**4**	⇓*i*Pn		**Pn**	**16 55 44.2**	**+0.9**
VTS	**Vitosha**	**3.88**	**4**	P		**Pn**	**16 55 43.8**	**+0.5**
VTS	**Vitosha**	**3.88**	**4**	⇑*i*P		**Pn**	**16 55 44.8**	**+1.5**
PGB	**Panagyurishte**	**3.96**	**14**	*e*P		**Pn**	**16 55 44.0**	**-0.4**
LCI	**Lecce**	**3.99**	**295**	P		**Pn**	**16 55 45.2**	**+0.5**
GVD	**Gavdhos**	**4.00**	**165**	*e*PN		**Pn**	**16 55 46.0**	**+1.1**
NSR	**Nisiros**	**4.01**	**120**	*e*PN		**Pn**	**16 55 45.5**	**+0.5**
NPS	**Neapolis**	**4.11**	**146**	*e*PN		**Pn**	**16 55 48.1**	**+1.8**
BARS	**Barje**	**4.17**	**350**	⇓*i*Pn		**Pn**	**16 55 47.9**	**+0.7**
BARS				*e*Sg		**Sg**	**16 57 06.9**	**+10**
BARS	**Barje**	**4.17**	**350**	Pn		**Pn**	**16 55 48.0**	**+0.8**
ULC	**Ulcinj**	**4.24**	**321**	⇑*i*Pn		**Pn**	**16 55 48.8**	**+0.6**
ULC				*e*Sn		**Sn**	**16 56 38.8**	**+0.8**
PVY	**Plav**	**4.44**	**332**	⇑*i*Pn		**Pn**	**16 55 52.0**	**+1.1**
PVY				*e*Sn		**Sn**	**16 56 43.6**	**+0.7**
XRY	**Khrisi**	**4.47**	**148**	*e*PN		**Pn**	**16 55 53.0**	**+1.6**
PDG	**Podgorica**	**4.60**	**325**	⇑*i*Pn		**Pn**	**16 55 53.5**	**+0.4**
TTG	**Podgorica**	**4.60**	**325**	⇑*i*Pn		**Pn**	**16 55 53.5**	**+0.4**
TTG				*i* Sn		**Sn**	**16 56 47.7**	**+0.9**
PE1	**Pezze di Greco**	**4.66**	**298**	*e*Pn		**Pn**	**16 55 54.1**	**+0.2**
BUM	**Brajici-Budva**	**4.67**	**321**	⇑*i*Pn		**Pn**	**16 55 54.6**	**+0.5**
BUM				*e*Sn		**Sn**	**16 56 49.0**	**+0.5**
KARP	**Karpathos**	**4.69**	**131**	*e*PN		**Pn**	**16 55 55.2**	**+0.8**
BEY	**Berane**	**4.71**	**333**	⇑*i*Pn		**Pn**	**16 55 55.6**	**+1.0**
BEY				*e*Sn		**Sn**	**16 55 50.2**	**+0.5**
IVA	**Berane**	**4.71**	**333**	⇑*i*Pn		**Pn**	**16 55 55.6**	**+1.0**
IVA				*e*Sn		**Sn**	**16 56 50.0**	**+0.5**
TIP	**Timpagrande**	**4.75**	**277**	*e*Pn		**Pn**	**16 55 55.0**	**-0.3**
TIP	**Timpagrande**	**4.75**	**277**	*e*Pn		**Pn**	**16 55 55.0**	**-0.3**
HCY	**Herceg Novi**	**4.97**	**320**	⇑*i*Pn		**Pn**	**16 55 59.0**	**+0.7**
HCY				*e*Sn		**Sn**	**16 56 56.8**	**+0.7**
NKY	**Niksic**	**5.02**	**326**	⇑*i*Pn		**Pn**	**16 56 00.0**	**+1.1**
NKY				*i* Sn		**Sn**	**16 56 57.1**	**-0.1**
SZH	**Strazhica**	**5.12**	**26**	P		**Pn**	**16 56 00.7**	**+0.5**
BAI	**Bari**	**5.16**	**299**	*e*Pn		**Pn**	**16 56 01.1**	**+0.3**
SG1	**Sgolgore (BA)**	**5.19**	**296**	*e*Pn		**Pn**	**16 56 01.1**	**-0.1**
PLE	**Pljevlja**	**5.29**	**332**	⇑*i*Pn		**Pn**	**16 56 04.0**	**+1.4**
PLE				*e*Sn		**Sn**	**16 57 04.1**	**+0.3**
BRY	**Bratogost**	**5.29**	**323**	⇑*i*Pn		**Pn**	**16 56 03.2**	**+0.5**
BRY				*i* Sn		**Sn**	**16 57 04.4**	**+0.5**
UPM	**Unac-Piva**	**5.37**	**328**	⇑*i*Pn		**Pn**	**16 56 05.0**	**+1.2**
UPM				*e*Sn		**Sn**	**16 57 05.3**	**0.0**
GRUS	**Gruza**	**5.41**	**344**	*e*Pn		**Pn**	**16 56 06.6**	**+0.6**
GRUS				*e*Sg		**Sg**	**16 57 49.0**	**+12**
SVIS	**Svilajnac**	**5.70**	**348**	*e*Pn		**Pn**	**16 56 08.8**	**+0.5**
SVIS				*e*Sg		**Sg**	**16 57 54.7**	**+8.5**
BBLS	**Bajina Basta -**	**5.75**	**335**	*e*Pn		**Pn**	**16 56 09.8**	**+0.8**
BBLS				*e*Sn		**Sn**	**16 57 20.8**	**+5.5**
DIVS	**Divcibare**	**5.78**	**339**	*e*Pn		**Pn**	**16 56 09.4**	**0.0**
DIVS	**Divcibare**	**5.78**	**339**	⇓*i*Pn		**Pn**	**16 56 09.3**	**-0.1**
DIVS				*e*Sn		**Sn**	**16 57 20.3**	**+4.3**
DJES	**Djerdap**	**5.92**	**358**	*e*Pn		**Pn**	**16 56 13.3**	**+2.1**
DJES				*e*Sn		**Sn**	**16 57 21.9**	**+2.7**
MSAG	**Monte S. Angel**	**6.08**	**302**	P		**Pn**	**16 56 13.4**	**-0.1**
SGO	**Sicignano**	**6.09**	**290**	P		**Pn**	**16 56 14.2**	**+0.6**
ISP	**Isparta**	**6.11**	**96**	⇑*e*P		**Pn**	**16 56 12.6**	**-1.2**
SGRT	**San Giovanni R**	**6.21**	**301**	P		**Pn**	**16 56 16.9**	**+1.6**
FG5	**Orsara di Pugl**	**6.34**	**296**	P		**Pn**	**16 56 17.9**	**+0.8**
CSSN	**Cassano Irpino**	**6.38**	**292**	P		**Pn**	**16 56 19.2**	**+1.6**
MRB1	**Monte Rocchett**	**6.50**	**294**	P		**Pn**	**16 56 20.8**	**+1.6**
FG2	**Serracapriola**	**6.63**	**300**	P		**Pn**	**16 56 21.1**	**+1.1**
PSB1	**Pescosannita**	**6.65**	**295**	P		**Pn**	**16 56 22.9**	**+1.6**
GZR	**Gura Zlata**	**6.67**	**360**	P		**Pn**	**16 56 23.6**	**+2.0**
GZR	**Gura Zlata**	**6.67**	**360**	⇑*i*P		**Pn**	**16 56 24.3**	**+2.7**
GZR	**Gura Zlata**	**6.67**	**360**	P		**Pn**	**16 56 23.6**	**+2.0**
LTBQ	**Tobruq**	**6.71**	**172**	*i* P		**Pn**	**16 56 22.0**	**-0.1**
	SNR=110							
LTBQ				*e*S		**Sn**	**16 57 33.4**	**-5.4**
	SNR=110							
VAE	**Valguarnera**	**6.75**	**262**	Pn		**Pn**	**16 56 23.9**	**+1.2**
	6.0nm,0.3s,baz=15,slow=16,SNR=4.4							
VAE				Sn		**Sn**	**16 57 39.4**	**-0.5**
	6.1nm,0.3s,baz=30,slow=17,SNR=2.8							
FGSL	**Fruska Gora**	**6.82**	**342**	⇓*i*Pn		**Pn**	**16 56 23.8**	**+0.2**
SGG	**Gregorio Mates**	**7.01**	**295**	P		**Pn**	**16 56 28.1**	**+1.9**
HARR	**Harsova**	**7.08**	**31**	⇑P		**Pn**	**16 56 27.9**	**+0.7**
HARR	**Harsova**	**7.08**	**31**	⇑*i*P		**Pn**	**16 56 28.0**	**+0.8**
MLR	**Muntele Rosu**	**7.15**	**18**	P		**Pn**	**16 56 30.2**	**+2.0**
MLR	**Muntele Rosu**	**7.15**	**18**	Pn		**Pn**	**16 56 30.0**	**+1.8**
	2.4nm,0.3s,baz=174,slow=9.9,SNR=26							
MLR				LR		LR	16 59 24.3	
	comp=Z,362nm,20.6s,baz=51,slow=39							
MLR	**Muntele Rosu**	**7.15**	**18**	⇑*i*P		**Pn**	**16 56 30.1**	**+1.9**
MLR	**Muntele Rosu**	**7.15**	**18**	P		**Pn**	**16 56 30.2**	**+2.0**
MIDA	**Miranda**	**7.19**	**297**	P		**Pn**	**16 56 31.2**	**+2.6**
RFI	**Roccamonfina**	**7.26**	**294**	P		**Pn**	**16 56 31.2**	**+1.5**
SDI	**San Donato**	**7.52**	**296**	P		**Pn**	**16 56 34.4**	**+1.2**
INTR	**Introdacqua**	**7.57**	**299**	P		**Pn**	**16 56 34.0**	**+0.1**
PLOR	**Plostina**	**7.67**	**20**	⇓*i*P		**Pn**	**16 56 38.2**	**+2.9**
PLOR	**Plostina**	**7.67**	**20**	P		**Pn**	**16 56 37.8**	**+2.5**
VRI	**Vrincioaia**	**7.71**	**21**	P		**Pn**	**16 56 38.5**	**+2.7**
VRI	**Vrincioaia**	**7.71**	**21**	⇓*i*P		**Pn**	**16 56 38.2**	**+2.4**
VVLD	**Villa Vallelon**	**7.71**	**297**	P		**Pn**	**16 56 38.6**	**+2.8**
PTQR	**Pietraquaria**	**7.92**	**298**	P		**Pn**	**16 56 40.6**	**+1.9**
AQU	**L'Aquila**	**8.04**	**300**	*e*Pn		**Pn**	**16 56 42.6**	**+2.1**
	89nm,0.9s							
AQU	**L'Aquila**	**8.04**	**300**	*e*P		**Pn**	**16 56 42.6**	**+2.2**
AQU				pmax		pmax		
	comp=Z,89nm,0.9s							
AQU	**L'Aquila**	**8.04**	**300**	⇑*i*P		**Pn**	**16 56 42.4**	**+2.0**
AQU	**L'Aquila**	**8.04**	**300**	*e*P		**Pn**	**16 56 42.6**	**+2.2**
	comp=Z,89nm,0.9s							
DRGR		**8.07**	**359**	⇑P		**Pn**	**16 56 42.7**	**+2.0**
DRGR		**8.07**	**359**	⇑*i*P		**Pn**	**16 56 42.7**	**+1.9**
LJBD	**Adjabya**	**8.08**	**196**	⇓*i*P		**Pn**	**16 56 36.7**	**-4.2**
	SNR=107							
PKSM	**Moragy**	**8.10**	**339**	P		**Pn**	**16 56 41.5**	**+0.2**
PKSM	**Moragy**	**8.10**	**339**	⇓*i*Pn		**Pn**	**16 56 41.3**	**+0.1**
PKSM	**Moragy**	**8.10**	**339**	⇓*i*P		**Pn**	**16 56 41.2**	**0.0**
PKSM	**Moragy**	**8.10**	**339**	P		**Pn**	**16 56 41.5**	**+0.3**
BRTR	**Keskin Array B**	**8.45**	**80**	P		**Pn**	**16 56 48.3**	**+2.3**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
BRTR				MLR		MLR		
	comp=Z,316nm,18.6s							
BRTR	**Keskin Array B**	**8.45**	**80**	Pn		**Pn**	**16 56 48.3**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=265,slow=12,SNR=21							
BRTR				LR		LR	17 00 07.2	
	comp=Z,316nm,18.6s,baz=119,slow=38							
BOJS	**Bojanci**	**8.81**	**323**	*e*Pn		**Pn**	**16 56 49.7**	**-1.2**
BOJS				*i* Sn		**Sn**	**16 58 24.2**	**-6.3**
MURB	**Monte Urbino**	**9.02**	**304**	P		**Pn**	**16 56 56.8**	**+3.0**
KOGS	**Kog**	**9.12**	**330**	P		**Pn**	**16 56 55.2**	**+0.1**
BUD	**Budapest**	**9.19

HINF	**Hinteralfeld**	**14.75**	**313**	*eP*		**Pn**	**16 58 05.8**	**-6.2**
CDF	**Champ du Feu**	**14.84**	**316**	*eP*		**Pn**	**16 58 06.6**	**-6.7**
	comp=Z,14nm,0.7s							
CDF	**Champ du Feu**	**14.84**	**316**	*eP*		**Pn**	**16 58 06.6**	**-6.7**
	comp=Z,6.8nm,0.7s							
CDF	**Champ du Feu**	**14.84**	**316**	*eP*		**Pn**	**16 58 06.6**	**-6.7**
CDF					pmax	pmax		
	comp=Z,7.0nm,0.7s							
HAU	**Haudompre**	**15.13**	**313**	*eP*		**Pn**	**16 58 10.5**	**-6.8**
KIV	**Kislovodsk**	**15.80**	**64**	*eP*		**Pn**	**16 58 26.5**	**+0.5**
KIV					pmax	pmax		
	comp=Z,8.0nm,1.1s							
KIV					MLR	MLR		
	comp=Z,66nm,13.0s							
KIV	**Kislovodsk**	**15.80**	**64**	*eP*		**Pn**	**16 58 26.5**	**+0.5**
	comp=Z,66nm,13.0s							
SMF	**Signal de Mont**	**16.03**	**306**	*eP*		**Pn**	**16 58 22.8**	**-6.2**
	comp=Z,45nm,1.1s							
SMF	**Signal de Mont**	**16.03**	**306**	*eP*		**Pn**	**16 58 22.8**	**-6.2**
	comp=Z,23nm,1.1s							
SMF	**Signal de Mont**	**16.03**	**306**	*eP*		**Pn**	**16 58 22.8**	**-6.2**
SMF					pmax	pmax		
	comp=Z,23nm,1.1s							
MEZF	**Maizieres J'vi**	**16.13**	**313**	*eP*		**Pn**	**16 58 24.9**	**-5.4**
LOR	**Lormes**	**16.27**	**308**	*eP*		**Pn**	**16 58 26.3**	**-5.8**
AVF	**Avril sur Loir**	**16.39**	**306**	*eP*		**Pn**	**16 58 28.4**	**-5.3**
	comp=Z,17nm,0.9s							
AVF	**Avril sur Loir**	**16.39**	**306**	*eP*		**Pn**	**16 58 28.4**	**-5.3**
	comp=Z,8.6nm,0.9s							
AVF	**Avril sur Loir**	**16.39**	**306**	*eP*		**Pn**	**16 58 28.4**	**-5.3**
AVF					pmax	pmax		
	comp=Z,9.0nm,0.9s							
SSF	**Saint Saulge**	**16.40**	**307**	*eP*		**Pn**	**16 58 27.6**	**-6.2**
	comp=Z,21nm,0.9s							
SSF	**Saint Saulge**	**16.40**	**307**	*eP*		**Pn**	**16 58 27.6**	**-6.2**
	comp=Z,10nm,0.9s							
BGF	**Bois d'Agland**	**16.63**	**305**	*eP*		**Pn**	**16 58 32.0**	**-4.7**
	comp=Z,28nm,0.8s							
BGF	**Bois d'Agland**	**16.63**	**305**	*eP*		**Pn**	**16 58 32.0**	**-4.7**
	comp=Z,14nm,0.8s							
BGF	**Bois d'Agland**	**16.63**	**305**	*eP*		**Pn**	**16 58 32.0**	**-4.7**
BGF					pmax	pmax		
	comp=Z,14nm,0.8s							
TCF	**Toulx Ste Croi**	**16.95**	**303**	*eP*		**Pn**	**16 58 35.6**	**-5.2**
VRSR	**Storozhevoye**	**16.99**	**37**	*eP*		**Pn**	**16 58 42.2**	**+1.1**
VRSR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
VRSR					pmax	pmax		
	comp=N,2.0nm,1.0s							
VRSR					pmax	pmax		
	comp=E,2.0nm,0.9s							
VRSR	**Storozhevoye**	**16.99**	**37**	*eP*		**Pn**	**16 58 42.2**	**+1.1**
	comp=E,2.0nm,1.0s							
GIVF	**Givet**	**17.13**	**317**	*eP*		**Pn**	**16 58 37.8**	**-5.1**
MFF	**Saint Martin d**	**18.60**	**302**	*eP*		**Pn**	**16 58 58.2**	**-2.9**
OBN	**Obninsk**	**18.84**	**25**‖	*eP*		**Pn**	**16 59 04.0**	**+0.1**
OBN					pmax	pmax		
	comp=Z,14nm,0.6s							
OBN					MLR	MLR		
	comp=Z,200nm,14.0s							
OBN	**Obninsk**	**18.84**	**25**	*eP*		**Pn**	**16 59 04.0**	**+0.1**
	comp=Z,200nm,14.0s							
LDF	**La Druitiere**	**19.25**	**308**	*eP*		**Pn**	**16 59 07.2**	**-1.8**
FLN	**La Foliniere**	**19.54**	**308**	*eP*		**Pn**	**16 59 09.9**	**-2.5**
	comp=Z,153nm,1.3s							
FLN	**La Foliniere**	**19.54**	**308**	*eP*		**Pn**	**16 59 09.9**	**-2.5**
FLN					pmax	pmax		
	comp=Z,76nm,1.3s							
FLN	**La Foliniere**	**19.54**	**308**	*eP*		**Pn**	**16 59 09.9**	**-2.5**
	comp=Z,76nm,1.3s							
GRR	**Gorron**	**19.63**	**307**	*eP*		**Pn**	**16 59 11.0**	**-2.6**
	comp=Z,66nm,0.8s							
GRR	**Gorron**	**19.63**	**307**	*eP*		**Pn**	**16 59 11.0**	**-2.6**
GRR					pmax	pmax		
	comp=Z,33nm,0.8s							
GRR	**Gorron**	**19.63**	**307**	*eP*		**Pn**	**16 59 11.0**	**-2.6**
	comp=Z,33nm,0.8s							
VSU	**Vasula**	**19.92**	**6**	P		**Pn**	**16 59 15.2**	**-1.7**
VSU	**Vasula**	**19.92**	**6***c*	*iP*		**Pn**	**16 59 15.3**	**-1.6**
VSU	**Vasula**	**19.92**	**6**	*iP*		**Pn**	**16 59 15.3**	**-1.6**
ESDC	**Sonseca Array**	**20.77**	**281**	P		**P**	**16 59 23.5**	**-1.1**
	comp=Z,5.8nm,0.7s,baz=76,slow=11,SNR=16							
ESDC					LR	LR	17 07 53.2	
	comp=Z,140nm,19.2s,MS3.4,baz=85,slow=38							
QUIF	**Quistinic**	**20.95**	**304**	*eP*		**P**	**16 59 25.7**	**-0.8**
	comp=Z,74nm,0.9s							
QUIF	**Quistinic**	**20.95**	**304**	*eP*		**P**	**16 59 25.7**	**-0.8**
QUIF					pmax	pmax		
	comp=Z,37nm,0.9s							
QUIF	**Quistinic**	**20.95**	**304**	*eP*		**P**	**16 59 25.7**	**-0.8**
	comp=Z,37nm,0.9s							
ROSF	**Rostrenen**	**21.14**	**306**	*eP*		**P**	**16 59 27.2**	**-1.4**
MEF	**Metsahovi**	**21.55**	**2**	P		**P**	**16 59 33.7**	**+0.9**
TAM	**Tamanrasset**	**21.69**	**228**	P		**P**	**16 59 34.7**	**0.0**
HFS	**Hagfors**	**22.20**	**348**	P		**P**	**16 59 38.1**	**-1.8**
HFS					pmax	pmax		
	comp=Z,8.0nm,0.6s							
HFS	**Hagfors**	**22.20**	**348**	P		**P**	**16 59 38.1**	**-1.7**
	comp=Z,8.0nm,0.6s,mb4.3,baz=162,slow=11,SNR=18							
HFA0	**Hagfors New Ar**	**22.21**	**348**	P		**P**	**16 59 39.1**	**-0.9**
HFA0					Pn	**P**	**16 59 42.2**	**+2.2**
FINES	**FINESS Array B**	**22.84**	**4**	P		**P**	**16 59 45.7**	**-0.9**
FINES							17 03 36.3	
FINES					pmax	pmax		
	comp=Z,5.0nm,0.8s							
FINES					pmax	pmax		
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**22.84**	**4**	P		**P**	**16 59 45.7**	**-1.0**
	comp=Z,5.4nm,0.8s,mb4.0,baz=167,slow=9.2,SNR=11							
FINES					PcP	PcP	17 03 36.3	-1.1
	comp=Z,1.0nm,0.5s,baz=134,slow=3.0,SNR=9.5							
FINES	**FINESS Array B**	**22.84**	**4**	P		**P**	**16 59 45.7**	**-0.9**
	comp=Z,5.0nm,0.8s,mb4.0							
MDT	**Midelt**	**22.99**	**264**	P		**P**	**16 59 47.3**	**-1.1**
	comp=Z,5.5nm,1.0s,mb3.9,baz=86,slow=14,SNR=2.4							
NB2	**NORSAR Subarra**	**23.49**	**346**	P		**P**	**16 59 51.5**	**-2.0**
	comp=Z,1.1nm,0.7s,mb3.4,baz=156,slow=11							
NB2	**NORSAR Subarra**	**23.49**	**346**	P		**P**	**16 59 51.5**	**-2.0**
NB2					pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4							
NOA	**NORSAR Array B**	**23.49**	**346**	P		**P**	**16 59 51.5**	**-2.0**
NOA					pmax	pmax		
	comp=Z,7.0nm,0.7s							
NOA	**NORSAR Array B**	**23.49**	**346**	P		**P**	**16 59 51.5**	**-2.0**
	comp=Z,7.3nm,0.7s,mb4.2,baz=159,slow=10,SNR=12							
KAF	**Kangasniemi**	**23.52**	**4**	*ep*		**P**	**16 59 52.0**	**-1.8**
	comp=Z,14nm,0.8s,mb4.4							
KAF	**Kangasniemi**	**23.52**	**4**	*eP*		**P**	**16 59 52.0**	**-1.8**
KAF					pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4							
EVO	**Evora**	**24.05**	**279**	*eP*		**P**	**16 59 56.8**	**-2.1**
	comp=Z,70nm,1.4s,mb4.6							
EKA	**Eskdalemuir Ar**	**24.08**	**322**	P		**P**	**16 59 58.0**	**-1.0**
EKA					pmax	pmax		
	comp=Z,20nm,0.7s							
EKA	**Eskdalemuir Ar**	**24.08**	**322**	P		**P**	**16 59 58.0**	**-1.0**
	comp=Z,20nm,0.7s,mb4.7,baz=115,slow=9.8,SNR=52							
EVOP	**Sao Brissos**	**24.13**	**279**	*eP*		**P**	**16 59 56.8**	**-2.8**
	comp=Z,35nm,1.4s,mb4.6							
JOF	**Joensuu**	**24.77**	**9**	*ep*		**P**	**17 00 03.9**	**-1.3**
	comp=Z,5.5nm,0.7s,mb4.2							
JOF	**Joensuu**	**24.77**	**9**	*eP*		**P**	**17 00 03.9**	**-1.3**
JOF					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2							
DLF	**Lyons Farm**	**24.84**	**316**	*eP*		**P**	**16 59 59.0**	**-7.0**
DCN	**Croghan**	**25.27**	**315**	*eP*		**P**	**16 59 59.0**	**-11**
DMUB	**Kingscourt**	**25.30**	**317**	*eP*		**P**	**17 00 03.0**	**-7.1**
PRGR	**Permogore**	**26.91**	**24**	*eP*		**P**	**17 00 23.5**	**-1.1**
PRGR					*eS*	**S**	**17 04 59.7**	**-1.9**
PRGR					pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.6							
PRGR	**Permogore**	**26.91**	**24**	*eP*		**P**	**17 00 23.5**	**-1.1**
	comp=Z,9.0nm,0.5s,mb4.6							
AKTK	**Aktyubinsk**	**27.41**	**53**	P		**P**	**17 00 29.4**	**+0.2**
AKTK	**Aktyubinsk**	**27.41**	**53**	P		**P**	**17 00 29.5**	**+0.3**
	comp=Z,2.0nm,0.6s,mb3.8							
AKTO	**Aktyubinsk**	**27.41**	**53**	P		**P**	**17 00 29.5**	**+0.3**
AKTO					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8							
AKTO	**Aktyubinsk**	**27.41**	**53**	P		**P**	**17 00 29.4**	**+0.2**
	comp=Z,1.7nm,0.6s,mb3.7,baz=238,slow=13,SNR=6.4							
ARU	**Arti**	**29.46**	**41***d*	*iP*		**P**	**17 00 47.3**	**-0.1**
ARU				*e*			17 01 39.7	
ARU					PPP		17 01 52.5	
ARU					S	**S**	**17 05 40.9**	**-0.8**
ARU					SS	SS	17 07 04.5	-42
ARU					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0							
ARU	**Arti**	**29.46**	**41**	*iP*		**P**	**17 00 47.3**	**-0.1**
	comp=Z,3.0nm,1.0s,mb4.0							
SVE	**Sverdlovsk**	**30.67**	**41**	*eP*		**P**	**17 00 49.0**	**-9.1**
ARCES	**ARCESS Array B**	**30.91**	**2**	P		**P**	**17 00 59.2**	**-0.9**
ARCES							17 03 56.8	
ARCES					pmax	pmax		
	comp=Z,4.0nm,0.9s							
ARCES					pmax	pmax		
	comp=Z,5.0nm,1.0s							
ARCES	**ARCESS Array B**	**30.91**	**2**	P		**P**	**17 00 59.1**	**-1.0**
	comp=Z,3.5nm,0.9s,mb4.2,baz=187,slow=9.5,SNR=4.7							
ARCES					PcP	PcP	17 03 56.8	+0.4
	comp=Z,4.8nm,1.0s,baz=156,slow=3.6,SNR=5.4							
TORD	**Torodi Ar. Bea**	**31.61**	**222**	P		**P**	**17 01 05.6**	**-1.2**
	comp=Z,9.2nm,0.6s,mb4.8,baz=31,slow=9.3,SNR=65							
EKS2	**Erkin-Say**	**38.36**	**67**	*eP*		**P**	**17 02 06.0**	**+1.3**
	comp=Z,6.0nm,0.9s,mb4.3							
EKS2	**Erkin-Say**	**38.36**	**67**	*eP*		**P**	**17 02 06.0**	**+1.2**
	comp=Z,6.0nm,0.9s,mb4.3							
UCH	**Uchtor**	**38.98**	**68**	P		**P**	**17 02 14.1**	**+4.0**
KURK	**Kurchatov**	**40.50**	**54**	*eP*		**P**	**17 02 21.6**	**-0.9**
DBIC	**Dimbokro**	**40.54**	**225**	P		**P**	**17 02 21.9**	**-1.3**
DBIC	**Dimbokro**	**40.54**	**225**	P		**P**	**17 02 21.9**	**-1.3**
DBIC					pmax	pmax		
	comp=Z,8.0nm,0.6s							
DBIC	**Dimbokro**	**40.54**	**225**	P		**P**	**17 02 21.9**	**-1.3**
	comp=Z,7.7nm,0.6s,mb4.5,baz=24,slow=9.3,SNR=19							
LIC	**Lamto**	**41.00**	**225**	*eP*		**P**	**17 02 25.8**	**-1.2**
	comp=Z,28nm,0.5s,mb4.8							
LIC	**Lamto**	**41.00**	**225**	*eP*		**P**	**17 02 25.8**	**-1.2**
	comp=Z,14nm,0.5s,mb4.8							
KMBO	**Kilima Mbogo**	**41.81**	**158**	P		**P**	**17 02 34.6**	**+1.0**
KMBO					pmax	pmax		
	comp=Z,2.0nm,0.7s							
KMBO	**Kilima Mbogo**	**41.81**	**158**	P		**P**	**17 02 34.1**	**+0.5**
	comp=Z,1.4nm,0.6s,mb3.8,baz=28,slow=20,SNR=5.4							
KMBO	**Kilima Mbogo**	**41.81**	**158**	P		**P**	**17 02 34.6**	**+1.0**
	comp=Z,1.8nm,0.7s,mb3.8							
NVS	**Novosibirsk**	**42.98**	**48**	*iP*		**P**	**17 02 43.3**	**+0.5**
MKAR	**Makanchi Array**	**43.47**	**59**	P		**P**	**17 02 46.8**	**-0.1**
	comp=Z,2.5nm,0.6s,mb4.1,baz=279,slow=6.6,SNR=16							
MKAR					ScP	ScP	17 08 21.5	-5.3
	comp=Z,0.2nm,0.2s,baz=267,slow=2.6,SNR=2.7							
TLY	**Talaya**	**55.59**	**48**‖	*eP*		**P**	**17 04 17.5**	**-1.7**
TLY					pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.9							
TLY	**Talaya**	**55.59**	**48**	*eP*		**P**	**17 04 17.5**	**-1.7**
	comp=Z,2.0nm,1.7s,mb3.9							
ZAK	**Zakamensk**	**55.83**	**50**	*eP*		**P**	**17 04 21.5**	**+0.5**
ZAK				*e*			17 12 09.9	
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.4s,mb4.0							
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.9							
ZAK	**Zakamensk**	**55.83**	**50**	*eP*		**P**	**17 04 21.5**	**+0.5**
	comp=Z,2.0nm,1.6s,mb3.9							
LSA	**Lhasa**	**56.05**	**77**	P		**P**	**17 04 23.4**	**+0.5**
LSA	**Lhasa**	**56.05**	**77**	*eP*		**P**	**17 04 22.8**	**-0.1**
	comp=Z,5.7nm,0.6s,mb4.8							
LSA	**Lhasa**	**56.05**	**77**	*eP*		**P**	**17 04 22.8**	**-0.1**
LSA					pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8							
LSA	**Lhasa**	**56.05**	**77**	*eP*		**P**	**17 04 22.8**	**-0.1**
	comp=Z,5.7nm,0.6s,mb4.8							
GTA	**Gaotai**	**57.97**	**63**	*eP*		**P**	**17 04 36.1**	**-0.2**
GTA					AP	pP	17 04 46.3	+7.9
GTA					XP	sP	17 04 50.4	+11
GTA					PP	PP	17 06 45.6	+1.1
GTA					S	**S**	**17 12 30.1**	**-6.8**
GTA					XS	sS	17 12 46.1	+5.8
GTA					AMB	AMB		
	comp=Z,2.0nm,1.0s,mb4.1							
GTA					AMB	AMB		
	comp=Z,82nm,6.8s							
GTA					LR	LR		
	comp=N,110nm,13.7s,MS4.4							
GTA					LR	LR		
	comp=E,190nm,14.8s,MS4.4							
GTA					LR	LR		
	comp=Z,148nm,14.4s,MS4.2							
TIXI	**Tiksi**	**58.51**	**21**	*eP*		**P**	**17 04 39.7**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.2							
TIXI	**Tiksi**	**58.51**	**21**	*eP*		**P**	**17 04 40.0**	**+0.4**
TIXI					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5							
TIXI					MLR	MLR		
	comp=Z,236nm,14.0s,MS4.5							
TIXI	**Tiksi**	**58.51**	**21**	*eP*		**P**	**17 04 39.7**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.2							
SONM	**Songino Array**	**58.71**	**52**	P		**P**	**17 04 41.3**	**-0.1**
SONM					pmax	pmax		
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**58.71**	**52**	P		**P**	**17 04 41.3**	**-0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=279,slow=8.4,SNR=14							
BOD	**Bodaibo**	**58.83**	**39**	*eP*		**P**	**17 04 40.0**	**-2.0**
BOD					pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5							
BOD	**Bodaibo**	**58.83**	**39**	*eP*		**P**	**17 04 40.0**	**-2.0**
	comp=Z,4.0nm,0.9s,mb4.5							
ULN	**Ulaanbaatar**	**59.10**	**51**	*eP*		**P**	**17 04 43.5**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.2							
ULN	**Ulaanbaatar**	**59.10**	**51**	*eP*		**P**	**17 04 43.8**	**-0.3**
SCHQ	**Schefferville**	**59.29**	**318**	P		**P**	**17 04 43.9**	**-1.4**
	baz=56,slow=7.9							
LZH	**Lanzhou**	**62.34**	**65**	*eP*		**P**	**17 05 07.6**	**+1.3**
LZH					AP	pP	17 05 15.0	+6.6
LZH					XP	sP	17 05 19.0	+10
LZH					AMB	AMB		
	comp=Z,15nm,1.0s,mb5.1							
LZH					AMB	AMB		
	comp=Z,67nm,4.1s							
YAK	**Yakutsk**	**63.74**	**30**‖	*eP*		**P**	**17 05 12.5**	**-2.7**
YAK					pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8							
YAK	**Yakutsk**	**63.74**	**30**	P		**P**	**17 05 14.8**	**-0.4**
	comp=Z,9.9nm,0.6s,mb5.0							
CD2	**Chengdu**	**64.89**	**70**	*eP*		**P**	**17 05 23.8**	**+0.5**
CD2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0							
CD2					AMB	AMB		
	comp=Z,30nm,5.2s							
XAN	**Xi'an**	**66.96**	**64**	P		**P**	**17 05 36.6**	**0.0**
XAN					AP	pP	17 05 40.1	+1.4
XAN					AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.5							
BOSA	**Boshof**	**67.02**	**178**	P		**P**	**17 05 36.6**	**-0.1**
BOSA					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6							
BOSA	**Boshof**	**67.02**	**178**	P		**P**	**17 05 36.5**	**-0.2**
	comp=Z,5.6nm,0.9s,mb4.6,baz=355,slow=6.1,SNR=12							
KMI	**Kunming**	**67.22**	**75**	P		**P**	**17 05 40.9**	**+2.6**
KMI					AMB	AMB		
	comp=Z,6.0nm,0.9s,mb4.6							
GYA	**Guiyang**	**69.43**	**72**	P		**P**	**17 05 53.3**	**+1.1**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
BILL	**Bilibino**	**70.08**	**14**	*eP*		**P**	**17 05 52.6**	**-2.8**
BILL					pmax	pmax		
	comp=Z,11nm,2.5s,mb4.3							
BILL	**Bilibino**	**70.08**	**14**	*eP*		**P**	**17 05 52.6**	**-2.8**
	comp=Z,11nm,2.5s,mb4.3							
CN2	**Changchun**	**72.19**	**48**	*eP*		**P**	**17 06 08.0**	**-0.7**
CN2					eXP	sP	17 06 22.3	+11
CN2					eS	S	17 15 26.0	-5.5
CN2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
CN2					LR	LR		
	comp=N,200nm,13.0s,MS4.7							
CN2					LR	LR		
	comp=E,200nm,13.0s,MS4.7							
CN2					LR	LR		
	comp=Z,200nm,12.0s,MS4.6							
YKA	**Yellowknife Ar**	**73.49**	**341**	P		**P**	**17 06 14.9**	**-1.2**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**73.49**	**341**	P		**P**	**17 06 14.9**	**-1.2**
	comp=Z,1.4nm,0.6s,mb4.0,baz=29,slow=5.5,SNR=24							
MDJ	**Mudanjiang**	**74.05**	**45**	P		**P**	**17 06 19.9**	**+0.2**
MDJ					AMB	AMB		
	comp=Z,5.0nm,1.7s,mb4.2							
MDJ					AMB	AMB		
	comp=Z,35nm,6.2s							
MDJ					LR	LR		
	comp=N,43nm,32.2s,MS4.0							
MDJ					LR	LR		
	comp=E,113nm,30.3s,MS4.0							
MDJ					LR	LR		
	comp=Z,67nm,17.1s							
NJ2	**Nanjing**	**74.98**	**61**	*eP*		**P**	**17 06 24.5**	**-0.8**
NJ2					AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3							
IMA2	**Indian Mountai**	**75.51**	**359**	*eP*		**P**	**17 06 28.2**	**+0.4**
IMA2	**Indian Mountai**	**75.51**	**359**	*eP*		**P**	**17 06 28.2**	**+0.5**
ULM	**Lac du Bonnet**	**76.33**	**325**	P		**P**	**17 06 31.8**	**-0.9**
	baz=32,slow=5.1							
KSRS	**Korea Array**	**77.58**	**52**	P		**P**	**17 06 38.6**	**-1.4**
	comp=Z,2.4nm,0.5s,mb4.3,baz=314,slow=4.4,SNR=17							
YSS	**Yuzh-Sakhalins**	**79.26**	**37**‖	*eP*		**P**	**17 06 43.6**	**-5.5**
YSS					pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7							
MJAR	**Matsushiro Arr**	**84.31**	**47**	P		**P**	**17 07 13.7**	**-2.2**
MJAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
MJAR	**Matsushiro Arr**	**84.31**	**47**	P		**P**	**17 07 13.7**	**-2.2**
	comp=Z,1.5nm,0.8s,mb4.2,baz=318,slow=7.2,SNR=3.2							
PDAR	**Pinedale Array**	**88.11**	**327**	P		**P**	**17 07 32.5**	**-2.0**
	comp=Z,0.6nm,0.7s,mb3.9,baz=58,slow=4.2,SNR=6.2							
TXAR	**Lajitas Array**	**95.89**	**315**	P		**P**	**17 08 11.0**	**+0.2**
TXAR	**Lajitas Array**	**95.89**	**315**	P		**P**	**17 08 11.0**	**+0.2**
	comp=Z,0.4nm,0.6s,mb4.0,baz=60,slow=4.5,SNR=6.6							
ASAR	**Alice Springs**	**120.44**	**97**	PKIKP		PKPdf	17 13 33.5	-2.1
ASAR					pmax	pmax		
	comp=Z,1.0nm,0.7s							
ASAR	**Alice Springs**	**120.44**	**97**	PKP		PKPdf	17 13 33.5	-2.1
	comp=Z,0.6nm,0.7s,baz=317,slow=1.6,SNR=13							

IDC ***20*** *16:57:02.6± 1.2, 3265S× 17881W, h0km, mb4.3/5, mb1 4.4/6, mb1mx4. 1/17, mbtmp4.3/6, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx3.0/24, Error ellipse: s-maj=33.6km s-min=24.9km az=55.0*

NEIC ***20*** *16:57:07.9± 1.1, 3280S× 17889W, h35km, Error ellipse: s-maj=26.6km s-min=15.8km az=96.0*

ISCJB ***20*** *16:57:10.8± 1.0, 3325S± 005× 1797W± 0.1, h33km, mb4.2/5, Error ellipse: s-maj=18.5km s-min=6.6km az=13.7*

ISC 20 16:57:09.3± 1.9, 3316S± 006× 1798W± 02, h5km± 18km, n43, σ 1§ 23/51, mb4.2/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.66**	**199**	PN	**Pn**	**16 58 22.6**	**+2.4**
MXZ				SN	**Sn**	**16 59 22.6**	**+8.1**
KUZ	**Kuaotunu**	**5.13**	**225**	PN	**Pn**	**16 58 36.0**	**+9.3**
PUZ	**Puketiti**	**5.15**	**197**	PN	**Pn**	**16 58 28.6**	**+1.7**
PUZ				SN	**Sn**	**16 59 32.2**	**+5.4**
WCZ	**Waipu Caves**	**5.57**	**239**	PN	**Pn**	**16 58 43.0**	**+10**
MWZ	**Matawai**	**5.60**	**202**	PN	**Pn**	**16 58 35.1**	**+2.0**
MWZ				SN	**Sn**	**16 59 44.1**	**+6.2**
URZ	**Urewera**	**5.68**	**205**	Pn	**Pn**	**16 58 37.5**	**+3.4**
	3.1nm,0.3s,baz=269,slow=1.8,SNR=70						
URZ				Sn	**Sn**	**16 59 47.5**	**+7.8**
	6.5nm,0.3s,baz=142,slow=19,SNR=8.2						
URZ	**Urewera**	**5.68**	**205**	PN	**Pn**	**16 58 36.3**	**+2.2**
URZ				SN	**Sn**	**16 59 47.6**	**+8.0**
OUZ	**Omahuta**	**5.85**	**248**	PN	**Pn**	**16 58 47.2**	**+11**
KNZ	**Kokohu**	**6.20**	**199**	*e*PN	**Pn**	**16 58 42.1**	**+0.8**
KNZ				SN	**Sn**	**16 59 56.2**	**+3.7**
BKZ	**Black Stump Fm**	**6.70**	**206**	*e*PN	**Pn**	**16 58 49.5**	**+1.3**
BKZ				SN	**Sn**	**17 00 10.4**	**+5.5**
FWVZ	**Far West T-bar**	**7.15**	**210**	*e*PN	**Pn**	**16 58 58.8**	**+4.4**
WNVZ	**Wahianoa**	**7.19**	**210**	PN	**Pn**	**16 58 58.6**	**+3.7**
TSZ	**Takapari Road**	**7.68**	**205**	*e*PN	**Pn**	**16 59 00.8**	**-0.9**
BFZ	**Birch Farm**	**8.15**	**202**	*e*PN	**Pn**	**16 59 06.7**	**-1.4**
BFZ				SN	**Sn**	**17 00 40.2**	**-0.3**
TIWZ	**Tintock**	**8.35**	**203**	SN	**Sn**	**17 00 46.3**	**+0.9**
MRZ	**Mangatainoka R**	**8.35**	**205**	*e*PN	**Pn**	**16 59 09.1**	**-1.8**
MRZ				SN	**Sn**	**17 00 45.6**	**+0.1**
KIW	**Kapiti Island**	**8.77**	**207**	*e*PN	**Pn**	**16 59 17.2**	**+0.6**
MTW	**Mount Morrison**	**8.82**	**204

JNE Jan Mayen East 3.53 255 *e*P **Pn** **17 04 28.1 -7.6**
JNW Jan Mayen West 3.55 256 *e*P **Pn** **17 04 28.6 -7.5**
JMIC Jan Mayen 3.60 255 Pn **Pn** **17 04 28.8 -7.8**
15nm,0.3s,baz=24,slow=3.3,SNR=4.8
JMI Jan Mayen 3.69 255 *e*P **Pn** **17 04 30.1 -7.7**
JMI Jan Mayen 3.69 255 *e*P **Pn** **17 04 30.1 -7.8**
SNR=50
BJO1 Bjornoya 5.36 57 *e*P **Pn** **17 05 01.3 +0.5**
BJO1 Bjornoya 5.36 57 *e*P **Pn** **17 05 01.3 +0.5**
BJO Bjornoya 5.41 57 *e*P **Pn** **17 05 01.3 -0.2**
LOF Lofoten 5.62 131 *e*P **Pn** **17 05 07.5 +3.1**
LOF *e*S **Sn** **17 06 09.5 +0.6**
LOF *e* 17 10 10.2
LOF Lofoten 5.62 131 *e*P **Pn** **17 05 07.5 +3.1**
LOF *e*S **Sn** **17 06 09.5 +0.6**
LOF AML AML 17 06 14.9
comp=Z,43nm,0.4s
LOF *e* 17 10 10.2
TRO Tromso 6.06 107 *e*P **Pn** **17 05 09.6 -0.9**
TRO *e*S **Sn** **17 06 16.1 -3.7**
TRO AML AML 17 06 20.1
comp=Z,13nm,0.3s
TRO Tromso 6.06 107 *e*P **Pn** **17 05 09.6 -0.9**
TRO *e*S **Sn** **17 06 16.1 -3.6**
SPB4 Spitsbergen Ar 7.00 25 *e*Pn **Pn** **17 05 21.6 -1.7**
SPB4 Spitsbergen Ar 7.00 25 *e*Pn **Pn** **17 05 21.6 -1.7**
STOK Stokkvaagen 7.02 142 *e*P **Pn** **17 05 23.6 -0.1**
STOK *e*S **Sn** **17 06 38.9 -4.5**
STOK Stokkvaagen 7.02 142 *e*P **Pn** **17 05 23.6 -0.1**
STOK *e*S **Sn** **17 06 38.9 -4.5**
STOK AML AML 17 06 45.9
comp=Z,31nm,0.7s
KBS Kingsbay 7.18 15 Pn **Pn** **17 05 22.3 -3.5**
KBS *e*P 17 05 22.5
KBS Kingsbay 7.18 15 *e*P **Pn** **17 05 22.4 -3.4**
MOR8 Moi Rana 7.45 138 *e*P **Pn** **17 05 29.7 +0.3**
MOR8 AML AML 17 06 57.4
comp=Z,23nm,0.5s
KTK1 Kautokeino 7.68 104 *e*P **Pn** **17 05 34.7 +2.0**
KTK1 *e*S **Sn** **17 06 59.4 -0.2**
ARA0 ARCESS Array S 8.09 98 Pn **Pn** **17 05 38.4 +0.1**
baz=290,slow=12
ARA0 Sn **Sn** **17 07 09.4 -0.1**
baz=305,slow=22
ARCES ARCESS Array B 8.09 98 P **Pn** **17 05 38.9 +0.7**
ARCES 17 07 08.7
ARCES pmax pmax
comp=Z,3.0nm,0.3s
ARCES smax
comp=N,2.0nm,0.3s
ARCES MLR MLR
comp=Z,410nm,18.3s
ARCES ARCESS Array B 8.09 98 Pn **Pn** **17 05 38.9 +0.6**
comp=Z,2.9nm,0.3s,baz=307,slow=12,SNR=69
ARCES Sn **Sn** **17 07 08.7 -0.9**
comp=Z,1.5nm,0.3s,baz=321,slow=24,SNR=3.7
ARCES LR LR 17 09 02.4
comp=Z,410nm,18.3s,baz=298,slow=39
ARE0 ARCESS Array S 8.09 98 *e*Pn **Pn** **17 05 37.9 -0.3**
ARE0 ARCESS Array S 8.09 98 *e*Pn **Pn** **17 05 37.9 -0.3**
KEV Kevo 8.44 95 *e*p **Pn** **17 05 41.5 -1.6**
NSS Namsos 8.49 150 *e*P **Pn** **17 05 41.2 -2.6**
NSS *e*S **Sn** **17 07 13.3 -6.2**
NSS Namsos 8.49 150 *e*P **Pn** **17 05 41.2 -2.6**
NSS *e*S **Sn** **17 07 13.3 -6.2**
NSS AML AML 17 07 18.4
comp=Z,39nm,0.7s
DOMB Dombas 10.53 162 *e*Pn **Pn** **17 06 11.9 +0.2**
HYA Hoyanger 11.19 170 *e*Pn **Pn** **17 06 20.7 0.0**
HYA *e*Sn **Sn** **17 08 17.9 -7.6**
NB2 NORSAR Subarra 11.74 158 Pn **Pn** **17 06 27.7 -0.5**
comp=Z,31nm,1.1s,baz=345,slow=14
NB2 NORSAR Subarra 11.74 158 Pn **Pn** **17 06 27.7 -0.5**
comp=Z,31nm,1.1s
NB2 NORSAR Subarra 11.74 158 Pn **Pn** **17 06 27.6 -0.7**
baz=348,slow=14
NB2 NORSAR Subarra 11.74 158 P **Pn** **17 06 27.7 -0.5**
NB2 pmax pmax
comp=Z,31nm,1.1s
NOA NORSAR Array B 11.74 158 P **Pn** **17 06 27.6 -0.6**
NOA 17 08 32.3
NOA pmax pmax
comp=Z,1.0nm,0.3s
NOA smax
comp=N,1.0nm,0.3s
NOA MLR MLR
comp=Z,1μm,19.0s
NOA NORSAR Array B 11.74 158 Pn **Pn** **17 06 27.6 -0.7**
comp=Z,0.8nm,0.3s,baz=331,slow=12,SNR=12
NOA Sn **Sn** **17 08 32.3 -6.9**
comp=Z,0.8nm,0.3s,baz=296,slow=18,SNR=4.5
NOA LR LR 17 10 59.3
comp=Z,1μm,19.0s,baz=345,slow=37
NOA NORSAR Array B 11.74 158 Pn **Pn** **17 06 27.5 -0.7**
NOA Sn **Sn** **17 08 32.3 -6.8**
HFS Hagfors 12.94 153 Pn **Pn** **17 06 42.5 -2.1**
baz=344,slow=16
HFS Hagfors 12.94 153 P **Pn** **17 06 43.2 -1.3**
HFS 17 09 00.0
HFS pmax pmax
comp=Z,2.0nm,0.3s
HFS smax
comp=N,2.0nm,0.3s
HFS MLR MLR
comp=Z,2μm,21.4s
HFS Hagfors 12.94 153 Pn **Pn** **17 06 43.2 -1.3**
comp=Z,2.4nm,0.3s,baz=354,slow=12,SNR=54
HFS Sn **Sn** **17 08 60.0 -8.3**
comp=Z,1.5nm,0.3s,baz=350,slow=26,SNR=10.0
HFS LR LR 17 11 04.9
comp=Z,2μm,21.4s,baz=3.1,slow=34
KONO Kongsberg 12.94 163 *e*Pn **Pn** **17 06 43.4 -1.2**
KONO Kongsberg 12.94 163 *e*Pn **Pn** **17 06 43.4 -1.2**
KAF Kangasniemi 13.65 125 *e*p **Pn** **17 06 52.9 -1.4**
FIA0 FINESS Array S 14.17 127 Pn **Pn** **17 07 01.0 -0.3**
baz=322,slow=11
FINES FINESS Array B 14.17 127 P **Pn** **17 07 00.4 -0.9**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES FINESS Array B 14.17 127 Pn **Pn** **17 07 00.4 -0.9**
comp=Z,0.6nm,0.3s,baz=332,slow=11,SNR=23
JOF Joensuu 14.31 116 *e*p **Pn** **17 07 01.0 -2.3**
comp=Z,28nm,0.7s
JOF Joensuu 14.31 116 *e*P **Pn** **17 07 01.0 -2.3**
JOF pmax pmax
comp=Z,28nm,0.7s
MUD Monsted U'grnd 16.07 166 *i* P **Pn** **17 07 30.9 +4.3**
MUD pmax pmax
comp=Z,58nm,1.3s
MUD MLR MLR
comp=Z,1μm,20.0s
MUD Monsted U'grnd 16.07 166 *i* P **Pn** **17 07 30.9 +4.3**
comp=Z,58nm,1.3s
MUD
comp=Z,1μm,20.0s
VSU Vasula 16.96 131⇓ *e*P **Pn** **17 07 35.8 -2.1**
VSU Vasula 16.96 131 P **Pn** **17 07 35.8 -2.1**
EKA Eskdalemuir Ar 17.08 190 P **Pn** **17 07 37.5 -1.9**
comp=Z,0.2nm,0.3s,baz=12,slow=12,SNR=4.5
BSD Bornholm Skovb 17.98 156 *e*P **Pn** **17 07 48.9 -1.7**
BSD pmax pmax
comp=Z,34nm,1.0s
BSD MLR MLR
comp=Z,970nm,18.0s
BSD Bornholm Skovb 17.98 156 *i* P **Pn** **17 07 48.9 -1.7**
comp=Z,34nm,1.0s
BSD
comp=Z,960nm,18.0s
SFJD Kangerlussuaq 18.55 280 LR LR 17 14 03.3
comp=Z,1μm,18.0s,baz=17,slow=34
PRGR Permogore 19.50 100⇓ *i*P **Pn** **17 08 07.2 -1.8**
PRGR *e*S **Sn** **17 11 38.0 -10**
SUW Suwalki 20.35 142 *e*P **P** **17 08 17.4 +0.4**
CLZ Clausthal 20.75 166 *e*P **P** **17 08 21.3 -0.1**
CLZ pmax pmax
comp=Z,73nm,1.3s
CLZ Clausthal 20.75 166 *e*P **P** **17 08 21.3 -0.1**
comp=Z,73nm,1.3s
MNK Minsk 20.84 135 *e*P **P** **17 08 21.0 -1.3**
MNK pmax pmax
comp=Z,210nm,1.8s
MNK pmax pmax
comp=N,580nm,2.0s
CLL Collm 21.51 161 *i* P **P** **17 08 29.0 -0.6**
comp=N,46nm,1.4s,mb4.7
CLL *i* 17 08 40.1
CLL *e*S **S** **17 12 29.0 +1.4**
CLL LR LR
comp=Z,700nm,21.5s,MS4.0
CLL Collm 21.51 161 *i* P **P** **17 08 29.0 -0.6**
CLL pmax pmax
comp=Z,46nm,1.4s,mb4.7
CLL MLR MLR
comp=Z,700nm,21.5s,MS4.0
CLL Collm 21.51 161 *i* P **P** **17 08 29.0 -0.6**
comp=Z,46nm,1.4s,mb4.7
CLL *i* x x 17 08 40.1
CLL *i* x x 17 08 43.1
CLL *e*S **S** **17 12 29.0 +1.4**
CLL Lm 17 16 00.0
comp=Z,700nm,21.5s
CLL Collm 21.51 161 *e*P **P** **17 08 28.6 -1.0**
comp=Z,46nm,1.4s,mb4.7
MEM Membach 21.73 173 P **P** **17 08 32.0 +0.1**
comp=Z,18nm,1.3s,mb4.3
UBBA Unterbreizbach 21.74 166 *e*P **P** **17 08 31.5 -0.5**
BCLA Clavier 21.90 175 P **P** **17 08 33.8 0.0**
comp=Z,22nm,1.8s,mb4.3
BRG Berggiesshubel 22.03 160 *i* P **P** **17 08 34.4 -0.8**
BRG pmax pmax
comp=Z,18nm,1.3s,mb4.3
BRG Berggiesshubel 22.03 160 *e*P **P** **17 08 34.6 -0.6**
comp=Z,61nm,1.6s,mb4.8
BRG Berggiesshubel 22.03 160 *i* P **P** **17 08 34.4 -0.8**
comp=Z,30nm,1.3s,mb4.6
MOX Moxa 22.04 164 *e*P **P** **17 08 35.7 +0.5**
comp=Z,91nm,1.9s,mb4.9
MOX
comp=Z,600nm,21.0s
MOX Moxa 22.04 164 *e*P **P** **17 08 35.7 +0.5**
MOX pmax pmax
comp=Z,91nm,1.9s,mb4.9
MOX MLR MLR
comp=Z,600nm,21.0s,MS4.0
MOX Moxa 22.04 164 *e*P **P** **17 08 35.0 -0.2**
comp=Z,37nm,0.3s,mb5.3
MOS Moscow 22.12 119 *e*P **P** **17 08 36.1 +0.1**
MOS *e* 17 08 55.1
MOS *e* 17 13 05.8
MOS pmax pmax
comp=Z,143nm,1.8s,mb5.1
MOS Moscow 22.12 119 *e*P **P** **17 08 36.1 +0.1**
comp=Z,143nm,1.8s,mb5.1
GIVF Givet 22.20 175 *e*P **P** **17 08 37.0 0.0**
comp=Z,45nm,1.0s,mb4.6
GIVF Givet 22.20 175 *e*P **P** **17 08 37.0 0.0**
GIVF pmax pmax
comp=Z,22nm,1.0s,mb4.5
GIVF Givet 22.20 175 *e*P **P** **17 08 37.0 0.0**
comp=Z,22nm,1.0s,mb4.6
DOU Dourbes 22.20 176 P **P** **17 08 37.9 +0.9**
comp=Z,36nm,2.3s,mb4.4
DOU Dourbes 22.20 176 P **P** **17 08 37.8 +0.8**
comp=Z,36nm,2.3s,mb4.4
TNS Taunus Mts 22.23 169 *e*P **P** **17 08 37.1 -0.2**
TNS pmax pmax
comp=Z,32nm,1.1s,mb4.7
TNS Taunus Mts 22.23 169 *e*P **P** **17 08 37.1 -0.2**
comp=Z,32nm,1.1s,mb4.7
BAIF Baives 22.23 177 *e*P **P** **17 08 37.2 -0.1**
comp=Z,68nm,1.3s,mb4.6
BAIF Baives 22.23 177 *e*P **P** **17 08 37.2 -0.1**
BAIF pmax pmax
comp=Z,34nm,1.3s,mb4.6
BAIF Baives 22.23 177 *e*P **P** **17 08 37.2 -0.1**
comp=Z,34nm,1.3s,mb4.6
KSP Ksiaz 22.34 156 *e*P **P** **17 08 38.1 -0.3**
KSP Ksiaz 22.34 156 *e*P **P** **17 08 38.0 -0.4**
KSP *e*pP 17 08 42.9
TANN Tannenbergstha 22.34 162 *e*P **P** **17 08 37.8 -0.7**
comp=Z,41nm,1.5s,mb4.6
OBN Obninsk 22.39 122 *e*P **P** **17 08 36.3 -2.7**
comp=Z,67nm,1.1s,mb5.0
OBN Obninsk 22.39 122⇑ *e*P **P** **17 08 38.3 -0.7**
OBN *i* 17 08 46.6
OBN *e* 17 08 57.7
OBN pmax pmax
comp=Z,72nm,1.2s,mb5.0
OBN MLR MLR
comp=Z,2μm,17.0s,MS4.5
OBN Obninsk 22.39 122 *e*P **P** **17 08 38.3 -0.7**
comp=Z,72nm,1.2s,mb5.0
PVCC Panska Ves 22.44 159 *e*P **P** **17 08 39.2 -0.3**
NKC Novy Kostel 22.52 163 *e*P **P** **17 08 40.5 +0.1**
UPC Upice 22.63 157 *e*P **P** **17 08 41.6 +0.1**
DPC Dobruska-Polom 22.82 156 *e*P **P** **17 08 43.4 -0.2**
DPC AMS AMS 17 18 00.0
comp=Z,600nm,17.0s
GRA1 Grafenberg Arr 22.95 165 *e*P **P** **17 08 45.3 +0.4**
comp=Z,42nm,1.1s,mb4.8
GRA1 LR LR
comp=Z,700nm,21.4s,MS4.1
GRF Grafenberg Arr 22.95 165 *e*P **P** **17 08 45.3 +0.4**
GRF pmax pmax
comp=Z,42nm,1.1s,mb4.8
GRF MLR MLR
comp=Z,700nm,21.4s,MS4.1
GRF Grafenberg Arr 22.95 165 *e*P **P** **17 08 45.3 +0.4**
GRF pmax pmax
comp=Z,42nm,1.1s,mb4.8
GRF MLR MLR
comp=Z,700nm,21.4s,MS4.1
GRF Grafenberg Arr 22.95 165 *e*P **P** **17 08 45.3 +0.4**
comp=Z,42nm,1.1s,mb4.8
GRF *e*L 17 17 11.9
comp=Z,677nm,21.4s
ROTZ Rotzenmuhle 22.96 163 *e*P **P** **17 08 44.8 -0.2**
comp=Z,41nm,1.2s,mb4.7
PRU Pruhonice 22.97 159 *e*P **P** **17 08 44.6 -0.6**
OJC Ojcow 23.43 151 *e*P **P** **17 08 49.3 -0.7**
FLN La Foliniere 23.54 184 *e*P **P** **17 08 48.1 -3.1**
FLN *e*MLR MLR
comp=Z,353nm,19.2s,MS3.5
FLN La Foliniere 23.54 184 *e*P **P** **17 08 48.1 -3.1**
FLN MLR MLR
comp=Z,350nm,19.3s,MS3.8
MORC Moravsky Berou 23.54 154 *e*P **P** **17 08 50.1 -1.1**
comp=Z,28nm,1.3s,mb4.5
MORC Moravsky Berou 23.54 154 *e*P **P** **17 08 50.1 -1.1**
MORC pmax pmax
comp=Z,28nm,1.3s,mb4.5
MORC Moravsky Berou 23.54 154 *e*P **P** **17 08 50.6 -0.6**
OKC Ostrava-Krasne 23.56 154 *e*P **P** **17 08 50.6 -0.8**
WET Wettzell 23.64 162 *e*P **P** **17 08 52.3 +0.3**
LDF La Druitiere 23.70 184 *e*P **P** **17 08 50.4 -2.2**
KHC Kasperske Hory 23.72 161 *e*P **P** **17 08 53.0 +0.2**
KHC *e*pP 17 09 00.0
STU Stuttgart 23.72 168 *e*P **P** **17 08 53.1 +0.3**
VRAC Vranov 23.88 156 P **P** **17 08 53.9 -0.4**
VRAC LR LR 17 18 43.8
VRAC Vranov 23.88 156 P **P** **17 08 53.9 -0.3**
VRAC pmax pmax
comp=Z,20nm,1.0s
VRAC MLR MLR
comp=Z,571nm,18.1s
VRAC Vranov 23.88 156 P **P** **17 08 53.9 -0.4**
comp=Z,20nm,0.9s,mb4.5,baz=350,slow=11,SNR=13
VRAC LR LR 17 18 43.8
comp=Z,571nm,18.1s,MS4.1,baz=345,slow=38
VRAC Vranov 23.88 156 *e*P **P** **17 08 54.3 +0.1**
GRR Gorron 23.92 185 *e*P **P** **17 08 52.3 -2.4**
GEC2 GERESS Array S 24.01 161 *e*P **P** **17 08 55.9 +0.4**
GEC2 pmax pmax
comp=Z,29nm,1.2s,mb4.6
GEC2 GERESS Array S 24.01 161 *e*P **P** **17 08 55.9 +0.4**
comp=Z,29nm,1.2s,mb4.6
GERES GERESS Array B 24.01 161 P **P** **17 08 55.9 +0.4**
GERES pmax pmax
comp=Z,10.0nm,1.0s
GERES MLR MLR
comp=Z,659nm,21.4s
GERES GERESS Array B 24.01 161 P **P** **17 08 55.9 +0.5**
comp=Z,9.7nm,1.0s,mb4.2,baz=352,slow=8.2,SNR=31
GERES LR LR 17 17 55.6
comp=Z,658nm,21.4s,MS4.1,baz=347,slow=36
BFO Black Forest 24.11 170 *e*P **P** **17 08 58.1 +1.7**
BFO pmax pmax
comp=Z,15nm,1.1s,mb4.3
BFO Black Forest 24.11 170 *e*P **P** **17 08 58.1 +1.7**
comp=Z,15nm,1.1s,mb4.3
NIE Niedzica 24.29 150 *e*P **P** **17 09 00.1 +2.1**
HAU Haudompre 24.34 173 *e*P **P** **17 08 58.5 0.0**
comp=Z,24nm,1.0s,mb4.3
HAU *e*MLR MLR
comp=Z,284nm,17.2s,MS3.5
HAU Haudompre 24.34 173 *e*P **P** **17 08 58.5 0.0**
comp=Z,12nm,1.0s,mb4.3
HAU LR LR
comp=Z,280nm,17.3s,MS3.8
HAU Haudompre 24.34 173 *e*P **P** **17 08 58.5 0.0**
HAU pmax pmax
comp=Z,12nm,1.0s,mb4.3
HAU MLR MLR
comp=Z,280nm,17.3s,MS3.8
STHS Stebnicka Huta 24.43 149 *i* P **P** **17 09 00.9 +1.6**
STHS pmax pmax
comp=Z,25nm,1.8s,mb4.3
STHS Stebnicka Huta 24.43 149 *i* P **P** **17 09 00.8 +1.5**
STHS Stebnicka Huta 24.43 149 *i* P **P** **17 09 00.9 +1.6**
comp=Z,25nm,1.8s,mb4.3
KWP Kalwaria 24.47 147 *e*P **P** **17 09 01.9 +2.3**
LVV L'vov 24.52 144 *e*P **P** **17 09 00.5 +0.5**
LVV MLR MLR
comp=Z,900nm,16.2s,MS4.3
LVV MLR MLR
comp=N,900nm,15.0s,MS4.4
LVV MLR MLR
comp=E,500nm,15.5s,MS4.4
AKASG Malin Array Be 24.70 136 P **P** **17 09 00.9 -0.8**
AKASG pmax pmax
comp=Z,24nm,1.0s
AKASG MLR MLR
comp=Z,1μm,18.1s
AKASG Malin Array Be 24.70 136 P **P** **17 09 00.9 -0.8**
comp=Z,24nm,1.0s,mb4.7,baz=339,slow=10,SNR=30
AKASG LR LR 17 18 36.5
comp=Z,1μm,18.1s,MS4.4,baz=335,slow=36
AKBB Malin Array Si 24.70 136 *e*P **P** **17 09 00.6 -1.0**
AKBB Malin Array Si 24.70 136 *e*P **P** **17 09 00.6 -1.1**
KIEV Kiev 24.70 136 *e*P **P** **17 09 00.9 -0.7**
comp=Z,38nm,1.1s,mb4.8
KIEV Kiev 24.70 136 *e*P **P** **17 09 00.9 -0.8**
KIEV pmax pmax
comp=Z,38nm,1.1s,mb4.8
KIEV Kiev 24.70 136 *e*P **P** **17 09 00.9 -0.8**
comp=Z,38nm,1.1s,mb4.8
SMOL Smolenice 24.77 155 *e*P **P** **17 09 05.6 +3.3**
KOLL Kolacno 24.83 154 *e*P **P** **17 09 03.8 +0.9**
RES Resolute Bay 24.88 321 *e*P **P** **17 09 05.5 +2.4**
comp=Z,2μm,2.1s
RES Resolute Bay 24.88 321 *e*P **P** **17 09 05.5 +2.4**
RES pmax pmax
comp=Z,2μm,2.1s
RES Resolute Bay 24.88 321 *e*P **P** **17 09 05.5 +2.4**
comp=Z,2μm,2.1s
MODS Modra-Piesok 24.88 156 *i* P **P** **17 09 04.0 +0.6**
CRVS Cervenica-Dubn 24.97 149 *i* P **P** **17 09 05.8 +1.6**
VYHS Vyhne 24.97 153 *i* P **P** **17 09 04.4 +0.2**
VYHS pmax pmax
comp=Z,143nm,4.0s
VYHS Vyhne 24.97 153 *i* P **P** **17 09 04.4 +0.2**
comp=Z,143nm,4.0s
LOR Lormes 25.02 177 *e*P **P** **17 09 03.3 -1.3**
comp=Z,27nm,1.1s,mb4.4
LOR *e*MLR MLR
comp=Z,375nm,21.8s,MS3.6
LOR Lormes 25.02 177 *e*P **P** **17 09 03.3 -1.3**
comp=Z,14nm,1.1s,mb4.4
LOR LR LR
comp=Z,380nm,21.8s,MS3.9
LOR Lormes 25.02 177 *e*P **P** **17 09 03.3 -1.3**
LOR pmax pmax
comp=Z,14nm,1.1s,mb4.4
LOR MLR MLR
comp=Z,380nm,21.8s,MS3.9
ZST Bratislava 25.04 156 *i* P **P** **17 09 06.6 +1.8**
ZST pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
ZST Bratislava 25.04 156 *i* P **P** **17 09 06.6 +1.8**
comp=Z,9.5nm,0.7s,mb4.4
MOA Molln 25.05 161⇑ *i*P **P** **17 09 06.2 +1.2**
comp=Z,20nm,1.3s,mb4.5
KOLS Kolonicke sedl 25.07 148 *i* P **P** **17 09 06.1 +1.0**
CONA Conrad Observa 25.15 158⇑ *i*P **P** **17 09 07.1 +1.2**
comp=Z,32nm,1.2s,mb4.7
SSF Saint Saulge 25.22 178 *e*P **P** **17 09 05.4 -1.1**
comp=Z,27nm,1.1s,mb4.4
SSF Saint Saulge 25.22 178 *e*P **P** **17 09 05.4 -1.1**
comp=Z,13nm,1.1s,mb4.4
SSF Saint Saulge 25.22 178 *e*P **P** **17 09 05.4 -1.1**
SSF pmax pmax
comp=Z,13nm,1.1s,mb4.4
KECS Kecovo 25.22 151 *i* P **P** **17 09 06.6 +0.1**
comp=Z,7.4nm,1.1s,mb4.1
KECS Kecovo 25.22 151 *i* P **P** **17 09 06.6 +0.1**
KECS pmax pmax
comp=Z,7.0nm,1.1s,mb4.1
DAVA Damuels 25.24 168⇓ *i*P **P** **17 09 08.8 +2.1**
comp=Z,11nm,1.0s,mb4.4
DAVA Damuels 25.24 168⇓ *i*pP pP 17 09 08.8 -0.9
comp=Z,11nm,1.0s
UZH Uzhgorod 25.36 148 *e*P **P** **17 09 09.0 +1.2**
UZH *i* 17 09 41.6
UZH *e*S **S** **17 13 33.0 -0.7**
WTTA Wattenberg 25.39 165⇑ *i*P **P** **17 09 09.7 +1.7**
comp=Z,34nm,1.2s,mb4.7
WTTA Wattenberg 25.39 165⇑ *i*P **P** **17 09 09.7 +1.7**
WTTA pmax pmax
comp=Z,34nm,1.2s,mb4.8
MFF Saint Martin d 25.69 184 *e*P **P** **17 09 10.1 -0.7**
comp=Z,41nm,1.1s,mb4.6
MFF Saint Martin d 25.69 184 *e*P **P** **17 09 10.1 -0.7**
comp=Z,20nm,1.1s,mb4.6
MFF Saint Martin d 25.69 184 *e*P **P** **17 09 10.1 -0.7**
MFF pmax pmax
comp=Z,20nm,1.1s,mb4.6
CABF La Chapelle 25.73 174 *e*P **P** **17 09 12.6 +1.5**
comp=Z,112nm,1.5s,mb4.9
CABF La Chapelle 25.73 174 *e*P **P** **17 09 12.6 +1.5**
comp=Z,56nm,1.5s,mb4.9
CABF La Chapelle 25.73 174 *e*P **P** **17 09 12.6 +1.5**
CABF pmax pmax
comp=Z,56nm,1.5s,mb4.9
DAVOX Davos/Dischmat 25.75 168 LR LR 17 19 44.4
comp=Z,725nm,19.5s,MS4.2,baz=82,slow=37
ARSA Arzberg 25.78 159⇑ *i*P **P** **17 09 14.2 +2.6**
comp=Z,17nm,1.2s,mb4.5
ARSA Arzberg 25.78 159⇑ *i*pP pP 17 09 14.2 -0.4
comp=Z,17nm,1.2s
TCF Toulx Ste Croi 25.99 180 *e*P **P** **17 09 12.6 -0.8**
comp=Z,110nm,1.5s,mb4.9
TCF Toulx Ste Croi 25.99 180 *e*P **P** **17 09 12.6 -0.8**
comp=Z,55nm,1.5s,mb4.9
TCF Toulx Ste Croi 25.99 180 *e*P **P** **17 09 12.6 -0.8**
TCF pmax pmax
comp=Z,55nm,1.5s,mb4.9
VOR Voronezh 26.13 122 *e*P **P** **17 09 15.0 +0.4**
VOR pmax pmax
comp=Z,120nm,1.8s,mb5.1
VRSR Storozhevoye 26.59 122 *e*P **P** **17 09 19.0 +0.1**
VRSR pmax pmax
comp=Z,6.0nm,1.2s,mb4.0
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,4.0nm,1.0s
LPL La Plagne 26.84 173 *e*P **P** **17 09 22.4 +1.2**
comp=E,56nm,1.4s,mb4.6
LPL La Plagne 26.84 173 *e*P **P** **17 09 22.4 +1.2**
comp=E,28nm,1.4s,mb4.6
LPL La Plagne 26.84 173 *e*P **P** **17 09 22.4 +1.2**
LPL pmax pmax
comp=Z,28nm,1.4s,mb4.6
VORD Divnogorie 26.85 122 *e*P **P** **17 09 21.3 +0.2**
VORD pmax pmax
comp=Z,20nm,1.2s,mb4.5
VORD pmax pmax
comp=N,40nm,1.4s
VORD pmax pmax
comp=E,30nm,0.9s
LPG La Plagne 26.86 173 *e*P **P** **17 09 22.6 +1.3**
comp=E,32nm,1.2s,mb4.4
LPG La Plagne 26.86 173 *e*P **P** **17 09 22.6 +1.3**
comp=E,16nm,1.2s,mb4.4
LPG La Plagne 26.86 173 *e*P **P** **17 09 22.6 +1.3**
LPG pmax pmax
comp=Z,16nm,1.2s,mb4.4
ARU Arti 27.66 95 *e*P **P** **17 09 27.1 -1.3**

comp=Z,16nm,1.0s,mb4.6
ARU Arti 27.66 95*c iP* **P 17 09 31.0 +2.6**
ARU 17 10 12.5
ARU S **S 17 14 05.9 -3.9**
ARU pmax pmax
comp=Z,32nm,1.9s,mb4.6
ARU Arti 27.66 95 *eP* **P 17 09 27.1 -1.3**
comp=Z,16nm,1.0s,mb4.6
MLR Muntele Rosu 29.03 144 LR LR 17 21 42.0
comp=Z,1μm,19.4s,MS4.5,baz=317,slow=37
ANN Anapa 32.11 129 *eP* **P 17 10 07.8 -0.1**
ANN pmax pmax
comp=Z,50nm,1.6s,mb5.1
ANN MLR MLR
comp=Z,850nm,15.0s,MS4.5
TIXI Tiksi 32.41 28 *eP* **P 17 10 12.6 +2.4**
TIXI pmax pmax
comp=Z,4.0nm,1.2s,mb4.1
AKTK Aktyubinsk 32.66 101 P **P 17 10 12.8 +0.2**
AKTK LR LR 17 23 40.7
AKTK Aktyubinsk 32.66 101 P **P 17 10 12.8 +0.2**
AKTO Aktyubinsk 32.66 101 P **P 17 10 12.8 +0.2**
AKTO pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
AKTO MLR MLR
comp=Z,377nm,21.9s,MS4.0
AKTO Aktyubinsk 32.66 101 P **P 17 10 12.8 +0.2**
comp=Z,1.3nm,0.7s,mb4.0,baz=327,slow=7.7,SNR=5.7
AKTO LR LR 17 23 40.7
comp=Z,377nm,21.9s,MS4.0,baz=101,slow=36
ESDC Sonseca Array 32.74 189 LR LR 17 22 46.2
comp=Z,190nm,20.4s,MS3.8,baz=55,slow=35
BRVK Borovoye 34.13 87 P **P 17 10 29.9 +4.5**
KIV Kislovodsk 34.21 123 *eP* **P 17 10 26.8 +0.6**
KIV pmax pmax
comp=Z,11nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,643nm,17.0s,MS4.4
VAE Valguarnera 35.34 163 LR LR 17 26 08.8
comp=Z,505nm,18.6s,MS4.3,baz=123,slow=38
BRTR Keskin Array B 36.09 137 P **P 17 10 44.2 +1.7**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR MLR MLR
comp=Z,297nm,20.6s
BRTR Keskin Array B 36.09 137 P **P 17 10 44.2 +1.7**
comp=Z,4.6nm,1.0s,mb4.4,baz=342,slow=7.8,SNR=12
BRTR LR LR 17 26 14.8
comp=Z,297nm,20.6s,MS4.0,baz=308,slow=37
NVS Novosibirsk 36.51 74 *iP* **P 17 10 47.4 +1.5**
KEST Kesra 36.72 170 LR LR 17 27 06.5
comp=Z,109nm,18.1s,MS3.7,baz=321,slow=38
INK Inuvik 36.73 334 *eP* **P 17 10 44.6 -3.0**
comp=Z,249nm,1.0s
INK Inuvik 36.73 334 *eP* **P 17 10 44.6 -3.0**
INK pmax pmax
comp=Z,249nm,1.0s
INK Inuvik 36.73 334 LR LR 17 27 19.7
comp=Z,384nm,18.4s,MS4.2,baz=225,slow=39
INK Inuvik 36.73 334 *eP* **P 17 10 44.6 -3.0**
comp=Z,249nm,1.0s
ISP Isparta 37.28 142⇑ *iP* **P 17 10 53.6 +1.0**
MALT Malatya 38.50 132 *eP* **P 17 11 04.3 +1.5**
comp=Z,6.4nm,1.0s,mb4.3
MALT Malatya 38.50 132 *eP* **P 17 11 04.4 +1.5**
MALT pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
MALT Malatya 38.50 132 *eP* **P 17 11 04.3 +1.4**
comp=Z,6.3nm,1.0s,mb4.3
KURK Kurchatov 38.72 81‖ *eP* **P 17 11 08.2 +3.6**
KURK Kurchatov 38.72 81 P **P 17 11 08.2 +3.6**
IDI Anoyia 38.80 150 LR LR 17 27 44.7
comp=Z,165nm,19.3s,MS3.9,baz=331,slow=37
YKA Yellowknife Ar 38.89 319 P **P 17 11 01.4 -4.5**
YKA PcP PcP 17 13 13.5 -2.8
YKA LR LR 17 27 21.9
YKA Yellowknife Ar 38.89 319 P **P 17 11 01.4 -4.5**
YKA 17 13 13.5
YKA pmax pmax
comp=Z,2.0nm,1.0s
YKA MLR MLR
comp=Z,338nm,18.3s
YKA Yellowknife Ar 38.89 319 P **P 17 11 01.4 -4.5**
comp=Z,2.2nm,1.0s,mb3.9,baz=23,slow=8.7,SNR=17
YKA PcP PcP 17 13 13.5 -2.8
comp=Z,0.3nm,0.6s,baz=13,slow=4.0,SNR=4.1
YKA LR LR 17 27 21.9
comp=Z,338nm,18.3s,MS4.2,baz=160,slow=37
YKA Yellowknife Ar 38.89 319 PcP PcP 17 13 13.5 -2.8
BILL Bilibino 39.62 9 P **P 17 11 11.5 -0.4**
comp=Z,3.6nm,0.5s,mb4.4
BILL Bilibino 39.62 9 P **P 17 11 11.5 -0.4**
BILL pmax pmax
comp=Z,4.0nm,0.5s,mb4.4
BILL Bilibino 39.62 9 P **P 17 11 11.5 -0.4**
comp=Z,3.6nm,0.5s,mb4.4
MKAR Makanchi Array 43.32 81 P **P 17 11 43.3 +0.8**
comp=Z,0.2nm,0.2s,baz=8.3,slow=5.9,SNR=3.4
MKAR LR LR 17 31 12.7
comp=Z,125nm,18.4s,MS3.9,baz=148,slow=38
ASF Jabal al Asfar 44.06 136 P **P 17 11 49.1 +0.5**
ASF pmax pmax
comp=Z,2.0nm,0.6s
ASF Jabal al Asfar 44.06 136 P **P 17 11 49.1 +0.5**
comp=Z,2.3nm,0.6s,mb4.1,baz=122,slow=4.4,SNR=4.8
SONM Songino Array 49.30 59 P **P 17 12 30.3 +0.9**
SONM pmax pmax
comp=Z,1.0nm,1.1s
SONM MLR MLR
comp=Z,79nm,18.3s
SONM Songino Array 49.30 59 P **P 17 12 30.3 +0.9**
comp=Z,1.4nm,1.1s,mb3.9,baz=326,slow=7.7,SNR=5.9
SONM LR LR 17 39 11.8
comp=Z,79nm,18.3s,MS3.7,baz=250,slow=43
ULN Ulaanbaatar 49.44 59‖ *eP* **P 17 12 36.8 +6.3**
PDAR Pinedale Array 55.95 304 P **P 17 13 14.1 -4.6**
comp=Z,0.7nm,0.9s,mb3.7,baz=73,slow=7.6,SNR=3.5
PDAR LR LR 17 37 08.9
comp=Z,140nm,18.5s,MS4.1,baz=25,slow=36
TORD Torodi Ar. Bea 59.02 181 P **P 17 13 38.7 -1.9**
TORD LR LR 17 40 22.7
TORD Torodi Ar. Bea 59.02 181 P **P 17 13 38.7 -1.9**
comp=Z,1.6nm,0.8s,mb4.1,baz=7.0,slow=7.5,SNR=10.0
TORD LR LR 17 40 22.7
comp=Z,158nm,18.2s,MS4.2,baz=0.0,slow=37
NVAR Mina Array Bea 62.20 310 P **P 17 13 59.0 -3.1**
comp=Z,0.1nm,0.3s,baz=34,slow=4.4,SNR=3.6
DBIC Dimbokro 65.60 188 LR LR 17 42 54.9
comp=Z,152nm,18.2s,MS4.2,baz=351,slow=36
TXAR Lajitas Array 67.02 294 P **P 17 14 28.9 -4.8**
TXAR pmax pmax
comp=Z,1.0nm,1.0s
TXAR MLR MLR
comp=Z,179nm,21.1s
TXAR Lajitas Array 67.02 294 P **P 17 14 28.9 -4.8**
comp=Z,0.7nm,1.0s,mb3.7,baz=42,slow=3.9,SNR=5.0
TXAR LR LR 17 43 23.2
comp=Z,179nm,21.1s,MS4.3,baz=5.0,slow=36
NJ2 Nanjing 67.35 55 *eP* **P 17 14 38.5 +2.8**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.1
KMI Kunming 69.48 72 P **P 17 14 50.8 +1.6**
KMI AP pP 17 14 55.3 +2.9
KMI S S 17 23 53.8 -2.5
KMI AMB AMB
comp=Z,7.0nm,0.8s,mb4.6
KMI AMB AMB
comp=Z,86nm,3.9s
KMI LR LR
comp=N,111nm,13.8s,MS4.4
KMI LR LR
comp=E,131nm,17.9s,MS4.4
KMI LR LR
comp=Z,125nm,26.3s
KMBO Kilima Mbogo 76.52 144 LR LR 17 53 14.7
comp=Z,110nm,19.4s,MS4.2,baz=262,slow=39
WRA Warramunga Arr 121.13 55 PKIKP PKPdf 17 22 30.4 -2.9
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 121.13 55 PKP PKPdf 17 22 30.4 -2.9
comp=Z,0.7nm,0.9s,baz=342,slow=2.3,SNR=4.7
ASAR Alice Springs 124.58 56 PKIKP PKPdf 17 22 36.5 -3.3
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 124.58 56 PKP PKPdf 17 22 36.5 -3.3
comp=Z,0.6nm,0.8s,baz=349,slow=1.4,SNR=10

*NEIC **20** 17:04:17.2±5.0, 24.30N×141.62E, h29km±35km, MG4.3(JMA), Error ellipse: s-maj=23.8km s-min=12.2km az=88.0*
*IDC **20** 17:04:28.3±1.9, 24.27N×141.49E, h130km±19km, mb3.3/6, mb1 3.5/7, mb1mx3.4/16, mbtmp3.4/7, Error ellipse: s-maj=36.4km s-min=15.9km az=87.0*
*JMA **20** 17:04:30.4±0.1, 24.57N×141.57E, h178km, M4.3*
*ISCJB **20** 17:04:32.7±1.4, 24.72N±008×141.4E±02, h167km±11km, mb3.4/6, Error ellipse: s-maj=31.0km s-min=11.8km az=170.0*
ISC 20 17:04:32.1±1.6, 24.62N±010×141.3E±02, h152km±14km, n20, σ1§16/25, mb3.4/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.14**	**21**	P		**Pn**	**Pn**	**17 05 08.9**	**-0.1**
JHHJ				S		**Sn**	**Sn**	**17 05 38.4**	**+0.9**
CBIJ	**Chichi jima**	**2.58**	**17**	P		**Pn**	**Pn**	**17 05 14.2**	**-0.1**
CBIJ				S		**Sn**	**Sn**	**17 05 48.2**	**+1.3**
CBIJ	**Chichi jima**	**2.58**	**17**	P		**Pn**	**Pn**	**17 05 14.3**	**0.0**
	45nm,0.3s,baz=282,slow=22,SNR=57								
CBIJ				S		**Sn**	**Sn**	**17 05 48.5**	**+1.6**
	52nm,0.3s,baz=304,slow=23,SNR=11								
BSO2	**Boso 2**	**10.11**	**357**	S		**Sn**	**Sn**	**17 08 43.2**	**-2.1**
BSO3	**Boso 3**	**10.17**	**356**	P		**Pn**	**Pn**	**17 06 52.7**	**-1.5**
BSO3				*e*S		**Sn**	**Sn**	**17 08 46.1**	**-0.7**
JIM2	**Oshima 3**	**10.19**	**351**	S		**Sn**	**Sn**	**17 08 48.7**	**+1.3**
BSO4	**Boso 4**	**10.37**	**355**	S		**Sn**	**Sn**	**17 08 50.5**	**-1.1**
JOD2	**Odawara 2**	**10.78**	**350**	P		**Pn**	**Pn**	**17 07 02.8**	**+0.5**
JRY	**Ryogami san**	**11.55**	**350**	P		**Pn**	**Pn**	**17 07 12.5**	**+0.1**
JYT	**Yasato**	**11.61**	**355**	P		**Pn**	**Pn**	**17 07 03.0**	**-10**
JYT				S		**Sn**	**Sn**	**17 09 17.1**	**-4.3**
JAG	**Ashikaga**	**11.87**	**353**	S		**Sn**	**Sn**	**17 09 23.4**	**-4.4**
JHO	**Hitachi**	**11.97**	**357**	P		**Pn**	**Pn**	**17 07 15.6**	**-2.2**
SONM	**Songino Array**	**36.02**	**319**	P		**P**		**17 11 19.6**	**+1.2**
	0.2nm,0.5s,mb3.0,baz=109,slow=7.2,SNR=3.5								
WRA	**Warramunga Arr**	**44.82**	**189**	P		**P**		**17 12 26.9**	**-4.0**
	0.7nm,0.3s,mb3.7,baz=8.8,slow=8.6,SNR=21								
ASAR	**Alice Springs**	**48.54**	**189**	P		**P**		**17 12 55.4**	**-4.5**
	0.1nm,0.4s,mb2.8,baz=10,slow=5.9,SNR=8.1								
MK31	**Makanchi Array**	**51.48**	**311**	*e*P		**P**		**17 13 23.2**	**+1.3**
MKAR	**Makanchi Array**	**51.48**	**311**	P		**P**		**17 13 23.0**	**+1.1**
	0.9nm,0.5s,mb3.7,baz=90,slow=8.8,SNR=8.9								
INK	**Inuvik**	**65.59**	**24**	*e*P		**P**		**17 14 59.3**	**+0.1**
YKA	**Yellowknife Ar**	**74.68**	**28**	P		**P**		**17 15 54.6**	**0.0**
	0.3nm,0.4s,mb3.2,baz=297,slow=5.8,SNR=6.5								
ARCES	**ARCESS Array B**	**75.62**	**341**	P		**P**		**17 16 01.1**	**+1.3**
	3.5nm,0.9s,mb4.0,baz=46,slow=6.6,SNR=3.8								

*ISCJB **20** 17:14:28.4±1.1, 46.7N±0.1×153.1E±0.1, h43km±9km, mb4.2/13, Error ellipse: s-maj=21.7km s-min=7.8km az=137.9*
*MOS **20** 17:14:31.2±1.5, 46.87N×152.85E, h66km, mb4.2/5, Error ellipse: s-maj=19.5km s-min=11.6km az=59.8*
*NEIC **20** 17:14:33.4±2.0, 46.85N×152.92E, h68km±17km, Error ellipse: s-maj=25.4km s-min=12.4km az=121.0*
*IDC **20** 17:14:35.3±4.2, 46.88N×152.90E, h84km±40km, mb3.5/9, mb1 3.6/11, mb1mx3.5/21, mbtmp3.5/11, Error ellipse: s-maj=28.2km s-min=21.3km az=142.0*
ISC 20 17:14:30.6±1.0, 46.67N±010×153.1E±01, h44km±8km, n50, σ1§18/59, mb4.2/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.95**	**251**	PN		**Pn**	**Pn**	**17 15 27.0**	**-1.6**
KUR				*e*S		**Sn**	**Sn**	**17 16 14.4**	**+0.8**
KUR				pmax	pmax				
	comp=N,80nm,0.6s								
KUR				pmax	pmax				
	comp=Z,80nm,0.6s								
KUR				smax					
	comp=N,220nm,0.8s								
KUR				smax					
	comp=E,340nm,0.8s								
SKR	**Severo-Kuril's**	**4.47**	**25**	*e*PN		**Pn**		**17 15 36.5**	**+0.7**
SKR				*e*S		**Sn**		**17 16 23.5**	**-3.1**
SKR				pmax	pmax				
	comp=Z,60nm,0.5s								
SKR				smax					
	comp=N,80nm,0.5s								
SKR				smax					
	comp=E,60nm,0.5s								
SKR				smax					
	comp=Z,50nm,0.5s								
NEM2	**Nemuro 2**	**6.19**	**240**	P		**Pn**		**17 15 57.7**	**-1.7**
NEM2				*e*S		**Sn**		**17 17 04.9**	**-4.0**
JRA	**Rausu**	**6.28**	**247**	P		**Pn**		**17 16 02.0**	**+1.4**
JNK	**Nakash**	**6.71**	**246**	P		**Pn**		**17 16 06.6**	**+0.2**
JAK	**Akkeshi**	**7.03**	**242**	P		**Pn**		**17 16 09.2**	**-1.8**
JAK				*e*S		**Sn**		**17 17 24.6**	**-5.0**
JTKR	**Abashiri--Toko**	**7.04**	**251**	P		**Pn**		**17 16 12.1**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.13**	**276**	*e*Pn		**Pn**		**17 16 13.7**	**+1.4**
JMP	**Maruseppu**	**7.39**	**252**	P		**Pn**		**17 16 17.3**	**+1.5**
JAR	**Ashorobuto**	**7.45**	**246**	P		**Pn**		**17 16 16.6**	**0.0**
JAR				*e*S		**Sn**		**17 17 38.7**	**-1.0**
JOB	**Onbets**	**7.61**	**244**	P		**Pn**		**17 16 18.8**	**-0.1**
JOB				*e*S		**Sn**		**17 17 39.6**	**-4.2**
JKK2	**Kamakawa 2**	**7.84**	**253**	P		**Pn**		**17 16 23.5**	**+1.5**
ASAJ	**Asahikawa**	**7.85**	**255**	P		**Pn**		**17 16 24.0**	**+1.9**
ASAJ	**Asahikawa**	**7.85**	**255**	PN		**Pn**		**17 16 23.9**	**+1.8**
ASAJ				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ASAJ	**Asahikawa**	**7.85**	**255**	P		**Pn**		**17 16 23.9**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=82,slow=15,SNR=13								
JWK2	**Keihoku**	**7.94**	**264**	P		**Pn**		**17 16 28.0**	**+4.6**
JCH	**Churui**	**8.06**	**243**	P		**Pn**		**17 16 23.9**	**-1.1**
JCH				*e*S		**Sn**		**17 17 48.9**	**-5.9**
JFR	**Furan**	**8.26**	**249**	P		**Pn**		**17 16 28.9**	**+1.1**
JEM	**Erimo**	**8.53**	**241**	P		**Pn**		**17 16 31.3**	**-0.1**
ERM	**Erimo**	**8.53**	**241**	*e*Pn		**Pn**		**17 16 31.3**	**-0.2**
ERM				*e*Sn		**Sn**		**17 18 00.8**	**-5.5**
JBT2	**Biratori 2**	**8.60**	**247**	P		**Pn**		**17 16 32.0**	**-0.4**
JNBK	**Urakawa-nobuka**	**8.62**	**243**	P		**Pn**		**17 16 31.3**	**-1.4**
JNBK				*e*S		**Sn**		**17 18 02.1**	**-6.5**
JNB	**Noboribetsu**	**9.60**	**248**	P		**Pn**		**17 16 45.9**	**-0.2**
JKB	**Kayabe**	**9.91**	**246**	*e*S		**Sn**		**17 18 32.9**	**-7.2**
JOSM	**Okushiri--Mats**	**10.80**	**250**	P		**Pn**		**17 17 01.2**	**-1.3**
MAZ2	**Magadan**	**13.01**	**355**	*e*P		**Pn**		**17 17 32.5**	**0.0**
MJAR	**Matsushiro Arr**	**15.04**	**233**	P		**Pn**		**17 18 03.9**	**+3.7**
	comp=Z,0.2nm,0.3s,baz=38,slow=8.4,SNR=5.0								
KSRS	**Korea Array**	**20.79**	**253**	P		**P**		**17 19 10.1**	**+2.2**
	comp=Z,1.2nm,0.9s,baz=54,slow=6.2,SNR=3.8								
INK	**Inuvik**	**41.71**	**32**	*e*P		**P**		**17 22 14.9**	**+0.3**
INK	**Inuvik**	**41.71**	**32**	P		**P**		**17 22 14.9**	**+0.3**
INK				pmax	pmax				
	comp=Z,1.0nm,0.6s								
INK	**Inuvik**	**41.71**	**32**	P		**P**		**17 22 14.9**	**+0.3**
	comp=Z,0.9nm,0.6s,mb3.6,baz=288,slow=6.6,SNR=3.7								
MKAR	**Makanchi Array**	**46.09**	**297**	P		**P**		**17 22 56.4**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.6,baz=73,slow=6.8,SNR=2.3								
YKA	**Yellowknife Ar**	**50.98**	**37**	P		**P**		**17 23 27.7**	**+0.3**
YKA	**Yellowknife Ar**	**50.98**	**37**	P		**P**		**17 23 27.7**	**+0.3**
YKA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**50.98**	**37**	P		**P**		**17 23 27.7**	**+0.3**
	comp=Z,0.7nm,0.8s,mb3.7,baz=296,slow=7.1,SNR=8.7								
TAPN	**Taplejung**	**54.12**	**273**	*e*P		**P**		**17 23 51.8**	**+0.7**
ODAN	**Odare**	**54.65**	**273**	*e*P		**P**		**17 23 57.1**	**+2.1**
	comp=Z,5.0nm,0.8s,mb4.6								
JIRN	**Jiri**	**54.97**	**275**	*e*P		**P**		**17 23 57.4**	**+0.1**
	comp=Z,12nm,0.8s,mb5.0								
KKN	**Kakani**	**55.51**	**275**	*e*P		**P**		**17 24 01.3**	**+0.1**
	comp=Z,5.9nm,0.5s,mb4.8								
GKN	**Gorkha**	**55.82**	**276**	*e*P		**P**		**17 24 03.2**	**-0.2**
	comp=Z,2.2nm,0.2s,mb4.8								
KOLN	**Koldanda**	**56.67**	**276**	*e*P		**P**		**17 24 09.5**	**0.0**
	comp=Z,9.6nm,0.9s,mb4.8								
FINES	**FINESS Array B**	**64.12**	**335**	P		**P**		**17 24 58.0**	**-1.8**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.4s								
FINES	**FINESS Array B**	**64.12**	**335**	P		**P**		**17 24 58.0**	**-1.8**
	comp=Z,0.8nm,0.4s,mb4.1,baz=44,slow=6.4,SNR=10.0								
NB2	**NORSAR Subarra**	**68.31**	**341**	P		**P**		**17 25 25.3**	**-1.3**
	comp=Z,1.2nm,0.6s,mb4.1,baz=28,slow=6.5								
NOA	**NORSAR Array B**	**68.31**	**341**	P		**P**		**17 25 25.3**	**-1.3**
NOA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
NOA	**NORSAR Array B**	**68.31**	**341**	P		**P**		**17 25 25.3**	**-1.3**
	comp=Z,2.8nm,0.9s,mb4.3,baz=28,slow=6.4,SNR=4.8								
AKASG	**Malin Array Be**	**71.62**	**326**	P		**P**		**17 25 44.9**	**-2.2**
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.4s								
AKASG	**Malin Array Be**	**71.62**	**326**	P		**P**		**17 25 44.9**	**-2.2**
	comp=Z,1.0nm,0.4s,mb4.1,baz=30,slow=5.7,SNR=4.2								
ASAR	**Alice Springs**	**72.14**	**199**	P		**P**		**17 25 51.2**	**+0.8**
	comp=Z,0.3nm,0.8s,mb3.3,baz=19,slow=6.1,SNR=4.9								
TXAR	**Lajitas Array**	**77.52**	**61**	P		**P**		**17 26 22.1**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=298,slow=4.8,SNR=9.1								

*ISCJB **20** 17:24:28.2±1.6, 7.57S±0.1×128.28E±0.09, h174km±17km, mb4.1/12, Error ellipse: s-maj=19.8km s-min=8.6km az=41.7*
*NEIC **20** 17:24:30.3±1.8, 7.61S×128.07E, h165km±20km, mb4.2/2, Error ellipse: s-maj=28.6km s-min=11.4km az=224.0*
*IDC **20** 17:24:32.4±2.7, 7.59S×128.05E, h187km±29km, mb3.3/4, mb1 3.4/6, mb1mx3.3/13, mbtmp3.4/6, Error ellipse: s-maj=29.0km s-min=15.0km az=31.0*
ISC 20 17:24:31.5±1.3, 7.84S±008×128.23E±009, h198km±13km, n26, σ0§83/33, mb4.0/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.08**	**242**	P		**Pn**		**17 25 47.5**	**+0.6**
	73nm,0.3s,baz=124,slow=1.2,SNR=292								
BATI				S		**Sn**		**17 26 46.7**	**+0.3**
	34nm,0.3s,baz=331,slow=19,SNR=17								
KAKA	**Kakadu**	**6.37**	**140**	*e*P		**Pn**		**17 26 03.9**	**+0.3**
	22nm,0.2s								
KAKA				*e*S		**Sn**		**17 27 12.7**	**-3.8**
KAKA	**Kakadu**	**6.37**	**140**	*e*Pn		**Pn**		**17 26 03.8**	**+0.2**
KAKA				*e*Sn		**Sn**		**17 27 08.8**	**-7.7**
FITZ	**Fitzroy Crossi**	**10.51**	**194**	*e*P		**Pn**		**17 26 56.7**	**-0.6**
	38nm,0.6s								
FITZ				*e*S		**Sn**		**17 28 49.1**	**-5.5**
FITZ	**Fitzroy Crossi**	**10.51**	**194**	*e*Pn		**Pn**		**17 26 56.7**	**-0.6**
FITZ				*e*Sn		**Sn**		**17 28 50.3**	**-4.3**
FITZ	**Fitzroy Crossi**	**10.51**	**194**	P		**Pn**		**17 26 56.9**	**-0.4**
	3.0nm,0.3s,baz=25,slow=11,SNR=100								
FITZ				S		**Sn**		**17 28 50.3**	**-4.3**
	2.2nm,0.3s,baz=278,slow=23,SNR=3.8								
WRA	**Warramunga Arr**	**13.41**	**154**	P		**Pn**		**17 27 35.1**	**+0.9**
	1.4nm,0.3s,baz=321,slow=14,SNR=46								
WRA				S		**Sn**		**17 29 57.8**	**-6.1**
	6.0nm,0.3s,baz=326,slow=24,SNR=14								
WB2	**Warramunga Arr**	**13.42**	**154**	*e*P		**Pn**		**17 27 32.8**	**-1.5**
WB2				*e*S		**Sn**		**17 29 55.9**	**-8.1**
ASAR	**Alice Springs**	**16.65**	**162**	P		**Pn**		**17 28 17.5**	**+3.8**
	1.5nm,0.3s,baz=340,slow=10.0,SNR=291								
ASAR				S		**S**		**17 31 16.6**	**0.0**
	1.6nm,0.3s,baz=321,slow=17,SNR=8.7								
KKM	**Kota Kinabalu**	**18.27**	**319**	*e*P		**P**		**17 28 28.6**	**-1.8**
KKM				*e*				17 28 33.6	
PMG	**Port Moresby**	**18.78**	**96**	P		**P**		**17 28 41.4**	**+5.3**
	0.5nm,0.3s,baz=311,slow=9.3,SNR=4.1								
KSM	**Kuching**	**20.12**	**297**	*e*P		**P**		**17 28 50.9**	**+0.4**
CTA	**Charters Tower**	**21.29**	**127**	P		**P**		**17 29 06.2**	**+3.4**
	2.2nm,0.8s,mb3.7,baz=302,slow=11,SNR=3.6								
STKA	**Stephens Creek**	**26.96**	**154**	P		**P**		**17 29 59.5**	**+4.8**
	0.7nm,0.5s,mb3.6,baz=333,slow=9.0,SNR=3.9								
LSA	**Lhasa**	**51.61**	**318**	*e*P		**P**		**17 33 18.8**	**+1.0**
	1.7nm,0.4s,mb3.8								
ODAN	**Odare**	**52.50**	**313**	*e*P		**P**		**17 33 23.7**	**-0.8**
	5.1nm,0.5s,mb4.2								
TAPN	**Taplejung**	**52.55**	**313**	*e*P		**P**		**17 33 25.1**	**+0.3**
	4.6nm,0.4s,mb4.3								
JIRN	**Jiri**	**53.83**	**313**	*e*P		**P**		**17 33 34.5**	**+0.3**
	2.7nm,0.4s,mb4.1								
KKN	**Kakani**	**54.57**	**312**	*e*P		**P**		**17 33 39.6**	**+0.1**
	4.4nm,0.5s,mb4.2								
GKN	**Gorkha**	**55.16**	**312**	*e*P		**P**		**17 33 43.8**	**+0.1**
	8.6nm,0.4s,mb4.6								
KOLN	**Koldanda**	**55.80**	**311**	*e*P		**P**		**17 33 48.1**	**-0.2**
	8.2nm,0.7s,mb4.4								
SONM	**Songino Array**	**58.70**	**343**	P		**P**		**17 34 07.7**	**-0.4**
	0.6nm,0.6s,mb3.4,baz=171,slow=7.0,SNR=6.7								
MKAR	**Makanchi Array**	**67.98**	**328**	P		**P**		**17 35 09.4**	**+0.4**
	0.5nm,0.5s,mb3.5,baz=120,slow=7.7,SNR=8.0								
KURK	**Kurchatov**	**72.33**	**329**	*e*P		**P**		**17 35 35.4**	**0.0**
	5.3nm,0.9s,mb4.2								
TXAR	**Lajitas Array**	**126.86**	**59**	PKP		PKPdf		17 43 15.3	+3.0
	0.2nm,0.6s,baz=259,slow=2.6,SNR=3.4								
TORD	**Torodi Ar. Bea**	**127.24**	**281**	PKP		PKPdf		17 43 15.2	+1.9
	0.5nm,0.6s,baz=113,slow=1.5,SNR=3.9								

IDC 20 17:44:22.1±4.9, 22.49N×121.94E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=356.2km s-min=29.5km az=60.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.04**	**317**	P		P	P	17 51 58.7	-0.1
	0.2nm,0.5s,baz=110,slow=7.0,SNR=3.6								
WRA	**Warramunga Arr**	**43.88**	**163**	P		P		17 52 29.9	-0.5
	0.3nm,0.4s,baz=344,slow=8.9,SNR=5.6								
ASAR	**Alice Springs**	**47.33**	**165**	P		P		17 52 58.1	+0.5
	0.1nm,0.3s,baz=348,slow=8.1,SNR=4.4								

*ISCJB **20** 17:59:45.8±0.4, 31.68S±0.03×66.89W±0.04, h126km±3km, mb4.9/57, Error ellipse: s-maj=6.1km s-min=4.3km az=155.2*
*GUC **20** 17:59:46.5±0.8, 31.67S×66.92W, h119km, ML5.3*
*IDC **20** 17:59:47.7±0.3, 31.73S×67.07W, h134km±2km, mb4.5/23, mb1 4.6/26, mb1mx4.5/28, mbtmp4.5/26, MS4.0/6, Ms1 4.0/6, ms1mx3.6/19, Error ellipse: s-maj=9.3km s-min=7.3km az=29.0*
*MOS **20** 17:59:47.8±1.3, 31.71S×67.12W, h145km, mb5.0/15, Error ellipse: s-maj=20.2km s-min=8.0km az=105.4*
*GCMT **20** 17:59:47.5±0.2, 31.92S×67.19W, h146km±2km, MW5.2/80, Moment Tensor Solution. s39,c53; s80,c112; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.39±.19; Mθθ-0.39±.23; Mϕϕ3.78±.27; Mrθ-2.69±.14; Mrϕ0.44±.27; Mθϕ-5.15±.18; Best double couple: M◎6.85000×10^16 NP1:ϕs168.00000°, δ19.00000°, λ-125.00000°. NP2: ϕs24.00000°, δ75.00000°, λ-79.00000°. Principal axes: T 6.8590, Plg29.0000°, Azm105.0000°; N -0.0140, Plg11.0000°, Azm201.0000°; P -6.8400, Plg59.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 17:59:47.5±0.1, 31.73S×66.96W, mb5.0/37, MD4.7(SJA) Error ellipse: s-maj=4.

LSCH La Serena 4.13 294 *e*P **Pn** **18 00 48.2 -0.3**
LSCH *i* S **Sn** **18 01 32.8 -3.3**
LCO Las Campanas 4.22 308 *e*Pn **Pn** **18 00 50.3 +0.6**
LCO Las Campanas 4.22 308 *i* P **Pn** **18 00 50.3 +0.6**
VACH Vallenar 4.55 312 *e*P **Pn** **18 00 54.3 +0.2**
VACH *i* S **Sn** **18 01 45.1 -1.0**
CPCH Copiapo 5.25 324 ⇓*i* P **Pn** **18 01 04.9 +1.4**
CPCH *i* S **Sn** **18 02 03.0 +0.1**
CDCH Caldera 5.72 322 *e*P **Pn** **18 01 09.7 -0.2**
TRQA Tornquist 7.54 149 *e*Pn **Pn** **18 01 34.0 -0.3**
comp=N,208nm,0.5s
CPN1 Cerro Paranal 7.67 335 *e*P **Pn** **18 01 36.3 0.0**
LPA La Plata 8.17 116 *ce*P **Pn** **18 01 43.0 +0.1**
LPA esP 18 02 43.0
LPA *e*S **Sn** **18 03 13.0 -0.6**
PLCA Paso Flores 9.50 197 P **Pn** **18 01 58.8 -2.0**
comp=N,3.1nm,0.3s,baz=4.5,slow=14,SNR=51
LPAZ La Paz 15.36 356 P **Pn** **18 03 18.1 +0.8**
comp=N,2.7nm,0.3s,baz=179,slow=7.4,SNR=63
ARE Arequipa 15.71 344 *e*P **Pn** **18 03 24.0 +2.4**
SIV San Ignacio 16.50 20 P **Pn** **18 03 31.5 +0.3**
comp=N,10.0nm,0.3s,baz=207,slow=12,SNR=295
EFI East Falkland 21.02 165 P **P** **18 04 20.2 -0.4**
comp=N,689nm,1.1s,mb5.9,SNR=13
NNA Nana 21.63 333 P **P** **18 04 27.4 0.0**
comp=N,18nm,0.8s,mb4.5,baz=188,slow=14,SNR=7.0
USHA Ushuaia 23.17 182 P **P** **18 04 42.7 +0.3**
comp=N,59nm,1.1s,mb4.8,baz=349,slow=4.8,SNR=14
ATAH Atahualpa 26.79 334 P **P** **18 05 15.3 -0.3**
comp=N,6.6nm,0.7s,mb4.3,baz=147,slow=8.6,SNR=7.5
ROSC El Rosal 37.01 348 P **P** **18 06 46.1 +1.3**
comp=N,7.5nm,0.6s,mb4.8,baz=117,slow=18,SNR=4.6
SDV Santo Domingo 40.49 354 *e*P **P** **18 07 12.2 -1.6**
comp=N,9.7nm,0.7s,mb4.7
SDV Santo Domingo 40.49 354 P **P** **18 07 12.8 -1.0**
comp=N,5.1nm,0.5s,mb4.6,baz=198,slow=3.8,SNR=7.8
PCRV Puerto La Cruz 41.67 3 P **P** **18 07 23.5 0.0**
comp=N,16nm,0.6s,mb4.9,baz=138,slow=5.4,SNR=6.7
PCRV LR LR 18 24 16.6
comp=N,193nm,20.4s,baz=42,slow=35
BAR1 43.61 336 *e*P **P** **18 07 40.5 +1.4**
LCR2 La Lucha 2 44.32 335 *e*P **P** **18 07 46.0 +1.2**
URSC Urasca 44.33 336 *e*P **P** **18 07 46.4 +1.6**
LAJ Bijagual 44.47 335 *e*P **P** **18 07 47.6 +1.6**
JTS JuntasAbangare 45.17 335 P **P** **18 07 51.0 -0.5**
comp=N,276nm,1.0s,mb5.9,SNR=5.9
JTS JuntasAbangare 45.17 335 P **P** **18 07 51.7 +0.2**
comp=N,27nm,0.8s,mb5.0,baz=140,slow=1.2,SNR=14
TGUH Tegucigalpa,Un 49.49 334 *e*P **P** **18 08 24.4 -0.6**
comp=N,116nm,0.8s,mb5.9
SJG San Juan 49.51 1 *e*P **P** **18 08 23.6 -1.4**
comp=N,43nm,0.8s,mb5.4
SJG San Juan 49.51 1 *e*P **P** **18 08 23.6 -1.4**
SJG pmax pmax
comp=Z,43nm,0.8s
SJG San Juan 49.51 1 P **P** **18 08 24.1 -0.9**
comp=Z,17nm,0.3s,mb5.5,baz=327,slow=18,SNR=8.7
VNA3 Neumayer Olymp 49.93 159 *e*P **P** **18 08 28.7 +1.0**
VNA3 *e* 18 08 31.5
VNA3 *e* 18 08 36.3
VNA1 Neumayer--Stat 50.17 158 *e*P **P** **18 08 30.7 +1.2**
VNA1 *e* 18 08 33.6
VNA1 *e* 18 08 38.1
VNA2 Neumayer--Watz 50.53 158 *e*P **P** **18 08 32.8 +0.6**
VNA2 *e* 18 08 35.5
VNA2 *e* 18 08 40.2
SDDR Presa de Saban 50.54 355 *e*P **P** **18 08 31.6 -1.2**
comp=Z,40nm,0.9s,mb5.5
SNAA Sanae 52.14 159 P **P** **18 08 44.9 +0.7**
comp=Z,3.1nm,0.3s,mb4.8,baz=296,slow=7.3,SNR=59
CMIG Matias Romero 55.42 327 P **P** **18 09 08.6 -0.1**
CMIG Matias Romero 55.42 327 P **P** **18 09 08.6 -0.1**
comp=Z,6.6nm,0.8s,mb4.7,baz=141,slow=5.7,SNR=10
TEIG Tepich 55.53 335 *e*P **P** **18 09 08.6 -0.8**
comp=Z,100nm,0.9s,mb5.8
TEIG Tepich 55.53 335 P **P** **18 09 08.7 -0.7**
comp=Z,49nm,0.5s,mb5.8,baz=140,slow=3.3,SNR=35
MAIT Maitri 56.72 157 *e*P **P** **18 09 16.3 -1.0**
NVL N'lazarevskaya 56.76 157 *e*P **P** **18 09 18.9 +1.4**
NVL pmax pmax
comp=N,2.0nm,0.9s
NVL pmax pmax
comp=E,16nm,0.9s
NVL pmax pmax
comp=Z,18nm,0.9s,mb5.1
LRAL Lakeview Retre 67.10 342 *e*P **P** **18 10 26.1 -1.1**
comp=Z,75nm,1.8s,mb5.2
HKT Hockley 67.16 333 *e*P **P** **18 10 27.8 +0.3**
comp=Z,51nm,1.7s,mb5.1
HKT Hockley 67.16 333 *e*P **P** **18 10 27.8 +0.2**
HKT pmax pmax
comp=Z,51nm,1.7s,mb5.1
VNDA Vanda 67.18 190 P **P** **18 10 26.6 -0.5**
comp=Z,1.7nm,1.0s,baz=177,slow=7.3,SNR=4.6
VNDA LR LR 18 38 46.3
comp=Z,129nm,18.5s,baz=323,slow=35
NATX Nacogdoches 68.35 335 *e*P **P** **18 10 34.8 -0.1**
TKL Tuckaleechee C 68.83 345 P **P** **18 10 36.7 -1.1**
comp=Z,10nm,0.7s,mb4.8,baz=162,slow=7.8,SNR=14
SWET Sewanee 68.90 343 *e*P **P** **18 10 37.4 -0.9**
JCT Junction City 69.25 330 *e*P **P** **18 10 40.0 -0.6**
comp=Z,134nm,1.7s,mb5.5
JCT Junction City 69.25 330 *e*P **P** **18 10 40.0 -0.6**
JCT pmax pmax
comp=Z,134nm,1.7s,mb5.5
ELN Prospectdale 69.76 348 *e*P **P** **18 10 43.5 0.0**
LTX Lajitas 70.02 326 *e*P **P** **18 10 45.0 -0.3**
comp=Z,7.1nm,0.8s,mb4.5
LTX Lajitas 70.02 326 *e*P **P** **18 10 45.0 -0.3**
LTX pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
TXAR Lajitas Array 70.02 326 P **P** **18 10 45.1 -0.2**
comp=Z,5.3nm,0.7s,mb4.5,baz=150,slow=7.8,SNR=76
TXAR pP pP 18 11 18.8 +2.8
comp=Z,0.8nm,0.5s,baz=139,slow=9.7,SNR=2.7
TXAR sP sP 18 11 32.6 +3.2
comp=Z,1.9nm,0.8s,baz=148,slow=7.1,SNR=2.3
WVT Waverly 70.25 342 *e*P **P** **18 10 45.3 -1.2**
comp=Z,50nm,0.8s,mb5.4
WVT Waverly 70.25 342 *e*P **P** **18 10 45.3 -1.2**
WVT pmax pmax
comp=Z,50nm,0.8s,mb5.4
DBIC Dimbokro 70.33 69 P **P** **18 10 47.9 +0.3**
DBIC pP pP 18 11 19.9 +1.6
DBIC LR LR 18 37 26.7
DBIC Dimbokro 70.33 69 P **P** **18 10 47.9 +0.3**
DBIC *PP pP 18 11 19.9 +1.6
DBIC Dimbokro 70.33 69 P **P** **18 10 47.9 +0.3**
comp=Z,12nm,0.3s,mb5.1,baz=211,slow=6.4,SNR=26
DBIC pP pP 18 11 19.9 +1.6
comp=Z,12nm,0.8s,baz=212,slow=7.0,SNR=4.3
DBIC LR LR 18 37 26.7
comp=Z,84nm,20.9s,baz=219,slow=32
MIAR Mount Ida 70.49 337 *e*P **P** **18 10 47.0 -1.0**
comp=Z,48nm,1.8s,mb5.0
MIAR Mount Ida 70.49 337 *e*P **P** **18 10 47.1 -1.0**
MIAR pmax pmax
comp=Z,48nm,1.8s,mb5.0
GNAR Gosnell 70.69 340 *e*P **P** **18 10 48.8 -0.5**
comp=Z,912nm,1.0s
PARMO Parma 71.27 341 *e*P **P** **18 10 52.2 -0.6**
WCI Wyandotte Cave 71.86 344 *e*P **P** **18 10 54.4 -1.8**
comp=Z,18nm,0.6s,mb5.1
WCI Wyandotte Cave 71.86 344 *e*P **P** **18 10 54.4 -1.8**
WCI pmax pmax
comp=Z,18nm,0.6s,mb5.1
FVM French Village 72.69 341 *e*P **P** **18 11 00.0 -1.2**
comp=Z,15nm,0.6s,mb5.0
FVM French Village 72.69 341 *e*P **P** **18 11 00.0 -1.2**
FVM pmax pmax
comp=Z,15nm,0.6s,mb5.0
MNTX Cornudas Mount 72.80 326 *e*P **P** **18 11 00.3 -1.7**
comp=Z,12nm,0.8s,mb4.8
ACSO Alum Creek Sta 73.08 347 *e*P **P** **18 11 02.2 -1.2**
comp=Z,16nm,0.8s,mb4.9
MAW Mawson 74.12 162 P **P** **18 11 08.4 -0.9**
comp=Z,8.5nm,0.7s,mb4.6,baz=201,slow=6.1,SNR=15
MAW pP pP 18 11 41.9 +1.7
comp=Z,17nm,1.0s,baz=226,slow=8.0,SNR=5.6
319A Douglas 74.45 323 ⇓P **P** **18 11 12.2 +0.6**
baz=75
318A Bisbee 74.87 323 ⇑P **P** **18 11 14.3 +0.2**
baz=75
218A Dragoon 75.32 323 ⇑P **P** **18 11 17.0 +0.3**
baz=76
BNM Barren Site 75.41 327 *e*P **P** **18 11 17.6 +0.5**

LPM Los Pinos Moun 75.55 327 *e*P **P** **18 11 18.0 +0.2**
217A Green Valley 75.56 322 ⇑P **P** **18 11 18.2 +0.2**
baz=76
LAZ Ladron 75.86 327 *e*P **P** **18 11 20.2 +0.6**
ANMO Albuquerque 76.00 327 *e*P **P** **18 11 20.6 +0.2**
comp=Z,28nm,1.6s,mb4.7
ANMO Albuquerque 76.00 327 ⇓*e*P **P** **18 11 18.0 -2.4**
ANMO *i* *PP pP 18 12 07.3 +16
216A Three Points, 76.08 322 ⇓P **P** **18 11 21.3 +0.4**
baz=76
CBKS Cedar Bluff 76.50 334 *e*P **P** **18 11 22.7 -0.5**
comp=Z,15nm,0.7s,mb4.8
CBKS Cedar Bluff 76.50 334 *e*P **P** **18 11 22.7 -0.4**
CBKS pmax pmax
comp=Z,15nm,0.7s,mb4.8
116A Eloy 76.64 322 ⇑P **P** **18 11 24.2 +0.1**
baz=77
115A Sonoran Desert 77.03 322 ⇓P **P** **18 11 26.7 +0.4**
baz=77,SNR=6.1
BOSA Boshof 77.25 116 P **P** **18 11 27.5 -0.3**
BOSA pP pP 18 12 01.1 +2.1
BOSA LR LR 18 43 54.2
BOSA Boshof 77.25 116 P **P** **18 11 27.5 -0.3**
BOSA *PP pP 18 12 01.2 +2.1
BOSA Boshof 77.25 116 P **P** **18 11 27.5 -0.3**
comp=Z,23nm,0.8s,mb5.0,baz=229,slow=4.9,SNR=32
BOSA pP pP 18 12 01.1 +2.1
comp=Z,24nm,0.8s,baz=239,slow=5.5,SNR=12
BOSA LR LR 18 43 54.2
comp=Z,107nm,19.1s,baz=188,slow=34
SDCO Great Sand Dun 77.89 330 *e*P **P** **18 11 31.3 +0.3**
comp=Z,9.7nm,0.7s,mb4.6
Z14A Wintersburg 77.92 322 ⇑P **P** **18 11 31.1 -0.1**
baz=78
Y14A Wickenburg 78.40 322 P **P** **18 11 33.9 +0.1**
baz=79,SNR=7.3
X15A Humboldt 78.43 323 ⇓P **P** **18 11 34.4 +0.4**
baz=79,SNR=12
GLA Glamis 78.69 321 ⇓P **P** **18 11 35.7 +0.2**
baz=79
Y13A Salome 78.73 322 ⇑P **P** **18 11 35.9 +0.2**
baz=79
X14A Yava 78.75 323 ⇑P **P** **18 11 36.1 +0.4**
baz=79,SNR=6.6
MVCO Mesa Verde 78.79 327 *e*P **P** **18 11 35.7 -0.2**
comp=Z,32nm,1.4s,mb5.0
MVCO Mesa Verde 78.79 327 ⇑P **P** **18 11 36.2 +0.3**
baz=79
WUAZ Wupatki 78.81 324 *e*P **P** **18 11 36.6 +0.6**
comp=Z,41nm,1.7s,mb5.0
WUAZ Wupatki 78.81 324 ⇓P **P** **18 11 36.5 +0.5**
baz=79
W15A Williams 78.99 324 ⇑P **P** **18 11 37.6 +0.6**
baz=79
Y12C Blythe 79.06 321 ⇑P **P** **18 11 37.5 +0.1**
baz=79
DVTC Desert V Tower 79.09 319 ⇓P **P** **18 11 37.9 +0.3**
baz=79
SWSC Sam W. Stewart 79.13 320 ⇑P **P** **18 11 38.0 +0.2**
baz=79
X13A Yucca 79.34 322 ⇑P **P** **18 11 39.3 +0.4**
baz=80
TORD Torodi Ar. Bea 79.34 67 P **P** **18 11 39.8 +0.4**
comp=Z,32nm,0.8s,mb5.2,baz=257,slow=4.9,SNR=159
TORD pP pP 18 12 12.9 +2.1
comp=Z,9.9nm,0.8s,baz=247,slow=5.0,SNR=4.6
TORD sP sP 18 12 27.8 +3.8
comp=Z,4.8nm,0.6s,baz=279,slow=6.1,SNR=2.4
TORD LR LR 18 42 54.0
comp=Z,91nm,20.5s,baz=295,slow=32
W14A Seligman 79.43 323 P **P** **18 11 40.1 +0.7**
baz=80,SNR=7.9
MONP Monument Peak 79.44 319 ⇓P **P** **18 11 40.0 +0.5**
baz=80
BC3 Big Chuckw Mtn 79.48 321 ⇑P **P** **18 11 40.0 +0.2**
baz=80
ISCO Idaho Springs 79.67 331 *e*P **P** **18 11 40.8 +0.2**
comp=Z,61nm,1.8s,mb5.1
ISCO Idaho Springs 79.67 331 *e*P **P** **18 11 40.8 +0.2**
ISCO pmax pmax
comp=Z,61nm,1.8s,mb5.1
IRM Iron Mountain 79.70 321 ⇓P **P** **18 11 41.1 +0.1**
baz=80
W13A Hualapai Mount 79.75 322 P **P** **18 11 42.0 +0.7**
baz=80,SNR=5.2
ECSD EROS,Sioux Fal 79.81 339 *e*P **P** **18 11 40.4 -0.9**
comp=Z,41nm,1.2s,mb5.1
109C Camp Elliot, M 79.82 319 ⇓P **P** **18 11 41.5 -0.1**
baz=80
NEE2 Needles Airpor 79.88 322 ⇑P **P** **18 11 41.8 -0.2**
baz=80
PFO Pinyon Flat Ob 80.00 320 P **P** **18 11 43.1 +0.6**
comp=Z,4.6nm,0.8s,mb4.4,baz=82,slow=6.3,SNR=7.0
PFO Pinyon Flat Ob 80.00 320 ⇑P **P** **18 11 42.8 +0.3**
baz=80
BELC Belle Mtn. 80.04 320 ⇑P **P** **18 11 42.9 +0.1**
baz=80
MURC Murrieta 80.40 319 ⇓P **P** **18 11 45.0 +0.3**
baz=81
U14A Mt Trumbull 80.42 324 ⇑P **P** **18 11 45.4 +0.7**
baz=81
GMRC Granite Mounta 80.45 321 ⇓P **P** **18 11 45.4 +0.4**
baz=81
T15A Red Dirt Ranch 80.49 325 ⇑P **P** **18 11 45.8 +0.7**
baz=81
V12A Nelson 80.74 322 ⇑P **P** **18 11 46.4 0.0**
baz=81
U13A Pakoon Wash 80.81 323 ⇑P **P** **18 11 47.3 +0.4**
baz=81
HEC Hector,Ludlow 80.84 321 ⇑P **P** **18 11 47.7 +0.6**
baz=81
T14A Hurricane 80.87 324 ⇓P **P** **18 11 47.6 +0.4**
baz=81
CIS Catalina Islan 80.93 318 ⇑P **P** **18 11 47.8 +0.3**
baz=81
TUQ Turquoise Mtn. 81.08 321 ⇓P **P** **18 11 48.7 +0.4**
baz=81
U12A Valley of Fire 81.12 323 ⇓P **P** **18 11 48.6 +0.2**
baz=81
BFSC Mount Baldy St 81.13 320 ⇓P **P** **18 11 48.6 +0.1**
baz=81
V11A Goodsprings 81.13 322 ⇑P **P** **18 11 48.6 +0.1**
baz=81
T13A Saint George 81.25 324 ⇓P **P** **18 11 49.4 +0.2**
baz=82
CCUT Cedar City 81.39 324 *e*P **P** **18 11 50.5 +0.6**
SNCC San Nicolas Is 81.45 318 ⇑P **P** **18 11 50.4 +0.1**
baz=82
GSC Goldstone 81.45 321 ⇑P **P** **18 11 50.7 +0.4**
baz=82
U11A Corn Creek 81.55 322 ⇑P **P** **18 11 51.1 +0.4**
baz=82
S13A Hot Ranch, En 81.66 324 ⇑P **P** **18 11 52.0 +0.7**
baz=82
TMUT Trail Mountain 81.73 327 *e*P **P** **18 11 51.8 +0.2**
EDW2 Edwards Air Fo 81.79 320 ⇑P **P** **18 11 51.8 -0.2**
baz=82
BLG Laguna Peak 81.82 319 ⇑P **P** **18 11 52.1 -0.1**
baz=82
U10A Ash Meadows, A 82.04 322 ⇓P **P** **18 11 53.7 +0.4**
baz=82
BSC Santa Cruz Isl 82.06 318 ⇓P **P** **18 11 53.7 +0.3**
baz=82
T11A Corn Creek, Al 82.09 323 ⇑P **P** **18 11 54.1 +0.6**
baz=82
S12A Delamar Landin 82.18 323 ⇑P **P** **18 11 54.7 +0.7**
baz=82
MPMC Manual Prospec 82.39 321 ⇑P **P** **18 11 55.3 +0.1**
baz=83
TPNV Topopah Spring 82.40 322 *e*P **P** **18 11 55.0 -0.2**
TPNV Topopah Spring 82.40 322 ⇓P **P** **18 11 55.8 +0.7**
baz=83
DAC Darwin (Calif) 82.61 321 *e*P **P** **18 11 56.2 0.0**
comp=Z,10nm,0.7s,mb4.8
DAC Darwin (Calif) 82.61 321 *e*P **P** **18 11 56.2 -0.1**
DAC pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
R12A Pony Springs, 82.61 324 ⇓P **P** **18 11 56.9 +0.7**
baz=83
ISA Isabella 82.63 320 ⇑P **P** **18 11 56.9 +0.4**
baz=83
DAU Daniels Canyon 82.64 327 *e*P **P** **18 11 56.5 +0.2**
RSSD Black Hills 82.70 334 *e*P **P** **18 11 56.1 -0.5**
comp=Z,7.3nm,1.0s,mb4.5
RSSD Black Hills 82.70 334 *e*P **P** **18 11 56.1 -0.4**
RSSD pmax pmax
comp=Z,7.0nm,1.0s,mb4.5

PKM Peak Mountain 82.82 319 ⇓P **P** **18 11 58.0 +0.6**
baz=83
GRAC Grapevine Rang 83.03 322 ⇓P **P** **18 11 58.8 +0.4**
baz=83
R11A Troy Canyon, C 83.12 324 ⇓P **P** **18 11 59.3 +0.5**
baz=83
TRCR Troy Canyon 83.12 324 *e*P **P** **18 11 59.1 +0.3**
P13A Bates Ranch, G 83.19 325 ⇑P **P** **18 11 59.5 +0.3**
baz=84
DUG Dugway 83.19 326 ⇑P **P** **18 11 59.3 +0.1**
baz=84
Q12A Willow Creek R 83.27 324 ⇑P **P** **18 11 59.8 +0.1**
baz=84
S10A Tonopah Range, 83.32 323 ⇑P **P** **18 12 00.0 +0.1**
baz=84
R10A Warm Springs 83.44 323 ⇑P **P** **18 12 01.0 +0.5**
baz=84
S09A Goldfield 83.50 322 ⇓P **P** **18 12 01.0 +0.2**
baz=84
Q11A Duckwater 83.54 324 ⇑P **P** **18 12 01.0 +0.1**
baz=84
V05C Boulder Hill, 83.57 319 ⇑P **P** **18 12 01.7 +0.4**
baz=84
N15A Stansbury Isla 83.61 327 ⇓P **P** **18 12 00.8 -0.5**
baz=84
P12A McGill 83.64 325 ⇓P **P** **18 12 01.7 +0.2**
baz=84
HELL Mitchell Peak, 83.68 320 ⇑P **P** **18 12 01.2 -0.5**
baz=84
AGMN Agassiz Refuge 83.73 341 *e*P **P** **18 12 00.7 -1.0**
comp=Z,5.7nm,0.6s,mb4.6
HWUT Hardware Ranch 83.73 328 *e*P **P** **18 12 01.3 -0.7**
comp=Z,14nm,0.8s,mb4.8
PDAR Pinedale Array 83.79 330 P **P** **18 12 01.5 -0.6**
comp=Z,3.7nm,0.7s,mb4.3,baz=128,slow=5.9,SNR=33
PDAR pP pP 18 12 36.0 +2.1
comp=Z,1.9nm,0.9s,baz=144,slow=5.5,SNR=3.0
PDAR sP sP 18 12 51.4 +4.4
comp=Z,2.4nm,0.7s,baz=125,slow=7.0,SNR=4.1
R09A Tonopah 83.80 323 ⇑P **P** **18 12 02.3 0.0**
baz=84
S08C White Mtn Res 83.83 321 ⇑P **P** **18 12 02.9 +0.4**
baz=84
BGU Big Grassy Mou 83.87 327 *e*P **P** **18 12 02.0 -0.6**
N14A Grayback Hills 83.89 327 ⇑P **P** **18 12 02.5 -0.3**
baz=84
Q10A Clear Creek Ra 83.90 323 ⇑P **P** **18 12 03.3 +0.4**
baz=84
SPUT South Promonto 83.90 327 *e*P **P** **18 12 02.0 -0.8**
V04C Ramage Ranch, 83.95 319 ⇓P **P** **18 12 03.6 +0.4**
baz=84
PKD Parkfield 83.98 319 ⇑P **P** **18 12 03.4 +0.1**
baz=84
M15A Larsen Ranch, 84.02 327 ⇑P **P** **18 12 02.9 -0.5**
baz=84
P11A Circle Ranch, 84.12 324 ⇓P **P** **18 12 04.2 +0.2**
baz=84
O12A Currie 84.18 325 ⇓P **P** **18 12 04.1 -0.1**
baz=84
MLAC Mammoth Lakes 84.28 321 ⇑P **P** **18 12 05.3 +0.5**
baz=85
Q09A Carvers 84.31 323 ⇑P **P** **18 12 05.1 +0.2**
baz=85
KCC Kaiser Creek 84.31 321 ⇓P **P** **18 12 04.5 -0.4**
baz=85
N13A Wendover, West 84.37 326 ⇓P **P** **18 12 04.9 -0.3**
baz=85
U04C Hernandez Rese 84.42 319 ⇑P **P** **18 12 05.9 +0.4**
baz=85
HVU Hansel Valley 84.42 327 *e*P **P** **18 12 04.8 -0.7**
comp=Z,5.1nm,0.8s,mb4.4
HVU Hansel Valley 84.42 327 *e*P **P** **18 12 04.8 -0.6**
HVU pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
V03C Hunter Liggett 84.43 319 ⇓P **P** **18 12 06.2 +0.7**
baz=85
M14A Sheep Mountain 84.47 327 ⇓P **P** **18 12 05.4 -0.3**
baz=85
O11A Cowboy Ranch, 84.52 325 P **P** **18 12 06.2 +0.2**
baz=85,SNR=12
P10A Eureka 84.53 324 ⇑P **P** **18 12 06.2 +0.2**
baz=85
NVAR Mina Array Bea 84.59 322 P **P** **18 12 06.4 +0.1**
comp=Z,2.7nm,0.8s,mb4.2,baz=146,slow=6.5,SNR=16
M13A Montello 84.75 326 ⇑P **P** **18 12 06.4 -0.7**
baz=85
N12A Clover Valley, 84.77 325 ⇑P **P** **18 12 07.0 -0.2**
baz=85
HAST UC Hastings Re 84.87 319 ⇓P **P** **18 12 08.0 +0.2**
baz=85
S05C Merced 84.88 320 ⇑P **P** **18 12 08.0 +0.2**
baz=85
LOHW Long Hollow 84.92 330 *e*P **P** **18 12 07.8 -0.1**
comp=Z,6.0nm,0.7s,mb4.6
O10A Cortez Mining, 85.06 324 ⇓P **P** **18 12 08.5 -0.1**
baz=85
M12A Wells 85.14 326 ⇑P **P** **18 12 08.9 -0.1**
baz=86
PACP Pacheco Peak 85.17 319 ⇑P **P** **18 12 09.3 +0.1**
baz=86
L13A Double Diamond 85.21 327 ⇑P **P** **18 12 09.3 0.0**
baz=86
K14A Jones Ranch, D 85.21 328 ⇑P **P** **18 12 08.9 -0.5**
baz=86
IMW Indian Meadow 85.29 330 *e*P **P** **18 12 09.7 0.0**
comp=Z,9.8nm,0.7s,mb4.8
O09A Fish Creek Ran 85.31 324 ⇑P **P** **18 12 09.8 -0.1**
baz=86
FLWY Flagg Ranch 85.34 330 *e*P **P** **18 12 09.8 -0.1**
comp=Z,149nm,2.1s,mb5.5
CMB Columbia Colle 85.41 320 ⇓P **P** **18 12 10.0 -0.4**
baz=86
P08A Dixie Valley 85.41 323 ⇓P **P** **18 12 10.5 +0.1**
baz=86
ULM Lac du Bonnet 85.51 342 P **P** **18 12 09.5 -1.1**
ULM Lac du Bonnet 85.51 342 P **P** **18 12 09.5 -1.1**
baz=161,slow=5.2
S04C Ingram Canyon, 85.54 320 ⇓P **P** **18 12 10.8 -0.3**
baz=86
M11A Holland Ranch, 85.58 325 ⇑P **P** **18 12 11.3 +0.2**
baz=86
YFT Old Faithful 85.69 330 *e*P **P** **18 12 13.0 +1.3**
K13A Stover Farm, H 85.71 327 ⇓P **P** **18 12 11.7 -0.1**
baz=86
P07A Fallon 85.72 322 ⇓P **P** **18 12 12.2 +0.3**
baz=86
R05C Kirkwood Meado 85.73 321 ⇓P **P** **18 12 12.4 +0.4**
baz=86
WENL Wente Brothers 85.86 319 ⇑P **P** **18 12 13.2 +0.4**
baz=86
R04C Big Horse Ranc 85.87 320 ⇓P **P** **18 12 13.0 +0.3**
baz=86
JRSC Jasper Ridge 85.98 319 ⇓P **P** **18 12 13.2 -0.1**
baz=86
N09A Rock Creek Ran 85.99 324 ⇓P **P** **18 12 12.8 -0.4**
baz=86
WCN Washoe City 86.00 322 ⇓P **P** **18 12 13.4 +0.1**
baz=86
M10A I.L. Ranch, Tu 86.01 325 ⇑P **P** **18 12 13.3 0.0**
baz=86
K12A Draper Farm, C 86.08 327 ⇓P **P** **18 12 13.8 +0.2**
baz=86
LAVA Lava Cap Winer 86.12 321 ⇑P **P** **18 12 13.7 -0.3**
baz=86
SCHQ Schefferville 86.15 0 P **P** **18 12 13.1 -0.6**
SCHQ Schefferville 86.15 0 P **P** **18 12 13.1 -0.6**
baz=143,slow=4.9
O07A Toulon 86.17 323 ⇓P **P** **18 12 14.0 -0.1**
baz=86
J13A Cove Ranch, Pi 86.33 328 ⇑P **P** **18 12 15.3 +0.5**
baz=87
M09A Marrel Ranch, 86.39 324 ⇓P **P** **18 12 14.9 -0.2**
baz=87
L10A Juniper Basin 86.40 325 ⇓P **P** **18 12 15.4 +0.2**
baz=87
P05C Yuba Gap, Truc 86.45 321 ⇑P **P** **18 12 15.8 +0.3**
baz=87
DGMT Dagmar 86.48 336 *e*P **P** **18 12 15.3 -0.2**
comp=Z,113nm,1.9s,mb5.5
Q04C Lincoln 86.53 320 ⇑P **P** **18 12 16.0 +0.1**
baz=87
HLID Hailey 86.57 328 *e*P **P** **18 12 16.0 0.0**
comp=Z,26nm,1.1s,mb5.1
HLID Hailey 86.57 328 P **P** **18 12 16.4 +0.4**
baz=87,SNR=22
J12A Stokes Ranch, 86.64 327 ⇑P **P** **18 12 16.5 +0.1**
baz=87
O06A Flanigan 86.66 322 ⇓P **P** **18 12 16.7 +0.2**

	baz=87									
N07B	**Gerlach**	**86.67**	**323**	⇑P		**P**	**18 12 16.3**	**-0.3**		
	baz=87									
I13A	**Wildhorse Cree**	**86.71**	**328**	⇑P		**P**	**18 12 17.3**	**+0.7**		
	baz=87									
K11A	**Parker Ranch,**	**86.72**	**326**	⇓P		**P**	**18 12 16.6**	**-0.2**		
	baz=87									
BEKR	**Beckwourth**	**86.72**	**322**	⇑P		**P**	**18 12 17.0**	**+0.2**		
	baz=87									
Q03C	**Winters**	**86.73**	**320**	⇓P		**P**	**18 12 17.4**	**+0.5**		
	baz=87									
CVS	**Carmenet Viney**	**86.77**	**319**	⇑P		**P**	**18 12 17.0**	**-0.1**		
	baz=87									
M08A	**Happy Creek Ra**	**86.87**	**324**	⇓P		**P**	**18 12 17.6**	**+0.1**		
	baz=87									
L09A	**Wilkinson Ranc**	**86.94**	**325**	⇑P		**P**	**18 12 17.6**	**-0.2**		
	baz=87									
OHCM	**Honcut**	**86.94**	**321**	*e*P		**P**	**18 12 17.9**	**0.0**		
G15A	**Dillon**	**86.97**	**330**	P		**P**	**18 12 18.1**	**+0.2**		
	baz=87,SNR=9.7									
MDT	**Midelt**	**87.02**	**48**	P		**P**	**18 12 19.6**	**+1.1**		
	comp=Z,11nm,0.8s,mb4.8,baz=223,slow=2.8,SNR=16									
MDT				pP	pP		18 12 54.0	+3.6		
	comp=Z,2.3nm,0.7s,baz=180,slow=1.9,SNR=2.2									
SUTB	**Sutter Butte**	**87.03**	**320**	⇑P		**P**	**18 12 18.1**	**-0.3**		
	baz=87									
O05C	**Quincy**	**87.09**	**321**	⇓P		**P**	**18 12 18.5**	**-0.2**		
	baz=87									
N06A	**Buffalo Meadow**	**87.09**	**323**	⇑P		**P**	**18 12 18.7**	**+0.1**		
	baz=87									
ORV	**Oroville**	**87.11**	**321**	⇑P		**P**	**18 12 18.7**	**0.0**		
	baz=87									
MFID	**Camas Ranch**	**87.11**	**327**	⇓P		**P**	**18 12 18.6**	**-0.1**		
	baz=87									
K10A	**MacKenzie Ranc**	**87.12**	**326**	⇑P		**P**	**18 12 18.3**	**-0.4**		
	baz=87									
M07A	**Soldier Meadow**	**87.22**	**323**	⇑P		**P**	**18 12 19.2**	**0.0**		
	baz=88									
H13A	**Challis**	**87.28**	**328**	⇓P		**P**	**18 12 19.5**	**+0.1**		
	baz=88									
L08A	**Fields**	**87.40**	**324**	⇓P		**P**	**18 12 19.7**	**-0.3**		
	baz=88									
K09A	**Rome**	**87.48**	**325**	⇓P		**P**	**18 12 20.2**	**-0.2**		
	baz=88									
F15A	**Butte**	**87.51**	**330**	P		**P**	**18 12 20.8**	**+0.4**		
	baz=88,SNR=17									
H12A	**Diamond D Ranc**	**87.54**	**328**	⇓P		**P**	**18 12 20.6**	**0.0**		
	baz=88									
G13A	**Cobalt**	**87.68**	**329**	⇑P		**P**	**18 12 21.6**	**+0.3**		
	baz=88									
O03C	**Acorn Hollow,**	**87.71**	**321**	⇓P		**P**	**18 12 21.7**	**+0.1**		
	baz=88									
M06C	**Likely Place G**	**87.76**	**323**	⇑P		**P**	**18 12 21.9**	**+0.1**		
	baz=88									
L07A	**Adell**	**87.77**	**324**	⇓P		**P**	**18 12 22.4**	**+0.6**		
	baz=88									
GASB	**Alder Springs**	**87.84**	**320**	⇑P		**P**	**18 12 22.8**	**+0.7**		
	baz=88									
F14A	**Wisdom**	**87.86**	**330**	⇑P		**P**	**18 12 22.5**	**+0.4**		
	baz=88									
K08A	**Mann Creek Ran**	**87.88**	**325**	⇑P		**P**	**18 12 22.4**	**+0.1**		
	baz=88									
J09A	**Fry Pan Ranch,**	**87.98**	**326**	⇓P		**P**	**18 12 22.7**	**0.0**		
	baz=88									
HATC	**Hat Creek Radi**	**87.99**	**322**	⇓P		**P**	**18 12 22.7**	**-0.2**		
	baz=88									
E15A	**Deer Lodge**	**88.03**	**330**	P		**P**	**18 12 22.9**	**-0.1**		
	baz=88,SNR=5.6									
P01C	**Double 8 Ranch**	**88.05**	**320**	⇓P		**P**	**18 12 23.5**	**+0.3**		
	baz=88									
I10A	**Payette**	**88.08**	**327**	⇑P		**P**	**18 12 22.9**	**-0.3**		
	baz=88									
EGMT	**Eagleton**	**88.15**	**333**	*e*P		**P**	**18 12 22.7**	**-0.8**		
	comp=Z,13nm,1.1s,mb4.9									
EGMT	**Eagleton**	**88.15**	**333**	P		**P**	**18 12 22.9**	**-0.6**		
	baz=88,SNR=8.5									
MOD	**Modoc**	**88.18**	**323**	*e*P		**P**	**18 12 23.5**	**-0.2**		
	comp=Z,7.5nm,0.6s,mb4.9									
MOD	**Modoc**	**88.18**	**323**	⇓P		**P**	**18 12 23.8**	**0.0**		
	baz=88									
H11A	**Donnelly**	**88.18**	**327**	⇓P		**P**	**18 12 23.6**	**-0.1**		
	baz=88									
M05C	**Lookout**	**88.22**	**322**	⇓P		**P**	**18 12 23.6**	**-0.4**		
	baz=88									
K07A	**Rock Creek Ran**	**88.22**	**324**	⇑P		**P**	**18 12 24.5**	**+0.6**		
	baz=88									
O02C	**Red Bluff**	**88.25**	**321**	⇓P		**P**	**18 12 23.7**	**-0.4**		
	baz=89									
J08A	**Circle Bar Ran**	**88.33**	**325**	⇑P		**P**	**18 12 24.7**	**+0.2**		
	baz=89									
E14A	**Clinton**	**88.39**	**330**	⇓P		**P**	**18 12 24.8**	**+0.2**		
	baz=89									
WDC	**Whiskeytown Da**	**88.40**	**321**	⇓P		**P**	**18 12 23.1**	**-1.7**		
	baz=89									
H10A	**Noah's Angus R**	**88.44**	**327**	⇓P		**P**	**18 12 24.5**	**-0.4**		
	baz=89									
I09A	**Lost Marbles R**	**88.44**	**326**	⇓P		**P**	**18 12 24.7**	**-0.2**		
	baz=89									
D15A	**Lincoln**	**88.47**	**331**	⇓P		**P**	**18 12 24.9**	**-0.1**		
	baz=89,SNR=12									
L05A	**Lakeview**	**88.55**	**323**	⇑P		**P**	**18 12 25.9**	**+0.4**		
	baz=89									
E13A	**Victor**	**88.71**	**329**	⇑P		**P**	**18 12 26.4**	**+0.2**		
	baz=89									
I08A	**Drewsey**	**88.79**	**325**	⇑P		**P**	**18 12 26.7**	**+0.2**		
	baz=89									
K06A	**Valley Falls**	**88.80**	**324**	⇑P		**P**	**18 12 26.9**	**+0.2**		
	baz=89									
G11A	**Walters Elk Ra**	**88.83**	**328**	⇑P		**P**	**18 12 26.8**	**0.0**		
	baz=89									
M04C	**Macdoel**	**88.88**	**322**	⇓P		**P**	**18 12 27.0**	**-0.1**		
	baz=89									
D14A	**Greenough**	**88.92**	**330**	P		**P**	**18 12 27.1**	**0.0**		
	baz=89,SNR=7.7									
H09A	**Durkee**	**88.92**	**326**	⇓P		**P**	**18 12 27.6**	**+0.4**		
	baz=89									
N02C	**Big Bar**	**88.98**	**321**	⇑P		**P**	**18 12 27.2**	**-0.3**		
	baz=89									
K05A	**Summer Lake**	**89.08**	**323**	⇓P		**P**	**18 12 28.6**	**+0.7**		
	baz=89									
J06A	**Christmas Vall**	**89.08**	**324**	⇑P		**P**	**18 12 28.0**	**0.0**		
	baz=89									
M02C	**Callahan**	**89.14**	**321**	⇑P		**P**	**18 12 27.8**	**-0.5**		
	baz=89									
G10A	**Bishop Farm, J**	**89.14**	**327**	⇑P		**P**	**18 12 28.7**	**+0.5**		
	baz=90									
F11A	**Grangeville**	**89.15**	**328**	⇓P		**P**	**18 12 27.5**	**-0.7**		
	baz=90									
H08A	**Prairie City**	**89.29**	**326**	⇓P		**P**	**18 12 28.5**	**-0.4**		
	baz=90									
YBH	**Yreka Blue Hor**	**89.31**	**322**	⇑P		**P**	**18 12 28.2**	**-0.9**		
	baz=90									
D13A	**Huson**	**89.34**	**330**	⇓P		**P**	**18 12 29.0**	**0.0**		
	baz=90									
I07A	**Izee**	**89.37**	**325**	⇓P		**P**	**18 12 29.6**	**+0.4**		
	baz=90									
K04A	**Chiluin**	**89.42**	**323**	⇑P		**P**	**18 12 29.6**	**0.0**		
	baz=90									
G09A	**Cove**	**89.44**	**327**	⇓P		**P**	**18 12 29.3**	**-0.2**		
	baz=90									
E11A	**Bogner Ranch,**	**89.53**	**328**	⇓P		**P**	**18 12 30.0**	**0.0**		
	baz=90									
I06A	**Prineville**	**89.62**	**325**	⇓P		**P**	**18 12 31.1**	**+0.6**		
	baz=90									
J05A	**Fort Rock**	**89.65**	**324**	⇓P		**P**	**18 12 31.0**	**+0.3**		
	baz=90									
F10A	**Beach Ranch, E**	**89.71**	**328**	⇑P		**P**	**18 12 31.2**	**+0.4**		
	baz=90									
H07A	**Lands Inn, Kim**	**89.78**	**325**	⇑P		**P**	**18 12 31.2**	**0.0**		
	baz=90									
C13A	**Hot Springs**	**89.84**	**330**	⇓P		**P**	**18 12 31.4**	**0.0**		
	baz=90									
G08A	**Pilot Rock**	**90.00**	**326**	⇓P		**P**	**18 12 31.8**	**-0.4**		
	baz=90									
J04A	**Umpqua Nationa**	**90.07**	**323**	⇓P		**P**	**18 12 32.6**	**0.0**		
	baz=90									
H06A	**Lindquist Farm**	**90.26**	**325**	⇑P		**P**	**18 12 33.6**	**+0.2**		
	baz=91									
I05A	**Bend**	**90.30**	**324**	⇑P		**P**	**18 12 34.2**	**+0.6**		
	baz=91									
G07A	**Ruggs Ranch, H**	**90.32**	**326**	⇑P		**P**	**18 12 33.9**	**+0.2**		
	baz=91									
B13A	**Whitefish**	**90.33**	**331**	⇑P		**P**	**18 12 33.4**	**-0.3**		
	baz=91									
K02A	**Glendale**	**90.44**	**322**	⇑P		**P**	**18 12 34.4**	**+0.1**		
	baz=91									
E09A	**Wood Farm, Sta**	**90.53**	**327**	⇓P		**P**	**18 12 33.9**	**-0.7**		
	baz=91									
I04A	**Tendick Farm,**	**90.61**	**323**	⇓P		**P**	**18 12 34.8**	**-0.3**		
	baz=91									
WALA	**Waterton Lakes**	**90.64**	**331**	*e*P		**P**	**18 12 34.5**	**-0.5**		
	comp=Z,22nm,1.3s,mb5.1									
A13A	**Flathead Natio**	**90.75**	**331**	⇑P		**P**	**18 12 35.4**	**-0.2**		
	baz=91									
G06A	**Carlson Farm,**	**90.77**	**325**	⇓P		**P**	**18 12 35.8**	**0.0**		
	baz=91									
B12A	**Libby**	**90.88**	**330**	⇑P		**P**	**18 12 35.9**	**-0.4**		
	baz=91									
D09A	**Jones Farm, Ri**	**91.02**	**328**	⇑P		**P**	**18 12 36.0**	**-0.9**		
	baz=91									
G05A	**Wamic**	**91.10**	**325**	⇓P		**P**	**18 12 37.2**	**-0.2**		
	baz=91									
H04A	**Detroit Lake**	**91.13**	**324**	⇑P		**P**	**18 12 37.4**	**-0.1**		
	baz=91									
C09A	**Chrisman Ranch**	**91.55**	**328**	⇑P		**P**	**18 12 38.8**	**-0.6**		
	baz=92									
A11A	**Hall Mountain,**	**91.59**	**330**	⇓P		**P**	**18 12 38.6**	**-0.9**		
	baz=92									
E06A	**Yakima**	**91.88**	**326**	⇑P		**P**	**18 12 40.9**	**0.0**		
	baz=92									
ESDC	**Sonseca Array**	**91.89**	**43**	P		**P**	**18 12 41.4**	**+0.3**		
	comp=Z,0.8nm,0.6s,mb4.2,baz=256,slow=3.1,SNR=3.0									
ESDC				pP		pP	18 13 16.2	+3.0		
	comp=Z,1.5nm,0.7s,baz=236,slow=5.0,SNR=3.4									
B09A	**Rice**	**91.96**	**329**	⇑P		**P**	**18 12 40.4**	**-0.8**		
	baz=92									
G03A	**Yamhill**	**92.13**	**324**	⇓P		**P**	**18 12 42.6**	**+0.6**		
	baz=92									
C07A	**Waterville**	**92.28**	**327**	⇑P		**P**	**18 12 42.3**	**-0.4**		
	baz=93									
B08A	**Colville Reser**	**92.44**	**328**	⇑P		**P**	**18 12 42.4**	**-1.1**		
	baz=93									
A09A	**Danville**	**92.56**	**329**	⇑P		**P**	**18 12 43.0**	**-0.9**		
	baz=93									
D05A	**Enumclaw**	**92.83**	**326**	⇑P		**P**	**18 12 45.0**	**-0.3**		
	baz=93									
A08A	**Turner Farm, O**	**92.85**	**328**	⇑P		**P**	**18 12 44.5**	**-0.8**		
	baz=93									
B07A	**Winthrop**	**92.87**	**328**	⇑P		**P**	**18 12 44.6**	**-0.8**		
	baz=93									
FCC	**Fort Churchill**	**92.91**	**346**	*e*P		**P**	**18 12 44.0**	**-1.3**		
	comp=Z,8.5nm,0.7s,mb5.2									
FCC	**Fort Churchill**	**92.91**	**346**	*e*P		**P**	**18 12 44.0**	**-1.3**		
FCC				pmax		pmax				
	comp=Z,8.0nm,0.7s,mb5.2									
A07A	**Ashnola River,**	**93.42**	**328**	⇑P		**P**	**18 12 47.4**	**-0.5**		
	baz=94									
KEST	**Kesra**	**97.99**	**53**	LR		LR	18 57 22.0			
	comp=Z,61nm,18.7s,baz=268,slow=35									
YKA	**Yellowknife Ar**	**101.33**	**339**	P		Pdif	18 13 22.1	-1.9		
YKA				pP			18 13 57.0			
YKA				PP		PP	18 17 31.6	-3.1		
YKA	**Yellowknife Ar**	**101.33**	**339**	P		Pdif	18 13 22.0	-1.9		
	comp=Z,2.6nm,0.6s,baz=139,slow=4.1,SNR=65									
YKA				pP			18 13 57.0			
	comp=Z,0.3nm,0.5s,baz=136,slow=5.0,SNR=2.6									
YKA				PP		PP	18 17 31.6	-3.1		
	comp=Z,0.2nm,0.7s,baz=130,slow=6.8,SNR=3.5									
FORT	**Forrest**	**116.28**	**194**	*e*P		PKPdf	18 18 14.3	-1.9		
	comp=Z,4.6nm,1.0s									
KLBR	**Kellerberrin**	**116.92**	**184**	*e*P		PKPdf	18 18 15.6	-1.8		
	comp=Z,3.6nm,0.3s									
BRTR	**Keskin Array B**	**116.93**	**58**	PKP		PKPdf	18 18 16.6	-0.4		
	comp=Z,0.8nm,0.7s,baz=198,slow=0.4,SNR=4.7									
BRTR				pPKP		pPKPdf	18 18 53.8	+3.4		
	comp=Z,0.7nm,0.9s,baz=241,slow=2.5,SNR=2.7									
IMA2	**Indian Mountai**	**117.23**	**333**	*e*PKPdf		PKPdf	18 18 16.9	+0.2		
AKASG	**Malin Array Be**	**117.46**	**45**	PKP		PKPdf	18 18 15.2	-2.4		
	comp=Z,2.2nm,0.7s,baz=254,slow=3.7,SNR=6.1									
AKASG				pPKP		pPKPdf	18 18 52.2	+1.1		
	comp=Z,0.3nm,0.3s,baz=259,slow=2.4,SNR=2.2									
FINES	**FINESS Array B**	**118.66**	**33**	PKP		PKPdf	18 18 18.4	-1.1		
FINES	**FINESS Array B**	**118.66**	**33**	PKP		PKPdf	18 18 18.4	-1.1		
	comp=Z,0.8nm,0.7s,baz=180,slow=3.4,SNR=4.7									
ARCES	**ARCESS Array B**	**120.12**	**24**	PKP		PKPdf	18 18 21.2	-1.0		
ARCES				PKKPbc		PKKPbc	18 28 28.9	-3.5		
ARCES	**ARCESS Array B**	**120.12**	**24**	PKP		PKPdf	18 18 21.2	-1.0		
	comp=Z,4.5nm,1.0s,baz=352,slow=7.4,SNR=3.5									
ARCES				PKKPbc		PKKPbc	18 28 28.9	-3.5		
	comp=Z,1.6nm,0.6s,baz=76,slow=5.1,SNR=7.2									
ASAR	**Alice Springs**	**121.48**	**202**	PKIKP		PKPdf	18 18 24.5	-1.8		
ASAR							18 19 01.7			
ASAR	**Alice Springs**	**121.48**	**202**	PKP		PKPdf	18 18 24.4	-1.9		
	comp=Z,2.9nm,0.5s,baz=139,slow=1.6,SNR=146									
ASAR				pPKP		pPKPdf	18 19 01.6	+1.9		
	comp=Z,1.2nm,0.8s,baz=164,slow=2.1,SNR=3.3									
ASAR				SKP			18 21 46.4			
	comp=Z,0.6nm,0.7s,baz=152,slow=2.2,SNR=4.6									
ASAR				PKKPbc		PKKPbc	18 28 26.2	-0.3		
	comp=Z,0.8nm,0.7s,baz=338,slow=3.5,SNR=7.9									
OBN	**Obninsk**	**122.81**	**42**	⇓*i* PKIKP		PKPdf	18 18 25.7	-2.0		
OBN				pmax		pmax				
	comp=Z,6.0nm,0.9s									
KIV	**Kislovodsk**	**124.61**	**56**	*e*PKIKP		PKPdf	18 18 29.3	-2.2		
KIV				pmax		pmax				
	comp=Z,4.0nm,0.6s									
WB2	**Warramunga Arr**	**124.78**	**205**	⇓*i* P		PKPdf	18 18 31.2	-1.5		
WRA	**Warramunga Arr**	**124.78**	**205**	PKP		PKPdf	18 18 31.2	-1.5		
	comp=Z,11nm,0.5s,baz=166,slow=1.6,SNR=376									
WRA				pPKP		pPKPdf	18 19 08.2	+2.0		
	comp=Z,2.3nm,0.6s,baz=154,slow=1.5,SNR=3.4									
PMG	**Port Moresby**	**127.74**	**224**	⇑*i* PKIKP		PKPdf	18 18 38.1	-0.4		
PMG	**Port Moresby**	**127.74**	**224**	PKP		PKPdf	18 18 37.9	-0.6		
	comp=Z,2.5nm,0.6s,baz=332,slow=12,SNR=3.2									
PRGR	**Permogore**	**127.96**	**34**	*e*PKIKP		PKPdf	18 18 36.5	-0.9		
FITZ	**Fitzroy Crossi**	**129.06**	**195**	⇓*i* P		PKPdf	18 18 39.8	-1.1		
	comp=Z,4.0nm,0.4s									
FITZ	**Fitzroy Crossi**	**129.06**	**195**	PKP		PKPdf	18 18 40.1	-0.9		
	comp=Z,3.1nm,0.5s,baz=266,slow=2.7,SNR=25									
BILL	**Bilibino**	**132.56**	**336**	*e*PKPdf		PKPdf	18 18 45.5	-0.4		
BILL	**Bilibino**	**132.56**	**336**	⇑*i* PKIKP		PKPdf	18 18 46.0	0.0		
BILL				*e*			18 19 23.0			
BILL				pmax		pmax				
	comp=Z,11nm,1.5s									
ARU	**Arti**	**135.18**	**40**	*i* PKIKP		PKPdf	18 18 51.2	0.0		
TIXI	**Tiksi**	**139.07**	**352**	*e*PKPdf		PKPdf	18 18 56.8	-1.2		
TIXI	**Tiksi**	**139.07**	**352**	*i* PKIKP		PKPdf	18 18 56.0	-2.0		
TIXI				*e*			18 19 31.1			
TIXI				pmax		pmax				
	comp=Z,3.0nm,0.7s									
SEY	**Seymchan**	**140.05**	**333**	⇑*i* PKIKP		PKPdf	18 19 00.5	+0.5		
CHKZ	**Chkalovo**	**142.57**	**41**	*i* PKIKP		PKPdf	18 19 01.1	-3.7		
CHKZ				pmax		pmax				
	comp=Z,5.0nm,0.9s									
KK31	**Karatay Array**	**144.64**	**59**	*i* PKIKP		PKPdf	18 19 06.7	-2.1		
KK31				pmax		pmax				
	comp=Z,2.0nm,0.5s									
HYB	**Hyderabad**	**145.69**	**106**	⇓*e*PKP		PKPdf	18 19 12.0	+0.7		
HYB				*e*			18 19 48.0			
HYB	**Hyderabad**	**145.69**	**106**	⇓*i* PKP		PKPdf	18 19 12.0	+0.7		
	comp=Z,105nm,1.0s									
HYB				*e*			18 19 48.0			
HYB				*e*			18 19 55.5			
AML	**Almayashu**	**147.07**	**60**	*e*PKPbc		PKPbc	18 19 14.2	-1.0		
AML	**Almayashu**	**147.07**	**60**	P		PKPdf	18 19 14.5	+1.6		
	SNR=9.5									
EKS2	**Erkin-Say**	**147.08**	**59**	*e*PKPdf		PKPdf	18 19 12.8	-0.1		
EKS2	**Erkin-Say**	**147.08**	**59**	P		PKPdf	18 19 13.7	+0.7		
	SNR=20									
USP	**Ospenovka**	**147.53**	**58**	P		PKPbc	18 19 16.7	+0.3		
	SNR=11									
AAK	**Ala-Archa**	**147.60**	**59**	P		PKPbc	18 19 17.6	+0.9		
	SNR=13									
UCH	**Uchtor**	**147.66**	**60**	*e*PKPdf		PKPdf	18 19 12.1	-1.8		
UCH				*e*PKPab		PKPab	18 19 17.7	-1.7		
UCH	**Uchtor**	**147.66**	**60**	P		PKPbc	18 19 17.9	+1.1		
	SNR=22									
FRU	**Bishkek**	**147.67**	**59**	⇓*e*PKP2		PKPab	18 19 17.0	-2.5		
FRU				pmax		pmax				
	comp=Z,50nm,2.0s									
FRU				pmax		pmax				
	comp=Z,150nm,1.9s									
CHMS	**Chumysh**	**147.75**	**59**	P		PKPbc	18 19 17.4	+0.4		
	SNR=6.9									
YAK	**Yakutsk**	**147.79**	**345**	*e*PKPdf		PKPdf	18 19 11.2	-2.3		
YAK				*e*PKPbc		PKPbc	18 19 15.8	-0.8		
YAK	**Yakutsk**	**147.79**	**345**	*e*PKIKP		PKPdf	18 19 13.1	-0.4		
YAK				*e*			18 19 48.4			
YAK				pmax		pmax				
	comp=Z,73nm,1.1s									
YAK				pmax		pmax				
	comp=N,10.0nm,1.2s									
YAK				pmax		pmax				
	comp=E,7.0nm,1.5s									
YAK				pmax		pmax				
	comp=Z,36nm,1.2s									
YAK				pmax		pmax				
	comp=N,11nm,1.4s									
YAK				pmax		pmax				
	comp=E,12nm,1.4s									
KBK	**Karagaybulak**	**147.93**	**59**	P		PKPbc	18 19 18.4	+0.9		
	SNR=12									
KZA	**Kyzart**	**148.22**	**60**	P		PKPbc	18 19 19.6	+1.3		
	SNR=10									
TKM2	**Tokmak 2**	**148.37**	**59**	*e*PKPdf		PKPdf	18 19 15.3	+0.2		
TKM2				*e*PKPbc		PKPbc	18 19 19.1	+0.4		
TKM2	**Tokmak 2**	**148.37**	**59**	P		PKPbc	18 19 19.2	+0.5		
	SNR=12									
NVS	**Novosibirsk**	**148.65**	**34**	*e*PKIKP		PKPdf	18 19 14.9	-0.2		
NVS				pmax		pmax				
	comp=N,6.0nm,1.5s									
NVS				pmax		pmax				
	comp=E,12nm,1.5s									
NVS				pmax		pmax				
	comp=Z,61nm,1.5s									
ULHL	**Ulahol**	**148.94**	**60**	P		PKPbc	18 19 20.7	+0.5		
	SNR=6.3									
DDI	**Dehra Dun**	**150.01**	**83**	*e*P		PKPbc	18 19 24.0	+0.8		
MKAR	**Makanchi Array**	**151.99**	**49**	PKP		PKPdf	18 19 19.8	-0.8		
MKAR				PKPbc		PKPbc	18 19 26.9	-0.3		
MKAR				PKPab		PKPab	18 19 36.9	-0.1		
MKAR				pPKPbc		pPKPbc	18 20 03.0	+2.4		
MKAR	**Makanchi Array**	**151.99**	**49**	PKP		PKPdf	18 19 19.8	-0.8		
	comp=Z,1.1nm,0.8s,baz=279,slow=1.3,SNR=12									
MKAR				PKPbc		PKPbc	18 19 26.9	-0.3		
	comp=Z,15nm,0.6s,baz=297,slow=2.1,SNR=157									
MKAR				PKPab		PKPab	18 19 36.9	-0.1		
	comp=Z,6.9nm,0.7s,baz=301,slow=3.3,SNR=11									
MKAR				pPKPbc		pPKPbc	18 20 03.0	+2.4		
	comp=Z,20nm,0.8s,baz=298,slow=2.6,SNR=12									
YSS	**Yuzh-Sakhalins**	**152.65**	**312**	⇓*e*PKIKP		PKPbc	18 19 29.0	+0.3		
YSS				*e*			18 20 06.0			
YSS				pmax		pmax				
	comp=Z,30nm,0.8s									
ASAJ	**Asahikawa**	**153.76**	**307**	PKPbc		PKPbc	18 19 30.8	-0.4		
	comp=Z,5.7nm,0.7s,baz=259,slow=9.8,SNR=13									
BOD	**Bodaibo**	**153.85**	**359**	*e*PKIKP		PKPdf	18 19 21.4	-1.5		
BOD				*e*			18 19 43.2			
BOD				pmax		pmax				
	comp=Z,4.0nm,1.2s									
BOD				pmax		pmax				
	comp=Z,5.0nm,0.9s									
BOD				pmax		pmax				
	comp=Z,12nm,0.8s									
WMQ	**Urumqi**	**156.64**	**52**	PKP		PKPdf	18 19 25.3	-1.9		
WMQ				APKP			18 20 07.9			
WMQ				PP		PP	18 23 35.6	-0.2		
WMQ				PP		PP				
	comp=Z,156nm,4.3s									
WMQ				LR		LR				
	comp=N,38nm,16.7s									
WMQ				LR		LR				
	comp=E,58nm,14.7s									
WMQ				LR		LR				
	comp=Z,19nm,18.8s									
MJAR	**Matsushiro Arr**	**158.67**	**290**	PKPab		PKPab	18 20 05.4	-0.7		
	comp=Z,6.4nm,0.8s,baz=99,slow=2.9,SNR=15									
MAT	**Matsushiro**	**158.67**	**290**	PKP2		PKPab	18 20 05.3	-0.8		
TLY	**Talaya**	**158.84**	**16**	*e*PKIKP		PKPdf	18 19 30.1	+0.5		
TLY				*e*			18 20 07.1			
TLY				pmax		pmax				
	comp=Z,9.0nm,1.0s									
CIT	**Chita**	**159.67**	**359

comp=Z,1.2nm,0.3s,baz=216,slow=28,SNR=9.8
MSF Maaselka 3.44 106 *e*P **Pn 18 06 05.5 +0.6**
MSF *e*S **Sn 18 06 46.3 0.0**
KU6 Riekki 3.72 102 *e*P **Pn 18 06 09.2 +0.4**
KU6 *e*S **Sn 18 06 52.7 -0.5**
KJN Kajaani 4.09 134 *e*P **Pn 18 06 15.2 +1.3**
KJN *e*S **Sn 18 07 01.8 -0.5**
VAF Ylistaro 4.09 169 *e*P **Pn 18 06 15.1 +1.2**
VAF *e*S **Sn 18 07 01.7 -0.6**
FINES FINESS Array B 6.05 156 Pn **Pn 18 06 42.0 +1.2**
comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=6.8
FINES Sn **Sn 18 07 49.1 -1.5**
comp=Z,0.3nm,0.3s,baz=350,slow=22,SNR=7.6
FINES Lg 18 08 20.9
comp=Z,0.2nm,0.3s,baz=351,slow=25,SNR=3.1
NOA NORSAR Array B 7.38 220 Pn **Pn 18 06 57.9 -1.1**
comp=Z,0.1nm,0.3s,baz=36,slow=14,SNR=2.6
NOA Sn **Sn 18 08 22.6 -0.8**
comp=Z,0.1nm,0.3s,baz=320,slow=24,SNR=2.4
NOA Lg 18 09 03.7
comp=Z,0.1nm,0.3s,baz=131,slow=25,SNR=2.5

NEIC ***20*** *18:07:46.1±0.5, 423N×7863W, h10km, mb4.8/2, Error ellipse: s-maj=13.0km s-min=11.6km az=208.0*
ISCJB ***20*** *18:07:51.8±2.6, 48N±0.1×784W±0.2, h49km±30km, mb4.0/7, Error ellipse: s-maj=27.1km s-min=15.3km az=19.1*
IDC ***20*** *18:07:53.6±3.0, 468N×7841W, h53km±29km, mb3.4/5, mb1 3.9/8, mb1mx3.7/19, mbtmp3.7/8, ML4.1/1, Error ellipse: s-maj=32.9km s-min=22.2km az=43.0*

ISC 20 18:07:54.3±1.9, 48N±01×784W±01, h54km±24km, n20, σ0°73/15, mb4.0/7, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ROSC	**El Rosal**	**4.04**	**88**	P		**Pn**	**18 08 53.7**	**0.0**
	2.2nm,0.3s,baz=270,slow=20,SNR=3.1							
OTAV	**Otavalo**	**4.48**	**181**	*e*Sn		**Sn**	**18 09 42.4**	**-8.1**
SDV	**Santo Domingo**	**8.73**	**61**	*e*Pn		**Pn**	**18 09 58.1**	**+0.2**
	18nm,1.0s							
ATAH	**Atahualpa**	**11.67**	**180**	P		**Pn**	**18 10 37.9**	**-0.3**
	1.4nm,0.3s,baz=4.7,slow=14,SNR=3.7							
SDDR	**Presa de Saban**	**15.75**	**26**	P		**Pn**	**18 11 26.8**	**-5.9**
NNA	**Nana**	**16.70**	**175**	P		**Pn**	**18 11 45.0**	**+0.3**
	2.2nm,0.3s,baz=352,slow=9.9,SNR=9.7							
TXAR	**Lajitas Array**	**34.21**	**318**	P		**P**	**18 14 33.2**	**-1.7**
TXAR	**Lajitas Array**	**34.21**	**318**	P		**P**	**18 14 33.2**	**-1.7**
	0.2nm,0.3s,mb3.5,baz=168,slow=4.6,SNR=6.4							
PDAR	**Pinedale Array**	**46.88**	**329**	P		**P**	**18 16 20.0**	**+0.8**
	0.4nm,0.7s,mb3.5,baz=125,slow=7.8,SNR=2.9							
NVAR	**Mina Array Bea**	**49.37**	**318**	P		**P**	**18 16 39.8**	**+1.3**
	0.3nm,0.6s,mb3.5,baz=120,slow=6.4,SNR=3.4							
HLID	**Hailey**	**50.03**	**326**	P		**P**	**18 16 43.7**	**+0.2**
	1.1nm,0.7s,mb4.0							
YKA	**Yellowknife Ar**	**63.51**	**342**	P		**P**	**18 18 17.8**	**-0.8**
YKA	**Yellowknife Ar**	**63.51**	**342**	P		**P**	**18 18 17.8**	**-0.8**
	1.7nm,0.7s,mb4.2,baz=133,slow=6.5,SNR=16							
INK	**Inuvik**	**73.25**	**341**	*e*P		**P**	**18 19 19.5**	**+0.1**
	57nm,0.8s,mb5.5							
TORD	**Torodi Ar. Bea**	**79.29**	**78**	P		**P**	**18 19 54.5**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=285,slow=7.3,SNR=4.0							
MKAR	**Makanchi Array**	**125.91**	**16**	PKP		PKPdf	18 26 49.5	-0.8
	0.3nm,0.5s,baz=298,slow=2.9,SNR=6.0							
SONM	**Songino Array**	**127.47**	**356**	PKP		PKPdf	18 26 53.3	0.0
	0.7nm,0.6s,baz=321,slow=1.2,SNR=7.0							
ASAR	**Alice Springs**	**143.64**	**236**	PKhKP			18 27 19.8	
	1.8nm,0.7s,baz=113,slow=3.9,SNR=25							
WB2	**Warramunga Arr**	**144.74**	**242**	*e*P		PKPdf	18 27 23.9	-2.1
WRA	**Warramunga Arr**	**144.75**	**242**	PKP		PKPdf	18 27 23.2	-2.8
	3.5nm,0.8s,baz=108,slow=2.9,SNR=27							

MAN 20 18:16:39, 953N×12614E, h4km, mb4.5, ML3.3, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**0.69**	**292**	*i* P		Pg	18 16 53.0	+0.7
SCPH				*i* S		Sg	18 17 03.0	+1.7
MSLP	**Maasin**	**1.40**	**296**	*e*P		Pn	18 17 04.3	-1.0
MSLP				*e*S		Sb	18 17 24.2	+0.2
BUKP	**Musuan**	**1.95**	**213**	*e*P		Pn	18 17 13.2	+0.3
BUKP				*e*S		Sn	18 17 39.4	+1.5
PLP	**Palo**	**1.99**	**325**	*e*P		Pn	18 17 12.3	-1.2
PLP				*e*S		Sn	18 17 37.6	-1.2
BESP	**Borongan**	**2.18**	**342**	*e*P		Pn	18 17 16.0	0.0
BESP				*e*S		Sn	18 17 45.4	+2.0
TBP	**Tagbilaran**	**2.25**	**274**	*e*P		Pn	18 17 18.2	+1.1
PVCP	**Virac**	**4.49**	**334**	*e*P		Pn	18 17 49.7	+1.9

IDC 20 18:30:08.7±5.9, 3078S×17920W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/13, mbtmp3.6/2, Error ellipse: s-maj=228.1km s-min=58.7km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**42.05**	**268**	P		P	18 38 01.6	-0.7
	0.5nm,0.8s,baz=110,slow=7.3,SNR=12							
WRA	**Warramunga Arr**	**43.08**	**273**	P		P	18 38 11.2	+0.6
	0.7nm,0.4s,baz=113,slow=8.0,SNR=24							
FINES	**FINESS Array B**	**145.13**	**339**	PKPbc		PKPbc	18 49 46.0	-0.9
	1.1nm,0.6s,baz=51,slow=3.7,SNR=4.6							

IDC 20 18:30:18.1±2.2, 406N×12341E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/17, mbtmp3.3/3, Error ellipse: s-maj=317.4km s-min=25.2km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.16**	**156**	P		P	18 35 54.5	+0.2
	0.3nm,0.3s,baz=335,slow=9.7,SNR=9.7							
ASAR	**Alice Springs**	**29.39**	**160**	P		P	18 36 23.3	0.0
	0.1nm,0.3s,baz=337,slow=6.8,SNR=7.4							
MKAR	**Makanchi Array**	**55.43**	**327**	P		P	18 39 54.4	0.0
	0.1nm,0.4s,baz=122,slow=7.6,SNR=2.2							

NIED ***20*** *18:35:00, 4250N×14380E, h59km, Mw3.8 Best double couple: M05.31000×10^14 NP1:φs78.00000°, δ10.00000°, λ-156.00000°. NP2:φs325.00000°, δ86.00000°, λ-80.00000°.*
ISCJB ***20*** *18:35:19.4±0.5, 4251N±005×14385E±006, h61km±5km, mb3.5/5, Error ellipse: s-maj=8.9km s-min=5.3km az=143.3*
JMA ***20*** *18:35:20.0±0.1, 4254N×14384E, h61km±2km, M3.8*
JMA Felt I J1.
MOS ***20*** *18:35:20.1±1.6, 4244N×14389E, h77km, mb3.8/2, Error ellipse: s-maj=25.1km s-min=13.2km az=81.2*
IDC ***20*** *18:35:21.4±3.5, 4253N×14409E, h73km±23km, mb3.2/5, mb1 3.4/6, mb1mx3.2/18, mbtmp3.2/6, MS2.5/1, Ms1 2.5/1, ms1mx2.3/13, Error ellipse: s-maj=58.9km s-min=17.3km az=76.0*

ISC 20 18:35:20.5±0.5, 4253N±005×14385E±006, h54km±5km, n28, σ0°82/39, mb3.5/5, 6C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCH	**Churui**	**0.37**	**283**	⇑P		**Pn**	**18 35 30.9**	**+0.3**
JCH				*e*S		**Sn**	**18 35 38.1**	**+0.2**
JOB	**Onbets**	**0.37**	**359**	⇓P		**Pn**	**18 35 30.9**	**+0.2**
JOB				*e*S		**Sn**	**18 35 38.4**	**+0.4**
JEM	**Erimo**	**0.72**	**225**	P		**Pn**	**18 35 33.9**	**-0.9**
JAR	**Ashorobuto**	**0.77**	**356**	⇑P		**Pn**	**18 35 35.2**	**-0.1**
JAR				*e*S		**Sn**	**18 35 45.9**	**-0.2**
JAK	**Akkeshi**	**0.78**	**53**	⇓P		**Pn**	**18 35 34.7**	**-0.8**
JAK				*e*S		**Sn**	**18 35 45.5**	**-0.9**
JNBK	**Urakawa-nobuka**	**0.85**	**253**	⇑P		**Pn**	**18 35 36.0**	**-0.3**
JFR	**Furan**	**1.12**	**305**	P		**Pn**	**18 35 39.8**	**-0.1**
JFR				*e*S		**Sn**	**18 35 53.6**	**-0.7**
JBT2	**Biratori 2**	**1.12**	**283**	⇑P		**Pn**	**18 35 39.4**	**-0.6**
JNK	**Nakash**	**1.23**	**31**	⇓P		**Pn**	**18 35 40.7**	**-0.8**
JNK				*e*S		**Sn**	**18 35 55.7**	**-1.4**
JTKR	**Abashiri--Toko**	**1.44**	**2**	⇑P		**Pn**	**18 35 44.7**	**+0.4**
JTKR				*e*S		**Sn**	**18 36 02.6**	**+0.5**
JMP	**Maruseppu**	**1.52**	**347**	⇑P		**Pn**	**18 35 45.5**	**+0.2**
JMP				*e*S		**Sn**	**18 36 02.9**	**-1.1**
JAB	**Ashibetsu**	**1.54**	**310**	P		**Pn**	**18 35 46.9**	**+1.3**
JKK2	**Kamakawa 2**	**1.56**	**329**	P		**Pn**	**18 35 46.5**	**+0.6**
ASAJ	**Asahikawa**	**1.83**	**331**	PN		**Pn**	**18 35 50.5**	**+1.0**
ASAJ				S		**Sn**	**18 36 16.3**	**+4.8**
ASAJ				pmax	pmax			
	comp=Z,7.0nm,0.3s							
ASAJ				smax				
	comp=N,22nm,0.3s							
ASAJ	**Asahikawa**	**1.83**	**331**	P		**Pn**	**18 35 50.5**	**+1.0**
	comp=N,7.3nm,0.3s,baz=169,slow=10.0,SNR=57							
ASAJ				S		**Sn**	**18 36 16.3**	**+4.8**
	comp=N,22nm,0.3s,baz=348,slow=20,SNR=12							
YUK	**Yuzh-Kuril'sk**	**2.10**	**44**	*e*PN		**Pn**	**18 35 54.4**	**+1.1**
YUK				*e*S		**Sn**	**18 36 18.0**	**-0.3**
YUK				pmax	pmax			
	comp=Z,570nm,0.3s							
YUK				smax				
	comp=N,2μm,0.5s							
YUK				smax				
	comp=E,2μm,0.5s							
YUK				smax				
	comp=N,3μm,0.7s							
YUK				smax				
	comp=E,3μm,0.7s							
KUR	**Kuril'sk**	**3.97**	**46**	*e*PN		**Pn**	**18 36 20.0**	**+1.2**
KUR				*e*S		**Sn**	**18 37 07.0**	**+3.0**
KUR				pmax	pmax			
	comp=N,60nm,0.8s							
KUR				pmax	pmax			
	comp=Z,110nm,0.8s							
KUR				smax				
	comp=N,320nm,0.8s							
KUR				smax				
	comp=E,220nm,0.8s							
YSS	**Yuzh-Sakhalins**	**4.49**	**350**	*e*PN		**Pn**	**18 36 31.8**	**+5.8**
YSS				*e*			18 37 17.0	
MJAR	**Matsushiro Arr**	**7.40**	**218**	PN		**Pn**	**18 37 06.4**	**+0.6**
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MJAR	**Matsushiro Arr**	**7.40**	**218**	P		**Pn**	**18 37 06.4**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=34,slow=14,SNR=6.4							
KSRS	**Korea Array**	**13.22**	**253**	LR		LR	18 43 01.4	
	comp=Z,24nm,21.9s,baz=55,slow=34							
SONM	**Songino Array**	**26.74**	**294**	P		**P**	**18 40 55.2**	**+0.4**
SONM				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SONM	**Songino Array**	**26.74**	**294**	P		**P**	**18 40 55.2**	**+0.4**
	comp=Z,0.6nm,0.6s,mb3.3,baz=87,slow=8.2,SNR=7.0							
MKAR	**Makanchi Array**	**43.01**	**298**	P		**P**	**18 43 14.5**	**+0.1**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**43.01**	**298**	P		**P**	**18 43 14.5**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.5,baz=84,slow=8.7,SNR=8.1							
WRA	**Warramunga Arr**	**62.77**	**190**	P		**P**	**18 45 39.3**	**-0.9**
	comp=Z,0.4nm,0.7s,mb3.6,baz=4.5,slow=6.7,SNR=3.1							
FINES	**FINESS Array B**	**64.84**	**332**	P		**P**	**18 45 51.7**	**-1.6**
	comp=Z,0.4nm,0.5s,mb3.7,baz=62,slow=5.2,SNR=4.4							
ASAR	**Alice Springs**	**66.50**	**190**	P		**P**	**18 46 05.0**	**+0.6**
	comp=Z,0.2nm,0.7s,mb3.2,baz=20,slow=7.0,SNR=4.1							

ISCJB ***20*** *18:45:31.8±0.3, 3635N±002×71.13E±003, h203km±3km, mb4.3/80, Error ellipse: s-maj=4.5km s-min=2.9km az=153.1*
IDC ***20*** *18:45:33.0±4.0, 3628N×7108E, h203km±37km, mb4.0/22, mb1 4.1/24, mb1mx4.1/25, mbtmp4.0/24, Error ellipse: s-maj=16.2km s-min=8.5km az=9.0*
MOS ***20*** *18:45:32.9±0.8, 3644N×7110E, h211km, mb4.3/48, Error ellipse: s-maj=7.3km s-min=5.0km az=110.0*
NEIC ***20*** *18:45:33.4±0.7, 3641N×7116E, h203km±6km, mb4.3/44, Error ellipse: s-maj=6.0km s-min=3.8km az=198.0*
BJI ***20*** *18:45:34.6, 3644N×7120E, h201km, mB4.6, mb4.6*
NNC ***20*** *18:45:39.4±2.4, 3694N×7121E, h213km±19km, mb3.8, mpv5.4, Error ellipse: s-maj=21.5km s-min=12.5km az=28.0*

ISC 20 18:45:32.9±0.3, 3639N±002×7112E±003, h196km±3km, h208km±8.6km; pP-P, n254, σ1°03/288, mb4.2/79, 15C-26D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**2.64**	**165**	⇓P		**Pn**	**18 46 21.0**	**+2.8**
CHCP	**Chirah Chowk**	**3.24**	**146**	⇓P		**Pn**	**18 46 27.9**	**+2.6**
THW	**Thamme Wali**	**3.62**	**172**	P		**Pn**	**18 46 32.3**	**+2.4**
SBDP	**Sheikh Budin**	**4.08**	**184**	P		**Pn**	**18 46 37.4**	**+1.8**
DRP	**Derazinda**	**4.69**	**190**	P		**Pn**	**18 46 39.3**	**-4.0**
JMU	**Jammu**	**4.81**	**138**	*ex*		x	18 47 02.5	
JMU				*e*S		**Sn**	**18 47 40.5**	**-0.9**
KSH	**Kashi**	**4.95**	**49**	⇓*i*P		**Pn**	**18 46 48.1**	**+1.6**
KSH				S		**Sn**	**18 47 43.8**	**-0.7**
KSH				Smax				
	comp=N,5μm,0.5s							
KSH				Smax				
	comp=E,3μm,0.6s							
THN	**Thein Dam**	**5.48**	**135**	*e*P		**Pn**	**18 46 54.9**	**+1.5**
THN				*e*S		**Sn**	**18 47 56.3**	**-0.5**
DLH	**Dalhousie**	**5.55**	**132**	*e*P		**Pn**	**18 46 54.0**	**-0.2**
DLH				*e*S		**Sn**	**18 47 56.0**	**-2.4**
PONG	**Pong**	**5.97**	**136**	*e*P		**Pn**	**18 47 10.0**	**+10**
PONG				*e*S		**Sn**	**18 48 15.5**	**+7.3**
AML	**Almayashu**	**6.08**	**18**	⇓*i*Pn		**Pn**	**18 47 01.4**	**+0.5**
AML				*e*Sn		**Sn**	**18 48 04.6**	**-6.0**
AML	**Almayashu**	**6.08**	**18**	P		**Pn**	**18 47 01.4**	**+0.4**
	SNR=1207							
UCH	**Uchtor**	**6.40**	**23**	⇓*i*Pn		**Pn**	**18 47 05.6**	**+0.5**
	comp=E,389nm,0.6s							
UCH				*e*Sn		**Sn**	**18 48 15.6**	**-2.6**
UCH	**Uchtor**	**6.40**	**23**	P		**Pn**	**18 47 05.7**	**+0.5**
	SNR=299							
KZA	**Kyzart**	**6.53**	**28**	P		**Pn**	**18 47 06.5**	**-0.3**
	SNR=163							
EKS2	**Erkin-Say**	**6.59**	**17**	⇓*i*Pn		**Pn**	**18 47 08.0**	**+0.3**
	comp=E,223nm,0.6s							
EKS2				*e*Sn		**Sn**	**18 48 13.3**	**-9.5**
EKS2	**Erkin-Say**	**6.59**	**17**	P		**Pn**	**18 47 07.9**	**+0.2**
	SNR=390							
KK31	**Karatay Array**	**6.72**	**356**	P		**Pn**	**18 47 09.5**	**+0.1**
	comp=E,82nm,0.3s,baz=182,slow=13,SNR=6675							
KK31				⇓S		**Sn**	**18 48 20.7**	**-5.1**
	comp=E,31nm,0.3s,baz=185,slow=23,SNR=4.3							
AAK	**Ala-Archa**	**6.76**	**22**	P		**Pn**	**18 47 10.5**	**+0.7**
	SNR=355							
KBK	**Karagaybulak**	**6.93**	**24**	P		**Pn**	**18 47 12.7**	**+0.7**
	SNR=387							
FRU	**Bishkek**	**6.98**	**22**	⇓*i*PN		**Pn**	**18 47 13.0**	**+0.3**
FRU				pmax	pmax			
	comp=Z,360nm,1.0s							
ULHL	**Ulahol**	**7.07**	**33**	P		**Pn**	**18 47 13.7**	**-0.2**
	SNR=22							
QUE	**Quetta**	**7.10**	**211**	*e*P		**Pn**	**18 47 25.0**	**+11**
QUE				*e*S		**Sn**	**18 48 42.0**	**+7.2**
CHMS	**Chumysh**	**7.17**	**22**	P		**Pn**	**18 47 15.2**	**0.0**
	SNR=196							
USP	**Ospenovka**	**7.35**	**20**	P		**Pn**	**18 47 16.9**	**-0.6**
	SNR=263							
TKM2	**Tokmak 2**	**7.38**	**27**	⇑P		**Pn**	**18 47 17.9**	**-0.1**
	comp=Z,335nm,0.8s							
TKM2				⇓S		**Sn**	**18 48 36.9**	**-4.5**
	comp=Z,68nm,1.1s							
TKM2	**Tokmak 2**	**7.38**	**27**	⇓*i*Pn		**Pn**	**18 47 18.1**	**+0.1**
	comp=Z,461nm,0.9s							
TKM2	**Tokmak 2**	**7.38**	**27**	⇓*i*PN		**Pn**	**18 47 18.1**	**+0.2**
TKM2				pmax	pmax			
	comp=Z,461nm,0.9s							
TKM2	**Tokmak 2**	**7.38**	**27**	P		**Pn**	**18 47 18.0**	**+0.1**
	SNR=501							
KLP	**Kalpa**	**7.65**	**127**	*e*P		**Pn**	**18 47 21.9**	**+0.3**
KLP				*e*S		**Sn**	**18 48 43.1**	**-4.9**
KKR	**Kurukshetra**	**7.99**	**142**	*e*P		**Pn**	**18 47 23.2**	**-2.9**
KKR				AML		AML	18 48 53.1	
	comp=Z,281nm,0.5s							
KNDC	**Almaty**	**8.17**	**32**	⇑P		**Pn**	**18 47 28.9**	**+0.7**
	comp=Z,108nm,0.5s							
DDI	**Dehra Dun**	**8.38**	**134**	*e*P		**Pn**	**18 47 32.0**	**+0.9**
DDI				*ex*		x	18 48 42.5	
KHET	**Khetri**	**9.19**	**153**	*e*P		**Pn**	**18 47 39.2**	**-2.4**
KHET				*e*S		**Sn**	**18 49 16.2**	**-8.3**
KHET				AML		AML	18 49 21.9	
	comp=N,132nm,0.4s							
KHET				AML		AML	18 49 23.2	
	comp=E,173nm,0.2s							
NDI	**New Delhi**	**9.25**	**144**	*e*P		**Pn**	**18 47 42.0**	**-0.4**
NDI				*e*S		**Sn**	**18 49 21.0**	**-4.9**
KUDL	**Kundal**	**9.39**	**150**	*e*P		**Pn**	**18 47 42.1**	**-2.2**
KUDL				*e*S		**Sn**	**18 49 22.4**	**-7.0**
KUDL				AML		AML	18 49 24.5	
	comp=E,283nm,0.6s							
KUDL				AML		AML	18 49 26.1	
	comp=N,88nm,0.4s							
SONA	**Sohna**	**9.55**	**146**	*e*P		**Pn**	**18 47 43.7**	**-2.7**
SONA				*e*S		**Sn**	**18 49 24.1**	**-9.1**
SONA				AML		AML	18 49 29.1	
	comp=N,111nm,0.3s							
SONA				AML		AML	18 49 29.4	
	comp=E,177nm,0.3s							
AJM	**Ajmer**	**10.32**	**162**	*e*P		**Pn**	**18 47 56.0**	**-0.4**
AJM				*ex*		**Sn**	**18 49 47.0**	**-4.7**
LGTI	**Lohaghat**	**10.33**	**129**	*e*P		**Pn**	**18 47 53.7**	**-2.7**
LGTI				*e*S		**Sn**	**18 49 42.5**	**-9.2**
AGRA	**Agra**	**10.82**	**146**	*e*P		**Pn**	**18 48 02.1**	**-0.7**
AGRA				*ex*		**Sn**	**18 49 46.6**	**-17**
AGRA				AML		AML	18 50 02.4	
	comp=N,164nm,0.4s							
AGRA				AML		AML	18 50 02.4	
	comp=E,157nm,0.5s							
MK31	**Makanchi Array**	**13.33**	**35**	⇑P		**Pn**	**18 48 33.8**	**-0.6**
	comp=E,5.3nm,0.2s							
MK31	**Makanchi Array**	**13.33**	**35**	*i* P		**Pn**	**18 48 33.7**	**-0.7**
MK31				pmax	pmax			
	comp=Z,5.0nm,0.2s							
MKAR	**Makanchi Array**	**13.33**	**35**	P		**Pn**	**18 48 33.8**	**-0.6**
MKAR				S		**Sn**	**18 51 04.9**	**+2.0**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.3s							
MKAR	**Makanchi Array**	**13.33**	**35**	P		**Pn**	**18 48 33.8**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=218,slow=14,SNR=120							
MKAR				S		**Sn**	**18 51 04.9**	**+2.0**
	baz=221,slow=17,SNR=4.1							
KOLN	**Koldanda**	**13.62**	**126**	*e*P		**Pn**	**18 48 37.9**	**-0.4**
	comp=Z,81nm,0.5s							
GKN	**Gorkha**	**14.16**	**122**	*e*P		**Pn**	**18 48 44.8**	**-0.2**
	comp=Z,108nm,0.5s							
GKN				*e*S		**Sn**	**18 51 13.3**	**-10**
WMQ	**Urumqi**	**14.69**	**55**	P		**Pn**	**18 48 51.3**	**0.0**
WMQ				XP			18 49 43.8	
WMQ				S		**Sn**	**18 51 27.9**	**-7.5**
WMQ				PCP		PcP	18 53 50.8	+1.7
WMQ				AMB	AMB			
	comp=Z,12nm,0.7s							
WMQ				AMB	AMB			
	comp=Z,102nm,5.2s							
WMQ				LR	LR			
	comp=N,30nm,15.1s							
WMQ				LR	LR			
	comp=E,23nm,14.0s							
WMQ				LR	LR			
	comp=Z,36nm,13.0s							
KKN	**Kakani**	**14.74**	**122**	*e*P		**Pn**	**18 48 52.3**	**+0.2**
	comp=Z,106nm,0.4s							
KURBB	**Kurchatov Arra**	**15.20**	**18**	⇑P		**Pn**	**18 48 55.7**	**-1.8**
	comp=Z,1.4nm,0.5s							
AB31	**Akbulak array**	**15.23**	**331**	⇓P		**Pn**	**18 48 57.1**	**-0.7**
	comp=Z,22nm,0.5s							
AB31				⇑S		**S**	**18 51 43.1**	**-3.6**
	comp=Z,15nm,0.8s,baz=147,slow=23,SNR=7.2							
JBP	**Jabalpur**	**15.25**	**147**	⇓*e*P		**Pn**	**18 48 57.6**	**-0.7**
JBP				*ex*		x	18 49 01.8	
	comp=Z,31nm,0.3s							
JBP				*i* x		**S**	**18 51 39.0**	**-8.7**
KURK	**Kurchatov**	**15.31**	**18**	⇓P		**Pn**	**18 48 57.1**	**-1.7**
	comp=Z,5.7nm,0.9s							
KURK	**Kurchatov**	**15.31**	**18**	⇓*e*P		**Pn**	**18 48 56.5**	**-2.3**
	comp=Z,10nm,0.8s							
KURK	**Kurchatov**	**15.31**	**18**	⇓*e*P		**Pn**	**18 48 56.5**	**-2.3**
KURK				pmax	pmax			
	comp=Z,10.0nm,0.8s							
JIRN	**Jiri**	**15.45**	**120**	*e*P		**Pn**	**18 49 01.5**	**+0.7**
	comp=Z,97nm,0.4s							
JIRN				*e*S		**S**	**18 51 44.4**	**-7.8**
BRVK	**Borovoye**	**16.68**	**358**	⇓P		**Pn**	**18 49 14.9**	**-0.4**
	comp=Z,5.1nm,0.5s							
BRVK	**Borovoye**	**16.68**	**358**	*e*P		**Pn**	**18 49 14.4**	**-0.9**
	comp=Z,22nm,0.4s							
BRVK				*e*			18 50 10.3	
BRVK				*e*S		**S**	**18 52 15.5**	**-2.7**
BRVK	**Borovoye**	**16.68**	**358**	*e*P		**Pn**	**18 49 14.4**	**-0.8**
BRVK				*e*S		**S**	**18 52 15.5**	**-2.7**
BRVK				pmax	pmax			
	comp=Z,22nm,0.4s							
TAPN	**Taplejung**	**16.71**	**118**	*e*P		**Pn**	**18 49 16.9**	**+1.0**
	comp=Z,28nm,0.3s							
ODAN	**Odare**	**16.78**	**120**	*e*P		**Pn**	**18 49 18.2**	**+1.4**
	comp=Z,43nm,0.5s							
AKTK	**Aktyubinsk**	**16.92**	**330**	P		**Pn**	**18 49 17.2**	**-1.0**
AKTO	**Aktyubinsk**	**16.92**	**330**	⇓P		**Pn**	**18 49 18.1**	**-0.1**
	comp=Z,3.3nm,0.7s							
AKTO				⇓S		**S**	**18 52 20.4**	**-2.7**
	comp=Z,5.5nm,1.9s							
AKTO	**Aktyubinsk**	**16.92**	**330**	P		**Pn**	**18 49 17.2**	**-1.0**
AKTO				pmax	pmax			
	comp=Z,5.0nm,0.3s							
AKTO	**Aktyubinsk**	**16.92**	**330**	P		**Pn**	**18 49 17.2**	**-1.0**
	comp=Z,5.1nm,0.3s,baz=137,slow=11,SNR=146							
CHKZ	**Chkalovo**	**17.29**	**359**	*i* P		**Pn**	**18 49 22.4**	**-0.1**
CHKZ				pmax	pmax			
	comp=Z,11nm,0.5s							
LSA	**Lhasa**	**18.06**	**106**	P		**P**	**18 49 34.8**	**+5.2**
LSA	**Lhasa**	**18.06**	**106**	*e*P		**P**	**18 49 33.2**	**+3.7**
	comp=Z,7.1nm,0.6s							
LSA	**Lhasa**	**18.06**	**106**	*e*P		**P**	**18 49 33.2**	**+3.6**
LSA				pmax	pmax			
	comp=Z,7.0nm,0.6s				

MALT Malatya 25.98 284 *e*P **P 18 50 49.5 +2.1**
MALT pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
MOY Mondy 26.12 45 *e*P **P 18 50 50.5 +2.0**
LZH Lanzhou 26.34 81 *e*P **P 18 50 50.5 -0.1**
LZH AP pP 18 51 29.5 -0.7
LZH XP sP 18 51 52.5 -0.5
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.6
LZH AMB AMB
comp=Z,63nm,4.1s
ANN Anapa 26.77 299 *e*P **P 18 50 59.0 +4.6**
ANN pmax pmax
comp=Z,24nm,1.3s,mb4.7
ZAK Zakamensk 27.00 49⇑*i*P **P 18 50 57.3 +1.0**
ZAK *e* 18 51 43.7
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.8
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.4
CD2 Chengdu 27.64 92 *e*P **P 18 51 03.9 +1.6**
CD2 PP PP 18 52 02.3 -6.3
CD2 XP sP 18 52 08.8 +4.0
CD2 S **S 18 55 28.8 -0.6**
CD2 XS sS 18 56 41.8 +1.3
CD2 SS SS 18 57 07.8 -27
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,20nm,5.4s
TLY Talaya 27.65 46 *e*P **P 18 51 03.3 +1.2**
comp=Z,1.5nm,0.6s,mb3.8
TLY Talaya 27.65 46 *e*P **P 18 51 03.7 +1.6**
TLY pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
SONM Songino Array 28.32 55 P **P 18 51 08.7 +0.6**
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 28.32 55 P **P 18 51 08.7 +0.6**
comp=Z,2.7nm,0.6s,mb4.0,baz=268,slow=8.9,SNR=29
ASF Jabal al Asfar 28.50 272 P **P 18 51 09.6 -0.3**
ASF pmax pmax
comp=Z,2.0nm,0.7s
ASF Jabal al Asfar 28.50 272 P **P 18 51 09.6 -0.3**
comp=Z,1.6nm,0.7s,mb3.8,baz=292,slow=7.6,SNR=3.8
ULN Ulaanbaatar 28.77 55 *e*P **P 18 51 12.0 0.0**
comp=Z,2.4nm,0.7s,mb3.9
ULN Ulaanbaatar 28.77 55⇑*e*P **P 18 51 12.3 +0.3**
KMI Kunming 29.28 104 P **P 18 51 20.3 +3.4**
KMI AMB AMB
comp=Z,5.0nm,0.9s,mb4.1
MMAI Mount Meron Ar 29.45 274 P **P 18 51 17.6 -0.7**
comp=Z,1.5nm,0.6s,mb3.8,baz=48,slow=14,SNR=4.2
BRTR Keskin Array B 29.56 288 P **P 18 51 20.0 +0.9**
BRTR pmax pmax
comp=Z,4.0nm,0.7s
BRTR Keskin Array B 29.56 288 P **P 18 51 20.0 +0.9**
comp=Z,4.2nm,0.7s,mb4.2,baz=98,slow=9.5,SNR=32
PRGR Permogore 29.91 336⇑*i*P **P 18 51 21.2 -0.8**
OBN Obninsk 30.08 319 *e*P **P 18 51 23.6 0.0**
comp=Z,14nm,0.6s,mb4.8
OBN Obninsk 30.08 319 *d i*P **P 18 51 24.3 +0.7**
OBN pmax pmax
comp=Z,19nm,0.8s,mb4.8
PALK Pallekele 30.27 161 *e*P **P 18 51 26.5 +0.8**
comp=Z,6.2nm,0.7s,mb4.3
HHC Hu-ho-hao-te 31.72 69 *e*P **P 18 51 39.8 +1.7**
HHC AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
HHC AMB AMB
comp=Z,93nm,4.3s
GYA Guiyang 31.76 98 P **P 18 51 40.3 +1.7**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
AKASG Malin Array Be 33.09 309 P **P 18 51 49.8 -0.1**
AKASG 18 53 09.3
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 33.09 309 P **P 18 51 49.8 -0.1**
comp=Z,5.1nm,0.6s,mb4.2,baz=79,slow=7.4,SNR=26
AKASG PP PP 18 53 09.3 +0.5
comp=Z,2.1nm,0.7s,baz=95,slow=11,SNR=6.5
CIT Chita 33.66 49 *e*P **P 18 51 55.7 +0.9**
CIT pmax pmax
comp=Z,17nm,1.4s,mb4.4
BJT Baijiatuau 35.30 70 *e*P **P 18 52 09.7 +0.6**
comp=Z,9.6nm,0.6s,mb4.5
BJT Baijiatuau 35.30 70 *e*P **P 18 52 09.7 +0.6**
BJT pmax pmax
comp=Z,10.0nm,0.6s
BJI Beijing 35.31 70 P **P 18 52 10.8 +1.7**
BJI AMB AMB
comp=Z,14nm,0.6s,mb4.7
BOD Bodaibo 35.38 39 *e*P **P 18 52 09.5 0.0**
BOD *e* 18 52 56.8
BOD pmax pmax
comp=Z,4.0nm,0.9s,mb4.0
BOD pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
JOF Joensuu 36.01 330 *e*p **P 18 52 14.6 -0.2**
comp=Z,25nm,0.3s,mb5.2
JOF Joensuu 36.01 330 *e*P **P 18 52 14.6 -0.2**
JOF pmax pmax
comp=Z,25nm,0.3s,mb5.2
FINES FINESS Array B 37.63 326 P **P 18 52 29.0 +0.6**
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 37.63 326 P **P 18 52 28.9 +0.5**
comp=Z,6.2nm,0.4s,mb4.5,baz=125,slow=9.8,SNR=88
KAF Kangasniemi 37.77 327 *e*p **P 18 52 29.3 -0.3**
comp=Z,4.1nm,0.4s,mb4.3,baz=111,slow=8.4
KAF Kangasniemi 37.77 327 *e*P **P 18 52 29.3 -0.3**
KAF pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
NJ2 Nanjing 39.40 82 *e*P **P 18 52 42.5 -1.1**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb4.9
KOLL Kolacno 39.98 305 *e*P **P 18 52 49.7 +1.6**
MORC Moravsky Berou 40.51 307 *e*P **P 18 52 52.5 +0.1**
comp=Z,3.5nm,0.7s,mb3.9
MORC Moravsky Berou 40.51 307 *e*P **P 18 52 52.5 +0.1**
MORC pmax pmax
comp=Z,3.0nm,0.7s,mb3.8
MODS Modra-Piesok 40.74 304 *e*P **P 18 52 51.9 -2.5**
KEV Kevo 40.94 338 *e*P **P 18 52 56.1 +0.4**
comp=Z,10nm,0.7s,mb4.4
KEV Kevo 40.94 338 *e*P **P 18 52 56.1 +0.4**
KEV pmax pmax
comp=Z,11nm,0.7s,mb4.4
ARCES ARCESS Array B 41.28 338 P **P 18 52 58.8 +0.3**
ARCES pmax pmax
comp=Z,9.0nm,0.4s
ARCES ARCESS Array B 41.28 338 P **P 18 52 58.8 +0.3**
comp=Z,8.9nm,0.4s,mb4.6,baz=116,slow=8.0,SNR=178
CN2 Changchun 41.58 62 *e*P **P 18 52 59.8 -1.5**
KTK1 Kautokeino 41.76 336 *e*P **P 18 53 02.6 +0.3**
KTK1 AMb AMB 18 53 07.6
comp=Z,36nm,2.4s,mb4.4
TIP Timpagrande 42.51 291 P **P 18 53 08.8 -0.1**
BRG Berggiesshubel 42.77 308 *i* P **P 18 53 11.9 +1.2**
BRG pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
BRG Berggiesshubel 42.77 308 *i* P **P 18 53 11.9 +1.1**
comp=Z,8.3nm,0.8s,mb4.2
MOA Molln 42.80 304⇑*i*P **P 18 53 12.0 +1.0**
comp=Z,5.2nm,0.8s,mb4.0
GERES GERESS Array B 43.07 305 P **P 18 53 13.5 +0.3**
GERES 18 54 58.3
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES pmax pmax
comp=Z,1.0nm,0.9s
GERES GERESS Array B 43.07 305 P **P 18 53 13.5 +0.3**
comp=Z,0.9nm,0.7s,mb3.3,baz=66,slow=7.5,SNR=7.6
GERES PP PP 18 54 58.3 +1.0
comp=Z,1.3nm,0.9s,baz=81,slow=8.2,SNR=3.8
CLL Collm 43.34 309⇓*i*P **P 18 53 15.8 +0.5**
comp=Z,5.0nm,0.9s,mb3.9
CLL Collm 43.34 309⇓*i*P **P 18 53 15.8 +0.5**
CLL pmax pmax
comp=Z,5.0nm,0.9s,mb3.9
CLL Collm 43.34 309⇓*i*P **P 18 53 15.8 +0.5**
comp=Z,5.0nm,0.9s,mb3.9
TRO Tromso 43.41 336 *e*P **P 18 53 15.3 -0.3**
comp=Z,84nm,1.7s,mb4.9
TRO Tromso 43.41 336 *e*P **P 18 53 15.3 -0.3**
TRO AMb AMB 18 53 26.7
comp=Z,84nm,1.7s,mb4.9
MOR8 Moi Rana 43.96 331 *e*P **P 18 53 19.7 -0.3**
MOR8 AMb AMB 18 53 32.0
comp=Z,52nm,1.8s,mb4.6
YAK Yakutsk 44.01 35 *e*P **P 18 53 19.4 -1.0**
comp=Z,18nm,0.8s,mb4.5
YAK Yakutsk 44.01 35 *e*P **P 18 53 20.2 -0.3**
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.3
YAK pmax pmax
comp=E,5.0nm,1.4s
MOX Moxa 44.26 308 *e*P **P 18 53 22.4 -0.2**
MDJ Mudanjiang 44.38 61 P **P 18 53 30.6 +6.9**
MDJ AP pP 18 54 10.8 +4.7
MDJ XP sP 18 54 33.1 +5.0
MDJ AMB AMB
comp=Z,109nm,5.6s
NB2 NORSAR Subarra 44.53 323 P **P 18 53 24.3 -0.3**
comp=Z,5.5nm,0.5s,mb4.1,baz=99,slow=7.9
NB2 NORSAR Subarra 44.53 323 P **P 18 53 24.3 -0.3**
NB2 pmax pmax
comp=Z,6.0nm,0.5s,mb4.2
NOA NORSAR Array B 44.53 323 P **P 18 53 24.2 -0.4**
NOA pmax pmax
comp=Z,7.0nm,0.6s
NOA NORSAR Array B 44.53 323 P **P 18 53 24.2 -0.4**
comp=Z,7.1nm,0.6s,mb4.2,baz=97,slow=7.7,SNR=25
KSRS Korea Array 44.83 71 P **P 18 53 27.2 -0.2**
comp=Z,2.7nm,0.5s,mb3.9,baz=272,slow=6.9,SNR=10
KLR Kul'dur 45.14 54 *e*P **P 18 53 26.7 -2.9**
KONO Kongsberg 45.23 321⇑*e*P **P 18 53 30.1 -0.1**
FETA Feichten 45.28 303⇓*i*P **P 18 53 30.9 +0.1**
comp=Z,2.4nm,0.6s,mb3.7
DAVA Damuels 45.81 304⇓*i*P **P 18 53 35.4 +0.4**
comp=Z,12nm,0.6s,mb4.4
TIXI Tiksi 45.84 22 *e*P **P 18 53 34.2 -0.6**
comp=Z,9.0nm,0.6s,mb4.3
TIXI *e* 18 54 22.5
TIXI Tiksi 45.84 22 *c i*P **P 18 53 34.5 -0.3**
TIXI *e* pP 18 54 22.0 +4.6
TIXI pmax pmax
comp=Z,7.0nm,0.6s,mb4.2
CDF Champ du Feu 47.35 306 *e*P **P 18 53 46.8 -0.1**
HABR Khabarovsk 47.41 54 *e*P **P 18 53 46.6 -0.7**
HABR *e* 18 55 12.4
HABR *e* 18 55 41.2
HABR S **S 19 00 29.9 +3.8**
HINF Hinteralfeld 47.74 305 *e*P **P 18 53 49.9 +0.1**
comp=Z,10nm,0.7s,mb4.0
HINF Hinteralfeld 47.74 305 *e*P **P 18 53 49.9 +0.1**
comp=Z,5.3nm,0.7s,mb4.0
HINF Hinteralfeld 47.74 305 *e*P **P 18 53 49.9 +0.1**
HINF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
HAU Haudompre 48.04 305 *e*P **P 18 53 52.3 +0.2**
comp=Z,10nm,0.6s,mb4.1
HAU Haudompre 48.04 305 *e*P **P 18 53 52.3 +0.2**
comp=Z,5.2nm,0.6s,mb4.0
HAU Haudompre 48.04 305 *e*P **P 18 53 52.3 +0.2**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.0
LPG La Plagne 48.29 302 *e*P **P 18 53 54.9 +0.8**
comp=Z,4.4nm,0.4s,mb3.9
LPG La Plagne 48.29 302 *e*P **P 18 53 54.9 +0.8**
comp=Z,2.2nm,0.4s,mb3.8
LPG La Plagne 48.29 302 *e*P **P 18 53 54.9 +0.8**
LPG pmax pmax
comp=Z,2.0nm,0.4s,mb3.8
LPL La Plagne 48.29 302 *e*P **P 18 53 54.8 +0.7**
MBDF Montbardon 48.45 301 *e*P **P 18 53 55.3 0.0**
comp=Z,9.8nm,0.7s,mb4.0
MBDF Montbardon 48.45 301 *e*P **P 18 53 55.3 0.0**
comp=Z,4.9nm,0.7s,mb4.0
MBDF Montbardon 48.45 301 *e*P **P 18 53 55.3 0.0**
MBDF pmax pmax
comp=Z,5.0nm,0.7s,mb4.0
CABF La Chapelle 48.49 303 *e*P **P 18 53 55.7 +0.1**
comp=Z,11nm,0.6s,mb4.1
CABF La Chapelle 48.49 303 *e*P **P 18 53 55.7 +0.1**
comp=Z,5.5nm,0.6s,mb4.1
CABF La Chapelle 48.49 303 *e*P **P 18 53 55.7 +0.1**
CABF pmax pmax
comp=Z,6.0nm,0.6s,mb4.1
JNU Nakatsue 48.53 75 P **P 18 53 56.8 +0.7**
comp=Z,6.8nm,0.8s,mb4.0,baz=7.2,slow=6.2,SNR=6.0
ORIF Oris-en-Rattie 49.02 301 *e*P **P 18 54 00.2 +0.5**
BAIF Baives 49.04 308 *e*P **P 18 54 00.0 +0.3**
comp=Z,7.8nm,0.6s,mb3.9
BAIF Baives 49.04 308 *e*P **P 18 54 00.0 +0.3**
comp=Z,3.9nm,0.6s,mb3.9
BAIF Baives 49.04 308 *e*P **P 18 54 00.0 +0.3**
BAIF pmax pmax
comp=Z,4.0nm,0.6s,mb3.9
LOR Lormes 49.84 305 *e*P **P 18 54 05.5 -0.3**
VIVF Saint-Julien-l 49.87 301 *e*P **P 18 54 06.4 +0.3**
comp=Z,12nm,0.8s,mb4.0
VIVF Saint-Julien-l 49.87 301 *e*P **P 18 54 06.4 +0.3**
comp=Z,5.9nm,0.8s,mb4.0
VIVF Saint-Julien-l 49.87 301 *e*P **P 18 54 06.4 +0.3**
VIVF pmax pmax
comp=Z,6.0nm,0.8s,mb4.0
SMF Signal de Mont 49.99 304 *e*P **P 18 54 07.0 0.0**
comp=Z,13nm,0.5s,mb4.2
SMF Signal de Mont 49.99 304 *e*P **P 18 54 07.0 0.0**
comp=Z,6.6nm,0.5s,mb4.2
SMF Signal de Mont 49.99 304 *e*P **P 18 54 07.0 0.0**
SMF pmax pmax
comp=Z,7.0nm,0.5s,mb4.2
SSF Saint Saulge 50.12 305 *e*P **P 18 54 07.8 -0.1**
AVF Avril sur Loir 50.28 304 *e*P **P 18 54 09.1 -0.1**
comp=Z,19nm,0.7s,mb4.2
AVF Avril sur Loir 50.28 304 *e*P **P 18 54 09.1 -0.1**
comp=Z,9.5nm,0.7s,mb4.2
AVF Avril sur Loir 50.28 304 *e*P **P 18 54 09.1 -0.1**
AVF pmax pmax
comp=Z,10.0nm,0.7s,mb4.2
LASF Ste Croix 50.63 301 *e*P **P 18 54 12.3 +0.5**
HYF Humbligny 50.64 305 *e*P **P 18 54 12.3 +0.5**
BGF Bois d'Agland 50.68 304 *e*P **P 18 54 11.9 -0.2**
TCF Toulx Ste Croi 51.17 304 *e*P **P 18 54 16.2 +0.4**
comp=Z,4.4nm,0.4s,mb4.0
TCF Toulx Ste Croi 51.17 304 *e*P **P 18 54 16.2 +0.4**
comp=Z,2.2nm,0.4s,mb3.9
TCF Toulx Ste Croi 51.17 304 *e*P **P 18 54 16.2 +0.4**
TCF pmax pmax
comp=Z,2.0nm,0.4s,mb3.9
CAF Calviac 51.64 302 *e*P **P 18 54 19.7 +0.4**
MTLF Montolieu 51.98 300 *e*P **P 18 54 22.1 +0.3**
LDF La Druitiere 52.12 307 *e*P **P 18 54 22.3 -0.5**
comp=Z,5.1nm,0.3s,mb4.1
LDF La Druitiere 52.12 307 *e*P **P 18 54 22.3 -0.5**
comp=Z,2.5nm,0.3s,mb4.1
LDF La Druitiere 52.12 307 *e*P **P 18 54 22.3 -0.5**
LDF pmax pmax
comp=Z,3.0nm,0.3s,mb4.2
FLN La Foliniere 52.31 307 *e*P **P 18 54 23.7 -0.5**
comp=Z,6.0nm,0.4s,mb4.1
FLN La Foliniere 52.31 307 *e*P **P 18 54 23.7 -0.5**
comp=Z,3.0nm,0.4s,mb4.1
FLN La Foliniere 52.31 307 *e*P **P 18 54 23.7 -0.5**
FLN pmax pmax
comp=Z,3.0nm,0.4s,mb4.1
LFF La Frestale 52.53 303 *e*P **P 18 54 26.2 +0.3**
GRR Gorron 52.65 307 *e*P **P 18 54 26.3 -0.3**
MFF Saint Martin d 52.66 305 *e*P **P 18 54 26.8 0.0**
YSS Yuzh-Sakhalins 52.81 55 *e*P **P 18 54 27.8 -0.1**
comp=Z,9.3nm,0.8s,mb4.3
YSS Yuzh-Sakhalins 52.81 55⇑*e*P **P 18 54 28.1 +0.2**
YSS pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
MJAR Matsushiro Arr 52.91 68 P **P 18 54 28.1 -0.7**
MJAR pmax pmax
comp=Z,1.0nm,0.4s
MJAR Matsushiro Arr 52.91 68 P **P 18 54 28.1 -0.7**
comp=Z,0.7nm,0.4s,mb3.5,baz=300,slow=9.8,SNR=5.5
ETSF Etsaut 54.05 300 *e*P **P 18 54 37.4 +0.4**
comp=Z,20nm,0.6s,mb4.5
ETSF Etsaut 54.05 300 *e*P **P 18 54 37.4 +0.4**
comp=Z,10nm,0.6s,mb4.5
ETSF Etsaut 54.05 300 *e*P **P 18 54 37.4 +0.4**
ETSF pmax pmax
comp=Z,10.0nm,0.6s,mb4.5
ROSF Rostrenen 54.21 308 *e*P **P 18 54 37.8 -0.2**
QUIF Quistinic 54.26 307 *e*P **P 18 54 37.9 -0.5**
SEY Seymchan 54.46 34⇑*e*P **P 18 54 40.1 +0.5**
ESDC Sonseca Array 57.59 298 P **P 18 55 01.2 -0.9**
comp=Z,2.9nm,0.6s,mb4.1,baz=56,slow=7.6,SNR=9.8
BILL Bilibino 58.67 26⇓*i*P **P 18 55 09.8 +0.7**
BILL pmax pmax
comp=Z,8.0nm,1.2s,mb4.2
TORD Torodi Ar. Bea 65.81 269 P **P 18 55 55.6 -1.7**
comp=Z,7.4nm,0.5s,mb4.6,baz=49,slow=5.6,SNR=81
BATI Kupang 67.72 122 P **P 18 56 08.4 -1.0**
comp=Z,7.6nm,0.4s,mb4.6,baz=56,slow=0.4,SNR=11
RES Resolute Bay 68.82 356 *e*P **P 18 56 15.0 -0.3**
comp=Z,35nm,0.6s,mb5.2
RES Resolute Bay 68.82 356 *e*P **P 18 56 15.0 -0.3**
RES pmax pmax
comp=Z,35nm,0.6s,mb5.2
IMA2 Indian Mountai 72.20 18 *e*P **P 18 56 35.4 -0.5**
INK Inuvik 74.00 9 *e*P **P 18 56 46.5 +0.1**
comp=Z,237nm,0.5s
INK Inuvik 74.00 9 *e*P **P 18 56 46.5 +0.1**
INK pmax pmax
comp=Z,237nm,0.5s
COLA College 74.56 16 *e*P **P 18 56 49.6 0.0**
comp=Z,4.4nm,0.6s,mb4.3
COLA College 74.56 16⇓*i*P **P 18 56 49.5 -0.1**
FITZ Fitzroy Crossi 74.75 127 *e*P **P 18 56 51.1 -0.3**
comp=Z,3.6nm,0.9s,mb4.0
FITZ Fitzroy Crossi 74.75 127 P **P 18 56 51.3 0.0**
comp=Z,1.1nm,0.5s,mb3.7,baz=312,slow=12,SNR=6.5
DBIC Dimbokro 74.78 267 P **P 18 56 50.2 -1.6**
DBIC pmax pmax
comp=Z,2.0nm,0.7s
DBIC Dimbokro 74.78 267 P **P 18 56 50.2 -1.6**
comp=Z,2.4nm,0.7s,mb4.0,baz=31,slow=4.5,SNR=4.2
TSUM Tsumeb 74.92 232 *e*P **P 18 56 52.7 +0.3**
comp=Z,2.2nm,0.4s,mb4.1
BOSA Boshof 77.72 220 P **P 18 57 07.5 -0.4**
BOSA Boshof 77.72 220 P **P 18 57 07.5 -0.4**
BOSA pmax pmax
comp=Z,4.0nm,0.5s,mb4.3
BOSA Boshof 77.72 220 P **P 18 57 07.5 -0.4**
comp=Z,3.8nm,0.5s,mb4.3,baz=43,slow=3.9,SNR=9.3
KLBR Kellerberrin 80.51 141 *e*P **P 18 57 22.9 0.0**
YKA Yellowknife Ar 81.36 3 P **P 18 57 27.1 0.0**
YKA pP pP 18 58 19.3 +4.7
YKA Yellowknife Ar 81.36 3 P **P 18 57 27.0 0.0**
comp=Z,3.7nm,0.5s,mb4.3,baz=351,slow=5.4,SNR=80
YKA pP pP 18 58 19.3 +4.7
comp=Z,1.2nm,0.7s,baz=350,slow=5.4,SNR=6.7
WRA Warramunga Arr 81.85 122 P **P 18 57 29.2 -1.1**
WRA pmax pmax
comp=Z,4.0nm,0.4s
WRA Warramunga Arr 81.85 122 P **P 18 57 29.2 -1.1**
comp=Z,4.1nm,0.4s,mb4.4,baz=325,slow=5.0,SNR=199
WB2 Warramunga Arr 81.86 122 *e*P **P 18 57 29.2 -1.1**
SCHQ Schefferville 82.24 337 P **P 18 57 31.7 -0.1**
baz=24,slow=7.2
ASAR Alice Springs 84.11 125 P **P 18 57 40.8 -1.0**
ASAR pmax pmax
comp=Z,6.0nm,0.6s
ASAR Alice Springs 84.11 125 P **P 18 57 40.8 -1.1**
comp=Z,5.6nm,0.6s,mb4.5,baz=310,slow=4.8,SNR=173
FCC Fort Churchill 84.41 352 *e*P **P 18 57 42.8 0.0**
comp=Z,5.7nm,0.9s,mb4.3
FCC Fort Churchill 84.41 352 *e*P **P 18 57 42.8 0.0**
FCC pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
FFC Flin Flon 89.06 356 *e*P **P 18 58 05.0 -0.4**
comp=Z,16nm,1.8s,mb4.5
FFC Flin Flon 89.06 356 *e*P **P 18 58 05.0 -0.4**
FFC pmax pmax
comp=Z,16nm,1.8s,mb4.5
CTAO Charters Tower 90.41 115 P **P 18 58 10.7 -1.4**
comp=Z,3.4nm,0.6s,mb4.3
CTAO Charters Tower 90.41 115 P **P 18 58 10.7 -1.4**
CTAO pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
STKA Stephens Creek 94.65 126 *e*P **P 18 58 29.7 -1.7**
comp=Z,1.1nm,0.9s,mb4.0
STKA Stephens Creek 94.65 126 P **P 18 58 30.2 -1.2**
comp=Z,0.4nm,0.3s,mb4.0,baz=125,slow=24,SNR=5.1
MCWV Mont Chateau 99.74 338 *e*P Pdif 18 59 00.7 +6.3
comp=Z,38nm,1.0s
PLCA Paso Flores 149.87 250 PKPbc PKPbc 19 04 58.9 -0.6
comp=Z,5.4nm,0.9s,baz=57,slow=2.1,SNR=12

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*ISCJB **20** 18:59:18.0±0.6,3891N±002×24.19E±003,h2km±5km, Error ellipse: s-maj=4.6km s-min=3.5km az=1.8*
*CSEM **20** 18:59:19.8±0.1,3889N×2420E,h12km,ML3.8, Error ellipse: s-maj=1.7km s-min=1.5km az=65.0*
*ATH **20** 18:59:19.9,3893N×24.18E,h31km±3km,MD3.6/15,ML4.0*
*THE **20** 18:59:20.6,3893N×24.15E,h10km,ML3.8*
*NEIC **20** 18:59:21.0,3890N×24.14E,h10km,ML4.0(ATH), After ATH.*

ISC 20 18:59:19.0±0.6,3891N±002×2417E±004,h6km±5km,n38, σ1°09/47,1C-3D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.34**	**319**	*e*Pg		**Pg**	**18 59 27.0**	**+1.2**
XOR	**Xorichti**	**0.89**	**301**	*e*Pg		**Pg**	**18 59 37.1**	**+1.0**
XOR				*e*Sg		**Sg**	**18 59 49.3**	**+1.7**
PTL	**Penteli**	**0.90**	**196**	*e*PN		**Pn**	**18 59 37.0**	**-1.1**
LKR	**Lokris**	**0.95**	**255**⇓*i*PB			**Pb**	**18 59 37.6**	**-0.3**
LKR				*e*SN		**Sn**	**18 59 52.2**	**-0.6**
ATH	**Athens Observa**	**1.00**	**201**⇓*i*PN			**Pn**	**18 59 39.2**	**-0.4**
ATH				*e*SN		**Sn**	**18 59 53.8**	**-0.2**
PAIG	**Paliouri**	**1.08**	**340**	*e*Pg		**Pg**	**18 59 40.2**	**+0.3**
PAIG				*e*Sg		**Sg**	**18 59 55.6**	**+1.7**
KVR	**Kavouri**	**1.13**	**196**	*e*PN		**Pn**	**18 59 41.0**	**-0.3**
LIA	**Limnos Island**	**1.26**	**38**	P		**Pn**	**18 59 47.6**	**+4.5**
NAIG	**Nisos Aigina**	**1.27**	**205**	*e*PN		**Pn**	**18 59 44.0**	**+0.7**
LTK	**Loutraki**	**1.30**	**227**	*e*Pg		**Pg**	**18 59 43.8**	**-0.1**
LTK				*e*Sg		**Sg**	**19 00 02.0**	**+1.2**
OUR	**Ouranopolis**	**1.43**	**354**	*e*Pg		**Pg**	**18 59 45.4**	**-1.0**
AGG	**Agios Georgios**	**1.44**	**275**	*e*Pg		**Pg**	**18 59 45.7**	**-1.0**
CHOS	**Chios island**	**1.56**	**109**	*e*Pg		**Pg**	**18 59 48.1**	**-0.9**
PLG	**Polygyros**	**1.56**	**339**	*e*Pg		**Pg**	**18 59 46.9**	**-2.1**
PLG	**Polygyros**	**1.56**	**339**	*e*PN		**Pn**	**18 59 47.1**	**-0.2**
PLG				*e*SN		**Sn**	**19 00 06.5**	**-1.4**
DID	**Didima**	**1.58**	**208**	*e*Pg		**Pg**	**18 59 47.6**	**-1.8**
DID				*e*Sg		**Sg**	**19 00 09.1**	**-0.8**
PRK	**Paraskevi**	**1.67**	**78**	*e*PN		**Pn**	**18 59 49.1**	**+0.4**
PRK				*e*SN		**Sn**	**19 00 09.9**	**-0.5**
LIT	**Litokhoron**	**1.76**	**313**	*e*Pb		**Pb**	**18 59 50.3**	**-1.4**
THL	**Klokotos Trika**	**1.80**	**292**	*e*PB		**Pb**	**18 59 51.1**	**-1.2**
EVR	**Evrytania**	**1.84**	**271**	*e*PN		**Pn**	**18 59 51.1**	**-0.1**
THE	**Thessaloniki**	**1.96**	**332**	*e*Pb		**Pb**	**18 59 52.9**	**-2.1**
SOH	**Sokhos**	**2.01**	**342**	*e*Pn		**Pn**	**18 59 53.7**	**+0.2**
VLX	**Vlachokerasia**	**2.09**	**223**	*e*Pn		**Pn**	**18 59 55.4**	**+0.8**
APE	**Apeiranthos**	**2.13**	**149**	*e*Pn		**Pn**	**18 59 55.7**	**+0.7**
APE	**Apeiranthos**	**2.13**	**149**⇑*i*PN			**Pn**	**18 59 56.0**	**+0.9**
VLI	**Veliai**	**2.40**	**204**	*e*PN		**Pn**	**18 59 59.3**	**+0.5**
SMG	**Samos**	**2.42**	**119**⇓*i*PN			**Pn**	**19 00 00.3**	**+1.3**
SMG				*e*SN		**Sn**	**19 00 27.9**	**-1.0**
NVR	**Nevrokopi**	**2.45**	**355**	*e*PN		**Pn**	**18 59 59.7**	**+0.2**
ALN	**Alexandroupoli**	**2.45**	**35**	*e*Pn		**Pn**	**18 59 59.4**	**-0.1**
GRG	**Griva**	**2.46**	**327**	*e*Pn		**Pn**	**19 00 00.1**	**+0.5**
RDO	**Rodhopi**	**2.47**	**25**	*e*PN		**Pn**	**18 59 59.7**	**0.0**
ITM	**Ithomi**	**2.48**	**226**	*e*PB		**Pb**	**19 00 01.6**	**-2.3**
SANT	**Santorini**	**2.73**	**158**	*e*Pn		**Pn**	**19 00 04.3**	**+0.9**
FNA	**Florina**	**2.85**	**312**	*e*Pn		**Pn**	**19 00 05.3**	**+0.2**
PLD	**Plovdiv**	**3.21**	**7**	*e*Pn		**Pn**	**19 00 11.1**	**+1.1**
IDI	**Anoyia**	**3.66**	**171**	P		**Pn**	**19 00 18.7**	**+2.5**
NPS	**Neapolis**	**3.82**	**162**	P		**Pn**	**19 00 20.0**	**+1.7**
TIP	**Timpagrande**	**5.78**	**275**	P		**Pn**	**19 00 47.1**	**+1.9**

IDC 20 19:05:32.4±3.7,5465S×15073E,h0km,mb3.2/2,mb1 3.6/2, mb1mx3.3/12,mbtmp3.3/2, Error ellipse: s-maj=150.6km s-min=47.8km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.48**	**226**	P		P	19 10 23.3	+0.5
	0.5nm,0.6s,baz=53,slow=10,SNR=8.2							
ASAR	**Alice Springs**	**24.30**	**220**	P		P	19 10 51.7	0.0
	0.9nm,0.7s,baz=51,slow=8.9,SNR=18							
TORD	**Torodi Ar. Bea**	**148.53**	**286**	PKPbc		PKPbc	19 25 21.5	-0.8
	0.5nm,0.6s,baz=79,slow=2.7,SNR=8.1							

IDC 20 19:12:37.1±7.5, 3154S×17939E, h472km×96km, mb2.6/3, mb1 2.8/4, mb1mx2.7/14, mbtmp2.7/4, Error ellipse: s-maj=103.8km s-min=38.8km az=6.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.96**	**195**	P	P	19 14 23.1	+1.1
	2.2nm,0.3s,baz=333,slow=2.1,SNR=16						
URZ				S	S	19 15 46.5	-1.3
	0.7nm,0.3s,baz=114,slow=20,SNR=4.4						
STKA	**Stephens Creek**	**32.05**	**259**	P	P	19 18 25.4	+1.5
	0.7nm,0.8s,baz=80,slow=6.1,SNR=2.8						
ASAR	**Alice Springs**	**40.84**	**269**	P	P	19 19 36.4	-0.3
	0.3nm,0.6s,baz=102,slow=7.0,SNR=4.6						
WRA	**Warramunga Arr**	**41.93**	**275**	P	P	19 19 45.0	-0.5
	0.3nm,0.3s,baz=111,slow=8.0,SNR=19						
FINES	**FINESS Array B**	**145.39**	**338**	PKPbc	PKPbc	19 31 19.9	-0.9
	0.4nm,0.3s,baz=49,slow=4.2,SNR=6.5						

IDC 20 19:27:00.2±2.1, 175N×12678E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/13, mbtmp3.5/3, Error ellipse: s-maj=183.2km s-min=24.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.80**	**161**	P	P	19 32 04.7	0.0
	2.0nm,0.8s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.20**	**165**	P	P	19 32 37.0	+0.2
	0.4nm,0.4s,baz=345,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	19 37 03.2	0.0
	0.1nm,0.4s,baz=125,slow=7.9,SNR=3.5						

ISCJB ***20*** *19:54:42.6±1.3, 24.14S±007×667W±03, h181km±27km, mb3.4/1, Error ellipse: s-maj=38.7km s-min=11.3km az=3.6*

IDC ***20*** *19:54:42.1±1.7, 24.17S×6671W, h162km±22km, mb3.4/1, mb1 3.1/5, mb1mx3.1/17, mbtmp3.0/5, Error ellipse: s-maj=45.4km s-min=13.9km az=98.0*

ISC 20 19:54:43.3±1.2, 2412S±007×667W±03, h172km±27km, n6, σ0°78/7, mb3.4/1, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.58**	**190**	P	**Pn**	**19 56 31.1**	**+0.1**
	0.1nm,0.3s,baz=1.8,slow=16,SNR=5.8						
CFAA				S	**Sn**	**19 57 50.9**	**-5.2**
	0.2nm,0.3s,baz=315,slow=21,SNR=6.8						
LPAZ	**La Paz**	**7.91**	**350**	P	**Pn**	**19 56 36.6**	**+1.1**
	0.7nm,0.3s,baz=171,slow=11,SNR=14						
LPAZ				S	**Sn**	**19 58 03.4**	**-0.7**
	0.1nm,0.3s,baz=332,slow=18,SNR=3.2						
SIV	**San Ignacio**	**9.66**	**34**	P	**Pn**	**19 56 58.4**	**-0.1**
	0.4nm,0.3s,baz=218,slow=14,SNR=11						
PLCA	**Paso Flores**	**16.88**	**190**	P	**Pn**	**19 58 29.2**	**-0.2**
	0.1nm,0.3s,baz=360,slow=13,SNR=4.8						
TORD	**Torodi Ar. Bea**	**76.36**	**69**	P	**P**	**20 06 13.9**	**0.0**
	0.5nm,0.5s,mb3.4,baz=257,slow=5.4,SNR=16						
WRA	**Warramunga Arr**	**131.65**	**207**	PKP	PKPdf	20 13 36.1	-0.2
	0.5nm,0.8s,baz=156,slow=2.0,SNR=5.9						

STR ***20*** *19:54:44.6±0.8, 5257N×770E, h10km, Ml3.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISCJB ***20*** *19:54:45.7±0.3, 5220N±002×769E±002, h0km, Error ellipse: s-maj=2.7km s-min=1.8km az=152.5*

IPEC ***20*** *19:54:46.5±0.4, 5236N×762E, h0km±1km, ML3.2/1, Error ellipse: s-maj=3.0km s-min=1.6km az=140.0*

NEIC ***20*** *19:54:47.0±0.4, 5236N×761E, h10km, ML3.7(LDG), ML3.7(STR), ML3.5(SZGRF), Error ellipse: s-maj=5.4km s-min=3.6km az=169.0*

IDC ***20*** *19:54:48.0±1.6, 5234N×783E, h0km, mb3.3/1, mb1 3.5/8, mb1mx3.3/21, mbtmp3.4/8, ML3.7/5, Error ellipse: s-maj=22.6km s-min=9.1km az=70.0*

CSEM ***20*** *19:54:47.9±0.1, 5232N×778E, h1km, ML3.7/22, Error ellipse: s-maj=1.7km s-min=1.0km az=171.0*

PRU ***20*** *19:54:48.2, 5229N×772E, h0km*

BGR ***20*** *19:54:48.7±0.3, 5229N×775E, h1km, ML3.3/8, Error ellipse: s-maj=4.4km s-min=3.3km az=169.0*

LDG ***20*** *19:54:48.8±0.1, 5226N×777E, h1km, Md3.6/2, Ml3.7/24, Error ellipse: s-maj=2.8km s-min=2.0km az=70.0, Suspected Mining induced.*

BNS ***20*** *19:54:49.0±0.9, 5230N×777E, h1km, ML3.4, GESPUERT IN IBBENBUEREN, METTINGEN*

ISC 20 19:54:46.9±0.3, 5226N±002×766E±002, h0km, n161, σ1°13/292, 7C-4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBBN	**Ibbenburen**	**0.08**	**52**	*e*Pg	**Pg**	**19 54 48.4**	**0.0**
	SNR=758						
IBBN				*i* Sg	**Sg**	**19 54 49.8**	**+0.4**
IBBN	**Ibbenburen**	**0.08**	**52**	*e*Pg	**Pg**	**19 54 49.0**	**+0.6**
IBBN				*e*Sg	**Sg**	**19 54 49.6**	**+0.2**
IBBN	**Ibbenburen**	**0.08**	**52**	*e*Pg	**Pg**	**19 54 49.0**	**+0.6**
IBBN				Sg	**Sg**	**19 54 49.8**	**+0.4**
WTSB	**Winterswijk**	**0.61**	**241**	*e*Pg	**Pg**	**19 55 02.4**	**+3.8**
	SNR=91						
WTSB	**Winterswijk**	**0.61**	**241**	Pg	**Pg**	**19 55 02.4**	**+3.8**
	SNR=91						
WTSB				*e*Sg	**Sg**	**19 55 13.3**	**+6.9**
HOBG	**Hohbusch**	**1.30**	**189**	*e*Pg	**Pg**	**19 55 13.2**	**+1.5**
BNS	**Bensberg**	**1.33**	**193**	*e*Pg	**Pg**	**19 55 14.1**	**+1.6**
BNS				*e*Sg	**Sg**	**19 55 32.7**	**+3.0**
	2µm,0.4s						
GTTG	**Gvttingen**	**1.60**	**116**	*e*Pn	**Pn**	**19 55 16.0**	**-0.5**
GTTG				*e*Sg	**Sg**	**19 55 40.4**	**+2.1**
CLZ	**Clausthal**	**1.73**	**103**	*e*Pn	**Pn**	**19 55 17.5**	**-0.7**
CLZ	**Clausthal**	**1.73**	**103**	*e*Pn	**Pn**	**19 55 17.5**	**-0.7**
CLZ	**Clausthal**	**1.73**	**103**	Pn	**Pn**	**19 55 17.5**	**-0.7**
CLZ				*e*Sg	**Sg**	**19 55 41.0**	**-1.4**
STB	**Steinbach**	**1.75**	**197**	*e*Pg	**Pg**	**19 55 19.7**	**-0.7**
STB				*e*Sg	**Sg**	**19 55 42.8**	**-0.2**
	264nm,0.8s						
KLL	**Kalltalsperre**	**1.82**	**208**	*e*Pg	**Pg**	**19 55 20.9**	**-1.0**
KLL				*e*Sg	**Sg**	**19 55 44.3**	**-1.2**
	279nm,0.7s						
DREG	**Dreilaegerbach**	**1.83**	**210**	*e*Pg	**Pg**	**19 55 21.2**	**-0.9**
DREG				*e*Sg	**Sg**	**19 55 45.0**	**-0.7**
	198nm,0.3s						
HGN	**Heimansgroeve**	**1.85**	**216**	*e*Pn	**Pn**	**19 55 20.7**	**+0.9**
	SNR=31						
HGN				*e*Sg	**Sg**	**19 55 48.8**	**+2.6**
	SNR=4.0						
HGN	**Heimansgroeve**	**1.85**	**216**	*e*Pg	**Pg**	**19 55 23.0**	**+0.7**
	14nm,0.1s						
HGN				Sg	**Sg**	**19 55 48.8**	**+2.6**
	SNR=4.0						
BEBN	**Eben Emael**	**1.92**	**221**	P	**Pn**	**19 55 24.2**	**+3.4**
MEM	**Membach**	**1.95**	**213**	P	**Pn**	**19 55 23.1**	**+1.9**
MEM				S	**Sn**	**19 55 52.5**	**+6.1**
	comp=N,164nm,0.6s						
UBBA	**Unterbreizbach**	**2.06**	**134**	*e*Pn	**Pn**	**19 55 22.5**	**-0.2**
	SNR=8.3						
UBBA				*e*Sg	**Sg**	**19 55 52.1**	**-0.9**
	SNR=3.6						
TNS	**Taunus Mts**	**2.10**	**166**	*e*Pn	**Pn**	**19 55 24.5**	**+1.2**
	SNR=30						
TNS				*e*Pg	**Pg**	**19 55 28.1**	**+0.9**
	SNR=11						
TNS				*e*Sg	**Sg**	**19 55 55.8**	**+1.4**
	SNR=4.1						
TNS	**Taunus Mts**	**2.10**	**166**	*e*Pn	**Pn**	**19 55 24.6**	**+1.3**
BSEG	**Bad Segeberg**	**2.32**	**43**	*e*Pn	**Pn**	**19 55 24.5**	**-1.8**
	SNR=8.6						
BSEG				*e*Sg	**Sg**	**19 56 02.7**	**+1.3**
HROE	**Hohe Rhon--Fla**	**2.33**	**137**	||*i*Pn	**Pn**	**19 55 26.4**	**-0.1**
BCLA	**Clavier**	**2.36**	**220**	P	**Pn**	**19 55 28.0**	**+1.1**
ABH	**Alteburg**	**2.38**	**182**	P	**Pn**	**19 55 28.4**	**+1.2**
ABH				S	**Sn**	**19 56 02.4**	**+5.3**
RUP	**Ruppelstein**	**2.59**	**189**	P	**Pn**	**19 55 31.3**	**+1.2**
SNF	**Seneffe**	**2.75**	**232**	P	**Pn**	**19 55 33.4**	**+1.2**
SNF	**Seneffe**	**2.75**	**232**	P	**Pn**	**19 55 33.3**	**+1.1**
TOD	**Tromm**	**2.76**	**164**	P	**Pn**	**19 55 32.8**	**+0.5**
NEUB	**Neuenburg**	**2.77**	**111**	*e*Pn	**Pn**	**19 55 32.8**	**+0.4**
	SNR=2.2						
NEUB				*e*Sg	**Sg**	**19 56 14.1**	**-1.7**
	SNR=2.4						
WLF	**Walferdange**	**2.77**	**201**	*e*Pg	**Pg**	**19 55 40.0**	**0.0**
	SNR=4.6						
WLF				*e*Sg	**Sg**	**19 56 16.9**	**+1.0**
	SNR=4.4						
WLF	**Walferdange**	**2.77**	**201**	*e*Pn	**Pn**	**19 55 27.1**	**-5.3**
WLF	**Walferdange**	**2.77**	**201**	P	**Pn**	**19 55 27.9**	**-4.6**
GIVF	**Givet**	**2.80**	**221**	*e*P	**Pn**	**19 55 36.4**	**+3.4**
GIVF	**Givet**	**2.80**	**221**	*e*Pg	**Pg**	**19 55 41.9**	**+1.3**
	SNR=1.0						
GIVF				*e*S	**Sn**	**19 56 12.2**	**+4.8**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**19 56 18.9**	**+2.0**
	comp=N,78nm,0.3s,SNR=1.0						
GIVF	**Givet**	**2.80**	**221**	*e*Pn	**Pn**	**19 55 33.6**	**+0.6**
GIVF				*e*P		19 55 36.4	
GIVF				*e*Pg	**Pg**	**19 55 41.9**	**+1.3**
GIVF				*e*S	**Sn**	**19 56 12.2**	**+4.8**
GIVF				*e*Sg	**Sg**	**19 56 18.9**	**+2.0**
GIVF	**Givet**	**2.80**	**221**	*e*P	**Pn**	**19 55 36.4**	**+3.4**
GIVF	**Givet**	**2.80**	**221**	*e*Pg	**Pg**	**19 55 41.9**	**+1.3**
	SNR=1.0						
GIVF				*e*S	**Sn**	**19 56 12.2**	**+4.8**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**19 56 18.9**	**+2.0**
	comp=N,39nm,0.3s,SNR=1.0						
DOU	**Dourbes**	**2.90**	**223**	P	**Pn**	**19 55 35.9**	**+1.6**
DOU	**Dourbes**	**2.90**	**223**	P	**Pn**	**19 55 35.8**	**+1.5**
MOX	**Moxa**	**2.96**	**122**	*e*Pn	**Pn**	**19 55 35.2**	**+0.2**
	SNR=4.3						
MOX				*e*Pg	**Pg**	**19 55 40.9**	**-2.7**
	SNR=4.3						
MOX				*e*Sg	**Sg**	**19 56 21.8**	**0.0**
	SNR=2.8						
MOX	**Moxa**	**2.96**	**122**	*e*PN	**Pn**	**19 55 35.4**	**+0.3**
MOX				*e*PG	**Pg**	**19 55 45.1**	**+1.5**
MOX				*e*SG	**Sg**	**19 56 21.9**	**0.0**
MOX	**Moxa**	**2.96**	**122**	*e*Pg	**Pg**	**19 55 45.1**	**+1.5**
MOX				Sg	**Sg**	**19 56 21.8**	**-0.1**
	SNR=2.8						
BAIF	**Baives**	**3.10**	**226**	*e*P	**Pn**	**19 55 40.1**	**+3.1**
	SNR=1.0						
BAIF	**Baives**	**3.10**	**226**	*e*Pg	**Pg**	**19 55 46.9**	**+0.7**
BAIF				*e*Sn	**Sn**	**19 56 13.5**	**-1.1**
BAIF				*e*Sg	**Sg**	**19 56 28.2**	**+1.9**
	comp=N,60nm,0.4s,SNR=1.0						
BAIF	**Baives**	**3.10**	**226**	*e*Pn	**Pn**	**19 55 37.3**	**+0.3**
BAIF				*e*P		19 55 40.1	
BAIF				*e*Pg	**Pg**	**19 55 46.9**	**+0.7**
BAIF				*e*Sn	**Sn**	**19 56 13.5**	**-1.1**
BAIF				*e*Sg	**Sg**	**19 56 28.2**	**+1.9**
BAIF	**Baives**	**3.10**	**226**	*e*P	**Pn**	**19 55 40.1**	**+3.1**
	SNR=1.0						
BAIF	**Baives**	**3.10**	**226**	*e*Pg	**Pg**	**19 55 46.9**	**+0.7**
BAIF				*e*Sn	**Sn**	**19 56 13.5**	**-1.1**
BAIF				*e*Sg	**Sg**	**19 56 28.2**	**+1.9**
	comp=N,30nm,0.4s,SNR=1.0						
LANF	**Langenberg**	**3.29**	**178**	P	**Pn**	**19 55 40.0**	**+0.4**
LANF				S	**Sn**	**19 56 27.1**	**+7.8**
GRA1	**Grafenberg Arr**	**3.42**	**137**	*e*Pn	**Pn**	**19 55 41.5**	**+0.1**
GRA1				*e*Sg	**Sg**	**19 56 36.8**	**+0.1**
GRF	**Grafenberg Arr**	**3.42**	**137**	*e*Pn	**Pn**	**19 55 41.4**	**0.0**
	SNR=4.0						
GRF				*e*Sg	**Sg**	**19 56 37.2**	**+0.5**
	SNR=3.4						
GRF	**Grafenberg Arr**	**3.42**	**137**	*e*Pn	**Pn**	**19 55 41.5**	**+0.1**
GRF				*e*Sg	**Sg**	**19 56 36.8**	**+0.1**
GRFO	**Grafenberg**	**3.42**	**137**	*e*Pn	**Pn**	**19 55 40.9**	**-0.5**
GRFO	**Grafenberg**	**3.42**	**137**	*e*Pn	**Pn**	**19 55 40.9**	**-0.5**
WERD	**Werda**	**3.43**	**120**	*e*Pn	**Pn**	**19 55 41.9**	**+0.3**
	SNR=3.9						
CLL	**Collm**	**3.45**	**104**	*e*Pn	**Pn**	**19 55 42.4**	**+0.5**
	SNR=5.2						
CLL				*e*Pg	**Pg**	**19 55 53.0**	**-0.1**
CLL				*e*Sg	**Sg**	**19 56 36.7**	**-1.1**
	SNR=3.0						
CLL	**Collm**	**3.45**	**104**	*e*Pn	**Pn**	**19 55 42.0**	**+0.1**
CLL				*e*Pg	**Pg**	**19 55 53.0**	**-0.1**
CLL				*i* Sg	**Sg**	**19 56 35.9**	**-1.9**
	comp=Z,25nm,0.5s						
GUNZ	**Gunzen**	**3.49**	**121**	*e*Pn	**Pn**	**19 55 42.8**	**+0.4**
	SNR=3.7						
GUNZ				*e*Sg	**Sg**	**19 56 38.7**	**-0.4**
	SNR=2.5						
MSBB	**Schoenbrunner**	**3.52**	**128**	⇑*i*Pn	**Pn**	**19 55 42.9**	**+0.1**
TANN	**Tannenbergstha**	**3.53**	**120**	*e*Pn	**Pn**	**19 55 43.4**	**+0.4**
	SNR=6.5						
TANN				*e*Sg	**Sg**	**19 56 39.2**	**-1.2**
	SNR=2.0						
NKC	**Novy Kostel**	**3.63**	**122**	*e*PN	**Pn**	**19 55 43.7**	**-0.6**
NKC				*e*PG	**Pg**	**19 55 56.8**	**+0.3**
NKC				*e*SG	**Sg**	**19 56 42.5**	**-1.0**
	comp=Z,51nm,0.5s						
CDF	**Champ du Feu**	**3.86**	**184**	*e*Pn	**Pn**	**19 55 47.3**	**-0.2**
CDF				*e*Sn	**Sn**	**19 56 30.2**	**-3.3**
	comp=Z,59nm,0.6s,SNR=1.0						
CDF				*e*Sg	**Sg**	**19 56 51.4**	**+0.5**
	comp=Z,114nm,0.7s						
CDF	**Champ du Feu**	**3.86**	**184**	*e*Pn	**Pn**	**19 55 47.3**	**-0.2**
CDF				*e*Sn	**Sn**	**19 56 30.2**	**-3.3**
	comp=Z,30nm,0.6s,SNR=1.0						
CDF				*e*Sg	**Sg**	**19 56 51.4**	**+0.5**
	comp=Z,57nm,0.7s						
RFYF	**Reffroy**	**3.90**	**202**	*e*P	**Pn**	**19 55 51.8**	**+3.8**
RFYF	**Reffroy**	**3.90**	**202**	*e*Pg	**Pg**	**19 56 01.9**	**+0.3**
RFYF				*e*Sn	**Sn**	**19 56 32.4**	**-2.0**
	baz=22						
RFYF				*e*Sg	**Sg**	**19 56 53.1**	**+1.1**
	comp=Z,42nm,0.3s,baz=23						
RFYF	**Reffroy**	**3.90**	**202**	*e*Pn	**Pn**	**19 55 48.3**	**+0.3**
RFYF				*e*P		19 55 51.8	
RFYF				*e*Pg	**Pg**	**19 56 01.9**	**+0.3**
RFYF				*e*Sn	**Sn**	**19 56 32.4**	**-2.0**
RFYF				*e*Sg	**Sg**	**19 56 53.1**	**+1.1**
RFYF	**Reffroy**	**3.90**	**202**	*e*P	**Pn**	**19 55 51.8**	**+3.8**
RFYF	**Reffroy**	**3.90**	**202**	*e*Pg	**Pg**	**19 56 01.9**	**+0.3**
RFYF				*e*Sn	**Sn**	**19 56 32.4**	**-2.0**
RFYF				*e*Sg	**Sg**	**19 56 53.1**	**+1.1**
	comp=Z,21nm,0.3s						
BFO	**Black Forest**	**3.96**	**174**	*e*Pn	**Pn**	**19 55 49.3**	**+0.5**
	SNR=4.4						
BFO				*e*Sn	**Sn**	**19 56 34.4**	**-1.5**
	SNR=3.2						
BFO	**Black Forest**	**3.96**	**174**	*e*Pn	**Pn**	**19 55 48.8**	**-0.1**
BFO				*e*Sn	**Sn**	**19 56 30.9**	**-5.1**
BFO	**Black Forest**	**3.96**	**174**	*e*Pn	**Pn**	**19 55 49.1**	**+0.2**
ECH	**Echery**	**4.06**	**185**	P	**Pn**	**19 55 50.2**	**-0.1**
MEZF	**Maizieres J'vi**	**4.12**	**205**	*e*Pn	**Pn**	**19 55 51.3**	**+0.3**
	baz=23						
MEZF	**Maizieres J'vi**	**4.12**	**205**	*e*Pg	**Pg**	**19 56 06.4**	**+0.6**
	baz=23						
MEZF				*e*Sg	**Sg**	**19 57 00.2**	**+1.1**
	comp=Z,41nm,0.5s,baz=22						
MEZF	**Maizieres J'vi**	**4.12**	**205**	*e*Pn	**Pn**	**19 55 51.3**	**+0.3**
MEZF				*e*Pg	**Pg**	**19 56 06.4**	**+0.6**
MEZF				*e*Sg	**Sg**	**19 57 00.2**	**+1.1**
MEZF	**Maizieres J'vi**	**4.12**	**205**	*e*Pg	**Pg**	**19 56 06.4**	**+0.6**
MEZF				*e*Sg	**Sg**	**19 57 00.2**	**+1.1**
	comp=Z,20nm,0.5s						
BRG	**Berggiesshubel**	**4.16**	**107**	*e*Pn	**Pn**	**19 55 52.0**	**+0.4**
	SNR=4.3						
BRG	**Berggiesshubel**	**4.16**	**107**	*e*Pn	**Pn**	**19 55 51.9**	**+0.3**
BRG	**Berggiesshubel**	**4.16**	**107**	PN	**Pn**	**19 55 52.1**	**+0.5**
BRG				PG	**Pg**	**19 56 08.7**	**+2.1**
BRG				SG	**Sg**	**19 56 58.9**	**-1.6**
	comp=Z,14nm,0.6s						
THEF	**They Montfort**	**4.18**	**196**	P	**Pn**	**19 55 53.1**	**+1.2**
MUD	**Monsted U'grnd**	**4.29**	**11**	*i* P	**Pn**	**19 55 51.8**	**-1.7**
MUD				*e*S	**Sn**	**19 56 40.6**	**-3.6**
HAU	**Haudompre**	**4.34**	**192**	*e*Pn	**Pn**	**19 55 54.3**	**+0.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**19 57 06.8**	**+0.4**
	comp=Z,31nm,0.3s						
HAU	**Haudompre**	**4.34**	**192**	*e*Pn	**Pn**	**19 55 54.3**	**+0.2**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**19 57 06.8**	**+0.4**
	comp=Z,15nm,0.3s						
SFTF	**Sexfontaines**	**4.39**	**204**	*e*Pn	**Pn**	**19 55 55.7**	**+0.9**
	baz=25						
SFTF	**Sexfontaines**	**4.39**	**204**	*e*Pg	**Pg**	**19 56 11.1**	**0.0**
	baz=26						
SFTF				*e*Sg	**Sg**	**19 57 08.7**	**+0.6**
	comp=Z,33nm,0.4s						
SFTF	**Sexfontaines**	**4.39**	**204**	*e*Pn	**Pn**	**19 55 55.7**	**+0.9**
SFTF				*e*Pg	**Pg**	**19 56 11.1**	**0.0**
SFTF				*e*Sg	**Sg**	**19 57 08.7**	**+0.6**
SFTF	**Sexfontaines**	**4.39**	**204**	*e*Pg	**Pg**	**19 56 11.1**	**0.0**
SFTF				*e*Sg	**Sg**	**19 57 08.7**	**+0.6**
	comp=Z,16nm,0.4s						
FELD	**Feldberg im Sc**	**4.40**	**177**	P	**Pn**	**19 55 55.9**	**+1.0**
MOF	**Molkenrain**	**4.43**	**185**	P	**Pn**	**19 55 55.0**	**-0.3**
HINF	**Hinteralfeld**	**4.48**	**187**	*e*Pn	**Pn**	**19 55 55.7**	**-0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**19 57 10.1**	**-0.7**
	comp=Z,30nm,0.5s,SNR=1.0						
HINF	**Hinteralfeld**	**4.48**	**187**	*e*Pn	**Pn**	**19 55 55.7**	**-0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**19 57 10.1**	**-0.7**
	comp=Z,15nm,0.5s,SNR=1.0						
WET	**Wettzell**	**4.55**	**131**	*e*Pn	**Pn**	**19 55 58.0**	**+1.0**
	SNR=5.7						
WET				*e*Sg	**Sg**	**19 57 12.4**	**-0.7**
	SNR=2.5						
WET	**Wettzell**	**4.55**	**131**	*e*Pn	**Pn**	**19 55 57.9**	**+0.9**
PVCC	**Panska Ves**	**4.66**	**109**	*e*PN	**Pn**	**19 55 58.6**	**+0.1**
KHC	**Kasperske Hory**	**4.90**	**127**	*e*Pn	**Pn**	**19 56 02.8**	**+1.1**
KHC				*e*		19 56 07.0	
KHC				*e*		19 56 25.0	
KHC				*e*		19 57 06.5	
KHC				*e*Sg	**Sg**	**19 57 24.3**	**+0.2**
KHC	**Kasperske Hory**	**4.90**	**127**	*e*PN	**Pn**	**19 56 02.8**	**+1.1**
KHC				x	x	19 56 07.0	
KHC				*e*PG	**Pg**	**19 56 25.0**	**+4.3**
KHC				*ex*	x	19 57 06.5	
KHC				*e*SG	**Sg**	**19 57 24.3**	**+0.2**
	comp=Z,15nm,0.6s						
LOMF	**Lomont**	**4.95**	**187**	P	**Pn**	**19 56 03.0**	**+0.6**
GEC2	**GERESS Array S**	**5.15**	**129**	*e*Pn	**Pn**	**19 56 06.5**	**+1.3**
	SNR=5.9						
GERES	**GERESS Array B**	**5.15**	**129**	Pn	**Pn**	**19 56 06.5**	**+1.3**
	comp=Z,1.5nm,0.3s,baz=310,slow=14,SNR=32						
GERES				Sn	**Sn**	**19 57 03.7**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=313,slow=23,SNR=6.1						
GERES				Lg		19 57 29.1	
	comp=Z,0.9nm,0.3s,baz=313,slow=32,SNR=4.7						
GERES	**GERESS Array B**	**5.15**	**129**	Pn	**Pn**	**19 56 06.5**	**+1.3**
GERES				Sn	**Sn**	**19 57 03.7**	**-1.6**
BSD	**Bornholm Skovb**	**5.17**	**54**	*i* P	**Pn**	**19 56 03.2**	**-2.3**
BSD				*e*S	**Sn**	**19 56 59.7**	**-6.1**
BSD				*e*S	**Sn**	**19 56 59.7**	**-6.1**
BSD	**Bornholm Skovb**	**5.17**	**54**	*e*P	**Pn**	**19 56 03.2**	**-2.3**
DAVA	**Damuels**	**5.18**	**163**	||*i*Pn	**Pn**	**19 56 07.9**	**+2.3**
WATA	**Walderalm**	**5.54**	**151**	⇑*i*Pn	**Pn**	**19 56 11.2**	**+0.6**
WATA				⇑*i*Sn	**Sn**	**19 57 14.3**	**-0.7**
SQTA	**Sankt Quirin**	**5.54**	**154**	||*i*Pn	**Pn**	**19 56 12.2**	**+1.5**
SQTA				⇑*i*Sn	**Sn**	**19 57 14.2**	**-0.8**
LOR	**Lormes**	**5.57**	**208**	*e*Pn	**Pn**	**19 56 10.9**	**-0.1**
	baz=29,SNR=1.0						
LOR	**Lormes**	**5.57**	**208**	*e*Pg	**Pg**	**19 56 32.7**	**-0.9**
LOR				*e*Sn	**Sn**	**19 57 12.7**	**-3.0**
	baz=32,SNR=1.0						
LOR				*e*Sg	**Sg**	**19 57 45.4**	**-0.4**
	comp=Z,28nm,0.5s,baz=32						
LOR	**Lormes**	**5.57**	**208**	*e*Pn	**Pn**	**19 56 10.9**	**-0.1**
LOR				*e*Pg	**Pg**	**19 56 32.7**	**-0.9**
LOR				*e*Sn	**Sn**	**19 57 12.7**	**-3.0**
LOR				*e*Sg	**Sg**	**19 57 45.4**	**-0.4**
LOR	**Lormes**	**5.57**	**208**	*e*Pg	**Pg**	**19 56 32.7**	**-0.9**
LOR				*e*Sn	**Sn**	**19 57 12.7**	**-3.0**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**19 57 45.4**	**-0.4**
	comp=Z,14nm,0.5s						
FETA	**Feichten**	**5.61**	**158**	||*i*Pn	**Pn**	**19 56 13.0**	**+1.5**
WTTA	**Wattenberg**	**5.63**	**151**	⇑*i*Pn	**Pn**	**19 56 12.6**	**+0.9**
DAVOX	**Davos/Dischmat**	**5.67**	**164**	Pn	**Pn**	**19 56 14.3**	**+1.9**
	baz=352,slow=19						
DAVOX				Lg		19 57 57.0	
	comp=Z,0.9nm,0.3s,baz=140,slow=22,SNR=3.5						
CABF	**La Chapelle**	**5.75**	**191**	*e*Pn	**Pn**	**19 56 13.4**	**0.0**
CABF				*e*Sg	**Sg**	**19 57 49.1**	**-2.4**
	comp=Z,45nm,0.8s						
CABF	**La Chapelle**	**5.75**	**191**	*e*Pn	**Pn**	**19 56 13.4**	**0.0**
CABF				*e*Sg	**Sg**	**19 57 49.1**	**-2.4**
	comp=Z,22nm,0.8s						
DPC	**Dobruska-Polom**	**5.76**	**106**	*e*Pn	**Pn**	**19 56 14.1**	**+0.5**
	comp=Z,11nm,0.7s						
DPC				*e*Sg	**Sg**	**19 57 52.2**	**+0.3**
	comp=Z,11nm,0.7s						
SSF	**Saint Saulge**	**5.86**	**209**	*e*Pg	**Pg**	**19 56 37.8**	**-1.4**
SSF				*e*Sn	**Sn**	**19 57 20.1**	**-2.7**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**19 57 54.4**	**-0.7**
	comp=Z,36nm,0.7s						
SSF	**Saint Saulge**	**5.86**	**209**	*e*Pn	**Pn**	**19 56 15.0**	**0.0**
SSF				*e*Pg	**Pg**	**19 56 37.8**	**

MFF	**Saint Martin d**	**7.61**	**225**	*e*Pn	**Pn**	**19 56 37.9**	**-1.1**
MFF				*e*Sn	**Sn**	**19 58 00.1**	**-5.8**
SGMF	**Saint Gilles**	**7.68**	**243**	*e*Pn	**Pn**	**19 56 38.9**	**-1.0**
SGMF				*e*Sn	**Sn**	**19 58 02.6**	**-4.9**
	comp=Z,1.3nm,0.2s						
SGMF	**Saint Gilles**	**7.68**	**243**	*e*Pn	**Pn**	**19 56 38.9**	**-1.0**
SGMF				*e*Sn	**Sn**	**19 58 02.6**	**-4.9**
	comp=Z,0.6nm,0.2s						
ROSF	**Rostrenen**	**8.03**	**245**	*e*Pn	**Pn**	**19 56 43.9**	**-0.8**
ROSF				*e*Sn	**Sn**	**19 58 10.2**	**-5.9**
	comp=Z,19nm,0.9s,SNR=1.0						
ROSF	**Rostrenen**	**8.03**	**245**	*e*Pn	**Pn**	**19 56 43.9**	**-0.8**
ROSF				*e*Sn	**Sn**	**19 58 10.2**	**-5.9**
	comp=Z,9.6nm,0.9s,SNR=1.0						
RJF	**Les Rejaudoux**	**8.05**	**213**	*e*Pn	**Pn**	**19 56 44.5**	**-0.6**
QUIF	**Quistinic**	**8.21**	**242**	*e*Pn	**Pn**	**19 56 45.6**	**-1.5**
QUIF				*e*Sn	**Sn**	**19 58 14.2**	**-6.3**
	comp=Z,2.9nm,0.3s						
QUIF	**Quistinic**	**8.21**	**242**	*e*Pn	**Pn**	**19 56 45.6**	**-1.5**
QUIF				*e*Sn	**Sn**	**19 58 14.2**	**-6.3**
	comp=Z,1.5nm,0.3s						
CAF	**Calviac**	**8.22**	**209**	*e*Pn	**Pn**	**19 56 46.1**	**-1.3**
HFS	**Hagfors**	**8.57**	**21**	Pn	**Pn**	**19 56 48.2**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=198,slow=14,SNR=9.7						
HFS				Sn	**Sn**	**19 58 19.5**	**-10**
	comp=Z,0.7nm,0.3s,baz=207,slow=28,SNR=7.9						
HFS	**Hagfors**	**8.57**	**21**	Sn	**Sn**	**19 58 19.5**	**-10**
LFF	**La Frestale**	**8.64**	**215**	*e*Pn	**Pn**	**19 56 52.6**	**-0.5**
FRF	**La Foret Royal**	**8.73**	**185**	*e*Pn	**Pn**	**19 56 52.7**	**-1.7**
LMR	**La Mourre**	**8.97**	**185**	*e*Pn	**Pn**	**19 56 55.9**	**-1.7**
NOA	**NORSAR Array B**	**9.02**	**11**	Pn	**Pn**	**19 56 53.9**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=3.2						
NOA				Sn	**Sn**	**19 58 28.4**	**-12**
	comp=Z,0.3nm,0.3s,baz=182,slow=19,SNR=2.8						
EPF	**Esparros**	**10.47**	**211**	*e*Pn	**Pn**	**19 57 17.2**	**-0.9**
AKASG	**Malin Array Be**	**13.53**	**88**	Pn	**Pn**	**19 57 54.7**	**-5.2**
	comp=Z,0.5nm,0.3s,baz=280,slow=13,SNR=2.5						
MKAR	**Makanchi Array**	**46.76**	**65**	P	**P**	**20 03 17.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=303,slow=8.3,SNR=3.0						

IDC 20 19:58:23.4±1.3**, 221N×12582E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/14**, mbtmp3.5**/4**, Error ellipse: s-maj=139.3km s-min=19.9km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.55**	**160**	P	P	20 03 35.5	-0.2
	0.7nm,0.3s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.89**	**163**	P	P	20 04 06.6	+0.4
	0.3nm,0.3s,baz=346,slow=10,SNR=12						
SONM	**Songino Array**	**48.46**	**343**	P	P	20 07 07.6	0.0
	0.1nm,0.4s,baz=158,slow=5.8,SNR=2.9						
MKAR	**Makanchi Array**	**58.29**	**326**	P	P	20 08 19.9	0.0
	0.6nm,0.4s,baz=122,slow=8.1,SNR=17						

*KRSC **20** 20:07:51.2±2.5, 5296N×15486E, h511^{km}±71^{km}, ML4.7*
*MOS **20** 20:07:51.9±1.0, 5370N×15358E, h433^{km}, mb4.1/24, Error ellipse: s-maj=13.5km s-min=9.3km az=80.3*
*ISCJB **20** 20:07:53.1±0.2, 5335N±004×15404E±007, h464^{km}±3^{km}, mb3.9/43, Error ellipse: s-maj=7.4km s-min=4.9km az=41.6*
*NEIC **20** 20:07:54.5±0.4, 5344N×15385E, h466^{km}±5^{km}, mb4.2/24, Error ellipse: s-maj=6.7km s-min=4.2km az=144.0*
*BJI **20** 20:07:54.0, 5352N×15413E, h489^{km}, mB4.7, mb4.4*
*IDC **20** 20:07:55.6±1.7, 5344N×15375E, h478^{km}±21^{km}, mb3.4/23, mb1 3.6/24, mb1mx3.6/27, mbtmp3.4/24, Error ellipse: s-maj=12.1km s-min=7.9km az=133.0*
ISC 20 20:07:53.9±0.2**, 5337N**±004×**15398E**±007**, h458**^{km}±3^{km}**, n129, σ1^{s}16**/149**, mb3.9**/43**, 4C-6D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**2.01**	**122**	*e*P	**P**	**20 08 55.8**	**+0.6**
MIPR				*e*S	**S**	**20 09 42.8**	**-2.1**
GNL	**Ganaly**	**2.39**	**81**	*i* P	**P**	**20 08 58.2**	**+0.9**
GNL				*i* S	**S**	**20 09 46.9**	**-1.9**
GRL	**Gorelyy**	**2.61**	**107**	*e*P	**P**	**20 09 00.3**	**+1.6**
PET	**Petropavlovsk**	**2.83**	**95**	*e*P	**P**	**20 09 00.7**	**+0.4**
PET				*e*S	**S**	**20 09 54.1**	**-0.1**
PET	**Petropavlovsk**	**2.83**	**95**	⇑*i*PN	**P**	**20 09 00.8**	**+0.6**
PET				*e*S	**S**	**20 09 54.3**	**+0.1**
PET				pmax	pmax		
	comp=Z,100nm,0.3s						
PET				pmax	pmax		
	comp=Z,135nm,0.4s						
PET				smax			
	comp=N,500nm,2.0s						
PET				smax			
	comp=N,249nm,0.8s						
PET	**Petropavlovsk**	**2.83**	**95**	*e*P	**P**	**20 09 00.6**	**+0.4**
PET				*i* S	**S**	**20 09 51.3**	**-2.9**
AVH	**Avacha**	**2.86**	**90**	*e*P	**P**	**20 09 01.6**	**+1.2**
AVH				*i* S	**S**	**20 09 53.2**	**-1.3**
RUS	**Russkaya**	**2.91**	**107**	*e*P	**P**	**20 09 00.7**	**-0.1**
RUS				*i* S	**S**	**20 09 51.5**	**-3.7**
SKR	**Severo-Kuril's**	**3.00**	**153**	*e*PN	**P**	**20 09 01.2**	**-0.4**
SKR				*e*S	**S**	**20 09 55.0**	**-1.5**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				pmax	pmax		
	comp=N,70nm,0.4s						
SKR				pmax	pmax		
	comp=E,30nm,0.4s						
SKR				smax			
	comp=N,120nm,0.5s						
SKR				smax			
	comp=E,150nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
NLC	**Nalytchevo**	**3.23**	**91**	*e*P	**P**	**20 09 03.1**	**0.0**
NLC				*i* S	**S**	**20 09 55.6**	**-3.9**
KII	**Karymskiy**	**3.32**	**76**	*e*P	**P**	**20 09 04.8**	**+1.0**
SPN	**Mys Shipunski**	**3.65**	**92**	*i* P	**P**	**20 09 05.5**	**-0.9**
SPN				*i* S	**S**	**20 09 59.9**	**-5.6**
TUMR	**Tumrok**	**4.09**	**60**	*i* P	**P**	**20 09 12.0**	**+1.9**
TUMR				*i* S	**S**	**20 10 10.7**	**-1.6**
KOZ	**Kozyrevsk**	**4.35**	**49**	*i* P	**P**	**20 09 14.2**	**+1.8**
KMNR	**Kamenistaya**	**4.36**	**54**	*i* P	**P**	**20 09 13.9**	**+1.4**
KMNR				*e*S	**S**	**20 10 14.2**	**-2.5**
KOZR	**Kozyr**	**4.37**	**49**	PN	**P**	**20 09 14.2**	**+1.7**
SRDR	**Sredinnyy**	**4.44**	**46**	*i* P	**P**	**20 09 15.0**	**+1.8**
SRDR				*e*S	**S**	**20 10 16.0**	**-2.0**
KPT	**Kopyto**	**4.46**	**52**	*i* P	**P**	**20 09 14.7**	**+1.3**
BZMR	**Bezymyannaya**	**4.57**	**53**	*e*P	**P**	**20 09 16.3**	**+1.9**
MKZ	**Mys Kozlova**	**4.73**	**72**	*e*P	**P**	**20 09 14.7**	**-1.2**
MKZ				*i* S	**S**	**20 10 15.7**	**-7.2**
KRSR	**Krestovskiy**	**4.76**	**51**	*i* P	**P**	**20 09 17.5**	**+1.3**
ZLN	**Zelenaya**	**4.76**	**53**	*e*P	**P**	**20 09 17.8**	**+1.6**
KLY	**Klyuchi**	**4.85**	**50**	P	**P**	**20 09 19.3**	**+2.3**
KLY				*i* S	**S**	**20 10 23.9**	**-1.1**
BDR	**Baidarnaya**	**5.25**	**50**	*e*P	**P**	**20 09 22.2**	**+1.3**
BDR				*i* S	**S**	**20 10 28.5**	**-3.5**
SRKR	**Sorokina**	**5.29**	**49**	*i* P	**P**	**20 09 23.2**	**+2.0**
SRKR				*i* S	**S**	**20 10 30.1**	**-2.4**
KBTR	**Krutoberegovo**	**5.85**	**57**	*e*P	**P**	**20 09 24.9**	**-1.9**
MA2	**Magadan**	**6.47**	**345**	⇑*e*P	**P**	**20 09 34.0**	**+1.0**
	comp=Z,34nm,0.8s						
MA2				*e*S	**S**	**20 10 55.8**	**+1.6**
MA2	**Magadan**	**6.47**	**345**	*c i*PN	**P**	**20 09 34.6**	**+1.6**
MA2				pmax	pmax		
	comp=N,20nm,0.7s						
MA2				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS	**Yuzh-Sakhalins**	**9.64**	**233**	*e*P	**P**	**20 10 08.8**	**+1.7**
YSS	**Yuzh-Sakhalins**	**9.64**	**233**	*e*PN	**P**	**20 10 10.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
ASAJ	**Asahikawa**	**11.91**	**224**	P	**P**	**20 10 32.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=57,slow=22,SNR=4.3						
YAK	**Yakutsk**	**15.52**	**314**	*e*P	**P**	**20 11 08.8**	**-1.2**
	comp=Z,14nm,0.5s						
YAK	**Yakutsk**	**15.52**	**314**	*e*P	**P**	**20 11 09.9**	**-0.2**
YAK				*e*S	**S**	**20 13 51.5**	**-0.6**
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				smax			
	comp=N,279nm,6.7s						
YAK				smax			
	comp=Z,309nm,8.2s						
YAK				smax			
	comp=E,151nm,4.3s						
BILL	**Bilibino**	**15.84**	**17**	*e*P	**P**	**20 11 12.8**	**-0.5**
	comp=E,11nm,0.7s						
BILL	**Bilibino**	**15.84**	**17**	⇓*e*P	**P**	**20 11 13.6**	**+0.3**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAJO	**Matsushiro**	**20.11**	**220**	*e*P	**P**	**20 11 55.7**	**-0.1**
	comp=Z,21nm,0.7s						
MAJO	**Matsushiro**	**20.11**	**220**	*e*P	**P**	**20 11 55.7**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,21nm,0.7s						
MAT	**Matsushiro**	**20.11**	**220**	P	**P**	**20 11 55.7**	**-0.1**
MJAR	**Matsushiro Arr**	**20.11**	**220**	P	**P**	**20 11 56.1**	**+0.3**
MJAR				pmax	pmax		
	comp=Z,11nm,0.6s						
MJAR	**Matsushiro Arr**	**20.11**	**220**	P	**P**	**20 11 56.1**	**+0.3**
	comp=Z,10nm,0.6s,baz=17,slow=9.9,SNR=45						
GAMB	**Gambell**	**20.43**	**46**	*e*P	**P**	**20 11 58.6**	**+0.3**
	comp=Z,6.7nm,0.5s						
TIXI	**Tiksi**	**21.37**	**338**	*e*P	**P**	**20 12 07.0**	**+0.2**
	comp=Z,12nm,0.6s,mb4.6						
TIXI	**Tiksi**	**21.37**	**338**	*i* P	**P**	**20 12 07.1**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
HIA	**Hailar**	**21.66**	**273**	*e*P	**P**	**20 12 09.4**	**-0.2**
	comp=Z,3.8nm,0.5s,mb4.2						
HIA	**Hailar**	**21.66**	**273**	*e*P	**P**	**20 12 09.4**	**-0.2**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TNA	**Tin City**	**22.45**	**42**	*e*P	**P**	**20 12 17.2**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.3						
BOD	**Bodaibo**	**22.77**	**297**	⇓*i*P	**P**	**20 12 21.4**	**+1.8**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.7						
KSRS	**Korea Array**	**24.05**	**239**	P	**P**	**20 12 32.3**	**+1.0**
	comp=Z,1.4nm,0.6s,mb3.5,baz=45,slow=8.5,SNR=5.7						
JNU	**Nakatsue**	**26.11**	**228**	P	**P**	**20 12 48.9**	**-0.8**
	comp=Z,5.6nm,0.7s,mb4.1,baz=97,slow=5.5,SNR=8.0						
TTA	**Tatalina**	**27.37**	**50**	*e*P	**P**	**20 13 00.7**	**+0.4**
	comp=Z,1.7nm,0.4s,mb3.8						
TTA	**Tatalina**	**27.37**	**50**	*e*P	**P**	**20 13 00.7**	**+0.4**
TTA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.9						
IMA2	**Indian Mountai**	**28.32**	**43**	*e*P	**P**	**20 13 09.1**	**+0.4**
KDAK	**Kodiak Island**	**29.86**	**60**	P	**P**	**20 13 22.2**	**0.0**
KDAK	**Kodiak Island**	**29.86**	**60**	P	**P**	**20 13 22.2**	**0.0**
	comp=Z,8.2nm,0.9s,mb4.2,baz=303,slow=3.6,SNR=7.7						
TLY	**Talaya**	**30.16**	**287**	P	**P**	**20 13 19.6**	**-5.2**
	comp=Z,5.0nm,0.8s,mb4.0						
TLY	**Talaya**	**30.16**	**287**	P	**P**	**20 13 19.6**	**-5.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
SONM	**Songino Array**	**30.24**	**279**	P	**P**	**20 13 26.0**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=57,slow=7.8,SNR=5.2						
SONM				ScP	ScP	20 19 07.6	-2.9
	comp=Z,0.4nm,1.0s,baz=62,slow=1.4,SNR=4.0						
MCK	**McKinley**	**30.48**	**47**	*e*P	**P**	**20 13 28.0**	**+0.5**
	comp=Z,3.7nm,0.4s,mb4.2						
MCK	**McKinley**	**30.48**	**47**	*e*P	**P**	**20 13 28.0**	**+0.6**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
COLA	**College**	**30.81**	**45**	*e*P	**P**	**20 13 30.8**	**+0.5**
	comp=Z,7.7nm,0.9s,mb4.1						
COLA	**College**	**30.81**	**45**	*e*P	**P**	**20 13 30.8**	**+0.5**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
SML	**Sawmill**	**31.06**	**51**	*e*P	**P**	**20 13 33.0**	**+0.5**
JOW	**Kunigami**	**32.66**	**226**	P	**P**	**20 13 46.4**	**-0.3**
	comp=Z,15nm,0.5s,mb4.7,baz=316,slow=28,SNR=7.2						
EGAK	**Eagle**	**33.65**	**44**	*e*P	**P**	**20 13 54.2**	**-0.4**
	comp=Z,7.1nm,0.8s,mb4.2						
DAWY	**Dawson**	**34.56**	**45**	*e*P	**P**	**20 14 02.7**	**+0.4**
INK	**Inuvik**	**35.89**	**37**	⇓*i*P	**P**	**20 14 13.9**	**+0.6**
	comp=Z,409nm,0.5s						
INK	**Inuvik**	**35.89**	**37**	⇓*i*P	**P**	**20 14 13.9**	**+0.6**
INK				pmax	pmax		
	comp=Z,409nm,0.5s						
INK	**Inuvik**	**35.89**	**37**	P	**P**	**20 14 14.3**	**+0.9**
	comp=Z,14nm,0.4s,mb4.7,baz=297,slow=7.0,SNR=61						
CD2	**Chengdu**	**42.37**	**259**	*e*P	**P**	**20 15 05.8**	**-0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
WMQ	**Urumqi**	**43.38**	**285**	*e*P	**P**	**20 15 14.3**	**+0.1**
GYA	**Guiyang**	**44.03**	**251**	P	**P**	**20 15 20.4**	**+0.8**
GYA				AP	pP	20 16 48.0	+2.0
GYA				PCP	PcP	20 16 56.4	+1.1
GYA				PP	PP	20 17 11.8	+0.5
GYA				SCP	ScP	20 20 03.6	+0.9
GYA				PCS	PcS	20 20 49.0	-0.4
GYA				S	**S**	**20 21 17.4**	**0.0**
GYA				SCS	ScS	20 24 25.3	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GYA				AMB	AMB		
	comp=Z,60nm,5.8s						
RES	**Resolute Bay**	**44.40**	**21**	⇓*e*P	**P**	**20 15 21.8**	**0.0**
	comp=Z,133nm,0.5s						
RES	**Resolute Bay**	**44.40**	**21**	⇓*e*P	**P**	**20 15 21.8**	**0.0**
RES				pmax	pmax		
	comp=Z,133nm,0.5s						
KURK	**Kurchatov**	**44.41**	**298**	*e*P	**P**	**20 15 21.7**	**-0.5**
	comp=Z,2.5nm,0.5s,mb3.9						
KURK	**Kurchatov**	**44.41**	**298**	*e*P	**P**	**20 15 21.7**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**44.68**	**292**	P	**P**	**20 15 23.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**44.68**	**292**	P	**P**	**20 15 23.8**	**-0.5**
	comp=Z,0.5nm,0.5s,mb3.2,baz=55,slow=6.6,SNR=8.1						
YKA	**Yellowknife Ar**	**45.40**	**41**	P	**P**	**20 15 30.2**	**+0.6**
YKA	**Yellowknife Ar**	**45.40**	**41**	P	**P**	**20 15 30.2**	**+0.6**
YKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
YKA	**Yellowknife Ar**	**45.40**	**41**	P	**P**	**20 15 30.2**	**+0.6**
	comp=Z,6.0nm,0.6s,mb4.2,baz=302,slow=7.4,SNR=104						
BRVK	**Borovoye**	**47.31**	**305**	*e*P	**P**	**20 15 43.4**	**-0.9**
	comp=Z,2.2nm,0.5s,mb3.8						
BRVK	**Borovoye**	**47.31**	**305**	*e*P	**P**	**20 15 43.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
ARU	**Arti**	**50.63**	**314**	*e*P	**P**	**20 16 08.4**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.0						
ARU	**Arti**	**50.63**	**314**	*e*P	**P**	**20 16 08.4**	**-0.6**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
LSA	**Lhasa**	**50.75**	**268**	P	**P**	**20 16 12.2**	**+2.0**
	comp=Z,1.6nm,0.6s,mb3.5						
LSA	**Lhasa**	**50.75**	**268**	P	**P**	**20 16 12.2**	**+1.9**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
ARCES	**ARCESS Array B**	**51.80**	**339**	P	**P**	**20 16 16.7**	**-0.7**
ARCES	**ARCESS Array B**	**51.80**	**339**	P	**P**	**20 16 16.7**	**-0.7**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES	**ARCESS Array B**	**51.80**	**339**	P	**P**	**20 16 16.7**	**-0.7**
	comp=Z,4.4nm,1.0s,mb3.8,baz=42,slow=8.2,SNR=37						
WALA	**Waterton Lakes**	**53.95**	**54**	*e*P	**P**	**20 16 33.1**	**+0.1**
	comp=Z,3.7nm,0.5s,mb4.0						
AKTK	**Aktyubinsk**	**54.85**	**309**	P	**P**	**20 16 37.5**	**-1.9**
AKTO	**Aktyubinsk**	**54.85**	**309**	P	**P**	**20 16 37.5**	**-1.9**
	comp=Z,0.4nm,0.3s,mb3.2,baz=33,slow=17,SNR=2.7						
FFC	**Flin Flon**	**55.41**	**43**	*e*P	**P**	**20 16 43.8**	**+0.5**
	comp=Z,13nm,1.0s,mb4.2						
FFC	**Flin Flon**	**55.41**	**43**	*e*P	**P**	**20 16 43.8**	**+0.6**
FFC				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
FCC	**Fort Churchill**	**55.48**	**36**	*e*P	**P**	**20 16 43.2**	**-0.5**
	comp=Z,9.6nm,0.6s,mb4.3						
FCC	**Fort Churchill**	**55.48**	**36**	*e*P	**P**	**20 16 43.2**	**-0.5**
FCC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
JOF	**Joensuu**	**55.68**	**332**	*e*p	**P**	**20 16 43.8**	**-1.2**
	comp=Z,2.5nm,0.4s,mb3.9						
JOF	**Joensuu**	**55.68**	**332**	*e*P	**P**	**20 16 43.8**	**-1.2**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.0						
KAF	**Kangasniemi**	**57.70**	**334**	*e*p	**P**	**20 16 56.4**	**-2.5**
	comp=Z,2.3nm,0.4s,mb3.9						
KAF	**Kangasniemi**	**57.70**	**334**	*e*P	**P**	**20 16 56.4**	**-2.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**58.31**	**334**	P	**P**	**20 17 02.5**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**58.31**	**334**	P	**P**	**20 17 02.5**	**-0.7**
	comp=Z,1.3nm,0.4s,mb3.6,baz=39,slow=7.7,SNR=19						
NVAR	**Mina Array Bea**	**59.05**	**66**	P	**P**	**20 17 09.9**	**+1.3**
	comp=Z,1.5nm,0.7s,mb3.5,baz=318,slow=5.8,SNR=8.5						
PDAR	**Pinedale Array**	**60.53**	**57**	P	**P**	**20 17 19.5**	**+1.1**
	comp=Z,2.5nm,0.7s,mb3.8,baz=327,slow=2.6,SNR=18						
NB2	**NORSAR Subarra**	**62.15**	**341**	P	**P**	**20 17 27.9**	**-0.8**
	comp=Z,2.0nm,0.5s,mb3.8,baz=24,slow=6.5						
NB2	**NORSAR Subarra**	**62.15**	**341**	P	**P**	**20 17 27.9**	**-0.8**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
NOA	**NORSAR Array B**	**62.15**	**341**	P	**P**	**20 17 28.1**	**-0.6**
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA	**NORSAR Array B**	**62.15**	**341**	P	**P**	**20 17 28.1**	**-0.6**
	comp=Z,3.2nm,0.8s,mb3.8,baz=25,slow=6.6,SNR=7.4						
KSM	**Kuching**	**63.02**	**231**	*e*P	**P**	**20 17 35.0**	**0.0**
EYMN	**Ely**	**64.82**	**43**	*e*P	**P**	**20 17 45.1**	**-1.0**
	comp=Z,6.2nm,0.7s,mb4.3						
AKASG	**Malin Array Be**	**66.38**	**325**	P	**P**	**20 17 54.2**	**-1.6**
AKASG	**Malin Array Be**	**66.38**	**325**	P	**P**	**20 17 54.2**	**-1.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**66.38**	**325**	P	**P**	**20 17 54.2**	**-1.6**
	comp=Z,1.2nm,0.3s,mb3.9,baz=29,slow=6.8,SNR=4.9						
SCHQ	**Schefferville**	**67.01**	**24**	P	**P**	**20 17 58.5**	**-1.1**
	baz=310,slow=8.8						
GERES	**GERESS Array B**	**72.75**	**334**	P	**P**	**20 18 32.6**	**-1.5**
GERES	**GERESS Array B**	**72.75**	**334**	P	**P**	**20 18 32.6**	**-1.5**
	comp=Z,0.2nm,0.3s,mb3.1,baz=8.3,slow=29,SNR=3.9						
TXAR	**Lajitas Array**	**73.84**	**63**	P	**P**	**20 18 41.8**	**+1.0**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**73.84**	**63**	P	**P**	**20 18 41.8**	**+1.0**
	comp=Z,1.2nm,0.5s,mb3.7,baz=297,slow=4.7,SNR=17						
BRTR	**Keskin Array B**	**73.97**	**316**	P	**P**	**20 18 41.4**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**73.97**	**316**	P	**P**	**20 18 41.4**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.2,baz=22,slow=5.2,SNR=3.5						
WB2	**Warramunga Arr**	**74.96**	**199**	⇑*i*P	**P**	**20 18 46.6**	**-0.4**
WRA	**Warramunga Arr**	**74.96**	**199**	P	**P**	**20 18 46.8**	**-0.2**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRA	**Warramunga Arr**	**74.96**	**199**	P	**P**	**20 18 46.8**	**-0.2**
	comp=Z,4.3nm,0.6s,mb4.2,baz=16,slow=6.0,SNR=57						
FITZ	**Fitzroy Crossi**	**75.26**	**208**	*e*P	**P**	**20 18 48.8**	**0.0**
	comp=Z,7.3nm,1.5s,mb4.0						
FITZ	**Fitzroy Crossi**	**75.26**	**208**	P	**P**	**20 18 48.5**	**-0.2**
	comp=Z,1.4nm,0.6s,mb3.7,baz=45,slow=7.1,SNR=4.8						
ASAR	**Alice Springs**	**78.67**	**199**	P	**P**	**20 19 07.7**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ASAR	**Alice Springs**	**78.67**	**199**	P	**P**	**20 19 07.7**	**+0.4**
	comp=Z,4.4nm,0.5s,mb4.3,baz=12,slow=5.3,SNR=120						
MMAI	**Mount Meron Ar**	**78.85**	**311**	P	**P**	**20 19 07.8**	**-0.6**
	comp=Z,0.2nm,0.3s,mb3.1,baz=46,slow=7.1,SNR=4.6						
ESDC	**Sonseca Array**	**85.38**	**343**	P	**P**	**20 19 40.4**	**-1.3**
	comp=Z,0.3nm,0.4s,mb3.2,baz=358,slow=3.6,SNR=3.1						

*ISCJB **20** 20:11:48.8±1.8, 181S±02×1774W±01, h273^{km}±17^{km}, mb4.0/13, Error ellipse: s-maj=32.9km s-min=13.3km az=149.0*
*NEIC **20** 20:11:49.9±1.5, 1806S×17735W, h272^{km}±14^{km}, mb4.3/9, Error ellipse: s-maj=25.0km s-min=9.8km az=149.0*
*IDC **20** 20:12:03.0±7.0, 1862S×17727W, h418^{km}±77^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/17, mbtmp3.5/9, Error ellipse: s-maj=83.1km s-min=24.7km az=154.0*
ISC 20 20:11:49.9±1.8**, 181S**±02×**1774W**±01**, h271**^{km}±17^{km}**, n23, σ0^{s}77**/22**, mb4.0**/13**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.78**	**53**	*e*Pn	**Pn**	**20 13 28.5**	**+0.3**
FUNA	**Funafuti**	**10.03**	**340**	*e*Pn	**Pn**	**20 14 08.2**	**-0.6**
	67nm,0.8s						
FUNA				*e*		20 14 25.4	
DZM	**Mont Dzumac**	**15.71**	**253**	P	**Pn**	**20 15 22.4**	**+4.6**
	0.3nm,0.3s,baz=90,slow=20,SNR=3.4						
ARMA	**Armidale**	**30.72**	**241**	*e*P	**P**	**20 17 40.7**	**+0.6**
CTA	**Charters Tower**	**34.38**	**261**	*e*P	**P**	**20 18 14.0**	**+2.0**
	8.6nm,0.8s,mb4.3						
CTA	**Charters Tower**	**34.38**	**261**	P	**P**	**20 18 13.9**	**+1.9**
	11nm,0.7s,mb4.5,baz=94,slow=11,SNR=9.0						
CTAO	**Charters Tower**	**34.38**	**261**	*e*P	**P**	**20 18 13.4**	**+1.4**
	10nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**39.42**	**242**	P	**P**	**20 18 53.2**	**-0.9**
	4.2nm,0.5s,mb4.1,baz=101,slow=10,SNR=25						
WB2	**Warramunga Arr**	**45.55**	**260**	*e*P	**P**	**20 19 43.8**	**+0.3**
WRA	**Warramunga Arr**	**45.56**	**260**	P	**P**	**20 19 43.3**	**-0.3**
	2.1nm,0.6s,mb3.6,baz=95,slow=7.9,SNR=34						
ASAR	**Alice Springs**	**45.69**	**254**	P	**P**	**20 19 44.8**	**+0.3**
	19nm,0.7s,mb4.5,baz=91,slow=8.3,SNR=189						
FORT	**Forrest**	**50.83**	**245**	*e*P	**P**	**20 20 22.1**	**-1.4**
	5.1nm,0.5s,mb4.1						
FITZ	**Fitzroy Crossi**	**53.97**	**260**	*e*P	**P**	**20 20 47.5**	**+0.9**
	4.5nm,0.5s,mb4.0						
FITZ	**Fitzroy Crossi**	**53.97**	**260**	P	**P**	**20 20 46.9**	**+0.3**
	2.5nm,0.5s,mb3.8,baz=102,slow=16,SNR=13						
MBWA	**Marble Bar**	**58.98**	**256**	*e*P	**P**	**20 21 20.9**	**-0.9**
	3.3nm,0.7s,mb3.9						
QSPA	**South Pole Qui**	**72.01**	**180**	*e*P	**P**	**20 22 37.3**	**-6.6**
	3.4nm,0.7s,mb4.1						
NVAR	**Mina Array Bea**	**78.85**	**43**	P	**P**	**20 23 23.2**	**0.0**
	1.1nm,0.8s,mb3.6,baz=218,slow=6.9,SNR=5.2						
MCK	**McKinley**	**84.46**	**12**	*e*P	**P**	**20 23 52.6**	**+0.8**
	7.9nm,1.1s,mb4.5						
TXAR	**Lajitas Array**	**85.25**	**57**	P	**P**	**20 23 56.4**	**-0.2**
	1.2nm,0.9s,mb3.7,baz=220,slow=7.5,SNR=8.4						
COLA	**College**	**85.70**	**12**	*e*P	**P**	**20 23 58.4**	**+0.5**
	2.8nm,0.7s,mb4.2						
YKA	**Yellowknife Ar**	**94.05**	**24**	P	**P**	**20 24 36.2**	**-0.9**
YKA	**Yellowknife Ar**	**94.05**	**24**	P	**P**	**20 24 36.2**	**-0.9**
	0.3nm,0.9s,mb3.3,baz=268,slow=4.3,SNR=4.1						
CLL	**Collm**	**145.80**	**348**	*e*PKPbc	PKPbc	20 30 58.0	+0.8

*IDC **20** 20:27:22.9±2.1, 428S×14403E, h0^{km}, mb3.5/3, mb1 3.9/6, mb1mx3.7/15, mbtmp3.8/6, ML3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/14, Error ellipse: s-maj=47.0km s-min=27.4km az=81.0*
*ISCJB **20** 20:27:27.9±4.1, 44S±02×1443E±02, h61^{km}±34^{km}, mb3.7/5, Error ellipse: s-maj=36.3km s-min=28.0km az=163.4*
*NEIC **20** 20:27:29.5±3.3, 441S×14425E, h63^{km}±28^{km}, mb4.1/3, Error ellipse: s-maj=28.5km s-min=22.7km az=165.0*
ISC 20 20:27:29.9±3.5**, 45S**±02×**1442E**±02**, h65**^{km}±29^{km}**, n12, σ0^{s}75**/13**, mb3.6**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.71**	**150**	*e*Pn	**Pn**	**20 28 51.5**	**-0.7**
PMG				*e*Sn	**Sn**	**20 29 50.5**	**-6.0**
PMG	**Port Moresby**	**5.71**	**150**	Pn	**Pn**	**20 28 52.3**	**+0.1**
	6.9nm,0.3s,baz=23,slow=6.4,SNR=16						
PMG				Sn	**Sn**	**20 29 50.8**	**-5.6**
	4.3nm,0.3s,baz=138,slow=22,SNR=3.0						
CTA	**Charters Tower**	**15.67**	**173**	Pn	**Pn**	**20 31 08.4**	**+1.6**
	0.1nm,0.3s,baz=357,slow=17,SNR=2.1						
CTAO	**Charters Tower**	**15.67**	**173**	*e*Pn	**Pn**	**20 31 12.8**	**+6.0**
	18nm,1.4s						
WB2	**Warramunga Arr**	**18.16**	**211**	*e*Pn	**Pn**	**20 31 38.0**	**+0.2**
WRA	**Warramunga Arr**	**18.17**	**211**	P	**Pn**	**20 31 37.8**	**-0.1**
	0.1nm,0.3s,baz=36,slow=12,SNR=9.2						
ASAR	**Alice Springs**	**21.55**	**207**	P	**P**	**20 32 14.9**	**+0.8**
	0.7nm,0.6s,mb3.2,baz=33,slow=12,SNR=18						
FITZ	**Fitzroy Crossi**	**22.70**	**232**	P	**P**	**20 32 25.2**	**-1.1**
	0.8nm,0.5s,mb3.4,baz=105,slow=12,SNR=6.3						
KSRS	**Korea Array**	**44.37**	**341**	LR	LR	20 51 12.9	
	comp=Z,12nm,18.3s,baz=335,slow=32						
VNDA	**Vanda**	**73.62**	**176**	P	**P**	**20 38 56.4**	**+0.5**
	1.0nm,0.7s,mb3.6						
MKAR	**Makanchi Array**	**74.57**	**321**	P	**P**	**20 39 02.3**	**+0.4**
	0.2nm,0.3s,mb3.4,baz=97,slow=7.8,SNR=5.3						
QSPA	**South Pole Qui**	**85.51**	**180**	*e*P	**P**	**20 39 59.2**	**-1.0**
	1.4nm,0.4s,mb4.2						

*ISCJB **20** 20:32:30.7±0.6, 3891N±002×2417E±004, h1^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=3.9km az=175.9*
*ATH **20** 20:32:32.8, 3893N×2415E, h29^{km}±1^{km}, MD3.3/10, ML3.5*

*NEIC **20** 20:32:32.7, 3894N×24.15E, h28km, ML3.5(ATH), After ATH.*
*CSEM **20** 20:32:33.6±0.1, 3893N×24.15E, h20km, ML3.1, Error ellipse: s-maj=2.0km s-min=1.5km az=88.0*
*THE **20** 20:32:33.6, 3895N×24.15E, h14km, ML3.1*
ISC 20 20:32:31.6±0.6, **3891N**±002×**2417E**±004, **h7**km±5km, **n25,** σ1§**07**/36, **1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.34**	**318**	*e*Pg		**Pg**		**20 32 39.7**	**+1.4**
AOS				*e*Sg		**Sg**		**20 32 44.6**	**+1.8**
XOR	**Xorichti**	**0.89**	**301**	*e*Pg		**Pg**		**20 32 49.7**	**+1.1**
XOR				*e*Sg		**Sg**		**20 33 01.6**	**+1.5**
PTL	**Penteli**	**0.90**	**196**	*e*PB		**Pb**		**20 32 49.5**	**0.0**
PTL				*e*SN		**Sn**		**20 33 03.0**	**-0.9**
LKR	**Lokris**	**0.95**	**254**	*e*PN		**Pn**		**20 32 50.5**	**-0.9**
LKR				*e*SN		**Sn**		**20 33 05.0**	**-0.3**
ATH	**Athens Observa**	**1.01**	**201**	*e*PN		**Pn**		**20 32 52.1**	**0.0**
ATH				*e*SN		**Sn**		**20 33 06.4**	**-0.2**
PAIG	**Paliouri**	**1.08**	**339**	*e*Pg		**Pg**		**20 32 52.9**	**+0.5**
PAIG				*e*Sg		**Sg**		**20 33 07.1**	**+0.7**
KVR	**Kavouri**	**1.13**	**196**	*e*PN		**Pn**		**20 32 55.0**	**+1.2**
LIA	**Limnos Island**	**1.26**	**38**	*e*PN		**Pn**		**20 32 56.6**	**+1.0**
NAIG	**Nisos Aigina**	**1.27**	**205**	*e*PN		**Pn**		**20 32 57.0**	**+1.2**
LTK	**Loutraki**	**1.30**	**227**	*e*Pg		**Pg**		**20 32 56.4**	**-0.1**
OUR	**Ouranopolis**	**1.43**	**354**	*e*Pg		**Pg**		**20 32 57.9**	**-1.0**
AGG	**Agios Georgios**	**1.44**	**275**	*e*Pg		**Pg**		**20 32 58.2**	**-1.0**
AGG				*e*Sg		**Sg**		**20 33 17.3**	**-0.6**
PLG	**Polygyros**	**1.56**	**339**	*e*Pg		**Pg**		**20 32 59.8**	**-1.8**
PLG	**Polygyros**	**1.56**	**339**	*e*PN		**Pn**		**20 32 59.9**	**+0.1**
PLG				*e*SN		**Sn**		**20 33 19.4**	**-0.9**
CHOS	**Chios island**	**1.56**	**109**	*e*Pg		**Pg**		**20 33 00.8**	**-0.8**
DID	**Didima**	**1.59**	**208**	*e*Pg		**Pg**		**20 33 00.5**	**-1.5**
DID				*e*Sg		**Sg**		**20 33 22.2**	**-0.3**
DID	**Didima**	**1.59**	**208**	*e*Pg		**Pg**		**20 33 00.5**	**-1.5**
DID				*e*Sg		**Sg**		**20 33 22.2**	**-0.4**
PRK	**Paraskevi**	**1.67**	**78**	*e*PB		**Pb**		**20 33 02.1**	**-0.5**
LIT	**Litokhoron**	**1.76**	**313**	*e*Pb		**Pb**		**20 33 02.0**	**-2.2**
THL	**Klokotos Trika**	**1.80**	**292**	*e*PN		**Pn**		**20 33 03.7**	**+0.7**
SOH	**Sokhos**	**2.01**	**342**	*e*Pb		**Pb**		**20 33 06.1**	**-2.3**
VLX	**Vlachokerasia**	**2.09**	**223**	*e*Pn		**Pn**		**20 33 08.0**	**+0.9**
APE	**Apeiranthos**	**2.13**	**149**	*e*PN		**Pn**		**20 33 08.3**	**+0.7**
APE	**Apeiranthos**	**2.13**	**149**	⇑*i*PN		**Pn**		**20 33 08.5**	**+0.9**
APE				*e*SN		**Sn**		**20 33 36.2**	**+1.9**
ALN	**Alexandroupoli**	**2.45**	**35**	*e*Pn		**Pn**		**20 33 11.9**	**-0.1**

IDC 20 20:50:36.6±1.9, **081S**×**12798E, h0**km, **mb3.4**/4, **mb1 3.6**/4, **mb1mx3.4**/14, **mbtmp3.5**/4, **MS3.5**/1, **Ms1 3.4**/1, **ms1mx2.7**/12, **Error ellipse: s-maj=152.4km s-min=23.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.01**	**162**	P	P		P	20 55 11.9	+0.9
	0.7nm,0.6s,baz=340,slow=12,SNR=8.6								
ASAR	**Alice Springs**	**23.44**	**166**	P	P		P	20 55 48.2	+0.5
	0.6nm,0.7s,baz=345,slow=11,SNR=9.1								
STKA	**Stephens Creek**	**33.47**	**159**	P	P		P	20 57 16.2	-1.4
	1.1nm,0.7s,baz=346,slow=12,SNR=2.3								
STKA					LR		LR	21 10 46.7	
	comp=Z,77nm,18.8s,baz=205,slow=36								
MKAR	**Makanchi Array**	**61.98**	**326**	P	P		P	21 00 58.6	+0.1
	0.1nm,0.3s,baz=114,slow=9.5,SNR=3.0								

*IDC **20** 20:59:57.2±1.1, 5380N×16372W, h0km, mb3.8/15, mb1 4.0/16, mb1mx3.9/23, mbtmp3.8/16, ML3.6/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/38, Error ellipse: s-maj=31.4km s-min=15.9km az=180.0*
*BJI **20** 21:00:02.0, 5360N×16360W, h69km, mB5.1, mb4.7, Ms4.6, Msz4.2*
*ISCJB **20** 21:00:03.1±0.9, 5371N±009×16387W±007, h59km±6km, mb4.3/32, MS3.7/11, Error ellipse: s-maj=15.7km s-min=6.8km az=168.8*
*NEIC **20** 21:00:04.3±0.9, 5379N×16387W, h57km±7km, mb4.5/8, ML3.6(AEIC), Error ellipse: s-maj=14.0km s-min=6.9km az=166.0*
ISC 20 21:00:04.5±0.9, **5378N**±009×**16389W**±008, **h52**km±6km, **h62**km±2.3km**:pP-P, n58,** σ1§**13**/59, **mb4.3**/32, **MS3.7**/11, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FALS	**False Pass**	**1.11**	**14**	P			**Pn**	**21 00 23.6**	**-0.2**
AKUT	**Akutan**	**1.17**	**289**	*e*Pn			**Pn**	**21 00 24.7**	**+0.2**
AKLV	**Akutan Long Va**	**1.28**	**288**	P			**Pn**	**21 00 26.2**	**+0.2**
UNV	**Unalaska Valle**	**1.55**	**274**	P			**Pn**	**21 00 28.6**	**-1.0**
KDAK	**Kodiak Island**	**7.53**	**53**	*e*Pn			**Pn**	**21 01 47.8**	**-3.8**
KDAK	**Kodiak Island**	**7.53**	**53**	Pn			**Pn**	**21 01 46.5**	**-5.0**
	0.9nm,0.3s,baz=358,slow=2.9,SNR=7.3								
KDAK					Sn		**Sn**	**21 03 05.1**	**-10**
	0.2nm,0.3s,baz=158,slow=23,SNR=5.7								
ADK	**Adak**	**7.98**	**261**	*e*Pn			**Pn**	**21 01 58.5**	**+0.8**
SVW2	**Sparrevohn**	**8.59**	**28**	*e*Pn			**Pn**	**21 02 07.0**	**+1.0**
TTA	**Tatalina**	**10.06**	**21**	*e*Pn			**Pn**	**21 02 31.1**	**+5.1**
	20nm,1.3s								
GAMB	**Gambell**	**10.80**	**341**	Pn			**Pn**	**21 02 35.2**	**-1.1**
TNA	**Tin City**	**11.99**	**352**	*e*Pn			**Pn**	**21 02 57.6**	**+5.3**
	7.8nm,1.0s								
MCK	**McKinley**	**12.60**	**32**	*e*Pn			**Pn**	**21 03 06.6**	**+5.9**
	17nm,1.3s								
IMA2	**Indian Mountai**	**13.32**	**18**	*e*Pn			**Pn**	**21 03 14.1**	**+3.6**
EGAK	**Eagle**	**15.89**	**37**	*e*Pn			**Pn**	**21 03 43.8**	**-0.6**
	7.2nm,0.9s								
DLBC	**Dease Lake**	**19.31**	**62**	*e*Pn			**Pn**	**21 04 27.6**	**+1.2**
INK	**Inuvik**	**20.36**	**33**	*e*Pn			**P**	**21 04 35.1**	**-1.1**
	144nm,0.9s								
INK	**Inuvik**	**20.36**	**33**	P			**P**	**21 04 33.2**	**-3.1**
	3.4nm,0.9s,baz=236,slow=11,SNR=7.7								
INK					LR		LR	21 14 24.0	
	comp=Z,213nm,18.3s,MS3.5,baz=253,slow=43								
BBB	**Bella Bella**	**21.46**	**80**	LR			LR	21 11 51.2	
	comp=Z,121nm,18.9s,MS3.3,baz=326,slow=33								
YKA	**Yellowknife Ar**	**26.80**	**51**	P			**P**	**21 05 39.0**	**-0.2**
YKA	**Yellowknife Ar**	**26.80**	**51**	P			**P**	**21 05 39.0**	**-0.2**
	0.9nm,0.7s,mb3.4,baz=271,slow=9.2,SNR=9.6								
EDM	**Edmonton**	**29.55**	**70**	*e*P			**P**	**21 06 03.8**	**-0.1**
TIXI	**Tiksi**	**33.27**	**328**	*e*P			**P**	**21 06 34.6**	**-1.6**
	2.0nm,1.0s,mb4.0								
NVAR	**Mina Array Bea**	**34.47**	**98**	P			**P**	**21 06 46.1**	**-1.0**
	0.3nm,0.6s,mb3.4,baz=311,slow=8.2,SNR=2.5								
RLMT	**Red Lodge**	**35.74**	**81**	*e*P			**P**	**21 06 57.6**	**-0.4**
	16nm,0.8s,mb5.0								
PDAR	**Pinedale Array**	**36.93**	**85**	P			**P**	**21 07 05.9**	**-2.2**
	0.2nm,0.7s,baz=332,slow=8.4,SNR=2.4								
FCC	**Fort Churchill**	**37.47**	**54**	*e*P			**P**	**21 07 15.2**	**+2.7**
	9.2nm,1.2s,mb4.5								
MDJ	**Mudanjiang**	**42.92**	**286**	P			**P**	**21 07 56.0**	**-1.8**
MDJ					S		**S**	**21 14 16.6**	**-2.1**
MDJ					AMB		AMB		
	comp=Z,5.0nm,2.3s,mb3.8								
MDJ					AMB		AMB		
	comp=Z,65nm,6.1s								
MDJ					LR		LR		
	comp=Z,57nm,24.2s,MS3.4								
MJAR	**Matsushiro Arr**	**43.02**	**271**	P			**P**	**21 07 58.7**	**0.0**
	comp=Z,1.5nm,0.9s,mb3.7,baz=30,slow=2.2,SNR=3.9								
MAJO	**Matsushiro**	**43.02**	**271**	P			**P**	**21 07 57.5**	**-1.2**
	comp=Z,7.6nm,0.8s,mb4.5								
CN2	**Changchun**	**45.78**	**288**	*e*P			**P**	**21 08 20.0**	**-0.6**
KSRS	**Korea Array**	**48.48**	**279**	P			**P**	**21 08 42.3**	**+0.6**
	comp=Z,3.2nm,1.0s,mb4.3,baz=44,slow=7.4,SNR=6.0								
KSRS					LR		LR	21 28 52.9	
	comp=Z,38nm,18.4s,MS3.4,baz=52,slow=36								
TXAR	**Lajitas Array**	**49.49**	**95**	P			**P**	**21 08 48.5**	**-0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=180,slow=30,SNR=6.6								
LPIG	**La Paz**	**49.55**	**105**	LR			LR	21 24 04.6	
	comp=Z,38nm,21.0s,MS3.4,baz=217,slow=29								
ULN	**Ulaanbaatar**	**53.01**	**303**	*e*P			**P**	**21 09 15.8**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.2								
SONM	**Songino Array**	**53.36**	**303**	P			**P**	**21 09 19.3**	**+1.1**
	comp=Z,3.3nm,1.1s,mb4.2,baz=44,slow=5.1,SNR=16								
HHC	**Hu-ho-hao-te**	**55.45**	**294**	*e*P			**P**	**21 09 32.9**	**-0.5**
HHC					PP		PP	21 11 38.6	+1.3
HHC					S		**S**	**21 17 10.0**	**-4.2**
HHC					AMB		AMB		
	comp=Z,16nm,0.6s,mb5.2								
HHC					AMB		AMB		
	comp=Z,140nm,5.2s								
TKL	**Tuckaleechee C**	**56.63**	**74**	LR			LR	21 32 16.7	
	comp=Z,55nm,18.8s,MS3.7,baz=335,slow=34								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**56.80**	**356**	P			**P**	**21 09 41.9**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.2,baz=13,slow=8.7,SNR=4.3								
NJ2	**Nanjing**	**57.57**	**281**	*e*P			**P**	**21 09 50.5**	**+1.8**
NJ2					AMB		AMB		
	comp=Z,20nm,0.5s,mb5.4								
PKME	**Peaks-Kenny Pk**	**57.57**	**57**	*e*P			**P**	**21 09 50.1**	**+1.7**
	comp=Z,50nm,0.8s								
GTA	**Gaotai**	**62.71**	**300**	*e*P			**P**	**21 10 24.8**	**+1.1**
GTA					PP		PP	21 12 44.3	+2.6
GTA					S		**S**	**21 18 47.4**	**-0.8**
GTA					SS		SS	21 22 51.9	-0.9
GTA					AMB		AMB		
	comp=Z,5.0nm,1.5s,mb4.4								
GTA					AMB		AMB		
	comp=Z,143nm,5.7s								
GTA					LR		LR		
	comp=N,145nm,15.2s,MS4.4								
GTA					LR		LR		
	comp=E,111nm,13.7s,MS4.4								
GTA					LR		LR		
	comp=Z,161nm,13.3s,MS4.4								
LZH	**Lanzhou**	**63.06**	**295**	*e*P			**P**	**21 10 27.0**	**+0.9**
LZH					AP		pP	21 10 44.5	+3.9
LZH					XP		sP	21 10 50.6	+4.1
LZH					AMB		AMB		
	comp=Z,16nm,1.2s,mb5.0								
LZH					AMB		AMB		
	comp=Z,65nm,4.3s								
BRVK	**Borovoye**	**64.40**	**327**	P			**P**	**21 10 32.4**	**-2.3**
	comp=Z,5.3nm,1.0s,mb4.5								
FINES	**FINESS Array B**	**64.85**	**355**	P			**P**	**21 10 37.3**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=23,slow=7.5,SNR=3.7								
MKAR	**Makanchi Array**	**65.16**	**316**	P			**P**	**21 10 39.1**	**-0.5**
	comp=Z,0.3nm,0.2s,mb3.9,baz=46,slow=6.9,SNR=5.4								
MKAR					LR		LR	21 40 52.6	
	comp=Z,48nm,18.8s,MS3.7,baz=208,slow=38								
WMQ	**Urumqi**	**65.19**	**311**	*e*P			**P**	**21 10 42.3**	**+2.4**
WMQ					AP		pP	21 10 57.8	+3.4
WMQ					PCP		PcP	21 11 14.9	+2.8
WMQ					PP		PP	21 13 07.6	+4.3
WMQ					*e*S		S	21 19 18.8	0.0
WMQ					AMB		AMB		
	comp=Z,4.0nm,0.5s,mb4.7								
WMQ					AMB		AMB		
	comp=Z,226nm,5.2s								
WMQ					LR		LR		
	comp=N,76nm,17.3s,MS4.1								
WMQ					LR		LR		
	comp=E,87nm,22.0s,MS4.1								
WMQ					LR		LR		
	comp=Z,31nm,22.0s,MS3.5								
NOA	**NORSAR Array B**	**65.46**	**3**	P			**P**	**21 10 42.1**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.8,baz=316,slow=15,SNR=3.2								
CD2	**Chengdu**	**67.02**	**291**	*e*P			**P**	**21 10 51.1**	**-0.7**
CD2					PP		PP	21 13 20.6	+1.0
CD2					S		S	21 19 37.3	-4.1
CD2					SS		SS	21 23 57.9	-2.2
CD2					AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.9								
CD2					AMB		AMB		
	comp=Z,20nm,5.8s								
CD2					LR		LR		
	comp=N,120nm,18.2s								
CD2					LR		LR		
	comp=Z,110nm,16.2s,MS4.2								
GYA	**Guiyang**	**68.79**	**286**	P			**P**	**21 11 02.8**	**-0.2**
GYA					PCP		PcP	21 11 27.8	+0.4
GYA					PP		PP	21 13 36.9	+1.8
GYA					S		S	21 19 59.8	-2.8
GYA					SKS			21 20 53.0	
GYA					SCS		ScS	21 20 54.0	-4.8
GYA					AMB		AMB		
	comp=Z,10.0nm,0.9s,mb4.8								
GYA					AMB		AMB		
	comp=Z,70nm,8.7s								
KMI	**Kunming**	**72.05**	**288**	P			**P**	**21 11 21.8**	**-1.1**
KMI					AP		pP	21 11 38.3	+0.7
KMI					XP		sP	21 11 44.3	+0.8
KMI					PP		PP	21 14 05.3	+2.2
KMI					S		S	21 20 35.0	-5.7
KMI					XS		sS	21 21 06.6	+1.3
KMI					SS		SS	21 25 13.8	-4.0
KMI					AMB		AMB		
	comp=Z,4.0nm,1.1s,mb4.3								
KMI					AMB		AMB		
	comp=Z,162nm,5.0s								
KMI					LR		LR		
	comp=N,144nm,14.4s,MS4.5								
KMI					LR		LR		
	comp=E,71nm,13.4s,MS4.5								
KMI					LR		LR		
	comp=Z,83nm,22.4s								
AKASG	**Malin Array Be**	**75.31**	**351**	P			**P**	**21 11 41.4**	**-0.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=11,slow=6.0,SNR=4.1								
GERES	**GERESS Array B**	**77.73**	**2**	P			**P**	**21 11 55.0**	**-0.4**
	comp=Z,0.4nm,0.7s,mb3.5,baz=293,slow=6.1,SNR=2.7								
TAPN	**Taplejung**	**78.39**	**300**	*e*P			**P**	**21 12 00.4**	**+1.0**
JIRN	**Jiri**	**78.91**	**302**	*e*P			**P**	**21 12 03.4**	**+1.2**
	comp=Z,11nm,0.6s,mb5.0								
KKN	**Kakani**	**79.26**	**303**	*e*P			**P**	**21 12 05.1**	**+1.0**
	comp=Z,19nm,1.2s,mb4.9								
GKN	**Gorkha**	**79.41**	**303**	*e*P			**P**	**21 12 05.8**	**+0.9**
	comp=Z,31nm,1.3s,mb5.1								
KOLN	**Koldanda**	**80.11**	**304**	*e*P			**P**	**21 12 09.8**	**+1.0**
	comp=Z,6.6nm,0.8s,mb4.6								
BRTR	**Keskin Array B**	**85.65**	**347**	P			**P**	**21 12 38.7**	**+1.5**
	comp=Z,0.6nm,0.7s,mb3.9,baz=36,slow=6.5,SNR=3.8								

IDC 20 21:15:05.4±1.7, **059S**×**12823E, h0**km, **mb3.7**/4, **mb1 4.0**/4, **mb1mx3.7**/13, **mbtmp3.8**/4, **Error ellipse: s-maj=118.2km s-min=24.1km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.14**	**163**	P	P		P	21 19 41.2	-0.2
	1.6nm,0.6s,baz=344,slow=12,SNR=17								
ASAR	**Alice Springs**	**23.59**	**167**	P	P		P	21 20 17.0	-1.2
	1.8nm,0.7s,baz=345,slow=11,SNR=26								
STKA	**Stephens Creek**	**33.59**	**159**	P	P		P	21 21 48.7	+1.2
	2.3nm,0.7s,baz=322,slow=9.6,SNR=7.8								
MKAR	**Makanchi Array**	**61.94**	**326**	P	P		P	21 25 27.0	-0.1
	0.2nm,0.4s,baz=120,slow=8.5,SNR=5.8								

JMA 20 21:17:37.4±0.3, **4406N**×**14805E, h0**km, **M3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.81**	**248**	P	P		Pn	21 18 10.1	+0.3
NEM2					*e*S		Sn	21 18 33.8	+0.3
JRA	**Rausu**	**2.12**	**268**	P	P		Pn	21 18 14.8	+0.8
JRA					*e*S		Sn	21 18 42.6	+1.6
JNK	**Nakash**	**2.46**	**260**	P	P		Pn	21 18 19.6	+0.9
JNK					*e*S		Sn	21 18 50.5	+1.1
JAK	**Akkeshi**	**2.66**	**248**	P	P		Pn	21 18 22.3	+0.8
JAK					*e*S		Sn	21 18 55.7	+1.3
JTKR	**Abashiri--Toko**	**2.99**	**270**	P	P		Pn	21 18 27.9	+1.9
JAR	**Ashorobuto**	**3.20**	**258**	P	P		Pn	21 18 30.5	+1.6
JCH	**Churui**	**3.71**	**249**	*e*S			Sn	21 19 21.9	+1.5
JNBK	**Urakawa-nobuka**	**4.26**	**247**	P	P		Pn	21 18 45.3	+1.8
JKB	**Kayabe**	**5.59**	**250**	P	P		Pn	21 19 03.2	+1.5
JKB					*e*S		Sn	21 20 07.2	+0.6
JOT	**Ohata**	**5.81**	**245**	P	P		Pn	21 19 05.9	+1.1
JOT					*e*S		Sn	21 20 11.8	-0.3

*CSEM **20** 21:22:56.8±0.1, 3907N×2678E, h6km±1km, MD3.3, Error ellipse: s-maj=2.3km s-min=1.6km az=83.0*
*ISK **20** 21:22:56.9, 3908N×2676E, h8km, MD3.2*
*ISCJB **20** 21:22:57.1±0.4, 3906N±002×2676E±003, h7km±4km, Error ellipse: s-maj=4.4km s-min=3.0km az=167.7*
*DDA **20** 21:22:57.7, 3904N×2674E, h12km, Md3.3*
*THE **20** 21:22:59.4, 3899N×2684E, h20km, ML3.4*
ISC 20 21:22:57.8±0.4, **3907N**±002×**2676E**±003, **h9**km±3km, **n43,** σ0§**78**/56, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.25**	**347**	*i* P			**Pg**	**21 23 02.9**	**+0.1**
AYVA				*i* S			**Sg**	**21 23 07.0**	**+0.8**
BLCB	**Balcova**	**0.71**	**162**	*i* PG			**Pg**	**21 23 11.8**	**+0.2**
BLCB				*i* SG			**Sg**	**21 23 21.4**	**+0.5**
BLCB	**Balcova**	**0.71**	**162**	*e*Pg			**Pg**	**21 23 11.0**	**-0.6**
BLCB				*e*Sg			**Sg**	**21 23 20.8**	**-0.1**
URLA	**Izmir**	**0.72**	**190**	*i* P			**Pg**	**21 23 10.7**	**-0.9**
URLA				*i* S			**Sg**	**21 23 22.5**	**+1.6**
KDAG	**Bornova**	**0.77**	**149**	*i* P			**Pg**	**21 23 12.0**	**-0.6**
KDAG				*i* S			**Sg**	**21 23 25.1**	**+2.4**
IZM	**Izmir**	**0.78**	**149**	*e*PG			**Pg**	**21 23 13.0**	**+0.3**
EZN	**Ezine**	**0.83**	**336**	PG			**Pg**	**21 23 12.8**	**-1.0**
EZN				SG			**Sg**	**21 23 25.1**	**+0.6**
AKS	**Akhisar**	**0.84**	**103**	PG			**Pg**	**21 23 13.7**	**-0.3**
AKHS	**Akhisar**	**0.84**	**103**	*i* P			**Pg**	**21 23 13.0**	**-1.0**
AKHS				*i* S			**Sg**	**21 23 24.9**	**-0.1**
CHOS	**Chios island**	**0.87**	**219**	*e*Pg			**Pg**	**21 23 14.2**	**-0.4**
CHOS				*e*Sg			**Sg**	**21 23 26.0**	**0.0**
BOZC	**Bozcaada**	**0.95**	**325**	*i* P			**Pg**	**21 23 15.2**	**-0.9**
BOZC				*i* S			**Sg**	**21 23 28.9**	**+0.6**
BALB	**Balikesir**	**1.04**	**56**	PG			**Pg**	**21 23 16.6**	**-1.2**
BALB				SG			**Sg**	**21 23 32.0**	**+0.7**
BTOK	**Tokmak**	**1.21**	**54**	*i* P			**Pb**	**21 23 19.8**	**-1.0**
BTOK				*i* S			**Sb**	**21 23 36.2**	**-0.2**
LPK	**Lapseki**	**1.30**	**0**	PN			**Pn**	**21 23 21.1**	**-1.1**
GADA	**Gvkgeada**	**1.30**	**330**	*e*PN			**Pn**	**21 23 22.0**	**-0.1**
EDC	**Edincik**	**1.54**	**33**	PN			**Pn**	**21 23 24.7**	**-0.6**
DST	**Dursunbey**	**1.55**	**69**	PN			**Pn**	**21 23 25.2**	**-0.2**
BNT	**Bandirma**	**1.57**	**34**	PN			**Pn**	**21 23 25.7**	**-0.1**
KULA	**Kula-Manisa**	**1.58**	**110**	*e*PN			**Pn**	**21 23 25.2**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.65**	**11**	PN			**Pn**	**21 23 27.3**	**+0.3**
SART	**Tekirdag**	**1.65**	**11**	*i* P			**Pn**	**21 23 26.8**	**-0.2**
MRMT	**Marmara Adasi**	**1.66**	**22**	*e*PN			**Pn**	**21 23 27.5**	**+0.4**
KCT	**Karacabey**	**1.72**	**45**	PN			**Pn**	**21 23 27.0**	**-0.8**
ENEZ	**Enez**	**1.73**	**345**	*e*PN			**Pn**	**21 23 28.0**	**-0.1**
ALN	**Alexandroupoli**	**1.91**	**344**	*e*Pn			**Pn**	**21 23 30.1**	**-0.3**
ALN				*e*Sn			**Sn**	**21 23 54.0**	**-0.6**
MLSB	**Milas**	**1.94**	**155**	*e*PN			**Pn**	**21 23 31.8**	**+0.9**
BODT	**Bodrum**	**2.05**	**168**	*e*PN			**Pn**	**21 23 32.4**	**0.0**
BDRM	**Kayabasi**	**2.07**	**165**	*i* P			**Pn**	**21 23 30.7**	**-2.0**
BDRM				*i* S			**Sg**	**21 24 03.2**	**-1.1**
ULDT	**Uludag**	**2.13**	**59**	*i* P			**Pn**	**21 23 34.8**	**+1.3**
AOS	**Alonnisos**	**2.24**	**274**	*e*Pn			**Pn**	**21 23 35.4**	**+0.4**
YER	**Yerkesik**	**2.27**	**148**	*e*PN			**Pn**	**21 23 36.1**	**+0.7**
KHL	**Karahalli**	**2.29**	**108**	*e*PN			**Pn**	**21 23 36.3**	**+0.7**
GEMT	**Gemlik**	**2.32**	**53**	*e*PN			**Pn**	**21 23 36.2**	**+0.1**
CTT	**Catalca**	**2.44**	**31**	*e*PN			**Pn**	**21 23 38.7**	**+0.9**
IZI	**Iznik**	**2.45**	**58**	*e*PN			**Pn**	**21 23 38.7**	**+0.8**
YLV	**Yalova**	**2.51**	**53**	*e*PN			**Pn**	**21 23 38.4**	**-0.3**
DERT	**Derbent**	**2.59**	**59**	*e*PN			**Pn**	**21 23 40.6**	**+0.7**
ISK	**Istanbul-Kandi**	**2.67**	**41**	*e*PN			**Pn**	**21 23 41.8**	**+1.0**
ADVT	**Abdulvahap**	**2.67**	**58**	*e*PN			**Pn**	**21 23 41.1**	**+0.2**
EDRB	**Edirne**	**2.78**	**360**	*e*PN			**Pn**	**21 23 43.3**	**+0.9**
HRT	**Hereke**	**2.84**	**51**	*e*PN			**Pn**	**21 23 44.0**	**+0.7**
BORA	**Eskisehir**	**2.97**	**73**	*i* P			**Pn**	**21 23 43.9**	**-1.2**
GULT	**Gulveren**	**3.20**	**64**	*e*PN			**Pn**	**21 23 48.6**	**+0.4**

*MOS **20** 21:23:58.6±1.0, 5257N×10148E, h11km, mb4.2/1, Error ellipse: s-maj=37.6km s-min=19.6km az=29.6*
BYKL 20 21:23:58.7±0.3, **5253N**×**10142E, h15**km±17km, **5C-6D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARS	**Arshan**	**0.87**	**134**	*e*PG			Pg	21 24 14.8	-0.7
ARS				*e*				21 24 26.3	
ARS				pmax			pmax		
	comp=Z,417nm,0.1s								
ARS				smax					
	comp=E,1μm,0.2s								
ARS	**Arshan**	**0.87**	**134**	⇓*i*Pg			Pg	21 24 15.0	-0.5
	comp=E,87nm,0.3s								

TDJR	**Todzha**	**3.26**	**270**	*e*Pg	Pg	21 24 57.0	-4.1
TDJR				*e*Sg	Sg	21 25 38.0	-5.2
FFNB	**Fofonovo**	**3.32**	**96**	*e*Pg	Pg	21 24 59.3	-2.9
FFNB				*e*Sg	Sg	21 25 41.9	-3.3
FFNB				Smax			
	comp=N,272nm,0.5s						
ZRHB	**Zarechye**	**3.50**	**87**	*e*Pg	Pg	21 25 02.4	-3.3
ZRHB				*e*Sg	Sg	21 25 48.8	-2.2
ZRHB				Pmax			
	comp=N,20nm,1.0s						
ZRHB				Smax			
	comp=N,139nm,0.7s						
HRMR	**Khuramsha**	**3.53**	**103**	*e*Pn	Pn	21 24 53.4	+0.5
HRMR				*e*		21 24 54.8	
HRMR				*e*Pg	Pg	21 25 01.0	-5.3
HRMR				*e*PgPg		21 25 03.1	
HRMR				*e*Sn	Sn	21 25 35.1	+0.7
HRMR				*e*Sg	Sg	21 25 46.9	-5.2
HRMR				max			
	comp=N,47nm,0.5s						
HRMR				Smax			
	comp=N,271nm,0.6s						
OGRR	**Ongureny**	**3.89**	**71**	*e*PN	Pn	21 24 57.3	-0.5
OGRR				*e*		21 25 07.0	
OGRR				*e*S	Sn	21 25 43.1	0.0
OGRR				*e*		21 25 57.7	
OGRR				pmax	pmax		
	comp=Z,16nm,0.3s						
OGRR				smax			
	comp=E,81nm,0.6s						
OGRR	**Ongureny**	**3.89**	**71**	*e*Pn	Pn	21 24 57.0	-0.8
OGRR				*e*Pg	Pg	21 25 07.4	-5.7
OGRR				*e*		21 25 13.7	
OGRR				*e*Sn	Sn	21 25 40.9	-2.2
OGRR				*e*Sg	Sg	21 25 57.9	-5.5
OGRR				max			
	comp=E,16nm,0.3s						
OGRR				Smax			
	comp=E,81nm,0.6s						
KELR	**Kotokel**	**4.06**	**84**	*e*Sn	Sn	21 25 46.9	-0.6
KELR				*e*Sg	Sg	21 26 04.8	-4.3
KELR				Smax			
	comp=E,86nm,0.9s						
MXMB	**Maximikha**	**4.50**	**78**	*e*Pn	Pn	21 25 08.2	+2.0
MXMB				*e*Pg	Pg	21 25 19.7	-5.0
MXMB				*e*		21 26 00.5	
MXMB				*e*Sg	Sg	21 26 18.2	-4.7
MXMB				Pmax			
	comp=E,8.0nm,0.6s						
MXMB				Smax			
	comp=E,138nm,0.8s						
ARDR	**Aradan**	**4.88**	**274**	*e*Pg	Pg	21 25 25.7	-6.3
ARDR				*e*Sg	Sg	21 26 28.2	-6.9
SYVR	**Suvo**	**5.29**	**74**	*e*Pn	Pn	21 25 18.5	+1.4
SYVR				*e*Pg	Pg	21 25 34.8	-5.2
SYVR				*e*Sg	Sg	21 26 42.3	-6.1
SYVR				Pmax			
	comp=E,4.0nm,0.7s						
SYVR				Smax			
	comp=E,13nm,1.0s						
NIZ	**Nizh Angarsk**	**5.77**	**53**	*e*Pg	Pg	21 25 42.0	-7.1
NIZ				*e*Sn	Sn	21 26 26.6	-3.0
NIZ				*e*Sg	Sg	21 26 56.7	-7.1
NIZ				Pmax			
	comp=E,8.0nm,0.4s						
NIZ				Smax			
	comp=E,78nm,1.3s						
ULN	**Ulaanbaatar**	**5.91**	**140**	*e*Sg	Sg	21 27 02.9	-5.2
YLYR	**Ulyunkhan**	**6.24**	**64**	*e*Pn	Pn	21 25 30.4	+0.2
YLYR				*e*Pg	Pg	21 25 50.0	-8.1
YLYR				*e*Sn	Sn	21 26 39.0	-2.2
YLYR				*e*Sg	Sg	21 27 11.2	-7.7
YLYR				Pmax			
	comp=E,3.0nm,0.4s						
YLYR				Smax			
	comp=E,25nm,1.5s						
KMO	**Kumora**	**6.65**	**56**	*e*Pn	Pn	21 25 36.8	+1.1
KMO				*e*		21 26 47.2	
KMO				*e*Sg	Sg	21 27 25.4	-6.5
KMO				Smax			
	comp=E,27nm,1.6s						
KPC	**Khapcheranga**	**7.46**	**108**	*e*Pn	Pn	21 25 48.7	+1.9
KPC				*e*Pg	Pn	21 26 13.2	+26
KPC				*e*Sg	Sn	21 27 48.2	+37
KPC				Smax			
	comp=E,8.0nm,1.8s						
CIT	**Chita**	**7.46**	**89**	*e*Sg	Sn	21 27 48.8	+38
CIT				Smax			
	comp=E,14nm,1.3s						
BOD	**Bodaibo**	**8.93**	**49**	*e*Sg	Sn	21 28 35.8	+49
BOD				Smax			
	comp=E,3.0nm,0.2s						
NLYR	**Nelyaty**	**9.20**	**59**	*e*Sg	Sn	21 28 44.0	+50
CRS	**Chara**	**10.68**	**59**	*e*Sg	Sn	21 29 27.2	+57
CRS				Smax			
	comp=E,7.0nm,1.6s						
TUP	**Tupik**	**11.21**	**73**	*e*Sg	Sn	21 29 44.2	+61
TUP				Smax			
	comp=E,3.0nm,1.3s						

IDC 20 21:30:49.3±2.5, 270S×13029E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.6/14, mbtmp3.7/4, ML3.6/2, Error ellipse: s-maj=126.3km s-min=27.1km az=74.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.97**	**196**	Pn	Pn	21 34 36.0	+0.5
	0.1nm,0.3s,baz=9.6,slow=10,SNR=2.6						
WRA	**Warramunga Arr**	**17.59**	**167**	P	Pn	21 34 56.8	+0.9
	0.3nm,0.3s,baz=348,slow=11,SNR=19						
ASAR	**Alice Springs**	**21.13**	**171**	P	P	21 35 35.0	-0.9
	2.2nm,0.4s,baz=354,slow=8.9,SNR=25						
MKAR	**Makanchi Array**	**64.84**	**326**	P	P	21 41 30.5	+0.3
	0.3nm,0.7s,baz=125,slow=7.7,SNR=4.2						

IDC 20 21:55:56.4±4.1, 395S×10232E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/16, mbtmp3.4/4, Error ellipse: s-maj=166.3km s-min=25.1km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.02**	**120**	P	P	22 02 52.5	+1.5
	0.4nm,0.8s,baz=297,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**36.24**	**126**	P	P	22 02 59.9	-1.6
	0.2nm,0.4s,baz=303,slow=8.5,SNR=5.6						
SONM	**Songino Array**	**51.69**	**3**	P	P	22 05 06.5	+1.4
	0.4nm,0.6s,baz=180,slow=9.7,SNR=5.5						
MKAR	**Makanchi Array**	**53.54**	**343**	P	P	22 05 17.7	-1.1
	0.2nm,0.4s,baz=141,slow=8.1,SNR=4.8						

*ISCJB **20** 22:09:59.7±1.0, 19.12N±006×1450E±0.1, h397km±11km, mb3.9/27, Error ellipse: s-maj=19.9km s-min=9.2km az=171.3*
*IDC **20** 22:10:00.9±2.5, 19.15N×14502E, h392km±26km, mb3.3/12, mb1 3.4/14, mb1mx3.3/23, mbtmp3.4/14, Error ellipse: s-maj=25.5km s-min=11.2km az=90.0*
*NEIC **20** 22:10:00.7±0.9, 19.13N×14504E, h394km±10km, mb4.0/9, Error ellipse: s-maj=15.4km s-min=6.6km az=77.0*

ISC 20 22:10:00.4±1.0, 1914N±006×1451E±01, h390km±11km, n39, σ0s62/38, mb3.9/27, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.52**	**182**	Pn	**Pn**	**22 11 27.4**	**-0.2**
CBIJ	**Chichi jima**	**8.35**	**342**	P	**Pn**	**22 11 58.9**	**-0.4**
	6.5nm,0.3s,baz=254,slow=23,SNR=3.5						
JOW	**Kunigami**	**17.24**	**299**	P	**P**	**22 13 36.9**	**-0.5**
	2.8nm,0.3s,baz=108,slow=21,SNR=5.3						
MAJO	**Matsushiro**	**18.36**	**342**	P	**P**	**22 13 49.5**	**+0.4**
YHNB	**Yeheng**	**22.64**	**288**	*e*P	**P**	**22 14 29.4**	**-0.2**
KSRS	**Korea Array**	**23.51**	**324**	P	**P**	**22 14 37.7**	**-0.6**
	3.2nm,0.5s,mb4.0,baz=141,slow=9.4,SNR=13						
INCN	**Inchon**	**24.36**	**322**	P	**P**	**22 14 45.5**	**+0.5**
ASAJ	**Asahikawa**	**24.99**	**356**	P	**P**	**22 14 51.6**	**+1.1**
	1.3nm,0.3s,mb3.9,baz=265,slow=30,SNR=5.3						
PMG	**Port Moresby**	**28.44**	**176**	*e*P	**P**	**22 15 21.0**	**-0.4**
	2.4nm,0.4s,mb3.9						
BJT	**Baijiatuan**	**32.39**	**316**	*e*P	**P**	**22 15 55.6**	**+0.1**
	3.6nm,0.4s,mb4.0						
HIA	**Hailar**	**36.29**	**332**	*e*P	**P**	**22 16 28.5**	**0.0**
	3.0nm,0.3s,mb4.1						
WB2	**Warramunga Arr**	**40.23**	**196**	*e*P	**P**	**22 17 01.5**	**+0.3**
WRA	**Warramunga Arr**	**40.23**	**196**	P	**P**	**22 17 01.6**	**+0.3**
	1.6nm,0.6s,mb3.5,baz=12,slow=8.5,SNR=28						
FITZ	**Fitzroy Crossi**	**41.63**	**208**	P	**P**	**22 17 12.5**	**-0.1**
	1.1nm,0.6s,mb3.4,baz=54,slow=17,SNR=5.8						
ULN	**Ulaanbaatar**	**42.05**	**322**	*e*P	**P**	**22 17 16.5**	**+1.0**
	1.9nm,0.6s,mb3.6						
SONM	**Songino Array**	**42.43**	**321**	P	**P**	**22 17 19.3**	**+0.8**
	2.1nm,0.6s,mb3.7,baz=138,slow=8.0,SNR=25						
SONM				PcP	PcP	22 19 04.2	+0.9
	0.2nm,0.5s,baz=143,slow=1.9,SNR=3.7						
ASAR	**Alice Springs**	**43.91**	**195**	P	**P**	**22 17 30.8**	**+0.3**
	0.2nm,0.3s,mb2.9,baz=19,slow=9.0,SNR=7.2						
TLY	**Talaya**	**45.86**	**325**	P	**P**	**22 17 45.1**	**-0.2**
LSA	**Lhasa**	**49.82**	**293**	*e*P	**P**	**22 18 15.8**	**0.0**
	2.7nm,0.5s,mb3.8						
TAPN	**Taplejung**	**52.95**	**290**	*e*P	**P**	**22 18 39.0**	**+0.3**
	19nm,1.2s,mb4.2						
ODAN	**Odare**	**53.27**	**290**	*e*P	**P**	**22 18 41.4**	**+0.4**
	10nm,0.7s,mb4.2						
JIRN	**Jiri**	**54.27**	**291**	*e*P	**P**	**22 18 49.0**	**+0.8**
	7.1nm,0.5s,mb4.1						
KKN	**Kakani**	**55.06**	**291**	*e*P	**P**	**22 18 53.8**	**0.0**
	5.1nm,0.5s,mb4.0						
GKN	**Gorkha**	**55.61**	**291**	*e*P	**P**	**22 18 57.4**	**-0.2**
	6.4nm,0.5s,mb4.2						
KOLN	**Koldanda**	**56.55**	**291**	*e*P	**P**	**22 19 04.2**	**0.0**
	2.9nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**57.73**	**314**	P	**P**	**22 19 12.7**	**+0.7**
	0.7nm,0.6s,mb3.2,baz=89,slow=9.2,SNR=8.9						
MKAR				PcP	PcP	22 19 59.8	-0.1
	0.4nm,0.4s,baz=77,slow=5.3,SNR=5.7						
NWAO	**Narrogin (SRO)**	**58.20**	**208**	*e*P	**P**	**22 19 15.7**	**+0.3**
	11nm,1.1s,mb4.1						
KURK	**Kurchatov**	**60.54**	**318**	*e*P	**P**	**22 19 30.8**	**-0.2**
	1.6nm,0.3s,mb3.9						
BRVK	**Borovoye**	**65.82**	**320**	*e*P	**P**	**22 20 04.5**	**-0.7**
	3.0nm,0.6s,mb4.1						
INK	**Inuvik**	**69.21**	**23**	*e*P	**P**	**22 20 26.2**	**+0.3**
	26nm,0.7s,mb5.0						
INK	**Inuvik**	**69.21**	**23**	P	**P**	**22 20 25.8**	**-0.1**
	0.9nm,0.8s,mb3.4,baz=281,slow=5.2,SNR=2.5						
AKTK	**Aktyubinsk**	**73.64**	**318**	P	**P**	**22 20 51.7**	**-0.7**
AKTO	**Aktyubinsk**	**73.64**	**318**	P	**P**	**22 20 51.7**	**-0.7**
	0.5nm,0.3s,mb3.6,baz=104,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**77.89**	**28**	P	**P**	**22 21 16.7**	**+0.8**
YKA	**Yellowknife Ar**	**77.89**	**28**	P	**P**	**22 21 16.7**	**+0.8**
	0.3nm,0.5s,mb3.2,baz=293,slow=5.4,SNR=5.4						
ARCES	**ARCESS Array B**	**81.89**	**342**	P	**P**	**22 21 36.9**	**-0.2**
	3.3nm,0.7s,mb4.2,baz=80,slow=8.4,SNR=13						
JOF	**Joensuu**	**83.37**	**335**	*ep*	**P**	**22 21 42.3**	**-2.4**
	4.4nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**86.24**	**335**	P	**P**	**22 21 57.7**	**-1.1**
	1.8nm,0.5s,mb4.0,baz=71,slow=4.6,SNR=14						
TORD	**Torodi Ar. Bea**	**131.71**	**309**	PKP	PKPdf	22 28 27.9	-0.8
	0.1nm,0.4s,baz=0.9,slow=1.5,SNR=9.3						

IDC 20 22:17:23.0±7.0, 104S×10022E, h123km±43km, mb3.1/3, mb1 3.3/4, mb1mx3.0/19, mbtmp3.1/4, MS2.8/1, Ms1 2.8/1, ms1mx2.6/23, Error ellipse: s-maj=185.9km s-min=23.0km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**4.03**	**341**	P	Pn	22 18 20.6	-2.5
	0.8nm,0.3s,baz=135,slow=19,SNR=2.9						
PSI				S	Sn	22 19 08.4	-1.2
	1.3nm,0.3s,baz=248,slow=18,SNR=3.1						
PSI				LR	LR	22 19 56.4	
	comp=Z,121nm,18.4s,baz=165,slow=39						
WRA	**Warramunga Arr**	**38.30**	**122**	P	P	22 24 32.0	+0.1
	0.4nm,1.0s,baz=296,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**39.65**	**127**	P	P	22 24 43.1	0.0
	0.5nm,0.7s,baz=300,slow=8.7,SNR=6.8						
MKAR	**Makanchi Array**	**50.17**	**344**	P	P	22 26 05.8	-0.2
	0.2nm,0.3s,baz=160,slow=6.8,SNR=4.6						

*ISCJB **20** 22:34:19.0±0.3, 49.33N±002×676E±003, h0km, Error ellipse: s-maj=2.6km s-min=2.4km az=168.7*
*CSEM **20** 22:34:20.7±0.1, 49.37N×683E, h2km, ML2.6/11, Error ellipse: s-maj=0.9km s-min=0.8km az=105.0*
*BGR **20** 22:34:20.5±0.3, 49.37N×685E, h1km, ML1.9/3, Error ellipse: s-maj=4.4km s-min=3.3km az=54.0*
*LDG **20** 22:34:20.7±0.1, 49.37N×682E, h1km, Md2.5/1, Ml2.6/12, Error ellipse: s-maj=1.0km s-min=0.9km az=115.0, Suspected Mining induced.*
*NEIC **20** 22:34:20.7, 49.37N×682E, h1km, ML2.6(LDG), ML2.4(STR), After LDG.*

ISC 20 22:34:19.9±0.3, 4936N±002×679E±003, h0km, n49, σ0s94/91, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.39**	**27**	*e*Pg	**Pg**	**22 34 28.1**	**+0.7**
	SNR=15						
RUP	**Ruppelstein**	**0.39**	**27**	Pg	**Pg**	**22 34 27.8**	**+0.4**
RUP				Sg	**Sg**	**22 34 32.3**	**-0.1**
WLF	**Walferdange**	**0.52**	**307**	*e*Pg	**Pg**	**22 34 31.3**	**+1.4**
	SNR=1.8						
WLF				*e*Sg	**Sg**	**22 34 36.9**	**+0.3**
	SNR=6.0						
WLF	**Walferdange**	**0.52**	**307**	P	**Pg**	**22 34 31.4**	**+1.6**
ABH	**Alteburg**	**0.72**	**43**	Pg	**Pg**	**22 34 34.3**	**+0.5**
LANF	**Langenberg**	**0.77**	**119**	*e*Pg	**Pg**	**22 34 34.9**	**+0.3**
	SNR=3.5						
LANF	**Langenberg**	**0.77**	**119**	Pg	**Pg**	**22 34 34.7**	**+0.1**
LANF				Sg	**Sg**	**22 34 46.5**	**+2.0**
LANF	**Langenberg**	**0.77**	**119**	Pg	**Pg**	**22 34 34.9**	**+0.3**
	SNR=3.5						
LANF				Sg	**Sg**	**22 34 46.5**	**+2.0**
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pn	**Pn**	**22 34 40.3**	**-0.8**
CDF				*e*Sg	**Sg**	**22 34 52.1**	**+0.1**
	12nm,0.2s						
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pg	**Pg**	**22 34 39.3**	**+0.3**
CDF				*e*Pn	**Pn**	**22 34 40.3**	**-0.8**
CDF				*e*Sg	**Sg**	**22 34 52.1**	**+0.1**
CDF	**Champ du Feu**	**1.00**	**161**	*e*Pn	**Pn**	**22 34 40.3**	**-0.8**
CDF				*e*Sg	**Sg**	**22 34 52.1**	**+0.1**
	5.9nm,0.2s						
STR	**Strasbourg**	**1.00**	**140**	*e*Pg	**Pg**	**22 34 38.2**	**-1.0**
	SNR=1.8						
RFYF	**Reffroy**	**1.13**	**230**	*e*Pg	**Pg**	**22 34 42.9**	**+1.3**
RFYF				*e*Sg	**Sg**	**22 34 57.3**	**+1.1**
	42nm,0.3s						
RFYF	**Reffroy**	**1.13**	**230**	*e*Pg	**Pg**	**22 34 42.9**	**+1.3**
RFYF				*e*Sg	**Sg**	**22 34 57.3**	**+1.1**
	21nm,0.3s						
ECH	**Echery**	**1.17**	**168**	*e*Pg	**Pg**	**22 34 43.2**	**+0.9**
	SNR=4.7						
ECH	**Echery**	**1.17**	**168**	Pg	**Pg**	**22 34 43.3**	**+1.0**
ECH				Sg	**Sg**	**22 34 58.4**	**+1.0**
ECH	**Echery**	**1.17**	**168**	Pg	**Pg**	**22 34 43.2**	**+0.9**
	SNR=4.7						
ECH				Sg	**Sg**	**22 34 58.4**	**+1.0**
THEF	**They Montfort**	**1.25**	**205**	*e*Pg	**Pg**	**22 34 44.5**	**+0.6**
	SNR=4.6						
THEF	**They Montfort**	**1.25**	**205**	Pg	**Pg**	**22 34 44.3**	**+0.5**
TOD	**Tromm**	**1.34**	**78**	Pg	**Pg**	**22 34 45.5**	**-0.1**
MEM	**Membach**	**1.35**	**338**	P	**Pg**	**22 34 46.2**	**+0.4**
TNS	**Taunus Mts**	**1.38**	**50**	*e*Pg	**Pg**	**22 34 44.8**	**-1.6**
	SNR=2.5						
TNS				*e*Sg	**Sg**	**22 35 03.2**	**-1.1**
	SNR=3.4						
HAU	**Haudompre**	**1.38**	**192**	*e*Pg	**Pg**	**22 34 46.7**	**+0.3**
HAU				*e*Sg	**Sg**	**22 35 05.3**	**+1.0**
	17nm,0.3s						
HAU	**Haudompre**	**1.38**	**192**	*e*Pg	**Pg**	**22 34 46.7**	**+0.3**
HAU				*e*Sg	**Sg**	**22 35 05.3**	**+1.0**
	8.3nm,0.3s						
MEZF	**Maizieres J'vi**	**1.43**	**234**	*e*Pg	**Pg**	**22 34 47.7**	**+0.4**
MEZF				*e*Sg	**Sg**	**22 35 06.8**	**+1.0**
	11nm,0.3s,baz=57						
MEZF	**Maizieres J'vi**	**1.43**	**234**	*e*Pg	**Pg**	**22 34 47.7**	**+0.4**
MEZF				*e*Sg	**Sg**	**22 35 06.8**	**+1.0**
	5.6nm,0.3s						
BCLA	**Clavier**	**1.43**	**318**	P	**Pn**	**22 34 48.0**	**+0.9**
BFO	**Black Forest**	**1.45**	**135**	*e*Pg	**Pg**	**22 34 48.0**	**+0.4**
	SNR=3.1						
BFO				*e*Sg	**Sg**	**22 35 05.2**	**-1.1**
	SNR=4.5						
BFO	**Black Forest**	**1.45**	**135**	Pg	**Pg**	**22 34 48.0**	**+0.4**
	SNR=3.1						
BFO				Sg	**Sg**	**22 35 05.2**	**-1.1**
	SNR=4.5						
GIVF	**Givet**	**1.48**	**301**	*e*Pg	**Pg**	**22 34 48.3**	**0.0**
GIVF				*e*Sg	**Sg**	**22 35 08.2**	**+0.8**
	12nm,0.3s						
GIVF	**Givet**	**1.48**	**301**	*e*Pg	**Pg**	**22 34 48.3**	**0.0**
GIVF				*e*Sg	**Sg**	**22 35 08.2**	**+0.8**
	6.0nm,0.3s						
MOF	**Molkenrain**	**1.52**	**171**	Pg	**Pg**	**22 34 49.6**	**+0.5**
MOF				Sg	**Sg**	**22 35 09.9**	**+1.1**
HINF	**Hinteralfeld**	**1.54**	**178**	*e*Pg	**Pg**	**22 34 49.6**	**+0.2**
HINF				*e*Sg	**Sg**	**22 35 09.7**	**+0.3**
	11nm,0.2s						
HINF	**Hinteralfeld**	**1.54**	**178**	*e*Pg	**Pg**	**22 34 49.6**	**+0.2**
HINF				*e*Sg	**Sg**	**22 35 09.7**	**+0.3**
	5.4nm,0.2s						
SFTF	**Sexfontaines**	**1.63**	**226**	*e*Pg	**Pg**	**22 34 51.0**	**-0.2**
SFTF				*e*Sg	**Sg**	**22 35 13.0**	**+0.6**
	12nm,0.4s						
SFTF	**Sexfontaines**	**1.63**	**226**	*e*Pg	**Pg**	**22 34 51.0**	**-0.2**
SFTF				*e*Sg	**Sg**	**22 35 13.0**	**+0.6**
	6.1nm,0.4s						
FELD	**Feldberg im Sc**	**1.69**	**151**	*e*Pg	**Pg**	**22 34 52.9**	**+0.6**
	SNR=2.6						
BAIF	**Baives**	**1.82**	**294**	*e*Pg	**Pg**	**22 34 54.8**	**0.0**
BAIF				*e*Sg	**Sg**	**22 35 18.4**	**+0.1**
	4.6nm,0.3s						
BAIF	**Baives**	**1.82**	**294**	*e*Pg	**Pg**	**22 34 54.8**	**0.0**
BAIF				*e*Sg	**Sg**	**22 35 18.4**	**+0.1**
	2.3nm,0.3s						
CABF	**La Chapelle**	**2.79**	**190**	*e*Pg	**Pg**	**22 35 12.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 35 49.0**	**-0.4**
	1.3nm,0.2s						
CABF	**La Chapelle**	**2.79**	**190**	*e*Pn	**Pn**	**22 35 05.2**	**-0.5**
CABF				*e*Pg	**Pg**	**22 35 12.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 35 49.0**	**-0.4**
CABF	**La Chapelle**	**2.79**	**190**	*e*Pg	**Pg**	**22 35 12.9**	**-0.4**
CABF				*e*Sg	**Sg**	**22 35 49.0**	**-0.4**
	0.6nm,0.2s						
LOR	**Lormes**	**2.86**	**224**	*e*Pn	**Pn**	**22 35 05.7**	**-1.1**
	baz=43						
LOR				*e*Sn	**Sn**	**22 35 39.5**	**-2.4**
	baz=40						
LOR				*e*Sg	**Sg**	**22 35 51.5**	**-0.3**
	5.7nm,0.4s						
LOR	**Lormes**	**2.86**	**224**	*e*Pn	**Pn**	**22 35 05.7**	**-1.1**
LOR				*e*Sn	**Sn**	**22 35 39.5**	**-2.4**
LOR				*e*Sg	**Sg**	**22 35 51.5**	**-0.3**
	2.8nm,0.4s						
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pn	**Pn**	**22 35 10.1**	**-1.0**
SSF				*e*Sn	**Sn**	**22 35 47.9**	**-1.8**
SSF				*e*Sg	**Sg**	**22 36 01.1**	**-0.8**
	3.7nm,0.4s						
SSF	**Saint Saulge**	**3.18**	**225**	*e*Pn	**Pn**	**22 35 10.1**	**-1.0**
SSF				*e*Sn	**Sn**	**22 35 47.9**	**-1.8**
SSF				*e*Sg	**Sg**	**22 36 01.1**	**-0.8**
	1.9nm,0.4s						
SMF	**Signal de Mont**	**3.36**	**217**	*e*Pn	**Pn**	**22 35 12.6**	**-1.0**
SMF				*e*Sn	**Sn**	**22 35 51.0**	**-3.1**
AVF	**Avril sur Loir**	**3.45**	**223**	*e*Pn	**Pn**	**22 35 13.9**	**-0.9**
AVF				*e*Sn	**Sn**	**22 35 53.1**	**-3.3**
BGF	**Bois d'Agland**	**3.85**	**225**	*e*Pn	**Pn**	**22 35 19.5**	**-0.9**

*IDC **20** 22:41:54.5±1.1, 19.19N×6779W, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=31.0km s-min=18.5km az=43.0*
*ISCJB **20** 22:41:55.4±1.0, 1921N±005×6771W±003, h18km±6km, mb3.5/3, Error ellipse: s-maj=8.7km s-min=4.2km az=15.4*
*RSPR **20** 22:41:57.7, 19.16N×6771W, h5km±31km, MD3.7/19, MD3.7/19*
*NEIC **20** 22:41:57.7, 19.16N×6771W, h5km, MD3.7(RSPR), After RSPR.*

ISC 20 22:41:55.5±1.0, 1917N±005×6769W±003, h9km±5km, n26, σ0s85/45, mb3.5/3, 13C-6D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.89**	**142**	↑*i*P	**Pg**	**22 42 12.4**	**-0.2**
AGPR				*e*S	**Sg**	**22 42 25.9**	**+1.7**
MPR	**Mayaguez**	**1.09**	**151**	↓*e*P	**Pg**	**22 42 15.2**	**-1.2**
MPR				*e*S	**Sg**	**22 42 31.4**	**+0.8**
LSP	**Las Mesas**	**1.14**	**150**	↑*e*P	**Pg**	**22 42 16.1**	**-1.4**
AOPR	**Arecibo Observ**	**1.21**	**132**	↑*e*P	**Pb**	**22 42 17.4**	**-1.1**
AOPR				*e*S	**Sb**	**22 42 34.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.28**	**154**	↑*e*P	**Pn**	**22 42 18.0**	**-1.6**
CRPR				*e*S	**Sb**	**22 42 35.4**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.42**	**147**	↑*e*P	**Pn**	**22 42 21.1**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.42**	**147**	*e*S	**Sn**	**22 42 40.1**	**0.0**
CELP	**Cerrillos**	**1.52**	**136**	↑*e*P	**Pn**	**22 42 22.3**	**-0.5**
CELP				*e*S	**Sn**	**22 42 42.5**	**-0.1**
OBIP	**Obispado Ponce**	**1.52**	**137**	↑*e*P	**Pn**	**22 42 22.3**	**-0.6**
OBIP				*e*S	**Sn**	**22 42 42.8**	**0.0**
IM	**Isla Caja Muer**	**1.69**	**139**	↓*e*P	**Pn**	**22 42 25.1**	**+0.5**
ICM				*e*S	**Sn**	**22 42 46.5**	**+0.3**
SJG	**San Juan**	**1.80**	**125**	↓*e*P	**Pn**	**22 42 26.9**	**+0.1**
SJG				*e*S	**Sn**	**22 42 49.1**	**-0.6**
SJG	**San Juan**	**1.80**	**125**	↓*e*P	**Pn**	**22 42 26.8**	**+0.1**
SJG				*e*S	**Sn**	**22 42 49.5**	**-0.2**
SJG	**San Juan**	**1.80**	**125**	Pn	**Pn**	**22 42 26.9**	**+0.2**
	64nm,0.3s,baz=301,slow=9.0,SNR=53						
SJG				Sn	**Sn**	**22 42 51.7**	**+2.0**
	132nm,0.3s,baz=113,slow=23,SNR=21						
CBYP	**Canovanas**	**1.96**	**117**	↓*e*P	**Pn**	**22 42 29.2**	**+0.3**
CBYP				*e*S	**Sn**

BOZ				eS	Sg	23 09 56.2	+2.0
E15A	**Deer Lodge**	**1.08**	**359**	⇑P	Pg	23 09 50.3	-0.3
	baz=1.1,SNR=94						
E15A				⇑S	Sg	23 10 04.7	0.0
	baz=1.1						
G13A	**Cobalt**	**1.17**	**258**	P	Pg	23 09 51.9	-0.4
	baz=1.2,SNR=131						
G13A				⇑S	Sg	23 10 06.4	-1.1
	baz=1.2						
E14A	**Clinton**	**1.23**	**331**	⇑P	Pg	23 09 53.4	-0.2
	baz=1.2						
E14A				⇓S	Sg	23 10 09.0	-0.6
	baz=1.2						
F13A	**Darby**	**1.28**	**291**	⇓P	Pg	23 09 53.8	-0.7
	baz=1.3						
F13A				⇓S	Sg	23 10 10.0	-1.1
	baz=1.3						
YMR	**Madison River**	**1.35**	**119**	eP	Pg	23 09 56.0	+0.2
YMR				eS	Sg	23 10 12.8	-0.4
H13A	**Challis**	**1.40**	**237**	⇑P	Pn	23 09 56.2	-0.3
	baz=1.4						
H13A				⇓S	Sg	23 10 14.3	-0.6
	baz=1.4						
E13A	**Victor**	**1.55**	**316**	⇓P	Pn	23 09 58.0	-0.6
	baz=1.5,SNR=84						
E13A				⇑S	Sn	23 10 19.2	-0.1
	baz=1.5						
CHMT	**Chamberlain Mo**	**1.63**	**344**	ePn	Pn	23 09 58.6	-1.1
CHMT				ePg	Pg	23 10 01.1	0.0
CHMT				eSn	Sn	23 10 19.8	-1.6
CHMT				eSg	Sg	23 10 22.2	-0.1
D15A	**Lincoln**	**1.70**	**2**	⇑P	Pn	23 09 60.0	-0.6
	baz=1.7,SNR=52						
D15A				⇑S	Sn	23 10 23.1	+0.2
	baz=1.7						
MSO	**Missoula**	**1.75**	**329**	Pn	Pn	23 10 01.3	0.0
MSO				ePg	Pg	23 10 02.9	-0.5
MSO				Sn	Sn	23 10 23.0	-1.2
MSO				eSg	Sg	23 10 25.9	-0.1
H12A	**Diamond D Ranc**	**1.78**	**244**	⇑Pb	Pb	23 10 02.6	-0.6
	baz=1.8						
H12A				⇑Sb	Sb	23 10 26.1	+0.2
	baz=1.8						
I13A	**Wildhorse Cree**	**1.79**	**217**	⇓P	Pn	23 10 01.5	-0.3
	baz=1.8,SNR=24						
I13A				⇓S	Sn	23 10 24.6	-0.5
	baz=1.8						
D14A	**Greenough**	**1.84**	**341**	P	Pn	23 10 02.0	-0.6
	baz=1.8,SNR=62						
D14A				⇑Sb	Sb	23 10 28.6	+0.7
	baz=1.8						
FLWY	**Flagg Ranch**	**1.86**	**132**	ePn	Pn	23 10 02.2	-0.6
FLWY				ePg	Pg	23 10 04.2	-1.3
FLWY				eSn	Sn	23 10 25.6	-1.3
FLWY				eSg	Sg	23 10 30.0	+0.4
IMW	**Indian Meadow**	**1.88**	**140**	Pn	Pn	23 10 01.4	-1.6
IMW				ePg	Pg	23 10 04.1	-1.7
IMW				eS	Sn	23 10 28.8	+1.5
F12A	**Elk City**	**1.90**	**283**	⇑Pg	Pg	23 10 04.9	-1.4
	baz=1.9						
F12A				⇓Sb	Sb	23 10 29.8	+0.3
	baz=1.9						
MOOW	**Moose Ponds**	**2.08**	**139**	ePn	Pn	23 10 06.7	+0.8
MOOW				ePg	Pg	23 10 09.1	-0.7
MOOW				eSn	Sn	23 10 32.0	-0.4
MOOW				eSg	Sg	23 10 36.6	-0.2
D13A	**Huson**	**2.17**	**324**	⇓Sb	Sb	23 10 37.9	+0.6
	baz=2.2						
HLID	**Hailey**	**2.20**	**217**	ePn	Pn	23 10 07.2	-0.3
HLID				ePg	Pg	23 10 11.7	-0.2
HLID				eSn	Sn	23 10 33.9	-1.4
HLID				eSg	Sg	23 10 39.6	-0.8
HLID	**Hailey**	**2.20**	**217**	⇓P	Pn	23 10 07.3	-0.1
	baz=2.2						
HLID				⇓Sb	Sb	23 10 38.8	+0.7
	baz=2.2						
TPAW	**Teton Pass**	**2.20**	**147**	ePn	Pn	23 10 08.6	+1.0
TPAW				ePg	Pg	23 10 11.9	-0.2
TPAW				eSn	Sn	23 10 35.1	-0.3
TPAW				eSg	Sg	23 10 40.1	-0.5
J13A	**Cove Ranch, Pi**	**2.24**	**210**	⇓P	Pn	23 10 08.2	+0.1
	baz=2.2						
J13A				⇑Sb	Sb	23 10 39.7	+0.3
	baz=2.2						
LOHW	**Long Hollow**	**2.25**	**140**	eP	Pn	23 10 10.0	+1.8
REDW	**Red Top Meadow**	**2.35**	**147**	ePn	Pn	23 10 09.7	+0.1
REDW				ePg	Pg	23 10 12.6	-2.3
REDW				eSn	Sn	23 10 39.1	+0.1
REDW				eSg	Sg	23 10 46.7	+1.3
H11A	**Donnelly**	**2.49**	**256**	⇓Sb	Sb	23 10 47.3	+0.8
	baz=2.5						
F11A	**Grangeville**	**2.54**	**284**	⇓Sb	Sb	23 10 48.4	+0.4
	baz=2.5						
G11A	**Walters Elk Ra**	**2.58**	**273**	⇓Sb	Sb	23 10 49.7	+0.8
	baz=2.6						
C13A	**Hot Springs**	**2.70**	**331**	⇑Sb	Sb	23 10 54.0	+1.5
	baz=2.7						
E11A	**Bogner Ranch,**	**2.71**	**293**	⇑Sb	Sb	23 10 53.9	+1.1
	baz=2.7						
J12A	**Stokes Ranch,**	**2.75**	**221**	⇓Sb	Sb	23 10 55.4	+1.5
	baz=2.7						
MFID	**Camas Ranch**	**3.00**	**231**	⇑Sb	Sb	23 11 03.0	+1.7
	baz=3.0						
H10A	**Noah's Angus R**	**3.03**	**257**	⇓Sb	Sb	23 11 02.9	+0.9
	baz=3.0						
G10A	**Bishop Farm, J**	**3.18**	**271**	⇓Sb	Sb	23 11 07.7	+1.4
	baz=3.2						
DUG	**Dugway**	**5.15**	**182**	ePn	Pn	23 10 49.7	+1.6
	3.3nm,0.7s						
DUG				ePg	Pg	23 11 09.7	+1.2
NLU	**North Lily Min**	**5.40**	**176**	ePn	Pn	23 10 50.7	-0.8

IDC ***20*** *23:27:31.2±0.7, 1067N×6260W, h0km, mb3.9/10, mb1 4.1/12, mb1mx4.0/22, mbtmp3.9/12, ML4.2/1, MS2.9/2, Ms1 2.9/2, ms1mx2.6/26, Error ellipse: s-maj=20.1km s-min=16.4km az=144.0*

ISCJB ***20*** *23:27:34.2±0.4, 1044N±002×6267W±002, h23km±3km, mb3.8/10, Error ellipse: s-maj=3.8km s-min=2.4km az=146.0*

FUNV ***20*** *23:27:34.4, 1043N×6260W, h5km, MW3.7*

TRN ***20*** *23:27:35.2, 1051N×6254W, h2km, MD3.7*

NEIC ***20*** *23:27:35.6, 1053N×6253W, h2km, MD3.7(TRN), After TRN.*

ISC 20 23:27:34.2±0.5,**1045N**±002×**6266W**±002,**h13**km±3km,**n59,**
σ1§24/91,mb3.8/10,**2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.40**	**225**	⇑*i*P	**Pg**	**23 27 42.1**	**0.0**
GUNV				eS	**Sg**	**23 27 48.2**	**+0.7**
GUIV	**Guiria**	**0.47**	**65**	⇑*i*P	**Pg**	**23 27 43.2**	**-0.3**
GUIV				eS	**Sg**	**23 27 49.1**	**-0.5**
CRUV	**Carupano**	**0.61**	**292**	eP	**Pg**	**23 27 45.1**	**-1.1**
CRUV				eS	**Sg**	**23 27 54.1**	**-0.2**
TCE	**Chacachacare**	**0.92**	**74**	⇓*i*P	**Pg**	**23 27 50.6**	**-1.3**
TCE				eS	**Sg**	**23 28 02.2**	**-1.8**
ALNG	**Atlantic LNG**	**0.99**	**105**	*e*	**Pb**	**23 27 55.5**	**+2.3**
ITEV	**Isla Los Testi**	**1.02**	**333**	eP	**Pb**	**23 27 53.0**	**-0.7**
ITEV				eS	**Sb**	**23 28 08.2**	**+1.2**
TPP	**Pointe-a-Pierr**	**1.19**	**96**	eP	**Pn**	**23 27 57.3**	**+0.7**
TRN	**Trinidad (W)**	**1.25**	**81**	eP	**Pn**	**23 27 56.3**	**-1.1**
TRN				eS	**Sb**	**23 28 13.6**	**0.0**
TBH	**Brigand Hill**	**1.56**	**89**	eP	**Pn**	**23 28 03.5**	**+1.8**
TBH				eS	**Sn**	**23 28 22.9**	**+1.1**
GRGR	**Grenville**	**1.94**	**30**	ePn	**Pn**	**23 28 05.9**	**-1.0**
GRGR				eSn	**Sn**	**23 28 28.9**	**-2.3**
GRW	**Mount Saint Ca**	**1.96**	**30**	eP	**Pn**	**23 28 07.5**	**+0.3**
GRW				eS	**Sn**	**23 28 33.2**	**+1.5**
GRW	**Mount Saint Ca**	**1.96**	**30**	eS	**Sn**	**23 28 33.2**	**+1.5**
PCRV	**Puerto La Cruz**	**1.97**	**262**	eP	**Pn**	**23 28 07.8**	**+0.5**
PCRV				eS	**Sn**	**23 28 33.3**	**+1.4**
PCRV	**Puerto La Cruz**	**1.97**	**262**	Pn	**Pn**	**23 28 08.6**	**+1.3**
	142nm,0.3s,baz=88,slow=8.5,SNR=148						
PCRV				Sn	**Sn**	**23 28 32.0**	**+0.1**
	18nm,0.3s,baz=356,slow=17,SNR=4.1						
TPR	**Prospect**	**1.98**	**68**	eP	**Pn**	**23 28 07.4**	**-0.1**
TPR				eS	**Sn**	**23 28 33.0**	**+0.7**
TPR	**Prospect**	**1.98**	**68**	eP	**Pn**	**23 28 07.4**	**-0.1**
TPR				eS	**Sn**	**23 28 33.0**	**+0.7**
IBAV	**Isla La Blanqu**	**2.33**	**306**	eP	**Pn**	**23 28 13.7**	**+1.4**
RIOV	**Rio Grande**	**2.50**	**161**	eP	**Pn**	**23 28 14.7**	**0.0**
RIOV				eS	**Sn**	**23 28 44.9**	**-0.2**
PRGV	**PARIAGUAN**	**2.58**	**230**	eP	**Pn**	**23 28 16.6**	**+0.9**
PRGV				eS	**Sn**	**23 28 48.0**	**+1.0**
GURV	**El Guri**	**2.70**	**189**	eP	**Pn**	**23 28 17.3**	**-0.1**
GURV				eS	**Sn**	**23 28 50.3**	**+0.3**
FCV	**Fort Charlotte**	**3.03**	**27**	eP	**Pn**	**23 28 17.2**	**-4.7**
FCV				eS	**Sn**	**23 28 56.5**	**-1.5**
CUPV	**Cœpira**	**3.11**	**263**	eP	**Pn**	**23 28 24.1**	**+1.2**
CUPV				eS	**Sn**	**23 29 00.6**	**+0.5**
SVB	**Belmont**	**3.12**	**26**	eP	**Pn**	**23 28 25.4**	**+2.1**
SVB				eS	**Sn**	**23 29 00.3**	**-0.1**
SVV	**Soufriere Volc**	**3.18**	**26**	eP	**Pn**	**23 28 26.7**	**+2.7**
SVV				eS	**Sn**	**23 29 01.2**	**-0.6**
SSV	**Crater Summit**	**3.20**	**26**	eP	**Pn**	**23 28 26.4**	**+2.1**
SSV				eS	**Sn**	**23 28 59.9**	**-2.4**
BIRV	**Birongo**	**3.56**	**271**	eP	**Pn**	**23 28 30.3**	**+1.2**
BIRV				eS	**Sn**	**23 29 11.9**	**+0.8**
SLB	**Belfond**	**3.71**	**25**	eP	**Pn**	**23 28 32.5**	**+1.3**
SLB				eS	**Sn**	**23 29 10.9**	**-4.1**
ORCV	**Isla La Orchil**	**3.73**	**292**	eP	**Pn**	**23 28 32.7**	**+1.2**
ORCV				eS	**Sn**	**23 29 16.4**	**+1.1**
MERV	**Las Mercedes**	**3.78**	**252**	eP	**Pn**	**23 28 33.2**	**+0.9**
MERV				eS	**Sn**	**23 29 16.3**	**-0.4**
BIM	**Bigot**	**4.33**	**21**	eP	**Pn**	**23 28 40.9**	**+1.1**
BIM				eS	**Sn**	**23 29 31.1**	**+0.8**
MVM	**Montagne Vaucl**	**4.43**	**23**	eP	**Pn**	**23 28 42.7**	**+1.5**
MVM				eS	**Sn**	**23 29 32.5**	**-0.1**
FDF	**Fort de France**	**4.51**	**19**	eP	**Pn**	**23 28 43.1**	**+0.9**
FDF				eS	**Sn**	**23 29 32.3**	**-2.3**
LUEV	**Luepa**	**4.72**	**165**	eP	**Pn**	**23 28 43.9**	**-1.3**
LUEV				eS	**Sn**	**23 29 36.2**	**-3.7**
CAOV	**Caicara del Or**	**4.77**	**230**	eP	**Pn**	**23 28 45.5**	**-0.3**
CAOV				eS	**Sn**	**23 29 38.8**	**-2.3**
TURV	**Turiamo**	**5.10**	**270**	eP	**Pn**	**23 28 50.4**	**0.0**
TURV				eS	**Sn**	**23 29 47.5**	**-1.7**
BAUV	**El Baul**	**5.52**	**255**	eP	**Pn**	**23 28 55.8**	**-0.3**
BAUV				eS	**Sn**	**23 29 57.2**	**-2.3**
SCG	**Saint Claude**	**5.63**	**10**	eP	**Pn**	**23 29 03.9**	**+6.2**
SCG				eS	**Sn**	**23 30 06.2**	**+4.0**
DEG	**La Desirade**	**6.03**	**15**	eP	**Pn**	**23 29 06.6**	**+3.4**
DEG				eS	**Sn**	**23 30 12.6**	**+0.3**
TEPV	**Terepaima**	**6.45**	**266**	eP	**Pn**	**23 29 08.0**	**-1.0**
PAYV	**Puerto Ayacuch**	**7.03**	**225**	eP	**Pn**	**23 29 16.5**	**-0.5**
CURV	**Curarigua**	**7.21**	**267**	eP	**Pn**	**23 29 18.2**	**-1.1**
SDV	**Santo Domingo**	**8.02**	**260**	Pn	**Pn**	**23 29 31.1**	**+0.6**
	2.9nm,0.3s,baz=62,slow=8.8,SNR=18						
SDV				Sn	**Sn**	**23 30 58.1**	**-3.0**
	2.6nm,0.3s,baz=26,slow=18,SNR=6.7						
SJG	**San Juan**	**8.34**	**336**	LR	LR	23 32 42.1	
	comp=Z,54nm,18.2s,baz=294,slow=38						
VIGV	**El Vigia**	**8.73**	**260**	eP	**Pn**	**23 29 40.0**	**-0.4**
VIRV	**Villa del Rosa**	**9.59**	**271**	eP	**Pn**	**23 29 50.8**	**-1.3**
ROSC	**El Rosal**	**12.83**	**245**	LR	LR	23 36 18.8	
	comp=Z,81nm,19.1s,baz=172,slow=41						
ATAH	**Atahualpa**	**23.37**	**223**	P	**P**	**23 32 45.4**	**+2.5**
	7.7nm,0.7s,mb4.2,baz=31,slow=4.7,SNR=5.1						
SIV	**San Ignacio**	**26.32**	**177**	P	**P**	**23 33 09.6**	**-0.3**
	2.6nm,0.8s,mb3.8,baz=16,slow=12,SNR=10						
LPAZ	**La Paz**	**27.11**	**192**	P	**P**	**23 33 18.2**	**+1.2**
	0.9nm,0.8s,mb3.4,baz=18,slow=9.6,SNR=3.9						
TXAR	**Lajitas Array**	**42.62**	**302**	P	**P**	**23 35 28.9**	**-1.5**
TXAR	**Lajitas Array**	**42.62**	**302**	P	**P**	**23 35 29.0**	**-1.5**
	0.7nm,0.6s,mb3.5,baz=121,slow=7.0,SNR=5.5						
PDAR	**Pinedale Array**	**51.92**	**317**	P	**P**	**23 36 40.6**	**-2.2**
	0.9nm,0.7s,mb3.8,baz=115,slow=7.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**62.90**	**81**	P	**P**	**23 38 00.0**	**-0.8**
	0.8nm,0.9s,mb3.8,baz=287,slow=6.6,SNR=8.3						
YKA	**Yellowknife Ar**	**63.83**	**336**	P	**P**	**23 38 03.1**	**-2.9**
YKA	**Yellowknife Ar**	**63.83**	**336**	P	**P**	**23 38 03.1**	**-2.9**
	1.2nm,0.7s,mb4.1,baz=110,slow=7.3,SNR=16						
GERES	**GERESS Array B**	**73.23**	**42**	P	**P**	**23 39 01.7**	**-3.4**
	0.4nm,0.7s,mb3.5,baz=270,slow=5.3,SNR=5.8						
FINES	**FINESS Array B**	**80.30**	**29**	P	**P**	**23 39 44.6**	**-0.2**
	0.5nm,0.5s,mb3.7,baz=310,slow=16,SNR=4.0						
BRTR	**Keskin Array B**	**88.19**	**50**	P	**P**	**23 40 24.7**	**-0.7**
	0.3nm,0.5s,mb3.8,baz=247,slow=2.5,SNR=3.6						
STKA	**Stephens Creek**	**149.06**	**223**	PKPbc	PKPbc	23 47 23.4	+0.6
	0.8nm,0.2s,baz=50,slow=8.8,SNR=7.0						

ATH ***21*** *00:00:43.7, 3869N×2254E, h89km±56km, ML3.5*

ISCJB ***21*** *00:00:45.8±0.5, 3873N±004×2269E±007, h23km±9km, Error ellipse: s-maj=9.5km s-min=5.5km az=157.5*

CSEM ***21*** *00:00:45.8±0.1, 3875N×2270E, h30km, ML3.2, Error ellipse: s-maj=1.7km s-min=1.5km az=93.0*

THE ***21*** *00:00:45.6, 3872N×2273E, h6km, ML3.2*

NEIC ***21*** *00:00:45.6, 3872N×2273E, h7km, MD3.3(ATH), ML3.2(THE), After THE.*

ISC 21 00:00:45.0±0.5,**3874N**±003×**2273E**±006,**h17**km±7km,**n15,**
σ0§83/19, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.42**	**312**	eP*g*	**Pg**	**00 00 53.9**	**+0.2**
AGG				eS*g*	**Sg**	**00 01 00.6**	**+1.1**
AGG	**Agios Georgios**	**0.42**	**312**	eP*g*	**Pg**	**00 00 53.8**	**+0.1**
AGG				eS*g*	**Sg**	**00 01 00.6**	**+1.1**
XOR	**Xorichti**	**0.72**	**30**	eP*g*	**Pg**	**00 00 59.3**	**+0.2**
LTK	**Loutraki**	**0.74**	**165**	eP*g*	**Pg**	**00 00 58.8**	**-0.7**
LTK				eS*g*	**Sg**	**00 01 10.0**	**+0.8**
EVR	**Evrytania**	**0.74**	**284**	eP	**Pb**	**00 01 00.0**	**+0.5**
SELA	**Sela**	**0.81**	**235**	eP*g*	**Pg**	**00 01 00.4**	**-0.3**
AOS	**Alonnisos**	**0.99**	**64**	eP*g*	**Pg**	**00 01 04.6**	**+0.3**
ATH	**Athens Observa**	**1.09**	**134**	eP	**Pb**	**00 01 05.5**	**+0.2**
PTL	**Penteli**	**1.12**	**127**	eP	**Pn**	**00 01 06.5**	**+0.6**
NAIG	**Nisos Aigina**	**1.15**	**148**	eP	**Pn**	**00 01 06.5**	**+0.3**
KVR	**Kavouri**	**1.22**	**138**	eP	**Pn**	**00 01 08.5**	**+1.3**
DID	**Didima**	**1.29**	**162**	eP*g*	**Pg**	**00 01 08.9**	**-1.1**
DID				eS*g*	**Sg**	**00 01 27.2**	**+0.4**
LIT	**Litokhoron**	**1.37**	**352**	eP*g*	**Pg**	**00 01 10.9**	**-0.6**
PAIG	**Paliouri**	**1.40**	**31**	eP*g*	**Pg**	**00 01 10.8**	**-1.2**
ITM	**Ithomi**	**1.68**	**203**	eP	**Pn**	**00 01 11.5**	**-2.1**

IDC 21 00:08:21.7±4.0,**1519S×17405W, h0**km,**mb3.7**/3,
mb1 4.0/3,**mb1mx3.7**/14,**mbtmp3.7**/3,**Error ellipse:**
s-maj=307.0km s-min=34.5km az=151.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.28**	**257**	P	P	00 17 13.0	+0.3
	0.3nm,0.7s,baz=91,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**49.58**	**252**	P	P	00 17 14.6	-0.3
	2.1nm,0.5s,baz=89,slow=8.2,SNR=40						
PDAR	**Pinedale Array**	**82.53**	**42**	P	P	00 20 46.8	+0.4
	0.3nm,0.6s,baz=231,slow=6.9,SNR=3.7						

CSEM ***21*** *00:13:18.9±0.1, 3767N×4245E, h5km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.7km az=17.0*

ISK ***21*** *00:13:18.9, 3767N×4244E, h4km, MD3.3*

ISCJB ***21*** *00:13:19.8±0.6, 3763N±004×4247E±003, h4km±6km, Error ellipse: s-maj=6.1km s-min=3.9km az=178.7*

DDA ***21*** *00:13:19.3, 3758N×4245E, h4km, Md2.9*

ISC 21 00:13:20.5±0.5,**3762N**±004×**4247E**±003,**h8**km±5km,**n22,**
σ1§02/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.12**	**192**	PG	**Pg**	**00 13 23.4**	**+0.2**
SIRT				SG	**Sg**	**00 13 26.2**	**+1.1**
BTMT	**Batman**	**0.96**	**307**	PG	**Pg**	**00 13 38.1**	**-0.9**
BTMT				SG	**Sg**	**00 13 52.9**	**+1.3**
CUKT	**Cukurca**	**0.98**	**112**	PG	**Pg**	**00 13 38.8**	**-0.5**
CUKT				SG	**Sg**	**00 13 53.6**	**+1.6**
HAKT	**HAKKARI**	**0.98**	**93**	*i* P	**Pg**	**00 13 39.1**	**-0.3**
HAKT				*i* S	**Sg**	**00 13 52.8**	**+0.6**
HKR	**Hakkari**	**1.01**	**92**	PG	**Pg**	**00 13 39.1**	**-0.8**
VANT	**Van**	**1.10**	**41**	PG	**Pg**	**00 13 38.9**	**-2.7**
TVAN	**Van**	**1.17**	**39**	*i* P	**Pg**	**00 13 40.2**	**-2.8**
TVAN				*i* S	**Sg**	**00 13 58.9**	**+0.8**
VANB	**Van**	**1.21**	**36**	PN	**Pn**	**00 13 42.2**	**-1.5**
VANB				SN	**Sn**	**00 13 59.9**	**-0.4**
MARD	**Mardin**	**1.38**	**258**	*i* P	**Pn**	**00 13 45.4**	**-0.7**
MARD				*i* S	**Sb**	**00 14 02.9**	**-1.4**
MSL	**Mosul**	**1.42**	**159**	*i* x	x	00 13 46.5	
MSL				*ex*	x	00 14 05.5	
BNGL	**BINGOL**	**1.69**	**322**	*i* P	**Pn**	**00 13 50.6**	**+0.3**
BNGL				*i* S	**Sn**	**00 14 13.2**	**+1.1**
TUTA	**Tutak**	**1.80**	**8**	*i* P	**Pn**	**00 13 52.6**	**+0.8**
TUTA				*i* S	**Sn**	**00 14 16.8**	**+1.9**
DIY	**Diyarbakir**	**1.80**	**279**	PN	**Pn**	**00 13 51.5**	**-0.3**
DIY				SN	**Sn**	**00 14 15.0**	**+0.2**
CLDR	**Caldiran**	**1.90**	**36**	*e*PN	**Pn**	**00 13 53.4**	**+0.3**
AGRB	**Hanur-Agry**	**2.00**	**12**	*e*PN	**Pn**	**00 13 54.1**	**-0.4**
BINT	**Bingol**	**2.00**	**309**	*e*PN	**Pn**	**00 13 54.5**	**-0.1**
ERZM	**Erzurum**	**2.44**	**340**	*i* P	**Pn**	**00 14 04.0**	**+3.4**
ERZM				*i* S	**Sn**	**00 14 36.4**	**+5.7**
EZM	**Erzurum**	**2.44**	**340**	*e*PN	**Pn**	**00 14 00.2**	**-0.4**
PTK	**Pertek**	**2.74**	**299**	*e*PN	**Pn**	**00 14 04.5**	**-0.2**
URFA	**Urfa**	**2.91**	**268**	*e*PN	**Pn**	**00 14 06.9**	**-0.1**
KARS	**Kars**	**3.03**	**9**	*e*PN	**Pn**	**00 14 08.5**	**-0.2**
MALT	**Malatya**	**3.27**	**283**	*e*PN	**Pn**	**00 14 12.6**	**+0.6**

ISCJB ***21*** *00:13:23.2±0.6, 1046N±003×6269W±002, h7km±4km, Error ellipse: s-maj=5.2km s-min=3.3km az=162.9*

FUNV ***21*** *00:13:23.8, 1049N×6263W, h5km, MW3.0*

TRN ***21*** *00:13:23.5, 1047N×6261W, h3km, MD3.4*

NEIC ***21*** *00:13:23.3, 1047N×6262W, h0km, MD3.4(TRN), After TRN.*

ISC 21 00:13:23.3±0.5,**1045N**±003×**6268W**±002,**h3**km±5km,**n19,**
σ1§04/35,4C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.39**	**222**	⇑*i*P	**Pg**	**00 13 31.3**	**+0.5**
GUNV				eS	**Sg**	**00 13 38.1**	**+2.3**
GUIV	**Guiria**	**0.49**	**66**	⇑*i*P	**Pg**	**00 13 32.3**	**-0.4**
GUIV				eS	**Sg**	**00 13 38.5**	**-0.5**
CRUV	**Carupano**	**0.59**	**292**	eP	**Pg**	**00 13 34.5**	**-0.2**
CRUV				eS	**Sg**	**00 13 42.4**	**-0.1**
TCE	**Chacachacare**	**0.94**	**75**	eP	**Pg**	**00 13 40.2**	**-1.2**
TCE				eS	**Sg**	**00 13 53.0**	**-0.7**
ITEV	**Isla Los Testi**	**1.00**	**334**	⇑*i*P	**Pg**	**00 13 42.3**	**-0.3**
ITEV				eS	**Sg**	**00 13 55.9**	**+0.3**
TPP	**Pointe-a-Pierr**	**1.21**	**96**	eP	**Pg**	**00 13 46.0**	**-0.7**
TPP				eS	**Sg**	**00 14 02.9**	**+0.5**
TRN	**Trinidad (W)**	**1.27**	**81**	eP	**Pg**	**00 13 46.6**	**-1.1**
TRN				eS	**Sg**	**00 14 04.4**	**+0.2**
ORIV	**Oritupano**	**1.55**	**208**	⇑*i*P	**Pn**	**00 13 52.6**	**+0.7**
ORIV				eS	**Sn**	**00 14 14.1**	**+1.5**
TBH	**Brigand Hill**	**1.58**	**89**	eP	**Pn**	**00 13 53.8**	**+1.4**
TBH				eS	**Sn**	**00 14 19.2**	**+5.8**
PCRV	**Puerto La Cruz**	**1.95**	**262**	eP	**Pn**	**00 13 57.7**	**+0.3**
GRW	**Mount Saint Ca**	**1.97**	**30**	eP	**Pn**	**00 13 58.0**	**+0.4**
GRW				eS	**Sn**	**00 14 24.9**	**+1.9**
TPR	**Prospect**	**2.00**	**68**	eS	**Pg**	**00 14 04.5**	**+2.7**
RIOV	**Rio Grande**	**2.52**	**160**	eP	**Pn**	**00 14 05.4**	**+0.1**
RIOV				eS	**Sn**	**00 14 35.1**	**-1.3**
PRGV	**PARIAGUAN**	**2.57**	**229**	eP	**Pn**	**00 14 06.2**	**+0.3**
PRGV				eS	**Sn**	**00 14 38.3**	**+0.6**
CUPV	**Cœpira**	**3.09**	**263**	eP	**Pn**	**00 14 13.3**	**+0.2**
BIRV	**Birongo**	**3.53**	**271**	eP	**Pn**	**00 14 19.4**	**+0.2**
BIRV				eS	**Sn**	**00 15 00.3**	**-1.3**
CAOV	**Caicara del Or**	**4.75**	**230**	eP	**Pn**	**00 14 35.5**	**-0.6**
CAOV				eS	**Sn**	**00 15 28.7**	**-3.1**
BAUV	**El Baul**	**5.50**	**255**	eP	**Pn**	**00 14 44.9**	**-1.4**
BAUV				eS	**Sn**	**00 15 46.4**	**-3.7**
PAYV	**Puerto Ayacuch**	**7.02**	**225**	eP	**Pn**	**00 15 06.2**	**-1.0**
PAYV				eS	**Sn**	**00 16 21.4**	**-6.2**

NIED ***21*** *00:19:00, 4170N×14140E, h125km, Mw4.3 Best double couple: M0 2.90000×10^15 NP1:φs20.00000°, δ45.00000°, λ-121.00000°. NP2:φs241.00000°, δ52.00000°, λ-62.00000°.*

ISCJB ***21*** *00:19:17.4±0.2, 4166N±002×14144E±004, h137km±2km, mb4.0/32, Error ellipse: s-maj=5.2km s-min=3.5km az=25.2*

JMA ***21*** *00:19:18.9±0.1, 4166N×14145E, h130km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs14.00000°, δ47.00000°, λ-126.00000°. NP2: φs241.00000°, δ54.00000°, λ-58.00000°. Principal axes: T Plg4.0000°, Azm309.0000°; N Plg26.0000°, Azm41.0000°; P Plg64.0000°, Azm210.0000°;*

JMA Felt II J1.

IDC ***21*** *00:19:18.0±1.1, 4167N×14141E, h127km±10km, mb3.6/11, mb1 3.8/15, mb1mx3.7/22, mbtmp3.6/15 Error ellipse: s-maj=17.8km s-min=10.0km az=106.0*

NEIC ***21*** *00:19:18.9±0.5, 4167N×14134E, h133km±5km, mb4.3/22, Error ellipse: s-maj=6.4km s-min=5.2km az=117.0*

NEIC Recorded [2 JMA] in Aomori and Iwate Prefectures, Honshu.

MOS ***21*** *00:19:18.0±0.9, 4167N×14136E, h145km, mb4.2/

MAJO pmax pmax
comp=Z,66nm,0.6s
MAT Matsushiro 5.70 207 P **Pn** **00 20 41.5 +0.5**
MAT S **Sn** **00 21 46.0 +0.7**
MJAR Matsushiro Arr 5.70 207 P **Pn** **00 20 42.0 +1.0**
comp=Z,6.6nm,0.3s,baz=26,slow=12,SNR=49
KUR Kuril'sk 5.88 51 P **Pn** **00 20 36.5 -7.0**
KUR S **Sn** **00 21 47.0 -2.7**
KUR smax
comp=N,50nm,0.6s
KUR smax
comp=E,110nm,0.6s
JHJ Hachijo jima 2 8.63 189 P **Pn** **00 21 19.2 -1.3**
comp=E,42nm,0.3s,baz=260,slow=22,SNR=5.9
JHJ S **Sn** **00 22 48.1 -8.1**
comp=E,101nm,0.3s,baz=77,slow=23,SNR=10.0
MDJ Mudanjiang 9.15 293 P **Pn** **00 21 27.8 +0.4**
MDJ AMB AMB
comp=Z,32nm,0.9s
MDJ AMB AMB
comp=Z,52nm,3.7s
MDJ Mudanjiang 9.15 293 *e*Pn **Pn** **00 21 27.2 -0.2**
comp=Z,34nm,1.0s
MDJ *e*Sn **Sn** **00 23 14.8 +6.3**
KLR Kul'dur 10.17 321 *e*P **Pn** **00 21 37.2 -3.8**
KLR pmax pmax
comp=E,28nm,1.6s
KLR pmax pmax
comp=Z,34nm,1.6s
KSRS Korea Array 11.25 252 P **Pn** **00 21 55.2 -0.2**
comp=Z,0.3nm,0.3s,baz=66,slow=12,SNR=2.8
INCN Inchon 12.16 255 Pn **Pn** **00 22 06.4 -0.9**
PET Petropavlovsk 16.24 40 Pn **Pn** **00 22 59.2 +0.3**
HIA Hailar 16.97 304 *e*Pn **Pn** **00 23 05.9 -1.9**
comp=Z,13nm,0.6s
HIA Hailar 16.97 304 *e*P **Pn** **00 23 05.9 -1.9**
HIA pmax pmax
comp=Z,13nm,0.6s
CLNS Chul'man 18.55 331 *e*P **P** **00 23 18.9 -5.9**
CLNS pmax pmax
comp=N,11nm,0.7s
CLNS pmax pmax
comp=Z,18nm,0.7s
CLNS pmax pmax
comp=E,4.0nm,0.9s
BJT Baijiatuau 19.17 273 *e*P **P** **00 23 29.8 -2.0**
comp=E,5.1nm,0.4s
BJT Baijiatuau 19.17 273 *e*P **P** **00 23 29.8 -1.9**
BJT pmax pmax
comp=Z,5.0nm,0.4s
NJ2 Nanjing 20.41 249 *e*P **P** **00 23 45.9 +0.8**
NJ2 AMB AMB
comp=Z,20nm,0.6s
HHC Hu-ho-hao-te 22.43 278 *e*P **P** **00 24 05.3 -1.1**
HHC *e*S **S** **00 27 58.1 -4.6**
HHC AMB AMB
comp=Z,7.0nm,1.1s,mb4.0
HHC AMB AMB
comp=Z,99nm,5.3s
HHC LR LR
comp=N,116nm,6.5s
HHC LR LR
comp=E,100nm,8.3s
HHC LR LR
comp=Z,92nm,15.5s
TATO Taipei 23.47 231 *e*P **P** **00 24 16.8 +0.6**
comp=Z,18nm,0.5s,mb4.8
BOD Bodaibo 23.75 322 *e*P **P** **00 24 15.9 -2.5**
BOD pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
NACB Ninganchiao 24.02 230 P **P** **00 24 19.4 -1.8**
ULN Ulaanbaatar 25.04 296 *e*P **P** **00 24 29.8 -0.4**
comp=Z,3.0nm,0.8s,mb3.9
ULN Ulaanbaatar 25.04 296 *e*P **P** **00 24 29.8 -0.4**
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb3.9
SONM Songino Array 25.48 296 P **P** **00 24 34.4 +0.2**
comp=Z,1.4nm,0.5s,mb3.8,baz=83,slow=9.0,SNR=13
TLY Talaya 27.52 304 *e*P **P** **00 24 53.0 +0.6**
comp=Z,5.5nm,0.5s,mb4.5
TLY Talaya 27.52 304 *e*P **P** **00 24 53.0 +0.6**
TLY pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
ZAK Zakamensk 27.63 301 *e*P **P** **00 24 53.5 0.0**
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.5
GYA Guiyang 32.30 253 P **P** **00 25 36.9 +2.0**
GYA AP pP 00 26 04.8 +1.3
GYA PP PP 00 26 48.3 -2.1
GYA PCP PcP 00 28 23.5 +3.6
GYA S **S** **00 30 39.8 +0.9**
GYA SCP ScP 00 31 54.5 +3.4
GYA PCS PcS 00 32 07.0 +1.9
GYA SCS ScS 00 35 52.4 +1.8
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,70nm,4.6s
MK31 Makanchi Array 41.82 298 *e*P **P** **00 26 54.7 -0.3**
MKAR Makanchi Array 41.82 298 P **P** **00 26 54.9 -0.2**
comp=Z,1.5nm,0.5s,mb3.9,baz=84,slow=10,SNR=22
LSA Lhasa 42.01 270 P **P** **00 26 57.0 +0.2**
KURK Kurchatov 43.21 304 *e*P **P** **00 27 06.1 -0.1**
comp=Z,3.9nm,0.6s,mb4.2
KURK Kurchatov 43.21 304 *e*P **P** **00 27 06.1 -0.1**
KURK pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
MCK McKinley 44.84 36 P **P** **00 27 19.3 +0.3**
COLA College 45.21 35 *e*P **P** **00 27 22.7 +0.8**
comp=Z,2.9nm,0.7s,mb4.0
COLA College 45.21 35 *e*P **P** **00 27 22.7 +0.8**
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
TKM2 Tokmak 2 47.58 295 *e*P **P** **00 27 41.5 +0.8**
comp=Z,3.6nm,0.6s,mb4.2
TKM2 Tokmak 2 47.58 295 *e*P **P** **00 27 41.5 +0.8**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s,mb4.2
BRVK Borovoye 47.62 309 P **P** **00 27 40.4 -0.5**
comp=Z,4.0nm,0.4s,mb4.4
BRVK Borovoye 47.62 309 P **P** **00 27 40.4 -0.4**
BRVK pmax pmax
comp=Z,4.0nm,0.4s,mb4.4
UCH Uchtor 48.58 294 *e*P **P** **00 27 48.0 -0.4**
comp=Z,1.2nm,0.8s,mb3.6
EKS2 Erkin-Say 48.91 295 *e*P **P** **00 27 51.0 +0.1**
comp=Z,1.1nm,0.6s,mb3.7
AML Almayashu 49.18 295 *e*P **P** **00 27 53.5 +0.5**
comp=Z,1.5nm,0.4s,mb4.0
AML *e*PcP PcP 00 29 14.2 0.0
INK Inuvik 50.29 29 *e*P **P** **00 28 02.4 +1.4**
comp=Z,162nm,0.5s
INK Inuvik 50.29 29 P **P** **00 28 01.6 +0.6**
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 50.29 29 P **P** **00 28 01.6 +0.6**
comp=Z,1.6nm,0.8s,mb3.7,baz=253,slow=4.7,SNR=7.3
PMG Port Moresby 51.09 173 *e*P **P** **00 28 07.5 -0.1**
ARU Arti 52.97 316 *e*P **P** **00 28 20.3 -0.7**
comp=Z,3.7nm,0.6s,mb4.3
ARU Arti 52.97 316 *e*P **P** **00 28 20.3 -0.7**
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
KAKA Kakadu 54.73 191 P **P** **00 28 31.1 -3.2**
KBL Kabul 55.88 288 *e*P **P** **00 28 41.9 -0.6**
comp=Z,1.7nm,0.8s,mb3.9
RES Resolute Bay 58.13 15 P **P** **00 28 58.1 +0.5**
comp=Z,135nm,0.8s
RES Resolute Bay 58.13 15 P **P** **00 28 58.1 +0.5**
RES pmax pmax
comp=Z,135nm,0.8s
YKA Yellowknife Ar 59.83 31 P **P** **00 29 10.1 +0.6**
comp=Z,0.2nm,0.6s,mb3.2,baz=304,slow=6.1,SNR=5.1
FITZ Fitzroy Crossi 61.23 197 *e*P **P** **00 29 20.2 +0.7**
comp=Z,5.3nm,0.8s,mb4.4
CTAO Charters Tower 61.60 175 P **P** **00 29 22.8 +0.9**
WB2 Warramunga Arr 61.64 188 *e*P **P** **00 29 21.4 -0.8**
WB2 *e* pP 00 29 54.4 +0.5
WRA Warramunga Arr 61.64 188 P **P** **00 29 21.7 -0.5**
comp=Z,2.9nm,0.6s,mb4.3,baz=7.8,slow=7.7,SNR=85
JOF Joensuu 61.91 331 *ep* **P** **00 29 22.6 -1.0**
comp=Z,1.1nm,0.5s,mb3.9
PALK Pallekele 63.47 255 P **P** **00 29 34.5 -0.2**
KAF Kangasniemi 64.22 332 *ep* **P** **00 29 41.7 +2.9**
comp=Z,1.3nm,0.4s,mb4.1
KAF Kangasniemi 64.22 332 *e*P **P** **00 29 41.7 +2.9**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
FINES FINESS Array B 64.75 331 P **P** **00 29 42.2 -0.1**
FINES FINESS Array B 64.75 331 P **P** **00 29 42.2 -0.1**
comp=Z,1.7nm,0.8s,mb3.9,baz=34,slow=4.8,SNR=6.7
ASAR Alice Springs 65.37 188 P **P** **00 29 46.6 0.0**
comp=Z,1.5nm,0.9s,mb3.8,baz=7.6,slow=5.7,SNR=13
MBWA Marble Bar 65.66 202 *e*P **P** **00 29 48.4 -0.2**
comp=Z,3.0nm,0.6s,mb4.3
KIV Kislovodsk 67.93 310 *e*P **P** **00 30 03.8 +0.9**
comp=Z,9.8nm,1.1s,mb4.5
KIV Kislovodsk 67.93 310 *e*P **P** **00 30 03.8 +1.0**
KIV pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
NB2 NORSAR Subarra 69.94 337 P **P** **00 30 14.5 -0.4**
comp=Z,0.7nm,0.5s,mb3.6,baz=37,slow=6.5
NB2 NORSAR Subarra 69.94 337 P **P** **00 30 14.5 -0.4**
NB2 pmax pmax
comp=Z,1.0nm,0.5s,mb3.8
NOA NORSAR Array B 69.94 337 P **P** **00 30 14.8 -0.1**
comp=Z,0.8nm,0.5s,mb3.7,baz=38,slow=6.4,SNR=4.0
AKASG Malin Array Be 70.67 321 P **P** **00 30 19.4 -0.1**
comp=Z,0.6nm,0.4s,mb3.7,baz=45,slow=6.5,SNR=7.4
STKA Stephens Creek 73.18 180 P **P** **00 30 35.0 +0.4**
comp=Z,0.6nm,0.3s,mb3.7,baz=349,slow=11,SNR=6.0
PDAR Pinedale Array 74.43 46 P **P** **00 30 42.7 +0.7**
comp=Z,0.5nm,0.6s,mb3.4,baz=318,slow=2.0,SNR=5.6
TORD Torodi Ar. Bea 114.04 316 PKP PKiKP 00 37 41.1 -1.3
comp=Z,0.2nm,0.5s,baz=347,slow=1.2,SNR=4.9

*ISCJB **21** 00:52:56.5±0.5, 2589S×003×703W×0.1, h73km±8km, mb3.6/2, Error ellipse: s-maj=16.4km s-min=5.1km az=3.0*
*GUC **21** 00:52:56.2±0.6, 2587S×7035W, h78km±10km, MD4.2, ML4.6*
*NEIC **21** 00:52:56.2, 2587S×7035W, h78km, MD4.2(GUC), After GUC.*
*IDC **21** 00:52:58.8±1.2, 2569S×70.15W, h56km±6km, mb3.5/2, mb1 4.0/5, mb1mx3.7/16, mbtmp3.8/5, MS3.8/2, Ms1 3.8/2, ms1mx3.0/16, Error ellipse: s-maj=34.7km s-min=15.9km az=85.0*
ISC 21 00:52:57.7±0.5, 2589S±003×703W±01, h63km±9km, n25, σ1§00/33, mb3.7/2, 3C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	**1.26**	**355**	⇓*i* P	**Pn**	**00 53 19.4**	**+0.2**
CPN1				⇑*i* S	**Sn**	**00 53 36.3**	**+1.0**
CPN1				AML	AML	00 53 40.2	
	comp=N,13μm,0.2s						
CPCH	**Copiapo**	**1.47**	**183**	⇓*i* P	**Pn**	**00 53 21.8**	**-0.2**
CPCH				*i* S	**Sn**	**00 53 40.8**	**+0.5**
CPCH	**Copiapo**	**1.47**	**183**	⇓*i* P	**Pn**	**00 53 21.8**	**-0.2**
CPCH				*i* S	**Sn**	**00 53 40.8**	**+0.5**
CPCH				AML	AML	00 53 46.3	
	comp=N,39μm,0.1s						
ANCH	**Antofagasta**	**2.20**	**357**	⇓*i* P	**Pn**	**00 53 35.9**	**+4.0**
ANCH				*i* S	**Sn**	**00 54 02.2**	**+4.3**
ANCH	**Antofagasta**	**2.20**	**357**	⇓*i* P	**Pn**	**00 53 35.9**	**+4.0**
ANCH				*i* S	**Sn**	**00 54 02.2**	**+4.3**
ANCH				AML	AML	00 54 13.2	
	comp=E,3μm,0.5s						
CEN1	**Los Morros**	**2.49**	**2**	⇑*i* P	**Pn**	**00 53 32.3**	**-3.5**
CEN1				*i* S	**Sn**	**00 53 59.5**	**-5.4**
CEN1				AML	AML	00 54 12.4	
	comp=E,4μm,0.7s						
VACH	**Vallenar**	**2.71**	**189**	*i* P	**Pn**	**00 53 38.3**	**-0.6**
VACH				*i* S	**Sn**	**00 54 10.4**	**-0.1**
LCO	**Las Campanas**	**3.13**	**187**	*e*Pn	**Pn**	**00 53 44.4**	**-0.2**
LCO				*e*Sn	**Sn**	**00 54 27.4**	**+6.6**
TLL	**Tololo Astrono**	**4.29**	**186**	⇑*i* P	**Pn**	**00 54 00.5**	**+0.1**
TLL				*i* S	**Sn**	**00 54 49.0**	**-0.1**
CFAA	**Coronel Fontan**	**5.97**	**163**	P	**Pn**	**00 54 25.6**	**+2.2**
	comp=E,1.5nm,0.3s,baz=345,slow=13,SNR=34						
CFAA				S	**Sn**	**00 55 37.1**	**+6.7**
	comp=E,1.7nm,0.3s,baz=78,slow=23,SNR=9.0						
ARE	**Arequipa**	**9.45**	**353**	*e*P	**Pn**	**00 55 09.0**	**-2.0**
LPAZ	**La Paz**	**9.76**	**12**	P	**Pn**	**00 55 14.8**	**-0.5**
LPAZ	**La Paz**	**9.76**	**12**	P	**Pn**	**00 55 14.8**	**-0.5**
	comp=E,1.0nm,0.3s,baz=202,slow=6.6,SNR=29						
SIV	**San Ignacio**	**13.06**	**43**	P	**Pn**	**00 55 56.6**	**-3.8**
	comp=E,1.0nm,0.3s,baz=227,slow=11,SNR=18						
SIV				S	**Sn**	**00 58 24.3**	**+0.2**
	comp=E,0.4nm,0.3s,baz=354,slow=23,SNR=3.5						
TRQA	**Tornquist**	**14.02**	**152**	*e*Pn	**Pn**	**00 56 12.2**	**-0.9**
PLCA	**Paso Flores**	**14.81**	**181**	*e*Pn	**Pn**	**00 56 23.5**	**+0.1**
PLCA	**Paso Flores**	**14.81**	**181**	P	**Pn**	**00 56 22.1**	**-1.4**
	comp=E,0.1nm,0.3s,baz=342,slow=16,SNR=3.6						
NNA	**Nana**	**15.15**	**335**	Pn	**Pn**	**00 56 28.8**	**+0.8**
OTAV	**Otavalo**	**27.14**	**342**	P	**P**	**00 58 34.1**	**-1.0**
SDV	**Santo Domingo**	**34.56**	**359**	P	**P**	**00 59 40.1**	**-0.4**
RPN	**Rapa Nui**	**34.88**	**259**	LR	LR	01 09 24.6	
	comp=E,64nm,18.8s,baz=257,slow=28						
TXAR	**Lajitas Array**	**63.57**	**328**	P	**P**	**01 03 23.2**	**+1.5**
	comp=E,0.4nm,0.7s,mb3.6,baz=157,slow=8.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**80.01**	**70**	P	**P**	**01 05 01.6**	**+0.8**
	comp=E,1.1nm,0.7s,mb3.9,baz=258,slow=5.0,SNR=16						
TORD				pP	pP	01 05 17.5	-0.6
	comp=E,1.3nm,0.6s,baz=262,slow=5.0,SNR=7.0						
TORD				sP	sP	01 05 23.8	-1.1
	comp=E,1.7nm,0.5s,baz=270,slow=5.5,SNR=7.9						
ESDC	**Sonseca Array**	**89.82**	**45**	LR	LR	01 45 21.6	
	comp=E,85nm,19.3s,baz=90,slow=35						
MKAR	**Makanchi Array**	**149.86**	**39**	PKPbc	PKPbc	01 12 41.6	+1.0
	comp=E,0.3nm,0.3s,baz=318,slow=3.3,SNR=4.5						
MKAR				pPKPbc	pPKPbc	01 12 58.5	-0.2
	comp=E,1.1nm,0.7s,baz=336,slow=2.7,SNR=3.6						

*NEIC **21** 00:59:15.4, 5899N×13796W, h3km, ML2.7(AEIC), After AEIC.*
PGC 21 00:59:15.6±0.4, 5892N×13794W, h10km, ML2.9/4, 97km Ese of Yakutat, Ak Southeastern Alaska, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNL	**Peninsula**	**1.06**	**316**	P	Pg	00 59 33.4	-2.6
PNL				S	Sg	00 59 48.2	-1.5
SKAG	**Skagway**	**1.45**	**67**	P	Pn	00 59 39.9	-1.9
SKAG				S	Sn	00 59 59.3	-1.5
HYT	**Haines Junctio**	**1.92**	**6**	Trac			
HYT	**Haines Junctio**	**1.92**	**6**	Pn	Pn	00 59 48.0	-0.3
HYT				Sg	Sg	01 00 15.3	-2.0
WHY	**Whitehorse**	**2.33**	**40**	P	Pn	00 59 53.0	-0.9
WHY	**Whitehorse**	**2.33**	**40**	Trac			
WHY	**Whitehorse**	**2.33**	**40**	Pn	Pn	00 59 53.5	-0.4
WHY				Sg	Sg	01 00 27.9	-2.4
SIT	**Sitka**	**2.33**	**142**	P	Pn	00 59 53.1	-0.8
WRAK	**Wrangell Islan**	**3.91**	**128**	Pn	Pn	01 00 18.8	+3.1
WRAK				Sn	Sn	01 01 10.1	+8.5
DLBC	**Dease Lake**	**4.16**	**93**	*e*Pn	Pn	01 00 17.9	-1.1
DLBC				*e*Sn	Sn	01 01 09.7	+2.1
DLBC	**Dease Lake**	**4.16**	**93**	Trac			
DLBC	**Dease Lake**	**4.16**	**93**	Pn	Pn	01 00 17.8	-1.2
DLBC				Sn	Sn	01 01 05.5	-2.0
DLBC				Sg	Sg	01 01 24.6	-4.4
DAWY	**Dawson**	**5.21**	**353**	*e*Pn	Pn	01 00 33.7	+0.2
DAWY				*e*Sn	Sn	01 01 32.1	-1.4
DAWY	**Dawson**	**5.21**	**353**	Trac			
DAWY	**Dawson**	**5.21**	**353**	Pn	Pn	01 00 33.5	+0.1

*CSEM **21** 01:12:52.4±0.1, 3855N×4368E, h10km, MD3.4, Error ellipse: s-maj=3.1km s-min=2.0km az=94.0*
*ISK **21** 01:12:52.9, 3855N×4366E, h8km, MD3.4*
*ISCJB **21** 01:12:53.1±0.8, 3854N±003×4370E±007, h6km±6km, Error ellipse: s-maj=9.3km s-min=4.9km az=11.6*
*DDA **21** 01:12:54.2, 3855N×4367E, h5km, Md3.3, Ml3.5*
ISC 21 01:12:53.5±0.7, 3854N±003×4368E±007, h3km±5km, n23, σ1§13/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.22**	**266**	*i* P	**Pg**	**01 12 57.5**	**-0.2**
VANB	**Van**	**0.24**	**283**	*i* PG	**Pg**	**01 12 57.5**	**-0.6**
VANT	**Van**	**0.25**	**247**	*i* PG	**Pg**	**01 13 00.5**	**+2.2**
CLDR	**Caldiran**	**0.63**	**17**	PG	**Pg**	**01 13 05.0**	**-0.5**
CLDR				SG	**Sg**	**01 13 15.1**	**+1.4**
HKR	**Hakkari**	**0.96**	**177**	PG	**Pg**	**01 13 11.9**	**-0.1**
HAKT	**HAKKARI**	**0.98**	**179**	*i* P	**Pg**	**01 13 12.2**	**-0.1**
HAKT				*i* S	**Sg**	**01 13 30.4**	**+5.3**
DYDN	**Diyadin**	**1.00**	**0**	*i* P	**Pg**	**01 13 11.6**	**-1.0**
DYDN				*i* S	**Sg**	**01 13 26.9**	**+1.3**
TUTA	**Tutak**	**1.09**	**322**	*i* P	**Pg**	**01 13 12.9**	**-1.6**
TUTA				*i* S	**Sg**	**01 13 28.1**	**-0.6**
AGRB	**Hanur-Agry**	**1.16**	**333**	PN	**Pn**	**01 13 14.5**	**-2.2**
AGRB				SN	**Sn**	**01 13 31.9**	**-1.2**
CUKT	**Cukurca**	**1.29**	**183**	PN	**Pn**	**01 13 17.4**	**-1.0**
SIRT	**Sirnak**	**1.43**	**224**	PN	**Pn**	**01 13 20.4**	**0.0**
BTMT	**Batman**	**1.76**	**259**	PN	**Pn**	**01 13 26.1**	**+1.2**
BTMT				SN	**Sn**	**01 13 50.8**	**+3.1**
DIGO	**Kars**	**1.89**	**353**	*i* P	**Pn**	**01 13 28.2**	**+1.7**
DIGO	**Kars**	**1.89**	**353**	*i* P	**Pn**	**01 13 28.2**	**+1.6**
KARS	**Kars**	**2.12**	**348**	*e*PN	**Pn**	**01 13 29.6**	**-0.2**
ERZM	**Erzurum**	**2.26**	**308**	*i* P	**Pn**	**01 13 34.7**	**+3.0**
EZM	**Erzurum**	**2.26**	**308**	*e*PN	**Pn**	**01 13 31.8**	**+0.1**
BINT	**Bingol**	**2.52**	**279**	*e*PN	**Pn**	**01 13 35.0**	**-0.3**
MARD	**Mardin**	**2.60**	**243**	*i* P	**Pn**	**01 13 35.2**	**-1.3**
BCA	**Borcka**	**3.30**	**332**	*e*PN	**Pn**	**01 13 46.5**	**+0.5**
PTK	**Pertek**	**3.38**	**277**	*e*PN	**Pn**	**01 13 47.3**	**+0.2**
PZAR	**Pazar-Rize**	**3.39**	**322**	*e*PN	**Pn**	**01 13 47.2**	**-0.1**

*CSEM **21** 01:15:07.6±0.1, 3861N×4372E, h2km, MD3.1, Error ellipse: s-maj=3.3km s-min=1.9km az=85.0*
*ISK **21** 01:15:08.5, 3858N×4368E, h5km, MD3.4*
*ISCJB **21** 01:15:09.9±0.7, 3858N±002×4366E±007, h3km±6km, Error ellipse: s-maj=8.9km s-min=3.9km az=1.1*
*DDA **21** 01:15:10.3, 3855N×4369E, h5km, Md3.1*
ISC 21 01:15:10.3±0.6, 3859N±002×4364E±007, h2km±6km, n19, σ1§12/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.19**	**253**	*i* P	**Pg**	**01 15 13.8**	**-0.3**
VANB	**Van**	**0.20**	**273**	PG	**Pg**	**01 15 13.7**	**-0.4**
VANT	**Van**	**0.24**	**235**	PG	**Pg**	**01 15 16.6**	**+1.6**
VANT				SG	**Sg**	**01 15 23.6**	**+5.5**
CLDR	**Caldiran**	**0.60**	**21**	PG	**Pg**	**01 15 21.4**	**-0.4**
CLDR				SG	**Sg**	**01 15 31.0**	**+1.5**
DYDN	**Diyadin**	**0.96**	**2**	*i* P	**Pg**	**01 15 27.9**	**-0.8**
DYDN				*i* S	**Sg**	**01 15 41.6**	**+0.5**
HKR	**Hakkari**	**1.01**	**176**	PG	**Pg**	**01 15 28.2**	**-1.5**
HKR				SG	**Sg**	**01 15 43.8**	**+1.0**
HAKT	**HAKKARI**	**1.03**	**177**	*i* P	**Pg**	**01 15 28.5**	**-1.6**
HAKT				*i* S	**Sg**	**01 15 44.4**	**+1.0**
TUTA	**Tutak**	**1.04**	**322**	*i* P	**Pg**	**01 15 29.1**	**-1.2**
TUTA	**Tutak**	**1.04**	**322**	*i* P	**Pg**	**01 15 29.0**	**-1.3**
AGRB	**Hanur-Agry**	**1.11**	**333**	PN	**Pn**	**01 15 30.9**	**-2.0**
AGRB				SN	**Sn**	**01 15 47.5**	**-1.3**
CUKT	**Cukurca**	**1.34**	**181**	PN	**Pn**	**01 15 34.5**	**-1.5**
CUKT				SN	**Sn**	**01 15 54.8**	**+0.4**
SIRT	**Sirnak**	**1.44**	**222**	*e*PN	**Pn**	**01 15 36.6**	**-0.9**
BTMT	**Batman**	**1.74**	**258**	*e*PN	**Pn**	**01 15 42.1**	**+0.6**
DIGO	**Kars**	**1.84**	**354**	*i* P	**Pn**	**01 15 44.0**	**+1.0**
KARS	**Kars**	**2.07**	**348**	*e*PN	**Pn**	**01 15 46.7**	**+0.6**
ERZM	**Erzurum**	**2.20**	**307**	*i* P	**Pn**	**01 15 51.2**	**+3.2**
EZM	**Erzurum**	**2.21**	**307**	*e*PN	**Pn**	**01 15 48.6**	**+0.6**
BINT	**Bingol**	**2.48**	**278**	*e*PN	**Pn**	**01 15 52.3**	**+0.5**
PTK	**Pertek**	**3.34**	**277**	*e*PN	**Pn**	**01 16 04.6**	**+1.1**

MAN 21 01:27:32, 901N×12620E, h71km, mb4.6, ML3.5, MS3.4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.84**	**169**	⇑*i* P	Pn	01 27 50.3	+1.8
BIPH				*i* S	Sn	01 28 02.8	+1.9
SCPH	**Surigao**	**1.04**	**318**	*e*P	Pn	01 27 52.6	+1.5
SCPH				*e*S	Sn	01 28 07.2	+2.1
CGP	**Cagayan de Oro**	**1.58**	**250**	⇑*e*P	Pn	01 27 59.4	+1.3
CGP				*e*S	Sn	01 28 22.3	+4.5
BUKP	**Musuan**	**1.59**	**225**	*e*P	Pn	01 28 04.5	+6.3

*ISK **21** 01:32:19.4, 3840N×3929E, h5km, MD3.5*
*CSEM **21** 01:32:20.3±0.1, 3839N×3928E, h5km, ML3.7, Error ellipse: s-maj=1.7km s-min=1.3km az=173.0*
*ISCJB **21** 01:32:21.4±0.3, 3840N±003×3929E±003, h10km, Error ellipse: s-maj=4.5km s-min=3.3km az=165.7*
*DDA **21** 01:32:21.4, 3835N×3930E, h5km, Md3.2, Ml3.7*
*NSSC **21** 01:32:29.2, 3800N×3958E, h15km±17km*
ISC 21 01:32:21.9±0.3, 3838N±003×3929E±003, h10km, n37, σ1§12/49, 1C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.27**	**295**	⇑*i* P	**Pg**	**01 32 26.4**	**-0.9**
PTK	**Pertek**	**0.51**	**9**	*i* PG	**Pg**	**01 32 29.8**	**-2.2**
MALT	**Malatya**	**0.69**	**264**	PG	**Pg**	**01 32 33.6**	**-1.5**
MALT				SG	**Sg**	**01 32 44.4**	**+0.3**
MYA	**Malataya**	**0.69**	**266**	PG	**Pg**	**01 32 33.8**	**-1.3**
DIY	**Diyarbakir**	**0.88**	**123**	PG	**Pg**	**01 32 37.5**	**-1.3**
URFA	**Urfa**	**1.01**	**202**	PG	**Pg**	**01 32 40.2**	**-1.2**
BINT	**Bingol**	**1.06**	**62**	PG	**Pg**	**01 32 40.0**	**-2.3**
ATAB	**Bozova**	**1.21**	**221**	*i* P	**Pn**	**01 32 44.2**	**-0.6**
ATAB				*i* S	**Sb**	**01 33 01.9**	**+1.5**
EZC	**Erzincan**	**1.42**	**16**	PN	**Pn**	**01 32 46.9**	**-0.9**
BNGL	**BINGOL**	**1.56**	**68**	*i* P	**Pn**	**01 32 49.9**	**+0.2**
BNGL				*i* S	**Sn**	**01 33 11.8**	**+1.9**
DRBT	**Darb Altahta**	**1.58**	**165**	⇑P	**Pg**	**01 32 58.5**	**+6.2**
DRBT				⇓S	**Sg**	**01 33 20.9**	**+8.1**
MARD	**Mardin**	**1.59**	**132**	*i* P	**Pn**	**01 32 48.6**	**-1.4**
MARD				*i* S	**Sn**	**01 33 10.2**	**-0.4**
KBSD	**Kabsdagh**	**1.70**	**144**	⇑P	**Pn**	**01 32 51.5**	**-0.1**
KBSD				⇓S	**Sn**	**01 33 10.2**	**-3.1**
KBSD	**Kabsdagh**	**1.70**	**144**	⇑*i* P	**Pn**	**01 32 51.5**	**-0.1**
KBSD				⇓*i* S	**Sn**	**01 33 10.2**	**-3.1**
GZT	**Gaziantep**	**1.71**	**234**	*i* P	**Pn**	**01 32 51.3**	**-0.4**
GZT				*i* S	**Sn**	**01 33 17.5**	**+3.9**
BTMT	**Batman**	**1.74**	**96**	PN	**Pn**	**01 32 50.8**	**-1.3**
KELT	**Kelkit**	**1.76**	**359**	*i* P	**Pn**	**01 32 53.3**	**+0.8**
GAZ	**Gaziantep**	**2.05**	**234**	PN	**Pn**	**01 32 56.2**	**-0.1**
SFNV	**Sufian**	**2.07**	**161**	⇑P	**Pn**	**01 32 58.1**	**+1.5**
SFNV				⇑S	**Sn**	**01 33 18.2**	**-4.2**
SFNV	**Sufian**	**2.07**	**161**	⇑*i* P	**Pn**	**01 32 58.1**	**+1.5**
SFNV				⇑*i* S	**Sn**	**01 33 18.2**	**-4.2**
GUMT	**Gumushane**	**2.08**	**4**	*e*PN	**Pn**	**01 32 57.1**	**+0.3**
KMRS	**Kahramanmaras**	**2.09**	**246**	*e*PN	**Pn**	**01 32 56.8**	**-0.1**
EZM	**Erzurum**	**2.21**	**46**	*e*PN	**Pn**	**01 32 59.0**	**+0.4**
ERZM	**Erzurum**	**2.21**	**46**	*i* P	**Pn**	**01 33 00.0**	**+1.4**
SLMH	**Al Salmeh**	**2.42**	**207**	⇑P	**Pn**	**01 33 05.5**	**+3.9**
SLMH	**Al Salmeh**	**2.42**	**207**	⇑*i* P	**Pn**	**01 33 05.5**	**+4.0**
ESPY	**Espiye-Giresun**	**2.57**	**350**	*e*PN	**Pn**	**01 33 03.9**	**+0.4**
SIRT	**Sirnak**	**2.64**	**109**	*e*PN	**Pn**	**01 33 05.1**	**+0.6**
BNN	**Bunyan**	**2.74**	**281**	*e*PN	**Pn**	**01 33 06.9**	**+1.0**
BSHR	**Al Beshri**	**2.74**	**171**	⇑P	**Pn**	**01 33 10.1**	**+4.2**
BSHR				⇑S	**Sn**	**01 33 43.7**	**+4.6**
KOZT	**Kozan**	**2.89**

LTK	**Loutraki**	**0.72**	**167**	*e*Pg	**Pg**	**01 47 21.4**	**-0.9**
LTK				*e*Sg	**Sg**	**01 47 31.5**	**-0.2**
EVR	**Evrytania**	**0.77**	**284**	*e*PN	**Pn**	**01 47 23.2**	**-2.3**
EVR				*e*SN	**Sg**	**01 47 34.8**	**+1.6**
SELA	**Sela**	**0.82**	**237**	*e*Pg	**Pg**	**01 47 22.7**	**-1.4**
SELA				*e*Sg	**Sg**	**01 47 35.1**	**+0.3**
AOS	**Alonnisos**	**0.98**	**63**	*e*Pg	**Pg**	**01 47 27.3**	**+0.1**
AOS				*e*Sg	**Sg**	**01 47 40.7**	**+0.9**
THL	**Klokotos Trika**	**1.02**	**325**	*e*PN	**Pn**	**01 47 27.2**	**-1.7**
THL				*e*SN	**Sn**	**01 47 41.7**	**-1.7**
ATH	**Athens Observa**	**1.06**	**135**	*e*PN	**Pn**	**01 47 28.8**	**-0.8**
ATH				*e*SN	**Sn**	**01 47 43.1**	**-1.4**
NAIG	**Nisos Aigina**	**1.12**	**149**	*e*PN	**Pn**	**01 47 30.0**	**-0.4**
KVR	**Kavouri**	**1.20**	**138**	*e*PN	**Pn**	**01 47 31.5**	**+0.1**
RLS	**Riolos of Patr**	**1.22**	**237**	*e*PN	**Pn**	**01 47 31.7**	**0.0**
RLS				*e*SN	**Sn**	**01 47 49.6**	**+1.3**
DID	**Didima**	**1.28**	**163**	*e*Pg	**Pg**	**01 47 31.8**	**-1.1**
DID				*e*Sg	**Sg**	**01 47 49.6**	**+0.2**
LIT	**Litokhoron**	**1.39**	**351**	*e*Pg	**Pg**	**01 47 33.8**	**-1.2**
LIT				*e*Sg	**Sg**	**01 47 53.7**	**+0.7**
VLX	**Vlachokerasia**	**1.39**	**193**	*e*Pg	**Pg**	**01 47 33.3**	**-1.7**
PAIG	**Paliouri**	**1.39**	**30**	*e*Pg	**Pg**	**01 47 33.4**	**-1.7**
PAIG				*e*Sg	**Sg**	**01 47 53.5**	**+0.3**
ITM	**Ithomi**	**1.68**	**203**	*e*PN	**Pn**	**01 47 39.9**	**+1.8**
PLG	**Polygyros**	**1.73**	**18**	*e*Pb	**Pb**	**01 47 38.2**	**-2.1**
PLG	**Polygyros**	**1.73**	**18**	*e*Pn	**Pn**	**01 47 38.8**	**+0.1**
JAN	**Janina**	**1.75**	**303**	*e*PN	**Pn**	**01 47 40.9**	**+1.9**
KZN	**Kozani**	**1.75**	**334**	*e*PN	**Pn**	**01 47 40.0**	**+1.0**
VLI	**Veliai**	**2.01**	**176**	*e*PN	**Pn**	**01 47 43.6**	**+1.0**
VLI				*e*SN	**Sn**	**01 48 09.5**	**+1.6**
SOH	**Sokhos**	**2.14**	**12**	*e*Pn	**Pn**	**01 47 44.3**	**0.0**
GRG	**Griva**	**2.24**	**353**	*e*Pn	**Pn**	**01 47 45.5**	**-0.3**
BIA	**Bitola**	**2.54**	**335**	*e*Pn	**Pg**	**01 47 58.4**	**+1.3**
BIA				*e*Sn	**Sg**	**01 48 36.7**	**+6.6**
APE	**Apeiranthos**	**2.75**	**126**	*e*PN	**Pn**	**01 47 53.0**	**+0.3**
APE				*e*SN	**Sn**	**01 48 27.2**	**+1.2**

NEIC ***21*** *02:06:36.2, 1609N×9755W, h16km, MD3.8(MEX), After MEX.*

MEX 21 02:06:36.2±0.9, 1608N×9756W, h16km±9km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.63**	**300**	*e*P	Pg	02 06 45.9	-2.7
PNIG				*i* S	Sg	02 06 54.2	-2.8
VHO	**Vista Hermosa**	**1.27**	**39**	*i* P	Pn	02 06 55.2	-4.0
VHO				*i* S	Sb	02 07 10.2	-5.5
OXX	**Oaxaca**	**1.28**	**39**	*i* P	Pn	02 06 56.2	-3.2
OXX				*i* S	Sb	02 07 11.3	-4.8
HUIG	**Huatulco**	**1.43**	**102**	*e*P	Pn	02 06 58.4	-3.0
HUIG				*i* S	Sn	02 07 14.4	-5.6
UTMO	**Huajuapan**	**1.76**	**352**	*e*P	Pn	02 07 03.5	-2.5
UTMO				*i* S	Sn	02 07 23.2	-4.8
TPIG	**Tehuac#an**	**2.33**	**5**	*i* P	Pn	02 07 09.6	-4.3
TPIG				*i* S	Sn	02 07 37.7	-4.6
ACX	**Acapulco**	**2.39**	**289**	*i* P	Pn	02 07 14.7	-0.1
ACX				*i* S	Sn	02 07 40.5	-3.3
MEIG	**Mezcala**	**2.69**	**313**	*i* P	Pn	02 07 15.9	-3.0
MEIG				*i* S	Sn	02 07 47.4	-3.8
CMIG	**Matias Romero**	**2.75**	**68**	*i* P	Pn	02 07 17.9	-3.8
CMIG				*i* S	Sn	02 07 47.9	-4.8
CAIG	**El Cayaco**	**2.77**	**291**	*i* P	Pn	02 07 18.2	-1.7
CAIG				*i* S	Sn	02 07 46.5	-6.6
PLIG	**Platanillo**	**2.96**	**321**	*i* P	Pn	02 07 21.1	-1.4
PLIG				*i* S	Sn	02 07 54.2	-3.5

CSEM ***21*** *03:06:30.4±0.1, 3812N×3873E, h2km, MD3.3, Error ellipse: s-maj=3.0km s-min=2.7km az=167.0*
DDA ***21*** *03:06:30.9, 3808N×3882E, h2km, Md3.2*
ISK ***21*** *03:06:30.3, 3812N×3872E, h5km, MD3.3*
ISCJB ***21*** *03:06:31.5±0.4, 3812N±003×3876E±004, h10km, Error ellipse: s-maj=5.0km s-min=3.9km az=139.3*

ISC 21 03:06:31.8±0.4, 3812N±003×3876E±004, h10km, n19, σ1§03/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MALT	**Malatya**	**0.33**	**307**	**Pg**	**Pg**	**03 06 36.7**	**-1.6**
MALT				SG	**Sg**	**03 06 42.8**	**0.0**
MYA	**Malataya**	**0.34**	**309**	*i* PG	**Pg**	**03 06 37.6**	**-0.9**
ELZG	**Elazig**	**0.42**	**25**	*i* P	**Pg**	**03 06 39.3**	**-0.7**
ELZG				*i* S	**Sg**	**03 06 46.1**	**+0.4**
URFA	**Urfa**	**0.67**	**176**	PG	**Pg**	**03 06 44.0**	**-0.8**
ATAB	**Bozova**	**0.74**	**210**	*i* P	**Pg**	**03 06 45.0**	**-1.1**
ATAB				*i* S	**Sg**	**03 06 55.2**	**-0.6**
ATAB	**Bozova**	**0.74**	**210**	*i* P	**Pg**	**03 06 45.0**	**-1.1**
ATAB				*i* S	**Sg**	**03 06 55.2**	**-0.6**
PTK	**Pertek**	**0.92**	**32**	PG	**Pg**	**03 06 48.8**	**-0.7**
DIY	**Diyarbakir**	**1.18**	**100**	PN	**Pn**	**03 06 54.5**	**+0.2**
GZT	**Gaziantep**	**1.22**	**232**	*i* P	**Pn**	**03 06 54.2**	**-0.6**
GZT				*i* S	**Sb**	**03 07 12.2**	**+1.7**
GAZ	**Gaziantep**	**1.55**	**233**	PN	**Pn**	**03 06 59.8**	**+0.4**
BINT	**Bingol**	**1.55**	**60**	PN	**Pn**	**03 07 00.7**	**+1.2**
KMRS	**Kahramanmaras**	**1.59**	**248**	*e*PN	**Pn**	**03 07 00.7**	**+0.6**
MARD	**Mardin**	**1.79**	**116**	*i* P	**Pn**	**03 07 02.8**	**+0.1**
MARD				*i* S	**Sg**	**03 07 27.8**	**-1.5**
EZC	**Erzincan**	**1.83**	**26**	*e*PN	**Pn**	**03 07 02.2**	**-1.0**
BTMT	**Batman**	**2.15**	**87**	*e*PN	**Pn**	**03 07 07.7**	**0.0**
BNN	**Bunyan**	**2.40**	**289**	*e*PN	**Pn**	**03 07 11.7**	**+0.6**
KOZT	**Kozan**	**2.41**	**256**	*e*PN	**Pn**	**03 07 12.3**	**+1.1**
SIRT	**Sirnak**	**2.98**	**101**	*e*PN	**Pn**	**03 07 20.9**	**+1.9**
AGRB	**Hanur-Agry**	**3.61**	**65**	*e*PN	**Pn**	**03 07 30.4**	**+2.6**

IDC 21 03:07:27.1±8.7, 706S×12917E, h119km±83km, mb3.6/2, mb1 3.7/5, mb1mx3.5/12, mbtmp3.7/5, ML4.1/3, Error ellipse: s-maj=71.6km s-min=24.0km az=48.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**6.28**	**240**	P	Pn	03 08 58.0	+0.6
	11nm,0.3s,baz=76,slow=2.9,SNR=9.4						
BATI				S	Sn	03 10 08.5	+0.8
	27nm,0.3s,baz=46,slow=20,SNR=22						
FITZ	**Fitzroy Crossi**	**11.51**	**197**	P	Pn	03 10 06.4	-1.3
	0.3nm,0.3s,baz=29,slow=16,SNR=13						
FITZ				S	Sn	03 12 04.5	-10
	1.4nm,0.3s,baz=264,slow=23,SNR=12						
WRA	**Warramunga Arr**	**13.76**	**159**	P	Pn	03 10 33.8	-3.4
	1.9nm,0.3s,baz=329,slow=14,SNR=25						
WRA				S	Sn	03 12 58.0	-11
	1.9nm,0.3s,baz=330,slow=24,SNR=8.1						
ASAR	**Alice Springs**	**17.13**	**165**	P	Pn	03 11 18.9	-0.3
	1.1nm,0.3s,baz=343,slow=11,SNR=94						
STKA	**Stephens Creek**	**27.28**	**156**	P	P	03 13 00.8	+0.4
	1.2nm,0.4s,baz=345,slow=10,SNR=7.8						
MKAR	**Makanchi Array**	**67.82**	**327**	P	P	03 18 12.3	0.0
	0.3nm,0.3s,baz=120,slow=7.2,SNR=4.2						

IDC ***21*** *03:13:21.6±10.0, 2594N×13001E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=507.7km s-min=30.3km az=63.0*
ISCJB ***21*** *03:13:30.1±0.8, 2494N±005×12796E±006, h33km, mb3.4/3, Error ellipse: s-maj=7.9km s-min=6.7km az=3.4*
JMA ***21*** *03:13:31.0±0.5, 2497N×12788E, h43km, M3.2*

ISC 21 03:13:31.0±2.6, 2498N±005×12793E±006, h29km±22km, n13, σ0§98/20, mb3.4/3, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**1.17**	**352**	P	**Pn**	**03 13 51.5**	**+0.1**
NAH1	**Naha**	**1.24**	**350**	P	**Pn**	**03 13 52.3**	**-0.1**
NAH1				eS	**Sn**	**03 14 07.6**	**-0.5**
JKE	**Kume jima 2**	**1.69**	**323**	P	**Pn**	**03 13 58.6**	**0.0**
JKE				S	**Sn**	**03 14 18.8**	**-0.3**
JAGN	**Aguni-jima**	**1.72**	**339**	P	**Pn**	**03 13 59.3**	**+0.3**
JAGN				S	**Sn**	**03 14 20.5**	**+0.5**
JOW	**Kunigami**	**1.87**	**9**	P	**Pn**	**03 14 01.1**	**0.0**
JIH	**Iheya**	**2.05**	**1**	P	**Pn**	**03 14 04.8**	**+1.3**
JIH				S	**Sn**	**03 14 29.5**	**+1.4**
JOGS	**Gusukube**	**2.30**	**265**	S	**Sn**	**03 14 32.6**	**-1.8**
JTK	**Tokunoshima**	**2.94**	**18**	P	**Pn**	**03 14 16.1**	**+0.3**
JTK				S	**Sn**	**03 14 50.3**	**+0.1**
JMZ	**Minamidaito 2**	**3.09**	**74**	P	**Pn**	**03 14 15.7**	**-2.1**
JMZ				S	**Sn**	**03 14 48.3**	**-5.5**
JAM	**Amami Oshima**	**3.73**	**23**	P	**Pn**	**03 14 26.8**	**+0.1**
JAM				S	**Sn**	**03 15 07.5**	**-2.2**
MKAR	**Makanchi Array**	**42.18**	**313**	P	**P**	**03 21 21.9**	**+1.0**
	0.2nm,0.4s,mb3.1,baz=113,slow=8.9,SNR=4.4						
WRA	**Warramunga Arr**	**45.08**	**171**	P	**P**	**03 21 44.6**	**+0.1**
	1.0nm,0.8s,mb3.7,baz=354,slow=8.3,SNR=6.8						
ASAR	**Alice Springs**	**48.70**	**173**	P	**P**	**03 22 14.2**	**+1.4**
	0.3nm,0.7s,mb3.4,baz=0.6,slow=14,SNR=5.0						

KRSC 21 03:14:51.3±0.6, 5510N×16209E, h19km±18km, ML4.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.58**	**201**	*i* P	Pb	03 15 02.6	-0.3
MKZ				*i* S	Sb	03 15 11.1	+0.4
ZLN	**Zelenaya**	**1.17**	**322**	*e*P	Pn	03 15 13.5	+0.8
ZLN				*i* S	Sb	03 15 29.1	+1.4
KBTR	**Krutoberegovo**	**1.19**	**20**	*i* P	Pn	03 15 10.7	-2.1
KBTR				*i* S	Sb	03 15 25.5	-2.6
BZMR	**Bezymyannaya**	**1.24**	**313**	*e*P	Pn	03 15 14.4	+0.9
BZMR				*e*S	Sb	03 15 31.7	+2.2
KMNR	**Kamenistaya**	**1.24**	**303**	*e*P	Pn	03 15 14.7	+1.1
KMNR				*i* S	Sb	03 15 31.1	+1.4
KPT	**Kopyto**	**1.37**	**310**	*i* P	Pn	03 15 16.7	+1.3
KPT				*i* S	Sn	03 15 35.3	+2.3
KRSR	**Krestovskiy**	**1.41**	**323**	*e*P	Pn	03 15 16.4	+0.4
KRSR				*i* S	Sn	03 15 35.0	+1.0
KLY	**Klyuchi**	**1.46**	**327**	*e*P	Pn	03 15 15.9	-0.7
KLY				*i* S	Sn	03 15 34.3	-0.9
BDR	**Baidarnaya**	**1.55**	**342**	*e*P	Pn	03 15 18.1	+0.2
BDR				*i* S	Sn	03 15 37.9	+0.4
KOZ	**Kozyrevsk**	**1.58**	**308**	*e*P	Pn	03 15 20.3	+2.0
KOZ				*i* S	Sn	03 15 41.7	+3.5
SRKR	**Sorokina**	**1.64**	**342**	*e*P	Pn	03 15 19.6	+0.5
SRKR				*i* S	Sn	03 15 40.7	+1.1
SRDR	**Sredinnyy**	**1.81**	**313**	*i* P	Pn	03 15 22.6	+1.1
SRDR				*i* S	Sn	03 15 45.7	+1.8
KII	**Karymskiy**	**1.87**	**236**	*e*P	Pn	03 15 23.3	+1.1
KII				*i* S	Sn	03 15 46.1	+0.8
NLC	**Nalytchevo**	**2.52**	**221**	*e*P	Pn	03 15 31.9	+0.8
NLC				*i* S	Sn	03 16 01.3	+0.1
AVH	**Avacha**	**2.69**	**228**	*e*P	Pn	03 15 34.9	+1.4
AVH				*i* S	Sn	03 16 06.9	+1.3
GNL	**Ganaly**	**2.80**	**242**	*e*P	Pn	03 15 36.7	+1.7
GNL				*i* S	Sn	03 16 09.6	+1.3
PET	**Petropavlovsk**	**2.90**	**226**	*e*P	Pn	03 15 37.8	+1.4
PET				*i* S	Sn	03 16 12.5	+1.8
RUS	**Russkaya**	**3.41**	**220**	P	Pn	03 15 45.3	+1.9
RUS				*i* S	Sn	03 16 24.5	+1.2
GRL	**Gorelyy**	**3.49**	**225**	*e*P	Pn	03 15 46.7	+2.2
GRL				*i* S	Sn	03 16 26.7	+1.5
MIPR	**Malaya Ipel'ka**	**4.25**	**230**	P	Pn	03 15 57.4	+2.5

NEIC ***21*** *03:37:27.3, 3755S×17734E, h106km, MG3.9(WEL), After WEL.*

WEL 21 03:37:26.7±0.3, 3754S×17735E, h112km±2km, ML3.9/8, 2C, Error ellipse: s-maj=2.2km s-min=1.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARZ	**Manawahe**	**0.70**	**230**	P	Pn	03 37 45.2	0.0
MARZ	**Manawahe**	**0.70**	**230**	PN	Pn	03 37 45.2	-0.1
OPRZ	**Ohinepanea**	**0.70**	**244**	PN	Pn	03 37 45.1	-0.1
OPRZ				SN	Sn	03 37 59.1	-0.2
URZ	**Urewera**	**0.74**	**195**	P	Pn	03 37 45.5	-0.1
URZ	**Urewera**	**0.74**	**195**	PN	Pn	03 37 45.5	-0.1
URZ				SN	Sn	03 37 59.8	-0.1
EDRZ	**Edgecumbe**	**0.75**	**221**	P	Pn	03 37 45.9	+0.3
EDRZ	**Edgecumbe**	**0.75**	**221**	PN	Pn	03 37 45.9	+0.2
MXZ	**Matakaoa Point**	**0.76**	**92**	P	Pn	03 37 46.0	+0.3
MXZ	**Matakaoa Point**	**0.76**	**92**	⇑PN	Pn	03 37 46.0	+0.3
MWZ	**Matawai**	**0.81**	**170**	P	Pn	03 37 46.3	+0.1
MWZ				S	Sn	03 38 00.2	-0.7
MWZ	**Matawai**	**0.81**	**170**	PN	Pn	03 37 46.3	+0.1
MWZ				SN	Sn	03 38 01.4	+0.5
TGRZ	**Tauranga**	**0.89**	**257**	P	Pn	03 37 46.8	-0.1
TGRZ	**Tauranga**	**0.89**	**257**	PN	Pn	03 37 46.8	-0.1
PUZ	**Puketiti**	**0.89**	**127**	P	Pn	03 37 47.0	+0.1
PUZ	**Puketiti**	**0.89**	**127**	⇑PN	Pn	03 37 46.9	0.0
TAZ	**Tarawera**	**0.96**	**224**	P	Pn	03 37 48.2	+0.6
TAZ	**Tarawera**	**0.96**	**224**	PN	Pn	03 37 48.2	+0.5
KARZ	**Kaharoa**	**1.00**	**241**	P	Pn	03 37 48.1	+0.1
KARZ	**Kaharoa**	**1.00**	**241**	PN	Pn	03 37 48.0	0.0
PATZ	**Paeroa**	**1.21**	**226**	P	Pn	03 37 50.8	+0.6
PATZ	**Paeroa**	**1.21**	**226**	PN	Pn	03 37 50.7	+0.5
KNZ	**Kokohu**	**1.50**	**170**	PN	Pn	03 37 52.8	-0.8
BKZ	**Black Stump Fm**	**1.76**	**202**	P	Pn	03 37 56.3	-0.4
BKZ	**Black Stump Fm**	**1.76**	**202**	PN	Pn	03 37 55.9	-0.9
BKZ				SN	Sn	03 38 19.2	-0.5
RITZ	**Rihia Road**	**1.86**	**219**	PN	Pn	03 37 58.1	+0.1
WTVZ	**West Tongariro**	**2.10**	**221**	P	Pn	03 38 00.9	-0.1
WTVZ	**West Tongariro**	**2.10**	**221**	PN	Pn	03 38 00.9	0.0
NGZ	**Ngauruhoe**	**2.14**	**220**	P	Pn	03 38 01.6	+0.1
NGZ	**Ngauruhoe**	**2.14**	**220**	PN	Pn	03 38 01.6	+0.1
TWVZ	**Taurewa**	**2.15**	**224**	P	Pn	03 38 01.9	+0.3
TWVZ	**Taurewa**	**2.15**	**224**	PN	Pn	03 38 01.9	+0.3
TUVZ	**Tukino**	**2.18**	**217**	P	Pn	03 38 01.8	-0.2
TUVZ	**Tukino**	**2.18**	**217**	PN	Pn	03 38 01.8	-0.3
WPVZ	**Whakapapa**	**2.19**	**220**	P	Pn	03 38 02.2	+0.1
WPVZ	**Whakapapa**	**2.19**	**220**	PN	Pn	03 38 02.2	+0.1
FWVZ	**Far West T-bar**	**2.22**	**219**	P	Pn	03 38 02.4	-0.2
FWVZ	**Far West T-bar**	**2.22**	**219**	PN	Pn	03 38 02.4	-0.2
MOVZ	**Moawhango**	**2.25**	**213**	P	Pn	03 38 01.8	-1.1
MOVZ	**Moawhango**	**2.25**	**213**	PN	Pn	03 38 01.8	-1.1
WNVZ	**Wahianoa**	**2.26**	**217**	P	Pn	03 38 02.5	-0.5
WNVZ	**Wahianoa**	**2.26**	**217**	PN	Pn	03 38 02.5	-0.5
TRVZ	**Turoa**	**2.26**	**218**	PN	Pn	03 38 02.7	-0.3
PXZ	**Pawanui**	**2.52**	**189**	PN	Pn	03 38 04.1	-2.3
TSZ	**Takapari Road**	**2.74**	**203**	PN	Pn	03 38 06.9	-2.4
MRZ	**Mangatainoka R**	**3.41**	**203**	PN	Pn	03 38 14.9	-3.3
TIWZ	**Tintock**	**3.43**	**199**	PN	Pn	03 38 15.6	-2.7
KIW	**Kapiti Island**	**3.82**	**209**	P	Pn	03 38 20.4	-3.2
KIW	**Kapiti Island**	**3.82**	**209**	PN	Pn	03 38 20.4	-3.3
MTW	**Mount Morrison**	**3.89**	**201**	P	Pn	03 38 20.6	-3.9
MTW	**Mount Morrison**	**3.89**	**201**	PN	Pn	03 38 20.6	-3.9
CAW	**Cannon Point**	**3.98**	**206**	P	Pn	03 38 22.0	-3.7
CAW	**Cannon Point**	**3.98**	**206**	PN	Pn	03 38 22.0	-3.7
MSWZ	**Moikau Station**	**4.20**	**202**	P	Pn	03 38 24.4	-4.3
MSWZ	**Moikau Station**	**4.20**	**202**	PN	Pn	03 38 24.4	-4.2
NNZ	**Nelson**	**4.79**	**219**	SN	Sn	03 39 26.3	-4.8
BSWZ	**Blackbirch Sta**	**4.96**	**212**	SN	Sn	03 39 28.7	-6.3
QRZ	**Quartz Range**	**4.98**	**227**	PN	Pn	03 38 36.0	-3.2
THZ	**Tophouse**	**5.44**	**218**	*e*PN	Pn	03 38 37.6	-7.8
THZ				SN	Sn	03 39 41.1	-5.6
KHZ	**Kahutara**	**5.68**	**210**	*e*P	Pn	03 38 44.0	-4.7
KHZ	**Kahutara**	**5.68**	**210**	*e*PN	Pn	03 38 43.4	-5.3
DSZ	**Denniston Nort**	**6.00**	**224**	*e*PN	Pn	03 38 46.2	-6.8
DSZ				SN	Sn	03 39 53.7	-6.6
LTZ	**Lake Taylor**	**6.53**	**215**	SN	Sn	03 40 03.9	-9.1
MQZ	**McQueen's Vall**	**7.12**	**209**	*e*PN	Pn	03 39 01.7	-6.4
MQZ				SN	Sn	03 40 15.5	-12
WVZ	**Waitaha Valley**	**7.49**	**220**	SN	Sn	03 40 26.5	-10

IDC 21 03:42:14.6±2.8, 3318S×17830W, h0km, mb4.0/2, mb1 4.3/3, mb1mx3.8/14, mbtmp4.0/3, ML3.8/1, Error ellipse: s-maj=69.9km s-min=35.3km az=122.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.29**	**215**	Pn	Pn	03 43 48.1	-0.5
	2.0nm,0.3s,baz=86,slow=20,SNR=12						
URZ				Sn	Sn	03 45 03.2	+2.0
	2.8nm,0.3s,baz=154,slow=22,SNR=8.0						
ASAR	**Alice Springs**	**42.78**	**270**	P	P	03 50 14.2	+0.2
	1.0nm,0.7s,baz=108,slow=7.6,SNR=9.5						
WRA	**Warramunga Arr**	**44.02**	**275**	P	P	03 50 23.8	-0.3
	1.8nm,0.4s,baz=117,slow=7.7,SNR=11						
KAF	**Kangasniemi**	**147.06**	**339**	*ep*	PKPdf	04 01 58.8	+2.4
FINES	**FINESS Array B**	**147.65**	**338**	PKPbc	PKPbc	04 01 59.5	-0.7
	1.3nm,0.5s,baz=48,slow=3.4,SNR=14						

ISCJB ***21*** *03:58:39.2±0.8, 1130N±008×4260E±005, h10km, Error ellipse: s-maj=12.7km s-min=3.8km az=148.5*
DHMR ***21*** *03:58:42.6±1.4, 1159N×4283E, h5km±12km, ML4.6*

ISC 21 03:58:41.4±0.9, 1132N±008×4265E±005, h10km, n13, σ0§78/26, 5C-1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**2.38**	**37**	⇑*i* P	**Pn**	**03 59 20.1**	**-0.4**
TRBA				*i* S	**Sn**	**03 59 48.5**	**-1.3**
TRBA				AML	AML	03 59 51.4	
	comp=E,12μm,0.4s						
TRBA	**At Turbah**	**2.38**	**37**	⇑*i* P	**Pn**	**03 59 20.1**	**-0.4**
TRBA				*i* S	**Sn**	**03 59 48.5**	**-1.3**
	comp=E,6μm,0.4s						
ADEN	**Aden**	**2.70**	**57**	*i* P	**Pn**	**03 59 25.1**	**+0.2**
ADEN				*i* S	**Sn**	**03 59 57.4**	**-0.4**
ADEN				AML	AML	04 00 09.6	
	comp=E,4μm,0.3s						
ADEN	**Aden**	**2.70**	**57**	*i* P	**Pn**	**03 59 25.1**	**+0.1**
ADEN				*i* S	**Sn**	**03 59 57.3**	**-0.4**
UDYN	**Al 'Udayn**	**2.93**	**26**	⇑*i* P	**Pn**	**03 59 27.9**	**-0.2**
UDYN				*i* S	**Sn**	**04 00 02.8**	**-0.6**
UDYN				AML	AML	04 00 13.7	
	comp=N,5μm,0.8s						
UDYN	**Al 'Udayn**	**2.93**	**26**	⇑*i* P	**Pn**	**03 59 27.9**	**-0.2**
UDYN				*i* S	**Sn**	**04 00 02.8**	**-0.6**
DESE	**Dese**	**2.97**	**266**	*e*P	**Pg**	**03 59 35.4**	**-2.9**
DESE				S	**Sg**	**04 00 16.8**	**0.0**
LBOS		**3.59**	**45**	⇑*i* P	**Pn**	**03 59 37.2**	**0.0**
LBOS				*i* S	**Sn**	**04 00 20.5**	**+0.9**
DHBB	**Dhamar BB**	**3.65**	**27**	⇓*i* P	**Pn**	**03 59 38.4**	**+0.4**
DHBB				*i* S	**Sn**	**04 00 22.2**	**+1.0**
BDHA	**Al Bayda'**	**3.88**	**47**	*i* P	**Pn**	**03 59 40.9**	**-0.3**
BDHA				*i* S	**Sn**	**04 00 27.2**	**+0.3**
BDHA				AML	AML	04 00 44.0	
	comp=N,2μm,0.5s						
BDHA	**Al Bayda'**	**3.88**	**47**	*i* P	**Pn**	**03 59 40.9**	**-0.3**
BDHA				*i* S	**Sn**	**04 00 27.2**	**+0.3**
HAJJ	**Hajjah**	**4.45**	**12**	*i* P	**Pn**	**03 59 49.1**	**+0.1**
HAJJ				*i* S	**Sn**	**04 00 41.6**	**+0.6**
FURI	**Furi**	**4.59**	**239**	*e*PN	**Pg**	**04 00 13.5**	**+4.0**
FURI				*e*S	**Sg**	**04 01 09.7**	**+0.7**

IDC 21 04:42:28.3±3.2, 3294S×17848W, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.8/14, mbtmp3.8/3, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=73.0km s-min=37.0km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.41**	**213**	Pn	Pn	04 44 04.3	+0.3
	1.1nm,0.3s,baz=33,slow=13,SNR=6.3						
URZ				Sn	Sn	04 45 16.5	-1.3
	1.9nm,0.3s,baz=197,slow=19,SNR=3.8						
CTA	**Charters Tower**	**33.89**	**283**	LR	LR	04 59 34.6	
	comp=Z,39nm,19.8s,baz=230,slow=30						
ASAR	**Alice Springs**	**42.63**	**270**	P	P	04 50 26.6	0.0
	0.9nm,0.7s,baz=94,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**43.84**	**275**	P	P	04 50 36.5	+0.1
	0.9nm,0.5s,baz=116,slow=7.8,SNR=6.3						
FINES	**FINESS Array B**	**147.36**	**338**	PKPbc	PKPbc	05 02 12.2	-0.9
	1.5nm,0.8s,baz=95,slow=5.9,SNR=4.3						

ISCJB ***21*** *05:13:37.2±0.9, 3595N±008×782E±03, h10km, mb3.6/2, Error ellipse: s-maj=32.7km s-min=8.7km az=14.5*
IDC ***21*** *05:13:37.6±4.0, 3593N×7837E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.4/18, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=60.4km s-min=50.2km az=175.0*

ISC 21 05:13:38.7±0.9, 3584N±008×783E±03, h10km, n5, σ0§83/6, mb3.6/2, Eastern Kashmir

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

NEW Newport 7.48 92 Pn **Pn 05 21 07.3 -3.2**
1.6nm,0.3s,baz=287,slow=12,SNR=11
NEW Lg 05 23 07.5
baz=97,slow=12,SNR=3.0
NEW LR LR 05 24 13.6
comp=Z,1μm,18.1s,baz=270,slow=40
YBH Yreka Blue Hor 8.35 150 *e*Pn **Pn 05 21 24.8 +2.4**
BMO Blue Mountains 8.66 115 *e*Pn **Pn 05 21 26.4 -0.2**
BSMT Bassoo Peak 9.10 93 *e*Pn **Pn 05 21 32.6 -0.1**
DLBC Dease Lake 9.43 355 *e*Pn **Pn 05 21 39.2 +2.1**
DLBC Dease Lake 9.43 355 Pn **Pn 05 21 39.6 +2.5**
baz=174,slow=12
WDC Whiskeytown Da 9.45 152 *e*Pn **Pn 05 21 38.3 +0.8**
28nm,1.2s
WALA Waterton Lakes 9.48 85 *e*Pn **Pn 05 21 38.8 +0.9**
EDM Edmonton 10.29 61 *e*Pn **Pn 05 21 49.2 +0.3**
CHMT Chamberlain Mo 10.35 96 *e*Pn **Pn 05 21 48.5 -1.4**
HLID Hailey 11.10 115 *e*Pn **Pn 05 22 01.0 +0.9**
PAHR Pah Rah Range 11.35 142 *e*Pn **Pn 05 22 12.9 +9.4**
MCMT McKenzie Canyo 11.41 106 *e*Pn **Pn 05 22 04.2 -0.2**
BOZ Bozeman (W) 11.85 101 *e*Pn **Pn 05 22 10.3 +0.1**
5.3nm,1.3s
NVAR Mina Array Bea 12.88 142 Pn **Pn 05 22 23.8 -0.5**
0.1nm,0.3s,baz=323,slow=11,SNR=13
IMW Indian Meadow 13.06 107 *e*Pn **Pn 05 22 27.1 +0.2**
LKWY Lake 13.09 103 *e*Pn **Pn 05 22 28.0 +0.8**
MOOW Moose Ponds 13.26 107 *e*Pn **Pn 05 22 31.4 +1.9**
TPAW Teton Pass 13.26 108 *e*Pn **Pn 05 22 31.4 +1.8**
TPAW *e* 05 22 42.9
REDW Red Top Meadow 13.39 109 *e*Pn **Pn 05 22 32.3 +1.0**
LOHW Long Hollow 13.41 107 *e*Pn **Pn 05 22 32.1 +0.4**
8.3nm,1.2s
RLMT Red Lodge 13.58 100 *e*Pn **Pn 05 22 34.5 +0.5**
MTUM Tungsten Hills 13.71 145 *e*Pn **Pn 05 22 44.1 +8.3**
HWUT Hardware Ranch 13.95 116 *e*Pn **Pn 05 22 42.4 +3.3**
DUG Dugway 14.17 123 *e*Pn **Pn 05 22 42.8 +0.9**
11nm,1.3s
BW06 Boulder Array 14.51 109 *e*Pn **Pn 05 22 48.8 +2.2**
PDAR Pinedale Array 14.51 109 Pn **Pn 05 22 48.0 +1.4**
0.1nm,0.3s,baz=312,slow=11,SNR=11
PDAR LR LR 05 28 41.0
comp=Z,364nm,19.8s,baz=309,slow=39
TPNV Topopah Spring 14.99 140 *e*Pn **Pn 05 22 52.7 -0.5**
LAO LASA Array 15.03 91 *e*Pn **Pn 05 22 54.1 +0.4**
YKA Yellowknife Ar 15.45 24 Pn **Pn 05 22 58.8 -0.3**
0.2nm,0.3s,baz=209,slow=12,SNR=14
YKA LR LR 05 29 38.4
comp=Z,79nm,20.9s,baz=215,slow=40
MSU Marysvale 15.71 126 *e*P **Pn 05 23 08.9 +6.2**
DGMT Dagmar 15.92 83 *e*Pn **Pn 05 23 06.0 +0.6**
17nm,1.0s
DAWY Dawson 16.16 342 *e*Pn **Pn 05 23 09.3 +1.0**
DAWY *e*P 05 23 12.9
SRU San Rafael 16.19 121 *e*Pn **Pn 05 23 12.2 +3.4**
KDAK Kodiak Island 16.78 310 LR LR 05 28 48.0
comp=Z,81nm,21.2s,baz=241,slow=34
FFC Flin Flon 17.17 61 *e*Pn **Pn 05 23 18.5 -2.6**
RSSD Black Hills 17.40 97 *e*P **Pn 05 23 24.7 +0.6**
7.7nm,0.7s
PFO Pinyon Flat Ob 17.82 146 LR LR 05 30 30.7
comp=Z,123nm,19.0s,baz=219,slow=38
PHWY Pilot Hill 17.87 107 *e*P **Pn 05 23 29.6 -0.3**
SMCO Snowmass 18.21 115 *e*Pn **Pn 05 23 33.9 -0.1**
WUAZ Wupatki 18.42 131 *e*Pn **Pn 05 23 44.7 +8.0**
MCK McKinley 18.44 330 *e*P **Pn 05 23 36.4 -0.4**
26nm,1.3s
ISCO Idaho Springs 18.64 111 *e*Pn **Pn 05 23 40.0 +0.7**
32nm,2.3s
MVCO Mesa Verde 18.66 122 *e*P **Pn 05 23 39.7 +0.1**
14nm,1.2s
COLA College 18.92 334 *e*P **Pn 05 23 42.7 +0.1**
49nm,1.6s
INK Inuvik 19.45 354 *e*P **Pn 05 23 48.0 -1.0**
695nm,1.6s
INK Inuvik 19.45 354 P **Pn 05 23 50.0 +1.0**
0.0nm,0.3s,baz=169,slow=11,SNR=8.3
INK LR LR 05 31 36.6
comp=Z,472nm,18.1s,baz=353,slow=38
SDCO Great Sand Dun 20.02 116 *e*P **P 05 23 54.8 +0.6**
12nm,1.6s
SDCO *e*Pn **P 05 23 58.3 +4.1**
TTA Tatalina 20.54 323 *e*P **P 05 23 58.9 -0.7**
56nm,1.8s
ULM Lac du Bonnet 20.97 74 P **P 05 24 04.5 +0.1**
baz=285,slow=12
TUC Tucson 21.32 135 *e*P **P 05 24 08.7 +0.4**
5.7nm,0.8s,mb4.0
AGMN Agassiz Refuge 21.38 80 *e*P **P 05 24 09.4 +0.6**
ANMO Albuquerque 21.43 123 *e*P **P 05 24 10.3 +0.8**
8.7nm,1.1s,mb4.0
ANMO Albuquerque 21.43 123 P **P 05 24 08.8 -0.8**
2.4nm,1.0s,mb3.5,baz=332,slow=15,SNR=2.1
LAZ Ladron 21.48 125 *e*P **P 05 24 10.4 +0.5**
IMA2 Indian Mountai 21.51 332 *e*P **P 05 24 09.3 -0.8**
LPM Los Pinos Moun 21.82 124 *e*P **P 05 24 15.3 +1.7**
BNM Barren Site 21.94 125 *e*P **P 05 24 16.6 +1.6**
FCC Fort Churchill 22.14 51 *e*P **P 05 24 17.8 +0.9**
28nm,0.8s,mb4.7
ECSD EROS,Sioux Fal 22.43 92 *e*P **P 05 24 20.2 +0.2**
10nm,0.8s,mb4.3
EYMN Ely 24.29 79 *e*P **P 05 24 39.0 +0.4**
23nm,0.7s,mb4.7
MNTX Cornudas Mount 24.50 127 *e*P **P 05 24 40.8 +0.1**
5.1nm,1.1s,mb3.9
KSU1 Kansas State U 24.72 102 *e*P **P 05 24 44.0 +1.4**
18nm,0.8s,mb4.7
JFWS Jewell Farm 26.97 89 *e*P **P 05 25 02.6 -0.4**
18nm,0.7s,mb4.7
LTX Lajitas 27.27 127 *e*P **P 05 25 09.6 +3.8**
3.7nm,1.0s,mb3.9
TXAR Lajitas Array 27.27 127 P **P 05 25 04.8 -0.9**
0.4nm,1.0s,baz=287,slow=10,SNR=2.7
TXAR LR LR 05 35 52.4
comp=Z,65nm,20.9s,baz=0.0,slow=37
LPIG La Paz 28.69 144 P **P 05 25 17.8 -0.6**
20nm,0.4s,mb5.2,baz=72,slow=5.0,SNR=4.1
LPIG LR LR 05 37 42.5
comp=Z,105nm,19.3s,MS3.5,baz=358,slow=39
HDIL Hopedale 28.72 92 *e*P **P 05 25 19.3 +0.7**
25nm,0.6s,mb5.1
RES Resolute Bay 29.29 17 *e*P **P 05 25 22.4 -1.0**
124nm,0.8s
BLO Bloomington 31.26 93 *e*P **P 05 25 48.2 +7.1**
9.9nm,0.7s,mb4.8
TKL Tuckaleechee C 35.05 96 LR LR 05 41 19.6
comp=Z,159nm,20.1s,MS3.8,baz=66,slow=38
CMIG Matias Romero 41.87 128 LR LR 05 47 21.0
comp=Z,104nm,20.7s,MS3.7,baz=167,slow=40
TEIG Tepich 42.99 118 LR LR 05 45 04.1
comp=Z,71nm,20.6s,MS3.5,baz=349,slow=36
BORG Borgarnes 53.27 31 LR LR 05 50 35.7
comp=Z,119nm,21.6s,MS3.9,baz=151,slow=35
SDV Santo Domingo 62.44 110 LR LR 06 00 24.5
comp=Z,44nm,19.8s,MS3.6,baz=8.3,slow=40
NOA NORSAR Array B 65.50 20 P **P 05 30 04.9 +0.7**
0.8nm,0.8s,mb3.8,baz=291,slow=3.8,SNR=2.8
SONM Songino Array 72.48 325 P **P 05 30 47.4 -0.4**
0.7nm,1.0s,mb3.6,baz=81,slow=4.7,SNR=5.3
SONM LR LR 06 03 00.0
comp=Z,65nm,18.3s,MS3.9,baz=180,slow=36
BRG Berggiesshubel 75.33 24 *e*P **P 05 31 11.6 +7.1**
12nm,1.4s,mb4.6
GERES GERESS Array B 77.11 25 P **P 05 31 16.4 +1.9**
0.3nm,0.5s,mb3.5,baz=143,slow=38,SNR=3.1
GERES LR LR 06 04 44.6
comp=Z,48nm,18.9s,MS3.8,baz=271,slow=35
MKAR Makanchi Array 80.86 339 P **P 05 31 33.4 -1.8**
0.2nm,0.4s,mb3.4,baz=23,slow=4.7,SNR=3.9
MKAR LR LR 06 08 11.5
comp=Z,56nm,19.4s,MS3.9,baz=232,slow=36
KEST Kesra 87.57 33 LR LR 06 10 26.8
comp=Z,62nm,18.3s,MS4.1,baz=315,slow=35
VNA3 Neumayer Olymp 144.59 151 *e*PKPdf PKPdf 05 38 59.1 +2.6
VNA3 *e* 05 39 01.2
VNA3 *e* 05 39 08.9
VNA2 Neumayer--Watz 145.36 150 *e*PKPdf PKPdf 05 39 00.6 +2.7
VNA2 *e* 05 39 02.6
VNA2 *e* 05 39 08.7
BOSA Boshof 151.26 54 PKPbc PKPbc 05 39 13.8 -1.1
1.8nm,0.9s,baz=277,slow=1.8,SNR=2.5

IDC ***21*** *06:59:09.4±0.5, 1557S×17343W, h0km, mb4.5/18, mb1 4.7/18, mb1mx4.7/21, mbtmp4.5/18, MS4.1/21, Ms1 4.1/21, ms1mx4.0/28, Error ellipse: s-maj=20.9km s-min=14.3km az=136.0*

SZGRF ***21*** *06:59:12.7, 1676S×17499W, h33km, Tonga Islands*

MOS ***21*** *06:59:13.9±1.3, 1550S×17349W, h33km, mb4.9/9, Error ellipse: s-maj=13.8km s-min=10.4km az=58.4*

ISCJB ***21*** *06:59:14.3±0.2, 1559S±006×17351W±005, h46km, mb4.8/53, MS4.2/25, Error ellipse: s-maj=10.3km s-min=4.7km az=145.1*

BJI ***21*** *06:59:14.4, 1556S×17366W, h40km, mB5.2, mb4.9, Ms5.1, Msz4.6*

NEIC ***21*** *06:59:15.6±0.2, 1554S×17348W, mb4.8/22, Error ellipse: s-maj=12.0km s-min=5.3km az=141.0*

ISC 21 06:59:16.3±0.2, 1557S±006×17352W±005, h48km, h48km±1.6km:pP-P, n374, σ0s65/277, mb4.8/53, MS4.2/25, 94C-60D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
AFI	**Afiamalu**	**2.36**	**46**	*e*Pn		**Pn**	**06 59 45.9**	**-6.7**
RAR	**Rarotonga**	**14.20**	**115**	Pn		**Pn**	**07 02 26.9**	**-7.8**
	4.3nm,0.3s,baz=268,slow=8.5,SNR=9.4							
RAR				Sn		**Sn**	**07 04 51.0**	**-20**
	5.5nm,0.3s,baz=149,slow=22,SNR=5.3							
RAR				LR		LR	07 06 30.4	
	comp=Z,651nm,19.4s,baz=282,slow=31							
PAE	**Paea**	**23.03**	**99**	*e*T			07 27 09.5	
	51nm,0.3s							
PPT	**Papeete**	**23.03**	**98**	*e*LR		LR	07 09 30.5	
	1μm,26.8s,baz=269							
PPT	**Papeete**	**23.03**	**98**	*e*T			07 27 09.1	
	10nm,0.3s							
PPT	**Papeete**	**23.03**	**98**	LR		LR	07 10 08.6	
	comp=Z,637nm,20.0s,MS4.1,baz=246,slow=29							
TVO	**Taravao**	**23.34**	**99**	*e*T			07 27 32.7	
	28nm,0.4s							
TBI	**Tubuai**	**23.94**	**113**	*e*LR		LR	07 09 59.6	
	1μm,27.2s,baz=285							
TBI	**Tubuai**	**23.94**	**113**	*e*T			07 28 18.7	
	28nm,0.4s							
URZ	**Urewera**	**24.07**	**198**	P		**P**	**07 04 25.2**	**-1.9**
	21nm,0.8s,mb4.6,baz=359,slow=3.2,SNR=14							
PMOR	**Pomariorio Ree**	**24.72**	**92**	*e*T			07 29 15.1	
	7.3nm,0.3s							
VAH	**Vaihoa**	**24.96**	**93**	*e*T			07 29 32.7	
	14nm,0.3s							
HNR	**Honiara**	**26.60**	**280**	LR		LR	07 14 10.4	
	comp=Z,507nm,19.3s,MS4.1,baz=181,slow=34							
RPZ	**Rata Peaks**	**30.98**	**202**	P		**P**	**07 05 29.6**	**+0.5**
	9.7nm,0.7s,mb4.8,baz=67,slow=17,SNR=3.8							
TAOE	**Nuku Hiva Isla**	**33.26**	**82**	*e*LR		LR	07 14 14.6	
	2μm,28.5s,baz=266							
ARMA	**Armidale**	**35.16**	**239**	*e*P		**P**	**07 06 05.4**	**-0.3**
RKT	**Rikitea**	**37.05**	**108**	*e*T			07 44 40.7	
	22nm,0.3s							
CTA	**Charters Tower**	**38.50**	**257**	P		**P**	**07 06 33.3**	**-0.9**
	2.5nm,0.4s,mb4.3,baz=75,slow=12,SNR=4.7							
CTA				LR		LR	07 20 05.5	
	comp=Z,228nm,18.9s,MS4.0,baz=54,slow=33							
CNB	**Canberra Magne**	**38.56**	**232**	*e*P		**P**	**07 06 34.0**	**-0.5**
	19nm,1.2s,mb4.7							
PMG	**Port Moresby**	**38.84**	**274**	P		**P**	**07 06 38.7**	**+1.6**
	18nm,0.8s,mb4.9,baz=306,slow=14,SNR=4.9							
PMG				LR		LR	07 20 07.2	
	comp=Z,113nm,21.4s,MS3.7,baz=74,slow=32							
STKA	**Stephens Creek**	**43.85**	**240**	*i*P		**P**	**07 07 17.8**	**-0.3**
	8.2nm,0.5s,mb4.7							
STKA	**Stephens Creek**	**43.85**	**240**	P		**P**	**07 07 17.9**	**-0.2**
	14nm,0.6s,mb4.8,baz=90,slow=9.6,SNR=42							
STKA				LR		LR	07 22 31.2	
	comp=Z,226nm,22.0s,MS4.0,baz=26,slow=32							
WB2	**Warramunga Arr**	**49.69**	**257**	*e*P		**P**	**07 08 02.8**	**-1.1**
WRA	**Warramunga Arr**	**49.70**	**257**	P		**P**	**07 08 03.4**	**-0.5**
WRA							07 09 24.8	
WRA	**Warramunga Arr**	**49.70**	**257**	P		**P**	**07 08 03.4**	**-0.5**
	5.8nm,0.5s,mb4.9,baz=93,slow=6.8,SNR=56							
WRA				PcP		PcP	07 09 24.8	+0.2
	3.6nm,0.9s,baz=86,slow=3.8,SNR=6.7							
WRA				LR		LR	07 27 57.0	
	comp=Z,196nm,19.6s,MS4.1,baz=100,slow=35							
ASAR	**Alice Springs**	**49.95**	**252**	P		**P**	**07 08 05.2**	**-0.7**
	46nm,0.7s,mb5.7,baz=86,slow=7.9,SNR=372							
KAKA	**Kakadu**	**52.37**	**266**	*e*P		**P**	**07 08 24.0**	**-0.1**
	11nm,0.5s,mb5.0							
KAKA	**Kakadu**	**52.37**	**266**	*e*P		**P**	**07 08 24.0**	**-0.1**
FORT	**Forrest**	**55.24**	**243**	*e*P		**P**	**07 08 43.7**	**-1.2**
	23nm,0.6s,mb5.4							
FITZ	**Fitzroy Crossi**	**58.07**	**258**	*e*P		**P**	**07 09 05.5**	**+0.4**
	3.9nm,0.8s,mb4.5							
FITZ	**Fitzroy Crossi**	**58.07**	**258**	P		**P**	**07 09 05.6**	**+0.5**
	0.9nm,0.5s,mb4.1,baz=72,slow=9.6,SNR=3.9							
RPN	**Rapa Nui**	**60.33**	**113**	LR		LR	07 27 48.0	
	comp=Z,164nm,19.1s,MS4.2,baz=270,slow=28							
SBA	**Scott Base**	**63.07**	**185**	*e*P		**P**	**07 09 39.2**	**+1.0**
VNDA	**Vanda**	**63.20**	**186**	P		**P**	**07 09 40.6**	**+1.5**
	2.5nm,0.9s,mb4.3,baz=33,slow=6.6,SNR=7.9							
VNDA				LR		LR	07 30 55.2	
	comp=Z,81nm,19.1s,MS3.9,baz=255,slow=30							
MBWA	**Marble Bar**	**63.21**	**254**	*e*P		**P**	**07 09 40.2**	**+0.1**
KLBR	**Kellerberrin**	**64.06**	**242**	*e*P		**P**	**07 09 45.1**	**-0.5**
	17nm,0.7s,mb5.2							
MUN	**Mundaring**	**65.35**	**242**	*e*P		**P**	**07 09 53.4**	**-0.6**
MJAR	**Matsushiro Arr**	**69.00**	**320**	P		**P**	**07 10 17.2**	**+0.3**
	1.1nm,0.6s,mb4.0,baz=174,slow=2.8,SNR=4.8							
MJAR				LR		LR	07 35 10.0	
	comp=Z,95nm,20.7s,MS4.0,baz=270,slow=31							
JNU	**Nakatsue**	**71.83**	**313**	P		**P**	**07 10 34.8**	**+0.5**
	6.7nm,0.6s,mb4.7,baz=64,slow=5.6,SNR=7.6							
NSHM	**Saint Helena R**	**71.86**	**40**	*e*P		**P**	**07 10 32.5**	**-1.9**
MURC	**Murrieta**	**72.59**	**47**	⇓P		**P**	**07 10 38.6**	**-0.2**
	baz=73							
EDW2	**Edwards Air Fo**	**72.74**	**45**	⇓P		**P**	**07 10 39.5**	**-0.2**
	baz=73,SNR=5.7							
T06C	**Millerton Lake**	**72.80**	**43**	P		**P**	**07 10 40.0**	**0.0**
	baz=73,SNR=5.7							
ISA	**Isabella**	**72.85**	**44**	⇑P		**P**	**07 10 40.4**	**+0.1**
	baz=73							
CMB	**Columbia Colle**	**72.97**	**41**	*e*P		**P**	**07 10 41.0**	**+0.1**
	3.6nm,0.9s,mb4.3							
CMB	**Columbia Colle**	**72.97**	**41**	*e*P		**P**	**07 10 41.0**	**+0.1**
CMB				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
CMB	**Columbia Colle**	**72.97**	**41**	⇑P		**P**	**07 10 41.4**	**+0.5**
	baz=73							
OHCM	**Honcut**	**73.06**	**40**	*e*P		**P**	**07 10 41.2**	**-0.2**
HELL	**Mitchell Peak,**	**73.06**	**43**	⇓P		**P**	**07 10 41.7**	**+0.1**
	baz=73							
PFO	**Pinyon Flat Ob**	**73.12**	**47**	*e*P		**P**	**07 10 42.0**	**+0.1**
PFO	**Pinyon Flat Ob**	**73.12**	**47**	LR		LR	07 35 05.5	
	comp=Z,155nm,19.2s,MS4.3,baz=328,slow=30							
ORV	**Orrville**	**73.18**	**40**	⇑P		**P**	**07 10 41.8**	**-0.3**
	baz=73							
LPIG	**La Paz**	**73.22**	**58**	LR		LR	07 33 47.8	
	comp=Z,187nm,20.3s,MS4.4,baz=216,slow=28							
KCC	**Kaiser Creek**	**73.24**	**42**	⇓P		**P**	**07 10 42.7**	**+0.2**
	baz=73							
CWC	**Cottonwood Cre**	**73.55**	**44**	⇓P		**P**	**07 10 44.0**	**-0.4**
	baz=74							
R05C	**Kirkwood Meado**	**73.56**	**41**	⇑P		**P**	**07 10 44.6**	**+0.2**
	baz=74							
YSS	**Yuzh-Sakhalins**	**73.58**	**330**	*e*P		**P**	**07 10 42.9**	**-1.4**
YSS				*es*P		sP	07 11 01.1	-2.4
YSS	**Yuzh-Sakhalins**	**73.58**	**330**	⇑*e*P		**P**	**07 10 45.4**	**+1.1**
YSS				pmax		pmax		
	comp=Z,4.0nm,0.4s,mb4.7							
P05C	**Yuba Gap, Truc**	**73.58**	**40**	⇓P		**P**	**07 10 44.2**	**-0.3**
	baz=74							
BELC	**Belle Mtn.**	**73.65**	**47**	⇓P		**P**	**07 10 44.8**	**-0.3**
	baz=74							
MPMC	**Manual Prospec**	**73.74**	**44**	⇑P		**P**	**07 10 46.2**	**+0.7**
	baz=74							
MTUM	**Tungsten Hills**	**73.75**	**43**	*e*P		**P**	**07 10 45.3**	**-0.3**
GSC	**Goldstone**	**73.79**	**45**	⇑P		**P**	**07 10 45.3**	**-0.5**
	baz=74							
YBH	**Yreka Blue Hor**	**73.80**	**37**	*e*P		**P**	**07 10 45.4**	**-0.4**
YBH	**Yreka Blue Hor**	**73.80**	**37**	⇓P		**P**	**07 10 45.8**	**+0.1**
	baz=74							
BC3	**Big Chuckw Mtn**	**73.85**	**47**	⇑P		**P**	**07 10 46.5**	**+0.3**
	baz=74							
HEC	**Hector,Ludlow**	**73.86**	**46**	⇓P		**P**	**07 10 46.0**	**-0.3**
	baz=74							
M03C	**McCloud**	**73.86**	**38**	⇓P		**P**	**07 10 45.9**	**-0.2**
	baz=74							
O04C	**Chester**	**73.90**	**39**	⇑P		**P**	**07 10 47.5**	**+1.1**
	baz=74							
HATC	**Hat Creek Radi**	**73.97**	**39**	⇓P		**P**	**07 10 46.8**	**0.0**
	baz=74							
GLA	**Glamis**	**73.99**	**48**	⇑P		**P**	**07 10 47.6**	**+0.5**
	baz=74							
BEKR	**Beckwourth**	**74.07**	**40**	⇑P		**P**	**07 10 47.3**	**0.0**
	baz=74							
S08C	**White Mtn Res**	**74.09**	**43**	P		**P**	**07 10 48.5**	**+0.9**
	baz=74,SNR=5.7							
WCN	**Washoe City**	**74.11**	**41**	⇑P		**P**	**07 10 47.8**	**+0.2**
	baz=74							
GMRC	**Granite Mounta**	**74.30**	**46**	⇓P		**P**	**07 10 48.6**	**-0.2**
	baz=74							
IRM	**Iron Mountain**	**74.33**	**47**	⇑P		**P**	**07 10 48.8**	**-0.3**
	baz=74							
GRAC	**Grapevine Rang**	**74.34**	**44**	⇑P		**P**	**07 10 49.1**	**+0.1**
	baz=74							
M04C	**Macdoel**	**74.34**	**38**	⇓P		**P**	**07 10 48.7**	**-0.2**
	baz=74							
FURC	**Furnace Creek,**	**74.39**	**44**	⇓P		**P**	**07 10 48.9**	**-0.4**
	baz=74							
QSPA	**South Pole Qui**	**74.47**	**180**	*e*P		**P**	**07 10 50.1**	**+1.0**
	comp=Z,10nm,0.8s,mb4.8							
M05C	**Lookout**	**74.49**	**38**	P		**P**	**07 10 50.4**	**+0.6**
	baz=75,SNR=5.8							
NVAR	**Mina Array Bea**	**74.53**	**42**	P		**P**	**07 10 50.4**	**+0.3**
NVAR	**Mina Array Bea**	**74.53**	**42**	P		**P**	**07 10 50.4**	**+0.4**
	comp=Z,5.5nm,0.9s,mb4.5,baz=217,slow=7.8,SNR=16							
Y12C	**Blythe**	**74.56**	**48**	⇑P		**P**	**07 10 50.1**	**-0.3**
	baz=75							
O06A	**Flanigan**	**74.58**	**40**	⇑P		**P**	**07 10 50.8**	**+0.5**
	baz=75							
U10A	**Ash Meadows, A**	**74.72**	**45**	⇑P		**P**	**07 10 51.3**	**+0.1**
	baz=75							
M06C	**Likely Place G**	**74.80**	**39**	P		**P**	**07 10 52.3**	**+0.8**
	baz=75,SNR=5.2							
S09A	**Goldfield**	**74.84**	**43**	P		**P**	**07 10 52.0**	**+0.2**
	baz=75,SNR=5.6							
N06A	**Buffalo Meadow**	**74.92**	**39**	P		**P**	**07 10 52.5**	**+0.2**
	baz=75,SNR=5.8							
Q08A	**Gabbs**	**75.01**	**42**	P		**P**	**07 10 52.8**	**-0.1**
	baz=75,SNR=6.9							
V11A	**Goodsprings**	**75.02**	**46**	⇓P		**P**	**07 10 52.8**	**-0.2**
	baz=75							
TPNV	**Topopah Spring**	**75.06**	**44**	*e*P		**P**	**07 10 52.9**	**-0.3**
TPNV	**Topopah Spring**	**75.06**	**44**	⇓P		**P**	**07 10 53.0**	**-0.2**
	baz=75							
J04A	**Umpqua Nationa**	**75.09**	**36**	P		**P**	**07 10 54.2**	**+1.0**
	baz=75,SNR=5.3							
Y13A	**Salome**	**75.09**	**48**	⇑P		**P**	**07 10 53.7**	**+0.3**
	baz=75							
L05A	**Lakeview**	**75.10**	**38**	⇑P		**P**	**07 10 53.3**	**0.0**
	baz=75							
PDMCI	**Parker Dam,Lak**	**75.12**	**47**	⇓P		**P**	**07 10 53.6**	**0.0**
	baz=75							
O07A	**Toulon**	**75.16**	**40**	P		**P**	**07 10 54.2**	**+0.5**
	baz=75,SNR=8.9							
R09A	**Tonopah**	**75.22**	**43**	P		**P**	**07 10 54.1**	**0.0**
	baz=75,SNR=8.5							
MOD	**Modoc**	**75.32**	**38**	⇑P		**P**	**07 10 54.9**	**+0.3**
	baz=75							
V12A	**Nelson**	**75.36**	**46**	⇓P		**P**	**07 10 55.0**	**+0.1**
	baz=76							
S10A	**Tonopah Range,**	**75.36**	**43**	⇑P		**P**	**07 10 54.5**	**-0.4**
	baz=76							
N07B	**Gerlach**	**75.47**	**40**	P		**P**	**07 10 57.3**	**+1.9**
	baz=76,SNR=7.4							
K05A	**Sumner Lake**	**75.48**	**37**	P		**P**	**07 10 56.1**	**+0.7**
	baz=76,SNR=7.4							
X13A	**Yucca**	**75.49**	**47**	⇑P		**P**	**07 10 55.7**	**0.0**
	baz=76							
Z14A	**Wintersburg**	**75.50**	**49**	⇑P		**P**	**07 10 56.1**	**+0.2**
	baz=76							
SHPR	**Sheep Range**	**75.56**	**45**	*e*P		**P**	**07 10 55.7**	**-0.3**
J05A	**Fort Rock**	**75.62**	**37**	P		**P**	**07 10 56.9**	**+0.7**
	baz=76,SNR=7.1							
M07A	**Soldier Meadow**	**75.70**	**39**	P		**P**	**07 10 57.5**	**+0.8**
	baz=76,SNR=7.3							
W13A	**Hualapai Mount**	**75.71**	**47**	P		**P**	**07 10 57.0**	**0.0**
	baz=76,SNR=7.9							
Y14A	**Wickenburg**	**75.75**	**48**	⇓P		**P**	**07 10 57.2**	**0.0**
	baz=76							
R10A	**Warm Springs**	**75.75**	**43**	P		**P**	**07 10 57.9**	**+0.7**
	baz=76,SNR=8.1							
S11A	**Rachel**	**75.77**	**44**	⇓P		**P**	**07 10 57.4**	**+0.1**
	baz=76							
K06A	**Valley Falls**	**75.90**	**37**	P		**P**	**07 10 58.2**	**+0.4**
	baz=76,SNR=5.2							
T11A	**Corn Creek, Al**	**75.91**	**44**	⇓P		**P**	**07 10 58.7**	**+0.7**
	baz=76							
216A	**Three Points,**	**75.94**	**51**	⇓P		**P**	**07 10 58.5**	**+0.2**
	baz=76							
U12A	**Valley of Fire**	**75.94**	**45**	P		**P**	**07 10 58.8**	**+0.6**
	baz=76,SNR=5.2							
H04A	**Detroit Lake**	**75.96**	**35**	⇑P		**P**	**07 10 59.1**	**+1.0**
	baz=76							
L07A	**Adell**	**75.97**	**39**	P		**P**	**07 10 59.0**	**+0.7**
	baz=76,SNR=9.1							
N08A	**GE Springer Mi**	**75.98**	**40**	⇑P		**P**	**07 10 58.6**	**+0.2**
	baz=76							
X14A	**Yava**	**76.10**	**48**	P		**P**	**07 10 59.1**	**-0.1**
	baz=76,SNR=12							
KSRS	**Korea Array**	**76.20**	**316**	P		**P**	**07 11 01.6**	**+1.9**
	comp=Z,1.2nm,0.6s,mb4.0,baz=125,slow=5.5,SNR=4.6							
KSRS				LR		LR	07 38 08.6	
	comp=Z,57nm,20.2s,MS3.9,baz=8.2,slow=31							
M08A	**Happy Creek Ra**	**76.22**	**39**	⇓P		**P**	**07 10 59.7**	**0.0**
	baz=76							
J06A	**Christmas Vall**	**76.23**	**37**	⇓P		**P**	**07 10 59.5**	**-0.2**
	baz=76							
O09A	**Fish Creek Ran**	**76.23**	**41**	⇑P		**P**	**07 10 59.1**	**-0.6**
	baz=76							
R11A	**Troy Canyon, C**	**76.26**	**43**	⇑P		**P**	**07 10 59.0**	**-1.0**
	baz=76							
217A	**Green Valley**	**76.31**	**51**	⇓P		**P**	**07 11 00.6**	**+0.2**
	baz=76							
U13A	**Pakoon Wash**	**76.33**	**46**	⇑P		**P**	**07 11 01.1**	**+0.6**
	baz=76							
W14A	**

baz=77
P12A McGill 77.31 43 ⇑P P 07 11 06.1 +0.2
baz=77
K09A Rome 77.34 39 ⇑P P 07 11 06.0 0.0
baz=77
E05A Randle 77.37 34 ⇓P P 07 11 06.5 +0.4
baz=78
H07A Lands Inn, Kim 77.37 36 ⇑P P 07 11 06.2 +0.1
baz=78
M10A I.L. Ranch, Tu 77.39 40 P P 07 11 06.8 +0.4
baz=78,SNR=6.2
C04A Brinnon 77.48 32 ⇑P P 07 11 07.1 +0.5
baz=78
S14A Cedar City 77.57 45 ⇓P P 07 11 07.5 +0.1
baz=78
Q13A Wheeler Ranch, 77.62 43 ⇓P P 07 11 06.9 -0.7
baz=78
J09A Fry Pan Ranch, 77.69 38 P P 07 11 08.2 +0.2
baz=78,SNR=11
WUAZ Wupatki 77.69 48 eP P 07 11 08.9 +0.8
comp=Z,14nm,1.1s,mb4.8
WUAZ Wupatki 77.69 48 ⇑P P 07 11 08.1 0.0
baz=78
G07A Ruggs Ranch, H 77.72 36 ⇓P P 07 11 08.1 +0.1
baz=78
T15A Red Dirt Ranch 77.73 46 ⇑P P 07 11 08.6 +0.3
baz=78
L10A Juniper Basin 77.75 40 ⇑P P 07 11 08.2 0.0
baz=78
E06A Yakima 77.78 34 ⇑P P 07 11 08.2 -0.1
baz=78
O12A Currie 77.84 42 ⇑P P 07 11 08.5 -0.4
baz=78
P13A Bates Ranch, G 77.89 43 ⇑P P 07 11 08.1 -1.0
baz=78
K10A MacKenzie Ranc 77.90 39 ⇓P P 07 11 09.4 +0.3
baz=78
N12A Clover Valley, 77.97 41 ⇓P P 07 11 10.3 +0.8
baz=78
C05A Tolt Reservoir 78.13 33 ⇑P P 07 11 10.4 +0.2
baz=78
K11A Parker Ranch, 78.41 39 ⇑P P 07 11 12.4 +0.5
baz=78
HABR Khabarovsk 78.42 328 eP P 07 11 19.2 +7.3
HABR 07 21 14.6 e
HAWA Hanford 78.48 35 eP P 07 11 12.0 -0.2
comp=Z,28nm,1.7s,mb4.9
H09A Durkee 78.51 37 ⇑P P 07 11 11.9 -0.5
baz=79
F08A Pendleton 78.54 36 ⇑P P 07 11 12.7 +0.1
baz=79
MSU Marysvale 78.62 45 eP P 07 11 12.9 -0.3
I10A Payette 78.68 38 ⇑P P 07 11 13.7 +0.3
baz=79
L12A House Creek Ra 78.69 40 ⇑P P 07 11 13.4 -0.1
baz=79
M13A Montello 78.80 41 ⇑P P 07 11 14.0 -0.1
baz=79
BMO Blue Mountains 78.83 37 eP P 07 11 13.9 -0.3
comp=Z,29nm,1.9s,mb4.9
MFID Camas Ranch 78.89 39 ⇑P P 07 11 14.3 -0.3
baz=79
F09A S2 Ranch, Elgi 78.98 36 ⇓P P 07 11 15.1 +0.1
baz=79
K12A Draper Farm, C 79.03 40 ⇑P P 07 11 15.3 -0.1
baz=79
DUG Dugway 79.06 43 eP P 07 11 15.7 +0.1
comp=Z,12nm,1.4s,mb4.7
DUG Dugway 79.06 43 eP P 07 11 15.7 +0.1
DUG pmax pmax
comp=Z,12nm,1.4s,mb4.6
DUG Dugway 79.06 43 ⇓P P 07 11 15.7 +0.1
baz=79
MDJ Mudanjiang 79.09 322 P P 07 11 16.8 +1.2
MDJ AMB AMB
comp=Z,7.0nm,1.1s,mb4.5
MDJ AMB AMB
comp=Z,68nm,6.2s
N14A Grayback Hills 79.16 42 ⇑P P 07 11 16.8 +0.7
baz=79
D08A Wollman Farm, 79.22 35 ⇓P P 07 11 16.4 +0.1
baz=79
J12A Stokes Ranch, 79.24 39 ⇑P P 07 11 16.4 0.0
baz=79
E09A Wood Farm, Sta 79.32 35 ⇑P P 07 11 17.2 +0.4
baz=79
L13A Double Diamond 79.33 41 ⇑P P 07 11 16.9 -0.1
baz=79
M14A Sheep Mountain 79.40 42 ⇑P P 07 11 17.6 +0.2
baz=80
B07A Winthrop 79.43 33 ⇑P P 07 11 17.0 -0.4
baz=80
K13A Stover Farm, H 79.54 40 ⇓P P 07 11 18.1 -0.1
baz=80
D09A Jones Farm, Ri 79.56 35 ⇓P P 07 11 19.3 +1.2
baz=80
A07A Ashnola River, 79.66 32 ⇑P P 07 11 18.5 -0.1
baz=80
TMUT Trail Mountain 79.67 44 eP P 07 11 18.6 -0.3
B08A Colville Reser 79.78 33 ⇓P P 07 11 18.6 -0.7
baz=80
HLID Hailey 79.83 39 ⇑P P 07 11 20.2 +0.5
baz=80
J13A Cove Ranch, Pi 79.89 40 ⇓P P 07 11 20.5 +0.5
baz=80
SRU San Rafael 80.04 45 eP P 07 11 20.8 -0.1
K14A Jones Ranch, D 80.05 41 ⇑P P 07 11 21.1 +0.2
baz=80
F11A Grangeville 80.09 37 ⇓P P 07 11 20.2 -0.8
baz=80
D10A Wagner Farm, O 80.12 35 ⇑P P 07 11 21.2 +0.1
baz=80
JLU Jordanelle 80.16 43 eP P 07 11 21.9 +0.3
A08A Turner Farm, O 80.17 33 ⇑P P 07 11 21.3 -0.1
baz=80
NJ2 Nanjing 80.18 307 eP P 07 11 22.3 +0.5
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
I13A Wildhorse Cree 80.20 39 ⇑P P 07 11 21.3 -0.3
baz=80
LAZ Ladron 80.25 50 eP P 07 11 22.3 +0.1
E11A Bogner Ranch, 80.32 36 ⇑P P 07 11 22.0 -0.2
baz=80
MNTX Cornudas Mount 80.42 53 eP P 07 11 22.6 -0.5
comp=Z,31nm,1.8s,mb4.9
H13A Challis 80.47 39 ⇑P P 07 11 22.8 -0.3
baz=81
BNM Barren Site 80.52 51 eP P 07 11 23.7 0.0
A09A Danville 80.55 33 ⇑P P 07 11 23.0 -0.4
baz=81
LPM Los Pinos Moun 80.59 51 eP P 07 11 23.4 -0.6
KLR Kul'dur 80.60 327 eP P 07 11 20.9 -2.8
LTX Lajitas 80.80 56 eP P 07 11 25.0 -0.3
comp=Z,14nm,1.4s,mb4.7
LTX Lajitas 80.80 56 eP P 07 11 25.0 -0.2
LTX pmax pmax
comp=Z,14nm,1.4s,mb4.7
TXAR Lajitas Array 80.80 56 P P 07 11 25.0 -0.3
comp=Z,3.4nm,1.0s,mb4.2,baz=224,slow=5.2,SNR=16
TXAR LR LR 07 39 20.9
comp=Z,142nm,18.4s,MS4.4,baz=5.0,slow=30
ANMO Albuquerque 81.00 50 eP P 07 11 25.8 -0.4
ANMO epP pP 07 11 39.0 -1.1
TNA Tin City 81.00 2 eP P 07 11 26.8 +1.3
F13A Darby 81.09 37 ⇓P P 07 11 26.1 -0.3
baz=81
A10A Northport 81.10 34 ⇓P P 07 11 25.6 -0.7
baz=81
CN2 Changchun 81.14 320 eP P 07 11 28.0 +1.3
CN2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
D12A Red Ives Fores 81.20 36 ⇑P P 07 11 27.0 0.0
baz=81
G14A Jackson 81.31 38 ⇓P P 07 11 28.1 +0.5
baz=81
GDL2 Guadalupe Moun 81.41 53 eP P 07 11 27.9 -0.5
MCMT McKenzie Canyo 81.46 39 eP P 07 11 27.5 -0.9
MCMT epP pP 07 11 40.8 -1.6
MCMT esP sP 07 11 45.5 -2.1
D13A Huson 81.73 36 ⇓P P 07 11 29.2 -0.6
baz=82
DCID1 Drake Creek 81.84 41 eP P 07 11 29.9 -0.5
MSO Missoula 81.88 37 eP P 07 11 30.1 -0.5
DLMT Dillon 81.89 38 eP P 07 11 29.6 -1.0
REDW Red Top Meadow 81.94 41 eP P 07 11 30.0 -1.0
comp=Z,22nm,1.4s,mb4.9
TPAW Teton Pass 81.94 41 eP P 07 11 29.8 -1.1

BSMT Bassoo Peak 81.97 36 eP P 07 11 30.2 -0.8
C13A Hot Springs 81.99 36 ⇑P P 07 11 30.3 -0.8
baz=82
SNOW Snow King Moun 82.05 41 eP P 07 11 30.5 -1.0
comp=Z,24nm,1.5s,mb4.9
IMW Indian Meadow 82.15 40 eP P 07 11 31.0 -1.0
comp=Z,11nm,1.1s,mb4.7
IMW epP pP 07 11 44.4 -1.6
MOOW Moose Ponds 82.20 41 eP P 07 11 31.4 -0.9
comp=Z,13nm,1.5s,mb4.6
MOOW epP pP 07 11 45.5 -0.8
F15A Butte 82.20 38 ⇓P P 07 11 31.7 -0.6
baz=82
LOHW Long Hollow 82.22 41 eP P 07 11 31.6 -0.7
comp=Z,9.6nm,1.3s,mb4.6
D14A Greenough 82.27 37 ⇑P P 07 11 31.7 -0.9
baz=82
QLMT Earthquake Lak 82.32 39 eP P 07 11 32.1 -0.8
CHMT Chamberlain Mo 82.33 37 eP P 07 11 31.9 -1.0
FLWY Flagg Ranch 82.39 40 eP P 07 11 32.5 -0.9
E15A Deer Lodge 82.42 38 ⇑P P 07 11 33.1 -0.3
baz=82
B13A Whitefish 82.43 35 ⇓P P 07 11 32.3 -1.1
baz=82
BW06 Boulder Array 82.47 42 eP P 07 11 32.6 -1.1
PDAR Pinedale Array 82.47 42 P P 07 11 32.5 -1.2
comp=Z,2.3nm,0.9s,mb4.1,baz=219,slow=3.7,SNR=16
PDAR LR LR 07 41 01.3
comp=Z,121nm,20.5s,MS4.2,baz=258,slow=30
C14A Swan Lake 82.50 36 ⇑P P 07 11 33.8 0.0
baz=83
COLA College 82.55 11 eP P 07 11 33.5 -0.2
comp=Z,6.5nm,0.8s,mb4.7
COLA ePcP PcP 07 11 38.6 0.0
COLA epP pP 07 11 45.6 -2.0
COLA College 82.55 11 eP P 07 11 33.5 -0.1
COLA e 07 11 38.6
COLA e*PP pP 07 11 45.6 -2.0
COLA pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
BOZ Bozeman (W) 82.62 39 eP P 07 11 33.4 -1.0
BOZ Bozeman (W) 82.62 39 ⇑P P 07 11 33.5 -0.9
baz=83
SEY Seymchan 82.65 345⇑eP P 07 11 34.7 +0.5
D15A Lincoln 82.82 37 ⇑P P 07 11 35.7 +0.3
baz=83
LKWY Lake 82.82 40 eP P 07 11 37.4 +1.9
comp=Z,8.8nm,1.3s,mb4.6
LKWY Lake 82.82 40 eP P 07 11 37.4 +1.9
LKWY pmax pmax
comp=Z,9.0nm,1.3s,mb4.6
SDCO Great Sand Dun 82.91 48 eP P 07 11 36.5 +0.3
RWWY Rawlins 83.49 44 eP P 07 11 38.0 -1.1
comp=Z,11nm,0.9s,mb4.9
DAWY Dawson 83.61 14 eP P 07 11 38.6 -0.5
ISCO Idaho Springs 83.73 46 eP P 07 11 40.1 -0.2
ISCO epP pP 07 11 52.1 -2.3
ISCO esP sP 07 11 57.5 -2.2
ISCO Idaho Springs 83.73 46 eP P 07 11 40.1 -0.2
ISCO e*PP pP 07 11 52.1 -2.2
RLMT Red Lodge 83.80 40 eP P 07 11 41.1 +0.5
CMIG Matias Romero 84.04 71 LR LR 07 40 58.5
comp=Z,128nm,18.5s,MS4.3,baz=216,slow=30
BILL Bilibino 84.66 352⇓eP P 07 11 45.3 +0.9
BILL SS SS 07 27 44.0 +3.5
BILL esSS 07 31 16.8
BILL pmax pmax
comp=Z,7.0nm,1.2s,mb4.7
BILL MLR MLR
comp=Z,100nm,16.0s,MS4.3
EGMT Eagleton 84.93 37 eP P 07 11 45.5 -0.7
comp=Z,5.7nm,0.8s,mb4.8
EGMT epP pP 07 11 58.2 -2.1
EDM Edmonton 85.69 32 eP P 07 11 49.3 -0.5
EDM epP pP 07 12 01.8 -2.1
HIA Hailar 87.26 323 eP P 07 11 57.0 -0.7
MAW Mawson 87.60 199 P P 07 11 59.5 +0.5
comp=Z,6.9nm,0.9s,mb4.9,baz=116,slow=4.1,SNR=7.7
GYA Guiyang 88.02 298 P P 07 12 02.6 +0.7
GYA AP pP 07 12 16.3 +0.3
GYA XP sP 07 12 21.0 -0.3
GYA PP PP 07 15 32.3 +3.2
GYA SKS 07 22 25.4
GYA S S 07 22 41.6 -0.7
GYA PS 07 23 51.0
GYA SS SS 07 28 33.8 +2.2
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb5.0
GYA AMB AMB
comp=Z,80nm,6.4s
GYA LR LR
comp=N,340nm,19.7s,MS4.9
GYA LR LR
comp=E,380nm,20.4s,MS4.9
GYA LR LR
comp=Z,320nm,21.0s,MS4.7
INK Inuvik 88.46 14 eP P 07 12 02.7 -0.3
HHC Hu-ho-hao-te 89.06 313 eP P 07 12 07.5 +1.1
HHC AP pP 07 12 21.3 +0.7
HHC XP sP 07 12 25.9 0.0
HHC PP PP 07 15 39.6 +2.5
HHC SKS 07 22 30.5
HHC eS S 07 22 50.1 -1.3
HHC XS sS 07 23 12.8 -2.4
HHC SS SS 07 28 46.8 +0.8
HHC AMB AMB
comp=Z,18nm,0.7s,mb5.5
HHC AMB AMB
comp=Z,127nm,5.5s
HHC LR LR
comp=N,113nm,15.5s,MS4.6
HHC LR LR
comp=E,139nm,15.5s,MS4.6
YAK Yakutsk 89.22 337 eP P 07 12 07.5 +0.8
YAK pmax pmax
comp=Z,15nm,0.7s,mb5.4
PLCA Paso Flores 89.48 132 P P 07 12 09.7 +1.2
comp=Z,1.5nm,0.9s,mb4.3,baz=69,slow=23,SNR=2.9
PLCA LR LR 07 43 08.4
comp=Z,160nm,19.7s,MS4.5,baz=199,slow=30
YKA Yellowknife Ar 90.30 23 P P 07 12 11.3 -0.3
comp=Z,1.0nm,1.0s,mb4.1,baz=234,slow=4.5,SNR=9.8
YKA LR LR 07 44 51.0
comp=Z,63nm,19.6s,MS4.1,baz=50,slow=30
TEIG Tepich 90.95 69 LR LR 07 45 13.2
comp=Z,54nm,18.5s,MS4.0,baz=286,slow=30
KMI Kunming 91.00 296 P P 07 12 13.3 -2.5
KMI AP pP 07 12 27.5 -2.5
KMI XP sP 07 12 32.8 -2.5
KMI AMB AMB
comp=Z,13nm,0.8s,mb5.3
KMI AMB AMB
comp=Z,30nm,3.4s
JTS JuntasAbangare 91.35 80 LR LR 07 43 37.7
comp=Z,100nm,20.6s,MS4.2,baz=349,slow=29
CD2 Chengdu 91.80 301 eP P 07 12 19.5 0.0
CD2 AP pP 07 12 33.0 -0.6
CD2 XP sP 07 12 38.3 -0.6
CD2 PP PP 07 16 01.9 +2.8
CD2 SKS 07 22 46.9
CD2 S S 07 23 14.5 -2.6
CD2 XS sS 07 23 38.3 -2.7
CD2 SS SS 07 29 28.0 +1.8
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.2
CD2 AMB AMB
comp=Z,30nm,5.2s
CD2 LR LR
comp=N,140nm,13.2s,MS4.9
CD2 LR LR
comp=E,240nm,13.2s,MS4.9
CD2 LR LR
comp=Z,110nm,15.6s,MS4.4
SYO Syowa Base 92.41 191⇓esP sP 07 12 37.1 -3.9
VNA3 Neumayer Olymp 92.70 175 eP P 07 12 23.4 +0.6
VNA3 e 07 12 29.7
VNA3 e epP 07 12 41.2 +4.2
VNA2 Neumayer--Watz 93.19 175 eP P 07 12 26.3 +1.2
VNA2 e 07 12 33.5
VNA2 e pP 07 12 43.1 +3.8
LZH Lanzhou 93.23 306 eP P 07 12 30.1 +4.2
LZH AP pP 07 12 35.6 -4.5
LZH AMB AMB
comp=Z,16nm,1.4s,mb5.3

LZH AMB AMB
comp=Z,65nm,4.0s
ULN Ulaanbaatar 94.48 318 eP P 07 12 31.0 -0.4
TIXI Tiksi 95.14 344⇑eP P 07 12 33.5 -0.3
TIXI pmax pmax
comp=Z,3.0nm,1.2s,mb4.6
GTA Gaotai 97.20 309 eP P 07 12 45.0 +1.0
GTA AP pP 07 12 58.4 +0.3
GTA XP sP 07 13 03.3 -0.1
GTA PP PP 07 16 45.9 +4.9
GTA SKS 07 23 17.3
GTA S S 07 24 02.0 -1.9
GTA XS sS 07 24 25.6 -2.3
GTA PS PS 07 25 35.6 +3.7
GTA SS SS 07 30 45.1 +2.5
GTA AMB AMB
comp=Z,4.0nm,1.0s,mb4.8
GTA AMB AMB
comp=Z,116nm,5.7s
GTA LR LR
comp=N,170nm,17.9s,MS4.7
GTA LR LR
comp=E,130nm,16.7s,MS4.7
GTA LR LR
comp=Z,110nm,19.4s,MS4.3
TLY Talaya 97.70 321 i P P 07 12 44.9 -1.0
TLY pmax pmax
comp=Z,2.0nm,0.7s,mb4.8
LPAZ La Paz 99.86 110 LR LR 07 47 09.0
comp=Z,64nm,21.4s,MS4.1,baz=25,slow=29
MKAR Makanchi Array 110.87 315 PKPdf PKiKP 07 17 42.7 -1.4
KURK Kurchatov 113.19 319⇑iPKIKP PKiKP 07 17 47.8 -0.6
ARCES ARCESS Array B 124.76 352 PKP PKPdf 07 18 09.9 -0.2
comp=Z,6.6nm,1.0s,baz=14,slow=1.8,SNR=19
JOF Joensuu 129.61 346 ep PKPdf 07 18 18.1 -1.5
comp=Z,3.3nm,0.5s
KAF Kangasniemi 131.43 348 ep PKPdf 07 18 20.6 -2.5
comp=Z,1.6nm,0.5s
FINES FINESS Array B 132.09 347 PKPdf PKPdf 07 18 24.8 +0.5
FINES FINESS Array B 132.09 347 PKIKP PKPdf 07 18 24.1 -0.2
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 132.09 347 PKP PKPdf 07 18 24.1 -0.2
comp=Z,0.5nm,0.4s,baz=80,slow=3.9,SNR=7.8
OBN Obninsk 134.22 336 i PKIKP PKPdf 07 18 29.0 +0.5
OBN SS SS 07 38 55.0 +10
KIV Kislovodsk 138.26 320 PKPdf PKPdf 07 18 38.7 +2.3
KIV Kislovodsk 138.26 320 ePKIKP PKPdf 07 18 38.9 +2.5
KIV pmax pmax
comp=Z,4.0nm,0.7s
ANN Anapa 140.88 325 i PKHKP 07 18 36.5
ANN pmax pmax
comp=Z,17nm,1.1s
KWP Kalwaria 143.55 342 ePKP PKPdf 07 18 43.5 -2.2
KWP Kalwaria 143.55 342 ePKPdf PKPdf 07 18 43.0 -2.8
KWP ePKP PKPdf 07 18 43.5 -2.2
KWP Kalwaria 143.55 342⇓iP PKPdf 07 18 43.3 -2.4
MALT Malatya 143.91 315 ePKPdf PKPdf 07 18 46.1 -0.6
CLL Collm 143.97 353 i PKPdf PKPdf 07 18 45.9 -0.5
STHS Stebnicka Huta 144.16 343 ePKP PKPdf 07 18 45.9 -0.9
KOLS Kolonicke sedl 144.30 342 ePKP PKPdf 07 18 46.1 -1.0
UPC Upice 144.31 350 ePKP PKPdf 07 18 47.3 +0.3
NIE Niedzica 144.41 344 ePKP PKPdf 07 18 46.7 -0.5
DPC Dobruska-Polom 144.41 349 ePKP PKPdf 07 18 46.5 -0.7
BOYT Boyabat 144.42 322 i P PKPdf 07 18 43.7 -3.8
OKC Ostrava-Krasne 144.53 347 ePKP PKPdf 07 18 46.5 -0.9
CRVS Cervenica-Dubn 144.57 343 ePKP PKPdf 07 18 46.8 -0.7
UZH Uzhgorod 144.57 342 ePKIKP PKPdf 07 18 46.6 -0.9
MORC Moravsky Berou 144.72 348 ⇓P PKPdf 07 18 47.0 -0.8
MORC Moravsky Berou 144.72 348⇓iP PKPdf 07 18 47.0 -0.8
MOX Moxa 144.77 354 ePKP PKPdf 07 18 47.1 -0.7
MOX Moxa 144.77 354 ePKPbc PKPdf 07 18 47.3 -0.5
WERD Werda 144.90 354 ePKPbc PKPdf 07 18 49.0 +1.0
TANN Tannenbergstha 144.91 353 ePKPbc PKPdf 07 18 47.9 -0.2
TRPA Tarpa 144.94 341⇑iP PKPdf 07 18 47.8 -0.4
GZT Gaziantep 144.97 314 i P PKPdf 07 18 47.6 -1.0
PRU Pruhonice 145.06 351 ePKP PKPdf 07 18 48.3 0.0
NKC Novy Kostel 145.09 353 ePKP PKPbc 07 18 51.3 +3.4
KECS Kecovo 145.22 344 ePKP PKPdf 07 18 49.2 +0.5
BALT Daday 145.23 323 i P PKPdf 07 18 43.5 -5.4
VRI Vrincioaia 145.35 335⇑P PKPbc 07 18 49.5 +0.6
VRI Vrincioaia 145.35 335⇑iP PKPbc 07 18 49.5 +0.6
KMBO Kilima Mbogo 145.36 244 ePKPbc PKPbc 07 18 51.1 +1.2
MANZ Manzenberg 145.37 354 ePKPbc PKPbc 07 18 49.3 +0.5
GIVF Givet 145.53 2 ePKP1 PKPbc 07 18 49.1 -0.2
ROTZ Rotzenmuhle 145.58 353 ePKPbc PKPbc 07 18 50.2 +0.7
VYHS Vyhne 145.63 345 ePKP PKPdf 07 18 50.4 +1.0
KOLL Kolacno 145.66 346 ePKP PKPdf 07 18 50.9 +1.5
GRA1 Grafenberg Arr 145.75 355 ePKPbc PKPbc 07 18 51.0 +1.0
GRF Grafenberg Arr 145.75 355 ePKPbc PKPbc 07 18 51.0 +1.0
ELDT Eldivan 145.87 322 i P PKPbc 07 18 51.9 +1.2
PSZ Piszkesteto 145.90 344⇑P PKPbc 07 18 51.6 +1.1
PSZ Piszkesteto 145.90 344⇑iP PKPbc 07 18 51.7 +1.2
MLR Muntele Rosu 145.98 335⇑P PKPbc 07 18 51.6 +0.7
MLR Muntele Rosu 145.98 335⇑iP PKPbc 07 18 51.6 +0.8
WLF Walferdange 146.00 0 ePKPbc PKPbc 07 18 51.4 +0.7
KHC Kasperske Hory 146.03 352 ePKP PKPbc 07 18 51.6 +0.7
KHC epPKP pPKPdf 07 19 04.2 -0.5
DRGR 146.06 340⇑P PKPdf 07 18 50.5 +0.4
DRGR 146.06 340⇑iP PKPdf 07 18 50.5 +0.3
MODS Modra-Piesok 146.10 347 ePKP PKPbc 07 18 52.3 +1.2
BRTR Keskin Array B 146.22 321 PKPbc PKPbc 07 18 52.3 +0.5
comp=Z,8.9nm,0.8s,baz=103,slow=1.7,SNR=33
GEC2 GERESS Array S 146.29 351 ePKPbc PKPbc 07 18 52.0 +0.3
GERES GERESS Array B 146.29 351 PKPbc PKPbc 07 18 52.2 +0.6
comp=Z,21nm,0.6s,baz=27,slow=3.3,SNR=14
ZST Bratislava 146.31 347 ePKP PKPbc 07 18 52.9 +1.2
SGKT Sivrigoynuk 146.62 323 i P PKPdf 07 18 51.6 +0.2
CDF Champ du Feu 147.25 359 ePKP1 PKPdf 07 18 53.4 +1.3
comp=Z,23nm,1.0s
GZR Gura Zlata 147.26 339⇑P PKPbc 07 18 54.9 +0.3
GZR Gura Zlata 147.26 339⇑iP PKPbc 07 18 54.9 +0.3
BZS Buzias 147.46 340⇑P PKPdf 07 18 54.1 +1.5
BZS Buzias 147.46 340⇑iP PKPdf 07 18 54.1 +1.6
HAU Haudompre 147.66 0 ePKP1 PKPdf 07 18 53.8 +1.0
ESKT Eskisehir 148.01 323 i P PKPdf 07 18 54.9 +1.2
SSF Saint Saulge 148.50 4 ePKP1 PKPdf 07 18 55.8 +1.6
comp=Z,31nm,1.1s
CABF La Chapelle 149.05 1 ePKP1 PKPbc 07 18 59.4 +0.2
comp=Z,30nm,1.0s
LPL La Plagne 150.15 360 ePKP1 PKPbc 07 19 03.0 +1.0
comp=Z,11nm,0.8s
LPG La Plagne 150.17 360 ePKP1 PKPbc 07 19 03.2 +1.2
AKHS Akhisar 150.17 325 i P PKPab 07 19 10.5 +2.2
ORIF Oris-en-Rattie 150.74 1 ePKP1 PKPbc 07 19 04.0 +0.6
comp=Z,40nm,1.2s
MBDF Montbardon 150.94 360 ePKP1 PKPbc 07 19 03.7 -0.2
comp=Z,25nm,1.0s
TORD Torodi Ar. Bea 174.77 117 PKP PKPdf 07 19 20.3 -1.5
comp=Z,0.6nm,0.9s,baz=341,slow=0.8,SNR=3.7

IDC 21 06:59:20.2±2.0, 077N×12525E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/14, mbtmp3.2/3, Error ellipse: s-maj=186.9km s-min=26.7km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.43	157	P	P		07 04 19.4	-1.3
	0.3nm,0.4s,baz=335,slow=11,SNR=12							
ASAR	Alice Springs	25.70	161	P	P		07 04 53.6	+1.4
	0.2nm,0.4s,baz=346,slow=12,SNR=4.4							
MKAR	Makanchi Array	59.17	327	P	P		07 09 22.9	0.0
	0.1nm,0.4s,baz=125,slow=7.4,SNR=4.5							

IDC 21 07:54:35.8±2.6, 817S×11778E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.5/14, mbtmp3.5/4, Error ellipse: s-maj=162.4km s-min=22.8km az=54.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.85	128	P	Pn		07 59 08.1	-1.9
	0.1nm,0.3s,baz=302,slow=12,SNR=10							
ASAR	Alice Springs	21.82	137	P	P		07 59 30.3	+0.4
	0.7nm,0.5s,baz=311,slow=9.9,SNR=15							
SONM	Songino Array	56.67	351	P	P		08 04 20.9	+0.1
	0.6nm,0.6s,baz=167,slow=8.7,SNR=7.0							
MKAR	Makanchi Array	63.18	333	P	P		08 05 05.8	+0.2
	0.7nm,0.7s,baz=159,slow=8.6,SNR=2.7							

*IDC **21** 08:10:04.8±7.0, 36.31N×76.59E, h0km, mb3.6/2, mb1 3.5/3, mb1mx3.2/18, mbtmp3.3/3, Error ellipse: s-maj=238.7km s-min=33.9km az=135.0*
*ISCJB **21** 08:10:22.0±3.3, 393N±0.1×740E±0.1, h32km±26km, mb3.6/2, Error ellipse: s-maj=18.6km s-min=17.1km az=30.0*
*NNC **21** 08:10:22.1±2.6, 3955N×7408E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=20.5km s-min=10.6km az=160.0*

ISC 21 08:10:21.4±3.2, 393N±0.1×741E±0.1, h17km±23km, n15, σ0§92/18, mb3.6/2, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.85**	**355**	P	**Pn**	**08 11 06.2**	**+0.1**
	SNR=39						
KZA	**Kyzart**	**2.93**	**18**	P	**Pn**	**08 11 06.8**	**-0.4**
	SNR=25						
UCH	**Uchtor**	**2.96**	**7**	P	**Pn**	**08 11 07.7**	**+0.1**
	SNR=145						
AAK	**Ala-Archa**	**3.36**	**6**	P	**Pn**	**08 11 13.6**	**+0.5**
	SNR=28						
EKS2	**Erkin-Say**	**3.38**	**357**	P	**Pn**	**08 11 14.1**	**+0.7**
	SNR=13						
ULHL	**Ulahol**	**3.39**	**29**	P	**Pn**	**08 11 17.5**	**+4.0**
	SNR=7.8						
KBK	**Karagaybulak**	**3.44**	**11**	P	**Pn**	**08 11 14.5**	**+0.4**
	SNR=21						
TKM2	**Tokmak 2**	**3.81**	**17**	⇑Pn	**Pn**	**08 11 19.5**	**+0.2**
	5.8nm,0.5s						
TKM2				⇑Sn	**Sn**	**08 12 02.5**	**-1.2**
	9.4nm,0.6s						
TKM2				⇑Lg		08 12 13.2	
	24nm,0.7s						
TKM2	**Tokmak 2**	**3.81**	**17**	P	**Pn**	**08 11 19.3**	**0.0**
	SNR=8.0						
USP	**Ospenovka**	**3.99**	**5**	P	**Pn**	**08 11 21.4**	**-0.3**
	SNR=5.6						
KK31	**Karatay Array**	**4.66**	**326**	Pn	**Pn**	**08 11 30.6**	**-0.2**
	1.7nm,0.3s,baz=133,slow=13,SNR=27						
KK31				⇑Pg	**Pg**	**08 11 43.3**	**-7.2**
	2.0nm,0.3s,baz=143,slow=16,SNR=9.2						
KK31				⇓Sn	**Sn**	**08 12 25.3**	**+0.8**
	4.8nm,0.5s,baz=141,slow=25						
KK31				⇓Lg		08 12 42.8	
	14nm,0.7s,baz=142,slow=28						
MKAR	**Makanchi Array**	**9.62**	**36**	Pn	**Pn**	**08 12 49.7**	**+11**
	baz=200,slow=14,SNR=2.3						
AB31	**Akbulak array**	**14.17**	**319**	P	**Pn**	**08 13 38.2**	**-3.0**
	0.6nm,0.5s,baz=120,slow=12,SNR=11						
TORD	**Torodi Ar. Bea**	**68.18**	**269**	P	**P**	**08 21 20.1**	**-1.0**
	0.4nm,0.4s,mb3.8,baz=48,slow=5.8,SNR=13						
YKA	**Yellowknife Ar**	**78.33**	**4**	P	**P**	**08 22 21.7**	**+1.5**
	0.3nm,0.8s,mb3.3,baz=348,slow=5.9,SNR=3.9						

WEL 21 08:45:05.4±0.1, 4094S×17540E, h14km±1km, ML3.5/40, Error ellipse: s-maj=1.0km s-min=0.6km az=90.0, MM 4., North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTW	**Mount Morrison**	**0.23**	**160**	PG	Pg	08 45 10.6	-0.2
MTW				SG	Sg	08 45 14.7	+0.8
CAW	**Cannon Point**	**0.30**	**236**	PG	Pg	08 45 12.1	+0.5
CAW				SG	Sg	08 45 16.9	+1.1
MRZ	**Mangatainoka R**	**0.31**	**26**	PG	Pg	08 45 11.6	-0.3
MRZ				SG	Sg	08 45 16.3	+0.1
KIW	**Kapiti Island**	**0.38**	**282**	PG	Pg	08 45 13.5	+0.5
TIWZ	**Tintock**	**0.41**	**66**	P*	Pg	08 45 13.1	-0.5
PAWZ	**Paruwai Farm**	**0.44**	**177**	P*	Pg	08 45 14.2	0.0
PAWZ				SG	Sg	08 45 21.1	+1.0
MSWZ	**Moikau Station**	**0.48**	**193**	P*	Pb	08 45 15.1	-0.5
TRWZ	**Traveller**	**0.51**	**154**	P*	Pb	08 45 15.7	-0.3
MRW	**Makara Radio**	**0.60**	**241**	P*	Pb	08 45 17.0	-0.6
BHW	**Baring Head**	**0.61**	**220**	P*	Pb	08 45 17.0	-0.8
BHW				SG	Sg	08 45 25.1	-0.4
SNZO	**South Karori**	**0.64**	**235**	P*	Pb	08 45 17.6	-0.7
BFZ	**Birch Farm**	**0.70**	**68**	P*	Pb	08 45 18.4	-0.8
TSZ	**Takapari Road**	**0.98**	**26**	eP*	Pb	08 45 22.9	-1.2
TUWZ	**Tuamarina**	**1.20**	**246**	P*	Pb	08 45 26.3	-1.5
WAZ	**Wanganui**	**1.23**	**345**	PN	Pn	08 45 28.5	+0.5
BSWZ	**Blackbirch Sta**	**1.38**	**236**	P*	Pb	08 45 28.9	-2.0
PXZ	**Pawanui**	**1.44**	**51**	P*	Pb	08 45 28.6	-3.4
NNZ	**Nelson**	**1.55**	**259**	PN	Pn	08 45 31.9	-0.5
MTVZ	**Mangateitei**	**1.56**	**2**	PN	Pn	08 45 32.8	+0.3
MOVZ	**Moawhango**	**1.56**	**10**	PN	Pn	08 45 31.7	-0.9
WNVZ	**Wahianoa**	**1.62**	**6**	PN	Pn	08 45 33.2	-0.2
TRVZ	**Turoa**	**1.65**	**4**	PN	Pn	08 45 33.8	0.0
PKVZ	**Pokaka**	**1.65**	**359**	PN	Pn	08 45 33.7	-0.1
FWVZ	**Far West T-bar**	**1.69**	**4**	PN	Pn	08 45 34.2	-0.1
RAEZ	**Rainy Point**	**1.82**	**335**	PN	Pn	08 45 37.6	+1.4
WTVZ	**West Tongariro**	**1.83**	**5**	PN	Pn	08 45 36.2	-0.1
TWVZ	**Taurewa**	**1.87**	**1**	PN	Pn	08 45 36.5	-0.3
VRZ	**Vera Road**	**1.88**	**345**	PN	Pn	08 45 37.7	+0.7
BKZ	**Black Stump Fm**	**1.96**	**26**	PN	Pn	08 45 36.0	-2.1
KHZ	**Kahutara**	**2.03**	**223**	PN	Pn	08 45 36.7	-2.4
THZ	**Tophouse**	**2.05**	**246**	PN	Pn	08 45 37.8	-1.5
QRZ	**Quartz Range**	**2.18**	**272**	PN	Pn	08 45 41.4	+0.3
WATZ	**Wairara**	**2.25**	**7**	PN	Pn	08 45 40.9	-1.1
HIZ	**Hauiti**	**2.46**	**350**	PN	Pn	08 45 44.9	0.0
DSZ	**Denniston Nort**	**2.82**	**252**	PN	Pn	08 45 48.3	-1.6
LTZ	**Lake Taylor**	**2.97**	**231**	ePN	Pn	08 45 49.7	-2.3
MWZ	**Matawai**	**3.08**	**33**	ePN	Pn	08 45 49.7	-3.8
MQZ	**McQueen's Vall**	**3.43**	**215**	SN	Sn	08 46 31.7	-7.1
MXZ	**Matakaoa Point**	**4.06**	**35**	ePN	Pn	08 46 03.1	-3.9
WVZ	**Waitaha Valley**	**4.07**	**237**	ePN	Pn	08 46 05.1	-2.1
FOZ	**Fox Glacier**	**4.98**	**236**	ePN	Pn	08 46 15.7	-3.9

*NEIC **21** 09:11:25.3±0.8, 365S×139.86E, h30km, mb4.3/1, Error ellipse: s-maj=14.7km s-min=12.8km az=50.0*
*ISCJB **21** 09:11:27.2±2.0, 383S±0.1×1399E±0.1, h60km±20km, mb3.9/4, Error ellipse: s-maj=18.9km s-min=16.1km az=25.8*
*IDC **21** 09:11:28.3±4.5, 374S×139.89E, h55km±40km, mb3.9/5, mb1 4.1/9, mb1mx3.9/14, mbtmp4.1/9, ML4.0/4, MS3.2/4, Ms1 3.2/4, ms1mx2.9/16, Error ellipse: s-maj=32.2km s-min=25.4km az=52.0*

ISC 21 09:11:31.5±1.7, 40S±0.1×13975E±009, h77km±15km, n16, σ1§15/19, mb3.9/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**9.11**	**127**	P	**Pn**	**09 13 37.6**	**-2.7**
	1.0nm,0.3s,baz=340,slow=12,SNR=3.3						
PMG				S	**Sn**	**09 15 10.7**	**-11**
	0.3nm,0.3s,baz=298,slow=16,SNR=3.5						
KAKA	**Kakadu**	**11.28**	**219**	eP	**Pn**	**09 14 10.6**	**+0.8**
	55nm,0.4s						
KAKA				eS	**Sn**	**09 16 13.3**	**-0.8**
WB2	**Warramunga Arr**	**16.70**	**198**	eP	**Pn**	**09 15 20.3**	**-0.4**
WRA	**Warramunga Arr**	**16.70**	**198**	P	**Pn**	**09 15 21.3**	**+0.6**
	2.1nm,0.3s,baz=22,slow=12,SNR=24						
WRA				S	**S**	**09 18 19.7**	**-13**
	0.7nm,0.3s,baz=14,slow=21,SNR=5.1						
WRA				LR	LR	09 22 31.2	
	comp=Z,60nm,20.8s,baz=50,slow=39						
BATI	**Kupang**	**17.10**	**248**	P	**Pn**	**09 15 30.5**	**+4.8**
	4.9nm,0.3s,baz=76,slow=4.2,SNR=3.6						
CTA	**Charters Tower**	**17.20**	**159**	P	**Pn**	**09 15 28.1**	**+1.2**
	0.3nm,0.3s,baz=11,slow=11,SNR=3.5						
CTA				LR	LR	09 21 28.9	
	comp=Z,66nm,18.9s,baz=229,slow=34						
FITZ	**Fitzroy Crossi**	**19.68**	**224**	eP	**Pn**	**09 15 57.0**	**+0.4**
	13nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.68**	**224**	P	**Pn**	**09 15 57.1**	**+0.5**
	0.3nm,0.3s,baz=55,slow=12,SNR=13						
FITZ				S	**S**	**09 19 30.8**	**-1.7**
	0.7nm,0.3s,baz=193,slow=13,SNR=5.5						
FITZ				LR	LR	09 24 38.4	
	comp=Z,64nm,18.4s,baz=334,slow=40						
ASAR	**Alice Springs**	**20.35**	**196**	P	**P**	**09 16 02.5**	**+0.7**
	17nm,0.8s,baz=28,slow=8.6,SNR=106						
ASAR				S	**S**	**09 19 44.6**	**-1.1**
	4.1nm,0.9s,baz=16,slow=28,SNR=6.0						
MBWA	**Marble Bar**	**25.87**	**227**	eP	**P**	**09 16 57.5**	**+1.3**
STKA	**Stephens Creek**	**27.79**	**177**	P	**P**	**09 17 15.0**	**+1.7**
	0.7nm,0.4s,mb3.5,baz=350,slow=12,SNR=2.7						
STKA				LR	LR	09 29 40.1	
	comp=Z,64nm,18.4s,baz=24,slow=39						
PSI	**Prapat**	**41.35**	**279**	P	**P**	**09 19 10.4**	**+0.1**
	7.0nm,0.7s,mb4.6,baz=59,slow=5.9,SNR=6.2						

MKAR	**Makanchi Array**	**71.43**	**322**	P	**P**	**09 22 42.0**	**-1.6**
	0.3nm,0.5s,mb3.4,baz=103,slow=7.5,SNR=5.8						
MAW	**Mawson**	**81.33**	**202**	P	**P**	**09 23 39.4**	**+0.2**
	1.8nm,0.7s,mb4.0,baz=66,slow=10.0,SNR=3.3						
DBIC	**Dimbokro**	**144.66**	**276**	PKP	PKPdf	09 30 59.7	-0.7
	1.5nm,0.6s,baz=49,slow=4.2,SNR=5.4						
LPAZ	**La Paz**	**145.85**	**127**	PKPbc	PKPbc	09 31 03.0	0.0
	0.8nm,0.7s,baz=256,slow=4.2,SNR=4.7						

*NEIC **21** 09:33:07.0, 1534N×9446W, h11km, MD4.0(MEX), After MEX.*

MEX 21 09:33:07.1±0.9, 1535N×9446W, h11km±15km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.78**	**347**	eP	Pn	09 33 34.1	-3.7
CMIG				*i* S	Sn	09 33 55.5	-4.9
SCX	**San Cristobal**	**2.23**	**52**	eP	Pn	09 33 42.0	-1.9
SCX				*i* S	Sn	09 34 10.5	-1.0
SCX	**San Cristobal**	**2.23**	**52**	eP	Pn	09 33 42.0	-1.9
SCX				*i* S	Sn	09 34 08.5	-3.0
CCIG	**Comitan**	**2.42**	**67**	eP	Pn	09 33 43.0	-3.6
CCIG				*i* S	Sn	09 34 11.9	-4.2
VHO	**Vista Hermosa**	**2.78**	**308**	*i* P	Pn	09 33 49.3	-2.3
VHO				*i* S	Sn	09 34 21.6	-3.5

NNC 21 10:06:49.6±10.0, 3951N×7221E, h0km, mb3.5, mpv3.2, 2C-2D, Error ellipse: s-maj=80.5km s-min=41.5km az=175.0, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.81**	**341**	P	Pn	10 07 49.1	-0.5
	1.3nm,0.2s,baz=149,slow=12,SNR=25						
KK31				⇑S	Sn	10 08 36.1	+1.0
	9.9nm,0.3s,baz=151,slow=24						
TKM2	**Tokmak 2**	**4.26**	**36**	⇑P	Pn	10 07 56.1	+0.3
	4.6nm,0.7s						
TKM2				⇓S	Sn	10 08 49.5	+3.4
	14nm,0.8s						
AB31	**Akbulak array**	**13.10**	**322**	P	Pn	10 09 53.4	-3.4
	0.3nm,0.4s,baz=128,slow=14,SNR=9.7						
AKTO	**Aktyubinsk**	**14.81**	**322**	⇓P	Pn	10 10 18.6	-1.6
	0.4nm,0.5s						

*ISCJB **21** 10:08:27.6±0.9, 4088N±006×4032E±005, h7km±8km, Error ellipse: s-maj=10.1km s-min=5.6km az=164.0*
*CSEM **21** 10:08:27.1±0.1, 4090N×4031E, h10km, MD2.9, Error ellipse: s-maj=4.7km s-min=2.3km az=168.0*
*ISK **21** 10:08:27.2, 4089N×4030E, h7km, MD2.8*
*DDA **21** 10:08:29.3, 4093N×4028E, h12km, Md2.9*

ISC 21 10:08:27.8±0.9, 4088N±006×4033E±005, h9km±8km, n10, σ0§47/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACK	**Trabzon**	**0.43**	**278**	*i* P	**Pg**	**10 08 36.7**	**+0.5**
MACK				*i* S	**Sg**	**10 08 43.0**	**+1.1**
KTUT	**Trabzon**	**0.44**	**284**	PG	**Pg**	**10 08 35.6**	**-0.8**
KTUT				SG	**Sg**	**10 08 42.0**	**-0.2**
GUMT	**Gumushane**	**0.77**	**237**	PG	**Pg**	**10 08 42.5**	**-0.2**
GUMT				SG	**Sg**	**10 08 52.4**	**-0.3**
KELT	**Kelkit**	**1.10**	**229**	*i* P	**Pg**	**10 08 48.9**	**0.0**
KELT				*i* S	**Sg**	**10 09 02.7**	**-0.5**
BCA	**Borcka**	**1.13**	**60**	PN	**Pn**	**10 08 49.2**	**-0.6**
ESPY	**Espiye-Giresun**	**1.22**	**272**	PN	**Pn**	**10 08 50.8**	**-0.2**
ARTV	**Artvin**	**1.25**	**75**	*i* P	**Pn**	**10 08 51.6**	**+0.2**
ARTV				*i* S	**Sb**	**10 09 07.6**	**-0.1**
EZM	**Erzurum**	**1.25**	**141**	PN	**Pn**	**10 08 52.2**	**+0.7**
GRSN	**GIRESUNGRSN**	**1.56**	**272**	*i* P	**Pn**	**10 08 55.8**	**0.0**
GRSN				*i* S	**Sn**	**10 09 16.0**	**-0.2**
PTK	**Pertek**	**2.12**	**200**	*e*PN	**Pn**	**10 09 03.9**	**+0.5**

*ISCJB **21** 10:09:30.9±0.8, 560S±0.1×268W±0.3, h10km, mb4.2/9, MS3.5/3, Error ellipse: s-maj=22.5km s-min=14.6km az=178.2*
*NEIC **21** 10:09:35.6±0.6, 5597S×2691W, h35km, Error ellipse: s-maj=19.5km s-min=13.2km az=87.0*
*IDC **21** 10:09:40.3±7.5, 5602S×2684W, h76km±69km, mb4.0/9, mb1 3.9/10, mb1mx3.9/17, mbtmp3.9/10, ML3.3/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/23, Error ellipse: s-maj=23.2km s-min=18.7km az=96.0*

ISC 21 10:09:32.8±0.8, 560S±01×268W±03, h10km, n14, σ0§54/11, mb4.2/9, MS3.5/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**18.70**	**156**	P	**Pn**	**10 13 50.9**	**-0.3**
	0.1nm,0.3s,baz=316,slow=9.1,SNR=11						
PLCA	**Paso Flores**	**32.21**	**280**	LR	LR	10 28 36.2	
	comp=Z,56nm,18.8s,MS3.3,baz=170,slow=35						
QSPA	**South Pole Qui**	**34.25**	**180**	P	**P**	**10 16 18.4**	**+0.2**
	2.6nm,0.4s,mb4.5,baz=195,slow=12,SNR=53						
MAW	**Mawson**	**40.06**	**143**	P	**P**	**10 17 07.6**	**+0.1**
	2.4nm,0.8s,mb4.0,baz=246,slow=11,SNR=3.9						
SUR	**Sutherland**	**40.41**	**75**	P	**P**	**10 17 12.2**	**+1.3**
SUR	**Sutherland**	**40.41**	**75**	P	**P**	**10 17 12.2**	**+1.3**
	9.0nm,1.0s,mb4.5,baz=122,slow=9.4,SNR=3.3						
BOSA	**Boshof**	**45.74**	**75**	P	**P**	**10 17 53.2**	**-0.7**
	2.7nm,1.0s,mb4.1,baz=217,slow=8.8,SNR=3.1						
BOSA				LR	LR	10 34 05.9	
	comp=Z,81nm,19.8s,MS3.7,baz=3.3,slow=32						
VNDA	**Vanda**	**46.64**	**183**	P	**P**	**10 18 00.2**	**-0.2**
	2.5nm,0.6s,mb4.3,baz=195,slow=7.6,SNR=12						
LPAZ	**La Paz**	**50.53**	**305**	P	**P**	**10 18 31.4**	**+0.3**
	1.1nm,0.3s,mb4.2,baz=128,slow=4.5,SNR=14						
DBIC	**Dimbokro**	**65.02**	**24**	P	**P**	**10 20 12.3**	**-0.6**
	0.9nm,0.4s,mb4.1,baz=201,slow=7.1,SNR=3.5						
DBIC				LR	LR	10 42 27.6	
	comp=Z,33nm,20.2s,MS3.5,baz=122,slow=30						
TORD	**Torodi Ar. Bea**	**72.90**	**29**	P	**P**	**10 21 01.6**	**-0.2**
	1.0nm,0.3s,mb4.2,baz=201,slow=6.2,SNR=19						
ASAR	**Alice Springs**	**98.97**	**162**	P	**P**	**10 23 13.6**	**+0.1**
	0.2nm,0.8s,mb3.7,baz=161,slow=3.5,SNR=4.9						
YKA	**Yellowknife Ar**	**136.28**	**318**	PKP	PKPdf	10 28 50.1	-2.8
	0.2nm,0.4s,baz=126,slow=2.5,SNR=6.4						
SONM	**Songino Array**	**150.50**	**86**	PKPbc	PKPbc	10 29 21.2	-2.3
	1.1nm,0.7s,baz=209,slow=3.9,SNR=8.0						
SONM				PKPab	PKPab	10 29 28.3	-1.9
	0.3nm,0.5s,baz=248,slow=1.6,SNR=3.0						
SONM				pPKPbc	pPKPbc	10 29 43.8	+17
	0.7nm,0.7s,baz=228,slow=4.5,SNR=3.3						

IDC 21 10:35:08.9±0.8, 1406N×14489E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.9/19, mbtmp3.8/10, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, 1D, Error ellipse: s-maj=33.7km s-min=17.4km az=96.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**27.77**	**330**	P	P	10 40 59.5	0.0
	1.2nm,0.8s,baz=254,slow=31,SNR=4.0						
ASAJ	**Asahikawa**	**30.02**	**357**	LR	LR	10 51 07.2	
	comp=Z,27nm,20.6s,baz=4.6,slow=32						
WRA	**Warramunga Arr**	**35.34**	**197**	P	P	10 42 06.2	0.0
	2.4nm,0.7s,baz=19,slow=9.3,SNR=29						
FITZ	**Fitzroy Crossi**	**37.17**	**211**	P	P	10 42 21.9	+0.1
	0.7nm,0.6s,baz=21,slow=8.6,SNR=3.5						
ASAR	**Alice Springs**	**39.00**	**196**	P	P	10 42 36.9	-0.3
	0.6nm,0.5s,baz=18,slow=11,SNR=14						
STKA	**Stephens Creek**	**45.78**	**184**	P	P	10 43 32.0	-0.3
	0.5nm,0.4s,baz=6.6,slow=8.9,SNR=4.8						
SONM	**Songino Array**	**46.36**	**325**	P	P	10 43 35.3	-1.5
	0.2nm,0.3s,baz=154,slow=5.5,SNR=2.2						
MKAR	**Makanchi Array**	**61.17**	**316**	P	P	10 45 27.1	+1.7
	0.5nm,0.7s,baz=100,slow=7.5,SNR=3.4						
AB31	**Akbulak array**	**76.21**	**318**	⇓Lg		10 47 36.1	
	0.7nm,0.5s,baz=355,slow=28						
YKA	**Yellowknife Ar**	**82.44**	**27**	P	P	10 47 32.0	-0.8
	0.3nm,0.4s,baz=284,slow=5.1,SNR=7.4						
NVAR	**Mina Array Bea**	**86.62**	**51**	P	P	10 47 55.6	+1.1
	1.1nm,0.6s,baz=274,slow=4.2						
PDAR	**Pinedale Array**	**91.62**	**45**	P	P	10 48 18.6	+0.4
	0.3nm,0.6s,baz=249,slow=4.7,SNR=3.0						
TORD	**Torodi Ar. Bea**	**134.62**	**305**	PKP	PKPdf	10 54 30.0	-0.4
	0.2nm,0.4s,baz=33,slow=2.0,SNR=4.1						
CFAA	**Coronel Fontan**	**145.02**	**126**	PKPbc	PKPbc	10 54 47.6	-0.5
	0.3nm,0.5s,baz=268,slow=3.0,SNR=4.0						

*ISCJB **21** 10:48:28.6±1.1, 1781N±007×12006E±008, h46km±15km, mb3.5/7, Error ellipse: s-maj=14.8km s-min=6.9km az=40.7*
*MAN **21** 10:48:28, 1781N×12006E, h27km, mb4.5, ML3.4, MS3.3*
*IDC **21** 10:48:30.3±9.0, 1755N×12041E, h65km±86km, mb3.3/8, mb1 3.4/8, mb1mx3.3/19, mbtmp3.3/8, Error ellipse: s-maj=51.8km s-min=17.1km az=72.0*

ISC 21 10:48:29.6±1.3, 1779N±007×12008E±008, h40km±18km, n18, σ1§01/26, mb3.5/7, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.62**	**103**	eP	**Pn**	**10 48 41.0**	**-1.0**
ABRA				eS	**Sn**	**10 48 50.1**	**-0.7**
APYP	**Conner**	**1.11**	**86**	eP	**Pn**	**10 48 48.1**	**-0.7**
APYP				eS	**Sn**	**10 49 02.9**	**0.0**
BOLP	**Bolinao**	**1.41**	**186**	eP	**Pn**	**10 48 52.2**	**-0.6**
BOLP				eS	**Sn**	**10 49 10.9**	**+0.6**
BCPH	**Baguio City Da**	**1.48**	**161**	⇑*i*P	**Pn**	**10 48 53.3**	**-0.5**
BCPH				*i* S	**Sn**	**10 49 10.8**	**-1.2**
CVP	**Callao Caves**	**1.67**	**93**	eP	**Pn**	**10 48 56.0**	**-0.3**
CVP				eS	**Sn**	**10 49 16.0**	**-0.5**
CAUP	**Cauayan**	**1.87**	**117**	eP	**Pn**	**10 49 00.6**	**+1.5**
SGCP	**Mt. Cagua**	**1.93**	**76**	eP	**Pn**	**10 49 00.4**	**+0.5**
SGCP				eS	**Sn**	**10 49 23.9**	**+1.0**
SCZP	**Santa Cruz**	**2.01**	**185**	eP	**Pn**	**10 49 00.8**	**-0.3**
SCZP				eS	**Sn**	**10 49 31.2**	**+6.1**
PCPH	**Palayan**	**2.42**	**156**	⇑eP	**Pn**	**10 49 06.9**	**+0.1**
BALP	**Baler**	**2.50**	**145**	eP	**Pn**	**10 49 08.9**	**+1.1**
BALP				eS	**Sn**	**10 49 38.6**	**+1.6**
KSRS	**Korea Array**	**20.77**	**18**	P	**P**	**10 53 06.3**	**-0.7**
	0.8nm,0.6s,baz=199,slow=11,SNR=5.3						
SONM	**Songino Array**	**31.99**	**342**	P	**P**	**10 54 53.6**	**+1.7**
	0.3nm,0.3s,mb3.6,baz=164,slow=10,SNR=3.5						
WRA	**Warramunga Arr**	**40.03**	**159**	P	**P**	**10 55 55.7**	**-5.2**
	0.2nm,0.3s,mb3.3,baz=344,slow=8.8,SNR=6.2						
MKAR	**Makanchi Array**	**42.44**	**321**	P	**P**	**10 56 23.0**	**+2.5**
	0.7nm,0.7s,mb3.4,baz=114,slow=8.4,SNR=7.2						
ASAR	**Alice Springs**	**43.36**	**161**	P	**P**	**10 56 24.2**	**-3.9**
	0.1nm,0.3s,mb3.0,baz=341,slow=6.9,SNR=8.8						
ARCES	**ARCESS Array B**	**75.07**	**339**	P	**P**	**11 00 05.6**	**-1.3**
	2.0nm,0.7s,mb4.1,baz=58,slow=8.6,SNR=4.1						
AKASG	**Malin Array Be**	**76.97**	**319**	P	**P**	**11 00 17.1**	**-0.9**
	0.3nm,0.4s,mb3.6,baz=66,slow=5.3,SNR=4.1						
INK	**Inuvik**	**79.52**	**21**	P	**P**	**11 00 31.4**	**-0.4**
	0.5nm,0.8s,mb3.5,baz=338,slow=5.4,SNR=3.7						

IDC 21 10:53:06.6±2.3, 2044S×6879W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/16, mbtmp3.6/4, ML3.7/2, MS2.8/2, Ms1 2.9/2, ms1mx2.6/18, Error ellipse: s-maj=48.0km s-min=42.0km az=74.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.17**	**9**	Pn	Pn	10 54 13.8	+2.2
	2.7nm,0.3s,baz=180,slow=11,SNR=56						
LPAZ				Sn	Sn	10 55 00.5	-0.6
	1.2nm,0.3s,baz=301,slow=23,SNR=2.0						
LPAZ				LR	LR	10 55 42.6	
	comp=Z,86nm,18.4s,baz=187,slow=37						
SIV	**San Ignacio**	**8.56**	**60**	Pn	Pn	10 55 11.7	-0.2
	0.5nm,0.3s,baz=256,slow=15,SNR=7.7						
ATAH	**Atahualpa**	**16.28**	**324**	LR	LR	11 02 30.8	
	comp=Z,47nm,19.1s,baz=132,slow=35						
TORD	**Torodi Ar. Bea**	**76.89**	**71**	P	P	11 05 01.5	+0.2
	0.7nm,0.9s,baz=254,slow=6.0,SNR=3.3						
YKA	**Yellowknife Ar**	**90.23**	**341**	P	P	11 06 08.2	-0.4
	0.1nm,0.6s,baz=128,slow=4.6,SNR=3.8						

*MOS **21** 11:12:14.3±0.8, 808S×12365E, h117km, mb4.0/4, Error ellipse: s-maj=20.1km s-min=10.2km az=106.1*
*ISCJB **21** 11:12:20.6±0.8, 819S±005×12397E±007, h180km±8km, mb4.1/12, Error ellipse: s-maj=12.1km s-min=7.8km az=165.1*
*NEIC **21** 11:12:20.4±1.3, 816S×12391E, h159km±13km, mb4.5/7, Error ellipse: s-maj=13.4km s-min=8.5km az=77.0*
*IDC **21** 11:12:22.0±1.0, 818S×12389E, h173km±9km, mb3.8/8, mb1 4.0/11, mb1mx3.9/15, mbtmp3.9/11, Error ellipse: s-maj=24.2km s-min=9.4km az=71.0*

ISC 21 11:12:21.6±0.8, 817S±005×12399E±009, h171km±8km, n48, σ1§06/47, mb4.1/12, 3D, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**2.05**	**189**	P	**Pn**	**11 12 58.9**	**+0.3**
	315nm,0.3s,baz=19,slow=3.6,SNR=235						
BATI				S	**Sn**	**

MKAR	**Makanchi Array**	**66.09**	**330**	P		**P**		**11 22 50.0**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.1,baz=133,slow=7.5,SNR=24								
MA2	**Magadan**	**70.83**	**14**	*eP*		**P**		**11 23 20.8**	**+1.4**
VNDA	**Vanda**	**72.07**	**172**	P		**P**		**11 23 27.6**	**+1.0**
	comp=Z,4.4nm,1.0s,mb4.2,baz=82,slow=18,SNR=9.2								
SEY	**Seymchan**	**74.16**	**13**	P		**P**		**11 23 39.6**	**+0.6**
TIXI	**Tiksi**	**79.72**	**2**	*eP*		**P**		**11 24 09.2**	**-0.6**
	comp=Z,4.8nm,0.5s,mb4.4								
TIXI				P				11 24 09.4	
TIXI	**Tiksi**	**79.72**	**2**	*eP*		**P**		**11 24 09.2**	**-0.7**
TIXI				pmax		pmax			
	comp=Z,5.0nm,0.5s,mb4.4								
QSPA	**South Pole Qui**	**81.82**	**180**	*eP*		**P**		**11 24 22.4**	**+1.4**
YKA	**Yellowknife Ar**	**111.38**	**25**	PKPdf	PKiKP			11 30 34.6	-0.3
YKA	**Yellowknife Ar**	**111.38**	**25**	*i* PKIKP	PKiKP			11 30 34.7	-0.2
YKA	**Yellowknife Ar**	**111.38**	**25**	PKiKP	PKiKP			11 30 34.7	-0.2
	comp=Z,0.2nm,0.5s,baz=300,slow=2.1,SNR=6.4								
PDAR	**Pinedale Array**	**121.92**	**44**	PKP	PKPdf			11 30 55.9	+0.1
	comp=Z,0.4nm,0.7s,baz=108,slow=2.1,SNR=4.7								
TORD	**Torodi Ar. Bea**	**123.17**	**280**	PKP	PKPdf			11 30 58.1	-0.9
	comp=Z,0.2nm,0.5s,baz=54,slow=2.2,SNR=4.6								
ULM	**Lac du Bonnet**	**126.59**	**31**	PKP	PKPdf			11 31 04.9	+0.4
	baz=348,slow=4.0								
ANMO	**Albuquerque**	**126.75**	**52**	PKPdf	PKPdf			11 31 06.4	+1.1
TXAR	**Lajitas Array**	**130.62**	**58**	PKP	PKPdf			11 31 13.1	+0.3
	comp=Z,0.2nm,0.8s,baz=15,slow=3.7,SNR=4.2								
KSU1	**Kansas State U**	**132.34**	**43**	*e*Pdif	Pdif			11 28 10.4	-0.6
LPAZ	**La Paz**	**152.90**	**154**	PKPbc	PKPbc			11 32 01.6	+2.1
	comp=Z,0.7nm,0.3s,baz=180,slow=5.1,SNR=4.7								
LPAZ				PKPab	PKPab			11 32 11.2	+0.2
	comp=Z,0.7nm,0.5s,baz=185,slow=12,SNR=3.6								

*IDC **21** 11:29:48.4±1.0, 350N×12659E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/17, mbtmp4.1/8, MS3.6/2, Ms1 3.6/2, ms1mx2.9/28, Error ellipse: s-maj=99.2km s-min=15.4km az=70.0*

*NEIC **21** 11:29:49.7±0.6, 360N×12691E, h10km, mb4.4/3, Error ellipse: s-maj=56.5km s-min=9.2km az=71.0*

*ISCJB **21** 11:29:51.5±0.8, 35N±02×1266E±05, h33km, mb4.1/9, MS3.6/2, Error ellipse: s-maj=74.9km s-min=11.2km az=160.0*

ISC 21 11:29:53.5±0.8, 35N±02×1268E±05, h35km, n15, σ0°54/13, mb4.1/9, MS3.6/2, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.50**	**183**	*eP*		**P**		**11 34 40.5**	**+1.0**
	1.5nm,0.4s,mb3.8								
FITZ	**Fitzroy Crossi**	**21.50**	**183**	P		**P**		**11 34 39.5**	**0.0**
	1.0nm,0.4s,mb3.6,baz=357,slow=9.4,SNR=7.5								
WRA	**Warramunga Arr**	**24.47**	**163**	P		**P**		**11 35 09.2**	**-0.2**
	2.1nm,0.3s,mb4.0,baz=340,slow=11,SNR=71								
WB2	**Warramunga Arr**	**24.47**	**163**	*eP*		**P**		**11 35 08.9**	**-0.5**
ASAR	**Alice Springs**	**27.90**	**166**	P		**P**		**11 35 40.1**	**-0.2**
	0.3nm,0.3s,mb3.4,baz=343,slow=8.8,SNR=25								
KSRS	**Korea Array**	**33.80**	**2**	LR		LR		11 50 36.6	
	comp=Z,26nm,19.9s,MS3.0,baz=175,slow=37								
STKA	**Stephens Creek**	**37.92**	**159**	*eP*		**P**		**11 37 07.9**	**+0.3**
	3.8nm,0.4s,mb4.5								
STKA	**Stephens Creek**	**37.92**	**159**	P		**P**		**11 37 08.0**	**+0.4**
	5.7nm,0.6s,mb4.4,baz=336,slow=7.9,SNR=25								
SONM	**Songino Array**	**47.51**	**341**	P		**P**		**11 38 25.1**	**-0.1**
	1.3nm,0.7s,mb4.1,baz=159,slow=8.7,SNR=16								
MKAR	**Makanchi Array**	**57.74**	**325**	P		**P**		**11 39 40.1**	**-0.8**
	1.0nm,0.4s,mb4.2,baz=117,slow=7.8,SNR=9.4								
KURK	**Kurchatov**	**61.93**	**328**	*eP*		**P**		**11 40 10.3**	**+0.7**
	3.2nm,0.6s,mb4.6								
AKTK	**Aktyubinsk**	**73.84**	**322**	P		**P**		**11 41 24.4**	**-0.3**
AKTO	**Aktyubinsk**	**73.84**	**322**	P		**P**		**11 41 24.4**	**-0.3**
	1.3nm,0.6s,mb4.1,baz=99,slow=11,SNR=7.3								
VNDA	**Vanda**	**83.2**	**173**	LR		LR		12 15 46.8	
	comp=Z,102nm,19.5s,MS4.2,baz=339,slow=33								
ARCES	**ARCESS Array B**	**90.66**	**340**	P		**P**		**11 42 53.1**	**+1.0**
	4.7nm,1.1s,mb4.7,baz=61,slow=7.3,SNR=3.4								

IDC 21 11:33:24.8±2.0, 434N×7346W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/17, mbtmp3.5/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/21, Error ellipse: s-maj=193.6km s-min=31.3km az=75.0, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**12.29**	**204**	LR		LR		11 41 40.4	
	comp=Z,32nm,19.2s,baz=264,slow=40								
LPAZ	**La Paz**	**21.16**	**166**	P		P		11 38 12.4	+0.7
	0.6nm,0.3s,baz=352,slow=7.1,SNR=7.5								
YKA	**Yellowknife Ar**	**65.47**	**340**	P		P		11 44 09.5	+0.1
	0.5nm,0.8s,baz=128,slow=7.0,SNR=8.1								
WRA	**Warramunga Arr**	**148.80**	**238**	PKPbc		PKPbc		11 53 14.6	-0.7
	0.5nm,0.9s,baz=104,slow=3.0,SNR=4.5								

TRN 21 11:33:59.4, 1467N×6073W, h40km, MD3.6, M2.7(FDF), 2C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.20**	**236**	⇓*iP*		Pn		11 34 07.9	+1.3
BIM	**Bigot**	**0.36**	**246**	⇓*iP*		Pn		11 34 10.1	+1.7
BIM				*e*S		Sn		11 34 16.9	+2.2
FDF	**Fort de France**	**0.42**	**279**	⇓*iP*		Pn		11 34 10.9	+1.9
FDF				*e*S		Sn		11 34 18.2	+2.4
SLB	**Belfond**	**0.89**	**200**	*eP*		Pn		11 34 16.3	+0.9
SLB				*e*S		Sn		11 34 23.3	-3.7
DWS	**Wesley**	**1.06**	**328**	*eP*		Pn		11 34 21.2	+3.4
DWS				*e*S		Sn		11 34 32.9	+1.6
MGG	**Marie-Galante**	**1.37**	**335**	⇑*iP*		Pn		11 34 24.1	+2.1
TBG	**Guadaloupe-3**	**1.48**	**323**	⇑*eP*		Pn		11 34 26.7	+3.2
FCV	**Fort Charlotte**	**1.58**	**199**	*eP*		Pn		11 34 26.9	+2.0
FCV				*e*S		Sn		11 34 44.3	+0.1
SCG	**Saint Claude**	**1.64**	**326**	*eP*		Pn		11 34 29.7	+3.9
DEG	**La Desirade**	**1.67**	**349**	*eP*		Pn		11 34 27.0	+0.8
DEG				*e*S		Sn		11 34 48.5	+2.2

IDC 21 11:37:06.0±2.1, 584S×13117E, h0km, mb3.5/1, mb1 4.0/5, mb1mx3.7/12, mbtmp3.9/5, ML4.0/4, Error ellipse: s-maj=59.4km s-min=27.7km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**8.61**	**239**	Pn		Pn		11 39 12.4	+0.6
	5.0nm,0.3s,baz=73,slow=11,SNR=5.6								
BATI				Sn		Sn		11 40 37.8	-12
	3.2nm,0.3s,baz=249,slow=9.1,SNR=3.6								
FITZ	**Fitzroy Crossi**	**13.33**	**203**	Pn		Pn		11 40 14.9	-1.7
	0.3nm,0.3s,baz=26,slow=13,SNR=7.4								
FITZ				Sn		Sn		11 42 24.1	-21
	0.8nm,0.3s,baz=99,slow=23,SNR=7.5								
WRA	**Warramunga Arr**	**14.35**	**168**	Pn		Pn		11 40 30.6	0.0
	0.7nm,0.3s,baz=352,slow=13,SNR=32								
WRA				Sn		Sn		11 42 59.7	-11
	1.0nm,0.3s,baz=332,slow=24,SNR=7.0								
ASAR	**Alice Springs**	**17.92**	**172**	P		Pn		11 41 17.6	+0.8
	0.5nm,0.3s,baz=345,slow=9.7,SNR=42								
ASAR				S		Sn		11 44 22.2	-15
	0.2nm,0.3s,baz=353,slow=27,SNR=4.9								
MKAR	**Makanchi Array**	**67.91**	**326**	P		P		11 48 06.5	+0.1
	0.3nm,0.5s,baz=127,slow=7.5,SNR=3.1								

IDC 21 12:17:32.0±1.0, 2208N×14317E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.8/16, mbtmp3.6/6, Error ellipse: s-maj=39.3km s-min=22.0km az=92.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.20**	**323**	P		P		11 22 12.2	+3.8
	0.9nm,0.6s,baz=142,slow=9.2,SNR=2.9								
SONM	**Songino Array**	**39.04**	**320**	P		P		11 25 00.5	+0.1
	0.2nm,0.5s,baz=132,slow=6.5,SNR=5.7								
WRA	**Warramunga Arr**	**42.65**	**192**	P		P		11 25 30.0	-0.4
	0.8nm,0.7s,baz=13,slow=8.4,SNR=10								
ASAR	**Alice Springs**	**46.35**	**192**	P		P		11 26 00.3	+0.3
	0.6nm,0.6s,baz=16,slow=11,SNR=13								
MKAR	**Makanchi Array**	**54.43**	**312**	P		P		11 27 01.1	+0.1
	0.3nm,0.6s,baz=92,slow=8.9,SNR=4.0								
YKA	**Yellowknife Ar**	**76.13**	**28**	P		P		11 29 21.2	-0.2
	0.3nm,0.5s,baz=293,slow=5.9,SNR=7.1								
NVAR	**Mina Array Bea**	**82.92**	**52**	P		P		11 29 59.7	+0.7
	0.3nm,0.4s,baz=268,slow=6.0,SNR=4.0								

*NEIC **21** 12:31:10.6, 28.12S×7046W, h74km, MG4.3(GUC), After GUC.*

NEIC Felt [II] at Vallenar.

GUC 21 12:31:10.6±0.7, 2812S×7046W, h74km±7km, ML4.3, 5C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.53**	**210**	⇑*iP*		Pn		12 31 24.5	+0.5
VACH				*i*S		Sn		12 31 34.3	+0.5
VACH	**Vallenar**	**0.53**	**210**	⇑*iP*		Pn		12 31 24.5	+0.5
VACH				*i*S		Sn		12 31 34.3	+0.5
VACH				AML		AML		12 31 35.5	
	comp=N,26μm,0.1s								
CPCH	**Copiapo**	**0.76**	**7**	⇓*iP*		Pn		12 31 26.8	+0.3
CPCH				*i*S		Sn		12 31 38.9	+0.7
CPCH	**Copiapo**	**0.76**	**7**	⇓*iP*		Pn		12 31 26.8	+0.3
CPCH				*i*S		Sn		12 31 38.9	+0.7
CPCH				AML		AML		12 31 40.3	
	comp=E,57μm,0.1s								
LCO	**Las Campanas**	**0.91**	**193**	*eP*		Pn		12 31 28.7	+0.5
LCO				*e*S		Sn		12 31 42.7	+1.3
LSCH	**La Serena**	**1.91**	**201**	⇑*iP*		Pn		12 31 41.2	+0.1
LSCH				*i*S		Sn		12 32 05.0	+0.7
TLL	**Tololo Astrono**	**2.06**	**188**	*eP*		Pn		12 31 44.4	+1.3
TLL				*i*S		Sn		12 32 10.1	+2.1
OVCH	**Ovalle**	**2.56**	**194**	*i*P		Pn		12 31 49.5	-0.4
OVCH				*i*S		Sn		12 32 19.4	-0.6
OVCH	**Ovalle**	**2.56**	**194**	*i*P		Pn		12 31 49.5	-0.4
OVCH				*i*S		Sn		12 32 19.4	-0.6
OVCH				AML		AML		12 32 26.4	
	comp=N,426nm,0.5s								
CMCH	**Combarbala**	**3.08**	**189**	⇑*iP*		Pn		12 31 56.7	-0.2
CMCH				*i*S		Sn		12 32 32.3	-0.3
CMCH	**Combarbala**	**3.08**	**189**	⇑*iP*		Pn		12 31 56.7	-0.2
CMCH				*i*S		Sn		12 32 32.3	-0.3
CMCH				AML		AML		12 32 49.9	
	comp=E,815nm,0.6s								
CHNG	**Los Chungos**	**3.86**	**193**	*eP*		Pn		12 31 50.6	-17
CHNG				*i*S		Sn		12 32 34.2	-17
FCH	**Farellones**	**5.19**	**178**	⇓*eP*		Pn		12 32 26.9	+1.2

IDC 21 12:34:54.4±2.8, 2111S×6841W, h133km±24km, mb3.3/2, mb1 3.4/5, mb1mx3.3/16, mbtmp3.3/5, Error ellipse: s-maj=41.9km s-min=26.8km az=101.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.80**	**3**	P		Pn		12 36 06.7	+1.8
	0.9nm,0.3s,baz=213,slow=6.8,SNR=21								
LPAZ				S		Sn		12 36 58.8	-1.0
	0.1nm,0.3s,baz=225,slow=13,SNR=2.8								
SIV	**San Ignacio**	**8.62**	**55**	P		Pn		12 36 54.8	-1.4
	2.0nm,0.3s,baz=254,slow=11,SNR=22								
PLCA	**Paso Flores**	**19.64**	**185**	P		P		12 39 12.7	+0.1
	0.1nm,0.3s,baz=353,slow=12,SNR=4.4								
TORD	**Torodi Ar. Bea**	**76.78**	**70**	P		P		12 46 31.9	+0.1
	0.5nm,0.4s,baz=246,slow=5.1,SNR=7.9								
YKA	**Yellowknife Ar**	**90.98**	**340**	P		P		12 47 41.4	-1.4
	0.1nm,0.5s,baz=133,slow=4.5,SNR=4.6								
MKAR	**Makanchi Array**	**145.04**	**36**	PKPbc		PKPbc		12 54 16.1	+0.6
	0.2nm,0.3s,baz=324,slow=2.0,SNR=5.0								

MAN 21 13:33:03, 1240N×12476E, h22km, mb4.4, ML3.2, MS3.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.14**	**321**	*eP**		Pb		13 33 09.1	+1.4
CNP				*e*S		Sb		13 33 13.5	+2.7
BESP	**Borongan**	**1.04**	**140**	*eP*		Pn		13 33 22.4	+0.2
BESP				*e*S		Sb		13 33 36.4	+1.0
PLP	**Palo**	**1.25**	**170**	*eP*		Pn		13 33 24.9	-0.1
PLP				*e*S		Sn		13 33 41.1	-0.1
PVCP	**Virac**	**1.33**	**334**	⇓*iP*		Pn		13 33 26.4	+0.1
PVCP				*i*S		Sn		13 33 44.0	+0.7
PVCP	**Virac**	**1.33**	**334**	*eP*		Pn		13 33 25.9	-0.3
PVCP				*e*S		Sn		13 33 43.6	+0.3
MSLP	**Maasin**	**2.25**	**177**	*eP*		Pn		13 33 42.5	+3.6
MSLP				*e*S		Sn		13 34 12.1	+6.0
OTRP	**Odiongan**	**2.67**	**270**	*eP*		Pn		13 33 45.2	+0.5
OTRP				*e*S		Sn		13 34 18.9	+2.4
GUIM	**Jordan**	**2.76**	**231**	*eP*		Pn		13 33 46.2	+0.3
POLP	**Polilio Island**	**3.59**	**311**	*eP*		Pn		13 34 01.1	+3.8

*ISCJB **21** 13:48:06.3±0.5, 286S±0.1×744E±0.1, h10km, mb4.2/16, MS3.8/14, Error ellipse: s-maj=16.8km s-min=13.1km az=26.6*

*IDC **21** 13:48:06.4±0.6, 2846S×7437E, h0km, mb4.1/12, mb1 4.2/12, mb1mx4.1/22, mbtmp4.1/12, MS3.8/14, Ms1 3.8/14, ms1mx3.6/30, Error ellipse: s-maj=22.6km s-min=16.6km az=13.0*

*NEIC **21** 13:48:08.1±0.4, 2851S×7434E, h10km, mb4.7/6, Error ellipse: s-maj=13.8km s-min=10.6km az=208.0*

ISC 21 13:48:08.3±0.5, 285S±01×744E±01, h10km, n30, σ0°70/20, mb4.2/16, MS3.8/14, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**39.06**	**41**	LR		LR		14 07 28.1	
	comp=Z,221nm,19.1s,MS4.0,baz=207,slow=30								
MAW	**Mawson**	**39.72**	**187**	LR		LR		14 08 08.6	
	comp=Z,159nm,19.6s,MS3.9,baz=58,slow=30								
MATP	**Matopo**	**42.32**	**270**	P		**P**		**13 56 03.4**	**+0.8**
	1.5nm,0.8s,mb3.7,baz=127,slow=5.1,SNR=2.7								
BOSA	**Boshof**	**42.89**	**258**	LR		LR		14 10 01.4	
	comp=Z,189nm,20.2s,MS4.0,baz=115,slow=31								
LSZ	**Lusaka**	**44.57**	**277**	P		**P**		**13 56 21.3**	**+0.4**
	1.4nm,0.7s,mb3.9,baz=172,slow=7.1,SNR=2.9								
KMBO	**Kilima Mbogo**	**44.70**	**301**	LR		LR		14 11 05.6	
	comp=Z,53nm,18.7s,MS3.5,baz=97,slow=31								
FITZ	**Fitzroy Crossi**	**47.90**	**89**	*eP*		**P**		**13 56 48.0**	**+1.0**
	4.2nm,0.6s,mb4.7								
FITZ	**Fitzroy Crossi**	**47.90**	**89**	P		**P**		**13 56 47.1**	**+0.1**
	3.3nm,0.9s,mb4.4,baz=257,slow=8.0								
FITZ				LR		LR		14 15 08.4	
	comp=Z,38nm,20.6s,MS3.4,baz=286,slow=34								
BATI	**Kupang**	**49.56**	**79**	LR		LR		14 15 37.9	
	comp=Z,136nm,18.1s,MS4.0,baz=251,slow=33								
ASAR	**Alice Springs**	**53.22**	**99**	P		**P**		**13 57 27.4**	**+0.2**
	3.3nm,0.6s,mb4.4,baz=249,slow=6.5,SNR=79								
ASAR				PcP		PcP		13 58 34.5	-0.6
	1.1nm,0.9s,baz=240,slow=3.4,SNR=4.8								
WRA	**Warramunga Arr**	**54.87**	**95**	P		**P**		**13 57 39.4**	**+0.1**
	7.3nm,0.8s,mb4.8,baz=251,slow=7.2,SNR=38								
WRA				PcP		PcP		13 58 40.5	-0.9
	0.6nm,0.7s,baz=250,slow=2.9,SNR=5.1								
WB2	**Warramunga Arr**	**54.88**	**95**	*eP*		**P**		**13 57 39.5**	**+0.2**
STKA	**Stephens Creek**	**57.35**	**111**	*eP*		**P**		**13 57 57.0**	**+0.1**
	2.1nm,1.3s,mb4.0								
STKA	**Stephens Creek**	**57.35**	**111**	P		**P**		**13 57 56.6**	**-0.2**
	1.5nm,0.7s,mb4.2,baz=242,slow=7.5,SNR=5.3								
STKA				LR		LR		14 18 38.8	
	comp=Z,104nm,19.2s,MS4.0,baz=8.2,slow=32								
SNAA	**Sanae**	**59.19**	**201**	LR		LR		14 17 48.5	
	comp=Z,39nm,18.3s,MS3.6,baz=144,slow=30								
QSPA	**South Pole Qui**	**61.62**	**180**	P		**P**		**13 58 25.7**	**+0.2**
	1.5nm,0.9s,mb4.1,baz=355,slow=1.9,SNR=8.6								
VNDA	**Vanda**	**61.83**	**166**	P		**P**		**13 58 26.5**	**-0.6**
	1.3nm,0.8s,mb4.1,baz=275,slow=7.0,SNR=5.4								
CTA	**Charters Tower**	**65.20**	**100**	LR		LR		14 23 48.2	
	comp=Z,112nm,18.8s,MS4.1,baz=122,slow=33								
AML	**Almayashu**	**70.30**	**359**	*eP*		**P**		**13 59 22.6**	**+0.9**
	3.6nm,0.8s,mb4.3								
PMG	**Port Moresby**	**70.48**	**90**	LR		LR		14 28 03.1	
	comp=Z,58nm,19.4s,MS3.8,baz=271,slow=34								
EKS2	**Erkin-Say**	**70.83**	**360**	*eP*		**P**		**13 59 26.0**	**+1.0**
	10nm,1.4s,mb4.6								
TKM2	**Tokmak 2**	**71.09**	**1**	*eP*		**P**		**13 59 27.1**	**+0.5**
	10nm,1.1s,mb4.7								
MK31	**Makanchi Array**	**75.30**	**6**	*eP*		**P**		**13 59 50.4**	**-0.9**
MKAR	**Makanchi Array**	**75.30**	**6**	P		**P**		**13 59 50.1**	**-1.2**
	1.2nm,0.7s,mb3.9,baz=188,slow=5.2,SNR=12								
MKAR				LR		LR		14 31 23.1	
	comp=Z,39nm,19.2s,MS3.7,baz=264,slow=34								
KURK	**Kurchatov**	**78.97**	**3**	*eP*		**P**		**14 00 11.8**	**0.0**
	16nm,1.8s,mb4.7								
SONM	**Songino Array**	**81.27**	**21**	P		**P**		**14 00 24.5**	**+0.1**
	1.6nm,0.7s,mb4.0,baz=196,slow=6.9,SNR=18								
TORD	**Torodi Ar. Bea**	**81.50**	**290**	P		**P**		**14 00 24.9**	**-1.5**
	0.5nm,0.8s,mb3.5,baz=109,slow=4.4,SNR=3.4								
TORD				LR		LR		14 34 39.7	
	comp=Z,54nm,19.5s,MS3.9,baz=145,slow=34								
KSRS	**Korea Array**	**82.62**	**40**	P		**P**		**14 00 30.9**	**-0.8**
	1.4nm,0.8s,mb4.1,baz=216,slow=6.0,SNR=6.9								
KSRS				LR		LR		14 34 13.1	
	comp=Z,62nm,18.9s,MS4.0,baz=333,slow=34								
DBIC	**Dimbokro**	**83.77**	**281**	LR		LR		14 36 45.2	
	comp=Z,30nm,19.4s,MS3.7,baz=119,slow=35								
YKA	**Yellowknife Ar**	**145.51**	**7**	PKPbc		PKPbc		14 07 44.7	-1.4
	2.0nm,0.9s,baz=334,slow=3.9,SNR=24								

*ISCJB **21** 13:52:22.8±0.5, 2758N±006×1399E±0.1, h480km±7km, mb3.3/9, Error ellipse: s-maj=18.4km s-min=8.7km az=169.8*

*IDC **21** 13:52:23.6±0.6, 2757N×13999E, h472km±8km, mb2.9/8, mb1 3.1/12, mb1mx3.0/19, mbtmp3.0/12, Error ellipse: s-maj=22.4km s-min=11.6km az=74.0*

*JMA **21** 13:52:24.3±0.1, 2779N×14064E, h495km, M3.9*

*NEIC **21** 13:52:24.3, 2779N×14064E, h495km, MG3.9(JMA), After JMA.*

ISC 21 13:52:24.0±0.5, 2758N±006×1400E±01, h476km±6km, n28, σ0°80/32, mb3.3/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.00**	**104**	P		**P**		**13 53 27.2**	**+0.3**
CBIJ				*e*S		**S**		**13 54 16.9**	**-1.0**
CBIJ	**Chichi jima**	**2.00**	**104**	P		**P**		**13 53 27.2**	**+0.3**
	28nm,0.3s,baz=261,slow=16,SNR=30								
CBIJ				S		**S**		**13 54 16.9**	**-0.9**
	36nm,0.3s,baz=285,slow=22,SNR=11								
JHHJ	**Haha-jima-NKT**	**2.16**	**116**	P		**P**		**13 53 28.7**	**+1.0**
JHHJ				*e*S		**S**		**13 54 19.4**	**0.0**
BSO1	**Boso 1**	**7.10**	**6**	P		**P**		**13 54 10.5**	**+0.3**
BSO1				*e*S		**S**		**13 55 36.0**	**-1.4**
BSO3	**Boso 3**	**7.21**	**3**	P		**P**		**13 54 11.8**	**+0.4**
JIE	**Ise**	**7.35**	**338**	P		**P**		**13 54 15.5**	**+2.6**
JHU	**Hanno**	**8.27**	**356**	P		**P**		**13 54 21.4**	**-1.1**
JRY	**Ryogami san**	**8.46**	**354**	P		**P**		**13 54 25.6**	**+1.1**
JYT	**Yasato**	**8.62**	**1**	P		**P**		**13 54 26.2**	**0.0**
JAG	**Ashikaga**	**8.83**	**357**	P		**P**		**13 54 27.7**	**-0.7**
JHO	**Hitachi**	**9.02**	**3**	P		**P**		**13 54 30.8**	**+0.4**
MJAR	**Matsushiro Arr**	**9.06**	**351**	P		**P**		**13 54 30.5**	**-0.4**
	1.2nm,0.3s,baz=169,slow=11,SNR=12								
MAT	**Matsushiro**	**9.06**	**351**	P		**P**		**13 54 30.4**	**-0.5**
JNU	**Nakatsue**	**9.62**	**307**	P		**P**		**13 54 38.0**	**+1.0**
	0.2nm,0.3s,baz=205,slow=9.1,SNR=3.1								
JMM	**Marumori**	**10.28**	**3**	P		**P**		**13 54 45.0**	**+1.1**
JOW	**Kunigami**	**10.47**	**269**	P		**P**		**13 54 44.9**	**-1.3**
	2.4nm,0.3s,baz=131,slow=7.6,SNR=5.6								
SONM	**Songino Array**	**33.03**	**317**	P		**P**		**13 58 18.7**	**+0.2**
	0.2nm,0.3s,mb3.0,baz=116,slow=6.6,SNR=3.2								
WRA	**Warramunga Arr**	**47.56**	**187**	P		**P**		**14 00 15.3**	**-0.1**
	0.4nm,0.3s,mb3.2,baz=7.3,slow=7.9,SNR=44								
MKAR	**Makanchi Array**	**48.67**	**309**	P		**P**		**14 00 23.4**	**-0.1**
	0.4nm,0.3s,mb3.2,baz=89,slow=11,SNR=4.8								
ASAR	**Alice Springs**	**51.29**	**187**	P		**P**		**14 00 42.9**	**-0.1**
	0.1nm,0.3s,mb2.7,baz=358,slow=4.8,SNR=7.4								
STKA	**Stephens Creek**	**59.15**	**178**	P		**P**		**14 01 37.9**	**0.0**
STKA	**Stephens Creek**	**59.15**	**178**	P		**P**		**14 01 37.9**	**0.0**
	1.2nm,0.8s,mb3.3,baz=342,slow=6.1,SNR=3.1								
ARCES	**ARCESS Array B**	**72.44**	**340**	P		**P**		**14 03 01.1**	**+0.4**
	3.1nm,0.9s,mb3.8,baz=74,slow=9.5,SNR=3.2								
YKA	**Yellowknife Ar**	**72.63**	**28**	P		**P**		**14 03 02.2**	**+0.3**
YKA	**Yellowknife Ar**	**72.63**	**28**	P		**P**		**14 03 02.2**	**+0.3**
	0.2nm,0.6s,mb2.9,baz=300,slow=5.6,SNR=6.2								
JOF	**Joensuu**	**73.78**	**333**	*ep*		**P**		**14 03 07.6**	**-0.9**
	0.6nm,0.3s,mb3.6								
FINES	**FINESS Array B**	**76.65**	**333**	P		**P**		**14 03 24.3**	**-0.3**
FINES	**FINESS Array B**	**76.65**	**333**	P		**P**		**

UKT Pmax 14 55 51.4
comp=N,15μm,0.8s
UKT eSg **Sg** **14 55 55.9 +3.6**
UKT Smax 14 56 03.4
comp=N,38μm,1.4s
SVKR Severomuysk 0.34 1 ePG **Pg** **14 55 49.3 +0.2**
SVKR e 14 55 53.8
SVKR pmax pmax
comp=Z,13μm,1.0s
SVKR smax
comp=N,115μm,1.2s
SVKR Severomuysk 0.34 1⇑ iPg **Pg** **14 55 49.3 +0.2**
SVKR Pmax 14 55 51.2
comp=N,9μm,0.3s
SVKR eSg **Sg** **14 55 54.2 +0.6**
SVKR Smax 14 55 55.4
comp=N,115μm,1.1s
YOA Uoyan 1.08 290⇑ iPG **Pg** **14 56 01.5 -1.7**
YOA i 14 56 15.7
YOA pmax pmax
comp=Z,9μm,0.3s
YOA smax
comp=N,60μm,0.4s
KMO Kumora 1.33 275⇑ iPN **Pn** **14 56 05.9 -1.1**
KMO e 14 56 21.1
KMO pmax pmax
comp=Z,5μm,0.4s
KMO smax
comp=N,38μm,0.6s
NLYR Nelyaty 1.40 59 ePN **Pn** **14 56 08.2 +0.3**
NLYR eS **Sn** **14 56 26.8 +0.4**
NLYR Nelyaty 1.40 59 ePg **Pg** **14 56 08.7 -0.5**
NLYR eSg **Sg** **14 56 28.1 +0.7**
NLYR e 14 56 35.4
YLYR Ulyunkhan 1.64 237 ePN **Pg** **14 56 12.8 -1.0**
YLYR e 14 56 34.3
YLYR pmax pmax
comp=Z,703nm,0.3s
YLYR smax
comp=E,5μm,0.3s
YLYR Ulyunkhan 1.64 237⇑ iPg **Pg** **14 56 12.8 -1.0**
YLYR Pmax 14 56 23.7
comp=E,756nm,0.5s
YLYR eSg **Sg** **14 56 34.8 -0.2**
YLYR Smax 14 56 37.6
comp=E,5μm,0.2s
BOD Bodaibo 2.06 7⇑ iPN **Pn** **14 56 17.5 +0.5**
BOD e 14 56 43.1
BOD pmax pmax
comp=Z,2μm,0.7s
BOD smax
comp=N,12μm,0.8s
BOD Bodaibo 2.06 7⇓ iPg **Pg** **14 56 18.2 -3.6**
BOD Pmax 14 56 23.9
comp=N,1μm,1.2s
BOD eSg **Sg** **14 56 44.0 -4.5**
BOD Smax 14 56 44.8
comp=N,12μm,0.9s
NIZ Nizh Angarsk 2.26 271 ePN **Pn** **14 56 20.3 +0.5**
NIZ e 14 56 22.2
NIZ e 14 56 49.0
NIZ pmax pmax
comp=Z,770nm,1.0s
NIZ smax
comp=N,3μm,0.6s
NIZ Nizh Angarsk 2.26 271⇑ iPg **Pn** **14 56 20.4 +0.6**
NIZ Pmax 14 56 30.8
comp=N,1μm,1.0s
NIZ eSg **Sn** **14 56 49.3 +1.6**
NIZ Smax 14 57 12.8
comp=N,4μm,2.3s
CRS Chara 2.86 65 ePN **Pg** **14 56 35.1 -2.0**
CRS e 14 57 12.6
CRS pmax pmax
comp=Z,1μm,1.0s
CRS smax
comp=E,5μm,1.1s
CRS Chara 2.86 65⇓ iPn **Pn** **14 56 28.8 +0.9**
CRS ePg **Pg** **14 56 35.6 -1.5**
CRS Pmax 14 56 40.7
comp=E,1μm,1.1s
CRS eSg **Sg** **14 57 13.1 -1.0**
CRS Smax 14 57 21.5
comp=E,5μm,1.8s
SYVR Suvo 2.96 226 ePN **Pg** **14 56 37.4 -1.7**
SYVR e 14 57 15.0
SYVR pmax pmax
comp=Z,364nm,0.8s
SYVR smax
comp=E,2μm,1.0s
SYVR Suvo 2.96 226 ePn **Pn** **14 56 30.5 +1.1**
SYVR ePg **Pg** **14 56 34.9 -4.2**
SYVR Pmax 14 56 36.9
comp=E,373nm,0.8s
SYVR eSg **Sg** **14 57 15.2 -2.2**
SYVR Smax 14 57 25.2
comp=E,5μm,1.7s
KHNR Khani 3.75 70 e **Pn** **14 56 42.6 +2.3**
KHNR e 14 57 25.5
KHNR eSg **Sg** **14 57 40.3 -2.6**
CIT Chita 3.77 180 ePN **Pg** **14 56 52.2 -2.3**
CIT e 14 57 43.3
CIT pmax pmax
comp=Z,894nm,1.5s
CIT smax
comp=E,7μm,1.5s
CIT Chita 3.77 180⇓ iPn **Pn** **14 56 41.4 +0.9**
CIT ePg **Pg** **14 56 52.2 -2.3**
CIT Pmax 14 56 53.5
comp=E,896nm,1.5s
CIT eSg **Sg** **14 57 42.5 -0.8**
CIT Smax 14 57 47.6
comp=E,7μm,1.2s
MXMB Maximikha 3.77 230 ePn **Pn** **14 56 41.0 +0.5**
MXMB ⇓iPg **Pg** **14 56 51.5 -3.0**
MXMB Pmax 14 57 14.5
comp=E,314nm,1.4s
MXMB eSg **Sg** **14 57 41.8 -1.5**
MXMB Smax 14 57 50.6
comp=E,4μm,1.0s
TUP Tupik 3.92 108 ePN **Pg** **14 56 54.1 -3.4**
TUP e 14 57 47.6
TUP pmax pmax
comp=Z,742nm,1.1s
TUP smax
comp=N,6μm,1.3s
TUP Tupik 3.92 108⇓ iPn **Pn** **14 56 44.0 +1.4**
TUP ePg **Pg** **14 56 55.6 -1.9**
TUP Pmax 14 57 03.4
comp=N,774nm,1.6s
TUP eSg **Sg** **14 57 47.9 -0.3**
TUP Smax 14 58 02.1
comp=N,6μm,1.3s
OGRR Ongureny 4.06 241 ePN **Pn** **14 56 45.1 +0.6**
OGRR e 14 56 55.4
OGRR e 14 57 47.7
OGRR pmax pmax
comp=Z,178nm,0.6s
OGRR smax
comp=E,759nm,0.7s
OGRR Ongureny 4.06 241⇓ iPn **Pn** **14 56 45.1 +0.6**
OGRR ePg **Pg** **14 56 54.6 -5.6**
OGRR Pmax 14 57 08.0
comp=E,305nm,1.1s
OGRR eSg **Sg** **14 57 48.1 -4.7**
OGRR Smax 14 57 54.2
comp=E,1μm,1.4s
ZRHB Zarechye 4.96 232 e **Pn** **14 57 01.7 +4.9**
ZRHB Pg **Pg** **14 57 13.0 -4.3**
ZRHB Pmax 14 57 34.7
comp=E,258nm,1.1s
ZRHB e 14 57 53.5
ZRHB eSg **Sg** **14 58 17.3 -4.1**
ZRHB Smax 14 58 32.6
comp=E,4μm,1.1s
TRG Tyrgan 5.19 237 ePN **Pg** **14 57 15.2 -6.6**
TRG e 14 58 23.0
TRG pmax pmax
comp=Z,56nm,0.6s
TRG smax
comp=E,632nm,0.7s
TRG Tyrgan 5.19 237 ePn **Pn** **14 57 00.9 +0.9**
TRG ePg **Pg** **14 57 16.1 -5.7**
TRG Pmax 14 57 41.0
comp=E,62nm,0.7s
TRG eSn **Sn** **14 58 01.4 +1.5**
TRG eSg **Sg** **14 58 23.1 -5.9**
TRG Smax 14 58 36.2
comp=E,637nm,0.7s
FFNB Fofonovo 5.48 230 e **Pn** **14 57 07.1 +3.1**
FFNB e 14 57 23.5
FFNB max 14 57 37.2
comp=E,163nm,1.0s
FFNB eSg **Sg** **14 58 33.3 -5.0**
FFNB Smax 14 58 48.9
comp=E,2μm,1.0s
KAB Kabansk 5.53 230 e Sn 14 57 38.3 -30
KAB max 14 57 52.1
comp=E,420nm,1.0s
KAB eSg **Sg** **14 58 34.1 -5.7**
KAB Smax 14 58 36.8
comp=E,5μm,1.8s
HRMR Khuramsha 5.71 226⇓ iPn **Pn** **14 57 08.8 +1.6**
HRMR ePg **Pg** **14 57 26.6 -5.1**
HRMR Pmax 14 57 33.8
comp=E,213nm,0.7s
HRMR eSg **Sg** **14 58 42.3 -3.4**
HRMR Smax 14 59 01.6
comp=E,3μm,1.2s
KPC Khapcheranga 6.13 187 ePG **Pg** **14 57 35.7 -4.0**
KPC eSG **Sg** **14 58 55.1 -3.9**
KPC Khapcheranga 6.13 187 ePn **Pn** **14 57 13.5 +0.6**
KPC ePg **Pg** **14 57 33.8 -5.9**
KPC Pmax 14 57 42.0
comp=E,92nm,1.3s
KPC e 14 58 38.3
KPC eSg **Sg** **14 58 55.0 -4.0**
KPC Smax 14 59 10.2
comp=E,2μm,1.2s
NRGR Nerungri 6.30 77 ePN **Pn** **14 57 23.8 +8.6**
IENR Iengra 6.36 81 e **Pn** **14 57 17.1 +1.0**
IENR eSg **Sg** **14 59 00.6 -5.9**
LSTR Listvyanka 6.48 236 e **Pg** **14 57 45.1 -1.3**
LSTR max 14 58 16.0
comp=E,62nm,1.4s
LSTR eSg **Sg** **14 59 03.4 -6.8**
LSTR Smax 14 59 08.2
comp=E,925nm,1.8s
IRK Irkutsk 6.52 241 ePN **Pn** **14 57 18.7 +0.5**
IRK e 14 57 40.1
IRK e 14 59 02.9
IRK pmax pmax
comp=Z,118nm,0.1s
IRK smax
comp=E,2μm,0.9s
IRK Irkutsk 6.52 241 e **Pg** **14 57 36.6 -10**
IRK max 14 57 52.2
comp=E,128nm,0.5s
IRK e 14 58 40.6
IRK eSg **Sg** **14 59 04.3 -7.1**
IRK Smax 14 59 15.5
comp=E,2μm,0.9s
TLY Talaya 7.17 239 ePn **Pn** **14 57 26.9 -0.2**
comp=E,38nm,0.6s
TLY eSg **Sg** **14 59 23.4 -8.8**
TLY Talaya 7.17 239 ePN **Pn** **14 57 27.1 0.0**
TLY e 14 57 53.4
TLY e 14 59 23.9
TLY pmax pmax
comp=Z,41nm,0.5s
TLY smax
comp=N,589nm,1.5s
TLY Talaya 7.17 239 ePn **Pn** **14 57 27.0 -0.1**
TLY e 14 57 53.9
TLY max 14 58 20.8
comp=N,38nm,1.3s
TLY e 14 59 17.4
TLY eSg **Sg** **14 59 24.3 -7.9**
TLY Smax 15 00 00.3
comp=N,685nm,1.6s
HIA Hailar 7.54 147 ePn **Pn** **14 57 30.9 -1.3**
comp=N,85nm,1.1s
HIA Hailar 7.54 147 ePN **Pn** **14 57 30.9 -1.3**
HIA pmax pmax
comp=Z,85nm,1.1s
ZAK Zakamensk 8.21 233 ePN **Pn** **14 57 44.8 +3.4**
ZAK e 14 58 11.5
ZAK e 14 59 57.5
ZAK pmax pmax
comp=Z,14nm,1.0s
ZAK smax
comp=N,838nm,2.0s
ZAK Zakamensk 8.21 233 ePn **Pn** **14 57 40.6 -0.8**
ZAK e 14 57 49.4
ZAK max 14 57 50.7
comp=N,26nm,1.6s
ZAK eSg Sn 14 59 59.8 +46
ZAK Smax 15 00 23.3
comp=N,839nm,1.9s
MOY Mondy 8.51 246 ePN **Pn** **14 57 46.4 +0.9**
MOY e 14 58 13.7
MOY eS **Sn** **14 59 23.7 +2.2**
MOY e 15 00 06.7
MOY pmax pmax
comp=Z,79nm,0.5s
MOY pmax pmax
comp=E,830nm,1.4s
MOY Mondy 8.51 246⇓⇑ iPn **Pn** **14 57 46.3 +0.8**
MOY i 14 57 50.3
MOY e 14 58 01.3
MOY max 14 58 03.4
comp=E,103nm,1.5s
MOY e 14 59 27.0
MOY eSg Sn 15 00 04.0 +43
MOY Smax 15 00 30.9
comp=E,809nm,1.5s
ORL Orlik 8.69 254⇓⇑ iPn **Pn** **14 57 48.7 +0.7**
ORL i 14 57 52.1
ORL e 14 58 01.2
ORL max 14 58 05.1
comp=E,73nm,1.2s
ORL e 14 59 25.4
ORL e 14 59 41.6
ORL eSg Sn 15 00 10.9 +45
ORL Smax 15 00 18.4
comp=E,1μm,1.5s
ULN Ulaanbaatar 8.89 210 ePn **Pn** **14 57 48.8 -1.9**
comp=E,11nm,0.6s
ULN eS Sn 15 00 23.9 +53
ULN Ulaanbaatar 8.89 210 ePN **Pn** **14 57 48.8 -1.9**
ULN eS Sn 15 00 23.9 +53
ULN pmax pmax
comp=Z,11nm,0.6s
SONM Songino Array 9.10 212 Pn **Pn** **14 57 55.6 +1.9**
comp=Z,0.3nm,0.3s,baz=18,slow=13,SNR=11
SONM Pg Pn 14 58 24.4 +31
comp=Z,2.1nm,0.3s,baz=27,slow=14,SNR=9.7
SONM Sn **Sn** **14 59 28.5 -7.6**
comp=Z,2.3nm,0.3s,baz=22,slow=16,SNR=5.2
SONM Lg 15 00 29.6
comp=Z,11nm,0.3s,baz=25,slow=30,SNR=13
SONM LR LR 15 01 40.1
comp=Z,580nm,19.1s,baz=14,slow=39
YAK Yakutsk 10.41 46 ePn **Pn** **14 58 05.2 -6.4**
comp=Z,12nm,0.6s
YAK Yakutsk 10.41 46 eP **Pn** **14 58 09.9 -1.6**
YAK e 15 00 01.1
YAK pmax pmax
comp=Z,9.0nm,0.5s
YAK pmax pmax
comp=N,1.0nm,0.3s
YAK pmax pmax
comp=E,3.0nm,0.5s
YAK smax
comp=E,18nm,0.5s
YAK smax
comp=Z,12nm,0.4s
YAK smax
comp=N,22nm,0.8s
YAK pmax pmax
comp=E,546nm,1.6s
YAK pmax pmax
comp=Z,146nm,1.0s
YAK pmax pmax
comp=N,638nm,1.7s
YAK MLR MLR
comp=Z,907nm,12.0s
TDJR Todzha 10.79 259 e **Pn** **14 58 25.9 +9.2**
TDJR e 15 00 21.6
TDJR eSg Sn 15 01 13.9 +56
KRAR Krasnoyarsk 11.61 280⇑ eP **Pn** **14 58 28.0 +0.1**
ARDR Aradan 12.21 263 ePn **Pn** **14 58 38.5 +2.4**
ARDR e 15 01 05.1
ARDR eSg Sn 15 01 58.5 +66
KLR Kul'dur 12.86 113 eP **Pn** **14 58 44.2 -0.8**
KLR MLR MLR
comp=E,2μm,8.5s
KLR MLR MLR
comp=Z,4μm,8.5s
HHC Hu-ho-hao-te 15.00 186 eP **Pn** **14 59 15.9 +1.6**
HHC PP 14 59 28.6
HHC S **Sn** **15 02 02.0 +1.6**
HHC PCP PcP 15 04 24.8 +2.3
HHC AMB AMB
comp=Z,18nm,0.7s
HHC AMB AMB
comp=Z,113nm,4.6s
HHC LR LR
comp=N,1μm,8.3s
HHC LR LR
comp=E,524nm,6.0s
HHC LR LR
comp=Z,1μm,8.3s
HABR Khabarovsk 15.05 110 eP **Pn** **14 59 07.7 -7.2**
HABR pmax pmax
comp=Z,15nm,1.9s
MDJ Mudanjiang 15.13 131 P **Pn** **14 59 16.3 +0.3**
MDJ S **Sn** **15 02 04.1 +0.5**
MDJ PCP PcP 15 04 24.3 +1.7
MDJ PCS PcS 15 07 59.6 +1.9
MDJ AMB AMB
comp=Z,4.0nm,2.1s
MDJ AMB AMB
comp=Z,103nm,5.2s
MDJ LR LR
comp=N,827nm,8.3s
MDJ LR LR
comp=E,504nm,8.1s
MDJ LR LR
comp=Z,1μm,8.4s
SNY Shenyang 15.42 151⇑ P **Pn** **14 59 27.3 +7.5**
SNY AMB AMB
comp=Z,9.0nm,1.2s
SNY AMB AMB
comp=Z,128nm,4.2s
SNY LR LR
comp=N,1μm,9.5s
SNY LR LR
comp=Z,1μm,9.2s
BJI Beijing 15.85 173 P **Pn** **14 59 31.8 +6.4**
BJI AMB AMB
comp=Z,6.0nm,0.7s
BJI LR LR
comp=N,1μm,9.7s
BJI LR LR
comp=E,343nm,10.4s
BJI LR LR
comp=Z,473nm,16.1s
TIXI Tiksi 17.21 16 eP **Pn** **14 59 36.3 -6.1**
comp=Z,19nm,0.6s
TIXI Tiksi 17.21 16 i P **Pn** **14 59 36.9 -5.6**
TIXI pmax pmax
comp=Z,22nm,1.3s
NVS Novosibirsk 17.22 279 eP **Pn** **14 59 41.8 -0.9**
NVS eS **Sn** **15 02 43.3 -11**
NVS pmax pmax
comp=Z,28nm,2.0s
NVS pmax pmax
comp=N,14nm,1.6s
NVS smax
comp=E,23nm,1.2s
GTA Gaotai 18.76 215 eP **Pn** **15 00 07.4 +5.7**
GTA AP pP 15 00 11.3 +7.2
GTA XP sP 15 00 13.5 +8.1
GTA S **Sn** **15 03 29.1 -2.3**
GTA LG1 15 05 26.6
GTA LG2 15 05 57.4
GTA AMB AMB
comp=Z,4.0nm,1.1s
GTA AMB AMB
comp=Z,72nm,4.6s
GTA LR LR
comp=N,629nm,13.7s
GTA LR LR
comp=E,331nm,11.4s
GTA LR LR
comp=Z,751nm,12.2s
MA2 Magadan 20.08 64 eP **P** **15 00 16.5 +1.0**
comp=Z,22nm,1.2s
MA2 Magadan 20.08 64 eP **P** **15 00 16.6 +1.0**
MA2 e 15 00 49.1
MA2 S **S** **15 03 55.8 -5.0**
MA2 pmax pmax
comp=E,20nm,1.0s
MA2 pmax pmax
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 20.13 104 eP **P** **15 00 18.2 +1.9**
comp=Z,5.1nm,0.7s
YSS Yuzh-Sakhalins 20.13 104 i P **P** **15 00 18.1 +1.9**
YSS pmax pmax
comp=Z,12nm,1.5s
WMQ Urumqi 20.39 245 P **P** **15 00 20.5 +1.3**
KSRS Korea Array 20.75 146 P **P** **15 00 23.7 +0.7**
comp=Z,0.5nm,0.6s,baz=337,slow=8.2,SNR=3.8
KSRS Lg 15 06 41.7
comp=Z,1.1nm,0.8s,baz=330,slow=21,SNR=3.5
KSRS LR LR 15 09 25.3
comp=Z,288nm,19.1s,MS3.7,baz=342,slow=40
SEY Seymchan 20.76 54 i P **P** **15 00 23.2 +0.2**
LZH Lanzhou 20.78 203 eP **P** **15 00 29.9 +6.5**
LZH AP 15 00 36.5
LZH XP sP 15 00 38.5 +11
LZH PP 15 00 55.0
LZH eS **S** **15 04 18.0 +2.8**
LZH SS 15 04 49.0
LZH AMB AMB
comp=Z,15nm,1.0s
LZH AMB AMB
comp=Z,74nm,4.7s
LZH LR LR
comp=N,826nm,12.1s
LZH LR LR
comp=Z,985nm,14.4s,MS4.3
KURK Kurchatov 21.35 271 eP **P** **15 00 28.3 -1.2**
comp=Z,38nm,1.3s,mb4.6
KURK Kurchatov 21.35 271 eP **P** **15 00 28.3 -1.1**
KURK pmax pmax
comp=Z,38nm,1.3s,mb4.6
MK31 Makanchi Array 21.36 258 eP **P** **15 00 29.1 -0.4**
MK31 Makanchi Array 21.36 258 i P **P** **15 00 29.7 +0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s,mb3.9
MKAR Makanchi Array 21.36 258 i P **P** **15 00 29.7 +0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 21.36 258 P **P** **15 00 29.8 +0.2**
comp=Z,1.9nm,0.5s,mb3.6,baz=60,slow=10.0,SNR=19
MKAR Lg 15 06 46.7
comp=Z,0.2nm,0.3s,baz=43,slow=26,SNR=2.7
MKAR LR LR 15 09 03.6
comp=Z,400nm,19.6s,MS3.8,baz=44,slow=38
ASAJ Asahikawa 21.86 110 LR LR 15 08 21.2
comp=Z,127nm,18.9s,MS3.4,baz=324,slow=35
NJ2 Nanjing 24.02 169 eP **P** **15 00 54.4 -2.8**
NJ2 S **S** **15 05 05.0 -9.0**
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb4.5
NJ2 AMB AMB
comp=Z,100nm,4.9s
NJ2 LR LR
comp=N,1μm,13.5s,MS4.6
NJ2 LR LR
comp=E,650nm,12.9s,MS4.6
NJ2 LR LR
comp=Z,650nm,12.9s,MS4.3
BRVK Borovoye 25.02 282 eP **P** **15 01 06.6 +0.4**
comp=Z,26nm,1.1s,mb4.7
BRVK Borovoye 25.02 282 eP **P** **15 01 06.6 +0.5**
BRVK pmax pmax
comp=Z,26nm,1.1s,mb4.7
MJAR Matsushiro Arr 25.50 129 LR LR 15 11 34.8
comp=Z,201nm,19.8s,MS3.6,baz=340,slow=37
CD2 Chengdu 25.81 200 eP **P** **15 01 11.9 -1.6**
CD2 AP pP 15 01 21.3 +4.8
CD2 XP sP 15 01 26.0 +8.2
CD2 PP 15 01 53.3

CD2 S **S** **15 05 38.1 -4.6**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=N,670nm,15.6s,MS4.5
CD2 LR LR
comp=E,820nm,16.8s,MS4.5
CD2 LR LR
comp=Z,776nm,13.2s,MS4.4
BILL Bilibino 26.72 42 *e*P **P** **15 01 22.5 +1.1**
comp=Z,2.6nm,0.6s,mb3.9
BILL Bilibino 26.72 42⇑ *e*P **P** **15 01 22.9 +1.5**
BILL *e* 15 01 29.2
BILL 15 02 05.0
BILL pmax pmax
comp=Z,9.0nm,1.6s,mb4.0
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.5
TKM2 Tokmak 2 27.49 258 *e*P **P** **15 01 31.2 +2.6**
comp=Z,9.1nm,1.1s,mb4.2
TKM2 Tokmak 2 27.49 258 *e*P **P** **15 01 31.2 +2.6**
TKM2 pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
EKS2 Erkin-Say 28.67 260 *e*P **P** **15 01 39.2 +0.2**
comp=Z,8.7nm,1.2s,mb4.4
JHJ Hachijo jima 2 29.08 130 LR LR 15 13 55.2
comp=Z,119nm,19.1s,MS3.5,baz=232,slow=38
GYA Guiyang 29.72 193 P **P** **15 01 50.3 +1.8**
GYA AP pP 15 01 56.3 +4.7
GYA PCP PcP 15 04 54.8 +2.5
GYA S **S** **15 06 43.5 -0.9**
GYA SCP ScP 15 08 34.3 +0.3
GYA SCS ScS 15 12 27.8 -1.2
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.7
GYA AMB AMB
comp=Z,60nm,4.8s
ARU Arti 29.98 294 *d i*P **P** **15 01 51.9 +1.3**
ARU *e* 15 02 46.0
ARU *e*PPP 15 02 55.8
ARU S **S** **15 06 49.9 +1.9**
ARU SS SS 15 08 20.6 -35
ARU pmax pmax
comp=Z,2.0nm,0.7s,mb4.0
ARU MLR MLR
comp=Z,619nm,14.0s,MS4.4
ARU MLR MLR
comp=N,222nm,14.0s,MS4.3
ARU MLR MLR
comp=E,439nm,13.0s,MS4.3
KMI Kunming 31.63 199 P **P** **15 02 06.3 +0.9**
KMI AP pP 15 02 13.8 +5.3
KMI XP sP 15 02 16.4 +6.7
KMI PP PP 15 03 11.4 -5.4
KMI S **S** **15 07 12.3 -2.0**
KMI AMB AMB
comp=Z,9.0nm,1.2s,mb4.5
KMI AMB AMB
comp=Z,75nm,4.2s
KMI LR LR
comp=N,320nm,12.3s,MS4.4
KMI LR LR
comp=E,439nm,11.9s,MS4.4
KMI LR LR
comp=Z,539nm,13.1s,MS4.4
AKTK Aktyubinsk 32.98 284 P **P** **15 02 17.2 +0.1**
AKTK LR LR 15 16 38.8
AKTO Aktyubinsk 32.98 284 P **P** **15 02 17.2 +0.1**
comp=Z,0.6nm,0.5s,mb3.8,baz=76,slow=18,SNR=2.8
AKTO LR LR 15 16 38.8
comp=Z,149nm,19.1s,MS3.7,baz=213,slow=38
TAPN Taplejung 33.97 224 *e*P **P** **15 02 26.2 +0.4**
comp=Z,16nm,1.2s,mb4.8
JIRN Jiri 34.30 226 *e*P **P** **15 02 29.7 +1.0**
comp=Z,11nm,0.9s,mb4.8
ODAN Odare 34.53 224 *e*P **P** **15 02 28.7 -2.0**
comp=Z,18nm,0.9s,mb5.0
GKN Gorkha 34.65 229 *e*P **P** **15 02 32.8 +1.1**
comp=Z,12nm,0.6s,mb5.0
KOLN Koldanda 35.30 230 *e*P **P** **15 02 38.7 +1.4**
comp=Z,7.8nm,0.6s,mb4.8
QIZ Qiongzhong 36.80 186 *e*P **P** **15 02 53.3 +3.1**
QIZ *e*S **S** **15 08 36.3 +2.1**
QIZ LR LR
comp=E,435nm,16.3s
QIZ LR LR
comp=Z,343nm,15.9s,MS4.2
TNA Tin City 37.15 42 *e*P **P** **15 02 53.6 +0.9**
comp=Z,19nm,1.3s,mb4.8
ARCES ARCESS Array B 38.81 326 P **P** **15 03 04.0 -2.8**
comp=Z,2.0nm,0.8s,mb3.9,baz=69,slow=11,SNR=3.1
ARCES LR LR 15 21 25.6
comp=Z,114nm,18.7s,MS3.7,baz=225,slow=40
FINES FINESS Array B 42.64 315 *i* P **P** **15 03 39.5 +1.1**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 42.64 315 P **P** **15 03 36.9 -1.5**
comp=Z,1.4nm,0.6s,mb3.9,baz=63,slow=9.2,SNR=6.0
KIV Kislovodsk 45.21 286 *e*P **P** **15 03 59.6 +0.3**
comp=Z,16nm,1.0s,mb4.8
KIV Kislovodsk 45.21 286 *e*P **P** **15 03 59.4 +0.1**
KIV pmax pmax
comp=Z,21nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,119nm,18.0s,MS3.9
INK Inuvik 46.83 28 *e*P **P** **15 04 11.9 +0.2**
INK Inuvik 46.83 28 P **P** **15 04 11.2 -0.5**
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 46.83 28 P **P** **15 04 11.2 -0.5**
comp=Z,2.6nm,0.9s,mb4.2,baz=317,slow=11,SNR=7.4
SOC Sochi 47.07 288 *i* P **P** **15 04 19.8 +5.9**
AKASG Malin Array Be 47.75 301 P **P** **15 04 17.5 -1.6**
AKASG Malin Array Be 47.75 301 P **P** **15 04 17.5 -1.6**
comp=Z,1.7nm,0.5s,mb4.3,baz=44,slow=8.8,SNR=4.7
HFS Hagfors 48.24 319 P **P** **15 04 21.6 -1.2**
comp=Z,2.3nm,0.8s,mb4.3,baz=96,slow=7.2,SNR=5.1
NB2 NORSAR Subarra 48.54 321 P **P** **15 04 23.8 -1.3**
comp=Z,3.9nm,1.0s,mb4.4,baz=50,slow=7.9
NB2 NORSAR Subarra 48.54 321 P **P** **15 04 23.8 -1.3**
NB2 pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
NOA NORSAR Array B 48.54 321 P **P** **15 04 23.6 -1.5**
comp=Z,1.2nm,0.9s,mb3.9,baz=48,slow=6.6,SNR=3.4
NOA LR LR 15 26 42.5
comp=Z,85nm,18.2s,MS3.8,baz=40,slow=38
MLR Muntele Rosu 52.91 298 LR LR 15 29 24.2
comp=Z,181nm,18.7s,MS4.2,baz=226,slow=38
CLL Collm 54.73 311 *e*(P) **P** **15 05 14.0 +2.6**
BORG Borgarnes 54.94 338 LR LR 15 28 39.2
comp=Z,195nm,18.5s,MS4.2,baz=67,slow=36
YKA Yellowknife Ar 56.23 25 P **P** **15 05 20.7 -1.4**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 56.23 25 P **P** **15 05 20.7 -1.3**
comp=Z,1.5nm,0.6s,mb4.2,baz=331,slow=7.0,SNR=26
EKA Eskdalemuir Ar 57.85 323 P **P** **15 05 32.2 -1.5**
comp=Z,2.6nm,1.0s,mb4.2,baz=44,slow=5.7,SNR=5.0
KEST Kesra 68.47 302 LR LR 15 40 21.3
comp=Z,35nm,20.1s,MS3.6,baz=223,slow=39
SCHQ Schefferville 69.75 0 P **P** **15 06 50.9 -1.1**
SCHQ Schefferville 69.75 0 P **P** **15 06 50.9 -1.1**
baz=6.3,slow=9.2
CHMT Chamberlain Mo 70.39 32 *e*P **P** **15 06 56.4 +0.3**
RLMT Red Lodge 73.18 30 *e*P **P** **15 07 13.1 +0.2**
comp=Z,9.9nm,1.1s,mb4.7
PDAR Pinedale Array 75.25 31 P **P** **15 07 24.6 -0.4**
comp=Z,0.4nm,0.5s,mb3.6,baz=0.6,slow=3.5,SNR=4.9
NVAR Mina Array Bea 76.31 39 P **P** **15 07 30.2 -0.9**
NVAR Mina Array Bea 76.31 39 P **P** **15 07 30.3 -0.9**
comp=Z,0.7nm,0.5s,mb3.8,baz=321,slow=3.8,SNR=5.1
WRA Warramunga Arr 77.46 160 P **P** **15 07 37.4 -0.2**
comp=Z,2.0nm,0.6s,mb4.2,baz=352,slow=6.6,SNR=25
WB2 Warramunga Arr 77.46 160 *e*P **P** **15 07 36.5 -1.1**
ASAR Alice Springs 81.01 161 P **P** **15 07 57.0 0.0**
comp=Z,0.7nm,0.6s,mb3.8,baz=358,slow=5.0,SNR=18
TXAR Lajitas Array 89.47 32 P **P** **15 08 37.0 -2.5**
comp=Z,0.2nm,0.4s,mb3.8,baz=343,slow=2.2,SNR=3.0
TORD Torodi Ar. Bea 91.05 295 P **P** **15 08 45.2 -1.8**
comp=Z,0.8nm,0.7s,mb4.2,baz=1.4,slow=4.9,SNR=7.4
DBIC Dimbokro 99.89 298 LR LR 15 57 36.6
comp=Z,41nm,19.6s,MS3.9,baz=230,slow=37
QSPA South Pole Qui 145.54 180 *e*PKP PKPdf 15 15 18.5 -0.3
QSPA South Pole Qui 145.54 180 PKPbc PKPbc 15 15 17.6 -1.4
comp=Z,5.8nm,0.8s,baz=319,slow=0.9,SNR=26
VNA2 Neumayer--Watz 151.02 216 *e*PKPdf PKPbc 15 15 33.9 +0.2
baz=85,slow=1.7
VNA2 *e* 15 15 35.4
VNA2 *e* 15 15 38.3
VNA3 Neumayer Olymp 151.75 215 *e*PKPdf PKPbc 15 15 34.6 -0.8
VNA3 *e* 15 15 36.1
VNA3 *e* 15 15 40.1

MOS ***21*** *14:59:26.7±2.2,5592N×11349E,h10km,mb4.3/1,Error ellipse: s-maj=24.3km s-min=12.9km az=80.5*
BYKL 21 14:59:26.7±0.4,5588N×11340E,h19km±8km,4C-1D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.25**	**21**	*e*PG	Pg	14 59 32.9	+0.4
SVKR				*e*		14 59 37.8	
SVKR				pmax	pmax		
	comp=Z,3μm,0.8s						
SVKR				smax			
	comp=N,30μm,0.6s						
SVKR	**Severomuysk**	**0.25**	**21**⇑	*i*Pg	Pg	14 59 33.0	+0.5
SVKR				*e*		14 59 33.8	
SVKR				*e*		14 59 36.8	
SVKR				*e*Sg	Sg	14 59 38.1	+1.6
SVKR				max			
	comp=N,2μm,0.3s						
SVKR				Smax			
	comp=N,30μm,0.6s						
UKT	**Uakit**	**0.41**	**162**	*e*PG	Pg	14 59 34.5	-0.7
UKT				*e*		14 59 40.2	
UKT				pmax	pmax		
	comp=Z,386nm,0.1s						
UKT				smax			
	comp=E,3μm,0.2s						
UKT	**Uakit**	**0.41**	**162**⇑	*i*Pg	Pg	14 59 34.5	-0.7
UKT				*i* Sg	Sg	14 59 40.3	-0.7
UKT				Pmax			
	comp=E,2μm,0.9s						
UKT				Smax			
	comp=E,3μm,1.0s						
YOA	**Uoyan**	**0.97**	**286**⇓	*i*PG	Pg	14 59 45.1	-0.5
YOA				*i*		14 59 59.3	
YOA				pmax	pmax		
	comp=Z,2μm,0.3s						
YOA				smax			
	comp=N,8μm,0.4s						
KMO	**Kumora**	**1.24**	**271**	*e*PG	Pg	14 59 49.3	-1.3
KMO				*e*		15 00 05.1	
KMO				pmax	pmax		
	comp=Z,636nm,0.3s						
KMO				smax			
	comp=E,5μm,0.5s						
KMO	**Kumora**	**1.24**	**271**⇑	*i*Pg	Pg	14 59 49.4	-1.2
KMO				*e*Pb	Pb	14 59 50.8	+1.4
KMO				*e*		14 59 55.1	
KMO				*i* Sg	Sg	15 00 06.0	-0.8
KMO				*e*Sb	Sb	15 00 08.7	+3.7
KMO				Pmax			
	comp=E,687nm,0.3s						
KMO				max			
	comp=E,5μm,0.8s						
NLYR	**Nelyaty**	**1.43**	**64**	*e*Pg	Pg	14 59 52.6	-1.6
NLYR				*e*Sg	Sg	15 00 11.6	-1.2
YLYR	**Ulyunkhan**	**1.63**	**233**	*e*PN	Pn	14 59 56.3	+2.0
YLYR				*e*		15 00 18.4	
YLYR				pmax	pmax		
	comp=Z,136nm,0.2s						
YLYR				smax			
	comp=E,1μm,0.2s						
YLYR	**Ulyunkhan**	**1.63**	**233**⇑	*i*Pg	Pg	14 59 56.1	-1.9
YLYR				*i* Sg	Sg	15 00 18.5	-0.6
YLYR				Pmax			
	comp=E,180nm,0.9s						
YLYR				Smax			
	comp=E,1μm,0.3s						
BOD	**Bodaibo**	**1.97**	**9**	*e*PN	Pn	15 00 01.1	+2.1
BOD				*e*		15 00 27.2	
BOD				pmax	pmax		
	comp=Z,277nm,0.5s						
BOD				smax			
	comp=E,1μm,0.6s						
BOD	**Bodaibo**	**1.97**	**9**	*e*Pg	Pg	15 00 01.8	-2.8
BOD				*e*		15 00 07.3	
BOD				*i* Sg	Sg	15 00 27.6	-2.6
BOD				max			
	comp=E,277nm,0.7s						
BOD				Smax			
	comp=E,1μm,0.5s						
NIZ	**Nizh Angarsk**	**2.18**	**269**	*e*PN	Pn	15 00 04.5	+2.6
NIZ				*e*		15 00 05.7	
NIZ				*e*		15 00 32.6	
NIZ				pmax	pmax		
	comp=Z,119nm,0.7s						
NIZ				smax			
	comp=N,558nm,0.5s						
NIZ	**Nizh Angarsk**	**2.18**	**269**	*e*Pg	Pg	15 00 04.5	-4.0
NIZ				*e*Sg	Sg	15 00 32.8	-4.0
NIZ				*e*		15 00 36.0	
NIZ				Pmax			
	comp=N,189nm,1.6s						
NIZ				max			
	comp=N,574nm,0.5s						
CRS	**Chara**	**2.89**	**67**	*e*	Pn	15 00 21.7	+10
CRS				*e*Sg	Sg	15 00 56.7	-2.9
CRS				max			
	comp=N,378nm,1.4s						
CRS				Smax			
	comp=N,454nm,1.6s						
SYVR	**Suvo**	**2.97**	**223**	*e*PN	Pn	15 00 20.9	+8.1
SYVR				*e*		15 00 58.6	
SYVR				pmax	pmax		
	comp=Z,64nm,0.8s						
SYVR				smax			
	comp=E,367nm,0.6s						
SYVR	**Suvo**	**2.97**	**223**	*e*Pg	Pg	15 00 19.5	-4.1
SYVR				*i* Sg	Sg	15 00 58.6	-3.5
SYVR				Pmax			
	comp=E,127nm,1.8s						
SYVR				Smax			
	comp=E,458nm,1.3s						
MXMB	**Maximikha**	**3.77**	**228**	*e*Sg	Sg	15 01 24.7	-3.0
MXMB				Smax			
	comp=E,771nm,0.8s						
KHNR	**Khani**	**3.80**	**71**	*e*Sg	Sg	15 01 24.0	-4.7
CIT	**Chita**	**3.87**	**179**	*e*Pg	Pg	15 00 35.1	-5.6
CIT				*e*Sg	Sg	15 01 26.1	-4.7
CIT				Pmax			
	comp=E,196nm,1.8s						
CIT				Smax			
	comp=E,492nm,1.1s						
TUP	**Tupik**	**4.03**	**108**	*e*	Pn	15 00 58.7	+31
TUP				*e*Sg	Sg	15 01 31.7	-4.4
TUP				max			
	comp=E,85nm,0.9s						
TUP				Smax			
	comp=E,481nm,0.6s						
OGRR	**Ongureny**	**4.04**	**239**	*e*Pg	Pg	15 00 38.2	-5.8
OGRR				*e*Sg	Sg	15 01 31.0	-5.3
OGRR				Pmax			
	comp=E,105nm,1.9s						
OGRR				Smax			
	comp=E,169nm,1.6s						
ZRHB	**Zarechye**	**4.95**	**230**	*e*Sg	Sg	15 02 00.9	-4.7
ZRHB				Smax			
	comp=E,540nm,1.4s						
TRG	**Tyrgan**	**5.18**	**236**	*e*	Pn	15 01 33.7	+51
TRG				*e*Sg	Sg	15 02 06.8	-5.9
TRG				max			
	comp=E,46nm,0.8s						
TRG				Smax			
	comp=E,70nm,1.1s						
FFNB	**Fofonovo**	**5.48**	**228**	*e*Sg	Sg	15 02 17.1	-5.5
FFNB				Smax			
	comp=E,344nm,0.8s						
KAB	**Kabansk**	**5.53**	**229**	*e*Sg	Sg	15 02 19.9	-4.1
KAB				Smax			
	comp=E,501nm,0.8s						
KPC	**Khapcheranga**	**6.22**	**186**	*e*	Pn	15 01 14.0	+17
KPC				*e*Sg	Sn	15 02 39.0	+31
KPC				max			
	comp=E,27nm,0.8s						
KPC				Smax			
	comp=E,161nm,1.4s						
IENR	**Iengra**	**6.43**	**82**	*e*Sg	Sn	15 02 46.4	+33
LSTR	**Listvyanka**	**6.46**	**235**	*e*Sg	Sn	15 02 47.4	+34
LSTR				Smax			
	comp=E,47nm,1.3s						
TLY	**Talaya**	**7.15**	**238**	*e*Sg	Sn	15 03 07.2	+37
TLY				Smax			
	comp=E,41nm,1.2s						
HIA	**Hailar**	**7.67**	**147**	*e*Sg	Sn	15 03 22.5	+39
MOY	**Mondy**	**8.47**	**245**	*e*Sg	Sn	15 03 50.7	+48
MOY				Smax			
	comp=E,53nm,1.0s						
ORL	**Orlik**	**8.64**	**253**	*e*Sg	Sn	15 03 51.8	+45
ORL				Smax			
	comp=E,115nm,1.6s						

IDC ***21*** *15:12:56.3±0.9,5604N×11364E,h0km,mb3.7/7, mb1 3.9/8,mb1mx3.7/20,mbtmp3.7/8,ML3.3/1,MS3.3/4, Ms1 3.3/4,ms1mx2.9/36,Error ellipse: s-maj=30.6km s-min=20.4km az=70.0*
MOS ***21*** *15:12:58.6±1.9,5588N×11368E,h19km,mb4.2/5,Error ellipse: s-maj=9.8km s-min=6.2km az=76.2*
MOS Felt (II) at Severomuisk.
BYKL ***21*** *15:13:00.7±0.3,5588N×11340E,h15km±42km,FELT I=II MSK at Severomuisk*
BJI ***21*** *15:13:00.3,5651N×11414E,h42km,mb4.7,Ms4.2*
NEIC ***21*** *15:13:01.1±1.4,5615N×11388E,h28km±8km,mb4.0/3, Error ellipse: s-maj=15.7km s-min=11.4km az=126.0*
NEIC Felt [III] at Severomuysk.
ISC 21 15:12:59.6±0.2,5577N±002×11346E±003,h10km,n90, σ1§54/135,mb3.9/12,MS3.1/4,12C-10D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UKT	**Uakit**	**0.30**	**161**	*e*PG	**Pg**	**15 13 08.1**	**+2.6**
UKT				*e*		15 13 13.9	
UKT				pmax	pmax		
	comp=Z,3μm,0.2s						
UKT				smax			
	comp=N,61μm,0.2s						
UKT	**Uakit**	**0.30**	**161**⇓	*i*Pg	**Pg**	**15 13 08.1**	**+2.6**
	comp=N,8μm,0.7s						
UKT				⇑*i*Pg	**Pg**	**15 13 08.1**	**+2.6**
	comp=N,2μm,0.7s						
UKT				⇑*i*Pg	**Pg**	**15 13 08.1**	**+2.6**
	comp=N,5μm,0.7s						
UKT				Pmax		15 13 08.6	
	comp=N,5μm,0.7s						
UKT				*i* Sg	**Sg**	**15 13 14.0**	**+4.5**
UKT				Smax		15 13 21.5	
	comp=N,7μm,1.0s						
SVKR	**Severomuysk**	**0.35**	**9**	P	**Pg**	**15 13 06.6**	**+0.1**
SVKR	**Severomuysk**	**0.35**	**9**	*e*PG	**Pg**	**15 13 06.7**	**+0.2**
SVKR				*e*		15 13 11.4	
SVKR				pmax	pmax		
	comp=Z,6μm,0.2s						
SVKR				smax			
	comp=N,50μm,0.6s						
SVKR	**Severomuysk**	**0.35**	**9**⇑	*i*Pg	**Pg**	**15 13 06.8**	**+0.3**
SVKR				Pmax		15 13 07.4	
	comp=N,6μm,0.2s						
SVKR				*i* Sg	**Sg**	**15 13 11.6**	**+0.4**
SVKR				Smax		15 13 12.2	
	comp=N,50μm,0.6s						
YOA	**Uoyan**	**1.04**	**291**⇑	*i*PG	**Pg**	**15 13 18.9**	**-0.7**
KMO	**Kumora**	**1.28**	**276**	*e*PN	**Pn**	**15 13 23.0**	**-0.5**
KMO				*e*		15 13 38.5	
KMO				pmax	pmax		
	comp=Z,3μm,0.5s						
KMO				smax			
	comp=E,8μm,0.5s						
KMO	**Kumora**	**1.28**	**276**⇑	*i*Pg	**Pn**	**15 13 23.0**	**-0.5**
KMO				⇓*i*		15 13 24.3	
KMO				max		15 13 24.5	
	comp=E,3μm,0.4s						
KMO				*i* Sg	**Sg**	**15 13 39.5**	**-1.2**
KMO				Smax		15 13 42.9	
	comp=E,8μm,0.8s						
NLYR	**Nelyaty**	**1.45**	**59**⇓	*i*Pg	**Pg**	**15 13 25.9**	**-1.5**
NLYR				*i* Sg	**Sg**	**15 13 45.3**	**-0.8**
YLYR	**Ulyunkhan**	**1.59**	**237**	*e*PN	**Pg**	**15 13 29.6**	**-0.5**
YLYR				*e*		15 13 51.2	
YLYR				pmax	pmax		
	comp=Z,262nm,0.2s						
YLYR				smax			
	comp=E,2μm,0.3s						
YLYR	**Ulyunkhan**	**1.59**	**237**⇑	*i*Pg	**Pg**	**15 13 29.6**	**-0.5**
YLYR				⇓*i*Pb	**Pb**	**15 13 30.5**	**+1.5**
YLYR				max		15 13 30.7	
	comp=E,259nm,0.2s						
YLYR				*i* Sg	**Sg**	**15 13 51.6**	**+0.9**
YLYR				*e*		15 13 53.6	
YLYR				max		15 13 54.1	
	comp=E,2μm,0.2s						
BOD	**Bodaibo**	**2.08**	**8**⇑	*i*PN	**Pn**	**15 13 34.9**	**+0.5**
BOD				*e*		15 14 00.9	
BOD				pmax	pmax		
	comp=Z,505nm,0.3s						
BOD				smax			
	comp=E,4μm,0.6s						
BOD	**Bodaibo**	**2.08**	**8**⇑	*i*Pn	**Pn**	**15 13 34.7**	**+0.3**
BOD				⇑*i*Pg	**Pg**	**15 13 35.2**	**-4.1**
BOD				Pmax		15 13 36.1	
	comp=E,504nm,0.3s						
BOD				*e*		15 13 41.1	
BOD				*e*Sn	**Sn**	**15 13 57.6**	**-2.7**
BOD				*e*Sg	**Sg**	**15 14 01.5**	**-4.7**
BOD				Smax		15 14 02.0	
	comp=E,4μm,0.6s						
NIZ	**Nizh Angarsk**	**2.21**	**272**	*e*PN	**Pg**	**15 13 39.3**	**-2.7**
NIZ				*e*SG	**Sg**	**15 14 06.5**	**-4.1**
NIZ	**Nizh Angarsk**	**2.21**	**272**⇓	*i*Pn	**Pn**	**15 13 37.3**	**+1.0**
NIZ				⇑*i*Pg	**Pg**	**15 13 39.3**	**-2.7**
NIZ				Pmax		15 13 48.3	
	comp=E,272nm,0.3s						
NIZ				*e*Sn	**Sn**	**15 14 06.2**	**+2.5**
NIZ				*e*Sg	**Sg**	**15 14 08.5**	**-2.1**
NIZ				Smax		15 14 13.1	
	comp=E,1μm,0.3s						
CRS	**Chara**	**2.91**	**65**	*e*PN	**Pb**	**15 13 52.1**	**+0.7**
CRS				*e*		15 14 30.4	
CRS				pmax	pmax		
	comp=Z,229nm,0.5s						
CRS				smax			
	comp=E,2μm,0.5s						
CRS	**Chara**	**2.91**	**65**⇓	*i*Pn	**Pn**	**15 13 46.4**	**+0.6**
CRS				*e*Pg	**Pg**	**15 13 52.3**	**-2.9**
CRS				Pmax		15 14 13.5	
	comp=E,259nm,0.9s						
CRS				*i* Sg	**Sg**	**15 14 30.2**	**-2.7**
CRS				Smax		15 14 31.8	
	comp=E,2μm,0.5s						
SYVR	**Suvo**	**2.92**	**225**	P	**Pg**	**15 13 54.5**	**-0.9**
SYVR	**Suvo**	**2.92**	**225**	*e*PN	**Pg**	**15 13 54.6**	**-0.8**
SYVR				*e*		15 14 32.2	
SYVR				pmax	pmax		
	comp=Z,89nm,0.6s						
SYVR				smax			
	comp=E,767nm,0.6s						
SYVR	**Suvo**	**2.92**	**225**⇓	*i*Pn	**Pn**	**15 13 47.7**	**+1.7**
SYVR				*e*		15 13 51.7	
SYVR				⇑*i*Pg	**Pg**	**15 13 54.6**	**-0.8**
SYVR				Pmax		15 14 17.9	
	comp=E,97nm,0.9s						
SYVR				*e*Sg	**Sg**	**15 14 32.9**	**-0.3**
SYVR				Smax		15 14 37.8	
	comp=E,1μm,1.5s						
MXMB	**Maximikha**	**3.72**	**229**⇑	*i*	**Pb**	**15 14 06.4**	**+1.0**
MXMB				Pg	**Pg**	**15 14 10.5**	**-0.4**
MXMB				Pmax		15 14 19.8	
	comp=E,82nm,0.8s						
MXMB				*i* Sg	**Sg**	**15 14 59.0**	**0.0**
MXMB				Smax		15 15 00.2	
	comp=E,1μm,0.7s						
CIT	**Chita**	**3.76**	**179**	*e*PN	**Pn**	**15 13 59.5**	**+2.0**
CIT				*e*		15 14 09.1	
CIT				*e*		15 15 00.7	
CIT				pmax	pmax		
	comp=Z,131nm,1.5s						
CIT				smax			
	comp=E,1μm,0.9s						

CIT	**Chita**	**3.76**	**179**	*e*Pn	**Pn**	**15 13 58.8**	**+1.3**
CIT				*e*Pg	**Pg**	**15 14 08.8**	**-2.7**
CIT				Pmax		15 14 10.2	
	comp=E,116nm,0.5s						
CIT				*e*Sn	**Sn**	**15 14 42.2**	**+0.4**
CIT				*e*Sg	**Sg**	**15 14 59.3**	**-0.9**
CIT				Smax		15 15 06.6	
	comp=E,1μm,0.8s						
KHNR	**Khani**	**3.81**	**70**	*e*Pn	**Pn**	**15 13 59.6**	**+1.4**
KHNR				*e*Sg	**Sg**	**15 14 57.9**	**-3.8**
TUP	**Tupik**	**3.97**	**107**	*e*PN	**Pn**	**15 14 01.3**	**+0.9**
TUP				*e*		15 14 11.8	
TUP				*e*S	**Sn**	**15 14 46.9**	**0.0**
TUP				*e*		15 15 04.6	
TUP				pmax	pmax		
	comp=Z,99nm,0.6s						
TUP				smax			
	comp=N,2μm,0.9s						
TUP	**Tupik**	**3.97**	**107**	⇓*i*Pn	**Pn**	**15 14 01.4**	**+1.0**
TUP				*e*Pg	**Pg**	**15 14 12.8**	**-2.7**
TUP				Pmax		15 14 16.5	
	comp=N,118nm,0.6s						
TUP				*i* Sg	**Sg**	**15 15 05.0**	**-1.9**
TUP				Smax		15 15 11.1	
	comp=N,2μm,0.8s						
OGRR	**Ongureny**	**4.01**	**240**	*e*PN	**Pn**	**15 14 02.3**	**+1.3**
OGRR				*e*		15 14 12.7	
OGRR				*e*		15 15 05.3	
OGRR				pmax	pmax		
	comp=Z,85nm,1.1s						
OGRR				smax			
	comp=N,392nm,1.2s						
OGRR	**Ongureny**	**4.01**	**240**	⇓*i*Pn	**Pn**	**15 14 02.3**	**+1.3**
OGRR				*e*		15 14 05.2	
OGRR				⇓*i*Pg	**Pg**	**15 14 12.3**	**-4.1**
OGRR				Pmax		15 14 25.2	
	comp=N,84nm,1.1s						
OGRR				*e*Sg	**Sg**	**15 15 04.7**	**-3.7**
OGRR				Smax		15 15 10.3	
	comp=N,395nm,1.2s						
KELR	**Kotokel**	**4.36**	**228**	*e*	**Pg**	**15 14 25.5**	**+2.4**
KELR				max		15 14 31.8	
	comp=N,111nm,0.2s						
KELR				*e*Sg	**Sg**	**15 15 19.1**	**-0.5**
KELR				Smax		15 15 25.0	
	comp=N,637nm,0.4s						
ZRHB	**Zarechye**	**4.91**	**232**	*e*Pn	**Pn**	**15 14 16.3**	**+2.9**
ZRHB				*e*		15 14 30.6	
ZRHB				*e*		15 14 33.2	
ZRHB				max		15 14 48.4	
	comp=N,76nm,0.8s						
ZRHB				*i* Sg	**Sg**	**15 15 33.7**	**-3.4**
ZRHB				Smax		15 15 49.8	
	comp=N,602nm,1.2s						
TRG	**Tyrgan**	**5.14**	**237**	*e*Pn	**Pn**	**15 14 18.4**	**+1.8**
TRG				max		15 14 54.8	
	comp=N,21nm,0.7s						
TRG				*e*Sg	**Sg**	**15 15 38.8**	**-5.8**
TRG				Smax		15 15 50.7	
	comp=N,147nm,1.0s						
FFNB	**Fofonovo**	**5.44**	**229**	*e*	**Pg**	**15 14 42.3**	**-1.3**
FFNB				*e*Sg	**Sg**	**15 15 51.1**	**-2.9**
FFNB				Smax		15 16 05.0	
	comp=N,593nm,0.7s						
KAB	**Kabansk**	**5.48**	**230**	*e*	**Pg**	**15 14 53.1**	**+8.6**
KAB				*e*Sg	**Sg**	**15 15 53.0**	**-2.5**
KAB				Smax		15 16 12.1	
	comp=N,1μm,1.2s						
HRMR	**Khuramsha**	**5.67**	**226**	*e*	**Pg**	**15 14 43.4**	**-4.7**
HRMR				max		15 15 11.5	
	comp=N,47nm,0.5s						
HRMR				*e*Sg	**Sg**	**15 15 57.5**	**-3.9**
HRMR				Smax		15 16 06.8	
	comp=N,815nm,0.6s						
KPC	**Khapcheranga**	**6.11**	**187**	*e*PN	**Pn**	**15 14 30.7**	**+0.8**
KPC				*e*		15 14 52.9	
KPC				*e*		15 16 12.6	
KPC				pmax	pmax		
	comp=Z,21nm,0.8s						
KPC				smax			
	comp=E,265nm,0.8s						
KPC	**Khapcheranga**	**6.11**	**187**	*e*Pn	**Pn**	**15 14 30.7**	**+0.8**
KPC				*e*Pg	**Pg**	**15 14 53.8**	**-2.8**
KPC				Pmax		15 15 00.1	
	comp=E,203nm,1.1s						
KPC				*e*Sg	**Sg**	**15 16 12.8**	**-2.9**
KPC				Smax		15 16 28.6	
	comp=E,266nm,0.7s						
NRGR	**Nerungri**	**6.35**	**77**	*e*PG	**Pg**	**15 14 56.0**	**-5.0**
NRGR				S	**Sb**	**15 16 07.6**	**+1.7**
NRGR				smax			
	comp=N,131nm,0.6s						
IENR	**Iengra**	**6.42**	**81**	*e*	**Pn**	**15 14 34.5**	**+0.5**
IENR				*e*		15 15 43.3	
IENR				*e*Sg	**Sg**	**15 16 20.8**	**-4.5**
LSTR	**Listvyanka**	**6.43**	**236**	*e*Pn	**Pn**	**15 14 38.7**	**+4.5**
LSTR				max		15 15 16.7	
	comp=N,9.0nm,0.5s						
LSTR				*e*Sg	**Sg**	**15 16 21.5**	**-4.3**
LSTR				Smax		15 16 38.5	
	comp=N,100nm,1.0s						
IRK	**Irkutsk**	**6.47**	**241**	*e*PG	**Pg**	**15 14 57.5**	**-5.8**
IRK				pmax	pmax		
	comp=Z,120nm,0.5s						
IRK	**Irkutsk**	**6.47**	**241**	*e*	**Sb**	**15 16 07.2**	**-2.1**
IRK				*e*Sg	**Sg**	**15 16 19.8**	**-7.2**
IRK				Smax		15 16 29.9	
	comp=Z,442nm,0.6s						
TLY	**Talaya**	**7.12**	**239**	Pn	**Pn**	**15 14 50.4**	**+6.8**
TLY				*e*S	**Sg**	**15 16 36.9**	**-11**
TLY	**Talaya**	**7.12**	**239**	*e*	**Pg**	**15 15 14.4**	**-1.4**
TLY				max		15 15 35.9	
	comp=Z,11nm,0.6s						
TLY				*e*		15 16 20.0	
TLY				*e*Sg	**Sg**	**15 16 41.0**	**-6.9**
TLY				Smax		15 16 52.4	
	comp=Z,115nm,0.8s						
HIA	**Hailar**	**7.56**	**147**	*e*Pn	**Pn**	**15 14 49.2**	**-0.5**
	comp=Z,8.1nm,0.6s						
HIA				*e*Sn	**Sn**	**15 16 16.8**	**+1.5**
HIA	**Hailar**	**7.56**	**147**	*e*PN	**Pn**	**15 14 49.2**	**-0.5**
HIA				*e*		15 16 16.8	
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ARS	**Arshan**	**7.58**	**244**	*e*PN	**Pn**	**15 14 51.8**	**+1.8**
ARS	**Arshan**	**7.58**	**244**	*e*	**Pn**	**15 14 55.0**	**+5.0**
ARS				*e*		15 15 22.8	
ARS				max		15 15 29.2	
	comp=Z,29nm,0.7s						
ARS				*e*		15 16 20.2	
ARS				*e*Sg	**Sg**	**15 16 53.5**	**-9.1**
ARS				Smax		15 17 01.1	
	comp=Z,582nm,0.8s						
ZAK	**Zakamensk**	**8.16**	**233**	*e*Pn	**Pn**	**15 15 03.5**	**+5.5**
ZAK				*e*		15 15 29.5	
ZAK				*e*S	Sn	15 17 15.7	+46
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAK				smax			
	comp=E,121nm,1.9s						
ZAK	**Zakamensk**	**8.16**	**233**	*e*	**Pb**	**15 15 14.0**	**-6.9**
ZAK				max		15 15 42.6	
	comp=E,4.0nm,0.6s						
ZAK				*e*		15 16 44.0	
ZAK				*e*Sg	Sn	15 17 16.1	+46
ZAK				Smax		15 17 40.7	
	comp=E,119nm,1.9s						
MOY	**Mondy**	**8.46**	**246**	*e*PN	**Pn**	**15 15 05.3**	**+3.3**
MOY				*e*		15 15 30.5	
MOY				*e*S	**Sn**	**15 16 40.8**	**+3.4**
MOY				pmax	pmax		
	comp=Z,20nm,0.6s						
MOY				pmax	pmax		
	comp=E,176nm,1.4s						
MOY	**Mondy**	**8.46**	**246**	*e*Pn	**Pn**	**15 15 05.3**	**+3.3**
MOY				*e*		15 15 08.2	
MOY				*e*		15 15 15.9	
MOY				max		15 15 18.9	
	comp=E,27nm,1.0s						
MOY				*e*Sg	Sn	15 17 22.3	+45
MOY				Smax		15 17 30.0	
	comp=E,177nm,1.7s						
ORL	**Orlik**	**8.64**	**254**	*e*PN	**Pn**	**15 15 05.7**	**+1.2**
ORL	**Orlik**	**8.64**	**254**	*e*Pn	**Pn**	**15 15 05.6**	**+1.1**
ORL				*i*		15 15 10.1	
ORL				max		15 15 31.9	
	comp=E,19nm,0.9s						
ORL				*e*Sn	**Sn**	**15 16 41.1**	**-0.8**
ORL				*e*Sg	Sn	15 17 26.4	+45
ORL				Smax		15 17 36.2	
	comp=E,257nm,1.2s						
ULN	**Ulaanbaatar**	**8.85**	**209**	*e*Pn	**Pn**	**15 15 13.1**	**+5.7**
	comp=E,3.4nm,0.4s						
ULN				*e*S	Sn	15 17 37.2	+50
ULN	**Ulaanbaatar**	**8.85**	**209**	*e*P	**Pn**	**15 15 13.1**	**+5.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SONM	**Songino Array**	**9.07**	**212**	Pn	**Pn**	**15 15 12.3**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=8.9,slow=10,SNR=4.3						
SONM				Lg		15 17 45.5	
	comp=Z,3.8nm,0.3s,baz=24,slow=30,SNR=13						
YAK	**Yakutsk**	**10.46**	**47**	*e*P	**Pn**	**15 15 25.2**	**-4.1**
YAK				*e*		15 17 17.1	
YAK				pmax	pmax		
	comp=N,3.0nm,0.3s						
YAK				smax			
	comp=N,6.0nm,0.6s						
YAK				smax			
	comp=E,8.0nm,0.4s						
YAK				smax			
	comp=Z,10.0nm,0.4s						
YAK				pmax	pmax		
	comp=N,70nm,0.7s						
YAK				pmax	pmax		
	comp=Z,73nm,1.1s						
YAK				pmax	pmax		
	comp=E,69nm,0.5s						
YAK				MLR	MLR		
	comp=Z,200nm,19.0s						
KRAR	**Krasnoyarsk**	**11.56**	**280**	P	**Pn**	**15 15 46.0**	**+1.6**
ARDR	**Aradan**	**12.15**	**263**	*e*Sg	Sx	15 19 16.6	
KLR	**Kul'dur**	**12.90**	**113**	*e*P	**Pn**	**15 16 01.3**	**-1.5**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
HHC	**Hu-ho-hao-te**	**14.98**	**186**	*e*P	**Pn**	**15 16 41.5**	**+10**
HHC				AP	pP	15 16 47.3	+7.8
HHC				XP	sP	15 16 51.3	+10
HHC				PP		15 16 53.8	
HHC				*e*S	**Sn**	**15 19 33.3**	**+16**
HHC				SS		15 19 52.3	
HHC				AMB	AMB		
	comp=Z,8.0nm,0.7s						
HHC				LR	LR		
	comp=N,142nm,6.5s						
HHC				LR	LR		
	comp=E,248nm,7.1s						
HABR	**Khabarovsk**	**15.10**	**110**	P	**Pn**	**15 16 36.7**	**+4.0**
HABR						15 19 26.2	
NVS	**Novosibirsk**	**17.17**	**279**	*e*P	**Pn**	**15 17 02.4**	**+3.1**
TIXI	**Tiksi**	**17.23**	**17**	*e*Pn	**Pn**	**15 16 55.1**	**-4.9**
	comp=E,5.2nm,0.6s						
TIXI	**Tiksi**	**17.23**	**17**	*e*P	**Pn**	**15 16 57.7**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MA2	**Magadan**	**20.13**	**64**	*e*P	**P**	**15 17 34.5**	**+1.2**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MA2				pmax	pmax		
	comp=E,4.0nm,0.7s						
KSRS	**Korea Array**	**20.77**	**146**	LR	LR	15 26 35.1	
	comp=E,53nm,18.5s,MS2.9,baz=335,slow=39						
SEY	**Seymchan**	**20.81**	**54**	P	**P**	**15 17 42.2**	**+1.5**
KURK	**Kurchatov**	**21.30**	**271**	*e*P	**P**	**15 17 46.6**	**+0.5**
	comp=E,5.8nm,0.9s,mb3.9						
KURK	**Kurchatov**	**21.30**	**271**	*e*P	**P**	**15 17 46.6**	**+0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb3.9						
MK31	**Makanchi Array**	**21.30**	**258**	*e*P	**P**	**15 17 47.6**	**+1.5**
MKAR	**Makanchi Array**	**21.30**	**258**	P	**P**	**15 17 50.9**	**+4.8**
MKAR				LR	LR	15 26 20.0	
MKAR	**Makanchi Array**	**21.30**	**258**	P	**P**	**15 17 46.4**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,93nm,18.2s						
MKAR	**Makanchi Array**	**21.30**	**258**	P	**P**	**15 17 46.4**	**+0.3**
	comp=E,1.0nm,0.6s,mb3.4,baz=54,slow=11,SNR=4.2						
MKAR				LR	LR	15 26 20.0	
	comp=Z,93nm,18.2s,MS3.2,baz=252,slow=37						
ASAJ	**Asahikawa**	**21.90**	**110**	LR	LR	15 27 18.6	
	comp=Z,71nm,18.9s,MS3.1,baz=356,slow=39						
NJ2	**Nanjing**	**24.01**	**169**	*e*P	**P**	**15 18 19.3**	**+5.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
BRVK	**Borovoye**	**24.97**	**282**	*e*P	**P**	**15 18 23.9**	**+1.0**
	comp=Z,4.4nm,0.8s,mb4.0						
BRVK	**Borovoye**	**24.97**	**282**	*e*P	**P**	**15 18 23.9**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
JNU	**Nakatsue**	**25.69**	**145**	LR	LR	15 29 06.8	
	comp=Z,54nm,19.0s,MS3.1,baz=35,slow=38						
CD2	**Chengdu**	**25.78**	**199**	*e*P	**P**	**15 18 35.3**	**+4.9**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**38.79**	**326**	P	**P**	**15 20 19.5**	**-4.2**
	comp=Z,4.4nm,1.0s,mb4.2,baz=75,slow=11,SNR=2.7						
FINES	**FINESS Array B**	**42.61**	**315**	P	**P**	**15 20 53.9**	**-1.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**42.61**	**315**	P	**P**	**15 20 53.9**	**-1.4**
	comp=Z,1.1nm,0.8s,mb3.7,baz=77,slow=6.3,SNR=2.5						
KIV	**Kislovodsk**	**45.17**	**286**	*e*P	**P**	**15 21 16.9**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
NOA	**NORSAR Array B**	**48.52**	**321**	P	**P**	**15 21 38.4**	**-3.7**
NOA	**NORSAR Array B**	**48.52**	**321**	P	**P**	**15 21 38.4**	**-3.7**
	comp=Z,0.6nm,0.8s,mb3.7,baz=12,slow=7.7,SNR=2.4						
YKA	**Yellowknife Ar**	**56.26**	**25**	P	**P**	**15 22 36.1**	**-3.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**56.26**	**25**	P	**P**	**15 22 36.1**	**-3.4**
	comp=Z,0.5nm,0.7s,mb3.6,baz=333,slow=6.8,SNR=5.7						
WRA	**Warramunga Arr**	**77.47**	**160**	P	**P**	**15 24 54.5**	**-0.3**
	comp=Z,1.2nm,0.8s,mb3.9,baz=352,slow=6.7,SNR=14						
ASAR	**Alice Springs**	**81.02**	**161**	P	**P**	**15 25 13.8**	**-0.4**
	comp=Z,0.3nm,0.8s,mb3.3,baz=342,slow=4.3,SNR=4.7						

*IDC **21** 15:48:05.8±13.0, 2361S×17991W, h443km±162km, mb3.2/4, mb1 3.4/5, mb1mx3.1/15, mbtmp3.2/5, Error ellipse: s-maj=116.6km s-min=30.1km az=7.0*
*NEIC **21** 15:48:10.0±3.8, 2396S×17993W, h495km±42km, mb4.2/1, Error ellipse: s-maj=37.8km s-min=18.1km az=213.0*
*ISCJB **21** 15:48:10.5±5.4, 2405±03×1800E±02, h513km±61km, mb3.6/4, Error ellipse: s-maj=48.5km s-min=24.1km az=33.9*

ISC 21 15:48:09.4±4.6, 239S±03×1800W±02, h488km±51km, n9, σ0s69/9, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.51**	**189**	P	**P**	**15 51 14.3**	**-0.2**
	0.8nm,0.3s,baz=191,slow=7.9,SNR=7.4						
CTA	**Charters Tower**	**31.52**	**270**	P	**P**	**15 53 51.8**	**+1.1**
	1.3nm,0.3s,mb3.8,baz=83,slow=11,SNR=7.1						
CTAO	**Charters Tower**	**31.52**	**270**	*e*P	**P**	**15 53 52.0**	**+1.3**
	3.3nm,0.4s,mb4.1						
ASAR	**Alice Springs**	**42.07**	**261**	P	**P**	**15 55 17.6**	**-0.2**
	0.5nm,0.5s,mb3.2,baz=99,slow=6.8,SNR=22						
WB2	**Warramunga Arr**	**42.44**	**266**	*e*P	**P**	**15 55 20.1**	**-0.6**
WRA	**Warramunga Arr**	**42.45**	**266**	P	**P**	**15 55 20.3**	**-0.5**
	1.1nm,0.4s,mb3.7,baz=98,slow=8.3,SNR=44						
SBA	**Scott Base**	**54.36**	**183**	*e*P	**P**	**15 56 50.0**	**+1.1**
QSPA	**South Pole Qui**	**66.16**	**180**	*e*P	**P**	**15 58 06.5**	**-0.7**
TXAR	**Lajitas Array**	**90.41**	**58**	P	**P**	**16 00 18.4**	**0.0**
	0.4nm,0.7s,mb3.4,baz=224,slow=7.0,SNR=4.7						

*IDC **21** 15:51:04.0±3.2, 3327S×17858W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.9/14, mbtmp4.1/3, ML3.8/1, Error ellipse: s-maj=71.3km s-min=36.5km az=115.0*

ISC 21 15:51:06.0±2.5, 334S±01×1781W±04, h35km, n9, σ0s39/10, mb4.0/2, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.08**	**214**	PN	**Pn**	**15 52 20.0**	**+0.4**
PUZ	**Puketiti**	**5.52**	**211**	PN	**Pn**	**15 52 25.9**	**+0.2**
MWZ	**Matawai**	**6.07**	**214**	PN	**Pn**	**15 52 32.4**	**-0.7**
MWZ				SN	**Sn**	**15 53 41.7**	**+0.4**
URZ	**Urewera**	**6.21**	**217**	Pn	**Pn**	**15 52 35.4**	**+0.3**
	2.3nm,0.3s,baz=266,slow=3.7,SNR=12						
URZ				Sn	**Sn**	**15 53 44.6**	**-0.3**
	2.9nm,0.3s,baz=152,slow=21,SNR=8.8						
URZ	**Urewera**	**6.21**	**217**	PN	**Pn**	**15 52 34.9**	**-0.3**
BKZ	**Black Stump Fm**	**7.22**	**216**	PN	**Pn**	**15 52 48.8**	**-0.2**
ASAR	**Alice Springs**	**42.94**	**270**	P	**P**	**15 59 02.0**	**+0.4**
	2.3nm,0.7s,mb4.0,baz=111,slow=7.3,SNR=46						
WRA	**Warramunga Arr**	**44.20**	**275**	P	**P**	**15 59 11.4**	**-0.3**
	1.5nm,0.6s,mb3.9,baz=116,slow=7.9,SNR=21						
FINES	**FINESS Array B**	**147.91**	**338**	PKPbc	PKPbc	16 10 48.7	+2.1
	0.7nm,0.7s,baz=72,slow=6.2,SNR=4.4						

IDC 21 15:52:31.9±23.0, 1672S×17550W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/15, mbtmp4.2/4, Error ellipse: s-maj=436.7km s-min=50.0km az=61.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**22.42**	**195**	P	P	15 57 32.3	+0.1
	4.1nm,0.4s,baz=288,slow=21,SNR=6.7						
STKA	**Stephens Creek**	**41.63**	**241**	P	P	16 00 22.1	+0.1
	1.8nm,0.5s,baz=80,slow=9.8,SNR=9.8						
WRA	**Warramunga Arr**	**47.59**	**259**	P	P	16 01 09.7	-0.2
	0.9nm,0.5s,baz=95,slow=7.0,SNR=21						
ASAR	**Alice Springs**	**47.79**	**253**	P	P	16 01 11.2	-0.1
	5.7nm,0.6s,baz=88,slow=8.5,SNR=62						

*ISCJB **21** 16:23:45.1±0.4, 4481N±002×1205E±005, h5km, Error ellipse: s-maj=5.0km s-min=2.5km az=12.2*
*CSEM **21** 16:23:45.5±0.2, 4477N×1205E, h12km, ML3.2/7, Error ellipse: s-maj=4.8km s-min=2.4km az=104.0*
*ROM **21** 16:23:45.7±0.3, 4478N×1204E, h5km, Md2.7/8, Ml2.7/4, Error ellipse: s-maj=4.8km s-min=2.5km az=94.0*
*VIE **21** 16:23:47.8±0.7, 4491N×1208E, h10km±2km, ML2.7/7, Error ellipse: s-maj=4.0km s-min=2.8km az=8.0*

ISC 21 16:23:46.5±0.4, 4478N±002×1204E±005, h12km±6km, n22, σ1s15/40, 9C-9D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEOL	**Teolo**	**0.64**	**336**	⇑*i*Pg	**Pg**	**16 23 50.0**	**+1.0**
TEOL				*i* Sg	**Sg**	**16 24 09.5**	**+2.1**
RAVA	**Ravarino**	**0.66**	**269**	Pg	**Pg**	**16 23 59.8**	**+0.5**
RAVA				Sg	**Sg**	**16 24 10.2**	**+2.3**
SEI	**Scarperia**	**0.87**	**215**	Pg	**Pg**	**16 24 02.4**	**-1.0**
SEI				Sg	**Sg**	**16 24 14.3**	**-0.5**
	104nm,0.2s						
SFI	**Santa Sofia**	**0.88**	**189**	Pg	**Pg**	**16 24 03.2**	**-0.3**
SFI				Sg	**Sg**	**16 24 16.6**	**+1.6**
	46nm,0.3s						
VMG	**Vicchio**	**0.89**	**204**	Pg	**Pg**	**16 24 02.9**	**-0.8**
	79nm,0.6s						
FNVD	**Fontana Vidola**	**0.90**	**228**	Pg	**Pg**	**16 24 02.9**	**-0.9**
FNVD				Sg	**Sg**	**16 24 14.8**	**-0.7**
MTLO	**Montello**	**1.04**	**2**	⇓*e*Pg	**Pg**	**16 24 08.4**	**+1.9**
MTLO				*e*Sg	**Sg**	**16 24 24.3**	**+4.3**
CGRP	**Cima Grappa**	**1.12**	**351**	⇑*e*Pg	**Pg**	**16 24 07.1**	**-0.9**
CGRP				*e*Sg	**Sg**	**16 24 25.2**	**+2.7**
CRE	**Caprese Michel**	**1.16**	**183**	Pg	**Pg**	**16 24 08.5**	**-0.3**
CRE				Sg	**Sg**	**16 24 25.4**	**+1.6**
	46nm,1.1s						
CTI	**Castel Tesino**	**1.30**	**348**	Pg	**Pg**	**16 24 09.7**	**-1.8**
	81nm,0.3s						
MAGA	**Magasa**	**1.41**	**315**	Pg	**Pg**	**16 24 12.7**	**-0.9**
MAGA				Sg	**Sg**	**16 24 30.6**	**-1.4**
	1μm,0.3s						
MLNI	**Malnisio**	**1.43**	**16**	*e*Pg	**Pg**	**16 24 12.0**	**-2.0**
MLNI				*e*Sg	**Sg**	**16 24 36.6**	**+4.0**
COLI	**Coloredo**	**1.65**	**34**	⇓*i*Pn	**Pn**	**16 24 18.9**	**+3.7**
BAD	**Bernadia**	**1.69**	**30**	⇓*i*Pn	**Pn**	**16 24 20.4**	**+4.7**
DRE	**Drenchia**	**1.79**	**38**	⇓*i*Pn	**Pn**	**16 24 17.2**	**0.0**
VOY	**Vojsko**	**1.81**	**45**	*e*Pn	**Pn**	**16 24 17.3**	**-0.1**
VOY				*e*Sn	**Sn**	**16 24 48.3**	**+8.0**
FVI	**Forni Avoltri**	**1.89**	**16**	Pg	**Pg**	**16 24 19.2**	**-3.6**
	42nm,0.4s						
ABTA	**Abfaltersbach**	**2.00**	**9**	⇑*i*Pn	**Pn**	**16 24 20.0**	**-0.1**
ABTA				⇓*i*Pg	**Pg**	**16 24 23.4**	**-1.4**
ABTA				⇑*i*Sn	**Sn**	**16 24 44.7**	**-0.2**
FETA	**Feichten**	**2.42**	**338**	⇑*i*Pn	**Pn**	**16 24 26.5**	**+0.6**
FETA				⇓*i*Sg	**Sg**	**16 25 03.5**	**-0.9**
	8.1nm,0.4s						
OBKA	**Obir**	**2.47**	**45**	⇓*i*Pn	**Pn**	**16 24 26.3**	**-0.2**
OBKA				⇑*i*Sg	**Sg**	**16 25 06.2**	**+0.5**
	18nm,0.4s						
WTTA	**Wattenberg**	**2.50**	**354**	⇑*i*Pn	**Pn**	**16 24 27.0**	**0.0**
WTTA				⇓*i*Pg	**Pg**	**16 24 33.7**	**-0.8**
WTTA				⇓*i*Sg	**Sg**	**16 25 07.6**	**+0.7**
	9.3nm,0.3s						
SQTA	**Sankt Quirin**	**2.51**	**347**	⇑*i*Pn	**Pn**	**16 24 27.9**	**+0.8**
SQTA				⇑*i*Sg	**Sg**	**16 25 07.1**	**-0.1**
	19nm,0.3s						

WEL 21 15:34:18.8±0.2, 3824S×17798E, h33km, ML3.7/11, 1D, Error ellipse: s-maj=2.1km s-min=1.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**0.28**	**54**	P*	Pb	15 34 25.8	-0.4
PUZ				S*	Sb	15 34 31.8	+0.6
MWZ	**Matawai**	**0.37**	**254**	PN	Pb	15 34 26.8	-0.6
MWZ				S*	Sb	15 34 33.3	+0.1
URZ	**Urewera**	**0.68**	**268**	*e*PN	Pn	15 34 31.6	-0.5
URZ				SN	Sn	15 34 41.0	-0.5
MXZ	**Matakaoa Point**	**0.72**	**21**	PN	Pn	15 34 32.3	-0.3
KNZ	**Kokohu**	**0.82**	**197**	PN	Pn	15 34 33.2	-0.7
EDRZ	**Edgecumbe**	**0.98**	**277**	PN	Pn	15 34 36.4	+0.2
TAZ	**Tarawera**	**1.16**	**270**	PN	Pn	15 34 38.7	+0.2
OPRZ	**Ohinepanea**	**1.19**	**289**	PN	Pn	15 34 38.2	-0.8
TGRZ	**Tauranga**	**1.45**	**290**	PN	Pn	15 34 41.7	-0.9
BKZ	**Black Stump Fm**	**1.49**	**231**	⇓PN	Pn	15 34 43.2	0.0
MYRZ	**Mayor Island**	**1.67**	**304**	PN	Pn	15 34 44.4	-1.2
PXZ	**Pawanui**	**1.99**	**205**	PN	Pn	15 34 47.7	-2.4
WPVZ	**Whakapapa**	**2.13**	**242**	PN	Pn	15 34 52.0	0.0
KUZ	**Kuaotunu**	**2.33**	**309**	PN	Pn	15 34 53.2	-1.5
TSZ

	59nm,0.3s,baz=32,slow=5.6,SNR=336							
PMG				S	Sn	16 32 04.2	-1.9	
	48nm,0.3s,baz=175,slow=23,SNR=15							
PMG				LR	LR	16 32 29.3		
	comp=Z,136nm,18.0s,baz=102,slow=34							
HNR	**Honiara**	**13.31**	**108**	*e*P	**Pn**	**16 33 28.9**	**+3.0**	
HNR				*e*S	**Sn**	**16 35 48.5**	**-4.6**	
HNR	**Honiara**	**13.31**	**108**	P	**Pn**	**16 33 28.1**	**+2.2**	
	16nm,0.3s,baz=243,slow=3.1,SNR=9.6							
HNR				S	**Sn**	**16 35 52.1**	**-1.0**	
	8.3nm,0.3s,baz=272,slow=12,SNR=4.8							
CTA	**Charters Tower**	**14.52**	**183**	P	**Pn**	**16 33 44.9**	**+3.7**	
	0.8nm,0.3s,baz=355,slow=12,SNR=8.7							
CTAO	**Charters Tower**	**14.52**	**183**	P	**Pn**	**16 33 45.4**	**+4.3**	
KAKA	**Kakadu**	**16.15**	**243**	⇑*i*P	**Pn**	**16 34 02.2**	**+0.7**	
	17nm,0.7s							
KAKA	**Kakadu**	**16.15**	**243**	*e*P	**Pn**	**16 34 02.1**	**+0.6**	
WB2	**Warramunga Arr**	**18.97**	**220**	*e*P	**P**	**16 34 33.7**	**+0.8**	
WB2				*e*S	**S**	**16 34 00.6**	**-0.3**	
WB2	**Warramunga Arr**	**18.97**	**220**	*e*P	**P**	**16 34 33.7**	**+0.8**	
WB2				*e*S	**S**	**16 38 00.6**	**-0.3**	
WRA	**Warramunga Arr**	**18.98**	**220**	P	**P**	**16 34 33.8**	**+0.9**	
	8.8nm,0.3s,baz=49,slow=12,SNR=322							
WRA				S	**S**	**16 38 08.5**	**+7.5**	
	baz=38,slow=18,SNR=6.0							
ASAR	**Alice Springs**	**22.08**	**214**	P	**P**	**16 35 06.7**	**+0.5**	
	24nm,0.7s,mb4.7,baz=44,slow=8.9,SNR=427							
ASAR				S	**S**	**16 39 00.3**	**+0.5**	
	4.0nm,1.0s,baz=30,slow=21,SNR=16							
FITZ	**Fitzroy Crossi**	**24.42**	**237**	*e*P	**P**	**16 35 27.8**	**-0.2**	
	45nm,0.4s,mb5.3							
FITZ	**Fitzroy Crossi**	**24.42**	**237**	*e*P	**P**	**16 35 27.8**	**-0.1**	
FITZ	**Fitzroy Crossi**	**24.42**	**237**	P	**P**	**16 35 28.1**	**+0.1**	
	24nm,0.5s,mb5.0,baz=55,slow=9.9,SNR=135							
STKA	**Stephens Creek**	**26.73**	**190**	*e*P	**P**	**16 35 53.9**	**+5.2**	
	1.8nm,0.3s,mb4.2							
STKA	**Stephens Creek**	**26.73**	**190**	*e*P	**P**	**16 35 48.5**	**-0.2**	
FORT	**Forrest**	**30.86**	**213**	*e*P	**P**	**16 36 25.3**	**0.0**	
	6.5nm,0.5s,mb4.6							
KLBR	**Kellerberrin**	**37.80**	**223**	*e*P	**P**	**16 37 24.3**	**-0.8**	
	6.2nm,0.4s,mb4.6							
MUN	**Mundaring**	**39.09**	**224**	*e*P	**P**	**16 37 35.8**	**0.0**	
SONM	**Songino Array**	**64.03**	**331**	P	**P**	**16 40 40.9**	**+0.1**	
	0.6nm,0.5s,mb3.7,baz=150,slow=6.0,SNR=8.2							
MKAR	**Makanchi Array**	**77.19**	**320**	P	**P**	**16 42 00.3**	**-0.3**	
	0.4nm,0.4s,mb3.4,baz=97,slow=8.6,SNR=4.3							
BRVK	**Borovoye**	**86.51**	**324**	*e*P	**P**	**16 42 46.5**	**-2.7**	
	2.3nm,1.1s,mb3.9							
TORD	**Torodi Ar. Bea**	**145.07**	**285**	PKPbc	PKPbc	16 49 41.2	-2.5	
TORD	**Torodi Ar. Bea**	**145.07**	**285**	PKPbc	PKPbc	16 49 41.2	-2.5	
	1.7nm,0.5s,baz=64,slow=4.2,SNR=19							

IDC 21 17:06:34.6±5.0, 737S×10317E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/15, mbtmp3.4/4, Error ellipse: s-maj=178.1km s-min=27.8km az=61.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.69**	**116**	P	P	17 13 09.4	+0.4
	0.2nm,0.4s,baz=283,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**33.64**	**122**	P	P	17 13 16.4	-0.8
	0.3nm,0.8s,baz=298,slow=7.7,SNR=8.6						
STKA	**Stephens Creek**	**43.28**	**130**	P	P	17 14 38.6	+0.4
	1.0nm,0.4s,baz=286,slow=11,SNR=8.1						
SONM	**Songino Array**	**55.04**	**3**	P	P	17 16 08.0	+0.1
	0.5nm,0.9s,baz=196,slow=5.3,SNR=3.2						

*ISCJB **21** 17:14:46.6±0.6, 179S±02×178.5W±0.1, h600km, mb4.3/13, Error ellipse: s-maj=27.7km s-min=10.3km az=150.8*
*IDC **21** 17:14:46.2±5.8, 1738S×17868W, h567km±74km, mb3.7/8, mb1 4.0/8, mb1mx3.7/14, mbtmp3.7/8, Error ellipse: s-maj=81.7km s-min=24.7km az=156.0*
*NEIC **21** 17:14:50.0±3.4, 1794S×17850W, h630km±41km, mb4.6/3, Error ellipse: s-maj=22.2km s-min=17.9km az=131.0*
ISC 21 17:14:47.8±0.6, 179S±02×1785W±01, h600km, n29, σ0°69/27, mb4.3/13, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.80**	**251**	P	**P**	**17 17 53.3**	**-0.8**
	0.2nm,0.3s,baz=57,slow=14,SNR=12						
EIDS	**Eidsvold**	**29.24**	**250**	*e*P	**P**	**17 20 02.9**	**-0.2**
ARMA	**Armidale**	**29.92**	**240**	*e*P	**P**	**17 20 09.9**	**+1.0**
CNB	**Canberra Magne**	**33.41**	**232**	*e*P	**P**	**17 20 38.9**	**+0.5**
	13nm,0.5s,mb4.8						
CTA	**Charters Tower**	**33.41**	**260**	*e*P	**P**	**17 20 38.9**	**+0.2**
	8.7nm,0.6s,mb4.6						
CTAO	**Charters Tower**	**33.41**	**260**	*e*P	**P**	**17 20 38.9**	**+0.2**
	9.2nm,0.6s,mb4.6						
PMG	**Port Moresby**	**34.42**	**280**	*e*P	**P**	**17 20 48.7**	**+1.6**
STKA	**Stephens Creek**	**38.61**	**241**	*e*P	**P**	**17 21 21.7**	**+0.5**
	8.0nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.61**	**241**	*e*P	**P**	**17 21 21.6**	**+0.5**
STKA	**Stephens Creek**	**38.61**	**241**	P	**P**	**17 21 21.8**	**+0.6**
	9.7nm,0.5s,mb4.6,baz=88,slow=9.2,SNR=61						
WB2	**Warramunga Arr**	**44.59**	**260**	*i*P	**P**	**17 22 07.7**	**-0.6**
WRA	**Warramunga Arr**	**44.60**	**260**	P	**P**	**17 22 07.7**	**-0.7**
	5.7nm,0.3s,mb4.5,baz=94,slow=7.4,SNR=362						
ASAR	**Alice Springs**	**44.76**	**254**	P	**P**	**17 22 09.6**	**0.0**
	28nm,0.5s,mb5.0,baz=89,slow=8.5,SNR=827						
KAKA	**Kakadu**	**47.55**	**269**	*e*P	**P**	**17 22 30.7**	**0.0**
	9.8nm,0.4s,mb4.7						
KAKA	**Kakadu**	**47.55**	**269**	*e*P	**P**	**17 22 30.6**	**-0.2**
FORT	**Forrest**	**49.98**	**245**	*e*P	**P**	**17 22 47.6**	**-0.9**
	12nm,0.6s,mb4.5						
FORT	**Forrest**	**49.98**	**245**	*e*P	**P**	**17 22 47.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**53.00**	**261**	*e*P	**P**	**17 23 10.4**	**+0.1**
	1.5nm,0.3s,mb3.8						
FITZ	**Fitzroy Crossi**	**53.00**	**261**	*e*P	**P**	**17 23 10.2**	**-0.1**
QSPA	**South Pole Qui**	**72.17**	**180**	*e*P	**P**	**17 25 12.0**	**-0.4**
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**17 25 53.7**	**+0.6**
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**17 25 53.7**	**+0.6**
	1.8nm,0.8s,mb3.5,baz=216,slow=7.2,SNR=9.2						
TXAR	**Lajitas Array**	**86.02**	**58**	P	**P**	**17 26 27.2**	**+1.1**
	2.1nm,0.8s,mb3.8,baz=220,slow=6.2,SNR=24						
BW06	**Boulder Array**	**87.36**	**43**	*e*P	**P**	**17 26 31.7**	**-0.4**
PDAR	**Pinedale Array**	**87.36**	**43**	P	**P**	**17 26 32.4**	**+0.2**
	1.4nm,0.6s,mb3.8,baz=236,slow=3.3,SNR=8.5						
INK	**Inuvik**	**91.88**	**15**	P	**P**	**17 26 51.6**	**-0.8**
	1.5nm,0.8s,mb4.1,baz=180,slow=4.0,SNR=3.9						
YKA	**Yellowknife Ar**	**94.33**	**25**	P	**P**	**17 27 03.0**	**-0.7**
	0.3nm,0.5s,mb3.6,baz=235,slow=4.5,SNR=5.7						
CLL	**Collm**	**145.44**	**347**	*i* PKPbc	PKPbc	17 33 19.6	-0.1
	comp=Z,9.0nm,1.0s						
GERES	**GERESS Array B**	**147.58**	**345**	PKPbc	PKPbc	17 33 25.5	-0.1
	comp=Z,1.0nm,0.5s,baz=20,slow=2.9,SNR=12						

*MOS **21** 17:15:11.9±0.4, 5574N×11356E, h8km, mb4.1/1, Error ellipse: s-maj=40.4km s-min=24.3km az=91.4*
BYKL 21 17:15:14.1±0.3, 5587N×11340E, h17km±12km, 9C-4D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.26**	**20**	*e*PG	Pg	17 15 20.5	+0.6
SVKR				*e*		17 15 25.1	
SVKR				pmax	pmax		
	comp=Z,952nm,0.6s						
SVKR				smax			
	comp=N,4μm,0.9s						
SVKR	**Severomuysk**	**0.26**	**20**	⇑*i*Pg	Pg	17 15 20.6	+0.7
SVKR				*i* Sg	Sg	17 15 25.1	+1.2
SVKR				Pmax			
	comp=N,980nm,0.2s						
SVKR				Smax			
	comp=N,4μm,0.6s						
UKT	**Uakit**	**0.40**	**161**	⇓*i*Pg	Pg	17 15 21.4	-0.9
	comp=N,473nm,0.7s						
UKT				⇑*i*Pg	Pg	17 15 21.4	-0.9
	comp=N,103nm,0.7s						
UKT				⇑*i*Pg	Pg	17 15 21.4	-0.9
	comp=N,308nm,0.7s						
UKT				*i* Sg	Sg	17 15 26.9	-0.9
UKT				Pmax			
	comp=N,279nm,0.7s						
UKT				Smax			
	comp=N,607nm,0.6s						
YOA	**Uoyan**	**0.98**	**286**	⇑*i*PG	Pg	17 15 32.7	-0.3
YOA				*e*S	Sb	17 15 35.0	-10
YOA				*e*		17 15 46.9	
YOA				pmax	pmax		
	comp=Z,570nm,0.2s						
YOA				smax			
	comp=N,1μm,0.4s						
KMO	**Kumora**	**1.24**	**272**	*e*PG	Pg	17 15 36.9	-1.1
KMO				*e*		17 15 52.7	
KMO				pmax	pmax		
	comp=Z,137nm,0.3s						
KMO				smax			
	comp=N,515nm,0.9s						
KMO	**Kumora**	**1.24**	**272**	⇑*i*Pg	Pg	17 15 36.9	-1.1
KMO				⇓*i*		17 15 38.4	
KMO				*i*		17 15 42.7	
KMO				*i* Sg	Sg	17 15 53.5	-0.7
KMO				max			
	comp=N,30nm,0.3s						
KMO				Smax			
	comp=N,520nm,0.9s						
NLYR	**Nelyaty**	**1.43**	**63**	*e*Pn	Pn	17 15 39.8	+0.6
NLYR				⇑*i*Pg	Pg	17 15 40.5	-1.1
NLYR				*i* Sg	Sg	17 15 59.8	-0.4
YLYR	**Ulyunkhan**	**1.62**	**233**	⇑*i*Pg	Pg	17 15 43.2	-2.0
YLYR				*e*		17 15 51.1	
YLYR				*i* Sg	Sg	17 16 05.1	-1.2
YLYR				*e*		17 16 07.6	
YLYR				max			
	comp=N,20nm,0.3s						
YLYR				max			
	comp=N,99nm,0.3s						
BOD	**Bodaibo**	**1.98**	**9**	⇑*i*PN	Pn	17 15 49.0	+2.2
BOD				*e*		17 16 14.3	
BOD				pmax	pmax		
	comp=Z,30nm,0.2s						
BOD				smax			
	comp=E,305nm,0.6s						
BOD	**Bodaibo**	**1.98**	**9**	*e*Pg	Pg	17 15 49.2	-2.9
BOD				*e*Sg	Sg	17 16 14.1	-3.7
BOD				*e*		17 16 16.8	
BOD				Pmax			
	comp=E,39nm,0.9s						
BOD				Smax			
	comp=E,320nm,0.8s						
NIZ	**Nizh Angarsk**	**2.18**	**269**	*e*Pn	Pn	17 15 49.2	-0.3
NIZ				*e*Pg	Pg	17 15 51.8	-4.1
NIZ				*e*		17 15 53.1	
NIZ				*i* Sg	Sg	17 16 20.6	-3.5
NIZ				max			
	comp=E,18nm,0.5s						
NIZ				Smax			
	comp=E,77nm,0.9s						
CRS	**Chara**	**2.90**	**67**	*e*PN	Pn	17 15 59.4	0.0
CRS				*e*		17 16 05.6	
CRS				*e*		17 16 43.7	
CRS				pmax	pmax		
	comp=Z,24nm,0.9s						
CRS				smax			
	comp=E,124nm,0.5s						
CRS	**Chara**	**2.90**	**67**	⇓*i*Pn	Pn	17 16 00.3	+0.9
CRS				⇑*i*Pg	Pg	17 16 06.4	-3.2
CRS				*e*Sg	Sg	17 16 44.4	-2.7
CRS				Pmax			
	comp=E,24nm,0.9s						
CRS				Smax			
	comp=E,123nm,0.5s						
SYVR	**Suvo**	**2.97**	**223**	*e*Pn	Pn	17 16 01.7	+1.4
SYVR				*e*Pg	Pg	17 16 07.2	-3.7
SYVR				*e*Sg	Sg	17 16 46.5	-2.8
SYVR				Pmax			
	comp=E,7.0nm,0.5s						
SYVR				Smax			
	comp=E,55nm,1.3s						
MXMB	**Maximikha**	**3.76**	**228**	*e*	Pn	17 16 24.3	+13
MXMB				*e*Sg	Sg	17 17 11.3	-3.5
MXMB				max			
	comp=E,5.0nm,0.5s						
MXMB				Smax			
	comp=E,74nm,1.0s						
KHNR	**Khani**	**3.81**	**71**	*e*Sg	Sg	17 17 11.4	-4.8
CIT	**Chita**	**3.86**	**179**	⇓*i*Pg	Pg	17 16 23.1	-4.8
CIT				*e*Sg	Sg	17 17 13.1	-4.8
CIT				Pmax			
	comp=E,8.0nm,0.5s						
CIT				Smax			
	comp=E,70nm,1.6s						
TUP	**Tupik**	**4.03**	**108**	*e*Pn	Pn	17 16 15.2	+0.3
TUP				*i* Pg	Pg	17 16 25.9	-5.3
TUP				*e*Sn	Sn	17 17 01.6	-0.1
TUP				*e*Sg	Sg	17 17 18.6	-4.8
TUP				Pmax			
	comp=E,8.0nm,0.7s						
TUP				Smax			
	comp=E,88nm,1.3s						
OGRR	**Ongureny**	**4.04**	**239**	*e*Pn	Pn	17 16 16.4	+1.4
OGRR				*e*		17 16 28.6	
OGRR				*e*Sg	Sg	17 17 19.8	-3.8
OGRR				max			
	comp=E,2.0nm,0.7s						
OGRR				Smax			
	comp=E,21nm,1.5s						
TRG	**Tyrgan**	**5.17**	**236**	*e*Pg	Pg	17 16 45.7	-7.3
TRG				*e*Sg	Sg	17 17 53.7	-6.2
FFNB	**Fofonovo**	**5.48**	**228**	*e*Sg	Sg	17 18 06.0	-3.8
FFNB				Smax			
	comp=E,37nm,0.8s						
KAB	**Kabansk**	**5.52**	**229**	*e*Sg	Sg	17 18 03.7	-7.5
KAB				Smax			
	comp=E,110nm,0.7s						
HRMR	**Khuramsha**	**5.71**	**225**	*e*Sg	Sg	17 18 13.4	-4.0
HRMR				Smax			
	comp=E,48nm,0.6s						
KPC	**Khapcheranga**	**6.21**	**186**	*e*	Pn	17 16 49.4	+4.6
KPC				*e*		17 17 07.6	
KPC				*e*Sg	Sg	17 18 25.7	-7.4
KPC				max			
	comp=E,1.0nm,1.2s						
KPC				Smax			
	comp=E,18nm,1.0s						
IENR	**Iengra**	**6.43**	**82**	*e*Sg	Sn	17 18 33.5	+33
LSTR	**Listvyanka**	**6.46**	**235**	*e*Sg	Sn	17 18 34.9	+33
LSTR				Smax			
	comp=E,14nm,1.3s						
ARS	**Arshan**	**7.59**	**243**	*e*Sg	Sn	17 19 07.6	+38
ARS				Smax			
	comp=E,28nm,0.8s						
MOY	**Mondy**	**8.47**	**245**	*e*Sg	Sn	17 19 37.0	+46
MOY				Smax			
	comp=E,12nm,1.3s						
ORL	**Orlik**	**8.63**	**253**	*e*Sg	Sn	17 19 41.3	+46
ORL				Smax			
	comp=E,9.0nm,1.0s						

*ISCJB **21** 17:34:18.8±0.6, 685N×006×7301W±006, h166km±7km, mb3.0/2, Error ellipse: s-maj=12.0km s-min=7.1km az=44.1*
*IDC **21** 17:34:19.0±0.8, 681N×7300W, h152km±11km, mb2.9/2, mb1 3.4/4, mb1mx3.1/17, mbtmp3.1/4, Error ellipse: s-maj=40.3km s-min=7.7km az=131.0*
*FUNV **21** 17:34:19.6, 679N×7315W, h165km, MW3.7*
*NEIC **21** 17:34:20.0±0.8, 680N×7299W, h165km±11km, Error ellipse: s-maj=33.1km s-min=13.8km az=128.0*
ISC 21 17:34:19.8±0.6, 684N±006×7300W±006, h160km±7km, n23, σ0°81/28, mb3.0/2, 5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.23**	**34**	⇑*i*P	**Pn**	**17 34 48.5**	**+1.0**
CAPV				*e*S	**Sn**	**17 35 09.3**	**+0.5**
ROSC	**El Rosal**	**2.37**	**214**	P	**Pn**	**17 35 00.6**	**+0.7**
	42nm,0.3s,baz=80,slow=11,SNR=76						
ROSC				S	**Sn**	**17 35 29.7**	**-1.2**
	49nm,0.3s,baz=96,slow=22,SNR=9.8						
SOCV	**Socops**	**2.56**	**56**	*e*P	**Pn**	**17 35 03.3**	**+1.1**
SOCV				*e*S	**Sn**	**17 35 35.0**	**0.0**
VIGV	**El Vigia**	**2.56**	**39**	⇑*i*P	**Pn**	**17 35 02.9**	**+0.7**
VIGV				*e*S	**Sn**	**17 35 34.7**	**-0.3**
SDV	**Santo Domingo**	**3.10**	**49**	*e*Pn	**Pn**	**17 35 09.7**	**+0.8**
SDV				*e*Sn	**Sn**	**17 35 46.3**	**-0.6**
SDV	**Santo Domingo**	**3.10**	**49**	P	**Pn**	**17 35 10.1**	**+1.2**
	7.5nm,0.3s,baz=248,slow=4.5,SNR=40						
SDV				S	**Sn**	**17 35 46.2**	**-0.7**
	48nm,0.3s,baz=94,slow=20,SNR=28						
ELOV	**Elorza**	**3.50**	**87**	*e*P	**Pn**	**17 35 15.0**	**+1.2**
ELOV				*e*S	**Sn**	**17 35 55.1**	**-0.6**
VIRV	**Villa del Rosa**	**3.69**	**9**	⇑*i*P	**Pn**	**17 35 15.2**	**-1.1**
VIRV				*e*S	**Sn**	**17 35 57.5**	**-2.8**
QARV	**Quebrada Arrib**	**4.15**	**36**	⇑*i*P	**Pn**	**17 35 23.0**	**+0.7**
SANV	**Sanarito**	**4.33**	**52**	*e*P	**Pn**	**17 35 24.4**	**-0.2**
CURV	**Curarigua**	**4.36**	**43**	*e*P	**Pn**	**17 35 25.3**	**+0.3**
DABV	**Dabajuro**	**4.68**	**30**	*e*P	**Pn**	**17 35 29.4**	**+0.1**
TEPV	**Terepaima**	**4.88**	**50**	*e*P	**Pn**	**17 35 32.4**	**+0.6**
SIQV	**Siquisique**	**4.93**	**40**	⇑*i*P	**Pn**	**17 35 32.4**	**-0.1**
BAUV	**El Baul**	**5.34**	**67**	*e*P	**Pn**	**17 35 37.0**	**-0.9**
TURV	**Turiamo**	**6.24**	**55**	*e*P	**Pn**	**17 35 49.6**	**-0.2**
CAOV	**Caicara del Or**	**6.65**	**85**	*e*P	**Pn**	**17 35 54.1**	**-1.1**
CUPV	**Cœpira**	**7.82**	**65**	*e*P	**Pn**	**17 36 10.2**	**-0.6**
LPAZ	**La Paz**	**23.48**	**168**	pP	pP	17 39 47.3	+1.5
	0.7nm,0.6s,baz=350,slow=13,SNR=2.6						
TXAR	**Lajitas Array**	**36.54**	**312**	P	**P**	**17 41 10.1**	**0.0**
	0.2nm,0.6s,mb3.0,baz=120,slow=7.4,SNR=3.6						
YKA	**Yellowknife Ar**	**63.29**	**340**	P	**P**	**17 44 31.5**	**+0.4**
	0.2nm,0.6s,mb3.1,baz=134,slow=6.9,SNR=5.7						
ASAR	**Alice Springs**	**149.22**	**234**	PKPbc	PKPbc	17 53 50.0	-0.3
	0.3nm,0.8s,baz=113,slow=3.8,SNR=4.1						
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	17 53 52.9	-0.4
	0.1nm,0.4s,baz=108,slow=2.8,SNR=6.1						

*ISCJB **21** 17:35:36.1±0.7, 3088N±004×5000E±006, h10km, Error ellipse: s-maj=7.8km s-min=5.8km az=2.5*
*CSEM **21** 17:35:37.6±0.1, 3085N×5004E, h27km±1km, ML3.1, Error ellipse: s-maj=2.2km s-min=1.1km az=104.0*
*THR **21** 17:35:38.1±0.3, 3096N×5013E, h16km±8km, ML3.1*
ISC 21 17:35:39.4±4.1, 3086N±006×5009E±007, h20km±41km, n12, σ0°48/18, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.66**	**319**	*e*Pg	**Pn**	**17 36 07.4**	**0.0**
SHGR				*e*Sg	**Sn**	**17 36 29.0**	**+0.9**
SHGR				AML	AML	17 36 32.2	
	comp=N,515nm,0.6s						
SHGR				AML	AML	17 36 36.0	
	comp=E,258nm,0.4s						
SHGR	**Shooshtar-Gavs**	**1.66**	**319**	*e*Pg	**Pn**	**17 36 07.4**	**0.0**
	SNR=91						
SHGR				*e*Sg	**Sn**	**17 36 29.0**	**+0.9**
	SNR=91						
NASN	**Na'in**	**3.02**	**49**	*e*Pn	**Pn**	**17 36 26.4**	**+0.5**
NASN				Sn	**Sn**	**17 37 01.5**	**0.0**
NASN				AML	AML	17 37 04.8	
	comp=E,15nm,0.5s						
NASN				AML	AML	17 37 18.7	
	comp=N,17nm,0.6s						
NASN	**Na'in**	**3.02**	**49**	*e*Pn	**Pn**	**17 36 26.5**	**+0.5**
	SNR=52						
NASN				Sn	**Sn**	**17 37 01.5**	**0.0**
	SNR=52						
KFJS		**3.25**	**216**	P	**Pn**	**17 36 29.0**	**-0.2**
ASAO	**Ashtian**	**3.68**	**359**	*e*Pn	**Pn**	**17 36 35.2**	**+0.1**
ASAO				Sn	**Sn**	**17 37 17.0**	**-0.9**
ASAO				AML	AML	17 37 23.2	
	comp=E,19nm,0.5s						
ASAO				AML	AML	17 37 38.6	
	comp=N,26nm,0.6s						
ASAO	**Ashtian**	**3.68**	**359**	*e*Pn	**Pn**	**17 36 35.2**	**+0.1**
	SNR=52						
ASAO				Sn	**Sn**	**17 37 17.0**	**-0.9**
	SNR=52						
GHVR	**GHOM**	**3.75**	**15**	*e*Pn	**Pn**	**17 36 35.9**	**-0.2**
GHVR				AML	AML	17 37 22.3	
	comp=N,250nm,0.2s						
ASYS		**6.03**	**238**	P	**Pn**	**17 37 06.8**	**-0.7**
BTHS		**6.82**	**174**	P	**Pn**	**17 37 18.6**	**+0.3**
BTHS		**6.82**	**174**	P	**Pn**	**17 37 18.5**	**+0.2**
HRDDS		**7.92**	**184**	P	**Pn**	**17 37 33.6**	**+0.2**

*NEIC **21** 17:35:51.2, 19.14N×6677W, h22km, MD3.2(RSPR), After RSPR.*
RSPR 21 17:35:51.2, 1914N×6677W, h22km±29km, MD3.2/12, MD3.2/12, 9C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.75**	**206**	⇑*e*P	Pb	17 36 03.2	-2.3
AGPR				*e*S	Sb	17 36 13.3	-2.0
AOPR	**Arecibo Observ**	**0.79**	**179**	⇑*e*P	Pb	17 36 04.3	-2.0
AOPR				*e*S	Sb	17 36 14.9	-1.7
LSP	**Las Mesas**	**1.01**	**197**	⇓*e*P	Pb	17 36 07.3	-2.7
LSP				*e*S	Sb	17 36 20.9	-2.0
CELP	**Cerrillos**	**1.08**	**170**	⇑*e*P	Pn	17 36 08.7	-2.2
CELP				*e*S	Sb	17 36 21.5	-3.3
OBIP	**Obispado Ponce**	**1.11**	**172**	⇑*e*P	Pn	17 36 09.1	-2.3
OBIP				*e*S	Sb	17 36 22.4	-3.2
GBPR	**Guanica, Bosqu**	**1.17**	**185**	*e*S	Sb	17 36 24.3	-3.0
SJG	**San Juan**	**1.18**	**150**	⇑*e*P	Pn	17 36 10.3	-2.1
SJG				*e*S	Sn	17 36 25.3	-2.6
SJG	**San Juan**	**1.18**	**150**	⇑*e*P	Pn	17 36 10.3	-2.1
SJG				*e*S	Sn	17 36 25.2	-2.6
CBYP	**Canovanas**	**1.23**	**135**	⇑*e*P	Pn	17 36 10.7	-2.3
CBYP				*e*S	Sn	17 36 25.4	-3.4
HUMP	**Col San Antoni**	**1.32**	**139**	⇑*e*P	Pn	17 36 12.2	-2.1
HUMP				*e*S	Sn	17 36 28.2	-3.1
CPD	**Cerro la Pandu**	**1.37**	**143**	⇑*e*P	Pn	17 36 13.2	-1.7
CPD				*e*S	Sn	17 36 28.9	-3.5
MTP	**Monte Pirata**	**1.56**	**132**	⇓*e*P	Pn	17 36 15.2	-2.3
MTP				*e*S	Sn	17 36 33.9	-3.1
STVI	**Saint Thomas**	**1.89**	**114**	⇓*e*P	Pn	17 36 20.2	-2.0
STVI				*e*S	Sn	17 36 41.6	-3.8
TBVI	**Tortola**	**2.17**	**109**	*e*S	Sn	17 36 49.4	-2.7
SDDR	**Presa de Saban**	**4.28**	**269**	*e*P	Pn	17 36 55.3	+0.4

*NEIC **21** 17:58:54.1±9.9, 4314N×12812W, h10km, Error ellipse: s-maj=108.0km s-min=11.7km az=66.0*
ISC 21 17:59:02.5±0.9, 4339N±004×12731W±007, h10km, n70, σ0°68/81, 15C-39D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
K01A	**Sixes**	**2.16**	**105**	⇓S	**Sn**	**18 00 04.7**	**-0.7**
	baz=2.3

F03A				⇓S		Sn	18 00 43.5	+0.4
	baz=3.8							
IRO	**Indian Ridge**	**3.72**	**79**	P		Pn	17 59 59.9	-0.1
J04A	**Umpqua Nationa**	**3.80**	**90**	⇓P		Pn	18 00 01.5	+0.4
	baz=4.0							
NLO	**Nicolai Mounta**	**3.86**	**44**	P		Pn	18 00 01.4	-0.4
FRIS	**Frissel Point**	**3.86**	**76**	P		Pn	18 00 02.5	+0.5
G04A	**Mulino**	**3.92**	**61**	⇑P		Pn	18 00 02.9	+0.3
	baz=4.1,SNR=17							
H04A	**Detroit Lake**	**3.92**	**69**	⇑P		Pn	18 00 02.5	-0.2
	baz=4.1							
HUOR	**Husband**	**4.03**	**78**	P		Pn	18 00 05.1	+0.9
WIFE	**Three Sisters-**	**4.04**	**79**	P		Pn	18 00 05.3	+0.9
E03A	**Lebam**	**4.13**	**39**	⇓P		Pn	18 00 04.6	-0.9
	baz=4.2,SNR=7.7							
E03A				⇓S		Sn	18 00 52.6	-1.2
	baz=4.2							
BKCOR	**Black Crater**	**4.17**	**75**	P		Pn	18 00 07.0	+1.0
BMW	**Boistfort Moun**	**4.24**	**42**	P		Pn	18 00 06.1	-0.9
RVW	**Rose Valley**	**4.27**	**48**	P		Pn	18 00 07.5	0.0
F04A	**Amboy**	**4.32**	**52**	⇓P		Pn	18 00 08.2	0.0
	baz=4.4,SNR=11							
F04A				⇓S		Sn	18 00 59.1	+0.5
	baz=4.4							
VLMM	**Larch Mountain**	**4.34**	**59**	P		Pn	18 00 09.3	+0.7
TDH	**Tom, Dick, Har**	**4.39**	**62**	P		Pn	18 00 09.9	+0.7
LVP	**Lakeview Peak**	**4.40**	**51**	P		Pn	18 00 09.7	+0.4
FL2	**Flat Top 2**	**4.51**	**50**	P		Pn	18 00 11.5	+0.6
NLWA	**Neilton Lookou**	**4.68**	**30**	⇑S		Sn	18 01 04.7	-2.8
	baz=4.8							
G05A	**Wamic**	**4.69**	**65**	⇑P		Pn	18 00 13.4	+0.2
	baz=4.8							
F05A	**White Salmon**	**4.87**	**57**	⇓P		Pn	18 00 16.3	+0.6
	baz=5.0							
E05A	**Randle**	**5.06**	**49**	⇓P		Pn	18 00 18.8	+0.5
	baz=5.2,SNR=18							
G06A	**Carlson Farm,**	**5.14**	**67**	⇓P		Pn	18 00 19.2	-0.3
	baz=5.3							
F06A	**Goldendale**	**5.24**	**61**	⇓P		Pn	18 00 21.0	+0.2
	baz=5.4							
D05A	**Enumclaw**	**5.34**	**43**	⇓P		Pn	18 00 22.5	+0.3
	baz=5.4,SNR=6.7							
E06A	**Yakima**	**5.49**	**53**	⇓P		Pn	18 00 25.0	+0.8
	baz=5.6,SNR=8.8							
H07A	**Lands Inn, Kim**	**5.72**	**75**	⇓P		Pn	18 00 27.8	+0.4
	baz=5.9							
G07A	**Ruggs Ranch, H**	**5.80**	**68**	⇓P		Pn	18 00 28.7	+0.2
	baz=5.9							
C05A	**Tolt Reservoir**	**5.84**	**41**	⇑P		Pn	18 00 29.1	0.0
	baz=5.9,SNR=6.4							
D06A	**Cle Elum**	**5.94**	**48**	⇓P		Pn	18 00 30.7	+0.2
	baz=6.0							
B05A	**Bryant**	**6.09**	**35**	⇑P		Pn	18 00 32.4	0.0
	baz=6.2							
N06A	**Buffalo Meadow**	**6.16**	**113**	⇓P		Pn	18 00 32.3	-1.2
	baz=6.3							
G08A	**Pilot Rock**	**6.29**	**70**	⇓P		Pn	18 00 35.1	-0.1
	baz=6.4							
HAWA	**Hanford**	**6.29**	**59**	*e*P		Pn	18 00 35.6	+0.3
	20nm,0.7s							
H08A	**Prairie City**	**6.34**	**77**	⇓P		Pn	18 00 36.2	+0.2
	baz=6.5							
E08A	**Dider Farm, El**	**6.63**	**59**	⇓P		Pn	18 00 40.0	+0.1
	baz=6.8							
C07A	**Waterville**	**6.67**	**47**	⇓P		Pn	18 00 40.5	+0.1
	baz=6.8,SNR=5.5							
D08A	**Wollman Farm,**	**6.97**	**55**	⇓P		Pn	18 00 44.3	-0.3
	baz=7.1							
H09A	**Durkee**	**7.07**	**76**	⇓P		Pn	18 00 46.2	+0.2
	baz=7.2							
B07A	**Winthrop**	**7.13**	**42**	⇓P		Pn	18 00 46.5	-0.3
	baz=7.2							
C08A	**Higginbotham F**	**7.28**	**50**	⇓P		Pn	18 00 48.9	+0.1
	baz=7.4							
BMO	**Blue Mountains**	**7.35**	**75**	*e*P		Pn	18 00 49.7	-0.1
	4.1nm,0.6s							
H10A	**Noah's Angus R**	**7.71**	**77**	⇓P		Pn	18 00 54.8	0.0
	baz=7.9							
B09A	**Rice**	**8.13**	**49**	⇓P		Pn	18 01 00.5	0.0
	baz=8.2							
H11A	**Donnelly**	**8.25**	**77**	⇓P		Pn	18 01 02.6	+0.5
	baz=8.4							
NEW	**Newport**	**8.62**	**52**	*e*P		Pn	18 01 07.3	+0.1
	6.7nm,0.9s							
H13A	**Challis**	**9.49**	**78**	⇑P		Pn	18 01 20.9	+1.8
	baz=9.6							
DLMT	**Dillon**	**10.72**	**74**	P		Pn	18 01 37.3	+1.3
	5.1nm,0.9s							
WALA	**Waterton Lakes**	**10.87**	**54**	*e*P		Pn	18 01 38.6	+0.6
	7.7nm,0.8s							
BOZ	**Bozeman (W)**	**11.43**	**73**	*e*P		Pn	18 01 45.6	0.0
	6.9nm,1.5s							
YMR	**Madison River**	**11.84**	**78**	*e*P		Pn	18 01 54.5	+3.2
	8.2nm,1.0s							
TPAW	**Teton Pass**	**11.90**	**84**	*e*P		Pn	18 01 56.4	+4.3
	11nm,1.1s							

*NEIC **21** 17:59:35.7±1.7, 7.43S×128.10E, h146km±18km, mb4.5/6, Error ellipse: s-maj=18.6km s-min=10.1km az=55.0*
*IDC **21** 17:59:37.0±3.5, 7.44S×128.12E, h149km±34km, mb3.8/5, mb1 4.0/8, mb1mx3.9/13, mbtmp3.9/8, MS3.6/1, Ms1 3.6/1, ms1mx2.8/23, Error ellipse: s-maj=38.0km s-min=15.1km az=61.0*
*ISCJB **21** 17:59:37.5±1.2, 7.72S±0.06×128.02E±0.06, h188km±12km, mb4.3/15, Error ellipse: s-maj=11.7km s-min=7.6km az=142.4*
*MOS **21** 17:59:38.4±0.7, 7.64S×128.11E, h197km, mb4.1/5, Error ellipse: s-maj=37.9km s-min=13.3km az=112.4*

ISC 21 17:59:39.1±1.3, 7.80S±0.08×128.00E±0.08, h188km±14km, n38, σ1°17/44, mb4.3/15, 3C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**4.91**	**240**	P	**Pn**	**18 00 54.0**	**+2.0**
	36nm,0.3s,baz=131,slow=2.0,SNR=73						
BATI				*e*S	**Sn**	**18 01 47.3**	**-2.1**
	72nm,0.3s,baz=44,slow=1.6,SNR=7.9						
KAKA	**Kakadu**	**6.55**	**139**	*e*P	**Pn**	**18 01 13.1**	**-0.3**
	48nm,0.4s						
KAKA				*e*S	**Sn**	**18 02 11.0**	**-17**
FITZ	**Fitzroy Crossi**	**10.50**	**192**	*e*P	**Pn**	**18 02 05.1**	**+0.1**
	14nm,0.3s						
FITZ				*e*S	**Sn**	**18 03 56.9**	**-5.1**
FITZ	**Fitzroy Crossi**	**10.50**	**192**	P	**Pn**	**18 02 05.3**	**+0.3**
	2.7nm,0.3s,baz=28,slow=11,SNR=44						
FITZ				S	**Sn**	**18 04 00.5**	**-1.5**
	5.5nm,0.3s,baz=97,slow=19,SNR=10						
WRA	**Warramunga Arr**	**13.55**	**154**	P	**Pn**	**18 02 44.7**	**+0.9**
	1.9nm,0.3s,baz=324,slow=14,SNR=81						
WRA				S	**Sn**	**18 05 08.9**	**-5.9**
	5.0nm,0.3s,baz=327,slow=24,SNR=20						
WB2	**Warramunga Arr**	**13.55**	**154**	*e*P	**Pn**	**18 02 43.2**	**-0.7**
WB2				*e*		18 02 49.9	
WB2				*e*S	**Sn**	**18 05 07.3**	**-7.7**
MBWA	**Marble Bar**	**15.50**	**210**	*e*Pn	**Pn**	**18 03 10.4**	**+2.4**
MBWA				*e*Sn	**Sn**	**18 05 54.8**	**-6.8**
ASAR	**Alice Springs**	**16.76**	**161**	P	**Pn**	**18 03 25.1**	**+1.9**
	4.7nm,0.3s,baz=340,slow=11,SNR=540						
ASAR				S	**S**	**18 06 25.1**	**-2.6**
	1.8nm,0.3s,baz=319,slow=17,SNR=9.6						
KKM	**Kota Kinabalu**	**18.09**	**319**	*e*P	**P**	**18 03 33.0**	**-3.8**
KSM	**Kuching**	**19.91**	**297**	*e*P	**P**	**18 03 56.5**	**0.0**
FORT	**Forrest**	**22.86**	**180**	*e*P	**P**	**18 04 29.9**	**+3.7**
	11nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**27.10**	**154**	*e*P	**P**	**18 05 08.1**	**+3.6**
	1.4nm,0.6s,mb3.8						
STKA	**Stephens Creek**	**27.10**	**154**	P	**P**	**18 05 08.3**	**+3.8**
	1.0nm,0.4s,mb3.8,baz=324,slow=13,SNR=7.9						
PSI	**Prapat**	**30.86**	**289**	P	**P**	**18 05 39.3**	**+1.3**
	3.8nm,0.5s,mb4.4,baz=150,slow=8.1,SNR=4.2						
HNR	**Honiara**	**31.62**	**95**	LR	LR	18 19 14.4	
	comp=Z,108nm,18.1s,baz=179,slow=37						
KSRS	**Korea Array**	**45.01**	**360**	P	**P**	**18 07 35.1**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
KSRS	**Korea Array**	**45.01**	**360**	P	**P**	**18 07 35.0**	**-0.8**
	comp=Z,1.0nm,0.4s,mb3.8,baz=176,slow=9.5,SNR=8.7						
LSA	**Lhasa**	**51.43**	**318**	P	**P**	**18 08 24.0**	**-1.2**
	comp=Z,3.8nm,0.6s,mb4.2						
LSA	**Lhasa**	**51.43**	**318**	P	**P**	**18 08 24.0**	**-1.2**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
ODAN	**Odare**	**52.31**	**313**	*e*P	**P**	**18 08 32.3**	**+0.6**
	comp=Z,3.7nm,0.4s,mb4.4						
TAPN	**Taplejung**	**52.36**	**313**	*e*P	**P**	**18 08 32.7**	**+0.6**
	comp=Z,14nm,1.0s,mb4.5						
JIRN	**Jiri**	**53.64**	**313**	*e*P	**P**	**18 08 41.8**	**+0.4**
	comp=Z,4.2nm,0.5s,mb4.5						
GKN	**Gorkha**	**54.97**	**312**	*e*P	**P**	**18 08 51.4**	**+0.4**
	comp=Z,6.1nm,0.3s,mb4.8						
KOLN	**Koldanda**	**55.61**	**311**	*e*P	**P**	**18 08 56.2**	**+0.6**
	comp=Z,9.9nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**58.43**	**344⇑**	*e*P	**P**	**18 09 15.0**	**0.0**
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**18 09 16.6**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.7,baz=112,slow=4.0,SNR=12						
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**18 10 16.7**	**-0.1**
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**18 10 16.8**	**0.0**
MKAR						18 10 42.7	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**67.82**	**328**	P	**P**	**18 10 16.8**	**-0.1**
	comp=Z,1.9nm,0.5s,mb4.1,baz=120,slow=7.9,SNR=37						
MKAR				PcP	PcP	18 10 42.6	+0.6
	comp=Z,1.1nm,0.8s,baz=130,slow=5.9,SNR=5.8						
YAK	**Yakutsk**	**69.63**	**1**	P	**P**	**18 10 26.8**	**-0.8**
YAK	**Yakutsk**	**69.63**	**1**	*e*P	**P**	**18 10 27.2**	**-0.4**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
KURK	**Kurchatov**	**72.18**	**330⇑**	*e*P	**P**	**18 10 43.6**	**+0.4**
SEY	**Seymchan**	**72.96**	**11**	P	**P**	**18 10 46.7**	**-0.9**
TIXI	**Tiksi**	**79.28**	**0**	*e*P	**P**	**18 11 20.7**	**-2.4**
	comp=Z,1.7nm,0.6s,mb3.9						
TIXI	**Tiksi**	**79.28**	**0⇑**	*e*P	**P**	**18 11 21.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
SOC	**Sochi**	**94.07**	**313**	P	**P**	**18 12 35.7**	**-0.5**
ANN	**Anapa**	**95.83**	**314**	*e*P	**P**	**18 12 39.3**	**-4.9**
ANN				*e*		18 16 35.9	
ANN				*e*PPP		18 18 40.1	
ANN				*e*		18 22 55.1	
ANN				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.5						
LPAZ	**La Paz**	**151.23**	**146**	PKPbc	PKPbc	18 19 15.3	+4.2
	comp=Z,0.5nm,0.4s,baz=342,slow=3.2,SNR=3.2						
LPAZ				PKPab	PKPab	18 19 24.5	+4.9
	comp=Z,0.8nm,0.7s,baz=129,slow=2.3,SNR=4.9						

*IDC **21** 18:01:06.9±1.1, 42.78N×104.88W, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.6/23, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=19.8km s-min=10.3km az=163.0*
*ISCJB **21** 18:01:11.9±0.4, 43.71N±004×105.26W±005, h0km, Error ellipse: s-maj=5.7km s-min=4.3km az=147.7*
*NEIC **21** 18:01:12.9±0.3, 43.72N×105.21W, h0km, ML3.3, Error ellipse: s-maj=5.4km s-min=4.2km az=159.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.

ISC 21 18:01:13.2±0.4, 43.72N±004×105.26W±004, h0km, n33, σ1°01/41, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.97**	**65**	*e*Pg	**Pg**	**18 01 31.4**	**-0.5**
RSSD				*e*Sg	**Sg**	**18 01 44.4**	**0.0**
PHWY	**Pilot Hill**	**2.42**	**183**	*e*Pn	**Pn**	**18 01 54.4**	**+0.3**
PHWY				*e*Sn	**Sn**	**18 02 24.7**	**+0.3**
RWWY	**Rawlins**	**2.49**	**216**	*e*Pn	**Pn**	**18 01 55.1**	**+0.2**
RWWY				*e*Sn	**Sn**	**18 02 25.0**	**-1.0**
LAO	**LASA Array**	**3.04**	**347**	*e*Pn	**Pn**	**18 02 02.9**	**+0.3**
RLMT	**Red Lodge**	**3.19**	**297**	*e*P	**Pn**	**18 02 04.8**	**+0.2**
BW06	**Boulder Array**	**3.28**	**255**	*e*Pn	**Pn**	**18 02 05.6**	**-0.3**
PDAR	**Pinedale Array**	**3.28**	**255**	Pn	**Pn**	**18 02 06.5**	**+0.7**
	3.7nm,0.3s,baz=92,slow=14,SNR=60						
PDAR				Lg		18 02 52.4	
	20nm,0.3s,baz=78,slow=31,SNR=23						
LKWY	**Lake**	**3.79**	**285**	Pn	**Pn**	**18 02 12.5**	**-0.4**
LKWY				*e*Pg	**Pg**	**18 02 22.9**	**-3.0**
LOHW	**Long Hollow**	**3.88**	**270**	*e*Pn	**Pn**	**18 02 14.9**	**+0.9**
ISCO	**Idaho Springs**	**3.93**	**184**	*e*Pn	**Pn**	**18 02 14.8**	**+0.1**
ISCO				S	**Sn**	**18 03 07.2**	**+5.7**
FLWY	**Flagg Ranch**	**3.95**	**277**	*e*Pn	**Pn**	**18 02 15.6**	**+0.6**
FLWY				*e*Pg	**Pg**	**18 02 26.0**	**-2.9**
FLWY				*e*Sg	**Sg**	**18 03 19.5**	**-0.5**
MOOW	**Moose Ponds**	**3.97**	**272**	*e*Pn	**Pn**	**18 02 16.3**	**+0.9**
SNOW	**Snow King Moun**	**4.00**	**268**	Pn	**Pn**	**18 02 16.2**	**+0.5**
REDW	**Red Top Meadow**	**4.08**	**267**	Pn	**Pn**	**18 02 17.9**	**+1.0**
YFT	**Old Faithful**	**4.08**	**282**	*e*Pg	**Pg**	**18 02 28.5**	**-3.0**
IMW	**Indian Meadow**	**4.11**	**274**	*e*Pn	**Pn**	**18 02 19.0**	**+1.7**
TPAW	**Teton Pass**	**4.14**	**269**	*e*Pn	**Pn**	**18 02 18.9**	**+1.2**
YMR	**Madison River**	**4.21**	**285**	*e*Pn	**Pn**	**18 02 18.2**	**-0.4**
SMCO	**Snowmass**	**4.72**	**196**	*e*P	**Pn**	**18 02 30.9**	**+5.3**
DGMT	**Dagmar**	**4.81**	**8**	*e*Pn	**Pn**	**18 02 28.5**	**+1.7**
BOZ	**Bozeman (W)**	**4.93**	**295**	*e*Pn	**Pn**	**18 02 27.5**	**-1.1**
HWUT	**Hardware Ranch**	**5.11**	**248**	*e*Pn	**Pn**	**18 02 31.1**	**+0.2**
	12nm,0.8s						
DLMT	**Dillon**	**5.49**	**290**	*e*Pn	**Pn**	**18 02 36.7**	**+0.5**
	11nm,0.9s						
DAU	**Daniels Canyon**	**5.55**	**236**	*e*P	**Pn**	**18 02 37.2**	**+0.1**
HVU	**Hansel Valley**	**5.86**	**253**	*e*P	**Pn**	**18 02 41.5**	**+0.1**
SRU	**San Rafael**	**6.07**	**222**	*e*Pn	**Pn**	**18 02 43.3**	**-0.9**
	7.9nm,0.7s						
SRU				*e*Sg	**Sb**	**18 04 18.0**	**+5.0**
PV01	**Paradox Valley**	**6.12**	**205**	Pn	**Pn**	**18 02 44.3**	**-0.5**
ECSD	**EROS,Sioux Fal**	**6.27**	**87**	*e*Pn	**Pn**	**18 02 47.3**	**+0.4**
	7.3nm,0.6s						
CHMT	**Chamberlain Mo**	**6.47**	**302**	*e*Pn	**Pn**	**18 02 50.0**	**+0.3**
ULM	**Lac du Bonnet**	**9.15**	**41**	Pn	**Pn**	**18 03 24.4**	**-2.0**
	1.6nm,0.3s,baz=227,slow=12,SNR=19						
ULM				Lg		18 06 02.5	
	0.4nm,0.3s,baz=155,slow=14,SNR=4.1						
YKA	**Yellowknife Ar**	**19.59**	**347**	P	**Pn**	**18 05 47.2**	**+3.5**
YKA	**Yellowknife Ar**	**19.59**	**347**	P	**Pn**	**18 05 47.2**	**+3.5**
	0.3nm,0.3s,baz=154,slow=8.9,SNR=4.8						
ARCES	**ARCESS Array B**	**61.43**	**18**	P	**P**	**18 11 29.4**	**-1.4**
	3.2nm,0.9s,baz=324,slow=7.5,SNR=5.2						

*IDC **21** 18:03:17.7±1.0, 30.28S×177.35W, h0km, mb4.5/6, mb1 4.6/8, mb1mx4.3/18, mbtmp4.5/8, ML4.2/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/35, Error ellipse: s-maj=28.1km s-min=26.0km az=136.0*
*NEIC **21** 18:03:19.0±0.7, 30.26S×177.34W, h10km, mb4.8/4, Error ellipse: s-maj=17.9km s-min=14.1km az=107.0*

ISC 21 18:03:32.0±4.7, 30.8S±02×178.1W±02, h76km±34km, n36, σ1°12/19, mb4.5/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.42**	**207**	Pn	**Pn**	**18 05 30.8**	**-0.4**
	1.2nm,0.3s,baz=182,slow=3.0,SNR=9.0						
URZ				Sn	**Sn**	**18 07 04.0**	**-0.6**
	4.7nm,0.3s,baz=296,slow=20,SNR=9.7						
RPZ	**Rata Peaks**	**15.49**	**211**	Pn	**Pn**	**18 07 07.0**	**+1.1**
	1.7nm,0.3s,baz=35,slow=11,SNR=5.8						
DZM	**Mont Dzumac**	**16.34**	**298**	LR	LR	18 12 09.1	
	comp=Z,46nm,21.4s,baz=184,slow=32						
RAR	**Rarotonga**	**19.02**	**64**	LR	LR	18 12 13.4	
	comp=Z,255nm,21.4s,baz=225,slow=29						
EIDS	**Eidsvold**	**27.68**	**274**	P	**P**	**18 09 13.6**	**+0.6**
CTA	**Charters Tower**	**33.79**	**280**	*e*P	**P**	**18 10 07.9**	**+1.1**
	11nm,0.8s,mb4.8						
CTA	**Charters Tower**	**33.79**	**280**	P	**P**	**18 10 08.0**	**+1.2**
	5.7nm,0.5s,mb4.7,baz=114,slow=11,SNR=10						
CTA				LR	LR	18 22 36.1	
	comp=Z,219nm,19.4s,baz=84,slow=34						
CTAO	**Charters Tower**	**33.79**	**280**	*e*P	**P**	**18 10 07.5**	**+0.7**
	11nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**34.31**	**258**	*e*P	**P**	**18 10 13.5**	**+2.3**
	7.7nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.31**	**258**	P	**P**	**18 10 13.5**	**+2.3**
	8.8nm,0.7s,mb4.7,baz=96,slow=9.5,SNR=16						
STKA				LR	LR	18 22 56.0	
	comp=Z,185nm,18.0s,baz=106,slow=34						
PMG	**Port Moresby**	**38.71**	**296**	LR	LR	18 23 36.5	
	comp=Z,147nm,18.1s,baz=330,slow=31						
ASAR	**Alice Springs**	**43.01**	**267**	P	**P**	**18 11 24.1**	**+0.1**
	2.6nm,0.6s,mb4.1,baz=103,slow=6.9,SNR=9.3						
ASAR				ScP	ScP	18 17 03.0	+5.5
	0.6nm,0.9s,baz=118,slow=4.1,SNR=5.4						
WB2	**Warramunga Arr**	**44.02**	**273**	*e*P	**P**	**18 11 30.9**	**-1.4**
WRA	**Warramunga Arr**	**44.03**	**273**	P	**P**	**18 11 31.5**	**-0.9**
	7.9nm,0.7s,mb4.5,baz=110,slow=8.1,SNR=28						
WRA				LR	LR	18 29 53.3	
	comp=Z,213nm,18.9s,baz=100,slow=36						
SBA	**Scott Base**	**47.62**	**184**	P	**P**	**18 12 01.3**	**+1.5**
FITZ	**Fitzroy Crossi**	**52.28**	**270**	*e*P	**P**	**18 12 34.4**	**-1.5**
	4.8nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.28**	**270**	P	**P**	**18 12 34.3**	**-1.7**
	3.0nm,0.8s,mb4.4,baz=139,slow=16,SNR=4.1						
FITZ				LR	LR	18 35 20.9	
	comp=Z,129nm,18.0s,baz=143,slow=36						
QSPA	**South Pole Qui**	**59.30**	**180**	*e*P	**P**	**18 13 25.4**	**+0.2**
QSPA	**South Pole Qui**	**59.30**	**180**	P	**P**	**18 13 25.8**	**+0.5**
	2.8nm,0.9s,mb4.3,baz=44,slow=3.6,SNR=4.2						
VNA3	**Neumayer Olymp**	**77.91**	**176**	*e*	**P**	**18 15 21.0**	**-0.1**
VNA3				*e*		18 15 32.5	
VNA3				*e*		18 15 34.6	
VNA3				*e*	pP	18 15 43.1	+1.7
VNA3				*e*	pP	18 15 44.7	+3.3
VNA3				*e*		18 15 46.7	
VNA2	**Neumayer--Watz**	**78.34**	**177**	*e*	**P**	**18 15 21.8**	**-1.7**
	baz=192,slow=5.0						
VNA2				*e*		18 15 33.3	
VNA2				*e*		18 15 35.5	
VNA2				*e*	pP	18 15 43.4	-0.4
VNA2				*e*	pP	18 15 45.2	+1.4
VNA2				*e*		18 15 47.8	
JNU	**Nakatsue**	**79.81**	**318**	LR	LR	18 44 27.8	
	comp=Z,46nm,19.6s,baz=51,slow=31						
KSRS	**Korea Array**	**84.61**	**320**	LR	LR	18 47 08.3	
	comp=Z,20nm,20.2s,baz=160,slow=31						
LPIG	**La Paz**	**84.82**	**58**	LR	LR	18 42 31.9	
	comp=Z,35nm,20.6s,baz=299,slow=28						
MKAR	**Makanchi Array**	**117.97**	**310**	PKP	PKPdf	18 22 05.5	-4.1
	0.2nm,0.5s,baz=96,slow=2.9,SNR=3.4						
ARCES	**ARCESS Array B**	**138.97**	**348**	PKP	PKPdf	18 22 45.1	-3.6
	4.8nm,1.1s,baz=9.5,slow=1.5,SNR=5.2						
JOF	**Joensuu**	**142.77**	**338**	*e*pkp	PKPdf	18 22 49.5	-6.2
KAF	**Kangasniemi**	**144.91**	**340**	*e*pkp	PKPdf	18 22 54.2	-5.3
FINES	**FINESS Array B**	**145.50**	**340**	PKPbc	PKPdf	18 22 56.4	-4.1
	2.9nm,0.5s,baz=69,slow=3.0,SNR=25						
NB2	**NORSAR Subarra**	**149.14**	**351**	PKP	PKPdf	18 23 07.1	+0.5
	comp=Z,5.7nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.14**	**351**	PKPbc	PKPdf	18 23 06.5	-0.1
	comp=Z,2.5nm,0.9s,baz=14,slow=4.2,SNR=5.0						
MALT	**Malatya**	**149.16**	**294**	*e*PKPbc	PKPdf	18 23 09.4	+2.1
AKASG	**Malin Array Be**	**151.57**	**322**	PKPbc	PKPdf	18 23 12.1	+1.4
AKASG				PKPab	PKPab	18 23 21.9	-3.9
AKASG	**Malin Array Be**	**151.57**	**322**	PKPbc	PKPdf	18 23 12.1	+1.4
	comp=Z,0.6nm,0.4s,baz=50,slow=2.1,SNR=7.4						
AKASG				PKPab	PKPab	18 23 21.9	-3.9
	comp=Z,5.1nm,0.7s,baz=47,slow=2.8,SNR=13						
BRTR	**Keskin Array B**	**152.72**	**298**	PKPbc	PKPdf	18 23 16.2	+3.5
	comp=Z,1.0nm,0.8s,baz=33,slow=2.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**162.42**	**179**	PKPab	PKPab	18 24 10.9	-2.3
	comp=Z,0.8nm,1.0s,baz=170,slow=4.0,SNR=3.6						

IDC 21 18:13:24.6±5.3, 3022S×17760W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.7/13, mbtmp3.8/3, Error ellipse: s-maj=205.2km s-min=50.2km az=150.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.85**	**257**	*e*P	P	18 20 17.5	0.0
	3.1nm,1.1s						
STKA	**Stephens Creek**	**34.85**	**257**	P	P	18 20 18.3	+0.8
	1.2nm,0.6s,baz=100,slow=12,SNR=6.6						
ASAR	**Alice Springs**	**43.46**	**267**	P	P	18 21 29.1	-0.5
	0.4nm,0.7s,baz=106,slow=7.4,SNR=10.0						
WRA	**Warramunga Arr**	**44.44**	**272**	P	P	18 21 36.9	-0.5
	0.5nm,0.3s,baz=111,slow=8.1,SNR=24						
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	PKPbc	18 33 02.2	-0.4
	0.9nm,0.4s,baz=43,slow=3.0,SNR=8.2						

IDC 21 18:13:42.7±1.2, 214N×12482E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/16, mbtmp3.4/4, Error ellipse: s-maj=174.4km s-min=20.4km az=68.0, Celebes Sea

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**6.16**	**342**	P	Pn	18 39 16.4	-0.1
	7.3nm,0.3s,baz=242,slow=19,SNR=6.0						
MJAR	**Matsushiro Arr**	**16.17**	**342**	P	Pn	18 41 26.1	+0.2
	0.2nm,0.3s,baz=165,slow=8.5,SNR=4.1						
WRA	**Warramunga Arr**	**42.05**	**194**	P	P	18 45 23.8	+0.2
	1.1nm,0.4s,baz=13,slow=8.5,SNR=35						
ASAR	**Alice Springs**	**45.75**	**193**	P	P	18 45 52.8	-0.3
	0.5nm,0.3s,baz=11,slow=6.6,SNR=31						
MKAR	**Makanchi Array**	**55.79**	**313**	P	P	18 47 08.2	+0.2
	0.3nm,0.6s,baz=90,slow=9.7,SNR=7.2						
MKAR				PcP	PcP	18 48 05.2	+0.1
	0.1nm,0.4s,baz=88,slow=3.3,SNR=4.0						
YKA	**Yellowknife Ar**	**76.39**	**28**	P	P	18 49 19.4	+0.4
	0.2nm,0.5s,baz=294,slow=5.5,SNR=2.8						
ARCES	**ARCESS Array B**	**79.70**	**342**	P	P	18 49 37.3	+0.1
	1.3nm,0.8s,baz=57,slow=8.9,SNR=3.6						
FINES	**FINESS Array B**	**84.06**	**335**	P	P	18 49 59.2	-0.8
	0.4nm,0.4s,baz=65,slow=7.8,SNR=4.3						

*IDC **21** 18:40:58.3±1.0, 3029S×17748W, h0km, mb4.4/5, mb1 4.5/6, mb1mx4.2/13, mbtmp4.4/6, ML4.4/1, MS2.5/1, Ms1 2.5/1, ms1mx2.4/25, Error ellipse: s-maj=30.4km s-min=28.4km az=156.0*

*ISCJB **21** 18:41:02.0±2.5, 305S±02×1776W±04, h33km, mb4.5/9, Error ellipse: s-maj=48.8km s-min=20.6km az=153.4*

*NEIC **21** 18:41:02.6±0.8, 3047S×17741W, h35km, mb4.7/5, Error ellipse: s-maj=20.1km s-min=16.9km az=113.0*

ISC 21 18:41:05.0±2.5, 306S±02×1778W±04, h35km, n29, σ1§07/19, mb4.5/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.77**	**207**	Pn	**Pn**	**18 43 05.2**	**-4.2**
	0.9nm,0.3s,baz=0.3,slow=16,SNR=9.8						
RPZ	**Rata Peaks**	**15.86**	**21**	Pn	**Pn**	**18 44 46.0**	**+0.6**
	1.3nm,0.3s,baz=23,slow=13,SNR=3.2						
DZM	**Mont Dzumac**	**16.48**	**297**	LR	LR	18 49 48.9	
	comp=Z,16nm,18.6s,baz=202,slow=32						
MCQ	**Macquarie Isla**	**29.18**	**208**	*eP*	**P**	**18 47 00.6**	**-2.3**
CTA	**Charters Tower**	**34.02**	**279**	*eP*	**P**	**18 47 47.3**	**+1.5**
	4.8nm,0.4s,mb4.8						
CTA	**Charters Tower**	**34.02**	**279**	P	**P**	**18 47 46.9**	**+1.1**
	5.9nm,0.5s,mb4.8,baz=99,slow=8.1,SNR=8.7						
CTAO	**Charters Tower**	**34.02**	**279**	*eP*	**P**	**18 47 46.4**	**+0.6**
	6.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.64**	**257**	*eP*	**P**	**18 47 52.9**	**+1.9**
	5.7nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**34.64**	**257**	P	**P**	**18 47 52.7**	**+1.7**
	4.6nm,0.5s,mb4.7,baz=94,slow=9.7,SNR=24						
ASAR	**Alice Springs**	**43.30**	**267**	P	**P**	**18 49 03.2**	**-0.4**
	1.4nm,0.5s,mb4.0,baz=104,slow=7.5,SNR=34						
WB2	**Warramunga Arr**	**44.30**	**272**	*eP*	**P**	**18 49 10.9**	**-0.7**
WRA	**Warramunga Arr**	**44.31**	**272**	P	**P**	**18 49 11.0**	**-0.7**
	5.7nm,0.8s,mb4.3,baz=112,slow=7.8,SNR=42						
FORT	**Forrest**	**46.20**	**255**	*eP*	**P**	**18 49 26.1**	**-0.5**
	4.7nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.56**	**270**	*eP*	**P**	**18 50 15.2**	**-0.1**
	7.1nm,1.4s,mb4.4						
QSPA	**South Pole Qui**	**59.56**	**180**	*eP*	**P**	**18 51 04.9**	**+0.5**
QSPA	**South Pole Qui**	**59.56**	**180**	P	**P**	**18 51 05.7**	**+1.3**
	1.4nm,0.7s,mb4.1,baz=36,slow=6.4,SNR=10						
VNA3	**Neumayer Olymp**	**78.14**	**176**	*e*	**P**	**18 53 05.7**	**+5.7**
VNA3				*e*		18 53 09.4	
VNA3				*e*	pP	18 53 14.2	+3.2
VNA3				*e*		18 53 22.9	
MJAR	**Matsushiro Arr**	**78.48**	**325**	P	**P**	**18 52 54.3**	**-8.1**
	13nm,0.3s,mb5.3,baz=164,slow=10,SNR=93						
VNA2	**Neumayer--Watz**	**78.58**	**177**	*e*	**P**	**18 53 08.6**	**+6.2**
	baz=201,slow=4.6						
VNA2				*e*		18 53 11.5	
VNA2				*e*	pP	18 53 16.7	+3.3
VNA2				*e*		18 53 25.3	
JNU	**Nakatsue**	**79.81**	**318**	P	**P**	**18 53 01.6**	**-8.1**
	5.9nm,1.1s,mb4.5,baz=172,slow=7.1,SNR=3.1						
MKAR	**Makanchi Array**	**118.03**	**310**	PKP	PKPdf	18 59 45.5	-2.3
MKAR	**Makanchi Array**	**118.03**	**310**	PKP	PKPdf	18 59 45.5	-2.2
	0.2nm,0.6s,baz=300,slow=1.2,SNR=4.2						
KAF	**Kangasniemi**	**144.76**	**341**	ep	PKPdf	19 00 32.9	-4.4
	1.1nm,0.4s						
FINES	**FINESS Array B**	**145.36**	**340**	PKPbc	PKPbc	19 00 36.2	-2.0
	2.8nm,0.5s,baz=68,slow=3.5,SNR=32						
NB2	**NORSAR Subarra**	**148.93**	**352**	PKP	PKPdf	19 00 46.4	+2.1
	comp=Z,1.4nm,0.7s,baz=17,slow=4.4						
NOA	**NORSAR Array B**	**148.93**	**352**	PKPbc	PKPbc	19 00 46.2	-2.1
	comp=Z,1.6nm,0.8s,baz=14,slow=4.3,SNR=4.5						
AKASG	**Malin Array Be**	**151.55**	**323**	PKPbc	PKPbc	19 00 53.3	-1.6
AKASG				PKPab	PKPab	19 01 01.5	-2.0
AKASG	**Malin Array Be**	**151.55**	**323**	PKPbc	PKPbc	19 00 53.3	-1.6
	comp=Z,0.7nm,0.3s,baz=45,slow=2.8,SNR=9.2						
AKASG				PKPab	PKPab	19 01 01.5	-2.0
	comp=Z,2.7nm,0.6s,baz=49,slow=2.9,SNR=13						
BRTR	**Keskin Array B**	**152.85**	**298**	PKPbc	PKPbc	19 00 57.0	-1.3
	comp=Z,0.9nm,0.9s,baz=19,slow=4.2,SNR=4.5						
BRTR				PKPab	PKPab	19 01 10.6	+1.2
	comp=Z,0.7nm,0.8s,baz=98,slow=5.1,SNR=3.5						

*IDC **21** 18:50:07.5±1.3, 4067N×2929W, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.7/20, mbtmp3.6/8, MS3.5/9, Ms1 3.5/9, ms1mx3.2/31, Error ellipse: s-maj=41.0km s-min=22.8km az=8.0*

*ISCJB **21** 18:50:08.1±0.6, 4044N±003×29.15W±008, h10km, mb3.6/9, MS3.4/8, Error ellipse: s-maj=8.7km s-min=4.6km az=166.2*

*PDA **21** 18:50:11.8±1.4, 4057N×2844W, h0km, MD3.5, ML3.0, Error ellipse: s-maj=17.3km s-min=6.7km az=92.0*

*CSEM **21** 18:50:11.8±1.4, 4057N×2844W, h0km, ML3.0, Error ellipse: s-maj=17.3km s-min=6.7km az=92.0, After PDA*

*SVSA **21** 18:50:11.8±1.4, 4057N×2844W, h0km, MD3.5, ML3.0, Error ellipse: s-maj=17.3km s-min=6.7km az=92.0*

ISC 21 18:50:09.1±0.5, 4041N±004×2920W±008, h10km, n62, σ1§35/79, mb3.6/9, MS3.4/8, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUZ	**Luz**	**1.40**	**173**	*eP*	**Sn**	**18 50 44.6**	**-8.7**
PVIA	**Vitoria**	**1.61**	**146**	*eP*	**Pn**	**18 50 44.6**	**+7.0**
STGR	**Santa Cruz**	**1.62**	**145**	*eP*	**Pn**	**18 50 35.5**	**-2.2**
STGR				*eS*	**Sn**	**18 50 53.3**	**-5.3**
SRBC	**Serra Branca**	**1.64**	**146**	*eP*	**Pn**	**18 50 36.1**	**-1.9**
PGRA	**Graciosa**	**1.67**	**145**	*eP*	**Pn**	**18 50 36.1**	**-2.3**
PGRA				*eS*	**Sn**	**18 50 54.3**	**-5.6**
PGRA				A		18 50 54.4	
	31nm,0.3s						
PGRA	**Graciosa**	**1.67**	**145**	*eP*	**Pn**	**18 50 36.1**	**-2.3**
PGRA				*eS*	**Sn**	**18 50 54.3**	**-5.6**
PCED	**Cedros**	**1.82**	**168**	*eP*	**Pn**	**18 50 41.4**	**+0.9**
PCED				*eS*	**Sn**	**18 51 03.3**	**-0.3**
PCED				A		18 51 05.2	
	65nm,0.4s						
PCED	**Cedros**	**1.82**	**168**	*eP*	**Pn**	**18 50 41.4**	**+0.9**
PCED				*eS*	**Sn**	**18 51 03.3**	**-0.3**
ROSA	**Rosais**	**1.84**	**156**	*eP*	**Pn**	**18 50 40.3**	**-0.5**
PTCA	**Ponta do Capel**	**1.85**	**170**	*eP*	**Pn**	**18 50 41.7**	**+0.8**
PTCA				*eS*	**Sn**	**18 51 05.0**	**+0.7**
PTCA				A		18 51 10.4	
	42nm,0.3s						
PTCA	**Ponta do Capel**	**1.85**	**170**	*eP*	**Pn**	**18 50 41.7**	**+0.8**
PTCA				*eS*	**Sn**	**18 51 05.0**	**+0.7**
CALA	**Caldeira**	**1.87**	**168**	*eP*	**Pn**	**18 50 42.3**	**+1.2**
CALA				*eS*	**Sn**	**18 51 05.3**	**+0.3**
PAMA	**Santo Amaro**	**1.90**	**155**	*eS*	**Sn**	**18 51 06.6**	**+1.0**
HOR	**Horta**	**1.93**	**167**	*eS*	**Sn**	**18 51 05.8**	**-0.5**
PMAN	**Manadas**	**1.97**	**154**	*eP*	**Pn**	**18 50 41.6**	**-1.0**
PMAN				*eS*	**Sn**	**18 51 03.9**	**-3.4**
PMAN				A		18 51 06.0	
	25nm,0.3s						
PMAN	**Manadas**	**1.97**	**154**	*eP*	**Pn**	**18 50 41.6**	**-1.0**
PMAN				*eS*	**Sn**	**18 51 03.9**	**-3.4**
PICO	**Pico**	**2.00**	**162**	*eP*	**Pn**	**18 50 42.9**	**0.0**
PICO				*eS*	**Sn**	**18 51 06.6**	**-1.4**
PCND	**Candelaria**	**2.02**	**163**	*eP*	**Pn**	**18 50 44.2**	**+1.0**
PCND				*eS*	**Sn**	**18 51 07.5**	**-1.0**
PCND				A		18 51 14.1	
	51nm,0.3s						
PTEI	**Pico do Teixo**	**2.02**	**161**	*eS*	**Sn**	**18 51 10.3**	**+1.8**
PTEI				A		18 51 17.3	
	58nm,0.4s						
PBOI	**Pico dos Bois**	**2.07**	**162**	*eS*	**Sn**	**18 51 14.8**	**+5.0**
PBOI				A		18 51 19.3	
	26nm,0.2s						
PIED	**Piedade**	**2.18**	**156**	*eP*	**Pn**	**18 50 46.7**	**+1.3**
ASBA	**Santa Barbara**	**2.23**	**139**	*eP*	**Pn**	**18 50 46.5**	**+0.5**
ASBA				*eS*	**Sn**	**18 51 11.2**	**-2.4**
ASBA				A		18 51 17.9	
	42nm,0.3s						
ASBA	**Santa Barbara**	**2.23**	**139**	*eP*	**Pn**	**18 50 46.5**	**+0.5**
ASBA				*eS*	**Sn**	**18 51 11.2**	**-2.4**
PBIS	**Biscoitos**	**2.23**	**137**	*eP*	**Pn**	**18 50 46.3**	**+0.2**
PBIS				*eS*	**Sn**	**18 51 12.3**	**-1.4**
PBIS				A		18 51 16.4	
	21nm,0.1s						
PBIS	**Biscoitos**	**2.23**	**137**	*eP*	**Pn**	**18 50 46.3**	**+0.2**
PBIS				*eS*	**Sn**	**18 51 12.3**	**-1.4**
PPAD	**Pico dos Padre**	**2.26**	**138**	*eP*	**Pn**	**18 50 46.9**	**+0.4**
PPAD				*eS*	**Sn**	**18 51 11.6**	**-2.8**
PPAD				A		18 51 19.5	
	18nm,0.2s						
PPAD	**Pico dos Padre**	**2.26**	**138**	*eP*	**Pn**	**18 50 46.9**	**+0.4**
PPAD				*eS*	**Sn**	**18 51 11.6**	**-2.8**
PVNV	**Vila Nova**	**2.28**	**135**	*eP*	**Pn**	**18 50 47.1**	**+0.3**
PVNV				*eS*	**Sn**	**18 51 13.7**	**-1.3**
PVNV				A		18 51 19.6	
	26nm,0.2s						
PVNV	**Vila Nova**	**2.28**	**135**	*eP*	**Pn**	**18 50 47.1**	**+0.3**
PVNV				*eS*	**Sn**	**18 51 13.7**	**-1.3**
ADH	**Angra Heroismo**	**2.32**	**138**	*eP*	**Pn**	**18 50 44.5**	**-2.9**
RIB2	**Ribeirinha**	**2.34**	**137**	*eP*	**Pn**	**18 50 50.3**	**+2.7**
RIB2				*eS*	**Sn**	**18 51 15.5**	**-0.9**
RIB2				A		18 51 23.2	
	14nm,0.2s						
RIB2	**Ribeirinha**	**2.34**	**137**	*eP*	**Pn**	**18 50 50.3**	**+2.7**
RIB2				*eS*	**Sn**	**18 51 15.5**	**-0.9**
PFAV	**Pico das Favas**	**2.36**	**135**	*eP*	**Pn**	**18 50 47.7**	**-0.2**
PFAV				*eS*	**Sn**	**18 51 15.9**	**-0.9**
PFAV				A		18 51 18.4	
	24nm,0.2s						
PFAV	**Pico das Favas**	**2.36**	**135**	*eP*	**Pn**	**18 50 47.7**	**-0.2**
PFAV				*eS*	**Sn**	**18 51 15.9**	**-0.9**
SET4	**Mosteiros**	**3.66**	**133**	*eP*	**Pn**	**18 51 06.8**	**+1.0**
SET2	**Ginetes**	**3.68**	**133**	*eP*	**Pn**	**18 51 06.1**	**0.0**
PFET	**Feteiras**	**3.71**	**133**	*eP*	**Pn**	**18 51 07.1**	**+0.7**
CML	**Cha da Macela**	**3.88**	**132**	*eP*	**Pn**	**18 51 10.2**	**+1.4**
PVER	**Pico Vermelho**	**3.88**	**131**	*eP*	**Pn**	**18 51 11.0**	**+2.2**
PMAT	**Coroa da Mata**	**3.89**	**131**	*eP*	**Pg**	**18 51 23.7**	**0.0**
LFA	**Lagoa do Fogo**	**3.91**	**131**	*eP*	**Pn**	**18 51 10.4**	**+1.1**
MESC	**Monte Escuro**	**3.92**	**131**	*eP*	**Pn**	**18 51 10.8**	**+1.4**
VIF	**Vila Franca**	**3.96**	**131**	*eP*	**Pn**	**18 51 12.7**	**+2.8**
FRA1	**Furnas**	**4.01**	**130**	*eP*	**Pn**	**18 51 12.2**	**+1.7**
MIRA	**Miradouro**	**4.02**	**129**	*eP*	**Pn**	**18 51 12.0**	**+1.2**
PSMN	**Pico do Norte,**	**4.70**	**135**	*eP*	**Pn**	**18 51 22.6**	**+2.6**
ESDC	**Sonseca Array**	**19.32**	**84**	LR	LR	19 00 46.7	
	comp=Z,134nm,19.7s,baz=295,slow=33						
DAVOX	**Davos/Dischmat**	**28.79**	**64**	LR	LR	19 05 37.8	
	comp=Z,81nm,19.9s,MS3.3,baz=84,slow=32						
GERES	**GERESS Array B**	**31.32**	**60**	P	**P**	**18 56 32.4**	**+3.0**
	0.2nm,0.4s,mb3.3,baz=260,slow=12,SNR=2.4						
GERES				LR	LR	19 06 59.6	
	comp=Z,64nm,18.4s,MS3.3,baz=256,slow=32						
NOA	**NORSAR Array B**	**32.11**	**36**	LR	LR	19 07 43.6	
	comp=Z,33nm,18.4s,MS3.0,baz=115,slow=33						
TORD	**Torodi Ar. Bea**	**38.35**	**126**	P	**P**	**18 57 31.8**	**+1.4**
	1.1nm,1.0s,mb3.5,baz=328,slow=7.2,SNR=4.2						
TORD				LR	LR	19 14 09.6	
	comp=Z,51nm,20.1s,MS3.3,baz=110,slow=37						
AKASG	**Malin Array Be**	**41.19**	**55**	P	**P**	**18 57 52.0**	**-1.6**
	0.4nm,0.5s,mb3.3,baz=294,slow=6.9,SNR=4.2						
PCRV	**Puerto La Cruz**	**43.46**	**236**	LR	LR	19 11 31.5	
	comp=Z,64nm,21.0s,MS3.5,baz=96,slow=30						
YKA	**Yellowknife Ar**	**53.11**	**325**	P	**P**	**18 59 24.0**	**-2.3**
	0.3nm,0.7s,mb3.3,baz=67,slow=7.7,SNR=3.6						
ROSC	**El Rosal**	**53.76**	**241**	LR	LR	19 18 45.8	
	comp=Z,42nm,20.7s,MS3.5,baz=190,slow=32						
PDAR	**Pinedale Array**	**57.92**	**301**	P	**P**	**19 00 00.0**	**-1.3**
	0.8nm,0.9s,mb3.7,baz=100,slow=8.1,SNR=3.8						
AKTO	**Aktyubinsk**	**58.66**	**48**	P	**P**	**19 00 06.0**	**-0.3**
	1.0nm,0.7s,mb4.0,baz=272,slow=8.4,SNR=5.8						
TXAR	**Lajitas Array**	**60.44**	**285**	P	**P**	**19 00 18.5**	**-0.5**
	0.7nm,0.8s,mb3.7,baz=77,slow=6.6,SNR=4.5						
TXAR				LR	LR	19 25 48.4	
	comp=Z,67nm,19.9s,MS3.8,baz=190,slow=36						
LPAZ	**La Paz**	**67.01**	**221**	LR	LR	19 26 37.7	
	comp=Z,44nm,20.8s,MS3.7,baz=87,slow=33						
MKAR	**Makanchi Array**	**73.92**	**42**	P	**P**	**19 01 43.4**	**-0.9**
	0.8nm,0.8s,mb3.7,baz=327,slow=5.8,SNR=11						
SONM	**Songino Array**	**83.71**	**28**	P	**P**	**19 02 37.3**	**-0.7**
	0.4nm,0.8s,mb3.6,baz=310,slow=5.6,SNR=4.3						
ASAR	**Alice Springs**	**158.07**	**46**	PKPab	PKPab	19 10 39.5	-0.4
	0.4nm,0.9s,baz=318,slow=3.7,SNR=3.4						

*ISCJB **21** 18:58:46.2±0.8, 134N±0.1×886W±0.1, h10km, mb3.5/4, Error ellipse: s-maj=21.1km s-min=8.0km az=41.2*

*IDC **21** 18:58:46.9±1.4, 1338N×8864W, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.6/19, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=50.3km s-min=18.5km az=46.0*

*NEIC **21** 18:58:48.4±0.8, 1348N×8851W, h10km, Error ellipse: s-maj=20.3km s-min=10.0km az=215.0*

ISC 21 18:58:48.4±0.8, 135N±01×885W±01, h10km, n10, σ0§75/12, mb3.5/4, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.33**	**64**	Pn	**Pn**	**18 59 12.2**	**-0.8**
JTS	**JuntasAbangare**	**4.70**	**132**	*ePn*	**Pn**	**18 59 59.2**	**-0.2**
JTS				Sn	**Sn**	**19 00 53.8**	**-0.3**
JTS	**JuntasAbangare**	**4.70**	**132**	Pn	**Pn**	**18 59 59.3**	**-0.1**
	1.7nm,0.3s,baz=312,slow=22,SNR=4.8						
JTS				Sn	**Sn**	**19 00 53.8**	**-0.3**
	0.7nm,0.3s,baz=234,slow=22,SNR=2.6						
CMIG	**Matias Romero**	**7.13**	**301**	Pn	**Pn**	**19 00 32.3**	**-0.6**
	0.3nm,0.3s,baz=119,slow=10,SNR=3.7						
TXAR	**Lajitas Array**	**21.14**	**321**	P	**P**	**19 03 33.7**	**+0.1**
	1.1nm,0.6s,mb3.4,baz=143,slow=9.1,SNR=12						
NVAR	**Mina Array Bea**	**36.26**	**319**	P	**P**	**19 05 51.9**	**0.0**
	0.4nm,0.6s,mb3.5,baz=137,slow=12,SNR=2.0						
SIV	**San Ignacio**	**39.91**	**136**	P	**P**	**19 06 23.7**	**+0.8**
	0.3nm,0.3s,mb3.4,baz=328,slow=13,SNR=3.8						
SCHQ	**Schefferville**	**44.61**	**18**	P	**P**	**19 07 02.5**	**+1.8**
	baz=223,slow=7.0						
YKA	**Yellowknife Ar**	**52.36**	**345**	P	**P**	**19 07 59.7**	**-0.6**
YKA	**Yellowknife Ar**	**52.36**	**345**	P	**P**	**19 07 59.7**	**-0.6**
	0.5nm,0.8s,mb3.5,baz=147,slow=7.8,SNR=7.7						

MAN 21 19:00:18,989N×12646E,h1km, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.96**	**264**	*i* P	Pg	19 00 36.8	+0.3
SCPH				*eS*	Sg	19 00 49.6	+0.6
MSLP	**Maasin**	**1.60**	**279**	*eP*	Pn	19 00 48.2	+0.8
MSLP				*eS*	Sn	19 01 09.8	+1.2
MSLP	**Maasin**	**1.60**	**279**	*eP*	Pn	19 00 48.2	+0.8
MSLP				*eS*	Sn	19 01 09.8	+1.2
BESP	**Borongan**	**1.97**	**329**	*eP*	Pn	19 00 53.8	+1.2
BESP	**Borongan**	**1.97**	**329**	*eP*	Pn	19 00 53.8	+1.2
OCLP	**Ormoc**	**2.15**	**302**	*eP*	Pn	19 00 59.0	+4.0
OCLP	**Ormoc**	**2.15**	**302**	*eP*	Pn	19 00 59.0	+4.0
BUKP	**Musuan**	**2.43**	**215**	*eP*	Pn	19 01 00.3	+1.4
BUKP	**Musuan**	**2.43**	**215**	*eP*	Pn	19 01 00.3	+1.4
CNP	**Catarman**	**3.14**	**326**	*eP*	Pn	19 01 10.2	+1.5
CNP	**Catarman**	**3.14**	**326**	*eP*	Pn	19 01 10.2	+1.5

*ISCJB **21** 19:08:22.9±0.9, 2441S±005×670W±0.1, h150km±10km, mb4.0/13, Error ellipse: s-maj=20.0km s-min=7.8km az=0.6*

*IDC **21** 19:08:24.0±1.4, 2442S×6703W, h151km±11km, mb3.9/11, mb1 4.0/14, mb1mx4.0/18, mbtmp3.9/14, Error ellipse: s-maj=20.3km s-min=10.9km az=88.0*

*NEIC **21** 19:08:24.1±0.8, 2443S×6696W, h150km±8km, mb4.6/3, Error ellipse: s-maj=14.3km s-min=7.1km az=96.0*

ISC 21 19:08:23.6±0.8, 2441S±005×670W±01, h141km±9km, n26, σ0§95/25, mb4.0/13, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**5.67**	**215**	*ePn*	**Pn**	**19 09 45.2**	**-0.6**
	62nm,0.7s						
LCO				*e*		19 09 59.3	
CFAA	**Coronel Fontan**	**7.25**	**189**	P	**Pn**	**19 10 08.1**	**+1.1**
	0.4nm,0.3s,baz=2.7,slow=12,SNR=21						
CFAA				S	**Sn**	**19 11 24.7**	**-3.3**
	0.8nm,0.3s,baz=296,slow=18,SNR=9.5						
LPAZ	**La Paz**	**8.15**	**352**	P	**Pn**	**19 10 21.4**	**+2.2**
	6.2nm,0.3s,baz=170,slow=10,SNR=100						
LPAZ				S	**Sn**	**19 11 48.6**	**-1.3**
	0.3nm,0.3s,baz=131,slow=20,SNR=4.0						
SIV	**San Ignacio**	**10.03**	**35**	P	**Pn**	**19 10 44.9**	**+0.6**
	1.9nm,0.3s,baz=221,slow=13,SNR=105						
SIV				S	**Sn**	**19 12 24.0**	**-11**
	baz=222,slow=17,SNR=7.6						
TRQA	**Tornquist**	**14.25**	**164**	*ePn*	**Pn**	**19 11 37.6**	**-1.3**
	76nm,0.6s						
TRQA				*eP*		19 11 42.9	
PLCA	**Paso Flores**	**16.55**	**190**	P	**Pn**	**19 12 08.5**	**+1.1**
	0.3nm,0.3s,baz=14,slow=12,SNR=19						
VNA2	**Neumayer--Watz**	**57.32**	**160**	*e*	**P**	**19 17 57.1**	**+0.8**
	baz=293,slow=7.1						
VNA2				*e*		19 17 59.9	
SNAA	**Sanae**	**58.95**	**161**	P	**P**	**19 18 07.4**	**-0.2**
	2.3nm,0.9s,mb4.0,baz=280,slow=9.1,SNR=10						
QSPA	**South Pole Qui**	**65.80**	**180**	*eP*	**P**	**19 18 53.5**	**+0.5**
	10.0nm,1.0s,mb4.6						
DBIC	**Dimbokro**	**67.90**	**71**	P	**P**	**19 19 06.6**	**-0.7**
	3.6nm,0.3s,mb4.6,baz=207,slow=5.6,SNR=19						
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P	**P**	**19 19 59.0**	**-0.5**
	3.3nm,0.4s,mb4.4,baz=256,slow=5.8,SNR=87						
TSUM	**Tsumeb**	**77.51**	**106**	*eP*	**P**	**19 20 03.3**	**-0.9**
	1.7nm,0.8s,mb3.7						
PDAR	**Pinedale Array**	**77.52**	**329**	P	**P**	**19 20 03.5**	**0.0**
	0.4nm,0.5s,mb3.3,baz=135,slow=8.7,SNR=4.3						
ULM	**Lac du Bonnet**	**78.62**	**342**	P	**P**	**19 20 08.3**	**-1.1**
ULM	**Lac du Bonnet**	**78.62**	**342**	P	**P**	**19 20 08.3**	**-1.1**
	1.0nm,0.5s,mb3.7,baz=153,slow=6.1,SNR=4.7						
NVAR	**Mina Array Bea**	**78.88**	**321**	P	**P**	**19 20 11.8**	**+0.7**
NVAR	**Mina Array Bea**	**78.88**	**321**	P	**P**	**19 20 11.8**	**+0.7**
	0.3nm,0.3s,mb3.4,baz=134,slow=6.4,SNR=2.9						
SCHQ	**Schefferville**	**78.92**	**0**	P	**P**	**19 20 11.0**	**+0.1**
	1.6nm,0.7s,mb3.8,baz=184,slow=5.0,SNR=3.4						
BOSA	**Boshof**	**80.52**	**117**	P	**P**	**19 20 20.6**	**+0.2**
	2.7nm,0.5s,mb4.1,baz=262,slow=4.6,SNR=13						
MAW	**Mawson**	**81.04**	**163**	P	**P**	**19 20 23.0**	**+0.6**
	5.4nm,0.8s,mb4.2,baz=207,slow=2.3,SNR=5.1						
ESDC	**Sonseca Array**	**86.67**	**44**	P	**P**	**19 20 52.1**	**+0.8**
	1.5nm,0.9s,mb3.8,baz=237,slow=5.1,SNR=5.6						
YKA	**Yellowknife Ar**	**94.52**	**340**	P	**P**	**19 21 26.5**	**-0.8**
	0.7nm,0.6s,mb4.1,baz=129,slow=4.4,SNR=15						
ASAR	**Alice Springs**	**128.10**	**205**	PKP	PKPdf	19 27 12.3	-1.2
	1.2nm,0.6s,baz=135,slow=1.9,SNR=16						
WRA	**Warramunga Arr**	**131.28**	**207**	PKhKP		19 27 13.3	
	0.2nm,0.6s,baz=156,slow=1.7,SNR=4.7						
WRA				PKP	PKPdf	19 27 18.5	-1.2
	0.9nm,0.5s,baz=159,slow=1.7,SNR=26						
WRA				SKPbc	SKPbc	19 30 27.6	-4.0
	1.5nm,0.9s,baz=151,slow=3.4,SNR=8.8						
MKAR	**Makanchi Array**	**146.82**	**40**	PKPbc	PKPbc	19 27 47.3	-1.7
	4.3nm,0.7s,baz=312,slow=1.4,SNR=36						
MKAR				SKPbc	SKPbc	19 31 12.2	-2.1
	0.2nm,0.2s,baz=323,slow=1.8,SNR=3.5						
SONM	**Songino Array**	**156.03**	**11**	PKP	PKPdf	19 28 00.3	-0.6
	0.1nm,0.4s,baz=349,slow=1.0,SNR=3.9						
SONM				PKPab	PKPab	19 28 26.4	-2.4
	0.3nm,0.6s,baz=345,slow=4.6,SNR=5.5						

*IDC **21** 19:16:18.9±1.7, 426N×9586E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/19, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=58.7km s-min=15.6km az=45.

OVCH	**Ovalle**	**0.86**	**96**	*e*P	Pb	20 38 12.3	-1.0
OVCH				*i* S	Sb	20 38 24.2	-0.2
OVCH	**Ovalle**	**0.86**	**96**	*e*P	Pb	20 38 12.3	-1.0
OVCH				*i* S	Sb	20 38 24.2	-0.2
OVCH				AML	AML	20 38 26.4	
	comp=N,884nm,0.8s						
CMCH	**Combarbala**	**1.22**	**123**	*e*P	Pn	20 38 18.1	-0.8
CMCH				*i* S	Sb	20 38 34.2	-0.5
CMCH	**Combarbala**	**1.22**	**123**	*e*P	Pn	20 38 18.1	-0.8
CMCH				*i* S	Sb	20 38 34.2	-0.5
CMCH				AML	AML	20 38 37.2	
	comp=N,3µm,0.5s						
TLL	**Tololo Astrono**	**1.25**	**74**	⇓*i*P	Pn	20 38 18.9	-0.6
TLL				*i* S	Sb	20 38 36.0	+0.4
TLL	**Tololo Astrono**	**1.25**	**74**	⇓*i*P	Pn	20 38 18.9	-0.6
TLL				*i* S	Sb	20 38 36.0	+0.4
TLL				AML	AML	20 38 41.5	
	comp=N,910nm,0.6s						
CHNG	**Los Chungos**	**1.48**	**157**	*e*P	Pn	20 38 06.0	-17
CHNG				*i* S	Sn	20 38 25.4	-16
CHNG				AML	AML	20 38 36.2	
	comp=E,216nm,0.6s						
FCH	**Farellones**	**3.23**	**151**	*e*P	Pn	20 38 48.7	+2.0
FCH				*i* S	Sn	20 39 27.3	+2.5
LMEL	**Las Melosas**	**3.72**	**154**	⇓*e*P	Pn	20 38 55.1	+1.7
LMEL				*i* S	Sn	20 39 39.1	+2.3
LMEL	**Las Melosas**	**3.72**	**154**	⇓*e*P	Pn	20 38 55.1	+1.7
LMEL				*i* S	Sn	20 39 39.1	+2.3
LMEL				AML	AML	20 40 00.1	
	comp=N,54nm,0.4s						

*NEIC **21** 20:55:01.5, 3269S×7171W, h30km, ML2.6(GUC), After GUC.*

GUC 21 20:55:01.5±0.9, 3269S×7171W, h30km±8km, MD3.6, ML2.6, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.27**	**56**	⇓*i*P	Pb	20 55 08.7	+0.1
PACH				*i* S	Sb	20 55 14.2	+0.8
ROCH	**El Roble**	**0.65**	**116**	⇑*i*P	Pb	20 55 14.2	-0.2
ROCH				*i* S	Sb	20 55 23.8	+0.6
LCCH	**Las Cruces**	**0.79**	**172**	⇑*i*P	Pn	20 55 15.5	-1.1
CHNG	**Los Chungos**	**0.82**	**12**	*e*P	Pn	20 55 00.2	-17
CHNG				*i* S	Sb	20 55 11.9	-16
CHNG				AML	AML	20 55 13.5	
	comp=E,111nm,0.3s						
TACH	**Talagante**	**1.16**	**146**	⇑*i*P	Pn	20 55 21.7	0.0
LNV	**Longovilo**	**1.28**	**169**	*e*P	Pn	20 55 22.6	-0.8
LNV				*i* S	Sn	20 55 39.8	+0.2
FCH	**Farellones**	**1.35**	**118**	⇓*i*P	Pn	20 55 25.2	+1.0
FCH				*i* S	Sn	20 55 43.5	+2.4
FCH				AML	AML	20 55 43.8	
	comp=N,272nm,0.3s						
PCH	**Pirque**	**1.36**	**133**	*e*P	Pn	20 55 25.3	+0.8
PCH				*i* S	Sn	20 55 44.3	+2.7
CHCH	**Chadas Angostu**	**1.52**	**145**	⇑*i*P	Pn	20 55 28.0	+1.4
CHCH				*i* S	Sn	20 55 48.4	+3.0
CACH	**El Canelo**	**1.70**	**147**	⇓*i*P	Pn	20 55 31.4	+2.4
CACH				*i* S	Sn	20 55 53.9	+4.2
LMEL	**Las Melosas**	**1.71**	**133**	*e*P	Pn	20 55 31.0	+1.8
LMEL				S	Sn	20 55 54.3	+4.3
LMEL	**Las Melosas**	**1.71**	**133**	*e*P	Pn	20 55 31.0	+1.8
LMEL				*i* S	Sn	20 55 54.3	+4.3
LMEL				AML	AML	20 55 58.5	
	comp=N,236nm,0.1s						
CICH	**Cipreses**	**1.95**	**147**	*e*P	Pn	20 55 34.4	+1.9

*ISCJB **21** 21:18:57.2±1.7, 378N±02×774E±02, h10km, mb3.3/3, Error ellipse: s-maj=25.3km s-min=19.7km az=7.9*
*IDC **21** 21:18:57.0±2.5, 3786N×7739E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/19, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=66.0km s-min=28.1km az=149.0*
*BJI **21** 21:19:02.7, 3804N×7795E, h15km, ML3.4*

ISC 21 21:18:58.2±8.0, 378N±04×775E±02, h8km±40km, n6, σ0§73/6, mb3.3/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.09**	**327**	*e*P	**Pg**	**21 19 38.3**	**+0.1**
KSH				Smax			
	comp=N,2µm,0.3s						
KSH				Smax			
	comp=E,2µm,0.5s						
MKAR	**Makanchi Array**	**9.70**	**20**	Pn	**Pn**	**21 21 17.6**	**-0.4**
	comp=E,0.7nm,0.3s,baz=192,slow=12,SNR=19						
SONM	**Songino Array**	**23.38**	**55**	P	**P**	**21 24 07.5**	**+0.3**
	comp=E,0.4nm,0.7s,mb2.9,baz=263,slow=8.5,SNR=4.4						
NB2	**NORSAR Subarra**	**46.51**	**322**	P	**P**	**21 27 26.6**	**+1.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=90,slow=7.9						
NOA	**NORSAR Array B**	**46.51**	**322**	P	**P**	**21 27 25.5**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.8,baz=94,slow=7.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**70.86**	**272**	P	**P**	**21 30 15.5**	**-0.4**
	comp=Z,0.3nm,1.0s,mb3.2,baz=40,slow=5.0,SNR=2.3						

*BJI **21** 21:19:31.7, 3729N×7681E, h26km, ML3.9*
*IDC **21** 21:19:40.7±2.4, 3772N×7746E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/19, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=65.3km s-min=28.2km az=151.0*
*ISCJB **21** 21:19:41.6±2.1, 379N±03×774E±02, h10km, mb3.5/3, Error ellipse: s-maj=47.5km s-min=20.1km az=154.5*

ISC 21 21:19:42.6±2.1, 378N±03×775E±02, h10km, n5, σ0§99/5, mb3.5/3, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**9.72**	**20**	Pn	**Pn**	**21 22 01.6**	**-0.7**
	0.5nm,0.3s,baz=193,slow=12,SNR=4.8						
WMQ	**Urumqi**	**9.85**	**49**	P	**Pn**	**21 22 04.3**	**+0.1**
SONM	**Songino Array**	**23.38**	**55**	P	**P**	**21 24 51.7**	**+0.3**
	1.1nm,0.9s,mb3.3,baz=258,slow=9.9,SNR=6.1						
NOA	**NORSAR Array B**	**46.53**	**322**	P	**P**	**21 28 11.0**	**+1.1**
	1.9nm,0.8s,mb4.1,baz=90,slow=7.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**70.87**	**272**	P	**P**	**21 30 59.3**	**-0.8**
	0.1nm,0.4s,mb3.1,baz=36,slow=5.6,SNR=2.5						

*ISCJB **21** 22:14:53.7±0.8, 3850N±005×3914E±005, h10km±8km, Error ellipse: s-maj=8.8km s-min=6.1km az=11.1*
*CSEM **21** 22:14:53.6±0.1, 3846N×3912E, h12km, MD3.0, Error ellipse: s-maj=2.8km s-min=1.9km az=4.0*
*DDA **21** 22:14:53.2, 3864N×3928E, h5km, Md2.7*
*ISK **21** 22:14:53.5, 3848N×3912E, h10km, MD3.0*

ISC 21 22:14:53.9±0.9, 3855N±006×3914E±005, h9km±8km, n9, σ0§97/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.14**	**247**	*i* P	**Pg**	**22 14 57.8**	**+0.9**
ELZG				*i* S	**Sg**	**22 15 00.0**	**+1.1**
MYA	**Malataya**	**0.61**	**249**	PG	**Pg**	**22 15 05.1**	**-0.5**
MYA				SG	**Sg**	**22 15 13.7**	**+0.2**
MALT	**Malatya**	**0.61**	**247**	PG	**Pg**	**22 15 04.6**	**-1.1**
MALT				SG	**Sg**	**22 15 13.3**	**-0.3**
DIY	**Diyarbakir**	**1.07**	**127**	*e*PG	**Pg**	**22 15 14.1**	**-0.4**
DIY				*e*SG	**Sg**	**22 15 29.0**	**+0.6**
URFA	**Urfa**	**1.14**	**193**	PG	**Pg**	**22 15 14.5**	**-1.2**
URFA				SG	**Sg**	**22 15 29.5**	**-0.9**
EZC	**Erzincan**	**1.30**	**23**	*e*PN	**Pn**	**22 15 18.9**	**+0.6**
GZT	**Gaziantep**	**1.73**	**227**	*i* P	**Pg**	**22 15 26.9**	**-0.1**
GZT				*i* S	**Sg**	**22 15 50.5**	**+1.1**
MARD	**Mardin**	**1.79**	**133**	*i* P	**Pn**	**22 15 24.8**	**-0.1**
MARD				*i* S	**Sn**	**22 15 50.1**	**+2.4**
BTMT	**Batman**	**1.88**	**100**	*e*PN	**Pn**	**22 15 24.4**	**-1.8**

*DDA **21** 22:18:07.4, 3871N×3930E, h3km, Md2.9*
*ISK **21** 22:18:09.8, 3842N×3912E, h5km, MD3.1*
*ISCJB **21** 22:18:10.1±0.7, 3846N±005×3916E±004, h6km±7km, Error ellipse: s-maj=9.3km s-min=5.5km az=8.8*
*CSEM **21** 22:18:10.2±0.1, 3842N×3912E, h4km, MD3.1, Error ellipse: s-maj=2.7km s-min=1.5km az=1.0*

ISC 21 22:18:10.3±1.0, 3852N±007×3917E±004, h5km±8km, n10, σ0§83/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.14**	**260**	*i* P	**Pg**	**22 18 13.8**	**+0.6**
ELZG				*i* S	**Sg**	**22 18 16.0**	**+1.0**
MYA	**Malataya**	**0.61**	**252**	*i* PG	**Pg**	**22 18 21.4**	**-0.6**
MYA				*i* SG	**Sg**	**22 18 29.8**	**-0.2**
MALT	**Malatya**	**0.62**	**250**	*i* PG	**Pg**	**22 18 21.2**	**-0.9**
MALT				*i* SG	**Sg**	**22 18 30.2**	**+0.1**
DIY	**Diyarbakir**	**1.04**	**126**	PG	**Pg**	**22 18 30.3**	**0.0**
DIY				SG	**Sg**	**22 18 44.5**	**+0.7**
URFA	**Urfa**	**1.11**	**194**	PG	**Pg**	**22 18 30.3**	**-1.3**
EZC	**Erzincan**	**1.32**	**22**	PN	**Pn**	**22 18 36.5**	**+1.0**
GZT	**Gaziantep**	**1.72**	**228**	*i* P	**Pg**	**22 18 42.3**	**-0.9**
GZT				*i* S	**Sg**	**22 19 06.6**	**+1.0**
MARD	**Mardin**	**1.76**	**133**	*i* P	**Pn**	**22 18 40.7**	**-0.7**
MARD				*i* S	**Sn**	**22 19 05.8**	**+1.7**
BTMT	**Batman**	**1.86**	**99**	PN	**Pn**	**22 18 42.2**	**-0.6**
BTMT				SN	**Sn**	**22 19 05.8**	**-0.8**
KMRS	**Kahramanmaras**	**2.06**	**241**	*e*PN	**Pn**	**22 18 45.5**	**0.0**

*ISCJB **21** 22:35:12.3±0.4, 4672N±006×15564E±009, h10km, mb4.1/23, Error ellipse: s-maj=10.9km s-min=6.6km az=136.9*
*IDC **21** 22:35:12.9±0.7, 4671N×15566E, h0km, mb3.9/15, mb1 4.2/17, mb1mx4.1/22, mbtmp4.0/17, ML3.9/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/40, Error ellipse: s-maj=20.8km s-min=15.5km az=138.0*
*MOS **21** 22:35:13.5±1.0, 4677N×15557E, h19km, mb4.7/6, Error ellipse: s-maj=12.7km s-min=8.2km az=82.5*
*BJI **21** 22:35:13.0, 4712N×15589E, h25km, mB4.3, mb4.3*
*NEIC **21** 22:35:14.2±0.3, 4671N×15564E, h10km, mb4.4/9, Error ellipse: s-maj=7.7km s-min=5.0km az=134.0*

ISC 21 22:35:14.3±0.4, 4671N±006×15565E±009, h10km, n60, σ0§75/60, mb4.1/23, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.99**	**4**	*e*PN	**Pn**	**22 36 10.8**	**-4.7**
SKR				pmax	pmax		
	comp=N,50nm,0.5s						
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
PET	**Petropavlovsk**	**6.61**	**16**	*e*Pn	**Pn**	**22 36 51.1**	**-0.4**
YSS	**Yuzh-Sakhalins**	**8.85**	**276**	Pn	**Pn**	**22 37 21.7**	**-0.4**
ASAJ	**Asahikawa**	**9.54**	**259**	PN	**Pn**	**22 37 31.1**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,43nm,19.8s						
ASAJ	**Asahikawa**	**9.54**	**259**	Pn	**Pn**	**22 37 31.1**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=106,slow=19,SNR=17						
ASAJ				LR	LR	22 40 56.4	
	comp=Z,42nm,19.8s,baz=152,slow=36						
MJAR	**Matsushiro Arr**	**16.50**	**238**	Pn	**Pn**	**22 39 04.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=4.7						
MAJO	**Matsushiro**	**16.50**	**238**	*e*Pn	**Pn**	**22 39 05.4**	**-0.3**
	comp=Z,8.7nm,0.8s						
MAJO	**Matsushiro**	**16.50**	**238**	*e*P	**Pn**	**22 39 05.4**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK	**Yakutsk**	**21.32**	**325**	*e*P	**P**	**22 40 00.3**	**-0.8**
	comp=Z,18nm,0.5s,mb4.7						
YAK	**Yakutsk**	**21.32**	**325**	*e*P	**P**	**22 40 00.3**	**-0.7**
YAK				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.7						
BILL	**Bilibino**	**22.07**	**11**	*e*P	**P**	**22 40 08.9**	**-0.1**
	comp=Z,5.7nm,1.0s,mb4.0						
BILL	**Bilibino**	**22.07**	**11**	P	**P**	**22 40 09.0**	**0.0**
BILL				*e*		22 40 17.1	
KSRS	**Korea Array**	**22.47**	**256**	P	**P**	**22 40 14.8**	**+1.3**
	comp=Z,2.2nm,0.7s,mb3.7,baz=61,slow=9.5,SNR=7.3						
INCN	**Incheon**	**23.31**	**257**	P	**P**	**22 40 22.0**	**-0.4**
BJT	**Baijiatuan**	**29.24**	**271**	*e*P	**P**	**22 41 16.2**	**0.0**
	comp=Z,4.4nm,0.4s,mb4.5						
BJT	**Baijiatuan**	**29.24**	**271**	*e*P	**P**	**22 41 16.2**	**0.0**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.4s						
NJ2	**Nanjing**	**31.67**	**256**	*e*P	**P**	**22 41 38.3**	**+0.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
SONM	**Songino Array**	**32.99**	**290**	P	**P**	**22 41 49.3**	**+0.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=62,slow=9.6,SNR=10						
TLY	**Talaya**	**33.75**	**298**	P	**P**	**22 41 55.3**	**-0.4**
MCK	**McKinley**	**34.55**	**40**	P	**P**	**22 42 02.1**	**-0.4**
COLA	**College**	**35.09**	**38**	*e*P	**P**	**22 42 06.7**	**-0.5**
INK	**Inuvik**	**40.75**	**33**	*e*P	**P**	**22 42 54.8**	**0.0**
	comp=Z,64nm,0.7s,mb5.4						
INK	**Inuvik**	**40.75**	**33**	P	**P**	**22 42 55.0**	**+0.1**
	comp=Z,1.8nm,0.8s,mb3.7,baz=280,slow=7.4,SNR=9.7						
QIZ	**Qiongzhong**	**46.45**	**249**	P	**P**	**22 43 40.8**	**-0.6**
MKAR	**Makanchi Array**	**48.51**	**298**	P	**P**	**22 43 56.5**	**-0.5**
	comp=Z,0.4nm,0.4s,mb3.8,baz=66,slow=7.8,SNR=7.6						
KURK	**Kurchatov**	**48.83**	**305**	*e*P	**P**	**22 43 58.9**	**-0.6**
	comp=Z,3.2nm,0.6s,mb4.5						
KURK	**Kurchatov**	**48.83**	**305**	*e*P	**P**	**22 43 58.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
YKA	**Yellowknife Ar**	**49.91**	**37**	P	**P**	**22 44 07.1**	**-0.4**
YKA				PcP	PcP	22 45 27.1	-0.6
YKA	**Yellowknife Ar**	**49.91**	**37**	P	**P**	**22 44 07.1**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=294,slow=7.2,SNR=4.7						
YKA				PcP	PcP	22 45 27.1	-0.6
	comp=Z,0.1nm,0.5s,baz=273,slow=3.7,SNR=4.4						
RES	**Resolute Bay**	**50.31**	**19**	P	**P**	**22 44 10.6**	**+0.2**
LSA	**Lhasa**	**52.02**	**275**	*e*P	**P**	**22 44 24.0**	**+0.1**
BRVK	**Borovoye**	**52.26**	**310**	*e*P	**P**	**22 44 26.1**	**+0.7**
	comp=Z,2.3nm,0.5s,mb4.4						
BRVK	**Borovoye**	**52.26**	**310**	*e*P	**P**	**22 44 26.1**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
UCH	**Uchtor**	**55.63**	**297**	P	**P**	**22 44 50.9**	**+0.7**
EKS2	**Erkin-Say**	**55.83**	**298**	*e*P	**P**	**22 44 52.8**	**+1.2**
AML	**Almayashu**	**56.18**	**298**	P	**P**	**22 44 54.5**	**+0.4**
ARU	**Arti**	**56.21**	**318**	*e*P	**P**	**22 44 54.2**	**+0.1**
	comp=Z,2.9nm,0.4s,mb4.7						
ARU	**Arti**	**56.21**	**318**	*e*P	**P**	**22 44 54.2**	**+0.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
PMG	**Port Moresby**	**56.38**	**190**	P	**P**	**22 44 55.0**	**-0.6**
ARCES	**ARCESS Array B**	**58.45**	**342**	P	**P**	**22 45 08.4**	**-1.3**
ARCES	**ARCESS Array B**	**58.45**	**342**	P	**P**	**22 45 08.4**	**-1.3**
	comp=Z,2.1nm,0.9s,mb4.2,baz=24,slow=9.1,SNR=2.6						
FCC	**Fort Churchill**	**60.33**	**34**	P	**P**	**22 45 21.5**	**-1.3**
JOF	**Joensuu**	**62.13**	**335**	*e*P	**P**	**22 45 33.4**	**-1.6**
PDAR	**Pinedale Array**	**63.35**	**55**	P	**P**	**22 45 44.5**	**+1.1**
	comp=Z,0.5nm,0.8s,mb3.7,baz=267,slow=3.0,SNR=4.2						
FINES	**FINESS Array B**	**64.81**	**336**	P	**P**	**22 45 52.9**	**+0.2**
	comp=Z,0.9nm,0.5s,mb4.1,baz=67,slow=6.4,SNR=11						
CTAO	**Charters Tower**	**67.02**	**190**	P	**P**	**22 46 06.9**	**-0.4**
NB2	**NORSAR Subarra**	**68.81**	**342**	P	**P**	**22 46 18.5**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**68.81**	**342**	P	**P**	**22 46 19.9**	**+1.7**
	comp=Z,0.5nm,0.5s,mb3.7,baz=25,slow=6.4,SNR=3.8						
WB2	**Warramunga Arr**	**69.08**	**201**	*e*P	**P**	**22 46 20.2**	**0.0**
WRA	**Warramunga Arr**	**69.08**	**201**	P	**P**	**22 46 20.2**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.2,baz=21,slow=7.0,SNR=17						
KIV	**Kislovodsk**	**72.06**	**316**	P	**P**	**22 46 39.8**	**+1.4**
KIV	**Kislovodsk**	**72.06**	**316**	P	**P**	**22 46 39.8**	**+1.4**
AKASG	**Malin Array Be**	**72.54**	**328**	P	**P**	**22 46 41.0**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.9,baz=33,slow=5.8,SNR=4.2						
ASAR	**Alice Springs**	**72.76**	**201**	P	**P**	**22 46 43.2**	**+0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=15,slow=5.8,SNR=16						
MBWA	**Marble Bar**	**74.94**	**215**	P	**P**	**22 46 55.8**	**+0.4**
TXAR	**Lajitas Array**	**75.98**	**62**	P	**P**	**22 47 01.9**	**+0.3**
	comp=Z,0.7nm,0.5s,mb3.8,baz=315,slow=5.4,SNR=15						
CLL	**Collm**	**77.21**	**337**	*es*P	**P**	**22 47 14.0**	**+5.9**
MLR	**Muntele Rosu**	**78.08**	**326**	P	**P**	**22 47 14.9**	**+1.8**
	comp=Z,2.8nm,0.8s,mb4.3,baz=352,slow=7.1,SNR=7.5						
GERES	**GERESS Array B**	**79.24**	**336**	P	**P**	**22 47 23.5**	**+4.2**
	comp=Z,0.2nm,0.4s,mb3.4,baz=56,slow=5.2,SNR=4.7						
MMAI	**Mount Meron Ar**	**84.14**	**313**	P	**P**	**22 47 46.3**	**+0.8**
	comp=Z,1.9nm,0.8s,mb4.3,baz=38,slow=7.4,SNR=4.5						

*BJI **21** 22:44:56.9, 1050N×5710E, h10km, mB5.2, mb4.6*
*ISCJB **21** 22:44:58.4±0.3, 1059N±005×5701E±004, h10km, mb4.6/79, MS3.7/9, Error ellipse: s-maj=7.8km s-min=5.2km az=178.0*
*IDC **21** 22:44:58.5±0.6, 1050N×5718E, h0km, mb4.2/23, mb1 4.3/24, mb1mx4.2/27, mbtmp4.2/24, ML4.2/1, MS3.7/10, Ms1 3.7/10, ms1mx3.6/32, Error ellipse: s-maj=15.5km s-min=13.3km az=140.0*

*NEIC **21** 22:44:59.9±0.3, 1052N×5708E, h10km, mb4.8/37, Error ellipse: s-maj=7.4km s-min=6.2km az=1.0*
*CSEM **21** 22:45:01.9±0.1, 1070N×5698E, h33km, mb4.8/30, Ms3.6, Error ellipse: s-maj=3.2km s-min=2.8km az=5.0*

ISC 21 22:45:00.2±0.3, 1054N±005×5704E±004, h10km, n153, σ1§05/152, mb4.6/79, MS3.7/9, 1C-4D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**13.97**	**275**	Pn	**Pn**	**22 48 18.6**	**+0.3**
	1.1nm,0.3s,baz=98,slow=19,SNR=7.5						
ATD				LR	LR	22 52 41.1	
	comp=Z,318nm,20.8s,baz=300,slow=33						
ATD	**Arta Tunnel**	**13.97**	**275**	Pn	**Pn**	**22 48 18.6**	**+0.3**
QRN	**Al-Qurain**	**20.03**	**336**	*e*P	**P**	**22 49 32.0**	**-1.4**
QRN				AMb	AMB	22 49 38.3	
	comp=Z,85nm,0.6s						
RDF	**Al-Radifah**	**20.34**	**335**	*e*P	**P**	**22 49 35.0**	**-1.8**
RDF				AMb	AMB	22 49 43.6	
	comp=Z,52nm,0.8s						
RDF	**Al-Radifah**	**20.34**	**335**	*e*P	**P**	**22 49 35.0**	**-1.7**
	comp=Z,52nm,0.8s						
KBD	**Kabd**	**20.50**	**336**	*e*P	**P**	**22 49 36.5**	**-1.9**
KBD				AMb	AMB	22 49 40.9	
	comp=Z,357nm,1.0s						
KBD	**Kabd**	**20.50**	**336**	*e*P	**P**	**22 49 36.5**	**-2.0**
	comp=Z,357nm,1.0s						
NAY	**Al-Naaiem**	**20.75**	**335**	*e*P	**P**	**22 49 39.7**	**-1.4**
NAY				AMb	AMB	22 49 53.5	
	comp=Z,20nm,0.8s						
NAY	**Al-Naaiem**	**20.75**	**335**	*e*P	**P**	**22 49 39.7**	**-1.5**
	comp=Z,20nm,0.8s						
HYB	**Hyderabad**	**21.95**	**69**	*i* P	**P**	**22 49 54.5**	**+0.2**
HYB				*e*S	**S**	**22 54 00.0**	**+3.1**
HYB	**Hyderabad**	**21.95**	**69**	*e*P	**P**	**22 49 54.5**	**+0.2**
KMBO	**Kilima Mbogo**	**22.84**	**241**	*e*P	**P**	**22 50 05.2**	**+1.5**
	comp=Z,32nm,1.4s,mb4.6						
KMBO	**Kilima Mbogo**	**22.84**	**241**	*e*P	**P**	**22 50 05.2**	**+1.4**
	comp=Z,32nm,1.4s,mb4.6						
PALK	**Pallekele**	**23.60**	**96**	*e*P	**P**	**22 50 11.3**	**-0.4**
	comp=Z,19nm,1.3s,mb4.4						
PALK	**Pallekele**	**23.60**	**96**	*e*P	**P**	**22 50 11.3**	**-0.4**
	comp=Z,19nm,1.3s,mb4.4						
KHET	**Khetri**	**24.80**	**43**	*e*P	**P**	**22 50 23.1**	**+0.6**
KHET				AMb	AMB	22 50 28.4	
	comp=Z,9.9nm,1.6s,mb4.1						
KUDL	**Kundal**	**25.30**	**43**	*e*P	**P**	**22 50 27.6**	**+0.5**
KUDL				AMb	AMB	22 50 32.1	
	comp=Z,15nm,1.1s,mb4.4						
AGRA	**Agra**	**25.75**	**47**	*e*P	**P**	**22 50 31.1**	**-0.1**
AGRA				AMb	AMB	22 50 36.0	
	comp=Z,46nm,0.6s,mb5.2						
SONA	**Sohna**	**25.77**	**44**	*e*P	**P**	**22 50 31.0**	**-0.3**
SONA				AMb	AMB	22 50 36.0	
	comp=Z,8.8nm,1.1s,mb4.2						
RTK	**Rohtak**	**25.83**	**42**	*e*P	**P**	**22 50 33.4**	**+1.5**
RTK				AMb	AMB	22 50 49.1	
	comp=Z,17nm,0.7s,mb4.7						
EIL	**Elat**	**28.05**	**316**	P	**P**	**22 50 52.1**	**+0.3**
	comp=Z,8.0nm,1.2s,mb4.2,baz=179,slow=12,SNR=3.8						
EIL				LR	LR	23 01 18.2	
	comp=Z,145nm,18.9s,MS3.6,baz=302,slow=35						
ASF	**Jabal al Asfar**	**28.45**	**322**	P	**P**	**22 50 57.8**	**+2.4**
	comp=Z,3.4nm,0.8s,mb4.0,baz=358,slow=5.7,SNR=5.1						
ASF				LR	LR	23 02 47.9	
	comp=Z,102nm,18.3s,MS3.5,baz=25,slow=37						
JOSI	**Joshimath**	**28.90**	**43**	*e*P	**P**	**22 51 00.8**	**+1.4**
JOSI				AMb	AMB	22 51 03.2	
	comp=Z,64nm,0.7s,mb5.5						
KOLN	**Koldanda**	**30.28**	**52**	*e*P	**P**	**22 51 12.7**	**+1.0**
	comp=Z,38nm,1.0s,mb5.1						
GKN	**Gorkha**	**31.19**	**52**	*e*P	**P**	**22 51 20.4**	**+0.7**
	comp=Z,28nm,1.0s,mb5.0						
KKN	**Kakani**	**31.59**	**53**	*e*P	**P**	**22 51 24.3**	**+1.0**
	comp=Z,48nm,1.0s,mb5.3						
JIRN	**Jiri**	**32.26**	**54**	*e*P	**P**	**22 51 30.2**	**+1.1**
	comp=Z,42nm,0.9s,mb5.2						
MALT	**Malatya**	**32.30**	**332**	*e*P	**P**	**22 51 30.9**	**+1.6**
	comp=Z,10nm,0.9s,mb4.7						
MALT	**Malatya**	**32.30**	**332**	*e*P	**P**	**22 51 30.9**	**+1.6**
	comp=Z,10nm,0.9s,mb4.7						
ODAN	**Odare**	**32.89**	**56**	*e*P	**P**	**22 51 34.8**	**+0.1**
	comp=Z,31nm,1.1s,mb5.2						
TAPN	**Taplejung**	**33.35**	**56**	*e*P	**P**	**22 51 39.8**	**+1.1**
	comp=Z,45nm,1.0s,mb5.4						
AML	**Almayashu**	**34.69**	**22**	*e*P	**P**	**22 51 52.7**	**+2.6**
	comp=Z,5.0nm,0.9s,mb4.4						
AML	**Almayashu**	**34.69**	**22**	*e*P	**P**

XAN AMB AMB
comp=Z,14nm,1.1s,mb4.8
KSM Kuching 53.66 96 *e*P **P 22 54 21.5 -1.1**
KSM Kuching 53.66 96 *e*P **P 22 54 21.5 -1.1**
TORD Torodi Ar. Bea 54.14 279 P **P 22 54 27.1 +1.0**
comp=Z,0.7nm,0.7s,mb3.7,baz=84,slow=6.6,SNR=11
FRF La Foret Royal 54.51 317 *e*P **P 22 54 27.7 -0.6**
comp=Z,89nm,1.4s,mb5.3
FRF La Foret Royal 54.51 317 *e*P **P 22 54 27.7 -0.6**
comp=Z,44nm,1.4s,mb5.3
LMR La Mourre 54.52 316 *e*P **P 22 54 28.1 -0.3**
comp=Z,14nm,0.7s,mb4.8
LMR La Mourre 54.52 316 *e*P **P 22 54 28.1 -0.3**
comp=Z,6.9nm,0.7s,mb4.8
MBDF Montbardon 54.87 318 *e*P **P 22 54 29.8 -1.1**
LPG La Plagne 55.17 319 *e*P **P 22 54 32.7 -0.4**
comp=Z,18nm,0.7s,mb4.9
LPG La Plagne 55.17 319 *e*P **P 22 54 32.7 -0.4**
comp=Z,9.0nm,0.7s,mb4.9
LPL La Plagne 55.20 319 *e*P **P 22 54 32.8 -0.4**
comp=Z,14nm,0.6s,mb4.8
LPL La Plagne 55.20 319 *e*P **P 22 54 32.8 -0.4**
comp=Z,6.9nm,0.6s,mb4.8
JOF Joensuu 55.46 346 *e*p **P 22 54 40.1 +5.3**
comp=Z,3.8nm,0.8s,mb4.5
ORIF Oris-en-Rattie 55.52 318 *e*P **P 22 54 34.5 -1.1**
comp=Z,19nm,1.1s,mb4.7
ORIF Oris-en-Rattie 55.52 318 *e*P **P 22 54 34.5 -1.1**
comp=Z,9.4nm,1.1s,mb4.7
SONM Songino Array 55.54 38 P **P 22 54 35.5 -0.2**
comp=Z,0.4nm,0.6s,mb3.6,baz=235,slow=4.7,SNR=3.7
SONM LR LR 23 21 36.7
comp=Z,49nm,18.4s,MS3.6,baz=2.9,slow=40
FINES FINESS Array B 55.63 343 P **P 22 54 35.0 -1.0**
comp=Z,1.4nm,0.8s,mb4.0,baz=134,slow=11,SNR=4.9
FINES LR LR 23 20 02.8
comp=Z,73nm,20.1s,MS3.8,baz=199,slow=38
FINES FINESS Array B 55.63 343 P **P 22 54 35.0 -1.1**
ULN Ulaanbaatar 55.96 39 *e*P **P 22 54 38.9 +0.2**
comp=Z,0.6nm,0.4s,mb4.0
ULN Ulaanbaatar 55.96 39 *e*P **P 22 54 38.9 +0.3**
comp=Z,0.6nm,0.4s,mb4.0
CDF Champ du Feu 56.03 322 *e*P **P 22 54 38.8 -0.4**
comp=Z,12nm,0.8s,mb4.7
CDF Champ du Feu 56.03 322 *e*P **P 22 54 38.8 -0.4**
comp=Z,6.2nm,0.8s,mb4.7
CABF La Chapelle 56.03 320 *e*P **P 22 54 39.6 +0.4**
comp=Z,68nm,0.8s,mb5.4
CABF La Chapelle 56.03 320 *e*P **P 22 54 39.6 +0.4**
comp=Z,34nm,0.8s,mb5.4
HINF Hinteralfeld 56.04 321 *e*P **P 22 54 38.5 -0.8**
comp=Z,16nm,1.1s,mb4.7
HINF Hinteralfeld 56.04 321 *e*P **P 22 54 38.5 -0.8**
comp=Z,8.2nm,1.1s,mb4.7
KAF Kangasniemi 56.10 343 *e*p **P 22 54 36.4 -3.0**
MEZF Maizieres J'vi 57.42 322 *e*P **P 22 54 48.3 -0.8**
comp=Z,15nm,0.7s,mb4.8
MEZF Maizieres J'vi 57.42 322 *e*P **P 22 54 48.3 -0.8**
comp=Z,7.6nm,0.7s,mb4.8
SMF Signal de Mont 57.48 319 *e*P **P 22 54 48.8 -0.7**
comp=Z,24nm,1.2s,mb4.8
SMF Signal de Mont 57.48 319 *e*P **P 22 54 48.8 -0.7**
comp=Z,12nm,1.2s,mb4.8
LOR Lormes 57.70 320 *e*P **P 22 54 50.6 -0.4**
comp=Z,28nm,0.8s,mb5.0
LOR Lormes 57.70 320 *e*P **P 22 54 50.6 -0.4**
comp=Z,14nm,0.8s,mb5.0
SSF Saint Saulge 57.85 320 *e*P **P 22 54 51.6 -0.5**
comp=Z,20nm,0.7s,mb5.0
SSF Saint Saulge 57.85 320 *e*P **P 22 54 51.6 -0.5**
comp=Z,10nm,0.7s,mb5.0
AVF Avril sur Loir 57.85 319 *e*P **P 22 54 51.2 -0.9**
comp=Z,20nm,1.0s,mb4.8
AVF Avril sur Loir 57.85 319 *e*P **P 22 54 51.2 -0.9**
comp=Z,9.8nm,1.0s,mb4.8
CAF Calviac 58.07 317 *e*P **P 22 54 53.3 -0.4**
BGF Bois d'Agland 58.09 319 *e*P **P 22 54 53.7 -0.1**
comp=Z,32nm,0.8s,mb5.1
BGF Bois d'Agland 58.09 319 *e*P **P 22 54 53.7 -0.1**
comp=Z,16nm,0.8s,mb5.1
GIVF Givet 58.20 323 *e*P **P 22 54 54.4 -0.1**
comp=Z,44nm,1.0s,mb5.1
GIVF Givet 58.20 323 *e*P **P 22 54 54.4 -0.1**
comp=Z,22nm,1.0s,mb5.1
TCF Toulx Ste Croi 58.42 318 *e*P **P 22 54 55.8 -0.3**
comp=Z,26nm,1.3s,mb4.8
TCF Toulx Ste Croi 58.42 318 *e*P **P 22 54 55.8 -0.3**
comp=Z,13nm,1.3s,mb4.8
BAIF Baives 58.54 323 *e*P **P 22 54 56.2 -0.7**
comp=Z,49nm,1.2s,mb5.1
BAIF Baives 58.54 323 *e*P **P 22 54 56.2 -0.7**
comp=Z,24nm,1.2s,mb5.1
KKM Kota Kinabalu 58.66 89 *e*P **P 22 54 56.3 -2.1**
LFF La Frestale 58.97 316 *e*P **P 22 54 59.3 -0.7**
ETSF Etsaut 59.31 314 *e*P **P 22 55 02.8 +0.5**
comp=Z,14nm,0.7s,mb4.8
ETSF Etsaut 59.31 314 *e*P **P 22 55 02.8 +0.5**
comp=Z,7.1nm,0.7s,mb4.8
BJI Beijing 59.75 50 P **P 22 55 04.9 -0.6**
BJI AMB AMB
comp=Z,11nm,1.0s,mb4.8
SJPF Ste Jean 59.83 314 *e*P **P 22 55 06.3 +0.3**
comp=Z,60nm,1.0s,mb5.3
SJPF Ste Jean 59.83 314 *e*P **P 22 55 06.3 +0.3**
comp=Z,30nm,1.0s,mb5.3
LDF La Druitiere 60.66 320 *e*P **P 22 55 11.0 -0.6**
comp=Z,36nm,0.8s,mb5.2
LDF La Druitiere 60.66 320 *e*P **P 22 55 11.0 -0.6**
comp=Z,18nm,0.8s,mb5.2
FLN La Foliniere 60.95 320 *e*P **P 22 55 12.7 -0.8**
comp=Z,19nm,0.9s,mb4.9
FLN La Foliniere 60.95 320 *e*P **P 22 55 12.7 -0.8**
comp=Z,9.7nm,0.9s,mb4.9
GRR Gorron 61.07 320 *e*P **P 22 55 13.4 -0.9**
comp=Z,12nm,0.7s,mb4.8
GRR Gorron 61.07 320 *e*P **P 22 55 13.4 -0.9**
comp=Z,6.2nm,0.7s,mb4.8
ESDC Sonseca Array 61.09 310 P **P 22 55 15.3 +0.7**
comp=Z,1.0nm,0.6s,mb4.1,baz=88,slow=6.0,SNR=6.0
DBIC Dimbokro 61.24 272 P **P 22 55 16.4 +0.3**
comp=Z,2.5nm,0.7s,mb4.5,baz=56,slow=8.0,SNR=6.4
LIC Lamto 61.48 271 *e*P **P 22 55 21.6 +3.9**
comp=Z,38nm,0.6s,mb5.4
LIC Lamto 61.48 271 *e*P **P 22 55 21.6 +3.9**
comp=Z,19nm,0.6s,mb5.4
SGMF Saint Gilles 62.11 319 *e*P **P 22 55 20.4 -1.0**
ARCES ARCESS Array B 62.30 348 P **P 22 55 23.0 +0.8**
ARCES ARCESS Array B 62.30 348 P **P 22 55 23.0 +0.8**
comp=Z,2.9nm,0.9s,mb4.4,baz=116,slow=8.2,SNR=5.5
NACB Ninganchiao 62.62 68 *e*P **P 22 55 23.9 -1.4**
NACB Ninganchiao 62.62 68 *e*P **P 22 55 23.9 -1.3**
CN2 Changchun 67.21 47 *e*P **P 22 55 54.5 -0.3**
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.8
KSRS Korea Array 68.51 54 P **P 22 56 01.9 -1.2**
comp=Z,4.5nm,0.8s,mb4.4,baz=264,slow=7.6,SNR=15
KSRS LR LR 23 27 03.7
comp=Z,37nm,20.1s,MS3.6,baz=335,slow=37
JNU Nakatsue 70.82 59 P **P 22 56 17.7 +0.3**
comp=Z,18nm,0.9s,mb5.0,baz=33,slow=0.8,SNR=7.8
JNU LR LR 23 28 11.3
comp=Z,71nm,18.9s,MS4.0,baz=39,slow=37
MJAR Matsushiro Arr 76.75 55 P **P 22 56 51.7 -0.4**
comp=Z,1.0nm,0.5s,mb4.6,baz=280,slow=4.5,SNR=4.8
ASAJ Asahikawa 79.58 47 LR LR 23 31 22.7
comp=Z,78nm,20.2s,MS4.0,baz=17,slow=35
WRA Warramunga Arr 81.85 112 P **P 22 57 19.1 -1.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=294,slow=4.5,SNR=13
WB2 Warramunga Arr 81.86 112 *e*P **P 22 57 19.0 -1.3**
WB2 *e*PcP PcP 22 57 27.0 +1.0
WB2 Warramunga Arr 81.86 112 *e*P **P 22 57 19.0 -1.3**
ASAR Alice Springs 82.39 116 P **P 22 57 21.9 -1.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=294,slow=5.3,SNR=9.4
GUMO Guam 85.49 77 *e*P **P 22 57 37.5 -1.6**
comp=Z,187nm,1.0s
GUMO Guam 85.49 77 *e*P **P 22 57 37.5 -1.6**
comp=Z,187nm,1.0s
PMG Port Moresby 91.81 99 P **P 22 58 08.6 -0.6**
PMG Port Moresby 91.81 99 P **P 22 58 08.6 -0.6**
PDAR Pinedale Array 125.56 348 PKP PKPdf 23 04 01.9 -0.2
comp=Z,0.5nm,0.8s,baz=46,slow=4.3,SNR=4.1

*ISCJB **21** 23:07:44.4±0.2, 1524N±005×4563W±002, h10km, mb5.0/185, MS4.8/64, Error ellipse: s-maj=7.1km s-min=2.6km az=165.4*

2007 MAR

*IDC **21** 23:07:44.5±0.4, 1531N×4566W, h0km, mb4.5/25, mb1 4.7/27, mb1mx4.7/27, mbtmp4.6/27, MS4.7/24, Ms1 4.7/24, ms1mx4.6/31, Error ellipse: s-maj=13.8km s-min=9.9km az=158.0*

*MOS **21** 23:07:45.0±0.9, 1537N×4563W, h10km, mb5.3/87, MS4.7/22, Error ellipse: s-maj=6.9km s-min=3.5km az=46.8*

*GCMT **21** 23:07:46.2±0.1, 1536N×4561W, h13km, MW5.4/89, Moment Tensor Solution. s79,c135; s89,c166; Duration: 1!2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.01±.02; $M_{\theta\theta}$-0.33±.02; $M_{\phi\phi}$0.34±.03; $M_{r\theta}$0.03±.04; $M_{\theta\phi}$-1.64±.03; $M_{r\phi}$0.18±.05; Best double couple: $M_0$1.68300×10^{17} NP1:ϕ_s276.00000°,δ84.00000°, λ-179.00000°; NP2:ϕ_s186.00000°,δ90.00000°, λ-6.00000°. Principal axes: T 1.6890, Plg4.0000°, Azm231.0000°; N -0.0120, Plg84.0000°, Azm1.0000°; P -1.6770, Plg5.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 23:07:46.2±0.2, 1519N×4562W, h10km, mb5.2/121, MS4.8/28 Error ellipse: s-maj=7.2km s-min=2.7km az=166.0*

*BJI **21** 23:07:46.1, 1520N×4560W, h10km, mB5.5, Ms5.3, Msz5.0*

*SZGRF **21** 23:08:00.4, 1548N×4428W, h63km, mb5.3, Northern Mid-Atlantic Ridge*

ISC 21 23:07:46.4±0.2, 1520N±005×4563W±002, h10km, (h48km±7.0km:pP-P), n545, σ1!01/537, mb5.0/185, MS4.8/64, 111C-10D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
					Op	ISC	h	m	s	ISC
BIM	**Bigot**	**14.94**	**269**	*e*P		**Pn**	**23**	**11**	**17.0**	**-0.8**
SLB	**Belfond**	**14.98**	**267**	*e*P		**Pn**	**23**	**11**	**15.9**	**-2.4**
SLB	**Belfond**	**14.98**	**267**	*e*		**Pn**	**23**	**11**	**15.9**	**-2.4**
FDF	**Fort de France**	**15.00**	**270**	*e*P		**Pn**	**23**	**11**	**18.0**	**-0.6**
SSV	**Crater Summit**	**15.20**	**265**	*e*P		**Pn**	**23**	**11**	**19.6**	**-1.7**
SSV	**Crater Summit**	**15.20**	**265**	*e*		**Pn**	**23**	**11**	**19.6**	**-1.7**
SVV	**Soufriere Volc**	**15.22**	**265**	*e*P		**Pn**	**23**	**11**	**19.7**	**-1.9**
SVV	**Soufriere Volc**	**15.22**	**265**	*e*		**Pn**	**23**	**11**	**19.7**	**-1.9**
SVB	**Belmont**	**15.27**	**265**	*e*P		**Pn**	**23**	**11**	**20.1**	**-2.0**
SVB	**Belmont**	**15.27**	**265**	*e*		**Pn**	**23**	**11**	**20.1**	**-2.0**
FCV	**Fort Charlotte**	**15.28**	**264**	*e*P		**Pn**	**23**	**11**	**20.0**	**-2.3**
FCV	**Fort Charlotte**	**15.28**	**264**	*e*		**Pn**	**23**	**11**	**20.0**	**-2.3**
TPR	**Prospect**	**15.28**	**257**	*e*P		**Pn**	**23**	**11**	**20.8**	**-1.5**
TBH	**Brigand Hill**	**15.76**	**255**	*e*P		**Pn**	**23**	**11**	**28.1**	**-0.5**
GRGR	**Grenville**	**15.87**	**261**	*e*Pn		**Pn**	**23**	**11**	**29.0**	**-1.0**
	108nm,0.7s									
GRW	**Mount Saint Ca**	**15.87**	**261**	*e*P		**Pn**	**23**	**11**	**28.1**	**-1.9**
TRN	**Trinidad (W)**	**16.02**	**255**	*e*P		**Pn**	**23**	**11**	**30.2**	**-1.8**
TPP	**Pointe-a-Pierr**	**16.17**	**254**	*e*P		**Pn**	**23**	**11**	**34.1**	**+0.2**
TCE	**Chacachacare**	**16.34**	**256**	*e*P		**Pn**	**23**	**11**	**36.0**	**0.0**
TCE	**Chacachacare**	**16.34**	**256**	*e*		**Pn**	**23**	**11**	**36.0**	**0.0**
PCRV	**Puerto La Cruz**	**19.20**	**257**	P		**Pn**	**23**	**12**	**11.2**	**-0.3**
	0.8nm,0.3s,baz=343,slow=2.8,SNR=4.8									
MTP	**Monte Pirata**	**19.30**	**281**	*e*Pn		**Pn**	**23**	**12**	**14.7**	**+2.0**
CPD	**Cerro la Pandu**	**19.64**	**281**	*e*P		**Pn**	**23**	**12**	**16.2**	**-0.5**
SJG	**San Juan**	**19.87**	**281**	*e*P		**Pn**	**23**	**12**	**18.1**	**-1.4**
SJG	**San Juan**	**19.87**	**281**	P		**Pn**	**23**	**12**	**17.5**	**-2.0**
	7.0nm,0.3s,baz=107,slow=14,SNR=5.6									
SJG					LR	LR	23	18	30.0	
	comp=Z,2μm,19.7s,baz=102,slow=33									
SDDR	**Presa de Saban**	**24.80**	**282**	*e*P		**P**	**23**	**13**	**12.0**	**+3.2**
SDV	**Santo Domingo**	**25.23**	**258**	*e*P		**P**	**23**	**13**	**12.2**	**-0.5**
	42nm,1.1s,mb4.9									
SDV	**Santo Domingo**	**25.23**	**258**	P		**P**	**23**	**13**	**13.0**	**+0.3**
	20nm,0.9s,mb4.6,baz=88,slow=5.1,SNR=20									
BBTS	**Babate**	**28.11**	**87**	P		**P**	**23**	**13**	**37.5**	**-1.2**
	43nm,1.0s,mb5.0,baz=352,slow=2.1,SNR=5.8									
BBTS					LR	LR	23	22	05.6	
	comp=Z,2μm,19.4s,MS4.7,baz=102,slow=31									
PDA	**Ponta Delgada**	**28.58**	**34**	*i* LR		LR	23	20	54.0	
ROSC	**El Rosal**	**30.03**	**253**	*e*P		**P**	**23**	**13**	**56.8**	**+1.0**
ROSC	**El Rosal**	**30.03**	**253**	P		**P**	**23**	**13**	**56.5**	**+0.7**
	22nm,0.6s,mb5.1,baz=75,slow=12,SNR=13									
SIV	**San Ignacio**	**34.54**	**207**	P		**P**	**23**	**14**	**36.2**	**+1.0**
	4.7nm,0.9s,mb4.4,baz=44,slow=9.8,SNR=7.1									
PAL	**Palisades**	**35.53**	**322**	P		**P**	**23**	**14**	**43.9**	**+0.4**
	74nm,1.5s,mb5.4									
OTAV	**Otavalo**	**35.67**	**248**	*e*P		**P**	**23**	**14**	**46.0**	**+1.0**
BRNJ	**Basking Ridge**	**35.73**	**321**	P		**P**	**23**	**14**	**46.1**	**+0.9**
MVL	**Millersville**	**36.45**	**319**	*e*P		**P**	**23**	**14**	**51.3**	**-0.1**
	32nm,1.2s,mb5.1									
SSPA	**Standing Stone**	**37.78**	**318**	*e*P		**P**	**23**	**15**	**06.2**	**+3.4**
SSPA					*e*pP	pP	23	15	13.5	+7.7
ELN	**Prospectdale**	**38.07**	**312**	*e*P		**P**	**23**	**15**	**06.5**	**+1.2**
LPAZ	**La Paz**	**38.37**	**216**	P		**P**	**23**	**15**	**09.4**	**+1.4**
	12nm,0.8s,mb4.7,baz=7.7,slow=10,SNR=61									
LPAZ					LR	LR	23	30	33.4	
	comp=Z,2μm,20.2s,MS4.8,baz=53,slow=36									
PFVI	**Vila Bisbo**	**39.25**	**49**	*e*S		**S**	**23**	**21**	**17.3**	**+1.5**
PFVI					*e*LR	LR	23	25	23.0	
	1μm,22.0s									
ATAH	**Atahualpa**	**39.26**	**238**	P		**P**	**23**	**15**	**17.1**	**+1.7**
	15nm,0.8s,mb4.8,baz=38,slow=5.2,SNR=6.5									
ATAH					LR	LR	23	31	16.9	
	comp=Z,2μm,20.8s,MS5.0,baz=46,slow=36									
MORF	**Marmelete**	**39.45**	**49**	*e*S		**S**	**23**	**21**	**22.8**	**+4.0**
MORF					*e*LR	LR	23	25	31.4	
	1μm,20.0s									
TKL	**Tuckaleechee C**	**39.68**	**308**	P		**P**	**23**	**15**	**22.8**	**+3.9**
	4.5nm,0.8s,mb4.2,baz=136,slow=6.0,SNR=3.9									
TKL					LR	LR	23	29	58.7	
	comp=Z,1μm,18.4s,MS4.7,baz=114,slow=34									
PMAFR	**Mafra**	**39.69**	**46**	*e*S		**S**	**23**	**21**	**21.6**	**-0.8**
PMAFR					*e*LR	LR	23	25	33.6	
	2μm,20.0s									
PBDV	**Barranco-do-Ve**	**39.95**	**49**	*e*S		**S**	**23**	**21**	**42.3**	**+16**
PBDV					*e*LR	LR	23	26	00.4	
	2μm,22.0s									
PVAQ	**Vaqueiros**	**40.17**	**49**	*e*S		**S**	**23**	**21**	**32.8**	**+3.2**
PVAQ					*e*LR	LR	23	25	53.5	
	1μm,22.0s									
TGUH	**Tegucigalpa,Un**	**40.27**	**274**	P		**P**	**23**	**15**	**25.6**	**+1.7**
PBEJ	**Beja**	**40.31**	**48**	*e*P		**P**	**23**	**15**	**24.4**	**+0.4**
	43nm,2.4s,mb4.8									
EVO	**Evora**	**40.41**	**48**	⇑*i*P		**P**	**23**	**15**	**24.3**	**-0.5**
	129nm,1.2s,mb5.2									
EVO					*e*MLR	MLR				
	comp=Z,2μm,21.0s,MS4.6									
EVO	**Evora**	**40.41**	**48**	*e*P		**P**	**23**	**15**	**25.1**	**+0.3**
	comp=Z,74nm,1.3s,mb5.2									
LIC	**Lamto**	**40.82**	**98**	*e*P		**P**	**23**	**15**	**28.0**	**-0.5**
	comp=Z,38nm,0.9s,mb4.7									
LIC					*e*MLR	MLR				
	comp=Z,562nm,21.8s,MS4.1									
LIC	**Lamto**	**40.82**	**98**	*e*P		**P**	**23**	**15**	**28.0**	**-0.5**
	comp=Z,19nm,0.9s,mb4.7									
LIC					LR	LR				
	comp=Z,280nm,21.8s,MS4.1									
TEIG	**Tepich**	**40.85**	**283**	P		**P**	**23**	**15**	**27.9**	**-0.8**
	comp=Z,9.5nm,0.8s,mb4.5,baz=0.0,slow=8.1,SNR=3.0									
PESTR	**Estremoz**	**40.85**	**47**	*e*S		**S**	**23**	**21**	**42.0**	**+2.3**
PESTR					*e*LR	LR	23	26	06.9	
	comp=Z,1μm,22.0s									
SADO	**Sadowa**	**40.86**	**323**	P		**P**	**23**	**15**	**27.8**	**-0.7**
SADO	**Sadowa**	**40.86**	**323**	P		**P**	**23**	**15**	**27.8**	**-0.7**
	baz=128,slow=6.4									
DBIC	**Dimbokro**	**40.86**	**97**	P		**P**	**23**	**15**	**28.1**	**-0.8**
DBIC					LR	LR	23	28	59.6	
DBIC	**Dimbokro**	**40.86**	**97**	P		**P**	**23**	**15**	**28.1**	**-0.8**
	comp=Z,20nm,1.0s,mb4.7,baz=280,slow=11,SNR=9.0									
DBIC					LR	LR	23	28	59.6	
	comp=Z,582nm,19.3s,MS4.5,baz=267,slow=31									
SFS	**San Fernando**	**40.94**	**51**	P		**P**	**23**	**15**	**29.8**	**+0.6**
PBAR	**Barrancos**	**40.96**	**49**	*e*P		**P**	**23**	**15**	**29.8**	**+0.4**
	comp=Z,66nm,1.7s,mb5.0									
PBAR					*e*S	**S**	**23**	**21**	**48.4**	**+7.0**
PBAR					*e*LR	LR	23	26	15.6	
	comp=Z,1μm,20.0s									
NNA	**Nana**	**41.05**	**231**	LR		LR	23	32	32.3	
	comp=Z,2μm,18.7s,MS5.0,baz=331,slow=36									
EMIN	**Mina Concepcio**	**41.07**	**49**	P		**P**	**23**	**15**	**28.8**	**-1.5**
	comp=Z,70nm,1.6s,mb5.0									
SWET	**Sewanee**	**41.19**	**306**	*e*P		**P**	**23**	**15**	**36.5**	**+5.2**
EBAD	**Badajoz**	**41.21**	**48**	P		**P**	**23**	**15**	**30.2**	**-1.2**
	comp=Z,46nm,1.2s,mb5.0									
PCBR	**Castelo Branco**	**41.34**	**46**	*e*P		**P**	**23**	**15**	**32.4**	**0.0**
	comp=Z,82nm,1.5s,mb5.1									
ESPR	**Espera**	**41.35**	**51**	P		**P**	**23**	**15**	**32.4**	**-0.2**
	comp=Z,78nm,1.2s,mb5.2									
LRAL	**Lakeview Retre**	**41.41**	**303**	*e*P		**P**	**23**	**15**	**33.1**	**0.0**
	comp=Z,11nm,0.8s,mb4.5									
PVIS	**Viseu**	**41.44**	**45**	*e*P		**P**	**23**	**15**	**33.3**	**+0.1**
	comp=Z,64nm,1.7s,mb5.0									
EJIF	**Jimena Fronter**	**41.49**	**52**	P		**P**	**23**	**15**	**34.3**	**+0.5**
	comp=Z,32nm,1.0s,mb4.9									
EJIF	**Jimena Fronter**	**41.49**	**52**	P		**P**	**23**	**15**	**34.3**	**+0.5**
EJIF					pmax	pmax				
	comp=Z,32nm,1.0s,mb4.9									
MTE	**Manteigas**	**41.53**	**45**	*e*P		**P**	**23**	**15**	**34.4**	**+0.3**
	comp=Z,69nm,1.1s,mb5.2									
MTE					*e*S	**S**	**23**	**21**	**57.8**	**+7.9**
MTE					*e*LR	LR	23	26	19.5	
	comp=Z,2μm,20.0s									
MTE	**Manteigas**	**41.53**	**45**	*e*P		**P**	**23**	**15**	**34.1**	**+0.1**
	comp=Z,26nm,0.8s,mb4.9									
PVRL	**Vila Real**	**41.81**	**44**	*e*P		**P**	**23**	**15**	**36.3**	**0.0**
	comp=Z,65nm,1.9s,mb4.9									
EMIJ	**Mijas**	**42.06**	**52**	P		**P**	**23**	**15**	**38.2**	**-0.2**
	comp=Z,69nm,1.8s,mb5.0									
MVO	**Moncorvo**	**42.22**	**45**	*e*P		**P**	**23**	**15**	**39.9**	**+0.2**
	comp=Z,43nm,1.8s,mb4.8									
MVO					*e*S	**S**	**23**	**22**	**13.3**	**+13**
MVO					*e*LR	LR	23	26	56.8	
	comp=Z,1μm,20.0s									
AAM	**Ann Arbor**	**42.36**	**317**	*e*P		**P**	**23**	**15**	**40.5**	**-0.3**
	comp=Z,16nm,0.5s,mb4.9									
AAM	**Ann Arbor**	**42.36**	**317**	*e*P		**P**	**23**	**15**	**40.5**	**-0.2**
AAM					pmax	pmax				
	comp=Z,16nm,0.5s,mb4.9									
ELOJ	**Sierra Loja**	**42.72**	**51**	P		**P**	**23**	**15**	**44.1**	**+0.3**
	comp=Z,16nm,0.9s,mb4.7									
ELOJ	**Sierra Loja**	**42.72**	**51**	P		**P**	**23**	**15**	**44.1**	**+0.3**
ELOJ					pmax	pmax				
	comp=Z,16nm,0.9s,mb4.8									
ELUQ	**Luque**	**42.78**	**51**	P		**P**	**23**	**15**	**44.6**	**+0.4**
	comp=Z,64nm,1.5s,mb5.1									
ELUQ	**Luque**	**42.78**	**51**	P		**P**	**23**	**15**	**44.6**	**+0.4**
ELUQ					pmax	pmax				
	comp=Z,64nm,1.5s,mb5.1									
PLAL	**Pickwick Lake**	**42.80**	**305**	*e*P		**P**	**23**	**15**	**44.5**	**+0.1**
	comp=Z,7.1nm,0.5s,mb4.7									
SCHQ	**Schefferville**	**42.83**	**342**	P		**P**	**23**	**15**	**44.5**	**0.0**
	baz=129,slow=10									
ERON	**Agron**	**42.94**	**52**	P		**P**	**23**	**15**	**42.9**	**-2.6**
	comp=Z,9.6nm,0.8s,mb4.6									
WVT	**Waverly**	**42.95**	**307**	*e*P		**P**	**23**	**15**	**45.2**	**-0.4**
ECOG	**Cogollos-Vega**	**43.21**	**51**	P		**P**	**23**	**15**	**48.5**	**+0.8**
	comp=Z,18nm,0.9s,mb4.8									
ECOG	**Cogollos-Vega**	**43.21**	**51**	P		**P**	**23**	**15**	**48.5**	**+0.8**
ECOG					pmax	pmax				
	comp=Z,18nm,0.9s,mb4.8									
EBAN	**Banos Encina**	**43.34**	**50**	P		**P**	**23**	**15**	**48.0**	**-0.8**
	comp=Z,22nm,1.3s,mb4.7									
EBAN	**Banos Encina**	**43.34**	**50**	P		**P**	**23**	**15**	**48.0**	**-0.8**
EBAN					pmax	pmax				
	comp=Z,22nm,1.3s,mb4.7									
EQES	**Quesada**	**43.75**	**51**	P		**P**	**23**	**15**	**48.5**	**-3.6**
	comp=Z,61nm,1.4s,mb5.1									
ESDC	**Sonseca Array**	**43.75**	**48**	P		**P**	**23**	**15**	**51.0**	**-1.1**
	comp=Z,20nm,1.4s,mb4.7									
ESDC	**Sonseca Array**	**43.75**	**48**	P		**P**	**23**	**15**	**52.2**	**+0.1**
	comp=Z,7.0nm,1.0s,mb4.4,baz=247,slow=7.7,SNR=16									
ESDC					LR	LR	23	29	46.5	
	comp=Z,1μm,21.9s,MS4.7,baz=260,slow=30									
GUD	**Guadarrama**	**43.99**	**47**	P		**P**	**23**	**15**	**53.9**	**0.0**
	comp=Z,13nm,0.8s,mb4.7									
GUD	**Guadarrama**	**43.99**	**47**	P		**P**	**23**	**15**	**53.9**	**-0.1**
GUD					pmax	pmax				
	comp=Z,13nm,0.8s,mb4.7									
ENIJ	**Nijar**	**44.14**	**52**	P		**P**	**23**	**15**	**54.1**	**-1.2**
	comp=Z,61nm,1.1s,mb5.2									
ENIJ	**Nijar**	**44.14**	**52**	P		**P**	**23**	**15**	**54.1**	**-1.2**
ENIJ					pmax	pmax				
	comp=Z,61nm,1.1s,mb5.2									
EVIA	**Vianos**	**44.45**	**50**	P		**P**	**23**	**15**	**54.4**	**-3.3**
	comp=Z,27nm,1.0s,mb4.9									
EVIA	**Vianos**	**44.45**	**50**	P		**P**	**23**	**15**	**54.4**	**-3.3**
EVIA					pmax	pmax				
	comp=Z,27nm,1.0s,mb4.9									
ETOB	**Tobarra**	**45.16**	**50**	P		**P**	**23**	**16**	**02.9**	**-0.4**
	comp=Z,74nm,1.5s,mb5.3									
CART	**Cartagena**	**45.24**	**52**	P		**P**	**23**	**16**	**05.1**	**+1.1**
FVM	**French Village**	**45.49**	**309**	*e*P		**P**	**23**	**16**	**07.3**	**+1.4**
	comp=Z,20nm,0.6s,mb5.1									
FVM	**French Village**	**45.49**	**309**	*e*P		**P**	**23**	**16**	**07.4**	**+1.4**
FVM					pmax	pmax				
	comp=Z,20nm,0.6s,mb5.1									
TOA0	**Torodi Ar. Sit**	**45.86**

MTLF Montolieu 49.39 45⇑ *i*P P 23 16 35.5 -0.8
comp=Z,40nm,1.2s,mb5.3
MTLF Montolieu 49.39 45⇑ *i*P P 23 16 35.5 -0.8
MTLF pmax pmax
comp=Z,41nm,1.2s,mb5.3
RJF Les Rejaudoux 49.61 43 *i*P P 23 16 36.7 -1.2
comp=Z,92nm,1.3s,mb5.3
RJF *e*MLR MLR
comp=Z,844nm,21.0s,MS4.4
RJF Les Rejaudoux 49.61 43⇑ *i*P P 23 16 36.7 -1.2
comp=Z,46nm,1.3s,mb5.3
RJF LR LR
comp=Z,840nm,21.0s,MS4.7
RJF Les Rejaudoux 49.61 43⇑ *i*P P 23 16 36.7 -1.2
RJF pmax pmax
comp=Z,46nm,1.3s,mb5.3
RJF MLR MLR
comp=Z,840nm,21.0s,MS4.7
FLN La Foliniere 49.76 38 *e*P P 23 16 38.7 -0.3
FLN *e*MLR MLR
comp=Z,605nm,19.8s,MS4.3
FLN La Foliniere 49.76 38 *e*P P 23 16 38.7 -0.3
FLN LR LR
comp=Z,610nm,19.8s,MS4.6
CAF Calviac 49.83 43⇑ *i*P P 23 16 38.8 -0.8
comp=Z,96nm,1.2s,mb5.4
CAF Calviac 49.83 43⇑ *i*P P 23 16 38.8 -0.8
comp=Z,48nm,1.2s,mb5.4
CAF Calviac 49.83 43⇑ *i*P P 23 16 38.8 -0.8
CAF pmax pmax
comp=Z,48nm,1.2s,mb5.4
LDF La Druitiere 49.90 38 *e*P P 23 16 39.6 -0.5
comp=Z,118nm,1.5s,mb5.4
LDF La Druitiere 49.90 38 *e*P P 23 16 39.6 -0.5
comp=Z,59nm,1.5s,mb5.4
LDF La Druitiere 49.90 38 *e*P P 23 16 39.6 -0.5
LDF pmax pmax
comp=Z,59nm,1.5s,mb5.4
TCF Toulx Ste Croi 50.42 42 *e*P P 23 16 44.1 0.0
comp=Z,129nm,1.3s,mb5.5
TCF Toulx Ste Croi 50.42 42 *e*P P 23 16 44.1 0.0
comp=Z,64nm,1.3s,mb5.5
TCF Toulx Ste Croi 50.42 42 *e*P P 23 16 44.1 0.0
TCF pmax pmax
comp=Z,64nm,1.3s,mb5.5
LBL Lubilhac 50.72 43 *e*P P 23 16 46.9 +0.5
PYM Petit Puy Mans 50.75 43 *e*P P 23 16 48.4 +1.9
LASF Ste Croix 50.75 45 *e*P P 23 16 45.9 -0.7
comp=Z,112nm,1.4s,mb5.3
BGF Bois d'Agland 50.93 42⇑ *i*P P 23 16 47.2 -0.7
comp=Z,74nm,1.2s,mb5.2
BGF Bois d'Agland 50.93 42⇑ *i*P P 23 16 47.2 -0.7
comp=Z,37nm,1.2s,mb5.2
BGF Bois d'Agland 50.93 42⇑ *i*P P 23 16 47.2 -0.7
BGF pmax pmax
comp=Z,37nm,1.2s,mb5.2
AGO Saint Agoulin 50.93 42 *e*P P 23 16 48.8 +0.9
HYF Humbligny 51.06 41⇑ *i*P P 23 16 48.4 -0.5
PLDF La Plantade 51.22 43 *e*P P 23 16 51.1 +1.0
AVF Avril sur Loir 51.34 42⇑ *i*P P 23 16 50.7 -0.3
comp=Z,74nm,1.3s,mb5.2
AVF Avril sur Loir 51.34 42⇑ *i*P P 23 16 50.7 -0.3
comp=Z,37nm,1.3s,mb5.2
AVF Avril sur Loir 51.34 42⇑ *i*P P 23 16 50.7 -0.3
AVF pmax pmax
comp=Z,37nm,1.3s,mb5.2
WMOK Wichita Mounta 51.34 302 *e*P P 23 16 52.9 +1.7
CFAA Coronel Fontan 51.35 205 P P 23 16 51.1 0.0
comp=Z,1.2nm,1.0s,mb3.8,baz=24,slow=7.0,SNR=10
CFAA LR LR 23 39 57.3
comp=Z,133nm,20.7s,MS4.0,baz=17,slow=38
SSF Saint Saulge 51.54 41⇑ *i*P P 23 16 52.1 -0.3
comp=Z,55nm,1.3s,mb5.0
SSF Saint Saulge 51.54 41⇑ *i*P P 23 16 52.1 -0.3
comp=Z,27nm,1.3s,mb5.0
SSF Saint Saulge 51.54 41⇑ *i*P P 23 16 52.1 -0.3
SSF pmax pmax
comp=Z,27nm,1.3s,mb5.0
VIVF Saint-Julien-l 51.55 44 *e*P P 23 16 52.3 -0.3
comp=Z,121nm,1.7s,mb5.3
VIVF Saint-Julien-l 51.55 44 *e*P P 23 16 52.3 -0.3
comp=Z,61nm,1.7s,mb5.2
VIVF Saint-Julien-l 51.55 44 *e*P P 23 16 52.3 -0.3
VIVF pmax pmax
comp=Z,61nm,1.7s,mb5.2
ESK Eskdalemuir 51.60 29 PFAKE 23 17 00.0 +7.3
ESK LR LR
comp=Z,793nm,21.0s,MS4.7
SMF Signal de Mont 51.60 42⇑ *i*P P 23 16 52.8 -0.1
comp=Z,66nm,1.3s,mb5.1
SMF Signal de Mont 51.60 42⇑ *i*P P 23 16 52.8 -0.1
comp=Z,33nm,1.3s,mb5.1
SMF Signal de Mont 51.60 42⇑ *i*P P 23 16 52.8 -0.1
SMF pmax pmax
comp=Z,33nm,1.3s,mb5.1
ECSD EROS,Sioux Fal 51.68 314 *e*P P 23 16 52.3 -1.2
JCT Junction City 51.73 297 *e*P P 23 16 56.4 +2.2
comp=Z,13nm,0.9s,mb4.9
JCT Junction City 51.73 297 *e*P P 23 16 56.4 +2.2
JCT pmax pmax
comp=Z,13nm,0.9s,mb4.9
LOR Lormes 51.84 41⇑ *i*P P 23 16 53.5 -1.2
comp=Z,72nm,1.5s,mb5.1
LOR *e*MLR MLR
comp=Z,402nm,20.5s,MS4.1
LOR Lormes 51.84 41⇑ *i*P P 23 16 53.5 -1.2
comp=Z,36nm,1.5s,mb5.1
LOR LR LR
comp=Z,400nm,20.5s,MS4.4
LOR Lormes 51.84 41⇑ *i*P P 23 16 53.5 -1.2
LOR pmax pmax
comp=Z,36nm,1.5s,mb5.1
LOR MLR MLR
comp=Z,400nm,20.5s,MS4.4
SFJD Kangerlussuaq 51.86 358 *i*P P 23 17 02.0 +7.5
SFJD *i*S S 23 24 20.2 +3.5
SFJD pmax pmax
comp=Z,30nm,1.2s,mb5.1
SFJD MLR MLR
comp=Z,240nm,20.0s,MS4.2
SFJD Kangerlussuaq 51.86 358 P P 23 16 56.8 +2.3
comp=Z,4.8nm,0.6s,mb4.6,baz=179,slow=1.8,SNR=3.2
SFJD Kangerlussuaq 51.86 358 *i*P P 23 17 02.0 +7.5
comp=Z,30nm,1.2s,mb5.1
SFJD *i*S S 23 24 20.2 +3.5
SFJD
comp=Z,230nm,20.0s
SMRF Simiane la Rot 51.90 46 *e*P P 23 16 54.9 -0.3
comp=Z,264nm,1.8s,mb5.6
SMRF Simiane la Rot 51.90 46 *e*P P 23 16 54.9 -0.3
comp=Z,264nm,1.8s,mb5.9
LMR La Mourre 52.37 47 *e*P P 23 16 58.3 -0.4
comp=Z,41nm,1.1s,mb5.0
LMR La Mourre 52.37 47 *e*P P 23 16 58.3 -0.4
comp=Z,20nm,1.1s,mb5.0
LMR La Mourre 52.37 47 *e*P P 23 16 58.3 -0.4
LMR pmax pmax
comp=Z,20nm,1.1s,mb5.0
FRF La Foret Royal 52.53 46 *e*P P 23 16 59.7 -0.2
AGMN Agassiz Refuge 52.67 320 *e*P P 23 16 59.8 -1.1
CBKS Cedar Bluff 52.78 307 *e*P P 23 16 59.8 -2.0
comp=Z,66nm,1.3s,mb5.4
CBKS Cedar Bluff 52.78 307 *e*P P 23 16 59.8 -2.0
CBKS pmax pmax
comp=Z,66nm,1.3s,mb5.4
MBDF Montbardon 52.94 45 *e*P P 23 17 03.6 +0.7
comp=Z,108nm,1.4s,mb5.3
MBDF Montbardon 52.94 45 *e*P P 23 17 03.6 +0.7
comp=Z,54nm,1.4s,mb5.3
MBDF Montbardon 52.94 45 *e*P P 23 17 03.6 +0.7
MBDF pmax pmax
comp=Z,54nm,1.4s,mb5.3
KEST Kesra 52.96 57 P P 23 17 03.9 +0.6
comp=Z,6.0nm,1.0s,mb4.5,baz=163,slow=3.0,SNR=7.6
KEST LR LR 23 36 41.6
comp=Z,469nm,21.1s,MS4.5,baz=348,slow=33
BNI Bardonecchia 52.97 45 *e*P P 23 17 04.9 +1.7
comp=Z,35nm,1.2s,mb5.2
BNI Bardonecchia 52.97 45 *e*P P 23 17 04.9 +1.8
BNI pmax pmax
comp=Z,35nm,1.2s,mb5.2
MEZF Maizieres J'vi 53.03 40⇑ *i*P P 23 17 03.2 -0.3
comp=Z,161nm,1.2s,mb5.5
MEZF Maizieres J'vi 53.03 40⇑ *i*P P 23 17 03.2 -0.3
comp=Z,161nm,1.2s,mb5.8
CABF La Chapelle 53.05 43⇑ *i*P P 23 17 03.9 +0.2
comp=Z,45nm,1.1s,mb5.0
CABF La Chapelle 53.05 43⇑ *i*P P 23 17 03.9 +0.2
comp=Z,23nm,1.1s,mb5.0
CABF La Chapelle 53.05 43⇑ *i*P P 23 17 03.9 +0.2
CABF pmax pmax
comp=Z,23nm,1.1s,mb5.0
BAIF Baives 53.09 38⇑ *i*P P 23 17 03.4 -0.5
comp=Z,86nm,1.3s,mb5.2
BAIF Baives 53.09 38⇑ *i*P P 23 17 03.4 -0.5
comp=Z,43nm,1.3s,mb5.2
BAIF Baives 53.09 38⇑ *i*P P 23 17 03.4 -0.5
BAIF pmax pmax
comp=Z,43nm,1.3s,mb5.2
LPL La Plagne 53.14 44⇑ *i*P P 23 17 04.6 +0.2
comp=Z,84nm,1.6s,mb5.1
LPL La Plagne 53.14 44⇑ *i*P P 23 17 04.6 +0.2
comp=Z,42nm,1.6s,mb5.1
LPL La Plagne 53.14 44⇑ *i*P P 23 17 04.6 +0.2
LPL pmax pmax
comp=Z,42nm,1.6s,mb5.1
LPG La Plagne 53.15 44⇑ *i*P P 23 17 05.0 +0.5
comp=Z,49nm,1.4s,mb4.9
LPG La Plagne 53.15 44⇑ *i*P P 23 17 05.0 +0.5
comp=Z,24nm,1.4s,mb4.9
SBF Sospel 53.16 46 *e*P P 23 17 04.5 -0.1
comp=Z,57nm,1.0s,mb5.2
SBF Sospel 53.16 46 *e*P P 23 17 04.5 -0.1
comp=Z,29nm,1.0s,mb5.2
SBF Sospel 53.16 46 *e*P P 23 17 04.5 -0.1
SBF pmax pmax
comp=Z,29nm,1.0s,mb5.2
SNF Seneffe 53.31 38 P P 23 17 05.6 +0.1
comp=Z,26nm,1.8s,mb4.8
DOU Dourbes 53.33 38 P P 23 17 05.0 -0.7
comp=Z,12nm,1.3s,mb4.7
ULM Lac du Bonnet 53.40 322 P P 23 17 04.4 -1.8
baz=110,slow=9.7
UCC Uccle 53.47 37 P P 23 17 04.8 -1.8
comp=Z,31nm,1.1s,mb5.2
GIVF Givet 53.47 38 *e*P P 23 17 05.6 -1.1
THEF They Montfort 53.52 41 *e*P P 23 17 07.4 +0.3
HAU Haudompre 53.67 41⇑ *i*P P 23 17 07.4 -0.8
comp=Z,39nm,1.1s,mb4.9
HAU *e*MLR MLR
comp=Z,510nm,19.5s,MS4.3
HAU Haudompre 53.67 41⇑ *i*P P 23 17 07.4 -0.8
comp=Z,20nm,1.1s,mb5.0
HAU LR LR
comp=Z,510nm,19.5s,MS4.6
HAU Haudompre 53.67 41⇑ *i*P P 23 17 07.4 -0.8
HAU pmax pmax
comp=Z,20nm,1.1s,mb5.0
HAU MLR MLR
comp=Z,510nm,19.5s,MS4.6
AMTX Amarillo 53.73 302 *e*P P 23 17 08.7 -0.2
comp=Z,31nm,1.0s,mb5.2
BCLA Clavier 53.88 38 P P 23 17 09.6 -0.1
comp=Z,21nm,2.2s,mb4.7
HINF Hinteralfeld 53.93 41 *e*P P 23 17 09.3 -0.8
comp=Z,25nm,1.1s,mb4.8
HINF Hinteralfeld 53.93 41 *e*P P 23 17 09.3 -0.8
comp=Z,13nm,1.1s,mb4.8
HINF Hinteralfeld 53.93 41 *e*P P 23 17 09.3 -0.8
HINF pmax pmax
comp=Z,13nm,1.1s,mb4.8
WLF Walferdange 54.11 39 *e*P P 23 17 11.6 +0.1
WLF Walferdange 54.11 39 P P 23 17 11.7 +0.2
comp=Z,21nm,1.3s,mb4.9
WLF Walferdange 54.11 39 *e*P P 23 17 11.2 -0.2
comp=Z,49nm,1.3s,mb5.3
MOF Molkenrain 54.12 41 *e*P P 23 17 10.7 -0.8
MEM Membach 54.36 38 P P 23 17 13.3 0.0
comp=Z,17nm,1.2s,mb4.9
CDF Champ du Feu 54.39 41⇑ *i*P P 23 17 12.9 -0.6
comp=Z,39nm,1.4s,mb4.8
CDF Champ du Feu 54.39 41⇑ *i*P P 23 17 12.9 -0.6
comp=Z,20nm,1.4s,mb4.8
CDF Champ du Feu 54.39 41⇑ *i*P P 23 17 12.9 -0.6
CDF pmax pmax
comp=Z,19nm,1.4s,mb4.8
RUP Ruppelstein 54.68 39 *e*P P 23 17 15.2 -0.4
FELD Feldberg im Sc 54.69 42 *e*P P 23 17 15.0 -0.6
LANF Langenberg 54.90 40 *e*P P 23 17 17.1 -0.1
LTX Lajitas 55.02 295 *e*P P 23 17 18.8 +0.4
comp=Z,92nm,2.8s,mb5.3
LTX Lajitas 55.02 295 *e*P P 23 17 18.8 +0.4
LTX pmax pmax
comp=Z,92nm,2.8s,mb5.3
TXAR Lajitas Array 55.02 295 P P 23 17 17.5 -0.9
TXAR PcP PcP 23 18 17.3 -2.8
TXAR LR LR 23 41 31.8
TXAR Lajitas Array 55.02 295 P P 23 17 17.5 -0.9
TXAR 23 18 17.3
TXAR Lajitas Array 55.02 295 P P 23 17 17.5 -0.9
comp=Z,3.1nm,0.9s,mb4.3,baz=110,slow=7.7,SNR=13
TXAR PcP PcP 23 18 17.3 -2.8
comp=Z,1.9nm,0.9s,baz=99,slow=5.6,SNR=2.3
TXAR LR LR 23 41 31.8
comp=Z,513nm,18.7s,MS4.6,baz=310,slow=37
BFO Black Forest 55.03 41 *e*P P 23 17 16.8 -1.3
BFO pmax pmax
comp=Z,21nm,1.1s,mb5.1
BFO Black Forest 55.03 41 *e*P P 23 17 16.8 -1.3
comp=Z,21nm,1.1s,mb5.1
ABH Alteburg 55.04 39 *e*P P 23 17 18.0 -0.2
SPAK Spaichingen-Ko 55.25 42 *e*P P 23 17 19.7 0.0
TNS Taunus Mts 55.70 39 *e*P P 23 17 23.0 +0.1
TNS pmax pmax
comp=Z,29nm,1.2s,mb5.2
TNS Taunus Mts 55.70 39 *e*P P 23 17 23.0 +0.1
comp=Z,29nm,1.2s,mb5.2
TOD Tromm 55.72 40 *e*P P 23 17 22.3 -0.8
DAVA Damuels 55.73 43⇑ *i*P P 23 17 23.6 +0.4
comp=Z,14nm,1.0s,mb4.9
GDL2 Guadalupe Moun 55.73 299 *e*P P 23 17 26.3 +2.8
FCC Fort Churchill 56.21 332 *e*P P 23 17 25.6 -0.9
comp=Z,22nm,1.1s,mb5.1
FCC Fort Churchill 56.21 332 *e*P P 23 17 25.6 -0.8
FCC pmax pmax
comp=Z,22nm,1.1s,mb5.1
FETA Feichten 56.22 43⇑ *i*P P 23 17 26.8 0.0
comp=Z,14nm,1.1s,mb4.9
RETA Rte 56.36 43⇑ *i*P P 23 17 27.9 +0.2
comp=Z,12nm,1.2s,mb4.8
MOTA Moosalm 56.55 43⇑ *i*P P 23 17 28.9 -0.2
comp=Z,27nm,1.2s,mb5.1,SNR=7.2
MOTA Moosalm 56.55 43⇑ *i*P P 23 17 28.9 -0.2
MOTA pmax pmax
comp=Z,27nm,1.2s,mb5.2
MNTX Cornudas Mount 56.58 298 *e*P P 23 17 28.4 -1.2
SQTA Sankt Quirin 56.59 43⇓ *i*P P 23 17 29.2 -0.1
WATA Walderalm 56.86 43⇑ *i*P P 23 17 30.8 -0.4
comp=Z,36nm,1.8s,mb5.1
WATA Walderalm 56.86 43⇑ *i*P P 23 17 30.8 -0.5
comp=Z,36nm,1.8s,mb5.1
WATA Walderalm 56.86 43⇑ *i*P P 23 17 30.8 -0.5
WATA pmax pmax
comp=Z,36nm,1.8s,mb5.1
FUR Furstenfeldbru 56.87 42 *e*P P 23 17 31.6 +0.3
FUR pmax pmax
comp=Z,45nm,1.3s,mb5.3
FUR Furstenfeldbru 56.87 42 *e*P P 23 17 31.6 +0.3
comp=Z,45nm,1.3s,mb5.3
WTTA Wattenberg 56.88 43⇑ *i*P P 23 17 31.1 -0.3
comp=Z,190nm,2.6s,mb5.7
WTTA Wattenberg 56.88 43⇑ *i*P P 23 17 31.1 -0.3
WTTA pmax pmax
comp=Z,190nm,2.6s,mb5.7
RSSD Black Hills 56.97 313 *e*P P 23 17 31.1 -1.0
comp=Z,2.5nm,0.8s,mb4.3
RSSD Black Hills 56.97 313 *e*P P 23 17 31.1 -1.0
RSSD pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
AQU L'Aquila 57.10 49 *e*P P 23 17 33.7 +0.7
AQU L'Aquila 57.10 49⇑ *i*P P 23 17 33.5 +0.4
SDCO Great Sand Dun 57.11 305 *e*P P 23 17 33.5 +0.3
comp=Z,6.2nm,0.8s,mb4.7
GRFO Grafenberg 57.25 40 *e*P P 23 17 33.3 -0.7
GRFO pmax pmax
comp=Z,8µm,2.4s
GRFO Grafenberg 57.25 40 *e*P P 23 17 33.3 -0.7
comp=Z,104nm,2.4s,mb5.4
GRA1 Grafenberg Arr 57.25 40 *e*P P 23 17 33.7 -0.3
comp=Z,34nm,1.6s,mb5.1
GRA1 *e*S S 23 25 32.0 +2.1
GRF Grafenberg Arr 57.25 40 *e*P P 23 17 33.7 -0.3
GRF *e*S S 23 25 32.0 +2.1
GRF pmax pmax
comp=Z,34nm,1.6s,mb5.1
GRF Grafenberg Arr 57.25 40 *e*P P 23 17 33.7 -0.3
comp=Z,34nm,1.6s,mb5.1
GRF *e*S S 23 25 32.0 +2.1
CLZ Clausthal 57.36 38 *e*P P 23 17 34.7 0.0
comp=Z,47nm,1.2s,mb5.4
CLZ *e*pP pP 23 17 51.4 +13
NRDL Niedersach Rie 57.42 37 *e*P P 23 17 35.6 +0.5
comp=Z,74nm,1.3s,mb5.6
ISCO Idaho Springs 57.44 308 *e*P P 23 17 36.3 +0.8
comp=Z,42nm,1.4s,mb5.3
ISCO Idaho Springs 57.44 308 *e*P P 23 17 36.3 +0.8
ISCO pmax pmax
comp=Z,42nm,1.4s,mb5.3
ANMO Albuquerque 57.64 302 *e*P P 23 17 37.7 +0.6
comp=Z,4.5nm,0.9s,mb4.5
ANMO LR LR 23 39 30.2
ANMO Albuquerque 57.64 302 *e*P P 23 17 37.7 +0.7
ANMO pmax pmax
comp=Z,4.0nm,0.9s
ANMO Albuquerque 57.64 302 P P 23 17 37.8 +0.7
comp=Z,2.4nm,0.7s,mb4.3,baz=103,slow=5.9,SNR=3.0
ANMO LR LR 23 39 30.2
comp=Z,993nm,21.3s,MS4.9,baz=276,slow=33
MOX Moxa 57.76 39 *e*P P 23 17 37.6 +0.1
comp=Z,40nm,1.5s,mb5.2
MOX
comp=Z,500nm,18.0s
MOX Moxa 57.76 39 *e*P P 23 17 37.6 +0.1
MOX pmax pmax
comp=Z,40nm,1.5s,mb5.2
MOX MLR MLR
comp=Z,500nm,18.0s,MS4.7
MOX Moxa 57.76 39 *e*P P 23 17 37.4 -0.1
comp=Z,32nm,1.3s,mb5.2
MOX *e*pP pP 23 17 54.1 +13
MANZ Manzenberg 57.88 40 *e*P P 23 17 39.2 +0.8
comp=Z,21nm,1.7s,mb4.9
ROTZ Rotzenmuhle 57.88 40 *e*P P 23 17 38.3 -0.1
comp=Z,23nm,1.6s,mb5.0
KBA Koelnbreinsper 57.97 44⇑ *i*P P 23 17 38.6 -0.5
comp=Z,21nm,1.4s,mb5.0
KBA Koelnbreinsper 57.97 44⇑ *i*P P 23 17 38.6 -0.5
KBA pmax pmax
comp=Z,21nm,1.4s,mb5.0
BSEG Bad Segeberg 58.01 35 *e*P P 23 17 39.1 -0.1
comp=Z,60nm,1.3s,mb5.5
DGMT Dagmar 58.02 318 *e*P P 23 17 38.8 -0.6
MYKA Terra Mystica 58.08 44⇑ *i*P P 23 17 39.6 -0.2
comp=Z,59nm,1.2s,mb5.5
VOJS Vojsko 58.12 45 *i*P P 23 17 40.0 -0.2
GUNZ Gunzen 58.12 40 *e*P P 23 17 40.2 +0.1
comp=Z,62nm,1.7s,mb5.4
WERD Werda 58.13 40 *e*P P 23 17 40.0 -0.1
comp=Z,38nm,1.5s,mb5.2
WERN Wernitzgruen 58.13 40 *e*P P 23 17 40.4 +0.3
comp=Z,62nm,1.3s,mb5.5
WET Wettzell 58.15 41 *e*P P 23 17 39.0 -1.3
WET pmax pmax
comp=Z,15nm,1.2s,mb4.9
WET Wettzell 58.15 41 *e*P P 23 17 39.0 -1.3
comp=Z,15nm,1.2s,mb4.9
NKC Novy Kostel 58.16 40 *e*P P 23 17 40.5 +0.2
NKC *e*S S 23 25 46.8 +5.0
NKC Novy Kostel 58.16 40 *e*P P 23 17 40.5 +0.2
NKC *e*S S 23 25 46.8 +5.0
NKC AMS AMS 23 41 40.0
comp=Z,500nm,15.9s
LAZ Ladron 58.17 301 *e*P P 23 17 41.2 +0.4
TANN Tannenbergstha 58.21 40 *e*P P 23 17 40.9 +0.2
comp=Z,60nm,1.7s,mb5.3
TANN *e*pP pP 23 17 57.3 +13
MUD Monsted U'grnd 58.29 32 *i*P P 23 17 42.1 +1.0
MUD pmax pmax
comp=Z,47nm,1.5s,mb5.3
MUD MLR MLR
comp=Z,790nm,21.0s,MS4.8
MUD Monsted U'grnd 58.29 32 *i*P P 23 17 42.1 +1.0
comp=Z,47nm,1.5s,mb5.3
MUD *i* 23 17 58.6
MUD
comp=Z,780nm,21.0s
SMCO Snowmass 58.41 307 *e*P P 23 17 37.9 -4.4
comp=Z,21nm,1.3s,mb5.0
FFC Flin Flon 58.49 326 *e*P P 23 17 41.1 -1.5
comp=Z,33nm,1.5s,mb5.2
FFC Flin Flon 58.49 326 *e*P P 23 17 41.1 -1.5
FFC pmax pmax
comp=Z,33nm,1.5s,mb5.1
LJU Ljubljana 58.56 45 *e*P P 23 17 43.3 +0.1
KHC Kasperske Hory 58.59 41 *e*P P 23 17 42.9 -0.5
KHC *e*S S 23 26 00.2 +13
KHC AMS AMS 23 43 10.0
comp=Z,500nm,17.3s
GEC2 GERESS Array S 58.60 42 *e*P P 23 17 42.6 -0.9
GEC2 pmax pmax
comp=Z,17nm,1.4s,mb4.9
GEC2 GERESS Array S 58.60 42 *e*P P 23 17 42.6 -0.9
comp=Z,17nm,1.4s,mb4.9
GERES GERESS Array B 58.60 42 P P 23 17 43.2 -0.3
comp=Z,2.3nm,0.9s,mb4.2,baz=238,slow=7.6,SNR=13
GERES LR LR 23 41 39.5
comp=Z,564nm,19.0s,MS4.7,baz=252,slow=35
MOA Molln 58.75 43⇑ *i*P P 23 17 43.7 -0.8
comp=Z,16nm,1.6s,mb4.8
CLL Collm 58.78 39⇑ *i*P P 23 17 44.6 -0.1
comp=Z,37nm,1.0s,mb5.4
CLL *i* 23 18 00.8
CLL *e*S S 23 25 50.0 +0.1
CLL LR LR
comp=Z,400nm,19.8s,MS4.5
CLL Collm 58.78 39⇑ *i*P P 23 17 44.6 -0.1
CLL *e*S S 23 25 50.0 +0.1
CLL pmax pmax
comp=Z,37nm,1.0s,mb5.4
CLL MLR MLR
comp=Z,400nm,19.8s,MS4.5
CLL Collm 58.78 39⇑ *i*P P 23 17 44.6 -0.1
comp=Z,37nm,1.0s,mb5.4
CLL *i*pP pP 23 17 47.4 -0.5
CLL *i*x x 23 18 00.8
CLL *e*S S 23 25 50.0 +0.1
comp=N,300nm,26.5s
CLL *e*S S 23 25 50.0 +0.1
comp=E,500nm,26.9s
CLL *e*SS SS 23 29 30.0 -13
CLL LV 23 39 00.0
comp=Z,400nm,19.8s
CLL Collm 58.78 39 *e*P P 23 17 44.6 -0.1
comp=Z,36nm,1.0s,mb5.4
CLL *e*pP pP 23 18 01.0 +13
FBE Freiberg 58.89 39 *e*P P 23 17 45.6 +0.1
comp=Z,51nm,1.5s,mb5.3
BOJS Bojanci 58.96 46 *e*P P 23 17 45.7 -0.4
BRG Berggiesshubel 59.24 39 *i*P P 23 17 47.8 -0.1
comp=Z,60nm,2.3s,mb5.2
BRG *e* 23 18 04.2
BRG *e* 23 25 47.0
BRG *e* 23 29 52.0
BRG LR LR
comp=Z,430nm,22.3s,MS4.5
BRG Berggiesshubel 59.24 39 *i*P P 23 17 47.8 -0.1
BRG *e* 23 25 47.0
BRG *e* 23 29 52.0
BRG pmax pmax
comp=Z,60nm,2.3s,mb5.2
BRG pmax pmax
comp=Z,12nm,1.7s,mb4.7
BRG MLR MLR
comp=Z,432nm,22.3s,MS4.5
BRG MLR MLR
comp=N,257nm,16.6s
BRG MLR MLR
comp=E,246nm,16.6s
BRG Berggiesshubel 59.24 39 *e*P P 23 17 47.8 -0.1
comp=Z,102nm,2.3s,mb5.5
BRG *e*pP pP 23 18 04.4 +13
BRG Berggiesshubel 59.24 39 *i*P P 23 17 47.8 -0.1
comp=Z,101nm,2.3s,mb5.5
BRG *e* 23 18 04.2
comp=Z,20nm,1.7s
BRG *e* 23 25 47.0
BRG *e* 23 29 52.0
BRG
comp=Z,721nm,22.3s

BRG							
	comp=N,429nm,16.6s						
BRG							
	comp=E,411nm,16.6s						
GCIS	**Gornji Cirnik**	**59.28**	**45**	eP	**P**	**23 17 48.2**	**-0.1**
PRU	**Pruhonice**	**59.40**	**41**	eP	**P**	**23 17 48.8**	**-0.2**
PRU				eS	**S**	**23 26 04.5**	**+6.5**
PRU				AMS	AMS	23 41 20.0	
	comp=Z,500nm,16.6s						
MVCO	**Mesa Verde**	**59.44**	**304**	eP	**P**	**23 17 53.8**	**+4.3**
PVCC	**Panska Ves**	**59.55**	**40**	eP	**P**	**23 17 49.7**	**-0.3**
RUE	**Ruedersdorf**	**59.56**	**38**	eP	**P**	**23 17 50.1**	**+0.1**
	comp=Z,70nm,1.1s,mb5.6						
RUE	**Ruedersdorf**	**59.56**	**38**	eP	**P**	**23 17 50.3**	**+0.3**
	comp=Z,111nm,1.1s,mb5.8						
RUE				epP	pP	23 18 06.9	+14
PV01	**Paradox Valley**	**59.56**	**305**	P	**P**	**23 17 50.4**	**0.0**
KONO	**Kongsberg**	**59.73**	**29**	eP	**P**	**23 17 51.4**	**+0.3**
KONO				LR	LR		
	comp=Z,797nm,22.0s,MS4.8						
CONA	**Conrad Observa**	**59.82**	**43**	⇑iP	**P**	**23 17 51.6**	**-0.3**
	comp=Z,26nm,1.5s,mb5.0,SNR=7.2						
PV10	**Paradox Valley**	**59.95**	**306**	eP	**P**	**23 17 54.9**	**+1.9**
SOP	**Sopron**	**60.23**	**44**	⇑eP	**P**	**23 17 54.4**	**-0.4**
PLCA	**Paso Flores**	**60.27**	**202**	P	**P**	**23 17 55.2**	**+0.3**
	comp=Z,11nm,1.1s,mb4.8,baz=19,slow=8.4,SNR=7.1						
PLCA				LR	LR	23 46 35.5	
	comp=Z,840nm,19.0s,MS4.9,baz=22,slow=39						
UPC	**Upice**	**60.44**	**40**	eP	**P**	**23 17 56.4**	**+0.3**
VRAC	**Vranov**	**60.56**	**42**	P	**P**	**23 17 57.2**	**+0.2**
VRAC	**Vranov**	**60.56**	**42**	⇑iP	**P**	**23 17 56.7**	**-0.3**
DPC	**Dobruska-Polom**	**60.60**	**40**	eP	**P**	**23 17 57.2**	**0.0**
DPC				eS	**S**	**23 26 20.7**	**+7.4**
DPC				AMS	AMS	23 42 10.0	
	comp=Z,600nm,15.0s						
KSP	**Ksiaz**	**60.69**	**40**	eP	**P**	**23 17 58.4**	**+0.6**
KSP				eS	**S**	**23 26 08.7**	**-5.7**
KSP				LMZ		23 43 25.8	
	comp=Z,900nm,17.9s						
KSP	**Ksiaz**	**60.69**	**40**	⇑eP	**P**	**23 17 58.0**	**+0.2**
KSP				eS	**S**	**23 26 19.0**	**+4.6**
KSP				MLR	MLR		
	comp=Z,1μm,17.9s,MS5.0						
ZST	**Bratislava**	**60.69**	**43**	eP	**P**	**23 17 57.8**	**-0.1**
	comp=Z,16nm,1.0s,mb5.1						
ZST				e		23 18 14.0	
ZST	**Bratislava**	**60.69**	**43**	eP	**P**	**23 17 57.8**	**-0.1**
ZST				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
BW06	**Boulder Array**	**60.74**	**311**	eP	**P**	**23 17 57.5**	**-0.8**
	comp=Z,19nm,1.3s,mb5.1						
PDAR	**Pinedale Array**	**60.74**	**311**	P	**P**	**23 17 57.0**	**-1.4**
	comp=Z,2.4nm,0.9s,mb4.3,baz=133,slow=8.3,SNR=14						
PDAR				LR	LR	23 41 02.9	
	comp=Z,729nm,22.0s,MS4.8,baz=112,slow=33						
RLMT	**Red Lodge**	**60.82**	**313**	eP	**P**	**23 17 59.5**	**+0.7**
MODS	**Modra-Piesok**	**60.83**	**43**	eP	**P**	**23 17 58.6**	**-0.3**
	comp=Z,9.7nm,1.2s,mb4.8						
MODS	**Modra-Piesok**	**60.83**	**43**	eP	**P**	**23 17 58.6**	**-0.3**
MODS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
SMOL	**Smolenice**	**60.95**	**43**	eP	**P**	**23 18 00.1**	**+0.4**
NB2	**NORSAR Subarra**	**61.01**	**28**	P	**P**	**23 17 58.3**	**-1.5**
	comp=Z,9.7nm,1.2s,mb4.8,baz=212,slow=6.5						
NB2	**NORSAR Subarra**	**61.01**	**28**	P	**P**	**23 17 58.3**	**-1.5**
NB2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
NOA	**NORSAR Array B**	**61.01**	**28**	P	**P**	**23 17 59.6**	**-0.2**
NOA				LR	LR	23 40 19.2	
NOA	**NORSAR Array B**	**61.01**	**28**	P	**P**	**23 17 59.7**	**-0.2**
	comp=Z,6.9nm,1.0s,mb4.7,baz=248,slow=6.7,SNR=6.6						
NOA				LR	LR	23 40 19.2	
	comp=Z,353nm,18.5s,MS4.5,baz=255,slow=32						
SRU	**San Rafael**	**61.16**	**306**	eP	**P**	**23 18 01.1**	**-0.1**
TUC	**Tucson**	**61.17**	**299**	eP	**P**	**23 18 01.6**	**+0.1**
MORC	**Moravsky Berou**	**61.26**	**41**	eP	**P**	**23 18 01.7**	**-0.1**
	comp=Z,31nm,1.3s,mb5.3						
MORC	**Moravsky Berou**	**61.26**	**41**	eP	**P**	**23 18 01.7**	**0.0**
MORC				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.3						
MORC	**Moravsky Berou**	**61.26**	**41**	⇑iP	**P**	**23 18 01.8**	**+0.1**
PKSM	**Moragy**	**61.41**	**45**	P	**P**	**23 18 03.5**	**+0.7**
PKSM	**Moragy**	**61.41**	**45**	⇑iP	**P**	**23 18 02.5**	**-0.3**
KOLL	**Kolacno**	**61.60**	**43**	eP	**P**	**23 18 03.9**	**-0.2**
KOLL				e		23 18 20.4	
OKC	**Ostrava-Krasne**	**61.65**	**41**	eP	**P**	**23 18 04.7**	**+0.3**
OKC				eS	**S**	**23 26 33.1**	**+6.3**
OKC	**Ostrava-Krasne**	**61.65**	**41**	eP	**P**	**23 18 04.7**	**+0.3**
OKC				eS	**S**	**23 26 33.1**	**+6.3**
OKC				AMS	AMS	23 44 40.0	
	comp=Z,600nm,20.0s						
SNOW	**Snow King Moun**	**61.68**	**311**	eP	**P**	**23 18 05.1**	**+0.4**
	comp=Z,21nm,0.7s,mb5.4						
WUAZ	**Wupatki**	**61.69**	**302**	eP	**P**	**23 18 05.8**	**+0.9**
	comp=Z,25nm,1.2s,mb5.2						
MOOW	**Moose Ponds**	**61.71**	**312**	eP	**P**	**23 18 04.1**	**-0.8**
	comp=Z,17nm,1.3s,mb5.0						
FLWY	**Flagg Ranch**	**61.71**	**312**	eP	**P**	**23 18 07.8**	**+2.9**
REDW	**Red Top Meadow**	**61.74**	**311**	eP	**P**	**23 18 07.6**	**+2.5**
DAU	**Daniels Canyon**	**61.80**	**308**	eP	**P**	**23 18 05.9**	**+0.3**
TPAW	**Teton Pass**	**61.83**	**311**	eP	**P**	**23 18 08.8**	**+3.1**
BUD	**Budapest**	**61.85**	**44**	⇑eP	**P**	**23 18 05.9**	**+0.1**
IMW	**Indian Meadow**	**61.86**	**312**	eP	**P**	**23 18 05.3**	**-0.7**
AHID	**Auburn Hatcher**	**61.87**	**311**	eP	**P**	**23 18 06.8**	**+0.8**
	comp=Z,22nm,1.3s,mb5.1						
VYHS	**Vyhne**	**61.88**	**43**	eP	**P**	**23 18 05.6**	**-0.3**
	comp=Z,22nm,1.8s,mb5.0						
VYHS				e		23 18 22.1	
VYHS	**Vyhne**	**61.88**	**43**	eP	**P**	**23 18 05.6**	**-0.3**
VYHS				pmax	pmax		
	comp=Z,22nm,1.8s,mb5.0						
VYHS	**Vyhne**	**61.88**	**43**	eP	**P**	**23 18 05.5**	**-0.4**
VYHS				e		23 18 22.1	
YMR	**Madison River**	**61.96**	**313**	eP	**P**	**23 18 07.7**	**+1.1**
	comp=Z,40nm,1.2s,mb5.4						
JLU	**Jordanelle**	**61.96**	**308**	eP	**P**	**23 18 09.7**	**+3.1**
DCID1	**Drake Creek**	**62.01**	**311**	eP	**P**	**23 18 07.9**	**+1.0**
MPU	**Maple Canyon**	**62.07**	**307**	eP	**P**	**23 18 09.8**	**+2.4**
	comp=Z,17nm,1.2s,mb5.0						
HWUT	**Hardware Ranch**	**62.12**	**309**	eP	**P**	**23 18 07.0**	**-0.6**
	comp=Z,20nm,1.0s,mb5.2						
NLU	**North Lily Min**	**62.40**	**307**	eP	**P**	**23 18 13.3**	**+3.7**
MSU	**Marysvale**	**62.41**	**306**	eP	**P**	**23 18 12.9**	**+3.2**
PSZ	**Piszkesteto**	**62.49**	**44**	eP	**P**	**23 18 10.3**	**+0.3**
	comp=Z,24nm,1.3s,mb5.2						
PSZ	**Piszkesteto**	**62.49**	**44**	eP	**P**	**23 18 10.3**	**+0.2**
PSZ				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.2						
PSZ	**Piszkesteto**	**62.49**	**44**	⇑eP	**P**	**23 18 10.1**	**0.0**
PSZ	**Piszkesteto**	**62.49**	**44**	⇓iP	**P**	**23 18 10.6**	**+0.5**
BOZ	**Bozeman (W)**	**62.53**	**314**	eP	**P**	**23 18 12.9**	**+2.5**
OJC	**Ojcow**	**62.77**	**41**	i P	**P**	**23 18 12.3**	**+0.4**
OJC				ePcP	PcP	23 18 50.5	+0.1
KRUS	**Krusevo**	**62.81**	**51**	eP	**P**	**23 18 13.2**	**+0.9**
KECS	**Kecovo**	**62.96**	**43**	eP	**P**	**23 18 13.3**	**+0.1**
	comp=Z,7.5nm,1.1s,mb4.7						
KECS				e		23 18 31.0	
KECS	**Kecovo**	**62.96**	**43**	eP	**P**	**23 18 13.3**	**+0.1**
KECS				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
NIE	**Niedzica**	**62.98**	**42**	eP	**P**	**23 18 14.3**	**+1.0**
DUG	**Dugway**	**62.98**	**308**	eP	**P**	**23 18 13.5**	**0.0**
	comp=Z,21nm,1.3s,mb5.1						
DUG	**Dugway**	**62.98**	**308**	eP	**P**	**23 18 13.5**	**0.0**
DUG				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.1						
DAG	**Danmarks Havn**	**63.14**	**7**	eP	**P**	**23 18 15.9**	**+2.0**
DAG				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.1						
DAG	**Danmarks Havn**	**63.14**	**7**	i P	**P**	**23 18 15.9**	**+2.0**
	comp=Z,20nm,1.2s,mb5.1						
BGU	**Big Grassy Mou**	**63.18**	**308**	eP	**P**	**23 18 14.5**	**-0.2**
BGU				ePcP	PcP	23 18 53.4	+1.1
DLMT	**Dillon**	**63.18**	**313**	eP	**P**	**23 18 15.9**	**+1.2**
	comp=Z,26nm,1.3s,mb5.2						
MCMT	**McKenzie Canyo**	**63.31**	**313**	P	**P**	**23 18 12.6**	**-3.0**
CCUT	**Cedar City**	**63.33**	**305**	eP	**P**	**23 18 15.5**	**-0.3**
ARUT	**Antelope Range**	**63.39**	**305**	P	**P**	**23 18 17.8**	**+1.6**
BZS	**Buzias**	**63.40**	**46**	P	**P**	**23 18 16.9**	**+0.7**
BZS	**Buzias**	**63.40**	**46**	⇓iP	**P**	**23 18 16.7**	**+0.5**
STIP	**Stip**	**63.53**	**51**	eP	**P**	**23 18 17.3**	**+0.2**
STHS	**Stebnicka Huta**	**63.58**	**42**	eP	**P**	**23 18 18.3**	**+1.0**
	comp=Z,6.3nm,1.3s,mb4.5						
STHS	**Stebnicka Huta**	**63.58**	**42**	eP	**P**	**23 18 18.3**	**+1.0**
STHS				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
CRVS	**Cervenica-Dubn**	**63.65**	**43**	eP	**P**	**23 18 18.5**	**+0.7**
VAY	**Valandovo**	**63.80**	**51**	eP	**P**	**23 18 18.4**	**-0.5**
WAR	**Warsaw**	**63.85**	**39**	eP	**P**	**23 18 24.4**	**+5.4**
WAR				LMZ		23 43 46.0	
	comp=Z,800nm,19.9s						
UZH	**Uzhgorod**	**64.17**	**43**	⇓iP	**P**	**23 18 21.0**	**-0.2**
UZH				eS	**S**	**23 26 56.0**	**-2.4**
KOLS	**Kolonicke sedl**	**64.19**	**43**	eP	**P**	**23 18 21.9**	**+0.6**
GZR	**Gura Zlata**	**64.20**	**47**	P	**P**	**23 18 22.1**	**+0.7**
GZR	**Gura Zlata**	**64.20**	**47**	⇑iP	**P**	**23 18 22.3**	**+0.9**
DRGR		**64.27**	**45**	P	**P**	**23 18 22.4**	**+0.5**
DRGR		**64.27**	**45**	⇑iP	**P**	**23 18 22.2**	**+0.3**
TRPA	**Tarpa**	**64.28**	**44**	⇑iP	**P**	**23 18 21.7**	**-0.2**
VTS	**Vitosha**	**64.34**	**50**	⇑P	**P**	**23 18 23.6**	**+1.2**
VTS	**Vitosha**	**64.34**	**50**	eP	**P**	**23 18 22.9**	**+0.5**
VTS	**Vitosha**	**64.34**	**50**	⇑iP	**P**	**23 18 23.6**	**+1.2**
HLID	**Hailey**	**64.34**	**311**	eP	**P**	**23 18 21.7**	**-0.7**
WALA	**Waterton Lakes**	**64.45**	**317**	P	**P**	**23 18 24.4**	**+1.4**
KWP	**Kalwaria**	**64.55**	**42**	eP	**P**	**23 18 24.6**	**+0.9**
KWP				LMZ		23 42 47.2	
	comp=Z,900nm,23.4s						
KWP	**Kalwaria**	**64.55**	**42**	eP	**P**	**23 18 23.3**	**-0.3**
	comp=Z,12nm,0.7s,mb5.0						
KWP	**Kalwaria**	**64.55**	**42**	eP	**P**	**23 18 23.3**	**-0.3**
KWP				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
KWP	**Kalwaria**	**64.55**	**42**	⇓iP	**P**	**23 18 24.6**	**+0.9**
EDM	**Edmonton**	**64.64**	**322**	eP	**P**	**23 18 23.5**	**-0.6**
MMB	**Musomiste**	**64.68**	**51**	eP	**P**	**23 18 25.3**	**+0.6**
BSMT	**Bassoo Peak**	**64.91**	**316**	eP	**P**	**23 18 28.7**	**+2.6**
RES	**Resolute Bay**	**65.25**	**347**	eP	**P**	**23 18 30.2**	**+2.4**
	comp=Z,407nm,1.3s,mb6.3						
RES	**Resolute Bay**	**65.25**	**347**	eP	**P**	**23 18 30.2**	**+2.4**
RES				pmax	pmax		
	comp=Z,407nm,1.3s,mb6.3						
SUW	**Suwalki**	**65.40**	**37**	eP	**P**	**23 18 28.6**	**-0.4**
SUW				epP	pP	23 18 32.7	+0.4
SUW				eS	S	23 27 09.8	-3.5
SUW				LMZ		23 43 32.7	
	comp=Z,700nm,20.6s						
SUW	**Suwalki**	**65.40**	**37**	eP	**P**	**23 18 28.6**	**-0.5**
SUW				e*PP	pP	23 18 32.7	+0.4
SUW				eS	S	23 27 09.8	-3.5
LVV	**L'vov**	**65.42**	**42**	eP	**P**	**23 18 29.2**	**-0.1**
TPNV	**Topopah Spring**	**65.63**	**304**	eP	**P**	**23 18 34.1**	**+3.2**
	comp=Z,33nm,1.8s,mb5.1						
TPNV	**Topopah Spring**	**65.63**	**304**	eP	**P**	**23 18 34.1**	**+3.2**
TPNV				pmax	pmax		
	comp=Z,33nm,1.8s,mb5.1						
SZH	**Strazhica**	**66.36**	**49**	eP	**P**	**23 18 36.0**	**+0.5**
MLR	**Muntele Rosu**	**66.43**	**47**	⇑P	**P**	**23 18 36.1**	**+0.2**
MLR	**Muntele Rosu**	**66.43**	**47**	⇑iP	**P**	**23 18 36.1**	**+0.2**
BMO	**Blue Mountains**	**66.48**	**313**	eP	**P**	**23 18 38.4**	**+2.2**
NEW	**Newport**	**66.50**	**316**	eP	**P**	**23 18 35.4**	**-0.9**
	comp=Z,26nm,1.2s,mb5.1						
NEW	**Newport**	**66.50**	**316**	eP	**P**	**23 18 35.4**	**-0.9**
NEW				pmax	pmax		
	comp=Z,25nm,1.2s						
NEW	**Newport**	**66.50**	**316**	LR	LR	23 45 14.1	
	comp=Z,758nm,18.2s,MS5.0,baz=101,slow=34						
JMB	**Yambol**	**66.83**	**50**	eP	**P**	**23 18 38.0**	**-0.5**
YKA	**Yellowknife Ar**	**66.94**	**332**	P	**P**	**23 18 36.8**	**-2.1**
YKA				LR	LR	23 46 00.6	
YKA	**Yellowknife Ar**	**66.94**	**332**	⇑eP	**P**	**23 18 39.0**	**+0.2**
YKA	**Yellowknife Ar**	**66.94**	**332**	P	**P**	**23 18 36.8**	**-2.0**
	comp=Z,2.3nm,0.8s,mb4.2,baz=103,slow=7.0,SNR=21						
YKA				LR	LR	23 46 00.6	
	comp=Z,691nm,19.0s,MS4.9,baz=105,slow=34						
YKW3	**Yellowknife Ar**	**66.96**	**332**	eP	**P**	**23 18 40.0**	**+1.0**
VRI	**Vrincioaia**	**66.99**	**46**	⇓P	**P**	**23 18 39.6**	**+0.1**
VRI	**Vrincioaia**	**66.99**	**46**	⇓iP	**P**	**23 18 39.6**	**+0.1**
NVAR	**Mina Array Bea**	**67.22**	**306**	P	**P**	**23 18 40.5**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=89,slow=7.4,SNR=5.9						
FINES	**FINESS Array B**	**68.03**	**29**	P	**P**	**23 18 45.5**	**-0.2**
	comp=Z,3.5nm,0.9s,mb4.4,baz=5.7,slow=1.9,SNR=6.6						
FINES				LR	LR	23 43 39.6	
	comp=Z,477nm,20.3s,MS4.7,baz=235,slow=32						
HAWA	**Hanford**	**68.08**	**314**	eP	**P**	**23 18 50.0**	**+3.7**
	comp=Z,42nm,1.6s,mb5.2						
MNK	**Minsk**	**68.16**	**37**	eP	**P**	**23 18 46.0**	**-0.7**
KAF	**Kangasniemi**	**68.24**	**29**	ep	**P**	**23 18 45.9**	**-1.1**
	comp=Z,4.6nm,0.7s,mb4.6,baz=260,slow=6.0						
KAF	**Kangasniemi**	**68.24**	**29**	eP	**P**	**23 18 45.9**	**-1.1**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
KIS	**Kishinev**	**68.46**	**45**	eP	**P**	**23 18 40.0**	**-8.7**
KIS				LRM		23 44 06.0	
	comp=Z,500nm,20.0s						
MOD	**Modoc**	**68.66**	**309**	P	**P**	**23 18 49.2**	**-0.9**
KIEV	**Kiev**	**68.80**	**41**	eP	**P**	**23 18 50.3**	**-0.5**
	comp=Z,8.3nm,1.0s,mb4.6						
KIEV	**Kiev**	**68.80**	**41**	eP	**P**	**23 18 50.3**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
AKASG	**Malin Array Be**	**68.81**	**41**	P	**P**	**23 18 50.0**	**-0.8**
AKASG				LR	LR	23 46 07.2	
AKASG	**Malin Array Be**	**68.81**	**41**	P	**P**	**23 18 50.0**	**-0.8**
	comp=Z,6.7nm,0.9s,mb4.6,baz=268,slow=6.0,SNR=33						
AKASG				LR	LR	23 46 07.2	
	comp=Z,295nm,21.1s,MS4.5,baz=235,slow=34						
ARCES	**ARCESS Array B**	**69.28**	**21**	P	**P**	**23 18 52.9**	**-0.6**
	comp=Z,3.0nm,0.6s,mb4.4,baz=262,slow=6.0,SNR=16						
ARCES				LR	LR	23 45 37.1	
	comp=Z,365nm,18.5s,MS4.7,baz=260,slow=33						
KEV	**Kevo**	**69.84**	**21**	ep	**P**	**23 18 53.9**	**-3.0**
	comp=Z,8.1nm,0.9s,mb4.7						
KEV	**Kevo**	**69.84**	**21**	eP	**P**	**23 18 53.9**	**-3.0**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
JOF	**Joensuu**	**70.64**	**28**	ep	**P**	**23 18 59.8**	**-2.1**
	comp=Z,5.3nm,0.7s,mb4.6						
TSUM	**Tsumeb**	**70.98**	**117**	eP	**P**	**23 19 07.7**	**+3.1**
TSUM				LR	LR		
	comp=Z,570nm,20.0s,MS4.8						
APA	**Apatity**	**71.87**	**23**	⇑eP	**P**	**23 19 11.0**	**+1.7**
APA				eS	S	23 28 35.0	+5.2
APA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
APA				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.2						
OBN	**Obninsk**	**73.23**	**36**	⇓eP	**P**	**23 19 16.3**	**-1.3**
OBN				LR	LR		
	comp=Z,500nm,16.0s,MS4.9						
OBN	**Obninsk**	**73.23**	**36**	⇑eP	**P**	**23 19 17.6**	**0.0**
OBN				e*PP	pP	23 19 21.7	+0.9
OBN						23 19 34.0	
OBN				eS	S	23 28 51.1	+5.4
OBN				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.3						
OBN				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.9						
MOS	**Moscow**	**73.80**	**36**	eP	**P**	**23 19 19.7**	**-1.2**
MOS				e		23 19 37.0	
MOS				e		23 22 02.7	
MOS				ePPP		23 23 45.3	
MOS				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
DLBC	**Dease Lake**	**74.26**	**327**	eP	**P**	**23 19 24.6**	**+1.0**
ANN	**Anapa**	**74.57**	**47**	eP	**P**	**23 19 29.4**	**+3.7**
ANN				e		23 19 42.0	
ANN				e		23 22 16.8	
ANN				ePPP		23 24 02.8	
ANN				eS	S	23 29 03.1	+1.8
ANN				eSS	SS	23 33 49.8	+1.9
ANN				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.2						
RPN	**Rapa Nui**	**74.75**	**236**	LR	LR	23 48 24.1	
	comp=Z,714nm,18.8s,MS5.0,baz=95,slow=33						
VRSR	**Storozhevoye**	**75.08**	**40**	eP	**P**	**23 19 28.3**	**-0.2**
VRSR				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
VRSR				pmax	pmax		
	comp=N,1.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,7.0nm,1.0s						
INK	**Inuvik**	**75.22**	**337**	eP	**P**	**23 19 27.7**	**-1.2**
	comp=E,576nm,0.8s						
INK	**Inuvik**	**75.22**	**337**	eP	**P**	**23 19 27.7**	**-1.2**
INK				pmax	pmax		
	comp=Z,576nm,0.8s						
ASF	**Jabal al Asfar**	**75.84**	**60**	P	**P**	**23 19 34.3**	**+1.0**
	comp=Z,14nm,1.4s,mb4.7,baz=100,slow=1.9,SNR=8.4						
MALT	**Malatya**	**76.14**	**54**	eP	**P**	**23 19 34.8**	**0.0**
	comp=Z,10nm,0.9s,mb4.8						
MALT	**Malatya**	**76.14**	**54**	eP	**P**	**23 19 34.8**	**0.0**
MALT				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MALT	**Malatya**	**76.14**	**54**	⇑iP	**P**	**23 19 35.2**	**+0.4**
SOC	**Sochi**	**76.35**	**48**	i P	**P**	**23 19 36.7**	**+0.8**
SOC	**Sochi**	**76.35**	**48**	c iP	**P**	**23 19 36.1**	**+0.2**
SOC				e*PP	pP	23 19 49.0	+10
SOC				eS	S	23 29 18.2	-2.9
SOC				e		23 29 46.3	
SOC				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.2						
SOC				MLR	MLR		
	comp=Z,260nm,19.0s,MS4.6						
VRHR	**Novokhopersk**	**76.62**	**40**	eP	**P**	**23 19 36.9**	**-0.4**
VRHR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VRHR				pmax	pmax		
	comp=E,20nm,1.1s						
PRGR	**Permogore**	**77.36**	**29**	⇓iP	**P**	**23 19 41.8**	**+0.6**
PRGR				e		23 19 52.9	
PRGR				eS	S	23 29 24.0	-7.4
DAWY	**Dawson**	**78.10**	**333**	eP	**P**	**23 19 45.3**	**0.0**
KIV	**Kislovodsk**	**78.42**	**47**	eP	**P**	**23 19 48.1**	**+0.6**
	comp=E,19nm,1.2s,mb4.9						
KIV				LR	LR		
	comp=Z,182nm,19.0s,MS4.4						
KIV	**Kislovodsk**	**78.42**	**47**	eP	**P**	**23 19 47.4**	**-0.1**
KIV				eS	S	23 29 37.2	-6.3
KIV				eSS	SS	23 34 41.4	-4.7
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KIV	**Kislovodsk**	**78.42**	**47**	⇑iP	**P**	**23 19 48.1**	**+0.6**
LSZ	**Lusaka**	**78.97**	**109**	eP	**P**	**23 19 52.8**	**+1.8**
LSZ				LR	LR		
	comp=Z,340nm,20.0s,MS4.7						
SUR	**Sutherland**	**79.19**	**128**	P	**P**	**23 19 52.3**	**+0.5**
SUR				LR	LR		
	comp=Z,958nm,20.0s,MS5.1						
ZEI	**Tsey**	**79.50**	**48**	eP	**P**	**23 19 55.4**	**+1.9**
ZEI				pmax	pmax		
	comp=N,4.0nm,0.8s						
MENT	**Mentasta**	**80.23**	**333**	eP	**P**	**23 19 59.1**	**+2.1**
BOSA	**Boshof**	**81.15**	**123**	P	**P**	**23 20 02.5**	**-0.1**
BOSA				LR	LR	23 50 59.6	
BOSA	**Boshof**	**81.15**	**123**	P	**P**	**23 20 02.5**	**0.0**
	comp=N,2.8nm,0.9s,mb4.2,baz=304,slow=11,SNR=3.7						
BOSA				LR	LR	23 50 59.6	
	comp=N,247nm,19.3s,MS4.6,baz=285,slow=32						
COLA	**College**	**81.47**	**335**	⇑eP	**P**	**23 20 02.8**	**-0.7**
MCK	**McKinley**	**82.27**	**334**	eP	**P**	**23 20 06.8**	**-1.0**
	comp=N,118nm,2.2s,mb5.4						
MCK	**McKinley**	**82.27**	**334**	eP	**P**	**23 20 06.8**	**-1.0**
MCK				pmax	pmax		
	comp=Z,118nm,2.2s,mb5.4						
SOKR	**Solikamsk**	**83.19**	**30**	eP	**P**	**23 20 12.4**	**-0.3**
SOKR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
IMA2	**Indian Mountai**	**83.35**	**337**	eP	**P**	**23 20 15.1**	**+1.8**
KMBO	**Kilima Mbogo**	**83.43**	**93**	P	**P**	**23 20 17.3**	**+2.5**
	comp=Z,24nm,1.7s,mb5.0						
KMBO				LR	LR		
	comp=Z,460nm,19.0s,MS4.9						
KMBO	**Kilima Mbogo**	**83.43**	**93**	P	**P**	**23 20 17.3**	**+2.5**
KMBO				pmax	pmax		
	comp=Z,24nm,1.7s						
KMBO				MLR	MLR		
	comp=Z,460nm,19.0s						
SLKM	**Skilak Lake**	**83.91**	**331**	eP	**P**	**23 20 17.3**	**+1.0**
ARU	**Arti**	**85.11**	**33**	PFAKE		23 20 30.0	+7.5
ARU				LR	LR		
	comp=Z,935nm,21.0s,MS5.2						
SVE	**Sverdlovsk**	**86.04**	**32**	⇓eP	**P**	**23 20 26.9**	**-0.2**
SVE				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.3						
TNA	**Tin City**	**88.72**	**339**	eP	**P**	**23 20 42.6**	**+2.7**
	comp=Z,16nm,1.5s,mb5.1						
BRVK	**Borovoye**	**92.69**	**33**	PFAKE		23 21 10.0	+11
BRVK				LR	LR		
	comp=Z,778nm,21.0s,MS5.1						
TIXI	**Tiksi**	**93.28**	**2**	⇑eP	**P**	**23 21 02.9**	**+1.9**
TIXI	**Tiksi**	**93.28**	**2**	eP	**P**	**23 21 01.4**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
BILL	**Bilibino**	**93.83**	**349**	PFAKE		23 21 10.0	+6.4
BILL				LR	LR		
	comp=Z,533nm,22.0s,MS5.0						
BILL	**Bilibino**	**93.83**	**349**	⇑eP	**P**	**23 21 05.9**	**+2.3**
BILL				e		23 21 13.0	
BILL				SS	SS	23 38 32.0	+1.5
BILL				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb5.0						
KURK	**Kurchatov**	**98.30**	**32**	eP	**P**	**23 21 24.1**	**-0.2**
	comp=Z,0.8nm,0.6s,mb4.4						
KURK				LR	LR		
	comp=Z,399nm,20.0s,MS4.9						
KURK	**Kurchatov**	**98.30**	**32**	eP	**P**	**23 21 24.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.5						
KURK				MLR	MLR		
	comp=Z,399nm,20.0s,MS4.9						
EKS2	**Erkin-Say**	**100.00**	**41**	PFAKE		23 21 40.0	+8.2
EKS2				LR	LR		
	comp=Z,356nm,21.0s,MS4.8						
UCH	**Uchtor**	**100.70**	**41**	Pdif	Pdif	23 21 35.6	+0.8
UCH				LR	LR		
	comp=Z,368nm,21.0s,MS4.9						
TKM2	**Tokmak 2**	**101.00**	**40**	ePdif	Pdif	23 21 36.1	-0.1
TKM2				LR	LR		
	comp=Z,364nm,19.0s,MS4.9						
YAK	**Yakutsk**	**102.93**	**2**	PFAKE		23 22 00.0	+15
YAK				LR	LR		
	comp=Z,244nm,20.0s,MS4.7						
TLY	**Talaya**	**108.23**	**20**	PFAKE		23 26 30.0	+15
TLY				LR	LR		
	comp=Z,291nm,22.0s,MS4.8						
ULN	**Ulaanbaatar**	**112.64**	**20**	PFAKE		23 26 30.0	+6.7
ULN				LR	LR		
	comp=Z,278nm,20.0s,MS4.8						
HABR	**Khabarovsk**	**116.61**	**359**	i P	Pdif	23 22 44.1	-1.5
HABR				i		23 26 31.2	
HABR				e		23 33 42.4	
YSS	**Yuzh-Sakhalins**	**117.67**	**354**	PFAKE		23 26 40.0	+7.0
YSS				LR	LR		
	comp=Z,304nm,22.0s,MS4.9						
LSA	**Lhasa**	**118.93**	**43**	ePKPdf	PKPdf	23 26 37.1	+1.3
LSA				LR	LR		
	comp=Z,280nm,21.0s,MS4.9						
MDJ	**Mudanjiang**	**120.31**	**4**	ePKP	PKPdf	23 26 37.9	-0.2
MDJ				XPKP		23 26 42.6	
MDJ				PP	PP	23 28 03.0	+0.4
MDJ				SS	SS	23 44 31.8	+2.2
MDJ				PP	PP		
	comp=Z,90nm,5.2s						
MDJ				LR	LR		
	comp=N,62nm,39.3s						
MDJ				LR	LR		
	comp=E,175nm,45.5s						
HHC	**Hu-ho-hao-te**	**120.36**	**20**	ePKP	PKPdf	23 26 36.1	-2.2
HHC				PP	PP	23 28 04.3	+1.2
HHC				PKS		23 30 11.0	
HHC				PP	PP		
	comp=Z,70nm,5.5s						
HHC				LR	LR		
	comp=N,167nm,17.1s,MS5.0						
HHC				LR	LR		
	comp=E,227nm,15.7s,MS5.0						
HHC				LR	LR		
	comp=Z,264nm,20.2s,MS4.9						
CN2	**Changchun**	**120.72**	**8**	ePKP	PKPdf	23 26 40.9	+2.0
CN2				PP	PP	23 28 12.3	+6.9
CN2				PP	PP		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=E,200nm,18.0s,MS5.2						
CN2				LR	LR		
	comp=Z,300nm,19.0s,MS5.0						
LZH	**Lanzhou**	**121.39**	**29**	ePKP	PKPdf	23 26 38.0	-2.4
LZH				XPKP		23 26 49.5	
LZH				PP	PP		

	comp=Z,68nm,4.1s							
LZH				LR	LR			
	comp=N,298nm,16.8s							
LZH				LR	LR			
	comp=Z,409nm,17.7s,MS5.1							
PALK	**Pallekele**	**122.32**	**71**	PFAKE		23 26 50.0	+7.2	
PALK				LR	LR			
	comp=Z,355nm,21.0s,MS5.0							
BJI	**Beijing**	**122.49**	**17**	PKP	PKPdf	23 26 41.3	-1.1	
BJI				PP	PP	23 28 17.6	0.0	
BJI				SKS	SKSdf	23 33 54.5	-0.2	
BJI				LR	LR			
	comp=N,252nm,17.6s,MS5.0							
BJI				LR	LR			
	comp=E,241nm,20.3s,MS5.0							
BJI				LR	LR			
	comp=Z,387nm,24.2s,MS5.0							
ENH	**Enshi**	**128.83**	**28**	PFAKE		23 27 10.0	+15	
ENH				LR	LR			
	comp=Z,4.0nm,21.0s							
KMI	**Kunming**	**129.43**	**38**	PKP	PKPdf	23 26 55.8	-0.3	
GYA	**Guiyang**	**130.60**	**33**	PKP	PKPdf	23 26 58.3	0.0	
GYA				PP	PP	23 29 16.5	+4.6	
GYA				PKS		23 30 33.3		
GYA				SKS	SKSdf	23 34 07.0	-3.3	
GYA				SKKS	SKKSac	23 36 06.8	-3.4	
GYA				SS	SS	23 46 41.3	+1.2	
GYA				PP	PP			
	comp=Z,120nm,7.6s							
GYA				LR	LR			
	comp=N,440nm,21.7s,MS5.3							
GYA				LR	LR			
	comp=E,480nm,22.4s,MS5.3							
GYA				LR	LR			
	comp=Z,320nm,21.0s,MS5.0							
NJ2	**Nanjing**	**130.72**	**17**	*e*PKP	PKPdf	23 26 55.3	-3.1	
SSE	**Sheshan**	**132.26**	**15**	PKP	PKPdf	23 26 59.3	-2.0	
SSE				PP	PP	23 29 25.1	+3.0	
SSE				SS	SS	23 46 58.6	-0.8	
SSE				LR	LR			
	comp=N,147nm,19.7s,MS4.8							
SSE				LR	LR			
	comp=E,147nm,19.7s,MS4.8							
SSE				LR	LR			
	comp=Z,188nm,15.0s,MS4.9							
KKM	**Kota Kinabalu**	**152.26**	**42**	*e*PKPbc	PKPbc	23 27 42.1	-1.4	
KKM				*e*PKPab	PKPab	23 27 52.7	-0.5	
ASAR	**Alice Springs**	**171.57**	**177**	PKP	PKPdf	23 27 56.0	0.0	
	comp=Z,0.3nm,0.7s,baz=158,slow=1.0,SNR=2.6							

IDC 21 23:15:59.3±9.9, 530S×14816E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.3/11, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=315.9km s-min=30.4km az=103.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.82**	**222**	P	Pn	23 20 31.8	-1.3
	0.1nm,0.3s,baz=42,slow=12,SNR=10						
ASAR	**Alice Springs**	**22.85**	**216**	P	P	23 21 04.2	-0.1
	0.2nm,0.3s,baz=49,slow=8.9,SNR=4.9						
SONM	**Songino Array**	**64.37**	**330**	P	P	23 26 37.2	+0.3
	0.3nm,0.6s,baz=116,slow=6.6,SNR=2.5						

*IDC **21** 23:19:51.5±1.5, 521S×15062E, h246km±13km, mb3.6/9, mb1 3.8/11, mb1mx3.7/16, mbtmp3.7/11, Error ellipse: s-maj=16.5km s-min=12.5km az=125.0*
*ISCJB **21** 23:19:52.4±1.3, 525S±008×15056E±008, h268km±12km, mb4.0/15, Error ellipse: s-maj=13.3km s-min=11.9km az=149.7*
*NEIC **21** 23:19:53.1±1.0, 524S×15055E, h262km±10km, mb4.3/10, Error ellipse: s-maj=8.1km s-min=7.4km az=124.0*

ISC 21 23:19:52.0±1.0, 520S±007×15057E±007, h248km±9km, n37, σ0°71/39, mb4.0/15, 2D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.38**	**219**	*e*Pn	**Pn**	**23 21 12.5**	**+0.1**
PMG				*e*Sn	**S**	**23 22 16.6**	**0.0**
PMG	**Port Moresby**	**5.38**	**219**	P	**Pn**	**23 21 12.5**	**+0.1**
	17nm,0.3s,baz=31,slow=5.3,SNR=44						
HNR	**Honiara**	**10.20**	**115**	Pn	**Pn**	**23 22 14.9**	**+1.7**
CTA	**Charters Tower**	**15.38**	**195**	*e*P	**Pn**	**23 23 15.0**	**-1.9**
	7.4nm,0.6s						
CTA	**Charters Tower**	**15.38**	**195**	P	**Pn**	**23 23 17.3**	**+0.4**
	1.2nm,0.3s,baz=19,slow=13,SNR=13						
CTAO	**Charters Tower**	**15.38**	**195**	*e*P	**Pn**	**23 23 17.8**	**+0.9**
	13nm,0.7s						
KAKA	**Kakadu**	**19.39**	**246**	*e*P	**P**	**23 23 59.8**	**0.0**
	15nm,0.4s						
WB2	**Warramunga Arr**	**21.54**	**226**	∥*i*P	**P**	**23 24 21.9**	**-0.1**
WB2	**Warramunga Arr**	**21.54**	**226**	*e*P	**P**	**23 24 22.0**	**0.0**
WB2				*e*S	**S**	**23 28 05.2**	**+1.8**
WRA	**Warramunga Arr**	**21.55**	**226**	P	**P**	**23 24 22.0**	**-0.1**
	14nm,0.6s,mb4.7,baz=52,slow=9.9,SNR=222						
WRA				S	**S**	**23 28 04.9**	**+1.4**
	2.3nm,0.7s,baz=47,slow=17,SNR=8.7						
WRA				ScP	ScP	23 31 28.5	+0.8
	1.1nm,0.8s,baz=60,slow=2.5,SNR=7.1						
DZM	**Mont Dzumac**	**22.74**	**139**	P	**P**	**23 24 32.5**	**-0.5**
	0.7nm,0.5s,mb3.5,baz=298,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**24.39**	**220**	P	**P**	**23 24 48.2**	**+0.3**
	3.4nm,0.3s,mb4.4,baz=52,slow=8.6,SNR=58						
ASAR				S	**S**	**23 28 49.8**	**+0.7**
	0.3nm,0.5s,baz=58,slow=14,SNR=3.8						
ASAR				ScP	ScP	23 31 35.7	+0.5
	0.9nm,0.8s,baz=38,slow=3.1,SNR=5.6						
FITZ	**Fitzroy Crossi**	**27.53**	**240**	*e*P	**P**	**23 25 15.6**	**-0.5**
	2.6nm,0.4s,mb4.2						
FITZ	**Fitzroy Crossi**	**27.53**	**240**	P	**P**	**23 25 16.4**	**+0.2**
	1.3nm,0.5s,mb3.9,baz=80,slow=9.7,SNR=9.0						
STKA	**Stephens Creek**	**27.84**	**197**	∥*i*P	**P**	**23 25 18.0**	**-0.7**
	4.8nm,0.4s,mb4.5						
STKA	**Stephens Creek**	**27.84**	**197**	*e*P	**P**	**23 25 18.3**	**-0.4**
STKA	**Stephens Creek**	**27.84**	**197**	P	**P**	**23 25 18.3**	**-0.4**
	7.5nm,0.6s,mb4.5,baz=8.4,slow=8.2,SNR=18						
FORT	**Forrest**	**33.10**	**217**	*e*P	**P**	**23 26 04.5**	**-0.4**
	24nm,0.7s,mb4.8						
MBWA	**Marble Bar**	**33.86**	**239**	*e*P	**P**	**23 26 11.4**	**-0.1**
	2.9nm,0.6s,mb4.0						
KLBR	**Kellerberrin**	**40.43**	**225**	*e*P	**P**	**23 27 05.3**	**-1.2**
	58nm,1.8s,mb4.7						
KSM	**Kuching**	**40.76**	**278**	P	**P**	**23 27 08.5**	**-1.0**
URZ	**Urewera**	**40.80**	**147**	P	**P**	**23 27 08.9**	**-0.5**
	3.7nm,0.4s,mb4.1,baz=292,slow=5.4,SNR=3.3						
YHNB	**Yeheng**	**41.10**	**318**	P	**P**	**23 27 11.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**41.54**	**224**	*e*P	**P**	**23 27 15.5**	**0.0**
	3.4nm,0.4s,mb4.1						
ENH	**Enshi**	**52.83**	**314**	*e*P	**P**	**23 28 43.3**	**+0.9**
BJT	**Baijiatuao**	**55.01**	**328**	*e*P	**P**	**23 28 59.2**	**+1.3**
	3.8nm,0.6s,mb4.1						
MA2	**Magadan**	**64.57**	**0**	P	**P**	**23 30 02.6**	**+0.1**
SONM	**Songino Array**	**65.50**	**329**	P	**P**	**23 30 09.3**	**+0.6**
	0.7nm,0.7s,mb3.4,baz=146,slow=4.6,SNR=6.0						
CASY	**Casey**	**67.00**	**196**	*e*P	**P**	**23 30 17.8**	**0.0**
BILL	**Bilibino**	**73.91**	**6**	*e*P	**P**	**23 30 59.2**	**-0.3**
MKAR	**Makanchi Array**	**79.18**	**319**	P	**P**	**23 31 29.2**	**-0.1**
	0.1nm,0.4s,mb2.8,baz=107,slow=5.6,SNR=3.6						
BRVK	**Borovoye**	**88.30**	**323**	*e*P	**P**	**23 32 15.1**	**-0.3**
	1.3nm,0.7s,mb3.9						
ARU	**Arti**	**95.41**	**326**	*e*P	**P**	**23 32 48.5**	**+0.4**
YKA	**Yellowknife Ar**	**96.81**	**28**	P	**P**	**23 32 53.0**	**-1.3**
YKA	**Yellowknife Ar**	**96.81**	**28**	P	**P**	**23 32 53.0**	**-1.3**
	0.3nm,0.5s,mb3.8,baz=274,slow=4.7,SNR=6.7						
SDV	**Santo Domingo**	**138.96**	**82**	PKP	PKPdf	23 38 49.5	-0.5
	2.9nm,0.7s,baz=352,slow=4.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**148.31**	**287**	PKPbc	PKPbc	23 39 09.1	-0.9
	0.8nm,0.7s,baz=66,slow=2.6,SNR=4.8						

*ISCJB **21** 23:26:05.1±0.4, 6070S±007×263W±0.1, h10km, mb4.3/10, Error ellipse: s-maj=12.3km s-min=8.2km az=43.0*
*IDC **21** 23:26:05.8±1.2, 6056S×2636W, h0km, mb4.3/7, mb1 4.3/8, mb1mx4.2/14, mbtmp4.3/8, ML4.3/1, Error ellipse: s-maj=42.6km s-min=21.1km az=7.0*
*NEIC **21** 23:26:10.4±0.5, 6077S×2634W, h35km, mb4.4/6, Error ellipse: s-maj=14.6km s-min=10.1km az=185.0*

ISC 21 23:26:07.2±0.4, 6066S±007×264W±01, h10km, n25, σ0°70/22, mb4.3/10, 1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.42**	**151**	*e*	**Pn**	**23 29 04.4**	**+0.7**
VNA1				*e*		23 29 08.3	
VNA1				*e*		23 29 10.0	
VNA1				*e*		23 29 11.2	
VNA1				*e*		23 29 17.1	
VNA3	**Neumayer Olymp**	**12.54**	**155**	*e*	**Pn**	**23 29 05.7**	**+0.4**
VNA3				*e*		23 29 08.8	
VNA3				*e*		23 29 10.4	
VNA3				*e*		23 29 12.1	
VNA2	**Neumayer--Watz**	**12.82**	**151**	*e*	**Pn**	**23 29 09.4**	**+0.3**
	baz=86,slow=13						
VNA2				*e*		23 29 12.4	
VNA2				*e*		23 29 13.9	
VNA2				*e*		23 29 15.4	
VNA2				*e*		23 29 20.2	
SNAA	**Sanae**	**14.42**	**150**	Pn	**Pn**	**23 29 30.5**	**-0.5**
	1.3nm,0.3s,baz=318,slow=16,SNR=43						
SNAA				Sn	**Sn**	**23 31 57.8**	**-13**
	0.1nm,0.3s,baz=3.5,slow=19,SNR=4.4						
PMSA	**Palmer Station**	**17.57**	**240**	*e*Pn	**Pn**	**23 30 10.0**	**-1.7**
	43nm,1.0s						
EFI	**East Falkland**	**19.63**	**283**	*e*P	**Pn**	**23 30 38.2**	**+1.3**
	14nm,0.4s						
TRQA	**Tornquist**	**31.76**	**299**	*e*P	**P**	**23 32 30.9**	**-0.3**
	6.1nm,0.5s,mb4.7						
PLCA	**Paso Flores**	**33.49**	**286**	P	**P**	**23 32 46.6**	**+0.3**
	1.3nm,0.4s,mb4.2,baz=151,slow=8.6,SNR=7.6						
FCH	**Farellones**	**39.39**	**294**	∥*i*P	**P**	**23 33 37.8**	**+1.1**
CFAA	**Coronel Fontan**	**39.94**	**297**	P	**P**	**23 33 41.0**	**-0.3**
	1.9nm,0.6s,mb4.0,baz=155,slow=7.5,SNR=40						
BOSA	**Boshof**	**46.88**	**71**	P	**P**	**23 34 36.9**	**-0.4**
BOSA	**Boshof**	**46.88**	**71**	P	**P**	**23 34 36.9**	**-0.4**
	1.0nm,0.6s,mb4.0,baz=111,slow=22,SNR=4.2						
TSUM	**Tsumeb**	**51.71**	**57**	*e*P	**P**	**23 35 14.2**	**0.0**
	1.8nm,0.6s,mb4.2						
LPAZ	**La Paz**	**53.47**	**307**	P	**P**	**23 35 27.9**	**+0.6**
	2.1nm,0.4s,mb4.4,baz=108,slow=6.5,SNR=21						
LSZ	**Lusaka**	**59.76**	**65**	*e*P	**P**	**23 36 11.8**	**-0.2**
	2.0nm,0.7s,mb4.3						
DBIC	**Dimbokro**	**69.22**	**23**	P	**P**	**23 37 13.1**	**-0.8**
	2.9nm,0.8s,mb4.2,baz=180,slow=12,SNR=3.4						
TOA0	**Torodi Ar. Sit**	**76.90**	**28**	*e*P	**P**	**23 37 59.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.90**	**28**	P	**P**	**23 37 59.6**	**+0.4**
	2.7nm,0.4s,mb4.5,baz=201,slow=6.3,SNR=82						
SDV	**Santo Domingo**	**77.59**	**315**	*e*P	**P**	**23 38 02.2**	**-1.0**
	1.8nm,0.6s,mb4.2						
SDV	**Santo Domingo**	**77.59**	**315**	P	**P**	**23 38 02.2**	**-1.1**
	1.4nm,0.5s,mb4.1,baz=202,slow=11,SNR=3.3						
JTS	**JuntasAbangare**	**84.38**	**302**	P	**P**	**23 38 39.0**	**-0.4**
NEW	**Newport**	**130.69**	**298**	PKP	PKPdf	23 45 19.6	+2.5
	4.5nm,0.9s,baz=351,slow=15,SNR=5.2						
ARCES	**ARCESS Array B**	**135.05**	**23**	PKP	PKPdf	23 45 26.5	+1.8
	2.8nm,0.8s,baz=180,slow=1.0,SNR=5.4						
YKA	**Yellowknife Ar**	**139.81**	**314**	PKP	PKPdf	23 45 34.8	+1.2
	0.3nm,0.5s,baz=127,slow=2.5,SNR=9.6						
SONM	**Songino Array**	**150.27**	**94**	PKPbc	PKPbc	23 45 58.0	+0.7
	0.4nm,0.7s,baz=234,slow=2.2,SNR=4.0						

*IDC **21** 23:27:01.3±1.5, 3049S×17741W, h0km, mb4.2/4, mb1 4.3/6, mb1mx4.1/15, mbtmp4.3/6, ML4.2/2, Error ellipse: s-maj=53.6km s-min=25.2km az=154.0*
*ISCJB **21** 23:27:03.5±6.5, 308S±01×1773W±02, h33km±52km, mb4.2/5, Error ellipse: s-maj=28.7km s-min=13.3km az=31.8*
*NEIC **21** 23:27:05.8±0.7, 3060S×17732W, h35km, mb4.4/2, Error ellipse: s-maj=19.9km s-min=13.9km az=149.0*

ISC 21 23:27:05.8±6.4, 307S±01×1774W±02, h33km±51km, n13, σ1°06/11, mb4.2/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.80**	**210**	Pn	**Pn**	**23 29 11.1**	**+0.5**
	0.6nm,0.3s,baz=342,slow=3.2,SNR=5.7						
URZ				Sn	**Sn**	**23 30 47.5**	**-1.2**
	3.8nm,0.3s,baz=326,slow=19,SNR=10.0						
RAR	**Rarotonga**	**18.40**	**63**	P	**Pn**	**23 31 17.4**	**-0.9**
	2.9nm,0.3s,baz=166,slow=12,SNR=3.7						
CTA	**Charters Tower**	**34.40**	**279**	P	**P**	**23 33 51.0**	**+1.0**
	2.5nm,0.4s,mb4.5,baz=112,slow=12,SNR=6.1						
CTAO	**Charters Tower**	**34.40**	**279**	*e*P	**P**	**23 33 52.0**	**+1.9**
	11nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**34.95**	**257**	P	**P**	**23 33 55.6**	**+0.8**
	2.7nm,0.5s,mb4.4,baz=99,slow=11,SNR=12						
ASAR	**Alice Springs**	**43.65**	**267**	P	**P**	**23 35 07.3**	**-0.1**
	0.7nm,0.4s,mb3.8,baz=103,slow=7.2,SNR=16						
WB2	**Warramunga Arr**	**44.66**	**272**	*e*P	**P**	**23 35 14.5**	**-1.0**
WRA	**Warramunga Arr**	**44.67**	**272**	P	**P**	**23 35 14.4**	**-1.2**
	2.9nm,0.8s,mb4.2,baz=111,slow=8.0,SNR=35						
SBA	**Scott Base**	**47.76**	**184**	P	**P**	**23 35 41.2**	**+2.0**
MBWA	**Marble Bar**	**56.75**	**264**	P	**P**	**23 36 46.6**	**-0.1**
	1.3nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**145.03**	**341**	*e*pkp	PKPdf	23 46 36.0	-2.8
FINES	**FINESS Array B**	**145.63**	**340**	PKPbc	PKPbc	23 46 39.8	-0.4
	1.8nm,0.4s,baz=65,slow=3.9,SNR=29						
AKASG	**Malin Array Be**	**151.89**	**323**	PKPbc	PKPbc	23 46 56.6	-0.2
	0.5nm,0.3s,baz=46,slow=3.0,SNR=5.6						

IDC 21 23:27:17.9±2.8, 427N×7860W, h0km, mb3.7/1, mb1 3.9/2, mb1mx3.5/17, mbtmp3.7/2, ML3.4/1, Error ellipse: s-maj=73.5km s-min=50.6km az=163.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**9.14**	**59**	Pn	Pn	23 29 31.4	+0.1
	0.4nm,0.3s,baz=254,slow=18,SNR=3.2						
YKA	**Yellowknife Ar**	**63.90**	**342**	P	P	23 37 52.2	0.0
	0.7nm,0.7s,baz=137,slow=6.1,SNR=15						
JOF	**Joensuu**	**95.15**	**26**	*e*pkp	PKiKP	23 45 29.2	+5.1
ASAR	**Alice Springs**	**143.19**	**235**	PKP	PKPdf	23 46 53.2	-1.7
	0.3nm,0.5s,baz=113,slow=3.6,SNR=4.1						
WRA	**Warramunga Arr**	**144.34**	**241**	PKP	PKPdf	23 46 57.4	+0.4
	0.7nm,0.7s,baz=108,slow=3.1,SNR=4.5						

*ISCJB **22** 00:02:54.0±2.3, 43S±01×152.1E±0.1, h193km±20km, mb4.4/11, Error ellipse: s-maj=20.6km s-min=17.9km az=143.6*
*IDC **22** 00:02:55.2±2.4, 4.16S×152.10E, h201km±22km, mb3.5/4, mb1 3.6/6, mb1mx3.5/13, mbtmp3.5/6, Error ellipse: s-maj=20.7km s-min=16.0km az=116.0*
*NEIC **22** 00:02:55.1±2.8, 4.27S×152.13E, h192km±25km, mb4.8/5, Error ellipse: s-maj=20.6km s-min=17.8km az=54.0*

ISC 22 00:02:55.2±1.7, 43S±01×1521E±01, h189km±13km, n27, σ0°97/30, mb4.4/11, 2C, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.03**	**224**	*e*Pn	**Pn**	**00 04 35.5**	**-0.3**
PMG				*e*Sn	**Sn**	**00 05 54.1**	**-1.2**
PMG	**Port Moresby**	**7.03**	**224**	P	**Pn**	**00 04 37.7**	**+1.9**
	1.2nm,0.3s,baz=220,slow=9.6,SNR=3.2						
CTA	**Charters Tower**	**16.66**	**200**	*e*P	**Pn**	**00 06 39.3**	**+1.3**
	5.5nm,0.6s						
CTA	**Charters Tower**	**16.66**	**200**	P	**Pn**	**00 06 39.2**	**+1.2**
	1.3nm,0.3s,baz=29,slow=13,SNR=11						
CTAO	**Charters Tower**	**16.66**	**200**	*e*P	**Pn**	**00 06 39.4**	**+1.3**
	10.0nm,0.7s						
KAKA	**Kakadu**	**21.13**	**246**	*e*P	**P**	**00 07 25.0**	**-0.6**
	40nm,0.4s,mb5.1						
KAKA	**Kakadu**	**21.13**	**246**	*e*P	**P**	**00 07 25.1**	**-0.4**
DZM	**Mont Dzumac**	**22.45**	**143**	P	**P**	**00 07 38.8**	**+0.2**
	3.1nm,0.9s,mb3.7,baz=341,slow=10,SNR=14						
WB2	**Warramunga Arr**	**23.23**	**227**	∥*i*P	**P**	**00 07 46.3**	**+0.6**
WB2				*e*S	**S**	**00 11 43.1**	**-0.5**
WB2	**Warramunga Arr**	**23.23**	**227**	*e*P	**P**	**00 07 47.2**	**+1.5**
WB2				*e*S	**S**	**00 11 43.1**	**-0.5**
WRA	**Warramunga Arr**	**23.24**	**227**	P	**P**	**00 07 46.4**	**+0.6**
	30nm,0.5s,mb5.0,baz=52,slow=9.4,SNR=505						
WRA				S	**S**	**00 11 44.4**	**+0.7**
	1.7nm,0.9s,baz=46,slow=16,SNR=6.3						
ASAR	**Alice Springs**	**26.03**	**221**	P	**P**	**00 08 10.9**	**-0.2**
	2.3nm,0.4s,mb4.2,baz=54,slow=9.0,SNR=32						
STKA	**Stephens Creek**	**29.11**	**199**	P	**P**	**00 08 38.5**	**0.0**
	1.3nm,0.4s,mb4.0,baz=20,slow=6.8,SNR=3.9						
FITZ	**Fitzroy Crossi**	**29.27**	**240**	∥*i*P	**P**	**00 08 39.5**	**-0.5**
	35nm,0.4s,mb5.4						
FITZ	**Fitzroy Crossi**	**29.27**	**240**	P	**P**	**00 08 39.6**	**-0.4**
	19nm,0.5s,mb5.1,baz=66,slow=8.2,SNR=125						
FORT	**Forrest**	**34.71**	**218**	*e*P	**P**	**00 09 26.9**	**-0.4**
	30nm,0.7s,mb5.0						
MBWA	**Marble Bar**	**35.60**	**239**	*e*P	**P**	**00 09 34.1**	**-0.9**
	18nm,0.4s,mb5.0						
KKM	**Kota Kinabalu**	**37.29**	**286**	P	**P**	**00 09 51.6**	**+2.2**
NACB	**Ninganchiao**	**41.05**	**315**	P	**P**	**00 10 26.7**	**+6.3**
KLBR	**Kellerberrin**	**42.12**	**226**	*e*P	**P**	**00 10 28.0**	**-1.0**
	61nm,1.8s,mb4.9						
KSM	**Kuching**	**42.16**	**277**	*e*P	**P**	**00 10 30.4**	**+0.8**
HIA	**Hailar**	**60.33**	**336**	*e*P	**P**	**00 12 49.9**	**+5.9**
SONM	**Songino Array**	**65.57**	**328**	P	**P**	**00 13 14.8**	**-3.8**
	0.5nm,1.0s,mb3.3,baz=109,slow=3.5,SNR=4.0						
KDAK	**Kodiak Island**	**76.08**	**27**	*e*P	**P**	**00 14 20.6**	**-1.2**
	13µm,2.6s						
MKAR	**Makanchi Array**	**79.52**	**319**	P	**P**	**00 14 40.3**	**-0.7**
	0.3nm,0.4s,mb3.3,baz=101,slow=6.7,SNR=5.9						
BRVK	**Borovoye**	**88.53**	**323**	P	**P**	**00 15 30.8**	**+4.5**
TORD	**Torodi Ar. Bea**	**149.50**	**289**	PKPbc	PKPbc	00 22 21.6	-1.6
	1.9nm,0.4s,baz=76,slow=2.1,SNR=66						

*ISCJB **22** 00:15:51.7±0.4, 6780N±002×20.16E±008, h0km, Error ellipse: s-maj=4.2km s-min=3.5km az=12.7*
*UPP **22** 00:15:52.8, 6783N×2020E, h1km, ML2.6, Mining explosion.*
*CSEM **22** 00:15:52.1±0.1, 6786N×2031E, h1km, ML2.0, Error ellipse: s-maj=2.2km s-min=1.7km az=111.0, Mining explosion.*
*NAO **22** 00:15:52.9±1.3, 6780N×2020E, ML2.1*
*IDC **22** 00:15:53.2±1.5, 6788N×2040E, h0km, mb1 2.9/3, mb1mx2.8/17, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=20.9km s-min=7.9km az=114.0*
*HEL **22** 00:15:53.3±0.0, 6784N×2018E, h0km, ML2.0, ML2.6(UPP), ML2.1(BER), Explosion*
*BER **22** 00:15:55.5±3.1, 6781N×2015E, h0km, ML2.1, ML2.1(NAO), Suspected explosion*

ISC 22 00:15:52.5±0.4, 6781N±002×2018E±007, h0km, n43, σ1°00/62, 3D, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.16**	**22**	∥*i*P	**Pg**	**00 15 55.5**	**0.0**
KUA				*i*S	**Sg**	**00 15 57.3**	**-0.2**
NIKU	**Nikkaluokta**	**0.44**	**278**	∥*i*P	**Pg**	**00 16 01.2**	**+0.4**
DUNU	**Dundret**	**0.71**	**168**	*i*P	**Pg**	**00 16 06.4**	**+0.4**
LANU	**Lannavaara**	**0.72**	**70**	∥*i*P	**Pg**	**00 16 06.1**	**-0.3**
MASU	**Masugnsbyn**	**0.78**	**116**	*i*P	**Pg**	**00 16 07.5**	**+0.1**
KIF	**Kilpisjarvi**	**1.22**	**11**	*e*P	**Pg**	**00 16 15.3**	**-0.5**
KIF				*e*S	**Sg**	**00 16 31.1**	**-0.6**
KIF	**Kilpisjarvi**	**1.22**	**11**	P	**Pg**	**00 16 15.3**	**-0.6**
KIF				S	**Sg**	**00 16 31.1**	**-0.6**
PAJU	**Pajala**	**1.38**	**124**	*e*P	**Pg**	**00 16 18.2**	**-0.7**
HEF	**Hetta**	**1.44**	**64**	*e*P	**Pn**	**00 16 18.8**	**-0.9**
HEF				*e*S	**Sg**	**00 16 37.4**	**-1.2**
HEF	**Hetta**	**1.44**	**64**	P	**Pn**	**00 16 18.7**	**-1.0**
HEF				S	**Sg**	**00 16 37.3**	**-1.3**
ERTU	**Ertsjaerv**	**1.48**	**147**	*e*P	**Pn**	**00 16 20.1**	**-0.2**
ERTU	**Ertsjaerv**	**1.48**	**147**	P	**Pn**	**00 16 20.1**	**-0.3**
KTK1	**Kautokeino**	**1.66**	**42**	*e*P	**Pn**	**00 16 23.3**	**+0.6**
KTK1				*e*S	**Sn**	**00 16 45.5**	**+0.8**
KTK1				AML	AML	00 16 49.5	
	comp=Z,17nm,0.4s						
KTK1	**Kautokeino**	**1.66**	**42**	P	**Pn**	**00 16 23.2**	**+0.5**
KTK1				S	**Sn**	**00 16 45.4**	**+0.8**
	comp=Z,17nm,0.4s						
HARU	**Harads**	**1.68**	**169**	*e*P	**Pn**	**00 16 23.6**	**+0.5**
HARU	**Harads**	**1.68**	**169**	P	**Pn**	**00 16 23.5**	**+0.4**
TRO	**Tromso**	**1.89**	**347**	*e*P	**Pn**	**00 16 25.4**	**-0.5**
TRO				*e*S	**Sn**	**00 16 49.8**	**-0.6**
TRO				AML	AML	00 16 52.8	
	comp=Z,23nm,0.3s						
TRO	**Tromso**	**1.89**	**347**	P	**Pn**	**00 16 25.4**	**-0.5**
TRO				S	**Sn**	**00 16 49.7**	**-0.7**
	comp=Z,23nm,0.3s						
SJUU	**Sjulsmark**	**2.38**	**166**	*e*P	**Pn**	**00 16 34.3**	**+1.7**
SGF	**Sodankyl**	**2.46**	**96**	*e*P	**Pn**	**00 16 34.3**	**+0.6**
SGF				*e*S	**Sn**	**00 17 04.8**	**+0.5**
SGF				MSG		00 17 09.2	
	comp=Z,8.0nm,0.2s						
SGF	**Sodankyl**	**2.46**	**96**	P	**Pn**	**00 16 34.3**	**+0.6**
SGF				S	**Sn**	**00 17 04.8**	**+0.4**
	comp=Z,18nm,0.5s						
LOF	**Lofoten**	**2.52**	**280**	*e*	**Sg**	**00 17 15.3**	**+1.8**
LOF				AML	AML	00 17 21.2	
	comp=Z,18nm,0.5s						
LOF	**Lofoten**	**2.52**	**280**	*e*Sg	**Sg**	**00 17 15.3**	**+1.8**
LOF				AML	AML	00 17 21.2	
	comp=Z,18nm,0.5s						
LOF	**Lofoten**	**2.52**	**280**	*e*Sg	**Sg**	**00 17 15.3**	**+1.9**
	comp=Z,18nm,0.5s,SNR=90						
ARA0	**ARCESS Array S**	**2.61**	**46**	Pn	**Pn**	**00 16 36.2**	**+0.5**

ISC 22 00:49:11.5±5.5, 606S±01×262W±01, h4^{km}±35^{km}, n63, σ0§82/42, mb4.7/22, MS4.1/8, 3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.45**	**152**	*eP*	**Pn**	**00 52 09.1**	**0.0**
VNA1				*e*		00 52 15.1	
VNA1				*e*		00 52 20.9	
VNA1				*e*		00 52 27.9	
VNA1				*e*		00 52 34.6	
VNA3	**Neumayer Olymp**	**12.58**	**155**	*eP*	**Pn**	**00 52 10.3**	**-0.5**
VNA3				*e*		00 52 14.9	
VNA3				*e*		00 52 21.9	
VNA3				*e*		00 54 21.3	
VNA3				*e*		00 54 26.4	
VNA3				*e*		00 54 31.4	
VNA3				*e*		00 54 43.2	
VNA3				*e*		00 54 51.5	
VNA2	**Neumayer--Watz** baz=316,slow=15	**12.85**	**152**	*eP*	**Pn**	**00 52 14.0**	**-0.5**
VNA2				*e*		00 52 19.6	
VNA2				*e*		00 52 25.5	
VNA2				*e*		00 52 33.6	
VNA2				*e*		00 52 38.7	
VNA2				*e*		00 54 23.5	
VNA2				*e*		00 54 29.4	
VNA2				*e*		00 54 34.4	
VNA2				*e*		00 54 45.3	
VNA2				*e*		00 54 54.6	
SNAA	**Sanae** 1.8nm,0.3s,baz=323,slow=14,SNR=62	**14.45**	**150**	Pn	**Pn**	**00 52 35.0**	**-1.3**
SNAA				Sn	**Sn**	**00 55 03.7**	**-13**
	0.3nm,0.3s,baz=200,slow=24,SNR=5.7						
SNAA				LR	LR	00 56 45.8	
	comp=Z,125nm,19.2s,baz=103,slow=31						
PMSA	**Palmer Station**	**17.67**	**240**	LR	LR	00 58 15.3	
	comp=Z,217nm,21.4s,baz=168,slow=30						
NVL	**N'lazarevskaya**	**18.31**	**139**	*eP*	**Pn**	**00 53 28.8**	**+3.0**
NVL				pmax	pmax		
	comp=N,11nm,1.4s						
NVL				pmax	pmax		
	comp=E,31nm,1.4s						
NVL				pmax	pmax		
	comp=Z,25nm,1.4s						
EFI	**East Falkland**	**19.69**	**283**	Pn	**Pn**	**00 53 43.6**	**+1.0**
	comp=Z,681nm,0.5s,SNR=22						
EFI	**East Falkland**	**19.69**	**283**	*eP*	**Pn**	**00 53 43.3**	**+0.7**
	comp=Z,59nm,0.6s						
EFI	**East Falkland**	**19.69**	**283**	*eP*	**Pn**	**00 53 43.3**	**+0.7**
EFI				pmax	pmax		
	comp=Z,59nm,0.6s						
USHA	**Ushuaia**	**22.96**	**266**	P	**P**	**00 54 18.1**	**+1.7**
	comp=Z,42nm,1.0s,mb4.8,baz=91,slow=7.0,SNR=9.0						
USHA				LR	LR	01 01 22.0	
	comp=Z,412nm,20.9s,MS3.9,baz=137,slow=32						
QSPA	**South Pole Qui**	**29.65**	**180**	P	**P**	**00 55 21.5**	**+4.1**
	comp=Z,11nm,0.5s,mb4.8,baz=208,slow=2.7,SNR=97						
TRQA	**Tornquist**	**31.79**	**299**	*eP*	**P**	**00 55 36.7**	**+0.1**
	comp=Z,69nm,1.1s,mb5.4						
TRQA				*e*		00 55 50.3	
PLCA	**Paso Flores**	**33.54**	**286**	P	**P**	**00 55 51.3**	**-0.5**
	comp=Z,5.7nm,0.4s,mb4.8,baz=159,slow=5.9,SNR=22						
PLCA				LR	LR	01 09 46.5	
	comp=Z,227nm,18.0s,MS3.9,baz=154,slow=37						
MAW	**Mawson**	**36.26**	**140**	LR	LR	01 09 34.2	
	comp=Z,164nm,19.8s,MS3.8,baz=261,slow=34						
FCH	**Farellones**	**39.43**	**293**	*iP*	**P**	**00 56 42.3**	**+0.1**
PEL	**Peldehue**	**39.76**	**293**	*eP*	**P**	**00 56 44.8**	**-0.1**
CFAA	**Coronel Fontan**	**39.97**	**297**	P	**P**	**00 56 45.9**	**-0.8**
CFAA	**Coronel Fontan**	**39.97**	**297**	P	**P**	**00 56 45.9**	**-0.8**
	comp=Z,7.4nm,0.6s,mb4.6,baz=157,slow=7.7,SNR=142						
SUR	**Sutherland**	**41.56**	**69**	*eP*	**P**	**00 57 01.1**	**+1.3**
	comp=Z,5.5nm,0.9s,mb4.2						
SUR	**Sutherland**	**41.56**	**69**	P	**P**	**00 57 00.6**	**+0.8**
	comp=Z,5.4nm,0.9s,mb4.2,baz=232,slow=12,SNR=5.0						
SBA	**Scott Base**	**41.58**	**184**	*eP*	**P**	**00 57 03.4**	**+3.9**
	comp=Z,9.2nm,1.3s,mb4.2						
SBA	**Scott Base**	**41.58**	**184**	*eP*	**P**	**00 57 03.4**	**+3.9**
SBA				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
VNDA	**Vanda**	**42.05**	**183**	P	**P**	**00 57 07.1**	**+3.7**
	comp=Z,2.7nm,0.8s,mb3.9,baz=193,slow=6.1,SNR=16						
LCO	**Las Campanas**	**43.28**	**296**	*eP*	**P**	**00 57 13.9**	**0.0**
	comp=Z,22nm,0.6s,mb5.1						
LCO				*e*		00 57 26.4	
BOSA	**Boshof**	**46.78**	**71**	P	**P**	**00 57 41.4**	**-0.3**
BOSA				LR	LR	01 15 40.8	
BOSA	**Boshof**	**46.78**	**71**	P	**P**	**00 57 41.4**	**-0.3**
	comp=Z,11nm,0.7s,mb4.9,baz=208,slow=8.2,SNR=31						
BOSA				LR	LR	01 15 40.8	
	comp=Z,180nm,18.1s,MS4.1,baz=178,slow=34						
TSUM	**Tsumeb**	**51.60**	**57**	*eP*	**P**	**00 58 18.9**	**+0.2**
	comp=Z,12nm,0.8s,mb4.2						
LPAZ	**La Paz**	**53.48**	**307**	P	**P**	**00 58 32.9**	**+0.2**
	comp=Z,7.9nm,0.4s,mb5.0,baz=128,slow=5.3,SNR=82						
LPAZ				LR	LR	01 18 08.1	
	comp=Z,52nm,20.5s,MS3.6,baz=349,slow=33						
LSZ	**Lusaka**	**59.66**	**65**	*eP*	**P**	**00 59 16.7**	**+0.1**
	comp=Z,15nm,0.8s,mb5.1						
LSZ	**Lusaka**	**59.66**	**65**	*eP*	**P**	**00 59 16.7**	**+0.1**
LSZ				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
NNA	**Nana**	**60.94**	**300**	*eP*	**P**	**00 59 24.4**	**-1.0**
	comp=Z,5.3nm,0.4s,mb5.0						
ATAH	**Atahualpa**	**66.07**	**301**	P	**P**	**00 59 59.8**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.6,baz=169,slow=16,SNR=2.4						
DBIC	**Dimbokro**	**69.12**	**23**	P	**P**	**01 00 17.8**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.5,baz=157,slow=8.2,SNR=8.1						
OTAV	**Otavalo**	**72.62**	**304**	*eP*	**P**	**01 00 39.9**	**0.0**
	comp=Z,9.9nm,1.1s,mb4.7						
OTAV				*e*		01 00 53.6	
ROSC	**El Rosal**	**75.22**	**310**	LR	LR	01 31 37.2	
	comp=Z,79nm,21.4s,MS4.0,baz=221,slow=34						
TOA0	**Torodi Ar. Sit**	**76.80**	**28**	*eP*	**P**	**01 01 04.4**	**+0.5**
TOA0				*ePcP*	PcP	01 01 16.7	+1.6
TORD	**Torodi Ar. Bea**	**76.80**	**28**	P	**P**	**01 01 04.6**	**+0.7**
	comp=Z,23nm,0.7s,mb5.2,baz=201,slow=6.3,SNR=300						
SDV	**Santo Domingo**	**77.59**	**315**	*eP*	**P**	**01 01 07.6**	**-0.9**
	comp=Z,8.4nm,0.7s,mb4.8						
SDV				*e*		01 01 17.0	
JTS	**JuntasAbangare**	**84.40**	**302**	P	**P**	**01 01 43.9**	**-0.9**
SJG	**San Juan**	**84.77**	**322**	*eP*	**P**	**01 01 45.9**	**-0.5**
STKA	**Stephens Creek**	**87.33**	**170**	*eP*	**P**	**01 02 00.5**	**+1.2**
ASAR	**Alice Springs**	**94.50**	**162**	P	**P**	**01 02 32.7**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.5,baz=182,slow=3.9,SNR=13						
TEIG	**Tepich**	**94.69**	**304**	P	**P**	**01 02 33.0**	**-0.4**
	comp=Z,7.9nm,0.6s,mb5.3,baz=3.4,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**98.22**	**162**	P	**P**	**01 02 49.2**	**-0.5**
	comp=Z,0.2nm,0.3s,mb4.1,baz=200,slow=4.4,SNR=6.0						
NVAR	**Mina Array Bea**	**123.54**	**290**	PKP	PKPdf	01 08 10.4	+1.4
	comp=Z,0.4nm,0.6s,baz=120,slow=3.1,SNR=3.6						
NOA	**NORSAR Array B**	**124.67**	**21**	PKP	PKPdf	01 08 09.9	-0.6
	comp=Z,1.5nm,0.9s,baz=173,slow=1.3,SNR=3.3						
FINES	**FINESS Array B**	**128.14**	**29**	PKP	PKPdf	01 08 16.8	-0.3
	comp=Z,4.0nm,0.8s,baz=190,slow=5.2,SNR=10						
KAF	**Kangasniemi**	**128.78**	**29**	*ep*	PKPdf	01 08 16.1	-2.2
KMI	**Kunming**	**130.42**	**112**	PKP	PKPdf	01 08 20.3	-2.4
GYA	**Guiyang**	**133.35**	**115**	PKP	PKPdf	01 08 27.6	-0.5
GYA				XPKP		01 08 43.3	
GYA				PP	PP	01 10 58.8	+3.2
GYA				PKS		01 12 02.8	
GYA				SKS	SKSdf	01 15 33.4	-6.4
GYA				SKKS	SKKSac	01 17 45.8	-6.0
GYA				SS	SS	01 28 37.3	-3.0
GYA				PP	PP		
	comp=Z,120nm,7.4s						
GYA				LR	LR		
	comp=N,240nm,21.9s,MS5.1						
GYA				LR	LR		
	comp=E,380nm,22.0s,MS5.1						
GYA				LR	LR		
	comp=Z,220nm,21.4s,MS4.8						
ARCES	**ARCESS Array B**	**134.95**	**23**	PKP	PKPdf	01 08 31.3	+1.5
	comp=Z,3.3nm,0.8s,baz=231,slow=2.1,SNR=16						
CD2	**Chengdu**	**135.81**	**109**	*ePKP*	PKPdf	01 08 31.8	-0.8
CD2				XPKP		01 08 46.1	
CD2				PP	PP	01 11 14.1	+2.8
CD2				PKS		01 12 06.6	
CD2				SKS	SKSdf	01 15 37.3	-6.7
CD2				SKKS	SKKSac	01 18 01.0	-5.5
CD2				SS	SS	01 29 07.3	-2.7
CD2				PP	PP		
	comp=Z,150nm,8.4s						
CD2				LR	LR		
	comp=N,110nm,14.4s						
CD2				LR	LR		
	comp=Z,110nm,15.6s,MS4.7						
MKAR	**Makanchi Array**	**137.69**	**75**	PKP	PKPdf	01 08 36.8	+1.3
	comp=Z,0.8nm,0.8s,baz=237,slow=4.2,SNR=6.3						
YKA	**Yellowknife Ar**	**139.81**	**314**	PKP		01 08 32.5	
YKA				PKP	PKPdf	01 08 39.4	+0.5
YKA	**Yellowknife Ar**	**139.81**	**314**	PKhKP		01 08 32.5	
	comp=Z,0.2nm,0.5s,baz=152,slow=1.9,SNR=5.1						
YKA				PKP	PKPdf	01 08 39.4	+0.5
	comp=Z,1.4nm,0.5s,baz=130,slow=2.5,SNR=28						
NVS	**Novosibirsk**	**143.55**	**67**	*e*PKIKP	PKPdf	01 08 43.1	-2.8
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
HHC	**Hu-ho-hao-te**	**147.55**	**108**	*e*PKP	PKPdf	01 08 55.1	+1.9
HHC				PKP2	PKPab	01 09 03.1	+5.1
HHC				APKP		01 09 05.3	
HHC				XPKP		01 09 09.3	
HHC				PKS		01 12 28.1	
HHC				PP	PP	01 12 29.4	+6.7
HHC				SKS	SKSdf	01 15 58.3	-3.7
HHC				SKKS	SKKSac	01 19 14.6	+0.4
HHC				PP	PP		
	comp=Z,88nm,5.8s						
INK	**Inuvik**	**149.54**	**316**	*e*PKPbc	PKPbc	01 08 59.8	-0.3
INK	**Inuvik**	**149.54**	**316**	PKPbc	PKPbc	01 08 59.8	-0.4
	comp=Z,5.5nm,0.6s,baz=83,slow=2.2,SNR=60						
DAWY	**Dawson**	**150.06**	**306**	*e*PKPbc	PKPbc	01 09 01.8	+0.3
SONM	**Songino Array**	**150.20**	**94**	PKPbc	PKPbc	01 09 02.8	+0.5
	comp=Z,6.3nm,0.9s,baz=217,slow=2.7,SNR=39						
ZAK	**Zakamensk**	**150.34**	**87**	*i*PKIKP	PKPbc	01 09 03.1	+0.5
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ULN	**Ulaanbaatar**	**150.54**	**94**	*e*PKPdf	PKPdf	01 08 58.6	+0.9
ULN				*e*PKPbc	PKPbc	01 09 03.6	+0.4

*CSEM **22** 01:05:02.8, 4187N×4577E, h49^{km}, mb3.9, Error ellipse: s-maj=14.7km s-min=7.5km az=249.0, After OBN*
*MOS **22** 01:05:02.8±2.4, 4187N×4577E, h49^{km}, mb3.9/1, Error ellipse: s-maj=14.7km s-min=7.5km az=114.9*
*TIF **22** 01:05:03.7, 42.18N×4558E, h9^{km}±2^{km}*
*ISCJB **22** 01:05:04.2±0.6, 42.18N±003×4560E±004, h1^{km}±5^{km}, Error ellipse: s-maj=5.5km s-min=4.3km az=39.0*

ISC 22 01:05:02.8±0.6, 4215N±003×4576E±003, h8^{km}±4^{km}, n23, σ1§19/45, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.76**	**203**	P	**Pg**	**01 05 19.9**	**+2.5**
DGRG				S	**Sg**	**01 05 37.6**	**+10**
MTA	**Mtatsminda**	**0.86**	**238**	P	**Pg**	**01 05 19.0**	**-0.2**
MTA				S	**Sg**	**01 05 30.5**	**+0.1**
TBLG	**Delisi**	**0.87**	**241**	P	**Pg**	**01 05 19.2**	**-0.3**
TBLG				S	**Sg**	**01 05 30.8**	**-0.1**
KRNR	**Karanay**	**1.08**	**51**	*eP*	**Pg**	**01 05 21.8**	**-1.8**
KRNR				*eS*	**Sg**	**01 05 37.0**	**-0.6**
KRNR				pmax	pmax		
	comp=Z,30nm,0.2s						
KRNR	**Karanay**	**1.08**	**51**	*eP*	**Pg**	**01 05 21.8**	**-1.8**
	comp=Z,30nm,0.2s						
KRNR				*eS*	**Sg**	**01 05 37.0**	**-0.6**
SNJR	**Sundja**	**1.15**	**323**	*i* P	**Pg**	**01 05 25.4**	**+0.5**
SNJR				*eS*	**Sg**	**01 05 40.0**	**+0.2**
DBC	**Dubki**	**1.17**	**42**	*eP*	**Pb**	**01 05 23.5**	**-1.8**
DBC				*i* S	**Sg**	**01 05 40.5**	**0.0**
VLKR	**Vladikavkaz**	**1.20**	**319**	*eP*	**Pb**	**01 05 25.9**	**+0.2**
VLKR				*eS*	**Sb**	**01 05 40.9**	**-0.5**
GOR	**Gori**	**1.24**	**263**	P	**Pn**	**01 05 25.1**	**-1.3**
GOR				S	**Sb**	**01 05 40.9**	**-1.7**
LACR	**Lac**	**1.27**	**302**	*i* P	**Pn**	**01 05 25.5**	**-1.4**
LACR				*i* S	**Sb**	**01 05 41.1**	**-2.5**
URKR	**Urkarakh**	**1.39**	**89**	P	**Pn**	**01 05 26.0**	**-2.5**
URKR				*eS*	**Sb**	**01 05 47.0**	**0.0**
ARNR	**Ardon**	**1.50**	**314**	*i* P	**Pg**	**01 05 31.7**	**+0.1**
ARNR				*eS*	**Sg**	**01 05 50.4**	**-0.7**
ZEI	**Tsey**	**1.51**	**295**	*i* P	**Pn**	**01 05 30.0**	**-0.1**
ZEI				*i* S	**Sn**	**01 05 48.2**	**-1.7**
BTKR	**Batakoyurt**	**1.51**	**324**	*i* P	**Pg**	**01 05 32.5**	**+0.7**
BTKR				*eS*	**Sg**	**01 05 51.6**	**+0.2**
MAK	**Makhachkala**	**1.52**	**57**	*eP*	**Pg**	**01 05 37.1**	**+5.2**
MAK				*e*		01 05 59.3	
MAK				pmax	pmax		
	comp=Z,25nm,0.2s						
MAK				smax			
	comp=N,315nm,1.2s						
MAK				smax			
	comp=E,308nm,1.2s						
MAK	**Makhachkala**	**1.52**	**57**	*eP*	**Pg**	**01 05 37.1**	**+5.2**
	comp=E,25nm,0.2s						
MAK				*eS*	**Sg**	**01 05 59.3**	**+7.6**
	comp=E,315nm,1.2s						
KORR	**Kora**	**1.56**	**307**	*eP*	**Pn**	**01 05 31.4**	**+0.6**
KORR				*eS*	**Sn**	**01 05 50.4**	**-0.8**
KMSR	**Komsomolskaya**	**1.63**	**319**	*i* P	**Pg**	**01 05 34.3**	**+0.3**
KMSR				*eS*	**Sg**	**01 05 54.7**	**-0.4**
TRKR	**Terskaya**	**1.74**	**335**	*eP*	**Pn**	**01 05 36.0**	**+2.7**
TRKR				*eS*	**Sn**	**01 05 58.5**	**+2.8**
ONI	**Oni**	**1.76**	**285**	P	**Pn**	**01 05 34.4**	**+0.8**
ONI				S	**Sn**	**01 05 57.1**	**+0.9**
DIGR	**Digorskoe uzhe**	**1.77**	**296**	*i* P	**Pn**	**01 05 34.4**	**+0.6**
DIGR				*i* S	**Sn**	**01 05 55.7**	**-0.8**
LSNR	**Lesken**	**1.82**	**309**	*eP*	**Pn**	**01 05 35.6**	**+1.2**
LSNR				*eS*	**Sn**	**01 05 57.9**	**+0.3**
PRTR	**Priterechnaya**	**1.93**	**326**	*eP*	**Pn**	**01 05 38.2**	**+2.3**
PRTR				*eS*	**Sn**	**01 06 02.5**	**+2.1**

*TIF **22** 01:07:14.6, 42.17N×4558E, h11^{km}±2^{km}*
*ISCJB **22** 01:07:15.6±1.0, 42.13N±003×4563E±007, h11^{km}, Error ellipse: s-maj=8.0km s-min=4.2km az=3.7*
*MOS **22** 01:07:16.4±0.7, 42.11N×4542E, h10^{km}, mb3.8/1, Error ellipse: s-maj=37.6km s-min=7.8km az=120.2*

ISC 22 01:07:15.7±1.1, 4217N±003×4558E±007, h1^{km}±5^{km}, n16, σ0§86/32, 1C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.73**	**193**	P	**Pg**	**01 07 30.6**	**+1.0**
DGRG				S	**Sg**	**01 07 47.3**	**+8.2**
MTA	**Mtatsminda**	**0.76**	**232**	P	**Pg**	**01 07 29.8**	**-0.3**
MTA				S	**Sg**	**01 07 41.1**	**+1.2**
TBLG	**Delisi**	**0.77**	**236**	P	**Pg**	**01 07 30.0**	**-0.3**
TBLG				S	**Sg**	**01 07 41.6**	**+1.3**
SNJR	**Sundja**	**1.07**	**328**	*e*PG	**Pg**	**01 07 35.9**	**-0.2**
SNJR				*eS*	**Sg**	**01 07 51.2**	**+1.2**
VLKR	**Vladikavkaz**	**1.11**	**323**	*e*PG	**Pg**	**01 07 36.5**	**-0.4**
VLKR				*eS*	**Sg**	**01 07 52.1**	**+0.9**
GOR	**Gori**	**1.11**	**261**	P	**Pg**	**01 07 35.9**	**-1.1**
GOR				S	**Sg**	**01 07 51.6**	**+0.2**
LACR	**Lac**	**1.16**	**305**	*i* PG	**Pg**	**01 07 36.3**	**-1.6**
LACR				*i* S	**Sg**	**01 07 52.0**	**-0.9**
ZEI	**Tsey**	**1.39**	**296**	*i* PG	**Pn**	**01 07 40.8**	**-1.3**
ZEI				*i* S	**Sg**	**01 07 59.5**	**-0.7**
ARNR	**Ardon**	**1.41**	**317**	*e*PG	**Pn**	**01 07 41.4**	**-1.0**
ARNR				*eS*	**Sg**	**01 08 00.7**	**-0.1**
BTKR	**Batakoyurt**	**1.43**	**328**	*e*PG	**Pn**	**01 07 43.5**	**+0.8**
BTKR				*eS*	**Sg**	**01 08 03.2**	**+1.6**
KORR	**Kora**	**1.45**	**310**	*e*PG	**Pn**	**01 07 42.1**	**-0.9**
KORR				*eS*	**Sg**	**01 08 01.8**	**-0.4**
KMSR	**Komsomolskaya**	**1.54**	**322**	*e*PG	**Pn**	**01 07 44.8**	**+0.6**
KMSR				*eS*	**Sn**	**01 08 05.9**	**+1.1**
ONI	**Oni**	**1.64**	**285**	P	**Pn**	**01 07 45.2**	**-0.4**
ONI				S	**Sn**	**01 08 07.7**	**+0.5**
DIGR	**Digorskoe uzhe**	**1.65**	**297**	*i* PG	**Pn**	**01 07 45.2**	**-0.6**
DIGR				*i* S	**Sn**	**01 08 07.1**	**-0.6**
TRKR	**Terskaya**	**1.68**	**338**	*e*PN	**Pn**	**01 07 46.4**	**+0.2**
TRKR				*eS*	**Sn**	**01 08 09.4**	**+1.1**
LSNR	**Lesken**	**1.71**	**311**	*e*PN	**Pn**	**01 07 46.1**	**-0.5**
LSNR				*eS*	**Sn**	**01 08 09.1**	**0.0**

*CSEM **22** 01:13:41.9±0.2, 3811N×3850E, h12^{km}, MD3.1, Error ellipse: s-maj=5.7km s-min=4.3km az=116.0*
*ISK **22** 01:13:41.5, 38.10N×3849E, h6^{km}, MD3.1*
*ISCJB **22** 01:13:42.3±0.6, 38.10N±003×3853E±005, h3^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=4.7km az=8.0*
*DDA **22** 01:13:44.0, 38.12N×3851E, h15^{km}, Md2.9*

ISC 22 01:13:42.7±0.5, 3811N±003×3854E±005, h11^{km}±5^{km}, n14, σ0§98/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MALT	**Malatya**	**0.22**	**337**	PG	**Pg**	**01 13 46.1**	**-1.1**
MALT				SG	**Sg**	**01 13 49.8**	**-0.5**
MYA	**Malataya**	**0.23**	**338**	PG	**Pg**	**01 13 47.7**	**+0.3**
ELZG	**Elazig**	**0.52**	**43**	*i* P	**Pg**	**01 13 54.0**	**+1.2**
ELZG				*i* S	**Sg**	**01 14 01.3**	**+1.6**
ATAB	**Bozova**	**0.67**	**197**	*i* P	**Pg**	**01 13 55.6**	**0.0**
ATAB				*i* S	**Sg**	**01 14 04.7**	**+0.3**
URFA	**Urfa**	**0.71**	**161**	*e*PG	**Pg**	**01 13 55.2**	**-1.2**
URFA				*e*SG	**Sg**	**01 14 05.4**	**-0.3**
GZT	**Gaziantep**	**1.08**	**226**	*i* P	**Pb**	**01 14 03.9**	**+0.5**
GZT				*i* S	**Sg**	**01 14 18.1**	**+0.6**
DIY	**Diyarbakir**	**1.35**	**99**	*e*PN	**Pn**	**01 14 08.4**	**+0.9**
GAZ	**Gaziantep**	**1.41**	**229**	*e*PN	**Pn**	**01 14 08.1**	**-0.2**
KMRS	**Kahramanmaras**	**1.43**	**245**	*e*PN	**Pn**	**01 14 08.2**	**-0.4**
ANDN	**Andirin**	**1.81**	**254**	*i* P	**Pn**	**01 14 13.8**	**0.0**
ANDN				*i* S	**Sn**	**01 14 39.8**	**+2.9**
EZC	**Erzincan**	**1.91**	**31**	*e*PN	**Pn**	**01 14 12.8**	**-2.4**
MARD	**Mardin**	**1.95**	**113**	*i* P	**Pn**	**01 14 20.2**	**+4.4**
MARD				*i* S	**Sn**	**01 14 48.7**	**+8.4**
KOZT	**Kozan**	**2.24**	**254**	*e*PN	**Pn**	**01 14 19.2**	**-0.5**
BTMT	**Batman**	**2.33**	**87**	*e*PN	**Pn**	**01 14 20.3**	**-0.7**

*BJI **22** 01:28:53.3, 3599N×140.12E, h103^{km}, mB4.8, mb4.7*
*ISCJB **22** 01:28:53.7±0.3, 3595N±002×13985E±004, h88^{km}±2^{km}, mb4.3/33, Error ellipse: s-maj=6.1km s-min=4.0km az=167.6*
*MOS **22** 01:28:53.4±1.1, 3599N×13985E, h86^{km}, mb4.2/6, Error ellipse: s-maj=13.6km s-min=8.2km az=107.3*
*NEIC **22** 01:28:54.1±0.8, 3595N×13988E, h77^{km}±6^{km}, mb4.4/9, Error ellipse: s-maj=8.1km s-min=6.2km az=120.0*
NEIC Felt at Tokyo. Recorded [3 JMA] in Ibaraki; [2 JMA] in Gumma, Saitama, Tochigi and Tokyo; [1 JMA] in Chiba, Fukushima, Kanagawa, Nagano and Yamanashi Prefectures.
*JMA **22** 01:28:55.5±0.2, 3596N×13981E, h78^{km}±2^{km}, M4.2 Broadband fault plane solution: P waves. NP1: ϕ_s22.00000°, δ18.00000°, λ-105.00000°. NP2: ϕ_s218.00000°, δ73.00000°, λ-85.00000°. Principal axes: T Plg28.0000°, Azm304.0000°; N Plg5.0000°, Azm36.0000°; P Plg62.0000°, Azm135.0000°;*
JMA Felt III J1.
*IDC **22** 01:28:55.3±1.2, 3588N×13973E, h87^{km}±11^{km}, mb3.8/13, mb1 4.0/17, mb1mx3.9/22, mbtmp3.9/17, MS2.8/3, Ms1 2.8/3, ms1mx2.6/29 Error ellipse: s-maj=20.1km s-min=6.8km az=66.0*
*NIED **22** 01:29:00, 3600N×13980E, h68^{km}, Mw4.1 Best double couple: M0 1.37000×10^{15} NP1: ϕ_s57.00000°, δ10.00000°, λ-76.00000°. NP2: ϕ_s223.00000°, δ80.00000°, λ-93.00000°.*

ISC 22 01:28:54.7±0.3, 3595N±002×13986E±004, h81^{km}±2^{km}, n100, σ0§92/117, mb4.3/33, 3C-5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOK	**Tokyo**	**0.28**	**198**	P	**Pn**	**01 29 08.6**	**+1.6**
TOK				*eS*	**Sn**	**01 29 18.3**	**+2.3**
JAG	**Ashikaga**	**0.58**	**325**	||P	**Pn**	**01 29 09.7**	**+0.4**
JAG				*eS*	**Sn**	**01 29 20.2**	**+0.2**
JRY	**Ryogami san**	**0.78**	**275**	||P	**Pn**	**01 29 11.8**	**+0.5**
JRY				S	**Sn**	**01 29 23.8**	**+0.1**
JOD2	**Odawara 2**	**0.93**	**223**	||P	**Pn**	**01 29 12.7**	**-0.3**
JOD2				*eS*	**Sn**	**01 29 25.1**	**-1.6**
JKT	**Katashina**	**0.95**	**329**	||P	**Pn**	**01 29 13.7**	**+0.4**
JKT				*eS*	**Sn**	**01 29 27.3**	**+0.2**
JYN	**Shimob**	**1.16**	**248**	||P	**Pn**	**01 29 15.9**	**+0.1**
JYN				*eS*	**Sn**	**01 29 31.3**	**-0.3**
BSO3	**Boso 3**	**1.26**	**155**	††P	**Pn**	**01 29 17.5**	**+0.4**
JIM2	**Oshima 3**	**1.28**	**196**	††P	**Pn**	**01 29 16.9**	**-0.4**
JIM2				*eS*	**Sn**	**01 29 33.1**	**-1.1**
MJAR	**Matsushiro Arr** 86nm,0.3s,baz=105,slow=14,SNR=260	**1.46**	**294**	P	**Pn**	**01 29 19.8**	**+0.2**
MJAR				S	**Sn**	**01 29 37.1**	**-1.2**
	134nm,0.3s,baz=110,slow=21,SNR=28						
MAJO	**Matsushiro**	**1.46**	**294**	*e*Pn	**Pn**	**01 29 20.0**	**+0.4**
MAJO				*e*Sn	**Sn**	**01 29 37.7**	**-0.7**
MAT	**Matsushiro**	**1.46**	**294**	P	**Pn**	**01 29 20.0**	**+0.4**
MAT				S	**Sn**	**01 29 37.8**	**-0.5**
MAT	**Matsushiro**	**1.46**	**294**	P	**Pn**	**01 29 20.2**	**+0.6**
MAT				S	**Sn**	**01 29 38.2**	**-0.1**
JIZS	**Izushimoda**	**1.47**	**213**	P	**Pn**	**01 29 20.0**	**+0.3**
JIZS				S	**Sn**	**01 29 38.3**	**-0.2**
BSO1	**Boso 1**	**1.58**	**144**	††P	**Pn**	**01 29 21.3**	**+0.1**
NJJJ	**Nii jima 2**	**1.62**	**197**	P	**Pn**	**01 29 22.0**	**+0.4**
NJJJ				*eS*	**Sn**	**01 29 42.5**	**

CD2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5							
GTA	**Gaotai**	**31.70**	**288**	*eP*	**P**	**P**	**01 35 10.1**	**-0.5**
GTA					PP	PP	01 36 16.9	-6.6
GTA					S	**S**	**01 40 13.4**	**-0.9**
GTA					AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.1							
GTA					AMB	AMB		
	comp=Z,75nm,8.0s							
GTA					LR	LR		
	comp=N,69nm,15.2s							
GTA					LR	LR		
	comp=E,142nm,15.2s							
GTA					LR	LR		
	comp=Z,53nm,15.2s							
KMI	**Kunming**	**33.56**	**262**	P	**P**	**P**	**01 35 27.0**	**0.0**
KMI					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
KMI					LR	LR		
	comp=Z,29nm,18.3s							
CHTO	**Chiang Mai**	**39.81**	**256**	P	**P**	**P**	**01 36 19.2**	**-0.9**
NVS	**Novosibirsk**	**42.70**	**315**	*eP*	**P**	**P**	**01 36 43.0**	**-0.3**
MKAR	**Makanchi Array**	**43.65**	**303**	P	**P**	**P**	**01 36 50.9**	**-0.2**
	comp=Z,2.8nm,0.5s,mb4.2,baz=86,slow=9.9,SNR=25							
MKAR					LR	LR	01 54 31.4	
	comp=Z,33nm,19.3s,baz=283,slow=35							
KURK	**Kurchatov**	**45.62**	**309**	*eP*	**P**	**P**	**01 37 06.0**	**-0.7**
	comp=Z,15nm,0.6s,mb4.9							
KURK	**Kurchatov**	**45.62**	**309**	*eP*	**P**	**P**	**01 37 06.1**	**-0.7**
KURK					pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9							
PMG	**Port Moresby**	**45.63**	**170**	*eP*	**P**	**P**	**01 37 06.3**	**-0.8**
KAKA	**Kakadu**	**48.90**	**190**	*eP*	**P**	**P**	**01 37 32.4**	**-0.1**
	comp=Z,12nm,0.6s,mb5.0							
TKM2	**Tokmak 2**	**49.05**	**299**	*eP*	**P**	**P**	**01 37 34.4**	**+0.9**
	comp=Z,11nm,0.5s,mb5.0							
TKM2	**Tokmak 2**	**49.05**	**299**	*eP*	**P**	**P**	**01 37 34.4**	**+0.9**
TKM2					pmax	pmax		
	comp=Z,11nm,0.5s,mb5.0							
TKM2	**Tokmak 2**	**49.05**	**299**	P	**P**	**P**	**01 37 35.0**	**+1.5**
	SNR=19							
KZA	**Kyzart**	**49.52**	**298**	P	**P**	**P**	**01 37 39.2**	**+2.2**
	SNR=22							
KBK	**Karagaybulak**	**49.58**	**299**	P	**P**	**P**	**01 37 38.7**	**+1.2**
	SNR=17							
USP	**Ospenovka**	**49.74**	**300**	P	**P**	**P**	**01 37 39.4**	**+0.7**
	SNR=6.2							
UCH	**Uchtor**	**50.00**	**298**	*eP*	**P**	**P**	**01 37 42.0**	**+1.2**
	comp=Z,3.3nm,0.6s,mb4.4							
UCH	**Uchtor**	**50.00**	**298**	P	**P**	**P**	**01 37 42.4**	**+1.7**
	SNR=6.4							
EKS2	**Erkin-Say**	**50.41**	**299**	*eP*	**P**	**P**	**01 37 44.1**	**+0.3**
	comp=Z,4.2nm,0.6s,mb4.5							
EKS2	**Erkin-Say**	**50.41**	**299**	P	**P**	**P**	**01 37 44.6**	**+0.8**
	SNR=6.4							
BRVK	**Borovoye**	**50.44**	**313**	*eP*	**P**	**P**	**01 37 43.7**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.0							
BRVK	**Borovoye**	**50.44**	**313**	*eP*	**P**	**P**	**01 37 43.7**	**-0.2**
BRVK					pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8							
AML	**Almayashu**	**50.62**	**298**	*eP*	**P**	**P**	**01 37 46.6**	**+1.2**
	comp=Z,32nm,0.7s,mb5.5							
AML	**Almayashu**	**50.62**	**298**	P	**P**	**P**	**01 37 47.2**	**+1.8**
	SNR=41							
COLA	**College**	**50.66**	**32**	*eP*	**P**	**P**	**01 37 44.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**55.42**	**196**	*eP*	**P**	**P**	**01 38 21.5**	**+0.7**
	comp=Z,7.1nm,0.5s,mb5.0							
WB2	**Warramunga Arr**	**55.83**	**186**	*eP*	**P**	**P**	**01 38 23.3**	**-0.4**
WRA	**Warramunga Ar**	**55.83**	**186**	P	**P**	**P**	**01 38 23.3**	**-0.4**
	comp=Z,2.8nm,0.4s,mb4.7,baz=1.2,slow=7.5,SNR=131							
INK	**Inuvik**	**55.92**	**27**	*eP*	**P**	**P**	**01 38 25.9**	**+2.0**
INK	**Inuvik**	**55.92**	**27**	P	**P**	**P**	**01 38 24.9**	**+1.1**
INK					pmax	pmax		
	comp=Z,1.0nm,0.7s							
INK	**Inuvik**	**55.92**	**27**	P	**P**	**P**	**01 38 24.9**	**+1.0**
	comp=Z,1.1nm,0.7s,mb4.0,baz=273,slow=9.0,SNR=9.4							
KBL	**Kabul**	**56.64**	**291**	*eP*	**P**	**P**	**01 38 29.3**	**-0.2**
	comp=Z,2.7nm,0.8s,mb4.3							
ASAR	**Alice Springs**	**59.56**	**186**	P	**P**	**P**	**01 38 50.0**	**+0.2**
	comp=Z,1.7nm,0.5s,mb4.3,baz=9.8,slow=7.0,SNR=31							
MBWA	**Marble Bar**	**59.91**	**202**	P	**P**	**P**	**01 38 51.6**	**-0.7**
PALK	**Pallekele**	**60.91**	**257**	*eP*	**P**	**P**	**01 38 59.5**	**+0.1**
RES	**Resolute Bay**	**63.96**	**14**	*eP*	**P**	**P**	**01 39 20.1**	**+1.3**
KEV	**Kevo**	**64.01**	**339**	*ep*	**P**	**P**	**01 39 20.6**	**+1.4**
	comp=Z,2.2nm,0.6s,mb4.2							
KEV	**Kevo**	**64.01**	**339**	*eP*	**P**	**P**	**01 39 20.6**	**+1.4**
KEV					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1							
ARCES	**ARCESS Array B**	**64.57**	**339**	P	**P**	**P**	**01 39 23.4**	**+0.6**
ARCES	**ARCESS Array B**	**64.57**	**339**	P	**P**	**P**	**01 39 23.4**	**+0.6**
	comp=Z,5.3nm,1.0s,mb4.3,baz=59,slow=7.1,SNR=14							
JOF	**Joensuu**	**66.33**	**332**	*ep*	**P**	**P**	**01 39 33.8**	**-0.4**
FORT	**Forrest**	**67.30**	**191**	*eP*	**P**	**P**	**01 39 41.2**	**+0.5**
	comp=Z,8.7nm,0.7s,mb4.7							
STKA	**Stephens Creek**	**67.49**	**178**	*eP*	**P**	**P**	**01 39 42.0**	**+0.1**
STKA	**Stephens Creek**	**67.49**	**178**	P	**P**	**P**	**01 39 41.3**	**-0.6**
	comp=Z,2.9nm,0.6s,mb4.3,baz=330,slow=9.9,SNR=7.0							
KAF	**Kangasniemi**	**68.69**	**332**	*ep*	**P**	**P**	**01 39 47.5**	**-1.7**
	comp=Z,0.8nm,0.3s,mb4.0,baz=54,slow=5.6							
KAF	**Kangasniemi**	**68.69**	**332**	*eP*	**P**	**P**	**01 39 47.5**	**-1.7**
KAF					pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.1							
FINES	**FINESS Array B**	**69.19**	**332**	P	**P**	**P**	**01 39 51.7**	**-0.6**
FINES	**FINESS Array B**	**69.19**	**332**	P	**P**	**P**	**01 39 51.7**	**-0.6**
	comp=Z,1.5nm,0.8s,mb3.9,baz=43,slow=7.9,SNR=6.3							
KIV	**Kislovodsk**	**70.67**	**311**	P	**P**	**P**	**01 40 02.9**	**+1.3**
	comp=Z,3.2nm,0.7s,mb4.3							
KIV	**Kislovodsk**	**70.67**	**311**	P	**P**	**P**	**01 40 02.9**	**+1.3**
KIV					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2							
WVOR	**Wild Horse Val**	**74.15**	**49**	P	**P**	**P**	**01 40 23.3**	**+1.0**
AKASG	**Malin Array Be**	**74.38**	**322**	P	**P**	**P**	**01 40 22.4**	**-1.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=47,slow=5.6,SNR=5.4							
NOA	**NORSAR Array B**	**74.69**	**337**	P	**P**	**P**	**01 40 24.5**	**-0.7**
NOA	**NORSAR Array B**	**74.69**	**337**	P	**P**	**P**	**01 40 24.5**	**-0.7**
	comp=Z,1.0nm,0.8s,mb3.6,baz=41,slow=5.8,SNR=3.6							
FCC	**Fort Churchill**	**75.52**	**26**	P	**P**	**P**	**01 40 28.9**	**-1.1**
BOZ	**Bozeman (W)**	**76.36**	**43**	P	**P**	**P**	**01 40 35.2**	**+0.2**
NVAR	**Mina Array Bea**	**76.64**	**52**	P	**P**	**P**	**01 40 38.2**	**+1.5**
	comp=Z,0.8nm,0.6s,mb3.6,baz=300,slow=3.5,SNR=5.2							
MOOW	**Moose Ponds**	**78.02**	**44**	P	**P**	**P**	**01 40 44.2**	**-0.2**
BW06	**Boulder Array**	**79.31**	**45**	*eP*	**P**	**P**	**01 40 51.3**	**-0.1**
PDAR	**Pinedale Array**	**79.32**	**45**	P	**P**	**P**	**01 40 51.2**	**-0.3**
	comp=Z,0.7nm,1.1s,mb3.4,baz=233,slow=8.9,SNR=3.4							
RSSD	**Black Hills**	**81.47**	**41**	*eP*	**P**	**P**	**01 41 02.1**	**-0.9**
CBKS	**Cedar Bluff**	**87.47**	**42**	P	**P**	**P**	**01 41 33.1**	**-0.3**
TXAR	**Lajitas Array**	**91.77**	**51**	P	**P**	**P**	**01 41 54.6**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.6,baz=281,slow=1.3,SNR=3.6							
NATX	**Nacogdoches**	**95.45**	**44**	P	**P**	**P**	**01 42 08.6**	**-2.0**
LPAZ	**La Paz**	**148.32**	**59**	PKPbc	PKPbc	PKPbc	01 48 33.6	+1.5
	comp=Z,0.8nm,0.7s,baz=25,slow=11,SNR=4.6							
SIV	**San Ignacio**	**152.74**	**49**	PKPbc	PKPbc	PKPbc	01 48 42.4	-0.3
	comp=Z,0.4nm,0.4s,baz=233,slow=11,SNR=3.7							

*ISCJB **22** 01:32:55.4±0.8, 328S±0.1×1788W±02, h33km, mb4.3/5, Error ellipse: s-maj=20.3km s-min=15.9km az=158.8*
*NEIC **22** 01:32:57.6±0.6, 3276S×17887W, h35km, mb4.3/1, Error ellipse: s-maj=15.6km s-min=12.6km az=73.0*
*IDC **22** 01:32:58.9±1.4, 3276S×17881W, h53km±8km, mb3.8/3, mb1 4.1/3, mb1mx3.7/14, mbtmp3.8/3, Error ellipse: s-maj=41.2km s-min=29.8km az=25.0*

ISC 22 01:32:57.4±0.8, 327S±01×1788W±02, h35km, n12, σ0§43/12, mb4.3/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.47**	**210**	P	**Pn**	**01 34 20.7**	**-9.4**
	2.7nm,0.3s,baz=253,slow=2.9,SNR=13						
URZ				S	**Sn**	**01 35 31.3**	**-11**
	0.7nm,0.3s,baz=130,slow=13,SNR=3.5						
AFI	**Afiamalu**	**19.77**	**21**	P	**Pn**	**01 37 26.1**	**-0.1**
CTAO	**Charters Tower**	**33.56**	**283**	P	**P**	**01 39 34.2**	**+0.1**
PMG	**Port Moresby**	**39.03**	**299**	*eP*	**P**	**01 40 21.4**	**+0.5**
	2.3nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**42.35**	**270**	P	**P**	**01 40 47.7**	**-0.5**
	2.9nm,0.7s,mb4.0,baz=110,slow=7.3,SNR=24						
ASAR				pP	pP	01 41 02.0	+3.5
	3.2nm,0.6s,baz=108,slow=7.5,SNR=11						
WB2	**Warramunga Arr**	**43.54**	**275**	*eP*	**P**	**01 40 58.1**	**+0.2**
WRA	**Warramunga Ar**	**43.55**	**275**	P	**P**	**01 40 57.5**	**-0.4**
	1.8nm,0.6s,mb4.0,baz=117,slow=7.6,SNR=13						
WRA				pP	pP	01 41 11.4	+3.2
	2.0nm,0.6s,baz=115,slow=7.8,SNR=7.6						
SBA	**Scott Base**	**45.70**	**184**	P	**P**	**01 41 14.1**	**-0.3**
	52nm,2.3s,mb5.1						
CASY	**Casey**	**52.79**	**209**	*eP*	**P**	**01 42 09.3**	**+0.6**
	118nm,1.7s						
QSPA	**South Pole Qui**	**57.42**	**180**	P	**P**	**01 42 41.3**	**-0.6**
	1.1nm,0.6s,mb4.0,baz=358,slow=7.4,SNR=2.7						
PMSA	**Palmer Station**	**70.46**	**156**	P	**P**	**01 44 08.3**	**+0.5**
FINES	**FINESS Array B**	**147.04**	**338**	PKPbc	PKPbc	01 52 34.6	-1.0
	2.2nm,0.9s,baz=64,slow=4.4,SNR=6.8						
FINES				pPKPbc	pPKPbc	01 52 50.0	+3.0
	1.9nm,0.8s,baz=43,slow=3.4,SNR=2.8						

*MOS **22** 02:06:04.6±0.9, 3635N×7056E, h195km, mb4.1/11, Error ellipse: s-maj=15.6km s-min=7.3km az=91.4*
*IDC **22** 02:06:05.2±6.0, 3623N×7056E, h189km±56km, mb3.7/10, mb1 3.8/12, mb1mx3.6/19, mbtmp3.7/12, Error ellipse: s-maj=23.4km s-min=14.9km az=17.0*
*ISCJB **22** 02:06:05.9±0.4, 3644N±003×7064E±005, h206km±5km, mb3.9/17, Error ellipse: s-maj=6.5km s-min=3.8km az=161.0*
*NEIC **22** 02:06:06.7±0.7, 3640N×7065E, h202km±6km, mb3.9/5, Error ellipse: s-maj=9.7km s-min=7.2km az=123.0*
*BJI **22** 02:06:06.8, 3665N×7041E, h222km, mb4.0*
*NNC **22** 02:06:13.4±2.5, 3703N×7068E, h207km±22km, mb3.6, mpv5.0, Error ellipse: s-maj=28.2km s-min=15.9km az=11.0*

ISC 22 02:06:06.7±0.4, 3646N±003×7061E±005, h199km±4km, n87, σ0§98/110, mb3.9/17, 6C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.30**	**214**	*e*Pn	**Pn**	**02 06 49.5**	**+1.2**
KBL				*e*Sn	**Sn**	**02 07 20.8**	**+0.1**
KSH	**Kashi**	**5.22**	**53**	*e*P	**Pn**	**02 07 25.3**	**+1.4**
KSH				Smax			
	comp=N,838nm,0.6s						
KSH				Smax			
	comp=E,877nm,0.5s						
THN	**Thein Dam**	**5.82**	**132**	*e*P	**Pn**	**02 07 31.9**	**+0.2**
THN				*e*x	**Sn**	**02 08 38.1**	**-0.7**
DLH	**Dalhousie**	**5.90**	**130**	*e*P	**Pn**	**02 07 34.0**	**+1.3**
DLH				*e*x	**Sn**	**02 08 41.0**	**+0.4**
AML	**Almayashu**	**6.15**	**22**	P	**Pn**	**02 07 36.0**	**+0.3**
	SNR=539						
UCH	**Uchtor**	**6.51**	**27**	*e*Pn	**Pn**	**02 07 40.8**	**+0.4**
	comp=E,151nm,0.6s						
UCH				*e*Sn	**Sn**	**02 08 51.9**	**-2.8**
UCH	**Uchtor**	**6.51**	**27**	P	**Pn**	**02 07 41.0**	**+0.5**
	SNR=167						
KK31	**Karatay Array**	**6.64**	**359**	⇓P	**Pn**	**02 07 41.7**	**-0.4**
	comp=E,28nm,0.3s,baz=176,slow=13						
KK31				⇑S	**Sn**	**02 08 52.1**	**-5.7**
	comp=E,29nm,0.5s,baz=186,slow=24						
KK31	**Karatay Array**	**6.64**	**359**	PN	**Pn**	**02 07 41.6**	**-0.5**
EKS2	**Erkin-Say**	**6.66**	**21**	*e*Pn	**Pn**	**02 07 42.7**	**+0.2**
	comp=E,45nm,0.4s						
EKS2				*e*Sn	**Sn**	**02 08 55.9**	**-2.4**
EKS2	**Erkin-Say**	**6.66**	**21**	P	**Pn**	**02 07 42.7**	**+0.3**
	SNR=116						
KZA	**Kyzart**	**6.67**	**31**	P	**Pn**	**02 07 42.5**	**0.0**
	SNR=63						
AAK	**Ala-Archa**	**6.86**	**25**	P	**Pn**	**02 07 45.5**	**+0.5**
	SNR=53						
KBK	**Karagaybulak**	**7.04**	**27**	P	**Pn**	**02 07 48.0**	**+0.7**
	SNR=51						
SDNR	**Sundarnagar**	**7.24**	**131**	*e*P	**Pn**	**02 07 49.4**	**-0.6**
SDNR				*e*S	**Sn**	**02 09 06.6**	**-5.4**
ULHL	**Ulahol**	**7.24**	**35**	P	**Pn**	**02 07 50.4**	**+0.5**
	SNR=19						
CHMS	**Chmysh**	**7.27**	**25**	P	**Pn**	**02 07 50.2**	**-0.1**
	SNR=19						
USP	**Ospenovka**	**7.43**	**23**	P	**Pn**	**02 07 52.1**	**-0.3**
	SNR=41						
TKM2	**Tokmak 2**	**7.51**	**29**	⇑P	**Pn**	**02 07 53.5**	**+0.1**
	comp=E,77nm,0.5s						
TKM2				⇓S	**Sn**	**02 09 13.3**	**-5.1**
	comp=E,12nm,0.7s						
TKM2	**Tokmak 2**	**7.51**	**29**	*e*Pn	**Pn**	**02 07 53.7**	**+0.3**
	comp=E,106nm,0.5s						
TKM2				*e*Sn	**Sn**	**02 09 16.7**	**-1.7**
TKM2	**Tokmak 2**	**7.51**	**29**	*e*PN	**Pn**	**02 07 53.7**	**+0.2**
TKM2				pmax	pmax		
	comp=Z,106nm,0.5s						
TKM2	**Tokmak 2**	**7.51**	**29**	P	**Pn**	**02 07 53.7**	**+0.2**
	SNR=155						
DDI	**Dehra Dun**	**8.73**	**132**	*e*P	**Pn**	**02 08 10.0**	**+0.6**
DDI				*e*x	x	02 09 21.5	
KHET	**Khetri**	**9.44**	**151**	*e*P	**Pn**	**02 08 17.6**	**-1.2**
KHET				*e*S	**Sn**	**02 09 55.0**	**-9.5**
KHET				AML	AML	02 10 00.1	
	comp=N,38nm,0.5s						
KHET				AML	AML	02 10 01.3	
	comp=E,39nm,0.4s						
JOSI	**Joshimath**	**9.51**	**126**	*e*P	**Pn**	**02 08 19.6**	**0.0**
JOSI				*e*S	**Sn**	**02 09 59.5**	**-6.5**
NDI	**New Delhi**	**9.54**	**142**	*e*P	**Pn**	**02 08 19.0**	**-1.1**
NDI				*e*S	**Sn**	**02 10 00.0**	**-6.9**
KUDL	**Kundal**	**9.66**	**147**	*e*P	**Pn**	**02 08 21.1**	**-0.5**
KUDL				*e*S	**Sn**	**02 10 00.9**	**-8.8**
KUDL				AML	AML	02 10 06.6	
	comp=N,26nm,0.5s						
KUDL				AML	AML	02 10 06.7	
	comp=E,25nm,0.5s						
SONA	**Sohna**	**9.84**	**144**	*e*P	**Pn**	**02 08 23.5**	**-0.4**
SONA				*e*S	**Sn**	**02 10 05.2**	**-8.8**
SONA				AML	AML	02 10 11.3	
	comp=N,134nm,0.3s						
SONA				AML	AML	02 10 11.9	
	comp=E,195nm,0.1s						
AJM	**Ajmer**	**10.53**	**160**	*e*P	**Pn**	**02 08 30.0**	**-2.8**
AJM				*e*x	**Sn**	**02 10 23.0**	**-7.3**
AGRA	**Agra**	**11.11**	**144**	*e*P	**Pn**	**02 08 38.2**	**-2.1**
AGRA				*e*S	**Sn**	**02 10 33.3**	**-11**
MK31	**Makanchi Array**	**13.51**	**37**	⇑P	**Pn**	**02 09 10.7**	**+0.3**
	comp=E,9.5nm,0.7s,baz=217,slow=14,SNR=62						
MK31	**Makanchi Array**	**13.51**	**37**	*e*P	**Pn**	**02 09 10.8**	**+0.4**
MKAR	**Makanchi Array**	**13.51**	**37**	P	**Pn**	**02 09 11.3**	**+0.9**
MKAR	**Makanchi Array**	**13.51**	**37**	P	**Pn**	**02 09 11.3**	**+0.9**
	comp=E,0.7nm,0.3s,baz=216,slow=13,SNR=38						
KOLN	**Koldanda**	**14.00**	**125**	*e*P	**Pn**	**02 09 16.5**	**-0.2**
	comp=E,8.0nm,0.4s						
KOLN				*e*S	**Sn**	**02 11 43.1**	**-10**
GKN	**Gorkha**	**14.55**	**121**	*e*P	**Pn**	**02 09 23.5**	**0.0**
	comp=E,24nm,0.5s						
GKN				*e*S	**Sn**	**02 11 56.1**	**-10**
AB31	**Akbulak array**	**14.97**	**332**	P	**Pn**	**02 09 27.5**	**-0.9**
	comp=E,4.3nm,0.5s,baz=146,slow=12,SNR=110						
AB31				⇑S	**Sn**	**02 12 09.6**	**-6.3**
	comp=E,0.9nm,0.4s,baz=48,slow=43,SNR=6.8						
AB31	**Akbulak array**	**14.97**	**332**	P	**Pn**	**02 09 30.0**	**+1.6**
KKN	**Kakani**	**15.13**	**121**	*e*P	**Pn**	**02 09 31.1**	**+0.6**
	comp=E,14nm,0.3s						
KURK	**Kurchatov**	**15.38**	**20**	*e*Pn	**Pn**	**02 09 32.6**	**-0.7**
	comp=E,2.3nm,0.8s						
KURK	**Kurchatov**	**15.38**	**20**	*e*P	**Pn**	**02 09 32.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JIRN	**Jiri**	**15.84**	**119**	*e*P	**Pn**	**02 09 40.2**	**+1.0**
	comp=Z,29nm,0.5s						
BRVK	**Borovoye**	**16.60**	**359**	*e*P	**Pn**	**02 09 47.3**	**-0.7**
	comp=Z,3.3nm,0.6s						
BRVK	**Borovoye**	**16.60**	**359**	*e*P	**Pn**	**02 09 47.3**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTK	**Aktyubinsk**	**16.66**	**331**	P	**Pn**	**02 09 49.3**	**+0.6**
AKTK				S	**S**	**02 12 50.6**	**-0.8**
AKTO	**Aktyubinsk**	**16.66**	**331**	P	**Pn**	**02 09 49.3**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=147,slow=10,SNR=30						
AKTO				S	**S**	**02 12 50.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=271,slow=23,SNR=3.4						
TAPN	**Taplejung**	**17.11**	**117**	*e*P	**Pn**	**02 09 55.9**	**+1.6**
	comp=Z,8.9nm,0.4s						
ODAN	**Odare**	**17.17**	**119**	*e*P	**Pn**	**02 09 56.6**	**+1.5**
	comp=Z,9.3nm,0.5s						
CHKZ	**Chkalovo**	**17.22**	**0**	⇑P	**Pn**	**02 09 54.3**	**-1.0**
	comp=Z,3.0nm,0.8s						
HYB	**Hyderabad**	**20.23**	**158**	*e*P	**P**	**02 10 31.0**	**+4.3**
HYB	**Hyderabad**	**20.23**	**158**	*i* P	**P**	**02 10 31.0**	**+4.3**
NVS	**Novosibirsk**	**20.34**	**21**	*e*P	**P**	**02 10 28.2**	**+0.8**
NVS				*e*		02 11 26.5	
NVS				*e*S	**S**	**02 14 02.3**	**-1.7**
NVS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
NVS				smax			
	comp=N,17nm,2.0s						
ARU	**Arti**	**21.57**	**342**	*e*P	**P**	**02 10 41.1**	**+0.6**
ARU	**Arti**	**21.57**	**342**	*d i*P	**P**	**02 10 41.3**	**+0.8**
ARU				S	**S**	**02 14 31.5**	**+5.8**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.2						
SONM	**Songino Array**	**28.62**	**55**	P	**P**	**02 11 45.4**	**+1.1**
	comp=Z,0.8nm,0.9s,mb3.4,baz=259,slow=8.2,SNR=6.1						
OBN	**Obninsk**	**29.77**	**320**	*eP*	**P**	**02 11 55.5**	**+1.1**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
HHC	**Hu-ho-hao-te**	**32.08**	**69**	*eP*	**P**	**02 12 12.1**	**-2.7**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
JOF	**Joensuu**	**35.75**	**330**	*ep*	**P**	**02 12 46.1**	**0.0**
	comp=Z,5.2nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**02 13 00.5**	**+0.9**
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**02 13 00.6**	**+1.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	**FINESS Array B**	**37.34**	**326**	P	**P**	**02 13 00.6**	**+0.9**
	comp=Z,4.2nm,0.7s,mb4.1,baz=118,slow=9.7,SNR=22						
KAF	**Kangasniemi**	**37.49**	**327**	*ep*	**P**	**02 13 01.2**	**+0.3**
	baz=111,slow=8.4						
PSZ	**Piszkesteto**	**38.63**	**303**	*eP*	**P**	**02 13 10.0**	**-0.6**
	comp=Z,2.5nm,0.7s,mb3.9						
PSZ	**Piszkesteto**	**38.63**	**303**	*eP*	**P**	**02 13 10.0**	**-0.6**
PSZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
KEV	**Kevo**	**40.73**	**338**	*ep*	**P**	**02 13 28.0**	**+0.5**
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**02 13 30.8**	**+0.5**
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**02 13 31.5**	**+1.2**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**02 13 31.4**	**+1.1**
	comp=Z,3.9nm,0.6s,mb4.0,baz=111,slow=7.7,SNR=20						
NB2	**NORSAR Subarra**	**44.23**	**323**	P	**P**	**02 13 56.0**	**+0.2**
	comp=Z,3.4nm,0.6s,mb3.9,baz=97,slow=7.9						
NB2	**NORSAR Subarra**	**44.23**	**323**	P	**P**	**02 13 56.0**	**+0.2**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
NOA	**NORSAR Array B**	**44.23**	**323**	P	**P**	**02 13 56.2**	**+0.4**
	comp=Z,3.8nm,0.7s,mb3.9,baz=97,slow=7.8,SNR=14						
TIXI	**Tiksi**	**45.93**	**22**	*eP*	**P**	**02 14 09.6**	**+0.5**
	comp=Z,2.2nm,0.5s,mb3.7						
TIXI	**Tiksi**	**45.93**	**22**	⇑*eP*	**P**	**02 14 09.5**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb3.8						
BILL	**Bilibino**	**58.79**	**26**	*eP*	**P**	**02 15 45.0**	**+1.5**
BILL				*e*	pP	02 16 31.0	+2.2
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
TOA0	**Torodi Ar. Sit**	**65.40**	**268**	*eP*	**P**	**02 16 27.1**	**-1.2**
TORD	**Torodi Ar. Bea**	**65.40**	**268**	P	**P**	**02 16 26.8**	**-1.5**
	comp=Z,2.0nm,0.5s,mb4.0,baz=49,slow=5.7,SNR=76						
INK	**Inuvik**	**74.00**	**9**	*eP*	**P**	**02 17 20.8**	**+0.9**
DBIC	**Dimbokro**	**74.38**	**267**	P	**P**	**02 17 22.3**	**-0.8**
DBIC	**Dimbokro**	**74.38**	**267**	P	**P**	**02 17 22.3**	**-0.7**
	comp=Z,4.4nm,1.0s,mb4.0,baz=339,slow=8.6,SNR=5.5						
BOSA	**Boshof**	**77.51**	**220**	P	**P**	**02 17 40.6**	**+0.4**
	comp=Z,1.2nm,0.8s,mb3.6,baz=121,slow=15,SNR=3.9						
YKA	**Yellowknife Ar**	**81.30**	**2**	P	**P**	**02 18 01.0**	**+0.7**
YKA	**Yellowknife Ar**	**81.30**	**2**	P	**P**	**02 18 01.1**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**81.30**	**2**	P	**P**	**02 18 01.1**	**+0.

ESK					AML	AML	02 25 10.5		
	comp=N,11nm,0.8s								
ESK					AML	AML	02 25 29.2		
	comp=E,12nm,0.7s								
ESK	**Eskdalemuir**	**4.31**	**188**	P		**Pn**	**02 24 17.9**	**+0.3**
ESK				S		**Sn**	**02 25 02.9**	**-3.9**
BLS5	**Blasjo**	**4.40**	**88**	*e*P		**Pn**	**02 24 20.6**	**+1.8**
BLS5				*e*S		**Sn**	**02 25 08.2**	**-0.7**
BLS5	**Blasjo**	**4.40**	**88**	*e*P		**Pn**	**02 24 20.6**	**+1.8**
BLS5				*e*S		**Sn**	**02 25 08.2**	**-0.7**
BLS5				AML		AML	02 25 16.2		
	comp=Z,3.3nm,0.1s								
HYA	**Hoyanger**	**4.44**	**65**	*e*P		**Pn**	**02 24 20.7**	**+1.3**
HYA				*e*S		**Sn**	**02 25 10.5**	**+0.5**
HYA	**Hoyanger**	**4.44**	**65**	*e*P		**Pn**	**02 24 20.7**	**+1.3**
HYA				*e*S		**Sn**	**02 25 10.5**	**+0.5**
HYA				AML		AML	02 25 17.1		
	comp=Z,6.3nm,0.6s								
ODD1	**Odda**	**4.46**	**82**	*e*P		**Pn**	**02 24 19.8**	**+0.1**
ODD1				*e*S		**Sn**	**02 25 08.7**	**-1.8**
SNART	**Snartemo**	**5.01**	**100**	*e*P		**Pn**	**02 24 27.7**	**+0.4**
SNART				*e*S		**Sn**	**02 25 22.6**	**-1.5**
SNART				AML		AML	02 25 39.3		
	comp=Z,3.8nm,0.4s								

MEX 22 02:59:29.3±0.3, 1840N×10307W, h16km±123km, MD3.9, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**2.19**	**54**	*i* P	Pn	03 00 01.6	-3.4
MOIG				*i* S	Sn	03 00 27.2	-4.5
MEIG	**Mezcala**	**3.31**	**98**	*i* P	Pn	03 00 17.6	-2.8
MEIG				*i* S	Sn	03 00 55.2	-4.2
ACX	**Acapulco**	**3.37**	**116**	*e*P	Pn	03 00 18.5	-2.7
SZVM	**Salazar**	**3.61**	**75**	*i* P	Pn	03 00 23.1	-1.5
SZVM				*i* S	Sn	03 01 04.4	-2.5

IDC 22 03:02:41.0±3.5, 100S×9975E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=153.6km s-min=24.3km az=57.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.72**	**121**	P	P	03 10 07.0	-0.3
	0.5nm,0.5s,baz=302,slow=9.4,SNR=6.9						
ASAR	**Alice Springs**	**40.05**	**127**	P	P	03 10 18.7	+0.4
	0.4nm,0.7s,baz=307,slow=8.0,SNR=4.5						
SONM	**Songino Array**	**48.98**	**6**	P	P	03 11 30.1	+0.9
	0.4nm,1.1s,baz=191,slow=6.9,SNR=3.7						
MKAR	**Makanchi Array**	**50.00**	**344**	P	P	03 11 37.0	-0.1
	1.0nm,0.5s,baz=147,slow=8.3,SNR=13						
TXAR	**Lajitas Array**	**144.06**	**36**	PKP	PKPdf	03 22 17.0	-2.5
	0.2nm,0.4s,baz=250,slow=0.8,SNR=5.0						

ATH 22 03:03:31.5, 3909N×2670E, h13km, MD3.0/4
NEIC 22 03:03:31.6, 3908N×2667E, h15km, MD3.0(ATH), After ATH.
ISCJB 22 03:03:33.6±0.9, 3897N±005×2637E±009, h21km±9km, Error ellipse: s-maj=12.6km s-min=6.0km az=155.0
CSEM 22 03:03:33.4±0.2, 3899N×2651E, h15km, MD2.8, Error ellipse: s-maj=6.9km s-min=2.7km az=72.0
DDA 22 03:03:34.4, 3900N×2641E, h22km, Md2.8
ISC 22 03:03:33.4±1.0, 3895N±005×2637E±008, h15km±6km, n8, σ0°77/13, 1C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.30**	**346**	*i* PB	**Pg**	**03 03 38.7**	**-1.1**
PRK				*e*SB	**Sg**	**03 03 44.1**	**0.0**
AYVA	**Ayvalik**	**0.43**	**35**	*i* P	**Pg**	**03 03 41.8**	**-0.3**
AYVA				*i* S	**Sg**	**03 03 49.1**	**+1.0**
KDAG	**Bornova**	**0.89**	**128**	*i* P	**Pb**	**03 03 50.3**	**-0.2**
KDAG				*i* S	**Sb**	**03 04 02.4**	**+0.2**
BOZC	**Bozcaada**	**0.92**	**345**	*i* P	**Pb**	**03 03 50.1**	**-0.9**
BOZC				*i* S	**Sb**	**03 04 03.3**	**+0.2**
SMG	**Samos**	**1.30**	**163**	*i* PB	**Pb**	**03 03 57.5**	**+0.1**
LIA	**Limnos Island**	**1.32**	**316**	*e*PB	**Pb**	**03 04 00.1**	**+2.3**
SART	**Tekirdag**	**1.84**	**20**	*i* P	**Pn**	**03 04 04.1**	**-0.3**
SART				*i* S	**Sn**	**03 04 27.1**	**-0.3**
RDO	**Rodhopi**	**2.28**	**344**	*e*PN	**Pn**	**03 04 10.3**	**-0.2**

ISCJB 22 03:17:25.8±0.5, 4227N±002×4565E±003, h10km, Error ellipse: s-maj=3.4km s-min=3.3km az=146.6
CSEM 22 03:17:26.4±0.1, 4215N×4559E, h2km, mb4.1, Error ellipse: s-maj=3.0km s-min=1.9km az=28.0
TIF 22 03:17:26.2, 4218N×4558E, h16km±2km
MOS 22 03:17:27.3±1.9, 4234N×4576E, h10km, mb4.1/1, Error ellipse: s-maj=13.4km s-min=7.6km az=41.7
ISC 22 03:17:26.5±0.5, 4222N±002×4564E±004, h10km, n25, σ1°02/46, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.80**	**195**	P	**Pg**	**03 17 42.3**	**+0.4**
DGRG				S	**Sg**	**03 17 59.5**	**+7.3**
MTA	**Mtatsminda**	**0.82**	**230**	P	**Pg**	**03 17 41.4**	**-1.0**
MTA				S	**Sg**	**03 17 52.8**	**-0.3**
TBLG	**Delisi**	**0.83**	**234**	P	**Pg**	**03 17 41.5**	**-1.0**
TBLG				S	**Sg**	**03 17 53.2**	**-0.2**
SNJR	**Sundja**	**1.04**	**324**	*e*Pg	**Pg**	**03 17 47.1**	**+0.5**
SNJR				*e*Sg	**Sg**	**03 18 01.6**	**+1.5**
VLKR	**Vladikavkaz**	**1.09**	**320**	*e*Pg	**Pg**	**03 17 47.8**	**+0.4**
VLKR				*e*Sg	**Sg**	**03 18 02.6**	**+1.0**
KRNR	**Karanay**	**1.11**	**57**	*e*PG	**Pg**	**03 17 43.5**	**-4.4**
KRNR				*i* S	**Sg**	**03 17 59.3**	**-3.1**
KRNR				pmax	pmax		
	comp=Z,50nm,0.2s						
KRNR	**Karanay**	**1.11**	**57**	*e*Pg	**Pg**	**03 17 43.5**	**-4.4**
	comp=Z,50nm,0.2s						
KRNR				*i* Sg	**Sg**	**03 17 59.3**	**-3.1**
LACR	**Lac**	**1.16**	**302**	*i* Pg	**Pg**	**03 17 47.9**	**-0.9**
LACR				*i* Sg	**Sg**	**03 18 03.0**	**-0.9**
GOR	**Gori**	**1.16**	**259**	P	**Pb**	**03 17 47.4**	**-1.2**
GOR				S	**Sb**	**03 18 03.3**	**-0.5**
DBC	**Dubki**	**1.19**	**47**	*e*PG	**Pg**	**03 17 44.0**	**-5.3**
DBC				*e*S	**Sb**	**03 18 00.5**	**-4.0**
ARNR	**Ardon**	**1.39**	**314**	*e*Pg	**Pg**	**03 17 52.8**	**-0.4**
ARNR				*e*Sg	**Sg**	**03 18 11.4**	**+0.1**
ZEI	**Tsey**	**1.40**	**294**	*i* Pg	**Pg**	**03 17 52.4**	**-1.0**
ZEI				*i* Sg	**Sg**	**03 18 10.7**	**-0.8**
BTKR	**Batakoyurt**	**1.41**	**325**	*i* Pg	**Pg**	**03 17 54.7**	**+1.2**
BTKR				*e*Sg	**Sg**	**03 18 13.6**	**+1.9**
KORR	**Kora**	**1.45**	**307**	*e*Pg	**Pg**	**03 17 53.5**	**-0.8**
KORR				*e*Sg	**Sg**	**03 18 12.6**	**-0.4**
URKR	**Urkarakh**	**1.48**	**92**	*e*PG	**Pg**	**03 17 54.5**	**-0.5**
URKR				*e*S	**Sg**	**03 18 19.5**	**+5.3**
KMSR	**Komsomolskaya**	**1.52**	**320**	*e*Pg	**Pg**	**03 17 55.1**	**-0.5**
KMSR				*e*Sg	**Sg**	**03 18 15.3**	**0.0**
MAK	**Makhachkala**	**1.56**	**61**	*e*PG	**Pg**	**03 17 56.9**	**+0.4**
MAK				*e*		03 18 21.9	
MAK				pmax	pmax		
	comp=Z,49nm,0.2s						
MAK				smax			
	comp=N,327nm,0.5s						
MAK				smax			
	comp=E,414nm,0.5s						
ONI	**Oni**	**1.66**	**283**	P	**Pn**	**03 17 56.5**	**+0.9**
ONI				S	**Sg**	**03 18 19.3**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.67**	**295**	*i* Pn	**Pn**	**03 17 56.8**	**+1.1**
LSNR	**Lesken**	**1.71**	**309**	*e*Pn	**Pn**	**03 17 57.9**	**+1.6**
LSNR				*e*Sg	**Sg**	**03 18 20.3**	**-1.0**
PRTR	**Priterechnaya**	**1.82**	**327**	*e*Pn	**Pb**	**03 18 00.1**	**+0.1**
PRTR				*e*Sg	**Sg**	**03 18 24.2**	**-1.0**
DIGO	**Kars**	**2.48**	**224**	*i* P	**Pn**	**03 18 08.0**	**+1.0**
DIGO	**Kars**	**2.48**	**224**	*i* P	**Pn**	**03 18 08.0**	**+1.0**
DIGO				*i* S	**Sn**	**03 18 40.2**	**+2.9**
ARTV	**Artvin**	**2.97**	**251**	*i* P	**Pn**	**03 18 15.2**	**+1.6**
ARTV	**Artvin**	**2.97**	**251**	*i* P	**Pn**	**03 18 15.2**	**+1.6**
ARTV				*i* S	**Sn**	**03 18 53.7**	**+4.5**

NEIC 22 03:25:48.6, 1732N×10088W, h13km, MD3.8(MEX), After MEX.
MEX 22 03:25:48.6±0.6, 1732N×10088W, h13km±6km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.63**	**297**	*i* P	Pg	03 25 59.4	-1.5
ZIIG				*i* S	Sg	03 26 07.1	-2.2
CAIG	**El Cayaco**	**0.64**	**115**	*i* P	Pg	03 25 59.0	-2.2
CAIG				*i* S	Sg	03 26 08.2	-1.5
ACX	**Acapulco**	**1.02**	**116**	*i* P	Pb	03 26 05.2	-3.0
ACX				*i* S	Sb	03 26 17.9	-3.6
MEIG	**Mezcala**	**1.34**	**63**	*i* P	Pn	03 26 09.3	-3.7
MEIG				*i* S	Sn	03 26 25.7	-5.1
MOIG	**Morelia**	**2.37**	**353**	*i* P	Pn	03 26 25.0	-2.1
MOIG				*i* S	Sn	03 26 51.5	-4.5
PPM	**Popocatepetl**	**2.76**	**51**	*i* P	Pn	03 26 30.2	-2.3
PPM				*i* S	Sn	03 27 03.0	-2.7
UTMO	**Huajuapan**	**2.98**	**80**	*e*P	Pn	03 26 33.6	-1.9
UTMO				*i* S	Sn	03 27 08.4	-2.7

ISCJB 22 03:30:45.3±1.0, 1759S±009×696W±0.1, h160km±10km, mb3.5/5, Error ellipse: s-maj=17.8km s-min=15.4km az=167.4
IDC 22 03:30:46.0±1.7, 1766S×6966W, h150km±14km, mb3.2/4, mb1 3.6/5, mb1mx3.3/16, mbtmp3.3/5, Error ellipse: s-maj=21.5km s-min=20.4km az=94.0
NEIC 22 03:30:46.8±1.4, 1762S×6956W, h155km±13km, mb3.7/2, Error ellipse: s-maj=30.4km s-min=14.2km az=94.0
ISC 22 03:30:46.0±1.0, 1762S±010×696W±01, h152km±10km, n13, σ1°12/15, mb3.5/5, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.95**	**47**	*e*Pn	**Pn**	**03 31 22.1**	**+1.4**
LPAZ				*e*Sn	**Sn**	**03 31 46.3**	**-1.0**
LPAZ	**La Paz**	**1.95**	**47**	P	**Pn**	**03 31 21.8**	**+1.1**
	39nm,0.3s,baz=237,slow=8.0,SNR=1287						
LPAZ				S	**Sn**	**03 31 49.7**	**+2.3**
	1.8nm,0.3s,baz=50,slow=20,SNR=3.7						
SIV	**San Ignacio**	**8.35**	**80**	P	**Pn**	**03 32 41.4**	**-2.8**
	2.1nm,0.3s,baz=270,slow=11,SNR=28						
NNA	**Nana**	**8.94**	**308**	P	**Pn**	**03 32 51.0**	**-1.0**
	2.2nm,0.3s,baz=144,slow=11,SNR=4.0						
CFAA	**Coronel Fontan**	**13.98**	**175**	P	**Pn**	**03 33 57.4**	**-0.2**
	0.0nm,0.3s,baz=349,slow=12,SNR=7.7						
CFAA				S	**Sn**	**03 36 22.4**	**-10**
	0.0nm,0.3s,baz=134,slow=19,SNR=4.2						
PLCA	**Paso Flores**	**23.05**	**182**	*e*P	**P**	**03 35 39.6**	**+1.7**
	1.2nm,0.8s,mb3.4						
PLCA	**Paso Flores**	**23.05**	**182**	P	**P**	**03 35 38.0**	**+0.1**
	1.2nm,0.8s,mb3.4,baz=348,slow=7.6,SNR=4.0						
TXAR	**Lajitas Array**	**57.08**	**324**	P	**P**	**03 40 16.0**	**-0.5**
	0.1nm,0.5s,mb2.9,baz=133,slow=5.3,SNR=2.5						
ULM	**Lac du Bonnet**	**71.43**	**343**	*e*P	**P**	**03 41 49.9**	**+0.3**
	1.7nm,0.5s,mb4.0						
TOA0	**Torodi Ar. Sit**	**76.73**	**71**	*e*P	**P**	**03 42 21.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**76.73**	**71**	P	**P**	**03 42 20.6**	**-0.5**
	1.1nm,0.7s,mb3.6,baz=257,slow=4.9,SNR=17						
YKA	**Yellowknife Ar**	**87.32**	**341**	P	**P**	**03 43 16.5**	**+1.3**
	0.6nm,0.5s,mb3.7,baz=134,slow=4.8,SNR=11						
SONM	**Songino Array**	**149.69**	**5**	PKPbc	PKPbc	03 50 19.6	+1.9
	0.6nm,0.6s,baz=314,slow=2.7,SNR=4.8						

IDC 22 04:19:02.3±3.4, 2739S×17535W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.8/13, mbtmp3.8/3, MS3.4/5, Ms1 3.4/5, ms1mx3.2/18, Error ellipse: s-maj=219.7km s-min=33.0km az=162.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**15.47**	**70**	LR	LR	04 27 19.0	
	comp=Z,178nm,20.1s,baz=267,slow=32						
DZM	**Mont Dzumac**	**17.36**	**284**	LR	LR	04 28 14.9	
	comp=Z,22nm,19.9s,baz=176,slow=32						
TBI	**Tubuai**	**23.72**	**86**	*e*LR	LR	04 29 37.5	
	236nm,29.8s						
PPT	**Papeete**	**25.70**	**73**	*e*LR	LR	04 30 39.6	
	332nm,26.2s						
PPT	**Papeete**	**25.70**	**73**	LR	LR	04 31 13.8	
	comp=Z,170nm,20.6s,baz=47,slow=28						
HNR	**Honiara**	**29.37**	**303**	LR	LR	04 34 42.4	
	comp=Z,100nm,19.2s,baz=180,slow=32						
RKT	**Rikitea**	**36.65**	**93**	*e*LR	LR	04 35 46.4	
	44nm,31.2s						
STKA	**Stephens Creek**	**37.51**	**253**	LR	LR	04 39 17.9	
	comp=Z,136nm,19.1s,baz=47,slow=32						
ASAR	**Alice Springs**	**45.69**	**263**	P	P	04 27 24.4	-0.8
	0.6nm,0.5s,baz=104,slow=7.7,SNR=3.9						
WRA	**Warramunga Arr**	**46.42**	**268**	P	P	04 27 31.6	+0.7
	0.8nm,0.8s,baz=107,slow=7.9,SNR=3.9						
TXAR	**Lajitas Array**	**88.80**	**56**	P	P	04 31 58.3	0.0
	0.8nm,1.0s,baz=236,slow=6.4,SNR=4.5						
NB2	**NORSAR Subarra**	**146.07**	**354**	PKP	PKPdf	04 38 42.9	+0.2
	comp=Z,2.3nm,0.8s,baz=8.8,slow=3.6						
NOA	**NORSAR Array B**	**146.07**	**354**	PKPbc	PKPbc	04 38 42.9	-0.6
	comp=Z,4.3nm,0.8s,baz=8.0,slow=2.3,SNR=9.1						

ISCJB 22 04:27:35.9±0.3, 5149N±002×687E±003, h0km, Error ellipse: s-maj=2.8km s-min=2.0km az=145.5
BUG 22 04:27:37.3, 5150N×683E, h1km, ML2.3
PRU 22 04:27:38.8, 5147N×687E, h0km
LDG 22 04:27:38.6±0.1, 5159N×681E, h1km, Md3.5/2, Ml3.3/19, Error ellipse: s-maj=2.5km s-min=2.0km az=27.0, Suspected Mining induced.
CSEM 22 04:27:38.2±0.1, 5161N×680E, h1km, ML3.3/17, Error ellipse: s-maj=1.7km s-min=1.1km az=107.0
BGR 22 04:27:39.2±0.4, 5152N×695E, h1km, ML2.7/4, Error ellipse: s-maj=4.4km s-min=3.3km az=130.0
BNS 22 04:27:39.3±0.8, 5154N×683E, h1km, ML2.6
STR 22 04:27:40.0±0.8, 5144N×699E, h5km, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
NEIC 22 04:27:40.0, 5144N×699E, h5km, ML3.3(LDG), ML2.9(STR), After STR.
ISC 22 04:27:37.3±0.3, 5153N±002×684E±002, h0km, n104, σ1°22/208, 1C-2D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.17**	**265**	Pg	**Pg**	**04 27 42.5**	**+2.0**
BRHE				Sg	**Sg**	**04 27 46.2**	**+3.5**
BUG	**Bochum--Univer**	**0.28**	**108**	*i* Pg	**Pg**	**04 27 43.6**	**+0.9**
BUG				Sg	**Sg**	**04 27 48.3**	**+1.9**
WTSB	**Winterswijk**	**0.44**	**357**	*i* Pg	**Pg**	**04 27 45.9**	**+0.2**
	baz=170						
WTSB				*e*Sg	**Sg**	**04 27 51.7**	**+0.3**
WTSB	**Winterswijk**	**0.44**	**357**	*i* Pg	**Pg**	**04 27 45.9**	**+0.2**
WTSB				*e*Sg	**Sg**	**04 27 51.7**	**+0.3**
RODG	**Roetgen-Dahlhe**	**0.56**	**227**	*e*Pg	**Pg**	**04 27 50.1**	**+2.0**
BNS	**Bensberg**	**0.60**	**159**	*e*Pg	**Pg**	**04 27 51.0**	**+2.2**
HOBG	**Hohbusch**	**0.63**	**150**	*e*Pg	**Pg**	**04 27 51.1**	**+1.8**
STB	**Steinbach**	**0.94**	**180**	*e*Pg	**Pg**	**04 27 57.4**	**+2.1**
STB				*e*Sg	**Sg**	**04 28 10.7**	**+3.3**
	165nm,0.4s						
KLL	**Kalltalsperre**	**0.94**	**201**	*e*Pg	**Pg**	**04 27 57.8**	**+2.4**
DREG	**Dreilaegerbach**	**0.95**	**204**	*e*Pg	**Pg**	**04 27 57.1**	**+1.7**
DREG				*e*Sg	**Sg**	**04 28 10.8**	**+3.1**
	233nm,0.2s						
HGN	**Heimansgroeve**	**0.96**	**217**	*e*Pg	**Pg**	**04 27 57.6**	**+2.0**
	30nm,0.1s,baz=40						
HGN				*e*Sg	**Sg**	**04 28 11.2**	**+3.2**
HGN	**Heimansgroeve**	**0.96**	**217**	*e*Pg	**Pg**	**04 27 57.6**	**+2.0**
	30nm,0.1s						
HGN				*e*Sg	**Sg**	**04 28 11.1**	**+3.1**
IBBN	**Ibbenburen**	**0.96**	**36**	*e*Pg	**Pg**	**04 27 55.5**	**-0.3**
	SNR=8.5						
IBBN				*e*Sg	**Sg**	**04 28 08.8**	**+0.5**
	SNR=5.2						
MEM	**Membach**	**1.06**	**210**	P	**Pg**	**04 27 59.0**	**+1.4**
MEM				S	**Sg**	**04 28 14.1**	**+2.8**
	comp=N,229nm,0.0s						
MEM	**Membach**	**1.06**	**210**	P	**Pg**	**04 27 58.9**	**+1.3**
MEM				S	**Sg**	**04 28 14.1**	**+2.8**
HILG	**Hillesheim**	**1.24**	**185**	*e*Pg	**Pg**	**04 28 02.8**	**+1.6**
BGG	**Burgeitz**	**1.36**	**166**	*e*Pg	**Pg**	**04 28 04.2**	**+0.8**
TNS	**Taunus Mts**	**1.66**	**141**	*e*Pn	**Pn**	**04 28 07.8**	**+0.2**
	SNR=12						
TNS				*e*Pg	**Pg**	**04 28 09.2**	**+0.1**
	SNR=12						
TNS				*e*Sg	**Sg**	**04 28 30.4**	**-0.1**
	SNR=4.5						
TNS	**Taunus Mts**	**1.66**	**141**	*e*Pg	**Pg**	**04 28 07.6**	**-1.5**
TNS				*e*Sg	**Sg**	**04 28 30.3**	**-0.2**
ABH	**Alteburg**	**1.71**	**164**	P	**Pn**	**04 28 09.1**	**+0.8**
ABH				S	**Sn**	**04 28 30.4**	**-0.4**
RUP	**Ruppelstein**	**1.83**	**176**	*e*Pn	**Pn**	**04 28 10.8**	**+0.8**
	SNR=11						
RUP	**Ruppelstein**	**1.83**	**176**	P	**Pn**	**04 28 10.4**	**+0.4**
GIVF	**Givet**	**1.92**	**223**	*e*P	**Pn**	**04 28 14.1**	**+2.9**
GIVF				*e*Sn	**Sn**	**04 28 34.6**	**-1.4**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**04 28 39.3**	**+0.4**
	comp=N,114nm,0.4s,SNR=1.0						
GIVF	**Givet**	**1.92**	**223**	*e*Pn	**Pn**	**04 28 11.5**	**+0.3**
GIVF				*e*P		04 28 14.1	
GIVF				*e*Sn	**Sn**	**04 28 34.6**	**-1.4**
GIVF				*e*Sg	**Sg**	**04 28 39.3**	**+0.4**
GIVF	**Givet**	**1.92**	**223**	*e*P	**Pn**	**04 28 14.1**	**+2.9**
GIVF				*e*Sn	**Sn**	**04 28 34.6**	**-1.4**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**04 28 39.3**	**+0.4**
	comp=N,57nm,0.4s,SNR=1.0						
WLF	**Walferdange**	**1.92**	**193**	*e*Pg	**Pg**	**04 28 14.8**	**+0.8**
	SNR=6.7						
WLF				*e*Sg	**Sg**	**04 28 39.1**	**+0.2**
	SNR=3.8						
WLF	**Walferdange**	**1.92**	**193**	*e*Pn	**Pn**	**04 28 09.3**	**-1.9**
WLF				*e*Pg	**Pg**	**04 28 14.7**	**+0.6**
WLF				*e*Sg	**Sg**	**04 28 39.0**	**+0.1**
WLF	**Walferdange**	**1.92**	**193**	*e*Pg	**Pg**	**04 28 14.7**	**+0.7**
UBBA	**Unterbreizbach**	**2.11**	**108**	*e*Pn	**Pn**	**04 28 12.4**	**-1.5**
UBBA				*e*Sg	**Sg**	**04 28 44.1**	**-1.0**
	SNR=3.7						
CLZ	**Clausthal**	**2.22**	**81**	*e*Pn	**Pn**	**04 28 14.9**	**-0.4**
CLZ				*e*Sg	**Sg**	**04 28 47.6**	**-1.1**
BAIF	**Baives**	**2.23**	**230**	*e*P	**Pn**	**04 28 18.4**	**+3.0**
BAIF				*e*Sn	**Sn**	**04 28 41.7**	**-1.9**
BAIF				*e*Sg	**Sg**	**04 28 49.2**	**+0.4**
	comp=N,28nm,0.4s						
BAIF	**Baives**	**2.23**	**230**	*e*Pn	**Pn**	**04 28 15.2**	**-0.2**
BAIF				*e*P		04 28 18.4	
BAIF				*e*Sn	**Sn**	**04 28 41.7**	**-1.9**
BAIF				*e*Sg	**Sg**	**04 28 49.2**	**+0.4**
BAIF	**Baives**	**2.23**	**230**	*e*P	**Pn**	**04 28 18.4**	**+3.0**
BAIF				*e*Sn	**Sn**	**04 28 41.7**	**-1.9**
BAIF				*e*Sg	**Sg**	**04 28 49.2**	**+0.4**
	comp=N,14nm,0.4s						
TOD	**Tromm**	**2.30**	**146**	*e*Pn	**Pn**	**04 28 17.4**	**+1.0**
	SNR=7.1						
TOD	**Tromm**	**2.30**	**146**	P	**Pn**	**04 28 16.8**	**+0.4**
TOD				S	**Sn**	**04 28 45.3**	**0.0**
LANF	**Langenberg**	**2.63**	**166**	P	**Pn**	**04 28 22.2**	**+1.3**
RFYF	**Reffroy**	**3.03**	**197**	*e*Pg	**Pg**	**04 28 35.8**	**+0.4**
	baz=20						
RFYF				*e*Sn	**Sn**	**04 29 01.8**	**-1.7**
RFYF				*e*Sg	**Sg**	**04 29 15.2**	**+0.5**
	comp=N,24nm,0.4s						
RFYF	**Reffroy**	**3.03**	**197**	*e*Pn	**Pn**	**04 28 26.4**	**-0.1**
RFYF				*e*Pg	**Pg**	**04 28 35.8**	**+0.4**
RFYF				*e*Sn	**Sn**	**04 29 01.8**	**-1.7**
RFYF				*e*Sg	**Sg**	**04 29 15.2**	**+0.5**
RFYF	**Reffroy**	**3.03**	**197**	*e*Pg	**Pg**	**04 28 35.8**	**+0.4**
RFYF				*e*Sn	**Sn**	**04 29 01.8**	**-1.7**
RFYF				*e*Sg	**Sg**	**04 29 15.2**	**+0.5**
	comp=N,12nm,0.4s						
NEUB	**Neuenburg**	**3.11**	**94**	*e*Sg	**Sg**	**04 29 15.6**	**-1.6**
	SNR=3.2						
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pg	**Pg**	**04 28 37.6**	**+0.3**
CDF				*e*Sg	**Sg**	**04 29 18.4**	**+0.5**
	comp=N,10nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pn	**Pn**	**04 28 28.4**	**+0.5**
CDF				*e*Pg	**Pg**	**04 28 37.6**	**+0.3**
CDF				*e*Sg	**Sg**	**04 29 18.4**	**+0.5**
CDF	**Champ du Feu**	**3.13**	**175**	*e*Pg	**Pg**	**04 28 37.6**	**+0.3**
CDF				*e*Sg	**Sg**	**04 29 18.4**	**+0.5**
	comp=N,5.2nm,0.3s,SNR=1.0						
MOX	**Moxa**	**3.14**	**105**	*e*Pn	**Pn**	**04 28 28.5**	**+0.6**
	SNR=3.2						
MOX				*e*Pg	**Pg**	**04 28 37.0**	**-0.4**
	SNR=2.5						
MOX				*e*Sg	**Sg**	**04 29 15.5**	**-2.6**
	SNR=3.3						
MOX	**Moxa**	**3.14**	**105**	*e*Pn	**Pn**	**04 28 28.4**	**+0.4**
MOX				*e*Sg	**Sg**	**04 29 17.5**	**-0.6**
MEZF	**Maizieres J'vi**	**3.24**	**202**	*e*Pg	**Pg**	**04 28 39.9**	**+0.5**
	baz=28						
MEZF				*e*Sg	**Sg**	**04 29 22.7**	**+1.3**
	comp=N,17nm,0.3s						
MEZF	**Maizieres J'vi**	**3.24**	**202**	*e*Pg	**Pg**	**04 28 39.9**	**+0.5**
MEZF				*e*Sg	**Sg**	**04 29 22.7**	**+1.3**
	comp=N,8.7nm,0.3s						
ECH	**Echery**	**3.32**	**176**	P	**Pn**	**04 28 31.0**	**+0.5**
BFO	**Black Forest**	**3.34**	**163**	*e*Pn	**Pn**	**04 28 31.5**	**+0.8**
	SNR=3.0						
BFO				*e*Sn	**Sn**	**04 29 09.2**	**-1.9**
	SNR=2.6						
BFO				*e*Sg	**Sg**	**04 29 25.3**	**+0.6**
	SNR=2.3						
THEF	**They Montfort**	**3.35**	**190**	P	**Pn**	**04 28 31.2**	**+0.3**
SFTF	**Sexfontaines**	**3.53**	**200**	*e*Pg	**Pg**	**04 28 44.6**	**-0.2**
	baz=9.3						
SFTF				*e*Sg	**Sg**	**04 29 30.6**	**+0.1**
	comp=N,11nm,0.2s						
SFTF	**Sexfontaines**	**3.53**

LOR				*e*Sn	**Sn**	**04 29 41.1**	**-3.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**04 30 06.7**	**-1.1**
	comp=Z,11nm,0.3s,SNR=1.0						
LOR	**Lormes**	**4.69**	**206**	*e*Pn	**Pn**	**04 28 48.9**	**-0.3**
LOR				*e*Pg	**Pg**	**04 29 05.8**	**-1.3**
LOR				*e*Sn	**Sn**	**04 29 41.1**	**-3.2**
LOR				*e*Sg	**Sg**	**04 30 06.7**	**-1.1**
LOR	**Lormes**	**4.69**	**206**	*e*Pg	**Pg**	**04 29 05.8**	**-1.3**
LOR				*e*Sn	**Sn**	**04 29 41.1**	**-3.2**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**04 30 06.7**	**-1.1**
	comp=Z,5.6nm,0.3s,SNR=1.0						
KHC	**Kasperske Hory**	**4.94**	**116**	*e*PN	**Pn**	**04 28 55.2**	**+2.5**
KHC				*e*SN	**Sn**	**04 29 55.0**	**+4.5**
KHC				*e*SG	**Sg**	**04 30 13.9**	**-2.0**
	comp=Z,6.9nm,0.8s						
CABF	**La Chapelle**	**4.95**	**186**	*e*Pn	**Pn**	**04 28 52.6**	**-0.2**
CABF				*e*Sg	**Sg**	**04 30 16.1**	**-0.1**
	comp=Z,30nm,0.9s						
CABF	**La Chapelle**	**4.95**	**186**	*e*Pn	**Pn**	**04 28 52.6**	**-0.2**
CABF				*e*Sg	**Sg**	**04 30 16.1**	**-0.1**
	comp=Z,15nm,0.9s						
SSF	**Saint Saulge**	**4.97**	**207**	*e*Pn	**Pn**	**04 28 52.8**	**-0.4**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**04 29 48.1**	**-3.2**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**04 30 16.1**	**-0.9**
	comp=Z,12nm,0.5s						
SSF	**Saint Saulge**	**4.97**	**207**	*e*Pn	**Pn**	**04 28 52.8**	**-0.4**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**04 29 48.1**	**-3.2**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**04 30 16.1**	**-0.9**
	comp=Z,5.8nm,0.5s						
PVCC	**Panska Ves**	**4.98**	**99**	*e*SG	**Sg**	**04 30 18.7**	**+1.5**
	comp=Z,6.0nm,0.4s						
HYF	**Humbligny**	**5.07**	**214**	*e*Sn	**Sn**	**04 29 49.0**	**-4.7**
HYF				*e*Sg	**Sg**	**04 30 18.7**	**-1.4**
PRU	**Pruhonice**	**5.13**	**105**	*e*SG	**Sg**	**04 30 21.8**	**-0.1**
	comp=Z,9.6nm,1.0s						
AVF	**Avril sur Loir**	**5.26**	**207**	*e*Pn	**Pn**	**04 28 56.6**	**-0.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**04 29 54.9**	**-3.6**
AVF				*e*Sg	**Sg**	**04 30 25.1**	**-1.2**
	comp=Z,2.5nm,0.3s						
AVF	**Avril sur Loir**	**5.26**	**207**	*e*Pn	**Pn**	**04 28 56.6**	**-0.6**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**04 29 54.9**	**-3.6**
AVF				*e*Sg	**Sg**	**04 30 25.1**	**-1.2**
	comp=Z,1.2nm,0.3s						
SMF	**Signal de Mont**	**5.27**	**203**	*e*Pn	**Pn**	**04 28 56.5**	**-0.7**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**04 30 24.7**	**-1.8**
	comp=Z,7.1nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**5.27**	**203**	*e*Pn	**Pn**	**04 28 56.5**	**-0.7**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**04 30 24.7**	**-1.8**
	comp=Z,3.5nm,0.4s,SNR=1.0						
LDF	**La Druitiere**	**5.36**	**239**	*e*Pn	**Pn**	**04 28 57.9**	**-0.6**
	SNR=1.0						
LDF				*e*Sn	**Sn**	**04 29 56.8**	**-4.0**
	comp=Z,3.0nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**5.36**	**239**	*e*Pn	**Pn**	**04 28 57.9**	**-0.6**
	SNR=1.0						
LDF				*e*Sn	**Sn**	**04 29 56.8**	**-4.0**
	comp=Z,1.5nm,0.2s,SNR=1.0						
FLN	**La Foliniere**	**5.46**	**242**	*e*Pn	**Pn**	**04 28 59.6**	**-0.2**
	baz=51,SNR=1.0						
FLN				*e*Sn	**Sn**	**04 29 59.0**	**-4.3**
BGF	**Bois d'Agland**	**5.62**	**209**	*e*Pn	**Pn**	**04 29 01.9**	**-0.2**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**04 30 02.7**	**-4.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**04 30 35.3**	**-2.6**
	comp=Z,20nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**5.62**	**209**	*e*Pn	**Pn**	**04 29 01.9**	**-0.2**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**04 30 02.7**	**-4.7**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**04 30 35.3**	**-2.6**
	comp=Z,10nm,0.4s,SNR=1.0						
GRR	**Gorron**	**5.88**	**241**	*e*Pn	**Pn**	**04 29 05.2**	**-0.4**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**04 30 08.1**	**-5.5**
	comp=Z,8.2nm,0.2s,SNR=1.0						
GRR	**Gorron**	**5.88**	**241**	*e*Pn	**Pn**	**04 29 05.2**	**-0.4**
	SNR=1.0						
GRR				*e*Sn	**Sn**	**04 30 08.1**	**-5.5**
	comp=Z,4.1nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**6.07**	**212**	*e*Pn	**Pn**	**04 29 07.0**	**-1.2**
TCF				*e*Sn	**Sn**	**04 30 14.2**	**-4.1**
DPC	**Dobruska-Polom**	**6.11**	**97**	*e*SG	**Sg**	**04 30 55.2**	**+1.8**
ORIF	**Oris-en-Rattie**	**6.65**	**186**	*e*Pn	**Pn**	**04 29 15.7**	**-0.4**
MFF	**Saint Martin d**	**6.73**	**226**	*e*Pn	**Pn**	**04 29 17.1**	**-0.2**
MFF				*e*Sn	**Sn**	**04 30 29.7**	**-5.0**
MBDF	**Montbardon**	**6.81**	**180**	*e*Pn	**Pn**	**04 29 19.4**	**+1.1**
VIVF	**Saint-Julien-l**	**6.83**	**193**	*e*Pn	**Pn**	**04 29 18.8**	**+0.1**
SGMF	**Saint Gilles**	**6.90**	**245**	*e*Pn	**Pn**	**04 29 18.1**	**-1.5**
SGMF				*e*Sn	**Sn**	**04 30 32.7**	**-6.0**
ROSF	**Rostrenen**	**7.27**	**248**	*e*Pn	**Pn**	**04 29 22.9**	**-1.7**
CAF	**Calviac**	**7.33**	**208**	*e*Pn	**Pn**	**04 29 25.2**	**-0.4**
QUIF	**Quistinic**	**7.42**	**245**	*e*Pn	**Pn**	**04 29 24.8**	**-2.0**
QUIF				*e*Sn	**Sn**	**04 30 45.2**	**-6.4**
LASF	**Ste Croix**	**7.72**	**196**	*e*Pn	**Pn**	**04 29 30.2**	**-0.7**
LFF	**La Frestale**	**7.75**	**214**	*e*Pn	**Pn**	**04 29 30.3**	**-0.9**

*NEIC **22** 04:40:33.6, 2995S×7060W, h89km, MD3.9(GUC), After GUC.*

GUC 22 04:40:33.6±0.8, 2995S×7060W, h89km±6km, MD3.9, ML3.8, 5C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**0.29**	**219**	⇓*i*P	Pn	04 40 48.1	+1.3
TLL				*i* S	Sn	04 40 58.1	+1.5
LSCH	**La Serena**	**0.57**	**274**	*e*P	Pn	04 40 49.0	+0.2
LSCH				*i* S	Sn	04 41 00.5	+0.4
OVCH	**Ovalle**	**0.84**	**218**	⇑*i*P	Pn	04 40 51.7	+0.2
OVCH				*i* S	Sn	04 41 04.9	+0.1
OVCH	**Ovalle**	**0.84**	**218**	⇑*i*P	Pn	04 40 51.7	+0.2
OVCH				*i* S	Sn	04 41 04.9	+0.1
OVCH				AML	AML	04 41 08.2	
	comp=N,2μm,0.5s						
LCO	**Las Campanas**	**0.94**	**354**	*e*Pn	Pn	04 40 52.8	+0.3
LCO				*e*Sn	Sn	04 41 07.4	+0.7
CMCH	**Combarbala**	**1.27**	**196**	⇑*i*P	Pn	04 40 56.8	+0.3
CMCH				*i* S	Sn	04 41 14.4	+0.8
CMCH	**Combarbala**	**1.27**	**196**	⇑*i*P	Pn	04 40 56.8	+0.3
CMCH				*i* S	Sn	04 41 14.4	+0.8
CMCH				AML	AML	04 41 18.5	
	comp=E,2μm,0.6s						
VACH	**Vallenar**	**1.37**	**354**	⇓*i*P	Pn	04 40 58.1	+0.4
VACH				*i* S	Sn	04 41 16.2	+0.4
VACH	**Vallenar**	**1.37**	**354**	⇓*i*P	Pn	04 40 58.1	+0.4
VACH				*i* S	Sn	04 41 16.2	+0.4
VACH				AML	AML	04 41 18.0	
	comp=E,7μm,0.1s						
CHNG	**Los Chungos**	**2.08**	**202**	⇑*i*P	Pn	04 40 52.0	-15
CHNG				*i* S	Sn	04 41 17.1	-15
CPCH	**Copiapo**	**2.59**	**5**	*i* P	Pn	04 41 13.5	-0.1
CPCH				*i* S	Sn	04 41 43.6	-0.7
FCH	**Farellones**	**3.38**	**176**	*e*P	Pn	04 41 25.6	+1.4

SVSA 22 04:46:22.9±0.9, 3780N×2545W, h5km±2km, ML0.8, Error ellipse: s-maj=3.3km s-min=1.8km az=57.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MESC	**Monte Escuro**	**0.01**	**172**	*e*P	Pg	04 46 24.4	+0.6
MESC				*e*S	Sg	04 46 25.5	+1.1
MESC	**Monte Escuro**	**0.01**	**172**	*e*S	Sg	04 46 28.6	+4.2
PMAT	**Coroa da Mata**	**0.02**	**308**	*e*P	Pg	04 46 24.4	+0.5
PMAT				*e*S	Sg	04 46 25.5	+0.9
PMAT				A		04 46 25.6	
	40nm,0.1s						
PMAT	**Coroa da Mata**	**0.02**	**308**	*e*P	Pg	04 46 27.9	+4.0
PMAT				*e*S	Sg	04 46 29.1	+4.5
LFA	**Lagoa do Fogo**	**0.04**	**225**	*e*P	Pg	04 46 24.9	+0.8
LFA	**Lagoa do Fogo**	**0.04**	**225**	*e*P	Pg	04 46 27.4	+3.3
PCNG	**Congro**	**0.05**	**130**	*e*S	Sg	04 46 26.3	+1.1
PCNG				A		04 46 28.2	
	32nm,0.1s						
PCNG	**Congro**	**0.05**	**130**	*e*S	Sg	04 46 29.4	+4.2
PCNG				A		04 46 31.4	
	28nm,0.1s						
PVER	**Pico Vermelho**	**0.05**	**266**	*e*S	Sg	04 46 25.5	+0.3
PVER				A		04 46 30.1	
	36nm,0.3s						
PVER	**Pico Vermelho**	**0.05**	**266**	*e*S	Sg	04 46 29.2	+4.0
PVER				A		04 46 31.7	
	31nm,0.2s						
VIF	**Vila Franca**	**0.06**	**174**	*e*S	Sg	04 46 26.5	+1.3
VIF				A		04 46 28.1	
	48nm,0.2s						
VIF	**Vila Franca**	**0.06**	**174**	*e*S	Sg	04 46 29.2	+4.0
VIF				A		04 46 30.1	
	52nm,0.3s						
PRCH	**Ribeira Ch**	**0.08**	**200**	*e*S	Sg	04 46 26.9	+1.1
PRCH				A		04 46 29.8	
	28nm,0.1s						
PRCH	**Ribeira Ch**	**0.08**	**200**	*e*S	Sg	04 46 29.2	+3.4
PRCH				A		04 46 30.2	
	42nm,0.1s						
CML	**Cha da Macela**	**0.08**	**249**	*e*P	Pg	04 46 25.5	+0.8
CML	**Cha da Macela**	**0.08**	**249**	*e*P	Pg	04 46 27.8	+3.1
FRA1	**Furnas**	**0.09**	**129**	*e*P	Pg	04 46 25.4	+0.5
FRA1	**Furnas**	**0.09**	**129**	*e*S	Sg	04 46 30.4	+4.2

WEL 22 05:07:05.4±0.6, 3778S×17632E, h189km±5km, ML3.6/5, Error ellipse: s-maj=7.5km s-min=7.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.79**	**128**	PN	Pn	05 07 32.4	-0.2
URZ				SN	Sn	05 07 53.5	-0.2
MWZ	**Matawai**	**1.10**	**120**	PN	Pn	05 07 35.0	+0.3
MWZ				SN	Sn	05 07 58.0	+0.5
BKZ	**Black Stump Fm**	**1.39**	**174**	PN	Pn	05 07 37.1	0.0
BKZ				SN	Sn	05 08 01.8	0.0
NGZ	**Ngauruhoe**	**1.50**	**202**	PN	Pn	05 07 39.1	+1.0
TUVZ	**Tukino**	**1.57**	**199**	PN	Pn	05 07 39.1	+0.3
MXZ	**Matakaoa Point**	**1.59**	**83**	PN	Pn	05 07 39.2	+0.2
KNZ	**Kokohu**	**1.63**	**140**	*e*PN	Pn	05 07 39.7	+0.3
WNVZ	**Wahianoa**	**1.64**	**200**	PN	Pn	05 07 39.6	+0.1
MOVZ	**Moawhango**	**1.68**	**195**	PN	Pn	05 07 39.4	-0.4
TSZ	**Takapari Road**	**2.29**	**187**	PN	Pn	05 07 45.6	-0.7
BFZ	**Birch Farm**	**2.89**	**181**	PN	Pn	05 07 51.6	-1.6
MRZ	**Mangatainoka R**	**2.93**	**191**	PN	Pn	05 07 51.7	-1.9
TIWZ	**Tintock**	**3.01**	**186**	PN	Pn	05 07 52.4	-2.1
TRWZ	**Traveller**	**3.64**	**188**	PN	Pn	05 07 59.9	-2.4
MRW	**Makara Radio**	**3.66**	**200**	PN	Pn	05 07 59.7	-2.8

SKHL 22 05:07:41.0±0.3, 5244N×13205E, h15km±2km, mb3.7/4, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**0.83**	**41**	⇓*i*Pg	Pg	05 07 56.0	-1.2
EKMR				AMB	AMB	05 07 56.3	
	82nm,0.2s						
EKMR				AMB	AMB	05 07 56.3	
	130nm,0.2s						
EKMR				AMB	AMB	05 07 56.3	
	160nm,0.2s						
EKMR				*e*Sg	Sg	05 08 07.0	-1.2
EKMR				A		05 08 07.5	
	110nm,0.4s						
YASR	**Yasnyy**	**2.61**	**291**	*e*Pg	Pg	05 08 27.0	-4.0
YASR				AMB	AMB	05 08 29.6	
	9.0nm,0.5s						
YASR				pPg		05 08 32.1	
YASR				*e*rx	rx	05 08 59.7	
YASR				*e*Sg	Sg	05 09 01.4	-3.4
YASR				A		05 09 05.0	
	25nm,0.5s						
BMKR	**Bomnak**	**2.97**	**321**	*e*Pn	Pn	05 08 28.0	+0.5
BMKR				*e*Pg	Pg	05 08 34.8	-3.1
BMKR				AMB	AMB	05 08 35.5	
	10.0nm,0.4s						
BMKR				AMB	AMB	05 08 35.5	
	12nm,0.4s						
BMKR				pPg		05 08 42.0	
BMKR				*e*Sg	Sg	05 09 14.2	-2.2
BMKR				A		05 09 20.1	
	20nm,0.4s						
BMKR				A		05 09 20.1	
	50nm,0.4s						
ZEA	**Zeya**	**3.17**	**296**	*e*Sg	Sg	05 09 19.3	-3.5
ZEA				A		05 09 24.1	
	25nm,0.5s						
GRNR	**Gornyy**	**3.20**	**120**	*e*rx	rx	05 08 36.0	
GRNR				*e*Pg	Pg	05 08 39.0	-3.2
GRNR				*e*rx	rx	05 09 16.0	
KROS	**Kirovskiy**	**3.63**	**305**	*e*Pn	Pn	05 08 36.6	0.0
KROS				*e*Pg	Pg	05 08 45.6	-5.0
KROS				AMB	AMB	05 08 47.2	
	4.0nm,0.4s						
KROS				*e*Sn	Sn	05 09 19.6	+0.4
KROS				*e*Sg	Sg	05 09 33.9	-3.7
KROS				A		05 09 38.2	
	4.0nm,0.5s						
KROS				A		05 09 38.2	
	11nm,0.5s						
NKL	**Nikolayevsk**	**5.29**	**79**	*e*rx	rx	05 09 54.3	
NKL				*e*Sg	Sg	05 10 25.0	-5.5
NKL				A		05 10 28.0	
	12nm,0.8s						

*IDC **22** 05:21:08.4±1.1, 1466N×9310W, h0km, mb4.1/11, mb1 4.4/13, mb1mx4.3/18, mbtmp4.1/13, ML3.8/2, MS3.6/9, Ms1 3.6/9, ms1mx3.4/33, Error ellipse: s-maj=43.8km s-min=16.8km az=54.0*

*ISCJB **22** 05:21:10.7±2.0, 1457N±006×9345W±006, h26km±14km, mb4.3/41, MS3.5/6, Error ellipse: s-maj=12.6km s-min=5.8km az=38.0*

*NEIC **22** 05:21:10.9, 1426N×9387W, h15km, mb4.4/40, MD4.6(MEX), After MEX.*

*MEX **22** 05:21:11.2±0.5, 1430N×9387W, h15km±40km, MD4.6*

ISC 22 05:21:14.0±0.9, 1457N±006×9346W±005, h35km±7km, n189, o092/185, mb4.3/41, MS3.5/6, 51C-39D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**2.13**	**37**	*i* P	Pn	**05 21 49.6**	**+2.5**
CCIG				*i* S	Sn	**05 22 19.2**	**+6.9**
CCIG	**Comitan**	**2.13**	**37**	*i* P	Pn	**05 21 49.6**	**+2.5**
CCIG				*i* S	Sn	**05 22 20.2**	**+7.9**
SCX	**San Cristobal**	**2.30**	**20**	*i* P	Pn	**05 21 52.2**	**+2.8**
SCX				*i* S	Sn	**05 22 25.0**	**+8.5**
CMIG	**Matias Romero**	**2.86**	**332**	Pn	Pn	**05 21 55.1**	**-2.0**
	11nm,0.3s,baz=150,slow=10,SNR=195						
CMIG	**Matias Romero**	**2.86**	**332**	*i* P	Pn	**05 21 55.0**	**-2.1**
CMIG				*i* S	Sn	**05 22 28.6**	**-1.7**
RBDL	**Robledal**	**3.69**	**97**	*e*P	x	05 22 10.9	
RTR	**El Retiro**	**3.76**	**100**	*e*P	x	05 22 12.7	
SBLS	**San Blas**	**3.79**	**101**	*e*P	x	05 22 12.6	
SNJE	**San Jose**	**3.80**	**100**	*e*P	x	05 22 13.2	
OXX	**Oaxaca**	**4.01**	**309**	*i* P	Pn	**05 22 09.6**	**-3.4**
LFRS	**El Faro**	**4.37**	**102**	*e*P	x	05 22 21.4	
LCBS	**La Ceiba**	**4.44**	**101**	*e*P	x	05 22 21.1	
UTMO	**Huajuapan**	**5.28**	**308**	*e*P	Pn	**05 22 27.6**	**-2.8**
UTMO				*i* S	Sn	**05 23 24.9**	**-5.2**
TPIG	**Tehuac#an**	**5.35**	**316**	*i* P	Pn	**05 22 26.7**	**-4.8**
TPIG				*i* S	Sn	**05 23 26.7**	**-5.1**
TGUH	**Tegucigalpa,Un**	**6.02**	**94**	*e*Pn	Pn	**05 22 39.5**	**-1.2**
PPM	**Popocatepetl**	**6.67**	**313**	*i* P	Pn	**05 22 44.5**	**-5.0**
PPM				*i* S	Sn	**05 23 57.2**	**-7.1**
PPM	**Popocatepetl**	**6.67**	**313**	*i* P	Pn	**05 22 44.5**	**-5.0**
PPM				*i* S	Sn	**05 24 00.5**	**-3.8**
TEIG	**Tepich**	**7.49**	**41**	*e*Pn	Pn	**05 23 00.4**	**-0.5**
TEIG				*e*P		05 23 00.5	
TEIG	**Tepich**	**7.49**	**41**	Pn	Pn	**05 23 00.7**	**-0.1**
	7.2nm,0.3s,baz=319,slow=4.1,SNR=15						
TEIG				LR	LR	05 26 22.5	
	comp=Z,1μm,20.0s,baz=276,slow=44						
TEIG	**Tepich**	**7.49**	**41**	*e*P	Pn	**05 23 00.5**	**-0.3**
MOIG	**Morelia**	**8.96**	**306**	*i* P	Pn	**05 23 20.1**	**-1.0**
JTS	**JuntasAbangare**	**9.34**	**116**	*e*Pn	Pn	**05 23 28.4**	**+2.3**
JTS	**JuntasAbangare**	**9.34**	**116**	Pn	Pn	**05 23 26.0**	**-0.2**
	0.6nm,0.3s,baz=302,slow=16,SNR=3.4						
HKT	**Hockley**	**15.46**	**352**	*e*Pn	Pn	**05 24 49.5**	**0.0**
	58nm,1.8s						
JCT	**Junction City**	**16.88**	**341**	*e*P	Pn	**05 25 09.5**	**+2.0**
	16nm,0.9s						
TXAR	**Lajitas Array**	**17.46**	**329**	P	Pn	**05 25 15.9**	**+1.1**
	0.1nm,0.3s,baz=160,slow=10,SNR=21						
TXAR				LR	LR	05 33 09.3	
	comp=Z,73nm,19.6s,baz=110,slow=41						
LTX	**Lajitas**	**17.46**	**329**	*e*P	Pn	**05 25 15.7**	**+0.9**
	21nm,1.2s						
LPIG	**La Paz**	**18.49**	**303**	LR	LR	05 32 03.3	
	comp=Z,85nm,20.2s,baz=258,slow=35						
MIAR	**Mount Ida**	**19.89**	**360**	*e*P	Pn	**05 25 42.0**	**-2.2**
	27nm,1.2s						
UALR	**University of**	**20.14**	**3**	*e*P	P	**05 25 46.5**	**+1.4**
	25nm,1.1s						
GDL2	**Guadalupe Moun**	**20.18**	**332**	*e*Pn	P	**05 25 48.1**	**+2.6**
OXF	**Oxford**	**20.19**	**10**	*e*P	P	**05 25 44.7**	**-1.0**
	96nm,1.2s						
MNTX	**Cornudas Mount**	**20.24**	**329**	*e*P	P	**05 25 46.1**	**-0.1**
	6.1nm,0.8s						
OTAV	**Otavalo**	**20.57**	**133**	*e*P	P	**05 25 51.0**	**+1.1**
	3.3nm,1.0s						
WMOK	**Wichita Mounta**	**20.65**	**347**	*e*P	P	**05 25 50.1**	**-0.5**
	7.2nm,0.8s						
ROSC	**El Rosal**	**21.16**	**115**	*e*P	P	**05 25 57.9**	**+1.5**
ROSC	**El Rosal**	**21.16**	**115**	P	P	**05 25 57.4**	**+1.0**
	8.0nm,0.8s,mb4.1,baz=276,slow=22,SNR=5.8						
WVT	**Waverly**	**22.05**	**12**	*e*P	P	**05 26 05.3**	**-0.4**
	4.6nm,0.7s,mb4.0						
319A	**Douglas**	**22.13**	**322**	⇑P	P	**05 26 07.0**	**+0.4**
	baz=22						
318A	**Bisbee**	**22.61**	**321**	⇑P	P	**05 26 11.4**	**-0.2**
	baz=23						
TKL	**Tuckaleechee C**	**22.73**	**21**	LR	LR	05 37 20.5	
	comp=Z,237nm,18.7s,MS3.6,baz=212,slow=43						
BNM	**Barren Site**	**22.84**	**331**	*e*P	P	**05 26 14.8**	**+0.7**
SDV	**Santo Domingo**	**23.05**	**102**	*e*P	P	**05 26 16.4**	**-0.1**
	9.5nm,0.8s,mb4.3						
SDV	**Santo Domingo**	**23.05**	**102**	P	P	**05 26 17.0**	**+0.5**
	8.4nm,0.7s,mb4.3,baz=302,slow=3.7,SNR=14						
LAZ	**Ladron**	**23.29**	**330**	*e*P	P	**05 26 19.1**	**+0.3**
SIUC	**Southern Illin**	**23.36**	**9**	*e*P	P	**05 26 18.4**	**-1.0**
	22nm,0.8s,mb4.6						
ANMO	**Albuquerque**	**23.43**	**332**	*e*P	P	**05 26 19.8**	**-0.4**
	5.6nm,1.1s,mb3.9						
ANMO	**Albuquerque**	**23.43**	**332**	P	P	**05 26 20.1**	**-0.1**
	2.1nm,0.8s,mb3.6,baz=156,slow=13,SNR=6.9						
TUC	**Tucson**	**23.70**	**321**	*e*P	P	**05 26 22.7**	**0.0**
	8.1nm,0.9s,mb4.2						
WCI	**Wyandotte Cave**	**24.41**	**14**	*e*P	P	**05 26 27.8**	**-1.3**
	13nm,0.8s,mb4.4						
116A	**Eloy**	**24.43**	**320**	⇓P	P	**05 26 29.1**	**-0.3**
	baz=24						
KSU1	**Kansas State U**	**24.59**	**354**	*e*P	P	**05 26 29.5**	**-1.3**
	8.9nm,0.8s,mb4.3						
CBKS	**Cedar Bluff**	**24.78**	**348**	*e*P	P	**05 26 31.3**	**-1.1**
	9.9nm,0.9s,mb4.3						
115A	**Sonoran Desert**	**24.85**	**320**	⇓P	P	**05 26 33.9**	**+0.7**
	baz=25						
SDCO	**Great Sand Dun**	**25.44**	**337**	*e*P	P	**05 26 39.5**	**+1.1**
	15nm,1.1s,mb4.4						
X15A	**Humboldt**	**26.09**	**323**	⇑P	P	**05 26 44.7**	**+0.3**
	baz=26						
ATAH	**Atahualpa**	**26.13**	**144**	LR	LR	05 34 50.0	
	comp=Z,105nm,21.1s,MS3.4,baz=29,slow=32						
Y14A	**Wickenburg**	**26.17**	**321**	⇓P	P	**05 26 44.5**	**-0.6**
	baz=26						
MVCO	**Mesa Verde**	**26.22**	**332**	*e*P	P	**05 26 46.7**	**+1.1**
MVCO	**Mesa Verde**	**26.22**	**332**	⇑P	P	**05 26 45.7**	**+0.1**
	baz=26,SNR=5.3						
WUAZ	**Wupatki**	**26.34**	**326**	*e*P	P	**05 26 47.6**	**+0.9**
	7.3nm,1.0s,mb4.2						
WUAZ	**Wupatki**	**26.34**	**326**	⇓P	P	**05 26 46.6**	**-0.1**
	baz=26						
X14A	**Yava**	**26.46**	**322**	⇑P	P	**05 26 47.2**	**-0.6**
	baz=26						
Y13A	**Salome**	**26.59**	**320**	⇑P	P	**05 26 48.7**	**-0.3**
	baz=27						
GLA	**Glamis**	**26.75**	**317**	⇑P	P	**05 26 50.5**	**+0.1**
	baz=27						
PV01	**Paradox Valley**	**27.02**	**333**	*e*P	P	**05 26 54.0**	**+1.2**
W14A	**Seligman**	**27.09**	**323**	⇓P	P	**05 26 53.7**	**+0.3**
	baz=27						
PDMCI	**Parker Dam,Lak**	**27.11**	**320**	⇑P	P	**05 26 52.7**	**-0.9**
	baz=27						
X13A	**Yucca**	**27.11**	**321**	⇓P	P	**05 26 53.7**	**0.0**
	baz=27						
SMCO	**Snowmass**	**27.25**	**337**	*e*P	P	**05 26 51.1**	**-3.7**
	11nm,1.3s,mb4.2						
ISCO	**Idaho Springs**	**27.30**	**339**	*e*P	P	**05 26 55.9**	**+0.6**
	7.7nm,0.9s,mb4.2						
BC3	**Big Chuckw Mtn**	**27.53**	**317**	⇓P	P	**05 26 56.6**	**-0.9**
	baz=28,SNR=5.1						
IRM	**Iron Mountain**	**27.65**	**319**	⇓P	P	**05 26 58.2**	**-0.3**
	baz=28						
T15A	**Red Dirt Ranch**	**28.00**	**326**	⇓P	P	**05 27 01.5**	**-0.1**
	baz=28						
U14A	**Mt Trumbull**	**28.00**	**325**	⇑P	P	**05 27 02.1**	**+0.5**
	baz=28						
PFO	**Pinyon Flat Ob**	**28.17**	**316**	LR	LR	05 39 05.2	
	comp=Z,140nm,21.1s,MS3.5,baz=282,slow=38						
GMRC	**Granite Mounta**	**28.37**	**319**	⇓P	P	**05 27 04.7**	**-0.3**
	baz=28						
T14A	**Hurricane**	**28.41**	**326**	⇑P	P	**05 27 04.5**	**-0.7**
	baz=28			

	baz=32							
LOHW	**Long Hollow** 17nm,1.4s,mb4.7	32.45	336	*e*P		P	05 27 41.9	+1.0
TPAW	**Teton Pass** 16nm,1.2s,mb4.7	32.48	336	*e*P		P	05 27 42.3	+1.2
N11A	**Elko Archery C** baz=33	32.56	328	⇑P		P	05 27 43.8	+2.0
O10A	**Cortez Mining,** baz=33	32.59	326	⇑P		P	05 27 43.5	+1.4
M12A	**Wells** baz=33	32.59	329	⇓P		P	05 27 43.4	+1.3
MOOW	**Moose Ponds** 11nm,1.4s,mb4.6	32.62	336	*e*P		P	05 27 42.1	-0.2
K14A	**Jones Ranch, D** baz=33	32.65	332	⇓P		P	05 27 43.2	+0.6
IMW	**Indian Meadow** 4.9nm,1.1s,mb4.3	32.82	336	*e*P		P	05 27 45.9	+1.8
M11A	**Holland Ranch,** baz=33	33.04	328	⇑P		P	05 27 46.7	+0.7
LKWY	**Lake** 4.3nm,1.0s,mb4.3	33.19	338	*e*P		P	05 27 48.7	+1.5
RLMT	**Red Lodge** 3.0nm,0.6s,mb4.4	33.27	339	*e*P		P	05 27 48.4	+0.4
LAO	**LASA Array**	33.76	344	*e*P		P	05 27 51.7	-0.5
J13A	**Cove Ranch, Pi** baz=34	33.77	332	⇓P		P	05 27 52.0	-0.3
L10A	**Juniper Basin** baz=34	33.86	329	⇑P		P	05 27 52.9	-0.3
HLID	**Hailey** 4.6nm,0.9s,mb4.4	34.01	332	*e*P		P	05 27 55.1	+0.7
HLID	**Hailey** baz=34,SNR=5.8	34.01	332	P		P	05 27 55.5	+1.0
I13A	**Wildhorse Cree** baz=34	34.15	333	⇓P		P	05 27 55.6	0.0
O06A	**Flanigan** baz=34	34.37	323	⇓P		P	05 27 57.8	+0.1
G15A	**Dillon** baz=34,SNR=8.4	34.49	336	P		P	05 28 00.1	+1.5
BOZ	**Bozeman (W)** 2.7nm,1.0s,mb4.1	34.56	337	*e*P		P	05 27 59.9	+0.7
DLMT	**Dillon** 9.6nm,0.9s,mb4.7	34.69	336	*e*P		P	05 28 01.1	+0.8
H13A	**Challis** baz=35	34.73	334	⇓P		P	05 28 00.9	+0.2
N06A	**Buffalo Meadow** baz=35	34.75	324	⇓P		P	05 28 00.4	-0.5
L08A	**Fields** baz=35	34.91	327	⇑P		P	05 28 02.0	-0.3
G14A	**Jackson** baz=35	34.94	335	⇓P		P	05 28 02.4	-0.1
K09A	**Rome** baz=35,SNR=6.3	34.95	328	⇑P		P	05 28 02.9	+0.3
H12A	**Diamond D Ranc** baz=35,SNR=11	34.98	333	⇑P		P	05 28 02.8	-0.1
ORV	**Oroville** baz=35	34.99	321	⇑P		P	05 28 03.4	+0.4
LRM	**Limekiln Ridge**	35.02	337	*e*P		P	05 28 03.9	+0.7
F15A	**Butte** baz=35	35.05	337	⇑P		P	05 28 03.3	-0.1
G13A	**Cobalt** baz=35	35.14	334	⇑P		P	05 28 04.1	-0.1
O04C	**Chester** baz=35	35.21	322	⇑P		P	05 28 05.3	+0.4
WVOR	**Wild Horse Val** 8.6nm,1.5s,mb4.5	35.24	327	*e*P		P	05 28 05.2	+0.2
K08A	**Mann Creek Ran** baz=35	35.37	327	⇑P		P	05 28 06.5	+0.3
F14A	**Wisdom** baz=35	35.37	336	⇑P		P	05 28 06.1	-0.1
M06C	**Likely Place G** baz=36	35.42	324	⇓P		P	05 28 07.1	+0.4
J09A	**Fry Pan Ranch,** baz=36	35.43	329	⇑P		P	05 28 06.5	-0.3
I10A	**Payette** baz=36	35.52	331	⇑P		P	05 28 07.1	-0.3
E15A	**Deer Lodge** baz=36	35.60	337	⇓P		P	05 28 07.7	-0.5
H11A	**Donnelly** baz=36,SNR=8.7	35.62	332	⇑P		P	05 28 07.9	-0.4
K07A	**Rock Creek Ran** baz=36	35.74	327	⇑P		P	05 28 08.5	-0.9
F13A	**Darby** baz=36,SNR=6.5	35.74	335	⇑P		P	05 28 08.7	-0.7
MOD	**Modoc** baz=36	35.78	325	⇑P		P	05 28 09.2	-0.6
J08A	**Circle Bar Ran** baz=36,SNR=7.0	35.81	328	⇑P		P	05 28 09.6	-0.3
H10A	**Noah's Angus R** baz=36	35.87	331	⇓P		P	05 28 10.4	0.0
I09A	**Lost Marbles R** baz=36	35.88	330	⇑P		P	05 28 10.9	+0.3
D15A	**Lincoln** baz=36	36.07	338	⇓P		P	05 28 12.0	-0.2
F12A	**Elk City** baz=36,SNR=12	36.10	334	⇑P		P	05 28 12.7	+0.2
L05A	**Lakeview** baz=36	36.17	325	⇓P		P	05 28 11.9	-1.2
E13A	**Victor** baz=36,SNR=7.8	36.22	336	⇓P		P	05 28 12.7	-0.7
G11A	**Walters Elk Ra** baz=36,SNR=8.8	36.27	333	⇓P		P	05 28 13.5	-0.4
H09A	**Durkee** baz=36	36.36	330	⇓P		P	05 28 14.6	0.0
D14A	**Greenough** baz=36	36.47	337	⇑P		P	05 28 14.8	-0.8
G10A	**Bishop Farm, J** baz=37	36.57	332	⇑P		P	05 28 15.5	-1.0
H08A	**Prairie City** baz=37	36.74	329	⇑P		P	05 28 17.3	-0.7
E11A	**Bogner Ranch,** baz=37	36.99	334	⇑P		P	05 28 19.0	-1.0
F10A	**Beach Ranch, E** baz=37,SNR=6.8	37.14	332	⇑P		P	05 28 20.6	-0.7
D12A	**Red Ives Fores** baz=37	37.18	335	⇑P		P	05 28 21.2	-0.5
H07A	**Lands Inn, Kim** baz=37	37.24	329	⇑P		P	05 28 21.2	-1.0
C13A	**Hot Springs** baz=37	37.38	336	⇑P		P	05 28 23.1	-0.2
B13A	**Whitefish** baz=38,SNR=5.8	37.91	337	⇓P		P	05 28 27.3	-0.5
D10A	**Wagner Farm, O** baz=38	37.99	333	⇓P		P	05 28 27.1	-1.4
NEW	**Newport** 1.6nm,0.7s,mb3.9	38.87	335	*e*P		P	05 28 35.9	+0.1
B09A	**Rice** baz=39	39.42	334	⇑P		P	05 28 40.3	-0.2
LPAZ	**La Paz** 0.7nm,0.7s,mb3.5,baz=342,slow=13,SNR=3.5	39.58	140	P		P	05 28 40.2	-1.8
LPAZ				LR		LR	05 43 11.4	
	comp=Z,47nm,18.4s,MS3.4,baz=226,slow=34							
FCC	**Fort Churchill** 4.1nm,0.8s,mb4.2	44.12	360	*e*P		P	05 29 16.8	-1.9
YKA	**Yellowknife Ar** 6.2nm,0.7s,mb4.7,baz=153,slow=7.2,SNR=96	50.16	347	P		P	05 30 05.0	-0.7
YKW3	**Yellowknife Ar**	50.22	347	*e*P		P	05 30 05.0	-1.2
PLCA	**Paso Flores** 2.4nm,0.9s,mb4.2,baz=307,slow=7.7,SNR=5.4	58.98	160	P		P	05 31 10.1	0.0
INK	**Inuvik**	59.50	344	*e*P		P	05 31 12.6	-0.7
INK	**Inuvik**	59.50	344	LR		LR	06 01 21.2	
	comp=Z,116nm,19.2s,MS4.0,baz=219,slow=40							
RES	**Resolute Bay**	60.12	360	*e*P		P	05 31 16.3	-1.1
COLA	**College** 3.3nm,0.8s,mb4.5	62.18	337	*e*P		P	05 31 30.8	-0.7
BILL	**Bilibino**	80.40	338	*e*P		P	05 33 20.9	-0.7
ESDC	**Sonseca Array** 0.9nm,0.6s,mb3.9,baz=294,slow=6.0,SNR=5.1	80.47	51	P		P	05 33 19.7	-2.9
NB2	**NORSAR Subarra** comp=Z,11nm,0.9s,mb5.0,baz=291,slow=5.1	84.32	28	P		P	05 33 42.3	+0.1
NOA	**NORSAR Array B** comp=Z,6.7nm,0.9s,mb4.8,baz=291,slow=4.9,SNR=15	84.32	28	P		P	05 33 42.2	+0.1
ARCES	**ARCESS Array B** comp=Z,2.0nm,0.8s,mb4.4,baz=285,slow=4.5,SNR=12	86.04	18	P		P	05 33 50.5	-0.2
GERES	**GERESS Array B** comp=Z,0.3nm,0.3s,mb4.0,baz=339,slow=3.4,SNR=4.2	90.06	39	P		P	05 34 09.0	-1.2
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,1.0s,mb3.9,baz=328,slow=6.3,SNR=2.9	91.62	76	P		P	05 34 16.0	-2.1

NEIC ***22*** *05:24:22.1, 39.58S×174.15E, h213km, MG4.5(WEL), After WEL.*

WEL 22 05:24:23.0±0.3, 3960S×17417E, h205km±2km, ML4.5/24, 4C-3D, Error ellipse: s-maj=2.4km s-min=1.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRZ	**Ngariki Road**	**0.32**	**325**	P	Pn	05 24 50.2	0.0
NRZ	**Ngariki Road**	**0.32**	**325**	PN	Pn	05 24 50.2	0.0
NEZ	**North Egmont**	**0.34**	**350**	PN	Pn	05 24 50.4	+0.2
RAEZ	**Rainy Point**	**0.36**	**29**	P	Pn	05 24 50.0	-0.3
RAEZ	**Rainy Point**	**0.36**	**29**	PN	Pn	05 24 50.0	-0.3
RAEZ				SN	Sn	05 25 09.8	-1.5
NWEZ	**Newall Road**	**0.40**	**324**	P	Pn	05 24 50.3	-0.1
NWEZ	**Newall Road**	**0.40**	**324**	PN	Pn	05 24 50.3	-0.1
PKE	**Pukeiti**	**0.43**	**340**	P	Pn	05 24 50.2	-0.3
PKE				S	Sn	05 25 12.1	+0.4
PKE	**Pukeiti**	**0.43**	**340**	PN	Pn	05 24 50.2	-0.3
PKE				SN	Sn	05 25 12.1	+0.4
WAZ	**Wanganui**	**0.65**	**104**	P	Pn	05 24 51.9	+0.7
WAZ				S	Sn	05 25 13.3	+0.2
WAZ	**Wanganui**	**0.65**	**104**	PN	Pn	05 24 51.9	+0.6
WAZ				SN	Sn	05 25 13.3	+0.2
VRZ	**Vera Road**	**0.66**	**44**	P	Pn	05 24 50.7	-0.7
VRZ				S	Sn	05 25 11.7	-1.5
VRZ	**Vera Road**	**0.66**	**44**	PN	Pn	05 24 50.7	-0.7
VRZ				SN	Sn	05 25 11.7	-1.6
PKVZ	**Pokaka**	**0.96**	**72**	PN	Pn	05 24 52.8	-0.2
PKVZ				SN	Sn	05 25 14.7	-1.5
MTVZ	**Mangateitei**	**1.03**	**78**	PN	Pn	05 24 53.6	+0.2
MTVZ				SN	Sn	05 25 15.4	-1.6
TRVZ	**Turoa**	**1.11**	**75**	PN	Pn	05 24 54.3	+0.3
TWVZ	**Taurewa**	**1.11**	**62**	P	Pn	05 24 53.7	-0.4
TWVZ	**Taurewa**	**1.11**	**62**	PN	Pn	05 24 53.7	-0.4
FWVZ	**Far West T-bar**	**1.12**	**73**	PN	Pn	05 24 54.3	+0.2
DRZ	**Dome Shelter**	**1.12**	**74**	P	Pn	05 24 54.9	+0.8
DRZ	**Dome Shelter**	**1.12**	**74**	PN	Pn	05 24 54.5	+0.3
WPVZ	**Whakapapa**	**1.14**	**70**	PN	Pn	05 24 54.1	-0.1
NGZ	**Ngauruhoe**	**1.19**	**69**	P	Pn	05 24 54.5	-0.1
NGZ	**Ngauruhoe**	**1.19**	**69**	PN	Pn	05 24 54.5	-0.1
WTVZ	**West Tongariro**	**1.20**	**67**	P	Pn	05 24 54.5	-0.2
WTVZ	**West Tongariro**	**1.20**	**67**	PN	Pn	05 24 54.5	-0.2
HIZ	**Hauiti**	**1.21**	**26**	P	Pn	05 24 54.0	-0.8
HIZ	**Hauiti**	**1.21**	**26**	PN	Pn	05 24 54.0	-0.8
DUWZ	**D'Urville Isla**	**1.22**	**189**	PN	Pn	05 24 54.7	0.0
KRVZ	**Karewarewa**	**1.25**	**67**	PN	Pn	05 24 54.9	-0.1
KATZ	**Kakaramea**	**1.34**	**63**	P	Pn	05 24 55.8	0.0
KATZ	**Kakaramea**	**1.34**	**63**	PN	Pn	05 24 55.8	0.0
KIW	**Kapiti Island**	**1.38**	**156**	P	Pn	05 24 56.1	0.0
KIW	**Kapiti Island**	**1.38**	**156**	PN	Pn	05 24 56.1	+0.1
RATZ	**Rangitukua**	**1.44**	**60**	P	Pn	05 24 56.5	-0.1
RATZ	**Rangitukua**	**1.44**	**60**	PN	Pn	05 24 56.5	-0.1
RITZ	**Rihia Road**	**1.45**	**65**	P	Pn	05 24 56.9	+0.2
RITZ	**Rihia Road**	**1.45**	**65**	PN	Pn	05 24 56.9	+0.2
TSZ	**Takapari Road**	**1.45**	**109**	P	Pn	05 24 57.0	+0.3
TSZ	**Takapari Road**	**1.45**	**109**	PN	Pn	05 24 57.0	+0.3
MRZ	**Mangatainoka R**	**1.51**	**135**	P	Pn	05 24 57.3	+0.1
MRZ	**Mangatainoka R**	**1.51**	**135**	⇑PN	Pn	05 24 57.3	+0.1
HATZ	**Hinemaiaia**	**1.65**	**65**	P	Pn	05 24 57.7	-0.8
HATZ	**Hinemaiaia**	**1.65**	**65**	PN	Pn	05 24 57.7	-0.8
CAW	**Cannon Point**	**1.65**	**156**	PN	Pn	05 24 58.5	0.0
MRW	**Makara Radio**	**1.68**	**166**	P	Pn	05 24 58.7	0.0
MRW	**Makara Radio**	**1.68**	**166**	PN	Pn	05 24 58.7	0.0
NNZ	**Nelson**	**1.73**	**200**	P	Pn	05 24 58.8	-0.3
NNZ	**Nelson**	**1.73**	**200**	PN	Pn	05 24 58.8	-0.4
WEL	**Wellington**	**1.74**	**165**	P	Pn	05 24 59.2	-0.1
WEL	**Wellington**	**1.74**	**165**	PN	Pn	05 24 59.2	-0.1
SNZO	**South Karori**	**1.75**	**167**	⇑PN	Pn	05 24 59.2	-0.2
QRZ	**Quartz Range**	**1.76**	**225**	P	Pn	05 24 58.3	-1.1
QRZ	**Quartz Range**	**1.76**	**225**	PN	Pn	05 24 58.3	-1.1
TIWZ	**Tintock**	**1.76**	**132**	PN	Pn	05 24 59.6	+0.1
TUWZ	**Tuamarina**	**1.84**	**185**	PN	Pn	05 24 59.9	-0.2
BKZ	**Black Stump Fm**	**1.85**	**77**	P	Pn	05 25 00.0	-0.4
BKZ	**Black Stump Fm**	**1.85**	**77**	⇓PN	Pn	05 25 00.0	-0.3
MTW	**Mount Morrison**	**1.86**	**147**	P	Pn	05 25 00.2	-0.2
MTW	**Mount Morrison**	**1.86**	**147**	⇑PN	Pn	05 25 00.2	-0.2
BHW	**Baring Head**	**1.88**	**164**	P	Pn	05 25 00.2	-0.4
BHW	**Baring Head**	**1.88**	**164**	PN	Pn	05 25 00.2	-0.4
BFZ	**Birch Farm**	**1.92**	**125**	P	Pn	05 25 01.1	+0.1
BFZ	**Birch Farm**	**1.92**	**125**	PN	Pn	05 25 01.1	+0.1
MSWZ	**Moikau Station**	**1.99**	**156**	P	Pn	05 25 01.3	-0.4
MSWZ	**Moikau Station**	**1.99**	**156**	PN	Pn	05 25 01.3	-0.4
PAWZ	**Paruwai Farm**	**2.02**	**152**	P	Pn	05 25 01.7	-0.3
PAWZ	**Paruwai Farm**	**2.02**	**152**	PN	Pn	05 25 01.7	-0.3
PXZ	**Pawanui**	**2.12**	**103**	⇓PN	Pn	05 25 03.3	+0.3
BSWZ	**Blackbirch Sta**	**2.12**	**186**	P	Pn	05 25 02.9	-0.2
BSWZ	**Blackbirch Sta**	**2.12**	**186**	PN	Pn	05 25 02.9	-0.2
TRWZ	**Traveller**	**2.13**	**148**	⇑PN	Pn	05 25 02.9	-0.3
CMWZ	**Cape Campbell**	**2.15**	**179**	P	Pn	05 25 03.5	+0.2
CMWZ	**Cape Campbell**	**2.15**	**179**	PN	Pn	05 25 03.5	+0.2
THZ	**Tophouse**	**2.37**	**204**	*e*P	Pn	05 25 04.9	-0.7
THZ	**Tophouse**	**2.37**	**204**	PN	Pn	05 25 04.9	-0.7
URZ	**Urewera**	**2.65**	**61**	P	Pn	05 25 07.1	-1.8
URZ	**Urewera**	**2.65**	**61**	PN	Pn	05 25 07.1	-1.8
KNZ	**Kokohu**	**2.78**	**79**	PN	Pn	05 25 09.7	-0.6
DSZ	**Denniston Nort**	**2.80**	**219**	PN	Pn	05 25 08.9	-1.6
KHZ	**Kahutara**	**2.85**	**189**	P	Pn	05 25 10.4	-0.7
KHZ	**Kahutara**	**2.85**	**189**	PN	Pn	05 25 10.4	-0.7
MWZ	**Matawai**	**2.91**	**65**	P	Pn	05 25 10.3	-1.5
MWZ	**Matawai**	**2.91**	**65**	⇓PN	Pn	05 25 10.3	-1.4
PUZ	**Puketiti**	**3.54**	**66**	P	Pn	05 25 17.5	-1.8
PUZ	**Puketiti**	**3.54**	**66**	PN	Pn	05 25 17.5	-1.8
MXZ	**Matakaoa Point**	**3.83**	**59**	P	Pn	05 25 21.0	-1.8
MXZ	**Matakaoa Point**	**3.83**	**59**	PN	Pn	05 25 21.0	-1.8
CRLZ	**Canterbury Las**	**4.14**	**196**	PN	Pn	05 25 24.5	-2.1
MQZ	**McQueen's Vall**	**4.26**	**195**	*e*P	Pn	05 25 25.2	-2.9
MQZ	**McQueen's Vall**	**4.26**	**195**	PN	Pn	05 25 25.2	-2.9
RPZ	**Rata Peaks**	**4.73**	**209**	*e*P	Pn	05 25 31.7	-2.3
RPZ	**Rata Peaks**	**4.73**	**209**	PN	Pn	05 25 31.7	-2.3
FOZ	**Fox Glacier**	**5.19**	**219**	*e*P	Pn	05 25 35.5	-4.4
FOZ	**Fox Glacier**	**5.19**	**219**	PN	Pn	05 25 35.5	-4.4
LBZ	**Lake Benmore**	**5.63**	**211**	*e*P	Pn	05 25 42.4	-3.0
LBZ	**Lake Benmore**	**5.63**	**211**	PN	Pn	05 25 42.4	-3.1
JCZ	**Jackson Bay**	**6.03**	**220**	P	Pn	05 25 47.1	-3.5
JCZ	**Jackson Bay**	**6.03**	**220**	PN	Pn	05 25 47.1	-3.4
ODZ	**Otahua Downs**	**6.04**	**205**	PN	Pn	05 25 48.4	-2.3
WKZ	**Wanaka**	**6.47**	**215**	*e*P	Pn	05 25 52.0	-4.3
WKZ	**Wanaka**	**6.47**	**215**	PN	Pn	05 25 52.0	-4.3
EAZ	**Earnscleugh**	**6.68**	**211**	*e*P	Pn	05 25 54.8	-4.2
EAZ	**Earnscleugh**	**6.68**	**211**	PN	Pn	05 25 54.8	-4.2

MEX 22 05:37:42.5±0.3, 1444N×9384W, h15km, MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**2.46**	**42**	*e*P	Pn	05 38 19.3	-2.8
CCIG				*i* S	Sn	05 38 48.0	-3.9
SCX	**San Cristobal**	**2.56**	**27**	*i* P	Pn	05 38 21.7	-1.8
CMIG	**Matias Romero**	**2.82**	**339**	*i* P	Pn	05 38 24.2	-2.7
CMIG				*i* S	Sn	05 38 56.9	-3.8
UTMO	**Huajuapan**	**5.08**	**312**	*i* P	Pn	05 38 59.0	+0.8

IDC 22 05:43:16.7±3.6, 4832S×12130E, h0km, mb3.5/2, mb1 3.6/2, mb1mx3.5/11, mbtmp3.5/2, Error ellipse: s-maj=137.7km s-min=68.4km az=131.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek** 1.7nm,0.7s,baz=224,slow=6.7,SNR=4.9	**22.49**	**50**	P	P	05 48 18.1	+0.5
ASAR	**Alice Springs** 0.4nm,0.6s,baz=191,slow=8.8,SNR=4.9	**26.56**	**27**	P	P	05 48 56.0	-0.3
YKA	**Yellowknife Ar** 0.6nm,0.7s,baz=264,slow=3.5,SNR=8.0	**146.43**	**44**	PKPbc	PKPbc	06 02 57.6	-0.7

BGS ***22*** *05:45:45.8, 47.59N×157.96E, h10km, mb5.5*

BJI ***22*** *05:45:50.7, 48.42N×155.21E, h35km, mB4.9, mb4.9, Ms4.3, Msz4.2*

GCMT ***22*** *05:45:52.1±0.4, 48.26N×155.03E, h53km±2km, MW5.0/52, Moment Tensor Solution. s26,c29; s52,c75; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr2.49±.24; Mθθ0.03±.18; Mϕϕ-2.52±.15; Mrθ1.25±.12; Mrϕ-1.41±.13; Mθϕ1.10±.10; Best double couple: Mo3.29700×10^16 NP1:ϕs187.00000°, δ33.00000°, λ63.00000°. NP2: ϕs39.00000°, δ61.00000°, λ107.00000°. Principal axes: T 3.0600, Plg69.0000°, Azm344.0000°; N 0.4740, Plg15.0000°, Azm210.0000°; P -3.5330, Plg14.0000°, Azm116.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *05:45:52.1±0.1, 48.27N×154.64E, h10km, mb5.2/143 Error ellipse: s-maj=4.1km s-min=2.6km az=168.0*

ISCJB ***22*** *05:45:54.3±0.5, 48.24N±003×154.75E±002, h37km±4km, mb5.2/227, MS4.2/13, Error ellipse: s-maj=4.5km s-min=2.4km az=170.0*

MOS ***22*** *05:45:56.6±1.0, 4833N×154.65E, h53km, mb5.4/89, Error ellipse: s-maj=7.5km s-min=3.9km az=99.9*

SKHL ***22*** *05:45:57.9±0.7, 4826N×154.87E, h65km±29km, mb5.8/3, mbh5.7/1, Ms4.3/3, msh5.4/3*

SZGRF ***22*** *05:46:01.6, 49.18N×153.18E, h33km, mb5.6, Kuril Islands, Russia*

IDC ***22*** *05:46:01.2±3.3, 4833N×154.59E, h83km±29km, mb4.6/28, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, MS3.7/6, Ms1 3.7/6, ms1mx3.5/32, Error ellipse: s-maj=13.7km s-min=9.9km az=126.0*

ISC 22 05:45:57.9±0.4, 4833N±003×15468E±002, h49km±3km, h14km±4.6km: pP-P, n845, σ0.976/856, mb5.2/227, MS4.2/13, 197C-63D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.53**	**21**	⇓*i* P	N	**05 46 37.2**	**+0.8**
SKR				*i* S	Sn	**05 47 06.2**	**+0.2**
SKR				pmax	pmax		
	comp=N,1μm,0.5s						
SKR				pmax	pmax		
	comp=E,470nm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,0.5s						
SKR				pmax	pmax		
	comp=N,1μm,2.0s						
SKR				pmax	pmax		
	comp=E,2μm,2.0s						
SKR				pmax	pmax		
	comp=Z,3μm,2.0s						
SKR				smax			
	comp=N,4μm,0.5s						
SKR				smax			
	comp=E,3μm,0.5s						
SKR				smax			
	comp=N,5μm,2.0s						
SKR				smax			
	comp=E,3μm,2.0s						
SKR	**Severo-Kuril's**	**2.53**	**21**	⇑*i* P	N	**05 46 37.2**	**+0.8**
SKR				AMB	AMB	05 46 41.0	
	comp=E,1μm,0.5s						
SKR				AMB	AMB	05 46 41.0	
	comp=E,470nm,0.5s						
SKR				AMB	AMB	05 46 41.0	
	comp=E,2μm,0.5s						
SKR				AMB	AMB	05 46 41.0	
	comp=E,1μm,2.0s						
SKR				AMB	AMB	05 46 41.0	
	comp=E,2μm,2.0s						
SKR				*i* S	Sn	**05 47 06.2**	**+0.2**
SKR				*e*S	Sn	**05 47 06.4**	**+0.4**
SKR				A		05 47 09.1	
	comp=E,5μm,2.0s						
SKR				A		05 47 09.1	
	comp=E,3μm,2.0s						
SKR				A		05 47 09.1	
	comp=E,5μm,2.0s						
SKR				A		05 47 09.1	
	comp=E,3μm,2.0s						
SKR				A		05 47 09.1	
	comp=E,2μm,4.0s						
SKR				A		05 47 09.1	
	comp=E,4μm,0.5s						
SKR				A		05 47 09.1	
	comp=E,3μm,0.5s						
SKR				A		05 47 09.1	
	comp=E,1μm,0.5s						
PET	**Petropavlovsk**	**5.33**	**27**	*e*Pn	Pn	**05 47 14.7**	**-0.1**
PET				*e*Sn	Sn	**05 48 12.2**	**-2.6**
PET	**Petropavlovsk**	**5.33**	**27**	⇑*i* PN	Pn	**05 47 15.4**	**+0.6**
PET				*i* S	Sn	**05 48 14.7**	**-0.1**
PET				pmax	pmax		
	comp=Z,205nm,0.6s						
PET				smax			
	comp=E,1μm,1.1s						
PET				smax			
	comp=E,1μm,0.6s						
PET				smax			
	comp=N,616nm,0.5s						
PET				MLR	MLR		
	comp=Z,900nm,15.0s						
KUR	**Kuril'sk**	**5.61**	**239**	*e*PN	Pn	**05 47 20.5**	**+1.9**
KUR				*e*S	Sn	**05 48 23.0**	**+1.3**
KUR				pmax	pmax		
	comp=N,650nm,0.5s						
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,650nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,2.0s						
KUR				smax			
	comp=N,2μm,0.8s						
KUR				smax			
	comp=E,2μm,0.8s						
KUR				smax			
	comp=N,5μm,2.0s						
KUR				smax			
	comp=E,5μm,2.0s						
KUR	**Kuril'sk**	**5.61**	**239**	*e*P	Pn	**05 47 20.5**	**+1.9**
KUR				AMB	AMB	05 47 28.0	
	comp=E,228nm,0.5s						
KUR				AMB	AMB	05 47 28.0	
	comp=E,152nm,0.5s						
KUR				AMB	AMB	05 47 28.0	
	comp=E,646nm,0.5s						
KUR				AMB	AMB	05 47 30.0	
	comp=E,2μm,2.0s						
KUR				*i* S	Sn	**05 48 23.0**	**+1.3**
KUR				A		05 48 29.0	
	comp=E,1505μm,0.8s						
KUR				A		05 48 29.0	
	comp=E,10965μm,0.8s						
KUR				A		05 48 34.0	
	comp=E,5μm,2.0s						
YUK	**Yuzh-Kuril'sk**	**7.47**	**238**	*e*P	Pn	**05 47 45.0**	**+0.8**
YUK				AMB	AMB	05 47 45.6	
	comp=E,190nm,0.4s						
YUK				AMB	AMB	05 47 45.6	
	comp=E,480nm,0.4s						
YUK				AMB	AMB	05 47 51.9	
	comp=E,1μm,0.6s						
YUK				*e*S	Sn	**05 49 07.5**	**0.0**
YUK				A		05 49 18.4	
	comp=E,2μm,1.0s						
YUK				A		05 49 19.1	
	comp=E,1μm,0.8s						
YUK				A		05 49 19.1	
	comp=E,250nm,0.5s						
YUK				AMS	AMS	05 50 26.0	
	comp=E,2μm,14.0s						
YUK				AMS	AMS	05 50 26.0	
	comp=E,2μm,15.0s						
YSS	**Yuzh-Sakhalins**	**8.17**	**265**	*e*Pn	Pn	**05 47 59.4**	**+5.7**
YSS	**Yuzh-Sakhalins**	**8.17**	**265**

TYV	**Tymovskoe**	**8.21**	**292**	*e*P	**Pn**	**05 48 00.5**	**+6.3**
TYV				AMB	AMB	05 48 05.0	
	comp=Z,400nm,4.0s						
TYV				AMB	AMB	05 48 11.2	
	comp=Z,38nm,0.8s						
TYV				AMB	AMB	05 48 11.2	
	comp=Z,35nm,0.8s						
TYV				AMB	AMB	05 48 11.2	
	comp=Z,66nm,0.8s						
TYV				*e*S	**Sn**	**05 49 26.5**	**+1.0**
TYV				A		05 49 33.0	
	comp=Z,48nm,0.8s						
TYV				A		05 49 33.0	
	comp=Z,35nm,0.8s						
TYV				AMS	AMS	05 51 12.0	
	comp=Z,1μm,20.0s						
TYV				AMS	AMS	05 51 12.0	
	comp=Z,1μm,20.0s						
UGL	**Uglegorsk**	**8.38**	**280**	*e*P	**Pn**	**05 48 03.0**	**+6.5**
UGL				AMB	AMB	05 48 04.0	
	comp=Z,200nm,0.7s						
UGL				AMB	AMB	05 48 04.0	
	comp=Z,550nm,1.0s						
UGL				*e*S	**Sn**	**05 49 35.0**	**+5.4**
UGL				A		05 49 42.0	
	comp=Z,130nm,0.9s						
UGL				A		05 49 42.0	
	comp=Z,98nm,0.9s						
UGL				*e*L		05 50 20.0	
UGL				AMS	AMS	05 51 33.0	
	comp=Z,650nm,16.0s						
UGL				AMS	AMS	05 51 33.0	
	comp=Z,450nm,16.0s						
UGL				AMS	AMS	05 51 33.0	
	comp=Z,900nm,16.0s						
JMP	**Maruseppu**	**8.96**	**245**	P	**Pn**	**05 48 06.8**	**+2.2**
OKH	**Okha**	**9.06**	**310**	*e*PN	**Pn**	**05 48 08.0**	**+2.1**
OKH				*e*S	**Sn**	**05 49 51.0**	**+4.6**
OKH				MLR	MLR		
	comp=Z,800nm,16.0s						
OKH	**Okha**	**9.06**	**310**	*e*P	**Pn**	**05 48 08.0**	**+2.1**
OKH				*e*P		05 48 11.3	
OKH				*e*S	**Sn**	**05 49 51.0**	**+4.6**
OKH				*e*S	**Sn**	**05 49 52.0**	**+5.6**
OKH				*e*L		05 50 44.2	
OKH				AMS	AMS	05 51 54.2	
	comp=Z,600nm,16.0s						
OKH				AMS	AMS	05 51 54.2	
	comp=Z,800nm,16.0s						
OKH				AMS	AMS	05 51 54.2	
	comp=Z,900nm,14.0s						
JWK2	**Keihoku**	**9.27**	**256**	P	**Pn**	**05 48 14.9**	**+6.2**
ASAJ	**Asahikawa**	**9.37**	**248**	P	**Pn**	**05 48 13.9**	**+3.7**
ASAJ	**Asahikawa**	**9.37**	**248**	PN	**Pn**	**05 48 13.7**	**+3.5**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,583nm,19.0s						
ASAJ	**Asahikawa**	**9.37**	**248**	P	**Pn**	**05 48 13.7**	**+3.5**
	comp=Z,9.1nm,0.3s,baz=83,slow=14,SNR=90						
ASAJ				LR	LR	05 51 37.8	
	comp=Z,582nm,19.0s,baz=100,slow=36						
JEM	**Erimo**	**10.29**	**236**	P	**Pn**	**05 48 22.3**	**-0.4**
JEM				*e*S	**Sn**	**05 50 11.2**	**-5.4**
ERM	**Erimo**	**10.29**	**236**	Pn	**Pn**	**05 48 23.4**	**+0.7**
	comp=Z,280nm,0.4s,SNR=9.4						
ERM	**Erimo**	**10.29**	**236**	*e*Pn	**Pn**	**05 48 22.7**	**-0.1**
	comp=Z,36nm,0.5s						
ERM				*e*Sn	**Sn**	**05 50 11.3**	**-5.3**
ERM	**Erimo**	**10.29**	**236**	*e*PN	**Pn**	**05 48 22.7**	**0.0**
ERM				pmax	pmax		
	comp=Z,36nm,0.5s						
JEW	**Eniwo**	**10.77**	**244**	P	**Pn**	**05 48 28.7**	**-0.6**
MA2	**Magadan**	**11.49**	**350**	*e*Pn	**Pn**	**05 48 41.8**	**+2.8**
MA2	**Magadan**	**11.49**	**350***c*	*i*PN	**Pn**	**05 48 41.0**	**+2.0**
MA2				pmax	pmax		
	comp=Z,40nm,0.9s						
MA2				pmax	pmax		
	comp=N,40nm,1.0s						
JSH	**Shimam**	**11.73**	**246**	P	**Pn**	**05 48 43.0**	**+0.6**
JOT	**Ohata**	**11.90**	**239**	P	**Pn**	**05 48 41.7**	**-3.0**
JOT				*e*S	**Sn**	**05 50 45.4**	**-10**
JTM	**Tenmabayashi**	**12.28**	**237**	P	**Pn**	**05 48 45.8**	**-4.1**
JTM				*e*S	**Sn**	**05 50 53.0**	**-12**
TEY	**Ternei**	**12.84**	**262**	*e*P	**Pn**	**05 49 02.0**	**+4.5**
HABR	**Khabarovsk**	**13.04**	**278**	*e*PN	**Pn**	**05 49 04.9**	**+4.7**
HABR				pmax	pmax		
	comp=Z,43nm,1.6s						
JOM	**Ohasama**	**13.08**	**232**	P	**Pn**	**05 48 56.0**	**-4.8**
JOM				*e*S	**Sn**	**05 51 12.4**	**-12**
SMY	**Shemya**	**13.11**	**63**	*e*P	**Pn**	**05 48 59.3**	**-1.8**
	comp=Z,588nm,0.5s						
SMY	**Shemya**	**13.11**	**63**	*e*PN	**Pn**	**05 48 59.3**	**-1.8**
SMY				pmax	pmax		
	comp=Z,588nm,0.5s						
JYA	**Atsumi**	**14.56**	**234**	P	**Pn**	**05 49 13.9**	**-6.9**
SEY	**Seymchan**	**14.69**	**356**ñ	*e*P	**Pn**	**05 49 22.1**	**-0.2**
KLR	**Kul'dur**	**15.13**	**282**	*e*P	**Pn**	**05 49 28.4**	**+0.2**
KLR				pmax	pmax		
	comp=E,50nm,1.4s						
KLR				pmax	pmax		
	comp=Z,43nm,1.4s						
KLR				MLR	MLR		
	comp=E,500nm,13.5s						
KLR				MLR	MLR		
	comp=Z,900nm,13.5s						
MJAR	**Matsushiro Arr**	**16.89**	**232**	P	**Pn**	**05 49 47.2**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=31,slow=12,SNR=10						
MJAR				LR	LR	05 57 31.4	
	comp=Z,129nm,19.0s,baz=75,slow=41						
MAJO	**Matsushiro**	**16.89**	**232**	*e*Pn	**Pn**	**05 49 48.9**	**-1.7**
MAT	**Matsushiro**	**16.89**	**232**	P	**Pn**	**05 49 47.7**	**-2.9**
MAT	**Matsushiro**	**16.89**	**232**	P	**Pn**	**05 49 53.1**	**+2.5**
JRY	**Ryogami san**	**16.93**	**229**	P	**Pn**	**05 49 53.2**	**+2.0**
MDJ	**Mudanjiang**	**17.64**	**267**	P	**Pn**	**05 49 58.4**	**-1.5**
MDJ				S	**S**	**05 53 09.9**	**-11**
MDJ				XS	sS	05 53 27.8	-11
MDJ				PCP	PcP	05 54 36.3	0.0
MDJ				AMB	AMB		
	comp=Z,21nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,46nm,2.9s						
MDJ				LR	LR		
	comp=N,165nm,20.5s						
MDJ				LR	LR		
	comp=E,245nm,27.4s						
MDJ				LR	LR		
	comp=Z,401nm,23.7s						
MDJ	**Mudanjiang**	**17.64**	**267**	*e*P	**Pn**	**05 49 57.7**	**-2.2**
	comp=Z,17nm,0.9s						
ZEA	**Zeya**	**18.01**	**298**	*e*P	**Pn**	**05 50 03.3**	**-1.0**
ZEA				AMB	AMB	05 50 04.8	
	comp=Z,46nm,1.4s						
ZEA				AMB	AMB	05 50 04.8	
	comp=Z,30nm,1.2s						
ZEA				AMB	AMB	05 50 04.8	
	comp=Z,50nm,1.2s						
ZEA				AMB	AMB	05 50 06.0	
	comp=Z,200nm,2.0s						
ZEA				*e*S	**S**	**05 53 31.0**	**+2.9**
ZEA				A		05 53 38.0	
	comp=Z,300nm,6.0s						
JWT	**Wachi**	**19.33**	**235**	P	**Pn**	**05 50 19.3**	**-1.1**
YAK	**Yakutsk**	**19.62**	**324**	*e*P	**Pn**	**05 50 21.8**	**-1.7**
	comp=Z,138nm,0.7s						
YAK	**Yakutsk**	**19.62**	**324**	*e*P	**Pn**	**05 50 21.2**	**-2.3**
YAK				*e*S	**S**	**05 53 58.5**	**-1.7**
YAK				pmax	pmax		
	comp=Z,18nm,0.7s						
YAK				pmax	pmax		
	comp=N,17nm,1.5s						
YAK				pmax	pmax		
	comp=E,27nm,1.4s						
YAK				pmax	pmax		
	comp=Z,175nm,1.0s						
YAK				pmax	pmax		
	comp=N,115nm,1.2s						
YAK				pmax	pmax		
	comp=E,130nm,1.2s						
YAK				smax			
	comp=N,96nm,1.6s						
YAK				smax			
	comp=Z,74nm,1.9s						
YAK				smax			
	comp=E,148nm,2.3s						
YAK				MLR	MLR		
	comp=E,313nm,21.0s						
YAK				MLR	MLR		
	comp=Z,302nm,21.0s						
YAK				MLR	MLR		
	comp=N,161nm,22.0s						
CLNS	**Chul'man**	**19.86**	**307**	*e*P	**Pn**	**05 50 26.4**	**0.0**
CLNS				*e*S	**S**	**05 54 06.9**	**+1.7**
CLNS				pmax	pmax		
	comp=Z,214nm,0.9s						
CLNS				pmax	pmax		
	comp=N,87nm,1.0s						
CLNS				pmax	pmax		
	comp=E,88nm,0.8s						
CLNS				smax			
	comp=N,21nm,1.1s						
CLNS				smax			
	comp=E,10.0nm,0.8s						
CLNS				smax			
	comp=Z,7.0nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,500nm,18.0s						
CLNS				MLR	MLR		
	comp=N,200nm,16.0s						
CLNS				MLR	MLR		
	comp=E,300nm,15.0s						
NRGR	**Nerungri**	**19.91**	**306**	*i* P	**Pn**	**05 50 28.6**	**+1.6**
NRGR				S	**S**	**05 54 03.8**	**-2.4**
NRGR				smax			
	comp=E,37nm,0.5s						
JWZ	**Kozaga**	**20.51**	**231**	P	**P**	**05 50 28.3**	**-3.4**
BILL	**Bilibino**	**20.61**	**12**	*e*P	**P**	**05 50 30.9**	**-1.6**
	comp=E,47nm,0.6s						
BILL	**Bilibino**	**20.61**	**12**	*i* P	**P**	**05 50 31.1**	**-1.4**
BILL				*e**SP	sP	05 50 51.7	+1.6
BILL				*e*S	**S**	**05 54 19.3**	**-0.6**
BILL				pmax	pmax		
	comp=Z,43nm,0.6s						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
CN2	**Changchun**	**20.71**	**268**	*e*P	**P**	**05 50 31.4**	**-2.4**
CN2				*e*PP		05 50 52.5	
CN2				PPP		05 51 01.5	
CN2				*e*S	**S**	**05 54 16.1**	**-6.2**
CN2				AMB	AMB		
	comp=Z,40nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,20.0s,MS3.7						
CN2				LR	LR		
	comp=E,300nm,20.0s,MS3.7						
CN2				LR	LR		
	comp=Z,300nm,21.0s						
KSRS	**Korea Array**	**22.30**	**251**	P	**P**	**05 50 51.3**	**+0.4**
	comp=Z,12nm,0.6s,mb4.5,baz=48,slow=10,SNR=53						
KSRS				PcP	PcP	05 54 44.8	-0.2
	comp=Z,3.2nm,0.9s,baz=124,slow=0.6,SNR=6.2						
KSRS				LR	LR	05 59 09.3	
	comp=Z,307nm,18.9s,MS3.8,baz=49,slow=35						
HIA	**Hailar**	**22.91**	**286**	*e*P	**P**	**05 50 55.8**	**-1.5**
	comp=Z,23nm,1.0s,mb4.5						
HIA	**Hailar**	**22.91**	**286**	*e*P	**P**	**05 50 55.8**	**-1.4**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
JNU	**Nakatsue**	**23.45**	**238**	P	**P**	**05 51 03.3**	**+0.6**
	comp=Z,17nm,0.8s,mb4.5,baz=50,slow=16,SNR=6.3						
JNU				LR	LR	06 00 24.2	
	comp=Z,115nm,20.2s,baz=36,slow=37						
GAMB	**Gambell**	**23.92**	**37**	*e*P	**P**	**05 51 07.1**	**+0.3**
DL2	**Dalian**	**25.54**	**261**	P	**P**	**05 51 20.9**	**-0.9**
DL2				S	**S**	**05 55 47.9**	**+2.1**
DL2				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
DL2				LR	LR		
	comp=N,120nm,16.1s						
DL2				LR	LR		
	comp=E,110nm,16.1s						
DL2				LR	LR		
	comp=Z,200nm,19.2s						
BOD	**Bodaibo**	**25.84**	**307**	*e*P	**P**	**05 51 22.1**	**-2.2**
BOD				*e*		05 51 41.0	
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.1						
TIXI	**Tiksi**	**26.27**	**342**	*e*P	**P**	**05 51 25.9**	**-2.2**
	comp=Z,27nm,0.5s,mb5.0						
TIXI				*e*PcP	PcP	05 54 52.3	-0.7
TIXI	**Tiksi**	**26.27**	**342**	*i* P	**P**	**05 51 26.4**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.8						
BJI	**Beijing**	**28.58**	**268**	P	**P**	**05 51 50.3**	**+1.3**
BJI				PCP	PcP	05 54 59.6	+0.5
BJI				S	**S**	**05 56 36.3**	**+2.7**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.3						
BJI				LR	LR		
	comp=N,101nm,23.0s						
BJI				LR	LR		
	comp=E,120nm,19.7s						
BJI				LR	LR		
	comp=Z,167nm,23.0s						
TTA	**Tatalina**	**30.54**	**43**	*e*P	**P**	**05 52 06.4**	**+0.3**
SVW2	**Sparrevohn**	**30.63**	**47**	*e*P	**P**	**05 52 07.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**31.26**	**272**	*e*P	**P**	**05 52 12.6**	**-0.1**
HHC				AP	pP	05 52 19.9	-5.6
HHC				XP	sP	05 52 23.5	-7.8
HHC				PP	PP	05 53 14.9	-8.9
HHC				PCP	PcP	05 55 07.8	+1.8
HHC				S	**S**	**05 57 15.1**	**-0.6**
HHC				PCS	PcS	05 58 51.4	+1.2
HHC				SCS	ScS	06 02 43.6	+1.6
HHC				AMB	AMB		
	comp=Z,37nm,0.7s,mb5.3						
HHC				AMB	AMB		
	comp=Z,92nm,5.1s						
HHC				LR	LR		
	comp=N,128nm,15.5s,MS4.0						
HHC				LR	LR		
	comp=E,255nm,16.6s,MS4.0						
HHC				LR	LR		
	comp=Z,273nm,19.0s,MS3.9						
ULN	**Ulaanbaatar**	**31.41**	**287**	*e*P	**P**	**05 52 13.4**	**-0.6**
	comp=Z,13nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**31.41**	**287**	*e*P	**P**	**05 52 13.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
ULN	**Ulaanbaatar**	**31.41**	**287**	P	**P**	**05 52 13.7**	**-0.2**
	SNR=8.0						
NJ2	**Nanjing**	**31.48**	**252**	*e*P	**P**	**05 52 14.3**	**-0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
SONM	**Songino Array**	**31.84**	**288**	P	**P**	**05 52 17.3**	**-0.4**
SONM						05 55 06.8	
SONM	**Songino Array**	**31.84**	**288**	P	**P**	**05 52 17.3**	**-0.4**
	comp=Z,10nm,0.8s,mb4.7,baz=66,slow=9.0,SNR=62						
SONM				PcP	PcP	05 55 06.8	-0.6
	comp=Z,3.4nm,0.8s,baz=111,slow=1.9,SNR=8.8						
SONM				LR	LR	06 06 24.0	
	comp=Z,361nm,19.1s,MS4.1,baz=36,slow=38						
IMA2	**Indian Mountai**	**31.90**	**37**	*e*P	**P**	**05 52 18.3**	**+0.2**
TLY	**Talaya**	**32.42**	**295**	P	**P**	**05 52 23.7**	**+0.9**
	comp=Z,221nm,0.8s,mb6.0,SNR=9.3						
TLY	**Talaya**	**32.42**	**295**	*e*P	**P**	**05 52 23.2**	**+0.4**
	comp=Z,30nm,0.9s,mb5.1						
TLY				*e*PcP	PcP	05 55 08.8	-0.2
TLY	**Talaya**	**32.42**	**295**	*e*P	**P**	**05 52 23.1**	**+0.3**
TLY				*e*S	**S**	**05 57 35.7**	**+2.1**
TLY				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.2						
TLY				MLR	MLR		
	comp=Z,290nm,19.0s,MS4.0						
TLY	**Talaya**	**32.42**	**295**	P	**P**	**05 52 23.4**	**+0.6**
	SNR=17						
TLY	**Talaya**	**32.42**	**295**	P	**P**	**05 52 23.4**	**+0.6**
	SNR=17						
TLY	**Talaya**	**32.42**	**295**	P	**P**	**05 52 23.4**	**+0.6**
	SNR=17						
TLY	**Talaya**	**32.42**	**295**	P	**P**	**05 52 23.4**	**+0.6**
	SNR=17						
ZAK	**Zakamensk**	**33.00**	**293**ñ	*i* P	**P**	**05 52 27.6**	**-0.2**
ZAK				*e*		05 53 35.8	
ZAK				*e*		05 55 09.4	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
MOY	**Mondy**	**34.02**	**296**	*e*P	**P**	**05 52 37.1**	**+0.4**
MOY				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9						
COLA	**College**	**34.24**	**40**	*e*P	**P**	**05 52 38.8**	**+0.4**
	comp=Z,39nm,0.8s,mb5.4						
COLA	**College**	**34.24**	**40**	*e*P	**P**	**05 52 38.8**	**+0.3**
COLA				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
MENT	**Mentasta**	**36.15**	**43**	*e*P	**P**	**05 52 55.7**	**+0.8**
XAN	**Xi'an**	**36.72**	**264**	P	**P**	**05 52 59.5**	**-0.6**
XAN				AP	pP	05 53 12.6	-0.4
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
EGAK	**Eagle**	**37.10**	**40**	*e*P	**P**	**05 53 02.5**	**-0.5**
	comp=Z,42nm,1.0s,mb5.2						
DAWY	**Dawson**	**37.95**	**41**	*e*P	**P**	**05 53 10.3**	**+0.2**
LZH	**Lanzhou**	**38.91**	**271**ļ	*i*P	**P**	**05 53 19.8**	**+1.3**
LZH				PP	PP	05 54 51.6	+3.4
LZH				*e*S	**S**	**05 59 14.0**	**+0.8**
LZH				SS	SS	06 02 00.0	-6.0
LZH				AMB	AMB		
	comp=Z,34nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,98nm,5.0s						
LZH				LR	LR		
	comp=E,1μm,13.4s						
LZH				LR	LR		
	comp=Z,1μm,15.1s,MS4.9						
INK	**Inuvik**	**39.75**	**34**	*e*P	**P**	**05 53 25.9**	**+0.8**
	comp=Z,605nm,0.5s,mb6.6						
INK	**Inuvik**	**39.75**	**34**	P	**P**	**05 53 26.0**	**+0.9**
INK				pmax	pmax		
	comp=Z,18nm,0.5s						
INK	**Inuvik**	**39.75**	**34**	P	**P**	**05 53 26.0**	**+0.9**
	comp=Z,18nm,0.5s,mb5.1,baz=295,slow=6.5,SNR=262						
GTA	**Gaotai**	**39.78**	**278**	*e*P	**P**	**05 53 25.8**	**0.0**
GTA				AP	pP	05 53 30.3	-8.5
GTA				PP	PP	05 54 59.8	+2.1
GTA				PCP	PcP	05 55 31.6	+0.5
GTA				SCP	ScP	05 59 12.5	-3.2
GTA				S	**S**	**05 59 34.6**	**+8.3**
GTA				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,128nm,7.2s						
GTA				LR	LR		
	comp=N,218nm,17.9s,MS4.2						
GTA				LR	LR		
	comp=E,214nm,20.9s,MS4.2						
GTA				LR	LR		
	comp=Z,310nm,17.1s,MS4.2						
CD2	**Chengdu**	**42.07**	**265**	*e*P	**P**	**05 53 44.6**	**-0.1**
CD2				PP	PP	05 55 25.3	+2.6
CD2				PCP	PcP	05 55 40.3	+1.6
CD2				S	**S**	**06 00 02.8**	**+2.3**
CD2				SS	SS	06 03 04.3	-4.8
CD2				SCS	ScS	06 03 44.3	+1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=N,300nm,18.0s,MS4.4						
CD2				LR	LR		
	comp=E,300nm,15.6s,MS4.4						
CD2				LR	LR		
	comp=Z,300nm,19.2s,MS4.2						
NVS	**Novosibirsk**	**43.08**	**307**	*e*P	**P**	**05 53 51.8**	**-0.8**
NVS				*e*		05 55 40.5	
NVS				pmax	pmax		
	comp=Z,24nm,1.5s,mb4.7						
NVS				pmax	pmax		
	comp=E,23nm,1.6s						
GYA	**Guiyang**	**43.09**	**257**ñ	*i*P	**P**	**05 53 52.9**	**-0.1**
GYA				PP	PP	05 55 36.3	+2.6
GYA				PCP	PcP	05 55 44.9	+2.7
GYA				S	**S**	**06 00 19.0**	**+3.4**
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,6.8s						
GYA				LR	LR		
	comp=N,440nm,20.7s,MS4.5						
GYA				LR	LR		
	comp=E,480nm,19.4s,MS4.5						
GYA				LR	LR		
	comp=Z,320nm,19.0s,MS4.2						
WMQ	**Urumqi**	**45.35**	**291**	P	**P**	**05 54 11.0**	**+0.1**
WMQ				AP	pP	05 54 15.5	-8.6
WMQ				PCP	PcP	05 55 51.0	+1.4
WMQ				PP	PP	05 55 56.8	-0.6
WMQ				PPP		05 56 39.0	
WMQ				SCP	ScP	05 59 41.8	+3.8
WMQ				S	**S**	**06 00 50.3**	**+2.3**
WMQ				AMB	AMB		
	comp=Z,16nm,0.6s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,71nm,4.0s						
WMQ				LR	LR		
	comp=N,157nm,21.0s						
WMQ				LR	LR		
	comp=E,367nm,28.9s						
WMQ				LR	LR		
	comp=Z,303nm,23.6s,MS4.2						
QIZ	**Qiongzhong**	**46.44**	**247**	P	**P**	**05 54 16.9**	**-2.9**
QIZ				*e*S	**S**	**06 01 06.4**	**+2.2**
QIZ				AMB	AMB		
	comp=Z,22nm,1.5s,mb4.9						
QIZ				AMB	AMB		
	comp=Z,133nm,4.6s						
KMI	**Kunming**	**46.57**	**259**	P	**P**	**05 54 20.8**	**+0.1**
KMI				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
MK31	**Makanchi Array**	**47.16**	**297**	*e*P	**P**	**05 54 24.3**	**-0.7**
MK31	**Makanchi Array**	**47.16**	**297**	*i* P	**P**	**05 54 24.1**	**-1.0**
MK31				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.5						
MKAR	**Makanchi Array**	**47.16**	**297**	P	**P**	**05 54 23.9**	**-1.2**
	comp=Z,37nm,0.8s,mb5.4,baz=64,slow=7.6,SNR=323						
MKAR				PcP	PcP	05 55 55.5	-0.4
	comp=Z,4.9nm,0.7s,baz=66,slow=7.1,SNR=3.7						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	comp=Z,1μm,0.6s,SNR=95						
KURK	**Kurchatov**	**47.38**	**303**	*e*P	**P**	**05 54 25.2**	**-1.5**
	comp=Z,112nm,0.8s,mb5.8						
KURK	**Kurchatov**	**47.38**	**303**	*e*P	**P**	**05 54 25.6**	**-1.1**
KURK				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.8						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	SNR=42						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	SNR=42						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	SNR=42						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	SNR=42						
KURK	**Kurchatov**	**47.38**	**303**	P	**P**	**05 54 26.3**	**-0.4**
	SNR=42						
ALE	**Alert**	**48.06**	**6**	P	**P**	**05 54 31.5**	**-0.1**
	comp=Z,443nm,0.6s,SNR=24						
YKW3	**Yellowknife Ar**	**48.99**	**38**	*e*P	**P**	**05 54 39.2**	**+0.3**
RES	**Resolute Bay**	**48.99**	**19**	*e*P	**P**	**05 54 39.4**	**+0.5**
YKA	**Yellowknife Ar**	**49.02**	**38**	P	**P**	**05 54 39.4**	**+0.2**
YKA				PcP	PcP	05 56 01.9	-0.4
YKA	**Yellowknife Ar**	**49.02**	**38**	P	**P**	**05 54 39.4**	**+0.2**
	comp=Z,9.3nm,0.7s,mb4.9,baz=297,slow=7.5,SNR=116						
YKA				PcP	PcP	05 56 01.9	-0.4
	comp=Z,2.3nm,0.8s,baz=296,slow=4.0,SNR=4.8						
CHKZ	**Chkalovo**	**50.23**	**310**	*i* P	**P**	**05 54 46.7**	**-1.8**
CHKZ				pmax	pmax		
	comp=Z,30nm,0.5s,mb5.6						

BRVK Borovoye 50.72 309 P **P** 05 54 51.7 -0.5
comp=Z,417nm,0.5s,mb6.6,SNR=35
BRVK Borovoye 50.72 309 *e*P **P** 05 54 51.0 -1.2
comp=Z,40nm,0.6s,mb5.5
BRVK *e*PcP PcP 05 56 08.1 -0.6
BRVK Borovoye 50.72 309 *e*P **P** **05 54 51.0 -1.2**
BRVK *e* 05 56 08.1
BRVK pmax pmax
comp=Z,40nm,0.6s,mb5.5
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
BRVK Borovoye 50.72 309 P **P** **05 54 51.1 -1.1**
SNR=11
LSA Lhasa 51.25 273 *e*P **P** **05 54 57.8 +1.3**
comp=Z,14nm,0.6s,mb5.1
LSA Lhasa 51.25 273 *e*P **P** **05 54 57.8 +1.3**
LSA pmax pmax
comp=Z,14nm,0.6s,mb5.1
IMP Imphal 52.63 266 *ex* x 05 55 06.0
A07A Ashnola River, 53.16 55 ⇓P **P** **05 55 09.9 -0.6**
baz=53
TKM2 Tokmak 2 53.26 296 *e*P **P** **05 55 10.7 -0.5**
comp=Z,12nm,0.9s,mb4.8
TKM2 *e*PcP PcP 05 56 18.3 -0.1
TKM2 Tokmak 2 53.26 296 *e*P **P** **05 55 10.7 -0.5**
TKM2 *e* 05 56 18.3
TKM2 pmax pmax
comp=Z,12nm,0.9s,mb4.8
TKM2 Tokmak 2 53.26 296 P **P** **05 55 11.2 0.0**
SNR=13
ULHL Ulahol 53.26 295 P **P** **05 55 11.1 -0.1**
SNR=21
SHL Shillong 53.47 268 *i* P **P** **05 55 13.0 0.0**
CHTO Chiang Mai 53.51 257 *e*P **P** **05 55 13.6 +0.2**
comp=Z,43nm,1.0s,mb5.3
CHTO Chiang Mai 53.51 257 *e*P **P** **05 55 13.6 +0.2**
CHTO pmax pmax
comp=Z,43nm,1.0s,mb5.3
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
CHTO Chiang Mai 53.51 257 P **P** **05 55 14.3 +1.0**
SNR=15
B07A Winthrop 53.63 55 ⇑P **P** **05 55 14.0 +0.1**
baz=54
USP Ospenovka 53.71 297 P **P** **05 55 14.5 -0.1**
SNR=52
CHMS Chumysh 53.72 296 P **P** **05 55 14.6 0.0**
SNR=6.2
KBK Karagaybulak 53.80 296 P **P** **05 55 15.1 -0.1**
SNR=8.5
A08A Turner Farm, O 53.82 55 P **P** **05 55 15.2 0.0**
baz=54,SNR=6.1
KZA Kyzart 53.95 295 P **P** **05 55 16.8 +0.4**
SNR=16
AAK Ala-Archa 54.09 296 P **P** **05 55 16.1 -1.2**
comp=Z,189nm,0.7s,mb6.1,SNR=18
AAK Ala-Archa 54.09 296 P **P** **05 55 17.0 -0.3**
SNR=19
C07A Waterville 54.10 56 ⇓P **P** **05 55 16.5 -0.8**
baz=54
B08A Colville Reser 54.12 55 P **P** **05 55 17.3 -0.1**
baz=54,SNR=5.5
A09A Danville 54.18 54 P **P** **05 55 18.1 +0.2**
baz=54,SNR=10
UCH Uchtor 54.31 296 *e*P **P** **05 55 18.8 -0.1**
comp=Z,2.3nm,0.8s,mb4.2
UCH *e*PcP PcP 05 56 22.8 +0.4
EDM Edmonton 54.46 48 *e*P **P** **05 55 19.9 0.0**
EKS2 Erkin-Say 54.50 297 *e*P **P** **05 55 19.8 -0.5**
comp=Z,20nm,0.7s,mb5.2
EKS2 *e*PcP PcP 05 56 23.1 -0.1
EKS2 Erkin-Say 54.50 297 P **P** **05 55 19.7 -0.6**
SNR=31
ARU Arti 54.56 317 *e*P **P** **05 55 19.5 -1.0**
comp=Z,28nm,0.6s,mb5.5
ARU Arti 54.56 317 *d i*P **P** **05 55 19.7 -0.8**
ARU 05 56 21.4
ARU 05 57 19.1
ARU S **S** **06 02 54.5 -1.5**
ARU SS SS 06 06 38.4 0.0
ARU pmax pmax
comp=Z,37nm,1.0s,mb5.4
C08A Higginbotham F 54.61 56 ⇑P **P** **05 55 19.6 -1.5**
baz=54
A10A Northport 54.73 54 ⇓P **P** **05 55 21.3 -0.6**
baz=55
B09A Rice 54.73 55 ⇑P **P** **05 55 22.0 +0.1**
baz=55
AML Almayashu 54.86 296 *e*P **P** **05 55 23.2 +0.3**
comp=Z,7.3nm,0.7s,mb4.8
AML *e*PcP PcP 05 56 24.9 +0.3
AML Almayashu 54.86 296 P **P** **05 55 23.4 +0.5**
SNR=11
E07A Sunnyside 54.87 57 ⇑P **P** **05 55 22.4 -0.5**
baz=55
TAPN Taplejung 55.07 273 *e*P **P** **05 55 25.3 +0.7**
comp=Z,26nm,0.6s,mb5.4
F07A Phinny Hill Vi 55.22 58 ⇑P **P** **05 55 24.9 -0.5**
baz=55
NEW Newport 55.38 54 *e*P **P** **05 55 26.6 0.0**
A11A Hall Mountain, 55.38 53 ⇑P **P** **05 55 26.3 -0.3**
baz=55,SNR=5.9
D09A Jones Farm, Ri 55.44 56 ⇓P **P** **05 55 26.5 -0.5**
baz=55
ODAN Odare 55.60 273 *e*P **P** **05 55 29.1 +0.6**
B11A Sandpoint 55.69 54 ⇓P **P** **05 55 28.2 -0.6**
baz=56
E09A Wood Farm, Sta 55.85 56 ⇓P **P** **05 55 29.5 -0.5**
baz=56
JIRN Jiri 55.88 275 *e*P **P** **05 55 30.6 +0.2**
comp=Z,36nm,0.5s,mb5.7
D10A Wagner Farm, O 56.01 56 ⇑P **P** **05 55 30.6 -0.5**
baz=56
YBH Yreka Blue Hor 56.08 63 ⇓P **P** **05 55 31.2 -0.4**
baz=56
KK31 Karatay Array 56.17 299 *i* P **P** **05 55 31.2 -1.1**
KK31 pmax pmax
comp=Z,14nm,0.8s,mb5.0
KEV Kevo 56.20 341 *ep* **P** **05 55 29.9 -2.2**
comp=Z,2.9nm,0.6s,mb4.5
KEV Kevo 56.20 341 *e*P **P** **05 55 29.9 -2.2**
KEV pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
I06A Prineville 56.21 60 ⇑P **P** **05 55 32.4 -0.2**
baz=56
KKN Kakani 56.40 275 *e*P **P** **05 55 34.7 +0.6**
comp=Z,53nm,0.6s,mb5.7
A13A Flathead Natio 56.43 52 ⇑P **P** **05 55 33.8 -0.3**
baz=56
E10A Myers Farm, Un 56.44 56 ⇓P **P** **05 55 34.0 -0.2**
baz=56
I07A Izee 56.54 59 ⇑P **P** **05 55 34.4 -0.5**
baz=56
K05A Summer Lake 56.55 62 ⇑P **P** **05 55 34.9 -0.2**
baz=56
PRGR Permogore 56.61 327 *e*P **P** **05 55 33.8 -1.3**
PRGR pmax pmax
comp=Z,32nm,1.0s,mb5.3
WALA Waterton Lakes 56.62 52 *e*P **P** **05 55 35.6 +0.2**
comp=Z,13nm,0.8s,mb5.0
J06A Christmas Vall 56.66 61 ⇓P **P** **05 55 36.6 +0.8**
baz=56
GKN Gorkha 56.68 276 *e*P **P** **05 55 36.5 +0.3**
comp=Z,59nm,0.5s,mb5.9
F10A Beach Ranch, E 56.69 57 ⇓P **P** **05 55 36.0 +0.1**
baz=56
ARCES ARCESS Array B 56.70 341 P **P** **05 55 34.1 -1.6**
comp=Z,2.4nm,0.5s,mb4.5,baz=42,slow=8.2,SNR=24
B13A Whitefish 56.74 53 P **P** **05 55 36.7 +0.4**
baz=57,SNR=13
H08A Prairie City 56.75 59 ⇑P **P** **05 55 36.5 +0.1**
baz=57
K06A Valley Falls 56.88 61 ⇓P **P** **05 55 37.5 +0.2**
baz=57
BSMT Bassoo Peak 56.89 54 *e*P **P** **05 55 38.1 +0.8**
L05A Lakeview 57.00 62 ⇑P **P** **05 55 39.0 +0.8**
baz=57
E11A Bogner Ranch, 57.02 56 ⇑P **P** **05 55 37.8 -0.5**
baz=57
DANN Dangsing 57.03 277 *e*P **P** **05 55 39.0 +0.3**
comp=Z,1.3nm,0.6s,mb4.1
C13A Hot Springs 57.11 54 ⇑P **P** **05 55 38.6 -0.2**
baz=57
G10A Bishop Farm, J 57.16 57 P **P** **05 55 39.6 +0.3**
baz=57,SNR=10
I08A Drewsey 57.18 59 ⇑P **P** **05 55 39.9 +0.4**
baz=57
H09A Durkee 57.23 58 ⇓P **P** **05 55 40.3 +0.4**
baz=57
BMO Blue Mountains 57.32 58 *e*P **P** **05 55 40.0 -0.5**
comp=Z,4.5nm,0.7s,mb4.6
F11A Grangeville 57.33 56 ⇑P **P** **05 55 40.0 -0.5**
baz=57
MOD Modoc 57.40 62 ⇓P **P** **05 55 41.5 +0.5**
baz=57
C14A Swan Lake 57.49 53 ⇑P **P** **05 55 42.6 +1.0**
baz=57
KOLN Koldanda 57.52 276 *e*P **P** **05 55 42.7 +0.6**
comp=Z,44nm,0.7s,mb5.6
D13A Huson 57.52 54 ⇑P **P** **05 55 41.3 -0.5**
baz=57
K07A Rock Creek Ran 57.53 61 ⇑P **P** **05 55 41.8 -0.2**
baz=57
G11A Walters Elk Ra 57.57 57 ⇑P **P** **05 55 41.7 -0.5**
baz=57
J08A Circle Bar Ran 57.57 60 ⇑P **P** **05 55 42.4 +0.1**
baz=57
KTK1 Kautokeino 57.61 341 *e*P **P** **05 55 42.1 0.0**
I09A Lost Marbles R 57.61 59 ⇑P **P** **05 55 42.3 -0.2**
baz=58
HNR Honiara 57.70 174 LR LR 06 19 19.2
comp=Z,56nm,18.4s,MS3.7,baz=0.2,slow=35
H10A Noah's Angus R 57.80 58 P **P** **05 55 44.0 +0.2**
baz=58,SNR=8.0
L07A Adell 57.89 61 ⇓P **P** **05 55 45.0 +0.5**
baz=58
F12A Elk City 57.91 56 ⇓P **P** **05 55 44.4 -0.2**
baz=58,SNR=9.6
K08A Mann Creek Ran 57.95 60 ⇓P **P** **05 55 45.7 +0.8**
baz=58
MSO Missoula 57.97 54 *e*P **P** **05 55 44.6 -0.3**
comp=Z,11nm,1.3s,mb4.7
TRO Tromso 57.97 343 *e*P **P** **05 55 42.4 -2.3**
comp=Z,82nm,1.5s,mb5.5
TRO Tromso 57.97 343 *e*P **P** **05 55 42.4 -2.3**
TRO *e*pP pP 05 55 47.4 -11
TRO AMb AMB 05 55 50.2
comp=Z,82nm,1.5s,mb5.5
J09A Fry Pan Ranch, 57.99 59 ⇑P **P** **05 55 45.3 +0.1**
baz=58
D14A Greenough 58.05 54 P **P** **05 55 45.7 +0.2**
baz=58,SNR=14
WVOR Wild Horse Val 58.05 61 *e*P **P** **05 55 45.6 +0.1**
comp=Z,3.5nm,0.9s,mb4.4
WVOR Wild Horse Val 58.05 61 *e*P **P** **05 55 45.6 0.0**
WVOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
E13A Victor 58.07 55 P **P** **05 55 46.3 +0.6**
baz=58,SNR=5.1
I10A Payette 58.08 58 P **P** **05 55 46.6 +0.9**
baz=58,SNR=5.3
ORV Oroville 58.14 65 ⇑P **P** **05 55 45.6 -0.7**
baz=58
H11A Donnelly 58.14 57 P **P** **05 55 46.5 +0.3**
baz=58,SNR=28
CHMT Chamberlain Mo 58.29 54 *e*P **P** **05 55 46.8 -0.4**
L08A Fields 58.37 61 ⇓P **P** **05 55 48.6 +0.8**
baz=58
M07A Soldier Meadow 58.38 62 P **P** **05 55 48.8 +0.8**
baz=58,SNR=6.7
N06A Buffalo Meadow 58.39 63 ⇑P **P** **05 55 48.5 +0.5**
baz=58
F13A Darby 58.40 55 P **P** **05 55 47.9 -0.1**
baz=58,SNR=6.0
E14A Clinton 58.47 54 P **P** **05 55 48.6 +0.2**
baz=58,SNR=7.9
D15A Lincoln 58.60 53 ⇓P **P** **05 55 49.7 +0.4**
baz=58
BEKR Beckwourth 58.63 64 ⇑P **P** **05 55 49.9 +0.2**
baz=58
O06A Flanigan 58.76 63 ⇓P **P** **05 55 50.2 -0.4**
baz=59
M08A Happy Creek Ra 58.81 61 ⇓P **P** **05 55 51.1 +0.2**
baz=59
FFC Flin Flon 58.85 41 P **P** **05 55 51.1 +0.1**
comp=Z,102nm,0.8s,mb5.9,SNR=9.5
FFC Flin Flon 58.85 41 *e*P **P** **05 55 50.7 -0.2**
comp=Z,20nm,1.2s,mb5.0
FFC Flin Flon 58.85 41 *e*P **P** **05 55 50.7 -0.3**
FFC pmax pmax
comp=Z,20nm,1.2s,mb5.0
K10A MacKenzie Ranc 58.85 59 ⇑P **P** **05 55 51.6 +0.5**
baz=59
L09A Wilkinson Ranc 58.87 60 ⇑P **P** **05 55 50.9 -0.4**
baz=59
H12A Diamond D Ranc 58.88 57 ⇑P **P** **05 55 50.6 -0.8**
baz=59
G13A Cobalt 58.89 56 P **P** **05 55 51.5 +0.1**
baz=59,SNR=15
F14A Wisdom 58.91 55 ⇑P **P** **05 55 51.3 -0.2**
baz=59
E15A Deer Lodge 58.92 54 P **P** **05 55 51.8 +0.2**
baz=59,SNR=8.5
MFID Camas Ranch 59.05 58 ⇓P **P** **05 55 52.0 -0.5**
baz=59
H13A Challis 59.21 56 ⇓P **P** **05 55 52.8 -0.8**
baz=59
G14A Jackson 59.22 55 ⇑P **P** **05 55 53.2 -0.5**
baz=59
O07A Toulon 59.33 63 ⇓P **P** **05 55 54.7 +0.2**
baz=59
K11A Parker Ranch, 59.34 59 ⇓P **P** **05 55 54.4 -0.2**
baz=59
WCN Washoe City 59.35 64 ⇓P **P** **05 55 54.9 +0.2**
baz=59
FCC Fort Churchill 59.36 34 *e*P **P** **05 55 53.5 -0.9**
comp=Z,13nm,0.8s,mb5.0
FCC Fort Churchill 59.36 34 *e*P **P** **05 55 53.6 -0.8**
FCC pmax pmax
comp=Z,13nm,0.8s,mb5.0
F15A Butte 59.37 54 P **P** **05 55 56.0 +1.3**
baz=59,SNR=10
LRM Limekiln Ridge 59.40 54 *e*P **P** **05 55 55.8 +0.8**
EGMT Eagleton 59.43 51 *e*P **P** **05 55 54.6 -0.5**
comp=Z,16nm,0.8s,mb5.1
EGMT Eagleton 59.43 51 ⇑P **P** **05 55 55.2 +0.1**
baz=59
L10A Juniper Basin 59.52 60 ⇑P **P** **05 55 56.3 +0.5**
baz=59
J12A Stokes Ranch, 59.56 58 ⇑P **P** **05 55 56.5 +0.5**
baz=59
DLMT Dillon 59.62 55 *e*P **P** **05 55 57.5 +1.1**
comp=Z,5.0nm,0.8s,mb4.6
I13A Wildhorse Cree 59.70 57 ⇓P **P** **05 55 57.7 +0.7**
baz=60
HLID Hailey 59.75 57 *e*P **P** **05 55 57.7 +0.3**
comp=Z,4.3nm,0.8s,mb4.5
HLID *e*PcP PcP 05 56 44.2 +0.5
HLID Hailey 59.75 57 P **P** **05 55 58.2 +0.8**
baz=60,SNR=6.7
G15A Dillon 59.80 55 P **P** **05 55 58.0 +0.3**
baz=60,SNR=9.7
M10A I.L. Ranch, Tu 59.84 60 ⇑P **P** **05 55 57.9 -0.1**
baz=60
BOZ Bozeman (W) 59.96 54 *e*P **P** **05 55 59.0 +0.3**
comp=Z,11nm,0.8s,mb5.0
BOZ Bozeman (W) 59.96 54 *e*P **P** **05 55 59.1 +0.3**
BOZ pmax pmax
comp=Z,11nm,0.8s,mb4.9
BOZ Bozeman (W) 59.96 54 ⇓P **P** **05 55 59.2 +0.4**
baz=60
J13A Cove Ranch, Pi 59.99 57 ⇓P **P** **05 55 58.9 -0.2**
baz=60
R06C Coleville 60.02 65 ⇑P **P** **05 55 59.6 +0.2**
baz=60
K12A Draper Farm, C 60.07 58 ⇑P **P** **05 55 59.7 +0.2**
baz=60
S05C Merced 60.25 66 ⇑P **P** **05 56 01.1 +0.3**
baz=60
L12A House Creek Ra 60.31 59 ⇑P **P** **05 56 02.0 +0.8**
baz=60
O09A Fish Creek Ran 60.32 62 ⇑P **P** **05 56 01.2 -0.1**
baz=60
M11A Holland Ranch, 60.33 60 ⇓P **P** **05 56 01.8 +0.5**
baz=60
JOF Joensuu 60.38 334 *ep* **P** **05 55 59.7 -1.7**
comp=Z,16nm,0.6s,mb5.2
QLMT Earthquake Lak 60.59 55 *e*P **P** **05 56 04.2 +1.1**
O10A Cortez Mining, 60.65 61 ⇑P **P** **05 56 03.4 -0.1**
baz=60
Q08A Gabbs 60.72 63 P **P** **05 56 04.7 +0.6**
baz=61,SNR=6.6
P09A Austin 60.74 62 ⇑P **P** **05 56 05.1 +0.8**
baz=61
NVAR Mina Array Bea 60.77 64 P **P** **05 56 04.8 +0.3**
comp=Z,3.4nm,0.8s,mb4.5,baz=292,slow=7.8,SNR=18
NVAR PcP PcP 05 56 48.1 +0.2
comp=Z,2.7nm,0.7s,baz=314,slow=3.5,SNR=5.7
M12A Wells 60.84 59 ⇑P **P** **05 56 05.3 +0.5**
baz=61
T06C Millerton Lake 60.84 66 ⇓P **P** **05 56 04.6 -0.3**
baz=61
KCC Kaiser Creek 60.88 66 ⇑P **P** **05 56 05.1 0.0**
baz=61
L13A Double Diamond 60.96 58 ⇑P **P** **05 56 05.8 +0.2**
baz=61
K14A Jones Ranch, D 61.10 58 ⇑P **P** **05 56 07.4 +0.8**
baz=61
N12A Clover Valley, 61.13 60 ⇑P **P** **05 56 07.3 +0.5**
baz=61
YFT Old Faithful 61.16 55 *e*P **P** **05 56 08.8 +1.8**
O11A Cowboy Ranch, 61.24 61 ⇓P **P** **05 56 07.5 -0.1**
baz=61
M13A Montello 61.31 59 P **P** **05 56 08.7 +0.6**
baz=61,SNR=7.9
LKWY Lake 61.32 54 *e*P **P** **05 56 09.8 +1.7**
comp=Z,9.1nm,1.0s,mb4.9
LKWY Lake 61.32 54 P **P** **05 56 10.6 +2.5**
LKWY pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
IMW Indian Meadow 61.46 55 *e*P **P** **05 56 09.8 +0.8**
comp=Z,14nm,1.1s,mb5.0
HELL Mitchell Peak, 61.47 66 ⇓P **P** **05 56 08.9 -0.3**
baz=61
FLWY Flagg Ranch 61.47 55 *e*P **P** **05 56 10.8 +1.7**
DCID1 Drake Creek 61.53 56 *e*P **P** **05 56 11.1 +1.7**
P11A Circle Ranch, 61.56 62 ⇓P **P** **05 56 10.3 +0.5**
baz=61
RLMT Red Lodge 61.57 53 *e*P **P** **05 56 10.4 +0.7**
comp=Z,26nm,1.2s,mb5.2
R09A Tonopah 61.63 63 P **P** **05 56 10.3 +0.1**
baz=62,SNR=11
Q10A Clear Creek Ra 61.65 63 ⇑P **P** **05 56 10.6 +0.2**
baz=62
MOOW Moose Ponds 61.67 55 *e*P **P** **05 56 10.9 +0.5**
comp=Z,4.6nm,0.8s,mb4.7
M14A Sheep Mountain 61.68 59 ⇓P **P** **05 56 09.5 -1.1**
baz=62
O12A Currie 61.68 60 P **P** **05 56 11.1 +0.5**
baz=62,SNR=11
TPAW Teton Pass 61.72 55 *e*P **P** **05 56 11.7 +0.9**
comp=Z,15nm,0.9s,mb5.1
MOR8 Moi Rana 61.83 343 *e*P **P** **05 56 09.0 -2.1**
MOR8 Moi Rana 61.83 343 *e*P **P** **05 56 08.7 -2.4**
LOHW Long Hollow 61.83 55 *e*P **P** **05 56 12.2 +0.7**
comp=Z,13nm,1.1s,mb5.0
SNOW Snow King Moun 61.85 55 *e*P **P** **05 56 13.3 +1.7**
comp=Z,14nm,0.8s,mb5.1
REDW Red Top Meadow 61.86 56 *e*P **P** **05 56 12.8 +1.1**
S09A Goldfield 61.88 64 ⇑P **P** **05 56 11.9 0.0**
baz=62
DGMT Dagmar 61.95 48 *e*P **P** **05 56 11.8 -0.4**
comp=Z,45nm,1.2s,mb5.5
R10A Warm Springs 62.06 63 ⇑P **P** **05 56 13.1 -0.1**
baz=62
Q11A Duckwater 62.08 62 ⇓P **P** **05 56 12.9 -0.4**
baz=62
P12A McGill 62.11 61 ⇓P **P** **05 56 14.0 +0.5**
baz=62
LAO LASA Array 62.12 50 *e*P **P** **05 56 13.7 +0.3**
comp=Z,28nm,1.0s,mb5.3
S10A Tonopah Range, 62.13 63 ⇑P **P** **05 56 13.5 0.0**
baz=62
N14A Grayback Hills 62.20 59 ⇓P **P** **05 56 13.3 -0.7**
baz=62
M15A Larsen Ranch, 62.22 58 ⇑P **P** **05 56 14.0 -0.1**
baz=62
Q12A Willow Creek R 62.44 61 P **P** **05 56 16.1 +0.4**
baz=62,SNR=5.8
KAF Kangasniemi 62.45 335 *ep* **P** **05 56 13.6 -1.7**
comp=Z,5.3nm,0.5s,mb4.9,baz=35,slow=6.3
KAF Kangasniemi 62.45 335 *e*P **P** **05 56 13.6 -1.7**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.9
R11A Troy Canyon, C 62.45 62 ⇓P **P** **05 56 15.0 -0.7**
baz=62
KBL Kabul 62.46 292 *e*P **P** **05 56 14.7 -1.2**
comp=Z,21nm,0.8s,mb5.3
HWUT Hardware Ranch 62.62 57 *e*P **P** **05 56 16.9 +0.1**
comp=Z,99nm,0.6s,mb6.1
P13A Bates Ranch, G 62.64 61 ⇑P **P** **05 56 17.5 +0.5**
baz=62
KULM Kulim 62.71 245 *e*P **P** **05 56 17.8 +0.1**
MPMC Manual Prospec 62.81 66 ⇓P **P** **05 56 18.2 0.0**
baz=63
S11A Rachel 62.81 63 ⇑P **P** **05 56 18.4 +0.3**
baz=63
DUG Dugway 62.85 59 *e*P **P** **05 56 18.3 -0.1**
comp=Z,11nm,1.0s,mb5.0
DUG Dugway 62.85 59 P **P** **05 56 18.7 +0.4**
DUG pmax pmax
comp=Z,11nm,1.0s,mb4.9
DUG Dugway 62.85 59 ⇑P **P** **05 56 18.2 -0.1**
baz=63
FURC Furnace Creek, 62.92 65 ⇑P **P** **05 56 18.9 0.0**
baz=63
BW06 Boulder Array 62.97 55 *e*P **P** **05 56 18.6 -0.5**
comp=Z,14nm,1.0s,mb5.0
PDAR Pinedale Array 62.97 55 P **P** **05 56 19.4 +0.2**
comp=Z,9.7nm,0.9s,mb4.9,baz=299,slow=2.1,SNR=57
Q13A Wheeler Ranch, 62.97 61 ⇑P **P** **05 56 19.1 -0.1**
baz=63
TPNV Topopah Spring 62.97 64 ⇓P **P** **05 56 19.2 0.0**
baz=63
R12A Pony Springs, 63.04 62 ⇑P **P** **05 56 19.6 -0.1**
baz=63
FIA1 FINESS Array S 63.05 335 *e*P **P** **05 56 18.1 -1.2**
FINES FINESS Array B 63.05 335 P **P** **05 56 18.4 -0.9**
comp=Z,14nm,0.5s,mb5.4,baz=40,slow=7.4,SNR=134
EDW2 Edwards Air Fo 63.29 67 ⇓P **P** **05 56 21.1 -0.3**
baz=63
JLU Jordanelle 63.35 58 *e*P **P** **05 56 22.9 +1.2**
S12A Delamar Landin 63.37 63 ⇓P **P** **05 56 22.1 +0.3**
baz=63
T11A Corn Creek, Al 63.40 63 ⇑P **P** **05 56 21.7 -0.3**
baz=63
SFJD Kangerlussuaq 63.40 11 *e*P **P** **05 56 20.7 -0.9**
comp=Z,21nm,0.8s,mb5.3
SFJD Kangerlussuaq 63.40 11 *i* P **P** **05 56 21.2 -0.4**
SFJD *i* 05 56 43.5
SFJD pmax pmax
comp=Z,16nm,0.5s,mb5.4
SFJD Kangerlussuaq 63.40 11 P **P** **05 56 21.1 -0.5**
comp=Z,13nm,0.4s,mb5.4,baz=326,slow=5.2,SNR=15
SFJD Kangerlussuaq 63.40 11 *i* P **P** **05 56 21.2 -0.4**
comp=Z,16nm,0.5s,mb5.4
SFJD *i* 05 56 43.5
NLU North Lily Min 63.43 59 *e*P **P** **05 56 22.9 +0.7**
DAU Daniels Canyon 63.59 58 *e*P **P** **05 56 24.3 +1.1**
MPU Maple Canyon 63.64 59 *e*P **P** **05 56 23.6 0.0**
comp=Z,7.2nm,0.7s,mb4.8
GSC Goldstone 63.73 66 ⇓P **P** **05 56 23.7 -0.6**
baz=64
NSS Namsos 63.77 343 *e*P **P** **05 56 22.5 -1.6**
KAKA Kakadu 63.90 204 *e*P **P** **05 56 24.1 -1.4**
comp=Z,12nm,0.6s,mb5.1
S13A Holt Ranch, En 63.98 62 ⇓P **P** **05 56 25.2 -0.7**
baz=64
ARUT Antelope Range 64.08 62 *e*P **P** **05 56 26.3 -0.2**
TUQ Turquoise Mtn. 64.18 65 ⇑P **P** **05 56 26.3 -0.9**
baz=64
V11A Goodsprings 64.21 64 ⇑P **P** **05 56 26.8 -0.6**
baz=64
S14A Cedar City 64.26 62 ⇑P **P** **05 56 27.7 0.0**
baz=64
CCUT Cedar City 64.29 62 *e*P **P** **05 56 28.0 +0.1**

T13A Saint George 64.32 63 ⇑P P 05 56 28.4 +0.3
baz=64
MSU Marysvale 64.33 60 eP P 05 56 29.1 +0.9
HEC Hector,Ludlow 64.34 66 ⇓P P 05 56 28.0 -0.3
baz=64
OBN Obninsk 64.60 326 eP P 05 56 28.5 -1.1
OBN e*PP pP 05 56 43.1 -0.3
OBN e 05 57 02.0
OBN eSS SS 06 09 15.6 +0.1
OBN pmax pmax
comp=Z,11nm,0.9s,mb4.9
OBN MLR MLR
comp=Z,200nm,12.0s,MS4.5
MURC Murrieta 64.63 67 ⇓P P 05 56 29.4 -0.8
baz=64
U13A Pakoon Wash 64.69 63 ⇑P P 05 56 30.9 +0.3
baz=64
GMRC Granite Mounta 64.78 65 ⇑P P 05 56 30.9 -0.3
baz=65
T14A Hurricane 64.78 62 ⇑P P 05 56 30.8 -0.3
baz=65
SRU San Rafael 64.88 59 eP P 05 56 30.9 -0.8
comp=Z,10.0nm,0.7s,mb5.0
SRU San Rafael 64.88 59 eP P 05 56 30.9 -0.9
SRU pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
RSSD Black Hills 65.00 51 eP P 05 56 32.1 -0.3
comp=Z,19nm,0.9s,mb5.1
RSSD Black Hills 65.00 51 eP P 05 56 32.1 -0.3
RSSD pmax pmax
comp=Z,19nm,0.9s,mb5.1
BELC Belle Mtn. 65.10 66 ⇑P P 05 56 32.7 -0.6
baz=65
U14A Mt Trumbull 65.16 63 ⇑P P 05 56 34.2 +0.6
baz=65
T15A Red Dirt Ranch 65.22 62 ⇓P P 05 56 34.0 0.0
baz=65
IRM Iron Mountain 65.51 66 P P 05 56 35.9 0.0
baz=65,SNR=7.9
W13A Hualapai Mount 65.63 64 P P 05 56 36.6 -0.1
baz=66,SNR=5.7
BC3 Big Chuckw Mtn 65.67 66 ⇓P P 05 56 36.0 -0.9
baz=66
PSI Prapat 65.72 245 P P 05 56 37.4 -0.1
comp=Z,9.5nm,0.8s,mb4.9,baz=18,slow=5.3,SNR=8.0
X13A Yucca 66.01 65 P P 05 56 38.9 -0.3
baz=66,SNR=6.3
PDMCI Parker Dam,Lak 66.02 65 ⇓P P 05 56 38.3 -0.9
baz=66
W14A Seligman 66.04 64 P P 05 56 39.7 +0.4
baz=66,SNR=16
Y12C Blythe 66.17 66 ⇑P P 05 56 39.3 -0.9
baz=66
PV10 Paradox Valley 66.23 59 eP P 05 56 40.9 +0.4
GLA Glamis 66.46 66 ⇑P P 05 56 42.1 +0.1
baz=66
VRSR Storozhevoye 66.52 322 eP P 05 56 41.0 -1.1
VRSR pmax pmax
comp=N,1.0nm,0.8s
VRSR pmax pmax
comp=E,1.0nm,0.8s
W15A Williams 66.55 63 P P 05 56 43.5 +1.0
baz=66,SNR=5.5
DOMB Dombas 66.59 343 eP P 05 56 42.2 -0.1
DOMB AMb AMB 05 56 43.4
comp=Z,21nm,0.7s,mb5.3
SMCO Snowmass 66.84 57 eP P 05 56 39.3 -5.1
comp=Z,7.4nm,0.8s,mb4.8
WUAZ Wupatki 66.84 62 eP P 05 56 44.5 +0.1
comp=Z,5.7nm,0.8s,mb4.7
WUAZ Wupatki 66.84 62 ⇑P P 05 56 44.4 0.0
baz=67
Y14A Wickenburg 66.96 65 P P 05 56 44.9 -0.3
baz=67,SNR=6.1
X15A Humboldt 67.04 64 P P 05 56 46.4 +0.7
baz=67,SNR=7.7
NB2 NORSAR Subarra 67.06 342 P P 05 56 44.9 -0.5
comp=Z,96nm,1.2s,mb5.7,baz=26,slow=6.5
NB2 NORSAR Subarra 67.06 342 P P 05 56 44.9 -0.5
NB2 pmax pmax
comp=Z,96nm,1.2s,mb5.7
NOA NORSAR Array B 67.06 342 P P 05 56 45.0 -0.4
comp=Z,29nm,0.6s,mb5.5,baz=26,slow=6.4,SNR=96
ISCO Idaho Springs 67.16 55 eP P 05 56 46.6 +0.3
comp=Z,16nm,1.2s,mb4.9
ISCO Idaho Springs 67.16 55 P P 05 56 46.9 +0.5
ISCO pmax pmax
comp=Z,16nm,1.1s,mb5.0
BORG Borgarnes 67.22 358 P P 05 56 45.3 -1.0
comp=Z,53nm,0.8s,mb5.6,baz=60,slow=5.0,SNR=6.3
HFS Hagfors 67.34 340 P P 05 56 46.6 -0.5
comp=Z,38nm,0.5s,mb5.7,baz=57,slow=5.3,SNR=165
MVCO Mesa Verde 67.35 59 eP P 05 56 47.7 +0.1
comp=Z,143nm,1.2s,mb5.9
MVCO Mesa Verde 67.35 59 ⇓P P 05 56 46.6 -1.0
baz=67
HYA Hoyanger 67.94 344 eP P 05 56 52.0 +1.2
comp=Z,72nm,1.4s,mb5.5
HYA Hoyanger 67.94 344 eP P 05 56 52.0 +1.2
HYA AMb AMB 05 56 54.0
comp=Z,72nm,1.4s,mb5.5
115A Sonoran Desert 68.28 65 P P 05 56 53.9 +0.3
baz=68,SNR=5.5
KONO Kongsberg 68.67 342 eP P 05 56 55.3 -0.2
comp=Z,53nm,0.9s,mb5.5
KONO Kongsberg 68.67 342 eP P 05 56 55.3 -0.2
KONO pmax pmax
comp=Z,53nm,0.9s,mb5.5
SDCO Great Sand Dun 68.67 57 eP P 05 56 55.6 -0.2
comp=Z,10nm,1.3s,mb4.6
116A Eloy 68.69 65 ⇑P P 05 56 55.9 -0.2
baz=68
ASK Askoy 68.75 344 eP P 05 56 56.1 +0.1
BER Bergen 68.82 344 eP P 05 56 56.7 +0.3
EGD Espegrend 68.94 344 eP P 05 56 57.6 +0.4
ODD1 Odda 69.02 343 eP P 05 56 57.0 -0.7
comp=Z,98nm,1.0s,mb5.7
ODD1 Odda 69.02 343 ⇑iP P 05 56 57.0 -0.6
ODD1 AMb AMB 05 56 58.8
comp=Z,98nm,1.0s,mb5.7
ECSD EROS,Sioux Fal 69.03 47 eP P 05 56 56.8 -1.2
comp=Z,16nm,0.8s,mb5.0
TUC Tucson 69.42 64 eP P 05 57 00.5 -0.2
comp=Z,4.6nm,1.1s,mb4.3
TUC Tucson 69.42 64 eP P 05 57 00.5 -0.1
TUC pmax pmax
comp=Z,5.0nm,1.1s,mb4.4
BLS5 Blasjo 69.51 343 eP P 05 57 01.6 +0.9
comp=Z,47nm,0.7s,mb5.5
BLS5 Blasjo 69.51 343 eP P 05 57 01.6 +0.9
BLS5 AMb AMB 05 57 02.4
comp=Z,47nm,0.7s,mb5.5
KMY Karmoy 69.93 344 eP P 05 57 03.3 0.0
comp=Z,126nm,1.8s,mb5.5
KMY Karmoy 69.93 344 eP P 05 57 03.3 0.0
KMY AMb AMB 05 57 12.4
comp=Z,126nm,1.8s,mb5.5
LAZ Ladron 70.10 61 eP P 05 57 05.4 +0.6
218A Dragoon 70.11 64 ⇑P P 05 57 04.6 -0.2
baz=70
STAV Stavanger 70.11 343 eP P 05 57 04.7 +0.3
comp=Z,82nm,1.1s,mb5.6
STAV Stavanger 70.11 343 eP P 05 57 04.7 +0.3
STAV AMb AMB 05 57 05.5
comp=Z,82nm,1.1s,mb5.6
SUW Suwalki 70.11 332 eP P 05 57 03.4 -1.0
ANMO Albuquerque 70.11 60 eP P 05 57 04.8 0.0
comp=Z,6.0nm,1.0s,mb4.5
ANMO Albuquerque 70.11 60 P P 05 57 05.1 +0.3
ANMO pmax pmax
comp=Z,5.0nm,0.8s
ANMO Albuquerque 70.11 60 P P 05 57 05.1 +0.3
comp=Z,4.6nm,0.8s,mb4.4,baz=316,slow=7.0,SNR=17
WB2 Warramunga Arr 70.36 200 ⇑iP P 05 57 05.0 -1.3
WRA Warramunga Arr 70.36 200 P P 05 57 05.1 -1.2
comp=Z,15nm,0.8s,mb5.0,baz=18,slow=6.7,SNR=68
SNART Snartemo 70.36 342 eP P 05 57 06.5 +0.5
SNART AMb AMB 05 57 07.2
comp=Z,103nm,0.7s,mb5.9
KIV Kislovodsk 70.45 315 eP P 05 57 06.7 0.0
comp=Z,14nm,0.9s,mb4.9
KIV Kislovodsk 70.45 315 eP P 05 57 07.0 +0.3
KIV pmax pmax
comp=Z,19nm,1.0s,mb5.0
KIV Kislovodsk 70.45 315 P P 05 57 07.6 +0.8
SNR=5.5
KIV Kislovodsk 70.45 315 P P 05 57 07.6 +0.8
SNR=5.5
KIV Kislovodsk 70.45 315 P P 05 57 07.6 +0.8
SNR=5.5
KIV Kislovodsk 70.45 315 P P 05 57 07.6 +0.8
SNR=5.5
318A Bisbee 70.52 65 ⇓P P 05 57 06.6 -0.8
baz=70
ZEI Tsey 70.75 313 eP P 05 57 08.3 -0.3
ZEI pmax pmax
comp=Z,13nm,1.2s,mb4.7
AKASG Malin Array Be 70.81 327 P P 05 57 07.8 -1.0
comp=Z,17nm,0.7s,mb5.1,baz=33,slow=6.1,SNR=84
KIEV Kiev 70.82 327 eP P 05 57 07.4 -1.5
comp=Z,25nm,0.8s,mb5.2
KIEV Kiev 70.82 327 eP P 05 57 07.4 -1.5
KIEV pmax pmax
comp=Z,25nm,0.8s,mb5.2
319A Douglas 70.99 64 ⇑P P 05 57 10.0 -0.2
baz=71
FITZ Fitzroy Crossi 71.04 209 eP P 05 57 10.2 -0.3
comp=Z,28nm,0.8s,mb5.2
FITZ Fitzroy Crossi 71.04 209 P P 05 57 10.2 -0.2
comp=Z,17nm,0.8s,mb5.0,baz=17,slow=6.6,SNR=35
SOC Sochi 72.12 316 eP P 05 57 15.8 -1.0
SOC e*PP pP 05 57 30.3 -0.5
SOC e 05 59 54.5
SOC eS S 06 06 32.6 -2.5
SOC pmax pmax
comp=Z,34nm,0.9s,mb5.3
ANN Anapa 72.21 318 eP P 05 57 14.6 -2.7
ANN pmax pmax
comp=Z,49nm,1.4s,mb5.2
MCD Coleburn Disti 72.88 348 eP P 05 57 21.1 0.0
MNTX Cornudas Mount 73.07 61 eP P 05 57 21.9 -0.8
comp=Z,8.0nm,1.2s,mb4.5
KAC Achnashellach 73.23 349 eP P 05 57 22.9 -0.3
LVV L'vov 73.39 329 eP P 05 57 24.1 -0.1
KPL Plockton 73.44 349 eP P 05 57 23.5 -0.9
KPL AMb AMB 05 57 32.6
comp=Z,71nm,1.7s,mb5.3
SIM Simferopol' 73.53 320 ⇓iP P 05 57 24.0 -1.2
SIM pmax pmax
comp=Z,34nm,0.9s,mb5.3
KSB Sheil Bridge 73.53 349 ⇑eP P 05 57 24.9 -0.1
BSEG Bad Segeberg 73.74 339 eP P 05 57 26.5 +0.3
comp=Z,53nm,0.9s,mb5.5
KAR1 Arisaig 73.87 349 ⇑eP P 05 57 26.7 -0.2
PALK Pallekele 73.95 263 eP P 05 57 27.6 -0.4
comp=Z,6.7nm,0.8s,mb4.6
KWP Kalwaria 74.00 330 eP P 05 57 28.1 +0.3
KWP Kalwaria 74.00 330 ⇑iP P 05 57 28.1 +0.3
KIS Kishinev 74.01 325 eP P 05 57 26.0 -1.9
ASAR Alice Springs 74.05 200 P P 05 57 27.9 -0.3
comp=Z,6.9nm,0.9s,mb4.6,baz=9.9,slow=5.5,SNR=51
RUE Ruedersdorf 74.19 336 eP P 05 57 28.9 +0.1
comp=Z,18nm,0.4s,mb5.4
RUE Ruedersdorf 74.19 336 eP P 05 57 29.0 +0.2
comp=Z,86nm,0.8s,mb5.7
EBH Black Hill 74.21 348 ⇑eP P 05 57 28.5 -0.4
EAB Aberfoyle 74.38 348 eP P 05 57 29.5 -0.4
ESY Stoneypath 74.39 347 eP P 05 57 29.8 -0.2
OJC Ojcow 74.44 332 iP P 05 57 30.3 0.0
EDI Edinburgh 74.47 347 eP P 05 57 30.9 +0.4
EDI AMb AMB 05 57 33.7
comp=Z,52nm,2.2s,mb5.1
WMOK Wichita Mounta 74.58 55 eP P 05 57 30.5 -1.0
comp=Z,7.7nm,1.1s,mb4.5
WMOK Wichita Mounta 74.58 55 eP P 05 57 30.5 -0.9
WMOK pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
EAU Auchinoon 74.59 347 eP P 05 57 31.0 -0.1
EBL Broad Law 74.60 347 eP P 05 57 31.3 +0.1
STHS Stebnicka Huta 74.67 331 eP P 05 57 32.2 +0.5
comp=Z,46nm,0.7s,mb5.5
STHS Stebnicka Huta 74.67 331 eP P 05 57 32.2 +0.5
STHS pmax pmax
comp=Z,46nm,0.7s,mb5.5
KOLS Kolonicke sedl 74.74 330 eP P 05 57 32.1 -0.1
XSO Sourhope Farm 74.75 347 eP P 05 57 31.9 -0.2
PGBU Glenifferbraes 74.77 348 eP P 05 57 32.2 +0.1
PGBU AMb AMB 05 57 34.4
comp=Z,149nm,1.3s,mb5.8
KSP Ksiaz 74.95 334 eP P 05 57 33.3 0.0
KSP Ksiaz 74.95 334 ⇑eP P 05 57 33.0 -0.3
NIE Niedzica 74.97 331 eP P 05 57 34.0 +0.6
UZH Uzhgorod 75.00 330 eP P 05 57 32.5 -1.1
CRVS Cervenica-Dubn 75.04 330 eP P 05 57 34.1 +0.2
EKA Eskdalemuir Ar 75.04 347 P P 05 57 33.6 -0.2
comp=Z,15nm,0.6s,mb5.1,baz=19,slow=5.4,SNR=58
ESK Eskdalemuir 75.06 347 eP P 05 57 34.1 +0.2
ESK AMb AMB 05 57 43.5
comp=Z,54nm,1.5s,mb5.3
ESK Eskdalemuir 75.06 347 eP P 05 57 34.0 +0.1
comp=Z,23nm,0.8s,mb5.2
ESK Eskdalemuir 75.06 347 eP P 05 57 34.0 +0.1
ESK pmax pmax
comp=Z,23nm,0.8s,mb5.2
NRDL Niedersach Rie 75.11 338 eP P 05 57 34.4 +0.2
comp=Z,49nm,1.0s,mb5.4
ECK Cauldkaine Hil 75.18 347 eP P 05 57 34.7 +0.2
BHH Howats Hill 75.28 347 eP P 05 57 35.3 +0.1
OKC Ostrava-Krasne 75.28 333 ⇑iP P 05 57 35.3 0.0
OKC epP pP 05 57 40.2 -9.1
UPC Upice 75.33 334 ⇑iP P 05 57 35.8 +0.3
TRPA Tarpa 75.34 329 ⇑iP P 05 57 35.8 +0.2
XAL Allendale 75.35 346 eP P 05 57 35.2 -0.4
DPC Doubruska-Polom 75.38 334 ⇑iP P 05 57 36.4 +0.6
CLL Collm 75.45 336 ⇑iP P 05 57 35.9 -0.3
comp=Z,99nm,0.9s,mb5.7
CLL Collm 75.45 336 ⇑iP P 05 57 35.9 -0.3
comp=Z,99nm,0.9s,mb5.7
CLL LmV 05 10 00.0
comp=Z,400nm,19.1s
CLL Collm 75.45 336 eP P 05 57 36.0 -0.2
comp=Z,99nm,0.9s,mb5.7
MORC Moravsky Berou 75.52 333 eP P 05 57 36.7 +0.1
comp=Z,72nm,0.9s,mb5.6
MORC Moravsky Berou 75.52 333 eP P 05 57 36.7 +0.1
MORC pmax pmax
comp=Z,72nm,0.9s,mb5.6
MORC Moravsky Berou 75.52 333 ⇑iP P 05 57 36.9 +0.3
BRG Berggiesshubel 75.59 336 ⇑iP P 05 57 36.8 -0.2
BRG pmax pmax
comp=Z,24nm,1.1s,mb5.0
BRG MLR MLR
comp=Z,398nm,14.6s,MS4.8
BRG MLR MLR
comp=N,186nm,17.4s,MS4.7
BRG MLR MLR
comp=E,298nm,17.4s,MS4.7
BRG Berggiesshubel 75.59 336 eP P 05 57 36.8 -0.2
comp=Z,41nm,1.0s,mb5.3
BRG Berggiesshubel 75.59 336 ⇑iP P 05 57 36.8 -0.1
comp=Z,41nm,1.1s,mb5.3
BRG
comp=Z,665nm,14.6s
BRG
comp=N,311nm,17.4s
BRG
comp=E,498nm,17.4s
CLZ Clausthal 75.65 338 eP P 05 57 37.7 +0.4
CLZ pmax pmax
comp=Z,90nm,1.1s,mb5.6
CLZ Clausthal 75.65 338 eP P 05 57 37.7 +0.4
comp=Z,90nm,1.1s,mb5.6
LIKS Likavka 75.68 332 eP P 05 57 37.0 -0.5
FBE Freiberg 75.71 336 eP P 05 57 37.6 -0.1
comp=Z,74nm,0.9s,mb5.6
GCL Cushendall 75.71 349 eP P 05 57 37.3 -0.3
GAL1 Galloway 75.72 348 eP P 05 57 36.5 -1.1
GAL1 AMb AMB 05 57 38.8
comp=Z,92nm,1.4s,mb5.5
PVCC Panska Ves 75.72 335 ⇑iP P 05 57 37.9 +0.1
KECS Kecovo 75.73 331 eP P 05 57 37.8 0.0
comp=Z,17nm,0.8s,mb5.0
KECS Kecovo 75.73 331 eP P 05 57 37.8 0.0
KECS pmax pmax
comp=Z,17nm,0.8s,mb5.0
LTX Lajitas 75.80 62 eP P 05 57 38.1 -0.5
comp=Z,24nm,1.3s,mb5.0
LTX Lajitas 75.80 62 eP P 05 57 38.1 -0.5
LTX pmax pmax
comp=Z,24nm,1.3s,mb5.0
TXAR Lajitas Array 75.80 62 P P 05 57 38.2 -0.4
TXAR Lajitas Array 75.80 62 P P 05 57 38.2 -0.4
comp=Z,9.1nm,0.8s,mb4.8,baz=300,slow=4.3,SNR=105
IBBN Ibbenburen 75.84 340 eP P 05 57 38.4 0.0
comp=Z,63nm,0.8s,mb5.6
MBWA Marble Bar 75.92 213 eP P 05 57 38.4 -0.7
comp=Z,16nm,1.1s,mb4.9
HPK Haverah Park 76.13 346 eP P 05 57 40.5 +0.5
HPK AMb AMB 05 57 42.2
comp=Z,163nm,1.4s,mb5.8
PRU Pruhonice 76.22 335 ⇑iP P 05 57 40.8 +0.2
PRU epP pP 05 57 46.3 -8.4
VRAC Vranov 76.22 333 P P 05 57 41.3 +0.6
VRAC Vranov 76.22 333 ⇑iP P 05 57 41.2 +0.6
VYHS Vyhne 76.25 332 eP P 05 57 41.2 +0.4
comp=Z,23nm,1.1s,mb5.0
VYHS Vyhne 76.25 332 eP P 05 57 41.2 +0.4
VYHS pmax pmax
comp=Z,23nm,1.1s,mb5.0
HARR Harsova 76.28 324 P P 05 57 41.3 +0.2
HARR Harsova 76.28 324 ⇓iP P 05 57 41.1 +0.1
KOLL Kolacno 76.31 332 eP P 05 57 41.7 +0.5
MLR Muntele Rosu 76.37 326 P P 05 57 42.4 +0.9
MLR Muntele Rosu 76.37 326 ⇓iP P 05 57 41.8 +0.3
WTSB eP 06 23 24.1
comp=Z,27nm,1.6s
WTSB Winterswijk 76.38 340 eP P 05 57 41.5 0.0
comp=Z,55nm,1.1s,mb5.4
TANN Tannenbergstha 76.41 336 eP P 05 57 41.6 0.0
comp=Z,59nm,1.6s,mb5.2
PSZ Piszkesteto 76.41 331 eP P 05 57 41.8 +0.1
comp=Z,28nm,0.9s,mb5.2
PSZ Piszkesteto 76.41 331 eP P 05 57 41.8 +0.1
PSZ pmax pmax
comp=Z,28nm,0.9s,mb5.2
PSZ Piszkesteto 76.41 331 ⇑eP P 05 57 42.1 +0.4
PSZ Piszkesteto 76.41 331 ⇑iP P 05 57 42.1 +0.4
WERD Werda 76.42 336 eP P 05 57 41.7 0.0
comp=Z,52nm,1.3s,mb5.3
MOX Moxa 76.42 337 eP P 05 57 41.8 +0.1
comp=Z,57nm,1.1s,mb5.4
MOX Moxa 76.42 337 eP P 05 57 41.8 +0.1
MOX pmax pmax
comp=Z,57nm,1.1s,mb5.4
DRGR 76.44 328 P P 05 57 42.0 +0.1
DRGR 76.44 328 ⇑iP P 05 57 41.7 -0.2
GUNZ Gunzen 76.49 336 eP P 05 57 42.2 +0.1
comp=Z,43nm,0.8s,mb5.4
GMM Mts of Mourne 76.50 348 eP P 05 57 41.3 -0.8
WERN Wernitzgruen 76.55 336 eP P 05 57 42.7 +0.3
comp=Z,58nm,0.8s,mb5.6
NKC Novy Kostel 76.58 336 ⇑eP P 05 57 43.0 +0.4
KBI1 Birley Grange 76.79 346 eP P 05 57 43.7 -0.1
MALT Malatya 76.84 314 eP P 05 57 45.4 +1.1
comp=Z,45nm,0.8s,mb5.5
MALT Malatya 76.84 314 ⇑iP P 05 57 45.7 +1.4
MODS Modra-Piesok 76.85 332 eP P 05 57 45.2 +1.0
comp=Z,21nm,1.1s,mb5.0
MODS Modra-Piesok 76.85 332 eP P 05 57 45.2 +1.0
MODS pmax pmax
comp=Z,21nm,1.1s,mb5.0
MANZ Manzenberg 76.89 336 eP P 05 57 44.6 +0.2
comp=Z,39nm,1.0s,mb5.3
DMUB Kingscourt 76.96 349 ⇑iP P 05 57 44.7 0.0
ZST Bratislava 77.06 332 eP P 05 57 46.5 +1.1
comp=Z,32nm,1.0s,mb5.2
ZST Bratislava 77.06 332 eP P 05 57 46.5 +1.1
ZST pmax pmax
comp=Z,32nm,1.0s,mb5.2
ROTZ Rotzenmuhle 77.06 336 eP P 05 57 45.6 +0.2
comp=Z,60nm,1.1s,mb5.4
KWE Weaver Farm 77.07 346 eP P 05 57 46.0 +0.7
BUD Budapest 77.08 331 ⇑eP P 05 57 46.0 +0.5
WBK Wadi Bani Khal 77.09 289 P P 05 57 47.4 +1.5
SNR=5.8
WBK Wadi Bani Khal 77.09 289 P P 05 57 47.4 +1.5
SNR=5.8
WBK Wadi Bani Khal 77.09 289 P P 05 57 47.4 +1.5
SNR=5.8
WBK Wadi Bani Khal 77.09 289 P P 05 57 47.4 +1.5
SNR=5.8
JCT Junction City 77.19 59 eP P 05 57 45.4 -1.0
comp=Z,14nm,1.2s,mb4.8
JCT Junction City 77.19 59 eP P 05 57 45.4 -1.0
JCT pmax pmax
comp=Z,14nm,1.2s,mb4.8
HATD Hatta, Dubai 77.24 293 P P 05 57 47.2 +0.4
SNR=9.1
HATD Hatta, Dubai 77.24 293 P P 05 57 47.2 +0.4
SNR=9.1
HATD Hatta, Dubai 77.24 293 P P 05 57 47.2 +0.4
SNR=9.1
HATD Hatta, Dubai 77.24 293 P P 05 57 47.2 +0.4
SNR=9.1
HATD Hatta, Dubai 77.24 293 P P 05 57 47.2 +0.4
SNR=9.1
CWF Charnwood Fore 77.25 345 eP P 05 57 46.4 0.0
CWF AMb AMB 05 57 49.1
comp=Z,74nm,1.4s,mb5.4
KHC Kasperske Hory 77.26 335 ⇑iP P 05 57 47.0 +0.5
KHC e pP 05 58 03.5 +2.9
KHC Kasperske Hory 77.26 335 ⇑iP P 05 57 47.0 +0.5
KHC x x 05 58 03.5
ASHO Ashiyiah 77.39 293 P P 05 57 47.8 +0.2
SNR=11
ASHO Ashiyiah 77.39 293 P P 05 57 47.8 +0.2
SNR=11
ASHO Ashiyiah 77.39 293 P P 05 57 47.8 +0.2
SNR=11
ASHO Ashiyiah 77.39 293 P P 05 57 47.8 +0.2
SNR=11
ASHO Ashiyiah 77.39 293 P P 05 57 47.8 +0.2
SNR=11
GRA1 Grafenberg Arr 77.40 337 eP P 05 57 47.8 +0.6
comp=Z,93nm,0.8s,mb5.8
GRF Grafenberg Arr 77.40 337 eP P 05 57 47.8 +0.6
GRF pmax pmax
comp=Z,93nm,0.8s,mb5.8
GRF Grafenberg Arr 77.40 337 eP P 05 57 47.8 +0.6
GRF pmax pmax
comp=Z,93nm,0.8s,mb5.8
GRF Grafenberg Arr 77.40 337 eP P 05 57 47.8 +0.6
comp=Z,93nm,0.8s,mb5.8
GRFO Grafenberg 77.40 337 eP P 05 57 47.6 +0.4
comp=Z,116nm,1.1s,mb5.7
GRFO Grafenberg 77.40 337 eP P 05 57 47.6 +0.4
GRFO pmax pmax
comp=Z,116nm,1.1s,mb5.7
SBD1 Bryn Du 77.41 347 eP P 05 57 47.2 0.0
HOQ Hoqain 77.42 291 P P 05 57 48.2 +0.4
SNR=10
HOQ Hoqain 77.42 291 P P 05 57 48.2 +0.4
SNR=10
HOQ Hoqain 77.42 291 P P 05 57 48.2 +0.4
SNR=10
HOQ Hoqain 77.42 291 P P 05 57 48.2 +0.4
SNR=10
WET Wettzell 77.45 335 eP P 05 57 48.0 +0.5
WET pmax pmax
comp=Z,66nm,0.9s,mb5.6
WET Wettzell 77.45 335 eP P 05 57 48.0 +0.5
comp=Z,66nm,0.9s,mb5.6
GEC2 GERESS Array S 77.49 335 eP P 05 57 47.7 0.0
GEC2 pmax pmax
comp=Z,24nm,0.8s,mb5.2
GEC2 GERESS Array S 77.49 335 eP P 05 57 47.7 0.0
comp=Z,24nm,0.8s,mb5.2
GERES GERESS Array B 77.49 335 P P 05 57 48.1 +0.4
comp=Z,16nm,0.7s,mb5.1,baz=32,slow=5.4,SNR=82
DLF Lyons Farm 77.50 349 ⇑iP P 05 57 47.6 -0.1
MIAR Mount Ida 77.51 52 eP P 05 57 47.3 -0.8
comp=Z,7.0nm,0.7s,mb4.7
MIAR Mount Ida 77.51 52 eP P 05 57 47.3 -0.8
MIAR pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
DCN Croghan 77.55 349 ⇑iP P 05 57 48.0 0.0
TNS Taunus Mts 77.61 339 eP P 05 57 48.7 +0.3
TNS pmax pmax
comp=Z,46nm,0.9s,mb5.4
TNS Taunus Mts 77.61 339 eP P 05 57 48.7 +0.3
comp=Z,46nm,0.9s,mb5.4
GZR Gura Zlata 77.61 328 P P 05 57 48.5 0.0
GZR Gura Zlata 77.61 328 ⇓iP P 05 57 48.6 +0.1
CONA Conrad Observa 77.68 333 ⇓ipP P 05 57 49.5 +0.6

comp=Z,58nm,1.4s,mb5.3,SNR=14
SOP Sopron 77.68 332⇑ *e*P P 05 57 49.7 +0.8
JMDO Jabal Madar 77.81 290 P P 05 57 50.5 +0.5
SNR=10.0
JMDO Jabal Madar 77.81 290 P P 05 57 50.5 +0.5
SNR=10.0
JMDO Jabal Madar 77.81 290 P P 05 57 50.5 +0.5
SNR=10.0
JMDO Jabal Madar 77.81 290 P P 05 57 50.5 +0.5
SNR=10.0
MEM Membach 77.83 340 P P 05 57 49.9 +0.3
comp=Z,40nm,1.2s,mb5.2
TOD Tromm 78.10 338 *e*P P 05 57 51.2 +0.1
BSY Bisya 78.10 291 P P 05 57 52.4 +0.8
SNR=13
BSY Bisya 78.10 291 P P 05 57 52.4 +0.8
SNR=13
BSY Bisya 78.10 291 P P 05 57 52.4 +0.8
SNR=13
SKP1 Kophill 78.14 345 *e*P P 05 57 50.7 -0.6
ABH Alteburg 78.15 339 *e*P P 05 57 51.2 -0.2
BCLA Clavier 78.16 341 P P 05 57 51.8 +0.3
comp=Z,30nm,1.4s,mb5.0
ANTO Ankara 78.21 318 *e*P P 05 57 52.2 +0.3
comp=Z,22nm,0.6s,mb5.3
ANTO Ankara 78.21 318 *e*P P 05 57 52.3 +0.4
ANTO pmax pmax
comp=Z,22nm,0.6s,mb5.3
ANTO Ankara 78.21 318 P P 05 57 52.8 +0.9
SNR=5.4
ANTO Ankara 78.21 318 P P 05 57 52.8 +0.9
SNR=5.4
ANTO Ankara 78.21 318 P P 05 57 52.8 +0.9
SNR=5.4
ANTO Ankara 78.21 318 *i*P P 05 57 52.5 +0.6
MOA Molln 78.22 334⇑ *i*P P 05 57 52.2 +0.3
comp=Z,21nm,0.9s,mb5.1,SNR=14
MOA Molln 78.22 334⇑ *i*pP P 05 57 52.2 +0.3
comp=Z,21nm,0.9s,mb5.1,SNR=14
WCI Wyandotte Cave 78.23 45 *e*P P 05 57 51.4 -0.7
comp=Z,21nm,0.9s,mb5.1
WCI Wyandotte Cave 78.23 45 *e*P P 05 57 51.4 -0.7
WCI pmax pmax
comp=Z,21nm,0.9s,mb5.1
SZH Strazhica 78.25 324 P P 05 57 51.7 -0.4
SNF Seneffe 78.30 341 P P 05 57 50.8 -1.4
PKSM Moragy 78.32 331 P P 05 57 51.9 -0.6
PKSM Moragy 78.32 331⇑ *i*P P 05 57 51.6 -0.8
ARSA Arzberg 78.39 333⇑ *i*P P 05 57 53.1 +0.4
comp=Z,22nm,1.2s,mb5.0
ARSA Arzberg 78.39 333⇑ *i*P P 05 57 53.1 +0.4
comp=Z,22nm,1.2s,mb5.0
ARSA Arzberg 78.39 333⇑ *i*pP P 05 57 53.1 +0.4
comp=Z,22nm,1.2s,mb5.0
RUP Ruppelstein 78.43 339 *e*P P 05 57 52.9 -0.1
PVL Pavlikeni 78.53 325 P P 05 57 54.0 +0.4
HGH Gray Hill 78.56 346 *e*P P 05 57 53.7 0.0
GIVF Givet 78.57 341 *e*P P 05 57 53.6 -0.1
comp=Z,30nm,0.9s,mb4.9
GIVF Givet 78.57 341 *e*P P 05 57 53.6 -0.1
comp=Z,15nm,0.9s,mb4.9
GIVF Givet 78.57 341 *e*P P 05 57 53.6 -0.1
GIVF pmax pmax
comp=Z,15nm,0.9s,mb4.9
DOU Dourbes 78.62 341 P P 05 57 53.9 -0.1
JMB Yambol 78.67 324 P P 05 57 54.3 -0.1
WLF Walferdange 78.68 340 *e*P P 05 57 55.1 +0.8
comp=Z,14nm,0.9s,mb4.9
WLF Walferdange 78.68 340 *e*P P 05 57 55.1 +0.8
WLF pmax pmax
comp=Z,15nm,0.9s,mb4.9
UMR Umm Al-Rimmam 78.70 302 *e*P P 05 57 54.1 -0.7
UMR AMb AMB 05 57 56.4
comp=Z,108nm,1.2s,mb5.7
MIB Mutribah 78.73 302 *e*P P 05 57 55.0 +0.1
MIB AMb AMB 05 57 56.4
comp=Z,161nm,0.8s,mb6.0
BAIF Baives 78.74 341 *e*P P 05 57 54.7 0.0
comp=Z,30nm,0.9s,mb4.9
BAIF Baives 78.74 341 *e*P P 05 57 54.7 0.0
comp=Z,15nm,0.9s,mb4.9
BAIF Baives 78.74 341 *e*P P 05 57 54.7 0.0
BAIF pmax pmax
comp=Z,15nm,0.9s,mb4.9
FUR Furstenfeldbru 78.78 336 *e*P P 05 57 55.2 +0.3
FUR pmax pmax
comp=Z,55nm,1.0s,mb5.4
FUR Furstenfeldbru 78.78 336 *e*P P 05 57 55.2 +0.3
comp=Z,55nm,1.0s,mb5.4
LANF Langenberg 78.92 338 *e*P P 05 57 55.7 0.0
KBD Kabd 79.00 302 *e*P P 05 57 56.7 +0.2
KBD AMb AMB 05 57 57.2
comp=Z,260nm,0.9s,mb6.2
PERS Pernice 79.06 333 *i*P P 05 57 56.7 +0.2
NATX Nacogdoches 79.08 54 *e*P P 05 57 57.1 +0.3
comp=Z,22nm,0.7s,mb5.2
RST Umm Al-Ruwaisa 79.15 302 *e*P P 05 57 56.7 -0.6
RST AMb AMB 05 57 58.5
comp=Z,164nm,0.8s,mb6.0
WVT Waverly 79.17 47 *e*P P 05 57 56.2 -1.1
comp=Z,5.4nm,0.8s,mb4.5
WVT Waverly 79.17 47 *e*P P 05 57 56.2 -1.1
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KBA Koelnbreinsper 79.19 334⇑ *i*P P 05 57 58.2 +1.0
comp=Z,116nm,1.8s,mb5.5,SNR=24
KBA Koelnbreinsper 79.19 334⇑ *i*pP P 05 57 58.2 +1.0
comp=Z,116nm,1.8s,mb5.5,SNR=24
KBA Koelnbreinsper 79.19 334⇑ *i*P P 05 57 58.2 +1.0
KBA pmax pmax
comp=Z,116nm,1.8s,mb5.5
NAY Al-Naaiem 79.20 302 *e*P P 05 57 57.3 -0.3
NAY AMb AMB 05 57 59.1
comp=Z,81nm,1.0s,mb5.6
RDF Al-Radifah 79.27 301 *e*P P 05 57 57.7 -0.2
RDF AMb AMB 05 57 59.8
comp=Z,204nm,1.1s,mb6.0
BFO Black Forest 79.40 338 *e*P P 05 57 57.6 -0.7
comp=Z,30nm,1.1s,mb5.1
BFO Black Forest 79.40 338 *e*P P 05 57 57.6 -0.7
BFO pmax pmax
comp=Z,30nm,1.1s,mb5.1
WATA Walderalm 79.45 335⇑ *i*P P 05 57 59.3 +0.7
comp=Z,41nm,1.0s,mb5.3,SNR=8.9
WATA Walderalm 79.45 335⇑ *i*pP P 05 57 59.3 +0.7
comp=Z,41nm,1.0s,mb5.3,SNR=8.9
WATA Walderalm 79.45 335⇑ *i*P P 05 57 59.3 +0.7
WATA pmax pmax
comp=Z,41nm,1.0s,mb5.3
SPAK Spaichingen-Ko 79.49 338 *e*P P 05 57 58.8 0.0
WTTA Wattenberg 79.50 335⇑ *i*P P 05 57 59.7 +0.8
comp=Z,115nm,1.3s,mb5.6,SNR=24
WTTA Wattenberg 79.50 335⇑ *i*pP P 05 57 59.7 +0.8
comp=Z,115nm,1.3s,mb5.6,SNR=24
WTTA Wattenberg 79.50 335⇑ *i*P P 05 57 59.7 +0.8
WTTA pmax pmax
comp=Z,115nm,1.3s,mb5.7
RETA Reutte 79.54 336⇑ *i*pP P 05 57 59.4 +0.4
comp=Z,31nm,0.9s,mb5.2,SNR=7.5
MOTA Moosalm 79.58 336⇑ *i*P P 05 57 59.8 +0.5
comp=Z,71nm,1.1s,mb5.5,SNR=20
MOTA Moosalm 79.58 336⇑ *i*P P 05 57 59.8 +0.5
comp=Z,71nm,1.1s,mb5.5
MOTA Moosalm 79.58 336⇑ *i*pP P 05 57 59.8 +0.5
comp=Z,71nm,1.1s,mb5.5,SNR=20
MOTA Moosalm 79.58 336⇑ *i*P P 05 57 59.8 +0.5
MOTA pmax pmax
comp=Z,71nm,1.1s,mb5.5
CDF Champ du Feu 79.58 339⇑ *i*P P 05 57 59.3 0.0
comp=Z,44nm,0.9s,mb5.1
CDF Champ du Feu 79.58 339⇑ *i*P P 05 57 59.3 0.0
comp=Z,22nm,0.9s,mb5.1
CDF Champ du Feu 79.58 339⇑ *i*P P 05 57 59.3 0.0
CDF pmax pmax
comp=Z,22nm,0.9s,mb5.1
SQTA Sankt Quirin 79.66 336⇑ *i*P P 05 58 00.3 +0.5
comp=Z,48nm,1.1s,mb5.3,SNR=15
SQTA Sankt Quirin 79.66 336⇑ *i*pP P 05 58 00.3 +0.5
comp=Z,48nm,1.1s,mb5.3,SNR=15
SQTA Sankt Quirin 79.66 336⇑ *i*P P 05 58 00.3 +0.6
SQTA pmax pmax
comp=Z,49nm,1.1s,mb5.3
ABTA Abfaltersbach 79.73 335⇑ *i*P P 05 58 00.1 0.0
comp=Z,20nm,1.2s,mb4.9,SNR=6.0
ECH Echery 79.79 339 *e*P P 05 58 00.5 +0.1
KDZ Kurdzhali 79.83 324 P P 05 58 01.8 +1.1

VTS Vitosha 79.87 326 P P 05 58 00.9 0.0
VTS Vitosha 79.87 326 P P 05 58 00.6 -0.4
VTS Vitosha 79.87 326⇑ *i*P P 05 58 00.7 -0.3
VISS Visnje 79.89 333 *e*P P 05 58 00.5 -0.5
FELD Feldberg im Sc 79.90 338 *e*P P 05 58 00.9 -0.1
DAVA Damuels 79.96 337⇑ *i*P P 05 58 01.9 +0.5
comp=Z,34nm,1.1s,mb5.2
DAVA Damuels 79.96 337⇑ *i*pP P 05 58 01.9 +0.5
comp=Z,34nm,1.1s,mb5.2
PLAL Pickwick Lake 79.97 48 *e*P P 05 58 00.3 -1.4
comp=Z,9.2nm,1.2s,mb4.6
FETA Feichten 79.97 336⇑ *i*pP P 05 58 02.1 +0.7
comp=Z,47nm,1.5s,mb5.2,SNR=11
MEZF Maizieres J'vi 80.02 340 *e*P P 05 58 02.0 +0.3
BOJS Bojanci 80.03 332 *i*P P 05 58 02.7 +0.9
JAVS Javornik 80.05 333 *i*P P 05 58 01.9 +0.1
THEF They Montfort 80.06 339 *e*P P 05 58 02.0 +0.1
MOF Molkenrain 80.14 338 *e*P P 05 58 02.0 -0.3
HAU Haudompre 80.18 339⇑ *i*P P 05 58 02.4 -0.2
comp=Z,25nm,0.8s,mb4.9
HAU Haudompre 80.18 339⇑ *i*P P 05 58 02.4 -0.2
comp=Z,12nm,0.8s,mb4.9
HAU Haudompre 80.18 339⇑ *i*P P 05 58 02.4 -0.2
HAU pmax pmax
comp=Z,12nm,0.8s,mb4.9
HINF Hinteralfeld 80.24 339 *e*P P 05 58 02.5 -0.4
comp=Z,8.0nm,0.6s,mb4.5
HINF Hinteralfeld 80.24 339 *e*P P 05 58 02.5 -0.4
comp=Z,4.0nm,0.6s,mb4.5
HINF Hinteralfeld 80.24 339 *e*P P 05 58 02.5 -0.4
HINF pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
BBS Basel-Blauen 80.41 338 *e*P P 05 58 04.0 +0.2
DAVOX Davos/Dischmat 80.43 336 P P 05 58 04.9 +1.0
comp=Z,15nm,0.6s,mb5.1,baz=23,slow=4.9,SNR=22
MMB Musomiste 80.53 325 P P 05 58 04.0 -0.6
TAOE Nuku Hiva Isla 80.62 115 *e*LR LR 06 22 48.5
comp=Z,434nm,23.6s
STKA Stephens Creek 80.70 191 P P 05 58 04.1 -1.2
comp=Z,2.7nm,0.7s,mb4.3,baz=332,slow=7.6,SNR=5.7
SWET Sewanee 80.83 46 *e*P P 05 58 05.1 -1.2
FLN La Foliniere 80.92 344⇑ *i*P P 05 58 06.3 -0.2
comp=Z,77nm,1.3s,mb5.2
FLN La Foliniere 80.92 344⇑ *i*P P 05 58 06.3 -0.2
comp=Z,38nm,1.3s,mb5.2
FLN La Foliniere 80.92 344⇑ *i*P P 05 58 06.3 -0.2
FLN pmax pmax
comp=Z,38nm,1.3s,mb5.2
LDF La Druitiere 81.02 343⇑ *i*P P 05 58 06.7 -0.3
PMOR Pomariorio Ree 81.05 124 *e*T 07 27 23.4
comp=Z,13nm,0.2s
GRR Gorron 81.35 344 *e*P P 05 58 08.7 -0.1
comp=Z,40nm,0.7s,mb5.2
GRR Gorron 81.35 344 *e*P P 05 58 08.7 -0.1
comp=Z,20nm,0.7s,mb5.2
GRR Gorron 81.35 344 *e*P P 05 58 08.7 -0.1
GRR pmax pmax
comp=Z,20nm,0.7s,mb5.2
LOR Lormes 81.45 340⇑ *i*P P 05 58 09.2 -0.1
comp=Z,28nm,0.7s,mb5.0
LOR Lormes 81.45 340⇑ *i*P P 05 58 09.2 -0.1
comp=Z,14nm,0.7s,mb5.0
LOR Lormes 81.45 340⇑ *i*P P 05 58 09.2 -0.1
LOR pmax pmax
comp=Z,14nm,0.7s,mb5.0
TKL Tuckaleechee C 81.50 45 P P 05 58 09.4 -0.4
comp=Z,5.6nm,0.8s,mb4.5,baz=325,slow=2.0,SNR=4.6
CABF La Chapelle 81.55 339⇑ *i*P P 05 58 10.1 +0.2
KRUS Krusevo 81.66 326 *e*P P 05 58 10.0 -0.5
HYF Humbligny 81.72 341 *e*P P 05 58 10.5 -0.3
SSF Saint Saulge 81.73 341⇑ *i*P P 05 58 10.6 -0.2
comp=Z,31nm,0.8s,mb5.0
SSF Saint Saulge 81.73 341⇑ *i*P P 05 58 10.6 -0.2
comp=Z,16nm,0.8s,mb5.0
SSF Saint Saulge 81.73 341⇑ *i*P P 05 58 10.6 -0.2
SSF pmax pmax
comp=Z,16nm,0.8s,mb5.0
SGMF Saint Gilles 81.79 345⇑ *i*P P 05 58 11.1 0.0
comp=Z,40nm,0.7s,mb5.1
SGMF Saint Gilles 81.79 345⇑ *i*P P 05 58 11.1 0.0
comp=Z,20nm,0.7s,mb5.2
SGMF Saint Gilles 81.79 345⇑ *i*P P 05 58 11.1 0.0
SGMF pmax pmax
comp=Z,20nm,0.7s,mb5.2
ROSF Rostrenen 81.83 345 *e*P P 05 58 11.3 0.0
comp=Z,61nm,0.9s,mb5.2
ROSF Rostrenen 81.83 345 *e*P P 05 58 11.3 0.0
comp=Z,30nm,0.9s,mb5.2
ROSF Rostrenen 81.83 345 *e*P P 05 58 11.3 0.0
ROSF pmax pmax
comp=Z,30nm,0.9s,mb5.2
CSS Prodhromos 81.97 315 *e*P P 05 58 12.1 -0.2
comp=Z,24nm,0.8s,mb5.2
AVF Avril sur Loir 82.02 341⇑ *i*P P 05 58 12.3 0.0
comp=Z,19nm,0.7s,mb4.8
AVF Avril sur Loir 82.02 341⇑ *i*P P 05 58 12.3 0.0
comp=Z,9.4nm,0.7s,mb4.8
AVF Avril sur Loir 82.02 341⇑ *i*P P 05 58 12.3 0.0
AVF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
SMF Signal de Mont 82.05 340⇑ *i*P P 05 58 12.4 -0.1
comp=Z,77nm,1.1s,mb5.3
SMF Signal de Mont 82.05 340⇑ *i*P P 05 58 12.4 -0.1
comp=Z,38nm,1.1s,mb5.2
SMF Signal de Mont 82.05 340⇑ *i*P P 05 58 12.4 -0.1
SMF pmax pmax
comp=Z,39nm,1.1s,mb5.2
QUIF Quistinic 82.22 345⇑ *i*P P 05 58 13.1 -0.3
comp=Z,33nm,1.0s,mb4.9
QUIF Quistinic 82.22 345⇑ *i*P P 05 58 13.1 -0.3
comp=Z,16nm,1.0s,mb4.9
QUIF Quistinic 82.22 345⇑ *i*P P 05 58 13.1 -0.3
QUIF pmax pmax
comp=Z,16nm,1.0s,mb4.9
PPT Papeete 82.25 127 *e*LR LR 06 23 49.9
comp=Z,138nm,23.5s,baz=327
PPT Papeete 82.25 127 *e*T 07 28 52.2
comp=Z,7.7nm,0.2s
FORT Forrest 82.29 203 *e*P P 05 58 13.1 -0.6
comp=Z,44nm,0.7s,mb5.5
PAE Paea 82.33 127 *e*T 07 28 57.6
comp=Z,5.7nm,0.2s
BGF Bois d'Agland 82.35 341 *e*P P 05 58 14.0 -0.1
comp=Z,17nm,0.7s,mb4.8
BGF Bois d'Agland 82.35 341 *e*P P 05 58 14.0 -0.1
comp=Z,8.4nm,0.7s,mb4.8
BGF Bois d'Agland 82.35 341 *e*P P 05 58 14.0 -0.1
BGF pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
LPL La Plagne 82.42 338⇑ *i*P P 05 58 15.4 +1.0
comp=Z,25nm,0.6s,mb5.0
LPL La Plagne 82.42 338⇑ *i*P P 05 58 15.4 +1.0
comp=Z,12nm,0.6s,mb5.0
LPL La Plagne 82.42 338⇑ *i*P P 05 58 15.4 +1.0
LPL pmax pmax
comp=Z,13nm,0.6s,mb5.0
LPG La Plagne 82.43 338⇑ *i*P P 05 58 15.6 +1.1
comp=Z,39nm,0.7s,mb5.2
LPG La Plagne 82.43 338⇑ *i*P P 05 58 15.6 +1.1
comp=Z,20nm,0.7s,mb5.1
LPG La Plagne 82.43 338⇑ *i*P P 05 58 15.6 +1.1
LPG pmax pmax
comp=Z,20nm,0.7s,mb5.2
PLDF La Plantade 82.73 340 *e*P P 05 58 16.4 +0.3
TCF Toulx Ste Croi 82.75 341⇑ *i*P P 05 58 16.2 +0.1
comp=Z,47nm,1.1s,mb5.1
TCF Toulx Ste Croi 82.75 341⇑ *i*P P 05 58 16.2 +0.1
comp=Z,23nm,1.1s,mb5.1
TCF Toulx Ste Croi 82.75 341⇑ *i*P P 05 58 16.2 +0.1
TCF pmax pmax
comp=Z,23nm,1.1s,mb5.1
AGO Saint Agoulin 82.77 340 *e*P P 05 58 16.7 +0.5
BNI Bardonecchia 82.86 338 *e*P P 05 58 17.0 +0.3
comp=Z,35nm,1.3s,mb5.2
BNI Bardonecchia 82.86 338 *e*P P 05 58 17.0 +0.2
BNI pmax pmax
comp=Z,35nm,1.3s,mb5.2
MFF Saint Martin d 82.93 343 *e*P P 05 58 17.1 0.0
PYM Petit Puy Mans 83.08 340 *e*P P 05 58 18.1 +0.2
MBDF Montbardon 83.14 338⇑ *i*P P 05 58 19.4 +1.2
comp=Z,20nm,0.7s,mb5.0
MBDF Montbardon 83.14 338⇑ *i*P P 05 58 19.4 +1.2
comp=Z,10nm,0.7s,mb5.0
MBDF Montbardon 83.14 338⇑ *i*P P 05 58 19.4 +1.2
MBDF pmax pmax
comp=Z,10.0nm,0.7s,mb5.0

ORIF Oris-en-Rattie 83.19 338⇑ *i*P P 05 58 19.2 +0.8
comp=Z,34nm,0.8s,mb5.2
ORIF Oris-en-Rattie 83.19 338⇑ *i*P P 05 58 19.2 +0.8
comp=Z,17nm,0.8s,mb5.1
ORIF Oris-en-Rattie 83.19 338⇑ *i*P P 05 58 19.2 +0.8
ORIF pmax pmax
comp=Z,17nm,0.8s,mb5.1
VIVF Saint-Julien-l 83.54 339⇑ *i*P P 05 58 20.7 +0.4
comp=Z,22nm,0.7s,mb5.1
VIVF Saint-Julien-l 83.54 339⇑ *i*P P 05 58 20.7 +0.4
comp=Z,11nm,0.7s,mb5.1
VIVF Saint-Julien-l 83.54 339⇑ *i*P P 05 58 20.7 +0.4
VIVF pmax pmax
comp=Z,11nm,0.7s,mb5.1
SAOF Saorge 83.63 337 *e*P P 05 58 21.3 +0.6
AUTN L'Aution 83.66 337 *e*P P 05 58 20.4 -0.5
TOUF Mont Tournerai 83.69 337 *e*P P 05 58 22.6 +1.6
SBF Sospel 83.78 337 *e*P P 05 58 21.2 -0.3
comp=Z,113nm,1.0s,mb5.7
SBF Sospel 83.78 337 *e*P P 05 58 21.2 -0.3
comp=Z,56nm,1.0s,mb5.7
SBF Sospel 83.78 337 *e*P P 05 58 21.2 -0.3
SBF pmax pmax
comp=Z,57nm,1.0s,mb5.7
WHFO Wadi Hawf 83.83 290 P P 05 58 21.9 -0.2
SNR=7.5
WHFO Wadi Hawf 83.83 290 P P 05 58 21.9 -0.2
SNR=7.5
RJF Les Rejaudoux 83.83 341 *e*P P 05 58 22.6 +0.9
comp=Z,66nm,1.2s,mb5.3
RJF Les Rejaudoux 83.83 341 *e*P P 05 58 22.6 +0.9
comp=Z,33nm,1.2s,mb5.3
RJF Les Rejaudoux 83.83 341 *e*P P 05 58 22.6 +0.9
RJF pmax pmax
comp=Z,33nm,1.2s,mb5.3
REVF Revere 83.91 337 *e*P P 05 58 21.9 -0.3
CAF Calviac 84.07 341⇑ *i*P P 05 58 23.5 +0.5
comp=Z,32nm,0.9s,mb5.1
CAF Calviac 84.07 341⇑ *i*P P 05 58 23.5 +0.5
comp=Z,16nm,0.9s,mb5.2
CAF Calviac 84.07 341⇑ *i*P P 05 58 23.5 +0.5
CAF pmax pmax
comp=Z,16nm,0.9s,mb5.2
SMRF Simiane la Rot 84.15 338 *e*P P 05 58 24.1 +0.7
FRF La Foret Royal 84.27 337 *e*P P 05 58 24.7 +0.7
LFF La Frestale 84.34 342⇑ *i*P P 05 58 24.6 +0.3
comp=Z,85nm,1.1s,mb5.5
LFF La Frestale 84.34 342⇑ *i*P P 05 58 24.6 +0.3
comp=Z,43nm,1.1s,mb5.5
LFF La Frestale 84.34 342⇑ *i*P P 05 58 24.6 +0.3
LFF pmax pmax
comp=Z,43nm,1.1s,mb5.5
LASF Ste Croix 84.47 339 *e*P P 05 58 25.5 +0.5
LMR La Mourre 84.51 337 *e*P P 05 58 24.6 -0.6
comp=Z,80nm,1.1s,mb5.5
LMR La Mourre 84.51 337 *e*P P 05 58 24.6 -0.6
comp=Z,40nm,1.1s,mb5.5
LMR La Mourre 84.51 337 *e*P P 05 58 24.6 -0.6
LMR pmax pmax
comp=Z,40nm,1.1s,mb5.5
CORF Corte 84.76 335 *e*P P 05 58 28.0 +1.5
TIP Timpagrande 85.20 328 *e*P P 05 58 28.8 0.0
comp=Z,17nm,1.0s,mb5.1
MTLF Montolieu 85.55 340 *e*P P 05 58 30.9 +0.5
comp=Z,44nm,1.3s,mb5.2
MTLF Montolieu 85.55 340 *e*P P 05 58 30.9 +0.5
comp=Z,22nm,1.3s,mb5.2
MTLF Montolieu 85.55 340 *e*P P 05 58 30.9 +0.5
MTLF pmax pmax
comp=Z,22nm,1.3s,mb5.2
KLBR Kellerberrin 86.16 211 *e*P P 05 58 32.1 -1.2
comp=Z,47nm,1.4s,mb5.5
EPF Esparros 86.25 341 *e*P P 05 58 34.8 +0.9
comp=Z,18nm,0.9s,mb5.0
EPF Esparros 86.25 341 *e*P P 05 58 34.8 +0.9
comp=Z,9.2nm,0.9s,mb5.0
EPF Esparros 86.25 341 *e*P P 05 58 34.8 +0.9
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
ETSF Etsaut 86.57 342⇑ *i*P P 05 58 37.3 +1.8
comp=Z,18nm,0.7s,mb5.1
ETSF Etsaut 86.57 342⇑ *i*P P 05 58 37.3 +1.8
comp=Z,8.9nm,0.7s,mb5.1
ETSF Etsaut 86.57 342⇑ *i*P P 05 58 37.3 +1.8
ETSF pmax pmax
comp=Z,9.0nm,0.7s,mb5.1
TBI Tubuai 87.10 130 *e*LR LR 06 25 56.6
comp=Z,220nm,26.0s,baz=331
TBI Tubuai 87.10 130 *e*T 07 34 54.0
comp=Z,10nm,0.3s
ESDC Sonseca Array 90.35 344 P P 05 58 52.6 -0.9
comp=Z,3.5nm,0.7s,mb4.8,baz=3.4,slow=4.1,SNR=9.2
KEST Kesra 90.77 332 P P 05 58 55.7 +0.2
comp=Z,7.7nm,0.6s,mb5.2,baz=354,slow=0.4,SNR=25
TORD Torodi Ar. Bea 114.25 331 PKP PKiKP 06 04 30.4 -1.7
comp=Z,1.0nm,0.7s,baz=358,slow=1.5,SNR=7.2
TORD PP PP 06 05 19.5 -7.4
comp=Z,0.9nm,0.7s,baz=21,slow=7.7,SNR=5.2
DBIC Dimbokro 122.35 336 PKP PKPdf 06 04 46.4 -1.3
comp=Z,3.4nm,0.6s,baz=240,slow=1.3,SNR=7.3
LPAZ La Paz 132.67 63 PKP PKPdf 06 05 07.3 +0.2
comp=Z,2.3nm,1.0s,baz=351,slow=4.5,SNR=4.9
LBTB Lobatse 134.01 282 *e*PKPdf PKPdf 06 05 09.5 0.0
BOSA Boshof 136.67 278 *e*PKPdf PKPdf 06 05 15.1 +0.7
BOSA Boshof 136.67 278 PKIKP PKPdf 06 05 15.3 +1.0
BOSA pmax pmax
comp=Z,2.0nm,0.9s
BOSA Boshof 136.67 278 PKP PKPdf 06 05 15.3 +0.9
comp=Z,1.8nm,0.8s,baz=170,slow=3.9,SNR=5.8
QSPA South Pole Qui 138.07 180 PKP 06 05 04.8
QSPA *e*PKPdf PKPdf 06 05 13.7 -1.7
QSPA South Pole Qui 138.07 180 PKhKP 06 05 04.8
comp=Z,1.2nm,0.7s,baz=196,slow=0.6,SNR=3.5
QSPA PKP PKPdf 06 05 15.6 +0.3
comp=Z,5.0nm,0.9s,baz=294,slow=2.1,SNR=10
SYO Syowa Base 142.82 213‖ *e*P PKPdf 06 05 18.0 -6.2
PLCA Paso Flores 147.28 94 *e*PKPbc PKPbc 06 05 34.3 -0.9
PLCA Paso Flores 147.28 94 PKPbc PKPbc 06 05 34.3 -0.9
comp=Z,5.1nm,0.6s,baz=287,slow=3.6,SNR=21
MAIT Maitri 151.54 205 *e*PKPdf PKPdf 06 05 40.8 +2.1
TRQA Tornquist 151.62 82 *e*PKPbc PKPbc 06 05 44.4 -1.7
SNAA Sanae 154.37 196 PKPbc PKPbc 06 05 49.1 -2.0
comp=Z,1.2nm,0.7s,baz=190,slow=3.4,SNR=7.8
VNA2 Neumayer--Watz 155.80 194 *e*PKPdf PKPab 06 06 10.6 -1.1
baz=144,slow=4.3
VNA2 *e* 06 06 16.2
VNA2 *e* 06 06 18.5
VNA2 *e* 06 06 26.9
VNA3 Neumayer Olymp 155.87 192 *e*PKPdf PKPab 06 06 10.7 -1.3
VNA3 *e* 06 06 15.5
VNA3 *e* 06 06 18.5
VNA3 *e* 06 06 27.8
VNA1 Neumayer--Stat 156.18 194 *e*PKPdf PKPab 06 06 10.9 -2.5
VNA1 *e* 06 06 14.7
VNA1 *e* 06 06 18.1

IDC **22** *05:53:23.5±0.7, 4069N×2936W, h0km, mb4.0/13, mb1 4.1/14, mb1mx4.0/27, mbtmp4.0/14, ML4.5/1, MS4.0/15, Ms1 4.0/15, ms1mx3.9/41, Error ellipse: s-maj=22.4km s-min=15.4km az=14.0*
CSEM **22** *05:53:23.1±0.1, 4054N×2921W, h10km, mb4.6/37, Error ellipse: s-maj=3.4km s-min=1.6km az=57.0*
ISCJB **22** *05:53:23.2±0.2, 4046N±002×2921W±004, h10km, mb4.4/53, MS4.0/17, Error ellipse: s-maj=4.9km s-min=2.0km az=146.5*
NEIC **22** *05:53:25.3±0.3, 4062N×2939W, h10km, mb4.6/30, Error ellipse: s-maj=11.8km s-min=5.5km az=189.0*
BJI **22** *05:53:25.3, 4060N×2940W, h30km, mb5.2*
MOS **22** *05:53:27.2±1.1, 4068N×2942W, h33km, mb4.7/23, Error ellipse: s-maj=12.1km s-min=10.1km az=63.6*
PDA **22** *05:53:27.4±1.3, 4054N×2926W, h0km, MD4.3, ML4.0, Error ellipse: s-maj=4.6km s-min=3.3km az=68.0*
SVSA **22** *05:53:27.4±1.3, 4054N×2926W, h0km, MD4.3, ML4.0, Error ellipse: s-maj=4.6km s-min=3.3km az=68.0*
ISC 22 05:53:24.9±0.2**, 4041N**±002×**2921W**±004**, h10**km**, n213,** σ1§**05**/251**, mb4.4**/53**, MS4.0**/17**, 1C-1D, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
PLUZ	**Luz**	**1.41**	**173**	*e*P	**Pn**	**05 53 55.1**	**+4.6**
PLUZ				*e*S	**Sn**	**05 54 15.4**	**+6.3**

PLUZ A 05 54 19.9
87nm,0.3s
PVIA Vitoria 1.61 146 *eP* **Pn 05 53 54.2 +0.9**
PVIA *eS* **Sn 05 54 13.9 -0.3**
PVIA A 05 54 15.6
90nm,0.3s
STGR Santa Cruz 1.62 145 *eP* **Pn 05 53 53.9 +0.4**
STGR *eS* **Sn 05 54 13.7 -0.7**
STGR A 05 54 17.3
310nm,0.3s
STGR Santa Cruz 1.62 145 *eP* **Pn 05 53 53.9 +0.4**
STGR *eS* **Sn 05 54 13.7 -0.7**
SRBC Serra Branca 1.64 146 *eP* **Pn 05 53 54.0 +0.2**
SRBC *eS* **Sn 05 54 14.5 -0.4**
PGRA Graciosa 1.67 145 *eP* **Pn 05 53 55.2 +1.0**
PGRA *eS* **Sn 05 54 16.1 +0.4**
PGRA A 05 54 23.7
366nm,0.4s
PGRA Graciosa 1.67 145 *eP* **Pn 05 53 55.2 +1.0**
PGRA *eS* **Sn 05 54 16.1 +0.4**
PCED Cedros 1.82 167 *eP* **Pn 05 53 57.0 +0.7**
PCED *eS* **Sn 05 54 19.5 +0.1**
PCED A 05 54 20.4
504nm,0.4s
PCED Cedros 1.82 167 *eP* **Pn 05 53 57.0 +0.7**
PCED *eS* **Sn 05 54 19.5 +0.1**
ROSA Rosais 1.85 156 *eP* **Pn 05 53 57.1 +0.5**
ROSA *eS* **Sn 05 54 20.5 +0.5**
PTCA Ponta do Capel 1.85 170 *eP* **Pn 05 53 57.9 +1.2**
PTCA *eS* **Sn 05 54 19.8 -0.3**
PTCA A 05 54 24.4
257nm,0.3s
PTCA Ponta do Capel 1.85 170 *eP* **Pn 05 53 57.9 +1.2**
PTCA *eS* **Sn 05 54 19.8 -0.3**
CALA Caldeira 1.87 168 *eP* **Pn 05 53 57.9 +1.0**
CALA *eS* **Sn 05 54 20.7 +0.2**
PAMA Santo Amaro 1.90 155 *eP* **Pn 05 53 58.2 +0.8**
PAMA *eS* **Sn 05 54 20.9 -0.5**
PAMA A 05 54 25.8
136nm,0.3s
PAMA Santo Amaro 1.90 155 *eP* **Pn 05 53 58.2 +0.8**
PAMA *eS* **Sn 05 54 20.9 -0.5**
HOR Horta 1.94 166 *eP* **Pn 05 53 58.8 +1.0**
HOR *eS* **Sn 05 54 22.0 -0.1**
PMAN Manadas 1.98 154 *eP* **Pn 05 53 58.5 +0.1**
PMAN *eS* **Sn 05 54 23.1 -0.1**
PMAN A 05 54 23.4
172nm,0.3s
PMAN Manadas 1.98 154 *eP* **Pn 05 53 58.5 +0.1**
PMAN *eS* **Sn 05 54 23.1 -0.1**
PICO Pico 2.00 162 *eP* **Pn 05 53 59.8 +1.1**
PICO *eS* **Sn 05 54 23.2 -0.6**
PCND Candelaria 2.02 163 *eP* **Pn 05 54 00.4 +1.4**
PCND *eS* **Sn 05 54 25.1 +0.8**
PCND A 05 54 30.5
357nm,0.3s
PTEI Pico do Teixo 2.02 161 *eP* **Pn 05 53 59.9 +0.9**
PTEI *eS* **Sn 05 54 24.1 -0.3**
PTEI A 05 54 29.8
327nm,0.4s
PBOI Pico dos Bois 2.08 162 *eP* **Pn 05 54 00.6 +0.9**
PBOI *eS* **Sn 05 54 25.4 -0.2**
PBOI A 05 54 32.3
196nm,0.3s
PID Ribeirinha 2.14 156 *eP* **Pn 05 54 01.1 +0.5**
PIED Piedade 2.18 155 *eP* **Pn 05 54 02.3 +1.1**
ASBA Santa Barbara 2.23 139 *eP* **Pn 05 54 02.3 +0.5**
ASBA *eS* **Sn 05 54 28.5 -0.9**
ASBA A 05 54 33.3
198nm,0.2s
ASBA Santa Barbara 2.23 139 *eP* **Pn 05 54 02.3 +0.5**
ASBA *eS* **Sn 05 54 28.5 -0.9**
PBIS Biscoitos 2.23 137 *eP* **Pn 05 54 02.2 +0.3**
PBIS *eS* **Sn 05 54 28.8 -0.8**
PBIS A 05 54 36.3
122nm,0.2s
PBIS Biscoitos 2.23 137 *eP* **Pn 05 54 02.2 +0.3**
PBIS *eS* **Sn 05 54 28.8 -0.8**
PPAD Pico dos Padre 2.26 138 *eP* **Pn 05 54 02.8 +0.5**
PPAD *eS* **Sn 05 54 29.9 -0.4**
PPAD A 05 54 35.8
144nm,0.3s
PPAD Pico dos Padre 2.26 138 *eP* **Pn 05 54 02.8 +0.5**
PPAD *eS* **Sn 05 54 29.9 -0.4**
PVNV Vila Nova 2.29 135 *eP* **Pn 05 54 02.6 0.0**
PVNV *eS* **Sn 05 54 29.9 -0.9**
PVNV A 05 54 35.9
173nm,0.3s
PVNV Vila Nova 2.29 135 *eP* **Pn 05 54 02.6 0.0**
PVNV *eS* **Sn 05 54 29.9 -0.9**
ADH Angra Heroismo 2.32 138 *eP* **Pn 05 54 03.4 +0.2**
ADH *eS* **Sn 05 54 31.5 -0.3**
RIB2 Ribeirinha 2.34 137 *eP* **Pn 05 54 04.1 +0.7**
RIB2 *eS* **Sn 05 54 31.5 -0.7**
RIB2 A 05 54 40.7
101nm,0.3s
RIB2 Ribeirinha 2.34 137 *eP* **Pn 05 54 04.1 +0.7**
RIB2 *eS* **Sn 05 54 31.5 -0.7**
PSCM Serra do Cume 2.35 136 *eP* **Pn 05 54 03.4 -0.1**
PSCM *eS* **Sn 05 54 31.3 -1.1**
PSCM A 05 54 36.8
436nm,0.3s
PSCM Serra do Cume 2.35 136 *eP* **Pn 05 54 03.4 -0.1**
PSCM *eS* **Sn 05 54 31.3 -1.1**
PFAV Pico das Favas 2.36 135 *eP* **Pn 05 54 04.1 +0.4**
PFAV *eS* **Sn 05 54 31.9 -0.8**
PFAV A 05 54 39.9
262nm,0.4s
PFAV Pico das Favas 2.36 135 *eP* **Pn 05 54 04.1 +0.4**
PFAV *eS* **Sn 05 54 31.9 -0.8**
SET4 Mosteiros 3.67 133 *eP* **Pn 05 54 22.3 +0.7**
SET4 *eS* **Sn 05 55 03.7 -1.2**
SET2 Ginetes 3.68 133 *eP* **Pn 05 54 23.3 +1.5**
SET2 *eS* **Sn 05 55 04.7 -0.6**
PFET Feteiras 3.71 133 *eP* **Pn 05 54 23.5 +1.3**
PFET *eS* **Sn 05 55 05.2 -0.8**
PSAN Santo Antonio 3.72 132 *eP* **Pn 05 54 23.0 +0.6**
PSAN *eS* **Sn 05 55 04.8 -1.5**
FAC Faja de Cima 3.82 132 *eP* **Pn 05 54 24.8 +1.1**
FAC *eS* **Sn 05 55 07.9 -0.8**
PDA Ponta Delgada 3.83 133 *eP* **Pn 05 54 27.0 +3.1**
CML Cha da Macela 3.88 132 *eP* **Pn 05 54 25.5 +0.9**
CML *eS* **Sn 05 55 08.7 -1.5**
PVER Pico Vermelho 3.88 131 *eP* **Pn 05 54 25.8 +1.2**
PVER *eS* **Sn 05 55 08.4 -1.8**
PVER A 05 55 15.9
129nm,0.3s
PMAT Coroa da Mata 3.89 131 *eP* **Pn 05 54 25.9 +1.2**
PMAT *eS* **Sn 05 55 08.8 -1.7**
PMAT A 05 55 13.3
78nm,0.4s
PMAT Coroa da Mata 3.89 131 *eP* **Pn 05 54 25.9 +1.2**
PMAT *eS* **Sn 05 55 08.8 -1.7**
LFA Lagoa do Fogo 3.92 131 *eP* **Pn 05 54 26.0 +1.0**
LFA *eS* **Sn 05 55 09.3 -1.7**
MESC Monte Escuro 3.92 131 *eP* **Pn 05 54 26.2 +1.0**
MESC *eS* **Sn 05 55 10.4 -0.8**
PRCH Ribeira Ch 3.95 132 *eP* **Pn 05 54 26.8 +1.3**
PRCH *eS* **Sn 05 55 10.4 -1.4**
PRCH A 05 55 17.6
146nm,0.4s
PRCH Ribeira Ch 3.95 132 *eP* **Pn 05 54 26.8 +1.3**
PRCH *eS* **Sn 05 55 10.4 -1.4**
VIF Vila Franca 3.96 131 *eP* **Pn 05 54 26.3 +0.6**
VIF *eS* **Sn 05 55 11.0 -1.1**
VIF A 05 55 16.1
18nm,0.2s
VIF Vila Franca 3.96 131 *eP* **Pn 05 54 26.3 +0.6**
VIF *eS* **Sn 05 55 11.0 -1.1**
PFAD Fenais da Ajud 3.96 129 *eP* **Pn 05 54 26.1 +0.4**
PFAD *eS* **Sn 05 55 11.0 -1.2**
PCNG Congro 3.97 130 *eS* **Sn 05 55 11.2 -1.2**
PCNG A 05 55 18.6
42nm,0.3s
FRA1 Furnas 4.01 130 *eP* **Pn 05 54 27.3 +1.0**
FRA1 *eS* **Sn 05 55 12.6 -0.7**
MIRA Miradouro 4.03 129 *eP* **Pn 05 54 27.3 +0.7**
MIRA *eS* **Sn 05 55 12.9 -0.9**
PSMN Pico do Norte, 4.70 135 *eP* **Pn 05 54 36.9 +1.1**
PSMN *eS* **Sn 05 55 28.8 -1.5**
PMAFR Mafra 15.41 89 *eLR* LR 06 00 40.2
988nm,20.0s

PVIS Viseu 16.20 82 *eP* **Pn 05 57 18.6 +6.1**
PFVI Vila Bisbo 16.23 95 *eLR* LR 06 00 56.2
885nm,20.0s
PVRL Vila Real 16.29 80 *eP* **Pn 05 57 19.1 +5.5**
MORF Marmelete 16.31 94 *eLR* LR 06 00 59.0
950nm,20.0s
MTE Manteigas 16.50 83 *eP* **Pn 05 57 21.4 +5.1**
MTE *eLR* LR 06 01 01.1
PCBR Castelo Branco 16.63 85 *eP* **Pn 05 57 24.1 +6.1**
32nm,1.3s
PESTR Estremoz 16.72 88 *eLR* LR 06 01 08.3
856nm,18.0s
MVO Moncorvo 16.81 80 *eP* **Pn 05 57 23.6 +3.3**
42nm,1.4s
MVO *eLR* LR 06 00 59.9
697nm,20.0s
PBDV Barranco-do-Ve 16.87 94 *eP* **Pn 05 57 28.2 +7.1**
133nm,1.7s
PBDV *eLR* LR 06 01 15.7
908nm,20.0s
PVAQ Vaqueiros 16.99 93 *eLR* LR 06 01 21.4
706nm,20.0s
PBAR Barrancos 17.30 90 *eLR* LR 06 01 20.4
992nm,20.0s
ESDC Sonseca Array 19.33 84 P **Pn 05 57 52.7 +1.4**
0.3nm,0.3s,baz=279,slow=10,SNR=5.2
MDT Midelt 21.10 103 P **P 05 58 11.4 +1.9**
2.6nm,0.9s,mb3.5,baz=298,slow=8.6,SNR=2.5
MDT LR LR 06 04 48.6
comp=Z,376nm,19.3s,MS3.8,baz=288,slow=32
BORG Borgarnes 24.80 8 LR LR 06 05 39.3
comp=Z,486nm,19.9s,MS4.0,baz=198,slow=30
BBTS Babate 27.94 153 LR LR 06 07 35.2
comp=Z,203nm,20.3s,MS3.7,baz=291,slow=30
SCHQ Schefferville 28.77 313 LR LR 06 09 28.8
comp=Z,291nm,18.5s,MS3.9,baz=137,slow=34
SFJD Kangerlussuaq 29.17 343 LR LR 06 08 06.6
comp=Z,189nm,20.6s,MS3.7,baz=127,slow=31
NKC Novy Kostel 30.53 57 *eP* **P 05 59 40.7 +2.6**
NKC AMS AMS 06 11 10.0
comp=Z,900nm,17.4s
KEST Kesra 30.54 86 LR LR 06 11 06.1
comp=Z,199nm,19.1s,MS3.8,baz=197,slow=35
KHC Kasperske Hory 31.24 59 *eP* **P 05 59 48.5 +4.1**
KHC LR LR
comp=Z,500nm,23.0s,MS4.1
GERES GERESS Array B 31.32 60 LR LR 06 10 38.0
comp=Z,304nm,20.0s,MS4.0,baz=260,slow=33
PRU Pruhonice 31.87 58 *eP* **P 05 59 51.4 +1.5**
PRU LR LR
comp=Z,700nm,15.3s,MS4.5
PRU Pruhonice 31.87 58 *eP* **P 05 59 51.4 +1.5**
comp=Z,700nm,15.3s
NOA NORSAR Array B 32.11 36 LR LR 06 10 27.1
comp=Z,222nm,18.6s,MS3.9,baz=270,slow=32
DPC Dobruska-Polom 33.02 57 *eP* **P 06 00 05.2 +5.2**
DPC AMS AMS 06 12 00.0
comp=Z,800nm,16.9s
TOA0 Torodi Ar. Sit 38.36 126 *eP* **P 06 00 48.0 +1.9**
TOA0 Torodi Ar. Sit 38.36 126 *eP* **P 06 00 48.0 +1.9**
TORD Torodi Ar. Bea 38.36 126 P **P 06 00 48.0 +1.9**
TORD LR LR 06 15 09.0
TORD Torodi Ar. Bea 38.36 126 P **P 06 00 48.0 +1.9**
comp=Z,6.6nm,1.0s,mb4.3,baz=315,slow=7.8,SNR=14
TORD LR LR 06 15 09.0
comp=Z,187nm,19.6s,MS3.9,baz=355,slow=34
SJG San Juan 38.75 246 LR LR 06 12 37.7
comp=Z,173nm,20.2s,MS3.9,baz=92,slow=30
DBIC Dimbokro 40.05 140 P **P 06 01 01.5 +1.2**
DBIC Dimbokro 40.05 140 P **P 06 01 01.5 +1.2**
comp=Z,2.4nm,0.9s,mb3.9,baz=328,slow=9.5,SNR=2.1
AKASG Malin Array Be 41.19 55 P **P 06 01 08.3 -1.1**
comp=Z,0.4nm,0.3s,mb3.5,baz=276,slow=8.6,SNR=6.6
AKASG LR LR 06 17 49.9
comp=Z,444nm,18.3s,MS4.4,baz=250,slow=36
IDI Anoyia 42.47 79 LR LR 06 17 50.4
comp=Z,166nm,21.9s,MS3.9,baz=293,slow=34
PCRV Puerto La Cruz 43.46 236 LR LR 06 15 45.3
comp=Z,213nm,18.6s,MS4.1,baz=192,slow=31
FCC Fort Churchill 43.94 317 *eP* **P 06 01 28.5 -3.1**
comp=Z,8.4nm,1.2s,mb4.3
FCC Fort Churchill 43.94 317 *eP* **P 06 01 28.5 -3.1**
FCC pmax pmax
comp=Z,8.0nm,1.2s,mb4.3
OBN Obninsk 44.88 48 *eP* **P 06 01 39.1 -0.1**
OBN pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
OBN Obninsk 44.88 48 *eP* **P 06 01 39.1 -0.1**
comp=Z,7.0nm,1.0s,mb4.5
RES Resolute Bay 45.09 340 *eP* **P 06 01 39.2 -1.3**
comp=Z,25nm,0.6s,mb5.2
RES Resolute Bay 45.09 340 *eP* **P 06 01 39.2 -1.4**
RES pmax pmax
comp=Z,25nm,0.6s,mb5.2
RES Resolute Bay 45.09 340 *eP* **P 06 01 39.2 -1.4**
comp=Z,25nm,0.6s,mb5.2
ULM Lac du Bonnet 46.43 306 LR LR 06 20 02.3
comp=Z,424nm,18.4s,MS4.4,baz=182,slow=35
BRTR Kevin Array B 47.17 69 P **P 06 01 57.8 +0.3**
comp=Z,1.2nm,0.8s,mb3.9,baz=224,slow=5.2,SNR=4.6
VRSR Storozhevoye 47.25 53 *eP* **P 06 01 57.6 -0.3**
VRSR pmax pmax
comp=N,2.0nm,0.8s
VRSR pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
VRSR pmax pmax
comp=E,2.0nm,0.7s
VORD Divnogorie 47.37 53 *eP* **P 06 01 57.7 -1.2**
VORD pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,30nm,0.9s
VORD Divnogorie 47.37 53 *eP* **P 06 01 57.7 -1.2**
comp=E,10.0nm,0.8s,mb4.8
ECSD EROS,Sioux Fal 48.89 297 *eP* **P 06 02 11.1 +0.4**
comp=E,12nm,1.2s,mb4.8
ECSD EROS,Sioux Fal 48.89 297 *eP* **P 06 02 11.1 +0.4**
comp=E,12nm,1.2s,mb4.8
FFC Flin Flon 48.91 313 *eP* **P 06 02 09.1 -1.6**
comp=E,7.8nm,1.1s,mb4.7
FFC Flin Flon 48.91 313 *eP* **P 06 02 09.1 -1.6**
FFC pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
FFC Flin Flon 48.91 313 *eP* **P 06 02 09.1 -1.6**
comp=Z,7.8nm,1.1s,mb4.7
MIAR Mount Ida 50.42 285 *eP* **P 06 02 21.9 -0.6**
comp=Z,7.8nm,1.0s,mb4.7
MIAR Mount Ida 50.42 285 *eP* **P 06 02 21.9 -0.6**
MIAR pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MIAR Mount Ida 50.42 285 *eP* **P 06 02 21.9 -0.6**
comp=Z,7.8nm,1.0s,mb4.7
MALT Malatya 51.15 69 *eP* **P 06 02 29.1 +1.1**
MALT pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
MALT Malatya 51.15 69 *eP* **P 06 02 29.1 +1.1**
comp=Z,6.2nm,1.1s,mb4.5
YKA Yellowknife Ar 53.10 325 P **P 06 02 40.2 -1.9**
YKA Yellowknife Ar 53.10 325 P **P 06 02 40.2 -1.9**
comp=Z,0.9nm,0.8s,mb3.8,baz=67,slow=7.2,SNR=10
WMOK Wichita Mounta 54.15 288 *eP* **P 06 02 48.4 -1.7**
comp=Z,5.8nm,1.0s,mb4.5
WMOK Wichita Mounta 54.15 288 *eP* **P 06 02 48.4 -1.8**
WMOK pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WMOK Wichita Mounta 54.15 288 *eP* **P 06 02 48.4 -1.8**
comp=Z,5.8nm,1.0s,mb4.5
ARU Arti 56.40 42 *d iP* **P 06 03 05.1 -1.0**
ARU S **S 06 10 48.1 -8.3**
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.8
ARU Arti 56.40 42 *i* P **P 06 03 05.1 -1.0**
comp=Z,19nm,1.7s,mb4.8
SDCO Great Sand Dun 57.52 294 *eP* **P 06 03 14.1 -0.2**
comp=Z,2.1nm,0.9s,mb4.2
SDCO Great Sand Dun 57.52 294 *eP* **P 06 03 14.1 -0.2**
comp=Z,2.1nm,0.9s,mb4.2
BW06 Boulder Array 57.92 301 *eP* **P 06 03 14.8 -2.3**
comp=Z,14nm,1.7s,mb4.7
PDAR Pinedale Array 57.92 301 P **P 06 03 15.2 -1.9**
comp=Z,2.1nm,0.9s,mb4.2,baz=57,slow=5.5,SNR=13
INK Inuvik 58.04 335 *eP* **P 06 03 14.9 -2.6**
INK Inuvik 58.04 335 P **P 06 03 14.5 -3.0**
INK pmax pmax
comp=Z,1.0nm,0.9s

INK Inuvik 58.04 335 P **P 06 03 14.5 -3.0**
comp=Z,1.4nm,0.9s,mb4.0,baz=46,slow=6.8,SNR=5.0
FLWY Flagg Ranch 58.06 303 *eP* **P 06 03 16.8 -1.2**
comp=Z,4.8nm,0.9s,mb4.5
FLWY Flagg Ranch 58.06 303 *eP* **P 06 03 16.8 -1.2**
comp=Z,4.8nm,0.9s,mb4.5
LOHW Long Hollow 58.21 302 *eP* **P 06 03 18.0 -1.1**
comp=Z,4.4nm,1.2s,mb4.4
LOHW Long Hollow 58.21 302 *eP* **P 06 03 18.0 -1.1**
comp=Z,4.4nm,1.2s,mb4.4
MOOW Moose Ponds 58.24 303 *eP* **P 06 03 19.1 -0.2**
comp=Z,3.7nm,1.3s,mb4.2
MOOW Moose Ponds 58.24 303 *eP* **P 06 03 19.1 -0.2**
comp=Z,3.7nm,1.3s,mb4.2
SNOW Snow King Moun 58.38 302 *eP* **P 06 03 18.9 -1.3**
comp=Z,3.7nm,0.9s,mb4.4
SNOW Snow King Moun 58.38 302 *eP* **P 06 03 18.9 -1.3**
comp=Z,3.7nm,0.9s,mb4.4
TPAW Teton Pass 58.49 302 *eP* **P 06 03 20.6 -0.5**
comp=Z,7.9nm,1.4s,mb4.5
TPAW Teton Pass 58.49 302 *eP* **P 06 03 20.6 -0.4**
comp=Z,7.9nm,1.4s,mb4.5
AKTK Aktyubinsk 58.66 48 P **P 06 03 22.4 +0.2**
AKTK Aktyubinsk 58.66 48 P **P 06 03 22.4 +0.3**
comp=Z,3.0nm,0.7s,mb4.4
AKTO Aktyubinsk 58.66 48 P **P 06 03 22.4 +0.3**
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
AKTO Aktyubinsk 58.66 48 P **P 06 03 22.4 +0.2**
comp=Z,2.5nm,0.7s,mb4.4,baz=296,slow=6.5,SNR=8.2
ANMO Albuquerque 59.56 292 *eP* **P 06 03 29.1 +0.5**
comp=Z,2.2nm,1.0s,mb4.1
ANMO Albuquerque 59.56 292 *eP* **P 06 03 29.1 +0.5**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 59.56 292 *eP* **P 06 03 29.1 +0.5**
comp=Z,2.2nm,1.0s,mb4.1
HWUT Hardware Ranch 59.78 301 *eP* **P 06 03 29.2 -0.8**
comp=Z,6.4nm,1.1s,mb4.6
HWUT Hardware Ranch 59.78 301 *eP* **P 06 03 29.2 -0.8**
comp=Z,6.4nm,1.1s,mb4.6
NEW Newport 60.07 310 *eP* **P 06 03 30.0 -1.8**
comp=Z,4.3nm,0.9s,mb4.5
NEW Newport 60.07 310 *eP* **P 06 03 30.0 -1.9**
NEW pmax pmax
comp=Z,4.0nm,0.9s
NEW Newport 60.07 310 *eP* **P 06 03 30.0 -1.9**
comp=Z,4.3nm,0.9s,mb4.5
BNM Barren Site 60.08 291 *eP* **P 06 03 32.8 +0.5**
BNM Barren Site 60.08 291 *eP* **P 06 03 32.8 +0.6**
LAZ Ladron 60.32 291 *eP* **P 06 03 30.7 -3.2**
LTX Lajitas 60.44 285 *eP* **P 06 03 35.0 +0.3**
comp=Z,5.0nm,1.1s,mb4.5
LTX Lajitas 60.44 285 *eP* **P 06 03 35.0 +0.3**
LTX pmax pmax
comp=Z,5.0nm,1.1s,mb4.5
LTX Lajitas 60.44 285 *eP* **P 06 03 35.0 +0.3**
comp=Z,5.0nm,1.1s,mb4.5
TXAR Lajitas Array 60.44 285 P **P 06 03 33.9 -0.8**
comp=Z,1.9nm,0.7s,mb4.2,baz=69,slow=7.2,SNR=19
MNTX Cornudas Mount 60.45 288 *eP* **P 06 03 34.6 -0.2**
comp=Z,6.0nm,1.5s,mb4.4
MNTX Cornudas Mount 60.45 288 *eP* **P 06 03 34.6 -0.2**
comp=Z,6.0nm,1.5s,mb4.4
HLID Hailey 60.67 304 *eP* **P 06 03 35.6 -0.5**
comp=Z,2.0nm,1.0s,mb4.2
HLID Hailey 60.67 304 *eP* **P 06 03 35.6 -0.5**
comp=Z,2.0nm,1.0s,mb4.2
DUG Dugway 61.30 300 *eP* **P 06 03 39.3 -1.1**
comp=Z,5.7nm,1.1s,mb4.6
DUG Dugway 61.30 300 *eP* **P 06 03 39.3 -1.1**
DUG pmax pmax
comp=Z,6.0nm,1.1s,mb4.6
DUG Dugway 61.30 300 *eP* **P 06 03 39.3 -1.1**
comp=Z,5.7nm,1.1s,mb4.6
MSU Marysvale 61.72 298 *eP* **P 06 03 44.3 +1.0**
WVOR Wild Horse Val 63.91 304 *eP* **P 06 03 56.6 -1.2**
comp=Z,2.6nm,1.8s,mb5.0
WVOR Wild Horse Val 63.91 304 *eP* **P 06 03 56.6 -1.2**
WVOR pmax pmax
comp=Z,26nm,1.8s,mb5.0
WVOR Wild Horse Val 63.91 304 *eP* **P 06 03 56.6 -1.2**
comp=Z,26nm,1.8s,mb5.0
BRVK Borovoye 63.97 41 *eP* **P 06 03 58.1 +0.1**
comp=Z,6.7nm,1.1s,mb4.6
BRVK Borovoye 63.97 41 *eP* **P 06 03 58.1 +0.1**
BRVK pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
BRVK Borovoye 63.97 41 *eP* **P 06 03 58.1 +0.1**
comp=Z,6.7nm,1.1s,mb4.6
TUC Tucson 64.01 291 *eP* **P 06 03 59.2 +0.6**
comp=Z,1.7nm,0.9s,mb4.1
TUC Tucson 64.01 291 *eP* **P 06 03 59.2 +0.6**
TUC pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
TUC Tucson 64.01 291 *eP* **P 06 03 59.2 +0.6**
comp=Z,1.7nm,0.9s,mb4.1
IMA2 Indian Mountai 65.59 338 *eP* **P 06 04 06.6 -1.7**
IMA2 Indian Mountai 65.59 338 *eP* **P 06 04 06.6 -1.8**
LPAZ La Paz 67.01 221 P **P 06 04 21.1 +3.0**
comp=Z,1.4nm,0.9s,mb4.0,baz=7.2,slow=7.9,SNR=6.0
LPAZ LR LR 06 29 54.4
comp=Z,174nm,21.0s,MS4.2,baz=22,slow=33
LPAZ La Paz 67.01 221 P **P 06 04 21.0 +2.9**
TIXI Tiksi 67.16 7 *eP* **P 06 04 18.0 -0.3**
TIXI pmax pmax
comp=Z,7.0nm,1.3s,mb4.5
TIXI Tiksi 67.16 7 *eP* **P 06 04 18.0 -0.3**
comp=Z,7.0nm,1.3s,mb4.5
NVS Novosibirsk 69.01 35 *eP* **P 06 04 29.7 -0.5**
NVS pmax pmax
comp=Z,20nm,1.7s,mb4.8
NVS Novosibirsk 69.01 35 *eP* **P 06 04 29.7 -0.5**
comp=Z,20nm,1.7s,mb4.8
KURK Kurchatov 69.52 40 *eP* **P 06 04 33.0 -0.5**
comp=Z,7.6nm,1.0s,mb4.6
KURK Kurchatov 69.52 40 *eP* **P 06 04 33.0 -0.4**
KURK pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
KURK Kurchatov 69.52 40 *eP* **P 06 04 33.0 -0.4**
comp=Z,7.6nm,1.0s,mb4.6
BILL Bilibino 71.25 354 *eP* **P 06 04 44.5 +0.8**
BILL *e* 06 07 17.8
BILL pmax pmax
comp=Z,3.0nm,1.9s,mb3.9
BILL Bilibino 71.25 354 *eP* **P 06 04 44.5 +0.8**
comp=Z,3.0nm,1.9s,mb3.9
EKS2 Erkin-Say 71.97 49 *eP* **P 06 04 49.8 +1.3**
comp=Z,17nm,1.5s,mb4.7
EKS2 Erkin-Say 71.97 49 *eP* **P 06 04 49.8 +1.3**
comp=Z,17nm,1.5s,mb4.7
AML Almayashu 72.26 50 *eP* **P 06 04 51.5 +1.3**
comp=Z,5.9nm,0.9s,mb4.5
AML Almayashu 72.26 50 *eP* **P 06 04 51.5 +1.3**
comp=Z,5.9nm,0.9s,mb4.5
UCH Uchtor 72.67 49 *eP* **P 06 04 53.5 +0.8**
comp=Z,7.3nm,1.0s,mb4.6
UCH Uchtor 72.67 49 *eP* **P 06 04 53.5 +0.8**
comp=Z,7.3nm,1.0s,mb4.6
TKM2 Tokmak 2 72.85 48 *eP* **P 06 04 55.0 +1.2**
comp=Z,2.8nm,1.1s,mb4.1
TKM2 Tokmak 2 72.85 48 *eP* **P 06 04 55.0 +1.2**
TKM2 pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
TKM2 Tokmak 2 72.85 48 *eP* **P 06 04 55.0 +1.2**
comp=Z,2.8nm,1.1s,mb4.1
KMBO Kiiima Mbogo 73.00 107 *eP* **P 06 04 58.0 +2.9**
MKAR Makanchi Array 73.92 42 P **P 06 04 59.9 -0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=316,slow=5.7,SNR=15
TLY Talaya 79.51 28 *eP* **P 06 05 31.8 +0.3**
ZAK Zakamensk 80.45 29 *eP* **P 06 05 36.7 +0.1**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
ZAK Zakamensk 80.45 29 *eP* **P 06 05 36.7 +0.1**
comp=Z,2.0nm,1.2s,mb3.9
SONM Songino Array 83.71 28 P **P 06 05 53.9 +0.1**
comp=Z,1.3nm,0.7s,mb4.2,baz=315,slow=5.3,SNR=8.5
ULN Ulaanbaatar 83.92 28 *eP* **P 06 05 55.4 +0.5**
comp=Z,11nm,1.4s,mb4.8
ULN Ulaanbaatar 83.92 28 *eP* **P 06 05 55.4 +0.6**
ULN pmax pmax
comp=Z,11nm,1.4s,mb4.8
ULN Ulaanbaatar 83.92 28 *eP* **P 06 05 55.3 +0.5**
comp=Z,11nm,1.4s,mb4.8
HHC Hu-ho-hao-te 91.60 29 *eP* **P 06 06 31.3 -0.7**
HHC PP PP 06 10 09.8 +0.5
HHC SKS 06 17 00.3

HHC				S	S	06 17 24.6	-7.5	
HHC				AMB	AMB			
	comp=Z,9.0nm,0.7s,mb5.2							
CD2	**Chengdu**	**96.73**	**39**	*eP*	**P**	**06 06 55.8**	**+0.1**	
KMI	**Kunming**	**100.95**	**43**	P	Pdif	06 07 15.9	+1.4	
KMI				AP		06 07 23.5		
GYA	**Guiyang**	**101.84**	**40**	P	Pdif	06 07 18.8	+0.4	

*CSEM **22** 05:57:56.4±1.2, 4053N×2912W, h0km, ML2.9, Error ellipse: s-maj=9.3km s-min=5.6km az=88.0, After PDA*
*PDA **22** 05:57:56.4±1.2, 4053N×2912W, h0km, MD3.7, ML2.9, Error ellipse: s-maj=9.3km s-min=5.6km az=88.0*
SVSA 22 05:57:56.4±1.2, 4053N×2912W, h0km, MD3.7, ML2.9, Error ellipse: s-maj=9.3km s-min=5.6km az=88.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRBC	**Serra Branca**	**1.71**	**150**	*eP*	Pn	05 58 22.6	-4.8
SRBC				*eS*	Sn	05 58 41.8	-8.2
PCED	**Cedros**	**1.93**	**170**	*eS*	Sn	05 58 47.9	-7.4
PCED				A		05 58 49.1	
	66nm,0.3s						
ROSA	**Rosais**	**1.93**	**159**	*eP*	Pn	05 58 25.2	-5.3
ROSA				*eS*	Sn	05 58 47.5	-8.0
PTCA	**Ponta do Capel**	**1.96**	**172**	*eP*	Sn	05 58 49.2	-6.9
CALA	**Caldeira**	**1.97**	**170**	*eP*	Pn	05 58 26.3	-4.8
CALA				*eS*	Sn	05 58 49.0	-7.5
HOR	**Horta**	**2.04**	**169**	*eP*	Pn	05 58 26.9	-5.0
HOR				*eS*	Sn	05 58 50.6	-7.5
PMAN	**Manadas**	**2.06**	**157**	A		05 58 50.4	
	14nm,0.2s						
PMAN				*eS*	Sn	05 58 50.6	-7.9
PMAN	**Manadas**	**2.06**	**157**	*eS*	Sn	05 58 50.6	-7.9
PICO	**Pico**	**2.10**	**165**	*eP*	Pn	05 58 28.1	-4.7
PICO				*eS*	Sn	05 58 51.8	-7.7
PTEI	**Pico do Teixo**	**2.12**	**163**	*eP*	Sn	05 58 56.5	-3.5
PCND	**Candelaria**	**2.12**	**166**	*eP*	Sn	05 58 54.4	-5.7
PBOI	**Pico dos Bois**	**2.17**	**164**	*eP*	Sn	05 58 56.9	-4.4
ASBA	**Santa Barbara**	**2.28**	**142**	*eP*	Pn	05 58 30.9	-4.4
ASBA				*eS*	Sn	05 58 55.9	-8.1
ASBA				A		05 59 03.0	
	16nm,0.2s						
ASBA	**Santa Barbara**	**2.28**	**142**	*eP*	Pn	05 58 30.9	-4.4
ASBA				*eS*	Sn	05 58 55.9	-8.1
PBIS	**Biscoitos**	**2.28**	**140**	*eP*	Pn	05 58 30.7	-4.6
PPAD	**Pico dos Padre**	**2.31**	**142**	*eP*	Pn	05 58 31.2	-4.5
PPAD				*eP*		05 58 33.3	
PVNV	**Vila Nova**	**2.33**	**139**	*eP*	Pn	05 58 31.3	-4.7
PVNV				*eS*	Sn	05 58 58.2	-7.1
PVNV				A		05 59 00.2	
	12nm,0.2s						
PVNV	**Vila Nova**	**2.33**	**139**	*eP*	Pn	05 58 31.3	-4.7
PVNV				*eS*	Sn	05 58 58.2	-7.1
RIB2	**Ribeirinha**	**2.39**	**140**	*eP*	Sn	05 59 00.5	-6.3
PFAV	**Pico das Favas**	**2.41**	**138**	*eP*	Pn	05 58 32.5	-4.5
PFAV				*eS*	Sn	05 58 58.9	-8.2
PFAV				A		05 59 07.6	
	10nm,0.2s						
PFAV	**Pico das Favas**	**2.41**	**138**	*eP*	Pn	05 58 32.5	-4.5
PFAV				*eS*	Sn	05 58 58.9	-8.2

*PDA **22** 05:59:01.6±1.8, 4060N×2920W, h5km, MD4.1, ML3.1, Error ellipse: s-maj=11.0km s-min=7.2km az=89.0*
*CSEM **22** 05:59:01.6±1.8, 4060N×2920W, h5km, ML3.1, Error ellipse: s-maj=11.0km s-min=7.2km az=89.0, After PDA*
SVSA 22 05:59:01.6±1.8, 4060N×2920W, h5km, MD4.1, ML3.1, Error ellipse: s-maj=11.0km s-min=7.2km az=89.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUZ	**Luz**	**1.59**	**174**	*eS*	Sn	05 59 48.0	-3.2
PLUZ				A		05 59 49.6	
	10nm,0.1s						
PVIA	**Vitoria**	**1.77**	**149**	*eS*	Sn	05 59 47.6	-8.0
PVIA				A		05 59 47.9	
	14nm,0.1s						
STGR	**Santa Cruz**	**1.77**	**148**	*eS*	Sn	05 59 47.9	-7.9
STGR				A		05 59 48.5	
	58nm,0.3s						
SRBC	**Serra Branca**	**1.80**	**150**	*eP*	Pn	05 59 27.7	-5.5
SRBC				*eS*	Sn	05 59 46.6	-10
PGRA	**Graciosa**	**1.82**	**149**	*eS*	Sn	05 59 47.6	-9.5
PGRA				A		05 59 47.9	
	42nm,0.4s						
PCED	**Cedros**	**2.00**	**169**	A		05 59 53.4	
	52nm,0.2s						
PCED				*eS*	Sn	05 59 54.0	-7.4
PCED	**Cedros**	**2.00**	**169**	*eS*	Sn	05 59 54.0	-7.4
ROSA	**Rosais**	**2.02**	**158**	*eP*	Pn	05 59 30.6	-5.6
ROSA				*eS*	Sn	05 59 53.5	-8.3
PTCA	**Ponta do Capel**	**2.03**	**171**	*eS*	Sn	05 59 55.6	-6.6
PTCA				A		05 59 57.6	
	28nm,0.1s						
CALA	**Caldeira**	**2.05**	**169**	*eP*	Pn	05 59 32.0	-4.7
CALA				*eS*	Sn	05 59 54.9	-7.7
PAMA	**Santo Amaro**	**2.07**	**157**	*eS*	Sn	05 59 56.8	-6.3
PAMA				A		05 59 57.5	
	14nm,0.2s						
HOR	**Horta**	**2.11**	**168**	*eP*	Pn	05 59 32.4	-5.2
HOR				*eS*	Sn	05 59 56.6	-7.6
PMAN	**Manadas**	**2.14**	**156**	*eP*	Pn	05 59 32.2	-5.7
PMAN				*eS*	Sn	05 59 56.2	-8.7
PMAN				A		05 59 57.5	
	40nm,0.2s						
PMAN	**Manadas**	**2.14**	**156**	*eP*	Pn	05 59 32.2	-5.7
PMAN				*eS*	Sn	05 59 56.2	-8.7
PICO	**Pico**	**2.18**	**164**	*eP*	Pn	05 59 33.1	-5.3
PICO				*eS*	Sn	05 59 57.9	-7.8
PTEI	**Pico do Teixo**	**2.20**	**162**	*eS*	Sn	05 59 58.1	-8.2
PTEI				A		06 00 02.4	
	28nm,0.4s						
PCND	**Candelaria**	**2.20**	**165**	*eS*	Sn	05 59 59.9	-6.4
PCND				A		06 00 02.6	
	33nm,0.2s						
PBOI	**Pico dos Bois**	**2.25**	**163**	*eS*	Sn	06 00 00.9	-6.6
PBOI				A		06 00 05.2	
	22nm,0.2s						
ASBA	**Santa Barbara**	**2.37**	**142**	*eP*	Pn	05 59 36.3	-4.8
ASBA				*eS*	Sn	06 00 02.8	-7.7
ASBA				A		06 00 04.4	
	106nm,0.2s						
ASBA	**Santa Barbara**	**2.37**	**142**	*eP*	Pn	05 59 36.3	-4.8
ASBA				*eS*	Sn	06 00 02.8	-7.7
PBIS	**Biscoitos**	**2.37**	**140**	*eP*	Pn	05 59 36.3	-4.8
PBIS				*eS*	Sn	06 00 02.7	-7.9
PBIS				A		06 00 03.9	
	45nm,0.3s						
PBIS	**Biscoitos**	**2.37**	**140**	*eP*	Pn	05 59 36.3	-4.8
PBIS				*eS*	Sn	06 00 02.7	-7.9
PPAD	**Pico dos Padre**	**2.40**	**141**	*eP*	Pn	05 59 36.7	-4.8
PPAD				*eS*	Sn	06 00 03.3	-8.0
PPAD				A		06 00 04.9	
	19nm,0.2s						
PPAD	**Pico dos Padre**	**2.40**	**141**	*eP*	Pn	05 59 36.7	-4.8
PPAD				*eS*	Sn	06 00 03.3	-8.0
PVNV	**Vila Nova**	**2.42**	**139**	*eP*	Pn	05 59 37.1	-4.7
PVNV				*eS*	Sn	06 00 03.8	-7.9
PVNV				A		06 00 05.3	
	45nm,0.2s						
PVNV	**Vila Nova**	**2.42**	**139**	*eP*	Pn	05 59 37.1	-4.7
PVNV				*eS*	Sn	06 00 03.8	-7.9
RIB2	**Ribeirinha**	**2.48**	**140**	*eP*	Pn	05 59 37.5	-5.1
RIB2				*eS*	Sn	06 00 05.4	-7.8
RIB2				A		06 00 06.9	
	16nm,0.2s						
RIB2	**Ribeirinha**	**2.48**	**140**	*eP*	Pn	05 59 37.5	-5.1
RIB2				*eS*	Sn	06 00 05.4	-7.8
PFAV	**Pico das Favas**	**2.49**	**138**	*eP*	Pn	05 59 37.9	-4.9
PFAV				*eS*	Sn	06 00 05.9	-7.7
PFAV				A		06 00 08.2	
	50nm,0.1s						
PFAV	**Pico das Favas**	**2.49**	**138**	*eP*	Pn	05 59 37.9	-4.9
PFAV				*eS*	Sn	06 00 05.9	-7.7
SET4	**Mosteiros**	**3.79**	**135**	*eP*	Pn	05 59 57.2	-3.4
SET4				*eS*	Sn	06 00 38.6	-7.0
SET2	**Ginetes**	**3.81**	**135**	*eP*	Pn	05 59 57.8	-3.1
SET2				*eS*	Sn	06 00 39.8	-6.2
PFET	**Feteiras**	**3.84**	**135**	*eP*	Pn	05 59 57.7	-3.6
PFET				*eS*	Sn	06 00 43.0	-3.8
PSAN	**Santo Antonio**	**3.85**	**134**	*eS*	Sn	06 00 43.6	-3.4
FAC	**Faja de Cima**	**3.94**	**134**	*eP*	Pn	05 59 59.3	-3.5
FAC				*eS*	Sn	06 00 43.7	-5.7
CML	**Cha da Macela**	**4.00**	**134**	*eP*	Pn	05 59 59.3	-4.3
CML				*eS*	Sn	06 00 44.5	-6.3
PMAT	**Coroa da Mata**	**4.01**	**133**	*eS*	Sn	06 00 42.0	-9.1
PMAT				A		06 00 45.3	
	13nm,0.2s						
LFA	**Lagoa do Fogo**	**4.04**	**133**	*eP*	Pn	05 59 59.7	-4.3
MESC	**Monte Escuro**	**4.04**	**133**	*eS*	Sn	06 00 41.7	-10
PRCH	**Ribeira Ch**	**4.07**	**133**	*eS*	Sn	06 00 42.8	-10
PRCH				A		06 00 48.0	
	22nm,0.2s						
FRA1	**Furnas**	**4.13**	**132**	*eP*	Pn	06 00 01.5	-3.8
MIRA	**Miradouro**	**4.14**	**131**	*eP*	Pn	06 00 01.8	-3.7
MIRA				*eS*	Sn	06 00 45.5	-8.8

*PDA **22** 06:00:45.6±1.0, 4076N×2931W, h10km, MD4.8, ML3.0, Error ellipse: s-maj=14.8km s-min=6.2km az=79.0*
*CSEM **22** 06:00:45.6±1.0, 4076N×2931W, h10km, ML3.0, Error ellipse: s-maj=14.8km s-min=6.2km az=79.0, After PDA*
SVSA 22 06:00:45.6±1.0, 4076N×2931W, h10km, MD4.8, ML3.0, Error ellipse: s-maj=14.8km s-min=6.2km az=79.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STGR	**Santa Cruz**	**1.95**	**149**	*eS*	Sn	06 01 35.8	-7.5
STGR				A		06 01 36.6	
	20nm,0.2s						
PCND	**Candelaria**	**2.38**	**164**	*eS*	Sn	06 01 46.3	-7.4
PCND				A		06 01 49.8	
	18nm,0.3s						
ASBA	**Santa Barbara**	**2.54**	**142**	*eS*	Sn	06 01 49.9	-8.0
ASBA				A		06 01 50.8	
	15nm,0.1s						
PBIS	**Biscoitos**	**2.55**	**141**	*eP*	Pn	06 01 22.3	-4.6
PPAD	**Pico dos Padre**	**2.58**	**142**	*eP*	Pn	06 01 22.3	-5.1
PVNV	**Vila Nova**	**2.59**	**140**	*eP*	Pn	06 01 23.1	-4.5
RIB2	**Ribeirinha**	**2.66**	**141**	*eP*	Pn	06 01 24.0	-4.4
PFAV	**Pico das Favas**	**2.67**	**139**	*eP*	Pn	06 01 23.8	-4.8
SET4	**Mosteiros**	**3.96**	**135**	*eP*	Pn	06 01 42.4	-4.0
SET2	**Ginetes**	**3.98**	**136**	*eP*	Pn	06 01 42.6	-4.0
PFET	**Feteiras**	**4.01**	**136**	*eP*	Pn	06 01 43.3	-3.7
PSAN	**Santo Antonio**	**4.02**	**135**	*eP*	Pn	06 01 43.0	-4.1
FAC	**Faja de Cima**	**4.12**	**135**	*eP*	Pn	06 01 43.3	-5.2
CML	**Cha da Macela**	**4.17**	**134**	*eP*	Pn	06 01 45.6	-3.7
MIRA	**Miradouro**	**4.31**	**132**	*eP*	Pn	06 01 47.2	-4.0
MIRA				*eS*	Sn	06 02 33.2	-8.3
PSMN	**Pico do Norte,**	**5.00**	**137**	*eP*	Pn	06 01 52.5	-8.2

*ISCJB **22** 06:04:04.5±1.1, 487S±0.1×124.1E±0.6, h10km, mb4.2/7, Error ellipse: s-maj=56.5km s-min=13.7km az=13.5*
*IDC **22** 06:04:05.0±1.3, 4873S×12398E, h0km, mb4.3/5, mb1 4.4/5, mb1mx4.1/13, mbtmp4.3/5, Error ellipse: s-maj=90.4km s-min=18.9km az=109.0*
*NEIC **22** 06:04:05.9±0.7, 4870S×12381E, h10km, mb4.4/4, Error ellipse: s-maj=40.1km s-min=11.6km az=104.0*
ISC 22 06:04:06.5±1.1, 487S±01×1240E±06, h10km, n9, σ0$26/8, mb4.2/7, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**21.43**	**45**	*eP*	**P**	**06 08 54.4**	**-0.1**
	5.3nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**21.43**	**45**	P	**P**	**06 08 54.8**	**+0.3**
	6.9nm,0.9s,mb4.0,baz=197,slow=12,SNR=12						
ASAR	**Alice Springs**	**26.21**	**21**	P	**P**	**06 09 41.3**	**0.0**
	9.1nm,0.9s,mb4.3,baz=192,slow=9.4,SNR=54						
WRA	**Warramunga Arr**	**29.90**	**20**	P	**P**	**06 10 13.8**	**-0.5**
	2.1nm,1.0s,mb3.8,baz=195,slow=7.9,SNR=6.6						
SBA	**Scott Base**	**33.34**	**165**	*eP*	**P**	**06 10 44.0**	**0.0**
	3.4nm,1.0s,mb4.2						
KAKA	**Kakadu**	**36.58**	**14**	*eP*	**P**	**06 11 13.0**	**+0.4**
	25nm,1.1s,mb5.0						
QSPA	**South Pole Qui**	**41.39**	**180**	P	**P**	**06 11 52.2**	**0.0**
	10nm,1.0s,mb4.4,baz=345,slow=6.4,SNR=12						
SNAA	**Sanae**	**54.18**	**198**	P	**P**	**06 13 31.4**	**0.0**
	2.6nm,0.9s,mb4.1,baz=148,slow=9.1,SNR=6.1						
YKA	**Yellowknife Ar**	**145.46**	**44**	PKPbc	PKPbc	06 23 43.9	+0.4
	1.7nm,0.8s,baz=269,slow=3.4,SNR=28						

*IDC **22** 06:09:01.0±0.8, 4068N×2924W, h0km, mb3.9/8, mb1 4.2/9, mb1mx3.9/26, mbtmp3.9/9, ML4.5/1, MS4.1/5, Ms1 4.1/5, ms1mx3.6/36, Error ellipse: s-maj=29.1km s-min=17.4km az=11.0*
*CSEM **22** 06:09:02.4±0.1, 4046N×2888W, h10km, mb4.6/16, Ms3.6, Error ellipse: s-maj=3.2km s-min=1.4km az=87.0*
*ISCJB **22** 06:09:02.5±0.4, 4044N±002×2896W±005, h10km, mb4.4/25, MS4.0/5, Error ellipse: s-maj=5.6km s-min=2.7km az=171.5*
*NEIC **22** 06:09:02.4±0.4, 4061N×2926W, h10km, mb4.7/19, Error ellipse: s-maj=12.1km s-min=6.1km az=174.0*
*SVSA **22** 06:09:04.6±1.2, 4055N×2922W, h0km, MD4.1, ML3.5, Error ellipse: s-maj=4.7km s-min=3.5km az=79.0*
*PDA **22** 06:09:04.6±1.2, 4055N×2922W, h0km, MD4.1, ML3.5, Error ellipse: s-maj=4.7km s-min=3.5km az=79.0*
ISC 22 06:09:02.8±0.4, 4041N±002×2910W±005, h10km, n118, σ0$84/148, mb4.4/26, MS4.0/5, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUZ	**Luz**	**1.40**	**176**	*eP*	**Pn**	**06 09 31.9**	**+3.6**
PLUZ				*eS*	**Sn**	**06 09 52.4**	**+5.7**
PLUZ				A		06 09 54.0	
	41nm,0.5s						
PVIA	**Vitoria**	**1.57**	**148**	*eP*	**Pn**	**06 09 31.0**	**+0.3**
PVIA				*eS*	**Sn**	**06 09 51.1**	**+0.1**
PVIA				A		06 09 54.2	
	28nm,0.2s						
STGR	**Santa Cruz**	**1.57**	**147**	*eP*	**Pn**	**06 09 31.4**	**+0.6**
STGR				*eS*	**Sn**	**06 09 51.4**	**+0.2**
STGR				A		06 09 54.6	
	136nm,0.2s						
STGR	**Santa Cruz**	**1.57**	**147**	*eP*	**Pn**	**06 09 31.4**	**+0.6**
STGR				*eS*	**Sn**	**06 09 51.4**	**+0.2**
SRBC	**Serra Branca**	**1.60**	**149**	*eP*	**Pn**	**06 09 30.6**	**-0.5**
SRBC				*eS*	**Sn**	**06 09 51.9**	**+0.2**
PGRA	**Graciosa**	**1.63**	**148**	*eP*	**Pn**	**06 09 31.7**	**+0.2**
PGRA				*eS*	**Sn**	**06 09 51.6**	**-0.9**
PGRA				A		06 09 52.4	
	125nm,0.4s						
PGRA	**Graciosa**	**1.63**	**148**	*eP*	**Pn**	**06 09 31.7**	**+0.2**
PGRA				*eS*	**Sn**	**06 09 51.6**	**-0.9**
PCED	**Cedros**	**1.81**	**170**	*eP*	**Pn**	**06 09 34.2**	**+0.2**
PCED				*eS*	**Sn**	**06 09 56.4**	**-0.5**
PCED				A		06 09 57.4	
	117nm,0.2s						
PCED	**Cedros**	**1.81**	**170**	*eP*	**Pn**	**06 09 34.2**	**+0.2**
PCED				*eS*	**Sn**	**06 09 56.4**	**-0.5**
ROSA	**Rosais**	**1.81**	**158**	*eP*	**Pn**	**06 09 33.6**	**-0.5**
ROSA				*eS*	**Sn**	**06 09 57.1**	**0.0**
PTCA	**Ponta do Capel**	**1.84**	**173**	*eP*	**Pn**	**06 09 35.3**	**+0.9**
PTCA				*eS*	**Sn**	**06 09 57.7**	**0.0**
PTCA				A		06 10 04.2	
	100nm,0.4s						
PTCA	**Ponta do Capel**	**1.84**	**173**	*eP*	**Pn**	**06 09 35.3**	**+0.9**
PTCA				*eS*	**Sn**	**06 09 57.7**	**0.0**
CALA	**Caldeira**	**1.85**	**170**	*eP*	**Pn**	**06 09 34.9**	**+0.3**
CALA				*eS*	**Sn**	**06 09 57.8**	**-0.2**
PAMA	**Santo Amaro**	**1.87**	**157**	*eS*	**Sn**	**06 09 58.9**	**+0.4**
PAMA				A		06 10 05.7	
	56nm,0.2s						
HOR	**Horta**	**1.92**	**169**	*eP*	**Pn**	**06 09 35.6**	**+0.1**
HOR				*eS*	**Sn**	**06 09 59.3**	**-0.3**
PMAN	**Manadas**	**1.94**	**156**	*eP*	**Pn**	**06 09 35.1**	**-0.7**
PMAN				*eS*	**Sn**	**06 09 59.5**	**-0.7**
PMAN				A		06 10 00.1	
	92nm,0.3s						
PMAN	**Manadas**	**1.94**	**156**	*eP*	**Pn**	**06 09 35.1**	**-0.7**
PMAN				*eS*	**Sn**	**06 09 59.5**	**-0.7**
PICO	**Pico**	**1.98**	**164**	*eP*	**Pn**	**06 09 36.7**	**+0.4**
PICO				*eS*	**Sn**	**06 10 01.2**	**+0.1**
PTEI	**Pico do Teixo**	**2.00**	**163**	*eS*	**Sn**	**06 10 01.8**	**+0.2**
PTEI				A		06 10 07.2	
	88nm,0.4s						
PCND	**Candelaria**	**2.00**	**165**	*eP*	**Pn**	**06 09 37.0**	**+0.4**
PCND				*eS*	**Sn**	**06 10 01.8**	**+0.1**
PCND				A		06 10 08.5	
	82nm,0.4s						
PBOI	**Pico dos Bois**	**2.05**	**164**	*eS*	**Sn**	**06 10 02.6**	**-0.3**
PBOI				A		06 10 09.6	
	41nm,0.3s						
PID	**Ribeirinha**	**2.11**	**159**	*eP*	**Pn**	**06 09 38.3**	**+0.2**
PIED	**Piedade**	**2.15**	**157**	*eP*	**Pn**	**06 09 39.1**	**+0.5**
PIED				*eP*		06 10 03.6	
ASBA	**Santa Barbara**	**2.17**	**140**	*eP*	**Pn**	**06 09 39.3**	**+0.3**
ASBA				*eS*	**Sn**	**06 10 05.6**	**-0.4**
ASBA				A		06 10 07.6	
	338nm,0.1s						
ASBA	**Santa Barbara**	**2.17**	**140**	*eP*	**Pn**	**06 09 39.3**	**+0.3**
ASBA				*eS*	**Sn**	**06 10 05.6**	**-0.4**
PBIS	**Biscoitos**	**2.18**	**138**	*eP*	**Pn**	**06 09 39.3**	**+0.2**
PBIS				*eS*	**Sn**	**06 10 06.1**	**0.0**
PBIS				A		06 10 07.0	
	131nm,0.1s						
PBIS	**Biscoitos**	**2.18**	**138**	*eP*	**Pn**	**06 09 39.3**	**+0.2**
PBIS				*eS*	**Sn**	**06 10 06.1**	**0.0**
PPAD	**Pico dos Padre**	**2.21**	**140**	*eP*	**Pn**	**06 09 39.7**	**+0.2**
PPAD				*eS*	**Sn**	**06 10 06.5**	**-0.3**
PPAD				A		06 10 09.6	
	45nm,0.2s						
PPAD	**Pico dos Padre**	**2.21**	**140**	*eP*	**Pn**	**06 09 39.7**	**+0.2**
PPAD				*eS*	**Sn**	**06 10 06.5**	**-0.3**
PVNV	**Vila Nova**	**2.23**	**137**	*eP*	**Pn**	**06 09 40.1**	**+0.3**
PVNV				*eS*	**Sn**	**06 10 06.8**	**-0.5**
PVNV				A		06 10 08.4	
	130nm,0.1s						
PVNV	**Vila Nova**	**2.23**	**137**	*eP*	**Pn**	**06 09 40.1**	**+0.3**
PVNV				*eS*	**Sn**	**06 10 06.8**	**-0.5**
ADH	**Angra Heroismo**	**2.27**	**140**	*eP*	**Pn**	**06 09 40.4**	**+0.1**
ADH				*eS*	**Sn**	**06 10 07.5**	**-0.9**
RIB2	**Ribeirinha**	**2.29**	**139**	*eS*	**Sn**	**06 10 08.7**	**-0.1**
RIB2				A		06 10 14.8	
	48nm,0.2s						
PSCM	**Serra do Cume**	**2.29**	**137**	*eP*	**Pn**	**06 09 40.0**	**-0.7**
PSCM				*eS*	**Sn**	**06 10 08.2**	**-0.8**
PSCM				A		06 10 14.2	
	152nm,0.2s						
PSCM	**Serra do Cume**	**2.29**	**137**	*eP*	**Pn**	**06 09 40.0**	**-0.7**
PSCM				*eS*	**Sn**	**06 10 08.2**	**-0.8**
PFAV	**Pico das Favas**	**2.30**	**137**	*eP*	**Pn**	**06 09 41.1**	**+0.3**
PFAV				*eS*	**Sn**	**06 10 08.8**	**-0.4**
PFAV				A		06 10 10.2	
	166nm,0.2s						
PFAV	**Pico das Favas**	**2.30**	**137**	*eP*	**Pn**	**06 09 41.1**	**+0.3**
PFAV				*eS*	**Sn**	**06 10 08.8**	**-0.4**
SET4	**Mosteiros**	**3.61**	**134**	*eP*	**Pn**	**06 09 59.7**	**+1.0**
SET4				*eS*	**Sn**	**06 10 41.2**	**-0.1**
SET2	**Ginetes**	**3.62**	**134**	*eP*	**Pn**	**06 10 00.2**	**+1.2**
SET2				*eS*	**Sn**	**06 10 41.3**	**-0.5**
PFET	**Feteiras**	**3.65**	**134**	*eP*	**Pn**	**06 10 00.1**	**+0.8**
PFET				*eP*		06 10 43.1	
PSAN	**Santo Antonio**	**3.66**	**133**	*eP*	**Pn**	**06 10 00.3**	**+0.8**
PSAN				*eS*	**Sn**	**06 10 41.5**	**-1.2**
FAC	**Faja de Cima**	**3.76**	**133**	*eP*	**Pn**	**06 10 01.6**	**+0.8**
PDA	**Ponta Delgada**	**3.77**	**134**	*i P*	**Sb**	**06 11 00.0**	**+4.8**
PVER	**Pico Vermelho**	**3.82**	**132**	*eP*	**Pn**	**06 10 03.3**	**+1.6**
PVER				*eS*	**Sn**	**06 10 45.9**	**-0.7**
PVER				A		06 10 53.3	
	34nm,0.3s						
CML	**Cha da Macela**	**3.82**	**132**	*eP*	**Pn**	**06 10 02.6**	**+0.9**
CML				*eS*	**Sn**	**06 10 46.2**	**-0.4**
PMAT	**Coroa da Mata**	**3.83**	**131**	*eS*	**Sn**	**06 10 45.9**	**-1.0**
PMAT				A		06 10 51.5	
	49nm,0.2s						
LFA	**Lagoa do Fogo**	**3.85**	**132**	*eP*	**Pn**	**06 10 03.3**	**+1.2**
MESC	**Monte Escuro**	**3.86**	**131**	*eP*	**Pn**	**06 10 03.3**	**+1.1**
MESC				*eS*	**Sn**	**06 10 47.0**	**-0.6**
PRCH	**Ribeira Ch**	**3.89**	**132**	*eS*	**Sn**	**06 10 47.9**	**-0.4**
PRCH				A		06 10 57.2	
	61nm,0.2s						
VIF	**Vila Franca**	**3.90**	**132**	*eP*	**Pn**	**06 10 05.2**	**+2.5**
PFAD	**Fenais da Ajud**	**3.90**	**130**	*eP*	**Pn**	**06 10 03.8**	**+1.0**
PFAD				*eS*	**Sn**	**06 10 47.7**	**-0.9**
PCNG	**Congro**	**3.91**	**131**	*eP*	**Sn**	**06 10 48.5**	**-0.3**
FRA1	**Furnas**	**3.95**	**131**	*eP*	**Pn**	**06 10 04.5**	**+1.1**
FRA1				*eS*	**Sn**	**06 10 48.7**	**-1.0**
MIRA	**Miradouro**	**3.96**	**130**	*eP*	**Pn**	**06 10 04.8**	**+1.2**
MIRA				*eS*	**Sn**	**06 10 49.5**	**-0.6**
PSMN	**Pico do Norte,**	**4.64**	**136**	*eS*	**Sn**	**06 11 06.2**	**-0.6**
PMAFR	**Mafra**	**15.33**	**89**	*eLR*	LR	06 16 25.7	
PFVI	**Vila Bisbo**	**16.14**	**95**	*eLR*	LR	06 16 44.5	
MORF	**Marmelete**	**16.23**	**94**	*eLR*	LR	06 16 50.9	
MTE	**Manteigas**	**16.42**	**83**	*eP*	**Pn**	**06 12 58.3**	**+5.0**
MTE				*eLR*	LR	06 16 53.1	
PCBR	**Castelo Branco**	**16.55**	**85**	*eP*	**Pn**	**06 12 58.9**	**+4.0**
PESTR	**Estremoz**	**16.64**	**88**	*eLR*	LR	06 17 03.3	
MVO	**Moncorvo**	**16.73**	**80**	*eP*	**Pn**	**06 13 01.3**	**+4.1**
MVO				*eLR*	LR	06 17 16.2	
PBDV	**Barranco-do-Ve**	**16.79**	**94**	*eLR*	LR	06 17 07.6	
PVAQ	**Vaqueiros**	**16.91**	**93**	*eLR*	LR	06 16 54.7	
PBAR	**Barrancos**	**17.22**	**90**	*eLR*	LR	06 17 21.5	
ESDC	**Sonseca Array**	**19.25**	**84**	P	**Pn**	**06 13 28.9**	**+0.7**
	0.3nm,0.3s,baz=289,slow=11,SNR=3.3						
ESDC				LR	LR	06 19 39.8	
	comp=Z,447nm,19.6s,baz=285,slow=33						
QUIF

	comp=Z,420nm,20.3s,MS3.9							
BAIF	**Baives**	**25.18**	**56**	*e*P		**P**	**06 14 27.5**	**-0.7**
MEZF	**Maizieres J'vi**	**25.52**	**60**	*e*P		**P**	**06 14 31.2**	**-0.1**
GIVF	**Givet**	**25.57**	**56**	*e*P		**P**	**06 14 31.1**	**-0.7**
HINF	**Hinteralfeld**	**26.67**	**62**	*e*P		**P**	**06 14 43.3**	**+1.6**
	comp=Z,49nm,1.6s,mb4.5							
HINF	**Hinteralfeld**	**26.97**	**62**	*e*P		**P**	**06 14 43.3**	**+1.6**
	comp=Z,25nm,1.6s,mb4.5							
CDF	**Champ du Feu**	**26.98**	**61**	*e*P		**P**	**06 14 44.4**	**-0.1**
	comp=Z,160nm,1.9s,mb4.9							
CDF	**Champ du Feu**	**26.98**	**61**	*e*P		**P**	**06 14 44.4**	**-0.1**
	comp=Z,80nm,1.9s,mb4.9							
SCHQ	**Schefferville**	**28.83**	**313**	LR		LR	06 25 16.9	
	comp=Z,171nm,19.4s,MS3.7,baz=60,slow=34							
BRG	**Berggiesshubel**	**31.45**	**56**	*e*(P)		**P**	**06 15 24.1**	**0.0**
	comp=Z,5.0nm,1.2s,mb4.2							
TOA0	**Torodi Ar. Sit**	**38.29**	**126**	*e*P		**P**	**06 16 24.4**	**+0.9**
TOA0	**Torodi Ar. Sit**	**38.29**	**126**	*e*P		**P**	**06 16 24.4**	**+0.9**
TORD	**Torodi Ar. Bea**	**38.29**	**126**	P		**P**	**06 16 24.4**	**+0.9**
	comp=Z,3.5nm,0.9s,mb4.1,baz=317,slow=6.9,SNR=8.6							
AKASG	**Malin Array Be**	**41.12**	**55**	P		**P**	**06 16 45.5**	**-1.3**
	comp=Z,1.1nm,0.7s,mb3.6,baz=263,slow=7.4,SNR=5.5							
ECSD	**EROS,Sioux Fal**	**48.97**	**297**	*e*P		**P**	**06 17 47.5**	**-1.7**
	comp=Z,6.8nm,0.9s,mb4.7							
MIAR	**Mount Ida**	**50.50**	**285**	*e*P		**P**	**06 17 58.6**	**-2.3**
	comp=Z,9.4nm,1.0s,mb4.8							
YKA	**Yellowknife Ar**	**53.15**	**325**	P		**P**	**06 18 17.7**	**-2.7**
YKA	**Yellowknife Ar**	**53.15**	**325**	P		**P**	**06 18 17.7**	**-2.7**
	comp=Z,1.4nm,0.8s,mb3.9,baz=70,slow=7.1,SNR=14							
ROSC	**El Rosal**	**53.83**	**241**	LR		LR	06 39 31.8	
	comp=Z,265nm,18.2s,MS4.3,baz=344,slow=34							
PDAR	**Pinedale Array**	**57.99**	**301**	P		**P**	**06 18 54.1**	**-1.3**
	comp=Z,1.5nm,0.9s,mb4.0,baz=64,slow=7.1,SNR=12							
AKTO	**Aktyubinsk**	**58.60**	**48**	P		**P**	**06 18 59.3**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.1,baz=302,slow=6.2,SNR=7.1							
TXAR	**Lajitas Array**	**60.52**	**285**	P		**P**	**06 19 11.6**	**-1.6**
	comp=Z,1.2nm,0.8s,mb4.1,baz=79,slow=6.1,SNR=18							
LPAZ	**La Paz**	**67.06**	**221**	P		**P**	**06 19 58.5**	**+2.1**
	comp=Z,1.3nm,0.8s,mb4.0,baz=5.8,slow=8.5,SNR=4.4							
PFO	**Pinyon Flat Ob**	**67.35**	**295**	LR		LR	06 49 34.6	
	comp=Z,270nm,19.1s,MS4.5,baz=187,slow=36							

BJI ***22*** *06:10:34.0, 4.26S×8644E, h21km, mB5.7, mb5.4, Ms5.8, Msz5.6*

IDC ***22*** *06:10:39.8±0.3, 3.36S×8678E, h0km, mb5.3/35, mb1 5.3/36, mb1mx5.3/37, mbtmp5.3/36, ML4.2/1, MS5.5/23, Ms1 5.5/23, ms1mx5.4/29, Error ellipse: s-maj=12.5km s-min=10.3km az=34.0*

CRAAG ***22*** *06:10:40.4, 3.34S×8675E, Mb5.7*

MOS ***22*** *06:10:41.1±1.0, 3.28S×8680E, h16km, mb5.8/111, MS5.5/81, Error ellipse: s-maj=7.5km s-min=3.8km az=119.8*

ISCJB ***22*** *06:10:42.6±0.1, 3.34S±0.03×8672E±0.02, h27km, mb5.5/242, MS5.6/225, Error ellipse: s-maj=3.7km s-min=2.9km az=2.6*

GCMT ***22*** *06:10:43.1±0.1, 3.35S×8676E, h33km, MW5.9/108, Moment Tensor Solution. s91,c184; s108,c334; Duration: 2s2 Moment tensor: Scale 10^18 Nm; Mrr 0.24±.01; Mθθ 0.75±.01; Mϕϕ 0.50±.01; Mrθ -0.28±.01; Mθϕ -0.43±.01; Mϕr 0.33±.01; Best double couple: M0 0.89800×10^18 NP1:ϕs32.00000°, δ61.00000°, λ17.00000°. NP2:ϕs293.00000°, δ75.00000°, λ150.00000°. Principal axes: T 0.8890, Plg32.0000°, Azm249.0000°; N 0.0180, Plg57.0000°, Azm89.0000°; P -0.9070, Plg9.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***22*** *06:10:43.1±0.1, 3.39S×8678E, h21km, mb5.7/134, ME6.1, MS5.7/166, MW5.9 Error ellipse: s-maj=5.3km s-min=3.6km az=30.0 Broadband fault plane solution: P waves. NP1:ϕs35.00000°, δ80.00000°, λ20.00000°. NP2:ϕs301.00000°, δ70.00000°, λ169.00000°. Principal axes: T Plg21.0000°, Azm260.0000°; N Plg0.0000°, Azm0.0000°; P Plg7.0000°, Azm167.0000°; Moment Tensor Solution. s31 Moment tensor: Scale 10^17 Nm; Mrr 1.85; Mθθ -7.47; Mϕϕ 5.62; Mrθ -0.55; Mθϕ -3.97; Mϕr 2.98; Best double couple: M0 8.40000×10^17 NP1:ϕs296.00000°, δ71.00000°, λ162.00000°. NP2:ϕs32.00000°, δ73.00000°, λ20.00000°. Principal axes: T 8.1700, Plg26.0000°, Azm255.0000°; N 0.4200, Plg64.0000°, Azm71.0000°; P -8.5900, Plg2.0000°, Azm164.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

SZGRF ***22*** *06:10:46.4, 3.66S×8577E, h29km, mb5.7, MS5.3, South Indian Ocean*

ISC 22 06:10:44.6±0.1, 3.38S±0.03×8672E±0.02, h28km, h28km±.6km: pP-P, n1276, σ1 9 03/924, mb5.5/242, MS6.6/225, 218C-134D, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.16**	**330**	Pn	**Pn**	**06 13 33.1**	**-2.9**
	8μm,0.5s						
PALK	**Pallekele**	**12.16**	**330**	*e*Pn	**Pn**	**06 13 32.1**	**-3.9**
PALK				*e*Sn	**Sn**	**06 15 40.8**	**-10**
PALK	**Pallekele**	**12.16**	**330**	Pn	**Pn**	**06 13 33.3**	**-2.7**
	SNR=119						
PALK	**Pallekele**	**12.16**	**330**	P

SNR=14
ASHO Ashiyiah 40.81 315 P P 06 18 19.6 -4.1
SNR=14
ASHO Ashiyiah 40.81 315 P P 06 18 19.6 -4.1
SNR=14
ASHO Ashiyiah 40.81 315 P P 06 18 19.6 -4.1
SNR=14
FITZ Fitzroy Crossi 40.82 114⇑ *i*P P 06 18 24.0 0.0
comp=Z,31nm,0.6s,mb5.1
FITZ *e*S **S** **06 24 32.1 -1.4**
FITZ Fitzroy Crossi 40.82 114 P P 06 18 23.8 -0.2
comp=Z,14nm,0.9s,mb4.6,baz=275,slow=6.1,SNR=32
FITZ LR LR 06 34 36.6
comp=Z,5μm,18.2s,MS5.4,baz=294,slow=35
NWAO Narrogin (SRO) 40.98 139 P P 06 18 25.2 +0.1
NWAO PcP PcP 06 20 23.8 -1.3
NWAO LR LR
comp=Z,5μm,22.0s,MS5.3
NWAO Narrogin (SRO) 40.98 139 P P 06 18 25.2 +0.1
comp=Z,10nm,0.8s,mb4.5,baz=287,slow=7.6,SNR=5.9
NWAO PcP PcP 06 20 23.8 -1.2
comp=Z,26nm,1.0s,baz=270,slow=2.0,SNR=3.6
KBL Kabul 41.22 338 *e*P **P 06 18 28.1 +1.1**
comp=Z,28nm,0.8s,mb5.0
OPO Ambohidratompo 41.51 246 P P 06 18 30.0 +0.4
comp=Z,60nm,0.9s,mb5.2,baz=65,slow=7.9,SNR=51
LZH Lanzhou 42.40 21⇓ *i*P P 06 18 36.3 -0.3
LZH AP pP 06 18 44.1 -1.1
LZH XP sP 06 18 47.8 -0.8
LZH PP PP 06 20 19.3 +4.1
LZH PCP PcP 06 20 30.4 +0.8
LZH *e*S **S** **06 24 55.0 -1.4**
LZH XS sS 06 25 17.0 +6.5
LZH SCS ScS 06 28 29.0 -7.7
LZH AMB AMB
comp=Z,49nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,419nm,6.1s
LZH LR LR
comp=E,5μm,15.0s
LZH LR LR
comp=Z,6μm,16.5s,MS5.6
XAN Xi'an 42.70 28 P P 06 18 37.8 -1.3
XAN AP pP 06 18 50.9 +3.3
XAN PP PP 06 20 17.6 -0.9
XAN AMB AMB
comp=Z,112nm,1.3s,mb5.4
XAN AMB AMB
comp=Z,429nm,4.9s
XAN LR LR
comp=N,2μm,16.8s,MS5.6
XAN LR LR
comp=E,7μm,19.1s,MS5.6
XAN LR LR
comp=Z,8μm,18.1s,MS5.7
WHN Wuhan 42.82 36⇑ P P 06 18 41.0 +0.8
WHN S **S** **06 25 01.9 -0.9**
WHN LR LR
comp=Z,11μm,19.1s,MS5.8
NACB Ninganchiao 43.60 49 *e*P **P 06 18 45.8 -0.8**
YHNB Yeheng 43.71 48 *e*P **P 06 18 48.4 +0.9**
YHNB *e*pP pP 06 18 55.0 -1.1
KSH Kashi 43.81 348 P P 06 18 49.8 +1.8
KSH AP pP 06 18 58.3 +1.8
KSH PP PP 06 20 35.1 +4.7
KSH PPP 06 21 13.8
KSH *e*SCP ScP 06 24 21.1 -3.0
KSH *e*PCS PcS 06 24 25.5 -1.5
KSH *S* **S** **06 25 20.6 +3.6**
KSH *e*SS SS 06 28 31.5 -2.3
KSH AMB AMB
comp=Z,3μm,3.0s
KSH LR LR
comp=E,31μm,13.2s
KSH LR LR
comp=Z,6μm,12.3s,MS5.7
TATO Taipei 43.97 48 PFAKE 06 19 00.0 +10
TATO LR LR
comp=Z,5μm,20.0s,MS5.4
GTA Gaotai 44.25 15 P P 06 18 51.3 -0.2
GTA AP pP 06 19 01.0 +0.9
GTA XP sP 06 19 05.3 +1.8
GTA PP PP 06 20 32.8 -2.3
GTA S **S** **06 25 22.4 -1.0**
GTA AMB AMB
comp=Z,89nm,1.6s,mb5.2
GTA AMB AMB
comp=Z,774nm,7.6s
GTA LR LR
comp=N,3μm,19.8s,MS5.3
GTA LR LR
comp=E,2μm,17.5s,MS5.3
GTA LR LR
comp=Z,4μm,17.1s,MS5.4
LBOS 44.55 294 *e*P **P 06 18 54.9 +0.6**
ATD Arta Tunnel 46.07 289 P P 06 19 07.8 +1.3
comp=Z,137nm,1.0s,mb5.8,baz=100,slow=2.8,SNR=34
KAKA Kakadu 46.14 104⇑ *i*P P 06 19 06.0 -1.0
comp=Z,113nm,1.2s,mb5.7
ULHL Ulahol 46.39 349 P P 06 19 10.2 +1.7
SNR=24
KZA Kyzart 46.42 348 P P 06 19 10.4 +1.8
SNR=32
NJ2 Nanjing 46.61 38 *e*P **P 06 19 10.6 +0.2**
NJ2 AP pP 06 19 20.3 +1.3
NJ2 XP sP 06 19 23.3 +0.9
NJ2 PP PP 06 21 00.5 +0.3
NJ2 S **S** **06 25 56.5 -1.3**
NJ2 XS sS 06 26 12.0 0.0
NJ2 AMB AMB
comp=Z,20nm,0.9s,mb5.0
NJ2 AMB AMB
comp=Z,610nm,4.4s
NJ2 LR LR
comp=N,12μm,16.2s,MS6.1
NJ2 LR LR
comp=E,11μm,15.0s,MS6.1
NJ2 LR LR
comp=Z,11μm,15.0s,MS5.9
HAJJ Hajjah 46.67 295 *e*P **P 06 19 12.6 +1.4**
UCH Uchtor 46.72 348 *e*P **P 06 19 12.2 +1.1**
comp=Z,48nm,0.9s,mb5.4
UCH LR LR
comp=Z,3μm,20.0s,MS5.3
UCH Uchtor 46.72 348 P P 06 19 12.9 +1.9
SNR=53
AML Almayashu 46.81 347 *e*P **P 06 19 13.4 +1.7**
comp=Z,39nm,0.8s,mb5.4
AML LR LR
comp=Z,4μm,20.0s,MS5.4
AML Almayashu 46.81 347 P P 06 19 13.5 +1.8
SNR=53
WMQ Urumqi 46.99 1⇓ *i*P P 06 19 14.1 +1.0
WMQ AP pP 06 19 24.1 +2.4
WMQ XP sP 06 19 28.1 +3.0
WMQ PP PP 06 21 04.3 +0.3
WMQ PPP 06 21 51.3
WMQ SCP ScP 06 24 36.6 -0.6
WMQ PCS PcS 06 24 40.1 +0.1
WMQ S **S** **06 26 02.6 -0.2**
WMQ XS sS 06 26 19.1 +2.1
WMQ PS 06 29 03.3
WMQ AMB AMB
comp=Z,105nm,1.3s,mb5.6
WMQ AMB AMB
comp=Z,267nm,8.0s
WMQ LR LR
comp=N,2μm,23.4s,MS5.3
WMQ LR LR
comp=E,3μm,21.5s,MS5.3
WMQ LR LR
comp=Z,3μm,23.0s,MS5.1
KBK Karagaybulak 47.04 348 P P 06 19 15.3 +1.8
SNR=16
AAK Ala-Archa 47.11 348 P P 06 19 14.3 +0.2
comp=Z,224nm,1.0s,mb6.0,SNR=39
AAK Ala-Archa 47.11 348 P P 06 19 15.9 +1.8
SNR=34
TKM2 Tokmak 2 47.17 349 *e*P **P 06 19 15.3 +0.9**
comp=Z,38nm,0.9s,mb5.3
TKM2 LR LR
comp=Z,4μm,20.0s,MS5.4
TKM2 Tokmak 2 47.17 349 *e*P **P 06 19 15.3 +0.8**
TKM2 pmax pmax
comp=Z,38nm,0.9s,mb5.3
TKM2 MLR MLR
comp=Z,4μm,20.0s,MS5.4
TKM2 Tokmak 2 47.17 349 P P 06 19 15.8 +1.3
SNR=39
AAA Alma-Ata 47.26 350 *i*P **P 06 19 17.0 +1.8**
AAA *e* 06 21 06.5
AAA *e*S **S** **06 26 10.0 +3.3**
AAA pmax pmax
comp=Z,2μm,4.0s
AAA smax
comp=N,3μm,6.5s
AAA MLR MLR
comp=Z,6μm,16.0s,MS5.6
FRU Bishkek 47.28 348 *e*P **P 06 19 16.2 +0.8**
FRU *i* pP 06 19 23.5 -0.5
FRU *e* 06 26 09.0
FRU pmax pmax
comp=Z,170nm,2.2s,mb5.6
FRU pmax pmax
comp=Z,4μm,19.0s
EKS2 Erkin-Say 47.30 347 *e*P **P 06 19 17.2 +1.7**
comp=Z,51nm,0.6s,mb5.6
EKS2 LR LR
comp=Z,4μm,21.0s,MS5.4
EKS2 Erkin-Say 47.30 347 P P 06 19 16.9 +1.4
SNR=76
TIY Taiyuan 47.34 28 *e*P **P 06 19 18.8 +2.9**
TIY S **S** **06 26 06.1 -1.9**
TIY AMB AMB
comp=Z,712nm,4.7s
TIY LR LR
comp=N,5μm,14.0s
TIY LR LR
comp=E,5μm,19.2s
TIY LR LR
comp=Z,7μm,16.2s,MS5.7
SSE Sheshan 47.47 41 P P 06 19 17.3 +0.2
SSE XP sP 06 19 30.6 +1.5
SSE S **S** **06 26 09.8 -0.3**
SSE XS sS 06 26 25.3 +1.0
SSE SS SS 06 29 39.6 +1.3
SSE AMB AMB
comp=Z,71nm,1.0s,mb5.5
SSE AMB AMB
comp=Z,655nm,8.2s
SSE LR LR
comp=N,6μm,19.0s,MS5.6
SSE LR LR
comp=E,3μm,19.0s,MS5.6
SSE LR LR
comp=Z,8μm,16.6s,MS5.8
FORT Forrest 47.56 130 *e*P **P 06 19 17.9 +0.1**
comp=Z,68nm,0.7s,mb5.8
USP Ospenovka 47.72 348 P P 06 19 19.5 +0.7
SNR=31
KK31 Karatay Array 48.52 344 *i*P **P 06 19 25.9 +0.9**
KK31 Karatay Array 48.52 344 *i*P **P 06 19 25.8 +0.8**
KK31 pmax pmax
comp=Z,76nm,1.0s,mb5.7
TIA Tai'an 48.55 33 *e*P **P 06 19 24.8 -0.6**
BTO Baotou 48.69 24 *e*P **P 06 19 23.3 -3.0**
BTO S **S** **06 26 29.1 +2.1**
ABKT Ailbek 48.91 330 P P 06 19 29.0 +1.0
comp=Z,903nm,0.9s,mb6.8,SNR=28
VAN Vannovskaya 48.92 330 P P 06 19 29.9 +1.7
VAN S **S** **06 26 29.9 -0.5**
DESE Dese 49.01 288 *e*P **P 06 19 32.1 +2.9**
DESE *S* **S** **06 26 39.2 +6.9**
QRN Al-Qurain 49.06 313 *e*P **P 06 19 28.5 -0.9**
QRN AMb AMB 06 19 41.8
comp=Z,169nm,1.1s,mb6.0
WRA Warramunga Arr 49.24 113 P P 06 19 30.9 -0.1
comp=Z,7.4nm,0.6s,mb4.9,baz=285,slow=8.0,SNR=54
WRA LR LR 06 39 02.4
comp=Z,4μm,18.7s,MS5.4,baz=295,slow=35
WB2 Warramunga Arr 49.26 113⇑ *i*P P 06 19 30.8 -0.3
WB2 *i* S **S** **06 26 35.5 -0.2**
RDF Al-Radifah 49.43 313 *e*P **P 06 19 31.6 -0.6**
RDF AMb AMB 06 19 42.7
comp=Z,175nm,1.0s,mb6.0
KBD Kabd 49.47 314 *e*P **P 06 19 32.2 -0.3**
KBD AMb AMB 06 19 34.5
comp=Z,373nm,1.3s,mb6.3
KMBO Kilima Mbogo 49.47 271 *e*P **P 06 19 34.1 +1.2**
comp=Z,112nm,0.9s,mb5.9
KMBO LR LR
comp=Z,6μm,22.0s,MS5.5
KMBO Kilima Mbogo 49.47 271 *e*P **P 06 19 34.1 +1.3**
KMBO pmax pmax
comp=Z,112nm,0.9s
KMBO MLR MLR
comp=Z,6μm,22.0s
KMBO Kilima Mbogo 49.47 271 P P 06 19 34.2 +1.4
comp=Z,90nm,0.9s,mb5.8,baz=60,slow=11,SNR=139
KMBO LR LR 06 36 11.3
comp=Z,5μm,21.7s,MS5.5,baz=92,slow=31
HHC Hu-ho-hao-te 49.53 25 *e*P **P 06 19 32.8 +0.1**
HHC AP pP 06 19 38.4 -3.0
HHC XP sP 06 19 42.1 -2.7
HHC PP PP 06 21 28.9 +1.6
HHC SCP ScP 06 24 45.5 -2.5
HHC S **S** **06 26 37.4 -1.3**
HHC SCS ScS 06 29 20.3 -2.3
HHC SS SS 06 30 09.1 -2.1
HHC AMB AMB
comp=Z,86nm,1.2s,mb5.7
HHC AMB AMB
comp=Z,785nm,3.8s
HHC LR LR
comp=N,3μm,17.8s,MS5.6
HHC LR LR
comp=E,4μm,17.8s,MS5.6
HHC LR LR
comp=Z,5μm,21.4s,MS5.4
UMR Umm Al-Rimmam 49.66 314 *e*P **P 06 19 33.4 -0.6**
UMR AMb AMB 06 19 44.5
comp=Z,169nm,1.1s,mb6.0
ASAR Alice Springs 49.80 118 P P 06 19 35.0 -0.2
comp=Z,6.8nm,0.7s,mb4.8,baz=295,slow=7.1,SNR=67
NAY Al-Naaiem 49.84 313 *e*P **P 06 19 34.7 -0.6**
NAY AMb AMB 06 19 38.2
comp=Z,90nm,1.0s,mb5.8
MIB Mutribah 50.08 314 *e*P **P 06 19 37.1 0.0**
MIB AMb AMB 06 19 40.4
comp=Z,235nm,1.0s,mb6.2
MK31 Makanchi Array 50.11 356 *i*P **P 06 19 36.6 -0.4**
MKAR Makanchi Array 50.11 356 P **P 06 19 37.0 -0.1**
MKAR LR LR 06 40 48.5
MKAR Makanchi Array 50.11 356 P **P 06 19 37.0 0.0**
comp=Z,23nm,1.0s,mb5.2,baz=150,slow=8.2,SNR=119
MKAR LR LR 06 40 48.5
comp=Z,3μm,20.3s,MS5.4,baz=282,slow=36
BJT Baijiatuau 50.94 29 *e*P **P 06 19 43.9 +0.4**
comp=Z,300nm,1.4s,mb6.0
BJT LR LR
comp=Z,6μm,21.0s,MS5.6
BJT Baijiatuau 50.94 29 *e*P **P 06 19 43.9 +0.4**
BJT pmax pmax
comp=Z,300nm,1.4s
BJT MLR MLR
comp=Z,6μm,21.0s
BJI Beijing 50.96 29 P P 06 19 44.5 +0.9
BJI AP pP 06 19 52.5 +0.2
BJI XP sP 06 19 57.4 +1.7
BJI PCP PcP 06 20 59.9 +0.2
BJI PP PP 06 21 40.9 +0.6
BJI SCP ScP 06 24 53.8 -0.4
BJI AMB AMB
comp=Z,110nm,1.2s,mb5.7
BJI AMB AMB
comp=Z,762nm,6.4s
BJI LR LR
comp=N,2μm,22.0s,MS5.6
BJI LR LR
comp=E,6μm,19.8s,MS5.6
BJI LR LR
comp=Z,4μm,20.9s,MS5.4
DL2 Dalian 52.98 34 *i*P **P 06 19 58.3 -0.4**
DL2 AP pP 06 20 05.4 -2.0
DL2 XP sP 06 20 12.0 +1.2
DL2 PP PP 06 22 04.1 +5.5
DL2 S **S** **06 27 26.1 -0.4**
DL2 AMB AMB
comp=Z,30nm,1.1s,mb5.1
DL2 AMB AMB
comp=Z,120nm,4.5s
DL2 LR LR
comp=N,1μm,19.3s,MS5.2
DL2 LR LR
comp=E,2μm,18.3s,MS5.2
DL2 LR LR
comp=Z,2μm,18.8s,MS5.2
SONM Songino Array 53.84 16 P P 06 20 04.4 -0.4
comp=Z,31nm,0.9s,mb5.2,baz=199,slow=8.1,SNR=126
SONM LR LR 06 45 30.0
comp=Z,5μm,18.6s,MS5.6,baz=193,slow=39
SONM PKPPKP 06 50 15.4
comp=Z,0.2nm,0.4s,baz=64,slow=3.4,SNR=3.3
SONM PKP2ab 06 50 53.5
comp=Z,0.3nm,0.5s,baz=95,slow=1.6,SNR=3.9
ULN Ulaanbaatar 54.05 17⇑ *e*P P 06 20 05.7 -0.7
ULN LR LR
comp=Z,4μm,20.0s,MS5.5
ULN Ulaanbaatar 54.05 17 P P 06 20 06.1 -0.2
SNR=22
ULN Ulaanbaatar 54.05 17 P P 06 20 06.1 -0.2
SNR=22
ULN Ulaanbaatar 54.05 17 P P 06 20 06.1 -0.2
SNR=22
ULN Ulaanbaatar 54.05 17 P P 06 20 06.1 -0.2
SNR=22
BHD Baghdad 54.10 316 *ex* x 06 20 06.0
BHD *ex* x 06 20 14.0
BHD *ex* x 06 27 40.0
BHD *ex* x 06 27 57.0
BHD *ex* x 06 29 50.0
KURK Kurchatov 54.33 354 P P 06 20 08.7 +0.4
comp=Z,413nm,0.6s,mb6.5,SNR=46
KURK Kurchatov 54.33 354 *e*P **P 06 20 08.5 +0.2**
comp=Z,74nm,0.8s,mb5.7
KURK *e*pP pP 06 20 16.7 -0.4
KURK *e*PcP PcP 06 21 09.6 -2.4
KURK LR LR
comp=Z,5μm,22.0s,MS5.5
KURK Kurchatov 54.33 354 *e*P **P 06 20 08.5 +0.2**
KURK *e**PP pP 06 20 16.7 -0.4
KURK *e* 06 21 09.6
KURK pmax pmax
comp=Z,74nm,0.8s,mb5.7
KURK MLR MLR
comp=Z,5μm,22.0s,MS5.5
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
KURK Kurchatov 54.33 354 P P 06 20 08.4 +0.1
SNR=50
INCN Inchon 54.99 39 *e*P **P 06 20 12.8 -0.7**
comp=Z,200nm,1.3s,mb6.0
INCN LR LR
comp=Z,10μm,19.0s,MS5.9
INCN Inchon 54.99 39 P sP 06 20 26.8 +1.2
SNR=5.6
ZAK Zakamensk 55.41 13⇓ *i*P P 06 20 15.7 -0.5
ZAK pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
ZAK pmax pmax
comp=Z,7.0nm,1.4s,mb4.5
KSRS Korea Array 55.78 39 P P 06 20 18.7 -0.4
comp=Z,24nm,1.1s,mb5.2,baz=232,slow=7.5,SNR=42
KSRS LR LR 06 44 53.2
comp=Z,5μm,20.1s,MS5.6,baz=228,slow=37
MBAR Mbarara 56.01 272 P P 06 20 21.9 +0.7
SNR=20
SNY Shenyang 56.08 33⇓ P P 06 20 20.1 -1.0
SNY AP pP 06 20 25.8 -4.1
SNY XP sP 06 20 30.0 -3.3
SNY S **S** **06 28 06.9 -1.2**
SNY PS 06 28 19.5
SNY XS sS 06 28 30.4 +7.8
SNY AMB AMB
comp=Z,46nm,1.3s,mb5.3
SNY AMB AMB
comp=Z,420nm,3.5s
SNY LR LR
comp=N,5μm,18.8s
SNY LR LR
comp=Z,4μm,18.6s,MS5.6
MOY Mondy 56.17 11 *e*P **P 06 20 20.4 -1.2**
MOY pmax pmax
comp=Z,79nm,3.2s
MSL Mosul 56.68 318 *ex* x 06 20 25.0
MSL *ex* x 06 20 34.0
MSL *ex* x 06 28 14.0
TLY Talaya 56.71 13 P **P 06 20 25.2 -0.2**
comp=Z,67nm,0.9s,mb5.7,SNR=9.6
TLY Talaya 56.71 13 *e*P **P 06 20 26.3 +0.8**
TLY LR LR
comp=Z,7μm,21.0s,MS5.8
TLY Talaya 56.71 13 *d i*P **P 06 20 25.5 +0.1**
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
TLY Talaya 56.71 13 P **P 06 20 25.7 +0.2**
SNR=16
CUKT Cukurca 56.88 319 *e*PN **P 06 20 24.6 -2.3**
HAKT HAKKARI 57.00 320 *i*P **P 06 20 24.6 -3.2**
AB31 Akbulak array 57.33 339⇑ *e*P P 06 20 29.9 0.0
IRK Irkutsk 57.38 13⇓ *i*P P 06 20 29.7 -0.4
IRK pmax pmax
comp=Z,115nm,2.3s,mb5.5
TVAN Van 57.76 320 *i*P **P 06 20 32.9 -0.2**
CLDR Caldiran 57.80 321 *e*PN **P 06 20 32.0 -1.5**
VANB Van 57.81 321 *e*PN **P 06 20 30.3 -3.2**
BRVK Borovoye 57.91 348 P **P 06 20 33.8 -0.1**
comp=Z,150nm,1.1s,mb5.9,SNR=15
BRVK Borovoye 57.91 348 *e*P **P 06 20 33.5 -0.4**
BRVK MLR MLR
comp=Z,5μm,22.0s,MS5.6
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
BRVK Borovoye 57.91 348 P P 06 20 34.2 +0.4
SNR=12
NVS Novosibirsk 58.08 358⇓ *i*P P 06 20 33.5 -1.6
NVS *e*S **S** **06 28 29.9 -4.2**
NVS pmax pmax
comp=Z,222nm,2.1s,mb5.8
NVS pmax pmax
comp=N,137nm,1.7s
NVS smax
comp=N,584nm,3.8s
NVS smax
comp=E,257nm,3.8s
MAK Makhachkala 58.12 327 *e*P **P 06 20 32.4 -3.2**
MAK *i* 06 21 27.8
MAK *i* 06 22 43.8
MAK *i*S **S** **06 28 30.2 -4.9**
MAK *i* 06 30 22.7
MAK *e*SSS 06 34 47.7
MAK pmax pmax
comp=Z,131nm,0.8s,mb6.0
MAK MLR MLR
comp=Z,3μm,17.0s,MS5.4
DYDN Diyadin 58.18 322 *i*P **P 06 20 36.4 +0.3**
DGRG David-gareji 58.34 324 P **P 06 20 38.5 +1.4**
CHKZ Chkalovo 58.42 349 *i*P **P 06 20 37.2 -0.3**
CN2 Changchun 58.43 32 *e*P **P 06 20 37.3 -0.4**
CN2 XP sP 06 20 50.8 +0.9
CN2 PCP PcP 06 21 27.4 -0.8
CN2 PPP 06 24 12.3

CN2 eS S 06 28 36.8 -2.3
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3μm,17.0s,MS5.7
CN2 LR LR
comp=E,4μm,17.0s,MS5.7
CN2 LR LR
comp=Z,3μm,20.0s,MS5.4
AGRB Hanur-Agry 58.64 321 ePN P 06 20 38.6 -0.6
TUTA Tutak 58.65 321 *i* P P 06 20 37.8 -1.5
STKA Stephens Creek 58.71 125⇑ *i*P P 06 20 39.3 -0.7
comp=Z,28nm,0.8s,mb5.3
STKA eS S 06 28 44.3 +1.1
STKA Stephens Creek 58.71 125 P P 06 20 39.4 -0.5
comp=Z,21nm,0.9s,mb5.2,baz=299,slow=5.9,SNR=33
STKA LR LR 06 47 17.6
comp=Z,4μm,18.1s,MS5.6,baz=271,slow=38
LSZ Lusaka 58.78 254 eP P 06 20 40.7 0.0
comp=Z,77nm,0.8s,mb5.8
LSZ LR LR
comp=Z,7μm,19.0s,MS5.8
LSZ Lusaka 58.78 254 eP P 06 20 40.7 0.0
LSZ pmax pmax
comp=Z,77nm,0.8s,mb5.8
LSZ MLR MLR
comp=Z,7μm,19.0s,MS5.8
LSZ Lusaka 58.78 254 P P 06 20 41.3 +0.6
SNR=30
LSZ Lusaka 58.78 254 P P 06 20 41.3 +0.6
SNR=30
LSZ Lusaka 58.78 254 P P 06 20 41.3 +0.6
SNR=30
LSZ Lusaka 58.78 254 P P 06 20 41.3 +0.6
SNR=30
LSZ Lusaka 58.78 254 P P 06 20 40.9 +0.2
comp=Z,73nm,0.7s,mb5.8,baz=82,slow=7.2,SNR=68
MARD Mardin 58.79 318 *i* P P 06 20 39.7 -0.7
MTA Mtatsminda 58.83 324 P P 06 20 40.5 -0.1
TBLG Delisi 58.89 324 P P 06 20 41.7 +0.7
DIGO Kars 58.90 322 *i* P P 06 20 40.2 -0.9
ASF Jabal al Asfar 58.99 311 P P 06 20 42.5 +0.7
comp=Z,22nm,1.0s,mb5.1,baz=345,slow=5.9,SNR=23
AKTK Aktyubinsk 59.00 339 P P 06 20 41.4 -0.2
AKTO Aktyubinsk 59.00 339 P P 06 20 41.4 -0.2
comp=Z,36nm,0.9s,mb5.4,baz=146,slow=4.8,SNR=47
KARS Kars 59.19 322 ePN P 06 20 50.3 +7.2
EIL Elat 59.41 307 P P 06 20 45.0 +0.1
comp=Z,34nm,1.0s,mb5.3,baz=147,slow=1.6,SNR=18
BNGL BINGOL 59.45 320 *i* P P 06 20 45.4 +0.5
CIT Chita 59.70 19 eP P 06 20 45.6 -0.8
CIT pmax pmax
comp=Z,196nm,1.4s,mb6.0
HIA Hailar 59.73 24 eP P 06 20 46.4 -0.2
comp=Z,129nm,1.3s,mb5.8
HIA LR LR
comp=Z,8μm,20.0s,MS5.8
HIA Hailar 59.73 24 eP P 06 20 46.4 -0.2
HIA pmax pmax
comp=Z,129nm,1.3s
HIA MLR MLR
comp=Z,8μm,20.0s
ZEI Tsey 60.02 325 eP P 06 20 52.3 +3.5
ZEI eS S 06 29 02.2 +2.5
ZEI pmax pmax
comp=Z,75nm,1.1s,mb5.6
GUMO Guam 60.09 72 PFAKE 06 21 00.0 +10
GUMO LR LR
comp=Z,2μm,20.0s,MS5.2
ONI Oni 60.17 324 P P 06 20 50.4 +0.6
URFA Urfa 60.17 317 ePN P 06 20 49.4 -0.6
ARTV Artvin 60.24 322 *i* P P 06 20 48.8 -1.5
CTA Charters Tower 60.29 111 eP P 06 20 51.1 +0.1
comp=Z,28nm,0.9s,mb5.3
CTA eS S 06 29 05.9 +2.0
CTA Charters Tower 60.29 111 eP P 06 20 51.1 +0.1
CTA eS S 06 29 05.9 +2.0
CTA pmax pmax
comp=Z,28nm,0.9s
CTAO Charters Tower 60.29 111 eP P 06 20 51.6 +0.5
comp=Z,190nm,1.6s,mb5.9
CTAO epP pP 06 20 57.9 -1.9
CTAO LR LR
comp=Z,5μm,21.0s,MS5.6
CTAO Charters Tower 60.29 111 eP P 06 20 51.6 +0.6
CTAO e*PP pP 06 20 57.9 -2.0
CTAO pmax pmax
comp=Z,189nm,1.6s,mb5.9
CTAO MLR MLR
comp=Z,5μm,21.0s,MS5.6
PMG Port Moresby 60.30 99 LR LR 06 50 39.5
comp=Z,2μm,18.5s,MS5.3,baz=116,slow=40
MMAI Mount Meron Ar 60.49 311 P P 06 20 52.6 +0.4
comp=Z,37nm,1.0s,mb5.4,baz=106,slow=8.8,SNR=36
ATAB Bozova 60.55 317 *i* P P 06 20 53.0 +0.6
BCA Borcka 60.58 322 ePN P 06 20 50.8 -1.8
ELZG Elazig 60.62 318 *i* P P 06 20 53.3 +0.3
HWQ Hawqa 60.66 313 eP P 06 20 54.3 +1.0
BHL Bhannes 60.70 312 eP P 06 20 54.7 +1.1
EZC Erzincan 60.75 320 ePN P 06 20 56.7 +2.9
MALT Malatya 60.90 318 ePN P 06 20 52.7 -2.1
MALT Malatya 60.90 318 eP P 06 20 55.8 +1.0
comp=Z,65nm,1.0s,mb5.7
MALT Malatya 60.90 318 eP P 06 20 55.8 +1.0
MALT pmax pmax
comp=Z,65nm,1.0s,mb5.7
MALT Malatya 60.90 318⇑ *i*P P 06 20 55.7 +0.9
MYA Malataya 60.90 318 ePN P 06 20 56.2 +1.3
GZT Gaziantep 60.99 316 *i* P P 06 20 55.4 -0.1
GAZ Gaziantep 61.14 316 ePN P 06 20 56.5 -0.1
MDJ Mudanjiang 61.21 34 P P 06 20 56.6 -0.2
MDJ AP pP 06 21 06.0 +0.3
MDJ XP sP 06 21 09.5 +0.4
MDJ SCP ScP 06 25 38.1 -1.1
MDJ S S 06 29 11.6 -3.3
MDJ XS sS 06 29 30.5 +1.0
MDJ SCS ScS 06 30 45.5 -0.7
MDJ AMB AMB
comp=Z,13nm,1.3s,mb4.9
MDJ AMB AMB
comp=Z,565nm,6.2s
MDJ LR LR
comp=N,3μm,17.4s,MS5.6
MDJ LR LR
comp=E,2μm,17.4s,MS5.6
MDJ LR LR
comp=Z,4μm,16.5s,MS5.7
MDJ Mudanjiang 61.21 34 eP P 06 20 56.5 -0.3
comp=Z,105nm,1.3s,mb5.8
MDJ epP pP 06 21 03.1 -2.6
MDJ LR LR
comp=Z,4μm,21.0s,MS5.6
KELT Kelkit 61.33 320 *i* P P 06 20 57.5 -0.3
GUMT Gumushane 61.36 320 ePN P 06 20 58.3 +0.4
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
comp=Z,498nm,1.3s,mb6.5,SNR=8.3
KIV Kislovodsk 61.45 325 eP P 06 20 58.8 +0.3
comp=Z,120nm,1.1s,mb5.9
KIV LR LR
comp=Z,1μm,20.0s,MS5.0
KIV Kislovodsk 61.45 325*c* iP P 06 20 58.9 +0.4
KIV pmax pmax
comp=Z,111nm,1.1s,mb5.9
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
SNR=23
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
SNR=23
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
SNR=23
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
SNR=23
KIV Kislovodsk 61.45 325 P P 06 20 59.2 +0.7
SNR=23
KIV Kislovodsk 61.45 325⇑ *i*P P 06 20 59.7 +1.2
KTUT Trabzon 61.47 321 ePN P 06 20 58.0 -0.6
COBT Iskenderun 61.49 315 *i* P P 06 20 58.5 -0.4
KMRS Kahramanmaras 61.52 316 ePN P 06 20 58.5 -0.6
ANDN Andirin 61.94 316 *i* P P 06 21 01.8 -0.1
CEYT Ceyhan 62.08 315 ePN P 06 21 02.3 -0.6
ESPY Espiye-Giresun 62.08 320 ePN P 06 21 09.9 +7.1
KRTS Karatas 62.14 315 ePN P 06 21 03.3 +0.1

MAJO Matsushiro 62.23 45 eP P 06 21 03.5 -0.4
comp=Z,94nm,1.1s,mb5.8
MAJO LR LR
comp=Z,5μm,19.0s,MS5.7
MAJO Matsushiro 62.23 45 eP P 06 21 03.5 -0.4
MAJO pmax pmax
comp=Z,94nm,1.1s,mb5.8
MAJO MLR MLR
comp=Z,5μm,19.0s,MS5.7
MAT Matsushiro 62.23 45 P P 06 21 02.9 -1.0
MAT S S 06 29 25.0 -3.1
MJAR Matsushiro Arr 62.23 45 P P 06 21 03.7 -0.2
comp=Z,29nm,1.1s,mb5.3,baz=235,slow=7.2,SNR=27
MJAR LR LR 06 49 06.5
comp=Z,5μm,19.0s,MS5.7,baz=250,slow=37
KOZT Kozan 62.26 316 ePN P 06 21 03.4 -0.6
GRSN GIRESUNGRSN 62.38 320 *i* P P 06 21 02.8 -2.0
KARA Karaisali 62.69 315 ePN P 06 21 05.5 -1.5
MERS Mersin 62.88 315 ePN P 06 21 06.7 -1.5
CSS Prodhromos 62.89 312 eP P 06 21 08.8 +0.4
comp=Z,67nm,1.3s,mb5.6
BNN Bunyan 62.91 317 ePN P 06 21 06.5 -1.8
SOC Sochi 62.96 323 *i* P P 06 21 08.6 0.0
SOC Sochi 62.96 323*c* *i*P P 06 21 07.6 -1.0
SOC *i* *PP pP 06 21 16.8 -0.7
SOC ePPP 06 24 56.0
SOC eS S 06 29 33.8 -3.2
SOC e*SS sS 06 29 50.7 -0.9
SOC e 06 30 57.1
SOC eSS SS 06 33 44.7 +1.7
SOC pmax pmax
comp=Z,63nm,1.1s,mb5.7
SOC pmax pmax
comp=Z,214nm,2.6s,mb5.8
SOC MLR MLR
comp=Z,3μm,24.0s,MS5.3
TOKT Tokat 63.18 319 ePN P 06 21 11.3 +1.1
IKL Isikli 63.20 314 ePN P 06 21 09.2 -1.1
BOSA Boshof 63.44 240 eP P 06 21 11.5 -0.6
comp=Z,192nm,1.2s,mb6.1
BOSA LR LR
comp=Z,3μm,19.0s,MS5.5
BOSA Boshof 63.44 240 eP P 06 21 11.5 -0.6
BOSA pmax pmax
comp=Z,192nm,1.2s,mb6.1
BOSA MLR MLR
comp=Z,3μm,19.0s,MS5.5
BOSA Boshof 63.44 240 P P 06 21 11.8 -0.3
comp=Z,114nm,1.1s,mb5.9,baz=77,slow=6.1,SNR=58
BOSA LR LR 06 43 11.4
comp=Z,2μm,21.1s,MS5.3,baz=78,slow=31
SVE Sverdlovsk 63.63 344⇓ eP P 06 21 13.6 +0.8
SVE e 06 21 48.0
SVE eS S 06 29 48.6 +3.7
SVE e 06 31 07.8
SVE pmax pmax
comp=Z,167nm,1.1s,mb6.0
SVE MLR MLR
comp=Z,5μm,19.0s,MS5.7
ARU Arti 63.87 343 eP P 06 21 14.1 -0.3
comp=Z,59nm,0.9s,mb5.6
ARU LR LR
comp=Z,3μm,21.0s,MS5.5
ARU Arti 63.87 343*d* *i*P P 06 21 14.2 -0.2
ARU e 06 21 48.5
ARU 06 23 30.1
ARU PPP 06 25 07.2
ARU eS S 06 29 45.5 -2.4
ARU e 06 31 00.2
ARU eSSS 06 36 49.5
ARU pmax pmax
comp=Z,50nm,1.0s,mb5.5
ARU pmax pmax
comp=Z,3μm,17.0s
ARU pmax pmax
comp=N,2μm,17.0s
ARU pmax pmax
comp=E,2μm,23.0s
KVT Kavak 63.90 319 ePN P 06 21 13.8 -1.0
CDAG Cicekdag 64.29 317 *i* P P 06 21 13.6 -3.8
CORM Corum 64.38 318 ePN P 06 21 16.9 -1.1
CTKT Corum 64.49 318 *i* P P 06 21 18.7 -0.1
DIKM Dikmen 64.69 320 ePN P 06 21 14.3 -5.7
BOYT Boyabat 64.81 319 *i* P P 06 21 20.2 -0.7
BOD Bodaibo 64.82 16 eP P 06 21 19.5 -1.1
BOD e 06 21 30.9
BOD pmax pmax
comp=Z,25nm,0.9s,mb5.2
BOD pmax pmax
comp=Z,51nm,1.3s,mb5.4
KONT Konya--Tatoy 64.91 315 ePN P 06 21 21.2 -0.4
CASY Casey 64.98 170 PFAKE 06 21 30.0 +8.5
CASY LR LR
comp=Z,5μm,21.0s,MS5.7
ANN Anapa 65.00 323 *i* P P 06 21 21.4 -0.6
ANN Anapa 65.00 323 eP P 06 21 21.0 -1.0
ANN eS S 06 29 59.3 -3.0
ANN pmax pmax
comp=Z,43nm,1.3s,mb5.3
ANN MLR MLR
comp=N,650nm,16.0s,MS5.2
ANN MLR MLR
comp=E,963nm,16.0s,MS5.2
ANN MLR MLR
comp=Z,1μm,16.0s,MS5.2
TOS Tosya 65.20 318 ePN P 06 21 21.4 -2.0
CANT Cankiri 65.26 318 ePN P 06 21 23.1 -0.7
KLR Kul'dur 65.27 31 eP P 06 21 19.0 -4.7
KLR e 06 21 19.5
KLR eS S 06 29 57.0 -8.4
KLR e 06 31 12.0
KLR pmax pmax
comp=E,94nm,2.2s
KLR pmax pmax
comp=Z,140nm,2.2s,mb5.6
KLR pmax pmax
comp=Z,1μm,6.5s
KLR smax
comp=N,700nm,12.5s
KLR smax
comp=E,1μm,12.5s
KLR MLR MLR
comp=Z,10μm,13.5s,MS6.2
ELDT Eldivan 65.34 318 *i* P P 06 21 22.8 -1.5
EIDS Eidsvold 65.44 116 eP P 06 21 25.0 -0.3
comp=Z,37nm,1.4s,mb5.2
EIDS epP pP 06 21 32.0 -2.2
ANTO Ankara 65.47 317 ePN P 06 21 21.7 -3.5
ANTO Ankara 65.47 317⇑ P P 06 21 24.8 -0.4
ANTO MLR MLR
comp=Z,3μm,19.0s,MS5.5
ANTO Ankara 65.47 317 P P 06 21 25.2 0.0
SNR=9.5
ANTO Ankara 65.47 317 P P 06 21 25.2 0.0
SNR=9.5
ANTO Ankara 65.47 317 P P 06 21 25.2 0.0
SNR=9.5
ANTO Ankara 65.47 317 P P 06 21 25.2 0.0
SNR=9.5
ANTO Ankara 65.47 317 P P 06 21 25.2 0.0
SNR=9.5
ANTO Ankara 65.47 317⇑ *i*P P 06 21 24.8 -0.4
KIZT Kizilcal 65.66 316 ePN P 06 21 24.6 -1.8
BALT Daday 65.86 319 *i* P P 06 21 25.3 -2.4
ELL Elmali 66.17 313 ePN P 06 21 28.4 -1.3
MAW Mawson 66.18 190⇑ *i*P P 06 21 28.7 -0.5
comp=Z,13nm,0.7s,mb5.1
MAW Mawson 66.18 190⇑ *i*P P 06 21 28.7 -0.5
MAW pmax pmax
comp=Z,13nm,0.7s
MAW Mawson 66.18 190 P P 06 21 29.1 -0.1
comp=Z,16nm,0.8s,mb5.1,baz=22,slow=8.0,SNR=16
MAW LR LR 06 44 05.4
comp=Z,4μm,20.1s,MS5.7,baz=20,slow=30
ISP Isparta 66.18 314 eP P 06 21 29.6 -0.2
comp=Z,62nm,0.9s,mb5.6
ISP Isparta 66.18 314 eP P 06 21 29.6 -0.2
ISP pmax pmax
comp=Z,62nm,0.9s,mb5.6
SAFT Safranbolu 66.18 318 ePN P 06 21 29.3 -0.4
SGKT Sivrigoynuk 66.30 317 *i* P P 06 21 29.9 -0.5
TAU Tasmania Unive 66.44 136 eP P 06 21 31.9 +0.6
TAU LR LR
comp=Z,5μm,19.0s,MS5.7
SHUT Suhut-Afyon 66.45 315 ePN P 06 21 30.4 -1.1

VRHR Novokhopersk 66.48 331 eP P 06 21 22.6 -8.8
VRHR pmax pmax
comp=Z,40nm,0.4s,mb5.8
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=E,10.0nm,0.5s
HABR Khabarovsk 66.55 33 eP P 06 21 28.8 -3.1
HABR e*PP pP 06 21 39.0 -1.8
HABR e 06 21 58.5
HABR e 06 23 55.0
HABR eS S 06 30 16.0 -5.0
HABR e 06 31 22.3
HABR eSS SS 06 34 34.3 -4.3
ESKT Eskisehir 66.66 316 ePN P 06 21 32.9 +0.1
ESKT Eskisehir 66.66 316 *i* P P 06 21 31.8 -1.0
ARMA Armidale 66.73 122 eP P 06 21 34.3 +0.9
comp=E,1.1nm,1.0s
ARMA epP pP 06 21 41.3 -1.1
SOKR Solikamsk 67.04 344*c* *i*P P 06 21 35.8 +1.0
SOKR 06 23 57.7
SOKR S S 06 30 25.0 -1.5
SOKR pmax pmax
comp=Z,70nm,1.0s,mb5.7
SOKR MLR MLR
comp=Z,4μm,20.0s,MS5.6
KDZE Karadeniz Ereo 67.05 318 ePN P 06 21 33.6 -1.6
SIM Simferopol' 67.08 322⇑ eP P 06 21 34.9 -0.5
SIM e pP 06 21 42.0 -2.3
SIM *i* S S 06 30 24.0 -3.6
SIM eSS SS 06 34 53.0 +5.9
SIM pmax pmax
comp=Z,48nm,0.7s,mb5.6
HENT Hendek 67.20 317 *i* P P 06 21 33.1 -3.1
GULT Gulveren 67.29 317 ePN P 06 21 36.0 -0.7
NRGR Nerungri 67.32 22 eP P 06 21 36.1 -0.5
NRGR S S 06 30 27.7 -2.3
NRGR smax
comp=N,57nm,0.7s
GDZ Gediz 67.44 315 *i* P P 06 21 37.3 -0.5
CLNS Chul'man 67.51 22 eP P 06 21 34.8 -3.0
CLNS e*PP pP 06 21 44.5 -2.3
CLNS e 06 22 05.0
CLNS pmax pmax
comp=Z,57nm,1.1s,mb5.5
CLNS pmax pmax
comp=N,17nm,0.9s
CLNS pmax pmax
comp=E,24nm,1.0s
CLNS pmax pmax
comp=Z,11nm,1.1s,mb4.8
CLNS pmax pmax
comp=N,14nm,0.9s
CLNS pmax pmax
comp=E,11nm,1.1s
CLNS MLR MLR
comp=Z,2μm,16.0s,MS5.5
CLNS MLR MLR
comp=N,2μm,15.0s,MS5.6
CLNS MLR MLR
comp=E,2μm,18.0s,MS5.6
VORD Divnogorie 67.56 330 eP P 06 21 37.0 -1.2
VORD pmax pmax
comp=Z,40nm,0.7s,mb5.6
VORD pmax pmax
comp=N,60nm,1.0s
VORD pmax pmax
comp=E,80nm,1.0s
VORD MLR MLR
comp=Z,3μm,19.0s,MS5.5
VORD MLR MLR
comp=N,960nm,13.0s
VORD MLR MLR
comp=E,2μm,17.0s
KARP Karpathos 67.75 311 eP P 06 21 39.5 -0.3
VRSR Storozhevoye 67.76 330*c* *i*P P 06 21 38.4 -1.1
VRSR e*PP pP 06 21 49.5 +1.0
VRSR eS S 06 30 30.7 -4.8
VRSR pmax pmax
comp=N,5.0nm,0.9s
VRSR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
VRSR pmax pmax
comp=E,10.0nm,0.8s
VRSR smax
comp=N,90nm,3.6s
VRSR smax
comp=Z,70nm,5.3s
VRSR smax
comp=E,370nm,6.9s
VRSR MLR MLR
comp=Z,270nm,18.0s,MS4.5
VRSR MLR MLR
comp=N,230nm,17.0s,MS4.7
VRSR MLR MLR
comp=E,280nm,17.0s,MS4.7
KULA Kula-Manisa 67.78 314 ePN P 06 21 38.5 -1.5
ADVT Abdulvahap 67.82 316 ePN P 06 21 38.2 -1.9
SUR Sutherland 67.91 236 P P 06 21 42.3 +1.4
comp=E,676nm,1.5s,mb6.5,SNR=8.2
SUR Sutherland 67.91 236 eP P 06 21 41.3 +0.3
SUR LR LR
comp=Z,6μm,19.0s,MS5.8
SUR Sutherland 67.91 236 P P 06 21 40.9 -0.1
comp=Z,120nm,1.1s,mb5.8,baz=74,slow=5.4,SNR=27
VOR Voronezh 68.07 330 eP P 06 21 48.0 +6.6
VOR pmax pmax
comp=Z,200nm,1.8s,mb5.8
BDRM Kayabasi 68.11 312 *i* P P 06 21 39.9 -2.1
ULDT Uludag 68.12 316 *i* P P 06 21 40.7 -1.3
YLV Yalova 68.13 316 ePN P 06 21 40.1 -2.0
ERM Erimo 68.14 42 eP P 06 21 43.2 +1.1
comp=Z,94nm,1.0s,mb5.8
ERM LR LR
comp=Z,2μm,19.0s,MS5.4
ERM Erimo 68.14 42 eP P 06 21 43.2 +1.0
ERM pmax pmax
comp=Z,94nm,1.0s,mb5.8
ERM MLR MLR
comp=Z,2μm,19.0s,MS5.4
GEMT Gemlik 68.20 316 ePN P 06 21 40.3 -2.3
AKS Akhisar 68.54 314 ePN P 06 21 43.5 -1.2
ISK Istanbul-Kandi 68.56 317 ePN P 06 21 42.6 -2.1
XRY Khrisi 68.63 309 eP P 06 21 45.0 -0.4
BTOK Tokmak 68.73 315 *i* P P 06 21 45.5 -0.5
KDAG Bornova 68.75 313 *i* P P 06 21 45.6 -0.4
IZM Izmir 68.75 313 ePN P 06 21 46.1 +0.1
BALB Balikesir 68.79 315 ePN P 06 21 42.9 -3.4
NPS Neapolis 68.83 310 eP P 06 21 45.5 -1.1
BLCB Balcova 68.90 313 ePN P 06 21 41.1 -5.9
BNT Bandirma 69.05 316 ePN P 06 21 46.3 -1.5
TSUM Tsumeb 69.20 251 eP P 06 21 48.8 -0.4
comp=Z,94nm,1.3s,mb5.6
TSUM LR LR
comp=Z,2μm,20.0s,MS5.4
URLA Izmir 69.22 313 *i* P P 06 21 48.1 -0.8
IDI Anoyia 69.39 310 P P 06 21 49.9 -0.2
comp=Z,62nm,0.6s,mb5.7,baz=96,slow=8.5,SNR=45
APE Apeiranthos 69.53 312⇓ P P 06 21 49.5 -1.4
APE Apeiranthos 69.53 312 eP P 06 21 48.5 -2.4
APE Apeiranthos 69.53 312⇓ *i*P P 06 21 49.5 -1.4
RKY Sarkoy-Tekirda 69.70 316 ePN P 06 21 43.0 -8.9
PRK Paraskevi 69.79 314 eP P 06 21 53.5 +1.1
VAM Vamos 69.96 310 eP P 06 21 53.5 -0.1
YSS Yuzh-Sakhalins 70.16 37 eP P 06 21 54.1 -0.5
comp=Z,92nm,1.1s,mb5.6
YSS LR LR
comp=Z,3μm,20.0s,MS5.6
YSS Yuzh-Sakhalins 70.16 37⇑ eP P 06 21 54.5 0.0
YSS e 06 22 18.8
YSS e 06 24 32.0
YSS eS S 06 31 10.0 +5.9
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS pmax pmax
comp=Z,900nm,4.0s
YSS smax
comp=N,900nm,8.0s
YSS MLR MLR
comp=Z,2μm,18.0s,MS5.5
YSS MLR MLR
comp=N,3μm,16.0s,MS5.8
YSS MLR MLR
comp=E,3μm,16.0s,MS5.8
ENEZ Enez 70.44 315 eP P 06 21 55.5 -0.9

EDRB	**Edirne**	**70.47**	**317**	*e*	PN	**P**	**06 21 54.5**	**-2.0**
HARR	**Harsova**	**70.85**	**320**		P	**P**	**06 21 58.5**	**-0.3**
HARR	**Harsova**	**70.85**	**320**	⇓	*i* P	**P**	**06 21 58.5**	**-0.3**
CFR	**Carcaliu**	**70.93**	**320**		P	**P**	**06 21 59.1**	**-0.2**
RDO	**Rodhopi**	**71.03**	**316**	*e*	P	**P**	**06 21 59.2**	**-0.8**
KVR	**Kavouri**	**71.11**	**312**	*e*	P	**P**	**06 21 59.0**	**-1.5**
PTL	**Penteli**	**71.11**	**312**	*e*	P	**P**	**06 21 59.0**	**-1.6**
KYTH	**Kithira**	**71.14**	**310**	*e*	P	**P**	**06 22 00.0**	**-0.8**
MOS	**Moscow**	**71.25**	**333**	*e*	P	**P**	**06 22 00.0**	**-1.0**
MOS				*e*			06 22 20.2	
MOS				*e*			06 24 38.4	
MOS				*e*	S	S	06 31 11.6	-4.8
MOS					pmax	pmax		
	comp=Z,110nm,0.9s,mb5.8							
MOS					MLR	MLR		
	comp=Z,2μm,17.1s,MS5.4							
NAIG	**Nisos Aigina**	**71.29**	**312**	*e*	P	**P**	**06 22 00.0**	**-1.7**
KIS	**Kishinev**	**71.31**	**322**	*e*	P	**P**	**06 22 02.0**	**+0.5**
KIS				*e*			06 22 07.0	
KIS				*e*			06 24 40.0	
KIS				*e*	S	S	06 31 12.0	-5.4
KIS	**Kishinev**	**71.31**	**322**	*e*	PcP	pP	06 22 07.0	-3.5
KIS	**Kishinev**	**71.31**	**322**	*e*	PP	PP	06 24 40.0	0.0
KIS				*i*	S	S	06 31 12.0	-5.4
OBN	**Obninsk**	**71.36**	**332**	*e*	P	**P**	**06 22 01.0**	**-0.7**
	comp=Z,108nm,1.3s,mb5.6							
OBN					epP	pP	06 22 08.9	-1.7
OBN					LR	LR		
	comp=Z,2μm,20.0s,MS5.4							
OBN	**Obninsk**	**71.36**	**332**	⇑	*e* P	**P**	**06 22 00.5**	**-1.1**
OBN				*e*		pP	06 22 08.7	-1.9
OBN				*e*			06 22 21.5	
OBN				*e*	S	S	06 31 18.7	+1.0
OBN				*e*	SS	SS	06 35 55.7	+3.1
OBN					pmax	pmax		
	comp=Z,61nm,1.1s,mb5.4							
OBN					MLR	MLR		
	comp=Z,2μm,17.0s,MS5.3							
VLI	**Veliai**	**71.36**	**310**	*e*	P	**P**	**06 21 59.5**	**-2.6**
DIM	**Dimitrovgrad**	**71.38**	**316**		P	**P**	**06 22 01.5**	**-0.6**
SZH	**Strazhica**	**71.58**	**318**		P	**P**	**06 22 02.7**	**-0.6**
PVL	**Pavlikeni**	**71.96**	**318**	*e*	P	**P**	**06 22 04.1**	**-1.5**
PRGR	**Permogore**	**72.07**	**341**	⇓	*i* P	**P**	**06 22 05.6**	**-0.2**
PRGR				*e*			06 22 24.0	
PRGR				*e*	S	S	06 31 25.5	-0.1
PRGR					pmax	pmax		
	comp=Z,93nm,1.0s,mb5.7							
VRI	**Vrincioaia**	**72.12**	**321**		P	**P**	**06 22 06.8**	**+0.4**
VRI	**Vrincioaia**	**72.12**	**321**	⇑	*i* P	**P**	**06 22 06.7**	**+0.3**
PLOR	**Plostina**	**72.16**	**320**		P	**P**	**06 22 07.3**	**+0.6**
PLOR	**Plostina**	**72.16**	**320**	⇑	*i* P	**P**	**06 22 07.1**	**+0.4**
ITM	**Ithomi**	**72.28**	**311**	*e*	P	**P**	**06 22 06.5**	**-1.1**
MLR	**Muntele Rosu**	**72.46**	**320**		P	**P**	**06 22 08.9**	**+0.4**
MLR	**Muntele Rosu**	**72.46**	**320**	⇑	*i* P	**P**	**06 22 08.4**	**-0.1**
PGB	**Panagyurishte**	**72.50**	**317**		P	**P**	**06 22 15.5**	**+6.7**
SYO	**Syowa Base**	**72.58**	**196**	⇑	*i* P	**P**	**06 22 07.8**	**-1.0**
SYO	**Syowa Base**	**72.58**	**196**	⇓	*e* pP	pP	06 22 17.4	-0.4
AKASG	**Malin Array Be**	**72.78**	**326**		P	**P**	**06 22 08.9**	**-1.4**
	comp=Z,9.0nm,0.6s,mb4.9,baz=97,slow=4.8,SNR=22							
AKASG					LR	LR	06 55 15.1	
	comp=Z,1μm,21.1s,MS5.2,baz=110,slow=37							
KIEV	**Kiev**	**72.79**	**326**	*e*	P	**P**	**06 22 09.0**	**-1.3**
	comp=Z,20nm,0.8s,mb5.1							
KIEV				*e*	pP	pP	06 22 17.6	-1.8
KIEV					LR	LR		
	comp=Z,2μm,20.0s,MS5.3							
KIEV	**Kiev**	**72.79**	**326**	*e*	P	**P**	**06 22 09.0**	**-1.3**
KIEV				*e*	PP	pP	06 22 17.6	-1.7
KIEV					pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1							
KIEV					MLR	MLR		
	comp=Z,2μm,20.0s,MS5.3							
HNR	**Honiara**	**72.92**	**99**	*e*	P	**P**	**06 22 11.6**	**-0.3**
	comp=Z,183nm,0.9s,mb6.0							
HNR					LR	LR		
	comp=Z,1μm,20.0s,MS5.2							
HNR	**Honiara**	**72.92**	**99**		P	**P**	**06 22 12.5**	**+0.6**
HNR					pmax	pmax		
	comp=Z,180nm,0.9s,mb6.0							
EVR	**Evrytania**	**72.92**	**312**	*e*	P	**P**	**06 22 10.8**	**-0.6**
YAK	**Yakutsk**	**72.97**	**20**	*e*	P	**P**	**06 22 10.4**	**-0.7**
	comp=Z,281nm,1.0s,mb6.2							
YAK				*e*	pP	pP	06 22 17.7	-2.5
YAK					LR	LR		
	comp=Z,2μm,19.0s,MS5.4							
YAK	**Yakutsk**	**72.97**	**20**	*e*	P	**P**	**06 22 10.1**	**-1.1**
YAK				*e*	PP	pP	06 22 18.1	-2.1
YAK				*e*			06 22 24.2	
YAK				*e*			06 25 00.6	
YAK				*e*	S	S	06 31 29.2	-6.7
YAK				*e*			06 32 16.1	
YAK				*e*	SS	SS	06 36 13.1	-3.9
YAK					pmax	pmax		
	comp=Z,157nm,1.2s,mb5.8							
YAK					pmax	pmax		
	comp=N,29nm,0.9s							
YAK					pmax	pmax		
	comp=E,45nm,1.5s							
YAK					pmax	pmax		
	comp=Z,350nm,5.7s							
YAK					pmax	pmax		
	comp=N,82nm,4.0s							
YAK					pmax	pmax		
	comp=E,102nm,4.0s							
YAK					smax			
	comp=N,129nm,3.8s							
YAK					smax			
	comp=Z,82nm,3.1s							
YAK					smax			
	comp=E,259nm,4.5s							
YAK					MLR	MLR		
	comp=Z,2μm,27.0s,MS5.2							
YAK					MLR	MLR		
	comp=N,2μm,17.0s							
YAK					MLR	MLR		
	comp=E,2μm,14.0s							
KKB	**Krupnik**	**73.01**	**316**		P	**P**	**06 22 16.5**	**+4.7**
VAY	**Valandovo**	**73.18**	**315**	*e*	P	**P**	**06 22 10.8**	**-2.0**
VTS	**Vitosha**	**73.18**	**316**		P	**P**	**06 22 12.3**	**-0.5**
VTS	**Vitosha**	**73.18**	**316**		P	**P**	**06 22 12.1**	**-0.7**
VTS	**Vitosha**	**73.18**	**316**	⇑	*i* P	**P**	**06 22 11.9**	**-0.9**
VLS	**Valsamata**	**73.60**	**311**	*e*	P	**P**	**06 22 14.5**	**-0.9**
JAN	**Janina**	**73.86**	**313**	*e*	P	**P**	**06 22 16.5**	**-0.4**
KRUS	**Krusevo**	**74.13**	**315**	*e*	P	**P**	**06 22 17.2**	**-1.3**
SKO	**Skopje**	**74.19**	**315**	*e*	P	**P**	**06 22 18.5**	**-0.3**
SKO	**Skopje**	**74.19**	**315**	*e*	P	**P**	**06 22 18.4**	**-0.4**
BARS	**Barje**	**74.21**	**316**		P	**P**	**06 22 17.6**	**-1.3**
OHR	**Ohrid**	**74.37**	**314**	*e*	P	**P**	**06 22 18.5**	**-1.3**
GZR	**Gura Zlata**	**74.48**	**319**	⇓	P	**P**	**06 22 20.5**	**+0.1**
GZR	**Gura Zlata**	**74.48**	**319**	⇓	*i* P	**P**	**06 22 20.5**	**+0.1**
DRGR		**75.04**	**320**		P	**P**	**06 22 23.5**	**-0.1**
MNK	**Minsk**	**75.32**	**329**	*e*	P	**P**	**06 22 23.0**	**-2.0**
LVV	**L'vov**	**75.39**	**324**	*e*	P	**P**	**06 22 25.3**	**-0.3**
LVV				*e*	S	S	06 31 55.0	-8.6
TRPA	**Tarpa**	**75.65**	**322**	⇑	*i* P	**P**	**06 22 26.2**	**-0.9**
UZH	**Uzhgorod**	**75.99**	**322**	*e*	P	**P**	**06 22 28.0**	**-1.0**
UZH				*i*	S	S	06 32 08.0	-2.2
KOLS	**Kolonicke sedl**	**76.11**	**322**	*e*	P	**P**	**06 22 30.0**	**+0.3**
KWP	**Kalwaria**	**76.11**	**323**	*e*	P	**P**	**06 22 30.2**	**+0.6**
KWP				*e*	S	S	06 32 09.9	-1.6
KWP				*e*	SKS		06 32 42.5	
KWP					LMZ		07 00 31.8	
	comp=E,2μm,20.9s							
KWP	**Kalwaria**	**76.11**	**323**	*e*	P	**P**	**06 22 30.2**	**+0.5**
KWP				*e*	S	S	06 32 09.9	-1.7
KWP				*e*			06 32 42.5	
CRVS	**Cervenica-Dubn**	**76.60**	**322**	*e*	P	**P**	**06 22 32.1**	**-0.3**
PUL	**Pulkovo**	**76.75**	**334**	⇑	*e* P	**P**	**06 22 34.6**	**+1.5**
TIP	**Timpagrande**	**76.75**	**311**	*e*	P	**P**	**06 22 33.3**	**-0.2**
	comp=E,20nm,0.9s,mb5.0							
STHS	**Stebnicka Huta**	**76.92**	**322**	*e*	P	**P**	**06 22 34.5**	**+0.3**
	comp=E,12nm,1.2s,mb4.7							
STHS	**Stebnicka Huta**	**76.92**	**322**	*e*	P	**P**	**06 22 34.5**	**+0.3**
STHS					pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7							
STHS	**Stebnicka Huta**	**76.92**	**322**	*e*	P	**P**	**06 22 34.4**	**+0.2**
KECS	**Kecovo**	**77.05**	**321**	*e*	P	**P**	**06 22 34.6**	**-0.4**
	comp=Z,25nm,1.2s,mb5.0							
KECS				*e*		pP	06 22 44.2	+0.1
KECS	**Kecovo**	**77.05**	**321**	*e*	P	**P**	**06 22 34.6**	**-0.4**
KECS				*e*		pP	06 22 44.2	+0.1
KECS					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0							
PSZ	**Piszkesteto**	**77.23**	**321**	*e*	P	**P**	**06 22 35.5**	**-0.5**
	comp=Z,13nm,1.0s,mb4.8							
PSZ	**Piszkesteto**	**77.23**	**321**	*e*	P	**P**	**06 22 35.5**	**-0.5**
PSZ					pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8							
PSZ	**Piszkesteto**	**77.23**	**321**	⇑	*e* P	**P**	**06 22 34.8**	**-1.2**
PSZ	**Piszkesteto**	**77.23**	**321**	⇓	*i* P	**P**	**06 22 34.9**	**-1.1**
PKSM	**Moragy**	**77.48**	**319**		P	**P**	**06 22 37.2**	**-0.3**
PKSM	**Moragy**	**77.48**	**319**	⇑	*i* P	**P**	**06 22 36.3**	**-1.2**
NIE	**Niedzica**	**77.49**	**322**	*e*	P	**P**	**06 22 38.0**	**+0.6**
SUW	**Suwalki**	**77.56**	**327**	*e*	P	**P**	**06 22 37.6**	**-0.2**
SUW				*e*	pP	pP	06 22 45.1	-1.7
SUW				*e*	SKS		06 32 48.1	
SUW					LMZ		07 00 33.1	
	comp=Z,2μm,18.6s							
SUW	**Suwalki**	**77.56**	**327**	*e*	P	**P**	**06 22 37.6**	**-0.2**
SUW				*e*	PP	pP	06 22 45.1	-1.7
SUW				*e*			06 32 48.1	
BUD	**Budapest**	**77.64**	**320**	⇑	*e* P	**P**	**06 22 37.1**	**-1.2**
JOF	**Joensuu**	**78.03**	**337**	*e*	p	**P**	**06 22 38.9**	**-1.3**
	comp=Z,32nm,0.7s,mb5.3							
OJC	**Ojcow**	**78.08**	**323**	*e*	P	**P**	**06 22 40.4**	**-0.3**
OJC				*e*	S	S	06 32 32.5	-0.4
OJC					L		07 01 13.7	
	comp=Z,1.6nm,20.0s							
VYHS	**Vyhne**	**78.09**	**321**	*e*	P	**P**	**06 22 40.4**	**-0.4**
	comp=Z,22nm,1.4s,mb4.9							
VYHS	**Vyhne**	**78.09**	**321**	*e*	P	**P**	**06 22 40.4**	**-0.4**
VYHS					pmax	pmax		
	comp=Z,23nm,1.4s,mb4.9							
VAE	**Valguarnera**	**78.11**	**309**		P	**P**	**06 22 43.0**	**+1.8**
	comp=Z,28nm,0.9s,mb5.2,baz=34,slow=7.4,SNR=4.4							
KOLL	**Kolacno**	**78.39**	**321**	*e*	P	**P**	**06 22 42.9**	**+0.4**
KOLL					epP	pP	06 22 52.4	+0.8
OKC	**Ostrava-Krasne**	**78.95**	**322**	*e*	P	**P**	**06 22 45.0**	**-0.6**
OKC				*e*	pP	pP	06 22 53.5	-1.1
OKC				*e*	SKS		06 32 35.0	
OKC	**Ostrava-Krasne**	**78.95**	**322**	*e*	P	**P**	**06 22 45.0**	**-0.6**
OKC				*e*	pP	pP	06 22 53.5	-1.1
OKC				*e*	SKS		06 32 35.0	
OKC					AMS	AMS	07 02 10.0	
	comp=Z,2μm,17.9s							
MODS	**Modra-Piesok**	**79.04**	**321**	*e*	P	**P**	**06 22 45.5**	**-0.5**
	comp=Z,23nm,1.1s,mb5.0							
MODS				*e*		pP	06 22 54.1	-1.0
MODS	**Modra-Piesok**	**79.04**	**321**	*e*	P	**P**	**06 22 45.5**	**-0.5**
MODS				*e*		pP	06 22 54.1	-1.0
MODS					pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0							
ZST	**Bratislava**	**79.09**	**320**	*e*	P	**P**	**06 22 47.4**	**+1.0**
	comp=Z,17nm,0.9s,mb5.0							
ZST				*e*		pP	06 22 56.7	+1.2
ZST	**Bratislava**	**79.09**	**320**	*e*	P	**P**	**06 22 47.4**	**+1.0**
ZST				*e*		pP	06 22 56.7	+1.2
ZST					pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0							
SOP	**Sopron**	**79.29**	**320**	⇑	*e* P	**P**	**06 22 46.7**	**-0.7**
MORC	**Moravsky Berou**	**79.31**	**322**	*e*	P	**P**	**06 22 47.2**	**-0.3**
	comp=Z,22nm,1.1s,mb5.0							
MORC	**Moravsky Berou**	**79.31**	**322**	*e*	P	**P**	**06 22 47.2**	**-0.3**
MORC					pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0							
MORC	**Moravsky Berou**	**79.31**	**322**	⇑	*i* P	**P**	**06 22 47.1**	**-0.4**
FINES	**FINESS Array B**	**79.40**	**335**		P	**P**	**06 22 47.3**	**-0.4**
	comp=Z,29nm,0.9s,mb5.2,baz=106,slow=6.8,SNR=44							
GOLS	**Golise**	**79.43**	**318**	*i*	P	**P**	**06 22 47.7**	**-0.5**
BOJS	**Bojanci**	**79.54**	**317**	*i*	P	**P**	**06 22 47.7**	**-1.2**
BOJS				*i*		pP	06 22 55.1	-2.9
KAF	**Kangasniemi**	**79.62**	**335**	*e*	p	**P**	**06 22 48.0**	**-0.9**
	comp=Z,120nm,0.9s,mb5.8,baz=115,slow=4.8							
KAF	**Kangasniemi**	**79.62**	**335**	*e*	P	**P**	**06 22 48.0**	**-0.9**
KAF					pmax	pmax		
	comp=Z,120nm,0.9s,mb5.8							
TIXI	**Tiksi**	**79.69**	**12**	*e*	P	**P**	**06 22 48.3**	**-0.8**
	comp=Z,133nm,0.8s,mb5.9							
TIXI				*e*	pP	pP	06 22 56.1	-2.1
TIXI					LR	LR		
	comp=Z,4μm,19.0s,MS5.7							
TIXI	**Tiksi**	**79.69**	**12**	*d*	*i* P	**P**	**06 22 48.2**	**-0.9**
TIXI					pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4							
SKR	**Severo-Kuril's**	**79.73**	**37**	*e*	P	**P**	**06 22 55.0**	**+5.2**
SKR				*e*			06 25 52.0	
SKR				*e*	PPP		06 27 44.0	
SKR				*e*	PS		06 33 29.0	
SKR					pmax	pmax		
	comp=Z,2μm,6.0s							
SKR					pmax	pmax		
	comp=N,100nm,1.0s							
SKR					pmax	pmax		
	comp=E,100nm,1.0s							
SKR					pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7							
SKR					MLR	MLR		
	comp=N,1μm,20.0s,MS5.6							
SKR					MLR	MLR		
	comp=E,2μm,20.0s,MS5.6							
SKR					MLR	MLR		
	comp=Z,3μm,20.0s,MS5.6							
LVZ	**Lovozero**	**79.74**	**342**		PFAKE		06 23 00.0	+11
LVZ					LR	LR		
	comp=Z,3μm,20.0s,MS5.7							
VRAC	**Vranov**	**79.75**	**321**		P	**P**	**06 22 49.9**	**0.0**
VRAC	**Vranov**	**79.75**	**321**	⇓	*i* P	**P**	**06 22 49.2**	**-0.7**
CONA	**Conrad Observa**	**79.81**	**320**	⇑	*i* P	**P**	**06 22 49.7**	**-0.6**
	comp=Z,347nm,3.5s							
ARSA	**Arzberg**	**79.84**	**319**	⇑	*i* P	**P**	**06 22 50.2**	**-0.2**
	comp=Z,535nm,4.4s							
VISS	**Visnje**	**79.90**	**318**	*i*	P	**P**	**06 22 50.0**	**-0.8**
VISS				*i*		pP	06 23 00.1	+0.2
APA	**Apatity**	**79.93**	**342**	⇑	*i* P	**P**	**06 22 51.0**	**+0.5**
APA				*i*			06 23 04.4	
APA				*i*	S	S	06 32 48.0	-4.0
APA				*i*			06 33 07.0	
APA				*e*	SP		06 33 33.0	
APA					pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0							
APA					MLR	MLR		
	comp=Z,3μm,16.0s,MS5.8							
PERS	**Pernice**	**79.94**	**318**	*e*	P	**P**	**06 22 50.4**	**-0.6**
PERS				*i*		pP	06 23 00.1	0.0
AQU	**L'Aquila**	**80.03**	**314**	*e*	P	**P**	**06 22 52.0**	**+0.4**
	comp=Z,140nm,0.9s,mb5.9							
AQU	**L'Aquila**	**80.03**	**314**	*e*	P	**P**	**06 22 52.0**	**+0.4**
AQU					pmax	pmax		
	comp=Z,140nm,0.9s,mb5.9							
AQU	**L'Aquila**	**80.03**	**314**	⇑	*i* P	**P**	**06 22 51.2**	**-0.4**
MA2	**Magadan**	**80.10**	**28**	*e*	P	**P**	**06 22 51.5**	**0.0**
	comp=Z,236nm,1.7s,mb5.8							
MA2					LR	LR		
	comp=Z,2μm,19.0s,MS5.6							
MA2	**Magadan**	**80.10**	**28**	*d*	*i* P	**P**	**06 22 50.9**	**-0.7**
MA2				*i*			06 23 05.8	
MA2				*e*	S	S	06 32 49.2	-4.9
MA2				*e*	SS	SS	06 37 59.0	-5.8
MA2					pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4							
MA2					MLR	MLR		
	comp=Z,2μm,19.7s,MS5.5							
DPC	**Dobruska-Polom**	**80.23**	**322**	*e*	P	**P**	**06 22 52.6**	**+0.1**
DPC				*e*	pP	pP	06 23 00.7	-0.9
DPC				*e*	SKS		06 32 54.4	
DPC					AMS	AMS	07 02 40.0	
	comp=Z,2μm,21.7s							
KSP	**Ksiaz**	**80.40**	**323**	*e*	P	**P**	**06 22 54.4**	**+1.0**
KSP				*e*	PcP	PcP	06 23 01.3	+0.9
KSP				*e*	pP	pP	06 23 04.6	+2.1
KSP				*e*	S	S	06 32 56.9	-0.7
KSP				*e*	ScS	ScS	06 33 15.7	-1.6
KSP				*e*	SS	SS	06 38 14.8	+5.1
KSP					LMZ		07 02 40.2	
	comp=Z,4μm,18.3s							
KSP	**Ksiaz**	**80.40**	**323**	⇑	*e* P	**P**	**06 22 54.0**	**+0.6**
KSP				*e*	PcP	PcP	06 23 00.9	+0.6
KSP				*e*	pP	pP	06 23 02.8	+0.3
KSP				*e*	S	S	06 32 55.0	-2.6
KSP				*e*	SS	SS	06 37 50.5	-19
KSP					LR	LR		
	comp=Z,4μm,18.3s,MS5.8							
KSP	**Ksiaz**	**80.40**	**323**	⇑	*e* P	**P**	**06 22 54.0**	**+0.6**
KSP				*e*		pP	06 23 00.9	-1.6
KSP				*e*	PP	pP	06 23 02.8	+0.3
KSP				*e*	S	S	06 32 55.0	-2.6
KSP					MLR	MLR		
	comp=Z,4μm,18.3s,MS5.8							
JAVS	**Javornik**	**80.44**	**317**	*i*	P	**P**	**06 22 54.3**	**+0.6**
JAVS				*i*		pP	06 23 03.5	+0.7
UPC	**Upice**	**80.47**	**322**	*e*	P	**P**	**06 22 54.1**	**+0.3**
UPC				*e*	pP	pP	06 23 01.4	-1.5
MOA	**Molln**	**80.82**	**319**	⇑	*i* P	**P**	**06 22 55.0**	**-0.7**
	comp=Z,149nm,2.3s,mb5.5							
MYKA	**Terra Mystica**	**80.92**	**318**		*i* P	**P**	**06 22 55.8**	**-0.4**
	comp=Z,219nm,1.6s,mb5.8							
PRU	**Pruhonice**	**81.22**	**322**	*e*	P	**P**	**06 22 57.8**	**0.0**
PRU				*e*	pP	pP	06 23 06.0	-0.9
PRU				*e*	SKS		06 33 03.2	
PRU					AMS	AMS	06 58 20.0	
	comp=Z,1μm,22.0s							
KBA	**Koelnbreinsper**	**81.23**	**318**	⇓	*i* P	**P**	**06 22 57.2**	**-0.7**
	comp=Z,120nm,2.2s,mb5.4,SNR=8.7							
KBA	**Koelnbreinsper**	**81.23**	**318**	⇓	*i* P	**P**	**06 22 57.2**	**-0.7**
KBA					pmax	pmax		
	comp=Z,120nm,2.3s,mb5.4							
PRA	**Prague**	**81.31**	**322**		P	**P**	**06 22 59.0**	**+0.7**
PVCC	**Panska Ves**	**81.36**	**322**	*e*	P	**P**	**06 22 59.0**	**+0.5**
PVCC				*e*	pP	pP	06 23 07.4	-0.2
PVCC				*e*	SKS		06 33 07.4	
GEC2	**GERESS Array S**	**81.45**	**320**	*e*	P	**P**	**06 22 58.7**	**-0.3**
GEC2					pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3							
GEC2	**GERESS Array S**	**81.45**	**320**	*e*	P	**P**	**06 22 58.7**	**-0.3**
	comp=Z,50nm,1.3s,mb5.3							
GERES	**GERESS Array B**	**81.45**	**320**		P	**P**	**06 22 58.5**	**-0.5**
	comp=Z,19nm,1.0s,mb5.0,baz=130,slow=4.2,SNR=48							
KHC	**Kasperske Hory**	**81.60**	**321**	*e*	P	**P**	**06 22 59.6**	**-0.2**
KHC				*e*	PP	pP	06 23 07.5	-1.4
KHC				*e*			06 33 06.5	
KHC					MLR	MLR		
	comp=Z,1μm,17.5s,MS5.3							
KHC	**Kasperske Hory**	**81.60**	**321**	*e*	P	**P**	**06 22 59.6**	**-0.2**
KHC				*e*	pP	pP	06 23 07.5	-1.4
KHC				*e*	x	x	06 23 14.5	
KHC				*e*	SKS		06 33 06.5	
KHC					AMS	AMS	07 04 20.0	
	comp=Z,1μm,17.5s							
ABTA	**Abfaltersbach**	**81.70**	**318**	⇑	*i* P	**P**	**06 22 59.9**	**-0.5**
	comp=Z,402nm,3.4s							
KEST	**Kesra**	**81.75**	**307**		P	**P**	**06 23 02.0**	**+1.1**
	comp=Z,38nm,1.0s,mb5.3,baz=150,slow=1.0,SNR=30							
KEST					LR	LR	07 01 24.4	
	comp=Z,621nm,18.2s,MS5.0,baz=216,slow=37							
BRG	**Berggiesshubel**	**81.83**	**322**	⇑	*i* P	**P**	**06 23 01.6**	**+0.6**
	comp=Z,38nm,1.3s,mb5.2							
BRG				*i*		pP	06 23 09.7	-0.4
BRG					S	S	06 33 15.0	+2.5
BRG					SS	SS	06 38 39.0	+7.9
BRG					LR	LR		
	comp=Z,810nm,20.6s,MS5.1							
BRG	**Berggiesshubel**	**81.83**	**322**	⇑	*i* P	**P**	**06 23 01.6**	**+0.6**
BRG				*i*		pP	06 23 09.7	-0.4
BRG					S	S	06 33 15.0	+2.5
BRG					SS	SS	06 38 39.0	+7.9
BRG					pmax	pmax		
	comp=Z,38nm,1.3s,mb5.2							
BRG					pmax	pmax		
	comp=Z,69nm,1.6s,mb5.3							
BRG					MLR	MLR		
	comp=Z,811nm,20.6s,MS5.1							
BRG					MLR	MLR		
	comp=N,1μm,18.5s,MS5.3							
BRG					MLR	MLR		
	comp=E,790nm,18.5s,MS5.3							
BRG	**Berggiesshubel**	**81.83**	**322**	*e*	P	**P**	**06 23 01.5**	**+0.5**
	comp=Z,64nm,1.3s,mb5.4							
BRG					epP	pP	06 23 09.7	-0.4
BRG				*e*	S	S	06 33 10.4	-2.1
BRG	**Berggiesshubel**	**81.83**	**322**	⇑	*i* P	**P**	**06 23 01.6**	**+0.6**
	comp=Z,64nm,1.3s,mb5.4							
BRG				*i*		pP	06 23 09.7	-0.4
	comp=Z,116nm,1.6s							
BRG					S	S	06 33 15.0	+2.5
BRG					SS	SS	06 38 39.0	+7.9
BRG								
	comp=Z,1μm,20.6s							
BRG								
	comp=N,2μm,18.5s							
BRG								
	comp=E,1μm,18.5s							
NVL	**N'lazarevskaya**	**81.87**	**199**	*i*	P	**P**	**06 23 02.7**	**+1.9**
NVL					pmax	pmax		
	comp=Z,193nm,1.1s,mb5.9							
NVL					pmax	pmax		
	comp=N,19nm,1.2s							
NVL					pmax	pmax		
	comp=E,65nm,1.2s							
MAIT	**Maitri**	**81.90**	**199**	*e*	P	**P**	**06 23 00.5**	**-0.5**
PET	**Petropavlovsk**	**81.93**	**35**	*e*	P	**P**	**06 23 01.0**	**-0.5**
	comp=E,217nm,1.6s,mb5.8							
PET					LR	LR		
	comp=Z,3μm,20.0s,MS5.7							
PET	**Petropavlovsk**	**81.93**	**35**	*e*	P	**P**	**06 23 00.8**	**-0.7**
PET				*e*			06 26 11.1	
PET				*e*	S	S	06 33 09.0	-4.4
PET				*e*	PS		06 34 00.2	
PET				

CLL LmV 07 04 00.0
comp=Z,1μm,20.9s
CLL Collm 82.52 323⇑*iP* **P 06 23 04.4 -0.2**
comp=Z,88nm,1.1s,mb5.7
CLL *e*pP pP 06 23 12.9 -0.8
CLL *e*PP PP 06 26 06.8 -7.3
CLL *e*S S 06 33 17.2 -2.3
CLL *e*SP 06 34 13.1
CLL *e*SS SS 06 38 47.4 +6.1
CLL *e*SSS 06 42 19.8
CLL *e*SSSS 06 45 09.4
VLC Villacollemand 82.58 315 *e*P **P 06 23 03.8 -1.2**
comp=Z,60nm,1.0s,mb5.6
NKC Novy Kostel 82.59 321 *e*P **P 06 23 05.1 +0.1**
NKC *e*pP pP 06 23 12.9 -1.2
NKC *e*SKS 06 33 20.1
ROTZ Rotzenmuhle 82.62 321 *e*P **P 06 23 05.5 +0.3**
comp=Z,60nm,1.1s,mb5.5
ROTZ *e*S S 06 33 20.2 -0.5
TANN Tannenbergstha 82.62 322 *e*P **P 06 23 05.5 +0.3**
comp=Z,58nm,1.7s,mb5.3
WERN Wernitzgruen 82.65 321 *e*P **P 06 23 05.7 +0.4**
comp=Z,25nm,1.0s,mb5.2
SQTA Sankt Quirin 82.67 318⇑*iP* **P 06 23 04.9 -0.6**
comp=Z,38nm,1.3s,mb5.3
SQTA Sankt Quirin 82.67 318⇑*iP* **P 06 23 04.9 -0.6**
SQTA pmax pmax
comp=Z,38nm,1.3s,mb5.3
GUNZ Gunzen 82.69 322 *e*P **P 06 23 06.1 +0.6**
comp=Z,37nm,1.1s,mb5.3
WERD Werda 82.73 322 *e*P **P 06 23 06.0 +0.3**
comp=Z,40nm,1.3s,mb5.3
WERD *e*pP pP 06 23 14.2 -0.7
MANZ Manzenberg 82.74 321 *e*P **P 06 23 06.5 +0.7**
comp=Z,103nm,1.1s,mb5.8
MANZ *e*pP pP 06 23 15.1 +0.2
MANZ *e*S S 06 33 21.6 -0.3
MOTA Moosalm 82.77 318⇑*iP* **P 06 23 05.4 -0.7**
comp=Z,27nm,0.9s,mb5.2
MOTA Moosalm 82.77 318⇑*iP* **P 06 23 05.4 -0.6**
MOTA pmax pmax
comp=Z,27nm,0.9s,mb5.3
FETA Feichten 82.95 318 *i*P **P 06 23 06.8 -0.2**
comp=Z,175nm,2.8s,mb5.6,SNR=18
KEV Kevo 83.08 342 *e*P **P 06 23 05.3 -1.8**
comp=Z,36nm,0.9s,mb5.4
KEV LR LR
comp=Z,3μm,20.0s,MS5.7
KEV Kevo 83.08 342 *e*P **P 06 23 05.3 -1.8**
KEV pmax pmax
comp=Z,36nm,0.9s,mb5.4
KEV MLR MLR
comp=Z,3μm,20.0s,MS5.7
CORF Corte 83.09 313 *e*P **P 06 23 08.8 +1.0**
MOX Moxa 83.20 322 *e*P **P 06 23 08.9 +0.7**
comp=Z,114nm,1.4s,mb5.7
MOX *e* pP 06 23 16.6 -0.7
comp=Z,61nm,0.9s
MOX
comp=Z,800nm,20.0s
MOX Moxa 83.20 322 *e*P **P 06 23 08.9 +0.7**
MOX *e* pP 06 23 16.6 -0.7
MOX pmax pmax
comp=Z,114nm,1.4s,mb5.7
MOX pmax pmax
comp=Z,61nm,0.9s,mb5.6
MOX MLR MLR
comp=Z,800nm,20.0s,MS5.1
MOX Moxa 83.20 322 *e*P **P 06 23 08.6 +0.4**
comp=Z,84nm,1.1s,mb5.7
MOX *e*S S 06 33 26.8 +0.3
GRA1 Grafenberg Arr 83.23 321 *e*P **P 06 23 08.9 +0.6**
comp=Z,180nm,1.2s,mb6.0
GRA1 *e*pP pP 06 23 17.2 -0.3
GRA1 LR LR
comp=Z,1μm,19.7s,MS5.3
GRF Grafenberg Arr 83.23 321 *e*P **P 06 23 08.9 +0.6**
GRF *e**PP pP 06 23 17.2 -0.3
GRF pmax pmax
comp=Z,180nm,1.2s,mb6.0
GRF MLR MLR
comp=Z,1μm,19.7s,MS5.3
GRF Grafenberg Arr 83.23 321 *e*P **P 06 23 08.9 +0.6**
GRF *e**PP pP 06 23 17.2 -0.3
GRF pmax pmax
comp=Z,180nm,1.2s,mb6.0
GRF MLR MLR
comp=Z,1μm,19.7s,MS5.3
GRF Grafenberg Arr 83.23 321 *e*P **P 06 23 08.9 +0.6**
comp=Z,180nm,1.2s,mb6.0
GRF *e*pP pP 06 23 17.2 -0.3
GRF *e*L 07 05 02.0
comp=Z,1μm,19.7s
GRFO Grafenberg 83.23 321 *e*P **P 06 23 08.9 +0.6**
comp=Z,168nm,1.2s,mb6.0
GRFO LR LR
comp=Z,1μm,20.0s,MS5.3
GRFO Grafenberg 83.23 321 *e*P **P 06 23 08.9 +0.6**
GRFO pmax pmax
comp=Z,168nm,1.2s,mb6.0
GRFO MLR MLR
comp=Z,1μm,20.0s,MS5.3
ARCES ARCESS Array B 83.43 342 P **P 06 23 08.9 0.0**
comp=Z,31nm,0.9s,mb5.3,baz=118,slow=3.7,SNR=32
ARCES LR LR 07 03 14.3
comp=Z,3μm,18.0s,MS5.8,baz=117,slow=38
ARE0 ARCESS Array S 83.43 342 *e*P **P 06 23 09.3 +0.4**
DAVOX Davos/Dischmat 83.47 318 P **P 06 23 09.8 +0.1**
comp=Z,41nm,0.7s,mb5.5,baz=158,slow=3.6,SNR=32
VNDA Vanda 83.52 168 P **P 06 23 09.1 -0.3**
VNDA LR LR 06 54 38.7
VNDA Vanda 83.52 168 P **P 06 23 09.1 -0.3**
baz=297,slow=6.8
VNDA LR LR 06 54 38.7
comp=Z,5μm,19.4s,MS5.9,baz=316,slow=32
DAVA Damuels 83.57 318 *i*P **P 06 23 10.3 +0.2**
comp=Z,187nm,1.8s,mb5.9,SNR=30
RPZ Rata Peaks 83.59 133 LR LR 06 57 51.6
comp=Z,4μm,19.2s,MS5.8,baz=284,slow=34
CAEH 'Ain El Ouahch 83.91 307 P **P 06 23 11.0 -1.1**
CKFL Kef-Lekhel 83.95 307 P **P 06 23 12.0 -0.4**
COP Copenhagen 83.98 327 *e*P **P 06 23 13.9 +1.9**
COP pmax pmax
comp=Z,63nm,1.0s,mb5.7
COP MLR MLR
comp=Z,630nm,19.0s,MS5.0
COP Copenhagen 83.98 327 *i*P **P 06 23 13.9 +1.9**
comp=Z,63nm,1.0s,mb5.7
COP *i* 06 39 13.1
COP
comp=Z,620nm,19.0s
CASM Ain Smara 84.12 307 P **P 06 23 14.0 +0.8**
CLZ Clausthal 84.24 323 *e*P **P 06 23 13.6 +0.2**
CLZ *e*S S 06 33 36.7 -0.2
CLZ pmax pmax
comp=Z,82nm,1.1s,mb5.8
CLZ Clausthal 84.24 323 *e*P **P 06 23 13.6 +0.2**
comp=Z,82nm,1.1s,mb5.8
CLZ *e*S S 06 33 36.7 -0.2
UBBA Unterbreizbach 84.24 322 *e*P **P 06 23 13.6 +0.1**
comp=Z,53nm,1.4s,mb5.5
UBBA *e*S S 06 33 36.8 -0.2
STU Stuttgart 84.33 320 *e*P **P 06 23 14.2 +0.2**
comp=Z,127nm,1.3s,mb5.9
STU *e*S S 06 33 35.4 -2.5
SPAK Spaichingen-Ko 84.46 319 *e*P **P 06 23 14.6 -0.1**
CMER Merouana 84.50 306 P **P 06 23 18.0 +2.9**
NRDL Niedersach Rie 84.54 323 *e*P **P 06 23 15.3 +0.3**
comp=Z,62nm,1.2s,mb5.6
SAOF Saorge 84.55 315 *e*P **P 06 23 14.4 -0.8**
SBF Sospel 84.61 314⇑*iP* **P 06 23 15.4 -0.1**
comp=Z,262nm,1.2s,mb5.9
SBF Sospel 84.61 314⇑*iP* **P 06 23 15.4 -0.1**
comp=Z,131nm,1.2s,mb5.9
SBF Sospel 84.61 314⇑*iP* **P 06 23 15.4 -0.1**
SBF pmax pmax
comp=Z,131nm,1.2s,mb5.9
SBA Scott Base 84.62 168 *e*P **P 06 23 15.3 +0.4**
comp=Z,18nm,0.9s,mb5.2
SBA LR LR
comp=Z,4μm,19.0s,MS5.8
SBA Scott Base 84.62 168 *e*P **P 06 23 15.4 +0.4**
SBA pmax pmax
comp=Z,18nm,0.9s,mb5.2
SBA MLR MLR
comp=Z,4μm,19.0s,MS5.8

DFRA Djebel Bou Aff 84.65 307 P **P 06 23 19.0 +3.1**
LUCF Luceram 84.68 314 *e*P **P 06 23 16.5 +0.6**
BSEG Bad Segeberg 84.74 325 *e*P **P 06 23 16.5 +0.6**
comp=Z,60nm,1.3s,mb5.6
BSEG *e*S S 06 33 41.5 -0.3
TOD Tromm 84.75 320 *e*P **P 06 23 16.1 0.0**
TOUF Mont Tournerai 84.77 315 *e*P **P 06 23 16.5 +0.2**
BFO Black Forest 84.81 319 P **P 06 23 16.9 +0.5**
comp=Z,280nm,1.1s,mb6.3,SNR=18
BFO Black Forest 84.81 319 *e*P **P 06 23 15.9 -0.5**
comp=Z,74nm,1.2s,mb5.7
BFO *e*S S 06 33 40.4 -2.3
BFO LR LR
comp=Z,1μm,19.0s,MS5.3
BFO Black Forest 84.81 319 *e*P **P 06 23 15.9 -0.5**
BFO *e*S S 06 33 40.4 -2.3
BFO pmax pmax
comp=Z,74nm,1.2s,mb5.7
BFO MLR MLR
comp=Z,1μm,19.0s,MS5.3
BFO Black Forest 84.81 319 *e*P **P 06 23 15.9 -0.5**
comp=Z,74nm,1.2s,mb5.7
BFO *e*S S 06 33 40.4 -2.3
MVIF Mont Vial 84.82 314 *e*P **P 06 23 17.2 +0.6**
FELD Feldberg im Sc 84.94 318 *e*P **P 06 23 16.5 -0.6**
SET Setif 84.98 307 P **P 06 23 18.0 +0.4**
CALN Calern 84.98 314 *e*P **P 06 23 18.6 +1.2**
TNS Taunus Mts 85.09 321 *e*P **P 06 23 18.2 +0.4**
TNS *e**PP pP 06 23 26.7 -0.3
TNS *e*S S 06 33 45.9 +0.4
TNS pmax pmax
comp=Z,50nm,1.3s,mb5.5
TNS Taunus Mts 85.09 321 *e*P **P 06 23 18.2 +0.4**
comp=Z,50nm,1.3s,mb5.5
TNS *e*pP pP 06 23 26.7 -0.3
TNS *e*S S 06 33 45.9 +0.4
FRF La Foret Royal 85.12 314⇑*iP* **P 06 23 18.1 0.0**
comp=Z,140nm,1.1s,mb5.7
FRF La Foret Royal 85.12 314⇑*iP* **P 06 23 18.1 0.0**
comp=Z,70nm,1.1s,mb5.7
FRF La Foret Royal 85.12 314⇑*iP* **P 06 23 18.1 0.0**
FRF pmax pmax
comp=Z,70nm,1.1s,mb5.7
KTD Kalmit 85.15 320 *e*P **P 06 23 18.0 -0.1**
SURF Saint Ours 85.16 315 *e*P **P 06 23 18.2 0.0**
LMR La Mourre 85.19 314 *e*P **P 06 23 18.3 -0.1**
comp=Z,306nm,1.7s,mb5.8
LMR La Mourre 85.19 314 *e*P **P 06 23 18.3 -0.1**
comp=Z,153nm,1.7s,mb5.8
LMR La Mourre 85.19 314 *e*P **P 06 23 18.3 -0.1**
LMR pmax pmax
comp=Z,153nm,1.7s,mb5.8
BBS Basel-Blauen 85.19 318 *e*P **P 06 23 17.8 -0.5**
MBDF Montbardon 85.23 315⇑*iP* **P 06 23 17.9 -0.7**
comp=Z,64nm,0.9s,mb5.5
MBDF Montbardon 85.23 315⇑*iP* **P 06 23 17.9 -0.7**
comp=Z,32nm,0.9s,mb5.5
MBDF Montbardon 85.23 315⇑*iP* **P 06 23 17.9 -0.7**
MBDF pmax pmax
comp=Z,32nm,0.9s,mb5.5
LANF Langenberg 85.27 320 *e*P **P 06 23 18.7 0.0**
BNI Bardonecchia 85.34 316 *e*P **P 06 23 18.4 -0.8**
comp=Z,52nm,1.0s,mb5.6
BNI Bardonecchia 85.34 316 *e*P **P 06 23 18.4 -0.8**
BNI pmax pmax
comp=Z,52nm,1.0s,mb5.6
LPG La Plagne 85.37 316⇑*iP* **P 06 23 19.2 -0.1**
comp=Z,130nm,1.3s,mb5.6
LPG La Plagne 85.37 316⇑*iP* **P 06 23 19.2 -0.1**
comp=Z,65nm,1.3s,mb5.6
LPG La Plagne 85.37 316⇑*iP* **P 06 23 19.2 -0.1**
LPG pmax pmax
comp=Z,65nm,1.3s,mb5.6
LPL La Plagne 85.38 316⇑*iP* **P 06 23 19.2 -0.2**
comp=Z,105nm,1.0s,mb5.6
LPL La Plagne 85.38 316⇑*iP* **P 06 23 19.2 -0.2**
comp=Z,52nm,1.0s,mb5.6
LPL La Plagne 85.38 316⇑*iP* **P 06 23 19.2 -0.2**
LPL pmax pmax
comp=Z,52nm,1.0s,mb5.6
MOF Molkenrain 85.51 318 *e*P **P 06 23 19.5 -0.4**
CDF Champ du Feu 85.51 319⇑*iP* **P 06 23 19.7 -0.2**
ECH Echery 85.55 319 *e*P **P 06 23 20.0 -0.1**
TRO Tromso 85.56 341 *e*P *s*P 06 23 30.5 -1.7
TRO *e* S 06 33 48.1 -1.3
TRO AMS AMS 07 02 47.3
comp=Z,1μm,20.6s,MS5.3
ABH Alteburg 85.60 320 *e*P **P 06 23 20.2 -0.1**
LOMF Lomont 85.62 318 *e*P **P 06 23 20.4 -0.1**
HINF Hinteralfeld 85.69 318 *e*P **P 06 23 20.3 -0.5**
STOF St-Etienne Org 85.72 314 *e*P **P 06 23 22.8 +1.7**
GDM Grand'Maison 85.76 316 *e*P **P 06 23 22.3 +1.1**
RUP Ruppelstein 85.88 320 *e*P **P 06 23 21.7 0.0**
ORIF Oris-en-Rattie 85.88 315⇑*iP* **P 06 23 22.0 +0.1**
comp=Z,83nm,1.1s,mb5.6
ORIF *e*MLR MLR
comp=Z,3μm,21.5s,MS5.3
ORIF Oris-en-Rattie 85.88 315⇑*iP* **P 06 23 22.0 +0.1**
comp=Z,41nm,1.1s,mb5.6
ORIF Oris-en-Rattie 85.88 315⇑*iP* **P 06 23 22.0 +0.1**
ORIF pmax pmax
comp=Z,41nm,1.1s,mb5.6
IBBN Ibbenburen 85.92 323 *e*P **P 06 23 22.1 +0.3**
comp=Z,79nm,1.1s,mb5.9
TOA0 Torodi Ar. Sit 85.92 283 *e*P **P 06 23 22.1 -0.6**
TORD Torodi Ar. Bea 85.92 283 P **P 06 23 21.9 -0.7**
TORD PKKPbc PKKPbc 06 41 23.3 0.0
TORD LR LR 07 00 36.6
TORD Torodi Ar. Bea 85.92 283 P **P 06 23 21.9 -0.7**
comp=Z,21nm,0.7s,mb5.5,baz=92,slow=5.1,SNR=90
TORD PKKPbc PKKPbc 06 41 23.3 +0.1
comp=Z,0.8nm,0.7s,baz=315,slow=2.7,SNR=4.6
TORD LR LR 07 00 36.6
comp=Z,3μm,19.5s,MS5.7,baz=75,slow=35
MUD Monsted U'grnd 85.93 327 *i*P **P 06 23 20.5 -1.3**
comp=Z,54nm,1.2s,mb5.7
MUD
comp=Z,1μm,17.0s
MUD
comp=Z,870nm,19.0s
NB2 NORSAR Subarra 85.95 332 P **P 06 23 20.5 -1.3**
comp=Z,23nm,1.0s,mb5.4,baz=99,slow=6.2
NB2 NORSAR Subarra 85.95 332 P **P 06 23 20.5 -1.3**
NB2 pmax pmax
comp=Z,23nm,1.0s,mb5.4
NOA NORSAR Array B 85.95 332 P **P 06 23 21.1 -0.8**
comp=Z,11nm,0.9s,mb5.1,baz=100,slow=5.6,SNR=12
NOA LR LR 07 06 50.9
comp=Z,2μm,18.4s,MS5.5,baz=85,slow=39
SMRF Simiane la Rot 85.96 314 *e*P **P 06 23 22.8 +0.6**
comp=Z,164nm,1.4s,mb5.8
SMRF Simiane la Rot 85.96 314 *e*P **P 06 23 22.8 +0.6**
comp=Z,164nm,1.4s,mb6.1
CABF La Chapelle 86.00 317⇑*iP* **P 06 23 22.8 +0.4**
comp=Z,134nm,1.1s,mb5.8
CABF La Chapelle 86.00 317⇑*iP* **P 06 23 22.8 +0.4**
comp=Z,67nm,1.1s,mb5.8
CABF La Chapelle 86.00 317⇑*iP* **P 06 23 22.8 +0.4**
CABF pmax pmax
comp=Z,67nm,1.1s,mb5.8
GRN Grenoble 86.03 316 *e*P **P 06 23 22.4 -0.2**
HAU Haudompre 86.05 318⇑*iP* **P 06 23 22.4 -0.2**
comp=Z,80nm,1.0s,mb5.6
HAU *e*MLR MLR
comp=Z,1μm,17.5s,MS5.0
HAU Haudompre 86.05 318⇑*iP* **P 06 23 22.4 -0.2**
comp=Z,40nm,1.0s,mb5.6
HAU LR LR
comp=Z,1μm,17.5s,MS5.3
HAU Haudompre 86.05 318⇑*iP* **P 06 23 22.4 -0.2**
HAU pmax pmax
comp=Z,40nm,1.0s,mb5.6
HAU MLR MLR
comp=Z,1μm,17.5s,MS5.3
PRAF Pradon 86.22 314 *e*P **P 06 23 24.5 +0.9**
SNZO South Karori 86.28 131 PFAKE 06 23 30.0 +6.1
SNZO LR LR
comp=Z,3μm,20.0s,MS5.7
THEF They Montfort 86.33 319 *e*P **P 06 23 23.4 -0.6**
KONO Kongsberg 86.41 330 *e*P **P 06 23 23.8 -0.3**
comp=Z,60nm,0.9s,mb5.8
KONO LR LR
comp=Z,2μm,20.0s,MS5.6
KONO Kongsberg 86.41 330 *e*P **P 06 23 24.0 -0.1**
KONO *e*SKS 06 33 48.7

KONO AMS AMS 07 06 54.5
comp=Z,2μm,15.1s,MS5.7
KONO Kongsberg 86.41 330 *e*P **P 06 23 23.8 -0.3**
KONO pmax pmax
comp=Z,60nm,0.9s,mb5.8
KONO MLR MLR
comp=Z,2μm,20.0s,MS5.6
WLF Walferdange 86.45 320 *e*P **P 06 23 25.5 +1.0**
comp=Z,28nm,0.9s,mb5.5
WLF Walferdange 86.45 320 *e*P **P 06 23 25.5 +1.0**
WLF pmax pmax
comp=Z,28nm,0.9s,mb5.5
WLF Walferdange 86.45 320 P **P 06 23 25.4 +0.9**
comp=Z,31nm,2.0s,mb5.2
WLF Walferdange 86.45 320 *e*P **P 06 23 25.3 +0.8**
comp=Z,35nm,1.1s,mb5.5
WLF *e*S S 06 33 59.5 +0.6
NSS Namsos 86.51 335 *e*P **P 06 23 28.0 +3.5**
NSS LR LR
comp=Z,2μm,20.0s,MS5.5
NSS Namsos 86.51 335 *e*P **P 06 23 25.3 +0.8**
NSS *e* 06 33 43.3
NSS AMS AMS 07 09 39.4
comp=Z,2μm,20.0s,MS5.5
QSPA South Pole Qui 86.61 180 *e*P **P 06 23 24.9 +0.1**
comp=Z,80nm,0.9s,mb6.0
QSPA LR LR
comp=Z,5μm,20.0s,MS5.9
QSPA South Pole Qui 86.61 180 PKPPKP 06 49 30.4
comp=Z,2.6nm,1.1s,baz=183,slow=5.3,SNR=2.7
QSPA LR LR 06 56 31.6
comp=Z,5μm,20.1s,MS5.9,baz=136,slow=32
SNAA Sanae 86.68 198 P **P 06 23 25.6 +0.3**
comp=Z,12nm,0.8s,mb5.2,baz=96,slow=4.5,SNR=38
MEM Membach 86.70 321 P **P 06 23 26.1 +0.4**
comp=Z,13nm,1.2s,mb5.0
VIVF Saint-Julien-l 86.72 315 *e*P **P 06 23 26.0 0.0**
comp=Z,51nm,1.0s,mb5.4
VIVF Saint-Julien-l 86.72 315 *e*P **P 06 23 26.0 0.0**
comp=Z,25nm,1.0s,mb5.4
VIVF Saint-Julien-l 86.72 315 *e*P **P 06 23 26.0 0.0**
VIVF pmax pmax
comp=Z,25nm,1.0s,mb5.4
HGN *e*SKS 06 33 05.5
HGN *i* S S 06 34 06.4 +4.5
HGN *e*SS SS 06 39 54.6 +11
HGN *ex* x 06 46 38.2
HGN Heimansgroeve 86.77 321 *e*P **P 06 23 26.7 +0.6**
comp=Z,32nm,2.4s,mb5.1
EMHD Djebel Mahouad 86.94 306 P **P 06 23 30.0 +2.7**
MEZF Maizieres J'vi 86.99 319 *e*P **P 06 23 27.3 +0.1**
LASF Ste Croix 87.20 314 *e*P **P 06 23 28.6 +0.3**
comp=Z,68nm,1.1s,mb5.5
BJO Bjornoya 87.35 346 AMS AMS 07 09 07.3
comp=Z,2μm,21.2s,MS5.5
GIVF Givet 87.37 320 *e*P **P 06 23 29.2 +0.2**
DOU Dourbes 87.51 320 P **P 06 23 30.4 +0.6**
comp=Z,9.5nm,1.3s,mb4.9
SMF Signal de Mont 87.54 317⇑*iP* **P 06 23 29.7 -0.2**
comp=Z,84nm,1.0s,mb5.6
SMF Signal de Mont 87.54 317⇑*iP* **P 06 23 29.7 -0.2**
comp=Z,42nm,1.0s,mb5.6
SMF Signal de Mont 87.54 317⇑*iP* **P 06 23 29.7 -0.2**
SMF pmax pmax
comp=Z,42nm,1.0s,mb5.6
PLDF La Plantade 87.61 316 *e*P **P 06 23 30.4 +0.2**
LOR Lormes 87.61 317⇑*iP* **P 06 23 30.3 +0.1**
comp=Z,154nm,1.1s,mb5.9
LOR *e*MLR MLR
comp=Z,2μm,22.2s,MS5.1
LOR Lormes 87.61 317⇑*iP* **P 06 23 30.3 +0.1**
comp=Z,77nm,1.1s,mb5.8
LOR LR LR
comp=Z,2μm,22.3s,MS5.4
LOR Lormes 87.61 317⇑*iP* **P 06 23 30.3 +0.1**
LOR pmax pmax
comp=Z,77nm,1.1s,mb5.8
LOR MLR MLR
comp=Z,2μm,22.3s,MS5.4
BAIF Baives 87.75 320 *e*P **P 06 23 31.2 +0.3**
comp=Z,76nm,0.9s,mb5.6
BAIF Baives 87.75 320 *e*P **P 06 23 31.2 +0.3**
comp=Z,38nm,0.9s,mb5.6
BAIF Baives 87.75 320 *e*P **P 06 23 31.2 +0.3**
BAIF pmax pmax
comp=Z,38nm,0.9s,mb5.6
LBL Lubilhac 87.77 315 *e*P **P 06 23 31.7 +0.6**
SSF Saint Saulge 87.82 317⇑*iP* **P 06 23 31.3 0.0**
comp=Z,88nm,1.0s,mb5.6
SSF Saint Saulge 87.82 317⇑*iP* **P 06 23 31.3 0.0**
comp=Z,44nm,1.0s,mb5.6
SSF Saint Saulge 87.82 317⇑*iP* **P 06 23 31.3 0.0**
SSF pmax pmax
comp=Z,44nm,1.0s,mb5.6
AVF Avril sur Loir 87.89 317⇑*iP* **P 06 23 31.5 -0.1**
comp=Z,96nm,1.2s,mb5.6
AVF Avril sur Loir 87.89 317⇑*iP* **P 06 23 31.5 -0.1**
comp=Z,48nm,1.2s,mb5.6
AVF Avril sur Loir 87.89 317⇑*iP* **P 06 23 31.5 -0.1**
AVF pmax pmax
comp=Z,48nm,1.2s,mb5.6
AGO Saint Agoulin 87.95 316 *e*P **P 06 23 32.5 +0.6**
MOL Molde 87.99 333 AMS AMS 07 06 23.0
comp=Z,1μm,21.0s,MS5.3
PYM Petit Puy Mans 88.00 316 *e*P **P 06 23 33.3 +1.1**
EBNR Beni Rached 88.10 306 P **P 06 23 31.5 -1.3**
VNA2 Neumayer--Watz 88.18 199 *e*P **P 06 23 33.0 +0.5**
VNA2 *e* 06 23 36.0
VNA2 *e* pP 06 23 42.9 +1.2
ETRT Tiaret 88.20 305 P **P 06 23 35.0 +1.7**
BGF Bois d'Agland 88.21 317⇑*iP* **P 06 23 33.6 +0.5**
comp=Z,174nm,0.9s,mb6.0
BGF Bois d'Agland 88.21 317⇑*iP* **P 06 23 33.6 +0.5**
comp=Z,87nm,0.9s,mb6.0
BGF Bois d'Agland 88.21 317⇑*iP* **P 06 23 33.6 +0.5**
BGF pmax pmax
comp=Z,87nm,0.9s,mb6.0
ECHA Ech Chlef 88.22 306 P **P 06 23 34.0 +0.6**
URZ Urewera 88.24 128 LR LR 06 57 53.9
comp=Z,3μm,21.5s,MS5.7,baz=218,slow=32
MTLF Montolieu 88.29 313⇑*iP* **P 06 23 33.9 +0.3**
comp=Z,87nm,1.2s,mb5.6
MTLF Montolieu 88.29 313⇑*iP* **P 06 23 33.9 +0.3**
comp=Z,43nm,1.2s,mb5.6
MTLF Montolieu 88.29 313⇑*iP* **P 06 23 33.9 +0.3**
MTLF pmax pmax
comp=Z,43nm,1.2s,mb5.5
VERF Verneugheol 88.37 316 *e*P **P 06 23 34.5 +0.6**
EANR 'Ain N'Sour 88.41 306 P **P 06 23 34.0 -0.3**
HYF Humbligny 88.43 317 *e*P **P 06 23 34.8 +0.6**
VNA1 Neumayer--Stat 88.50 199 *e*P **P 06 23 34.9 +0.9**
VNA1 *e* 06 23 37.8
VNA1 *e* pP 06 23 44.3 +1.1
CAF Calviac 88.57 315 *e*P **P 06 23 35.4 +0.5**
comp=Z,29nm,0.9s,mb5.3
CAF Calviac 88.57 315 *e*P **P 06 23 35.4 +0.5**
comp=Z,14nm,0.9s,mb5.3
CAF Calviac 88.57 315 *e*P **P 06 23 35.4 +0.5**
CAF pmax pmax
comp=Z,14nm,0.9s,mb5.3
TCF Toulx Ste Croi 88.62 316⇑*iP* **P 06 23 35.4 +0.4**
comp=Z,78nm,1.3s,mb5.6
TCF Toulx Ste Croi 88.62 316⇑*iP* **P 06 23 35.4 +0.4**
comp=Z,39nm,1.3s,mb5.6
TCF Toulx Ste Croi 88.62 316⇑*iP* **P 06 23 35.4 +0.4**
TCF pmax pmax
comp=Z,39nm,1.3s,mb5.6
BER Bergen 88.65 331 *e* S 06 34 10.6 -8.9
BER *e*SS SS 06 40 11.0 +0.1
BER AMS AMS 07 08 05.5
comp=Z,3μm,20.6s,MS5.7
VNA3 Neumayer Olymp 88.89 199 *e*P **P 06 23 35.6 -0.2**
VNA3 *e* 06 23 39.0
EPOB Poblet 88.93 311 P **P 06 23 37.9 +1.2**
comp=Z,25nm,1.3s,mb5.4
RJF Les Rejaudoux 89.00 315⇑*iP* **P 06 23 37.5 +0.6**
comp=Z,102nm,1.0s,mb5.8
RJF *e*MLR MLR
comp=Z,1μm,23.0s,MS5.0
RJF Les Rejaudoux 89.00 315⇑*iP* **P 06 23 37.5 +0.6**
comp=Z,51nm,1.0s,mb5.8
RJF LR LR
comp=Z,1μm,23.0s,MS5.3
RJF Les Rejaudoux 89.00 315⇑*iP* **P 06 23 37.5 +0.6**
RJF pmax pmax
comp=Z,51nm,1.0s,mb5.8

RJF MLR MLR
comp=Z,1µm,23.0s,MS5.3
BILL Bilibino 89.20 22⇑ *i*P **P 06 23 38.8 +1.5**
BILL *e*AP pP 06 23 47.2 +0.7
BILL *e*PP PP 06 27 07.6 -0.2
BILL *e*S S 06 34 04.2 -20
BILL pmax pmax
comp=Z,25nm,1.6s,mb5.3
ERTA Horta de San J 89.45 311 P **P 06 23 40.4 +1.3**
comp=Z,35nm,1.1s,mb5.6
LFF La Frestale 89.51 315⇑ *i*P **P 06 23 40.1 +0.8**
comp=Z,91nm,0.9s,mb5.8
LFF La Frestale 89.51 315⇑ *i*P **P 06 23 40.1 +0.8**
comp=Z,45nm,0.9s,mb5.8
LFF La Frestale 89.51 315⇑ *i*P **P 06 23 40.1 +0.8**
LFF pmax pmax
comp=Z,45nm,0.9s,mb5.8
EPF Esparros 89.63 313 *e*P **P 06 23 40.2 +0.3**
EBEN Beniarda 89.70 309 P **P 06 23 42.1 +1.8**
comp=Z,37nm,1.1s,mb5.6
EBIE Bielsa 89.74 313 P **P 06 23 41.9 +1.4**
comp=Z,24nm,1.3s,mb5.4
EMOS Mosqueruela 90.02 310 P **P 06 23 43.9 +2.1**
comp=Z,38nm,1.2s,mb5.6
MFF Saint Martin d 90.27 316⇑ *i*P **P 06 23 43.0 +0.2**
comp=Z,107nm,1.2s,mb5.8
MFF Saint Martin d 90.27 316⇑ *i*P **P 06 23 43.0 +0.2**
comp=Z,54nm,1.2s,mb5.8
MFF Saint Martin d 90.27 316⇑ *i*P **P 06 23 43.0 +0.2**
MFF pmax pmax
comp=Z,54nm,1.2s,mb5.8
ETSF Etsaut 90.28 313 *e*P **P 06 23 43.8 +0.9**
comp=Z,184nm,1.7s,mb5.8
ETSF Etsaut 90.28 313 *e*P **P 06 23 43.8 +0.9**
comp=Z,92nm,1.7s,mb5.8
ETSF Etsaut 90.28 313 *e*P **P 06 23 43.8 +0.9**
ETSF pmax pmax
comp=Z,92nm,1.7s,mb5.8
ECHE Chera 90.34 309 P **P 06 23 45.5 +2.3**
comp=Z,13nm,0.9s,mb5.3
ECHE Chera 90.34 309 P **P 06 23 45.5 +2.2**
ECHE pmax pmax
comp=Z,13nm,0.9s,mb5.3
KBS Kingsbay 90.38 349 PFAKE 06 23 50.0 +7.3
KBS LR LR
comp=Z,3µm,20.0s,MS5.7
KBS Kingsbay 90.38 349 AMS AMS 07 09 47.1
comp=Z,3µm,16.5s,MS5.7
LDF La Druitiere 90.41 318 *e*P **P 06 23 43.5 +0.1**
comp=Z,147nm,1.3s,mb5.8
LDF La Druitiere 90.41 318 *e*P **P 06 23 43.5 +0.1**
comp=Z,73nm,1.3s,mb5.8
LDF La Druitiere 90.41 318 *e*P **P 06 23 43.5 +0.1**
LDF pmax pmax
comp=Z,73nm,1.3s,mb5.8
EMUR La Murta 90.43 308 P **P 06 23 45.0 +1.3**
comp=Z,17nm,0.9s,mb5.4
FLN La Foliniere 90.66 319⇑ *i*P **P 06 23 44.5 -0.1**
comp=Z,83nm,1.0s,mb5.7
FLN *e*MLR MLR
comp=Z,970nm,20.2s,MS4.9
FLN La Foliniere 90.66 319⇑ *i*P **P 06 23 44.5 -0.1**
comp=Z,42nm,1.0s,mb5.7
FLN LR LR
comp=Z,970nm,20.3s,MS5.2
FLN La Foliniere 90.66 319⇑ *i*P **P 06 23 44.5 -0.1**
FLN pmax pmax
comp=Z,42nm,1.0s,mb5.7
FLN MLR MLR
comp=Z,970nm,20.3s,MS5.2
ETOB Tobarra 90.73 308 P **P 06 23 46.0 +0.9**
comp=Z,17nm,0.8s,mb5.4
SJPF Ste Jean 90.78 313 *e*P **P 06 23 46.1 +0.9**
comp=Z,114nm,1.1s,mb5.8
SJPF Ste Jean 90.78 313 *e*P **P 06 23 46.1 +0.9**
comp=Z,57nm,1.1s,mb5.8
SJPF Ste Jean 90.78 313 *e*P **P 06 23 46.1 +0.9**
SJPF pmax pmax
comp=Z,57nm,1.1s,mb5.8
GRR Gorron 90.89 318⇑ *i*P **P 06 23 45.7 +0.1**
comp=Z,138nm,1.3s,mb5.8
GRR Gorron 90.89 318⇑ *i*P **P 06 23 45.7 +0.1**
comp=Z,69nm,1.3s,mb5.8
GRR Gorron 90.89 318⇑ *i*P **P 06 23 45.7 +0.1**
GRR pmax pmax
comp=Z,69nm,1.3s,mb5.8
ELIZ Elizondo 91.00 313 P **P 06 23 48.1 +1.9**
comp=Z,70nm,1.5s,mb5.8
ELIZ Elizondo 91.00 313 P **P 06 23 48.1 +1.8**
ELIZ pmax pmax
comp=Z,70nm,1.5s,mb5.8
SMY Shemya 91.07 37 PFAKE 06 24 00.0 +14
SMY LR LR
comp=Z,1µm,19.0s,MS5.3
SKP1 Kophill 91.09 322 *e*P **P 06 23 45.7 -0.8**
ETOR Torete 91.25 311 P **P 06 23 49.6 +2.2**
comp=Z,12nm,0.9s,mb5.2
ETOR Torete 91.25 311 P **P 06 23 49.7 +2.2**
ETOR pmax pmax
comp=Z,12nm,0.9s,mb5.2
CWF Charnwood Fore 91.46 323 *e*P **P 06 23 47.6 -0.6**
EVIA Vianos 91.47 308 P **P 06 23 50.1 +1.5**
comp=Z,8.4nm,0.7s,mb5.2
EVIA Vianos 91.47 308 P **P 06 23 50.1 +1.5**
EVIA pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
KBI1 Birley Grange 91.63 323 *e*P **P 06 23 48.5 -0.4**
EBER Berja 91.69 307 P **P 06 23 50.6 +1.0**
comp=Z,39nm,1.3s,mb5.6
ECRI Cripan 91.69 312 P **P 06 23 51.0 +1.6**
comp=Z,30nm,1.1s,mb5.5
ECRI Cripan 91.69 312 P **P 06 23 51.0 +1.5**
ECRI pmax pmax
comp=Z,30nm,1.1s,mb5.5
HPK Haverah Park 91.72 324 *e*P **P 06 23 48.0 -1.4**
HPK AMb AMB 06 23 52.9
comp=Z,113nm,1.6s,mb5.9
HPK AMS AMS 07 09 57.8
comp=Z,1µm,18.2s,MS5.4
HPK Haverah Park 91.72 324 P **P 06 23 48.0 -1.4**
HPK AMb AMB 06 23 52.9
comp=Z,113nm,1.6s,mb5.9
KWE Weaver Farm 91.80 323 *e*P **P 06 23 48.8 -1.0**
LHO Holmfirth 91.84 323 *e*P **P 06 23 50.1 +0.2**
EQES Quesada 91.88 308 P **P 06 23 50.9 +0.4**
comp=Z,13nm,1.0s,mb5.2
DBIC Dimbokro 91.95 277 P **P 06 23 51.4 +0.1**
comp=Z,49nm,1.1s,mb5.8,baz=80,slow=5.5,SNR=18
DBIC LR LR 07 03 41.3
comp=Z,2µm,20.0s,MS5.6,baz=75,slow=35
SGMF Saint Gilles 92.01 318 *e*P **P 06 23 50.8 0.0**
comp=Z,60nm,1.2s,mb5.5
SGMF Saint Gilles 92.01 318 *e*P **P 06 23 50.8 0.0**
comp=Z,30nm,1.2s,mb5.5
SGMF Saint Gilles 92.01 318 *e*P **P 06 23 50.8 0.0**
SGMF pmax pmax
comp=Z,30nm,1.2s,mb5.5
LIC Lamto 92.09 276⇑ *i*P **P 06 23 51.7 -0.3**
comp=Z,124nm,1.1s,mb5.8,baz=100
LIC *e*MLR MLR
comp=Z,2µm,20.8s,MS5.3
LIC Lamto 92.09 276⇑ *i*P **P 06 23 51.7 -0.3**
comp=Z,62nm,1.1s,mb5.8
LIC LR LR
comp=Z,1µm,20.8s,MS5.3
XAL Allendale 92.12 325 *e*P **P 06 23 51.1 0.0**
XSO Sourhope Farm 92.17 325 *e*P **P 06 23 50.1 -1.3**
HAE Alders End 92.18 322 *e*P **P 06 23 50.8 -0.7**
ECOG Cogollos-Vega 92.25 307 P **P 06 23 52.5 +0.3**
comp=Z,13nm,0.9s,mb5.3
ECOG Cogollos-Vega 92.25 307 P **P 06 23 52.5 +0.3**
ECOG pmax pmax
comp=Z,13nm,0.9s,mb5.3
HGH Gray Hill 92.33 321 *e*P **P 06 23 51.8 -0.4**
HGN *e*P 05 57 48.9
comp=Z,69nm,1.6s
QUIF Quistinic 92.40 318 *e*P **P 06 23 52.3 -0.3**
comp=Z,128nm,1.6s,mb5.7
QUIF Quistinic 92.40 318 *e*P **P 06 23 52.3 -0.3**
comp=Z,64nm,1.6s,mb5.7
QUIF Quistinic 92.40 318 *e*P **P 06 23 52.3 -0.3**
QUIF pmax pmax
comp=Z,64nm,1.6s,mb5.7
EBAN Banos Encina 92.46 308 P **P 06 23 54.2 +1.0**
comp=Z,9.4nm,0.6s,mb5.3
EBAN Banos Encina 92.46 308 P **P 06 23 54.2 +1.1**
EBAN pmax pmax
comp=Z,9.0nm,0.6s,mb5.3
MCH1 Michaelchurch 92.46 322 *e*P **P 06 23 53.5 +0.7**
MCH1 AMb AMB 06 23 58.3
comp=Z,65nm,1.7s,mb5.7
ROSF Rostrenen 92.49 318 *e*P **P 06 23 52.8 -0.2**
ESDC Sonseca Array 92.66 309 P **P 06 23 54.0 0.0**
comp=Z,6.0nm,0.6s,mb5.2
ESDC Sonseca Array 92.66 309 P **P 06 23 54.9 +0.9**
comp=Z,5.9nm,0.8s,mb5.0,baz=81,slow=4.1,SNR=15
ESDC PP PP 06 27 37.3 +1.3
comp=Z,18nm,1.3s,baz=83,slow=6.7,SNR=5.9
ESDC LR LR 07 05 03.1
comp=Z,675nm,20.4s,MS5.1,baz=70,slow=35
ESLA Sonseca Array 92.66 309 PFAKE 06 24 10.0 +16
ESLA LR LR
comp=Z,6µm,21.0s,MS6.0
ECK Cauldkaine Hil 92.66 325 *e*P **P 06 23 53.5 -0.2**
EKA Eskdalemuir Ar 92.68 325 P **P 06 23 53.9 +0.1**
comp=Z,6.7nm,0.7s,mb5.2,baz=92,slow=4.0,SNR=17
BHH Howats Hill 92.71 325 *e*P **P 06 23 53.3 -0.5**
ESK Eskdalemuir 92.71 325 *e*P **P 06 23 54.1 +0.3**
ESK AMb AMB 06 23 56.8
comp=Z,83nm,1.6s,mb5.9
ESK AMS AMS 07 13 18.4
comp=Z,2µm,17.6s,MS5.6
ESK Eskdalemuir 92.71 325 P **P 06 23 54.1 +0.3**
ESK AMb AMB 06 23 56.8
comp=Z,83nm,1.6s,mb5.9
ESK Eskdalemuir 92.71 325 *e*P **P 06 23 55.4 +1.5**
comp=Z,30nm,1.0s,mb5.7
ESK *e*pP pP 06 24 05.2 +2.2
ESK LR LR
comp=Z,2µm,19.0s,MS5.5
ESK Eskdalemuir 92.71 325 *e*P **P 06 23 55.4 +1.5**
ESK *e**PP pP 06 24 05.2 +2.1
ESK pmax pmax
comp=Z,30nm,1.0s,mb5.7
ESK MLR MLR
comp=Z,2µm,19.0s,MS5.5
EDI Edinburgh 92.72 326 *e*P **P 06 23 54.1 +0.2**
EDI AMb AMB 06 23 57.4
comp=Z,56nm,1.8s,mb5.7
EDI AMS AMS 07 08 54.2
comp=Z,1µm,20.7s,MS5.4
EDI Edinburgh 92.72 326 P **P 06 23 54.1 +0.2**
EDI AMb AMB 06 23 57.4
comp=Z,56nm,1.8s,mb5.7
MDT Midelt 92.93 303 P **P 06 23 56.3 +0.8**
comp=Z,13nm,1.0s,mb5.3,baz=104,slow=4.5,SNR=9.5
PAB San Pablo 92.95 309 PFAKE 06 24 10.0 +15
PAB LR LR
comp=Z,1µm,21.0s,MS5.3
DYA Yadsworthy 92.99 320 *e*P **P 06 23 55.0 -0.3**
DYA AMb AMB 06 24 04.3
comp=Z,89nm,1.5s,mb6.0
DYA AMS AMS 07 11 24.0
comp=Z,1µm,18.7s,MS5.3
DYA Yadsworthy 92.99 320 P **P 06 23 55.0 -0.3**
DYA AMb AMB 06 24 04.3
comp=Z,89nm,1.5s,mb6.0
EADA Adamuz 93.08 308 P **P 06 23 56.7 +0.6**
comp=Z,3.8nm,0.7s,mb4.9
EMIJ Mijas 93.19 306 P **P 06 23 56.6 0.0**
comp=Z,6.9nm,0.6s,mb5.3
EJIF Jimena Fronter 93.74 306 P **P 06 24 00.3 +1.2**
comp=Z,6.2nm,0.7s,mb5.2
EJIF Jimena Fronter 93.74 306 P **P 06 24 00.3 +1.2**
EJIF pmax pmax
comp=Z,6.0nm,0.7s,mb5.1
ESPR Espera 94.06 307 P **P 06 24 02.1 +1.5**
comp=Z,5.6nm,0.5s,mb5.2
ADK Adak 96.72 38 PFAKE 06 24 20.0 +7.7
ADK LR LR
comp=Z,1µm,20.0s,MS5.4
ASCN Ascension 100.48 261 PFAKE 06 24 40.0 +11
ASCN LR LR
comp=Z,2µm,19.0s,MS5.5
COLA College 107.46 21 PFAKE 06 29 20.0 +12
COLA LR LR
comp=Z,2µm,20.0s,MS5.6
PMR Palmer 108.62 25 PFAKE 06 29 20.0 +10
PMR LR LR
comp=Z,2µm,19.0s,MS5.7
PMSA Palmer Station 108.69 193 PFAKE 06 29 20.0 +9.5
PMSA LR LR
comp=Z,4µm,21.0s,MS6.0
KDAK Kodiak Island 108.81 29 PFAKE 06 29 20.0 +9.1
KDAK LR LR
comp=Z,835nm,21.0s,MS5.3
INK Inuvik 109.73 15 PKKPbc PKKPbc 06 40 14.6 -4.3
comp=Z,2.3nm,1.1s,baz=129,slow=3.7,SNR=7.5
INK PKKPab PKKPab 06 40 26.4 -1.9
comp=Z,3.3nm,1.0s,baz=126,slow=5.9,SNR=5.8
EGAK Eagle 109.86 20 PFAKE 06 29 20.0 +7.3
EGAK LR LR
comp=Z,2µm,19.0s,MS5.8
SFJD Kangerlussuaq 110.02 344 PFAKE 06 29 20.0 +7.1
SFJD LR LR
comp=Z,1µm,20.0s,MS5.6
EFI East Falkland 117.52 204 PFAKE 06 29 40.0 +12
EFI LR LR
comp=Z,2µm,19.0s,MS5.7
YKA Yellowknife Ar 118.92 11 PKP PKPdf 06 29 27.9 -2.1
YKA PP PP 06 30 44.9 -3.7
YKA PKKPbc PKKPbc 06 39 43.2 -4.1
YKA Yellowknife Ar 118.92 11 PKIKP PKPdf 06 29 27.9 -2.2
YKA 06 30 44.9
YKA Yellowknife Ar 118.92 11 PKP PKPdf 06 29 27.9 -2.1
comp=Z,3.1nm,0.9s,baz=342,slow=2.1,SNR=20
YKA PP PP 06 30 44.9 -3.6
comp=Z,1.8nm,1.0s,baz=331,slow=6.5,SNR=4.2
YKA PKKPbc PKKPbc 06 39 43.2 -4.0
comp=Z,2.3nm,0.8s,baz=149,slow=3.8,SNR=23
TBI Tubuai 119.19 119 *e*SP SP 06 40 36.4 -0.8
comp=Z,562nm,25.8s
TBI *e*SS SS 06 47 09.7 -2.5
comp=Z,1µm,27.5s
TBI Tubuai 119.19 119 *e*LR LR 07 05 58.9
comp=Z,4µm,28.8s
PPT Papeete 120.73 113 *e*PS PS 06 40 52.2 -2.7
PPT *e*SS SS 06 47 35.0 +2.6
comp=Z,812nm,26.5s
PPT Papeete 120.73 113 *e*LR LR 07 06 39.9
comp=Z,2µm,21.8s
RCBR Riachuelo 121.97 261 PFAKE 06 29 50.0 +13
RCBR LR LR
comp=Z,1µm,19.0s,MS5.7
SCHQ Schefferville 124.39 342 PKP PKPdf 06 29 39.6 -1.2
baz=4.4,slow=5.0
FCC Fort Churchill 124.76 1 *e*PKPdf PKPdf 06 29 39.8 -1.6
EDM Edmonton 127.63 15 *e*PKPdf PKPdf 06 29 45.0 -2.1
FFC Flin Flon 128.32 6 *e*PKPdf PKPdf 06 29 47.1 -1.3
FFC LR LR
comp=Z,2µm,20.0s,MS5.8
A05A Maple Falls 128.33 24 ⇓P PKPdf 06 29 47.8 -0.7
baz=128
B05A Bryant 128.90 24 ⇑P PKPdf 06 29 48.7 -0.9
baz=129
A07A Ashnola River, 128.96 23 ⇓P PKPdf 06 29 50.0 +0.3
baz=129
A08A Turner Farm, O 129.46 22 ⇓P PKPdf 06 29 50.9 +0.2
baz=129
C05A Tolt Reservoir 129.52 25 ⇓P PKPdf 06 29 50.1 -0.8
baz=129
B07A Winthrop 129.54 23 ⇓P PKPdf 06 29 49.7 -1.1
baz=129
TRQA Tornquist 129.60 212 PFAKE 06 30 00.0 +8.7
TRQA LR LR
comp=Z,2µm,19.0s,MS5.8
A09A Danville 129.69 21 ⇓P PKPdf 06 29 50.8 -0.3
baz=130
D05A Enumclaw 129.79 25 ⇓P PKPdf 06 29 50.8 -0.6
baz=130
B08A Colville Reser 129.92 22 ⇑P PKPdf 06 29 50.8 -0.7
baz=130
A10A Northport 130.06 21 ⇓P PKPdf 06 29 51.7 -0.2
baz=130
C07A Waterville 130.18 23 ⇑P PKPdf 06 29 52.3 +0.2
baz=130
D06A Cle Elum 130.26 24 ⇓P PKPdf 06 29 51.5 -0.8
baz=130
B09A Rice 130.31 22 ⇓P PKPdf 06 29 52.2 -0.2
baz=130
E05A Randle 130.38 26 ⇓P PKPdf 06 29 52.5 0.0
baz=130
A11A Hall Mountain, 130.49 20 ⇑P PKPdf 06 29 53.1 +0.4
baz=130
F04A Amboy 130.57 27 ⇓P PKPdf 06 29 53.1 +0.1
baz=130
D07A Quincy 130.62 24 ⇑P PKPdf 06 29 53.1 +0.2
baz=130
E06A Yakima 130.72 25 ⇑P PKPdf 06 29 53.7 +0.5
baz=131
C09A Chrisman Ranch 130.78 22 ⇑P PKPdf 06 29 53.8 +0.6
baz=131
NEW Newport 130.82 21 PKP PKPdf 06 29 50.6 -2.7
NEW LR LR
comp=Z,2µm,19.0s,MS5.8
NEW Newport 130.82 21 PKP PKPdf 06 29 50.6 -2.7
comp=Z,2.7nm,1.0s,baz=11,slow=10,SNR=2.5
B11A Sandpoint 130.94 20 ⇑P PKPdf 06 29 53.5 0.0
baz=131
H03A Soap Creek Ran 131.13 28 ⇑P PKPdf 06 29 54.5 +0.5
baz=131
A13A Flathead Natio 131.15 18 ⇓P PKPdf 06 29 54.7 +0.8
baz=131
D08A Wollman Farm, 131.15 23 ⇑P PKPdf 06 29 54.5 +0.5
baz=131
E07A Sunnyside 131.18 24 ⇓P PKPdf 06 29 54.0 -0.1
baz=131
COR Corvallis 131.19 28 PFAKE 06 30 10.0 +16
COR LR LR
comp=Z,1µm,21.0s,MS5.6
F06A Goldendale 131.42 26 ⇑P PKPdf 06 29 55.4 +0.9
baz=131
PLCA Paso Flores 131.43 203 PKP PKPdf 06 29 53.3 -1.4
PLCA PP PP 06 32 16.9 +4.5
PLCA LR LR
comp=Z,848nm,20.0s,MS5.4
PLCA Paso Flores 131.43 203 PKhKP 06 29 44.8
comp=Z,1.0nm,0.7s,baz=233,slow=3.5,SNR=3.1
PLCA PKP PKPdf 06 29 53.3 -1.4
comp=Z,14nm,1.2s,baz=186,slow=1.6,SNR=10
PLCA PP PP 06 32 16.9 +4.5
comp=Z,5.1nm,1.0s,baz=152,slow=8.9,SNR=4.7
HAWA Hanford 131.45 24 *e*PKPdf PKPdf 06 29 54.5 0.0
HAWA LR LR
comp=Z,2µm,20.0s,MS5.8
E08A Dider Farm, El 131.56 24 ⇓P PKPdf 06 29 54.7 -0.1
baz=131
RKT Rikitea 131.57 125 *e*LR LR 07 11 49.0
comp=Z,482nm,23.6s
B13A Whitefish 131.62 19 ⇓P PKPdf 06 29 55.6 +0.7
baz=132
H04A Detroit Lake 131.64 27 ⇑P PKPdf 06 29 54.5 -0.5
baz=132
F07A Phinny Hill Vi 131.68 25 ⇓P PKPdf 06 29 55.5 +0.5
baz=132
TAOE Nuku Hiva Isla 131.73 105 *e*LR LR 07 11 50.5
comp=Z,4µm,22.0s
D10A Wagner Farm, O 131.78 22 P PKPdf 06 29 55.7 +0.5
baz=132,SNR=6.1
E09A Wood Farm, Sta 131.90 23 ⇓P PKPdf 06 29 55.1 -0.3
baz=132
G06A Carlson Farm, 131.91 26 ⇓P PKPdf 06 29 55.7 +0.3
baz=132
H05A Madras 132.10 27 ⇑P PKPdf 06 29 55.7 -0.1
baz=132
C13A Hot Springs 132.20 19 ⇓P PKPdf 06 29 55.9 -0.1
baz=132
I04A Tendick Farm, 132.21 28 ⇓P PKPdf 06 29 55.7 -0.3
baz=132
J03A Ideyld Park 132.26 29 ⇑P PKPdf 06 29 56.2 0.0
baz=132
G07A Ruggs Ranch, H 132.29 25 ⇑P PKPdf 06 29 55.9 -0.3
baz=132
E10A Myers Farm, Un 132.32 22 ⇑P PKPdf 06 29 56.1 -0.1
baz=132
C14A Swan Lake 132.39 19 ⇑P PKPdf 06 29 56.4 +0.1
baz=132
H06A Lindquist Farm 132.43 26 ⇑P PKPdf 06 29 56.0 -0.5
baz=132
I05A Bend 132.46 27 ⇓P PKPdf 06 29 56.6 +0.1
baz=132
D12A Red Ives Fores 132.47 20 ⇓P PKPdf 06 29 56.2 -0.3
baz=132
G08A Pilot Rock 132.57 25 ⇓P PKPdf 06 29 56.4 -0.3
baz=132
F09A S2 Ranch, Elgi 132.66 23 ⇓P PKPdf 06 29 56.4 -0.5
baz=132
F10A Beach Ranch, E 132.70 23 ⇓P PKPdf 06 29 56.6 -0.3
baz=133,SNR=7.0
D13A Huson 132.74 20 ⇑P PKPdf 06 29 56.5 -0.5
baz=133
E11A Bogner Ranch, 132.76 22 P PKPdf 06 29 57.9 +0.8
baz=133,SNR=6.1
J04A Umpqua Nationa 132.77 29 ⇓P PKPdf 06 29 56.6 -0.6
baz=133
H07A Lands Inn, Kim 132.88 26 ⇓P PKPdf 06 29 57.0 -0.3
baz=133
D14A Greenough 133.07 19 ⇑P PKPdf 06 29 57.7 +0.1
baz=133
I06A Prineville 133.11 27 ⇓P PKPdf 06 29 57.4 -0.4
baz=133
MSO Missoula 133.15 19 *e*PKPdf PKPdf 06 29 57.4 -0.3
MSO LR LR
comp=Z,1µm,19.0s,MS5.7
J05A Fort Rock 133.15 28 ⇓P PKPdf 06 29 57.7 -0.2
baz=133
F11A Grangeville 133.18 22 P PKPdf 06 29 56.9 -1.0
baz=133,SNR=8.1
ULM Lac du Bonnet 133.24 2 PKP PKPdf 06 29 56.5 -1.3
baz=14,slow=4.0
ULM PP PP 06 32 20.1 -3.5
baz=345,slow=8.9
PKME Peaks-Kenny Pk 133.28 337 PFAKE 06 30 10.0 +12
PKME LR LR
comp=Z,2µm,19.0s,MS5.8
CHMT Chamberlain Mo 133.30 19 *e*PKPdf PKPdf 06 29 57.1 -0.9
I07A Izee 133.31 26 ⇓P PKPdf 06 29 58.4 +0.2
baz=133
G10A Bishop Farm, J 133.31 23 ⇓P PKPdf 06 29 57.8 -0.3
baz=133
EGMT Eagleton 133.31 15 *e*PKPdf PKPdf 06 29 57.9 -0.2
EGMT *e*SKPbc SKPbc 06 33 22.7 -1.7
EGMT LR LR
comp=Z,1µm,20.0s,MS5.6
EGMT Eagleton 133.31 15 ⇑P PKPdf 06 29 57.9 -0.1
baz=133
H08A Prairie City 133.32 25 ⇑P PKPdf 06 29 58.6 +0.4
baz=133
E13A Victor 133.40 20 ⇑P PKPdf 06 29 58.1 -0.1
baz=133
D15A Lincoln 133.42 18 ⇑P PKPdf 06 29 57.9 -0.3
baz=133
G11A Walters Elk Ra 133.55 22 ⇓P PKPdf 06 29 57.8 -0.7
baz=133
YBH Yreka Blue Hor 133.60 31 PFAKE 06 30 10.0 +11
YBH LR LR
comp=Z,960nm,21.0s,MS5.5
BMO Blue Mountains 133.60 24 PFAKE 06 30 10.0 +11
BMO LR LR
comp=Z,2µm,20.0s,MS5.8
E14A Clinton 133.66 19 ⇑P PKPdf 06 29 58.4 -0.3
baz=134
J06A Christmas Vall 133.68 27 ⇓P PKPdf 06 29 58.5 -0.4
baz=134
K05A Summer Lake 133.74 28 ⇑P PKPdf 06 29 59.0 0.0
baz=134
M02C Callahan 133.77 31 ⇓P PKPdf 06 29 58.7 -0.4
baz=134
F13A Darby 133.92 20 ⇓P PKPdf 06 29 59.1 -0.1
baz=134
J07A Hines 133.96 26 ⇓P PKPdf 06 29 59.2 -0.2
baz=134
K06A Valley Falls 133.98 28 ⇑P PKPdf 06 29 59.2 -0.2
baz=134
H10A Noah's Angus R 134.04 23 ⇓P PKPdf 06 29 58.4 -1.1
baz=134
DGMT Dagmar 134.11 10 PFAKE 06 30 10.0 +11
DGMT LR LR
comp=Z,2µm,21.0s,MS5.9
M03C McCloud 134.23 30 ⇓P PKPdf 06 29 59.5 -0.4
baz=134
H11A Donnelly 134.24 23 P PKPdf 06 29 58.9 -1.0
baz=134,SNR=9.3
L05A Lakeview 134.29 29 ⇑P PKPdf 06 30 00.2 +0.2
baz=134
J08A Circle Bar Ran 134.34 26 ⇑P PKPdf 06 29 59.9 -0.2
baz=134
PTCN Pitcairn Islan 134.44 130 PFAKE 06 30 10.0 +9.2
PTCN LR LR
comp=Z,2µm,20.0s,MS5.7

F15A Butte 134.49 19 ⇑P PKPdf 06 30 00.9 +0.6
baz=134
K07A Rock Creek Ran 134.53 27 ⇓P PKPad 06 30 00.2 -0.2
baz=134
WDC Whiskeytown Da 134.53 31 PFAKE 06 30 10.0 +9.5
WDC LR LR
comp=Z,1μm,20.0s,MS5.7
WDC Whiskeytown Da 134.53 31 ⇑P PKPdf 06 29 59.9 -0.7
G13A Cobalt 134.56 21 ⇑P PKPdf 06 30 00.5 0.0
baz=134
MOD Modoc 134.65 28 ePKPdf PKPdf 06 30 01.4 +0.7
MOD LR LR
comp=Z,1μm,20.0s,MS5.6
MOD Modoc 134.65 28 ⇑P PKPdf 06 30 01.1 +0.3
baz=134
J09A Fry Pan Ranch, 134.66 25 ⇓P PKPdf 06 30 00.5 -0.2
baz=134
M05C Lookout 134.66 30 ⇓P PKPdf 06 30 00.5 -0.3
baz=135
G14A Jackson 134.70 20 ⇑P PKPdf 06 30 00.7 0.0
baz=135
H12A Diamond D Ranc 134.80 22 ⇑P PKPdf 06 30 01.5 +0.6
baz=135
K08A Mann Creek Ran 134.84 26 ⇓P PKPdf 06 30 00.8 -0.2
baz=135
DLMT Dillon 134.88 19 ePKPdf PKPdf 06 30 01.5 +0.5
BOZ Bozeman (W) 134.94 18 ePKPdf PKPdf 06 30 01.0 -0.1
BOZ LR LR
comp=Z,2μm,20.0s,MS5.7
BOZ Bozeman (W) 134.94 18 ⇑P PKPdf 06 30 01.4 +0.2
baz=135
WVOR Wild Horse Val 135.01 27 ePKPdf PKPdf 06 30 01.9 +0.6
WVOR LR LR
comp=Z,966nm,20.0s,MS5.5
H13A Challis 135.01 21 ⇑P PKPdf 06 30 01.3 0.0
baz=135
L07A Adell 135.01 28 ⇑P PKPdf 06 30 01.5 +0.1
baz=135
G15A Dillon 135.09 19 ⇑P PKPdf 06 30 01.4 0.0
baz=135
M06C Likely Place G 135.10 29 ⇑P PKPdf 06 30 01.1 -0.5
baz=135
LBNH Lisbon 135.15 338 PFAKE 06 30 10.0 +8.4
LBNH LR LR
comp=Z,2μm,20.0s,MS5.7
AGMN Agassiz Refuge 135.19 2 ePKPdf PKPdf 06 30 00.0 -1.5
AGMN LR LR
comp=Z,2μm,22.0s,MS5.8
K09A Rome 135.19 26 ⇓P PKPdf 06 30 02.0 +0.3
baz=135
L08A Fields 135.33 27 ⇑P PKPdf 06 30 02.7 +0.7
baz=135
HOPS Hopland 135.38 33 PFAKE 06 30 10.0 +7.8
HOPS LR LR
comp=Z,1μm,21.0s,MS5.7
MFID Camas Ranch 135.39 23 ⇓P PKPdf 06 30 02.0 0.0
baz=135
LAO LASA Array 135.41 13 ePKPdf PKPdf 06 30 02.4 +0.4
LAO LR LR
comp=Z,2μm,20.0s,MS5.7
O04C Chester 135.47 31 ⇓P PKPdf 06 30 02.8 +0.5
baz=135
K10A MacKenzie Ranc 135.49 25 ⇓P PKPdf 06 30 02.4 +0.1
baz=135
EYMN Ely 135.57 358 PFAKE 06 30 10.0 +7.7
EYMN LR LR
comp=Z,1μm,20.0s,MS5.7
M07A Soldier Meadow 135.59 28 ⇓P PKPdf 06 30 02.4 -0.1
baz=136
I13A Wildhorse Cree 135.62 22 ⇓P PKPdf 06 30 03.0 +0.5
baz=136
LONY Lake Ozonia 135.74 341 PFAKE 06 30 10.0 +7.3
LONY LR LR
comp=Z,2μm,22.0s,MS5.7
N06A Buffalo Meadow 135.76 29 ⇑P PKPdf 06 30 02.4 -0.5
baz=136
L09A Wilkinson Ranc 135.77 26 ⇑P PKPdf 06 30 02.7 -0.1
baz=136
HLID Hailey 135.81 22 ePKPdf PKPdf 06 30 03.0 +0.1
HLID LR LR
comp=Z,1μm,21.0s,MS5.7
HLID Hailey 135.81 22 ⇓P PKPdf 06 30 03.0 +0.1
baz=136
J12A Stokes Ranch, 135.82 23 ⇑P PKPdf 06 30 02.8 -0.1
baz=136
ORV Oroville 135.82 32 ⇓P PKPdf 06 30 03.2 +0.3
baz=136
M08A Happy Creek Ra 135.91 27 ⇓P PKPdf 06 30 03.2 +0.1
baz=136
YMR Madison River 136.03 18 PFAKE 06 30 10.0 +6.8
YMR LR LR
comp=Z,3μm,20.0s,MS6.0
J13A Cove Ranch, Pi 136.04 22 ⇑P PKPdf 06 30 04.0 +0.7
baz=136
MCCM Marconi Confer 136.09 34 PFAKE 06 30 10.0 +6.5
MCCM LR LR
comp=Z,1μm,19.0s,MS5.6
RLMT Red Lodge 136.12 16 PFAKE 06 30 10.0 +6.6
RLMT LR LR
comp=Z,2μm,20.0s,MS5.9
N07B Gerlach 136.16 28 ⇓P PKPdf 06 30 03.6 +0.1
baz=136
BEKR Beckwourth 136.18 30 ⇓P PKPdf 06 30 03.5 -0.1
baz=136
NCB Newcomb 136.20 340 PFAKE 06 30 20.0 +16
NCB LR LR
comp=Z,1μm,20.0s,MS5.6
O06A Flanigan 136.22 30 ⇓P PKPdf 06 30 03.2 -0.5
baz=136
L10A Juniper Basin 136.24 25 ⇑P PKPdf 06 30 03.2 -0.5
baz=136
YFT Old Faithful 136.26 18 ePKPdf PKPdf 06 30 05.5 +1.8
LKWY Lake 136.29 18 ePKPdf PKPdf 06 30 05.0 +1.3
LKWY LR LR
comp=Z,2μm,20.0s,MS5.8
M09A Marrel Ranch, 136.34 26 ⇑P PKPdf 06 30 04.0 +0.1
baz=136
K12A Draper Farm, C 136.41 23 ⇓P PKPdf 06 30 04.1 +0.1
baz=136
HRV Harvard--Oak R 136.48 337 PFAKE 06 30 20.0 +16
HRV LR LR
comp=Z,1μm,20.0s,MS5.6
WES Weston 136.49 336 PFAKE 06 30 20.0 +16
WES LR LR
comp=Z,1μm,19.0s,MS5.6
N08A GE Springer Mi 136.55 28 ⇓P PKPdf 06 30 04.2 -0.1
baz=136
P06A Stead Airport, 136.55 30 ⇓P PKPdf 06 30 04.2 -0.1
baz=136
FLWY Flagg Ranch 136.64 18 ePKPdf PKPdf 06 30 04.6 +0.3
M10A I.L. Ranch, Tu 136.66 26 ⇓P PKPdf 06 30 04.4 -0.1
baz=136
O07A Toulon 136.68 29 ⇑P PKPdf 06 30 04.4 -0.1
baz=137
K13A Stover Farm, H 136.72 22 ⇑P PKPdf 06 30 04.7 +0.1
baz=137
IMW Indian Meadow 136.73 19 ePKPdf PKPdf 06 30 01.0 -3.5
N09A Rock Creek Ran 136.77 27 ⇓P PKPdf 06 30 04.6 -0.1
baz=137
L12A House Creek Ra 136.78 24 ⇓P PKPdf 06 30 04.6 -0.1
baz=137
LAVA Lava Cap Winer 136.81 32 ⇑P PKPdf 06 30 04.9 0.0
baz=137
WCN Washoe City 136.91 30 ⇓P PKPdf 06 30 05.4 +0.4
baz=137
DCID1 Drake Creek 136.92 19 ePKPdf PKPdf 06 30 06.8 +1.9
SADO Sadowa 136.94 345 PKP PKPdf 06 30 03.4 -1.5
baz=304,slow=3.6
M11A Holland Ranch, 137.06 25 ⇓P PKPdf 06 30 05.5 +0.3
baz=137
TPAW Teton Pass 137.09 19 ePKPdf PKPdf 06 30 01.1 -4.1
LOHW Long Hollow 137.09 19 ePKPdf PKPdf 06 30 05.3 +0.1
K14A Jones Ranch, D 137.15 22 ⇑P PKPdf 06 30 05.6 +0.3
baz=137
SNOW Snow King Moun 137.18 19 ePKPdf PKPdf 06 30 05.5 +0.1
R05C Kirkwood Meado 137.19 31 ⇑P PKPdf 06 30 05.2 -0.4
baz=137
REDW Red Top Meadow 137.23 19 ePKPdf PKPdf 06 30 01.2 -4.2
L13A Double Diamond 137.25 23 ⇑P PKPdf 06 30 06.2 +0.6
baz=137
M12A Wells 137.44 24 ⇓P PKPdf 06 30 06.7 +0.8
baz=137
O09A Fish Creek Ran 137.47 27 ⇓P PKPdf 06 30 07.0 +1.0
baz=137
CMB Columbia Colle 137.53 32 PFAKE 06 30 20.0 +14
CMB LR LR
comp=Z,754nm,20.0s,MS5.4
CMB Columbia Colle 137.53 32 ⇓P PKPdf 06 30 06.6 +0.4
baz=137
N11A Elko Archery C 137.59 25 ⇑P PKPdf 06 30 06.5 +0.2
baz=138
R06C Coleville 137.65 31 ⇑P PKPdf 06 30 07.2 +0.8
baz=138
O10A Cortez Mining, 137.68 27 ⇑P PKPdf 06 30 06.8 +0.4
baz=138
AHID Auburn Hatcher 137.69 20 PFAKE 06 30 20.0 +14
AHID LR LR
comp=Z,791nm,20.0s,MS5.5
M13A Montello 137.78 24 ⇓P PKPdf 06 30 07.6 +1.0
baz=138
N12A Clover Valley, 137.85 25 ⇑P PKPdf 06 30 07.5 +0.8
baz=138
ELK Elko 137.86 25 PFAKE 06 30 20.0 +13
ELK LR LR
comp=Z,54nm,21.0s,MS4.3
SAO San Andreas Ge 137.87 34 PFAKE 06 30 20.0 +13
SAO LR LR
comp=Z,644nm,22.0s,MS5.3
M14A Sheep Mountain 137.98 23 ⇓P PKPdf 06 30 07.2 +0.2
baz=138
GLMI Grayling 138.02 351 PFAKE 06 30 20.0 +13
GLMI LR LR
comp=Z,2μm,20.0s,MS5.8
S05C Merced 138.06 33 ⇓P PKPdf 06 30 07.4 +0.1
baz=138
HAST UC Hastings Re 138.07 35 ⇓P PKPdf 06 30 08.0 +0.7
baz=138
Q08A Gabbs 138.15 29 ⇑P PKPdf 06 30 05.2 -2.1
baz=138
BW06 Boulder Array 138.18 18 PFAKE 06 30 20.0 +13
BW06 LR LR
comp=Z,1μm,21.0s,MS5.7
PDAR Pinedale Array 138.18 18 PKP PKPdf 06 30 06.6 -0.7
PDAR PP PP 06 32 57.2 +2.2
PDAR Pinedale Array 138.18 18 PKhKP 06 29 56.1
comp=Z,0.6nm,0.6s,baz=103,slow=3.1,SNR=6.8
PDAR PKP PKPdf 06 30 06.6 -0.7
comp=Z,4.6nm,0.8s,baz=78,slow=1.1,SNR=12
PDAR PP PP 06 32 57.2 +2.2
comp=Z,2.0nm,0.9s,baz=289,slow=2.8,SNR=3.3
O11A Cowboy Ranch, 138.19 26 ⇓P PKPdf 06 30 06.0 -1.3
baz=138
NVAR Mina Array Bea 138.30 30 PKP PKPdf 06 30 07.4 -0.2
comp=Z,6.7nm,0.8s,baz=302,slow=1.0,SNR=19
RSSD Black Hills 138.32 12 ePKPdf PKPdf 06 30 06.7 -0.7
RSSD LR LR
comp=Z,2μm,20.0s,MS5.8
BINY Binghamton 138.36 341 ePKPdf PKPdf 06 30 06.5 -1.1
BINY LR LR
comp=Z,2μm,20.0s,MS5.8
O12A Currie 138.47 25 ⇓P PKPdf 06 30 06.7 -1.2
baz=138
HWUT Hardware Ranch 138.55 21 ePKPdf PKPdf 06 30 03.4 -4.6
HWUT LR LR
comp=Z,1μm,20.0s,MS5.7
N14A Grayback Hills 138.60 23 ⇑P PKPdf 06 30 07.7 -0.4
baz=138
T06C Millerton Lake 138.65 33 ⇑P PKPdf 06 30 08.0 -0.3
baz=139
O13A Hicks Ranch, I 138.90 24 ⇓P PKPdf 06 30 08.6 0.0
baz=139
Q10A Clear Creek Ra 138.91 28 ⇑P PKPdf 06 30 09.1 +0.3
baz=139
PKD Parkfield 138.96 34 ⇑P PKPdf 06 30 08.6 -0.3
baz=139
MTUM Tungsten Hills 139.00 31 ePKPdf PKPdf 06 30 04.2 -4.8
P12A McGill 139.06 26 ⇑P PKPdf 06 30 08.7 -0.2
baz=139
R09A Tonopah 139.06 29 ⇓P PKPdf 06 30 08.8 -0.2
baz=139
S08C White Mtn Res 139.09 31 ⇑P PKPdf 06 30 08.2 -0.8
baz=139
Q11A Duckwater 139.24 27 ⇑P PKPdf 06 30 08.7 -0.6
baz=139
DUG Dugway 139.31 23 ePKPdf PKPdf 06 30 01.9 -7.5
DUG LR LR
comp=Z,1μm,21.0s,MS5.6
DUG Dugway 139.31 23 ⇓P PKPdf 06 30 09.6 +0.2
baz=139
R10A Warm Springs 139.39 28 ⇑P PKPdf 06 30 09.5 -0.1
baz=139
S09A Goldfield 139.39 30 ⇑P PKPdf 06 30 09.2 -0.5
baz=139
Q12A Willow Creek R 139.45 26 ⇓P PKPdf 06 30 08.7 -1.0
baz=139
P13A Bates Ranch, G 139.45 25 ⇓P PKPdf 06 30 08.3 -1.4
baz=139
S10A Tonopah Range, 139.54 29 ⇓P PKPdf 06 30 09.0 -0.8
baz=139
ERPA Erie 139.63 345 PFAKE 06 30 20.0 +10
ERPA LR LR
comp=Z,1μm,21.0s,MS5.7
R11A Troy Canyon, C 139.67 27 ⇑P PKPdf 06 30 08.9 -1.2
baz=140
TRCR Troy Canyon 139.67 27 ePKPdf PKPdf 06 30 10.6 +0.5
ECSD EROS,Sioux Fal 139.70 4 ePKPdf PKPdf 06 30 02.9 -7.1
ECSD LR LR
comp=Z,2μm,22.0s,MS5.8
DAU Daniels Canyon 139.71 21 ePKPdf PKPdf 06 30 10.4 +0.3
RWWY Rawlins 139.86 16 ePKPdf PKPdf 06 30 04.1 -6.2
Q13A Wheeler Ranch, 139.87 25 ⇑P PKPdf 06 30 07.9 -2.6
baz=140
MPU Maple Canyon 139.92 22 PFAKE 06 30 20.0 +9.5
MPU LR LR
comp=Z,1μm,22.0s,MS5.6
AAM Ann Arbor 140.30 349 PFAKE 06 30 20.0 +8.9
AAM LR LR
comp=Z,2μm,22.0s,MS5.7
SSPA Standing Stone 140.39 342 PFAKE 06 30 20.0 +8.6
SSPA LR LR
comp=Z,1μm,22.0s,MS5.6
TPNV Topopah Spring 140.48 29 PFAKE 06 30 20.0 +8.4
TPNV LR LR
comp=Z,1μm,20.0s,MS5.7
JFWS Jewell Farm 140.54 356 PFAKE 06 30 20.0 +8.5
JFWS LR LR
comp=Z,2μm,20.0s,MS5.8
MPMC Manual Prospec 140.54 32 ⇓P PKPdf 06 30 07.4 -4.4
baz=140
BBSR BB Station 140.62 320 PFAKE 06 30 20.0 +8.0
BBSR LR LR
comp=Z,1μm,19.0s,MS5.6
PHWY Pilot Hill 140.69 15 ePKPdf PKPdf 06 30 11.1 -0.8
MSU Marysvale 141.01 24 ePKPdf PKPdf 06 30 09.7 -2.8
SRU San Rafael 141.12 22 ePKPdf PKPdf 06 30 11.1 -1.6
EDW2 Edwards Air Fo 141.16 33 ⇑P PKPdf 06 30 09.5 -3.5
baz=141
LCO Las Campanas 141.18 212 PFAKE 06 30 30.0 +17
LCO LR LR
comp=Z,2μm,20.0s,MS5.8
T13A Saint George 141.52 27 ⇓P PKPdf 06 30 10.9 -2.7
baz=141
TUQ Turquoise Mtn. 141.83 31 ⇓P PKPdf 06 30 11.0 -3.1
baz=142
T14A Hurricane 141.85 26 ⇑P PKPdf 06 30 12.4 -1.7
baz=142
MCWV Mont Chateau 141.88 343 PFAKE 06 30 30.0 +16
MCWV LR LR
comp=Z,2μm,20.0s,MS5.9
U13A Pakoon Wash 141.99 28 ⇓P PKPdf 06 30 12.3 -2.1
baz=142
ISCO Idaho Springs 142.06 16 ePKPdf PKPdf 06 30 11.8 -2.5
ISCO LR LR
comp=Z,2μm,22.0s,MS5.8
HEC Hector,Ludlow 142.09 32 ⇓P PKPdf 06 30 11.5 -3.1
baz=142
V12A Nelson 142.13 29 ⇓P PKPdf 06 30 11.9 -2.8
baz=142
ACSO Alum Creek Sta 142.15 347 ePKPdf PKPdf 06 30 09.9 -4.7
ACSO LR LR
comp=Z,1μm,20.0s,MS5.6
T15A Red Dirt Ranch 142.19 25 ⇑P PKPdf 06 30 12.0 -2.8
baz=142
PV10 Paradox Valley 142.31 20 ePKPdf PKPdf 06 30 14.2 -0.7
U14A Mt Trumbull 142.35 27 ⇓P PKPdf 06 30 13.5 -1.6
baz=142
CBN Corbin 142.41 339 PFAKE 06 30 30.0 +15
CBN LR LR
comp=Z,2μm,20.0s,MS5.8
GMRC Granite Mounta 142.47 31 ⇓P PKPdf 06 30 13.8 -1.5
baz=142
PV01 Paradox Valley 142.69 20 ePKPdf PKPdf 06 30 08.4 -7.2
HDIL Hopedale 142.81 355 PFAKE 06 30 30.0 +14
HDIL LR LR
comp=Z,1μm,21.0s,MS5.6
BELC Belle Mtn. 142.90 32 ⇑P PKPad 06 30 14.4 -1.7
baz=143
PFO Pinyon Flat Ob 142.95 33 ePKPdf PKPad 06 30 14.6 -1.6
PFO LR LR
comp=Z,1μm,21.0s,MS5.7
PFO Pinyon Flat Ob 142.95 33 PKhKP 06 30 10.6
comp=Z,3.4nm,0.8s,baz=251,slow=6.4,SNR=4.1
URVA University of 143.03 339 ePKPdf PKPdf 06 30 17.1 +1.0
W13A Hualapai Mount 143.10 29 ⇑P PKPdf 06 30 14.9 -1.5
baz=143
IRM Iron Mountain 143.22 31 ⇑P PKPdf 06 30 15.1 -1.5
baz=143
W14A Seligman 143.39 28 P PKPdf 06 30 15.4 -1.4
baz=143,SNR=9.4
BC3 Big Chuckw Mtn 143.45 32 ⇑P PKPdf 06 30 15.7 -1.4
baz=143
MONP Monument Peak 143.51 34 ⇓P PKPdf 06 30 15.6 -1.6
baz=143
X13A Yucca 143.54 29 ⇑P PKPdf 06 30 16.0 -1.2
baz=143,SNR=6.6
MVCO Mesa Verde 143.54 21 ePKPdf PKPdf 06 30 14.0 -3.1
MVCO LR LR
comp=Z,1μm,20.0s,MS5.6
MVCO Mesa Verde 143.54 21 ⇑P PKPdf 06 30 14.9 -2.2
baz=143
PDMCI Parker Dam,Lak 143.62 30 ⇑P PKPdf 06 30 15.6 -1.8
baz=144
W15A Williams 143.79 27 ⇑P PKPdf 06 30 15.4 -2.2
baz=144,SNR=7.5
SWSC Sam W. Stewart 143.82 33 ⇑P PKPdf 06 30 15.9 -1.8
baz=144
BLO Bloomington 143.84 351 ePKPdf PKPdf 06 30 14.5 -3.0
Y12C Blythe 143.86 31 ⇓P PKPdf 06 30 16.1 -1.7
baz=144
WUAZ Wupatki 143.90 25 ePKPdf PKPdf 06 30 15.9 -1.8
WUAZ LR LR
comp=Z,904nm,19.0s,MS5.6
WUAZ Wupatki 143.90 25 ⇓P PKPdf 06 30 15.6 -2.2
baz=144,SNR=13
SDCO Great Sand Dun 144.01 17 ePKPdf PKPdf 06 30 15.5 -2.4
SDCO LR LR
comp=Z,1μm,19.0s,MS5.8
X14A Yava 144.09 28 ⇓P PKPdf 06 30 16.7 -1.4
baz=144,SNR=17
Y13A Salome 144.16 30 ⇓P PKPdf 06 30 17.2 -1.1
baz=144
CBKS Cedar Bluff 144.24 9 ePKPdf PKPdf 06 30 15.6 -2.7
CBKS LR LR
comp=Z,2μm,22.0s,MS5.8
GLA Glamis 144.25 32 ⇓P PKPdf 06 30 17.2 -1.3
baz=144
KSU1 Kansas State U 144.31 4 ePKPdf PKPdf 06 30 16.2 -2.2
KSU1 LR LR
comp=Z,2μm,22.0s,MS5.8
BLA Blacksburg 144.31 342 ePKPdf PKPdf 06 30 15.6 -2.9
BLA LR LR
comp=Z,1μm,20.0s,MS5.8
X15A Humboldt 144.38 27 ⇓P PKPdf 06 30 17.6 -1.0
baz=144,SNR=35
ELN Prospectdale 144.40 343 ePKPdf PKPdf 06 30 15.9 -2.6
Y14A Wickenburg 144.47 29 ⇓P PKPdf 06 30 18.1 -0.7
baz=144,SNR=18
WCI Wyandotte Cave 144.73 350 ePKPdf PKPdf 06 30 16.6 -2.5
WCI LR LR
comp=Z,1μm,20.0s,MS5.7
SLM Saint Louis 144.79 356 ePKPdf PKPdf 06 30 18.8 -0.4
Z14A Wintersburg 144.96 29 ⇓P PKPdf 06 30 18.6 -1.1
baz=145,SNR=8.3
CEN1 Los Morros 145.16 219 ⇓P PKPbc 06 30 19.6 -0.2
USIN University of 145.19 352 ePKPdf PKPdf 06 30 18.2 -1.8
CNNC Cliffs of the 145.23 338 PFAKE 06 30 30.0 +10
CNNC LR LR
comp=Z,2μm,21.0s,MS5.8
BBGH Gun Hill 145.29 288 PFAKE 06 30 30.0 +10
BBGH LR LR
comp=Z,2μm,20.0s,MS6.0
FVM French Village 145.46 356 ePKPdf PKPdf 06 30 19.1 -1.2
SIUC Southern Illin 145.62 354 ePKPdf PKPdf 06 30 19.9 -0.8
TZTN Tazewell 145.79 346 ePKPdf PKPdf 06 30 20.4 -0.6
TZTN LR LR
comp=Z,1μm,20.0s,MS5.7
DEG La Desirade 145.82 294 eP PKPdf 06 30 20.8 -0.8
115A Sonoran Desert 145.85 29 ⇓P PKPdf 06 30 21.7 +0.4
baz=146,SNR=48
MVM Montagne Vaucl 146.19 291 eP PKPdf 06 30 21.5 -0.7
116A Eloy 146.22 29 ⇑P PKPdf 06 30 22.0 +0.1
baz=146,SNR=15
ANMO Albuquerque 146.28 20 ePKPdf PKPdf 06 30 22.5 +0.6
ANMO LR LR
comp=Z,2μm,20.0s,MS5.8
ANMO Albuquerque 146.28 20 PKPbc PKPbc 06 30 22.6 -0.4
comp=Z,34nm,1.1s,baz=268,slow=1.5,SNR=21
ANMO PP PP 06 33 56.7 +13
comp=Z,15nm,1.2s,baz=322,slow=7.3,SNR=4.2
BIM Bigot 146.37 291 eP PKPdf 06 30 24.5 +2.0
FDF Fort de France 146.38 292 eP PKPdf 06 30 21.1 -1.4
SCG Saint Claude 146.48 294 eP PKPdf 06 30 23.8 +1.1
TBG Guadaloupe-3 146.50 294 eP PKPdf 06 30 23.3 +0.6
LAZ Ladron 146.54 21 ePKPdf PKPdf 06 30 22.3 -0.1
TKL Tuckaleechee C 146.69 346 PKPbc PKPbc 06 30 22.8 -1.4
comp=Z,67nm,0.9s,baz=124,slow=2.0,SNR=24
PARMO Parma 146.72 355 ePKPbc PKPbc 06 30 23.4 -0.9
216A Three Points, 146.79 29 ⇑P PKPdf 06 30 23.0 +0.2
baz=147
LPM Los Pinos Moun 146.81 20 ePKPdf PKPdf 06 30 21.8 -1.0
LENM Lemitar 146.82 21 ePKPdf PKPdf 06 30 23.1 +0.3
TUC Tucson 146.86 28 ePKPdf PKPdf 06 30 23.6 +0.7
TUC LR LR
comp=Z,907nm,19.0s,MS5.6
Y22C IRIS PASSCAL I 146.92 21 ⇑P PKPdf 06 30 23.4 +0.4
baz=147
UTMT University of 146.94 353 ePKPdf PKPdf 06 30 22.7 -0.2
LHS Liberty Hill 146.95 341 ePKPbc PKPbc 06 30 24.3 -0.6
BNM Barren Site 146.95 21 ePKPdf PKPdf 06 30 23.2 +0.1
PVMO Portageville 146.96 355 ePKPdf PKPdf 06 30 22.6 -0.3
WVT Waverly 147.02 352 ePKPbc PKPbc 06 30 23.9 -1.1
WVT LR LR
comp=Z,2μm,22.0s,MS5.7
GLAT Glass 147.06 354 ePKPdf PKPdf 06 30 22.2 -1.0
GLAT ePKPbc PKPbc 06 30 24.5 -0.7
GLAT ePKPab PKPab 06 30 26.7 0.0
CPCT Cooper Cave 147.07 347 ePKPbc PKPbc 06 30 24.2 -1.0
JSC Jenkinsville 147.28 341 ePKPbc PKPbc 06 30 26.1 +0.3
JSC ePKPab PKPab 06 30 27.6 0.0
217A Green Valley 147.29 28 ⇑P PKPdf 06 30 25.0 +1.3
baz=147
HALT Halls 147.42 354 ePKPbc PKPbc 06 30 26.2 0.0
GNAR Gosnell 147.43 355 ePKPbc PKPbc 06 30 25.7 -0.5
GNAR ePKPab PKPab 06 30 28.0 -0.2
218A Dragoon 147.48 27 ⇓P PKPdf 06 30 25.3 +1.3
baz=147
SWET Sewanee 147.59 349 ePKPbc PKPbc 06 30 24.9 -1.9
AMTX Amarillo 147.69 13 ePKPbc PKPbc 06 30 26.4 -0.6
AMTX LR LR
comp=Z,2μm,22.0s,MS5.8
HBAR Harrisburg 147.89 356 ePKPbc PKPbc 06 30 26.6 -0.9
318A Bisbee 147.95 28 ⇓P PKPdf 06 30 26.1 +1.3
baz=148
NHSC New Hope 147.98 339 ePKPdf PKPdf 06 30 25.3 +0.6
NHSC LR LR
comp=Z,1μm,19.0s,MS5.7
PLAL Pickwick Lake 148.18 352 ePKPdf PKPdf 06 30 24.6 -0.4
PLAL ePKPbc PKPbc 06 30 28.5 +0.2
PLAL LR LR
comp=Z,2μm,20.0s,MS5.8
319A Douglas 148.33 27 ⇓P PKPdf 06 30 28.5 +3.0
baz=148
LPAZ La Paz 148.38 231 ePKPdf PKPdf 06 30 26.0 +0.2
LPAZ LR LR
comp=Z,2μm,20.0s,MS5.9
LPAZ La Paz 148.38 231 PKP PKPdf 06 30 26.1 +0.3
comp=Z,34nm,1.2s,baz=61,slow=2.4,SNR=29
WMOK Wichita Mounta 148.38 9 ePKPdf PKPdf 06 30 23.9 -1.5
WMOK ePKPbc PKPbc 06 30 27.9 -1.0
WMOK LR LR
comp=Z,1μm,20.0s,MS5.7
GOGA Godfrey 148.74 344 ePKPdf PKPdf 06 30 25.4 -0.6
GOGA LR LR
comp=Z,2μm,22.0s,MS5.9
UALR University of 148.75 359 ePKPdf PKPdf 06 30 25.5 -0.5
OXF Oxford 148.81 354 ePKPbc PKPbc 06 30 28.7 -1.3
OXF LR LR
comp=Z,2μm,19.0s,MS5.9

MIAR	**Mount Ida**	**148.99**	**0**	*e*PKPdf	PKPdf	06 30 26.1	-0.3
MIAR				*e*PKPbc	PKPbc	06 30 30.0	-0.4
MIAR				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
MTP	**Monte Pirata**	**149.15**	**300**	*e*PKPbc	PKPbc	06 30 32.3	+1.0
CPD	**Cerro la Pandu**	**149.49**	**301**	*e*PKPdf	PKPdf	06 30 27.4	-0.2
CPD				*e*PKPbc	PKPbc	06 30 31.5	-0.6
MNTX	**Cornudas Mount**	**149.61**	**21**	*e*PKPdf	PKPdf	06 30 27.1	-0.3
MNTX				*e*PKPbc	PKPbc	06 30 32.1	0.0
MNTX				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
SJG	**San Juan**	**149.66**	**301**	*e*PKPbc	PKPbc	06 30 31.2	-1.3
SJG				LR	LR		
	comp=Z,2µm,22.0s,MS6.0						
LRAL	**Lakeview Retre**	**149.91**	**349**	*e*PKPdf	PKPdf	06 30 27.1	-0.8
LRAL				*e*PKPbc	PKPbc	06 30 32.6	-0.2
LRAL				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
NATX	**Nacogdoches**	**151.74**	**2**	*e*PKPbc	PKPbc	06 30 36.6	-0.5
NATX				*e*PKPab	PKPab	06 30 46.4	+0.7
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.8						
BRAL	**Brewton**	**151.89**	**349**	PFAKE		06 30 40.0	+9.0
BRAL				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
JCT	**Junction City**	**152.35**	**12**	*e*PKPdf	PKPdf	06 30 31.1	-0.6
JCT				*e*PKPbc	PKPbc	06 30 38.0	-0.5
JCT				*e*PKPab	PKPab	06 30 47.0	-1.3
JCT				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
LTX	**Lajitas**	**152.36**	**20**	*e*PKPdf	PKPdf	06 30 31.2	-0.5
LTX				*e*PKPbc	PKPbc	06 30 38.1	-0.4
LTX				*e*PKPab	PKPab	06 30 47.2	-1.2
LTX				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
TXAR	**Lajitas Array**	**152.37**	**20**	PKP	PKPdf	06 30 31.1	-0.6
	comp=Z,3.8nm,0.9s,baz=263,slow=1.0,SNR=24						
TXAR				PKPbc	PKPbc	06 30 37.9	-0.7
	comp=Z,12nm,0.7s,baz=298,slow=1.9,SNR=97						
TXAR				PP	PP	06 34 26.7	+7.3
	comp=Z,3.8nm,1.0s,baz=344,slow=4.9,SNR=3.7						
DWPF	**Disney**	**152.93**	**337**	PFAKE		06 30 40.0	+7.4
DWPF				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
HKT	**Hockley**	**153.46**	**5**	*e*PKPdf	PKPdf	06 30 33.1	-0.3
HKT				*e*PKPab	PKPab	06 30 54.5	+1.4
HKT				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
SDDR	**Presa de Saban**	**153.49**	**307**	*e*PKPab	PKPab	06 30 53.2	-0.4
SDDR				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
KVTX	**Kingsville**	**155.56**	**10**	PFAKE		06 30 50.0	+14
KVTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
SDV	**Santo Domingo**	**156.83**	**285**	*e*PKPdf	PKPdf	06 30 36.2	-2.2
SDV				*e*PKPab	PKPab	06 31 08.2	+0.1
SDV				LR	LR		
	comp=Z,716nm,19.0s,MS5.5						
NNA	**Nana**	**157.64**	**227**	PFAKE		06 30 50.0	+11
NNA				LR	LR		
	comp=Z,2µm,22.0s,MS5.9						
ROSC	**El Rosal**	**161.04**	**275**	*e*PKPdf	PKPdf	06 30 43.0	-0.4
ROSC	**El Rosal**	**161.04**	**275**	PKP	PKPdf	06 30 42.6	-0.8
	comp=Z,7.2nm,0.9s,baz=123,slow=4.6,SNR=7.5						
ROSC				PKPab	PKPab	06 31 26.8	+0.3
	comp=Z,9.8nm,0.7s,baz=99,slow=19,SNR=6.7						
TEIG	**Tepich**	**162.55**	**344**	PFAKE		06 31 00.0	+15
TEIG				LR	LR		
	comp=Z,2µm,20.0s						
OTAV	**Otavalo**	**164.85**	**258**	*e*PKPdf	PKPdf	06 30 46.6	-0.5
OTAV				*e*PKPab	PKPab	06 31 44.5	+1.3
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
TGUH	**Tegucigalpa,Un**	**167.84**	**331**	PFAKE		06 31 00.0	+11
TGUH				LR	LR		
	comp=Z,1µm,20.0s						
JTS	**JuntasAbangare**	**169.25**	**310**	PFAKE		06 31 00.0	+10
JTS				LR	LR		
	comp=Z,2µm,20.0s						

*CSEM **22** 06:21:42.8±0.1, 4056N×2288E, h5km, ML2.5, Error ellipse: s-maj=1.2km s-min=0.9km az=129.0*

THE 22 06:21:42.6, 4056N×2290E, h8km, ML2.5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.09**	**36**	*e*Pg	Pg	06 21 44.9	+0.1
HORT	**Hortiatis**	**0.16**	**76**	*e*Pg	Pg	06 21 46.2	+0.1
HORT				*e*Sg	Sg	06 21 48.6	+0.3
SOH	**Sokhos**	**0.44**	**53**	*e*Pg	Pg	06 21 51.1	-0.1
SOH				*e*Sg	Sg	06 21 57.4	+0.5
PLG	**Polygyros**	**0.46**	**114**	*e*Pg	Pg	06 21 51.6	+0.1
PLG				*e*Sg	Sg	06 21 58.0	+0.4
PLG	**Polygyros**	**0.46**	**114**	*i* P	Pg	06 21 52.0	+0.5
LIT	**Litokhoron**	**0.55**	**214**	*e*Pg	Pg	06 21 53.1	-0.2
KNT	**Kendrikon**	**0.60**	**0**	*e*Pg	Pg	06 21 53.9	-0.4

*PDA **22** 06:28:21.1±1.3, 4058N×2932W, h0km, MD3.5, ML3.0, Error ellipse: s-maj=9.5km s-min=5.3km az=82.0*
*CSEM **22** 06:28:21.1±1.3, 4058N×2932W, h0km, ML3.0, Error ellipse: s-maj=9.5km s-min=5.3km az=82.0, After PDA*

SVSA 22 06:28:21.1±1.3, 4058N×2932W, h0km, MD3.5, ML3.0, Error ellipse: s-maj=9.5km s-min=5.3km az=82.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STGR	**Santa Cruz**	**1.81**	**145**	*e*P	Pn	06 28 48.1	-5.4
STGR				*e*S	Sn	06 29 09.9	-7.2
STGR				A		06 29 10.9	
	35nm,0.1s						
STGR	**Santa Cruz**	**1.81**	**145**	*e*P	Pn	06 28 48.1	-5.4
STGR				*e*S	Sn	06 29 09.9	-7.2
SRBC	**Serra Branca**	**1.83**	**147**	*e*P	Pn	06 28 46.7	-7.1
SRBC				*e*S	Sn	06 29 08.0	-10
PCED	**Cedros**	**2.01**	**166**	*e*S	Sn	06 29 14.3	-7.7
PCED				A		06 29 15.6	
	55nm,0.3s						
PTCA	**Ponta do Capel**	**2.03**	**168**	*e*S	Sn	06 29 16.6	-6.1
PTCA				A		06 29 22.8	
	41nm,0.2s						
ROSA	**Rosais**	**2.04**	**155**	*e*P	Pn	06 28 51.6	-5.0
CALA	**Caldeira**	**2.05**	**166**	*e*P	Pn	06 28 52.4	-4.4
CALA				*e*S	Sn	06 29 16.0	-7.1
PAMA	**Santo Amaro**	**2.09**	**155**	*e*S	Sn	06 29 16.4	-7.7
PAMA				A		06 29 22.4	
	12nm,0.2s						
HOR	**Horta**	**2.12**	**165**	*e*P	Pn	06 28 53.0	-4.7
HOR				*e*S	Sn	06 29 16.7	-8.1
PMAN	**Manadas**	**2.17**	**154**	*e*S	Sn	06 29 17.4	-8.5
PMAN				A		06 29 18.4	
	12nm,0.3s						
PICO	**Pico**	**2.19**	**161**	*e*P	Pn	06 28 54.1	-4.6
PICO				*e*S	Sn	06 29 19.0	-7.5
PCND	**Candelaria**	**2.21**	**162**	*e*S	Sn	06 29 18.8	-8.2
PCND				A		06 29 22.0	
	35nm,0.4s						
ASBA	**Santa Barbara**	**2.41**	**140**	*e*P	Pn	06 28 57.2	-4.6
ASBA				*e*S	Sn	06 29 24.0	-8.0
ASBA				A		06 29 25.9	
	26nm,0.1s						
ASBA	**Santa Barbara**	**2.41**	**140**	*e*P	Pn	06 28 57.2	-4.6
ASBA				*e*S	Sn	06 29 24.0	-8.0
PBIS	**Biscoitos**	**2.42**	**138**	*e*P	Pn	06 28 57.4	-4.5
PBIS				*e*S	Sn	06 29 24.4	-7.8
PBIS				A		06 29 26.9	
	11nm,0.1s						
PBIS	**Biscoitos**	**2.42**	**138**	*e*P	Pn	06 28 57.4	-4.5
PBIS				*e*S	Sn	06 29 24.4	-7.8
PPAD	**Pico dos Padre**	**2.45**	**139**	*e*P	Pn	06 28 57.6	-4.7
PPAD				*e*S	Sn	06 29 24.6	-8.3
PPAD				A		06 29 29.4	
	11nm,0.3s						
PPAD	**Pico dos Padre**	**2.45**	**139**	*e*P	Pn	06 28 57.6	-4.7
PPAD				*e*S	Sn	06 29 24.6	-8.3
PVNV	**Vila Nova**	**2.47**	**137**	*e*P	Pn	06 28 58.0	-4.5
PVNV				*e*S	Sn	06 29 25.2	-8.2
PVNV				A		06 29 26.6	
	23nm,0.2s						
PVNV	**Vila Nova**	**2.47**	**137**	*e*P	Pn	06 28 58.0	-4.5
PVNV				*e*S	Sn	06 29 25.2	-8.2

ADH	**Angra Heroismo**	**2.51**	**139**	*e*P	Pn	06 29 01.6	-1.5
PFAV	**Pico das Favas**	**2.54**	**136**	*e*S	Sn	06 29 27.4	-7.8
PFAV				A		06 29 33.6	
	17nm,0.2s						
SET4	**Mosteiros**	**3.84**	**134**	*e*P	Pn	06 29 18.1	-3.4
SET2	**Ginetes**	**3.86**	**134**	*e*P	Pn	06 29 18.5	-3.2
PFET	**Feteiras**	**3.89**	**134**	*e*P	Pn	06 29 18.8	-3.3
PSAN	**Santo Antonio**	**3.90**	**133**	*e*P	Pn	06 29 19.0	-3.3
FAC	**Faja de Cima**	**4.00**	**133**	*e*P	Pn	06 29 19.6	-4.0
CML	**Cha da Macela**	**4.06**	**133**	*e*P	Pn	06 29 20.2	-4.2
PMAT	**Coroa da Mata**	**4.07**	**131**	*e*P	Pn	06 29 20.0	-4.6
LFA	**Lagoa do Fogo**	**4.09**	**132**	*e*P	Pn	06 29 21.3	-3.6
PFAD	**Fenais da Ajud**	**4.14**	**130**	*e*P	Pn	06 29 22.8	-2.7
FRA1	**Furnas**	**4.19**	**131**	*e*P	Pn	06 29 22.9	-3.3
MIRA	**Miradouro**	**4.20**	**130**	*e*P	Pn	06 29 23.0	-3.4

*PDA **22** 06:29:10.0±0.9, 4061N×2910W, h5km, MD4.1, ML2.9, Error ellipse: s-maj=6.0km s-min=3.4km az=85.0*
*CSEM **22** 06:29:10.0±0.9, 4061N×2910W, h5km, ML2.9, Error ellipse: s-maj=6.0km s-min=3.4km az=85.0, After PDA*

SVSA 22 06:29:10.0±0.9, 4061N×2910W, h5km, MD4.1, ML2.9, Error ellipse: s-maj=6.0km s-min=3.4km az=85.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVIA	**Vitoria**	**1.74**	**152**	*e*S	Sn	06 29 55.4	-7.9
PVIA				A		06 29 57.3	
	15nm,0.2s						
STGR	**Santa Cruz**	**1.74**	**151**	*e*S	Sn	06 29 55.3	-8.1
SRBC	**Serra Branca**	**1.77**	**152**	*e*P	Pn	06 29 35.1	-6.1
SRBC				*e*S	Sn	06 29 54.7	-9.3
ROSA	**Rosais**	**2.00**	**160**	*e*P	Pn	06 29 39.3	-5.1
ROSA				*e*S	Sn	06 30 02.0	-7.7
PCED	**Cedros**	**2.00**	**171**	*e*S	Sn	06 30 01.5	-8.3
PCED				A		06 30 03.0	
	94nm,0.4s						
PTCA	**Ponta do Capel**	**2.03**	**173**	*e*P	Pn	06 29 40.4	-4.5
PTCA				*e*S	Sn	06 30 02.8	-7.8
PTCA				A		06 30 05.0	
	19nm,0.1s						
PTCA	**Ponta do Capel**	**2.03**	**173**	*e*P	Pn	06 29 40.4	-4.5
PTCA				*e*S	Sn	06 30 02.8	-7.8
CALA	**Caldeira**	**2.05**	**171**	*e*P	Pn	06 29 40.6	-4.5
PAMA	**Santo Amaro**	**2.05**	**160**	*e*P	Pn	06 29 41.1	-4.0
PAMA				*e*S	Sn	06 30 03.5	-7.6
PAMA				A		06 30 05.3	
	15nm,0.2s						
PAMA	**Santo Amaro**	**2.05**	**160**	*e*P	Pn	06 29 41.1	-4.0
PAMA				*e*S	Sn	06 30 03.5	-7.6
HOR	**Horta**	**2.11**	**170**	*e*S	Sn	06 30 04.8	-7.7
PMAN	**Manadas**	**2.12**	**158**	A		06 30 04.5	
	40nm,0.4s						
PMAN				*e*S	Sn	06 30 04.6	-8.2
PMAN				A		06 30 07.2	
	40nm,0.3s						
PMAN	**Manadas**	**2.12**	**158**	*e*S	Sn	06 30 04.6	-8.2
PICO	**Pico**	**2.17**	**166**	*e*P	Pn	06 29 42.1	-4.6
PICO				*e*S	Sn	06 30 06.0	-7.9
PTEI	**Pico do Teixo**	**2.19**	**165**	*e*P	Pn	06 29 43.1	-3.9
PTEI				*e*S	Sn	06 30 06.7	-7.7
PTEI				A		06 30 11.0	
	21nm,0.3s						
PCND	**Candelaria**	**2.19**	**167**	*e*P	Pn	06 29 42.7	-4.3
PCND				*e*S	Sn	06 30 06.4	-8.1
PCND				A		06 30 10.5	
	21nm,0.3s						
PID	**Ribeirinha**	**2.29**	**160**	*e*P	Pn	06 29 43.6	-4.8
ASBA	**Santa Barbara**	**2.33**	**144**	*e*P	Pn	06 29 44.2	-4.7
ASBA				*e*S	Sn	06 30 11.2	-6.7
ASBA				A		06 30 18.4	
	32nm,0.3s						
ASBA	**Santa Barbara**	**2.33**	**144**	*e*P	Pn	06 29 44.2	-4.7
ASBA				*e*S	Sn	06 30 11.2	-6.7
PBIS	**Biscoitos**	**2.33**	**142**	*e*P	Pn	06 29 44.2	-4.7
PBIS				*e*S	Sn	06 30 10.1	-7.8
PBIS				A		06 30 10.5	
	21nm,0.3s						
PBIS	**Biscoitos**	**2.33**	**142**	*e*P	Pn	06 29 44.2	-4.7
PBIS				*e*S	Sn	06 30 10.1	-7.8
PPAD	**Pico dos Padre**	**2.36**	**143**	*e*P	Pn	06 29 44.7	-4.7
PPAD				*e*S	Sn	06 30 10.5	-8.2
PPAD				A		06 30 11.5	
	18nm,0.1s						
PPAD	**Pico dos Padre**	**2.36**	**143**	*e*P	Pn	06 29 44.7	-4.7
PPAD				*e*S	Sn	06 30 10.5	-8.2
PVNV	**Vila Nova**	**2.37**	**140**	*e*P	Pn	06 29 44.9	-4.7
PVNV				*e*S	Sn	06 30 11.5	-7.5
PVNV				A		06 30 12.5	
	17nm,0.3s						
PVNV	**Vila Nova**	**2.37**	**140**	*e*P	Pn	06 29 44.9	-4.7
PVNV				*e*S	Sn	06 30 11.5	-7.5
RIB2	**Ribeirinha**	**2.44**	**142**	*e*P	Pn	06 29 45.7	-4.7
RIB2				*e*S	Sn	06 30 12.9	-7.7
RIB2				A		06 30 15.3	
	11nm,0.2s						
RIB2	**Ribeirinha**	**2.44**	**142**	*e*P	Pn	06 29 45.7	-4.7
RIB2				*e*S	Sn	06 30 12.9	-7.7
PFAV	**Pico das Favas**	**2.45**	**140**	*e*P	Pn	06 29 45.9	-4.7
PFAV				*e*S	Sn	06 30 12.9	-8.0
PFAV				A		06 30 15.2	
	18nm,0.2s						
PFAV	**Pico das Favas**	**2.45**	**140**	*e*P	Pn	06 29 45.9	-4.7
PFAV				*e*S	Sn	06 30 12.9	-8.0
SET4	**Mosteiros**	**3.74**	**136**	*e*P	Pn	06 30 03.6	-4.8
SET2	**Ginetes**	**3.76**	**136**	*e*P	Pn	06 30 03.9	-4.7
PFET	**Feteiras**	**3.79**	**136**	*e*P	Pn	06 30 05.5	-3.5
PSAN	**Santo Antonio**	**3.80**	**135**	*e*P	Pn	06 30 06.1	-3.0
FAC	**Faja de Cima**	**3.90**	**136**	*e*P	Pn	06 30 05.9	-4.6
CML	**Cha da Macela**	**3.95**	**135**	*e*P	Pn	06 30 05.8	-5.5
PFAD	**Fenais da Ajud**	**4.03**	**132**	*e*P	Pn	06 30 09.2	-3.1
FRA1	**Furnas**	**4.08**	**133**	*e*P	Pn	06 30 09.6	-3.4
MIRA	**Miradouro**	**4.09**	**132**	*e*P	Pn	06 30 09.0	-4.2

*NEIC **22** 06:38:07.2, 4038S×17347E, h177km, MG4.1(WEL), After WEL.*

WEL 22 06:38:07.2±0.3, 4038S×17347E, h177km±2km, ML4.0/18, 4C, Error ellipse: s-maj=1.6km s-min=0.8km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.54**	**141**	PN	Pn	06 38 32.0	+0.2
DUWZ				SN	Sn	06 38 50.0	-0.8
NNZ	**Nelson**	**0.84**	**185**	P	Pn	06 38 33.3	-0.1
NNZ				S	Sn	06 38 52.6	-1.2
NNZ	**Nelson**	**0.84**	**185**	PN	Pn	06 38 33.3	-0.1
NNZ				SN	Sn	06 38 52.6	-1.2
QRZ	**Quartz Range**	**0.84**	**238**	P	Pn	06 38 33.3	-0.2
QRZ				S	Sn	06 38 52.2	-1.5
QRZ	**Quartz Range**	**0.84**	**238**	⇑PN	Pn	06 38 33.3	-0.2
QRZ				SN	Sn	06 38 52.2	-1.6
NRZ	**Ngariki Road**	**1.10**	**19**	P	Pn	06 38 35.5	+0.1
NRZ	**Ngariki Road**	**1.10**	**19**	PN	Pn	06 38 35.5	0.0
TUWZ	**Tuamarina**	**1.11**	**161**	PN	Pn	06 38 35.4	0.0
NWEZ	**Newall Road**	**1.15**	**16**	P	Pn	06 38 35.9	+0.1
NWEZ	**Newall Road**	**1.15**	**16**	PN	Pn	06 38 35.9	+0.1
KIW	**Kapiti Island**	**1.20**	**114**	P	Pn	06 38 36.1	0.0
KIW	**Kapiti Island**	**1.20**	**114**	PN	Pn	06 38 36.1	0.0
PKE	**Pukeiti**	**1.25**	**19**	P	Pn	06 38 36.5	-0.2
PKE	**Pukeiti**	**1.25**	**19**	PN	Pn	06 38 36.5	-0.2
MRW	**Makara Radio**	**1.26**	**133**	P	Pn	06 38 36.8	+0.1
MRW	**Makara Radio**	**1.26**	**133**	⇑PN	Pn	06 38 36.8	+0.2
RAEZ	**Rainy Point**	**1.30**	**33**	P	Pn	06 38 37.2	+0.1
RAEZ	**Rainy Point**	**1.30**	**33**	PN	Pn	06 38 37.2	0.0
SNZO	**South Karori**	**1.32**	**135**	P	Pn	06 38 37.2	0.0
SNZO	**South Karori**	**1.32**	**135**	⇑PN	Pn	06 38 37.2	0.0
WAZ	**Wanganui**	**1.32**	**62**	P	Pn	06 38 37.7	+0.5
WAZ	**Wanganui**	**1.32**	**62**	PN	Pn	06 38 37.7	+0.5
WEL	**Wellington**	**1.34**	**133**	PN	Pn	06 38 37.4	+0.1
BSWZ	**Blackbirch Sta**	**1.37**	**167**	P	Pn	06 38 38.0	+0.4
BSWZ	**Blackbirch Sta**	**1.37**	**167**	PN	Pn	06 38 38.0	+0.4
CAW	**Cannon Point**	**1.41**	**121**	PN	Pn	06 38 38.1	+0.1
THZ	**Tophouse**	**1.45**	**197**	P	Pn	06 38 38.2	-0.1
THZ	**Tophouse**	**1.45**	**197**	PN	Pn	06 38 38.2	-0.1
BHW	**Baring Head**	**1.48**	**134**	P	Pn	06 38 38.4	-0.2
BHW	**Baring Head**	**1.48**	**134**	⇑PN	Pn	06 38 38.4	-0.2
CMWZ	**Cape Campbell**	**1.48**	**158**	P	Pn	06 38 39.1	+0.5
CMWZ	**Cape Campbell**	**1.48**	**158**	PN	Pn	06 38 39.1	+0.5

VRZ	**Vera Road**	**1.60**	**39**	P	Pn	06 38 39.2	-0.7
VRZ	**Vera Road**	**1.60**	**39**	PN	Pn	06 38 39.2	-0.7
MRZ	**Mangatainoka R**	**1.63**	**101**	P	Pn	06 38 40.0	-0.2
MRZ	**Mangatainoka R**	**1.63**	**101**	PN	Pn	06 38 40.0	-0.1
MSWZ	**Moikau Station**	**1.70**	**128**	PN	Pn	06 38 40.6	-0.2
MTW	**Mount Morrison**	**1.73**	**117**	P	Pn	06 38 40.9	-0.2
MTW	**Mount Morrison**	**1.73**	**117**	PN	Pn	06 38 40.9	-0.2
PAWZ	**Paruwai Farm**	**1.79**	**125**	P	Pn	06 38 41.5	-0.2
PAWZ	**Paruwai Farm**	**1.79**	**125**	PN	Pn	06 38 41.5	-0.2
PKVZ	**Pokaka**	**1.81**	**54**	PN	Pn	06 38 41.5	-0.5
DSZ	**Denniston Nort**	**1.86**	**222**	P	Pn	06 38 42.0	-0.4
DSZ	**Denniston Nort**	**1.86**	**222**	PN	Pn	06 38 42.0	-0.5
TIWZ	**Tintock**	**1.88**	**103**	PN	Pn	06 38 42.7	0.0
TRVZ	**Turoa**	**1.93**	**57**	PN	Pn	06 38 42.7	-0.5
WNVZ	**Wahianoa**	**1.95**	**58**	P	Pn	06 38 43.0	-0.5
WNVZ	**Wahianoa**	**1.95**	**58**	PN	Pn	06 38 43.0	-0.5
FWVZ	**Far West T-bar**	**1.96**	**56**	P	Pn	06 38 43.1	-0.5
FWVZ	**Far West T-bar**	**1.96**	**56**	PN	Pn	06 38 43.1	-0.5
TRWZ	**Traveller**	**1.96**	**122**	PN	Pn	06 38 43.5	-0.1
MOVZ	**Moawhango**	**2.01**	**62**	P	Pn	06 38 43.1	-1.0
MOVZ	**Moawhango**	**2.01**	**62**	PN	Pn	06 38 43.1	-1.0
TUVZ	**Tukino**	**2.02**	**57**	P	Pn	06 38 43.8	-0.4
TUVZ	**Tukino**	**2.02**	**57**	PN	Pn	06 38 43.8	-0.4
KHZ	**Kahutara**	**2.03**	**179**	PN	Pn	06 38 43.9	-0.5
NGZ	**Ngauruhoe**	**2.04**	**54**	P	Pn	06 38 43.7	-0.7
NGZ	**Ngauruhoe**	**2.04**	**54**	PN	Pn	06 38 43.7	-0.7
WTVZ	**West Tongariro**	**2.07**	**53**	P	Pn	06 38 44.1	-0.7
WTVZ	**West Tongariro**	**2.07**	**53**	PN	Pn	06 38 44.1	-0.7
OTVZ	**Oturere**	**2.08**	**55**	PN	Pn	06 38 44.3	-0.6
BFZ	**Birch Farm**	**2.14**	**99**	P	Pn	06 38 45.3	-0.2
BFZ	**Birch Farm**	**2.14**	**99**	PN	Pn	06 38 45.3	-0.2
HIZ	**Hauiti**	**2.15**	**30**	*e*P	Pn	06 38 44.8	-0.9
HIZ	**Hauiti**	**2.15**	**30**	PN	Pn	06 38 44.8	-1.0
KATZ	**Kakaramea**	**2.22**	**51**	P	Pn	06 38 45.9	-0.6
KATZ	**Kakaramea**	**2.22**	**51**	PN	Pn	06 38 45.9	-0.5
LTZ	**Lake Taylor**	**2.56**	**200**	*e*P	Pn	06 38 49.6	-0.8
LTZ	**Lake Taylor**	**2.56**	**200**	PN	Pn	06 38 49.6	-0.7
BKZ	**Black Stump Fm**	**2.63**	**63**	P	Pn	06 38 49.8	-1.4
BKZ	**Black Stump Fm**	**2.63**	**63**	PN	Pn	06 38 49.8	-1.3
URZ	**Urewera**	**3.53**	**54**	P	Pn	06 38 59.8	-2.4
URZ	**Urewera**	**3.53**	**54**	PN	Pn	06 38 59.7	-2.5
MWZ	**Matawai**	**3.75**	**58**	*e*P	Pn	06 39 02.9	-2.1
MWZ	**Matawai**	**3.75**	**58**	PN	Pn	06 39 02.9	-2.1
RPZ	**Rata Peaks**	**3.79**	**208**	*e*P	Pn	06 39 03.8	-1.6
RPZ	**Rata Peaks**	**3.79**	**208**	PN	Pn	06 39 03.8	-1.6
FOZ	**Fox Glacier**	**4.25**	**220**	*e*P	Pn	06 39 08.0	-3.3
FOZ	**Fox Glacier**	**4.25**	**220**	PN	Pn	06 39 08.0	-3.3
MXZ	**Matakaoa Point**	**4.70**	**55**	P	Pn	06 39 14.8	-2.4
MXZ	**Matakaoa Point**	**4.70**	**55**	PN	Pn	06 39 14.8	-2.4
JCZ	**Jackson Bay**	**5.08**	**222**	P	Pn	06 39 19.7	-2.4
JCZ	**Jackson Bay**	**5.08**	**222**	PN	Pn	06 39 19.7	-2.4
ODZ	**Otahua Downs**	**5.10**	**203**	*e*P	Pn	06 39 20.7	-1.6
ODZ	**Otahua Downs**	**5.10**	**203**	PN	Pn	06 39 20.7	-1.6

*ISK **22** 07:09:16.8, 3581N×3144E, h11km, MD3.8, ML3.5*
*CSEM **22** 07:09:17.6±0.1, 3577N×3139E, h25km, Mw3.3, Error ellipse: s-maj=2.2km s-min=1.6km az=101.0*
*DDA **22** 07:09:17.5, 3577N×3140E, h9km, Md3.2*
*ISCJB **22** 07:09:18.8±0.3, 3579N±003×3137E±004, h45km, Error ellipse: s-maj=4.6km s-min=3.6km az=138.3*
*NIC **22** 07:09:19.7±0.3, 3584N×3145E, h45km, mb4.0, ML3.7, MW3.3*
*NEIC **22** 07:09:19.7, 3584N×3145E, h45km, MG3.7(NIC), After NIC.*
*HLW **22** 07:09:19.1, 3585N×3154E, h22km, Mb4.0*

ISC 22 07:09:19.3±1.5, 3582N±003×3140E±004, h23km±15km, n38, σ0°78/48, 1C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**1.09**	**136**	P	**Pn**	**07 09 38.8**	**-0.4**
ALFC	**Alevga**	**1.18**	**124**	⇓*e*P	**Pn**	**07 09 39.1**	**-1.3**
	38nm,0.2s						
ALFC				S	**Sb**	**07 09 55.4**	**-0.4**
PPCY	**Paphos**	**1.21**	**140**	⇓P	**Pn**	**07 09 43.1**	**+2.3**
ELL	**Elmali**	**1.52**	**308**	*e*PN	**Pn**	**07 09 45.6**	**+0.5**
SZAC	**Souni-Zanaja**	**1.61**	**131**	⇑P	**Pn**	**07 09 47.7**	**+1.4**
	10nm,0.2s						
SZAC				S	**Sn**	**07 10 08.7**	**+2.4**
MAMC	**Mammari**	**1.62**	**113**	P	**Pn**	**07 09 45.8**	**-0.6**
BCK	**Bucak**	**1.76**	**339**	*e*PN	**

σ0$93/143, **mb4.1**/17, **MS3.7**/3, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLUZ	**Luz**	**1.39**	**179**	*eS*	**Sn**	**07 35 26.3**	**+5.2**
PLUZ				A		07 35 32.9	
	64nm,0.2s						
PVIA	**Vitoria**	**1.53**	**151**	*eP*	**Pn**	**07 35 05.1**	**+0.5**
PVIA				*eS*	**Sn**	**07 35 24.2**	**-0.4**
PVIA				A		07 35 29.7	
	47nm,0.3s						
STGR	**Santa Cruz**	**1.54**	**149**	*eP*	**Pn**	**07 35 05.1**	**+0.4**
STGR				*eS*	**Sn**	**07 35 24.8**	**+0.1**
STGR				A		07 35 26.1	
	165nm,0.2s						
STGR	**Santa Cruz**	**1.54**	**149**	*eP*	**Pn**	**07 35 05.1**	**+0.4**
STGR				*eS*	**Sn**	**07 35 24.8**	**+0.1**
SRBC	**Serra Branca**	**1.57**	**151**	*eP*	**Pn**	**07 35 04.8**	**-0.2**
SRBC				*eS*	**Sn**	**07 35 25.6**	**+0.3**
PGRA	**Graciosa**	**1.59**	**150**	*eP*	**Pn**	**07 35 04.7**	**-0.7**
ROSA	**Rosais**	**1.79**	**160**	*eP*	**Pn**	**07 35 07.7**	**-0.4**
ROSA				*eS*	**Sn**	**07 35 30.6**	**-0.3**
PCED	**Cedros**	**1.80**	**172**	*eP*	**Pn**	**07 35 08.5**	**+0.3**
PCED				*eS*	**Sn**	**07 35 30.4**	**-0.6**
PCED				A		07 35 31.5	
	139nm,0.3s						
PCED	**Cedros**	**1.80**	**172**	*eP*	**Pn**	**07 35 08.5**	**+0.3**
PCED				*eS*	**Sn**	**07 35 30.4**	**-0.6**
PTCA	**Ponta do Capel**	**1.83**	**175**	*eP*	**Pn**	**07 35 09.1**	**+0.4**
PTCA				*eS*	**Sn**	**07 35 31.9**	**0.0**
PTCA				A		07 35 35.2	
	89nm,0.1s						
PTCA	**Ponta do Capel**	**1.83**	**175**	*eP*	**Pn**	**07 35 09.1**	**+0.4**
PTCA				*eS*	**Sn**	**07 35 31.9**	**0.0**
CALA	**Caldeira**	**1.84**	**172**	*eP*	**Pn**	**07 35 09.3**	**+0.5**
CALA				*eS*	**Sn**	**07 35 31.2**	**-1.0**
PAMA	**Santo Amaro**	**1.85**	**159**	*eP*	**Pn**	**07 35 09.2**	**+0.3**
PAMA				*eS*	**Sn**	**07 35 32.6**	**+0.3**
PAMA				A		07 35 35.9	
	67nm,0.3s						
PAMA	**Santo Amaro**	**1.85**	**159**	*eP*	**Pn**	**07 35 09.2**	**+0.3**
PAMA				*eS*	**Sn**	**07 35 32.6**	**+0.3**
HOR	**Horta**	**1.91**	**171**	*eP*	**Pn**	**07 35 09.7**	**0.0**
HOR				*eS*	**Sn**	**07 35 33.0**	**-0.7**
PMAN	**Manadas**	**1.92**	**158**	*eP*	**Pn**	**07 35 09.2**	**-0.6**
PMAN				*eS*	**Sn**	**07 35 31.9**	**-2.1**
PMAN				A		07 35 33.3	
	76nm,0.4s						
PMAN	**Manadas**	**1.92**	**158**	*eP*	**Pn**	**07 35 09.2**	**-0.6**
PMAN				*eS*	**Sn**	**07 35 31.9**	**-2.1**
PICO	**Pico**	**1.96**	**166**	*eP*	**Pn**	**07 35 11.0**	**+0.5**
PICO				*eS*	**Sn**	**07 35 34.4**	**-0.7**
PTEI	**Pico do Teixo**	**1.98**	**165**	*eS*	**Sn**	**07 35 36.0**	**+0.4**
PTEI				A		07 35 39.9	
	84nm,0.2s						
PCND	**Candelaria**	**1.99**	**167**	*eP*	**Pn**	**07 35 11.4**	**+0.6**
PCND				*eS*	**Sn**	**07 35 35.1**	**-0.6**
PCND				A		07 35 37.9	
	83nm,0.3s						
PBOI	**Pico dos Bois**	**2.03**	**166**	*eS*	**Sn**	**07 35 36.7**	**-0.2**
PBOI				A		07 35 41.4	
	45nm,0.2s						
PID	**Ribeirinha**	**2.09**	**160**	*eP*	**Pn**	**07 35 12.2**	**0.0**
PID				*eS*	**Sn**	**07 35 38.1**	**-0.1**
PIED	**Piedade**	**2.12**	**159**	*eP*	**Pn**	**07 35 13.4**	**+0.7**
ASBA	**Santa Barbara**	**2.14**	**142**	*eP*	**Pn**	**07 35 13.7**	**+0.9**
ASBA				*eS*	**Sn**	**07 35 39.3**	**-0.1**
ASBA				A		07 35 44.4	
	98nm,0.2s						
ASBA	**Santa Barbara**	**2.14**	**142**	*eP*	**Pn**	**07 35 13.7**	**+0.9**
ASBA				*eS*	**Sn**	**07 35 39.3**	**-0.1**
PBIS	**Biscoitos**	**2.14**	**140**	*eP*	**Pn**	**07 35 13.5**	**+0.6**
PBIS				*eS*	**Sn**	**07 35 39.4**	**-0.1**
PBIS				A		07 35 43.1	
	39nm,0.3s						
PBIS	**Biscoitos**	**2.14**	**140**	*eP*	**Pn**	**07 35 13.5**	**+0.6**
PBIS				*eS*	**Sn**	**07 35 39.4**	**-0.1**
PPAD	**Pico dos Padre**	**2.17**	**141**	*eP*	**Pn**	**07 35 13.9**	**+0.6**
PPAD				*eS*	**Sn**	**07 35 40.0**	**-0.2**
PPAD				A		07 35 47.8	
	61nm,0.2s						
PPAD	**Pico dos Padre**	**2.17**	**141**	*eP*	**Pn**	**07 35 13.9**	**+0.6**
PPAD				*eS*	**Sn**	**07 35 40.0**	**-0.2**
PVNV	**Vila Nova**	**2.19**	**138**	*eP*	**Pn**	**07 35 14.2**	**+0.7**
PVNV				*eS*	**Sn**	**07 35 40.3**	**-0.3**
PVNV				A		07 35 42.6	
	84nm,0.3s						
PVNV	**Vila Nova**	**2.19**	**138**	*eP*	**Pn**	**07 35 14.2**	**+0.7**
PVNV				*eS*	**Sn**	**07 35 40.3**	**-0.3**
ADH	**Angra Heroismo**	**2.23**	**141**	*eP*	**Pn**	**07 35 14.1**	**-0.1**
ADH				*eS*	**Sn**	**07 35 41.3**	**-0.4**
RIB2	**Ribeirinha**	**2.25**	**140**	*eP*	**Pn**	**07 35 15.2**	**+0.8**
RIB2				*eS*	**Sn**	**07 35 42.5**	**+0.3**
RIB2				A		07 35 47.8	
	36nm,0.2s						
RIB2	**Ribeirinha**	**2.25**	**140**	*eP*	**Pn**	**07 35 15.2**	**+0.8**
RIB2				*eS*	**Sn**	**07 35 42.5**	**+0.3**
PSCM	**Serra do Cume**	**2.25**	**139**	*eP*	**Pn**	**07 35 14.3**	**-0.2**
PSCM				*eS*	**Sn**	**07 35 41.8**	**-0.5**
PSCM				A		07 35 47.9	
	179nm,0.3s						
PSCM	**Serra do Cume**	**2.25**	**139**	*eP*	**Pn**	**07 35 14.3**	**-0.2**
PSCM				*eS*	**Sn**	**07 35 41.8**	**-0.5**
PFAV	**Pico das Favas**	**2.26**	**138**	*eP*	**Pn**	**07 35 15.3**	**+0.7**
PFAV				*eS*	**Sn**	**07 35 42.4**	**-0.1**
PFAV				A		07 35 45.0	
	62nm,0.2s						
PFAV	**Pico das Favas**	**2.26**	**138**	*eP*	**Pn**	**07 35 15.3**	**+0.7**
PFAV				*eS*	**Sn**	**07 35 42.4**	**-0.1**
SET4	**Mosteiros**	**3.56**	**134**	*eP*	**Pn**	**07 35 13.2**	**+0.8**
SET4				*eS*	**Sn**	**07 36 13.8**	**-0.8**
SET2	**Ginetes**	**3.58**	**135**	*eP*	**Pn**	**07 35 05.0**	**+2.3**
SET2				*eS*	**Sn**	**07 36 14.4**	**-0.6**
PFET	**Feteiras**	**3.61**	**135**	*eP*	**Pn**	**07 35 34.8**	**+1.7**
PFET				*eS*	**Sn**	**07 36 15.2**	**-0.5**
PSAN	**Santo Antonio**	**3.62**	**134**	*eP*	**Pn**	**07 35 33.7**	**+0.5**
PSAN				*eS*	**Sn**	**07 36 14.8**	**-1.2**
FAC	**Faja de Cima**	**3.71**	**134**	*eP*	**Pn**	**07 35 37.1**	**+2.5**
FAC				*eS*	**Sn**	**07 36 17.5**	**-0.9**
PVER	**Pico Vermelho**	**3.77**	**133**	*eS*	**Sn**	**07 36 17.9**	**-1.9**
PVER				A		07 36 22.6	
	48nm,0.3s						
CML	**Cha da Macela**	**3.77**	**133**	*eP*	**Pn**	**07 35 35.7**	**+0.3**
CML				*eS*	**Sn**	**07 36 19.4**	**-0.4**
PMAT	**Coroa da Mata**	**3.78**	**132**	*eP*	**Pn**	**07 35 37.1**	**+1.6**
LFA	**Lagoa do Fogo**	**3.81**	**133**	*eP*	**Pn**	**07 35 37.1**	**+1.3**
MESC	**Monte Escuro**	**3.81**	**132**	*eP*	**Pn**	**07 35 37.1**	**+1.2**
MESC				*eS*	**Sn**	**07 36 20.1**	**-0.7**
PRCH	**Ribeira Ch**	**3.84**	**133**	*eP*	**Pn**	**07 35 37.6**	**+1.3**
PRCH				*eS*	**Sn**	**07 36 20.6**	**-0.9**
PRCH				A		07 36 24.8	
	35nm,0.3s						
PRCH	**Ribeira Ch**	**3.84**	**133**	*eP*	**Pn**	**07 35 37.6**	**+1.3**
PRCH				*eS*	**Sn**	**07 36 20.6**	**-0.9**
VIF	**Vila Franca**	**3.85**	**133**	*eP*	**Pn**	**07 35 38.9**	**+2.5**
PFAD	**Fenais da Ajud**	**3.85**	**131**	*eP*	**Pn**	**07 35 38.5**	**+2.0**
PCNG	**Congro**	**3.86**	**132**	*eP*	**Pn**	**07 35 41.5**	**+4.9**
FRA1	**Furnas**	**3.90**	**132**	*eP*	**Pn**	**07 35 38.6**	**+1.5**
FRA1				*eS*	**Sn**	**07 36 21.9**	**-1.0**
MIRA	**Miradouro**	**3.92**	**131**	*eP*	**Pn**	**07 35 38.6**	**+1.3**
MIRA				*eS*	**Sn**	**07 36 23.0**	**-0.3**
PSMN	**Pico do Norte,**	**4.60**	**136**	*eP*	**Pn**	**07 35 48.5**	**+1.8**
PSMN				*eS*	**Sn**	**07 36 39.1**	**-1.0**
ESDC	**Sonseca Array**	**19.18**	**84**	P	**Pn**	**07 39 01.6**	**-0.2**
	0.6nm,0.3s,baz=270,slow=9.0,SNR=4.3						
QUIF	**Quistinic**	**19.94**	**59**	*eP*	**Pn**	**07 39 10.8**	**0.0**
	90nm,1.4s						
QUIF	**Quistinic**	**19.94**	**59**	*eP*	**Pn**	**07 39 10.8**	**0.0**
	45nm,1.4s						
SJPF	**Ste Jean**	**20.87**	**73**	*eP*	**P**	**07 39 20.5**	**+1.3**
MDT	**Midelt**	**20.96**	**103**	P	**P**	**07 39 23.5**	**+3.3**
MDT				LR	LR	07 45 12.5	
MDT	**Midelt**	**20.96**	**103**	P	**P**	**07 39 23.5**	**+3.3**
	4.3nm,0.9s,baz=263,slow=14,SNR=2.2						
MDT				LR	LR	07 45 12.5	
	comp=Z,279nm,20.3s,MS3.6,baz=167,slow=30						
ETSF	**Etsaut**	**21.37**	**74**	*eP*	**P**	**07 39 25.0**	**+0.4**
GRR	**Gorron**	**21.55**	**59**	*eP*	**P**	**07 39 26.9**	**+0.4**
MFF	**Saint Martin d**	**21.76**	**64**	*eP*	**P**	**07 39 28.1**	**-0.7**
EPF	**Esparros**	**22.02**	**74**	*eP*	**P**	**07 39 30.9**	**-0.7**
	42nm,1.3s,mb4.4						
EPF	**Esparros**	**22.02**	**74**	*eP*	**P**	**07 39 30.9**	**-0.7**
	21nm,1.3s,mb4.4						
LDF	**La Druitiere**	**22.07**	**59**	*eP*	**P**	**07 39 31.3**	**-0.8**
	36nm,1.1s,mb4.4						
LDF	**La Druitiere**	**22.07**	**59**	*eP*	**P**	**07 39 31.3**	**-0.8**
	18nm,1.1s,mb4.4						
CAF	**Calviac**	**23.22**	**68**	*eP*	**P**	**07 39 43.9**	**-0.3**
	21nm,1.1s,mb4.2						
CAF	**Calviac**	**23.22**	**68**	*eP*	**P**	**07 39 43.9**	**-0.3**
	10nm,1.1s,mb4.2						
TCF	**Toulx Ste Croi**	**23.36**	**65**	*eP*	**P**	**07 39 44.5**	**-1.2**
	104nm,1.9s,mb4.6						
TCF	**Toulx Ste Croi**	**23.36**	**65**	*eP*	**P**	**07 39 44.5**	**-1.2**
	52nm,1.9s,mb4.6						
BGF	**Bois d'Agland**	**23.82**	**64**	*eP*	**P**	**07 39 50.2**	**+0.1**
	25nm,0.8s,mb4.4						
BGF	**Bois d'Agland**	**23.82**	**64**	*eP*	**P**	**07 39 50.2**	**+0.1**
	12nm,0.8s,mb4.4						
AVF	**Avril sur Loir**	**24.18**	**64**	*eP*	**P**	**07 39 52.6**	**-0.8**
SSF	**Saint Saulge**	**24.30**	**63**	*eP*	**P**	**07 39 53.8**	**-0.8**
	29nm,1.2s,mb4.3						
SSF	**Saint Saulge**	**24.30**	**63**	*eP*	**P**	**07 39 53.8**	**-0.8**
	14nm,1.2s,mb4.3						
SMF	**Signal de Mont**	**24.50**	**64**	*eP*	**P**	**07 39 55.6**	**-0.8**
	45nm,1.2s,mb4.5						
SMF	**Signal de Mont**	**24.50**	**64**	*eP*	**P**	**07 39 55.6**	**-0.8**
	22nm,1.2s,mb4.5						
BAIF	**Baives**	**25.12**	**56**	*eP*	**P**	**07 40 01.4**	**-0.6**
MEZF	**Maizieres J'vi**	**25.46**	**60**	*eP*	**P**	**07 40 05.2**	**+0.1**
GIVF	**Givet**	**25.52**	**56**	*eP*	**P**	**07 40 04.9**	**-0.7**
CDF	**Champ du Feu**	**26.93**	**61**	*eP*	**P**	**07 40 18.0**	**-0.4**
	47nm,1.4s,mb4.5						
CDF	**Champ du Feu**	**26.93**	**61**	*eP*	**P**	**07 40 18.0**	**-0.4**
	23nm,1.4s,mb4.5						
DAVOX	**Davos/Dischmat**	**28.66**	**64**	LR	LR	07 49 54.4	
	comp=Z,221nm,20.1s,MS3.8,baz=258,slow=32						
KEST	**Kesra**	**30.40**	**86**	LR	LR	07 51 47.8	
	comp=Z,134nm,18.1s,MS3.6,baz=340,slow=34						
TORD	**Torodi Ar. Bea**	**38.24**	**127**	P	**P**	**07 41 59.0**	**+1.6**
	4.0nm,0.9s,mb4.1,baz=319,slow=6.7,SNR=12						
AKASG	**Malin Array Be**	**41.07**	**55**	P	**P**	**07 42 19.4**	**-1.2**
AKASG	**Malin Array Be**	**41.07**	**55**	P	**P**	**07 42 19.4**	**-1.2**
	0.2nm,0.3s,mb3.2,baz=274,slow=8.8,SNR=5.3						
BRTR	**Keskin Array B**	**47.04**	**69**	P	**P**	**07 43 09.8**	**+1.2**
	1.4nm,0.8s,mb4.0,baz=240,slow=9.9,SNR=3.5						
YKA	**Yellowknife Ar**	**53.19**	**325**	P	**P**	**07 43 52.0**	**-3.0**
YKA	**Yellowknife Ar**	**53.19**	**325**	P	**P**	**07 43 52.0**	**-3.0**
	0.9nm,0.8s,mb3.8,baz=67,slow=7.3,SNR=17						
PDAR	**Pinedale Array**	**58.04**	**301**	P	**P**	**07 44 28.0**	**-2.2**
	1.4nm,0.9s,mb4.0,baz=70,slow=7.4,SNR=9.5						
AKTK	**Aktyubinsk**	**58.55**	**48**	P	**P**	**07 44 33.7**	**+0.1**
AKTO	**Aktyubinsk**	**58.55**	**48**	P	**P**	**07 44 33.7**	**+0.1**
	2.1nm,0.7s,mb4.3,baz=301,slow=9.0,SNR=5.3						
TXAR	**Lajitas Array**	**60.58**	**285**	P	**P**	**07 44 46.0**	**-2.0**
	1.6nm,0.9s,mb4.1,baz=71,slow=4.8,SNR=12						
MKAR	**Makanchi Array**	**73.83**	**42**	P	**P**	**07 46 11.0**	**-0.7**
MKAR	**Makanchi Array**	**73.83**	**42**	P	**P**	**07 46 11.0**	**-0.7**
	1.3nm,0.9s,mb3.9,baz=320,slow=4.9,SNR=10.0						
SONM	**Songino Array**	**83.64**	**28**	P	**P**	**07 47 05.1**	**-0.6**
	0.6nm,0.8s,mb3.8,baz=320,slow=7.0,SNR=5.0						

NDI ***22*** *07:44:24.4±1.9, 3449N×7242E, h10km, ML3.4*
ISCJB ***22*** *07:44:25.5±1.8, 3475N±008×732E±0.1, h8km±10km, mb3.5/6, Error ellipse: s-maj=20.8km s-min=5.8km az=144.0*
IDC ***22*** *07:44:25.4±0.9, 3459N×7314E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/21, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=28.4km s-min=23.0km az=42.0*

ISC 22 07:44:27.6±1.9, 3471N±007×731E±0.1, h9km±11km, n25, σ1$28/33, mb3.5/6, 1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.50**	**142**	*eS*	**Sn**	**07 45 41.0**	**+1.9**
THN	**Thein Dam**	**3.16**	**135**	*eP*	**Pn**	**07 45 19.0**	**+1.5**
THN				*ex*	**Sb**	**07 46 02.6**	**0.0**
DLH	**Dalhousie**	**3.23**	**131**	*eP*	**Pn**	**07 45 20.0**	**+1.4**
DLH				*ex*	**Sg**	**07 46 11.0**	**-0.5**
SDNR	**Sundarnagar**	**4.57**	**133**	*eP*	**Pn**	**07 45 37.0**	**+0.1**
SDNR				*ex*	**Sb**	**07 46 45.0**	**+1.9**
SMLA	**Simla**	**4.96**	**135**	*eP*	**Pn**	**07 45 42.9**	**+0.7**
SMLA				*eS*	**Sn**	**07 46 38.7**	**-1.0**
KLP	**Kalpa**	**5.37**	**125**	*eP*	**Pn**	**07 45 49.0**	**+1.1**
KLP				*eS*	**Sn**	**07 46 50.1**	**+0.2**
KLP				AML	AML	07 47 20.5	
	comp=N,161nm,0.8s						
KLP				AML	AML	07 47 24.5	
	comp=E,202nm,0.5s						
DDI	**Dehra Dun**	**6.06**	**135**	*ex*	**Sn**	**07 47 10.0**	**+3.0**
JOSI	**Joshimath**	**6.85**	**125**	*eP*	**Pn**	**07 46 08.6**	**+0.3**
JOSI				AML	AML	07 48 01.3	
	comp=E,68nm,0.4s						
JOSI				AML	AML	07 48 01.3	
	comp=N,73nm,0.8s						
NDI	**New Delhi**	**6.96**	**149**	*eS*	**Sn**	**07 47 23.0**	**-6.2**
KHET	**Khetri**	**7.01**	**160**	*eP*	**Pn**	**07 46 06.2**	**-4.3**
KHET				*eS*	**Sn**	**07 47 22.2**	**-8.2**
KHET				AML	AML	07 47 28.5	
	comp=E,9.2nm,0.3s						
KHET				AML	AML	07 47 28.7	
	comp=N,8.9nm,0.2s						
KUDL	**Kundal**	**7.16**	**155**	*eS*	**Sn**	**07 47 25.7**	**-8.4**
KUDL				AML	AML	07 47 32.2	
	comp=N,6.7nm,0.2s						
KUDL				AML	AML	07 47 32.7	
	comp=E,15nm,0.6s						
KK31	**Karatay Array**	**8.62**	**347**	Pn	**Pn**	**07 46 34.8**	**+2.4**
	comp=E,4.6nm,0.3s,baz=171,slow=13,SNR=262						
KK31				⇓Sn	**Sn**	**07 48 09.5**	**-0.1**
	comp=E,2.5nm,0.3s,baz=166,slow=23,SNR=13						
KOLN	**Koldanda**	**11.35**	**125**	*eP*	**Pn**	**07 47 07.7**	**-2.2**
	comp=E,4.9nm,0.4s						
GKN	**Gorkha**	**11.92**	**121**	*eP*	**Pn**	**07 47 15.1**	**-2.6**
	comp=E,11nm,0.4s						
GKN				*eS*	**Sn**	**07 49 15.3**	**-16**
JIRN	**Jiri**	**13.23**	**119**	*eP*	**Pn**	**07 47 32.0**	**-3.7**
	comp=E,16nm,0.5s						
MKAR	**Makanchi Array**	**13.93**	**27**	Pn	**Pn**	**07 47 44.8**	**-0.3**
	comp=E,0.1nm,0.3s,baz=240,slow=33,SNR=3.0						
TAPN	**Taplejung**	**14.52**	**116**	*eP*	**Pn**	**07 47 49.4**	**-3.8**
	comp=E,6.4nm,0.4s						
ODAN	**Odarе**	**14.56**	**119**	*eP*	**Pn**	**07 47 50.1**	**-3.8**
	comp=E,7.6nm,0.5s						
AKTO	**Aktyubinsk**	**19.18**	**330**	P	**Pn**	**07 48 53.0**	**+0.7**
	comp=E,0.3nm,0.3s,baz=133,slow=12,SNR=5.5						
SONM	**Songino Array**	**28.02**	**52**	P	**P**	**07 50 19.7**	**+0.8**
	comp=E,0.1nm,0.4s,mb2.8,baz=255,slow=8.8,SNR=2.6						
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**07 52 30.3**	**-0.1**
	comp=E,2.8nm,1.0s,mb4.0,baz=102,slow=5.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**67.41**	**271**	P	**P**	**07 55 23.5**	**-0.3**
	comp=E,0.4nm,0.4s,mb3.8,baz=45,slow=6.4,SNR=10						
WRA	**Warramunga Arr**	**79.60**	**123**	P	**P**	**07 56 33.9**	**-1.5**
	comp=E,0.4nm,0.5s,mb3.6,baz=319,slow=5.3,SNR=14						
ASAR	**Alice Springs**	**81.83**	**126**	P	**P**	**07 56 46.3**	**-0.9**
	comp=E,0.4nm,0.5s,mb3.6,baz=308,slow=5.1,SNR=9.8						
YKA	**Yellowknife Ar**	**82.94**	**4**	P	**P**	**07 56 51.7**	**-0.8**
	comp=E,0.2nm,0.6s,mb3.3,baz=346,slow=5.2,SNR=7.9						

PDA ***22*** *07:46:06.8±1.1, 4052N×2924W, h0km, MD3.9, ML2.7, Error ellipse: s-maj=7.2km s-min=4.2km az=91.0*
CSEM ***22*** *07:46:06.8±1.1, 4052N×2924W, h0km, ML2.7, Error ellipse: s-maj=7.2km s-min=4.2km az=91.0, After PDA*

SVSA 22 07:46:06.8±1.1, 4052N×2924W, h0km, MD3.9, ML2.7, Error ellipse: s-maj=7.2km s-min=4.2km az=91.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVIA	**Vitoria**	**1.71**	**147**	*eS*	**Sn**	**07 46 53.1**	**-7.4**
PVIA				A		07 46 57.7	
	10nm,0.3s						
SRBC	**Serra Branca**	**1.75**	**148**	*eP*	**Pn**	**07 46 32.6**	**-5.7**
PCED	**Cedros**	**1.94**	**168**	*eS*	**Sn**	**07 46 58.4**	**-7.5**
PCED				A		07 46 59.5	
	31nm,0.2s						
ROSA	**Rosais**	**1.96**	**157**	*eP*	**Pn**	**07 46 36.0**	**-5.2**
ROSA				*eS*	**Sn**	**07 46 58.7**	**-7.8**
PTCA	**Ponta do Capel**	**1.96**	**170**	*eS*	**Sn**	**07 46 59.5**	**-7.1**
PTCA				A		07 47 01.8	
	15nm,0.1s						
CALA	**Caldeira**	**1.98**	**168**	*eP*	**Pn**	**07 46 36.8**	**-4.8**
CALA				*eS*	**Sn**	**07 46 59.3**	**-7.8**
PAMA	**Santo Amaro**	**2.01**	**156**	*eS*	**Sn**	**07 47 01.8**	**-6.0**
PAMA				A		07 47 06.4	
	10nm,0.2s						
HOR	**Horta**	**2.05**	**167**	*eP*	**Pn**	**07 46 37.8**	**-4.7**
HOR				*eS*	**Sn**	**07 47 01.0**	**-7.7**
PMAN	**Manadas**	**2.08**	**154**	*eP*	**Pn**	**07 46 37.5**	**-5.5**
PMAN				*eS*	**Sn**	**07 47 01.8**	**-7.8**
PMAN				A		07 47 02.6	
	16nm,0.1s						
PMAN	**Manadas**	**2.08**	**154**	*eP*	**Pn**	**07 46 37.5**	**-5.5**
PMAN				*eS*	**Sn**	**07 47 01.8**	**-7.8**
PICO	**Pico**	**2.11**	**162**	*eP*	**Pn**	**07 46 38.9**	**-4.5**
PICO				*eS*	**Sn**	**07 47 02.6**	**-7.7**
PCND	**Candelaria**	**2.14**	**163**	*eP*	**Pn**	**07 46 39.3**	**-4.4**
PCND				*eS*	**Sn**	**07 47 03.0**	**-7.9**
PCND				A		07 47 07.4	
	22nm,0.3s						
PTEI	**Pico do Teixo**	**2.14**	**161**	*eS*	**Sn**	**07 47 03.2**	**-7.7**
PTEI				A		07 47 06.7	
	15nm,0.3s						
PBOI	**Pico dos Bois**	**2.19**	**162**	*eS*	**Sn**	**07 47 03.5**	**-8.6**
PBOI				A		07 47 10.4	
	6.2nm,0.1s						
PID	**Ribeirinha**	**2.25**	**157**	*eP*	**Pn**	**07 46 39.8**	**-5.4**
ASBA	**Santa Barbara**	**2.33**	**140**	*eP*	**Pn**	**07 46 41.7**	**-4.6**
ASBA				*eS*	**Sn**	**07 47 07.8**	**-7.8**
ASBA				A		07 47 09.8	
	30nm,0.1s						
ASBA	**Santa Barbara**	**2.33**	**140**	*eP*	**Pn**	**07 46 41.7**	**-4.6**
ASBA				*eS*	**Sn**	**07 47 07.8**	**-7.8**
PBIS	**Biscoitos**	**2.33**	**138**	*eP*	**Pn**	**07 46 41.3**	**-5.1**
PBIS				*eS*	**Sn**	**07 47 07.8**	**-7.9**
PBIS				A		07 47 10.4	
	16nm,0.1s						
PBIS	**Biscoitos**	**2.33**	**138**	*eP*	**Pn**	**07 46 41.3**	**-5.1**
PBIS				*eS*	**Sn**	**07 47 07.8**	**-7.9**
PPAD	**Pico dos Padre**	**2.36**	**140**	*eP*	**Pn**	**07 46 42.1**	**-4.7**
PPAD				*eS*	**Sn**	**07 47 08.8**	**-7.6**
PPAD				A		07 47 16.0	
	13nm,0.2s						
PPAD	**Pico dos Padre**	**2.36**	**140**	*eP*	**Pn**	**07 46 42.1**	**-4.7**
PPAD				*eS*	**Sn**	**07 47 08.8**	**-7.6**
PVNV	**Vila Nova**	**2.38**	**137**	*eP*	**Pn**	**07 46 42.4**	**-4.7**
PVNV				*eS*	**Sn**	**07 47 09.0**	**-7.9**
PVNV				A		07 47 10.4	
	18nm,0.2s						
PVNV	**Vila Nova**	**2.38**	**137**	*eP*	**Pn**	**07 46 42.4**	**-4.7**
PVNV				*eS*	**Sn**	**07 47 09.0**	**-7.9**
RIB2	**Ribeirinha**	**2.44**	**139**	*eP*	**Pn**	**07 46 43.4**	**-4.5**
RIB2				*eS*	**Sn**	**07 47 10.4**	**-8.0**
RIB2				A		07 47 15.2	
	11nm,0.2s						
RIB2	**Ribeirinha**	**2.44**	**139**	*eP*	**Pn**	**07 46 43.4**	**-4.5**
RIB2				*eS*	**Sn**	**07 47 10.4**	**-8.0**
PFAV	**Pico das Favas**	**2.46**	**137**	*eP*	**Pn**	**07 46 43.5**	**-4.6**
PFAV				*eS*	**Sn**	**07 47 10.8**	**-8.0**
PFAV				A		07 47 12.1	
	18nm,0.2s						
PFAV	**Pico das Favas**	**2.46**	**137**	*eP*	**Pn**	**07 46 43.5**	**-4.6**
PFAV				*eS*	**Sn**	**07 47 10.8**	**-8.0**
SET4	**Mosteiros**	**3.76**	**134**	*eP*	**Pn**	**07 47 01.7**	**-4.3**
SET2	**Ginetes**	**3.77**	**134**	*eP*	**Pn**	**07 47 02.4**	**-3.8**
PFET	**Feteiras**	**3.80**	**134**	*eP*	**Pn**	**07 47 03.0**	**-3.6**
PSAN	**Santo Antonio**	**3.81**	**133**	*eP*	**Pn**	**07 47 02.9**	**-3.9**
CML	**Cha da Macela**	**3.97**	**133**	*eP*	**Pn**	**07 47 04.2**	**-4.7**
PFAD	**Fenais da Ajud**	**4.05**	**130**	*eP*	**Pn**	**07 47 07.7**	**-2.3**
FRA1	**Furnas**	**4.10**	**131**	*eP*	**Pn**	**07 47 07.1**	**-3.6**
MIRA	**Miradouro**	**4.11**	**130**	*eP*	**Pn**	**07 47 07.0**	**-3.9**

MOS ***22*** *08:23:59.0±1.3, 2228S×17147E, h98km, mb5.3/28, Error ellipse: s-maj=10.1km s-min=9.3km az=111.6*
LDG ***22*** *08:24:00.7±0.4, 2181S×17163E, h110km, Mb5.5/2, Ms4.4/8, Error ellipse: s-maj=35.3km s-min=6.0km az=166.0*
*

PMG Port Moresby 26.65 295 *e*P **P 08 29 30.2 -0.2**
comp=Z,78nm,0.8s,mb5.3
PMG Port Moresby 26.65 295 *e*P **P 08 29 30.2 -0.2**
PMG pmax pmax
comp=Z,78nm,0.8s
PMG Port Moresby 26.65 295 P **P 08 29 29.9 -0.5**
comp=Z,89nm,0.8s,mb5.3,baz=105,slow=5.6,SNR=27
RAR Rarotonga 26.71 93 LR LR 08 37 29.9
comp=Z,589nm,20.6s,baz=225,slow=30
STKA Stephens Creek 28.15 244 *e*P **P 08 29 44.4 +0.7**
comp=Z,14nm,0.8s,mb4.5
STKA *e*PCP PcP 08 32 54.9 +0.1
STKA Stephens Creek 28.15 244 P **P 08 29 44.4 +0.7**
comp=Z,15nm,0.7s,mb4.6,baz=90,slow=10,SNR=45
STKA PcP PcP 08 32 55.2 +0.4
comp=Z,10nm,0.7s,baz=349,slow=1.9,SNR=8.2
STKA LR LR 08 39 32.8
comp=Z,490nm,18.1s,baz=66,slow=33
ASAR Alice Springs 34.54 260 P **P 08 30 39.5 -0.3**
ASAR 08 33 11.1
ASAR S **S 08 36 00.1 0.0**
ASAR pmax pmax
comp=Z,67nm,0.8s
ASAR pmax pmax
comp=Z,6.0nm,0.7s
ASAR smax
comp=N,2.0nm,0.9s
ASAR pmax pmax
comp=N,2.0nm,0.7s
ASAR Alice Springs 34.54 260 P **P 08 30 39.5 -0.4**
comp=N,67nm,0.8s,mb5.5,baz=87,slow=9.1,SNR=420
ASAR PcP PcP 08 33 11.1 -1.0
comp=N,6.1nm,0.7s,baz=111,slow=3.5,SNR=6.7
ASAR S **S 08 36 00.1 0.0**
comp=N,1.6nm,0.9s,baz=96,slow=15,SNR=4.8
ASAR ScP ScP 08 36 49.4 +2.9
comp=N,1.8nm,0.7s,baz=112,slow=3.8,SNR=7.2
WB2 Warramunga Arr 34.65 267⇑*i*P **P 08 30 39.5 -1.3**
WB2 *e*PCP PcP 08 33 12.2 -0.3
WB2 *e*S **S 08 35 59.7 -2.1**
WRA Warramunga Arr 34.66 267 P **P 08 30 39.3 -1.6**
WRA PcP PcP 08 33 12.0 -0.6
WRA S **S 08 35 60.0 -2.1**
WRA ScP ScP 08 36 50.1 +3.1
WRA Warramunga Arr 34.66 267 P **P 08 30 39.3 -1.6**
WRA 08 33 12.0
WRA S **S 08 36 00.0 -2.0**
WRA pmax pmax
comp=Z,14nm,0.3s
WRA pmax pmax
comp=Z,5.0nm,0.7s
WRA smax
comp=N,3.0nm,1.0s
WRA pmax pmax
comp=N,1.0nm,0.7s
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRA MLR MLR
comp=Z,298nm,20.6s
WRA Warramunga Arr 34.66 267 P **P 08 30 39.3 -1.6**
comp=Z,14nm,0.3s,mb5.2,baz=101,slow=8.6,SNR=95
WRA PcP PcP 08 33 12.0 -0.6
comp=Z,5.0nm,0.7s,baz=98,slow=2.7,SNR=6.1
WRA S **S 08 35 60.0 -2.1**
comp=Z,3.3nm,1.0s,baz=100,slow=14,SNR=5.0
WRA ScP ScP 08 36 50.1 +3.1
comp=Z,1.3nm,0.7s,baz=95,slow=3.4,SNR=3.7
WRA PKiKP PKiKP 08 40 33.3 -1.9
comp=Z,0.5nm,1.0s,baz=224,slow=0.1,SNR=4.5
WRA LR LR 08 45 12.9
comp=Z,298nm,20.6s,baz=140,slow=37
TBI Tubuai 35.94 99 *e*LR LR 08 40 49.8
comp=Z,745nm,30.0s
PPT Papeete 36.85 90 *e*LQ 08 39 32.0
comp=Z,2μm,31.5s
PPT *e*LR LR 08 41 03.3
comp=Z,1μm,28.0s
PPT Papeete 36.85 90 LR LR 08 42 12.3
comp=Z,362nm,21.3s,baz=256,slow=30
KAKA Kakadu 38.34 278⇑*i*P **P 08 31 11.2 -1.0**
comp=Z,62nm,0.6s,mb5.6
FORT Forrest 39.52 248 *e*P **P 08 31 21.7 -0.2**
comp=Z,78nm,0.7s,mb5.6
FITZ Fitzroy Crossi 43.09 267⇑*i*P **P 08 31 51.5 +0.3**
comp=Z,319nm,0.8s,mb6.1
FITZ *e*S **S 08 38 08.5 -0.1**
FITZ Fitzroy Crossi 43.09 267 P **P 08 31 51.5 +0.3**
comp=Z,165nm,0.8s,mb5.8,baz=123,slow=7.9,SNR=248
BATI Kupang 47.27 277 P **P 08 32 25.3 +1.0**
comp=Z,143nm,0.7s,mb5.8,baz=173,slow=1.1,SNR=24
MBWA Marble Bar 47.88 261 *e*P **P 08 32 28.9 +0.1**
comp=Z,111nm,0.7s,mb5.8
TAOE Nuku Hiva Isla 48.28 82 *e*LR LR 08 46 18.1
comp=Z,2μm,27.8s
KLBR Kellerberrin 48.34 247⇑*i*P **P 08 32 31.8 -0.5**
comp=Z,104nm,1.1s,mb5.6
NWAO Narrogin (SRO) 48.73 245 *e*P **P 08 32 35.4 +0.2**
comp=Z,42nm,0.8s,mb5.4
NWAO Narrogin (SRO) 48.73 245 P **P 08 32 35.4 +0.2**
comp=Z,50nm,0.7s,mb5.5,baz=116,slow=6.9,SNR=21
NWAO LR LR 08 51 28.2
comp=Z,488nm,20.9s,baz=280,slow=34
MUN Mundaring 49.64 246 *e*P **P 08 32 41.0 -1.2**
VNDA Vanda 55.40 183 P **P 08 33 23.7 -0.2**
VNDA pmax pmax
comp=Z,4.0nm,0.8s
VNDA Vanda 55.40 183 P **P 08 33 23.7 -0.2**
comp=Z,3.6nm,0.8s,mb4.5,baz=1.1,slow=7.4,SNR=26
SBA Scott Base 55.58 181 *e*P **P 08 33 26.1 +0.9**
comp=Z,39nm,0.8s,mb5.5
SBA *e*pP pP 08 33 50.1 -3.5
SBA Scott Base 55.58 181 *e*P **P 08 33 26.1 +0.9**
SBA *e**PP pP 08 33 50.1 -3.5
SBA pmax pmax
comp=Z,39nm,0.8s,mb5.5
CBIJ Chichi jima 56.75 329 P **P 08 33 33.3 -0.9**
comp=Z,136nm,0.7s,mb6.1,baz=263,slow=19,SNR=7.4
CBIJ LR LR 08 54 51.8
comp=Z,166nm,19.3s,baz=129,slow=33
MYLDM Lahad Datu 58.59 291⇓P **P 08 33 49.0 +1.7**
TSM Tawau 58.70 290⇑P **P 08 33 49.0 +0.9**
SDKM Sandakan 59.94 291⇑P **P 08 33 57.6 +0.9**
KDM Kudat 60.89 292⇓P **P 08 34 04.5 +1.4**
KKM Kota Kinabalu 60.99 291 *e*P **P 08 34 04.2 +0.4**
KKM Kota Kinabalu 60.99 291⇓P **P 08 34 04.6 +0.8**
BTM Bintulu 62.39 286⇓P **P 08 34 14.4 +1.1**
SBUM Sibu 62.83 285⇓P **P 08 34 17.9 +1.8**
JHJ Hachijo jima 2 62.92 330 LR LR 08 55 53.6
comp=Z,196nm,21.3s,baz=149,slow=30
KSM Kuching 64.11 283 *e*P **P 08 34 24.9 +0.3**
KSM Kuching 64.11 283⇑P **P 08 34 25.1 +0.5**
MJAR Matsushiro Arr 66.49 331 P **P 08 34 38.2 -1.2**
MJAR pmax pmax
comp=Z,14nm,0.6s
MJAR Matsushiro Arr 66.49 331 P **P 08 34 38.2 -1.1**
comp=Z,14nm,0.6s,mb5.0,baz=167,slow=8.1,SNR=43
MAJO Matsushiro 66.49 331 *e*P **P 08 34 38.5 -0.9**
comp=Z,40nm,1.0s,mb5.2
MAJO Matsushiro 66.49 331 *e*P **P 08 34 38.5 -0.9**
MAJO pmax pmax
comp=Z,40nm,1.0s,mb5.2
MAT Matsushiro 66.49 331 P **P 08 34 38.3 -1.1**
MAT S S 08 43 10.8 -10
JNU Nakatsue 67.42 324 LR LR 08 59 42.7
comp=Z,157nm,21.0s,baz=120,slow=32
YHNB Yeheng 67.47 311 *e*P **P 08 34 45.9 0.0**
QSPA South Pole Qui 67.70 180 *e*P **P 08 34 46.3 -0.2**
comp=Z,19nm,0.5s,mb5.2
QSPA South Pole Qui 67.70 180 P **P 08 34 46.4 -0.1**
comp=Z,31nm,0.9s,mb5.1,baz=15,slow=1.3,SNR=165
QZH Quanzhou 69.61 309⇑*i*P **P 08 35 01.3 +2.1**
QZH S S 08 43 56.0 -2.1
MYKOM Kota Tinggi 70.10 281⇓P **P 08 35 03.3 +0.9**
KGM Kluang 70.67 281⇓P **P 08 35 06.8 +0.9**
KTGM Kuala Trenggan 72.22 284⇓P **P 08 35 16.5 +1.2**
KSRS Korea Array 72.26 325 P **P 08 35 14.7 -0.2**
KSRS pmax pmax
comp=Z,22nm,0.8s,mb5.0
KSRS Korea Array 72.26 325 P **P 08 35 14.7 -0.3**
comp=Z,22nm,0.8s,mb5.1,baz=144,slow=6.0,SNR=67
FRIM Kepong 72.71 281⇑P **P 08 35 19.3 +1.1**
QIZ Qiongzhong 72.94 299 P **P 08 35 18.4 -0.9**
QIZ AP pP 08 35 51.0 +1.9
QIZ S S 08 44 39.4 +2.7
QIZ XS sS 08 45 31.9 +4.0
QIZ AMB AMB
comp=Z,18nm,1.5s,mb4.7
QIZ AMB AMB
comp=Z,148nm,5.7s
INCN Inchon 72.97 324 *e*P **P 08 35 19.9 +0.8**
comp=Z,67nm,0.9s,mb5.5
YSS Yuzh-Sakhalins 73.72 340 *e*P **P 08 35 23.8 +0.5**
comp=Z,24nm,0.7s,mb5.0
YSS Yuzh-Sakhalins 73.72 340 *e*P **P 08 35 23.8 +0.5**
YSS pmax pmax
comp=Z,24nm,0.7s,mb5.0
NJ2 Nanjing 73.90 315 *e*P **P 08 35 25.6 +0.9**
NJ2 AMB AMB
comp=Z,80nm,1.0s,mb5.4
KULM Kulim 74.45 283 *e*P **P 08 35 28.1 -0.2**
KULM Kulim 74.45 283⇓P **P 08 35 28.9 +0.6**
ADK Adak 74.66 8 *e*P **P 08 35 27.7 -0.9**
comp=Z,30nm,0.8s,mb5.1
ADK Adak 74.66 8 P **P 08 35 27.7 -0.9**
ADK pmax pmax
comp=Z,30nm,0.8s,mb5.1
PSI Prapat 75.00 279 LR LR 09 06 09.6
comp=Z,153nm,20.2s,baz=22,slow=34
SNG Songkhla 75.27 284 P **P 08 35 32.5 -0.6**
comp=Z,294nm,1.0s,mb6.0
PET Petropavlovsk 75.90 352 *e*P **P 08 35 35.1 -0.6**
PET *e* 08 35 47.2
PET *e**PP pP 08 36 11.0 +5.3
PET *e*S S 08 45 03.9 -4.4
PET pmax pmax
comp=Z,15nm,0.4s,mb5.1
MAW Mawson 76.33 202 P **P 08 35 38.3 +0.2**
MAW pmax pmax
comp=Z,7.0nm,0.6s
MAW Mawson 76.33 202 P **P 08 35 38.3 +0.2**
comp=Z,6.6nm,0.6s,mb4.6,baz=133,slow=7.5,SNR=16
DL2 Dalian 76.76 322⇑*i*P **P 08 35 40.6 -0.3**
DL2 XP sP 08 36 24.1 +0.4
DL2 S S 08 45 18.8 +0.4
DL2 AMB AMB
comp=Z,50nm,0.8s,mb5.3
DL2 AMB AMB
comp=Z,140nm,5.3s
MDJ Mudanjiang 76.86 331 P **P 08 35 41.0 -0.3**
MDJ S S 08 45 18.8 -0.4
MDJ SS SS 08 50 14.5 -4.2
MDJ AMB AMB
comp=Z,26nm,1.1s,mb4.9
MDJ AMB AMB
comp=Z,122nm,6.4s
MDJ LR LR
comp=N,181nm,38.3s
MDJ LR LR
comp=E,160nm,32.4s
MDJ LR LR
comp=Z,282nm,36.8s
MDJ Mudanjiang 76.86 331 *e*P **P 08 35 41.5 +0.2**
comp=Z,38nm,1.1s,mb5.0
HABR Khabarovsk 77.69 336 *e*P **P 08 35 44.6 -1.3**
HABR *e* 08 35 53.8
HABR *e**PP pP 08 36 20.2 +4.3
HABR *e*S S 08 45 22.8 -5.2
HABR *e* 08 45 47.0
HABR *e*PS 08 46 08.3
CN2 Changchun 78.21 328 *e*P **P 08 35 48.4 -0.4**
CN2 PCP PcP 08 35 57.6 -0.2
CN2 *e*XP sP 08 36 31.0 -0.7
CN2 *e*PP PP 08 38 49.1 +1.6
CN2 *e*S S 08 45 33.6 -0.2
CN2 AMB AMB
comp=Z,70nm,0.8s,mb5.4
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,21.0s
GYA Guiyang 79.31 304 P **P 08 35 57.6 +2.3**
GYA PCP PcP 08 36 05.8 +2.7
GYA XP sP 08 36 41.3 +3.1
GYA PP PP 08 39 01.6 +4.6
GYA PPP 08 40 52.3
GYA S S 08 45 47.6 +1.4
GYA SKS 08 45 58.0
GYA SCS ScS 08 46 07.0 -0.8
GYA PS 08 46 49.3
GYA SS SS 08 51 01.0 +4.8
GYA AMB AMB
comp=Z,30nm,1.0s,mb5.1
GYA AMB AMB
comp=Z,120nm,6.4s
GYA LR LR
comp=N,720nm,19.6s
GYA LR LR
comp=E,530nm,20.3s
GYA LR LR
comp=Z,690nm,20.8s
KLR Kul'dur 79.58 335 *e*P **P 08 35 52.8 -3.4**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,90nm,2.0s,mb5.2
BJT Baijiatuao 80.66 320 *e*P **P 08 36 02.1 -0.1**
comp=Z,60nm,1.1s,mb5.3
BJT Baijiatuao 80.66 320 *e*P **P 08 36 02.1 -0.2**
BJT pmax pmax
comp=Z,60nm,1.1s
BJI Beijing 80.67 320 P **P 08 36 02.1 -0.2**
BJI AP pP 08 36 33.0 +0.4
BJI XP sP 08 36 45.1 -0.2
BJI PP PP 08 39 08.3 +0.2
BJI S S 08 46 04.8 +4.8
BJI XS sS 08 46 53.8 +1.7
BJI SS SS 08 51 15.6 -0.5
BJI AMB AMB
comp=Z,54nm,1.0s,mb5.3
BJI AMB AMB
comp=Z,416nm,9.8s
BJI LR LR
comp=N,228nm,20.2s
BJI LR LR
comp=E,120nm,25.6s
BJI LR LR
comp=Z,509nm,30.9s
KMI Kunming 81.69 301 P **P 08 36 09.3 +1.3**
KMI AP pP 08 36 41.6 +3.2
KMI XP sP 08 36 53.1 +2.0
KMI PPP 08 41 10.3
KMI S S 08 46 11.5 +0.4
KMI XS sS 08 47 06.5 +3.1
KMI SS SS 08 51 34.4 +2.6
KMI AMB AMB
comp=Z,34nm,1.0s,mb5.1
KMI AMB AMB
comp=Z,209nm,4.4s
KMI LR LR
comp=N,107nm,23.5s
KMI LR LR
comp=E,142nm,24.8s
KMI LR LR
comp=Z,136nm,22.2s
XAN Xi'an 81.75 312 P **P 08 36 07.8 -0.4**
XAN AMB AMB
comp=Z,17nm,0.7s,mb5.0
CHG Chiang Mai 81.84 294⇑P **P 08 36 09.2 +0.2**
comp=Z,65nm,0.8s,mb5.5
CHTO Chiang Mai 81.84 294 *e*P **P 08 36 09.0 +0.1**
comp=Z,18nm,0.9s,mb4.9
CHTO Chiang Mai 81.84 294 *e*P **P 08 36 09.0 0.0**
CHTO pmax pmax
comp=Z,18nm,0.9s,mb4.9
CHGN Chignik 82.41 16 *e*P **P 08 36 08.9 -2.1**
SYO Syowa Base 82.51 196⇑*e*P **P 08 36 08.9 -2.7**
PMSA Palmer Station 83.26 159 P **P 08 36 14.7 -0.9**
comp=Z,15nm,0.9s,mb4.8,baz=238,slow=9.2,SNR=4.2
MA2 Magadan 83.40 350 *e*P **P 08 36 14.9 -1.2**
MA2 pmax pmax
comp=Z,10.0nm,1.0s,mb4.6
CD2 Chengdu 83.79 307 *e*P **P 08 36 19.4 +0.6**
CD2 AP pP 08 36 49.0 -0.2
CD2 XP sP 08 37 03.3 +1.4
CD2 PP PP 08 39 36.5 +2.7
CD2 S S 08 46 31.4 -0.8
CD2 XS sS 08 47 27.3 +2.6
CD2 SS SS 08 52 04.9 +2.2
CD2 AMB AMB
comp=Z,20nm,1.1s,mb4.9
CD2 AMB AMB
comp=Z,40nm,5.8s
CD2 LR LR
comp=N,290nm,26.4s
CD2 LR LR
comp=E,590nm,16.8s
CD2 LR LR
comp=Z,280nm,20.4s
HHC Hu-ho-hao-te 83.94 319 *e*P **P 08 36 19.8 +0.5**
HHC AP pP 08 36 50.9 +1.1
HHC XP sP 08 37 05.0 +2.6
HHC PP PP 08 39 37.6 +2.7
HHC SKS 08 46 27.3
HHC S S 08 46 31.3 -2.0
HHC PS 08 47 44.3
HHC SS SS 08 52 04.8 +0.2
HHC AMB AMB
comp=Z,49nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,148nm,5.0s
HHC LR LR
comp=N,183nm,16.6s
HHC LR LR
comp=E,144nm,17.8s
HHC LR LR
comp=Z,200nm,19.0s
BTO Baotou 84.75 318 *e*P **P 08 36 23.5 +0.1**
KDAK Kodiak Island 85.30 18 P **P 08 36 24.5 -1.2**
comp=Z,17nm,1.1s,mb4.9,baz=236,slow=3.6,SNR=2.6
MAIT Maitri 86.02 187 *e*P **P 08 36 26.5 -2.8**
BNLO Ben Lomond (Sa 86.03 47⇑P **P 08 36 28.8 -1.0**
baz=86
HAST UC Hastings Re 86.06 48⇓P **P 08 36 30.3 +0.3**
baz=86
JRSC Jasper Ridge 86.13 47⇓P **P 08 36 30.6 +0.3**
baz=86
SNAA Sanae 86.13 182 P **P 08 36 28.2 -1.6**
SNAA pmax pmax
comp=Z,6.0nm,1.0s
SNAA Sanae 86.13 182 P **P 08 36 28.2 -1.6**
comp=Z,6.3nm,1.0s,mb4.5,baz=179,slow=4.5,SNR=25
SEY Seymchan 86.35 351⇓*e*P **P 08 36 29.2 -1.6**
LZH Lanzhou 86.36 311 *e*P **P 08 36 32.0 +0.5**
LZH AP pP 08 37 02.5 +0.4
LZH XP sP 08 37 16.0 +1.3
LZH PP PP 08 39 57.8 +3.2
LZH *e*SKS 08 46 44.3
LZH *e*S S 08 46 56.1 -1.3
LZH *e*SS SS 08 52 42.5 +2.1
LZH AMB AMB
comp=Z,69nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,275nm,4.0s
LZH LR LR
comp=E,1μm,8.2s
LZH LR LR
comp=Z,1μm,9.5s
KCPM Cahto Peak 86.45 44 *e*P **P 08 36 32.7 +0.9**
P01C Double 8 Ranch 86.50 45⇓P **P 08 36 30.5 -1.6**
baz=87
PKM Peak Mountain 86.51 50⇑P **P 08 36 32.5 +0.2**
baz=87
PKD Parkfield 86.54 49⇓P **P 08 36 31.9 -0.4**
baz=87
O01C Eel River Cons 86.55 44⇑P **P 08 36 33.1 +0.8**
baz=87
PACP Pacheco Peak 86.57 48⇓P **P 08 36 32.1 -0.4**
baz=87
U04C Hernandez Rese 86.58 48⇑P **P 08 36 32.5 -0.1**
baz=87
SMMC Simmler 86.59 50⇓P **P 08 36 33.5 +0.9**
baz=87
PTRM Twissleman Ran 86.62 49 *e*P **P 08 36 32.6 -0.1**
VNA3 Neumayer Olymp 86.64 180 *e*P **P 08 36 30.7 -1.6**
VNA3 *e* 08 36 33.2
VNA3 *e* 08 36 37.4
VNA3 *e* 08 36 40.3
VNA3 *e* 08 36 43.4
MNRC McLaughlin Nat 86.77 46⇓P **P 08 36 33.8 +0.4**
baz=87
S04C Ingram Canyon, 86.80 47⇓P **P 08 36 33.9 +0.3**
baz=87
GAMB Gambell 86.87 7 *e*P **P 08 36 33.5 +0.2**
VNA2 Neumayer--Watz 86.95 180 *e*P **P 08 36 32.7 -1.2**
baz=182,slow=4.5
VNA2 *e* 08 36 35.3
VNA2 *e* 08 36 38.6
VNA2 *e* 08 36 42.3
VNA2 *e* 08 36 45.7
GASB Alder Springs 87.00 45 P **P 08 36 35.9 +1.4**
baz=87,SNR=7.9
KHMM Horse Mountain 87.00 43 *e*P **P 08 36 34.9 +0.4**
O02C Red Bluff 87.23 44 P **P 08 36 36.4 +0.8**
baz=87,SNR=12
VNA1 Neumayer--Stat 87.23 180 *e*P **P 08 36 35.0 -0.2**
VNA1 *e* 08 36 36.9
VNA1 *e* 08 36 40.4
VNA1 *e* 08 36 43.7
VNA1 *e* 08 36 47.5
N02C Big Bar 87.25 44 P **P 08 36 36.3 +0.6**
baz=87,SNR=5.2
M01C Crescent City 87.29 42⇑P **P 08 36 36.6 +0.8**
baz=87
SVW2 Sparrevohn 87.33 15 *e*P **P 08 36 35.8 +0.3**
ARVC Arvin 87.33 50⇑P **P 08 36 36.7 +0.5**
baz=88
SUTB Sutter Butte 87.39 46 P **P 08 36 35.7 -0.6**
baz=88
S05C Merced 87.40 48⇑P **P 08 36 36.7 +0.2**
baz=88
Q04C Lincoln 87.46 46⇑P **P 08 36 36.7 0.0**
baz=88
109C Camp Elliot, M 87.50 53⇓P **P 08 36 36.5 -0.6**
baz=88
K01A Sixes 87.61 41⇑P **P 08 36 37.5 +0.2**
baz=88
WDC Whiskeytown Da 87.61 44 *e*P **P 08 36 37.3 -0.1**
comp=Z,23nm,1.1s,mb5.1
WDC Whiskeytown Da 87.61 44 *e*P **P 08 36 37.3 -0.1**
WDC pmax pmax
comp=Z,23nm,1.1s,mb5.1
WDC Whiskeytown Da 87.61 44 P **P 08 36 37.5 +0.1**
baz=88,SNR=7.0
O03C Acorn Hollow, 87.63 45 P **P 08 36 37.6 +0.1**
baz=88,SNR=6.6
RCTC Rector, Farmer 87.63 49⇑P **P 08 36 37.5 -0.2**
baz=88
OHCM Honcut 87.64 46 *e*P **P 08 36 37.7 +0.1**
T06C Millerton Lake 87.65 48 P **P 08 36 37.5 -0.2**
baz=88,SNR=14
CMB Columbia Colle 87.71 47 *e*P **P 08 36 37.6 -0.4**
comp=Z,20nm,1.1s,mb5.0
CMB Columbia Colle 87.71 47 *e*P **P 08 36 37.6 -0.3**
CMB pmax pmax
comp=Z,19nm,1.1s,mb5.0
CMB Columbia Colle 87.71 47 P **P 08 36 37.8 -0.1**
baz=88,SNR=8.1
BFSC Mount Baldy St 87.74 52⇓P **P 08 36 37.6 -0.6**
baz=88,SNR=6.1
ORV Oroville 87.75 45 P **P 08 36 38.0 0.0**
baz=88,SNR=7.3
MURC Murrieta 87.77 52⇑P **P 08 36 37.8 -0.6**
baz=88
L02A Cave Junction 87.78 42⇓P **P 08 36 38.6 +0.5**
baz=88
EDW2 Edwards Air Fo 87.81 51 P **P 08 36 38.3 -0.2**
baz=88,SNR=17
LAVA Lava Cap Winer 87.84 46⇑P **P 08 36 38.2 -0.4**
baz=88
M02C Callahan 87.84 43 P **P 08 36 39.4 +0.9**
baz=88,SNR=13
ISA Isabella 87.85 50 P **P 08 36 38.7 +0.1**
baz=88,SNR=23
HELL Mitchell Peak, 87.97 49 P **P 08 36 38.7 -0.4**
baz=88,SNR=11
MONP Monument Peak 88.01 53 P **P 08 36 39.6 +0.1**
baz=88,SNR=8.0
KCC Kaiser Creek 88.08 48 P **P 08 36 41.0 +1.3**
baz=88,SNR=7.7
YBH Yreka Blue Hor 88.11 43 *e*P **P 08 36 40.1 +0.4**
comp=Z,19nm,0.8s,mb5.2
YBH Yreka Blue Hor 88.11 43 *e*P **P 08 36 40.2 +0.4**
YBH pmax pmax

comp=Z,19nm,0.8s
YBH Yreka Blue Hor 88.11 43 P P 08 36 40.3 +0.5
baz=88,SNR=13
DVTC Desert V Tower 88.14 54 ⇓P P 08 36 40.8 +0.7
baz=88
K02A Glendale 88.19 42 ⇓P P 08 36 40.2 +0.1
baz=88
P05C Yuba Gap, Truc 88.21 46 P P 08 36 40.9 +0.6
baz=88,SNR=7.6
M03C McCloud 88.25 44 P P 08 36 40.7 +0.3
baz=88,SNR=15
R05C Kirkwood Meado 88.26 47 ⇓P P 08 36 41.5 +0.9
baz=88,SNR=8.9
PFO Pinyon Flat Ob 88.32 53 eP P 08 36 41.6 +0.7
PFO Pinyon Flat Ob 88.32 53 ⇓P P 08 36 40.7 -0.3
baz=88
O05C Quincy 88.34 45 P P 08 36 41.1 +0.2
baz=88,SNR=5.1
LHEM Herd Peak 88.37 43 P P 08 36 41.4 +0.4
O04C Chester 88.42 45 P P 08 36 41.4 +0.2
baz=89,SNR=8.9
HATC Hat Creek Radi 88.43 44 ⇑P P 08 36 42.0 +0.7
baz=89
J02A Umpqua 88.46 41 ⇓P P 08 36 40.8 -0.5
baz=89
SWSC Sam W. Stewart 88.49 53 ⇑P P 08 36 40.8 -1.0
baz=89
CWC Cottonwood Cre 88.51 49 ⇑P P 08 36 41.9 +0.2
baz=89
LBCM Butte Creek Ri 88.51 44 P P 08 36 41.7 0.0
R06C Coleville 88.59 47 ⇑P P 08 36 42.4 +0.3
baz=89
MTUM Tungsten Hills 88.62 48 eP P 08 36 42.7 +0.5
R07C Lee Vining 88.65 48 P P 08 36 43.1 +0.7
baz=89,SNR=11
I02A Mapleton 88.65 41 ⇓P P 08 36 43.1 +0.8
baz=89
BEKR Beckwourth 88.66 46 P P 08 36 42.3 -0.1
baz=89,SNR=8.2
M04C Macdoel 88.69 43 P P 08 36 42.8 +0.3
baz=89,SNR=6.3
BUOR Burton Butte 88.70 43 P P 08 36 42.9 +0.4
MPMC Manual Prospec 88.74 50 P P 08 36 42.7 -0.2
baz=89,SNR=6.3
WCN Washoe City 88.78 46 P P 08 36 43.5 +0.6
baz=89,SNR=6.9
ELFS Eagle Lake Fie 88.80 45 ⇑P P 08 36 43.7 +0.7
baz=89
TTA Tatalina 88.82 14 eP P 08 36 42.5 0.0
comp=Z,6.0nm,1.0s,mb4.6
TTA Tatalina 88.82 14 eP P 08 36 42.6 0.0
TTA pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
J03A Ideyld Park 88.83 42 ⇑P P 08 36 44.2 +1.1
baz=89
BELC Belle Mtn. 88.84 52 P P 08 36 43.5 +0.1
baz=89,SNR=10
HSO Harness Mounta 88.84 41 P P 08 36 43.6 +0.4
GSC Goldstone 88.87 51 ⇑P P 08 36 42.6 -0.9
baz=89
M05C Lookout 88.92 44 P P 08 36 43.8 +0.3
baz=89,SNR=20
S08C White Mtn Res 88.96 49 P P 08 36 44.4 +0.6
baz=89,SNR=17
I03A Eugene 88.97 41 ⇓P P 08 36 44.2 +0.5
baz=89
HEC Hector,Ludlow 88.99 52 P P 08 36 43.9 -0.2
baz=89,SNR=13
HOG Hogback Mounta 89.02 43 P P 08 36 44.5 +0.4
BC3 Big Chuckw Mtn 89.08 53 P P 08 36 46.0 +1.5
baz=89,SNR=6.0
MPOR Mary's Peak 89.09 40 P P 08 36 44.6 +0.3
O06A Flanigan 89.16 46 P P 08 36 45.0 +0.2
baz=89,SNR=17
PAHR Pah Rah Range 89.23 46 eP P 08 36 45.0 -0.1
comp=Z,31nm,1.0s,mb5.3
GLA Glamis 89.27 54 P P 08 36 46.1 +0.7
baz=89,SNR=11
M06C Likely Place G 89.27 44 P P 08 36 45.4 +0.2
baz=89,SNR=12
GRAC Grapevine Rang 89.28 49 P P 08 36 45.6 +0.2
baz=89,SNR=8.7
J04A Umpqua Nationa 89.29 42 P P 08 36 45.6 +0.4
baz=89,SNR=9.1
NVAR Mina Array Bea 89.33 48 P P 08 36 45.5 -0.1
NVAR PKKPbc PKKPbc 08 54 23.2 +0.9
NVAR Mina Array Bea 89.33 48 P P 08 36 45.5 -0.1
comp=Z,14nm,0.7s,mb5.1,baz=211,slow=6.3,SNR=79
NVAR PKKPbc PKKPbc 08 54 23.2 +0.9
comp=Z,0.2nm,0.4s,baz=66,slow=4.6,SNR=4.0
H03A Soap Creek Ran 89.34 40 ⇓P P 08 36 45.3 -0.1
baz=90
FURC Furnace Creek, 89.38 50 P P 08 36 46.1 +0.2
baz=90,SNR=8.4
I04A Tendick Farm, 89.40 41 P P 08 36 45.7 -0.1
baz=90,SNR=9.7
R08A Mina 89.42 48 ⇑P P 08 36 46.2 +0.2
baz=90,SNR=7.2
GMRC Granite Mounta 89.45 52 ⇑P P 08 36 45.6 -0.6
baz=90
N06A Buffalo Meadow 89.45 45 P P 08 36 46.1 0.0
baz=90,SNR=17
L05A Lakeview 89.47 44 P P 08 36 46.7 +0.6
baz=90,SNR=13
HBO Huckleberry Mo 89.48 41 P P 08 36 46.2 0.0
IRM Iron Mountain 89.54 53 P P 08 36 46.7 +0.1
baz=90,SNR=11
S09A Goldfield 89.73 49 P P 08 36 47.1 -0.3
baz=90,SNR=10
U10A Ash Meadows, A 89.74 50 P P 08 36 48.1 +0.6
baz=90,SNR=6.7
MOD Modoc 89.74 44 eP P 08 36 47.4 0.0
comp=Z,9.6nm,0.7s,mb5.0
MOD Modoc 89.74 44 P P 08 36 47.4 +0.1
baz=90,SNR=12
K05A Summer Lake 89.78 43 P P 08 36 48.0 +0.4
baz=90,SNR=11
Q08A Gabbs 89.79 47 P P 08 36 47.5 -0.2
baz=90,SNR=38
O07A Toulon 89.79 46 P P 08 36 47.7 0.0
baz=90,SNR=24
Y12C Blythe 89.81 53 ⇑P P 08 36 48.3 +0.3
baz=90
J05A Fort Rock 89.86 42 P P 08 36 48.2 +0.3
baz=90,SNR=38
F03A Seaside 89.86 39 ⇑P P 08 36 48.7 +0.9
baz=90
H04A Detroit Lake 90.01 41 ⇓P P 08 36 48.7 +0.2
baz=90
N07B Gerlach 90.04 45 P P 08 36 49.0 +0.2
baz=90,SNR=11
TPNV Topopah Spring 90.04 50 eP P 08 36 48.8 -0.1
comp=Z,17nm,0.8s,mb5.2
TPNV ePP pP 08 37 19.4 -0.3
TPNV Topopah Spring 90.04 50 eP P 08 36 48.8 -0.1
TPNV e*PP pP 08 37 19.4 -0.4
TPNV pmax pmax
comp=Z,17nm,0.8s,mb5.2
TPNV Topopah Spring 90.04 50 ⇓P P 08 36 49.1 +0.1
baz=90
R09A Tonopah 90.08 48 P P 08 36 49.0 -0.1
baz=90,SNR=22
V11A Goodsprings 90.11 51 ⇓P P 08 36 50.0 +0.8
baz=90
G04A Mulino 90.11 40 P P 08 36 49.6 +0.6
baz=90,SNR=5.6
E03A Lebam 90.20 39 ⇓P P 08 36 49.0 -0.4
baz=90
M07A Soldier Meadow 90.21 45 P P 08 36 49.9 +0.3
baz=90,SNR=29
BILL Bilibino 90.22 358 eP P 08 36 47.8 -1.2
comp=Z,16nm,1.0s,mb5.1
BILL ePP pP 08 37 21.0 +1.1
BILL Bilibino 90.22 358⇑ eP P 08 36 47.9 -1.1
BILL e*PP pP 08 37 21.6 +1.8
BILL e 08 47 02.2
BILL pmax pmax
comp=Z,27nm,1.5s,mb5.2
K06A Valley Falls 90.23 43 P P 08 36 49.8 +0.2
baz=90,SNR=20
S10A Tonopah Range, 90.26 49 ⇑P P 08 36 49.8 -0.1
baz=90
W12A Cal Nev Ari 90.27 52 ⇓P P 08 36 50.7 +0.7
baz=90
Q09A Carvers 90.29 48 P P 08 36 50.6 +0.6
baz=90,SNR=5.7
I05A Bend 90.30 42 P P 08 36 50.1 +0.2
baz=90,SNR=9.4
PDMCI Parker Dam,Lak 90.34 53 P P 08 36 50.8 +0.4
baz=90,SNR=9.7
Y13A Salome 90.36 53 P P 08 36 50.8 +0.3
baz=90,SNR=12
U11A Corn Creek 90.41 51 ⇑P P 08 36 50.8 +0.1
baz=90
L07A Adell 90.42 44 P P 08 36 51.0 +0.5
baz=91,SNR=22
V12A Nelson 90.47 51 P P 08 36 51.3 +0.3
baz=91,SNR=6.0
YAK Yakutsk 90.48 342 i P P 08 36 49.5 -0.8
YAK pmax pmax
comp=Z,17nm,0.7s,mb5.3
J06A Christmas Vall 90.52 43 P P 08 36 50.5 -0.5
baz=91,SNR=17
F04A Amboy 90.53 40 ⇑P P 08 36 50.5 -0.5
baz=91
H05A Madras 90.57 41 ⇑P P 08 36 51.3 +0.1
baz=91
N08A GE Springer Mi 90.59 46 P P 08 36 51.5 +0.1
baz=91,SNR=18
SHPR Sheep Range 90.61 51 eP P 08 36 51.6 +0.1
ULN Ulaanbaatar 90.61 323 eP P 08 36 51.2 0.0
comp=Z,23nm,0.6s,mb5.5
ULN Ulaanbaatar 90.61 323 eP P 08 36 51.3 0.0
ULN pmax pmax
comp=Z,23nm,0.6s,mb5.5
R10A Warm Springs 90.64 49 P P 08 36 52.0 +0.4
baz=91,SNR=18
P09A Austin 90.66 47 ⇑P P 08 36 51.3 -0.4
baz=91
X13A Yucca 90.70 53 P P 08 36 52.1 0.0
baz=91,SNR=12
S11A Rachel 90.72 49 ⇓P P 08 36 52.6 +0.5
baz=91
M08A Happy Creek Ra 90.76 45 P P 08 36 52.4 +0.2
baz=91,SNR=11
GTA Gaotai 90.78 313 eP P 08 36 52.8 +0.5
GTA AP pP 08 37 21.8 -1.3
GTA XP sP 08 37 34.5 -1.2
GTA PP PP 08 40 31.5 +1.6
GTA SKS 08 47 11.9
GTA S S 08 47 38.5 -0.3
GTA XS sS 08 48 27.9 -4.2
GTA SS SS 08 53 47.8 +3.3
GTA AMB AMB
comp=Z,18nm,1.8s,mb4.9
GTA AMB AMB
comp=Z,149nm,12.5s
GTA LR LR
comp=N,115nm,19.8s
GTA LR LR
comp=E,172nm,23.6s
GTA LR LR
comp=Z,155nm,19.0s
K07A Rock Creek Ran 90.81 44 P P 08 36 52.5 +0.2
baz=91,SNR=25
Z14A Wintersburg 90.81 54 ⇓P P 08 36 52.9 +0.3
baz=91
Q10A Clear Creek Ra 90.82 48 ⇑P P 08 36 52.7 +0.2
baz=91
G05A Wamic 90.83 41 ⇑P P 08 36 51.9 -0.5
baz=91
I06A Prineville 90.84 42 P P 08 36 52.7 +0.3
baz=91,SNR=18
VIPM Ingram Point 90.87 42 P P 08 36 52.4 -0.2
W13A Hualapai Mount 90.89 52 P P 08 36 53.1 +0.2
baz=91,SNR=9.7
T11A Corn Creek, Al 90.91 50 ⇓P P 08 36 53.7 +0.8
baz=91
O09A Fish Creek Ran 90.92 47 P P 08 36 52.8 -0.2
baz=91,SNR=11
SONM Songino Array 90.97 322 P P 08 36 52.6 -0.4
comp=Z,15nm,0.6s,mb5.3,baz=144,slow=3.4,SNR=64
SONM LR LR 09 12 42.5
comp=Z,113nm,20.1s,baz=103,slow=32
Y14A Wickenburg 91.02 54 P P 08 36 53.4 -0.2
baz=91,SNR=5.6
N09A Rock Creek Ran 91.03 46 P P 08 36 53.6 +0.2
baz=91,SNR=12
B04A Port Angeles 91.05 37 ⇓P P 08 36 53.6 +0.3
baz=91
115A Sonoran Desert 91.06 55 ⇓P P 08 36 53.1 -0.7
baz=91
WVOR Wild Horse Val 91.08 44 eP P 08 36 53.5 0.0
comp=Z,18nm,1.0s,mb5.2
WVOR Wild Horse Val 91.08 44 eP P 08 36 53.6 0.0
WVOR pmax pmax
comp=Z,18nm,1.0s,mb5.2
F05A White Salmon 91.08 40 ⇑P P 08 36 53.4 -0.2
baz=91
J07A Hines 91.11 43 P P 08 36 54.1 +0.4
baz=91,SNR=5.2
L08A Fields 91.14 44 P P 08 36 54.1 +0.2
baz=91,SNR=23
P10A Eureka 91.15 47 ⇑P P 08 36 54.3 +0.2
baz=91
R11A Troy Canyon, C 91.16 49 ⇑P P 08 36 53.6 -0.5
baz=91
TRCR Troy Canyon 91.16 49 eP P 08 36 54.1 0.0
H06A Lindquist Farm 91.16 41 P P 08 36 53.6 -0.3
baz=91,SNR=31
C04A Brinnon 91.17 38 ⇑P P 08 36 54.1 +0.2
baz=91
GNW Green Mountain 91.17 38 eP P 08 36 53.8 -0.1
G06A Carlson Farm, 91.24 41 P P 08 36 55.1 +0.9
baz=91,SNR=6.4
E05A Randle 91.25 39 P P 08 36 53.8 -0.5
baz=91,SNR=8.4
K08A Mann Creek Ran 91.32 44 P P 08 36 54.8 +0.1
baz=92,SNR=27
S12A Delamar Landin 91.34 50 ⇑P P 08 36 55.4 +0.5
baz=92
X14A Yava 91.34 53 P P 08 36 55.1 +0.1
baz=92,SNR=18
Q11A Duckwater 91.35 48 P P 08 36 54.8 -0.1
baz=92,SNR=17
I07A Izee 91.35 42 P P 08 36 54.8 0.0
baz=92,SNR=13
116A Eloy 91.40 55 P P 08 36 55.5 +0.2
baz=92,SNR=5.9
F06A Goldendale 91.42 40 ⇓P P 08 36 55.6 +0.5
baz=92
U13A Pakoon Wash 91.42 51 ⇑P P 08 36 56.4 +1.1
baz=92
O10A Cortez Mining, 91.45 47 ⇓P P 08 36 56.3 +0.9
baz=92
D05A Enumclaw 91.45 39 ⇑P P 08 36 56.1 +0.9
baz=92
L09A Wilkinson Ranc 91.50 45 P P 08 36 56.0 +0.5
baz=92,SNR=21
W14A Seligman 91.53 52 P P 08 36 56.2 +0.4
baz=92,SNR=18
H07A Lands Inn, Kim 91.56 42 ⇑P P 08 36 56.2 +0.4
baz=92
J08A Circle Bar Ran 91.64 43 P P 08 36 56.4 +0.2
baz=92,SNR=10
N10A Dunphy 91.64 46 ⇓P P 08 36 57.5 +1.2
baz=92
E06A Yakima 91.71 40 P P 08 36 56.3 -0.1
baz=92,SNR=5.5
T13A Saint George 91.74 51 ⇑P P 08 36 56.3 -0.6
baz=92
K09A Rome 91.79 44 P P 08 36 56.8 -0.1
baz=92,SNR=22
R12A Pony Springs, 91.84 49 ⇓P P 08 36 56.7 -0.5
baz=92
X15A Humboldt 91.84 53 P P 08 36 57.5 +0.2
baz=92,SNR=12
G07A Ruggs Ranch, H 91.84 41 P P 08 36 56.7 -0.4
baz=92,SNR=8.6
I08A Drewsey 91.85 43 P P 08 36 57.3 +0.2
baz=92,SNR=6.2
A04A Legoe Bay, Lum 91.86 37 ⇓P P 08 36 58.0 +0.9
baz=92
C05A Tolt Reservoir 91.89 38 ⇑P P 08 36 57.5 +0.2
baz=92
O11A Cowboy Ranch, 91.94 47 P P 08 36 57.6 -0.1
baz=92,SNR=12
B05A Bryant 91.96 38 ⇑P P 08 36 57.8 +0.2
baz=92
U14A Mt Trumbull 91.99 51 ⇓P P 08 36 58.4 +0.4
baz=92
TUC Tucson 92.00 56 eP P 08 36 58.5 +0.4
comp=Z,4.5nm,0.9s,mb4.7
TUC Tucson 92.00 56 eP P 08 36 58.5 +0.4
TUC pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
F07A Phinny Hill Vi 92.00 41 P P 08 36 57.5 -0.3
baz=92,SNR=5.3
M10A I.L. Ranch, Tu 92.00 46 P P 08 36 58.2 +0.3
baz=92,SNR=15
Q12A Willow Creek R 92.01 48 P P 08 36 58.0 0.0
baz=92,SNR=8.4
S13A Holt Ranch, En 92.02 50 ⇑P P 08 36 57.9 -0.2
baz=92
IMA2 Indian Mountai 92.04 13 eP P 08 36 57.4 -0.1
H08A Prairie City 92.08 42 P P 08 36 57.8 -0.4
baz=92,SNR=5.6
J09A Fry Pan Ranch, 92.09 44 P P 08 36 58.2 -0.1
baz=92,SNR=16
W15A Williams 92.12 53 ⇓P P 08 36 58.3 -0.3
baz=92
D06A Cle Elum 92.12 39 ⇑P P 08 36 57.5 -0.8
baz=92
P12A McGill 92.15 48 P P 08 36 58.5 -0.1
baz=92,SNR=7.8
318A Bisbee 92.24 57 ⇑P P 08 36 58.8 -0.5
baz=92
G08A Pilot Rock 92.29 41 P P 08 36 58.8 -0.4
baz=92,SNR=11
L10A Juniper Basin 92.31 45 ⇑P P 08 36 59.0 -0.4
baz=92
T14A Hurricane 92.35 51 ⇑P P 08 36 59.7 +0.1
baz=92
CCUT Cedar City 92.36 50 eP P 08 37 00.0 +0.3
CCUT epP pP 08 37 31.8 +1.2
E07A Sunnyside 92.38 40 ⇓P P 08 36 59.4 -0.2
baz=92
K10A MacKenzie Ranc 92.38 44 ⇓P P 08 36 59.6 0.0
baz=92
218A Dragoon 92.42 56 ⇑P P 08 37 00.3 +0.2
baz=92
COLA College 92.43 16⇑ eP P 08 36 57.1 -2.2
M11A Holland Ranch, 92.46 46 P P 08 37 00.7 +0.7
baz=93,SNR=6.6
HAWA Hanford 92.49 40 eP P 08 36 59.9 -0.2
comp=Z,12nm,0.8s,mb5.2
HAWA epP pP 08 37 33.7 +2.8
Q13A Wheeler Ranch, 92.53 49 ⇓P P 08 37 00.2 -0.2
baz=93
S14A Cedar City 92.60 50 ⇑P P 08 37 00.2 -0.6
baz=93
O12A Currie 92.62 47 P P 08 37 00.8 -0.1
baz=93,SNR=7.0
D07A Quincy 92.63 39 ⇑P P 08 37 00.2 -0.5
baz=93
F08A Pendleton 92.65 41 ⇓P P 08 36 59.6 -1.2
baz=93
N12A Clover Valley, 92.69 47 P P 08 37 01.4 +0.3
baz=93,SNR=8.7
P13A Bates Ranch, G 92.76 48 ⇑P P 08 37 01.6 +0.2
baz=93
319A Douglas 92.77 57 ⇓P P 08 37 01.5 -0.2
baz=93
H09A Durkee 92.78 42 ⇑P P 08 37 00.8 -0.6
baz=93
E08A Dider Farm, El 92.82 40 ⇓P P 08 37 01.0 -0.5
baz=93
T15A Red Dirt Ranch 92.83 51 ⇑P P 08 37 02.6 +0.7
baz=93
C07A Waterville 92.83 39 ⇑P P 08 37 00.8 -0.8
baz=93
WUAZ Wupatki 92.92 53 eP P 08 37 02.3 0.0
comp=Z,7.3nm,1.0s,mb5.0
WUAZ Wupatki 92.92 53 ⇓P P 08 37 01.6 -0.7
baz=93
K11A Parker Ranch, 92.92 45 ⇑P P 08 37 01.4 -0.7
baz=93
M12A Wells 93.03 46 ⇑P P 08 37 02.9 +0.2
baz=93,SNR=7.1
O13A Hicks Ranch, I 93.08 48 ⇑P P 08 37 02.1 -0.8
baz=93
BMO Blue Mountains 93.10 42 eP P 08 37 02.1 -0.7
comp=Z,29nm,2.1s,mb5.2
BMO Blue Mountains 93.10 42 eP P 08 37 02.2 -0.7
BMO pmax pmax
comp=Z,29nm,2.1s,mb5.2
F09A S2 Ranch, Elgi 93.14 41 ⇓P P 08 37 03.1 +0.1
baz=93
D08A Wollman Farm, 93.19 40 ⇑P P 08 37 02.7 -0.5
baz=93
B07A Winthrop 93.19 38 ⇑P P 08 37 02.7 -0.5
baz=93
N13A Wendover, West 93.26 47 ⇑P P 08 37 03.9 +0.2
baz=93
L12A House Creek Ra 93.30 46 ⇓P P 08 37 04.1 +0.3
baz=93
H10A Noah's Angus R 93.32 43 P P 08 37 03.1 -0.8
baz=94,SNR=10
A07A Ashoola River, 93.34 38 ⇑P P 08 37 03.8 -0.1
baz=94
MFID Camas Ranch 93.36 44 ⇑P P 08 37 03.8 -0.3
baz=94
E09A Wood Farm, Sta 93.38 41 ⇓P P 08 37 04.3 +0.1
baz=94
G10A Bishop Farm, J 93.42 42 P P 08 37 03.6 -0.8
baz=94,SNR=8.4
PALK Pallekele 93.44 276 eP P 08 37 05.7 +0.5
comp=Z,10.0nm,1.1s,mb5.1
PALK epP pP 08 37 38.5 +2.5
M13A Montello 93.51 47 P P 08 37 05.0 +0.2
baz=94,SNR=10
D09A Jones Farm, Ri 93.55 40 ⇓P P 08 37 04.4 -0.5
baz=94
K12A Draper Farm, C 93.60 45 ⇓P P 08 37 05.5 +0.3
baz=94
MSU Marysvale 93.63 50 eP P 08 37 05.8 +0.3
F10A Beach Ranch, E 93.68 41 P P 08 37 06.0 +0.4
baz=94,SNR=11
J12A Stokes Ranch, 93.75 45 ⇓P P 08 37 05.6 -0.4
baz=94
H11A Donnelly 93.84 43 P P 08 37 05.5 -0.7
baz=94,SNR=10
DUG Dugway 93.92 48 ⇑P P 08 37 06.3 -0.5
baz=94
A08A Turner Farm, O 93.92 38 ⇑P P 08 37 06.7 +0.2
baz=94
G11A Walters Elk Ra 94.00 42 ⇓P P 08 37 05.4 -1.6
baz=94
ZAK Zakamensk 94.05 323⇑ iP P 08 37 06.4 -0.7
M14A Sheep Mountain 94.13 47 ⇑P P 08 37 06.9 -0.8
baz=94
K13A Stover Farm, H 94.14 45 ⇑P P 08 37 08.0 +0.2
baz=94
D10A Wagner Farm, O 94.17 40 ⇓P P 08 37 06.5 -1.2
baz=94
EGAK Eagle 94.20 18 eP P 08 37 00.2 -7.3
DAWY Dawson 94.22 19 eP P 08 37 07.0 -0.5
F11A Grangeville 94.30 42 ⇑P P 08 37 11.0 +2.7
baz=94
HLID Hailey 94.34 45 eP P 08 37 09.3 +0.7
comp=Z,4.0nm,0.7s,mb4.9
HLID Hailey 94.34 45 P P 08 37 09.5 +0.9
baz=94,SNR=10
J13A Cove Ranch, Pi 94.42 45 ⇓P P 08 37 09.9 +0.9
baz=94
E11A Bogner Ranch, 94.49 41 ⇓P P 08 37 08.6 -0.6
baz=95
H12A Diamond D Ranc 94.50 43 ⇑P P 08 37 09.3 0.0
baz=95
TLY Talaya 94.51 325 eP P 08 37 08.2 -1.0
comp=Z,11nm,1.0s,mb5.2
TLY Talaya 94.51 325 i P P 08 37 08.3 -0.9
I13A Wildhorse Cree 94.69 44 ⇓P P 08 37 10.2 -0.1
baz=95
K14A Jones Ranch, D 94.70 46 ⇓P P 08 37 09.9 -0.4
baz=95
M15A Larsen Ranch, 94.72 47 ⇓P P 08 37 09.9 -0.5
baz=95
F12A Elk City 94.80 42 P P 08 37 09.8 -0.8
baz=95,SNR=6.2
PLCA Paso Flores 94.82 138 P P 08 37 11.6 +0.5
comp=Z,1.9nm,0.7s,mb4.6,baz=191,slow=5.6,SNR=5.9
PLCA LR LR 09 08 20.9
comp=Z,124nm,21.7s,baz=206,slow=28
H13A Challis 94.89 44 ⇑P P 08 37 10.4 -0.7
baz=95
SRU San Rafael 95.05 50 eP P 08 37 12.9 +0.9
comp=Z,3.4nm,0.8s,mb4.8
SRU San Rafael 95.05 50 eP P 08 37 12.9 +0.9
SRU pmax pmax
comp=Z,3.0nm,0.8s,mb4.8
G13A Cobalt 95.14 43 P P 08 37 12.7 +0.4
baz=95,SNR=6.0

D12A Red Ives Fores 95.33 41 ⇓P **P 08 37 13.7 +0.7**
baz=96
B11A Sandpoint 95.36 40 ⇓P **P 08 37 13.6 +0.4**
baz=96
HWUT Hardware Ranch 95.38 47 *eP* **P 08 37 13.8 +0.4**
F13A Darby 95.39 43 ⇓P **P 08 37 12.7 -0.7**
baz=96
G14A Jackson 95.70 43 P **P 08 37 11.4 -3.4**
baz=96,SNR=7.3
PV10 Paradox Valley 95.81 51 *eP* **P 08 37 16.5 +1.0**
MCMT McKenzie Canyo 95.91 44 P **P 08 37 14.4 -1.4**
MOY Mondy 95.94 324 *eP* **P 08 37 15.2 -0.5**
MOY pmax pmax
comp=Z,31nm,2.9s,mb5.2
E14A Clinton 96.19 42 ⇑P **P 08 37 15.3 -1.7**
baz=96
G15A Dillon 96.28 44 ⇑P **P 08 37 16.4 -1.1**
baz=96
ANMO Albuquerque 96.36 55⇑ *eP* **P 08 37 18.3 +0.2**
TXAR Lajitas Array 96.43 61 P **P 08 37 18.4 -0.2**
comp=Z,0.6nm,0.7s,mb4.1,baz=215,slow=5.6,SNR=10.0
TXAR PKKP PKKPbc 08 54 03.9 +0.6
comp=Z,0.7nm,0.5s,baz=103,slow=3.7,SNR=24
TXAR LR LR 09 11 14.7
comp=Z,97nm,21.6s,baz=185,slow=29
D15A Lincoln 97.06 42 ⇑P **P 08 37 19.9 -1.1**
baz=97
PDAR Pinedale Array 97.21 47 P **P 08 37 20.8 -0.9**
comp=Z,1.1nm,0.8s,mb4.4,baz=214,slow=3.8,SNR=11
PDAR PP PP 08 41 17.1 -2.9
comp=Z,0.3nm,0.8s,baz=151,slow=3.4,SNR=3.6
PDAR PKKP PKKPbc 08 54 00.6 -1.2
comp=Z,0.5nm,0.8s,baz=68,slow=4.0,SNR=4.1
SMCO Snowmass 97.61 51 *eP* **P 08 37 20.0 -3.6**
TIXI Tiksi 98.23 347 *i P* **P 08 37 23.3 -2.3**
WMQ Urumqi 100.87 313 ⇑P Pdif 08 37 37.6 -0.4
WMQ PP PP 08 41 49.5 +1.8
WMQ SKS 08 48 04.9
WMQ *eS* Sdif 08 49 02.3 -3.5
WMQ AMB AMB
comp=Z,7.0nm,0.5s
WMQ AMB AMB
comp=Z,87nm,4.1s
WMQ LR LR
comp=N,162nm,25.0s
WMQ LR LR
comp=E,230nm,28.5s
WMQ LR LR
comp=Z,131nm,25.0s
YKA Yellowknife Ar 102.48 27 P Pdif 08 37 43.5 -1.7
YKA PP PP 08 41 53.2 -6.1
YKA PKKPbc PKKPbc 08 53 41.0 -6.4
YKA Yellowknife Ar 102.48 27 P Pdif 08 37 43.5 -1.7
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 102.48 27 P Pdif 08 37 43.5 -1.7
comp=Z,0.6nm,0.8s,baz=251,slow=4.7,SNR=9.6
YKA PP PP 08 41 53.2 -6.1
comp=Z,0.4nm,0.7s,baz=249,slow=7.6,SNR=5.8
YKA PKKPbc PKKPbc 08 53 41.0 -6.4
comp=Z,0.2nm,0.6s,baz=52,slow=2.4,SNR=4.1
MKAR Makanchi Array 105.42 315 Pdiff Pdif 08 37 59.0 +0.7
comp=Z,2.5nm,0.6s,baz=92,slow=6.3,SNR=13
MKAR PKiKP PKiKP 08 42 10.3 -1.0
comp=Z,0.3nm,0.4s,baz=112,slow=0.8,SNR=4.5
MKAR PKKPbc PKKPbc 08 53 35.3 -2.8
comp=Z,0.6nm,0.6s,baz=324,slow=2.9,SNR=4.8
MKAR PKKPab PKKPab 08 53 52.9 +0.1
comp=Z,0.2nm,0.2s,baz=300,slow=2.7,SNR=3.6
LPAZ La Paz 110.14 118 PKKPbc PKKPbc 08 53 20.8 -1.5
comp=Z,0.8nm,0.8s,baz=45,slow=2.9,SNR=3.9
BOSA Boshof 119.75 214 PKiKP PKPdf 08 42 39.2 0.0
BOSA pmax pmax
comp=Z,4.0nm,0.4s
BOSA Boshof 119.75 214 PKP PKPdf 08 42 39.2 0.0
comp=Z,4.4nm,0.4s,baz=156,slow=1.8,SNR=35
ARU Arti 120.99 323 *i* PKiKP PKPdf 08 42 39.1 -1.5
ARU 08 49 21.4
AKTK Aktyubinsk 121.77 316 PKP PKPdf 08 42 40.9 -1.4
AKTO Aktyubinsk 121.77 316 PKiKP PKPdf 08 42 40.9 -1.4
AKTO pmax pmax
comp=Z,8.0nm,0.8s
AKTO Aktyubinsk 121.77 316 PKP PKPdf 08 42 40.9 -1.4
comp=Z,7.5nm,0.8s,baz=87,slow=3.6,SNR=33
LBTB Lobatse 122.42 217 PKiKP PKPdf 08 42 44.0 -0.4
LBTB pmax pmax
comp=Z,5.0nm,0.6s
LBTB Lobatse 122.42 217 PKP PKPdf 08 42 44.0 -0.5
comp=Z,5.1nm,0.6s,baz=195,slow=3.0,SNR=13
SCHQ Schefferville 126.16 38 PKP PKPdf 08 42 49.4 -1.2
baz=284,slow=4.2
KEV Kevo 128.09 345 *e*pkp PKPdf 08 42 50.5 -3.4
ARCES ARCESS Array B 128.61 345 PKiKP PKPdf 08 42 53.0 -1.8
ARCES pmax pmax
comp=Z,3.0nm,0.7s
ARCES ARCESS Array B 128.61 345 PKP PKPdf 08 42 53.0 -1.8
comp=Z,2.9nm,0.7s,baz=62,slow=1.3,SNR=14
QRN Al-Qurain 129.08 290 *eP* PKPdf 08 42 54.7 -2.3
QRN AMb AMB 08 42 58.7
comp=Z,66nm,0.6s
UMR Umm Al-Rimmam 129.34 291 *eP* PKPdf 08 42 54.3 -3.2
UMR AMb AMB 08 42 58.6
comp=Z,40nm,0.6s
RDF Al-Radifah 129.42 290 *eP* PKPdf 08 42 55.1 -2.5
RDF AMb AMB 08 43 01.3
comp=Z,80nm,0.8s
KMBO Kilima Mbogo 129.65 249 PKiKP PKPdf 08 42 59.6 +1.1
KMBO pmax pmax
comp=Z,3.0nm,0.8s
KMBO Kilima Mbogo 129.65 249 PKP PKPdf 08 42 59.6 +1.1
comp=Z,3.2nm,0.8s,baz=72,slow=8.5,SNR=11
NAY Al-Naaiem 129.72 290 *eP* PKPdf 08 42 55.9 -2.3
NAY AMb AMB 08 42 59.8
comp=Z,18nm,1.1s
JOF Joensuu 131.44 337 *e*pkp PKPdf 08 42 58.7 -1.7
TSUM Tsumeb 131.44 214 PKP PKPdf 08 43 02.7 +0.9
TSUM Tsumeb 131.44 214 PKP PKPdf 08 43 02.7 +1.0
comp=Z,2.5nm,0.3s,baz=126,slow=4.8,SNR=12
OBN Obninsk 133.25 326 *e*PKiKP PKPdf 08 43 03.8 -0.2
OBN pmax pmax
comp=Z,4.0nm,0.9s
KAF Kangasniemi 133.73 338 *e*pkp PKPdf 08 43 03.3 -1.4
FINES FINESS Array B 134.26 338 PKP PKPdf 08 43 04.5 -1.3
FINES SKPbc SKPbc 08 46 23.9 -0.6
FINES FINESS Array B 134.26 338 PKHKP 08 42 58.0
comp=Z,0.5nm,0.4s,baz=77,slow=3.9,SNR=6.5
FINES PKP PKPdf 08 43 04.5 -1.3
comp=Z,1.0nm,0.5s,baz=87,slow=2.6,SNR=7.6
FINES SKPbc SKPbc 08 46 23.9 -0.6
comp=Z,1.9nm,0.7s,baz=108,slow=6.2,SNR=4.6
MALT Malatya 136.94 303 ⇑P PKPdf 08 43 11.9 +0.4
MALT Malatya 136.94 303 ⇑*i* P PKPdf 08 43 11.9 +0.4
AKASG Malin Array Be 139.24 323 PKHKP 08 43 04.9
comp=Z,1.4nm,0.5s,baz=66,slow=2.8,SNR=8.6
AKASG SKPbc SKPbc 08 46 38.6 -1.0
comp=Z,0.2nm,0.2s,baz=68,slow=2.5,SNR=4.1
MMAI Mount Meron Ar 139.94 295 PKHKP 08 43 10.8
comp=Z,1.5nm,0.5s,baz=93,slow=1.7,SNR=5.3
MMAI PKP PKPdf 08 43 13.9 -3.2
comp=Z,1.5nm,0.5s,baz=62,slow=3.4,SNR=5.5
BRTR Keskin Array B 140.36 306 PKP PKPdf 08 43 18.1 +0.4
BRTR Keskin Array B 140.36 306 PKHKP 08 43 09.9
BRTR 08 43 18.1
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 140.36 306 PKhKP 08 43 09.8
comp=Z,1.1nm,0.5s,baz=128,slow=3.7,SNR=6.5
BRTR PKP PKPdf 08 43 18.1 +0.4
comp=Z,1.8nm,0.5s,baz=225,slow=0.2,SNR=7.1
EIL Elat 140.44 290 PKhKP 08 43 14.3
comp=Z,2.2nm,0.4s,baz=149,slow=5.9,SNR=2.6
LVV L'vov 142.53 325 *e*PKiKP PKPdf 08 43 20.8 -0.4
HARR Harsova 142.78 316 ⇑*i* P PKPdf 08 43 19.0 -2.8
VRI Vrincioaia 143.02 318 P PKPdf 08 43 20.2 -2.1
VRI Vrincioaia 143.02 318 ⇓*i* P PKPdf 08 43 18.8 -3.4
PLOR Plostina 143.08 318 PKiKP PKPdf 08 43 19.2 -3.1
PLOR Plostina 143.08 318 ⇑*i* P PKPdf 08 43 18.9 -3.4
KWP Kalwaria 143.34 326 ⇓P PKPdf 08 43 20.1 -2.6
KWP Kalwaria 143.34 326 ⇓*i* P PKPdf 08 43 20.1 -2.6
ISR Istrita 143.48 317 ⇓P PKPdf 08 43 20.9 -2.1
ISR Istrita 143.48 317 ⇓*i* P PKPdf 08 43 21.0 -2.1
MLR Muntele Rosu 143.68 318 P PKPdf 08 43 21.4 -2.0
MLR Muntele Rosu 143.68 318 PKP PKPdf 08 43 21.0 -2.4
comp=Z,26nm,0.4s,baz=328,slow=4.8,SNR=66
MLR Muntele Rosu 143.68 318 ⇑*i* P PKPdf 08 43 20.5 -2.9
KOLS Kolonicke sedl 143.98 325 *e*PKP PKPdf 08 43 23.0 -0.8
KOLS *e* 08 43 29.3
UZH Uzhgorod 144.15 325 ⇑*i* PKiKP PKPdf 08 43 22.2 -1.9
STHS Stebnicka Huta 144.22 326 *e*PKP PKPdf 08 43 23.0 -1.2
TRPA Tarpa 144.30 324 ⇑*i* P PKPdf 08 43 22.5 -1.9
CRVS Cervenica-Dubn 144.43 325 *e*PKP PKPdf 08 43 22.5 -2.1
OJC Ojcow 144.43 328 *e*PKPdf PKPdf 08 43 23.4 -1.2
JMB Yambol 144.57 313 P PKPdf 08 43 24.9 -0.2
SZH Strazhica 144.68 314 P PKPdf 08 43 23.8 -1.4
NIE Niedzica 144.70 327 *e*PKP PKPdf 08 43 24.2 -0.9
ZIMR 144.89 315 P PKPdf 08 43 26.1 +0.5
ZIMR 144.89 315 ⇓*i* P PKPdf 08 43 25.1 -0.5
DRGR 144.96 322 P PKPdf 08 43 24.9 -0.6
DRGR 144.96 322 ⇓*i* P PKPdf 08 43 25.3 -0.3
KECS Kecovo 145.19 326 *e*PKP PKPdf 08 43 25.7 -0.2
BSEG Bad Segeberg 145.40 340 *e*PKPbc PKPbc 08 43 25.3 -1.0
DIM Dimitrovgrad 145.45 313 P PKPdf 08 43 26.3 -0.3
OKC Ostrava-Krasne 145.48 329 *e*PKP PKPdf 08 43 25.9 -0.5
KSP Ksiaz 145.62 332 *e*PKP PKPdf 08 43 26.6 0.0
KSP Ksiaz 145.62 332 *e*PKP2 PKPab 08 43 26.4 -1.1
GZR Gura Zlata 145.67 320 P PKPdf 08 43 26.4 -0.4
GZR Gura Zlata 145.67 320 ⇓*i* P PKPdf 08 43 26.8 -0.1
MORC Moravsky Berou 145.81 330 P PKPdf 08 43 27.3 +0.3
MORC Moravsky Berou 145.81 330 ⇑*i* P PKPdf 08 43 27.0 0.0
PSZ Piszkesteto 145.85 325 P PKPdf 08 43 27.8 +0.7
PSZ Piszkesteto 145.85 325⇓ *e*PKP PKPdf 08 43 27.2 +0.1
PSZ Piszkesteto 145.85 325 ⇑*i* P PKPdf 08 43 27.1 0.0
DPC Dobruska-Polom 145.96 331 *e*PKP PKPdf 08 43 27.4 +0.2
DPC *ex* x 08 43 40.0
UPC Upice 145.99 332 *e*PKP PKPdf 08 43 27.6 +0.4
VYHS Vyhne 146.04 327 *e*PKP PKPdf 08 43 27.9 +0.5
VYHS *e* 08 43 56.3
RZN Rozhen 146.16 313 *e*P PKPdf 08 43 29.3 +1.5
PGB Panagyurishte 146.16 314 P PKPdf 08 43 29.0 +1.2
KOLL Kolacno 146.20 327 *e*PKP PKPdf 08 43 28.6 +0.9
KOLL *e* 08 43 57.0
KOLL Kolacno 146.20 327 *e*PKP PKPdf 08 43 28.6 +0.9
KOLL *e* 08 43 57.0
VRAC Vranov 146.58 330 P PKPbc 08 43 30.1 +0.1
VRAC Vranov 146.58 330 PKP2 PKPbc 08 43 29.2 -0.8
VRAC pmax pmax
comp=Z,9.0nm,0.6s
VRAC Vranov 146.58 330 PKPbc PKPbc 08 43 29.2 -0.7
comp=Z,9.4nm,0.6s,baz=51,slow=5.1,SNR=11
VRAC Vranov 146.58 330 ⇓*i* P PKPdf 08 43 29.3 +1.0
BUD Budapest 146.59 325 *e*PKP PKPdf 08 43 29.2 +0.9
BRG Berggiesshubel 146.59 334 *i* PKP PKPdf 08 43 29.0 +0.8
BRG *e* 08 43 38.6
BRG Berggiesshubel 146.59 334 PKP2 PKPbc 08 43 29.0 -0.9
BRG pmax pmax
comp=Z,11nm,0.7s
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 146.59 334 *e*PKPbc PKPbc 08 43 28.8 -1.1
PVCC Panska Ves 146.59 333 *e*PKP PKPdf 08 43 29.0 +0.7
CLL Collm 146.62 335 *e*PKP2 PKPbc 08 43 29.0 -1.0
CLL pmax pmax
comp=Z,25nm,0.8s
CLL Collm 146.62 335 *i* PKPdf PKPdf 08 43 28.7 +0.4
CLL *i* PKPbc PKPbc 08 43 29.1 -0.9
comp=Z,25nm,0.8s
CLL *i* PKiKP PKiKP 08 43 32.2 -0.5
CLL *ex* x 08 43 41.0
CLL Collm 146.62 335 *e*PKPbc PKPbc 08 43 28.7 -1.3
NRDL Niedersach Rie 146.69 339 *e*PKPbc PKPbc 08 43 28.9 -1.3
VTS Vitosha 146.78 315 P PKPbc 08 43 30.4 -0.3
VTS Vitosha 146.78 315 P PKPbc 08 43 30.0 -0.8
VTS Vitosha 146.78 315 ⇑*i* P PKPbc 08 43 30.3 -0.5
FBE Freiberg 146.79 334 *e*PKPbc PKPbc 08 43 29.7 -0.8
MMB Musomiste 146.87 313 P PKPdf 08 43 30.0 +1.0
MODS Modra-Piesok 146.90 328 *e*PKP PKPbc 08 43 30.9 0.0
PRA Prague 146.99 333 PKP PKPbc 08 43 31.0 -0.1
PRU Pruhonice 147.01 332 *e*PKP PKPdf 08 43 30.0 +1.0
PRU *ep*PKP pPKPdf 08 44 01.0 -0.2
ZST Bratislava 147.10 328 *e*PKP PKPbc 08 43 30.9 -0.6
CLZ Clausthal 147.15 338 *e*PKPbc PKPbc 08 43 30.7 -0.8
KKB Krupnik 147.19 314 P PKPdf 08 43 31.2 +1.7
APE Apeiranthos 147.19 304 ⇓P PKPdf 08 43 30.2 +0.5
APE Apeiranthos 147.19 304 ⇓*i* P PKPdf 08 43 30.2 +0.5
TANN Tannenbergstha 147.54 335 *e*PKPbc PKPbc 08 43 31.8 -0.8
WERD Werda 147.57 335 *e*PKPbc PKPbc 08 43 31.7 -1.0
PKSM Moragy 147.58 324 P PKPbc 08 43 31.9 -0.9
PKSM Moragy 147.58 324 ⇑*i* P PKPbc 08 43 31.8 -1.1
IBBN Ibbenburen 147.59 341 *e*PKPbc PKPbc 08 43 31.5 -1.2
GUNZ Gunzen 147.63 335 *e*PKPbc PKPbc 08 43 32.2 -0.7
WERN Wernitzgruen 147.67 335 *e*PKPbc PKPbc 08 43 31.9 -1.1
MOX Moxa 147.68 336 *e*PKP PKPdf 08 43 31.7 +1.6
MOX Moxa 147.68 336 *e*PKPbc PKPbc 08 43 31.8 -1.2
NKC Novy Kostel 147.69 335 *e*PKP PKPbc 08 43 32.0 -1.0
SOP Sopron 147.72 328⇑ *e*PKP PKPbc 08 43 32.5 +2.3
VAY Vandovo 147.77 313 *e*PKP PKPdf 08 43 31.3 +0.8
CONA Conrad Observa 147.89 329 ⇑*i* PKPdf PKPdf 08 43 30.1 -0.5
comp=Z,32nm,1.3s
MANZ Manzenberg 148.02 335 *e*PKPbc PKPbc 08 43 33.0 -0.9
KHC Kasperske Hory 148.07 332 *e*PKP PKPbc 08 43 33.1 -1.0
KHC *ex* x 08 43 44.6
UBBA Unterbreizbach 148.13 338 *e*PKPbc PKPbc 08 43 33.0 -1.2
ROTZ Rotzenmuhle 148.15 334 *e*PKPbc PKPbc 08 43 33.5 -0.8
IDI Anoyia 148.18 301 PKPbc PKPbc 08 43 34.0 -0.8
comp=Z,30nm,0.4s,baz=190,slow=19,SNR=23
SKO Skopje 148.22 315 *e*PKP PKPdf 08 43 33.2 +2.0
GEC2 GERESS Array S 148.23 332 *e*PKPbc PKPbc 08 43 33.6 -0.9
GERES GERESS Array B 148.23 332 PKP2 PKPbc 08 43 33.5 -1.0
GERES pmax pmax
comp=Z,8.0nm,0.7s
GERES GERESS Array B 148.23 332 PKPbc PKPbc 08 43 33.5 -1.0
comp=Z,7.5nm,0.7s,baz=43,slow=2.4,SNR=27
GRA1 Grafenberg Arr 148.60 335 *e*PKPbc PKPbc 08 43 34.5 -0.9
GRF Grafenberg Arr 148.60 335 *e*PKPbc PKPbc 08 43 34.5 -0.9
KRUS Krusevo 148.64 314 *e*PKP PKPdf 08 43 33.9 +1.9
MOA Molln 148.70 330 ⇑*i* P PKPbc 08 43 34.7 -1.1
comp=Z,18nm,1.1s
OHR Ohrid 149.06 314 *e*PKP PKPdf 08 43 30.6 -2.0
TNS Taunus Mts 149.17 339 *e*PKPbc PKPbc 08 43 35.8 -1.0
MEM Membach 149.61 342 PKPbc PKPbc 08 43 36.2 -1.7
KBA Koelnbreinsper 149.69 330 ⇑*i* P PKPbc 08 43 36.4 -1.8
comp=Z,14nm,0.8s
BOJS Bojanci 149.85 326 *i* PKPdf PKPdf 08 43 34.6 +0.9
BOJS *i* PKPbc PKPbc 08 43 38.1 -0.6
MYKA Terra Mystica 149.88 329 ⇑*i* PKPbc PKPbc 08 43 36.9 -1.8
comp=Z,11nm,0.4s
VOY Vojsko 150.18 328 *i* PKPbc PKPbc 08 43 37.8 -1.6
JAVS Javornik 150.19 327 *i* PKPbc PKPbc 08 43 38.9 -0.6
JAVS 08 43 44.9
ABTA Abfaltersbach 150.32 330 ⇓*i* PKPbc PKPbc 08 43 37.3 -2.4
comp=Z,27nm,1.6s
WTTA Wattenberg 150.33 332 ⇑*i* P PKPbc 08 43 38.7 -1.0
comp=Z,25nm,1.1s
GIVF Givet 150.40 342 *e*PKP1 PKPbc 08 43 37.8 -2.0
DOU Dourbes 150.47 343 PKPbc PKPbc 08 43 38.9 -1.0
MOTA Moosalm 150.50 332 ⇑*i* P PKPbc 08 43 38.5 -1.7
comp=Z,15nm,1.1s
SQTA Sankt Quirin 150.55 332 ⇑*i* P PKPbc 08 43 39.0 -1.3
comp=Z,15nm,1.1s
BAIF Baives 150.61 343 *e*PKP1 PKPbc 08 43 38.3 -2.0
BFO Black Forest 150.81 337 *e*PKPbc PKPbc 08 43 40.2 -0.7
FETA Feichten 150.91 332 ⇑*i* PKPbc PKPbc 08 43 40.0 -1.1
comp=Z,15nm,0.9s
DAVA Damuels 151.06 334 ⇑*i* P PKPbc 08 43 40.3 -1.2
comp=Z,16nm,1.1s
CDF Champ du Feu 151.12 338 *e*PKP1 PKPbc 08 43 39.4 -2.2
comp=Z,7.9nm,0.5s
DAVOX Davos/Dischmat 151.46 333 PKPbc PKPbc 08 43 41.4 -1.0
comp=Z,6.7nm,0.4s,baz=212,slow=3.4,SNR=17
DAVOX PKPab PKPab 08 43 50.8 -0.3
comp=Z,15nm,0.5s,baz=16,slow=8.4,SNR=5.7
MEZF Maizieres J'vi 151.77 341 *e*PKP1 PKPbc 08 43 41.3 -1.8
comp=Z,17nm,0.5s
HINF Hinteralfeld 151.77 338 *e*PKP1 PKPbc 08 43 40.7 -2.4
comp=Z,6.1nm,0.5s
HAU Haudompre 151.78 339 *e*PKP1 PKPbc 08 43 40.9 -2.2
HAU *e*MLR MLR
comp=Z,79nm,20.5s
HAU Haudompre 151.78 339 *e*PKIKP PKPbc 08 43 40.9 -2.2
HAU MLR MLR
comp=Z,80nm,20.5s
FLN La Foliniere 152.90 348 *e*PKP1 PKPbc 08 43 43.0 -2.6
FLN *e*MLR MLR
comp=Z,136nm,20.2s
FLN La Foliniere 152.90 348 *e*PKIKP PKPbc 08 43 43.0 -2.6
FLN MLR MLR
comp=Z,140nm,20.3s
LDF La Druitiere 152.99 348 *e*PKP1 PKPbc 08 43 43.0 -2.8
CABF La Chapelle 153.08 337 *e*PKP1 PKPbc 08 43 44.3 -1.7
comp=Z,8.8nm,0.6s
LOR Lormes 153.23 341 *e*PKP1 PKPbc 08 43 44.3 -2.1
LOR *e*MLR MLR
comp=Z,139nm,22.0s
GRR Gorron 153.33 349 *e*PKP1 PKPbc 08 43 44.0 -2.5
SSF Saint Saulge 153.52 341 *e*PKP1 PKPbc 08 43 45.7 -1.3
comp=Z,2.5nm,0.3s
LPG La Plagne 153.77 335 *e*PKP1 PKPbc 08 43 48.5 +0.9
SMF Signal de Mont 153.79 340 *e*PKP1 PKPbc 08 43 45.6 -2.0
AVF Avril sur Loir 153.81 341 *e*PKP1 PKPbc 08 43 45.7 -1.9
ORIF Oris-en-Rattie 154.59 336 *e*PKP1 PKPbc 08 43 50.4 +1.0
ORIF *e*MLR MLR
comp=Z,114nm,21.5s
KEST Kesra 159.52 314 PKPab PKPab 08 44 24.9 -1.1
comp=Z,4.8nm,0.9s,baz=296,slow=8.0,SNR=5.5
ESDC Sonseca Array 162.32 348 PKPab PKPab 08 44 36.8 -1.2
comp=Z,1.4nm,0.5s,baz=9.4,slow=3.9,SNR=6.7
DBIC Dimbokro 163.99 193 PKIKP PKPdf 08 43 51.9 -0.7
DBIC 08 44 46.1
DBIC pmax pmax
comp=Z,6.0nm,1.0s
DBIC pmax pmax
comp=Z,4.0nm,0.7s
DBIC Dimbokro 163.99 193 PKP PKPdf 08 43 51.9 -0.7
comp=Z,6.0nm,0.9s,baz=158,slow=5.2,SNR=5.3
DBIC PKPab PKPab 08 44 46.1 +0.2
comp=Z,3.5nm,0.7s,baz=148,slow=4.7,SNR=5.5
TORD Torodi Ar. Bea 166.63 228 PKP PKPdf 08 43 53.8 -0.9
TORD PKPab PKPab 08 44 57.9 +0.2
TORD Torodi Ar. Bea 166.63 228 PKP PKPdf 08 43 53.8 -0.9
comp=Z,5.0nm,1.0s,baz=358,slow=0.5,SNR=19
TORD PKPab PKPab 08 44 57.9 +0.2
comp=Z,10nm,0.9s,baz=118,slow=4.7,SNR=22

ISCJB ***22*** *08:38:07.3±0.7, 31.16S±0.006×6758W±0.009, h10km, mb3.8/5, Error ellipse: s-maj=11.1km s-min=9.0km az=160.3*
IDC ***22*** *08:38:07.2±0.7, 3104S×6782W, h0km, mb3.9/5, mb1 4.0/8, mb1mx3.9/17, mbtmp3.8/8, ML3.7/3, Error ellipse: s-maj=27.0km s-min=8.8km az=121.0*
NEIC ***22*** *08:38:09.5±3.8, 31.13S×6772W, h15km±24km, MD4.1(SJA), Error ellipse: s-maj=20.7km s-min=10.4km az=96.0*
NEIC Felt [III] at San Juan.
ISC 22 08:38:09.2±0.7, 3115S±0.006×6762W±0.009, h10km, n14, σ1.1s10/11, mb3.8/5, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.70**	**229**	Pg	**Pg**	**08 38 21.4**	**-1.4**
	18nm,0.3s,baz=17,slow=15,SNR=3040						
CFAA				Lg		08 38 28.8	
	366nm,0.3s,baz=280,slow=18,SNR=236						
LCO	**Las Campanas**	**3.42**	**308**	*e*Pn	**Pn**	**08 39 03.3**	**+0.7**
LCO				*e*Sn	**Sn**	**08 39 44.1**	**+1.0**
PLCA	**Paso Flores**	**9.86**	**193**	Pn	**Pn**	**08 40 31.8**	**+0.8**
	0.1nm,0.3s,baz=4.7,slow=8.3,SNR=4.2						
LPAZ	**La Paz**	**14.80**	**358**	Pn	**Pn**	**08 41 38.6**	**0.0**
	0.1nm,0.3s,baz=127,slow=5.1,SNR=5.6						
SIV	**San Ignacio**	**16.23**	**23**	Pn	**Pn**	**08 41 56.0**	**-1.4**
	0.3nm,0.3s,baz=224,slow=14,SNR=5.3						
SNAA	**Sanae**	**52.86**	**159**	P	**P**	**08 47 24.9**	**+0.3**
	0.3nm,0.4s,mb3.6,baz=337,slow=13,SNR=6.4						
TXAR	**Lajitas Array**	**69.24**	**327**	P	**P**	**08 49 15.8**	**-0.5**
	0.5nm,0.6s,mb3.6,baz=153,slow=8.3,SNR=8.1						
TORD	**Torodi Ar. Bea**	**79.70**	**68**	P	**P**	**08 50 18.7**	**+1.2**
	1.1nm,0.5s,mb4.0,baz=280,slow=7.2,SNR=20						
LBTB	**Lobatse**	**80.05**	**113**	P	**P**	**08 50 20.3**	**+0.9**
	1.6nm,0.5s,mb4.2,baz=253,slow=2.8,SNR=4.4						
PDAR	**Pinedale Array**	**83.02**	**330**	P	**P**	**08 50 31.9**	**-2.6**
	0.5nm,0.7s,mb3.6,baz=140,slow=5.8,SNR=4.9						
ASAR	**Alice Springs**	**121.73**	**203**	PKP	PKPdf	08 57 02.2	-1.7
	0.1nm,0.4s,baz=141,slow=1.9,SNR=4.7						
WRA	**Warramunga Arr**	**125.00**	**205**	PKP	PKPdf	08 57 08.9	-1.4
	0.5nm,0.4s,baz=162,slow=1.7,SNR=25						
MK31	**Makanchi Array**	**152.09**	**47**	*e*PKPbc	PKPbc	08 58 04.6	+0.1
MK31				*e*PKPab	PKPab	08 58 12.0	-2.1
MKAR	**Makanchi Array**	**152.09**	**47**	PKPbc	PKPbc	08 58 04.7	+0.1
	1.9nm,0.7s,baz=293,slow=2.1,SNR=18						

IDC ***22*** *08:42:09.6±2.4, 681N×125.11E, h322km±21km, mb3.4/8, mb1 3.6/9, mb1mx3.4/21, mbtmp3.5/9, Error ellipse: s-maj=70.9km s-min=10.9km az=69.0*
ISCJB ***22*** *08:42:10.5±0.8, 68N±02×125.1E±0.4, h350km, mb3.5/8, Error ellipse: s-maj=56.4km s-min=10.4km az=159.9*
NEIC ***22*** *08:42:12.3±4.5, 677N×125.13E, h356km±50km, mb4.3/2, Error ellipse: s-maj=67.8km s-min=13.0km az=70.0*
ISC 22 08:42:11.9±0.8, 68N±02×1252E±0.4, h350km, n15, σ0.944/14, mb3.5/8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**16.95**	**185**	P	**P**	**08 45 47.8**	**+0.1**
	8.0nm,0.3s,baz=83,slow=6.5,SNR=4.4						
KAKA	**Kakadu**	**20.68**	**160**	⇓*i* P	**P**	**08 46 25.8**	**-0.4**
	10nm,0.5s						
FITZ	**Fitzroy Crossi**	**24.73**	**179**	*e*P	**P**	**08 47 02.7**	**-0.2**
	4.0nm,0.3s,mb4.1						
FITZ	**Fitzroy Crossi**	**24.73**	**179**	P	**P**	**08 47 02.7**	**-0.2**
	1.8nm,0.3s,mb3.8,baz=23,slow=9.4,SNR=17						
WRA	**Warramunga Arr**	**28.05**	**161**	P	**P**	**08 47 32.1**	**-0.3**
	0.6nm,0.5s,mb3.1,baz=340,slow=8.6,SNR=31						
WRA				ScP	ScP	08 53 47.9	+3.6
	0.4nm,0.8s,baz=342,slow=3.3,SNR=5.4						
WB2	**Warramunga Arr**	**28.06**	**161**	*e*P	**P**	**08 47 32.0**	**-0.4**
ASAR	**Alice Springs**	**31.45**	**165**	P	**P**	**08 48 02.5**	**+0.3**
	1.8nm,0.3s,mb3.8,baz=338,slow=7.4,SNR=82						
ASAR				ScP	ScP	08 53 58.7	+3.4
	0.1nm,0.4s,baz=340,slow=3.4,SNR=4.5						
STKA	**Stephens Creek**	**41.52**	**159**	P	**P**	**08 49 27.4**	**+1.1**
STKA	**Stephens Creek**	**41.52**	**159**	P	**P**	**08 49 27.4**	**+1.1**
	0.7nm,0.4s,mb3.2,baz=331,slow=10,SNR=4.4						
SONM	**Songino Array**	**43.92**	**342**	P	**P**	**08 49 45.3**	**+0.1**
	0.5nm,0.7s,mb2.8,baz=165,slow=8.8,SNR=5.1						
MKAR	**Makanchi Array**	**54.17**	**325**	P	**P**	**08 51 02.4**	**+0.2**
	1.8nm,0.4s,mb3.6,baz=116,slow=7.3,SNR=35						
MKAR				PcP	PcP	08 52 02.1	+0.4
	0.6nm,0.7s,baz=120,slow=2.6,SNR=2.8						
AKTK	**Aktyubinsk**	**70.31**	**321**	P	**P**	**08 52 48.3**	**+0.1**
AKTO	**Aktyubinsk**	**70.31**	**321**	P	**P**	**08 52 48.3**	**+0.1**
	1.3nm,0.4s,mb4.0,baz=69,slow=8.6,SNR=9.5						
FINES	**FINESS Array B**	**88.42**	**332**	P	**P**	**08 54 24.1**	**-0.6**
	0.5nm,0.4s,mb3.7,baz=63,slow=5.1,SNR=6.6						
TORD	**Torodi Ar. Bea**	**120.46**	**289**	PKP	PKPdf	09 00 23.1	-0.1
	0.2nm,0.4s,baz=104,slow=0.5,SNR=3.8						

CSEM ***22*** *09:04:18.0±1.0, 4047N×2869W, h5km, ML2.7, Error ellipse: s-maj=10.6km s-min=6.5km az=112.0, After PDA*
PDA ***22*** *09:04:18.0±1.0, 4047N×2869W, h5km, MD3.6, ML2.7, Error ellipse: s-maj=10.6km s-min=6.5km az=112.0*
SVSA 22 09:04:18.0±1.0, 4047N×2869W, h5km, MD3.6, ML2.7, Error ellipse: s-maj=10.6km s-min=6.5km az=112.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**1.84**	**180**	*e*S	Sn	09 05 05.6	-8.2
PCED				A		09 05 11.5	
	43nm,0.3s						
CALA	**Caldeira**	**1.89**	**180**	*e*S	Sn	09 05 07.0	-8.

PVNV eS Sn 09 05 11.7 -8.0

NIED ***22*** *09:27:00, 3260N×13080E, h5km, Mw3.7 Best double couple: M₀4.55000×10¹⁴ NP1:φ₀=111.00000°, δ=76.00000°, λ=-13.00000°. NP2:φ₀=204.00000°, δ=78.00000°, λ=-166.00000°.*

IDC ***22*** *09:27:29.6±1.1, 3257N×13077E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.5/5, ML3.5/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/22, Error ellipse: s-maj=28.2km s-min=9.2km az=97.0*

ISCJB ***22*** *09:27:30.3±0.5, 3260N±004×13083E±007, h9km±4km, mb3.5/5, Error ellipse: s-maj=9.8km s-min=5.3km az=159.9*

NEIC ***22*** *09:27:30.4, 3262N×13083E, h6km, MG4.0(JMA), After JMA.*

NEIC Recorded [3 JMA] in Kumamoto and [1 JMA] in Kagoshima and Miyazaki Prefectures.

JMA ***22*** *09:27:30.4, 3262N×13083E, h6km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φ₀=205.00000°, δ=72.00000°, λ=-179.00000°. NP2: φ₀=114.00000°, δ=89.00000°, λ=-18.00000°. Principal axes: T Plg12.0000°, Azm161.0000°; N Plg72.0000°, Azm292.0000°; P Plg13.0000°, Azm68.0000°;*

JMA Felt III J1.

ISC 22 09:27:31.1±0.5, 3259N±004×13081E±006, h5km±4km, n15, σ0=92/19, mb3.5/5, 5C, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU2	**Izumi 2**	**0.05**	**179**	⇑P	**Pg**	**09 27 32.1**	**-0.3**
JIU2				S	**Sg**	**09 27 33.5**	**+0.2**
JTA	**Tamana**	**0.44**	**327**	⇑P	**Pg**	**09 27 39.0**	**-0.6**
JTA				S	**Sg**	**09 27 45.1**	**-0.2**
JZO	**Okuchi**	**0.49**	**202**	⇑P	**Pg**	**09 27 40.3**	**-0.2**
JZO				S	**Sg**	**09 27 47.7**	**+0.9**
JNU	**Nakatsue**	**0.53**	**6**	Pg	**Pg**	**09 27 40.6**	**-0.7**
	322nm,0.3s,baz=333,slow=19,SNR=3498						
JNU				Lg		09 27 47.2	
	2μm,0.3s,baz=285,slow=20,SNR=147						
JTSN	**Tsuno**	**0.68**	**121**	⇑P	**Pg**	**09 27 44.0**	**-0.2**
JTSN				S	**Sg**	**09 27 52.9**	**-0.1**
JTZ	**Takazaki**	**0.73**	**161**	⇑P	**Pg**	**09 27 45.3**	**+0.2**
KSRS	**Korea Array**	**5.40**	**335**	Pn	**Pn**	**09 28 54.4**	**+2.1**
	0.4nm,0.3s,baz=152,slow=12,SNR=4.1						
KSRS				Pg	**Pg**	**09 29 09.2**	**-5.4**
	1.1nm,0.3s,baz=151,slow=18,SNR=11						
KSRS				Lg		09 30 20.8	
	2.2nm,0.3s,baz=153,slow=31,SNR=8.2						
KSRS				LR	LR	09 31 00.0	
	comp=Z,94nm,20.1s,baz=350,slow=39						
MJAR	**Matsushiro Arr**	**7.26**	**55**	Pn	**Pn**	**09 29 19.7**	**+1.8**
	0.8nm,0.3s,baz=241,slow=14,SNR=7.8						
MJAR				LR	LR	09 32 16.0	
	comp=Z,150nm,19.0s,baz=15,slow=39						
GUMO	**Guam**	**22.87**	**143**	P	**P**	**09 32 30.9**	**-4.5**
	336nm,0.4s						
ULN	**Ulaanbaatar**	**23.57**	**317**	P	**P**	**09 32 43.5**	**+0.9**
	1.6nm,0.6s,mb3.6						
SONM	**Songino Array**	**23.93**	**317**	P	**P**	**09 32 45.9**	**-0.1**
	0.4nm,0.8s,mb2.9,baz=123,slow=10,SNR=2.7						
WRA	**Warramunga Arr**	**52.35**	**176**	P	**P**	**09 36 42.0**	**-2.0**
	0.6nm,0.8s,mb3.6,baz=355,slow=8.4,SNR=5.6						
AKTO	**Aktyubinsk**	**55.12**	**312**	LR	LR	10 01 50.0	
	comp=Z,48nm,18.1s,baz=239,slow=37						
ASAR	**Alice Springs**	**56.02**	**177**	P	**P**	**09 37 10.2**	**-0.6**
	0.2nm,0.6s,mb3.4,baz=10,slow=14,SNR=6.0						
FINES	**FINESS Array B**	**68.47**	**330**	P	**P**	**09 38 33.0**	**-0.9**
	0.8nm,0.6s,mb3.9,baz=76,slow=5.9,SNR=3.5						

NIED ***22*** *09:43:00, 24.10N×122.40E, h29km, Mw4.0 Best double couple: M₀1.21000×10¹⁵ NP1:φ₀=315.00000°, δ=14.00000°, λ=154.00000°. NP2:φ₀=70.00000°, δ=84.00000°, λ=77.00000°.*

ISCJB ***22*** *09:43:21.0±1.4, 2387N±007×12242E±003, h25km±9km, mb3.9/11, Error ellipse: s-maj=11.6km s-min=4.5km az=4.3*

JMA ***22*** *09:43:22.9±0.3, 2405N×12243E, h36km, M3.9*

NEIC ***22*** *09:43:22.0±3.0, 2402N×12253E, h26km±21km, mb4.2/2, Error ellipse: s-maj=15.4km s-min=10.7km az=202.0*

IDC ***22*** *09:43:23.8±5.3, 2409N×12256E, h40km±50km, mb3.8/9, mb1 3.9/10, mb1mx3.8/19, mbtmp3.8/10, ML3.5/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/23, Error ellipse: s-maj=37.3km s-min=17.8km az=68.0*

ISC 22 09:43:21.0±1.3, 2395N±006×12244E±003, h15km±7km, n29, σ1=10/38, mb3.9/11, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.73**	**46**	P	**Pg**	**09 43 35.9**	**+0.6**
YOJ				S	**Sg**	**09 43 44.7**	**-0.2**
NACB	**Ninganchiao**	**0.80**	**286**	*e*Pn	**Pn**	**09 43 37.1**	**-0.7**
YHNB	**Yeheng**	**1.21**	**307**	*e*Pn	**Pn**	**09 43 43.8**	**+0.5**
YHNB				*e*Sn	**Sn**	**09 44 01.5**	**+2.1**
IRIF	**Iriomote-Funau**	**1.24**	**72**	P	**Pn**	**09 43 44.0**	**+0.2**
IRIF				S	**Sb**	**09 44 00.6**	**+0.6**
HATJ	**Hateruma jima**	**1.25**	**85**	P	**Pn**	**09 43 44.4**	**+0.4**
HATJ				S	**Sb**	**09 44 01.0**	**+0.6**
TATO	**Taipei**	**1.34**	**320**	*e*Pn	**Pn**	**09 43 46.3**	**+1.2**
TATO				*e*Sn	**Sn**	**09 44 03.0**	**+0.2**
JKRS	**Kuro-shima**	**1.47**	**78**	P	**Pn**	**09 43 47.6**	**+0.7**
JKRS				S	**Sn**	**09 44 06.9**	**+1.1**
JIJ	**Ishigaki jima**	**1.61**	**75**	P	**Pn**	**09 43 49.1**	**+0.2**
JIJ				S	**Sn**	**09 44 08.4**	**-1.0**
JTJ	**Tarama**	**2.18**	**71**	P	**Pn**	**09 43 56.6**	**-0.1**
JTJ				S	**Sn**	**09 44 24.2**	**+0.8**
JMJ	**Miyako jima 2**	**2.74**	**71**	S	**Sn**	**09 44 38.5**	**+1.1**
JOGS	**Gusukube**	**2.83**	**73**	P	**Pn**	**09 44 06.8**	**+1.2**
JOGS				S	**Sn**	**09 44 40.4**	**+1.0**
JOW	**Kunigami**	**6.01**	**60**	P	**Pn**	**09 44 48.1**	**-1.3**
JOW	**Kunigami**	**6.01**	**60**	Pn	**Pn**	**09 44 47.9**	**-1.5**
	2.7nm,0.3s,baz=196,slow=12,SNR=13						
JOW				Sn	**Sn**	**09 45 56.1**	**-1.8**
	0.4nm,0.3s,baz=128,slow=19,SNR=1.9						
JTK	**Tokunoshima**	**7.00**	**56**	P	**Pn**	**09 45 00.9**	**-2.1**
JAM	**Amami Oshima**	**7.82**	**54**	P	**Pn**	**09 45 12.2**	**-2.1**
JNU	**Nakatsue**	**11.77**	**37**	LR	LR	09 50 47.4	
	comp=Z,10nm,20.0s,baz=54,slow=38						
KSRS	**Korea Array**	**14.26**	**18**	Pn	**Pn**	**09 46 47.6**	**+5.3**
	0.6nm,0.3s,baz=198,slow=12,SNR=23						
KSRS				LR	LR	09 52 43.1	
	comp=Z,60nm,19.2s,baz=225,slow=40						
SONM	**Songino Array**	**27.04**	**336**	P	**P**	**09 49 01.3**	**-1.2**
	1.8nm,0.6s,mb3.8,baz=150,slow=9.8,SNR=19						
MKAR	**Makanchi Array**	**39.30**	**316**	P	**P**	**09 50 48.8**	**-0.6**
	1.6nm,0.4s,mb4.1,baz=103,slow=10,SNR=26						
UCH	**Uchtor**	**43.48**	**307**	*e*P	**P**	**09 51 25.3**	**+1.7**
	3.7nm,0.9s,mb4.1						
AML	**Almayashu**	**44.06**	**306**	*e*P	**P**	**09 51 30.0**	**+1.6**
	3.6nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**45.14**	**164**	P	**P**	**09 51 37.0**	**-0.1**
	0.9nm,0.7s,mb3.7,baz=346,slow=8.4,SNR=7.2						
ASAR	**Alice Springs**	**48.62**	**166**	P	**P**	**09 52 04.6**	**+0.3**
	0.4nm,0.5s,mb3.7,baz=356,slow=13,SNR=7.2						
ARCES	**ARCESS Array B**	**70.18**	**338**	P	**P**	**09 54 31.8**	**-1.0**
	7.7nm,1.2s,mb4.5,baz=82,slow=6.5,SNR=3.5						
FINES	**FINESS Array B**	**72.22**	**330**	P	**P**	**09 54 43.0**	**-2.2**
	1.3nm,0.8s,mb3.9,baz=60,slow=3.9,SNR=2.9						
BRTR	**Keskin Array B**	**74.23**	**307**	P	**P**	**09 54 57.6**	**+0.1**
	1.8nm,0.8s,mb4.0,baz=106,slow=6.6,SNR=6.2						
NOA	**NORSAR Array B**	**78.97**	**332**	P	**P**	**09 55 23.1**	**-0.8**
	0.8nm,0.6s,mb3.8,baz=53,slow=5.8,SNR=2.6						
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**09 55 42.3**	**-1.7**
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**09 55 42.3**	**-1.7**
	0.2nm,0.6s,mb3.4,baz=312,slow=4.8,SNR=8.9						

ISCJB ***22*** *09:44:44.8±0.7, 4048N±004×29.1W±0.1, h10km, mb3.6/6, Error ellipse: s-maj=11.4km s-min=5.0km az=165.1*

IDC ***22*** *09:44:44.5±1.3, 4066N×2930W, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/22, mbtmp3.6/6, Error ellipse: s-maj=42.7km s-min=26.6km az=25.0*

PDA ***22*** *09:44:49.7±0.9, 4061N×29.15W, h10km, MD3.7, ML3.1, Error ellipse: s-maj=7.6km s-min=3.8km az=94.0*

CSEM ***22*** *09:44:49.7±0.9, 4061N×29.15W, h10km, ML3.1, Error ellipse: s-maj=7.6km s-min=3.8km az=94.0, After PDA*

SVSA ***22*** *09:44:49.7±0.9, 4061N×29.15W, h10km, MD3.7, ML3.1, Error ellipse: s-maj=7.6km s-min=3.8km az=94.0*

ISC 22 09:44:46.3±0.7, 4044N±004×2914W±010, h10km, n30, σ0=90/39, mb3.6/6, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVIA	**Vitoria**	**1.61**	**148**	*e*S	**Sn**	**09 45 35.1**	**-0.4**
PVIA				A		09 45 35.7	
	9.0nm,0.1s						
PGRA	**Graciosa**	**1.67**	**147**	*e*S	**Sn**	**09 45 36.4**	**-0.6**
PGRA				A		09 45 42.9	
	64nm,0.4s						
PCED	**Cedros**	**1.84**	**169**	*e*S	**Sn**	**09 45 41.0**	**-0.3**
PCED				A		09 45 44.5	
	90nm,0.2s						
ROSA	**Rosais**	**1.86**	**158**	*e*P	**Pn**	**09 45 19.3**	**+1.2**
ROSA				*e*S	**Sn**	**09 45 41.5**	**-0.1**
PTCA	**Ponta do Capel**	**1.88**	**172**	*e*S	**Sn**	**09 45 41.9**	**-0.2**
PTCA				A		09 45 48.8	
	38nm,0.3s						
CALA	**Caldeira**	**1.89**	**170**	*e*P	**Pn**	**09 45 19.5**	**+0.9**
CALA				*e*S	**Sn**	**09 45 41.9**	**-0.5**
PAMA	**Santo Amaro**	**1.91**	**157**	*e*S	**Sn**	**09 45 42.1**	**-0.8**
PAMA				A		09 45 46.6	
	26nm,0.2s						
PMAN	**Manadas**	**1.98**	**155**	*e*S	**Sn**	**09 45 44.1**	**-0.6**
PMAN				A		09 45 47.9	
	37nm,0.3s						
PICO	**Pico**	**2.02**	**164**	*e*P	**Pn**	**09 45 21.6**	**+1.3**
PICO				*e*S	**Sn**	**09 45 45.9**	**+0.3**
PTEI	**Pico do Teixo**	**2.04**	**162**	*e*P	**Sn**	**09 45 49.4**	**+3.3**
PCND	**Candelaria**	**2.04**	**165**	*e*S	**Sn**	**09 45 46.0**	**-0.1**
PCND				A		09 45 51.3	
	47nm,0.3s						
PBOI	**Pico dos Bois**	**2.09**	**163**	*e*S	**Sn**	**09 45 47.2**	**-0.2**
PBOI				A		09 45 55.1	
	30nm,0.3s						
ASBA	**Santa Barbara**	**2.22**	**140**	*e*P	**Pn**	**09 45 23.8**	**+0.7**
ASBA				*e*S	**Sn**	**09 45 49.5**	**-1.1**
ASBA				A		09 45 54.2	
	25nm,0.2s						
ASBA	**Santa Barbara**	**2.22**	**140**	*e*P	**Pn**	**09 45 23.8**	**+0.7**
ASBA				*e*S	**Sn**	**09 45 49.5**	**-1.1**
PBIS	**Biscoitos**	**2.23**	**138**	*e*P	**Pn**	**09 45 23.8**	**+0.6**
PPAD	**Pico dos Padre**	**2.25**	**140**	*e*P	**Pn**	**09 45 24.2**	**+0.6**
PVNV	**Vila Nova**	**2.27**	**137**	*e*P	**Pn**	**09 45 24.4**	**+0.6**
PVNV				*e*S	**Sn**	**09 45 50.7**	**-1.2**
PVNV				A		09 45 54.7	
	19nm,0.3s						
PVNV	**Vila Nova**	**2.27**	**137**	*e*P	**Pn**	**09 45 24.4**	**+0.6**
PVNV				*e*S	**Sn**	**09 45 50.7**	**-1.2**
PFAV	**Pico das Favas**	**2.35**	**137**	*e*P	**Pn**	**09 45 25.5**	**+0.6**
PFAV				*e*S	**Sn**	**09 45 52.2**	**-1.5**
PFAV				A		09 46 00.8	
	35nm,0.4s						
PFAV	**Pico das Favas**	**2.35**	**137**	*e*P	**Pn**	**09 45 25.5**	**+0.6**
PFAV				*e*S	**Sn**	**09 45 52.2**	**-1.5**
SET2	**Ginetes**	**3.67**	**134**	*e*P	**Pn**	**09 45 44.0**	**+1.0**
PFET	**Feteiras**	**3.70**	**134**	*e*P	**Pn**	**09 45 44.6**	**+1.2**
PSAN	**Santo Antonio**	**3.71**	**133**	*e*P	**Pn**	**09 45 44.1**	**+0.5**
MIRA	**Miradouro**	**4.01**	**130**	*e*P	**Pn**	**09 45 47.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**38.34**	**126**	P	**P**	**09 52 08.9**	**+1.6**
	1.4nm,0.9s,mb3.7,baz=302,slow=8.3,SNR=2.8						
YKA	**Yellowknife Ar**	**53.11**	**325**	P	**P**	**09 54 01.4**	**-2.1**
	0.2nm,0.8s,mb3.1,baz=70,slow=7.3,SNR=4.8						
AKTO	**Aktyubinsk**	**55.60**	**48**	P	**P**	**09 54 42.8**	**-0.3**
	1.0nm,0.7s,mb4.0,baz=307,slow=9.1,SNR=4.1						
TXAR	**Lajitas Array**	**60.48**	**285**	P	**P**	**09 54 55.2**	**-1.2**
	0.3nm,0.6s,mb3.5,baz=65,slow=7.1,SNR=4.9						
MKAR	**Makanchi Array**	**73.87**	**42**	P	**P**	**09 56 20.6**	**-0.4**
	0.2nm,0.3s,mb3.5,baz=314,slow=6.9,SNR=5.1						
SONM	**Songino Array**	**83.66**	**28**	P	**P**	**09 57 14.2**	**-0.6**
	0.4nm,0.9s,mb3.5,baz=316,slow=4.0,SNR=4.3						

GUC 22 10:23:53.9±0.3, 4540S×7307W, h7km±2km, ML3.9, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.72**	**105**	*e*P	Pg	10 24 06.6	-1.0
COYC				*i* S	Sg	10 24 16.4	-0.6

ISCJB ***22*** *10:26:27.7±0.3, 4621N±001×12221W±002, h3km±2km, Error ellipse: s-maj=2.8km s-min=2.5km az=13.6*

NEIC ***22*** *10:26:27.6, 4620N×122.19W, h1km, MD3.1(SEA), After SEA.*

ISC 22 10:26:28.0±0.3, 4621N±001×12220W±002, h3km±2km, n46, σ0=80/67, 32C-29D, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YEL	**Yellow Rock**	**0.01**	**96**	⇓P	**Pg**	**10 26 28.1**	**-0.4**
SHW	**Mount Saint He**	**0.03**	**233**	⇓P	**Pg**	**10 26 28.6**	**-0.1**
STD	**Studebaker Rid**	**0.03**	**332**	⇓P	**Pg**	**10 26 28.8**	**+0.1**
ESD	**East Dome**	**0.04**	**110**	⇓P	**Pg**	**10 26 28.5**	**-0.4**
HSR	**South Ridge**	**0.04**	**160**	⇓P	**Pg**	**10 26 28.5**	**-0.4**
JLK	**June Lake**	**0.07**	**152**	⇓P	**Pg**	**10 26 29.1**	**-0.4**
FL2	**Flat Top 2**	**0.10**	**262**	⇑P	**Pg**	**10 26 30.4**	**+0.3**
ERK	**Elk Rock**	**0.14**	**315**	P	**Pg**	**10 26 30.9**	**+0.2**
TDL	**Tradedollar La**	**0.14**	**356**	⇓P	**Pg**	**10 26 31.1**	**+0.3**
CDFW	**Cedar Flats**	**0.14**	**131**	⇑P	**Pg**	**10 26 30.7**	**-0.1**
MTMW	**Mount Mitchell**	**0.18**	**182**	⇓P	**Pg**	**10 26 31.5**	**-0.1**
LVP	**Lakeview Peak**	**0.20**	**225**	P	**Pg**	**10 26 31.9**	**0.0**
F04A	**Amboy**	**0.32**	**209**	⇑P	**Pg**	**10 26 33.8**	**-0.2**
	baz=0.3,SNR=18						
F04A				⇓S	**Sg**	**10 26 39.0**	**+0.9**
	baz=0.3						
E05A	**Randle**	**0.47**	**41**	P	**Pg**	**10 26 36.5**	**-0.4**
	baz=0.5,SNR=18						
E05A				⇑S	**Sg**	**10 26 43.6**	**+0.6**
	baz=0.5						
E04A	**Onalaska**	**0.52**	**317**	⇑S	**Sg**	**10 26 47.1**	**+2.2**
	baz=0.5						
GLK	**Glacier Lake**	**0.54**	**49**	P	**Pg**	**10 26 38.4**	**0.0**
F05A	**White Salmon**	**0.61**	**122**	⇓P	**Pg**	**10 26 39.1**	**-0.7**
	baz=0.6						
F05A				⇓S	**Sg**	**10 26 50.0**	**+2.4**
	baz=0.6						
E06A	**Yakima**	**0.91**	**68**	⇑P	**Pg**	**10 26 45.1**	**-0.4**
	baz=0.9						
E06A				⇑S	**Sg**	**10 26 57.7**	**+0.4**
	baz=0.9						
F03A	**Seaside**	**0.98**	**254**	⇑P	**Pg**	**10 26 46.4**	**-0.5**
	baz=1.0						
F03A				⇓S	**Sg**	**10 26 59.8**	**+0.2**
	baz=1.0						
D05A	**Enumclaw**	**0.99**	**8**	⇓P	**Pg**	**10 26 46.5**	**-0.5**
	baz=1.0						
D05A				⇓S	**Sg**	**10 26 59.8**	**0.0**
	baz=1.0						
D04A	**Dobbs Creek Ra**	**0.99**	**336**	⇓P	**Pg**	**10 26 46.9**	**-0.1**
	baz=1.0						
E03A	**Lebam**	**1.00**	**290**	⇑P	**Pg**	**10 26 46.5**	**-0.7**
	baz=1.0						
E03A				⇓S	**Sg**	**10 27 00.9**	**+0.8**
	baz=1.0						
G04A	**Mulino**	**1.02**	**191**	⇑P	**Pg**	**10 26 47.3**	**-0.3**
	baz=1.0						
G04A				⇑S	**Sg**	**10 27 01.6**	**+0.8**
	baz=1.0						
F06A	**Goldendale**	**1.09**	**114**	⇑P	**Pg**	**10 26 48.2**	**-0.6**
	baz=1.1						
F06A				⇓S	**Sg**	**10 27 03.3**	**+0.5**
	baz=1.1						
G05A	**Wamic**	**1.15**	**147**	⇑P	**Pg**	**10 26 49.5**	**-0.5**
	baz=1.1,SNR=17						
G05A				⇑S	**Sg**	**10 27 04.9**	**-0.1**
	baz=1.1						
G03A	**Yamhill**	**1.17**	**221**	⇓P	**Pg**	**10 26 49.7**	**-0.7**
	baz=1.2						
G03A				⇑S	**Sg**	**10 27 07.1**	**+1.5**
	baz=1.2						
D06A	**Cle Elum**	**1.36**	**43**	⇓S	**Sg**	**10 27 12.3**	**+0.7**
	baz=1.4						
G06A	**Carlson Farm,**	**1.47**	**131**	⇑P	**Pn**	**10 26 54.4**	**-0.9**
	baz=1.4,SNR=9.7						
G06A				⇑S	**Sb**	**10 27 14.2**	**-0.8**
	baz=1.4						
C05A	**Tolt Reservoir**	**1.53**	**13**	⇑S	**Sn**	**10 27 16.2**	**-0.3**
	baz=1.5						
H04A	**Detroit Lake**	**1.53**	**180**	⇓P	**Pn**	**10 26 54.9**	**-1.3**
	baz=1.5,SNR=10						
H04A				⇑S	**Sn**	**10 27 16.4**	**-0.1**
	baz=1.5						
C04A	**Brinnon**	**1.60**	**341**	⇓S	**Sn**	**10 27 17.7**	**-0.6**
	baz=1.6						
F07A	**Phinny Hill Vi**	**1.61**	**100**	⇑P	**Pn**	**10 26 56.5**	**-0.9**
	baz=1.6						
F07A				⇑S	**Sn**	**10 27 18.4**	**-0.4**
	baz=1.6						
E07A	**Sunnyside**	**1.66**	**77**	⇓P	**Pn**	**10 26 57.6**	**-0.4**
	baz=1.7						
E07A				⇑S	**Sn**	**10 27 20.0**	**+0.2**
	baz=1.7						
H05A	**Madras**	**1.71**	**156**	⇑P	**Pn**	**10 26 58.2**	**-0.4**
	baz=1.7,SNR=9.9						
H05A				⇑S	**Sn**	**10 27 22.2**	**+1.2**
	baz=1.7						
H03A	**Soap Creek Ran**	**1.71**	**207**	⇑P	**Pn**	**10 26 57.9**	**-0.9**
	baz=1.7						
H03A				⇑S	**Sn**	**10 27 21.9**	**+0.7**
	baz=1.7						
HAWA	**Hanford**	**1.86**	**83**	*e*Pn	**Pn**	**10 27 00.5**	**-0.3**
HAWA				*e*Sn	**Sn**	**10 27 27.5**	**+2.7**
H06A	**Lindquist Farm**	**1.98**	**138**	⇓P	**Pn**	**10 27 02.0**	**-0.3**
	baz=2.0						
G07A	**Ruggs Ranch, H**	**2.01**	**117**	⇓P	**Pn**	**10 27 02.5**	**-0.4**
	baz=2.0						
B05A	**Bryant**	**2.06**	**2**	⇑P	**Pn**	**10 27 03.4**	**-0.1**
	baz=2.1						
B05A				⇑S	**Sn**	**10 27 29.4**	**-0.2**
	baz=2.1						
C07A	**Waterville**	**2.08**	**44**	⇑Pb	**Pb**	**10 27 05.6**	**-0.9**
	baz=2.1						
C07A				⇓Sb	**Sb**	**10 27 35.1**	**+2.4**
	baz=2.1						
I03A	**Eugene**	**2.36**	**199**	⇓P	**Pn**	**10 27 07.9**	**+0.2**
	baz=2.4						
I04A	**Tendick Farm,**	**2.42**	**184**	⇓Sb	**Sb**	**10 27 43.0**	**+0.6**
	baz=2.4						
G08A	**Pilot Rock**	**2.45**	**111**	⇑Sb	**Sb**	**10 27 44.0**	**+0.8**
	baz=2.4						
H07A	**Lands Inn, Kim**	**2.46**	**130**	⇓Pb	**Pb**	**10 27 12.1**	**-0.8**
	baz=2.4						
H07A				⇓Sb	**Sb**	**10 27 46.2**	**+2.5**
	baz=2.4						
B07A	**Winthrop**	**2.66**	**31**	⇑Pb	**Pb**	**10 27 15.4**	**-0.8**
	baz=2.7						
I06A	**Prineville**	**2.67**	**147**	⇑Pb	**Pb**	**10 27 15.5**	**-1.0**
	baz=2.7						

IDC 22 10:34:03.7±1.5, 2637S×7225E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/19, mbtmp3.9/4, MS4.0/3, Ms1 4.0/3, ms1mx3.4/35, Error ellipse: s-maj=44.2km s-min=30.2km az=98.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**41.65**	**185**	P	P	10 41 53.4	0.0
	4.4nm,0.4s,baz=39,slow=6.5,SNR=28						
ASAR	**Alice Springs**	**55.47**	**102**	P	P	10 43 39.8	-0.8
	0.8nm,0.8s,baz=248,slow=5.8,SNR=7.4						
WRA	**Warramunga Arr**	**56.98**	**98**	P	P	10 43 52.1	+0.7
	1.2nm,0.8s,baz=251,slow=7.3,SNR=8.0						
MKAR	**Makanchi Array**	**73.38**	**7**	P	P	10 45 37.3	+0.1
	0.1nm,0.2s,baz=197,slow=4.5,SNR=2.4						
JOW	**Kunigami**	**75.54**	**50**	LR	LR	11 16 45.4	
	comp=Z,112nm,18.8s,baz=209,slow=34						
JNU	**Nakatsue**	**81.27**	**46**	LR	LR	11 22 48.9	
	comp=Z,68nm,19.1s,baz=308,slow=36						
KSRS	**Korea Array**	**82.23**	**42**	LR	LR	11 17 30.1	
	comp=Z,74nm,21.8s,baz=303,slow=32						

GUC 22 10:39:04.8±0.2, 4539S×7307W, h7km±1km, ML3.5, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.71**	**105**	*e*P	Pg	10 39 17.6	-1.0
COYC				*i* S	Sg	10 39 27.1	-0.7

GCMT ***22*** *10:41:12.0±0.4, 1621S×17768E, h23km±1km, MW4.9/70, Moment Tensor Solution. s26,c31; s70,c92; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.07±.17; Mθθ=0.51±.13; Mφφ=0.58±.13; Mrθ=0.32±.20; Mrφ=3.12±.12; Mθφ=0.44±.20; Best double couple: M₀3.21400×10¹⁶ NP1:φ₀=265.00000°, δ82.00000°, λ=-5.00000°. NP2: φ₀=355.00000°, δ85.00000°, λ=-172.00000°. Principal axes: T 3.2070, Plg2.0000°, Azm130.0000°; N 0.0130, Plg80.0000°, Azm27.0000°; P -3.2210, Plg10.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***22*** *10:41:27.1±0.8, 155S±02×176.1E±0.1, h33km, mb4.3/8 Error ellipse: s-maj=29.6km s-min=17.3km az=160.7*

IDC ***22*** *10:41:55.5±9.3, 1605S×176.14E, h300km±99km, mb3.4/6, mb1 3.6/6, mb1mx3.4/13, mbtmp3.4/6, Error ellipse: s-maj=41.0km s-min=18.0km az=174.0*

ISC 22 10:41:29.7±0.9, 156S±02×1760E±01, h35km, n15, σ0=71/10, mb4.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARMA	**Armidale**	**26.81**	**232**	*e*P	**P**	**10 47 06.5**	**-0.2**
PPT	**Papeete**	**33.00**	**98**	*e*LQ		10 54 28.3	
	950nm,27.5s						
PPT				*e*LR	LR	10 55 50.9	
	652nm,30.5s						
PPT	**Papeete**	**33.00**	**98**	P	**P**	**10 48 02.0**	**+0.4**
	19nm,0.6s,mb5.2,baz=270,slow=4.0,SNR=4.2						
TBI	**Tubuai**	**33.38**	**109**	*e*LQ		10 54 39.2	
	864nm,25.2s						
TBI				*e*LR	LR	10 56 06.1	
	737nm,30.5s						
STKA	**Stephens Creek**	**35.28**	**236**	*e*P	**P**	**10 48 20.8**	**-0.5**
	7.6nm,0.8s,mb4.7					

comp=Z,441nm,21.7s,baz=348,slow=33
CTA Charters Tower 15.83 216 Pn Pn 10 49 24.4 -0.6
CTA Charters Tower 15.83 216 Pn Pn 10 49 24.4 -0.6
0.1nm,0.3s,baz=45,slow=14,SNR=3.1
KAKA Kakadu 23.93 255 eP P 10 50 54.7 -0.5
18nm,0.9s,mb4.5
WB2 Warramunga Arr 24.53 237 eP P 10 51 00.9 +0.3
WRA Warramunga Arr 24.54 237 P P 10 51 01.3 +0.6
5.0nm,0.6s,mb4.2,baz=64,slow=9.5,SNR=34
WRA LR LR 11 00 24.8
comp=Z,365nm,18.5s,MS3.9,baz=120,slow=36
ASAR Alice Springs 26.77 230 P P 10 51 20.6 -0.2
1.0nm,0.6s,mb3.5,baz=64,slow=8.8,SNR=7.4
STKA Stephens Creek 27.85 207 eP P 10 51 34.3 +3.9
2.7nm,0.8s,mb3.9
STKA Stephens Creek 27.85 207 P P 10 51 30.9 +0.5
1.4nm,0.7s,mb3.7,baz=55,slow=14,SNR=2.2
STKA LR LR 11 02 40.0
comp=Z,524nm,18.2s,MS4.2,baz=36,slow=36
FITZ Fitzroy Crossi 31.55 247 eP P 10 52 02.6 -0.8
8.6nm,1.0s,mb4.5
FITZ Fitzroy Crossi 31.55 247 LR LR 11 05 14.4
comp=Z,204nm,20.3s,MS3.8,baz=92,slow=37
NWAO Narrogin (SRO) 44.08 229 LR LR 11 12 15.5
comp=Z,372nm,21.0s,MS4.3,baz=74,slow=36
KSRS Korea Array 51.87 331 P P 10 54 46.4 -2.6
KSRS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
KSRS Korea Array 51.87 331 P P 10 54 46.4 -2.6
comp=Z,1.1nm,0.7s,mb3.9,baz=143,slow=7.7,SNR=5.5
ASAJ Asahikawa 52.76 348 LR LR 11 16 01.2
comp=Z,233nm,19.5s,MS4.2,baz=154,slow=35
NJ2 Nanjing 52.99 320 eP P 10 54 58.3 +0.9
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
KMI Kunming 61.22 304 P P 10 55 57.8 +2.1
KMI PP PP 10 58 15.3 +4.2
KMI S S 11 04 11.3 -1.0
KMI SS SS 11 08 15.3 +1.9
KMI AMB AMB
comp=Z,13nm,1.1s,mb5.0
KMI AMB AMB
comp=Z,97nm,4.3s
KMI LR LR
comp=N,115nm,17.5s,MS4.2
KMI LR LR
comp=E,105nm,19.9s,MS4.2
KMI LR LR
comp=Z,163nm,23.1s,MS4.1
CD2 Chengdu 62.98 310 eP P 10 56 08.6 +1.2
CD2 PP PP 10 58 28.8 +2.3
CD2 S S 11 04 34.6 +0.3
CD2 SS SS 11 08 42.8 +2.0
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
CD2 AMB AMB
comp=Z,20nm,5.8s
CD2 LR LR
comp=N,120nm,14.2s
CD2 LR LR
comp=Z,110nm,16.4s,MS4.1
HHC Hu-ho-hao-te 63.14 323 eP P 10 56 08.3 +0.1
HHC PCP PcP 10 56 45.6 +0.2
HHC PP PP 10 58 28.4 +0.7
HHC PCS PcS 11 00 47.3 -1.6
HHC eS S 11 04 34.8 -1.0
HHC AMB AMB
comp=Z,16nm,0.6s,mb5.3
HHC AMB AMB
comp=Z,83nm,3.8s
HHC LR LR
comp=N,90nm,14.3s,MS4.2
HHC LR LR
comp=E,103nm,16.7s,MS4.2
HHC LR LR
comp=Z,115nm,15.5s,MS4.2
HIA Hailar 64.81 335 i P P 10 56 15.4 -3.6
MA2 Magadan 66.93 357 eP P 10 56 38.1 +5.6
MA2 pmax pmax
comp=Z,10.0nm,1.4s,mb4.7
MA2 pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
GTA Gaotai 69.85 317 eP P 10 56 53.0 +1.8
GTA AMB AMB
comp=Z,3.0nm,1.4s,mb4.0
ULN Ulaanbaatar 70.00 327 eP P 10 56 46.9 -5.0
SEY Seymchan 70.22 358 i P P 10 56 57.5 +4.6
SONM Songino Array 70.33 327 P P 10 56 54.5 +0.6
comp=Z,3.5nm,0.8s,mb4.3,baz=131,slow=7.1,SNR=20
BOD Bodaibo 73.45 338 eP P 10 57 08.5 -3.9
BILL Bilibino 75.64 4 eP P 10 57 25.9 +1.0
BILL pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
QSPA South Pole Qui 82.54 180 eP P 10 58 03.5 +0.9
comp=Z,3.2nm,0.7s,mb4.5
QSPA South Pole Qui 82.54 180 P P 10 58 03.0 +0.5
comp=Z,2.1nm,0.6s,mb4.3,baz=8.9,slow=6.3,SNR=11
MK31 Makanchi Array 84.50 318 eP P 10 58 13.1 0.0
MK31 e 10 58 21.8
MKAR Makanchi Array 84.50 318 P P 10 58 13.1 0.0
MKAR pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 84.50 318 P P 10 58 13.1 0.0
comp=Z,9.8nm,0.7s,mb5.0,baz=101,slow=5.3,SNR=84
NVS Novosibirsk 86.36 326 i P P 10 58 20.7 -1.5
NVS pmax pmax
comp=Z,12nm,1.7s,mb4.8
NVS pmax pmax
comp=N,6.0nm,1.6s
NVS pmax pmax
comp=E,10.0nm,1.6s
KURK Kurchatov 87.90 322 eP P 10 58 29.4 -0.4
comp=E,1.9nm,0.8s,mb4.4
KURK Kurchatov 87.90 322 eP P 10 58 29.4 -0.3
KURK pmax pmax
comp=Z,2.0nm,0.8s,mb4.4
AML Almayashu 89.39 312 eP P 10 58 36.2 -0.7
comp=Z,2.0nm,0.8s,mb4.5
AML e pP 10 58 46.8 -4.6
BRVK Borovoye 93.41 323 eP P 10 58 54.3 -1.1
BRVK pmax pmax
comp=Z,3.0nm,1.3s,mb4.6
YKA Yellowknife Ar 96.18 28 P P 10 59 07.9 0.0
comp=Z,0.1nm,0.4s,mb3.6,baz=264,slow=4.6,SNR=5.4
OBN Obninsk 112.75 327 eP Pdif 11 00 22.7 +0.8
OBN pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 130.23 119 PKIKP PKPdf 11 04 53.0 +1.8
LPAZ pmax pmax
comp=Z,1.0nm,0.5s
LPAZ La Paz 130.23 119 PKP PKPdf 11 04 53.0 +1.8
comp=Z,0.7nm,0.5s,baz=315,slow=1.4,SNR=3.7
TORD Torodi Ar. Bea 154.26 285 PKPbc PKPbc 11 05 40.6 -0.6
comp=Z,0.8nm,0.9s,baz=74,slow=2.5,SNR=4.0

IDC 22 10:52:18.3±3.6, 4853S×12399E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.8/12, mbtmp3.8/3, Error ellipse: s-maj=107.5km s-min=64.2km az=112.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	21.30	45	P	P	10 57 06.9	+0.5
	1.2nm,0.3s,baz=194,slow=17,SNR=2.6						
ASAR	Alice Springs	26.03	21	P	P	10 57 53.2	+0.2
	2.5nm,0.9s,baz=192,slow=9.7,SNR=15						
WRA	Warramunga Arr	29.72	20	P	P	10 58 25.7	-0.3
	0.7nm,1.0s,baz=180,slow=9.8,SNR=2.9						
YKA	Yellowknife Ar	145.34	44	PKPbc	PKPbc	11 11 55.6	-0.9
	0.9nm,0.8s,baz=269,slow=3.2,SNR=12						

*BJI **22** 10:57:47.5, 6034N×15369W, h97km, mb4.6*
*ISCJB **22** 10:57:48.8±0.3, 6020N±004×15307W±008, h130km±4km, mb3.9/11, Error ellipse: s-maj=6.7km s-min=5.8km az=136.3*
*IDC **22** 10:57:50.5±0.9, 5999N×15331W, h134km±9km, mb3.4/8, mb1 3.7/10, mb1mx3.5/22, mbtmp3.6/10, Error ellipse: s-maj=14.4km s-min=13.4km az=5.0*
*NEIC **22** 10:57:51.2, 6015N×15294W, h126km, MG4.0(AEIC), After AEIC.*
ISC 22 10:57:50.0±0.3, 6019N±004×15307W±008, h122km±4km, h133km±5.7km: pP-P, n48, σ0s99/51, mb4.0/11, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUL	Augustine Lava	0.83	193	P	Pn	10 58 11.6	+1.0
AUL				S	Sn	10 58 27.9	+1.8
SLKM	Skilak Lake	1.45	76	P	Pn	10 58 17.0	+0.1
SVW2	Sparrevohn	1.54	307	P	Pn	10 58 18.8	+1.0
FIB	Fire Island	1.73	54	P	Pn	10 58 21.6	+1.4
SEW	Seward	1.81	91	P	Pn	10 58 20.7	-0.5
RC01	Rabbit Creek A	1.88	60	P	Pn	10 58 21.6	-0.3
PMR	Palmer	2.38	52	P	Pn	10 58 27.5	-0.8
KDAK	Kodiak Island	2.43	174	P	Pn	10 58 27.7	-1.2
KDAK	Kodiak Island	2.43	174	P	Pn	10 58 27.8	-1.1
KDAK				S	Sn	10 58 56.3	-2.4
GHO	Glory Hole Cre	2.57	50	P	Pn	10 58 30.0	-0.6
SML	Sawmill	2.82	53	P	Pn	10 58 33.3	-0.6
TTA	Tatalina	3.09	334	eP	Pn	10 58 37.9	+0.5
MID	Middleton Isla	3.49	100	eP	Pn	10 58 42.6	0.0
KTH	Kantishna Hill	3.52	16	P	Pn	10 58 43.1	0.0
EYAK	Cordova Ski Ar	3.66	81	P	Pn	10 58 44.5	-0.3
RAGM	Ragged Mountai	4.18	84	P	Pn	10 58 51.6	-0.2
PAX	Paxson	4.58	49	P	Pn	10 58 57.0	-0.1
CHGN	Chignik	4.81	218	P	Pn	10 59 00.0	-0.3
COLA	College	5.28	25	P	Pn	10 59 06.2	-0.4
IL1	Eielson Array	5.42	29	P	Pn	10 59 07.8	-0.5
IM3	Indian Mountai	5.82	357	P	Pn	10 59 14.3	+0.4
IMA2	Indian Mountai	5.91	358	P	Pn	10 59 15.7	+0.7
BCA3	Beaver Creek A	6.10	57	P	Pn	10 59 17.6	0.0
SDPT	Sand Point	6.26	222	eP	Pn	10 59 18.9	-1.0
PNL	Peninsula	6.89	88	P	Pn	10 59 29.8	+1.4
COLD	Coldfoot	7.18	9	P	Pn	10 59 32.0	-0.1
EGAK	Eagle	7.18	45	P	Pn	10 59 31.2	-0.9
DAWY	Dawson	7.49	53	P	Pn	10 59 35.2	-1.2
BM3	Burnt Mountain	8.16	24	P	Pn	10 59 43.6	-1.7
TNA	Tin City	8.65	315	P	Pn	10 59 52.4	+0.4
SKAG	Skagway	8.97	87	eP	Pn	10 59 58.0	+1.7
WHY	Whitehorse	9.01	79	P	Pn	10 59 55.7	-1.2
SIT	Sitka	9.77	101	eP	Pn	11 00 08.2	+1.1
INK	Inuvik	11.71	38	ePn	Pn	11 00 33.0	+0.1
INK	Inuvik	11.71	38	P	Pn	11 00 31.8	-1.1
	0.3nm,0.3s,baz=227,slow=16,SNR=44						
INK				S	Sn	11 02 57.7	+16
	baz=142,slow=26,SNR=2.3						
DLBC	Dease Lake	11.89	88	P	Pn	11 00 37.1	+1.8
	baz=273,slow=13						
YKA	Yellowknife Ar	18.41	66	P	P	11 01 55.5	+0.2
	1.5nm,0.3s,baz=278,slow=10,SNR=148						
YKA				ScP	ScP	11 09 42.2	-1.8
	baz=290,slow=2.2,SNR=14						
NVAR	Mina Array Bea	30.85	119	P	P	11 03 52.4	-1.8
	0.2nm,0.4s,mb3.2,baz=294,slow=6.8,SNR=3.0						
NVAR				pP	pP	11 04 23.6	+2.9
	0.5nm,0.8s,baz=302,slow=11,SNR=1.7						
PDAR	Pinedale Array	31.47	104	P	P	11 04 01.7	+2.0
	0.4nm,0.8s,mb3.2,baz=335,slow=4.0,SNR=3.1						
PDAR				pP	pP	11 04 29.2	+3.0
	1.2nm,1.0s,baz=312,slow=5.6,SNR=6.4						
ULM	Lac du Bonnet	33.08	81	P	P	11 04 14.4	+0.8
	1.3nm,0.4s,mb4.1,baz=300,slow=8.0,SNR=3.7						
SCHQ	Schefferville	43.49	57	P	P	11 05 40.3	-0.3
	0.9nm,0.4s,mb3.9,baz=299,slow=10,SNR=4.9						
TXAR	Lajitas Array	45.08	111	P	P	11 05 54.8	+1.2
	0.4nm,0.8s,mb3.2,baz=309,slow=6.0,SNR=4.5						
TXAR				pP	pP	11 06 23.6	+2.2
	1.2nm,1.1s,baz=346,slow=6.6,SNR=3.8						
CN2	Changchun	49.38	289	eP	P	11 06 26.5	-0.2
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
KSRS	Korea Array	53.10	282	P	P	11 06 52.7	-1.8
	comp=Z,3.3nm,0.9s,mb4.4,baz=36,slow=9.1,SNR=11						
SONM	Songino Array	54.65	306	P	P	11 07 06.4	+0.7
	comp=Z,4.1nm,0.7s,mb4.6,baz=40,slow=7.0,SNR=37						
MKAR	Makanchi Array	64.26	321	P	P	11 08 10.7	-0.9
	comp=Z,0.7nm,0.4s,mb3.8,baz=39,slow=6.3,SNR=9.7						
GTA	Gaotai	64.29	305	eP	P	11 08 12.4	+0.5
GTA				AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4						
GYA	Guiyang	72.30	292	P	P	11 09 02.8	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						

*NEIC **22** 11:04:06.8±3.4, 4417N×12864W, h10km, mb3.6/3, Error ellipse: s-maj=40.5km s-min=14.2km az=83.0*
ISC 22 11:04:04.5±0.9, 4404N±005×12883W±007, h10km, n41, σ0s91/54, mb4.1/1, 20C-14D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
K01A	Sixes	3.41	110	⇓S	Sn	11 05 36.6	-1.4
	baz=3.3						
H02A	Toledo	3.52	78	P	Pn	11 04 58.5	-0.7
	baz=3.4,SNR=12						
I02A	Mapleton	3.61	89	⇓P	Pn	11 04 59.5	-0.9
	baz=3.5,SNR=13						
I02A				⇑S	Sn	11 05 42.3	-0.7
	baz=3.5						
RNO	Roman Nose	3.67	90	P	Pn	11 05 01.2	-0.1
J02A	Umpqua	3.87	98	⇓P	Pn	11 05 02.9	-1.1
	baz=3.7,SNR=50						
J02A				⇑S	Sn	11 05 49.1	-0.4
	baz=3.7						
I03A	Eugene	4.00	89	⇓P	Pn	11 05 05.6	-0.3
	baz=3.9,SNR=104						
I03A				⇓S	Sn	11 05 52.1	-0.7
	baz=3.9						
H03A	Soap Creek Ran	4.02	79	⇑P	Pn	11 05 05.4	-0.7
	baz=3.9,SNR=15						
H03A				⇑S	Sn	11 05 53.3	+0.1
	baz=3.9						
K02A	Glendale	4.09	106	⇓S	Sn	11 05 54.3	-0.8
	baz=4.0						
G03A	Yamhill	4.16	70	⇓P	Pn	11 05 07.2	-0.8
	baz=4.0						
G03A				⇑S	Sn	11 05 57.2	+0.6
	baz=4.0						
DBO	Dodson Butte	4.16	101	P	Pn	11 05 07.0	-1.1
HSO	Harness Mounta	4.19	95	P	Pn	11 05 08.1	-0.3
F03A	Seaside	4.19	61	⇑P	Pn	11 05 07.8	-0.6
	baz=4.1,SNR=16						
F03A				⇑S	Sn	11 05 58.1	+0.7
	baz=4.1						
L02A	Cave Junction	4.26	114	⇑S	Sn	11 05 58.8	-0.5
	baz=4.1						
J03A	Ideyld Park	4.30	97	⇑P	Pn	11 05 09.2	-0.8
	baz=4.2,SNR=31						
J03A				⇑S	Sn	11 06 00.3	+0.1
	baz=4.2						
NLO	Nicolai Mounta	4.33	60	P	Pn	11 05 10.3	0.0
E03A	Lebam	4.48	54	⇓P	Pn	11 05 11.6	-0.8
	baz=4.4						
BROR	Big Rock Looko	4.59	85	P	Pn	11 05 14.8	+0.8
BBOR	Butler Butte	4.62	102	P	Pn	11 05 13.8	-0.6
I04A	Tendick Farm,	4.64	91	⇓P	Pn	11 05 13.8	-0.9
	baz=4.5,SNR=20						
I04A				⇑S	Sn	11 06 09.5	+0.9
	baz=4.5						
BMW	Boistfort Moun	4.64	56	P	Pn	11 05 14.3	-0.3
G04A	Mulino	4.68	73	⇑P	Pn	11 05 14.6	-0.6
	baz=4.6,SNR=6.1						
D03A	Wishkah Elem.	4.70	47	⇑P	Pn	11 05 15.2	-0.2
	baz=4.6						
HBO	Huckleberry Mo	4.70	90	P	Pn	11 05 17.0	+1.5
H04A	Detroit Lake	4.81	80	⇑P	Pn	11 05 17.0	+0.1
	baz=4.7						
H04A				⇓S	Sn	11 06 13.1	+0.5
	baz=4.7						
FRIS	Frissel Point	4.85	86	P	Pn	11 05 18.6	+1.1
F04A	Amboy	4.92	65	⇓P	Pn	11 05 18.8	+0.3
	baz=4.8,SNR=6.9						
F04A				⇓S	Sn	11 06 16.7	+1.2
	baz=4.8						
J04A	Umpqua Nationa	4.94	97	⇑P	Pn	11 05 19.0	+0.2
	baz=4.8,SNR=10						
J04A				⇑S	Sn	11 06 16.6	+0.6
	baz=4.8						
TDH	Tom, Dick, Har	5.17	74	P	Pn	11 05 22.8	+0.9
VFP	Flag Point	5.41	74	P	Pn	11 05 26.1	+1.0
B04A	Port Angeles	5.47	41	⇓P	Pn	11 05 25.1	-0.9
	baz=5.4						
B04A				⇓S	Sn	11 06 27.8	-1.0
	baz=5.4						
G05A	Wamic	5.49	75	⇑P	Pn	11 05 26.9	+0.6
	baz=5.4,SNR=9.3						
C04A	Brinnon	5.50	46	⇑S	Sn	11 06 30.8	+1.1
	baz=5.4						
E05A	Randle	5.59	61	⇑P	Pn	11 05 28.4	+0.8
	baz=5.5,SNR=7.8						
FMW	Mount Fremont	5.80	58	P	Pn	11 05 31.1	+0.5
PGC	Sidney	5.93	37	ePn	Pn	11 05 30.8	-1.5
PGC				eSn	Sn	11 06 36.8	-3.4
G08A	Pilot Rock	7.15	76	⇑P	Pn	11 05 49.1	0.0
	baz=7.0,SNR=5.3						
PV10	Paradox Valley	15.92	104	eP	Pn	11 07 51.9	+3.4
PV01	Paradox Valley	16.36	104	eP	Pn	11 07 56.1	+1.9
SDCO	Great Sand Dun	18.69	102	eP	Pn	11 08 25.0	+1.8
	3.9nm,1.1s						
ANMO	Albuquerque	19.45	110	eP	Pn	11 08 32.5	+0.1
	2.0nm,1.0s						
WMOK	Wichita Mounta	24.90	102	eP	P	11 09 29.6	+2.2
	6.4nm,1.1s,mb4.1						

*MOS **22** 11:11:22.9±1.1, 4984N×15615E, h83km, mb4.6/4, Error ellipse: s-maj=15.5km s-min=7.8km az=77.2*
*ISCJB **22** 11:11:24.1±0.8, 4984N±007×15629E±0.10, h94km±6km, mb3.8/21, Error ellipse: s-maj=13.6km s-min=6.6km az=138.3*
*KRSC **22** 11:11:24.4±1.2, 4979N×15702E, h23km±23km, ML4.4*
*NEIC **22** 11:11:24.5±1.1, 4984N×15606E, h78km±10km, mb4.4/5, Error ellipse: s-maj=12.9km s-min=7.8km az=136.0*
*IDC **22** 11:11:28.8±4.4, 4987N×15611E, h116km±40km, mb3.3/16, mb1 3.5/17, mb1mx3.4/24, mbtmp3.3/17, Error ellipse: s-maj=18.3km s-min=13.7km az=150.0*
ISC 22 11:11:24.8±0.8, 4981N±007×15624E±010, h84km±6km, n48, σ1s11/60, mb3.8/21, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.88	355	ePN	Pn	11 11 42.4	-0.3
SKR				i S	Sn	11 11 56.0	-0.1
SKR				pmax	pmax		
	comp=N,50nm,0.3s						
SKR				pmax	pmax		
	comp=E,50nm,0.3s						
SKR				pmax	pmax		
	comp=Z,70nm,0.3s						
SKR				smax			
	comp=N,4μm,0.2s						
SKR				smax			
	comp=E,1μm,0.2s						
ALID	Alaid	1.15	338	i P	Pn	11 11 47.6	+1.7
ALID				i S	Sn	11 12 04.5	+2.8
MIPR	Malaya Ipel'ka	2.49	7	i P	Pn	11 12 04.1	+0.8
MIPR				i S	Sn	11 12 33.4	+0.5
GRL	Gorelyy	2.98	22	i P	Pn	11 12 10.4	+0.5
GRL				i S	Sn	11 12 43.6	-1.0
RUS	Russkaya	2.99	28	i P	Pn	11 12 08.8	-1.3
RUS				i S	Sn	11 12 40.6	-4.3
PET	Petropavlovsk	3.56	24	ePn	Pn	11 12 17.4	-0.2
PET				eSn	Sn	11 12 58.8	+0.2
PET	Petropavlovsk	3.56	24	eP	Pn	11 12 17.5	-0.2
PET				i S	Sn	11 12 56.4	-2.2
AVH	Avacha	3.80	23	i P	Pn	11 12 21.9	+1.0
AVH				i S	Sn	11 13 03.8	-0.6
NLC	Nalytchevo	3.89	29	eP	Pn	11 12 20.0	-2.1
NLC				i S	Sn	11 13 00.4	-6.2
GNL	Ganaly	4.03	15	i P	Pn	11 12 25.5	+1.4
GNL				i S	Sn	11 13 09.9	-0.2
SPN	Mys Shipunski	4.06	34	i P	Pn	11 12 23.1	-1.3
SPN				i S	Sn	11 13 05.3	-5.4
KII	Karymskiy	4.68	24	eP	Pn	11 12 33.7	+0.8
ASAJ	Asahikawa	10.92	244	PN	Pn	11 14 02.4	+4.5
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	Asahikawa	10.92	244	P	Pn	11 14 02.4	+4.5
	comp=Z,0.5nm,0.3s,baz=90,slow=11,SNR=3.8						
ERM	Erimo	11.98	234	ePn	Pn	11 14 11.2	-1.1
ERM				eSn	Sn	11 16 15.2	-8.7
HABR	Khabarovsk	13.93	273	eP	Pn	11 14 38.4	+0.2
HABR				e		11 17 11.2	
MJAR	Matsushiro Arr	18.61	231	P	Pn	11 15 34.4	-2.2
	comp=Z,0.1nm,0.3s,baz=42,slow=13,SNR=3.2						
BILL	Bilibino	18.95	12	eP	Pn	11 15 39.7	-0.7
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HIA	Hailar	23.55	283	i P	P	11 16 26.1	-1.1
KSRS	Korea Array	23.77	249	P	P	11 16 30.5	+1.1
	comp=Z,0.6nm,0.6s,mb3.1,baz=49,slow=9.8,SNR=3.7						
TIXI	Tiksi	25.21	340	eP	P	11 16 40.8	-1.4
	comp=Z,3.8nm,0.6s,mb4.0						
TIXI	Tiksi	25.21	340	‖eP	P	11 16 41.0	-1.1
BJT	Baijiatuan	29.70	266	eP	P	11 17 29.2	+6.6
	comp=Z,25nm,1.0s,mb4.8						
BJT	Baijiatuan	29.70	266	eP	P	11 17 29.2	+6.6
BJT				pmax	pmax		
	comp=Z,25nm,1.0s						
ULN	Ulaanbaatar	31.97	286	i P	P	11 17 43.6	+1.1
SONM	Songino Array	32.39	286	P	P	11 17 46.4	+0.3
	comp=Z,0.2nm,0.3s,mb3.3,baz=93,slow=5.8,SNR=2.7						
INK	Inuvik	37.95	35	eP	P	11 18 34.9	+1.2
	comp=Z,78nm,1.4s,mb5.3						
INK	Inuvik	37.95	35	P	P	11 18 34.1	+0.5
	comp=Z,0.4nm,0.4s,mb3.6,baz=288,slow=4.1,SNR=6.9						
YKA	Yellowknife Ar	47.23	39	P	P	11 19 50.2	+1.5
YKA	Yellowknife Ar	47.23	39	P	P	11 19 50.2	+1.5
	comp=Z,0.2nm,0.6s,mb3.0,baz=294,slow=7.2,SNR=5.8						
MKAR	Makanchi Array	47.42	296	P	P	11 19 50.3	-0.2
	comp=Z,0.5nm,0.3s,mb3.7,baz=60,slow=7.4,SNR=10.0						
MKAR				PcP	PcP	11 21 20.6	+1.0
	comp=Z,0.1nm,0.2s,baz=85,slow=5.1,SNR=2.3						
KURK	Kurchatov	47.44	303	eP	P	11 19 50.6	+0.1
	comp=Z,3.1nm,0.5s,mb4.3						
KURK	Kurchatov	47.44	303	eP	P	11 19 50.7	+0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
BRVK	Borovoye	50.59	309	eP	P	11 20 14.6	+0.1
	comp=Z,1.1nm,0.6s,mb4.1						
BRVK	Borovoye	50.59	309	eP	P	11 20 14.6	+0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ARCES	ARCESS Array B	55.64	341	P	P	11 20 49.8	-1.6
	comp=Z,2.6nm,0.9s,mb4.2,baz=41,slow=6.4,SNR=7.2						
AKTK	Aktyubinsk	58.24	312	P	P	11 21 09.8	-0.2
AKTO	Aktyubinsk	58.24	312	P	P	11 21 09.8	-0.2
	comp=Z,0.7nm,0.5s,mb4.0,baz=41,slow=8.8,SNR=7.4						
NVAR	Mina Array Bea	59.22	66	P	P	11 21 17.4	+0.5
	comp=Z,0.2nm,0.5s,mb3.4,baz=293,slow=4.6,SNR=2.5						
PDAR	Pinedale Array	61.29	57	P	P	11 21 32.9	+1.8
	comp=Z,0.3nm,0.8s,mb3.4,baz=318,slow=1.2,SNR=3.0						
FINES	FINESS Array B	62.14	335	P	P	11 21 36.2	-0.2
	comp=Z,0.5nm,0.4s,mb3.9,baz=192,slow=35,SNR=3.7						
OBN	Obninsk	63.95	326	eP	P	11 21 46.4	-2.1
OBN				e*PP	pP	11 22 08.2	-1.7
OBN				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
AKASG	Malin Array Be	70.13	327	P	P	11 22 26.6	-1.1
	comp=Z,0.2nm,0.2s,mb3.5,baz=32,slow=6.6,SNR=6.1						
WRA	Warramunga Arr	72.11	202	P	P	11 22 38.9	-1.0
	comp=Z,0.6nm,1.0s,mb3.4,baz=14,slow=5.8,SNR=4.4						
EKA	Eskdalemuir Ar	73.82	348	P	P	11 22 50.3	+0.6
	comp=Z,0.9nm,0.5s,mb3.8,baz=18,slow=5.1,SNR=5.5						
TXAR	Lajitas Array	74.21	63	P	P	11 22 53.6	+1.2
	comp=Z,0.4nm,0.7s,mb3.2,baz=296,slow=3.8,SNR=5.5						
ASAR	Alice Springs	75.79	201	P	P	11 23 02.8	+1.4
	comp=Z,0.3nm,0.6s,mb3.2,baz=15,slow=5.9,SNR=7.2						
MMAI	Mount Meron Ar	82.30	313	P	P	11 23 38.4	+1.4
	comp=Z,1.7nm,0.5s,mb4.1,baz=14,slow=6.4,SNR=4.1						

IDC 22 11:20:29.0±1.3, 3410N×9123E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/20, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=84.5km s-min=22.7km az=56.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	14.38	335	Pn	Pn	11 23 52.5	-1.2
	0.1nm,0.3s,baz=134,slow=12,SNR=2.3						
AKTO	Aktyubinsk	29.20	314	P	P	11 26 31.6	-0.4
	1.0nm,0.9s,baz=76,slow

Error ellipse: s-maj=22.8km s-min=9.0km az=133.3, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIV	**Kislovodsk**	**0.62**	**115**	*i* PG	Pg	11 28 40.1	-1.9
BEYR	**Belyy Ugol+**	**0.69**	**107**	*i* PG	Pg	11 28 41.7	-1.6
BEYR				*i* S	Sg	11 28 49.4	-2.8
SHAR	**Shatzhatmas**	**0.73**	**131**	*i* PG	Pg	11 28 41.7	-2.3
PYA	**Pyatigorsk**	**0.85**	**102**	*e*PG	Pg	11 28 45.3	-1.0
PYA				*e*S	Sg	11 28 55.5	-1.9
LSNR	**Lesken**	**1.68**	**124**	*e*PN	Pn	11 29 03.8	+4.5
LSNR				*e*S	Sn	11 29 23.3	+2.5
DIGR	**Digorskoe uzhe**	**1.79**	**137**⇓	*i*PN	Pn	11 29 01.2	+0.2
KORR	**Kora**	**1.93**	**125**⇑	*i*PN	Pn	11 29 06.8	+3.9
ARNR	**Ardon**	**2.00**	**120**⇑	*i*PN	Pn	11 29 09.0	+5.1
ARNR				*e*S	Sn	11 29 32.3	+3.3
ZEI	**Tsey**	**2.05**	**134**⇑	*i*PN	Pn	11 29 05.4	+0.9
LACR	**Lac**	**2.23**	**128**	*e*PN	Pn	11 29 09.5	+2.6
LACR				*e*S	Sn	11 29 33.8	-0.7

IDC 22 11:33:25.9±7.8, 897N×7368W, h114km±45km, mb2.9/1, mb1 3.2/2, mb1mx3.0/18, mbtmp3.1/2, Error ellipse: s-maj=386.2km s-min=36.3km az=92.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**4.14**	**189**	P	Pn	11 34 27.9	+0.7
	2.7nm,0.3s,baz=300,slow=11,SNR=5.7						
ROSC				S	Sn	11 35 16.0	+1.3
	5.4nm,0.3s,baz=236,slow=22,SNR=7.2						
YKA	**Yellowknife Ar**	**61.07**	**340**	P	P	11 43 27.3	0.0
	0.2nm,0.6s,baz=130,slow=7.4,SNR=6.6						
WRA	**Warramunga Arr**	**150.81**	**245**	PKPbc	PKPbc	11 53 05.6	-0.2
	0.2nm,0.6s,baz=99,slow=1.9,SNR=5.9						

IDC 22 11:34:45.6±3.5, 4853S×12382E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, MS3.4/2, Ms1 3.4/2, ms1mx3.1/18, Error ellipse: s-maj=119.3km s-min=63.9km az=111.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.36**	**340**	LR	LR	11 42 30.2	
	comp=Z,92nm,19.9s,baz=177,slow=28						
STKA	**Stephens Creek**	**21.39**	**45**	P	P	11 39 34.9	+0.2
	1.6nm,0.9s,baz=207,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**26.07**	**21**	P	P	11 40 20.9	+0.1
	2.7nm,0.9s,baz=197,slow=8.4,SNR=22						
WRA	**Warramunga Arr**	**29.76**	**20**	P	P	11 40 53.7	0.0
	0.2nm,0.5s,baz=193,slow=8.1,SNR=5.8						
WRA				LR	LR	11 50 20.9	
	comp=Z,104nm,21.0s,baz=170,slow=31						
YKA	**Yellowknife Ar**	**145.42**	**44**	PKPbc	PKPbc	11 54 23.4	-0.8
	1.0nm,0.7s,baz=269,slow=3.5,SNR=20						

MAN 22 11:36:58, 1629N×12032E, h5km, mb4.4, ML3.2, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.27**	**70**⇑	*i*P	Pg	11 37 05.1	+1.9
BCPH				*i* S	Sg	11 37 09.9	+3.2
BOLP	**Bolinao**	**0.40**	**283**	*e*P	Pg	11 37 06.9	+1.1
BOLP				*e*S	Sg	11 37 08.8	-2.2
SCZP	**Santa Cruz**	**0.64**	**218**	*e*P	Pg	11 37 11.3	+0.9
SCZP				*e*S	Sg	11 37 28.6	+10
APYP	**Conner**	**1.80**	**29**	*e*P	Pn	11 37 29.9	+0.3
APYP				*e*S	Sn	11 37 53.8	+1.0

JMA 22 12:04:03.5±0.3, 4397N×14797E, h0km, M4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.73**	**250**	P	Pn	12 04 35.0	+0.3
NEM2				*e*S	Sn	12 04 57.2	-0.2
JRA	**Rausu**	**2.06**	**270**	P	Pn	12 04 39.7	+0.4
JRA				*e*S	Sn	12 05 06.7	+1.1
JNK	**Nakash**	**2.39**	**262**	P	Pn	12 04 44.6	+0.8
JNK				*e*S	Sn	12 05 14.9	+1.2
JAK	**Akkeshi**	**2.57**	**249**	P	Pn	12 04 47.2	+0.8
JAK				*e*S	Sn	12 05 19.9	+1.5
JTKR	**Abashiri--Toko**	**2.93**	**271**	P	Pn	12 04 53.4	+2.1
JAR	**Ashorobuto**	**3.12**	**259**	P	Pn	12 04 55.7	+1.8
JOB	**Onbets**	**3.19**	**252**	P	Pn	12 04 56.3	+1.4
JOB				*e*S	Sn	12 05 35.7	+2.0
JCH	**Churui**	**3.63**	**250**	P	Pn	12 05 03.8	+2.9
JKK2	**Kamakawa 2**	**3.77**	**270**	P	Pn	12 05 05.0	+2.1
JNBK	**Urakawa-nobuka**	**4.18**	**248**	P	Pn	12 05 10.8	+2.4
JKB	**Kayabe**	**5.50**	**250**	P	Pn	12 05 28.2	+1.6
JKB				*e*S	Sn	12 06 31.8	+1.2

IDC 22 12:12:24.9±8.9, 4872S×12470E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/12, mbtmp3.6/2, Error ellipse: s-maj=602.8km s-min=66.4km az=96.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**26.04**	**20**	P	P	12 18 00.0	+0.3
	2.0nm,0.8s,baz=199,slow=8.4,SNR=21						
WRA	**Warramunga Arr**	**29.74**	**19**	P	P	12 18 32.4	-0.4
	0.4nm,1.0s,baz=196,slow=8.5,SNR=3.6						
YKA	**Yellowknife Ar**	**145.14**	**44**	PKPbc	PKPbc	12 32 02.0	-0.6
	0.7nm,0.7s,baz=270,slow=3.5,SNR=17						

*CSEM **22** 12:14:00.0±0.1, 3986N×3899E, h5km, MD2.9, Error ellipse: s-maj=2.5km s-min=2.0km az=96.0*
*ISK **22** 12:14:00.2, 3988N×3896E, h6km, MD3.0*
*NEIC **22** 12:14:00.6, 3987N×3903E, h10km, MD2.9(ISK), After ISK.*
*ISCJB **22** 12:14:01.3±0.7, 3985N±004×3901E±007, h10km, Error ellipse: s-maj=8.4km s-min=5.2km az=28.3*
*DDA **22** 12:14:05.5, 4007N×3906E, h9km, Md2.9*

ISC 22 12:14:01.5±0.7, 3986N±004×3899E±007, h10km, n17, σ0§68/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.36**	**35**	*i* P	**Pg**	**12 14 09.0**	**+0.5**
KELT				*i* S	**Sg**	**12 14 13.8**	**+0.5**
EZC	**Erzincan**	**0.65**	**99**	*i* PG	**Pg**	**12 14 06.7**	**-7.3**
EZC				*i* SG	**Sg**	**12 14 12.6**	**-10**
EZC	**Erzincan**	**0.65**	**99**	Pg	**Pg**	**12 14 06.8**	**-7.2**
EZC				Sg	**Sg**	**12 14 10.8**	**-12**
GUMT	**Gumushane**	**0.71**	**32**	PG	**Pg**	**12 14 14.5**	**-0.7**
GUMT				SG	**Sg**	**12 14 24.1**	**-0.4**
GUMT	**Gumushane**	**0.71**	**32**	Pg	**Pg**	**12 14 15.2**	**0.0**
GUMT				Sg	**Sg**	**12 14 23.2**	**-1.3**
ESPY	**Espiye-Giresun**	**1.08**	**349**	PG	**Pg**	**12 14 20.8**	**-1.4**
GRSN	**GIRESUNGRSN**	**1.20**	**333**	*i* P	**Pb**	**12 14 24.2**	**0.0**
GRSN				*i* S	**Sb**	**12 14 41.0**	**+1.2**
GRSN	**GIRESUNGRSN**	**1.20**	**333**	*i* P	**Pb**	**12 14 24.2**	**-0.1**
GRSN				*i* S	**Sb**	**12 14 41.0**	**+1.1**
MACK	**Trabzon**	**1.24**	**29**	*i* P	**Pn**	**12 14 24.0**	**-0.9**
MACK				*i* S	**Sb**	**12 14 41.6**	**+0.7**
KTUT	**Trabzon**	**1.28**	**28**	*e*PN	**Pn**	**12 14 25.5**	**+0.1**
MYA	**Malataya**	**1.59**	**196**	*e*PN	**Pn**	**12 14 29.8**	**+0.2**
MYA	**Malataya**	**1.59**	**196**	Pn	**Pn**	**12 14 29.9**	**+0.2**
MALT	**Malatya**	**1.60**	**196**	*e*PN	**Pn**	**12 14 29.8**	**0.0**
MALT	**Malatya**	**1.60**	**196**	Pn	**Pn**	**12 14 29.8**	**0.0**
EZM	**Erzurum**	**1.83**	**88**	*e*PN	**Pn**	**12 14 33.4**	**+0.5**
EZM	**Erzurum**	**1.83**	**88**	Pn	**Pn**	**12 14 33.5**	**+0.6**
TOKT	**Tokat**	**1.93**	**285**	Pn	**Pn**	**12 14 34.2**	**-0.1**

*GII **22** 12:17:35.2±0.0, 2969N×3643E, h0km, ML1.7/2*
*ISCJB **22** 12:17:37.1±0.9, 2982N±005×3635E±006, h0km, Error ellipse: s-maj=7.8km s-min=7.3km az=0.1*
*SGS **22** 12:17:37.5, 3004N×3620E, h0km*
*CSEM **22** 12:17:38.7±0.2, 2977N×3623E, h2km, ML1.7, Error ellipse: s-maj=4.4km s-min=2.5km az=88.0, Mining explosion.*

*HLW **22** 12:17:42.5, 2964N×3633E, h20km, Mb3.2*

ISC 22 12:17:37.2±0.9, 2983N±005×3638E±006, h0km, n19, σ1§05/23, 3C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.18**	**280**	Pg	**Pg**	**12 17 58.4**	**-1.6**
HRFI				Sg	**Sg**	**12 18 16.6**	**+1.3**
HRFI	**Mount Harif**	**1.18**	**280**	Pg	**Pg**	**12 17 58.3**	**-1.6**
HRFI				Sg	**Sg**	**12 18 16.6**	**+1.3**
EIL	**Elat**	**1.25**	**263**	Pg	**Pg**	**12 18 00.1**	**-1.2**
EIL				Sg	**Sg**	**12 18 19.0**	**+1.5**
HQLS		**1.26**	**246**	P	**Pg**	**12 18 00.5**	**-1.0**
HQLS		**1.26**	**246**	P	**Pg**	**12 18 00.5**	**-0.9**
HQLS				S	**Sg**	**12 18 17.5**	**-0.3**
PRNI	**Paran**	**1.30**	**294**	Pn	**Pn**	**12 18 00.8**	**-1.8**
JLOS		**1.34**	**216**	P	**Pg**	**12 18 03.3**	**+0.4**
KRMI	**Paran Flat**	**1.46**	**282**	Pn	**Pn**	**12 18 03.8**	**-1.1**
HBST	**Basata**	**1.56**	**247**	⇓P	**Pn**	**12 18 05.8**	**-0.4**
MZDA	**Masada**	**1.72**	**330**	Pn	**Pn**	**12 18 08.6**	**+0.2**
YTIR	**Yattir**	**1.88**	**325**	Pn	**Pn**	**12 18 10.7**	**+0.2**
HDHB	**Dhahab**	**1.89**	**235**	⇓P	**Pn**	**12 18 10.5**	**-0.2**
DSI	**Dead Sea**	**1.94**	**334**	Pn	**Pn**	**12 18 12.2**	**+0.8**
RSHS		**2.06**	**223**	P	**Pn**	**12 18 12.5**	**-0.6**
HNKL	**Nakhl**	**2.09**	**273**	⇑P	**Pn**	**12 18 14.1**	**+0.6**
HKAT	**Jabal Katrina**	**2.46**	**239**	⇑P	**Pn**	**12 18 18.6**	**0.0**
TR1		**2.80**	**230**	⇑P	**Pn**	**12 18 23.2**	**-0.1**
AMAG	**Maghara**	**2.86**	**287**	P	**Pn**	**12 18 27.1**	**+3.0**
WJHS		**3.08**	**180**	P	**Pn**	**12 18 29.0**	**+1.8**

*ISCJB **22** 12:18:25.5±1.5, 4009N±004×3563E±009, h2km±10km, Error ellipse: s-maj=12.1km s-min=7.2km az=168.1*
*CSEM **22** 12:18:25.8±0.3, 4006N×3557E, h8km, MD2.9, Error ellipse: s-maj=7.4km s-min=4.3km az=84.0*
*ISK **22** 12:18:26.7, 4006N×3549E, h14km, MD3.1*
*DDA **22** 12:18:32.8, 4009N×3504E, h8km, Md2.9*

ISC 22 12:18:25.9±1.9, 4007N±005×357E±01, h7km±15km, n7, σ0§72/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.51**	**212**	*i* PG	**Pg**	**12 18 35.9**	**+0.2**
YOZ				*i* SG	**Sg**	**12 18 42.5**	**+0.2**
CORM	**Corum**	**0.80**	**278**	*e*PG	**Pg**	**12 18 40.1**	**-1.2**
CTKT	**Corum**	**0.86**	**310**	*i* P	**Pg**	**12 18 43.3**	**+0.8**
CTKT				*i* S	**Sg**	**12 18 53.4**	**-0.3**
CDAG	**Cicekdag**	**1.09**	**246**	*i* P	**Pg**	**12 18 45.7**	**-1.1**
CDAG				*i* S	**Sg**	**12 19 01.9**	**+0.9**
BNN	**Bunyan**	**1.23**	**173**	*e*PN	**Pn**	**12 18 49.5**	**+0.1**
DIKM	**Dikmen**	**1.60**	**349**	*e*PN	**Pn**	**12 18 55.4**	**+0.8**
ELDT	**Eldivan**	**1.76**	**284**	*i* P	**Pn**	**12 18 55.9**	**-0.8**
ELDT				*e*S	**Sg**	**12 19 23.0**	**+0.6**

*IDC **22** 12:28:17.5±1.5, 4562N×13204E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.5/19, mbtmp3.5/7, ML3.2/2, MS2.7/3, Ms1 2.7/3, ms1mx2.5/20, Error ellipse: s-maj=48.3km s-min=20.7km az=69.0*
*ISCJB **22** 12:28:18.4±0.4, 4555N±003×13156E±005, h10km, mb3.6/7, Error ellipse: s-maj=5.0km s-min=4.0km az=23.4*
*SKHL **22** 12:28:20.3±1.7, 4536N×13119E, h25km±2km, mb4.6/7, Ms4.1/4, msh5.1/2*
*BJI **22** 12:28:21.6, 4531N×13113E, h32km, ML4.4*
*MOS **22** 12:28:22.1±1.5, 4541N×13142E, h33km, mb4.1/3, Error ellipse: s-maj=27.7km s-min=10.3km az=96.8*

ISC 22 12:28:20.8±0.5, 4548N±003×13146E±005, h10km, n33, σ1§50/35, mb3.6/7, 3D, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**1.58**	**238**	PG	**Pn**	**12 28 43.3**	**-5.5**
MDJ				SG	**Sn**	**12 29 00.8**	**-8.5**
MDJ				Smax			
	comp=N,2μm,0.5s						
MDJ				Smax			
	comp=E,2μm,0.7s						
VLA	**Vladivostok**	**2.38**	**172**	*d* P	**Pn**	**12 28 57.2**	**-2.6**
TEY	**Ternei**	**3.66**	**95**	*e*Pn	**Pn**	**12 29 18.2**	**+0.8**
TEY				*e*Pg	**Pg**	**12 29 28.8**	**-2.1**
TEY				AMB	AMB	12 29 33.7	
	comp=E,161nm,0.9s						
TEY				*e*rx	rx	12 30 16.0	
TEY				*e*Sg	**Sg**	**12 30 18.8**	**+0.5**
TEY				A		12 30 24.0	
	comp=E,370nm,1.8s						
TEY				A		12 30 24.5	
	comp=E,806nm,0.8s						
TEY				AMS	AMS	12 30 50.0	
	comp=E,1μm,5.0s						
KLR	**Kul'dur**	**3.76**	**3**	*e*Pn	**Pn**	**12 29 19.7**	**+0.9**
KLR				*e*Pg	**Pg**	**12 29 29.8**	**-3.0**
KLR				*e*Sg	**Sg**	**12 30 22.0**	**+0.6**
KLR				AMS	AMS	12 30 50.5	
	comp=E,1μm,8.5s						
KLR				AMS	AMS	12 30 50.5	
	comp=E,1μm,8.5s						
CN2	**Changchun**	**4.61**	**251**	*e*PG	**Pb**	**12 29 40.8**	**-0.8**
CN2				*e*SG	**Sb**	**12 30 35.9**	**-1.2**
CN2				Smax			
	comp=N,430nm,0.7s						
CN2				Smax			
	comp=E,280nm,0.7s						
GRNR	**Gornyy**	**6.25**	**30**	*e*Pg	**Pg**	**12 30 17.8**	**-2.6**
GRNR				AMB	AMB	12 30 19.8	
	comp=E,190nm,0.8s						
GRNR				*e*rx	rx	12 31 34.9	
GRNR				*e*Sg	**Sg**	**12 31 42.0**	**+0.8**
GRNR				A		12 31 46.1	
	comp=E,140nm,0.8s						
EKMR	**Ekimchan**	**7.66**	**7**⇓	*e*Pn	**Pn**	**12 30 14.6**	**+2.3**
EKMR				AMB	AMB	12 30 17.5	
	comp=E,4.0nm,0.5s						
EKMR				AMB	AMB	12 30 17.5	
	comp=E,5.0nm,0.5s						
EKMR				AMB	AMB	12 30 17.5	
	comp=E,6.0nm,0.5s						
EKMR				pPn		12 30 23.0	
EKMR				*e*Pg	**Pg**	**12 30 41.4**	**-6.0**
EKMR				*e*Sg	**Sg**	**12 32 24.5**	**-2.0**
EKMR				A		12 32 31.5	
	comp=E,37nm,0.6s						
EKMR				A		12 32 31.5	
	comp=E,86nm,0.6s						
EKMR				A		12 32 31.5	
	comp=E,38nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.97**	**75**	*e*rx	rx	12 32 30.5	
YSS				*e*rx	rx	12 32 52.0	
ASAJ	**Asahikawa**	**8.04**	**96**	LR	LR	12 32 33.0	
	comp=E,42nm,18.5s,baz=84,slow=33						
UGL	**Uglegorsk**	**8.06**	**60**	*e*Sg	Sx	12 32 40.0	
UGL				A		12 32 49.0	
	comp=E,200nm,2.0s						
UGL				A		12 32 49.0	
	comp=E,600nm,2.0s						
UGL				A		12 32 52.0	
	comp=E,220nm,1.0s						
UGL				AMS	AMS	12 34 09.0	
	comp=E,400nm,9.0s						
UGL				AMS	AMS	12 34 09.0	
	comp=E,500nm,10.0s						
YASR	**Yasnyy**	**8.14**	**345**	*e*Pn	**Pn**	**12 30 18.1**	**-0.8**
YASR				AMB	AMB	12 30 19.1	
	comp=E,30nm,0.5s						
YASR				AMB	AMB	12 30 19.1	
	comp=E,8.0nm,0.5s						
YASR				AMB	AMB	12 30 19.1	
	comp=E,23nm,0.5s						
YASR				pPn		12 30 25.6	
YASR				*e*Sg	Sn	12 32 38.0	+47
YASR				A		12 32 46.9	
	comp=E,17nm,0.6s						
YASR				A		12 32 46.9	
	comp=E,18nm,0.6s						
YASR				A		12 32 46.9	
	comp=E,6.0nm,0.6s						
KSRS	**Korea Array**	**8.44**	**200**	P	**Pn**	**12 30 25.9**	**+2.8**
KSRS						12 32 03.0	
KSRS	**Korea Array**	**8.44**	**200**	Pn	**Pn**	**12 30 25.9**	**+2.8**
	comp=E,0.3nm,0.3s,baz=17,slow=13,SNR=5.8						
KSRS				Sn	**Sn**	**12 32 03.0**	**+4.6**
	comp=E,0.6nm,0.3s,baz=24,slow=27,SNR=5.9						
KSRS				Lg		12 32 42.5	
	comp=E,1.3nm,0.3s,baz=11,slow=28,SNR=12						
ZEA	**Zeya**	**8.71**	**343**	*e*Pn	**Pn**	**12 30 26.7**	**+0.1**
ZEA				AMB	AMB	12 30 27.6	
	comp=E,32nm,0.9s						
ZEA				AMB	AMB	12 30 27.6	
	comp=E,21nm,0.8s						
ZEA				AMB	AMB	12 30 27.6	
	comp=E,10.0nm,0.8s						
ZEA				pPn		12 30 33.8	
ZEA				*e*Sg	Sn	12 32 55.0	+50
ZEA				A		12 33 02.0	
	comp=E,200nm,2.0s						
ZEA				A		12 33 02.7	
	comp=E,47nm,1.0s						
ZEA				A		12 33 02.7	
	comp=E,86nm,1.2s						
ZEA				A		12 33 02.7	
	comp=E,28nm,1.2s						
ZEA				AMS	AMS	12 36 12.0	
	comp=E,200nm,8.0s						
TYV	**Tymovskoe**	**9.21**	**50**	*e*Sg	Sx	12 33 24.5	
TYV				A		12 33 31.0	
	comp=E,104nm,1.2s						
TYV				AMS	AMS	12 34 10.0	
	comp=E,500nm,15.0s						
BMKR	**Bomnak**	**9.39**	**351**⇓	*e*P	**Pn**	**12 30 37.0**	**+0.9**
BMKR				AMB	AMB	12 30 38.0	
	comp=E,20nm,0.7s						
KROS	**Kirovskiy**	**9.42**	**344**	*e*rx	rx	12 30 35.7	
KROS				*e*P		12 30 36.5	
KROS				AMB	AMB	12 30 37.3	
	comp=E,11nm,0.7s						
KROS				pP		12 30 46.0	
NKL	**Nikolayevsk**	**9.75**	**35**	*e*Sg	Sx	12 33 32.3	
NKL				AMS	AMS	12 34 23.0	
	comp=E,600nm,8.0s						
NKL				AMS	AMS	12 34 23.0	
	comp=E,500nm,8.0s						
NKL				AMS	AMS	12 34 23.0	
	comp=E,400nm,8.0s						
OKH	**Okha**	**10.98**	**39**	*e*rx	rx	12 34 28.0	
OKH				AMS	AMS	12 35 16.0	
	comp=E,500nm,12.0s						
CLNS	**Chul'man**	**12.09**	**343**	*e*P	**Pn**	**12 31 14.2**	**+1.3**
CLNS				*e*S	**Sn**	**12 33 26.4**	**-1.2**
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.6s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CLNS				smax			
	comp=E,46nm,11.8s						
CLNS				smax			
	comp=Z,42nm,13.5s						
CLNS				smax			
	comp=N,27nm,12.3s						
CLNS				MLR	MLR		
	comp=N,100nm,12.0s						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s						
CLNS				MLR	MLR		
	comp=E,70nm,13.0s						
JNU	**Nakatsue**	**12.35**	**182**	LR	LR	12 35 21.0	
	comp=E,43nm,18.9s,baz=219,slow=34						
BOD	**Bodaibo**	**16.36**	**325**	*e*P	**Pn**	**12 32 11.5**	**+1.1**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.8s						
SONM	**Songino Array**	**17.35**	**287**	P	**Pn**	**12 32 23.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=94,slow=12,SNR=5.7						
SONM				Lg		12 37 24.4	
	comp=Z,0.1nm,0.3s,baz=92,slow=27,SNR=5.6						
JOW	**Kunigami**	**18.78**	**189**	LR	LR	12 40 19.9	
	comp=Z,22nm,21.9s,baz=328,slow=38						
TIXI	**Tiksi**	**26.28**	**358**	*e*P	**P**	**12 33 57.3**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
BILL	**Bilibino**	**28.87**	**26**	*e*P	**P**	**12 34 22.8**	**+3.7**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.6						
MKAR	**Makanchi Array**	**33.66**	**290**	P	**P**	**12 35 03.5**	**+2.1**
	comp=Z,0.2nm,0.7s,mb3.1,baz=78,slow=7.7,SNR=3.3						
FINES	**FINESS Array B**	**57.76**	**327**	P	**P**	**12 38 09.4**	**-2.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**57.76**	**327**	P	**P**	**12 38 09.4**	**-2.1**
	comp=Z,1.2nm,0.7s,mb4.0,baz=57,slow=7.0,SNR=3.5						
AKASG	**Malin Array Be**	**63.02**	**316**	P	**P**	**12 38 47.5**	**-0.1**
	comp=Z,0.3nm,0.4s,mb3.8,baz=47,slow=7.4,SNR=4.2						
WRA	**Warramunga Arr**	**65.16**	**177**	P	**P**	**12 38 59.9**	**-2.0**
	comp=Z,0.3nm,0.7s,mb3.4,baz=351,slow=6.8,SNR=4.4						
ASAR	**Alice Springs**	**68.85**	**178**	P	**P**	**12 39 26.0**	**+0.8**
	comp=Z,0.3nm,0.9s,mb3.2,baz=354,slow=5.0,SNR=4.9						
TXAR	**Lajitas Array**	**90.28**	**46**	P	**P**	**12 41 27.3**	**+5.4**

*ISCJB **22** 12:40:01.9±0.4, 3888N±003×2262E±003, h11km, Error ellipse: s-maj=4.0km s-min=3.5km az=5.3*
*THE **22** 12:40:01.9, 3887N×2261E, h11km, ML3.3*
*CSEM **22** 12:40:02.3±0.1, 3889N×2260E, h2km, ML3.3, Error ellipse: s-maj=3.1km s-min=2.5km az=27.0*
*ATH **22** 12:40:03.0, 3882N×2255E, h9km, MD3.1/7*
*NEIC **22** 12:40:03.0, 3882N×2255E, h10km, MD3.1(ATH), After ATH.*

ISC 22 12:40:02.3±0.5, 3889N±003×2259E±003, h9km±7km, n15, σ1§03/25, 1C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.24**	**304**	*e*Pg	**Pg**	**12 40 07.1**	**-0.1**
AGG				*e*Sg	**Sg**	**12 40 11.7**	**+1.1**
AGG	**Agios Georgios**	**0.24**	**304**	*e*Pg	**Pg**	**12 40 07.1**	**-0.1**
AGG				*e*Sg	**Sg**	**12 40 11.6**	**+1.1**
LKR	**Lokris**	**0.40**	**126**⇓	*i*PG	**Pg**	**12 40 09.8**	**-0.2**
LKR				*e*SB	**Sg**	**12 40 16.5**	**+1.2**
EVR	**Evrytania**	**0.61**	**273**⇓	*i*PB	**Pb**	**12 40 14.6**	**-0.5**
EVR				*e*SB	**Sb**	**12 40 23.0**	**-0.7**
XOR	**Xorichti**	**0.67**	**44**	*e*Pg	**Pg**	**12 40 14.7**	**-0.5**
XOR				*e*Sg	**Sg**	**12 40 24.5**	**+0.5**
THL	**Klokotos Trika**	**0.81**	**327**	*e*PB	**Pb**	**12 40 18.0**	**-0.5**
THL				*e*SB	**Sb**	**12 40 31.7**	**+2.1**
SELA	**Sela**	**0.82**	**222**	*e*Pg	**Pg**	**12 40 16.8**	**-1.1**
SELA				*e*Sg	**Sg**	**12 40 29.8**	**+1.2**
LTK	**Loutraki**	**0.91**	**161**	*e*Pg	**Pg**	**12 40 18.9**	**-0.8**
LTK				*e*Sg	**Sg**	**12 40 31.7**	**+0.2**
AOS	**Alonnisos**	**1.04**	**74**	*e*Pg	**Pg**	**12 40 21.0**	**-1.3**
AOS				*e*Sg	**Sg**	**12 40 36.0**	**+0.1**
AOS	**Alonnisos**	**1.04**	**74**	*e*Pg	**Pg**	**12 40 21.0**	**-1.3**
AOS				*e*Sg	**Sg**	**12 40 36.0**	**+0.1**
RLS	**Riolos of Patr**	**1.21**	**227**	*e*PB	**Pb**	**12 40 23.0**	**-2.2**
LIT	**Litokhoron**	**1.22**	**356**	*e*Pg	**Pg**	**12 40 24.4**	**-1.3**
NAIG	**Nisos Aigina**	**1.33**	**148**	*e*PB	**Pb**	**12 40 27.5**	**+0.2**
KVR	**Kavouri**	**1.41**	**138**	*e*PB	**Pb**	**12 40 30.0**	**+1.4**
VLS	**Valsamata**	**1.

CFAA	**Coronel Fontan**	**15.19**	**177**	P		**Pn**	**12 43 51.5**	**-0.2**	
	0.4nm,0.3s,baz=316,slow=21,SNR=16								
ROSC	**El Rosal**	**21.69**	**346**	P		**P**	**12 45 01.9**	**-0.8**	
	6.8nm,0.4s,mb4.6,baz=252,slow=20,SNR=2.7								
SJG	**San Juan**	**34.40**	**5**	LR		LR	13 00 40.7		
	comp=Z,105nm,18.2s,baz=95,slow=35								
PDAR	**Pinedale Array**	**69.56**	**329**	P		**P**	**12 51 16.1**	**+1.4**	
	0.3nm,0.4s,mb3.2,baz=116,slow=8.2,SNR=5.9								
ULM	**Lac du Bonnet**	**70.37**	**342**	P		**P**	**12 51 19.4**	**+0.1**	
	baz=152,slow=8.4								
TORD	**Torodi Ar. Bea**	**75.95**	**72**	P		**P**	**12 51 52.6**	**-0.2**	
	0.4nm,0.5s,mb3.3,baz=272,slow=4.8,SNR=4.8								
YKA	**Yellowknife Ar**	**86.28**	**341**	P		**P**	**12 52 47.4**	**+1.2**	
	0.5nm,0.5s,mb3.5,baz=133,slow=4.6,SNR=20								
WRA	**Warramunga Arr**	**137.14**	**214**	PKP		PKPdf	12 59 27.6	-0.1	
	0.2nm,0.4s,baz=145,slow=1.8,SNR=10								
SONM	**Songino Array**	**148.41**	**6**	PKPbc		PKPbc	12 59 52.3	+2.0	
	1.1nm,0.5s,baz=323,slow=2.2,SNR=14								

IDC 22 12:56:13.7±9.4, 4856S×12475E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/12, mbtmp3.7/2, Error ellipse: s-maj=644.2km s-min=66.5km az=96.0, Western Indian-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**25.88**	**20**	P	P	13 01 48.0	+1.1
	1.5nm,0.8s,baz=197,slow=8.2,SNR=19						
WRA	**Warramunga Arr**	**29.57**	**19**	P	P	13 02 19.0	-1.2
	0.6nm,0.9s,baz=185,slow=7.7,SNR=3.0						
YKA	**Yellowknife Ar**	**145.00**	**44**	PKPbc	PKPbc	13 15 50.2	-0.7
	0.7nm,0.7s,baz=271,slow=3.4,SNR=17						

*ISCJB **22** 12:56:54.8±0.2, 1223N×002×7007W×002, h10km, mb4.0/15, Error ellipse: s-maj=3.1km s-min=2.7km az=37.8*
*NEIC **22** 12:56:58.1, 1215N×7018W, h13km, mb4.4/8, MW3.9(CAR), After CAR.*
NEIC Felt at Saint Nicolaas, Aruba.
*FUNV **22** 12:56:58.3, 1215N×7018W, h14km, MW4.7*
*IDC **22** 12:56:59.7±5.2, 1215N×6999W, h30km±39km, mb3.5/8, mb1 3.9/11, mb1mx3.8/21, mbtmp3.8/11, ML4.5/4, MS3.2/5, Ms1 3.2/5, ms1mx2.9/26, Error ellipse: s-maj=20.1km s-min=15.2km az=80.0*

ISC 22 12:56:56.5±0.2, 1218N×002×7011W×002, h10km, n95, σ1§01/118, mb4.0/15, 15C-14D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOV	**Isla Los Monje**	**0.80**	**283**	*i* P	**Pg**	**12 57 11.7**	**-0.3**
IMOV				*e* S	**Sg**	**12 57 21.9**	**-0.4**
DABV	**Dabajuro**	**1.35**	**203**	*e* P	**Pn**	**12 57 21.2**	**-0.2**
DABV				*e* S	**Sb**	**12 57 39.0**	**-0.3**
SIQV	**Siquisique**	**1.54**	**169**	*e* P	**Pn**	**12 57 24.6**	**+0.5**
SIQV				*e* S	**Sn**	**12 57 44.5**	**+0.2**
JACV	**Jacura**	**1.65**	**131**	*e* P	**Pn**	**12 57 27.0**	**+1.4**
JACV				*e* S	**Sn**	**12 57 48.2**	**+1.3**
QARV	**Quebrada Arrib**	**2.00**	**192**	*e* P	**Pn**	**12 57 30.9**	**+0.6**
QARV				*e* S	**Sn**	**12 57 54.8**	**-0.7**
QARV	**Quebrada Arrib**	**2.00**	**192**	*e* P	**Pn**	**12 57 30.6**	**+0.3**
QARV				*e* S	**Sn**	**12 57 54.8**	**-0.7**
CURV	**Curarigua**	**2.15**	**176**	*e* P	**Pn**	**12 57 32.8**	**+0.3**
CURV				*e* S	**Sn**	**12 57 58.1**	**-1.2**
TEPV	**Terepaima**	**2.37**	**158**	*e* P	**Pn**	**12 57 36.0**	**+0.4**
TEPV				*e* S	**Sn**	**12 58 04.2**	**-0.5**
SANV	**Sanarito**	**2.72**	**168**	*e* P	**Pn**	**12 57 41.1**	**+0.8**
SANV				*e* S	**Sn**	**12 58 12.7**	**-0.5**
CAFV	**EL CAFE**	**2.77**	**133**	*e* P	**Pn**	**12 57 42.0**	**+1.1**
VIRV	**Villa del Rosa**	**2.80**	**234**	*e* P	**Pn**	**12 57 40.2**	**-1.2**
VIRV				*e* S	**Sn**	**12 58 12.8**	**-2.5**
TURV	**Turiamo**	**2.81**	**127**	*i* P	**Pn**	**12 57 41.2**	**-0.3**
TURV	**Turiamo**	**2.81**	**127**	*i* P	**Pn**	**12 57 41.4**	**-0.1**
CLCV	**CALICANTO**	**3.11**	**127**	*i* P	**Pn**	**12 57 46.1**	**+0.4**
CLCV				*e* S	**Sn**	**12 58 22.1**	**-0.9**
SDV	**Santo Domingo**	**3.31**	**189**	*e* Pn	**Pn**	**12 57 49.2**	**+0.8**
SDV	**Santo Domingo**	**3.31**	**189**	Pn	**Pn**	**12 57 49.3**	**+0.9**
	27nm,0.3s,baz=54,slow=6.5,SNR=124						
SDV				Sn	**Sn**	**12 58 25.0**	**-2.8**
	50nm,0.3s,baz=300,slow=13,SNR=7.7						
SDV				LR	LR	12 59 27.3	
	comp=Z,274nm,19.1s,baz=51,slow=45						
BOTV	**Botiquin**	**3.34**	**122**	*e* P	**Pn**	**12 57 51.0**	**+2.3**
BOTV				*e* S	**Sn**	**12 58 28.8**	**+0.3**
BOTV	**Botiquin**	**3.34**	**122**	*e* P	**Pn**	**12 57 50.0**	**+1.2**
BOTV				*e* S	**Sn**	**12 58 28.8**	**+0.3**
PAUV	**EL PAUJM**	**3.44**	**125**	*e* P	**Pn**	**12 57 51.0**	**+0.8**
PAUV				*e* S	**Sn**	**12 58 29.4**	**-1.7**
FDCV	**FORTIN DE LA C**	**3.49**	**117**	*e* P	**Pn**	**12 57 50.8**	**-0.1**
FDCV				*e* S	**Sn**	**12 58 32.0**	**-0.3**
FDCV	**FORTIN DE LA C**	**3.49**	**117**	*e* P	**Pn**	**12 57 51.0**	**+0.1**
FDCV				*e* S	**Sn**	**12 58 32.0**	**-0.3**
VIGV	**El Vigia**	**3.54**	**201**	*e* P	**Pn**	**12 57 52.3**	**+0.8**
VIGV				*e* S	**Sn**	**12 58 30.3**	**-3.2**
FUNV	**FUNVISIS**	**3.65**	**117**	*e* P	**Pn**	**12 57 53.2**	**+0.1**
BAUV	**El Baul**	**3.80**	**148**	*e* P	**Pn**	**12 57 55.5**	**+0.3**
BAUV				*e* S	**Sn**	**12 58 37.2**	**-2.7**
OCUV	**OCUMARITO**	**3.84**	**122**	*e* P	**Pn**	**12 57 56.5**	**+0.9**
OCUV				*e* S	**Sn**	**12 58 40.1**	**-0.7**
ORCV	**Isla La Orchil**	**3.84**	**95**	*e* P	**Pn**	**12 57 56.6**	**+0.8**
SOCV	**Socops**	**3.94**	**191**	*e* P	**Pn**	**12 57 58.0**	**+0.9**
SOCV				*e* S	**Sn**	**12 58 39.4**	**-3.9**
SOCV	**Socops**	**3.94**	**191**	*e* P	**Pn**	**12 57 57.6**	**+0.5**
SOCV				*e* S	**Sn**	**12 58 39.4**	**-3.9**
BIRV	**Birongo**	**4.12**	**114**	*e* P	**Pn**	**12 57 59.7**	**0.0**
CUPV	**Cœpira**	**4.73**	**116**	*e* P	**Pn**	**12 58 09.2**	**+1.2**
CUPV	**Cœpira**	**4.73**	**116**	*e* P	**Pn**	**12 58 08.6**	**+0.6**
MERV	**Las Mercedes**	**4.74**	**127**	*e* P	**Pn**	**12 58 08.7**	**+0.6**
CAPV	**Capacho**	**4.80**	**207**	*e* P	**Pn**	**12 58 08.7**	**-0.2**
ELOV	**Elorza**	**5.18**	**173**	*e* P	**Pn**	**12 58 14.2**	**+0.1**
IBAV	**Isla La Blanqu**	**5.42**	**93**	*e* P	**Pn**	**12 58 17.1**	**-0.4**
IBAV	**Isla La Blanqu**	**5.42**	**93**	*e* P	**Pn**	**12 58 17.1**	**-0.3**
PCRV	**Puerto La Cruz**	**5.72**	**110**	*e* P	**Pn**	**12 58 23.0**	**+1.4**
PCRV	**Puerto La Cruz**	**5.72**	**110**	*e* P	**Pn**	**12 58 22.5**	**+0.9**
PCRV	**Puerto La Cruz**	**5.72**	**110**	Pn	**Pn**	**12 58 23.0**	**+1.3**
	38nm,0.3s,baz=300,slow=4.4,SNR=70						
PCRV				Sn	**Sn**	**12 59 27.6**	**+0.2**
	12nm,0.3s,baz=315,slow=20,SNR=3.7						
CAIV	**Caiguire**	**6.06**	**106**	*e* P	**Pn**	**12 58 26.3**	**0.0**
CAOV	**Caicara del Or**	**6.09**	**142**	*e* P	**Pn**	**12 58 26.2**	**-0.5**
PRGV	**PARIAGUAN**	**6.35**	**122**	*e* P	**Pn**	**12 58 30.2**	**-0.1**
MPR	**Mayaguez**	**6.65**	**25**	*e* Pn	**Pn**	**12 58 34.6**	**+0.3**
SDDR	**Presa de Saban**	**6.86**	**351**	*e* Pn	**Pn**	**12 58 43.7**	**+6.4**
ITEV	**Isla Los Testi**	**6.88**	**96**	*e* P	**Pn**	**12 58 37.5**	**0.0**
CRUV	**Carupano**	**6.90**	**102**	*e* P	**Pn**	**12 58 39.1**	**+1.3**
SJG	**San Juan**	**7.03**	**32**	*e* Pn	**Pn**	**12 58 39.1**	**-0.4**
SJG				*e* Sn	**Sn**	**12 59 54.2**	**-5.4**
SJG	**San Juan**	**7.03**	**32**	Pn	**Pn**	**12 58 39.0**	**-0.5**
	7.1nm,0.3s,baz=211,slow=16,SNR=10.0						
SJG				Sn	**Sn**	**12 59 55.4**	**-4.2**
	16nm,0.3s,baz=59,slow=19,SNR=3.9						
CPD	**Cerro la Pandu**	**7.09**	**34**	*e* Pn	**Pn**	**12 58 39.2**	**-1.2**
CPD				*e* Sn	**Sn**	**12 59 56.1**	**-5.1**
HUMP	**Col San Antoni**	**7.22**	**34**	*e* Pn	**Pn**	**12 58 41.5**	**-0.6**
ORIV	**Oritupano**	**7.27**	**114**	*e* P	**Pn**	**12 58 43.4**	**+0.5**
ORIV	**Oritupano**	**7.27**	**114**	*e* P	**Pn**	**12 58 42.6**	**-0.3**
GUNV	**Guanoco**	**7.31**	**105**	*e* P	**Pn**	**12 58 44.2**	**+0.8**
GUNV	**Guanoco**	**7.31**	**105**	*e* P	**Pn**	**12 58 43.8**	**+0.4**
CBYP	**Canovanas**	**7.32**	**34**	*e* Pn	**Pn**	**12 58 43.0**	**-0.5**
MTP	**Monte Pirata**	**7.35**	**36**	*e* Pn	**Pn**	**12 58 43.1**	**-0.9**
MTP				*e* Sn	**Sn**	**13 00 03.3**	**-4.2**
GUIV	**Guiria**	**7.88**	**100**	*e* P	**Pn**	**12 58 51.6**	**+0.4**
GURV	**El Guri**	**8.19**	**122**	*e* P	**Pn**	**12 58 54.7**	**-0.8**
ROSC	**El Rosal**	**8.38**	**210**	Pn	**Pn**	**12 58 59.9**	**+1.7**
	5.6nm,0.3s,baz=91,slow=10,SNR=16						
ROSC				Sn	**Sn**	**13 00 33.2**	**+0.2**
	baz=246,slow=20,SNR=3.0						
ROSC				LR	LR	13 02 52.8	
	comp=Z,155nm,18.2s,baz=188,slow=42						
FCV	**Fort Charlotte**	**8.70**	**83**	*e* P	**Pn**	**12 59 02.6**	**0.0**
SVB	**Belmont**	**8.71**	**82**	*e* P	**Pn**	**12 59 01.1**	**-1.5**
SVV	**Soufriere Volc**	**8.75**	**82**	*e* P	**Pn**	**12 59 03.8**	**+0.6**
SLB	**Belfond**	**8.99**	**78**	*e* P	**Pn**	**12 59 05.8**	**-0.6**
RIOV	**Rio Grande**	**9.13**	**116**	*e* P	**Pn**	**12 59 07.2**	**-1.2**
BCIP	**Isla Barro Col**	**10.02**	**254**	*e* Pn	**Pn**	**12 59 22.7**	**+2.1**
LUEV	**Luepa**	**10.60**	**126**	*e* P	**Pn**	**12 59 27.2**	**-1.5**
OTAV	**Otavalo**	**14.46**	**216**	Pn	**Pn**	**13 00 22.4**	**+0.9**
	29nm,0.9s						
OTAV				*e*		13 00 29.4	
JTS	**JuntasAbangare**	**14.68**	**264**	LR	LR	13 06 24.1	
	comp=Z,78nm,20.6s,baz=260,slow=38						
TEIG	**Tepich**	**19.18**	**297**	LR	LR	13 09 21.7	
	comp=Z,69nm,18.5s,baz=323,slow=38						
ATAH	**Atahualpa**	**20.76**	**204**	P	**P**	**13 01 40.1**	**+2.4**
	3.6nm,0.6s,baz=30,slow=8.1,SNR=3.5						
CMIG	**Matias Romero**	**24.46**	**284**	LR	LR	13 11 14.4	
	comp=Z,86nm,19.7s,baz=244,slow=35						
LPAZ	**La Paz**	**28.35**	**176**	P	**P**	**13 02 51.5**	**+0.7**
	0.5nm,0.5s,mb3.4,baz=355,slow=12,SNR=2.5						
SIV	**San Ignacio**	**29.38**	**162**	P	**P**	**13 02 58.4**	**-1.7**
	2.3nm,0.6s,mb4.1,baz=4.9,slow=11,SNR=16						
TXAR	**Lajitas Array**	**35.55**	**304**	P	**P**	**13 03 56.7**	**+2.6**
TXAR	**Lajitas Array**	**35.55**	**304**	P	**P**	**13 03 56.7**	**+2.6**
	0.1nm,0.5s,mb3.0,baz=150,slow=7.9,SNR=2.7						
AMTX	**Amarillo**	**36.47**	**314**	*e*P	**P**	**13 04 02.1**	**+0.2**
	14nm,1.0s,mb4.8						
AMTX				*e*		13 04 10.0	
MNTX	**Cornudas Mount**	**37.81**	**307**	P	**P**	**13 04 14.0**	**+0.6**
	3.5nm,0.8s,mb4.1						
MNTX				*e*		13 04 21.2	
ANMO	**Albuquerque**	**39.97**	**311**	P	**P**	**13 04 32.1**	**+0.8**
	1.5nm,0.6s,mb3.9						
ANMO				*e*		13 04 41.7	
SDCO	**Great Sand Dun**	**40.57**	**315**	P	**P**	**13 04 34.9**	**-1.5**
	1.2nm,0.7s,mb3.6						
SDCO				*e*		13 04 43.5	
PV01	**Paradox Valley**	**42.89**	**314**	P	**P**	**13 04 56.2**	**+0.8**
PV01				*e*		13 05 05.7	
WUAZ	**Wupatki**	**43.88**	**309**	P	**P**	**13 05 01.7**	**-1.7**
	2.6nm,0.8s,mb4.0						
WUAZ				*e*pP	pP	13 05 08.8	+2.3
WUAZ				*e*sP	sP	13 05 13.1	+5.4
PDAR	**Pinedale Array**	**45.75**	**319**	P	**P**	**13 05 19.1**	**+0.9**
	0.2nm,0.5s,mb3.3,baz=98,slow=12,SNR=2.8						
NLU	**North Lily Min**	**46.14**	**315**	*e*P	**P**	**13 05 22.1**	**+0.8**
NLU				*e*		13 05 31.2	
HWUT	**Hardware Ranch**	**46.52**	**317**	*e*P	**P**	**13 05 22.8**	**-1.4**
	6.8nm,1.1s,mb4.5						
HWUT				*e*		13 05 29.1	
HWUT				*e*		13 05 32.3	
REDW	**Red Top Meadow**	**46.87**	**319**	*e*P	**P**	**13 05 26.4**	**-0.5**
	25nm,1.8s,mb4.8						
REDW				*e*		13 05 33.2	
REDW				*e*		13 05 36.1	
MCMT	**McKenzie Canyo**	**48.84**	**320**	*e*P	**P**	**13 05 42.5**	**+0.3**
MCMT				*e*		13 05 49.5	
FFC	**Flin Flon**	**49.28**	**336**	*e*P	**P**	**13 05 44.4**	**-0.9**
	7.4nm,1.1s,mb4.6						
FFC				*e*		13 05 53.0	
PLCA	**Paso Flores**	**52.64**	**180**	P	**P**	**13 06 12.2**	**+1.4**
	1.9nm,0.7s,mb4.2,baz=338,slow=8.0,SNR=5.6						
YKA	**Yellowknife Ar**	**59.38**	**338**	P	**P**	**13 06 58.4**	**-0.3**
YKA	**Yellowknife Ar**	**59.38**	**338**	P	**P**	**13 06 58.4**	**-0.3**
	0.4nm,0.8s,mb3.5,baz=124,slow=7.1,SNR=7.6						
INK	**Inuvik**	**69.07**	**339**	P	**P**	**13 07 59.1**	**-3.1**
INK				*e*		13 08 08.6	
TORD	**Torodi Ar. Bea**	**69.83**	**80**	P	**P**	**13 08 07.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**69.83**	**80**	P	**P**	**13 08 07.6**	**-0.4**
	0.2nm,0.4s,mb3.4,baz=280,slow=8.6,SNR=3.5						
ASAR	**Alice Springs**	**154.50**	**240**	PKPbc	PKPbc	13 16 57.4	-0.9
	0.3nm,0.8s,baz=120,slow=1.9,SNR=3.0						
WRA	**Warramunga Arr**	**155.29**	**249**	PKP	PKPdf	13 16 52.0	+0.9
	0.3nm,0.8s,baz=92,slow=1.0,SNR=3.2						
WRA				PKPbc	PKPdf	13 16 59.1	+8.0
	0.4nm,0.8s,baz=100,slow=2.8,SNR=7.5						

*NAO **22** 13:04:40.4±1.1, 5928N×2684E, ML2.1*
*BER **22** 13:04:40.6±2.0, 5931N×2725E, h0km, ML2.1(NAO), Suspected explosion*

HEL 22 13:04:39.9±0.2, 5930N×2740E, h0km, ML1.8, ML2.1(NAO), Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.91**	**203**	*i* P	Pg	13 04 55.8	-1.4
VSU				*i* S	Sg	13 05 08.3	-0.6
VJF	**Virojoki**	**1.25**	**4**	*e* P	Pg	13 05 02.2	-1.5
VJF				MSG		13 05 19.3	
	comp=Z,11nm,0.1s						
VJF				*e*SB	Sb	13 05 19.3	-1.6
MEF	**Metsahovi**	**1.78**	**303**	*e*P	Pn	13 05 11.0	-0.8
MEF				*e*SG	Sg	13 05 34.3	-2.6
MEF				MSG		13 05 34.3	
	comp=Z,6.7nm,0.2s						
FIA0	**FINESS Array S**	**2.25**	**344**	*e*P	Pn	13 05 18.3	0.0
	baz=167						
FIA0				*e*SB	Sb	13 05 48.1	-1.6
FIA0				MSG		13 05 48.1	
	comp=Z,3.3nm,0.3s						
FIA0	**FINESS Array S**	**2.25**	**344**	Pn	Pn	13 05 18.4	+0.1
	baz=165,slow=18						
FIA0				Lg		13 05 49.4	
	baz=169,slow=37						
FIA1	**FINESS Array S**	**2.25**	**344**	*e*P	Pn	13 05 18.1	-0.2
FIA1				*e*SG	Sg	13 05 48.9	-3.2
KAF	**Kangasniemi**	**2.88**	**350**	*e*PB	Pb	13 05 28.2	-3.7
KAF				*e*SG	Sg	13 06 09.0	-3.2
KAF				MSG		13 06 09.0	
	comp=Z,2.9nm,0.4s						
KEF	**Keuruu**	**3.13**	**338**	*e*PB	Pb	13 05 34.2	-2.2
RAF	**Rauma**	**3.30**	**304**	*e*P	Pn	13 05 33.4	+0.6
RAF				*e*S	Sn	13 06 14.9	+2.2
RAF				MSG		13 06 14.9	
	comp=Z,1.9nm,0.4s						
SUF	**Sumiainen**	**3.49**	**351**	*e*SG	Sg	13 06 26.0	-5.8
SUF				MSG		13 06 26.0	
	comp=Z,2.6nm,0.4s						
ARA0	**ARCESS Array S**	**10.31**	**356**	Pn	Pn	13 07 07.1	-1.7
	baz=174,slow=14						
ARA0				Sn	Sn	13 08 56.4	-8.5
	baz=182,slow=37						
ARA0	**ARCESS Array S**	**10.31**	**356**	*e*P	Pn	13 07 07.1	-1.7
ARA0				*e*S	Sn	13 08 56.4	-8.5

*IDC **22** 13:15:23.7±5.4, 4902N×15525E, h70km±51km, mb3.1/4, mb1 3.4/5, mb1mx3.2/19, mbtmp3.3/5, ML3.8/1, Error ellipse: s-maj=34.1km s-min=31.9km az=163.0*
*MOS **22** 13:15:24.9±1.2, 4913N×15481E, h91km, mb4.1/2, Error ellipse: s-maj=44.3km s-min=14.2km az=65.8*
*ISCJB **22** 13:15:25.4±1.1, 4914N±0.1×15514E±02, h100km±10km, mb3.3/4, Error ellipse: s-maj=25.4km s-min=9.7km az=41.0*
*KRSC **22** 13:15:27.0±1.1, 4916N×15579E, h10km±10km, ML4.2*

ISC 22 13:15:26.5±1.1, 4914N±01×15506E±02, h91km±11km, n16, σ1§21/25, mb3.3/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.73**	**24**	*e*PN	**Pn**	**13 15 54.4**	**-0.8**
SKR				*i* S	**Sn**	**13 16 16.5**	**-0.6**
SKR				pmax	pmax		
	comp=N,40nm,0.4s						
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR				pmax	pmax		
	comp=E,40nm,0.5s						
SKR				smax			
	comp=N,460nm,0.3s						
SKR				smax			
	comp=E,350nm,0.3s						
SKR				smax			
	comp=Z,80nm,0.4s						
ALID	**Alaid**	**1.80**	**11**	*e*P	**Pn**	**13 15 56.3**	**+0.2**
ALID				*i* S	**Sn**	**13 16 17.5**	**-1.1**
MIPR	**Malaya Ipel'ka**	**3.36**	**19**	P	**Pn**	**13 16 17.5**	**+0.6**
MIPR				*i* S	**Sn**	**13 16 54.9**	**-0.9**
GRL	**Gorelyy**	**3.96**	**28**	*e*P	**Pn**	**13 16 26.9**	**+2.0**
GRL				*e*S	**Sn**	**13 17 10.6**	**+0.4**
RUS	**Russkaya**	**4.01**	**32**	*e*P	**Pn**	**13 16 25.6**	**+0.1**
RUS				*i* S	**Sn**	**13 17 09.3**	**-2.0**
PET	**Petropavlovsk**	**4.55**	**29**	P	**Pn**	**13 16 34.6**	**+1.7**
PET				*i* S	**Sn**	**13 17 24.2**	**-0.2**
SDLR	**Sedlovina**	**4.84**	**29**	*e*P	**Pn**	**13 16 38.1**	**+1.3**
SDLR				*i* S	**Sn**	**13 17 30.5**	**-1.0**
GNL	**Ganaly**	**4.95**	**21**	*e*P	**Pn**	**13 16 41.4**	**+3.1**
GNL				*i* S	**Sn**	**13 17 36.2**	**+2.0**
SPN	**Mys Shipunski**	**5.09**	**36**	*e*P	**Pn**	**13 16 40.2**	**-0.1**
SPN				*i* S	**Sn**	**13 17 34.0**	**-3.8**
ASAJ	**Asahikawa**	**9.89**	**244**	PN	**Pn**	**13 17 44.8**	**-0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.89**	**244**	P	**Pn**	**13 17 44.8**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=65,slow=13,SNR=19						
MKAR	**Makanchi Array**	**47.01**	**296**	P	**P**	**13 23 47.1**	**-1.2**
	comp=Z,0.2nm,0.6s,mb3.0,baz=61,slow=7.4,SNR=3.7						
NVAR	**Mina Array Bea**	**60.24**	**65**	P	**P**	**13 25 23.5**	**-1.5**
	comp=Z,0.2nm,0.5s,mb3.5,baz=316,slow=6.3,SNR=2.7						
FINES	**FINESS Array B**	**62.44**	**335**	P	**P**	**13 25 41.0**	**+1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**62.44**	**335**	P	**P**	**13 25 41.0**	**+1.6**
	comp=Z,1.0nm,0.9s,mb3.9,baz=28,slow=6.3,SNR=2.5						
ASAR	**Alice Springs**	**74.85**	**200**	P	**P**	**13 26 56.8**	**-0.1**
	comp=Z,0.2nm,0.7s,mb3.0,baz=19,slow=5.8,SNR=4.3						

*IDC **22** 13:16:13.3±0.7, 5545N×16624E, h0km, mb3.6/12, mb1 3.8/13, mb1mx3.8/21, mbtmp3.6/13, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/38, Error ellipse: s-maj=26.7km s-min=15.1km az=150.0*
*NEIC **22** 13:16:15.3±0.6, 5547N×16596E, h10km, mb4.4/6, Error ellipse: s-maj=18.1km s-min=11.2km az=159.0*
*BJI **22** 13:16:15.2, 5550N×16600E, h10km, mB4.8, mb4.6, Ms4.2, Msz3.9*
*KRSC **22** 13:16:16.1±0.9, 5567N×16547E, h5km±5km, ML4.5*
*ISCJB **22** 13:16:16.4±1.7, 5561N±005×16575E±007, h23km±12km, mb4.1/25, MS3.6/6, Error ellipse: s-maj=8.9km s-min=5.1km az=148.5*
*MOS **22** 13:16:17.4±1.3, 5565N×16573E, h33km, mb4.3/7, Error ellipse: s-maj=14.3km s-min=10.7km az=50.3*

ISC 22 13:16:17.4±1.9, 5563N±005×16575E±007, h16km±12km, h34km±.9km·pP-P, n55, σ1§30/65, mb4.1/25, MS3.6/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.75**	**291**	*e*P	**Pn**	**13 16 44.1**	**-2.9**
KBTR				*e*S	**Sn**	**13 17 04.2**	**-4.6**
MKZ	**Mys Kozlova**	**2.55**	**247**	*e*P	**Pn**	**13 16 57.2**	**-0.8**
MKZ				*e*S	**Sn**	**13 17 27.7**	**-0.8**
SRKR	**Sorokina**	**2.76**	**294**	*i* P	**Pn**	**13 17 00.4**	**-0.5**
SRKR				S	**Sn**	**13 17 33.1**	**-0.7**
KLY	**Klyuchi**	**2.94**	**286**	*e*P	**Pn**	**13 17 01.0**	**-2.4**
KLY				S	**Sn**	**13 17 33.5**	**-4.8**
KPT	**Kopyto**	**3.14**	**278**	*i* P	**Pn**	**13 17 06.3**	**+0.2**
KPT				S	**Sn**	**13 17 43.2**	**+0.1**
SRDR	**Sredinnyy**	**3.46**	**284**	*e*P	**Pn**	**13 17 11.1**	**+0.6**
SRDR				S	**Sn**	**13 17 51.6**	**+0.6**
KII	**Karymskiy**	**3.98**	**249**	P	**Pn**	**13 17 17.8**	**+0.2**
KII				*e*S	**Sn**	**13 18 03.9**	**+0.1**
SPN	**Mys Shipunski**	**4.20**	**235**	P	**Pn**	**13 17 21.4**	**+0.7**
SPN				*e*S	**Sn**	**13 18 07.9**	**-1.4**
NLC	**Nalytchevo**	**4.48**	**239**	*e*P	**Pn**	**13 17 25.4**	**+0.9**
NLC				*e*S	**Sn**	**13 18 16.0**	**-0.2**
AVH	**Avacha**	**4.73**	**243**	P	**Pn**	**13 17 29.2**	**+1.3**
AVH				*e*S	**Sn**	**13 18 22.6**	**+0.3**
PET	**Petropavlovsk**	**4.90**	**241**	*e*Pn	**Pn**	**13 17 28.2**	**-2.1**
PET	**Petropavlovsk**	**4.90**	**241**	*e*PN	**Pn**	**13 17 28.2**	**-2.1**
PET				pmax	pmax		
	comp=Z,34nm,0.4s						
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	**Petropavlovsk**	**4.90**	**241**	*e*S	**Sn**	**13 18 24.3**	**-2.3**
GNL	**Ganaly**	**4.93**	**250**	P	**Pn**	**13 17 30.5**	**-0.2**
RUS	**Russkaya**	**5.33**	**236**	*e*S	**Sn**	**13 18 35.7**	**-1.5**
GRL	**Gorelyy**	**5.47**	**239**	S	**Sn**	**13 18 42.3**	**+1.8**
BILL	**Bilibino**	**12.46**	**1**	*e*PN	**Pn**	**13 19 20.6**	**+6.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ASAJ	**Asahikawa**	**18.75**	**242**	P	**Pn**	**13 20 36.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=76,slow=9.3,SNR=3.6						
YAK	**Yakutsk**	**19.53**	**304**	*i* P	**Pn**	**13 20 43.6**	**-1.4**
ERM	**Erimo**	**20.04**	**237**	*i* P	**P**	**13 20 58.1**	**+8.6**
TIXI	**Tiksi**	**22.34**	**330**	*e*P	**P**	**13 21

GYA				PCP	PcP	13 26 39.8	+4.8
GYA				PP	PP	13 27 18.8	+2.1
GYA				SCP	ScP	13 30 31.5	+1.0
GYA				S	**S**	**13 32 32.3**	**-5.4**
GYA				XS	sS	13 32 49.8	+3.5
GYA				SCS	ScS	13 35 07.3	-2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,5.2s						
BRVK	**Borovoye**	**51.38**	**310**	P	**P**	**13 25 22.6**	**+1.8**
	comp=Z,4.9nm,1.1s,mb4.3						
BRVK	**Borovoye**	**51.38**	**310**	P	**P**	**13 25 22.6**	**+1.8**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
PDAR	**Pinedale Array**	**53.43**	**66**	P	**P**	**13 25 34.7**	**-1.4**
	comp=Z,0.6nm,0.9s,mb3.5,baz=291,slow=3.6,SNR=3.6						
KMI	**Kunming**	**54.47**	**263**	P	**P**	**13 25 46.6**	**+2.7**
KMI				AP	pP	13 25 55.8	+6.6
KMI				AMB	AMB		
	comp=Z,11nm,1.8s,mb4.5						
KMI				LR	LR		
	comp=Z,48nm,20.9s,MS3.5						
ISCO	**Idaho Springs**	**57.62**	**66**	*e*P	**P**	**13 26 07.9**	**+1.6**
	comp=Z,4.4nm,1.1s,mb4.4						
NOA	**NORSAR Array B**	**61.95**	**346**	P	**P**	**13 26 34.9**	**-0.8**
	comp=Z,0.6nm,0.9s,mb3.7,baz=32,slow=4.6,SNR=2.4						
TXAR	**Lajitas Array**	**66.65**	**72**	P	**P**	**13 27 02.5**	**-4.5**
	comp=Z,0.1nm,0.4s,mb3.2,baz=244,slow=3.9,SNR=3.2						
GERES	**GERESS Array B**	**73.30**	**341**	P	**P**	**13 27 48.3**	**+0.8**
	comp=Z,0.2nm,0.3s,mb3.5,baz=28,slow=4.4,SNR=3.2						
WRA	**Warramunga Arr**	**79.86**	**210**	P	**P**	**13 28 22.3**	**-2.5**
	comp=Z,0.4nm,0.9s,mb3.4,baz=23,slow=6.3,SNR=2.9						
ASAR	**Alice Springs**	**83.51**	**209**	P	**P**	**13 28 42.9**	**-1.1**
	comp=Z,0.2nm,0.5s,mb3.5,baz=14,slow=4.6,SNR=5.5						
QSPA	**South Pole Qui**	**145.38**	**180**	*e*PKPdf	PKPdf	13 35 51.6	-0.8

*ISCJB **22** 13:24:21.3±3.9, 564S±02×27.1W±05, h104km±34km, mb4.4/6, Error ellipse: s-maj=44.5km s-min=24.6km az=156.3*
*IDC **22** 13:24:26.1±7.8, 5642S×27.10W, h136km±68km, mb4.1/6, mb1 4.2/6, mb1mx3.9/14, mbtmp4.1/6, Error ellipse: s-maj=30.0km s-min=18.7km az=63.0*

ISC 22 13:24:23.6±4.0, 565S±02×270W±05, h111km±36km, n15, σ0§46/9, mb4.4/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.39**	**158**		*e*P		**Pn**	**13 28 07.1**	**+0.5**
VNA1					*e*			13 28 08.0	
VNA1					*e*			13 28 10.5	
VNA1					*e*			13 28 15.3	
VNA1					*e*			13 28 21.8	
VNA1					*e*			13 28 24.7	
VNA3	**Neumayer Olymp**	**16.58**	**160**		*e*P		**Pn**	**13 28 08.8**	**-0.2**
VNA3					*e*			13 28 10.2	
VNA3					*e*			13 28 12.3	
VNA3					*e*			13 28 17.7	
VNA3					*e*			13 28 24.4	
VNA3					*e*			13 28 27.7	
VNA2	**Neumayer--Watz**	**16.78**	**158**		*e*P		**Pn**	**13 28 10.9**	**-0.5**
	baz=316,slow=13								
VNA2					*e*			13 28 12.5	
VNA2					*e*			13 28 14.3	
VNA2					*e*			13 28 20.2	
VNA2					*e*			13 28 26.3	
VNA2					*e*			13 28 30.3	
MAW	**Mawson**	**39.77**	**143**	P			**P**	**13 31 44.9**	**+0.1**
	2.2nm,0.4s,mb4.3,baz=219,slow=9.9,SNR=12								
VNDA	**Vanda**	**46.18**	**183**	P			**P**	**13 32 36.9**	**+0.6**
	2.3nm,0.6s,mb4.1,baz=187,slow=8.7,SNR=33								
LPAZ	**La Paz**	**50.69**	**305**	P			**P**	**13 33 11.5**	**-0.1**
	12nm,0.5s,mb5.2,baz=97,slow=5.1,SNR=75								
TORD	**Torodi Ar. Bea**	**73.35**	**29**	P			**P**	**13 35 43.3**	**+0.2**
	5.1nm,0.6s,mb4.5,baz=198,slow=6.5,SNR=36								
TORD				pP			pP	13 36 09.8	-1.1
	1.5nm,0.7s,baz=200,slow=6.1,SNR=4.3								
STKA	**Stephens Creek**	**91.49**	**170**	P			**P**	**13 37 17.6**	**+0.3**
	1.3nm,0.8s,mb4.1,baz=180,slow=10,SNR=3.9								
ASAR	**Alice Springs**	**98.58**	**162**	P			**P**	**13 37 48.8**	**-0.9**
	0.4nm,0.7s,mb4.0,baz=177,slow=3.8,SNR=6.5								
FINES	**FINESS Array B**	**124.69**	**28**	PKP			PKPdf	13 43 07.0	-1.4
	0.7nm,0.5s,baz=0.0,slow=0.6,SNR=5.5								
ARCES	**ARCESS Array B**	**131.28**	**22**	PKP			PKPdf	13 43 19.1	-1.7
	2.7nm,1.0s,baz=335,slow=5.4,SNR=4.8								
YKA	**Yellowknife Ar**	**136.54**	**318**	PKP			PKPdf	13 43 29.7	-1.1
	0.6nm,0.5s,baz=125,slow=2.3,SNR=12								
INK	**Inuvik**	**146.18**	**320**	PKPbc			PKPbc	13 43 48.2	-1.0
	6.3nm,0.5s,baz=100,slow=1.1,SNR=75								
SONM	**Songino Array**	**150.65**	**87**	PKPbc			PKPbc	13 44 00.9	-0.5
	0.7nm,0.6s,baz=219,slow=4.6,SNR=6.9								
KDAK	**Kodiak Island**	**151.09**	**296**	PKPbc			PKPbc	13 44 01.3	-0.8
	12nm,0.6s,baz=124,slow=2.6,SNR=14								

*IDC **22** 13:26:30.4±2.0, 858N×12121E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, Error ellipse: s-maj=233.1km s-min=27.1km az=62.0*
*ISCJB **22** 13:26:32.6±0.6, 923N±004×12233E±004, h33km, mb3.5/4, Error ellipse: s-maj=6.7km s-min=4.5km az=137.4*

ISC 22 13:26:34.2±0.6, 927N±004×12239E±004, h35km, n17, σ1§23/26, mb3.5/4, 3D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.84**	**85**	⇓*i*P			**Pn**	**13 26 48.5**	**-1.1**
SNPH				*i* S			**Sn**	**13 26 59.5**	**-1.2**
GUIM	**Jordan**	**1.37**	**8**	*e*P			**Pn**	**13 26 55.7**	**-1.2**
GUIM				*e*S			**Sn**	**13 27 12.3**	**-1.5**
TBP	**Tagbilaran**	**1.52**	**74**	*i* P			**Pn**	**13 26 58.4**	**-0.5**
PAGZ	**Pagadian**	**1.72**	**145**	*e*P			**Pn**	**13 27 03.0**	**+1.3**
PAGZ				*e*S			**Sn**	**13 27 28.9**	**+6.5**
LLP	**Lapu-Lapu**	**1.88**	**56**	⇓*i*P			**Pn**	**13 27 03.1**	**-0.8**
LLP				*e*S			**Sn**	**13 27 24.5**	**-1.8**
CUYO	**Cuyo Island**	**2.07**	**320**	*e*P			**Pn**	**13 27 06.8**	**+0.3**
CUYO				*e*S			**Sn**	**13 27 30.1**	**-1.1**
RCP	**Roxas**	**2.31**	**9**	⇓*e*P			**Pn**	**13 27 11.0**	**+1.2**
RCP				*e*S			**Sn**	**13 27 38.4**	**+1.5**
KALP	**Kalibo**	**2.40**	**359**	*e*P			**Sn**	**13 27 41.2**	**+2.0**
MSLP	**Maasin**	**2.59**	**70**	*e*P			**Pn**	**13 27 14.5**	**+0.9**
MSLP				*e*S			**Sn**	**13 27 47.1**	**+3.3**
OCLP	**Ormoc**	**2.82**	**51**	*e*P			**Pn**	**13 27 16.3**	**-0.5**
BUKP	**Musuan**	**2.98**	**117**	*e*P			**Pn**	**13 27 21.0**	**+2.0**
OTRP	**Odiongan**	**3.10**	**353**	*e*P			**Pn**	**13 27 21.6**	**+0.9**
OTRP				*e*S			**Sn**	**13 27 58.1**	**+1.6**
BUSP	**Coron**	**3.47**	**322**	*e*P			**Pn**	**13 27 25.3**	**-0.5**
BUSP				*e*S			**Sn**	**13 28 03.8**	**-1.8**
WRA	**Warramunga Arr**	**31.32**	**158**	P			**P**	**13 32 50.1**	**-1.3**
	0.3nm,0.6s,mb3.3,baz=330,slow=11,SNR=2.7								
ASAR	**Alice Springs**	**34.61**	**161**	P			**P**	**13 33 20.6**	**+0.4**
	0.5nm,0.7s,mb3.6,baz=344,slow=7.2,SNR=15								
STKA	**Stephens Creek**	**44.85**	**157**	P			**P**	**13 34 44.8**	**-0.4**
	0.8nm,0.7s,mb3.6,baz=354,slow=10,SNR=3.1								
MKAR	**Makanchi Array**	**50.58**	**325**	P			**P**	**13 35 30.1**	**+0.7**
	0.6nm,1.0s,mb3.5,baz=132,slow=8.2,SNR=3.7								

*ISCJB **22** 13:31:07.7±0.4, 3776N±002×2307E±003, h5km, Error ellipse: s-maj=3.3km s-min=3.2km az=43.4*
*CSEM **22** 13:31:08.4±0.1, 3774N×2308E, h2km, ML3.1, Error ellipse: s-maj=1.8km s-min=1.5km az=149.0*
*THE **22** 13:31:08.3, 3772N×2306E, h12km, ML3.1*
*ATH **22** 13:31:08.4, 3774N×2306E, h5km, MD3.0/7, ML2.7*
*NEIC **22** 13:31:08.4, 3774N×2306E, h5km, ML2.7(ATH), After ATH.*

ISC 22 13:31:08.1±0.4, 3776N±002×2308E±003, h11km±5km, n18, σ0§89/30, 2C-2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DID	**Didima**	**0.28**	**153**	*e*Pg			**Pg**	**13 31 13.3**	**-0.5**
DID				*e*Sg			**Sg**	**13 31 17.7**	**+0.1**
LTK	**Loutraki**	**0.28**	**341**	*e*Pg			**Pg**	**13 31 14.7**	**+0.8**
LTK				*e*Sg			**Sg**	**13 31 19.5**	**+1.7**
NAIG	**Nisos Aigina**	**0.32**	**89**	*e*PG			**Pg**	**13 31 14.8**	**+0.2**
NAIG				*e*SB			**Sg**	**13 31 20.3**	**+1.3**
ATH	**Athens Observa**	**0.55**	**67**	⇑*i*PB			**Pb**	**13 31 19.7**	**0.0**
ATH				*e*SB			**Sb**	**13 31 27.8**	**+0.2**
KVR	**Kavouri**	**0.55**	**82**	*e*PB			**Pb**	**13 31 20.5**	**+0.7**
KVR				*e*SB			**Sb**	**13 31 27.0**	**-0.6**
VLX	**Vlachokerasia**	**0.68**	**236**	*e*Pg			**Pg**	**13 31 20.6**	**-0.7**
VLX				*e*Sg			**Sg**	**13 31 30.1**	**0.0**
PTL	**Penteli**	**0.69**	**64**	*e*PB			**Pb**	**13 31 21.5**	**-0.6**
PTL				*e*SB			**Sb**	**13 31 31.5**	**0.0**
LKR	**Lokris**	**0.90**	**356**	⇓*i*PB			**Pb**	**13 31 25.8**	**+0.1**
LKR				*e*SB			**Sb**	**13 31 38.7**	**+1.1**
VLI	**Veliai**	**1.04**	**186**	⇓*i*PG			**Pg**	**13 31 27.2**	**-1.0**
VLI				*e*SB			**Sb**	**13 31 42.2**	**+0.5**
SELA	**Sela**	**1.07**	**299**	*e*Pg			**Pg**	**13 31 28.6**	**-0.2**
SELA				*e*Sg			**Sg**	**13 31 43.5**	**+0.8**
SELA	**Sela**	**1.07**	**299**	*e*Pg			**Pg**	**13 31 28.5**	**-0.3**
SELA				*e*Sg			**Sg**	**13 31 43.5**	**+0.8**
ITM	**Ithomi**	**1.08**	**238**	⇑*i*PG			**Pg**	**13 31 28.3**	**-0.7**
RLS	**Riolos of Patr**	**1.31**	**284**	*e*PB			**Pb**	**13 31 33.8**	**+1.1**
AGG	**Agios Georgios**	**1.40**	**335**	*e*Pg			**Pg**	**13 31 33.4**	**-1.6**
AGG				*e*Sg			**Sg**	**13 31 52.4**	**-0.7**
KYTH	**Kithira**	**1.47**	**181**	*e*PB			**Pb**	**13 31 37.0**	**+1.5**
AOS	**Alonnisos**	**1.55**	**24**	*e*Pg			**Pg**	**13 31 35.8**	**-2.0**
XOR	**Xorichti**	**1.61**	**3**	*e*Pb			**Pb**	**13 31 36.5**	**-1.4**
PAIG	**Paliouri**	**2.22**	**12**	*e*Pn			**Pn**	**13 31 44.5**	**-0.3**

*CASC **22** 13:43:49.1±2.7, 1188N×8733W, h164km±32km, MD4.1*
*IDC **22** 13:43:52.0±1.6, 1215N×8653W, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/20, mbtmp3.6/5, ML3.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/36, Error ellipse: s-maj=67.6km s-min=24.8km az=50.0*
*ISCJB **22** 13:43:52.6±0.8, 1137N±006×8748W±005, h33km, mb3.5/4, Error ellipse: s-maj=8.9km s-min=7.1km az=34.1*

ISC 22 13:43:52.6±2.6, 1154N±008×8735W±006, h8km±16km, n23, σ1§12/23, mb3.5/4, 6C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.97**	**49**	⇓*e*P			**Pb**	**13 44 12.7**	**+0.9**
COPN				*e*S			**Sb**	**13 44 32.1**	**+7.3**
TEL3	**Telica 3**	**1.14**	**26**	⇑*e*P			**Pb**	**13 44 15.2**	**+0.6**
CNGN	**Cerro Negro**	**1.15**	**34**	⇑*e*P			**Pb**	**13 44 14.1**	**-0.6**
CNGN				*e*S			**Sb**	**13 44 35.2**	**+5.5**
XAVN	**Gruta Xavier**	**1.17**	**59**	*e*P			**Pb**	**13 44 14.7**	**-0.4**
MOMJ	**Momotombo**	**1.17**	**42**	⇑*i*P			**Pb**	**13 44 15.3**	**+0.3**
TICN	**Ticuantepe**	**1.20**	**66**	⇓*e*P			**Pn**	**13 44 15.1**	**-0.6**
MGAN	**Managua**	**1.23**	**61**	⇑*e*P			**Pn**	**13 44 15.4**	**-0.8**
MGAN				*e*S			**Sb**	**13 44 37.5**	**+5.2**
APON	**Apoyo**	**1.31**	**73**	⇑*e*P			**Pn**	**13 44 15.9**	**-1.3**
HUEN		**1.40**	**55**	⇑*e*P			**Pn**	**13 44 17.9**	**-0.6**
HUEN				*e*S			**Sn**	**13 44 39.3**	**+2.3**
BLLM	**Bellamira**	**2.08**	**335**	*e*P			x	13 44 38.5	
BLLM				*e*S			x	13 45 05.7	
LCBS	**La Ceiba**	**2.64**	**323**	⇓*e*P			x	13 44 44.7	
LCBS				*e*S			x	13 45 17.4	
JTS	**JuntasAbangare**	**2.66**	**118**	Pn			**Pn**	**13 44 32.4**	**-3.4**
	4.1nm,0.3s,baz=328,slow=19,SNR=8.6								
SNJE	**San Jose**	**3.20**	**317**	*e*P			x	13 44 52.9	
SNJE				*e*S			x	13 45 29.6	
PRS1	**Puriscal**	**3.36**	**117**	*e*P			**Pn**	**13 44 46.2**	**+0.8**
URSC	**Urasca**	**3.90**	**115**	*e*P			**Pn**	**13 44 53.4**	**+0.6**
URSC				*e*S			**Sn**	**13 45 39.8**	**+1.0**
BAR1		**4.58**	**120**	*e*P			**Pn**	**13 45 01.8**	**-0.4**
CMIG	**Matias Romero**	**9.15**	**308**	Pn			**Pn**	**13 46 07.5**	**+2.4**
	0.5nm,0.3s,baz=106,slow=8.3,SNR=5.3								
ROSC	**El Rosal**	**14.49**	**116**	LR			LR	13 51 52.9	
	comp=Z,32nm,18.9s,baz=330,slow=34								
TXAR	**Lajitas Array**	**23.34**	**322**	P			**P**	**13 49 02.5**	**+0.9**
	0.9nm,0.5s,mb3.4,baz=137,slow=9.6,SNR=17								
PDAR	**Pinedale Array**	**36.62**	**332**	P			**P**	**13 50 59.3**	**-0.1**
	0.4nm,0.5s,mb3.5,baz=126,slow=9.8,SNR=5.7								
YKA	**Yellowknife Ar**	**54.51**	**345**	P			**P**	**13 53 18.5**	**-2.1**
	0.5nm,0.7s,mb3.7,baz=141,slow=7.6,SNR=13								
INK	**Inuvik**	**64.10**	**343**	P			**P**	**13 54 25.8**	**-1.2**
	0.4nm,0.7s,mb3.6,baz=151,slow=5.7,SNR=3.5								
WRA	**Warramunga Arr**	**139.11**	**253**	PKP			PKPdf	14 03 23.2	+2.2
	0.2nm,0.5s,baz=94,slow=2.4,SNR=8.4								

*JMA **22** 14:06:23.6±0.2, 3022N×13890E, h516km, M3.1*
*ISCJB **22** 14:06:27.3±0.7, 3035N±009×1392E±03, h464km±13km, mb2.8/2, Error ellipse: s-maj=36.4km s-min=10.3km az=163.3*
*IDC **22** 14:06:28.2±2.7, 3010N×13862E, h422km±102km, mb2.4/2, mb1 2.8/5, mb1mx2.6/22, mbtmp2.8/5, Error ellipse: s-maj=241.0km s-min=15.1km az=69.0*

ISC 22 14:06:28.5±0.7, 3038N±009×1393E±03, h458km±13km, n11, σ1§03/13, mb2.8/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.76**	**9**	P			**P**	**14 07 36.4**	**+2.1**
JHJ	**Hachijo jima 2**	**2.77**	**8**	P			**P**	**14 07 36.2**	**+1.9**
	4.8nm,0.3s,baz=257,slow=23,SNR=3.5								
JHJ				S			**S**	**14 08 28.1**	**+0.1**
	5.8nm,0.3s,baz=243,slow=24,SNR=3.3								
CBIJ	**Chichi jima**	**4.13**	**142**	P			**P**	**14 07 45.7**	**+0.3**
	6.5nm,0.3s,baz=294,slow=20,SNR=5.3								
CBIJ				S			**S**	**14 08 46.7**	**-1.1**
	16nm,0.3s,baz=286,slow=22,SNR=14								
JWZ	**Kozaga**	**4.39**	**317**	P			**P**	**14 07 45.7**	**-1.7**
JNY	**Yasuok**	**5.12**	**347**	P			**P**	**14 07 54.9**	**+0.7**
JRY	**Ryogami san**	**5.64**	**357**	P			**P**	**14 07 59.6**	**+0.3**
JAG	**Ashikaga**	**6.04**	**1**	P			**P**	**14 08 02.6**	**-0.7**
MJAR	**Matsushiro Arr**	**6.22**	**352**	P			**P**	**14 08 04.5**	**-0.6**
	0.4nm,0.3s,baz=171,slow=12.3,SNR=4.6								
JHO	**Hitachi**	**6.31**	**9**	*e*S			**S**	**14 09 24.9**	**-1.1**
WRA	**Warramunga Arr**	**50.25**	**186**	P			**P**	**14 14 41.5**	**+0.2**
	0.2nm,0.3s,mb2.9,baz=1.0,slow=8.1,SNR=8.4								
ASAR	**Alice Springs**	**53.98**	**186**	P			**P**	**14 15 08.3**	**+0.1**
	0.4nm,1.1s,mb2.7,baz=353,slow=5.3,SNR=6.4								

*IDC **22** 14:21:35.9±0.5, 5290S×2785E, h0km, mb4.5/17, mb1 4.5/17, mb1mx4.4/21, mbtmp4.5/17, MS4.1/15, Ms1 4.0/15, ms1mx3.9/29, Error ellipse: s-maj=19.4km s-min=9.9km az=67.0*
*ISCJB **22** 14:21:36.6±0.4, 5280S±006×275E±02, h10km, mb4.6/19, MS4.1/17, Error ellipse: s-maj=15.0km s-min=7.9km az=169.9*
*NEIC **22** 14:21:37.6±0.3, 5285S×2765E, h10km, mb4.8/11, Error ellipse: s-maj=17.0km s-min=8.2km az=82.0*
*BJI **22** 14:21:37.5, 5290S×2760E, h10km, mB5.2, Ms5.1, Msz4.8*

ISC 22 14:21:38.2±0.4, 5284S±006×276E±02, h10km, n57, σ1§04/37, mb4.5/20, MS4.1/17, 1C, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**17.17**	**165**	⇑*e*P			**Pn**	**14 25 34.0**	**-3.8**
SUR	**Sutherland**	**21.04**	**344**	*e*P			**P**	**14 26 23.3**	**+1.3**
	30nm,0.9s,mb4.6								
SUR	**Sutherland**	**21.04**	**344**	P			**P**	**14 26 23.4**	**+1.4**
	7.7nm,0.6s,mb4.2,baz=160,slow=12,SNR=6.3								
SUR				LR			LR	14 32 38.8	
	comp=Z,798nm,20.8s,MS4.1,baz=349,slow=31								
MAW	**Mawson**	**22.46**	**145**	P			**P**	**14 26 36.3**	**-0.7**
	6.7nm,0.7s,mb4.2,baz=292,slow=15,SNR=8.1								
MAW				S			**S**	**14 30 39.2**	**-4.1**
	4.1nm,0.7s,baz=45,slow=5.7,SNR=5.5								
MAW				LR			LR	14 33 27.8	
	comp=Z,468nm,19.3s,MS3.9,baz=282,slow=32								
SNAA	**Sanae**	**23.13**	**204**	P			**P**	**14 26 45.0**	**+0.9**
	11nm,0.7s,mb4.4,baz=70,slow=8.5,SNR=26								
SNAA				LR			LR	14 34 21.3	
	comp=Z,33nm,20.0s,MS2.8,baz=265,slow=33								
VNA2	**Neumayer--Watz**	**23.91**	**208**	*e*			**P**	**14 26 52.7**	**+1.0**
	baz=36,slow=7.4								
VNA2				*e*				14 26 58.3	
VNA2				*e*				14 27 04.8	
VNA2				*e*				14 27 09.2	
VNA2				*e*				14 27 16.0	
VNA2				*e*				14 27 27.4	
VNA2				*e*				14 27 37.0	
VNA1	**Neumayer--Stat**	**24.02**	**209**	*e*			**P**	**14 26 57.2**	**+4.5**
VNA1				*e*				14 27 03.8	
VNA1				*e*				14 27 07.8	
VNA1				*e*				14 27 13.5	
BOSA	**Boshof**	**24.27**	**355**	P			**P**	**14 26 55.4**	**+0.1**
BOSA				LR			LR	14 34 46.4	
BOSA	**Boshof**	**24.27**	**355**	P			**P**	**14 26 55.4**	**+0.1**
	7.2nm,0.8s,mb4.1,baz=181,slow=13,SNR=8.5								
BOSA				LR			LR	14 34 46.4	
	comp=Z,477nm,18.9s,MS4.0,baz=184,slow=32								
VNA3	**Neumayer Olymp**	**24.72**	**208**	*e*			**P**	**14 26 59.7**	**+0.7**
VNA3				*e*				14 27 06.1	
VNA3				*e*				14 27 10.3	
VNA3				*e*				14 27 15.8	
VNA3				*e*				14 27 28.4	
VNA3				*e*				14 27 38.1	
LBTB	**Lobatse**	**27.83**	**356**	P			**P**	**14 27 27.4**	**-0.1**
LBTB				LR			LR	14 36 31.5	
LBTB	**Lobatse**	**27.83**	**356**	P			**P**	**14 27 27.4**	**-0.1**
	2.9nm,0.8s,mb4.0,baz=210,slow=6.0,SNR=3.6								
LBTB				LR			LR	14 36 31.5	
	comp=Z,496nm,19.9s,MS4.1,baz=179,slow=32								
TRIS	**Tristan da Cun**	**31.88**	**284**	*e*P			**P**	**14 28 08.6**	**+5.3**
MATP	**Matopo**	**32.36**	**2**	P			**P**	**14 28 06.8**	**-0.9**
	6.7nm,0.6s,mb4.7,baz=184,slow=7.8,SNR=12								
MATP				LR			LR	14 39 20.0	
	comp=Z,273nm,18.9s,MS4.0,baz=175,slow=33								
TSUM	**Tsumeb**	**34.47**	**343**	*e*P			**P**	**14 28 26.1**	**+0.1**
	6.7nm,0.8s,mb4.6								
TSUM	**Tsumeb**	**34.47**	**343**	P			**P**	**14 28 25.9**	**-0.1**
	5.6nm,0.7s,mb4.6,baz=152,slow=9.1,SNR=9.1								
TSUM				LR			LR	14 40 44.9	
	comp=Z,533nm,20.0s,MS4.3,baz=141,slow=33								
QSPA	**South Pole Qui**	**37.38**	**180**	*e*P			**P**	**14 28 49.8**	**-0.6**
	85nm,1.0s,mb5.5								
QSPA				*e*				14 29 00.7	
QSPA	**South Pole Qui**	**37.38**	**180**	P			**P**	**14 28 50.0**	**-0.4**
	9.8nm,0.4s,mb5.0,baz=249,slow=2.4,SNR=77								
LSZ	**Lusaka**	**37.48**	**1**	*e*P			**P**	**14 28 51.7**	**-0.1**
	4.9nm,0.8s,mb4.4								
LSZ	**Lusaka**	**37.48**	**1**	P			**P**	**14 28 51.9**	**+0.1**
	2.3nm,0.5s,mb4.2,baz=178,slow=12,SNR=5.8								
LSZ				LR			LR	14 41 54.7	
	comp=Z,347nm,22.0s,MS4.1,baz=16,slow=32								
VNDA	**Vanda**	**46.85**	**168**	P			**P**	**14 30 06.5**	**-1.1**
	4.6nm,0.9s,mb4.4,baz=252,slow=6.7,SNR=12								
SBA	**Scott Base**	**47.17**	**169**	*e*P			**P**	**14 30 11.3**	**+1.2**
	21nm,1.1s,mb5.0								
KMBO	**Kilima Mbogo**	**52.16**	**12**	LR			LR	14 50 32.3	
	comp=Z,144nm,18.4s,MS4.0,baz=81,slow=33								
TRQA	**Tornquist**	**60.57**	**245**	*e*P			**P**	**14 31 47.4**	**-1.1**
	18nm,1.0s,mb5.2								
PLCA	**Paso Flores**	**63.18**	**237**	*e*P			**P**	**14 32 05.2**	**-0.9**
	14nm,1.0s,mb5.0								
PLCA	**Paso Flores**	**63.18**	**237**	P			**P**	**14 32 05.3**	**-0.8**
	9.9nm,1.0s,mb4.9,baz=140,slow=6.7,SNR=15								
NWAO	**Narrogin (SRO)**	**64.31**	**111**	LR			LR	14 53 15.5	
	comp=Z,194nm,18.8s,MS4.3,baz=275,slow=30								
DBIC	**Dimbokro**	**65.38**	**324**	*e*P			**P**	**14 32 19.6**	**-1.1**
	12nm,1.0s,mb4.9								
DBIC	**Dimbokro**	**65.38**	**324**	P			**P**	**14 32 20.1**	**-0.6**
	13nm,1.1s,mb4.9,baz=128,slow=10,SNR=6.9								
DBIC				LR			LR	14 54 31.0	
	comp=Z,135nm,19.8s,MS4.2,baz=116,slow=30								
TORD	**Torodi Ar. Bea**	**69.41**	**333**	P			**P**	**14 32 46.0**	**-0.2**
	8.8nm,1.0s,mb4.7,baz=165,slow=5.2,SNR=30								
STKA	**Stephens Creek**	**77.99**	**127**	*e*P			**P**	**14 33 38.3**	**+1.8**
	2.7nm,0.8s,mb4.2								
STKA	**Stephens Creek**	**77.99**	**127**	P			**P**	**14 33 36.7**	**+0.2**
	3.4nm,0.7s,mb4.4,baz=247,slow=5.4,SNR=9.5								
STKA				LR			LR	15 03 51.5	
	comp=Z,174nm,19.5s,MS4.4,baz=21,slow=33								
LPAZ	**La Paz**	**80.61**	**256**	*e*P			**P**	**14 33 46.7**	**-4.3**
	5.8nm,1.5s,mb4.3								
LPAZ	**La Paz**	**80.61**	**256**	P			**P**	**14 33 50.6**	**-0.4**
	1.1nm,0.9s,mb3.8,baz=120,slow=13,SNR=4.7								
ASAR	**Alice Springs**	**80.71**	**117**	P			**P**	**14 33 50.9**	**-0.7**
	4.1nm,0.8s,mb4.4,baz=207,slow=5.

0.3nm,0.6s,baz=121,slow=7.7,SNR=4.7

*ISCJB **22** 15:11:24.1±2.0, 555N×006×8266W×007, h19km±15km, mb4.1/9, Error ellipse: s-maj=13.8km s-min=6.6km az=143.9*

*IDC **22** 15:11:24.2±1.4, 566N×8258W, h0km, mb3.9/4, mb1 4.3/7, mb1mx4.0/19, mbtmp4.1/7, ML3.8/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/27, Error ellipse: s-maj=45.2km s-min=20.3km az=46.0*

*CASC **22** 15:11:25.4±2.0, 571N×8263W, h0km±22km, MD4.2, mb4.1(NEIC)*

*NEIC **22** 15:11:27.1±4.0, 561N×8265W, h28km±27km, mb4.1/5, MD4.2(CASC), Error ellipse: s-maj=23.8km s-min=8.8km az=215.0*

ISC 22 15:11:25.8±1.9, 558N±006×8260W±005, h16km±13km, n39, σ1§23/48, mb4.1/9, 7C-2D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AZU	**Azuero**	**3.19**	**46**↑	*eP*	**Pn**	**15 12 15.0**	**-0.4**
AZU	**Azuero**	**3.19**	**46**↑	*iP*	**Pn**	**15 12 15.0**	**-0.4**
BAR1		**3.71**	**349**↑	*eP*	**Pn**	**15 12 21.8**	**-0.7**
CNI	**Changuinola**	**3.82**	**1**↑	*eP*	**Pn**	**15 12 25.2**	**+1.2**
CNI	**Changuinola**	**3.82**	**1**	*eS*	**Sn**	**15 13 08.4**	**-0.2**
BUS	**Buena Vista**	**4.12**	**344**	*eP*	**Pn**	**15 12 29.1**	**+0.9**
BUS				*eS*	**Sn**	**15 13 17.4**	**+1.4**
LCR2	**La Lucha 2**	**4.37**	**342**↑	*eP*	**Pn**	**15 12 30.9**	**-0.6**
LCR2				*eS*	**Sn**	**15 13 24.1**	**+2.0**
LCR2	**La Lucha 2**	**4.37**	**342**	*eP*	**Pn**	**15 12 31.0**	**-0.6**
LCR2				*eS*	**Sn**	**15 13 24.1**	**+2.0**
URSC	**Urasca**	**4.39**	**345**↓	*eP*	**Pn**	**15 12 32.1**	**+0.2**
BCIP	**Isla Barro Col**	**4.50**	**37**	*ePn*	**Pn**	**15 12 34.2**	**+0.8**
BCIP	**Isla Barro Col**	**4.50**	**37**	*eP*	**Pn**	**15 12 35.2**	**+1.8**
LAJ	**Bijagual**	**4.52**	**341**↑	*eP*	**Pn**	**15 12 33.2**	**-0.4**
LAJ				*eS*	**Sn**	**15 13 25.6**	**-0.3**
UPIG		**4.56**	**42**↑	*iP*	**Pn**	**15 12 35.3**	**+1.1**
PRS1	**Puriscal**	**4.70**	**339**↓	*eP*	**Pn**	**15 12 34.8**	**-1.3**
PRS1				*eS*	**Sn**	**15 13 29.6**	**-0.7**
CGA2	**Cerro Gallo 2**	**4.78**	**337**	*eP*	**Pn**	**15 12 37.1**	**-0.2**
JCR	**Jicaral**	**4.92**	**330**	*eP*	**Pn**	**15 12 37.9**	**-1.3**
JCR				*eS*	**Sn**	**15 13 37.9**	**+2.0**
JCR	**Jicaral**	**4.92**	**330**	*eP*	**Pn**	**15 12 38.2**	**-1.0**
JCR				*eS*	**Sn**	**15 13 37.9**	**+2.0**
JTS	**JuntasAbangare**	**5.23**	**334**	Pn	**Pn**	**15 12 42.2**	**-1.3**
	44nm,0.3s,baz=112,slow=16,SNR=77						
JTS				Sn	**Sn**	**15 13 41.8**	**-1.7**
	71nm,0.3s,baz=284,slow=23,SNR=16						
JTS				LR	LR	15 14 37.7	
	comp=Z,359nm,21.7s,baz=169,slow=38						
CUI		**5.66**	**333**	*eP*	**Pn**	**15 12 49.4**	**0.0**
CUI				*eS*	**Sn**	**15 13 54.4**	**+0.3**
ROSC	**El Rosal**	**8.27**	**95**	*ePn*	**Pn**	**15 13 24.2**	**-1.0**
ROSC				Pn	**Pn**	**15 13 24.7**	**-0.5**
ROSC	**El Rosal**	**8.27**	**95**	Pn	**Pn**	**15 13 24.7**	**-0.5**
	2.7nm,0.3s,baz=108,slow=20,SNR=2.5						
SDV	**Santo Domingo**	**12.32**	**74**	Pn	**Pn**	**15 14 22.8**	**+2.0**
SDV				Sn	**Sn**	**15 16 35.8**	**-2.1**
SDV	**Santo Domingo**	**12.32**	**74**	Pn	**Pn**	**15 14 22.8**	**+2.0**
	1.1nm,0.3s,baz=284,slow=13,SNR=8.4						
SDV				Sn	**Sn**	**15 16 35.8**	**-2.1**
	0.9nm,0.3s,baz=64,slow=20,SNR=4.2						
ATAH	**Atahualpa**	**13.18**	**161**	LR	LR	15 19 00.8	
	comp=Z,272nm,19.5s,baz=104,slow=34						
TEIG	**Tepich**	**15.57**	**340**	LR	LR	15 21 19.1	
	comp=Z,71nm,19.8s,baz=219,slow=38						
CMIG	**Matias Romero**	**16.60**	**315**	Pn	**Pn**	**15 15 26.0**	**+8.0**
	1.9nm,0.3s,baz=141,slow=8.5,SNR=18						
CMIG				LR	LR	15 20 48.4	
	comp=Z,82nm,20.1s,baz=164,slow=34						
LPAZ	**La Paz**	**26.02**	**147**	P	**P**	**15 17 00.5**	**+2.2**
LPAZ				LR	LR	15 28 06.0	
LPAZ	**La Paz**	**26.02**	**147**	P	**P**	**15 17 00.5**	**+2.2**
	0.9nm,0.7s,mb3.4,baz=330,slow=13,SNR=5.3						
LPAZ				LR	LR	15 28 06.0	
	comp=Z,99nm,19.1s,baz=282,slow=38						
HDIL	**Hopedale**	**35.34**	**351**	P	**P**	**15 18 19.4**	**-1.1**
	22nm,0.7s,mb5.2						
ANMO	**Albuquerque**	**36.60**	**326**	P	**P**	**15 18 32.3**	**+1.0**
	2.4nm,0.9s,mb4.0						
RSSD	**Black Hills**	**42.76**	**337**	P	**P**	**15 19 19.3**	**-3.2**
	1.7nm,0.6s,mb4.0						
PDAR	**Pinedale Array**	**44.06**	**331**	P	**P**	**15 19 34.8**	**+1.7**
	0.8nm,0.8s,mb3.5,baz=134,slow=11,SNR=7.4						
HWUT	**Hardware Ranch**	**44.20**	**329**	*eP*	**P**	**15 19 34.4**	**+0.2**
	2.8nm,0.7s,mb4.1						
ULM	**Lac du Bonnet**	**45.90**	**348**	P	**P**	**15 19 46.6**	**-0.9**
	baz=169,slow=8.7						
NVAR	**Mina Array Bea**	**46.01**	**320**	P	**P**	**15 19 49.6**	**+1.0**
	1.7nm,0.8s,mb4.0,baz=130,slow=8.2,SNR=9.1						
HLID	**Hailey**	**47.07**	**328**	P	**P**	**15 19 54.7**	**-2.1**
	1.2nm,0.6s,mb4.0						
YKA	**Yellowknife Ar**	**61.49**	**344**	P	**P**	**15 21 41.9**	**+0.4**
	2.7nm,0.7s,mb4.5,baz=140,slow=6.5,SNR=39						
INK	**Inuvik**	**71.16**	**342**	P	**P**	**15 22 41.6**	**-1.9**
	118nm,1.2s						
WRA	**Warramunga Arr**	**141.36**	**245**	PKP	PKPdf	15 30 56.2	-0.7
	0.4nm,0.8s,baz=106,slow=2.5,SNR=3.6						

*ISK **22** 15:26:28.9, 3853N×39.18E, h10km, MD2.7*

*CSEM **22** 15:26:29.7±0.1, 3845N×3916E, h10km, MD2.4, Error ellipse: s-maj=3.4km s-min=1.2km az=15.0*

*DDA **22** 15:26:30.6, 3854N×3923E, h7km, Md2.4*

ISC 22 15:26:28.4±1.7, 387N±01×3922E±005, h7km±6km, n10, σ0§82/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.25**	**228**	*i* P	**Pg**	**15 26 34.3**	**+1.0**
ELZG				*i* S	**Sg**	**15 26 37.2**	**+0.6**
MYA	**Malataya**	**0.71**	**242**	*i* PG	**Pg**	**15 26 41.9**	**-0.1**
MYA				*i* SG	**Sg**	**15 26 51.0**	**-0.3**
MALT	**Malatya**	**0.71**	**241**	*i* PG	**Pg**	**15 26 40.8**	**-1.3**
DIY	**Diyarbakir**	**1.10**	**134**	PG	**Pg**	**15 26 49.7**	**+0.1**
DIY				SG	**Sg**	**15 27 03.7**	**-0.2**
URFA	**Urfa**	**1.26**	**195**	PN	**Pn**	**15 26 51.0**	**-1.5**
ATAB	**Bozova**	**1.40**	**212**	*i* P	**Pn**	**15 26 54.2**	**-0.1**
ATAB				*i* S	**Sb**	**15 27 12.6**	**-0.3**
MARD	**Mardin**	**1.83**	**137**	*i* P	**Pn**	**15 27 00.9**	**+0.7**
MARD				*i* S	**Sn**	**15 27 23.6**	**0.0**
GZT	**Gaziantep**	**1.85**	**225**	*i* P	**Pn**	**15 27 03.3**	**+2.7**
GZT				*i* S	**Sn**	**15 27 24.6**	**+0.4**
KMRS	**Kahramanmaras**	**2.17**	**238**	*e*PN	**Pn**	**15 27 04.8**	**-0.1**
GAZ	**Gaziantep**	**2.18**	**227**	*e*PN	**Pn**	**15 27 04.6**	**-0.5**

IDC 22 15:32:26.3±53.0, 1888S×17891W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/13, mbtmp3.6/3, Error ellipse: s-maj=969.2km s-min=154.6km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.75**	**242**	P	P	15 39 44.3	+0.2
	1.2nm,0.6s,baz=58,slow=9.5,SNR=4.5						
WRA	**Warramunga Arr**	**43.99**	**261**	P	P	15 40 35.8	0.0
	0.1nm,0.3s,baz=97,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**44.07**	**255**	P	P	15 40 36.1	-0.3
	0.3nm,0.3s,baz=89,slow=8.5,SNR=23						

*IDC **22** 15:40:47.0±3.0, 6203N×15168W, h52km±30km, mb3.3/6, mb1 3.5/8, mb1mx3.5/19, mbtmp3.3/8, ML3.2/2, Error ellipse: s-maj=19.9km s-min=18.2km az=37.0*

*ISCJB **22** 15:40:48.4±0.4, 6212N±004×1513W±0.1, h86km±6km, mb3.4/6, Error ellipse: s-maj=8.2km s-min=6.5km az=158.3*

*NEIC **22** 15:40:50.3, 6205N×15130W, h79km, MG3.2(AEIC), After AEIC.*

NEIC Felt at Talkeetna.

ISC 22 15:40:49.5±0.4, 6209N±004×1514W±01, h76km±7km, n34, σ0§84/41, mb3.4/6, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIB	**Fire Island**	**1.08**	**148**	P	**Pn**	**15 41 10.4**	**+1.2**
FIB				S	**Sn**	**15 41 26.1**	**+2.1**
PMR	**Palmer**	**1.17**	**114**	P	**Pn**	**15 41 09.7**	**-0.6**
PMR				*e*Sn	**Sn**	**15 41 25.3**	**-0.5**
PMR				S	**Sn**	**15 41 25.4**	**-0.4**
GHO	**Glory Hole Cre**	**1.19**	**104**	P	**Pn**	**15 41 10.7**	**+0.1**
RC01	**Rabbit Creek A**	**1.27**	**142**	P	**Pn**	**15 41 11.0**	**-0.5**
SML	**Sawmill**	**1.46**	**100**	P	**Pn**	**15 41 13.8**	**-0.2**
KTH	**Kantishna Hill**	**1.48**	**7**	P	**Pn**	**15 41 15.3**	**+1.0**
KNK	**Knik Glacier**	**1.54**	**115**	P	**Pn**	**15 41 14.6**	**-0.5**
SLKM	**Skilak Lake**	**1.68**	**161**	P	**Pn**	**15 41 17.2**	**+0.3**
SEW	**Seward**	**2.20**	**154**	P	**Pn**	**15 41 23.5**	**-0.3**
SVW2	**Sparrevohn**	**2.25**	**246**	P	**Pn**	**15 41 24.3**	**-0.3**
TTA	**Tatalina**	**2.32**	**293**	*e*P	**Pn**	**15 41 25.6**	**+0.1**
TTA				*e*Sn	**Sn**	**15 41 47.8**	**-5.2**
PAX	**Paxson**	**2.87**	**69**	P	**Pn**	**15 41 33.1**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.11**	**117**	*e*Pn	**Pn**	**15 41 35.5**	**-0.7**
COLA	**College**	**3.21**	**28**	P	**Pn**	**15 41 37.8**	**+0.3**
IL1	**Eielson Array**	**3.36**	**35**	P	**Pn**	**15 41 39.4**	**-0.1**
MID	**Middleton Isla**	**3.63**	**135**	*e*P	**Pn**	**15 41 43.5**	**+0.3**
MENT	**Mentasta**	**3.64**	**73**	*e*Pn	**Pn**	**15 41 42.7**	**-0.7**
IM3	**Indian Mountai**	**4.05**	**346**	P	**Pn**	**15 41 49.2**	**+0.4**
IMA2	**Indian Mountai**	**4.12**	**347**	P	**Pn**	**15 41 50.3**	**+0.4**
KDAK	**Kodiak Island**	**4.37**	**189**	P	**Pn**	**15 41 50.7**	**-2.6**
KDAK				S	**Sn**	**15 42 38.2**	**-4.5**
KDAK	**Kodiak Island**	**4.37**	**189**	P	**Pn**	**15 41 50.7**	**-2.6**
	0.4nm,0.3s,baz=130,slow=19,SNR=7.3						
KDAK				S	**Sn**	**15 42 38.2**	**-4.5**
	2.3nm,0.3s,baz=1.1,slow=21,SNR=9.1						
BCA3	**Beaver Creek A**	**4.53**	**73**	P	**Pn**	**15 41 54.8**	**-0.7**
COLD	**Coldfoot**	**5.18**	**5**	P	**Pn**	**15 42 04.9**	**+0.6**
EGAK	**Eagle**	**5.31**	**55**	P	**Pn**	**15 42 05.5**	**-0.5**
DAWY	**Dawson**	**5.78**	**65**	P	**Pn**	**15 42 12.0**	**-0.5**
BM3	**Bonnet Mountain**	**6.08**	**25**	P	**Pn**	**15 42 16.9**	**+0.4**
INK	**Inuvik**	**9.71**	**42**	*e*Pn	**Pn**	**15 43 05.1**	**-1.0**
	79nm,0.9s						
INK	**Inuvik**	**9.71**	**42**	P	**Pn**	**15 43 05.8**	**-0.3**
	0.2nm,0.3s,baz=240,slow=17,SNR=13						
INK				S	**Sn**	**15 44 49.0**	**-4.3**
	0.2nm,0.3s,baz=244,slow=8.5,SNR=4.4						
NVAR	**Mina Array Bea**	**31.14**	**124**	P	**P**	**15 47 01.6**	**+1.0**
	0.7nm,0.6s,mb3.6,baz=320,slow=6.3,SNR=6.0						
PDAR	**Pinedale Array**	**31.21**	**109**	P	**P**	**15 47 02.9**	**+1.7**
	0.2nm,0.6s,mb3.0,baz=328,slow=8.5,SNR=2.7						
TXAR	**Lajitas Array**	**45.04**	**114**	P	**P**	**15 48 57.9**	**+0.6**
	0.4nm,0.6s,mb3.3,baz=318,slow=6.9,SNR=4.6						
KSRS	**Korea Array**	**53.51**	**282**	P	**P**	**15 50 01.9**	**+0.1**
	0.3nm,0.5s,mb3.6,baz=34,slow=6.9,SNR=3.1						
SONM	**Songino Array**	**54.22**	**306**	P	**P**	**15 50 06.8**	**0.0**
	0.6nm,1.0s,mb3.6,baz=32,slow=7.0,SNR=4.7						
MKAR	**Makanchi Array**	**63.29**	**322**	P	**P**	**15 51 07.6**	**-2.1**
	0.2nm,0.3s,mb3.5,baz=38,slow=5.6,SNR=4.1						

IDC 22 16:04:38.3±2.2, 262N×12749E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/14, mbtmp3.1/3, Error ellipse: s-maj=152.9km s-min=27.7km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.41**	**164**	P	P	16 09 49.0	-0.2
	0.3nm,0.3s,baz=343,slow=10,SNR=5.3						
ASAR	**Alice Springs**	**26.87**	**167**	P	P	16 10 20.6	-0.3
	0.2nm,0.4s,baz=350,slow=7.4,SNR=4.3						
MKAR	**Makanchi Array**	**58.89**	**325**	P	P	16 14 39.5	+0.5
	0.1nm,0.2s,baz=120,slow=5.7,SNR=3.8						

*MEX **22** 16:12:02.1±0.5, 1374N×9254W, h73km±52km, MD4.6*

*ISCJB **22** 16:12:02.6±0.9, 1407N±006×9222W±005, h33km±7km, mb4.4/25, MS3.5/3, Error ellipse: s-maj=11.0km s-min=6.2km az=28.3*

*BJI **22** 16:12:06.0, 1420N×9200W, h70km, mB5.1*

*NEIC **22** 16:12:07.7±1.1, 1418N×9201W, h71km±8km, mb4.5/21, MD4.6(MEX), Error ellipse: s-maj=13.0km s-min=5.8km az=47.0*

*IDC **22** 16:12:08.6±3.2, 1421N×9193W, h78km±27km, mb3.9/11, mb1 4.2/14, mb1mx4.0/24, mbtmp4.0/14, MS3.6/4, Ms1 3.6/4, ms1mx3.1/31, Error ellipse: s-maj=31.4km s-min=13.0km az=51.0*

*CASC **22** 16:12:14.9±2.4, 1440N×9156W, h20km±27km, MD4.2, mb4.5(NEIC)*

ISC 22 16:12:04.8±1.4, 1407N±005×9223W±004, h34km±10km, n177, σ1§06/169, mb4.4/25, MS3.5/3, 42C-38D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.63**	**67**↑	*e*P	**Pb**	**16 12 19.0**	**+1.4**
PCG	**Pacaya**	**1.61**	**78**↓	*e*P	**Pn**	**16 12 32.2**	**+1.4**
CCIG	**Comitan**	**2.20**	**2**	*e*P	**Pn**	**16 12 40.6**	**+1.6**
CCIG				*i* S	**Sn**	**16 13 10.8**	**+5.7**
RBDL	**Robledal**	**2.47**	**89**↑	*e*P	x	16 12 52.2	
RBDL				*e*S	x	16 13 15.5	
RTR	**El Retiro**	**2.52**	**94**	*e*P	x	16 12 52.7	
RTR				*e*S	x	16 13 16.4	
SCX	**San Cristobal**	**2.68**	**352**	*e*P	**Pn**	**16 12 46.2**	**+0.6**
SCX				*i* S	**Sn**	**16 13 20.2**	**+3.4**
VSM	**San Miguel**	**3.90**	**99**	*e*P	x	16 13 11.1	
BLLM	**Bellamira**	**3.93**	**99**	*e*P	x	16 13 07.3	
CMIG	**Matias Romero**	**3.94**	**320**	*e*P	**Pn**	**16 13 00.6**	**-2.4**
CMIG				*e*S	**Sn**	**16 13 45.5**	**-2.5**
HUIG	**Huatulco**	**4.11**	**295**	*i* S	**Sn**	**16 13 46.5**	**-5.7**
TGUH	**Tegucigalpa,Un**	**4.81**	**90**	*e*Pn	**Pn**	**16 13 15.2**	**+0.2**
SCIG	**Sabancuy**	**4.97**	**12**	*e*P	**Pn**	**16 13 17.1**	**0.0**
SCIG				*e*S	**Sn**	**16 14 14.8**	**+1.4**
OXX	**Oaxaca**	**5.26**	**305**	*e*P	**Pn**	**16 13 21.0**	**-0.1**
UTMO	**Huajuapan**	**6.53**	**306**	*e*P	**Pn**	**16 13 36.8**	**-1.8**
UTMO				*i* S	**Sn**	**16 14 48.5**	**-3.4**
TPIG	**Tehuac#an**	**6.55**	**312**	*i* P	**Pn**	**16 13 37.1**	**-1.8**
TPIG				*i* S	**Sn**	**16 14 50.9**	**-1.5**
TEIG	**Tepich**	**7.20**	**31**	*e*Pn	**Pn**	**16 13 47.4**	**-0.3**
	120nm,0.5s						
TEIG				*i* P		16 13 49.4	
TEIG				*i* S	**Sn**	**16 15 15.7**	**+7.5**
TEIG	**Tepich**	**7.20**	**31**	P	**Pn**	**16 13 47.7**	**0.0**
	27nm,0.3s,baz=255,slow=5.2,SNR=96						
TEIG				LR	LR	16 17 00.8	
	comp=Z,321nm,20.2s,baz=11,slow=42						
TEIG	**Tepich**	**7.20**	**31**	*i* P	**Pn**	**16 13 49.4**	**+1.7**
TEIG				*i* S	**Sn**	**16 15 15.7**	**+7.5**
PPM	**Popocatepetl**	**7.89**	**310**	*i* P	**Pn**	**16 13 56.1**	**-1.1**
PPM				*i* S	**Sn**	**16 15 19.6**	**-5.8**
JTS	**JuntasAbangare**	**8.05**	**117**	*e*Pn	**Pn**	**16 13 59.6**	**+0.2**
	49nm,0.8s						
JTS				*e*Sn	Sn	16 15 50.1	+21
JTS	**JuntasAbangare**	**8.05**	**117**	P	**Pn**	**16 13 58.9**	**-0.4**
	0.6nm,0.3s,baz=314,slow=11,SNR=5.3						
MEIG	**Mezcala**	**8.07**	**299**	*i* P	**Pn**	**16 13 54.7**	**-5.0**
MEIG				*i* S	**Sn**	**16 15 25.5**	**-4.3**
LTX	**Lajitas**	**18.52**	**327**	*e*P	**Pn**	**16 16 18.6**	**0.0**
	5.7nm,0.9s						
TXAR	**Lajitas Array**	**18.52**	**327**	P	**Pn**	**16 16 19.4**	**+0.7**
TXAR	**Lajitas Array**	**18.52**	**327**	P	**Pn**	**16 16 19.4**	**+0.7**
	0.2nm,0.3s,baz=154,slow=15,SNR=36						
LRAL	**Lakeview Retre**	**19.47**	**13**	*e*P	**Pn**	**16 16 28.8**	**-1.4**
	14nm,0.6s						
ROSC	**El Rosal**	**19.87**	**116**	P	**Pn**	**16 16 35.0**	**-0.1**
	0.9nm,0.3s,baz=272,slow=23,SNR=7.8						
MIAR	**Mount Ida**	**20.42**	**357**	*e*P	**P**	**16 16 37.5**	**-1.6**
	20nm,0.8s						
MIAR				*e*		16 16 57.6	
UALR	**University of**	**20.62**	**360**	*e*P	**P**	**16 16 40.4**	**-0.8**
	30nm,0.7s						
UALR				*e*		16 16 53.3	
UALR				*e*		16 17 00.1	
GOGA	**Godfrey**	**20.84**	**21**	*e*P	**P**	**16 16 43.5**	**-0.1**
	7.6nm,0.8s						
MNTX	**Cornudas Mount**	**21.29**	**328**	*e*P	**P**	**16 16 47.6**	**-0.8**
	8.1nm,0.7s,mb4.2						
WMOK	**Wichita Mounta**	**21.41**	**345**	*e*P	**P**	**16 16 48.2**	**-1.6**
	4.0nm,0.8s,mb3.8						
SDV	**Santo Domingo**	**21.78**	**101**	*e*P	**P**	**16 16 51.3**	**-2.6**
	3.2nm,0.5s,mb4.0						
SDV	**Santo Domingo**	**21.78**	**101**	P	**P**	**16 16 52.9**	**-1.0**
	3.0nm,0.4s,mb4.1,baz=319,slow=9.3,SNR=6.2						
SWET	**Sewanee**	**21.81**	**14**	*e*P	**P**	**16 16 51.0**	**-3.1**
WVT	**Waverly**	**22.32**	**9**	*e*P	**P**	**16 16 57.3**	**-2.1**
	4.2nm,0.4s,mb4.2						
AMTX	**Amarillo**	**22.41**	**339**	*e*P	**P**	**16 16 59.2**	**-1.2**
	37nm,0.8s,mb4.9						
TKL	**Tuckaleechee C**	**22.80**	**18**	P	**P**	**16 17 03.5**	**-1.1**
	4.0nm,0.5s,mb4.1,baz=191,slow=11,SNR=8.4						
319A	**Douglas**	**23.27**	**321**	↓P	**P**	**16 17 08.2**	**-1.4**
	baz=23						
TZTN	**Tazewell**	**23.69**	**18**	*e*P	**P**	**16 17 11.1**	**-2.5**
	19nm,0.9s,mb4.5						
SIUC	**Southern Illin**	**23.70**	**6**	*e*P	**P**	**16 17 11.6**	**-2.0**
	25nm,0.7s,mb4.8						
318A	**Bisbee**	**23.75**	**320**	↓P	**P**	**16 17 14.2**	**0.0**
	baz=24						
BNM	**Barren Site**	**23.87**	**329**	*e*P	**P**	**16 17 16.1**	**+0.9**
LPM	**Los Pinos Moun**	**24.00**	**330**	*e*P	**P**	**16 17 17.0**	**+0.6**
LENM	**Lemitar**	**24.05**	**329**	*e*P	**P**	**16 17 17.8**	**+1.0**
LAZ	**Ladron**	**24.32**	**329**	*e*P	**P**	**16 17 20.6**	**+1.3**
ANMO	**Albuquerque**	**24.43**	**331**	*e*P	**P**	**16 17 20.4**	**0.0**
	3.6nm,0.8s,mb3.9						
ANMO	**Albuquerque**	**24.43**	**331**	P	**P**	**16 17 20.7**	**+0.3**
	2.1nm,0.5s,mb3.9,baz=150,slow=12,SNR=6.9						
WCI	**Wyandotte Cave**	**24.63**	**11**	*e*P	**P**	**16 17 19.7**	**-2.4**
	41nm,1.0s,mb4.9						
ATAH	**Atahualpa**	**25.04**	**146**	LR	LR	16 25 54.8	
	comp=Z,108nm,18.0s,MS3.4,baz=284,slow=33						
SJG	**San Juan**	**25.37**	**77**	LR	LR	16 27 11.0	
	comp=Z,141nm,20.2s,MS3.5,baz=284,slow=36						
X15A	**Humboldt**	**27.21**	**322**	⇑P	**P**	**16 17 45.2**	**-0.2**
	baz=27						
MVCO	**Mesa Verde**	**27.23**	**331**	*e*P	**P**	**16 17 45.2**	**-0.4**
	18nm,0.9s,mb4.6						
MVCO	**Mesa Verde**	**27.23**	**331**	↓P	**P**	**16 17 45.9**	**+0.3**
	baz=27						
PV01	**Paradox Valley**	**28.01**	**332**	*e*P	**P**	**16 17 53.9**	**+1.3**
X13A	**Yucca**	**28.25**	**320**	⇑P	**P**	**16 17 54.9**	**+0.1**
	baz=28						
PDMCI	**Parker Dam,Lak**	**28.26**	**319**	↓P	**P**	**16 17 55.6**	**+0.7**
	baz=28						
PV10	**Paradox Valley**	**28.42**	**331**	*e*P	**P**	**16 17 55.9**	**-0.3**
IRM	**Iron Mountain**	**28.82**	**318**	⇑P	**P**	**16 18 01.7**	**+1.9**
	baz=29						
U14A	**Mt Trumbull**	**29.10**	**324**	↓P	**P**	**16 18 03.2**	**+0.9**
	baz=29						
PFO	**Pinyon Flat Ob**	**29.35**	**316**	LR	LR	16 32 30.3	
	comp=Z,136nm,18.6s,MS3.6,baz=119,slow=42						
MSU	**Marysvale**	**30.07**	**326**	*e*P	**P**	**16 18 07.3**	**-3.5**
R12A	**Pony Springs,**	**31.25**	**325**	⇑P	**P**	**16 18 20.8**	**-0.5**
	baz=31						
Q13A	**Wheeler Ranch,**	**31.37**	**326**	↓P	**P**	**16 18 23.0**	**+0.7**
	baz=32						
MPMC	**Manual Prospec**	**31.50**	**319**	⇑P	**P**	**16 18 23.8**	**+0.3**
	baz=32						
S10A	**Tonopah Range,**	**32.12**	**322**	↓P	**P**	**16 18 29.5**	**+0.6**
	baz=32						
R10A	**Warm Springs**	**32.19**	**323**	↓P	**P**	**16 18 29.7**	**+0.1**
	baz=32						
Q11A	**Duckwater**	**32.20**	**324**	↓P	**P**	**16 18 30.3**	**+0.7**
	baz=32						
P12A	**McGill**	**32.22**	**326**	↓P	**P**	**16 18 29.8**	**-0.1**
	baz=32						
PDAR	**Pinedale Array**	**32.27**	**336**	P	**P**	**16 18 29.5**	**-0.7**
	1.0nm,0.5s,mb3.9,baz=133,slow=10,SNR=10						
PDAR				PcP	PcP	16 21 18.3	+0.3
	0.5nm,0.5s,baz=134,slow=5.6,SNR=4.5						
SADO	**Sadowa**	**32.56**	**17**	P	**P**	**16 18 29.4**	**-3.3**
O12A	**Currie**	**32.71**	**327**	⇑P	**P**	**16 18 34.5**	**+0.4**
	baz=33						
N13A	**Wendover, West**	**32.86**	**328**	⇑P	**P**	**16 18 36.1**	**+0.7**
	baz=33						
M14A	**Sheep Mountain**	**32.92**	**330**	⇑P	**P**	**16 18 36.6**	**+0.6**
	baz=33						
O11A	**Cowboy Ranch,**	**33.10**	**326**	↓P	**P**	**16 18 38.9**	**+1.5**
	baz=33						
P10A	**Eureka**	**33.19**	**325**	⇑P	**P**	**16 18 39.0**	**+0.7**
	baz=33						
M13A	**Montello**	**33.22**	**329**	⇑P	**P**	**16 18 38.3**	**-0.2**
	baz=33						
N12A	**Clover Valley,**	**33.28**	**328**	↓P	**P**	**16 18 39.3**	**+0.2**
	baz=33						
REDW	**Red Top Meadow**	**33.28**	**335**	*e*P	**P**	**16 18 38.8**	**-0.3**
	23nm,1.0s,mb5.1						
SNOW	**Snow King Moun**	**33.33**	**335**	*e*P	**P**	**16 18 39.9**	**+0.5**
	35nm,1.0s,mb5.2						
LOHW	**Long Hollow**	**33.39**	**335**	*e*P	**P**	**16 18 39.4**	**-0.6**
	4.8nm,0.8s,mb4.5						
NVAR	**Mina Array Bea**	**33.48**	**321**	P	**P**	**16 18 42.3**	**+1.5**
	3.0nm,0.7s,mb4.3,baz=126,slow=9.0,SNR=25						
M12A	**Wells**	**33.63**	**328**	P	**P**	**16 18 42.9**	**+0.7**
	baz=34,SNR=7.2						
K14A	**Jones Ranch, D**	**33.65**	**

H08A	**Prairie City**	**37.78**	**329**	⇑P		**P**		**16 19 18.6**	**+0.9**
	baz=38									
D13A	**Huson**	**37.80**	**335**	P		**P**		**16 19 17.5**	**-0.3**
	baz=38,SNR=6.1									
I07A	**Izee**	**37.90**	**327**	⇑P		**P**		**16 19 18.6**	**-0.1**
	baz=38									
E11A	**Bogner Ranch,**	**37.97**	**333**	P		**P**		**16 19 18.9**	**-0.4**
	baz=38,SNR=6.0									
D12A	**Red Ives Fores**	**38.14**	**334**	⇑P		**P**		**16 19 19.4**	**-1.3**
	baz=38									
F10A	**Beach Ranch, E**	**38.14**	**332**	⇓P		**P**		**16 19 21.2**	**+0.5**
	baz=38									
I06A	**Prineville**	**38.18**	**327**	⇓P		**P**		**16 19 22.0**	**+1.0**
	baz=38									
F09A	**S2 Ranch, Elgi**	**38.27**	**331**	⇑P		**P**		**16 19 21.9**	**+0.2**
	baz=38									
H07A	**Lands Inn, Kim**	**38.29**	**328**	⇑P		**P**		**16 19 22.4**	**+0.5**
	baz=38									
G08A	**Pilot Rock**	**38.47**	**329**	⇓P		**P**		**16 19 23.6**	**+0.1**
	baz=39									
H06A	**Lindquist Farm**	**38.78**	**328**	⇓P		**P**		**16 19 27.3**	**+1.2**
	baz=39									
B13A	**Whitefish**	**38.84**	**336**	⇓P		**P**		**16 19 25.6**	**-0.9**
	baz=39									
E09A	**Wood Farm, Sta**	**38.97**	**331**	⇑P		**P**		**16 19 28.0**	**+0.4**
	baz=39									
G06A	**Carlson Farm,**	**39.28**	**328**	⇓P		**P**		**16 19 32.5**	**+2.2**
	baz=39									
D09A	**Jones Farm, Ri**	**39.45**	**332**	⇑P		**P**		**16 19 32.1**	**+0.5**
	baz=40									
G05A	**Wamic**	**39.64**	**327**	⇓P		**P**		**16 19 34.7**	**+1.4**
	baz=40									
B11A	**Sandpoint**	**39.65**	**335**	P		**P**		**16 19 33.2**	**-0.1**
	baz=40,SNR=5.5									
NEW	**Newport**	**39.84**	**334**	P		**P**		**16 19 33.6**	**-1.3**
	1.8nm,0.4s,mb4.2,baz=86,slow=14,SNR=2.9									
C09A	**Chrisman Ranch**	**39.99**	**333**	⇓P		**P**		**16 19 36.4**	**+0.3**
	baz=40									
A11A	**Hall Mountain,**	**40.06**	**335**	⇑P		**P**		**16 19 37.2**	**+0.5**
	baz=40									
F05A	**White Salmon**	**40.15**	**328**	⇑P		**P**		**16 19 39.2**	**+1.7**
	baz=40									
C08A	**Higginbotham F**	**40.32**	**332**	⇑P		**P**		**16 19 40.1**	**+1.2**
	baz=40									
D07A	**Quincy**	**40.33**	**331**	⇑P		**P**		**16 19 40.0**	**+1.0**
	baz=40									
E06A	**Yakima**	**40.36**	**329**	⇑P		**P**		**16 19 40.2**	**+1.0**
	baz=40									
B09A	**Rice**	**40.40**	**333**	⇑P		**P**		**16 19 39.5**	**0.0**
	baz=40									
C07A	**Waterville**	**40.72**	**331**	⇑P		**P**		**16 19 43.6**	**+1.4**
	baz=41									
G03A	**Yamhill**	**40.73**	**326**	⇑P		**P**		**16 19 42.8**	**+0.4**
	baz=41									
A09A	**Danville**	**41.01**	**334**	⇑P		**P**		**16 19 44.5**	**0.0**
	baz=41									
A07A	**Ashnola River,**	**41.85**	**332**	⇑P		**P**		**16 19 52.0**	**+0.5**
	baz=42									
B06A	**Marblemount**	**41.98**	**331**	⇑P		**P**		**16 19 52.6**	**0.0**
	baz=42									
SIV	**San Ignacio**	**42.90**	**133**	P		**P**		**16 19 58.9**	**-1.5**
	3.7nm,0.6s,mb4.3,baz=308,slow=8.3,SNR=20									
YKA	**Yellowknife Ar**	**50.91**	**347**	P		**P**		**16 21 00.5**	**-1.8**
YKA				PcP	PcP	PcP		16 22 16.3	-2.1
YKA	**Yellowknife Ar**	**50.91**	**347**	P		**P**		**16 21 00.5**	**-1.8**
	7.4nm,0.6s,mb4.8,baz=150,slow=7.3,SNR=132									
YKA				PcP	PcP	PcP		16 22 16.3	-2.1
	1.6nm,0.8s,baz=148,slow=4.0,SNR=9.1									
DLBC	**Dease Lake**	**52.50**	**336**	P		**P**		**16 21 15.0**	**+0.7**
	baz=158,slow=7.1									
INK	**Inuvik**	**60.31**	**344**	P		**P**		**16 22 07.2**	**-2.5**
	5.1nm,0.6s,mb4.7,baz=138,slow=6.8,SNR=20									
TTA	**Tatalina**	**65.74**	**333**	*e*P		**P**		**16 22 43.5**	**-2.3**
	10.0nm,0.9s,mb4.8									
NOA	**NORSAR Array B**	**84.19**	**28**	P		**P**		**16 24 29.9**	**-2.6**
	0.7nm,0.7s,mb3.9,baz=290,slow=5.2,SNR=3.2									
TIXI	**Tiksi**	**90.14**	**348**	*e*P		**P**		**16 24 58.8**	**-2.3**
	6.4nm,0.8s,mb5.0									
TORD	**Torodi Ar. Bea**	**90.58**	**76**	P		**P**		**16 25 01.3**	**-3.0**
	0.2nm,0.5s,mb3.7,baz=276,slow=5.6,SNR=2.8									
SONM	**Songino Array**	**116.17**	**346**	PKP		PKPdf		16 30 43.0	-1.6
	0.4nm,1.0s,baz=8.7,slow=1.9,SNR=3.2									
MKAR	**Makanchi Array**	**119.22**	**4**	PKP		PKPdf		16 30 48.0	-2.5
	0.1nm,0.3s,baz=307,slow=2.9,SNR=2.8									
BOSA	**Boshof**	**120.59**	**115**	PKP		PKPdf		16 30 51.5	-2.0
	2.0nm,0.9s,baz=290,slow=4.0,SNR=3.3									
WMQ	**Urumqi**	**122.39**	**0**	*e*PKP		PKPdf		16 30 53.3	-3.4
NJ2	**Nanjing**	**125.32**	**327**	*e*PKP		PKPdf		16 30 57.6	-5.0
LZH	**Lanzhou**	**127.85**	**343**	*e*PKP		PKPdf		16 31 02.0	-5.4
LZH				PP		PP			
	comp=Z,68nm,4.1s									
STKA	**Stephens Creek**	**127.89**	**240**	PKP		PKPdf		16 31 05.9	-1.6
	comp=Z,0.9nm,0.6s,baz=121,slow=5.9,SNR=4.7									
CD2	**Chengdu**	**132.71**	**341**	*e*PKP		PKPdf		16 31 13.9	-2.8
WRA	**Warramunga Arr**	**135.19**	**256**	PKP		PKPdf		16 31 19.6	-2.0
	comp=Z,0.7nm,0.7s,baz=84,slow=1.8,SNR=9.6									
ASAR	**Alice Springs**	**135.47**	**251**	PKP		PKPdf		16 31 19.5	-2.5
	comp=Z,0.4nm,1.0s,baz=106,slow=2.0,SNR=3.4									
GYA	**Guiyang**	**135.72**	**335**	PKP		PKPdf		16 31 19.6	-2.9
GYA				XPKP				16 31 49.0	
GYA				PP		PP		16 34 01.3	+2.1
GYA				PP		PP			
	comp=Z,60nm,4.9s									

IDC ***22*** *16:15:51.7±0.7, 5573N×16572E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.9/22, mbtmp3.8/15, ML3.5/1, MS3.9/20, Ms1 3.9/20, ms1mx3.7/37, Error ellipse: s-maj=21.1km s-min=14.9km az=157.0*

MOS ***22*** *16:15:54.8±1.0, 5568N×16562E, h33km, mb4.8/16, Error ellipse: s-maj=10.6km s-min=7.7km az=70.4*

ISCJB ***22*** *16:15:55.6±0.6, 5570N±004×16551E±005, h37km±4km, mb4.4/45, MS4.1/29, Error ellipse: s-maj=6.3km s-min=4.0km az=161.9*

KRSC ***22*** *16:15:56.2±0.8, 5567N×16523E, h22km±21km, ML4.7*

NEIC ***22*** *16:15:57.0±1.2, 5573N×16552E, h37km±11km, mb4.7/22, Error ellipse: s-maj=9.6km s-min=5.7km az=165.0*

BJI ***22*** *16:15:56.9, 5570N×16550E, h37km, mB4.8, mb4.6, Ms4.7, Msz4.4*

ISC 22 16:15:57.5±0.5, 5571N±004×16549E±005, h37km±4km, h46km±4.3km; pP-P, n140, σ1914/161, mb4.4/45, MS4.1/29, 2C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.58**	**290**	*e*P	**Pn**	**16 16 20.3**	**-2.7**
KBTR				*i* S	**Sn**	**16 16 38.0**	**-4.2**
MKZ	**Mys Kozlova**	**2.44**	**243**	*e*P	**Pn**	**16 16 33.7**	**-1.2**
MKZ				*i* S	**Sn**	**16 17 01.6**	**-1.9**
BDR	**Baidarnaya**	**2.55**	**292**	*e*P	**Pn**	**16 16 36.2**	**-0.1**
BDR				*i* S	**Sn**	**16 17 05.4**	**-0.6**
SRKR	**Sorokina**	**2.59**	**293**	*e*P	**Pn**	**16 16 36.5**	**-0.4**
SRKR				*i* S	**Sn**	**16 17 05.8**	**-1.4**
ZLN	**Zelenaya**	**2.66**	**279**	P	**Pn**	**16 16 38.6**	**+0.8**
ZLN				*i* S	**Sn**	**16 17 09.4**	**+0.7**
KLY	**Klyuchi**	**2.78**	**285**	*e*P	**Pn**	**16 16 37.9**	**-1.6**
KLY				*i* S	**Sn**	**16 17 07.6**	**-4.2**
KRSR	**Krestovskiy**	**2.81**	**283**	*e*P	**Pn**	**16 16 40.4**	**+0.5**
KRSR				*e*S	**Sn**	**16 17 12.2**	**-0.4**
BZMR	**Bezymyannaya**	**2.83**	**277**	*e*P	**Pn**	**16 16 40.1**	**0.0**
BZMR				*e*S	**Sn**	**16 17 12.2**	**-0.8**
KMNR	**Kamenistaya**	**2.97**	**273**	*e*P	**Pn**	**16 16 42.7**	**+0.6**
KMNR				*i* S	**Sn**	**16 17 16.2**	**-0.2**
KPT	**Kopyto**	**2.98**	**277**	*e*P	**Pn**	**16 16 43.0**	**+0.8**
KPT				*i* S	**Sn**	**16 17 16.7**	**0.0**
TUMR	**Tumrok**	**3.07**	**264**	P	**Pn**	**16 16 44.7**	**+1.3**
TUMR				*i* S	**Sn**	**16 17 19.8**	**+1.0**
KOZR	**Kozyr**	**3.17**	**279**	PN	**Pn**	**16 16 45.8**	**+1.0**
KOZR				S	**Sn**	**16 17 21.2**	**-0.2**
KOZ	**Kozyrevsk**	**3.18**	**279**	*e*P	**Pn**	**16 16 45.8**	**+0.8**
KOZ				*e*S	**Sn**	**16 17 21.2**	**-0.5**
SRDR	**Sredinnyy**	**3.30**	**283**	*e*P	**Pn**	**16 16 47.1**	**+0.5**
SRDR				*i* S	**Sn**	**16 17 23.9**	**-0.6**
SPN	**Mys Shipunski**	**4.12**	**233**	P	**Pn**	**16 16 57.2**	**-0.8**
SPN				*i* S	**Sn**	**16 17 41.7**	**-3.2**
NLC	**Nalytchevo**	**4.39**	**237**	P	**Pn**	**16 17 01.4**	**-0.2**
NLC				*i* S	**Sn**	**16 17 50.4**	**-1.1**
AVH	**Avacha**	**4.63**	**241**	*e*P	**Pn**	**16 17 05.5**	**+0.6**
AVH				*i* S	**Sn**	**16 17 56.0**	**-1.4**
PET	**Petropavlovsk**	**4.81**	**239**	*e*Pn	**Pn**	**16 17 07.5**	**+0.1**
PET				*e*Sn	**Sn**	**16 18 02.5**	**+0.6**
PET	**Petropavlovsk**	**4.81**	**239**	*e*PN	**Pn**	**16 17 07.8**	**+0.4**
PET				pmax	pmax		
	comp=Z,53nm,0.3s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PET	**Petropavlovsk**	**4.81**	**239**	*e*P	**Pn**	**16 17 07.9**	**+0.5**
PET				*i* S	**Sn**	**16 18 01.2**	**-0.7**
GNL	**Ganaly**	**4.82**	**248**	*e*P	**Pn**	**16 17 08.6**	**+1.1**
GNL				*e*S	**Sn**	**16 18 01.4**	**-0.5**
RUS	**Russkaya**	**5.25**	**234**	P	**Pn**	**16 17 12.9**	**-0.6**
RUS				*i* S	**Sn**	**16 18 09.7**	**-3.0**
GRL	**Gorelyy**	**5.38**	**237**	P	**Pn**	**16 17 18.7**	**+3.5**
GRL				*i* S	**Sn**	**16 18 18.6**	**+2.7**
MIPR	**Malaya Ipel'ka**	**6.19**	**240**	P	**Pn**	**16 17 26.9**	**+0.6**
SKR	**Severo-Kuril's**	**7.54**	**232**	*e*PN	**Pn**	**16 17 46.2**	**+1.3**
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
SKR				MLR	MLR		
	comp=N,2μm,18.0s						
SKR				MLR	MLR		
	comp=E,2μm,18.0s						
SKR				MLR	MLR		
	comp=Z,1μm,18.0s						
ALID	**Alaid**	**7.67**	**235**	P	**Pn**	**16 17 49.2**	**+2.6**
SEY	**Seymchan**	**9.85**	**323**	*i* PN	**Pn**	**16 18 17.2**	**+0.8**
BILL	**Bilibino**	**12.38**	**1**	*e*Pn	**Pn**	**16 18 49.6**	**-1.3**
	comp=Z,29nm,1.4s						
BILL	**Bilibino**	**12.38**	**1**	*e*PN	**Pn**	**16 18 52.2**	**+1.2**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
YSS	**Yuzh-Sakhalins**	**16.62**	**248**	*i* P	**Pn**	**16 19 47.7**	**+0.2**
ASAJ	**Asahikawa**	**18.66**	**241**	P	**Pn**	**16 20 13.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=118,slow=3.5,SNR=5.4						
ASAJ				LR	LR	16 27 17.6	
	comp=Z,370nm,18.1s,baz=20,slow=36						
YAK	**Yakutsk**	**19.36**	**304**	*e*P	**Pn**	**16 20 17.4**	**-3.5**
	comp=Z,12nm,0.6s						
YAK	**Yakutsk**	**19.36**	**304**	*e*P	**Pn**	**16 20 25.2**	**+4.3**
YAK				pmax	pmax		
	comp=Z,15nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,17nm,1.5s						
YAK				pmax	pmax		
	comp=Z,38nm,1.4s						
YAK				pmax	pmax		
	comp=N,29nm,1.6s						
YAK				pmax	pmax		
	comp=E,90nm,1.9s						
YAK				MLR	MLR		
	comp=Z,167nm,7.0s						
YAK				MLR	MLR		
	comp=N,444nm,13.0s						
YAK				MLR	MLR		
	comp=E,406nm,15.0s						
HABR	**Khabarovsk**	**19.93**	**261**	P	**Pn**	**16 20 23.9**	**-3.8**
HABR				*e*		16 20 37.0	
HABR				*e*		16 20 40.2	
HABR				*e*S	**S**	**16 24 05.8**	**-2.1**
HABR				*e*		16 24 20.4	
HABR				*e*		16 24 38.8	
HABR				*e*		16 31 56.6	
ERM	**Erimo**	**19.96**	**236**	*i* P	**Pn**	**16 20 30.9**	**+2.7**
TTA	**Tatalina**	**20.66**	**54**	*e*P	**P**	**16 20 33.6**	**-0.1**
	comp=E,42nm,1.8s						
TTA	**Tatalina**	**20.66**	**54**	*e*P	**P**	**16 20 33.6**	**0.0**
TTA				pmax	pmax		
	comp=Z,42nm,1.8s						
IMA2	**Indian Mountai**	**21.97**	**45**	*e*P	**P**	**16 20 47.1**	**-0.6**
TIXI	**Tiksi**	**22.21**	**330**	*e*P	**P**	**16 20 50.0**	**-0.2**
	comp=Z,12nm,1.0s,mb4.3						
TIXI	**Tiksi**	**22.21**	**330**	*e*P	**P**	**16 20 49.9**	**-0.3**
TIXI				*i* S	**S**	**16 24 55.1**	**+2.8**
TIXI				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,269nm,10.0s,MS4.0						
KDAK	**Kodiak Island**	**22.82**	**67**	P	**P**	**16 20 56.0**	**-0.8**
	comp=Z,111nm,1.1s,mb4.2,baz=93,slow=9.8,SNR=2.3						
KDAK				LR	LR	16 28 29.8	
	comp=Z,407nm,18.7s,MS3.9,baz=266,slow=33						
COLA	**College**	**24.31**	**49**	P	**P**	**16 21 10.8**	**-0.3**
	comp=Z,8.6nm,0.9s,mb4.2						
COLA	**College**	**24.31**	**49**	P	**P**	**16 21 10.8**	**-0.3**
COLA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.2						
MDJ	**Mudanjiang**	**25.24**	**259**	P	**P**	**16 21 18.9**	**-0.9**
MDJ				XP	sP	16 21 34.3	-0.2
MDJ				PCP	PcP	16 24 52.5	+0.3
MDJ				S	**S**	**16 25 39.9**	**-2.7**
MDJ				AMB	AMB		
	comp=Z,2.0nm,0.5s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,52nm,8.6s						
MDJ				LR	LR		
	comp=N,218nm,19.5s,MS3.9						
MDJ				LR	LR		
	comp=E,302nm,18.2s,MS3.9						
MDJ				LR	LR		
	comp=Z,385nm,19.5s,MS3.9						
MAJO	**Matsushiro**	**26.64**	**235**	*e*P	**P**	**16 21 31.0**	**-1.4**
MJAR	**Matsushiro Arr**	**26.64**	**235**	LR	LR	16 33 33.2	
	comp=Z,126nm,18.7s,MS3.5,baz=15,slow=40						
BOD	**Bodaibo**	**27.74**	**296**	*e*P	**P**	**16 21 42.7**	**+0.5**
BOD				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.7						
CN2	**Changchun**	**28.07**	**262**	*e*P	**P**	**16 21 44.6**	**-0.6**
CN2				*e*XP	sP	16 22 01.8	+1.8
CN2				*e*S	**S**	**16 26 22.8**	**-4.4**
CN2				LR	LR		
	comp=N,370nm,14.0s,MS4.3						
CN2				LR	LR		
	comp=E,360nm,14.0s,MS4.3						
INK	**Inuvik**	**29.85**	**41**	*e*P	**P**	**16 22 04.8**	**+4.0**
	comp=E,399nm,1.0s						
INK	**Inuvik**	**29.85**	**41**	*e*P	**P**	**16 22 04.8**	**+4.0**
INK				pmax	pmax		
	comp=Z,399nm,1.0s						
KSRS	**Korea Array**	**31.10**	**250**	P	**P**	**16 22 14.7**	**+2.6**
	comp=Z,1.3nm,0.8s,mb3.8,baz=30,slow=7.8,SNR=3.4						
KSRS				LR	LR	16 34 36.7	
	comp=Z,200nm,19.3s,MS3.8,baz=50,slow=36						
ULN	**Ulaanbaatar**	**36.00**	**283**	*e*P	**P**	**16 22 55.1**	**+0.5**
	comp=Z,7.8nm,1.2s,mb4.5						
ULN	**Ulaanbaatar**	**36.00**	**283**	*e*P	**P**	**16 22 55.1**	**+0.5**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
SONM	**Songino Array**	**36.38**	**283**	P	**P**	**16 22 59.4**	**+1.5**
	comp=Z,0.5nm,0.5s,mb3.8,baz=62,slow=7.5,SNR=10						
SONM				LR	LR	16 39 27.3	
	comp=Z,278nm,18.3s,MS4.1,baz=59,slow=39						
ZAK	**Zakamensk**	**36.65**	**288**	*e*P	**P**	**16 23 00.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
MOY	**Mondy**	**37.18**	**292**	*e*P	**P**	**16 23 13.3**	**+8.7**
HHC	**Hu-ho-hao-te**	**37.82**	**270**	*e*P	**P**	**16 23 09.9**	**-0.2**
HHC				AP	pP	16 23 22.4	+1.7
HHC				XP	sP	16 23 27.3	+2.2
HHC				*e*S	**S**	**16 28 55.1**	**-3.2**
HHC				XS	sS	16 29 15.3	-0.5
HHC				SCS	ScS	16 33 17.6	-1.5
HHC				LR	LR		
	comp=N,580nm,14.3s,MS4.6						
HHC				LR	LR		
	comp=E,508nm,16.6s,MS4.6						
HHC				LR	LR		
	comp=Z,306nm,15.5s,MS4.2						
BBB	**Bella Bella**	**37.90**	**67**	LR	LR	16 37 03.2	
	comp=Z,423nm,20.0s,MS4.2,baz=269,slow=34						
YKA	**Yellowknife Ar**	**39.09**	**46**	P	**P**	**16 23 19.6**	**-0.9**
YKA	**Yellowknife Ar**	**39.09**	**46**	*e*P	**P**	**16 23 23.1**	**+2.6**
YKA	**Yellowknife Ar**	**39.09**	**46**	P	**P**	**16 23 19.6**	**-0.9**
	comp=Z,1.3nm,0.8s,mb3.7,baz=299,slow=8.3,SNR=4.2						
RES	**Resolute Bay**	**39.68**	**24**	*e*P	**P**	**16 23 24.4**	**-1.0**
	comp=Z,92nm,0.9s,mb5.5						
RES	**Resolute Bay**	**39.68**	**24**	*e*P	**P**	**16 23 24.4**	**-0.9**
RES				pmax	pmax		
	comp=Z,92nm,0.9s,mb5.5						
NJ2	**Nanjing**	**40.05**	**254**	*e*P	**P**	**16 23 30.8**	**+1.9**
NJ2				AP	pP	16 23 42.9	+3.4
NJ2				XP	sP	16 23 48.4	+4.5
NJ2				PP	PP	16 25 08.1	+6.8
NJ2				S	**S**	**16 29 33.0**	**+0.8**
NJ2				XS	sS	16 29 53.0	+3.3
NJ2				LR	LR		
	comp=N,350nm,15.8s,MS4.5						
NJ2				LR	LR		
	comp=E,330nm,12.5s,MS4.5						
NJ2				LR	LR		
	comp=Z,340nm,12.5s,MS4.4						
NVS	**Novosibirsk**	**44.23**	**305**	*i* P	**P**	**16 24 09.0**	**+6.4**
NVS				*e*		16 25 52.0	
NVS				pmax	pmax		
	comp=N,18nm,1.6s						
NVS				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.6						
NVS				pmax	pmax		
	comp=E,19nm,1.8s						
EDM	**Edmonton**	**44.69**	**58**	P	**P**	**16 24 05.4**	**-0.9**
GTA	**Gaotai**	**45.42**	**278**	*e*P	**P**	**16 24 14.8**	**+2.5**
GTA				AP	pP	16 24 27.3	+4.2
GTA				XP	sP	16 24 32.0	+4.6
GTA				PCP	PcP	16 25 54.1	+3.1
GTA				PP	PP	16 26 00.3	+1.5
GTA				S	**S**	**16 30 55.3**	**+4.5**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.2						
GTA				AMB	AMB		
	comp=Z,129nm,8.7s						
GTA				LR	LR		
	comp=N,321nm,17.1s,MS4.5						
GTA				LR	LR		
	comp=E,280nm,16.7s,MS4.5						
GTA				LR	LR		
	comp=Z,230nm,17.5s,MS4.2						
LZH	**Lanzhou**	**45.48**	**271**	*e*P	**P**	**16 24 13.4**	**+0.6**
LZH				AP	pP	16 24 27.0	+3.4
LZH				XP	sP	16 24 30.5	+2.6
LZH				PCP	PcP	16 25 50.3	-0.9
LZH				PP	PP	16 26 03.1	+3.7
LZH				*e*S	**S**	**16 30 51.0**	**-0.7**
LZH				AMB	AMB		
	comp=Z,16nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,112nm,5.3s						
LZH				LR	LR		
	comp=N,633nm,14.2s						
LZH				LR	LR		
	comp=Z,851nm,17.7s,MS4.7						
MOD	**Modoc**	**48.43**	**74**	P	**P**	**16 24 35.0**	**-0.9**
	comp=Z,16nm,1.2s,mb4.9						
KURK	**Kurchatov**	**49.00**	**303**	*e*P	**P**	**16 24 39.8**	**-0.3**
	comp=Z,22nm,1.1s,mb5.1						
KURK	**Kurchatov**	**49.00**	**303**	*e*P	**P**	**16 24 39.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
WMQ	**Urumqi**	**49.05**	**290**	*e*P	**P**	**16 24 41.9**	**+1.4**
WMQ				AP	pP	16 24 54.4	+3.1
WMQ				XP	sP	16 24 59.9	+4.2
CD2	**Chengdu**	**49.32**	**267**	*e*P	**P**	**16 24 42.4**	**-0.4**
CD2				XP	sP	16 25 00.3	+2.3
CD2				PP	PP	16 26 37.3	+0.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=N,180nm,13.4s						
CD2				LR	LR		
	comp=Z,110nm,12.4s,MS4.1						
FCC	**Fort Churchill**	**49.45**	**42**	P	**P**	**16 24 40.4**	**-3.0**
	comp=Z,13nm,1.4s,mb4.8						
FCC	**Fort Churchill**	**49.45**	**42**	P	**P**	**16 24 40.4**	**-2.9**
FCC				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.8						
MK31	**Makanchi Array**	**49.83**	**297**	*e*P	**P**	**16 24 46.2**	**-0.2**
MKAR	**Makanchi Array**	**49.83**	**297**	*i* P	**P**	**16 24 46.5**	**+0.1**
MKAR	**Makanchi Array**	**49.83**	**297**	P	**P**	**16 24 45.9**	**-0.6**
	comp=Z,0.3nm,0.3s,mb3.8,baz=60,slow=7.4,SNR=7.0						
MKAR				LR	LR	16 46 52.6	
	comp=Z,85nm,19.9s,MS3.8,baz=216,slow=37						
MCMT	**McKenzie Canyo**	**50.39**	**66**	*e*P	**P**	**16 24 55.7**	**+5.0**
GYA	**Guiyang**	**51.10**	**260**	P	**P**	**16 24 56.6**	**+0.4**
GYA				AP	pP	16 25 10.3	+3.2
GYA				XP	sP	16 25 15.6	+4.1
GYA				PCP	PcP	16 26 12.8	+1.2
GYA				PP	PP	16 26 54.4	+1.5
GYA				SCP	ScP	16 30 03.3	-1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,70nm,5.2s						
GYA				LR	LR		
	comp=N,350nm,18.9s,MS4.6						
GYA				LR	LR		
	comp=E,370nm,19.4s,MS4.6						
GYA				LR	LR		
	comp=Z,390nm,19.6s,MS4.4						
QLMT	**Earthquake Lak**	**51.12**	**65**	*e*P	**P**	**16 24 57.3**	**+1.1**
BRVK	**Borovoye**	**51.22**	**310**	*e*P	**P**	**16 24 56.7**	**-0.1**
	comp=Z,11nm,1.1s,mb4.7						
BRVK	**Borovoye**	**51.22**	**310**	*e*P	**P**	**16 24 56.7**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
ARCES	**ARCESS Array B**	**51.74**	**343**	P	**P**	**16 24 59.5**	**-1.0**
	comp=Z,2.9nm,0.8s,mb4.3,baz=352,slow=5.5,SNR=2.6						
ARCES				LR	LR	16 50 32.3	
	comp=Z,123nm,18.0s,MS4.0,baz=344,slow=40						
LKWY	**Lake**	**51.83**	**65**	P	**P**	**16 25 01.2**	**-0.3**
	comp=Z,5.3nm,0.9s,mb4.5						
LKWY	**Lake**	**51.83**	**65**	P	**P**	**16 25 01.3**	**-0.2**
LKWY				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
NVAR	**Mina Array Bea**	**51.96**	**76**	P	**P**	**16 25 03.0**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=294,slow=6.5,SNR=4.2						

ISCO				pmax	pmax			
	comp=Z,22nm,1.4s,mb5.0							
FINES	**FINES Array B**	**58.91**	**339**	P	**P**	**16**	**25**	**52.2 +0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=12,slow=7.3,SNR=2.8							
TAPN	**Taplejung**	**61.10**	**277**	*eP*	**P**	**16**	**26**	**08.3 +0.6**
	comp=Z,23nm,1.1s,mb5.2							
ODAN	**Odare**	**61.66**	**277**	*eP*	**P**	**16**	**26**	**11.4 -0.1**
JIRN	**Jiri**	**61.71**	**278**	*eP*	**P**	**16**	**26**	**13.4 +1.6**
NB2	**NORSAR Subarra**	**61.84**	**346**	P	**P**	**16**	**26**	**11.2 -1.0**
	comp=Z,3.3nm,1.0s,mb4.4,baz=16,slow=6.9							
NB2	**NORSAR Subarra**	**61.84**	**346**	P	**P**	**16**	**26**	**11.2 -1.0**
NB2				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.4							
NOA	**NORSAR Array B**	**61.84**	**346**	P	**P**	**16**	**26**	**11.3 -0.9**
NOA				LR	LR	16	53	25.8
NOA	**NORSAR Array B**	**61.84**	**346**	P	**P**	**16**	**26**	**11.3 -0.9**
	comp=Z,4.3nm,1.3s,mb4.4,baz=19,slow=6.7,SNR=2.6							
NOA				LR	LR	16	53	25.8
	comp=Z,51nm,20.8s,MS3.7,baz=160,slow=36							
OBN	**Obninsk**	**61.94**	**330**	*eP*	**P**	**16**	**26**	**14.7 +1.8**
OBN				*e*		16	28	27.9
OBN				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.6							
KKN	**Kakani**	**62.12**	**279**	*eP*	**P**	**16**	**26**	**15.4 +0.8**
GKN	**Gorkha**	**62.31**	**280**	*eP*	**P**	**16**	**26**	**17.3 +1.4**
	comp=Z,23nm,1.0s,mb5.3							
KOLN	**Koldanda**	**63.07**	**280**	*eP*	**P**	**16**	**26**	**20.7 -0.2**
MNTX	**Cornudas Mount**	**64.00**	**71**	*eP*	**P**	**16**	**26**	**26.4 -0.6**
	comp=Z,4.8nm,1.5s,mb4.3							
MNTX				*e*		16	26	34.0
HNR	**Honiara**	**65.06**	**186**	LR	LR	16	49	33.8
	comp=Z,172nm,19.9s,MS4.2,baz=357,slow=31							
KBL	**Kabul**	**65.62**	**296**	P	**P**	**16**	**26**	**36.2 -1.3**
	comp=Z,3.8nm,0.3s,mb4.9							
TXAR	**Lajitas Array**	**66.77**	**72**	*eP*	**P**	**16**	**26**	**44.1 -0.8**
TXAR	**Lajitas Array**	**66.77**	**72**	P	**P**	**16**	**26**	**43.1 -1.8**
	comp=Z,0.4nm,0.4s,mb3.8,baz=306,slow=5.4,SNR=7.2							
TXAR				LR	LR	16	54	43.7
	comp=Z,53nm,18.9s,MS3.8,baz=0.0,slow=35							
AKASG	**Malin Array Be**	**67.91**	**332**	LR	LR	17	00	26.9
	comp=Z,122nm,19.6s,MS4.1,baz=25,slow=39							
OJC	**Ojcow**	**70.64**	**337**	*eP*	**P**	**16**	**27**	**16.0 +7.3**
CLL	**Collm**	**70.94**	**342**	*eP*	**P**	**16**	**27**	**16.0 +5.5**
	comp=Z,9.0nm,1.3s,mb4.5							
CLL	**Collm**	**70.94**	**342**	*eP*	**P**	**16**	**27**	**16.0 +5.5**
CLL				pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.5							
CLL	**Collm**	**70.94**	**342**	*eP*	**P**	**16**	**27**	**11.0 +0.5**
CLL				*ex*	x	16	27	16.0
	comp=Z,9.0nm,1.3s							
DPC	**Dobruska-Polom**	**71.24**	**340**	*eP*	**P**	**16**	**27**	**20.1 +7.8**
OKC	**Ostrava-Krasne**	**71.36**	**338**	*eP*	**P**	**16**	**27**	**20.4 +7.3**
PRU	**Pruhonice**	**71.93**	**341**	*eP*	**P**	**16**	**27**	**24.2 +7.7**
VRAC	**Vranov**	**72.18**	**339**	LR	LR	17	03	42.7
	comp=Z,65nm,18.2s,MS3.9,baz=354,slow=40							
KHC	**Kasperske Hory**	**72.93**	**341**	*eP*	**P**	**16**	**27**	**29.7 +7.2**
KHC				*ex*	x	16	27	38.0
GERES	**GERESS Array B**	**73.18**	**341**	P	**P**	**16**	**27**	**24.5 +0.5**
	comp=Z,0.2nm,0.3s,mb3.6,baz=136,slow=24,SNR=2.3							
GERES				LR	LR	17	03	15.8
	comp=Z,89nm,19.7s,MS4.0,baz=56,slow=39							
MLR	**Muntele Rosu**	**73.56**	**332**	LR	LR	17	02	26.8
	comp=Z,148nm,20.4s,MS4.1,baz=33,slow=38							
WRA	**Warramunga Arr**	**79.85**	**210**	*i* P	**P**	**16**	**28**	**00.4 -1.5**
WRA	**Warramunga Arr**	**79.85**	**210**	P	**P**	**16**	**28**	**01.6 -0.3**
	comp=Z,0.3nm,0.5s,mb3.5,baz=25,slow=6.2,SNR=8.4							
MMAI	**Mount Meron Ar**	**81.91**	**320**	LR	LR	17	11	48.6
	comp=Z,41nm,18.0s,MS3.8,baz=30,slow=41							
PPT	**Papeete**	**82.25**	**137**	LR	LR	16	56	43.5
	comp=Z,127nm,20.8s,MS4.3,baz=76,slow=30							
IDI	**Anoyia**	**83.32**	**328**	LR	LR	17	08	05.3
	comp=Z,60nm,20.2s,MS4.0,baz=271,slow=38							
ASAR	**Alice Springs**	**83.51**	**209**	P	**P**	**16**	**28**	**21.5 +0.4**
	comp=Z,0.5nm,0.5s,mb3.9,baz=18,slow=4.7,SNR=32							
EIL	**Elat**	**85.08**	**318**	LR	LR	17	12	18.8
	comp=Z,48nm,19.9s,MS3.9,baz=212,slow=40							
QSPA	**South Pole Qui**	**145.46**	**180**	PKPbc	PKPbc	16	35	28.0 -1.7
	comp=Z,1.5nm,0.7s,baz=31,slow=3.3,SNR=10							

IDC 22 16:19:35.4±17.0, 556S×15419E, h204km±185km, mb2.7/5, mb1 3.0/6, mb1mx2.9/15, mbtmp2.9/6, ML3.7/1, Error ellipse: s-maj=67.7km s-min=25.8km az=161.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.38**	**207**	P	P	16 23 15.1	+1.7
	0.2nm,0.3s,baz=38,slow=12,SNR=2.9						
DZM	**Mont Dzumac**	**20.25**	**145**	P	P	16 23 55.1	-0.1
	0.4nm,0.5s,baz=312,slow=14,SNR=7.8						
WRA	**Warramunga Arr**	**24.03**	**232**	P	P	16 24 32.0	+0.1
	0.4nm,0.5s,baz=57,slow=10,SNR=10						
ASAR	**Alice Springs**	**26.57**	**225**	P	P	16 24 54.5	-0.3
	0.1nm,0.3s,baz=54,slow=9.2,SNR=8.4						
SONM	**Songino Array**	**67.70**	**327**	P	P	16 30 11.2	+0.5
	0.2nm,0.4s,baz=137,slow=5.5,SNR=7.2						
MKAR	**Makanchi Array**	**81.80**	**319**	P	P	16 31 31.6	0.0
	0.1nm,0.2s,baz=108,slow=6.6,SNR=2.0						

*NEIC **22** 16:48:12.9, 3822S×17590E, h183km, MG4.7(WEL), After WEL.*

WEL 22 16:48:12.7±0.2, 3822S×17591E, h185km±2km, ML4.7/25, Error ellipse: s-maj=1.6km s-min=1.1km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARZ	**Kaharoa**	**0.33**	**54**	PN	Pn	16 48 37.5	+0.1
WATZ	**Wairara**	**0.51**	**195**	PN	Pn	16 48 38.5	+0.5
WATZ				SN	Sn	16 48 57.7	0.0
TGRZ	**Tauranga**	**0.56**	**30**	P	Pn	16 48 38.1	-0.2
TGRZ				S	Sn	16 48 58.3	+0.4
TGRZ	**Tauranga**	**0.56**	**30**	PN	Pn	16 48 38.1	-0.2
TGRZ				SN	Sn	16 48 58.3	+0.4
OPRZ	**Ohinepanea**	**0.63**	**55**	PN	Pn	16 48 38.6	0.0
OPRZ				SN	Sn	16 48 58.9	+0.4
RATZ	**Rangitukua**	**0.66**	**189**	P	Pn	16 48 38.7	0.0
RATZ	**Rangitukua**	**0.66**	**189**	PN	Pn	16 48 38.7	0.0
HATZ	**Hinemaiaia**	**0.69**	**168**	PN	Pn	16 48 38.8	-0.1
RITZ	**Rihia Road**	**0.76**	**183**	PN	Pn	16 48 39.7	+0.4
KATZ	**Kakaramea**	**0.78**	**192**	P	Pn	16 48 39.5	+0.1
KATZ	**Kakaramea**	**0.78**	**192**	PN	Pn	16 48 39.5	+0.1
HIZ	**Hauiti**	**0.88**	**250**	*eP*	Pn	16 48 39.6	-0.4
HIZ	**Hauiti**	**0.88**	**250**	*eP*	Pn	16 48 39.6	-0.4
HIZ				SN	Sn	16 49 00.6	-0.5
KRVZ	**Karewarewa**	**0.90**	**193**	PN	Pn	16 48 40.2	0.0
TWVZ	**Taurewa**	**0.93**	**203**	P	Pn	16 48 40.3	0.0
TWVZ				S	Sn	16 49 01.2	-0.6
TWVZ	**Taurewa**	**0.93**	**203**	PN	Pn	16 48 40.3	-0.1
TWVZ				SN	Sn	16 49 01.2	-0.6
WTVZ	**West Tongariro**	**0.93**	**195**	P	Pn	16 48 40.4	0.0
WTVZ				S	Sn	16 49 01.6	-0.3
WTVZ	**West Tongariro**	**0.93**	**195**	PN	Pn	16 48 40.4	+0.1
WTVZ				SN	Sn	16 49 01.6	-0.3
URZ	**Urewera**	**0.95**	**93**	P	Pn	16 48 40.2	-0.3
URZ	**Urewera**	**0.95**	**93**	PN	Pn	16 48 40.2	-0.3
URZ				SN	Sn	16 49 00.6	-1.2
OTVZ	**Oturere**	**0.97**	**191**	PN	Pn	16 48 40.9	+0.3
NGZ	**Ngauruhoe**	**0.99**	**194**	P	Pn	16 48 40.9	+0.2
NGZ	**Ngauruhoe**	**0.99**	**194**	PN	Pn	16 48 40.9	+0.2
WPVZ	**Whakapapa**	**1.03**	**196**	P	Pn	16 48 41.2	+0.2
WPVZ	**Whakapapa**	**1.03**	**196**	PN	Pn	16 48 41.2	+0.2
BKZ	**Black Stump Fm**	**1.06**	**154**	P	Pn	16 48 41.3	+0.1
BKZ	**Black Stump Fm**	**1.06**	**154**	PN	Pn	16 48 41.3	+0.1
TUVZ	**Tukino**	**1.07**	**191**	P	Pn	16 48 41.6	+0.3
TUVZ	**Tukino**	**1.07**	**191**	PN	Pn	16 48 41.6	+0.3
FWVZ	**Far West T-bar**	**1.08**	**195**	PN	Pn	16 48 41.7	+0.3
TRVZ	**Turoa**	**1.12**	**194**	PN	Pn	16 48 42.0	+0.3
WNVZ	**Wahianoa**	**1.14**	**192**	P	Pn	16 48 42.1	+0.2
WNVZ	**Wahianoa**	**1.14**	**192**	PN	Pn	16 48 42.1	+0.2
PKVZ	**Pokaka**	**1.16**	**202**	PN	Pn	16 48 42.0	0.0
MOVZ	**Moawhango**	**1.20**	**186**	P	Pn	16 48 42.0	-0.3
MOVZ	**Moawhango**	**1.20**	**186**	PN	Pn	16 48 42.0	-0.3
MTVZ	**Mangateitei**	**1.22**	**196**	PN	Pn	16 48 42.5	0.0
MWZ	**Matawai**	**1.28**	**96**	P	Pn	16 48 43.3	+0.2
MWZ	**Matawai**	**1.28**	**96**	PN	Pn	16 48 43.3	+0.3
KUZ	**Kuaotunu**	**1.47**	**354**	P	Pn	16 48 44.8	0.0
KUZ	**Kuaotunu**	**1.47**	**354**	PN	Pn	16 48 44.8	0.0
RAEZ	**Rainy Point**	**1.59**	**227**	P	Pn	16 48 46.2	+0.3
RAEZ	**Rainy Point**	**1.59**	**227**	PN	Pn	16 48 46.2	+0.3
KNZ	**Kokohu**	**1.60**	**121**	P	Pn	16 48 46.4	+0.4
KNZ	**Kokohu**	**1.60**	**121**	PN	Pn	16 48 46.4	+0.4
WAZ	**Wanganui**	**1.70**	**205**	P	Pn	16 48 46.6	-0.3
WAZ	**Wanganui**	**1.70**	**205**	PN	Pn	16 48 46.6	-0.3
PKE	**Pukeiti**	**1.79**	**236**	P	Pn	16 48 48.0	+0.1
PKE	**Pukeiti**	**1.79**	**236**	PN	Pn	16 48 48.0	+0.2
TSZ	**Takapari Road**	**1.84**	**179**	P	Pn	16 48 47.9	-0.5
TSZ	**Takapari Road**	**1.84**	**179**	PN	Pn	16 48 47.9	-0.4
PUZ	**Puketiti**	**1.86**	**86**	P	Pn	16 48 48.7	+0.1
PUZ	**Puketiti**	**1.86**	**86**	PN	Pn	16 48 48.7	+0.1
NWEZ	**Newall Road**	**1.91**	**236**	P	Pn	16 48 49.3	+0.2
NWEZ	**Newall Road**	**1.91**	**236**	PN	Pn	16 48 49.3	+0.2
PXZ	**Pawanui**	**1.96**	**158**	PN	Pn	16 48 49.5	-0.1
MXZ	**Matakaoa Point**	**2.01**	**72**	P	Pn	16 48 50.8	+0.6
MXZ	**Matakaoa Point**	**2.01**	**72**	PN	Pn	16 48 50.8	+0.6
MRZ	**Mangatainoka R**	**2.46**	**186**	P	Pn	16 48 53.6	-1.5
MRZ	**Mangatainoka R**	**2.46**	**186**	PN	Pn	16 48 53.6	-1.5
BFZ	**Birch Farm**	**2.48**	**174**	P	Pn	16 48 54.2	-1.1
BFZ	**Birch Farm**	**2.48**	**174**	PN	Pn	16 48 54.2	-1.1
TIWZ	**Tintock**	**2.56**	**180**	PN	Pn	16 48 54.9	-1.4
WCZ	**Waipu Caves**	**2.59**	**331**	*eP*	Pn	16 48 56.6	-0.1
WCZ	**Waipu Caves**	**2.59**	**331**	PN	Pn	16 48 56.6	-0.2
KIW	**Kapiti Island**	**2.75**	**196**	P	Pn	16 48 56.6	-1.9
KIW	**Kapiti Island**	**2.75**	**196**	PN	Pn	16 48 56.6	-1.9
MTW	**Mount Morrison**	**2.96**	**186**	P	Pn	16 48 58.8	-2.2
MTW	**Mount Morrison**	**2.96**	**186**	PN	Pn	16 48 58.8	-2.2
CAW	**Cannon Point**	**2.96**	**192**	P	Pn	16 48 59.1	-1.9
CAW	**Cannon Point**	**2.96**	**192**	PN	Pn	16 48 59.1	-1.9
DUWZ	**D'Urville Isla**	**3.01**	**210**	PN	Pn	16 48 59.3	-2.2
MRW	**Makara Radio**	**3.15**	**197**	P	Pn	16 49 01.0	-2.3
MRW	**Makara Radio**	**3.15**	**197**	PN	Pn	16 49 01.0	-2.3
PAWZ	**Paruwai Farm**	**3.19**	**186**	P	Pn	16 49 01.5	-2.2
PAWZ	**Paruwai Farm**	**3.19**	**186**	PN	Pn	16 49 01.5	-2.2
TRWZ	**Traveller**	**3.19**	**183**	PN	Pn	16 49 01.6	-2.1
WEL	**Wellington**	**3.19**	**196**	P	Pn	16 49 01.6	-2.1
WEL	**Wellington**	**3.19**	**196**	PN	Pn	16 49 01.7	-2.1
SNZO	**South Karori**	**3.23**	**196**	PN	Pn	16 49 01.7	-2.5
MSWZ	**Moikau Station**	**3.24**	**189**	P	Pn	16 49 01.9	-2.4
MSWZ	**Moikau Station**	**3.24**	**189**	PN	Pn	16 49 01.9	-2.5
TCW	**Tory Channel**	**3.25**	**202**	P	Pn	16 49 02.1	-2.4
TCW	**Tory Channel**	**3.25**	**202**	PN	Pn	16 49 02.1	-2.4
BHW	**Baring Head**	**3.29**	**194**	P	Pn	16 49 02.4	-2.6
BHW	**Baring Head**	**3.29**	**194**	PN	Pn	16 49 02.4	-2.6
TUWZ	**Tuamarina**	**3.55**	**205**	PN	Pn	16 49 05.3	-2.9
NNZ	**Nelson**	**3.58**	**212**	P	Pn	16 49 05.8	-2.7
NNZ	**Nelson**	**3.58**	**212**	PN	Pn	16 49 05.8	-2.7
QRZ	**Quartz Range**	**3.69**	**224**	*eP*	Pn	16 49 06.6	-3.4
QRZ	**Quartz Range**	**3.69**	**224**	PN	Pn	16 49 06.6	-3.4
CMWZ	**Cape Campbell**	**3.76**	**200**	PN	Pn	16 49 09.4	-1.4
BSWZ	**Blackbirch Sta**	**3.83**	**203**	P	Pn	16 49 09.0	-2.7
BSWZ	**Blackbirch Sta**	**3.83**	**203**	PN	Pn	16 49 09.0	-2.6
THZ	**Tophouse**	**4.23**	**212**	PN	Pn	16 49 13.2	-3.5
KHZ	**Kahutara**	**4.57**	**203**	P	Pn	16 49 18.2	-2.9
KHZ	**Kahutara**	**4.57**	**203**	PN	Pn	16 49 18.2	-3.0
DSZ	**Denniston Nort**	**4.73**	**220**	*eP*	Pn	16 49 19.2	-4.0
DSZ	**Denniston Nort**	**4.73**	**220**	PN	Pn	16 49 19.2	-3.9
LTZ	**Lake Taylor**	**5.34**	**210**	PN	Pn	16 49 26.4	-4.6
CRLZ	**Canterbury Las**	**5.91**	**204**	PN	Pn	16 49 33.4	-4.9
MQZ	**McQueen's Vall**	**6.01**	**203**	PN	Pn	16 49 34.9	-4.9

*ISCJB **22** 16:48:11.1±1.1, 2214S±009×17979W±009, h538km±17km, mb4.2/18, Error ellipse: s-maj=16.7km s-min=9.9km az=137.5*

*NEIC **22** 16:48:12.8±1.1, 2223S×17973W, h547km±13km, mb4.6/12, Error ellipse: s-maj=12.6km s-min=8.5km az=142.0*

*IDC **22** 16:48:15.7±2.1, 2223S×17990W, h576km±24km, mb3.3/8, mb1 3.7/9, mb1mx3.5/15, mbtmp3.4/9, Error ellipse: s-maj=22.3km s-min=12.9km az=161.0*

ISC 22 16:48:12.3±1.3, 2220S±010×17979W±010, h537km±18km, n35, σ0°87/33, mb4.2/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.22**	**44**	*eP*	**P**	**16 50 42.5**	**-0.3**
AFI				*eS*	**S**	**16 52 41.2**	**-5.4**
DZM	**Mont Dzumac**	**12.76**	**268**	P	**P**	**16 51 06.0**	**+7.2**
	0.1nm,0.3s,baz=73,slow=18,SNR=11						
FUNA	**Funafuti**	**13.63**	**356**	P	**P**	**16 51 04.8**	**-3.1**
URZ	**Urewera**	**16.23**	**189**	P	**P**	**16 51 34.5**	**+0.1**
	1.9nm,0.3s,baz=86,slow=1.5,SNR=3.6						
URZ				S	**S**	**16 54 06.8**	**-13**
	0.7nm,0.3s,baz=52,slow=7.7,SNR=8.0						
ARMA	**Armidale**	**26.84**	**246**	*eP*	**P**	**16 53 11.8**	**+1.8**
PPT	**Papeete**	**28.75**	**86**	*eLR*	LR	16 53 41.2	
	19?m,24.0s,baz=341						
CNB	**Canberra Magne**	**29.90**	**237**	*eP*	**P**	**16 53 36.8**	**+0.2**
	31nm,0.7s,mb4.9						
CTA	**Charters Tower**	**31.70**	**267**	*eP*	**P**	**16 53 53.7**	**+1.4**
	12nm,0.5s,mb4.7						
CTAO	**Charters Tower**	**31.70**	**267**	*eP*	**P**	**16 53 53.4**	**+1.1**
	18nm,0.6s,mb4.8						
TAU	**Tasmania Unive**	**34.25**	**225**	P	**P**	**16 54 13.0**	**-0.5**
	5.9nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**35.56**	**246**	*eP*	**P**	**16 54 25.2**	**+0.6**
	7.1nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**35.56**	**246**	*eP*	**P**	**16 54 25.0**	**+0.4**
	11nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**35.56**	**246**	P	**P**	**16 54 25.3**	**+0.7**
	13nm,0.7s,mb4.5,baz=92,slow=9.5,SNR=41						
ASAR	**Alice Springs**	**42.53**	**259**	P	**P**	**16 55 21.2**	**+0.3**
	11nm,0.8s,mb4.5,baz=98,slow=7.6,SNR=131						
ASAR				S	**S**	**17 01 02.3**	**-2.3**
	0.5nm,0.7s,baz=93,slow=17,SNR=3.9						
WB2	**Warramunga Arr**	**42.73**	**264**	*eP*	**P**	**16 55 22.4**	**-0.2**
WRA	**Warramunga Arr**	**42.74**	**264**	P	**P**	**16 55 22.5**	**-0.1**
	2.9nm,0.2s,mb4.4,baz=96,slow=7.9,SNR=131						
WRA				ScP	ScP	16 59 59.0	-2.9
	1.3nm,0.8s,baz=95,slow=4.1,SNR=7.9						
WRA				S	**S**	**17 01 03.9**	**-3.8**
	0.4nm,0.8s,baz=97,slow=14,SNR=3.4						
KAKA	**Kakadu**	**46.38**	**273**	*eP*	**P**	**16 55 50.8**	**+0.1**
	8.2nm,0.3s,mb4.7						
FORT	**Forrest**	**47.11**	**248**	*eP*	**P**	**16 55 55.3**	**-0.7**
	36nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.17**	**264**	*eP*	**P**	**16 56 26.5**	**+0.3**
	8.8nm,0.7s,mb4.2						
MBWA	**Marble Bar**	**55.87**	**259**	*eP*	**P**	**16 56 58.8**	**-0.7**
	17nm,0.5s,mb4.5						
SBA	**Scott Base**	**56.08**	**183**	*eP*	**P**	**16 57 00.3**	**+0.3**
	5.2nm,1.0s,mb3.7						
VNDA	**Vanda**	**56.09**	**185**	P	**P**	**16 56 59.6**	**-0.4**
	1.6nm,0.7s,mb3.4,baz=2.7,slow=8.0						
QSPA	**South Pole Qui**	**67.88**	**180**	*eP*	**P**	**16 58 14.8**	**-1.8**
	9.8nm,0.9s,mb4.3						
MJAR	**Matsushiro Art**	**70.61**	**325**	P	**P**	**16 58 32.8**	**-0.8**
	1.6nm,0.7s,mb3.7,baz=154,slow=6.0,SNR=3.6						
KSM	**Kuching**	**72.02**	**279**	*eP*	**P**	**16 58 42.5**	**+0.1**
NVAR	**Mina Array Bea**	**83.40**	**44**	P	**P**	**16 59 44.2**	**+1.0**
NVAR	**Mina Array Bea**	**83.40**	**44**	P	**P**	**16 59 44.2**	**+1.0**
	0.9nm,0.8s,mb3.4,baz=209,slow=6.4,SNR=6.6						
MA2	**Magadan**	**84.98**	**345**	P	**P**	**16 59 50.9**	**+0.4**
	4.1nm,0.9s,mb4.0						
TXAR	**Lajitas Array**	**89.37**	**58**	P	**P**	**17 00 12.7**	**+0.8**
	1.0nm,1.0s,mb3.6,baz=201,slow=6.9,SNR=5.8						
PDAR	**Pinedale Array**	**91.33**	**44**	P	**P**	**17 00 20.9**	**+0.2**
	0.2nm,0.7s,mb3.2,baz=160,slow=2.9,SNR=3.7						
MKAR	**Makanchi Array**	**111.14**	**313**	PKiKP	PKiKP	17 05 43.4	-1.4
	0.1nm,0.2s,baz=80,slow=2.5,SNR=2.0						
ARCES	**ARCESS Array B**	**130.26**	**349**	PKP	PKPdf	17 06 20.2	-0.6
	2.1nm,0.8s,baz=122,slow=1.2,SNR=3.6						
AKASG	**Malin Array Be**	**143.64**	**329**	PKP	PKPdf	17 06 43.7	-2.1
	1.7nm,0.4s,baz=44,slow=4.1,SNR=11						
MMAI	**Mount Meron Ar**	**147.15**	**297**	PKPbc	PKPbc	17 06 55.8	+0.3
	0.9nm,0.3s,baz=52,slow=6.8,SNR=4.1						
CLL	**Collm**	**149.28**	**344**	*e*PKPbc	PKPbc	17 07 00.0	-0.2
	comp=Z,13nm,1.3s						

*IDC **22** 17:17:48.3±1.3, 4198S×17287E, h52km±18km, mb3.4/2, mb1 3.8/4, mb1mx3.6/11, mbtmp3.7/4, ML4.0/2, MS2.6/1, Ms1 2.6/1, ms1mx2.6/9, Error ellipse: s-maj=36.2km s-min=9.0km az=130.0*

*ISCJB **22** 17:17:49.3±0.3, 42.11S±004×172.79E±006, h99km±6km, mb3.8/3, Error ellipse: s-maj=8.9km s-min=3.2km az=39.8*

*WEL **22** 17:17:51.3±0.2, 4201S×17271E, h79km±1km, ML4.7/25, Error ellipse: s-maj=1.6km s-min=1.2km az=90.0, reported intensity MM 4.*

WEL Felt from Nelson to Canterbury, and from West Coast to Marlborough, maximum.

*NEIC **22** 17:17:51.3, 4201S×17271E, h80km, mb4.0/1, ML4.7(WEL), After WEL.*

ISC 22 17:17:50.6±0.3, 4210S±003×17277E±005, h84km±5km,

n143, σ0°93/147, mb3.8/3, 5C-8D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.35**	**17**	P	Pn	**17 18 03.0**	**-0.6**
THZ				S	Sn	**17 18 11.5**	**-1.8**
THZ	**Tophouse**	**0.35**	**17**	⇓PN	Pn	**17 18 03.0**	**-0.6**
THZ				SN	Sn	**17 18 11.2**	**-2.0**
KHZ	**Kahutara**	**0.65**	**120**	P	Pn	**17 18 07.4**	**+1.3**
KHZ				S	Sn	**17 18 18.8**	**+1.1**
KHZ	**Kahutara**	**0.65**	**120**	⇑PN	Pn	**17 18 07.4**	**+1.3**
KHZ				SN	Sn	**17 18 18.8**	**+1.1**
LTZ	**Lake Taylor**	**0.78**	**208**	P	Pn	**17 18 08.9**	**+1.5**
LTZ	**Lake Taylor**	**0.78**	**208**	⇓PN	Pn	**17 18 08.9**	**+1.5**
DSZ	**Denniston Nort**	**0.80**	**296**	P	Pn	**17 18 06.9**	**-0.8**
DSZ	**Denniston Nort**	**0.80**	**296**	⇑PN	Pn	**17 18 06.9**	**-0.8**
BSWZ	**Blackbirch Sta**	**0.91**	**65**	P	Pn	**17 18 09.7**	**+0.9**
BSWZ	**Blackbirch Sta**	**0.91**	**65**	⇑PN	Pn	**17 18 09.7**	**+0.9**
NNZ	**Nelson**	**0.99**	**28**	P	Pn	**17 18 09.7**	**-0.1**
NNZ	**Nelson**	**0.99**	**28**	⇓PN	Pn	**17 18 09.7**	**0.0**
TUWZ	**Tuamarina**	**1.10**	**53**	⇓PN	Pn	**17 18 11.6**	**+0.5**
CMWZ	**Cape Campbell**	**1.13**	**73**	P	Pn	**17 18 12.7**	**+1.3**
CMWZ	**Cape Campbell**	**1.13**	**73**	PN	Pn	**17 18 12.7**	**+1.2**
QRZ	**Quartz Range**	**1.28**	**352**	P	Pn	**17 18 12.2**	**-1.1**
QRZ	**Quartz Range**	**1.28**	**352**	⇓PN	Pn	**17 18 12.2**	**-1.2**
TCW	**Tory Channel**	**1.43**	**52**	P	Pn	**17 18 15.6**	**+0.4**
TCW	**Tory Channel**	**1.43**	**52**	⇓PN	Pn	**17 18 15.6**	**+0.4**
CRLZ	**Canterbury Las**	**1.48**	**184**	P	Pn	**17 18 17.0**	**+1.2**
CRLZ	**Canterbury Las**	**1.48**	**184**	⇑PN	Pn	**17 18 17.0**	**+1.2**
DUWZ	**D'Urville Isla**	**1.56**	**34**	⇓PN	Pn	**17 18 17.4**	**+0.7**
MQZ	**McQueen's Vall**	**1.61**	**183**	P	Pn	**17 18 18.4**	**+0.9**
MQZ	**McQueen's Vall**	**1.61**	**183**	⇑PN	Pn	**17 18 18.4**	**+0.9**
SNZO	**South Karori**	**1.65**	**62**	P	Pn	**17 18 18.1**	**+0.1**
SNZO				*e*Sn	Sn	**17 18 38.8**	**+0.1**
SNZO	**South Karori**	**1.65**	**62**	⇓PN	Pn	**17 18 18.1**	**+0.1**
MRW	**Makara Radio**	**1.69**	**60**	P	Pn	**17 18 18.5**	**+0.1**
MRW	**Makara Radio**	**1.69**	**60**	PN	Pn	**17 18 18.5**	**+0.1**
WEL	**Wellington**	**1.70**	**62**	P	Pn	**17 18 18.9**	**+0.3**
WEL	**Wellington**	**1.70**	**62**	PN	Pn	**17 18 18.9**	**+0.2**
BHW	**Baring Head**	**1.71**	**67**	P	Pn	**17 18 18.9**	**+0.1**
BHW	**Baring Head**	**1.71**	**67**	PN	Pn	**17 18 18.9**	**0.0**
WVZ	**Waitaha Valley**	**

1.8nm,0.9s,baz=44,slow=2.7,SNR=2.9
TORD Torodi Ar. Bea 150.13 198 PKPbc PKPbc 17 37 33.5 +1.6
1.1nm,0.7s,baz=170,slow=1.8,SNR=5.2

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*CSEM **22** 17:24:55.1±0.3, 4008N×2156E, h2km, MD2.9, Error ellipse: s-maj=14.8km s-min=4.8km az=73.0*
*SKO **22** 17:24:56.2, 4006N×2162E, h1km*
ATH 22 17:24:53.0, 4022N×2209E, h24km±12km**, MD2.9**/3**, 2C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.26**	**290**	↑*i* PB	Pb	17 25 00.0	+0.7
KZN				*e* SB	Sb	17 25 04.1	+0.5
THL	**Klokotos Trika**	**0.66**	**185**	↑*i* PN	Pn	17 25 06.0	-0.8
BIA	**Bitola**	**0.99**	**324**	*e* Pg	Pn	17 25 14.0	+2.7
BIA				*e* Sg	Sb	17 25 27.6	+3.6
KRUS	**Krusevo**	**1.31**	**331**	*e* Pg	Pn	17 25 20.8	+5.0
KRUS				*e* Sg	Sn	17 25 38.1	+5.6
EVR	**Evrytania**	**1.32**	**190**	*e* PB	Pb	17 25 16.6	-0.5
EVR				*e* SN	Sn	17 25 36.8	+4.1
OHR	**Ohrid**	**1.33**	**313**	*e* Pg	Pn	17 25 17.7	+1.7
OHR				*e* Sg	Sn	17 25 35.3	+2.4
OHR	**Ohrid**	**1.33**	**313**	*e* Pg	Pn	17 25 17.7	+1.7
OHR				*e* Sg	Sn	17 25 35.2	+2.3

IDC 22 17:35:10.4±11.0, 2189N×14297E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, Error ellipse: s-maj=450.2km s-min=23.3km az=75.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**39.06**	**320**	P	P	17 42 38.9	-0.2
	0.2nm,0.5s,baz=137,slow=7.7,SNR=4.5						
WRA	**Warramunga Arr**	**42.43**	**192**	P	P	17 43 07.1	+0.1
	0.7nm,0.9s,baz=13,slow=9.0,SNR=4.3						
ASAR	**Alice Springs**	**46.14**	**192**	P	P	17 43 36.5	-0.2
	0.6nm,0.6s,baz=18,slow=9.3,SNR=16						
MKAR	**Makanchi Array**	**54.42**	**313**	P	P	17 44 39.6	+0.3
	0.1nm,0.2s,baz=95,slow=8.3,SNR=2.7						

IDC 22 17:44:42.8±1.4, 107S×12737E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.5/14, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=125.5km s-min=21.5km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.95**	**160**	P	Pn	17 49 16.5	-1.7
	0.1nm,0.3s,baz=340,slow=11,SNR=13						
ASAR	**Alice Springs**	**23.34**	**165**	P	P	17 49 53.1	+0.2
	0.6nm,0.5s,baz=344,slow=12,SNR=10						
SONM	**Songino Array**	**52.03**	**342**	P	P	17 53 54.7	+0.6
	0.2nm,0.6s,baz=160,slow=8.9,SNR=3.0						
MKAR	**Makanchi Array**	**61.87**	**327**	P	P	17 55 03.5	-0.4
	0.7nm,0.5s,baz=124,slow=8.3,SNR=9.0						

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*MOS **22** 17:45:18.9±0.6, 4364N×4416E, h11km, mb3.6/1, Error ellipse: s-maj=11.1km s-min=7.1km az=95.5*
*ISCJB **22** 17:45:19.9±0.4, 4365N±002×4413E±003, h11km, Error ellipse: s-maj=3.5km s-min=2.9km az=34.7*
*TIF **22** 17:45:19.0, 4364N×4411E, h8km±1km*
ISC 22 17:45:19.9±0.8, 4365N±002×4412E±004, h18km±20km**, n16, σ0§81/32, 5C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRTR	**Priterechnaya**	**0.15**	**50**	‖ *i* PG	**Pg**	**17 45 23.1**	**-1.1**
PRTR				*i* S	**Sg**	**17 45 26.0**	**-1.1**
KMSR	**Komsomolskaya**	**0.31**	**156**	*i* PG	**Pg**	**17 45 25.7**	**-0.8**
KMSR				*i* S	**Sg**	**17 45 30.8**	**-0.2**
BTKR	**Batakoyurt**	**0.41**	**132**	*e* PG	**Pg**	**17 45 28.0**	**-0.4**
BTKR				*e* S	**Sg**	**17 45 34.6**	**+0.5**
LSNR	**Lesken**	**0.44**	**211**	↑*i* PG	**Pg**	**17 45 27.8**	**-1.0**
LSNR				*e* S	**Sg**	**17 45 34.1**	**-0.7**
TRKR	**Terskaya**	**0.45**	**81**	*e* PG	**Pg**	**17 45 28.8**	**-0.3**
TRKR				*e* S	**Sg**	**17 45 36.0**	**+0.8**
ARNR	**Ardon**	**0.48**	**166**	↑*i* PG	**Pg**	**17 45 29.2**	**-0.3**
ARNR				*i* S	**Sg**	**17 45 36.5**	**+0.5**
KUBR	**Kubataba**	**0.54**	**286**	PG	**Pg**	**17 45 31.3**	**+0.7**
KUBR				S	**Sg**	**17 45 40.7**	**+2.9**
KORR	**Kora**	**0.57**	**184**	↑*i* PG	**Pg**	**17 45 30.5**	**-0.7**
KORR				*i* S	**Sg**	**17 45 38.8**	**0.0**
SNJR	**Sundja**	**0.77**	**139**	*e* PG	**Pg**	**17 45 34.9**	**-0.1**
SNJR				*i* S	**Sg**	**17 45 46.5**	**+1.3**
LACR	**Lac**	**0.83**	**171**	‖ *i* PG	**Pg**	**17 45 35.8**	**-0.4**
LACR				*i* S	**Sg**	**17 45 48.0**	**+0.8**
DIGR	**Digorskoe uzhe**	**0.85**	**208**	↑*i* PG	**Pg**	**17 45 35.4**	**-1.1**
DIGR				*i* S	**Sg**	**17 45 47.2**	**-0.5**
ZEI	**Tsey**	**0.90**	**190**	↑*i* PG	**Pg**	**17 45 36.1**	**-1.3**
ZEI				*i* S	**Sg**	**17 45 48.7**	**-0.5**
BEYR	**Belyy Ugol+**	**1.01**	**291**	PG	**Pg**	**17 45 38.9**	**-0.6**
BEYR				S	**Sg**	**17 45 52.9**	**+0.1**
BEYR				pmax	pmax		
	comp=Z,5.0nm,0.1s						
BEYR				smax			
	comp=N,43nm,0.2s						
SHAR	**Shatzhatmas**	**1.06**	**275**	PG	**Pg**	**17 45 39.6**	**-0.8**
SHAR				S	**Sg**	**17 45 55.1**	**+0.8**
SHAR				pmax	pmax		
	comp=Z,11nm,0.1s						
KIV	**Kislovodsk**	**1.08**	**287**	PG	**Pg**	**17 45 40.3**	**-0.6**
KIV				S	**Sg**	**17 45 56.0**	**+0.9**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.2s						
KIV				smax			
	comp=N,37nm,0.2s						
ONI	**Oni**	**1.18**	**205**	P	**Pg**	**17 45 41.6**	**-1.1**
ONI				S	**Sg**	**17 45 59.0**	**+0.9**

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*CSEM **22** 17:51:30.9±0.1, 4041N×2940W, h10km, mb4.4/24, Ms3.2, Error ellipse: s-maj=2.8km s-min=1.5km az=64.0*
*IDC **22** 17:51:32.1±1.0, 4069N×2937W, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/20, mbtmp3.9/7, MS3.6/9, Ms1 3.6/9, ms1mx3.3/25, Error ellipse: s-maj=34.8km s-min=19.5km az=12.0*
*NEIC **22** 17:51:33.6±0.5, 4061N×2938W, h10km, mb4.5/28, Error ellipse: s-maj=12.9km s-min=5.9km az=182.0*
*ISCJB **22** 17:51:34.5±1.1, 4042N±002×2924W±005, h32km±8km, mb4.3/37, MS3.5/9, Error ellipse: s-maj=6.7km s-min=3.1km az=160.9*
*PDA **22** 17:51:35.9±0.9, 4058N×2922W, h5km, MD4.2, ML3.5, Error ellipse: s-maj=5.4km s-min=3.0km az=85.0*
*SVSA **22** 17:51:35.9±0.9, 4058N×2922W, h5km, MD4.2, ML3.5, Error ellipse: s-maj=5.4km s-min=3.0km az=85.0*
ISC 22 17:51:35.3±1.1, 4039N±002×2925W±005, h25km±8km**, n126, σ0§85/148, mb4.3/37, MS3.5/9, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLUZ	**Luz**	**1.38**	**171**	*e* P	**Pn**	**17 52 02.9**	**+3.9**
PLUZ				*e* S	**Sn**	**17 52 23.6**	**+7.2**
PVIA	**Vitoria**	**1.61**	**144**	*e* P	**Pn**	**17 52 02.8**	**+0.7**
PVIA				*e* S	**Sn**	**17 52 22.0**	**0.0**
STGR	**Santa Cruz**	**1.62**	**143**	*e* P	**Pn**	**17 52 02.1**	**-0.2**
STGR				*e* S	**Sn**	**17 52 22.2**	**-0.1**
SRBC	**Serra Branca**	**1.64**	**145**	*e* P	**Pn**	**17 52 01.3**	**-1.2**
SRBC				*e* S	**Sn**	**17 52 22.4**	**-0.4**
PGRA	**Graciosa**	**1.67**	**144**	*e* P	**Pn**	**17 52 02.5**	**-0.5**
PGRA				*e* S	**Sn**	**17 52 23.2**	**-0.4**
PGRA				A		17 52 24.6	
	80nm,0.4s						
PGRA	**Graciosa**	**1.67**	**144**	*e* P	**Pn**	**17 52 02.5**	**-0.5**
PGRA				*e* S	**Sn**	**17 52 23.2**	**-0.4**
PCED	**Cedros**	**1.81**	**166**	*e* P	**Pn**	**17 52 05.3**	**+0.5**
PCED				*e* S	**Sn**	**17 52 26.9**	**0.0**
PCED				A		17 52 31.1	
	205nm,0.4s						
PCED	**Cedros**	**1.81**	**166**	*e* P	**Pn**	**17 52 05.3**	**+0.5**
PCED				*e* S	**Sn**	**17 52 26.9**	**0.0**
PTCA	**Ponta do Capel**	**1.83**	**169**	*e* P	**Pn**	**17 52 06.7**	**+1.5**
PTCA				*e* S	**Sn**	**17 52 28.6**	**+1.1**
ROSA	**Rosais**	**1.84**	**154**	*e* P	**Pn**	**17 52 04.6**	**-0.7**
ROSA				*e* S	**Sn**	**17 52 27.4**	**-0.3**
CALA	**Caldeira**	**1.85**	**166**	*e* P	**Pn**	**17 52 05.8**	**+0.4**
CALA				*e* S	**Sn**	**17 52 28.9**	**+0.9**
PAMA	**Santo Amaro**	**1.90**	**154**	*e* P	**Pn**	**17 52 06.3**	**+0.3**
PAMA				*e* S	**Sn**	**17 52 29.3**	**+0.2**
HOR	**Horta**	**1.92**	**165**	*e* P	**Pn**	**17 52 06.5**	**+0.2**
HOR				*e* S	**Sn**	**17 52 30.0**	**+0.4**
PMAN	**Manadas**	**1.97**	**152**	*e* P	**Pn**	**17 52 06.1**	**-0.9**
PMAN				*e* S	**Sn**	**17 52 30.9**	**0.0**
PMAN				A		17 52 35.0	
	127nm,0.4s						
PMAN	**Manadas**	**1.97**	**152**	*e* P	**Pn**	**17 52 06.1**	**-0.9**
PMAN				*e* S	**Sn**	**17 52 30.9**	**0.0**
PICO	**Pico**	**1.99**	**161**	*e* P	**Pn**	**17 52 08.1**	**+0.8**
PICO				*e* S	**Sn**	**17 52 31.9**	**+0.5**
PCND	**Candelaria**	**2.01**	**162**	*e* P	**Pn**	**17 52 08.3**	**+0.7**
PCND				*e* S	**Sn**	**17 52 32.5**	**+0.6**
PCND				A		17 52 35.9	
	88nm,0.3s						
PTEI	**Pico do Teixo**	**2.01**	**159**	*e* P	**Pn**	**17 52 08.3**	**+0.7**
PTEI				*e* S	**Sn**	**17 52 33.1**	**+1.1**
PTEI				A		17 52 39.1	
	99nm,0.4s						
PPNO	**Prainha do Nor**	**2.06**	**158**	*e* S	**Sn**	**17 52 33.5**	**+0.4**
PBOI	**Pico dos Bois**	**2.06**	**160**	*e* P	**Pn**	**17 52 08.8**	**+0.5**
PBOI				*e* S	**Sn**	**17 52 33.6**	**+0.4**
PBOI				A		17 52 41.6	
	52nm,0.3s						
PID	**Ribeirinha**	**2.13**	**155**	*e* P	**Pn**	**17 52 09.0**	**-0.3**
ASBA	**Santa Barbara**	**2.23**	**138**	*e* P	**Pn**	**17 52 10.4**	**-0.3**
ASBA				*e* S	**Sn**	**17 52 36.8**	**-0.6**
PBIS	**Biscoitos**	**2.24**	**136**	*e* P	**Pn**	**17 52 10.3**	**-0.5**
PBIS				*e* S	**Sn**	**17 52 36.6**	**-1.0**
PPAD	**Pico dos Padre**	**2.27**	**137**	*e* P	**Pn**	**17 52 10.8**	**-0.4**
PPAD				*e* S	**Sn**	**17 52 35.9**	**-2.4**
PVNV	**Vila Nova**	**2.29**	**134**	*e* P	**Pn**	**17 52 11.1**	**-0.4**
PVNV				*e* S	**Sn**	**17 52 37.7**	**-1.2**
ADH	**Angra Heroismo**	**2.33**	**137**	*e* P	**Pn**	**17 52 11.4**	**-0.6**
ADH				*e* P		17 52 12.8	
RIB2	**Ribeirinha**	**2.35**	**136**	*e* P	**Pn**	**17 52 11.7**	**-0.6**
RIB2				*e* S	**Sn**	**17 52 38.7**	**-1.6**
PSCM	**Serra do Cume**	**2.36**	**135**	*e* P	**Pn**	**17 52 11.0**	**-1.4**
PSCM				*e* S	**Sn**	**17 52 39.5**	**-1.0**
PSCM				A		17 52 39.5	
	65nm,0.3s						
PSCM	**Serra do Cume**	**2.36**	**135**	*e* P	**Pn**	**17 52 11.0**	**-1.4**
PSCM				*e* S	**Sn**	**17 52 39.5**	**-1.0**
PFAV	**Pico das Favas**	**2.37**	**134**	*e* P	**Pn**	**17 52 12.1**	**-0.4**
PFAV				*e* S	**Sn**	**17 52 39.7**	**-1.1**
SET4	**Mosteiros**	**3.67**	**132**	*e* P	**Pn**	**17 52 31.1**	**+0.6**
SET4				*e* S	**Sn**	**17 53 12.8**	**-0.2**
SET2	**Ginetes**	**3.69**	**132**	*e* P	**Pn**	**17 52 31.1**	**+0.4**
SET2				*e* S	**Sn**	**17 53 14.2**	**+0.8**
PFET	**Feteiras**	**3.72**	**132**	*e* P	**Pn**	**17 52 31.6**	**+0.5**
PFET				*e* S	**Sn**	**17 53 14.4**	**+0.3**
PSAN	**Santo Antonio**	**3.73**	**132**	*e* P	**Pn**	**17 52 31.1**	**-0.2**
FAC	**Faja de Cima**	**3.83**	**132**	*e* P	**Pn**	**17 52 32.1**	**-0.5**
CML	**Cha da Macela**	**3.89**	**131**	*e* P	**Pn**	**17 52 32.9**	**-0.6**
PVER	**Pico Vermelho**	**3.89**	**130**	*e* P	**Pn**	**17 52 32.9**	**-0.6**
PMAT	**Coroa da Mata**	**3.91**	**130**	*e* P	**Pn**	**17 52 33.5**	**-0.2**
LFA	**Lagoa do Fogo**	**3.93**	**130**	*e* P	**Pn**	**17 52 34.5**	**+0.5**
MESC	**Monte Escuro**	**3.94**	**130**	*e* P	**Pn**	**17 52 33.5**	**-0.6**
PRCH	**Ribeira Ch**	**3.96**	**131**	*e* P	**Pn**	**17 52 35.4**	**+1.0**
VIF	**Vila Franca**	**3.97**	**130**	*e* P	**Pn**	**17 52 33.6**	**-1.0**
PFAD	**Fenais da Ajud**	**3.98**	**128**	*e* P	**Pn**	**17 52 34.8**	**+0.2**
FRA1	**Furnas**	**4.02**	**130**	*e* P	**Pn**	**17 52 34.6**	**-0.6**
MIRA	**Miradouro**	**4.04**	**129**	*e* P	**Pn**	**17 52 35.7**	**+0.2**
PSMN	**Pico do Norte,**	**4.71**	**135**	*e* P	**Pn**	**17 52 45.4**	**+0.7**
ESDC	**Sonseca Array**	**19.37**	**84**	LR	LR	18 02 19.6	
	comp=Z,181nm,18.4s,baz=285,slow=33						
SJPF	**Ste Jean**	**21.05**	**73**	*e* P	**P**	**17 56 18.9**	**+1.6**
	64nm,1.3s,mb4.5						
SJPF	**Ste Jean**	**21.05**	**73**	*e* P	**P**	**17 56 18.9**	**+1.6**
	32nm,1.3s,mb4.5						
MDT	**Midelt**	**21.13**	**103**	LR	LR	18 02 45.9	
	comp=Z,184nm,19.1s,MS3.5,baz=128,slow=32						
ETSF	**Etsaut**	**21.55**	**74**	*e* P	**P**	**17 56 23.3**	**+0.7**
	131nm,1.9s,mb4.7						
ETSF	**Etsaut**	**21.55**	**74**	*e* P	**P**	**17 56 23.3**	**+0.7**
	65nm,1.9s,mb4.7						
GRR	**Gorron**	**21.72**	**59**	*e* P	**P**	**17 56 26.3**	**+1.9**
	70nm,1.3s,mb4.6						
GRR	**Gorron**	**21.72**	**59**	*e* P	**P**	**17 56 26.3**	**+1.9**
	35nm,1.3s,mb4.6						
MFF	**Saint Martin d**	**21.94**	**64**	*e* P	**P**	**17 56 26.9**	**+0.2**
	54nm,1.4s,mb4.5						
MFF	**Saint Martin d**	**21.94**	**64**	*e* P	**P**	**17 56 26.9**	**+0.2**
	27nm,1.4s,mb4.5						
EPF	**Esparros**	**22.20**	**73**	*e* P	**P**	**17 56 30.3**	**+0.7**
	115nm,1.7s,mb4.7						
EPF	**Esparros**	**22.20**	**73**	*e* P	**P**	**17 56 30.3**	**+0.7**
	57nm,1.7s,mb4.7						
LDF	**La Druitiere**	**22.24**	**59**	*e* P	**P**	**17 56 29.6**	**-0.3**
	49nm,1.3s,mb4.5						
LDF	**La Druitiere**	**22.24**	**59**	*e* P	**P**	**17 56 29.6**	**-0.3**
	25nm,1.3s,mb4.5						
ESK	**Eskdalemuir**	**22.80**	**40**	P	**P**	**17 56 33.1**	**-2.8**
	7.4nm,1.1s,mb4.0						
ESK	**Eskdalemuir**	**22.80**	**40**	P	**P**	**17 56 33.1**	**-2.8**
	7.4nm,1.1s,mb4.0						
CAF	**Calviac**	**23.39**	**68**	*e* P	**P**	**17 56 42.0**	**-0.2**
	34nm,1.2s,mb4.4						
CAF	**Calviac**	**23.39**	**68**	*e* P	**P**	**17 56 42.0**	**-0.2**
	17nm,1.2s,mb4.4						
TCF	**Toulx Ste Croi**	**23.54**	**65**	*e* P	**P**	**17 56 43.4**	**-0.1**
	40nm,1.3s,mb4.4						
TCF	**Toulx Ste Croi**	**23.54**	**65**	*e* P	**P**	**17 56 43.4**	**-0.1**
	20nm,1.3s,mb4.4						
BGF	**Bois d'Agland**	**23.99**	**64**	*e* P	**P**	**17 56 48.4**	**+0.7**
	29nm,0.9s,mb4.4						
BGF	**Bois d'Agland**	**23.99**	**64**	*e* P	**P**	**17 56 48.4**	**+0.7**
	14nm,0.9s,mb4.4						
AVF	**Avril sur Loir**	**24.35**	**64**	*e* P	**P**	**17 56 51.8**	**+0.8**
	19nm,1.2s,mb4.1						
AVF	**Avril sur Loir**	**24.35**	**64**	*e* P	**P**	**17 56 51.8**	**+0.8**
	9.5nm,1.2s,mb4.1						
SSF	**Saint Saulge**	**24.47**	**63**	*e* P	**P**	**17 56 52.4**	**+0.3**
	40nm,1.5s,mb4.3						
SSF	**Saint Saulge**	**24.47**	**63**	*e* P	**P**	**17 56 52.4**	**+0.3**
	20nm,1.5s,mb4.3						
SMF	**Signal de Mont**	**24.68**	**64**	*e* P	**P**	**17 56 54.3**	**+0.3**
	21nm,1.1s,mb4.3						
SMF	**Signal de Mont**	**24.68**	**64**	*e* P	**P**	**17 56 54.3**	**+0.3**
	10nm,1.1s,mb4.3						
BAIF	**Baives**	**25.29**	**56**	*e* P	**P**	**17 56 59.3**	**-0.2**
	58nm,1.3s,mb4.7						
BAIF	**Baives**	**25.29**	**56**	*e* P	**P**	**17 56 59.3**	**-0.2**
	29nm,1.3s,mb4.7						
MEZF	**Maizieres J'vi**	**25.63**	**60**	*e* P	**P**	**17 57 04.2**	**+1.6**
HAU	**Haudompre**	**26.45**	**61**	*e* P	**P**	**17 57 11.1**	**+1.0**
HAU				*e* MLR	MLR		
	comp=Z,147nm,20.0s,MS3.2						
HAU	**Haudompre**	**26.45**	**61**	*e* P	**P**	**17 57 11.1**	**+1.0**
HAU				LR	LR		
	comp=Z,150nm,20.0s,MS3.5						
CDF	**Champ du Feu**	**27.10**	**61**	*e* P	**P**	**17 57 16.9**	**+1.0**
	comp=Z,16nm,1.1s,mb4.2						
CDF	**Champ du Feu**	**27.10**	**61**	*e* P	**P**	**17 57 16.9**	**+1.0**
	comp=Z,7.8nm,1.1s,mb4.1						
BFO	**Black Forest**	**27.80**	**61**	P	**P**	**17 57 23.6**	**+1.5**
	comp=Z,5.5nm,1.0s,mb4.1						
BFO	**Black Forest**	**27.80**	**61**	P	**P**	**17 57 23.6**	**+1.5**
	comp=Z,5.4nm,1.0s,mb4.1						
DAVOX	**Davos/Dischmat**	**28.83**	**64**	LR	LR	18 07 01.4	
	comp=Z,65nm,20.6s,MS3.2,baz=269,slow=32						
GERES	**GERESS Array B**	**31.37**	**60**	LR	LR	18 08 14.1	
	comp=Z,81nm,20.7s,MS3.4,baz=257,slow=32						
TOA0	**Torodi Ar. Sit**	**38.37**	**126**	*e* P	**P**	**17 58 56.2**	**+1.8**
TORD	**Torodi Ar. Bea**	**38.37**	**126**	P	**P**	**17 58 56.1**	**+1.7**
	comp=Z,2.6nm,1.0s,mb3.9,baz=329,slow=5.9,SNR=9.0						
TORD				LR	LR	18 12 54.5	
	comp=Z,64nm,19.5s,MS3.4,baz=260,slow=33						
FINES	**FINESS Array B**	**39.21**	**39**	LR	LR	18 12 45.8	
	comp=Z,45nm,19.4s,MS3.3,baz=275,slow=33						
DBIC	**Dimbokro**	**40.05**	**140**	LR	LR	18 13 31.8	
	comp=Z,69nm,18.8s,MS3.5,baz=299,slow=33						
AKASG	**Malin Array Be**	**41.23**	**55**	P	**P**	**17 59 16.9**	**-1.0**
	comp=Z,2.6nm,0.8s,mb3.9,baz=276,slow=8.2,SNR=3.6						
SPB4	**Spitsbergen Ar**	**42.12**	**13**	*e* P	**P**	**17 59 23.8**	**-1.1**
SPB4	**Spitsbergen Ar**	**42.12**	**13**	*e* P	**P**	**17 59 23.8**	**-1.1**
FCC	**Fort Churchill**	**43.94**	**317**	*e* P	**P**	**17 59 38.6**	**-1.1**
	comp=Z,3.9nm,1.1s,mb4.0						
FCC	**Fort Churchill**	**43.94**	**317**	*e* P	**P**	**17 59 38.6**	**-1.1**
	comp=Z,3.9nm,1.1s,mb4.0						
RES	**Resolute Bay**	**45.10**	**340**	P	**P**	**17 59 46.5**	**-2.3**
	comp=Z,114nm,1.3s,mb5.5						
RES	**Resolute Bay**	**45.10**	**340**	P	**P**	**17 59 46.5**	**-2.3**
	comp=Z,114nm,1.3s,mb5.5						
BRTR	**Keskin Array B**	**47.22**	**69**	P	**P**	**18 00 06.9**	**+1.0**
	comp=Z,1.8nm,0.9s,mb4.0,baz=298,slow=6.1,SNR=3.3						
MIAR	**Mount Ida**	**50.39**	**285**	P	**P**	**18 00 29.4**	**-0.9**
	comp=Z,9.6nm,1.2s,mb4.7						
MIAR	**Mount Ida**	**50.39**	**285**	P	**P**	**18 00 29.5**	**-0.9**
	comp=Z,9.6nm,1.2s,mb4.7						
MALT	**Malatya**	**51.20**	**69**	*e* P	**P**	**18 00 36.7**	**+0.3**
	comp=Z,3.0nm,1.0s,mb4.2						
YKA	**Yellowknife Ar**	**53.10**	**325**	P	**P**	**18 00 48.4**	**-1.8**
	comp=Z,1.0nm,0.9s,mb3.7,baz=71,slow=7.0,SNR=9.7						
ARU	**Arti**	**56.44**	**42**	*e* P	**P**	**18 01 14.0**	**-0.4**
	comp=Z,5.1nm,0.8s,mb4.6						
ARU				*e*		18 01 19.1	
ARU	**Arti**	**56.44**	**42**	*e* P	**P**	**18 01 14.0**	**-0.5**
PDAR	**Pinedale Array**	**57.90**	**301**	P	**P**	**18 01 23.8**	**-1.2**
	comp=Z,1.5nm,0.9s,mb4.0,baz=75,slow=7.0,SNR=9.1						
PDAR				LR	LR	18 26 42.2	
	comp=Z,89nm,21.1s,MS3.9,baz=206,slow=37						
HWUT	**Hardware Ranch**	**59.76**	**301**	*e* P	**P**	**18 01 36.9**	**-1.1**
	comp=Z,3.7nm,0.9s,mb4.4						
HWUT	**Hardware Ranch**	**59.76**	**301**	*e* P	**P**	**18 01 36.9**	**-1.1**
	comp=Z,3.7nm,0.9s,mb4.4						
NEW	**Newport**	**60.06**	**310**	P	**P**	**18 01 40.2**	**+0.3**
	comp=Z,3.5nm,0.9s,mb4.4						
TXAR	**Lajitas Array**	**60.41**	**285**	P	**P**	**18 01 42.3**	**-0.3**
	comp=Z,1.0nm,0.8s,mb3.9,baz=72,slow=6.6,SNR=10.0						
DAWY	**Dawson**	**62.35**	**332**	P	**P**	**18 01 55.7**	**+0.6**
DAWY	**Dawson**	**62.35**	**332**	P	**P**	**18 01 55.7**	**+0.5**
BRVK	**Borovoye**	**64.01**	**41**	P	**P**	**18 02 11.1**	**+4.8**
	comp=Z,2.4nm,0.8s,mb4.3						
LPAZ	**La Paz**	**66.97**	**221**	LR	LR	18 28 15.1	
	comp=Z,46nm,18.7s,MS3.7,baz=265,slow=33						
TIXI	**Tiksi**	**67.19**	**7**	*e* P	**P**	**18 02 26.8**	**+0.2**
	comp=Z,3.9nm,1.1s,mb4.3						
TIXI				*e*	pP	18 02 36.0	+1.4
CMB	**Columbia Colle**	**67.41**	**301**	P	**P**	**18 02 28.5**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.1						
CMB	**Columbia Colle**	**67.41**	**301**	P	**P**	**18 02 28.5**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.1						
KURK	**Kurchatov**	**69.56**	**40**	*e* P	**P**	**18 02 40.7**	**-1.0**
	comp=Z,2.9nm,0.9s,mb4.2						
KURK	**Kurchatov**	**69.56**	**40**	*e* P	**P**	**18 02 40.7**	**-1.1**
	comp=Z,2.9nm,0.9s,mb4.2						
EKS2	**Erkin-Say**	**72.02**	**49**	*e* P	**P**	**18 02 57.0**	**+0.1**
	comp=Z,2.1nm,0.7s,mb4.2						
EKS2	**Erkin-Say**	**72.02**	**49**	*e* P	**P**	**18 02 57.0**	**+0.2**
	comp=Z,2.1nm,0.7s,mb4.2						
UCH	**Uchtor**	**72.72**	**49**	*e* P	**P**	**18 03 01.3**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.2						
UCH	**Uchtor**	**72.72**	**49**	*e* P	**P**	**18 03 01.3**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**73.97**	**42**	P	**P**	**18 03 08.5**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=319,slow=5.3,SNR=6.8						
SONM	**Songino Array**	**83.75**	**28**	P	**P**	**18 04 02.6**	**+0.7**
	comp=Z,0.5nm,0.7s,mb3.7,baz=324,slow=6.9,SNR=4.8						
QSPA	**South Pole Qui**	**130.27**	**180**	PKP	PKPdf	18 10 45.3	+3.6
QSPA	**South Pole Qui**	**130.27**	**180**	PKP	PKPdf	18 10 45.3	+3.6
	comp=Z,2.6nm,1.1s,baz=159,slow=0.6,SNR=3.3						

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*ISCJB **22** 18:29:41.1±1.8, 287N±02×885E±03, h10km, mb3.6/3, Error ellipse: s-maj=51.4km s-min=10.7km az=146.2*
*IDC **22** 18:29:42.3±1.9, 2887N×8888E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=66.7km s-min=27.2km az=66.0*
ISC 22 18:29:43.8±1.7, 289N±02×887E±03, h10km**, n5, σ0§69/6, mb3.6/3, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.34**	**138**	*e* PN	**Pn**	**18 30 55.0**	**+5.1**
SHL				*e* SN	**Sn**	**18 31 41.0**	**+0.4**
MKAR	**Makanchi Array**	**18.59**	**346**	P	**Pn**	**18 34 01.9**	**+0.7**
	0.1nm,0.3s,baz=154,slow=12

az=32.9
*MOS **22** 19:51:00.0±1.4, 5556N×16576E, h33km, mb4.3/4, Error ellipse: s-maj=13.7km s-min=10.1km az=46.7*
*KRSC **22** 19:51:00.0±0.5, 5560N×16542E, h21km±20km, ML4.4*
*NEIC **22** 19:51:04.1±1.9, 5537N×16603E, h57km±17km, mb4.2/3, Error ellipse: s-maj=19.1km s-min=11.4km az=139.0*

ISC 22 19:51:02.3±1.5, 5559N±004×16559E±005, h32km±11km, n54, σ1920/74, mb3.7/16, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.68**	**293**	*eP*		**Pn**		**19 51 25.7**	**-3.7**
KBTR				*i*	S		**Sn**	**19 51 43.9**	**-5.9**
MKZ	**Mys Kozlova**	**2.45**	**247**	*eP*		**Pn**		**19 51 39.0**	**-1.0**
MKZ				*i*	S		**Sn**	**19 52 07.8**	**-1.0**
BDR	**Baidarnaya**	**2.64**	**294**	*i*	P	**Pn**		**19 51 41.8**	**-0.9**
BDR				*i*	S		**Sn**	**19 52 13.1**	**-0.5**
SRKR	**Sorokina**	**2.69**	**295**	*i*	P	**Pn**		**19 51 42.2**	**-1.2**
SRKR				*i*	S		**Sn**	**19 52 13.8**	**-1.0**
ZLN	**Zelenaya**	**2.73**	**281**	*eP*		**Pn**		**19 51 43.9**	**0.0**
ZLN				*i*	S		**Sn**	**19 52 16.4**	**+0.6**
KLY	**Klyuchi**	**2.87**	**287**	*eP*		**Pn**		**19 51 43.0**	**-2.8**
KLY				*i*	S		**Sn**	**19 52 15.2**	**-3.9**
KRSR	**Krestovskiy**	**2.90**	**285**	P		**Pn**		**19 51 44.8**	**-1.3**
KRSR				*i*	S		**Sn**	**19 52 17.9**	**-1.9**
KMNR	**Kamenistaya**	**3.03**	**275**	*eP*		**Pn**		**19 51 48.2**	**+0.2**
KMNR				*i*	S		**Sn**	**19 52 23.9**	**+0.7**
KPT	**Kopyto**	**3.05**	**279**	*eP*		**Pn**		**19 51 48.2**	**-0.1**
KPT				*i*	S		**Sn**	**19 52 23.7**	**0.0**
TUMR	**Tumrok**	**3.11**	**267**	*eP*		**Pn**		**19 51 49.7**	**+0.5**
TUMR				*eS*		**Sn**		**19 52 26.1**	**+0.9**
KOZR	**Kozyr**	**3.25**	**281**	PN		**Sn**		**19 51 51.7**	**+0.8**
KOZR				S		**Sn**		**19 52 29.5**	**+1.1**
KOZ	**Kozyrevsk**	**3.26**	**281**	*eP*		**Pn**		**19 51 51.7**	**+0.6**
KOZ				*i*	S	**Sn**		**19 52 29.5**	**+0.8**
SRDR	**Sredinnyy**	**3.38**	**285**	*eP*		**Pn**		**19 51 52.5**	**-0.3**
SRDR				*i*	S	**Sn**		**19 52 31.0**	**-0.7**
KII	**Karymskiy**	**3.88**	**249**	*eP*		**Pn**		**19 52 00.2**	**+0.6**
SPN	**Mys Shipunski**	**4.10**	**235**	P		**Pn**		**19 52 02.0**	**-0.7**
SPN				*i*	S	**Sn**		**19 52 47.0**	**-2.6**
NLC	**Nalytchevo**	**4.38**	**239**	P		**Pn**		**19 52 06.8**	**+0.3**
NLC				*i*	S	**Sn**		**19 52 55.8**	**-0.6**
AVH	**Avacha**	**4.63**	**243**	*eP*		**Pn**		**19 52 11.0**	**+1.1**
AVH				*i*	S	**Sn**		**19 53 03.5**	**+1.0**
PET	**Petropavlovsk**	**4.80**	**241**	*ePn*		**Pn**		**19 52 13.2**	**+0.8**
PET	**Petropavlovsk**	**4.80**	**241**	*ePN*		**Pn**		**19 52 13.1**	**+0.7**
PET	comp=Z,35nm,0.5s			pmax		pmax			
PET	comp=Z,100nm,15.0s			MLR		MLR			
PET	**Petropavlovsk**	**4.80**	**241**	*eP*		**Pn**		**19 52 11.0**	**-1.4**
PET				*i*	S	**Sn**		**19 53 04.4**	**-2.5**
GNL	**Ganaly**	**4.83**	**250**	*eP*		**Pn**		**19 52 13.9**	**+1.2**
GNL				*i*	S	**Sn**		**19 53 08.3**	**+0.9**
RUS	**Russkaya**	**5.23**	**236**	P		**Pn**		**19 52 19.0**	**+0.7**
RUS				*i*	S	**Sn**		**19 53 16.7**	**-0.7**
GRL	**Gorelyy**	**5.37**	**239**	P		**Pn**		**19 52 20.5**	**+0.4**
GRL				*i*	S	**Sn**		**19 53 19.4**	**-1.4**
MIPR	**Malaya Ipel'ka**	**6.18**	**241**	P		**Pn**		**19 52 32.6**	**+1.4**
SKR	**Severo-Kuril's**	**7.52**	**233**	*ePN*		**Pn**		**19 52 57.9**	**+8.3**
BILL	**Bilibino**	**12.50**	**1**	PN		**Pn**		**19 54 03.8**	**+6.1**
ASAJ	**Asahikawa**	**18.65**	**242**	P		**Pn**		**19 55 17.0**	**-0.7**
ASAJ	comp=Z,0.2nm,0.3s,baz=94,slow=15,SNR=5.9			LR		LR		20 02 47.7	
YAK	**Yakutsk**	**19.47**	**304**	P		**Pn**		**19 55 31.2**	**+3.7**
YAK	**Yakutsk**	**19.47**	**304**	*eP*		**Pn**		**19 55 32.3**	**+4.8**
YAK	comp=Z,11nm,1.4s			pmax		pmax			
YAK	comp=E,5.0nm,1.1s			pmax		pmax			
ERM	**Erimo**	**19.95**	**236**	P		**Pn**		**19 55 33.4**	**+0.2**
HABR	**Khabarovsk**	**19.97**	**262**	*eP*		**Pn**		19 55 46.1	+6.0
HABR				*eS*		**Sn**		**19 59 18.0**	**+1.1**
HABR				*e*				19 59 31.8	
HABR				*eSS*				19 59 36.5	
IMA2	**Indian Mountai**	**22.01**	**45**	*eP*		**P**		**19 55 52.2**	**-1.3**
TIXI	**Tiksi**	**22.33**	**330**	*eP*		**P**		**19 56 00.1**	**+3.2**
TIXI	comp=E,1.5nm,0.6s,mb3.6			pmax		pmax			
TIXI	**Tiksi**	**22.33**	**330**	*eP*		**P**		**19 55 59.2**	**+2.3**
TIXI	comp=Z,4.0nm,1.3s,mb3.7			pmax		pmax			
MJAR	**Matsushiro Arr**	**26.62**	**236**	P		**P**		**19 56 39.5**	**+1.9**
INK	**Inuvik**	**29.90**	**41**	S		**P**		**19 57 06.4**	**-0.2**
KSRS	**Korea Array**	**31.11**	**250**	P		**P**		**19 57 19.8**	**+2.2**
ULN	**Ulaanbaatar**	**36.08**	**283**	P		**P**		**19 58 03.7**	**+3.0**
SONM	**Songino Array**	**36.46**	**283**	P		**P**		**19 58 04.9**	**+0.9**
ZAK	**Zakamensk**	**36.74**	**289**	*eP*		**P**		**19 58 04.7**	**-1.6**
ZAK	comp=Z,1.0nm,1.0s,mb3.6			pmax		pmax			
YKA	**Yellowknife Ar**	**39.13**	**46**	P		**P**		**19 58 23.3**	**-3.0**
KURK	**Kurchatov**	**49.11**	**303**	*eP*		**P**		**19 59 46.6**	**+0.2**
KURK	comp=Z,5.7nm,0.9s,mb4.6			pmax		pmax			
KURK	**Kurchatov**	**49.11**	**303**	*eP*		**P**		**19 59 46.6**	**+0.3**
MK31	**Makanchi Array**	**49.93**	**297**	*eP*		**P**		**19 59 54.3**	**+1.7**
MKAR	**Makanchi Array**	**49.93**	**297**	*i*	P	**P**		**19 59 51.0**	**-1.6**
MKAR	**Makanchi Array**	**49.93**	**297**	P		**P**		**19 59 51.7**	**-1.0**
NVAR	**Mina Array Bea**	**51.90**	**76**	P		**P**		**20 00 10.7**	**+2.9**
EKS2	**Erkin-Say**	**57.14**	**299**	*eP*		**P**		**20 00 47.0**	**+1.5**
FINES	**FINESS Array B**	**59.03**	**339**	P		**P**		**20 00 59.7**	**+1.3**
OBN	**Obninsk**	**62.07**	**330**	*eP*		**P**		**20 01 18.9**	**-0.3**
OBN	comp=Z,4.0nm,0.7s,mb4.7			pmax		pmax			
KBL	**Kabul**	**65.72**	**296**	*eP*		**P**		**20 01 44.0**	**+0.5**
TXAR	**Lajitas Array**	**66.75**	**72**	P		**P**		**20 01 48.8**	**-1.5**
WRA	**Warramunga Arr**	**79.78**	**210**	P		**P**		**20 03 05.9**	**-1.0**
ASAR	**Alice Springs**	**83.43**	**209**	P		**P**		**20 03 25.9**	**-0.3**

comp=Z,2.0nm,0.4s,mb3.3,baz=19,slow=12,SNR=2.7
comp=Z,0.2nm,0.3s,mb3.3,baz=276,slow=32,SNR=3.9
comp=Z,0.7nm,0.9s,mb3.4,baz=292,slow=14,SNR=1.7
comp=Z,0.6nm,0.7s,mb3.5,baz=61,slow=14,SNR=3.2
comp=Z,0.8nm,0.6s,mb3.8,baz=60,slow=7.6,SNR=8.3
comp=Z,0.3nm,0.4s,mb3.7,baz=53,slow=6.5,SNR=6.1
comp=Z,0.1nm,0.3s,mb3.2,baz=300,slow=9.1,SNR=2.6
comp=Z,2.2nm,0.8s,mb4.2
comp=Z,0.9nm,0.7s,mb3.9,baz=44,slow=4.2,SNR=3.0
comp=Z,4.0nm,0.7s,mb4.7
comp=Z,0.3nm,0.8s,mb3.4,baz=316,slow=5.2,SNR=3.8
comp=Z,0.5nm,1.2s,mb3.3,baz=26,slow=5.7,SNR=2.8
comp=Z,0.3nm,0.7s,mb3.4,baz=18,slow=5.6,SNR=2.7

IDC 22 19:51:46.6±0.8, 5600N×16545E, h0km, mb3.7/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.7/8, Error ellipse: s-maj=31.6km s-min=20.2km az=163.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**36.30**	**283**	P		P		19 58 50.0	-1.4
YKA	**Yellowknife Ar**	**38.90**	**47**	P		P		19 59 14.2	+0.9
MKAR	**Makanchi Array**	**49.68**	**297**	P		P		20 00 41.1	+1.4
NVAR	**Mina Array Bea**	**51.90**	**76**	P		P		20 00 57.0	+0.3
NOA	**NORSAR Array B**	**61.54**	**346**	P		P		20 02 04.7	-0.1
TXAR	**Lajitas Array**	**66.69**	**72**	P		P		20 02 38.1	-1.0
WRA	**Warramunga Arr**	**80.10**	**210**	P		P		20 03 57.9	-0.1
ASAR	**Alice Springs**	**83.76**	**209**	P		P		20 04 18.2	+1.1

comp=Z,86nm,8.4s,mb4.2,baz=8,slow=8.2,SNR=2.4
comp=Z,7.6nm,0.9s,mb3.8,baz=77,slow=7.6,SNR=2.4
comp=Z,23nm,0.7s,mb4.8,baz=298,slow=8.3,SNR=3.8
comp=Z,0.8nm,0.6s,baz=51,slow=7.6,SNR=5.0
comp=Z,1.1nm,0.7s,baz=315,slow=6.7,SNR=6.4
comp=Z,0.8nm,0.8s,baz=19,slow=7.0,SNR=3.3
comp=Z,1.1nm,0.7s,baz=302,slow=4.1,SNR=3.1
comp=Z,0.2nm,0.6s,baz=28,slow=5.5,SNR=3.3
comp=Z,0.4nm,0.7s,baz=14,slow=4.7,SNR=6.1

IDC 22 20:15:19.4±2.1, 075N×12424E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/15, mbtmp3.5/3, Error ellipse: s-maj=304.6km s-min=25.5km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.83**	**155**	P		P		20 20 24.2	0.0
ASAR	**Alice Springs**	**26.03**	**159**	P		P		20 20 53.9	-0.5
MKAR	**Makanchi Array**	**58.63**	**327**	P		P		20 25 18.9	+0.6

IDC 22 20:23:52.2±2.4, 327N×9553E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.3/21, mbtmp3.2/5, ML3.2/1, Error ellipse: s-maj=78.5km s-min=22.7km az=56.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**3.42**	**98**	Pn		Pn		20 24 45.1	-1.8
PSI	2.1nm,0.3s,baz=310,slow=11,SNR=7.0			Sn		Sn		20 25 24.5	-3.7
WRA	**Warramunga Arr**	**44.55**	**123**	P		P		20 32 05.5	-0.6
MKAR	**Makanchi Array**	**44.86**	**347**	P		P		20 32 06.5	-1.7
SONM	**Songino Array**	**45.38**	**10**	P		P		20 32 14.2	+1.9
ASAR	**Alice Springs**	**45.97**	**128**	P		P		20 32 18.5	+1.1

3.4nm,0.3s,baz=336,slow=20,SNR=3.1
0.2nm,0.5s,baz=298,slow=9.3,SNR=4.1
0.1nm,0.4s,baz=148,slow=8.5,SNR=2.6
0.3nm,0.6s,baz=199,slow=6.9,SNR=3.3
0.2nm,0.7s,baz=306,slow=7.9,SNR=3.2

*IDC **22** 20:25:15.4±0.5, 2811S×7111W, h0km, mb4.7/13, mb1 4.8/16, mb1mx4.7/19, mbtmp4.6/16, ML4.0/3, MS4.4/20, Ms1 4.4/20, ms1mx4.4/29, Error ellipse: s-maj=24.8km s-min=13.5km az=74.0*
*MOS **22** 20:25:20.1±1.2, 2797S×7116W, h33km, mb5.3/17, MS4.6/4, Error ellipse: s-maj=26.7km s-min=9.5km az=102.5*
*NEIC **22** 20:25:20.1, 28.12S×7120W, h42km, mb5.2/30, MS4.4/3, After GUC.*
NEIC Felt [IV] at Freirina and Huasco; [III] at Alto del Carmen, Copiapo, Tierra Amarilla and Vallenar.
*GUC **22** 20:25:20.1±0.7, 28.12S×7120W, h42km±10km, ML5.1*
*GCMT **22** 20:25:20.1±0.3, 28.10S×7160W, h41km±1km, MW5.2/58, Moment Tensor Solution. s41,c49; s58,c87; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr0.52±.03; Mθθ0.28±.03; Mϕϕ-0.79±.03; Mrθ-0.21±.03; Mθϕ-0.16±.02; Mϕr-0.01±.03; Best double couple: M0.73600×10^17 NP1:ϕs341.00000°, δ51.00000°, λ49.00000°. NP2: ϕs215.00000°, δ54.00000°, λ129.00000°. Principal axes: T 0.6490, Plg59.0000°, Azm185.0000°; N 0.1750, Plg31.0000°, Azm10.0000°; P -0.8230, Plg2.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **22** 20:25:21.9±0.5, 2819S×7104W×008, h54km±5km, mb5.0/43, MS4.5/21 Error ellipse: s-maj=11.1km s-min=4.7km az=1.7*
*BJI **22** 20:25:21.2, 2803S×7219W, h47km, mB5.0, Ms4.9, Msz4.9*

ISC 22 20:25:21.8±0.6, 2812S±003×7105W±007, h36km±6km, h42km±3.0km: pP-P, n444, σ0.71/365, mb5.0/43, MS4.5/21, 126C-129D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.52**	**151**	⇓*iP*		**Pn**		**20 25 33.7**	**+0.9**
VACH				*i*	S	**Sn**		**20 25 43.0**	**+2.6**
LCO	**Las Campanas**	**0.94**	**161**	*ePg*		**Pn**		**20 25 39.5**	**+1.0**
LCO				*eSg*		**Sn**		**20 25 52.7**	**+2.0**
CPCH	**Copiapo**	**0.98**	**39**	*eP*		**Pn**		**20 25 39.4**	**+0.4**
CPCH				*i*	S	**Sn**		**20 25 54.0**	**+2.4**
CPCH	**Copiapo**	**0.98**	**39**	*eP*		**Pn**		**20 25 39.4**	**+0.4**
CPCH				*i*	S	**Sn**		**20 25 54.0**	**+2.4**
CPCH	comp=E,132μm,0.4s			AML		AML		20 25 56.9	
LSCH	**La Serena**	**1.79**	**185**	*eP*		**Pn**		**20 25 49.2**	**-1.0**
LSCH				*i*	S	**Sn**		**20 26 10.9**	**-0.8**
TLL	**Tololo Astrono**	**2.05**	**174**	⇑*iP*		**Pn**		**20 25 54.6**	**+0.8**
TLL				*i*	S	**Sn**		**20 26 20.3**	**+2.2**
TLL	**Tololo Astrono**	**2.05**	**174**	⇑*iP*		**Pn**		**20 25 54.6**	**+0.8**
TLL				*i*	S	**Sn**		**20 26 20.3**	**+2.2**
TLL	comp=E,15μm,0.6s			AML		AML		20 26 31.8	
OVCH	**Ovalle**	**2.48**	**183**	*eP*		**Pn**		**20 25 58.6**	**-1.1**
OVCH				*i*	S	**Sn**		**20 26 28.3**	**-0.5**
CMCH	**Combarbala**	**3.04**	**179**	*eP*		**Pn**		**20 26 06.5**	**-0.9**
CMCH				*i*	S	**Sn**		**20 26 42.5**	**-0.1**
CHNG	**Los Chungos**	**3.77**	**186**	*eP*		**Pn**		**20 25 59.2**	**-18**
CHNG				*i*	S	**Sn**		**20 26 41.6**	**-19**
CFAA	**Coronel Fontan**	**4.24**	**146**	Pn		**Pn**		**20 26 27.6**	**+3.7**
CFAA				Sn		**Sn**		**20 27 18.4**	**+6.2**
CFAA				Lg				20 27 37.1	
CFAA				LR		LR		20 27 38.7	
CFAA	**Coronel Fontan**	**4.24**	**146**	Pn		**Pn**		**20 26 27.6**	**+3.7**
CFAA	comp=E,9.8nm,0.3s,baz=319,slow=13,SNR=190			Sn		**Sn**		**20 27 18.4**	**+6.2**
CFAA	comp=E,11nm,0.3s,baz=125,slow=22,SNR=4.9			Lg				20 27 37.1	
CFAA	comp=E,26nm,0.3s,baz=246,slow=18,SNR=17			LR		LR		20 27 38.7	
PEL	**Peldehue**	**5.01**	**177**	*eP*		**Pn**		**20 26 34.4**	**-0.2**
PEL				*i*	S	**Sn**		**20 27 29.0**	**-2.3**
TACH	**Talagante**	**5.51**	**179**	*eP*		**Pn**		**20 26 40.6**	**-0.7**
CHCH	**Chadas Angostu**	**5.80**	**177**	*eP*		**Pn**		**20 26 45.0**	**-0.3**
SFDO	**San Fernando**	**6.47**	**180**	*eP*		**Pn**		**20 26 53.5**	**-1.0**
LPAZ	**La Paz**	**12.08**	**14**	Pn		**Pn**		**20 28 09.6**	**-1.9**
LPAZ				Sn		**Sn**		**20 30 23.4**	**-1.6**
LPAZ				Lg				20 31 18.9	
LPAZ	**La Paz**	**12.08**	**14**	P		**Pn**		**20 28 09.6**	**-1.9**
LPAZ								20 30 23.4	
LPAZ	**La Paz**	**12.08**	**14**	Pn		**Pn**		**20 28 09.6**	**-1.9**
LPAZ	comp=E,0.7nm,0.3s,baz=208,slow=6.5,SNR=11			Sn		**Sn**		**20 30 23.4**	**-1.6**
LPAZ	comp=E,0.2nm,0.3s,baz=68,slow=23,SNR=1.4			Lg				20 31 18.9	
TRQA	**Tornquist**	**12.48**	**145**	*ePn*		**Pn**		**20 28 17.1**	**+0.2**
PLCA	**Paso Flores**	**12.59**	**178**	Pn		**Pn**		**20 28 15.3**	**-3.0**
PLCA				Lg				20 32 06.3	
PLCA				LR		LR		20 33 33.8	
PLCA	**Paso Flores**	**12.59**	**178**	Pn		**Pn**		**20 28 15.3**	**-3.0**
PLCA	comp=E,0.1nm,0.3s,baz=349,slow=14,SNR=5.7			Lg				20 32 06.3	
PLCA	comp=E,0.2nm,0.3s,baz=3.4,slow=17,SNR=2.1			LR		LR		20 33 33.8	
SIV	**San Ignacio**	**15.20**	**39**	Pn		**Pn**		**20 28 46.3**	**-7.4**
NNA	**Nana**	**16.94**	**340**	Pn		**Pn**		**20 29 12.7**	**-3.4**
NNA				LR		LR		20 34 27.8	
NNA	**Nana**	**16.94**	**340**	Pn		**Pn**		**20 29 12.7**	**-3.4**
NNA	comp=E,1.1nm,0.3s,baz=201,slow=16,SNR=2.2			LR		LR		20 34 27.8	
ATAH	**Atahualpa**	**22.13**	**340**	P		**P**		**20 30 12.9**	**-1.3**
ATAH	comp=E,4.8nm,0.6s,mb4.1,baz=89,slow=20,SNR=4.8			LR		LR		20 37 17.7	
USHA	**Ushuaia**	**26.76**	**177**	P		**P**		**20 30 56.8**	**-1.0**
USHA	comp=E,23nm,0.7s,mb4.8,baz=342,slow=6.4,SNR=14			LR		LR		20 42 13.7	
ROSC	**El Rosal**	**32.94**	**354**	LR		LR		20 45 12.3	
RPN	**Rapa Nui**	**33.84**	**263**	LR		LR		20 41 58.1	
SDV	**Santo Domingo**	**36.79**	**1**	*eP*		**P**		**20 32 23.9**	**-2.3**
SDV				LR		LR			
SDV	**Santo Domingo**	**36.79**	**1**	LR		LR		20 48 56.6	
PMSA	**Palmer Station**	**36.93**	**175**	P		**P**		**20 32 26.9**	**0.0**
PCRV	**Puerto La Cruz**	**38.57**	**10**	LR		LR		20 49 57.6	
SJG	**San Juan**	**46.20**	**6**	LR		LR		20 54 29.4	
CMIG	**Matias Romero**	**50.52**	**330**	LR		LR		20 50 53.5	
TEIG	**Tepich**	**50.87**	**339**	*eP*		**P**		**20 34 17.7**	**-1.4**
TEIG				LR		LR			
TEIG	**Tepich**	**50.87**	**339**	LR		LR		20 53 12.5	
VNA3	**Neumayer Olymp**	**54.51**	**160**	*eP*		**P**		**20 34 45.7**	**+0.2**
VNA3				*e*				20 34 49.2	
VNA3				*e*				20 34 50.8	
VNA3				*e*		pP		20 34 58.4	+2.0
VNA3				*e*				20 35 48.5	
VNA1	**Neumayer--Stat**	**54.78**	**159**	*eP*		**P**		**20 34 48.6**	**+1.1**
VNA1				*e*				20 34 51.5	
VNA1				*e*				20 34 52.8	
VNA1				*e*		pP		20 34 59.3	+1.0
VNA1				*e*		pP		20 35 01.4	+3.1
VNA1				*e*				20 35 50.4	
VNA2	**Neumayer--Watz**	**55.13**	**159**	*eP*		**P**		**20 34 50.1**	**+0.1**
VNA2	baz=290,slow=8.0			*e*				20 34 53.1	
VNA2				*e*				20 34 54.8	
VNA2				*e*		pP		20 35 02.0	+1.1
VNA2				*e*				20 35 04.0	
VNA2				*e*				20 35 50.9	
SNAA	**Sanae**	**56.73**	**159**	P		**P**		**20 35 01.2**	**-0.3**
RKT	**Rikitea**	**57.28**	**259**	*eT*				21 36 37.0	
MAIT	**Maitri**	**61.37**	**158**	*eP*		**P**		**20 35 31.7**	**-1.9**
JCT	**Junction City**	**64.41**	**333**	*eP*		**P**		**20 35 53.9**	**-0.4**
JCT	comp=Z,12nm,0.6s,mb5.1			LR		LR			
JCT	**Junction City**	**64.41**	**333**	*eP*		**P**		**20 35 53.9**	**-0.4**
JCT	comp=Z,12nm,0.6s,mb5.1			pmax		pmax			
JCT	comp=Z,340nm,21.0s,MS4.5			MLR		MLR			
CPCT	**Cooper Cave**	**64.50**	**348**	*eP*		**P**		**20 35 53.4**	**-1.3**
SWET	**Sewanee**	**64.55**	**347**	*eP*		**P**		**20 35 53.1**	**-1.9**
SWET				*e*		pP		20 36 03.3	-2.8
TXAR	**Lajitas Array**	**65.10**	**329**	P		**P**		**20 35 58.4**	**-0.3**
TXAR	comp=Z,3.5nm,0.8s,mb4.4,baz=151,slow=8.6,SNR=29			LR		LR		21 00 24.5	
MIAR	**Mount Ida**	**65.87**	**340**	*eP*		**P**		**20 36 02.8**	**-0.8**
MIAR	**Mount Ida**	**65.87**	**340**	*eP*		**P**		**20 36 02.8**	**-0.8**
MIAR	comp=Z,51nm,1.6s,mb5.3			pmax		pmax			
TAOE	**Nuku Hiva Isla**	**67.47**	**272**	*e*LR		LR		20 56 27.4	
MNTX	**Cornudas Mount**	**67.88**	**329**	*eP*		**P**		**20 36 14.6**	**-1.9**
FVM	**French Village**	**68.22**	**344**	*eP*		**P**		**20 36 16.9**	**-1.6**
319A	**Douglas**	**69.48**	**326**	⇑P		**P**		**20 36 27.1**	**+0.6**
TBI	**Tubuai**	**69.65**	**254**	*eS*		S		20 45 30.3	-3.7
TBI	**Tubuai**	**69.65**	**254**	*e*LR		LR		20 57 29.6	
TBI	**Tubuai**	**69.65**	**254**	*eT*				21 52 10.8	
318A	**Bisbee**	**69.89**	**325**	⇑P		**P**		**20 36 28.9**	**-0.1**
218A	**Dragoon**	**70.35**	**325**	⇑P		**P**		**20 36 32.6**	**+0.8**
MEH	**Mehetia**	**70.61**	**260**	*eT*				21 53 19.9	
LPM	**Los Pinos Moun**	**70.64**	**329**	*eP*		**P**		**20 36 33.9**	**+0.4**
LAZ	**Ladron**	**70.94**	**329**	*eP*		**P**		**20 36 36.2**	**+0.8**
SYO	**Syowa Base**	**71.02**	**159**	⇑*eP*		**P**		**20 36 33.8**	**-1.7**
SYO	**Syowa Base**	**71.02**	**159**	⇑*ep*	P		pP	20 36 37.4	-9.2
ANMO	**Albuquerque**	**71.10**	**330**	*eP*		**P**		**20 36 36.1**	**-0.1**
ANMO	comp=Z,57nm,2.0s,mb5.2			pmax		pmax			
ANMO	**Albuquerque**	**71.10**	**330**	*eP*		**P**		**20 36 36.2**	**-0.1**
ANMO	comp=Z,57nm,2.0s			pmax		pmax			
116A	**Eloy**	**71.66**	**325**	⇑P		**P**		**20 36 40.0**	**+0.2**
115A	**Sonoran Desert**	**72.04**	**324**	⇓P		**P**		**20 36 42.3**	**+0.3**
PPT	**Papeete**	**72.05**	**259**	*eS*		S		20 45 59.7	-2.4
PPT	**Papeete**	**72.05**	**259**	*e*LR		LR		20 58 42.4	
DBIC	**Dimbokro**	**72.54**	**72**	P		**P**		**20 36 45.4**	**-0.1**
DBIC	comp=Z,1.5nm,0.6s,mb5.1,baz=217,slow=5.9,SNR=32			LR		LR		21 08 06.2	
JFWS	**Jewell Farm**	**72.86**	**345**	*eP*		**P**		**20 36 45.1**	**-1.5**
JFWS	**Jewell Farm**	**72.86**	**345**	*eP*		**P**		**20 36 45.2**	**-1.5**
JFWS	comp=Z,59nm,1.5s,mb5.3			pmax		pmax			
Z14A	**Wintersburg**	**72.93**	**324**	⇓P		**P**		**20 36 47.7**	**+0.4**
SDCO	**Great Sand Dun**	**73.05**	**332**	*eP*		**P**		**20 36 47.9**	**0.0**
Y14A	**Wickenburg**	**73.41**	**325**	⇓P		**P**		**20 36 50.7**	**+0.6**
X15A	**Humboldt**	**73.45**	**325**	⇓P		**P**		**20 36 50.7**	**+0.4**
GLA	**Glamis**	**73.67**	**323**	⇓P		**P**		**20 36 52.2**	**+0.5**
Y13A	**Salome**	**73.74**	**324**	⇓P		**P**		**20 36 52.7**	**+0.7**
X14A	**Yava**	**73.77**	**325**	⇑P		**P**		**20 36 52.8**	**+0.6**
WUAZ	**Wupatki**	**73.85**	**327**	*eP*		**P**		**20 36 52.8**	**+0.1**
WUAZ	**Wupatki**	**73.85**	**327**	⇑P		**P**		**20 36 53.6**	**+1.0**
MVCO	**Mesa Verde**	**73.89**	**330**	*eP*		**P**		**20 36 52.6**	**-0.3**
W15A	**Williams**	**74.02**	**326**	⇓P		**P**		**20 36 54.5**	**+0.9**
Y12C	**Blythe**	**74.05**	**323**	⇓P		**P**		**20 36 54.7**	**+0.8**
DVTC	**Desert V Tower**	**74.06**	**322**	⇑P		**P**		**20 36 55.0**	**+1.0**
SWSC	**Sam W. Stewart**	**74.11**	**322**	⇓P		**P**		**20 36 54.9**	**+0.7**
PDMCI	**Parker Dam,Lak**	**74.28**	**324**	⇓P		**P**		**20 36 55.9**	**+0.7**
X13A	**Yucca**	**74.35**	**324**	⇓P		**P**		**20 36 56.2**	**+0.6**
MONP	**Monument Peak**	**74.42**	**322**	⇑P		**P**		**20 36 56.1**	**+0.1**
W14A	**Seligman**	**74.45**	**325**	⇑P		**P**		**20 36 56.7**	**+0.5**
BC3	**Big Chuckw Mtn**	**74.47**	**323**	⇑P		**P**		**20 36 56.7**	**+0.4**
PV01	**Paradox Valley**	**74.69**	**330**	*eP*		**P**		**20 36 57.5**	**0.0**
IRM	**Iron Mountain**	**74.70**	**323**	⇓P		**P**		**20 36 57.3**	**-0.4**
W13A	**Hualapai Mount**	**74.77**	**325**	⇓P		**P**		**20 36 58.6**	**+0.6**
PFO	**Pinyon Flat Ob**	**74.98**	**322**	⇑P		**P**		**20 37 00.2**	**+0.9**
BELC	**Belle Mtn.**	**75.03**	**323**	⇓P		**P**		**20 37 00.2**	**+0.7**
PV10	**Paradox Valley**	**75.09**	**330**	*eP*		**P**		**20 36 58.5**	**-1.3**
ECSD	**EROS,Sioux

baz=76
SRU San Rafael 76.36 329 eP P 20 37 06.7 -0.3
comp=Z,15nm,1.1s,mb4.8
SRU San Rafael 76.36 329 eP P 20 37 06.7 -0.3
SRU pmax pmax
comp=Z,15nm,1.1s,mb4.8
SNCC San Nicolas Is 76.42 320 ⇓P P 20 37 08.0 +0.5
baz=77
CCUT Cedar City 76.43 327 eP P 20 37 08.3 +0.8
GSC Goldstone 76.45 323 ⇑P P 20 37 08.1 +0.5
baz=77
S14A Cedar City 76.51 327 ⇓P P 20 37 08.9 +1.0
baz=77
U11A Corn Creek 76.56 325 ⇓P P 20 37 09.1 +0.8
baz=77
MSU Marysvale 76.63 328 eP P 20 37 08.8 +0.1
S13A Holt Ranch, En 76.70 326 ⇓P P 20 37 09.9 +0.9
baz=77
EDW2 Edwards Air Fo 76.77 322 ⇑P P 20 37 09.7 +0.2
baz=77
BLG Laguna Peak 76.79 321 ⇑P P 20 37 10.0 +0.4
baz=77
TMUT Trail Mountain 76.82 329 P P 20 37 09.9 +0.2
R14A James Farms, M 76.86 327 ⇓P P 20 37 10.8 +0.9
baz=77
U10A Ash Meadows, A 77.05 324 ⇓P P 20 37 11.8 +0.8
baz=77
T11A Corn Creek, Al 77.11 325 ⇑P P 20 37 12.0 +0.7
baz=77
S12A Delamar Landin 77.21 326 ⇑P P 20 37 13.0 +1.1
baz=77
FURC Furnace Creek, 77.36 324 ⇑P P 20 37 13.4 +0.6
baz=78
MPMC Manual Prospec 77.39 323 ⇓P P 20 37 13.3 +0.4
baz=78
TPNV Topopah Spring 77.41 324 eP P 20 37 12.8 -0.2
comp=Z,32nm,1.4s,mb5.0
TPNV Topopah Spring 77.41 324 eP P 20 37 12.8 -0.2
TPNV pmax pmax
comp=Z,32nm,1.4s,mb5.1
TPNV Topopah Spring 77.41 324 ⇓P P 20 37 13.3 +0.3
baz=78,SNR=14
ARVC Arvin 77.41 322 ⇓P P 20 37 13.7 +0.6
baz=78
MPU Maple Canyon 77.59 329 eP P 20 37 13.9 -0.1
comp=Z,46nm,1.3s,mb5.2
ISA Isabella 77.62 322 ⇑P P 20 37 14.6 +0.4
baz=78
R12A Pony Springs, 77.65 326 ⇓P P 20 37 14.8 +0.4
baz=78
NLU North Lily Min 77.74 329 eP P 20 37 13.2 -1.6
PKM Peak Mountain 77.79 321 ⇑P P 20 37 15.7 +0.5
baz=78
Q13A Wheeler Ranch, 77.86 327 ⇑P P 20 37 15.7 +0.2
baz=78
EYMN Ely 77.92 346 P P 20 37 14.5 -1.1
comp=Z,61nm,1.8s,mb5.2
RSSD Black Hills 77.98 336 eP P 20 37 15.8 -0.2
comp=Z,6.4nm,1.0s,mb4.5
RSSD Black Hills 77.98 336 eP P 20 37 15.8 -0.2
RSSD pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
R11A Troy Canyon, C 78.15 326 ⇓P P 20 37 17.8 +0.7
baz=78
SMMC Simmler 78.19 321 ⇑P P 20 37 18.3 +0.9
baz=78
P13A Bates Ranch, G 78.25 327 ⇑P P 20 37 18.1 +0.5
baz=78
DUG Dugway 78.27 329 eP P 20 37 18.3 +0.6
comp=Z,46nm,1.3s,mb5.2
DUG Dugway 78.27 329 eP P 20 37 18.3 +0.5
DUG pmax pmax
comp=Z,46nm,1.3s,mb5.2
DUG Dugway 78.27 329 ⇓P P 20 37 18.0 +0.3
baz=78,SNR=8.0
Q12A Willow Creek R 78.32 327 ⇑P P 20 37 18.7 +0.7
baz=78
S10A Tonopah Range, 78.33 325 ⇑P P 20 37 18.5 +0.4
baz=78
R10A Warm Springs 78.46 325 ⇑P P 20 37 19.9 +1.0
baz=79
S09A Goldfield 78.50 324 ⇓P P 20 37 19.4 +0.3
baz=79
TIN Tinemaha 78.52 323 ⇑P P 20 37 19.7 +0.5
baz=79
MAW Mawson 78.56 164 P P 20 37 19.0 -0.1
comp=Z,12nm,0.9s,mb4.8,baz=209,slow=6.4,SNR=11
MAW LR LR 21 11 29.5
comp=Z,498nm,18.4s,MS4.9,baz=237,slow=35
Q11A Duckwater 78.57 326 ⇓P P 20 37 19.4 0.0
baz=79
HELL Mitchell Peak, 78.67 322 ⇓P P 20 37 20.2 +0.2
baz=79
P12A McGill 78.69 327 ⇑P P 20 37 20.7 +0.6
baz=79
N15A Stansbury Isla 78.70 329 ⇑P P 20 37 20.1 0.0
baz=79
O13A Hicks Ranch, I 78.77 328 ⇑P P 20 37 20.7 +0.2
baz=79
R09A Tonopah 78.82 325 ⇓P P 20 37 20.7 -0.1
baz=79
S08C White Mtn Res 78.83 324 ⇑P P 20 37 21.4 +0.5
baz=79
Q10A Clear Creek Ra 78.92 326 ⇑P P 20 37 21.9 +0.5
baz=79
PDAR Pinedale Array 78.94 332 P P 20 37 20.8 -0.6
comp=Z,11nm,1.1s,mb4.7,baz=126,slow=7.5,SNR=15
PDAR LR LR 21 07 10.7
comp=Z,179nm,20.4s,MS4.4,baz=172,slow=32
PKD Parkfield 78.96 321 ⇓P P 20 37 22.3 +0.7
baz=79
N14A Grayback Hills 78.97 329 ⇑P P 20 37 21.9 +0.3
baz=79
M15A Larsen Ranch, 79.12 330 ⇓P P 20 37 22.6 +0.2
baz=79
P11A Circle Ranch, 79.17 326 ⇑P P 20 37 22.9 +0.2
baz=79
O12A Currie 79.24 327 ⇑P P 20 37 23.4 +0.4
baz=79
AGMN Agassiz Refuge 79.26 343 eP P 20 37 21.7 -1.3
comp=Z,4.2nm,0.4s,mb4.7
MLAC Mammoth Lakes 79.28 323 ⇓P P 20 37 23.5 +0.2
baz=80
T06C Millerton Lake 79.28 322 ⇓P P 20 37 23.4 0.0
baz=80
KCC Kaiser Creek 79.30 323 ⇑P P 20 37 23.8 +0.3
baz=80
Q09A Carvers 79.33 325 ⇓P P 20 37 24.3 +0.7
baz=80
U04C Hernandez Rese 79.40 321 ⇑P P 20 37 24.3 +0.3
baz=80
V03C Hunter Liggett 79.40 321 ⇓P P 20 37 24.6 +0.6
baz=80
N13A Wendover, West 79.44 328 ⇓P P 20 37 24.9 +0.7
baz=80
M14A Sheep Mountain 79.56 329 ⇓P P 20 37 25.2 +0.4
baz=80
O11A Cowboy Ranch, 79.57 327 ⇓P P 20 37 25.2 +0.4
baz=80
P10A Eureka 79.57 326 ⇓P P 20 37 25.4 +0.5
baz=80
NVAR Mina Array Bea 79.59 324 P P 20 37 24.4 -0.6
comp=Z,1.7nm,0.7s,mb4.1,baz=75,slow=28,SNR=5.5
Q08A Gabbs 79.73 325 ⇑P P 20 37 26.3 +0.6
baz=80
R07C Lee Vining 79.73 323 ⇑P P 20 37 26.4 +0.6
baz=80
M13A Montello 79.82 328 ⇓P P 20 37 26.2 0.0
baz=80
N12A Clover Valley, 79.83 328 ⇓P P 20 37 26.0 -0.3
baz=80
HAST UC Hastings Re 79.84 321 ⇓P P 20 37 27.1 +0.7
baz=80
S05C Merced 79.86 322 ⇑P P 20 37 27.4 +0.9
baz=80
TSUM Tsumeb 80.03 106 eP P 20 37 28.8 +0.8
comp=Z,32nm,1.4s,mb5.0
O10A Cortez Mining, 80.10 326 ⇑P P 20 37 28.4 +0.7
baz=80
PACP Pacheco Peak 80.14 321 ⇑P P 20 37 29.1 +1.1
baz=80
M12A Wells 80.21 328 ⇑P P 20 37 28.9 +0.6
baz=80
R06C Coleville 80.26 323 ⇑P P 20 37 29.3 +0.7
baz=80
L13A Double Diamond 80.30 329 ⇑P P 20 37 29.4 +0.6
baz=80
K14A Jones Ranch, D 80.31 330 ⇑P P 20 37 29.3 +0.5
baz=80
O09A Fish Creek Ran 80.35 326 ⇑P P 20 37 29.6 +0.5
baz=80
CMB Columbia Colle 80.40 323 ⇓P P 20 37 30.0 +0.6
baz=81
P08A Dixie Valley 80.43 325 ⇓P P 20 37 29.9 +0.4
baz=81
S04C Ingram Canyon, 80.52 322 ⇓P P 20 37 30.7 +0.6
baz=81
M11A Holland Ranch, 80.64 328 ⇑P P 20 37 30.9 +0.3
baz=81
R05C Kirkwood Meado 80.72 323 ⇑P P 20 37 31.8 +0.7
baz=81
LKWY Lake 80.77 333 eP P 20 37 32.7 +1.5
comp=Z,14nm,1.4s,mb4.7
LKWY Lake 80.77 333 eP P 20 37 32.7 +1.5
LKWY pmax pmax
comp=Z,14nm,1.4s,mb4.7
RLMT Red Lodge 80.78 334 eP P 20 37 30.7 -0.6
comp=Z,81nm,1.5s,mb5.4
K13A Stover Farm, H 80.80 329 ⇑P P 20 37 32.2 +0.7
baz=81
L12A House Creek Ra 80.83 328 ⇓P P 20 37 32.4 +0.8
baz=81
WENL Wente Brothers 80.84 322 ⇓P P 20 37 32.4 +0.6
baz=81
R04C Big Horse Ranc 80.86 322 ⇑P P 20 37 32.9 +1.1
baz=81
WCN Washoe City 81.00 324 ⇑P P 20 37 33.5 +0.9
baz=81
N09A Rock Creek Ran 81.03 326 ⇓P P 20 37 32.9 +0.2
baz=81
M10A I.L. Ranch, Tu 81.06 327 ⇑P P 20 37 33.5 +0.6
baz=81
YMR Madison River 81.09 332 eP P 20 37 33.2 +0.3
comp=Z,66nm,1.1s,mb5.5
PAHR Pah Rah Range 81.11 324 eP P 20 37 33.2 +0.1
comp=Z,60nm,1.4s,mb5.3
LAVA Lava Cap Winer 81.11 323 ⇑P P 20 37 33.8 +0.6
baz=81
K12A Draper Farm, C 81.17 329 ⇓P P 20 37 33.7 +0.3
baz=81
O07A Toulon 81.19 325 ⇑P P 20 37 34.0 +0.5
baz=81
N08A GE Springer Mi 81.28 326 ⇓P P 20 37 33.7 -0.3
baz=82
TORD Torodi Ar. Bea 81.42 70 P P 20 37 35.0 -0.3
comp=Z,12nm,0.8s,mb4.9,baz=256,slow=4.9,SNR=62
TORD LR LR 21 13 35.1
comp=Z,309nm,19.0s,MS4.7,baz=230,slow=36
M09A Marrel Ranch, 81.43 327 ⇓P P 20 37 34.9 +0.1
baz=82
J13A Cove Ranch, Pi 81.44 330 ⇓P P 20 37 35.2 +0.4
baz=82
P05C Yuba Gap, Truc 81.45 323 ⇑P P 20 37 35.3 +0.4
baz=82
L10A Juniper Basin 81.46 328 ⇑P P 20 37 35.0 0.0
baz=82
HLID Hailey 81.67 330 eP P 20 37 35.9 -0.1
comp=Z,30nm,1.1s,mb5.1
HLID Hailey 81.67 330 ⇑P P 20 37 36.3 +0.3
baz=82
O06A Flanigan 81.67 324 ⇓P P 20 37 36.3 +0.2
baz=82
N07B Gerlach 81.70 325 ⇓P P 20 37 36.3 +0.1
baz=82
BEKR Beckwourth 81.73 324 ⇓P P 20 37 36.9 +0.5
baz=82
J12A Stokes Ranch, 81.74 329 ⇑P P 20 37 36.7 +0.3
baz=82
CVS Carmenet Viney 81.75 322 ⇓P P 20 37 36.7 +0.2
baz=82
K11A Parker Ranch, 81.79 328 ⇓P P 20 37 36.9 +0.2
baz=82
I13A Wildhorse Cree 81.82 330 ⇓P P 20 37 37.3 +0.5
baz=82
DGMT Dagmar 81.83 338 eP P 20 37 36.9 +0.1
comp=Z,13nm,0.6s,mb5.0
M08A Happy Creek Ra 81.90 326 ⇑P P 20 37 37.0 -0.3
baz=82
OHCM Honcut 81.94 323 eP P 20 37 37.1 -0.4
L09A Wilkinson Ranc 81.99 327 ⇑P P 20 37 37.7 0.0
baz=82
MCMT McKenzie Canyo 82.00 331 eP P 20 37 38.0 +0.2
SUTB Sutter Butte 82.02 323 ⇓P P 20 37 38.4 +0.4
baz=82
BOSA Boshof 82.06 118 P P 20 37 38.0 -0.7
comp=Z,22nm,0.7s,mb5.2,baz=238,slow=4.8,SNR=3.0
BOSA LR LR 21 10 12.9
comp=Z,439nm,19.1s,MS4.8,baz=231,slow=33
O05C Quincy 82.09 324 ⇓P P 20 37 38.2 -0.1
baz=82
ORV Oroville 82.10 323 ⇑P P 20 37 38.4 0.0
baz=82
N06A Buffalo Meadow 82.11 325 ⇑P P 20 37 38.5 +0.1
baz=82
G15A Dillon 82.12 332 ⇑P P 20 37 38.7 +0.3
baz=82
K10A MacKenzie Ranc 82.19 328 ⇓P P 20 37 38.6 -0.2
baz=82
MFID Camas Ranch 82.20 329 ⇓P P 20 37 38.9 +0.1
baz=82
M07A Soldier Meadow 82.25 326 ⇑P P 20 37 39.2 +0.1
baz=82
H13A Challis 82.40 330 ⇑P P 20 37 39.9 +0.1
baz=83
O04C Chester 82.44 324 ⇑P P 20 37 40.3 +0.2
baz=83
L08A Fields 82.45 327 ⇓P P 20 37 40.1 0.0
baz=83
ELFS Eagle Lake Fie 82.47 324 ⇓P P 20 37 40.6 +0.3
baz=83
K09A Rome 82.53 327 ⇓P P 20 37 40.4 -0.2
baz=83
H12A Diamond D Ranc 82.65 330 ⇑P P 20 37 41.8 +0.7
baz=83
F15A Butte 82.67 332 ⇓P P 20 37 41.1 -0.1
baz=83
WVOR Wild Horse Val 82.77 327 eP P 20 37 40.7 -1.1
comp=Z,21nm,1.3s,mb5.0
WVOR Wild Horse Val 82.77 327 eP P 20 37 40.7 -1.1
WVOR pmax pmax
comp=Z,21nm,1.3s,mb5.0
M06C Likely Place G 82.78 325 ⇑P P 20 37 42.1 +0.2
baz=83
G13A Cobalt 82.81 331 ⇑P P 20 37 42.0 +0.1
baz=83
L07A Adell 82.81 326 ⇓P P 20 37 42.0 0.0
baz=83
GASB Alder Springs 82.82 322 ⇓P P 20 37 42.5 +0.4
baz=83
K08A Mann Creek Ran 82.92 327 ⇓P P 20 37 42.2 -0.4
baz=83
LBCM Butte Creek Ri 82.95 324 P P 20 37 41.9 -0.9
HATC Hat Creek Radi 83.00 324 ⇓P P 20 37 42.9 -0.1
baz=83
F14A Wisdom 83.01 332 ⇑P P 20 37 42.9 -0.1
baz=83
J09A Fry Pan Ranch, 83.04 328 ⇓P P 20 37 42.9 -0.3
baz=83
I10A Payette 83.16 329 ⇓P P 20 37 43.7 -0.1
baz=83
MOD Modoc 83.20 325 eP P 20 37 43.9 -0.1
comp=Z,14nm,1.1s,mb4.9
MOD Modoc 83.20 325 ⇓P P 20 37 43.9 -0.1
baz=83
E15A Deer Lodge 83.20 332 ⇑P P 20 37 43.9 0.0
baz=83
M05C Lookout 83.23 324 ⇑P P 20 37 44.4 +0.2
baz=83
K07A Rock Creek Ran 83.26 326 ⇓P P 20 37 44.5 +0.2
baz=83
H11A Donnelly 83.28 330 ⇓P P 20 37 44.1 -0.3
baz=84
J08A Circle Bar Ran 83.39 327 ⇑P P 20 37 44.9 -0.1
baz=84
WDC Whiskeytown Da 83.39 323 eP P 20 37 42.0 -3.1
comp=Z,7.7nm,1.2s,mb4.6
WDC Whiskeytown Da 83.39 323 eP P 20 37 42.0 -3.1
WDC pmax pmax
comp=Z,8.0nm,1.2s,mb4.6
WDC Whiskeytown Da 83.39 323 ⇓P P 20 37 43.9 -1.2
baz=84
I09A Lost Marbles R 83.51 328 ⇓P P 20 37 45.5 -0.1
baz=84
H10A Noah's Angus R 83.53 329 ⇑P P 20 37 45.3 -0.3
baz=84
L05A Lakeview 83.58 325 ⇓P P 20 37 46.0 0.0
baz=84
D15A Lincoln 83.65 333 ⇓P P 20 37 46.0 -0.2
baz=84
M03C McCloud 83.67 324 ⇓P P 20 37 46.4 -0.1
baz=84
O01C Eel River Cons 83.77 322 ⇑P P 20 37 47.0 0.0
baz=84
F12A Elk City 83.77 331 ⇓P P 20 37 46.4 -0.5
baz=84
J07A Hines 83.81 327 ⇓P P 20 37 47.2 +0.1
baz=84
K06A Valley Falls 83.84 326 ⇑P P 20 37 47.5 +0.2
baz=84
CHMT Chamberlain Mo 83.85 332 eP P 20 37 47.4 +0.2
I08A Drewsey 83.85 328 ⇓P P 20 37 47.4 +0.1
baz=84
E13A Victor 83.86 332 ⇓P P 20 37 47.6 +0.3
baz=84
M04C Macdoel 83.89 324 ⇓P P 20 37 47.8 +0.2
baz=84
G11A Walters Elk Ra 83.94 330 ⇑P P 20 37 47.5 -0.2
baz=84
N02C Big Bar 83.97 323 ⇑P P 20 37 48.2 +0.2
baz=84
H09A Durkee 84.00 329 ⇑P P 20 37 47.6 -0.5
baz=84
D14A Greenough 84.08 332 ⇑P P 20 37 48.2 -0.2
baz=84
K05A Summer Lake 84.10 326 ⇑P P 20 37 48.4 -0.2
baz=84
J06A Christmas Vall 84.12 326 ⇓P P 20 37 48.5 -0.2
baz=84
G10A Bishop Farm, J 84.24 329 ⇓P P 20 37 49.0 -0.2
baz=84
F11A Grangeville 84.27 330 ⇓P P 20 37 49.1 -0.3
baz=84
YBH Yreka Blue Hor 84.31 324 ⇓P P 20 37 48.4 -1.3
baz=84
H08A Prairie City 84.36 328 ⇑P P 20 37 49.3 -0.6
baz=84
I07A Izee 84.43 327 ⇑P P 20 37 50.2 0.0
baz=85
D13A Huson 84.49 332 ⇓P P 20 37 49.9 -0.6
baz=85
G09A Cove 84.53 329 ⇓P P 20 37 50.2 -0.5
baz=85
E11A Bogner Ranch, 84.66 330 ⇓P P 20 37 50.4 -0.9
baz=85
I06A Prineville 84.67 327 ⇑P P 20 37 51.5 +0.1
baz=85
J05A Fort Rock 84.68 326 ⇓P P 20 37 51.7 +0.2
baz=85
C14A Swan Lake 84.73 333 ⇓P P 20 37 51.3 -0.4
baz=85
F10A Beach Ranch, E 84.81 330 ⇑P P 20 37 51.8 -0.3
baz=85
F09A S2 Ranch, Elgi 84.91 329 ⇑P P 20 37 52.2 -0.4
baz=85
C13A Hot Springs 85.00 332 ⇑P P 20 37 52.5 -0.5
baz=85
G08A Pilot Rock 85.08 328 ⇓P P 20 37 53.0 -0.5
baz=85
L02A Cave Junction 85.08 324 ⇓P P 20 37 53.5 -0.1
baz=85
J04A Umpqua Nationa 85.09 325 ⇑P P 20 37 53.3 -0.3
baz=85
E10A Myers Farm, Un 85.15 330 ⇓P P 20 37 53.1 -0.7
baz=85
H06A Lindquist Farm 85.31 327 ⇓P P 20 37 54.8 +0.1
baz=86
G07A Ruggs Ranch, H 85.39 328 ⇓P P 20 37 55.1 +0.1
baz=86
K02A Glendale 85.45 324 ⇓P P 20 37 55.3 -0.2
baz=86
B13A Whitefish 85.51 333 ⇑P P 20 37 55.0 -0.5
baz=86
E09A Wood Farm, Sta 85.63 330 ⇑P P 20 37 55.7 -0.5
baz=86
I04A Tendick Farm, 85.64 325 ⇑P P 20 37 55.8 -0.6
baz=86
D10A Wagner Farm, O 85.66 330 ⇑P P 20 37 55.7 -0.6
baz=86
G06A Carlson Farm, 85.83 327 ⇑P P 20 37 57.0 -0.2
baz=86
J02A Umpqua 85.92 325 ⇓P P 20 37 57.5 -0.3
baz=86
K01A Sixes 85.99 324 ⇑P P 20 37 58.0 -0.2
baz=86
BROR Big Rock Looko 86.00 326 P P 20 37 57.4 -0.8
E08A Dider Farm, El 86.03 329 ⇓P P 20 37 57.9 -0.3
baz=86
B12A Libby 86.04 332 ⇓P P 20 37 57.8 -0.4
baz=86
D09A Jones Farm, Ri 86.12 330 ⇑P P 20 37 58.4 -0.2
baz=86
G05A Wamic 86.16 327 ⇑P P 20 37 58.4 -0.5
baz=86
HAWA Hanford 86.17 329 eP P 20 37 58.4 -0.6
comp=Z,8.9nm,0.7s,mb5.1
H04A Detroit Lake 86.17 326 ⇑P P 20 37 58.5 -0.5
baz=86
RSW Rattlesnake Hi 86.20 329 P P 20 37 59.7 +0.6
I03A Eugene 86.20 325 ⇓P P 20 37 59.0 -0.2
baz=86
F06A Goldendale 86.29 328 ⇓P P 20 37 59.2 -0.3
baz=86
B11A Sandpoint 86.34 332 ⇑P P 20 37 58.9 -0.8
baz=86
D08A Wollman Farm, 86.39 329 ⇓P P 20 37 59.1 -0.8
baz=87
A12A Yaak River Ran 86.43 332 ⇓P P 20 37 59.7 -0.4
baz=87
OD2 Odessa Site #2 86.55 330 P P 20 38 00.2 -0.5
F05A White Salmon 86.69 327 ⇓P P 20 38 01.8 +0.2
baz=87
H03A Soap Creek Ran 86.72 326 ⇓P P 20 38 01.7 0.0
baz=87
A11A Hall Mountain, 86.75 332 ⇓P P 20 38 01.1 -0.6
baz=87
E06A Yakima 86.95 328 ⇓P P 20 38 02.6 -0.2
baz=87
D07A Quincy 86.97 329 ⇓P P 20 38 02.7 -0.2
baz=87
B09A Rice 87.09 331 ⇓P P 20 38 02.7 -0.7
baz=87
G03A Yamhill 87.17 326 ⇓P P 20 38 03.5 -0.3
baz=87
F04A Amboy 87.19 327 ⇑P P 20 38 02.9 -1.0
baz=87
A10A Northport 87.26 331 ⇑P P 20 38 03.0 -1.2
baz=87
E05A Randle 87.33 328 ⇓P P 20 38 03.6 -1.0
baz=88
WTV Waterville 87.34 329 P P 20 38 04.3 -0.2
D06A Cle Elum 87.37 329 ⇓P P 20 38 04.2 -0.6
baz=88
C07A Waterville 87.38 329 ⇑P P 20 38 03.9 -0.9
baz=88
B08A Colville Reser 87.56 330 ⇑P P 20 38 04.7 -0.9
baz=88
A09A Danville 87.70 331 ⇑P P 20 38 05.8 -0.5
baz=88
D05A Enumclaw 87.90 328 ⇑P P 20 38 06.6 -0.7
baz=88
A08A Turner Farm, O 87.98 331 ⇓P P 20 38 06.3 -1.3
baz=88
B07A Winthrop 87.98 330 ⇓P P 20 38 06.5 -1.2
baz=88
C05A Tolt Reservoir 88.13 328 ⇑P P 20 38 07.5 -0.9
baz=88
E03A Lebam 88.18 327 ⇑P P 20 38 07.9 -0.8
baz=88
A07A Ashnola River, 88.53 330 ⇓P P 20 38 10.0 -0.3
baz=89
JCW Jim Creek 88.60 329 P P 20 38 09.7 -0.9
FCC Fort Churchill 88.66 348 eP P 20 38 09.8 -0.7
comp=Z,27nm,0.9s,mb5.6
FCC Fort Churchill 88.66 348 eP P 20 38 09.9 -0.7
FCC pmax pmax
comp=Z,27nm,0.9s,mb5.6
B05A Bryant 88.73 329 ⇑P P 20 38 10.2 -1.0
baz=89
EDM Edmonton 88.96 336 eP P 20 38 10.4 -1.8
ESDC Sonseca Array 91.88 45 P P 20 38 26.2 +0.1
comp=Z,0.3nm,0.5s,mb3.9,baz=224,slow=3.5,SNR=3.2
ESDC LR LR 21 19 27.9
comp=Z,209nm,18.4s,MS4.6,baz=220,slow=35
YKA Yellowknife Ar 96.78 341 P P 20 38 46.2 -1.8

comp=Z,2.3nm,0.8s,mb4.7,baz=141,slow=4.5,SNR=34
KEST Kesra 98.78 54 LR LR 21 25 18.4
comp=Z,419nm,20.9s,MS4.9,baz=3.3,slow=36
AKASG Malin Array Be 117.52 45 *i* PKIKP PKPdf 20 44 02.2 -1.1
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 117.52 45 PKP PKPdf 20 44 01.5 -1.8
comp=Z,1.8nm,0.6s,baz=266,slow=2.6,SNR=5.0
BRTR Keskin Array B 118.11 58 PKP PKPdf 20 44 03.6 -1.2
comp=Z,1.7nm,0.8s,baz=187,slow=1.8,SNR=9.7
OBN Obninsk 122.50 40 *i* PKIKP PKPdf 20 44 12.4 -0.3
OBN *e* 20 51 09.3
OBN *e*SS SS 21 02 43.0 +14
OBN pmax pmax
comp=Z,13nm,0.8s
OBN MLR MLR
comp=Z,200nm,18.0s,MS4.8
ASAR Alice Springs 123.17 208 PKP PKPdf 20 44 13.3 -1.9
comp=Z,4.2nm,0.9s,baz=140,slow=1.9,SNR=30
KIV Kislovodsk 125.53 54 *i* PKIKP PKPdf 20 44 18.3 -0.6
KIV pmax pmax
comp=Z,9.0nm,1.1s
WB2 Warramunga Arr 126.28 210 *e*P PKPdf 20 44 19.6 -1.6
WRA Warramunga Arr 126.28 210 PKP PKPdf 20 44 19.6 -1.6
comp=Z,9.8nm,0.7s,baz=160,slow=1.7,SNR=112
PRGR Permogore 126.96 32 *e*PKIKP PKPdf 20 44 19.6 -1.5
BILL Bilibino 127.87 336 ⇓ *i* PKIKP PKPdf 20 44 22.4 -0.3
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,200nm,24.0s,MS4.7
FITZ Fitzroy Crossi 131.29 201 *e*P PKPdf 20 44 29.6 -1.2
comp=Z,9.3nm,0.8s
ARU Arti 134.65 37 *i* PKIKP PKPdf 20 44 35.9 +0.1
TIXI Tiksi 135.06 351 *e*PKPdf PKPdf 20 44 35.3 -0.8
TIXI Tiksi 135.06 351 *d* PKIKP PKPdf 20 44 35.5 -0.7
SEY Seymchan 135.27 333 *i* PKIKP PKPdf 20 44 36.6 -0.2
MA2 Magadan 137.62 330 *i* PKIKP PKPdf 20 44 41.1 -0.1
MA2 *e* 20 47 28.8
MA2 *e*SS SS 21 05 27.8 -5.9
MA2 pmax pmax
comp=Z,10.0nm,0.9s
MA2 MLR MLR
comp=Z,100nm,25.0s,MS4.5
BATI Kupang 139.33 203 PKP PKPdf 20 44 46.0 +0.1
comp=Z,19nm,0.8s,baz=184,slow=3.6,SNR=5.9
BRVK Borovoye 142.19 38 *e*PKPdf PKPdf 20 44 49.5 -0.2
YAK Yakutsk 143.41 344 *e*PKPpre 20 44 47.6
YAK Yakutsk 143.41 344 *e*PKIKP PKPdf 20 44 48.4 -3.2
YAK pmax pmax
comp=Z,39nm,1.3s
YAK pmax pmax
comp=N,8.0nm,1.5s
YAK pmax pmax
comp=E,8.0nm,1.6s
PALK Pallekele 146.19 122 *e*PKPbc PKPbc 20 44 58.5 -0.5
KAD Karad 146.28 101 *e*P PKPdf 20 44 58.5 +0.5
NVS Novosibirsk 147.44 28 ⇑ *i* PKIKP PKPdf 20 44 58.6 -0.1
NVS pmax pmax
comp=Z,123nm,2.2s
NVS pmax pmax
comp=N,16nm,1.5s
NVS pmax pmax
comp=E,34nm,2.2s
YSS Yuzh-Sakhalins 147.60 315 *e*PKPbc PKPbc 20 45 01.6 -0.4
YSS Yuzh-Sakhalins 147.60 315 *e*PKP2 PKPab 20 45 02.0 -2.3
KURK Kurchatov 147.84 37 *e*PKPdf PKPdf 20 44 59.4 -0.1
EKS2 Erkin-Say 148.12 54 *e*PKPdf PKPdf 20 45 00.7 +0.4
EKS2 Erkin-Say 148.12 54 P PKPdf 20 45 01.0 +0.8
SNR=36
AML Almayashu 148.20 55 *e*PKPdf PKPdf 20 45 01.0 +0.6
AML Almayashu 148.20 55 P PKPdf 20 45 01.4 +1.0
SNR=24
USP Ospenovka 148.46 52 P PKPdf 20 45 01.7 +0.9
SNR=27
AAK Ala-Archa 148.63 53 P PKPdf 20 45 03.2 +2.1
SNR=23
FRU Bishkek 148.66 53 *e*PKIKP PKPdf 20 45 02.0 +0.8
FRU *i* 20 45 05.0
FRU pmax pmax
comp=Z,150nm,1.8s
CHMS Chumysh 148.71 53 P PKPdf 20 45 06.4 +5.1
SNR=12
ASAJ Asahikawa 148.75 310 PKPbc PKPbc 20 45 04.8 -0.3
comp=Z,26nm,1.0s,baz=260,slow=9.5,SNR=7.6
UCH Uchtor 148.76 54 *e*PKPdf PKPdf 20 45 02.2 +0.9
UCH Uchtor 148.76 54 P PKPdf 20 45 04.0 +2.6
SNR=33
KBK Karagaybulak 148.95 53 P PKPdf 20 45 02.2 +0.6
SNR=14
KZA Kyzart 149.33 54 P PKPdf 20 45 04.0 +1.7
SNR=12
TKM2 Tokmak 2 149.33 52 *e*PKPdf PKPdf 20 45 02.2 -0.1
TKM2 *e*PKPbc PKPbc 20 45 06.5 -0.1
TKM2 Tokmak 2 149.33 52 P PKPdf 20 45 02.6 +0.4
SNR=8.2
KRAR Krasnoyarsk 149.84 18 *i* PKP2 PKPbc 20 45 06.3 -1.1
ULHL Ulahol 149.99 53 P PKPbc 20 45 09.3 +1.1
SNR=9.8
HYB Hyderabad 150.09 104 ⇑ *e* PKPbc 20 45 09.0 -0.2
HYB *e* 20 45 20.0
HYB Hyderabad 150.09 104 ⇑ *i* PKP PKPbc 20 45 09.0 -0.2
comp=Z,85nm,1.0s
HYB *e* 20 45 20.0
BOD Bodaibo 150.10 355 *e*PKIKP PKPdf 20 45 01.2 -1.8
BOD *e* 20 45 06.0
BOD pmax pmax
comp=Z,27nm,1.5s
HABR Khabarovsk 151.38 322 ⇑ *e*PKIKP PKPdf 20 45 04.8 -0.5
HABR *i* 20 45 11.8
HABR *e* 20 45 19.1
HABR *e* 20 48 49.5
HABR *e* 20 52 09.7
HABR *e*SS SS 21 08 09.6 -2.2
MKAR Makanchi Array 152.01 41 PKP PKPdf 20 45 05.6 -0.7
comp=Z,20nm,0.7s,baz=300,slow=2.4,SNR=17
MKAR PKPbc PKPbc 20 45 12.1 -0.8
comp=Z,20nm,0.7s,baz=318,slow=1.6,SNR=100
MJAR Matsushiro Arr 153.97 296 PKPab PKPab 20 45 29.7 -1.3
comp=Z,6.5nm,0.8s,baz=116,slow=2.7,SNR=9.5
IRK Irkutsk 155.65 7 *e*PKIKP PKPdf 20 45 10.4 -0.9
IRK pmax pmax
comp=Z,40nm,2.0s
MOY Mondy 155.73 12 *e*PKIKP PKPdf 20 45 12.8 +1.4
CIT Chita 155.88 353 *e*PKIKP PKPdf 20 45 11.9 +0.3
TLY Talaya 156.13 8 *e*PKPdf PKPdf 20 45 12.6 +0.7
TLY *e*PKPab PKPab 20 45 39.8 +0.3
TLY Talaya 156.13 8 *e*PKIKP PKPdf 20 45 12.1 +0.2
TLY pmax pmax
comp=Z,22nm,1.7s
MDJ Mudanjiang 156.71 320 PKP PKPdf 20 45 11.1 -1.8
MDJ PP PP
comp=Z,88nm,6.1s
MDJ Mudanjiang 156.71 320 *e*P PKPdf 20 45 11.1 -1.8
WMQ Urumqi 156.83 42 *e*PKP PKPdf 20 45 13.5 +0.4
ZAK Zakamensk 157.35 9 ⇑ *i* PKIKP PKPdf 20 45 13.8 +0.3
ZAK *e* 20 49 20.8
ZAK pmax pmax
comp=Z,5.0nm,1.4s
ZAK pmax pmax
comp=Z,5.0nm,1.7s
ZAK pmax pmax
comp=Z,3.0nm,1.9s
KOLN Koldanda 157.61 85 *e*P PKPdf 20 45 13.8 -0.8
comp=Z,32nm,1.2s
GKN Gorkha 158.55 85 *e*P PKPdf 20 45 15.0 -0.7
comp=Z,45nm,1.3s
KKN Kakani 159.09 85 *e*P PKPdf 20 45 15.6 -0.8
CN2 Changchun 159.49 324 *e*PKP PKPdf 20 45 13.8 -2.5
CN2 PKP2 PKPab 20 45 53.9 -0.5
JIRN Jiri 159.88 86 *e*P PKPdf 20 45 16.5 -0.8
comp=Z,45nm,1.6s
SONM Songino Array 160.22 5 PKP PKPdf 20 45 16.3 -0.7
comp=Z,2.3nm,0.9s,baz=285,slow=0.3,SNR=17
SONM PKPab PKPab 20 45 57.0 -0.3
comp=Z,1.7nm,0.8s,baz=339,slow=2.7,SNR=7.0
ULN Ulaanbaatar 160.23 4 *i* PKIKP PKPdf 20 45 16.7 -0.3
ODAN Odare 160.83 89 *e*P PKPdf 20 45 18.2 -0.2
comp=Z,41nm,1.2s
TAPN Taplejung 161.18 87 *e*P PKPdf 20 45 18.2 -0.5
comp=Z,31nm,1.6s
KSRS Korea Array 161.56 305 PKP PKPdf 20 45 17.7 -1.1
comp=Z,3.8nm,1.0s,baz=48,slow=1.4,SNR=13
KSRS PKPab PKPab 20 46 02.9 -0.8
comp=Z,2.4nm,1.1s,baz=46,slow=7.2,SNR=4.6

LSA Lhasa 164.33 80 *e*P PKPdf 20 45 22.0 +0.3
GTA Gaotai 166.43 32 *e*PKP PKPdf 20 45 23.1 -0.1
GTA PKS 20 48 56.4
GTA PP PP 20 50 15.4 +3.3
GTA PP PP
comp=Z,182nm,9.1s
BJI Beijing 166.70 335 PKP PKPdf 20 45 22.8 -0.6
BJI PP PP
comp=Z,96nm,5.5s
BJI LR LR
comp=N,110nm,17.4s
BJI LR LR
comp=E,213nm,16.9s
BJI LR LR
comp=Z,275nm,49.6s
CHTO Chiang Mai 166.96 133 *e*PKPdf PKPdf 20 45 23.6 -0.6
NJ2 Nanjing 170.57 297 *e*PKP PKPdf 20 45 22.3 -3.8
QIZ Qiongzhong 170.91 185 PKP PKPdf 20 45 23.8 -2.9
QIZ PP PP 20 50 37.8 +3.5
QIZ PPP 20 54 45.3
QIZ PP PP
comp=Z,159nm,4.8s
QIZ LR LR
comp=N,113nm,22.2s
QIZ LR LR
comp=Z,274nm,19.4s
LZH Lanzhou 170.96 27 *e*PKP PKPdf 20 45 23.4 -2.8
LZH PP PP 20 50 34.3 -0.7
LZH SKS SKSdf 20 52 21.8 -5.1
LZH *e*SKKS SKKSac 20 57 16.5 -3.0
LZH SS SS 21 11 30.8 -5.1
LZH PP PP
comp=Z,69nm,5.7s
LZH LR LR
comp=N,146nm,19.7s
LZH LR LR
comp=Z,226nm,20.4s
KMI Kunming 173.69 117 PKP PKPdf 20 45 27.4 -0.4
GYA Guiyang 177.38 129 *i* PKP PKPdf 20 45 27.5 -1.2
GYA PKP2 PKPab 20 47 15.3 +1.4
GYA PKS 20 48 58.8
GYA PP PP 20 51 09.0 +2.1
GYA SS SS 21 12 39.6 +0.3
GYA PP PP
comp=Z,120nm,7.9s
GYA LR LR
comp=N,250nm,22.9s
GYA LR LR
comp=E,470nm,23.4s
GYA LR LR
comp=Z,360nm,22.6s

NEIC ***22*** *20:28:57.6, 1706N×10079W, h18km, MD3.9(MEX), After MEX.*

MEX 22 20:28:56.6±0.8, 1711N×10077W, h4km±5km, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.48**	**97**	*i* P	Pg	20 29 05.7	-0.1
CAIG				*i* S	Sg	20 29 12.2	+0.2
ZIIG	**Zihuatanejo**	**0.83**	**307**	*i* P	Pg	20 29 11.8	-0.8
ZIIG				*i* S	Sg	20 29 21.7	-1.7
ACX	**Acapulco**	**0.85**	**106**	*e*P	Pg	20 29 11.8	-1.0
ACX				*i* S	Sg	20 29 22.7	-1.2
MEIG	**Mezcala**	**1.36**	**53**	*i* P	Pn	20 29 18.4	-4.1
MEIG				*i* S	Sg	20 29 35.3	-5.2
PLIG	**Platanillo**	**1.75**	**43**	*i* P	Pn	20 29 24.2	-3.6
PLIG				*i* S	Sn	20 29 46.8	-3.9
YAIG	**Yautepec**	**2.38**	**43**	*i* P	Pn	20 29 33.2	-3.2
YAIG				*i* S	Sn	20 30 03.4	-2.7
SZVM	**Salazar**	**2.57**	**31**	*i* P	Pn	20 29 35.5	-3.5
SZVM				*i* S	Sn	20 30 04.6	-6.1
MOIG	**Morelia**	**2.59**	**351**	*i* P	Pn	20 29 36.6	-2.7
MOIG				*i* S	Sn	20 30 07.7	-3.6
MMIG	**Aquila**	**2.73**	**296**	*i* P	Pn	20 29 36.5	-4.7
MMIG				*i* S	Sn	20 30 09.9	-4.7
PPM	**Popocatepetl**	**2.82**	**46**	*e*P	Pn	20 29 39.6	-2.9
PPM				*i* S	Sn	20 30 13.7	-3.2
PPM	**Popocatepetl**	**2.82**	**46**	*e*P	Pn	20 29 39.5	-3.0
PPM				*e*P		20 29 39.6	
PPM				*i* S	Sn	20 30 13.7	-3.2
UTMO	**Huajuapan**	**2.92**	**75**	*e*P	Pn	20 29 41.2	-2.7
UTMO				*i* S	Sn	20 30 16.3	-3.1
PTVM	**Pico Tres Padr**	**2.93**	**32**	*i* P	Pn	20 29 41.6	-2.4
PTVM				*i* S	Sn	20 30 15.9	-3.8
IIO	**Organos**	**3.14**	**38**	*e*P	Pn	20 29 45.8	-1.1
IIO				*i* S	Sn	20 30 20.9	-4.0
TPIG	**Tehuac#an**	**3.50**	**68**	*i* S	Sn	20 30 31.3	-2.4

IDC ***22*** *20:41:12.9±0.6, 4694N×15569E, h0km, mb4.1/15, mb1 4.3/17, mb1mx4.2/23, mbtmp4.1/17, ML4.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/30, Error ellipse: s-maj=19.8km s-min=13.8km az=149.0*

ISCJB ***22*** *20:41:15.5±0.5, 4674N±008×15561E±008, h33km, mb4.4/26, Error ellipse: s-maj=13.6km s-min=4.6km az=147.7*

MOS ***22*** *20:41:16.1±1.2, 4698N×15554E, h33km, mb4.7/4, Error ellipse: s-maj=13.0km s-min=10.3km az=70.6*

NEIC ***22*** *20:41:16.1±4.3, 4691N×15572E, h22km±31km, mb4.6/4, Error ellipse: s-maj=13.7km s-min=11.5km az=152.0*

ISC 22 20:41:19.4±1.0, 4670N±010×15553E±009, h50km±10km, n76, σ1°27/86, mb4.4/26, 2C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.00**	**5**	*e*PN	**Pn**	**20 42 11.0**	**-7.1**
SKR				pmax	pmax		
comp=Z,20nm,0.5s							
KUR	**Kuril'sk**	**5.54**	**257**	⇑ *i* PN	**Pn**	**20 42 40.0**	**+0.8**
KUR				pmax	pmax		
comp=N,90nm,0.5s							
KUR				pmax	pmax		
comp=E,90nm,0.5s							
KUR				pmax	pmax		
comp=Z,150nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**7.31**	**252**	*e*PN	**Pn**	**20 43 03.9**	**+0.4**
YUK				pmax	pmax		
comp=Z,230nm,0.4s							
YUK				pmax	pmax		
comp=E,150nm,0.5s							
NEM2	**Nemuro 2**	**7.69**	**248**	P	**Pn**	**20 43 07.8**	**-0.9**
NEM2				*e*S	**Sn**	**20 44 32.2**	**-2.2**
JRA	**Rausu**	**7.84**	**253**	P	**Pn**	**20 43 11.8**	**+1.1**
JRA				*e*S	**Sn**	**20 44 39.7**	**+1.7**
JNK	**Nakash**	**8.25**	**252**	P	**Pn**	**20 43 17.3**	**+0.9**
JAK	**Akkeshi**	**8.54**	**248**	P	**Pn**	**20 43 19.4**	**-0.9**
JAK				*e*S	**Sn**	**20 44 52.1**	**-3.1**
JTKR	**Abashiri--Toko**	**8.63**	**256**	P	**Pn**	**20 43 22.8**	**+1.2**
YSS	**Yuzh-Sakhalins**	**8.77**	**276**	*e*P	**Pn**	**20 43 25.4**	**+2.0**
comp=E,14nm,0.6s							
YSS	**Yuzh-Sakhalins**	**8.77**	**276**	⇑ *e*PN	**Pn**	**20 43 27.8**	**+4.4**
YSS				pmax	pmax		
comp=Z,20nm,0.8s							
YSS				pmax	pmax		
comp=E,30nm,0.9s							
JMP	**Maruseppu**	**8.98**	**257**	P	**Pn**	**20 43 29.5**	**+3.1**
JAR	**Ashorobuto**	**9.00**	**252**	P	**Pn**	**20 43 27.8**	**+1.2**
JAR				*e*S	**Sn**	**20 45 06.6**	**+0.1**
JOB	**Onbets**	**9.14**	**250**	P	**Pn**	**20 43 28.2**	**-0.3**
JOB				*e*S	**Sn**	**20 45 07.3**	**-2.6**
JKK2	**Kamakawa 2**	**9.45**	**257**	P	**Pn**	**20 43 34.4**	**+1.7**
ASAJ	**Asahikawa**	**9.46**	**259**	P	**Pn**	**20 43 35.3**	**+2.4**
ASAJ	**Asahikawa**	**9.46**	**259**	PN	**Pn**	**20 43 34.1**	**+1.2**
ASAJ				pmax	pmax		
comp=Z,3.0nm,0.3s							
ASAJ	**Asahikawa**	**9.46**	**259**	Pn	**Pn**	**20 43 34.0**	**+1.2**
comp=Z,2.5nm,0.3s,baz=86,slow=15,SNR=20							
JCH	**Churui**	**9.59**	**249**	P	**Pn**	**20 43 34.0**	**-0.6**
JCH				*e*S	**Sn**	**20 45 17.0**	**-3.8**
JFR	**Furan**	**9.83**	**254**	P	**Pn**	**20 43 40.4**	**+2.4**
JAB	**Ashibetsu**	**9.94**	**256**	P	**Pn**	**20 43 41.5**	**+2.1**
JEM	**Erimo**	**10.02**	**247**	P	**Pn**	**20 43 41.0**	**+0.4**
ERM	**Erimo**	**10.02**	**247**	*e*P	**Pn**	**20 43 40.7**	**+0.1**
comp=Z,26nm,0.7s							
ERM	**Erimo**	**10.02**	**247**	*e*PN	**Pn**	**20 43 40.7**	**+0.1**
ERM				pmax	pmax		
comp=Z,26nm,0.7s							
JNBK	**Urakawa-nobuka**	**10.14**	**249**	P	**Pn**	**20 43 41.3**	**-0.9**
JNBK				*e*S	**Sn**	**20 45 31.6**	**-2.8**

JBT2 Biratori 2 10.15 252 P **Pn** **20 43 42.7 +0.3**
JEW Eniwo 10.73 254 P **Pn** **20 43 52.3 +2.1**
JNB Noboribetsu 11.17 253 P **Pn** **20 43 55.8 -0.4**
JNB *e*S **Sn** **20 45 57.2 -2.3**
JKB Kayabe 11.45 250 P **Pn** **20 43 58.8 -1.3**
JKB *e*S **Sn** **20 46 00.6 -5.8**
JSH Shimam 11.75 255 P **Pn** **20 44 04.5 +0.4**
JYM2 Yakumo 2 11.77 253 P **Pn** **20 44 03.7 -0.7**
JANG Nango 11.97 243 P **Pn** **20 44 04.4 -2.8**
JANG *e*S **Sn** **20 46 10.7 -8.4**
JTM Tenmabayashi 12.01 246 P **Pn** **20 44 06.1 -1.6**
JTM *e*S **Sn** **20 46 13.2 -6.9**
JOSM Okushiri--Mats 12.38 254 P **Pn** **20 44 11.9 -0.8**
OFUJ Ofunato 12.69 238 P **Pn** **20 44 14.8 -2.2**
JRG Rokugo 13.10 242 *e*S **Sn** **20 46 38.3 -8.5**
KLR Kul'dur 16.11 288 *e*P **Pn** **20 45 02.7 +0.4**
KLR pmax pmax
comp=E,28nm,1.8s
KLR pmax pmax
comp=Z,42nm,1.8s
MAT Matsushiro 16.42 238 PKP **Pn** **20 45 06.5 +0.2**
MJAR Matsushiro Arr 16.42 238 Pn **Pn** **20 45 06.2 0.0**
MJAR Matsushiro Arr 16.42 238 Pn **Pn** **20 45 06.2 0.0**
comp=Z,0.2nm,0.3s,baz=28,slow=13,SNR=8.7
KSRS Korea Array 22.38 256 P **P** **20 46 16.2 +3.0**
comp=Z,3.3nm,0.7s,mb3.9,baz=58,slow=10,SNR=13
KSRS LR LR 20 54 28.2
comp=Z,41nm,20.6s,baz=162,slow=35
TIXI Tiksi 28.00 342 *e*P **P** **20 47 01.2 -3.8**
comp=Z,2.9nm,0.6s,mb4.1
TIXI Tiksi 28.00 342 *e*P **P** **20 47 01.2 -3.8**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
KDAK Kodiak Island 32.84 51 P **P** **20 47 44.1 -3.7**
comp=Z,6.0nm,0.6s,mb4.7,baz=18,slow=11,SNR=6.0
SONM Songino Array 32.92 290 P **P** **20 47 48.7 +0.1**
comp=Z,1.1nm,0.7s,mb3.9,baz=65,slow=8.6,SNR=5.5
INK Inuvik 40.80 33 P **P** **20 48 53.9 -1.4**
INK Inuvik 40.80 33 P **P** **20 48 53.9 -1.4**
comp=Z,4.6nm,0.5s,mb4.4,baz=296,slow=4.5,SNR=27
MKAR Makanchi Array 48.44 298 P **P** **20 49 56.1 -0.3**
comp=Z,2.5nm,0.7s,mb4.3,baz=66,slow=8.5,SNR=9.0
KURK Kurchatov 48.77 305 *e*P **P** **20 49 59.4 +0.5**
comp=Z,9.0nm,0.6s,mb5.0
KURK Kurchatov 48.77 305 *e*P **P** **20 49 59.4 +0.5**
KURK pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
YKA Yellowknife Ar 49.96 37 P **P** **20 50 06.6 -1.2**
YKA Yellowknife Ar 49.96 37 P **P** **20 50 06.6 -1.2**
comp=Z,1.6nm,0.5s,mb4.3,baz=295,slow=7.3,SNR=19
BRVK Borovoye 52.21 310 *e*P **P** **20 50 25.5 +0.7**
comp=Z,4.2nm,0.6s,mb4.5
BRVK Borovoye 52.21 310 *e*P **P** **20 50 25.5 +0.7**
BRVK pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ARCES ARCESS Array B 58.44 342 P **P** **20 51 07.8 -1.5**
comp=Z,4.5nm,0.9s,mb4.5,baz=41,slow=8.4,SNR=4.3
AKTK Aktyubinsk 59.99 313 P **P** **20 51 20.1 -0.2**
AKTO Aktyubinsk 59.99 313 P **P** **20 51 20.1 -0.2**
comp=Z,1.0nm,0.5s,mb4.1,baz=71,slow=5.3,SNR=4.8
NVAR Mina Array Bea 60.97 64 P **P** **20 51 27.0 -0.3**
comp=Z,0.4nm,0.6s,mb3.7,baz=290,slow=9.0,SNR=5.1
JOF Joensuu 62.10 335 *e*p **P** **20 51 33.9 -0.6**
comp=Z,2.0nm,0.5s,mb4.5
PDAR Pinedale Array 63.42 55 P **P** **20 51 43.2 -0.3**
comp=Z,0.9nm,0.8s,mb3.9,baz=282,slow=2.9,SNR=6.7
FINES FINESS Array B 64.78 336 P **P** **20 51 51.5 -0.7**
FINES FINESS Array B 64.78 336 P **P** **20 51 51.5 -0.7**
comp=Z,1.3nm,0.6s,mb4.1,baz=34,slow=8.1,SNR=8.1
RSSD Black Hills 65.57 51 *e*P **P** **20 51 56.4 -1.1**
RSSD pmax pmax
comp=Z,4.4nm,0.9s,mb4.5
RSSD Black Hills 65.57 51 *e*P **P** **20 51 56.4 -1.2**
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
NOA NORSAR Array B 68.80 342 P **P** **20 52 16.7 -1.0**
NOA NORSAR Array B 68.80 342 P **P** **20 52 16.7 -1.0**
comp=Z,0.3nm,0.6s,mb3.4,baz=30,slow=6.7,SNR=2.5
WRA Warramunga Arr 69.04 201 P **P** **20 52 21.8 +2.2**
comp=Z,2.2nm,0.8s,mb4.1,baz=21,slow=6.7,SNR=16
ASAR Alice Springs 72.72 201 P **P** **20 52 43.6 +1.7**
comp=Z,1.1nm,0.7s,mb3.9,baz=22,slow=5.9,SNR=11
TXAR Lajitas Array 76.06 62 P **P** **20 53 01.4 0.0**
comp=Z,2.1nm,0.5s,mb4.3,baz=302,slow=4.6,SNR=15
KHC Kasperske Hory 78.99 336 *e*P **P** **20 53 17.5 0.0**
KHC *e*pP pP 20 53 25.5 -6.4
GERES GERESS Array B 79.21 335 P **P** **20 53 18.7 0.0**
comp=Z,0.4nm,0.6s,mb3.5,baz=32,slow=5.8,SNR=3.5
MIB Mutribah 80.10 303 *e*P **P** **20 53 25.5 +1.6**
MIB AMb AMB 20 53 26.4
comp=Z,21nm,0.8s,mb5.1
KBD Kabd 80.36 302 *e*P **P** **20 53 26.4 +1.1**
KBD AMb AMB 20 53 28.0
comp=Z,50nm,0.6s,mb5.6
QRN Al-Qurain 80.55 302 *e*P **P** **20 53 26.7 +0.4**
QRN AMb AMB 20 53 30.6
comp=Z,31nm,0.9s,mb5.2
NAY Al-Naaiem 80.57 303 *e*P **P** **20 53 27.0 +0.6**
NAY AMb AMB 20 53 28.9
comp=Z,11nm,0.8s,mb4.8
RDF Al-Radifah 80.63 302 *e*P **P** **20 53 27.3 +0.6**
RDF AMb AMB 20 53 30.5
comp=Z,30nm,0.9s,mb5.2
PLCA Paso Flores 146.55 97 PKPbc PKPbc 21 00 54.9 +0.3
comp=Z,1.9nm,0.7s,baz=302,slow=3.9,SNR=6.3

ISCJB ***22*** *20:44:30.6±0.9, 1195N±009×8824W±005, h33km, mb3.6/4, Error ellipse: s-maj=13.5km s-min=6.5km az=10.5*

IDC ***22*** *20:44:30.9±2.4, 1259N×8745W, h0km, mb3.6/2, mb1 4.1/2, mb1mx3.6/15, mbtmp3.7/2, ML2.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.8/24, Error ellipse: s-maj=71.2km s-min=27.9km az=46.0*

CASC ***22*** *20:44:31.9±2.3, 1201N×8815W, h26km±22km, MD3.8, mb3.6(NEIC)*

NEIC ***22*** *20:44:36.7±1.5, 1221N×8757W, h70km±15km, mb3.6/1, Error ellipse: s-maj=30.9km s-min=12.9km az=57.0*

ISC 22 20:44:32.0±0.9, 1196N±009×8821W±005, h35km, n33, σ0°92/30, mb3.6/4, 4C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEL3	**Telica 3**	**1.46**	**65**	⇑ *e*P	**Pn**	**20 44 55.5**	**-0.5**
BLLM	**Bellamira**	**1.48**	**359**	*e*P	x	20 45 08.4	
BLLM				*e*S	x	20 45 27.9	
TELN	**Telica**	**1.49**	**64**	⇓ *e*P	**Pn**	**20 44 55.9**	**-0.4**
TELN				*e*S	**Sn**	**20 45 13.4**	**-1.1**
COPN	**Copaltepe**	**1.59**	**82**	⇓ *e*P	**Pn**	**20 44 57.4**	**-0.3**
COPN				*e*S	**Sn**	**20 45 17.8**	**+0.7**
MOMJ	**Momotombo**	**1.69**	**74**	⇓ *e*P	**Pn**	**20 44 58.5**	**-0.5**
MOMJ				*e*S	**Sn**	**20 45 20.6**	**+1.2**
CAHU	**Cacacuatique**	**1.80**	**360**	*e*P	x	20 45 13.3	
CAHU				*e*S	x	20 45 36.7	
APYN	**Apoyeque**	**1.84**	**81**	*e*P	**Pn**	**20 45 01.0**	**-0.1**
LCBS	**La Ceiba**	**1.85**	**336**	*e*P	x	20 45 14.4	
LCBS				*e*S	x	20 45 38.2	
XAVN	**Gruta Xavier**	**1.85**	**84**	*e*P	**Pn**	**20 45 00.8**	**-0.4**
XAVN				*e*S	**Sn**	**20 45 22.9**	**-0.5**
LFRS	**El Faro**	**1.85**	**333**	*e*P	x	20 45 14.5	
LFRS				*e*S	x	20 45 36.9	
TISN	**Laguna Tiscapa**	**1.90**	**84**	*e*P	**Pn**	**20 45 01.8**	**-0.2**
TISN				*e*S	**Sn**	**20 45 26.4**	**+1.7**
MGAN	**Managua**	**1.93**	**84**	*e*P	**Pn**	**20 45 02.3**	**+0.1**
MGAN				*e*S	**Sn**	**20 45 26.2**	**+0.9**
TICN	**Ticuantepe**	**1.93**	**88**	⇑ *e*P	**Pn**	**20 45 02.5**	**+0.1**
HUEN		**2.02**	**79**	⇑ *e*P	**Pn**	**20 45 03.2**	**-0.4**
HUEN				*e*P		20 45 04.2	
BOQS	**Boqueron**	**2.05**	**329**	⇑ *e*P	x	20 45 18.4	
BOQS				*e*S	x	20 45 45.1	
APON	**Apoyo**	**2.09**	**91**	*e*P	**Pn**	**20 45 04.1**	**-0.5**
TGUH	**Tegucigalpa,Un**	**2.27**	**23**	*e*P	**Pn**	**20 45 06.5**	**-0.6**
SBLS	**San Blas**	**2.32**	**324**	*e*P	x	20 45 22.8	
SBLS				*e*S	x	20 45 50.0	
SNJE	**San Jose**	**2.34**	**324**	*e*P	x	20 45 21.7	
SNJE				*e*S	x	20 45 51.0	
RTR	**El Retiro**	**2.38**	**324**	⇓ *e*P	x	20 45 23.2	
RTR				*e*S	x	20 45 52.5	
SSNN	**San Juan del S**	**2.40**	**106**	*e*P	**Pn**	**20 45 09.8**	**+0.9**
CONN	**Concepcion**	**2.56**	**99**	*e*P	**Pn**	**20 45 10.2**	**-0.8**
RBDL	**Robledal**	**2.58**	**326**	⇓ *e*P	x	20 45 26.2	
RBDL				*e*S	x	20 45 57.3	
JTS	**JuntasAbangare**	**3.60**	**117**	Pn	**Pn**	**20 45 24.6**	**-0.7**
JTS				LR	LR	20 47 10.0	

JTS	**JuntasAbangare**	**3.60**	**117**	Pn	**Pn**	**20**	**45**	**24.6 -0.7**
	0.6nm,0.3s,baz=306,slow=19,SNR=4.4							
JTS				LR	LR	20	47	10.0
	comp=Z,264nm,19.5s,baz=157,slow=47							
LTX	**Lajitas**	**22.50**	**323**	*eP*	**P**	**20**	**49**	**33.1 +4.6**
	2.2nm,0.8s,mb3.6							
TXAR	**Lajitas Array**	**22.50**	**323**	P	**P**	**20**	**49**	**32.0 +3.5**
	2.4nm,0.8s,mb3.7,baz=138,slow=11,SNR=22							
PDAR	**Pinedale Array**	**35.86**	**333**	P	**P**	**20**	**51**	**31.1 +2.6**
	0.5nm,0.7s,mb3.5,baz=119,slow=9.4,SNR=4.8							
ULM	**Lac du Bonnet**	**38.70**	**352**	P	**P**	**20**	**51**	**51.7 -0.7**
ULM	**Lac du Bonnet**	**38.70**	**352**	P	**P**	**20**	**51**	**51.7 -0.7**
	baz=168,slow=9.9							
SCHQ	**Schefferville**	**45.96**	**17**	P	**P**	**20**	**52**	**49.6 -1.8**
	baz=219,slow=8.5							
YKA	**Yellowknife Ar**	**53.89**	**345**	P	**P**	**20**	**53**	**52.3 +0.8**
YKA	**Yellowknife Ar**	**53.89**	**345**	P	**P**	**20**	**53**	**52.3 +0.8**
	0.5nm,0.6s,mb3.6,baz=136,slow=8.0,SNR=14							

IDC ***22*** *20:51:17.7±1.6, 700S×129.52E, h0km, mb3.7/2, mb1 4.0/6, mb1mx3.7/14, mbtmp3.8/6, ML3.9/4, MS4.2/2, Ms1 4.2/2, ms1mx3.1/27, Error ellipse: s-maj=45.2km s-min=24.9km az=71.0*

ISCJB ***22*** *20:51:35.2±2.0, 79S±02.×1289E±0.1, h176km±20km, mb3.4/2, Error ellipse: s-maj=31.0km s-min=12.4km az=37.8*

ISC 22 20:51:33.7±2.6, 77S±02×1289E±01, h136km±24km, n12, σ1§18/12, mb3.4/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.75**	**244**	Pn	**Pn**		**20 52 57.4**	**+0.6**
	1.9nm,0.3s,baz=112,slow=11,SNR=6.8							
BATI				Sn	Sx		20 53 58.5	
	10nm,0.3s,baz=97,slow=22,SNR=12							
KAKA	**Kakadu**	**6.08**	**145**	*eP*	**Pn**		**20 53 02.7**	**+1.4**
	17nm,0.1s							
KAKA				*eS*	**Sn**		**20 54 09.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**10.82**	**197**	*eP*	**Pn**		**20 54 03.9**	**-0.9**
	2.9nm,0.8s							
FITZ				*eS*	Sx		20 55 55.7	
FITZ	**Fitzroy Crossi**	**10.82**	**197**	Pn	**Pn**		**20 54 03.9**	**-0.9**
	0.4nm,0.3s,baz=34,slow=9.3,SNR=13							
FITZ				Sn	Sx		20 55 55.3	
	0.7nm,0.3s,baz=72,slow=20,SNR=5.1							
WRA	**Warramunga Arr**	**13.27**	**157**	Pn	**Pn**		**20 54 35.2**	**-1.6**
	0.7nm,0.3s,baz=342,slow=12,SNR=55							
WRA				Sn	Sx		20 56 54.4	
	2.3nm,0.3s,baz=332,slow=22,SNR=18							
WB2	**Warramunga Arr**	**13.27**	**157**	*eP*	**Pn**		**20 54 36.1**	**-0.8**
WB2				*eS*	**Sn**		**20 56 56.6**	**-6.9**
ASAR	**Alice Springs**	**16.59**	**164**	P	**Pn**		**20 55 20.0**	**+1.7**
	0.5nm,0.3s,baz=342,slow=9.5,SNR=40							
ASAR				S	Sx		20 58 18.3	
	0.5nm,0.3s,baz=322,slow=14,SNR=7.4							
STKA	**Stephens Creek**	**26.81**	**156**	*eP*	**P**		**20 57 03.4**	**+2.2**
	1.7nm,1.3s,mb3.5							
STKA	**Stephens Creek**	**26.81**	**156**	P	**P**		**20 57 02.2**	**+1.0**
	1.1nm,0.8s,mb3.5,baz=331,slow=14,SNR=3.8							
JHJ	**Hachijo jima 2**	**41.89**	**14**	LR	LR		21 12 54.4	
	comp=Z,248nm,21.3s,baz=139,slow=32							
MKAR	**Makanchi Array**	**68.22**	**327**	P	**P**		**21 02 18.6**	**-0.9**
	0.2nm,0.3s,mb3.3,baz=123,slow=7.2,SNR=6.7							
AKTO	**Aktyubinsk**	**83.96**	**323**	LR	LR		21 41 30.8	
	comp=Z,175nm,20.8s,baz=285,slow=36							

BJI ***22*** *21:28:55.6, 844S×128.20E, h160km, mB5.1, mb5.3*

MOS ***22*** *21:28:59.2±0.8, 740S×127.48E, h113km, mb5.5/31, MS4.3/10, Error ellipse: s-maj=12.1km s-min=6.1km az=114.6*

ISCJB ***22*** *21:29:03.5±0.2, 758S±002×12766E±003, h161km, mb5.4/100, Error ellipse: s-maj=4.9km s-min=3.3km az=169.9*

GCMT ***22*** *21:29:05.1±0.1, 767S×12769E, h171km, MW5.4/100, Moment Tensor Solution. s88,c138; s100,c178; Duration: 1§2 Moment tensor: Scale 10^17^Nm; Mrr1.45±.02; Mθθ-0.62±.03; Mφφ-0.82±.03; Mrθ0.06±.02; Mθφ0.18±.02; Mφr0.85±.02; Best double couple: Mo1.44300×10^17^ NP1:φs152.00000°, δ29.00000°, λ74.00000°. NP2:φs350.00000°, δ62.00000°, λ98.00000°. Principal axes: T 1.7350, Plg71.0000°, Azm279.0000°; N -0.5810, Plg7.0000°, Azm166.0000°; P -1.1500, Plg17.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *21:29:05.1±0.1, 756S×12756E, mb5.4/25 Error ellipse: s-maj=5.0km s-min=3.5km az=63.0*

NEIC Felt at Darwin, Australia.

BGS ***22*** *21:29:05.1, 756S×12756E, h161km, mb5.4(NEIC)*

IDC ***22*** *21:29:06.2±1.0, 751S×12756E, h168km±8km, mb5.0/21, mb1 5.0/21, mb1mx5.0/23, mbtmp5.0/21, MS4.2/7, Ms1 4.2/7, ms1mx4.0/17, Error ellipse: s-maj=10.8km s-min=8.1km az=63.0*

ISC 22 21:29:05.0±0.2, 765S±002×12769E±004, h163km, h163km±1.8km:pP-P, n733, σ1§23/432, mb5.4/99, 110C-38D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.72**	**237**	P	**Pn**		**21 30 16.9**	**+2.0**
	4µm,0.3s,baz=118,slow=2.1,SNR=4306							
BATI				S	**Sn**		**21 31 09.3**	**-0.3**
	1µm,0.3s,baz=48,slow=18,SNR=10							
BATI				LR	LR		21 32 34.4	
	comp=Z,819nm,18.3s,baz=75,slow=44							
KAKA	**Kakadu**	**6.87**	**137**	*eP*	**Pn**		**21 30 43.8**	**+0.5**
KAKA				*eS*	**Sn**		**21 31 55.9**	**-4.7**
KAPI	**Kappang**	**8.31**	**288**	Pn	**Pn**		**21 31 03.9**	**+1.4**
	2µm,1.1s,SNR=35							
BAKI	**Biak**	**10.56**	**53**	P	**Pn**		**21 31 31.7**	**-0.6**
	834nm,1.2s							
FITZ	**Fitzroy Crossi**	**10.58**	**191**	⇓*iP*	**Pn**		**21 31 30.4**	**-2.0**
	868nm,0.5s							
FITZ				*eS*	**Sn**		**21 33 22.5**	**-7.2**
FITZ	**Fitzroy Crossi**	**10.58**	**191**	P	**Pn**		**21 31 30.4**	**-2.0**
	57nm,0.3s,baz=22,slow=13,SNR=303							
FITZ				S	**Sn**		**21 33 22.6**	**-7.1**
	51nm,0.3s,baz=78,slow=16,SNR=12							
FITZ				LR	LR		21 36 41.9	
	comp=Z,1µm,19.0s,baz=204,slow=43							
WRA	**Warramunga Arr**	**13.81**	**153**	P	**Pn**		**21 32 11.2**	**-2.9**
	7.7nm,0.3s,baz=324,slow=13,SNR=467							
WRA				S	**Sn**		**21 34 37.6**	**-10**
	68nm,0.3s,baz=330,slow=23,SNR=13							
WB2	**Warramunga Arr**	**13.82**	**153**	⇓*iP*	**Pn**		**21 32 11.5**	**-2.7**
WB2				*eS*	**Sn**		**21 34 36.0**	**-12**
MATI	**Mati**	**14.57**	**354**	*eP*	**Pn**		**21 32 28.3**	**+4.6**
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 28.7**	**+2.5**
	668nm,1.1s							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	Pn	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
DAV	**Davao City (W)**	**14.78**	**352**	P	**Pn**		**21 32 31.3**	**+5.1**
	SNR=23							
TSM	**Tawau**	**15.39**	**320**	⇑P	**Pn**		**21 32 37.4**	**+3.7**
MBWA	**Marble Bar**	**15.47**	**209**	*eP*	**Pn**		**21 32 34.3**	**-0.4**
	3.8nm,0.4s							
MBWA				*eS*	**S**		**21 35 11.6**	**-16**
MBWA	**Marble Bar**	**15.47**	**209**	P	**Pn**		**21 32 35.2**	**+0.5**
	SNR=12						

comp=Z,4μm,16.6s
PALK Pallekele 49.14 286 P **P** 21 37 36.9 +0.2
comp=Z,420nm,1.0s,mb6.0,SNR=19
PALK Pallekele 49.14 286 *e*P **P** 21 37 35.4 -1.4
comp=Z,172nm,1.4s,mb5.5
PALK *e*PcP PcP 21 38 57.6 -0.1
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
PALK Pallekele 49.14 286 P **P** 21 37 36.1 -0.6
SNR=15
HHC Hu-ho-hao-te 50.49 344 ⇑P **P** 21 37 46.1 -0.3
HHC AP pP 21 38 22.8 -0.4
HHC XP sP 21 38 40.6 -0.6
HHC PCP PcP 21 39 02.4 +0.3
HHC PP PP 21 39 45.4 +1.5
HHC PCS PcS 21 42 57.3 -2.1
HHC S **S** **21 44 44.3 -3.4**
HHC SCS ScS 21 47 17.1 -3.5
HHC AMB AMB
comp=Z,27nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,254nm,5.0s
HHC LR LR
comp=N,220nm,16.6s
HHC LR LR
comp=E,117nm,16.6s
HHC LR LR
comp=Z,233nm,21.4s
LSA Lhasa 51.12 318 P **P** 21 37 52.0 +0.7
LSA AMB AMB
comp=Z,140nm,0.9s,mb5.6
LSA Lhasa 51.12 318 *e*P **P** 21 37 52.3 +1.0
comp=Z,123nm,0.7s,mb5.6
LSA Lhasa 51.12 318 *e*P **P** 21 37 52.3 +1.0
LSA pmax pmax
comp=Z,123nm,0.7s,mb5.6
CN2 Changchun 51.25 358 *e*P **P** **21 37 52.0 0.0**
CN2 PCP PcP 21 39 04.1 -0.7
CN2 SCP ScP 21 42 43.9 -2.2
CN2 *e*S **S** **21 44 58.1 +0.1**
CN2 *e*SS SS 21 48 34.8 -1.2
CN2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.6
CN2 AMB AMB
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,300nm,16.0s
ODAN Odare 51.98 313 *e*P **P** **21 37 57.4 -0.4**
comp=E,194nm,0.7s,mb5.8
TAPN Taplejung 52.04 314 *e*P **P** **21 37 58.1 -0.1**
comp=E,257nm,0.9s,mb5.9
MDJ Mudanjiang 52.05 2 P **P** **21 37 57.8 -0.1**
MDJ AP pP 21 38 31.9 -3.1
MDJ XP sP 21 38 48.6 -4.3
MDJ PCP PcP 21 39 07.8 0.0
MDJ PP PP 21 39 56.8 -1.1
MDJ S **S** **21 45 06.8 -2.2**
MDJ SCS ScS 21 47 31.8 +0.5
MDJ SS SS 21 48 48.8 +0.1
MDJ AMB AMB
comp=Z,24nm,1.6s,mb4.6
MDJ AMB AMB
comp=Z,152nm,5.3s
MDJ LR LR
comp=N,112nm,26.7s
MDJ LR LR
comp=E,115nm,25.3s
MDJ LR LR
comp=Z,171nm,21.1s
MDJ Mudanjiang 52.05 2 *e*P **P** **21 37 57.8 -0.1**
comp=Z,72nm,1.4s,mb5.1
MDJ *e*pP pP 21 38 33.9 -1.0
RPZ Rata Peaks 52.15 141 P **P** **21 38 01.3 +2.6**
comp=Z,128nm,1.0s,mb5.5,baz=278,slow=1.3,SNR=50
JIRN Jiri 53.31 313 *e*P **P** **21 38 07.5 0.0**
comp=Z,351nm,0.8s,mb6.2
GTA Gaotai 53.48 333 P **P** **21 38 08.9 +0.4**
GTA AP pP 21 38 45.3 -0.4
GTA XP sP 21 39 03.3 -0.3
GTA PCP PcP 21 39 14.8 +1.5
GTA PP PP 21 40 13.8 +2.9
GTA SCP ScP 21 42 55.8 -0.1
GTA PCS PcS 21 43 11.5 -1.0
GTA S **S** **21 45 24.3 -4.2**
GTA XS sS 21 46 32.8 -0.3
GTA SCS ScS 21 47 38.1 -3.4
GTA AMB AMB
comp=Z,68nm,1.0s,mb5.3
GTA AMB AMB
comp=Z,376nm,9.1s
GTA LR LR
comp=N,311nm,17.9s
GTA LR LR
comp=E,271nm,20.1s
GTA LR LR
comp=Z,224nm,19.0s
URZ Urewera 53.90 132 P **P** **21 38 13.2 +1.5**
comp=Z,20nm,0.6s,mb5.1,baz=281,slow=3.5,SNR=24
KKN Kakani 54.05 312 *e*P **P** **21 38 12.7 -0.2**
comp=Z,249nm,0.8s,mb6.0
HYB Hyderabad 54.56 298⇑*e*P **P** **21 38 15.5 -1.3**
comp=Z,155nm,1.0s,mb5.7
HYB Hyderabad 54.56 298⇑*e*P **P** **21 38 15.5 -1.3**
HYB pmax pmax
comp=Z,155nm,1.0s,mb5.7
HYB Hyderabad 54.56 298⇑*i*P **P** **21 38 15.5 -1.3**
comp=Z,155nm,1.0s,mb5.7
HYB *e* pP 21 38 53.0 -1.1
HYB *e*PcP PcP 21 39 19.0 +1.0
GKN Gorkha 54.64 312 *e*P **P** **21 38 16.8 -0.4**
comp=Z,301nm,0.6s,mb6.2
KOLN Koldanda 55.28 311 *e*P **P** **21 38 21.7 0.0**
comp=Z,493nm,0.7s,mb6.3
YSS Yuzh-Sakhalins 55.99 12⇓*e*P **P** **21 38 25.0 -1.4**
YSS Yuzh-Sakhalins 55.99 12⇓*e*P **P** **21 38 25.9 -0.5**
YSS pmax pmax
comp=Z,6.0nm,0.5s,mb4.7
HABR Khabarovsk 56.26 6⇑*e*P **P** **21 38 27.8 -0.5**
HABR *e**PP pP 21 39 06.8 +0.9
HABR *e*SP 21 39 28.5
HABR *e*S **S** **21 46 02.2 -3.1**
HABR *e* 21 47 57.4
HABR *e*SS SS 21 49 53.3 -1.5
HABR pmax pmax
comp=Z,31nm,1.0s,mb5.1
KLR Kul'dur 56.75 3 *e*P **P** **21 38 28.0 -3.8**
KLR *e* pP 21 39 05.5 -3.9
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,50nm,1.8s,mb5.0
HIA Hailar 57.10 354 *e*P **P** **21 38 34.1 -0.2**
comp=Z,19nm,1.1s,mb4.8
HIA *e*pP pP 21 39 10.8 -1.1
HIA Hailar 57.10 354 *e*P **P** **21 38 34.1 -0.1**
HIA *e**PP pP 21 39 10.8 -1.1
HIA pmax pmax
comp=Z,19nm,1.1s
BHPL Bhopal 57.93 303 *e*P **P** **21 38 37.5 -3.1**
ULN Ulaanbaatar 58.21 344⇑*i*P **P** **21 38 42.6 +0.6**
ULN Ulaanbaatar 58.21 344 P **P** **21 38 42.8 +0.9**
SNR=46
ULN Ulaanbaatar 58.21 344 P **P** **21 38 42.8 +0.9**
SNR=46
ULN Ulaanbaatar 58.21 344 P **P** **21 38 42.8 +0.9**
SNR=46
SONM Songino Array 58.37 343 P **P** **21 38 43.5 +0.4**
SONM PcP PcP 21 39 29.4 -2.7
SONM P'P' 22 08 14.7
SONM ⇑*e* 22 08 29.1
SONM Songino Array 58.37 343 P **P** **21 38 43.5 +0.4**
SONM 21 39 29.4
SONM Songino Array 58.37 343 P **P** **21 38 43.5 +0.4**
comp=Z,38nm,0.8s,mb5.3,baz=166,slow=7.4,SNR=229
SONM PcP PcP 21 39 29.4 -2.7
comp=Z,20nm,0.8s,baz=155,slow=4.7,SNR=7.0
SONM PKPPKP 22 08 14.7
comp=Z,1.5nm,1.0s,baz=262,slow=1.2,SNR=5.8
SONM PKP2bc 22 08 29.1
comp=Z,5.8nm,1.1s,baz=309,slow=1.9,SNR=13
KAD Karad 58.40 296 *e*P **P** **21 38 42.2 -1.7**
LGTI Lohaghat 58.67 311 *e*P **P** **21 38 43.5 -2.0**
POO Poona 59.13 297⇓*i*P **P** **21 38 47.0 -1.9**
comp=Z,180nm,1.0s,mb5.9
CASY Casey 59.73 188 *e*P **P** **21 38 54.3 +2.1**
NDI New Delhi 60.58 309 *e*P **P** **21 38 56.0 -2.7**
CIT Chita 60.66 350 *e*P **P** **21 38 59.4 +0.7**
CIT *e* pP 21 39 35.8 -1.0
DDI Dehra Dun 60.75 311 *e*P **P** **21 38 58.5 -1.2**
ZAK Zakamensk 61.56 342⇓*i*P **P** **21 39 04.5 -0.3**
ZAK *e* pP 21 39 41.8 -1.2
ZAK pmax pmax
comp=Z,15nm,1.1s,mb4.7
ZAK pmax pmax
comp=Z,10.0nm,1.3s,mb4.5
TLY Talaya 62.61 343 P **P** **21 39 12.4 +0.7**
comp=Z,113nm,0.7s,mb5.8,SNR=7.5
TLY Talaya 62.61 343⇑*i*P **P** **21 39 12.3 +0.6**
TLY Talaya 62.61 343 *e*P **P** **21 39 12.0 +0.3**
TLY *e* 21 41 32.7
TLY *e*PPP 21 43 00.5
TLY *e*S **S** **21 47 25.2 -1.5**
TLY pmax pmax
comp=Z,18nm,0.9s,mb4.9
TLY MLR MLR
comp=Z,281nm,31.0s
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
TLY Talaya 62.61 343 P **P** **21 39 12.6 +0.9**
SNR=9.5
WMQ Urumqi 62.72 328⇑*i*P **P** **21 39 12.9 +0.3**
WMQ PCP PcP 21 39 49.9 +0.1
WMQ XP sP 21 40 07.9 -0.7
WMQ PP PP 21 41 34.4 +1.6
WMQ PPP 21 43 06.4
WMQ SCP ScP 21 43 35.4 -1.2
WMQ AMB AMB
comp=Z,86nm,0.9s,mb5.6
WMQ AMB AMB
comp=Z,275nm,5.6s
WMQ LR LR
comp=N,358nm,23.3s
WMQ LR LR
comp=E,170nm,22.2s
WMQ LR LR
comp=Z,188nm,24.4s
IRK Irkutsk 62.94 344⇑*i*P **P** **21 39 13.9 0.0**
IRK *e* pP 21 39 49.8 -2.5
IRK *e* 21 47 30.7
IRK pmax pmax
comp=Z,72nm,1.2s,mb5.4
MOY Mondy 63.38 342 *e*P **P** **21 39 19.9 +3.1**
MOY pmax pmax
comp=Z,95nm,2.4s,mb5.2
DLH Dalhousie 63.40 312 *e*P **P** **21 39 16.0 -1.4**
THN Thein Dam 63.53 312 *ex* x 21 39 16.6
PET Petropavlovsk 65.92 20 *e*P **P** **21 39 29.9 -3.4**
PET *e*S S 21 47 59.6 -7.8
PET *e**SS sS 21 49 14.3 -0.1
PET pmax pmax
comp=Z,17nm,0.5s,mb5.1
PET MLR MLR
comp=Z,100nm,20.0s
BOD Bodaibo 66.19 352 *e*P **P** **21 39 34.0 -0.9**
BOD *e* 21 48 08.6
BOD pmax pmax
comp=Z,29nm,1.3s,mb5.0
MK31 Makanchi Array 67.54 328 *e*P **P** **21 39 43.3 -0.4**
MK31 *e*PcP PcP 21 40 09.0 -0.6
MKAR Makanchi Array 67.54 328 P **P** **21 39 43.5 -0.1**
MKAR PcP PcP 21 40 08.4 -1.2
MKAR pP pP 21 40 26.7 +4.2
MKAR ⇑*e* 22 07 59.7
MKAR Makanchi Array 67.54 328 P **P** **21 39 43.6 0.0**
MKAR 21 40 08.5
MKAR *PP pP 21 40 26.7 +4.2
MKAR Makanchi Array 67.54 328 P **P** **21 39 43.5 -0.1**
comp=Z,35nm,0.7s,mb5.2,baz=127,slow=8.0,SNR=422
MKAR PcP PcP 21 40 08.4 -1.2
comp=Z,19nm,0.8s,baz=116,slow=5.5,SNR=8.9
MKAR pP pP 21 40 26.7 +4.2
comp=Z,24nm,0.9s,baz=127,slow=8.1,SNR=2.6
MKAR PKP2bc 22 07 59.7
comp=Z,0.7nm,0.7s,baz=276,slow=3.5,SNR=4.7
ULHL Ulahol 68.28 321 P **P** **21 39 48.9 +0.5**
SNR=6.5
KZA Kyzart 68.81 321 P **P** **21 39 52.7 +1.1**
SNR=47
TKM2 Tokmak 2 69.05 322 P **P** **21 39 53.6 +0.4**
SNR=50
KBK Kangaybulak 69.31 321 P **P** **21 39 55.2 +0.5**
SNR=29
UCH Uchtor 69.35 321 P **P** **21 39 56.0 +1.0**
SNR=50
KBL Kabul 69.44 311 *e*P **P** **21 39 55.3 -0.5**
comp=Z,87nm,0.9s,mb5.5
YAK Yakutsk 69.49 1⇑*i*P **P** **21 39 54.9 -0.5**
YAK Yakutsk 69.49 1 *e*P **P** **21 39 55.5 +0.1**
YAK *e* 21 40 19.1
YAK *e**PP pP 21 40 22.2 -12
YAK *e* 21 40 40.4
YAK *e*S S 21 48 47.4 -2.1
YAK *e**SS sS 21 49 38.3 -19
YAK pmax pmax
comp=Z,108nm,1.4s,mb5.4
YAK pmax pmax
comp=N,41nm,1.1s
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=Z,105nm,1.0s,mb5.5
YAK pmax pmax
comp=N,60nm,1.3s
YAK pmax pmax
comp=E,20nm,1.5s
YAK smax
comp=N,104nm,2.3s
YAK smax
comp=Z,49nm,2.3s
YAK smax
comp=E,95nm,2.1s
YAK MLR MLR
comp=Z,67nm,10.0s
YAK MLR MLR
comp=N,45nm,6.0s
YAK MLR MLR
comp=E,51nm,7.0s
MA2 Magadan 69.50 12⇑*i*P **P** **21 39 55.7 +0.2**
MA2 Magadan 69.50 12 *e*P **P** **21 39 55.6 +0.1**
MA2 *e* 21 40 39.5
MA2 *e* 21 48 44.1
MA2 *e* 21 53 15.8
MA2 pmax pmax
comp=Z,40nm,1.2s,mb5.0
AAK Ala-Archa 69.58 321 P **P** **21 39 56.7 +0.3**
comp=Z,332nm,0.7s,mb6.2,SNR=74
AAK Ala-Archa 69.58 321 P **P** **21 39 56.7 +0.3**
SNR=50
FRU Bishkek 69.61 321 *e*P **P** **21 39 56.5 -0.1**
FRU pmax pmax
comp=Z,140nm,2.2s,mb5.3
CHMS Chumysh 69.61 321 P **P** **21 39 56.4 -0.2**
SNR=15
KRAR Krasnoyarsk 69.66 340 *i* P **P** **21 39 56.9 +0.3**
KRAR pmax pmax
comp=Z,45nm,2.3s,mb4.8
AML Almayashu 69.82 320 P **P** **21 39 58.9 +1.0**
SNR=5.3
USP Ospenovka 69.91 321 P **P** **21 39 58.3 -0.1**
SNR=120
EKS2 Erkin-Say 70.04 321 P **P** **21 39 59.9 +0.7**
SNR=63
KURK Kurchatov 71.90 330 P **P** **21 40 10.0 -0.2**
comp=Z,1μm,0.9s,mb6.6
KURK Kurchatov 71.90 330⇑*i*P **P** **21 40 09.8 -0.4**
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KURK Kurchatov 71.90 330 P **P** **21 40 10.3 +0.1**
SNR=64
KK31 Karatay Array 72.33 320 *i* P **P** **21 40 12.4 -0.6**
NVS Novosibirsk 72.46 335⇑*i*P **P** **21 40 12.5 -1.0**
NVS *i* 21 40 57.3
NVS *i* S S 21 49 18.2 -5.8
NVS pmax pmax
comp=N,100nm,1.5s
NVS pmax pmax
comp=E,84nm,1.5s
NVS pmax pmax
comp=Z,137nm,1.5s,mb5.5
NVS smax
comp=N,39nm,1.7s
NVS smax
comp=E,46nm,1.5s
SEY Seymchan 72.88 12⇑*e*P **P** **21 40 15.7 -0.1**
SBA Scott Base 73.00 172 *e*P **P** **21 40 18.6 +2.1**
comp=E,58nm,0.9s,mb5.3
SBA Scott Base 73.00 172 *e*P **P** **21 40 18.6 +2.2**
SBA pmax pmax
comp=Z,58nm,0.9s,mb5.3
MAW Mawson 73.51 201 *e*P **P** **21 40 20.8 +1.3**
comp=Z,37nm,0.8s,mb5.2
MAW Mawson 73.51 201 P **P** **21 40 21.2 +1.7**
MAW pmax pmax
comp=Z,40nm,0.7s
MAW MLR MLR
comp=Z,184nm,20.8s
MAW Mawson 73.51 201 P **P** **21 40 21.2 +1.7**
comp=Z,40nm,0.7s,mb5.3,baz=71,slow=6.9,SNR=63
MAW LR LR 22 11 11.3
comp=Z,184nm,20.8s,baz=201,slow=34
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
WBK Wadi Bani Khal 73.63 296 P **P** **21 40 20.9 -0.1**
SNR=26
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
JMDO Jabal Madar 74.34 296 P **P** **21 40 24.7 -0.5**
SNR=23
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
SMDO Samad 74.56 296 P **P** **21 40 26.0 -0.5**
SNR=38
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BIDO Bidbid 74.62 297 P **P** **21 40 26.5 -0.3**
SNR=65
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
BSY Bisya 75.24 296 P **P** **21 40 30.1 -0.3**
SNR=30
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HOQ Hoqain 75.36 297 P **P** **21 40 31.3 +0.3**
SNR=18
HATD Hatta, Dubai 76.72 298 P **P** **21 40 38.6 -0.1**
SNR=48

HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
HATD Hatta, Dubai 76.72 298 P P 21 40 38.6 -0.1
SNR=48
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
RBK Rabkut 76.74 290 P P 21 40 38.7 -0.2
SNR=8.5
ASHO Ashiyiah 76.75 298 P P 21 40 38.5 -0.4
SNR=35
ASHO Ashiyiah 76.75 298 P P 21 40 38.5 -0.4
SNR=35
ASHO Ashiyiah 76.75 298 P P 21 40 38.5 -0.4
SNR=35
ASHO Ashiyiah 76.75 298 P P 21 40 38.5 -0.4
SNR=35
ASHO Ashiyiah 76.75 298 P P 21 40 38.5 -0.4
SNR=35
BANOM Banah 76.86 299 P P 21 40 39.9 +0.4
SNR=53
BANOM Banah 76.86 299 P P 21 40 39.9 +0.4
SNR=53
BANOM Banah 76.86 299 P P 21 40 39.9 +0.4
SNR=53
BANOM Banah 76.86 299 P P 21 40 39.9 +0.4
SNR=53
BANOM Banah 76.86 299 P P 21 40 39.9 +0.4
SNR=53
WHFO Wadi Hawf 77.23 290 P P 21 40 40.7 -1.0
SNR=18
WHFO Wadi Hawf 77.23 290 P P 21 40 40.7 -1.0
SNR=18
BRVK Borovoye 77.48 329 P P 21 40 42.0 -0.3
comp=Z,631nm,1.1s,mb6.2,SNR=69
BRVK Borovoye 77.48 329 eP P 21 40 41.5 -0.7
comp=Z,151nm,1.1s,mb5.5
BRVK epP pP 21 41 21.8 -0.4
BRVK Borovoye 77.48 329 eP P 21 40 41.6 -0.7
BRVK e*PP pP 21 41 21.8 -0.4
BRVK pmax pmax
comp=Z,151nm,1.1s,mb5.5
BRVK Borovoye 77.48 329 P P 21 40 42.3 0.0
SNR=72
BRVK Borovoye 77.48 329 P P 21 40 42.3 0.0
SNR=72
BRVK Borovoye 77.48 329 P P 21 40 42.3 0.0
SNR=72
BRVK Borovoye 77.48 329 P P 21 40 42.3 0.0
SNR=72
BRVK Borovoye 77.48 329 P P 21 40 42.3 0.0
SNR=72
ABTO Aybut 77.56 290 P P 21 40 43.1 -0.4
SNR=11
ABTO Aybut 77.56 290 P P 21 40 43.1 -0.4
SNR=11
ABTO Aybut 77.56 290 P P 21 40 43.1 -0.4
SNR=11
ABTO Aybut 77.56 290 P P 21 40 43.1 -0.4
SNR=11
ABTO Aybut 77.56 290 P P 21 40 43.1 -0.4
SNR=11
OPO Ambohidratompo 78.64 253 P P 21 40 50.2 +0.7
comp=Z,28nm,0.7s,mb5.0,baz=90,slow=5.0,SNR=44
ABKT Ailbek 78.89 311 P P 21 40 50.3 -0.2
comp=Z,349nm,1.1s,mb5.9,SNR=28
TIXI Tiksi 79.14 0 eP P 21 40 49.3 -1.8
comp=Z,27nm,0.8s,mb4.9
TIXI Tiksi 79.14 0 c iP P 21 40 49.6 -1.5
TIXI e 21 40 56.8
TIXI e pP 21 41 28.0 -3.1
TIXI eS S 21 50 30.4 -6.3
TIXI pmax pmax
comp=Z,56nm,1.4s,mb5.0
BILL Bilibino 80.28 14 i P P 21 40 57.9 +0.7
AB31 Akbulak array 81.60 322 i P P 21 41 03.0 -1.7
SYO Syowa Base 82.23 201 ⇓iP P 21 41 07.6 0.0
QSPA South Pole Qui 82.33 180 P P 21 41 09.5 +1.6
QSPA South Pole Qui 82.33 180 P P 21 41 09.5 +1.6
comp=Z,120nm,0.8s,mb5.6,baz=321,slow=1.5,SNR=300
AKTK Aktyubinsk 83.19 323 P P 21 41 12.5 -0.4
AKTO Aktyubinsk 83.19 323 P P 21 41 12.5 -0.4
comp=Z,52nm,0.8s,mb5.3,baz=106,slow=5.9,SNR=74
SVE Sverdlovsk 84.15 329 eP P 21 41 17.1 -0.5
SVE pmax pmax
comp=Z,183nm,1.4s,mb5.6
LBOS 84.54 285⇑eP P 21 41 21.1 +0.6
KBD Kabd 85.04 300 eP P 21 41 21.9 -0.8
KBD AMb AMB 21 41 22.8
comp=Z,273nm,1.2s,mb5.8
ARU Arti 85.05 329 P P 21 41 21.7 -0.5
comp=Z,561nm,1.0s,mb6.2,SNR=24
ARU Arti 85.05 329 eP P 21 41 21.5 -0.6
comp=Z,97nm,0.9s,mb5.5
ARU Arti 85.05 329 c iP P 21 41 21.5 -0.7
ARU e*PP pP 21 42 03.5 +0.8
ARU e 21 44 37.8
ARU PPP 21 46 31.7
ARU eS S 21 51 27.9 -10
ARU SS SS 21 57 10.0 -4.9
ARU pmax pmax
comp=Z,189nm,1.7s,mb5.5
RDF Al-Radifah 85.11 300 eP P 21 41 22.1 -1.0
RDF AMb AMB 21 41 24.3
comp=Z,212nm,0.9s,mb5.9
NAY Al-Naaiem 85.44 300 eP P 21 41 23.7 -1.0
NAY AMb AMB 21 41 24.6
comp=Z,114nm,0.8s,mb5.7
MIB Mutribah 85.47 301 eP P 21 41 23.9 -1.0
MIB AMb AMB 21 41 25.9
comp=Z,265nm,0.9s,mb6.0
ATD Arta Tunnel 86.50 282 P P 21 41 31.5 +1.3
comp=Z,39nm,0.9s,mb5.1,baz=104,slow=2.6,SNR=13
SOKR Solikamsk 87.06 331 c iP P 21 41 30.0 -1.9
SOKR pmax pmax
comp=Z,60nm,1.1s,mb5.3
BHD Baghdad 88.59 304 ex x 21 41 37.5
BHD Baghdad 88.59 304 ex x 21 52 08.5
BHD ex x 21 53 19.0
DGRG David-gareji 89.29 312 P P 21 41 44.0 +1.1
MTA Mtatsminda 89.76 312 P P 21 41 45.0 -0.1
TBLG Delisi 89.81 312 P P 21 41 45.4 +0.1
HAKT HAKKARI 89.87 308⇑iP P 21 41 45.3 -0.4
MSL Mosul 90.15 306 ex x 21 41 46.0
DYDN Diyadin 90.22 310⇑iP P 21 41 48.1 +0.8
TVAN Van 90.26 309⇓iP P 21 41 47.6 +0.1
KMBO Kilima Mbogo 90.28 269 eP P 21 41 47.8 -0.3
comp=Z,68nm,1.7s,mb5.3
KMBO Kilima Mbogo 90.28 269 P P 21 41 48.7 +0.5
KMBO pmax pmax
comp=Z,5.0nm,0.7s
KMBO Kilima Mbogo 90.28 269 P P 21 41 49.0 +0.8
SNR=14
KMBO Kilima Mbogo 90.28 269 P P 21 41 49.0 +0.8
SNR=14
KMBO Kilima Mbogo 90.28 269 P P 21 41 49.0 +0.8
SNR=14
KMBO Kilima Mbogo 90.28 269 P P 21 41 48.7 +0.5
comp=Z,4.7nm,0.7s,mb4.5,baz=62,slow=5.3,SNR=22
SVW2 Sparrevohn 90.29 28 P P 21 41 46.0 -1.0
ZEI Tsey 90.60 313 eP P 21 41 49.9 +0.9
ZEI e*PP pP 21 42 30.0 +0.1
ZEI pmax pmax
comp=Z,28nm,0.9s,mb5.3
ONI Oni 90.90 313 P P 21 41 50.5 +0.1
MAIT Maitri 91.08 197 eP P 21 41 51.2 +0.5
KIV Kislovodsk 91.67 314 ⇑P P 21 41 54.0 +0.1

KIV Kislovodsk 91.67 314 eP P 21 41 52.8 -1.1
KIV e 21 45 31.9
KIV eSS SS 21 58 46.4 -5.2
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.9
KIV MLR MLR
comp=Z,100nm,19.0s
KIV Kislovodsk 91.67 314⇑iP P 21 41 54.0 +0.1
BNGL BINGOL 92.07 309⇑iP P 21 41 56.5 +0.6
IMA2 Indian Mountai 92.35 24 eP P 21 41 55.6 -0.9
IMA2 epP pP 21 42 37.2 -0.3
SLKM Skilak Lake 92.72 29 eP P 21 41 56.9 -1.4
PRGR Permogore 92.91 332 eP P 21 41 53.7 -5.5
VRHR Novokhopersk 93.43 321 eP P 21 42 00.6 -1.2
VRHR pmax pmax
comp=Z,10.0nm,0.5s,mb5.2
VRHR pmax pmax
comp=N,4.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
ELZG Elazig 93.69 308⇓iP P 21 42 03.7 +0.4
SOC Sochi 93.75 313 eP P 21 42 01.1 -2.4
SOC pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
MALT Malatya 94.11 308⇑iP P 21 42 04.9 -0.4
MALT Malatya 94.11 308⇑iP P 21 42 04.9 -0.4
SNAA Sanae 94.49 194 P P 21 42 08.2 +1.8
comp=Z,15nm,0.9s,mb5.1,baz=164,slow=4.8,SNR=56
GZT Gaziantep 94.68 307⇓iP P 21 42 07.8 -0.1
VORD Divnogorie 94.87 321 eP P 21 42 07.3 -1.1
VORD pmax pmax
comp=Z,30nm,0.9s,mb5.5
VORD pmax pmax
comp=N,20nm,1.0s
VORD pmax pmax
comp=E,20nm,1.0s
VRSR Storozhevoye 94.96 321 eP P 21 42 06.9 -2.0
VRSR pmax pmax
comp=N,1.0nm,1.0s
VRSR pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
VRSR pmax pmax
comp=E,7.0nm,0.9s
ANN Anapa 95.51 314 eP P 21 42 08.8 -2.7
ANN e*PP pP 21 42 54.5 +2.0
ANN pmax pmax
comp=Z,56nm,0.9s,mb5.9
MATP Matopo 95.89 249 P P 21 42 14.1 +0.3
comp=Z,9.7nm,1.0s,mb5.1,baz=117,slow=5.5,SNR=15
VNA2 Neumayer--Watz 96.08 194 eP P 21 42 15.3 +1.7
baz=130,slow=3.8
VNA2 e 21 42 26.5
VNA2 e 21 42 29.7
VNA2 e 21 42 34.0
VNA2 e 21 42 08.8
VNA2 e 21 46 14.4
VNA2 e 21 46 55.4
EIL Elat 96.10 299 P P 21 42 13.8 -0.7
comp=Z,4.0nm,0.8s,mb4.8,baz=305,slow=3.9,SNR=6.3
EIL PP PP 21 46 07.9 -1.8
comp=Z,4.5nm,0.9s,baz=34,slow=4.2,SNR=4.3
MOS Moscow 96.30 325 eP P 21 42 12.2 -2.6
VNA3 Neumayer Olymp 96.36 193 eP P 21 42 16.6 +1.7
VNA3 e 21 42 27.4
VNA3 e 21 42 30.2
VNA3 e 21 42 35.1
VNA1 Neumayer--Stat 96.47 193 eP P 21 42 18.3 +2.9
VNA1 e 21 42 30.0
VNA1 e 21 42 33.5
VNA1 e 21 42 37.0
OBN Obninsk 96.86 325 c iP P 21 42 15.7 -1.7
OBN e*PP pP 21 42 57.1 -1.3
OBN pmax pmax
comp=Z,78nm,1.7s,mb5.8
LSZ Lusaka 97.08 254 eP P 21 42 19.1 -0.1
comp=Z,13nm,1.3s,mb5.1
LSZ Lusaka 97.08 254 eP P 21 42 19.1 -0.2
LSZ pmax pmax
comp=Z,13nm,1.3s,mb5.1
BOSA Boshof 97.16 240 P P 21 42 19.6 +0.2
comp=Z,10nm,0.9s,mb5.2,baz=111,slow=5.5,SNR=17
SIM Simferopol' 97.87 314 eP P 21 42 20.2 -2.0
SIM 21 52 44.0
SIM pmax pmax
comp=Z,16nm,0.6s,mb5.6
BRTR Keskin Array B 97.94 309 P P 21 42 21.0 -1.6
BRTR 21 46 17.7
BRTR Keskin Array B 97.94 309 P P 21 42 20.9 -1.7
comp=Z,7.0nm,0.8s,mb5.2,baz=135,slow=5.7,SNR=51
BRTR PP PP 21 46 17.7 -5.8
comp=Z,1.9nm,0.8s,baz=108,slow=7.9,SNR=4.2
BRTR PKKPbc PKKPbc 21 58 56.1 -1.2
comp=Z,0.8nm,0.9s,baz=224,slow=3.4,SNR=4.2
JOF Joensuu 99.67 333 ep Pdif 21 42 26.7 -3.4
comp=Z,11nm,0.7s
INK Inuvik 100.32 22 P Pdif 21 42 30.6 -2.4
INK pP 21 43 16.8
INK Inuvik 100.32 22 P Pdif 21 42 30.6 -2.4
comp=Z,2.4nm,1.0s,baz=278,slow=5.0,SNR=7.5
INK pP 21 43 16.8
comp=Z,4.1nm,1.0s,baz=265,slow=5.9,SNR=5.3
INK PKiKP PKiKP 21 46 58.3 -0.4
comp=Z,2.6nm,0.8s,baz=315,slow=4.4,SNR=5.4
INK PKKPbc PKKPbc 21 58 49.4 -2.3
comp=Z,6.2nm,0.6s,baz=75,slow=3.1,SNR=30
AKASG Malin Array Be 101.24 320 iP Pdif 21 42 39.0 +2.0
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 101.24 320 P Pdif 21 42 35.4 -1.7
comp=Z,2.3nm,0.7s,baz=77,slow=4.7,SNR=4.3
AKASG PKiKP PKiKP 21 46 59.9 -1.0
comp=Z,2.6nm,0.5s,baz=74,slow=2.4,SNR=11
KIEV Kiev 101.25 320 ePdif Pdif 21 42 34.5 -2.6
comp=Z,5.7nm,0.8s
KIEV Kiev 101.25 320 eP Pdif 21 42 34.5 -2.6
KIEV pmax pmax
comp=Z,6.0nm,0.8s
ARCES ARCESS Array B 101.39 339 P Pdif 21 42 36.0 -1.7
comp=Z,9.4nm,0.8s,baz=84,slow=6.3,SNR=10
ARCES PKiKP PKiKP 21 47 00.8 +0.2
comp=Z,2.9nm,0.7s,baz=109,slow=1.3,SNR=30
ARCES PKKPbc PKKPbc 21 58 45.8 -2.8
comp=Z,2.3nm,0.7s,baz=246,slow=2.2,SNR=16
KAF Kangasniemi 102.05 332 ep Pdif 21 42 37.4 -3.2
baz=80,slow=4.1
KAF Kangasniemi 102.05 332 epkp PKiKP 21 47 02.1 +0.1
FINES FINESS Array B 102.23 331 i P Pdif 21 42 39.2 -2.2
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 102.23 331 P Pdif 21 42 39.0 -2.5
comp=Z,2.6nm,0.6s,baz=70,slow=5.7,SNR=9.8
FINES PKiKP PKiKP 21 47 03.0 +0.6
comp=Z,2.5nm,0.6s,baz=94,slow=3.8,SNR=11
HARR Harsova 102.27 314⇑iP PKiKP 21 47 03.6 +0.7
VRI Vrincioaia 103.08 315⇓iP Pdif 21 42 45.4 +0.1
VRI Vrincioaia 103.08 315⇓iP Pdif 21 42 45.3 +0.1
PLOR Plostina 103.14 315⇓iP PKiKP 21 47 05.9 +1.4
MLR Muntele Rosu 103.65 315⇓iP Pdif 21 42 47.0 -0.8
MLR Muntele Rosu 103.65 315⇓iP Pdif 21 42 47.0 -0.7
MLR Muntele Rosu 103.65 315⇑iP PKiKP 21 47 08.0 +2.6
IDI Anoyia 104.81 304 PKiKP PKiKP 21 47 08.7 +0.8
comp=Z,18nm,1.0s,baz=135,slow=4.3,SNR=3.7
KWP Kalwaria 105.49 319⇑P PKiKP 21 47 08.6 -0.1
KWP Kalwaria 105.49 319⇑iP PKiKP 21 47 08.6 -0.1
DRGR 105.79 316⇑P Pdif 21 42 57.0 -0.2
DRGR 105.79 316⇑iP Pdif 21 42 57.0 -0.3
DRGR 105.79 316⇓iP PKiKP 21 47 09.9 +0.6
VTS Vitosha 105.80 312⇓P PKiKP 21 47 09.9 +0.5
VTS Vitosha 105.80 312⇓iP PKiKP 21 47 09.9 +0.4
KOLS Kolonicke sedl 105.85 319 eP Pdif 21 42 58.8 +1.3
KOLS e 21 47 10.4
KOLS Kolonicke sedl 105.85 319 PDIF Pdif 21 42 58.8 +1.3
KOLS Kolonicke sedl 105.85 319 ePKP PKiKP 21 47 10.4 +1.0
GZR Gura Zlata 105.88 315⇑iP PKiKP 21 47 10.3 +0.8
CRVS Cervenica-Dubn 106.39 319 ePKP PKiKP 21 47 08.8 -1.6
STHS Stebnicka Huta 106.47 319 ePKP PKiKP 21 47 11.4 +0.9
BZS Buzias 106.67 315⇓P Pdif 21 43 00.7 -0.4
BZS Buzias 106.67 315⇓iP Pdif 21 43 00.7 -0.5
BZS Buzias 106.67 315⇓iP PKiKP 21 47 10.6 -0.4
NIE Niedzica 107.07 319 ePKP PKiKP 21 47 12.7 +1.1
OJC Ojcow 107.28 320 ePKiKP PKiKP 21 47 12.5 +0.5
KRUS Krusevo 107.35 311 eP PKiKP 21 47 12.7 +0.3
PSZ Piszkesteto 107.56 318⇓P PKiKP 21 47 13.3 +0.7
PSZ Piszkesteto 107.56 318⇓iP PKiKP 21 47 13.3 +0.7

VYHS Vyhne 108.17 319 ePKP PKiKP 21 47 13.4 -0.3
OKC Ostrava-Krasne 108.39 320 ePKP PKiKP 21 47 14.7 +0.6
KOLL Kolacno 108.44 319 ePKP PKiKP 21 47 14.5 +0.3
PKSM Moragy 108.65 316⇓iP PKiKP 21 47 15.1 +0.4
MORC Moravsky Berou 108.79 320⇑P PKiKP 21 47 16.0 +1.2
MORC Moravsky Berou 108.79 320⇑iP PKiKP 21 47 16.0 +1.2
MODS Modra-Piesok 109.21 319 ePKP PKiKP 21 47 16.1 +0.4
NOA NORSAR Array B 109.31 333 Pdiff Pdif 21 43 10.9 -2.0
comp=Z,1.7nm,0.9s,baz=68,slow=4.5,SNR=4.6
NOA PKiKP PKiKP 21 47 15.2 -0.3
comp=Z,4.2nm,0.7s,baz=270,slow=3.2,SNR=16
NOA PKKPbc PKKPbc 21 58 22.6 -1.6
comp=Z,0.8nm,0.8s,baz=17,slow=14,SNR=3.3
YKA Yellowknife Ar 109.34 26 Pdif Pdif 21 43 11.8 -1.2
YKA PKPdf PKiKP 21 47 15.4 0.0
YKA SKP 21 50 33.4
YKA PKKPbc PKKPbc 21 58 21.9 -2.2
YKA PKKPab PKKPab 21 58 33.5 -0.6
YKA Yellowknife Ar 109.34 26 P Pdif 21 43 11.8 -1.2
YKA 21 58 21.9
YKA Yellowknife Ar 109.34 26 Pdiff Pdif 21 43 11.8 -1.2
comp=Z,0.4nm,0.7s,baz=295,slow=4.7,SNR=8.3
YKA PKiKP PKiKP 21 47 15.4 0.0
comp=Z,5.6nm,0.7s,baz=296,slow=1.7,SNR=78
YKA SKP 21 50 33.3
comp=Z,0.3nm,0.7s,baz=287,slow=1.7,SNR=4.2
YKA PKKPbc PKKPbc 21 58 21.9 -2.2
comp=Z,6.2nm,0.7s,baz=107,slow=3.2,SNR=76
YKA PKKPab PKKPab 21 58 33.5 -0.6
comp=Z,2.6nm,0.7s,baz=106,slow=5.3,SNR=10
KSP Ksiaz 109.36 321 ePKPdf PKiKP 21 47 16.2 +0.3
DPC Dobruska-Polom 109.45 321 ePKP PKiKP 21 47 16.4 +0.4
UPC Upice 109.61 321 ePKP PKiKP 21 47 16.9 +0.6
TREC Trest 110.19 320 ePKP PKiKP 21 47 17.9 +0.4
PVCC Panska Ves 110.50 321 ePKP PKiKP 21 47 18.5 +0.5
PRU Pruhonice 110.64 321 ePKP PKiKP 21 47 18.4 +0.1
GROS Grobnik 110.75 317 iPKiKP PKiKP 21 47 18.1 -0.5
BRG Berggiesshubel 110.81 322 iPKiKP PKiKP 21 47 18.5 -0.1
BRG pmax pmax
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 110.81 322 iP PKiKP 21 47 18.5 -0.1
comp=Z,11nm,0.8s
PERS Pernice 110.98 317 iPKiKP PKiKP 21 47 19.1 +0.1
BOJS Bojanci 111.11 316 iPKiKP PKiKP 21 47 19.2 -0.1
BOJS iPP PP 21 48 03.5 +2.8
CLL Collm 111.27 322 iPKiKP PKiKP 21 47 19.6 +0.1
CLL pmax pmax
comp=Z,17nm,0.9s
CLL Collm 111.27 322 iPKiKP PKiKP 21 47 19.6 +0.1
comp=Z,17nm,0.9s
VISS Visnje 111.33 316 iPKiKP PKiKP 21 47 20.3 +0.5
GERES GERESS Array B 111.44 320 PKiKP PKiKP 21 47 20.1 +0.2
comp=Z,10nm,0.6s,baz=63,slow=1.7,SNR=55
GERES PKKPbc PKKPbc 21 58 16.8 -0.1
comp=Z,0.6nm,0.6s,baz=228,slow=3.4,SNR=5.1
GERES PKKPab PKKPab 21 58 26.7 +1.6
comp=Z,1.2nm,0.7s,baz=309,slow=4.3,SNR=6.4
KHC Kasperske Hory 111.45 320 c iPKiKP PKiKP 21 47 20.1 +0.2
KHC Kasperske Hory 111.45 320 ePKP PKiKP 21 47 19.7 -0.2
JAVS Javornik 111.84 316 iPKiKP PKiKP 21 47 20.2 -0.6
NKC Novy Kostel 111.89 321 ePKP PKiKP 21 47 20.9 +0.2
KBA Koelnbreinsper 112.08 318⇑iP PKiKP 21 47 20.2 -0.9
comp=Z,7.5nm,0.7s
MOX Moxa 112.30 322 ePKP PKiKP 21 47 21.4 0.0
comp=Z,14nm,1.1s
MOX Moxa 112.30 322 ePKiKP PKiKP 21 47 21.4 0.0
MOX pmax pmax
comp=Z,14nm,1.1s
WVOR Wild Horse Val 112.56 47 ePKiKP PKiKP 21 47 23.0 +0.8
ABTA Abfaltersbach 112.71 318⇓iPKiKP PKiKP 21 47 21.7 -0.7
comp=Z,13nm,0.7s
GRA1 Grafenberg Arr 112.80 321 ePKPdf PKiKP 21 47 22.2 -0.2
GRA1 ePKKP PKKPbc 21 58 21.4 +9.0
GRF Grafenberg Arr 112.80 321 ePKiKP PKiKP 21 47 22.2 -0.2
GRF ePKKP PKKPbc 21 58 21.4 +9.0
WTTA Wattenberg 113.16 318⇑iP PKiKP 21 47 23.2 0.0
comp=Z,25nm,0.8s,SNR=16
WATA Walderalm 113.19 318⇑iP PKiKP 21 47 23.0 -0.3
comp=Z,13nm,1.0s
SQTA Sankt Quirin 113.46 318⇑iP PKiKP 21 47 23.7 0.0
comp=Z,20nm,1.2s
MOTA Moosalm 113.49 318⇑iP PKiKP 21 47 23.6 -0.2
comp=Z,11nm,0.8s
NVAR Mina Array Bea 113.49 51 PKiKP PKiKP 21 47 25.9 +1.8
comp=Z,4.4nm,0.9s,baz=259,slow=0.9,SNR=18
NVAR SKP 21 50 44.2
comp=Z,0.8nm,0.7s,baz=242,slow=1.9,SNR=3.8
NVAR PKKPbc PKKPbc 21 58 10.4 +0.7
comp=Z,0.6nm,0.6s,baz=118,slow=4.6,SNR=3.6
NVAR PKKPab PKKPab 21 58 17.9 +1.8
comp=Z,3.4nm,0.9s,baz=109,slow=6.4,SNR=11
FETA Feichten 113.82 318⇓iPKiKP PKiKP 21 47 24.5 0.0
comp=Z,15nm,0.9s,SNR=5.7
DAVA Damuels 114.31 319⇑iP PKiKP 21 47 25.6 +0.2
comp=Z,47nm,0.9s,SNR=26
TOD Tromm 114.33 321 PKP PKiKP 21 47 25.2 -0.1
SPAK Spaichingen-Ko 114.79 320 PKP PKiKP 21 47 25.8 -0.5
BFO Black Forest 115.01 320 ePKiKP PKiKP 21 47 25.9 -0.8
ABH Alteburg 115.01 322 PKP PKiKP 21 47 26.7 0.0
LANF Langenberg 115.14 321 PKP PKPdf 21 47 26.9 0.0
LRW Lerwick 115.20 334 eP PKiKP 21 47 26.4 -0.3
LRW AMb AMB 21 47 27.7
comp=Z,85nm,1.6s
CHMT Chamberlain Mo 115.24 41 ePKPdf PKPdf 21 47 27.0 -0.1
HLID Hailey 115.34 45 ePKPdf PKPdf 21 47 28.8 +1.3
TPNV Topopah Spring 115.34 53 ePKPdf PKPdf 21 47 28.8 +1.1
FELD Feldberg im Sc 115.36 320 PKP PKPdf 21 47 26.9 -0.5
RUP Ruppelstein 115.37 322 PKP PKPdf 21 47 27.3 -0.1
TRCR Troy Canyon 115.61 51 ePKPdf PKPdf 21 47 29.5 +1.3
CDF Champ du Feu 115.66 320⇑iPKiKP PKPdf 21 47 27.3 -0.6
comp=Z,18nm,0.8s
MEM Membach 115.70 323 PKPdf PKPdf 21 47 28.2 +0.3
PFO Pinyon Flat Ob 115.70 56 ePKPdf PKPdf 21 47 28.1 -0.4
BBS Basel-Blauen 115.80 319 PKP PKPdf 21 47 27.5 -0.8
MOF Moikenrain 115.92 320 PKP PKPdf 21 47 27.8 -0.7
MCMT McKenzie Canyo 116.10 44 ePKPdf PKPdf 21 47 30.2 +1.3
HINF Hinterlafeld 116.11 320⇑iPKiKP PKPdf 21 47 28.3 -0.5
comp=Z,58nm,0.7s
PGF Pioggiola 116.15 314⇑iPKiKP PKPdf 21 47 29.0 -0.1
comp=Z,12nm,0.5s
BCLA Clavier 116.19 323 PKPdf PKPdf 21 47 29.2 +0.3
LOMF Lomont 116.28 319 PKP PKPdf 21 47 28.6 -0.6
HAU Haudompre 116.37 320⇑iPKiKP PKPdf 21 47 29.0 -0.3
comp=Z,67nm,0.9s
HAU eMLR MLR
comp=Z,121nm,20.8s
HAU Haudompre 116.37 320⇑iPKiKP PKPdf 21 47 29.0 -0.3
HAU MLR MLR
comp=Z,120nm,20.8s
THEF They Montfort 116.53 321 PKP PKPdf 21 47 29.5 -0.1
GIVF Givet 116.59 323 ePKiKP PKPdf 21 47 29.9 +0.2
comp=Z,42nm,0.8s
DOU Dourbes 116.73 323 PKPdf PKPdf 21 47 30.4 +0.5
SNF Seneffe 116.76 323 PKPdf PKPdf 21 47 30.5 +0.5
LPG La Plagne 116.90 317⇑iPKiKP PKPdf 21 47 30.8 +0.4
comp=Z,50nm,0.9s
LPL La Plagne 116.91 317⇑iPKiKP PKPdf 21 47 30.7 +0.3
comp=Z,40nm,0.6s
SBF Sospel 116.91 316⇑iPKiKP PKPdf 21 47 30.2 -0.3
comp=Z,95nm,0.9s
BAIF Baives 116.97 323⇑iPKiKP PKPdf 21 47 30.7 +0.3
comp=Z,29nm,0.8s
CABF La Chapelle 116.99 319⇑iPKiKP PKPdf 21 47 30.8 +0.2
comp=Z,88nm,0.7s
TOUF Mont Tournerai 117.00 316 PKP PKPdf 21 47 32.3 +1.6
MEZF Maizieres J'vi 117.02 321 ePKiKP PKPdf 21 47 30.5 -0.1
comp=Z,12nm,0.6s
BNI Bardonecchia 117.08 317 ePKPdf PKPdf 21 47 30.2 -0.6
MVIF Mont Vial 117.09 316 PKP PKPdf 21 47 31.7 +0.8
MBDF Montbardon 117.12 317⇑iPKiKP PKPdf 21 47 30.6 -0.3
comp=Z,25nm,0.7s
SPUT South Promonto 117.31 47 ePKPdf PKPdf 21 47 32.3 +0.9
DUG Dugway 117.32 49 ePKPdf PKPdf 21 47 32.7 +1.3
CALN Calern 117.32 316 PKP PKPdf 21 47 31.2 -0.1
KEST Kesra 117.37 306 PKP PKPdf 21 47 31.9 +0.2
comp=Z,11nm,0.9s,baz=290,slow=4.3,SNR=12
MCD Coleburn Disti 117.47 333⇑eP PKPdf 21 47 30.8 -0.3
FRF La Foret Royal 117.54 315⇑iPKiKP PKPdf 21 47 31.6 -0.1
comp=Z,67nm,1.0s
ORIF Oris-en-Rattie 117.66 317 ePKiKP PKPdf 21 47 31.8 -0.1
comp=Z,44nm,0.7s
ORIF eMLR MLR
comp=Z,153nm,20.5s
IMW Indian Meadow 117.67 44 ePKPdf PKPdf 21 47 33.6 +1.6

LMR	La Mourre	117.70	315	⇑	*i*PKIKP	PKPdf	21 47 31.9	-0.1	
	comp=Z,52nm,1.0s								
FLWY	Flagg Ranch	117.78	44		*e*PKPdf	PKPdf	21 47 33.7	+1.5	
TPAW	Teton Pass	117.79	45		*e*PKPdf	PKPdf	21 47 33.5	+1.3	
HWUT	Hardware Ranch	117.88	47		*e*PKPdf	PKPdf	21 47 32.8	+0.4	
REDW	Red Top Meadow	117.89	45		*e*PKPdf	PKPdf	21 47 33.6	+1.2	
SNOW	Snow King Moun	117.93	45		*e*PKPdf	PKPdf	21 47 34.3	+1.8	
LOHW	Long Hollow	117.99	44		*e*PKPdf	PKPdf	21 47 33.9	+1.3	
ESY	Stoneypath	118.05	331	⇑	*e*P	PKPdf	21 47 31.8	-0.5	
MDO	Dochfour	118.05	333		*e*P	PKPdf	21 47 31.5	-0.8	
XSO	Sourhope Farm	118.09	330	⇑	*e*P	PKPdf	21 47 32.4	-0.1	
SMRF	Simiane la Rot	118.16	316		*e*PKIKP	PKPdf	21 47 33.2	+0.3	
	comp=Z,59nm,0.8s								
MSU	Marysvale	118.19	50		*e*PKPdf	PKPdf	21 47 35.0	+1.8	
LOR	Lormes	118.21	320	⇑	*i*PKIKP	PKPdf	21 47 32.8	-0.1	
	comp=Z,48nm,0.9s								
LOR					*e*MLR	MLR			
	comp=Z,83nm,18.0s								
LOR	Lormes	118.21	320	⇑	*i*PKIKP	PKPdf	21 47 32.8	-0.1	
LOR					MLR	MLR			
	comp=Z,80nm,18.0s								
MPU	Maple Canyon	118.24	49		*e*PKPdf	PKPdf	21 47 34.2	+1.0	
EBL	Broad Law	118.33	331		*e*P	PKPdf	21 47 33.0	+0.1	
XAL	Allendale	118.39	330	⇑	*e*P	PKPdf	21 47 32.0	-1.0	
DAU	Daniels Canyon	118.42	48		*e*PKPdf	PKPdf	21 47 34.3	+0.8	
RLMT	Red Lodge	118.43	42		*e*PKPdf	PKPdf	21 47 34.8	+1.4	
KAC	Achnashellach	118.44	333		*e*P	PKPdf	21 47 32.6	-0.4	
SMF	Signal de Mont	118.44	319	⇑	*i*PKIKP	PKPdf	21 47 33.1	-0.3	
	comp=Z,25nm,0.8s								
VIVF	Saint-Julien-l	118.50	317	⇑	*i*PKIKP	PKPdf	21 47 33.4	-0.1	
	comp=Z,47nm,0.9s								
SSF	Saint Saulge	118.51	320	⇑	*i*PKIKP	PKPdf	21 47 33.4	-0.1	
	comp=Z,100nm,0.8s								
HPK	Haverah Park	118.54	329		*e*P	PKPdf	21 47 33.3	0.0	
HPK					AMb	AMB	21 47 33.7		
	comp=Z,58nm,1.0s								
ESK	Eskdalemuir	118.65	331		*e*P	PKPdf	21 47 33.0	-0.5	
ESK					AMb	AMB	21 47 36.0		
	comp=Z,35nm,1.6s								
KSB	Sheil Bridge	118.66	333	⇑	*e*P	PKPdf	21 47 32.9	-0.6	
KPL	Plockton	118.69	333		*e*P	PKPdf	21 47 33.1	-0.4	
KPL					AMb	AMB	21 47 41.0		
	comp=Z,37nm,1.9s								
AVF	Avril sur Loir	118.70	320	⇑	*i*PKIKP	PKPdf	21 47 33.5	-0.4	
	comp=Z,30nm,0.6s								
EAB	Aberfoyle	118.73	332		*e*P	PKPdf	21 47 33.6	0.0	
TMUT	Trail Mountain	118.74	49		*e*PKPdf	PKPdf	21 47 35.7	+1.5	
PLDF	La Plantade	118.82	319		PKP	PKPdf	21 47 34.8	+0.7	
LHO	Holmfirth	118.86	328	⇑	*e*P	PKPdf	21 47 33.8	-0.2	
CWF	Charnwood Fore	118.97	327		*e*P	PKPdf	21 47 33.0	-1.2	
CWF					AMb	AMB	21 47 33.3		
	comp=Z,31nm,1.7s								
PDAR	Pinedale Array	118.97	45		PKP	PKPdf	21 47 35.0	+0.5	
	comp=Z,6.5nm,0.9s,baz=216,slow=1.3,SNR=53								
PDAR					SKP		21 50 53.8		
	comp=Z,1.6nm,0.8s,baz=316,slow=0.9,SNR=5.8								
PDAR					PKKPbc	PKKPbc	21 57 49.9	-0.8	
	comp=Z,2.7nm,1.0s,baz=106,slow=4.8,SNR=6.5								
HYF	Humbligny	118.98	320		*e*PKIKP	PKPdf	21 47 34.8	+0.4	
KAR1	Arisaig	119.01	333	⇑	*e*P	PKPdf	21 47 33.8	-0.4	
AGO	Saint Âgoulin	119.11	319		PKP	PKPdf	21 47 35.0	+0.3	
BGF	Bois d'Agland	119.11	320		*e*PKIKP	PKPdf	21 47 34.9	+0.2	
	comp=Z,169nm,0.8s								
KWE	Weaver Farm	119.12	328	⇑	*e*P	PKPdf	21 47 34.3	-0.2	
GCD	Castle Douglas	119.25	330	⇑	*e*P	PKPdf	21 47 34.0	-0.7	
PYM	Petit Puy Mans	119.30	319		PKP	PKPdf	21 47 35.5	+0.5	
SRU	San Rafael	119.30	49		*e*PKPdf	PKPdf	21 47 36.0	+0.7	
LASF	Ste Croix	119.30	317	⇑	*i*PKIKP	PKPdf	21 47 35.2	+0.1	
	comp=Z,77nm,1.1s								
LBL	Lubilhac	119.32	318		PKP	PKPdf	21 47 36.1	+1.0	
WUAZ	Wupatki	119.49	53		*e*PKPdf	PKPdf	21 47 36.8	+1.1	
TCF	Toulx Ste Croi	119.62	319	⇑	*i*PKIKP	PKPdf	21 47 35.7	+0.1	
	comp=Z,74nm,0.8s								
GAL1	Galloway	119.62	331	⇑	*e*P	PKPdf	21 47 34.8	-0.5	
GAL1					AMb	AMB	21 47 37.5		
	comp=Z,58nm,1.6s								
SSW	Stow on the Wo	119.62	327		*e*P	PKPdf	21 47 35.6	+0.1	
SWN1	Swindon	119.81	326		*e*P	PKPdf	21 47 35.7	-0.2	
SWN1					AMb	AMB	21 47 36.9		
	comp=Z,116nm,1.6s								
LAO	LASA Array	119.86	40		*e*PKPdf	PKPdf	21 47 37.5	+1.4	
FCC	Fort Churchill	119.88	24		*e*PKPdf	PKPdf	21 47 34.8	-1.0	
HLM1	Long Mynd	119.91	328		*e*P	PKPdf	21 47 36.3	+0.3	
SBD1	Bryn Du	119.92	328		*e*P	PKPdf	21 47 35.4	-0.6	
HAE	Alders End	119.97	327		*e*P	PKPdf	21 47 35.7	-0.5	
WIM	Isle of Man	119.99	330		*e*P	PKPdf	21 47 35.8	-0.3	
LDF	La Druitiere	120.16	323		*e*PKIKP	PKPdf	21 47 36.4	-0.2	
	comp=Z,41nm,0.9s								
GCL	Cushendall	120.19	331	⇑	*e*P	PKPdf	21 47 35.9	-0.5	
CAF	Calviac	120.22	318	⇑	*i*PKIKP	PKPdf	21 47 37.3	+0.5	
	comp=Z,87nm,0.9s								
MCH1	Michaelchurch	120.23	327		*e*P	PKPdf	21 47 36.3	-0.4	
MCH1					AMb	AMB	21 47 37.5		
	comp=Z,66nm,1.6s								
FLN	La Foliniere	120.30	323	⇑	*i*PKIKP	PKPdf	21 47 36.7	-0.2	
	comp=Z,65nm,0.9s								
FLN					*e*MLR	MLR			
	comp=Z,128nm,22.8s								
FLN	La Foliniere	120.30	323	⇑	*i*PKIKP	PKPdf	21 47 36.7	-0.2	
FLN					MLR	MLR			
	comp=Z,130nm,22.8s								
WLF1	Llynfaes	120.31	329	⇑	*e*P	PKPdf	21 47 36.2	-0.5	
HTR	Trewern Hill	120.34	327	⇑	*e*P	PKPdf	21 47 36.6	-0.3	
RJF	Les Rejaudoux	120.44	319	⇑	*i*PKIKP	PKPdf	21 47 37.5	+0.3	
	comp=Z,85nm,1.2s								
RJF					*e*MLR	MLR			
	comp=Z,109nm,21.5s								
RJF	Les Rejaudoux	120.44	319	⇑	*i*PKIKP	PKPdf	21 47 37.5	+0.3	
RJF					MLR	MLR			
	comp=Z,110nm,21.5s								
EJON	La Jonquera	120.51	315		PKP	PKPdf	21 47 36.6	-0.8	
GMM	Mts of Mourne	120.57	330	⇑	*e*P	PKPdf	21 47 36.3	-0.9	
PV10	Paradox Valley	120.61	50		*e*PKPdf	PKPdf	21 47 39.2	+1.4	
TUC	Tucson	120.62	57		*e*PKPdf	PKPdf	21 47 39.3	+1.3	
MTLF	Montolieu	120.67	316	⇑	*i*PKIKP	PKPdf	21 47 37.7	-0.1	
	comp=Z,74nm,0.9s								
GRR	Gorron	120.69	323	⇑	*i*PKIKP	PKPdf	21 47 37.5	-0.1	
	comp=Z,12nm,0.5s								
RWWY	Rawlins	120.97	46		*e*PKPdf	PKPdf	21 47 39.0	+0.6	
MFF	Saint Martin d	121.00	321	⇑	*i*PKIKP	PKPdf	21 47 38.2	-0.1	
	comp=Z,96nm,0.8s								
PV01	Paradox Valley	121.03	50		*e*PKPdf	PKPdf	21 47 39.7	+1.1	
LFF	La Frestale	121.08	318	⇑	*i*PKIKP	PKPdf	21 47 38.9	+0.4	
	comp=Z,70nm,0.7s								
HEX	Exmoor	121.13	326	⇑	*e*P	PKPdf	21 47 37.9	-0.5	
MVCO	Mesa Verde	121.34	51		*e*PKPdf	PKPdf	21 47 40.7	+1.5	
ETOS	Mallorca	121.41	312		PKP	PKPdf	21 47 38.9	-0.4	
DYA	Yadsworthy	121.51	326		*e*P	PKPdf	21 47 38.7	-0.4	
DYA					AMb	AMB	21 47 40.8		
	comp=Z,90nm,1.3s								
HTL	Hartland	121.54	327		*e*P	PKPdf	21 47 38.5	-0.7	
HTL					AMb	AMB	21 47 46.8		
	comp=Z,131nm,1.7s								
EMIR	Miracle	121.64	315		PKP	PKPdf	21 47 39.8	+0.1	
SGMF	Saint Gilles	121.76	323	⇑	*i*PKIKP	PKPdf	21 47 39.5	-0.2	
	comp=Z,54nm,0.8s								
EPF	Esparros	122.06	317		*e*PKIKP	PKPdf	21 47 40.4	-0.1	
	comp=Z,59nm,0.9s								
EPOB	Poblet	122.15	314		PKP	PKPdf	21 47 40.3	-0.4	
ROSF	Rostrenen	122.15	323		*e*PKIKP	PKPdf	21 47 40.2	-0.2	
	comp=Z,29nm,0.7s								
RSSD	Black Hills	122.28	42		*e*PKPdf	PKPdf	21 47 40.5	-0.4	
QUIF	Quistinic	122.28	323	⇑	*i*PKIKP	PKPdf	21 47 40.5	-0.2	
	comp=Z,25nm,0.6s								
EBIE	Bielsa	122.33	316		PKP	PKPdf	21 47 41.9	+0.9	
REYF	Montagne du Re	122.55	317		PKP	PKPdf	21 47 43.3	+1.9	
ETSF	Etsaut	122.73	317	⇑	*i*PKIKP	PKPdf	21 47 42.5	+0.8	
	comp=Z,76nm,1.0s								
ISCO	Idaho Springs	122.73	47		*e*PKPdf	PKPdf	21 47 42.8	+1.0	
ERTA	Horta de San J	122.81	314		PKP	PKPdf	21 47 41.3	-0.7	
LARF	Larrau	122.96	317		PKP	PKPdf	21 47 43.1	+0.9	
SJPF	Ste Jean	123.09	317		*e*PKIKP	PKPdf	21 47 43.1	+0.7	
	comp=Z,64nm,1.0s								
ESAC	San Caprasio	123.10	315		PKP	PKPdf	21 47 42.7	+0.2	
LAZ	Ladron	123.13	54		*e*PKPdf	PKPdf	21 47 44.6	+1.8	
ELIZ	Elizondo	123.28	317		PKP	PKPdf	21 47 41.6	-1.1	
SDCO	Great Sand Dun	123.47	50		*e*PKPdf	PKPdf	21 47 44.6	+1.3	
ANMO	Albuquerque	123.53	53		*e*PKPdf	PKPdf	21 47 44.9	+1.4	
ANMO	Albuquerque	123.53	53	⇑	*i*PKIKP	PKPdf	21 47 45.2	+1.7	
LPM	Los Pinos Moun	123.56	54		*e*PKPdf	PKPdf	21 47 45.1	+1.5	
EMOS	Mosqueruela	123.59	314		PKP	PKPdf	21 47 44.4	+0.9	
BNM	Barren Site	123.60	54		*e*PKPdf	PKPdf	21 47 45.4	+1.7	
EBEN	Beniarda	123.98	312		PKP	PKPdf	21 47 45.1	+0.8	
ECRI	Cripan	124.16	317		PKP	PKPdf	21 47 45.5	+1.1	
ECHE	Chera	124.22	313		PKP	PKPdf	21 47 45.8	+1.1	
ELAN	Lanestosa	124.52	318		PKP	PKPdf	21 47 45.1	0.0	
ETOR	Torete	124.55	315		PKP	PKPdf	21 47 46.1	+0.9	
ETOB	Tobarra	124.97	312		PKP	PKPdf	21 47 46.1	-0.1	
EMUR	La Murta	125.02	311		PKP	PKPdf	21 47 46.5	+0.3	
MNTX	Cornudas Mount	125.23	57		*e*PKPdf	PKPdf	21 47 47.8	+0.9	
AGMN	Agassiz Refuge	125.32	34		*e*PKPdf	PKPdf	21 47 45.5	-1.0	
EARI	Arriondas	125.66	319		PKP	PKPdf	21 47 48.0	+0.7	
EVIA	Vianos	125.68	313		PKP	PKPdf	21 47 48.4	+0.9	
ENIJ	Nijar	126.04	311		PKP	PKPdf	21 47 48.6	+0.3	
GUD	Guadarrama	126.08	315		PKP	PKPdf	21 47 49.4	+1.1	
ESDC	Sonseca Array	126.34	314		PKP	PKPdf	21 47 48.9	+0.1	
ESDC	Sonseca Array	126.34	314		PKP	PKPdf	21 47 48.2	-0.6	
	comp=Z,21nm,1.0s,baz=23,slow=2.9,SNR=36								
EQES	Quesada	126.39	312		PKP	PKPdf	21 47 48.9	0.0	
EBER	Berja	126.58	311		PKP	PKPdf	21 47 49.4	+0.1	
PAB	San Pablo	126.66	314		*e*PKPdf	PKPdf	21 47 49.9	+0.5	
TORD	Torodi Ar. Bea	126.68	281		PKP	PKPdf	21 47 49.7	-0.4	
TORD	Torodi Ar. Bea	126.68	281		PKP	PKPdf	21 47 49.7	-0.3	
	comp=Z,54nm,1.0s,baz=65,slow=1.8,SNR=180								
EBAN	Banos Encina	126.79	312		PKP	PKPdf	21 47 50.3	+0.7	
EPON	Pontenova	126.90	320		PKP	PKPdf	21 47 50.5	+0.7	
ECOG	Cogollos-Vega	126.95	311		PKP	PKPdf	21 47 49.3	-0.7	
EGUA	Guajares	127.11	311		PKP	PKPdf	21 47 50.5	+0.2	
ERON	Agron	127.22	311		PKP	PKPdf	21 47 50.1	-0.4	
LTX	Lajitas	127.23	59		*e*PKPdf	PKPdf	21 47 51.5	+0.8	
TXAR	Lajitas Array	127.23	59		PKP	PKPdf	21 47 51.5	+0.7	
TXAR					PKKPbc		21 57 20.9		
TXAR	Lajitas Array	127.23	59		PKhKP		21 47 44.0		
	comp=Z,4.6nm,1.2s,baz=261,slow=4.9,SNR=5.7								
TXAR					PKP	PKPdf	21 47 51.5	+0.7	
	comp=Z,9.0nm,1.0s,baz=270,slow=1.3,SNR=38								
TXAR					PKKPbc		21 57 20.9		
	comp=Z,0.7nm,0.9s,baz=116,slow=5.7,SNR=4.7								
ECSD	EROS,Sioux Fal	127.25	39		*e*PKPdf	PKPdf	21 47 50.4	0.0	
ECAL	Calabor	127.28	318		PKP	PKPdf	21 47 50.7	+0.2	
CBKS	Cedar Bluff	127.34	46		*e*PKPdf	PKPdf	21 47 51.5	+0.8	
PBRG	Braganca	127.35	318		*e*PKP	PKPdf	21 47 51.4	+0.8	
EADA	Adamuz	127.36	313		PKP	PKPdf	21 47 51.1	+0.4	
ELUQ	Luque	127.37	312		PKP	PKPdf	21 47 51.2	+0.4	
ELOJ	Sierra Loja	127.44	311		PKP	PKPdf	21 47 50.3	-0.6	
MVO	Moncorvo	127.83	317		*e*PKP	PKPdf	21 47 53.1	+1.5	
STS	Santiago	128.01	320		PKP	PKPdf	21 47 52.6	+0.7	
EMIJ	Mijas	128.11	311		PKP	PKPdf	21 47 51.0	-1.2	
ELOB	Lobios	128.19	318		PKP	PKPdf	21 47 52.9	+0.7	
PVRL	Vila Real	128.24	318		*e*PKP	PKPdf	21 47 53.8	+1.5	
PCAB	Cabril	128.24	318		*e*PKP	PKPdf	21 47 52.8	+0.5	
EMAZ	Mazaricos	128.25	320		PKP	PKPdf	21 47 53.5	+1.2	
MTE	Manteigas	128.52	317		*e*PKP	PKPdf	21 47 54.8	+1.9	
PVIS	Viseu	128.62	317		*e*PKP	PKPdf	21 47 54.4	+1.3	
EJIF	Jimena Fronter	128.67	311		PKP	PKPdf	21 47 52.3	-1.1	
PCBR	Castelo Branco	128.73	316		*e*PKP	PKPdf	21 47 54.0	+0.7	
ESPR	Espera	128.80	312		PKP	PKPdf	21 47 54.1	+0.5	
EBAD	Badajoz	128.88	314		PKP	PKPdf	21 47 53.7	+0.1	
PLCA	Paso Flores	129.01	162		PKP	PKPdf	21 47 54.9	+1.0	
PLCA					SKPbc		21 50 58.7		
PLCA	Paso Flores	129.01	162		PKP	PKPdf	21 47 54.9	+1.0	
	comp=Z,9.2nm,0.9s,baz=207,slow=5.0,SNR=12								
PLCA					SKPbc		21 50 58.7		
	comp=Z,9.1nm,0.8s,baz=210,slow=4.3,SNR=12								
EMIN	Mina Concepcio	129.04	313		PKP	PKPdf	21 47 55.3	+1.4	
PBAR	Barrancos	129.14	314		*e*PKP	PKPdf	21 47 54.8	+0.7	
PESTR	Estremoz	129.23	315		*e*PKP	PKPdf	21 47 55.9	+1.6	
KSU1	Kansas State U	129.43	45		*e*PKPdf	PKPdf	21 47 56.0	+1.4	
EVO	Evora	129.68	315	⇑	*i*PKIKP	PKPdf	21 47 55.8	+0.6	
	comp=Z,96nm,1.2s								
EVO					*e*MLR	MLR			
	comp=Z,114nm,20.0s								
EVO	Evora	129.68	315		*e*PKP	PKPdf	21 47 56.9	+1.7	
EGRO	El Granado	129.72	313		PKP	PKPdf	21 47 55.7	+0.4	
PBEJ	Beja	129.79	314		*e*PKP	PKPdf	21 47 56.3	+0.9	
PVAQ	Vaqueiros	129.95	313		*e*PKP	PKPdf	21 47 57.4	+1.7	
JCT	Junction City	130.16	56		*e*PKPdf	PKPdf	21 47 57.1	+0.8	
PBDV	Barranco-do-Ve	130.17	313		*e*PKP	PKPdf	21 47 57.9	+1.8	
MORF	Marmelete	130.66	313		*e*PKP	PKPdf	21 47 58.6	+1.5	
PFVI	Vila Bisbo	130.86	313		*e*PKP	PKPdf	21 47 59.1	+1.6	
SCHQ	Schefferville	131.53	11		PKP	PKPdf	21 47 59.0	+0.8	
SCHQ					SKPbc	SKPbc	21 51 06.5	-2.1	
SCHQ	Schefferville	131.53	11		PKP	PKPdf	21 47 59.0	+0.8	
	baz=2.6,slow=3.0								
SCHQ					SKPbc	SKPbc	21 51 06.5	-2.1	
DBIC	Dimbokro	132.92	272		PKP	PKPdf	21 48 02.4	+0.3	
DBIC					SKPbc	SKPbc	21 51 11.6	-3.1	
DBIC	Dimbokro	132.92	272		PKhKP		21 47 46.9		
	comp=Z,1.5nm,0.5s,baz=219,slow=18,SNR=7.2								
DBIC					PKP	PKPdf	21 48 02.4	+0.3	
	comp=Z,28nm,0.8s,baz=90,slow=2.4,SNR=27								
DBIC					SKPbc	SKPbc	21 51 11.6	-3.1	
	comp=Z,11nm,1.0s,baz=100,slow=2.8,SNR=5.7								
LIC	Lamto	133.06	271		*e*PKIKP	PKPdf	21 48 02.1	-0.2	
	comp=Z,68nm,0.8s								
LIC					*e*MLR	MLR			
	comp=Z,121nm,23.0s								
LIC	Lamto	133.06	271		*e*PKPdf	PKPdf	21 48 02.1	-0.2	
LIC					LR	LR			
	comp=Z,60nm,23.0s								
PLAL	Pickwick Lake	137.39	45		*e*PKPdf	PKPdf	21 48 09.0	-0.8	
CMIG	Matias Romero	137.46	73		PKP	PKPdf	21 48 10.8	+0.4	
CMIG					SKPbc	SKPbc	21 51 27.7	-1.1	
CMIG	Matias Romero	137.46	73		PKP	PKPdf	21 48 10.8	+0.4	
	comp=Z,12nm,0.8s,baz=343,slow=3.2,SNR=13								
CMIG					SKPbc	SKPbc	21 51 27.7	-1.1	
	comp=Z,12nm,0.9s,baz=152,slow=1.1,SNR=9.0								
CFAA	Coronel Fontan	138.10	159		PKhKP		21 48 01.2		
	comp=Z,0.4nm,0.4s,baz=241,slow=3.8,SNR=7.8								
CFAA					SKPbc	SKPbc	21 51 28.4	-2.0	
	comp=Z,0.6nm,0.6s,baz=217,slow=5.4,SNR=5.0								
CFTV	Fuerteventura	138.46	305		PKP	PKPdf	21 48 12.9	+1.0	
NCB	Newcomb	139.07	24		*e*PKPdf	PKPdf	21 48 12.2	-0.3	
LRAL	Lakeview Retre	139.15	47		*e*PKPdf	PKPdf	21 48 11.8	-1.3	
MCWV	Mont Chateau	139.70	33		*e*PKPpre		21 48 09.5		
SSPA	Standing Stone	140.02	31		*e*PKPdf	PKPdf	21 48 13.8	-0.6	
ELN	Prospectdale	140.84	37		*e*PKPpre		21 48 12.8		
BLA	Blacksburg	141.05	37		*e*PKPpre		21 48 13.1		
MVL	Millersville	141.27	30		*e*PKPdf	PKPdf	21 48 17.0	+0.3	
TEIG	Tepich	143.02	66		*e*PKPpre		21 48 18.0		
TEIG	Tepich	143.02	66		PKhKP		21 48 18.0		
	comp=Z,43nm,0.9s,baz=320,slow=6.7,SNR=10								
TEIG					SKPbc	SKPbc	21 51 42.0	-1.5	
	comp=Z,34nm,1.0s,baz=332,slow=4.7,SNR=6.0								
COW	Cow Castle Cre	143.33	42		*e*PKPdf	PKPdf	21 48 22.4	+1.9	
TGUH	Tegucigalpa,Un	145.11	76		*e*PKPdf	PKPdf	21 48 25.0	+1.0	
JTS	JuntasÂbangare	147.66	83		*e*PKPdf	PKPdf	21 48 27.9	-0.6	
NNA	Nana	148.76	128		PKP	PKPdf	21 48 31.4	+1.2	
	comp=Z,73nm,0.9s,baz=309,slow=5.3,SNR=5.5								
NNA					PKPbc	PKPbc	21 48 35.6	+1.4	
	comp=Z,73nm,0.9s,baz=279,slow=4.6,SNR=20								
ATAH	Atahualpa	150.19	119		PKP	PKPdf	21 48 34.6	+2.1	
	comp=Z,15nm,1.0s,baz=28,slow=4.3,SNR=11								
ATAH					PKPbc	PKPbc	21 48 40.7	+2.9	
	comp=Z,76nm,1.0s,baz=168,slow=2.1,SNR=38								
LPAZ	La Paz	151.52	147		PKP	PKPdf	21 48 36.8	+2.3	
	comp=Z,7.9nm,1.1s,baz=50,slow=1.2,SNR=29								
LPAZ					PKPbc	PKPbc	21 48 43.1	+2.3	
	comp=Z,51nm,0.8s,baz=344,slow=0.9,SNR=94								
LPAZ					PKPab	PKPab	21 48 52.3	+2.6	
	comp=Z,66nm,0.7s,baz=234,slow=4.1,SNR=33								
SIV	San Ignacio	154.96	160		PKP	PKPdf	21 48 40.7	+1.2	
	comp=Z,13nm,1.0s,baz=208,slow=1.4,SNR=44								
SIV					PKPab	PKPab	21 49 05.7	+1.6	
	comp=Z,22nm,0.8s,baz=216,slow=4.5,SNR=23								
ROSC	El Rosal	157.94	96		PKP	PKPdf	21 48 44.9	+1.4	
	comp=Z,15nm,0.9s,baz=78,slow=22,SNR=7.9								
SDV	Santo Domingo	161.83	85		PKP	PKPdf	21 48 47.9	+0.2	
	comp=Z,36nm,0.9s,baz=289,slow=2.5,SNR=13								
SJG	San Juan	162.98	51		*e*PKPdf	PKPdf	21 48 48.4	-0.4	

CSEM ***22*** *21:43:14.5±0.9, 37.12N×12.43W, h10km, ML1.9, Error ellipse: s-maj=19.8km s-min=11.7km az=57.0*
INMG ***22*** *21:43:15.3±0.8, 36.37N×12.58W, h10km, ML1.9, Error ellipse: s-maj=6.0km s-min=5.0km az=98.0*

MDD 22 21:43:13.7±2.2, 3640N×1246W, h67km±122km, mb3.9/8, Error ellipse: s-maj=23.9km s-min=17.8km az=80.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.01**	**75**	*e*Pn	Pn	21 43 58.0	-1.0
PFVI				*e*Sn	Sn	21 44 30.2	-3.7
PFVI				A		21 44 33.8	
	3.5nm,0.1s						
PFVI	**Vila Bisbo**	**3.01**	**75**	Pn	Pn	21 43 58.0	-1.0
PFVI				Sn	Sn	21 44 30.2	-3.7
	1.8nm,0.1s						
PFVI	**Vila Bisbo**	**3.01**	**75**	*e*Pn	Pn	21 43 58.0	-1.0
PFVI				*e*Sn	Sn	21 44 30.2	-3.7
MORF	**Marmelete**	**3.19**	**72**	*e*Pn	Pn	21 44 00.9	-0.5
MORF				*e*Sn	Sn	21 44 35.5	-2.7
MORF				A		21 44 39.8	
	3.8nm,0.2s						
MORF	**Marmelete**	**3.19**	**72**	Pn	Pn	21 44 00.9	-0.5
MORF				Sn	Sn	21 44 35.5	-2.7
	3.8nm,0.2s						
MORF	**Marmelete**	**3.19**	**72**	*e*Pn	Pn	21 44 00.9	-0.5
MORF				*e*Sn	Sn	21 44 35.5	-2.7
PTEO	**Sao Teotonio**	**3.20**	**68**	*e*Sn	Sn	21 44 36.1	-2.5
PTEO				A		21 44 39.1	
	1.5nm,0.1s						
PTEO	**Sao Teotonio**	**3.20**	**68**	*e*Sn	Sn	21 44 36.1	-2.5
	1.5nm,0.1s						
PMAFR	**Mafra**	**3.59**	**44**	*e*Pn	Pn	21 44 06.2	-0.6
PMAFR				*e*Sn	Sn	21 44 46.1	-1.9
PMAFR				A		21 44 48.6	
	9.5nm,0.2s						
PMAFR	**Mafra**	**3.59**	**44**	*e*Pn	Pn	21 44 06.2	-0.6
PMAFR				*e*Sn	Sn	21 44 46.1

0.4nm,0.3s,baz=326,slow=12,SNR=22
ASAR S S 22 01 44.9 -1.4
0.1nm,0.3s,baz=321,slow=25,SNR=4.2
ASAR ScP ScP 22 06 22.6 +4.7
0.1nm,0.3s,baz=352,slow=1.6,SNR=4.5
NWAO Narrogin (SRO) 24.70 193 P **P 21 59 41.3 +1.4**
10nm,1.0s,mb4.3,baz=37,slow=10,SNR=3.7
STKA Stephens Creek 28.45 146 P **P 22 00 17.4 +3.8**
STKA Stephens Creek 28.45 146 P **P 22 00 17.4 +3.8**
1.1nm,0.3s,mb4.1,baz=349,slow=7.4,SNR=6.7
MJAR Matsushiro Arr 47.17 16 P **P 22 02 49.4 -0.5**
1.8nm,0.7s,mb3.8,baz=181,slow=9.1,SNR=4.8
ODAN Odare 49.84 316 *eP* **P 22 03 10.4 -0.1**
5.2nm,0.3s,mb4.6
TAPN Taplejung 49.94 317 *eP* **P 22 03 11.5 +0.2**
16nm,0.5s,mb4.9
JIRN Jiri 51.17 316 *eP* **P 22 03 20.5 0.0**
11nm,0.4s,mb4.9
KKN Kakani 51.88 316 *eP* **P 22 03 26.2 +0.5**
5.8nm,0.4s,mb4.6
GKN Gorkha 52.45 316 *eP* **P 22 03 29.7 -0.2**
9.4nm,0.3s,mb4.8
KOLN Koldanda 53.03 315 *eP* **P 22 03 33.9 -0.3**
5.8nm,0.3s,mb4.8
SONM Songino Array 58.39 347 P **P 22 04 11.2 -0.8**
0.3nm,0.5s,mb3.4,baz=164,slow=7.6,SNR=4.9
MKAR Makanchi Array 66.40 330 P **P 22 05 05.0 -0.1**
2.3nm,0.7s,mb4.1,baz=132,slow=7.7,SNR=21
TORD Torodi Ar. Bea 122.81 280 PKP PKPdf 22 13 12.4 +1.3
0.4nm,0.7s,baz=59,slow=1.5,SNR=11

CASC 22 22:44:35.4±1.9, 837N×8275W, h0km±6km, MD3.6, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.31**	**77**	*eP*	Pg	22 44 42.4	+1.0
DVD				*eS*	Sg	22 44 48.6	+3.3
BAR1		**1.03**	**328**	↓*eP*	Pg	22 44 54.6	-0.6
CNI	**Changuinola**	**1.07**	**13**	*eP*	Pg	22 44 55.6	-0.4
CNI				*eS*	Sg	22 45 11.8	+2.0
BUS	**Buena Vista**	**1.54**	**320**	*eS*	Sn	22 45 26.9	+2.0
URSC	**Urasca**	**1.78**	**325**	*eP*	Pn	22 45 06.6	-0.8
URSC				*eS*	Sn	22 45 31.8	+1.1
LCR2	**La Lucha 2**	**1.84**	**318**	*eP*	Pn	22 45 08.7	+0.4
LCR2				*eS*	Sn	22 45 33.2	+0.9
LAJ	**Bijagual**	**2.01**	**318**	*eP*	Pn	22 45 15.2	+4.6
LAJ				*eS*	Sn	22 45 45.0	+8.6
PRS1	**Puriscal**	**2.23**	**316**	*eP*	Pn	22 45 12.9	-0.7
PRS1				*eS*	Sn	22 45 42.8	+1.0
CGA2	**Cerro Gallo 2**	**2.35**	**314**	*eP*	Pn	22 45 15.2	-0.1
CGA2				*eS*	Sn	22 45 47.8	+2.8
PTP	**Ponta Puerca**	**19.33**	**58**	*i* P		22 44 39.9	

*IDC **22** 22:50:45.1±1.6, 935S×10977E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.7/16, mbtmp3.6/6, ML3.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/23, Error ellipse: s-maj=75.1km s-min=20.7km az=46.0*
*ISCJB **22** 22:50:48.1±0.9, 101S±02×1094E±02, h33km, mb3.9/8, Error ellipse: s-maj=31.3km s-min=11.6km az=135.9*
ISC 22 22:50:50.0±0.9, 101S±02×1095E±02, h35km, n13, σ0§93/14, mb3.9/8, 1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJII	**Banjamegara**	**2.75**	**4**	↓*iP*	**Pn**	**22 51 31.6**	**-0.1**
BJII				*i* S	**Sn**	**22 52 23.6**	**+20**
FITZ	**Fitzroy Crossi**	**17.55**	**119**	P	**Pn**	**22 54 51.9**	**-0.2**
	0.1nm,0.3s,baz=298,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**25.88**	**115**	P	**P**	**22 56 18.9**	**+0.1**
	1.1nm,0.9s,mb3.4,baz=287,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**26.91**	**123**	P	**P**	**22 56 31.6**	**+3.6**
	0.8nm,1.0s,mb3.2,baz=287,slow=9.3,SNR=4.0						
ODAN	**Odare**	**42.54**	**330**	*eP*	**P**	**22 58 42.9**	**+0.5**
	5.4nm,0.6s,mb4.5						
TAPN	**Taplejung**	**42.80**	**331**	*eP*	**P**	**22 58 44.1**	**-0.4**
JIRN	**Jiri**	**43.80**	**330**	*eP*	**P**	**22 58 53.3**	**+0.7**
	20nm,0.9s						
KKN	**Kakani**	**44.37**	**329**	*eP*	**P**	**22 58 58.2**	**+1.1**
	13nm,0.9s,mb4.7						
GKN	**Gorkha**	**44.87**	**328**	*eP*	**P**	**22 59 01.3**	**+0.1**
	6.7nm,0.6s,mb4.7						
KOLN	**Koldanda**	**45.23**	**327**	*eP*	**P**	**22 59 04.4**	**+0.4**
	16nm,0.8s						
SONM	**Songino Array**	**57.74**	**358**	P	**P**	**23 00 32.1**	**-5.1**
	0.5nm,1.0s,mb3.5,baz=169,slow=8.8,SNR=2.7						
SONM				LR	LR	23 29 14.4	
	comp=Z,49nm,18.1s,baz=31,slow=40						
MKAR	**Makanchi Array**	**61.63**	**339**	P	**P**	**23 01 01.4**	**-2.7**
	0.5nm,0.6s,mb3.8,baz=140,slow=7.5,SNR=9.7						
BRTR	**Keskin Array B**	**85.71**	**311**	P	**P**	**23 03 24.6**	**-1.0**
	0.4nm,0.8s,mb3.7,baz=116,slow=6.6,SNR=3.4						

*IDC **22** 23:06:09.4±1.2, 653S×154 66E, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.2/14, mbtmp4.0/9, ML3.8/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/22, Error ellipse: s-maj=43.2km s-min=20.9km az=121.0*
*ISCJB **22** 23:06:10.7±4.6, 654S±009×154 69E±008, h18km±34km, mb4.4/22, Error ellipse: s-maj=15.0km s-min=13.1km az=159.0*
*NEIC **22** 23:06:14.9±1.3, 657S×154 66E, h38km±13km, mb4.4/9, Error ellipse: s-maj=9.1km s-min=7.7km az=143.0*
ISC 22 23:06:14.3±4.7, 658S±009×154 68E±008, h30km±34km, n37, σ0§75/35, mb4.4/22, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.94**	**119**	Pn	**Pn**	**23 07 40.9**	**+0.6**
CTA	**Charters Tower**	**15.72**	**211**	Pn	**Pn**	**23 09 53.8**	**+0.1**
	0.3nm,0.3s,baz=59,slow=13,SNR=3.0						
CTA				LR	LR	23 14 59.2	
	comp=Z,182nm,18.6s,baz=49,slow=34						
DZM	**Mont Dzumac**	**19.14**	**145**	LR	LR	23 16 12.1	
	comp=Z,12nm,20.3s,baz=238,slow=31						
KAKA	**Kakadu**	**22.74**	**253**	*eP*	**P**	**23 11 13.9**	**-0.2**
	3.6nm,0.8s,mb3.9						
WB2	**Warramunga Arr**	**23.79**	**234**	*eP*	**P**	**23 11 24.7**	**+0.1**
WB2	**Warramunga Arr**	**23.79**	**234**	*eP*	**P**	**23 11 24.3**	**-0.3**
WRA	**Warramunga Arr**	**23.80**	**234**	P	**P**	**23 11 24.2**	**-0.4**
	7.0nm,0.9s,mb4.1,baz=58,slow=9.7,SNR=30						
WRA				PcP	PcP	23 15 08.0	+0.2
	0.8nm,0.8s,baz=58,slow=3.0,SNR=5.1						
ASAR	**Alice Springs**	**26.21**	**227**	P	**P**	**23 11 46.4**	**-0.3**
	0.9nm,0.8s,mb3.4,baz=62,slow=9.1,SNR=8.6						
FITZ	**Fitzroy Crossi**	**30.54**	**245**	*eP*	**P**	**23 12 26.0**	**+0.8**
	5.6nm,0.9s,mb4.4						
FITZ	**Fitzroy Crossi**	**30.54**	**245**	P	**P**	**23 12 24.8**	**-0.4**
	1.8nm,0.8s,mb4.0,baz=81,slow=9.5,SNR=4.1						
RAO	**Raoul Island**	**34.30**	**134**	P	**P**	**23 12 58.3**	**+0.1**
NWAO	**Narrogin (SRO)**	**43.53**	**228**	*eP*	**P**	**23 14 14.7**	**-0.7**
	3.2nm,0.7s,mb4.2						
NACB	**Ninganchiao**	**44.44**	**315**	P	**P**	**23 14 22.7**	**-0.1**
YHNB	**Yeheng**	**44.91**	**315**	P	**P**	**23 14 26.2**	**-0.2**
KSRS	**Korea Array**	**50.42**	**332**	P	**P**	**23 15 09.0**	**-0.1**
	0.9nm,0.8s,mb3.9,baz=138,slow=9.7,SNR=3.7						
YSS	**Yuzh-Sakhalins**	**54.34**	**350**	P	**P**	**23 15 36.7**	**-1.2**
MDJ	**Mudanjiang**	**55.74**	**339**	*eP*	**P**	**23 15 47.5**	**-0.6**
	2.7nm,0.5s,mb4.5						
CASY	**Casey**	**66.89**	**198**	*eP*	**P**	**23 17 01.2**	**-2.0**
	8.0nm,0.6s,mb4.9						
SONM	**Songino Array**	**68.81**	**327**	P	**P**	**23 17 15.3**	**-0.4**
	0.6nm,0.9s,mb3.5,baz=128,slow=9.3,SNR=2.9						
LSA	**Lhasa**	**70.78**	**304**	*eP*	**P**	**23 17 27.7**	**-0.4**
	1.7nm,0.4s,mb4.3						
SBA	**Scott Base**	**71.52**	**177**	P	**P**	**23 17 31.7**	**-0.1**
TAPN	**Taplejung**	**72.92**	**301**	*eP*	**P**	**23 17 42.3**	**+1.3**
	20nm,1.0s,mb5.0						
ODAN	**Odare**	**73.05**	**301**	*eP*	**P**	**23 17 42.9**	**+1.1**
	32nm,0.8s,mb5.3						
JIRN	**Jiri**	**74.30**	**301**	*eP*	**P**	**23 17 50.4**	**+1.2**
	10nm,0.6s,mb4.9						
PALK	**Pallekele**	**75.06**	**279**	P	**P**	**23 17 53.4**	**-0.5**
KKN	**Kakani**	**75.11**	**301**	*eP*	**P**	**23 17 54.5**	**+0.6**
	19nm,0.9s,mb5.0						
GKN	**Gorkha**	**75.71**	**301**	*eP*	**P**	**23 17 58.0**	**+0.7**
	26nm,0.9s,mb5.2						
KOLN	**Koldanda**	**76.54**	**300**	*eP*	**P**	**23 18 02.6**	**+0.6**
	20nm,0.8s,mb5.1						
PMR	**Palmer**	**80.54**	**24**	*eP*	**P**	**23 18 21.5**	**-1.8**
	11nm,0.9s,mb4.8						
MK31	**Makanchi Array**	**82.88**	**319**	P	**P**	**23 18 36.6**	**+0.5**
MKAR	**Makanchi Array**	**82.88**	**319**	P	**P**	**23 18 35.9**	**-0.1**
	1.4nm,0.7s,mb4.1,baz=103,slow=5.3,SNR=20						
QSPA	**South Pole Qui**	**83.39**	**180**	*eP*	**P**	**23 18 39.3**	**+1.2**
	3.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	**86.31**	**322**	*eP*	**P**	**23 18 53.2**	**-0.1**
	0.7nm,0.4s,mb4.2						
EKS2	**Erkin-Say**	**87.76**	**313**	P	**P**	**23 19 01.1**	**+0.6**
NVAR	**Mina Array Bea**	**91.71**	**52**	P	**P**	**23 19 19.6**	**+0.5**
	1.2nm,0.8s,mb4.3,baz=248,slow=4.7,SNR=7.4						
YKA	**Yellowknife Ar**	**96.12**	**28**	P	**P**	**23 19 38.3**	**-0.4**
	0.2nm,0.5s,mb3.8,baz=259,slow=4.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**152.61**	**286**	PKPbc	PKPbc	23 26 08.4	-0.5
	3.1nm,0.8s,baz=68,slow=2.3,SNR=16						

*IDC **22** 23:14:55.2±1.1, 654S×154 57E, h0km, mb3.9/7, mb1 4.1/7, mb1mx4.0/12, mbtmp3.9/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/22, Error ellipse: s-maj=47.7km s-min=22.4km az=118.0*
*ISCJB **22** 23:14:58.9±0.5, 664S±009×154 70E±009, h33km, mb4.3/17, Error ellipse: s-maj=14.0km s-min=12.6km az=43.9*
*NEIC **22** 23:15:00.3±0.5, 658S×154 65E, h35km, mb4.3/2, Error ellipse: s-maj=13.7km s-min=12.7km az=51.0*
ISC 22 23:15:00.9±0.5, 664S±009×154 68E±009, h35km, n28, σ1§06/26, mb4.3/17, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.91**	**118**	Pn	**Pn**	**23 16 25.6**	**-0.4**
HNR	**Honiara**	**5.91**	**118**	LR	LR	23 18 35.4	
	comp=Z,122nm,19.6s,baz=178,slow=36						
CTA	**Charters Tower**	**15.67**	**211**	Pn	**Pn**	**23 18 43.2**	**+4.2**
CTA				LR	LR	23 23 32.5	
CTA	**Charters Tower**	**15.67**	**211**	Pn	**Pn**	**23 18 43.2**	**+4.2**
	0.3nm,0.3s,baz=34,slow=11,SNR=5.1						
CTA				LR	LR	23 23 32.5	
	comp=Z,114nm,19.9s,baz=49,slow=33						
WB2	**Warramunga Arr**	**23.75**	**234**	*eP*	**P**	**23 20 10.8**	**+0.6**
WB2	**Warramunga Arr**	**23.75**	**234**	*eP*	**P**	**23 20 10.7**	**+0.6**
WRA	**Warramunga Arr**	**23.76**	**234**	P	**P**	**23 20 10.1**	**-0.2**
	4.6nm,0.8s,mb3.9,baz=58,slow=9.2,SNR=39						
WRA				PcP	PcP	23 23 53.8	+0.2
	0.9nm,0.8s,baz=37,slow=1.3,SNR=5.9						
ASAR	**Alice Springs**	**26.17**	**227**	P	**P**	**23 20 31.4**	**-0.8**
	1.0nm,0.8s,mb3.4,baz=59,slow=8.6,SNR=7.2						
STKA	**Stephens Creek**	**27.92**	**204**	P	**P**	**23 20 47.0**	**-0.8**
	1.8nm,0.8s,mb3.7,baz=24,slow=12,SNR=2.9						
KKM	**Kota Kinabalu**	**40.40**	**287**	P	**P**	**23 22 34.1**	**-1.9**
KULM	**Kulim**	**55.21**	**281**	P	**P**	**23 24 29.5**	**-1.3**
MDJ	**Mudanjiang**	**55.80**	**339**	*eP*	**P**	**23 24 31.3**	**-3.1**
	3.1nm,0.3s,mb4.8						
SONM	**Songino Array**	**68.87**	**327**	P	**P**	**23 26 00.6**	**-1.3**
	0.3nm,0.4s,mb3.6,baz=135,slow=5.3,SNR=4.4						
LSA	**Lhasa**	**70.81**	**304**	*eP*	**P**	**23 26 16.1**	**+1.9**
	2.5nm,0.6s,mb4.3						
TLY	**Talaya**	**72.60**	**330**	*eP*	**P**	**23 26 24.0**	**-0.5**
TAPN	**Taplejung**	**72.95**	**301**	*eP*	**P**	**23 26 28.2**	**+1.1**
	8.8nm,0.7s,mb4.8						
ODAN	**Odare**	**73.08**	**301**	*eP*	**P**	**23 26 29.0**	**+1.1**
	26nm,0.8s,mb5.2						
JIRN	**Jiri**	**74.33**	**301**	*eP*	**P**	**23 26 36.4**	**+1.2**
	3.7nm,0.3s,mb4.7						
KKN	**Kakani**	**75.14**	**301**	*eP*	**P**	**23 26 40.8**	**+0.9**
	11nm,0.7s,mb4.9						
GKN	**Gorkha**	**75.75**	**301**	*eP*	**P**	**23 26 44.0**	**+0.6**
	19nm,0.8s,mb5.1						
KOLN	**Koldanda**	**76.57**	**300**	*eP*	**P**	**23 26 48.6**	**+0.5**
	15nm,0.7s,mb5.0						
MK31	**Makanchi Array**	**82.93**	**319**	*eP*	**P**	**23 27 23.1**	**+1.0**
MKAR	**Makanchi Array**	**82.93**	**319**	P	**P**	**23 27 21.6**	**-0.5**
	1.1nm,0.7s,mb4.0,baz=100,slow=5.9,SNR=17						
QSPA	**South Pole Qui**	**83.33**	**180**	*eP*	**P**	**23 27 24.6**	**+0.9**
	6.8nm,1.1s,mb4.6						
KURK	**Kurchatov**	**86.36**	**322**	*eP*	**P**	**23 27 38.1**	**-1.2**
	1.0nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**91.75**	**52**	P	**P**	**23 28 05.8**	**+0.7**
	0.7nm,0.7s,mb4.1,baz=247,slow=5.1,SNR=4.9						
YKA	**Yellowknife Ar**	**96.17**	**28**	P	**P**	**23 28 24.5**	**-0.4**
	0.1nm,0.4s,mb3.6,baz=269,slow=4.6,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.63**	**286**	PKP	PKPdf	23 34 47.1	-0.7
	0.4nm,1.0s,baz=57,slow=2.4,SNR=2.6						
TORD				PKPbc	PKPbc	23 34 54.2	-0.7
	1.9nm,0.8s,baz=72,slow=2.0,SNR=13						

*IDC **22** 23:51:10.3±0.7, 642S×154 62E, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.4/13, mbtmp4.3/10, ML2.8/1, MS3.6/5, Ms1 3.6/5, ms1mx3.4/19, Error ellipse: s-maj=27.6km s-min=18.1km az=108.0*
*ISCJB **22** 23:51:14.7±3.2, 648S±009×154 61E±007, h36km±30km, mb4.5/26, MS3.7/3, Error ellipse: s-maj=14.4km s-min=12.3km az=177.1*
*NEIC **22** 23:51:15.6±0.3, 649S×154 65E, h35km, mb4.6/10, Error ellipse: s-maj=10.5km s-min=9.0km az=51.0*
*BJI **22** 23:51:15.5, 650S×154 70E, h35km, mb4.5*
ISC 22 23:51:19.2±2.2, 654S±008×154 61E±007, h62km±22km, n51, σ1§24/47, mb4.5/26, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.01**	**119**	*e*Pn	**Pn**	**23 52 40.2**	**-5.3**
HNR				*e*Sn	**Sn**	**23 53 53.4**	**+0.3**
HNR	**Honiara**	**6.01**	**119**	Pn	**Pn**	**23 52 47.1**	**+1.6**
	16nm,0.3s,baz=240,slow=3.7,SNR=2.3						
HNR				Sn	**Sn**	**23 54 05.3**	**+12**
	20nm,0.3s,baz=59,slow=5.5,SNR=5.2						
CTA	**Charters Tower**	**15.72**	**210**	Pn	**Pn**	**23 55 00.2**	**+3.4**
	0.4nm,0.3s,baz=35,slow=13,SNR=11						
CTA				LR	LR	00 00 13.2	
	comp=Z,400nm,20.2s,baz=45,slow=34						
CTAO	**Charters Tower**	**15.72**	**210**	*e*Pn	**Pn**	**23 55 00.5**	**+3.6**
	25nm,0.9s						
DZM	**Mont Dzumac**	**19.21**	**145**	P	**Pn**	**23 55 38.6**	**-1.0**
	0.0nm,0.3s,baz=297,slow=21,SNR=2.6						
DZM				LR	LR	00 01 40.2	
	comp=Z,26nm,20.0s,baz=231,slow=33						
KAKA	**Kakadu**	**22.69**	**253**	*eP*	**P**	**23 56 14.9**	**-0.9**
	12nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**23.76**	**234**	*eP*	**P**	**23 56 25.8**	**-0.2**
WRA	**Warramunga Arr**	**23.77**	**234**	P	**P**	**23 56 25.2**	**-0.9**
	15nm,0.8s,mb4.5,baz=58,slow=9.6,SNR=39						
WRA				PcP	PcP	00 00 09.1	+0.5
	1.7nm,0.8s,baz=57,slow=2.0,SNR=7.1						
ARMA	**Armidale**	**23.92**	**186**	*eP*	**P**	**23 56 32.0**	**+4.6**
	1.1nm,1.3s						
ASAR	**Alice Springs**	**26.19**	**227**	P	**P**	**23 56 47.6**	**-0.5**
	3.3nm,0.9s,mb3.9,baz=61,slow=8.8,SNR=19						
STKA	**Stephens Creek**	**27.99**	**204**	*eP*	**P**	**23 57 06.6**	**+2.5**
	2.7nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**27.99**	**204**	*eP*	**P**	**23 57 04.0**	**-0.2**
STKA	**Stephens Creek**	**27.99**	**204**	P	**P**	**23 57 05.4**	**+1.2**
	3.4nm,0.7s,mb4.1,baz=38,slow=11,SNR=7.4						
STKA				LR	LR	00 08 40.0	
	comp=Z,254nm,20.6s,baz=27,slow=37						
FITZ	**Fitzroy Crossi**	**30.49**	**245**	*eP*	**P**	**23 57 26.2**	**-0.4**
	7.3nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**30.49**	**245**	P	**P**	**23 57 25.2**	**-1.3**
	3.8nm,0.8s,mb4.2,baz=79,slow=8.5,SNR=7.2						
FITZ				LR	LR	00 10 14.6	
	comp=Z,259nm,19.4s,baz=78,slow=38						
RAO	**Raoul Island**	**34.37**	**134**	*eP*	**P**	**23 58 00.6**	**+0.3**
MBWA	**Marble Bar**	**36.74**	**243**	*eP*	**P**	**23 58 19.0**	**-1.8**
	12nm,1.2s,mb4.6						
KKM	**Kota Kinabalu**	**40.31**	**287**	P	**P**	**23 58 48.7**	**-2.2**
JOW	**Kunigami**	**41.85**	**324**	P	**P**	**23 59 05.0**	**+1.7**
	5.9nm,0.6s,mb4.4,baz=108,slow=20,SNR=2.5						
YHNB	**Yeheng**	**44.84**	**315**	*eP*	**P**	**23 59 26.1**	**-1.3**
KSRS	**Korea Array**	**50.36**	**332**	P	**P**	**00 00 08.6**	**-1.4**
	0.6nm,0.3s,mb4.1,baz=157,slow=11,SNR=3.6						
KSRS				LR	LR	00 18 03.0	
	comp=Z,37nm,18.3s,baz=121,slow=32						
KULM	**Kulim**	**55.13**	**281**	*eP*	**P**	**00 00 45.4**	**-0.3**
KMI	**Kunming**	**59.45**	**304**	P	**P**	**00 01 17.8**	**+1.9**
KMI				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
MA2	**Magadan**	**65.97**	**358**	P	**P**	**00 01 56.9**	**-1.7**
GTA	**Gaotai**	**68.15**	**317**	*eP*	**P**	**00 02 15.5**	**+2.6**
GTA				AMB	AMB		
	comp=Z,3.0nm,0.9s,mb4.3						
ULN	**Ulaanbaatar**	**68.42**	**328**	*eP*	**P**	**00 02 13.2**	**-1.2**
	comp=Z,2.5nm,0.7s,mb4.3						
SONM	**Songino Array**	**68.75**	**327**	P	**P**	**00 02 16.2**	**-0.3**
	comp=Z,1.8nm,1.1s,mb3.9,baz=83,slow=4.6,SNR=7.3						
LSA	**Lhasa**	**70.70**	**304**	*eP*	**P**	**00 02 31.4**	**+2.5**
	comp=Z,5.2nm,0.6s,mb4.6						
TLY	**Talaya**	**72.48**	**330**	P	**P**	**00 02 38.1**	**-1.0**
TAPN	**Taplejung**	**72.84**	**301**	*eP*	**P**	**00 02 43.2**	**+1.4**
	comp=Z,26nm,0.9s,mb5.2						
ODAN	**Odare**	**72.97**	**301**	*eP*	**P**	**00 02 44.1**	**+1.5**
	comp=Z,77nm,0.8s						
JIRN	**Jiri**	**74.22**	**301**	*eP*	**P**	**00 02 51.6**	**+1.7**
	comp=Z,21nm,0.8s,mb5.1						
BILL	**Bilibino**	**74.86**	**5**	*eP*	**P**	**00 02 51.6**	**-1.0**
	comp=Z,5.4nm,0.7s,mb4.6						
KKN	**Kakani**	**75.04**	**301**	*eP*	**P**	**00 02 55.9**	**+1.3**
	comp=Z,38nm,0.8s,mb5.3						
GKN	**Gorkha**	**75.64**	**301**	*eP*	**P**	**00 02 59.2**	**+1.1**
	comp=Z,29nm,0.7s,mb5.3						
KOLN	**Koldanda**	**76.47**	**300**	*eP*	**P**	**00 03 03.8**	**+1.1**
	comp=Z,48nm,0.9s,mb5.4						
MKAR	**Makanchi Array**	**82.81**	**319**	P	**P**	**00 03 37.5**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.3,baz=102,slow=4.9,SNR=24						
QSPA	**South Pole Qui**	**83.43**	**180**	*eP*	**P**	**00 03 40.2**	**+0.9**
	comp=Z,6.1nm,1.0s,mb4.6						
MAW	**Mawson**	**84.67**	**203**	P	**P**	**00 03 45.7**	**-0.2**
	comp=Z,1.1nm,0.5s,mb4.2,baz=90,slow=11,SNR=5.7						
TKM2	**Tokmak 2**	**86.43**	**314**	*eP*	**P**	**00 03 54.5**	**-0.5**
	comp=Z,2.0nm,0.7s,mb4.5						
UCH	**Uchtor**	**87.07**	**313**	P	**P**	**00 03 58.5**	**+0.3**
EKS2	**Erkin-Say**	**87.69**	**313**	*eP*	**P**	**00 04 00.9**	**-0.3**
	comp=Z,1.5nm,0.6s,mb4.4						
NVAR	**Mina Array Bea**	**91.74**	**52**	P	**P**	**00 04 19.1**	**-1.1**
	comp=Z,1.2nm,0.7s,mb4.3,baz=242,slow=4.1,SNR=8.1						
BRVK	**Borovoye**	**91.77**	**323**	P	**P**	**00 04 18.7**	**-1.4**
YKA	**Yellowknife Ar**	**96.11**	**28**	P	**P**	**00 04 39.6**	**-0.1**
	comp=Z,0.6nm,0.6s,mb4.2,baz=268,slow=4.5,SNR=11						
NOA	**NORSAR Array B**	**119.15**	**341**	PKP	PKPdf	00 10 00.5	-0.4
	comp=Z,0.7nm,0.8s,baz=20,slow=1.1,SNR=3.4						
BOSA	**Boshof**	**120.00**	**232**	PKP	PKPdf	00 10 02.6	-0.9
	comp=Z,2.3nm,0.9s,baz=270,slow=5.1,SNR=2.8						
SANT	**Santorini**	**124.97**	**310**	*e*PKPdf	PKPdf	00 10 13.8	+1.0
GERES	**GERESS Array B**	**126.47**	**329**	PKP	PKPdf	00 10 13.5	-1.7
	comp=Z,0.6nm,0.9s,baz=287,slow=11,SNR=3.7						
TORD	**Torodi Ar. Bea**	**152.54**	**286**	PKP	PKPdf	00 11 02.4	-0.2
TORD				PKPbc	PKPbc	00 11 09.7	+0.1
TORD	**Torodi Ar. Bea**	**152.54**	**286**	PKP	PKPdf	00 11 02.4	-0.2
	comp=Z,0.6nm,0.8s,baz=354,slow=1.9,SNR=4.7						
TORD				PKPbc	PKPbc	00 11 09.7	+0.1
	comp=Z,3.5nm,0.7s,baz=59,slow=1.6,SNR=24						

*ISCJB **23** 00:07:07.9±0.5, 3802N±002×2753E±005, h6km±5km, Error ellipse: s-maj=6.6km s-min=3.3km az=155.6*
*CSEM **23** 00:07:07.1±0.1, 3800N×2750E, h12km, MD3.0, Error ellipse: s-maj=4.0km s-min=2.0km az=71.0*
*ISK **23** 00:07:07.3, 3802N×2750E, h7km, MD3.0*
*DDA **23** 00:07:08.3, 3800N×2751E, h7km±2km, Md2.6*
ISC 23 00:07:08.5±0.4, 3801N±002×2751E±005, h13km±5km, n17, σ0§83/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.43**	**333**	PG	**Pg**	**00 07 16.7**	**-0.4**
IZM				SG	**Sg**	**00 07 22.0**	**-0.9**
KDAG	**Bornova**	**0.44**	**334**	*i* P	**Pg**	**00 07 17.1**	**0.0**
KDAG				*i* S	**Sg**	**00 07 23.8**	**+0.8**
KDAG	**Bornova**	**0.44**	**334**	*i* P	**Pg**	**00 07 17.1**	**0.0**
KDAG				*i* S	**Sg**	**00 07 23.8**	**+0.8**
AYDN	**Tasoluk**	**0.46**	**140**	*i* P	**Pg**	**00 07 17.5**	**0.0**
AYDN				*i* S	**Sg**	**00 07 23.6**	**0.0**
BLCB	**Balcova**	**0.53**	**316**	PG	**Pg**	**00 07 18.3**	**-0.5**
BLCB				SG	**Sg**	**00 07 24.4**	**-1.4**
MLSB	**Milas**	**0.74**	**163**	PG	**Pg**	**00 07 21.9**	**-1.0**
MLSB				SG	**Sg**	**00 07 33.9**	**+1.3**
URLA	**Izmir**	**0.80**	**296**	*i* P	**Pg**	**00 07 24.4**	**+0.5**
URLA				*i* S	**Sg**	**00 07 35.5**	**+1.0**
AKHS	**Akhisar**	**0.90**	**15**	*i* P	**Pg**	**00 07 25.9**	**+0.1**

AKHS					*i* S		**Sg**	**00 07 40.1**	**+2.5**
AKS	**Akhisar**	**0.90**	**15**		PG		**Pg**	**00 07 25.2**	**-0.7**
AKS					SG		**Sg**	**00 07 37.1**	**-0.5**
BDRM	**Kayabasi**	**0.94**	**183**		*i* P		**Pg**	**00 07 26.0**	**-0.7**
BDRM					*i* S		**Sg**	**00 07 39.8**	**+0.8**
KULA	**Kula-Manisa**	**1.04**	**61**		*e*PG		**Pg**	**00 07 27.6**	**-0.9**
YER	**Yerkesik**	**1.07**	**145**		*e*PN		**Pn**	**00 07 28.0**	**-1.1**
YER					*e*SN		**Sn**	**00 07 43.1**	**-0.7**
DENT	**Denizli**	**1.23**	**101**		*e*PN		**Pn**	**00 07 32.2**	**+0.8**
BALB	**Balikesir**	**1.65**	**10**		*e*PN		**Pn**	**00 07 37.7**	**+0.5**
DST	**Dursunbey**	**1.82**	**28**		*e*PN		**Pn**	**00 07 40.3**	**+0.9**
EZN	**Ezine**	**2.04**	**333**		*e*PN		**Pn**	**00 07 42.4**	**0.0**
EDC	**Edincik**	**2.35**	**7**		*e*PN		**Pn**	**00 07 46.9**	**+0.1**

IDC ***23*** *00:20:27.2±0.7, 2461S×17647W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.3/17, mbtmp4.2/10, MS3.9/9, Ms1 3.9/9, ms1mx3.6/19, Error ellipse: s-maj=27.2km s-min=19.5km az=158.0*
ISCJB ***23*** *00:20:35.1±3.1, 2455S±0.1×1767W±0.1, h68km±26km, mb4.2/14, Error ellipse: s-maj=25.0km s-min=18.2km az=179.3*
NEIC ***23*** *00:20:35.7±2.6, 2445S×17667W, h57km±22km, mb4.5/6, Error ellipse: s-maj=18.8km s-min=14.4km az=180.0*

ISC 23 00:20:36.0±2.8, 245S±01×1767W±01, h62km±23km, n47, σ0§87/26, mb4.2/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.91**	**193**	Pn	**Pn**	**00 21 47.2**	**0.0**
URZ	**Urewera**	**14.74**	**200**	Pn	**Pn**	**00 24 01.0**	**0.0**
	0.5nm,0.3s,baz=337,slow=7.6,SNR=5.4						
URZ				Sn	**Sn**	**00 26 31.0**	**-12**
	0.4nm,0.3s,baz=3.8,slow=22,SNR=3.0						
DZM	**Mont Dzumac**	**15.68**	**275**	Pn	**Pn**	**00 24 22.5**	**+9.3**
	0.0nm,0.3s,baz=92,slow=19,SNR=4.8						
DZM				LR	LR	00 27 51.0	
	comp=Z,11nm,19.6s,baz=106,slow=28						
RAR	**Rarotonga**	**15.92**	**82**	Pn	**Pn**	**00 24 06.0**	**-10**
	1.7nm,0.3s,baz=215,slow=12,SNR=3.9						
SNZO	**South Karori**	**18.28**	**201**	P	**P**	**00 24 40.2**	**-5.0**
RPZ	**Rata Peaks**	**21.69**	**205**	LR	LR	00 33 26.3	
	comp=Z,166nm,18.1s,baz=355,slow=36						
TBI	**Tubuai**	**24.90**	**93**	*e*LR	LR	00 31 44.5	
	312nm,26.0s						
TBI	**Tubuai**	**24.90**	**93**	*e*T		00 51 06.0	
	33nm,0.4s						
PAE	**Paea**	**26.15**	**80**	*e*T		00 52 42.1	
	130nm,0.3s						
PPT	**Papeete**	**26.19**	**80**	*e*LR	LR	00 32 18.1	
	290nm,24.5s,baz=253						
PPT	**Papeete**	**26.19**	**80**	LR	LR	00 32 56.5	
	comp=Z,216nm,19.1s,baz=258,slow=29						
TVO	**Taravao**	**26.41**	**81**	*e*T		00 53 01.3	
	14nm,0.4s						
HNR	**Honiara**	**26.82**	**300**	P	**P**	**00 26 19.2**	**+8.5**
	31nm,0.5s,mb5.1						
HNR	**Honiara**	**26.82**	**300**	LR	LR	00 35 06.8	
	comp=Z,153nm,18.9s,baz=357,slow=32						
MEH	**Mehetia**	**27.45**	**82**	*e*T		00 54 18.9	
	125nm,0.3s						
VAH	**Vaihoa**	**28.78**	**77**	*e*T		00 55 59.5	
	8.9nm,0.2s						
EIDS	**Eidsvold**	**29.21**	**261**	*e*P	**P**	**00 26 39.2**	**+7.2**
	4.3nm,0.8s,mb4.2						
CTA	**Charters Tower**	**34.50**	**270**	P	**P**	**00 27 20.4**	**+2.0**
	4.3nm,0.3s,mb4.8,baz=100,slow=10,SNR=12						
CTAO	**Charters Tower**	**34.50**	**270**	*e*P	**P**	**00 27 23.5**	**+5.1**
	5.4nm,0.4s,mb4.8						
TAU	**Tasmania Unive**	**34.82**	**229**	P	**P**	**00 27 19.3**	**-1.6**
STKA	**Stephens Creek**	**37.34**	**249**	P	**P**	**00 27 41.9**	**-0.7**
	2.6nm,0.9s,mb4.1,baz=139,slow=9.1,SNR=3.4						
STKA				LR	LR	00 40 29.4	
	comp=Z,155nm,19.8s,baz=165,slow=32						
RKT	**Rikitea**	**38.09**	**97**	*e*T		01 07 33.4	
	11nm,0.3s						
TAOE	**Nuku Hiva Isla**	**38.13**	**72**	*e*LR	LR	00 37 44.0	
	499nm,35.0s						
ASAR	**Alice Springs**	**44.93**	**260**	P	**P**	**00 28 45.0**	**0.0**
	5.3nm,0.9s,mb4.4,baz=103,slow=8.3,SNR=30						
WB2	**Warramunga Arr**	**45.37**	**266**	*e*P	**P**	**00 28 49.1**	**+0.5**
WB2				*e*PcP	PcP	00 30 24.2	-3.0
WRA	**Warramunga Arr**	**45.38**	**266**	P	**P**	**00 28 47.9**	**-0.7**
	2.2nm,0.4s,mb4.3,baz=103,slow=8.0,SNR=25						
WRA				LR	LR	00 46 28.8	
	comp=Z,142nm,20.0s,baz=145,slow=34						
FITZ	**Fitzroy Crossi**	**53.80**	**265**	P	**P**	**00 29 53.1**	**+0.4**
	1.9nm,0.6s,mb4.2,baz=151,slow=5.5,SNR=5.8						
SBA	**Scott Base**	**54.03**	**184**	*e*P	**P**	**00 29 55.2**	**+1.7**
	2.9nm,0.8s,mb4.3						
MBWA	**Marble Bar**	**58.25**	**259**	*e*P	**P**	**00 30 25.4**	**+1.0**
	3.9nm,0.8s,mb4.5						
CASY	**Casey**	**60.95**	**206**	P	**P**	**00 30 41.7**	**-0.6**
QSPA	**South Pole Qui**	**65.64**	**180**	*e*P	**P**	**00 31 13.5**	**+0.4**
	2.5nm,0.5s,mb4.5						
QSPA	**South Pole Qui**	**65.64**	**180**	P	**P**	**00 31 11.9**	**-1.1**
	7.8nm,1.2s,mb4.6,baz=94,slow=2.5,SNR=14						
MAW	**Mawson**	**78.28**	**200**	P	**P**	**00 32 28.3**	**-0.5**
	7.8nm,1.1s,mb4.6,baz=101,slow=5.2,SNR=6.9						
MAW				LR	LR	01 03 08.0	
	comp=Z,132nm,21.9s,baz=244,slow=33						
KSRS	**Korea Array**	**80.64**	**318**	LR	LR	01 03 24.9	
	comp=Z,23nm,18.1s,baz=127,slow=32						
NVAR	**Mina Array Bea**	**83.08**	**42**	P	**P**	**00 32 55.0**	**+0.1**
	0.2nm,0.5s,mb3.4,baz=225,slow=8.7,SNR=3.8						
PLCA	**Paso Flores**	**85.70**	**133**	LR	LR	01 03 35.0	
	comp=Z,118nm,18.2s,baz=59,slow=30						
TXAR	**Lajitas Array**	**88.18**	**57**	P	**P**	**00 33 19.4**	**-1.0**
	0.2nm,0.6s,mb3.5,baz=332,slow=7.5,SNR=3.0						
PDAR	**Pinedale Array**	**91.01**	**43**	P	**P**	**00 33 33.0**	**-0.3**
	0.2nm,0.6s,mb3.6,baz=234,slow=7.7,SNR=1.3						
TRQA	**Tornquist**	**92.75**	**134**	P	**P**	**00 33 42.9**	**+1.2**
LPAZ	**La Paz**	**99.43**	**113**	LR	LR	01 11 52.2	
	comp=Z,40nm,18.0s,baz=213,slow=31						
FINES	**FINESS Array B**	**139.89**	**343**	PKP	PKPdf	00 39 58.5	+2.0
	0.7nm,0.8s,baz=243,slow=2.1,SNR=2.9						
HFS	**Hagfors**	**143.61**	**351**	PKhKP		00 40 00.0	
	3.2nm,0.9s,baz=46,slow=4.3,SNR=4.4						
AKASG	**Malin Array Be**	**147.03**	**329**	PKPbc	PKPbc	00 40 12.5	+1.0
	0.9nm,0.4s,baz=46,slow=4.0,SNR=3.4						
BRTR	**Keskin Array B**	**150.31**	**308**	PKPbc	PKPbc	00 40 22.2	+1.9
	0.6nm,0.6s,baz=111,slow=1.7,SNR=4.7						
CLL	**Collm**	**152.17**	**347**	*ep*PKPbc	pPKPbc	00 40 40.0	-2.3
CLL				*es*PKPbc		00 40 47.0	
GERES	**GERESS Array B**	**154.31**	**344**	PKPab	PKPab	00 40 42.9	-0.3
	1.1nm,0.8s,baz=64,slow=3.1,SNR=4.6						
TORD	**Torodi Ar. Bea**	**168.65**	**172**	PKPab	PKPab	00 41 45.6	-0.9
	2.4nm,1.0s,baz=189,slow=3.7,SNR=8.9						

NAO ***23*** *00:22:36.1±2.2, 6780N×2044E, ML2.1*
BER ***23*** *00:22:37.7±3.0, 6787N×2003E, h0km, ML1.9, ML2.1(NAO), Suspected explosion*

HEL 23 00:22:36.2±0.1, 6784N×2020E, h0km, ML1.7, ML2.2(UPP), **ML1.9**(BER), **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**23**	*i* P	Pg	00 22 38.2	-0.4
KUA				*i* S	Sg	00 22 40.2	-0.1
NIKU	**Nikkaluokta**	**0.44**	**274**	*i* P	Pg	00 22 43.9	-0.8
NIKU				*i* S	Sg	00 22 50.0	-0.4
LANU	**Lannavaara**	**0.71**	**72**	*i* P	Pg	00 22 48.8	-0.9
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*PB	Pb	00 22 58.6	-1.0
KIF				*e*SB	Sb	00 23 14.5	-1.1
KIF				MSG		00 23 14.5	
	comp=Z,9.7nm,0.2s						
PAJU	**Pajala**	**1.39**	**125**	*e*P	Pn	00 23 00.8	-2.0
HEF	**Hetta**	**1.42**	**65**	*e*P	Pn	00 23 01.5	-1.6
HEF				*e*SN	Sn	00 23 24.3	+1.8
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	Pn	00 23 02.7	-1.7
KTK1	**Kautokeino**	**1.63**	**42**	*e*P	Pn	00 23 06.1	+0.1
KTK1				*e*SN	Sn	00 23 29.6	+1.9
KTK1				AML	AML	00 23 32.2	
	comp=Z,16nm,0.4s						
HARU	**Harads**	**1.71**	**169**	*e*P	Pn	00 23 06.2	-0.9
TRO	**Tromso**	**1.86**	**346**	*e*SN	Sn	00 23 33.3	-0.1
SJUU	**Sjulsmark**	**2.41**	**166**	*e*P	Pn	00 23 16.9	+0.1
SGF	**Sodankyl**	**2.45**	**96**	*e*P	Pn	00 23 17.7	+0.4
	baz=281						
SGF				*e*SG	Sg	00 23 52.0	-2.8
SGF				MSG		00 23 52.0	
	comp=Z,2.1nm,0.2s						
ARA0	**ARCESS Array S**	**2.58**	**46**	Pn	Pn	00 23 18.9	-0.2
	baz=227,slow=16						
ARA0				Sn	Sn	00 23 51.5	+0.3
	baz=232,slow=22						
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P	Pn	00 23 18.9	-0.2
ARA0				*e*S	Sn	00 23 51.5	+0.3
MOR8	**Moi Rana**	**2.81**	**236**	*e*SG	Sg	00 23 58.8	-7.7
MOR8				AML	AML	00 23 59.7	
	comp=Z,18nm,0.3s						
KEV	**Kevo**	**3.13**	**49**	*e*PB	Pb	00 23 30.2	-2.5
KEV				*e*SB	Sb	00 24 11.1	-0.3
KEV				MSG		00 24 11.1	
	comp=Z,2.3nm,0.4s						
STOK	**Stokkvaagen**	**3.19**	**245**	*e*SG	Sg	00 24 16.1	-2.5
OUL	**Oulu**	**3.58**	**138**	*e*PG	Pg	00 23 40.1	-4.7
	baz=318						
OUL				*e*		00 24 31.1	
OUL				MSG		00 24 31.1	
	comp=Z,1.2nm,0.4s						
KU6	**Riekki**	**4.22**	**111**	*e*SG	Sg	00 24 49.6	-2.1
NSS	**Namsos**	**4.71**	**229**	*e*SG	Sg	00 25 02.5	-4.7
FIA0	**FINESS Array S**	**6.89**	**156**	Pn	Pn	00 24 17.8	-0.6
	baz=354,slow=14						
FIA0				Sn	Sn	00 25 33.6	-3.7
	baz=335,slow=28						
FIA0				Lg		00 26 10.8	
	baz=349,slow=37						
FIA0	**FINESS Array S**	**6.89**	**156**	*e*P	Pn	00 24 17.8	-0.6
FIA0				*e*S	Sn	00 25 33.6	-3.7
FIA0				*e*SG	Sg	00 26 10.8	-6.5
HFS	**Hagfors**	**8.24**	**203**	Lg		00 26 54.5	
	baz=16,slow=37						
HFS	**Hagfors**	**8.24**	**203**	*e*		00 26 54.5	
HFS	**Hagfors**	**8.24**	**203**	Lg		00 26 54.5	
	baz=16,slow=37						

CSEM ***23*** *00:30:51.5±0.6, 3682N×4485E, h2km, MD3.6, Error ellipse: s-maj=13.7km s-min=7.5km az=150.0*
ISK ***23*** *00:30:54.0, 3680N×4477E, h18km, MD3.6*
DDA ***23*** *00:30:58.5, 3721N×4470E, h11km, Md3.2*

ISC 23 00:30:52.8±3.0, 368N±01×450E±01, h5km±14km, n12, σ1§18/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	**1.16**	**291**	PG	**Pg**	**00 31 13.6**	**-1.3**
HKR	**Hakkari**	**1.22**	**308**	PN	**Pn**	**00 31 15.5**	**-1.0**
HAKT	**HAKKARI**	**1.23**	**306**	*i* P	**Pb**	**00 31 14.5**	**-2.0**
HAKT				*i* S	**Sb**	**00 31 31.8**	**-0.9**
MSL	**Mosul**	**1.60**	**251**	*ex*	x	00 31 22.0	
MSL				*ex*	x	00 31 46.0	
VANT	**Van**	**2.03**	**323**	*e*PN	**Pn**	**00 31 28.9**	**+1.2**
TVAN	**Van**	**2.09**	**324**	*i* P	**Pn**	**00 31 26.8**	**-1.6**
TVAN				*i* S	**Sg**	**00 32 00.9**	**+1.0**
SIRT	**Sirnak**	**2.12**	**289**	PN	**Pn**	**00 31 28.2**	**-0.7**
VANB	**Van**	**2.15**	**325**	PN	**Pn**	**00 31 29.7**	**+0.4**
CLDR	**Caldiran**	**2.44**	**341**	*e*PN	**Pn**	**00 31 34.1**	**+0.8**
BTMT	**Batman**	**3.07**	**297**	*e*PN	**Pn**	**00 31 43.2**	**+1.2**
AGRB	**Hanur-Agry**	**3.14**	**331**	*e*PN	**Pn**	**00 31 42.9**	**0.0**
MARD	**Mardin**	**3.38**	**279**	*i* P	**Pn**	**00 31 48.2**	**+2.0**
MARD				*i* S	**Sg**	**00 32 42.0**	**+0.8**

ISCJB ***23*** *01:27:46.9±1.1, 3971N±003×3973E±004, h2km±9km, Error ellipse: s-maj=5.8km s-min=4.5km az=171.7*
CSEM ***23*** *01:27:46.0±0.1, 3972N×3974E, h2km, MD3.4, Error ellipse: s-maj=2.1km s-min=2.0km az=40.0*
DDA ***23*** *01:27:46.3, 3973N×3957E, h5km±2km, Md3.0*
ISK ***23*** *01:27:46.1, 3971N×3978E, h2km, MD3.4*

ISC 23 01:27:47.6±0.9, 3972N±003×3973E±005, h5km±8km, n27, σ1§16/35, 3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZC	**Erzincan**	**0.07**	**69**	*i* PG	**Pg**	**01 27 53.8**	**+4.5**
GUMT	**Gumushane**	**0.76**	**346**	*i* PG	**Pg**	**01 28 02.3**	**0.0**
GUMT				*i* SG	**Sg**	**01 28 13.8**	**+1.7**
BINT	**Bingol**	**1.03**	**145**	*i* PG	**Pg**	**01 28 05.6**	**-1.8**
MACK	**Trabzon**	**1.22**	**2**	*i* P	**Pg**	**01 28 09.9**	**-1.1**
MACK				*e*S	**Sg**	**01 28 26.8**	**-0.1**
MACK	**Trabzon**	**1.22**	**2**	*i* P	**Pg**	**01 28 09.9**	**-1.1**
MACK				*e*S	**Sg**	**01 28 26.8**	**-0.1**
KTUT	**Trabzon**	**1.27**	**1**	PN	**Pn**	**01 28 11.0**	**-1.0**
EZM	**Erzurum**	**1.27**	**81**	*i* PN	**Pn**	**01 28 10.5**	**-1.6**
ERZM	**Erzurum**	**1.28**	**81**	⇓*i*P	**Pn**	**01 28 10.8**	**-1.3**
ERZM				*e*S	**Sg**	**01 28 32.9**	**+4.2**
BNGL	**BINGOL**	**1.35**	**124**	⇓*i*P	**Pn**	**01 28 13.3**	**+0.2**
BNGL				*i* S	**Sb**	**01 28 34.4**	**+3.5**
ELZG	**Elazig**	**1.35**	**205**	⇓*i*P	**Pn**	**01 28 11.6**	**-1.6**
ELZG				*i* S	**Sb**	**01 28 29.9**	**-1.1**
ESPY	**Espiye-Giresun**	**1.42**	**328**	PN	**Pn**	**01 28 14.2**	**+0.1**
GRSN	**GIRESUNGRSN**	**1.64**	**318**	*i* P	**Pn**	**01 28 15.8**	**-1.3**
GRSN				*i* S	**Sn**	**01 28 37.5**	**-1.1**
PZAR	**Pazar-Rize**	**1.71**	**31**	*e*PN	**Pn**	**01 28 18.0**	**-0.1**
MYA	**Malataya**	**1.72**	**216**	*e*PN	**Pn**	**01 28 18.4**	**+0.1**
MALT	**Malatya**	**1.73**	**216**	*e*PN	**Pn**	**01 28 17.8**	**-0.6**
BTMT	**Batman**	**2.06**	**137**	*e*PN	**Pn**	**01 28 22.2**	**-0.6**
ARTV	**Artvin**	**2.23**	**48**	*i* P	**Pn**	**01 28 28.3**	**+3.1**
ARTV				*i* S	**Sn**	**01 28 59.2**	**+6.1**
BCA	**Borcka**	**2.25**	**39**	*e*PN	**Pn**	**01 28 25.6**	**+0.1**
AGRB	**Hanur-Agry**	**2.53**	**92**	*e*PN	**Pn**	**01 28 29.2**	**-0.1**
MARD	**Mardin**	**2.54**	**161**	*e*P	**Pn**	**01 28 32.1**	**+2.5**
KARS	**Kars**	**2.73**	**70**	*e*PN	**Pn**	**01 28 32.0**	**-0.1**
SIRT	**Sirnak**	**3.07**	**135**	*e*PN	**Pn**	**01 28 37.2**	**+0.4**
KMRS	**Kahramanmaras**	**3.13**	**226**	*e*PN	**Pn**	**01 28 39.0**	**+1.4**
BNN	**Bunyan**	**3.13**	**255**	*e*PN	**Pn**	**01 28 38.1**	**+0.4**
CLDR	**Caldiran**	**3.30**	**99**	*e*PN	**Pn**	**01 28 40.8**	**+0.9**
KOZT	**Kozan**	**3.79**	**235**	*e*PN	**Pn**	**01 28 48.2**	**+1.6**
CORM	**Corum**	**3.94**	**278**	*e*PN	**Pn**	**01 28 50.4**	**+1.6**

IDC ***23*** *01:49:59.5±1.5, 3626N×7125E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/21, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=34.6km s-min=31.2km az=155.0*
MOS ***23*** *01:50:06.8±0.7, 3654N×7117E, h66km, mb4.1/1, Error ellipse: s-maj=28.7km s-min=13.8km az=83.4*
NEIC ***23*** *01:50:10.5±2.9, 3664N×7117E, h88km±24km, mb3.5/3, Error ellipse: s-maj=28.7km s-min=14.5km az=188.0*
ISCJB ***23*** *01:50:11.8±0.5, 3676N±003×7143E±007, h136km±9km, mb3.8/4, Error ellipse: s-maj=9.4km s-min=4.1km az=173.2*
NNC ***23*** *01:50:19.1±5.0, 3734N×7110E, h161km±65km, mb2.9, mpv4.0, Error ellipse: s-maj=44.4km s-min=25.8km az=18.0*

ISC 23 01:50:13.0±0.5, 3676N±002×7144E±007, h131km±8km, n47, σ1§28/65, mb3.8/4, 4C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.96**	**172**	⇓P	**Pn**	**01 50 59.9**	**+0.8**
CEP				S	**Sn**	**01 51 36.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.44**	**154**	⇑P	**Pn**	**01 51 07.1**	**+1.7**
THW	**Thamme Wali**	**3.97**	**176**	P	**Pn**	**01 51 12.4**	**+0.1**
THW				S	**Sn**	**01 51 57.0**	**-1.4**
SBDP	**Sheikh Budin**	**4.49**	**187**	P	**Pn**	**01 51 18.1**	**-1.1**
THN	**Thein Dam**	**5.58**	**140**	*e*P	**Pn**	**01 51 33.9**	**+0.1**
THN				*e*S	**Sn**	**01 52 36.2**	**-0.6**
DLH	**Dalhousie**	**5.62**	**137**	*e*P	**Pn**	**01 51 37.0**	**+2.6**
DLH				*e*S	**Sn**	**01 52 38.0**	**0.0**
AML	**Almayashu**	**5.63**	**17**	*e*Pn	**Pn**	**01 51 35.3**	**+0.8**
	45nm,0.4s						
AML				*e*Sn	**Sn**	**01 52 34.7**	**-3.4**
AML	**Almayashu**	**5.63**	**17**	P	**Pn**	**01 51 35.3**	**+0.8**
	SNR=158						
UCH	**Uchtor**	**5.95**	**23**	*e*Pn	**Pn**	**01 51 39.7**	**+1.0**
	7.8nm,0.3s						
UCH				*e*Sn	**Sn**	**01 52 43.8**	**-1.9**
UCH	**Uchtor**	**5.95**	**23**	P	**Pn**	**01 51 39.8**	**+1.1**
	SNR=18						
KZA	**Kyzart**	**6.07**	**28**	P	**Pn**	**01 51 41.2**	**+0.9**
	SNR=20						
EKS2	**Erkin-Say**	**6.16**	**16**	*e*Pn	**Pn**	**01 51 42.2**	**+0.7**
	5.1nm,0.4s						
EKS2				*e*Sn	**Sn**	**01 52 50.2**	**-0.4**
EKS2	**Erkin-Say**	**6.16**	**16**	P	**Pn**	**01 51 42.2**	**+0.7**
	SNR=52						
AAK	**Ala-Archa**	**6.32**	**21**	P	**Pn**	**01 51 44.6**	**+1.0**
	SNR=21						
KK31	**Karatay Array**	**6.37**	**354**	P	**Pn**	**01 51 43.1**	**-1.2**
	2.8nm,0.3s,baz=177,slow=12,SNR=123						
KK31				⇑S	**Sn**	**01 52 49.9**	**-6.0**
	5.3nm,0.3s,baz=177,slow=23,SNR=8.1						
KBK	**Karagaybulak**	**6.47**	**24**	P	**Pn**	**01 51 43.8**	**-2.0**
	SNR=6.8						
ULHL	**Ulahol**	**6.61**	**33**	P	**Pn**	**01 51 49.5**	**+1.9**
	SNR=11						
CHMS	**Chumysh**	**6.73**	**21**	P	**Pn**	**01 51 49.9**	**+0.8**
	SNR=13						
USP	**Ospenovka**	**6.91**	**19**	P	**Pn**	**01 51 52.1**	**+0.6**
	SNR=11						
TKM2	**Tokmak 2**	**6.93**	**26**	⇑P	**Pn**	**01 51 52.6**	**+0.7**
	11nm,0.5s						
TKM2				⇑S	**Sn**	**01 53 06.9**	**-2.4**
	4.4nm,0.5s						
TKM2	**Tokmak 2**	**6.93**	**26**	*e*Pn	**Pn**	**01 51 52.7**	**+0.8**
	15nm,0.5s						
TKM2				Sn	**Sn**	**01 53 16.9**	**+7.7**
TKM2	**Tokmak 2**	**6.93**	**26**	*e*P	**Pn**	**01 51 52.7**	**+0.8**
TKM2						01 53 16.9	
				pmax	pmax		
	comp=Z,15nm,0.5s						
TKM2	**Tokmak 2**	**6.93**	**26**	P	**Pn**	**01 51 52.7**	**+0.9**
	SNR=21						
SDNR	**Sundarnagar**	**6.97**	**137**	*e*P	**Pn**	**01 51 52.1**	**-0.4**
SDNR				*e*S	**Sn**	**01 53 06.1**	**-4.3**
DDI	**Dehra Dun**	**8.47**	**137**	*ex*	x	01 53 46.0	
JOSI	**Joshimath**	**9.17**	**130**	*e*P	**Pn**	**01 52 23.2**	**+1.1**
JOSI				*e*S	**Sn**	**01 53 57.1**	**-6.4**
JOSI				AML	AML	01 54 03.8	
	comp=E,90nm,0.6s						
JOSI				AML	AML	01 54 05.3	
	comp=N,144nm,1.0s						
KHET	**Khetri**	**9.42**	**156**	*e*P	**Pn**	**01 52 23.1**	**-2.3**
KHET				*e*S	**Sn**	**01 53 59.8**	**-10**
KHET				AML	AML	01 54 06.2	
	comp=E,7.6nm,0.1s						
KHET				AML	AML	01 54 06.5	
	comp=N,5.6nm,0.2s						
MKAR	**Makanchi Array**	**12.87**	**35**	Pn	**Pn**	**01 53 11.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=222,slow=14,SNR=18						
KOLN	**Koldanda**	**13.64**	**128**	*e*P	**Pn**	**01 53 19.5**	**-1.4**
	comp=N,4.5nm,0.3s						
KOLN				*e*S	**Sn**	**01 55 42.9**	**-8.6**
GKN	**Gorkha**	**14.15**	**124**	*e*P	**Pn**	**01 53 26.5**	**-1.0**
	comp=N,11nm,0.3s						
GKN				*e*S	**Sn**	**01 55 53.2**	**-11**
KKN	**Kakani**	**14.72**	**123**	*e*P	**Pn**	**01 53 33.2**	**-1.5**
	comp=N,9.6nm,0.5s						
KURK	**Kurchatov**	**14.87**	**18**	*e*Pn	**Pn**	**01 53 37.4**	**+1.1**
	comp=N,2.6nm,0.8s						
KURK	**Kurchatov**	**14.87**	**18**	*e*P	**Pn**	**01 53 37.4**	**+1.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AB31	**Akbulak array**	**15.03**	**330**	P	**Pn**	**01 53 35.3**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=131,slow=13,SNR=47						
AB31				⇓S	S	01 56 11.8	-21
	comp=Z,1.3nm,0.6s,baz=150,slow=24,SNR=4.4						
JIRN	**Jiri**	**15.42**	**122**	*e*P	**Pn**	**01 53 42.4**	**-1.0**
	comp=Z,8.9nm,0.3s						
JIRN				*e*S	**S**	**01 56 24.2**	**-17**
BRVK	**Borovoye**	**16.31**	**358**	*e*Pn	**Pn**	**01 53 55.4**	**+1.2**
	comp=Z,0.8nm,0.4s						
BRVK	**Borovoye**	**16.31**	**358**	*e*P	**Pn**	**01 53 55.4**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TAPN	**Taplejung**	**16.66**	**120**	*e*P	**Pn**	**01 53 59.4**	**+0.7**
	comp=Z,5.7nm,0.3s						
AKTK	**Aktyubinsk**	**16.73**	**329**	Pn	**Pn**	**01 53 58.2**	**-1.1**
AKTK				Sn	**Sn**	**01 56 52.7**	**-13**
AKTO	**Aktyubinsk**	**16.73**	**329**	⇓P	**Pn**	**01 53 58.1**	**-1.2**
	comp=Z,1.7nm,2.3s						
AKTO				⇓S	**S**	**01 56 56.2**	**-9.4**
	comp=Z,3.0nm,2.9s						
AKTO	**Aktyubinsk**	**16.73**	**329**	Pn	**Pn**	**01 53 58.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=139,slow=9.6,SNR=6.0						
AKTO				Sn	**Sn**	**01 56 52.7**	**-13**
	comp=Z,0.1nm,0.3s,baz=149,slow=18,SNR=3.0						
KIV	**Kislovodsk**	**22.98**	**297**	*e*P	**P**	**01 55 06.2**	**+0.2**
	comp=Z,2.3nm,0.5s,mb3.9						
KIV	**Kislovodsk**	**22.98**	**297**	*e*P	**P**	**01 55 06.2**	**+0.2**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
HIA	**Hailar**	**36.85**	**55**	P	**P**	**01 57 12.9**	**+4.7**
KEV	**

LPAZ	**La Paz**	**126.60**	**118**	PKP	PKPdf	02 24 22.3	+1.1
	1.8nm,1.0s,baz=37,slow=5.6,SNR=6.3							

*ISCJB **23** 02:20:40.6±1.0, 3659N×004×2581E×008, h1^km±12^km, Error ellipse: s-maj=11.3km s-min=6.2km az=2.4*
*ATH **23** 02:20:41.5, 3656N×2578E, h3^km, MD3.3/8, ML3.5*
*NEIC **23** 02:20:41.6, 3656N×2578E, h3^km, ML3.5(ATH), After ATH.*
*CSEM **23** 02:20:42.8±0.5, 3660N×2575E, h8^km, ML3.5, Error ellipse: s-maj=11.3km s-min=2.5km az=96.0*
*THE **23** 02:20:42.5, 3662N×2571E, h3^km*
ISC 23 02:20:41.5±0.9, 3658N±004×2580E±008, h11^km±10^km, n15, σ0$74/19, 1C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANT	**Santorini**	**0.35**	**233**	*e*Pg	**Pg**	**02 20 48.2**	**-0.2**
SANT				*e*Sg	**Sg**	**02 20 53.1**	**0.0**
SANT	**Santorini**	**0.35**	**233**	*e*Pg	**Pg**	**02 20 49.0**	**+0.6**
SANT				*e*Sg	**Sg**	**02 20 54.5**	**+1.4**
SANT	**Santorini**	**0.35**	**233**	*e*Pg	**Pg**	**02 20 49.0**	**+0.6**
SANT				*e*Sg	**Sg**	**02 20 53.1**	**0.0**
THR1	**Thera Island**	**0.35**	**233**	*e*Pg	**Pg**	**02 20 49.3**	**+0.9**
APE	**Apeiranthos**	**0.53**	**336**	*e*Pg	**Pg**	**02 20 51.9**	**0.0**
APE	**Apeiranthos**	**0.53**	**336**	⇑*i*Pg	**Pg**	**02 20 52.2**	**+0.4**
APE				*e*SG	**Sg**	**02 20 59.2**	**+0.4**
NPS	**Neapolis**	**1.33**	**187**	*e*PG	**Pg**	**02 21 05.5**	**-1.5**
SMG	**Samos**	**1.39**	**36**	*e*PB	**Pb**	**02 21 08.4**	**+0.9**
ZKR	**Zakros**	**1.50**	**167**	*e*Pg	**Pg**	**02 21 10.2**	**-0.2**
ZKR	**Zakros**	**1.50**	**167**	*e*Pg	**Pg**	**02 21 10.1**	**-0.2**
VAM	**Vamos**	**1.75**	**228**	*e*PB	**Pb**	**02 21 14.5**	**+0.9**
PTL	**Penteli**	**2.13**	**314**	*e*PG	**Pg**	**02 21 21.5**	**-0.8**
ATH	**Athens Observa**	**2.17**	**310**	⇓*i*PG	**Pg**	**02 21 22.7**	**-0.3**
NAIG	**Nisos Aigina**	**2.19**	**303**	*e*PG	**Pg**	**02 21 22.5**	**-0.9**
VLI	**Veliai**	**2.31**	**274**	*e*PN	**Pn**	**02 21 19.0**	**-0.4**

*NEIC **23** 02:26:51.8±5.1, 3200S×17940W, h142^km±38^km, mb4.4/3, Error ellipse: s-maj=47.4km s-min=19.3km az=224.0*
*IDC **23** 02:26:52.7±6.8, 32.11S×17950W, h141^km±50^km, mb4.0/5, mb1 4.0/7, mb1mx3.8/15, mbtmp3.9/7, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=54.9km s-min=17.9km az=49.0*
ISC 23 02:26:59.2±2.3, 325S±01×1799W±02, h182^km±17^km, n35, σ1$15/38, mb4.3/8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.30**	**196**	*e*PN	**Pn**	**02 28 17.9**	**+1.0**
MXZ				*e*SN	**Sn**	**02 29 18.7**	**+0.5**
PUZ	**Puketiti**	**5.80**	**195**	PN	**Pn**	**02 28 24.1**	**+0.7**
PUZ				SN	**Sn**	**02 29 29.0**	**-0.9**
MWZ	**Matawai**	**6.22**	**199**	*e*PN	**Pn**	**02 28 29.6**	**+0.6**
MWZ				SN	**Sn**	**02 29 39.8**	**-0.2**
URZ	**Urewera**	**6.28**	**202**	P	**Pn**	**02 28 30.5**	**+0.8**
	2.2nm,0.3s,baz=314,slow=5.4,SNR=23						
URZ				S	**Sn**	**02 29 42.6**	**+1.4**
	23nm,0.3s,baz=86,slow=22,SNR=25						
URZ	**Urewera**	**6.28**	**202**	*e*PN	**Pn**	**02 28 30.3**	**+0.5**
BKZ	**Black Stump Fm**	**7.30**	**203**	*e*PN	**Pn**	**02 28 42.1**	**-1.0**
BKZ				SN	**Sn**	**02 30 04.8**	**-0.7**
WNVZ	**Wahianoa**	**7.76**	**207**	*e*PN	**Pn**	**02 28 49.3**	**0.0**
BFZ	**Birch Farm**	**8.77**	**200**	*e*PN	**Pn**	**02 29 00.1**	**-2.3**
MRZ	**Mangatainoka R**	**8.95**	**203**	*e*PN	**Pn**	**02 29 01.4**	**-3.4**
MRZ				SN	**Sn**	**02 30 36.9**	**-7.9**
TIWZ	**Tintock**	**8.96**	**201**	*e*PN	**Pn**	**02 29 02.5**	**-2.5**
TIWZ				SN	**Sn**	**02 30 40.6**	**-4.4**
KIW	**Kapiti Island**	**9.36**	**205**	PN	**Pn**	**02 29 06.7**	**-3.5**
NNZ	**Nelson**	**10.26**	**210**	PN	**Pn**	**02 29 23.2**	**+1.3**
QRZ	**Quartz Range**	**10.32**	**214**	*e*PN	**Pn**	**02 29 23.6**	**+0.9**
RPZ	**Rata Peaks**	**13.29**	**210**	P	**Pn**	**02 30 00.8**	**0.0**
	1.0nm,0.3s,baz=36,slow=4.3,SNR=4.9						
RPZ				S	**Sn**	**02 32 16.4**	**-12**
	2.8nm,0.3s,baz=103,slow=17,SNR=12						
HNR	**Honiara**	**29.54**	**316**	LR	LR	02 41 40.1	
	comp=Z,62nm,19.5s,baz=0.7,slow=30						
STKA	**Stephens Creek**	**32.48**	**260**	*e*P	**P**	**02 33 13.7**	**+1.2**
	2.6nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**32.48**	**260**	P	**P**	**02 33 13.7**	**+1.2**
	2.8nm,0.7s,mb4.1,baz=90,slow=10,SNR=5.0						
CTA	**Charters Tower**	**32.62**	**284**	P	**P**	**02 33 14.9**	**+1.2**
	5.1nm,0.8s,mb4.3,baz=107,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**41.43**	**270**	P	**P**	**02 34 28.1**	**+0.2**
	6.3nm,0.6s,mb4.4,baz=107,slow=7.5,SNR=81						
WB2	**Warramunga Arr**	**42.60**	**275**	*e*P	**P**	**02 34 37.2**	**-0.3**
WRA	**Warramunga Arr**	**42.61**	**275**	P	**P**	**02 34 37.4**	**-0.1**
	14nm,0.3s,mb5.0,baz=114,slow=8.0,SNR=428						
VNDA	**Vanda**	**45.89**	**185**	P	**P**	**02 35 04.5**	**+1.7**
VNDA	**Vanda**	**45.89**	**185**	P	**P**	**02 35 04.5**	**+1.7**
	0.6nm,0.6s,mb3.4,baz=356,slow=7.9						
KAKA	**Kakadu**	**47.75**	**283**	*e*P	**P**	**02 35 17.3**	**-0.7**
	3.1nm,0.5s,mb4.2						
KAKA	**Kakadu**	**47.75**	**283**	*e*P	**P**	**02 35 16.9**	**-1.1**
	8.3nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**50.78**	**273**	*e*P	**P**	**02 35 39.2**	**-1.8**
	9.7nm,1.5s,mb4.2						
QSPA	**South Pole Qui**	**57.65**	**180**	P	**P**	**02 36 31.2**	**+1.5**
	17nm,0.7s,mb5.0,baz=37,slow=3.0,SNR=46						
SNAA	**Sanae**	**76.14**	**179**	*e*	**P**	**02 38 24.9**	**-1.5**
SNAA				*e*		02 38 27.4	
VNA3	**Neumayer Olymp**	**76.36**	**177**	*e*	**P**	**02 38 26.9**	**-0.7**
VNA3				*e*		02 38 29.2	
VNA2	**Neumayer--Watz**	**76.77**	**177**	*e*	**P**	**02 38 30.3**	**+0.4**
	baz=182,slow=4.2						
VNA2				*e*		02 38 31.9	
VNA1	**Neumayer--Stat**	**77.01**	**177**	*e*	**P**	**02 38 26.3**	**-5.0**
VNA1				*e*		02 38 28.2	
TKM2	**Tokmak 2**	**121.19**	**304**	*e*PKPdf	PKPdf	02 45 26.7	-3.3
FINES	**FINESS Array B**	**146.47**	**338**	PKPbc	PKPbc	02 46 14.9	-3.1
	1.0nm,0.7s,baz=67,slow=5.0,SNR=3.6						
BRTR	**Keskin Array B**	**152.06**	**295**	PKPbc	PKPbc	02 46 30.3	-2.3
	0.6nm,0.6s,baz=92,slow=3.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**160.72**	**185**	PKPab	PKPab	02 47 18.8	-1.7
	1.5nm,0.8s,baz=159,slow=5.1,SNR=15						

MOS 23 02:37:45.5±1.2, 4244N×4594E, h24^km, mb3.6/1, Error ellipse: s-maj=40.6km s-min=9.9km az=39.7, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**1.04**	**307**	*e*PG	Pn	02 38 03.7	-0.9
SNJR				*e*S	Sb	02 38 18.6	+0.6
VLKR	**Vladikavkaz**	**1.11**	**303**	*e*PG	Pn	02 38 04.7	-0.8
VLKR				*e*S	Sb	02 38 20.5	+0.5
LACR	**Lac**	**1.27**	**288**	*e*PG	Pn	02 38 07.3	-0.5
LACR				*e*S	Sn	02 38 24.9	+0.8
BTKR	**Batakoyurt**	**1.39**	**313**	*e*PG	Pn	02 38 09.0	-0.3
BTKR				*e*S	Sn	02 38 29.1	+2.3
KORR	**Kora**	**1.52**	**296**	*e*PG	Pn	02 38 14.4	+3.2
KORR				*e*S	Sn	02 38 35.3	+5.1
KMSR	**Komsomolskaya**	**1.53**	**308**	*e*PG	Pn	02 38 11.9	+0.7
KMSR				*e*S	Sn	02 38 32.8	+2.5
ZEI	**Tsey**	**1.54**	**283**	*e*PG	Pn	02 38 11.8	+0.3
ZEI				*e*S	Sn	02 38 32.6	+1.9
TRKR	**Terskaya**	**1.56**	**326**	*e*PG	Pn	02 38 12.7	+1.0
TRKR				*e*S	Sn	02 38 34.2	+3.1
LSNR	**Lesken**	**1.77**	**299**	*e*PN	Pn	02 38 15.4	+0.8
DIGR	**Digorskoe uzhe**	**1.80**	**285**	*e*PN	Pn	02 38 15.7	+0.7

*CSEM **23** 02:38:17.9, 1408N×4336E, h44^km, ML3.6, After DHMR*
DHMR 23 02:38:17.9±1.3, 1408N×4336E, h44^km±5^km, ML3.6, 6C-3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UDYN	**Al 'Udayn**	**0.60**	**100**	⇑*e*P	Pn	02 38 31.0	+0.9
UDYN				*i* S	Sn	02 38 40.3	+1.5
UDYN				AML	AML	02 38 42.1	
	comp=N,2μm,0.4s						
DHBB	**Dhamar BB**	**1.11**	**64**	⇑*e*P	Pn	02 38 38.6	+1.5
DHBB				*i* S	Sn	02 38 54.0	+2.8
DHBB	**Dhamar BB**	**1.11**	**64**	⇑*e*P	Pn	02 38 38.6	+1.5
DHBB				*i* S	Sn	02 38 54.0	+2.7
	comp=N,477nm,0.2s						
TRBA	**At Turbah**	**1.11**	**139**	⇓*i*P	Pn	02 38 38.2	+1.2
TRBA				*i* S	Sn	02 38 53.1	+1.9
TRBA				AML	AML	02 38 54.9	
	comp=N,954nm,0.2s						

HAJJ	**Hajjah**	**1.63**	**8**	⇑*i*P	Pn	02 38 45.9	+1.8
HAJJ				*i* S	Sn	02 39 07.7	+3.7
HAJJ				AML	AML	02 39 13.2	
	comp=Z,2μm,0.5s						
HAJJ	**Hajjah**	**1.63**	**8**	⇑*i*P	Pn	02 38 45.9	+1.7
HAJJ				*i* S	Sn	02 39 07.7	+3.7
	comp=Z,866nm,0.5s						
LBOS		**1.85**	**96**	⇑*i*P	Pn	02 38 49.8	+2.7
LBOS				*i* S	Sn	02 39 13.6	+4.3
BDHA	**Al Bayda'**	**2.15**	**92**	⇓*i*P	Pn	02 38 54.1	+2.9
BDHA				*i* S	Sn	02 39 22.0	+5.4
BDHA				AML	AML	02 39 28.9	
	comp=N,527nm,0.7s						
BDHA	**Al Bayda'**	**2.15**	**92**	⇓*i*P	Pn	02 38 54.1	+2.9
BDHA				*i* S	Sn	02 39 22.0	+5.4
	comp=N,264nm,0.7s						

*IDC **23** 02:49:07.3±1.3, 3698N×7965E, h0^km, mb3.6/7, mb1 3.8/8, mb1mx3.6/20, mbtmp3.6/8, ML3.9/1, Error ellipse: s-maj=32.7km s-min=28.2km az=45.0*
*NEIC **23** 02:49:08.9±0.8, 3683N×7957E, h10^km, mb3.6/1, Error ellipse: s-maj=18.7km s-min=11.5km az=219.0*
*ISCJB **23** 02:49:10.2±0.7, 3726N±005×7959E±008, h10^km, mb3.5/7, Error ellipse: s-maj=9.9km s-min=7.6km az=17.8*
*MOS **23** 02:49:11.4±1.8, 3719N×7972E, h33^km, mb3.7/1, Error ellipse: s-maj=25.0km s-min=11.4km az=99.5*
*BJI **23** 02:49:14.0, 3753N×7983E, h8^km, ML3.7*
*NNC **23** 02:49:17.8±5.5, 3785N×8036E, h0^km, mb3.6, mpv4.2, Error ellipse: s-maj=58.0km s-min=25.6km az=136.0*
ISC 23 02:49:14.8±2.7, 3744N±006×798E±01, h18^km±16^km, n33, σ1$34/38, mb3.5/7, 9C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.66**	**306**	*e*P	**Pn**	**02 50 11.3**	**+0.8**
KSH				Smax			
	comp=N,2μm,0.5s						
KSH				Smax			
	comp=E,2μm,0.4s						
DLH	**Dalhousie**	**5.82**	**214**	*e*P	**Pn**	**02 50 41.0**	**+0.8**
DLH				*e*S	**Sn**	**02 51 40.0**	**-6.5**
KNDC	**Almaty**	**6.17**	**340**	⇑Pn	**Pn**	**02 50 52.2**	**+7.3**
	comp=E,23nm,0.6s						
KNDC				⇑Lg		02 52 30.0	
	comp=E,99nm,0.7s						
UCH	**Uchtor**	**6.28**	**321**	*e*Pn	**Pn**	**02 50 47.4**	**+0.8**
	comp=E,21nm,0.8s						
UCH				*e*Pg		02 51 09.1	
UCH				*e*Sg		02 52 37.3	
TKM2	**Tokmak 2**	**6.36**	**331**	⇓Pn	**Pn**	**02 50 54.5**	**+7.0**
	comp=E,11nm,0.7s						
TKM2				⇓Lg		02 52 37.4	
	comp=E,29nm,0.7s						
TKM2	**Tokmak 2**	**6.36**	**331**	*e*Pn	**Pn**	**02 50 48.8**	**+1.3**
	comp=E,9.4nm,0.5s						
TKM2				*e*Pg		02 51 10.0	
TKM2				*e*Sg		02 52 37.5	
TKM2	**Tokmak 2**	**6.36**	**331**	*e*P	**Pn**	**02 50 48.8**	**+1.3**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
AML	**Almayashu**	**6.64**	**317**	*e*Pn	**Pn**	**02 50 51.8**	**+0.2**
	comp=Z,164nm,1.0s						
AML				*e*Pb	**Pb**	**02 51 06.7**	**-3.0**
AML				*e*Pg		02 51 17.3	
EKS2	**Erkin-Say**	**6.97**	**320**	*e*Pn	**Pn**	**02 50 57.8**	**+1.8**
	comp=Z,8.3nm,0.7s						
EKS2				*e*Sg		02 52 53.2	
WMQ	**Urumqi**	**8.74**	**41**	*e*P	**Pn**	**02 51 24.5**	**+4.2**
WMQ				Smax			
	comp=N,16nm,0.6s						
WMQ				Smax			
	comp=E,25nm,0.5s						
KK31	**Karatay Array**	**9.08**	**311**	⇑Pn	**Pn**	**02 51 31.7**	**+6.8**
	comp=E,0.3nm,0.2s,baz=198,slow=17						
KK31				⇑Lg		02 54 06.8	
	comp=E,7.5nm,0.8s,baz=144,slow=33						
MK31	**Makanchi Array**	**9.53**	**10**	Pn	**Pn**	**02 51 31.6**	**+0.6**
	comp=E,1.1nm,0.6s,baz=191,slow=13,SNR=27						
MK31				⇑Sn	**Sn**	**02 53 18.0**	**+0.4**
	comp=E,13nm,0.9s,baz=192,slow=25						
MKAR	**Makanchi Array**	**9.53**	**10**	Pn	**Pn**	**02 51 31.7**	**+0.7**
MKAR				Sn	**Sn**	**02 53 17.9**	**+0.4**
MKAR	**Makanchi Array**	**9.53**	**10**	Pn	**Pn**	**02 51 31.7**	**+0.7**
	comp=E,0.9nm,0.3s,baz=185,slow=13,SNR=37						
MKAR				Sn	**Sn**	**02 53 17.9**	**+0.4**
	comp=E,0.8nm,0.3s,baz=191,slow=25,SNR=7.3						
KUR15	**Kurchatov Arra**	**13.21**	**357**	⇑Pn	**Pn**	**02 52 24.9**	**+3.6**
	comp=E,0.2nm,1.0s						
KURK	**Kurchatov**	**13.30**	**357**	*e*Pn	**Pn**	**02 52 20.9**	**-1.7**
	comp=E,2.6nm,0.5s						
KURK	**Kurchatov**	**13.30**	**357**	*e*P	**Pn**	**02 52 20.9**	**-1.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVA0	**Borovoye Array**	**16.91**	**340**	⇑Pn	**Pn**	**02 53 18.7**	**+8.2**
	comp=Z,0.8nm,1.4s,baz=146,slow=9.2,SNR=3.5						
BRVK	**Borovoye**	**16.97**	**340**	*e*P	**Pn**	**02 53 11.8**	**+0.6**
	comp=Z,5.4nm,1.0s						
BRVK	**Borovoye**	**16.97**	**340**	*e*P	**Pn**	**02 53 11.8**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AB31	**Akbulak array**	**18.60**	**316**	⇑Pn	**Pn**	**02 53 37.9**	**+6.6**
	comp=Z,0.7nm,0.7s,baz=123,slow=11,SNR=4.8						
AKTK	**Aktyubinsk**	**20.28**	**317**	P	**P**	**02 53 48.9**	**-0.4**
AKTO	**Aktyubinsk**	**20.28**	**317**	⇑Pn	**P**	**02 53 57.7**	**+8.4**
	comp=Z,2.6nm,2.4s						
AKTO	**Aktyubinsk**	**20.28**	**317**	P	**P**	**02 53 48.9**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=126,slow=19,SNR=3.8						
ZAK	**Zakamensk**	**21.18**	**45**	*e*P	**P**	**02 53 56.3**	**-2.7**
SONM	**Songino Array**	**22.04**	**53**	P	**P**	**02 54 09.7**	**+1.4**
SONM	**Songino Array**	**22.04**	**53**	P	**P**	**02 54 09.7**	**+1.4**
	comp=Z,0.4nm,0.6s,mb3.1,baz=227,slow=15,SNR=2.8						
BRTR	**Keskin Array B**	**35.86**	**288**	P	**P**	**02 56 09.6**	**-4.0**
	comp=Z,0.4nm,0.7s,mb3.5,baz=105,slow=11,SNR=3.5						
ARCES	**ARCESS Array B**	**43.11**	**335**	P	**P**	**02 57 11.9**	**-1.6**
	comp=Z,3.4nm,0.9s,mb4.1,baz=92,slow=7.4,SNR=3.6						
NOA	**NORSAR Array B**	**47.92**	**322**	P	**P**	**02 57 48.7**	**-3.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=87,slow=7.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**72.76**	**274**	P	**P**	**03 00 36.3**	**-6.0**
	comp=Z,0.7nm,0.8s,mb3.7,baz=44,slow=4.9,SNR=20						
WRA	**Warramunga Arr**	**76.74**	**128**	P	**P**	**03 01 00.1**	**-5.1**
	comp=Z,0.4nm,0.8s,mb3.4,baz=328,slow=6.0,SNR=3.7						
YKA	**Yellowknife Ar**	**79.73**	**7**	P	**P**	**03 01 19.6**	**-1.6**
	comp=Z,0.2nm,0.6s,mb3.2,baz=346,slow=5.1,SNR=3.7						

*CSEM **23** 03:02:58.3±0.1, 3728N×3623E, h2^km, MD3.0, Error ellipse: s-maj=2.5km s-min=1.9km az=169.0*
*ISK **23** 03:02:58.1, 3731N×3624E, h5^km, MD3.2*
*ISCJB **23** 03:02:59.2±0.5, 3728N±003×3622E±003, h1^km±6^km, Error ellipse: s-maj=5.3km s-min=4.2km az=167.9*
*DDA **23** 03:02:59.4, 3729N×3625E, h7^km±1^km, Md3.0*
ISC 23 03:02:59.7±0.5, 3729N±003×3622E±003, h2^km±6^km, n17, σ0$74/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.31**	**19**	*i* P	**Pg**	**03 03 05.0**	**-0.6**
ANDN				*i* S	**Sg**	**03 03 10.3**	**+0.7**
KOZT	**Kozan**	**0.36**	**302**	PG	**Pg**	**03 03 06.8**	**+0.1**
KOZT				SG	**Sg**	**03 03 13.3**	**+1.8**
CEYT	**Ceyhan**	**0.47**	**233**	PG	**Pg**	**03 03 08.4**	**-0.3**
KMRS	**Kahramanmaras**	**0.59**	**68**	PG	**Pg**	**03 03 09.5**	**-1.5**
KMRS				SG	**Sg**	**03 03 18.4**	**-0.2**
COBT	**Iskenderun**	**0.77**	**178**	*i* P	**Pg**	**03 03 14.4**	**-0.1**
COBT				*i* S	**Sg**	**03 03 25.4**	**+1.0**
GAZ	**Gaziantep**	**0.80**	**98**	PG	**Pg**	**03 03 14.7**	**-0.4**
GAZ				SG	**Sg**	**03 03 27.1**	**+1.6**
KARA	**Karaisali**	**0.93**	**269**	*e*PG	**Pg**	**03 03 16.9**	**-0.6**
KRTS	**Karatas**	**0.98**	**224**	*e*PG	**Pg**	**03 03 18.4**	**-0.2**
GZT	**Gaziantep**	**1.08**	**86**	*i* P	**Pg**	**03 03 19.3**	**-1.1**
GZT				*i* S	**Sg**	**03 03 34.5**	**+0.2**
HTY	**Hatay**	**1.17**	**183**	*e*PN	**Pn**	**03 03 22.2**	**-0.8**
MERS	**Mersin**	**1.42**	**253**	*e*PN	**Pn**	**03 03 26.4**	**-0.1**
NIG	**Nigde**	**1.52**	**303**	*e*PN	**Pn**	**03 03 27.6**	**-0.2**
BNN	**Bunyan**	**1.59**	**350**	*e*PN	**Pn**	**03 03 28.6**	**-0.2**
ATAB	**Bozova**	**1.67**	**83**	*i* P	**Pn**	**03 03 30.2**	**+0.3**
ATAB				*i* S	**Sn**	**03 03 52.6**	**+0.8**
MALT	**Malatya**	**2.03**	**59**	*e*PN	**Pn**	**03 03 34.8**	**0.0**
MYA	**Malatya**	**2.03**	**59**	*e*PN	**Pn**	**03 03 34.3**	**-0.6**
URFA	**Urfa**	**2.08**	**85**	*e*PN	**Pn**	**03 03 36.1**	**+0.5**

*BJI **23** 03:06:29.8, 5478N×16294E, h31^km, mB4.8, mb4.8*
*KRSC **23** 03:06:32.8±0.5, 5429N×16310E, h42^km±41^km, ML4.2*
*ISCJB **23** 03:06:33.3±0.8, 5428N±003×16311E±009, h53^km±8^km, mb3.9/10, Error ellipse: s-maj=9.0km s-min=4.4km az=22.5*
*NEIC **23** 03:06:33.4±0.6, 5435N×16281E, h35^km, mb4.0/2, Error ellipse: s-maj=19.8km s-min=9.3km az=142.0*
*MOS **23** 03:06:34.1±1.0, 5440N×16283E, h60^km, mb4.2/3, Error ellipse: s-maj=18.2km s-min=9.8km az=71.8*
*IDC **23** 03:06:35.1±1.2, 5435N×16286E, h47^km±7^km, mb3.3/7, mb1 3.6/7, mb1mx3.4/19, mbtmp3.3/7, Error ellipse: s-maj=31.7km s-min=23.7km az=165.0*
ISC 23 03:06:34.7±0.8, 5428N±003×16309E±009, h47^km±8^km, h50^km±.5km:pP-P, n48, σ1$08/66, mb3.9/10, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.84**	**290**	*i* P	**Pn**	**03 06 49.3**	**-0.9**
MKZ				*e*S	**Sn**	**03 07 01.4**	**0.0**
KBTR	**Krutoberegovo**	**1.94**	**356**	*e*P	**Pn**	**03 07 02.3**	**-2.8**
KBTR				*e*S	**Sn**	**03 07 23.8**	**-4.4**
TUMR	**Tumrok**	**1.98**	**302**	*e*P	**Pn**	**03 07 06.8**	**+1.1**
TUMR				*e*S	**Sn**	**03 07 31.7**	**+2.5**
KII	**Karymskiy**	**2.15**	**265**	*e*P	**Pn**	**03 07 08.1**	**0.0**
KII				*e*S	**Sn**	**03 07 33.9**	**+0.3**
SPN	**Mys Shipunski**	**2.18**	**238**	*e*P	**Pn**	**03 07 07.2**	**-1.2**
SPN				*e*S	**Sn**	**03 07 32.2**	**-1.9**
KMNR	**Kamenistaya**	**2.21**	**313**	*e*P	**Pn**	**03 07 09.2**	**+0.4**
KMNR				*e*S	**Sn**	**03 07 35.9**	**+1.0**
KLY	**Klyuchi**	**2.46**	**327**	*e*P	**Pn**	**03 07 10.7**	**-1.7**
KLY				*e*S	**Sn**	**03 07 39.0**	**-2.2**
NLC	**Nalytchevo**	**2.49**	**245**	*e*P	**Pn**	**03 07 12.0**	**-0.7**
NLC				*e*S	**Sn**	**03 07 41.4**	**-0.4**
KOZ	**Kozyrevsk**	**2.56**	**315**	S	**Sn**	**03 07 44.4**	**+0.8**
SRKR	**Sorokina**	**2.62**	**336**	*e*P	**Pn**	**03 07 14.0**	**-0.4**
SRKR				S	**Sn**	**03 07 44.0**	**-0.9**
AVH	**Avacha**	**2.78**	**250**	*e*P	**Pn**	**03 07 17.1**	**+0.5**
AVH				*e*S	**Sn**	**03 07 49.5**	**+0.7**
SRDR	**Sredinnyy**	**2.81**	**318**	*e*P	**Pn**	**03 07 16.9**	**-0.1**
SRDR				S	**Sn**	**03 07 49.9**	**+0.4**
PET	**Petropavlovsk**	**2.93**	**246**	*e*Pn	**Pn**	**03 07 16.3**	**-2.4**
PET				*e*Sn	**Sn**	**03 07 49.8**	**-2.7**
PET	**Petropavlovsk**	**2.93**	**246**	*e*PN	**Pn**	**03 07 19.5**	**+0.8**
PET				*e*S	**Sn**	**03 07 52.5**	**0.0**
PET				pmax	pmax		
	comp=Z,16nm,0.3s						
PET				smax			
	comp=N,108nm,0.6s						
PET				smax			
	comp=E,143nm,0.4s						
PET	**Petropavlovsk**	**2.93**	**246**	*e*P	**Pn**	**03 07 19.4**	**+0.7**
PET				*e*S	**Sn**	**03 07 52.4**	**-0.1**
GNL	**Ganaly**	**3.10**	**261**	*e*P	**Pn**	**03 07 22.1**	**+1.1**
GNL				S	**Sn**	**03 07 58.3**	**+1.6**
RUS	**Russkaya**	**3.31**	**238**	*e*P	**Pn**	**03 07 23.9**	**0.0**
RUS				*e*S	**Sn**	**03 08 01.8**	**-0.2**
GRL	**Gorelyy**	**3.47**	**242**	*e*P	**Pn**	**03 07 26.7**	**+0.6**
GRL				S	**Sn**	**03 08 06.2**	**+0.4**
MIPR	**Malaya Ipel'ka**	**4.30**	**245**	P	**Pn**	**03 07 38.8**	**+1.3**
SKR	**Severo-Kuril's**	**5.58**	**233**	*e*PN	**Pn**	**03 08 04.0**	**+8.9**
ALID	**Alaid**	**5.73**	**236**	P	**Pn**	**03 07 58.5**	**+1.4**
BILL	**Bilibino**	**13.89**	**5**	P	**Pn**	**03 09 49.8**	**+1.3**
BILL	**Bilibino**	**13.89**	**5**	⇓*e*P	**Pn**	**03 09 47.4**	**-1.1**
BILL				*e*S	**Sn**	**03 12 21.8**	**+0.9**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ERM	**Erimo**	**18.02**	**235**	*e*P	**Pn**	**03 10 38.8**	**-2.7**
	comp=Z,16nm,0.9s						
ERM	**Erimo**	**18.02**	**235**	*e*P	**Pn**	**03 10 38.8**	**-2.7**
ERM				pmax	pmax		
	comp=Z,17nm,0.9s						
TIXI	**Tiksi**	**22.79**	**333**	P	**P**	**03 11 31.7**	**-1.1**
MDJ	**Mudanjiang**	**23.62**	**260**	P	**P**	**03 11 39.3**	**-2.0**
MDJ				AMB	AMB		
	comp=Z,22nm,3.4s						
INK	**Inuvik**	**31.83**	**39**	*e*

CRUV				eS		Sn	03 27 39.0	-0.7
ITEV	**Isla Los Testi**	**0.98**	**314**	∥eP		**Pn**	**03 27 29.2**	**+0.5**
ITEV				eS		Sn	03 27 42.9	-0.3
TRN	**Trinidad (W)**	**1.00**	**91**	eP		**Pn**	**03 27 36.3**	**+7.4**
TRN				eS		Sn	03 27 43.1	-0.4
PCRV	**Puerto La Cruz**	**2.24**	**257**	eP		**Pn**	**03 27 44.8**	**+0.1**
RIOV	**Rio Grande**	**2.65**	**167**	eP		**Pn**	**03 27 50.9**	**+0.7**
PRGV	**PARIAGUAN**	**2.90**	**229**	eP		**Pn**	**03 27 53.3**	**-0.2**
BIRV	**Birongo**	**3.79**	**267**	eP		**Pn**	**03 28 05.6**	**+0.1**
LUEV	**Luepa**	**4.89**	**169**	eP		**Pn**	**03 28 19.7**	**-0.9**
CAOV	**Caicara del Or**	**5.09**	**230**	eP		**Pn**	**03 28 23.0**	**-0.3**
BAUV	**El Baul**	**5.80**	**253**	eP		**Pn**	**03 28 32.4**	**-0.5**

NIED ***23*** *03:27:00, 25.30N×141.60E, h11km, Mw4.3 Best double couple: M0 3.41000×10^15 NP1:φ=27.00000°, δ=21.00000°, λ=-120.00000°. NP2:φ=239.00000°, δ=72.00000°, λ=-79.00000°.*

IDC ***23*** *03:27:09.6±0.7, 25.52N×142.78E, h0km, mb4.1/11, mb1 4.2/13, mb1mx4.1/20, mbtmp4.0/13, ML3.5/1, MS3.4/6, Ms1 3.4/6, ms1mx3.2/32, Error ellipse: s-maj=26.6km s-min=14.2km az=82.0*

MOS ***23*** *03:27:13.1±1.6, 25.57N×142.81E, h33km, mb4.4/11, Error ellipse: s-maj=23.7km s-min=10.0km az=107.4*

ISCJB ***23*** *03:27:14.1±1.6, 25.51N±0.06×142.8E±0.01, h44km±13km, mb4.2/23, MS3.7/2, Error ellipse: s-maj=16.2km s-min=10.5km az=170.0*

NEIC ***23*** *03:27:16.8±1.8, 25.58N×142.69E, h52km±16km, mb4.3/9, Error ellipse: s-maj=15.3km s-min=7.8km az=92.0*

BJI ***23*** *03:27:16.7, 25.60N×142.70E, h51km, mB4.6, mb4.2, Ms3.9, Msz3.7*

ISC 23 03:27:17.1±1.5, 2557N±0.07×1427E±0.1, h54km±12km, n55, σ1°01/52, mb4.2/23, MS3.7/2, 2C, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.59**	**343**	Pn	**Pn**	**03 27 41.4**	**-1.4**
	190nm,0.3s,baz=287,slow=20,SNR=100						
CBIJ				Sn	**Sn**	**03 28 03.5**	**+1.2**
	209nm,0.3s,baz=295,slow=24,SNR=14						
JHJ	**Hachijo jima 2**	**7.94**	**342**	LR	LR	03 31 57.0	
	comp=Z,210nm,19.2s,baz=31,slow=36						
MJAR	**Matsushiro Arr**	**11.59**	**342**	Pn	**Pn**	**03 29 59.0**	**-0.7**
	0.3nm,0.3s,baz=128,slow=16,SNR=2.9						
JNU	**Nakatsue**	**12.75**	**309**	LR	LR	03 34 45.6	
	comp=Z,172nm,18.3s,baz=107,slow=36						
JOW	**Kunigami**	**13.01**	**279**	LR	LR	03 34 58.4	
	comp=Z,174nm,18.2s,baz=154,slow=36						
KSRS	**Korea Array**	**17.27**	**317**	P	**Pn**	**03 31 14.4**	**0.0**
	baz=154,slow=10,SNR=2.6						
KSRS				LR	LR	03 37 38.5	
	comp=Z,162nm,19.4s,baz=163,slow=36						
ASAJ	**Asahikawa**	**18.50**	**360**	LR	LR	03 38 51.2	
	comp=Z,64nm,20.5s,baz=19,slow=38						
NJ2	**Nanjing**	**21.84**	**293**	eP	**P**	**03 32 07.1**	**+2.0**
NJ2				AP		03 32 16.9	
NJ2				XP	sP	03 32 20.3	-3.8
NJ2				PP		03 32 34.8	
NJ2				S	**S**	**03 36 01.5**	**-1.9**
NJ2				XS	sS	03 36 17.5	-6.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,120nm,5.0s						
NJ2				LR	LR		
	comp=N,520nm,20.0s,MS4.0						
NJ2				LR	LR		
	comp=E,250nm,19.3s,MS4.0						
NJ2				LR	LR		
	comp=Z,180nm,14.7s,MS3.6						
KLR	**Kul'dur**	**25.11**	**343**	eP	**P**	**03 32 34.8**	**-1.9**
ULN	**Ulaanbaatar**	**35.75**	**318**	eP	**P**	**03 34 11.9**	**+1.3**
	comp=Z,1.3nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**35.75**	**318**	eP	**P**	**03 34 11.9**	**+1.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
SONM	**Songino Array**	**36.13**	**317**	P	**P**	**03 34 13.5**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.7,baz=110,slow=6.3,SNR=2.7						
SEY	**Seymchan**	**37.91**	**7**	P	**P**	**03 34 28.0**	**-0.8**
BOD	**Bodaibo**	**38.13**	**335**	eP	**P**	**03 34 25.4**	**-5.3**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.0						
ZAK	**Zakamensk**	**39.06**	**320**	eP	**P**	**03 34 42.2**	**+3.6**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.4						
BILL	**Bilibino**	**44.84**	**12**	P	**P**	**03 35 26.8**	**+1.3**
WB2	**Warramunga Arr**	**45.96**	**191**	eP	**P**	**03 35 34.9**	**+0.1**
WRA	**Warramunga Arr**	**45.96**	**191**	P	**P**	**03 35 34.7**	**-0.2**
WRA	**Warramunga Arr**	**45.96**	**191**	P	**P**	**03 35 34.8**	**-0.1**
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**45.96**	**191**	P	**P**	**03 35 34.8**	**0.0**
	comp=Z,5.9nm,0.9s,mb4.5,baz=8.7,slow=8.3,SNR=36						
FITZ	**Fitzroy Crossi**	**46.47**	**203**	eP	**P**	**03 35 39.4**	**+0.5**
	comp=Z,9.6nm,0.8s,mb4.8						
ASAR	**Alice Springs**	**49.68**	**191**	P	**P**	**03 36 03.6**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.9,baz=16,slow=11,SNR=15						
MKAR	**Makanchi Array**	**51.80**	**311∥**	eP	**P**	**03 36 24.6**	**+5.2**
MKAR	**Makanchi Array**	**51.80**	**311**	P	**P**	**03 36 20.0**	**+0.6**
	comp=Z,0.3nm,0.3s,mb3.7,baz=86,slow=11,SNR=3.8						
MKAR				LR	LR	03 58 36.6	
	comp=Z,48nm,18.2s,MS3.6,baz=242,slow=36						
KURK	**Kurchatov**	**54.38**	**315**	eP	**P**	**03 36 39.8**	**+1.4**
	comp=Z,2.9nm,0.6s,mb4.4						
KURK	**Kurchatov**	**54.38**	**315**	eP	**P**	**03 36 39.8**	**+1.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**56.67**	**306**	eP	**P**	**03 36 58.9**	**+4.0**
	comp=Z,1.5nm,0.7s,mb4.1						
TKM2	**Tokmak 2**	**56.67**	**306**	eP	**P**	**03 36 58.9**	**+4.0**
TKM2				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**57.13**	**181**	eP	**P**	**03 36 58.4**	**+0.3**
	comp=Z,2.9nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**57.13**	**181**	P	**P**	**03 36 56.5**	**-1.6**
	comp=Z,3.1nm,0.7s,mb4.5,baz=344,slow=8.5,SNR=6.6						
FORT	**Forrest**	**57.75**	**195**	eP	**P**	**03 37 02.3**	**-0.2**
	comp=Z,18nm,0.6s,mb5.3						
BRVK	**Borovoye**	**59.54**	**318**	eP	**P**	**03 37 13.6**	**-1.2**
	comp=Z,2.3nm,0.6s,mb4.4						
BRVK	**Borovoye**	**59.54**	**318**	eP	**P**	**03 37 13.6**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
INK	**Inuvik**	**64.23**	**24**	eP	**P**	**03 37 46.2**	**+0.2**
INK	**Inuvik**	**64.23**	**24**	P	**P**	**03 37 46.1**	**+0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**64.23**	**24**	P	**P**	**03 37 46.0**	**+0.1**
	comp=Z,1.0nm,0.8s,mb3.9,baz=214,slow=9.8,SNR=4.8						
ARU	**Arti**	**65.91**	**323**	eP	**P**	**03 37 56.4**	**-0.7**
ARU				S	S	03 46 39.6	-0.5
ARU				SS	SS	03 50 51.9	-3.4
YKA	**Yellowknife Ar**	**73.27**	**28**	P	**P**	**03 38 42.5**	**+0.2**
YKA	**Yellowknife Ar**	**73.27**	**28**	P	**P**	**03 38 42.0**	**-0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**73.27**	**28**	P	**P**	**03 38 42.0**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=293,slow=6.1,SNR=16						
JOF	**Joensuu**	**76.65**	**334**	ep	**P**	**03 39 01.1**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.3						
KAF	**Kangasniemi**	**79.04**	**335**	ep	**P**	**03 39 14.0**	**-1.1**
	comp=Z,1.6nm,0.5s,mb4.2,baz=54,slow=5.0						
KAF	**Kangasniemi**	**79.04**	**335**	eP	**P**	**03 39 14.0**	**-1.1**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
FINES	**FINESS Array B**	**79.51**	**334**	P	**P**	**03 39 18.0**	**+0.3**
FINES	**FINESS Array B**	**79.51**	**334**	P	**P**	**03 39 18.0**	**+0.3**
	comp=Z,2.1nm,0.4s,mb4.4,baz=68,slow=4.8,SNR=21						
NVAR	**Mina Array Bea**	**81.10**	**52**	P	**P**	**03 39 27.7**	**+1.0**
	comp=Z,1.0nm,0.8s,mb3.8,baz=269,slow=4.5						
FFC	**Flin Flon**	**82.79**	**32**	eP	**P**	**03 39 35.7**	**+0.5**
	comp=Z,3.3nm,1.0s,mb4.3						
FFC	**Flin Flon**	**82.79**	**32**	eP	**P**	**03 39 35.7**	**+0.4**
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
NB2	**NORSAR Subarra**	**85.19**	**339**	P	**P**	**03 39 46.8**	**-0.6**
	comp=Z,1.5nm,0.7s,mb4.2,baz=44,slow=5.1						
NB2	**NORSAR Subarra**	**85.19**	**339**	P	**P**	**03 39 46.8**	**-0.6**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
NOA	**NORSAR Array B**	**85.19**	**339**	P	**P**	**03 39 46.6**	**-0.7**
	comp=Z,1.0nm,0.5s,mb4.2,baz=45,slow=5.0,SNR=5.2						
ANMO	**Albuquerque**	**91.10**	**50**	eP	**P**	**03 40 15.0**	**-1.1**
ANMO	**Albuquerque**	**91.10**	**50∥**	eP	**P**	**03 40 17.8**	**+1.7**
ANMO	**Albuquerque**	**91.10**	**50**	P	**P**	**03 40 16.8**	**+0.6**
	comp=Z,0.4nm,0.2s,mb4.3,baz=264,slow=9.2,SNR=4.0						
LPAZ	**La Paz**	**149.83**	**78**	PKPbc	PKPbc	03 47 03.1	+1.3
	comp=Z,1.3nm,0.6s,baz=352,slow=4.6,SNR=8.8						

IDC 23 03:43:40.9±3.3, 1680S×17466W, h0km, mb4.3/3, mb1 4.5/3, mb1mx4.0/12, mbtmp4.3/3, Error ellipse: s-maj=160.9km s-min=39.9km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.29**	**241**	P	P	03 51 36.8	+0.3
	3.0nm,0.7s,baz=102,slow=9.0,SNR=5.4						
WRA	**Warramunga Arr**	**48.36**	**258**	P	P	03 52 24.1	-0.7
	0.9nm,0.8s,baz=95,slow=7.1,SNR=9.3						
ASAR	**Alice Springs**	**48.53**	**253**	P	P	03 52 26.6	+0.5
	6.0nm,0.8s,baz=84,slow=8.6,SNR=43						
ASAR				PcP	PcP	03 53 50.9	-1.3
	0.5nm,0.5s,baz=95,slow=4.0,SNR=4.2						
BRTR	**Keskin Array B**	**146.44**	**319**	PKPbc	PKPbc	04 03 24.4	+0.2
	0.6nm,0.5s,baz=137,slow=4.5,SNR=5.2						
GERES	**GERESS Array B**	**147.32**	**350**	PKPbc	PKPbc	04 03 25.7	-0.7
	0.5nm,0.6s,baz=28,slow=4.7,SNR=5.3						

IDC ***23*** *03:49:02.7±1.5, 48.92N×128.87W, h0km, mb3.8/2, mb1 4.1/8, mb1mx3.8/22, mbtmp3.9/8, ML3.7/5, MS3.7/8, Ms1 3.7/8, ms1mx3.3/28, Error ellipse: s-maj=25.9km s-min=10.6km az=62.0*

BJI ***23*** *03:49:02.3, 49.00N×128.80W, h10km, mB4.9, mb4.8, Ms4.5, Msz4.3*

ISCJB ***23*** *03:49:03.7±1.3, 49.07N±0.003×128.73W±0.005, h7km±9km, mb4.5/24, MS4.0/6, Error ellipse: s-maj=5.7km s-min=4.2km az=161.7*

PGC ***23*** *03:49:05.3±0.5, 48.97N×128.84W, h10km, ML3.4/10, Mw4.0, Mw4.6, 214km Wsw of Gold R., Bc Vancouver Island Region*

NEIC ***23*** *03:49:05.3, 48.97N×128.84W, h10km, mb4.3/27, MW4.6(PGC), After PGC.*

ISC 23 03:49:07.0±1.5, 4913N±0.003×12870W±0.005, h16km±10km, n141, σ1°13/137, mb4.5/24, MS4.0/6, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPBC	**Brooks Peninsu**	**1.19**	**30**	Trac			
BPBC	**Brooks Peninsu**	**1.19**	**30**	Pn	**Pn**	**03 49 28.5**	**-0.6**
BPBC				Sn	**Sn**	**03 49 45.1**	**+0.2**
EDB	**Eliza Dome**	**1.27**	**53**	Trac			
EDB	**Eliza Dome**	**1.27**	**53**	Pn	**Pn**	**03 49 29.5**	**-0.6**
EDB				Sn	**Sn**	**03 49 46.1**	**-0.7**
ETB	**Estevan Point**	**1.44**	**79**	Trac			
ETB	**Estevan Point**	**1.44**	**79**	Pn	**Pn**	**03 49 31.3**	**-1.0**
HOLB	**Holberg**	**1.56**	**13**	Trac			
HOLB	**Holberg**	**1.56**	**13**	Pn	**Pn**	**03 49 33.2**	**-0.9**
HOLB				Sn	**Sn**	**03 49 54.9**	**+1.0**
MAYB	**Maynard**	**1.61**	**37**	Trac			
MAYB	**Maynard**	**1.61**	**37**	Pn	**Pn**	**03 49 34.7**	**-0.1**
MAYB				Sn	**Sn**	**03 49 55.0**	**-0.3**
WOSB	**Woss**	**1.73**	**52**	Trac			
WOSB	**Woss**	**1.73**	**52**	Pn	**Pn**	**03 49 36.6**	**+0.3**
PHC	**Port Hardy**	**1.78**	**27**	Trac			
PHC	**Port Hardy**	**1.78**	**27**	Pn	**Pn**	**03 49 37.0**	**-0.1**
PHC				Sn	**Sn**	**03 50 00.6**	**+1.2**
GDR	**Gold River**	**1.86**	**68**	Trac			
GDR	**Gold River**	**1.86**	**68**	Pn	**Pn**	**03 49 37.4**	**-0.8**
GDR				Sn	**Sn**	**03 50 01.1**	**-0.2**
BTB	**Buttle Lake**	**2.11**	**79**	Trac			
BTB	**Buttle Lake**	**2.11**	**79**	Pn	**Pn**	**03 49 40.8**	**-0.8**
OZB	**Mount Ozzard**	**2.11**	**93**	Trac			
OZB	**Mount Ozzard**	**2.11**	**93**	Pn	**Pn**	**03 49 39.2**	**-2.5**
OZB				Sn	**Sn**	**03 50 06.3**	**-1.3**
BBB	**Bella Bella**	**3.08**	**7**	Pn	**Pn**	**03 49 55.0**	**-0.1**
	250nm,0.3s,baz=210,slow=6.5,SNR=1633						
BBB				Sn	**Sn**	**03 50 33.2**	**+1.7**
	112nm,0.3s,baz=88,slow=18,SNR=17						
BBB				LR	LR	03 51 21.9	
	comp=Z,519nm,21.5s,baz=307,slow=42						
PGC	**Sidney**	**3.49**	**96**	ePn	**Pn**	**03 49 58.3**	**-2.3**
OSD	**Olympics--Snow**	**3.57**	**110**	P	**Pn**	**03 50 00.3**	**-1.4**
NLWA	**Neilton Lookou**	**3.66**	**116**	ePn	**Pn**	**03 50 00.1**	**-2.9**
HDW	**Hoodsport**	**4.04**	**109**	P	**Pn**	**03 50 07.5**	**-0.6**
VDB	**Vedder Mountai**	**4.33**	**89**	P	**Pn**	**03 50 11.3**	**-0.9**
CMW	**Cultus Mountai**	**4.41**	**97**	P	**Pn**	**03 50 11.7**	**-1.5**
MBW	**Mount Baker**	**4.49**	**92**	P	**Pn**	**03 50 13.8**	**-0.5**
JCW	**Jim Creek**	**4.58**	**99**	P	**Pn**	**03 50 14.3**	**-1.3**
FMW	**Mount Fremont**	**5.20**	**112**	P	**Pn**	**03 50 22.7**	**-1.4**
RCM	**Mount Rainier-**	**5.21**	**114**	P	**Pn**	**03 50 23.9**	**-0.3**
WRW	**Wenatchee Ridg**	**5.35**	**101**	P	**Pn**	**03 50 25.9**	**-0.3**
TBM	**Table Mountain**	**5.76**	**107**	P	**Pn**	**03 50 31.7**	**-0.1**
EBG	**Ellensburg**	**5.89**	**99**	P	**Pn**	**03 50 33.6**	**+0.1**
HAWA	**Hanford**	**6.75**	**110**	ePn	**Pn**	**03 50 45.0**	**-0.5**
NEW	**Newport**	**7.71**	**92**	ePn	**Pn**	**03 50 57.9**	**-0.6**
NEW	**Newport**	**7.71**	**92**	Pn	**Pn**	**03 50 57.1**	**-1.4**
	0.9nm,0.3s,baz=280,slow=11,SNR=12						
NEW				LR	LR	03 54 06.1	
	comp=Z,718nm,19.7s,baz=275,slow=39						
YBH	**Yreka Blue Hor**	**8.51**	**148**	ePn	**Pn**	**03 51 09.9**	**+0.4**
BMO	**Blue Mountains**	**8.88**	**115**	ePn	**Pn**	**03 51 13.9**	**-0.6**
MOD	**Modoc**	**9.32**	**138**	ePn	**Pn**	**03 51 20.5**	**-0.1**
BSMT	**Bassoo Peak**	**9.33**	**93**	ePn	**Pn**	**03 51 20.8**	**+0.1**
DLBC	**Dease Lake**	**9.36**	**356**	Pn	**Pn**	**03 51 23.1**	**+2.0**
DLBC				ePn	**Pn**	**03 51 26.3**	**+5.2**
DLBC	**Dease Lake**	**9.36**	**356**	Pn	**Pn**	**03 51 23.1**	**+2.0**
	baz=187,slow=11						
WDC	**Whiskeytown Da**	**9.60**	**151**	ePn	**Pn**	**03 51 24.0**	**-0.4**
	12nm,1.0s						
WVOR	**Wild Horse Val**	**9.70**	**130**	ePn	**Pn**	**03 51 26.0**	**+0.1**
	10nm,1.0s						
WALA	**Waterton Lakes**	**9.70**	**85**	ePn	**Pn**	**03 51 24.9**	**-0.9**
MSO	**Missoula**	**10.16**	**98**	ePn	**Pn**	**03 51 32.1**	**0.0**
EDM	**Edmonton**	**10.47**	**61**	ePn	**Pn**	**03 51 37.1**	**+0.8**
CHMT	**Chamberlain Mo**	**10.58**	**96**	ePn	**Pn**	**03 51 36.4**	**-1.5**
OHCM	**Honcut**	**11.07**	**150**	ePn	**Pn**	**03 51 43.5**	**-1.1**
HLID	**Hailey**	**11.33**	**114**	ePn	**Pn**	**03 51 47.9**	**-0.2**
PAHR	**Pah Rah Range**	**11.52**	**141**	ePn	**Pn**	**03 51 51.3**	**+0.5**
DLMT	**Dillon**	**11.57**	**103**	ePn	**Pn**	**03 51 50.8**	**-0.6**
BOZ	**Bozeman (W)**	**12.08**	**100**	ePn	**Pn**	**03 51 57.7**	**-0.5**
QLMT	**Earthquake Lak**	**12.54**	**104**	ePn	**Pn**	**03 52 06.1**	**+1.3**
EGMT	**Eagleton**	**12.60**	**88**	ePn	**Pn**	**03 52 05.6**	**+0.2**
YMR	**Madison River**	**12.91**	**104**	ePn	**Pn**	**03 52 12.3**	**+2.5**
	30nm,0.9s						
YMR				e		03 52 23.2	
NVAR	**Mina Array Bea**	**13.05**	**141**	Pn	**Pn**	**03 52 11.1**	**-0.6**
	0.1nm,0.3s,baz=322,slow=9.9,SNR=13						
YFT	**Old Faithful**	**13.10**	**104**	ePn	**Pn**	**03 52 18.0**	**+5.7**
YFT				e		03 52 26.1	
DCID1	**Drake Creek**	**13.29**	**108**	ePn	**Pn**	**03 52 28.1**	**+13**
IMW	**Indian Meadow**	**13.29**	**106**	ePn	**Pn**	**03 52 16.1**	**+1.2**
IMW				e		03 52 27.5	
GCMT	**Greycliff**	**13.30**	**97**	ePn	**Pn**	**03 52 16.3**	**+1.3**
GCMT				e		03 52 27.6	
LKWY	**Lake**	**13.32**	**103**	ePn	**Pn**	**03 52 21.4**	**+6.0**
FLWY	**Flagg Ranch**	**13.35**	**105**	ePn	**Pn**	**03 52 16.6**	**+0.8**
FLWY				e		03 52 28.5	
HVU	**Hansel Valley**	**13.36**	**117**	ePn	**Pn**	**03 52 19.2**	**+3.4**
MOOW	**Moose Ponds**	**13.49**	**107**	ePn	**Pn**	**03 52 20.5**	**+2.9**
MOOW				e		03 52 29.6	
TPAW	**Teton Pass**	**13.49**	**108**	ePn	**Pn**	**03 52 19.2**	**+1.6**
TPAW				e		03 52 29.9	
REDW	**Red Top Meadow**	**13.62**	**108**	ePn	**Pn**	**03 52 24.1**	**+4.7**
REDW				e		03 52 31.4	
SNOW	**Snow King Moun**	**13.62**	**108**	ePn	**Pn**	**03 52 27.2**	**+7.7**
LOHW	**Long Hollow**	**13.64**	**107**	ePn	**Pn**	**03 52 22.8**	**+3.0**
LOHW				e		03 52 31.1	
BGU	**Big Grassy Mou**	**13.76**	**121**	ePn	**Pn**	**03 52 22.6**	**+1.2**
AHID	**Auburn Hatcher**	**13.78**	**111**	ePn	**Pn**	**03 52 32.7**	**+11**
RLMT	**Red Lodge**	**13.81**	**100**	ePn	**Pn**	**03 52 24.8**	**+2.8**
RLMT				e		03 52 33.8	
SPUT	**South Promonto**	**13.85**	**118**	ePn	**Pn**	**03 52 25.1**	**+2.6**
SPUT				e		03 52 32.2	
HWUT	**Hardware Ranch**	**14.18**	**116**	ePn	**Pn**	**03 52 27.6**	**+0.6**
	44nm,2.0s						
DUG	**Dugway**	**14.38**	**122**	ePn	**Pn**	**03 52 30.5**	**+0.7**
BW06	**Boulder Array**	**14.74**	**108**	ePn	**Pn**	**03 52 36.6**	**+1.9**
PDAR	**Pinedale Array**	**14.74**	**108**	Pn	**Pn**	**03 52 35.6**	**+1.0**
PDAR				LR	LR	03 58 33.0	
	comp=Z,291nm,19.2s,baz=55,slow=39						
JLU	**Jordanelle**	**14.88**	**118**	eP	**Pn**	**03 52 43.1**	**+6.5**
DAU	**Daniels Canyon**	**15.12**	**119**	eP	**Pn**	**03 52 46.6**	**+6.8**
TPNV	**Topopah Spring**	**15.17**	**139**	eP	**Pn**	**03 52 43.0**	**+2.5**
	26nm,1.5s						
LAO	**LASA Array**	**15.26**	**91**	eP	**Pn**	**03 52 41.8**	**+0.2**
	36nm,1.3s						
YKA	**Yellowknife Ar**	**15.51**	**25**	Pn	**Pn**	**03 52 44.0**	**-0.7**
YKA	**Yellowknife Ar**	**15.51**	**25**	Pn	**Pn**	**03 52 44.0**	**-0.7**
	0.3nm,0.3s,baz=216,slow=12,SNR=18						
YKW3	**Yellowknife Ar**	**15.56**	**25**	ePn	**Pn**	**03 52 45.9**	**+0.6**
ARUT	**Antelope Range**	**15.81**	**130**	ePn	**Pn**	**03 52 47.7**	**-1.2**
MSU	**Marysvale**	**15.92**	**126**	eP	**Pn**	**03 52 55.1**	**+4.8**
DGMT	**Dagmar**	**16.14**	**83**	eP	**Pn**	**03 52 52.9**	**-0.2**
	9.1nm,0.6s						
SRU	**San Rafael**	**16.41**	**121**	ePn	**Pn**	**03 52 58.6**	**+2.1**
RWWY	**Rawlins**	**16.79**	**108**	ePn	**Pn**	**03 53 03.9**	**+2.6**
FFC	**Flin Flon**	**17.34**	**61**	eP	**Pn**	**03 53 06.2**	**-2.0**
	88nm,0.8s						
RSSD	**Black Hills**	**17.63**	**97**	eP	**Pn**	**03 53 13.3**	**+1.5**
	14nm,0.8s						
PV10	**Paradox Valley**	**17.75**	**120**	eP	**Pn**	**03 53 14.0**	**+0.6**
PHWY	**Pilot Hill**	**18.10**	**107**	eP	**Pn**	**03 53 16.9**	**-0.7**
PV01	**Paradox Valley**	**18.19**	**120**	eP	**Pn**	**03 53 18.8**	**+0.1**
SMCO	**Snowmass**	**18.43**	**115**	ePn	**Pn**	**03 53 17.7**	**-4.0**
COLA	**College**	**18.78**	**334**	eP	**Pn**	**03 53 26.6**	**+0.8**
	23nm,1.4s						
ISCO	**Idaho Springs**	**18.87**	**111**	eP	**Pn**	**03 53 27.1**	**+0.1**
	13nm,1.3s						
MVCO	**Mesa Verde**	**18.88**	**122**	eP	**Pn**	**03 53 25.4**	**-1.7**
	19nm,0.9s						
INK	**Inuvik**	**19.39**	**355**	P	**Pn**	**03 53 31.8**	**-1.2**
INK				LR	LR	04 01 20.0	
INK	**Inuvik**	**19.39**	**355**	P	**Pn**	**03 53 31.8**	**-1.2**
	0.1nm,0.3s,baz=160,slow=9.4,SNR=11						
INK				LR	LR	04 01 20.0	
	comp=Z,341nm,18.1s,baz=80,slow=38						
SDCO	**Great Sand Dun**	**20.24**	**116**	eP	**P**	**03 53 41.7**	**+0.3**
	6.3nm,1.1s						
TTA	**Tatalina**	**20.37**	**323**	eP	**P**	**03 53 43.7**	**+1.1**
	6.0nm,0.9s						
ULM	**Lac du Bonnet**	**21.17**	**74**	P	**P**	**03 53 50.8**	**-0.6**
	baz=276,slow=12						
IMA2	**Indian Mountai**	**21.37**	**332**	eP	**P**	**03 53 52.6**	**-0.7**
TUC	**Tucson**	**21.51**	**135**	eP	**P**	**03 53 53.5**	**-1.6**
	15nm,1.8s,mb4.1						
AGMN	**Agassiz Refuge**	**21.59**	**80**	eP	**P**	**03 53 56.5**	**+0.6**
	61nm,1.1s,mb4.9						
ANMO	**Albuquerque**	**21.65**	**123**	eP	**P**	**03 53 57.6**	**+1.0**
	8.1nm,1.2s,mb4.0						
ANMO	**Albuquerque**	**21.65**	**123**	P	**P**	**03 53 56.0**	**-0.6**
	1.8nm,0.7s,mb3.6,baz=317,slow=13,SNR=4.4						
LAZ	**Ladron**	**21.69**	**125**	eP	**P**	**03 53 57.3**	**+0.3**
LPM	**Los Pinos Moun**	**22.03**	**124**	eP	**P**	**03 54 01.5**	**+0.8**
BNM	**Barren Site**	**22.15**	**124**	eP	**P**	**03 54 02.5**	**+0.5**
FCC	**Fort Churchill**	**22.29**	**51**	eP	**P**	**03 54 04.6**	**+1.3**
	29nm,1.0s,mb4.7						
ECSD	**EROS,Sioux Fal**	**22.65**	**92**	eP	**P**	**03 54 06.5**	**-0.7**
	23nm,1.3s,mb4.4						
CBKS	**Cedar Bluff**	**23.12**	**106**	eP	**P**	**03 54 13.1**	**+0.9**
	46nm,1.6s,mb4.7						
EYMN	**Ely**	**24.50**	**79**	eP	**P**	**03 54 26.5**	**+1.1**
	24nm,0.8s,mb4.8						
MNTX	**Cornudas Mount**	**24.70**	**126**	eP	**P**	**03 54 27.1**	**-0.2**
	2.0nm,1.0s,mb3.6						
KSU1	**Kansas State U**	**24.95**	**102**	eP	**P**	**03 54 31.0**	**+1.5**
	17nm,0.9s,mb4.6						
WMOK	**Wichita Mounta**	**26.29**	**112**	eP	**P**	**03 54 40.5**	**-1.1**
	4.8nm,0.8s,mb4.1						
JFWS	**

MKAR	**Makanchi Array**	**47.02**	**298**	P		**P**		**04 13 52.7**	**-0.8**
	comp=Z,0.2nm,0.2s,mb3.6,baz=61,slow=9.9,SNR=4.8								
YKA	**Yellowknife Ar**	**51.22**	**37**	P		**P**		**04 14 25.7**	**+0.4**
	comp=Z,0.1nm,0.4s,mb3.1,baz=295,slow=7.0,SNR=3.8								
BATI	**Kupang**	**62.21**	**213**	P		**P**		**04 15 42.5**	**-1.3**
	comp=Z,13nm,0.4s,baz=50,slow=7.9,SNR=2.5								
FINES	**FINESS Array B**	**64.29**	**335**	P		**P**		**04 15 57.4**	**+0.3**
FINES				pmax	pmax				
	comp=Z,1.0nm,0.8s								
FINES	**FINESS Array B**	**64.29**	**335**	P		**P**		**04 15 57.4**	**+0.3**
	comp=Z,1.2nm,0.8s,mb4.0,baz=42,slow=7.2,SNR=7.8								
PDAR	**Pinedale Array**	**64.99**	**54**	P		**P**		**04 16 02.9**	**+1.0**
	comp=Z,0.2nm,0.5s,mb3.4,baz=297,slow=4.0,SNR=2.6								
NOA	**NORSAR Array B**	**68.50**	**341**	P		**P**		**04 16 24.2**	**+0.2**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.9s								
NOA	**NORSAR Array B**	**68.50**	**341**	P		**P**		**04 16 24.2**	**+0.2**
	comp=Z,1.2nm,0.9s,mb3.8,baz=43,slow=8.2,SNR=2.5								
AKASG	**Malin Array Be**	**71.77**	**326**	P		**P**		**04 16 44.0**	**-0.2**
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**	**71.77**	**326**	P		**P**		**04 16 44.0**	**-0.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=35,slow=6.1,SNR=3.1								
TXAR	**Lajitas Array**	**77.71**	**60**	P		**P**		**04 17 18.9**	**-0.1**
	comp=Z,0.3nm,0.5s,mb3.4,baz=292,slow=4.2,SNR=5.2								

KRSC 23 04:21:21.0±0.5, 5474N×16272E, h19km±18km, ML3.7,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.60**	**253**	*i* P		Pb	04 21 33.7	+0.8
MKZ				*e*S		Sb	04 21 42.8	+1.8
KBTR	**Krutoberegovo**	**1.47**	**2**	*e*P		Pn	04 21 45.2	-1.3
KBTR				*e*S		Sn	04 22 02.5	-2.7
TUMR	**Tumrok**	**1.58**	**291**	*e*P		Pn	04 21 49.1	+1.2
TUMR				*e*S		Sn	04 22 10.1	+2.3
KMNR	**Kamenistaya**	**1.75**	**307**	*e*P		Pn	04 21 51.3	+1.0
KMNR				*e*S		Sn	04 22 13.5	+1.5
KPT	**Kopyto**	**1.88**	**312**	*e*P		Pn	04 21 53.6	+1.5
KPT				*e*S		Sn	04 22 17.7	+2.4
KLY	**Klyuchi**	**1.97**	**324**	*e*P		Pn	04 21 53.6	+0.4
KLY				*e*S		Sn	04 22 16.8	-0.6
KII	**Karymskiy**	**2.04**	**251**	*e*P		Pn	04 21 55.4	+1.2
KII				*e*S		Sn	04 22 20.9	+1.8
KOZ	**Kozyrevsk**	**2.09**	**310**	S		Sn	04 22 23.2	+2.7
SRKR	**Sorokina**	**2.11**	**336**	P		Pn	04 21 56.3	+1.1
SRKR				S		Sn	04 22 21.5	+0.6
SRDR	**Sredinnyy**	**2.33**	**314**	*e*P		Pn	04 21 59.6	+1.4
SRDR				S		Sn	04 22 27.5	+1.3
NLC	**Nalytchevo**	**2.54**	**233**	*e*P		Pn	04 22 01.5	+0.4
NLC				*e*S		Sn	04 22 31.9	+0.4
AVH	**Avacha**	**2.78**	**239**	*e*P		Pn	04 22 06.3	+1.9
AVH				*e*S		Sn	04 22 39.3	+2.0
PET	**Petropavlovsk**	**2.96**	**236**	P		Pn	04 22 08.0	+1.1
PET				*e*S		Sn	04 22 41.4	-0.4
GNL	**Ganaly**	**2.99**	**251**	*e*P		Pn	04 22 09.6	+2.2
GNL				*e*S		Sn	04 22 45.2	+2.5
RUS	**Russkaya**	**3.41**	**229**	P		Pn	04 22 13.8	+0.7
RUS				*e*S		Sn	04 22 52.9	0.0
GRL	**Gorelyy**	**3.53**	**233**	*e*P		Pn	04 22 17.2	+2.5
MIPR	**Malaya Ipel'ka**	**4.33**	**238**	P		Pn	04 22 27.6	+1.9

*IDC **23** 04:51:50.0±1.2, 3479N×2403E, h0km, mb3.6/3, mb1 3.5/5, mb1mx3.4/18, mbtmp3.5/5, ML3.1/2, Error ellipse: s-maj=30.7km s-min=16.5km az=147.0*
*ISCJB **23** 04:51:50.7±0.9, 3452N±006×2414E±008, h10km, mb3.5/3, Error ellipse: s-maj=9.2km s-min=8.2km az=161.2*
*CSEM **23** 04:51:52.9±0.6, 3460N×2429E, h15km, MD3.5, Error ellipse: s-maj=15.3km s-min=8.2km az=42.0*
*ATH **23** 04:51:53.3, 3465N×2401E, h13km±5km, MD3.5/6*
*NEIC **23** 04:51:53.3, 3465N×2401E, h13km, MD3.5(ATH), After ATH.*

ISC 23 04:51:52.6±0.9, 3462N±006×2411E±007, h10km, n16,
σ1§38/18, mb3.5/3, 1C, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GVD	**Gavdhos**	**0.21**	**355**	*e*PG		**Pg**	**04 51 58.0**	**+0.9**
SIVA	**Sivas**	**0.70**	**56**	P		**Pg**	**04 52 07.5**	**+1.4**
VAM	**Vamos**	**0.78**	**5**	⇑*i*PB		**Pb**	**04 52 06.7**	**-1.6**
VAM				*e*SB		**Sb**	**04 52 19.1**	**+0.1**
IDI	**Anoyia**	**0.92**	**44**	Pn		**Pn**	**04 52 09.7**	**-1.9**
	42nm,0.3s,baz=232,slow=14,SNR=102							
IDI				Sn		**Sn**	**04 52 22.9**	**-2.0**
	85nm,0.3s,baz=146,slow=21,SNR=20							
XRY	**Khrisi**	**1.33**	**79**	*e*PG		**Pg**	**04 52 19.5**	**+1.4**
NPS	**Neapolis**	**1.39**	**62**	*e*PG		**Pg**	**04 52 20.5**	**+1.2**
KYTH	**Kithira**	**1.87**	**332**	*e*PN		**Pn**	**04 52 26.5**	**+1.8**
VLI	**Veliai**	**2.30**	**336**	*e*PN		**Pn**	**04 52 32.5**	**+2.0**
APE	**Apeiranthos**	**2.70**	**25**	P		**Pn**	**04 52 36.0**	**0.0**
BRTR	**Keskin Array B**	**9.15**	**53**	Pn		**Pn**	**04 54 04.7**	**+0.1**
	0.1nm,0.3s,baz=249,slow=12,SNR=3.2							
EIL	**Elat**	**10.43**	**115**	Pn		**Pn**	**04 54 22.7**	**+0.4**
EIL				Sn		Sx	04 56 09.7	
EIL	**Elat**	**10.43**	**115**	Pn		**Pn**	**04 54 22.7**	**+0.4**
	0.4nm,0.3s,baz=27,slow=14,SNR=5.1							
EIL				Sn		Sx	04 56 09.7	
	0.6nm,0.3s,baz=102,slow=20,SNR=3.4							
EIL	**Elat**	**10.43**	**115**	Pn		**Pn**	**04 54 22.7**	**+0.5**
EIL				Sn		Sx	04 56 09.6	
TORD	**Torodi Ar. Bea**	**29.48**	**229**	P		**P**	**04 57 56.5**	**-0.4**
	0.7nm,0.4s,mb3.7,baz=33,slow=8.6,SNR=29							
MKAR	**Makanchi Array**	**44.79**	**56**	P		**P**	**05 00 04.8**	**-1.6**
	0.5nm,0.5s,mb3.6,baz=290,slow=6.7,SNR=5.2							
YKA	**Yellowknife Ar**	**77.69**	**342**	P		**P**	**05 03 46.6**	**-2.4**
	0.1nm,0.3s,mb3.2,baz=31,slow=5.3,SNR=4.1							

*PRU **23** 05:01:37.1, 4549N×1008E, h0km*
*ISCJB **23** 05:01:37.5±0.2, 45729N±0010×975E±001, h7km±1km, Error ellipse: s-maj=1.7km s-min=1.5km az=161.4*
*SZGRF **23** 05:01:38.5, 4552N×975E, h10km, mb3.6, Northern Italy*
*ROM **23** 05:01:38.9±0.2, 4570N×984E, h9km±2km, Md3.3/41, Ml3.4/24, Error ellipse: s-maj=1.6km s-min=1.5km az=9.0*
*ZUR **23** 05:01:38.4, 4569N×987E, h10km, ML3.6/10*
*GEN **23** 05:01:38.7, 4576N×988E, h13km, ML3.0*
*LDG **23** 05:01:39.3±0.1, 4571N×995E, h10km, Md3.4/2, Ml3.6/28, Error ellipse: s-maj=1.7km s-min=1.5km az=39.0*
*NEIC **23** 05:01:39.0, 4570N×983E, h10km, ML3.7(FUR), ML3.5(ROM), ML3.6(SZGRF), ML3.6(ZUR), ML3.6(LDG), ML3.4(STR), After ROM.*
NEIC Felt [III] at Alzano Lombardo, Bergamo, Palazzolo sull'Oglio and Trescore Balneario. Also felt at Brescia.
*CSEM **23** 05:01:39.9±0.0, 4571N×991E, h12km, ML3.7/33, Error ellipse: s-maj=1.0km s-min=0.7km az=14.0*
*STR **23** 05:01:40.6±0.4, 4567N×957E, h10km, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 23 05:01:38.8±0.2, 4570N±001×980E±001, h11km±1km, n230,
σ1§10/385, 14C-27D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDI	**Monti di Nese**	**0.10**	**325**	Pg		**Pg**	**05 01 42.2**	**+0.8**
MDI				Sg		**Sg**	**05 01 44.9**	**+1.5**
	6μm,0.2s							
SALO	**Salr**	**0.52**	**98**	Pg		**Pg**	**05 01 48.0**	**-0.9**
SALO				Sg		**Sg**	**05 01 56.8**	**+1.1**
	2μm,0.3s							
MUGIO	**Muggio**	**0.57**	**294**	Pg		**Pg**	**05 01 50.1**	**+0.2**
MUGIO				Sg		**Sg**	**05 01 59.8**	**+2.3**
MUGIO	**Muggio**	**0.57**	**294**	⇓*i*Pg		**Pg**	**05 01 49.7**	**-0.2**
	4μm,0.5s							
MAGA	**Magasa**	**0.59**	**82**	Pg		**Pg**	**05 01 49.0**	**-1.2**
MAGA				Sg		**Sg**	**05 01 57.9**	**-0.1**
	11μm,0.3s							
MABI	**Malga Bissina**	**0.62**	**54**	Pg		**Pg**	**05 01 50.0**	**-0.8**
MABI				Sg		**Sg**	**05 01 58.1**	**-0.8**
	410nm,0.3s							
BERNI	**Berninapass**	**0.73**	**12**	⇓*i*Pg		**Pg**	**05 01 53.1**	**+0.1**
	3μm,0.2s							
VAI	**Varese**	**0.74**	**284**	Pg		**Pg**	**05 01 53.4**	**+0.4**
VAI				Sg		**Sg**	**05 02 05.1**	**+2.4**
VDL	**Val di Lei**	**0.82**	**343**	⇓*i*Pg		**Pg**	**05 01 55.1**	**+0.4**
	1μm,0.4s							
TUE	**Stuetta**	**0.84**	**338**	Pg		**Pg**	**05 01 55.5**	**+0.6**
	488nm,0.3s							
BRMO	**Bormio**	**0.88**	**27**	Pg		**Pg**	**05 01 55.3**	**-0.4**
BRMO				Sg		**Sg**	**05 02 07.5**	**+0.3**
	201nm,0.5s							
BOB	**Bobbio (Coli)**	**0.96**	**195**	Pn		**Pn**	**05 01 57.8**	**-0.4**
BOB				Sn		**Sn**	**05 02 14.1**	**+2.2**
	2μm,0.6s							
FUORN	**Ofenpass-Fuorn**	**0.98**	**19**	Pn		**Pn**	**05 01 57.7**	**-0.8**
FUORN				Sn		**Sn**	**05 02 11.7**	**-0.7**
FUORN	**Ofenpass-Fuorn**	**0.98**	**19**	⇓*i*Pg		**Pg**	**05 01 57.3**	**-0.4**
	2μm,0.5s							
SBPO	**S.Benedetto Po**	**1.02**	**129**	Pn		**Pn**	**05 01 58.2**	**-0.9**
SBPO				Sn		**Sn**	**05 02 13.6**	**+0.2**
	2μm,0.2s							
DAVOX	**Davos/Dischmat**	**1.09**	**3**	Pn		**Pn**	**05 01 59.7**	**-0.3**
DAVOX				Sn		**Sn**	**05 02 14.9**	**-0.1**
DAVOX	**Davos/Dischmat**	**1.09**	**3**	⇓*i*Pg		**Pg**	**05 01 59.4**	**-0.3**
	2μm,0.8s							
FUSIO	**Fusio**	**1.09**	**314**	⇑*i*Pg		**Pg**	**05 01 59.7**	**-0.1**
	3μm,0.9s							
NOVE	**Novellara**	**1.11**	**144**	Pn		**Pn**	**05 02 00.3**	**0.0**
NOVE				Sn		**Sn**	**05 02 17.3**	**+1.8**
	4μm,0.5s							
APPI	**Appiano**	**1.27**	**51**	Pn		**Pn**	**05 02 01.6**	**-0.9**
APPI				Sn		**Sn**	**05 02 19.1**	**-0.4**
	1μm,0.6s							
ORO	**Oropa**	**1.27**	**268**	Pn		**Pn**	**05 02 01.8**	**-0.7**
ORO				Sn		**Sn**	**05 02 21.7**	**+2.1**
	539nm,0.3s							
ORX	**Oropa**	**1.27**	**268**	Pn		**Pn**	**05 02 01.8**	**-0.7**
ORX				Sn		**Sn**	**05 02 21.6**	**+2.0**
LLS	**Linth-Limmern**	**1.27**	**335**	⇓*i*Pg		**Pg**	**05 02 03.3**	**0.0**
	2μm,0.4s							
SC2M	**Scurtabr**	**1.30**	**188**	P		**Pn**	**05 02 02.9**	**0.0**
SC2M	**Scurtabr**	**1.30**	**188**	Pn		**Pn**	**05 02 03.7**	**+0.8**
SC2M				S		**Sb**	**05 02 19.0**	**-1.0**
SC2M				Sn		**Sn**	**05 02 21.6**	**+1.2**
	1μm,0.3s							
CODM		**1.30**	**178**	P		**Pn**	**05 02 01.1**	**-1.9**
RAVA	**Ravarino**	**1.33**	**135**	Pn		**Pn**	**05 02 03.8**	**+0.6**
RAVA				Sn		**Sn**	**05 02 23.6**	**+2.7**
	5μm,0.4s							
MMK	**Mattmark**	**1.33**	**286**	Pn		**Pn**	**05 02 04.3**	**+1.0**
MMK				Sn		**Sn**	**05 02 21.9**	**+0.9**
CTI	**Castel Tesino**	**1.34**	**74**	Pn		**Pn**	**05 02 03.4**	**-0.1**
CTI				Sn		**Sn**	**05 02 21.7**	**+0.4**
	650nm,0.3s							
PLONS	**Plons/SG**	**1.38**	**348**	⇑*i*P*P		**Pg**	**05 02 05.5**	**+0.1**
	825nm,0.6s							
VALM		**1.38**	**166**	P		**Pn**	**05 02 03.3**	**-0.7**
VALM				S		**Sb**	**05 02 20.0**	**-2.3**
CGRP	**Cima Grappa**	**1.42**	**82**	⇓*e*Pg		**Pg**	**05 02 03.7**	**-2.3**
CGRP				*e*Sg		**Sg**	**05 02 22.6**	**-1.7**
GENL	**Genova Univers**	**1.42**	**205**	P		**Pn**	**05 02 03.2**	**-1.3**
BACM		**1.43**	**172**	P		**Pn**	**05 02 04.7**	**0.0**
BACM				S		**Sn**	**05 02 21.8**	**-1.7**
PCP	**Pian Castagno**	**1.45**	**218**	P		**Pn**	**05 02 05.0**	**0.0**
PCP	**Pian Castagno**	**1.45**	**218**	Pn		**Pn**	**05 02 05.5**	**+0.5**
PCP				S		**Sn**	**05 02 22.7**	**-1.4**
PCP				Sn		**Sn**	**05 02 24.9**	**+0.8**
	401nm,0.4s							
MONC	**Moncucco Torin**	**1.46**	**245**	Pn		**Pg**	**05 02 07.1**	**+0.4**
GSCL	**Gusciola**	**1.46**	**157**	Pn		**Pn**	**05 02 05.6**	**+0.5**
	76nm,0.4s							
FETA	**Feichten**	**1.48**	**26**	⇓*e*Pg		**Pg**	**05 02 06.3**	**-0.8**
	SNR=41							
FETA				⇓*i*Sg		**Sg**	**05 02 26.5**	**+0.3**
	95nm,0.5s							
MUO	**Muotathal**	**1.50**	**328**	⇓*i*P*		**Pb**	**05 02 07.5**	**+0.8**
	5μm,0.7s							
BNALP	**Bannalp**	**1.51**	**322**	⇓*i*P*		**Pb**	**05 02 07.7**	**+0.9**
	2μm,0.3s							
SARO	**Sassorosso**	**1.57**	**164**	P		**Pn**	**05 02 05.8**	**-0.8**
SARO				S		**Sn**	**05 02 23.9**	**-3.0**
ZCCA	**Zocca**	**1.58**	**148**	Pn		**Pn**	**05 02 08.0**	**+1.2**
	23nm,0.5s							
VLC	**Villacollemand**	**1.59**	**164**	*e*Pn		**Pn**	**05 02 07.4**	**+0.5**
VLC				*e*Pg		**Pg**	**05 02 11.5**	**+2.2**
VLC				*e*Sg		**Sg**	**05 02 31.5**	**+1.6**
VLC	**Villacollemand**	**1.59**	**164**	Pn		**Pn**	**05 02 07.4**	**+0.5**
	252nm,0.8s							
VLC	**Villacollemand**	**1.59**	**164**	*e*Pg		**Pg**	**05 02 11.5**	**+2.2**
DAVA	**Damuels**	**1.59**	**2**	⇓*e*Pg		**Pg**	**05 02 08.8**	**-0.5**
	SNR=87							
DAVA				⇑*i*Sg		**Sg**	**05 02 30.9**	**+0.9**
	377nm,0.5s							
DAVA	**Damuels**	**1.59**	**2**	*e*Pg		**Pg**	**05 02 10.2**	**+0.9**
DAVA				*e*Sg		**Sg**	**05 02 34.8**	**+4.8**
DAVA	**Damuels**	**1.59**	**2**	Pg		**Pg**	**05 02 08.8**	**-0.5**
	87nm,2.0s							
DAVA				Sg		**Sg**	**05 02 30.9**	**+0.9**
	377nm,0.5s							
FAU	**Forcella Aurin**	**1.61**	**70**	⇓*i*Pg		**Pn**	**05 02 07.6**	**+0.4**
MTLO	**Mottello**	**1.62**	**85**	⇑*i*Pn		**Pn**	**05 02 06.8**	**-0.4**
DIX	**Grande Dixence**	**1.71**	**284**	Pn		**Pn**	**05 02 10.0**	**+1.5**
QLNO	**Quiliano**	**1.71**	**217**	Pn		**Pn**	**05 02 09.4**	**+0.8**
	338nm,0.6s							
BDI	**Bagni Di Lucca**	**1.73**	**160**	Pn		**Pn**	**05 02 10.3**	**+1.5**
	435nm,0.8s							
PZZT	**Monte Pizzetto**	**1.74**	**154**	Pn		**Pn**	**05 02 09.6**	**+0.7**
	304nm,0.5s							
FNVD	**Fontana Vidola**	**1.79**	**148**	Pn		**Pn**	**05 02 10.3**	**+0.6**
	332nm,0.4s							
SQTA	**Sankt Quirin**	**1.81**	**32**	*e*Pg		**Pg**	**05 02 12.6**	**-0.9**
	SNR=71							
SQTA				⇑*i*Sg		**Sg**	**05 02 37.4**	**+0.4**
	181nm,0.5s							
SQTA	**Sankt Quirin**	**1.81**	**32**	Pg		**Pg**	**05 02 12.6**	**-0.9**
	71nm,4.0s							
SQTA				Sg		**Sg**	**05 02 37.4**	**+0.4**
	181nm,0.5s							
MAIM		**1.85**	**164**	P		**Pn**	**05 02 09.5**	**-0.9**
MAIM		**1.85**	**164**	Pn		**Pn**	**05 02 10.9**	**+0.5**
	290nm,0.5s							
MAIM				S		**Sn**	**05 02 30.6**	**-3.2**
CSO	**Casso**	**1.86**	**71**	⇓*i*Pn		**Pn**	**05 02 11.0**	**+0.4**
CSO				*i* Sn		**Sn**	**05 02 36.4**	**+2.5**
AFL	**Alpe Faloria**	**1.86**	**62**	⇑*i*Pn		**Pn**	**05 02 11.8**	**+1.3**
AFL				*i* Sn		**Sn**	**05 02 36.6**	**+2.5**
FIN	**Finale Ligure**	**1.86**	**218**	Pn		**Pn**	**05 02 11.3**	**+0.6**
RSP	**Reno Superiore**	**1.87**	**254**	Pn		**Pn**	**05 02 08.6**	**-2.1**
	236nm,0.7s							
CAE	**Caneva**	**1.87**	**79**	⇓*i*Pn		**Pn**	**05 02 10.6**	**-0.2**
CAE				*e*Sn		**Sn**	**05 02 36.9**	**+2.5**
MOTA	**Moosalm**	**1.88**	**28**	*e*Pg		**Pg**	**05 02 13.5**	**-1.4**
	SNR=87							
MOTA				⇓*i*Sg		**Sg**	**05 02 40.1**	**+0.9**
	142nm,0.6s							
MOTA	**Moosalm**	**1.88**	**28**	Pg		**Pg**	**05 02 13.5**	**-1.3**
	87nm,1.0s							
MOTA				Sg		**Sg**	**05 02 40.1**	**+0.9**
	142nm,0.6s							
RETA	**Reutte**	**1.91**	**20**	⇑*e*Pg		**Pg**	**05 02 14.7**	**-0.8**
	SNR=9.9							
MRGE	**Morge**	**1.92**	**273**	Pn		**Pn**	**05 02 13.1**	**+1.7**
	199nm,0.7s							
SEI	**Scarperia**	**1.98**	**145**	Pn		**Pn**	**05 02 13.6**	**+1.3**
	601nm,0.4s							
SEST	**Monte Rota**	**1.98**	**57**	Pn		**Pn**	**05 02 13.1**	**+0.8**
RORO		**2.00**	**218**	P		**Pn**	**05 02 11.9**	**-0.7**
MLNI	**Malnisio**	**2.02**	**76**	⇑*i*Pn		**Pn**	**05 02 12.6**	**-0.1**
MLNI				*i* Sn		**Sn**	**05 02 38.2**	**+0.3**
WTTA	**Wattenberg**	**2.02**	**38**	⇓*e*Pg		**Pg**	**05 02 15.9**	**-1.6**
	SNR=32							
WTTA				⇑*i*Sg		**Sg**	**05 02 43.6**	**-0.1**
	123nm,0.5s							
WATA	**Walderalm**	**2.05**	**36**	⇓*e*Pg		**Pg**	**05 02 15.9**	**-2.2**
	SNR=22							
WATA	**Walderalm**	**2.05**	**36**	Pg		**Pg**	**05 02 15.9**	**-2.2**
	21nm,8.0s							
EMV	**Vieux Emosson**	**2.06**	**281**	Pn		**Pn**	**05 02 16.1**	**+2.8**
CRMI	**Carmignano**	**2.08**	**156**	Pn		**Pn**	**05 02 13.8**	**+0.2**
VMG	**Vicchio**	**2.13**	**144**	Pn		**Pn**	**05 02 14.6**	**+0.2**
	33nm,0.3s							
LPG	**La Plagne**	**2.15**	**266**	*e*P		**Pn**	**05 02 17.7**	**+3.2**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**05 02 42.1**	**+1.0**
	115nm,0.5s							
LPG	**La Plagne**	**2.15**	**266**	*e*Pn		**Pn**	**05 02 14.4**	**-0.1**
LPG				*e*P			05 02 17.7	
LPG				*e*Sn		**Sn**	**05 02 42.1**	**+1.0**
LPG	**La Plagne**	**2.15**	**266**	*e*P		**Pn**	**05 02 17.7**	**+3.2**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**05 02 42.1**	**+1.0**
	58nm,0.5s							
LPL	**La Plagne**	**2.16**	**266**	*e*P		**Pn**	**05 02 17.8**	**+3.1**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**05 02 41.2**	**-0.2**
	80nm,0.4s,SNR=1.0							
LPL	**La Plagne**	**2.16**	**266**	*e*Pn		**Pn**	**05 02 15.1**	**+0.4**
LPL				*e*P			05 02 17.8	
LPL				*e*Sn		**Sn**	**05 02 41.2**	**-0.2**
LPL	**La Plagne**	**2.16**	**266**	*e*P		**Pn**	**05 02 17.8**	**+3.1**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**05 02 41.2**	**-0.2**
	40nm,0.4s,SNR=1.0							
ABTA	**Abfaltersbach**	**2.16**	**60**	⇑*i*Pn		**Pn**	**05 02 15.7**	**+1.0**
ABTA				⇓*e*Pg		**Pg**	**05 02 18.4**	**-1.7**
	SNR=30							
DOI	**San Damiano**	**2.16**	**237**	Pn		**Pn**	**05 02 13.8**	**-0.9**
	151nm,0.5s							
MONE	**Monesi**	**2.17**	**223**	P		**Pn**	**05 02 14.6**	**-0.3**
ENR	**Entracque**	**2.24**	**230**	P		**Pn**	**05 02 15.2**	**-0.6**
IMI	**Imperia**	**2.24**	**218**	Pn		**Pn**	**05 02 16.3**	**+0.5**
PZZ	**Prazzo**	**2.25**	**239**	Pn		**Pn**	**05 02 14.3**	**-1.6**
STV	**Sta Anna Valdi**	**2.28**	**231**	P		**Pn**	**05 02 15.4**	**-0.9**
BNI	**Bardonecchia**	**2.29**	**255**	*e*Pn		**Pn**	**05 02 15.5**	**-1.0**
BNI				*e*Pg		**Pg**	**05 02 19.3**	**-3.4**
BNI				*e*Sg		**Sg**	**05 02 48.5**	**-3.8**
BNI	**Bardonecchia**	**2.29**	**255**	*e*Pn		**Pn**	**05 02 15.5**	**-1.0**
MPRI	**Monte Prat**	**2.29**	**75**	⇓*i*Pn		**Pn**	**05 02 16.6**	**+0.1**
SAOF	**Saorge**	**2.34**	**224**	P		**Pn**	**05 02 17.8**	**+0.7**
MBDF	**Montbardon**	**2.35**	**247**	*e*P		**Pn**	**05 02 20.2**	**+2.9**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**05 02 45.6**	**-0.5**
	SNR=1.0							
MBDF				*e*Sg		**Sg**	**05 02 56.6**	**+2.5**
	77nm,0.4s,SNR=1.0							
MBDF	**Montbardon**	**2.35**	**247**	*e*Pn		**Pn**	**05 02 16.3**	**-1.0**
MBDF				*e*P			05 02 20.2	
MBDF				*e*Sn		**Sn**	**05 02 45.6**	**-0.5**
MBDF				*e*Sg		**Sg**	**05 02 56.6**	**+2.5**
MBDF	**Montbardon**	**2.35**	**247**	*e*P		**Pn**	**05 02 20.2**	**+2.9**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**05 02 45.6**	**-0.5**
	SNR=1.0							
MBDF				*e*Sg		**Sg**	**05 02 56.6**	**+2.5**
	38nm,0.4s,SNR=1.0							
BBS	**Basel-Blauen**	**2.37**	**319**	P		**Pn**	**05 02 18.6**	**+1.0**
ZOU	**Zoufplan**	**2.37**	**68**	⇓*i*Pn		**Pn**	**05 02 18.5**	**+0.8**
NEGI	**Negi**	**2.37**	**220**	P		**Pn**	**05 02 16.0**	**-1.6**
BUA	**Buia**	**2.38**	**76**	⇓*i*Pn		**Pn**	**05 02 17.8**	**0.0**
BUA				*e*Sn		**Sn**	**05 02 46.9**	**0.0**
AUTN	**L'Aution**	**2.39**	**226**	P		**Pn**	**05 02 18.2**	**+0.3**
BAD	**Bernadia**	**2.46**	**76**	⇑*i*Pn		**Pn**	**05 02 18.5**	**-0.4**
CSNT	**Castellina Chi**	**2.47**	**154**	Pn		**Pn**	**05 02 18.4**	**-0.5**
	114nm,0.6s							
GMNA	**Gemona**	**2.47**	**75**	Pn		**Pn**	**05 02 17.9**	**-1.1**
	215nm,0.4s							
TOUF	**Mont Tournerai**	**2.47**	**228**	P		**Pn**	**05 02 18.5**	**-0.5**
PLRO	**Paularo**	**2.48**	**69**	⇓*e*Pn		**Pn**	**05 02 20.2**	**+1.0**
SBF	**Sospel**	**2.49**	**223**	*e*Pg		**Pg**	**05 02 27.0**	**+0.6**
SBF				*e*Sn		**Sn**	**05 02 48.4**	**-1.1**
	110nm,0.3s,SNR=1.0							
SBF	**Sospel**	**2.49**	**223**	*e*Pn		**Pn**	**05 02 19.2**	**0.0**
SBF				*e*Pg		**Pg**	**05 02 27.0**	**+0.6**
SBF				*e*Sn		**Sn**	**05 02 48.4**	**-1.1**
SBF	**Sospel**	**2.49**	**223**	*e*Pg		**Pg**	**05 02 27.0**	**+0.6**
SBF				*e*Sn		**Sn**	**05 02 48.4**	**-1.1**
	55nm,0.3s,SNR=1.0							
FELD	**Feldberg im Sc**	**2.50**	**331**	P		**Pn**	**05 02 19.8**	**+0.3**
FELD				S		**Sn**	**05 02 55.3**	**+5.3**
SPAK	**Spaichingen-Ko**	**2.50**	**344**	P

VNDS	**Vrh nad Dolski**	**3.45**	**81**	*i* Pn	**Pn**	**05 02 32.0**	**-0.4**
SMRF	**Simiane la Rot**	**3.46**	**242**	*e*P	**Pn**	**05 02 35.5**	**+2.9**
SMRF				*e*Sn	**Sn**	**05 03 12.5**	**-1.0**
	19nm,0.4s,SNR=1.0						
SMRF	**Simiane la Rot**	**3.46**	**242**	*e*Pn	**Pn**	**05 02 32.7**	**+0.1**
SMRF				*e*P		05 02 35.5	
SMRF				*e*Sn	**Sn**	**05 03 12.5**	**-1.0**
SMRF	**Simiane la Rot**	**3.46**	**242**	*e*P	**Pn**	**05 02 35.5**	**+2.9**
SMRF				*e*Sn	**Sn**	**05 03 12.5**	**-1.0**
	9.7nm,0.4s,SNR=1.0						
THEF	**They Montfort**	**3.63**	**316**	P	**Pn**	**05 02 35.9**	**+0.9**
VIVF	**Saint-Julien-l**	**3.71**	**259**	*e*Pn	**Pn**	**05 02 36.0**	**0.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**05 03 17.9**	**-1.9**
	11nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.71**	**259**	*e*Pn	**Pn**	**05 02 36.0**	**0.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**05 03 17.9**	**-1.9**
	5.6nm,0.3s,SNR=1.0						
MOA	**Molln**	**3.75**	**53**	*e*Pn	**Pn**	**05 02 36.9**	**+0.3**
NVLJ	**Novalja**	**3.77**	**106**	*e*Pn	**Pn**	**05 02 35.9**	**-0.9**
NVLJ				Sn	**Sn**	**05 03 16.8**	**-4.3**
NVLJ	**Novalja**	**3.77**	**106**	*e*Pn	**Pn**	**05 02 35.8**	**-1.0**
NVLJ				Sn	**Sn**	**05 03 16.8**	**-4.3**
WET	**Wettzell**	**4.04**	**30**	*e*Pn	**Pn**	**05 02 40.6**	**+0.1**
GRFO	**Grafenberg**	**4.11**	**13**	Pn	**Pn**	**05 02 41.0**	**-0.5**
GRFO				*e*Pg	**Pg**	**05 02 57.9**	**+0.4**
GRFO	**Grafenberg**	**4.11**	**13**	Pn	**Pn**	**05 02 41.0**	**-0.5**
GRFO	**Grafenberg**	**4.11**	**13**	*e*Pg	**Pg**	**05 02 57.9**	**+0.4**
SFTF	**Sexfontaines**	**4.11**	**309**	*e*Pn	**Pn**	**05 02 42.2**	**+0.7**
	baz=127						
SFTF				*e*Sn	**Sn**	**05 03 26.4**	**-3.2**
	baz=131						
SFTF				*e*Sg	**Sg**	**05 03 50.4**	**-0.4**
	44nm,0.5s,baz=131						
SFTF	**Sexfontaines**	**4.11**	**309**	*e*Pn	**Pn**	**05 02 42.2**	**+0.7**
SFTF				*e*Sn	**Sn**	**05 03 26.4**	**-3.2**
SFTF				*e*Sg	**Sg**	**05 03 50.4**	**-0.4**
	22nm,0.5s						
GRF	**Grafenberg Arr**	**4.11**	**13**	*e*Sn	**Sn**	**05 03 30.6**	**+1.0**
GEC2	**GERESS Array S**	**4.12**	**39**	*e*Pn	**Pn**	**05 02 41.8**	**+0.1**
GEC2				*e*Sn	**Sn**	**05 03 29.0**	**-0.9**
RFYF	**Reffroy**	**4.16**	**316**	*e*P	**Pn**	**05 02 45.1**	**+2.9**
	baz=128						
RFYF				*e*Sn	**Sn**	**05 03 28.4**	**-2.4**
	baz=132						
RFYF				*e*Sg	**Sg**	**05 03 52.0**	**-0.3**
	47nm,0.4s,baz=123						
RFYF	**Reffroy**	**4.16**	**316**	*e*Pn	**Pn**	**05 02 41.5**	**-0.7**
RFYF				*e*P		05 02 45.1	
RFYF				*e*Sn	**Sn**	**05 03 28.4**	**-2.4**
RFYF				*e*Sg	**Sg**	**05 03 52.0**	**-0.3**
RFYF	**Reffroy**	**4.16**	**316**	*e*P	**Pn**	**05 02 45.1**	**+2.9**
RFYF				*e*Sn	**Sn**	**05 03 28.4**	**-2.4**
RFYF				*e*Sg	**Sg**	**05 03 52.0**	**-0.3**
	24nm,0.4s						
SMF	**Signal de Mont**	**4.24**	**285**	*e*Pn	**Pn**	**05 02 43.7**	**+0.3**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**05 03 31.6**	**-1.3**
	26nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**4.24**	**285**	*e*Pn	**Pn**	**05 02 43.7**	**+0.3**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**05 03 31.6**	**-1.3**
	13nm,0.4s,SNR=1.0						
ARSA	**Arzberg**	**4.25**	**66**	*e*Pn	**Pn**	**05 02 44.0**	**+0.5**
MEZF	**Maizieres J'vi**	**4.29**	**313**	*e*Pn	**Pn**	**05 02 43.5**	**-0.4**
	baz=126,SNR=1.0						
MEZF				*e*Sg	**Sg**	**05 03 55.6**	**-0.7**
	73nm,0.7s						
MEZF	**Maizieres J'vi**	**4.29**	**313**	*e*Pn	**Pn**	**05 02 43.5**	**-0.4**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**05 03 55.6**	**-0.7**
	36nm,0.7s						
KHC	**Kasperske Hory**	**4.29**	**35**	*e*PN	**Pn**	**05 02 44.0**	**0.0**
KHC				*e*PG	**Pg**	**05 02 56.0**	**-4.9**
KHC				*e*SN	**Sn**	**05 03 33.2**	**-0.8**
KHC				*e*SG	**Sg**	**05 03 55.0**	**-1.5**
	25nm,0.5s						
PLDF	**La Plantade**	**4.32**	**276**	P	**Pn**	**05 02 44.8**	**+0.3**
PLDF				S	**Sn**	**05 03 35.2**	**+0.3**
LOR	**Lormes**	**4.39**	**293**	*e*Pn	**Pn**	**05 02 46.1**	**+0.7**
	baz=115,SNR=1.0						
LOR				*e*Sn	**Sn**	**05 03 34.9**	**-1.6**
	37nm,0.3s,baz=114,SNR=1.0						
LOR				*e*Sg	**Sg**	**05 03 59.9**	**+0.2**
LOR	**Lormes**	**4.39**	**293**	*e*Pn	**Pn**	**05 02 46.1**	**+0.7**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**05 03 34.9**	**-1.6**
	19nm,0.3s,SNR=1.0						
LOR				*e*Sg	**Sg**	**05 03 59.9**	**+0.2**
RUP	**Ruppelstein**	**4.41**	**336**	P	**Pn**	**05 02 47.4**	**+1.7**
LASF	**Ste Croix**	**4.52**	**251**	*e*Pn	**Pn**	**05 02 46.9**	**-0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 03 38.2**	**-1.5**
	18nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**4.52**	**251**	*e*Pn	**Pn**	**05 02 46.9**	**-0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**05 03 38.2**	**-1.5**
	9.1nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**4.56**	**290**	*e*Pg	**Pg**	**05 03 06.0**	**-0.1**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**05 04 04.3**	**-0.9**
	24nm,0.5s						
SSF	**Saint Saulge**	**4.56**	**290**	*e*Pn	**Pn**	**05 02 47.9**	**+0.2**
SSF				*e*Pg	**Pg**	**05 03 06.0**	**-0.1**
SSF				*e*Sg	**Sg**	**05 04 04.3**	**-0.9**
SSF	**Saint Saulge**	**4.56**	**290**	*e*Pg	**Pg**	**05 03 06.0**	**-0.1**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**05 04 04.3**	**-0.9**
	12nm,0.5s						
AVF	**Avril sur Loir**	**4.60**	**286**	*e*Pn	**Pn**	**05 02 48.3**	**0.0**
	SNR=1.0						
TNS	**Taunus Mts**	**4.62**	**349**	*e*Pn	**Pn**	**05 02 49.1**	**+0.6**
TNS				*e*Sn	**Sn**	**05 03 42.1**	**0.0**
LBL	**Lubilhac**	**4.63**	**267**	P	**Pn**	**05 02 48.8**	**+0.1**
AGO	**Saint Agoulin**	**4.67**	**277**	P	**Pn**	**05 02 49.6**	**+0.4**
WLF	**Walferdange**	**4.67**	**330**	*e*Pn	**Pn**	**05 02 50.7**	**+1.5**
WLF				*e*Pb	**Pb**	**05 03 00.4**	**-0.3**
WLF				*e*Pg	**Pg**	**05 03 08.6**	**+0.4**
WLF				*e*Sg	**Sg**	**05 04 05.3**	**-3.4**
WLF	**Walferdange**	**4.67**	**330**	P	**Sb**	**05 03 52.5**	**-4.4**
CONA	**Conrad Observa**	**4.73**	**60**	⇑*i* Pn	**Pn**	**05 02 50.0**	**0.0**
NKC	**Novy Kostel**	**4.88**	**20**	*e*PN	**Pn**	**05 02 53.8**	**+1.8**
NKC				*e*PG	**Pg**	**05 03 12.5**	**+0.4**
BGF	**Bois d'Agland**	**4.91**	**283**	*e*Pn	**Pn**	**05 02 52.7**	**+0.2**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**05 03 46.6**	**-2.6**
	30nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.91**	**283**	*e*Pn	**Pn**	**05 02 52.7**	**+0.2**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**05 03 46.6**	**-2.6**
	15nm,0.4s,SNR=1.0						
MOX	**Moxa**	**5.10**	**13**	*e*PN	**Pn**	**05 02 56.0**	**+0.9**
MOX				*e*PG	**Pg**	**05 03 21.2**	**+4.8**
MOX				*e*SN	**Sn**	**05 03 54.5**	**+0.5**
MOX				*e*SG	**Sg**	**05 04 25.4**	**+3.0**
MOX	**Moxa**	**5.10**	**13**	*e*Sn	**Sn**	**05 03 52.9**	**-1.1**
HYF	**Humbligny**	**5.19**	**290**	*e*Pn	**Pn**	**05 02 57.1**	**+0.8**
TCF	**Toulx Ste Croi**	**5.32**	**279**	*e*Pn	**Pn**	**05 02 58.3**	**+0.2**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**05 03 55.2**	**-4.2**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**05 04 28.3**	**-1.2**
	9.0nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**5.32**	**279**	*e*Pn	**Pn**	**05 02 58.3**	**+0.2**
	SNR=1.0						
TCF				*e*Sn	**Sn**	**05 03 55.2**	**-4.2**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**05 04 28.3**	**-1.2**
	4.5nm,0.4s,SNR=1.0						
PRU	**Pruhonice**	**5.35**	**35**	*e*Pn	**Pn**	**05 02 57.8**	**-0.8**
	23nm,1.0s						
PRU				*e*Sg	**Sg**	**05 04 30.1**	**-0.4**
	23nm,1.0s						
CAF	**Calviac**	**5.51**	**265**	*e*Pn	**Pn**	**05 03 01.4**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**05 04 02.2**	**-1.8**
	5.7nm,0.5s						
CAF	**Calviac**	**5.51**	**265**	*e*Pn	**Pn**	**05 03 01.4**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**05 04 02.2**	**-1.8**
	2.8nm,0.5s						
GIVF	**Givet**	**5.53**	**325**	*e*P	**Pn**	**05 03 04.7**	**+3.7**
GIVF				*e*Sg	**Sg**	**05 04 34.0**	**-2.3**
	9.2nm,0.4s						
GIVF	**Givet**	**5.53**	**325**	*e*P	**Pn**	**05 03 04.7**	**+3.7**
GIVF				*e*Sg	**Sg**	**05 04 34.0**	**-2.3**
	4.6nm,0.4s						
BCLA	**Clavier**	**5.60**	**329**	P	**Pn**	**05 03 04.1**	**+2.0**
DOU	**Dourbes**	**5.62**	**323**	P	**Pn**	**05 03 09.8**	**+7.6**
BAIF	**Baives**	**5.76**	**321**	*e*P	**Pn**	**05 03 07.9**	**+3.7**
BAIF				*e*Sg	**Sg**	**05 04 40.8**	**-2.8**
	17nm,0.6s						
BAIF	**Baives**	**5.76**	**321**	*e*P	**Pn**	**05 03 07.9**	**+3.7**
BAIF				*e*Sg	**Sg**	**05 04 40.8**	**-2.8**
	8.6nm,0.6s						
RJF	**Les Rejaudoux**	**5.83**	**269**	*e*Pn	**Pn**	**05 03 05.7**	**+0.5**
	SNR=1.0						
BRG	**Berggiesshubel**	**5.87**	**27**	Pn	**Pn**	**05 03 09.4**	**+3.6**
	7.7nm,1.1s						
BRG				Pg	**Pg**	**05 03 29.8**	**-1.4**
BRG				Sg	**Sg**	**05 04 39.4**	**-7.8**
BRG	**Berggiesshubel**	**5.87**	**27**	PN	**Pn**	**05 03 09.4**	**+3.6**
BRG				PG	**Pg**	**05 03 29.8**	**-1.4**
BRG				SG	**Sg**	**05 04 39.4**	**-7.8**
	13nm,1.1s						
MTLF	**Montolieu**	**5.91**	**249**	*e*Pn	**Pn**	**05 03 06.1**	**-0.1**
MTLF				*e*Sn	**Sn**	**05 04 11.0**	**-2.9**
	3.0nm,0.4s						
MTLF	**Montolieu**	**5.91**	**249**	*e*Pn	**Pn**	**05 03 06.1**	**-0.1**
MTLF				*e*Sn	**Sn**	**05 04 11.0**	**-2.9**
	1.5nm,0.4s						
CLL	**Collm**	**6.01**	**20**	*e*Pg	**Pg**	**05 03 34.0**	**+0.3**
CLL				*ex*	x	05 03 37.0	
CLL				*e*Sg	**Sg**	**05 04 52.0**	**+0.5**
	comp=Z,21nm,0.9s						
STON	**Ston**	**6.34**	**114**	Sn	**Sn**	**05 04 20.6**	**-3.9**
DPC	**Dobruska-Polom**	**6.39**	**41**	*e*SG	**Sg**	**05 05 02.1**	**-1.7**
	comp=Z,8.6nm,0.6s						
LFF	**La Frestale**	**6.43**	**266**	*e*Pn	**Pn**	**05 03 14.0**	**+0.6**
	SNR=1.0						
MFF	**Saint Martin d**	**6.96**	**281**	*e*Pn	**Pn**	**05 03 20.5**	**-0.2**
	SNR=1.0						
EPF	**Esparros**	**7.28**	**252**	*e*Pn	**Pn**	**05 03 24.5**	**-0.6**
LDF	**La Druitiere**	**7.36**	**297**	*e*Pn	**Pn**	**05 03 25.7**	**-0.4**
FLN	**La Foliniere**	**7.64**	**297**	*e*Pn	**Pn**	**05 03 30.2**	**+0.3**
	baz=112,SNR=1.0						
GRR	**Gorron**	**7.76**	**294**	*e*Pn	**Pn**	**05 03 31.0**	**-0.6**
	SNR=1.0						
ETSF	**Etsaut**	**7.94**	**253**	*e*P	**Pn**	**05 03 39.6**	**+5.5**
SGMF	**Saint Gilles**	**8.83**	**291**	*e*Pn	**Pn**	**05 03 45.5**	**-0.7**
QUIF	**Quistinic**	**9.16**	**289**	*e*Pn	**Pn**	**05 03 50.2**	**-0.7**
ROSF	**Rostrenen**	**9.31**	**291**	*e*Pn	**Pn**	**05 03 52.6**	**-0.3**

IDC 23 05:40:56.8±2.0, 218N×12664E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=177.5km s-min=23.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.25**	**161**	P	P	05 46 05.7	-0.3
	1.9nm,0.4s,baz=340,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.65**	**165**	P	P	05 46 38.0	+0.6
	0.4nm,0.5s,baz=346,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	05 50 56.6	-0.1
	0.6nm,0.4s,baz=115,slow=7.5,SNR=16						

IDC 23 06:15:30.4±3.2, 379S×12854E, h265km±35km, mb3.3/3, mb1 3.5/4, mb1mx3.3/15, mbtmp3.3/4, Error ellipse: s-maj=114.3km s-min=16.8km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.02**	**161**	P	P	06 19 11.4	-0.2
	1.7nm,0.3s,baz=341,slow=11,SNR=75						
ASAR	**Alice Springs**	**20.43**	**166**	P	P	06 19 47.8	-0.3
	3.6nm,0.5s,baz=346,slow=12,SNR=62						
ASAR				S	S	06 23 21.7	+0.6
	0.9nm,0.9s,baz=348,slow=23,SNR=7.2						
STKA	**Stephens Creek**	**30.51**	**158**	P	P	06 21 21.0	+1.7
	2.5nm,0.8s,baz=8.5,slow=7.0,SNR=3.2						
MKAR	**Makanchi Array**	**64.76**	**327**	P	P	06 25 40.6	-0.1
	0.2nm,0.5s,baz=131,slow=6.6,SNR=3.9						

NIED ***23*** *06:38:00, 4200N×14250E, h62km, Mw4.4 Best double couple: M₀4.27000×10¹⁵ NP1:φ₀210.00000°, δ22.00000°, λ91.00000°. NP2:φ₀30.00000°, δ68.00000°, λ90.00000°.*

BJI ***23*** *06:38:47.1, 4200N×14250E, h62km, mB4.6, mb4.6, Ms3.8, Msz3.4*

MOS ***23*** *06:38:47.6±1.2, 4204N×14254E, h69km, mb4.6/19, Error ellipse: s-maj=9.0km s-min=6.2km az=97.8*

ISCJB ***23*** *06:38:48.2±0.3, 4201N±003×14249E±003, h68km±2km, mb4.3/57, Error ellipse: s-maj=4.9km s-min=2.9km az=144.7*

JMA ***23*** *06:38:48.1±0.1, 4197N×14254E, h66km±2km, M4.2 Broadband fault plane solution: P waves. NP1: φ₀243.00000°, δ18.00000°, λ138.00000°. NP2: φ₀14.00000°, δ78.00000°, λ77.00000°. Principal axes: T Plg55.0000°, Azm267.0000°; N Plg13.0000°, Azm117.0000°; P Plg32.0000°, Azm115.0000°;*

JMA Felt I J1.

IDC ***23*** *06:38:49.8±1.7, 4204N×14250E, h72km±13km, mb3.7/14, mb1 3.9/17, mb1mx3.8/23, mbtmp3.7/17, MS3.5/7, Ms1 3.5/7, ms1mx3.3/28 Error ellipse: s-maj=19.1km s-min=11.3km az=115.0*

NEIC ***23*** *06:38:49.0±0.6, 42.16N×142.46E, h56km±6km, mb4.5/33, MW4.4(NIED), Error ellipse: s-maj=6.8km s-min=5.1km az=145.0*

NEIC Recorded [1 JMA] in south-central Hokkaido and southwestern Hokkaido. Also recorded [1 JMA] in Aomori Prefecture, Honshu.

ISC 23 06:38:49.3±0.3, 4204N±003×14248E±003, h61km±2km, h68km±3.7km: pP-P, n150, σ1§04/173, mb4.4/57, 7C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.32**	**40**	⇑P	**Pn**	**06 38 58.9**	**-0.8**
JNBK				*e*S	**Sn**	**06 39 07.0**	**-0.2**
ERM	**Erimo**	**0.51**	**92**	*e*Pn	**Pn**	**06 39 00.5**	**-1.0**
JEM	**Erimo**	**0.51**	**92**	⇑P	**Pn**	**06 39 00.4**	**-1.0**
JEM				*e*S	**Sn**	**06 39 09.1**	**-1.2**
JBT2	**Biratori 2**	**0.74**	**354**	⇓P	**Pn**	**06 39 04.0**	**-0.2**
JBT2				*e*S	**Sn**	**06 39 15.6**	**+0.5**
JCH	**Churui**	**0.87**	**48**	⇑P	**Pn**	**06 39 05.1**	**-0.7**
JCH				*e*S	**Sn**	**06 39 17.9**	**0.0**
JKB	**Kayabe**	**1.09**	**263**	⇓P	**Pn**	**06 39 08.0**	**-0.5**
JKB				*e*S	**Sn**	**06 39 22.4**	**-0.4**
JEW	**Eniwo**	**1.10**	**317**	⇓P	**Pn**	**06 39 09.0**	**+0.2**
JEW				S	**Sn**	**06 39 24.3**	**+1.1**
JFR	**Furan**	**1.13**	**4**	⇓P	**Pn**	**06 39 09.1**	**0.0**
JNB	**Noboribetsu**	**1.15**	**292**	⇓P	**Pn**	**06 39 08.6**	**-0.8**
JNB				*e*S	**Sn**	**06 39 24.2**	**-0.1**
JOT	**Ohata**	**1.25**	**239**	⇓P	**Pn**	**06 39 10.0**	**-0.7**
JOT				*e*S	**Sn**	**06 39 25.8**	**-0.9**
JOB	**Onbets**	**1.33**	**49**	⇑P	**Pn**	**06 39 12.1**	**+0.4**
JOB				*e*S	**Sn**	**06 39 30.6**	**+2.2**
JAB	**Ashibetsu**	**1.48**	**353**	⇓P	**Pn**	**06 39 14.2**	**+0.5**
JAB				*e*S	**Sn**	**06 39 34.9**	**+2.8**
JYM2	**Yakumo 2**	**1.57**	**274**	⇓P	**Pn**	**06 39 14.6**	**-0.3**
JYM2				*e*S	**Sn**	**06 39 34.7**	**+0.4**
JAR	**Ashorobuto**	**1.58**	**37**	P	**Pn**	**06 39 14.9**	**-0.2**
JAR				*e*S	**Sn**	**06 39 34.7**	**+0.2**
JSR	**Shiriuchi**	**1.62**	**252**	P	**Pn**	**06 39 15.2**	**-0.4**
JSR				*e*S	**Sn**	**06 39 35.5**	**0.0**
JTM	**Tenmabayashi**	**1.64**	**221**	⇓P	**Pn**	**06 39 15.5**	**-0.4**
JTM				*e*S	**Sn**	**06 39 35.7**	**-0.2**
ASAJ	**Asahikawa**	**2.08**	**2**	PN	**Pn**	**06 39 23.1**	**+1.3**
ASAJ				S	**Sn**	**06 39 47.9**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,59nm,0.3s						
ASAJ				smax			
	comp=N,55nm,0.3s						
ASAJ	**Asahikawa**	**2.08**	**2**	P	**Pn**	**06 39 23.1**	**+1.3**
	comp=N,59nm,0.3s,baz=202,slow=14,SNR=164						
ASAJ				S	**Sn**	**06 39 47.9**	**+1.2**
	comp=N,55nm,0.3s,baz=80,slow=25,SNR=26						
YUK	**Yuzh-Kuril'sk**	**3.18**	**50**	*e*PN	**Pn**	**06 39 33.0**	**-3.9**
YUK				*e*S	**Sn**	**06 40 13.5**	**-0.1**
YUK				smax			
	comp=N,600nm,0.5s						
YUK				smax			
	comp=N,200nm,0.5s						
YUK				smax			
	comp=N,2μm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.92**	**2**	*e*Pn	**Pn**	**06 39 59.2**	**-1.4**
YSS	**Yuzh-Sakhalins**	**4.92**	**2**	⇓*i* PN	**Pn**	**06 40 04.0**	**+3.4**
YSS				*e*S	**Sn**	**06 40 59.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				smax			
	comp=N,30nm,1.0s						
KUR	**Kuril'sk**	**5.05**	**49**	PN	**Pn**	**06 40 02.5**	**+0.1**
KUR				*e*S	**Sn**	**06 41 03.0**	**+3.6**
KUR				pmax	pmax		
	comp=Z,60nm,0.5s						
KUR				smax			
	comp=N,130nm,0.8s						
KUR				smax			
	comp=E,90nm,0.8s						
MAJO	**Matsushiro**	**6.41**	**212**	*e*Pn	**Pn**	**06 40 22.6**	**+1.5**
MAT	**Matsushiro**	**6.41**	**212**	P	**Pn**	**06 40 21.0**	**-0.1**
MAT				*e*S	**Sn**	**06 41 34.3**	**+1.5**
MJAR	**Matsushiro Arr**	**6.41**	**212**	P	**Pn**	**06 40 21.9**	**+0.9**
	comp=E,0.9nm,0.3s,baz=22,slow=14,SNR=6.6						
MJAR				LR	LR	06 43 23.1	
	comp=E,179nm,19.3s,baz=20,slow=43						
VLA	**Vladivostok**	**7.89**	**281**	*i* PN	**Pn**	**06 40 43.7**	**+2.5**
MDJ	**Mudanjiang**	**9.74**	**290**	P	**Pn**	**06 41 04.8**	**-1.7**
MDJ				S	**Sn**	**06 42 50.4**	**-3.9**
MDJ				SCP	ScP	06 50 45.5	+2.5
MDJ				PCS	PcS	06 50 50.5	+1.0
MDJ				AMB	AMB		
	comp=Z,3.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,16nm,3.0s						
MDJ				LR	LR		
	comp=N,76nm,22.2s						
MDJ				LR	LR		
	comp=E,132nm,32.7s						
MDJ				LR	LR		
	comp=Z,159nm,27.8s						
KLR	**Kul'dur**	**10.39**	**317**	*e*PN	**Pn**	**06 41 14.0**	**-1.4**
KSRS	**Korea Array**	**12.10**	**253**	P	**Pn**	**06 41 40.1**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=65,slow=13,SNR=14						
KSRS				S	**Sn**	**06 43 58.6**	**+6.6**
	comp=Z,0.6nm,0.3s,baz=64,slow=24,SNR=6.9						
KSRS				LR	LR	06 45 50.9	
	comp=Z,127nm,20.5s,baz=1.2,slow=35						
CN2	**Changchun**	**12.61**	**284**	*e*P	**Pn**	**06 41 45.3**	**-0.4**
CN2				*e*AP		06 41 55.9	
JNU	**Nakatsue**	**12.79**	**230**	LR	LR	06 46 27.9	
	comp=Z,54nm,21.6s,baz=48,slow=36						
PET	**Petropavlovsk**	**15.46**	**39**	*e*Pn	**Pn**	**06 42 22.0**	**-1.3**
	comp=Z,22nm,0.9s						
PET	**Petropavlovsk**	**15.46**	**39**	*e*P	**Pn**	**06 42 22.0**	**-1.3**
PET				pmax	pmax		
	comp=Z,22nm,0.9s						
HIA	**Hailar**	**17.42**	**302**	*e*Pn	**Pn**	**06 42 47.9**	**-0.1**
	comp=Z,4.4nm,0.5s						
HIA	**Hailar**	**17.42**	**302**	*e*P	**Pn**	**06 42 47.9**	**0.0**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MA2	**Magadan**	**18.30**	**14**	*e*P	**Pn**	**06 42 56.9**	**-1.6**
	comp=Z,2.7nm,0.3s						
MA2	**Magadan**	**18.30**	**14**	*e*P	**Pn**	**06 42 56.9**	**-1.6**
MA2				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BJI	**Beijing**	**19.92**	**273**	P	**Pn**	**06 43 13.6**	**-4.4**
BJI				AP	pP	06 43 28.0	-1.0
BJI				XP	sP	06 43 38.1	+1.4
BJI				S	**S**	**06 46 55.1**	**-1.4**
BJI				AMB	AMB		
	comp=Z,16nm,0.9s						
BJI				AMB	AMB		
	comp=Z,47nm,4.3s						
BJI				LR	LR		
	comp=N,123nm,15.4s						
BJI				LR	LR		
	comp=E,106nm,17.3s						
BJI				LR	LR		
	comp=Z,106nm,24.4s						
BJT	**Baijiatuan**	**19.93**	**273**	*e*P	**Pn**	**06 43 14.5**	**-3.6**
	comp=Z,7.4nm,0.4s						
BJT	**Baijiatuan**	**19.93**	**273**	*e*P	**Pn**	**06 43 14.5**	**-3.6**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.4s						
SEY	**Seymchan**	**21.73**	**12**	⇑*e*P	**P**	**06 43 33.0**	**-2.1**
HHC	**Hu-ho-hao-te**	**23.15**	**277**	*e*P	**P**	**06 43 51.1**	**+0.8**
HHC				AP		06 44 05.3	
HHC				XP	sP	06 44 12.6	+1.1
HHC				PP		06 44 23.3	
HHC				PCP	PcP	06 47 36.0	-0.7
HHC				*e*S	**S**	**06 47 56.8**	**0.0**
HHC				XS	sS	06 48 17.8	-4.0
HHC				AMB	AMB		
	comp=Z,18nm,0.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,95nm,4.3s						
HHC				LR	LR		
	comp=N,102nm,16.7s						
HHC				LR	LR		
	comp=E,156nm,17.8s						
HHC				LR	LR		
	comp=Z,104nm,13.1s						
BOD	**Bodaibo**	**23.94**	**321**	*e*P	**P**	**06 43 54.2**	**-3.2**
BOD				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
TATO	**Taipei**	**24.31**	**232**	*e*P	**P**	**06 44 03.6**	**+2.6**
	comp=Z,140nm,1.7s,mb5.1						
YHNB	**Yeheng**	**24.61**	**232**	*e*P	**P**	**06 44 01.2**	**-2.6**
NACB	**Ninganchiao**	**24.86**

CD2 PP PP 06 46 29.8 -1.9
CD2 S **S** **06 50 30.0 +0.6**
CD2 XS sS 06 50 55.8 +0.7
CD2 SS SS 06 52 31.6 -21
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,20nm,3.8s
CD2 LR LR
comp=N,90nm,12.2s
CD2 LR LR
comp=Z,100nm,13.4s
GYA Guiyang 33.16 254 P **P** **06 45 23.3 +3.5**
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
KMI Kunming 36.78 255 P **P** **06 45 52.1 +1.1**
KMI AP pP 06 46 11.0 +4.7
KMI XP sP 06 46 16.8 +3.3
KMI AMB AMB
comp=Z,11nm,0.7s,mb4.8
KMI LR LR
comp=Z,49nm,18.5s
WMQ Urumqi 39.53 292 ⇑P **P** **06 46 14.3 +0.3**
WMQ AP pP 06 46 29.3 -0.1
WMQ XP sP 06 46 36.5 0.0
WMQ PP PP 06 47 49.8 +4.2
WMQ PPP 06 48 14.8
WMQ PCP PcP 06 48 19.8 -0.6
WMQ *e*S **S** **06 52 11.4 -0.5**
WMQ AMB AMB
comp=Z,12nm,1.0s,mb4.6
WMQ AMB AMB
comp=Z,124nm,4.8s
WMQ LR LR
comp=N,55nm,19.0s
WMQ LR LR
comp=Z,42nm,20.0s
NVS Novosibirsk 40.13 310 *i* P **P** **06 46 18.5 -0.3**
NVS pmax pmax
comp=E,9.0nm,1.3s
NVS pmax pmax
comp=Z,10.0nm,1.3s,mb4.4
MK31 Makanchi Array 42.34 298 *i* P **P** **06 46 36.5 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
MKAR Makanchi Array 42.34 298 P **P** **06 46 36.9 -0.2**
comp=Z,6.4nm,0.9s,mb4.3,baz=80,slow=9.1,SNR=54
LSA Lhasa 42.79 270 *e*P **P** **06 46 42.0 +1.2**
comp=Z,7.3nm,0.9s,mb4.4
LSA Lhasa 42.79 270 *e*P **P** **06 46 42.0 +1.1**
LSA pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
CHTO Chiang Mai 43.50 251 *e*P **P** **06 46 51.0 +4.4**
KURK Kurchatov 43.65 304 *e*P **P** **06 46 47.0 -0.5**
comp=Z,12nm,0.9s,mb4.6
KURK Kurchatov 43.65 304 *e*P **P** **06 46 47.0 -0.5**
KURK pmax pmax
comp=Z,12nm,0.9s,mb4.6
COLA College 44.46 35 *e*P **P** **06 46 53.8 0.0**
comp=Z,1.1nm,0.4s,mb3.9
COLA College 44.46 35 *e*P **P** **06 46 53.8 0.0**
COLA pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
TAPN Taplejung 46.60 270 *e*P **P** **06 47 11.8 +0.6**
JIRN Jiri 47.56 271 *e*P **P** **06 47 19.2 +0.5**
CHKZ Chkalovo 47.61 310 *i* P **P** **06 47 17.1 -1.6**
CHKZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
BRVK Borovoye 47.98 309 *e*P **P** **06 47 21.4 -0.2**
comp=Z,2.8nm,0.7s,mb4.4
BRVK Borovoye 47.98 309 *e*P **P** **06 47 21.4 -0.2**
BRVK pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
TKM2 Tokmak 2 48.12 295 *e*P **P** **06 47 23.2 +0.3**
comp=Z,14nm,0.8s,mb5.1
TKM2 Tokmak 2 48.12 295 *e*P **P** **06 47 23.2 +0.3**
TKM2 pmax pmax
comp=Z,14nm,0.8s,mb5.0
TKM2 Tokmak 2 48.12 295 P **P** **06 47 23.5 +0.6**
SNR=16
KKN Kakani 48.17 272 *e*P **P** **06 47 23.7 +0.3**
GKN Gorkha 48.53 273 *e*P **P** **06 47 27.3 +1.1**
comp=Z,9.3nm,0.5s,mb5.1
KBK Karagaybulak 48.67 295 P **P** **06 47 27.4 +0.4**
SNR=5.9
USP Ospenovka 48.73 296 P **P** **06 47 27.4 -0.1**
SNR=6.2
UCH Uchtor 49.13 294 *e*P **P** **06 47 31.5 +0.8**
comp=Z,2.4nm,0.9s,mb4.2
KOLN Koldanda 49.43 273 *e*P **P** **06 47 33.2 +0.1**
comp=Z,7.9nm,0.5s,mb5.0
EKS2 Erkin-Say 49.45 295 *e*P **P** **06 47 32.8 -0.3**
comp=Z,4.5nm,0.7s,mb4.6
EKS2 Erkin-Say 49.45 295 P **P** **06 47 33.4 +0.3**
SNR=6.0
INK Inuvik 49.59 29 *e*P **P** **06 47 33.5 -0.3**
comp=Z,22nm,0.7s,mb5.3
INK Inuvik 49.59 29 P **P** **06 47 33.3 -0.4**
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 49.59 29 P **P** **06 47 33.3 -0.4**
comp=Z,0.5nm,0.3s,mb4.0,baz=260,slow=4.4,SNR=17
AML Almayashu 49.73 295 *e*P **P** **06 47 35.8 +0.6**
comp=Z,4.7nm,0.8s,mb4.6
AML Almayashu 49.73 295 P **P** **06 47 35.9 +0.7**
SNR=5.3
KK31 Karatay Array 51.45 297 *i* P **P** **06 47 47.5 -0.7**
KK31 pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ARU Arti 53.23 316 *e*P **P** **06 48 00.5 -0.6**
comp=Z,7.4nm,0.9s,mb4.6
ARU Arti 53.23 316 *d i*P **P** **06 48 01.1 0.0**
ARU *e* 06 50 02.0
ARU *e*PPP 06 51 16.1
ARU S S 06 55 47.8 +20
ARU pmax pmax
comp=Z,12nm,1.2s,mb4.7
POHA Pohakuloa 56.38 93 P **P** **06 48 26.0 +1.6**
comp=Z,384nm,0.2s
RES Resolute Bay 57.56 15 *e*P **P** **06 48 31.4 -0.6**
comp=Z,51nm,1.5s,mb5.3
RES Resolute Bay 57.56 15 *e*P **P** **06 48 31.4 -0.6**
RES pmax pmax
comp=Z,51nm,1.5s,mb5.3
KEV Kevo 59.08 339 *ep* **P** **06 48 39.3 -3.3**
comp=Z,6.7nm,0.8s,mb4.7
KEV Kevo 59.08 339 *e*P **P** **06 48 39.3 -3.3**
KEV pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
YKA Yellowknife Ar 59.10 32 P **P** **06 48 42.7 -0.1**
YKA Yellowknife Ar 59.10 32 P **P** **06 48 42.7 -0.1**
comp=Z,0.6nm,0.9s,mb3.6,baz=304,slow=6.6,SNR=11
ARCES ARCESS Array B 59.62 339 LR LR 07 21 32.6
comp=Z,62nm,18.5s,baz=242,slow=43
JOF Joensuu 61.96 331 *ep* **P** **06 49 00.0 -2.3**
WRA Warramunga Arr 62.12 189 P **P** **06 49 02.6 -1.3**
comp=Z,0.6nm,0.7s,mb3.9,baz=6.7,slow=7.5,SNR=7.7
KAF Kangasniemi 64.26 332 *ep* **P** **06 49 13.1 -4.4**
baz=44,slow=6.1
PALK Pallekele 64.32 256 *e*P **P** **06 49 19.0 +0.4**
comp=Z,1.9nm,0.6s,mb4.3
FINES FINESS Array B 64.79 332 P **P** **06 49 20.2 -0.8**
FINES FINESS Array B 64.79 332 P **P** **06 49 20.2 -0.8**
comp=Z,4.1nm,0.8s,mb4.5,baz=57,slow=7.0,SNR=11
KEBM Edson Butte 65.05 54 *e*P **P** **06 49 23.2 +0.2**
ASAR Alice Springs 65.85 189 P **P** **06 49 26.9 -1.3**
comp=Z,0.2nm,0.3s,mb3.6,baz=2.3,slow=6.8,SNR=2.8
MBWA Marble Bar 66.31 203 *e*P **P** **06 49 34.3 +3.1**
comp=Z,8.0nm,1.0s,mb4.7
WALA Waterton Lakes 67.22 44 *e*P **P** **06 49 37.1 +0.3**
comp=Z,8.1nm,1.1s,mb4.7
KIV Kislovodsk 68.29 310 *e*P **P** **06 49 44.0 +0.4**
comp=Z,11nm,0.8s,mb4.9
KIV Kislovodsk 68.29 310 ⇑*e*P **P** **06 49 44.8 +1.2**
KIV *e*S S 06 58 41.5 +1.9
KIV pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
FCC Fort Churchill 69.18 28 *e*P **P** **06 49 49.2 +0.3**
comp=Z,0.4nm,0.4s,mb3.7
HRY Holter Researc 69.79 45 *e*P **P** **06 49 54.6 +1.7**
HFS Hagfors 69.88 335 P **P** **06 49 52.5 -0.7**
comp=Z,1.6nm,0.3s,mb4.5,baz=32,slow=6.3,SNR=22
NB2 NORSAR Subarra 69.90 337 P **P** **06 49 52.4 -0.9**
comp=Z,2.0nm,0.8s,mb4.1,baz=36,slow=6.2
NB2 NORSAR Subarra 69.90 337 P **P** **06 49 52.4 -0.9**
NB2 pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
NOA NORSAR Array B 69.90 337 P **P** **06 49 52.6 -0.6**
comp=Z,3.3nm,0.8s,mb4.3,baz=36,slow=6.2,SNR=11
NOA LR LR 07 23 02.6
comp=Z,43nm,18.1s,baz=215,slow=38
AKASG Malin Array Be 70.86 322 P **P** **06 49 58.5 -0.9**
comp=Z,2.2nm,0.6s,mb4.2,baz=44,slow=5.8,SNR=5.5
BORG Borgarnes 72.80 353 *e*P **P** **06 50 09.9 -0.8**
comp=Z,78nm,1.2s,mb5.5
HWUT Hardware Ranch 73.28 49 *e*P **P** **06 50 13.9 -0.1**
comp=Z,6.7nm,1.8s,mb4.3
TPNV Topopah Spring 73.58 55 *e*P **P** **06 50 15.8 -0.1**
comp=Z,2.6nm,0.9s,mb4.2
TPNV Topopah Spring 73.58 55 *e*P **P** **06 50 15.8 0.0**
TPNV pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BW06 Boulder Array 73.61 47 *e*P **P** **06 50 17.0 +1.1**
comp=Z,29nm,2.6s,mb4.7
PDAR Pinedale Array 73.61 47 P **P** **06 50 15.4 -0.5**
comp=Z,0.3nm,0.8s,baz=288,slow=1.4,SNR=3.7
MALT Malatya 74.36 308 *e*P **P** **06 50 20.4 0.0**
comp=Z,0.1nm,0.9s
OJC Ojcow 75.35 326 *e*P **P** **06 50 25.6 -0.2**
NIE Niedzica 75.75 325 *e*P **P** **06 50 28.8 +0.7**
BRTR Keskin Array B 76.16 311 P **P** **06 50 30.1 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 76.16 311 P **P** **06 50 30.1 -0.6**
comp=Z,1.2nm,0.7s,mb3.9,baz=69,slow=3.0,SNR=6.0
MORC Moravsky Berou 76.62 327 *e*P **P** **06 50 32.8 -0.2**
comp=Z,1.4nm,0.5s,mb4.2
MORC Moravsky Berou 76.62 327 *e*P **P** **06 50 32.8 -0.3**
MORC pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
DPC Dobruska-Polom 76.66 328 *e*P **P** **06 50 34.1 +0.8**
PV10 Paradox Valley 76.89 50 *e*P **P** **06 50 35.4 +0.6**
PSZ Piszkesteto 77.07 324 *e*P **P** **06 50 36.3 +0.7**
comp=Z,8.8nm,1.2s,mb4.6
PSZ Piszkesteto 77.07 324 *e*P **P** **06 50 36.3 +0.7**
PSZ pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
CLL Collm 77.17 330 *i* P **P** **06 50 35.6 -0.5**
comp=Z,7.0nm,0.9s,mb4.6
PV01 Paradox Valley 77.32 50 *e*P **P** **06 50 37.4 +0.2**
NWAO Narrogin (SRO) 78.12 202 *e*P **P** **06 50 43.4 +1.9**
comp=Z,7.9nm,0.8s,mb4.7
NWAO Narrogin (SRO) 78.12 202 *e*P **P** **06 50 43.4 +1.9**
NWAO pmax pmax
comp=Z,8.0nm,0.8s
KHC Kasperske Hory 78.71 329 *e*P **P** **06 50 40.6 -4.1**
GERES GERESS Array B 78.89 328 P **P** **06 50 45.3 -0.5**
comp=Z,0.2nm,0.3s,mb3.6,baz=349,slow=5.4,SNR=4.7
SDCO Great Sand Dun 79.33 48 *e*P **P** **06 50 49.2 +0.9**
comp=Z,12nm,2.3s,mb4.4
WMOK Wichita Mounta 85.22 46 *e*P **P** **06 51 18.3 -0.9**
comp=Z,5.2nm,1.3s,mb4.5
WMOK Wichita Mounta 85.22 46 *e*P **P** **06 51 18.3 -0.8**
WMOK pmax pmax
comp=Z,5.0nm,1.3s,mb4.5
PPT Papeete 86.18 118 LR LR 07 22 45.8
comp=Z,140nm,20.5s,baz=281,slow=31
TXAR Lajitas Array 86.44 53 P **P** **06 51 24.6 -0.7**
comp=Z,0.4nm,0.9s,mb3.6,baz=309,slow=4.0,SNR=3.6
SIV San Ignacio 147.08 45 PKPbc PKPbc 06 58 25.8 +0.3
comp=Z,0.9nm,0.8s,baz=180,slow=1.0,SNR=5.0

IDC 23 06:46:18.5±7.2, 1856S×6722W, h287km±35km, mb3.1/2, mb1 3.2/3, mb1mx2.9/15, mbtmp3.0/3, Error ellipse: s-maj=141.9km s-min=27.5km az=19.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.42**	**339**	P		Pn 06 47 08.9	+1.2
	0.2nm,0.3s,baz=209,slow=4.2,SNR=5.2						
LPAZ				S		S 06 47 48.3	+1.3
	0.2nm,0.3s,baz=195,slow=9.6,SNR=4.2						
SIV	**San Ignacio**	**6.40**	**67**	P		Pn 06 47 53.4	+1.0
	0.6nm,0.3s,baz=237,slow=12,SNR=30						
TORD	**Torodi Ar. Bea**	**74.87**	**70**	P		P 06 57 28.1	-0.3
	0.6nm,0.5s,baz=257,slow=5.4,SNR=13						
YKA	**Yellowknife Ar**	**88.96**	**340**	P		P 06 58 40.8	+0.6
	0.2nm,0.6s,baz=134,slow=4.3,SNR=7.5						

IDC 23 06:51:17.5±9.4, 235N×12802E, h76km±91km, mb3.6/5, mb1 3.7/5, mb1mx3.5/14, mbtmp3.6/5, Error ellipse: s-maj=79.2km s-min=18.1km az=75.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.00**	**165**	P		P 06 56 16.0	-0.1
	1.9nm,0.5s,baz=343,slow=10,SNR=22						
WB2	**Warramunga Arr**	**23.00**	**165**	*e*P		P 06 56 15.8	-0.3
ASAR	**Alice Springs**	**26.48**	**168**	P		P 06 56 47.4	-0.3
	0.5nm,0.5s,baz=353,slow=7.6,SNR=8.8						
ASAR				PcP		PcP 07 00 10.9	-0.2
	0.4nm,0.4s,baz=354,slow=1.9,SNR=7.1						
KSRS	**Korea Array**	**34.94**	**360**	P		P 06 58 01.4	-0.6
	0.6nm,0.4s,baz=173,slow=9.5,SNR=4.4						
STKA	**Stephens Creek**	**36.39**	**160**	P		P 06 58 14.0	-0.5
	1.4nm,0.6s,baz=348,slow=9.3,SNR=4.3						
MKAR	**Makanchi Array**	**59.42**	**325**	P		P 07 01 13.2	+1.0
	1.1nm,0.6s,baz=119,slow=8.6,SNR=7.9						

*NEIC **23** 07:05:22.6, 28.13S×71.19W, h47km, MG3.6(GUC), After GUC.*

GUC 23 07:05:22.6±0.8, 2813S×7119W, h47km±4km, MD3.8, ML3.6, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.58**	**140**	⇓*i*P		Pn 07 05 35.3	+0.6
VACH				*i* S		Sn 07 05 44.3	+0.9
VACH	**Vallenar**	**0.58**	**140**	⇓*i*P		Pn 07 05 35.3	+0.6
VACH				*i* S		Sn 07 05 44.3	+0.9
VACH				AML	AML	07 05 45.7	
	comp=N,8μm,0.2s						
LCO	**Las Campanas**	**0.98**	**154**	*e*Pn		Pn 07 05 41.0	+1.1
CPCH	**Copiapo**	**1.07**	**44**	*e*P		Pn 07 05 41.8	+0.7
CPCH				*i* S		Sn 07 05 56.0	+1.2
LSCH	**La Serena**	**1.77**	**182**	⇑*i*P		Pn 07 05 50.8	0.0
LSCH				*i* S		Sn 07 06 12.9	+0.8
TLL	**Tololo Astrono**	**2.06**	**171**	⇓*i*P		Pn 07 05 56.3	+1.5
TLL				*i* S		Sn 07 06 21.5	+2.3
TLL	**Tololo Astrono**	**2.06**	**171**	⇓*i*P		Pn 07 05 56.3	+1.5
TLL				*i* S		Sn 07 06 21.5	+2.3
TLL				AML	AML	07 06 34.1	
	comp=E,261nm,0.4s						
CPN1	**Cerro Paranal**	**3.56**	**12**	AML	AML	07 07 18.1	
	comp=E,60nm,0.5s						
CEN1	**Los Morros**	**4.80**	**11**	AML	AML	07 07 56.9	
	comp=E,22nm,0.7s						

*LDG **23** 07:08:15.1±0.3, 18.15S×168.44E, h10km, Mb4.2/2, Error ellipse: s-maj=36.1km s-min=20.7km az=38.0*
*NEIC **23** 07:08:24.3±0.6, 18.80S×168.94E, mb4.4/1, Error ellipse: s-maj=16.7km s-min=12.8km az=156.0*
*ISCJB **23** 07:08:26.0±2.0, 18.8S±0.1×168.7E±0.2, h120km±18km, mb4.1/10, Error ellipse: s-maj=24.2km s-min=17.1km az=11.7*
*IDC **23** 07:08:25.9±2.8, 18.89S×168.91E, h112km±27km, mb3.9/9, mb1 4.1/11, mb1mx4.0/16, mbtmp4.0/11, MS3.6/2, Ms1 3.6/2, ms1mx2.8/27, Error ellipse: s-maj=24.6km s-min=19.2km az=168.0*

ISC 23 07:08:25.6±1.8, 188S±01×1689E±01, h107km±16km, n43, σ0.96/17, mb4.1/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.97**	**214**	*e*P		**Pn 07 09 25.3**	**+0.9**
DZM				*e*S		**Sn 07 10 10.1**	**0.0**
DZM	**Mont Dzumac**	**3.97**	**214**	P		**Pn 07 09 25.2**	**+0.7**
	3.4nm,0.3s,baz=49,slow=19,SNR=263						
DZM				S		**Sn 07 10 10.5**	**+0.4**
	10.0nm,0.3s,baz=130,slow=18,SNR=16						
HNR	**Honiara**	**12.70**	**316**	P		**Pn 07 11 21.6**	**-0.8**
	10nm,0.3s,baz=257,slow=3.3,SNR=2.4						
STKA	**Stephens Creek**	**27.78**	**237**	P		**P 07 14 02.8**	**-1.8**
	1.0nm,0.4s,mb3.7,baz=66,slow=14,SNR=3.6						
RAR	**Rarotonga**	**29.55**	**100**	P		**P 07 14 17.8**	**-2.5**
	7.4nm,0.4s,mb4.6,baz=131,slow=15,SNR=3.4						
WB2	**Warramunga Arr**	**32.55**	**262**	*e*P		**P 07 14 46.1**	**-0.6**
WRA	**Warramunga Arr**	**32.56**	**262**	P		**P 07 14 46.3**	**-0.5**
	0.9nm,0.8s,mb3.6,baz=89,slow=8.3,SNR=9.7						
WRA				pP		pP 07 15 09.3	-1.3
	0.8nm,0.7s,baz=96,slow=8.8,SNR=4.2						
ASAR	**Alice Springs**	**32.89**	**255**	P		**P 07 14 49.9**	**+0.2**
	2.7nm,0.5s,mb4.3,baz=84,slow=8.6,SNR=69						
ASAR				pP		pP 07 15 12.9	-0.5
	3.8nm,0.6s,baz=82,slow=9.1,SNR=7.0						
FITZ	**Fitzroy Crossi**	**40.93**	**264**	*e*P		**P 07 15 58.7**	**+0.9**
	3.8nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**40.93**	**264**	LR		LR 07 30 18.2	
	comp=Z,50nm,20.0s,baz=112,slow=32						
MJAR	**Matsushiro Arr**	**62.19**	**332**	P		**P 07 18 35.5**	**-0.2**
MJAR	**Matsushiro Arr**	**62.19**	**332**	P		**P 07 18 35.5**	**-0.2**
	1.8nm,0.9s,mb4.1,baz=164,slow=5.5,SNR=4.2						
ASAJ	**Asahikawa**	**67.06**	**340**	P		**P 07 19 07.8**	**+0.6**
	4.7nm,0.7s,mb4.4,baz=294,slow=16,SNR=4.7						
SONM	**Songino Array**	**86.65**	**323**	P		**P 07 20 58.2**	**+1.2**
	0.8nm,0.7s,mb3.8,baz=154,slow=6.4,SNR=5.9						
SONM				LR		LR 07 56 07.3	
	comp=Z,38nm,18.1s,baz=219,slow=33						
NVAR	**Mina Array Bea**	**88.78**	**49**	P		**P 07 21 08.0**	**+0.5**
	1.1nm,0.7s,mb4.0,baz=229,slow=8.2						
TXAR	**Lajitas Array**	**96.87**	**61**	P		**P 07 21 45.8**	**+0.8**
	0.8nm,0.8s,mb4.2,baz=220,slow=5.5,SNR=5.7						
YKA	**Yellowknife Ar**	**100.44**	**27**	P		Pdif 07 22 00.4	-0.1
	1.0nm,0.6s,baz=256,slow=4.7,SNR=36						
MKAR	**Makanchi Array**	**101.17**	**316**	P		Pdif 07 22 05.4	+1.6
	0.2nm,0.4s,baz=97,slow=7.3,SNR=2.6						
ARCES	**ARCESS Array B**	**124.55**	**345**	PKP		PKPdf 07 27 11.2	-0.5
	4.0nm,0.8s,baz=75,slow=2.5,SNR=12						
GERES	**GERESS Array B**	**143.93**	**332**	PKP		PKPdf 07 27 46.9	-1.4
	0.9nm,0.5s,baz=315,slow=0.9,SNR=6.5						
GIVF	**Givet**	**146.26**	**341**	*e*PKP1		PKPbc 07 27 52.8	-0.7
BAIF	**Baives**	**146.48**	**342**	*e*PKP1		PKPbc 07 27 54.2	0.0
	12nm,0.8s						
CDF	**Champ du Feu**	**146.90**	**337**	*e*PKP1		PKPbc 07 27 55.4	0.0
	20nm,0.8s						
HAU	**Haudompre**	**147.57**	**338**	*e*PKP1		PKPbc 07 27 57.3	0.0
CABF	**La Chapelle**	**148.84**	**337**	*e*PKP1		PKPbc 07 28 01.1	+0.4
	14nm,0.6s						
LOR	**Lormes**	**149.06**	**340**	*e*PKP1		PKPbc 07 28 01.2	0.0
	11nm,0.6s						
SSF	**Saint Saulge**	**149.35**	**340**	*e*PKP1		PKPbc 07 28 02.0	+0.1
	15nm,0.8s						
LPL	**La Plagne**	**149.50**	**335**	*e*PKP1		PKPbc 07 28 02.9	+0.5
	12nm,0.8s						
LPG	**La Plagne**	**149.51**	**335**	*e*PKP1		PKPbc 07 28 03.0	+0.6
	9.5nm,0.6s						
SMF	**Signal de Mont**	**149.61**	**339**	*e*PKP1		PKPbc 07 28 02.3	-0.3
	3.9nm,0.6s						
AVF	**Avril sur Loir**	**149.64**	**340**	*e*PKP1		PKPbc 07 28 02.4	-0.3
BGF	**Bois d'Agland**	**150.01**	**341**	*e*PKP1		PKPbc 07 28 03.4	-0.2
	12nm,0.7s						
MBDF	**Montbardon**	**150.13**	**334**	*e*PKP1		PKPbc 07 28 03.8	-0.1
	7.2nm,0.7s						
ORIF	**Oris-en-Rattie**	**150.34**	**335**	*e*PKP1		PKPbc 07 28 04.5	+0.1
	20nm,0.6s						
TCF	**Toulx Ste Croi**	**150.45**	**341**	*e*PKP1		PKPbc 07 28 04.5	-0.1
	11nm,0.9s						
SBF	**Sospel**	**150.54**	**332**	*e*PKP1		PKPbc 07 28 05.1	+0.2
VIVF	**Saint-Julien-l**	**150.86**	**337**	*e*PKP1		PKPbc 07 28 05.6	0.0
FRF	**La Foret Royal**	**151.12**	**333**	*e*PKP1		PKPbc 07 28 06.4	+0.1
SMRF	**Simiane la Rot**	**151.24**	**334**	*e*PKP1		PKPbc 07 28 06.8	+0.3
	22nm,0.8s						
LMR	**La Mourre**	**151.37**	**333**	*e*PKP1		PKPbc 07 28 06.5	-0.4
LASF	**Ste Croix**	**151.83**	**337**	*e*PKP1		PKPbc 07 28 08.0	+0.1
MTLF	**Montolieu**	**153.06**	**338**	*e*PKP1		PKPbc 07 28 10.3	-0.4
TORD	**Torodi Ar. Bea**	**166.45**	**247**	PKP		PKPdf 07 28 17.4	-1.8
	1.4nm,0.9s,baz=137,slow=2.0,SNR=6.3						

*ISCJB **23** 07:16:39.3±0.4, 4366N±002×2080E±003, h10km, Error ellipse: s-maj=3.6km s-min=3.1km az=149.2*
*BEO **23** 07:16:40.6±0.2, 4365N×2078E, h0km±2km, ML2.7/11*

ISC 23 07:16:40.3±0.4, 4367N±002×2079E±003, h10km, n19, σ1.8/13/31, 4C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRUS	**Gruza**	**0.23**	**346**	⇑*i*Pg		**Pg 07 16 45.1**	**+0.1**
GRUS				*e*Sg		**Sg 07 16 49.0**	**+0.8**
SVIS	**Svilajnac**	**0.70**	**26**	*e*Pg		**Pg 07 16 52.8**	**-1.1**
SVIS				*e*Sg		**Sg 07 17 01.8**	**-1.3**
DIVS	**Divcibare**	**0.72**	**307**	⇑*i*Pg		**Pg 07 16 53.6**	**-0.6**
DIVS				*e*Sg		**Sg 07 17 03.5**	**-0.1**
SJES	**Sjenica**	**0.73**	**238**	⇓*i*Pg		**Pg 07 16 52.7**	**-1.8**
SJES				*e*Sg		**Sg 07 17 03.0**	**-1.1**
BBLS	**Bajina Basta -**	**1.02**	**282**	*e*Pg		**Pg 07 16 59.9**	**0.0**
BBLS				*e*Sg		**Sg 07 17 13.5**	**+0.3**
BARS	**Barje**	**1.14**	**138**	⇑*i*Pg		**Pg 07 17 01.1**	**-1.0**
BARS				*e*Sg		**Sg 07 17 16.3**	**-0.5**
BEO	**Belgrade**	**1.18**	**348**	*e*Pg		**Pg 07 17 02.1**	**-0.9**
BEO				*e*Sg		**Sg 07 17 18.5**	**+0.2**
DJES	**Djerdap**	**1.58**	**52**	*e*Pg		**Pg 07 17 10.1**	**-0.5**
DJES				*e*Sg		**Sg 07 17 29.9**	**-0.2**
FGSL	**Fruska Gora**	**1.65**	**335**	*e*Pn		**Pn 07 17 10.7**	**+1.4**
FGSL				*e*Sn		**Sg 07 17 33.5**	**+0.2**
BZS	**Buzias**	**2.04**	**17**	*e*Pn		**Pn 07 17 16.5**	**+1.9**
BZS				*e*Sn		**Sn 07 17 42.4**	**+2.3**
BZS	**Buzias**	**2.04**	**17**	⇓*i*P		**Pn 07 17 13.3**	**-1.3**
BZS	**Buzias**	**2.04**	**17**	S		**Sn 07 17 42.4**	**+2.3**
VTS	**Vitosha**	**2.07**	**120**	*e*Pn		**Pn 07 17 16.8**	**+1.7**
VTS				*e*Sg		**Sg 07 17 46.3**	**-0.5**
GZR	**Gura Zlata**	**2.24**	**39**	⇓*i*P		**Pn 07 17 19.5**	**+2.1**
GZR	**Gura Zlata**	**2.24**	**39**	S		**Sg 07 17 50.7**	**-1.4**
KRUS	**Krusevo**	**2.32**	**171**	*e*Pn		**Pn 07 17 20.4**	**+1.9**
KRUS				*e*Sn		**Sn 07 17 48.3**	**+1.2**
PKSM	**Moragy**	**2.97**	**330**	*e*Pn		**Pn 07 17 26.7**	**-0.7**
DRGR		**3.41**	**23**	⇑*i*P		**Pg 07 17 49.4**	**+3.8**
DRGR		**3.41**	**23**	S		**Sb 07 18 27.3**	**+5.1**

*NIED **23** 07:20:00, 3330N×137.00E, h5km, Mw4.3 Best double couple: M0 3.19000×10^15 NP1:ϕs 63.00000°, δ 37.00000°, λ -10.00000°. NP2:ϕs 161.00000°, δ 84.00000°, λ -127.00000°.*
*IDC **23** 07:20:49.6±1.3, 3331N×136.97E, h0km, mb3.9/5, mb1 3.9/8, mb1mx3.7/23, mbtmp3.7/8, ML2.8/3, MS3.4/7, Ms1 3.4/7, ms1mx3.2/42, Error ellipse: s-maj=37.8km s-min=19.0km az=66.0*
*ISCJB **23** 07:20:51.0±0.8, 3337N±004×136.95E±004, h26km±6km, mb3.9/6, MS3.6/3, Error ellipse: s-maj=7.0km s-min=5.2km az=154.4*
*JMA **23** 07:20:51.1±0.1, 33.34N×136.97E, h41km±2km, M3.5*
*MOS **23** 07:20:52.1±0.5, 33.36N×136.97E, h33km, mb4.3/2, Error ellipse: s-maj=47.1km s-min=17.8km az=85.9*
*NEIC **23** 07:20:53.1±1.2, 33.36N×136.95E, h25km, mb4.2/1, Error ellipse: s-maj=24.1km s-min=13.6km az=129.0*

ISC 23 07:20:51.1±0.8, 3343N±004×13692E±004, h13km±5km, n32, σ0.97/37, mb3.9/6, MS3.6/3, 6C, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK01	**Tokai 1**	**0.65**	**59**	P		**Pg 07 21 04.1**	**+0.3**
TK02	**Tokai 2**	**0.87**	**53**	P		**Pg 07 21 07.1**	**-0.8**
TK02				S		**Sg 07 21 19.1**	**-0.2**
JKN2	**Miekihoku**	**0.97**	**327**	⇑P		**Pg 07 21 09.9**	**0.0**
JIE	**Ise**	**0.98**	**349**	⇑P		**Pg 07 21 10.4**	**+0.4**
JIE				S		**Sg 07 21 23.6**	**+0.7**
JWZ	**Kozaga**	**1.01**	**276**	⇑P		**Pb 07 21 09.8**	**-0.8**
JWZ				S		**Sb 07 21 23.2**	**-0.6**
JAA	**Atsumi**	**1.22**	**9**	P		**Pn 07 21 13.3**	**-0.5**
JAA				S		**Sb 07 21 29.1**	**-0.5**
TK04	**Tokai 4**	**1.24**	**39**	P		**Pn 07 21 13.

MAJO	**Matsushiro**	**3.28**	**18**	*e*Pn		**Pn**	**07 21 42.6**	**+0.3**
MAT	**Matsushiro**	**3.28**	**18**	P		**Pn**	**07 21 43.3**	**+1.0**
MAT				*e*S		**Sn**	**07 22 20.5**	**-0.7**
JNU	**Nakatsue**	**5.07**	**268**	Pn		**Pn**	**07 22 06.9**	**+0.1**
	0.2nm,0.3s,baz=56,slow=19,SNR=3.6							
KSRS	**Korea Array**	**8.37**	**301**	Pn		**Pn**	**07 22 53.3**	**+1.2**
	0.1nm,0.3s,baz=114,slow=14,SNR=4.7							
KSRS				LR		LR	07 26 16.6	
	comp=Z,285nm,19.9s,baz=165,slow=38							
JOW	**Kunigami**	**9.96**	**231**	LR		LR	07 26 56.8	
	comp=Z,96nm,19.6s,baz=105,slow=37							
ASAJ	**Asahikawa**	**11.55**	**21**	LR		LR	07 28 27.7	
	comp=Z,151nm,21.4s,baz=2.5,slow=39							
SONM	**Songino Array**	**27.06**	**311**	P		**P**	**07 26 34.0**	**+0.8**
	0.7nm,0.7s,mb3.3,baz=124,slow=11,SNR=5.1							
SONM				LR		LR	07 37 58.4	
	comp=Z,82nm,19.9s,MS3.3,baz=338,slow=38							
TIXI	**Tiksi**	**38.53**	**356**	*e*P		**P**	**07 28 14.9**	**+2.1**
	3.4nm,0.8s,mb4.1							
TIXI	**Tiksi**	**38.53**	**356**	*e*P		**P**	**07 28 13.2**	**+0.4**
TIXI				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.1							
MKAR	**Makanchi Array**	**43.03**	**305**	P		**P**	**07 28 52.5**	**+2.1**
MKAR				LR		LR	07 47 35.8	
MKAR	**Makanchi Array**	**43.03**	**305**	P		**P**	**07 28 52.5**	**+2.1**
	comp=Z,1.3nm,0.6s,mb3.8,baz=93,slow=9.7,SNR=14							
MKAR				LR		LR	07 47 35.8	
	comp=Z,88nm,21.6s,MS3.6,baz=350,slow=37							
WRA	**Warramunga Arr**	**53.12**	**183**	P		**P**	**07 30 08.1**	**-0.4**
	comp=Z,1.1nm,0.8s,mb3.8,baz=2.1,slow=7.7,SNR=12							
ASAR	**Alice Springs**	**56.85**	**183**	P		**P**	**07 30 36.0**	**+0.6**
ASAR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**56.85**	**183**	P		**P**	**07 30 36.0**	**+0.6**
	comp=Z,0.8nm,0.8s,mb3.8,baz=19,slow=11,SNR=6.1							
STKA	**Stephens Creek**	**65.10**	**176**	P		**P**	**07 31 30.4**	**-1.0**
	comp=Z,1.3nm,0.4s,mb4.3,baz=356,slow=11,SNR=5.3							
GERES	**GERESS Array B**	**83.75**	**326**	LR		LR	08 14 45.9	
	comp=Z,57nm,18.6s,MS4.0,baz=18,slow=39							

ISCJB ***23*** *07:26:32.8±0.5, 134N±007×1263E±02, h10km, mb4.5/13, Error ellipse: s-maj=29.6km s-min=7.7km az=165.8*
IDC ***23*** *07:26:32.7±0.6, 127N×12655E, h0km, mb4.4/11, mb1 4.4/12, mb1mx4.3/17, mbtmp4.3/12, ML4.4/1, Error ellipse: s-maj=41.1km s-min=9.6km az=75.0*
NEIC ***23*** *07:26:34.5±0.3, 137N×12643E, h10km, mb4.7/3, Error ellipse: s-maj=22.7km s-min=6.0km az=74.0*

ISC 23 07:26:33.2±3.9, 133N±007×1263E±02, h1km±24km, n23, σ0§52/21, mb4.5/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**15.21**	**157**	*e*P	**Pn**	**07 30 09.0**	**-0.3**
	16nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.32**	**182**	*e*P	**Pn**	**07 31 00.4**	**-0.6**
	4.8nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.32**	**182**	P	**Pn**	**07 31 00.6**	**-0.4**
	0.8nm,0.3s,baz=13,slow=11,SNR=17						
WRA	**Warramunga Arr**	**22.55**	**160**	P	**P**	**07 31 34.9**	**0.0**
	40nm,0.6s,mb5.2,baz=338,slow=11,SNR=189						
WRA				S	**S**	**07 35 37.5**	**-5.9**
	1.8nm,1.1s,baz=338,slow=21,SNR=3.7						
WB2	**Warramunga Arr**	**22.55**	**160**	*e*P	**P**	**07 31 35.0**	**+0.1**
JOW	**Kunigami**	**25.42**	**4**	P	**P**	**07 32 02.5**	**0.0**
	18nm,1.0s,mb4.8,baz=164,slow=25,SNR=2.2						
ASAR	**Alice Springs**	**25.91**	**164**	P	**P**	**07 32 07.2**	**+0.2**
	4.0nm,0.5s,mb4.3,baz=345,slow=7.7,SNR=76						
ASAR				S	**S**	**07 36 38.0**	**-0.1**
	0.7nm,0.9s,baz=346,slow=20,SNR=3.5						
NWAO	**Narrogin (SRO)**	**35.14**	**193**	P	**P**	**07 33 29.2**	**+0.7**
	7.3nm,0.7s,mb4.7,baz=352,slow=7.1,SNR=2.8						
KSRS	**Korea Array**	**35.98**	**2**	P	**P**	**07 33 37.0**	**+1.3**
	0.6nm,0.4s,mb3.7,baz=181,slow=9.6,SNR=2.9						
STKA	**Stephens Creek**	**36.05**	**158**	*e*P	**P**	**07 33 36.6**	**+0.2**
	4.8nm,0.6s,mb4.5						
STKA	**Stephens Creek**	**36.05**	**158**	P	**P**	**07 33 36.8**	**+0.4**
	5.5nm,0.6s,mb4.5,baz=337,slow=8.9,SNR=13						
MJAR	**Matsushiro Arr**	**36.72**	**16**	P	**P**	**07 33 41.1**	**-0.9**
	1.0nm,0.3s,mb4.0,baz=180,slow=9.6,SNR=4.0						
SONM	**Songino Array**	**49.44**	**342**	P	**P**	**07 35 25.3**	**+0.5**
	0.6nm,0.5s,mb3.9,baz=161,slow=8.5,SNR=6.1						
MKAR	**Makanchi Array**	**59.30**	**326**	P	**P**	**07 36 36.4**	**-0.3**
	1.9nm,0.4s,mb4.5,baz=125,slow=8.5,SNR=17						
KURK	**Kurchatov**	**63.55**	**328**	*e*P	**P**	**07 37 04.6**	**-0.7**
	11nm,0.8s,mb5.1						
AKTK	**Aktyubinsk**	**75.29**	**322**	P	**P**	**07 38 18.0**	**0.0**
AKTO	**Aktyubinsk**	**75.29**	**322**	P	**P**	**07 38 18.0**	**0.0**
	2.0nm,0.5s,mb4.5,baz=90,slow=7.0,SNR=5.9						
ARCES	**ARCESS Array B**	**92.55**	**340**	P	**P**	**07 39 45.3**	**-0.6**
	4.8nm,1.0s,mb4.9,baz=70,slow=5.3,SNR=3.5						
FINES	**FINESS Array B**	**93.75**	**332**	P	**P**	**07 39 51.9**	**+0.3**
	3.4nm,1.1s,mb4.6,baz=34,slow=15,SNR=3.1						
YKA	**Yellowknife Ar**	**101.83**	**24**	P	Pdif	07 40 27.6	-0.6
	0.1nm,0.7s,baz=298,slow=4.7,SNR=4.2						
SCHQ	**Schefferville**	**122.98**	**9**	PKP	PKPdf	07 45 31.3	-0.1
	3.8nm,0.9s,baz=263,slow=6.7,SNR=9.3						
TORD	**Torodi Ar. Bea**	**123.26**	**287**	PKP	PKPdf	07 45 32.6	-0.4
	0.7nm,0.9s,baz=56,slow=1.9,SNR=3.5						
TXAR	**Lajitas Array**	**123.35**	**53**	PKP	PKPdf	07 45 32.9	+0.1
	0.2nm,0.8s,baz=207,slow=1.4,SNR=3.8						

ISCJB ***23*** *07:31:19.2±0.9, 2211S±006×6834W±010, h95km±10km, mb4.2/10, Error ellipse: s-maj=16.1km s-min=8.3km az=20.8*
NEIC ***23*** *07:31:20.1±1.0, 2216S×6831W, h70km±19km, mb4.2/1, Error ellipse: s-maj=27.9km s-min=9.9km az=105.0*
GUC ***23*** *07:31:21.7±0.8, 2217S×6859W, h120km, ML4.5*
IDC ***23*** *07:31:23.4±0.6, 2196S×6845W, h120km±5km, mb4.1/10, mb1 4.1/12, mb1mx4.0/17, mbtmp4.0/12, Error ellipse: s-maj=22.7km s-min=13.8km az=84.0*

ISC 23 07:31:19.8±0.7, 2210S±005×6825W±008, h84km±8km, h120km±1.9km; pP-P, n25, σ1§29/27, mb4.2/10, 1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**2.21**	**234**	*e*P	**Pn**	**07 31 58.1**	**+3.4**
CEN1				*e*S	**Sn**	**07 32 24.3**	**+3.0**
CEN1				AML	AML	07 32 33.2	
	comp=N,2μm,0.6s						
ANCH	**Antofagasta**	**2.54**	**231**	*e*P	**Pn**	**07 31 59.6**	**+0.6**
ANCH				*i* S	**Sn**	**07 32 27.9**	**-1.2**
ANCH				AML	AML	07 32 39.0	
	comp=E,3μm,0.7s						
CPN1	**Cerro Paranal**	**3.20**	**218**	*e*P	**Pn**	**07 32 08.6**	**+0.7**
CPN1				*i* S	**Sn**	**07 32 44.6**	**-0.5**
CPCH	**Copiapo**	**5.58**	**200**	*e*P	**Pn**	**07 32 40.9**	**+0.7**
CPCH				*e*S	**Sn**	**07 33 41.5**	**-1.4**
LPAZ	**La Paz**	**5.78**	**1**	P	**Pn**	**07 32 45.1**	**+2.1**
	comp=E,3.3nm,0.3s,baz=194,slow=7.5,SNR=88						
LPAZ				S	**Sn**	**07 33 37.9**	**-10**
	comp=E,2.6nm,0.3s,baz=188,slow=11,SNR=7.5						
LCO	**Las Campanas**	**7.23**	**197**	*e*Pn	**Pn**	**07 33 01.9**	**-0.9**
	comp=E,27nm,0.6s						
SIV	**San Ignacio**	**9.10**	**49**	P	**Pn**	**07 33 29.5**	**+1.1**
	comp=E,8.6nm,0.3s,baz=237,slow=11,SNR=198						
SIV				S	**Sn**	**07 35 06.6**	**-2.6**
	comp=E,1.2nm,0.3s,baz=237,slow=21,SNR=4.0						
CFAA	**Coronel Fontan**	**9.47**	**180**	P	**Pn**	**07 33 32.9**	**-0.4**
	comp=E,0.7nm,0.3s,baz=352,slow=13,SNR=41						
CFAA				S	**Sn**	**07 35 15.4**	**-2.5**
	comp=E,0.1nm,0.3s,baz=102,slow=22,SNR=4.2						
TRQA	**Tornquist**	**16.80**	**163**	*e*Pn	**Pn**	**07 35 11.2**	**+1.5**
	comp=E,14nm,0.8s						
PLCA	**Paso Flores**	**18.68**	**185**	P	**Pn**	**07 35 32.4**	**-0.1**
	comp=E,1.1nm,0.3s,baz=7.3,slow=13,SNR=30						
USHA	**Ushuaia**	**32.69**	**180**	P	**P**	**07 37 44.2**	**+0.3**
	comp=E,7.7nm,0.9s,mb4.5,baz=344,slow=9.8,SNR=6.0						
SNAA	**Sanae**	**61.52**	**161**	P	**P**	**07 41 28.8**	**+1.4**
	comp=E,2.3nm,0.6s,mb4.4,baz=281,slow=7.7,SNR=20						
DBIC	**Dimbokro**	**68.32**	**73**	P	**P**	**07 42 13.1**	**+0.6**
	comp=E,3.2nm,0.4s,mb4.5,baz=208,slow=7.6,SNR=12						
PDAR	**Pinedale Array**	**74.93**	**330**	P	**P**	**07 42 50.5**	**-1.0**
	comp=E,0.6nm,0.5s,mb3.6,baz=133,slow=7.4,SNR=8.0						
PDAR				pP	pP	07 43 21.4	+7.9
	comp=E,0.5nm,0.8s,baz=133,slow=6.6,SNR=2.9						
ULM	**Lac du Bonnet**	**76.07**	**342**	P	**P**	**07 42 55.8**	**-2.2**
	comp=E,0.9nm,0.5s,mb3.8,baz=177,slow=11,SNR=4.7						
VNDA	**Vanda**	**76.37**	**190**	P	**P**	**07 43 00.3**	**+0.9**
	comp=E,1.1nm,0.8s,mb3.6,baz=123,slow=2.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**76.98**	**70**	P	**P**	**07 43 03.8**	**-0.1**
	comp=E,6.9nm,0.4s,mb4.7,baz=256,slow=5.4,SNR=76						
TORD				pP	pP	07 43 34.1	+8.3
	comp=E,3.4nm,0.8s,baz=252,slow=5.1,SNR=7.1						
BOSA	**Boshof**	**82.62**	**118**	P	**P**	**07 43 34.9**	**+0.6**
	comp=E,5.2nm,0.9s,mb4.3,baz=214,slow=3.9,SNR=4.4						
MAW	**Mawson**	**83.58**	**163**	P	**P**	**07 43 39.4**	**+1.0**
	comp=E,3.6nm,0.5s,mb4.4,baz=223,slow=8.6,SNR=17						
YKA	**Yellowknife Ar**	**91.95**	**340**	P	**P**	**07 44 16.8**	**-1.6**
	comp=E,1.4nm,0.6s,mb4.4,baz=133,slow=4.5,SNR=70						
YKA				pP	pP	07 44 47.0	+6.0
	comp=E,0.8nm,0.7s,baz=133,slow=4.5,SNR=9.3						
YKA				sP	sP	07 45 00.2	+10
	comp=E,0.4nm,0.5s,baz=134,slow=4.4,SNR=3.3						
ASAR	**Alice Springs**	**129.66**	**207**	PKP	PKPdf	07 50 19.1	-0.8
	comp=E,0.7nm,0.4s,baz=124,slow=1.8,SNR=8.8						
WRA	**Warramunga Arr**	**132.75**	**209**	PKP	PKPdf	07 50 24.9	-0.9
	comp=E,1.0nm,0.5s,baz=158,slow=1.7,SNR=22						
FITZ	**Fitzroy Crossi**	**137.80**	**200**	PKP	PKPdf	07 50 34.7	-0.6
	comp=E,0.8nm,0.6s,baz=224,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**145.75**	**37**	PKPbc	PKPbc	07 50 48.6	-0.5
	comp=E,1.3nm,0.6s,baz=326,slow=2.3,SNR=19						
MKAR				pPKPbc	pPKPbc	07 51 20.8	+8.6
	comp=E,0.8nm,0.6s,baz=320,slow=4.4,SNR=2.7						
SONM	**Songino Array**	**153.96**	**8**	PKP	PKPdf	07 50 59.6	-1.8
	comp=E,0.4nm,0.7s,baz=347,slow=5.9,SNR=3.9						
SONM				PKPbc	PKPbc	07 51 08.4	-1.1
	comp=E,0.5nm,0.6s,baz=355,slow=1.7,SNR=3.9						

IDC 23 07:42:52.5±58.0, 1437S×16454E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, Error ellipse: s-maj=966.4km s-min=103.1km az=64.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.27**	**226**	P	P	07 48 38.8	0.0
	1.3nm,0.4s,baz=46,slow=9.5,SNR=5.3						
WRA	**Warramunga Arr**	**29.36**	**255**	P	P	07 48 57.5	0.0
	0.3nm,0.5s,baz=86,slow=9.2,SNR=7.3						
ASAR	**Alice Springs**	**30.35**	**248**	P	P	07 49 06.4	+0.2
	0.6nm,0.4s,baz=74,slow=9.3,SNR=20						

IDC 23 07:47:56.0±2.5, 4924S×10894E, h0km, mb4.2/2, mb1 4.4/2, mb1mx4.0/12, mbtmp4.2/2, MS3.5/2, Ms1 3.5/2, ms1mx3.1/20, Error ellipse: s-maj=131.4km s-min=45.3km az=122.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**32.19**	**47**	P	P	07 54 25.7	+0.1
	2.0nm,0.7s,baz=207,slow=8.4,SNR=14						
FITZ	**Fitzroy Crossi**	**33.87**	**29**	LR	LR	08 06 52.3	
	comp=Z,64nm,19.6s,baz=278,slow=34						
WRA	**Warramunga Arr**	**35.60**	**44**	P	P	07 54 55.3	+0.1
	3.0nm,0.7s,baz=208,slow=8.1,SNR=16						
CTA	**Charters Tower**	**41.60**	**59**	LR	LR	08 11 38.4	
	comp=Z,27nm,20.2s,baz=231,slow=34						
TXAR	**Lajitas Array**	**148.24**	**117**	PKPbc	PKPbc	08 07 44.4	+0.7
	0.5nm,0.8s,baz=207,slow=7.6,SNR=7.3						
YKA	**Yellowknife Ar**	**152.81**	**44**	PKPbc	PKPbc	08 07 52.3	-1.2
	0.4nm,0.7s,baz=282,slow=2.1,SNR=9.5						

WEL 23 07:49:05.2±0.4, 3816S×17583E, h188km±4km, ML3.5/17, Error ellipse: s-maj=4.6km s-min=4.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.01**	**96**	PN	Pn	07 49 33.8	+0.1
URZ				SN	Sn	07 49 55.4	-0.3
TUVZ	**Tukino**	**1.12**	**187**	PN	Pn	07 49 34.8	+0.3
BKZ	**Black Stump Fm**	**1.13**	**153**	PN	Pn	07 49 34.7	+0.2
BKZ				SN	Sn	07 49 58.1	+0.6
WNVZ	**Wahianoa**	**1.18**	**189**	PN	Pn	07 49 35.3	+0.3
MOVZ	**Moawhango**	**1.25**	**183**	PN	Pn	07 49 35.3	-0.2
MWZ	**Matawai**	**1.35**	**98**	PN	Pn	07 49 36.7	+0.3
MWZ				SN	Sn	07 49 60.0	-0.5
KNZ	**Kokohu**	**1.68**	**121**	PN	Pn	07 49 38.7	+0.2
TSZ	**Takapari Road**	**1.90**	**177**	PN	Pn	07 49 40.9	-0.7
PUZ	**Puketiti**	**1.92**	**88**	PN	Pn	07 49 41.9	0.0
PUZ				SN	Sn	07 50 08.6	-1.7
MXZ	**Matakaoa Point**	**2.05**	**74**	PN	Pn	07 49 43.5	+0.2
MRZ	**Mangatainoka R**	**2.51**	**184**	PN	Pn	07 49 46.4	-1.9
MRZ				SN	Sn	07 50 18.0	-4.0
BFZ	**Birch Farm**	**2.54**	**173**	PN	Pn	07 49 47.0	-1.7
TIWZ	**Tintock**	**2.62**	**179**	PN	Pn	07 49 47.8	-1.7
KIW	**Kapiti Island**	**2.79**	**194**	PN	Pn	07 49 49.2	-2.4
CAW	**Cannon Point**	**3.00**	**191**	PN	Pn	07 49 51.8	-2.3
MTW	**Mount Morrison**	**3.01**	**185**	PN	Pn	07 49 51.4	-2.8
MRW	**Makara Radio**	**3.19**	**195**	PN	Pn	07 49 53.8	-2.5
MRW				SN	Sn	07 50 31.3	-5.1
SNZO	**South Karori**	**3.26**	**195**	PN	Pn	07 49 54.4	-2.9
TCW	**Tory Channel**	**3.28**	**201**	PN	Pn	07 49 54.9	-2.5
NNZ	**Nelson**	**3.59**	**211**	PN	Pn	07 49 58.5	-2.8
QRZ	**Quartz Range**	**3.69**	**223**	PN	Pn	07 49 59.6	-2.9
THZ	**Tophouse**	**4.24**	**211**	PN	Pn	07 50 07.1	-2.4
KHZ	**Kahutara**	**4.60**	**202**	PN	Pn	07 50 10.8	-3.3

CSEM ***23*** *07:49:55.6±0.6, 7995N×2121E, h5km, ML3.2, Error ellipse: s-maj=12.9km s-min=5.7km az=20.0*
BER ***23*** *07:49:56.9±3.3, 7995N×2142E, h15km±38km, MD2.3, ML3.5, ML3.2(NAO)*

NAO 23 07:49:58.2±3.5, 7991N×2056E, h22km±16km, ML3.2, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.88**	**242**	Pn	Pn	07 50 28.3	-0.6
KBS				Pg	Pn	07 50 32.9	+4.0
KBS				Lg		07 50 58.0	
KBS	**Kingsbay**	**1.88**	**242**	*e*P	Pn	07 50 28.2	-0.7
KBS				*e*Pg	Pn	07 50 32.7	+3.8
KBS				*e*Sg	Sn	07 50 57.7	+5.8
KBS				AML	AML	07 51 03.0	
	comp=Z,621nm,0.5s						
SPA0	**Spitsbergen Ar**	**1.92**	**207**	Pn	Pn	07 50 28.7	-0.8
	baz=10,slow=10						
SPA0				Pg	Pn	07 50 33.3	+3.8
	baz=19,slow=14						
SPA0				Lg		07 50 59.1	
	baz=32,slow=37						
SPA0	**Spitsbergen Ar**	**1.92**	**207**	Pg	Pn	07 50 33.3	+3.8
	SNR=8.7						
ARA0	**ARCESS Array S**	**10.51**	**170**	Pn	Pn	07 52 25.4	-1.9
	baz=357,slow=10						
ARA0				Sn	Sn	07 54 15.5	-8.6
	baz=358,slow=22						

ISCJB ***23*** *07:51:53.4±0.9, 72S±01×1212E±01, h545km±8km, mb3.9/9, Error ellipse: s-maj=25.6km s-min=12.0km az=137.6*
NEIC ***23*** *07:51:53.7±1.4, 720S×12116E, h534km±16km, mb4.6/2, Error ellipse: s-maj=17.1km s-min=13.1km az=72.0*
IDC ***23*** *07:51:54.4±0.9, 724S×12127E, h541km±9km, mb3.4/10, mb1 3.4/12, mb1mx3.3/20, mbtmp3.4/12, Error ellipse: s-maj=22.5km s-min=9.7km az=54.0*

ISC 23 07:51:54.5±0.9, 72S±01×1213E±01, h541km±8km, n24, σ0§74/23, mb3.9/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**3.78**	**141**	P	**P**	**07 53 15.3**	**+1.2**
	131nm,0.3s,baz=322,slow=1.8,SNR=21						
BATI				S	**S**	**07 54 17.9**	**-1.0**
	33nm,0.3s,baz=354,slow=18,SNR=5.8						
FITZ	**Fitzroy Crossi**	**11.60**	**159**	P	**P**	**07 54 29.0**	**+0.1**
	0.3nm,0.3s,baz=330,slow=7.8,SNR=11						
KAKA	**Kakadu**	**12.27**	**117**	*e*P	**P**	**07 54 35.5**	**-0.4**
	21nm,0.5s						
WRA	**Warramunga Arr**	**17.89**	**136**	P	**P**	**07 55 32.7**	**+0.9**
	2.6nm,0.3s,baz=315,slow=11,SNR=101						
WRA				S	**S**	**07 58 28.0**	**-0.9**
	0.2nm,0.3s,baz=315,slow=16,SNR=4.8						
WB2	**Warramunga Arr**	**17.90**	**136**	*e*P	**P**	**07 55 32.3**	**+0.4**
ASAR	**Alice Springs**	**20.34**	**145**	P	**P**	**07 55 54.5**	**+0.4**
	1.2nm,0.5s,baz=316,slow=8.5,SNR=17						
ASAR				S	**S**	**07 59 06.3**	**-2.0**
	1.6nm,0.7s,baz=311,slow=15,SNR=4.5						
ASAR				PcP	PcP	07 59 42.8	+0.1
	0.8nm,0.4s,baz=342,slow=1.2,SNR=6.3						
ASAR				ScP	ScP	08 02 28.0	-0.2
	0.9nm,0.5s,baz=348,slow=2.7,SNR=5.5						
NWAO	**Narrogin (SRO)**	**25.83**	**188**	P	**P**	**07 56 41.9**	**-1.1**
NWAO	**Narrogin (SRO)**	**25.83**	**188**	P	**P**	**07 56 41.9**	**-1.1**
	2.2nm,0.3s,mb4.2,baz=27,slow=8.8,SNR=5.6						
STKA	**Stephens Creek**	**30.98**	**145**	*e*P	**P**	**07 57 29.0**	**+1.1**
	1.7nm,0.2s,mb4.2						
STKA	**Stephens Creek**	**30.98**	**145**	P	**P**	**07 57 29.0**	**+1.1**
	2.3nm,0.3s,mb4.2,baz=320,slow=11,SNR=13						
STKA				S	**S**	**08 01 55.7**	**+1.1**
	3.9nm,0.9s,baz=50,slow=20,SNR=2.9						
SONM	**Songino Array**	**56.39**	**348**	P	**P**	**08 00 43.7**	**-0.8**
	0.5nm,0.5s,mb3.0,baz=165,slow=9.0,SNR=2.8						
URZ	**Urewera**	**58.95**	**131**	P	**P**	**08 01 02.0**	**-0.2**
	3.0nm,0.5s,mb3.8,baz=243,slow=11,SNR=5.1						
MKAR	**Makanchi Array**	**63.97**	**331**	P	**P**	**08 01 34.6**	**-0.1**
	2.8nm,0.6s,mb3.9,baz=139,slow=7.3,SNR=43						
MAW	**Mawson**	**71.65**	**200**	P	**P**	**08 02 21.2**	**+0.1**
	1.2nm,0.4s,mb3.7,baz=22,slow=13,SNR=8.6						
OPO	**Ambohidratompo**	**72.68**	**253**	P	**P**	**08 02 28.1**	**-0.1**
	1.7nm,0.6s,mb3.7,baz=35,slow=5.5,SNR=5.4						
VNDA	**Vanda**	**73.37**	**172**	P	**P**	**08 02 31.6**	**+0.6**
	baz=311,slow=7.5						
QSPA	**South Pole Qui**	**82.74**	**180**	P	**P**	**08 03 21.7**	**+0.5**
	2.7nm,0.5s,mb4.0,baz=302,slow=1.5,SNR=37						
BOSA	**Boshof**	**91.82**	**241**	P	**P**	**08 04 05.0**	**-0.4**
BOSA	**Boshof**	**91.82**	**241**	P	**P**	**08 04 05.0**	**-0.4**
	1.5nm,0.7s,mb4.2,baz=80,slow=19,SNR=4.2						
YKA	**Yellowknife Ar**	**111.67**	**24**	PKiKP	PKiKP	08 09 26.6	-0.8
	0.1nm,0.4s,baz=299,slow=1.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**120.35**	**281**	PKP	PKPdf	08 09 43.8	-1.7
	0.9nm,0.7s,baz=48,slow=2.5,SNR=7.4						
ISCO	**Idaho Springs**	**127.03**	**45**	*e*PKPdf	PKPdf	08 09 59.6	+2.0
TXAR	**Lajitas Array**	**132.40**	**57**	PKP	PKPdf	08 10 07.9	-0.2
	0.6nm,1.1s,baz=262,slow=0.9,SNR=4.4						
LPAZ	**La Paz**	**154.84**	**158**	PKPab	PKPab	08 11 15.2	+1.7
	0.8nm,0.3s,baz=158,slow=5.4,SNR=7.3						

CASC 23 07:53:47.4±2.1, 847N×8011W, h13km±13km, MD4.1, 4C-3D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AZU	**Azuero**	**0.70**	**194**	*i*P	Pg	07 53 59.5	-1.5
AZU				*e*S	Sg	07 54 10.0	-0.2
BCIP	**Isla Barro Col**	**0.74**	**21**	*e*P	Pg	07 54 00.9	-0.8
BCIP				*e*S	Sg	07 54 11.6	+0.1
UPIG		**0.77**	**48**	*i*P	Pg	07 54 01.8	-0.5
UPIG				*e*S	Sg	07 54 12.6	+0.3
PINA	**Piqa, Costa Ab**	**0.78**	**3**	*e*S	Sg	07 54 12.1	-0.6
ACLA	**Agua Clara, Si**	**0.97**	**24**	*e*S	Sb	07 54 17.9	-1.0
DVD	**David**	**2.32**	**269**	*e*S	Sn	07 54 54.7	+1.0
TBS2		**2.54**	**277**	*e*P	Pn	07 54 34.0	+5.7
TBS2				*e*S	Sn	07 55 06.5	+7.3
CNI	**Changuinola**	**2.56**	**292**	*e*P	Pn	07 54 26.9	-1.7
BRU2	**Volcan**	**2.57**	**277**	*e*P	Pn	07 54 29.7	+0.8
BRU2				*e*S	Sn	07 55 00.9	+0.9
CTCR	**Cotoan**	**2.66**	**279**	*e*P	Pn	07 54 30.6	+0.6
CTCR				*e*S	Sn	07 55 03.7	+1.6
BAR1		**3.26**	**284**	*e*P	Pn	07 54 39.2	+1.0
URSC	**Urasca**	**3.87**	**291**	*e*P	Pn	07 54 45.7	-1.0
LCR2	**La Lucha 2**	**4.05**	**288**	*e*P	Pn	07 54 49.4	+0.3
PRS1	**Puriscal**	**4.41**	**290**	*e*P	Pn	07 54 55.8	+1.6

JMA 23 07:54:08.2±0.2, 4100N×14579E, h54km±4km, M3.5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**2.15**	**338**	P	Pn	07 54 42.8	+1.1
JAK				*e*S	Sn	07 55 08.3	+1.1
JEM	**Erimo**	**2.22**	**298**	*e*S	Sn	07 55 09.4	+0.6
NEM2	**Nemuro 2

GNL				*i* S	Sn	08 11 04.2	+2.1
PET	**Petropavlovsk**	**2.94**	**226**	*e*PN	Pn	08 10 32.2	+1.9
PET				*e*S	Sn	08 11 07.8	+3.4
PET				pmax	pmax		
	comp=Z,43nm,0.3s						
PET				smax			
	comp=N,209nm,0.5s						
PET				smax			
	comp=E,175nm,0.6s						
PET	**Petropavlovsk**	**2.94**	**226**	*e*P	Pn	08 10 32.1	+1.8
PET				*i* S	Sn	08 11 05.8	+1.4
RUS	**Russkaya**	**3.44**	**220**	P	Pn	08 10 38.9	+1.6
RUS				*i* S	Sn	08 11 18.7	+1.8
GRL	**Gorelyy**	**3.52**	**225**	P	Pn	08 10 41.3	+2.9
GRL				*i* S	Sn	08 11 22.5	+3.6
MIPR	**Malaya Ipel'ka**	**4.28**	**231**	P	Pn	08 10 52.7	+3.9

BJI ***23*** *08:12:06.8, 4674N×15351E, h25km, mB4.5, mb4.3*
NEIC ***23*** *08:12:07.2±1.5, 4652N×15322E, h10km, mb3.8/1, Error ellipse: s-maj=33.7km s-min=12.2km az=135.0*
IDC ***23*** *08:12:08.8±0.8, 4675N×15284E, h0km, mb4.0/14, mb1 4.2/15, mb1mx4.1/21, mbtmp4.0/15, ML3.9/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/30, Error ellipse: s-maj=23.3km s-min=17.4km az=128.0*
MOS ***23*** *08:12:11.6±1.4, 4670N×15265E, h33km, mb4.7/6, Error ellipse: s-maj=11.7km s-min=9.7km az=66.1*
ISCJB ***23*** *08:12:12.6±1.2, 4667N±008×1527E±01, h39km±9km, mb4.1/23, MS3.7/8, Error ellipse: s-maj=17.6km s-min=6.9km az=136.6*

ISC 23 08:12:15.7±1.1, 4673N±008×1527E±01, h49km±8km, n52, σ1°9/19/55, mb4.1/23, MS3.7/8, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KUR	**Kuril'sk**	**3.66**	**248**	*e*PN	**Pn**		**08 13 08.0**	**-1.8**
KUR				*e*S	**Sn**		**08 13 53.4**	**+1.7**
KUR				pmax	pmax			
	comp=Z,280nm,0.9s							
KUR				smax				
	comp=N,4μm,2.0s							
KUR				smax				
	comp=E,2μm,2.0s							
KUR				smax				
	comp=N,750nm,0.8s							
KUR				smax				
	comp=E,320nm,0.8s							
SKR	**Severo-Kuril's**	**4.57**	**29**	*e*PN	**Pn**		**08 13 22.0**	**-0.3**
SKR				*e*S	**Sn**		**08 14 16.0**	**+1.9**
SKR				pmax	pmax			
	comp=Z,220nm,1.0s							
SKR				smax				
	comp=N,220nm,1.0s							
SKR				smax				
	comp=E,400nm,1.0s							
SKR				smax				
	comp=Z,220nm,1.0s							
SKR				MLR	MLR			
	comp=E,1μm,12.0s							
SKR				MLR	MLR			
	comp=Z,1μm,12.0s							
YUK	**Yuzh-Kuril'sk**	**5.50**	**243**	*e*PN	**Pn**		**08 13 31.3**	**-3.6**
YSS	**Yuzh-Sakhalins**	**6.80**	**276**	*e*Pn	**Pn**		**08 13 58.5**	**+5.7**
YSS	**Yuzh-Sakhalins**	**6.80**	**276**↑	*e*PN	**Pn**		**08 13 59.5**	**+6.7**
YSS				*e*S	**Sn**		**08 15 21.0**	**+12**
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
YSS				smax				
	comp=N,30nm,0.8s							
YSS				MLR	MLR			
	comp=Z,500nm,16.0s							
YSS				MLR	MLR			
	comp=E,500nm,15.0s							
ASAJ	**Asahikawa**	**7.55**	**253**	PN	**Pn**		**08 14 03.7**	**+0.6**
ASAJ				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,341nm,19.1s							
ASAJ	**Asahikawa**	**7.55**	**253**	Pn	**Pn**		**08 14 03.6**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=92,slow=11,SNR=16							
ASAJ				LR	LR		08 16 53.6	
	comp=Z,341nm,19.1s,baz=62,slow=37							
ERM	**Erimo**	**8.28**	**239**	*e*Pn	**Pn**		**08 14 11.8**	**-1.3**
	comp=Z,23nm,0.5s							
ERM	**Erimo**	**8.28**	**239**	*e*PN	**Pn**		**08 14 12.0**	**-1.1**
KLR	**Kul'dur**	**14.23**	**288**	*e*P	**Pn**		**08 15 33.2**	**-1.0**
KLR				MLR	MLR			
	comp=Z,1μm,12.0s							
MJAR	**Matsushiro Arr**	**14.82**	**232**	Pn	**Pn**		**08 15 37.2**	**-4.9**
	baz=40,slow=13,SNR=6.1							
MJAR				LR	LR		08 22 16.9	
	comp=Z,104nm,18.5s,baz=40,slow=41							
MDJ	**Mudanjiang**	**16.25**	**271**	*e*P	**Pn**		**08 16 01.9**	**+1.4**
	comp=Z,4.8nm,0.6s							
KSRS	**Korea Array**	**20.50**	**252**	P	**P**		**08 16 49.2**	**-0.2**
	comp=Z,4.1nm,0.8s,baz=60,slow=11,SNR=11							
KSRS				LR	LR		08 23 44.4	
	comp=Z,105nm,20.8s,MS3.2,baz=55,slow=34							
JNU	**Nakatsue**	**21.44**	**238**	LR	LR		08 25 36.8	
	comp=Z,98nm,18.6s,MS3.2,baz=39,slow=38							
HIA	**Hailar**	**22.08**	**289**	*e*P	**P**		**08 17 03.4**	**-2.9**
BILL	**Bilibino**	**22.49**	**13**	*e*P	**P**		**08 17 06.4**	**-4.0**
BILL				*e*S	**S**		**08 21 11.7**	**-2.3**
BILL				pmax	pmax			
	comp=Z,2.0nm,1.0s,mb3.5							
BILL				MLR	MLR			
	comp=Z,100nm,20.0s,MS3.2							
ULN	**Ulaanbaatar**	**30.61**	**289**	P	**P**		**08 18 24.3**	**-0.5**
SONM	**Songino Array**	**31.05**	**289**	P	**P**		**08 18 29.4**	**+0.7**
	comp=Z,2.1nm,1.3s,mb3.8,baz=71,slow=5.7,SNR=5.2							
SONM				LR	LR		08 32 10.5	
	comp=Z,163nm,18.3s,MS3.7,baz=146,slow=39							
TLY	**Talaya**	**31.92**	**297**	*e*P	**P**		**08 18 37.1**	**+0.9**
TLY				*e*			08 19 35.8	
TLY				pmax	pmax			
	comp=Z,5.0nm,1.5s,mb4.1							
TLY				MLR	MLR			
	comp=Z,193nm,14.0s,MS3.9							
ZAK	**Zakamensk**	**32.41**	**295**	*e*P	**P**		**08 18 40.6**	**0.0**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.1s,mb3.9							
LZH	**Lanzhou**	**37.58**	**272**	*e*P	**P**		**08 19 26.5**	**+1.3**
GTA	**Gaotai**	**38.67**	**279**	*e*P	**P**		**08 19 36.3**	**+1.9**
GTA				AP	pP		08 19 40.3	-7.1
GTA				XP	sP		08 19 43.8	-9.4
GTA				AMB	AMB			
	comp=Z,7.0nm,1.4s,mb4.2							
GYA	**Guiyang**	**41.41**	**257**↓	*i*P	**P**		**08 19 57.4**	**+0.2**
GYA				AMB	AMB			
	comp=Z,100nm,2.6s,mb5.0							
INK	**Inuvik**	**41.84**	**32**	P	**P**		**08 19 59.6**	**-0.6**
	comp=Z,1.6nm,0.8s,mb3.7,baz=253,slow=4.3,SNR=10							
MKAR	**Makanchi Array**	**46.68**	**297**	P	**P**		**08 20 39.4**	**+0.2**
MKAR	**Makanchi Array**	**46.68**	**297**	P	**P**		**08 20 39.4**	**+0.2**
	comp=Z,5.6nm,1.0s,mb4.5,baz=65,slow=8.6,SNR=13							
MKAR				LR	LR		08 41 27.1	
	comp=Z,158nm,20.1s,MS4.0,baz=1.3,slow=38							
KURK	**Kurchatov**	**47.12**	**303**	*e*P	**P**		**08 20 41.9**	**-0.7**
	comp=Z,8.4nm,1.0s,mb4.6							
KURK	**Kurchatov**	**47.12**	**303**	*e*P	**P**		**08 20 41.9**	**-0.7**
KURK				pmax	pmax			
	comp=Z,8.0nm,1.0s,mb4.6							
BRVK	**Borovoye**	**50.68**	**309**	*e*P	**P**		**08 21 09.5**	**-0.2**
	comp=Z,6.1nm,1.0s,mb4.5							
BRVK	**Borovoye**	**50.68**	**309**	*e*P	**P**		**08 21 09.5**	**-0.3**
BRVK				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.5							
YKA	**Yellowknife Ar**	**51.13**	**37**	P	**P**		**08 21 10.6**	**-2.4**
	comp=Z,1.3nm,0.9s,mb3.8,baz=295,slow=7.1,SNR=14							
EKS2	**Erkin-Say**	**54.00**	**297**	*e*P	**P**		**08 21 33.6**	**-0.9**
	comp=Z,3.5nm,0.8s,mb4.3							
AML	**Almayashu**	**54.34**	**296**	*e*P	**P**		**08 21 34.4**	**-2.6**
	comp=Z,3.8nm,0.9s,mb4.3							
ARU	**Arti**	**54.82**	**317**	P	**P**		**08 21 39.5**	**-0.8**
ARCES	**ARCESS Array B**	**57.77**	**341**	P	**P**		**08 21 59.8**	**-1.3**
	comp=Z,9.9nm,1.1s,mb4.8,baz=25,slow=6.7,SNR=3.7							
ARCES				LR	LR		08 53 22.4	
	comp=Z,114nm,18.1s,MS4.0,baz=248,slow=43							
FINES	**FINESS Array B**	**63.93**	**335**	P	**P**		**08 22 42.9**	**-0.1**
FINES	**FINESS Array B**	**63.93**	**335**	P	**P**		**08 22 42.9**	**-0.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=53,slow=7.4,SNR=7.3							
NB2	**NORSAR Subarra**	**68.15**	**341**	P	**P**		**08 23 10.0**	**-0.1**
	comp=Z,1.1nm,0.5s,mb4.1,baz=27,slow=6.5							
NOA	**NORSAR Array B**	**68.15**	**341**	P	**P**		**08 23 10.4**	**+0.3**
NOA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
NOA	**NORSAR Array B**	**68.15**	**341**	P	**P**		**08 23 10.3**	**+0.2**
	comp=Z,4.8nm,1.0s,mb4.5,baz=27,slow=6.4,SNR=9.7							
WRA	**Warramunga Arr**	**68.39**	**199**	P	**P**		**08 23 12.2**	**+0.1**
	comp=Z,0.4nm,0.9s,mb3.5,baz=20,slow=6.5,SNR=3.3							
AKASG	**Malin Array Be**	**71.40**	**326**	P	**P**		**08 23 30.0**	**-0.2**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
AKASG	**Malin Array Be**	**71.40**	**326**	P	**P**		**08 23 29.9**	**-0.3**
	comp=Z,2.2nm,0.4s,mb4.4,baz=31,slow=5.8,SNR=6.6							
ASAR	**Alice Springs**	**72.09**	**198**	P	**P**		**08 23 34.7**	**+0.1**
	comp=Z,0.4nm,0.9s,mb3.4,baz=17,slow=6.8,SNR=3.1							
CLL	**Collm**	**76.36**	**335**	*e*P	**P**		**08 24 00.0**	**+0.7**
	comp=Z,7.0nm,1.1s,mb4.5							
TXAR	**Lajitas Array**	**77.77**	**60**	P	**P**		**08 24 09.2**	**+1.6**
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
TXAR	**Lajitas Array**	**77.77**	**60**	P	**P**		**08 24 09.2**	**+1.6**
	comp=Z,0.8nm,0.9s,mb3.7,baz=295,slow=3.9,SNR=3.5							
KHC	**Kasperske Hory**	**78.13**	**334**	P	**P**		**08 24 04.5**	**-4.7**
KHC	**Kasperske Hory**	**78.13**	**334**	*e*P	**P**		**08 24 10.0**	**+0.8**
BRTR	**Keskin Array B**	**78.20**	**316**	P	**P**		**08 24 11.6**	**+1.8**
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BRTR	**Keskin Array B**	**78.20**	**316**	P	**P**		**08 24 11.6**	**+1.8**
	comp=Z,2.5nm,0.9s,mb4.1,baz=90,slow=2.6,SNR=9.2							
GERES	**GERESS Array B**	**78.34**	**334**	P	**P**		**08 24 11.5**	**+1.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=20,slow=4.4,SNR=5.7							
GERES				LR	LR		09 02 44.4	
	comp=Z,75nm,18.6s,MS4.0,baz=200,slow=39							

IDC ***23*** *08:29:02.4±0.9, 1048N×6198W, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.8/25, mbtmp3.8/10, ML3.2/3, Error ellipse: s-maj=22.2km s-min=16.1km az=164.0*
ISCJB ***23*** *08:29:06.6±0.4, 1032N±002×6215W±002, h27km±4km, mb3.6/8, Error ellipse: s-maj=4.3km s-min=3.3km az=155.5*
FUNV ***23*** *08:29:06.2, 1038N×6198W, h8km, MW4.1*
TRN ***23*** *08:29:08.8, 1043N×6204W, h16km, MD3.9*
NEIC ***23*** *08:29:08.6, 1047N×6204W, h12km, MD3.9(TRN), After TRN.*

ISC 23 08:29:07.3±0.5, 1034N±002×6212W±002, h19km±3km, n58, σ1°9/09/78, mb3.6/8, 1C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUIV	**Guiria**	**0.33**	**342**↓	*i*P	**Pg**		**08 29 13.3**	**-1.1**
GUIV				*e*S	**Sg**		**08 29 18.5**	**-0.6**
ALNG	**Atlantic LNG**	**0.45**	**110**	*e*P	**Pg**		**08 29 17.9**	**+1.4**
ALNG				*e*S	**Sg**		**08 29 24.1**	**+1.3**
TCE	**Chacachacare**	**0.51**	**45**↑	*i*P	**Pg**		**08 29 16.5**	**-1.1**
TCE				*e*S	**Sg**		**08 29 23.6**	**-0.9**
TPP	**Pointe-a-Pierr**	**0.66**	**92**	*e*P	**Pb**		**08 29 20.1**	**-0.1**
TPP				*e*S	**Sb**		**08 29 29.3**	**+0.3**
TRN	**Trinidad (W)**	**0.77**	**66**	*e*P	**Pb**		**08 29 20.9**	**-1.2**
TRN				*e*S	**Sb**		**08 29 30.4**	**-1.8**
GUNV	**Guanoco**	**0.83**	**258**	*e*P	**Pb**		**08 29 23.2**	**+0.1**
GUNV				*e*S	**Sb**		**08 29 38.0**	**+4.1**
TBH	**Brigand Hill**	**1.04**	**82**	*e*P	**Pb**		**08 29 27.2**	**+0.3**
TBH				*e*S	**Sb**		**08 29 41.5**	**+1.3**
CRUV	**Carupano**	**1.15**	**287**↓	*i*P	**Pn**		**08 29 27.7**	**-0.7**
CRUV				*e*S	**Sb**		**08 29 43.8**	**+0.7**
ITEV	**Isla Los Testi**	**1.42**	**316**↓	*i*P	**Pn**		**08 29 32.1**	**0.0**
ITEV				*e*S	**Sn**		**08 29 52.0**	**+1.7**
TPR	**Prospect**	**1.57**	**57**	*e*P	**Pn**		**08 29 34.8**	**+0.7**
TPR				*e*S	**Sn**		**08 29 53.8**	**-0.1**
ORIV	**Oritupano**	**1.79**	**225**	*e*P	**Pn**		**08 29 38.5**	**+1.3**
ORIV				*e*S	**Sn**		**08 30 03.3**	**+3.8**
GRGR	**Grenville**	**1.84**	**14**	*e*Pn	**Pn**		**08 29 37.5**	**-0.4**
GRW	**Mount Saint Ca**	**1.87**	**14**	*e*P	**Pn**		**08 29 38.7**	**+0.4**
GRW				*e*S	**Sn**		**08 30 00.5**	**-0.9**
RIOV	**Rio Grande**	**2.27**	**172**	*e*P	**Pn**		**08 29 43.4**	**-0.5**
RIOV				*e*S	**Sn**		**08 30 11.8**	**+0.4**
PCRV	**Puerto La Cruz**	**2.48**	**267**	*e*P	**Pn**		**08 29 47.4**	**+0.6**
PCRV				*e*S	**Sn**		**08 30 18.1**	**+1.5**
PCRV	**Puerto La Cruz**	**2.48**	**267**	Pn	**Pn**		**08 29 47.0**	**+0.3**
	5.5nm,0.3s,baz=67,slow=3.8,SNR=23							
PCRV				Lg			08 30 25.6	
	30nm,0.3s,baz=293,slow=21,SNR=4.8							
GURV	**El Guri**	**2.73**	**201**	*e*P	**Pn**		**08 29 49.8**	**-0.4**
IBAV	**Isla La Blanqu**	**2.83**	**302**	*e*P	**Pn**		**08 29 52.3**	**+0.8**
PRGV	**PARIAGUAN**	**2.94**	**298**	*e*P	**Pn**		**08 29 54.6**	**+1.5**
CUPV	**Cuepira**	**3.62**	**266**	*e*P	**Pn**		**08 30 03.7**	**+1.3**
BIRV	**Birongo**	**4.08**	**272**	*e*P	**Pn**		**08 30 10.1**	**+1.3**
MERV	**Las Mercedes**	**4.26**	**256**	*e*P	**Pn**		**08 30 11.9**	**+0.8**
MERV				*e*S	**Sn**		**08 30 59.7**	**-0.7**
ORCV	**Isla La Orchil**	**4.26**	**291**	*e*P	**Pn**		**08 30 11.9**	**+0.7**
BIM	**Bigot**	**4.28**	**14**	*e*P	**Pn**		**08 30 12.3**	**+0.8**
MVM	**Montagne Vaucl**	**4.36**	**16**	*e*P	**Pn**		**08 30 13.9**	**+1.3**
FDF	**Fort de France**	**4.47**	**12**	*e*P	**Pn**		**08 30 14.8**	**+0.7**
LUEV	**Luepa**	**4.51**	**172**	*e*P	**Pn**		**08 30 13.7**	**-1.0**
CAOV	**Caicara del Or**	**5.12**	**235**↓	*e*P	**Pn**		**08 30 23.0**	**-0.1**
CAOV				*e*S	**Sn**		**08 31 20.4**	**-1.2**
MGG	**Marie-Galante**	**5.60**	**8**	*e*P	**Pn**		**08 30 31.4**	**+1.7**
HMG	**Houelmont**	**5.63**	**4**	*e*P	**Pn**		**08 30 29.6**	**-0.4**
HMG				*e*S	**Sn**		**08 31 38.1**	**+3.9**
TURV	**Turiamo**	**5.63**	**272**	*e*P	**Pn**		**08 30 30.9**	**+0.8**
SCG	**Saint Claude**	**5.67**	**4**	*e*P	**Pn**		**08 30 32.5**	**+1.8**
SCG				*e*S	**Sn**		**08 31 41.2**	**+5.9**
BAUV	**El Baul**	**6.00**	**257**	*e*P	**Pn**		**08 30 35.1**	**-0.1**
DEG	**La Desirade**	**6.03**	**10**	*e*P	**Pn**		**08 30 36.7**	**+1.1**
TEPV	**Terepaima**	**6.97**	**268**	*e*P	**Pn**		**08 30 47.8**	**-0.7**
PAYV	**Puerto Ayacuch**	**7.34**	**229**	*e*P	**Pn**		**08 30 52.8**	**-0.8**
SANV	**Sanarito**	**7.35**	**264**	*e*P	**Pn**		**08 30 53.4**	**-0.4**
SIQV	**Siquisique**	**7.57**	**273**	*e*P	**Pn**		**08 30 56.5**	**-0.2**
CURV	**Curarigua**	**7.73**	**268**	*e*P	**Pn**		**08 30 58.8**	**-0.1**
ELOV	**Elorza**	**8.00**	**246**	*e*P	**Pn**		**08 31 02.5**	**-0.1**
SDV	**Santo Domingo**	**8.52**	**261**	*e*Pn	**Pn**		**08 31 08.7**	**-1.1**
SDV				Sn	**Sn**		**08 32 42.4**	**-3.0**
SDV				*e*Sn	**Sn**		**08 32 43.1**	**-2.3**
SDV	**Santo Domingo**	**8.52**	**261**	Pn	**Pn**		**08 31 08.7**	**-1.1**
	1.8nm,0.3s,baz=105,slow=8.1,SNR=18							
SDV				Sn	**Sn**		**08 32 42.4**	**-3.0**
	3.7nm,0.3s,baz=56,slow=18,SNR=3.9							
SOCV	**Socops**	**8.86**	**257**	*e*P	**Pn**		**08 31 14.4**	**0.0**
VIGV	**El Vigia**	**9.24**	**262**	*e*P	**Pn**		**08 31 18.5**	**-1.1**
VIRV	**Villa del Rosa**	**10.12**	**272**	*e*P	**Pn**		**08 31 31.1**	**-0.6**
CAPV	**Capacho**	**10.36**	**257**	*e*P	**Pn**		**08 31 33.9**	**-1.1**
ROSC	**El Rosal**	**13.27**	**247**	Pn	**Pn**		**08 32 14.5**	**-0.3**
	0.5nm,0.3s,baz=250,slow=22,SNR=2.4							
ATAH	**Atahualpa**	**23.65**	**224**	P	**P**		**08 34 19.6**	**+1.8**
	5.3nm,0.8s,mb4.0,baz=90,slow=9.1,SNR=2.3							
SIV	**San Ignacio**	**26.18**	**178**	P	**P**		**08 34 39.6**	**-1.3**
	1.5nm,0.7s,mb3.6,baz=8.0,slow=10,SNR=11							
LPAZ	**La Paz**	**27.11**	**193**	P	**P**		**08 34 52.3**	**+3.0**
	0.8nm,0.7s,mb3.3,baz=11,slow=11,SNR=3.6							
TXAR	**Lajitas Array**	**43.12**	**302**	P	**P**		**08 37 05.6**	**-1.1**
TXAR				PcP	PcP		08 38 54.8	-1.6
TXAR	**Lajitas Array**	**43.12**	**302**	P	**P**		**08 37 05.6**	**-1.1**
	0.1nm,0.5s,mb2.8,baz=93,slow=8.2,SNR=3.6							
TXAR				PcP	PcP		08 38 54.8	-1.6
	0.3nm,0.8s,baz=126,slow=4.8,SNR=3.5							
PDAR	**Pinedale Array**	**52.36**	**317**	P	**P**		**08 38 16.1**	**-2.0**
	0.4nm,0.5s,mb3.6,baz=115,slow=9.2,SNR=6.0							
TORD	**Torodi Ar. Bea**	**62.40**	**81**	P	**P**		**08 39 27.5**	**-2.0**
	1.1nm,1.1s,mb3.9,baz=267,slow=6.4,SNR=2.5							
YKA	**Yellowknife Ar**	**64.14**	**336**	P	**P**		**08 39 37.0**	**-3.2**
YKA	**Yellowknife Ar**	**64.14**	**336**	P	**P**		**08 39 37.0**	**-3.2**
	0.4nm,0.5s,mb3.7,baz=110,slow=7.3,SNR=11							
FINES	**FINESS Array B**	**80.14**	**29**	P	**P**		**08 41 14.2**	**-1.8**
	0.4nm,0.3s,mb3.8,baz=300,slow=1.5,SNR=4.2							
WRA	**Warramunga Arr**	**161.48**	**237**	PKPab	PKPab		08 49 50.3	-1.9
	0.3nm,0.6s,baz=103,slow=4.3,SNR=4.5							

IDC ***23*** *08:58:29.8±1.1, 1896N×12139E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.6/6, MS2.7/1, Ms1 2.7/1, ms1mx2.4/26, Error ellipse: s-maj=59.5km s-min=20.8km az=75.0*
ISCJB ***23*** *08:58:34.8±0.7, 1917N±005×12103E±009, h33km, mb3.4/5, Error ellipse: s-maj=12.1km s-min=6.6km az=174.4*
MAN ***23*** *08:58:37, 1887N×12117E, h6km, mb4.1, ML2.9, MS2.6*

ISC 23 08:58:31.9±1.3, 1918N±005×12115E±008, h0km±8km, n15, σ1°19/18, mb3.5/5, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PIP	**Pasuquin**	**0.99**	**211**↓	*i*P	**Pg**		**08 58 51.9**	**+1.1**
PIP				*e*S	**Sg**		**08 59 02.4**	**-1.2**
SGCP	**Mt. Cagua**	**1.26**	**137**	*e*P	**Pg**		**08 58 57.1**	**+1.0**
APYP	**Conner**	**1.31**	**176**	*e*P	**Pg**		**08 58 57.3**	**+0.2**
APYP				*e*S	**Sg**		**08 59 12.5**	**-1.6**
ABRA	**Dolores**	**1.58**	**195**	*e*P	**Pn**		**08 59 01.1**	**-0.1**
ABRA				*e*S	**Sn**		**08 59 23.9**	**+1.6**
CVP	**Callao Caves**	**1.60**	**156**	*e*P	**Pn**		**08 59 02.0**	**+0.6**
CVP				*e*S	**Sn**		**08 59 21.6**	**-1.2**
PALP	**Palanan**	**2.43**	**150**↑	*e*P	**Pn**		**08 59 15.1**	**+2.2**
PALP	**Palanan**	**2.43**	**150**	*e*P	**Pn**		**08 59 15.0**	**+2.1**
BALP	**Baler**	**3.44**	**173**	*e*P	**Pn**		**08 59 31.8**	**+4.9**
JNU	**Nakatsue**	**16.39**	**30**	LR	LR		09 08 52.0	
	comp=Z,28nm,21.9s,baz=227,slow=38							
KSRS	**Korea Array**	**19.15**	**17**	P	**Pn**		**09 02 56.5**	**-1.1**
	baz=199,slow=10,SNR=3.6							
SONM	**Songino Array**	**31.00**	**341**	P	**P**		**09 04 51.2**	**+0.2**
	0.6nm,0.8s,mb3.6,baz=163,slow=8.3,SNR=5.6							
WRA	**Warramunga Arr**	**40.97**	**161**	P	**P**		**09 06 11.6**	**-5.0**
	0.4nm,0.9s,mb3.2,baz=342,slow=9.0,SNR=2.9							
MKAR	**Makanchi Array**	**42.01**	**320**	P	**P**		**09 06 25.6**	**+0.7**
	0.3nm,0.3s,mb3.5,baz=106,slow=7.7,SNR=4.0							
ASAR	**Alice Springs**	**44.37**	**163**	P	**P**		**09 06 40.3**	**-3.8**
	0.2nm,0.5s,mb3.1,baz=344,slow=7.2,SNR=8.7							
YKA	**Yellowknife Ar**	**87.58**	**23**	P	**P**		**09 11 20.0**	**-1.7**
	0.9nm,0.7s,mb4.2,baz=308,slow=4.5,SNR=27							

PRU ***23*** *09:17:03.8, 5031N×1884E, h0km*

WAR 23 09:17:03.3, 5025N×1895E, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
OJC	**Ojcow**	**0.54**	**92**	*e*Pg	**Pg**		**09 17 14.0**	**+0.3**
OJC				*e*Sg	Sg		**09 17 21.9**	**+1.1**
OKC	**Ostrava-Krasne**	**0.66**	**232**	*e*PG	**Pg**		**09 17 15.8**	**-0.1**
OKC				*e*SG	Sg		**09 17 25.4**	**+0.9**
	27nm,0.7s							
LIKS	**Likavka**	**1.20**	**175**	*e*PN	Pn		**09 17 27.0**	**-0.3**
LIKS				*e*SN	Sn		**09 17 44.5**	**+0.2**
NIE	**Niedzica**	**1.21**	**133**	*e*Pg	Pg		**09 17 26.9**	**+0.5**
NIE				*e*Sg	Sg		**09 17 44.2**	**+2.1**
DPC	**Dobruska-Polom**	**1.69**	**275**	*e*PG	Pg		**09 17 32.8**	**-2.9**
DPC				*e*SG	Sg		**09 17 55.7**	**-1.8**
	18nm,0.5s							
STHS	**Stebnicka Huta**	**1.70**	**118**	*e*PN	Pn		**09 17 35.6**	**+1.4**
STHS				*e*SN	Sn		**09 18 01.5**	**+4.9**
KOLL	**Kolacno**	**1.71**	**192**	*e*PN	Pn		**09 17 36.1**	**+1.8**
KOLL				*e*SN	Sn		**09 17 57.6**	**+0.8**
VYHS	**Vyhne**	**1.75**	**183**	*e*PN	Pn		**09 17 33.9**	**-1.0**
VYHS				*e*SN	Sn		**09 17 56.6**	**-1.3**
UPC	**Upice**	**1.90**	**279**	*e*SG	Sg		**09 18 02.2**	**-2.1**
KECS	**Kecovo**	**2.03**	**150**	*e*PN	Pn		**09 17 37.5**	**-1.2**
KECS				*e*PG	Pg		**09 17 41.1**	**-1.1**
KECS				*e*SN	Sn		**09 18 07.8**	**+3.1**
CRVS	**Cervenica-Dubn**	**2.12**	**129**	*e*PN	Pn		**09 17 42.4**	**+2.5**
MODS	**Modra-Piesok**	**2.17**	**211**	*e*PN	Pn		**09 17 42.5**	**+1.9**
PRU	**Pruhonice**	**2.85**	**266**	*e*SG	Sg		**09 18 32.0**	**-2.8**
	4.8nm,0.7s							
KHC	**Kasperske Hory**	**3.66**	**254**	*e*SG	Sg		**09 18 56.5**	**-4.4**
	6.0nm,0.6s							

IDC ***23*** *09:33:14.6±0.6, 5582N×16561E, h0km, mb3.8/15, mb1 4.0/16, mb1mx4.0/23, mbtmp3.9/16, ML3.9/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/34, Error ellipse: s-maj=21.6km s-min=13.9km az=153.0*
KRSC ***23*** *09:33:16.8±1.0, 5565N×16530E, h20km±20km, ML4.7*
ISCJB ***23*** *09:33:19.0±1.2, 5566N±003×16499E±003, h12km±7km, mb4.4/46, MS3.8/10, Error ellipse: s-maj=5.8km s-min=2

TIXI pmax pmax
comp=Z,24nm,1.1s,mb4.5
TIXI MLR MLR
comp=Z,130nm,11.0s,MS3.6
COLA College 24.54 49 *eP* **P 09 38 39.0 -0.8**
comp=Z,5.4nm,0.9s,mb4.1
COLA College 24.54 49 *eP* **P 09 38 39.0 -0.8**
COLA pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
MAJO Matsushiro 26.39 235 *eP* **P 09 38 54.7 -2.2**
comp=Z,19nm,0.9s,mb4.6
MAJO Matsushiro 26.39 235 *eP* **P 09 38 54.7 -2.2**
MAJO pmax pmax
comp=Z,19nm,0.9s,mb4.6
MAT Matsushiro 26.39 235 P **P 09 38 48.6 -8.3**
MJAR Matsushiro Arr 26.39 235 P **P 09 38 55.2 -1.7**
comp=Z,1.9nm,0.8s,mb3.7,baz=22,slow=7.7,SNR=5.0
BOD Bodaibo 27.44 296 *eP* **P 09 39 02.3 -3.9**
INK Inuvik 30.04 41 P **P 09 39 21.8 -7.4**
INK pmax pmax
comp=Z,1.0nm,0.6s
INK Inuvik 30.04 41 P **P 09 39 21.8 -7.4**
comp=Z,0.7nm,0.6s,mb3.5,baz=304,slow=4.8,SNR=9.8
KSRS Korea Array 30.81 249 P **P 09 39 36.5 +0.2**
KSRS LR LR 09 52 17.5
comp=Z,3.4nm,0.9s,mb4.2,baz=37,slow=10,SNR=8.3
comp=Z,66nm,18.1s,MS3.3,baz=236,slow=37
DLBC Dease Lake 34.23 58 *eP* **P 09 40 05.1 -0.9**
SONM Songino Array 36.06 283 P **P 09 40 22.0 +0.1**
SONM LR LR 09 56 38.4
SONM Songino Array 36.06 283 P **P 09 40 22.0 +0.1**
comp=Z,2.0nm,0.8s,mb4.1,baz=57,slow=8.6,SNR=19
SONM LR LR 09 56 38.4
comp=Z,84nm,20.6s,MS3.5,baz=224,slow=38
ZAK Zakamensk 36.34 288 *eP* **P 09 40 22.9 -1.3**
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
MOY Mondy 36.86 291 *eP* **P 09 40 28.4 -0.3**
YKA Yellowknife Ar 39.30 46 P **P 09 40 41.5 -7.6**
YKA Yellowknife Ar 39.30 46 P **P 09 40 41.5 -7.6**
comp=Z,0.3nm,0.7s,baz=299,slow=8.0,SNR=9.2
WHN Wuhan 43.37 256 *eP* **P 09 41 25.0 +2.1**
NVS Novosibirsk 43.94 304 *eP* **P 09 41 24.4 -2.8**
NVS pmax pmax
comp=N,17nm,1.8s
NVS pmax pmax
comp=Z,22nm,1.8s,mb4.6
NVS pmax pmax
comp=E,21nm,2.0s
A07A Ashnola River, 44.01 66 ⇑P **P 09 41 28.8 +1.0**
baz=45
C05A Tolt Reservoir 44.17 68 ⇓P **P 09 41 29.4 +0.2**
baz=45
D05A Enumclaw 44.34 69 ⇑P **P 09 41 31.2 +0.7**
baz=45
B07A Winthrop 44.51 66 ⇑P **P 09 41 31.3 -0.5**
baz=45
A08A Turner Farm, O 44.64 65 ⇓P **P 09 41 32.4 -0.5**
baz=45
GUMO Guam 44.83 208 *eP* **P 09 41 32.9 -1.8**
comp=E,108nm,0.9s
GUMO Guam 44.83 208 *eP* **P 09 41 32.9 -1.8**
GUMO pmax pmax
comp=Z,108nm,0.9s
EDM Edmonton 44.94 57 *eP* **P 09 41 34.9 -0.3**
A09A Danville 44.98 65 ⇓P **P 09 41 35.0 -0.6**
baz=46
B08A Colville Reser 44.98 66 ⇑P **P 09 41 34.3 -1.3**
baz=46
GTA Gaotai 45.09 277 *eP* **P 09 41 35.5 -1.1**
GTA AP pP 09 41 40.1 +1.5
GTA XP sP 09 41 43.0 +3.6
GTA PP PP 09 43 18.5 -3.2
GTA SCP ScP 09 47 14.3 +4.5
GTA AMB AMB
comp=Z,6.0nm,1.1s,mb4.3
GTA AMB AMB
comp=Z,62nm,8.0s
GTA LR LR
comp=N,170nm,17.9s,MS4.1
GTA LR LR
comp=E,110nm,19.8s,MS4.1
GTA LR LR
comp=Z,75nm,14.4s
LZH Lanzhou 45.15 271 *eP* **P 09 41 36.5 -0.6**
LZH AMB AMB
comp=Z,26nm,1.2s,mb4.9
LZH AMB AMB
comp=Z,70nm,4.1s
C08A Higginbotham F 45.50 67 ⇑P **P 09 41 39.1 -0.6**
baz=46
B09A Rice 45.55 65 ⇑P **P 09 41 39.6 -0.6**
baz=46
A11A Hall Mountain, 46.12 64 ⇑P **P 09 41 43.9 -0.7**
baz=47
J04A Umpqua Nationa 46.85 73 ⇓P **P 09 41 51.0 +0.6**
baz=48
D10A Wagner Farm, O 46.89 66 ⇑P **P 09 41 49.6 -1.1**
baz=48
J05A Fort Rock 47.29 73 ⇓P **P 09 41 54.2 +0.4**
baz=48
WALA Waterton Lakes 47.30 62 *eP* **P 09 41 54.0 +0.3**
H07A Lands Inn, Kim 47.31 70 ⇓P **P 09 41 53.5 -0.5**
baz=48
E10A Myers Farm, Un 47.35 67 ⇑P **P 09 41 53.9 -0.4**
baz=48
I06A Prineville 47.40 71 ⇑P **P 09 41 54.1 -0.5**
baz=48
B13A Whitefish 47.46 63 ⇓P **P 09 41 53.9 -1.2**
baz=48
YBH Yreka Blue Hor 47.54 75 ⇓P **P 09 41 56.5 +0.6**
baz=48
M02C Callahan 47.70 76 ⇓P **P 09 41 57.4 +0.4**
baz=49
H08A Prairie City 47.84 70 ⇑P **P 09 41 57.1 -0.9**
baz=48
N02C Big Bar 47.84 77 ⇓P **P 09 41 58.7 +0.6**
baz=49
K05A Summer Lake 47.85 73 ⇑P **P 09 41 58.7 +0.4**
baz=49
C13A Hot Springs 47.86 64 ⇑P **P 09 41 57.2 -1.1**
baz=48,SNR=5.2
J06A Christmas Vall 47.90 72 P **P 09 41 59.0 +0.5**
baz=49,SNR=5.5
E11A Bogner Ranch, 47.90 66 ⇓P **P 09 41 57.4 -1.1**
baz=48
G10A Bishop Farm, J 48.13 68 ⇓P **P 09 41 59.3 -1.1**
baz=49
K06A Valley Falls 48.15 72 ⇓P **P 09 42 00.8 +0.3**
baz=49
M03C McCloud 48.18 75 ⇓P **P 09 42 01.3 +0.6**
baz=49
C14A Swan Lake 48.22 63 ⇑P **P 09 42 00.1 -0.9**
baz=49
F11A Grangeville 48.24 67 ⇓P **P 09 42 00.4 -0.7**
baz=49
J07A Hines 48.27 71 ⇓P **P 09 42 01.7 +0.3**
baz=49
D13A Huson 48.31 65 ⇑P **P 09 42 01.0 -0.6**
baz=49
BMO Blue Mountains 48.33 69 *eP* **P 09 42 03.3 +1.4**
L05A Lakeview 48.35 74 ⇓P **P 09 42 02.3 +0.2**
baz=49
G11A Walters Elk Ra 48.51 67 ⇑P **P 09 42 02.3 -0.9**
baz=49
KURK Kurchatov 48.71 302 *eP* **P 09 42 02.1 -2.6**
comp=Z,22nm,1.0s,mb5.1
KURK Kurchatov 48.71 302 *eP* **P 09 42 02.1 -2.6**
KURK pmax pmax
comp=Z,22nm,1.0s,mb5.1
WMQ Urumqi 48.73 290 *eP* **P 09 42 03.5 -1.5**
MOD Modoc 48.73 73 *eP* **P 09 42 05.4 +0.3**
comp=Z,6.3nm,0.7s,mb4.8
MOD Modoc 48.73 73 P **P 09 42 05.4 +0.4**
baz=50,SNR=6.0
MSO Missoula 48.75 64 *eP* **P 09 42 05.8 +0.7**
comp=Z,13nm,1.7s,mb4.7
K07A Rock Creek Ran 48.77 72 ⇓P **P 09 42 05.1 -0.2**
baz=50
F12A Elk City 48.80 66 ⇓P **P 09 42 04.3 -1.2**
baz=49
D14A Greenough 48.80 64 ⇓P **P 09 42 04.7 -0.8**
baz=49
H10A Noah's Angus R 48.80 68 ⇑P **P 09 42 05.5 -0.1**
baz=50
E13A Victor 48.88 65 ⇓P **P 09 42 05.5 -0.6**
baz=49
H11A Donnelly 49.11 68 P **P 09 42 07.9 0.0**
baz=50,SNR=6.3
J09A Fry Pan Ranch, 49.12 70 P **P 09 42 08.5 +0.5**
baz=50,SNR=5.4
K08A Mann Creek Ran 49.15 71 ⇓P **P 09 42 07.8 -0.3**
baz=50
L07A Adell 49.18 73 ⇓P **P 09 42 09.0 +0.6**
baz=50
D15A Lincoln 49.33 63 ⇓P **P 09 42 07.9 -1.6**
baz=50
ELFS Eagle Lake Fie 49.39 75 ⇓P **P 09 42 10.8 +0.8**
baz=50
O04C Chester 49.40 75 ⇓P **P 09 42 10.1 -0.1**
baz=50
MKAR Makanchi Array 49.53 296 P **P 09 42 08.2 -2.9**
comp=Z,2.1nm,0.7s,mb4.3,baz=58,slow=6.7,SNR=19
K09A Rome 49.58 71 ⇑P **P 09 42 10.3 -1.1**
baz=50
L08A Fields 49.59 72 ⇓P **P 09 42 12.0 +0.3**
baz=50
FCC Fort Churchill 49.64 42 *eP* **P 09 42 10.3 -1.4**
E15A Deer Lodge 49.69 64 ⇓P **P 09 42 11.4 -0.8**
baz=50
M07A Soldier Meadow 49.70 73 ⇑P **P 09 42 12.8 +0.3**
baz=50
G13A Cobalt 49.77 66 ⇓P **P 09 42 12.0 -0.9**
baz=50
N06A Buffalo Meadow 49.79 74 ⇓P **P 09 42 13.3 +0.2**
baz=51
K10A MacKenzie Ranc 49.98 70 ⇑P **P 09 42 14.2 -0.4**
baz=51
L09A Wilkinson Ranc 50.08 72 ⇑P **P 09 42 13.6 -1.7**
baz=51
BEKR Beckwourth 50.12 75 ⇓P **P 09 42 14.8 -0.8**
baz=51
H13A Challis 50.12 67 ⇓P **P 09 42 14.1 -1.5**
baz=51
O06A Flanigan 50.20 75 ⇓P **P 09 42 15.3 -0.9**
baz=51
N07B Gerlach 50.24 74 ⇑P **P 09 42 17.2 +0.7**
baz=51
J12A Stokes Ranch, 50.59 69 ⇓P **P 09 42 19.0 -0.1**
baz=51
G15A Dillon 50.62 65 ⇓P **P 09 42 19.4 0.0**
baz=51
I13A Wildhorse Cree 50.64 67 ⇑P **P 09 42 19.1 -0.4**
baz=51
MCMT McKenzie Canyo 50.67 66 *eP* **P 09 42 19.3 -0.4**
L10A Juniper Basin 50.67 71 ⇓P **P 09 42 19.8 0.0**
baz=51
N08A GE Springer Mi 50.69 73 ⇑P **P 09 42 19.8 -0.1**
baz=52
LAVA Lava Cap Winer 50.70 77 ⇓P **P 09 42 19.5 -0.5**
baz=52
O07A Toulon 50.72 74 P **P 09 42 20.8 +0.6**
baz=52,SNR=5.2
HLID Hailey 50.73 68 *eP* **P 09 42 20.0 -0.2**
comp=Z,1.6nm,0.9s,mb4.0
HLID Hailey 50.73 68 ⇑P **P 09 42 19.0 -1.3**
baz=51
WCN Washoe City 50.85 75 ⇑P **P 09 42 21.3 +0.1**
baz=52
BRVK Borovoye 50.95 309 *eP* **P 09 42 22.1 +0.3**
comp=Z,3.0nm,0.6s,mb4.4
BRVK Borovoye 50.95 309 *eP* **P 09 42 22.1 +0.4**
BRVK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
N09A Rock Creek Ran 50.97 72 ⇑P **P 09 42 21.5 -0.5**
baz=52
J13A Cove Ranch, Pi 50.97 68 ⇓P **P 09 42 21.1 -1.0**
baz=52
M10A I.L. Ranch, Tu 51.03 71 ⇑P **P 09 42 22.6 +0.1**
baz=52
R05C Kirkwood Meado 51.10 76 ⇑P **P 09 42 23.0 0.0**
baz=52
QLMT Earthquake Lak 51.40 65 *eP* **P 09 42 25.6 +0.4**
CMB Columbia Colle 51.40 77 *eP* **P 09 42 24.6 -0.8**
comp=Z,0.9nm,0.3s,mb4.2
CMB Columbia Colle 51.40 77 *eP* **P 09 42 24.6 -0.7**
CMB pmax pmax
comp=Z,1.0nm,0.3s,mb4.2
R06C Coleville 51.57 76 ⇑P **P 09 42 27.1 +0.5**
baz=52
O09A Fish Creek Ran 51.63 73 ⇓P **P 09 42 27.1 +0.1**
baz=52
L13A Double Diamond 52.01 69 ⇑P **P 09 42 29.6 -0.2**
baz=53
K14A Jones Ranch, D 52.09 68 ⇓P **P 09 42 30.7 +0.3**
baz=53
P09A Austin 52.10 73 ⇓P **P 09 42 31.3 +0.8**
baz=53
R07C Lee Vining 52.10 76 ⇑P **P 09 42 30.7 +0.2**
baz=53
LKWY Lake 52.11 64 *eP* **P 09 42 31.4 +0.9**
Q08A Gabbs 52.16 75 P **P 09 42 31.6 +0.7**
baz=53,SNR=7.5
NVAR Mina Array Bea 52.26 75 P **P 09 42 25.2 -6.5**
comp=Z,0.5nm,0.6s,mb3.6,baz=303,slow=8.2,SNR=4.8
ELK Elko 52.27 71 *eP* **P 09 42 33.3 +1.5**
comp=Z,9.4nm,0.9s,mb4.7
ELK Elko 52.27 71 *eP* **P 09 42 33.3 +1.5**
ELK pmax pmax
comp=Z,9.0nm,0.9s
RLMT Red Lodge 52.29 63 *eP* **P 09 42 32.9 +1.0**
FLWY Flagg Ranch 52.30 65 *eP* **P 09 42 32.6 +0.7**
comp=Z,10.0nm,1.0s,mb4.7
IMW Indian Meadow 52.30 65 *eP* **P 09 42 33.1 +1.1**
comp=Z,9.8nm,1.3s,mb4.6
N12A Clover Valley, 52.30 71 ⇑P **P 09 42 32.9 +0.9**
baz=53
MOOW Moose Ponds 52.51 65 *eP* **P 09 42 34.3 +0.8**
TPAW Teton Pass 52.58 66 *eP* **P 09 42 34.8 +0.7**
comp=Z,7.5nm,1.3s,mb4.5
LOHW Long Hollow 52.67 65 *eP* **P 09 42 35.4 +0.7**
LAO LASA Array 52.71 60 *eP* **P 09 42 34.6 -0.3**
comp=Z,11nm,0.9s,mb4.8
REDW Red Top Meadow 52.72 66 *eP* **P 09 42 37.1 +2.0**
comp=Z,17nm,1.5s,mb4.8
O12A Currie 52.87 71 ⇑P **P 09 42 36.2 0.0**
baz=54
Q10A Clear Creek Ra 53.02 74 ⇑P **P 09 42 37.8 +0.5**
baz=54
R09A Tonopah 53.07 74 ⇑P **P 09 42 37.5 -0.2**
baz=54
HELL Mitchell Peak, 53.13 77 ⇑P **P 09 42 38.2 0.0**
baz=54
M15A Larsen Ranch, 53.24 68 ⇑P **P 09 42 38.6 -0.3**
baz=54
S09A Goldfield 53.36 75 ⇓P **P 09 42 40.0 +0.2**
baz=54
R10A Warm Springs 53.46 74 ⇓P **P 09 42 40.8 +0.2**
baz=54
S10A Tonopah Range, 53.56 74 ⇑P **P 09 42 41.7 +0.3**
baz=54
HWUT Hardware Ranch 53.60 68 *eP* **P 09 42 42.3 +0.7**
Q12A Willow Creek R 53.71 72 ⇑P **P 09 42 43.8 +1.4**
baz=54
R11A Troy Canyon, C 53.80 73 ⇑P **P 09 42 43.2 +0.1**
baz=55
GRAC Grapevine Rang 53.81 76 ⇑P **P 09 42 43.8 +0.6**
baz=55
BW06 Boulder Array 53.81 65 *eP* **P 09 42 43.1 0.0**
comp=Z,7.0nm,1.2s,mb4.5
PDAR Pinedale Array 53.81 65 P **P 09 42 36.9 -6.3**
comp=Z,3.0nm,0.9s,mb4.2,baz=337,slow=3.4,SNR=5.7
CWC Cottonwood Cre 53.83 77 ⇓P **P 09 42 43.8 +0.5**
baz=55
P13A Bates Ranch, G 53.85 71 ⇑P **P 09 42 43.4 -0.1**
baz=55
DUG Dugway 53.96 70 *eP* **P 09 42 45.3 +1.1**
comp=Z,11nm,1.5s,mb4.6
DUG Dugway 53.96 70 *eP* **P 09 42 45.3 +1.1**
DUG pmax pmax
comp=Z,11nm,1.5s,mb4.6
DUG Dugway 53.96 70 ⇑P **P 09 42 44.1 -0.1**
baz=55
ISA Isabella 54.18 78 ⇑P **P 09 42 46.2 +0.4**
baz=55
Q13A Wheeler Ranch, 54.21 72 ⇓P **P 09 42 46.4 +0.3**
baz=55
S11A Rachel 54.22 74 ⇓P **P 09 42 46.4 +0.2**
baz=55
R12A Pony Springs, 54.34 73 ⇓P **P 09 42 46.6 -0.4**
baz=55
MPMC Manual Prospec 54.43 77 ⇓P **P 09 42 47.8 +0.1**
baz=55
TPNV Topopah Spring 54.46 75 *eP* **P 09 42 48.5 +0.6**
TPNV Topopah Spring 54.46 75 ⇓P **P 09 42 48.3 +0.4**
baz=55
FURC Furnace Creek, 54.47 76 P **P 09 42 48.8 +0.8**
baz=55,SNR=7.9
S12A Delamar Landin 54.74 73 ⇓P **P 09 42 50.3 +0.4**
baz=56
U10A Ash Meadows, A 54.80 75 ⇑P **P 09 42 51.2 +0.8**
baz=56
T11A Corn Creek, Al 54.80 74 ⇑P **P 09 42 50.9 +0.5**
baz=56
EDW2 Edwards Air Fo 55.02 78 ⇑P **P 09 42 51.7 -0.3**
baz=56
SHOC Shoshone 55.21 76 ⇑P **P 09 42 53.3 -0.1**
baz=56
S13A Holt Ranch, En 55.29 73 ⇓P **P 09 42 54.1 +0.2**
baz=56
GSC Goldstone 55.36 77 ⇑P **P 09 42 54.5 +0.1**
baz=56
S14A Cedar City 55.53 72 ⇓P **P 09 42 55.7 0.0**
baz=56
CCUT Cedar City 55.58 72 *eP* **P 09 42 56.9 +0.8**
RSSD Black Hills 55.62 61 *eP* **P 09 42 55.8 -0.4**
comp=Z,5.1nm,0.7s,mb4.7
RSSD Black Hills 55.62 61 *eP* **P 09 42 55.8 -0.4**
RSSD pmax pmax
comp=Z,5.0nm,0.7s,mb4.7
BFSC Mount Baldy St 55.68 78 ⇓P **P 09 42 56.8 +0.1**
baz=57
T13A Saint George 55.68 73 ⇑P **P 09 42 57.0 +0.3**
baz=56
V11A Goodsprings 55.72 75 ⇓P **P 09 42 57.1 +0.1**
baz=57
TUQ Turquoise Mtn. 55.75 76 ⇑P **P 09 42 57.4 +0.2**
baz=57
SRU San Rafael 55.96 69 *eP* **P 09 42 59.3 +0.6**
HEC Hector,Ludlow 55.97 77 ⇑P **P 09 42 59.5 +0.7**
baz=57
U13A Pakoon Wash 56.09 74 ⇑P **P 09 42 59.7 0.0**
baz=57
T14A Hurricane 56.09 73 ⇓P **P 09 43 00.1 +0.4**
baz=57
V12A Nelson 56.12 75 ⇑P **P 09 43 01.1 +1.2**
baz=57
JOF Joensuu 56.31 337 *ep* **P 09 42 55.3 -5.5**
GMRC Granite Mounta 56.38 76 P **P 09 43 02.3 +0.6**
baz=57,SNR=6.6
AGMN Agassiz Refuge 56.40 52 *eP* **P 09 43 01.6 -0.2**
comp=Z,5.4nm,0.8s,mb4.6
T15A Red Dirt Ranch 56.50 72 ⇑P **P 09 43 03.2 +0.6**
baz=57
U14A Mt Trumbull 56.52 73 ⇑P **P 09 43 03.2 +0.5**
baz=57
BELC Belle Mtn. 56.77 77 ⇑P **P 09 43 04.3 -0.2**
baz=58
PFO Pinyon Flat Ob 56.81 78 ⇓P **P 09 43 04.4 -0.5**
baz=58
W13A Hualapai Mount 57.11 75 ⇑P **P 09 43 06.5 -0.5**
baz=58
IRM Iron Mountain 57.12 76 ⇑P **P 09 43 06.6 -0.4**
baz=58
BC3 Big Chuckw Mtn 57.33 77 ⇑P **P 09 43 07.9 -0.6**
baz=58
W14A Seligman 57.47 74 ⇑P **P 09 43 10.4 +1.0**
baz=58
X13A Yucca 57.52 75 ⇑P **P 09 43 09.1 -0.7**
baz=58
PDMCI Parker Dam,Lak 57.57 76 ⇑P **P 09 43 10.2 0.0**
baz=58
PV01 Paradox Valley 57.71 69 *eP* **P 09 43 11.8 +0.6**
SMCO Snowmass 57.77 67 *eP* **P 09 43 07.0 -4.5**
comp=Z,6.1nm,0.9s,mb4.6
Y12C Blythe 57.77 76 ⇓P **P 09 43 11.8 +0.1**
baz=59
ISCO Idaho Springs 58.01 65 *eP* **P 09 43 14.4 +1.2**
comp=Z,5.2nm,0.8s,mb4.6
ISCO Idaho Springs 58.01 65 *eP* **P 09 43 14.4 +1.2**
ISCO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
AKTK Aktyubinsk 58.07 314 P **P 09 43 10.0 -3.5**
AKTK LR LR 10 10 41.7
AKTO Aktyubinsk 58.07 314 P **P 09 43 10.0 -3.5**
comp=Z,2.4nm,1.1s,mb4.2,baz=49,slow=5.2,SNR=4.9
AKTO LR LR 10 10 41.7
comp=Z,35nm,18.2s,MS3.5,baz=134,slow=38
KAF Kangasniemi 58.11 339 *ep* **P 09 43 15.4 +1.8**
X14A Yava 58.13 75 ⇑P **P 09 43 14.8 +0.7**
baz=59
GLA Glamis 58.13 77 ⇑P **P 09 43 14.7 +0.6**
baz=59
WUAZ Wupatki 58.16 73 *eP* **P 09 43 15.4 +1.1**
comp=Z,3.4nm,0.8s,mb4.4
WUAZ Wupatki 58.16 73 ⇓P **P 09 43 14.6 +0.3**
baz=59
MVCO Mesa Verde 58.44 69 ⇓P **P 09 43 16.1 -0.1**
baz=59
Y14A Wickenburg 58.46 75 ⇓P **P 09 43 16.6 +0.1**
baz=59
X15A Humboldt 58.47 74 ⇑P **P 09 43 16.4 -0.1**
baz=59
EYMN Ely 58.59 50 *eP* **P 09 43 17.5 +0.4**
FINES FINESS Array B 58.76 338 P **P 09 43 13.3 -4.8**
comp=Z,2.1nm,1.0s,mb4.1,baz=301,slow=15,SNR=3.0
ECSD EROS,Sioux Fal 59.49 56 *eP* **P 09 43 22.7 -0.7**
SDCO Great Sand Dun 59.60 67 *eP* **P 09 43 25.6 +1.3**
115A Sonoran Desert 59.82 75 ⇑P **P 09 43 27.0 +1.1**
baz=61
ANMO Albuquerque 61.22 70 *eP* **P 09 43 36.0 +0.6**
comp=Z,3.2nm,1.1s,mb4.4
ANMO Albuquerque 61.22 70 *eP* **P 09 43 36.0 +0.6**
ANMO pmax pmax
comp=Z,3.0nm,1.1s
LAZ Ladron 61.28 70 *eP* **P 09 43 36.8 +1.0**
218A Dragoon 61.57 74 ⇓P **P 09 43 37.6 -0.2**
baz=62
NB2 NORSAR Subarra 61.73 346 P **P 09 43 41.0 +2.5**
comp=Z,1.2nm,0.6s,mb4.2,baz=19,slow=6.9
NB2 NORSAR Subarra 61.73 346 P **P 09 43 41.0 +2.5**
NB2 pmax pmax
comp=Z,1.0nm,0.6s,mb4.1
NOA NORSAR Array B 61.73 346 P **P 09 43 35.6 -2.9**
comp=Z,1.0nm,1.0s,mb3.9,baz=17,slow=6.8,SNR=2.6
318A Bisbee 62.01 75 ⇓P **P 09 43 40.9 +0.2**
baz=63
HFS Hagfors 62.23 344 LR LR 10 13 49.2
comp=Z,78nm,19.7s,MS3.9,baz=246,slow=39
319A Douglas 62.44 74 ⇓P **P 09 43 43.7 0.0**
baz=63
MNTX Cornudas Mount 64.30 71 *eP* **P 09 43 56.7 +0.7**
comp=Z,2.9nm,0.8s,mb4.4
HNR Honiara 65.06 185 LR LR 10 07 59.5
comp=Z,89nm,19.1s,MS4.0,baz=358,slow=32
WMOK Wichita Mounta 65.38 64 *eP* **P 09 44 02.6 -0.4**
comp=Z,2.9nm,0.7s,mb4.4
WMOK Wichita Mounta 65.38 64 *eP* **P 09 44 02.6 -0.4**
WMOK pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
FVM French Village 66.90 56 *eP* **P 09 44 10.8 -1.9**
comp=Z,5.8nm,0.6s,mb4.8
FVM French Village 66.90 56 *eP* **P 09 44 10.8 -1.9**
FVM pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
LTX Lajitas 67.06 71 *eP* **P 09 44 13.9 0.0**
TXAR Lajitas Array 67.06 71 P **P 09 44 06.9 -7.0**
TXAR pmax pmax
comp=Z,1.0nm,0.6s
TXAR Lajitas Array 67.06 71 P **P 09 44 06.8 -7.0**
comp=Z,0.5nm,0.6s,mb3.7,baz=302,slow=4.0,SNR=9.4
HBAR Harrisburg 68.75 58 *eP* **P 09 44 21.3 -3.0**
PLAL Pickwick Lake 70.44 56 *eP* **P 09 44 33.6 -1.3**
comp=Z,6.0nm,0.6s,mb4.7
GERES GERESS Array B 73.04 341 P **P 09 44 46.2 -4.0**
comp=Z,0.3nm,0.2s,mb3.8,baz=3.4,slow=4.9,SNR=3.3
GERES LR LR 10 20 24.8
comp=Z,57nm,18.4s,MS3.9,baz=28,slow=39
DAVOX Davos/Dischmat 75.72 343 LR LR 10 20 42.7
comp=Z,75nm,18.3s,MS4.0,baz=253,slow=38
CTAO Charters Tower 77.17 198 *eP* **P 09 45 14.4 +0.2**
comp=Z,20nm,1.5s,mb4.8
CTAO Charters Tower 77.17 198 *eP* **P 09 45 14.4 +0.2**
CTAO pmax pmax
comp=Z,19nm,1.5s,mb4.8
WRA Warramunga Arr 79.72 209 *i* P **P 09 45 31.2 +2.9**
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 79.72 209 P **P 09 45 27.3 -1.0**
comp=Z,0.9nm,0.9s,mb3.7,baz=25,slow=5.9,SNR=5.5
ASAR Alice Springs 83.38 208 P **P 09 45 43.5 -4.2**
comp=Z,0.8nm,0.8s,mb3.8,baz=17,slow=5.7,SNR=4.0

QSPA	**South Pole Qui**	**145.49 180**	*e*PKPdf	PKPdf	09 52 51.6	-5.3
QSPA			*e*PKPab	PKPab	09 52 57.6	+0.3
QSPA	**South Pole Qui**	**145.49 180**	PKPbc	PKPbc	09 52 51.1	-6.0
	comp=Z,3.2nm,1.0s,baz=314,slow=4.5,SNR=5.7					

IDC 23 09:54:35.7±1.9, 610S×15469E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/11, mbtmp3.5/3, Error ellipse: s-maj=148.8km s-min=32.4km az=133.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.09**	**233**	P	P	09 59 54.2	+1.0
	0.3nm,0.4s,baz=59,slow=9.4,SNR=11						
WRA				PcP	PcP	10 03 34.1	-0.8
	0.2nm,0.5s,baz=61,slow=2.4,SNR=6.4						
ASAR	**Alice Springs**	**26.55**	**227**	P	P	10 00 15.1	-0.4
	0.4nm,0.7s,baz=57,slow=9.2,SNR=6.9						
YKA	**Yellowknife Ar**	**95.69**	**28**	P	P	10 08 03.7	+0.6
	0.2nm,0.9s,baz=273,slow=4.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.49**	**287**	PKPbc	PKPbc	10 14 34.4	-0.7
	0.3nm,0.7s,baz=45,slow=2.2,SNR=2.2						

*ISCJB **23** 10:16:26.8±3.6, 221N×0.1×1430E±03, h42km±34km, mb3.7/5, Error ellipse: s-maj=52.9km s-min=24.1km az=8.4*

*IDC **23** 10:16:29.4±4.8, 22.13N×143.08E, h52km±45km, mb3.5/5, mb1 3.8/6, mb1mx3.5/20, mbtmp3.6/6, ML3.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/26, Error ellipse: s-maj=47.7km s-min=19.2km az=101.0*

ISC 23 10:16:29.2±3.2, 221N×01×1431E±03, h48km±31km, n8, σ1§01/6, mb3.7/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.03**	**351**	P	**Pn**	**10 17 42.1**	**0.0**
	6.0nm,0.3s,baz=284,slow=19,SNR=4.1						
JNU	**Nakatsue**	**15.37**	**318**	LR	LR	10 24 55.6	
	comp=Z,26nm,19.8s,baz=336,slow=33						
SONM	**Songino Array**	**38.95**	**320**	P	**P**	**10 23 50.6**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=126,slow=6.8,SNR=5.0						
WRA	**Warramunga Arr**	**42.65**	**192**	P	**P**	**10 24 20.8**	**-0.2**
	1.8nm,0.9s,mb3.8,baz=14,slow=8.6,SNR=12						
ASAR	**Alice Springs**	**46.35**	**192**	P	**P**	**10 24 50.8**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=16,slow=10.0,SNR=14						
YKA	**Yellowknife Ar**	**76.16**	**28**	P	**P**	**10 28 10.8**	**-1.0**
	0.4nm,0.5s,mb3.6,baz=293,slow=6.0,SNR=13						
NVAR	**Mina Array Bea**	**82.99**	**51**	P	**P**	**10 28 50.4**	**+0.9**
	1.0nm,0.8s,mb3.9,baz=272,slow=5.3,SNR=7.6						
LPAZ	**La Paz**	**150.03**	**84**	PKPbc	PKPbc	10 36 14.9	-0.3
	1.3nm,0.8s,baz=270,slow=3.0,SNR=6.2						

*IDC **23** 10:37:58.8±6.8, 3804N×7407E, h136km±60km, mb3.1/3, mb1 3.3/4, mb1mx3.0/21, mbtmp3.0/4, Error ellipse: s-maj=45.1km s-min=35.6km az=16.0*

*NEIC **23** 10:38:00.6±3.8, 3811N×7409E, h153km±32km, Error ellipse: s-maj=48.2km s-min=29.5km az=176.0*

*ISCJB **23** 10:38:02.3±2.5, 383N±02×740E±02, h179km±23km, mb3.2/3, Error ellipse: s-maj=32.3km s-min=20.0km az=179.6*

*NNC **23** 10:38:02.0±15.0, 3848N×7354E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=122.5km s-min=72.7km az=165.0*

ISC 23 10:38:02.5±2.3, 383N±02×741E±01, h168km±20km, n11, σ0§94/14, mb3.2/3, 4C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.88**	**356**	*e*P	**Pn**	**10 39 02.7**	**+1.0**
UCH	**Uchtor**	**3.98**	**5**	*e*P	**Pn**	**10 39 04.1**	**+1.1**
EKS2	**Erkin-Say**	**4.41**	**357**	*e*P	**Pn**	**10 39 06.4**	**-2.0**
TKM2	**Tokmak 2**	**4.81**	**13**	⇑P	**Pn**	**10 39 14.6**	**+1.0**
	3.6nm,0.5s						
TKM2				⇑S	**Sn**	**10 40 08.8**	**-0.5**
	15nm,0.7s						
KK31	**Karatay Array**	**5.55**	**332**	⇑P	**Pn**	**10 39 23.5**	**+0.1**
	0.8nm,0.3s,baz=160,slow=17,SNR=32						
KK31				⇓S	**Sn**	**10 40 22.9**	**-3.8**
	6.9nm,0.6s,baz=163,slow=26,SNR=8.9						
MKAR	**Makanchi Array**	**10.46**	**33**	P	**Pn**	**10 40 27.6**	**-0.6**
	0.1nm,0.3s,baz=210,slow=15,SNR=8.7						
AB31	**Akbulak array**	**14.98**	**322**	⇑P	**Pn**	**10 41 24.9**	**-0.7**
	0.3nm,0.5s,baz=135,slow=13,SNR=5.0						
AB31				S	**Sn**	**10 44 12.7**	**+0.4**
	0.8nm,0.2s,baz=26,slow=25,SNR=3.6						
TORD	**Torodi Ar. Bea**	**68.19**	**270**	P	**P**	**10 48 44.8**	**-0.2**
	0.3nm,0.5s,mb3.2,baz=56,slow=4.7,SNR=4.7						
YKA	**Yellowknife Ar**	**79.36**	**4**	P	**P**	**10 49 50.2**	**+1.0**
YKA	**Yellowknife Ar**	**79.36**	**4**	P	**P**	**10 49 50.2**	**+1.0**
	0.4nm,0.9s,mb3.1,baz=352,slow=5.0,SNR=7.1						
WRA	**Warramunga Arr**	**80.89**	**124**	P	**P**	**10 49 57.4**	**-0.5**
	0.6nm,1.0s,mb3.2,baz=323,slow=4.9,SNR=5.3						

LDG 23 11:00:16.4±0.1, 4865N×618E, h2km, Md2.5/1, Ml2.4/6, Error ellipse: s-maj=1.9km s-min=1.4km az=1.0, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RFYF	**Reffroy**	**0.47**	**268**	*e*Pg	Pg	11 00 24.7	-0.7
	baz=88						
RFYF				*e*Sg	Sg	11 00 32.0	+0.5
	36nm,0.4s,baz=82						
HAU	**Haudompre**	**0.66**	**170**	*e*Pg	Pg	11 00 29.0	+0.1
HAU				*e*Sg	Sg	11 00 37.8	+0.4
	12nm,0.4s						
CDF	**Champ du Feu**	**0.76**	**108**	*e*Pg	Pg	11 00 31.0	0.0
CDF				*e*Sn	Sg	11 00 44.1	+3.2
	6.5nm,0.4s						
MEZF	**Maizieres J'vi**	**0.77**	**259**	*e*Pg	Pg	11 00 30.8	-0.3
MEZF				*e*Sg	Sg	11 00 41.8	+0.8
	32nm,0.4s,baz=73						
SFTF	**Sexfontaines**	**0.88**	**240**	*e*Pg	Pg	11 00 33.1	-0.2
	baz=62						
SFTF				*e*Sg	Sg	11 00 44.8	0.0
	32nm,0.8s,baz=61						
HINF	**Hinteralfeld**	**0.95**	**152**	*e*Pg	Pg	11 00 34.1	-0.4
HINF				*e*Sn	Sn	11 00 48.4	-2.3
	23nm,0.6s						
BFO	**Black Forest**	**1.46**	**102**	*e*Sg	Sg	11 01 05.6	+2.3
	SNR=1.2						
CABF	**La Chapelle**	**2.04**	**182**	*e*Sg	Sg	11 01 20.9	-1.1
	20nm,0.8s						
LOR	**Lormes**	**2.09**	**229**	*e*Pg	Pg	11 00 55.5	-0.9
LOR				*e*Sg	Sg	11 01 22.3	-1.1
	3.8nm,0.4s,baz=49						
SSF	**Saint Saulge**	**2.41**	**230**	*e*Sg	Sg	11 01 32.2	-1.4
	3.0nm,0.3s						

IDC 23 12:08:27.6±1.5, 113S×12703E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/15, mbtmp3.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.7/13, Error ellipse: s-maj=138.8km s-min=23.7km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**9.62**	**200**	LR	LR	12 15 03.0	
	comp=Z,140nm,19.9s,baz=226,slow=41						
FITZ	**Fitzroy Crossi**	**16.92**	**185**	LR	LR	12 18 08.1	
	comp=Z,37nm,19.1s,baz=228,slow=34						
WRA	**Warramunga Arr**	**20.02**	**160**	P	P	12 13 02.3	+0.2
	0.6nm,0.7s,baz=339,slow=12,SNR=7.5						
ASAR	**Alice Springs**	**23.37**	**164**	P	P	12 13 38.1	0.0
	0.4nm,0.7s,baz=350,slow=11,SNR=7.4						
SONM	**Songino Array**	**51.98**	**342**	P	P	12 17 39.3	+0.8
	0.2nm,0.6s,baz=160,slow=9.0,SNR=2.1						
MKAR	**Makanchi Array**	**61.72**	**327**	P	P	12 18 47.1	-0.6
	0.2nm,0.4s,baz=108,slow=7.7,SNR=2.7						

IDC 23 12:13:55.2±1.3, 401N×12199E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.6/4, Error ellipse: s-maj=188.9km s-min=22.0km az=66.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.71**	**153**	P	P	12 19 36.3	-0.1
	1.0nm,0.3s,baz=337,slow=9.5,SNR=44						
ASAR	**Alice Springs**	**29.86**	**158**	P	P	12 20 04.8	+0.3
	0.4nm,0.5s,baz=341,slow=8.3,SNR=12						
SONM	**Songino Array**	**45.68**	**345**	P	P	12 22 18.8	+1.2
	0.3nm,0.7s,baz=162,slow=6.1,SNR=2.6						
MKAR	**Makanchi Array**	**54.70**	**327**	P	P	12 23 25.3	-0.9
	0.4nm,0.4s,baz=122,slow=7.6,SNR=4.1						

*ISCJB **23** 12:18:25.0±2.1, 184S±04×1689E±04, h214km±34km, mb4.1/8, Error ellipse: s-maj=80.9km s-min=21.2km az=137.8*

*NEIC **23** 12:18:25.3±2.1, 1864S×16926E, h223km±20km, mb4.2/4, Error ellipse: s-maj=35.5km s-min=19.9km az=152.0*

*IDC **23** 12:18:26.9±1.9, 1865S×169.11E, h228km±20km, mb3.8/7, mb1 4.0/7, mb1mx3.8/13, mbtmp3.8/7, Error ellipse: s-maj=37.4km s-min=16.4km az=148.0*

ISC 23 12:18:26.2±1.9, 185S±03×1690E±03, h213km±28km, n23, σ0§69/21, mb4.1/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.29**	**213**	*e*P	**Pn**	**12 19 31.6**	**-0.5**
DZM				*e*S	**S**	**12 20 18.7**	**-5.3**
DZM	**Mont Dzumac**	**4.29**	**213**	P	**Pn**	**12 19 31.8**	**-0.2**
	0.9nm,0.3s,baz=64,slow=12,SNR=65						
DZM				S	**S**	**12 20 23.8**	**-0.2**
	baz=358,slow=19,SNR=5.5						
CTA	**Charters Tower**	**21.51**	**262**	*e*P	**P**	**12 22 59.1**	**+0.4**
	8.2nm,1.5s,mb4.0						
CTA	**Charters Tower**	**21.51**	**262**	P	**P**	**12 23 00.2**	**+1.5**
	2.8nm,0.8s,mb4.1,baz=111,slow=13,SNR=7.7						
CTAO	**Charters Tower**	**21.51**	**262**	*e*P	**P**	**12 23 00.6**	**+1.8**
STKA	**Stephens Creek**	**28.05**	**236**	*e*P	**P**	**12 23 58.7**	**+0.9**
	2.6nm,0.9s,mb3.9						
STKA	**Stephens Creek**	**28.05**	**236**	P	**P**	**12 23 58.9**	**+1.1**
	1.3nm,0.4s,mb3.9,baz=47,slow=9.6,SNR=5.6						
WB2	**Warramunga Arr**	**32.70**	**262**	*e*P	**P**	**12 24 38.0**	**-0.8**
WRA	**Warramunga Arr**	**32.71**	**262**	P	**P**	**12 24 38.2**	**-0.7**
WRA				PcP	PcP	12 27 18.7	-0.7
WRA				S	**S**	**12 29 38.6**	**-0.9**
WRA	**Warramunga Arr**	**32.71**	**262**	P	**P**	**12 24 38.2**	**-0.7**
	1.6nm,0.4s,mb3.9,baz=86,slow=8.4,SNR=66						
WRA				PcP	PcP	12 27 18.7	-0.7
	0.8nm,0.9s,baz=90,slow=3.4,SNR=4.6						
WRA				S	**S**	**12 29 38.6**	**-0.9**
	1.4nm,1.1s,baz=89,slow=19,SNR=6.0						
ASAR	**Alice Springs**	**33.08**	**255**	P	**P**	**12 24 42.1**	**0.0**
	14nm,0.4s,mb4.8,baz=81,slow=8.7,SNR=495						
FITZ	**Fitzroy Crossi**	**41.08**	**263**	*e*P	**P**	**12 25 49.8**	**+0.4**
	6.8nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**41.08**	**263**	P	**P**	**12 25 50.2**	**+0.8**
	6.5nm,0.8s,mb4.1,baz=113,slow=6.9,SNR=14						
MBWA	**Marble Bar**	**46.26**	**258**	*e*P	**P**	**12 26 30.4**	**-0.3**
MJAR	**Matsushiro Arr**	**61.97**	**332**	P	**P**	**12 28 23.3**	**-0.3**
	2.8nm,0.9s,mb3.9,baz=164,slow=6.8,SNR=5.8						
BILL	**Bilibino**	**86.29**	**359**	*e*P	**P**	**12 30 42.9**	**-0.5**
	7.0nm,0.9s,mb4.4						
SONM	**Songino Array**	**86.47**	**323**	P	**P**	**12 30 45.3**	**+0.6**
	1.6nm,0.6s,mb3.9,baz=144,slow=6.7,SNR=15						
YKA	**Yellowknife Ar**	**100.11**	**27**	P	Pdif	12 31 47.1	-0.3
	0.5nm,0.6s,baz=253,slow=4.7,SNR=13						
MKAR	**Makanchi Array**	**101.03**	**316**	P	Pdif	12 31 52.8	+1.3
	0.2nm,0.4s,baz=95,slow=5.7,SNR=3.0						
ARCES	**ARCESS Array B**	**124.28**	**345**	PKP	PKPdf	12 36 57.2	-1.6
ARCES	**ARCESS Array B**	**124.28**	**345**	PKP	PKPdf	12 36 57.2	-1.6
	7.7nm,1.0s,baz=81,slow=2.8,SNR=14						
GERES	**GERESS Array B**	**143.71**	**332**	PKP	PKPdf	12 37 32.3	-3.3
	1.6nm,0.8s,baz=56,slow=3.4,SNR=7.7						
TORD	**Torodi Ar. Bea**	**166.66**	**248**	PKP	PKPdf	12 38 05.7	-1.3
	1.3nm,1.0s,baz=210,slow=5.0,SNR=4.4						

*ISCJB **23** 12:46:02.0±2.2, 53S±0.1×1295E±0.1, h230km±21km, mb3.6/2, Error ellipse: s-maj=22.3km s-min=12.6km az=141.9*

*IDC **23** 12:46:09.0±3.4, 553S×129.20E, h282km±34km, mb3.3/2, mb1 3.5/6, mb1mx3.3/15, mbtmp3.4/6, Error ellipse: s-maj=37.9km s-min=13.3km az=69.0*

*NEIC **23** 12:46:10.3±1.4, 558S×12932E, h300km, mb4.0/1, Error ellipse: s-maj=35.3km s-min=20.1km az=69.0*

ISC 23 12:46:07.4±2.1, 55S±01×1294E±01, h261km±22km, n8, σ1§24/13, mb3.6/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**7.33**	**230**	P	**Pn**	**12 47 53.5**	**+1.1**
	11nm,0.3s,baz=58,slow=1.2,SNR=13						
BATI				S	**S**	**12 49 15.9**	**-1.0**
	0.8nm,0.3s,baz=0.8,slow=18,SNR=4.6						
FITZ	**Fitzroy Crossi**	**13.01**	**196**	P	**Pn**	**12 49 03.1**	**-0.1**
	0.5nm,0.3s,baz=34,slow=11,SNR=12						
FITZ				S	**S**	**12 51 23.2**	**-4.5**
	0.2nm,0.3s,baz=265,slow=23,SNR=3.5						
WRA	**Warramunga Arr**	**15.10**	**162**	P	**Pn**	**12 49 28.3**	**-0.1**
	0.5nm,0.3s,baz=343,slow=12,SNR=47						
WRA				S	**S**	**12 52 13.9**	**-0.2**
	0.6nm,0.3s,baz=337,slow=22,SNR=7.0						
WB2	**Warramunga Arr**	**15.10**	**162**	*e*P	**Pn**	**12 49 27.1**	**-1.3**
WB2				*e*S	**S**	**12 52 11.4**	**-2.7**
MBWA	**Marble Bar**	**18.14**	**210**	*e*P	**P**	**12 50 02.0**	**+1.1**
	3.6nm,0.5s						
ASAR	**Alice Springs**	**18.53**	**167**	P	**P**	**12 50 06.8**	**+1.8**
	0.9nm,0.3s,baz=350,slow=12,SNR=104						
ASAR				S	**S**	**12 53 24.4**	**+1.8**
	0.2nm,0.3s,baz=349,slow=20,SNR=14						
STKA	**Stephens Creek**	**28.58**	**158**	P	**P**	**12 51 40.3**	**+0.7**
	1.2nm,0.5s,mb3.6,baz=330,slow=7.8,SNR=5.5						
MKAR	**Makanchi Array**	**66.69**	**327**	P	**P**	**12 56 29.1**	**-1.3**
	0.6nm,0.5s,mb3.6,baz=121,slow=8.2,SNR=7.6						

IDC 23 13:02:35.9±1.8, 587S×13037E, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.7/10, mbtmp3.8/4, Error ellipse: s-maj=123.1km s-min=27.9km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.51**	**165**	Pn	Pn	13 06 02.8	+0.1
	0.4nm,0.3s,baz=349,slow=13,SNR=21						
WRA				Sn	Sn	13 08 31.4	-13
	1.3nm,0.3s,baz=337,slow=22,SNR=11						
ASAR	**Alice Springs**	**18.02**	**169**	P	Pn	13 06 48.1	+0.2
	0.2nm,0.3s,baz=344,slow=9.4,SNR=16						
ASAR				S	Sn	13 09 56.4	-13
	0.3nm,0.3s,baz=354,slow=27,SNR=5.2						
SONM	**Songino Array**	**57.49**	**341**	P	P	13 12 27.8	+1.1
	0.3nm,0.5s,baz=155,slow=7.8,SNR=6.2						
MKAR	**Makanchi Array**	**67.19**	**326**	P	P	13 13 33.2	-0.5
	1.1nm,0.4s,baz=116,slow=7.7,SNR=16						

*TEH **23** 13:03:37.3, 3048N×5068E, h3km, ML3.5*

*ISCJB **23** 13:04:29.1±1.3, 3045N±03×5053E±005, h8km±10km, Error ellipse: s-maj=7.6km s-min=4.9km az=174.3*

*CSEM **23** 13:04:29.7±0.1, 3043N×5062E, h12km, ML3.5, Error ellipse: s-maj=3.5km s-min=2.8km az=47.0*

*THR **23** 13:04:39.3±0.4, 3122N×5073E, h18km±3km, ML3.0*

ISC 23 13:04:31.6±1.3, 3044N±003×5051E±004, h18km±10km, n32, σ1§16/46, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**1.91**	**114**	*e*Pn	**Pn**	**13 05 04.1**	**+0.8**
SHI				*e*Sn	**Sn**	**13 05 27.9**	**+1.0**
SHI				*e*		13 05 35.1	
	comp=Z,4μm,0.2s						
SHI	**Shiraz**	**1.91**	**114**	*e*Pn	**Pn**	**13 05 04.1**	**+0.8**
SHI				*e*Sn	**Sn**	**13 05 27.9**	**+1.0**
SHGR	**Shooshtar-Gavs**	**2.22**	**319**	*e*Pg	**Pg**	**13 05 13.2**	**-0.9**
SHGR				*e*Sg	**Sg**	**13 05 38.2**	**-4.8**
SHGR				AML	AML	13 05 54.8	
	comp=E,166nm,0.5s						
SHGR				AML	AML	13 05 54.9	
	comp=N,142nm,0.6s						
SHGR	**Shooshtar-Gavs**	**2.22**	**319**	*e*Pg	**Pg**	**13 05 13.2**	**-1.0**
	SNR=91						
SHGR				*e*Sg	**Sg**	**13 05 38.2**	**-4.7**
	SNR=91						
IGAR	**Garneh**	**2.31**	**38**	*e*Pn	**Pn**	**13 05 10.0**	**+1.2**
IGAR				*e*Sn	**Sn**	**13 05 38.0**	**+1.3**
IGAR				*e*		13 05 46.7	
	comp=Z,2μm,0.1s						
IGAR	**Garneh**	**2.31**	**38**	*e*Pn	**Pn**	**13 05 10.0**	**+1.2**
IGAR				*e*Sn	**Sn**	**13 05 38.0**	**+1.3**
IMOK	**Mook**	**2.37**	**125**	*e*Pn	**Pn**	**13 05 13.3**	**+3.8**
IMOK				*e*Sn	**Sn**	**13 05 38.7**	**+0.6**
IMOK				*e*		13 05 51.6	
	comp=Z,3μm,0.3s						
ISRV	**Sarvestan**	**2.49**	**114**	*e*Pn	**Pn**	**13 05 10.8**	**-0.5**
ISRV				*e*Sn	**Sn**	**13 05 41.8**	**+0.5**
ISRV				*e*		13 05 53.4	
	comp=Z,2μm,0.2s						
ISRV	**Sarvestan**	**2.49**	**114**	*e*Pn	**Pn**	**13 05 10.8**	**-0.5**
ISRV				*e*Sn	**Sn**	**13 05 41.8**	**+0.5**
IZEF	**Zefreh**	**2.90**	**32**	*e*Pn	**Pn**	**13 05 17.4**	**+0.5**
IZEF				*e*		13 05 18.5	
	comp=Z,2μm,0.1s						
IZEF				*e*Sn	**Sn**	**13 05 50.8**	**-0.5**
IKLH	**Kalahroud**	**3.01**	**17**	*e*Pn	**Pn**	**13 05 15.4**	**-3.0**
IKLH				*e*		13 05 17.6	
	comp=Z,759nm,0.1s						
NASN	**Na'in**	**3.06**	**39**	*e*Pn	**Pn**	**13 05 19.7**	**+0.6**
NASN				*e*Sg	**Sn**	**13 05 54.0**	**-1.4**
ISAD	**Sadrabad**	**3.10**	**61**	*e*Pn	**Pn**	**13 05 20.1**	**+0.5**
ISAD				*e*		13 05 27.7	
	comp=N,831nm,0.1s						
ISAD				*e*Sn	**Sn**	**13 05 54.6**	**-1.5**
KFJS		**3.17**	**226**	P	**Pn**	**13 05 21.7**	**+1.1**
IMEH	**Mehriz**	**3.65**	**74**	*e*Pn	**Pn**	**13 05 27.0**	**-0.2**
IMEH				*e*		13 05 28.8	
	comp=Z,504nm,0.1s						
ICHK	**Chekchek**	**3.79**	**61**	*e*Pn	**Pn**	**13 05 28.6**	**-0.5**
ICHK				*e*		13 05 31.2	
	comp=Z,570nm,0.1s						
ICHK				*e*Sn	**Sn**	**13 06 11.2**	**-2.1**
GHVR	**GHOM**	**4.09**	**9**	*e*Pn	**Pn**	**13 05 31.8**	**-1.4**
GHVR				AML	AML	13 06 27.4	
	comp=N,193nm,0.3s						
ASAO	**Ashtian**	**4.12**	**354**	*e*Pn	**Pn**	**13 05 33.4**	**-0.2**
ASAO				*e*Sg	**Sn**	**13 06 24.3**	**+2.9**
ASAO				AML	AML	13 06 32.4	
	comp=E,15nm,0.9s						
ASAO				AML	AML	13 06 35.8	
	comp=N,16nm,0.6s						
IBAF	**Bafgh**	**4.49**	**74**	*e*Pn	**Pn**	**13 05 38.0**	**-0.8**
IBAF				*e*		13 05 38.3	
	comp=Z,186nm,0.1s						
IKOM	**Komasi**	**4.51**	**327**	*e*Pn	**Pn**	**13 05 41.0**	**+2.0**
IKOM				*e*		13 06 46.2	
	comp=Z,283nm,0.1s						
BQQSS		**4.66**	**193**	P	**Pn**	**13 05 41.7**	**+0.7**
DAMV	**Damavand**	**5.32**	**13**	*e*Pn	**Pn**	**13 05 49.2**	**-1.0**
ILAS	**Lasjerd**	**5.34**	**22**	*e*Pn	**Pn**	**13 05 50.7**	**+0.2**
ILAS				*e*		13 05 54.4	
	comp=N,421nm,0.1s						
SNGE	**Sanandaj**	**5.35**	**331**	*e*Pn	**Pn**	**13 05 53.0**	**+2.4**
IANJ	**Anjiloo**	**5.78**	**29**	*e*Pn	**Pn**	**13 05 56.3**	**-0.1**
IANJ				*e*		13 05 56.5	
	comp=Z,322nm,0.1s						
ISHM	**Shahmirzad**	**5.84**	**23**	*e*	**Pn**	**13 05 58.2**	**+0.9**
	comp=Z,563nm,0.1s						
IPRN	**Paran-Amol**	**5.97**	**14**	*e*Pn	**Pn**	**13 06 00.1**	**+1.1**
IPRN				*e*		13 06 03.6	
	comp=Z,446nm,0.3s						
ASYS		**6.14**	**243**	S	**Sn**	**13 07 09.5**	**-1.8**
ASYS		**6.14**	**243**	P	**Pn**	**13 06 00.8**	**-0.6**
IGLO	**Galoogah**	**6.37**	**22**	*e*Pn	**Pn**	**13 06 09.6**	**+5.1**
IGLO				*e*		13 06 10.1	
	comp=Z,427nm,0.2s						
BTHS		**6.37**	**177**	P	**Pn**	**13 06 03.8**	**-0.9**
HRDDS		**7.54**	**187**	P	**Pn**	**13 06 19.8**	**-0.9**

*NIED **23** 13:37:00, 3260N×13080E, h5km, Mw3.8 Best double couple: M0 6.35000×10^14 NP1:φs209.00000°, δ83.00000°, λ-174.00000°. NP2:φs119.00000°, δ84.00000°, λ-7.00000°.*

*ISCJB **23** 13:37:05.6±0.4, 3259N±003×13083E±005, h10km, mb3.5/4, Error ellipse: s-maj=5.6km s-min=4.1km az=172.1*

*NEIC **23** 13:37:05.8, 3262N×13083E, h6km, MG4.1(JMA), After JMA.*

NEIC Recorded [4 JMA] in Kumamoto, [2 JMA] in Kagoshima and [1 JMA] in Miyazaki and Nagasaki Prefectures.

*JMA **23** 13:37:05.7, 3262N×13083E, h6km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs111.00000°, δ75.00000°, λ-12.00000°. NP2: φs204.00000°, δ78.00000°, λ-165.00000°. Principal axes: T Plg2.0000°, Azm337.0000°; N Plg71.0000°, Azm241.0000°; P Plg19.0000°, Azm68.0000°;*

JMA Felt IV J1.

*IDC **23** 13:37:05.2±1.0, 3257N×13085E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.6/20, mbtmp3.6/7, ML3.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/21 Error ellipse: s-maj=24.1km s-min=8.5km az=92.0*

ISC 23 13:37:06.8±0.5, 3258N±003×13079E±005, h10km, n15, σ1§16/22, mb3.5/4, 5C, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIU2	**Izumi 2**	**0.04**	**148**	⇑P	**Pg**	**13 37 07.5**	**-1.2**
JIU2				S	**Sg**	**13 37 08.9**	**-1.1**
JTA	**Tamana**	**0.44**	**331**	⇑P	**Pg**	**13 37 14.3**	**-1.1**
JTA				S	**Sg**	**13 37 20.5**	**-0.8**
JZO	**Okuchi**	**0.47**	**200**	⇑P	**Pg**	**13 37 15.7**	**-0.2**
JZO				S	**Sg**	**13 37 23.1**	**+1.1**
JNU	**Nakatsue**	**0.55**	**8**	Pg	**Pg**	**13 37 16.0**	**-1.4**
	369nm,0.3s,baz=175,slow=11,SNR=2859						
JNU				Lg		13 37 23.1	
	3μm,0.3s,baz=311,slow=25,SNR=176						
JTSN	**Tsuno**	**0.69**	**119**	⇑P	**Pg**	**13 37 19.3**	**-0.8**
JTSN				S	**Sg**	**13 37 28.2**	**-0.9**
JTZ	**Takazaki**	**0.72**	**159**	⇑P	**Pg**	**13 37 20.7**	**0.0**
KSRS	**Korea Array**	**5.40**	**335**	Pn	**Pn**	**13 38 28.4**	**+1.1**
	0.6nm,0.3s,baz=154,slow=14,SNR=6.1						
KSRS				Pg	**Pg**	**13

TSZ	Takapari Road	1.51	165	PN	Pn	13 42 09.0	-0.2
MWZ	Matawai	1.65	82	P	Pn	13 42 10.6	+0.3
MWZ	Matawai	1.65	82	PN	Pn	13 42 10.6	+0.3
KNZ	Kokohu	1.79	104	*e*P	Pn	13 42 12.0	+0.6
KNZ	Kokohu	1.79	104	PN	Pn	13 42 12.0	+0.5
MRZ	Mangatainoka R	2.06	177	*e*P	Pn	13 42 12.5	-1.3
MRZ	Mangatainoka R	2.06	177	PN	Pn	13 42 12.5	-1.3
BFZ	Birch Farm	2.17	164	*e*P	Pn	13 42 14.0	-0.8
TIWZ	Tintock	2.20	171	PN	Pn	13 42 13.9	-1.2
PUZ	Puketiti	2.27	78	P	Pn	13 42 16.0	+0.2
PUZ	Puketiti	2.27	78	PN	Pn	13 42 16.0	+0.2
KIW	Kapiti Island	2.30	190	P	Pn	13 42 14.2	-1.8
KIW	Kapiti Island	2.30	190	PN	Pn	13 42 14.2	-1.9
MXZ	Matakaoa Point	2.48	66	*e*P	Pn	13 42 17.9	0.0
MXZ	Matakaoa Point	2.48	66	PN	Pn	13 42 17.9	0.0
DUWZ	D'Urville Isla	2.50	208	PN	Pn	13 42 15.7	-2.3
CAW	Cannon Point	2.53	187	P	Pn	13 42 16.3	-2.0
CAW	Cannon Point	2.53	187	PN	Pn	13 42 16.3	-2.0
MTW	Mount Morrison	2.56	179	P	Pn	13 42 16.7	-1.9
MTW	Mount Morrison	2.56	179	PN	Pn	13 42 16.7	-1.9
MRW	Makara Radio	2.69	192	PN	Pn	13 42 17.7	-2.3
WEL	Wellington	2.74	191	P	Pn	13 42 18.3	-2.1
WEL	Wellington	2.74	191	PN	Pn	13 42 18.3	-2.1
TCW	Tory Channel	2.77	199	P	Pn	13 42 18.4	-2.3
TCW	Tory Channel	2.77	199	PN	Pn	13 42 18.4	-2.3
SNZO	South Karori	2.77	192	P	Pn	13 42 18.3	-2.5
SNZO	South Karori	2.77	192	PN	Pn	13 42 18.3	-2.5
MSWZ	Moikau Station	2.82	183	P	Pn	13 42 19.1	-2.2
MSWZ	Moikau Station	2.82	183	PN	Pn	13 42 19.1	-2.2
BHW	Baring Head	2.84	189	PN	Pn	13 42 19.1	-2.5
TUWZ	Tuamarina	3.06	202	PN	Pn	13 42 21.5	-2.4
NNZ	Nelson	3.06	211	P	Pn	13 42 20.9	-3.1
NNZ	Nelson	3.06	211	PN	Pn	13 42 20.9	-3.1
NNZ				SN	S	13 43 00.7	-5.4
QRZ	Quartz Range	3.17	224	P	Pn	13 42 21.1	-4.0
QRZ	Quartz Range	3.17	224	PN	Pn	13 42 21.1	-3.9
BSWZ	Blackbirch Sta	3.34	201	P	Pn	13 42 24.6	-2.4
BSWZ	Blackbirch Sta	3.34	201	PN	Pn	13 42 24.6	-2.3
THZ	Tophouse	3.72	211	PN	Pn	13 42 27.7	-3.6
KHZ	Kahutara	4.08	200	PN	Pn	13 42 32.3	-3.2
DSZ	Denniston Nort	4.21	220	*e*P	Pn	13 42 32.4	-4.6
DSZ	Denniston Nort	4.21	220	PN	Pn	13 42 32.4	-4.6
LTZ	Lake Taylor	4.83	209	*e*PN	Pn	13 42 40.0	-4.5
CRLZ	Canterbury Las	5.42	202	*e*PN	Pn	13 42 46.5	-5.1
MQZ	McQueen's Vall	5.53	202	*e*PN	Pn	13 42 47.6	-5.3

IDC 23 13:43:25.2±4.4, 412S×14621E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/12, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=75.6km s-min=60.8km az=74.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	15.87	180	Pn	Pn	13 47 11.2	+1.1
	0.4nm,0.3s,baz=7.3,slow=14,SNR=4.9						
WRA	Warramunga Arr	19.53	215	P	Pn	13 47 52.8	-2.8
	0.1nm,0.3s,baz=37,slow=11,SNR=10						
ASAR	Alice Springs	22.78	210	P	P	13 48 29.4	-0.1
	0.3nm,0.4s,baz=48,slow=7.8,SNR=13						
FITZ	Fitzroy Crossi	24.46	234	P	P	13 48 46.8	+0.7
	1.4nm,0.6s,baz=56,slow=7.3,SNR=3.7						
STKA	Stephens Creek	27.95	188	P	P	13 49 18.1	+0.7
	1.4nm,0.7s,baz=23,slow=15,SNR=2.9						
TORD	Torodi Ar. Bea	143.84	287	PKP	PKPdf	14 03 02.5	-1.1
	0.4nm,0.8s,baz=56,slow=3.6,SNR=2.7						

*NEIC **23** 13:53:09.3, 15.17N×95.16W, h10km, MD4.2(MEX), After MEX.*

MEX 23 13:53:09.4±0.8, 1518N×9517W, h10km±19km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.08	303	*i* P	Pg	13 53 27.2	-3.0
HUIG				*i* S	Sg	13 53 40.3	-4.0
CMIG	Matias Romero	1.92	8	*i* P	Pn	13 53 38.4	-3.8
CMIG				*i* S	Sn	13 54 02.4	-4.1
VHO	Vista Hermosa	2.41	322	*i* P	Pg	13 53 49.4	+0.4
VHO				*i* S	Sn	13 54 16.8	-1.8
VHO	Vista Hermosa	2.41	322	*i* P	Pn	13 53 48.8	-0.2
VHO				*i* S	Sn	13 54 13.1	-5.5
OXX	Oaxaca	2.41	322	*e*P	Pn	13 53 49.0	0.0
SCX	San Cristobal	2.88	57	*i* P	Pn	13 53 54.0	-1.5
SCX				*i* S	Sn	13 54 28.5	-1.8
SCX	San Cristobal	2.88	57	*i* P	Pn	13 53 53.5	-2.0
SCX				*i* S	Sn	13 54 28.5	-1.8
CCIG	Comitan	3.12	69	*i* P	Pn	13 53 56.3	-2.4
CCIG				*i* S	Sn	13 54 30.6	-5.4
UTMO	Huajuapan	3.66	317	*i* P	Pn	13 54 06.5	+0.4
UTMO				*i* S	Sn	13 54 45.6	-3.7
TPIG	Tehuac#an	3.85	327	*i* S	Sn	13 54 50.8	-3.3
PPM	Popocatepetl	5.09	320	*e*S	Sn	13 55 22.0	-2.7

*CSEM **23** 14:01:52.2±0.6, 2679N×3496E, h35km, ML3.6, Error ellipse: s-maj=15.7km s-min=5.9km az=48.0*

SGS 23 14:01:54.7, 2685N×3505E, h29km, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WJHS		1.21	95	P	Pn	14 02 14.3	-1.4
WJHS		1.21	95	P	Pn	14 02 14.3	-1.4
WJHS				S	Sn	14 02 29.1	-2.0
RSHS		1.46	351	P	Pn	14 02 17.0	-2.1
JLOS		1.92	12	P	Pn	14 02 23.9	-1.5
HQLS		2.44	0	P	Pn	14 02 31.5	-1.1

IDC 23 14:22:33.1±2.0, 4665N×15561E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.7/17, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=50.8km s-min=33.3km az=78.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	9.51	259	Pn	Pn	14 24 51.1	0.0
	0.2nm,0.3s,baz=123,slow=10,SNR=4.5						
SONM	Songino Array	32.98	290	P	P	14 29 10.3	+0.9
	0.2nm,0.6s,baz=55,slow=11,SNR=2.8						
MKAR	Makanchi Array	48.51	299	P	P	14 31 16.5	-0.9
	0.2nm,0.2s,baz=75,slow=7.8,SNR=3.6						
FINES	FINESS Array B	64.85	336	P	P	14 33 13.5	+0.1
	0.6nm,0.4s,baz=41,slow=6.0,SNR=7.8						
ASAR	Alice Springs	72.69	201	P	P	14 34 02.7	+0.1
	0.4nm,0.7s,baz=15,slow=6.2,SNR=7.1						

WEL 23 14:32:43.8±0.4, 3855S×17582E, h173km±3km, ML3.5/20, Error ellipse: s-maj=3.3km s-min=3.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WPVZ	Whakapapa	0.69	198	PN	Pn	14 33 08.8	+0.1
TUVZ	Tukino	0.73	190	PN	Pn	14 33 09.2	+0.3
TUVZ				eSN	Sn	14 33 28.6	+0.2
FWVZ	Far West T-bar	0.73	197	PN	Pn	14 33 09.2	+0.2
FWVZ				eSN	Sn	14 33 28.4	0.0
WNVZ	Wahianoa	0.79	193	PN	Pn	14 33 09.5	+0.2
BKZ	Black Stump Fm	0.81	140	PN	Pn	14 33 09.8	+0.4
BKZ				SN	Sn	14 33 29.2	0.0
MOVZ	Moawhango	0.85	184	PN	Pn	14 33 09.6	-0.2
URZ	Urewera	1.05	74	PN	Pn	14 33 10.9	-0.3
URZ				SN	Sn	14 33 32.8	+0.6
MWZ	Matawai	1.36	81	PN	Pn	14 33 13.8	0.0
MWZ				SN	Sn	14 33 36.3	-0.6
WAZ	Wanganui	1.37	208	PN	Pn	14 33 13.4	-0.5
TSZ	Takapari Road	1.51	176	PN	Pn	14 33 15.0	-0.2
TSZ				SN	Sn	14 33 38.3	-1.4
KNZ	Kokohu	1.52	108	PN	Pn	14 33 16.0	+0.6
PXZ	Pawanui	1.68	152	PN	Pn	14 33 17.2	+0.2
PUZ	Puketiti	1.98	77	PN	Pn	14 33 20.0	-0.1
PUZ				SN	Sn	14 33 47.8	-0.3
MRZ	Mangatainoka R	2.12	185	PN	Pn	14 33 20.3	-1.3
MRZ				SN	Sn	14 33 48.4	-2.6
BFZ	Birch Farm	2.15	171	*e*PN	Pn	14 33 21.3	-0.8
MXZ	Matakaoa Point	2.20	64	PN	Pn	14 33 22.5	-0.1
KIW	Kapiti Island	2.41	197	PN	Pn	14 33 23.1	-1.9
MTW	Mount Morrison	2.61	185	PN	Pn	14 33 25.3	-2.1
CAW	Cannon Point	2.62	193	PN	Pn	14 33 25.5	-2.0
DUWZ	D'Urville Isla	2.68	213	PN	Pn	14 33 25.5	-2.7
MRW	Makara Radio	2.81	198	PN	Pn	14 33 27.5	-2.3
WEL	Wellington	2.85	196	PN	Pn	14 33 27.9	-2.3
SNZO	South Karori	2.88	197	PN	Pn	14 33 28.0	-2.6
MSWZ	Moikau Station	2.89	189	PN	Pn	14 33 28.3	-2.5
TCW	Tory Channel	2.91	204	PN	Pn	14 33 28.4	-2.6
TUWZ	Tuamarina	3.22	206	PN	Pn	14 33 31.8	-3.0
NNZ	Nelson	3.26	214	PN	Pn	14 33 31.7	-3.5
QRZ	Quartz Range	3.41	227	PN	Pn	14 33 32.7	-4.4
BSWZ	Blackbirch Sta	3.49	205	PN	Pn	14 33 35.2	-3.0
THZ	Tophouse	3.91	214	PN	Pn	14 33 39.6	-3.8
KHZ	Kahutara	4.23	204	PN	Pn	14 33 44.4	-3.3
DSZ	Denniston Nort	4.43	223	PN	Pn	14 33 45.4	-4.8
LTZ	Lake Taylor	5.01	211	PN	Pn	14 33 53.5	-4.2
MQZ	McQueen's Vall	5.68	204	PN	Pn	14 34 01.3	-5.1

MAN 23 14:42:33, 1187N×12229E, h25km, mb4.2, ML3.0, MS2.8, 2C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALP	Kalibo	0.20	165	*e*P	Pb	14 42 39.8	+1.2
KALP				*i* S	Sb	14 42 44.2	+1.8
RCP	Roxas	0.54	124	*e*P	Pb	14 42 45.9	+1.9
RCP				*e*S	Sb	14 42 54.5	+3.1
OTRP	Odiongan	0.56	332	*e*P	Pb	14 42 44.5	+0.4
OTRP				*e*S	Sb	14 42 53.5	+1.8
GUIM	Jordan	1.27	167	*e*P	Pn	14 42 57.4	+2.2
GUIM				*e*S	Sn	14 43 16.8	+5.4
CUYO	Cuyo Island	1.60	231	*e*P	Pn	14 42 59.7	-0.1
BUSP	Coron	2.05	274	*e*P	Pn	14 43 07.1	+1.2
BUSP				*e*S	Sn	14 43 31.9	+1.3
ENPP	El Nido	2.88	257	*e*P	Pn	14 43 18.0	+0.7

*IDC **23** 14:51:05.6±2.1, 3357S×17921W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/12, mbtmp3.9/3, ML4.0/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/12, Error ellipse: s-maj=50.6km s-min=36.2km az=122.0*

*ISCJB **23** 14:51:09.3±2.2, 3389S×10.170×1792W±0.02, h40km±19km, mb4.2/4, Error ellipse: s-maj=28.9km s-min=15.7km az=7.8*

*NEIC **23** 14:51:09.9±1.0, 3377S×17908W, h35km, mb4.4/1, Error ellipse: s-maj=22.2km s-min=11.5km az=99.0*

ISC 23 14:51:10.1±3.0, 3377S±007×1794W±03, h26km±26km, n25, σ0°72/25, mb4.2/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.21	205	P	Pn	14 52 13.2	+0.5
MXZ	Matakaoa Point	4.21	205	*e*PN	Pn	14 52 12.5	-0.1
MXZ				*e*SN	Sn	14 53 00.7	-0.3
PUZ	Puketiti	4.69	203	*e*P	Pn	14 52 19.1	-0.1
PUZ	Puketiti	4.69	203	*e*PN	Pn	14 52 18.7	-0.5
PUZ				*e*SN	Sn	14 53 12.3	-0.5
MWZ	Matawai	5.18	208	*e*P	Pn	14 52 26.2	+0.2
MWZ	Matawai	5.18	208	*e*PN	Pn	14 52 25.4	-0.6
URZ	Urewera	5.29	211	*e*P	Pn	14 52 28.6	+1.2
URZ	Urewera	5.29	211	Pn	Pn	14 52 28.8	+1.4
	4.7nm,0.3s,baz=23,slow=5.2,SNR=23						
URZ				Sn	Sn	14 53 27.8	+0.2
	3.5nm,0.3s,baz=114,slow=23,SNR=6.1						
URZ	Urewera	5.29	211	*e*PN	Pn	14 52 27.1	-0.4
URZ				*e*SN	Sn	14 53 27.9	+0.3
KNZ	Kokohu	5.74	203	*e*PN	Pn	14 52 34.5	+0.9
OUZ	Omahuta	5.94	254	*e*P	Pn	14 52 41.2	+4.7
OUZ	Omahuta	5.94	254	*e*PN	Pn	14 52 41.2	+4.7
BKZ	Black Stump Fm	6.31	210	*e*P	Pn	14 52 41.9	+0.4
BKZ	Black Stump Fm	6.31	210	*e*PN	Pn	14 52 40.6	-0.9
TSZ	Takapari Road	7.28	209	*e*PN	Pn	14 52 53.9	-1.0
MRZ	Mangatainoka R	7.95	209	*e*SN	Sn	14 54 27.7	-5.3
RPZ	Rata Peaks	12.39	214	Sn	Sn	14 56 12.3	-10
	0.5nm,0.3s,baz=68,slow=21,SNR=3.6						
HNR	Honiara	30.77	317	P	P	14 57 22.3	-1.3
	17nm,0.3s,mb5.3,baz=100,slow=11,SNR=4.4						
ASAR	Alice Springs	41.85	271	P	P	14 58 59.4	+1.2
	0.9nm,0.7s,mb3.5,baz=112,slow=7.8,SNR=18						
WRA	Warramunga Arr	43.15	277	P	P	14 59 08.9	+0.2
	0.5nm,0.3s,mb3.7,baz=117,slow=7.9,SNR=20						
QSPA	South Pole Qui	56.35	180	P	P	15 00 48.6	+0.2
	3.6nm,1.0s,mb4.4						
FINES	FINESS Array B	147.83	337	PKPbc	PKPbc	15 10 50.5	-1.4
	1.3nm,0.8s,baz=45,slow=4.1,SNR=5.8						
NB2	NORSAR Subarra	151.86	349	PKP	PKPbc	15 11 01.2	-0.6
	comp=Z,0.6nm,0.6s,baz=15,slow=2.5						
NOA	NORSAR Array B	151.86	349	PKPbc	PKPbc	15 11 01.2	-0.6
	comp=Z,1.1nm,0.7s,baz=14,slow=4.1,SNR=3.8						
TORD	Torodi Ar. Bea	159.44	183	PKPab	PKPab	15 11 48.9	+4.4
	comp=Z,0.2nm,0.6s,baz=177,slow=5.7,SNR=3.5						

*IDC **23** 15:05:19.1±7.9, 1131S×162.11E, h58km±55km, mb3.5/4, mb1 3.7/6, mb1mx3.6/14, mbtmp3.6/6, ML4.0/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/11, Error ellipse: s-maj=62.9km s-min=25.9km az=97.0*

ISC 23 15:05:18.0±5.1, 1135±01×1622E±03, h55km±35km, n9, σ0°86/7, mb3.6/4, MS3.5/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.90	310	P	Pn	15 06 01.5	-0.3
	42nm,0.3s,baz=102,slow=3.8,SNR=11						
HNR				S	Sn	15 06 35.6	+0.1
	53nm,0.3s,baz=102,slow=14,SNR=7.7						
CTA	Charters Tower	17.66	238	P	Pn	15 09 20.9	+0.7
	0.2nm,0.3s,baz=56,slow=14,SNR=5.5						
STKA	Stephens Creek	27.95	220	LR	LR	15 22 03.7	
	comp=Z,123nm,20.2s,MS3.5,baz=24,slow=36						
WRA	Warramunga Arr	28.15	249	P	P	15 11 04.6	-0.7
	0.8nm,0.8s,mb3.4,baz=77,slow=9.4,SNR=4.9						
WRA				PcP	PcP	15 14 19.7	+1.3
	0.4nm,0.8s,baz=77,slow=2.8,SNR=5.0						
ASAR	Alice Springs	29.60	242	P	P	15 11 18.0	-0.1
	1.1nm,0.7s,mb3.7,baz=67,slow=10,SNR=13						
RPZ	Rata Peaks	33.19	168	LR	LR	15 21 16.0	
	comp=Z,123nm,22.0s,MS3.6,baz=256,slow=29						
KSRS	Korea Array	58.20	328	LR	LR	15 38 46.4	
	comp=Z,27nm,18.5s,MS3.4,baz=47,slow=34						
SONM	Songino Array	76.86	325	P	P	15 17 05.2	+1.1
	0.4nm,0.3s,mb3.8,baz=137,slow=5.6,SNR=4.6						
MKAR	Makanchi Array	91.35	317	P	P	15 18 17.2	-0.7
	0.1nm,0.3s,mb3.7,baz=93,slow=5.8,SNR=3.0						

*ISCJB **23** 15:27:23.3±0.7, 1037N±004×6142W±004, h47km±6km, Error ellipse: s-maj=7.3km s-min=6.2km az=155.2*

*FUNV **23** 15:27:23.1, 1044N×6135W, h25km, MW3.4*

*TRN **23** 15:27:25.4, 1047N×6141W, h31km, MD3.1*

*NEIC **23** 15:27:25.4, 1047N×6141W, h31km, MD3.1(TRN), After TRN.*

ISC 23 15:27:24.2±0.6, 1039N±004×6142W±004, h40km±7km, n16, σ0°82/26, 1C-1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	Pointe-a-Pierr	0.08	204	*e*P	Pn	15 27 30.5	-0.2
TPP				*e*S	Sn	15 27 36.2	+1.0
TRN	Trinidad (W)	0.26	3	*e*P	Pn	15 27 31.3	-0.8
TRN				*e*S	Sn	15 27 36.5	-1.0
TBH	Brigand Hill	0.36	75	*e*P	Pn	15 27 32.9	-0.2
TBH				*e*S	Sn	15 27 39.7	+0.3
TCE	Chacachacare	0.45	313	*i* P	Pn	15 27 35.0	+0.7
TCE				*e*S	Sn	15 27 40.8	-0.6
GUIV	Guiria	0.83	288	*e*P	Pn	15 27 40.0	+0.5
GUIV				*e*S	Sn	15 27 50.7	+0.2
TPR	Prospect	1.01	38	*e*P	Pn	15 27 43.2	+1.3
TPR				*e*S	Sn	15 27 54.6	-0.3
GUNV	Guanoco	1.52	262	*e*P	Pn	15 27 50.1	+1.3
GUNV				*e*S	Sn	15 28 08.7	+1.3
GRW	Mount Saint Ca	1.77	352	*e*P	Pn	15 27 54.2	+1.8
GRW				*e*S	Sn	15 28 13.7	-0.2
CRUV	Carupano	1.81	279	*e*P	Pn	15 27 52.7	-0.2
CRUV				*e*S	Sn	15 28 14.7	0.0
ITEV	Isla Los Testi	1.94	300	*e*P	Pn	15 27 54.2	-0.5
ITEV				*e*S	Sn	15 28 16.9	-0.9
RIOV	Rio Grande	2.34	190	*e*P	Pn	15 28 00.7	+0.5
ORIV	Oritupano	2.36	236	*e*P	Pn	15 28 00.3	-0.2
PCRV	Puerto La Cruz	3.17	266	*e*P	Pn	15 28 11.7	+0.1
LUEV	Luepa	4.52	181	*e*P	Pn	15 28 28.5	-1.6
CAOV	Caicara del Or	5.72	238	*e*P	Pn	15 28 45.8	-1.0
BAUV	El Baul	6.69	258	*e*P	Pn	15 28 58.8	-1.1

IDC 23 15:36:58.7±9.8, 2327S×17935E, h558km±150km, mb3.2/4, mb1 3.3/5, mb1mx3.1/13, mbtmp3.2/5, Error ellipse: s-maj=85.4km s-min=45.0km az=171.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	15.06	187	P	P	15 40 07.9	-0.6
	0.5nm,0.3s,baz=341,slow=16,SNR=8.1						
CTA	Charters Tower	30.88	269	P	P	15 42 31.0	+0.7
	4.6nm,0.3s,baz=94,slow=10,SNR=12						
ASAR	Alice Springs	41.55	260	P	P	15 43 58.1	-0.1
	0.7nm,0.5s,baz=91,slow=6.8,SNR=17						
WRA	Warramunga Arr	41.86	266	P	P	15 43 60.0	-0.7
	0.8nm,0.3s,baz=96,slow=8.2,SNR=85						
MJAR	Matsushiro Arr	71.04	326	P	P	15 47 20.9	+0.1
	1.0nm,0.5s,baz=105,slow=8.7,SNR=6.5						

*ISCJB **23** 15:47:04.4±0.7, 5351N±004×16033E±008, h57km±10km, Error ellipse: s-maj=9.1km s-min=4.3km az=31.8*

*KRSC **23** 15:47:04.3±0.6, 5353N×16030E, h51km±40km, ML4.0*

*MOS **23** 15:47:05.2±1.6, 5357N×16032E, h33km, mb4.2/1, Error ellipse: s-maj=30.1km s-min=10.4km az=73.3*

ISC 23 15:47:05.3±0.7, 5350N±004×16032E±008, h51km±13km, n21, σ0°65/38, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.44	204	*i* P	Pn	15 47 16.1	+0.2
SPN				*i* S	Sn	15 47 24.5	+1.0
NLC	Nalytchevo	0.67	241	*i* P	Pn	15 47 18.2	-0.5
NLC				*i* S	Sn	15 47 28.4	0.0
KII	Karymskiy	0.75	317	*i* P	Pn	15 47 19.2	-0.5
KII				*i* S	Sn	15 47 29.5	-0.6
AVH	Avacha	0.97	257	*i* P	Pn	15 47 22.6	-0.1
AVH				*i* S	Sn	15 47 35.9	+0.4
PET	Petropavlovsk	1.11	245	*i* P	Pn	15 47 24.1	-0.4
PET				*i* S	Sn	15 47 38.3	-0.4
MKZ	Mys Kozlova	1.35	38	*i* P	Pn	15 47 27.1	-0.6
MKZ				*i* S	Sn	15 47 43.2	-1.3
GNL	Ganaly	1.43	279	*i* P	Pn	15 47 28.5	-0.3
GNL				*i* S	Sn	15 47 46.0	-0.5
RUS	Russkaya	1.53	226	*i* P	Pn	15 47 29.5	-0.7
RUS				*i* S	Sn	15 47 47.6	-1.2
GRL	Gorelyy	1.66	236	*i* P	Pn	15 47 32.6	+0.7
GRL				*i* S	Sn	15 47 52.8	+0.8
TUMR	Tumrok	1.79	357	*i* P	Pn	15 47 34.1	+0.3
TUMR				*i* S	Sn	15 47 55.5	+0.2
KMNR	Kamenistaya	2.26	359	*e*P	Pn	15 47 41.1	+0.9
KMNR				*i* S	Sn	15 48 07.3	+0.4
KPT	Kopyto	2.47	359	*i* P	Pn	15 47 43.6	+0.5
KPT				*e*S	Sn	15 48 12.4	+0.4
MIPR	Malaya Ipel'ka	2.48	242	*e*P	Pn	15 47 43.6	+0.4
KOZ	Kozyrevsk	2.58	354	*i* P	Pn	15 47 44.6	+0.1
KOZ				*i* S	Sn	15 48 14.7	+0.1
KOZR	Kozyr	2.58	355	PN	Pn	15 47 44.6	0.0
KOZR				S	Sn	15 48 14.7	-0.1
KRSR	Krestovskiy	2.73	3	P	Pn	15 47 46.5	-0.1
KLY	Klyuchi	2.83	4	*e*P	Pn	15 47 48.9	+1.0
KLY				*i* S	Sn	15 48 22.0	+1.3
SRDR	Sredinnyy	2.85	353	*e*P	Pn	15 47 47.7	-0.5
SRDR				*i* S	Sn	15 48 20.2	-1.0
KBTR	Krutoberegovo	3.08	27	*e*P	Pn	15 47 51.2	-0.1
KBTR				*i* S	Sn	15 48 25.7	-1.1
SRKR	Sorokina	3.20	8	P	Pn	15 47 54.1	+1.1
SKR	Severo-Kuril's	3.83	224	*e*PN	Pn	15 48 08.4	+6.7
SKR				pmax	pmax		
	comp=Z,80nm,0.4s						

*ISCJB **23** 15:55:11.9±0.2, 1519S±003×16737E±004, h124km, mb5.2/76, Error ellipse: s-maj=5.5km s-min=4.4km az=143.4*

*BJI **23** 15:55:11.9, 1463S×16752E, h110km, mB5.1, mb5.2*

*NEIC **23** 15:55:14.0±0.2, 1511S×16739E, mb5.2/35, Error ellipse: s-maj=8.8km s-min=7.6km az=158.0*

*GCMT **23** 15:55:14.0±0.2, 1513S×16726E, h126km±1km, MW5.2/91, Moment Tensor Solution. s71,c95; s91,c164; Duration: 1s0 Moment tensor: Scale 10^{17}Nm; M_rr0.85±.01; $M_{\theta\theta}$0.05±.01; $M_{\phi\phi}$-0.89±.01; $M_{r\theta}$-0.10±.01; $M_{\theta\phi}$-0.01±.02; $M_{\phi r}$-0.17±.01; Best double couple: M0.89300×10^{17} NP1:ϕs353.00000°, δ40.00000°, λ79.00000°. NP2: ϕs187.00000°, δ51.00000°, λ99.00000°. Principal axes: T 0.8750, Plg81.0000°, Azm142.0000°; N 0.0360, Plg7.0000°, Azm2.0000°; P -0.9110, Plg6.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **23** 15:55:14.1±0.6, 1517S×16730E, h128km±4km, mb4.7/17, mb1 4.7/18, mb1mx4.7/19, mbtmp4.7/18, MS4.0/14, Ms1 4.0/14, ms1mx3.9/25 Error ellipse: s-maj=10.6km s-min=9.6km az=143.0*

*MOS **23** 15:55:14.2±1.7, 1513S×16733E, h139km, mb5.1/24, MS4.4/4, Error ellipse: s-maj=9.8km s-min=7.6km az=131.2*

ISC 23 15:55:13.7±0.2, 1518S±003×16741E±004, h126km, h126km±1.6km: pP-P, n334, σ0°96/167, mb5.2/76, 71C-10D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.92	187	*e*P	Pn	15 56 53.1	+0.6
DZM				*

RPZ Rata Peaks 28.61 174 P **P** **16 00 58.4 +0.4**
comp=Z,9.5nm,0.6s,mb4.6,baz=2.4,slow=6.0,SNR=9.6
RPZ LR LR 16 10 36.5
comp=Z,341nm,20.6s,baz=138,slow=32
STKA Stephens Creek 28.81 230 *eP* **P** **16 01 01.1 +1.2**
comp=Z,31nm,1.0s,mb4.9
STKA *e*PCP PcP 16 04 06.5 -0.2
STKA Stephens Creek 28.81 230 P **P** **16 01 01.2 +1.2**
comp=Z,18nm,0.4s,mb5.1,baz=48,slow=7.0,SNR=58
STKA PcP PcP 16 04 06.6 -0.1
comp=Z,13nm,0.9s,baz=18,slow=2.9,SNR=5.3
STKA ScP ScP 16 07 38.5 +1.8
comp=Z,4.0nm,0.8s,baz=354,slow=9.6,SNR=3.1
STKA LR LR 16 13 14.1
comp=Z,267nm,19.2s,baz=54,slow=38
RAR Rarotonga 31.71 106 P **P** **16 01 26.4 +0.8**
comp=Z,27nm,1.0s,mb4.9,baz=272,slow=8.4,SNR=3.9
WB2 Warramunga Arr 31.84 257 *eP* **P** **16 01 25.6 -1.2**
WB2 *e*PCP PcP 16 04 14.8 -0.1
WRA Warramunga Arr 31.85 257 P **P** **16 01 25.5 -1.4**
WRA pP pP 16 01 53.8 -0.6
WRA PcP PcP 16 04 14.7 -0.2
WRA S **S** **16 06 25.3 -3.1**
WRA ScP ScP 16 07 47.8 +1.0
WRA Warramunga Arr 31.85 257 P **P** **16 01 25.5 -1.4**
WRA *PP pP 16 01 53.8 -0.6
WRA 16 04 14.7
WRA S **S** **16 06 25.3 -3.1**
WRA Warramunga Arr 31.85 257 P **P** **16 01 25.5 -1.4**
comp=Z,3.9nm,0.6s,mb4.3,baz=81,slow=7.1,SNR=106
WRA pP pP 16 01 53.8 -0.6
comp=Z,11nm,1.2s,baz=87,slow=9.0,SNR=5.4
WRA PcP PcP 16 04 14.7 -0.2
comp=Z,9.8nm,1.2s,baz=82,slow=3.3,SNR=8.1
WRA S **S** **16 06 25.3 -3.1**
comp=Z,2.2nm,1.1s,baz=81,slow=14,SNR=7.7
WRA ScP ScP 16 07 47.8 +1.0
comp=Z,7.6nm,1.1s,baz=86,slow=3.7,SNR=12
WRA PKiKP PKiKP 16 11 41.8 -1.7
comp=Z,2.3nm,0.9s,baz=10,slow=0.4,SNR=23
WRA LR LR 16 13 35.7
comp=Z,399nm,20.0s,baz=85,slow=35
TAU Tasmania Unive 32.57 208 P **P** **16 01 32.3 -0.5**
comp=Z,41nm,1.2s,mb5.1
TAU Tasmania Unive 32.57 208 P **P** **16 01 32.3 -0.6**
TAU pmax pmax
comp=Z,41nm,1.2s,mb5.1
ASAR Alice Springs 32.64 250 P **P** **16 01 33.3 -0.5**
ASAR pP pP 16 02 01.1 -0.2
ASAR PcP PcP 16 04 15.6 -1.4
ASAR S **S** **16 06 37.3 -3.4**
ASAR ScP ScP 16 07 50.1 +0.7
ASAR Alice Springs 32.64 250 P **P** **16 01 33.3 -0.5**
ASAR *PP pP 16 02 01.1 -0.2
ASAR 16 04 15.6
ASAR S **S** **16 06 37.3 -3.4**
ASAR Alice Springs 32.64 250 P **P** **16 01 33.3 -0.5**
comp=Z,26nm,0.8s,mb5.1,baz=84,slow=9.0,SNR=230
ASAR pP pP 16 02 01.1 -0.2
comp=Z,4.5nm,0.7s,baz=78,slow=9.5,SNR=2.1
ASAR PcP PcP 16 04 15.6 -1.4
comp=Z,3.6nm,0.8s,baz=99,slow=3.2,SNR=6.9
ASAR S **S** **16 06 37.3 -3.4**
comp=Z,3.7nm,1.2s,baz=76,slow=16,SNR=5.9
ASAR ScP ScP 16 07 50.1 +0.7
comp=Z,3.6nm,0.8s,baz=85,slow=3.1,SNR=14
ASAR PKiKP PKiKP 16 11 42.4 -1.6
comp=Z,1.3nm,0.9s,baz=95,slow=1.4,SNR=9.5
KAKA Kakadu 34.01 270 *eP* **P** **16 01 45.2 -0.5**
comp=Z,5.6nm,0.6s,mb4.6
KAKA *e*PCP PcP 16 04 21.0 0.0
FORT Forrest 39.19 240 *eP* **P** **16 02 29.7 +0.2**
comp=Z,42nm,0.5s,mb5.5
FORT *e*PCP PcP 16 05 00.4 +24
FITZ Fitzroy Crossi 40.07 260 *eP* **P** **16 02 36.6 -0.3**
comp=Z,17nm,0.9s,mb4.9
FITZ *e*pP pP 16 03 04.8 -0.4
FITZ Fitzroy Crossi 40.07 260 P **P** **16 02 36.8 -0.2**
comp=Z,7.4nm,0.6s,mb4.7,baz=98,slow=9.5
FITZ LR LR 16 18 59.8
comp=Z,331nm,19.6s,baz=90,slow=36
PAE Paea 41.27 100 *eP* **P** **16 02 47.1 +0.3**
comp=Z,300nm,1.1s,mb6.0
PAE Paea 41.27 100 *eP* **P** **16 02 47.1 +0.3**
PAE pmax pmax
comp=Z,300nm,1.1s,mb6.0
PPT Papeete 41.28 99 *eP* **P** **16 02 47.4 +0.5**
comp=Z,163nm,1.3s,mb5.7
PPT *e*pP pP 16 03 10.7 -4.6
comp=Z,52nm,1.2s
PPT *e*S **S** **16 08 52.1 +0.3**
comp=Z,186nm,24.0s
PPT *e*LQ 16 12 33.3
comp=Z,386nm,24.5s
PPT *e*LR LR 16 14 21.3
comp=Z,966nm,31.0s
PPT Papeete 41.28 99 P **P** **16 02 47.3 +0.4**
comp=Z,87nm,0.9s,mb5.6,baz=252,slow=2.6,SNR=10
TBI Tubuai 41.39 108 *eS* **S** **16 08 52.9 -0.5**
comp=Z,148nm,25.9s
TBI *e*LQ 16 12 40.3
comp=Z,325nm,35.2s
TBI *e*LR LR 16 14 27.8
comp=Z,703nm,34.2s
TVO Taravao 41.57 100 *eP* **P** **16 02 49.9 +0.6**
comp=Z,336nm,1.2s,mb6.0
TVO Taravao 41.57 100 *eP* **P** **16 02 49.9 +0.6**
TVO pmax pmax
comp=Z,336nm,1.2s,mb6.0
BATI Kupang 42.91 271 P **P** **16 03 00.9 +0.7**
comp=Z,25nm,0.5s,mb5.2
BATI LR LR 16 21 07.4
comp=Z,202nm,18.4s,baz=129,slow=36
PMOR Pomariorio Ree 43.10 96 *eP* **P** **16 03 02.8 +1.1**
comp=Z,437nm,1.3s,mb6.0
VAH Vaihoa 43.33 96 *eP* **P** **16 03 04.3 +0.8**
comp=Z,396nm,1.3s,mb6.0
MBWA Marble Bar 45.56 255⇑ *iP* **P** **16 03 21.1 -0.1**
comp=Z,89nm,1.4s,mb5.3
MBWA *e*pP pP 16 03 47.0 -3.1
KLBR Kellerberrin 48.01 241 *eP* **P** **16 03 37.4 -2.7**
comp=Z,96nm,1.8s,mb5.3
NWAO Narrogin (SRO) 48.64 239 *eP* **P** **16 03 44.3 -0.6**
comp=Z,90nm,1.3s,mb5.5
NWAO Narrogin (SRO) 48.64 239 *eP* **P** **16 03 44.3 -0.6**
NWAO pmax pmax
comp=Z,90nm,1.3s
NWAO Narrogin (SRO) 48.64 239 LR LR 16 24 48.4
comp=Z,294nm,18.4s,baz=77,slow=36
MUN Mundaring 49.36 241 *eP* **P** **16 03 49.6 -0.9**
TAOE Nuku Hiva Isla 51.58 89 *eP* **P** **16 04 08.5 +1.1**
comp=Z,889nm,1.3s
RKT Rikitea 54.71 108 *eS* **S** **16 12 00.1 -1.0**
comp=Z,313nm,29.8s
RKT *e*LR LR 16 20 35.9
comp=Z,638nm,34.0s,baz=264
KKM Kota Kinabalu 54.93 289 *eP* **P** **16 04 32.1 +0.2**
MJAR Matsushiro Arr 58.36 333 P **P** **16 04 54.8 -0.9**
MJAR *PP pP 16 05 25.0 -0.9
MJAR Matsushiro Arr 58.36 333 P **P** **16 04 54.8 -0.9**
comp=Z,10.0nm,1.0s,mb4.8,baz=166,slow=7.3,SNR=22
MJAR pP pP 16 05 25.0 -0.9
comp=Z,4.3nm,0.9s,baz=170,slow=9.0,SNR=3.9
MJAR LR LR 16 27 01.1
comp=Z,89nm,18.5s,baz=35,slow=33
MAJO Matsushiro 58.36 333 *eP* **P** **16 04 53.7 -2.1**
comp=Z,24nm,1.1s,mb5.2
MAJO Matsushiro 58.36 333 *eP* **P** **16 04 53.7 -2.0**
MAJO pmax pmax
comp=Z,24nm,1.1s,mb5.1
KSM Kuching 58.83 281⇑ *eP* **P** **16 04 59.4 -0.1**
KSM *e*pP pP 16 05 26.4 -3.3
YHNB Yeheng 59.88 311 *eP* **P** **16 05 06.0 -0.4**
ERM Erimo 61.15 340 *eP* **P** **16 05 14.3 -0.4**
SBA Scott Base 62.69 180 *eP* **P** **16 05 25.2 +0.7**
comp=Z,63nm,1.3s,mb5.4
SBA Scott Base 62.69 180 *eP* **P** **16 05 25.2 +0.6**
SBA pmax pmax
comp=Z,63nm,1.3s,mb5.4
KSRS Korea Array 64.18 326 P **P** **16 05 35.0 0.0**
comp=Z,6.4nm,0.9s,mb4.5,baz=140,slow=6.7,SNR=17
KSRS pP pP 16 06 06.7 +1.1
comp=Z,7.0nm,1.1s,baz=143,slow=6.0,SNR=4.4
KSRS LR LR 16 29 28.1
comp=Z,76nm,21.0s,baz=220,slow=32
YSS Yuzh-Sakhalins 65.69 342 *eP* **P** **16 05 45.0 +0.5**
comp=Z,61nm,1.3s,mb5.3
YSS Yuzh-Sakhalins 65.69 342⇑ *iP* **P** **16 05 46.5 +2.0**
YSS *e* pP 16 06 16.0 +0.7
YSS pmax pmax
comp=Z,90nm,1.2s,mb5.5
QIZ Qiongzhong 66.07 299 P **P** **16 05 48.3 +0.8**
QIZ AP pP 16 06 18.5 +0.2
QIZ XP sP 16 06 29.3 -2.7
QIZ S S 16 14 28.3 +2.3
QIZ XS sS 16 15 15.3 -3.8
QIZ AMB AMB
comp=Z,34nm,1.4s,mb5.0
QIZ AMB AMB
comp=Z,101nm,4.2s
NJ2 Nanjing 66.09 316 *eP* **P** **16 05 47.6 +0.2**
NJ2 XP sP 16 06 32.8 +0.9
NJ2 PP PP 16 08 16.6 +1.9
NJ2 S S 16 14 25.5 -0.3
NJ2 XS sS 16 15 17.5 -1.4
NJ2 AMB AMB
comp=Z,40nm,0.9s,mb5.2
NJ2 AMB AMB
comp=Z,200nm,4.6s
NJ2 LR LR
comp=N,300nm,21.4s
NJ2 LR LR
comp=E,220nm,19.7s
NJ2 LR LR
comp=Z,220nm,19.6s
VLA Vladivostok 66.53 332*d iP* **P** **16 05 49.6 -0.3**
VLA pmax pmax
comp=Z,18nm,1.0s,mb4.9
PET Petropavlovsk 68.34 354 *eP* **P** **16 06 04.8 +3.7**
PET *e*S S 16 14 51.7 -0.2
WHN Wuhan 68.34 312⇑ *iP* **P** **16 06 01.8 +0.2**
DL2 Dalian 68.74 323 P **P** **16 06 04.3 +0.4**
DL2 S S 16 14 57.0 -0.2
DL2 AMB AMB
comp=Z,30nm,1.0s,mb5.1
DL2 AMB AMB
comp=Z,140nm,5.8s
MDJ Mudanjiang 68.74 332 P **P** **16 06 04.3 +0.6**
MDJ AP pP 16 06 33.8 -1.0
MDJ XP sP 16 06 47.0 -1.4
MDJ PP PP 16 08 37.1 -0.3
MDJ S S 16 14 58.8 +1.9
MDJ AMB AMB
comp=Z,48nm,1.1s,mb5.2
MDJ AMB AMB
comp=Z,97nm,3.4s
MDJ LR LR
comp=N,96nm,35.2s
MDJ LR LR
comp=E,121nm,29.0s
MDJ LR LR
comp=Z,103nm,33.9s
KULM Kulim 69.17 282⇑ *eP* **P** **16 06 06.9 -0.3**
KULM *e*pP pP 16 06 35.6 -2.6
HABR Khabarovsk 69.60 338⇑ *iP* **P** **16 06 09.7 +0.7**
HABR *e**PP pP 16 06 41.5 +1.4
HABR *e* 16 08 43.3
HABR *e*S S 16 15 06.8 -0.1
HABR *e* 16 15 54.8
HABR pmax pmax
comp=Z,60nm,1.8s,mb5.1
CN2 Changchun 70.10 329 *eP* **P** **16 06 11.8 -0.3**
CN2 AMB AMB
comp=Z,30nm,0.8s,mb5.2
KLR Kul'dur 71.47 336⇓ *eP* **P** **16 06 18.0 -2.3**
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,100nm,1.6s,mb5.4
GYA Guiyang 72.08 305⇑ *iP* **P** **16 06 25.3 +0.8**
GYA PP PP 16 09 10.3 +3.8
GYA PPP 16 10 53.8
GYA S S 16 15 37.6 +1.1
GYA SKS 16 16 14.4
GYA SS SS 16 20 19.9 +3.3
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.3
GYA AMB AMB
comp=Z,130nm,6.4s
GYA LR LR
comp=N,450nm,19.8s
GYA LR LR
comp=E,570nm,18.6s
GYA LR LR
comp=Z,460nm,20.9s
BJT Baijiatuan 72.69 321 *eP* **P** **16 06 28.0 +0.2**
comp=Z,42nm,1.3s,mb5.1
BJT Baijiatuan 72.69 321 *eP* **P** **16 06 28.0 +0.2**
BJT pmax pmax
comp=Z,42nm,1.3s
BJI Beijing 72.70 321 P **P** **16 06 28.3 +0.5**
BJI PCP PcP 16 06 44.8 +0.3
BJI PP PP 16 09 12.8 +1.3
BJI S S 16 15 41.9 -1.1
BJI AMB AMB
comp=Z,32nm,0.9s,mb5.2
BJI AMB AMB
comp=Z,118nm,5.3s
BJI LR LR
comp=N,63nm,16.1s
BJI LR LR
comp=E,122nm,15.6s
NST Nakhon Sawan 73.18 292 P **P** **16 06 32.0 +0.8**
comp=E,58nm,0.6s,mb5.6
XAN Xi'an 74.09 313 P **P** **16 06 36.3 +0.1**
XAN AMB AMB
comp=Z,30nm,1.0s,mb5.0
KMI Kunming 74.66 302 P **P** **16 06 41.1 +1.5**
KMI PCP PcP 16 06 54.1 +0.8
KMI AP pP 16 07 12.3 +1.2
KMI XP sP 16 07 25.8 +1.2
KMI PP PP 16 09 31.6 +3.2
KMI PPP 16 11 18.9
KMI S S 16 16 07.9 +2.3
KMI SKS 16 16 33.8
KMI SS SS 16 21 00.1 +4.1
KMI SSS 16 24 15.8
KMI AMB AMB
comp=Z,60nm,1.2s,mb5.2
KMI AMB AMB
comp=Z,183nm,4.3s
KMI LR LR
comp=N,111nm,18.9s
KMI LR LR
comp=E,87nm,20.6s
KMI LR LR
comp=Z,87nm,19.7s
QSPA South Pole Qui 74.85 180⇑ *iP* **P** **16 06 40.0 +0.2**
comp=Z,78nm,1.1s,mb5.3
CHRT Chiangrai 75.05 296 ⇑P **P** **16 06 43.0 +1.0**
comp=Z,26nm,0.9s,mb5.0
CHG Chiang Mai 75.39 294 ⇑P **P** **16 06 45.0 +1.1**
comp=Z,56nm,1.2s,mb5.2
CHTO Chiang Mai 75.39 294⇑ *iP* **P** **16 06 44.7 +0.7**
comp=Z,56nm,1.4s,mb5.1
CHTO *e*pP pP 16 07 14.5 -1.0
CHTO Chiang Mai 75.39 294⇑ *iP* **P** **16 06 44.7 +0.8**
CHTO *e**PP pP 16 07 14.5 -1.0
CHTO pmax pmax
comp=Z,56nm,1.4s,mb5.1
MA2 Magadan 75.71 351⇑ *iP* **P** **16 06 44.0 -0.9**
comp=Z,12nm,0.8s,mb4.7
MA2 Magadan 75.71 351 *eP* **P** **16 06 43.9 -0.9**
MA2 pmax pmax
comp=Z,40nm,1.1s,mb5.1
HHC Hu-ho-hao-te 76.01 320 *eP* **P** **16 06 47.9 +0.9**
HHC PCP PcP 16 07 00.1 +1.3
HHC AP pP 16 07 19.1 +0.5
HHC XP sP 16 07 33.3 +1.2
HHC PP PP 16 09 42.3 +2.7
HHC S S 16 16 18.9 -1.1
HHC SKS 16 16 41.6
HHC SCS ScS 16 16 47.4 -2.8
HHC SS SS 16 21 17.5 +1.5
HHC AMB AMB
comp=Z,38nm,0.9s,mb5.1
HHC AMB AMB
comp=Z,105nm,3.9s
HHC LR LR
comp=N,128nm,19.0s
HHC LR LR
comp=E,173nm,14.3s
CD2 Chengdu 76.39 308 *eP* **P** **16 06 50.4 +1.0**
CD2 AP pP 16 07 21.9 +0.9
CD2 XP sP 16 07 35.8 +1.3
CD2 S S 16 16 24.4 -0.1
CD2 SS SS 16 21 25.5 +3.5
CD2 AMB AMB
comp=Z,40nm,1.1s,mb5.1
CD2 AMB AMB
comp=Z,120nm,5.8s
CD2 LR LR
comp=N,210nm,20.4s
CD2 LR LR
comp=E,400nm,21.6s
CD2 LR LR
comp=Z,140nm,20.3s
HIA Hailar 76.74 330⇑ *iP* **P** **16 06 50.9 -0.1**
comp=Z,29nm,1.1s,mb4.9
HIA Hailar 76.74 330⇑ *iP* **P** **16 06 50.9 0.0**
HIA pmax pmax
comp=Z,29nm,1.1s
BTO Baotou 76.85 319 *eP* **P** **16 06 52.8 +1.0**
LZH Lanzhou 78.72 312 *eP* **P** **16 07 03.9 +1.7**
LZH PCP PcP 16 07 13.0 +2.3
LZH AP pP 16 07 35.4 +1.4
LZH PP PP 16 10 06.0 +3.6
LZH *e*S S 16 16 51.0 +1.6
LZH XS sS 16 17 43.1 -1.1
LZH SS SS 16 22 00.1 +3.2
LZH AMB AMB
comp=Z,122nm,1.5s,mb5.5
SEY Seymchan 78.74 353⇑ *eP* **P** **16 07 01.9 +0.2**
CLNS Chul'man 79.99 338 *eP* **P** **16 07 08.4 -0.2**
CLNS pmax pmax
comp=Z,20nm,1.0s,mb4.9
CLNS pmax pmax
comp=N,10.0nm,1.2s
CLNS pmax pmax
comp=E,9.0nm,1.0s
MAW Mawson 81.52 202 *eP* **P** **16 07 17.1 +0.3**
comp=E,12nm,0.9s,mb4.7
MAW Mawson 81.52 202 *eP* **P** **16 07 17.1 +0.3**
MAW pmax pmax
comp=Z,12nm,0.9s
MAW Mawson 81.52 202 P **P** **16 07 17.0 +0.3**
comp=Z,18nm,1.1s,mb4.8,baz=93,slow=7.2,SNR=12
MAW LR LR 16 41 16.0
comp=Z,125nm,19.4s,baz=249,slow=34
CIT Chita 81.53 330 *eP* **P** **16 07 17.6 +0.7**
CIT pmax pmax
comp=Z,145nm,1.3s,mb5.7
YAK Yakutsk 82.50 343⇑ *iP* **P** **16 07 21.4 -0.4**
comp=Z,228nm,1.5s,mb5.8
YAK *e*pP pP 16 07 54.8 +1.0
YAK Yakutsk 82.50 343*c iP* **P** **16 07 21.7 -0.1**
YAK *e*S S 16 17 25.3 -2.3
YAK pmax pmax
comp=Z,82nm,1.0s,mb5.5
YAK pmax pmax
comp=N,45nm,1.4s
YAK pmax pmax
comp=E,30nm,1.5s
YAK smax
comp=N,74nm,2.7s
YAK smax
comp=E,29nm,3.3s
ULN Ulaanbaatar 82.58 324⇑ *iP* **P** **16 07 23.0 +0.5**
comp=E,58nm,1.0s,mb5.4
ULN *e*pP pP 16 07 56.6 +2.1
ULN Ulaanbaatar 82.58 324⇑ *iP* **P** **16 07 23.0 +0.5**
ULN *e**PP pP 16 07 56.6 +2.1
ULN pmax pmax
comp=Z,58nm,1.0s,mb5.4
TNA Tin City 82.62 10 *eP* **P** **16 07 20.9 -1.4**
comp=Z,7.4nm,1.2s,mb4.4
SONM Songino Array 82.94 324 P **P** **16 07 24.8 +0.4**
SONM *PP pP 16 07 58.3 +1.9
SONM Songino Array 82.94 324 P **P** **16 07 24.8 +0.4**
comp=Z,22nm,0.9s,mb5.0,baz=146,slow=6.9,SNR=147
SONM pP pP 16 07 58.3 +1.8
comp=Z,4.8nm,1.1s,baz=142,slow=7.4,SNR=1.8
SONM LR LR 16 44 58.9
comp=Z,60nm,18.0s,baz=124,slow=36
BILL Bilibino 82.99 360⇑ *eP* **P** **16 07 23.2 -1.0**
comp=Z,44nm,1.3s,mb5.1
BILL Bilibino 82.99 360⇓ *eP* **P** **16 07 23.6 -0.6**
BILL *e* 16 10 33.9
BILL *e*S S 16 17 30.1 -2.3
BILL pmax pmax
comp=Z,39nm,1.2s,mb5.1
GTA Gaotai 83.07 314 ⇑P **P** **16 07 26.6 +1.3**
GTA S S 16 17 37.8 +3.3
GTA AMB AMB
comp=Z,62nm,1.5s,mb5.2
GTA AMB AMB
comp=Z,269nm,9.1s
GTA LR LR
comp=N,47nm,11.8s
GTA LR LR
comp=E,40nm,11.8s
GTA LR LR
comp=Z,65nm,10.6s
SHL Shillong 83.90 298⇑ *iP* **P** **16 07 30.5 +0.7**
BOD Bodaibo 84.94 334⇓ *iP* **P** **16 07 33.4 -0.9**
BOD pmax pmax
comp=Z,26nm,1.8s,mb4.9
CMB Columbia Colle 85.79 49⇑ *eP* **P** **16 07 38.0 -1.0**
comp=Z,3.9nm,0.8s,mb4.4
CMB Columbia Colle 85.79 49⇑ *eP* **P** **16 07 38.0 -1.0**
CMB pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
LSA Lhasa 85.91 302⇑ *iP* **P** **16 07 40.9 +1.1**
comp=Z,26nm,1.1s,mb5.1
LSA Lhasa 85.91 302⇑ *iP* **P** **16 07 40.9 +1.1**
LSA pmax pmax
comp=Z,26nm,1.1s,mb5.1
ZAK Zakamensk 85.99 325 *eP* **P** **16 07 39.4 -0.3**
ZAK *e* 16 17 48.2
ZAK pmax pmax
comp=Z,26nm,1.2s,mb5.0
IRK Irkutsk 86.38 327⇑ *iP* **P** **16 07 40.7 -0.9**
IRK pmax pmax
comp=Z,41nm,1.5s,mb5.1
TLY Talaya 86.44 326 *eP* **P** **16 07 41.4 -0.4**
comp=Z,92nm,1.6s,mb5.5
TLY Talaya 86.44 326⇑ *iP* **P** **16 07 41.5 -0.3**
TLY *e*S S 16 18 01.3 -5.9
TLY *e* 16 19 19.0
TLY pmax pmax
comp=Z,37nm,1.2s,mb5.2
COLA College 86.70 18 *eP* **P** **16 07 42.0 -0.8**
COLA College 86.70 18 *eP* **P** **16 07 42.3 -0.5**
MTUM Tungsten Hills 86.87 50 *eP* **P** **16 07 44.3 0.0**
MTUM *e*pP pP 16 08 16.2 -0.5
BBB Bella Bella 87.07 34 LR LR 16 38 24.2
comp=Z,163nm,21.6s,baz=282,slow=30
NVAR Mina Array Bea 87.46 49 P **P** **16 07 47.4 +0.3**
comp=Z,2.4nm,0.8s,mb4.2,baz=229,slow=6.6
NVAR pP pP 16 08 20.6 +1.1
comp=Z,1.4nm,0.8s,baz=61,slow=24,SNR=4.6
MOY Mondy 87.88 325 *eP* **P** **16 07 49.6 +0.8**
MOY pmax pmax
comp=Z,41nm,2.9s,mb5.0
TAPN Taplejung 88.01 299 *eP* **P** **16 07 50.2 +0.2**
comp=Z,59nm,1.1s,mb5.5
ODAN Odare 88.13 298 *eP* **P** **16 07 50.7 +0.1**
comp=Z,54nm,1.0s,mb5.5
SYO Syowa Base 88.32 197⇓ *eP* **P** **16 07 48.4 -2.3**
BMN Battle Mountai 88.96 48 *eP* **P** **16 07 54.0 -0.1**
comp=Z,7.5nm,1.1s,mb4.6
BMN *e*pP pP 16 08 30.2 +3.6
BMN Battle Mountai 88.96 48 *eP* **P** **16 07 54.0 -0.2**
BMN *e**PP pP 16 08 30.2 +3.6
BMN pmax pmax
comp=Z,8.0nm,1.1s,mb4.7
JIRN Jiri 89.39 299 *eP* **P** **16 07 56.7 +0.2**
comp=Z,34nm,1.1s,mb5.3
KKN Kakani 90.20 299 *eP* **P** **16 07 59.9 -0.4**
comp=Z,45nm,1.2s,mb5.5
TIXI Tiksi 90.43 349 *eP* **P** **16 07 59.1 -1.2**
comp=Z,23nm,1.3s,mb5.2
TIXI Tiksi 90.43 349*c iP* **P** **16 07 59.0 -1.3**
TIXI *i* 16 18 42.9
TIXI pmax pmax
comp=Z,23nm,1.2s,mb5.2

GKN	Gorkha	90.81	299	*eP*	P	16 08 02.2	-0.9		
	comp=Z,43nm,1.2s,mb5.5								
KOLN	Koldanda	91.62	298	*eP*	P	16 08 05.7	-1.2		
	comp=Z,30nm,1.4s,mb5.3								
NVL	N'lazarevskaya	92.63	188	*eP*	P	16 08 10.0	-0.7		
NVL				pmax	pmax				
	comp=N,7.0nm,1.1s								
NVL				pmax	pmax				
	comp=E,6.0nm,1.1s								
NVL				pmax	pmax				
	comp=Z,32nm,1.1s,mb5.6								
MAIT	Maitri	92.63	188	*eP*	P	16 08 08.4	-2.3		
SNAA	Sanae	93.11	183	*eP*	P	16 08 11.5	-1.4		
SNAA				*e*		16 08 15.8			
WMQ	Urumqi	93.14	314	⇑*iP*	P	16 08 13.9	+0.4		
WMQ				AP	pP	16 08 46.6	+0.6		
WMQ				XP	sP	16 09 00.4	+1.1		
WMQ				PP	PP	16 12 00.6	+1.9		
WMQ				SKS		16 18 34.4			
WMQ				*e*S	S	16 19 06.0	-3.5		
WMQ				AMB	AMB				
	comp=Z,40nm,1.0s,mb5.7								
WMQ				LR	LR				
	comp=N,52nm,20.5s								
WMQ				LR	LR				
	comp=E,61nm,22.1s								
WMQ				LR	LR				
	comp=Z,56nm,20.4s								
INK	Inuvik	93.27	19	LR	LR	16 47 43.2			
	comp=Z,81nm,18.5s,baz=263,slow=34								
VNA3	Neumayer Olymp	93.77	181	*eP*	P	16 08 14.8	-1.2		
VNA3				*e*		16 08 18.3			
VNA3				*e*	pP	16 08 46.6	-1.9		
VNA3				*e*		16 08 59.2			
VNA2	Neumayer--Watz	94.04	182	*eP*	P	16 08 16.4	-0.8		
	baz=192,slow=4.4								
VNA2				*e*		16 08 19.9			
VNA2				*e*	pP	16 08 49.5	-0.2		
VNA2				*e*		16 09 01.3			
MK31	Makanchi Array	97.62	316	*eP*	P	16 08 33.5	-0.3		
MKAR	Makanchi Array	97.62	316	*i* P	P	16 08 34.5	+0.7		
MKAR				pmax	pmax				
	comp=Z,13nm,0.8s								
MKAR	Makanchi Array	97.62	316	P	P	16 08 34.0	+0.2		
	comp=Z,13nm,0.8s,mb5.5,baz=101,slow=6.3,SNR=84								
MKAR				LR	LR	16 49 57.5			
	comp=Z,55nm,19.4s,baz=224,slow=34								
YKA	Yellowknife Ar	97.88	27	P	P	16 08 32.9	-1.7		
YKA				PKKP	PKKPbc	16 25 07.9	-3.4		
YKA	Yellowknife Ar	97.88	27	P	P	16 08 32.9	-1.7		
	comp=Z,3.2nm,0.8s,mb4.9,baz=256,slow=4.6,SNR=42								
YKA				PKKP	PKKPbc	16 25 07.9	-3.4		
	comp=Z,0.7nm,0.9s,baz=47,slow=3.4,SNR=8.7								
NVS	Novosibirsk	98.95	324	*eP*	P	16 08 38.4	-1.2		
NVS				pmax	pmax				
	comp=Z,25nm,1.6s,mb5.5								
NVS				pmax	pmax				
	comp=N,7.0nm,1.6s								
NVS				pmax	pmax				
	comp=E,16nm,1.6s								
RES	Resolute Bay	106.57	16	P	PKiKP	16 13 22.1	-0.9		
ARU	Arti	112.93	325	*e*PKPdf	PKiKP	16 13 34.6	-0.8		
ARU	Arti	112.93	325	*i* PKIKP	PKiKP	16 13 34.5	-1.0		
ARU						16 20 05.2			
ARU				SS	SS	16 29 51.5	-7.8		
PRGR	Permogore	118.13	333	*e*PKIKP	PKPdf	16 13 41.9	-3.4		
KEV	Kevo	120.19	345	*e*pkp	PKPdf	16 13 46.3	-2.8		
ARCES	ARCESS Array B	120.72	345	PKP	PKPdf	16 13 49.6	-0.5		
	comp=E,12nm,0.7s,baz=67,slow=1.8,SNR=38								
SDV	Santo Domingo	123.02	89	*eP*	PKPdf	16 13 54.2	-2.0		
BOSA	Boshof	123.12	220	PKP	PKPdf	16 13 55.6	-0.4		
	comp=E,14nm,1.0s,baz=109,slow=4.3,SNR=8.7								
JOF	Joensuu	123.35	338	*e*pkp	PKPdf	16 13 53.7	-1.6		
ZEI	Tsey	124.65	312	*e*PKIKP	PKPdf	16 13 58.2	-0.2		
OBN	Obninsk	125.15	328	*e*P	PKPdf	16 13 58.7	-0.3		
OBN	Obninsk	125.15	328	⇓*i*PKIKP	PKPdf	16 13 58.8	-0.2		
OBN				*e*		16 15 52.0			
OBN				*e*SS	SS	16 32 39.4	+3.0		
OBN				pmax	pmax				
	comp=Z,36nm,1.6s								
KIV	Kislovodsk	125.25	313	⇓*i*PKIKP	PKPdf	16 13 57.7	-1.8		
KIV				pmax	pmax				
	comp=Z,17nm,1.2s								
KAF	Kangasniemi	125.66	339	*e*pkp	PKPdf	16 13 57.6	-2.2		
FINES	FINESS Array B	126.19	338	PKP	PKPdf	16 14 00.3	-0.5		
	comp=Z,13nm,1.0s,baz=83,slow=4.6,SNR=17								
KMBO	Kilima Mbogo	128.13	256	*e*PKPdf	PKPdf	16 14 06.5	+0.5		
KMBO	Kilima Mbogo	128.13	256	PKP	PKPdf	16 14 06.8	+0.8		
	comp=Z,9.1nm,1.0s,baz=43,slow=3.9,SNR=20								
LSZ	Lusaka	129.61	235	*e*PKPdf	PKPdf	16 14 07.8	-0.9		
MALT	Malatya	129.68	307	*eP*	PKPdf	16 14 08.1	-0.1		
NB2	NORSAR Subarra	131.09	345	PKPdf	PKPdf	16 14 10.2	+0.1		
	comp=Z,12nm,1.2s,baz=31,slow=1.9								
NB2	NORSAR Subarra	131.09	345	PKPdf	PKPdf	16 14 10.2	+0.1		
	baz=31,slow=1.9								
NOA	NORSAR Array B	131.09	345	PKP	PKPdf	16 14 09.6	-0.6		
NOA				SKPbc	SKPbc	16 17 24.9	+1.7		
NOA	NORSAR Array B	131.09	345	PKP	PKPdf	16 14 09.6	-0.6		
	comp=Z,5.3nm,0.8s,baz=33,slow=2.0,SNR=14								
NOA				SKPbc	SKPbc	16 17 24.9	+1.7		
	comp=Z,2.8nm,0.7s,baz=31,slow=3.0,SNR=9.9								
AKASG	Malin Array Be	131.18	326	PKP	PKPdf	16 14 09.9	-0.7		
	comp=Z,0.4nm,0.4s,baz=52,slow=1.8,SNR=16								
AKASG				SKPbc	SKPbc	16 17 25.1	+1.2		
	comp=Z,0.5nm,0.5s,baz=48,slow=4.7,SNR=4.5								
STHS	Stebnicka Huta	136.12	328	*e*PKP	PKPdf	16 14 17.7	-2.2		
STHS				*e*		18 34 44.0			
CRVS	Cervenica-Dubn	136.34	328	*e*PKP	PKPdf	16 14 20.4	0.0		
CRVS				*e*		18 34 46.9			
KECS	Kecovo	137.10	328	*e*PKIKP	PKPdf	16 14 21.0	-0.8		
KECS				*e*		16 35 08.4			
MORC	Moravsky Berou	137.69	331	*e*PKPdf	PKPdf	16 14 23.0	+0.2		
PSZ	Piszkesteto	137.77	327	⇓*e*PKP	PKPdf	16 14 23.4	+0.4		
DPC	Dobruska-Polom	137.84	333	*e*PKPdf	PKPdf	16 14 23.5	+0.4		
UPC	Upice	137.86	333	*e*PKPdf	PKPdf	16 14 23.9	+0.8		
VYHS	Vyhne	137.93	329	*e*PKP	PKPdf	16 14 23.2	-0.1		
VYHS				*e*PP	PP	16 17 03.6	-8.4		
PVCC	Panska Ves	138.47	334	*e*PKPpre		16 14 20.8			
PVCC				*e*PKPdf	PKPdf	16 14 24.7	+0.5		
BRG	Berggiesshubel	138.47	335	*e*PKIKP	PKPdf	16 14 18.0	-6.2		
BRG				pmax	pmax				
	comp=Z,3.0nm,0.9s								
BRG				pmax	pmax				
	comp=Z,11nm,1.3s								
BRG	Berggiesshubel	138.47	335	*e*PKPdf	PKPdf	16 14 15.8	-8.4		
BRG	Berggiesshubel	138.47	335	*e*PKP	PKPdf	16 14 18.0	-6.3		
	comp=Z,4.8nm,0.9s								
BRG				*e*		16 14 25.6			
	comp=Z,18nm,1.3s								
CLL	Collm	138.52	336	*e*PKIKP	PKPdf	16 14 24.0	-0.3		
CLL				pmax	pmax				
	comp=Z,15nm,1.2s								
CLL	Collm	138.52	336	*e*PKPpre		16 14 15.0			
	comp=Z,7.0nm,1.0s								
CLL				*e*PKPdf	PKPdf	16 14 24.0	-0.3		
	comp=Z,15nm,1.2s								
CLL				*e*PP	PP	16 17 15.0	-0.4		
FBE	Freiberg	138.68	335	*e*PKPdf	PKPdf	16 14 15.9	-8.7		
MODS	Modra-Piesok	138.78	330	*e*PKP	PKPdf	16 14 24.1	-0.8		
PRU	Pruhonice	138.88	333	*e*PKPdf	PKPdf	16 14 24.4	-0.6		
ZST	Bratislava	138.99	330	*e*PKP	PKPdf	16 14 25.8	+0.5		
ZST				LR	LR				
	comp=Z,300nm,16.6s								
CLZ	Clausthal	139.08	338	*e*PKPdf	PKPdf	16 14 16.8	-8.5		
TANN	Tannenbergstha	139.43	335	*e*PKPdf	PKPdf	16 14 19.3	-6.7		
WERD	Werda	139.47	336	*e*PKPdf	PKPdf	16 14 18.8	-7.3		
GUNZ	Gunzen	139.52	335	*e*PKPdf	PKPdf	16 14 19.3	-6.9		
MOX	Moxa	139.58	336	*e*PKP	PKPdf	16 14 18.3	-8.0		
MANZ	Manzenberg	139.91	335	*e*PKPdf	PKPdf	16 14 20.7	-6.2		
KHC	Kasperske Hory	139.94	333	*e*PKPpre		16 14 20.1			
KHC				*e*PKPdf	PKPdf	16 14 26.8	-0.2		
GEC2	GERESS Array S	140.10	333	*e*PKPdf	PKPdf	16 14 21.5	-5.8		
GERES	GERESS Array B	140.10	333	PKhKP		16 14 19.5			
	comp=Z,1.4nm,0.7s,baz=48,slow=2.0,SNR=10.0								
GERES				PKP	PKPdf	16 14 27.3	0.0		
	comp=Z,2.1nm,0.7s,baz=72,slow=4.3,SNR=9.6								
GRA1	Grafenberg Arr	140.49	336	*e*PKPbc	PKPdf	16 14 22.5	-5.5		
GRF	Grafenberg Arr	140.49	336	*e*PKPdf	PKPdf	16 14 22.5	-5.5		
TNS	Taunus Mts	141.10	338	*e*PKPdf	PKPdf	16 14 23.3	-5.7		
KBA	Koelnbreinsper	141.57	331	⇑*iP*	PKPdf	16 14 25.2	-4.8		
	comp=Z,8.2nm,1.0s								
MEM	Membach	141.59	341	PKP	PKPdf	16 14 24.9	-5.0		
UCC	Uccle	141.93	343	PKP	PKPdf	16 14 25.4	-5.1		
RUP	Ruppelstein	142.03	339	PKP	PKPdf	16 14 27.3	-3.4		
SNF	Seneffe	142.21	342	PKP	PKPdf	16 14 28.0	-3.0		
WTTA	Wattenberg	142.21	333	⇓*iP*	PKPdf	16 14 27.1	-4.0		
	comp=Z,39nm,1.6s,SNR=8.2								
WLF	Walferdange	142.37	340	*e*PKPdf	PKPdf	16 14 27.4	-3.9		
WLF	Walferdange	142.37	340	PKP	PKPdf	16 14 27.2	-4.1		
WLF	Walferdange	142.37	340	*e*PKPdf	PKPdf	16 14 27.6	-3.7		
LANF	Langenberg	142.37	338	PKP	PKPdf	16 14 27.9	-3.5		
MOTA	Moosalm	142.38	333	⇑*iP*	PKPdf	16 14 27.6	-3.9		
	comp=Z,37nm,0.9s								
GIVF	Givet	142.41	342	*e*PKP1	PKPdf	16 14 27.1	-4.3		
	comp=Z,100nm,1.3s								
SQTA	Sankt Quirin	142.43	333	⇑*iP*	PKPdf	16 14 28.1	-3.4		
	comp=Z,33nm,1.2s,SNR=8.3								
DOU	Dourbes	142.48	342	PKP	PKPdf	16 14 27.9	-3.6		
BAIF	Baives	142.63	342	*e*PKP1	PKPdf	16 14 27.2	-4.6		
	comp=Z,52nm,1.1s								
BFO	Black Forest	142.72	337	*e*PKPdf	PKPdf	16 14 27.8	-4.2		
FETA	Feichten	142.79	333	⇑*i*PKPdf	PKPdf	16 14 29.3	-2.8		
	comp=Z,61nm,0.9s,SNR=37								
DAVA	Damuels	142.94	334	⇓*iP*	PKPdf	16 14 29.7	-2.7		
	comp=Z,39nm,0.9s								
HAU	Haudompre	143.72	338	⇑*i*PKP1	PKPdf	16 14 31.4	-2.4		
	comp=Z,111nm,1.0s								
HAU				*e*MLR	MLR				
	comp=Z,85nm,18.5s								
HAU	Haudompre	143.72	338	⇑*i*PKIKP	PKPdf	16 14 31.4	-2.4		
HAU				MLR	MLR				
	comp=Z,90nm,18.5s								
MEZF	Maizieres J'vi	143.73	340	⇑*i*PKP1	PKPdf	16 14 31.8	-2.0		
	comp=Z,127nm,1.0s								
BBS	Basel-Blauen	143.74	337	PKP	PKPdf	16 14 32.4	-1.4		
LOMF	Lomont	144.09	337	PKP	PKPdf	16 14 34.0	-0.4		
CABF	La Chapelle	144.99	337	⇑*i*PKP1	PKPdf	16 14 36.4	+0.4		
	comp=Z,816nm,1.1s								
FLN	La Foliniere	145.06	346	⇑*i*PKP1	PKPbc	16 14 35.6	-0.1		
	comp=Z,431nm,0.9s								
FLN				*e*MLR	MLR				
	comp=Z,74nm,19.2s								
FLN	La Foliniere	145.06	346	⇑*i*PKIKP	PKPdf	16 14 35.6	-0.5		
FLN				MLR	MLR				
	comp=Z,70nm,19.3s								
LDF	La Druitiere	145.13	345	⇑*i*PKP1	PKPbc	16 14 35.8	-0.2		
	comp=Z,299nm,0.9s								
LOR	Lormes	145.20	340	⇑*i*PKP1	PKPbc	16 14 36.6	+0.4		
	comp=Z,776nm,1.2s								
LOR				*e*MLR	MLR				
	comp=Z,70nm,19.5s								
LOR	Lormes	145.20	340	⇑*i*PKIKP	PKPdf	16 14 36.6	+0.2		
LOR				MLR	MLR				
	comp=Z,70nm,19.5s								
GRR	Gorron	145.50	346	⇑*i*PKP1	PKPbc	16 14 37.3	+0.2		
	comp=Z,770nm,1.0s								
SSF	Saint Saulge	145.50	340	⇑*i*PKP1	PKPbc	16 14 37.8	+0.6		
	comp=Z,747nm,1.1s								
HYF	Humbligny	145.59	342	⇑*i*PKP1	PKPbc	16 14 38.2	+0.8		
LPL	La Plagne	145.66	336	⇑*i*PKP1	PKPbc	16 14 38.7	+1.0		
	comp=Z,419nm,1.2s								
LPG	La Plagne	145.66	336	⇑*i*PKP1	PKPbc	16 14 38.9	+1.2		
	comp=Z,494nm,1.2s								
SMF	Signal de Mont	145.75	340	⇑*i*PKP1	PKPbc	16 14 38.2	+0.2		
	comp=Z,516nm,1.2s								
AVF	Avril sur Loir	145.79	340	⇑*i*PKP1	PKPbc	16 14 38.2	+0.1		
	comp=Z,256nm,1.0s								
SGMF	Saint Gilles	145.99	348	⇑*i*PKP1	PKPbc	16 14 38.7	+0.1		
	comp=Z,365nm,0.9s								
ROSF	Rostrenen	146.05	349	⇑*i*PKP1	PKPbc	16 14 38.8	0.0		
	comp=Z,158nm,0.9s								
BGF	Bois d'Agland	146.16	341	⇑*i*PKP1	PKPbc	16 14 39.5	+0.3		
	comp=Z,212nm,0.8s								
MBDF	Montbardon	146.29	335	⇑*i*PKP1	PKPbc	16 14 39.9	+0.3		
	comp=Z,110nm,0.9s								
PLDF	La Plantade	146.42	339	PKP	PKPbc	16 14 40.8	+0.8		
QUIF	Quistinic	146.44	349	⇑*i*PKP1	PKPbc	16 14 39.7	-0.3		
	comp=Z,100nm,0.9s								
ORIF	Oris-en-Rattie	146.49	336	⇑*i*PKP1	PKPbc	16 14 40.7	+0.5		
	comp=Z,218nm,1.0s								
ORIF				*e*MLR	MLR				
	comp=Z,121nm,22.2s								
AGO	Saint Agoulin	146.51	340	PKP	PKPbc	16 14 40.8	+0.6		
SAOF	Saorge	146.55	333	PKP	PKPbc	16 14 40.4	0.0		
TCF	Toulx Ste Croi	146.60	341	⇑*i*PKP1	PKPbc	16 14 40.8	+0.3		
	comp=Z,275nm,1.1s								
AUTN	L'Aution	146.60	333	PKP	PKPbc	16 14 40.7	+0.1		
TOUF	Mont Tournerai	146.66	334	PKP	PKPdf	16 14 39.7	+0.7		
SBF	Sospel	146.70	333	*e*PKP1	PKPbc	16 14 39.8	-1.1		
	comp=Z,391nm,1.1s								
LUCF	Luceram	146.72	333	PKP	PKPdf	16 14 39.9	+0.8		
COLF	Collangettes	146.79	339	PKP	PKPbc	16 14 41.6	+0.6		
MVIF	Mont Vial	146.80	334	PKP	PKPdf	16 14 39.9	+0.7		
PYM	Petit Puy Mans	146.82	340	PKP	PKPbc	16 14 41.7	+0.6		
REVF	Revere	146.83	333	PKP	PKPdf	16 14 40.5	+1.3		
MFF	Saint Martin d	146.99	344	⇑*i*PKP1	PKPbc	16 14 41.7	+0.1		
	comp=Z,349nm,0.8s								
OCF	Saint Nazaire	147.00	336	PKP	PKPbc	16 14 42.6	+0.9		
OG26	St.-Nazaire-De	147.00	336	PKP	PKPbc	16 14 42.6	+0.9		
VIVF	Saint-Julien-l	147.00	337	⇑*i*PKP1	PKPbc	16 14 42.1	+0.4		
	comp=Z,260nm,1.4s								
CALN	Calern	147.03	334	PKP	PKPdf	16 14 40.4	+0.8		
CORF	Corte	147.12	330	PKP	PKPbc	16 14 41.8	-0.3		
LBL	Lubilhac	147.19	339	PKP	PKPbc	16 14 43.3	+1.1		
STOF	St-Etienne Org	147.24	335	PKP	PKPbc	16 14 42.3	-0.1		
FRNF	Fournols	147.29	340	PKP	PKPbc	16 14 43.4	+1.0		
FRF	La Foret Royal	147.29	334	⇑*i*PKP1	PKPbc	16 14 42.5	0.0		
	comp=Z,164nm,1.0s								
SMRF	Simiane la Rot	147.39	335	⇑*i*PKP1	PKPbc	16 14 43.3	+0.5		
	comp=Z,107nm,1.0s								
LMR	La Mourre	147.53	334	⇑*i*PKP1	PKPbc	16 14 43.2	0.0		
	comp=Z,211nm,1.1s								
OSPF	L'Ospedale	147.58	329	PKP	PKPbc	16 14 43.3	-0.1		
RJF	Les Rejaudoux	147.69	341	⇑*i*PKP1	PKPbc	16 14 43.9	+0.3		
	comp=Z,378nm,1.3s								
RJF				*e*MLR	MLR				
	comp=Z,92nm,19.0s								
RJF	Les Rejaudoux	147.69	341	⇑*i*PKP2	PKPbc	16 14 43.9	+0.3		
RJF				MLR	MLR				
	comp=Z,90nm,19.0s								
PRAF	Pradon	147.70	336	PKP	PKPbc	16 14 43.4	-0.2		
CAF	Calviac	147.86	340	⇑*i*PKP1	PKPbc	16 14 44.5	+0.5		
	comp=Z,123nm,1.1s								
OLEF	Ile d'Oleron	147.91	345	PKP	PKPbc	16 14 44.4	+0.3		
GELF	Grande-Etoile	147.94	335	PKP	PKPbc	16 14 44.0	-0.3		
LASF	Ste Croix	147.97	337	⇑*i*PKP1	PKPbc	16 14 44.8	+0.5		
	comp=Z,138nm,1.0s								
LFF	La Frestale	148.26	342	⇑*i*PKP1	PKPbc	16 14 45.4	+0.3		
	comp=Z,251nm,1.0s								
MTLF	Montolieu	149.20	339	⇑*i*PKP1	PKPbc	16 14 47.8	+0.3		
	comp=Z,186nm,1.1s								
MLS	Moulis	149.93	340	PKP	PKPbc	16 14 49.5	+0.2		
EPF	Esparros	150.11	341	*e*PKP1	PKPbc	16 14 49.9	+0.2		
	comp=Z,154nm,1.4s								
RESF	Ens	150.31	341	PKP	PKPbc	16 14 51.1	+0.9		
VIEF	Viey	150.34	341	PKP	PKPbc	16 14 51.4	+1.1		
EBIE	Bielsa	150.48	341	PKP	PKPbc	16 14 50.8	+0.2		
SJPF	Ste Jean	150.50	343	⇑*i*PKP1	PKPbc	16 14 51.1	+0.4		
	comp=Z,130nm,1.1s								
LARF	Larrau	150.51	343	PKP	PKPbc	16 14 51.3	+0.6		
ETSF	Etsaut	150.51	342	⇑*i*PKP1	PKPbc	16 14 51.4	+0.7		
	comp=Z,134nm,1.0s								
ELIZ	Elizondo	150.54	343	PKP	PKPbc	16 14 50.8	+0.1		
ELAN	Lanestosa	150.96	346	PKP	PKPbc	16 14 51.0	-0.8		
EARI	Arriondas	151.27	349	PKP	PKPbc	16 14 50.7	-1.7		
ECRI	Crispan	151.32	344	PKP	PKPbc	16 14 53.5	+0.9		
EPOB	Poblet	151.35	338	PKP	PKPbc	16 14 52.0	-0.7		
ESAC	San Caprasio	151.55	341	PKP	PKPbc	16 14 53.0	-0.1		
EPON	Pontenova	151.56	352	PKP	PKPbc	16 14 52.1	-1.1		
KEST	Kesra	151.64	320	PKPbc	PKPbc	16 14 54.4	+0.8		
	comp=Z,12nm,0.9s,baz=215,slow=0.7,SNR=14								
KEST				PKPab	PKPab	16 15 02.4	-0.2		
	comp=Z,12nm,1.0s,baz=309,slow=3.1,SNR=7.9								
ERTA	Horta de San J	151.97	339	PKP	PKPbc	16 14 52.7	-1.4		
ETOS	Mallorca	152.04	334	PKP	PKPbc	16 14 53.6	-0.7		
EMAZ	Mazaricos	152.15	354	PKP	PKPbc	16 14 53.4	-1.1		
STS	Santiago	152.17	354	PKP	PKPbc	16 14 54.4	-0.1		
EMOS	Mosqueruela	152.77	339	PKP	PKPbc	16 14 55.7	-0.3		
ECAL	Calabor	152.86	350	PKP	PKPbc	16 14 54.8	-1.3		
ETOR	Torete	152.86	342	PKP	PKPbc	16 14 56.0	-0.1		
PBRG	Braganca	152.99	350	*e*PKPab	PKPab	16 15 08.8	+0.8		
GUD	Guadarrama	153.59	345	PKP	PKPbc	16 14 58.3	+0.6		
PVRL	Vila Real	153.66	352	*e*PKPab	PKPab	16 15 11.6	+0.8		
MVO	Moncorvo	153.66	351	*e*PKPab	PKPab	16 15 11.5	+0.6		
PVIS	Viseu	154.23	352	*e*PKPab	PKPab	16 15 14.3	+1.0		
ESDC	Sonseca Array	154.45	344	PKP	PKPdf	16 14 51.0	-0.2		
	comp=Z,0.2nm,0.3s,baz=346,slow=3.1,SNR=7.4								
ESDC				PKPbc	PKPbc	16 14 58.8	-0.8		
	comp=Z,0.5nm,0.3s,baz=16,slow=2.6,SNR=6.9								
ESDC				PKPab	PKPab	16 15 14.7	+0.4		
	comp=Z,1.4nm,0.4s,baz=22,slow=4.1,SNR=12								
MTE	Manteigas	154.49	351	*e*PKPab	PKPab	16 15 15.4	+1.0		
EVIA	Vianos	155.00	341	PKP	PKPdf	16 14 52.0	0.0		
EBAN	Banos Encina	155.82	343	PKP	PKPab	16 15 20.8	+0.7		
EVO	Evora	156.39	351	*e*PKPab	PKPab	16 15 23.6	+1.0		
PBAR	Barrancos	156.57	349	*e*PKPab	PKPab	16 15 24.3	+0.9		
PBEJ	Beja	156.86	350	*e*PKPab	PKPab	16 15 25.9	+1.3		
EMIN	Mina Concepcio	156.90	348	PKP	PKPdf	16 14 54.0	-0.5		
PVAQ	Vaqueiros	157.44	350	*e*PKPab	PKPab	16 15 28.3	+1.2		
PBDV	Barranco-do-Ve	157.64	350	*e*PKPab	PKPab	16 15 29.5	+1.5		
MORF	Marmelete	157.69	352	*e*PKPab	PKPab	16 15 29.6	+1.4		
TORD	Torodi Ar. Bea	166.00	264	PKP	PKPdf	16 15 03.9	-0.7		
	comp=Z,15nm,1.1s,baz=52,slow=0.8,SNR=40								
TORD				PKPab	PKPab	16 16 04.9	-0.6		
	comp=Z,2.0nm,0.9s,baz=111,slow=4.5,SNR=4.1								
LIC	Lamto	168.41	221	*e*PKIKP	PKPdf	16 15 03.7	-2.7		
	comp=Z,118nm,1.4s								

*BJI **23** 16:34:51.6, 680N×7300W, h161km*
*ISCJB **23** 16:34:52.8±0.4, 684N±004×7300W±004, h168km±4km, mb3.9/16, Error ellipse: s-maj=7.4km s-min=5.8km az=136.8*
*FUNV **23** 16:34:52.5, 670N×7318W, h169km, MW4.1*
*IDC **23** 16:34:53.3±0.4, 678N×7298W, h158km±4km, mb3.5/9, mb1 3.8/13, mb1mx3.6/21, mbtmpg3.6/13, Error ellipse: s-maj=10.9km s-min=6.6km az=122.0*
*NEIC **23** 16:34:53.6±0.3, 679N×7303W, mb4.1/12, Error ellipse: s-maj=8.4km s-min=7.4km az=58.0*

ISC 23 16:34:53.9±0.4, 683N±004×7298W±004, h162km±4km, n63, σ0 94/65, mb3.9/16, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.23	33	⇓*iP*	Pn	16 35 22.7	+0.9
CAPV				*e*S	Sn	16 35 44.1	+0.8
ROSC	El Rosal	2.37	214	*e*Pn	Pn	16 35 33.9	-0.3
ROSC	El Rosal	2.37	214	P	Pn	16 35 34.4	+0.2
	102nm,0.3s,baz=359,slow=2.5,SNR=118						
ROSC				S	Sn	16 36 04.2	-1.0
	95nm,0.3s,baz=98,slow=16,SNR=13						
SOCV	Socops	2.56	55	⇓*iP*	Pn	16 35 37.4	+1.0
SOCV				*e*S	Sn	16 36 09.2	0.0
VIGV	El Vigia	2.56	39	*e*P	Pn	16 35 37.1	+0.7
VIGV				*e*S	Sn	16 36 10.4	+1.1
SDV	Santo

ASAR pPKPbc pPKPbc 16 55 04.1 -2.5
comp=Z,0.5nm,0.6s,baz=116,slow=3.5,SNR=2.3
WRA Warramunga Arr 150.46 241 PKP PKPdf 16 54 21.5 -0.3
comp=Z,1.0nm,0.5s,baz=109,slow=2.5,SNR=7.1
WRA PKPbc PKPbc 16 54 26.3 -0.9
comp=Z,1.2nm,0.5s,baz=109,slow=2.5,SNR=44
WRA pPKP pPKPdf 16 55 03.7 -0.9
comp=Z,0.5nm,0.6s,baz=106,slow=2.4,SNR=1.7
WRA pPKPbc pPKPbc 16 55 07.7 -2.1
comp=Z,0.9nm,0.5s,baz=107,slow=2.6,SNR=3.5

MAN 23 16:45:55, 1105N×12461E, h29km, mb3.6, ML2.3, MS1.8, Leyte

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
OCLP	**Ormoc**	**0.01**	**327**	*eP*		Pb	16 46 00.9	+1.0
OCLP				*eS*		Sb	16 46 04.8	+1.7
PLP	**Palo**	**0.38**	**72**	*eP*		Pb	16 46 01.2	-2.2
PLP				*eS*		Sb	16 46 06.8	-2.5
MSLP	**Maasin**	**0.94**	**165**	*eP*		Pn	16 46 12.1	-0.1
MSLP				*eS*		Sn	16 46 26.9	+2.2
BESP	**Borongan**	**0.98**	**56**	*eP*		Pn	16 46 13.6	+0.8
BESP				*eS*		Sn	16 46 26.6	+0.9

MAN 23 16:53:30, 1629N×12088E, h59km, mb4.3, ML3.1, MS3.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BCPH	**Baguio City Da**	**0.30**	**288**	⇑*iP*		Pn	16 53 39.7	-0.2
BCPH				*i* S		Sn	16 53 46.0	-1.2
BALP	**Baler**	**0.86**	**129**	*eP*		Pn	16 53 48.5	+2.3
BALP				*eS*		Sn	16 54 01.2	+3.0
CAUP	**Cauayan**	**1.12**	**54**	*eP*		Pn	16 53 50.3	+0.8
CAUP				*eS*		Sn	16 54 06.2	+2.0
ABRA	**Dolores**	**1.36**	**353**	*eP*		Pn	16 53 54.6	+1.8
ABRA				*eS*		Sn	16 54 12.5	+2.5
APYP	**Conner**	**1.60**	**13**	*eP*		Pn	16 53 58.6	+2.6
APYP				*eS*		Sn	16 54 20.1	+4.3

*ISCJB **23** 16:55:19.3±2.4, 531S±008×1468E±02, h168km±21km, mb4.2/11, Error ellipse: s-maj=27.1km s-min=12.1km az=16.5*
*IDC **23** 16:55:27.0±2.7, 547S×14676E, h226km±25km, mb3.8/7, mb1 3.9/9, mb1mx3.8/14, mbtmp3.8/9, MS3.5/1, Ms1 3.5/1, ms1mx2.6/26, Error ellipse: s-maj=26.9km s-min=12.1km az=110.0*
*NEIC **23** 16:55:30.1±2.6, 551S×14646E, h251km±25km, mb4.3/9, Error ellipse: s-maj=19.3km s-min=14.4km az=78.0*
ISC 23 16:55:25.9±2.0, 541S±008×1466E±01, h209km±19km, n25, σ0§88/23, mb4.2/11, 2D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CTA	**Charters Tower**	**14.60**	**181**	*eP*		Pn	**16 58 44.4**	**+1.5**
	9.7nm,1.1s							
CTA	**Charters Tower**	**14.60**	**181**	P		Pn	**16 58 43.9**	**+1.0**
	0.7nm,0.3s,baz=11,slow=11,SNR=7.7							
CTAO	**Charters Tower**	**14.60**	**181**	*e*Pn		Pn	**16 58 44.3**	**+1.4**
	10nm,0.8s							
KAKA	**Kakadu**	**15.76**	**242**	*eP*		Pn	**16 58 55.5**	**-1.5**
	11nm,0.5s							
WB2	**Warramunga Arr**	**18.74**	**218**	⇓*iP*		P	**16 59 29.3**	**+0.1**
WRA	**Warramunga Arr**	**18.74**	**218**	P		P	**16 59 29.5**	**+0.2**
	2.8nm,0.3s,baz=46,slow=12,SNR=181							
WRA				S		S	**17 02 51.7**	**+0.2**
	0.3nm,0.3s,baz=39,slow=20,SNR=16							
ASAR	**Alice Springs**	**21.90**	**213**	P		P	**17 00 02.8**	**+0.3**
	13nm,0.6s,mb4.6,baz=48,slow=8.0,SNR=320							
ASAR				S		S	**17 03 49.9**	**+0.6**
	1.1nm,0.8s,baz=27,slow=17,SNR=3.6							
BATI	**Kupang**	**23.22**	**257**	P		P	**17 00 15.9**	**+1.3**
	5.8nm,0.4s,mb4.5,baz=153,slow=7.5,SNR=4.0							
FITZ	**Fitzroy Crossi**	**24.06**	**237**	*eP*		P	**17 00 22.5**	**+0.3**
	10nm,0.6s,mb4.6							
FITZ	**Fitzroy Crossi**	**24.06**	**237**	P		P	**17 00 22.6**	**+0.4**
	4.7nm,0.5s,mb4.4,baz=59,slow=12,SNR=20							
STKA	**Stephens Creek**	**26.75**	**190**	*eP*		P	**17 00 44.9**	**-1.4**
	4.3nm,0.9s,mb4.1							
STKA	**Stephens Creek**	**26.75**	**190**	P		P	**17 00 44.6**	**-1.7**
	2.1nm,0.6s,mb4.0,baz=1.1,slow=11,SNR=6.3							
FORT	**Forrest**	**30.68**	**212**	*eP*		P	**17 01 17.6**	**-3.5**
	15nm,0.5s,mb4.9							
CBIJ	**Chichi jima**	**32.59**	**353**	LR		LR	17 11 38.4	
	comp=Z,77nm,20.6s,baz=107,slow=30							
KLBR	**Kellerberrin**	**37.54**	**223**	⇓*iP*		P	**17 02 19.7**	**-0.4**
	12nm,0.5s,mb4.7							
ULN	**Ulaanbaatar**	**63.40**	**331**	*eP*		P	**17 05 34.0**	**+0.9**
	3.2nm,0.8s,mb4.0							
SONM	**Songino Array**	**63.70**	**331**	P		P	**17 05 35.7**	**+0.7**
	1.2nm,0.6s,mb3.7,baz=154,slow=6.0,SNR=8.9							
TLY	**Talaya**	**67.64**	**333**	P		P	**17 06 00.5**	**+0.3**
SBA	**Scott Base**	**73.18**	**176**	*eP*		P	**17 06 33.4**	**+0.2**
	1.5nm,0.8s,mb3.7							
MKAR	**Makanchi Array**	**76.79**	**321**	P		P	**17 06 53.8**	**-0.6**
	0.2nm,0.3s,mb3.3,baz=91,slow=7.9,SNR=2.7							
MAW	**Mawson**	**82.64**	**203**	P		P	**17 07 25.1**	**-0.4**
	5.2nm,0.8s,mb4.3,baz=96,slow=13,SNR=8.9							
BRVK	**Borovoye**	**86.13**	**324**	P		P	**17 07 42.0**	**-1.2**
PLCA	**Paso Flores**	**122.83**	**147**	PKP		PKPdf	17 13 56.1	-1.3
	1.7nm,0.6s,baz=225,slow=1.2,SNR=6.4							
TORD	**Torodi Ar. Bea**	**144.56**	**285**	PKP		PKPdf	17 14 37.0	-1.5
TORD	**Torodi Ar. Bea**	**144.56**	**285**	PKP		PKPdf	17 14 37.0	-1.5
	0.6nm,0.4s,baz=60,slow=4.2,SNR=10.0							

*IDC **23** 16:57:49.1±3.0, 1589N×120.14E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/17, mbtmp3.6/3, Error ellipse: s-maj=306.5km s-min=27.6km az=61.0*
*MAN **23** 16:57:49, 1650N×12094E, h7km, mb4.9, ML3.8, MS3.8*
*ISCJB **23** 16:57:50.2±0.4, 1647N±002×12097E±003, h10km, mb3.4/3, Error ellipse: s-maj=3.7km s-min=3.1km az=23.1*
ISC 23 16:57:49.7±0.5, 1648N±002×12099E±003, h2km±5km, n20, σ1§16/34, mb3.4/3, 3C-3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BCPH	**Baguio City Da**	**0.40**	**257**	⇑*iP*		Pg	**16 57 56.9**	**-0.5**
BCPH				*i* S		Sg	**16 58 03.5**	**+0.8**
PCPH	**Palayan**	**0.91**	**174**	⇓*eP*		Pg	**16 58 06.0**	**-1.3**
PCPH				*eS*		Sg	**16 58 19.1**	**0.0**
BALP	**Baler**	**0.92**	**142**	*eP*		Pg	**16 58 06.1**	**-1.3**
BALP				*eS*		Sg	**16 58 19.1**	**-0.3**
CAUP	**Cauayan**	**0.92**	**60**	*eP*		Pg	**16 58 08.1**	**+0.7**
CAUP				*eS*		Sg	**16 58 22.9**	**+3.5**
BOLP	**Bolinao**	**1.04**	**265**	*eP*		Pg	**16 58 09.2**	**-0.4**
BOLP				*eS*		Sg	**16 58 23.7**	**+0.7**
ABRA	**Dolores**	**1.20**	**347**	*eP*		Pg	**16 58 11.2**	**-1.4**
ABRA				*eS*		Sg	**16 58 29.0**	**+0.8**
SCZP	**Santa Cruz**	**1.25**	**236**	*eP*		Pg	**16 58 12.8**	**-0.8**
SCZP				*eS*		Sg	**16 58 30.6**	**+0.8**
APYP	**Conner**	**1.40**	**10**	*eP*		Pn	**16 58 15.5**	**-0.8**
APYP				*eS*		Sg	**16 58 37.9**	**+3.1**
CVP	**Callao Caves**	**1.46**	**33**	*eP*		Pn	**16 58 16.0**	**-1.1**
CVP				*eS*		Sb	**16 58 36.2**	**-0.4**
PALP	**Palanan**	**1.49**	**67**	*eP*		Pn	**16 58 16.2**	**-1.3**
PALP				*i* S		Sn	**16 58 38.9**	**+1.2**
PALP	**Palanan**	**1.49**	**67**	*eP*		Pn	**16 58 16.6**	**-0.9**
PALP				*eS*		Sn	**16 58 37.9**	**+0.2**
NBP	**Mount Natib**	**1.81**	**198**	⇑*iP*		Pn	**16 58 23.1**	**+1.2**
NBP							15 50 53.6	
PIP	**Pasuquin**	**1.87**	**349**	⇓*iP*		Pn	**16 58 23.4**	**+0.6**
PIP				*eS*		Sg	**16 58 49.5**	**-0.4**
POLP	**Polilio Island**	**1.96**	**152**	*eP*		Pn	**16 58 24.1**	**+0.1**
POLP				*eS*		Sn	**16 58 52.4**	**+3.2**
LBPH	**Los Banos**	**2.31**	**175**	⇑*eP*		Pn	**16 58 30.1**	**+1.3**
LBPH							20 27 30.5	
TGY	**Tagaytay City**	**2.36**	**181**	*eP*		Pg	**16 58 40.3**	**+5.4**
GQP	**Guinayangan**	**2.92**	**151**	⇓*eP*		Pn	**16 58 38.2**	**+1.1**
GQP				*i* S		Sn	**16 59 14.4**	**+1.7**
WRA	**Warramunga Arr**	**38.49**	**160**	P		P	**17 05 10.5**	**-3.0**
	1.1nm,0.9s,mb3.6,baz=338,slow=9.2,SNR=3.9							
ASAR	**Alice Springs**	**41.84**	**162**	P		P	**17 05 39.0**	**-2.2**
	0.8nm,0.6s,mb3.5,baz=339,slow=7.1,SNR=8.6							
MKAR	**Makanchi Array**	**44.01**	**322**	P		P	**17 05 57.9**	**-0.7**
	0.3nm,0.7s,mb3.1,baz=127,slow=9.3,SNR=4.6							

*ISCJB **23** 16:59:22.2±0.3, 5041N±003×14854E±005, h615km±4km, mb4.2/57, Error ellipse: s-maj=6.2km s-min=3.8km az=43.4*
*MOS **23** 16:59:22.1±0.9, 5040N×14849E, h620km, mb4.1/12, Error ellipse: s-maj=12.4km s-min=7.6km az=87.2*
*BJI **23** 16:59:22.1, 5044N×14855E, h621km, mB4.5, mb4.4*
*IDC **23** 16:59:23.5±1.1, 5040N×14848E, h613km±13km, mb3.6/16, mb1 3.7/19, mb1mx3.6/25, mbtmp3.6/19, Error ellipse: s-maj=12.6km s-min=7.6km az=130.0*
*NEIC **23** 16:59:23.0±0.4, 5042N×14846E, h609km±5km, mb4.2/28, Error ellipse: s-maj=6.4km s-min=4.0km az=137.0*
ISC 23 16:59:22.7±0.3, 5036N±003×14855E±005, h604km±4km, n152, σ0§94/167, mb4.2/57, 24C-2D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
OKH	**Okha**	**4.72**	**315**	*eP*		P	**17 00 54.6**	**+1.2**
OKH				*eS*		S	**17 02 11.0**	**+3.2**
OKH				smax				
	comp=N,400nm,6.0s							
OKH				smax				
	comp=E,1μm,5.0s							
SKR	**Severo-Kuril's**	**4.84**	**83**	*eP*		P	**17 00 54.0**	**-0.4**
SKR				*eS*		S	**17 02 08.5**	**-1.1**
SKR				pmax		pmax		
	comp=Z,80nm,0.5s							
SKR				smax				
	comp=N,70nm,0.7s							
SKR				smax				
	comp=E,90nm,0.7s							
YSS	**Yuzh-Sakhalins**	**5.13**	**231**	⇑*iP*		P	**17 00 58.3**	**+1.5**
	comp=E,111nm,0.6s							
YSS				*eS*		S	**17 02 15.8**	**+2.0**
YSS	**Yuzh-Sakhalins**	**5.13**	**231**	⇑*iP*		P	**17 00 59.5**	**+2.7**
YSS				*i* S		S	**17 02 17.0**	**+3.2**
YSS				pmax		pmax		
	comp=Z,140nm,0.6s							
YSS				smax				
	comp=E,60nm,1.0s							
JWK2	**Keihoku**	**6.74**	**224**	P		P	**17 01 11.4**	**+0.9**
PET	**Petropavlovsk**	**6.83**	**63**	*eP*		P	**17 01 10.0**	**-1.0**
PET				*eS*		S	**17 02 36.8**	**-3.2**
PET	**Petropavlovsk**	**6.83**	**63**	⇓*eP*		S	**17 01 10.7**	**-0.3**
PET				*eS*		S	**17 02 39.8**	**-0.2**
PET				pmax		pmax		
	comp=Z,100nm,1.4s							
PET				pmax		pmax		
	comp=Z,58nm,0.9s							
PET				smax				
	comp=N,72nm,1.0s							
PET				smax				
	comp=E,100nm,17.0s							
PET				MLR		MLR		
	comp=Z,100nm,18.0s							
JMP	**Maruseppu**	**7.27**	**211**	P		P	**17 01 14.0**	**-1.4**
ASAJ	**Asahikawa**	**7.44**	**215**	P		P	**17 01 16.2**	**-0.7**
ASAJ	**Asahikawa**	**7.44**	**215**	P		P	**17 01 16.5**	**-0.4**
ASAJ				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	**7.44**	**215**	P		P	**17 01 16.5**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=35,slow=5.8,SNR=18							
JEW	**Eniwo**	**8.97**	**216**	P		P	**17 01 30.1**	**-1.3**
HABR	**Khabarovsk**	**9.00**	**263**	⇑*iP*		P	**17 01 32.7**	**+1.1**
HABR				*eS*		S	**17 03 19.3**	**+1.9**
HABR				pmax		pmax		
	comp=Z,31nm,0.6s							
JEM	**Erimo**	**9.14**	**206**	P		P	**17 01 32.0**	**-1.1**
JEM				*eS*		S	**17 03 14.0**	**-6.1**
ERM	**Erimo**	**9.14**	**206**	*c iP*		P	**17 01 32.0**	**-1.1**
MA2	**Magadan**	**9.32**	**7**	⇓*iP*		P	**17 01 34.8**	**+0.4**
	comp=Z,20nm,0.7s							
MA2				*eS*		S	**17 03 18.5**	**-4.3**
MA2	**Magadan**	**9.32**	**7**	*eP*		P	**17 01 34.9**	**+0.5**
MA2				*eS*		S	**17 03 23.5**	**+0.7**
MA2				pmax		pmax		
	comp=N,20nm,0.7s							
MA2				pmax		pmax		
	comp=Z,30nm,0.7s							
JOT	**Ohata**	**10.39**	**213**	P		P	**17 01 43.6**	**-1.7**
JOT				S		S	**17 03 35.1**	**-7.3**
JTM	**Tenmabayashi**	**10.91**	**211**	P		P	**17 01 48.8**	**-1.7**
JTM				S		S	**17 03 44.9**	**-7.0**
KLR	**Kul'dur**	**10.92**	**271**	*eP*		P	**17 01 47.8**	**-2.7**
KLR				pmax		pmax		
	comp=E,24nm,1.4s							
KLR				pmax		pmax		
	comp=Z,33nm,1.4s							
JOM	**Ohasama**	**12.03**	**208**	P		P	**17 02 01.6**	**-0.2**
JOM				S		S	**17 04 10.1**	**-2.4**
SEY	**Seymchan**	**12.78**	**8**	*eP*		P	**17 02 08.8**	**0.0**
JYA	**Atsumi**	**13.34**	**211**	P		P	**17 02 15.3**	**+0.4**
JMM	**Marumori**	**13.67**	**207**	P		P	**17 02 18.1**	**-0.1**
MDJ	**Mudanjiang**	**14.03**	**253**	P		P	**17 02 21.3**	**-0.3**
MDJ				S		S	**17 04 45.4**	**-2.4**
MDJ				SCP		ScP	17 09 29.3	-1.1
MDJ				PCS		PcS	17 10 28.5	+0.3
MDJ				SCS		ScS	17 13 08.5	+0.7
MDJ				AMB		AMB		
	comp=Z,8.0nm,1.1s							
MDJ				AMB		AMB		
	comp=Z,33nm,5.4s							
JSD	**Sado**	**14.34**	**215**	P		P	**17 02 24.8**	**+0.2**
JYT	**Yasato**	**15.37**	**206**	P		P	**17 02 34.7**	**+0.7**
NRGR	**Nerungri**	**15.46**	**303**	*eP*		P	**17 02 35.1**	**+0.6**
NRGR				S		S	**17 05 06.5**	**-4.5**
NRGR				smax				
	comp=E,42nm,0.5s							
YAK	**Yakutsk**	**15.63**	**326**	⇑*iP*		P	**17 02 35.3**	**-0.8**
	comp=E,66nm,0.8s							
YAK	**Yakutsk**	**15.63**	**326**	*c iP*		P	**17 02 35.5**	**-0.5**
YAK				*eS*		S	**17 05 13.5**	**-0.1**
YAK				pmax		pmax		
	comp=Z,43nm,0.8s							
YAK				pmax		pmax		
	comp=N,7.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,13nm,1.2s							
YAK				smax				
	comp=E,41nm,1.8s							
YAK				smax				
	comp=N,62nm,3.1s							
MAJO	**Matsushiro**	**15.70**	**212**	*eP*		P	**17 02 36.6**	**-0.5**
	comp=N,14nm,0.6s							
MAJO	**Matsushiro**	**15.70**	**212**	*eP*		P	**17 02 36.6**	**-0.5**
MAJO				pmax		pmax		
	comp=Z,14nm,0.6s							
MAT	**Matsushiro**	**15.70**	**212**	P		P	**17 02 36.4**	**-0.7**
MAT				*eS*		S	**17 05 09.8**	**-5.7**
MAT	**Matsushiro**	**15.70**	**212**	P		P	**17 02 37.3**	**+0.2**
MJAR	**Matsushiro Arr**	**15.70**	**212**	P		P	**17 02 37.6**	**+0.5**
	comp=Z,3.7nm,0.3s,baz=19,slow=9.7,SNR=38							
JRY	**Ryogami san**	**15.95**	**210**	P		P	**17 02 39.7**	**+0.3**
JOD2	**Odawara 2**	**16.59**	**208**	P		P	**17 02 46.4**	**+1.2**
JGF	**Kuroka**	**16.84**	**213**	P		P	**17 02 49.2**	**+1.7**
CN2	**Changchun**	**17.01**	**256**	*eP*		P	**17 02 48.6**	**-0.3**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.7s							
JWT	**Wachi**	**17.85**	**217**	P		P	**17 02 56.8**	**+0.1**
HIA	**Hailar**	**18.57**	**278**	*eP*		P	**17 03 03.1**	**0.0**
JAD	**Aida**	**18.64**	**220**	P		P	**17 03 04.5**	**+0.6**
JHS	**Saijyo**	**19.03**	**222**	P		P	**17 03 08.4**	**+1.0**
JWZ	**Kozaga**	**19.29**	**214**	P		P	**17 03 10.9**	**+1.1**
KSRS	**Korea Array**	**19.60**	**237**	P		P	**17 03 13.7**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=40,slow=9.4,SNR=18							
KSRS				PcP		PcP	17 07 02.5	+0.1
	comp=Z,0.1nm,0.3s,baz=2.9,slow=2.5,SNR=4.3							
BILL	**Bilibino**	**19.77**	**20**	⇑*eP*		P	**17 03 13.5**	**-0.1**
	comp=Z,2.5nm,0.6s							
BILL	**Bilibino**	**19.77**	**20**	⇑*iP*		P	**17 03 13.4**	**-0.2**
BILL				*i* S		S	**17 06 20.1**	**-0.1**
BILL				pmax		pmax		
	comp=Z,8.0nm,1.2s							
BOD	**Bodaibo**	**21.40**	**304**	*eP*		P	**17 03 27.0**	**-1.3**
BOD				pmax		pmax		
	comp=Z,2.0nm,1.6s,mb3.5							
TIXI	**Tiksi**	**23.15**	**344**	⇑*eP*		P	**17 03 42.5**	**-1.2**
	comp=Z,9.5nm,0.4s,mb4.8							
TIXI	**Tiksi**	**23.15**	**344**	*i* P		P	**17 03 43.3**	**-0.5**
TIXI				pmax		pmax		
	comp=Z,5.0nm,0.5s,mb4.4							
HHC	**Hu-ho-hao-te**	**27.32**	**264**	*eP*		P	**17 04 21.8**	**+1.0**
HHC				AMB		AMB		
	comp=Z,9.0nm,0.7s,mb4.5							
HHC				AMB		AMB		
	comp=Z,53nm,3.6s							

SONM Songino Array 27.45 281 P **P** **17 04 22.5 +0.7**
SONM 17 07 18.4
SONM Songino Array 27.45 281 P **P** **17 04 22.5 +0.6**
comp=Z,0.5nm,0.4s,mb3.5,baz=77,slow=8.1,SNR=9.3
SONM PcP PcP 17 07 18.4 -1.0
comp=Z,0.5nm,0.6s,baz=149,slow=1.4,SNR=4.1
SONM ScP ScP 17 10 02.2 -1.1
comp=Z,0.4nm,0.7s,baz=79,slow=1.9,SNR=5.0
TLY Talaya 27.94 290 ⇑*eP* **P** **17 04 26.6 +0.6**
comp=Z,4.9nm,1.5s,mb3.9
TLY Talaya 27.94 290 *eP* **P** **17 04 27.1 +1.0**
TLY pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
JOW Kunigami 28.16 221 P **P** **17 04 28.6 +0.3**
comp=Z,23nm,0.5s,mb5.1,baz=51,slow=7.3,SNR=13
ZAK Zakamensk 28.53 288 *eP* **P** **17 04 31.2 0.0**
ZAK pmax pmax
comp=Z,1.0nm,0.9s,mb3.5
ZAK pmax pmax
comp=Z,1.0nm,1.2s,mb3.3
NJ2 Nanjing 28.59 242 *eP* **P** **17 04 31.0 -1.0**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.0
TTA Tatalina 31.89 46 *eP* **P** **17 05 00.0 +0.3**
comp=Z,20nm,1.5s,mb4.5
TTA *e* 17 05 09.9
TTA *e* 17 05 14.1
TTA Tatalina 31.89 46 *eP* **P** **17 05 00.0 +0.3**
TTA pmax pmax
comp=Z,20nm,1.5s,mb4.5
SVW2 Sparrevohn 32.24 49 *eP* **P** **17 05 03.8 +1.1**
IMA2 Indian Mountai 32.80 40 ⇑*iP* **P** **17 05 07.8 +0.4**
IMA2 *eS* S 17 09 17.1 -26
YHNB Yeheng 33.16 229 P **P** **17 05 10.9 -0.1**
KDAK Kodiak Island 34.32 54 P **P** **17 05 19.7 -0.5**
comp=Z,9.5nm,0.6s,mb4.6,baz=252,slow=7.6,SNR=9.1
LZH Lanzhou 35.01 263 *eP* **P** **17 05 27.5 +1.3**
LZH XP sP 17 08 15.9 +1.7
LZH AMB AMB
comp=Z,18nm,1.0s,mb4.7
LZH AMB AMB
comp=Z,84nm,4.0s
PMR Palmer 35.24 47 *eP* **P** **17 05 20.8 -6.9**
comp=Z,64nm,1.4s,mb5.1
PMR Palmer 35.24 47 *eP* **P** **17 05 20.8 -6.9**
PMR pmax pmax
comp=Z,64nm,1.4s,mb5.1
COLA College 35.31 41 ⇑*iP* **P** **17 05 28.5 +0.2**
comp=Z,24nm,0.8s,mb4.9
COLA College 35.31 41 ⇑*iP* **P** **17 05 28.5 +0.3**
COLA pmax pmax
comp=Z,25nm,0.8s,mb4.9
SML Sawmill 35.57 47 *eP* **P** **17 05 30.6 +0.2**
GTA Gaotai 35.62 271 *eP* **P** **17 05 32.4 +1.2**
GTA XP sP 17 08 22.3 +2.7
GTA AMB AMB
comp=Z,2.0nm,0.7s,mb3.8
EGAK Eagle 38.15 41 ⇑*iP* **P** **17 05 50.6 -0.8**
comp=Z,32nm,0.7s,mb5.0
CD2 Chengdu 38.44 257 *eP* **P** **17 05 53.4 -0.9**
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
DAWY Dawson 39.06 42 *eP* **P** **17 05 58.7 0.0**
GYA Guiyang 39.84 249 *eP* **P** **17 06 05.8 +0.2**
GYA AP 17 07 50.4
GYA PP PP 17 07 55.3 +0.7
GYA PCP PcP 17 07 57.6 +1.8
GYA XP sP 17 08 57.3 +1.3
GYA SCP ScP 17 10 49.6 +1.8
GYA S **S** **17 11 29.3 +1.3**
GYA PCS PcS 17 11 47.4 +0.1
GYA SCS ScS 17 15 03.6 +0.1
GYA AMB AMB
comp=Z,10.0nm,1.0s,mb4.3
INK Inuvik 40.30 34 ⇑*iP* **P** **17 06 08.7 +0.2**
comp=Z,551nm,0.5s
INK *e*PcP PcP 17 08 00.9 +4.3
INK Inuvik 40.30 34 P **P** **17 06 09.0 +0.5**
INK pmax pmax
comp=Z,16nm,0.4s
INK Inuvik 40.30 34 P **P** **17 06 08.9 +0.4**
comp=Z,16nm,0.4s,mb4.9,baz=299,slow=6.5,SNR=73
WMQ Urumqi 40.91 285 ⇑P **P** **17 06 14.8 +1.0**
WMQ AP pP 17 07 59.0 +2.1
WMQ PP PP 17 08 05.3 +1.3
WMQ XP sP 17 09 05.8 +0.9
WMQ AMB AMB
comp=Z,2.0nm,0.5s,mb3.9
MKAR Makanchi Array 42.68 292 P **P** **17 06 27.7 +0.2**
MKAR 17 08 04.1
MKAR Makanchi Array 42.68 292 P **P** **17 06 27.7 +0.2**
comp=Z,1.9nm,0.6s,mb3.8,baz=68,slow=8.2,SNR=20
MKAR PcP PcP 17 08 04.1 -0.8
comp=Z,0.5nm,0.3s,baz=61,slow=6.8,SNR=5.1
MKAR ScP ScP 17 10 56.4 -2.4
comp=Z,0.3nm,0.4s,baz=50,slow=5.6,SNR=4.6
KURK Kurchatov 42.90 299 *eP* **P** **17 06 28.3 -0.9**
comp=Z,3.1nm,0.7s,mb4.0
KURK *e*PcP PcP 17 07 58.9 -6.8
KURK Kurchatov 42.90 299 *eP* **P** **17 06 28.3 -0.9**
KURK *e* 17 07 58.9
KURK pmax pmax
comp=Z,3.0nm,0.7s,mb3.9
KMI Kunming 43.20 252 P **P** **17 06 32.3 +0.4**
KMI AMB AMB
comp=Z,9.0nm,0.8s,mb4.3
KMI AMB AMB
comp=Z,30nm,3.1s
DLBC Dease Lake 45.30 47 *eP* **P** **17 06 48.8 +1.3**
DLBC Dease Lake 45.30 47 P **P** **17 06 49.0 +1.5**
baz=274,slow=6.7
BRVK Borovoye 46.30 305 *eP* **P** **17 06 55.0 -0.1**
comp=Z,1.6nm,0.5s,mb3.8
BRVK *e* 17 07 01.1
BRVK Borovoye 46.30 305 *eP* **P** **17 06 55.0 -0.1**
BRVK pmax pmax
comp=Z,2.0nm,0.5s,mb3.9
RES Resolute Bay 48.37 19 ⇑*eP* **P** **17 07 09.5 -0.7**
comp=Z,301nm,0.8s
RES *e* 17 07 33.1
RES Resolute Bay 48.37 19 ⇓*eP* **P** **17 07 09.5 -0.8**
RES pmax pmax
comp=Z,301nm,0.8s
YKA Yellowknife Ar 49.86 37 P **P** **17 07 21.3 0.0**
YKA ScP ScP 17 11 28.4 -0.2
YKA Yellowknife Ar 49.86 37 P **P** **17 07 21.3 0.0**
comp=Z,6.9nm,0.6s,mb4.3,baz=304,slow=7.0,SNR=136
YKA ScP ScP 17 11 28.4 -0.2
comp=Z,0.4nm,0.7s,baz=304,slow=4.1,SNR=5.9
ARU Arti 50.31 314 P **P** **17 07 22.4 -2.3**
comp=Z,2.4nm,0.7s,mb3.7
ARU Arti 50.31 314 P **P** **17 07 22.4 -2.3**
ARU pmax pmax
comp=Z,2.0nm,0.7s,mb3.7
TAPN Taplejung 51.05 267 *eP* **P** **17 07 31.1 +0.5**
JIRN Jiri 51.81 269 *eP* **P** **17 07 36.7 +0.7**
comp=Z,6.1nm,0.3s,mb4.5
KKN Kakani 52.31 269 *eP* **P** **17 07 40.3 +0.8**
KEV Kevo 52.89 338 *ep* **P** **17 07 41.9 -1.1**
KOLN Koldanda 53.40 271 *eP* **P** **17 07 47.8 +0.5**
comp=Z,14nm,0.4s,mb4.6
ARCES ARCESS Array B 53.41 338 P **P** **17 07 47.0 +0.3**
ARCES ARCESS Array B 53.41 338 P **P** **17 07 47.0 +0.3**
comp=Z,4.9nm,0.9s,mb3.9,baz=36,slow=6.4,SNR=6.9
AKTK Aktyubinsk 54.08 308 P **P** **17 07 51.5 -0.2**
AKTO Aktyubinsk 54.08 308 P **P** **17 07 51.5 -0.2**
comp=Z,0.4nm,0.5s,baz=51,slow=13,SNR=2.8
JOF Joensuu 56.73 331 *ep* **P** **17 08 08.7 -1.0**
KSM Kuching 58.50 227 *eP* **P** **17 08 22.4

BOZ	**Bozeman (W)**	**61.92**	**52**⇑	*e*P		**P**		**17 08 45.5**	**+1.0**
BOZ					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb3.5								
HLID	**Hailey**	**61.95**	**55**	*e*P		**P**		**17 08 46.2**	**+1.4**
	comp=Z,1.2nm,0.8s,mb3.2								
CMB	**Columbia Colle**	**62.50**	**63**	*e*P		**P**		**17 08 48.6**	**+0.3**
	comp=Z,4.0nm,1.0s,mb3.6								
CMB	**Columbia Colle**	**62.50**	**63**	*e*P		**P**		**17 08 48.7**	**+0.3**
CMB					pmax	pmax			
	comp=Z,4.0nm,1.0s,mb3.6								
NVAR	**Mina Array Bea**	**63.40**	**61**	P		**P**		**17 08 55.4**	**+1.3**
	comp=Z,2.7nm,0.6s,mb3.8,baz=296,slow=6.9,SNR=16								
RLMT	**Red Lodge**	**63.47**	**51**	*e*P		**P**		**17 08 55.5**	**+1.0**
	comp=Z,3.1nm,0.6s,mb3.8								
NB2	**NORSAR Subarra**	**63.79**	**338**	P		**P**		**17 08 55.7**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.2,baz=26,slow=6.5								
NB2	**NORSAR Subarra**	**63.79**	**338**	P		**P**		**17 08 55.7**	**-0.5**
NB2					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb3.4								
NOA	**NORSAR Array B**	**63.79**	**338**	P		**P**		**17 08 55.9**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.3,baz=28,slow=6.5,SNR=3.6								
BATI	**Kupang**	**64.10**	**207**	P		**P**		**17 08 58.6**	**-0.2**
	comp=Z,5.3nm,0.3s,mb4.4,baz=54,slow=23,SNR=8.9								
KAKA	**Kakadu**	**64.37**	**197**	*e*P		**P**		**17 08 59.2**	**-1.3**
	comp=Z,7.1nm,0.7s,mb4.1								
HWUT	**Hardware Ranch**	**64.82**	**55**	*e*P		**P**		**17 09 03.0**	**0.0**
	comp=Z,4.3nm,0.9s,mb3.9								
PDAR	**Pinedale Array**	**65.02**	**53**	P		**P**		**17 09 05.0**	**+0.7**
	comp=Z,5.0nm,0.6s,mb4.1,baz=357,slow=1.7,SNR=27								
TPNV	**Topopah Spring**	**65.60**	**61**	*e*P		**P**		**17 09 09.0**	**+1.0**
	comp=Z,2.6nm,0.4s,mb4.0								
TPNV	**Topopah Spring**	**65.60**	**61**	*e*P		**P**		**17 09 09.0**	**+1.0**
TPNV					pmax	pmax			
	comp=Z,3.0nm,0.4s,mb4.1								
ULM	**Lac du Bonnet**	**65.72**	**39**	P		**P**		**17 09 07.6**	**-0.9**
	comp=Z,1.0nm,0.3s,mb3.7,baz=312,slow=9.4,SNR=3.7								
KIV	**Kislovodsk**	**66.12**	**311**⇑	*e*P		**P**		**17 09 07.0**	**-4.1**
KIV				*e*				17 11 42.2	
KIV				*e*SS		SS		17 21 48.2	+4.5
KIV					pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.0								
PV10	**Paradox Valley**	**68.50**	**56**	*e*P		**P**		**17 09 26.9**	**+1.2**
PALK	**Pallekele**	**70.35**	**257**	*e*P		**P**		**17 09 36.5**	**-0.6**
	comp=Z,4.3nm,0.8s,mb3.9								
SCHQ	**Schefferville**	**71.08**	**21**	P		**P**		**17 09 40.1**	**-0.5**
	comp=Z,4.7nm,1.1s,mb3.9,baz=315,slow=7.1,SNR=1.8								
FITZ	**Fitzroy Crossi**	**71.10**	**203**	*e*P		**P**		**17 09 41.6**	**+0.4**
	comp=Z,9.3nm,0.8s,mb4.4								
FITZ	**Fitzroy Crossi**	**71.10**	**203**	P		**P**		**17 09 41.8**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.1,baz=22,slow=4.5,SNR=12								
WB2	**Warramunga Arr**	**71.11**	**194**	*e*P		**P**		**17 09 41.3**	**+0.1**
WRA	**Warramunga Arr**	**71.11**	**194**	*i* P		**P**		**17 09 39.0**	**-2.2**
WRA					pmax	pmax			
	comp=Z,8.0nm,0.8s								
WRA	**Warramunga Arr**	**71.11**	**194**	P		**P**		**17 09 41.2**	**0.0**
	comp=Z,8.2nm,0.8s,mb4.3,baz=9.9,slow=6.0,SNR=59								
MALT	**Malatya**	**72.49**	**309**	P		**P**		**17 09 48.6**	**-0.6**
	comp=Z,14nm,0.9s,mb4.5								
MALT	**Malatya**	**72.49**	**309**	P		**P**		**17 09 48.6**	**-0.6**
MALT					pmax	pmax			
	comp=Z,13nm,0.9s,mb4.5								
MIB	**Mutribah**	**74.24**	**298**	*e*P		**P**		**17 09 58.6**	**-0.6**
MIB					AMb	AMB		17 09 59.5	
	comp=Z,20nm,0.5s,mb4.9								
KBD	**Kabd**	**74.52**	**297**	*e*P		**P**		**17 10 00.2**	**-0.6**
KBD					AMb	AMB		17 10 05.0	
	comp=Z,57nm,1.0s,mb5.0								
RST	**Umm Al-Ruwaisa**	**74.67**	**298**	*e*P		**P**		**17 10 00.6**	**-1.0**
RST					AMb	AMB		17 10 01.6	
	comp=Z,15nm,0.6s,mb4.7								
QRN	**Al-Qurain**	**74.71**	**297**	*e*P		**P**		**17 10 00.9**	**-1.0**
QRN					AMb	AMB		17 10 07.2	
	comp=Z,57nm,1.4s,mb4.9								
NAY	**Al-Naaiem**	**74.72**	**297**	*e*P		**P**		**17 10 01.0**	**-0.9**
NAY					AMb	AMB		17 10 01.6	
	comp=Z,2.7nm,0.3s,mb4.2								
RDF	**Al-Radifah**	**74.78**	**297**	*e*P		**P**		**17 10 01.7**	**-0.6**
RDF					AMb	AMB		17 10 02.7	
	comp=Z,10nm,0.4s,mb4.8								
ASAR	**Alice Springs**	**74.83**	**194**	P		**P**		**17 10 03.5**	**+1.1**
	comp=Z,13nm,0.7s,mb4.6,baz=4.9,slow=5.5,SNR=169								
MBWA	**Marble Bar**	**75.63**	**208**	*e*P		**P**		**17 10 06.8**	**-0.1**
	comp=Z,12nm,0.9s,mb4.3								
SYO	**Syowa Base**	**142.31**	**214**⇑	*e*P		PKPdf		17 17 41.2	-4.7
CFAA	**Coronel Fontan**	**146.95**	**70**	PKPbc		PKPbc		17 17 57.7	-0.4
	comp=Z,0.2nm,0.4s,baz=130,slow=4.4,SNR=3.5								
PLCA	**Paso Flores**	**151.27**	**86**	PKPbc		PKPbc		17 18 07.5	-0.8
PLCA	**Paso Flores**	**151.27**	**86**	PKPbc		PKPbc		17 18 07.5	-0.8
	comp=Z,1.4nm,0.5s,baz=347,slow=4.7,SNR=5.0								

*ISCJB **23** 17:03:53.4±1.1, 180S±02ₓ1780W±02, h649km±23km, mb4.1/9, Error ellipse: s-maj=31.1km s-min=23.8km az=172.1*
*NEIC **23** 17:03:53.7±0.8, 1802Sₓ17797W, h630km±13km, mb4.3/7, Error ellipse: s-maj=19.9km s-min=13.7km az=160.0*
*IDC **23** 17:03:57.4±9.6, 1790Sₓ17827W, h657km±92km, mb3.5/6, mb1 3.6/6, mb1mx3.2/15, mbtmp3.5/6, Error ellipse: s-maj=88.1km s-min=61.4km az=114.0*

ISC 23 17:03:54.0±1.2, 180S±02ₓ1780W±02, h634km±26km, n20, σ0§64/19, mb4.2/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.18**	**57**	*e*P	**P**	**17 05 46.8**	**-0.4**
FUNA	**Funafuti**	**9.78**	**343**	*e*P	**P**	**17 06 11.9**	**+0.4**
	85nm,1.0s						
DZM	**Mont Dzumac**	**15.22**	**252**	P	**P**	**17 07 03.6**	**+0.7**
	0.1nm,0.3s,baz=82,slow=21,SNR=6.5						
ARMA	**Armidale**	**30.28**	**240**	*e*P	**P**	**17 09 17.1**	**+0.7**
CTA	**Charters Tower**	**33.86**	**261**	*e*P	**P**	**17 09 46.4**	**-0.3**
	3.9nm,0.6s,mb4.2						
CTA	**Charters Tower**	**33.86**	**261**	P	**P**	**17 09 46.9**	**+0.2**
	4.5nm,0.6s,mb4.3,baz=183,slow=22,SNR=7.1						
CTAO	**Charters Tower**	**33.86**	**261**	*e*P	**P**	**17 09 46.2**	**-0.5**
	6.6nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**38.98**	**241**	*e*P	**P**	**17 10 27.0**	**-1.3**
	4.3nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**38.98**	**241**	P	**P**	**17 10 29.1**	**+0.8**
	3.2nm,0.5s,mb4.1,baz=91,slow=9.6,SNR=9.1						
WB2	**Warramunga Arr**	**45.03**	**260**	*e*P	**P**	**17 11 15.0**	**-0.7**
WRA	**Warramunga Arr**	**45.04**	**260**	P	**P**	**17 11 15.2**	**-0.6**
	4.4nm,0.4s,mb4.4,baz=94,slow=7.2,SNR=15						
WRA				PcP	PcP	17 12 42.9	+0.3
	0.5nm,0.4s,baz=90,slow=3.4,SNR=5.0						
ASAR	**Alice Springs**	**45.19**	**254**	P	**P**	**17 11 16.9**	**0.0**
	13nm,0.7s,mb4.6,baz=91,slow=8.1,SNR=179						
ASAR				PcP	PcP	17 12 43.0	0.0
	1.5nm,0.6s,baz=105,slow=3.9,SNR=7.9						
KAKA	**Kakadu**	**48.01**	**269**	*e*P	**P**	**17 11 38.1**	**0.0**
	7.0nm,0.3s,mb4.7						
FITZ	**Fitzroy Crossi**	**53.44**	**260**	P	**P**	**17 12 16.8**	**-0.4**
	1.1nm,0.3s,mb3.6,baz=80,slow=9.0,SNR=9.2						
BATI	**Kupang**	**56.96**	**269**	P	**P**	**17 12 42.4**	**+0.8**
	6.7nm,0.5s,mb4.1,baz=52,slow=6.9,SNR=4.8						
MBWA	**Marble Bar**	**58.48**	**256**	*e*P	**P**	**17 12 50.7**	**-1.0**
	13nm,1.1s,mb4.0						
NWAO	**Narrogin (SRO)**	**59.56**	**242**	P	**P**	**17 12 58.2**	**-0.5**
	20nm,1.2s,mb4.2						
QSPA	**South Pole Qui**	**72.09**	**180**	*e*P	**P**	**17 14 16.1**	**+0.7**
KSM	**Kuching**	**73.12**	**277**	*e*P	**P**	**17 14 23.2**	**+0.7**
GERES	**GERESS Array B**	**147.78**	**346**	PKPbc	PKPbc	17 22 29.5	+0.5
	0.8nm,0.5s,baz=22,slow=4.3,SNR=7.7						

CASC 23 17:12:10.2±3.1, 1093N×8675W, h29km±10km, MD3.7, 6C-4D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SSNN	**San Juan del S**	**0.95**	**68**	*e*S	Sn	17 12 41.0	+0.7
SSN	**San Juan del S**	**0.96**	**67**	*e*P	Pn	17 12 27.0	-0.6
SSN				⇑*e*P		17 12 27.1	
SSN				*e*S	Sn	17 12 42.5	+2.1
APON	**Apoyo**	**1.19**	**34**⇑	*e*P	Pn	17 12 31.5	+0.6
TICN	**Ticuantepe**	**1.21**	**25**	*e*P	Pn	17 12 31.6	+0.4
TICN				*e*S	Sn	17 12 47.0	+0.3
COPN	**Copaltepe**	**1.26**	**7**⇓	*i* P	Pn	17 12 31.4	-0.5
CONN	**Concepcion**	**1.27**	**60**⇓	*e*P	Pn	17 12 31.2	-0.8
XAVN	**Gruta Xavier**	**1.28**	**19**	*e*P	Pn	17 12 31.3	-0.9
XAVN				*e*S	Sn	17 12 51.8	+3.4
MADN	**Villa Maderas**	**1.29**	**68**⇑	*e*P	Pn	17 12 31.6	-0.6
MADN				*e*P		17 12 31.9	
TISN	**Laguna Tiscapa**	**1.30**	**21**	*e*P	Pn	17 12 31.8	-0.6
MGAN	**Managua**	**1.31**	**22**⇑	*e*P	Pn	17 12 31.9	-0.6
MGAN				*e*S	Sn	17 12 49.8	+0.7
VCR	**Vista de Mar**	**1.36**	**126**	*e*P	Pn	17 12 32.6	-0.6
APYN	**Apoyeque**	**1.36**	**17**⇑	*e*P	Pn	17 12 33.0	-0.2
LEON	**Leon**	**1.49**	**355**	*e*P	Pn	17 12 34.7	-0.3
HUEN		**1.51**	**22**⇑	*e*P	Pn	17 12 34.8	-0.5
HUEN				*e*S	Sn	17 12 54.9	+0.8
2RIO	**Dos Rios de Up**	**1.54**	**105**⇓	*i* P	Pn	17 12 32.6	-3.2
2RIO				*e*S	Sn	17 12 49.8	-5.1
CNGN	**Cerro Negro**	**1.56**	**2**	*e*P	Pn	17 12 37.6	+1.5
CUI		**1.57**	**99**	*e*P	Pn	17 12 35.8	-0.3
CUI				*e*S	Sn	17 12 59.4	+4.0
TEL3	**Telica 3**	**1.64**	**357**⇓	*e*P	Pn	17 12 37.1	+0.1
JCR	**Jicaral**	**1.93**	**123**	*e*P	Pn	17 12 40.6	-0.5
CGA2	**Cerro Gallo 2**	**2.42**	**112**	*e*P	Pn	17 12 50.0	+2.1
LAJ	**Bijagual**	**2.79**	**112**	*e*P	Pn	17 12 50.4	-2.6
LCR2	**La Lucha 2**	**2.95**	**113**	*e*P	Pn	17 12 58.5	+3.4
URSC	**Urasca**	**3.12**	**110**	*e*P	Pn	17 13 00.7	+3.2
LCBS	**La Ceiba**	**3.48**	**321**	*e*P	x	17 13 02.5	
CHI2		**14.32**	**115**	*e*P		17 12 37.9	

*ISCJB **23** 17:12:48.2±0.4, 5868Sₓ006ₓ252W±0.1, h10km, mb4.9/24, MS4.4/19, Error ellipse: s-maj=10.7km s-min=7.4km az=136.8*
*NEIC **23** 17:12:51.6±4.6, 5865Sₓ25.18W, h20km±31km, mb5.0/13, Error ellipse: s-maj=15.4km s-min=10.8km az=211.0*
*BJI **23** 17:12:51.6, 5870Sₓ2520W, h20km, mB5.2, Ms5.1, Msz4.7*
*MOS **23** 17:12:52.7±1.1, 5878Sₓ25.13W, h33km, mb4.9/4, Error ellipse: s-maj=28.7km s-min=14.9km az=101.5*
*IDC **23** 17:12:54.5±1.8, 5876Sₓ2535W, h39km±14km, mb4.7/14, mb1 4.7/16, mb1mx4.6/21, mbtmp4.7/16, ML5.0/2, MS4.2/14, Ms1 4.2/14, ms1mx4.1/19, Error ellipse: s-maj=16.1km s-min=13.3km az=44.0*

ISC 23 17:12:49.4±4.9, 5869Sₓ008ₓ252W±01, h6km±31km, n147, σ1§03/42, mb4.9/23, MS4.4/19, 1C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.95**	**156**	*e*Pn	**Pn**	**17 16 07.2**	**0.0**
VNA1				*e*		17 16 11.0	
VNA1				*e*		17 16 14.8	
VNA1				*e*		17 16 17.8	
VNA1				*e*		17 16 22.3	
VNA1				*e*		17 16 29.5	
VNA1				*e*		17 16 32.9	
VNA1				*e*		17 16 38.4	
VNA3	**Neumayer Olymp**	**14.14**	**159**	*e*Pn	**Pn**	**17 16 09.3**	**-0.6**
VNA3				*e*		17 16 13.1	
VNA3				*e*		17 16 16.6	
VNA3				*e*		17 16 19.5	
VNA3				*e*		17 16 24.6	
VNA3				*e*		17 16 31.5	
VNA3				*e*		17 16 40.4	
VNA3				*e*		17 18 33.8	
VNA3				*e*		17 18 38.1	
VNA2	**Neumayer--Watz**	**14.35**	**156**	*e*Pn	**Pn**	**17 16 11.8**	**-0.8**
	baz=317,slow=16						
VNA2				*e*		17 16 15.3	
VNA2				*e*		17 16 19.0	
VNA2				*e*		17 16 22.2	
VNA2				*e*		17 16 28.2	
VNA2				*e*		17 16 35.8	
VNA2				*e*		17 16 43.6	
VNA2				*e*		17 18 39.9	
VNA2				*e*		17 18 44.6	
SNAA	**Sanae**	**15.90**	**154**	*e*Pn	**Pn**	**17 16 33.4**	**+0.1**
SNAA				*e*		17 16 37.6	
SNAA				*e*		17 16 41.7	
SNAA				*e*		17 16 44.5	
SNAA				*e*		17 16 49.9	
SNAA				*e*		17 16 56.7	
SNAA				*e*		17 19 15.4	
SNAA				*e*		17 19 19.3	
SNAA	**Sanae**	**15.90**	**154**	Pn	**Pn**	**17 16 32.5**	**-0.8**
	3.1nm,0.3s,baz=323,slow=15,SNR=132						
SNAA				Sn	**Sn**	**17 19 15.0**	**-15**
	0.5nm,0.3s,baz=321,slow=19,SNR=5.1						
SNAA				PcP	PcP	17 21 31.0	+0.1
	0.2nm,0.3s,baz=233,slow=5.2,SNR=5.2						
SNAA				LR	LR	17 21 44.8	
	comp=Z,280nm,18.3s,baz=12,slow=33						
PMSA	**Palmer Station**	**19.10**	**235**	*e*P	**Pn**	**17 17 13.4**	**+0.2**
	33nm,0.7s						
PMSA	**Palmer Station**	**19.10**	**235**	P	**Pn**	**17 17 12.6**	**-0.6**
	1.1nm,0.3s,baz=86,slow=15,SNR=1.8						
PMSA				LR	LR	17 23 25.0	
	comp=Z,800nm,19.5s,baz=82,slow=33						
EFI	**East Falkland**	**19.85**	**276**	*e*P	**Pn**	**17 17 23.2**	**+0.9**
	51nm,0.5s						
EFI	**East Falkland**	**19.85**	**276**	*e*P	**Pn**	**17 17 23.2**	**+1.0**
EFI				pmax	pmax		
	comp=Z,51nm,0.5s						
USHA	**Ushuaia**	**23.67**	**261**	P	**P**	**17 18 01.7**	**+0.3**
	comp=Z,40nm,0.6s,mb5.0,baz=104,slow=8.9,SNR=25						
USHA				PcP	PcP	17 21 45.6	+0.4
	comp=Z,5.8nm,0.7s,baz=83,slow=2.5,SNR=5.6						
USHA				LR	LR	17 25 14.3	
	comp=Z,948nm,18.9s,MS4.3,baz=61,slow=31						
SYO	**Syowa Base**	**28.89**	**138**⇓	*e*PcP	PcP	17 21 56.0	-1.1
TRQA	**Tornquist**	**31.36**	**295**	*e*P	**P**	**17 19 10.8**	**+0.3**
	comp=Z,30nm,1.1s,mb5.0						
TRQA				*e*		17 19 26.0	
QSPA	**South Pole Qui**	**31.55**	**180**	P	**P**	**17 19 13.1**	**+1.3**
	comp=Z,33nm,0.6s,mb5.4,baz=209,slow=2.9,SNR=232						
QSPA				PcP	PcP	17 22 04.2	+0.3
	comp=Z,13nm,0.9s,baz=318,slow=4.4,SNR=5.1						
QSPA				ScP	ScP	17 25 44.4	-2.8
	comp=Z,2.8nm,1.0s,baz=50,slow=2.7,SNR=3.6						
QSPA				LR	LR	17 31 00.1	
	comp=Z,361nm,21.9s,MS4.0,baz=9.3,slow=34						
PLCA	**Paso Flores**	**33.55**	**282**	P	**P**	**17 19 30.2**	**+0.6**
PLCA				PcP	PcP	17 22 10.2	+0.2
PLCA				ScP	ScP	17 25 51.5	-3.1
PLCA				LR	LR	17 33 24.1	
PLCA	**Paso Flores**	**33.55**	**282**	P	**P**	**17 19 30.2**	**+0.6**
PLCA						17 22 10.2	
PLCA	**Paso Flores**	**33.55**	**282**	P	**P**	**17 19 30.2**	**+0.6**
	comp=Z,13nm,0.7s,mb4.9,baz=146,slow=7.5,SNR=33						
PLCA				PcP	PcP	17 22 10.2	+0.2
	comp=Z,1.7nm,0.6s,baz=94,slow=1.8,SNR=4.0						
PLCA				ScP	ScP	17 25 51.5	-3.1
	comp=Z,1.2nm,0.7s,baz=61,slow=8.8,SNR=3.7						
PLCA				LR	LR	17 33 24.1	
	comp=Z,339nm,18.9s,MS4.1,baz=138,slow=37						
MAW	**Mawson**	**37.41**	**141**	P	**P**	**17 20 02.7**	**+0.2**
MAW						17 22 21.5	
MAW	**Mawson**	**37.41**	**141**	P	**P**	**17 20 02.7**	**+0.2**
	comp=Z,7.0nm,0.7s,mb4.6,baz=232,slow=9.7,SNR=24						
MAW				PcP	PcP	17 22 21.5	+0.6
	comp=Z,2.0nm,0.7s,baz=172,slow=2.8,SNR=6.7						
MAW				LR	LR	17 33 32.7	
	comp=Z,427nm,19.2s,MS4.3,baz=244,slow=33						
CFAA	**Coronel Fontan**	**39.59**	**294**	P	**P**	**17 20 20.6**	**-0.6**
	comp=Z,2.0nm,0.5s,mb4.1,baz=149,slow=7.8,SNR=33						
CFAA				PcP	PcP	17 22 28.0	-0.3
	comp=Z,0.9nm,0.5s,baz=154,slow=4.4,SNR=5.8						
SUR	**Sutherland**	**40.43**	**70**	P	**P**	**17 20 27.7**	**-0.5**
	comp=Z,17nm,1.1s,mb4.7						
LCO	**Las Campanas**	**42.92**	**294**	*e*P	**P**	**17 20 48.6**	**+0.1**
	comp=Z,34nm,1.1s,mb5.0						
SBA	**Scott Base**	**43.51**	**184**	*e*P	**P**	**17 20 53.7**	**+0.9**
	comp=Z,7.6nm,0.6s,mb4.6						
SBA				*e*		17 21 04.1	
SBA				*e*PcP	PcP	17 22 41.4	+1.0
SBA	**Scott Base**	**43.51**	**184**	*e*P	**P**	**17 20 53.7**	**+0.9**
SBA				*e*		17 21 04.1	
SBA				*e*		17 22 41.4	
SBA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
BOSA	**Boshof**	**45.70**	**71**	P	**P**	**17 21 11.6**	**+0.7**
BOSA				LR	LR	17 36 52.1	
BOSA	**Boshof**	**45.70**	**71**	P	**P**	**17 21 11.6**	**+0.7**
	comp=Z,3.3nm,0.7s,mb4.4,baz=203,slow=9.8,SNR=6.7						
BOSA				LR	LR	17 36 52.1	
	comp=Z,229nm,18.2s,MS4.2,baz=214,slow=31						
CASY	**Casey**	**51.06**	**159**	P	**P**	**17 21 54.6**	**+2.9**
	comp=Z,101nm,1.5s,mb5.5						
LPAZ	**La Paz**	**52.76**	**305**	P	**P**	**17 22 05.5**	**+0.6**
	comp=Z,4.0nm,0.5s,mb4.7,baz=188,slow=7.8,SNR=21						
LPAZ				PcP	PcP	17 23 15.4	+1.0
	comp=Z,2.4nm,0.5s,baz=55,slow=3.1,SNR=7.6						
LSZ	**Lusaka**	**58.43**	**65**	*e*P	**P**	**17 22 45.4**	**-0.3**
	comp=Z,4.4nm,0.8s,mb4.5						
LSZ	**Lusaka**	**58.43**	**65**	*e*P	**P**	**17 22 45.4**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
NNA	**Nana**	**60.44**	**298**	P	**P**	**17 22 56.2**	**-3.4**
	comp=Z,28nm,1.3s,mb5.1						
DBIC	**Dimbokro**	**67.18**	**22**	P	**P**	**17 23 45.1**	**+1.1**
	comp=Z,9.6nm,0.7s,mb4.9,baz=161,slow=6.4,SNR=9.8						
DBIC				LR	LR	17 47 14.4	
	comp=Z,75nm,18.2s,MS4.0,baz=186,slow=31						
ROSC	**El Rosal**	**74.39**	**309**	LR	LR	17 57 46.7	
	comp=Z,104nm,21.2s,MS4.1,baz=21,slow=36						
TORD	**Torodi Ar. Bea**	**74.88**	**27**	P	**P**	**17 24 32.3**	**+1.7**
	comp=Z,21nm,0.6s,mb5.3,baz=200,slow=6.1,SNR=160						
TORD				LR	LR	17 49 33.8	
	comp=Z,148nm,21.5s,MS4.2,baz=190,slow=29						
KMBO	**Kilima Mbogo**	**75.06**	**67**	LR	LR	17 54 56.2	
	comp=Z,287nm,18.2s,MS4.6,baz=160,slow=34						
SDV	**Santo Domingo**	**76.61**	**314**	*e*P	**P**	**17 24 38.0**	**-2.5**
	comp=Z,6.6nm,0.8s,mb4.6						
SDV				*e*		17 24 50.8	
BBGH	**Gun Hill**	**76.85**	**326**	P	**P**	**17 24 39.8**	**-2.0**
	comp=Z,912nm,1.4s						
RPZ	**Rata Peaks**	**77.07**	**192**	P	**P**	**17 24 42.2**	**-0.7**
	comp=Z,13nm,0.9s,mb4.9,baz=131,slow=6.4,SNR=7.4						
RKT	**Rikitea**	**80.17**	**242**	LR	LR	17 50 08.0	
	comp=Z,457nm,31.8s						
URZ	**Urewera**	**81.62**	**198**	P	**P**	**17 25 08.2**	**+0.3**
	comp=Z,5.7nm,0.5s,mb4.8,baz=91,slow=5.6,SNR=8.0						
JTS	**JuntasAbangare**	**83.81**	**301**	P	**P**	**17 25 15.9**	**-3.4**
	comp=Z,15nm,0.9s,mb5.1						
JTS	**JuntasAbangare**	**83.81**	**301**	P	**P**	**17 25 15.9**	**-3.5**
JTS				pmax	pmax		
	comp=Z,15nm,0.9s						
TBI	**Tubuai**	**86.21**	**230**	LR	LR	17 53 00.2	
	comp=Z,173nm,25.8s						
FORT	**Forrest**	**88.13**	**157**	*e*P	**P**	**17 25 40.5**	**-0.2**
	comp=Z,15nm,0.5s,mb5.5						
STKA	**Stephens Creek**	**89.11**	**169**	*e*P	**P**	**17 25 45.1**	**-0.2**
	comp=Z,9.7nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**89.11**	**169**	P	**P**	**17 25 45.1**	**-0.2**
	comp=Z,11nm,0.8s,mb5.3,baz=166,slow=5.7,SNR=14						
STKA				LR	LR	18 03 20.9	
	comp=Z,211nm,19.2s,MS4.6,baz=206,slow=34						
PPT	**Papeete**	**91.44**	**232**	LR	LR	17 55 21.0	
	comp=Z,172nm,23.5s						
PPT	**Papeete**	**91.44**	**232**	LR	LR	17 58 13.4	
	comp=Z,199nm,21.1s,MS4.5,baz=152,slow=30						
TAOE	**Nuku Hiva Isla**	**94.99**	**244**	LR	LR	17 56 59.2	
	comp=Z,622nm,26.2s						
ASAR	**Alice Springs**	**96.15**	**161**	P	**P**	**17 26 16.9**	**-1.0**
	comp=Z,5.0nm,0.7s,mb5.0,baz=182,slow=4.1,SNR=81						
ASAR				PKiKP	PKiKP	17 30 55.0	-1.3
	comp=Z,0.4nm,0.5s,baz=171,slow=1.1,SNR=9.6						
ASAR				PKKPbc	PKKPbc	17 43 03.7	+1.9
	comp=Z,0.7nm,0.5s,baz=20,slow=2.5,SNR=16						
KEST	**Kesra**	**98.40**	**28**	LR	LR	18 02 52.0	
	comp=Z,52nm,18.8s,MS4.0,baz=270,slow=30						
WRA	**Warramunga Arr**	**99.86**	**161**	P	Pdif	17 26 33.4	-1.4
	comp=Z,1.0nm,0.8s,baz=194,slow=4.3,SNR=12						
WRA				PKiKP	PKiKP	17 31 01.4	-1.5
	comp=Z,0.6nm,0.6s,baz=211,slow=1.5,SNR=7.3						
WRA				PKKPbc	PKKPbc	17 42 53.8	+2.2
	comp=Z,0.6nm,0.3s,baz=359,slow=2.8,SNR=28						
TXAR	**Lajitas Array**	**108.91**	**295**	PKPdf	PKiKP	17 31 18.7	-0.4
TXAR	**Lajitas Array**	**108.91**	**295**	PKiKP	PKiKP	17 31 18.7	-0.3
	baz=168,slow=4.6						
GERES	**GERESS Array B**	**111.83**	**27**	PKiKP	PKiKP	17 31 23.3	-0.5
	comp=Z,0.5nm,0.6s,baz

CD2				SKKS	SKKSac	17 41 41.6	-3.1		
CD2				SS	SS	17 52 49.1	+0.2		
CD2				PP	PP				
	comp=Z,120nm,10.2s								
CD2				LR	LR				
	comp=N,180nm,24.2s								
CD2				LR	LR				
	comp=Z,150nm,26.2s,MS4.6								
MK31	**Makanchi Array**	**136.70**	**73**	*e*PKPpre		17 31 59.7			
MKAR	**Makanchi Array**	**136.70**	**73**	PKIKP	PKPdf	17 32 09.7	-1.7		
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
MKAR				pmax	pmax				
	comp=N,1.0nm,1.0s								
MKAR	**Makanchi Array**	**136.70**	**73**	PKhKP		17 31 59.9			
	comp=N,0.6nm,0.7s,baz=221,slow=4.1,SNR=6.2								
MKAR				PKP	PKPdf	17 32 09.7	-1.7		
	comp=N,0.5nm,0.5s,baz=243,slow=1.4,SNR=6.1								
MKAR				SKPbc	SKPbc	17 35 38.5	-5.6		
	comp=N,0.9nm,1.0s,baz=249,slow=5.1,SNR=4.1								
WMQ	**Urumqi**	**137.37**	**80**	*e*PKP	PKPdf	17 32 11.8	-0.9		
WMQ				XPKP		17 32 23.8			
WMQ				LR	LR				
	comp=N,32nm,15.5s,MS4.3								
WMQ				LR	LR				
	comp=E,25nm,16.1s,MS4.3								
WMQ				LR	LR				
	comp=Z,53nm,17.5s,MS4.3								
KURK	**Kurchatov**	**137.55**	**66**	*i* PKIKP	PKPdf	17 32 14.3	+1.5		
YKA	**Yellowknife Ar**	**138.82**	**315**	PKP		17 32 03.9			
YKA				PKP	PKPdf	17 32 14.8	+0.1		
YKA				SKPbc	SKPbc	17 35 44.8	-4.9		
YKA	**Yellowknife Ar**	**138.82**	**315**	PKIKP	PKPdf	17 32 14.8	+0.1		
YKA				pmax	pmax				
	comp=Z,21nm,0.6s								
YKA				pmax	pmax				
	comp=N,1.0nm,0.8s								
YKA	**Yellowknife Ar**	**138.82**	**315**	PKhKP		17 32 03.9			
	comp=N,0.6nm,0.5s,baz=120,slow=2.9,SNR=13								
YKA				PKP	PKPdf	17 32 14.8	0.0		
	comp=N,21nm,0.6s,baz=127,slow=2.2,SNR=191								
YKA				SKPbc	SKPbc	17 35 44.8	-4.9		
	comp=N,1.3nm,0.8s,baz=122,slow=2.1,SNR=6.9								
LZH	**Lanzhou**	**140.07**	**102**	*e*PKP	PKPdf	17 32 17.0	-0.9		
LZH				XPKP		17 32 29.0			
LZH				PP	PP	17 35 18.4	+2.9		
LZH				SKKS	SKKSac	17 42 04.5	-4.6		
LZH				SS	SS	17 53 36.4	-1.7		
LZH				PP	PP				
	comp=Z,80nm,4.4s								
LZH				LR	LR				
	comp=E,179nm,19.0s								
LZH				LR	LR				
	comp=Z,224nm,20.9s,MS4.9								
RES	**Resolute Bay**	**140.70**	**337**	*e*PKPpre		17 32 09.9			
NVS	**Novosibirsk**	**142.32**	**64**	*e*PKIKP	PKPdf	17 32 17.3	-4.0		
NVS				pmax	pmax				
	comp=N,1.0nm,0.4s								
NVS				pmax	pmax				
	comp=E,2.0nm,0.4s								
NVS				pmax	pmax				
	comp=Z,1.0nm,0.4s								
NJ2	**Nanjing**	**144.06**	**122**	*e*PKP	PKPdf	17 32 24.0	-1.2		
BTO	**Baotou**	**146.65**	**103**	*e*PKP	PKPdf	17 32 31.0	+1.7		
HHC	**Hu-ho-hao-te**	**147.62**	**104**	*e*PKP	PKPdf	17 32 34.3	+3.4		
HHC				PKP2	PKPab	17 32 42.3	+6.4		
HHC				PKS		17 36 07.6			
HHC				PP	PP	17 36 09.3	+8.5		
HHC				SKKS	SKKSac	17 42 52.9	+0.8		
HHC				SS	SS	17 55 09.8	+5.0		
HHC				PP	PP				
	comp=Z,62nm,4.9s								
HHC				LR	LR				
	comp=N,206nm,13.1s,MS5.1								
HHC				LR	LR				
	comp=E,114nm,14.3s,MS5.1								
HHC				LR	LR				
	comp=Z,149nm,14.3s,MS4.9								
INK	**Inuvik**	**148.49**	**318**	*e*PKPdf	PKPdf	17 32 29.6	-1.9		
INK				*e*PKPab	PKPab	17 32 35.0	-3.6		
MOY	**Mondy**	**149.26**	**79**	*e*PKP2	PKPbc	17 32 37.5	-0.1		
MOY				pmax	pmax				
	comp=Z,25nm,1.5s								
BJT	**Baijiatuan**	**149.28**	**110**	*e*PKPbc	PKPbc	17 32 37.8	-0.3		
DAWY	**Dawson**	**149.30**	**308**	*e*PKPdf	PKPdf	17 32 32.7	-0.2		
DAWY				*e*PKPbc	PKPbc	17 32 37.1	-0.2		
BJI	**Beijing**	**149.30**	**110**	PKP	PKPdf	17 32 38.3	+4.6		
BJI				SKS	SKSdf	17 39 40.0	-1.9		
BJI				SS	SS	17 55 23.3	-0.4		
BJI				LR	LR				
	comp=N,55nm,17.2s,MS4.9								
BJI				LR	LR				
	comp=E,148nm,16.1s,MS4.9								
BJI				LR	LR				
	comp=Z,113nm,30.1s								
ZAK	**Zakamensk**	**149.70**	**83**	*e*PKIKP	PKPdf	17 32 33.2	-0.8		
ZAK				*e*		17 32 38.7			
ZAK				pmax	pmax				
	comp=Z,2.0nm,1.8s								
ZAK				pmax	pmax				
	comp=Z,11nm,1.0s								
SONM	**Songino Array**	**149.76**	**90**	PKP	PKPdf	17 32 33.9	-0.2		
	comp=Z,13nm,1.3s,baz=212,slow=3.2,SNR=8.2								
SONM				PKPbc	PKPbc	17 32 39.2	+0.3		
	comp=Z,7.4nm,0.5s,baz=225,slow=3.5,SNR=78								
ULN	**Ulaanbaatar**	**150.13**	**90**	*e*PKPbc	PKPbc	17 32 39.2	-0.6		
EGAK	**Eagle**	**150.27**	**309**	*e*PKPdf	PKPdf	17 32 35.2	+0.7		
EGAK				*e*PKPbc	PKPbc	17 32 39.3	-0.3		
TLY	**Talaya**	**150.63**	**81**	*e*PKPbc	PKPbc	17 32 40.9	0.0		
TLY	**Talaya**	**150.63**	**81**	*i* PKIKP	PKPbc	17 32 41.1	+0.2		
TLY				*e*		17 32 57.7			
TLY				pmax	pmax				
	comp=Z,13nm,0.9s								
IRK	**Irkutsk**	**151.26**	**81**	*e*PKIKP	PKPbc	17 32 40.5	-1.9		
IRK				pmax	pmax				
	comp=Z,13nm,0.8s								
SML	**Sawmill**	**152.36**	**301**	*e*PKPbc	PKPbc	17 32 44.8	+0.2		
KSRS	**Korea Array**	**152.53**	**129**	PKP	PKPdf	17 32 38.9	+0.1		
	comp=Z,0.9nm,0.7s,baz=228,slow=1.5,SNR=3.1								
KSRS				PKPbc	PKPbc	17 32 45.6	-0.1		
	comp=Z,2.2nm,0.5s,baz=187,slow=2.2,SNR=11								
KSRS				PKPab	PKPab	17 32 56.5	+0.4		
	comp=Z,4.6nm,0.8s,baz=213,slow=4.5,SNR=9.0								
KDAK	**Kodiak Island**	**152.85**	**291**	*e*PKPbc	PKPbc	17 32 45.7	-0.1		
COLA	**College**	**153.04**	**308**	*e*PKPbc	PKPbc	17 32 43.2	-2.8		
MJAR	**Matsushiro Arr**	**155.33**	**147**	PKPab	PKPab	17 33 06.8	-1.3		
	comp=Z,3.3nm,0.7s,baz=190,slow=4.6,SNR=8.6								
MAT	**Matsushiro**	**155.33**	**147**	PKP2	PKPab	17 33 07.5	-0.6		
IMA2	**Indian Mountai**	**155.65**	**309**	*e*PKPbc	PKPdf	17 32 52.0	+10		
IMA2				*e*PKPab	PKPab	17 33 08.5	-0.2		
TTA	**Tatalina**	**156.11**	**301**	*e*PKPbc	PKPdf	17 32 52.9	+10		
BOD	**Bodaibo**	**158.77**	**75**	*e*PKIKP	PKPdf	17 32 44.4	-2.0		
BOD				pmax	pmax				
	comp=Z,2.0nm,1.0s								
TIXI	**Tiksi**	**163.28**	**29**	*e*PKP2	PKPab	17 33 42.2	+0.5		
TIXI				pmax	pmax				
	comp=Z,3.0nm,0.9s								
KLR	**Kul'dur**	**163.56**	**115**	*e*PKP2	PKPab	17 33 39.9	-3.6		
BILL	**Bilibino**	**169.31**	**336**⇓	*e*PKIKP	PKPdf	17 32 51.4	-4.3		
BILL				pmax	pmax				
	comp=Z,3.0nm,1.2s								

*NNC **23** 17:16:00.4±2.5,3868N×7126E,h0km,mb3.7,mpv3.6, Error ellipse: s-maj=26.9km s-min=22.3km az=78.0*

ISC 23 17:15:56.6±2.7,385N±02×727E±02,h100km,n8,σ0965/10, 2C-1D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=44	**3.72**	**11**	P	**Pn**	**17 16 51.6**	**-0.3**
UCH	**Uchtor** SNR=30	**3.98**	**19**	P	**Pn**	**17 16 54.7**	**-0.8**
EKS2	**Erkin-Say** SNR=11	**4.25**	**10**	P	**Pn**	**17 17 00.1**	**+1.1**
AAK	**Ala-Archa** SNR=5.5	**4.36**	**17**	P	**Pn**	**17 17 00.7**	**+0.1**
KBK	**Karagaybulak** SNR=7.3	**4.49**	**21**	P	**Pn**	**17 17 02.2**	**-0.2**
KK31	**Karatay Array** 3.9nm,0.3s,baz=151,slow=15,SNR=113	**4.92**	**341**	P	**Pn**	**17 17 09.0**	**+0.9**
KK31	12nm,0.4s,baz=151,slow=22,SNR=16			⇑S	**Sn**	**17 18 03.5**	**-0.2**
AB31	**Akbulak array**	**14.16**	**324**	P	**Pn**	**17 19 11.4**	**-1.0**
	0.7nm,0.4s,baz=126,slow=13,SNR=28						
AB31				⇓S	**Sn**	**17 21 40.4**	**-7.8**
	0.4nm,0.5s						
AKTO	**Aktyubinsk** 0.5nm,0.8s	**15.88**	**324**	⇑P	**Pn**	**17 19 34.5**	**+0.4**

IDC 23 17:29:49.1±2.0,673S×12905E,h0km,mb3.7/1,mb1 3.8/3, mb1mx3.5/11,mbtmp3.6/3,ML3.8/2,Error ellipse: s-maj=114.4km s-min=31.1km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=338,slow=12,SNR=16	**14.10**	**159**	Pn	Pn	17 33 09.6	-0.6
WRA	0.5nm,0.3s,baz=334,slow=25,SNR=7.7			Sn	Sn	17 35 34.4	-13
ASAR	**Alice Springs** 0.3nm,0.3s,baz=346,slow=11,SNR=27	**17.47**	**165**	P	Pn	17 33 54.8	+0.5
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=119,slow=7.5,SNR=6.9	**67.49**	**327**	P	P	17 40 47.0	+0.1

*MAN **23** 18:05:58,491N×12575E,h109km,mb5.3,ML4.3,MS4.5*
*ISCJB **23** 18:06:00.3±0.5,5.14N±004×12576E±006,h142km±4km, mb4.4/51,Error ellipse: s-maj=10.1km s-min=5.4km az=166.1*
*BJI **23** 18:06:00.6,531N×12582E,h137km,mB4.8,mb4.7*
*MOS **23** 18:06:01.1±1.2,5.18N×12568E,h153km,mb4.4/11,Error ellipse: s-maj=18.2km s-min=8.8km az=95.9*
*IDC **23** 18:06:02.4±1.7,5.16N×12558E,h147km±14km,mb4.0/18, mb1 4.1/19,mb1mx4.1/23,mbtmp4.1/19,Error ellipse: s-maj=20.7km s-min=8.1km az=79.0*
*NEIC **23** 18:06:02.4±1.2,5.19N×12576E,h146km±11km,mb4.5/14, Error ellipse: s-maj=13.5km s-min=7.4km az=81.0*

ISC 23 18:06:01.3±0.5,514N±003×12577E±006,h135km±4km, h145km±2.5km:pP-P,n105,σ128/118,mb4.4/51,7C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.25**	**319**⇑	*i* P	**Pn**	**18 06 24.6**	**-2.5**
GSPH				*i* S	**Sn**	**18 06 42.6**	**-4.2**
MATI	**Mati**	**1.86**	**15**	*e*P	**Pn**	**18 06 32.3**	**-1.7**
MATI				*e*S	**Sn**	**18 07 09.8**	**+11**
DAV	**Davao City (W)**	**1.93**	**354**	*e*Pn	**Pn**	**18 06 34.5**	**-0.3**
DAV	**Davao City (W)**	**1.93**	**354**⇓	*e*P	**Pn**	**18 06 34.5**	**-0.3**
DMPH	**Davao City--Mi**	**1.95**	**352**⇓	*e*P	**Pn**	**18 06 34.7**	**-0.3**
DMPH				*e*S	**Sn**	**18 07 05.0**	**+4.1**
CTBH	**Cotabato--PC H**	**2.57**	**324**⇓	*e*P	**Pn**	**18 06 41.3**	**-1.4**
CTBH				*i* S	**Sn**	**18 07 10.9**	**-3.5**
BUKP	**Musuan**	**2.81**	**346**	*e*P	**Pn**	**18 06 45.1**	**-0.7**
BUKP				*e*S	**Sn**	**18 07 21.7**	**+1.6**
BIPH	**Bislig**	**3.08**	**11**⇑	*i* P	**Pn**	**18 06 49.8**	**+0.5**
BIPH						04 06 33.7	
CGP	**Cagayan de Oro**	**3.47**	**342**⇑	*e*P	**Pn**	**18 06 53.7**	**-0.5**
CGP				*i* S	**Sn**	**18 07 32.4**	**-2.8**
SCPH	**Surigao**	**4.62**	**357**	*e*P	**Pn**	**18 07 09.7**	**+0.1**
SCPH				*e*S	**Sn**	**18 07 56.7**	**-5.9**
TBP	**Tagbilaran**	**4.91**	**337**	*e*P	**Pn**	**18 07 12.7**	**-0.6**
MSLP	**Maasin**	**5.05**	**350**	*e*P	**Pn**	**18 07 17.7**	**+2.5**
OCLP	**Ormoc**	**5.99**	**349**	*e*P	**Pn**	**18 07 28.5**	**+0.7**
PLP	**Palo**	**6.04**	**353**	*e*P	**Pn**	**18 07 29.0**	**+0.5**
GUIM	**Jordan**	**6.30**	**330**	*e*P	**Pn**	**18 07 32.7**	**+0.7**
CUYO	**Cuyo Island**	**7.37**	**321**	*e*P	**Pn**	**18 07 47.4**	**+0.9**
CNP	**Catarman**	**7.41**	**352**	*e*P	**Pn**	**18 07 48.9**	**+2.0**
PVCP	**Virac**	**8.56**	**349**	*e*P	**Pn**	**18 08 05.2**	**+2.9**
BATP	**Bataraza**	**8.71**	**295**	*e*P	**Pn**	**18 08 15.0**	**+11**
ABRA	**Dolores**	**13.38**	**339**	*e*P	**Pn**	**18 09 08.2**	**+2.1**
BATI	**Kupang** 5.6nm,0.3s,baz=334,slow=1.5,SNR=14	**15.39**	**188**	P	**Pn**	**18 09 32.4**	**+1.0**
KSM	**Kuching**	**15.86**	**257**	*e*P	**Pn**	**18 09 40.7**	**+3.5**
KAKA	**Kakadu** 19nm,0.5s	**18.93**	**160**	*e*P	**P**	**18 10 12.4**	**+0.5**
QIZ	**Qiongzhong**	**20.79**	**313**	P	**P**	**18 10 32.4**	**+0.5**
QIZ				AP		18 10 58.0	
QIZ				XP	sP	18 11 15.8	+2.5
QIZ				AMB	AMB		
	comp=Z,15nm,1.4s						
QIZ				AMB	AMB		
	comp=Z,121nm,4.4s						
JOW	**Kunigami**	**21.71**	**6**	P	**P**	**18 10 42.1**	**+0.5**
	comp=Z,48nm,0.8s,mb5.0,baz=148,slow=9.2,SNR=5.9						
FITZ	**Fitzroy Crossi**	**23.09**	**180**	*e*P	**P**	**18 10 55.4**	**0.0**
	comp=Z,6.3nm,0.3s,mb4.5						
FITZ	**Fitzroy Crossi**	**23.09**	**180**	P	**P**	**18 10 55.3**	**0.0**
	comp=Z,3.8nm,0.4s,mb4.2,baz=15,slow=7.9,SNR=37						
WRA	**Warramunga Arr**	**26.31**	**162**	P	**P**	**18 11 24.3**	**-0.2**
WRA				S	**S**	**18 15 46.4**	**-1.1**
WRA	**Warramunga Arr**	**26.31**	**162**	P	**P**	**18 11 24.3**	**-0.3**
	comp=Z,2.1nm,0.3s,mb4.2,baz=338,slow=10,SNR=64						
WRA				S	**S**	**18 15 46.4**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=339,slow=14,SNR=3.2						
WRA				ScP	ScP	18 18 14.6	-0.3
	comp=Z,0.6nm,0.8s,baz=345,slow=3.2,SNR=4.6						
WB2	**Warramunga Arr**	**26.31**	**162**	*e*P	**P**	**18 11 24.5**	**-0.1**
MBWA	**Marble Bar**	**26.80**	**193**	*e*P	**P**	**18 11 27.8**	**-1.1**
	comp=Z,5.8nm,0.6s,mb4.4						
PSI	**Prapat**	**26.88**	**266**	P	**P**	**18 11 29.9**	**0.0**
	comp=Z,2.2nm,0.4s,mb4.2,baz=310,slow=20,SNR=4.4						
NST	**Nakhon Sawan**	**27.27**	**295**	P	**P**	**18 11 32.1**	**-1.1**
NJ2	**Nanjing**	**27.55**	**347**	*e*P	**P**	**18 11 33.1**	**-2.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
GYA	**Guiyang**	**27.98**	**321**	*e*P	**P**	**18 11 42.3**	**+2.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
JNU	**Nakatsue**	**28.25**	**9**	P	**P**	**18 11 42.4**	**+0.7**
	comp=Z,9.9nm,0.9s,mb4.6,baz=348,slow=0.7,SNR=4.9						
CHG	**Chiang Mai**	**29.49**	**300**	⇓P	**P**	**18 11 54.5**	**+1.5**
	comp=Z,20nm,0.7s,mb5.0						
CHTO	**Chiang Mai**	**29.49**	**300**	*e*P	**P**	**18 11 54.2**	**+1.2**
	comp=Z,7.5nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**29.49**	**300**	*e*P	**P**	**18 11 54.2**	**+1.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ASAR	**Alice Springs**	**29.71**	**165**	P	**P**	**18 11 55.2**	**+0.5**
	comp=Z,3.4nm,0.5s,mb4.3,baz=344,slow=7.4,SNR=115						
ASAR				S	**S**	**18 16 41.4**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=350,slow=22,SNR=3.3						
ASAR				ScP	ScP	18 18 26.2	+0.8
	comp=Z,1.0nm,0.7s,baz=352,slow=2.8,SNR=7.8						
KMI	**Kunming**	**29.72**	**314**	P	**P**	**18 11 57.3**	**+2.4**
KMI				AP	pP	18 12 27.6	+3.7
KMI				XP	sP	18 12 44.6	+5.1
KMI				S	**S**	**18 16 43.3**	**+2.1**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.4						
KMI				AMB	AMB		
	comp=Z,78nm,4.6s						
KMI				LR	LR		
	comp=N,84nm,19.4s						
KMI				LR	LR		
	comp=E,59nm,18.5s						
KMI				LR	LR		
	comp=Z,46nm,16.5s						
KSRS	**Korea Array**	**32.23**	**3**	P	**P**	**18 12 17.5**	**+0.7**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
KSRS	**Korea Array**	**32.23**	**3**	P	**P**	**18 12 17.4**	**+0.7**
	comp=Z,6.6nm,0.8s,mb4.4,baz=183,slow=10,SNR=22						
XAN	**Xi'an**	**32.74**	**334**	P	**P**	**18 12 19.5**	**-1.8**
XAN				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.8						
CD2	**Chengdu**	**32.95**	**324**	*e*P	**P**	**18 12 25.3**	**+2.1**
CD2				AP	pP	18 12 55.8	+3.4
CD2				XP	sP	18 13 12.0	+4.0
CD2				PP	PP	18 13 41.1	+0.7
CD2				S	**S**	**18 17 32.3**	**+0.9**
CD2				XS	sS	18 18 25.5	+2.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
MAJO	**Matsushiro**	**33.27**	**18**	*e*P	**P**	**18 12 24.9**	**-1.0**
	comp=Z,7.7nm,0.9s,mb4.4						
MAJO	**Matsushiro**	**33.27**	**18**	*e*P	**P**	**18 12 24.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
MAT	**Matsushiro**	**33.27**	**18**	P	**P**	**18 12 24.5**	**-1.4**
MJAR	**Matsushiro Arr**	**33.27**	**18**	P	**P**	**18 12 25.3**	**-0.6**
	comp=Z,6.1nm,0.7s,mb4.4,baz=195,slow=9.4,SNR=22						
FORT	**Forrest**	**35.78**	**177**	*e*P	**P**	**18 12 47.7**	**+0.2**
	comp=Z,19nm,0.5s,mb5.0						
BJI	**Beijing**	**35.81**	**347**	P	**P**	**18 12 46.6**	**-1.1**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.5						
BJI				LR	LR		
	comp=N,152nm,13.5s						
BJI				LR	LR		
	comp=E,73nm,13.2s						
BJI				LR	LR		
	comp=Z,114nm,32.4s						
LZH	**Lanzhou**	**36.81**	**330**	*e*P	**P**	**18 12 56.0**	**-0.3**
LZH				AP	pP	18 13 26.8	+0.9
LZH				XP	sP	18 13 42.9	+1.5
LZH				AMB	AMB		
	comp=Z,26nm,1.5s,mb4.6						
LZH				AMB	AMB		
	comp=Z,93nm,4.0s						
HHC	**Hu-ho-hao-te**	**37.77**	**342**	*e*P	**P**	**18 13 06.5**	**+2.2**
HHC				AP	pP	18 13 38.0	+3.9
HHC				XP	sP	18 13 53.8	+4.3
HHC				S	**S**	**18 18 45.6**	**+0.6**
HHC				XS	sS	18 19 40.3	+3.5
HHC				AMB	AMB		
	comp=Z,16nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,98nm,4.9s						
HHC				LR	LR		
	comp=N,85nm,15.5s						
HHC				LR	LR		
	comp=E,167nm,13.1s						
HHC				LR	LR		
	comp=Z,82nm,15.5s						
SHL	**Shillong**	**38.28**	**306**	*e*P	**P**	**18 13 08.5**	**-0.3**
NWAO	**Narrogin (SRO)**	**38.71**	**192**	P	**P**	**18 13 12.4**	**+0.1**
	comp=Z,5.2nm,0.4s,mb4.5,baz=37,slow=7.4,SNR=9.6						
MDJ	**Mudanjiang**	**39.46**	**4**	P	**P**	**18 13 19.3**	**+1.0**
MDJ				AP	pP	18 13 50.1	+1.8
MDJ				XP	sP	18 14 06.3	+2.6
MDJ				PP	PP	18 14 53.0	+1.2
MDJ				SCP	ScP	18 18 59.0	-0.8
MDJ				S	**S**	**18 19 10.9**	**+0.7**
MDJ				XS	sS	18 20 05.9	+3.6
MDJ				SCS	ScS	18 23 10.8	-1.4
MDJ				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,20nm,5.0s						
STKA	**Stephens Creek**	**39.78**	**159**	*e*P	**P**	**18 13 22.0**	**+0.9**
	comp=Z,5.5nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**39.78**	**159**	P	**P**	**18 13 22.4**	**+1.4**
	comp=Z,5.3nm,0.6s,mb4.4,baz=329,slow=9.1,SNR=16						
LSA	**Lhasa**	**40.80**	**311**	*e*P	**P**	**18 13 31.9**	**+2.2**
	comp=Z,4.5nm,0.6s,mb4.3						
LSA	**Lhasa**	**40.80**	**311**	*e*P	**P**	**18 13 31.9**	**+2.3**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
GTA	**Gaotai**	**41.41**	**329**	*e*P	**P**	**18 13 35.8**	**+1.4**
GTA				AP	pP	18 14 06.3	+1.7
GTA				XP	sP	18 14 23.1	+3.2
GTA				PP	PP	18 15 14.4	+1.5
GTA				PCP	PcP	18 15 31.9	+1.9
GTA				SCP	ScP	18 19 07.1	-0.5
GTA				S	**S**	**18 19 41.8**	**+2.5**
GTA				XS	sS	18 20 35.8	+4.1
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.0						
GTA				AMB	AMB		
	comp=Z,42nm,8.0s						
GTA				LR	LR		
	comp=N,113nm,12.2s						
GTA				LR	LR		
	comp=E,114nm,11.0s						
GTA				LR	LR		
	comp=Z,215nm,14.5s						
TAPN	**Taplejung**	**42.42**	**306**	*e*P	**P**	**18 13 43.8**	**+0.9**
	comp=Z,14nm,0.6s,mb4.7						
ODAN	**Odare**	**42.48**	**305**	*e*P	**P**	**18 13 43.3**	**-0.1**
	comp=Z,25nm,0.8s,mb4.9						
JIRN	**Jiri**	**43.78**	**305**	*e*P	**P**	**18 13 53.4**	**-0.4**
	comp=Z,30nm,0.7s,mb5.0						
HABR	**Khabarovsk**	**43.90**	**9**	*e*P	**P**	**18 13 55.2**	**+0.8**
HABR				*e*SS	SS	18 23 20.9	-16
YSS	**Yuzh-Sakhalins**	**44.16**	**17**	*e*P	**P**	**18 13 57.0**	**+0.5**
	comp=Z,7.6nm,0.6s,mb4.5						
YSS	**Yuzh-Sakhalins**	**44.16**	**17**⇑	*e*P	**P**	**18 13 56.6**	**+0.1**
YSS				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.3						
KLR	**Kul'dur**	**44.23**	**6**	*e*P	**P**	**18 13 54.4**	**-2.6**
KKN	**Kakani**	**44.57**	**305**	*e*P	**P**	**18 14 00.5**	**+0.4**
	comp=Z,12nm,0.8s,mb4.6						
GKN	**Gorkha**	**45.18**	**305**	*e*P	**P**	**18 14 03.9**	**-1.0**
SONM	**Songino Array**	**45.67**	**342**	P	**P**	**18 14 07.0**	**-1.5**
	comp=Z,0.4nm,0.4s,mb3.5,baz=165,slow=8.8,SNR=18						
KOLN	**Koldanda**	**45.95**	**304**	*e*P	**P**	**18 14 10.6**	**-0.4**
	comp=Z,36nm,0.7s,mb5.1						
DZM	**Mont Dzumac**	**48.12**	**126**	P	**P**	**18 14 29.8**	**+1.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=247,slow=13,SNR=6.6						
WMQ	**Urumqi**	**51.03**	**325**	*e*P	**P**	**18 14 48.8**	**-0.8**
WMQ				AP	pP	18 15 21.3	+0.4
WMQ				XP	sP	18 15 37.3	+1.4
WMQ				PCP	PcP	18 16 03.3	-0.4
WMQ				PP	PP	18 16 48.1	+0.6
WMQ				AMB	AMB		
	comp=Z,2.0nm,0.9s,mb3.8						
WMQ				LR	LR		
	comp=N,32nm,16.7s						
WMQ				LR	LR		
	comp=E,13nm,17.6s						
WMQ				LR	LR		
	comp=Z,53nm,18.5s						
BOD	**Bodaibo**	**53.35**	**352**	*e*P	**P**	**18 15 04.9**	**-1.5**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.7						
MK31	**Makanch

OBN				*e*	PP	pP	18 18 59.6	+2.0
OBN				*e*			18 21 47.7	
OBN					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2							
ARCES	**ARCESS Array B**	**88.81**	**340**	P		**P**	**18 18 37.8**	**-1.9**
	comp=Z,2.9nm,0.7s,mb4.3,baz=75,slow=6.4,SNR=4.2							
INK	**Inuvik**	**89.21**	**21**	*e*P		**P**	**18 18 41.9**	**+0.3**
	comp=Z,39nm,0.7s,mb5.5							
INK	**Inuvik**	**89.21**	**21**	*e*P		**P**	**18 18 41.9**	**+0.4**
INK					pmax	pmax		
	comp=Z,39nm,0.7s							
FINES	**FINESS Array B**	**90.15**	**332**	*i* P		**P**	**18 18 44.0**	**-2.0**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**90.15**	**332**	P		**P**	**18 18 44.1**	**-1.9**
	comp=Z,1.5nm,0.8s,mb4.0,baz=41,slow=3.5,SNR=4.6							
NOA	**NORSAR Array B**	**97.11**	**334**	P		**P**	**18 19 15.5**	**-2.5**
NOA	**NORSAR Array B**	**97.11**	**334**	P		**P**	**18 19 15.5**	**-2.5**
	comp=Z,1.0nm,0.8s,mb4.2,baz=65,slow=4.6,SNR=4.4							
YKA	**Yellowknife Ar**	**98.62**	**24**	P		**P**	**18 19 25.6**	**+0.9**
YKA	**Yellowknife Ar**	**98.62**	**24**	P		**P**	**18 19 25.6**	**+0.9**
	comp=Z,0.7nm,0.7s,mb4.2,baz=301,slow=4.8,SNR=13							
TXAR	**Lajitas Array**	**121.48**	**51**	PKP		PKPdf	18 24 40.8	+1.3
	comp=Z,0.3nm,0.6s,baz=270,slow=0.9,SNR=4.8							
TORD	**Torodi Ar. Bea**	**121.57**	**289**	PKP		PKPdf	18 24 38.2	-1.8
	comp=Z,0.7nm,0.7s,baz=51,slow=2.1,SNR=5.7							

*BJI **23** 18:15:11.9, 2350S×17080E, h10km, mB4.9, mb5.0*
*ISCJB **23** 18:15:13.8±5.3, 2343S±009×1710E±0.1, h24km±35km, mb4.5/19, Error ellipse: s-maj=18.7km s-min=11.5km az=140.1*
*NEIC **23** 18:15:14.9±0.8, 2345S×17082E, h10km, mb4.9/8, Error ellipse: s-maj=17.7km s-min=15.6km az=206.0*
*IDC **23** 18:15:17.6±5.3, 2335S×17095E, h40km±41km, mb4.0/10, mb1 4.2/11, mb1mx4.1/17, mbtmp4.0/11, ML3.3/1, MS3.6/2, Ms1 3.6/2, ms1mx3.1/15, Error ellipse: s-maj=33.9km s-min=19.7km az=63.0*
*MOS **23** 18:15:17.6±2.4, 2325S×17065E, h33km, mb4.6/6, Error ellipse: s-maj=20.0km s-min=15.1km az=9.9*

ISC 23 18:15:16.4±5.3, 2340S±009×1710E±01, h30km±36km, h27km±.6km:pP-P, n52, σ0°93/40, mb4.5/19, 1C, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.39**	**287**	*e*P		**Pn**	**18 16 20.7**	**-0.3**
DZM				*e*S		**Sn**	**18 17 11.7**	**+0.4**
DZM	**Mont Dzumac**	**4.39**	**287**	P		**Pn**	**18 16 20.9**	**-0.1**
	1.5nm,0.3s,baz=100,slow=18,SNR=98							
DZM				S		**Sn**	**18 17 11.2**	**0.0**
	0.7nm,0.3s,baz=151,slow=19,SNR=4.4							
HNR	**Honiara**	**17.45**	**321**	LR		LR	18 24 08.3	
	comp=Z,124nm,19.1s,baz=177,slow=30							
EIDS	**Eidsvold**	**18.23**	**260**	*e*P		**Pn**	**18 19 26.5**	**-0.8**
	5.8nm,1.0s							
RPZ	**Rata Peaks**	**20.26**	**180**	P		**P**	**18 19 50.0**	**+0.6**
	5.7nm,0.7s,baz=102,slow=3.6,SNR=3.5							
CTA	**Charters Tower**	**23.19**	**273**	P		**P**	**18 20 21.6**	**+0.6**
	11nm,0.8s,mb4.3,baz=102,slow=8.6,SNR=6.9							
CTAO	**Charters Tower**	**23.19**	**273**	*e*P		**P**	**18 20 21.8**	**+0.8**
	15nm,0.9s,mb4.4							
CTAO	**Charters Tower**	**23.19**	**273**	*e*P		**P**	**18 20 21.8**	**+0.8**
CTAO					pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4							
STKA	**Stephens Creek**	**27.30**	**246**	*e*P		**P**	**18 20 59.7**	**+1.2**
	comp=Z,4.9nm,0.8s,mb4.1							
STKA	**Stephens Creek**	**27.30**	**246**	P		**P**	**18 20 59.5**	**+1.0**
	comp=Z,6.2nm,0.7s,mb4.2,baz=37,slow=8.7,SNR=12							
ASAR	**Alice Springs**	**33.93**	**262**	P		**P**	**18 21 57.0**	**-0.1**
	comp=Z,3.5nm,0.8s,mb4.3,baz=92,slow=8.7,SNR=56							
WRA	**Warramunga Arr**	**34.16**	**269**	P		**P**	**18 21 57.9**	**-1.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=97,slow=8.4,SNR=30							
FORT	**Forrest**	**38.73**	**250**	*e*P		**P**	**18 22 38.2**	**+0.2**
	comp=Z,33nm,0.6s,mb5.2							
FITZ	**Fitzroy Crossi**	**42.59**	**268**	*e*P		**P**	**18 23 10.5**	**+0.4**
	comp=Z,10nm,0.9s,mb4.6							
FITZ	**Fitzroy Crossi**	**42.59**	**268**	P		**P**	**18 23 10.0**	**-0.1**
	comp=Z,6.5nm,0.9s,mb4.3,baz=110,slow=4.7,SNR=7.7							
MBWA	**Marble Bar**	**47.27**	**262**	*e*P		**P**	**18 23 46.8**	**-0.5**
KLBR	**Kellerberrin**	**47.52**	**248**	*e*P		**P**	**18 23 48.7**	**-0.5**
	comp=Z,14nm,0.6s,mb5.2							
NWAO	**Narrogin (SRO)**	**47.89**	**246**	*e*P		**P**	**18 23 51.7**	**-0.2**
	comp=Z,25nm,0.9s,mb5.2							
NWAO	**Narrogin (SRO)**	**47.89**	**246**	P		**P**	**18 23 51.8**	**-0.1**
	baz=71,slow=5.0							
MUN	**Mundaring**	**48.81**	**247**	*e*P		**P**	**18 23 59.2**	**+0.1**
SBA	**Scott Base**	**54.55**	**181**	*e*P		**P**	**18 24 42.5**	**+1.3**
	comp=Z,6.1nm,1.0s,mb4.6							
SBA	**Scott Base**	**54.55**	**181**	*e*P		**P**	**18 24 42.5**	**+1.3**
SBA					pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6							
QSPA	**South Pole Qui**	**66.67**	**180**	P		**P**	**18 26 04.4**	**+0.5**
	comp=Z,3.5nm,0.7s,mb4.5,baz=31,slow=2.5,SNR=15							
MJAR	**Matsushiro Arr**	**67.17**	**332**	P		**P**	**18 26 07.2**	**-0.4**
	comp=Z,4.2nm,1.1s,mb4.4,baz=174,slow=7.0,SNR=4.2							
ASAJ	**Asahikawa**	**72.05**	**339**	LR		LR	18 52 36.0	
	comp=Z,63nm,19.8s,baz=166,slow=31							
YSS	**Yuzh-Sakhalins**	**74.53**	**340**	*e*P		**P**	**18 26 53.3**	**+1.3**
	comp=Z,15nm,0.9s,mb4.9							
YSS	**Yuzh-Sakhalins**	**74.53**	**340**	*e*P		**P**	**18 26 51.8**	**-0.2**
YSS					pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8							
PSI	**Prapat**	**74.72**	**280**	P		**P**	**18 26 52.7**	**-1.2**
PSI	**Prapat**	**74.72**	**280**	P		**P**	**18 26 52.7**	**-1.2**
	comp=Z,1.5nm,0.3s,mb4.4,baz=345,slow=20,SNR=3.9							
KMI	**Kunming**	**81.84**	**302**	P		**P**	**18 27 35.3**	**+2.3**
KMI				AP		pP	18 27 43.8	+1.2
KMI				AMB		AMB		
	comp=Z,6.0nm,1.2s,mb4.4							
MA2	**Magadan**	**84.33**	**350**	*e*P		**P**	**18 27 43.7**	**-1.4**
MA2					pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.3							
HHC	**Hu-ho-hao-te**	**84.42**	**319**	*e*P		**P**	**18 27 48.8**	**+2.8**
HHC				PP		PP	18 31 06.8	+5.1
HHC				SKS			18 38 03.5	
HHC				S		S	18 38 08.9	-1.3
HHC				PS			18 39 13.8	
HHC				SS		SS	18 43 43.9	+2.4
HHC				AMB		AMB		
	comp=Z,15nm,0.8s,mb5.2							
HHC				AMB		AMB		
	comp=Z,42nm,4.1s							
SNAA	**Sanae**	**85.08**	**182**	*e*		**P**	**18 27 47.9**	**-1.1**
SNAA				*e*		pP	18 27 55.8	-2.8
VNA3	**Neumayer Olymp**	**85.61**	**180**	*e*		**P**	**18 27 50.6**	**-1.0**
VNA3				*e*		pP	18 27 58.4	-2.8
VNA2	**Neumayer--Watz**	**85.92**	**181**	*e*		**P**	**18 27 52.4**	**-0.8**
VNA2				*e*		pP	18 28 01.0	-1.8
SEY	**Seymchan**	**87.30**	**352**	*e*P		**P**	**18 28 00.8**	**+1.1**
ULN	**Ulaanbaatar**	**91.15**	**323**	*e*P		**P**	**18 28 18.1**	**-0.1**
BILL	**Biiibino**	**91.23**	**358**∥	*e*P		**P**	**18 28 16.8**	**-1.3**
BILL					pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.3							
SONM	**Songino Array**	**91.50**	**323**	P		**P**	**18 28 20.3**	**+0.4**
	comp=Z,1.0nm,1.0s,mb4.1,baz=144,slow=4.3,SNR=4.2							
ZAK	**Zakamensk**	**94.60**	**324**	*e*P		**P**	**18 28 34.3**	**+0.2**
ZAK					pmax	pmax		
	comp=Z,1.0nm,1.2s,mb4.1							
UZH	**Uzhgorod**	**144.71**	**323**	*e*PKIKP		PKPdf	18 34 49.3	-0.8
UZH				*e*			18 34 57.7	
KECS	**Kecovo**	**145.77**	**324**	*e*PKP		PKPdf	18 34 53.0	+1.1
KECS				*e*			18 35 08.4	
VYHS	**Vyhne**	**146.64**	**326**	*e*PKP		PKPbc	18 34 55.4	+0.4
KOLL	**Kolacno**	**146.81**	**326**	*e*P		PKPdf	18 34 47.5	-6.1
KOLL	**Kolacno**	**146.81**	**326**	*e*		PKPdf	18 34 47.5	-6.1
BRG	**Berggiesshubel**	**147.30**	**333**	*e*P		PKPbc	18 34 57.3	+0.6
	comp=Z,4.0nm,0.9s							
CLL	**Collm**	**147.36**	**334**	*e*PKPdf		PKPbc	18 34 57.0	+0.1
KHC	**Kasperske Hory**	**148.75**	**331**	*e*PKP		PKPbc	18 35 00.0	-0.7
GERES	**GERESS Array B**	**148.90**	**330**	PKPbc		PKPbc	18 35 00.2	-0.9
	comp=Z,2.1nm,0.8s,baz=40,slow=2.3,SNR=12							
GRA1	**Grafenberg Arr**	**149.33**	**334**	*e*PKP		PKPbc	18 35 02.4	+0.3
GRF	**Grafenberg Arr**	**149.33**	**334**	*e*PKP		PKPbc	18 35 02.4	+0.3
TORD	**Torodi Ar. Bea**	**165.60**	**227**	PKPab		PKPab	18 36 16.6	-0.9
	comp=Z,0.8nm,0.8s,baz=123,slow=2.8,SNR=4.1							

*IDC **23** 18:22:59.7±1.1, 2268N×12094E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/22, Error ellipse: s-maj=44.0km s-min=23.5km az=70.0*
*NEIC **23** 18:23:00.5±0.8, 2296N×12153E, h10km, mb4.1/1, ML4.4(TAP), Error ellipse: s-maj=26.8km s-min=11.8km az=83.0*
NEIC Recorded [3 TAP] in T'ai-tung and [2 TAP] in Hua-lien Counties.
*ISCJB **23** 18:23:03.4±1.3, 2300N±010×12149E±005, h45km±15km, mb3.6/4, Error ellipse: s-maj=16.1km s-min=7.3km az=4.3*
*JMA **23** 18:23:05.5±0.3, 2302N×12163E, h66km, M3.1*
*BJI **23** 18:23:06.6, 23.11N×12125E, h21km, mb4.1, ML3.9, Ms3.8, Msz3.7*

ISC 23 18:23:04.5±1.4, 230N±01×12147E±005, h37km±17km, n18, σ0°84/23, mb3.6/4, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**1.14**	**6**	*e*Pn		**Pn**	**18 23 23.0**	**-1.0**
NACB				*e*			18 23 35.5	
YHNB	**Yeheng**	**1.63**	**357**	*e*Pn		**Pn**	**18 23 29.5**	**-1.3**
TATO	**Taipei**	**1.93**	**0**	*e*Pn		**Pn**	**18 23 36.4**	**+1.5**
YOJ	**Yonaguni jima**	**2.00**	**44**	P		**Pn**	**18 23 36.5**	**+0.7**
YOJ				*e*S		**Sn**	**18 23 59.9**	**+0.3**
HATJ	**Hateruma jima**	**2.37**	**64**	P		**Pn**	**18 23 41.2**	**+0.3**
HATJ				*e*S		**Sn**	**18 24 07.6**	**-1.1**
IRIF	**Iriomote-Funau**	**2.44**	**58**	P		**Pn**	**18 23 42.8**	**+0.9**
IRIF				*e*S		**Sn**	**18 24 10.3**	**-0.2**
JKRS	**Kuro-shima**	**2.62**	**62**	P		**Pn**	**18 23 44.8**	**+0.5**
JIJ	**Ishigaki jima**	**2.78**	**61**	P		**Pn**	**18 23 46.8**	**+0.2**
JIJ				*e*S		**Sn**	**18 24 18.3**	**-0.6**
QZH	**Quanzhou**	**3.25**	**306**	P		**Pn**	**18 23 53.3**	**+0.3**
QZH				S		**Sn**	**18 24 29.3**	**-1.1**
QZH				Smax				
	comp=N,520nm,0.8s							
QZH				Smax				
	comp=E,450nm,0.6s							
JTJ	**Tarama**	**3.36**	**61**	P		**Pn**	**18 23 55.0**	**+0.5**
NJ2	**Nanjing**	**9.28**	**346**	*e*P		**Pn**	**18 25 21.3**	**+5.5**
NJ2				AP			18 25 24.8	
NJ2				XP			18 25 27.4	
NJ2				S		**Sn**	**18 27 07.0**	**+8.1**
NJ2				AMB		AMB		
	comp=Z,10.0nm,0.5s							
NJ2				LR		LR		
	comp=N,520nm,12.5s							
NJ2				LR		LR		
	comp=E,210nm,11.0s							
NJ2				LR		LR		
	comp=Z,420nm,10.8s							
JNU	**Nakatsue**	**13.03**	**37**	LR		LR	18 31 08.5	
	comp=Z,75nm,21.4s,baz=331,slow=36							
MJAR	**Matsushiro Arr**	**19.76**	**43**	P		**Pn**	**18 27 38.3**	**+5.3**
	comp=Z,2.7nm,1.0s,baz=227,slow=8.4,SNR=6.9							
LSA	**Lhasa**	**27.92**	**290**	P		**P**	**18 28 52.9**	**+1.6**
	comp=Z,2.4nm,0.6s,mb4.0							
MK31	**Makanchi Array**	**39.35**	**317**	*e*P		**P**	**18 30 30.1**	**-0.1**
MKAR	**Makanchi Array**	**39.35**	**317**	P		**P**	**18 30 30.5**	**+0.3**
	comp=Z,0.7nm,0.7s,mb3.5,baz=110,slow=9.6,SNR=8.5							
MKAR				PcP		PcP	18 32 37.8	-0.4
	comp=Z,0.4nm,0.8s,baz=96,slow=4.3,SNR=3.7							
WRA	**Warramunga Arr**	**44.52**	**163**	P		**P**	**18 31 11.3**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.5,baz=344,slow=8.8,SNR=25							
ASAR	**Alice Springs**	**47.97**	**165**	P		**P**	**18 31 39.4**	**-0.3**
	comp=Z,0.6nm,0.9s,mb3.6,baz=342,slow=6.7,SNR=6.6							

MAN 23 18:25:40, 1565N×12007E, h25km, mb4.3, ML3.1, MS2.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	**0.20**	**310**	*e*P		Pb	18 25 47.6	+1.9
SCZP				*e*S		Sb	18 25 54.2	+4.7
BOLP	**Bolinao**	**0.75**	**348**	*e*P		Pb	18 25 54.9	+0.6
BOLP				*e*S		Sb	18 26 06.3	+2.2
PCPH	**Palayan**	**0.99**	**95**∥	*e*P		Pn	18 25 56.6	-1.8
PCPH				*e*S		Sb	18 26 07.4	-3.8
BALP	**Baler**	**1.46**	**86**	*e*P		Pn	18 26 04.3	-0.4
BALP				*e*S		Sn	18 26 24.1	+1.2
LUBP	**Lubang**	**1.91**	**175**	*e*P		Pn	18 26 12.0	+1.0
ABRA	**Dolores**	**2.08**	**17**	*e*P		Pn	18 26 14.2	+0.8
ABRA				*e*S		Sn	18 26 40.8	+2.3

IDC 23 18:29:57.4±2.9, 3353S×17868W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.9/11, mbtmp4.0/3, ML3.3/1, Error ellipse: s-maj=68.5km s-min=35.7km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URZ	**Urewera**	**5.83**	**215**	Pn		Pn	18 31 25.4	+0.3
	0.9nm,0.3s,baz=29,slow=4.0,SNR=8.7							
URZ				Sn		Sn	18 32 32.3	-0.3
	4.7nm,0.3s,baz=158,slow=18,SNR=10.0							
ASAR	**Alice Springs**	**42.47**	**271**	P		P	18 37 54.5	+0.1
	1.5nm,0.7s,baz=110,slow=7.2,SNR=28							
ASAR				pP			18 38 06.0	
	1.1nm,0.7s,baz=112,slow=6.7,SNR=7.8							
WB2	**Warramunga Arr**	**43.73**	**276**	*e*P		P	18 38 03.9	-0.7
WRA	**Warramunga Arr**	**43.74**	**276**	P		P	18 38 04.4	-0.2
	1.7nm,0.7s,baz=118,slow=7.5,SNR=20							
WRA				pP			18 38 16.1	
	1.2nm,0.5s,baz=116,slow=7.3,SNR=8.3							
FINES	**FINESS Array B**	**147.85**	**338**	PKPbc		PKPbc	18 49 42.9	-0.7
	1.0nm,0.8s,baz=76,slow=5.9,SNR=2.7							

*ISCJB **23** 18:44:58.7±0.6, 2514N±004×1062E±0.1, h10km, mb3.1/4, Error ellipse: s-maj=13.5km s-min=5.5km az=4.5*
*BJI **23** 18:45:00.4, 2536N×10632E, h15km, ML3.3, Ms3.6*
*IDC **23** 18:45:01.5±1.5, 2537N×10642E, h0km, mb3.1/4, mb1 3.3/4, mb1mx3.2/20, mbtmp3.2/4, Error ellipse: s-maj=95.3km s-min=23.9km az=67.0*
*PLV **23** 18:45:07.9±0.8, 2477N×10638E, h12km±6km, MD4.0*

ISC 23 18:45:00.5±0.5, 2524N±003×10627E±009, h10km, n11, σ1°54/23, mb3.1/4, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GYA	**Guiyang**	**1.26**	**16**	P		**Pn**	**18 45 22.9**	**-1.3**
GYA				PG		**Pg**	**18 45 25.3**	**+0.5**
GYA				SG		**Sg**	**18 45 39.5**	**-1.7**
GYA				Smax				
	comp=N,870nm,0.4s							
GYA				Smax				
	comp=E,1μm,0.8s							
KMI	**Kunming**	**3.20**	**269**	P		**Pn**	**18 45 52.8**	**+1.9**
KMI				PG		**Pg**	**18 46 00.0**	**-1.9**
KMI				SG		**Sg**	**18 46 36.8**	**-6.5**
KMI				Smax				
	comp=N,110nm,0.8s							
KMI				Smax				
	comp=E,70nm,0.8s							
KMI				LR		LR		
	comp=N,457nm,5.2s							
KMI				LR		LR		
	comp=E,156nm,3.8s							
HNV	**Hanoi**	**4.20**	**186**	*e*Pn		**Pn**	**18 46 07.4**	**+2.7**
HNV				*e*Pg		**Pg**	**18 46 21.8**	**+0.8**
HNV				*e*Sg		**Sg**	**18 47 12.0**	**-3.4**
BVV	**Ba Vi**	**4.21**	**192**	*e*Pn		**Pn**	**18 46 06.2**	**+1.5**
BVV				*e*Pg		**Pg**	**18 46 20.3**	**-0.8**
BVV				*e*Sg		**Sg**	**18 47 09.8**	**-5.8**
PLV	**Phu-Lien**	**4.43**	**176**	*e*Pn		**Pn**	**18 46 08.9**	**+1.1**
PLV				*e*Pg		**Pg**	**18 46 24.0**	**-1.4**
PLV				*e*Sg		**Sg**	**18 47 15.4**	**-7.5**
DSV	**Doi Son**	**4.64**	**183**	*e*Pn		**Pn**	**18 46 11.4**	**+0.7**
DSV				*e*Pg		**Pg**	**18 46 27.8**	**-1.8**
DSV				*e*SG		**Sg**	**18 47 22.2**	**-7.5**
XAN	**Xi'an**	**9.06**	**14**	P		**Pn**	**18 47 10.6**	**-0.8**
XAN				AP			18 47 22.3	
SONM	**Songino Array**	**22.55**	**0**	P		**P**	**18 50 01.4**	**+0.8**
	comp=E,0.5nm,0.6s,mb3.1,baz=182,slow=11,SNR=7.7							
MKAR	**Makanchi Array**	**28.75**	**325**	P		**P**	**18 51 00.9**	**+2.7**
	comp=E,0.1nm,0.5s,mb2.8,baz=142,slow=12,SNR=3.0							
WRA	**Warramunga Arr**	**52.56**	**146**	P		**P**	**18 54 16.4**	**+2.0**
	comp=E,0.2nm,0.5s,mb3.3,baz=326,slow=9.9,SNR=6.0							
ASAR	**Alice Springs**	**55.51**	**149**	P		**P**	**18 54 39.7**	**+3.9**
	comp=E,0.2nm,0.7s,mb3.3,baz=324,slow=7.6,SNR=2.8							

IDC 23 18:57:52.0±7.0, 1938S×17699W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.7/12, mbtmp3.9/2, Error ellipse: s-maj=297.3km s-min=111.0km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.71**	**261**	P		P	19 06 15.3	+0.2
	0.6nm,0.3s,baz=97,slow=7.2,SNR=27							
ASAR	**Alice Springs**	**45.71**	**256**	P		P	19 06 14.7	-0.3
	0.7nm,0.4s,baz=93,slow=7.9,SNR=21							
AKASG	**Malin Array Be**	**142.48**	**333**	PKP		PKPdf	19 17 26.2	-0.4
	0.7nm,0.4s,baz=41,slow=4.1,SNR=6.2							

IDC 23 19:06:12.1±2.9, 3295S×17843W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.9/12, mbtmp4.1/3, ML4.0/1, Error ellipse: s-maj=67.5km s-min=35.3km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
URZ	**Urewera**	**6.42**	**213**	Pn		Pn	19 07 48.0	0.0
	3.7nm,0.3s,baz=254,slow=1.4,SNR=21							
URZ				Sn		Sn	19 09 00.8	-1.2
	6.4nm,0.3s,baz=149,slow=16,SNR=9.7							
ASAR	**Alice Springs**	**42.67**	**270**	P		P	19 14 10.9	+0.2
	1.2nm,0.6s,baz=109,slow=7.3,SNR=20							
WB2	**Warramunga Arr**	**43.88**	**275**	*e*P		P	19 14 20.1	-0.4
WRA	**Warramunga Arr**	**43.89**	**275**	P		P	19 14 20.5	-0.1
	1.6nm,0.4s,baz=114,slow=7.7,SNR=68							
JOF	**Joensuu**	**144.63**	**337**	*e*p		PKPdf	19 25 57.0	+7.2
FINES	**FINESS Array B**	**147.39**	**338**	PKPbc		PKPbc	19 25 56.2	-0.8
	1.0nm,0.5s,baz=56,slow=4.6,SNR=9.7							

*ISCJB **23** 19:26:48.3±0.3, 3419S±002×7007W±004, h10km, mb4.5/23, MS3.8/3, Error ellipse: s-maj=5.2km s-min=3.0km az=154.6*
*GUC **23** 19:26:48.4±1.0, 3416S×7005W, h20km±4km, ML3.6*
*NEIC **23** 19:26:48.4, 3416S×7005W, h20km, mb4.6/15, ML3.6(GUC), After GUC.*
*BJI **23** 19:26:48.4, 3420S×7010W, h20km, mB4.7, Ms4.6, Msz4.7*
*IDC **23** 19:26:52.8±2.9, 3417S×6984W, h27km±19km, mb4.3/13, mb1 4.3/17, mb1mx4.3/21, mbtmp4.2/17, ML3.7/4, MS3.8/4, Ms1 3.8/4, ms1mx3.2/19, Error ellipse: s-maj=24.6km s-min=10.7km az=97.0*

ISC 23 19:26:49.7±0.3, 3417S±002×7015W±004, h10km, n73, σ1°11/72, mb4.5/23, MS3.8/3, 10C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CICH	**Cipreses**	**0.27**	**237**∥	*i*P		**Pg**	**19 26 55.2**	**+0.1**
LMEL	**Las Melosas**	**0.33**	**352**∥	*i*P		**Pg**	**19 26 55.3**	**-0.9**
LMEL				*i* S		**Sg**	**19 27 00.8**	**+0.2**
LMEL	**Las Melosas**	**0.33**	**352**∥	*i*P		**Pg**	**19 26 55.3**	**-0.9**
LMEL				*i* S		**Sg**	**19 27 00.8**	**+0.2**
LMEL				AML		AML	19 27 01.6	
	comp=E,13μm,0.4s							
CACH	**El Canelo**	**0.38**	**278**∥	*i*P		**Pg**	**19 26 57.2**	**+0.1**
CHCH	**Chadas Angostu**	**0.48**	**300**∥	*i*P		**Pg**	**19 26 59.2**	**+0.1**
SJCH	**San Jose de Ma**	**0.56**	**342**∥	*i*P		**Pg**	**19 26 59.2**	**-1.4**
SJCH				*i* S		**Sg**	**19 27 08.0**	**+0.1**
SJCH	**San Jose de Ma**	**0.56**	**342**∥	*i*P		**Pg**	**19 26 59.2**	**-1.4**
SJCH				*i* S		**Sg**	**19 27 08.0**	**+0.1**
SJCH				AML		AML	19 27 09.4	
	comp=E,5μm,0.7s							
PCH	**Pirque**	**0.63**	**331**∥	*i*P		**Pg**	**19 27 01.2**	**-0.6**
ANTU	**Antumapu**	**0.72**	**326**	*e*P		**Pg**	**19 27 02.6**	**-1.1**
ANTU				*i* S		**Sg**	**19 27 14.0**	**+0.8**
ANTU	**Antumapu**	**0.72**	**326**	*e*P		**Pg**	**19 27 02.6**	**-1.1**
ANTU				*i* S		**Sg**	**19 27 14.0**	**+0.8**
ANTU				AML		AML	19 27 24.5	
	comp=E,5μm,0.4s							
FSR	**Penalolen**	**0.76**	**335**	*e*P		**Pg**	**19 27 03.9**	**-0.5**
FSR				*i* S		**Sg**	**19 27 14.6**	**+0.3**
FSR	**Penalolen**	**0.76**	**335**	*e*P		**Pg**	**19 27 03.9**	**-0.5**
FSR				*i* S		**Sg**	**19 27 14.6**	**+0.3**
FSR				AML		AML	19 27 17.2	
	comp=N,4μm,0.7s							
SAN	**Santiago**	**0.83**	**329**	*e*S		**Sg**	**19 27 16.8**	**+0.2**
SAN						AML	AML	19 27 23.5
	comp=N,3μm,0.5s							
TACH	**Talagante**	**0.83**	**308**∥	*i*P		**Pg**	**19 27 05.2**	**-0.6**
TACH				*i* S		**Sg**	**19 27 17.6**	**+0.9**
SFDO	**San Fernando**	**0.84**	**238**∥	*i*P		**Pg**	**19 27 05.5**	**-0.4**
STL	**Santa Lucia**	**0.84**	**331**	*e*P		**Pg**	**19 27 04.6**	**-1.3**
STL				*i* S		**Sg**	**19 27 16.9**	**+0.1**
DSCH	**Colegio Aleman**	**0.85**	**336**	*e*P		**Pg**	**19 27 04.7**	**-1.3**
DSCH				*i* S		**Sg**	**19 27 17.4**	**+0.3**
FCH	**Farellones**	**0.85**	**352**∥	*i*P		**Pg**	**19 27 04.5**	**-1.6**

SMCO	**Snowmass**	**80.56**	**332**	*e*P		**P**	**19 39 04.0**	**+2.0**
	comp=E,9.6nm,1.2s,mb4.6								
ECSD	**EROS,Sioux Fal**	**81.21**	**341**	*e*P		**P**	**19 39 05.7**	**+0.3**
	comp=E,7.4nm,1.0s,mb4.6								
TORD	**Torodi Ar. Bea**	**82.80**	**69**	P		**P**	**19 39 14.1**	**-0.4**
	comp=E,2.3nm,0.9s,mb4.2,baz=253,slow=5.1,SNR=14								
TORD				LR		LR	20 16 18.9		
	comp=E,66nm,18.6s,MS4.0,baz=225,slow=36								
RPZ	**Rata Peaks**	**84.52**	**220**	P		**P**	**19 39 23.7**	**+0.8**
	comp=E,8.2nm,0.8s,mb4.9,baz=96,slow=11,SNR=5.8								
PDAR	**Pinedale Array**	**84.64**	**332**	P		**P**	**19 39 24.2**	**+1.1**
	comp=E,1.1nm,0.7s,mb4.1,baz=160,slow=3.4,SNR=9.6								
NVAR	**Mina Array Bea**	**84.93**	**324**	P		**P**	**19 39 26.8**	**+2.0**
	comp=E,0.7nm,0.5s,mb4.1,baz=166,slow=5.4								
IMW	**Indian Meadow**	**86.13**	**332**	*e*P		**P**	**19 39 31.6**	**+1.0**
	comp=E,2.9nm,0.9s,mb4.5								
ULM	**Lac du Bonnet**	**87.08**	**344**	P		**P**	**19 39 35.1**	**0.0**
	comp=E,1.4nm,0.7s,mb4.3,baz=94,slow=9.7,SNR=2.6								
HLID	**Hailey**	**87.27**	**329**	*e*P		**P**	**19 39 37.7**	**+1.5**
	comp=E,2.3nm,1.0s,mb4.4								
ASAR	**Alice Springs**	**118.10**	**205**	PKP	PKPdf		19 45 36.6	-0.8	
	comp=E,0.7nm,0.7s,baz=138,slow=1.6,SNR=9.8								
WRA	**Warramunga Arr**	**121.35**	**207**	PKP	PKPdf		19 45 43.2	-0.5	
	comp=E,1.5nm,0.6s,baz=161,slow=1.6,SNR=46								
BRVK	**Borovoye**	**146.26**	**44**	*e*PKPdf	PKPdf		19 46 28.1	-0.7	
KBL	**Kabul**	**146.47**	**78**	*e*PKPdf	PKPdf		19 46 30.3	+0.6	
HYB	**Hyderabad**	**147.43**	**113**	*e*P	PKPdf		19 46 34.0	+2.2	
HYB	**Hyderabad**	**147.43**	**113**	PKP	PKPdf		19 46 34.0	+2.2	
EKS2	**Erkin-Say**	**150.67**	**62**	*e*PKPbc	PKPbc		19 46 37.6	-4.2	
EKS2				PKPab	PKPab		19 46 42.4	-6.3	
UCH	**Uchtor**	**151.25**	**63**	*e*PKPbc	PKPbc		19 46 39.4	-3.8	
KURK	**Kurchatov**	**151.92**	**44**	*e*PKPbc	PKPbc		19 46 41.3	-3.1	
TKM2	**Tokmak 2**	**151.98**	**62**	*e*PKPbc	PKPbc		19 46 45.5	+0.7	
MK31	**Makanchi Array**	**155.68**	**51**	*e*PKPdf	PKPdf		19 46 43.1	-0.3	
MKAR	**Makanchi Array**	**155.68**	**51**	PKP	PKPdf		19 46 43.2	-0.2	
MKAR				PKPbc	PKPdf		19 46 53.1	+10	
MKAR				PKPab	PKPab		19 47 06.5	-3.2	
MKAR	**Makanchi Array**	**155.68**	**51**	PKP	PKPdf		19 46 43.2	-0.2	
	comp=E,0.2nm,0.2s,baz=270,slow=2.1,SNR=3.7								
MKAR				PKPbc	PKPdf		19 46 53.1	+10	
	comp=E,0.2nm,0.3s,baz=283,slow=2.1,SNR=5.8								
MKAR				PKPab	PKPab		19 47 06.5	-3.2	
	comp=E,0.2nm,0.3s,baz=318,slow=1.6,SNR=4.1								
WMQ	**Urumqi**	**160.32**	**54**	PKP	PKPdf		19 46 48.6	-0.6	
WMQ				PKP2	PKPab		19 47 30.4	+0.5	
WMQ				PP	PP		19 51 12.6	+0.1	
WMQ				PP	PP				
	comp=Z,57nm,5.2s								
WMQ				LR	LR				
	comp=N,39nm,19.7s								
WMQ				LR	LR				
	comp=E,45nm,18.0s								
WMQ				LR	LR				
	comp=Z,30nm,18.0s								
SONM	**Songino Array**	**166.11**	**10**	PKP	PKPdf		19 46 52.3	-2.2	
	comp=Z,0.4nm,0.8s,baz=90,slow=2.9,SNR=2.6								
SONM				PKPab	PKPab		19 47 55.2	+0.2	
	comp=Z,0.5nm,0.8s,baz=349,slow=4.0,SNR=4.8								
HHC	**Hu-ho-hao-te**	**173.20**	**349**	*e*PKP	PKPdf		19 46 54.0	-5.0	
HHC				APKP			19 47 04.9		
HHC				XPKP			19 47 08.4		
HHC				PKS			19 50 24.5		
HHC				SKS	SKSdf		19 53 51.4	-11	
HHC				SKKS	SKKSac		19 58 57.8	-6.9	
HHC				PP	PP				
	comp=Z,59nm,6.9s								
HHC				LR	LR				
	comp=N,81nm,17.8s								
HHC				LR	LR				
	comp=E,93nm,16.7s								
HHC				LR	LR				
	comp=Z,91nm,15.5s								
CD2	**Chengdu**	**173.91**	**121**	*e*PKP	PKPdf		19 46 57.3	-2.3	

NEIC ***23*** *19:30:50.8, 34.14S×70.06W, h5km, ML3.2(GUC), After GUC.*

GUC 23 19:30:50.8±0.7, 34.14S×70.06W, h5km±1km, MD3.7, ML3.2, 10C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCH	**Chadas Angostu**	**0.53**	**293**	⇑*i*P	Pg	19 31 01.9	+0.8
CHCH				*i* S	Sg	19 31 10.2	+2.2
SJCH	**San Jose de Ma**	**0.56**	**334**	⇑*i*P	Pg	19 31 01.7	+0.3
SJCH				*i* S	Sg	19 31 10.5	+1.8
SJCH	**San Jose de Ma**	**0.56**	**334**	⇑*i*P	Pg	19 31 01.7	+0.3
SJCH				*i* S	Sg	19 31 10.5	+1.8
SJCH				AML	AML	19 31 11.2	
	comp=E,2μm,0.5s						
PCH	**Pirque**	**0.64**	**324**	⇑*i*P	Pg	19 31 04.1	+1.0
PCH				*i* S	Sg	19 31 14.1	+2.7
ANTU	**Antumapu**	**0.74**	**320**	⇑*i*P	Pg	19 31 05.8	+0.8
ANTU				*i* S	Sg	19 31 16.8	+2.1
ANTU	**Antumapu**	**0.74**	**320**	⇑*i*P	Pg	19 31 05.8	+0.8
ANTU				*i* S	Sg	19 31 16.8	+2.1
ANTU				AML	AML	19 31 18.3	
	comp=E,1μm,0.3s						
FCH	**Farellones**	**0.83**	**347**	⇑*i*P	Pg	19 31 07.8	+1.0
FCH				*i* S	Sg	19 31 20.5	+2.9
STL	**Santa Lucia**	**0.85**	**325**	*i* P	Pg	19 31 07.6	+0.4
STL				*i* S	Sg	19 31 19.6	+1.3
TACH	**Talagante**	**0.88**	**303**	⇑*i*P	Pg	19 31 08.0	+0.4
TACH				*i* S	Sg	19 31 20.5	+1.5
SFDO	**San Fernando**	**0.92**	**239**	⇑*i*P	Pg	19 31 08.1	-0.4
SFDO				*i* S	Sg	19 31 21.7	+1.3
LNV	**Longovilo**	**1.14**	**279**	⇓*i*P	Pg	19 31 11.9	-0.7
LNV				*i* S	Sg	19 31 27.6	+0.3
PACH	**Papudo**	**1.97**	**324**	⇑*i*P	Pn	19 31 27.2	+2.3
PACH				*i* S	Sn	19 31 53.5	+3.5
CHNG	**Los Chungos**	**2.56**	**331**	*i* P	Pn	19 31 19.6	-13
CHNG				*i* S	Sn	19 31 52.3	-12
CHNG				AML	AML	19 31 57.7	
	comp=E,307nm,0.4s						

ISCJB ***23*** *20:16:33.4±0.4, 27.56N×53.70E×006, h10km, mb3.4/4, Error ellipse: s-maj=7.8km s-min=5.0km az=156.8*
CSEM ***23*** *20:16:33.8±0.1, 27.53N×53.69E, h10km, mb3.2, Error ellipse: s-maj=3.3km s-min=2.1km az=84.0*
IDC ***23*** *20:16:35.6±2.6, 28.14N×53.79E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, Error ellipse: s-maj=73.6km s-min=30.5km az=158.0*
NEIC ***23*** *20:16:45.1, 28.15N×53.58E, h15km, MN3.2(TEH), After TEH.*

ISC 23 20:16:34.4±1.9, 27.55N±004×53.73E±007, h4km±15km, n25, σ1§17/29, mb3.4/4, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	**Mook**	**1.74**	**329**	Pg	**Pg**	**20 17 05.5**	**-2.2**
IMOK				Sg	**Sg**	**20 17 22.6**	**-7.7**
ISRV	**Sarvestan**	**1.90**	**344**	Pn	**Pn**	**20 17 08.8**	**+1.2**
BANOM	**Banah**	**2.81**	**125**	P	**Pn**	**20 17 19.8**	**-0.3**
	SNR=13						
BANOM	**Banah**	**2.81**	**125**	P	**Pn**	**20 17 19.8**	**-0.3**
	SNR=13						
BANOM				S	**Sn**	**20 17 52.9**	**-1.6**
NAZ	**Nazwa, Dubai**	**3.08**	**145**	P	**Pn**	**20 17 25.3**	**+1.4**
	SNR=6.5						
ASUD	**Al Ashush, Dub**	**3.25**	**153**	P	**Pn**	**20 17 27.3**	**+1.2**
	SNR=8.0						
FAQ	**Al Faqa, Dubai**	**3.26**	**149**	P	**Pn**	**20 17 26.9**	**+0.7**
HATD	**Hatta, Dubai**	**3.47**	**141**	P	**Pn**	**20 17 29.6**	**+0.5**
ASHO	**Ashiyiah**	**3.54**	**143**	P	**Pn**	**20 17 30.5**	**+0.4**
	SNR=25						
SLWS		**3.90**	**226**	P	**Pn**	**20 17 34.8**	**-0.4**
IMEH	**Mehriz**	**3.90**	**11**	Pn	**Pn**	**20 17 36.3**	**+1.2**
BOOSS		**4.24**	**248**	P	**Pn**	**20 17 39.9**	**+0.1**
IBAF	**Bafgh**	**4.33**	**21**	Pn	**Pn**	**20 17 36.4**	**-4.6**
ISAD	**Sadrabad**	**4.35**	**359**	Pn	**Pn**	**20 17 42.5**	**+1.3**
ISAD				Sn	**Sn**	**20 18 24.4**	**-8.0**
BTHS		**4.35**	**217**	P	**Pn**	**20 17 40.8**	**-0.6**
ICHK	**Chekchek**	**4.71**	**7**	Pn	**Pn**	**20 17 47.1**	**+0.8**
IZEF	**Zefreh**	**5.46**	**348**	Pn	**Pn**	**20 17 57.2**	**+0.6**
IZEF				Sn	**Sn**	**20 18 51.0**	**-8.9**
SMDO	**Samad**	**5.94**	**138**	⇑P	**Pn**	**20 18 03.1**	**0.0**
	SNR=5.8						
HRDDS		**6.01**	**221**	P	**Pn**	**20 18 03.6**	**-0.6**
IKLH	**Kalahroud**	**6.04**	**343**	Pn	**Pn**	**20 18 04.7**	**+0.2**
RBK	**Rabkut**	**10.01**	**177**	P	**Pn**	**20 18 58.7**	**-0.3**
	SNR=6.8						
MKAR	**Makanchi Array**	**29.53**	**42**	P	**P**	**20 22 37.1**	**-2.7**
	0.2nm,0.3s,mb3.3,baz=230,slow=8.2,SNR=3.3						
FINES	**FINESS Array B**	**38.61**	**339**	P	**P**	**20 23 55.7**	**-2.7**
	1.1nm,0.7s,mb3.7,baz=156,slow=10.0,SNR=4.7						
SONM	**Songino Array**	**45.35**	**49**	P	**P**	**20 24 52.5**	**-1.1**
	0.3nm,0.7s,mb3.2,baz=272,slow=8.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**50.50**	**264**	P	**P**	**20 25 36.5**	**+2.5**
	0.2nm,0.5s,mb3.3,baz=62,slow=7.9,SNR=4.0						

ISCJB ***23*** *20:22:19.7±0.7, 13.15N±006×14391E±006, h131km±6km, mb4.4/51, Error ellipse: s-maj=9.7km s-min=8.8km az=146.8*
MOS ***23*** *20:22:19.2±1.0, 13.20N×14.374E, h129km, mb4.5/15, Error ellipse: s-maj=16.7km s-min=9.3km az=100.3*
BJI ***23*** *20:22:19.5, 13.11N×14.424E, h148km, mB4.8, mb4.7*
NEIC ***23*** *20:22:21.2±0.8, 13.13N×14.392E, h133km±7km, mb4.6/22, Error ellipse: s-maj=9.2km s-min=7.9km az=94.0*
NEIC Felt at Barrigada.
IDC ***23*** *20:22:21.1±2.6, 13.12N×144.01E, h133km±22km, mb4.1/13, mb1 4.2/13, mb1mx4.2/18, mbtmp4.1/13, MS3.8/1, Ms1 3.7/1, ms1mx2.8/25, Error ellipse: s-maj=27.5km s-min=11.6km az=82.0*

ISC 23 20:22:21.1±0.7, 1317N±006×14398E±006, h130km±6km, h129km±1.5km; pP-P, n91, σ1§03/92, mb4.4/51, 2C-1D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.96**	**64**	*e*Pn	**Pn**	**20 22 44.3**	**+0.6**
GUMO				*e*Sn	**Sn**	**20 23 00.1**	**-0.8**
JOW	**Kunigami**	**20.04**	**315**	P	**P**	**20 26 45.8**	**+1.8**
	46nm,0.5s,baz=135,slow=12,SNR=19						
JNU	**Nakatsue**	**23.19**	**331**	P	**P**	**20 27 17.1**	**+0.7**
	18nm,0.6s,mb4.7,baz=120,slow=6.6,SNR=15						
NACB	**Ninganchiao**	**23.83**	**301**	*e*P	**P**	**20 27 21.9**	**-0.5**
MJAR	**Matsushiro Arr**	**23.85**	**348**	P	**P**	**20 27 21.1**	**-1.3**
	11nm,0.7s,mb4.5,baz=164,slow=8.4,SNR=32						
MJAR				PcP	PcP	20 31 02.2	+0.2
	1.5nm,0.7s,baz=169,slow=3.6,SNR=4.2						
MAJO	**Matsushiro**	**23.85**	**348**	*e*P	**P**	**20 27 21.4**	**-1.0**
	20nm,0.7s,mb4.8						
MAJO	**Matsushiro**	**23.85**	**348**	*e*P	**P**	**20 27 21.4**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.8						
MAT	**Matsushiro**	**23.85**	**348**	P	**P**	**20 27 21.3**	**-1.1**
MAT				*e*S	**S**	**20 31 25.0**	**-3.8**
KSRS	**Korea Array**	**28.12**	**332**	P	**P**	**20 28 00.5**	**-0.3**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
KSRS	**Korea Array**	**28.12**	**332**	P	**P**	**20 28 00.5**	**-0.3**
	comp=Z,4.3nm,0.7s,mb4.3,baz=141,slow=9.6,SNR=16						
NJ2	**Nanjing**	**29.73**	**313**	*e*P	**P**	**20 28 17.0**	**+1.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
WHN	**Wuhan**	**32.34**	**307**	⇓P	**P**	**20 28 39.0**	**+0.9**
MDJ	**Mudanjiang**	**33.67**	**341**	P	**P**	**20 28 50.0**	**+0.5**
MDJ				AP	pP	20 29 16.4	-1.4
MDJ				PP	PP	20 30 08.3	0.0
MDJ				S	**S**	**20 34 04.0**	**+1.2**
MDJ				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,10.0nm,3.7s						
WB2	**Warramunga Arr**	**34.24**	**196**	*e*P	**P**	**20 28 53.8**	**-0.8**
WRA	**Warramunga Arr**	**34.24**	**196**	P	**P**	**20 28 53.9**	**-0.8**
	comp=Z,10.0nm,0.7s,mb4.7,baz=17,slow=9.4,SNR=138						
CN2	**Changchun**	**34.43**	**336**	*e*P	**P**	**20 28 55.4**	**-0.7**
CN2				PCP	PcP	20 31 28.5	-0.2
FITZ	**Fitzroy Crossi**	**35.95**	**211**	*e*P	**P**	**20 29 09.8**	**+0.4**
	comp=Z,5.4nm,1.2s,mb4.0						
HABR	**Khabarovsk**	**35.97**	**350**	*e*P	**P**	**20 29 06.2**	**-3.0**
HABR				*e**PP	pP	20 29 34.8	-3.0
HABR				*e*S	**S**	**20 34 35.8**	**-2.3**
HABR				*e*		20 39 10.3	
BJI	**Beijing**	**36.25**	**323**	P	**P**	**20 29 11.5**	**-0.2**
BJI				AMB	AMB		
	comp=Z,14nm,1.1s,mb4.5						
GYA	**Guiyang**	**37.37**	**296**	P	**P**	**20 29 22.3**	**+0.9**
GYA				AP	pP	20 29 51.8	+1.7
GYA				XP	sP	20 30 07.3	+2.4
GYA				PP	PP	20 30 53.8	+4.5
GYA				PCP	PcP	20 31 40.3	+2.5
GYA				S	**S**	**20 34 59.4**	**-0.5**
GYA				SCS	ScS	20 39 20.4	-1.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
ASAR	**Alice Springs**	**37.91**	**195**	P	**P**	**20 29 25.1**	**-0.8**
	comp=Z,3.2nm,0.7s,mb4.0,baz=21,slow=12,SNR=43						
XAN	**Xi'an**	**37.98**	**309**	P	**P**	**20 29 25.9**	**-0.5**
XAN				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.4						
HHC	**Hu-ho-hao-te**	**39.53**	**320**	*e*P	**P**	**20 29 41.8**	**+2.5**
HHC				AP	pP	20 30 10.3	+2.1
HHC				XP	sP	20 30 24.1	+1.1
HHC				PP	PP	20 31 18.3	+5.6
HHC				PCP	PcP	20 31 45.8	+1.5
HHC				PCS	PcS	20 35 34.6	+0.3
HHC				S	**S**	**20 35 35.9**	**+3.8**
HHC				XS	sS	20 36 25.3	+2.9
HHC				SS	SS	20 38 31.3	-0.8
HHC				SCS	ScS	20 39 32.4	-1.2
HHC				AMB	AMB		
	comp=Z,15nm,0.5s,mb4.9						
HHC				AMB	AMB		
	comp=Z,87nm,3.6s						
KMI	**Kunming**	**40.58**	**293**	P	**P**	**20 29 49.3**	**+1.2**
KMI				AP	pP	20 30 19.0	+1.8
KMI				XP	sP	20 30 33.5	+1.5
KMI				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.2						
KMI				AMB	AMB		
	comp=Z,47nm,5.1s						
CD2	**Chengdu**	**40.98**	**302**	*e*P	**P**	**20 29 51.3**	**-0.1**
CD2				AP	pP	20 30 19.6	-0.9
CD2				PP	PP	20 31 30.4	+1.9
CD2				S	**S**	**20 35 52.4**	**-1.5**
CD2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.2						
CD2				AMB	AMB		
	comp=Z,80nm,4.2s						
LZH	**Lanzhou**	**42.61**	**310**	*e*P	**P**	**20 30 05.5**	**+0.9**
LZH				AP	pP	20 30 33.5	-0.4
LZH				AMB	AMB		
	comp=Z,26nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
KULM	**Kulim**	**43.42**	**264**	*e*P	**P**	**20 30 11.3**	**-0.1**
STKA	**Stephens Creek**	**44.84**	**183**	P	**P**	**20 30 21.1**	**-1.3**
	comp=Z,1.7nm,0.5s,mb3.9,baz=8.1,slow=7.1,SNR=9.7						
STKA				LR	LR	20 47 55.8	
	comp=Z,115nm,19.2s,baz=16,slow=34						
ULN	**Ulaanbaatar**	**46.24**	**326**	*e*P	**P**	**20 30 33.8**	**+0.6**
	comp=Z,1.7nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	**46.24**	**326**	*e*P	**P**	**20 30 33.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
SONM	**Songino Array**	**46.58**	**326**	P	**P**	**20 30 36.4**	**+0.5**
	comp=Z,2.6nm,0.7s,mb4.0,baz=144,slow=8.4,SNR=28						
SONM				PcP	PcP	20 32 07.7	-0.2
	comp=Z,0.8nm,0.5s,baz=141,slow=3.7,SNR=5.4						
MA2	**Magadan**	**46.60**	**5**	*e*P	**P**	**20 30 32.9**	**-2.9**
MA2				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.1						
GTA	**Gaotai**	**46.81**	**312**	*e*P	**P**	**20 30 38.3**	**+0.5**
GTA				PCP	PcP	20 32 09.4	+0.5
GTA				PP	PP	20 32 29.0	-0.3
GTA				S	**S**	**20 37 14.5**	**-3.8**
GTA				SS	SS	20 40 38.3	-8.2
GTA				AMB	AMB		
	comp=Z,12nm,1.2s,mb4.4						
GTA				AMB	AMB		
	comp=Z,47nm,7.6s						
GTA				LR	LR		
	comp=N,54nm,9.9s						
GTA				LR	LR		
	comp=E,73nm,9.5s						
GTA				LR	LR		
	comp=Z,37nm,7.6s						
ZAK	**Zakamensk**	**49.71**	**327**	*e*P	**P**	**20 30 59.2**	**-0.7**
ZAK				*e*	pP	20 31 29.8	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.6s,mb3.2						
YAK	**Yakutsk**	**49.87**	**351**	*e*P	**P**	**20 30 59.8**	**-1.0**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
YAK				pmax	pmax		
	comp=N,3.0nm,1.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.8s						
SEY	**Seymchan**	**50.05**	**5**	*e*P	**P**	**20 31 02.0**	**-0.2**
BILL	**Bilibino**	**56.72**	**10**	*e*P	**P**	**20 31 50.0**	**-0.9**
	comp=E,3.8nm,0.9s,mb4.2						
BILL	**Bilibino**	**56.72**	**10**	⇑*e*P	**P**	**20 31 50.0**	**-0.8**
BILL				*e*PP	PP	20 33 54.8	-3.5
BILL				*e*S	**S**	**20 39 38.7**	**+5.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
WMQ	**Urumqi**	**56.80**	**314**	⇑P	**P**	**20 31 52.8**	**+0.9**
WMQ				AP	pP	20 32 22.8	+0.1
WMQ				PCP	PcP	20 32 47.8	+1.6
WMQ				PP	PP	20 34 01.8	+2.3
WMQ				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.2						
WMQ				AMB	AMB		
	comp=Z,66nm,5.4s						
WMQ				LR	LR		
	comp=N,56nm,17.9s						
WMQ				LR	LR		
	comp=E,19nm,21.7s						
WMQ				LR	LR		
	comp=Z,23nm,16.3s						
TIXI	**Tiksi**	**59.17**	**354**	*e*P	**P**	**20 32 08.0**	**+0.1**
	comp=Z,0.6nm,0.5s,mb3.7						
TIXI	**Tiksi**	**59.17**	**354**	*e*P	**P**	**20 32 07.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.7s,mb3.7						
MKAR	**Makanchi Array**	**61.19**	**316**	P	**P**	**20 32 22.3**	**+0.2**
MKAR	**Makanchi Array**	**61.19**	**316**	*i* P	**P**	**20 32 22.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**61.19**	**316**	P	**P**	**20 32 22.3**	**+0.2**
	comp=Z,3.4nm,0.6s,mb4.4,baz=91,slow=8.5,SNR=39						
NVS	**Novosibirsk**	**62.62**	**325**	*e*P	**P**	**20 32 30.6**	**-0.8**
NVS				pmax	pmax		
	comp=N,3.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.3						
KURK	**Kurchatov**	**64.35**	**320**	*e*P	**P**	**20 32 42.4**	**-0.6**
	comp=Z,12nm,0.6s,mb4.9						
KURK				*e*	pP	20 33 14.6	+0.2
KURK	**Kurchatov**	**64.35**	**320**	*e*P	**P**	**20 32 42.4**	**-0.5**
KURK				*e*	pP	20 33 14.6	+0.2
KURK				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
UCH	**Uchtor**	**66.09**	**310**	*e*P	**P**	**20 32 54.8**	**+0.5**
	comp=Z,3.4nm,0.9s,mb4.2						
AML	**Almayashu**	**66.69**	**310**	*e*P	**P**	**20 32 59.3**	**+1.2**
	comp=Z,2.8nm,0.7s,mb4.2						
BRVK	**Borovoye**	**69.79**	**322**	*e*P	**P**	**20 33 16.7**	**-0.6**
	comp=Z,11nm,0.7s,mb4.7						
BRVK	**Borovoye**	**69.79**	**322**	*e*P	**P**	**20 33 16.7**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.7						
ARU	**Arti**	**76.62**	**325**	*e*P	**P**	**20 33 56.4**	**-0.9**
	comp=Z,5.4nm,0.8s,mb4.2						
ARU	**Arti**	**76.62**	**325**	*e*P	**P**	**20 33 55.2**	**-2.1**
ARU						20 34 01.7	
ARU				*PP	pP	20 34 26.7	-3.1
ARU				*e*S	S	20 43 30.9	-2.1
ARU				SS	SS	20 48 23.3	-7.3
PRGR	**Permogore**	**82.46**	**332**	*e*P	**P**	**20 34 28.0**	**-0.8**
PRGR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
YKA	**Yellowknife Ar**	**83.63**	**27**	P	**P**	**20 34 34.5**	**-0.3**
YKA	**Yellowknife Ar**	**83.63**	**27**	P	**P**	**20 34 34.5**	**-0.3**
	comp=Z,1.9nm,0.4s,mb4.2,baz=287,slow=5.1,SNR=25						
YBH	**Yreka Blue Hor**	**83.80**	**49**	*e*P	**P**	**20 34 36.6**	**+0.4**
	comp=Z,4.2nm,0.7s,mb4.3						
YBH	**Yreka Blue Hor**	**83.80**	**49**	*e*P	**P**	**20 34 36.6**	**+0.5**
YBH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RES	**Resolute Bay**	**85.16**	**13**	*e*P	**P**	**20 34 42.1**	**-0.2**
	comp=Z,68nm,0.7s,mb5.5						
RES				*e*		20 35 35.5	
RES	**Resolute Bay**	**85.16**	**13**	*e*P	**P**	**20 34 42.1**	**-0.2**
RES				pmax	pmax		
	comp=Z,68nm,0.7s,mb5.5						
NEW	**Newport**	**86.12**	**41**	*e*P	**P**	**20 34 47.7**	**+0.1**
	comp=Z,9.6nm,0.9s,mb4.5						
NEW	**Newport**	**86.12**	**41**	*e*P	**P**	**20 34 47.7**	**+0.2**
NEW				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMB	**Columbia Colle**	**86.37**	**52**	*e*P	**P**	**20 34 49.7**	**+0.7**
	comp=Z,2.3nm,0.8s,mb4.0						
CMB	**Columbia Colle**	**86.37**	**52**	*e*P	**P**	**20 34 49.7**	**+0.7**
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
BMO	**Blue Mountains**	**86.90**	**45**	*e*P	**P**	**20 34 51.5**	**+0.1**
	comp=Z,13nm,0.9s,mb4.8						
ARCES	**ARCESS Array B**	**87.22**	**342**	P	**P**	**20 34 51.6**	**-0.8**
	comp=Z,5.3nm,1.0s,mb4.3,baz=57,slow=4.6,SNR=5.9						
JOF	**Joensuu**	**88.31**	**335**	*e*p	**P**	**20 34 54.9**	**-2.9**
TPH	**Tonopah**	**88.78**	**51**	*e*P	**P**	**20 35 01.

KLY				*i* S		Sn	20 28 50.1	-0.3
TUMR	**Tumrok**	**3.07**	**279**	*e*P		Pn	20 28 19.1	+4.0
TUMR				*i* S		Sn	20 28 54.7	+4.2
KMNR	**Kamenistaya**	**3.10**	**288**	*e*P		Pn	20 28 19.7	+4.2
KMNR				*e*S		Sn	20 28 55.8	+4.6
KOZ	**Kozyrevsk**	**3.38**	**292**	P		Pn	20 28 22.8	+3.5
SPN	**Mys Shipunski**	**3.68**	**243**	*e*P		Pn	20 28 26.0	+2.5
SPN				*i* S		Sn	20 29 07.3	+1.7
NLC	**Nalytchevo**	**4.00**	**247**	*i* P		Pn	20 28 31.1	+3.2
NLC				*i* S		Sn	20 29 15.3	+1.9
AVH	**Avacha**	**4.28**	**250**	*e*P		Pn	20 28 36.1	+4.4
AVH				*e*S		Sn	20 29 23.3	+2.9
PET	**Petropavlovsk**	**4.44**	**248**	P		Pn	20 28 38.1	+4.2
PET				*i* S		Sn	20 29 26.6	+2.4
GNL	**Ganaly**	**4.56**	**258**	*e*P		Pn	20 28 40.4	+4.8
GNL				*e*S		Sn	20 29 31.1	+3.8
RUS	**Russkaya**	**4.81**	**242**	*e*P		Pn	20 28 42.3	+3.3
RUS				*i* S		Sn	20 29 34.4	+1.0
GRL	**Gorelyy**	**4.98**	**245**	P		Pn	20 28 43.9	+2.6
MIPR	**Malaya Ipel'ka**	**5.81**	**247**	P		Pn	20 28 57.0	+4.3

*NEIC **23** 20:27:39.8, 3732N×1396W, h0km, MG4.4(MDD), After MDD.*
*MDD **23** 20:27:39.9±1.7, 3717N×1418W, h29km±70km, mb4.5/9, Error ellipse: s-maj=55.9km s-min=13.3km az=65.0, PRXIMO*
*IGIL **23** 20:27:40.5, 3710N×1428W, h74km, ML3.3*
*INMG **23** 20:27:40.8±2.0, 3698N×1430W, h10km, MD3.0, ML2.9, Error ellipse: s-maj=8.1km s-min=4.3km az=131.0*
*LDG **23** 20:27:41.3±0.4, 3726N×1401W, h10km, ML3.8/1, Error ellipse: s-maj=8.1km s-min=5.7km az=43.0*
*CSEM **23** 20:27:42.7±0.4, 3749N×1374W, h2km, ML3.6/19, Error ellipse: s-maj=7.8km s-min=5.2km az=54.0*

ISC 23 20:27:44.0±0.8, 3741N±004×1358W±005, h10km, n74, σ0s85/145, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAFR	**Mafra**	**3.72**	**64**	*e*Pn	**Pn**	**20 28 42.1**	**+0.6**
PMAFR				*e*Sn	**Sn**	**20 29 28.1**	**+2.8**
PMAFR				A		20 29 33.9	
	44nm,0.1s						
PMAFR	**Mafra**	**3.72**	**64**	Pn	**Pn**	**20 28 42.1**	**+0.6**
PMAFR				Sn	**Sn**	**20 29 28.1**	**+2.8**
	22nm,0.1s						
PFVI	**Vila Bisbo**	**3.80**	**93**	*e*Pn	**Pn**	**20 28 41.9**	**-0.7**
PFVI				*e*Sn	**Sn**	**20 29 26.7**	**-0.6**
PFVI				A		20 29 32.5	
	16nm,0.2s						
PFVI	**Vila Bisbo**	**3.80**	**93**	*e*Pn	**Pn**	**20 28 41.9**	**-0.7**
PFVI				*e*Sn	**Sn**	**20 29 26.7**	**-0.6**
	16nm,0.2s						
PTEO	**Sao Teotonio**	**3.86**	**87**	*e*Pn	**Pn**	**20 28 42.9**	**-0.5**
PTEO				*e*Sn	**Sn**	**20 29 29.1**	**+0.2**
PTEO				A		20 29 35.1	
	24nm,0.5s						
PTEO	**Sao Teotonio**	**3.86**	**87**	*e*Pn	**Pn**	**20 28 42.9**	**-0.5**
PTEO				*e*Sn	**Sn**	**20 29 29.1**	**+0.2**
	24nm,0.5s						
MORF	**Marmelete**	**3.92**	**90**	*e*Pn	**Pn**	**20 28 44.0**	**-0.3**
MORF				*e*Sn	**Sn**	**20 29 30.3**	**-0.1**
MORF				A		20 29 35.4	
	20nm,0.3s						
MORF	**Marmelete**	**3.92**	**90**	Pn	**Pn**	**20 28 44.0**	**-0.3**
MORF				P		20 28 44.0	
MORF				Sn	**Sn**	**20 29 30.3**	**-0.1**
	20nm,0.3s						
MORF				S	**Sn**	**20 29 30.7**	**+0.3**
MORF	**Marmelete**	**3.92**	**90**	*e*Pn	**Pn**	**20 28 44.0**	**-0.3**
MORF				*e*Sn	**Sn**	**20 29 30.3**	**-0.1**
	20nm,0.3s						
MOE	**Montemor**	**4.28**	**73**	*e*Pn	**Pn**	**20 28 49.6**	**+0.5**
MOE				*e*Sn	**Sn**	**20 29 40.3**	**+1.2**
ALMR	**Almeirim**	**4.30**	**65**	*e*P	**Pn**	**20 28 49.9**	**+0.4**
ALMR				*e*S	**Sn**	**20 29 41.0**	**+1.3**
ALMR				*e*S	**Sn**	**20 29 41.0**	**+1.3**
ALMR				AML	AML	20 29 46.4	
	comp=E,64nm,0.3s						
ALMR	**Almeirim**	**4.30**	**65**	*e*P	**Pn**	**20 28 49.9**	**+0.4**
ALMR				*e*S	**Sn**	**20 29 41.0**	**+1.3**
ALMR	**Almeirim**	**4.30**	**65**	P	**Pn**	**20 28 49.8**	**+0.3**
ALMR				P		20 28 49.9	
ALMR				S	**Sn**	**20 29 40.9**	**+1.2**
ALMR				S	**Sn**	**20 29 41.0**	**+1.3**
EVOP	**Sao Brissos**	**4.45**	**74**	*e*Pn	**Pn**	**20 28 50.9**	**-0.6**
EVOP				*e*Sn	**Sn**	**20 29 43.5**	**+0.1**
	comp=E,16nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.50**	**90**	*e*Pn	**Pn**	**20 28 51.9**	**-0.3**
PBDV				*e*Sn	**Sn**	**20 29 45.3**	**+0.7**
PBDV				A		20 29 50.8	
	comp=E,9.0nm,0.6s						
PBDV	**Barranco-do-Ve**	**4.50**	**90**	*e*Pn	**Pn**	**20 28 51.9**	**-0.3**
PBDV				*e*Sn	**Sn**	**20 29 45.3**	**+0.7**
	comp=E,9.0nm,0.6s						
EVO	**Evora**	**4.54**	**74**	*e*Pn	**Pn**	**20 28 50.9**	**-1.8**
EVO				*e*Sn	**Sn**	**20 29 43.5**	**-2.0**
	comp=E,31nm,0.3s						
EVO	**Evora**	**4.54**	**74**	*e*Pn	**Pn**	**20 28 53.0**	**+0.3**
EVO				*e*Sn	**Sn**	**20 29 46.7**	**+1.2**
EVO				A		20 29 51.6	
	comp=E,17nm,0.1s						
EVO	**Evora**	**4.54**	**74**	Pn	**Pn**	**20 28 53.0**	**+0.3**
EVO				Sn	**Sn**	**20 29 46.7**	**+1.2**
	comp=E,8.6nm,0.1s						
PBEJ	**Beja**	**4.57**	**81**	*e*Pn	**Pn**	**20 28 54.0**	**+0.8**
PBEJ				*e*Sn	**Sn**	**20 29 47.6**	**+1.3**
PBEJ				A		20 29 52.0	
	comp=E,11nm,0.3s						
PBEJ	**Beja**	**4.57**	**81**	Pn	**Pn**	**20 28 54.0**	**+0.8**
PBEJ				Sn	**Sn**	**20 29 47.6**	**+1.3**
	comp=E,5.4nm,0.3s						
PVAQ	**Vaqueiros**	**4.66**	**88**	*e*Pn	**Pn**	**20 28 54.0**	**-0.5**
PVAQ				*e*Sn	**Sn**	**20 29 47.8**	**-0.8**
PVAQ				A		20 29 56.4	
	comp=E,11nm,0.3s						
PVAQ	**Vaqueiros**	**4.66**	**88**	*e*Pn	**Pn**	**20 28 54.0**	**-0.5**
PVAQ				*e*Sn	**Sn**	**20 29 47.8**	**-0.8**
	comp=E,11nm,0.3s						
EGRO	**El Granado**	**4.85**	**87**	Pn	**Pn**	**20 28 56.7**	**-0.3**
	comp=E,1.9nm,0.1s,SNR=22						
EGRO				Sn	**Sn**	**20 29 52.1**	**-1.1**
	comp=E,8.2nm,0.3s,SNR=9.0						
EGRO	**El Granado**	**4.85**	**87**	Pn	**Pn**	**20 28 56.8**	**-0.2**
EGRO				Sn	**Sn**	**20 29 52.1**	**-1.1**
	comp=E,8.2nm,0.3s,SNR=9.0						
PESTR	**Estremoz**	**4.94**	**71**	*e*Pn	**Pn**	**20 28 58.2**	**0.0**
PESTR				*e*Sn	**Sn**	**20 29 56.0**	**+0.6**
PESTR				A		20 30 01.3	
	comp=E,6.0nm,0.3s						
PBAR	**Barrancos**	**5.23**	**80**	*e*Pn	**Pn**	**20 29 02.1**	**-0.2**
PBAR				*e*Sn	**Sn**	**20 30 04.0**	**+1.3**
PBAR				A		20 30 09.0	
	comp=E,5.7nm,0.2s						
PBAR	**Barrancos**	**5.23**	**80**	Pn	**Pn**	**20 29 02.1**	**-0.2**
PBAR				Sn	**Sn**	**20 30 04.0**	**+1.3**
	comp=E,2.8nm,0.2s						
EBAD	**Badajoz**	**5.35**	**73**	Pn	**Pn**	**20 29 04.0**	**+0.1**
	comp=E,6.0nm,0.1s,SNR=30						
EBAD				Sn	**Sn**	**20 30 05.7**	**+0.2**
	comp=E,4.0nm,0.2s,SNR=5.7						
EBAD	**Badajoz**	**5.35**	**73**	Pn	**Pn**	**20 29 04.0**	**+0.1**
	comp=E,6.0nm,0.1s,SNR=30						
EBAD				Sn	**Sn**	**20 30 05.7**	**+0.2**
	comp=E,4.0nm,0.2s,SNR=5.7						
PCBR	**Castelo Branco**	**5.36**	**61**	*e*Pn	**Pn**	**20 29 04.1**	**+0.1**
PCBR				*e*Sn	**Sn**	**20 30 06.6**	**+0.9**
PCBR				A		20 30 10.6	
	comp=E,6.6nm,0.2s						
PCBR	**Castelo Branco**	**5.36**	**61**	Pn	**Pn**	**20 29 04.1**	**+0.1**
PCBR				Sn	**Sn**	**20 30 06.6**	**+0.9**
	comp=E,3.3nm,0.2s						
EMIN	**Mina Concepcio**	**5.49**	**84**	Pn	**Pn**	**20 29 05.2**	**-0.7**
	comp=E,1.6nm,0.2s,SNR=25						
EMIN				Sn	**Sn**	**20 30 08.4**	**-0.7**
	comp=E,5.3nm,0.4s,SNR=7.1						
EMIN	**Mina Concepcio**	**5.49**	**84**	Pn	**Pn**	**20 29 05.2**	**-0.7**
	comp=E,1.6nm,0.2s,SNR=25						
EMIN				Sn	**Sn**	**20 30 08.4**	**-0.7**
	comp=E,5.3nm,0.4s,SNR=7.1						
PVIS	**Viseu**	**5.52**	**52**	*e*Pn	**Pn**	**20 29 06.8**	**+0.6**
PVIS				*e*Sn	**Sn**	**20 30 10.4**	**+0.8**
PVIS				A		20 30 14.8	
	comp=E,7.1nm,0.1s						
PVIS	**Viseu**	**5.52**	**52**	Pn	**Pn**	**20 29 06.8**	**+0.6**
PVIS				Sn	**Sn**	**20 30 10.4**	**+0.8**
	comp=E,3.6nm,0.1s						
MTE	**Manteigas**	**5.57**	**56**	*e*Pn	**Pn**	**20 29 07.3**	**+0.4**
MTE				*e*Sn	**Sn**	**20 30 11.8**	**+0.8**
PVRL	**Vila Real**	**5.96**	**48**	*e*Pn	**Pn**	**20 29 13.2**	**+0.9**
PVRL				*e*Sn	**Sn**	**20 30 20.4**	**-0.1**
PVRL				A		20 30 23.4	
	comp=E,6.0nm,0.1s						
PVRL	**Vila Real**	**5.96**	**48**	Pn	**Pn**	**20 29 13.2**	**+0.9**
PVRL				Sn	**Sn**	**20 30 20.4**	**-0.1**
	comp=E,3.0nm,0.1s						
EZAM	**Zamans**	**6.04**	**37**	Pn	**Pn**	**20 29 13.1**	**-0.3**
	comp=E,3.2nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**6.07**	**43**	*e*Pn	**Pn**	**20 29 14.8**	**+1.1**
PCAB				*e*Sn	**Sn**	**20 30 22.7**	**-0.5**
PCAB				A		20 30 27.2	
	comp=E,4.6nm,0.2s						
PCAB	**Cabril**	**6.07**	**43**	Pn	**Pn**	**20 29 14.8**	**+1.1**
PCAB				Sn	**Sn**	**20 30 22.7**	**-0.5**
	comp=E,2.3nm,0.2s						
ELOB	**Lobios**	**6.16**	**42**	Pn	**Pn**	**20 29 15.3**	**+0.3**
ELOB				Sn	**Sn**	**20 30 23.1**	**-2.3**
ELOB	**Lobios**	**6.16**	**42**	Pn	**Pn**	**20 29 15.3**	**+0.3**
	comp=E,0.4nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**20 30 23.1**	**-2.3**
	comp=E,2.0nm,0.1s,SNR=4.6						
ELOB	**Lobios**	**6.16**	**42**	Pn	**Pn**	**20 29 15.3**	**+0.3**
	comp=E,0.4nm,0.1s,SNR=7.9						
ELOB				Sn	**Sn**	**20 30 23.1**	**-2.3**
	comp=E,2.0nm,0.1s,SNR=4.6						
ESPR	**Espera**	**6.19**	**93**	Pn	**Pn**	**20 29 15.9**	**+0.4**
	comp=E,2.9nm,0.2s,SNR=4.0						
ESPR				Sn	**Sn**	**20 30 27.1**	**+0.8**
	comp=E,12nm,0.3s,SNR=7.9						
ESPR	**Espera**	**6.19**	**93**	Pn	**Pn**	**20 29 15.9**	**+0.4**
	comp=E,2.9nm,0.2s,SNR=4.0						
ESPR				Sn	**Sn**	**20 30 27.1**	**+0.8**
	comp=E,12nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**6.31**	**52**	*e*Pn	**Pn**	**20 29 17.1**	**0.0**
MVO				*e*Sn	**Sn**	**20 30 28.4**	**-0.8**
MVO				A		20 30 31.9	
	comp=E,6.0nm,0.2s						
MVO	**Moncorvo**	**6.31**	**52**	Pn	**Pn**	**20 29 17.1**	**0.0**
MVO				Sn	**Sn**	**20 30 28.4**	**-0.8**
	comp=E,3.0nm,0.2s						
EMAZ	**Mazaricos**	**6.55**	**31**	Pn	**Pn**	**20 29 19.7**	**-0.7**
	comp=E,0.3nm,0.1s,SNR=5.6						
EMAZ				Sn	**Sn**	**20 30 31.2**	**-4.0**
	comp=E,3.6nm,0.2s,SNR=7.2						
EMAZ	**Mazaricos**	**6.55**	**31**	Pn	**Pn**	**20 29 19.7**	**-0.7**
	comp=E,0.3nm,0.1s,SNR=5.6						
EMAZ				Sn	**Sn**	**20 30 31.2**	**-4.0**
	comp=E,3.6nm,0.2s,SNR=7.2						
PBRG	**Braganca**	**6.86**	**48**	*e*Pn	**Pn**	**20 29 25.0**	**+0.4**
PBRG				*e*Sn	**Sn**	**20 30 41.1**	**-1.6**
PBRG				A		20 30 45.7	
	comp=E,2.3nm,0.1s						
PBRG	**Braganca**	**6.86**	**48**	Pn	**Pn**	**20 29 25.0**	**+0.4**
PBRG				Sn	**Sn**	**20 30 41.1**	**-1.6**
	comp=E,1.2nm,0.1s						
ECAL	**Calabor**	**6.95**	**47**	Pn	**Pn**	**20 29 26.5**	**+0.6**
ECAL				Sn	**Sn**	**20 30 43.8**	**-1.0**
ECAL	**Calabor**	**6.95**	**47**	Pn	**Pn**	**20 29 26.5**	**+0.6**
	comp=E,2.5nm,0.3s,SNR=11						
ECAL				Sn	**Sn**	**20 30 43.8**	**-1.0**
	comp=E,5.0nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.95**	**47**	Pn	**Pn**	**20 29 26.5**	**+0.7**
	comp=E,2.5nm,0.3s,SNR=11						
ECAL				Sn	**Sn**	**20 30 43.8**	**-1.1**
	comp=E,5.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**7.17**	**81**	Pn	**Pn**	**20 29 28.5**	**-0.3**
EADA				Sn	**Sn**	**20 30 50.4**	**+0.1**
EADA	**Adamuz**	**7.17**	**81**	Pn	**Pn**	**20 29 28.5**	**-0.3**
	comp=E,6.7nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**20 30 50.4**	**+0.1**
	comp=E,5.5nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**7.17**	**81**	Pn	**Pn**	**20 29 28.5**	**-0.3**
	comp=E,6.7nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**20 30 50.4**	**+0.1**
	comp=E,5.5nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**7.40**	**86**	Pn	**Pn**	**20 29 32.8**	**+0.7**
	comp=E,0.7nm,0.1s,SNR=7.9						
ELUQ				Sn	**Sn**	**20 30 52.8**	**-3.4**
	comp=E,0.5nm,0.1s,SNR=4.0						
EPON	**Pontenova**	**7.68**	**38**	Pn	**Pn**	**20 29 34.8**	**-1.0**
	comp=E,0.6nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**20 30 58.4**	**-4.4**
	comp=E,2.4nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.68**	**38**	Pn	**Pn**	**20 29 34.8**	**-1.0**
	comp=E,0.6nm,0.2s,SNR=7.9						
EPON				Sn	**Sn**	**20 30 58.4**	**-4.4**
	comp=E,2.4nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**7.79**	**81**	Pn	**Pn**	**20 29 35.8**	**-1.6**
	comp=E,1.6nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**20 31 05.2**	**-0.4**
	comp=E,3.7nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**7.87**	**70**	Pn	**Pn**	**20 29 38.5**	**+0.1**
	comp=E,1.2nm,0.1s,baz=256,slow=13,SNR=7.9						
ESDC				Sn	**Sn**	**20 31 06.8**	**-0.7**
	comp=E,0.3nm,0.2s,baz=254,slow=24,SNR=4.0						
ESDC	**Sonseca Array**	**7.87**	**70**	Pn	**Pn**	**20 29 38.5**	**+0.1**
	comp=E,1.2nm,0.1s,SNR=7.9						
ESDC				Sn	**Sn**	**20 31 06.8**	**-0.7**
	comp=E,0.3nm,0.2s,SNR=4.0						
GUD	**Guadarrama**	**8.01**	**63**	S	**Sn**	**20 31 11.9**	**+0.9**
	comp=E,1.7nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**8.08**	**88**	Pn	**Pn**	**20 29 41.9**	**+0.5**
	comp=E,1.1nm,0.3s,SNR=7.9						
EQUE				Sn	**Sn**	**20 31 11.0**	**-1.8**
	comp=E,0.9nm,0.3s,SNR=7.9						
EQES	**Quesada**	**8.35**	**84**	Pn	**Pn**	**20 29 45.0**	**-0.1**
	comp=E,1.0nm,0.2s,SNR=4.8						
EQES				Sn	**Sn**	**20 31 18.9**	**-0.4**
	comp=E,1.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**8.35**	**84**	Pn	**Pn**	**20 29 45.0**	**-0.1**
	comp=E,1.0nm,0.2s,SNR=4.8						
EQES				Sn	**Sn**	**20 31 18.9**	**-0.4**
	comp=E,1.2nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**8.82**	**79**	Pn	**Pn**	**20 29 51.5**	**-0.1**
	comp=E,1.3nm,0.1s,SNR=4.5						
ETOR	**Torete**	**9.58**	**66**	Pn	**Pn**	**20 30 02.7**	**+0.8**
	comp=E,6.9nm,0.2s,SNR=24						
ETOR				Sn	**Sn**	**20 31 48.1**	**-1.4**
	comp=E,4.6nm,0.2s,SNR=7.9						
SJPF	**Ste Jean**	**11.02**	**55**	*e*Pn	**Pn**	**20 30 22.3**	**+0.7**
ETSF	**Etsaut**	**11.36**	**57**	*e*Pn	**Pn**	**20 30 26.1**	**-0.3**
EPF	**Esparros**	**12.02**	**58**	*e*Pn	**Pn**	**20 30 35.5**	**+0.2**

IDC 23 20:28:23.2±2.8, 3333S×17986E, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.8/11, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=61.8km s-min=35.0km az=103.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.40**	**204**	Pn	Pn	20 29 43.1	-1.9
	0.8nm,0.3s,baz=77,slow=19,SNR=4.9						
URZ				Sn	Sn	20 30 50.0	+2.1
	2.2nm,0.3s,baz=351,slow=19,SNR=5.0						
ASAR	**Alice Springs**	**41.24**	**271**	P	P	20 36 09.3	-0.7
	0.7nm,0.5s,baz=110,slow=8.6,SNR=14						
WRA	**Warramunga Arr**	**42.50**	**277**	P	P	20 36 21.6	+1.2
	0.8nm,0.6s,baz=115,slow=8.5,SNR=8.2						
FINES	**FINESS Array B**	**147.19**	**337**	PKPbc	PKPbc	20 48 06.7	-0.8
	1.6nm,0.7s,baz=57,slow=4.1,SNR=6.6						

IDC 23 20:30:11.5±2.2, 3259S×17841W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.9/11, mbtmp3.9/3, Error ellipse: s-maj=58.3km s-min=36.9km az=53.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.74**	**212**	Pn	Pn	20 31 47.7	-3.9
	2.3nm,0.3s,baz=264,slow=4.4,SNR=3.6						
URZ				Sn	Sn	20 33 01.0	-8.1
	4.9nm,0.3s,baz=132,slow=22,SNR=6.5						
ASAR	**Alice Springs**	**42.69**	**269**	P	P	20 38 10.2	0.0
	0.7nm,0.7s,baz=106,slow=7.6,SNR=6.4						
WB2	**Warramunga Arr**	**43.87**	**275**	*e*P	P	20 38 19.6	-0.2
WRA	**Warramunga Arr**	**43.88**	**275**	P	P	20 38 19.8	-0.1
	1.2nm,0.4s,baz=114,slow=7.7,SNR=22						
VNDA	**Vanda**	**45.89**	**186**	P	P	20 38 34.8	-0.4
	0.7nm,0.4s,baz=7.8,slow=7.7						
FINES	**FINESS Array B**	**147.06**	**339**	PKPbc	PKPbc	20 49 55.1	-0.4
	0.9nm,0.5s,baz=52,slow=4.4,SNR=6.6						

*IDC **23** 20:59:08.2±3.3, 1513S×16768E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/13, mbtmp3.9/5, Error ellipse: s-maj=113.5km s-min=34.7km az=138.0*
*ISCJB **23** 20:59:14.0±1.9, 1514S±008×1673E±03, h33km, mb3.9/5, Error ellipse: s-maj=43.1km s-min=11.6km az=175.9*

ISC 23 20:59:15.8±1.9, 1506S±008×1673E±03, h35km, n26, σ0s50/7, mb3.8/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.02**	**187**	*e*P	**Pn**	**21 01 00.0**	**+3.9**
DZM				*e*S	**Sn**	**21 02 14.5**	**-0.2**
WRA	**Warramunga Arr**	**31.79**	**256**	P	**P**	**21 05 37.1**	**-0.2**
	0.2nm,0.3s,mb3.4,baz=84,slow=8.7,SNR=9.5						
ASAR	**Alice Springs**	**32.60**	**250**	P	**P**	**21 05 44.0**	**-0.3**
	0.9nm,0.4s,mb4.1,baz=76,slow=9.0,SNR=29						
FITZ	**Fitzroy Crossi**	**40.00**	**260**	P	**P**	**21 06 48.2**	**+0.6**
	0.8nm,0.5s,mb3.7,baz=79,slow=12,SNR=4.5						
SONM	**Songino Array**	**82.79**	**324**	P	**P**	**21 11 36.3**	**+0.1**
	0.6nm,0.4s,mb3.9,baz=123,slow=7.1,SNR=8.2						
MKAR	**Makanchi Array**	**97.48**	**316**	P	**P**	**21 12 45.7**	**-0.3**
	0.2nm,0.2s,mb4.1,baz=90,slow=6.2,SNR=5.0						
ARCES	**ARCESS Array B**	**120.59**	**345**	PKP	PKPdf	21 18 00.5	-2.7
	2.7nm,0.8s,baz=68,slow=2.4,SNR=6.2						
GIVF	**Givet**	**142.27**	**342**	*e*PKP1	PKPdf	21 18 37.6	-6.9
BAIF	**Baives**	**142.49**	**342**	*e*PKP1	PKPdf	21 18 38.1	-6.8
CDF	**Champ du Feu**	**142.90**	**338**	*e*PKP1	PKPdf	21 18 40.4	-5.3
HAU	**Haudompre**	**143.58**	**338**	*e*PKP1	PKPdf	21 18 42.6	-4.3
CABF	**La Chapelle**	**144.85**	**337**	*e*PKP1	PKPdf	21 18 47.5	-1.7
	5.6nm,0.6s						
FLN	**La Foliniere**	**144.93**	**346**	*e*PKP1	PKPdf	21 18 46.7	-2.5
	36nm,0.9s						
LDF	**La Druitiere**	**145.00**	**345**	*e*PKP1	PKPdf	21 18 47.0	-2.4
	23nm,0.9s						
LOR	**Lormes**	**145.07**	**340**	*e*PKP1	PKPbc	21 18 47.7	-1.2
	3.6nm,0.6s						
SSF	**Saint Saulge**	**145.36**	**340**	*e*PKP1	PKPbc	21 18 48.7	-1.2
GRR	**Gorron**	**145.37**	**346**	*e*PKP1	PKPbc	21 18 48.7	-1.2
	8.8nm,0.5s						
LPL	**La Plagne**	**145.52**	**336**	*e*PKP1	PKPbc	21 18 49.7	-0.8
LPG	**La Plagne**	**145.53**	**336**	*e*PKP1	PKPbc	21 18 49.7	-0.8
SMF	**Signal de Mont**	**145.62**	**340**	*e*PKP1	PKPbc	21 18 50.0	-0.7
	6.3nm,0.8s						
AVF	**Avril sur Loir**	**145.65**	**340**	*e*PKP1	PKPbc	21 18 50.1	-0.7
	6.1nm,0.6s						
SGMF	**Saint Gilles**	**145.87**	**348**	*e*PKP1	PKPbc	21 18 49.8	-1.6
BGF	**Bois d'Agland**	**146.02**	**341**	*e*PKP1	PKPbc	21 18 50.5	-1.5
TCF	**Toulx Ste Croi**	**146.46**	**341**	*e*PKP1	PKPbc	21 18 51.8	-1.5
MFF	**Saint Martin d**	**146.86**	**344**	*e*PKP1	PKPbc	21 18 52.7	-1.7
	6.8nm,0.7s						
LFF	**La Frestale**	**148.13**	**342**	*e*PKP1	PKPbc	21 18 56.3	-1.7
	12nm,0.9s						

*NEIC **23** 21:13:33.1, 3710N×1315W, h0km, MG3.8(MDD), After MDD.*
*INMG **23** 21:13:34.7±0.9, 3694N×1354W, h10km, ML2.0, Error ellipse: s-maj=7.2km s-min=6.1km az=115.0*
*CSEM **23** 21:13:35.7±0.5, 3827N×1307W, h10km, ML3.0/3, Error ellipse: s-maj=14.7km s-min=10.2km az=21.0*

MDD 23 21:13:33.5±2.5, 3709N×1324W, h13km±143km, mb3.8/5, Error ellipse: s-maj=165.0km s-min=18.8km az=67.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.53**	**88**	*e*Pn	Pn	21 14 26.8	-1.3
PFVI				*e*Sn	Sn	21 15 06.2	-3.5
PFVI				A		21 15 09.9	
	2.3nm,0.2s						
PFVI	**Vila Bisbo**	**3.53**	**88**	*e*Pn	Pn	21 14 26.8	-1.3
PFVI				*e*Sn	Sn	21 15 06.2	-3.5
	2.3nm,0.2s						
PTEO	**Sao Teotonio**	**3.63**	**81**	*e*Pn	Pn	21 14 28.6	-0.9
PTEO				*e*Sn	Sn	21 15 08.6	-3.6
PMAFR	**Mafra**	**3.64**	**58**	*e*Pn	Pn	21 14 28.7	-0.9
PMAFR				*e*Sn	Sn	21 15 09.0	-3.4
PMAFR				A		21 15 15.2	
	10nm,0.4s						
PMAFR	**Mafra**	**3.64**	**58**	*e*Pn	Pn	21 14 28.7	-0.9
PMAFR				*e*Sn	Sn	21 15 09.0	-3.4
	10nm,

ESPR				S	Sn	21 16 05.3	-3.3	
	3.5nm,0.3s,SNR=7.9							
ESPR	**Espera**	**5.92**	**90**	P	Pn	21 14 59.7	-1.2	
	0.7nm,0.1s,SNR=7.9							
ESPR				S	Sn	21 16 05.3	-3.3	
	3.5nm,0.3s,SNR=7.9							
ELOB	**Lobios**	**6.23**	**38**	S	Sn	21 16 10.1	-6.1	
	1.3nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**6.23**	**38**	S	Sn	21 16 10.1	-6.2	
	1.3nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.32**	**48**	*e*Pn	Pn	21 15 04.3	-2.1	
MVO				*e*Sn	Sn	21 16 12.0	-6.4	
MVO				A		21 16 17.2		
	1.5nm,0.2s							
MVO	**Moncorvo**	**6.32**	**48**	Pn	Pn	21 15 04.3	-2.1	
MVO				Sn	Sn	21 16 12.0	-6.4	
	0.8nm,0.2s							
EMAZ	**Mazaricos**	**6.71**	**28**	S	Sn	21 16 19.7	-8.2	
	1.3nm,0.1s,SNR=4.6							
PBRG	**Braganca**	**6.89**	**45**	*e*Sn	Sn	21 16 26.0	-6.5	
ECAL	**Calabor**	**6.99**	**44**	P	Pn	21 15 16.2	+0.7	
	0.5nm,0.1s,SNR=4.0							
ECAL				S	Sn	21 16 29.3	-5.5	
	0.9nm,0.2s,SNR=7.9							
ESDC	**Sonseca Array**	**7.73**	**68**	P	Pn	21 15 24.1	-1.7	
	0.7nm,0.1s,baz=256,slow=14,SNR=6.3							
ESDC	**Sonseca Array**	**7.73**	**68**	P	Pn	21 15 24.1	-1.7	

IDC ***23*** *21:24:36.0±1.0, 2305N×12147E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.6/17, mbtmp3.6/6, ML3.2/1, Error ellipse: s-maj=33.8km s-min=20.2km az=68.0*
BJI ***23*** *21:24:40.8, 2327N×121.19E, h5km, ML3.7*
ISCJB ***23*** *21:24:41.5±1.1, 2309N±007×12145E±004, h58km±12km, mb3.4/5, Error ellipse: s-maj=12.5km s-min=6.5km az=9.4*
JMA ***23*** *21:24:41.8±0.2, 2304N×12155E, h101km, M2.9*
ISC 23 21:24:42.2±1.2, 2302N±008×12145E±004, h45km±13km, n14, σ0°66/23, mb3.4/5, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**2.03**	**45**	P	**Pn**	**21 25 14.3**	**+0.4**
YOJ				S	**Sn**	**21 25 38.8**	**+0.8**
HATJ	**Hateruma jima**	**2.39**	**64**	P	**Pn**	**21 25 18.9**	**0.0**
HATJ				*e*S	**Sn**	**21 25 47.0**	**0.0**
IRIF	**Iriomote-Funau**	**2.47**	**57**	P	**Pn**	**21 25 20.0**	**+0.1**
IRIF				S	**Sn**	**21 25 49.1**	**+0.3**
JKRS	**Kuro-shima**	**2.64**	**62**	P	**Pn**	**21 25 22.4**	**+0.1**
JKRS				*e*S	**Sn**	**21 25 53.6**	**+0.5**
JJJ	**Ishigaki jima**	**2.81**	**61**	P	**Pn**	**21 25 24.8**	**+0.2**
JJJ				S	**Sn**	**21 25 56.5**	**-0.7**
QZH	**Quanzhou**	**3.24**	**307**	P	**Pn**	**21 25 30.9**	**+0.3**
QZH				S	**Sn**	**21 26 06.5**	**-1.4**
QZH				Smax			
	comp=N,350nm,0.7s						
QZH				Smax			
	comp=E,340nm,0.9s						
JTJ	**Tarama**	**3.39**	**61**	P	**Pn**	**21 25 32.3**	**-0.2**
JTJ				*e*S	**Sn**	**21 26 11.1**	**-0.4**
JOW	**Kunigami**	**7.26**	**57**	Pn	**Pn**	**21 26 24.9**	**-0.9**
	comp=E,0.9nm,0.3s,baz=125,slow=8.4,SNR=6.5						
JOW				Sn	**Sn**	**21 27 46.0**	**-0.9**
	comp=E,0.2nm,0.3s,baz=128,slow=19,SNR=1.6						
NJ2	**Nanjing**	**9.29**	**346**	*e*P	**Pn**	**21 26 54.8**	**+1.3**
NJ2				AP		21 26 58.0	
NJ2				XP		21 27 01.3	
NJ2				S	**Sn**	**21 28 37.0**	**+0.4**
NJ2				XS		21 28 47.5	
SONM	**Songino Array**	**27.53**	**338**	P	**P**	**21 30 23.4**	**-1.2**
	comp=E,0.3nm,0.7s,mb3.0,baz=143,slow=7.8,SNR=2.4						
MKAR	**Makanchi Array**	**39.35**	**317**	P	**P**	**21 32 08.1**	**+1.0**
	comp=E,0.3nm,0.4s,mb3.3,baz=107,slow=10.0,SNR=7.3						
WRA	**Warramunga Arr**	**44.51**	**163**	P	**P**	**21 32 49.2**	**-0.2**
	comp=E,0.6nm,0.6s,mb3.6,baz=344,slow=8.7,SNR=8.7						
ASAR	**Alice Springs**	**47.96**	**165**	P	**P**	**21 33 17.0**	**+0.5**
	comp=E,0.2nm,0.5s,mb3.4,baz=342,slow=6.5,SNR=5.7						
NOA	**NORSAR Array B**	**79.37**	**332**	P	**P**	**21 36 43.0**	**-0.1**
	comp=E,0.3nm,0.5s,mb3.5,baz=56,slow=5.9,SNR=3.0						

ISCJB ***23*** *21:33:23.7±1.5, 8.1S±0.1×746W±02, h178km±27km, mb4.1/2, Error ellipse: s-maj=29.1km s-min=13.2km az=144.1*
IDC ***23*** *21:33:24.5±2.5, 8.10S×7464W, h172km±38km, mb4.0/2, mb1 3.6/6, mb1mx3.4/19, mbtmp3.6/6, Error ellipse: s-maj=40.7km s-min=14.7km az=60.0*
ISC 23 21:33:24.6±1.5, 81S±01×746W±02, h170km±28km, n6, σ0°72/8, mb4.1/2, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**3.90**	**286**	P	**Pn**	**21 34 24.1**	**0.0**
	4.5nm,0.3s,baz=94,slow=7.7,SNR=17						
ATAH				S	**Sn**	**21 35 10.2**	**-0.2**
	14nm,0.3s,baz=236,slow=23,SNR=23						
NNA	**Nana**	**4.46**	**209**	P	**Pn**	**21 34 32.6**	**+1.3**
	7.3nm,0.3s,baz=20,slow=10,SNR=15						
NNA				S	**Sn**	**21 35 23.0**	**-0.6**
	18nm,0.3s,baz=141,slow=21,SNR=13						
LPAZ	**La Paz**	**10.33**	**143**	P	**Pn**	**21 35 48.3**	**-0.3**
	0.3nm,0.3s,baz=330,slow=14,SNR=3.7						
SIV	**San Ignacio**	**15.40**	**122**	P	**Pn**	**21 36 53.0**	**0.0**
	0.6nm,0.3s,baz=301,slow=12,SNR=8.4						
DBIC	**Dimbokro**	**71.09**	**80**	P	**P**	**21 44 24.9**	**0.0**
	3.6nm,0.4s,mb4.5,baz=241,slow=7.3,SNR=15						
TORD	**Torodi Ar. Bea**	**78.66**	**75**	P	**P**	**21 45 08.2**	**-0.1**
	1.4nm,0.5s,mb3.8,baz=262,slow=5.4,SNR=17						

TEH ***23*** *21:37:18.2, 2749N×55.16E, h4km, ML4.8*
IDC ***23*** *21:38:01.4±0.6, 2759N×5530E, h0km, mb4.5/19, mb1 4.6/22, mb1mx4.5/24, mbtmp4.5/22, ML3.9/3, MS4.2/25, Ms1 4.2/25, ms1mx4.1/36, Error ellipse: s-maj=15.5km s-min=13.6km az=162.0*
GCMT ***23*** *21:38:02.0±0.3, 2748N×55.12E, h12km, MW5.0/76, Moment Tensor Solution. s33,c37; s76,c119; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.29±.09; Mθθ-3.28±.08; Mφφ0.00±.09; Mrθ0.36±.28; Mθφ0.52±.08; Mφr-0.95±.34; Best double couple: Mo3.47400×10^16 NP1:ϕb265.00000°, δ52.00000°, λ69.00000°. NP2: ϕs113.00000°, δ51.00000°, λ108.00000°. Principal axes: T 3.5490, Plg75.0000°, Azm83.0000°; N -0.1480, Plg14.0000°, Azm281.0000°; P -3.3990, Plg4.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***23*** *21:38:02.0, 2747N×55.15E, h14km, mb4.8/85, MS4.2/3, ML4.9(THR), MN4.8(TEH), After THR.*
THR ***23*** *21:38:02.1±0.2, 2747N×55.15E, h15km±11km, ML4.9*
BJI ***23*** *21:38:02.1, 2786N×5459E, h35km, mB4.9, mb4.7, Ms4.6, Msz4.4*
CSEM ***23*** *21:38:04.3±0.1, 2753N×55.18E, h25km, mb4.8/45, Ms4.4, Mw5.0, Error ellipse: s-maj=1.7km s-min=1.4km az=154.0*
ISCJB ***23*** *21:38:04.2±0.2, 2757N±002×5520E±002, h28km, mb4.7/137, MS4.3/45, Error ellipse: s-maj=3.4km s-min=2.7km az=12.1*
MOS ***23*** *21:38:06.6±1.3, 2757N×55.18E, h48km, mb5.0/59, MS4.3/18, Error ellipse: s-maj=7.4km s-min=3.6km az=123.5*
SZGRF ***23*** *21:38:11.1, 2844N×5555E, h25km, mb4.8, Southern Iran*
ISC 23 21:38:06.3±0.2, 2754N±002×5523E±002, h29km, h29km±3.1km:pP-P, n452, σ1§20/471, mb4.7/137, MS4.3/45, 12C-6D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBND		**1.17**	**94**	*e*Pg	**Pn**	**21 38 26.8**	**+0.1**
IBND				*e*Sg	**Sn**	**21 38 42.5**	**+0.8**
NAZ	**Nazwa, Dubai**	**2.58**	**171**	Pn	**Pn**	**21 38 47.7**	**+1.7**
	SNR=67						
ISRV	**Sarvestan**	**2.61**	**315**	Pn	**Pn**	**21 38 47.7**	**+1.2**
ISRV				Sn	**Sn**	**21 39 19.2**	**+2.0**
ISRV	**Sarvestan**	**2.61**	**315**	*e*Pn	**Pn**	**21 38 47.8**	**+1.3**
ISRV				*e*Sn	**Sn**	**21 39 19.2**	**+2.0**
ISRV				*e*		21 39 51.8	
	comp=Z,65μm,0.6s						
ISRV	**Sarvestan**	**2.61**	**315**	*e*Pn	**Pn**	**21 38 47.8**	**+1.3**
ISRV				*e*Sn	**Sn**	**21 39 19.2**	**+2.0**
IMOK	**Mook**	**2.67**	**305**	Pn	**Pn**	**21 38 48.0**	**+0.7**
IMOK				Sn	**Sn**	**21 39 20.8**	**+2.1**
IMOK	**Mook**	**2.67**	**305**	*e*Pn	**Pn**	**21 38 48.0**	**+0.7**
IMOK				*e*Sn	**Sn**	**21 39 20.9**	**+2.2**
IMOK				*e*		21 39 49.4	
	comp=Z,56μm,0.5s						
IMOK	**Mook**	**2.67**	**305**	*e*Pn	**Pn**	**21 38 48.0**	**+0.7**
IMOK				*e*Sn	**Sn**	**21 39 20.9**	**+2.2**
KRBR	**Kerman**	**2.78**	**29**	Pn	**Pn**	**21 38 49.0**	**+0.2**
KRBR				Sg	**Sn**	**21 39 32.0**	**+11**
KRBR	**Kerman**	**2.78**	**29**	*e*Pn	**Pn**	**21 38 49.6**	**+0.8**
KRBR				*e*Sg	**Sn**	**21 39 32.0**	**+11**
KRBR				AML	AML	21 39 36.5	
	comp=N,1μm,0.5s						
KRBR	**Kerman**	**2.78**	**29**	*e*Pn	**Pn**	**21 38 49.6**	**+0.8**
	SNR=52						
KRBR				*e*Sg	**Sn**	**21 39 32.0**	**+11**
	SNR=90						
FAQ	**Al Faqa, Dubai**	**2.81**	**173**	Pn	**Pn**	**21 38 50.7**	**+1.5**
HATD	**Hatta, Dubai**	**2.83**	**163**	Pn	**Pn**	**21 38 50.5**	**+1.0**
	SNR=115						
HATD				Sn	**Sn**	**21 39 26.3**	**+3.7**
ASUD	**Al Ashush, Dub**	**2.91**	**178**	Pn	**Pn**	**21 38 52.6**	**+2.0**
	SNR=62						
ASHO	**Ashiyiah**	**2.94**	**165**	Pn	**Pn**	**21 38 51.8**	**+0.7**
	SNR=313						
IPAR	**Pars**	**2.98**	**321**	*e*Pn	**Pn**	**21 38 52.9**	**+1.3**
SHI	**Shiraz**	**3.17**	**312**	Pn	**Pn**	**21 38 52.7**	**-1.5**
SHI	**Shiraz**	**3.17**	**312**	*e*Pn	**Pn**	**21 38 52.8**	**-1.4**
SHI				*e*		21 40 25.1	
	comp=Z,22μm,0.6s						
IMEH	**Mehriz**	**3.87**	**352**	Pn	**Pn**	**21 39 04.5**	**+0.7**
IMEH	**Mehriz**	**3.87**	**352**	*e*Pn	**Pn**	**21 39 04.6**	**+0.8**
IMEH				*e*		21 40 33.5	
	comp=Z,15μm,0.6s						
IBAF	**Bafgh**	**4.04**	**4**	*e*Pn	**Pn**	**21 39 06.0**	**-0.2**
IBAF				*e*		21 40 33.7	
	comp=Z,16μm,0.6s						
ISAD	**Sadrabad**	**4.55**	**343**	Pn	**Pn**	**21 39 14.8**	**+1.6**
ISAD				Sn	**Sn**	**21 40 05.8**	**+0.6**
ISAD	**Sadrabad**	**4.55**	**343**	*e*Pn	**Pn**	**21 39 14.9**	**+1.7**
ISAD				*e*		21 39 19.8	
	comp=N,5μm,0.2s						
ISAD				*e*Sn	**Sn**	**21 40 05.8**	**+0.6**
ICHK	**Chekchek**	**4.74**	**352**	*e*Pn	**Pn**	**21 39 16.5**	**+0.8**
ICHK				*e*		21 41 03.3	
	comp=Z,7μm,0.6s						
SLWS		**4.94**	**237**	P	**Pn**	**21 39 19.3**	**+0.8**
BTHS		**5.26**	**230**	P	**Pn**	**21 39 23.0**	**0.0**
ZHSF	**Zahedan**	**5.30**	**66**	Pn	**Pn**	**21 39 24.0**	**+0.6**
ZHSF	**Zahedan**	**5.30**	**66**	*e*Pn	**Pn**	**21 39 24.2**	**+0.8**
ZHSF	**Zahedan**	**5.30**	**66**	*e*Pn	**Pn**	**21 39 24.2**	**+0.8**
	SNR=52						
IGAR	**Garneh**	**5.37**	**331**	*e*Pn	**Pn**	**21 39 29.1**	**+4.7**
IGAR				*e*		21 40 42.3	
	comp=Z,5μm,0.3s						
BQQSS		**5.49**	**254**	P	**Pn**	**21 39 27.4**	**+1.3**
NASN	**Na'in**	**5.64**	**339**	Pn	**Pn**	**21 39 28.0**	**-0.1**
NASN	**Na'in**	**5.64**	**339**	*e*Pn	**Pn**	**21 39 28.6**	**+0.4**
IKOO		**5.87**	**33**	*e*Pn	**Pn**	**21 39 31.8**	**+0.6**
IZEF	**Zefreh**	**5.89**	**336**	*e*Pn	**Pn**	**21 39 31.8**	**+0.2**
IZEF				*e*		21 39 34.7	
	comp=Z,1μm,0.2s						
ITEG		**6.14**	**29**	*e*Pn	**Pn**	**21 39 35.4**	**+0.3**
KFJS		**6.48**	**277**	P	**Pn**	**21 39 40.1**	**+0.4**
IDAH		**6.55**	**37**	*e*Pn	**Pn**	**21 39 41.4**	**+0.7**
IKLH	**Kalahroud**	**6.56**	**332**	Pn	**Pn**	**21 39 39.3**	**-1.5**
IKLH	**Kalahroud**	**6.56**	**332**	*e*Pn	**Pn**	**21 39 39.4**	**-1.4**
IKLH				*e*		21 42 04.2	
	comp=Z,4μm,0.9s						
QRN	**Al-Qurain**	**6.56**	**282**	*e*P	**Pn**	**21 39 41.1**	**+0.3**
QRN				AML	AML	21 40 56.2	
	comp=Z,137nm,0.7s						
IMON		**6.81**	**33**	*e*Pn	**Pn**	**21 39 46.7**	**+2.5**
KBD	**Kabd**	**6.83**	**286**	*e*P	**Pn**	**21 39 44.8**	**+0.3**
KBD				AML	AML	21 41 04.5	
	comp=Z,183nm,0.4s						
RDF	**Al-Radifah**	**6.91**	**283**	*e*P	**Pn**	**21 39 46.4**	**+0.8**
RDF				AML	AML	21 41 05.6	
	comp=Z,77nm,0.5s						
HRDDS		**6.95**	**230**	P	**Pn**	**21 39 46.3**	**+0.1**
SHGR	**Shooshtar-Gavs**	**7.20**	**311**	Pn	**Pn**	**21 39 49.0**	**-0.5**
SHGR	**Shooshtar-Gavs**	**7.20**	**311**	*e*Pn	**Pn**	**21 39 49.1**	**-0.5**
NAY	**Al-Naaiem**	**7.23**	**285**	*e*P	**Pn**	**21 39 50.2**	**+0.2**
NAY				AML	AML	21 41 13.5	
	comp=Z,51nm,0.6s						
MIB	**Mutribah**	**7.28**	**290**	*e*P	**Pn**	**21 39 50.8**	**+0.1**
MIB				AML	AML	21 41 16.3	
	comp=Z,79nm,0.5s						
GHVR	**GHOM**	**7.69**	**335**	*e*Pn	**Pn**	**21 39 56.8**	**+0.5**
GHVR				AML	AML	21 41 54.7	
	comp=N,442nm,0.5s						
ASAO	**Ashtian**	**8.28**	**329**	Pn	**Pn**	**21 40 04.0**	**-0.4**
ASAO	**Ashtian**	**8.28**	**329**	*e*Pn	**Pn**	**21 40 04.7**	**+0.3**
DAMV	**Damavand**	**8.53**	**342**	Pn	**Pn**	**21 40 08.0**	**+0.3**
DAMV	**Damavand**	**8.53**	**342**	*e*Pn	**Pn**	**21 40 08.4**	**+0.7**
CHTH	**Charan**	**9.04**	**338**	Pn	**Pn**	**21 40 15.0**	**+0.2**
CHTH	**Charan**	**9.04**	**338**	*e*Pn	**Pn**	**21 40 15.4**	**+0.6**
THKV	**Tehran--Karaj**	**9.13**	**337**	Pn	**Pn**	**21 40 16.0**	**0.0**
THKV	**Tehran--Karaj**	**9.13**	**337**	*e*Pn	**Pn**	**21 40 16.7**	**+0.7**
IMOG	**Moghan**	**9.23**	**21**	Pn	**Pn**	**21 40 18.5**	**+1.2**
IMOG	**Moghan**	**9.23**	**21**	*e*Pn	**Pn**	**21 40 18.6**	**+1.3**
IMOG				*e*		21 43 48.2	
	comp=Z,2μm,1.1s						
IKOM	**Komasi**	**9.36**	**317**	Pn	**Pn**	**21 40 18.0**	**-1.1**
IKOM	**Komasi**	**9.36**	**317**	*e*Pn	**Pn**	**21 40 18.1**	**-1.0**
IKOM				*e*		21 42 11.8	
	comp=Z,2μm,0.4s						
IPAY	**Payeh**	**9.44**	**19**	*e*Pn	**Pn**	**21 40 21.4**	**+1.2**
IPAY				*e*		21 43 44.2	
	comp=Z,1μm,0.9s						
SHAO	**Shalim**	**9.48**	**178**	Pn	**Pn**	**21 40 21.0**	**0.0**
	SNR=35						
IKRD	**Kardeh**	**9.61**	**16**	Pn	**Pn**	**21 40 27.5**	**+4.8**
IKRD	**Kardeh**	**9.61**	**16**	*e*Pn	**Pn**	**21 40 27.6**	**+4.9**
IKRD				*e*		21 44 08.2	
	comp=Z,442nm,0.5s						
ASYS		**9.66**	**272**	P	**Pn**	**21 40 20.8**	**-2.6**
IMYA	**Miamay**	**9.70**	**24**	Pn	**Pn**	**21 40 25.5**	**+1.7**
IMYA	**Miamay**	**9.70**	**24**	*e*Pn	**Pn**	**21 40 25.6**	**+1.8**
IMYA				*e*		21 44 11.3	
	comp=Z,2μm,0.8s						
IVIS	**Veys**	**10.00**	**316**	Pn	**Pn**	**21 40 26.7**	**-1.2**
IVIS	**Veys**	**10.00**	**316**	*e*Pn	**Pn**	**21 40 26.8**	**-1.1**
IVIS				*e*		21 42 40.8	
	comp=Z,924nm,0.3s						
IGHG	**Ghaleghazi**	**10.04**	**314**	*e*Pn	**Pn**	**21 40 27.6**	**-1.0**
IGHG				*e*		21 42 45.6	
	comp=Z,2μm,0.3s						
BHD	**Baghdad**	**10.96**	**304**	*ex*	x	21 40 39.0	
BHD				*ex*	x	21 42 38.0	
BHD				*i* x	x	21 44 34.0	
BHD				*i* x	x	21 46 05.0	
MSL	**Mosul**	**13.49**	**313**	*ex*	x	21 41 11.5	
MSL				*ex*	x	21 43 31.5	
MSL				*ex*	x	21 45 40.5	
MSL				*ex*	x	21 46 07.0	
DHBB	**Dhamar BB**	**16.38**	**220**↑	*e*P	**Pn**	**21 41 47.6**	**-6.6**
DHBB				*i* S	**Sn**	**21 44 49.4**	**-5.8**
LBOS		**16.48**	**216**	*i* S	**Sn**	**21 44 51.7**	**-6.0**
MTA	**Mtatsminda**	**16.50**	**331**	P	**Pn**	**21 42 03.3**	**+7.8**
ASF	**Jabal al Asfar**	**16.55**	**291**	P	**Pn**	**21 41 55.7**	**-0.6**
ASF						21 44 52.5	
ASF	**Jabal al Asfar**	**16.55**	**291**	Pn	**Pn**	**21 41 55.7**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=330,slow=4.8,SNR=14						
ASF				Sn	**Sn**	**21 44 52.5**	**-6.7**
	comp=Z,0.3nm,0.3s,baz=18,slow=19,SNR=3.3						
ASF				LR	LR	21 50 00.2	
	comp=Z,392nm,18.8s,baz=149,slow=43						
MAK	**Makhachkala**	**16.61**	**340**	*d* P	**Pn**	**21 41 58.9**	**+2.0**
MAK				*e*S	**Sn**	**21 45 07.2**	**+6.8**
MAK				pmax	pmax		
	comp=Z,427nm,1.7s						
MAK				MLR	MLR		
	comp=Z,2μm,21.0s						
TRBA	**At Turbah**	**17.62**	**218**↑	*e*P	**Pn**	**21 42 03.5**	**-6.3**
TRBA				AMb	AMB	21 42 05.4	
	comp=Z,146nm,2.0s						
MALT	**Malatya**	**17.70**	**312**	*e*P	**Pn**	**21 42 10.4**	**-0.2**
	comp=Z,20nm,0.8s						
MALT	**Malatya**	**17.70**	**312**	*e*P	**Pn**	**21 42 10.4**	**-0.1**
MALT				pmax	pmax		
	comp=Z,20nm,0.8s						
MALT	**Malatya**	**17.70**	**312**	*e*P	**Pn**	**21 42 10.4**	**-0.1**
	comp=Z,20nm,0.8s						
ZEI	**Tsey**	**17.76**	**332**	*e*P	**Pn**	**21 42 14.1**	**+2.8**
ONI	**Oni**	**17.80**	**330**	P	**Pn**	**21 42 14.2**	**+2.5**
EIL	**Elat**	**17.93**	**282**	P	**Pn**	**21 42 13.1**	**-0.4**
EIL				S	**Sn**	**21 45 39.4**	**+6.8**
EIL				LR	LR	21 50 42.5	
EIL	**Elat**	**17.93**	**282**	P	**Pn**	**21 42 13.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=6.7,slow=17,SNR=3.4						
EIL				S	**Sn**	**21 45 39.4**	**+6.8**
	comp=Z,0.3nm,0.3s,baz=162,slow=19,SNR=2.2						
EIL				LR	LR	21 50 42.5	
	comp=Z,352nm,18.3s,baz=103,slow=42						
MMAI	**Mount Meron Ar**	**17.96**	**292**	P	**Pn**	**21 42 13.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=68,slow=11,SNR=13						
MMAI				LR	LR	21 50 45.7	
	comp=Z,496nm,19.9s,baz=5.0,slow=42						
KHET	**Khetri**	**18.22**	**84**	*e*P	**Pn**	**21 42 15.7**	**-1.3**
KHET				*ex*	x	21 44 21.8	
KHET				AML	AML	21 45 58.5	
	comp=N,4.1nm,0.1s						
KHET				AML	AML	21 45 58.5	
	comp=E,4.6nm,0.3s						
KUDL	**Kundal**	**18.82**	**83**	*e*P	**Pn**	**21 42 22.7**	**-1.6**
KUDL				AML	AML	21 45 59.4	
	comp=N,3.1nm,0.7s						
KUDL				AML	AML	21 45 59.7	
	comp=E,2.7nm,0.6s						
KIV	**Kislovodsk**	**19.24**	**332**	*e*P	**Pn**	**21 42 28.8**	**-0.5**
	comp=E,42nm,0.8s						
KIV	**Kislovodsk**	**19.24**	**332**↑	*e*P	**Pn**	**21 42 29.8**	**+0.5**
KIV				pmax	pmax		
	comp=Z,59nm,1.1s						
KIV				MLR	MLR		
	comp=Z,400nm,20.0s						
KIV	**Kislovodsk**	**19.24**	**332**	*e*P	**Pn**	**21 42 28.8**	**-0.5**
	comp=Z,42nm,0.8s						
CSS	**Prodhromos**	**20.10**	**297**	*e*P	**P**	**21 42 36.8**	**-0.9**
	comp=Z,19nm,0.8s						
CSS	**Prodhromos**	**20.10**	**297**	*e*P	**P**	**21 42 36.8**	**-0.8**
	comp=Z,19nm,0.8s						
SOC	**Sochi**	**20.32**	**326**	*e*P	**P**	**21 42 40.5**	**+0.6**
SOC				*e**PP		21 42 54.3	
SOC				*e**SP	sP	21 43 03.5	+12
SOC				*e*		21 46 26.5	
SOC				pmax	pmax		
	comp=Z,54nm,1.1s						
SOC				MLR	MLR		
	comp=Z,2μm,19.0s,MS4.5						
SOC	**Sochi**	**20.32**	**326**	*e*P	**P**	**21 42 40.5**	**+0.6**
	comp=Z,54nm,1.1s						
JOSI	**Joshimath**	**21.47**	**76**	*ex*	x	21 42 28.4	
JOSI				*ex*	x	21 42 55.5	
FRU	**Bishkek**	**21.92**	**41**	*e*P	**P**	**21 42 51.0**	**-6.2**
FRU				*e*		21 43 05.0	
FRU				*e*		21 43 40.0	
FRU				pmax	pmax		
	comp=Z,220nm,2.7s,mb5.1						
DESE	**Dese**	**21.95**	**225**	*e*P	**P**	**21 42 49.9**	**-7.8**
DESE				S	**S**	**21 47 09.8**	**+11**
ANTO	**Ankara**	**22.28**	**309**	*e*P	**P**	**21 43 02.3**	**+1.3**
	comp=Z,49nm,1.0s,mb4.9						
ANTO	**Ankara**	**22.28**	**309**	*e*P	**P**	**21 43 02.3**	**+1.3**
ANTO				pmax	pmax		
	comp=Z,49nm,1.0s,mb4.9						
ANTO	**Ankara**	**22.28**	**309**	*e*P	**P**	**21 43 02.3**	**+1.3**
	comp=Z,49nm,1.0s,mb4.9						
TKM2	**Tokmak 2**	**22.55**	**42**	*e*P	**P**	**21 43 05.8**	**+2.0**
	comp=Z,17nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**22.55**	**42**	*e*P	**P**	**21 43 05.8**	**+2.0**
TKM2				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
TKM2	**Tokmak 2**	**22.55**	**42**	*e*P	**P**	**21 43 05.8**	**+2.0**
	comp=Z,17nm,1.0s,mb4.4						
AKTK	**Aktyubinsk**	**22.96**	**5**	P	**P**	**21 43 07.7**	**-0.4**
AKTK				LR	LR	21 53 53.8	
AKTK	**Aktyubinsk**	**22.96**	**5**	P	**P**	**21 43 07.7**	**-0.4**
AKTO	**Aktyubinsk**	**22.96**	**5**	P	**P**	**21 43 07.7**	**-0.4**
	comp=Z,24nm,0.9s,mb4.7,baz=190,slow=11,SNR=40						
AKTO				LR	LR	21 53 53.8	
	comp=Z,3μm,18.3s,MS4.7,baz=8.2,slow=42						
HYB	**Hyderabad**	**23.76**	**110**	*i* P	**P**	**21 43 18.5**	**+2.1**
HYB				*e*S	**S**	**21 47 34.0**	**+4.1**
HYB	**Hyderabad**	**23.76**	**110**	*e*P	**P**	**21 43 18.5**	**+2.1**
KOLN	**Koldanda**	**25.11**	**83**	*e*P	**P**	**21 43 25.1**	**-3.6**
	comp=Z,6.5nm,0.3s,mb4.6						
VRHR	**Novokhopersk**	**25.68**	**340**	*e*P	**P**	**21 43 33.6**	**0.0**
VRHR				pmax	pmax		
	comp=Z,90nm,0.5s,mb5.6						
VRHR				pmax	pmax		
	comp=N,20nm,0.4s						
VRHR				pmax	pmax		
	comp=E,40nm,0.9s						
VRHR	**Novokhopersk**	**25.68**	**340**	*e*P	**P**	**21 43 33.6**	**0.0**
	comp=E,20nm,0.4s,mb5.0						
GKN	**Gorkha**	**26.00**	**82**	*e*P	**P**	**21 43 31.1**	**-5.6**
	comp=E,8.4nm,0.3s,mb4.8						
VRSR	**Storozhevoye**	**26.57**	**337**	*e*P	**P**	**21 43 42.3**	**+0.7**
VRSR				pmax	pmax		
	comp=Z,20nm,4.0s						
VRSR				pmax	pmax		
	comp=N,30nm,4.

AKASG Malin Array Be 30.40 327 P **P** **21 44 14.3 -1.5**
comp=Z,5.0nm,0.6s,mb4.5,baz=136,slow=8.4,SNR=27
AKBB Malin Array Si 30.40 327 *e*P **P** **21 44 14.8 -1.0**
AKBB Malin Array Si 30.40 327 *e*P **P** **21 44 14.8 -0.9**
KIEV Kiev 30.41 327 *e*P **P** **21 44 15.1 -0.7**
comp=Z,16nm,0.8s,mb4.8
KIEV Kiev 30.41 327 *e*P **P** **21 44 15.1 -0.7**
KIEV pmax pmax
comp=Z,16nm,0.8s,mb4.8
KIEV Kiev 30.41 327 *e*P **P** **21 44 15.1 -0.7**
comp=Z,16nm,0.8s,mb4.8
OBN Obninsk 30.70 339 *e*P **P** **21 44 18.3 0.0**
comp=Z,35nm,0.6s,mb5.4
OBN Obninsk 30.70 339⇑ *e*P **P** **21 44 18.2 -0.1**
OBN *i* S **S** **21 49 21.8 +2.7**
OBN *e*SS SS 21 50 56.7 -34
OBN pmax pmax
comp=Z,18nm,1.0s,mb4.9
OBN MLR MLR
comp=Z,500nm,24.0s,MS4.1
OBN Obninsk 30.70 339 *e*P **P** **21 44 18.2 -0.1**
comp=Z,18nm,1.0s,mb4.9
WMQ Urumqi 30.73 50⇑ *i*P **P** **21 44 19.0 +0.3**
WMQ PPP 21 46 19.5
WMQ AMB AMB
comp=Z,11nm,0.5s,mb4.9
WMQ AMB AMB
comp=Z,140nm,3.5s
WMQ LR LR
comp=N,2μm,25.8s,MS4.6
WMQ LR LR
comp=E,494nm,25.8s,MS4.6
WMQ LR LR
comp=Z,828nm,21.9s,MS4.3
MOS Moscow 30.90 341 *e*P **P** **21 44 18.2 -1.9**
MOS *e* 21 44 41.5
MOS *e* 21 45 28.1
MOS pmax pmax
comp=Z,70nm,1.5s,mb5.3
MOS Moscow 30.90 341 *e*P **P** **21 44 18.2 -1.9**
comp=Z,70nm,1.5s,mb5.3
SOKR Solikamsk 32.03 2 *d i*P **P** **21 44 31.7 +1.7**
SOKR pmax pmax
comp=Z,20nm,0.8s,mb5.0
SOKR MLR MLR
comp=Z,1μm,19.0s,MS4.7
SOKR Solikamsk 32.03 2 *i* P **P** **21 44 31.7 +1.7**
comp=Z,1μm,19.0s
LVV L'vov 32.60 321 *e*P **P** **21 44 39.0 +3.9**
UZH Uzhgorod 33.01 319 *e*P **P** **21 44 48.0 +9.3**
UZH *e* 21 45 11.0
KOLS Kolonicke sedl 33.16 319 *e*P **P** **21 44 39.8 -0.2**
KMBO Kilima Mbogo 33.34 214 *e*P **P** **21 44 42.3 +0.4**
comp=Z,7.9nm,0.9s,mb4.6
KMBO Kilima Mbogo 33.34 214 *e*P **P** **21 44 42.3 +0.4**
KMBO pmax pmax
comp=Z,8.0nm,0.9s
KMBO Kilima Mbogo 33.34 214 P **P** **21 44 43.6 +1.7**
comp=Z,5.9nm,0.8s,mb4.5,baz=38,slow=12,SNR=22
KMBO LR LR 21 59 54.2
comp=Z,686nm,21.1s,MS4.3,baz=99,slow=39
KMBO Kilima Mbogo 33.34 214 *e*P **P** **21 44 42.3 +0.4**
comp=Z,8.0nm,0.9s,mb4.7
CRVS Cervenica-Dubn 33.62 319 *e*P **P** **21 44 44.2 +0.2**
STHS Stebnicka Huta 33.98 319 *e*P **P** **21 44 50.5 +3.3**
STHS *e*PP PP 21 45 59.5 -4.8
KECS Kecovo 34.02 317 *e*P **P** **21 44 49.9 +2.4**
comp=Z,5.5nm,1.0s,mb4.4
KECS Kecovo 34.02 317 *e*P **P** **21 44 49.9 +2.4**
KECS pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
NVS Novosibirsk 34.04 29 *e*P **P** **21 44 45.8 -1.8**
NVS pmax pmax
comp=N,21nm,2.0s
NVS pmax pmax
comp=Z,20nm,2.0s,mb4.7
NVS pmax pmax
comp=E,20nm,2.4s
PRGR Permogore 34.69 352 *e*P **P** **21 44 54.4 +1.3**
PRGR *e**PP pP 21 45 11.8 +10
PRGR *e* 21 46 07.4
PRGR *e*S **S** **21 50 12.1 -8.8**
VYHS Vyhne 35.02 317 *e*P **P** **21 44 58.9 +2.7**
comp=E,4.4nm,1.0s,mb4.3
VYHS Vyhne 35.02 317 *e*P **P** **21 44 58.9 +2.7**
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
LIKS Likavka 35.08 318 *e*P **P** **21 44 59.1 +2.4**
comp=Z,61nm,1.4s,mb5.3
LIKS Likavka 35.08 318 *e*P **P** **21 44 59.1 +2.4**
LIKS pmax pmax
comp=Z,61nm,1.4s,mb5.3
LIKS Likavka 35.08 318 *e*P **P** **21 44 59.0 +2.3**
OJC Ojcow 35.18 320 *e*P **P** **21 44 57.1 -0.4**
MODS Modra-Piesok 35.94 316 *e*P **P** **21 45 06.4 +2.4**
OKC Ostrava-Krasne 35.98 318 *e*P **P** **21 45 06.1 +1.7**
MORC Moravsky Berou 36.31 318 *e*P **P** **21 45 07.2 0.0**
comp=Z,12nm,1.1s,mb4.8
MORC Moravsky Berou 36.31 318 *e*P **P** **21 45 07.2 0.0**
MORC pmax pmax
comp=Z,12nm,1.1s,mb4.7
VRAC Vranov 36.70 317 *e*P **P** **21 45 11.1 +0.6**
VSU Vasula 36.73 335 *e*P **P** **21 45 10.7 +0.1**
DPC Dobruska-Polom 37.26 318 *e*P **P** **21 45 15.2 -0.1**
DPC *ex* x 21 45 36.1
DPC AMS AMS 22 00 40.0
comp=Z,400nm,26.9s
TREC Trest 37.37 316 *e*P **P** **21 45 15.1 -1.1**
TREC *ex* x 21 45 35.7
TREC AMS AMS 22 02 00.0
comp=Z,300nm,21.0s
UPC Upice 37.51 318 *e*P **P** **21 45 17.2 -0.2**
UPC *ex* x 21 45 37.0
KBA Koelnbreinsper 38.04 312⇓ *i*P **P** **21 45 23.0 +1.1**
comp=Z,7.7nm,0.7s,mb4.5
KBA Koelnbreinsper 38.04 312⇓ *i*pP pP 21 45 23.0 -7.5
comp=Z,7.7nm,0.7s
KBA Koelnbreinsper 38.04 312⇓ *i*P **P** **21 45 23.0 +1.1**
KBA pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
PRU Pruhonice 38.19 317 *e*P **P** **21 45 23.7 +0.5**
PRU AMS AMS 22 02 40.0
comp=Z,400nm,18.7s
GERES GERESS Array B 38.33 315 P **P** **21 45 22.9 -1.5**
comp=Z,1.8nm,0.8s,mb3.9,baz=111,slow=8.2,SNR=9.7
GERES LR LR 22 03 31.7
comp=Z,263nm,20.0s,MS4.0,baz=108,slow=40
PVCC Panska Ves 38.37 318 *e*P **P** **21 45 23.5 -1.1**
PVCC *ex* x 21 45 44.8
KHC Kasperske Hory 38.49 315 *e*P **P** **21 45 24.0 -1.7**
KHC *e* 21 45 27.5
KHC Kasperske Hory 38.49 315 *e*P **P** **21 45 24.0 -1.7**
KHC pP pP 21 45 27.5 -6.9
GTA Gaotai 38.67 61 *e*P **P** **21 45 27.3 -0.1**
GTA AMB AMB
comp=Z,9.0nm,0.8s,mb4.5
GTA AMB AMB
comp=Z,66nm,7.6s
GTA LR LR
comp=N,497nm,17.5s,MS4.5
GTA LR LR
comp=E,376nm,15.6s,MS4.5
GTA LR LR
comp=Z,404nm,16.3s,MS4.3
JOF Joensuu 38.69 343 *ep* **P** **21 45 26.3 -0.9**
comp=Z,2.3nm,0.4s,mb4.3
BRG Berggiesshubel 38.86 318 *e*P **P** **21 45 29.1 +0.3**
BRG pmax pmax
comp=Z,7.0nm,1.1s,mb4.3
BRG MLR MLR
comp=N,198nm,16.9s,MS4.3
BRG MLR MLR
comp=E,317nm,16.3s,MS4.3
BRG MLR MLR
comp=Z,278nm,16.5s,MS4.2
BRG Berggiesshubel 38.86 318 *e*P **P** **21 45 29.5 +0.7**
comp=Z,11nm,1.1s,mb4.5
BRG Berggiesshubel 38.86 318 *e*P **P** **21 45 29.1 +0.3**
comp=Z,11nm,1.1s,mb4.5
BRG
comp=N,331nm,16.9s
BRG
comp=E,529nm,16.3s
BRG
comp=Z,464nm,16.5s

WET Wettzell 38.94 315 *e*P **P** **21 45 30.4 +1.0**
WET pmax pmax
comp=Z,17nm,1.7s,mb4.5
WET Wettzell 38.94 315 *e*P **P** **21 45 30.4 +1.0**
comp=Z,17nm,1.7s,mb4.5
FINES FINESS Array B 39.10 338 P **P** **21 45 29.9 -0.7**
comp=Z,4.5nm,0.6s,mb4.4,baz=133,slow=9.7,SNR=20
KRAR Krasnoyarsk 39.16 33 *e*P **P** **21 45 30.6 -0.6**
KRAR pmax pmax
comp=Z,50nm,2.5s,mb4.8
KRAR Krasnoyarsk 39.16 33 *e*P **P** **21 45 30.6 -0.6**
comp=Z,50nm,2.5s,mb4.8
WTTA Wattenberg 39.21 312⇑ *i*P **P** **21 45 30.9 -0.8**
comp=Z,17nm,1.0s,mb4.8
WTTA Wattenberg 39.21 312⇑ *i*P **P** **21 45 31.0 -0.7**
WTTA pmax pmax
comp=Z,17nm,1.0s,mb4.7
WTTA Wattenberg 39.21 312 P **P** **21 45 30.9 -0.8**
comp=Z,17nm,1.0s,mb4.8
FBE Freiberg 39.23 318 *e*P **P** **21 45 33.9 +2.0**
comp=Z,21nm,1.5s,mb4.7
KAF Kangasniemi 39.52 339 *ep* **P** **21 45 33.3 -0.8**
comp=Z,1.0nm,0.4s,mb3.9
KAF Kangasniemi 39.52 339 *e*P **P** **21 45 33.3 -0.8**
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb3.9
NKC Novy Kostel 39.54 317 *e*P **P** **21 45 34.2 -0.3**
NKC AMS AMS 22 01 50.0
comp=Z,500nm,24.6s
ROTZ Rotzenmuhle 39.54 316 *e*P **P** **21 45 36.7 +2.2**
comp=Z,30nm,1.6s,mb4.8
CLL Collm 39.57 319 *i* P **P** **21 45 36.1 +1.4**
CLL pmax pmax
comp=Z,16nm,1.0s,mb4.7
CLL Collm 39.57 319 *i* P **P** **21 45 36.1 +1.4**
comp=Z,16nm,1.0s,mb4.7
CLL LmV 21 06 00.0
comp=Z,400nm,19.3s
CLL *i* x x 21 45 40.1
CLL *e*(sP) sP 21 45 55.0 +8.1
CLL *e*S **S** **21 51 36.0 +0.5**
CLL Collm 39.57 319 *e*P **P** **21 45 36.0 +1.3**
comp=Z,16nm,1.0s,mb4.7
WERN Wernitzgruen 39.60 317 *e*P **P** **21 45 36.2 +1.2**
comp=Z,20nm,1.8s,mb4.5
KEST Kesra 39.61 294 P **P** **21 45 36.5 +1.3**
comp=Z,6.2nm,0.9s,mb4.3,baz=341,slow=1.6,SNR=11
KEST LR LR 22 05 19.0
comp=Z,80nm,20.6s,MS3.5,baz=351,slow=41
GUNZ Gunzen 39.66 317 *e*P **P** **21 45 37.2 +1.8**
comp=Z,13nm,1.5s,mb4.4
MANZ Manzenberg 39.67 316 *e*P **P** **21 45 37.4 +1.8**
comp=Z,10.0nm,1.3s,mb4.4
FUR Furstenfeldbru 39.68 313 *e*P **P** **21 45 36.9 +1.3**
FUR pmax pmax
comp=Z,39nm,1.5s,mb4.9
FUR Furstenfeldbru 39.68 313 *e*P **P** **21 45 36.9 +1.3**
comp=Z,39nm,1.5s,mb4.9
GRA1 Grafenberg Arr 40.13 316 *e*P **P** **21 45 41.1 +1.7**
comp=Z,16nm,0.9s,mb4.8
GRA1 *ep*P pP 21 45 47.6 -0.5
GRF Grafenberg Arr 40.13 316 *e*P **P** **21 45 41.1 +1.7**
GRF pmax pmax
comp=Z,16nm,0.9s,mb4.8
GRF Grafenberg Arr 40.13 316 *e*P **P** **21 45 41.1 +1.7**
GRF pmax pmax
comp=Z,16nm,0.9s,mb4.8
GRF Grafenberg Arr 40.13 316 *e*P **P** **21 45 41.1 +1.7**
comp=Z,16nm,0.9s,mb4.8
GRF *ep*P pP 21 45 47.6 -0.5
GRFO Grafenberg 40.13 316 *e*P **P** **21 45 40.7 +1.3**
MOX Moxa 40.18 317 *e*P **P** **21 45 42.1 +2.3**
MOX
comp=Z,300nm,25.0s
MOX Moxa 40.18 317 *e*P **P** **21 45 41.5 +1.7**
DAVA Damuels 40.38 312⇑ *i*P **P** **21 45 40.1 -1.4**
comp=Z,14nm,0.5s,mb5.0
UBBA Unterbreizbach 41.21 317 *e*P **P** **21 45 49.7 +1.4**
comp=Z,36nm,1.8s,mb4.7
CLZ Clausthal 41.30 318 *e*P **P** **21 45 49.6 +0.6**
CLZ pmax pmax
comp=Z,33nm,0.8s,mb5.0
CLZ Clausthal 41.30 318 *e*P **P** **21 45 49.6 +0.6**
comp=Z,33nm,0.8s,mb5.0
SBF Sospel 41.48 306 *e*P **P** **21 45 49.2 -1.4**
comp=Z,60nm,1.1s,mb4.8
SBF Sospel 41.48 306 *e*P **P** **21 45 49.2 -1.4**
SBF pmax pmax
comp=Z,30nm,1.1s,mb4.8
SBF Sospel 41.48 306 *e*P **P** **21 45 49.2 -1.4**
comp=Z,30nm,1.1s,mb4.8
NRDL Niedersach Rie 41.66 319 *e*P **P** **21 45 53.0 +1.1**
comp=Z,38nm,1.0s,mb5.0
MOY Mondy 41.79 42 *e*P **P** **21 45 53.9 +0.9**
LZH Lanzhou 41.82 66 *e*P **P** **21 45 54.6 +1.1**
LZH AP pP 21 46 04.3 +2.1
LZH PP PP 21 47 35.0 +4.5
LZH PCP PcP 21 47 51.5 +2.3
LZH *e*S **S** **21 52 07.0 -2.4**
LZH SS SS 21 55 11.0 -5.0
LZH AMB AMB
comp=Z,23nm,1.2s,mb4.7
LZH AMB AMB
comp=Z,100nm,4.0s
LZH LR LR
comp=E,425nm,15.5s
LZH LR LR
comp=Z,720nm,16.5s,MS4.6
TNS Taunus Mts 42.00 316 *e*P **P** **21 45 57.0 +2.3**
TNS pmax pmax
comp=Z,24nm,1.4s,mb4.6
TNS Taunus Mts 42.00 316 *e*P **P** **21 45 57.0 +2.3**
comp=Z,24nm,1.4s,mb4.6
MBDF Montbardon 42.06 307 *e*P **P** **21 45 53.8 -1.6**
comp=Z,22nm,0.8s,mb4.5
MBDF Montbardon 42.06 307 *e*P **P** **21 45 53.8 -1.6**
MBDF pmax pmax
comp=Z,11nm,0.8s,mb4.5
MBDF Montbardon 42.06 307 *e*P **P** **21 45 53.8 -1.6**
comp=Z,11nm,0.8s,mb4.5
APA Apatity 42.17 348 *e*P **P** **21 45 55.0 -0.9**
APA MLR MLR
comp=Z,1μm,17.0s,MS4.8
APA Apatity 42.17 348 *e*P **P** **21 45 55.0 -0.9**
comp=Z,1μm,17.0s
LPG La Plagne 42.18 308 *e*P **P** **21 45 55.3 -1.0**
comp=Z,15nm,0.7s,mb4.4
LPG La Plagne 42.18 308 *e*P **P** **21 45 55.3 -1.0**
LPG pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
LPG La Plagne 42.18 308 *e*P **P** **21 45 55.3 -1.0**
comp=Z,7.3nm,0.7s,mb4.4
LPL La Plagne 42.20 308 *e*P **P** **21 45 55.5 -0.9**
comp=Z,27nm,1.0s,mb4.5
LPL La Plagne 42.20 308 *e*P **P** **21 45 55.5 -0.9**
LPL pmax pmax
comp=Z,13nm,1.0s,mb4.5
LPL La Plagne 42.20 308 *e*P **P** **21 45 55.5 -0.9**
comp=Z,13nm,1.0s,mb4.5
CD2 Chengdu 42.23 73 *e*P **P** **21 45 56.8 -0.1**
CD2 AP pP 21 46 07.1 +1.5
CD2 PP PP 21 47 38.3 +3.4
CD2 S **S** **21 52 13.5 -2.0**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,30nm,6.4s
CD2 LR LR
comp=N,780nm,19.2s,MS4.8
CD2 LR LR
comp=E,730nm,14.4s,MS4.8
CD2 LR LR
comp=Z,360nm,14.4s,MS4.4
CDF Champ du Feu 42.33 313 *e*P **P** **21 45 55.5 -2.0**
KMI Kunming 42.45 82 P **P** **21 45 59.5 +0.7**
KMI AP pP 21 46 07.5 0.0
KMI XP sP 21 46 10.5 -0.5
KMI PP PP 21 47 40.3 +2.9
KMI PPP 21 48 08.3
KMI S **S** **21 52 16.8 -2.2**
KMI SSS 21 55 59.3
KMI AMB AMB
comp=Z,8.0nm,1.0s,mb4.3
KMI AMB AMB
comp=Z,85nm,5.6s
KMI LR LR
comp=N,213nm,21.8s,MS4.1
KMI LR LR
comp=E,148nm,17.4s,MS4.1
KMI LR LR
comp=Z,172nm,17.4s,MS4.0
HINF Hinteralfeld 42.49 312 *e*P **P** **21 45 56.9 -1.9**
ORIF Oris-en-Rattie 42.72 307 *e*P **P** **21 45 58.6 -2.1**
ORIF *e*MLR MLR
comp=Z,363nm,22.0s,MS3.9
CABF La Chapelle 42.80 310 *e*P **P** **21 46 00.0 -1.3**
comp=Z,23nm,0.8s,mb4.6
CABF La Chapelle 42.80 310 *e*P **P** **21 46 00.0 -1.3**
CABF pmax pmax
comp=Z,12nm,0.8s,mb4.7
CABF La Chapelle 42.80 310 *e*P **P** **21 46 00.0 -1.3**
comp=Z,12nm,0.8s,mb4.6
ZAK Zakamensk 42.83 44⇑ *i*P **P** **21 46 01.4 -0.1**
ZAK *e* 21 47 48.8
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb3.9
ZAK Zakamensk 42.83 44 *i* P **P** **21 46 01.4 -0.1**
comp=Z,2.0nm,0.8s,mb3.9
ZAK Zakamensk 42.83 44 *e*PcP PcP 21 47 48.8 -3.5
comp=Z,2.0nm,0.8s
HAU Haudompre 42.86 312 *e*P **P** **21 45 59.8 -2.0**
HAU *e*MLR MLR
comp=Z,311nm,22.2s,MS3.9
HAU Haudompre 42.86 312 *e*P **P** **21 45 59.8 -2.0**
HAU MLR MLR
comp=Z,310nm,22.3s,MS4.2
IBBN Ibbenburen 42.98 318 *e*P **P** **21 46 04.9 +2.2**
comp=Z,58nm,1.3s,mb5.2
TLY Talaya 43.38 43 *e*P **P** **21 46 05.5 -0.4**
TLY *e*S **S** **21 52 31.1 -0.7**
TLY *e*SS SS 21 55 59.7 +14
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
TLY MLR MLR
comp=Z,711nm,16.0s,MS4.7
TLY Talaya 43.38 43 *e*P **P** **21 46 05.5 -0.4**
comp=Z,6.0nm,1.0s,mb4.3
TLY *e*S **S** **21 52 31.1 -0.7**
VIVF Saint-Julien-l 43.56 307 *e*P **P** **21 46 06.5 -1.0**
MEZF Maizieres J'vi 43.80 312 *e*P **P** **21 46 08.2 -1.2**
LASF Ste Croix 44.08 306 *e*P **P** **21 46 10.1 -1.5**
GIVF Givet 44.24 315 *e*P **P** **21 46 11.3 -1.6**
SMF Signal de Mont 44.34 310 *e*P **P** **21 46 12.0 -1.7**
comp=Z,53nm,1.1s,mb4.9
SMF Signal de Mont 44.34 310 *e*P **P** **21 46 12.0 -1.7**
SMF pmax pmax
comp=Z,26nm,1.1s,mb4.9
SMF Signal de Mont 44.34 310 *e*P **P** **21 46 12.0 -1.7**
comp=Z,26nm,1.1s,mb4.9
SONM Songino Array 44.36 49 P **P** **21 46 13.6 -0.2**
comp=Z,2.8nm,0.9s,mb4.0,baz=270,slow=8.9,SNR=22
SONM LR LR 22 07 01.5
comp=Z,692nm,21.6s,MS4.5,baz=259,slow=39
LOR Lormes 44.41 311 *e*P **P** **21 46 12.5 -1.7**
LOR *e*MLR MLR
comp=Z,325nm,17.2s,MS4.0
LOR Lormes 44.41 311 *e*P **P** **21 46 12.5 -1.7**
LOR MLR MLR
comp=Z,330nm,17.3s,MS4.3
NB2 NORSAR Subarra 44.55 331 P **P** **21 46 13.9 -1.3**
comp=Z,5.9nm,0.7s,mb4.5,baz=118,slow=7.9
NB2 NORSAR Subarra 44.55 331 P **P** **21 46 13.9 -1.3**
NB2 pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
NOA NORSAR Array B 44.55 331 P **P** **21 46 13.3 -1.8**
comp=Z,4.5nm,0.7s,mb4.4,baz=117,slow=7.9,SNR=17
NOA LR LR 22 07 45.3
comp=Z,253nm,20.0s,MS4.1,baz=100,slow=40
SSF Saint Saulge 44.62 310 *e*P **P** **21 46 14.5 -1.4**
comp=Z,49nm,1.2s,mb4.9
SSF Saint Saulge 44.62 310 *e*P **P** **21 46 14.5 -1.4**
SSF pmax pmax
comp=Z,25nm,1.2s,mb4.9
SSF Saint Saulge 44.62 310 *e*P **P** **21 46 14.5 -1.4**
comp=Z,25nm,1.2s,mb4.9
BAIF Baives 44.62 315 *e*P **P** **21 46 14.0 -1.9**
comp=Z,105nm,1.4s,mb5.2
BAIF Baives 44.62 315 *e*P **P** **21 46 14.0 -1.9**
BAIF pmax pmax
comp=Z,52nm,1.4s,mb5.2
BAIF Baives 44.62 315 *e*P **P** **21 46 14.0 -1.9**
comp=Z,52nm,1.4s,mb5.2
AVF Avril sur Loir 44.69 310 *e*P **P** **21 46 14.7 -1.8**
EJON La Jonquera 44.69 304 P **P** **21 46 14.4 -2.2**
comp=Z,11nm,1.0s,mb4.7
EJON La Jonquera 44.69 304 P **P** **21 46 14.4 -2.2**
comp=Z,11nm,1.0s,mb4.7
ETOS Mallorca 44.72 300 P **P** **21 46 15.9 -1.0**
comp=Z,24nm,1.2s,mb4.9
ETOS Mallorca 44.72 300 P **P** **21 46 15.9 -1.0**
comp=Z,24nm,1.2s,mb4.9
ULN Ulaanbaatar 44.80 49 *e*P **P** **21 46 16.1 -1.3**
BGF Bois d'Agland 45.01 309 *e*P **P** **21 46 17.6 -1.5**
comp=Z,22nm,1.0s,mb4.7
BGF Bois d'Agland 45.01 309 *e*P **P** **21 46 17.6 -1.5**
BGF pmax pmax
comp=Z,11nm,1.0s,mb4.6
BGF Bois d'Agland 45.01 309 *e*P **P** **21 46 17.6 -1.5**
comp=Z,11nm,1.0s,mb4.7
MTLF Montolieu 45.22 305 *e*P **P** **21 46 18.5 -2.3**
comp=Z,47nm,1.2s,mb4.9
MTLF Montolieu 45.22 305 *e*P **P** **21 46 18.5 -2.3**
MTLF pmax pmax
comp=Z,23nm,1.2s,mb4.9
MTLF Montolieu 45.22 305 *e*P **P** **21 46 18.5 -2.3**
comp=Z,23nm,1.2s,mb4.9
HYF Humbligny 45.23 310 *e*P **P** **21 46 19.9 -0.9**
KEV Kevo 45.29 347 *ep* **P** **21 46 19.4 -1.5**
CAF Calviac 45.42 307 *e*P **P** **21 46 21.3 -1.0**
comp=Z,22nm,0.9s,mb4.7
CAF Calviac 45.42 307 *e*P **P** **21 46 21.3 -1.0**
CAF pmax pmax
comp=Z,11nm,0.9s,mb4.7
CAF Calviac 45.42 307 *e*P **P** **21 46 21.3 -1.0**
comp=Z,11nm,0.9s,mb4.7
TCF Toulx Ste Croi 45.42 309 *e*P **P** **21 46 21.0 -1.3**
comp=Z,25nm,0.9s,mb4.7
TCF Toulx Ste Croi 45.42 309 *e*P **P** **21 46 21.0 -1.3**
TCF pmax pmax
comp=Z,12nm,0.9s,mb4.7
TCF Toulx Ste Croi 45.42 309 *e*P **P** **21 46 21.0 -1.3**
comp=Z,12nm,0.9s,mb4.7
ARCES ARCESS Array B 45.43 346 P **P** **21 46 22.3 +0.3**
comp=Z,4.0nm,0.9s,mb4.3,baz=134,slow=8.6,SNR=7.2
ARCES LR LR 22 08 12.4
comp=Z,388nm,18.7s,MS4.4,baz=145,slow=40
GYA Guiyang 45.57 79 *e*P **P** **21 46 24.8 +1.0**
GYA AP pP 21 46 35.6 +3.0
GYA PCP PcP 21 48 03.8 +1.7
GYA PP PP 21 48 12.8 +2.1
GYA SCP ScP 21 51 52.4 -0.5
GYA S **S** **21 53 04.0 -0.4**
GYA SCS ScS 21 56 16.0 -2.4
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,60nm,5.4s
GYA LR LR
comp=N,350nm,18.8s,MS4.6
GYA LR LR
comp=E,470nm,17.6s,MS4.6
GYA LR LR
comp=Z,460nm,18.9s,MS4.4
EMIR Miracle 45.69 303 P **P** **21 46 25.5 +1.0**
comp=Z,22nm,1.1s,mb5.0
EMIR Miracle 45.69 303 P **P** **21 46 25.5 +0.9**
comp=Z,22nm,1.1s,mb5.0
RJF Les Rejaudoux 45.83 308 *e*P **P** **21 46 24.8 -0.8**
comp=Z,53nm,1.2s,mb5.1
RJF *e*MLR MLR
comp=Z,268nm,22.8s,MS3.8
RJF Les Rejaudoux 45.83 308 *e*P **P** **21 46 24.8 -0.8**
comp=Z,26nm,1.2s,mb5.0
RJF LR LR
comp=Z,270nm,22.8s,MS4.1
RJF Les Rejaudoux 45.83 308 *e*P **P** **21 46 24.8 -0.8**
RJF pmax pmax
comp=Z,26nm,1.2s,mb5.0
RJF MLR MLR
comp=Z,270nm,22.8s,MS4.1

EPOB Poblet 46.03 302 P **P** **21 46 27.5 +0.3**
comp=Z,8.3nm,0.7s,mb4.8
EPOB Poblet 46.03 302 P **P** **21 46 27.5 +0.3**
comp=Z,8.3nm,0.7s,mb4.8
LFF La Frestale 46.36 307 *eP* **P** **21 46 27.9 -1.8**
comp=Z,38nm,0.9s,mb5.0
LFF La Frestale 46.36 307 *eP* **P** **21 46 27.9 -1.8**
LFF pmax pmax
comp=Z,19nm,0.9s,mb5.0
LFF La Frestale 46.36 307 *eP* **P** **21 46 27.9 -1.8**
comp=Z,19nm,0.9s,mb5.0
ERTA Horta de San J 46.60 301 P **P** **21 46 33.3 +1.6**
comp=Z,12nm,0.8s,mb4.9
ERTA Horta de San J 46.60 301 P **P** **21 46 33.3 +1.6**
comp=Z,12nm,0.8s,mb4.9
EBIE Bielsa 46.73 304 P **P** **21 46 33.5 +0.8**
comp=Z,5.5nm,0.9s,mb4.5
EBIE Bielsa 46.73 304 P **P** **21 46 33.5 +0.8**
comp=Z,5.5nm,0.9s,mb4.5
MFF Saint Martin d 47.07 309 *eP* **P** **21 46 33.6 -1.7**
EBEN Beniarda 47.12 298 P **P** **21 46 33.8 -2.0**
comp=Z,22nm,1.5s,mb4.9
EBEN Beniarda 47.12 298 P **P** **21 46 33.8 -2.0**
comp=Z,22nm,1.5s,mb4.9
ESAC San Caprasio 47.19 303 P **P** **21 46 35.7 -0.6**
comp=Z,22nm,0.6s,mb5.3
ESAC San Caprasio 47.19 303 P **P** **21 46 35.7 -0.6**
comp=Z,22nm,0.6s,mb5.3
LDF La Druitiere 47.22 312 *eP* **P** **21 46 34.5 -1.9**
comp=Z,12nm,0.6s,mb4.7
LDF La Druitiere 47.22 312 *eP* **P** **21 46 34.5 -1.9**
LDF pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LDF La Druitiere 47.22 312 *eP* **P** **21 46 34.5 -1.9**
comp=Z,6.2nm,0.6s,mb4.7
ETSF Etsaut 47.24 304 *eP* **P** **21 46 35.0 -1.7**
comp=Z,32nm,1.0s,mb4.9
ETSF Etsaut 47.24 304 *eP* **P** **21 46 35.0 -1.7**
ETSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
ETSF Etsaut 47.24 304 *eP* **P** **21 46 35.0 -1.7**
comp=Z,16nm,1.0s,mb4.9
FLN La Foliniere 47.47 312 *eP* **P** **21 46 36.5 -1.9**
comp=Z,94nm,1.3s,mb5.2
FLN *e*MLR MLR
comp=Z,322nm,22.0s,MS4.0
FLN La Foliniere 47.47 312 *eP* **P** **21 46 36.5 -1.9**
comp=Z,47nm,1.3s,mb5.3
FLN LR LR
comp=Z,320nm,22.0s,MS4.2
FLN La Foliniere 47.47 312 *eP* **P** **21 46 36.5 -1.9**
FLN pmax pmax
comp=Z,47nm,1.3s,mb5.3
FLN MLR MLR
comp=Z,320nm,22.0s,MS4.2
SJPF Ste Jean 47.73 304 *eP* **P** **21 46 39.1 -1.4**
PSI Prapat 49.43 113 LR LR 22 09 46.9
comp=Z,242nm,18.8s,MS4.2,baz=140,slow=39
SGMF Saint Gilles 48.81 311 *eP* **P** **21 46 47.2 -1.5**
ENIJ Nijar 48.83 296 P **P** **21 46 50.1 +1.0**
ENIJ pmax pmax
comp=Z,18nm,1.2s,mb5.0
ENIJ Nijar 48.83 296 P **P** **21 46 50.1 +1.0**
comp=Z,18nm,1.2s,mb5.0
EVIA Vianos 48.90 299 P **P** **21 46 51.1 +1.5**
comp=Z,14nm,0.8s,mb5.0
EVIA Vianos 48.90 299 P **P** **21 46 51.1 +1.5**
EVIA pmax pmax
comp=Z,14nm,0.8s,mb5.0
EVIA Vianos 48.90 299 P **P** **21 46 51.1 +1.5**
comp=Z,14nm,0.8s,mb5.0
QUIF Quistinic 49.20 311 *eP* **P** **21 46 50.5 -1.2**
comp=Z,51nm,1.1s,mb5.2
QUIF Quistinic 49.20 311 *eP* **P** **21 46 50.5 -1.2**
QUIF pmax pmax
comp=Z,26nm,1.1s,mb5.2
QUIF Quistinic 49.20 311 *eP* **P** **21 46 50.5 -1.2**
comp=Z,26nm,1.1s,mb5.2
EBER Berja 49.38 296 P **P** **21 46 54.2 +0.9**
comp=Z,11nm,0.6s,mb5.1
EBER Berja 49.38 296 P **P** **21 46 54.2 +0.9**
comp=Z,11nm,0.6s,mb5.1
EQES Quesada 49.43 297 P **P** **21 46 54.4 +0.7**
comp=Z,13nm,0.8s,mb5.0
EQES Quesada 49.43 297 P **P** **21 46 54.4 +0.8**
comp=Z,13nm,0.8s,mb5.0
ECOG Cogollos-Vega 49.88 297 P **P** **21 46 57.1 +0.1**
ECOG Cogollos-Vega 49.88 297 P **P** **21 46 57.1 0.0**
EGUA Guajares 49.93 296 P **P** **21 46 57.8 +0.3**
comp=Z,1.3nm,0.6s,mb4.1
EGUA Guajares 49.93 296 P **P** **21 46 57.8 +0.3**
EGUA pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
EGUA Guajares 49.93 296 P **P** **21 46 57.8 +0.3**
comp=Z,1.0nm,0.6s,mb4.0
ESDC Sonseca Array 49.95 300 P **P** **21 46 57.5 -0.1**
comp=Z,4.6nm,0.6s,mb4.7
ESDC Sonseca Array 49.95 300 P **P** **21 46 57.1 -0.5**
comp=Z,2.3nm,0.5s,mb4.5,baz=72,slow=7.2,SNR=15
ESDC LR LR 22 09 24.0
comp=Z,177nm,20.9s,MS4.0,baz=120,slow=38
ESDC Sonseca Array 49.95 300 P **P** **21 46 57.5 0.0**
comp=Z,4.6nm,0.6s,mb4.7
ESLA Sonseca Array 49.95 300 *eP* **P** **21 46 58.5 +1.0**
comp=Z,1.0nm,0.7s,mb4.0
ESLA Sonseca Array 49.95 300 *eP* **P** **21 46 58.5 +1.0**
comp=Z,1.0nm,0.7s,mb4.0
EBAN Banos Encina 49.95 298 P **P** **21 46 57.7 0.0**
comp=Z,14nm,0.8s,mb5.0
EBAN Banos Encina 49.95 298 P **P** **21 46 57.7 +0.1**
EBAN pmax pmax
comp=Z,14nm,0.8s,mb5.0
EBAN Banos Encina 49.95 298 P **P** **21 46 57.7 +0.1**
comp=Z,14nm,0.8s,mb5.0
LSZ Lusaka 49.99 215 *eP* **P** **21 46 58.4 +0.3**
comp=Z,15nm,1.8s,mb4.7
LSZ Lusaka 49.99 215 *eP* **P** **21 46 58.4 +0.3**
LSZ pmax pmax
comp=Z,15nm,1.8s,mb4.7
LSZ Lusaka 49.99 215 *eP* **P** **21 46 58.4 +0.3**
comp=Z,15nm,1.8s,mb4.7
GUD Guadarrama 50.01 301 P **P** **21 46 55.4 -2.6**
comp=Z,1.8nm,0.5s,mb4.4
GUD Guadarrama 50.01 301 P **P** **21 46 55.4 -2.6**
GUD pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
GUD Guadarrama 50.01 301 P **P** **21 46 55.4 -2.6**
comp=Z,2.0nm,0.5s,mb4.4
ERON Agron 50.10 297 P **P** **21 46 59.1 +0.3**
comp=Z,13nm,1.0s,mb4.9
ERON Agron 50.10 297 P **P** **21 46 59.1 +0.3**
comp=Z,13nm,1.0s,mb4.9
ELOJ Sierra Loja 50.36 297 P **P** **21 47 00.8 +0.1**
comp=Z,5.6nm,0.7s,mb4.7
ELOJ Sierra Loja 50.36 297 P **P** **21 47 00.8 +0.1**
ELOJ pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ELOJ Sierra Loja 50.36 297 P **P** **21 47 00.8 +0.1**
comp=Z,6.0nm,0.7s,mb4.7
ELUQ Luque 50.40 297 P **P** **21 47 00.7 -0.3**
comp=Z,6.3nm,0.6s,mb4.8
ELUQ Luque 50.40 297 P **P** **21 47 00.7 -0.3**
ELUQ pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
ELUQ Luque 50.40 297 P **P** **21 47 00.7 -0.3**
comp=Z,6.0nm,0.6s,mb4.8
QIZ Qiongzhong 50.55 87 P **P** **21 47 07.8 +5.4**
QIZ S **S** **21 54 19.8 +4.8**
QIZ SS SS 21 57 50.1 +0.8
QIZ LR LR
comp=E,205nm,21.8s
QIZ LR LR
comp=Z,221nm,20.3s,MS4.2
EADA Adamuz 50.57 298 P **P** **21 47 01.1 -1.2**
comp=Z,5.2nm,0.8s,mb4.5
EADA Adamuz 50.57 298 P **P** **21 47 01.1 -1.2**
comp=Z,5.2nm,0.8s,mb4.5
BOD Bodaibo 50.59 36 *eP* **P** **21 47 00.5 -1.6**
BOD pmax pmax
comp=Z,12nm,1.0s,mb4.8
BOD Bodaibo 50.59 36 *eP* **P** **21 47 00.5 -1.6**
comp=Z,12nm,1.0s,mb4.8
EMIJ Mijas 50.93 296 P **P** **21 47 03.6 -1.4**
comp=Z,16nm,1.2s,mb4.8
EMIJ Mijas 50.93 296 P **P** **21 47 03.6 -1.4**
comp=Z,16nm,1.2s,mb4.8
CZD Col de Zad 51.72 292 *eP* **P** **21 47 12.0 +1.0**

ESPR Espera 51.75 297 P **P** **21 47 09.9 -1.2**
comp=Z,8.5nm,0.7s,mb4.8
ESPR Espera 51.75 297 P **P** **21 47 09.9 -1.3**
comp=Z,8.5nm,0.7s,mb4.8
TOA0 Torodi Ar. Sit 51.82 265 *eP* **P** **21 47 11.5 -0.5**
TOA0 Torodi Ar. Sit 51.82 265 *eP* **P** **21 47 11.5 -0.5**
TORD Torodi Ar. Bea 51.82 265 P **P** **21 47 11.2 -0.7**
comp=Z,6.0nm,0.7s,mb4.6,baz=61,slow=6.2,SNR=44
TORD LR LR 22 10 01.2
comp=Z,287nm,21.9s,MS4.3,baz=105,slow=37
ECAL Calabor 51.85 303 P **P** **21 47 12.9 +1.1**
comp=Z,4.0nm,0.8s,mb4.4
ECAL Calabor 51.85 303 P **P** **21 47 12.9 +1.0**
comp=Z,4.0nm,0.8s,mb4.4
PBRG Braganca 51.87 303 *eP* **P** **21 47 14.8 +2.8**
comp=Z,17nm,1.7s,mb4.7
EPON Pontenova 52.05 305 P **P** **21 47 13.5 +0.2**
comp=Z,13nm,1.1s,mb4.8
MVO Moncorvo 52.14 302 *eP* **P** **21 47 15.3 +1.3**
comp=Z,14nm,1.0s,mb4.8
EMIN Mina Concepcio 52.27 298 P **P** **21 47 14.6 -0.4**
comp=Z,5.5nm,1.2s,mb4.4
EMIN Mina Concepcio 52.27 298 P **P** **21 47 14.6 -0.4**
comp=Z,5.5nm,1.2s,mb4.4
EBAD Badajoz 52.40 299 P **P** **21 47 15.0 -1.0**
comp=Z,2.6nm,0.5s,mb4.4
EBAD Badajoz 52.40 299 P **P** **21 47 15.0 -1.0**
comp=Z,2.6nm,0.5s,mb4.4
PBAR Barrancos 52.50 298 *eP* **P** **21 47 17.5 +0.8**
comp=Z,11nm,0.7s,mb4.9
PCBR Castelo Branco 52.62 301 *eP* **P** **21 47 18.8 +1.2**
comp=Z,16nm,1.4s,mb4.7
PVRL Vila Real 52.65 302 *eP* **P** **21 47 19.3 +1.5**
comp=Z,10nm,0.7s,mb4.9
ELOB Lobios 52.84 303 P **P** **21 47 19.5 +0.3**
comp=Z,5.3nm,0.6s,mb4.7
ELOB Lobios 52.84 303 P **P** **21 47 19.5 +0.3**
comp=Z,5.3nm,0.6s,mb4.7
EGRO El Granado 52.94 298 P **P** **21 47 19.9 -0.1**
comp=Z,5.4nm,1.0s,mb4.4
EGRO El Granado 52.94 298 P **P** **21 47 19.9 -0.1**
comp=Z,5.4nm,1.0s,mb4.4
PBEJ Beja 53.16 298 *eP* **P** **21 47 22.2 +0.6**
comp=Z,11nm,1.1s,mb4.7
EVO Evora 53.20 299 *eP* **P** **21 47 23.0 +1.1**
EMAZ Mazaricos 53.41 305 P **P** **21 47 21.6 -1.8**
comp=Z,14nm,1.3s,mb4.8
EMAZ Mazaricos 53.41 305 P **P** **21 47 21.6 -1.8**
comp=Z,14nm,1.3s,mb4.8
NJ2 Nanjing 54.70 69 *eP* **P** **21 47 35.0 +2.0**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.4
CN2 Changchun 57.67 54 *eP* **P** **21 47 52.8 -1.2**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.8
YAK Yakutsk 58.81 32 *eP* **P** **21 48 01.8 +0.2**
YAK pmax pmax
comp=Z,22nm,1.7s,mb4.9
YAK Yakutsk 58.81 32 *eP* **P** **21 48 01.8 +0.2**
comp=Z,22nm,1.7s,mb4.9
TIXI Tiksi 58.97 21 *eP* **P** **21 48 02.4 -0.1**
comp=Z,4.3nm,0.8s,mb4.5
TIXI Tiksi 58.97 21 *eP* **P** **21 48 00.3 -2.3**
TIXI *eS* **S** **21 55 59.2 -7.5**
TIXI pmax pmax
comp=Z,11nm,1.6s,mb4.6
TIXI Tiksi 58.97 21 *eP* **P** **21 48 02.4 -0.2**
comp=Z,4.3nm,0.8s,mb4.5
TSUM Tsumeb 59.06 222 *eP* **P** **21 48 05.4 +1.5**
comp=Z,8.7nm,0.8s,mb4.8
TSUM Tsumeb 59.06 222 *eP* **P** **21 48 05.4 +1.5**
comp=Z,8.7nm,0.8s,mb4.8
LBTB Lobatse 59.55 211 *eP* **P** **21 48 06.3 -0.8**
comp=Z,12nm,0.8s,mb5.0
LBTB Lobatse 59.55 211 *eP* **P** **21 48 06.3 -0.8**
LBTB pmax pmax
comp=Z,12nm,0.8s,mb5.0
LBTB Lobatse 59.55 211 *eP* **P** **21 48 06.3 -0.8**
comp=Z,12nm,0.8s,mb5.0
DBIC Dimbokro 60.46 262 P **P** **21 48 14.2 +0.5**
DBIC LR LR 22 12 53.4
DBIC Dimbokro 60.46 262 P **P** **21 48 14.2 +0.5**
comp=Z,9.2nm,0.8s,mb4.8,baz=50,slow=9.3,SNR=10
DBIC LR LR 22 12 53.4
comp=Z,192nm,19.0s,MS4.3,baz=44,slow=35
MDJ Mudanjiang 60.47 52 P **P** **21 48 14.0 +0.6**
MDJ AMB AMB
comp=Z,71nm,4.8s
KSRS Korea Array 60.75 61 P **P** **21 48 14.3 -1.1**
comp=Z,3.0nm,0.7s,mb4.6,baz=280,slow=6.8,SNR=11
KSRS LR LR 22 18 15.7
comp=Z,151nm,18.0s,MS4.2,baz=110,slow=40
LIC Lamto 60.82 261 *eP* **P** **21 48 16.7 +0.5**
comp=Z,26nm,0.8s,mb5.1
LIC *e*MLR MLR
comp=Z,226nm,20.2s,MS4.0
LIC Lamto 60.82 261 *eP* **P** **21 48 16.7 +0.5**
comp=Z,13nm,0.8s,mb5.1
LIC LR LR
comp=Z,110nm,20.3s,MS4.0
LIC Lamto 60.82 261 *eP* **P** **21 48 16.7 +0.5**
comp=Z,13nm,0.8s,mb5.1
KLR Kul'dur 61.12 47 *eP* **P** **21 48 08.9 -8.8**
BOSA Boshof 62.80 210 P **P** **21 48 29.3 +0.2**
BOSA LR LR 22 17 41.0
BOSA Boshof 62.80 210 P **P** **21 48 29.3 +0.2**
comp=Z,7.8nm,0.7s,mb4.9,baz=37,slow=5.7,SNR=29
BOSA LR LR 22 17 41.0
comp=Z,356nm,19.2s,MS4.5,baz=30,slow=38
JNU Nakatsue 64.23 65 LR LR 22 20 40.2
comp=Z,225nm,18.0s,MS4.4,baz=82,slow=40
YSS Yuzh-Sakhalins 68.82 47 *eP* **P** **21 49 07.5 -0.3**
YSS pmax pmax
comp=Z,20nm,0.8s,mb5.1
YSS MLR MLR
comp=Z,500nm,18.0s,MS4.8
YSS Yuzh-Sakhalins 68.82 47 *eP* **P** **21 49 07.5 -0.3**
comp=Z,500nm,18.0s
MJAR Matsushiro Arr 68.90 59 LR LR 22 23 09.9
comp=Z,176nm,19.4s,MS4.3,baz=300,slow=39
SEY Seymchan 69.00 29⇑ *eP* **P** **21 49 07.7 -0.9**
ASAJ Asahikawa 69.61 50 LR LR 22 23 14.8
comp=Z,256nm,18.4s,MS4.5,baz=171,slow=39
JHJ Hachijo jima 2 71.29 62 LR LR 22 21 16.2
comp=Z,188nm,19.1s,MS4.4,baz=274,slow=36
BILL Bilibino 72.17 22 *eP* **P** **21 49 28.1 +0.3**
comp=Z,10nm,1.1s,mb4.7
BILL Bilibino 72.17 22⇓ *eP* **P** **21 49 28.3 +0.4**
BILL *e* 21 52 11.7
BILL pmax pmax
comp=Z,15nm,1.7s,mb4.7
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.7
BILL Bilibino 72.17 22 *eP* **P** **21 49 28.1 +0.2**
comp=Z,10nm,1.1s,mb4.7
CBIJ Chichi jima 75.50 67 LR LR 22 24 15.6
comp=Z,105nm,19.2s,MS4.2,baz=97,slow=37
FITZ Fitzroy Crossi 81.89 115 *eP* **P** **21 50 23.4 +0.1**
comp=Z,7.2nm,0.8s,mb4.7
MUN Mundaring 82.90 132 *eP* **P** **21 50 29.0 +0.7**
KLBR Kellerberrin 83.70 130 *eP* **P** **21 50 32.4 0.0**
comp=Z,14nm,0.8s,mb5.2
SCHQ Schefferville 84.12 330 P **P** **21 50 33.8 -0.5**
baz=36,slow=7.4
INK Inuvik 84.22 3 *eP* **P** **21 50 34.1 -0.5**
INK pmax pmax
comp=Z,495nm,1.9s
INK Inuvik 84.22 3 *eP* **P** **21 50 34.1 -0.5**
comp=Z,495nm,1.9s
KAKA Kakadu 84.77 107 *eP* **P** **21 50 38.1 -0.1**
comp=Z,14nm,0.7s,mb5.2
WRA Warramunga Arr 89.90 113 *i* P **P** **21 51 04.0 +1.1**
WRA pmax pmax
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 89.90 113 P **P** **21 51 02.7 -0.2**
comp=Z,3.7nm,0.8s,mb4.8,baz=309,slow=4.0,SNR=20
WB2 Warramunga Arr 89.91 112 *eP* **P** **21 51 02.5 -0.5**
YKA Yellowknife Ar 89.91 355 P **P** **21 51 02.2 -0.1**
YKA LR LR 22 34 54.0
YKA Yellowknife Ar 89.91 355 *i* P **P** **21 51 02.7 +0.4**
YKA pmax pmax
comp=Z,2.0nm,0.9s
YKA Yellowknife Ar 89.91 355 P **P** **21 51 02.2 -0.1**
comp=Z,1.5nm,0.9s,mb4.3,baz=2.2,slow=4.8,SNR=21
YKA LR LR 22 34 54.0
comp=Z,149nm,21.1s,MS4.4,baz=190,slow=38
ASAR Alice Springs 91.36 116 P **P** **21 51 07.7 -2.0**
comp=Z,4.7nm,0.8s,mb4.9,baz=302,slow=4.2,SNR=20
MAW Mawson 95.03 177 LR LR 22 25 07.0
comp=Z,202nm,20.1s,MS4.6,baz=149,slow=30

IDC 23 21:56:10.4±3.4, 628S×14861E, h48km±26km, mb3.5/5, mb1 3.8/6, mb1mx3.7/11, mbtmp3.6/6, ML4.4/1, MS3.2/3, Ms1 3.2/3, ms1mx3.0/16, Error ellipse: s-maj=47.0km s-min=14.0km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**11.66**	**106**	LR	LR	22 02 16.4	
	comp=Z,66nm,21.6s,baz=2.1,slow=31						
CTA	**Charters Tower**	**13.92**	**189**	LR	LR	22 03 49.9	
	comp=Z,95nm,19.1s,baz=57,slow=33						
WRA	**Warramunga Arr**	**19.41**	**224**	P	Pn	22 00 33.5	-0.7
	1.2nm,0.3s,baz=50,slow=11,SNR=66						
WRA				S	S	22 04 10.3	+0.7
	0.0nm,0.3s,baz=44,slow=21,SNR=5.4						
WRA				ScP	ScP	22 08 26.7	+1.6
	0.0nm,0.3s,baz=47,slow=2.5,SNR=5.9						
ASAR	**Alice Springs**	**22.34**	**218**	P	P	22 01 04.8	+0.7
	1.9nm,0.5s,baz=53,slow=9.2,SNR=48						
ASAR				S	S	22 05 07.2	-0.1
	1.5nm,0.7s,baz=34,slow=20,SNR=7.5						
FITZ	**Fitzroy Crossi**	**25.30**	**240**	P	P	22 01 33.8	+1.2
	2.6nm,0.4s,baz=58,slow=11,SNR=18						
FITZ				LR	LR	22 12 11.8	
	comp=Z,77nm,18.9s,baz=108,slow=38						
STKA	**Stephens Creek**	**26.30**	**194**	P	P	22 01 41.2	-0.3
	1.9nm,0.8s,baz=0.0,slow=12,SNR=2.3						
SONM	**Songino Array**	**65.43**	**330**	P	P	22 06 49.7	+1.6
	0.2nm,0.6s,baz=152,slow=6.5,SNR=3.9						
MKAR	**Makanchi Array**	**78.73**	**320**	P	P	22 08 05.9	-1.8
	0.1nm,0.3s,baz=95,slow=7.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**146.71**	**284**	PKPbc	PKPbc	22 15 46.5	-1.5
	1.0nm,0.5s,baz=87,slow=2.3,SNR=41						

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*NEIC **23** 22:19:50.2±1.1, 4927N×14968E, h10km, mb3.9/1, Error ellipse: s-maj=29.2km s-min=19.9km az=161.0*
*MOS **23** 22:20:28.6±0.7, 4891N×14968E, h427km, mb3.7/2, Error ellipse: s-maj=23.4km s-min=17.6km az=118.2*
*ISCJB **23** 22:20:29.4±0.8, 493N±02×1493E±02, h395km±13km, mb3.5/15, Error ellipse: s-maj=29.8km s-min=12.4km az=159.1*
*IDC **23** 22:20:31.9±2.7, 4889N×14923E, h427km±35km, mb3.1/12, mb1 3.2/14, mb1mx3.0/23, mbtmp3.1/14, Error ellipse: s-maj=24.6km s-min=15.0km az=167.0*

ISC 23 22:20:30.4±0.8, 491N±02×1493E±02, h399km±13km, n26, σ0s82/26, mb3.5/15, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.67**	**68**	*e*PN	**Pn**	**22 21 47.4**	**-1.4**
YSS	**Yuzh-Sakhalins**	**4.90**	**246**	*e*PN	**Pn**	**22 21 53.8**	**+2.5**
ASAJ	**Asahikawa**	**6.81**	**225**	P	**Pn**	**22 22 11.6**	**-0.2**
	0.4nm,0.3s,baz=101,slow=16,SNR=3.8						
KSRS	**Korea Array**	**19.38**	**241**	P	**P**	**22 24 28.6**	**-0.5**
	0.1nm,0.3s,baz=45,slow=8.5,SNR=7.4						
BOD	**Bodaibo**	**22.53**	**306**	*e*P	**P**	**22 24 56.9**	**-0.6**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.4						
JOW	**Kunigami**	**27.57**	**224**	P	**P**	**22 25 39.0**	**-3.8**
	comp=Z,21nm,1.1s,mb4.4,baz=340,slow=2.6,SNR=3.8						
SONM	**Songino Array**	**28.21**	**284**	P	**P**	**22 25 48.6**	**+0.3**
	comp=Z,0.5nm,0.7s,mb2.9,baz=83,slow=7.9,SNR=5.5						
MK31	**Makanchi Array**	**43.62**	**294**	*e*P	**P**	**22 27 57.1**	**+0.1**
MKAR	**Makanchi Array**	**43.62**	**294**	P	**P**	**22 27 57.2**	**+0.1**
MKAR				PcP	PcP	22 29 35.5	-0.6
MKAR	**Makanchi Array**	**43.62**	**294**	P	**P**	**22 27 57.2**	**+0.1**
	comp=Z,1.0nm,0.5s,mb3.4,baz=69,slow=8.1,SNR=14						
MKAR				PcP	PcP	22 29 35.5	-0.6
	comp=Z,0.1nm,0.3s,baz=70,slow=1.7,SNR=3.5						
KURK	**Kurchatov**	**43.95**	**300**	*e*P	**P**	**22 27 59.3**	**-0.3**
	comp=Z,1.3nm,0.7s,mb3.4						
KURK	**Kurchatov**	**43.95**	**300**	*e*P	**P**	**22 27 59.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.2						
YKA	**Yellowknife Ar**	**50.56**	**37**	P	**P**	**22 28 51.5**	**+1.9**
	comp=Z,0.2nm,0.6s,mb2.5,baz=302,slow=7.1,SNR=4.4						
ARCES	**ARCESS Array B**	**54.76**	**339**	P	**P**	**22 29 20.6**	**+0.7**
	comp=Z,4.5nm,0.9s,mb3.7,baz=50,slow=8.4,SNR=2.4						
AKTK	**Aktyubinsk**	**55.26**	**309**	P	**P**	**22 29 23.4**	**-0.2**
AKTO	**Aktyubinsk**	**55.26**	**309**	P	**P**	**22 29 23.4**	**-0.2**
	comp=Z,1.2nm,0.5s,mb3.4,baz=80,slow=6.7,SNR=4.1						
FINES	**FINESS Array B**	**60.80**	**333**	P	**P**	**22 30 00.9**	**-0.4**
	comp=Z,0.9nm,0.4s,mb3.5,baz=34,slow=7.3,SNR=19						
NVAR	**Mina Array Bea**	**63.57**	**61**	P	**P**	**22 30 20.4**	**+0.4**
	baz=294,slow=8.7						
NOA	**NORSAR Array B**	**65.14**	**339**	P	**P**	**22 30 29.4**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.5,baz=36,slow=8.9,SNR=2.3						
HFS	**Hagfors**	**65.33**	**337**	P	**P**	**22 30 30.2**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.8,baz=52,slow=6.9,SNR=5.4						
PDAR	**Pinedale Array**	**65.38**	**53**	P	**P**	**22 30 31.6**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.2,baz=208,slow=1.9,SNR=4.0						
AKASG	**Malin Array Be**	**68.15**	**324**	P	**P**	**22 30 47.7**	**-0.9**
AKASG	**Malin Array Be**	**68.15**	**324**	P	**P**	**22 30 47.7**	**-0.9**
	comp=Z,0.9nm,0.4s,mb3.8,baz=35,slow=6.4,SNR=7.2						
SCHQ	**Schefferville**	**72.07**	**21**	P	**P**	**22 31 12.3**	**+0.3**
SCHQ	**Schefferville**	**72.07**	**21**	P	**P**	**22 31 12.3**	**+0.3**
	comp=Z,1.5nm,0.7s,mb3.6,baz=299,slow=10,SNR=4.4						
MMAI	**Mount Meron Ar**	**79.34**	**309**	P	**P**	**22 31 53.5**	**+0.4**
	comp=Z,2.1nm,1.0s,mb3.7,baz=53,slow=5.6,SNR=3.4						

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*KISR **23** 22:28:33.4±0.6, 2830N×5548E, h30km±999km, ML3.4*
*IDC **23** 22:28:34.9±1.5, 2728N×5553E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.6/20, mbtmp3.9/6, Error ellipse: s-maj=40.0km s-min=22.9km az=125.0*
*ISCJB **23** 22:28:36.6±2.4, 2757N±008×5519E±005, h22km±20km, mb3.8/6, Error ellipse: s-maj=13.6km s-min=7.3km az=1.8*
*CSEM **23** 22:28:37.4±0.2, 2763N×5521E, h30km, ML3.6, Error ellipse: s-maj=7.9km s-min=4.2km az=179.0*
*NEIC **23** 22:28:41.5, 2771N×5531E, h6km, mb4.0/1, MN3.4(TEH), After TEH,*

ISC 23 22:28:38.1±2.5, 2754N±008×5524E±005, h16km±18km, n28, σ1s01/36, mb3.8/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLWS		**4.95**	**238**	P	**Pn**	**22 29 52.5**	**+0.9**
BTHS		**5.27**	**230**	P	**Pn**	**22 29 55.9**	**-0.2**
BOQSS		**5.50**	**254**	P	**Pn**	**22 30 00.3**	**+1.0**
KFJS		**6.49**	**277**	P	**Pn**	**22 30 14.9**	**+2.0**
QRN	**Al-Qurain**	**6.57**	**282**	*e*P	**Pn**	**22 30 14.0**	**0.0**
QRN				*e*S	**Sn**	**22 31 29.4**	**+0.8**
QRN				AML	AML	22 31 31.5	
	comp=Z,6.7nm,0.2s						
KBD	**Kabd**	**6.84**	**286**	*e*P	**Pn**	**22 30 17.6**	**-0.2**
KBD				*e*S	**Sn**	**22 31 35.5**	**+0.2**
RDF	**Al-Radifah**	**6.92**	**283**	*e*P	**Pn**	**22 30 19.2**	**+0.4**
RDF				*e*S	**Sn**	**22 31 37.7**	**+0.5**
RDF				AML	AML	22 31 40.6	
	comp=Z,5.8nm,0.4s						
RDF	**Al-Radifah**	**6.92**	**283**	*e*P	**Pn**	**22 30 19.2**	**+0.4**
RDF				*e*S	**Sn**	**22 31 37.7**	**+0.5**
HRDDS		**6.96**	**230**	P	**Pn**	**22 30 19.1**	**-0.2**
NAY	**Al-Naaiem**	**7.25**	**285**	*e*P	**Pn**	**22 30 22.8**	**-0.4**
MIB	**Mutribah**	**7.30**	**290**	*e*P	**Pn**	**22 30 22.4**	**-1.5**
MIB				*e*S	**Sn**	**22 31 44.9**	**-1.5**
MIB				AML	AML	22 31 46.6	
	comp=Z,5.1nm,0.4s						
MIB	**Mutribah**	**7.30**	**290**	*e*P	**Pn**	**22 30 22.4**	**-1.5**
MIB				*e*S	**Sn**	**22 31 44.9**	**-1.5**
	comp=Z,5.1nm,0.4s						
RST	**Umm Al-Ruwaisa**	**7.51**	**287**	*e*P	**Pn**	**22 30 26.4**	**-0.4**
RST				*e*S	**Sn**	**22 31 51.3**	**-0.4**
RST				AML	AML	22 31 51.7	
	comp=Z,4.9nm,0.5s						
RST	**Umm Al-Ruwaisa**	**7.51**	**287**	*e*P	**Pn**	**22 30 26.4**	**-0.4**
RST				*e*S	**Sn**	**22 31 51.3**	**-0.3**
	comp=Z,4.9nm,0.5s						
ASYS		**9.67**	**272**	S	**Sn**	**22 32 39.8**	**-5.1**
ASYS		**9.67**	**272**	P	**Pn**	**22 30 54.4**	**-2.1**
AML	**Almayashu**	**20.95**	**41**	*e*P	**P**	**22 33 19.1**	**-1.0**
	comp=Z,4.6nm,0.6s						
AML	**Almayashu**	**20.95**	**41**	*e*P	**P**	**22 33 19.1**	**-1.0**
	comp=Z,4.6nm,0.6s						
AKTK	**Aktyubinsk**	**22.96**	**5**	P	**P**	**22 33 42.6**	**+1.1**
AKTO	**Aktyubinsk**	**22.96**	**5**	P	**P**	**22 33 42.6**	**+1.1**
	comp=Z,0.5nm,0.3s,mb3.4,baz=211,slow=18,SNR=3.7						

MK31	**Makanchi Array**	**28.66**	**41**	*e*P		**P**	**22 34 33.4**	**-0.5**
MK31	**Makanchi Array**	**28.66**	**41**	*e*P		**P**	**22 34 33.3**	**-0.6**
MKAR	**Makanchi Array**	**28.66**	**41**	P		**P**	**22 34 33.4**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.5,baz=224,slow=7.7,SNR=7.5							
FINES	**FINESS Array B**	**39.11**	**338**	P		**P**	**22 36 07.2**	**+2.9**
	comp=Z,1.5nm,0.8s,mb3.8,baz=141,slow=12,SNR=4.7							
KEST	**Kesra**	**39.62**	**294**	P		**P**	**22 36 12.9**	**+4.0**
	comp=Z,2.0nm,1.1s,mb3.8,baz=48,slow=12,SNR=5.2							
TORD	**Torodi Ar. Bea**	**51.83**	**265**	P		**P**	**22 37 44.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**51.83**	**265**	P		**P**	**22 37 44.9**	**-0.8**
	comp=Z,1.0nm,0.5s,mb4.0,baz=62,slow=6.5,SNR=24							
BOSA	**Boshof**	**62.80**	**210**	P		**P**	**22 39 02.6**	**-0.1**
	comp=Z,1.4nm,0.6s,mb4.3,baz=54,slow=6.3,SNR=5.9							

SZGRF ***23*** *22:30:52.6, 1938S×17808W, h643km, Fiji Islands region*
ISCJB ***23*** *22:30:53.2±0.6, 1898S±003×17843W±003, h603km±7km, mb5.4/97, Error ellipse: s-maj=5.6km s-min=3.2km az=152.9*
BJI ***23*** *22:30:53.7, 1858S×178.15W, h608km, mB4.8, mb5.3*
MOS ***23*** *22:30:54.3±1.2, 1882S×17838W, h608km, mb5.4/21, Error ellipse: s-maj=9.4km s-min=9.2km az=140.1*
BGS ***23*** *22:30:55.9, 1886S×17837W, h613km, mb5.6(NEIC)*
GCMT ***23*** *22:30:55.2±0.2, 1887S×17824W, h645km±1km, MW5.8/91, Moment Tensor Solution. s91,c177; s20,c20; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr=0.94±.06; Mθθ=5.84±.09; Mϕϕ=-4.91±.09; Mrθ=0.33±.09; Mϕr=-1.73±.09; Mθr=-1.58±.09; Best double couple: Mo=5.91300×10^17 NP1:ϕs=323.00000°, δ=81.00000°, λ=-16.00000°. NP2: ϕs=55.00000°, δ=74.00000°, λ=-171.00000°. Principal axes: T 6.1590, Plg5.0000°, Azm10.0000°; N -0.5000, Plg72.0000°, Azm114.0000°; P -5.6660, Plg18.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
NEIC ***23*** *22:30:55.2±0.5, 1886S×17837W, h613km±6km, mb5.6/46 Error ellipse: s-maj=7.0km s-min=4.6km az=156.0*
IDC ***23*** *22:30:55.1±0.8, 1893S×17842W, h612km±8km, mb4.7/23, mb1 4.6/25, mb1mx4.6/25, mbtmp4.7/25, Error ellipse: s-maj=8.6km s-min=7.4km az=152.0*
ISC 23 22:30:54.9±0.6**, 1895S**±003×**17840W**±003, **h607**km±7km, **h611**km±3.9km**; pP-P, n927, c0°66/**593**, mb5.4/96, 178C-181D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.10**	**53**	⇓*i*P			**P**	**22 32 55.0**	**-0.4**
	697nm,0.9s								
AFI	**Afiamalu**	**8.10**	**53**	⇓*i*P			**P**	**22 32 55.0**	**-0.4**
AFI					pmax	pmax			
	comp=Z,697nm,0.9s								
RAO	**Raoul Island**	**10.26**	**178**	⇑*e*P			**P**	**22 33 16.0**	**-0.2**
	comp=Z,768nm,0.4s								
RAO					*e*S		**S**	**22 35 13.6**	**+1.3**
RAO	**Raoul Island**	**10.26**	**178**	⇑*e*P			**P**	**22 33 16.0**	**-0.2**
RAO					*e*S		**S**	**22 35 13.6**	**+1.4**
RAO					pmax	pmax			
	comp=Z,768nm,0.4s								
FUNA	**Funafuti**	**10.62**	**347**	⇑*i*P			**P**	**22 33 19.7**	**-0.3**
	comp=Z,2μm,1.0s								
DZM	**Mont Dzumac**	**14.53**	**255**	*e*P			**P**	**22 34 00.1**	**+1.6**
DZM					*e*S		**S**	**22 36 28.4**	**0.0**
RAR	**Rarotonga**	**17.64**	**100**	P			**P**	**22 34 25.7**	**-1.3**
	comp=Z,2.8nm,0.3s,baz=248,slow=7.0,SNR=38								
OUZ	**Omahuta**	**17.69**	**202**	PN			**P**	**22 34 30.9**	**+3.8**
WCZ	**Waipu Caves**	**18.09**	**199**	⇑PN			**P**	**22 34 34.5**	**+3.7**
	comp=Z,886nm,0.6s								
MXZ	**Matakaoa Point**	**18.76**	**188**	PN			**P**	**22 34 36.3**	**-0.7**
PUZ	**Puketiti**	**19.27**	**188**	PN			**P**	**22 34 41.1**	**-0.4**
PUZ					*e*SN		**S**	**22 37 40.6**	**-4.4**
URZ	**Urewera**	**19.63**	**191**	P			**P**	**22 34 43.6**	**-1.2**
	comp=Z,64nm,0.3s,baz=20,slow=4.3,SNR=157								
URZ					S		**S**	**22 37 44.1**	**-6.5**
	comp=Z,2.0nm,0.3s,baz=24,slow=20,SNR=6.1								
URZ					ScS	ScS		22 44 51.5	-5.8
	comp=Z,0.8nm,0.3s,baz=158,slow=23,SNR=18								
URZ	**Urewera**	**19.63**	**191**	*e*PN			**P**	**22 34 42.7**	**-2.1**
MWZ	**Matawai**	**19.64**	**190**	*e*PN			**P**	**22 34 43.6**	**-1.2**
MWZ					*e*SN		**S**	**22 37 44.8**	**-5.9**
KNZ	**Kokohu**	**20.29**	**189**	PN			**P**	**22 34 50.5**	**-0.1**
HIZ	**Hauiti**	**20.36**	**195**	*e*PN			**P**	**22 34 52.8**	**+1.5**
BKZ	**Black Stump Fm**	**20.62**	**191**	PN			**P**	**22 34 52.1**	**-1.6**
BKZ					*e*SN		**S**	**22 37 58.8**	**-7.5**
FWVZ	**Far West T-bar**	**20.90**	**193**	*e*PN			**P**	**22 34 55.9**	**-0.2**
WAZ	**Wanganui**	**21.50**	**194**	*e*PN			**P**	**22 35 00.3**	**-1.2**
BFZ	**Birch Farm**	**22.14**	**191**	*e*PN			**P**	**22 35 06.1**	**-1.1**
BFZ					pP			22 36 20.5	
BFZ					sP		sP	22 37 47.1	+2.8
BFZ					*e*SN		**S**	**22 38 24.8**	**-5.4**
MRZ	**Mangatainoka R**	**22.25**	**192**	*e*PN			**P**	**22 35 06.5**	**-1.6**
MRZ					pP			22 36 20.7	
MRZ					*e*SN		**S**	**22 38 25.7**	**-6.1**
KIW	**Kapiti Island**	**22.58**	**193**	*e*PN			**P**	**22 35 09.8**	**-1.3**
DUWZ	**D'Urville Isla**	**22.75**	**195**	PN			**P**	**22 35 11.9**	**-0.7**
CAW	**Cannon Point**	**22.77**	**193**	PN			**P**	**22 35 12.0**	**-0.9**
MRW	**Makara Radio**	**22.97**	**193**	PN			**P**	**22 35 13.8**	**-0.8**
HNR	**Honiara**	**23.00**	**291**	P			**P**	**22 35 14.7**	**-0.6**
	comp=Z,196nm,0.6s,mb5.9,baz=99,slow=2.6,SNR=5.0								
TCW	**Tory Channel**	**23.05**	**194**	PN			**P**	**22 35 14.8**	**-0.5**
QRZ	**Quartz Range**	**23.15**	**198**	PN			**P**	**22 35 17.1**	**+0.9**
QRZ					*e*SN		**S**	**22 38 43.1**	**-2.9**
NNZ	**Nelson**	**23.28**	**196**	PN			**P**	**22 35 16.7**	**-0.7**
TUWZ	**Tuamarina**	**23.34**	**195**	*e*PN			**P**	**22 35 17.3**	**-0.6**
THZ	**Tophouse**	**23.91**	**196**	PN			**P**	**22 35 22.4**	**-0.5**
THZ					pP			22 36 54.6	
THZ					*e*SN		**S**	**22 38 51.5**	**-6.6**
DSZ	**Denniston Nort**	**24.20**	**198**	PN			**P**	**22 35 26.2**	**+0.6**
KHZ	**Kahutara**	**24.37**	**195**	⇑PN			**P**	**22 35 26.4**	**-0.6**
KHZ					*e*SN		**S**	**22 39 01.2**	**-4.0**
LTZ	**Lake Taylor**	**25.03**	**196**	PN			**P**	**22 35 32.1**	**-0.7**
MQZ	**McQueen's Vall**	**25.80**	**195**	*e*PN			**P**	**22 35 38.9**	**-0.6**
RPZ	**Rata Peaks**	**26.23**	**197**	P			**P**	**22 35 42.8**	**-0.6**
	comp=Z,55nm,0.3s,mb5.6,baz=242,slow=3.2,SNR=51								
RPZ					S		**S**	**22 39 29.3**	**-5.0**
	comp=Z,65nm,0.9s,baz=159,slow=18,SNR=4.1								
RPZ					ScS	ScS		22 45 21.9	-1.2
	comp=Z,7.2nm,0.6s,baz=26,slow=13,SNR=3.6								
RPZ	**Rata Peaks**	**26.23**	**197**	*e*PN			**P**	**22 35 42.1**	**-1.2**
FOZ	**Fox Glacier**	**26.51**	**200**	*e*PN			**P**	**22 35 44.7**	**-1.0**
LBZ	**Lake Benmore**	**27.10**	**198**	PN			**P**	**22 35 49.6**	**-1.3**
LBZ					pP			22 37 11.1	
JCZ	**Jackson Bay**	**27.26**	**200**	PN			**P**	**22 35 52.5**	**+0.1**
TBI	**Tubuai**	**27.32**	**104**	⇓*i*P			**P**	**22 35 53.8**	**+0.6**
	comp=Z,530nm,1.0s,mb6.1								
TBI					*e*pP			22 37 25.1	
	comp=Z,318nm,1.2s								
PAE	**Paea**	**27.38**	**92**	⇓*i*P			**P**	**22 35 53.4**	**-0.4**
	comp=Z,782nm,1.2s,mb6.2								
PAE	**Paea**	**27.38**	**92**	⇓*i*P			**P**	**22 35 53.4**	**-0.4**
PAE					pmax	pmax			
	comp=Z,782nm,1.2s,mb6.2								
PPT	**Papeete**	**27.40**	**92**	⇓*i*P			**P**	**22 35 53.9**	**0.0**
	comp=Z,418nm,1.3s,mb5.9								
PPT					*e*pP			22 37 25.3	
	comp=Z,121nm,1.6s								
PPT					*e*ScP	ScP		22 41 36.6	+0.5
	comp=Z,60nm,1.4s								
PPT	**Papeete**	**27.40**	**92**	P			**P**	**22 35 53.8**	**-0.1**
	comp=Z,128nm,0.5s,mb5.8,baz=238,slow=6.5,SNR=28								
PPT					ScP	ScP		22 41 36.3	+0.2
	comp=Z,19nm,0.3s,baz=225,slow=1.4,SNR=3.6								
ODZ	**Otahua Downs**	**27.57**	**197**	*e*PN			**P**	**22 35 54.7**	**-0.3**
TVO	**Taravao**	**27.68**	**92**	⇓*i*P			**P**	**22 35 56.2**	**-0.2**
	comp=Z,531nm,1.3s,mb6.0								
TVO					*e*pP			22 37 26.5	
	comp=Z,297nm,1.5s								
WKZ	**Wanaka**	**27.85**	**199**	PN			**P**	**22 35 57.1**	**-0.4**
EAZ	**Earnscleugh**	**28.13**	**199**	PN			**P**	**22 35 59.8**	**0.0**
MLZ	**Mavora Lakes**	**28.59**	**200**	⇑PN			**P**	**22 36 05.0**	**+1.2**
TUZ	**Tuapeka**	**28.69**	**198**	PN			**P**	**22 36 05.5**	**+0.8**
MEH	**Mehetia**	**28.79**	**93**	⇓*i*P			**P**	**22 36 05.6**	**-0.4**
	comp=Z,164nm,1.1s,mb5.6								
EIDS	**Eidsvold**	**28.93**	**252**	⇓*i*P			**P**	**22 36 08.2**	**+1.1**
	comp=Z,127nm,0.9s,mb5.5								
DCZ	**Deep Cove**	**29.04**	**201**	PN			**P**	**22 36 08.7**	**+1.0**
WHZ	**Wether Hill Ro**	**29.14**	**200**	PN			**P**	**22 36 09.5**	**+0.9**
PMOR	**Pomariorio Ree**	**29.42**	**87**	⇓*i*P			**P**	**22 36 11.3**	**-0.2**
	comp=Z,527nm,1.2s,mb6.0								
PMOR					*e*ScP	ScP		22 41 43.3	+0.7
	comp=Z,108nm,1.1s								
ARMA	**Armidale**	**29.43**	**241**	⇓*i*P			**P**	**22 36 13.9**	**+2.5**
ARMA					*e*S		**S**	**22 40 26.1**	**+1.7**
ARMA					*e*SCP	ScP		22 41 43.1	+0.7
ARMA					*e*SCS	ScS		22 45 43.9	+5.3
VAH	**Vaihoa**	**29.63**	**88**	⇓*i*P			**P**	**22 36 12.7**	**-0.5**
	comp=Z,366nm,1.0s,mb6.0								
VAH					*e*pP			22 37 42.6	
	comp=Z,125nm,1.1s								
APZ	**The Paps**	**29.97**	**199**	⇑PN			**P**	**22 36 16.8**	**+1.1**
	comp=Z,199nm,0.7s,mb5.9								
RIV	**Riverview**	**30.89**	**235**	*e*P			**P**	**22 36 25.8**	**+2.0**
CNB	**Canberra Magne**	**32.80**	**234**	*e*P			**P**	**22 36 42.2**	**+2.2**
	comp=Z,386nm,0.9s,mb6.0								
CNB					*e*S		**S**	**22 41 16.7**	**+1.0**
CNB					*e*SCP	ScP		22 41 55.0	+1.3
CTA	**Charters Tower**	**33.29**	**262**	⇓*i*P			**P**	**22 36 45.7**	**+1.4**
	comp=Z,820nm,0.7s,mb6.5								
CTA					*e*S		**S**	**22 41 20.0**	**-3.5**
CTA					*e*SCP	ScP		22 41 55.7	0.0
CTA					*e*sS	sS		22 44 29.9	+3.4
CTA					*e*SCS	ScS		22 45 59.2	+0.5
CTA	**Charters Tower**	**33.29**	**262**	⇓*i*P			**P**	**22 36 45.7**	**+1.4**
CTA					*e*S		**S**	**22 41 20.0**	**-3.5**
CTA					*e*			22 45 59.2	
CTA					pmax	pmax			
	comp=Z,820nm,0.7s								
CTA	**Charters Tower**	**33.29**	**262**	ScP		ScP		22 41 56.1	+0.3
	comp=Z,74nm,0.9s,baz=89,slow=2.7,SNR=11								
TAU	**Tasmania Unive**	**37.48**	**223**	*e*P			**P**	**22 37 19.8**	**+1.3**
	comp=Z,65nm,1.1s,mb5.1								
TAU	**Tasmania Unive**	**37.48**	**223**	*e*P			**P**	**22 37 19.8**	**+1.4**
TAU					pmax	pmax			
	comp=Z,65nm,1.1s,mb5.1								
STKA	**Stephens Creek**	**38.14**	**242**	⇓*i*P			**P**	**22 37 26.0**	**+2.0**
	comp=Z,526nm,0.9s,mb6.1								
STKA					*e*SCP	ScP		22 42 35.7	+22
STKA	**Stephens Creek**	**38.14**	**242**	⇓*i*P			**P**	**22 37 26.0**	**+2.0**
	comp=Z,533nm,0.8s,mb6.1								
STKA					*e*S		**S**	**22 42 35.4**	**+0.1**
STKA	**Stephens Creek**	**38.14**	**242**	P			**P**	**22 37 25.9**	**+1.9**
	comp=Z,276nm,0.5s,mb6.0,baz=91,slow=9.4,SNR=392								
STKA					ScP	ScP		22 42 13.8	+0.3
	comp=Z,21nm,0.9s,baz=333,slow=3.3,SNR=4.0								
STKA					S		**S**	**22 42 35.0**	**-0.3**
	comp=Z,53nm,1.0s,baz=277,slow=17,SNR=9.5								
TAOE	**Nuku Hiva Isla**	**38.39**	**80**	⇓*i*P			**P**	**22 37 26.2**	**-0.1**
	comp=Z,1μm,1.0s,mb6.4								
TAOE					*e*pP			22 39 04.4	
	comp=Z,487nm,1.3s								
RKT	**Rikitea**	**40.64**	**104**	⇓*i*P			**P**	**22 37 44.3**	**+0.2**
	comp=Z,354nm,1.1s,mb5.8								
RKT	**Rikitea**	**40.64**	**104**	⇓*i*P			**P**	**22 37 44.3**	**+0.2**
RKT					pmax	pmax			
	comp=Z,354nm,1.1s,mb5.8								
WB2	**Warramunga Arr**	**44.45**	**261**	⇓*i*P			**P**	**22 38 14.0**	**+0.2**
WB2					*e*SCP	ScP		22 42 38.8	-0.2
WB2					*e*S		**S**	**22 44 02.2**	**-3.9**
WB2					*e*SCS	ScS		22 47 04.3	-0.8
WRA	**Warramunga Arr**	**44.46**	**261**	P			**P**	**22 38 14.4**	**+0.5**
WRA								22 39 43.7	
WRA					S		**S**	**22 44 02.3**	**-4.0**
WRA								22 47 05.0	
WRA	**Warramunga Arr**	**44.46**	**261**	P			**P**	**22 38 14.4**	**+0.5**
	comp=Z,460nm,0.6s,mb6.2,baz=97,slow=8.0,SNR=1478								
WRA					PcP	PcP		22 39 43.7	-0.2
	comp=Z,45nm,0.8s,baz=94,slow=4.0,SNR=5.3								
WRA					ScP	ScP		22 42 38.8	-0.2
	comp=Z,33nm,0.9s,baz=92,slow=4.3,SNR=12								
WRA					S		**S**	**22 44 02.3**	**-4.0**
	comp=Z,24nm,0.8s,baz=97,slow=14,SNR=12								
WRA					ScS	ScS		22 47 05.0	-0.2
	comp=Z,8.1nm,1.0s,baz=90,slow=7.9,SNR=5.7								
ASAR	**Alice Springs**	**44.52**	**255**	P			**P**	**22 38 15.3**	**+1.0**
ASAR								22 39 43.7	
ASAR					S		**S**	**22 44 05.7**	**-1.4**
ASAR								22 47 04.9	
ASAR	**Alice Springs**	**44.52**	**255**	P			**P**	**22 38 15.2**	**+0.9**
	comp=Z,861nm,0.7s,mb6.4,baz=87,slow=8.1,SNR=4610								
ASAR					PcP	PcP		22 39 43.7	-0.4
	comp=Z,48nm,0.7s,baz=94,slow=3.9,SNR=5.6								
ASAR					ScP	ScP		22 42 39.1	-0.1
	comp=Z,24nm,0.8s,baz=109,slow=4.0,SNR=8.1								
ASAR					S		**S**	**22 44 05.7**	**-1.4**
	comp=Z,87nm,0.7s,baz=91,slow=16,SNR=36								
ASAR					ScS	ScS		22 47 04.8	-0.6
	comp=Z,10nm,0.9s,baz=96,slow=6.9,SNR=7.6								
POHA	**Pohakuloa**	**44.53**	**31**	*e*P			**P**	**22 38 13.1**	**-1.3**
	comp=Z,298nm,0.9s,mb5.8								
KAKA	**Kakadu**	**47.58**	**270**	*e*P			**P**	**22 38 37.7**	**+0.2**
	comp=Z,865nm,0.5s,mb6.5								
KAKA					*e*S		**S**	**22 44 48.6**	**-1.1**
FORT	**Forrest**	**49.57**	**245**	⇓*i*P			**P**	**22 38 52.1**	**+0.1**
	comp=Z,744nm,0.7s,mb6.2								
FORT					*e*S		**S**	**22 45 13.6**	**-2.9**
FITZ	**Fitzroy Crossi**	**52.87**	**261**	⇓*i*P			**P**	**22 39 16.4**	**+0.5**
	comp=Z,321nm,0.5s,mb5.9								
FITZ					*e*PCP	PcP		22 40 10.2	-4.7
FITZ					*e*S		**S**	**22 46 00.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.87**	**261**	S			**S**	**22 46 00.8**	**0.0**
	comp=Z,7.9nm,1.1s,baz=158,slow=18,SNR=5.8								
BATI	**Kupang**	**56.53**	**270**	S			**S**	**22 46 52.1**	**+3.6**
	comp=Z,6.4nm,0.3s,baz=327,slow=12,SNR=6.2								
KLBR	**Kellerberrin**	**58.38**	**244**	⇓*i*P			**P**	**22 39 53.5**	**-0.2**
	comp=Z,417nm,0.6s,mb5.7								
KLBR					*e*S		**S**	**22 47 07.6**	**-3.9**
VNDA	**Vanda**	**59.41**	**185**	P			**P**	**22 40 01.4**	**+1.6**
VNDA	**Vanda**	**59.41**	**185**	P			**P**	**22 40 01.4**	**+1.6**
	baz=1.7,slow=13								
CBIJ	**Chichi jima**	**59.63**	**319**	P			**P**	**22 40 01.4**	**-0.6**
	comp=Z,107nm,0.8s,mb5.1,baz=245,slow=6.8,SNR=8.6								
MUN	**Mundaring**	**59.66**	**244**	⇓*i*P			**P**	**22 40 02.5**	**+0.2**
MATI	**Mati**	**60.29**	**290**	*e*P			**P**	**22 40 04.9**	**-1.8**
BUKP	**Musuan**	**61.77**	**290**	*e*P			**P**	**22 40 16.5**	**+0.2**
KAPI	**Kappang**	**61.77**	**275**	P			**P**	**22 40 15.4**	**-1.0**
	comp=Z,973nm,0.7s,mb6.1,SNR=10								
SCPH	**Surigao**	**62.24**	**292**	*e*P			**P**	**22 40 18.9**	**-0.5**
CGP	**Cagayan de Oro**	**62.35**	**291**	⇓*e*P			**P**	**22 40 20.7**	**+0.6**
MSLP	**Maasin**	**62.96**	**292**	*e*P			**P**	**22 40 23.8**	**-0.1**
BESP	**Borongan**	**63.13**	**294**	*e*P			**P**	**22 40 25.7**	**+0.6**
PAGZ	**Pagadian**	**63.25**	**289**	*e*P			**P**	**22 40 26.2**	**+0.4**
PLP	**Palo**	**63.33**	**294**	*e*P			**P**	**22 40 24.9**	**-1.4**
OCLP	**Ormoc**	**63.59**	**293**	*e*P			**P**	**22 40 27.9**	**-0.2**
TBP	**Tabilaran**	**63.63**	**291**	*e*P			**P**	**22 40 28.1**	**-0.1**
CNP	**Catarman**	**64.23**	**295**	*e*P			**P**	**22 40 32.0**	**-0.1**
PVCP	**Virac**	**65.18**	**295**	*e*P			**P**	**22 40 38.2**	**+0.2**
CASY	**Casey**	**65.20**	**205**	*e*P			**P**	**22 40 37.9**	**+0.7**
JHJ	**Hachijo jima 2**	**65.39**	**322**	P			**P**	**22 40 38.7**	**-0.3**
	comp=Z,239nm,0.3s,mb6.0,baz=156,slow=5.2,SNR=10								
OTRP	**Odiongan**	**66.44**	**293**	*e*P			**P**	**22 40 45.0**	**-0.9**
TSM	**Tawau**	**66.81**	**283**	⇑P			**P**	**22 40 48.8**	**+0.7**
BUSP	**Coron**	**67.88**	**292**	*e*P			**P**	**22 40 54.4**	**-0.2**
SDKM	**Sandakan**	**67.95**	**284**	⇓P			**P**	**22 40 54.3**	**-0.8**
ENPP	**El Nido**	**68.21**	**291**	*e*P			**P**	**22 40 56.7**	**0.0**
BALP	**Baler**	**68.38**	**296**	*e*P			**P**	**22 40 57.3**	**-0.4**
LUBP	**Lubang**	**68.60**	**294**	*e*P			**P**	**22 40 57.5**	**-1.5**
BATP	**Bataraza**	**68.65**	**288**	*e*P			**P**	**22 40 59.5**	**+0.1**
CAUP	**Cauayan**	**68.74**	**297**	*e*P			**P**	**22 41 00.4**	**+0.6**
MJAR	**Matsushiro Arr**	**68.74**	**324**	P			**P**	**22 40 58.7**	**-0.7**
	comp=Z,61nm,0.7s,mb5.1,baz=157,slow=5.9,SNR=174								
MAT	**Matsushiro**	**68.75**	**324**	P			**P**	**22 40 58.8**	**-0.6**
MAT					S		S	22 49 14.0	-1.9
KDM	**Kudat**	**68.78**	**286**	⇑P			**P**	**22 41 00.4**	**+0.3**
JOW	**Kunigami**	**68.89**	**310**	P			**P**	**22 41 01.1**	**+0.6**
	comp=Z,119nm,0.7s,mb5.4,baz=147,slow=5.1,SNR=30								
KKM	**Kota Kinabalu**	**69.00**	**284**	⇓*i*P			**P**	**22 41 01.7**	**+0.3**
KKM	**Kota Kinabalu**	**69.00**	**284**	⇑P			**P**	**22 41 01.8**	**+0.4**
ERM	**Erimo**	**70.30**	**331**	*e*P			**P**	**22 41 08.0**	**-0.4**
	comp=Z,25nm,1.0s,mb4.6								
ERM	**Erimo**	**70.30**	**331**	*e*P			**P**	**22 41 08.0**	**-0.5**
ERM					pmax	pmax			
	comp=Z,25nm,1.0s,mb4.6								
BTM	**Bintulu**	**70.84**	**280**	⇓P			**P**	**22 41 13.0**	**+0.7**
JNU	**Nakatsue**	**70.89**	**317**	P			**P**	**22 41 11.9**	**-0.3**
	comp=Z,46nm,0.9s,mb5.0,baz=73,slow=7.6,SNR=12								
QSPA	**South Pole Qui**	**71.11**	**180**	⇑*i*P			**P**	**22 41 13.9**	**+1.2**
	comp=Z,157nm,0.9s,mb5.5								
SBUM	**Sibu**	**71.38**	**279**	⇓P			**P**	**22 41 16.3**	**+0.8**
ASAJ	**Asahikawa**	**72.19**	**332**	P			**P**	**22 41 20.6**	**+1.1**
	comp=Z,56nm,0.8s,mb5.1,baz=202,slow=7.6,SNR=44								
NACB	**Ninganchiao**	**72.50**	**304**	⇓*i*P			**P**	**22 41 20.6**	**-1.1**
KSM	**Kuching**	**72.83**	**278**	⇓*i*P			**P**	**22 41 24.3**	**+0.5**
KSM	**Kuching**	**72.83**	**278**	⇓P			**P**	**22 41 24.5**	**+0.6**
YHNB	**Yeheng**	**72.92**	**304**	⇓*i*P			**P**	**22 41 23.1**	**-1.0**
XMIS	**Christmas Isla**	**73.48**	**264**	⇓*e*P			**P**	**22 41 27.6**	**0.0**
YSS	**Yuzh-Sakhalins**	**74.35**	**334**	⇓*i*P			**P**	**22 41 33.0**	**+1.4**
YSS					*i* S		S	22 50 20.0	+2.0
YSS					*e*			22 50 47.0	
YSS					pmax	pmax			
	comp=Z,90nm,1.0s,mb5.2								
YSS					smax				
	comp=E,2μm,8.0s								
PET	**Petropavlovsk**	**74.38**	**346**	⇑*i*P			**P**	**22 41 30.5**	**-1.2**
PET					*e*			22 41 42.6	
PET					*e**PP	pP		22 43 39.0	+2.8
PET					*i* S	S		22 50 15.1	-3.0
PET					*e*SS	SS		22 55 18.6	-4.0
PET					*e*SSS			22 58 39.9	
PET					pmax	pmax			
	comp=Z,30nm,0.5s,mb5.1								
PET					MLR	MLR			
	comp=Z,100nm,19.0s								
QZH	**Quanzhou**	**75.25**	**303**	⇓*i*P			**P**	**22 41 39.9**	**+2.7**
QZH					S	S		22 50 30.3	+1.7
QZH					XS	sS		22 54 12.5	+1.4
QZH					AMB	AMB			
	comp=Z,420nm,1.0s,mb5.9								
QZH					AMB	AMB			
	comp=Z,1μm,3.2s								
KSRS	**Korea Array**	**75.48**	**319**	P			**P**	**22 41 38.9**	**+0.7**
	comp=Z,17nm,0.9s,mb4.6,baz=138,slow=6.2,SNR=40								
KSRS					PP	PP		22 44 41.5	+2.3
	comp=Z,2.2nm,0.8s,baz=140,slow=7.6,SNR=4.2								
SDPT	**Sand Point**	**75.56**	**10**	*e*P			**P**	**22 41 36.3**	**-1.9**
	comp=Z,190nm,0.5s,mb5.8								
SSE	**Sheshan**	**76.41**	**310**	P			**P**	**22 41 43.3**	**-0.1**
SSE					XP	sP		22 44 51.3	+0.7
SSE					S	S		22 50 41.4	+0.6
SSE					AMB	AMB			
	comp=Z,79nm,0.7s,mb5.2								
SSE					AMB	AMB			
	comp=Z,149nm,7.8s								
SNCC	**San Nicolas Is**	**76.48**	**48**	⇓P			**P**	**22 41 43.8**	**0.0**
	baz=77								
FARB	**Farallon Islan**	**76.72**	**42**	⇓P			**P**	**22 41 45.2**	**+0.2**
	baz=77,SNR=5.1								
BSC	**Santa Cruz Isl**	**76.82**	**47**	⇓P			**P**	**22 41 45.9**	**+0.2**
	baz=77,SNR=11								
CHGN	**Chignik**	**76.83**	**11**	*e*P			**P**	**22 41 43.3**	**-1.9**
V03C	**Hunter Liggett**	**76.88**	**44**	P			**P**	**22 41 46.5**	**+0.5**
	baz=77,SNR=7.5								
HAST	**UC Hastings Re**	**76.89**	**44**

NJ2 AMB AMB
comp=Z,270nm,6.6s
O03C **Acorn Hollow,** 78.70 41 ⇑P P 22 41 55.3 -0.2
baz=79,SNR=13
HELL **Mitchell Peak,** 78.72 45 P P 22 41 55.3 -0.4
baz=79,SNR=40
WDC **Whiskeytown Da** 78.73 40⇑*iP* P 22 41 55.6 -0.1
comp=Z,104nm,1.2s,mb5.0
WDC **Whiskeytown Da** 78.73 40⇑*iP* P 22 41 55.6 -0.1
WDC pmax pmax
comp=Z,104nm,1.2s,mb5.0
WDC **Whiskeytown Da** 78.73 40 P P 22 41 55.9 +0.2
baz=79,SNR=29
ORV **Oroville** 78.77 41 P P 22 41 55.8 -0.1
baz=79,SNR=53
LAVA **Lava Cap Winer** 78.78 42 ⇑P P 22 41 55.8 -0.2
baz=79
PFO **Pinyon Flat Ob** 78.84 49 P P 22 41 56.0 -0.5
comp=Z,186nm,1.1s,mb5.3,SNR=9.6
PFO **Pinyon Flat Ob** 78.84 49 P P 22 41 56.5 +0.1
comp=Z,24nm,0.9s,mb4.5,baz=259,slow=4.1,SNR=22
PFO **Pinyon Flat Ob** 78.84 49 ⇓P P 22 41 56.6 +0.1
baz=79,SNR=14
BBRC **Big Bear Sol-O** 78.85 48 ⇑P P 22 41 56.6 +0.1
baz=79
KCC **Kaiser Creek** 78.89 44 P P 22 41 56.7 +0.1
baz=79,SNR=38
HABR **Khabarovsk** 78.92 331⇑*iP* P 22 41 57.2 +0.7
HABR *e* 22 41 59.3
HABR *e* 22 45 05.6
HABR *e*S S 22 51 07.4 +1.2
HABR *e* 22 51 22.4
HABR *e*SS SS 22 56 28.6 -1.7
HABR pmax pmax
comp=Z,93nm,1.0s,mb5.1
LPIG **La Paz** 78.96 60 P P 22 41 57.9 +0.7
comp=Z,25nm,0.5s,mb4.8,baz=40,slow=0.4,SNR=5.7
K01A **Sixes** 78.96 37 ⇓P P 22 41 57.0 +0.1
baz=79
SWSC **Sam W. Stewart** 78.96 50 ⇓P P 22 41 57.1 0.0
baz=79,SNR=21
LRMC **Laurel Mountai** 78.97 46 P P 22 41 57.4 +0.3
baz=79,SNR=26
MYKOM **Kota Tinggi** 79.00 276 ⇑P P 22 41 58.2 +0.4
M02C **Callahan** 79.04 39 ⇑P P 22 41 58.0 +0.7
baz=79,SNR=40
MDJ **Mudanjiang** 79.04 325 P P 22 41 57.8 +0.6
MDJ AP pP 22 44 02.8 -1.0
MDJ XP sP 22 45 04.3 -0.9
MDJ S S 22 51 08.8 +1.2
MDJ SCS ScS 22 51 25.1 +0.4
MDJ AMB AMB
comp=Z,97nm,1.4s,mb4.9
MDJ AMB AMB
comp=Z,133nm,4.7s
L02A **Cave Junction** 79.06 38 ⇓P P 22 41 57.7 +0.3
baz=79,SNR=14
RRX **Edison Barstow** 79.12 47 ⇑P P 22 41 57.7 -0.3
baz=79
R05C **Kirkwood Meado** 79.18 43 ⇑P P 22 41 58.1 -0.1
baz=79,SNR=52
P05C **Yuba Gap, Truc** 79.18 42 P P 22 41 58.5 +0.4
baz=79,SNR=35
CWC **Cottonwood Cre** 79.22 45 ⇑P P 22 41 58.4 -0.1
baz=79,SNR=6.6
YBH **Yreka Blue Hor** 79.33 39 P P 22 41 59.5 +0.6
baz=79,SNR=68
BELC **Belle Mtn.** 79.37 49 P P 22 41 59.6 +0.4
baz=79,SNR=40
O05C **Quincy** 79.37 41 ⇓P P 22 41 59.2 +0.1
baz=80,SNR=12
MLAC **Mammoth Lakes** 79.38 44 ⇓P P 22 41 59.6 +0.4
baz=80,SNR=6.0
M03C **McCloud** 79.41 40 ⇑P P 22 41 59.4 +0.2
baz=80,SNR=48
KDAK **Kodiak Island** 79.41 14 P P 22 41 58.3 -0.6
comp=Z,64nm,0.7s,mb5.1,baz=214,slow=4.2,SNR=19
MPMC **Manual Prospec** 79.42 46 ⇓P P 22 41 59.6 +0.1
baz=80,SNR=42
TIN **Tinemaha** 79.46 45 ⇑P P 22 41 59.9 +0.2
baz=80
O04C **Chester** 79.47 41 P P 22 42 00.1 +0.4
baz=80,SNR=58
R06C **Coleville** 79.48 43 P P 22 42 00.3 +0.6
baz=80,SNR=58
GSC **Goldstone** 79.48 47 ⇑P P 22 41 59.6 -0.2
baz=80,SNR=24
R07C **Lee Vining** 79.50 44 ⇑P P 22 42 00.2 +0.4
baz=80,SNR=12
K02A **Glendale** 79.50 38 P P 22 41 60.0 +0.3
baz=80,SNR=14
HATC **Hat Creek Radi** 79.53 40 P P 22 42 00.4 +0.5
baz=80,SNR=31
HEC **Hector,Ludlow** 79.57 48 P P 22 42 00.3 0.0
baz=80,SNR=24
BC3 **Big Chuckw Mtn** 79.58 49 P P 22 42 00.7 +0.4
baz=80,SNR=25
KGM **Kluang** 79.58 276 ⇓P P 22 42 01.3 +0.4
BEKR **Beckwourth** 79.66 42 ⇑P P 22 42 00.6 0.0
baz=80,SNR=67
GLA **Glamis** 79.72 50 P P 22 42 01.8 +0.7
baz=80,SNR=43
WCN **Washoe City** 79.72 42 P P 22 42 01.5 +0.6
baz=80,SNR=28
S08C **White Mtn Res** 79.75 45 P P 22 42 01.8 +0.7
baz=80,SNR=83
J02A **Umpqua** 79.82 37 P P 22 42 01.7 +0.3
baz=80,SNR=13
P06A **Stead Airport,** 79.85 42 ⇓P P 22 42 02.1 +0.5
baz=80,SNR=6.2
ELFS **Eagle Lake Fie** 79.87 41 ⇓P P 22 42 02.0 +0.3
baz=80,SNR=44
M04C **Macdoel** 79.88 39 ⇓P P 22 42 01.9 +0.2
baz=80,SNR=29
QIZ **Qiongzhong** 79.88 294 P P 22 42 02.5 +0.3
QIZ AP pP 22 44 09.5 +0.4
QIZ XP sP 22 45 06.8 -3.7
QIZ PP PP 22 45 14.8 -0.8
QIZ S S 22 51 17.4 +0.1
QIZ AMB AMB
comp=Z,40nm,1.2s,mb4.6
QIZ AMB AMB
comp=Z,199nm,6.3s
QIZ **Qiongzhong** 79.88 294 *e*P P 22 42 01.6 -0.6
comp=Z,33nm,0.9s,mb4.7
LASM **Arnica Sink** 79.93 40 P P 22 42 02.3 +0.4
BUOR **Burton Butte** 79.93 39 P P 22 42 02.4 +0.4
GRAC **Grapevine Rang** 80.01 45 ⇓P P 22 42 02.8 +0.3
baz=80,SNR=12
GMRC **Granite Mounta** 80.01 48 P P 22 42 02.7 +0.2
baz=80,SNR=27
M05C **Lookout** 80.05 40 ⇑P P 22 42 02.8 +0.2
baz=80,SNR=49
IRM **Iron Mountain** 80.05 49 P P 22 42 03.3 +0.5
baz=80,SNR=34
FURC **Furnace Creek,** 80.07 46 P P 22 42 02.9 0.0
baz=80,SNR=14
I02A **Mapleton** 80.07 37 ⇓P P 22 42 02.9 +0.2
baz=80,SNR=9.4
Q07A **Schurz** 80.12 43 ⇓P P 22 42 03.3 +0.3
baz=80
SHOC **Shoshone** 80.16 47 ⇓P P 22 42 03.1 -0.3
baz=80,SNR=15
TUQ **Turquoise Mtn.** 80.17 47 P P 22 42 03.5 +0.1
baz=80,SNR=55
O06A **Flanigan** 80.17 42 P P 22 42 03.6 +0.3
baz=80,SNR=97
J03A **Ideyld Park** 80.18 38 ⇓P P 22 42 03.4 +0.2
baz=80,SNR=11
HOG **Hogback Mounta** 80.23 39 P P 22 42 03.9 +0.4
R08A **Mina** 80.25 44 ⇑P P 22 42 03.8 0.0
baz=80,SNR=7.7
Y12C **Blythe** 80.29 49 P P 22 42 04.5 +0.5
baz=80,SNR=31
DL2 **Dalian** 80.35 317 P P 22 42 04.4 +0.2
DL2 S S 22 51 22.5 +1.2
DL2 SS SS 22 56 53.3 +1.6
DL2 AMB AMB
comp=Z,20nm,0.7s,mb4.6
DL2 AMB AMB
comp=Z,180nm,4.6s
M06C **Likely Place G** 80.36 40 P P 22 42 04.8 +0.5
baz=80,SNR=69
I03A **Eugene** 80.37 37 P P 22 42 04.2 +0.1
baz=80,SNR=5.8
H02A **Toledo** 80.40 36 ⇓P P 22 42 04.9 +0.6
baz=80
U10A **Ash Meadows, A** 80.40 46 ⇓P P 22 42 04.7 +0.2
baz=80,SNR=12
P07A **Fallon** 80.41 43 ⇑P P 22 42 04.6 +0.1
baz=80
K04A **Chilquin** 80.44 39 ⇓P P 22 42 04.6 0.0
baz=80,SNR=5.0
S09A **Goldfield** 80.50 45 ⇑P P 22 42 04.7 -0.3
baz=81,SNR=11
N06A **Buffalo Meadow** 80.50 41 P P 22 42 05.2 +0.2
baz=81,SNR=91
J04A **Umpqua Nationa** 80.59 38 ⇓P P 22 42 05.8 +0.4
baz=81,SNR=58
L05A **Lakeview** 80.64 40 P P 22 42 06.4 +0.7
baz=81,SNR=61
Q08A **Gabbs** 80.65 44 P P 22 42 05.9 +0.1
baz=81,SNR=76
V11A **Goodsprings** 80.72 47 ⇑P P 22 42 06.4 +0.2
baz=81,SNR=57
NEE2 **Needles Airpor** 80.74 48 ⇑P P 22 42 07.1 +0.7
baz=81
TPNV **Topopah Spring** 80.74 46 ⇑P P 22 42 06.4 +0.1
baz=81
I04A **Tendick Farm,** 80.75 37 P P 22 42 06.0 -0.2
baz=81,SNR=23
O07A **Toulon** 80.77 42 P P 22 42 06.5 +0.1
baz=81,SNR=172
SNY **Shenyang** 80.78 320 ⇓P P 22 42 06.3 -0.1
SNY S S 22 51 26.1 +0.5
SNY SS SS 22 56 53.8 -4.2
SNY AMB AMB
comp=Z,35nm,0.6s,mb5.0
H03A **Soap Creek Ran** 80.79 36 ⇓P P 22 42 06.5 +0.1
baz=81,SNR=16
Y13A **Salome** 80.82 50 ⇓P P 22 42 07.3 +0.5
baz=81,SNR=34
W12A **Cal Nev Ari** 80.83 48 ⇓P P 22 42 06.9 +0.1
baz=81,SNR=6.0
PDMCI **Parker Dam,Lak** 80.84 49 ⇓P P 22 42 07.0 +0.1
baz=81,SNR=30
CN2 **Changchun** 80.85 322 *e*P P 22 42 06.6 -0.1
CN2 *e*PP PP 22 45 23.4 +0.4
CN2 *e*S S 22 51 26.4 +0.3
CN2 *e*SS SS 22 57 01.0 +2.1
CN2 AMB AMB
comp=Z,200nm,6.0s
KTGM **Kuala Trenggan** 80.87 279 ⇓P P 22 42 08.3 +0.8
MOD **Modoc** 80.88 40 P P 22 42 07.1 +0.2
baz=81,SNR=109
R09A **Tonopah** 80.88 44 P P 22 42 07.2 +0.2
baz=81,SNR=16
K05A **Summer Lake** 81.00 39 P P 22 42 08.2 +0.7
baz=81,SNR=103
KLR **Kul'dur** 81.01 330 *e*P P 22 42 03.8 -3.6
KLR *e*S S 22 51 27.5 0.0
KLR pmax pmax
comp=E,19nm,1.4s
KLR pmax pmax
comp=Z,36nm,1.4s,mb4.6
P08A **Dixie Valley** 81.02 43 ⇑P P 22 42 08.1 +0.4
baz=81,SNR=14
S10A **Tonopah Range,** 81.02 45 ⇑P P 22 42 07.9 +0.1
baz=81
U11A **Corn Creek** 81.06 47 ⇓P P 22 42 08.5 +0.5
baz=81
N07B **Gerlach** 81.06 41 ⇓P P 22 42 07.9 +0.1
baz=81,SNR=53
V12A **Nelson** 81.06 48 P P 22 42 08.2 +0.1
baz=81,SNR=16
Q09A **Carvers** 81.13 44 ⇓P P 22 42 08.4 +0.2
baz=81,SNR=14
J05A **Fort Rock** 81.13 38 P P 22 42 08.8 +0.7
baz=81,SNR=177
G03A **Yamhill** 81.19 36 ⇑P P 22 42 08.3 -0.1
baz=81,SNR=7.2
X13A **Yucca** 81.21 49 ⇑P P 22 42 09.1 +0.3
baz=81,SNR=41
WHN **Wuhan** 81.22 306 ⇓P P 22 42 09.3 +0.4
WHN AMB AMB
comp=Z,187nm,1.2s,mb5.4
Z14A **Wintersburg** 81.24 50 ⇑P P 22 42 09.4 +0.5
baz=81,SNR=27
M07A **Soldier Meadow** 81.28 41 P P 22 42 09.4 +0.5
baz=81,SNR=69
SSOR **Sweet Springs** 81.37 37 P P 22 42 09.0 -0.3
R10A **Warm Springs** 81.42 45 P P 22 42 10.4 +0.7
baz=82,SNR=40
H04A **Detroit Lake** 81.42 37 ⇑P P 22 42 09.2 -0.4
baz=82,SNR=32
F03A **Seaside** 81.42 35 ⇓P P 22 42 09.5 -0.1
baz=82,SNR=6.1
W13A **Hualapai Mount** 81.43 48 P P 22 42 10.3 +0.4
baz=82,SNR=47
K06A **Valley Falls** 81.43 39 P P 22 42 10.1 +0.4
baz=82,SNR=109
115A **Sonoran Desert** 81.44 51 ⇑P P 22 42 10.5 +0.5
baz=82,SNR=27
S11A **Rachel** 81.45 45 ⇓P P 22 42 09.9 0.0
baz=82
Y14A **Wickenburg** 81.48 50 ⇑P P 22 42 10.4 +0.2
baz=82,SNR=41
L07A **Adell** 81.53 40 P P 22 42 10.9 +0.7
baz=82,SNR=88
P09A **Austin** 81.54 43 ⇓P P 22 42 10.5 +0.1
baz=82,SNR=6.1
G04A **Mulino** 81.57 36 ⇓P P 22 42 10.0 -0.3
baz=82,SNR=11
FRIM **Kepong** 81.58 276 ⇑P P 22 42 11.1 0.0
N08A **GE Springer Mi** 81.58 42 ⇓P P 22 42 10.7 +0.2
baz=82,SNR=121
T11A **Corn Creek, Al** 81.59 46 ⇑P P 22 42 11.2 +0.5
baz=82
I05A **Bend** 81.63 38 ⇑P P 22 42 10.7 0.0
baz=82,SNR=7.8
Q10A **Clear Creek Ra** 81.64 44 ⇑P P 22 42 10.7 -0.1
baz=82
T12A **Moapa** 81.67 47 ⇓P P 22 42 11.4 +0.3
baz=82
216A **Three Points,** 81.68 52 ⇑P P 22 42 12.1 +0.8
baz=82
J06A **Christmas Vall** 81.75 39 P P 22 42 11.2 -0.1
baz=82,SNR=83
116A **Eloy** 81.77 52 ⇑P P 22 42 12.1 +0.5
baz=82,SNR=12
M08A **Happy Creek Ra** 81.80 41 ⇓P P 22 42 11.9 +0.3
baz=82,SNR=50
E03A **Lebam** 81.80 35 ⇓P P 22 42 11.5 0.0
baz=82,SNR=17
X14A **Yava** 81.82 49 P P 22 42 12.6 +0.7
baz=82,SNR=53
O09A **Fish Creek Ran** 81.85 43 P P 22 42 12.1 +0.2
baz=82,SNR=42
R11A **Troy Canyon, C** 81.92 45 ⇑P P 22 42 12.0 -0.3
baz=82
TRCR **Troy Canyon** 81.92 45 *e*P P 22 42 12.0 -0.3
H05A **Madras** 81.95 37 P P 22 42 12.2 -0.1
baz=82,SNR=19
BMN **Battle Mountai** 81.97 42 *e*P P 22 42 12.4 -0.1
comp=Z,119nm,0.9s,mb5.4
BMN **Battle Mountai** 81.97 42 *e*P P 22 42 12.4 -0.1
BMN pmax pmax
comp=Z,119nm,0.9s,mb5.4
K07A **Rock Creek Ran** 81.97 40 ⇑P P 22 42 12.6 +0.2
baz=82,SNR=116
N09A **Rock Creek Ran** 82.01 42 ⇑P P 22 42 12.8 +0.1
baz=82,SNR=39
P10A **Eureka** 82.02 43 ⇓P P 22 42 12.7 -0.1
baz=82,SNR=25
U13A **Pakoon Wash** 82.03 47 ⇑P P 22 42 13.3 +0.4
baz=82
S12A **Delamar Landin** 82.03 46 ⇑P P 22 42 13.6 +0.7
baz=82
D03A **Wishkah Elem.** 82.05 34 ⇑P P 22 42 13.2 +0.5
baz=82,SNR=6.4
F04A **Amboy** 82.05 36 ⇓P P 22 42 12.4 -0.4
baz=82,SNR=26
W14A **Seligman** 82.05 49 P P 22 42 13.8 +0.8
baz=82,SNR=123
217A **Green Valley** 82.06 53 ⇓P P 22 42 14.0 +0.9
baz=82
I06A **Prineville** 82.12 38 ⇑P P 22 42 13.6 +0.4
baz=82,SNR=63
Q11A **Duckwater** 82.14 44 P P 22 42 13.5 +0.1
baz=82,SNR=97
NLWA **Neilton Lookou** 82.17 34 ⇓P P 22 42 13.5 +0.2
baz=82,SNR=9.6
WVOR **Wild Horse Val** 82.20 40 P P 22 42 13.8 +0.2
MA2 **Magadan** 82.20 345*e*P P 22 42 10.4 -2.7
comp=Z,9.4nm,0.8s,mb4.4
MA2 **Magadan** 82.20 345*c iP* P 22 42 10.7 -2.5
MA2 *e**SP sP 22 45 28.1 +5.9
MA2 *i* S S 22 51 35.4 -3.5
MA2 *e*SP 22 52 32.1
MA2 *e* 23 00 45.2
MA2 pmax pmax
comp=Z,30nm,1.0s,mb4.8
OOW **Octopus West** 82.22 34 P P 22 42 14.2 +0.7
L08A **Fields** 82.24 41 P P 22 42 14.2 +0.4
baz=82,SNR=148
G05A **Wamic** 82.25 37 ⇓P P 22 42 13.6 -0.2
baz=82,SNR=10
E04A **Onalaska** 82.29 35 ⇑P P 22 42 14.4 +0.4
baz=82,SNR=10
X15A **Humboldt** 82.30 50 P P 22 42 15.0 +0.7
baz=82,SNR=68
J07A **Hines** 82.32 39 ⇑P P 22 42 14.3 +0.1
baz=82,SNR=25
TUC **Tucson** 82.33 52⇑*iP* P 22 42 15.2 +0.7
comp=Z,68nm,1.0s,mb5.1
TUC **Tucson** 82.33 52⇑*iP* P 22 42 15.2 +0.7
TUC pmax pmax
comp=Z,68nm,1.0s,mb5.1
O10A **Cortez Mining,** 82.36 43 ⇓P P 22 42 14.6 +0.2
baz=82,SNR=26
M09A **Marrel Ranch,** 82.37 42 ⇓P P 22 42 14.8 +0.3
baz=82,SNR=26
T13A **Saint George** 82.38 47 ⇑P P 22 42 14.9 +0.3
baz=82
SLKM **Skilak Lake** 82.40 14 *e*P P 22 42 13.0 -1.1
P11A **Circle Ranch,** 82.45 44 ⇑P P 22 42 15.0 +0.1
baz=82,SNR=11
K08A **Mann Creek Ran** 82.46 40 ⇑P P 22 42 15.0 +0.1
baz=82,SNR=76
H06A **Lindquist Farm** 82.51 38 ⇑P P 22 42 14.9 -0.2
baz=83,SNR=100
318A **Bisbee** 82.53 53 ⇑P P 22 42 16.5 +1.0
baz=83
F05A **White Salmon** 82.55 36 P P 22 42 15.1 -0.2
baz=83,SNR=16
L09A **Wilkinson Ranc** 82.56 41 ⇑P P 22 42 15.6 +0.2
baz=83,SNR=54
D04A **Dobbs Creek Ra** 82.56 35 ⇑P P 22 42 15.6 +0.3
baz=83
R12A **Pony Springs,** 82.57 45 ⇓P P 22 42 15.8 +0.3
baz=83
N10A **Dunphy** 82.58 43 ⇓P P 22 42 15.7 +0.1
baz=83,SNR=8.0
U14A **Mt Trumbull** 82.58 48 ⇓P P 22 42 16.4 +0.7
baz=83
I07A **Izee** 82.62 38 P P 22 42 15.9 +0.3
baz=83,SNR=101
W15A **Williams** 82.62 49 P P 22 42 16.8 +0.9
baz=83,SNR=11
G06A **Carlson Farm,** 82.63 37 P P 22 42 15.6 -0.2
baz=83,SNR=26
S13A **Holt Ranch, En** 82.69 46 ⇑P P 22 42 16.7 +0.5
baz=83
218A **Dragoon** 82.73 53 ⇓P P 22 42 17.6 +1.1
baz=83
B04A **Port Angeles** 82.78 34 ⇑P P 22 42 16.4 0.0
baz=83,SNR=7.8
Q12A **Willow Creek R** 82.79 45 P P 22 42 16.8 +0.2
baz=83,SNR=22
E05A **Randle** 82.79 36 ⇓P P 22 42 16.0 -0.5
baz=83,SNR=26
J08A **Circle Bar Ran** 82.82 40 P P 22 42 16.9 +0.2
baz=83,SNR=35
O11A **Cowboy Ranch,** 82.82 43 P P 22 42 17.2 +0.4
baz=83,SNR=23
C04A **Brinnon** 82.85 34 ⇓P P 22 42 16.7 0.0
baz=83,SNR=18
F06A **Goldendale** 82.86 37 ⇓P P 22 42 16.7 -0.2
baz=83,SNR=9.8
MAW **Mawson** 82.88 200 *e*P P 22 42 16.8 +0.1
comp=Z,6.8nm,0.5s,mb4.4
MAW **Mawson** 82.88 200 *e*P P 22 42 16.8 +0.1
MAW pmax pmax
comp=Z,7.0nm,0.5s
MAW **Mawson** 82.88 200 P P 22 42 17.1 +0.4
comp=Z,7.9nm,0.5s,mb4.5,baz=174,slow=5.2,SNR=31
K09A **Rome** 82.90 40 P P 22 42 17.4 +0.2
baz=83,SNR=121
P12A **McGill** 82.96 44 ⇑P P 22 42 17.5 0.0
baz=83,SNR=49
T14A **Hurricane** 82.97 47 ⇓P P 22 42 17.9 +0.4
baz=83
M10A **I.L. Ranch, Tu** 83.00 42 ⇑P P 22 42 18.0 +0.4
baz=83,SNR=70
CCUT **Cedar City** 83.02 47⇑*iP* P 22 42 18.4 +0.5
319A **Douglas** 83.04 54 ⇑P P 22 42 19.2 +1.1
baz=83
D05A **Enumclaw** 83.05 35 P P 22 42 18.1 +0.4
baz=83,SNR=22
I08A **Drewsey** 83.07 39 P P 22 42 18.1 +0.2
baz=83,SNR=37
N11A **Elko Archery C** 83.13 43 ⇑P P 22 42 18.3 0.0
baz=83
KULM **Kulim** 83.18 278 ⇓*iP* P 22 42 19.4 +0.2
KULM **Kulim** 83.18 278 ⇑P P 22 42 19.8 +0.6
G07A **Ruggs Ranch, H** 83.20 37 ⇓P P 22 42 18.2 -0.4
baz=83,SNR=39
E06A **Yakima** 83.22 36 P P 22 42 18.5 0.0
baz=83,SNR=17
J09A **Fry Pan Ranch,** 83.25 40 P P 22 42 18.8 0.0
baz=83,SNR=104
S14A **Cedar City** 83.26 46 ⇓P P 22 42 19.4 +0.4
baz=83
L10A **Juniper Basin** 83.34 41 ⇓P P 22 42 19.4 +0.1
baz=83
H08A **Prairie City** 83.36 38 P P 22 42 19.1 -0.2
baz=83,SNR=18
WUAZ **Wupatki** 83.42 49 ⇓P P 22 42 20.3 +0.5
baz=84
M11A **Holland Ranch,** 83.42 42 P P 22 42 20.3 +0.6
baz=84,SNR=33
F07A **Phinny Hill Vi** 83.42 37 ⇓P P 22 42 19.2 -0.4
baz=84
T15A **Red Dirt Ranch** 83.44 47 ⇑P P 22 42 20.4 +0.5
baz=84
K10A **MacKenzie Ranc** 83.47 41 ⇑P P 22 42 20.0 +0.1
baz=84
O12A **Currie** 83.48 44 P P 22 42 20.2 +0.1
baz=84,SNR=25
EYAK **Cordova Ski Ar** 83.50 16 *e*P P 22 42 17.9 -1.8
comp=Z,178nm,1.5s,mb5.4
C05A **Tolt Reservoir** 83.52 35 P P 22 42 19.8 -0.2
baz=84,SNR=33
P13A **Bates Ranch, G** 83.55 45 ⇓P P 22 42 20.4 0.0
baz=84
N12A **Clover Valley,** 83.60 43 P P 22 42 20.9 +0.3
baz=84,SNR=27
I09A **Lost Marbles R** 83.60 39 ⇑P P 22 42 20.2 -0.3
baz=84,SNR=6.8
A04A **Legoe Bay, Lum** 83.61 33 ⇑P P 22 42 20.4 -0.1
baz=84,SNR=10
G08A **Pilot Rock** 83.63 38 ⇑P P 22 42 20.6 -0.1
baz=84,SNR=89
R14A **James Farms, M** 83.63 46 ⇑P P 22 42 21.2 +0.3
baz=84
B05A **Bryant** 83.65 34 ⇑P P 22 42 20.4 -0.2
baz=84,SNR=16
EBG **Ellensburg** 83.66 36 P P 22 42 20.7 -0.1
D06A **Cle Elum** 83.68 35 ⇑P P 22 42 20.7 -0.1
baz=84,SNR=21
SNG **Songkhla** 83.85 280 P P 22 42 24.0 +1.5
comp=Z,376nm,1.0s,mb5.9
J10A **Berg Farm, Mel** 83.89 40 ⇑P P 22 42 21.7 -0.3
baz=84,SNR=8.1
O13A **Hicks Ranch, I** 83.91 44 ⇑P P 22 42 22.3 +0.1
baz=84
M12A **Wells** 83.97 43 P P 22 42 22.6 +0.2
baz=84,SNR=38
K11A **Parker Ranch,** 83.99 41 ⇓P P 22 42 22.7 +0.3
baz=84
F08A **Pendleton** 84.02 37 P P 22 42 22.4 -0.2
baz=84,SNR=32
H09A **Durkee** 84.03 39 P P 22 42 22.7 0.0
baz=84,SNR=30
C06A **Tall Timber Ra** 84.08 35 ⇓P P 22 42 22.1 -0.8
baz=84,SNR=5.6
A05A **Maple Falls** 84.10 33 ⇓P P 22 42 22.2 -0.7
baz=84
B06A **Marblemount** 84.13 34 ⇑P P 22 42 22.2 -0.9
baz=84,SNR=9.4
N13A **Wendover, West** 84.14 43 P P 22 42 23.4 +0.1
baz=84,SNR=22
D07A **Quincy** 84.16 36 ⇓P P 22 42 22.7 -0.5

baz=84,SNR=8.1
I10A Payette 84.23 40 ⇓P P 22 42 23.8 +0.2
baz=84,SNR=11
E08A Dider Farm, El 84.26 37 ⇑P P 22 42 23.3 -0.4
baz=84
L12A House Creek Ra 84.29 42 ⇑P P 22 42 24.2 +0.2
baz=84
G09A Cove 84.31 38 ⇓P P 22 42 23.8 -0.2
baz=84,SNR=27
C07A Waterville 84.40 35 ⇑P P 22 42 23.6 -0.7
baz=84,SNR=31
M13A Montello 84.42 43 P P 22 42 24.9 +0.2
baz=84,SNR=21
MFID Camas Ranch 84.46 41 ⇓P P 22 42 24.7 -0.1
baz=84
F09A S2 Ranch, Elgi 84.47 38 P P 22 42 24.7 -0.1
baz=85,SNR=16
A06A Chilliwack 84.48 34 ⇓P P 22 42 24.1 -0.7
baz=85,SNR=5.0
BJT Baijiatuau 84.52 315 ⇓*i*P P 22 42 25.0 -0.1
comp=Z,78nm,0.9s,mb5.3
BJT Baijiatuau 84.52 315 ⇓*i*P P 22 42 25.0 -0.2
BJT pmax pmax
comp=Z,78nm,0.9s
BJI Beijing 84.53 315 P P 22 42 23.6 -1.6
BJI AP pP 22 44 33.5 -0.6
BJI XP sP 22 45 34.3 -0.6
BJI PP PP 22 45 50.8 -1.8
BJI S S 22 52 03.9 +1.4
BJI XS sS 22 55 52.6 +0.4
BJI AMB AMB
comp=Z,79nm,1.4s,mb5.2
H10A Noah's Angus R 84.54 39 P P 22 42 24.7 -0.4
baz=85,SNR=42
K12A Draper Farm, C 84.62 42 ⇑P P 22 42 25.7 +0.1
baz=85
D08A Wollman Farm, 84.66 36 P P 22 42 25.6 -0.1
baz=85,SNR=33
G10A Bishop Farm, J 84.70 38 P P 22 42 25.6 -0.3
baz=85,SNR=53
DUG Dugway 84.72 44 ⇑P P 22 42 25.8 -0.3
baz=85
SEY Seymchan 84.79 347⇑*e*P P 22 42 24.9 -1.0
SEY *e**PP pP 22 44 37.2 +2.3
E09A Wood Farm, Sta 84.79 37 ⇓P P 22 42 25.6 -0.7
baz=85,SNR=26
N14A Grayback Hills 84.80 44 ⇓P P 22 42 26.3 -0.2
baz=85
B07A Winthrop 84.82 35 ⇓P P 22 42 25.9 -0.5
baz=85,SNR=39
J12A Stokes Ranch, 84.82 41 ⇑P P 22 42 26.6 0.0
baz=85
BGU Big Grassy Mou 84.94 44 *e*P P 22 42 26.4 -0.8
L13A Double Diamond 84.94 42 ⇑P P 22 42 27.3 +0.1
baz=85
OD2 Odessa Site #2 84.97 36 P P 22 42 26.8 -0.3
D09A Jones Farm, Ri 85.01 37 P P 22 42 27.1 -0.2
baz=85,SNR=32
C08A Higginbotham F 85.01 36 ⇑P P 22 42 26.7 -0.7
baz=85,SNR=22
F10A Beach Ranch, E 85.02 38 P P 22 42 26.9 -0.5
baz=85,SNR=75
A07A Ashnola River, 85.03 34 P P 22 42 27.2 -0.2
baz=85,SNR=28
M14A Sheep Mountain 85.03 43 ⇑P P 22 42 27.6 0.0
baz=85
KKTK Khon Kaen 85.03 289 P P 22 42 29.0 +0.9
comp=Z,1µm,0.5s
H11A Donnelly 85.04 39 P P 22 42 27.4 -0.2
baz=85,SNR=120
K13A Stover Farm, H 85.14 42 ⇑P P 22 42 28.3 +0.2
baz=85
B08A Colville Reser 85.19 35 P P 22 42 27.4 -0.8
baz=85,SNR=51
N15A Stansbury Isla 85.26 44 ⇓P P 22 42 28.4 -0.3
baz=85
G11A Walters Elk Ra 85.26 39 ⇓P P 22 42 28.1 -0.5
baz=85,SNR=102
E10A Myers Farm, Un 85.37 37 ⇑P P 22 42 28.4 -0.7
baz=85,SNR=8.9
HLID Hailey 85.41 41 P P 22 42 29.8 +0.4
baz=86,SNR=85
C09A Chrisman Ranch 85.45 36 P P 22 42 29.1 -0.3
baz=86,SNR=14
J13A Cove Ranch, Pi 85.47 41 ⇑P P 22 42 29.9 +0.3
baz=86
GYA Guiyang 85.56 300 ⇓*i*P P 22 42 30.5 0.0
GYA AP pP 22 44 41.6 +1.8
GYA XP sP 22 45 40.4 -0.1
GYA PP PP 22 46 02.5 +1.4
GYA SKS 22 51 57.4
GYA S S 22 52 12.9 -0.1
GYA PS 22 54 38.6
GYA XS sS 22 56 01.3 -2.0
GYA SS SS 22 58 10.0 +1.8
GYA AMB AMB
comp=Z,70nm,0.9s,mb5.3
GYA AMB AMB
comp=Z,110nm,6.7s
A08A Turner Farm, O 85.56 35 P P 22 42 29.8 -0.2
baz=86,SNR=56
D10A Wagner Farm, O 85.59 37 P P 22 42 29.4 -0.7
baz=86,SNR=38
M15A Larsen Ranch, 85.59 44 ⇑P P 22 42 30.0 -0.3
baz=86
F11A Grangeville 85.60 38 P P 22 42 28.6 -1.5
baz=86,SNR=28
USHA Ushuaia 85.62 147 P P 22 42 30.4 +0.2
comp=Z,23nm,1.0s,mb4.8,baz=256,slow=6.1,SNR=5.9
H12A Diamond D Ranc 85.66 40 P P 22 42 30.5 0.0
baz=86,SNR=105
K14A Jones Ranch, D 85.67 42 ⇓P P 22 42 30.6 0.0
baz=86
I13A Wildhorse Cree 85.78 41 ⇑P P 22 42 31.3 +0.2
baz=86
E11A Bogner Ranch, 85.82 38 ⇓P P 22 42 29.8 -1.4
baz=86,SNR=23
B09A Rice 85.87 35 ⇑P P 22 42 30.7 -0.7
baz=86,SNR=54
A09A Danville 85.95 35 ⇑P P 22 42 31.3 -0.5
baz=86,SNR=38
C10A Spilker Farm, 86.00 36 ⇑P P 22 42 31.3 -0.7
baz=86
LAZ Ladron 86.00 52 *e*P P 22 42 32.2 -0.2
Y22C IRIS PASSCAL I 86.02 52 ⇓P P 22 42 33.0 +0.5
baz=86
H13A Challis 86.03 40 ⇓P P 22 42 32.5 +0.2
baz=86
MENT Mentasta 86.05 15 *e*P P 22 42 31.2 -0.7
F12A Elk City 86.06 39 P P 22 42 32.0 -0.4
baz=86,SNR=148
MVCO Mesa Verde 86.26 49 ⇓P P 22 42 33.4 -0.1
baz=86
BNM Barren Site 86.27 52 *e*P P 22 42 33.6 0.0
B10A Chitwood Farm, 86.31 36 ⇑P P 22 42 32.6 -0.9
baz=86
G13A Cobalt 86.32 40 P P 22 42 33.5 -0.1
baz=86,SNR=50
NEW Newport 86.35 36 *e*P P 22 42 33.0 -0.7
A10A Northport 86.51 35 P P 22 42 34.1 -0.3
baz=87,SNR=26
TXAR Lajitas Array 86.55 58 P P 22 42 35.6 +0.6
baz=218,slow=6.9
COLA College 86.79 13 *e*P P 22 42 33.4 -2.0
comp=Z,102nm,0.8s,mb5.6
COLA College 86.79 13 *e*P P 22 42 33.4 -1.9
COLA pmax pmax
comp=Z,102nm,0.8s,mb5.6
B11A Sandpoint 86.86 36 P P 22 42 35.9 -0.2
baz=87,SNR=18
G14A Jackson 86.86 40 P P 22 42 36.5 +0.3
baz=87,SNR=38
XAN Xi'an 86.89 307 P P 22 42 36.8 +0.2
XAN AMB AMB
comp=Z,162nm,1.2s,mb5.6
MCMT McKenzie Canyo 87.03 40 *e*P P 22 42 36.9 -0.1
E13A Victor 87.05 39 P P 22 42 36.2 -0.8
baz=87,SNR=12
A11A Hall Mountain, 87.15 36 P P 22 42 37.5 +0.1
baz=87,SNR=34
F14A Wisdom 87.21 39 P P 22 42 37.6 -0.2
baz=87,SNR=26
HIA Hailar 87.22 325 ⇓*i*P P 22 42 37.3 -0.4
comp=Z,38nm,1.0s,mb5.1
HIA Hailar 87.22 325 ⇓*i*P P 22 42 37.3 -0.4
HIA pmax pmax
comp=Z,38nm,1.0s

D13A Huson 87.23 38 P P 22 42 36.8 -1.1
baz=87,SNR=21
B12A Libby 87.32 36 ⇑P P 22 42 37.9 -0.3
baz=87,SNR=9.4
G15A Dillon 87.42 40 P P 22 42 39.0 +0.2
baz=88,SNR=74
E14A Clinton 87.45 39 P P 22 42 38.6 -0.3
baz=88,SNR=34
BILL Bilibino 87.47 354 *e*P P 22 42 37.2 -1.3
comp=Z,16nm,0.6s,mb4.9
BILL Bilibino 87.47 354*c i*P P 22 42 37.2 -1.3
BILL *i* S S 22 52 20.0 -9.1
BILL pmax pmax
comp=Z,44nm,1.7s,mb4.9
C13A Hot Springs 87.47 37 P P 22 42 37.9 -1.0
baz=88,SNR=11
A12A Yaak River Ran 87.53 36 ⇑P P 22 42 38.9 -0.3
baz=88,SNR=7.4
F15A Butte 87.75 40 P P 22 42 40.2 -0.1
baz=88,SNR=30
D14A Greenough 87.78 38 ⇑P P 22 42 39.4 -1.1
baz=88,SNR=29
B13A Whitefish 87.90 37 ⇓P P 22 42 40.0 -1.0
baz=88,SNR=11
E15A Deer Lodge 87.96 39 P P 22 42 40.8 -0.5
baz=88,SNR=24
HHC Hu-ho-hao-te 88.00 314 *e*P P 22 42 41.9 +0.3
HHC AP pP 22 44 52.0 +0.1
HHC XP sP 22 45 51.0 -1.4
HHC PP PP 22 46 22.1 +2.0
HHC SKS 22 52 11.0
HHC S S 22 52 34.8 -0.4
HHC XS sS 22 56 23.8 -3.6
HHC AMB AMB
comp=Z,67nm,0.8s,mb5.4
HHC AMB AMB
comp=Z,124nm,4.2s
PDAR Pinedale Array 88.10 43 P P 22 42 41.9 -0.2
comp=Z,49nm,0.9s,mb5.2,baz=207,slow=3.0,SNR=163
PDAR pP 22 44 56.6 +4.3
comp=Z,4.3nm,1.0s,baz=199,slow=5.1,SNR=4.1
PDAR PP PP 22 46 17.8 -3.1
comp=Z,7.6nm,1.0s,baz=242,slow=6.2,SNR=9.9
PDAR PKKPbc PKKPbc 23 00 22.8 -1.4
comp=Z,1.1nm,0.6s,baz=95,slow=3.8,SNR=9.0
PDAR PKPPKP 23 08 24.3
comp=Z,0.4nm,0.8s,baz=129,slow=2.1,SNR=4.3
YMR Madison River 88.11 41 *e*P P 22 42 42.3 +0.3
comp=Z,203nm,1.4s,mb5.7
SYO Syowa Base 88.14 193⇑*i*P P 22 42 39.8 -2.0
BOZ Bozeman (W) 88.18 40⇑*i*P P 22 42 42.1 -0.2
comp=Z,85nm,1.3s,mb5.3
BOZ Bozeman (W) 88.18 40⇑*i*P P 22 42 42.1 -0.2
BOZ pmax pmax
comp=Z,85nm,1.3s,mb5.3
BOZ Bozeman (W) 88.18 40 ⇓P P 22 42 42.4 +0.1
baz=88
EGAK Eagle 88.22 15 *e*P P 22 42 40.8 -1.3
comp=Z,81nm,0.9s,mb5.5
KMI Kunming 88.31 297 P P 22 42 44.8 +1.4
KMI PP PP 22 46 24.3 +1.4
KMI SKS 22 52 11.4
KMI S S 22 52 35.8 -2.9
KMI SP SP 22 53 44.9 -2.1
KMI SS SS 22 58 51.9 +4.0
KMI AMB AMB
comp=Z,104nm,1.2s,mb5.4
KMI AMB AMB
comp=Z,272nm,3.1s
D15A Lincoln 88.34 39 P P 22 42 42.8 -0.2
baz=88,SNR=32
BDT Bhimbol Dam 88.77 289 P P 22 42 47.0 +1.3
comp=Z,58nm,0.8s,mb5.5
BTO Baotou 88.94 314 *e*P P 22 42 46.0 0.0
CHRT Chiangrai 88.98 291 ⇑P P 22 42 42.0 -4.7
comp=Z,737nm,0.9s,mb6.5
CHG Chiang Mai 89.36 290 ⇓P P 22 42 49.1 +0.7
comp=Z,150nm,0.6s,mb6.0
CHTO Chiang Mai 89.36 290 ⇓*i*P P 22 42 49.1 +0.6
comp=Z,109nm,0.8s,mb5.7
CHTO Chiang Mai 89.36 290 ⇓*i*P P 22 42 49.1 +0.7
CHTO pmax pmax
comp=Z,109nm,0.8s,mb5.7
RLMT Red Lodge 89.39 41 *e*P P 22 42 47.6 -0.3
comp=Z,54nm,1.1s,mb5.3
GCMT Greycliff 89.45 41 *e*P P 22 42 48.1 -0.2
SNAA Sanae 89.56 179 *e*P P 22 42 47.6 -0.8
SNAA *e* 22 42 51.1
SNAA *e* 22 42 54.0
SNAA Sanae 89.56 179 P P 22 42 47.9 -0.5
comp=Z,4.6nm,0.6s,mb4.5,baz=202,slow=3.1,SNR=26
CD2 Chengdu 89.64 305 ⇓*i*P P 22 42 49.8 +0.3
CD2 AP pP 22 45 00.5 +0.3
CD2 XP sP 22 45 59.1 -1.4
CD2 PP PP 22 46 35.3 +2.2
CD2 SKS 22 52 22.8
CD2 S S 22 52 49.0 -1.5
CD2 XS sS 22 56 40.1 -3.7
CD2 SS SS 22 59 08.5 +1.9
CD2 AMB AMB
comp=Z,40nm,1.2s,mb5.1
CD2 AMB AMB
comp=Z,240nm,3.8s
VNA3 Neumayer Olymp 89.70 176 *e*P P 22 42 48.7 -0.3
VNA3 *e* 22 42 52.5
VNA3 *e* 22 42 55.7
VNA2 Neumayer--Watz 90.14 177 *e*P P 22 42 51.1 0.0
VNA2 *e* 22 42 54.8
VNA2 *e* 22 42 57.5
MAIT Maitri 90.23 183 *e*P P 22 42 49.2 -2.3
NVL N'lazarevskaya 90.23 183⇑*i*P P 22 42 51.7 +0.2
NVL pmax pmax
comp=Z,33nm,0.7s,mb5.3
NVL pmax pmax
comp=N,6.0nm,0.7s
NVL pmax pmax
comp=E,3.0nm,0.7s
VNA1 Neumayer--Stat 90.37 177 *e*P P 22 42 53.0 +0.9
VNA1 *e* 22 42 56.4
VNA1 *e* 22 42 59.5
EGMT Eagleton 90.46 39 *e*P P 22 42 51.8 -1.0
comp=E,34nm,1.2s,mb5.0
YAK Yakutsk 90.54 338⇑*e*P P 22 42 51.6 -1.3
YAK pmax pmax
comp=Z,22nm,0.9s,mb5.1
PLCA Paso Flores 90.61 134 P P 22 42 54.4 +0.5
comp=Z,5.7nm,0.9s,mb4.5,baz=227,slow=7.5,SNR=8.5
LZH Lanzhou 91.53 308 ⇓P P 22 42 58.6 +0.5
LZH AP pP 22 45 05.3 -3.8
LZH XP sP 22 46 03.8 -5.5
LZH PP PP 22 46 50.3 +2.6
LZH SKS 22 52 32.0
LZH S S 22 53 06.4 -0.6
LZH XS sS 22 57 01.0 -0.7
LZH SS SS 22 59 36.0 +2.7
LZH AMB AMB
comp=Z,117nm,1.2s,mb5.8
LZH AMB AMB
comp=Z,430nm,4.0s
LAO LASA Array 91.99 41 *e*P P 22 42 59.8 -0.2
comp=Z,112nm,1.3s,mb5.7
CIT Chita 92.01 325 *e*P P 22 42 59.5 -0.4
CIT pmax pmax
comp=Z,51nm,2.0s,mb5.2
INK Inuvik 92.89 15 P P 22 43 01.9 -1.6
comp=Z,27nm,0.9s,mb5.3,baz=230,slow=4.4,SNR=80
ULN Ulaanbaatar 93.95 319 ⇓*e*P P 22 43 07.8 -1.0
comp=Z,14nm,1.0s,mb5.0
ULN *e*PP PP 22 47 05.3 -0.7
ULN Ulaanbaatar 93.95 319 ⇓*e*P P 22 43 07.9 -0.9
ULN *e* 22 47 05.3
ULN pmax pmax
comp=Z,14nm,1.0s,mb5.0
SONM Songino Array 94.34 319 P P 22 43 09.5 -1.1
comp=Z,2.4nm,0.5s,mb4.6,baz=131,slow=5.0,SNR=26
SONM sP sP 22 46 17.8 -4.2
comp=Z,3.3nm,1.2s,baz=115,slow=3.0,SNR=2.4
SONM PP PP 22 47 06.5 -2.5
comp=Z,2.9nm,0.9s,baz=124,slow=5.8,SNR=4.8
YKA Yellowknife Ar 95.27 25 P P 22 43 13.1 -1.4
comp=Z,7.7nm,0.8s,mb4.9,baz=244,slow=4.4,SNR=53
YKA PP PP 22 47 07.7 -8.1
comp=Z,2.5nm,0.8s,baz=240,slow=7.1,SNR=5.5
YKA PKKPbc PKKPbc 23 00 03.0 -3.7
comp=Z,0.4nm,0.4s,baz=39,slow=2.3,SNR=7.4

GTA Gaotai 95.70 310 *e*P P 22 43 16.8 -0.2
GTA AP pP 22 45 28.5 +0.1
GTA XP sP 22 46 25.9 -2.6
GTA PP PP 22 47 17.3 -2.3
GTA SKS 22 52 50.8
GTA S S 22 53 40.6 -2.3
GTA XS sS 22 57 39.0 -0.7
GTA SS SS 23 00 30.5 -1.3
GTA AMB AMB
comp=Z,18nm,1.1s,mb5.2
GTA AMB AMB
comp=Z,74nm,8.0s
ECSD EROS,Sioux Fal 97.15 46 *e*P P 22 43 22.2 -1.2
comp=Z,13nm,1.1s,mb5.1
TIXI Tiksi 97.16 345 *e*P P 22 43 17.9 -4.9
TIXI *e*S SKSac 22 52 56.1 -5.3
TIXI *e* 22 53 47.1
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.7
ZAK Zakamensk 97.20 321 ⇓*i*P P 22 43 22.1 -1.3
ZAK *e* 22 46 29.5
ZAK *e* 22 52 59.7
ZAK pmax pmax
comp=Z,3.0nm,1.5s,mb4.3
ZAK pmax pmax
comp=Z,1.0nm,1.5s
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb4.2
ZAK pmax pmax
comp=Z,3.0nm,1.6s,mb4.3
TLY Talaya 97.45 322 *e*P Pdif 22 43 22.8 -1.9
comp=Z,2.7nm,0.8s
TLY Talaya 97.45 322 *e*P Pdif 22 43 23.4 -1.3
TLY *e*S S 22 53 59.2 +2.1
TLY *e*SS SS 23 00 56.4 +0.9
TLY pmax pmax
comp=Z,4.0nm,1.1s,mb4.6
SHL Shillong 97.72 294 *e*P Pdif 22 43 26.0 +0.1
LSA Lhasa 99.53 298 *e*Pdif Pdif 22 43 35.2 +1.2
comp=Z,8.2nm,0.8s
LSA Lhasa 99.53 298 *e*P Pdif 22 43 35.2 +1.2
LSA pmax pmax
comp=Z,8.0nm,0.8s,mb5.1
ULM Lac du Bonnet 99.70 40 P Pdif 22 43 34.2 -0.5
comp=Z,2.4nm,1.0s,baz=305,slow=7.5,SNR=3.2
TAPN Taplejung 101.81 295 *e*P Pdif 22 43 42.1 -2.0
comp=Z,22nm,1.2s
ODAN Odare 101.95 294 *e*P Pdif 22 43 44.8 +0.1
comp=Z,19nm,0.8s
LPAZ La Paz 103.00 112 PP PP 22 48 11.1 -3.0
comp=Z,1.2nm,0.9s,baz=298,slow=3.5,SNR=4.1
LPAZ PKKPbc PKKPbc 22 59 43.5 -0.5
comp=Z,1.8nm,0.7s,baz=64,slow=3.8,SNR=5.7
KKN Kakani 104.00 295 *e*P Pdif 22 43 52.6 -1.2
comp=Z,14nm,0.8s
GKN Gorkha 104.61 295 *e*P Pdif 22 43 55.1 -1.4
comp=Z,11nm,0.7s
KOLN Koldanda 105.44 294 *e*P Pdif 22 44 01.4 +1.2
comp=Z,10nm,0.8s
HYB Hyderabad 107.46 283 *e*P PKiKP 22 48 13.0 -1.4
HYB Hyderabad 107.46 283 *i* PKP PKiKP 22 48 13.0 -1.4
HYB *e* 22 48 36.0
HYB *e*PP PP 22 48 44.0 -2.8
SIV San Ignacio 109.24 115 PP PP 22 48 57.5 -1.6
comp=Z,1.7nm,1.0s,baz=251,slow=12,SNR=7.2
MKAR Makanchi Array 109.86 314 P Pdif 22 44 20.5 +0.6
MKAR 22 48 16.1
MKAR Makanchi Array 109.86 314 Pdiff Pdif 22 44 20.5 +0.6
comp=Z,2.2nm,0.7s,baz=90,slow=6.1,SNR=17
MKAR PKiKP PKiKP 22 48 16.1 -1.9
comp=Z,10nm,0.5s,baz=161,slow=0.4,SNR=60
MKAR PP PP 22 48 58.2 -5.0
comp=Z,3.4nm,0.8s,baz=98,slow=8.7,SNR=6.7
MKAR SKP 22 50 53.3
comp=Z,3.9nm,0.6s,baz=211,slow=0.9,SNR=6.8
MKAR PKKPbc PKKPbc 22 59 22.1 -1.6
comp=Z,0.5nm,0.7s,baz=269,slow=4.9,SNR=4.8
KAD Karad 111.47 282 *e*P PKiKP 22 48 31.4 +9.4
POO Poona 112.07 283 *e*P PKiKP 22 48 20.0 -3.1
KURK Kurchatov 112.60 318 *e*PKPdf PKiKP 22 48 21.0 -2.1
ULHL Ulahol 113.72 309 P PKiKP 22 48 24.6 -1.0
SNR=9.4
TKM2 Tokmak 2 114.25 309 *e*PKPdf PKiKP 22 48 25.0 -1.6
TKM2 Tokmak 2 114.25 309 P PKiKP 22 48 25.2 -1.3
SNR=14
KZA Kyzart 114.45 308 P PKPdf 22 48 26.4 -0.6
SNR=7.2
CHMS Chumysh 114.87 309 P PKPdf 22 48 26.1 -1.7
SNR=7.4
FRU Bishkek 114.96 309 *e*PKIKP PKPdf 22 48 26.0 -1.9
FRU *e* 22 49 35.0
UCH Uchtor 115.00 308 *e*PKPdf PKPdf 22 48 27.3 -0.8
UCH Uchtor 115.00 308 P PKPdf 22 48 27.6 -0.4
SNR=14
USP Ospenovka 115.07 310 P PKPdf 22 48 26.6 -1.5
SNR=16
EKS2 Erkin-Say 115.57 309 *e*PKPdf PKPdf 22 48 27.8 -1.4
EKS2 Erkin-Say 115.57 309 P PKPdf 22 48 28.0 -1.1
SNR=9.1
AML Almayashu 115.61 308 *e*PKPdf PKPdf 22 48 28.0 -1.2
AML Almayashu 115.61 308 P PKPdf 22 48 28.6 -0.6
SNR=16
BRVK Borovoye 117.71 321 *e*PKPdf PKPdf 22 48 28.7 -4.2
SVE Sverdlovsk 122.50 326 *e*PKIKP PKPdf 22 48 40.5 -1.5
SVE pmax pmax
comp=Z,21nm,0.7s
SOKR Solikamsk 123.56 330*d i*PKIKP PKPdf 22 48 42.2 -1.8
SOKR pmax pmax
comp=Z,40nm,1.0s
ARU Arti 123.72 326 *e*PKPdf PKPdf 22 48 42.7 -1.7
ARU *e*SKPdf SKPdf 22 51 21.8 -1.2
ARU Arti 123.72 326 *i* PKIKP PKPdf 22 48 42.5 -1.8
AKTK Aktyubinsk 125.66 319 PKP PKPdf 22 48 47.3 -1.0
AKTO Aktyubinsk 125.66 319 PKP PKPdf 22 48 47.3 -1.0
comp=Z,14nm,0.7s,baz=76,slow=3.5,SNR=55
SUR Sutherland 125.74 200 PKP PKPdf 22 48 48.8 -0.3
comp=Z,18nm,0.8s,baz=310,slow=0.2,SNR=15
KEV Kevo 126.89 349 *e*pkp PKPdf 22 48 46.5 -3.5
ARCES ARCESS Array B 127.34 350 PKP PKPdf 22 48 49.4 -1.5
ARCES SKPbc 22 51 12.4
ARCES SKP 22 51 29.1
ARCES PKKP 22 59 01.3
ARCES ARCESS Array B 127.34 350 PKP PKPdf 22 48 49.4 -1.5
comp=Z,11nm,0.6s,baz=32,slow=1.0,SNR=57
ARCES SKPbc 22 51 12.4
comp=Z,9.0nm,0.7s,baz=42,slow=5.6,SNR=21
ARCES SKP 22 51 29.1
comp=Z,7.8nm,1.0s,baz=48,slow=1.3,SNR=4.1
ARCES PKKP 22 59 01.3
comp=Z,3.5nm,0.9s,baz=218,slow=2.7,SNR=6.8
BOSA Boshof 127.47 206 PKP PKPdf 22 48 52.4 -0.1
BOSA SKPbc 22 51 14.8
BOSA Boshof 127.47 206 PKP PKPdf 22 48 52.4 -0.1
comp=Z,11nm,0.8s,baz=230,slow=4.1,SNR=16
BOSA SKPbc 22 51 14.8
comp=Z,4.1nm,0.8s,baz=139,slow=5.1,SNR=3.7
PRGR Permogore 127.49 335 *e*PKIKP PKPdf 22 48 48.8 -2.6
JOF Joensuu 131.55 342 *e*pkp PKPdf 22 48 56.8 -2.3
KAF Kangasniemi 133.57 344 *e*pkp PKPdf 22 48 58.3 -4.6
FINES FINESS Array B 134.19 344 PKP 22 48 48.7
FINES PKP PKPdf 22 49 02.9 -1.2
FINES SKPbc SKPbc 22 51 35.5 -2.1
FINES FINESS Array B 134.19 344 PKHKP 22 48 48.7
FINES 22 49 02.9
FINES FINESS Array B 134.19 344 PKhKP 22 48 48.7
comp=Z,1.2nm,0.7s,baz=59,slow=2.7,SNR=8.3
FINES PKP PKPdf 22 49 02.9 -1.2
comp=Z,8.3nm,0.7s,baz=93,slow=3.8,SNR=19
FINES SKPbc SKPbc 22 51 35.5 -2.1
comp=Z,12nm,0.6s,baz=63,slow=3.3,SNR=18
OBN Obninsk 135.22 332 ⇓*i*PKIKP PKPdf 22 49 04.3 -1.9
OBN *e* 22 51 49.9
OBN *e*PS 23 02 57.3
OBN pmax pmax
comp=Z,16nm,0.7s
VRSR Storozhevoye 136.28 326 *i* PKIKP PKPdf 22 49 06.6 -1.7
VRSR pmax pmax
comp=Z,4.0nm,0.9s
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,3.0nm,1.0s
NB2 NORSAR Subarra137.41 353 PKP PKPdf 22 49 01.6 -8.4
comp=Z,5.6nm,0.6s,baz=15,slow=4.0
NOA NORSAR Array B137.41 353 PKHKP 22 49 00.9

NOA 22 49 10.9
NOA NORSAR Array B 137.41 353 PKhKP 22 49 00.9
comp=Z,5.2nm,0.7s,baz=15,slow=2.3,SNR=24
NOA PKP PKPdf 22 49 10.9 +0.8
comp=Z,1.2nm,0.5s,baz=8.1,slow=3.1,SNR=21
NOA SKPbc SKPbc 22 51 45.1 -2.2
comp=Z,15nm,1.0s,baz=16,slow=4.5,SNR=12
NOA SKPab 22 51 54.8
comp=Z,17nm,1.1s,baz=14,slow=3.1,SNR=7.4
KIV Kislovodsk 137.60 315 ⇓*i*PKIKP PKPdf 22 49 08.4 -2.5
KIV *e* 22 52 04.2
KIV pmax pmax
comp=Z,15nm,0.9s
KIV Kislovodsk 137.60 315 ⇓*i*P PKPdf 22 49 10.1 -0.8
HAKT HAKKARI 138.93 306 *i* P PKPdf 22 49 05.3 -8.3
KMBO Kilima Mbogo 139.69 244 PKHKP 22 49 09.6
KMBO 22 49 17.1
KMBO Kilima Mbogo 139.69 244 PKhKP 22 49 09.6
comp=Z,4.5nm,0.5s,baz=67,slow=6.5,SNR=22
KMBO PKP PKPdf 22 49 17.1 +1.4
comp=Z,14nm,0.9s,baz=70,slow=3.1,SNR=18
KMBO SKPbc SKPbc 22 51 55.6 +0.4
comp=Z,32nm,1.0s,baz=17,slow=2.8,SNR=29
BNGL BINGOL 140.46 309 *i* P PKPdf 22 49 11.0 -5.3
MARD Mardin 141.24 306 *i* P PKPdf 22 49 12.6 -5.2
SUW Suwalki 141.26 340 *e*PKP PKPdf 22 49 12.9 -4.4
AKASG Malin Array Be 141.48 332 PKP PKPdf 22 49 11.5 -6.2
AKASG SKPbc SKPbc 22 51 56.2 -2.3
AKASG SKKPbc 23 00 19.4
AKASG Malin Array Be 141.48 332 PKhKP 22 49 11.5
comp=Z,21nm,0.6s,baz=43,slow=4.1,SNR=139
AKASG SKPbc SKPbc 22 51 56.2 -2.3
comp=Z,5.6nm,0.5s,baz=42,slow=3.3,SNR=9.8
AKASG SKKPbc 23 00 19.4
comp=Z,1.2nm,0.8s,baz=233,slow=4.6,SNR=5.2
KIEV Kiev 141.49 332 *e*PKPdf PKPdf 22 49 11.3 -6.4
ELZG Elazig 142.21 309 *i* P PKPdf 22 49 16.8 -2.7
SIM Simferopol' 142.56 321 *i* PKHKP 22 49 15.0
SIM pmax pmax
comp=Z,151nm,0.7s
MYA Malataya 142.68 309 *e*P PKPdf 22 49 18.0 -2.2
MALT Malatya 142.68 309 P PKPdf 22 49 18.0 -2.3
MALT Malatya 142.68 309 ⇓*i*P PKPdf 22 49 16.9 -3.4
URFA Urfa 142.68 307 *e*P PKPdf 22 49 17.1 -3.2
EDI Edinburgh 142.91 4 *e*P PKPdf 22 49 17.0 -3.1
EDI AMb AMB 22 49 19.5
comp=Z,50nm,2.3s
PGBU Glenifferbraes 142.92 6 *e*P PKPdf 22 49 16.5 -3.6
PGBU AMb AMB 22 49 18.3
comp=Z,100nm,1.7s
ESY Stoneypath 142.96 4 *e*P PKPdf 22 49 16.7 -3.5
EAU Auchinoon 142.97 5⇑*e*P PKPdf 22 49 16.8 -3.4
ATAB Bozova 143.07 308 *i* P PKPdf 22 49 19.3 -1.7
EBL Broad Law 143.07 4⇑*e*P PKPdf 22 49 17.1 -3.3
GMK Mull of Kintyr 143.26 7⇑*e*P PKPdf 22 49 17.9 -2.9
XSO Sourhope Farm 143.41 4⇑*e*P PKPdf 22 49 18.2 -2.8
WAR Warsaw 143.46 340 *e*PKP PKPdf 22 49 19.9 -1.3
GCL Cushendall 143.46 7 *e*P PKPdf 22 49 18.5 -2.6
ESK Eskdalemuir 143.52 5 *e*P PKPdf 22 49 18.5 -2.7
ESK AMb AMB 22 49 20.2
comp=Z,76nm,1.5s
GZT Gaziantep 143.65 308 *i* P PKPdf 22 49 21.0 -1.0
ECK Cauldkaine Hil 143.66 5 *e*P PKPdf 22 49 18.9 -2.6
GAL1 Galloway 143.83 6 *e*P PKPdf 22 49 19.6 -2.2
GAL1 AMb AMB 22 49 21.5
comp=Z,128nm,1.3s
BOYT Boyabat 143.87 316 *i* P PKPdf 22 49 21.9 -0.3
GCD Castle Douglas 143.90 5⇑*e*P PKPdf 22 49 19.6 -2.3
GAZ Gaziantep 143.98 308 *e*P PKPdf 22 49 21.1 -1.5
XAL Allendale 144.04 4⇑*e*P PKPdf 22 49 20.5 -1.6
KMRS Kahramanmaras 144.09 308 *e*P PKPdf 22 49 21.8 -1.0
KIS Kishinev 144.24 328*k i*PKIKP PKPdf 22 49 21.0 -1.7
KIS pmax pmax
comp=Z,350nm,1.3s
KIS Kishinev 144.24 328 *i* UNK PKPdf 22 49 21.0 -1.7
KIS XM 22 49 22.5
comp=Z,400nm,1.3s
CKE Keswick 144.25 5 *e*P PKPdf 22 49 20.8 -1.7
GMM Mts of Mourne 144.30 8⇑*e*P PKPdf 22 49 20.9 -1.7
CTKT Corum 144.32 314 *i* P PKPdf 22 49 23.1 0.0
BNN Bunyan 144.35 311 *e*P PKPdf 22 49 22.5 -0.7
LVV L'vov 144.35 335 *e*PKIKP PKPdf 22 49 21.4 -1.4
GlM North Isle of 144.42 6 *e*P PKPdf 22 49 20.1 -2.7
BSEG Bad Segeberg 144.44 351 *e*PKPbc PKPdf 22 49 22.0 -0.8
ANDN Andirin 144.48 309 *i* P PKPdf 22 49 22.8 -0.6
CORM Corum 144.63 314 *e*P PKPdf 22 49 22.7 -0.9
BALT Daday 144.81 317 *i* P PKPdf 22 49 22.6 -1.3
KOZT Kozan 144.90 309 *e*P PKPdf 22 49 24.1 0.0
COBT Iskenderun 144.93 307 *i* P PKPdf 22 49 25.2 +1.0
HPK Haverah Park 144.97 3⇑*e*P PKPdf 22 49 23.8 0.0
HPK AMb AMB 22 49 30.4
comp=Z,111nm,1.8s
KWP Kalwaria 145.02 336 *e*PKP PKPdf 22 49 24.2 +0.2
KWP Kalwaria 145.02 336 ⇓*i*P PKPdf 22 49 24.1 +0.1
CEYT Ceyhan 145.13 308 *e*P PKPdf 22 49 24.8 +0.2
HTY Hatay 145.15 307 *e*P PKPdf 22 49 24.8 +0.2
RUE Ruedersdorf 145.21 347 *e*PKPdf PKPdf 22 49 24.0 -0.2
RUE Ruedersdorf 145.21 347 *e*PKPbc PKPbc 22 49 24.5 -0.9
DSB Dublin 145.22 8 *e*PKPdf PKPdf 22 49 24.1 -0.1
ELDT Eldivan 145.29 315 *i* P PKPdf 22 49 25.7 +1.0
WME Myndd Eilian 145.32 6 *e*P PKPdf 22 49 24.8 +0.4
LHO Holmfirth 145.37 4⇑*e*P PKPdf 22 49 24.6 +0.2
SAFT Safranbolu 145.41 317 *e*P PKPdf 22 49 23.9 -1.0
WLF1 Llynfaes 145.42 6⇑*e*P PKPdf 22 49 24.7 +0.2
KAMT Kaman 145.62 313 *e*P PKPdf 22 49 23.3 -2.0
KBI1 Birley Grange 145.68 3⇑*e*P PKPdf 22 49 25.5 +0.5
STHS Stebnicka Huta 145.75 337 *e*PKP PKPdf 22 49 26.6 +1.4
STHS *e* 22 52 07.8
STHS *e* 22 52 13.9
KOLS Kolonicke sedl 145.75 336 *e*P PKPdf 22 49 24.9 -0.3
KOLS *e*PKP PKPdf 22 49 26.6 +1.4
KOLS *e* 22 52 07.0
KOLS Kolonicke sedl 145.75 336 *e*PKP PKPdf 22 49 24.9 -0.3
KOLS *e* 22 49 26.6
NRDL Niedersach Rie 145.87 351 *e*PKPbc PKPbc 22 49 26.2 -1.0
KWE Weaver Farm 145.90 4 *e*P PKPdf 22 49 26.0 +0.7
SBD1 Bryn Du 145.91 5⇑*e*P PKPdf 22 49 26.4 +1.0
UZH Uzhgorod 145.99 335 ⇑*i*PKIKP PKPdf 22 49 26.0 +0.4
ANTO Ankara 146.02 314 P PKPbc 22 49 27.5 -0.6
ANTO Ankara 146.02 314 ⇑P PKPdf 22 49 27.0 +1.0
LOD Lodumlu 146.03 315 *e*P PKPdf 22 49 18.2 +2.7
VRI Vrincioaia 146.07 328 P PKPdf 22 49 27.5 +1.7
VRI Vrincioaia 146.07 328 ⇑*i*P PKPdf 22 49 26.8 +0.9
NIE Niedzica 146.09 338 ⇓*e*PKP PKPbc 22 49 27.8 -0.1
NIE *e* 22 52 09.1
CRVS Cervenica-Dubn 146.09 336 *e*P PKPdf 22 49 24.4 -1.4
CRVS *e*PKP PKPdf 22 49 27.3 +1.5
CRVS *e* 22 52 08.5
CRVS Cervenica-Dubn 146.09 336 *e*PKP PKPdf 22 49 24.3 -1.5
CRVS *e* 22 49 27.3
MERS Mersin 146.09 309 *e*P PKPdf 22 49 25.5 -0.7
KSP Ksiaz 146.11 343 *e*PKP PKPbc 22 49 27.6 -0.4
KSP Ksiaz 146.11 343 ⇓*i*PKP PKPbc 22 49 27.5 -0.5
KSP *e* 22 49 29.8
KSP *e* 22 49 39.6
KSP *e*pPKP pPKPdf 22 52 08.0 +22
KSP *e*SS SS 23 11 02.0 -1.4
PLOR Plostina 146.12 328 PKP2 PKPbc 22 49 27.7 -0.4
PLOR Plostina 146.12 328 ⇑*i*P PKPbc 22 49 27.4 -0.7
BRD Bordesti 146.13 327⇑*i*P PKPbc 22 49 28.7 +0.5
SGKT Sivrigoynuk 146.16 316 *i* P PKPdf 22 49 18.8 -7.4
CWF Charnwood Fore 146.21 3⇑*e*P PKPdf 22 49 26.7 +0.8
CWF AMb AMB 22 49 30.7
comp=Z,75nm,1.4s
HARR Harsova 146.23 325 P PKPbc 22 49 28.2 -0.3
RCY Rachaya 146.23 302 *e*P PKPdf 22 49 28.5 +1.9
BHL Bhannes 146.24 303 *e*P PKPdf 22 49 28.4 +1.9
TRPA Tarpa 146.29 334 ⇓*i*P PKPdf 22 49 27.8 +1.6
HLM1 Long Mynd 146.32 5⇑*e*P PKPdf 22 49 27.3 +1.2
OKC Ostrava-Krasne 146.46 341 *e*PKIKP PKPdf 22 49 25.3 -1.1
OKC *e* 22 49 28.1
OKC Ostrava-Krasne 146.46 341 *e*PKPDF PKPdf 22 49 25.3 -1.1
OKC ⇑*e*PKP PKPdf 22 49 28.1 +1.7
OKC *ex* x 22 49 39.2
CLZ Clausthal 146.46 350 *e*PKPbc PKPbc 22 49 28.2 -0.7
CLL Collm 146.48 347 *e*PKP PKPdf 22 49 25.0 -1.4
CLL ⇓*i*PKP PKPdf 22 49 28.1 +1.7
CLL *e*pPKP pPKPdf 22 51 54.0 +7.3
CLL *e*SKP 22 52 09.0
CLL Collm 146.48 347 ⇓*e*PKIKP PKPdf 22 49 25.0 -1.4
CLL *i* 22 49 28.1
CLL comp=Z,12nm,1.1s pmax pmax
CLL pmax pmax
comp=Z,60nm,0.7s
CLL Collm 146.48 347 *e*PKPdf PKPdf 22 49 25.0 -1.4
comp=Z,12nm,1.1s
CLL ⇓*i*PKPbc PKPbc 22 49 28.1 -0.8
comp=Z,60nm,0.7s
CLL *e*PKPab PKPab 22 49 31.0 -0.7
comp=Z,30nm,0.8s
CLL *ex* x 22 49 40.0
CLL *e*pPKiKP 22 51 54.0
CLL *e*SKPdf SKPdf 22 52 03.0 -0.8
CLL *e*SKPbc SKPbc 22 52 09.0 -1.2
comp=Z,14nm,0.8s
CLL Collm 146.48 347 ⇓*i*PKPbc PKPbc 22 49 28.0 -0.9
comp=Z,61nm,0.7s
CLL *e*PKPab PKPab 22 49 31.0 -0.7
CLL *e* 22 49 40.4
CLL *e*pPKPdf pPKPdf 22 51 54.1 +7.4
UPC Upice 146.49 343 *e*PKPDF PKPdf 22 49 25.7 -0.7
UPC ⇑*e*PKP PKPdf 22 49 28.5 +2.1
UPC *e*PKPAB PKPab 22 49 31.5 -0.3
DPC Dobruska-Polom 146.54 343 *e*PKIKP PKPdf 22 49 25.4 -1.1
DPC *e* 22 49 28.8
DPC Dobruska-Polom 146.54 343 *e*PKPDF PKPdf 22 49 25.4 -1.1
DPC ⇑*e*PKP PKPdf 22 49 28.8 +2.3
DPC *e*SKP 22 52 09.4
BRG Berggiesshubel 146.68 346 *e*PKIKP PKPdf 22 49 25.5 -1.2
BRG *i* 22 49 32.4
BRG *i* 23 11 12.0
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG pmax pmax
comp=Z,19nm,0.8s
BRG pmax pmax
comp=Z,9.0nm,0.9s
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG pmax pmax
comp=Z,5.0nm,0.8s
BRG pmax pmax
comp=Z,8.0nm,1.4s
BRG Berggiesshubel 146.68 346 *e*PKPbc PKPbc 22 49 28.6 -0.9
BRG Berggiesshubel 146.68 346 *e*PKP PKPdf 22 49 25.4 -1.3
comp=Z,11nm,1.1s
BRG *i* 22 49 28.9
comp=Z,31nm,0.8s
BRG *i* 22 49 32.4
comp=Z,15nm,0.8s
BRG *e*pPKP pPKPdf 22 51 55.6 +8.6
comp=Z,16nm,1.6s
BRG *i* 22 52 08.9
comp=Z,8.7nm,0.8s
BRG *e* 22 59 57.4
comp=Z,13nm,1.4s
BRG *i* 23 11 12.0
MORC Moravsky Berou 146.70 341 P PKPbc 22 49 29.4 -0.2
MLR Muntele Rosu 146.72 328 PKPbc PKPbc 22 49 28.8 -1.0
comp=Z,40nm,0.6s,baz=342,slow=6.9,SNR=58
MLR SKPbc SKPbc 22 52 09.3 -1.7
comp=Z,17nm,0.9s,baz=154,slow=2.6,SNR=4.7
HTR Trewern Hill 146.72 5 *e*P PKPdf 22 49 27.6 +0.8
FBE Freiberg 146.76 346 *e*PKPbc PKPbc 22 49 29.1 -0.6
HENT Hendek 146.78 317 *i* P PKPdf 22 49 29.4 +2.2
KECS Kecovo 146.81 337 *i* PKP PKPbc 22 49 29.3 -0.6
MCH1 Michaelchurch 146.83 5⇑*e*P PKPdf 22 49 28.5 +1.5
MCH1 AMb AMB 22 49 32.6
comp=Z,58nm,1.4s
PVCC Panska Ves 146.84 345 *e*PKP PKPbc 22 49 29.3 -0.7
PVCC *e* 22 49 41.2
PVCC *e* 22 52 07.8
PVCC Panska Ves 146.84 345⇑*e*PKP PKPbc 22 49 29.3 -0.7
PVCC *ex* x 22 49 41.2
PVCC *e*SKP 22 52 07.8
SSW Stow on the Wo 146.94 4 *e*P PKPbc 22 49 29.1 -1.0
SNX Sinaia 147.03 328⇑*i*P PKPbc 22 49 30.7 +0.1
KIZT Kizilcal 147.11 314 *e*P PKPdf 22 49 30.2 +2.4
HGH Gray Hill 147.20 5 *e*P PKPdf 22 49 29.0 +1.5
SKP1 Kophill 147.25 3 *e*P PKPbc 22 49 29.3 -1.7
DRGR 147.27 333 P PKPbc 22 49 30.5 -0.7
DRGR 147.27 333⇑*i*P PKPbc 22 49 30.3 -0.9
PRU Pruhonice 147.35 344 *e*PKHKP 22 49 26.5
PRU *e* 22 49 34.9
PRU Pruhonice 147.35 344 *e*PKPDF PKPdf 22 49 26.5 -1.4
PRU ⇑*e*PKP PKPbc 22 49 30.6 -0.7
PRU *e*PKPAB PKPab 22 49 34.9 -0.4
PRU *e*SKP 22 52 07.8
ERMK Ermenek 147.37 309 *i* P PKPbc 22 49 31.9 +0.1
MOX Moxa 147.39 348 *e*PKP PKPdf 22 49 26.9 -1.0
MOX *e* 22 49 30.6
MOX *e* 22 51 56.9
MOX Moxa 147.39 348 *e*PKPbc PKPbc 22 49 30.5 -0.9
VYHS Vyhne 147.39 339 *i* PKP PKPbc 22 49 31.0 -0.4
VYHS *e* 22 51 56.3
VYHS *e* 22 52 04.3
VYHS Vyhne 147.39 339 *i* PKP PKPbc 22 49 31.0 -0.4
VYHS *e* 22 51 56.3
VYHS *e*SKPDF 22 52 04.2
VRAC Vranov 147.40 342 P PKPbc 22 49 31.0 -0.4
VRAC Vranov 147.40 342 ⇓*i*P PKPbc 22 49 30.7 -0.7
TANN Tannenbergstha 147.44 347 *e*PKPbc PKPbc 22 49 30.8 -0.7
WERD Werda 147.44 347 *e*PKPbc PKPbc 22 49 30.6 -0.9
KOLL Kolacno 147.47 339 *e*PKP PKPbc 22 49 31.3 -0.3
ESKT Eskisehir 147.49 315 *e*P PKPdf 22 49 30.6 +2.2
ESKT Eskisehir 147.49 315 *i* P PKPdf 22 49 30.9 +2.5
PSZ Piszkesteto 147.50 337 P PKPbc 22 49 31.2 -0.5
PSZ Piszkesteto 147.50 337 ⇓*e*PKP PKPbc 22 49 31.0 -0.7
PSZ Piszkesteto 147.50 337⇑*i*P PKPbc 22 49 30.9 -0.8
GUNZ Gunzen 147.51 347 *e*PKPbc PKPbc 22 49 31.2 -0.5
NKC Novy Kostel 147.61 347 *e*PKP PKPbc 22 49 31.4 -0.6
NKC *e* 22 52 11.0
NKC Novy Kostel 147.61 347⇑*e*PKP PKPbc 22 49 31.4 -0.6
NKC *e*SKP 22 52 11.0
CSS Prodhromos 147.70 306 P PKPdf 22 49 30.7 +1.8
CSS Prodhromos 147.70 306 *e*PKPbc PKPbc 22 49 31.7 -1.0
CSS *e*PKPab PKPab 22 49 36.7 -0.6
CSS Prodhromos 147.70 306 *e*PKP PKPbc 22 49 31.4 -1.3
MAMC Mammari 147.71 306 P PKPbc 22 49 30.8 -1.9
TREC Trest 147.73 343 *e*PKIKP PKPbc 22 49 31.5 -0.8
TREC Trest 147.73 343⇑*e*PKP PKPbc 22 49 31.5 -0.8
SMOL Smolenice 147.84 340 *e*PKP PKPbc 22 49 32.8 +0.2
EIL Elat 147.89 296 PKPbc PKPbc 22 49 32.9 -0.4
EIL Elat 147.89 296 PKPbc PKPbc 22 49 32.9 -0.4
comp=Z,67nm,0.7s,baz=358,slow=2.8,SNR=61
MANZ Manzenberg 147.91 347 *e*PKPbc PKPbc 22 49 32.2 -0.5
IZI Iznik 147.96 318 *e*P PKPdf 22 49 31.6 +2.4
LEF Lefka 147.98 307 *e*P PKPdf 22 49 31.6 +2.2
MODS Modra-Piesok 148.01 340 *i* PKP PKPbc 22 49 32.9 -0.1
MODS *e* 22 51 58.6
MODS *e* 22 52 06.1
MODS Modra-Piesok 148.01 340 *i* PKP PKPbc 22 49 32.8 -0.2
MODS *e* 22 51 58.6
MODS *e*SKPDF 22 52 06.5
BEBN Eben Emael 148.06 355 PKPab PKPab 22 49 37.6 -0.6
ROTZ Rotzenmuhle 148.10 347 *e*PKPbc PKPbc 22 49 32.6 -0.6
SZAC Souni-Zanaja 148.12 306 P PKPbc 22 49 31.9 -1.9
UCC Uccle 148.15 357 PKPbc PKPbc 22 49 32.3 -0.9
BUD Budapest 148.18 337 ⇓*e*PKP PKPbc 22 49 32.6 -0.9
ALFC Alevga 148.19 307 P PKPbc 22 49 31.5 -2.4
comp=Z,4.9nm,0.6s
MEM Membach 148.22 355 PKPbc PKPbc 22 49 32.5 -0.9
ZST Bratislava 148.23 340 *e*PKP PKPbc 22 49 33.3 -0.3
SZH Strazhica 148.26 325 *i* P PKPbc 22 49 32.8 -1.0
DYA Yadsworthy 148.28 7 *e*P PKPbc 22 49 32.3 -1.4
DYA AMb AMB 22 49 36.4
comp=Z,65nm,1.7s
ULDT Uludag 148.28 318 *i* P PKPbc 22 49 33.5 -0.5
ZIMR 148.29 326 P PKPbc 22 49 33.0 -0.9
GZR Gura Zlata 148.31 331 P PKPbc 22 49 32.9 -1.0
GZR Gura Zlata 148.31 331 ⇓*i*P PKPbc 22 49 32.8 -1.1
TNS Taunus Mts 148.33 352 *e*PKPbc PKPbc 22 49 33.0 -0.7
GRF Grafenberg Arr 148.38 348 *e*PKPbc PKPbc 22 49 33.1 -0.8
GRF *e*pPKPbc pPKPbc 22 51 57.7 +5.4
GRF *e* 22 53 12.9
KHC Kasperske Hory 148.38 345 *e*PKPDF PKPdf 22 49 28.2 -1.4
KHC ⇑*e*PKP PKPbc 22 49 33.5 -0.4
KHC *e*PKPAB PKPab 22 49 38.3 -1.3
JMB Yambol 148.42 323 *e*P PKPbc 22 49 33.1 -1.2
JMB Yambol 148.42 323 *i* P PKPbc 22 49 33.3 -1.0
AKMC Akamas 148.44 307 P PKPdf 22 49 31.7 +1.6
SNF Seneffe 148.44 357 PKPbc PKPbc 22 49 32.7 -1.3
SNF PKPab PKPab 22 49 38.5 -1.3
BCLA Clavier 148.47 355 PKPbc PKPbc 22 49 35.1 +1.0
BCLA PKPab PKPab 22 49 38.7 -1.2
PPCY Paphos 148.49 306 P PKPdf 22 49 31.8 +1.6
WET Wettzell 148.54 346 *e*PKPbc PKPbc 22 49 33.5 -0.8
ISP Isparta 148.55 313 *e*PKPbc PKPbc 22 49 33.2 -1.6
GEC2 GERESS Array S 148.62 345 *e*PKPbc PKPbc 22 49 33.6 -0.9
GERES GERESS Array B 148.62 345 PKPbc PKPbc 22 49 33.9 -0.6
comp=Z,22nm,0.7s,baz=101,slow=1.4,SNR=84
GERES PP PP 22 53 11.8 +1.6
comp=Z,2.7nm,0.8s,baz=28,slow=3.2,SNR=4.3
GDZ Gediz 148.62 316 *i* P PKPbc 22 49 33.9 -1.0
BZS Buzias 148.66 332 ⇓*i*P PKPbc 22 49 33.7 -1.0
ABH Alteburg 148.78 353 PKP PKPbc 22 49 35.3 +0.4
GIVF Givet 148.82 356 *e*PKIKP PKPdf 22 49 30.7 +0.5
DOU Dourbes 148.84 356 PKPbc PKPbc 22 49 34.2 -0.8
CONA Conrad Observa 148.85 341 *i* PKPbc PKPbc 22 49 34.6 -0.5
comp=Z,156nm,1.6s,SNR=32
SOP Sopron 148.85 340 ⇓*e*PKP PKPbc 22 49 34.5 -0.6
TOD Tromm 148.88 351 PKP PKPbc 22 49 35.3 +0.2
BAIF Baives 148.90 357 *e*PKIKP PKPdf 22 49 30.6 +0.2
RUP Ruppelstein 149.01 353 PKP PKPbc 22 49 35.9 +0.5
WLF Walferdange 149.14 354 *e*PKPbc PKPbc 22 49 35.3 -0.5
WLF Walferdange 149.14 354 PKPbc PKPbc 22 49 35.2 -0.6
WLF PKPab PKPab 22 49 40.9 -1.8
WLF Walferdange 149.14 354 *e*PKPbc PKPbc 22 49 35.4 -0.4
BTOK Tokmak 149.20 318 *i* P PKPbc 22 49 35.2 -1.0
DIM Dimitrovgrad 149.28 324 *i* P PKPbc 22 49 35.8 -0.6
MOA Molln 149.38 343 ⇓*i*P PKPbc 22 49 35.4 -0.9
comp=Z,22nm,1.0s,SNR=11
PKSM Moragy 149.39 336 ⇓*i*P PKPbc 22 49 35.3 -1.2
STU Stuttgart 149.63 350 *e*PKPbc PKPbc 22 49 36.3 -0.6
LANF Langenberg 149.63 352 PKP PKPbc 22 49 37.5 +0.6
PGB Panagyurishte 149.69 326 *i* P PKPbc 22 49 36.3 -1.0
FUR Furstenfeldbru 149.82 347 *e*PKPbc PKPbc 22 49 36.5 -0.9
AKHS Akhisar 149.83 317 *i* P PKPbc 22 49 36.5 -1.2
RDO Rodhopi 149.87 322 *e*P PKPdf 22 49 34.3 +2.1
RZN Rozhen 149.98 324 *i* P PKPbc 22 49 36.9 -1.1
KOGS Kog 150.04 339 *i* PKPbc PKPbc 22 49 36.6 -1.4
VTS Vitosha 150.17 327 *e*P PKPbc 22 49 36.7 -1.7
VTS Vitosha 150.17 327 ⇓*i*P PKPbc 22 49 37.7 -0.7
BFO Black Forest 150.19 351 *e*PKPdf PKPbc 22 49 37.0 -1.3
BFO *e*PP PP 22 53 22.9 +3.8
FLN La Foliniere 150.22 3 *e*PKIKP PKPdf 22 49 31.6 -0.9
comp=Z,24nm,0.8s
PERS Pernice 150.23 341 *i* PKPbc PKPbc 22 49 37.0 -1.4
AYVA Ayvalik 150.31 318 *i* P PKPbc 22 49 37.3 -1.6
KBA Koelnbreinsper 150.34 344 ⇓*i*P PKPbc 22 49 37.2 -1.5
comp=Z,32nm,0.9s,SNR=24
SPAK Spaichingen-Ko 150.34 350 PKP PKPbc 22 49 38.8 +0.2
LDF La Druitiere 150.40 2 *e*PKIKP PKPdf 22 49 31.9 -0.9
AYDN Tasoluk 150.45 315 *i* P PKPbc 22 49 38.8 -0.4
KDAG Bornova 150.45 316 *i* P PKPbc 22 49 38.0 -1.2
ECH Echery 150.46 352 PKP PKPbc 22 49 38.5 -0.4
OBKA Obir 150.52 342 *i* P PKPbc 22 49 37.5 -1.6
comp=Z,112nm,2.6s,SNR=18
WATA Walderalm 150.54 346 *i* P PKPbc 22 49 38.1 -1.0
comp=Z,35nm,1.1s,SNR=18
DIVS Divcibare 150.57 332 *e*P PKPbc 22 49 38.1 -1.1
RETA Reutte 150.57 347 ⇓*i*PKPbc PKPbc 22 49 38.2 -1.0
comp=Z,47nm,1.7s,SNR=10.0
GRR Gorron 150.57 3 *e*PKIKP PKPdf 22 49 32.2 -0.8
THEF They Montfort 150.58 354 PKP PKPbc 22 49 39.0 -0.2
WTTA Wattenberg 150.59 346 *i* P PKPbc 22 49 38.4 -0.8
comp=Z,50nm,0.8s,SNR=55
MMB Musomiste 150.59 325 *i* P PKPbc 22 49 38.2 -1.2
PRK Paraskevi 150.60 319 *e*P PKPdf 22 49 34.4 +1.0
PRK Paraskevi 150.60 319 *e*P PKPbc 22 49 38.5 -1.0
MOTA Moosalm 150.63 347 ⇓*i*P PKPbc 22 49 38.3 -1.1
comp=Z,29nm,0.9s,SNR=23
MYKA Terra Mystica 150.67 343 ⇓*i*PKPbc PKPbc 22 49 37.7 -1.8
comp=Z,32nm,0.8s
FELD Feldberg im Sc 150.68 351 PKP PKPbc 22 49 39.2 -0.2
NVR Nevrokopi 150.68 324 *e*P PKPdf 22 49 36.8 +3.4
SQTA Sankt Quirin 150.73 347 *i* P PKPbc 22 49 38.7 -0.9
comp=Z,27nm,0.8s,SNR=30
KKB Krupnik 150.75 326 *i* P PKPbc 22 49 38.9 -0.9
MOF Molkenrain 150.82 352 PKP PKPbc 22 49 39.6 -0.1
CRES Cresnjev 150.85 340 *i* PKPbc PKPbc 22 49 38.8 -1.1
ABTA Abfaltersbach 150.86 344 *i* PKPbc PKPbc 22 49 38.3 -1.5
comp=Z,56nm,0.8s,SNR=33
DAVA Damuels 150.94 348 *i* P PKPbc 22 49 39.2 -0.8
comp=Z,59nm,1.3s,SNR=11
LJU Ljubljana 150.95 341 *e*PKPdf PKPdf 22 49 32.9 -0.8
LJU *i* PKPbc PKPbc 22 49 39.0 -1.1
CADS Cadrg 151.01 342 *i* PKPbc PKPbc 22 49 38.3 -1.9
FETA Feichten 151.02 347 ⇓*i*PKPbc PKPbc 22 49 39.5 -0.7
comp=Z,37nm,1.0s,SNR=15
BDRM Kayabasi 151.05 314 *i* P PKPdf 22 49 38.5 +4.4
BDRM Kayabasi 151.05 314 *i* P PKPbc 22 49 39.6 -1.0
VOY Vojsko 151.15 342 *e*PKPdf PKPdf 22 49 32.7 -1.3
VOY *e*PKPbc PKPbc 22 49 39.0 -1.5
VOY *e* 22 49 48.3
BBS Basel-Blauen 151.16 352 PKP PKPbc 22 49 40.3 -0.2
BOJS Bojanci 151.20 340 *i* PKPdf PKPdf 22 49 34.0 -0.1
BOJS *i* PKPbc PKPbc 22 49 40.0 -0.7
OUR Ouranopolis 151.30 323 *e*P PKPbc 22 49 39.0 -2.0
KNT Kendrikon 151.34 325 *e*P PKPbc 22 49 39.0 -2.2
STIP Stip 151.34 327 *e*PKP PKPbc 22 49 39.0 -2.1
LOMF Lomont 151.35 353 PKP PKPbc 22 49 41.1 +0.1
PLG Polygyros 151.57 323 *e*P PKPbc 22 49 39.5 -2.2
PLG Polygyros 151.57 323 *e*P PKPdf 22 49 37.5 +2.7
LOR Lormes 151.70 357 *e*PKIKP PKPdf 22 49 34.4 -0.4
GRG Griva 151.75 325 *e*P PKPbc 22 49 39.6 -2.5
SSF Saint Saulge 151.92 357 *e*PKIKP PKPdf 22 49 34.8 -0.3
comp=Z,7.1nm,0.7s
KARP Karpathos 152.02 311 *e*P PKPbc 22 49 39.3 +3.7
KRUS Krusevo 152.06 327 *e*PKP PKPbc 22 49 41.6 -1.1
CABF La Chapelle 152.17 353 *e*PKIKP PKPdf 22 49 35.7 +0.2
comp=Z,18nm,0.9s
AVF Avril sur Loir 152.20 357 *e*PKIKP PKPdf 22 49 35.7 +0.2
SMF Signal de Mont 152.32 357 *e*PKIKP PKPdf 22 49 35.6 -0.1
MFF Saint Martin d 152.39 3 *e*PKIKP PKPdf 22 49 34.9 -0.9
FNA Florina 152.42 326 *e*P PKPbc 22 49 41.7 -1.8
BGF Bois d'Agland 152.45 358 *e*PKIKP PKPdf 22 49 35.8 -0.1
comp=Z,9.6nm,0.8s
TCF Toulx Ste Croi 152.74 359 *e*PKIKP PKPdf 22 49 36.3 0.0
THL Klokotos Trika 152.93 324 *e*P PKPbc 22 49 44.9 +0.2
AGO Saint Agoulin 152.95 358 PKP PKPbc 22 49 43.3 -1.2
LKR Lokris 152.97 321 *e*P PKPbc 22 49 42.0 -2.8
PLDF La Plantade 153.01 357 PKP PKPbc 22 49 43.7 -0.9
LPL La Plagne 153.17 352 *e*PKIKP PKPdf 22 49 37.3 +0.4
LPG La Plagne 153.19 352 *e*PKIKP PKPdf 22 49 37.3 +0.3
PYM Petit Puy Mans 153.25 358 PKP PKPbc 22 49 44.4 -0.8
EVR Evrytania 153.49 323 *e*P PKPdf 22 49 42.4 +4.8
ORIF Oris-en-Rattie 153.86 353 *e*PKIKP PKPdf 22 49 38.1 +0.2
MBDF Montbardon 153.94 352 *e*PKIKP PKPdf 22 49 37.8 -0.3
VIVF Saint-Julien-l 154.04 355 *e*PKIKP PKPdf 22 49 38.4 +0.2
VAM Vamos 154.16 314 *e*P PKPbc 22 49 46.0 -1.4
VLI Veliai 154.23 318 *e*P PKPbc 22 49 48.5 +1.0
ITM Ithomi 154.57 320 *e*P PKPdf 22 49 46.5 +7.3
SJPF Ste Jean 155.80 5 *e*PKIKP PKPdf 22 49 40.3 -0.3
ETSF Etsaut 156.06 4 *e*PKIKP PKPdf 22 49 41.1 +0.1
comp=Z,16nm,0.8s
PBRG Braganca 156.14 16 *e*PKPab PKPab 22 50 12.0 -0.7
PVRL Vila Real 156.37 18 *e*PKPab PKPab 22 50 13.4 -0.3
MVO Moncorvo 156.66 17 *e*PKPab PKPab 22 50 14.4 -0.6
PVIS Viseu 156.83 19 *e*PKPab PKPab 22 50 15.6 -0.1
PCBR Castelo Branco 157.76 19 *e*PKPab PKPab 22 50 18.5 -1.3
PMAFR Mafra 157.95 23 *e*PKPab PKPab 22 50 19.9 -0.7
PESTR Estremoz 158.61 20 *e*PKPab PKPab 22 50 22.5 -1.0
EVO Evora 158.78 21 *e*PKIKP PKPdf 22 49 43.0 -1.4
comp=Z,12nm,0.8s
EVO Evora 158.78 21 *e*PKPab PKPab 22 50 23.3 -1.0
ESDC Sonseca Array 158.80 12 PKPab PKPab 22 50 23.3 -1.0
comp=Z,8.4nm,0.9s,baz=346,slow=4.0,SNR=21
ESDC PP PP 22 54 06.9 +0.4
comp=Z,2.3nm,0.8s,baz=343,slow=5.8,SNR=4.9
PBEJ Beja 159.28 22 *e*PKPab PKPab 22 50 25.5 -1.0
PTEO Sao Teotonio 159.39 24 *e*PKPab PKPab 22 50 25.7 -1.3
PBAR Barrancos 159.42 20 *e*PKPab PKPab 22 50 26

comp=Z,4.9nm,0.6s,baz=14,slow=1.2,SNR=12
DBIC PKPab PKPab 22 50 57.8 0.0
comp=Z,2.3nm,0.7s,baz=213,slow=8.8,SNR=4.0
TORD Torodi Ar. Bea 174.23 181 PKP PKPdf 22 49 54.5 -2.2
comp=Z,5.9nm,0.9s,baz=343,slow=0.9,SNR=26
TORD PKPab PKPab 22 51 32.3 -0.6
comp=Z,2.7nm,0.9s,baz=174,slow=3.6,SNR=8.3
TORD PP PP 22 55 25.9 +1.7
comp=Z,1.8nm,0.8s,baz=177,slow=3.9,SNR=5.0

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*THE **23** 23:09:52.6,38.38N×2206E,h3km,ML3.8*
*IDC **23** 23:09:52.2±0.9,38.39N×22.11E,h0km,mb3.6/10, mb1 3.7/13,mb1mx3.6/22,mbtmp3.6/13,ML3.2/3,Error ellipse: s-maj=19.9km s-min=15.5km az=98.0*
*ATH **23** 23:09:52.5,38.34N×2208E,h17km±1km,MD3.7/19,ML3.4*
*NEIC **23** 23:09:52.6,38.38N×2206E,h0km,mb3.5/1,ML3.8(THE), ML3.4(ATH),After THE.*
*ISCJB **23** 23:09:52.1±0.4,3836N±002×2206E±003,h7km±3km, mb3.6/9,Error ellipse: s-maj=3.9km s-min=2.8km az=168.9*
*CSEM **23** 23:09:53.1±0.1,3837N×2204E,h10km,ML3.8,Error ellipse: s-maj=1.4km s-min=1.3km az=95.0*

ISC 23 23:09:53.0±0.4,3837N±002×2208E±003,h4km±3km,n70, σ1§05/84,mb3.6/9,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SELA	**Sela**	**0.17**	**238**	*e*Pg		**Pg**	**23 09 55.9**	**-0.5**
SELA				*e*Sg		**Sg**	**23 09 58.6**	**-0.1**
RLS	**Riolos of Patr**	**0.57**	**237**	*e*PN		**Pg**	**23 10 03.5**	**-0.5**
RLS				*e*SN		**Sg**	**23 10 11.9**	**+0.4**
EVR	**Evrytania**	**0.59**	**339**	*e*PB		**Pg**	**23 10 04.1**	**-0.2**
EVR				*e*SN		**Sg**	**23 10 13.1**	**+1.2**
AGG	**Agios Georgios**	**0.68**	**17**	*e*Pg		**Pg**	**23 10 05.3**	**-0.7**
AGG				*e*Sg		**Sg**	**23 10 15.4**	**+0.5**
LKR	**Lokris**	**0.77**	**68**	*e*PN		**Pn**	**23 10 07.7**	**-3.0**
LTK	**Loutraki**	**0.78**	**116**	*e*Pg		**Pg**	**23 10 07.9**	**-0.1**
LTK				*e*Sg		**Sg**	**23 10 19.6**	**+1.6**
VLX	**Vlachokerasia**	**1.02**	**167**	*e*Pg		**Pg**	**23 10 11.7**	**-0.9**
VLX				*e*Sg		**Sg**	**23 10 27.3**	**+1.3**
KFL	**Anninata**	**1.05**	**256**	*e*Pg		**Pg**	**23 10 11.9**	**-1.2**
ITM	**Ithomi**	**1.19**	**186**	*e*PN		**Pn**	**23 10 14.5**	**-1.9**
THL	**Klokotos Trika**	**1.20**	**358**	*e*PN		**Pn**	**23 10 15.0**	**-1.5**
THL				*e*SN		**Sn**	**23 10 32.4**	**-0.7**
DID	**Didima**	**1.26**	**133**	*e*Pg		**Pg**	**23 10 16.3**	**-0.7**
DID				*e*Sg		**Sg**	**23 10 35.2**	**+1.9**
NAIG	**Nisos Aigina**	**1.27**	**118**	*e*PN		**Pn**	**23 10 17.0**	**-0.5**
NEO	**Neokhori**	**1.29**	**43**	*e*PN		**Pn**	**23 10 17.8**	**0.0**
XOR	**Xorichti**	**1.32**	**41**	*e*Pg		**Pg**	**23 10 17.5**	**-0.9**
XOR				*e*Sg		**Sg**	**23 10 36.6**	**+1.2**
ATH	**Athens Observa**	**1.35**	**107**	*e*PN		**Pn**	**23 10 18.2**	**-0.4**
ATH				*e*SN		**Sn**	**23 10 35.3**	**-1.6**
KVR	**Kavouri**	**1.44**	**112**	*e*PN		**Pn**	**23 10 20.0**	**+0.2**
PTL	**Penteli**	**1.44**	**102**	*e*PN		**Pn**	**23 10 19.5**	**-0.3**
PYL	**PYLOS**	**1.50**	**190**	*e*Pg		**Pg**	**23 10 19.8**	**-1.9**
PYL				*e*Sg		**Sg**	**23 10 41.4**	**+0.4**
JAN	**Janina**	**1.60**	**324**	*e*PN		**Pn**	**23 10 23.1**	**+1.0**
AOS	**Alonnisos**	**1.62**	**60**	*e*Pb		**Pb**	**23 10 21.4**	**-2.0**
LIT	**Litokhoron**	**1.76**	**10**	*e*Pb		**Pb**	**23 10 23.7**	**-2.1**
LIT				*e*Sb		**Sb**	**23 10 47.6**	**-0.5**
VLI	**Veliai**	**1.78**	**157**	*e*PN		**Pn**	**23 10 24.5**	**0.0**
KZN	**Kozani**	**1.95**	**353**	*e*PN		**Pn**	**23 10 27.8**	**+1.0**
PAIG	**Paliouri**	**1.99**	**38**	*e*Pn		**Pn**	**23 10 26.3**	**-1.1**
KYTH	**Kithira**	**2.22**	**160**	*e*PB		**Pb**	**23 10 30.0**	**-3.6**
KEK	**Kerkira**	**2.23**	**308**	*e*PN		**Pn**	**23 10 31.8**	**+1.2**
PLG	**Polygyros**	**2.26**	**27**	*e*Pn		**Pn**	**23 10 30.4**	**-0.8**
PLG	**Polygyros**	**2.26**	**27**	*e*Pn		**Pn**	**23 10 30.8**	**-0.4**
HORT	**Hortiatis**	**2.36**	**19**	*e*Pn		**Pn**	**23 10 31.7**	**-0.8**
OUR	**Ouranopolis**	**2.46**	**36**	*e*Pn		**Pn**	**23 10 33.0**	**-0.8**
FNA	**Florina**	**2.47**	**348**	*e*Pn		**Pn**	**23 10 33.8**	**-0.2**
FNA				*e*Sn		**Sn**	**23 11 05.2**	**+0.6**
GRG	**Griva**	**2.60**	**5**	*e*Pn		**Pn**	**23 10 35.7**	**-0.1**
SOH	**Sokhos**	**2.64**	**21**	*e*Pn		**Pn**	**23 10 36.3**	**0.0**
BIA	**Bitola**	**2.71**	**348**	*e*PN		**Pn**	**23 10 38.6**	**+1.4**
LOS	**Limnos**	**2.81**	**55**	*e*Pn		**Pn**	**23 10 38.1**	**-0.5**
LIA	**Limnos Island**	**2.86**	**57**	P	Pn	**Pn**	**23 10 43.5**	**+4.2**
KNT	**Kendrikon**	**2.86**	**12**	*e*Pn		**Pn**	**23 10 39.3**	**-0.1**
VAY	**Valandovo**	**2.97**	**7**	*e*Pn		**Pn**	**23 10 40.9**	**0.0**
VAY	**Valandovo**	**2.97**	**7**	*e*Pn		**Pn**	**23 10 40.8**	**-0.1**
APE	**Apeiranthos**	**3.03**	**114**	*e*PN		**Pn**	**23 10 42.3**	**+0.6**
KRUS	**Krusevo**	**3.06**	**348**	*i* Pn		**Pn**	**23 10 44.7**	**+2.6**
KRUS	**Krusevo**	**3.06**	**348**	*i* Pn		**Pn**	**23 10 44.6**	**+2.5**
CHOS	**Chios island**	**3.12**	**88**	*e*Pn		**Pn**	**23 10 43.4**	**+0.5**
NVR	**Nevrokopi**	**3.28**	**24**	*e*PN		**Pn**	**23 10 45.3**	**+0.2**
KARN	**Karanos**	**3.31**	**153**	*e*Pn		**Pn**	**23 10 45.9**	**+0.4**
STIP	**Stip**	**3.32**	**1**	*e*Pn		**Pn**	**23 10 45.4**	**-0.3**
STIP	**Stip**	**3.32**	**1**	*i* Pn		**Pn**	**23 10 46.5**	**+0.8**
VAM	**Vamos**	**3.41**	**149**	*e*Pn		**Pn**	**23 10 47.4**	**+0.1**
TIR	**Tirane**	**3.43**	**331**	*e*Pn		**Pn**	**23 10 46.9**	**-0.2**
IDI	**Anoyia**	**3.81**	**143**	Pn		**Pn**	**23 10 53.2**	**+0.8**
	1.7nm,0.3s,baz=337,slow=9.9,SNR=20							
IDI					Sn	**Sn**	**23 11 39.3**	**+1.6**
	2.2nm,0.3s,baz=276,slow=19,SNR=3.4							
RDO	**Rodhopi**	**3.85**	**43**	*e*PN		**Pn**	**23 10 54.0**	**+1.1**
LAST	**Lasithi**	**4.21**	**139**	*e*Pn		**Pn**	**23 10 58.6**	**+0.8**
BARS	**Barje**	**4.45**	**358**	Pn		**Pn**	**23 11 02.5**	**+1.3**
DIVS	**Divcibare**	**5.94**	**345**	Pn		**Pn**	**23 11 25.0**	**+3.4**
FGSL	**Fruska Gora**	**6.99**	**347**	Pn		**Pn**	**23 11 38.1**	**+2.0**
MLR	**Muntele Rosu**	**7.68**	**21**	Pn		**Pn**	**23 11 45.2**	**-0.3**
	0.1nm,0.3s,baz=312,slow=14,SNR=2.4							
GERES	**GERESS Array B**	**12.10**	**333**	Pn		**Pn**	**23 12 48.9**	**+2.9**
	0.1nm,0.3s,baz=169,slow=18,SNR=2.6							
ESDC	**Sonseca Array**	**20.26**	**282**	P		**P**	**23 14 29.4**	**+0.2**
	0.6nm,0.5s,baz=77,slow=11,SNR=5.1							
HFS	**Hagfors**	**22.43**	**349**	P		**P**	**23 14 52.6**	**+0.2**
	5.5nm,1.1s,mb3.9,baz=148,slow=14,SNR=5.0							
FINES	**FINESS Array B**	**23.23**	**5**	P		**P**	**23 14 59.9**	**-1.1**
	2.6nm,1.0s,mb3.6,baz=172,slow=12,SNR=2.6							
NB2	**NORSAR Subarra**	**23.69**	**347**	P		**P**	**23 15 05.2**	**-0.4**
	comp=Z,1.0nm,0.7s,mb3.4,baz=152,slow=10							
NOA	**NORSAR Array B**	**23.69**	**347**	P		**P**	**23 15 04.7**	**-0.9**
NOA	**NORSAR Array B**	**23.69**	**347**	P		**P**	**23 15 04.7**	**-0.9**
	comp=Z,0.8nm,0.6s,mb3.4,baz=154,slow=9.4,SNR=4.6							
EKA	**Eskdalemuir Ar**	**24.00**	**323**	P		**P**	**23 15 08.9**	**+0.5**
	comp=Z,2.6nm,0.8s,mb3.7,baz=133,slow=9.4,SNR=5.4							
TORD	**Torodi Ar. Bea**	**30.97**	**221**	P		**P**	**23 16 11.1**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=34,slow=9.5,SNR=15							
DBIC	**Dimbokro**	**39.88**	**225**	P		**P**	**23 17 28.0**	**+0.1**
DBIC	**Dimbokro**	**39.88**	**225**	P		**P**	**23 17 28.0**	**+0.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=18,slow=9.6,SNR=4.4							
MKAR	**Makanchi Array**	**44.16**	**59**	P		**P**	**23 18 01.7**	**-0.8**
	comp=Z,1.2nm,0.5s,mb3.9,baz=277,slow=7.3,SNR=15							
SONM	**Songino Array**	**59.39**	**51**	P		**P**	**23 19 57.9**	**+1.6**
	comp=Z,0.2nm,0.3s,mb3.6,baz=278,slow=9.1,SNR=3.0							
YKA	**Yellowknife Ar**	**73.62**	**341**	P		**P**	**23 21 25.2**	**-1.9**
	comp=Z,0.1nm,0.5s,mb3.0,baz=29,slow=5.3,SNR=3.6							

MAN 23 23:16:57,1541N×11952E,h61km,mb4.5,ML3.3,MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SCZP	**Santa Cruz**	**0.53**	**47**	*e*P		Pn	23 17 04.2	-5.2
BOLP	**Bolinao**	**1.04**	**22**	*e*P		Pn	23 17 17.2	+1.6
POLP	**Polilio Island**	**2.44**	**106**	*e*P		Pn	23 17 36.1	+1.7
ABRA	**Dolores**	**2.50**	**27**	*e*P		Pn	23 17 36.8	+1.4
ABRA				*e*S		Sn	23 17 47.3	-17
CVP	**Callao Caves**	**3.17**	**44**	*e*P		Pn	23 17 45.9	+1.0
CVP				*e*S		Sn	23 18 02.9	-18
SGCP	**Mt. Cagua**	**3.71**	**40**	*e*P		Pn	23 17 47.2	-4.7

GUC 23 23:22:20.2±0.3,4538S×7304W,h7km±2km,ML4.2,1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COYC	**Coyhaique**	**0.70**	**106**	⇑*i*P		Pg	23 22 32.9	-0.8
COYC				*i* S		Sg	23 22 42.2	-0.7

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*IDC **23** 23:54:49.9×1.1,042N×12607E,h0km,mb3.8/5,mb1 4.0/5, mb1mx3.8/15,mbtmp3.9/5,Error ellipse: s-maj=114.9km s-min=19.4km az=67.0*

NEIC 23 23:54:54.8±0.9,037N×12613E,h35km,Error ellipse: s-maj=132.0km s-min=12.6km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**21.73**	**159**	P		P	23 59 42.7	-0.5
	3.3nm,0.5s,baz=338,slow=11,SNR=60							
WB2	**Warramunga Arr**	**21.73**	**159**	*e*P		P	23 59 42.5	-0.7
ASAR	**Alice Springs**	**25.05**	**163**	P		P	00 00 17.7	+1.7
	2.8nm,0.5s,baz=350,slow=14,SNR=28							
SONM	**Songino Array**	**50.29**	**343**	P		P	00 03 48.4	+0.6
	0.4nm,0.8s,baz=142,slow=7.3,SNR=2.8							
MKAR	**Makanchi Array**	**59.99**	**327**	P		P	00 04 57.6	-0.2
MKAR					PcP	PcP	00 05 43.7	0.0
MKAR	**Makanchi Array**	**59.99**	**327**	P		P	00 04 57.6	-0.2
	0.6nm,0.4s,baz=124,slow=7.7,SNR=10							
MKAR					PcP	PcP	00 05 43.7	0.0
	0.4nm,0.6s,baz=111,slow=4.1,SNR=3.5							
AKTK	**Aktyubinsk**	**75.92**	**322**	P		P	00 06 38.0	+0.1
AKTO	**Aktyubinsk**	**75.92**	**322**	P		P	00 06 38.0	+0.1
	0.8nm,0.5s,baz=98,slow=11,SNR=5.3							
TORD	**Torodi Ar. Bea**	**123.32**	**286**	PKP		PKPdf	00 13 49.2	+0.1
	0.2nm,0.6s,baz=69,slow=1.9,SNR=3.8							

WEL 24 00:16:13.6±0.7,4503S×16632E,h5km,ML4.1/10,Error ellipse: s-maj=7.4km s-min=2.3km az=90.0,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DCZ	**Deep Cove**	**0.74**	**127**	P*		Pb	00 16 28.2	-0.8
DCZ				*e*S*		Sb	00 16 37.3	-2.1
DCZ				S*		Sb	00 16 37.4	-2.0
MSZ	**Milford Sound**	**1.20**	**73**	P*		Pb	00 16 35.6	-1.3
MLZ	**Mavora Lakes**	**1.35**	**104**	P*		Pb	00 16 38.3	-1.1
MLZ				S*		Sb	00 16 56.4	-0.6
WHZ	**Wether Hill Ro**	**1.44**	**127**	PN		Pn	00 16 39.4	-0.9
WHZ				SN		Sn	00 16 58.0	-1.5
WKZ	**Wanaka**	**1.93**	**85**	PN		Pn	00 16 48.9	+1.8
JCZ	**Jackson Bay**	**1.99**	**62**	PN		Pn	00 16 47.4	-0.6
EAZ	**Earnscleugh**	**2.13**	**96**	*e*PN		Pn	00 16 50.1	+0.3
FOZ	**Fox Glacier**	**2.83**	**60**	PN		Pn	00 16 59.5	0.0
LBZ	**Lake Benmore**	**2.83**	**78**	PN		Pn	00 16 60.0	+0.5
RPZ	**Rata Peaks**	**3.64**	**70**	PN		Pn	00 17 10.5	-0.1
WVZ	**Waitaha Valley**	**3.74**	**60**	PN		Pn	00 17 10.3	-1.6
DSZ	**Denniston Nort**	**5.17**	**53**	PN		Pn	00 17 30.6	-1.0

WEL 24 00:18:22.9±0.6,4507S×16630E,h12km,ML3.9/9,Error ellipse: s-maj=5.4km s-min=2.6km az=90.0,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DCZ	**Deep Cove**	**0.73**	**125**	P*		Pb	00 18 36.3	-1.1
MSZ	**Milford Sound**	**1.22**	**72**	P*		Pb	00 18 44.5	-1.3
MSZ				S*		Sb	00 19 01.3	-0.3
MLZ	**Mavora Lakes**	**1.35**	**103**	PN		Pn	00 18 46.6	-0.9
MLZ				SN		Sn	00 19 04.3	-1.1
WHZ	**Wether Hill Ro**	**1.42**	**126**	PN		Pn	00 18 47.9	-0.6
WHZ				SN		Sn	00 19 05.6	-1.6
WKZ	**Wanaka**	**1.94**	**84**	PN		Pn	00 18 57.0	+1.3
EAZ	**Earnscleugh**	**2.13**	**96**	PN		Pn	00 18 59.6	+1.4
EAZ				SN		Sn	00 19 25.8	+1.2
TUZ	**Tuapeka**	**2.50**	**112**	PN		Pn	00 19 02.6	-0.8
LBZ	**Lake Benmore**	**2.85**	**78**	PN		Pn	00 19 07.4	-0.7
FOZ	**Fox Glacier**	**2.86**	**59**	PN		Pn	00 19 06.8	-1.4
ODZ	**Otahua Downs**	**3.08**	**91**	PN		Pn	00 19 11.3	+0.1
RPZ	**Rata Peaks**	**3.66**	**70**	PN		Pn	00 19 18.8	-0.5
WVZ	**Waitaha Valley**	**3.77**	**60**	PN		Pn	00 19 18.5	-2.2
DSZ	**Denniston Nort**	**5.20**	**52**	PN		Pn	00 19 37.9	-2.6

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*NNC **24** 00:30:33.3±3.6,3726N×7028E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=28.3km s-min=27.5km az=77.0*

ISC 24 00:30:30.9±2.3,367N±01×702E±01,h35km,n8,σ1§21/11, 2C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**6.03**	**26**	P		**Pn**	**00 31 57.7**	**+0.2**
	SNR=36							
KK31	**Karatay Array**	**6.36**	**2**	⇓Pn		**Pn**	**00 32 04.3**	**+2.2**
	2.7nm,0.5s,baz=179,slow=13							
KK31				⇑Sn		**Sn**	**00 33 15.1**	**+1.7**
	12nm,0.6s,baz=182,slow=21							
UCH	**Uchtor**	**6.42**	**30**	P		**Pn**	**00 32 02.8**	**-0.1**
	SNR=7.5							
EKS2	**Erkin-Say**	**6.53**	**24**	P		**Pn**	**00 32 04.5**	**+0.1**
	SNR=12							
KZA	**Kyzart**	**6.62**	**35**	P		**Pn**	**00 32 06.0**	**+0.4**
	SNR=11							
USP	**Ospenovka**	**7.31**	**26**	P		**Pn**	**00 32 14.7**	**-0.4**
	SNR=7.1							
TKM2	**Tokmak 2**	**7.45**	**32**	⇓Pn		**Pn**	**00 32 14.7**	**-2.2**
	2.1nm,0.5s							
TKM2				⇓Sn		**Sn**	**00 33 39.5**	**-0.6**
	2.1nm,0.6s							
AB31	**Akbulak array**	**14.56**	**332**	Pn		**Pn**	**00 33 54.9**	**+0.6**
	1.3nm,0.3s,baz=144,slow=12,SNR=66							
AB31				⇑Sn		**Sn**	**00 36 32.3**	**-2.0**
	0.2nm,0.3s,baz=148,slow=24,SNR=3.9							

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*ISCJB **24** 00:36:15.3±0.4,6779N±003×20.16E±009,h0km,Error ellipse: s-maj=5.6km s-min=3.2km az=29.0*
*HEL **24** 00:36:16.7±0.1,6784N×2020E,h0km,ML2.0(UPP), ML1.9(BER),ML2.0(NAO),Explosion*
*NAO **24** 00:36:17.2±1.3,6789N×2022E,ML2.0*
*IDC **24** 00:36:20.4±0.9,6787N×2057E,h0km,mb1 2.8/4, mb1mx2.8/20,mbtmp2.8/4,ML2.3/4, Error ellipse: s-maj=16.5km s-min=5.5km az=122.0*
*BER **24** 00:36:21.4±4.6,6790N×2021E,h0km,ML1.9, ML2.0(NAO),Suspected explosion*

ISC 24 00:36:17.1±0.4,6784N±003×2031E±010,h0km,n25, σ1§41/32,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUA	**Kurravaara**	**0.11**	**6**	*i* P		**Pg**	**00 36 18.7**	**-0.5**
KUA				*i* S		**Sg**	**00 36 20.6**	**-0.1**
NIKU	**Nikkaluokta**	**0.48**	**274**	*i* P		**Pg**	**00 36 24.6**	**-1.7**
LANU	**Lannavaara**	**0.67**	**71**	*i* P		**Pg**	**00 36 29.5**	**-0.4**
KIF	**Kilpisjarvi**	**1.18**	**9**	*e*P		**Pg**	**00 36 39.1**	**-0.6**
PAJU	**Pajala**	**1.36**	**126**	*e*P		**Pg**	**00 36 41.4**	**-1.7**
HEF	**Hetta**	**1.38**	**64**	*e*P		**Pn**	**00 36 42.0**	**-1.5**
ERTU	**Ertsjaerv**	**1.49**	**150**	*e*P		**Pn**	**00 36 43.6**	**-1.4**
KTK1	**Kautokeino**	**1.60**	**41**	*e*P		**Pn**	**00 36 46.7**	**+0.2**
KTK1				*e*S		**Sn**	**00 37 08.0**	**+0.2**
KTK1				AML		AML	00 37 17.8	
	comp=Z,22nm,0.3s							
TRO	**Tromso**	**1.87**	**345**	*e*		**Sg**	**00 37 18.9**	**+1.9**
TRO				AML		AML	00 37 19.6	
	comp=Z,14nm,0.3s							
TRO	**Tromso**	**1.87**	**345**	*e*Sg		**Sg**	**00 37 18.9**	**+1.9**
TRO				AML		AML	00 37 19.6	
	comp=Z,14nm,0.3s							
SGF	**Sodankyl**	**2.41**	**97**	*e*PB		**Pb**	**00 36 59.0**	**-2.3**
ARA0	**ARCESS Array S**	**2.55**	**46**	Pn		**Pn**	**00 36 59.6**	**0.0**
	baz=235,slow=14							
ARA0				Sn		**Sn**	**00 37 33.1**	**+1.9**
	baz=225,slow=28							
ARA0	**ARCESS Array S**	**2.55**	**46**	*e*P		**Pn**	**00 36 59.6**	**0.0**
ARA0				*e*SB		**Sn**	**00 37 33.1**	**+1.9**
ARCES	**ARCESS Array B**	**2.55**	**46**	Pn		**Pn**	**00 37 00.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=227,slow=15,SNR=8.8							
ARCES				Pg		**Pg**	**00 37 04.9**	**-0.9**
	comp=Z,1.4nm,0.3s,baz=224,slow=15,SNR=35							
ARCES				Sn		**Sn**	**00 37 33.7**	**+2.4**
	comp=Z,1.5nm,0.3s,baz=228,slow=26,SNR=8.7							
ARCES				Lg			00 37 38.0	
	comp=Z,4.5nm,0.3s,baz=229,slow=26,SNR=16							
MOR8	**Moi Rana**	**2.85**	**237**	*e*		**Sg**	**00 37 44.3**	**-4.2**
MOR8				AML		AML	00 37 45.1	
	comp=Z,14nm,0.4s							
MOR8	**Moi Rana**	**2.85**	**237**	*e*Sg		**Sg**	**00 37 44.3**	**-4.2**
MOR8				AML		AML	00 37 45.1	
	comp=Z,14nm,0.4s							
NSS	**Namsos**	**4.74**	**229**	*e*Sg		**Sg**	**00 38 48.3**	**-0.8**
FIA0	**FINESS Array S**	**6.88**	**156**	Sn		**Sn**	**00 39 19.5**	**+1.5**
FIA0				Lg			00 39 54.9	
	baz=342,slow=22							
	baz=342,slow=37							
FINES	**FINESS Array B**	**6.88**	**156**	Pn		**Pn**	**00 38 03.2**	**+4.2**
	comp=Z,0.1nm,0.3s,baz=354,slow=12,SNR=3.7							
FINES				Sn		**Sn**	**00 39 19.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=3.3							
FINES				Lg			00 39 55.7	
	comp=Z,0.3nm,0.3s,baz=344,slow=26,SNR=5.6							
NB2	**NORSAR Subarra**	**7.87**	**214**	Sn		**Sn**	**00 39 43.1**	**+0.9**
NB2				Lg			00 40 28.2	
NOA	**NORSAR Array B**	**7.87**	**214**	Pn		**Pn**	**00 38 15.1**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=22,slow=11,SNR=1.0							
NOA				Sn		**Sn**	**00 39 43.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=36,slow=20,SNR=2.7							
NOA				Lg			00 40 30.2	
	comp=Z,0.4nm,0.3s,baz=33,slow=22,SNR=3.6							
HFS	**Hagfors**	**8.26**	**204**	Lg			00 40 36.8	
	baz=39,slow=28							
HFS	**Hagfors**	**8.26**	**204**	Lg			00 40 36.8	
	baz=39,slow=28							
HFS	**Hagfors**	**8.26**	**204**	Pn		**Pn**	**00 38 20.2**	**+2.3**
	comp=Z,1.0nm,0.3s,baz=32,slow=14,SNR=1.7							
HFS				Sn		**Sn**	**00 39 52.1**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=19,slow=24,SNR=3.2							
HFS				Lg			00 40 40.1	
	comp=Z,0.4nm,0.3s,baz=33,slow=29,SNR=7.0							
SPA0	**Spitsbergen Ar**	**10.45**	**356**	*e*P		**Pn**	**00 38 45.5**	**-2.3**

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*BJI **24** 00:45:31.5,4540S×7300W,h6km,mB4.7,Ms4.8,Msz4.9*
*NEIC **24** 00:45:34.5,4536S×7304W,h6km,mb4.5/3,ML4.5(GUC), After GUC.*
NEIC Felt [V] at Puerto Chacabuco, [IV] at Puerto Aisen and [III] at Coihaique.

GUC 24 00:45:34.5±0.2,4538S×7305W,h6km±1km,ML4.5, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COYC	**Coyhaique**	**0.70**	**106**	*e*P		Pg	00 45 47.2	-0.8
COYC				*i* S		Sg	00 45 56.6	-0.6
COYC	**Coyhaique**	**0.70**	**106**	*i* P		Pg	00 45 47.2	-0.9
COYC				*i* S		Sg	00 45 56.6	-0.6
PLCA	**Paso Flores**	**4.99**	**22**	*e*Pn		Pn	00 46 53.0	+3.1
PLCA				*e*Sn		Sn	00 47 52.2	+4.4
TRQA	**Tornquist**	**11.03**	**52**	Pn		Pn	00 48 17.8	+5.1
	5.2nm,0.8s							
TRQA				Sn		Sn	00 50 27.4	+11
LPAZ	**La Paz**	**29.29**	**10**	*e*P		P	00 51 39.0	+1.4
	6.9nm,1.3s							
LPAZ				*e*PP		PP	00 52 42.4	-1.3
NNA	**Nana**	**33.44**	**353**	P		P	00 52 12.8	-1.2
	13nm,1.3s							
SDV	**Santo Domingo**	**54.06**	**3**	P		P	00 55 00.4	+0.6
	7.4nm,1.4s							
ARU	**Arti**	**148.20**	**52**	*e*PKPdf		PKPdf	01 05 16.2	-0.7
CD2	**Chengdu**	**165.34**	**169**	*e*PKP		PKPdf	01 05 38.3	-1.3
WMQ	**Urumqi**	**166.19**	**90**	PKP		PKPdf	01 05 35.1	-4.7
LZH	**Lanzhou**	**170.42**	**165**	*e*PKP		PKPdf	01 05 38.3	-4.7
LZH				PP		PP		
	comp=Z,69nm,4.3s							
HHC	**Hu-ho-hao-te**	**174.35**	**218**	*e*PKP		PKPdf	01 05 43.3	-1.2
HHC				PKP2		PKPab	01 07 16.9	-0.1
HHC				PKS			01 09 13.3	
HHC				PP		PP	01 11 08.8	-0.4
HHC				PP		PP		
	comp=Z,84nm,11.1s							
HHC				LR		LR		
	comp=N,101nm,17.1s							
HHC				LR		LR		
	comp=E,68nm,15.6s							
HHC				LR		LR		
	comp=Z,61nm,22.6s							

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*MOS **24** 00:46:03.8±1.2,944N×125.17E,h33km,mb4.6/8,Error ellipse: s-maj=19.5km s-min=9.9km az=108.5*
*ISCJB **24** 00:46:04.1±0.3,950N±003×12555E±004,h33km, mb4.3/29,MS3.7/4,Error ellipse: s-maj=5.7km s-min=3.9km az=168.8*
*MAN **24** 00:46:04,942N×125.34E,h6km,mb5.1,ML4.1,MS4.2*
*NEIC **24** 00:46:06.1±0.3,946N×125.17E,h35km,mb4.6/12,Error ellipse: s-maj=12.6km s-min=6.3km az=74.0*
*IDC **24** 00:46:07.7±6.6,948N×12559E,h51km±62km,mb

comp=Z,2.7nm,0.7s,mb4.3,baz=125,slow=8.1,SNR=28
MKAR PcP PcP 00 56 25.0 +0.1
comp=Z,0.8nm,0.7s,baz=108,slow=5.6,SNR=2.1
MKAR LR LR 01 19 11.5
comp=Z,62nm,19.1s,MS3.7,baz=235,slow=38
YAK Yakutsk 52.55 2 P **P 00 55 15.8 0.0**
UCH Uchtor 55.19 315 *eP* **P 00 55 34.3 -1.2**
comp=Z,7.9nm,0.9s,mb4.7
AML Almayashu 55.73 315 *eP* **P 00 55 38.1 -1.2**
comp=Z,7.7nm,1.0s,mb4.7
EKS2 Erkin-Say 55.85 316 *eP* **P 00 55 38.9 -1.4**
comp=Z,3.1nm,0.8s,mb4.4
KURK Kurchatov 56.29 326 *eP* **P 00 55 42.1 -1.1**
comp=Z,8.2nm,1.0s,mb4.7
KURK Kurchatov 56.29 326 *eP* **P 00 55 42.1 -1.1**
KURK pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
BRVK Borovoye 61.95 326 *eP* **P 00 56 20.9 -1.5**
comp=Z,5.8nm,0.9s,mb4.7
BRVK Borovoye 61.95 326 *eP* **P 00 56 20.9 -1.5**
BRVK pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
TIXI Tiksi 62.15 1 *eP* **P 00 56 22.9 -0.5**
comp=Z,5.5nm,1.0s,mb4.6
TIXI Tiksi 62.15 1⇑*eP* **P 00 56 21.9 -1.5**
TIXI pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
BILL Bilibino 64.37 16 P **P 00 56 39.7 +1.6**
AKTK Aktyubinsk 68.44 321 P **P 00 57 05.1 +0.5**
AKTO Aktyubinsk 68.44 321 P **P 00 57 05.1 +0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.5s,mb4.1
AKTO Aktyubinsk 68.44 321 P **P 00 57 05.1 +0.5**
comp=Z,1.2nm,0.5s,mb4.2,baz=95,slow=8.4,SNR=3.8
SVE Sverdlovsk 68.46 328⇓*eP* **P 00 57 05.0 +0.5**
SVE pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
ARU Arti 69.47 327 *eP* **P 00 57 09.2 -1.5**
comp=Z,4.8nm,0.8s,mb4.5
ARU Arti 69.47 327 *d iP* **P 00 57 09.8 -1.0**
ARU 00 59 40.1
ARU PPP 01 01 26.8
ARU pmax pmax
comp=Z,10.0nm,1.7s,mb4.5
GAMB Gambell 69.71 25 *eP* **P 00 57 11.8 -0.3**
comp=Z,6.9nm,1.4s,mb4.4
DAWY Dawson 83.79 26 *eP* **P 00 58 30.7 -0.9**
KEV Kevo 84.11 340 *eP* **P 00 58 27.3 -5.8**
ARCES ARCESS Array B 84.67 340 P **P 00 58 36.0 0.0**
comp=Z,3.6nm,0.9s,mb4.5,baz=73,slow=6.2,SNR=5.2
FINES FINESS Array B 86.22 332 P **P 00 58 42.2 -1.7**
FINES FINESS Array B 86.22 332 P **P 00 58 43.3 -0.6**
comp=Z,0.9nm,0.6s,mb4.2,baz=83,slow=5.3,SNR=6.9
AKASG Malin Array Be 86.69 321 P **P 00 58 48.6 +2.2**
AKASG Malin Array Be 86.69 321 *i* P **P 00 58 48.7 +2.3**
AKASG Malin Array Be 86.69 321 P **P 00 58 46.0 -0.4**
comp=Z,0.3nm,0.4s,mb3.8,baz=75,slow=4.3,SNR=4.3
NOA NORSAR Array B 93.13 334 P **P 00 59 14.7 -1.7**
comp=Z,1.0nm,0.9s,mb4.2,baz=65,slow=4.7,SNR=3.0
NOA LR LR 01 43 41.5
comp=Z,41nm,18.4s,MS3.9,baz=240,slow=37
YKA Yellowknife Ar 94.79 24 P **P 00 59 25.0 +1.0**
YKA Yellowknife Ar 94.79 24 P **P 00 59 24.5 +0.5**
YKA pmax pmax
comp=Z,1.0nm,1.0s
YKA Yellowknife Ar 94.79 24 P **P 00 59 24.5 +0.5**
comp=Z,0.8nm,1.0s,mb4.1,baz=304,slow=4.3,SNR=8.3
TORD Torodi Ar. Bea 119.84 291 PKP PKPdf 01 04 53.9 0.0
comp=Z,0.6nm,0.7s,baz=45,slow=1.1,SNR=6.7

GUC 24 00:46:36.8±0.3, 4533S×7308W, h6km±1km, ML4.3, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.74**	**110**	*eP*	Pg	00 46 50.1	-0.9
COYC				*i* S	Sg	00 46 59.9	-0.8

GUC 24 00:49:03.3±0.3, 4538S×7304W, h6km±2km, ML3.5, 1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.70**	**106**	⇑*iP*	Pg	00 49 16.0	-0.7
COYC				*i* S	Sg	00 49 25.3	-0.6

KISR ***24*** *01:06:18.4±0.5, 2768N×5489E, h34km±881km, ML3.2*
CSEM ***24*** *01:06:21.4±0.5, 2758N×5517E, h40km, ML3.8, Error ellipse: s-maj=9.1km s-min=5.7km az=97.0*
ISC 24 01:06:21.6±2.1, 2756N±007×551E±01, h10km, n13, σ0s72/21, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTHS		**5.22**	**229**	P	**Pn**	**01 07 40.7**	**+1.0**
BTHS		**5.22**	**229**	P	**Pn**	**01 07 40.7**	**+1.0**
BTHS				S	**Sn**	**01 08 40.4**	**+0.4**
QRN	**Al-Qurain**	**6.48**	**282**	*eP*	**Pn**	**01 07 57.3**	**+0.2**
RDF	**Al-Radifah**	**6.83**	**283**	*eP*	**Pn**	**01 08 01.9**	**0.0**
RDF				*eS*	**Sn**	**01 09 20.0**	**+0.3**
RDF				AML	AML	01 09 23.1	
comp=Z,7.6nm,0.5s							
RDF	**Al-Radifah**	**6.83**	**283**	*eP*	**Pn**	**01 08 01.9**	**0.0**
RDF				*eS*	**Sn**	**01 09 20.0**	**+0.3**
comp=Z,7.6nm,0.5s							
HRDDS		**6.91**	**229**	S	**Sn**	**01 09 21.1**	**-0.5**
HRDDS		**6.91**	**229**	P	**Pn**	**01 08 02.6**	**-0.3**
NAY	**Al-Naaiem**	**7.15**	**285**	*eP*	**Pn**	**01 08 06.5**	**+0.2**
NAY				*eS*	**Sn**	**01 09 27.6**	**-0.1**
NAY				AML	AML	01 09 33.3	
comp=Z,4.6nm,0.5s							
NAY	**Al-Naaiem**	**7.15**	**285**	*eP*	**Pn**	**01 08 06.5**	**+0.2**
NAY				*eS*	**Sn**	**01 09 27.6**	**-0.1**
MIB	**Mutribah**	**7.21**	**290**	*eP*	**Pn**	**01 08 07.5**	**+0.5**
MIB				*eS*	**Sn**	**01 09 29.0**	**+0.1**
MIB				AML	AML	01 09 35.4	
comp=Z,3.3nm,0.5s							
MIB	**Mutribah**	**7.21**	**290**	*eP*	**Pn**	**01 08 07.5**	**+0.5**
MIB				*eS*	**Sn**	**01 09 29.0**	**+0.1**
ASYS		**9.59**	**272**	P	**Pn**	**01 08 37.3**	**-2.4**
ASYS		**9.59**	**272**	P	**Pn**	**01 08 37.3**	**-2.4**
ASYS				S	**Sn**	**01 10 20.4**	**-7.1**

IDC 24 01:08:11.4±1.6, 2867N×14082E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/20, Error ellipse: s-maj=45.7km s-min=27.3km az=83.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.98**	**142**	Pn	Pn	01 08 46.9	+0.7
10.0nm,0.3s,baz=266,slow=20,SNR=5.2							
CBIJ				Sn	Sn	01 09 11.4	-0.3
17nm,0.3s,baz=113,slow=24,SNR=4.6							
JHJ	**Hachijo jima 2**	**4.52**	**349**	LR	LR	01 10 24.2	
comp=Z,111nm,20.3s,baz=208,slow=29							
WRA	**Warramunga Arr**	**48.73**	**188**	P	P	01 16 57.0	-0.8
3.8nm,1.2s,baz=7.1,slow=8.0,SNR=8.1							
ASAR	**Alice Springs**	**52.46**	**188**	P	P	01 17 26.5	+0.6
0.2nm,0.7s,baz=21,slow=11,SNR=2.8							
YKA	**Yellowknife Ar**	**71.33**	**28**	P	P	01 19 32.6	0.0
0.3nm,0.8s,baz=296,slow=6.3,SNR=3.7							

GUC 24 01:53:17.1±0.3, 4535S×7305W, h7km±2km, ML3.5, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.72**	**108**	*i* P	Pg	01 53 29.9	-1.0
COYC				*i* S	Sg	01 53 39.4	-0.8

ISCJB ***24*** *02:17:13.4±0.6, 480N±008×9504E±005, h33km, mb4.4/27, MS3.8/13, Error ellipse: s-maj=12.9km s-min=5.5km az=26.4*
NEIC ***24*** *02:17:14.0±0.7, 470N×9494E, h30km, mb4.6/10, Error ellipse: s-maj=21.2km s-min=8.2km az=215.0*
BJI ***24*** *02:17:13.9, 470N×9490E, h30km, mB4.9, mb4.6, Ms4.2, Msz3.7*

IDC ***24*** *02:17:16.6±4.4, 473N×9507E, h54km±39km, mb3.9/9, mb1 4.1/10, mb1mx3.8/21, mbtmp3.9/10, ML4.0/1, MS3.7/9, Ms1 3.7/9, ms1mx3.5/24, Error ellipse: s-maj=42.0km s-min=17.8km az=53.0*
MOS ***24*** *02:17:17.0±0.9, 477N×9521E, h77km, mb4.7/10, Error ellipse: s-maj=16.5km s-min=10.0km az=108.4*
ISC 24 02:17:15.0±0.6, 470N±008×9500E±005, h35km, n68, σ1s31/69, mb4.4/27, MS3.8/13, 4C, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.35**	**116**	P	**Pn**	**02 18 20.5**	**+1.8**
PSI				S	**Sn**	**02 19 10.9**	**+2.7**
PSI	**Prapat**	**4.35**	**116**	P	**Pn**	**02 18 20.5**	**+1.8**
8.9nm,0.3s,baz=308,slow=12,SNR=20							
PSI				S	**Sn**	**02 19 10.9**	**+2.7**
10nm,0.3s,baz=121,slow=19,SNR=4.5							
PSI				LR	LR	02 20 22.6	
comp=Z,842nm,20.2s,baz=275,slow=43							
KULM	**Kulim**	**5.66**	**84**	*e*Pn	**Pn**	**02 18 36.7**	**0.0**
KULM				*e*Sn	**Sn**	**02 19 39.6**	**-0.9**
SNG	**Songkhla**	**6.11**	**66**	P	**Pn**	**02 18 44.0**	**+1.2**
CHG	**Chiang Mai**	**14.54**	**15**	⇑P	**Pn**	**02 20 44.7**	**+6.3**
21nm,0.8s							
CHTO	**Chiang Mai**	**14.54**	**15**	*e*Pn	**Pn**	**02 20 44.4**	**+6.1**
5.4nm,0.8s							
CHTO	**Chiang Mai**	**14.54**	**15**	*eP*	**Pn**	**02 20 44.4**	**+6.0**
CHTO				pmax	pmax		
comp=Z,5.0nm,0.8s							
KSM	**Kuching**	**15.62**	**101**	*e*Pn	**Pn**	**02 20 55.0**	**+2.3**
KMI	**Kunming**	**21.62**	**19**	P	**P**	**02 22 05.8**	**+3.6**
KMI				S	**S**	**02 26 02.3**	**+2.5**
KMI				AMB	AMB		
comp=Z,16nm,0.7s,mb4.6							
KMI				AMB	AMB		
comp=Z,42nm,3.1s							
KMI				LR	LR		
comp=N,240nm,14.3s,MS3.8							
KMI				LR	LR		
comp=E,158nm,17.6s,MS3.8							
KMI				LR	LR		
comp=Z,240nm,20.1s,MS3.6							
CD2	**Chengdu**	**27.34**	**17**⇑*iP*		**P**	**02 22 55.3**	**-1.5**
CD2				AP	pP	02 23 04.8	-2.0
CD2				XP	sP	02 23 09.1	-2.0
CD2				PP		02 23 41.4	
CD2				S	**S**	**02 27 28.6**	**-5.7**
CD2				AMB	AMB		
comp=Z,10.0nm,1.0s,mb4.3							
CD2				AMB	AMB		
comp=Z,20nm,5.2s							
CD2				LR	LR		
comp=N,160nm,19.2s,MS4.2							
CD2				LR	LR		
comp=E,556nm,14.4s,MS4.2							
CD2				LR	LR		
comp=Z,180nm,18.0s,MS3.7							
GTA	**Gaotai**	**34.82**	**7**	*eP*	**P**	**02 24 01.3**	**-1.3**
GTA				XP	sP	02 24 12.8	-4.1
GTA				AMB	AMB		
comp=Z,6.0nm,1.1s,mb4.4							
HHC	**Hu-ho-hao-te**	**38.94**	**20**	*eP*	**P**	**02 24 38.8**	**+1.2**
HHC				AP	pP	02 24 48.3	+0.5
HHC				XP	sP	02 24 53.3	+1.3
HHC				PP	PP	02 26 11.3	+4.0
HHC				PCP	PcP	02 26 49.8	+2.0
HHC				*e*S	**S**	**02 30 33.8**	**0.0**
HHC				XS	sS	02 30 50.3	-0.4
HHC				SS	SS	02 33 16.3	-10
HHC				AMB	AMB		
comp=Z,16nm,0.9s,mb4.8							
HHC				AMB	AMB		
comp=Z,77nm,3.9s							
HHC				LR	LR		
comp=N,196nm,20.2s,MS4.1							
HHC				LR	LR		
comp=E,155nm,16.7s,MS4.1							
HHC				LR	LR		
comp=Z,222nm,15.5s,MS4.1							
BJT	**Baijiatuan**	**40.01**	**26**	*eP*	**P**	**02 24 46.6**	**+0.1**
comp=Z,19nm,1.0s,mb4.8							
BJT	**Baijiatuan**	**40.01**	**26**	*eP*	**P**	**02 24 46.6**	**+0.1**
BJT				pmax	pmax		
comp=Z,19nm,1.0s							
BJI	**Beijing**	**40.03**	**26**	P	**P**	**02 24 47.0**	**+0.3**
BJI				AMB	AMB		
comp=Z,19nm,1.1s,mb4.7							
BJI				AMB	AMB		
comp=Z,119nm,4.0s							
BJI				LR	LR		
comp=N,116nm,15.4s,MS3.9							
BJI				LR	LR		
comp=E,56nm,16.4s,MS3.9							
BJI				LR	LR		
comp=Z,125nm,27.1s							
ULHL	**Ulahol**	**40.95**	**339**	P	**P**	**02 24 55.1**	**+0.9**
SNR=12							
KZA	**Kyzart**	**41.17**	**338**	P	**P**	**02 24 57.9**	**+1.9**
SNR=12							
UCH	**Uchtor**	**41.58**	**337**	*eP*	**P**	**02 25 00.7**	**+1.2**
comp=Z,28nm,1.2s,mb4.8							
UCH	**Uchtor**	**41.58**	**337**	P	**P**	**02 25 00.6**	**+1.1**
SNR=24							
TKM2	**Tokmak 2**	**41.77**	**339**	*eP*	**P**	**02 25 01.7**	**+0.8**
comp=Z,24nm,1.3s,mb4.7							
TKM2				*e*		02 26 04.8	
TKM2	**Tokmak 2**	**41.77**	**339**	*eP*	**P**	**02 25 01.7**	**+0.8**
TKM2				pmax	pmax		
comp=Z,24nm,1.3s,mb4.7							
TKM2	**Tokmak 2**	**41.77**	**339**	P	**P**	**02 25 02.1**	**+1.1**
SNR=9.6							
KBK	**Karagaybulak**	**41.78**	**338**	P	**P**	**02 25 02.9**	**+1.8**
SNR=18							
AML	**Almayashu**	**41.83**	**336**	*eP*	**P**	**02 25 02.4**	**+1.0**
comp=Z,6.2nm,0.6s,mb4.4							
AML	**Almayashu**	**41.83**	**336**	P	**P**	**02 25 03.1**	**+1.7**
SNR=18							
AAK	**Ala-Archa**	**41.94**	**337**	P	**P**	**02 25 04.3**	**+2.0**
SNR=8.1							
EKS2	**Erkin-Say**	**42.24**	**337**	*eP*	**P**	**02 25 05.7**	**+0.9**
comp=Z,6.3nm,0.9s,mb4.2							
EKS2	**Erkin-Say**	**42.24**	**337**	P	**P**	**02 25 06.4**	**+1.6**
SNR=7.2							
USP	**Ospenovka**	**42.47**	**338**	P	**P**	**02 25 07.6**	**+0.9**
SNR=25							
MKAR	**Makanchi Array**	**43.35**	**347**	P	**P**	**02 25 13.4**	**-0.3**
MKAR						02 27 02.4	
MKAR	**Makanchi Array**	**43.35**	**347**	P	**P**	**02 25 13.4**	**-0.3**
comp=Z,2.0nm,0.5s,mb4.1,baz=161,slow=7.7,SNR=25							
MKAR				PcP	PcP	02 27 02.4	+0.4
comp=Z,0.5nm,0.5s,baz=195,slow=5.9,SNR=1.9							
MKAR				LR	LR	02 44 41.6	
comp=Z,46nm,20.3s,MS3.4,baz=153,slow=38							
SONM	**Songino Array**	**44.07**	**11**	P	**P**	**02 25 18.1**	**-1.4**
SONM						02 27 04.1	
SONM	**Songino Array**	**44.07**	**11**	P	**P**	**02 25 18.1**	**-1.4**
comp=Z,1.1nm,1.1s,mb3.5,baz=198,slow=10,SNR=5.8							
SONM				PcP	PcP	02 27 04.1	-0.3
comp=Z,1.2nm,0.6s,baz=183,slow=4.5,SNR=6.2							
SONM				LR	LR	02 45 30.6	
comp=Z,78nm,22.0s,MS3.6,baz=242,slow=38							
ULN	**Ulaanbaatar**	**44.23**	**12**	*eP*	**P**	**02 25 20.0**	**-0.8**
comp=Z,0.9nm,0.5s,mb3.8							
ULN	**Ulaanbaatar**	**44.23**	**12**	*eP*	**P**	**02 25 20.0**	**-0.8**
ULN				pmax	pmax		
comp=Z,1.0nm,0.5s,mb3.8							
KSRS	**Korea Array**	**44.35**	**38**	P	**P**	**02 25 20.8**	**-1.1**
KSRS				pmax	pmax		
comp=Z,2.0nm,1.0s,mb3.8							
KSRS				MLR	MLR		
comp=Z,48nm,18.3s,MS3.5							
KSRS	**Korea Array**	**44.35**	**38**	P	**P**	**02 25 20.8**	**-1.2**
comp=Z,2.4nm,1.0s,mb3.9,baz=221,slow=13,SNR=3.5							
KSRS				LR	LR	02 47 42.9	
comp=Z,48nm,18.3s,MS3.5,baz=304,slow=41							
WRA	**Warramunga Arr**	**45.77**	**124**	P	**P**	**02 25 32.5**	**-0.9**
comp=Z,12nm,0.9s,mb4.8,baz=303,slow=9.0,SNR=38							
ASAR	**Alice Springs**	**47.27**	**128**	P	**P**	**02 25 43.9**	**-1.3**
comp=Z,1.5nm,0.5s,mb4.2,baz=297,slow=7.8,SNR=21							
KURK	**Kurchatov**	**47.87**	**346**	*eP*	**P**	**02 25 49.2**	**-0.2**
comp=Z,5.3nm,1.1s,mb4.5							
KURK	**Kurchatov**	**47.87**	**346**	*eP*	**P**	**02 25 49.2**	**-0.2**
KURK				pmax	pmax		
comp=Z,5.0nm,1.1s,mb4.5							
HIA	**Hailar**	**49.12**	**21**	*eP*	**P**	**02 25 57.1**	**-2.0**
MJAR	**Matsushiro Arr**	**50.71**	**45**	LR	LR	02 48 25.8	
comp=Z,89nm,18.7s,MS3.8,baz=260,slow=37							
BRVK	**Borovoye**	**52.31**	**341**	*eP*	**P**	**02 26 22.7**	**-0.3**
comp=Z,9.1nm,0.8s,mb4.8							
BRVK	**Borovoye**	**52.31**	**341**	*eP*	**P**	**02 26 22.7**	**-0.3**
BRVK				pmax	pmax		
comp=Z,9.0nm,0.8s,mb4.8							
KLR	**Kul'dur**	**54.20**	**29**	*eP*	**P**	**02 26 32.7**	**-4.3**
KMBO	**Kilima Mbogo**	**57.88**	**266**	LR	LR	02 48 18.1	
comp=Z,67nm,18.3s,MS3.8,baz=92,slow=32							
SVE	**Sverdlovsk**	**58.64**	**339**	*eP*	**P**	**02 27 08.2**	**-0.3**
YSS	**Yuzh-Sakhalins**	**58.78**	**36**⇑*eP*		**P**	**02 27 08.6**	**-1.1**
YSS				pmax	pmax		
comp=Z,14nm,1.3s,mb4.8							
ARU	**Arti**	**59.12**	**337**⇑*eP*		**P**	**02 27 10.6**	**-1.3**
ARU				pmax	pmax		
comp=Z,5.0nm,1.5s,mb4.3							
TIXI	**Tiksi**	**70.16**	**11**	*eP*	**P**	**02 28 21.1**	**-2.6**
comp=Z,8.0nm,1.1s,mb4.6							
TIXI	**Tiksi**	**70.16**	**11**	*eP*	**P**	**02 28 20.9**	**-2.7**
TIXI				pmax	pmax		
comp=Z,8.0nm,1.1s,mb4.6							
TIXI				MLR	MLR		
comp=Z,62nm,18.0s,MS3.9							
AKASG	**Malin Array Be**	**71.16**	**322**	P	**P**	**02 28 28.6**	**-1.5**
comp=Z,1.4nm,0.6s,mb4.1,baz=94,slow=5.0,SNR=6.2							
SEY	**Seymchan**	**71.45**	**24**	*eP*	**P**	**02 28 28.2**	**-3.4**
LBTB	**Lobatse**	**73.51**	**242**	LR	LR	02 56 17.1	
comp=Z,133nm,18.9s,MS4.2,baz=269,slow=32							
BOSA	**Boshof**	**74.66**	**239**	LR	LR	02 56 57.4	
comp=Z,72nm,18.4s,MS4.0,baz=128,slow=32							
KOLS	**Kolonicke sedl**	**75.14**	**319**	*eP*	**P**	**02 28 56.7**	**+3.0**
STHS	**Stebnicka Huta**	**75.89**	**320**	*eP*	**P**	**02 28 57.0**	**-1.0**
FINES	**FINESS Array B**	**75.89**	**332**	P	**P**	**02 28 57.0**	**-0.8**
FINES	**FINESS Array B**	**75.89**	**332**	P	**P**	**02 28 57.0**	**-0.8**
comp=Z,1.4nm,0.4s,mb4.2,baz=100,slow=5.7,SNR=17							
KECS	**Kecovo**	**76.24**	**319**	*eP*	**P**	**02 28 59.7**	**-0.3**
VYHS	**Vyhne**	**77.33**	**319**	*eP*	**P**	**02 29 06.0**	**-0.1**
MORC	**Moravsky Berou**	**78.32**	**320**	*eP*	**P**	**02 29 11.9**	**+0.3**
comp=Z,2.2nm,0.7s,mb4.2							
MORC	**Moravsky Berou**	**78.32**	**320**	*eP*	**P**	**02 29 11.9**	**+0.3**
MORC				pmax	pmax		
comp=Z,2.0nm,0.7s,mb4.2							
ARCES	**ARCESS Array B**	**78.52**	**340**	P	**P**	**02 29 11.9**	**-0.4**
comp=Z,2.2nm,0.5s,mb4.3,baz=98,slow=5.0,SNR=12							
BILL	**Bilibino**	**78.71**	**21**	*eP*	**P**	**02 29 10.9**	**-2.5**
BILL				pmax	pmax		
comp=Z,2.0nm,1.2s,mb3.9							
GERES	**GERESS Array B**	**80.75**	**319**	P	**P**	**02 29 25.4**	**+0.6**
comp=Z,1.2nm,0.6s,mb4.0,baz=112,slow=5.9,SNR=13							
DBIC	**Dimbokro**	**99.21**	**278**	LR	LR	03 12 39.6	
comp=Z,35nm,18.3s,MS3.9,baz=88,slow=34							

IDC 24 02:55:31.9±1.8, 816S×15722E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/13, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=42.9km s-min=27.2km az=14.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.97**	**115**	Pn	Pn	02 56 19.7	-0.7
25nm,0.3s,baz=249,slow=6.8,SNR=3.6							
HNR				Sn	Sn	02 56 58.2	+1.4
23nm,0.3s,baz=102,slow=1.6,SNR=6.6							
WRA	**Warramunga Arr**	**25.06**	**240**	P	P	03 00 57.2	-1.0
2.0nm,0.8s,baz=65,slow=9.9,SNR=6.5							
STKA	**Stephens Creek**	**27.72**	**210**	P	P	03 01 22.8	+0.7
2.2nm,0.5s,baz=39,slow=12,SNR=4.8							
MKAR	**Makanchi Array**	**85.74**	**318**	P	P	03 08 13.7	+0.7
0.3nm,0.5s,baz=109,slow=5.2,SNR=3.9							

ISCJB ***24*** *03:01:38.6±1.1, 594S±005×14657E±005, h100km±11km, mb4.9/61, Error ellipse: s-maj=9.2km s-min=8.0km az=33.0*
MOS ***24*** *03:01:39.9±0.8, 588S×14650E, h111km, mb4.8/19, Error ellipse: s-maj=13.8km s-min=7.7km az=100.3*
BJI ***24*** *03:01:39.7, 621S×147.15E, h148km, mB4.9, mb5.1*
IDC ***24*** *03:01:41.9±0.6, 596S×14655E, h116km±4km, mb4.4/14, mb1 4.5/17, mb1mx4.5/18, mbtmp4.5/17, MS3.5/6, Ms1 3.5/6, ms1mx3.3/19, Error ellipse: s-maj=15.3km s-min=9.3km az=97.0*
NEIC ***24*** *03:01:42.1±0.2, 598S×14655E, mb4.8/23, Error ellipse: s-maj=6.8km s-min=5.1km az=104.0*
ISC 24 03:01:42.2±1.1, 599S±005×14658E±005, h119km±10km, h127km±1.8km: pP-P, n139, σ0s89/129, mb4.9/60, 11C-1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**13.68**	**105**	*e*Pn	**Pn**	**03 04 51.2**	**-0.2**
201nm,0.9s							
HNR				*eP*		03 04 56.6	
HNR	**Honiara**	**13.68**	**105**	*eP*	**Pn**	**03 04 51.2**	**-0.2**
HNR				pmax	pmax		
comp=Z,201nm,0.9s							
HNR	**Honiara**	**13.68**	**105**	P	**Pn**	**03 04 51.5**	**+0.2**
comp=Z,5.0nm,0.3s,baz=256,slow=3.2,SNR=5.4							
HNR				LR	LR	03 09 24.9	
comp=Z,166nm,20.9s,baz=180,slow=34							
CTA	**Charters Tower**	**14.02**	**181**	*eP*	**Pn**	**03 04 57.8**	**+2.2**
comp=Z,22nm,0.4s							
CTA	**Charters Tower**	**14.02**	**181**	*eP*	**Pn**	**03 04 57.8**	**+2.2**
CTA				pmax	pmax		
comp=Z,22nm,0.4s							
CTA	**Charters Tower**	**14.02**	**181**	P	**Pn**	**03 04 57.6**	**+2.0**
comp=Z,5.1nm,0.3s,baz=1.2,slow=14,SNR=69							
CTA				LR	LR	03 09 33.0	
comp=Z,178nm,20.9s,baz=34,slow=34							
KAKA	**Kakadu**	**15.46**	**243**⇑*iP*		**Pn**	**03 05 12.6**	**-1.3**
comp=Z,197nm,0.9s							
WB2	**Warramunga Arr**	**18.26**	**219**	*eP*	**P**	**03 05 45.9**	**-0.8**
WRA	**Warramunga Arr**	**18.27**	**220**	P	**P**	**03 05 46.0**	**-0.7**
comp=Z,1.7nm,0.3s,baz=40,slow=11,SNR=26							
WRA				PcP	PcP	03 10 15.6	+1.5
comp=Z,0.4nm,0.3s,baz=27,slow=1.7,SNR=6.9							
GUMO	**Guam**	**19.53**	**355**	*eP*	**P**	**03 06 00.9**	**+0.4**
comp=Z,234nm,1.0s							
GUMO	**Guam**	**19.53**	**355**	*eP*	**P**	**03 06 00.9**	**+0.4**
GUMO				pmax	pmax		
comp=Z,233nm,1.0s							
ASAR	**Alice Springs**	**21.39**	**213**	P	**P**	**03 06 19.9**	**-0.5**
comp=Z,6.8nm,0.6s,mb4.2,baz=50,slow=8.0,SNR=62							
ASAR				S	**S**	**03 10 11.7**	**+0.5**
comp=Z,8.9nm,0.8s,baz=32,slow=20,SNR=8.0							
BATI	**Kupang**	**23.07**	**258**	P	**P**	**03 06 36.1**	**-1.4**
comp=Z,51nm,0.8s,mb4.9,baz=104,slow=4.2,SNR=6.0							
FITZ	**Fitzroy Crossi**	**23.72**	**238**	*eP*	**P**	**03 06 43.1**	**-0.4**
comp=Z,59nm,0.7s,mb5.0							
FITZ	**Fitzroy Crossi**	**23.72**	**238**	P	**P**	**03 06 43.2**	**-0.3**
comp=Z,33nm,0.7s,mb4.8,baz=72,slow=9.1,SNR=64							
FITZ				LR	LR	03 16 52.6	
comp=Z,72nm,20.6s,baz=246,slow=38							
ARMA	**Armidale**	**24.76**	**170**	*eP*	**P**	**03 06 53.1**	**+0.3**
STKA	**Stephens Creek**	**26.17**	**190**	*eP*	**P**

MAJO pmax pmax
comp=Z,22nm,0.9s,mb4.9
MAT Matsushiro 43.03 350 P **P** **03 09 28.3 -1.7**
QIZ Qiongzhong 43.91 305 P **P** **03 09 37.8 +0.4**
QIZ S **S** **03 16 01.5 +1.4**
QIZ AMB AMB
comp=Z,23nm,0.9s,mb4.9
QIZ AMB AMB
comp=Z,68nm,3.9s
NJ2 Nanjing 46.14 327 *eP* **P** **03 09 57.0 +2.1**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.1
KSRS Korea Array 46.60 339 P **P** **03 09 58.5 +0.3**
comp=Z,40nm,0.9s,mb5.2,baz=157,slow=9.1,SNR=78
KSRS LR LR 03 26 19.0
comp=Z,58nm,21.7s,baz=61,slow=32
KULM Kulim 47.20 283 *eP* **P** **03 10 03.7 +0.3**
WHN Wuhan 47.67 322 ⇑P **P** **03 10 06.0 -0.7**
PSI Prapat 48.38 279 P **P** **03 10 12.8 +0.2**
PSI PcP PcP 03 11 37.0 -0.5
PSI Prapat 48.38 279 P **P** **03 10 12.8 +0.2**
comp=Z,6.0nm,0.4s,mb4.8,baz=135,slow=10.0,SNR=7.8
PSI PcP PcP 03 11 37.0 -0.5
comp=Z,5.9nm,0.7s,baz=45,slow=5.7,SNR=4.8
GYA Guiyang 50.36 312 P **P** **03 10 28.6 +1.2**
GYA AP pP 03 10 58.3 +3.0
GYA PCP PcP 03 11 46.5 +2.2
GYA PP PP 03 12 27.3 +3.1
GYA S **S** **03 17 32.4 +0.8**
GYA PS 03 18 02.3
GYA SCS ScS 03 20 05.0 -1.9
GYA SS SS 03 21 05.3 -1.8
GYA AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
GYA AMB AMB
comp=Z,90nm,5.2s
GYA LR LR
comp=N,400nm,19.6s
GYA LR LR
comp=E,460nm,18.4s
GYA LR LR
comp=Z,370nm,19.8s
SNY Shenyang 52.02 338 ⇑P **P** **03 10 39.5 0.0**
SNY S **S** **03 17 47.5 -6.4**
SNY AMB AMB
comp=Z,44nm,0.6s,mb5.7
MDJ Mudanjiang 52.65 345 P **P** **03 10 44.0 0.0**
MDJ PCP PcP 03 11 46.8 -5.6
MDJ SCP ScP 03 15 35.9 -3.0
MDJ PCS PcS 03 15 48.8 -2.1
MDJ AMB AMB
comp=Z,29nm,0.8s,mb5.4
MDJ AMB AMB
comp=Z,76nm,4.6s
MDJ LR LR
comp=N,70nm,47.1s
MDJ LR LR
comp=E,35nm,36.4s
MDJ LR LR
comp=Z,34nm,40.7s
KMI Kunming 52.66 308 P **P** **03 10 46.3 +1.8**
KMI AP pP 03 11 17.0 +4.4
KMI S **S** **03 18 03.3 +0.1**
KMI AMB AMB
comp=Z,20nm,1.0s,mb5.1
KMI AMB AMB
comp=Z,96nm,3.9s
YSS Yuzh-Sakhalins 52.82 357 *eP* **P** **03 10 45.4 +0.1**
comp=Z,14nm,0.6s,mb5.2
YSS Yuzh-Sakhalins 52.82 357⇑*eP* **P** **03 10 44.4 -0.9**
YSS pmax pmax
comp=Z,20nm,1.3s,mb5.0
CHTO Chiang Mai 53.02 299 *eP* **P** **03 10 48.2 +1.0**
comp=Z,5.9nm,0.6s,mb4.8
CHTO Chiang Mai 53.02 299 *eP* **P** **03 10 48.2 +1.0**
CHTO pmax pmax
comp=Z,6.0nm,0.6s,mb4.8
CN2 Changchun 53.12 341 *eP* **P** **03 10 47.0 -0.5**
CN2 AMB AMB
comp=Z,20nm,0.7s,mb5.3
BJI Beijing 53.69 331 P **P** **03 10 51.5 -0.3**
BJI AP pP 03 11 22.1 +2.1
BJI PCP PcP 03 11 54.4 -2.1
BJI PP PP 03 12 55.8 +1.8
BJI S **S** **03 18 16.4 -0.3**
BJI AMB AMB
comp=Z,30nm,1.0s,mb5.3
CD2 Chengdu 54.97 314 *eP* **P** **03 11 01.5 +0.3**
CD2 PP PP 03 13 08.0 +2.4
CD2 S **S** **03 18 32.5 -1.7**
CD2 SS SS 03 22 17.3 -2.4
CD2 AMB AMB
comp=Z,50nm,0.6s,mb5.7
CD2 AMB AMB
comp=Z,120nm,5.8s
HABR Khabarovsk 55.17 351⇑*eP* **P** **03 11 01.9 -0.4**
HABR *e* 03 12 00.6
HABR *e* 03 13 03.7
HABR S **S** **03 18 37.6 +1.4**
HABR *e* 03 20 37.7
HABR *e*SS SS 03 22 22.8 +0.5
HABR pmax pmax
comp=Z,31nm,0.9s,mb5.3
KLR Kul'dur 56.50 348 *eP* **P** **03 11 07.7 -4.1**
KLR pmax pmax
comp=Z,45nm,1.6s,mb5.2
HHC Hu-ho-hao-te 56.61 329 *eP* **P** **03 11 12.8 +0.1**
HHC PCP PcP 03 12 06.8 -1.0
HHC PP PP 03 13 21.8 +1.8
HHC AMB AMB
comp=Z,23nm,0.6s,mb5.4
HHC AMB AMB
comp=Z,57nm,4.3s
HHC LR LR
comp=N,92nm,10.5s
HHC LR LR
comp=E,216nm,14.3s
HHC LR LR
comp=Z,82nm,14.3s
LZH Lanzhou 57.93 320 *eP* **P** **03 11 23.5 +1.4**
LZH AP pP 03 11 56.3 +5.6
LZH XP sP 03 12 11.8 +8.0
LZH PP PP 03 13 35.0 +3.1
LZH *e*S **S** **03 19 11.5 -1.6**
LZH SS SS 03 23 04.0 -2.2
LZH AMB AMB
comp=Z,26nm,1.2s,mb5.1
LZH AMB AMB
comp=Z,92nm,4.9s
PET Petropavlovsk 59.68 8 *eP* **P** **03 11 33.9 +0.1**
comp=Z,41nm,1.0s,mb5.4
PET Petropavlovsk 59.68 8⇓*eP* **P** **03 11 29.4 -4.4**
PET pmax pmax
comp=Z,47nm,1.2s,mb5.4
HIA Hailar 59.80 340 *eP* **P** **03 11 34.2 -0.6**
SHL Shillong 61.66 303 *eP* **P** **03 11 49.0 +1.1**
GTA Gaotai 62.47 320 ⇑P **P** **03 11 53.8 +0.8**
GTA AP pP 03 12 23.8 +1.8
GTA PP PP 03 14 14.4 +2.4
GTA PPP 03 15 45.6
GTA S **S** **03 20 09.1 -1.9**
GTA SS SS 03 24 17.4 +0.2
GTA AMB AMB
comp=Z,18nm,0.8s,mb5.2
GTA AMB AMB
comp=Z,54nm,6.5s
GTA LR LR
comp=N,101nm,14.1s
GTA LR LR
comp=E,93nm,16.0s
GTA LR LR
comp=Z,43nm,14.4s
ULN Ulaanbaatar 63.90 331 *eP* **P** **03 12 02.9 +0.6**
comp=Z,13nm,0.8s,mb4.8
ULN Ulaanbaatar 63.90 331 *eP* **P** **03 12 02.9 +0.6**
ULN pmax pmax
comp=Z,13nm,0.8s,mb4.8
SONM Songino Array 64.19 331 P **P** **03 12 04.5 +0.3**
comp=Z,5.7nm,0.9s,mb4.4,baz=144,slow=9.4,SNR=42
CIT Chita 64.29 338 *eP* **P** **03 12 05.5 +0.8**
CIT *e* pP 03 12 36.2 +2.3
CIT pmax pmax
comp=Z,55nm,1.7s,mb5.1
CLNS Chul'man 65.08 347 *eP* **P** **03 12 10.7 +0.9**
CLNS pmax pmax
comp=N,21nm,0.9s
CLNS pmax pmax
comp=Z,39nm,0.9s,mb5.2
CLNS pmax pmax
comp=E,7.0nm,0.7s
MA2 Magadan 65.44 2 *eP* **P** **03 12 11.5 -0.5**
MA2 *e* pP 03 12 42.9 +1.7
MA2 pmax pmax
comp=Z,70nm,0.8s,mb5.5
MA2 pmax pmax
comp=N,20nm,0.7s
PALK Pallekele 67.03 280 *eP* **P** **03 12 23.6 +0.4**
comp=N,11nm,1.0s,mb4.6
JIRN Jiri 67.17 303 *eP* **P** **03 12 24.4 +0.7**
comp=N,15nm,0.5s,mb5.0
JIRN Jiri 67.17 303 *eP* **P** **03 12 24.3 +0.6**
comp=N,15nm,0.5s,mb5.0
ZAK Zakamensk 67.43 332⇓*iP* **P** **03 12 24.8 -0.1**
ZAK *e* pP 03 12 55.6 +1.3
ZAK pmax pmax
comp=Z,9.0nm,1.0s,mb4.5
ZAK pmax pmax
comp=Z,4.0nm,1.1s,mb4.2
KKN Kakani 67.97 303 *eP* **P** **03 12 28.7 -0.1**
comp=Z,24nm,0.7s,mb5.1
KKN Kakani 67.97 303 *eP* **P** **03 12 28.7 -0.1**
comp=Z,24nm,0.7s,mb5.1
TLY Talaya 68.15 333 *eP* **P** **03 12 29.5 +0.2**
TLY pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
GKN Gorkha 68.58 303 *eP* **P** **03 12 32.7 +0.1**
comp=Z,25nm,0.7s,mb5.2
GKN Gorkha 68.58 303 *eP* **P** **03 12 32.8 +0.2**
comp=Z,25nm,0.7s,mb5.2
BOD Bodaibo 68.84 342 *eP* **P** **03 12 32.4 -1.1**
BOD pmax pmax
comp=Z,16nm,0.9s,mb4.8
SEY Seymchan 68.87 3⇑*eP* **P** **03 12 34.0 +0.4**
YAK Yakutsk 69.07 352 *eP* **P** **03 12 34.8 -0.1**
comp=Z,33nm,0.5s,mb5.4
YAK Yakutsk 69.07 352 *eP* **P** **03 12 34.3 -0.6**
YAK pmax pmax
comp=Z,41nm,1.4s,mb5.1
YAK pmax pmax
comp=N,13nm,1.2s
MOY Mondy 69.37 332 *eP* **P** **03 12 37.7 +0.8**
KOLN Koldanda 69.37 302 *eP* **P** **03 12 37.8 +0.3**
comp=N,28nm,0.8s,mb5.1
KOLN Koldanda 69.37 302 *eP* **P** **03 12 37.8 +0.3**
comp=N,26nm,0.8s,mb5.1
UNV Unalaska Valle 71.40 27 *eP* **P** **03 12 48.9 -0.3**
comp=N,7.8nm,0.5s,mb4.8
VNDA Vanda 71.94 177 P **P** **03 12 53.0 +0.8**
VNDA pP pP 03 13 22.4 +0.6
VNDA Vanda 71.94 177 P **P** **03 12 53.0 +0.8**
comp=N,2.4nm,0.6s,mb4.2,baz=331,slow=6.1,SNR=17
VNDA pP pP 03 13 22.4 +0.6
comp=N,3.4nm,0.8s,baz=350,slow=7.9,SNR=5.1
WMQ Urumqi 72.51 319⇑P **P** **03 12 56.3 +0.2**
WMQ PCP PcP 03 13 13.8 +0.6
WMQ AP pP 03 13 27.8 +2.0
WMQ PP PP 03 15 41.1 +2.0
WMQ PPP 03 17 24.3
WMQ S S 03 22 08.8 -2.1
WMQ AMB AMB
comp=Z,10.0nm,1.0s,mb4.6
WMQ AMB AMB
comp=Z,110nm,4.9s
WMQ LR LR
comp=N,43nm,24.1s
WMQ LR LR
comp=E,6.0nm,20.8s
WMQ LR LR
comp=Z,36nm,25.6s
BILL Bilibino 75.16 8 *eP* **P** **03 13 11.3 +0.3**
comp=Z,22nm,1.0s,mb4.8
BILL Bilibino 75.16 8 *eP* **P** **03 13 11.4 +0.4**
BILL pmax pmax
comp=Z,22nm,1.0s,mb4.8
MK31 Makanchi Array 77.22 321 *iP* **P** **03 13 22.9 -0.3**
MK31 pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
MKAR Makanchi Array 77.22 321 P **P** **03 13 23.0 -0.2**
MKAR pP pP 03 13 54.1 +0.9
MKAR Makanchi Array 77.22 321 P **P** **03 13 23.0 -0.1**
comp=Z,4.5nm,0.5s,mb4.5,baz=99,slow=8.3,SNR=60
MKAR pP pP 03 13 54.1 +0.9
comp=Z,3.0nm,0.8s,baz=106,slow=7.7,SNR=4.4
TIXI Tiksi 78.36 354 *eP* **P** **03 13 27.5 -1.5**
TIXI pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
TNA Tin City 78.71 18 *eP* **P** **03 13 31.3 +0.3**
comp=Z,4.7nm,1.0s,mb4.3
ULHL Ulahol 79.69 315 P **P** **03 13 35.8 -1.0**
SNR=5.6
NVS Novosibirsk 80.01 328⇑*iP* **P** **03 13 36.9 -1.3**
NVS *e* pP 03 14 10.4 +1.9
NVS pmax pmax
comp=N,4.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS pmax pmax
comp=Z,6.0nm,0.6s,mb4.6
KDAK Kodiak Island 80.09 28 P **P** **03 13 38.8 +0.1**
baz=180,slow=4.0
KZA Kyzart 80.34 314 P **P** **03 13 41.6 +1.3**
SNR=24
TKM2 Tokmak 2 80.34 315 *eP* **P** **03 13 40.2 -0.1**
comp=Z,4.7nm,0.6s,mb4.5
TKM2 Tokmak 2 80.34 315 *eP* **P** **03 13 40.2 -0.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.6s,mb4.5
TKM2 Tokmak 2 80.34 315 P **P** **03 13 40.6 +0.3**
SNR=8.5
SVW2 Sparrevohn 80.41 25 *eP* **P** **03 13 41.9 +1.7**
UCH Uchtor 80.91 314 *eP* **P** **03 13 43.8 +0.4**
comp=Z,11nm,1.2s,mb4.6
UCH Uchtor 80.91 314 P **P** **03 13 44.4 +1.1**
SNR=9.6
KURK Kurchatov 80.95 323 *eP* **P** **03 13 42.5 -0.9**
comp=Z,6.5nm,0.9s,mb4.5
KURK Kurchatov 80.95 323 *eP* **P** **03 13 42.5 -0.9**
KURK pmax pmax
comp=Z,7.0nm,0.9s,mb4.5
TTA Tatalina 81.21 23 *eP* **P** **03 13 45.5 +1.0**
USP Ospenovka 81.22 315 P **P** **03 13 45.0 +0.1**
SNR=11
AML Almayashu 81.47 314 *eP* **P** **03 13 46.8 +0.5**
comp=Z,16nm,1.1s,mb4.8
AML *ep*P pP 03 14 18.7 +2.1
AML Almayashu 81.47 314 P **P** **03 13 47.3 +1.0**
SNR=12
EKS2 Erkin-Say 81.55 315 *eP* **P** **03 13 47.2 +0.4**
comp=Z,20nm,1.5s,mb4.7
EKS2 *ep*P pP 03 14 18.2 +1.2
EKS2 Erkin-Say 81.55 315 P **P** **03 13 47.4 +0.6**
SNR=7.7
MAW Mawson 82.09 203 P **P** **03 13 49.4 +0.3**
comp=Z,1.4nm,0.3s,mb4.2,baz=111,slow=8.7,SNR=7.1
MAW pP pP 03 14 18.7 -0.8
comp=Z,5.0nm,0.9s,baz=77,slow=9.2,SNR=3.4
SLKM Skilak Lake 82.43 26 *eP* **P** **03 13 50.8 -0.1**
IMA2 Indian Mountai 83.70 21 *eP* **P** **03 13 57.3 0.0**
COLA College 85.31 23 *eP* **P** **03 14 04.7 -0.8**
CHKZ Chkalovo 86.55 325 *iP* **P** **03 14 09.9 -1.9**
CHKZ pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
BRVK Borovoye 86.59 324 *eP* **P** **03 14 10.8 -1.3**
comp=Z,4.5nm,0.9s,mb4.4
BRVK Borovoye 86.59 324 *eP* **P** **03 14 10.8 -1.2**
BRVK pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
EGAK Eagle 87.93 24 *eP* **P** **03 14 18.3 +0.1**
comp=Z,20nm,1.0s,mb5.1
DAWY Dawson 88.44 25 *eP* **P** **03 14 21.1 +0.4**
INK Inuvik 91.80 21 *eP* **P** **03 14 35.2 -1.1**
NEW Newport 98.63 42 *eP* **P** **03 15 07.8 -0.1**
YKA Yellowknife Ar 99.36 28 P Pdif 03 15 10.1 -0.9
comp=Z,1.2nm,0.7s,baz=274,slow=5.0,SNR=22
YKA pP pP 03 15 42.3 +0.7
comp=Z,0.7nm,0.8s,baz=274,slow=4.9,SNR=3.2
PDAR Pinedale Array 104.22 48 Pdiff Pdif 03 15 32.5 0.0
comp=Z,0.2nm,0.4s,baz=158,slow=1.6,SNR=4.1
ARCES ARCESS Array B 106.12 342 Pdif Pdif 03 15 38.9 -2.1
ARCES ARCESS Array B 106.12 342 Pdiff Pdif 03 15 38.9 -2.1
comp=Z,7.8nm,1.1s,baz=73,slow=8.1,SNR=8.8
OBN Obninsk 106.29 326 *eP* Pdif 03 15 44.5 +2.8
OBN pmax pmax
comp=Z,17nm,1.6s
FINES FINESS Array B 109.48 334 Pdiff Pdif 03 15 57.3 +1.3
comp=Z,2.6nm,1.1s,baz=76,slow=8.0,SNR=5.0
GERES GERESS Array B 121.66 325 PKP PKPdf 03 20 19.7 -2.3
comp=Z,0.6nm,0.6s,baz=130,slow=2.1,SNR=5.7
GERES pPKP pPKPdf 03 20 51.7 -2.6
comp=Z,1.1nm,0.8s,baz=90,slow=2.9,SNR=6.3
PLCA Paso Flores 122.36 147 PKP PKPdf 03 20 24.4 +0.7
comp=Z,2.0nm,0.5s,baz=164,slow=1.4,SNR=17
PLCA pPKP pPKPdf 03 20 54.4 -1.5
comp=Z,1.2nm,0.8s,baz=288,slow=2.9,SNR=1.7
WCI Wyandotte Cave 122.46 48 *e*PKPdf PKPdf 03 20 23.2 -0.7
TSUM Tsumeb 123.89 242 *e*PKPdf PKPdf 03 20 27.6 +0.4
SCHQ Schefferville 124.40 23 PKP PKPdf 03 20 24.9 -2.2
baz=329,slow=5.9
TRQA Tornquist 128.75 151 *e*PKPdf PKPdf 03 20 36.7 +0.7
LCO Las Campanas 130.03 136 *e*PKPdf PKPdf 03 20 39.9 +1.2
LPAZ La Paz 139.14 123 PKP PKPdf 03 20 47.7 -8.3
LPAZ PKP PKPdf 03 20 57.6 +1.6
LPAZ La Paz 139.14 123 PKhKP 03 20 47.7
comp=Z,1.5nm,0.7s,baz=273,slow=1.0,SNR=3.0
LPAZ PKP PKPdf 03 20 57.6 +1.6
comp=Z,3.4nm,0.7s,baz=288,slow=2.0,SNR=9.9
SDV Santo Domingo 143.00 83 *e*PKPdf PKPdf 03 21 03.3 +0.3
TORD Torodi Ar. Bea 144.68 284 PKP PKPdf 03 21 05.3 -0.6
TORD pPKP pPKPdf 03 21 35.4 -2.8
TORD Torodi Ar. Bea 144.68 284 PKP PKPdf 03 21 05.3 -0.6
comp=Z,29nm,1.0s,baz=57,slow=3.8,SNR=201
TORD pPKP pPKPdf 03 21 35.4 -2.8
comp=Z,5.7nm,0.8s,baz=84,slow=3.3,SNR=3.5
DBIC Dimbokro 151.60 273 PKPbc PKPbc 03 21 24.6 +1.0
DBIC PKPab PKPab 03 21 34.2 +1.5
DBIC Dimbokro 151.60 273 PKPbc PKPbc 03 21 24.6 +1.0
comp=Z,22nm,0.6s,baz=67,slow=2.4,SNR=61
DBIC PKPab PKPab 03 21 34.2 +1.5
comp=Z,13nm,0.7s,baz=76,slow=3.5,SNR=8.0

*ISCJB **24** 03:22:11.5±0.8, 976N±0.10×6246W±005, h65km±18km, Error ellipse: s-maj=17.2km s-min=6.6km az=158.5*
*FUNV **24** 03:22:11.2, 977N×6228W, h21km, MW2.9*
ISC 24 03:22:12.8±0.8, **978N**±009×**6245W**±005, **h52**km±25km, **n13, σ1°00/20, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.62**	**308**	*eP*		**Pn**	**03 22 24.9**	**-0.8**
GUNV				*i* S		**Sn**	**03 22 35.7**	**+0.8**
GUIV	**Guiria**	**0.89**	**14**	⇑*iP*		**Pn**	**03 22 27.4**	**-1.7**
GUIV				*e*S		**Sn**	**03 22 39.3**	**-1.9**
TCE	**Chacachacare**	**1.14**	**37**	*eP*		**Pn**	**03 22 33.1**	**+0.6**
TCE				*e*S		**Sn**	**03 22 48.1**	**+1.0**
CRUV	**Carupano**	**1.18**	**319**	*eP*		**Pn**	**03 22 32.9**	**-0.2**
CRUV				*e*S		**Sn**	**03 22 49.1**	**+0.9**
TRN	**Trinidad (W)**	**1.34**	**50**	*eP*		**Pn**	**03 22 35.6**	**+0.4**
TRN				*e*S		**Sn**	**03 22 51.8**	**-0.2**
ITEV	**Isla Los Testi**	**1.71**	**337**	*eP*		**Pn**	**03 22 39.6**	**-0.6**
TPR	**Prospect**	**2.16**	**49**	*eP*		**Pn**	**03 22 40.6**	**-5.8**
PCRV	**Puerto La Cruz**	**2.19**	**281**	*eP*		**Pn**	**03 22 47.4**	**+0.6**
PRGV	**PARIAGUAN**	**2.40**	**245**	*eP*		**Pn**	**03 22 51.0**	**+1.4**
CUPV	**Cœpira**	**3.30**	**275**	*eP*		**Pn**	**03 23 03.1**	**+1.1**
BIRV	**Birongo**	**3.83**	**281**	⇓*eP*		**Pn**	**03 23 10.4**	**+1.2**
CAOV	**Caicara del Or**	**4.54**	**238**	⇑*iP*		**Pn**	**03 23 19.4**	**+0.4**
CAOV				*e*S		**Sn**	**03 24 09.2**	**-1.4**
BAUV	**El Baul**	**5.58**	**262**	*eP*		**Pn**	**03 23 32.9**	**-0.4**
BAUV				*e*S		**Sn**	**03 24 34.7**	**-1.5**

*ISCJB **24** 03:24:22.9±0.9, 3668N±004×700E±02, h33km, Error ellipse: s-maj=19.8km s-min=5.4km az=179.6*
*NNC **24** 03:24:30.4±16.0, 3738N×7003E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=141.6km s-min=131.5km az=102.0*
ISC 24 03:24:25.4±1.0, **3664N**±004×**700E**±02, **h35**km, **n15, σ1°04/18, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.19**	**151**	P		**Pn**	**03 25 15.0**	**+1.9**
CHCP	**Chirah Chowk**	**3.97**	**137**	P		**Pn**	**03 25 23.9**	**0.0**
THW	**Thamme Wali**	**4.08**	**159**	⇑P		**Pn**	**03 25 25.1**	**-0.2**
THW				S		**Sn**	**03 26 10.0**	**-1.8**
SBDP	**Sheikh Budin**	**4.37**	**171**	P		**Pn**	**03 25 29.2**	**-0.1**
DRP	**Derazinda**	**4.88**	**178**	P		**Pn**	**03 25 37.1**	**+0.8**
AML	**Almayashu** SNR=73	**6.17**	**26**	P		**Pn**	**03 25 54.8**	**+0.7**
KK31	**Karatay Array** 0.2nm,0.2s,baz=176,slow=12,SNR=18	**6.47**	**3**	⇑Pn		**Pn**	**03 26 00.4**	**+2.3**
KK31				⇓Sn		**Sn**	**03 27 10.2**	**-0.5**
UCH	**Uchtor** SNR=42	**6.57**	**30**	P		**Pn**	**03 25 59.7**	**+0.2**
EKS2	**Erkin-Say** SNR=14	**6.67**	**24**	P		**Pn**	**03 26 01.6**	**+0.7**
KZA	**Kyzart** SNR=11	**6.77**	**35**	P		**Pn**	**03 26 01.6**	**-0.6**
AAK	**Ala-Archa** SNR=7.7	**6.91**	**28**	P		**Pn**	**03 26 04.5**	**+0.4**
ULHL	**Ulahol** SNR=6.0	**7.38**	**39**	P		**Pn**	**03 26 09.6**	**-1.0**
TKM2	**Tokmak 2** 8.3nm,0.5s	**7.59**	**33**	⇓Pn		**Pn**	**03 26 12.7**	**-0.9**
TKM2	2.5nm,0.6s			⇑Sn		**Sn**	**03 27 31.1**	**-7.2**
TKM2	**Tokmak 2** SNR=14	**7.59**	**33**	P		**Pn**	**03 26 12.9**	**-0.6**
AB31	**Akbulak array** 0.2nm,0.4s,baz=143,slow=11,SNR=4.6	**14.60**	**333**	⇑Pn		**Pn**	**03 27 45.8**	**-3.6**

*IDC **24** 03:49:41.8±2.5, 5257N×16945W, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.8/22, mbtmp3.8/9, ML3.5/1, Error ellipse: s-maj=62.2km s-min=21.3km az=177.0*
*ISCJB **24** 03:49:43.6±1.3, 5221N×0201695W±01, h33km, mb3.7/8, Error ellipse: s-maj=30.9km s-min=6.2km az=160.6*
*NEIC **24** 03:49:43.4, 5221N×16935W, h8km, ML3.3(AEIC), After AEIC.*
ISC 24 03:49:45.8±1.3, **523N**±02×**1695W**±01, **h35**km, **n17, σ0°88/20, mb3.7/8, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**2.39**	**47**	P		**Pn**	**03 50 22.5**	**+0.1**
UNV				S		**Sn**	**03 50 52.0**	**+1.5**
AKUT	**Akutan**	**2.91**	**48**	*e*Pn		**Pn**	**03 50 30.4**	**+0.9**
ATKA	**Atka Island**	**2.91**	**271**	P		**Pn**	**03 50 30.2**	**+0.7**
ADK	**Adak**	**4.47**	**268**	*e*Pn		**Pn**	**03 50 51.4**	**+0.4**
ADK				*e*Sn		**Sn**	**03 51 42.5**	**+0.8**
ADK				*e*Sg		**Sn**	**03 51 57.7**	**+16**
KDAK	**Kodiak Island** 0.4nm,0.3s,baz=180,slow=3.0,SNR=3.3	**11.14**	**54**	Pn		**Pn**	**03 52 21.1**	**-1.3**
INK	**Inuvik**	**23.47**	**33**	P		**P**	**03 54 50.4**	**-1.5**
INK	**Inuvik** 1.0nm,0.4s,mb3.6,baz=230,slow=6.9,SNR=5.8	**23.47**	**33**	P		**P**	**03 54 50.4**	**-1.5**
YKA	**Yellowknife Ar**	**30.36**	**49**	P		**P**	**03 55 54.3**	**+0.5**
YKA	**Yellowknife Ar** 0.4nm,0.4s,mb3.5,baz=273,slow=8.0,SNR=12	**30.36**	**49**	P		**P**	**03 55 54.3**	**+0.5**
PDAR	**Pinedale Array** 0.4nm,0.6s,mb3.4,baz=311,slow=4.7,SNR=4.7	**40.48**	**79**	P		**P**	**03 57 21.4**	**+0.5**
SONM	**Songino Array** 0.3nm,0.5s,mb3.5,baz=45,slow=7.5,SNR=4.3	**51.31**	**301**	P		**P**	**03 58 46.7**	**+0.7**
SONM	**Songino Array** 2.8nm,0.8s,mb4.4,baz=29,slow=8.3,SNR=4.4	**51.31**	**301**	P		**P**	**03 58 46.7**	**+0.7**
ARCES	**ARCESS Array B**	**58.03**	**354**	P		**P**	**03 59 33.4**	**-1.1**
MKAR	**Makanchi Array** 0.2nm,0.2s,mb3.7,baz=66,slow=7.3,SNR=2.6	**63.84**	**313**	P		**P**	**04 00 13.4**	**-0.9**
FINES	**FINESS Array B** 2.1nm,0.9s,mb4.1,baz=11,slow=7.8,SNR=6.4	**65.97**	**352**	P		**P**	**04 00 27.1**	**-0.7**
NOA	**NORSAR Array B**	**67.05**	**360**	P		**P**	**04 00 34.5**	**-0.3**
NOA	**NORSAR Array B** 0.8nm,0.9s,mb3.8,baz=0.3,slow=6.3,SNR=2.7	**67.05**	**360**	P		**P**	**04 00 34.5**	**-0.3**

*NIED **24** 04:05:00, 4620N×15300E, h83km, Mw4.7 Best double couple: M0 1.12000×10^16 NP1:φ162.00000°, δ15.00000°, λ9.00000°. NP2:φ63.00000°, δ88.00000°, λ105.00000°.*
*SZGRF **24** 04:05:00.7, 48.16N×152.08E, h33km, mb5.4, Kuril Islands, Russia*
*SKHL **24** 04:05:07.0±1.0, 4740N×15303E, h162km±13km, mb5.0/6, msh5.1/2*
*BJI **24** 04:05:09.5, 4789N×15254E, h149km, mB4.7, mb4.8*

MOS ***24*** *04:05:09.0±0.9, 4771N×15248E, h138km, mb4.9/82, Error ellipse: s-maj=7.9km s-min=4.0km az=99.7*

ISCJB ***24*** *04:05:09.3±0.2, 4756N±003×15261E±004, h149km, mb4.8/190, Error ellipse: s-maj=5.6km s-min=2.5km az=147.8*

BGS ***24*** *04:05:10.5, 4769N×154.11E, h150km, mb5.0*

NEIC ***24*** *04:05:10.9±0.2, 4763N×15253E, mb4.8/112, Error ellipse: s-maj=5.9km s-min=3.2km az=170.0*

IDC ***24*** *04:05:10.9±0.5, 4767N×15252E, h148km±4km, mb4.2/18, mb1 4.4/20, mb1mx4.4/22, mbtmp4.2/20, MS3.4/6, Ms1 3.4/6, ms1mx3.0/33, Error ellipse: s-maj=13.3km s-min=9.5km az=149.0*

JMA ***24*** *04:05:13.4±0.5, 4623N×15298E, h162km, M4.0*

ISC 24 04:05:11.2±0.2, 4757N±003×15253E±004, h151km, h151km±1.7km:pP-P, n562, σ0s88/586, mb4.8/190, 55C-19D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.90**	**36**	*e*PN		**Pn**	**04 06 06.7**	**-3.4**
SKR				*e*S		**Sn**	**04 06 50.7**	**-5.2**
SKR				pmax	pmax			
	comp=Z,140nm,0.6s							
SKR				pmax	pmax			
	comp=N,70nm,0.4s							
SKR				smax				
	comp=N,310nm,0.5s							
SKR				smax				
	comp=E,220nm,0.5s							
SKR				smax				
	comp=Z,120nm,0.5s							
SKR				MLR	MLR			
	comp=Z,800nm,14.0s							
SKR	**Severo-Kuril's**	**3.90**	**36**	*e*P		**Pn**	**04 06 06.7**	**-3.4**
SKR				AMB	AMB		04 06 08.9	
	comp=Z,140nm,0.6s							
SKR				AMB	AMB		04 06 08.9	
	comp=Z,70nm,0.4s							
SKR				*e*S		**Sn**	**04 06 50.7**	**-5.2**
SKR				A			04 07 02.0	
	comp=Z,310nm,0.5s							
SKR				A			04 07 02.0	
	comp=Z,220nm,0.5s							
SKR				A			04 07 02.0	
	comp=Z,120nm,0.5s							
SKR				AMS	AMS		04 08 31.0	
	comp=Z,800nm,14.0s							
KUR	**Kuril'sk**	**3.98**	**236**	*e*PN		**Pn**	**04 06 10.0**	**-1.2**
KUR				*e*S		**Sn**	**04 06 58.0**	**+0.2**
KUR				pmax	pmax			
	comp=N,260nm,0.7s							
KUR				pmax	pmax			
	comp=E,170nm,0.7s							
KUR				pmax	pmax			
	comp=Z,220nm,0.7s							
KUR				smax				
	comp=N,4μm,1.6s							
KUR				smax				
	comp=N,1μm,0.8s							
KUR				smax				
	comp=E,430nm,0.8s							
KUR	**Kuril'sk**	**3.98**	**236**	*e*P		**Pn**	**04 06 10.0**	**-1.2**
KUR				AMB	AMB		04 06 22.6	
	comp=E,258nm,0.7s							
KUR				AMB	AMB		04 06 22.6	
	comp=E,172nm,0.7s							
KUR				AMB	AMB		04 06 22.6	
	comp=E,215nm,0.7s							
KUR				*e*S		**Sn**	**04 06 58.0**	**+0.2**
KUR				A			04 07 02.4	
	comp=E,4μm,1.6s							
KUR				A			04 07 03.0	
	comp=E,1μm,0.8s							
KUR				A			04 07 03.0	
	comp=E,430nm,0.8s							
YUK	**Yuzh-Kuril'sk**	**5.85**	**235**	PN		**Pn**	**04 06 35.1**	**-0.8**
YUK				S		**Sn**	**04 07 44.3**	**+2.3**
YUK				pmax	pmax			
	comp=Z,210nm,0.4s							
YUK				smax				
	comp=N,420nm,0.5s							
YUK				smax				
	comp=E,380nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.85**	**235**	*e*P		**Pn**	**04 06 35.1**	**-0.8**
YUK				AMB	AMB		04 06 36.1	
	comp=E,210nm,0.4s							
YUK				*e*S		**Sn**	**04 07 44.3**	**+2.3**
NEM2	**Nemuro 2**	**6.36**	**231**	P		**Pn**	**04 06 39.8**	**-2.8**
NEM2				*e*S		**Sn**	**04 07 46.2**	**-8.0**
YSS	**Yuzh-Sakhalins**	**6.68**	**268**	*e*Pn		**Pn**	**04 06 49.0**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.68**	**268⇑**	*e*PN		**Pn**	**04 06 49.5**	**+2.6**
YSS				pmax	pmax			
	comp=E,100nm,0.7s							
YSS				pmax	pmax			
	comp=Z,90nm,0.7s							
YSS	**Yuzh-Sakhalins**	**6.68**	**268⇑**	*e*P		**Pn**	**04 06 49.5**	**+2.6**
YSS				AMB	AMB		04 06 50.9	
	comp=Z,100nm,0.7s							
YSS				AMB	AMB		04 06 50.9	
	comp=Z,90nm,0.7s							
YSS				*e*S		**Sn**	**04 08 06.0**	**+4.1**
YSS				A			04 08 08.5	
	comp=Z,40nm,1.0s							
PET	**Petropavlovsk**	**6.72**	**33**	*e*PN		**Pn**	**04 06 39.7**	**-7.6**
PET				*e*S		**Sn**	**04 07 55.3**	**-7.4**
PET				smax				
	comp=E,68nm,0.6s							
PET				smax				
	comp=N,90nm,0.7s							
PET				MLR	MLR			
	comp=Z,100nm,21.0s							
JNK	**Nakash**	**6.78**	**237**	P		**Pn**	**04 06 46.9**	**-1.3**
JTKR	**Abashiri--Toko**	**7.02**	**242**	P		**Pn**	**04 06 51.9**	**+0.4**
UGL	**Uglegorsk**	**7.14**	**286**	*e*P		**Pn**	**04 06 55.5**	**+2.6**
UGL				AMB	AMB		04 06 58.0	
	comp=Z,33nm,0.7s							
UGL				*e*S		**Sn**	**04 08 20.0**	**+7.2**
UGL				A			04 08 24.0	
	comp=Z,700nm,4.0s							
UGL				A			04 08 24.0	
	comp=Z,500nm,6.0s							
JAK	**Akkeshi**	**7.17**	**233**	P		**Pn**	**04 06 50.7**	**-2.8**
JAK				*e*S		**Sn**	**04 08 06.9**	**-6.8**
TYV	**Tymovskoe**	**7.26**	**301**	*e*P		**Pn**	**04 06 56.8**	**+2.3**
TYV				AMB	AMB		04 07 05.0	
	comp=Z,22nm,0.8s							
TYV				AMB	AMB		04 07 05.0	
	comp=Z,48nm,1.2s							
JMP	**Maruseppu**	**7.33**	**244**	P		**Pn**	**04 06 56.3**	**+0.7**
JAR	**Ashorobuto**	**7.50**	**238**	P		**Pn**	**04 06 56.0**	**-1.8**
JOB	**Onbets**	**7.71**	**236**	*e*S		**Sn**	**04 08 20.3**	**-6.3**
ASAJ	**Asahikawa**	**7.75**	**247**	P		**Pn**	**04 07 02.8**	**+1.7**
ASAJ	**Asahikawa**	**7.75**	**247**	PN		**Pn**	**04 07 02.7**	**+1.6**
ASAJ				pmax	pmax			
	comp=Z,6.0nm,0.3s							
ASAJ				MLR	MLR			
	comp=Z,109nm,20.7s							
ASAJ	**Asahikawa**	**7.75**	**247**	P		**Pn**	**04 07 02.6**	**+1.5**
	comp=Z,5.5nm,0.3s,baz=72,slow=14,SNR=26							
ASAJ				LR	LR		04 09 27.3	
	comp=Z,109nm,20.7s,baz=67,slow=33							
JKK2	**Kamakawa 2**	**7.78**	**245**	P		**Pn**	**04 07 02.4**	**+0.8**
JCH	**Churui**	**8.16**	**236**	P		**Pn**	**04 07 04.6**	**-2.1**
JCH				*e*S		**Sn**	**04 08 30.4**	**-7.1**
JFR	**Furan**	**8.27**	**241**	P		**Pn**	**04 07 08.3**	**+0.2**
OKH	**Okha**	**8.55**	**318**	*e*P		**Pn**	**04 07 13.0**	**+1.3**
OKH				*e*S		**Sn**	**04 08 54.0**	**+7.4**
JBT2	**Biratori 2**	**8.63**	**240**	P		**Pn**	**04 07 11.9**	**-1.0**
ERM	**Erimo**	**8.67**	**234**	*e*Pn		**Pn**	**04 07 13.2**	**-0.3**
	comp=Z,23nm,0.5s							
ERM				*e*Sn		**Sn**	**04 08 44.3**	**-5.5**
ERM	**Erimo**	**8.67**	**234**	*e*PN		**Pn**	**04 07 13.2**	**-0.3**
ERM				pmax	pmax			
	comp=Z,23nm,0.5s							
JEM	**Erimo**	**8.67**	**234**	*e*S		**Sn**	**04 08 43.0**	**-6.8**
JNBK	**Urakawa-nobuka**	**8.72**	**236**	P		**Pn**	**04 07 11.5**	**-2.6**
JNBK				*e*S		**Sn**	**04 08 42.8**	**-8.1**
JNB	**Noboribetsu**	**9.60**	**242**	*e*S		**Sn**	**04 09 06.5**	**-5.6**
JKB	**Kayabe**	**9.96**	**239**	P		**Pn**	**04 07 27.2**	**-3.3**
JKB				*e*S		**Sn**	**04 09 10.7**	**-10**
JSH	**Shimam**	**10.11**	**245**	P		**Pn**	**04 07 32.2**	**-0.3**
JYM2	**Yakumo 2**	**10.21**	**242**	P		**Pn**	**04 07 31.6**	**-2.2**
JSR	**Shiriuchi**	**10.54**	**239**	P		**Pn**	**04 07 35.2**	**-3.0**
JSR				*e*S		**Sn**	**04 09 24.9**	**-10**
JTM	**Tenmabayashi**	**10.66**	**235**	P		**Pn**	**04 07 35.4**	**-4.4**
JTM				*e*S		**Sn**	**04 09 24.6**	**-13**
JANG	**Nango**	**10.71**	**232**	*e*S		**Sn**	**04 09 24.9**	**-14**
JOSM	**Okushiri--Mats**	**10.77**	**244**	P		**Pn**	**04 07 40.1**	**-1.1**
JTH	**Tanohata**	**10.84**	**229**	*e*S		**Sn**	**04 09 27.7**	**-14**
OFUJ	**Ofunato**	**11.59**	**227**	*e*S		**Sn**	**04 09 47.0**	**-13**
HABR	**Khabarovsk**	**11.74**	**281**	*e*PN		**Pn**	**04 07 53.8**	**-0.1**
HABR				*e*			04 10 03.0	
JRG	**Rokugo**	**11.88**	**231**	P		**Pn**	**04 07 52.3**	**-3.5**
JRG				*e*S		**Sn**	**04 09 56.2**	**-11**
MA2	**Magadan**	**12.07**	**356**	*e*Pn		**Pn**	**04 08 03.5**	**+5.4**
MA2	**Magadan**	**12.07**	**356**	PN		**Pn**	**04 07 56.4**	**-1.7**
MA2				*e*			04 10 14.0	
JIO	**Ouri**	**12.23**	**226**	*e*S		**Sn**	**04 10 01.4**	**-14**
JFK	**Kawauchi**	**13.33**	**224**	*e*S		**Sn**	**04 10 28.0**	**-14**
KLR	**Kul'dur**	**13.90**	**285**	*e*P		**Pn**	**04 08 23.2**	**+1.6**
KLR				pmax	pmax			
	comp=Z,57nm,1.6s							
MJAR	**Matsushiro Arr**	**15.29**	**229**	P		**Pn**	**04 08 39.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=26,slow=11,SNR=9.6							
MJAR				LR	LR		04 14 47.7	
	comp=Z,50nm,18.8s,baz=70,slow=38							
MAJO	**Matsushiro**	**15.29**	**229**	*e*Pn		**Pn**	**04 08 39.4**	**+0.3**
	comp=Z,9.6nm,0.8s							
MAJO	**Matsushiro**	**15.29**	**229**	*e*P		**Pn**	**04 08 39.4**	**+0.3**
MAJO				pmax	pmax			
	comp=Z,10.0nm,0.8s							
MAT	**Matsushiro**	**15.29**	**229**	P		**Pn**	**04 08 39.7**	**+0.6**
SEY	**Seymchan**	**15.40**	**360**	*c i*P		**Pn**	**04 08 38.4**	**-1.7**
MDJ	**Mudanjiang**	**16.17**	**268**	P		**Pn**	**04 08 49.4**	**-0.4**
MDJ				XP	sP		04 09 31.8	-3.1
MDJ				S		**S**	**04 11 47.3**	**-2.4**
MDJ				PCP	PcP		04 13 36.1	+1.2
MDJ				SCP	ScP		04 16 57.6	+2.6
MDJ				PCS	PcS		04 17 11.3	+0.9
MDJ				SCS	ScS		04 20 36.5	+2.6
MDJ				AMB	AMB			
	comp=Z,8.0nm,1.2s							
MDJ				AMB	AMB			
	comp=Z,30nm,2.8s							
ZEA	**Zeya**	**17.12**	**300**	*e*P		**Pn**	**04 08 57.6**	**-3.6**
ZEA				AMB	AMB		04 08 58.5	
	comp=Z,23nm,1.0s							
CLNS	**Chul'man**	**19.19**	**309**	*e*P		**P**	**04 09 23.8**	**+0.8**
CLNS				pmax	pmax			
	comp=Z,31nm,0.8s							
CLNS				pmax	pmax			
	comp=N,20nm,0.7s							
CLNS				pmax	pmax			
	comp=E,13nm,0.8s							
CN2	**Changchun**	**19.25**	**269**	*e*P		**P**	**04 09 23.5**	**-0.3**
CN2				*e*AP			04 09 51.0	
CN2				AMB	AMB			
	comp=Z,20nm,0.8s							
YAK	**Yakutsk**	**19.41**	**327**	*e*P		**P**	**04 09 26.2**	**+0.8**
	comp=Z,48nm,0.8s							
YAK	**Yakutsk**	**19.41**	**327**	*e*P		**P**	**04 09 24.2**	**-1.2**
YAK				*e*S		**S**	**04 12 57.5**	**+1.0**
YAK				pmax	pmax			
	comp=Z,54nm,1.2s							
YAK				pmax	pmax			
	comp=N,31nm,1.4s							
YAK				pmax	pmax			
	comp=E,30nm,1.3s							
YAK				smax				
	comp=N,215nm,4.6s							
YAK				smax				
	comp=Z,286nm,6.2s							
YAK				smax				
	comp=E,140nm,2.1s							
KSRS	**Korea Array**	**20.69**	**250**	P		**P**	**04 09 40.5**	**+1.3**
	comp=E,17nm,0.9s,baz=53,slow=10.0,SNR=31							
KSRS				PcP	PcP		04 13 43.6	+0.9
	comp=E,3.1nm,0.8s,baz=342,slow=1.1,SNR=7.3							
BILL	**Bilibino**	**21.68**	**14**	*e*P		**P**	**04 09 47.1**	**-2.4**
	comp=E,24nm,0.8s,mb4.7							
BILL	**Bilibino**	**21.68**	**14**	*d i*P		**P**	**04 09 46.6**	**-3.0**
BILL				*e*S		**S**	**04 13 39.6**	**0.0**
BILL				*e*			04 13 48.2	
BILL				pmax	pmax			
	comp=Z,32nm,1.0s,mb4.7							
HIA	**Hailar**	**21.74**	**287**	*e*P		**P**	**04 09 48.3**	**-2.0**
	comp=Z,5.8nm,0.8s,mb4.1							
HIA	**Hailar**	**21.74**	**287**	*e*P		**P**	**04 09 48.3**	**-2.0**
HIA				pmax	pmax			
	comp=Z,6.0nm,0.8s							
BOD	**Bodaibo**	**25.16**	**308**	*e*P		**P**	**04 10 20.1**	**-2.0**
BOD				pmax	pmax			
	comp=Z,16nm,0.8s,mb4.6							
GAMB	**Gambell**	**25.40**	**37**	*e*P		**P**	**04 10 23.8**	**-0.5**
TIXI	**Tiksi**	**26.57**	**343**	*e*P		**P**	**04 10 32.6**	**-2.1**
	comp=Z,20nm,1.2s,mb4.6							
TIXI	**Tiksi**	**26.57**	**343⇑**	*e*P		**P**	**04 10 32.4**	**-2.2**
TIXI				pmax	pmax			
	comp=Z,15nm,1.1s,mb4.5							
BJI	**Beijing**	**27.10**	**267**	P		**P**	**04 10 41.9**	**+2.2**
BJI				AP	pP		04 11 09.3	-1.9
BJI				XP	sP		04 11 27.4	-1.2
BJI				S		**S**	**04 15 04.3**	**-2.3**
BJI				XS	sS		04 16 03.4	+1.0
BJI				AMB	AMB			
	comp=Z,13nm,0.8s,mb4.6							
TNA	**Tin City**	**27.58**	**35**	*e*P		**P**	**04 10 43.6**	**-0.1**
HHC	**Hu-ho-hao-te**	**29.85**	**272**	*e*P		**P**	**04 11 04.8**	**+0.7**
HHC				AP	pP		04 11 34.3	-1.6
HHC				XP	sP		04 11 51.3	-1.9
HHC				PP	PP		04 12 07.0	-7.3
HHC				S		**S**	**04 15 48.9**	**-0.8**
HHC				XS	sS		04 16 42.5	-3.2
HHC				SS	SS		04 17 36.6	-26
HHC				SCS	ScS		04 21 25.9	-0.6
HHC				AMB	AMB			
	comp=Z,12nm,1.2s,mb4.5							
HHC				AMB	AMB			
	comp=Z,86nm,6.1s							
NJ2	**Nanjing**	**29.87**	**251**	*e*P		**P**	**04 11 08.3**	**+3.9**
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.5s,mb4.8							
ULN	**Ulaanbaatar**	**30.26**	**288⇑**	*e*P		**P**	**04 11 07.4**	**-0.2**
SONM	**Songino Array**	**30.69**	**288**	P		**P**	**04 11 11.3**	**-0.1**
SONM				*PP	pP		04 11 43.1	-0.2
SONM							04 14 05.4	
SONM	**Songino Array**	**30.69**	**288**	P		**P**	**04 11 11.3**	**-0.2**
	comp=Z,1.3nm,0.6s,mb3.9,baz=63,slow=9.7,SNR=11							
SONM				pP	pP		04 11 43.1	-0.1
	comp=Z,1.1nm,0.8s,baz=72,slow=11,SNR=2.6							
SONM				PcP	PcP		04 14 05.4	-0.1
	comp=Z,1.5nm,0.8s,baz=75,slow=1.6,SNR=4.5							
SONM				ScP	ScP		04 17 32.7	-1.1
	comp=Z,0.5nm,0.8s,baz=82,slow=3.2,SNR=2.5							
TLY	**Talaya**	**31.45**	**296**	*e*P		**P**	**04 11 17.7**	**-0.3**
TLY	**Talaya**	**31.45**	**296**	*c i*P		**P**	**04 11 17.4**	**-0.7**
TLY				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.4							
ZAK	**Zakamensk**	**31.98**	**294**	*e*P		**P**	**04 11 22.2**	**-0.4**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.2							
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.3s,mb4.0							
TTA	**Tatalina**	**32.08**	**42**	*e*P		**P**	**04 11 23.2**	**-0.1**
	comp=Z,14nm,0.6s,mb4.9							
TTA	**Tatalina**	**32.08**	**42**	*e*P		**P**	**04 11 23.2**	**-0.2**
TTA				pmax	pmax			
	comp=Z,15nm,0.6s,mb4.9							
SVW2	**Sparrevohn**	**32.20**	**46**	*e*P		**P**	**04 11 24.4**	**-0.1**
IMA2	**Indian Mountai**	**33.38**	**37**	*e*P		**P**	**04 11 34.4**	**-0.3**
WHN	**Wuhan**	**33.77**	**254**	*e*P		**P**	**04 11 39.4**	**+1.0**
KDAK	**Kodiak Island**	**33.90**	**52**	P		**P**	**04 11 37.9**	**-1.4**
	comp=Z,16nm,0.8s,mb4.8,baz=291,slow=6.7,SNR=5.4							
QZH	**Quanzhou**	**35.05**	**242**	*i*P		**P**	**04 11 53.4**	**+3.8**
QZH				AMB	AMB			
	comp=Z,50nm,0.9s,mb5.1							
PMR	**Palmer**	**35.29**	**45**	*e*P		**P**	**04 11 50.9**	**-0.3**
	comp=Z,8.9nm,0.7s,mb4.5							
PMR				*e*P			04 11 51.3	
PMR	**Palmer**	**35.29**	**45**	*e*P		**P**	**04 11 50.9**	**-0.3**
PMR				pmax	pmax			
	comp=Z,9.0nm,0.7s,mb4.5							
SML	**Sawmill**	**35.66**	**44**	*e*P		**P**	**04 11 53.8**	**-0.4**
SML				*e*PcP	PcP		04 14 07.7	-11
COLA	**College**	**35.74**	**39**	*e*P		**P**	**04 11 54.8**	**-0.2**
	comp=Z,56nm,1.2s,mb5.1							
COLA	**College**	**35.74**	**39**	*e*P		**P**	**04 11 54.8**	**-0.2**
COLA				pmax	pmax			
	comp=Z,57nm,1.2s,mb5.1							
MID	**Middleton Isla**	**36.91**	**48**	*e*P		**P**	**04 12 05.4**	**+0.5**
LZH	**Lanzhou**	**37.47**	**270**	*e*P		**P**	**04 12 11.0**	**+1.0**
LZH				AP	pP		04 12 42.3	-0.3
LZH				XP	sP		04 12 58.0	-1.7
LZH				PP	PP		04 13 43.8	+5.3
LZH				PCP	PcP		04 14 26.9	+1.8
LZH				*e*S		**S**	**04 17 48.0**	**+0.7**
LZH				XS	sS		04 18 44.0	-0.3
LZH				SS	SS		04 20 26.0	-12
LZH				AMB	AMB			
	comp=Z,13nm,1.0s,mb4.5							
LZH				AMB	AMB			
	comp=Z,70nm,4.0s							
GTA	**Gaotai**	**38.46**	**278**	⇑P		**P**	**04 12 18.8**	**+0.6**
GTA				PP	PP		04 13 54.6	+5.5
GTA				PCP	PcP		04 14 29.5	+1.4
GTA				S		**S**	**04 18 01.4**	**-0.6**
GTA				XS	sS		04 19 02.3	+3.2
GTA				AMB	AMB			
	comp=Z,6.0nm,1.3s,mb4.1							
GTA				AMB	AMB			
	comp=Z,71nm,6.1s							
GTA				LR	LR			
	comp=N,90nm,15.2s							
GTA				LR	LR			
	comp=E,128nm,16.0s							
GTA				LR	LR			
	comp=Z,47nm,16.0s							
EGAK	**Eagle**	**38.61**	**39**	*e*P		**P**	**04 12 18.5**	**-0.6**
	comp=Z,21nm,0.8s,mb4.8							
DAWY	**Dawson**	**39.46**	**40**	*e*P		**P**	**04 12 26.3**	**+0.1**
CD2	**Chengdu**	**40.56**	**264**	*e*P		**P**	**04 12 35.9**	**+0.2**
CD2				AP	pP		04 13 07.3	-1.4
CD2				XP	sP		04 13 23.4	-2.3
CD2				PP	PP		04 14 14.4	+2.3
CD2				S		**S**	**04 18 33.3**	**-0.3**
CD2				XS	sS		04 19 27.9	-3.2
CD2				SS	SS		04 21 32.3	-7.1
CD2				AMB	AMB			
	comp=Z,70nm,0.8s,mb5.3							
CD2				AMB	AMB			
	comp=Z,110nm,8.4s							
INK	**Inuvik**	**41.17**	**33**	*e*P		**P**	**04 12 40.5**	**+0.3**
INK	**Inuvik**	**41.17**	**33**	P		**P**	**04 12 40.7**	**+0.5**
INK				pmax	pmax			
	comp=Z,17nm,0.9s							
INK	**Inuvik**	**41.17**	**33**	P		**P**	**04 12 40.6**	**+0.4**
	comp=Z,17nm,0.9s,mb4.7,baz=289,slow=7.0,SNR=84							
GYA	**Guiyang**	**41.52**	**256⇑**	*i*P		**P**	**04 12 44.3**	**+0.8**
GYA				AP	pP		04 13 17.8	+1.2
GYA				XP	sP		04 13 35.0	+1.4
GYA				PP	PP		04 14 25.8	+3.4
GYA				PCP	PcP		04 14 40.3	+2.2
GYA				SCP	ScP		04 18 15.0	+1.2
GYA				S		**S**	**04 18 48.5**	**+0.7**
GYA				XS	sS		04 19 46.3	+0.8
GYA				SS	SS		04 21 51.4	-6.9
GYA				SCS	ScS		04 22 30.3	-0.5
GYA				AMB	AMB			
	comp=Z,30nm,0.8s,mb5.0							
GYA				AMB	AMB			
	comp=Z,80nm,2.9s,mb4.8							
GYA				LR	LR			
	comp=N,450nm,17.8s							
GYA				LR	LR			
	comp=E,430nm,18.0s							
GYA				LR	LR			
	comp=Z,390nm,18.4s							
NVS	**Novosibirsk**	**42.38**	**307**	*e*P		**P**	**04 12 48.4**	**-1.8**
NVS				*e*			04 14 40.0	
NVS				pmax	pmax			
	comp=N,5.0nm,0.7s							
NVS				pmax	pmax			
	comp=E,10.0nm,0.7s							
NVS				pmax	pmax			
	comp=Z,14nm,0.7s,mb4.7							
WMQ	**Urumqi**	**44.26**	**290⇑**	*i*P		**P**	**04 13 05.8**	**+0.4**
WMQ				AP	pP		04 13 41.3	+2.4
WMQ				XP	sP		04 13 59.8	+4.0
WMQ				PCP	PcP		04 14 48.3	+1.2
WMQ				PP	PP		04 14 52.3	+0.9
WMQ				PPP			04 15 36.0	
WMQ				SCP	ScP		04 18 23.4	-1.3
WMQ				S		**S**	**04 19 26.3**	**-1.2**
WMQ				XS	sS		04 20 28.8	+3.1
WMQ				AMB	AMB			
	comp=Z,14nm,1.0s,mb4.5							
WMQ				AMB	AMB			
	comp=Z,102nm,4.0s							
WMQ				LR	LR			
	comp=N,33nm,16.6s							
WMQ				LR	LR			
	comp=E,16nm,19.0s							
WMQ				LR	LR			
	comp=Z,15nm,19.0s							
KMI	**Kunming**	**45.01**	**258**	P		**P**	**04 13 12.9**	**+1.3**
KMI				AP	pP		04 13 46.5	+1.4
KMI				PP	PP		04 15 00.5	+0.8
KMI				S		**S**	**04 19 40.9**	**+2.2**
KMI				SS	SS		04 22 55.8	-7.6
KMI				AMB	AMB			
	comp=Z,24nm,1.1s,mb4.7							
KMI				AMB	AMB			
	comp=Z,73nm,3.1s							
KMI				LR	LR			
	comp=Z,27nm,19.2s							
DLBC	**Dease Lake**	**45.31**	**46**	*e*P		**P**	**04 13 15.2**	**+1.7**
MK31	**Makanchi Array**	**46.21**	**296**	*e*P		**P**	**04 13 19.8**	**-1.0**
MK31	**Makanchi Array**	**46.21**	**296**	*i* P		**P**	**04 13 19.6**	**-1.2**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.4s,mb4.4							
MKAR	**Makanchi Array**	**46.21**	**296**	P		**P**	**04 13 20.0**	**-0.7**
MKAR				pP	pP		04 13 57.0	+2.6
MKAR				PcP	PcP		04 14 53.5	-0.3
MKAR				ScP	ScP		04 18 33.5	+0.8
MKAR				LR	LR		04 34 22.3	
MKAR	**Makanchi Array**	**46.21**	**296**	P		**P**	**04 13 20.0**	**-0.8**
MKAR							04 14 53.5	
MKAR	**Makanchi Array**	**46.21**	**296**	P		**P**	**04 13 20.0**	**-0.7**
	comp=Z,9.3nm,0.9s,mb4.4,baz=64,slow=8.5,SNR=59							
MKAR				pP	pP		04 13 57.0	+2.6
	comp=Z,2.4nm,0.7s,baz=64,slow=7.5,SNR=3.2							
MKAR				PcP	PcP		04 14 53.5	-0.3
	comp=Z,2.0nm,0.7s,baz=55,slow=4.6,SNR=4.5							
MKAR				ScP	ScP		04 18 33.5	+0.8
	comp=Z,0.1nm,0.3s,baz=80,slow=3.5,SNR=3.0							
MKAR				LR	LR		04 34 22.3	
	comp=Z,33nm,18.4s,baz=295,slow=38							
KURK	**Kurchatov**	**46.58**	**303**	*e*P		**P**	**04 13 22.4**	**-1.2**
	comp=Z,42nm,0.8s,mb5.1							
KURK				*e*pP	pP		04 13 60.0	+2.7
KURK	**Kurchatov**	**46.58**	**303**	*e*P		**P**	**04 13 22.4**	**-1.2**
KURK				pmax	pmax			
	comp=Z,42nm,0.8s,mb5.

YKA ScP ScP 04 18 50.2 -0.4
YKA Yellowknife Ar 50.51 37 P **P** **04 13 53.4 +0.1**
YKA *PP pP 04 14 27.3 -0.3
YKA 04 15 08.7
YKA Yellowknife Ar 50.51 37 P **P** **04 13 53.3 0.0**
comp=Z,15nm,0.8s,mb4.7,baz=297,slow=7.1,SNR=151
YKA pP pP 04 14 27.3 -0.3
comp=Z,1.8nm,0.7s,baz=301,slow=7.7,SNR=2.8
YKA PcP PcP 04 15 08.7 -0.3
comp=Z,2.1nm,0.7s,baz=301,slow=4.0,SNR=9.0
YKA ScP ScP 04 18 50.2 -0.4
comp=Z,0.1nm,0.3s,baz=307,slow=4.8,SNR=4.0
CHTO Chiang Mai 51.93 256 *eP* **P** **04 14 05.7 +1.2**
comp=Z,20nm,0.8s,mb4.8
CHTO Chiang Mai 51.93 256 *eP* **P** **04 14 05.7 +1.2**
CHTO pmax pmax
comp=Z,21nm,0.8s,mb4.8
CHTO Chiang Mai 51.93 256 P **P** **04 14 06.4 +1.9**
SNR=8.0
CHTO Chiang Mai 51.93 256 P **P** **04 14 06.4 +1.9**
SNR=8.0
SHL Shillong 52.00 267 *eP* **P** **04 14 06.0 +1.0**
ULHL Ulahol 52.26 294 P **P** **04 14 07.1 +0.4**
SNR=12
TKM2 Tokmak 2 52.28 295 *eP* **P** **04 14 06.7 -0.2**
comp=Z,8.6nm,1.1s,mb4.3
TKM2 Tokmak 2 52.28 295 *eP* **P** **04 14 06.7 -0.2**
TKM2 pmax pmax
comp=Z,9.0nm,1.1s,mb4.3
TKM2 Tokmak 2 52.28 295 P **P** **04 14 06.8 -0.1**
SNR=5.6
USP Ospenovka 52.76 296 P **P** **04 14 09.8 -0.5**
SNR=17
SVE Sverdlovsk 52.96 316⇑ *eP* **P** **04 14 10.5 -1.1**
SVE *eS* S 04 21 51.6 +23
SVE pmax pmax
comp=Z,38nm,1.1s,mb5.0
KZA Kyzart 52.97 295 P **P** **04 14 13.0 +1.1**
SNR=8.4
AAK Ala-Archa 53.12 296 P **P** **04 14 13.0 0.0**
SNR=6.3
SOKR Solikamsk 53.21 321 *eP* **P** **04 14 13.3 -0.1**
SOKR pmax pmax
comp=Z,20nm,0.9s,mb4.8
EKS2 Erkin-Say 53.54 296 *eP* **P** **04 14 15.8 -0.3**
comp=Z,11nm,1.0s,mb4.5
EKS2 *ePcP PcP 04 15 20.8 0.0
EKS2 Erkin-Say 53.54 296 P **P** **04 14 16.3 +0.2**
SNR=11
TAPN Taplejung 53.66 272 *eP* **P** **04 14 18.7 +1.5**
comp=Z,51nm,0.8s,mb5.3
TAPN Taplejung 53.66 272 *eP* **P** **04 14 18.6 +1.4**
comp=Z,51nm,0.8s,mb5.3
AML Almayashu 53.89 295 *eP* **P** **04 14 18.9 +0.3**
comp=Z,5.9nm,1.1s,mb4.2
AML *ePcP PcP 04 15 22.7 +0.5
AML Almayashu 53.89 295 P **P** **04 14 19.0 +0.4**
SNR=5.7
ARU Arti 54.14 317 *eP* **P** **04 14 18.8 -1.4**
comp=Z,28nm,0.6s,mb5.2
ARU Arti 54.14 317 *c iP* **P** **04 14 19.2 -1.0**
ARU 04 15 21.0
ARU PPP 04 17 35.6
ARU S **S** **04 21 44.2 -0.6**
ARU SS SS 04 25 26.1 -1.8
ARU pmax pmax
comp=Z,47nm,1.0s,mb5.2
ODAN Odare 54.20 272 *eP* **P** **04 14 22.1 +1.0**
comp=Z,33nm,0.8s,mb5.1
ODAN Odare 54.20 272 *eP* **P** **04 14 22.2 +1.1**
comp=Z,19nm,0.5s,mb5.1
JIRN Jiri 54.49 274 *eP* **P** **04 14 24.6 +1.4**
comp=Z,78nm,0.8s,mb5.5
JIRN Jiri 54.49 274 *eP* **P** **04 14 24.7 +1.5**
comp=Z,78nm,0.8s,mb5.5
KKN Kakani 55.02 274 *eP* **P** **04 14 28.3 +1.3**
comp=Z,107nm,1.1s,mb5.5
KKN Kakani 55.02 274 *eP* **P** **04 14 28.3 +1.3**
comp=Z,107nm,1.1s,mb5.5
KK31 Karatay Array 55.26 298 *i P* **P** **04 14 27.3 -1.2**
KK31 pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
GKN Gorkha 55.32 275 *eP* **P** **04 14 30.3 +1.2**
comp=Z,45nm,0.7s,mb5.3
GKN Gorkha 55.32 275 *eP* **P** **04 14 30.2 +1.1**
comp=Z,111nm,1.0s,mb5.5
EDM Edmonton 56.03 46 *eP* **P** **04 14 33.2 -0.7**
KOLN Koldanda 56.17 275 *eP* **P** **04 14 36.4 +1.2**
comp=Z,66nm,0.9s,mb5.5
KOLN Koldanda 56.17 275 *eP* **P** **04 14 36.4 +1.2**
comp=Z,66nm,0.9s,mb5.5
KEV Kevo 56.44 340 *ep* **P** **04 14 34.3 -2.1**
comp=Z,10nm,0.8s,mb4.7
KEV Kevo 56.44 340 *eP* **P** **04 14 34.3 -2.1**
KEV pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
PRGR Permogore 56.46 327⇑ *iP* **P** **04 14 35.6 -1.1**
PRGR *i* *PP pP 04 15 10.6 -1.1
PRGR *eS* **S** **04 22 09.1 -6.5**
PRGR *eSSS* 04 28 21.2
ARCES ARCESS Array B 56.95 340 P **P** **04 14 39.3 -0.8**
comp=Z,4.7nm,0.6s,mb4.5,baz=28,slow=6.6,SNR=29
KTK1 Kautokeino 57.86 341 *eP* **P** **04 14 46.5 +0.1**
AKTO Aktyubinsk 57.88 311 LR LR 04 39 33.0
comp=Z,29nm,18.7s,baz=41,slow=36
DDI Dehra Dun 58.24 282 *ex* **P** **04 14 48.0 -1.7**
TRO Tromso 58.28 343 *eP* **P** **04 14 47.3 -2.1**
BMO Blue Mountains 58.95 56 *eP* **P** **04 14 54.2 -0.1**
comp=Z,2.2nm,0.9s,mb4.0
MOD Modoc 59.03 60 *eP* **P** **04 14 55.1 +0.1**
comp=Z,5.4nm,1.1s,mb4.3
MOD *epP* pP 04 15 29.5 -0.7
MSO Missoula 59.58 53 *eP* **P** **04 14 58.9 +0.2**
comp=Z,5.3nm,0.9s,mb4.4
MSO *epP* pP 04 15 33.6 -0.3
WVOR Wild Horse Val 59.68 59 *eP* **P** **04 14 59.5 +0.1**
comp=Z,4.6nm,1.0s,mb4.3
WVOR Wild Horse Val 59.68 59 *eP* **P** **04 14 59.5 +0.1**
WVOR pmax pmax
comp=Z,5.0nm,1.0s,mb4.3
CHMT Chamberlain Mo 59.90 52 *eP* **P** **04 15 00.2 -0.6**
FFC Flin Flon 60.37 40 *eP* **P** **04 15 03.6 -0.2**
comp=Z,22nm,0.7s,mb5.1
FFC Flin Flon 60.37 40 *eP* **P** **04 15 03.6 -0.3**
FFC pmax pmax
comp=Z,22nm,0.7s,mb5.1
JOF Joensuu 60.42 333 *ep* **P** **04 15 02.1 -2.0**
comp=Z,11nm,0.6s,mb4.8
HRY Holter Researc 60.78 52 *epP* PcP 04 15 48.5 -0.7
FCC Fort Churchill 60.79 33 *eP* **P** **04 15 06.2 -0.6**
comp=Z,22nm,0.7s,mb5.1
FCC Fort Churchill 60.79 33 *eP* **P** **04 15 06.2 -0.5**
FCC pmax pmax
comp=Z,22nm,0.7s,mb5.1
PAHR Pah Rah Range 60.94 62 *epP* pP 04 15 42.8 -0.7
LRM Limekiln Ridge 61.02 53 *eP* **P** **04 15 09.1 +0.7**
KBL Kabul 61.40 291 *eP* **P** **04 15 10.7 -0.5**
comp=Z,18nm,0.8s,mb4.9
BOZ Bozeman (W) 61.57 53 *eP* **P** **04 15 12.8 +0.7**
MOR8 Moi Rana 62.12 342⇑ *iP* **P** **04 15 13.2 -2.2**
QLMT Earthquake Lak 62.20 53 *eP* **P** **04 15 16.8 +0.3**
QLMT *epP* pP 04 15 52.0 0.0
STOK Stokkvaagen 62.27 343 *eP* **P** **04 15 15.9 -0.6**
NVAR Mina Array Bea 62.41 62 P **P** **04 15 18.1 +0.3**
comp=Z,2.5nm,0.8s,mb4.1,baz=301,slow=5.3,SNR=19
NVAR pP pP 04 15 53.0 -0.5
comp=Z,2.9nm,0.6s,baz=308,slow=6.0,SNR=11
GCMT Greycliff 62.52 51 *eP* **P** **04 15 19.2 +0.7**
GCMT *epP* pP 04 15 53.7 -0.5
KAF Kangasniemi 62.53 335 *ep* **P** **04 15 15.5 -2.8**
comp=Z,13nm,0.8s,mb4.8,baz=37,slow=6.2
KAF Kangasniemi 62.53 335 *eP* **P** **04 15 15.5 -2.8**
KAF pmax pmax
comp=Z,13nm,0.8s,mb4.8
IMW Indian Meadow 63.08 54 *eP* **P** **04 15 23.7 +1.4**
FIA1 FINESS Array S 63.12 334 *eP* **P** **04 15 20.6 -1.6**
FINES FINESS Array B 63.13 334 P **P** **04 15 21.2 -1.0**
comp=Z,18nm,0.7s,mb5.0,baz=39,slow=7.2,SNR=112
RLMT Red Lodge 63.17 52 *eP* **P** **04 15 23.4 +0.6**
comp=Z,7.6nm,1.1s,mb4.4
MOOW Moose Ponds 63.28 54 *eP* **P** **04 15 24.8 +1.2**
TPAW Teton Pass 63.34 54 *eP* **P** **04 15 25.5 +1.6**
LOHW Long Hollow 63.45 54 *eP* **P** **04 15 25.6 +1.0**
REDW Red Top Meadow 63.48 54 *eP* **P** **04 15 25.1 +0.3**
DGMT Dagmar 63.53 46 *eP* **P** **04 15 25.1 +0.1**

LAO LASA Array 63.72 49 *eP* **P** **04 15 26.7 +0.4**
comp=Z,21nm,1.0s,mb4.9
NSS Namsos 64.06 342 *eP* **P** **04 15 27.2 -1.1**
NSS Namsos 64.06 342⇓ *iP* **P** **04 15 27.2 -1.1**
OBN Obninsk 64.41 325⇓ *eP* **P** **04 15 29.8 -0.9**
OBN *e* pP 04 16 03.6 -2.9
OBN pmax pmax
comp=Z,20nm,0.8s,mb5.0
SFJD Kangerlussuaq 64.41 10 *eP* **P** **04 15 29.7 -0.8**
SFJD pmax pmax
comp=Z,26nm,0.9s,mb5.1
SFJD Kangerlussuaq 64.41 10 *i P* **P** **04 15 29.7 -0.8**
comp=Z,26nm,0.9s,mb5.0
BW06 Boulder Array 64.58 54 *eP* **P** **04 15 31.9 -0.2**
comp=Z,2.2nm,0.7s,mb4.1
BW06 *epP* pP 04 16 07.4 -0.5
PDAR Pinedale Array 64.58 54 P **P** **04 15 32.0 0.0**
comp=Z,2.2nm,0.6s,mb4.2,baz=322,slow=1.5,SNR=28
PDAR pP pP 04 16 07.3 -0.6
comp=Z,4.2nm,0.9s,baz=302,slow=2.8,SNR=9.8
NLU North Lily Min 65.06 58 *eP* **P** **04 15 36.2 +1.0**
MPU Maple Canyon 65.27 57 *eP* **P** **04 15 36.6 +0.1**
comp=Z,3.8nm,0.6s,mb4.4
VRSR Storozhevoye 66.21 321 *eP* **P** **04 15 41.4 -1.0**
VRSR pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
VRSR pmax pmax
comp=N,3.0nm,0.8s
VRSR pmax pmax
comp=E,3.0nm,0.8s
SRU San Rafael 66.51 57 *eP* **P** **04 15 44.3 -0.2**
comp=E,5.1nm,0.9s,mb4.3
SRU San Rafael 66.51 57 *eP* **P** **04 15 44.3 -0.2**
SRU pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
DOMB Dombas 66.88 342 *eP* **P** **04 15 46.6 +0.1**
comp=Z,16nm,0.8s,mb4.9
DOMB Dombas 66.88 342⇑ *iP* **P** **04 15 46.7 +0.2**
DOMB AMb AMB 04 15 47.5
comp=Z,16nm,0.8s,mb4.9
NB2 NORSAR Subarra 67.32 341 P **P** **04 15 48.5 -0.7**
comp=Z,28nm,0.8s,mb5.2,baz=26,slow=6.5
NB2 NORSAR Subarra 67.32 341 P **P** **04 15 48.5 -0.7**
NB2 pmax pmax
comp=Z,28nm,0.8s,mb5.1
NOA NORSAR Array B 67.32 341 P **P** **04 15 48.8 -0.4**
comp=Z,24nm,0.8s,mb5.0,baz=27,slow=6.3,SNR=56
NOA LR LR 04 51 37.5
comp=Z,34nm,18.2s,baz=105,slow=41
NAO01 NORSAR Array S 67.57 341 *eP* **P** **04 15 50.3 -0.5**
comp=Z,27nm,1.1s,mb4.9
AGMN Agassiz Refuge 67.59 42 *eP* **P** **04 15 50.0 -1.2**
comp=Z,12nm,1.1s,mb4.6
PV10 Paradox Valley 67.86 57 *eP* **P** **04 15 53.4 +0.4**
PV10 *epP* pP 04 16 28.8 -0.4
HYA Hoyanger 68.26 343 *eP* **P** **04 15 55.7 +0.6**
comp=Z,80nm,1.3s,mb5.3
HYA Hoyanger 68.26 343 *eP* **P** **04 15 55.7 +0.6**
HYA AMb AMB 04 15 57.2
comp=Z,80nm,1.3s,mb5.3
PV01 Paradox Valley 68.29 57 *eP* **P** **04 15 55.0 -0.7**
PV01 *epP* pP 04 16 31.8 -0.1
SMCO Snowmass 68.46 55 *eP* **P** **04 15 56.5 -0.3**
comp=Z,3.6nm,0.7s,mb4.2
SMCO *epP* pP 04 16 32.2 -0.8
KONO Kongsberg 68.93 341 *eP* **P** **04 15 59.3 +0.1**
comp=Z,8.2nm,0.7s,mb4.6
KONO Kongsberg 68.93 341 *eP* **P** **04 15 59.3 0.0**
KONO pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
ASK Askoy 69.08 343 *eP* **P** **04 16 00.7 +0.5**
comp=Z,117nm,1.6s,mb5.4
ASK Askoy 69.08 343⇓ *iP* **P** **04 16 00.6 +0.4**
ASK AMb AMB 04 16 02.7
comp=Z,117nm,1.6s,mb5.4
BER Bergen 69.15 343 *eP* **P** **04 16 00.9 +0.3**
comp=Z,64nm,1.7s,mb5.1
BER Bergen 69.15 343 *eP* **P** **04 16 00.9 +0.3**
BER AMb AMB 04 16 03.4
comp=Z,64nm,1.7s,mb5.1
WRA Warramunga Arr 69.16 198 P **P** **04 16 01.6 +0.5**
comp=Z,2.0nm,0.7s,mb3.9,baz=17,slow=6.7,SNR=9.7
WRA pP pP 04 16 36.1 -1.3
comp=Z,1.7nm,0.8s,baz=16,slow=6.9,SNR=4.7
EGD Espegrend 69.27 343 *eP* **P** **04 16 01.8 +0.4**
comp=Z,70nm,1.4s,mb5.2
EGD Espegrend 69.27 343 *eP* **P** **04 16 01.8 +0.4**
EGD AMb AMB 04 16 03.7
comp=Z,70nm,1.4s,mb5.2
ODD1 Odda 69.32 342 *eP* **P** **04 16 00.8 -0.9**
comp=Z,56nm,0.9s,mb5.3
ODD1 Odda 69.32 342 *eP* **P** **04 16 00.8 -0.9**
ODD1 AMb AMB 04 16 02.7
comp=Z,56nm,0.9s,mb5.3
EYMN Ely 69.80 40 *eP* **P** **04 16 03.6 -1.2**
comp=Z,14nm,0.9s,mb4.7
BLS5 Blasjo 69.81 342⇑ *iP* **P** **04 16 06.0 +1.3**
comp=Z,35nm,0.7s,mb5.2
BLS5 Blasjo 69.81 342⇑ *iP* **P** **04 16 06.0 +1.3**
BLS5 AMb AMB 04 16 06.9
comp=Z,35nm,0.7s,mb5.2
KIV Kislovodsk 69.94 314 *eP* **P** **04 16 06.3 +0.5**
comp=Z,17nm,0.8s,mb4.8
KIV Kislovodsk 69.94 314⇓ *eP* **P** **04 16 06.2 +0.4**
KIV pmax pmax
comp=Z,27nm,1.4s,mb4.8
SUW Suwalki 70.08 331 *eP* **P** **04 16 06.0 -0.4**
ZEI Tsey 70.21 312 *eP* **P** **04 16 06.5 -0.9**
ZEI pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
ECSD EROS,Sioux Fal 70.60 46 *eP* **P** **04 16 08.8 -1.0**
comp=Z,10nm,0.7s,mb4.7
AKASG Malin Array Be 70.64 326 *i P* **P** **04 16 08.8 -1.1**
AKASG pmax pmax
comp=Z,11nm,0.5s
AKASG Malin Array Be 70.64 326 P **P** **04 16 08.8 -1.1**
comp=Z,11nm,0.5s,mb4.8,baz=34,slow=6.1,SNR=69
AKBB Malin Array Si 70.64 326 *eP* **P** **04 16 08.5 -1.4**
SNART Snartemo 70.64 341⇑ *iP* **P** **04 16 10.1 +0.3**
SNART AMb AMB 04 16 12.9
comp=Z,61nm,1.2s,mb5.2
KIEV Kiev 70.65 326 *eP* **P** **04 16 08.4 -1.6**
comp=Z,12nm,0.6s,mb4.8
KIEV Kiev 70.65 326 *eP* **P** **04 16 08.4 -1.6**
KIEV pmax pmax
comp=Z,12nm,0.6s,mb4.8
ANMO Albuquerque 71.74 58 *eP* **P** **04 16 16.4 -0.4**
comp=Z,2.1nm,0.9s,mb3.9
ANMO *epP* pP 04 16 52.1 -1.2
ANMO Albuquerque 71.74 58 *eP* **P** **04 16 16.4 -0.4**
ANMO *e*PP pP 04 16 52.1 -1.2
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ASAR Alice Springs 72.86 198 P **P** **04 16 24.5 +1.1**
comp=Z,3.2nm,0.8s,mb4.1,baz=12,slow=5.3,SNR=40
ASAR pP pP 04 17 00.7 +0.6
comp=Z,1.7nm,0.7s,baz=11,slow=5.0,SNR=3.8
LVV L'vov 73.29 328 *eP* **P** **04 16 25.0 -0.7**
MCD Coleburn Disti 73.30 347 *eP* **P** **04 16 25.8 +0.2**
MDO Dochfour 73.61 347⇑ *eP* **P** **04 16 26.9 -0.5**
KAC Achnashellach 73.69 348 *eP* **P** **04 16 27.3 -0.6**
KPL Plockton 73.89 348 *eP* **P** **04 16 28.6 -0.4**
KPL AMb AMB 04 16 37.7
comp=Z,86nm,1.7s,mb5.2
KWP Kalwaria 73.91 329 *eP* **P** **04 16 29.6 +0.3**
KWP Kalwaria 73.91 329 *eP* **P** **04 16 29.7 +0.4**
KWP Kalwaria 73.91 329⇓ *P* **P** **04 16 30.1 +0.8**
BSEG Bad Segeberg 73.92 338 *eP* **P** **04 16 29.5 +0.2**
BSEG pmax pmax
comp=Z,29nm,1.0s,mb5.0
BSEG Bad Segeberg 73.92 338 *eP* **P** **04 16 29.5 +0.2**
comp=Z,29nm,1.0s,mb5.0
KSB Sheil Bridge 73.99 348 *eP* **P** **04 16 29.4 -0.3**
RUE Ruedersdorf 74.29 335 *eP* **P** **04 16 31.6 +0.1**
comp=Z,24nm,0.7s,mb5.0
RUE Ruedersdorf 74.29 335 *eP* **P** **04 16 31.5 +0.1**
comp=Z,52nm,0.9s,mb5.3
KAR1 Arisaig 74.33 348 *eP* **P** **04 16 31.4 -0.2**
STHS Stebnicka Huta 74.61 329 *i P* **P** **04 16 34.0 +0.7**
comp=Z,19nm,0.9s,mb4.7
STHS Stebnicka Huta 74.61 329 *i P* **P** **04 16 34.0 +0.7**
STHS pmax pmax
comp=Z,19nm,0.9s,mb4.7
KOLS Kolonicke sedl 74.66 329 *eP* **P** **04 16 33.5 -0.1**
KOLS Kolonicke sedl 74.66 329 *eP* **P** **04 16 33.4 -0.2**
EAB Aberfoyle 74.81 347 *eP* **P** **04 16 34.6 +0.2**

UZH Uzhgorod 74.90 328 *eP* **P** **04 16 34.0 -1.1**
UZH *e* 04 16 52.5
NIE Niedzica 74.92 330 *eP* **P** **04 16 35.5 +0.3**
CRVS Cervenica-Dubn 74.97 329 *eP* **P** **04 16 35.4 0.0**
KSP Ksiaz 74.99 333 *eP* **P** **04 16 35.6 +0.1**
KSP Ksiaz 74.99 333 *eP* **P** **04 16 34.9 -0.6**
PGBU Glenifferbraes 75.20 347 *eP* **P** **04 16 36.9 +0.3**
PGBU AMb AMB 04 16 38.7
comp=Z,128nm,1.7s,mb5.3
TRPA Tarpa 75.24 328⇓ *iP* **P** **04 16 37.4 +0.4**
NRDL Niedersach Rie 75.28 337 *eP* **P** **04 16 37.1 0.0**
comp=Z,26nm,0.9s,mb4.9
OKC Ostrava-Krasne 75.28 331⇑ *iP* **P** **04 16 37.3 +0.1**
UPC Upice 75.37 333⇑ *iP* **P** **04 16 37.7 0.0**
DPC Dobruska-Polom 75.41 333⇑ *iP* **P** **04 16 38.3 +0.4**
ESK Eskdalemuir 75.47 346⇑ *eP* **P** **04 16 38.3 +0.1**
ESK AMb AMB 04 16 41.9
comp=Z,29nm,1.4s,mb4.7
MORC Moravsky Berou 75.53 332 *eP* **P** **04 16 38.6 0.0**
comp=Z,29nm,0.8s,mb5.0
MORC Moravsky Berou 75.53 332 *eP* **P** **04 16 38.6 0.0**
MORC pmax pmax
comp=Z,29nm,0.8s,mb5.0
MORC Moravsky Berou 75.53 332⇑ *iP* **P** **04 16 38.7 +0.1**
CFR Carcaliu 75.54 323 P **P** **04 16 42.4 +3.6**
VRI Vrincioaia 75.55 324⇓ *P* **P** **04 16 39.2 +0.4**
VRI Vrincioaia 75.55 324⇓ *iP* **P** **04 16 39.2 +0.4**
CLL Collm 75.55 335⇑ *iP* **P** **04 16 38.5 -0.2**
comp=Z,77nm,1.0s,mb5.3
CLL Collm 75.55 335⇑ *iP* **P** **04 16 38.5 -0.2**
CLL pmax pmax
comp=Z,77nm,1.0s,mb5.3
CLL Collm 75.55 335⇑ *iP* **P** **04 16 38.5 -0.2**
comp=Z,77nm,1.0s,mb5.3
CLL Collm 75.55 335 *eP* **P** **04 16 38.3 -0.4**
comp=Z,77nm,1.0s,mb5.3
KECS Kecovo 75.66 329 *i P* **P** **04 16 39.4 0.0**
comp=Z,10nm,0.8s,mb4.5
KECS Kecovo 75.66 329 *i P* **P** **04 16 39.4 0.0**
KECS pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
BRG Berggiesshubel 75.67 334 *i P* **P** **04 16 39.2 -0.2**
BRG pmax pmax
comp=Z,11nm,1.0s,mb4.4
BRG Berggiesshubel 75.67 334 *eP* **P** **04 16 39.1 -0.3**
comp=Z,18nm,0.9s,mb4.7
BRG Berggiesshubel 75.67 334 *i P* **P** **04 16 39.2 -0.2**
comp=Z,18nm,0.9s,mb4.7
XAL Allendale 75.74 345 *eP* **P** **04 16 39.8 +0.1**
PVCC Panska Ves 75.79 334⇑ *iP* **P** **04 16 40.3 +0.2**
FBE Freiberg 75.80 335 *eP* **P** **04 16 40.0 -0.1**
comp=Z,38nm,1.0s,mb5.0
HARR Harsova 76.03 323 P **P** **04 16 42.0 +0.5**
HARR Harsova 76.03 323⇓ *iP* **P** **04 16 41.9 +0.4**
IBBN Ibbenburen 76.04 339 *eP* **P** **04 16 41.6 +0.1**
comp=Z,42nm,0.9s,mb5.1
GAL1 Galloway 76.14 347⇑ *eP* **P** **04 16 41.0 -1.0**
GAL1 AMb AMB 04 16 44.5
comp=Z,45nm,1.6s,mb4.8
MLR Muntele Rosu 76.16 324 P **P** **04 16 42.6 +0.3**
comp=Z,33nm,0.8s,mb5.0,baz=344,slow=7.4,SNR=33
HATD Hatta, Dubai 76.19 292 P **P** **04 16 43.5 +0.7**
SNR=7.3
HATD Hatta, Dubai 76.19 292 P **P** **04 16 43.5 +0.7**
SNR=7.3
VYHS Vyhne 76.22 330 *i P* **P** **04 16 42.9 +0.4**
comp=Z,12nm,0.8s,mb4.6
VYHS Vyhne 76.22 330 *i P* **P** **04 16 42.9 +0.4**
VYHS pmax pmax
comp=Z,12nm,0.8s,mb4.6
VRAC Vranov 76.24 332 P **P** **04 16 43.3 +0.7**
VRAC Vranov 76.24 332⇓ *iP* **P** **04 16 43.1 +0.5**
PRU Pruhonice 76.27 334⇑ *iP* **P** **04 16 43.1 +0.3**
KOLL Kolacno 76.29 331 *i P* **P** **04 16 43.3 +0.4**
MALT Malatya 76.30 312 *eP* **P** **04 16 44.7 +1.5**
comp=Z,16nm,0.9s,mb4.7
MALT Malatya 76.30 312 *eP* **P** **04 16 44.7 +1.5**
MALT pmax pmax
comp=Z,16nm,0.9s,mb4.7
MALT Malatya 76.30 312⇓ *iP* **P** **04 16 45.3 +2.1**
DRGR 76.31 327 P **P** **04 16 43.9 +0.8**
DRGR 76.31 327⇓ *iP* **P** **04 16 43.2 +0.1**
HOQ Hoqain 76.34 290 P **P** **04 16 44.4 +0.7**
SNR=6.7
HOQ Hoqain 76.34 290 P **P** **04 16 44.4 +0.7**
SNR=6.7
ASHO Ashiyiah 76.34 292 P **P** **04 16 44.8 +1.1**
SNR=7.5
ASHO Ashiyiah 76.34 292 P **P** **04 16 44.8 +1.1**
SNR=7.5
PSZ Piszkesteto 76.35 329 *eP* **P** **04 16 43.5 +0.1**
comp=Z,23nm,1.0s,mb4.8
PSZ Piszkesteto 76.35 329 *eP* **P** **04 16 43.5 +0.2**
PSZ pmax pmax
comp=Z,23nm,1.0s,mb4.8
PSZ Piszkesteto 76.35 329⇑ *eP* **P** **04 16 43.7 +0.4**
PSZ Piszkesteto 76.35 329⇓ *iP* **P** **04 16 43.7 +0.4**
SNX Sinaia 76.44 325⇓ *iP* **P** **04 16 45.1 +1.2**
HPK Haverah Park 76.50 345⇑ *eP* **P** **04 16 43.6 -0.4**
HPK AMb AMB 04 16 46.8
comp=Z,77nm,1.5s,mb5.1
TANN Tannenbergstha 76.50 335 *eP* **P** **04 16 44.2 +0.1**
comp=Z,9.0nm,0.8s,mb4.5
WERD Werda 76.52 335 *eP* **P** **04 16 44.3 +0.1**
comp=Z,16nm,0.8s,mb4.7
MOX Moxa 76.54 336 *eP* **P** **04 16 44.3 0.0**
comp=Z,43nm,1.1s,mb5.0
MOX Moxa 76.54 336 *eP* **P** **04 16 44.3 0.0**
MOX pmax pmax
comp=Z,43nm,1.1s,mb5.0
MOX Moxa 76.54 336 *eP* **P** **04 16 44.4 +0.1**
comp=Z,40nm,1.1s,mb5.0
GUNZ Gunzen 76.59 335 *eP* **P** **04 16 44.8 +0.2**
comp=Z,24nm,0.9s,mb4.8
TREC Trest 76.60 333⇑ *iP* **P** **04 16 44.9 +0.2**
WERN Wernitzgruen 76.64 335 *eP* **P** **04 16 45.1 +0.2**
comp=Z,40nm,1.1s,mb5.0
SMOL Smolenice 76.66 331 *i P* **P** **04 16 45.8 +0.7**
NKC Novy Kostel 76.67 335⇑ *iP* **P** **04 16 45.1 0.0**
JMDO Jabal Madar 76.70 288 P **P** **04 16 47.1 +1.4**
SNR=7.1
JMDO Jabal Madar 76.70 288 P **P** **04 16 47.1 +1.4**
SNR=7.1
UBBA Unterbreizbach 76.82 337 *eP* **P** **04 16 45.8 -0.1**
comp=Z,15nm,0.7s,mb4.7
MODS Modra-Piesok 76.83 331 *i P* **P** **04 16 46.8 +0.8**
LHO Holmfirth 76.93 345⇑ *eP* **P** **04 16 47.2 +0.7**
MANZ Manzenberg 76.99 335 *eP* **P** **04 16 47.0 +0.1**
comp=Z,27nm,1.1s,mb4.8
BSY Bisya 77.01 289 P **P** **04 16 48.8 +1.4**
SNR=9.1
BSY Bisya 77.01 289 P **P** **04 16 48.8 +1.4**
SNR=9.1
BUD Budapest 77.03 330⇑ *eP* **P** **04 16 47.9 +0.8**
ZST Bratislava 77.05 331 *eP* **P** **04 16 47.7 +0.5**
comp=Z,22nm,0.9s,mb4.8
ZST Bratislava 77.05 331 *eP* **P** **04 16 47.7 +0.5**
ZST pmax pmax
comp=Z,22nm,0.9s,mb4.8
KBI1 Birley Grange 77.15 344⇑ *eP* **P** **04 16 47.5 -0.3**
ROTZ Rotzenmuhle 77.16 335 *eP* **P** **04 16 48.2 +0.4**
comp=Z,29nm,0.9s,mb4.9
KHC Kasperske Hory 77.33 334⇑ *iP* **P** **04 16 49.2 +0.5**
KHC *ex* x 04 16 53.0
DMUB Kingscourt 77.41 348 *eP* **P** **04 16 48.2 -0.9**
TXAR Lajitas Array 77.43 60 P **P** **04 16 49.4 -0.3**
TXAR pP pP 04 17 25.8 -1.0
TXAR Lajitas Array 77.43 60 P **P** **04 16 49.4 -0.3**
comp=Z,4.1nm,0.7s,mb4.2,baz=297,slow=4.2,SNR=45
TXAR pP pP 04 17 25.8 -1.0
comp=Z,7.7nm,0.8s,baz=308,slow=4.4,SNR=13
KWE Weaver Farm 77.44 344 *eP* **P** **04 16 49.3 0.0**
GZR Gura Zlata 77.47 326 P **P** **04 16 49.9 +0.3**
GZR Gura Zlata 77.47 326⇑ *iP* **P** **04 16 49.7 +0.1**
GRA1 Grafenberg Arr 77.51 335 *eP* **P** **04 16 50.3 +0.6**
comp=Z,70nm,0.9s,mb5.3
GRF Grafenberg Arr 77.51 335 *eP* **P** **04 16 50.3 +0.6**
GRF pmax pmax
comp=Z,70nm,0.9s,mb5.3
GRF Grafenberg Arr 77.51 335 *eP* **P** **04 16 50.3 +0.6**
GRF pmax pmax
comp=Z,70nm,0.9s,mb5.3
GRF Grafenberg Arr 77.51 335 *eP* **P** **04 16 50.3 +0.6**
comp=Z,70nm,0.9s,mb5.3
GRFO Grafenberg 77.51 335 *eP* **P** **04 16 49.9 +0.2**

comp=Z,114nm,1.3s,mb5.3
GRFO Grafenberg 77.51 335 *e*P **P 04 16 49.9 +0.2**
GRFO pmax pmax
comp=Z,114nm,1.3s,mb5.3
WET Wettzell 77.52 334 *e*P **P 04 16 50.4 +0.6**
WET pmax pmax
comp=Z,40nm,1.1s,mb5.0
WET Wettzell 77.52 334 *e*P **P 04 16 50.4 +0.6**
comp=Z,40nm,1.1s,mb5.0
GEC2 GERESS Array S 77.54 334 *e*P **P 04 16 50.0 0.0**
GEC2 pmax pmax
comp=Z,14nm,0.7s,mb4.7
GEC2 GERESS Array S 77.54 334 *e*P **P 04 16 50.0 0.0**
comp=Z,14nm,0.7s,mb4.7
GERES GERESS Array B 77.54 334 P **P 04 16 50.0 +0.1**
comp=Z,12nm,0.7s,mb4.7,baz=32,slow=5.4,SNR=98
CWF Charnwood Fore 77.60 344⇑ *e*P **P 04 16 50.3 +0.1**
CWF AMb AMb 04 16 53.0
comp=Z,40nm,1.9s,mb4.7
SOP Sopron 77.67 331⇑ *e*P **P 04 16 51.6 +0.9**
CONA Conrad Observa 77.68 332 *i* P **P 04 16 51.6 +0.9**
comp=Z,25nm,1.0s,mb4.8,SNR=38
BZS Buzias 77.71 327 P **P 04 16 51.4 +0.4**
BZS Buzias 77.71 327⇓ *i*P **P 04 16 50.6 -0.3**
TNS Taunus Mts 77.78 337 *e*P **P 04 16 51.5 +0.3**
TNS pmax pmax
comp=Z,37nm,0.8s,mb5.1
TNS Taunus Mts 77.78 337 *e*P **P 04 16 51.5 +0.3**
comp=Z,37nm,0.8s,mb5.1
SBD1 Bryn Du 77.79 345 *e*P **P 04 16 51.7 +0.5**
ANTO Ankara 77.80 317 *e*P **P 04 16 51.9 +0.4**
comp=Z,15nm,0.7s,mb4.7
ANTO Ankara 77.80 317 *e*P **P 04 16 51.9 +0.3**
ANTO pmax pmax
comp=Z,15nm,0.7s,mb4.7
ANTO Ankara 77.80 317⇑ *i*P **P 04 16 52.6 +1.1**
MIB Mutribah 77.90 301 *e*P **P 04 16 52.5 +0.2**
MIB AMb AMb 04 16 54.1
comp=Z,153nm,0.8s,mb5.7
DLF Lyons Farm 77.94 347 *e*P **P 04 16 49.9 -2.2**
BEBN Eben Emael 77.94 339 P **P 04 16 52.3 +0.2**
comp=Z,15nm,1.0s,mb4.6
DCN Croghan 78.00 348 *e*P **P 04 16 51.6 -0.8**
SZH Strazhica 78.02 323 P **P 04 16 52.4 -0.3**
MEM Membach 78.04 339 P **P 04 16 52.0 -0.7**
comp=Z,40nm,1.2s,mb4.9
HLM1 Long Mynd 78.10 345 *e*P **P 04 16 53.3 +0.4**
KBD Kabd 78.16 300 *e*P **P 04 16 53.6 -0.1**
KBD AMb AMb 04 16 54.9
comp=Z,255nm,0.7s,mb5.9
TOD Tromm 78.25 337 *e*P **P 04 16 55.0 +1.2**
UCC Uccle 78.25 340 P **P 04 16 53.5 -0.3**
MOA Molln 78.25 333⇑ *i*P **P 04 16 54.1 +0.2**
comp=Z,6.1nm,0.8s,mb4.3,SNR=18
PKSM Moragy 78.26 329 P **P 04 16 53.5 -0.5**
PKSM Moragy 78.26 329⇑ *i*P **P 04 16 53.3 -0.7**
ABH Alteburg 78.32 338 *e*P **P 04 16 55.2 +1.0**
QRN Al-Qurain 78.34 300 *e*P **P 04 16 54.9 +0.1**
QRN AMb AMb 04 16 55.9
comp=Z,107nm,0.8s,mb5.5
NAY Al-Naaiem 78.36 301 *e*P **P 04 16 54.9 0.0**
NAY AMb AMb 04 16 56.7
comp=Z,62nm,1.0s,mb5.2
BCLA Clavier 78.38 339 P **P 04 16 54.6 0.0**
comp=Z,20nm,1.2s,mb4.6
ARSA Arzberg 78.39 332⇑ *i*P **P 04 16 55.1 +0.4**
comp=Z,31nm,1.4s,mb4.7,SNR=9.3
RDF Al-Radifah 78.42 300 *e*P **P 04 16 55.4 +0.2**
RDF AMb AMb 04 16 57.4
comp=Z,141nm,0.9s,mb5.6
SKP1 Kophill 78.48 343⇑ *e*P **P 04 16 54.9 -0.1**
SNF Seneffe 78.54 340 P **P 04 16 55.6 +0.2**
comp=Z,20nm,2.0s,mb4.4
HTR Trewern Hill 78.59 345 *e*P **P 04 16 56.0 +0.3**
RUP Ruppelstein 78.61 338 *e*P **P 04 16 56.7 +0.9**
MCH1 Michaelchurch 78.62 345⇑ *e*P **P 04 16 55.3 -0.5**
MCH1 AMb AMb 04 16 58.0
comp=Z,62nm,1.9s,mb4.9
GIVF Givet 78.79 339 *e*P **P 04 16 56.7 -0.1**
comp=Z,47nm,1.1s,mb4.7
GIVF Givet 78.79 339 *e*P **P 04 16 56.7 -0.1**
comp=Z,24nm,1.1s,mb4.7
GIVF Givet 78.79 339 *e*P **P 04 16 56.7 -0.1**
GIVF pmax pmax
comp=Z,24nm,1.1s,mb4.7
DOU Dourbes 78.85 340 P **P 04 16 57.3 +0.1**
comp=Z,12nm,1.7s,mb4.3
SWN1 Swindon 78.87 344 *e*P **P 04 16 57.4 +0.2**
SWN1 AMb AMb 04 17 06.5
comp=Z,138nm,1.9s,mb5.3
FUR Furstenfeldbru 78.87 335 *e*P **P 04 16 57.7 +0.4**
FUR pmax pmax
comp=Z,55nm,1.1s,mb5.1
FUR Furstenfeldbru 78.87 335 *e*P **P 04 16 57.7 +0.4**
comp=Z,55nm,1.1s,mb5.1
STU Stuttgart 78.90 336 *e*P **P 04 16 57.6 +0.2**
comp=Z,33nm,1.0s,mb4.9
HGH Gray Hill 78.93 345 *e*P **P 04 16 56.9 -0.6**
BAIF Baives 78.98 340 *e*P **P 04 16 57.8 0.0**
comp=Z,6.1nm,0.5s,mb4.2
BAIF Baives 78.98 340 *e*P **P 04 16 57.8 0.0**
comp=Z,3.0nm,0.5s,mb4.2
BAIF Baives 78.98 340 *e*P **P 04 16 57.8 0.0**
BAIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.2
PERS Pernice 79.06 332 *i* P **P 04 16 58.5 +0.2**
MIAR Mount Ida 79.11 50 *e*P **P 04 16 57.9 -1.0**
comp=Z,6.1nm,1.0s,mb4.2
MIAR *e*pP pP 04 17 34.1 -1.9
MIAR Mount Ida 79.11 50 *e*P **P 04 16 57.9 -0.9**
MIAR *e**PP pP 04 17 34.1 -1.9
MIAR pmax pmax
comp=Z,6.0nm,1.0s,mb4.2
DIM Dimitrovgrad 79.19 323 P **P 04 16 59.8 +0.7**
KBA Koelnbreinsper 79.23 333⇓ *i*P **P 04 17 00.1 +0.9**
comp=Z,57nm,1.1s,mb5.1,SNR=50
KBA Koelnbreinsper 79.23 333⇓ *i*P **P 04 17 00.1 +0.9**
KBA pmax pmax
comp=Z,57nm,1.1s,mb5.1
OBKA Obir 79.36 332 *i* P **P 04 17 00.1 +0.1**
comp=Z,26nm,1.4s,mb4.7,SNR=9.3
GOLS Golise 79.45 331 *i* P **P 04 17 00.4 -0.1**
STR Strasbourg 79.46 337 *e*P **P 04 17 02.1 +1.6**
WATA Walderalm 79.53 334⇑ *i*P **P 04 17 01.4 +0.6**
comp=Z,33nm,1.0s,mb4.9,SNR=20
WATA Walderalm 79.53 334⇑ *i*P **P 04 17 01.4 +0.5**
WATA pmax pmax
comp=Z,33nm,1.0s,mb4.9
BFO Black Forest 79.54 337 *e*P **P 04 17 01.0 +0.1**
BFO pmax pmax
comp=Z,32nm,1.0s,mb4.9
BFO Black Forest 79.54 337 *e*P **P 04 17 01.0 +0.1**
comp=Z,32nm,1.0s,mb4.9
WTTA Wattenberg 79.58 334 *i* P **P 04 17 02.0 +0.9**
comp=Z,61nm,1.1s,mb5.1,SNR=26
WTTA Wattenberg 79.58 334 *i* P **P 04 17 02.0 +0.9**
WTTA pmax pmax
comp=Z,61nm,1.1s,mb5.1
SPAK Spaichingen-Ko 79.63 336 *e*P **P 04 17 02.5 +1.1**
RETA Reutte 79.63 335 *i* P **P 04 17 01.8 +0.4**
comp=Z,25nm,1.2s,mb4.7,SNR=11
ACSO Alum Creek Sta 79.64 40 *e*P **P 04 17 00.6 -1.0**
comp=Z,19nm,1.0s,mb4.7
HEX Exmoor 79.66 345 *e*P **P 04 17 01.3 -0.2**
MOTA Moosalm 79.66 334⇑ *i*P **P 04 17 02.0 +0.4**
comp=Z,41nm,1.1s,mb5.0,SNR=22
MOTA Moosalm 79.66 334⇑ *i*P **P 04 17 02.0 +0.4**
MOTA pmax pmax
comp=Z,41nm,1.1s,mb5.0
VTS Vitosha 79.67 325 P **P 04 17 02.2 +0.5**
VTS Vitosha 79.67 325 P **P 04 17 02.1 +0.4**
VTS Vitosha 79.67 325⇑ *i*P **P 04 17 02.0 +0.3**
SQTA Sankt Quirin 79.74 334⇑ *i*P **P 04 17 02.8 +0.8**
comp=Z,31nm,1.1s,mb4.9,SNR=14
SQTA Sankt Quirin 79.74 334⇑ *i*P **P 04 17 02.8 +0.8**
SQTA pmax pmax
comp=Z,31nm,1.1s,mb4.8
CDF Champ du Feu 79.75 337 *e*P **P 04 17 02.2 +0.2**
comp=Z,99nm,1.2s,mb5.0
CDF Champ du Feu 79.75 337 *e*P **P 04 17 02.2 +0.2**
comp=Z,50nm,1.2s,mb5.0
CDF Champ du Feu 79.75 337 *e*P **P 04 17 02.2 +0.2**
CDF pmax pmax
comp=Z,49nm,1.2s,mb5.0
LJU Ljubljana 79.78 332 *i* P **P 04 17 00.6 -1.7**

ECH Echery 79.96 337 *e*P **P 04 17 04.1 +1.0**
BOJS Bojanci 80.02 331 *i* P **P 04 17 02.6 -1.0**
FELD Feldberg im Sc 80.04 337 *e*P **P 04 17 04.3 +0.7**
JAVS Javornik 80.06 332 *i* P **P 04 17 02.6 -1.2**
FETA Feichten 80.06 335⇑ *i*P **P 04 17 04.4 +0.6**
comp=Z,43nm,1.4s,mb4.9,SNR=15
DAVA Damuels 80.06 335⇑ *i*P **P 04 17 04.2 +0.4**
comp=Z,34nm,1.1s,mb4.9
MEZF Maizieres J'vi 80.23 339 *e*P **P 04 17 04.7 +0.1**
comp=Z,48nm,0.9s,mb4.8
MEZF Maizieres J'vi 80.23 339 *e*P **P 04 17 04.7 +0.1**
comp=Z,48nm,0.9s,mb5.1
THEF They Montfort 80.25 338 *e*P **P 04 17 05.6 +0.9**
DYA Yadsworthy 80.29 345 *e*P **P 04 17 05.2 +0.3**
DYA AMb AMb 04 17 06.7
comp=Z,74nm,1.0s,mb5.2
MOF Molkenrain 80.30 337 *e*P **P 04 17 06.0 +1.0**
HAU Haudompre 80.36 338 *e*P **P 04 17 05.1 -0.2**
comp=Z,52nm,1.2s,mb4.7
HAU Haudompre 80.36 338 *e*P **P 04 17 05.1 -0.2**
comp=Z,28nm,1.2s,mb4.7
HAU Haudompre 80.36 338 *e*P **P 04 17 05.1 -0.2**
HAU pmax pmax
comp=Z,26nm,1.2s,mb4.7
HINF Hinteralfeld 80.40 337 *e*P **P 04 17 05.2 -0.4**
comp=Z,34nm,1.1s,mb4.6
HINF Hinteralfeld 80.40 337 *e*P **P 04 17 05.2 -0.4**
comp=Z,17nm,1.1s,mb4.6
HINF Hinteralfeld 80.40 337 *e*P **P 04 17 05.2 -0.4**
HINF pmax pmax
comp=Z,17nm,1.1s,mb4.6
BBS Basel-Blauen 80.56 337 *e*P **P 04 17 06.9 +0.5**
WVT Waverly 80.74 45 *e*P **P 04 17 06.6 -1.0**
comp=Z,1.9nm,0.3s,mb4.2
WVT Waverly 80.74 45 *e*P **P 04 17 06.6 -1.0**
WVT pmax pmax
comp=Z,2.0nm,0.3s,mb4.2
LOMF Lomont 80.84 337 *e*P **P 04 17 09.0 +1.1**
FLN La Foliniere 81.23 342 *e*P **P 04 17 10.2 +0.3**
comp=Z,20nm,0.7s,mb4.5
FLN La Foliniere 81.23 342 *e*P **P 04 17 10.2 +0.3**
comp=Z,9.8nm,0.7s,mb4.5
FLN La Foliniere 81.23 342 *e*P **P 04 17 10.2 +0.3**
FLN pmax pmax
comp=Z,10.0nm,0.7s,mb4.5
LDF La Druitiere 81.32 342 *e*P **P 04 17 10.0 -0.4**
comp=Z,24nm,0.9s,mb4.5
LDF La Druitiere 81.32 342 *e*P **P 04 17 10.0 -0.4**
comp=Z,12nm,0.9s,mb4.5
LDF La Druitiere 81.32 342 *e*P **P 04 17 10.0 -0.4**
LDF pmax pmax
comp=Z,12nm,0.9s,mb4.5
GRR Gorron 81.66 342 *e*P **P 04 17 12.4 +0.2**
comp=Z,62nm,1.0s,mb4.9
GRR Gorron 81.66 342 *e*P **P 04 17 12.4 +0.2**
comp=Z,31nm,1.0s,mb4.9
GRR Gorron 81.66 342 *e*P **P 04 17 12.4 +0.2**
GRR pmax pmax
comp=Z,31nm,1.0s,mb4.9
LOR Lormes 81.67 339 *e*P **P 04 17 12.1 -0.1**
comp=Z,17nm,0.5s,mb4.6
LOR *e*pP pP 04 17 51.7 +2.1
LOR Lormes 81.67 339 *e*P **P 04 17 12.1 -0.1**
comp=Z,8.4nm,0.5s,mb4.6
LOR *e*pP pP 04 17 51.7 +2.1
LOR Lormes 81.67 339 *e*P **P 04 17 12.1 -0.1**
LOR *e*PP pP 04 17 51.7 +2.1
LOR pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
CABF La Chapelle 81.72 337 *e*P **P 04 17 12.8 +0.3**
comp=Z,13nm,0.8s,mb4.3
CABF La Chapelle 81.72 337 *e*P **P 04 17 12.8 +0.3**
comp=Z,6.4nm,0.8s,mb4.3
CABF La Chapelle 81.72 337 *e*P **P 04 17 12.8 +0.3**
CABF pmax pmax
comp=Z,6.0nm,0.8s,mb4.3
SSF Saint Saulge 81.95 339 *e*P **P 04 17 13.7 0.0**
comp=Z,26nm,0.9s,mb4.6
SSF Saint Saulge 81.95 339 *e*P **P 04 17 13.7 0.0**
comp=Z,13nm,0.9s,mb4.6
SSF Saint Saulge 81.95 339 *e*P **P 04 17 13.7 0.0**
SSF pmax pmax
comp=Z,13nm,0.9s,mb4.6
HYF Humbligny 81.96 340 *e*P **P 04 17 14.0 +0.2**
SGMF Saint Gilles 82.13 343 *e*P **P 04 17 14.6 0.0**
comp=Z,67nm,0.9s,mb5.0
SGMF Saint Gilles 82.13 343 *e*P **P 04 17 14.6 0.0**
comp=Z,33nm,0.9s,mb5.0
SGMF Saint Gilles 82.13 343 *e*P **P 04 17 14.6 0.0**
SGMF pmax pmax
comp=Z,33nm,0.9s,mb5.0
ROSF Rostrenen 82.19 344 *e*P **P 04 17 14.8 -0.1**
comp=Z,37nm,0.8s,mb4.8
ROSF Rostrenen 82.19 344 *e*P **P 04 17 14.8 -0.1**
comp=Z,18nm,0.8s,mb4.8
ROSF Rostrenen 82.19 344 *e*P **P 04 17 14.8 -0.1**
ROSF pmax pmax
comp=Z,18nm,0.8s,mb4.8
AVF Avril sur Loir 82.24 339 *e*P **P 04 17 15.2 0.0**
comp=Z,65nm,1.2s,mb4.8
AVF Avril sur Loir 82.24 339 *e*P **P 04 17 15.2 0.0**
comp=Z,33nm,1.2s,mb4.8
AVF Avril sur Loir 82.24 339 *e*P **P 04 17 15.2 0.0**
AVF pmax pmax
comp=Z,33nm,1.2s,mb4.8
SMF Signal de Mont 82.25 339 *e*P **P 04 17 15.4 +0.1**
SMF *e*pP pP 04 17 55.5 +2.7
SWET Sewanee 82.39 45 *e*P **P 04 17 14.9 -1.4**
LPL La Plagne 82.56 337 *e*P **P 04 17 17.2 +0.3**
comp=Z,10nm,0.6s,mb4.4
LPL La Plagne 82.56 337 *e*P **P 04 17 17.2 +0.3**
comp=Z,5.1nm,0.6s,mb4.4
LPL La Plagne 82.56 337 *e*P **P 04 17 17.2 +0.3**
LPL pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
QUIF Quistinic 82.57 344 *e*P **P 04 17 16.7 -0.2**
comp=Z,6.1nm,0.5s,mb4.3
QUIF Quistinic 82.57 344 *e*P **P 04 17 16.7 -0.2**
comp=Z,3.0nm,0.5s,mb4.3
QUIF Quistinic 82.57 344 *e*P **P 04 17 16.7 -0.2**
QUIF pmax pmax
comp=Z,3.0nm,0.5s,mb4.3
LPG La Plagne 82.57 336 *e*P **P 04 17 17.4 +0.4**
comp=Z,9.7nm,0.6s,mb4.4
LPG *e*pP pP 04 17 55.4 +0.9
LPG La Plagne 82.57 336 *e*P **P 04 17 17.4 +0.4**
comp=Z,4.8nm,0.6s,mb4.4
LPG *e*pP pP 04 17 55.4 +0.9
LPG La Plagne 82.57 336 *e*P **P 04 17 17.4 +0.4**
LPG *e*PP pP 04 17 55.4 +0.9
LPG pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
BGF Bois d'Agland 82.58 339 *e*P **P 04 17 17.0 0.0**
comp=Z,12nm,0.6s,mb4.5
BGF Bois d'Agland 82.58 339 *e*P **P 04 17 17.0 0.0**
comp=Z,6.1nm,0.6s,mb4.5
BGF Bois d'Agland 82.58 339 *e*P **P 04 17 17.0 0.0**
BGF pmax pmax
comp=Z,6.0nm,0.6s,mb4.5
PLDF La Plantade 82.94 339 *e*P **P 04 17 19.4 +0.5**
PPT Papeete 82.96 125 LR LR 04 49 04.7
comp=Z,106nm,19.2s,baz=184,slow=32
TCF Toulx Ste Croi 82.98 340 *e*P **P 04 17 19.2 +0.1**
comp=Z,32nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.98 340 *e*P **P 04 17 19.2 +0.1**
comp=Z,16nm,0.9s,mb4.8
TCF Toulx Ste Croi 82.98 340 *e*P **P 04 17 19.2 +0.1**
TCF pmax pmax
comp=Z,16nm,0.9s,mb4.8
AGO Saint Agoulin 82.98 339 *e*P **P 04 17 20.1 +1.0**
MFF Saint Martin d 83.21 341 *e*P **P 04 17 20.3 0.0**
comp=Z,32nm,0.9s,mb4.8
MFF *e*pP pP 04 18 01.2 +3.4
MFF Saint Martin d 83.21 341 *e*P **P 04 17 20.3 0.0**
comp=Z,16nm,0.9s,mb4.8
MFF *e*pP pP 04 18 01.2 +3.4
MFF Saint Martin d 83.21 341 *e*P **P 04 17 20.3 0.0**
MFF pmax pmax
comp=Z,16nm,0.9s,mb4.8
MBDF Montbardon 83.28 336 *e*P **P 04 17 20.8 +0.2**
comp=Z,7.7nm,0.5s,mb4.4
MBDF Montbardon 83.28 336 *e*P **P 04 17 20.8 +0.2**
comp=Z,3.8nm,0.5s,mb4.4
MBDF Montbardon 83.28 336 *e*P **P 04 17 20.8 +0.2**
MBDF pmax pmax
comp=Z,4.0nm,0.5s,mb4.4

PYM Petit Puy Mans 83.30 339 *e*P **P 04 17 21.5 +0.8**
ORIF Oris-en-Rattie 83.34 337 *e*P **P 04 17 21.0 0.0**
comp=Z,24nm,0.8s,mb4.7
ORIF Oris-en-Rattie 83.34 337 *e*P **P 04 17 21.0 0.0**
comp=Z,12nm,0.8s,mb4.7
ORIF Oris-en-Rattie 83.34 337 *e*P **P 04 17 21.0 0.0**
ORIF pmax pmax
comp=Z,12nm,0.8s,mb4.7
VIVF Saint-Julien-l 83.72 338 *e*P **P 04 17 22.9 0.0**
comp=Z,23nm,0.9s,mb4.6
VIVF Saint-Julien-l 83.72 338 *e*P **P 04 17 22.9 0.0**
comp=Z,12nm,0.9s,mb4.6
VIVF Saint-Julien-l 83.72 338 *e*P **P 04 17 22.9 0.0**
VIVF pmax pmax
comp=Z,12nm,0.9s,mb4.6
LBL Lubilhac 83.72 339 *e*P **P 04 17 23.6 +0.7**
SBF Sospel 83.89 335 *e*P **P 04 17 23.8 0.0**
comp=Z,37nm,0.8s,mb4.9
SBF Sospel 83.89 335 *e*P **P 04 17 23.8 0.0**
comp=Z,18nm,0.8s,mb4.9
SBF Sospel 83.89 335 *e*P **P 04 17 23.8 0.0**
SBF pmax pmax
comp=Z,18nm,0.8s,mb4.8
RJF Les Rejaudoux 84.07 340 *e*P **P 04 17 24.4 -0.3**
comp=Z,26nm,0.9s,mb4.7
RJF Les Rejaudoux 84.07 340 *e*P **P 04 17 24.4 -0.3**
comp=Z,13nm,0.9s,mb4.7
RJF Les Rejaudoux 84.07 340 *e*P **P 04 17 24.4 -0.3**
RJF pmax pmax
comp=Z,13nm,0.9s,mb4.7
CAF Calviac 84.30 339 *e*P **P 04 17 25.8 0.0**
comp=Z,32nm,0.9s,mb4.8
CAF Calviac 84.30 339 *e*P **P 04 17 25.8 0.0**
comp=Z,16nm,0.9s,mb4.8
CAF Calviac 84.30 339 *e*P **P 04 17 25.8 0.0**
CAF pmax pmax
comp=Z,16nm,0.9s,mb4.8
SMRF Simiane la Rot 84.30 337 *e*P **P 04 17 25.8 0.0**
FRF La Foret Royal 84.39 336 *e*P **P 04 17 26.0 -0.3**
LFF La Frestale 84.59 340 *e*P **P 04 17 26.9 -0.4**
comp=Z,18nm,0.6s,mb4.7
LFF La Frestale 84.59 340 *e*P **P 04 17 26.9 -0.4**
comp=Z,9.0nm,0.6s,mb4.7
LFF La Frestale 84.59 340 *e*P **P 04 17 26.9 -0.4**
LFF pmax pmax
comp=Z,9.0nm,0.6s,mb4.7
LMR La Mourre 84.64 336 *e*P **P 04 17 27.6 0.0**
comp=Z,42nm,1.1s,mb4.8
LMR La Mourre 84.64 336 *e*P **P 04 17 27.6 0.0**
comp=Z,21nm,1.1s,mb4.8
LMR La Mourre 84.64 336 *e*P **P 04 17 27.6 0.0**
LMR pmax pmax
comp=Z,21nm,1.1s,mb4.8
LASF Ste Croix 84.65 338 *e*P **P 04 17 27.5 -0.1**
comp=Z,35nm,1.1s,mb4.7
MTLF Montolieu 85.75 339 *e*P **P 04 17 32.8 -0.3**
comp=Z,15nm,0.9s,mb4.4
MTLF Montolieu 85.75 339 *e*P **P 04 17 32.8 -0.3**
comp=Z,7.7nm,0.9s,mb4.4
MTLF Montolieu 85.75 339 *e*P **P 04 17 32.8 -0.3**
MTLF pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
EPF Esparros 86.49 340 *e*P **P 04 17 36.5 -0.2**
comp=Z,27nm,1.1s,mb4.6
EPF Esparros 86.49 340 *e*P **P 04 17 36.5 -0.2**
comp=Z,14nm,1.0s,mb4.6
EPF Esparros 86.49 340 *e*P **P 04 17 36.5 -0.2**
EPF pmax pmax
comp=Z,14nm,1.0s,mb4.7
SJPF Ste Jean 86.77 341 *e*P **P 04 17 37.8 -0.3**
ETSF Etsaut 86.83 341 *e*P **P 04 17 38.4 0.0**
ESDC Sonseca Array 90.65 342 P **P 04 17 55.2 -1.2**
comp=Z,0.8nm,0.6s,mb3.9,baz=5.2,slow=4.1,SNR=5.5
KEST Kesra 90.76 331 P **P 04 17 57.6 +0.7**
comp=Z,4.3nm,0.8s,mb4.6,baz=336,slow=3.3,SNR=12
TORD Torodi Ar. Bea 114.18 329 PKP PKiKP 04 23 31.5 -1.4
comp=Z,0.3nm,0.3s,baz=17,slow=1.8,SNR=30
DBIC Dimbokro 122.41 333 PKP PKPdf 04 23 47.9 -0.9
comp=Z,1.3nm,0.5s,baz=0.0,slow=2.0,SNR=4.4
LIC Lamto 122.89 333 *e*PKiKP PKPdf 04 23 48.1 -1.6
PLCA Paso Flores 148.67 93 PKPbc PKPbc 04 24 39.4 -0.5
comp=Z,3.0nm,0.9s,baz=333,slow=2.3,SNR=7.2
PLCA pPKPbc pPKPbc 04 25 18.1 -1.3
comp=Z,1.5nm,0.8s,baz=269,slow=4.7,SNR=2.8

ISCJB ***24*** *04:22:37.7±5.5, 195S±0.1×1758W±0.4, h264km±53km, mb3.9/7, Error ellipse: s-maj=64.8km s-min=19.4km az=173.4*
NEIC ***24*** *04:22:42.1±2.0, 1961S×17570W, h300km, mb4.0/3, Error ellipse: s-maj=42.4km s-min=19.7km az=81.0*
IDC ***24*** *04:22:44.4±4.2, 1975S×17601W, h299km±39km, mb3.6/3, mb1 3.8/4, mb1mx3.3/16, mbtmp3.6/4, Error ellipse: s-maj=45.3km s-min=15.8km az=89.0*
ISC 24 04:22:43.8±4.0**, 197S**±01×**1757W**±04**, h320**km±35km**, n10, σ0s28/10, mb3.8/7, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**19.56**	**197**	P		**P**	**04 26 48.8**	**0.0**
	1.7nm,0.3s,baz=27,slow=18,SNR=10							
URZ				S		**S**	**04 30 11.7**	**0.0**
	baz=251,slow=18,SNR=2.1							
RPZ	**Rata Peaks**	**26.43**	**202**	P		**P**	**04 27 47.2**	**-4.8**
	1.4nm,0.3s,mb3.6,baz=76,slow=17,SNR=3.0							
CTAO	**Charters Tower**	**35.75**	**263**	*e*P		**P**	**04 29 13.4**	**+0.1**
	2.1nm,0.3s,mb3.9							
ASAR	**Alice Springs**	**46.84**	**256**	P		**P**	**04 30 43.1**	**+0.4**
	3.6nm,0.5s,mb3.9,baz=90,slow=8.2,SNR=60							
WB2	**Warramunga Arr**	**46.87**	**261**	*e*P		**P**	**04 30 42.4**	**-0.7**
WRA	**Warramunga Arr**	**46.88**	**261**	P		**P**	**04 30 43.0**	**-0.1**
	2.3nm,0.3s,mb3.9,baz=97,slow=8.7,SNR=36							
KAKA	**Kakadu**	**50.15**	**270**	*e*P		**P**	**04 31 08.1**	**+0.2**
	4.2nm,0.4s,mb4.0							
FITZ	**Fitzroy Crossi**	**55.31**	**261**	*e*P		**P**	**04 31 45.5**	**+0.1**
	5.2nm,1.1s,mb3.8							
MJAR	**Matsushiro Arr**	**70.86**	**322**	P		**P**	**04 33 26.5**	**0.0**
	0.8nm,0.6s,mb3.6,baz=126,slow=6.2,SNR=2.7							
MMAI	**Mount Meron Ar**	**149.26**	**302**	PKPbc	PKPbc		04 41 58.5	+3.2
	1.1nm,0.5s,baz=94,slow=6.1,SNR=5.7							

NEIC ***24*** *04:30:11.6, 1751N×10172W, h8km, MD3.7(MEX), After MEX.*
MEX 24 04:30:11.8±0.8**, 1745N**×**10167W, h6**km±17km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.25**	**51**	*i* P		Pg	04 30 16.4	-0.3
ZIIG				*i* S		Sg	04 30 20.2	+0.1
ACX	**Acapulco**	**1.77**	**109**	*e*P		Pn	04 30 46.5	+3.5
ACX	**Acapulco**	**1.77**	**109**	*e*P		Pn	04 30 42.5	-0.5
MEIG	**Mezcala**	**2.01**	**76**	*i* P		Pn	04 30 42.3	-4.0
MEIG				*i* S		Sn	04 31 06.8	-4.9
PLIG	**Platanillo**	**2.27**	**65**	*e*P		Pn	04 30 47.9	-2.0
PLIG				*i* S		Sn	04 31 15.2	-2.9
PPM	**Popocatepetl**	**3.31**	**60**	*i* S		Sn	04 31 35.7	-8.1
PPM	**Popocatepetl**	**3.31**	**60**	*i* S		Sn	04 31 42.6	-1.2
IIO	**Organos**	**3.52**	**52**	*i* P		Pn	04 30 55.8	-11
IIO				*i* S		Sn	04 31 41.9	-7.1
UTMO	**Huajuapan**	**3.71**	**84**	*i* P		Pn	04 31 09.0	-0.6
UTMO				*i* S		Sn	04 31 47.6	-6.0

ISCJB ***24*** *04:36:55.3±2.0, 050N±005×12435E±008, h133km±19km, mb4.4/43, Error ellipse: s-maj=14.3km s-min=7.3km az=159.3*
NEIC ***24*** *04:36:56.5±2.2, 049N×12431E, h129km±21km, mb4.5/16, Error ellipse: s-maj=13.4km s-min=6.9km az=68.0*
BJI ***24*** *04:36:56.5, 050N×12430E, h129km, mb4.9, mb4.4*
IDC ***24*** *04:36:57.1±1.7, 051N×12434E, h133km±14km, mb4.0/18, mb1 4.1/19, mb1mx4.1/22, mbtmp4.0/19, MS3.3/1, Ms1 3.3/1, ms1mx2.7/22, Error ellipse: s-maj=20.2km s-min=8.4km az=70.0*
MOS ***24*** *04:36:59.8±1.0, 051N×12440E, h179km, mb4.6/9, Error ellipse: s-maj=19.3km s-min=9.6km az=108.0*
ISC 24 04:36:57.9±1.7**, 047N**±005×**12434E**±008**, h142**km±16km**, n82, σ0s98/78, mb4.4**/43**, 3C-2D, Minahassa Peninsula, Sulawesi**

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

BATI	**Kupang**	**10.62**	**184**	P		**Pn**	**04 39 33.1**	**+6.7**
	3.4nm,0.3s,baz=324,slow=15,SNR=3.8								
BATI				LR		LR	04 43 48.3		
	comp=Z,161nm,18.4s,baz=323,slow=38								
KSM	**Kuching**	**14.06**	**274**	*e*Pn		**Pn**	**04 40 16.4**	**+5.3**
KAKA	**Kakadu**	**15.36**	**149**	*e*P		**Pn**	**04 40 27.3**	**0.0**
	6.4nm,0.7s								
FITZ	**Fitzroy Crossi**	**18.50**	**176**	*e*P		**P**	**04 41 02.9**	**-0.3**
	7.3nm,0.3s								
FITZ	**Fitzroy Crossi**	**18.50**	**176**	P		**P**	**04 41 03.5**	**+0.3**
	1.3nm,0.3s,baz=11,slow=9.8,SNR=31								
MBWA	**Marble Bar**	**21.96**	**192**	*e*P		**P**	**04 41 39.1**	**-1.2**
	20nm,0.8s,mb4.6								
WRA	**Warramunga Arr**	**22.53**	**155**	P		**P**	**04 41 45.3**	**-0.8**
	5.6nm,0.4s,mb4.3,baz=334,slow=10,SNR=44								
WRA				PcP		PcP	04 45 35.1	+0.3	
	0.5nm,0.8s,baz=332,slow=2.1,SNR=5.6								
WRA				S		**S**	**04 45 42.3**	**-0.2**	
	2.1nm,0.9s,baz=322,slow=17,SNR=4.6								
WB2	**Warramunga Arr**	**22.53**	**155**	*e*P		**P**	**04 41 45.0**	**-1.2**
KULM	**Kulim**	**24.13**	**282**	*e*P		**P**	**04 41 59.6**	**-1.3**
PSI	**Prapat**	**25.51**	**275**	P		**P**	**04 42 14.6**	**+1.2**
	13nm,1.0s,mb4.5,baz=160,slow=12,SNR=4.1								
ASAR	**Alice Springs**	**25.73**	**159**	P		**P**	**04 42 16.0**	**+0.8**
ASAR							04 45 43.0		
ASAR				S		**S**	**04 46 35.1**	**+1.5**
ASAR	**Alice Springs**	**25.73**	**159**	P		**P**	**04 42 15.9**	**+0.8**
	3.0nm,0.7s,mb4.0,baz=341,slow=7.7,SNR=34								
ASAR				PcP		PcP	04 45 43.0	+1.3	
	3.1nm,0.4s,baz=347,slow=2.0,SNR=19								
ASAR				S		**S**	**04 46 35.0**	**+1.5**	
	0.8nm,0.8s,baz=336,slow=18,SNR=4.0								
ASAR				ScP		ScP	04 49 11.1	+3.0	
	0.5nm,0.8s,baz=337,slow=1.9,SNR=4.6								
CHTO	**Chiang Mai**	**30.88**	**308**	*e*P		**P**	**04 43 02.6**	**+1.6**
	9.3nm,0.9s,mb4.5								
CHTO	**Chiang Mai**	**30.88**	**308**	*e*P		**P**	**04 43 02.6**	**+1.6**
CHTO				pmax		pmax			
	comp=Z,9.0nm,0.9s,mb4.5								
FORT	**Forrest**	**31.27**	**174**	*e*P		**P**	**04 43 04.5**	**+0.1**
	comp=Z,21nm,0.5s,mb5.1								
CBIJ	**Chichi jima**	**31.55**	**31**	P		**P**	**04 43 06.5**	**-0.3**
	comp=Z,33nm,0.5s,mb5.3,baz=269,slow=7.9,SNR=4.9								
KLBR	**Kellerberrin**	**32.49**	**190**	*e*P		**P**	**04 43 14.5**	**-0.5**
	comp=Z,107nm,1.9s,mb5.2								
MUN	**Mundaring**	**33.17**	**193**	*e*P		**P**	**04 43 20.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**33.88**	**191**	P		**P**	**04 43 26.8**	**-0.3**
	comp=Z,8.2nm,0.8s,mb4.5,baz=16,slow=13,SNR=6.7								
CD2	**Chengdu**	**36.02**	**329**	*e*P		**P**	**04 43 47.8**	**+2.3**
CD2				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb4.6								
CD2				AMB		AMB			
	comp=Z,30nm,5.2s								
STKA	**Stephens Creek**	**36.08**	**155**	*e*P		**P**	**04 43 46.6**	**+0.7**
	comp=Z,3.1nm,0.4s,mb4.3								
STKA	**Stephens Creek**	**36.08**	**155**	P		**P**	**04 43 46.8**	**+0.9**
	comp=Z,3.9nm,0.5s,mb4.3,baz=322,slow=8.5,SNR=11								
MJAR	**Matsushiro Arr**	**38.13**	**18**	P		**P**	**04 44 02.6**	**-0.6**
	comp=Z,2.7nm,0.7s,mb4.2,baz=190,slow=8.6,SNR=10								
HHC	**Hu-ho-hao-te**	**41.83**	**345**	*e*P		**P**	**04 44 35.4**	**+1.7**
HHC				PP		PP	04 46 17.4	+3.9	
HHC				S		**S**	**04 50 41.0**	**+0.3**	
HHC				SS		SS	04 53 47.8	-5.0	
HHC				SCS		ScS	04 54 17.3	-4.2	
HHC				AMB		AMB			
	comp=Z,15nm,0.8s,mb4.7								
HHC				AMB		AMB			
	comp=Z,83nm,4.9s								
LSA	**Lhasa**	**42.94**	**316**	*e*P		**P**	**04 44 44.9**	**+2.0**
	comp=Z,11nm,0.6s,mb4.7								
LSA	**Lhasa**	**42.94**	**316**	*e*P		**P**	**04 44 44.9**	**+2.1**
LSA				pmax		pmax			
	comp=Z,11nm,0.6s,mb4.7								
ODAN	**Odare**	**44.15**	**310**	*e*P		**P**	**04 44 52.9**	**+0.3**
	comp=Z,10nm,0.7s,mb4.5								
TAPN	**Taplejung**	**44.15**	**310**	*e*P		**P**	**04 44 51.5**	**-1.1**
	comp=Z,7.4nm,0.4s,mb4.6								
JIRN	**Jiri**	**45.47**	**310**	*e*P		**P**	**04 45 03.2**	**+0.2**
	comp=Z,12nm,0.4s,mb4.9								
KKN	**Kakani**	**46.24**	**309**	*e*P		**P**	**04 45 09.1**	**+0.1**
	comp=Z,9.7nm,0.4s,mb4.8								
GKN	**Gorkha**	**46.84**	**309**	*e*P		**P**	**04 45 13.5**	**-0.2**
	comp=Z,16nm,0.7s,mb4.7								
KOLN	**Koldanda**	**47.53**	**308**	*e*P		**P**	**04 45 19.7**	**+0.6**
	comp=Z,48nm,0.8s,mb5.2								
YSS	**Yuzh-Sakhalins**	**49.02**	**17**	*e*P		**P**	**04 45 35.8**	**+5.7**
SONM	**Songino Array**	**49.69**	**344**	P		**P**	**04 45 35.7**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.5,baz=164,slow=10.0,SNR=5.6								
SONM				PcP		PcP	04 46 54.5	+0.2	
	comp=Z,1.4nm,0.7s,baz=157,slow=4.2,SNR=6.3								
BOD	**Bodaibo**	**57.77**	**353**	*e*P		**P**	**04 46 34.1**	**+0.3**
BOD				*e*			04 47 24.9		
MK31	**Makanchi Array**	**58.93**	**328**	*e*P		**P**	**04 46 42.0**	**-0.1**
MK31				*e*PcP		PcP	04 47 29.7	-0.1	
MKAR	**Makanchi Array**	**58.93**	**328**	P		**P**	**04 46 42.1**	**0.0**
MKAR				PcP		PcP	04 47 30.0	+0.2	
MKAR				ScP		ScP	04 51 16.2	-0.9	
MKAR	**Makanchi Array**	**58.93**	**328**	P		**P**	**04 46 42.1**	**0.0**
MKAR							04 47 30.0		
MKAR	**Makanchi Array**	**58.93**	**328**	P		**P**	**04 46 42.1**	**0.0**
	comp=Z,2.1nm,0.4s,mb4.3,baz=120,slow=9.0,SNR=38								
MKAR				PcP		PcP	04 47 30.0	+0.2	
	comp=Z,7.0nm,0.6s,baz=132,slow=3.7,SNR=21								
MKAR				ScP		ScP	04 51 16.2	-0.9	
	comp=Z,0.5nm,0.3s,baz=121,slow=9.4,SNR=5.9								
RPZ	**Rata Peaks**	**60.56**	**143**	P		**P**	**04 46 53.9**	**+0.6**
	comp=Z,3.2nm,0.6s,mb4.4,baz=280,slow=6.1,SNR=4.4								
UCH	**Uchtor**	**61.02**	**320**	*e*P		**P**	**04 46 57.0**	**+0.6**
	comp=Z,4.0nm,1.0s,mb4.2								
UCH				*e*PcP		PcP	04 47 39.5	+1.2	
AML	**Almayashu**	**61.50**	**319**	*e*P		**P**	**04 47 00.3**	**+0.6**
	comp=Z,4.0nm,1.0s,mb4.2								
AML				*e*PcP		PcP	04 47 40.3	0.0	
YAK	**Yakutsk**	**61.54**	**3**	P		**P**	**04 46 59.2**	**-0.3**
EKS2	**Erkin-Say**	**61.70**	**320**	*e*P		**P**	**04 47 01.0**	**0.0**
	comp=Z,4.9nm,1.1s,mb4.2								
EKS2				*e*PcP		PcP	04 47 40.3	-0.8	
MA2	**Magadan**	**62.44**	**15**	*e*P		**P**	**04 47 07.2**	**+1.7**
	comp=Z,9.8nm,0.8s,mb4.7								
MA2	**Magadan**	**62.44**	**15**	*e*P		**P**	**04 47 07.7**	**+2.1**
MA2				pmax		pmax			
	comp=Z,11nm,0.7s,mb4.8								
KURK	**Kurchatov**	**63.25**	**329**	*e*P		**P**	**04 47 10.2**	**-1.0**
	comp=Z,6.0nm,0.6s,mb4.6								
KURK	**Kurchatov**	**63.25**	**329**	*e*P		**P**	**04 47 10.2**	**-0.9**
KURK				pmax		pmax			
	comp=Z,6.0nm,0.6s,mb4.6								
SEY	**Seymchan**	**65.74**	**14**	P		**P**	**04 47 26.8**	**-0.2**
BRVK	**Borovoye**	**68.85**	**328**	*e*P		**P**	**04 47 45.0**	**-1.9**
	comp=Z,2.4nm,0.6s,mb4.1								
BRVK	**Borovoye**	**68.85**	**328**	*e*P		**P**	**04 47 45.0**	**-1.9**
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.6s,mb4.0								
TIXI	**Tiksi**	**71.13**	**2**	*e*P		**P**	**04 47 59.4**	**-1.0**
	comp=Z,3.8nm,0.7s,mb4.2								
TIXI	**Tiksi**	**71.13**	**2**⇓	*e*P		**P**	**04 48 00.2**	**-0.2**
TIXI				pmax		pmax			
	comp=Z,3.0nm,1.2s,mb3.9								
AKTK	**Aktyubinsk**	**74.75**	**323**	P		**P**	**04 48 21.6**	**-0.6**
AKTO	**Aktyubinsk**	**74.75**	**323**	P		**P**	**04 48 21.6**	**-0.6**
AKTO				pmax		pmax			
	comp=Z,6.0nm,0.7s,mb4.3								
AKTO	**Aktyubinsk**	**74.75**	**323**	P		**P**	**04 48 21.6**	**-0.6**
	comp=Z,5.9nm,0.7s,mb4.3,baz=108,slow=7.8,SNR=31								
MAW	**Mawson**	**79.89**	**200**	P		**P**	**04 48 52.1**	**+1.6**
	comp=Z,5.3nm,0.7s,mb4.3,baz=67,slow=2.7,SNR=4.3								
VNDA	**Vanda**	**80.52**	**172**	*e*P		**P**	**04 48 54.1**	**+0.4**
	comp=Z,1.3nm,0.6s,mb3.7								
VNDA	**Vanda**	**80.52**	**172**	*e*P		**P**	**04 48 54.1**	**+0.4**
VNDA				pmax		pmax			
	comp=Z,1.0nm,0.6s								
VNDA	**Vanda**	**80.52**	**172**	P		**P**	**04 48 54.5**	**+0.8**
	comp=Z,1.0nm,0.6s,mb3.7,baz=333,slow=6.5,SNR=5.4								
KIV	**Kislovodsk**	**83.66**	**314**	*e*P		**P**	**04 49 19.1**	**+8.4**
KIV				pmax		pmax			
	comp=Z,9.0nm,0.8s,mb4.5								
PRGR	**Permogore**	**84.23**	**332**	*e*P		**P**	**04 49 11.6**	**-1.6**
PRGR				pmax		pmax			
	comp=Z,8.0nm,0.7s,mb4.6								
IMA2	**Indian Mountai**	**86.31**	**24**	*e*P		**P**	**04 49 24.5**	**+1.1**
KMBO	**Kilima Mbogo**	**87.09**	**269**	P		**P**	**04 49 28.4**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.6,baz=50,slow=7.9,SNR=4.4								
OBN	**Obninsk**	**88.34**	**325**	P		**P**	**04 49 32.5**	**-0.9**
OBN	**Obninsk**	**88.34**	**325**⇑	*e*P		**P**	**04 49 32.4**	**-1.0**
OBN				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.3								
SYO	**Syowa Base**	**88.54**	**201**⇓	*e*P		**P**	**04 49 33.6**	**-0.5**
SYO	**Syowa Base**	**88.54**	**201**⇓	*e*pP		pP	04 50 16.0	+5.8	
MMAI	**Mount Meron Ar**	**88.85**	**303**	P		**P**	**04 49 36.8**	**+0.5**
	comp=Z,0.6nm,0.4s,mb3.9,baz=83,slow=6.8,SNR=6.0								
QSPA	**South Pole Qui**	**90.40**	**180**	P		**P**	**04 49 44.3**	**+1.7**
	comp=Z,1.8nm,0.5s,mb4.2,baz=354,slow=2.4,SNR=16								
JOF	**Joensuu**	**90.97**	**333**	*e*p		**P**	**04 49 43.6**	**-1.9**
	comp=Z,7.7nm,0.5s,mb5.0								
ARCES	**ARCESS Array B**	**92.66**	**340**	P		**P**	**04 49 52.0**	**-1.2**
ARCES	**ARCESS Array B**	**92.66**	**340**	P		**P**	**04 49 52.0**	**-1.2**
	comp=Z,2.7nm,0.6s,mb4.5,baz=87,slow=5.1,SNR=17								
AKASG	**Malin Array Be**	**92.89**	**321**	P		**P**	**04 49 53.4**	**-1.2**
	comp=Z,0.6nm,0.5s,mb4.0,baz=65,slow=5.8,SNR=3.2								
FINES	**FINESS Array B**	**93.55**	**332**	P		**P**	**04 49 56.1**	**-1.3**
	comp=Z,1.1nm,0.7s,mb4.1,baz=90,slow=7.6,SNR=6.5								
ANMO	**Albuquerque**	**120.97**	**48**⇑	*i*PKIKP		PKPdf	04 55 35.7	+1.7	
TORD	**Torodi Ar. Bea**	**121.57**	**286**	PKP		PKPdf	04 55 35.9	+0.2	
	comp=Z,1.6nm,0.7s,baz=69,slow=1.5,SNR=37								
SCHQ	**Schefferville**	**124.12**	**8**	PKP		PKPdf	04 55 40.4	+0.9	
	baz=359,slow=3.9								
TXAR	**Lajitas Array**	**125.47**	**53**	PKP		PKPdf	04 55 44.3	+1.5	
	comp=Z,0.2nm,0.7s,baz=287,slow=2.4,SNR=3.2								
PLCA	**Paso Flores**	**137.70**	**163**	PKP		PKPdf	04 56 07.7	+2.1	
	comp=Z,1.7nm,0.8s,baz=162,slow=0.9,SNR=5.6								
PLCA				SKPbc		SKPbc	04 59 28.3	+2.0	
	comp=Z,0.6nm,0.7s,baz=238,slow=1.3,SNR=3.0								
LPAZ	**La Paz**	**160.04**	**143**	PKP		PKPdf	04 56 42.9	+1.7	
LPAZ				PKPab		PKPab	04 57 24.2	+2.7	
LPAZ	**La Paz**	**160.04**	**143**	PKP		PKPdf	04 56 42.9	+1.7	
	comp=Z,1.3nm,0.8s,baz=204,slow=3.9,SNR=3.5								
LPAZ				PKPab		PKPab	04 57 24.2	+2.7	
	comp=Z,1.0nm,0.7s,baz=180,slow=3.0,SNR=3.0								

CSEM ***24*** *05:08:00.6±0.2, 40.36N×2598E, h8km, MD2.7, Error ellipse: s-maj=5.3km s-min=4.2km az=97.0*
ISK ***24*** *05:08:00.4, 40.36N×2601E, h5km, MD2.7*
ISCJB ***24*** *05:08:01.3±0.6, 40.39N±0.003×2600E±0.006, h8km±8km, Error ellipse: s-maj=8.1km s-min=5.7km az=8.8*
ATH ***24*** *05:08:05.4, 4054N×2569E, h35km±7km, MD3.1/3*
ISC 24 05:08:01.5±0.6**, 4037N**±0.003×**2596E**±0.007**, h10**km±7km**, n11,** σ0**92**/15**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.19**	**195**	*i*	PG	**Pg**		**05 08 04.2**	**-1.3**
GADA				*i*	SG	**Sg**		**05 08 09.1**	**+1.0**
ENEZ	**Enez**	**0.39**	**22**		PG	**Pg**		**05 08 09.0**	**-0.2**
ENEZ					SG	**Sg**		**05 08 16.2**	**+1.7**
EZN	**Ezine**	**0.61**	**153**		PG	**Pg**		**05 08 12.9**	**-0.5**
LIA	**Limnos Island**	**0.76**	**232**	*e*	PN	**Pg**		**05 08 20.5**	**+4.3**
LIA				*e*	SN	**Sg**		**05 08 31.1**	**+5.0**
RDO	**Rodhopi**	**0.84**	**338**	*e*	PN	**Pg**		**05 08 17.8**	**+0.1**
RDO				*e*	SN	**Sg**		**05 08 27.9**	**-0.7**
RKY	**Sarkoy-Tekirda**	**0.98**	**71**		PG	**Pg**		**05 08 19.3**	**-1.0**
MFT	**Murefte**	**1.09**	**67**		PG	**Pg**		**05 08 22.1**	**-0.3**
MRMT	**Marmara Adasi**	**1.27**	**79**	*e*	PN	**Pn**		**05 08 24.6**	**-0.7**
BNT	**Bandirma**	**1.50**	**90**	*e*	PN	**Pn**		**05 08 28.7**	**+0.2**
NVR	**Nevrokopi**	**1.87**	**302**	*e*	PN	**Pn**		**05 08 33.2**	**-0.4**
IZI	**Iznik**	**2.68**	**90**	*e*	PN	**Pn**		**05 08 46.4**	**+1.6**

IDC ***24*** *05:15:49.6±5.0, 2352S×17982W, h573km±56km, mb3.3/10, mb1 3.5/10, mb1mx3.4/17, mbtmp3.3/10, Error ellipse: s-maj=31.5km s-min=17.0km az=48.0*
ISCJB ***24*** *05:15:50.6±0.8, 236S±0.1×1799W±0.1, h600km, mb3.9/10, Error ellipse: s-maj=16.2km s-min=13.1km az=175.0*
NEIC ***24*** *05:15:52.4±3.1, 2357S×17990W, h610km±35km, mb4.1/4, Error ellipse: s-maj=23.5km s-min=14.9km az=221.0*
ISC 24 05:15:33.0±4.4**, 234S**±01×**1795W**±02**, h380**km±46km**, n30,** σ1**13**/21**, mb3.7**/10**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.08**	**190**	P		**P**		**05 18 45.9**	**-1.2**
URZ				S		**S**		**05 21 27.5**	**-0.3**
URZ	**Urewera**	**15.08**	**190**	P		**P**		**05 18 45.9**	**-1.2**
	2.5nm,0.3s,baz=118,slow=16,SNR=10								
URZ				S		**S**		**05 21 27.5**	**-0.3**
	0.5nm,0.3s,baz=265,slow=23,SNR=5.8								
RPZ	**Rata Peaks**	**21.70**	**199**	P		**P**		**05 19 57.0**	**+2.8**
	18nm,0.6s,mb4.5,baz=7.1,slow=1.6,SNR=14								
RPZ				S		**S**		**05 23 06.4**	**-21**
	3.3nm,0.4s,baz=212,slow=15,SNR=6.3								
CTA	**Charters Tower**	**31.97**	**269**	*e*P		**P**		**05 21 27.5**	**+2.0**
	4.6nm,0.3s,mb4.2								
CTA	**Charters Tower**	**31.97**	**269**	P		**P**		**05 21 27.5**	**+2.0**
	5.8nm,0.4s,mb4.2,baz=97,slow=11,SNR=14								
CTAO	**Charters Tower**	**31.97**	**269**	*e*P		**P**		**05 21 27.4**	**+1.9**
	2.7nm,0.4s,mb3.8								
STKA	**Stephens Creek**	**35.36**	**248**	P		**P**		**05 21 55.5**	**+1.2**
	3.6nm,0.9s,mb3.6,baz=64,slow=22,SNR=3.8								
ASAR	**Alice Springs**	**42.60**	**260**	P		**P**		**05 22 53.9**	**+0.2**
	3.5nm,0.7s,mb3.6,baz=102,slow=7.0,SNR=36								
WB2	**Warramunga Arr**	**42.93**	**265**⇓	*i*P		**P**		**05 22 55.7**	**-0.6**
WRA	**Warramunga Arr**	**42.94**	**265**	P		**P**		**05 22 55.9**	**-0.5**
	1.8nm,0.3s,mb3.6,baz=96,slow=8.4,SNR=55								
FITZ	**Fitzroy Crossi**	**51.36**	**265**	*e*P		**P**		**05 24 00.2**	**-0.5**
	4.2nm,0.5s,mb3.9								
FITZ	**Fitzroy Crossi**	**51.36**	**265**	P		**P**		**05 23 59.8**	**-0.9**
	2.0nm,0.4s,mb3.7,baz=98,slow=5.2,SNR=13								
VNDA	**Vanda**	**54.90**	**185**	P		**P**		**05 24 25.4**	**+0.2**
	0.4nm,0.5s,mb3.0,baz=34,slow=7.3,SNR=3.3								
MBWA	**Marble Bar**	**55.95**	**260**	*e*P		**P**		**05 24 31.0**	**-2.5**
QSPA	**South Pole Qui**	**66.66**	**180**	*e*P		**P**		**05 25 44.1**	**+0.6**
	1.8nm,0.6s,mb4.0								
QSPA	**South Pole Qui**	**66.66**	**180**	P		**P**		**05 25 43.9**	**+0.4**
	2.8nm,0.6s,mb4.2,baz=48,slow=1.2,SNR=16								
TXAR	**Lajitas Array**	**89.75**	**58**	P		**P**		**05 27 50.0**	**+0.5**
	0.6nm,0.7s,mb3.6,baz=212,slow=6.9,SNR=9.1								
PDAR	**Pinedale Array**	**92.00**	**44**	P		**P**		**05 27 58.9**	**-0.7**
	0.4nm,0.7s,mb3.5,baz=209,slow=5.3,SNR=3.5								
MK31	**Makanchi Array**	**112.19**	**313**	*e*PKP		PKiKP		05 33 18.9	-5.0
MKAR	**Makanchi Array**	**112.19**	**313**	PKiKP		PKiKP		05 33 19.2	-4.7
	0.2nm,0.3s,baz=97,slow=1.6,SNR=4.3								
ARCES	**ARCESS Array B**	**131.52**	**349**	PKP		PKPdf		05 33 55.8	-4.4
	1.1nm,0.5s,baz=80,slow=1.5,SNR=7.6								
FINES	**FINESS Array B**	**138.15**	**342**	PKhKP				05 34 00.8	
	0.9nm,0.9s,baz=116,slow=4.4,SNR=4.0								
FINES				PKP		PKPdf		05 34 08.4	-4.4
	0.8nm,0.8s,baz=29,slow=1.8,SNR=4.4								
NB2	**NORSAR Subarra**	**141.68**	**352**	PKP				05 34 10.8	
	comp=Z,0.6nm,0.6s,baz=13,slow=3.1								
NB2	**NORSAR Subarra**	**141.68**	**352**	PKPab				05 34 10.8	
NOA	**NORSAR Array B**	**141.68**	**352**	PKhKP				05 34 10.8	
	comp=Z,0.9nm,0.7s,baz=14,slow=4.5,SNR=3.6								
NOA				PKP		PKPdf		05 34 16.1	-3.1
	comp=Z,0.4nm,0.8s,baz=16,slow=1.6,SNR=2.5								
AKASG	**Malin Array Be**	**144.83**	**328**	PKP		PKPdf		05 34 20.7	-4.3
	comp=Z,2.0nm,0.5s,baz=44,slow=4.0,SNR=15								
NIE	**Niedzica**	**149.75**	**334**	*e*PX		PKPdf		05 34 35.5	+2.3
CLL	**Collm**	**150.54**	**344**⇑	*i*PKPbc		PKPbc		05 34 36.7	-3.4
TORD	**Torodi Ar. Bea**	**169.73**	**186**	PKP		PKPdf		05 34 51.4	-4.9
TORD				PKPab		PKPab		05 36 09.8	-2.7
TORD	**Torodi Ar. Bea**	**169.73**	**186**	PKP		PKPdf		05 34 51.4	-4.9
	comp=Z,0.3nm,0.8s,baz=340,slow=1.2,SNR=2.7								
TORD				PKPab		PKPab		05 36 09.8	-2.7
	comp=Z,0.7nm,0.7s,baz=159,slow=3.9,SNR=4.7								

NEIC ***24*** *05:26:40.8, 1609N×9881W, h16km, MD3.9(MEX), After MEX.*
MEX 24 05:26:40.7±1.6**, 1609N×9881W, h16**km±23km**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.72**	**65**	*i*	P		Pg	05 26 52.3	-2.6
PNIG				*i*	S		Sg	05 27 01.4	-3.1
ACX	**Acapulco**	**1.31**	**306**	*i*	P		Pn	05 27 00.5	-3.8
ACX				*i*	S		Sn	05 27 15.4	-6.2
UTMO	**Huajuapan**	**1.98**	**29**	*i*	P		Pn	05 27 09.8	-3.8
UTMO				*i*	S		Sn	05 27 33.5	-4.6
MEIG	**Mezcala**	**1.98**	**337**	*i*	P		Pn	05 27 12.0	-1.6
MEIG				*i*	S		Sn	05 27 33.4	-4.7
VHO	**Vista Hermosa**	**2.22**	**64**	*i*	P		Pn	05 27 11.9	-5.0
VHO				*i*	S		Sn	05 27 48.1	+4.1
VHO	**Vista Hermosa**	**2.22**	**64**	*e*	P		Pn	05 27 13.0	-3.8
VHO				*i*	S		Sn	05 27 39.2	-4.8
OXX	**Oaxaca**	**2.23**	**63**	*i*	P		Pn	05 27 16.5	-0.5
TPIG	**Tehuac#an**	**2.70**	**31**	*i*	P		Pn	05 27 21.5	-2.0
TPIG				*e*	S		Sn	05 27 53.3	-2.5
PPM	**Popocatepetl**	**2.97**	**3**	*i*	P		Pn	05 27 22.3	-4.9
PPM				*e*	P			05 27 29.2	
PPM						*i*	S	Sn	05 27 53.9	-8.5
PPM						*i*	S	Sn	05 28 05.7	+3.3
PPM	**Popocatepetl**	**2.97**	**3**	*i*	P		Pn	05 27 27.6	+0.4
PPM						*i*	S	Sn	05 27 60.0	-2.4
IIO	**Organos**	**3.48**	**1**	*i*	P		Pn	05 27 40.9	+6.7
PTVM	**Pico Tres Padr**	**3.50**	**355**	*i*	P		Pn	05 27 35.4	+0.9

NIED ***24*** *05:40:00, 2000N×122.10E, h77km, Mw4.2 Best double couple: M0 2.48000×10^15 NP1:φ=267.00000°, δ=31.00000°, λ=-28.00000°. NP2:φ=22.00000°, δ=76.00000°, λ=-118.00000°.*
IDC ***24*** *05:40:05.7±0.8, 2002N×12144E, h0km, mb4.0/7, mb1 4.2/9, mb1mx4.0/18, mbtmp4.0/9, ML4.0/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/27, Error ellipse: s-maj=40.0km s-min=17.5km az=74.0*
ISCJB ***24*** *05:40:12.0±1.7, 2012N±0.007×12178E±0.1, h64km±16km, mb3.9/9, Error ellipse: s-maj=18.2km s-min=11.5km az=2.6*
JMA ***24*** *05:40:12.8±0.3, 2002N×12207E, h89km, M3.8*
NEIC ***24*** *05:40:12.0±1.8, 2005N×12157E, h48km±17km, mb3.9/2, Error ellipse: s-maj=22.7km s-min=8.6km az=64.0*
ISC 24 05:40:13.3±1.6**, 2010N**±0.007×**1217E**±0.1**, h60**km±16km**, n21,** σ0**59**/25**, mb3.9**/9**, MS2.9**/2**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**4.40**	**26**	P		**Pn**		**05 41 17.4**	**-0.1**
HATJ				*e*S		**Sn**		**05 42 07.0**	**-0.4**
YOJ	**Yonaguni jima**	**4.51**	**15**	P		**Pn**		**05 41 20.0**	**+0.9**
YOJ				*e*S		**Sn**		**05 42 11.9**	**+1.7**
YHNB	**Yeheng**	**4.56**	**356**	*e*Pn		**Pn**		**05 41 19.8**	**0.0**
IRIF	**Iriomote-Funau**	**4.62**	**24**	P		**Pn**		**05 41 20.4**	**-0.1**
IRIF				*e*S		**Sn**		**05 42 12.6**	**-0.3**
JKRS	**Kuro-shima**	**4.64**	**27**	P		**Pn**		**05 41 21.1**	**+0.2**
JKRS				*e*S		**Sn**		**05 42 13.3**	**-0.2**
JIJ	**Ishigaki jima**	**4.81**	**28**	P		**Pn**		**05 41 23.0**	**-0.2**
JIJ				*e*S		**Sn**		**05 42 16.5**	**-1.1**
JTJ	**Tarama**	**5.30**	**31**	*e*S		**Sn**		**05 42 29.6**	**-0.2**
JOW	**Kunigami**	**9.02**	**41**	Pn		**Pn**		**05 42 20.6**	**-0.1**

ELOV Elorza 2.49 94 *eP* **Pn** 05 55 18.7 +1.4
ROSC El Rosal 3.28 226⇑ *iP* **Pn** 05 55 31.8 +3.6
ROSC El Rosal 3.28 226⇑ *ePn* **Pn** 05 55 31.8 +3.5
ROSC *eSn* **Sn** 05 56 05.3 -0.7
ROSC El Rosal 3.28 226 P **Pn** 05 55 31.9 +3.6
16nm,0.3s,baz=80,slow=17,SNR=92
ROSC S **Sn** 05 56 06.6 +0.5
38nm,0.3s,baz=94,slow=22,SNR=5.5
VIRV Villa del Rosa 3.33 353⇓ *eP* **Pn** 05 55 27.5 -1.6
VIRV *eS* **Sn** 05 56 07.1 -0.3
VIRV Villa del Rosa 3.33 353 *eP* **Pn** 05 55 27.8 -1.2
VIRV *eS* **Sn** 05 56 07.1 -0.3
QARV Quebrada Arrib 3.34 25⇑ *eP* **Pn** 05 55 29.4 +0.2
QARV *eS* **Sn** 05 56 07.1 -0.5
QARV Quebrada Arrib 3.34 25 *eP* **Pn** 05 55 29.4 +0.3
QARV *eS* **Sn** 05 56 07.1 -0.5
SANV Sanarito 3.35 46 *eP* **Pn** 05 55 29.2 0.0
SANV *eS* **Sn** 05 56 09.0 +1.2
CURV Curarigua 3.46 35⇓ *eP* **Pn** 05 55 31.2 +0.5
CURV *eS* **Sn** 05 56 12.1 +1.7
CURV Curarigua 3.46 35 *eP* **Pn** 05 55 31.2 +0.5
CURV *eS* **Sn** 05 56 12.1 +1.7
TEPV Terepaima 3.91 45 *eP* **Pn** 05 55 37.4 +0.5
DABV Dabajuro 3.96 20⇓ *eP* **Pn** 05 55 37.5 -0.1
DABV *eS* **Sn** 05 56 22.1 -0.6
DABV Dabajuro 3.96 20 *eP* **Pn** 05 55 37.6 0.0
DABV *eS* **Sn** 05 56 22.1 -0.6
SIQV Siquisique 4.07 32 *eP* **Pn** 05 55 39.5 +0.4
SIQV *eS* **Sn** 05 56 25.6 +0.1
SIQV Siquisique 4.07 32 *eP* **Pn** 05 55 39.3 +0.2
SIQV *eS* **Sn** 05 56 25.6 +0.1
BAUV El Baul 4.28 65⇓ *iP* **Pn** 05 55 41.5 -0.5
PAYV Puerto Ayacuch 4.64 112⇓ *eP* **Pn** 05 55 47.7 +0.7
PAYV Puerto Ayacuch 4.64 112 *eP* **Pn** 05 55 47.6 +0.7
JACV Jacura 4.98 38⇑ *eP* **Pn** 05 55 52.6 +1.0
JACV *eS* **Sn** 05 56 46.6 -1.5
JACV Jacura 4.98 38 *eP* **Pn** 05 55 52.3 +0.6
JACV *eS* **Sn** 05 56 46.6 -1.5
TURV Turiamo 5.23 51⇓ *eP* **Pn** 05 55 54.8 -0.3
TURV Turiamo 5.23 51 *eP* **Pn** 05 55 55.0 -0.1
IMOV Isla Los Monje 5.26 12 *eP* **Pn** 05 55 55.0 -0.6
CAOV Caicara del Or 5.62 88⇓ *iP* **Pn** 05 56 00.4 0.0
CAOV *eS* **Sn** 05 57 02.1 -1.6
CAOV Caicara del Or 5.62 88 *eP* **Pn** 05 56 00.6 +0.1
CAOV *eS* **Sn** 05 57 02.1 -1.6
MERV Las Mercedes 5.99 69⇓ *iP* **Pn** 05 56 05.1 -0.5
MERV Las Mercedes 5.99 69 *eP* **Pn** 05 56 05.2 -0.4
FUNV FUNVISIS 6.07 57⇓ *iP* **Pn** 05 56 07.0 +0.4
BIRV Birongo 6.53 59⇓ *eP* **Pn** 05 56 13.0 +0.1
CUPV Cœpira 6.76 64⇓ *iP* **Pn** 05 56 16.0 -0.1
CUPV Cœpira 6.76 64 *eP* **Pn** 05 56 16.0 -0.1
PRGV PARIAGUAN 7.43 77⇑ *eP* **Pn** 05 56 24.8 -0.6
PCRV Puerto La Cruz 7.85 67⇓ *eP* **Pn** 05 56 30.4 -0.7
PCRV Puerto La Cruz 7.85 67 P **Pn** 05 56 30.8 -0.3
20nm,0.3s,baz=214,slow=7.4,SNR=59
PCRV S **Sn** 05 57 59.4 +0.7
18nm,0.3s,baz=258,slow=13,SNR=5.6
BCIP Isla Barro Col 8.02 285 *ePn* **Pn** 05 56 32.3 -1.2
GURV El Guri 8.84 86⇑ *eP* **Pn** 05 56 43.6 -1.1
GUNV Guanoco 9.42 71⇑ *eP* **Pn** 05 56 51.7 -0.9
GUNV Guanoco 9.42 71 *eP* **Pn** 05 56 51.8 -0.8
OTAV Otavalo 9.44 223 *ePn* **Pn** 05 56 51.8 -1.1
LUEV Luepa 10.54 97⇓ *eP* **Pn** 05 57 05.8 -2.2
LUEV Luepa 10.54 97 *eP* **Pn** 05 57 05.9 -2.0
GRGR Grenville 11.31 63 Pn **Pn** 05 57 18.5 0.0
SDDR Presa de Saban 11.76 3 *ePn* **Pn** 05 57 23.7 -0.9
SJG San Juan 12.27 27 *ePn* **Pn** 05 57 28.8 -2.8
SJG San Juan 12.27 27 P **Pn** 05 57 29.2 -2.4
6.0nm,0.3s,baz=218,slow=13,SNR=8.1
SJG S **Sn** 05 59 33.8 -13
1.7nm,0.3s,baz=24,slow=18,SNR=2.0
CPD Cerro la Pandu 12.31 28 *ePn* **Pn** 05 57 29.4 -2.7
HUMP Col San Antoni 12.43 28 *ePn* **Pn** 05 57 34.8 +1.0
MTP Monte Pirata 12.54 29 *ePn* **Pn** 05 57 32.9 -2.4
CBYP Canovanas 12.54 28 *ePn* **Pn** 05 57 36.4 +1.0
JTS JuntasAbangare 13.19 285 P **Pn** 05 57 44.4 +0.1
JTS LR LR 06 02 24.9
JTS JuntasAbangare 13.19 285 P **Pn** 05 57 44.4 +0.1
0.3nm,0.3s,baz=90,slow=9.8,SNR=2.9
JTS LR LR 06 02 24.9
comp=Z,102nm,21.9s,baz=180,slow=36
ATAH Atahualpa 15.46 205 P **Pn** 05 58 16.8 +2.0
0.2nm,0.3s,baz=63,slow=11,SNR=4.1
TGUH Tegucigalpa,Un 16.51 296 Pn **Pn** 05 58 27.5 -0.7
48nm,0.9s
TGUH *eP* 05 58 30.9
NNA Nana 19.64 194 *eP* **Pn** 05 59 05.8 -0.7
41nm,1.4s
NNA Nana 19.64 194 P **Pn** 05 59 05.7 -0.8
0.2nm,0.3s,baz=27,slow=9.0,SNR=3.7
TEIG Tepich 20.44 311 P **P** 05 59 12.0 -1.6
TEIG LR LR 06 07 20.6
TEIG Tepich 20.44 311 P **P** 05 59 12.0 -1.6
20nm,0.6s,baz=97,slow=2.7,SNR=24
TEIG LR LR 06 07 20.5
comp=Z,118nm,21.9s,MS3.2,baz=278,slow=37
LPAZ La Paz 23.62 171 *eP* **P** 05 59 47.5 +0.4
11nm,0.8s,mb4.3
LPAZ La Paz 23.62 171 P **P** 05 59 47.9 +0.8
LPAZ pmax pmax
comp=Z,4.0nm,0.7s
LPAZ MLR MLR
comp=Z,414nm,18.2s
LPAZ La Paz 23.62 171 P **P** 05 59 47.9 +0.8
comp=Z,3.7nm,0.7s,mb3.9,baz=0.8,slow=8.9,SNR=11
LPAZ LR LR 06 09 55.5
comp=Z,414nm,18.2s,MS3.9,baz=62,slow=39
CMIG Matias Romero 24.43 296 P **P** 05 59 52.9 -1.8
comp=Z,3.1nm,0.7s,mb3.8,baz=73,slow=6.9,SNR=5.0
CMIG LR LR 06 10 29.1
comp=Z,70nm,21.3s,MS3.1,baz=42,slow=39
SIV San Ignacio 25.42 155 P **P** 06 00 04.7 +1.1
comp=Z,9.4nm,0.9s,mb4.3,baz=340,slow=9.7,SNR=35
LRAL Lakeview Retre 29.27 334 *eP* **P** 06 00 38.0 0.0
comp=Z,9.2nm,0.8s,mb4.6
TKL Tuckaleechee C 30.34 341 P **P** 06 00 47.6 +0.2
comp=Z,4.1nm,0.8s,mb4.2,baz=159,slow=11,SNR=5.7
CPCT Cooper Cave 30.41 339 *eP* **P** 06 00 48.0 0.0
PLAL Pickwick Lake 31.39 334 *eP* **P** 06 00 56.6 0.0
comp=Z,20nm,0.6s,mb5.1
HKT Hockley 31.87 318 *eP* **P** 06 00 60.0 -1.0
comp=Z,2.7nm,0.8s,mb4.1
HKT Hockley 31.87 318 *eP* **P** 06 01 00.0 -1.0
HKT pmax pmax
comp=Z,3.0nm,0.8s,mb4.2
WVT Waverly 32.26 336 *eP* **P** 06 01 04.5 +0.2
comp=Z,14nm,0.6s,mb5.0
WVT Waverly 32.26 336 *eP* **P** 06 01 04.5 +0.1
WVT pmax pmax
comp=Z,14nm,0.6s,mb5.0
NATX Nacogdoches 32.34 322 P **P** 06 01 05.0 -0.1
comp=Z,19nm,0.5s,mb5.2
HBAR Harrisburg 33.04 331 *eP* **P** 06 01 11.3 +0.2
GNAR Gosnell 33.08 333 *eP* **P** 06 01 11.5 0.0
MCWV Mont Chateau 33.11 349 *eP* **P** 06 01 11.7 0.0
comp=Z,13nm,0.8s,mb4.9
WCI Wyandotte Cave 33.52 339 *eP* **P** 06 01 15.7 +0.4
comp=Z,11nm,0.8s,mb4.8
WCI Wyandotte Cave 33.52 339 *eP* **P** 06 01 15.7 +0.4
WCI pmax pmax
comp=Z,11nm,0.8s,mb4.8
MIAR Mount Ida 33.73 327 *eP* **P** 06 01 17.0 -0.2
comp=Z,8.0nm,0.8s,mb4.7
MIAR Mount Ida 33.73 327 *eP* **P** 06 01 17.0 -0.2
MIAR pmax pmax
comp=Z,8.0nm,0.8s,mb4.7
SSPA Standing Stone 33.73 352 *eP* **P** 06 01 17.5 +0.3
comp=Z,8.3nm,0.8s,mb4.7
USIN University of 33.79 337 *eP* **P** 06 01 17.7 0.0
comp=Z,24nm,0.7s,mb5.2
SIUC Southern Illin 34.19 335 *eP* **P** 06 01 21.1 -0.1
comp=Z,40nm,0.7s,mb5.5
ACSO Alum Creek Sta 34.36 345 *eP* **P** 06 01 22.8 +0.2
comp=Z,8.7nm,0.8s,mb4.7
BLO Bloomington 34.45 340 *eP* **P** 06 01 23.6 +0.2
comp=Z,25nm,0.7s,mb5.2
BLO Bloomington 34.45 340 *eP* **P** 06 01 23.6 +0.3
BLO pmax pmax
comp=Z,25nm,0.7s,mb5.2
JCT Junction City 34.89 315 *eP* **P** 06 01 25.9 -1.4
comp=Z,3.4nm,0.8s,mb4.3
JCT Junction City 34.89 315 *eP* **P** 06 01 25.9 -1.4
JCT pmax pmax
comp=Z,3.0nm,0.8s,mb4.3

FVM French Village 34.93 334 *eP* **P** 06 01 27.5 0.0
comp=Z,28nm,0.6s,mb5.4
FVM French Village 34.93 334 *eP* **P** 06 01 27.5 -0.1
FVM pmax pmax
comp=Z,28nm,0.6s,mb5.4
ALLY Alegheny Colle 35.09 349 *eP* **P** 06 01 29.1 +0.2
comp=Z,17nm,0.6s,mb5.2
ERPA Erie 35.52 350 *eP* **P** 06 01 32.6 +0.1
comp=Z,16nm,0.7s,mb5.0
LCO Las Campanas 35.99 178 *eP* **P** 06 01 37.0 +0.3
comp=Z,14nm,1.0s,mb4.8
HDIL Hopedale 36.67 338 *eP* **P** 06 01 41.4 -1.0
WMOK Wichita Mounta 36.89 322 *eP* **P** 06 01 43.2 -1.2
comp=Z,9.9nm,0.6s,mb4.8
WMOK Wichita Mounta 36.89 322 *eP* **P** 06 01 43.2 -1.2
WMOK pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
LTX Lajitas 37.08 310 *eP* **P** 06 01 45.6 -0.6
comp=Z,5.3nm,0.7s,mb4.5
LTX Lajitas 37.08 310 *eP* **P** 06 01 45.6 -0.5
LTX pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TXAR Lajitas Array 37.08 310 P **P** 06 01 45.9 -0.3
comp=Z,4.5nm,0.7s,mb4.4,baz=126,slow=9.1,SNR=38
TXAR PcP PcP 06 04 07.4 +1.2
baz=136,slow=5.2
CFAA Coronel Fontan 38.72 175 P **P** 06 01 59.3 -0.5
comp=Z,0.6nm,0.9s,mb3.3,baz=339,slow=7.4,SNR=10
KSU1 Kansas State U 38.76 329 *eP* **P** 06 01 59.5 -0.7
comp=Z,16nm,0.8s,mb4.8
JFWS Jewell Farm 39.07 339 *eP* **P** 06 02 02.2 -0.4
comp=Z,36nm,0.6s,mb5.3
JFWS Jewell Farm 39.07 339 *eP* **P** 06 02 02.2 -0.4
JFWS pmax pmax
comp=Z,36nm,0.6s,mb5.3
MNTX Cornudas Mount 39.56 313 *eP* **P** 06 02 06.4 -0.5
comp=Z,17nm,0.8s,mb4.8
CBKS Cedar Bluff 40.23 326 *eP* **P** 06 02 12.3 -0.1
LPIG La Paz 40.38 299 LR LR 06 22 53.2
comp=Z,83nm,18.3s,MS3.6,baz=131,slow=42
COWI Conover 41.51 342 *eP* **P** 06 02 22.6 -0.2
comp=Z,20nm,0.8s,mb4.8
Y22C IRIS PASSCAL I 41.90 315⇑ P **P** 06 02 26.8 +0.6
baz=42
LENM Lemitar 41.98 315 *eP* **P** 06 02 26.9 +0.1
ANMO Albuquerque 42.04 316 *eP* **P** 06 02 26.9 -0.4
comp=Z,2.9nm,0.9s,mb3.9
ANMO Albuquerque 42.04 316 *eP* **P** 06 02 26.9 -0.4
ANMO pmax pmax
comp=Z,3.0nm,0.9s
LAZ Ladron 42.22 315 *eP* **P** 06 02 29.2 +0.4
319A Douglas 42.32 310⇓ P **P** 06 02 30.2 +0.6
baz=42
ECSD EROS,Sioux Fal 42.33 333 *eP* **P** 06 02 28.3 -1.2
comp=Z,4.5nm,0.6s,mb4.3
318A Bisbee 42.89 309⇓ P **P** 06 02 34.7 +0.4
baz=43
SDCO Great Sand Dun 43.00 320 *eP* **P** 06 02 35.5 +0.5
comp=Z,7.7nm,0.7s,mb4.5
SDCO *e*PcP PcP 06 04 25.7 +0.7
218A Dragoon 43.17 310⇑ P **P** 06 02 37.2 +0.7
baz=43
217A Green Valley 43.67 309⇑ P **P** 06 02 40.9 +0.3
baz=44
TUC Tucson 43.88 310 *eP* **P** 06 02 42.4 +0.1
comp=Z,6.1nm,1.0s,mb4.3
TUC Tucson 43.88 310 *eP* **P** 06 02 42.4 +0.1
TUC pmax pmax
comp=Z,6.0nm,1.0s,mb4.3
EYMN Ely 43.89 341 *eP* **P** 06 02 41.4 -0.7
comp=Z,26nm,0.6s,mb5.1
ISCO Idaho Springs 44.31 322 *eP* **P** 06 02 45.7 +0.1
comp=Z,11nm,0.9s,mb4.6
ISCO *e*PcP PcP 06 04 30.8 +1.4
ISCO Idaho Springs 44.31 322 *eP* **P** 06 02 45.7 +0.1
ISCO *e* 06 04 30.8
ISCO pmax pmax
comp=Z,11nm,0.9s,mb4.6
MVCO Mesa Verde 44.65 317 *eP* **P** 06 02 49.0 +0.6
comp=Z,7.6nm,0.9s,mb4.5
MVCO *e*PcP PcP 06 04 31.5 +0.8
MVCO Mesa Verde 44.65 317⇑ P **P** 06 02 48.8 +0.4
baz=45,SNR=7.3
116A Eloy 44.69 310⇑ P **P** 06 02 48.9 +0.2
baz=45,SNR=6.3
SMCO Snowmass 44.77 321 *eP* **P** 06 02 49.5 +0.2
115A Sonoran Desert 45.15 310⇓ P **P** 06 02 52.5 +0.1
baz=45,SNR=6.1
PV01 Paradox Valley 45.20 319 *eP* **P** 06 02 53.5 +0.7
AGMN Agassiz Refuge 45.72 338 *eP* **P** 06 02 56.1 -0.6
comp=Z,9.4nm,0.8s,mb4.8
WUAZ Wupatki 45.79 314 *eP* **P** 06 02 57.6 +0.2
comp=Z,17nm,0.8s,mb5.0
WUAZ Wupatki 45.79 314⇓ P **P** 06 02 58.1 +0.7
baz=46,SNR=18
X15A Humboldt 45.94 312⇑ P **P** 06 02 59.1 +0.5
baz=46,SNR=8.0
Z14A Wintersburg 45.98 310⇑ P **P** 06 02 59.1 +0.2
baz=46,SNR=6.4
Y14A Wickenburg 46.27 311⇓ P **P** 06 03 01.3 +0.1
baz=46,SNR=15
X14A Yava 46.41 312⇑ P **P** 06 03 03.0 +0.6
baz=46,SNR=7.6
W14A Seligman 46.88 312⇓ P **P** 06 03 06.6 +0.6
baz=47,SNR=9.7
SRU San Rafael 47.02 318 *eP* **P** 06 03 07.1 +0.1
comp=Z,8.2nm,1.1s,mb4.6
SRU San Rafael 47.02 318 *eP* **P** 06 03 07.1 +0.1
SRU pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
T15A Red Dirt Ranch 47.22 315⇑ P **P** 06 03 09.5 +0.9
baz=47
GLA Glamis 47.28 309⇓ P **P** 06 03 09.2 0.0
baz=47,SNR=7.0
Y12C Blythe 47.33 310⇑ P **P** 06 03 09.8 +0.2
baz=47
ULM Lac du Bonnet 47.35 339 P **P** 06 03 08.1 -1.3
comp=Z,15nm,0.8s,mb5.0,baz=144,slow=10,SNR=37
ULM LR LR 06 24 06.8
comp=Z,124nm,18.2s,MS3.9,baz=198,slow=37
W13A Hualapai Mount 47.42 312⇓ P **P** 06 03 10.8 +0.6
baz=47,SNR=5.6
U14A Mt Trumbull 47.50 314⇓ P **P** 06 03 11.7 +0.9
baz=48
PLCA Paso Flores 47.69 179 *eP* **P** 06 03 11.5 -0.5
comp=Z,18nm,1.2s,mb5.0
PLCA Paso Flores 47.69 179 P **P** 06 03 11.7 -0.4
PLCA pmax pmax
comp=Z,10.0nm,1.1s
PLCA Paso Flores 47.69 179 P **P** 06 03 11.7 -0.4
comp=Z,10nm,1.1s,mb4.8,baz=9.2,slow=7.7,SNR=12
SCHQ Schefferville 47.70 4 *eP* **P** 06 03 12.0 -0.1
comp=Z,18nm,0.6s,mb5.3
SCHQ Schefferville 47.70 4 P **P** 06 03 12.2 +0.2
comp=Z,20nm,0.6s,mb5.3,baz=193,slow=7.1,SNR=20
SCHQ LR LR 06 21 44.3
comp=Z,85nm,21.9s,MS3.7,baz=199,slow=34
T14A Hurricane 47.73 315⇑ P **P** 06 03 13.0 +0.4
baz=48
MSU Marysvale 47.81 317 *eP* **P** 06 03 13.3 +0.1
IRM Iron Mountain 47.98 310⇑ P **P** 06 03 14.7 +0.2
baz=48
SWSC Sam W. Stewart 47.99 308⇓ P **P** 06 03 14.8 +0.1
baz=48
U13A Pakoon Wash 48.06 314⇑ P **P** 06 03 15.9 +0.7
baz=48
DAU Daniels Canyon 48.19 320 *eP* **P** 06 03 16.3 +0.2
MPU Maple Canyon 48.23 319 *eP* **P** 06 03 16.6 +0.2
R14A James Farms, M 48.28 316⇑ P **P** 06 03 17.2 +0.3
baz=48
ARUT Antelope Range 48.33 315 *eP* **P** 06 03 17.1 -0.1
V12A Nelson 48.41 312⇓ P **P** 06 03 18.2 +0.3
baz=48,SNR=12
JLU Jordanelle 48.42 320 *eP* **P** 06 03 18.7 +0.9
BW06 Boulder Array 48.47 323 *eP* **P** 06 03 18.3 +0.1
PDAR Pinedale Array 48.47 323 P **P** 06 03 18.1 -0.1
comp=Z,3.3nm,0.8s,mb4.4,baz=127,slow=9.5,SNR=30
PDAR PcP PcP 06 04 43.5 -0.5
comp=Z,2.6nm,0.8s,baz=131,slow=3.8,SNR=6.4
NLU North Lily Min 48.48 319 *eP* **P** 06 03 18.1 -0.2
S13A Holt Ranch, En 48.52 315⇓ P **P** 06 03 19.6 +0.9
baz=48
BELC Belle Mtn. 48.56 310⇓ P **P** 06 03 19.1 0.0
baz=48
GMRC Granite Mounta 48.61 311⇓ P **P** 06 03 19.5 0.0
baz=49
V11A Goodsprings 48.88 312⇑ P **P** 06 03 21.8 +0.4
baz=49
SHPR Sheep Range 48.97 313 *eP* **P** 06 03 22.3 +0.1
SHPR *ep*P pP 06 03 33.7 +0.4
HWUT Hardware Ranch 49.04 321 *eP* **P** 06 03 22.0 -0.6
comp=Z,5.6nm,0.8s,mb4.7
TUQ Turquoise Mtn. 49.08 311⇓ P **P** 06 03 23.1 +0.1
baz=49
DUG Dugway 49.09 318 *eP* **P** 06 03 23.3 +0.3
comp=Z,3.2nm,0.8s,mb4.4
DUG Dugway 49.09 318 *eP* **P** 06 03 23.3 +0.3
DUG pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
DUG Dugway 49.09 318⇑ P **P** 06 03 23.7 +0.6
baz=49,SNR=5.5
HEC Hector,Ludlow 49.14 311⇓ P **P** 06 03 24.1 +0.6
baz=49,SNR=5.1
N15A Stansbury Isla 49.26 319⇓ P **P** 06 03 25.1 +0.8
baz=49
Q13A Wheeler Ranch, 49.29 316⇑ P **P** 06 03 25.4 +0.9
baz=49
T11A Corn Creek, Al 49.33 314⇓ P **P** 06 03 25.3 +0.4
baz=49
DGMT Dagmar 49.36 332 *eP* **P** 06 03 24.8 -0.1
comp=Z,24nm,0.7s,mb5.3
AHID Auburn Hatcher 49.39 322 *eP* **P** 06 03 25.7 +0.4
R12A Pony Springs, 49.40 315⇓ P **P** 06 03 26.3 +0.9
baz=49
P13A Bates Ranch, G 49.52 317⇑ P **P** 06 03 27.2 +0.9
baz=50
LOHW Long Hollow 49.58 323 *eP* **P** 06 03 27.1 +0.4
comp=Z,7.9nm,0.8s,mb4.8
REDW Red Top Meadow 49.59 323 *eP* **P** 06 03 27.0 +0.2
comp=Z,12nm,0.9s,mb4.9
SNOW Snow King Moun 49.59 323 *eP* **P** 06 03 26.6 -0.1
comp=Z,4.9nm,0.6s,mb4.7
BGU Big Grassy Mou 49.61 319 *eP* **P** 06 03 26.8 -0.2
N14A Grayback Hills 49.67 319⇓ P **P** 06 03 27.6 +0.1
baz=50
GSC Goldstone 49.68 311 P **P** 06 03 28.4 +0.7
baz=50,SNR=5.6
TPAW Teton Pass 49.72 323 *eP* **P** 06 03 28.1 +0.3
comp=Z,6.3nm,0.9s,mb4.7
RLMT Red Lodge 49.72 326 *eP* **P** 06 03 27.4 -0.3
comp=Z,6.5nm,0.9s,mb4.7
MOOW Moose Ponds 49.74 324 *eP* **P** 06 03 27.5 -0.5
comp=Z,5.8nm,0.8s,mb4.7
O13A Hicks Ranch, I 49.83 318⇑ P **P** 06 03 29.5 +0.8
baz=50
Q12A Willow Creek R 49.88 316⇑ P **P** 06 03 29.7 +0.7
baz=50,SNR=6.9
FLWY Flagg Ranch 49.91 324 *eP* **P** 06 03 29.0 -0.2
comp=Z,7.6nm,1.2s,mb4.6
IMW Indian Meadow 49.95 324 *eP* **P** 06 03 29.8 +0.3
comp=Z,7.0nm,0.8s,mb4.7
TPNV Topopah Spring 49.95 313 *eP* **P** 06 03 29.9 +0.2
comp=Z,7.0nm,0.9s,mb4.7
TPNV Topopah Spring 49.95 313 *eP* **P** 06 03 29.9 +0.3
TPNV pmax pmax
comp=Z,7.0nm,0.9s,mb4.7
TPNV Topopah Spring 49.95 313⇓ P **P** 06 03 30.3 +0.6
baz=50,SNR=5.5
R11A Troy Canyon, C 50.09 315⇑ P **P** 06 03 31.0 +0.4
baz=50
M14A Sheep Mountain 50.11 320⇑ P **P** 06 03 30.6 -0.2
baz=50
P12A McGill 50.14 317⇓ P **P** 06 03 31.8 +0.8
baz=50
N13A Wendover, West 50.34 319⇓ P **P** 06 03 32.6 0.0
baz=50
GCMT Greycliff 50.35 326 *eP* **P** 06 03 32.4 -0.1
Q11A Duckwater 50.36 316 P **P** 06 03 33.3 +0.6
baz=50,SNR=5.4
O12A Currie 50.41 318⇑ P **P** 06 03 33.2 +0.1
baz=50,SNR=6.3
YMR Madison River 50.41 324 *eP* **P** 06 03 33.9 +0.9
comp=Z,5.7nm,0.8s,mb4.7
EDW2 Edwards Air Fo 50.41 310⇓ P **P** 06 03 33.3 +0.2
baz=50
MPMC Manual Prospec 50.49 311⇓ P **P** 06 03 33.1 -0.6
baz=50
M13A Montello 50.57 319 P **P** 06 03 34.3 +0.1
baz=51,SNR=7.1
S10A Tonopah Range, 50.61 314⇑ P **P** 06 03 35.3 +0.7
baz=51
P11A Circle Ranch, 50.75 316⇓ P **P** 06 03 35.5 -0.2
baz=51
QLMT Earthquake Lak 50.77 324 *eP* **P** 06 03 36.0 +0.3
N12A Clover Valley, 50.89 318⇓ P **P** 06 03 35.8 -0.9
baz=51
O11A Cowboy Ranch, 50.96 317⇑ P **P** 06 03 37.4 +0.2
baz=51
S09A Goldfield 50.98 314⇑ P **P** 06 03 37.5 +0.1
baz=51
M12A Wells 51.09 319⇓ P **P** 06 03 38.3 +0.2
baz=51,SNR=6.1
R09A Tonopah 51.09 314⇓ P **P** 06 03 38.5 +0.3
baz=51,SNR=6.3
ARVC Arvin 51.15 310⇑ P **P** 06 03 38.3 -0.4
baz=51
P10A Eureka 51.27 316⇑ P **P** 06 03 40.4 +0.9
baz=51
BOZ Bozeman (W) 51.37 325 *eP* **P** 06 03 39.8 -0.3
comp=Z,4.4nm,0.9s,mb4.4
BOZ Bozeman (W) 51.37 325 *eP* **P** 06 03 39.8 -0.3
BOZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
BOZ Bozeman (W) 51.37 325⇑ P **P** 06 03 40.3 +0.2
baz=51,SNR=8.0
S08C White Mtn Res 51.57 313⇑ P **P** 06 03 42.8 +1.0
baz=52,SNR=7.3
G15A Dillon 51.58 324⇓ P **P** 06 03 42.2 +0.5
baz=52
MCMT McKenzie Canyo 51.60 324 *eP* **P** 06 03 42.8 +0.9
J13A Cove Ranch, Pi 51.63 321⇓ P **P** 06 03 42.2 +0.1
baz=52
M11A Holland Ranch, 51.67 318⇑ P **P** 06 03 42.8 +0.3
baz=52,SNR=5.6
K12A Draper Farm, C 51.69 320⇑ P **P** 06 03 43.0 +0.4
baz=52
EGMT Eagleton 51.80 328 *eP* **P** 06 03 43.9 +0.6
comp=Z,16nm,1.1s,mb4.8
EGMT *e*PcP PcP 06 04 56.2 +0.2
EGMT Eagleton 51.80 328⇑ P **P** 06 03 43.6 +0.3
baz=52,SNR=7.8
HLID Hailey 51.86 321 *eP* **P** 06 03 44.2 +0.3
HLID Hailey 51.86 321⇑ P **P** 06 03 44.1 +0.2
baz=52,SNR=10.0
I13A Wildhorse Cree 51.86 322⇑ P **P** 06 03 44.2 +0.3
baz=52
HELL Mitchell Peak, 51.87 312⇓ P **P** 06 03 44.4 +0.2
baz=52,SNR=10
LRM Limekiln Ridge 51.94 325 *eP* **P** 06 03 44.8 +0.4
Q08A Gabbs 51.96 315 P **P** 06 03 44.7 0.0
baz=52,SNR=7.2
F15A Butte 51.97 325⇑ P **P** 06 03 44.7 +0.1
baz=52,SNR=5.8
O09A Fish Creek Ran 52.02 316⇓ P **P** 06 03 45.6 +0.4
baz=52,SNR=8.9
NVAR Mina Array Bea 52.05 314 P **P** 06 03 45.4 0.0
comp=Z,1.5nm,0.6s,mb4.1,baz=116,slow=6.1,SNR=4.3
NVAR PcP PcP 06 04 58.0 +0.8
comp=Z,2.2nm,0.7s,baz=125,slow=4.5,SNR=7.3
J12A Stokes Ranch, 52.12 321⇓ P **P** 06 03 45.4 -0.5
baz=52
M10A I.L. Ranch, Tu 52.20 318⇓ P **P** 06 03 46.0 -0.5
baz=52
H13A Challis 52.30 323⇓ P **P** 06 03 46.7 -0.4
baz=52
E15A Deer Lodge 52.39 325⇑ P **P** 06 03 48.1 +0.3
baz=52,SNR=7.4
L10A Juniper Basin 52.42 319⇑ P **P** 06 03 48.3 +0.2
baz=52
F14A Wisdom 52.46 324⇓ P **P** 06 03 48.6 +0.3
baz=52,SNR=7.0
K11A Parker Ranch, 52.48 320⇑ P **P** 06 03 48.6 +0.1
baz=52
N09A Rock Creek Ran 52.55 317⇑ P **P** 06 03 48.9 -0.2
baz=52
G13A Cobalt 52.57 323⇑ P **P** 06 03 49.0 -0.1
baz=53,SNR=8.8
H12A Diamond D Ranc 52.65 322 P **P** 06 03 50.0 +0.2
baz=53,SNR=10
MFID Camas Ranch 52.67 321⇑ P **P** 06 03 50.0 +0.2
baz=53
D15A Lincoln 52.68 326⇓ P **P** 06 03 50.4 +0.5
baz=53,SNR=7.0
PKD Parkfield 52.74 310⇓ P **P** 06 03 50.5 -0.1
baz=53

M09A	**Marrel Ranch,** baz=53	**52.76**	**318**	⇓P		**P**	**06 03 51.0**	**+0.3**
E14A	**Clinton** baz=53	**52.87**	**325**	⇑P		**P**	**06 03 51.5**	**+0.2**
F13A	**Darby** baz=53,SNR=7.3	**53.01**	**324**	⇑P		**P**	**06 03 51.9**	**-0.4**
K10A	**MacKenzie Ranc** baz=53	**53.02**	**319**	⇓P		**P**	**06 03 52.5**	**0.0**
FFC	**Flin Flon** comp=Z,8.2nm,1.0s,mb4.6	**53.16**	**339**	*e*P		**P**	**06 03 52.3**	**-1.0**
FFC					pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6							
L09A	**Wilkinson Ranc** baz=53,SNR=16	**53.18**	**318**	⇓P		**P**	**06 03 54.3**	**+0.6**
D14A	**Greenough** baz=53	**53.26**	**326**	⇑P		**P**	**06 03 53.9**	**-0.2**
E13A	**Victor** baz=53	**53.28**	**325**	⇑P		**P**	**06 03 54.0**	**-0.3**
MSO	**Missoula** comp=Z,14nm,1.9s,mb4.6	**53.36**	**325**	*e*P		**P**	**06 03 55.4**	**+0.5**
H11A	**Donnelly** baz=53	**53.44**	**322**	⇓P		**P**	**06 03 55.1**	**-0.4**
N07B	**Gerlach** baz=54	**53.51**	**316**	⇓P		**P**	**06 03 55.9**	**-0.2**
F12A	**Elk City** baz=54	**53.53**	**323**	⇑P		**P**	**06 03 56.1**	**0.0**
K09A	**Rome** baz=54,SNR=15	**53.54**	**319**	⇑P		**P**	**06 03 56.3**	**0.0**
L08A	**Fields** baz=54,SNR=16	**53.71**	**318**	⇑P		**P**	**06 03 57.9**	**+0.3**
C14A	**Swan Lake** baz=54	**53.78**	**326**	⇑P		**P**	**06 03 58.4**	**+0.4**
D13A	**Huson** baz=54	**53.80**	**325**	⇑P		**P**	**06 03 58.2**	**+0.1**
H10A	**Noah's Angus R** baz=54	**53.83**	**321**	⇓P		**P**	**06 03 58.3**	**-0.1**
J09A	**Fry Pan Ranch,** baz=54,SNR=9.2	**53.86**	**320**	⇓P		**P**	**06 03 58.2**	**-0.4**
M07A	**Soldier Meadow** baz=54,SNR=13	**53.91**	**317**	⇑P		**P**	**06 03 58.7**	**-0.3**
G11A	**Walters Elk Ra** baz=54,SNR=5.7	**53.95**	**323**	⇑P		**P**	**06 03 58.5**	**-0.7**
WVOR	**Wild Horse Val** comp=Z,12nm,1.2s,mb4.7	**54.01**	**318**	*e*P		**P**	**06 03 59.0**	**-0.8**
WVOR	**Wild Horse Val**	**54.01**	**318**	*e*P		**P**	**06 03 59.0**	**-0.8**
WVOR					pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7							
K08A	**Mann Creek Ran** baz=54,SNR=8.0	**54.05**	**319**	⇓P		**P**	**06 03 60.0**	**-0.1**
BEKR	**Beckwourth** baz=54,SNR=6.4	**54.09**	**315**	⇑P		**P**	**06 04 00.4**	**0.0**
F11A	**Grangeville** baz=54,SNR=7.9	**54.13**	**323**	⇓P		**P**	**06 03 60.0**	**-0.6**
C13A	**Hot Springs** baz=54	**54.19**	**326**	⇓P		**P**	**06 04 00.9**	**-0.1**
FCC	**Fort Churchill** comp=Z,11nm,1.4s,mb4.6	**54.20**	**346**	*e*P		**P**	**06 03 59.0**	**-1.8**
FCC	**Fort Churchill**	**54.20**	**346**	*e*P		**P**	**06 03 59.0**	**-1.8**
FCC					pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6							
L07A	**Adell** baz=54,SNR=13	**54.30**	**318**	⇑P		**P**	**06 04 01.7**	**-0.2**
E11A	**Bogner Ranch,** baz=54,SNR=5.7	**54.41**	**324**	⇓P		**P**	**06 04 01.9**	**-0.7**
G10A	**Bishop Farm, J** baz=54,SNR=8.8	**54.41**	**322**	⇓P		**P**	**06 04 02.2**	**-0.4**
K07A	**Rock Creek Ran** baz=54	**54.53**	**318**	⇓P		**P**	**06 04 03.1**	**-0.4**
ELFS	**Eagle Lake Fie** baz=55	**54.65**	**315**	⇑P		**P**	**06 04 04.1**	**-0.4**
M06C	**Likely Place G** baz=55	**54.72**	**316**	⇑P		**P**	**06 04 04.1**	**-0.8**
O04C	**Chester** baz=55,SNR=5.9	**54.78**	**315**	⇓P		**P**	**06 04 05.4**	**-0.1**
G09A	**Cove** baz=55	**54.81**	**322**	⇑P		**P**	**06 04 04.9**	**-0.6**
A13A	**Flathead Natio** baz=55	**54.81**	**327**	⇓P		**P**	**06 04 05.4**	**-0.1**
F10A	**Beach Ranch, E** baz=55,SNR=6.6	**54.82**	**323**	⇑P		**P**	**06 04 05.2**	**-0.4**
MOD	**Modoc** baz=55	**54.89**	**317**	⇓P		**P**	**06 04 05.6**	**-0.6**
H08A	**Prairie City** baz=55	**55.00**	**321**	⇓P		**P**	**06 04 06.5**	**-0.4**
M05C	**Lookout** baz=55	**55.24**	**316**	⇓P		**P**	**06 04 08.1**	**-0.7**
I07A	**Izee** baz=55,SNR=6.6	**55.33**	**320**	⇑P		**P**	**06 04 09.2**	**-0.1**
D10A	**Wagner Farm, O** baz=55,SNR=5.7	**55.40**	**324**	⇓P		**P**	**06 04 09.1**	**-0.7**
A12A	**Yaak River Ran** baz=56,SNR=6.0	**55.49**	**326**	⇓P		**P**	**06 04 11.0**	**+0.6**
G08A	**Pilot Rock** baz=56,SNR=8.9	**55.54**	**321**	⇑P		**P**	**06 04 10.9**	**+0.1**
B11A	**Sandpoint** baz=56,SNR=7.7	**55.61**	**326**	⇓P		**P**	**06 04 11.3**	**0.0**
A11A	**Hall Mountain,** baz=56,SNR=7.4	**55.89**	**326**	⇑P		**P**	**06 04 14.0**	**+0.7**
NEW	**Newport** comp=Z,4.2nm,0.8s,mb4.5	**55.95**	**325**	*e*P		**P**	**06 04 12.9**	**-0.7**
NEW					*e*pP	pP	06 04 19.6	-5.3
NEW	**Newport**	**55.95**	**325**	*e*P		**P**	**06 04 12.9**	**-0.7**
NEW					*e**PP	pP	06 04 19.7	-5.3
NEW					pmax	pmax		
	comp=Z,4.0nm,0.8s							
J05A	**Fort Rock** baz=56,SNR=10	**56.10**	**318**	⇑P		**P**	**06 04 14.6**	**-0.2**
YBH	**Yreka Blue Hor** baz=56	**56.47**	**316**	⇑P		**P**	**06 04 15.9**	**-1.6**
N02C	**Big Bar** baz=56	**56.54**	**315**	⇓P		**P**	**06 04 16.9**	**-1.1**
G06A	**Carlson Farm,** baz=57	**56.57**	**321**	⇓P		**P**	**06 04 17.3**	**-0.8**
A10A	**Northport** baz=57,SNR=5.8	**56.57**	**326**	⇓P		**P**	**06 04 17.7**	**-0.4**
B09A	**Rice** baz=57,SNR=5.0	**56.61**	**325**	⇓P		**P**	**06 04 17.6**	**-0.8**
O01C	**Eel River Cons** baz=57	**56.66**	**314**	⇑P		**P**	**06 04 17.6**	**-1.3**
J04A	**Umpqua Nationa** baz=57,SNR=5.1	**56.66**	**318**	⇑P		**P**	**06 04 19.3**	**+0.5**
EDM	**Edmonton**	**56.85**	**332**	*e*P		**P**	**06 04 17.7**	**-2.2**
G05A	**Wamic** baz=57	**57.00**	**320**	⇑P		**P**	**06 04 21.9**	**+0.7**
I04A	**Tendick Farm,** baz=57	**57.09**	**318**	⇑P		**P**	**06 04 20.9**	**-1.0**
L02A	**Cave Junction** baz=57	**57.25**	**316**	⇓P		**P**	**06 04 22.6**	**-0.4**
B08A	**Colville Reser** baz=57,SNR=6.5	**57.26**	**324**	⇓P		**P**	**06 04 22.9**	**-0.1**
J03A	**Ideyld Park** baz=57	**57.29**	**318**	⇓P		**P**	**06 04 21.9**	**-1.3**
H04A	**Detroit Lake** baz=57	**57.32**	**319**	⇑P		**P**	**06 04 23.2**	**-0.2**
J02A	**Umpqua** baz=58	**57.69**	**317**	⇑P		**P**	**06 04 25.4**	**-0.7**
B07A	**Winthrop** baz=58	**57.77**	**324**	⇑P		**P**	**06 04 26.3**	**-0.3**
H03A	**Soap Creek Ran** baz=58	**58.03**	**319**	⇓P		**P**	**06 04 28.8**	**+0.3**
A07A	**Ashnola River,** baz=58,SNR=7.8	**58.21**	**325**	⇓P		**P**	**06 04 30.7**	**+1.1**
YKA	**Yellowknife Ar** comp=Z,13nm,0.6s,mb5.2,baz=130,slow=6.9,SNR=334	**63.33**	**339**	P		**P**	**06 05 03.5**	**-0.7**
YKW3	**Yellowknife Ar**	**63.38**	**339**	*e*P		**P**	**06 05 04.5**	**0.0**
DBIC	**Dimbokro** comp=Z,11nm,0.7s,mb5.0	**66.58**	**86**	*e*P		**P**	**06 05 26.9**	**+0.6**
DBIC					*e*pP	pP	06 05 33.4	-4.5
DBIC	**Dimbokro**	**66.58**	**86**	*e*P		**P**	**06 05 26.9**	**+0.6**
DBIC					*e**PP	pP	06 05 33.4	-4.5
DBIC					pmax	pmax		
	comp=Z,11nm,0.7s							
DBIC	**Dimbokro** comp=Z,3.1nm,0.8s,mb4.4,baz=214,slow=10,SNR=4.4	**66.58**	**86**	P		**P**	**06 05 26.2**	**-0.1**
DBIC					LR	LR	06 32 02.0	
	comp=Z,29nm,19.5s,MS3.5,baz=148,slow=34							
RES	**Resolute Bay**	**68.75**	**354**	*e*P		**P**	**06 05 37.9**	**-0.9**
TOA0	**Torodi Ar. Sit**	**72.56**	**78**	*e*P		**P**	**06 06 02.8**	**-0.3**
TOA0					*e*pP	pP	06 06 09.6	-5.2
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.5s,mb4.0,baz=285,slow=6.5,SNR=17	**72.56**	**78**	P		**P**	**06 06 03.6**	**+0.5**
INK	**Inuvik**	**73.08**	**340**	*e*P		**P**	**06 06 04.7**	**-0.6**
EGAK	**Eagle** comp=Z,2.7nm,0.6s,mb4.3	**74.74**	**335**	*e*P		**P**	**06 06 15.8**	**+0.8**
COLA	**College** comp=Z,2.9nm,0.7s,mb4.3	**77.55**	**335**	*e*P		**P**	**06 06 31.1**	**+0.1**
COLA	**College**	**77.55**	**335**	*e*P		**P**	**06 06 31.1**	**+0.1**
COLA					pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3							
NB2	**NORSAR Subarra** comp=Z,2.6nm,0.8s,mb4.2,baz=268,slow=5.6	**80.47**	**29**	P		**P**	**06 06 47.4**	**+0.4**
NB2	**NORSAR Subarra**	**80.47**	**29**	P		**P**	**06 06 47.4**	**+0.4**
NB2					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3							
NOA	**NORSAR Array B** comp=Z,1.3nm,0.7s,mb4.0,baz=267,slow=5.4,SNR=6.5	**80.47**	**29**	P		**P**	**06 06 47.8**	**+0.7**
TTA	**Tatalina** comp=Z,4.2nm,0.7s,mb4.5	**80.94**	**333**	*e*P		**P**	**06 06 49.0**	**-0.5**
TTA	**Tatalina**	**80.94**	**333**	*e*P		**P**	**06 06 49.0**	**-0.5**
TTA					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
GERES	**GERESS Array B** comp=Z,0.6nm,0.8s,mb3.6,baz=228,slow=5.2,SNR=4.0	**81.81**	**42**	P		**P**	**06 06 54.2**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,9.7nm,1.0s,mb5.0,baz=298,slow=5.1,SNR=7.6	**85.95**	**20**	P		**P**	**06 07 14.9**	**-0.3**
TNA	**Tin City** comp=Z,2.3nm,0.9s,mb4.4	**85.98**	**335**	*e*P		**P**	**06 07 16.0**	**+0.6**
FINES	**FINESS Array B** comp=Z,1.2nm,0.7s,mb4.2,baz=193,slow=7.8,SNR=4.3	**87.60**	**28**	P		**P**	**06 07 23.1**	**-0.3**
GAMB	**Gambell** comp=Z,11nm,0.9s,mb5.1	**87.90**	**334**	*e*P		**P**	**06 07 25.3**	**+0.6**
VSU	**Vasula**	**88.48**	**31**⇑	*e*P		**P**	**06 07 27.4**	**-0.2**
SNAA	**Sanae**	**90.34**	**163**⇑	*e*P		**P**	**06 07 36.1**	**+0.2**
OBN	**Obninsk**	**94.58**	**33**	*e*P		**P**	**06 07 59.1**	**+3.1**
OBN					pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.3							
BILL	**Bilibino**	**94.67**	**341**⇓	*e*P		**P**	**06 07 56.5**	**+0.4**
BILL					pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.7							
QSPA	**South Pole Qui** comp=Z,4.6nm,0.9s,mb4.9	**97.18**	**180**	*e*P		**P**	**06 08 08.1**	**+0.8**
QSPA	**South Pole Qui** comp=Z,2.8nm,1.0s,mb4.7,baz=177,slow=2.9,SNR=5.2	**97.18**	**180**	P		**P**	**06 08 08.0**	**+0.8**
TIXI	**Tiksi**	**100.14**	**353**⇓	*e*P		Pdif	06 08 16.1	-4.9
TIXI					pmax	pmax		
	comp=Z,7.0nm,2.5s							
KIV	**Kislovodsk**	**102.32**	**42**⇑	*e*P		Pdif	06 08 29.5	-1.2
KIV					pmax	pmax		
	comp=Z,15nm,1.2s							
WMQ	**Urumqi**	**126.01**	**18**	*e*PKP		PKPdf	06 13 35.9	-1.8
HHC	**Hu-ho-hao-te**	**132.10**	**356**	*e*PKP		PKPdf	06 13 49.4	0.0
HHC					XPKP		06 14 04.3	
HHC					PP	PP	06 16 14.4	+4.6
HHC					PKS		06 17 22.5	
HHC					SKS	SKSdf	06 20 56.1	-1.9
HHC					SKKS	SKKSac	06 23 01.9	-2.5
HHC					PP	PP		
	comp=Z,89nm,5.8s							
HHC					LR	LR		
	comp=N,133nm,17.8s,MS5.0							
HHC					LR	LR		
	comp=E,207nm,17.8s,MS5.0							
HHC					LR	LR		
	comp=Z,188nm,20.2s,MS4.8							
LZH	**Lanzhou**	**136.79**	**5**	*e*PKP		PKPdf	06 14 00.8	+2.5
LZH					PP	PP		
	comp=Z,68nm,4.3s							
NJ2	**Nanjing**	**139.65**	**346**	*e*PKP		PKPdf	06 14 02.3	-1.4
CD2	**Chengdu**	**141.91**	**6**	*e*PKP		PKPdf	06 14 05.6	-2.2
CD2					PP	PP	06 17 13.6	+2.5
CD2					PKS		06 17 39.9	
CD2					PP	PP		
	comp=Z,110nm,10.2s							
CD2					LR	LR		
	comp=N,150nm,24.4s							
CD2					LR	LR		
	comp=Z,120nm,26.2s,MS4.5							
SHL	**Shillong**	**143.87**	**25**	*e*P		PKPdf	06 14 08.5	-2.9
GYA	**Guiyang**	**146.54**	**2**	PKP		PKPdf	06 14 16.5	+0.5
GYA					PKP2	PKPab	06 14 18.8	+0.5
GYA					APKP		06 14 31.8	
GYA					PP	PP	06 17 42.0	+3.2
GYA					PKS		06 17 48.6	
GYA					SKS	SKSdf	06 21 16.3	-5.9
GYA					SKKS	SKKSac	06 24 24.6	-5.1
GYA					SS	SS	06 36 31.0	-2.3
GYA					LR	LR		
	comp=N,150nm,20.8s,MS5.0							
GYA					LR	LR		
	comp=E,230nm,21.0s,MS5.0							
GYA					LR	LR		
	comp=Z,190nm,20.4s,MS4.9							
KMI	**Kunming**	**147.49**	**9**	PKP		PKPdf	06 14 16.4	-1.2
ASAR	**Alice Springs** comp=Z,3.2nm,0.8s,baz=115,slow=1.7,SNR=6.5	**150.23**	**234**	PKP		PKPdf	06 14 20.4	-1.6
ASAR					PKPbc	PKPbc	06 14 26.4	-0.7
	comp=Z,4.1nm,0.9s,baz=119,slow=2.6,SNR=24							
ASAR					PKPab	PKPab	06 14 32.7	-0.6
	comp=Z,4.2nm,0.9s,baz=116,slow=4.0,SNR=14							
WB2	**Warramunga Arr**	**151.49**	**241**⇓	*i*P		PKPdf	06 14 29.4	+5.4
WRA	**Warramunga Arr** comp=Z,1.1nm,0.6s,baz=108,slow=2.3,SNR=11	**151.50**	**241**	PKP		PKPdf	06 14 24.3	+0.2
WRA					PKPbc	PKPbc	06 14 29.1	-1.1
	comp=Z,5.9nm,0.7s,baz=109,slow=2.4,SNR=63							
WRA					PKPab	PKPab	06 14 36.6	-2.0
	comp=Z,6.4nm,1.0s,baz=109,slow=3.0,SNR=20							

*NEIC **24** 06:06:32.4±1.0,383N×9571E,h30km, Error ellipse: s-maj=26.0km s-min=12.2km az=39.0*
*IDC **24** 06:06:36.7±6.0,394N×9600E,h64km±47km,mb3.7/6, mb1 3.9/7,mb1mx3.6/20,mbtmp3.8/7,ML3.5/1,MS3.2/2, Ms1 3.2/2,ms1mx2.8/19,Error ellipse: s-maj=72.3km s-min=19.1km az=55.0*
*ISCJB **24** 06:06:38.1±2.8,41N±0.1×962E±0.2,h88km±25km,mb3.9/6, Error ellipse: s-maj=27.1km s-min=18.4km az=163.7*

ISC 24 06:06:39.0±2.8,41N±0.1×961E±0.2,h80km±25km,n9, σ0s50/10,mb3.9/6,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.06**	**114**	P	**Pn**	**06 07 24.9**	**-0.3**
	5.6nm,0.3s,baz=318,slow=10,SNR=35						
PSI				S	**Sn**	**06 08 01.6**	**+0.8**
	4.2nm,0.3s,baz=103,slow=21,SNR=4.1						
PSI				LR	LR	06 08 53.4	
	comp=Z,156nm,19.7s,baz=149,slow=43						
KULM	**Kulim**	**4.67**	**75**	*e*Pn	**Pn**	**06 07 46.7**	**-0.3**
KULM				*e*Sn	**Sn**	**06 08 39.6**	**-0.3**
BATI	**Kupang**	**30.87**	**118**	LR	LR	06 28 55.6	
	comp=Z,103nm,18.8s,baz=327,slow=43						
MKAR	**Makanchi Array**	**44.22**	**346**	P		**06 14 39.9**	**-0.2**
	0.8nm,0.4s,mb3.6,baz=165,slow=8.2,SNR=17						
WRA	**Warramunga Arr**	**44.48**	**124**	P	**P**	**06 14 42.8**	**+0.2**
	1.1nm,0.4s,mb3.9,baz=303,slow=9.3,SNR=7.3						
SONM	**Songino Array**	**44.49**	**10**	P	**P**	**06 14 43.1**	**+0.9**
	1.4nm,0.6s,mb3.9,baz=191,slow=9.6,SNR=13						
SONM				PcP	PcP	06 16 24.6	+0.2
	0.7nm,0.5s,baz=189,slow=3.9,SNR=5.3						
ASAR	**Alice Springs**	**45.99**	**129**	P	**P**	**06 14 53.6**	**-0.9**
	0.6nm,0.4s,mb3.6,baz=299,slow=7.5,SNR=9.9						
FINES	**FINESS Array B**	**76.98**	**332**	P	**P**	**06 18 22.7**	**0.0**
	1.4nm,0.9s,mb3.7,baz=152,slow=3.9,SNR=2.9						
ARCES	**ARCESS Array B**	**79.49**	**340**	P	**P**	**06 18 36.5**	**+0.1**
	6.0nm,1.0s,mb4.4,baz=95,slow=6.9,SNR=9.3						

IDC 24 06:08:38.5±15.0,2330S×17750W,h448km±105km, mb3.6/5,mb1 3.7/6,mb1mx3.3/15,mbtmp3.6/6,Error ellipse: s-maj=237.5km s-min=43.9km az=59.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.61**	**196**	P	P	06 11 55.2	-0.9
	4.7nm,0.3s,baz=307,slow=4.2,SNR=17						
URZ				S	S	06 14 27.2	-12
	0.6nm,0.3s,baz=159,slow=21,SNR=8.6						
RPZ	**Rata Peaks**	**22.45**	**202**	P	P	06 13 02.9	+0.9
	3.2nm,0.3s,baz=252,slow=2.6,SNR=4.2						
CTA	**Charters Tower**	**33.78**	**268**	P	P	06 14 42.5	+0.8
	19nm,0.5s,baz=95,slow=11,SNR=45						
STKA	**Stephens Creek**	**37.07**	**248**	*e*P	P	06 15 08.2	-1.0
	1.6nm,0.3s						
STKA	**Stephens Creek**	**37.07**	**248**	P	P	06 15 07.7	-1.5
	1.9nm,0.3s,baz=79,slow=10,SNR=8.2						
ASAR	**Alice Springs**	**44.40**	**259**	P	P	06 16 08.1	0.0
	0.7nm,0.4s,baz=87,slow=6.2,SNR=8.5						
WRA	**Warramunga Arr**	**44.74**	**265**	P	P	06 16 10.6	-0.2
	1.2nm,0.3s,baz=99,slow=6.9,SNR=19						
FORT	**Forrest**	**48.67**	**249**	*e*P	P	06 16 39.7	-0.8
	14nm,0.8s						

KRSC 24 06:29:39.7±0.8,5537N×16375E,h41km±41km,ML3.7,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.99**	**328**	*i* P	Pn	06 29 55.5	-1.6
KBTR				*e*S	Sn	06 30 06.6	-3.3
MKZ	**Mys Kozlova**	**1.42**	**236**	*e*P	Pn	06 30 03.9	+0.9
MKZ				*e*S	Sn	06 30 21.6	+1.2
ZLN	**Zelenaya**	**1.79**	**292**	*e*P	Pn	06 30 10.6	+2.6
BDR	**Baidarnaya**	**1.87**	**311**	*e*P	Pn	06 30 11.0	+1.9
BDR				*e*S	Sn	06 30 34.1	+2.7
BZMR	**Bezymyannaya**	**1.93**	**288**	*e*P	Pn	06 30 12.8	+2.8
SRKR	**Sorokina**	**1.94**	**313**	*e*P	Pn	06 30 11.6	+1.5
SRKR				S	Sn	06 30 34.5	+1.3
KLY	**Klyuchi**	**1.99**	**300**	*e*P	Pn	06 30 11.3	+0.6
KLY				*e*S	Sn	06 30 34.4	+0.1
KRSR	**Krestovskiy**	**1.99**	**297**	P	Pn	06 30 12.7	+1.9
KMNR	**Kamenistaya**	**2.03**	**282**	*e*P	Pn	06 30 14.6	+3.2
KMNR				*e*S	Sn	06 30 40.5	+5.0
TUMR	**Tumrok**	**2.06**	**269**	*e*P	Pn	06 30 15.7	+4.0
TUMR				*e*S	Sn	06 30 41.5	+5.3
KPT	**Kopyto**	**2.09**	**288**	*i* P	Pn	06 30 15.0	+2.9
KPT				*e*S	Sn	06 30 41.1	+4.3
KOZ	**Kozyrevsk**	**2.30**	**289**	*e*P	Pn	06 30 18.4	+3.4
KOZ				*e*S	Sn	06 30 46.7	+4.7
SRDR	**Sredinnyy**	**2.46**	**294**	*e*P	Pn	06 30 20.8	+3.5
SRDR				S	Sn	06 30 50.2	+4.1
SPN	**Mys Shipunski**	**3.16**	**225**	*e*P	Pn	06 30 28.2	+1.4
SPN				*e*S	Sn	06 31 03.1	-0.1
NLC	**Nalytchevo**	**3.40**	**231**	*e*P	Pn	06 30 31.4	+1.3
NLC				*e*S	Sn	06 31 08.6	-0.4
AVH	**Avacha**	**3.61**	**236**	*e*P	Pn	06 30 36.4	+3.3
AVH				*e*S	Sn	06 31 17.0	+2.6
GNL	**Ganaly**	**3.78**	**246**	*e*P	Pn	06 30 38.9	+3.6
GNL				S	Sn	06 31 21.6	+3.2
PET	**Petropavlovsk**	**3.81**	**234**	S	Sn	06 31 19.3	+0.1
RUS	**Russkaya**	**4.27**	**229**	*e*P	Pn	06 30 44.5	+2.4
RUS				S	Sn	06 31 30.9	+0.3
GRL	**Gorelyy**	**4.38**	**232**	P	Pn	06 30 47.4	+3.8
MIPR	**Malaya Ipel'ka**	**5.17**	**236**	P	Pn	06 30 58.6	+4.1

WEL 24 06:29:56.2±0.5,3795S×17679E,h127km±3km,ML3.6/8, 2C,Error ellipse: s-maj=4.6km s-min=3.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.40**	**142**	⇑PN	Pn	06 30 14.3	0.0
URZ				SN	Sn	06 30 28.6	+0.5
MWZ	**Matawai**	**0.70**	**124**	PN	Pn	06 30 16.1	-0.1
MWZ				SN	Sn	06 30 31.1	-0.2
BKZ	**Black Stump Fm**	**1.24**	**191**	⇑PN	Pn	06 30 21.2	0.0
BKZ				SN	Sn	06 30 39.9	-0.4
KNZ	**Kokohu**	**1.28**	**148**	PN	Pn	06 30 21.6	+0.1
WNVZ	**Wahianoa**	**1.67**	**214**	PN	Pn	06 30 26.0	0.0
BFZ	**Birch Farm**	**2.76**	**189**	PN	Pn	06 30 37.6	-2.0
MRZ	**Mangatainoka R**	**2.87**	**199**	PN	Pn	06 30 38.8	-2.2
KIW	**Kapiti Island**	**3.26**	**206**	PN	Pn	06 30 43.2	-2.8
MTW	**Mount Morrison**	**3.36**	**197**	PN	Pn	06 30 44.3	-3.1
CAW	**Cannon Point**	**3.43**	**202**	PN	Pn	06 30 45.2	-3.0

NEIC 24 06:34:29.2,4519S×16729E,h9km,ML4.0(WEL),After WEL.,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.30**	**198**	P	Pg	06 34 35.4	+0.2
DCZ				S	Sg	06 34 41.2	+1.9
MLZ	**Mavora Lakes**	**0.64**	**105**	*e*P	Pg	06 34 41.3	-0.3
MSZ	**Milford Sound**	**0.69**	**41**	P	Pg	06 34 42.4	0.0
MSZ				S	Sg	06 34 50.9	-0.5
WHZ	**Wether Hill Ro**	**0.84**	**147**	P	Pg	06 34 44.7	-1.3
WHZ				S	Sg	06 34 57.1	+0.7
EAZ	**Earnscleugh**	**1.43**	**92**	*e*P	Pn	06 34 54.4	-0.8
JCZ	**Jackson Bay**	**1.53**	**44**	*e*P	Pn	06 34 56.2	-0.5

*ISCJB **24** 06:48:03.6±5.3,00N±0.1×1239E±0.3,h101km±53km, mb4.0/5,Error ellipse: s-maj=55.2km s-min=21.2km az=166.9*
*NEIC **24** 06:48:05.1±4.6,002N×12399E,h98km±47km,mb3.8/2, Error ellipse: s-maj=39.9km s-min=15.4km az=82.0*
*IDC **24** 06:48:10.7±7.7,000N×12401E,h152km±76km,mb3.6/5, mb1 3.7/6,mb1mx3.4/16,mbtmp3.5/6,Error ellipse: s-maj=54.8km s-min=18.2km az=76.0*

ISC 24 06:48:05.0±5.3,00N±02×1240E±03,h97km±54km,n10, σ0s40/10,mb4.0/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**15.18**	**147**	*e*P	**Pn**	**06 51 34.4**	**+0.2**
	8.9nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.07**	**175**	*e*P	**Pn**	**06 52 09.5**	**-0.3**
	6.8nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.07**	**175**	P	**Pn**	**06 52 10.6**	**+0.8**
	0.2nm,0.3s,baz=6.0,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**22.29**	**153**	P	**P**	**06 52 53.9**	**-0.5**
	4.4nm,0.6s,mb4.0,baz=332,slow=9.9,SNR=46						
WB2	**Warramunga Arr**	**22.29**	**153**	*e*P	**P**	**06 52 54.0**	**-0.5**
ASAR	**Alice Springs**	**25.44**	**158**	P	**P**	**06 53 23.9**	**0.0**
	3.8nm,1.0s,mb3.8,baz=330,slow=7.0,SNR=18						
ASAR				PcP	PcP	06 56 54.6	+0.9
	0.2nm,0.7s,baz=341,slow=2.0,SNR=4.6						
STKA	**Stephens Creek**	**35.84**	**154**	P	**P**	**06 54 56.0**	**+0.6**
STKA	**Stephens Creek**	**35.84**	**154**	P	**P**	**06 54 56.0**	**+0.6**
	3.6nm,0.5s,mb4.

NEIC ***24*** *07:20:50.7, 3659S×17659E, h251km, MG3.8(WEL), After WEL.*

WEL 24 07:20:54.5±0.6, 3679S×17706E, h240km±7km, ML3.6/9, Error ellipse: s-maj=10.2km s-min=8.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.26**	**128**	*eP*	Pn	07 21 30.1	+0.1
MXZ	**Matakaoa Point**	**1.26**	**128**	PN	Pn	07 21 30.1	+0.1
MXZ				SN	S	07 21 56.4	-1.6
URZ	**Urewera**	**1.47**	**179**	P	Pn	07 21 31.6	0.0
URZ	**Urewera**	**1.47**	**179**	PN	Pn	07 21 31.6	0.0
URZ				SN	S	07 22 00.8	-0.1
MWZ	**Matawai**	**1.59**	**167**	P	Pn	07 21 33.0	+0.5
MWZ				S	S	07 22 03.6	+1.1
MWZ	**Matawai**	**1.59**	**167**	PN	Pn	07 21 33.0	+0.5
MWZ				SN	S	07 22 03.1	+0.6
PUZ	**Puketiti**	**1.60**	**144**	P	Pn	07 21 32.9	+0.3
PUZ	**Puketiti**	**1.60**	**144**	PN	Pn	07 21 32.9	+0.3
PUZ				SN	S	07 22 01.8	-0.8
KNZ	**Kokohu**	**2.29**	**168**	*eP*	Pn	07 21 38.8	0.0
KNZ	**Kokohu**	**2.29**	**168**	PN	Pn	07 21 38.8	+0.1
BKZ	**Black Stump Fm**	**2.42**	**191**	*eP*	Pn	07 21 39.8	-0.3
BKZ	**Black Stump Fm**	**2.42**	**191**	PN	Pn	07 21 39.8	-0.3
BKZ				SN	S	07 22 16.4	+0.1
WAZ	**Wanganui**	**3.39**	**208**	*eP*	Pn	07 21 47.0	-3.6

CSEM ***24*** *07:23:09.0±0.0, 8290N×581W, h2km, mb4.6/35, Ms3.2, Error ellipse: s-maj=2.6km s-min=1.0km az=52.0*

MOS ***24*** *07:23:10.7±0.8, 8282N×621W, h10km, mb4.7/31, Error ellipse: s-maj=56.5km s-min=4.8km az=92.1*

IDC ***24*** *07:23:10.7±0.6, 8284N×653W, h0km, mb3.9/13, mb1 4.2/14, mb1mx4.1/19, mbtmp4.0/14, ML4.3/1, MS3.6/10, Ms1 3.6/10, ms1mx3.5/19, Error ellipse: s-maj=20.4km s-min=12.4km az=45.0*

BJI ***24*** *07:23:10.6, 8290N×600W, h8km, mB4.9, mb4.8, Ms4.8, Msz4.4*

ISCJB ***24*** *07:23:11.1±0.1, 8284N±003×58W±02, h10km, mb4.5/66, MS3.8/20, Error ellipse: s-maj=5.1km s-min=2.4km az=39.5*

NEIC ***24*** *07:23:12.6±0.2, 8287N×603W, h10km, mb4.6/37, Error ellipse: s-maj=5.9km s-min=2.7km az=48.0*

NAO ***24*** *07:23:16.4±23.0, 8233N×547W*

ISC 24 07:23:13.0±0.1, 8284N±003×57W±02, h10km, (h26km±4km; pP-P), n418, σ0 s75/415, mb4.5/66, MS3.8/20, 95C-129D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.79**	**136**	Pn	**Pn**	**07 24 24.2**	**-0.9**
KBS	**Kingsbay**	**4.79**	**136**	*e*Pn	**Pn**	**07 24 24.5**	**-0.6**
SPA0	**Spitsbergen Ar**	**5.87**	**131**	Pn	**Pn**	**07 24 38.9**	**-0.9**
	baz=345,slow=12						
DAG	**Danmarks Havn**	**6.49**	**207**	⇓*i*P	**Pn**	**07 24 47.2**	**-1.2**
DAG				pmax	pmax		
	comp=Z,14nm,0.4s						
DAG	**Danmarks Havn**	**6.49**	**207**	⇓*i*P	**Pn**	**07 24 47.2**	**-1.2**
	comp=Z,14nm,0.4s						
KEV	**Kevo**	**14.80**	**133**	*e*Pn	**Pn**	**07 26 40.3**	**-1.6**
	comp=Z,21nm,0.8s						
KEV	**Kevo**	**14.80**	**133**	*e*P	**Pn**	**07 26 40.3**	**-1.6**
KEV				pmax	pmax		
	comp=Z,21nm,0.8s						
KEV	**Kevo**	**14.80**	**133**	*e*P	**Pn**	**07 26 40.3**	**-1.6**
	comp=Z,21nm,0.8s						
ARA0	**ARCESS Array S**	**14.88**	**135**	P	**Pn**	**07 26 41.0**	**-2.0**
	baz=354,slow=11						
ARCES	**ARCESS Array B**	**14.88**	**135**	Pn	**Pn**	**07 26 40.3**	**-2.7**
	comp=Z,1.8nm,0.3s,baz=357,slow=9.4,SNR=41						
ARCES				Sn	**Sn**	**07 29 15.2**	**-12**
	comp=Z,0.2nm,0.3s,baz=335,slow=23,SNR=2.4						
ARCES				LR	LR	07 32 28.8	
	comp=Z,402nm,18.8s,baz=352,slow=37						
ARCES	**ARCESS Array B**	**14.88**	**135**	Pn	**Pn**	**07 26 40.3**	**-2.7**
ARCES				Sn	**Sn**	**07 29 15.2**	**-12**
RES	**Resolute Bay**	**16.89**	**294**	*e*Pn	**Pn**	**07 27 01.5**	**-7.5**
RES	**Resolute Bay**	**16.89**	**294**	*e*Pn	**Pn**	**07 27 01.5**	**-7.5**
LVZ	**Lovozero**	**17.34**	**125**	⇑*e*P	**Pn**	**07 27 12.7**	**-2.0**
LVZ				pmax	pmax		
	comp=Z,79nm,1.3s						
LVZ	**Lovozero**	**17.34**	**125**	*e*P	**Pn**	**07 27 12.7**	**-2.0**
	comp=Z,79nm,1.3s						
SFJD	**Kangerlussuaq**	**18.71**	**240**	P	**Pn**	**07 27 24.7**	**-6.9**
	comp=Z,0.9nm,0.3s,baz=352,slow=9.5,SNR=6.3						
SFJD	**Kangerlussuaq**	**18.71**	**240**	*i* P	**Pn**	**07 27 25.1**	**-6.4**
SFJD				*i* S	Sn	07 30 38.9	-21
SFJD							
	comp=Z,230nm,20.0s						
JOF	**Joensuu**	**21.88**	**132**	*e*p	**P**	**07 28 04.2**	**-1.3**
	comp=Z,20nm,1.0s,mb4.5						
KAF	**Kangasniemi**	**22.23**	**139**	*e*p	**P**	**07 28 10.0**	**+0.7**
	comp=Z,14nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**22.23**	**139**	*e*P	**P**	**07 28 10.0**	**+0.7**
KAF				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.4						
NB2	**NORSAR Subarra**	**22.32**	**158**	P	**P**	**07 28 10.1**	**-0.1**
	comp=Z,33nm,1.4s,mb4.6,baz=354,slow=11						
NB2	**NORSAR Subarra**	**22.32**	**158**	P	**P**	**07 28 10.8**	**+0.6**
	baz=348,slow=10						
NB2	**NORSAR Subarra**	**22.32**	**158**	P	**P**	**07 28 10.1**	**-0.1**
NB2				pmax	pmax		
	comp=Z,33nm,1.4s,mb4.6						
NOA	**NORSAR Array B**	**22.32**	**158**	P	**P**	**07 28 08.4**	**-1.8**
	comp=Z,8.5nm,0.9s,baz=354,slow=9.5,SNR=11						
NOA				LR	LR	07 34 48.7	
	comp=Z,106nm,21.6s,baz=100,slow=31						
FIA0	**FINESS Array S**	**22.88**	**139**	P	**P**	**07 28 16.4**	**+0.3**
	baz=353,slow=12						
FINES	**FINESS Array B**	**22.88**	**139**	P	**P**	**07 28 16.1**	**0.0**
	comp=Z,2.5nm,0.8s,mb3.7,baz=352,slow=12,SNR=6.2						
FINES				LR	LR	07 37 09.1	
	comp=Z,201nm,19.6s,MS3.6,baz=352,slow=36						
HFS	**Hagfors**	**23.34**	**155**	P	**P**	**07 28 20.7**	**-0.3**
	baz=45,slow=8.6						
HFS	**Hagfors**	**23.34**	**155**	P	**P**	**07 28 21.0**	**0.0**
	comp=Z,5.2nm,0.8s,baz=16,slow=11,SNR=7.9						
HFS				LR	LR	07 37 07.6	
	comp=Z,68nm,19.7s,baz=179,slow=36						
TIXI	**Tiksi**	**24.06**	**34**	*e*P	**P**	**07 28 25.8**	**-1.9**
TIXI	**Tiksi**	**24.06**	**34**	⇑*e*P	**P**	**07 28 27.4**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb3.9						
TIXI	**Tiksi**	**24.06**	**34**	*e*P	**P**	**07 28 25.8**	**-1.9**
PRGR	**Permogore**	**24.61**	**117**	*e*P	**P**	**07 28 27.2**	**-5.6**
PRGR				*e*S	**S**	**07 32 48.9**	**-4.6**
PRGR				pmax	pmax		
	comp=Z,23nm,0.4s,mb5.1						
INK	**Inuvik**	**26.83**	**319**	*e*P	**P**	**07 28 50.9**	**-2.0**
INK	**Inuvik**	**26.83**	**319**	P	**P**	**07 28 50.8**	**-2.1**
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
INK				MLR	MLR		
	comp=Z,178nm,18.5s						
INK	**Inuvik**	**26.83**	**319**	P	**P**	**07 28 50.8**	**-2.1**
	comp=Z,4.1nm,0.7s,mb4.0,baz=8.8,slow=13,SNR=19						
INK				LR	LR	07 41 43.4	
	comp=Z,178nm,18.5s,MS3.6,baz=18,slow=42						
INK	**Inuvik**	**26.83**	**319**	*e*P	**P**	**07 28 50.9**	**-2.0**
BILL	**Bilibino**	**29.25**	**6**	⇑*e*P	**P**	**07 29 13.3**	**-1.1**
BILL				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.5						
BILL	**Bilibino**	**29.25**	**6**	*e*P	**P**	**07 29 13.3**	**-1.1**
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**30.07**	**130**	*e*P	**P**	**07 29 21.3**	**-0.5**
OBN				*e*		07 30 19.5	
OBN				*e*S	**S**	**07 34 29.7**	**+10**
OBN				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
OBN				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.0						
OBN	**Obninsk**	**30.07**	**130**	*e*P	**P**	**07 29 21.3**	**-0.5**
	comp=Z,12nm,1.0s,mb4.6						
YKW3	**Yellowknife Ar**	**30.65**	**301**	*e*P	**P**	**07 29 24.7**	**-2.2**
YKW3	**Yellowknife Ar**	**30.65**	**301**	*e*P	**P**	**07 29 24.7**	**-2.1**
YKA	**Yellowknife Ar**	**30.71**	**301**	P	**P**	**07 29 26.1**	**-1.3**
YKA				PcP	PcP	07 32 23.3	-1.3
YKA				LR	LR	07 41 04.0	
YKA	**Yellowknife Ar**	**30.71**	**301**	P	**P**	**07 29 26.1**	**-1.3**
YKA						07 32 23.3	
YKA	**Yellowknife Ar**	**30.71**	**301**	P	**P**	**07 29 26.1**	**-1.3**
	comp=Z,1.8nm,0.8s,mb3.9,baz=7.8,slow=8.7,SNR=37						
YKA				PcP	PcP	07 32 23.3	-1.2
	comp=Z,1.1nm,0.8s,baz=4.7,slow=2.5,SNR=12						
YKA				LR	LR	07 41 03.9	
	comp=Z,66nm,19.4s,MS3.3,baz=130,slow=35						
YKA	**Yellowknife Ar**	**30.71**	**301**	PcP	PcP	07 32 23.3	-1.3
SVE	**Sverdlovsk**	**31.08**	**103**	⇑*e*P	**P**	**07 29 32.0**	**+1.3**
SVE				*e*		07 40 04.0	
SVE				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.6						
SVE	**Sverdlovsk**	**31.08**	**103**	*e*P	**P**	**07 29 32.0**	**+1.3**
	comp=Z,12nm,1.2s,mb4.6						
ARU	**Arti**	**31.21**	**105**	*e*P	**P**	**07 29 32.5**	**+0.6**
ARU						07 30 31.3	
ARU				S	**S**	**07 34 38.6**	**+1.0**
ARU				SS	SS	07 36 21.1	-29
ARU	**Arti**	**31.21**	**105**	*e*P	**P**	**07 29 32.5**	**+0.6**
ARU				S	**S**	**07 34 38.6**	**+1.0**
COLA	**College**	**31.26**	**330**	*e*P	**P**	**07 29 32.6**	**+0.3**
TNA	**Tin City**	**31.52**	**346**	*e*P	**P**	**07 29 32.8**	**-1.8**
TNA	**Tin City**	**31.52**	**346**	*e*P	**P**	**07 29 32.8**	**-1.7**
FCC	**Fort Churchill**	**31.95**	**280**	*e*P	**P**	**07 29 36.2**	**-2.2**
FCC	**Fort Churchill**	**31.95**	**280**	*e*P	**P**	**07 29 36.2**	**-2.2**
CLL	**Collm**	**32.12**	**158**	⇑*i*P	**P**	**07 29 40.2**	**+0.3**
	comp=Z,7.0nm,1.0s,mb4.5						
CLL				LmV		07 40 00.0	
	comp=Z,100nm,20.6s						
BRG	**Berggiesshubel**	**32.60**	**157**	*e*P	**P**	**07 29 44.4**	**+0.3**
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
BRG	**Berggiesshubel**	**32.60**	**157**	*e*(P)	**P**	**07 29 44.4**	**+0.3**
	comp=Z,5.8nm,1.1s,mb4.4						
MOX	**Moxa**	**32.72**	**160**	*e*P	**P**	**07 29 46.3**	**+1.1**
GIVF	**Givet**	**33.02**	**168**	*e*P	**P**	**07 29 48.5**	**+0.7**
BAIF	**Baives**	**33.05**	**168**	*e*P	**P**	**07 29 48.6**	**+0.6**
GAMB	**Gambell**	**33.41**	**349**	*e*P	**P**	**07 29 50.3**	**-0.8**
GAMB	**Gambell**	**33.41**	**349**	*e*P	**P**	**07 29 50.3**	**-0.8**
AKASG	**Malin Array Be**	**33.79**	**139**	P	**P**	**07 29 52.5**	**-1.9**
	comp=Z,0.2nm,0.4s,mb3.4,baz=342,slow=8.3,SNR=4.9						
AKASG	**Malin Array Be**	**33.79**	**139**	*i* P	**P**	**07 29 54.0**	**-0.5**
SEY	**Seymchan**	**34.01**	**18**	⇑*e*P	**P**	**07 29 55.8**	**-0.5**
FLN	**La Foliniere**	**34.26**	**174**	*e*P	**P**	**07 29 58.9**	**+0.4**
FLN				*e*MLR	MLR		
	comp=Z,72nm,22.2s						
FLN	**La Foliniere**	**34.26**	**174**	*e*P	**P**	**07 29 58.9**	**+0.4**
FLN				MLR	MLR		
	comp=Z,70nm,22.3s,MS3.3						
KHC	**Kasperske Hory**	**34.32**	**157**	*e*P	**P**	**07 30 00.4**	**+1.3**
LDF	**La Druitiere**	**34.43**	**174**	*e*P	**P**	**07 29 59.7**	**-0.4**
GERES	**GERESS Array B**	**34.61**	**157**	P	**P**	**07 30 02.3**	**+0.7**
	comp=Z,1.7nm,0.7s,mb4.1,baz=4.6,slow=6.7,SNR=14						
GERES				LR	LR	07 44 10.7	
	comp=Z,37nm,18.7s,baz=108,slow=36						
GRR	**Gorron**	**34.62**	**174**	*e*P	**P**	**07 30 02.0**	**+0.3**
ROSF	**Rostrenen**	**34.65**	**177**	*e*P	**P**	**07 30 02.3**	**+0.3**
	comp=Z,69nm,1.3s,mb5.1						
ROSF	**Rostrenen**	**34.65**	**177**	*e*P	**P**	**07 30 02.3**	**+0.3**
ROSF				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.1						
ROSF	**Rostrenen**	**34.65**	**177**	*e*P	**P**	**07 30 02.3**	**+0.3**
	comp=Z,35nm,1.3s,mb5.1						
SGMF	**Saint Gilles**	**34.74**	**176**	*e*P	**P**	**07 30 02.7**	**-0.1**
CDF	**Champ du Feu**	**34.78**	**165**	*e*P	**P**	**07 30 03.6**	**+0.5**
QUIF	**Quistinic**	**35.08**	**177**	*e*P	**P**	**07 30 04.8**	**-0.8**
HAU	**Haudompre**	**35.16**	**166**	*e*P	**P**	**07 30 07.0**	**+0.6**
HAU				*e*MLR	MLR		
	comp=Z,95nm,17.2s,MS3.3						
HAU	**Haudompre**	**35.16**	**166**	*e*P	**P**	**07 30 07.0**	**+0.6**
HAU				MLR	MLR		
	comp=Z,100nm,17.3s,MS3.6						
HINF	**Hinteralfeld**	**35.37**	**165**	*e*P	**P**	**07 30 08.6**	**+0.5**
LOR	**Lormes**	**35.83**	**169**	*e*P	**P**	**07 30 12.5**	**+0.4**
	comp=Z,11nm,0.9s,mb4.5						
LOR				*e*MLR	MLR		
	comp=Z,56nm,20.2s						
LOR	**Lormes**	**35.83**	**169**	*e*P	**P**	**07 30 12.5**	**+0.4**
	comp=Z,5.6nm,0.9s,mb4.5						
LOR				LR	LR		
	comp=Z,60nm,20.3s,MS3.4						
LOR	**Lormes**	**35.83**	**169**	*e*P	**P**	**07 30 12.5**	**+0.4**
LOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LOR				MLR	MLR		
	comp=Z,60nm,20.3s,MS3.4						
NVS	**Novosibirsk**	**35.84**	**81**	*e*P	**P**	**07 30 12.1**	**0.0**
NVS				*e*		07 31 35.7	
NVS				pmax	pmax		
	comp=N,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
SSF	**Saint Saulge**	**36.03**	**169**	*e*P	**P**	**07 30 14.3**	**+0.5**
	comp=Z,31nm,1.3s,mb4.8						
SSF	**Saint Saulge**	**36.03**	**169**	*e*P	**P**	**07 30 14.3**	**+0.5**
SSF				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
SSF	**Saint Saulge**	**36.03**	**169**	*e*P	**P**	**07 30 14.3**	**+0.5**
	comp=Z,16nm,1.3s,mb4.8						
AVF	**Avril sur Loir**	**36.30**	**170**	*e*P	**P**	**07 30 16.2**	**+0.1**
	comp=Z,17nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**36.30**	**170**	*e*P	**P**	**07 30 16.2**	**+0.1**
AVF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
AVF	**Avril sur Loir**	**36.30**	**170**	*e*P	**P**	**07 30 16.2**	**+0.1**
	comp=Z,8.5nm,1.1s,mb4.6						
MFF	**Saint Martin d**	**36.42**	**174**	*e*P	**P**	**07 30 17.3**	**+0.1**
SMF	**Signal de Mont**	**36.45**	**169**	*e*P	**P**	**07 30 17.5**	**0.0**
BGF	**Bois d'Agland**	**36.52**	**170**	*e*P	**P**	**07 30 17.9**	**-0.1**
	comp=Z,44nm,1.1s,mb4.9						
BGF	**Bois d'Agland**	**36.52**	**170**	*e*P	**P**	**07 30 17.9**	**-0.1**
BGF				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
BGF	**Bois d'Agland**	**36.52**	**170**	*e*P	**P**	**07 30 17.9**	**-0.1**
	comp=Z,22nm,1.1s,mb4.9						
CABF	**La Chapelle**	**36.55**	**166**	*e*P	**P**	**07 30 18.6**	**+0.3**
	comp=Z,12nm,0.9s,mb4.4						
CABF	**La Chapelle**	**36.55**	**166**	*e*P	**P**	**07 30 18.6**	**+0.3**
CABF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
CABF	**La Chapelle**	**36.55**	**166**	*e*P	**P**	**07 30 18.6**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.4						
TCF	**Toulx Ste Croi**	**36.77**	**171**	*e*P	**P**	**07 30 20.1**	**-0.1**
	comp=Z,31nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**36.77**	**171**	*e*P	**P**	**07 30 20.1**	**-0.1**
TCF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
TCF	**Toulx Ste Croi**	**36.77**	**171**	*e*P	**P**	**07 30 20.1**	**-0.1**
	comp=Z,15nm,1.2s,mb4.7						
AKTO	**Aktyubinsk**	**37.03**	**108**	*i* P	**P**	**07 30 22.2**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,2.1s,mb3.3						
LPL	**La Plagne**	**37.66**	**166**	*e*P	**P**	**07 30 28.0**	**+0.3**
	comp=Z,34nm,1.3s,mb4.6						
LPL	**La Plagne**	**37.66**	**166**	*e*P	**P**	**07 30 28.0**	**+0.3**
LPL				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.6						
LPL	**La Plagne**	**37.66**	**166**	*e*P	**P**	**07 30 28.0**	**+0.3**
	comp=Z,17nm,1.3s,mb4.6						
LPG	**La Plagne**	**37.68**	**166**	*e*P	**P**	**07 30 28.4**	**+0.5**
	comp=Z,12nm,1.0s,mb4.3						
LPG	**La Plagne**	**37.68**	**166**	*e*P	**P**	**07 30 28.4**	**+0.5**
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
LPG	**La Plagne**	**37.68**	**166**	*e*P	**P**	**07 30 28.4**	**+0.5**
	comp=Z,6.1nm,1.0s,mb4.3						
RJF	**Les Rejaudoux**	**37.74**	**172**	*e*P	**P**	**07 30 28.7**	**+0.3**
	comp=Z,32nm,1.1s,mb4.7						
RJF				*e*MLR	MLR		
	comp=Z,63nm,21.2s						
RJF	**Les Rejaudoux**	**37.74**	**172**	*e*P	**P**	**07 30 28.7**	**+0.3**
	comp=Z,16nm,1.1s,mb4.7						
RJF				LR	LR		
	comp=Z,60nm,21.2s,MS3.4						
RJF	**Les Rejaudoux**	**37.74**	**172**	*e*P	**P**	**07 30 28.7**	**+0.3**
RJF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
RJF				MLR	MLR		
	comp=Z,60nm,21.2s,MS3.4						
ORIF	**Oris-en-Rattie**	**38.23**	**167**	*e*P	**P**	**07 30 32.9**	**+0.3**
	comp=Z,11nm,0.9s,mb4.3						
ORIF				*e*MLR	MLR		
	comp=Z,80nm,18.2s,MS3.3						
ORIF	**Oris-en-Rattie**	**38.23**	**167**	*e*P	**P**	**07 30 32.9**	**+0.3**
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
ORIF	**Oris-en-Rattie**	**38.23**	**167**	*e*P	**P**	**07 30 32.9**	**+0.3**
	comp=Z,5.4nm,0.9s,mb4.2						
VIVF	**Saint-Julien-l**	**38.26**	**168**	*e*P	**P**	**07 30 33.1**	**+0.3**
MBDF	**Montbardon**	**38.45**	**166**	*e*P	**P**	**07 30 34.8**	**+0.4**
	comp=Z,28nm,1.2s,mb4.5						
MBDF	**Montbardon**	**38.45**	**166**	*e*P	**P**	**07 30 34.8**	**+0.4**
MBDF				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.5						
MBDF	**Montbardon**	**38.45**	**166**	*e*P	**P**	**07 30 34.8**	**+0.4**
	comp=Z,14nm,1.2s,mb4.5						
LASF	**Ste Croix**	**39.02**	**169**	*e*P	**P**	**07 30 39.0**	**-0.2**
SMRF	**Simiane la Rot**	**39.17**	**167**	*e*P	**P**	**07 30 40.3**	**-0.1**
KURK	**Kurchatov**	**39.30**	**87**	*e*P	**P**	**07 30 41.0**	**-0.5**
KURK	**Kurchatov**	**39.30**	**87**	⇑*e*P	**P**	**07 30 41.8**	**+0.3**
SBF	**Sospel**	**39.34**	**165**	*e*P	**P**	**07 30 41.9**	**+0.1**
FRF	**La Foret Royal**	**39.61**	**166**	*e*P	**P**	**07 30 44.1**	**0.0**
EDM	**Edmonton**	**39.67**	**296**	*e*P	**P**	**07 30 42.5**	**-2.0**
EDM	**Edmonton**	**39.67**	**296**	*e*P	**P**	**07 30 42.5**	**-2.0**
MTLF	**Montolieu**	**39.72**	**171**	*e*P	**P**	**07 30 44.9**	**-0.1**
LMR	**La Mourre**	**39.83**	**166**	*e*P	**P**	**07 30 46.0**	**0.0**
SJPF	**Ste Jean**	**39.90**	**175**	*e*P	**P**	**07 30 46.4**	**-0.1**
EPF	**Esparros**	**40.00**	**173**	*e*P	**P**	**07 30 47.3**	**0.0**
	comp=Z,74nm,1.6s,mb4.9						
EPF	**Esparros**	**40.00**	**173**	*e*P	**P**	**07 30 47.3**	**0.0**
EPF				pmax	pmax		
	comp=Z,37nm,1.6s,mb4.9						
EPF	**Esparros**	**40.00**	**173**	*e*P	**P**	**07 30 47.3**	**0.0**
	comp=Z,37nm,1.6s,mb4.9						
ETSF	**Etsaut**	**40.12**	**174**	*e*P	**P**	**07 30 48.2**	**-0.1**
ULM	**Lac du Bonnet**	**40.51**	**279**	P	**P**	**07 30 49.9**	**-1.5**
ULM				PcP	PcP	07 32 52.2	-1.5
ULM	**Lac du Bonnet**	**40.51**	**279**	P	**P**	**07 30 49.9**	**-1.5**
	baz=9.4,slow=9.4						
ULM				PcP	PcP	07 32 52.2	-1.5
	baz=45,slow=6.5						
ULM	**Lac du Bonnet**	**40.51**	**279**	PcP	PcP	07 32 52.2	-1.4
IRK	**Irkutsk**	**40.88**	**62**	*e*P	**P**	**07 30 53.1**	**-1.4**
IRK				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.5						
TLY	**Talaya**	**41.36**	**63**	*e*P	**P**	**07 30 59.0**	**+0.5**
TLY	**Talaya**	**41.36**	**63**	*e*P	**P**	**07 30 58.9**	**+0.4**
TLY				*e*		07 32 41.2	
TLY				*e*S	**S**	**07 37 11.4**	**-1.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TLY				MLR	MLR		
	comp=Z,111nm,17.0s,MS3.8						
KIV	**Kislovodsk**	**41.72**	**126**	⇑*e*P	**P**	**07 31 02.1**	**+0.6**
KIV				*e*S	**S**	**07 37 22.3**	**+4.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.8						
EYMN	**Ely**	**42.22**	**274**	*e*P	**P**	**07 31 03.4**	**-2.2**
EYMN	**Ely**	**42.22**	**274**	*e*P	**P**	**07 31 03.4**	**-2.2**
AGMN	**Agassiz Refuge**	**42.42**	**278**	*e*P	**P**	**07 31 06.9**	**-0.3**
AGMN	**Agassiz Refuge**	**42.42**	**278**	*e*P	**P**	**07 31 06.9**	**-0.3**
ESDC	**Sonseca Array**	**43.31**	**178**	P	**P**	**07 31 14.8**	**+0.4**
	comp=Z,2.2nm,0.6s,mb4.0,baz=1.8,slow=8.5,SNR=9.2						
MK31	**Makanchi Array**	**43.62**	**84**	*i* P	**P**	**07 31 17.3**	**+0.4**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
MKAR	**Makanchi Array**	**43.62**	**84**	P	**P**	**07 31 17.5**	**+0.6**
MKAR				LR	LR	07 52 03.7	
MKAR	**Makanchi Array**	**43.62**	**84**	P	**P**	**07 31 17.5**	**+0.6**
	comp=Z,1.1nm,0.6s,mb3.7,baz=351,slow=7.7,SNR=11						
MKAR				LR	LR	07 52 03.7	
	comp=Z,77nm,19.6s,MS3.6,baz=350,slow=40						
WALA	**Waterton Lakes**	**43.83**	**296**	*e*P	**P**	**07 31 16.6**	**-2.0**
	comp=Z,13nm,0.8s,mb4.7						
WALA	**Waterton Lakes**	**43.83**	**296**	*e*P	**P**	**07 31 16.5**	**-2.1**
	comp=Z,13nm,0.8s,mb4.7						
A13A	**Flathead Natio**	**44.01**	**296**	⇓P	**P**	**07 31 19.9**	**-0.2**
	baz=44,SNR=6.2						
A13A				⇓pP	pP	07 31 27.7	+4.5
	baz=44						
A12A	**Yaak River Ran**	**44.15**	**297**	⇓P	**P**	**07 31 21.7**	**+0.5**
	baz=44						
A12A				⇓pP	pP	07 31 29.6	+5.4
	baz=44						
A11A	**Hall Mountain,**	**44.21**	**298**	P	**P**	**07 31 22.0**	**+0.4**
	baz=44,SNR=12						
A11A				⇑pP	pP	07 31 29.7	+5.0
	baz=44						

MSO Missoula 46.03 295 eP P 07 31 36.1 0.0
comp=Z,9.9nm,1.0s,mb4.7
C04A Brinnon 46.14 304 ⇓P P 07 31 37.4 +0.4
baz=46
C04A ⇑pP pP 07 31 44.9 +4.8
baz=46
D10A Wagner Farm, O 46.19 298 ⇑P P 07 31 36.7 -0.6
baz=46
D10A ⇑pP pP 07 31 44.3 +3.8
baz=46
E15A Deer Lodge 46.29 294 ⇑P P 07 31 37.7 -0.4
baz=46,SNR=6.2
D08A Wollman Farm, 46.36 300 ⇓P P 07 31 38.4 -0.3
baz=46
D08A ⇓pP pP 07 31 44.6 +2.7
baz=46
E14A Clinton 46.39 295 ⇓P P 07 31 38.9 0.0
baz=46
E14A ⇓pP pP 07 31 47.4 +5.3
baz=46
E13A Victor 46.45 295 P P 07 31 39.0 -0.3
baz=46,SNR=17
E13A ⇑pP pP 07 31 47.0 +4.5
baz=46
E11A Bogner Ranch, 46.76 297 P P 07 31 41.1 -0.7
baz=46,SNR=10.0
E11A ⇑pP pP 07 31 48.3 +3.3
baz=46
E09A Wood Farm, Sta 46.82 299 ⇑pP pP 07 31 50.5 +5.1
baz=46
F15A Butte 46.84 293 ⇑P P 07 31 42.4 -0.1
baz=47,SNR=6.8
F15A ⇑pP pP 07 31 50.2 +4.5
baz=47
LRM Limekiln Ridge 46.86 293 eP P 07 31 40.7 -1.9
LRM Limekiln Ridge 46.86 293 eP P 07 31 40.7 -1.9
BOZ Bozeman (W) 46.94 293 eP P 07 31 43.0 -0.2
comp=Z,8.6nm,1.1s,mb4.6
BOZ Bozeman (W) 46.94 293 eP P 07 31 43.0 -0.2
BOZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BOZ Bozeman (W) 46.94 293 P P 07 31 43.6 +0.4
baz=47,SNR=8.9
BOZ Bozeman (W) 46.94 293 eP P 07 31 43.0 -0.2
comp=Z,8.6nm,1.1s,mb4.6
E08A Dider Farm, El 46.94 300 ⇓P P 07 31 43.0 -0.2
baz=47
E08A ⇓pP pP 07 31 49.9 +3.6
baz=47
F14A Wisdom 46.97 294 ⇑P P 07 31 43.4 -0.1
baz=47
ECSD EROS,Sioux Fal 47.01 278 eP P 07 31 43.6 -0.2
ECSD EROS,Sioux Fal 47.01 278 eP P 07 31 43.6 -0.2
E06A Yakima 47.09 302 ⇑P P 07 31 44.0 -0.4
baz=47
E06A ⇑pP pP 07 31 51.7 +4.1
baz=47
F13A Darby 47.11 295 P P 07 31 44.3 -0.3
baz=47,SNR=5.8
F13A ⇑pP pP 07 31 51.8 +4.2
baz=47
UCH Uchtor 47.14 93 eP P 07 31 47.8 +3.0
comp=Z,8.6nm,1.1s,mb4.6
E05A Randle 47.16 302 ⇑P P 07 31 44.4 -0.5
baz=47
RLMT Red Lodge 47.18 290 eP P 07 31 46.0 +0.8
RLMT Red Lodge 47.18 290 eP P 07 31 46.0 +0.9
F11A Grangeville 47.21 297 ⇓P P 07 31 44.6 -0.7
baz=47
F11A ⇑pP pP 07 31 51.7 +3.2
baz=47
WMQ Urumqi 47.22 80 eP P 07 31 45.4 0.0
WMQ AP pP 07 31 49.9 +1.3
WMQ XP sP 07 31 52.4 +2.6
WMQ PP PP 07 33 35.9 -0.1
WMQ PPP 07 34 23.4
WMQ S S 07 38 36.9 -0.9
WMQ AMB AMB
comp=Z,4.0nm,0.5s,mb4.6
WMQ AMB AMB
comp=Z,18nm,3.6s
WMQ LR LR
comp=N,92nm,19.6s,MS3.9
WMQ LR LR
comp=E,88nm,19.6s,MS3.9
WMQ LR LR
comp=Z,83nm,19.7s,MS3.7
E04A Onalaska 47.23 303 ⇓P P 07 31 45.0 -0.4
baz=47
F12A Elk City 47.24 296 ⇓P P 07 31 44.3 -1.2
baz=47
DLMT Dillon 47.33 293 eP P 07 31 46.0 -0.3
comp=Z,4.9nm,0.8s,mb4.5
DLMT Dillon 47.33 293 eP P 07 31 46.0 -0.3
comp=Z,4.9nm,0.8s,mb4.5
G15A Dillon 47.51 293 ⇓P P 07 31 47.5 -0.2
baz=47
G14A Jackson 47.55 294 ⇓P P 07 31 48.1 +0.1
baz=47
QLMT Earthquake Lak 47.72 292 eP P 07 31 49.3 0.0
G13A Cobalt 47.78 295 P P 07 31 49.5 -0.3
baz=48,SNR=8.9
F06A Goldendale 47.84 301 ⇑P P 07 31 50.6 +0.4
baz=48
MCMT McKenzie Canyo 47.88 294 eP P 07 31 51.0 +0.4
MCMT ePcP PcP 07 33 18.4 -0.5
MCMT McKenzie Canyo 47.88 294 eP P 07 31 51.0 +0.4
MCMT McKenzie Canyo 47.88 294 ePcP PcP 07 33 18.4 -0.5
G10A Bishop Farm, J 47.91 298 P P 07 31 50.6 -0.1
baz=48,SNR=7.8
G10A ⇓pP pP 07 31 58.0 +4.1
baz=48
G09A Cove 48.00 298 ⇓P P 07 31 52.1 +0.7
baz=48
G09A ⇓pP pP 07 31 59.5 +4.9
baz=48
G08A Pilot Rock 48.11 299 ⇑P P 07 31 52.8 +0.4
baz=48
G08A ⇑pP pP 07 32 00.1 +4.6
baz=48
G07A Ruggs Ranch, H 48.22 300 ⇑P P 07 31 53.4 +0.2
baz=48
G07A ⇓pP pP 07 32 01.1 +4.8
baz=48
H13A Challis 48.31 295 ⇑P P 07 31 53.7 -0.2
baz=48
H13A ⇑pP pP 07 32 01.5 +4.5
baz=48
BMO Blue Mountains 48.36 298 eP P 07 31 54.0 -0.3
comp=Z,6.1nm,0.9s,mb4.6
BMO Blue Mountains 48.36 298 eP P 07 31 54.0 -0.3
comp=Z,6.1nm,0.9s,mb4.6
H11A Donnelly 48.37 297 ⇑P P 07 31 53.2 -1.1
baz=48
H11A ⇓pP pP 07 32 01.5 +4.0
baz=48
FLWY Flagg Ranch 48.37 291 eP P 07 31 54.3 -0.1
FLWY Flagg Ranch 48.37 291 eP P 07 31 54.3 -0.1
H12A Diamond D Ranc 48.39 295 P P 07 31 54.0 -0.4
baz=48,SNR=10
H12A ⇓pP pP 07 32 02.3 +4.6
baz=48
H10A Noah's Angus R 48.56 297 ⇓P P 07 31 55.0 -0.8
baz=48,SNR=6.9
H10A ⇑pP pP 07 32 03.9 +5.0
baz=48
IMW Indian Meadow 48.58 292 eP P 07 31 55.9 -0.1
comp=Z,8.3nm,0.9s,mb4.8
IMW Indian Meadow 48.58 292 eP P 07 31 55.9 -0.1
comp=Z,8.3nm,0.9s,mb4.8
MOOW Moose Ponds 48.71 291 eP P 07 31 56.7 -0.3
comp=Z,6.6nm,1.0s,mb4.6
MOOW Moose Ponds 48.71 291 eP P 07 31 56.7 -0.2
comp=Z,6.6nm,1.0s,mb4.6
H06A Lindquist Farm 48.81 301 ⇓P P 07 31 58.3 +0.6
baz=48
LOHW Long Hollow 48.82 291 eP P 07 31 57.6 -0.2
comp=Z,14nm,1.5s,mb4.8
LOHW Long Hollow 48.82 291 eP P 07 31 57.6 -0.2
comp=Z,14nm,1.5s,mb4.8
H08A Prairie City 48.84 299 ⇓P P 07 31 59.0 +1.0
baz=49
H07A Lands Inn, Kim 48.87 300 ⇑P P 07 31 58.8 +0.6
baz=49
DCID1 Drake Creek 48.91 292 eP P 07 31 58.4 -0.1
DCID1 Drake Creek 48.91 292 eP P 07 31 58.4 -0.1
I13A Wildhorse Cree 48.93 295 ⇑P P 07 31 58.7 0.0
baz=49
TPAW Teton Pass 48.98 292 eP P 07 31 59.0 -0.1
TPAW Teton Pass 48.98 292 eP P 07 31 59.0 -0.1
REDW Red Top Meadow 49.10 291 eP P 07 31 59.9 -0.1
comp=Z,14nm,1.4s,mb4.8
H03A Soap Creek Ran 49.19 303 ⇑P P 07 32 01.3 +0.7
baz=49
HLID Hailey 49.31 295 eP P 07 32 01.4 -0.2
HLID Hailey 49.31 295 ⇓P P 07 32 00.8 -0.8
baz=49
HLID Hailey 49.31 295 eP P 07 32 01.4 -0.2
J13A Cove Ranch, Pi 49.45 295 ⇓P P 07 32 02.6 0.0
baz=49
J13A ⇓pP pP 07 32 10.7 +4.9
baz=49
BW06 Boulder Array 49.53 290 eP P 07 32 03.1 -0.2
comp=Z,10nm,1.4s,mb4.7
BW06 Boulder Array 49.53 290 eP P 07 32 03.1 -0.2
comp=Z,10nm,1.4s,mb4.7
PDAR Pinedale Array 49.53 290 P P 07 32 01.5 -1.8
PDAR LR LR 07 53 28.7
PDAR Pinedale Array 49.53 290 P P 07 32 01.5 -1.8
comp=Z,2.2nm,1.0s,mb4.1,baz=25,slow=3.9,SNR=12
PDAR LR LR 07 53 28.7
comp=Z,193nm,18.4s,MS4.1,baz=219,slow=37
I06A Prineville 49.58 300 ⇓P P 07 32 04.6 +1.0
baz=49
MFID Camas Ranch 49.62 296 ⇓P P 07 32 02.9 -1.0
baz=49
J10A Berg Farm, Mel 49.71 297 ⇓P P 07 32 04.5 -0.1
baz=49
J09A Fry Pan Ranch, 49.90 298 ⇑P P 07 32 05.4 -0.7
baz=50
I04A Tendick Farm, 49.97 302 ⇓P P 07 32 06.4 -0.2
baz=50
J08A Circle Bar Ran 49.97 299 ⇓P P 07 32 06.1 -0.5
baz=50
J07A Hines 50.05 299 ⇓P P 07 32 07.8 +0.6
baz=50
J07A ⇓pP pP 07 32 15.9 +5.6
baz=50
K14A Jones Ranch, D 50.18 293 ⇑P P 07 32 08.4 +0.3
baz=50
K13A Stover Farm, H 50.18 294 ⇑P P 07 32 08.3 +0.1
baz=50
J06A Christmas Vall 50.26 300 ⇓P P 07 32 09.9 +1.2
baz=50
K11A Parker Ranch, 50.28 296 ⇑P P 07 32 09.1 +0.1
baz=50
K12A Draper Farm, C 50.28 295 ⇓P P 07 32 09.1 +0.1
baz=50
J05A Fort Rock 50.34 301 ⇑P P 07 32 10.7 +1.2
baz=50,SNR=5.1
K10A MacKenzie Ranc 50.37 297 ⇓P P 07 32 09.7 +0.1
baz=50
K09A Rome 50.54 298 ⇓P P 07 32 10.6 -0.3
baz=50
K07A Rock Creek Ran 50.71 299 P P 07 32 13.0 +0.8
baz=50,SNR=10
L13A Double Diamond 50.72 294 ⇓P P 07 32 12.4 +0.1
baz=50
K06A Valley Falls 50.72 300 ⇓P P 07 32 13.4 +1.1
baz=50
L12A House Creek Ra 50.78 295 ⇓P P 07 32 12.8 +0.1
baz=50
K05A Sumner Lake 50.86 301 ⇓P P 07 32 14.6 +1.3
baz=51
HWUT Hardware Ranch 50.91 292 eP P 07 32 13.7 0.0
comp=Z,10.0nm,1.0s,mb4.7
HWUT Hardware Ranch 50.91 292 eP P 07 32 13.7 -0.1
comp=Z,10.0nm,1.0s,mb4.7
L10A Juniper Basin 51.01 296 ⇓P P 07 32 14.6 +0.1
baz=51
K04A Chilguin 51.06 302 ⇓P P 07 32 15.3 +0.4
baz=51
K02A Glendale 51.09 303 ⇓P P 07 32 15.8 +0.7
baz=51
L08A Fields 51.11 298 ⇓P P 07 32 15.1 -0.1
baz=51
L09A Wilkinson Ranc 51.20 298 ⇑P P 07 32 16.4 +0.5
baz=51
M14A Sheep Mountain 51.22 293 ⇓P P 07 32 16.1 0.0
baz=51
L07A Adell 51.39 299 P P 07 32 18.3 +1.0
baz=51,SNR=6.2
M13A Montello 51.46 294 ⇓P P 07 32 17.8 -0.1
baz=51
M12A Wells 51.49 295 P P 07 32 18.8 +0.7
baz=51,SNR=5.8
L05A Lakeview 51.52 301 ⇑P P 07 32 19.3 +1.0
baz=51
M10A I.L. Ranch, Tu 51.57 296 ⇓P P 07 32 19.2 +0.6
baz=51
M11A Holland Ranch, 51.57 296 ⇓P P 07 32 19.6 +0.9
baz=51
MOD Modoc 51.61 300 eP P 07 32 18.7 -0.3
MOD Modoc 51.61 300 ⇑P P 07 32 19.7 +0.8
baz=51
MOD Modoc 51.61 300 eP P 07 32 18.7 -0.3
M09A Marrel Ranch, 51.77 297 ⇓P P 07 32 21.2 +1.0
baz=52
M08A Happy Creek Ra 51.85 298 P P 07 32 21.7 +1.0
baz=52,SNR=6.6
N14A Grayback Hills 51.85 293 ⇓P P 07 32 20.6 -0.2
baz=52
M04C Macdoel 51.89 301 ⇑P P 07 32 20.8 -0.3
baz=52
N13A Wendover, West 51.96 294 ⇓P P 07 32 22.2 +0.5
baz=52
M07A Soldier Meadow 51.99 299 ⇑P P 07 32 22.9 +1.0
baz=52
N12A Clover Valley, 52.06 295 ⇓P P 07 32 22.9 +0.6
baz=52
M05C Lookout 52.24 301 ⇓P P 07 32 24.1 +0.4
baz=52
M06C Likely Place G 52.32 300 ⇑P P 07 32 25.0 +0.7
baz=52
N09A Rock Creek Ran 52.34 297 ⇓P P 07 32 25.1 +0.7
baz=52
M02C Callahan 52.39 302 ⇑P P 07 32 25.1 +0.3
baz=52
M03C McCloud 52.43 302 ⇑P P 07 32 25.0 0.0
baz=52
DUG Dugway 52.45 293 ⇓P P 07 32 25.2 0.0
baz=52
O12A Currie 52.60 294 ⇓P P 07 32 25.9 -0.4
baz=52
O13A Hicks Ranch, I 52.65 294 ⇓P P 07 32 26.8 +0.1
baz=52
N06A Buffalo Meadow 52.70 299 P P 07 32 27.6 +0.5
baz=52,SNR=6.8
SMCO Snowmass 52.77 287 eP P 07 32 27.4 -0.2
comp=Z,12nm,0.9s,mb4.8
SMCO Snowmass 52.77 287 eP P 07 32 27.5 -0.1
comp=Z,12nm,0.9s,mb4.8
O11A Cowboy Ranch, 52.84 295 ⇑P P 07 32 28.5 +0.4
baz=53
HHC Hu-ho-hao-te 52.92 58 eP P 07 32 30.1 +1.4
HHC AP pP 07 32 34.3 +2.4
HHC XP sP 07 32 37.3 +4.2
HHC PP PP 07 34 28.8 +0.9
HHC PCS PcS 07 37 36.8 +0.7
HHC S S 07 39 55.8 -1.6
HHC AMB AMB
comp=Z,11nm,0.7s,mb4.9
HHC AMB AMB
comp=Z,98nm,5.6s
HHC LR LR
comp=N,114nm,16.7s,MS4.4
HHC LR LR
comp=E,271nm,17.8s,MS4.4
HHC LR LR
comp=Z,94nm,15.5s,MS3.9
O09A Fish Creek Ran 52.98 297 ⇑P P 07 32 29.6 +0.5
baz=53
N02C Big Bar 53.00 303 ⇑P P 07 32 29.4 +0.2
baz=53
TMUT Trail Mountain 53.15 291 eP P 07 32 30.2 -0.2
TMUT Trail Mountain 53.15 291 eP P 07 32 30.2 -0.3
O07A Toulon 53.17 298 ⇑P P 07 32 30.9 +0.3
baz=53
SRU San Rafael 53.26 290 eP P 07 32 31.1 -0.1
comp=Z,2.6nm,0.5s,mb4.4
SRU San Rafael 53.26 290 eP P 07 32 31.1 -0.1
SRU pmax pmax
comp=Z,3.0nm,0.5s,mb4.5
SRU San Rafael 53.26 290 eP P 07 32 31.1 -0.1
comp=Z,2.6nm,0.5s,mb4.4
O04C Chester 53.26 301 P P 07 32 31.8 +0.6
baz=53,SNR=5.3
O06A Flanigan 53.27 299 ⇓P P 07 32 31.9 +0.6
baz=53
P13A Bates Ranch, G 53.32 294 ⇓P P 07 32 31.7 0.0
baz=53
P12A McGill 53.41 294 P P 07 32 32.6 +0.3
baz=53,SNR=9.4
P11A Circle Ranch, 53.42 295 ⇓P P 07 32 32.9 +0.4
baz=53
Q13A Wheeler Ranch, 53.82 294 ⇑P P 07 32 35.4 0.0
baz=54
Q12A Willow Creek R 53.83 294 ⇓P P 07 32 35.9 +0.5
baz=54
PV01 Paradox Valley 53.99 288 eP P 07 32 36.7 +0.1
PV01 Paradox Valley 53.99 288 eP P 07 32 36.7 +0.1
SDCO Great Sand Dun 54.00 285 eP P 07 32 36.5 -0.2
comp=Z,11nm,1.4s,mb4.6
SDCO Great Sand Dun 54.00 285 eP P 07 32 36.5 -0.2
comp=Z,11nm,1.4s,mb4.6
MSU Marysvale 54.04 292 eP P 07 32 36.8 -0.2
MSU Marysvale 54.04 292 eP P 07 32 36.8 -0.2
ORV Oroville 54.06 301 ⇓P P 07 32 38.7 +1.6
baz=54
Q11A Duckwater 54.11 295 P P 07 32 37.5 0.0
baz=54,SNR=5.9
P05C Yuba Gap, Truc 54.21 300 ⇑P P 07 32 38.2 0.0
baz=54
Q10A Clear Creek Ra 54.22 296 ⇓P P 07 32 38.8 +0.6
baz=54
Q08A Gabbs 54.35 297 ⇓P P 07 32 39.4 +0.2
baz=54
R12A Pony Springs, 54.51 294 ⇑P P 07 32 39.7 -0.6
baz=54
R11A Troy Canyon, C 54.60 295 ⇑P P 07 32 40.6 -0.4
baz=54
R10A Warm Springs 54.74 296 P P 07 32 42.6 +0.6
baz=54,SNR=6.8
R10A ⇓pP pP 07 32 50.1 +4.9
baz=54
R05C Kirkwood Meado 54.75 299 ⇑P P 07 32 42.7 +0.6
baz=54
R09A Tonopah 54.87 296 ⇓P P 07 32 42.4 -0.7
baz=55,SNR=6.0
R08A Mina 54.88 297 ⇓P P 07 32 43.5 +0.4
baz=55
MVCO Mesa Verde 54.89 288 eP P 07 32 43.9 +0.7
MVCO Mesa Verde 54.89 288 P P 07 32 44.0 +0.8
baz=55,SNR=6.0
S14A Cedar City 54.90 293 ⇑P P 07 32 43.4 +0.1
baz=55
Q03C Winters 55.03 301 ⇓P P 07 32 45.2 +1.1
baz=55
CCUT Cedar City 55.13 293 eP P 07 32 44.8 -0.1
S10A Tonopah Range, 55.13 296 ⇓P P 07 32 44.7 -0.2
baz=55
S10A ⇓pP pP 07 32 52.2 +4.1
baz=55
S13A Holt Ranch, En 55.16 293 ⇑P P 07 32 45.3 +0.2
baz=55
S13A ⇑pP pP 07 32 52.2 +3.9
baz=55
R07C Lee Vining 55.24 298 ⇓P P 07 32 46.8 +1.1
baz=55
R07C ⇑pP pP 07 32 52.5 +3.7
baz=55
S12A Delamar Landin 55.24 294 ⇑P P 07 32 46.4 +0.7
baz=55
R04C Big Horse Ranc 55.28 300 ⇑P P 07 32 46.5 +0.6
baz=55
CVS Carmenet Viney 55.36 301 ⇑P P 07 32 47.1 +0.6
baz=55
CVS ⇓pP pP 07 32 52.2 +2.5
baz=55
S09A Goldfield 55.40 296 ⇑P P 07 32 46.2 -0.6
baz=55
T15A Red Dirt Ranch 55.54 292 ⇑P P 07 32 47.7 -0.1
baz=55
T14A Hurricane 55.58 292 ⇓P P 07 32 48.1 0.0
baz=55
T11A Corn Creek, Al 55.65 294 ⇑P P 07 32 48.8 +0.1
baz=55
BDM Black Diamond 55.68 301 ⇓P P 07 32 49.1 +0.2
baz=55
T13A Saint George 55.72 293 ⇑P P 07 32 49.2 +0.1
baz=56
S08C White Mtn Res 55.73 297 ⇑P P 07 32 49.8 +0.7
baz=56,SNR=5.6
TPNV Topopah Spring 56.05 295 eP P 07 32 51.2 -0.3
comp=Z,6.4nm,1.0s,mb4.6
TPNV Topopah Spring 56.05 295 eP P 07 32 51.3 -0.2
TPNV pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
TPNV Topopah Spring 56.05 295 ⇑P P 07 32 50.9 -0.7
baz=56
TPNV ⇑pP pP 07 32 59.0 +4.3
baz=56
U13A Pakoon Wash 56.32 293 ⇓P P 07 32 53.8 +0.4
baz=56
ANMO Albuquerque 56.88 286 eP P 07 32 57.2 -0.2
WUAZ Wupatki 56.91 290 eP P 07 32 57.4 -0.2
comp=Z,6.1nm,0.9s,mb4.6
WUAZ Wupatki 56.91 290 ⇓P P 07 32 57.6 0.0
baz=57
RCTC Rector, Farmer 57.02 298 ⇑P P 07 32 58.6 +0.2
baz=57
RCTC ⇓pP pP 07 33 06.5 +4.9
baz=57
V11A Goodsprings 57.06 294 ⇓P P 07 32 59.1 +0.4
baz=57
V11A ⇓pP pP 07 33 06.1 +4.3
baz=57
MPMC Manual Prospec 57.07 296 P P 07 32 59.4 +0.6
baz=57,SNR=6.6
MPMC ⇑pP pP 07 33 07.1 +5.1
baz=57
V12A Nelson 57.10 294 ⇑P P 07 32 59.4 +0.4
baz=57,SNR=7.0
V12A ⇓pP pP 07 33 06.5 +4.3
baz=57
W14A Seligman 57.41 292 P P 07 33 01.7 +0.6
baz=57,SNR=7.6
W14A ⇓pP pP 07 33 09.7 +5.3
baz=57
ISA Isabella 57.58 297 ⇑P P 07 33 02.5 +0.2
baz=57
W13A Hualapai Mount 57.61 293 ⇓P P 07 33 02.8 +0.2
baz=57
W13A ⇓pP pP 07 33 09.6 +3.8
baz=57
GSC Goldstone 57.74 296 ⇑P P 07 33 04.0 +0.4
baz=58,SNR=5.2
GSC ⇓pP pP 07 33 11.2 +4.5
baz=58
X15A Humboldt 58.02 291 P P 07 33 06.1 +0.6
baz=58,SNR=6.2
SMMC Simmler 58.09 299 ⇑P P 07 33 06.9 +0.9
baz=58
X13A Yucca 58.10 293 ⇓P P 07 33 05.8 -0.3
baz=58
X13A ⇑pP pP 07 33 13.4 +4.2
baz=58
X14A Yava 58.12 292 ⇓P P 07 33 06.9 +0.7
baz=58
X14A ⇓pP pP 07 33 14.0 +4.7
baz=58
GMRC Granite Mounta 58.13 294 ⇓P P 07 33 06.3 +0.1
baz=58
GMRC ⇑pP pP 07 33 13.8 +4.3
baz=58
HEC Hector,Ludlow 58.16 295 ⇓P P 07 33 06.9 +0.5
baz=58
HEC ⇓pP pP 07 33 14.1 +4.5
baz=58
EDW2 Edwards Air Fo 58.30 297 ⇓P P 07 33 07.6 +0.2
baz=58
PDMCI Parker Dam,Lak 58.43 293 ⇓P P 07 33 08.5 +0.2
baz=58
PDMCI ⇓pP pP 07 33 15.7 +4.2
baz=58
Y14A Wickenburg 58.66 292 ⇓P P 07 33 10.3 +0.4
baz=58
Y14A ⇓pP pP 07 33 17.6 +4.5
baz=58
IRM Iron Mountain 58.68 294 ⇓P P 07 33 10.4 +0.3
baz=58
IRM ⇓pP pP 07 33 17.6 +4.3
baz=58

BBRC	**Big Bear Sol-O**	**58.78**	**296**	⇓P		pP		07 33 18.9	+4.8
	baz=58								
Y13A	**Salome**	**58.87**	**292**	⇓P		**P**		**07 33 11.9**	**+0.5**
	baz=59								
Y13A				⇑pP		pP		07 33 19.3	+4.6
	baz=59								
BELC	**Belle Mtn.**	**58.94**	**295**	⇓P		**P**		**07 33 12.3**	**+0.4**
	baz=59								
BELC				⇓pP		pP		07 33 20.1	+5.0
	baz=59								
Y12C	**Blythe**	**59.02**	**293**	⇓P		**P**		**07 33 12.7**	**+0.3**
	baz=59								
Y12C				⇓pP		pP		07 33 20.0	+4.4
	baz=59								
BLG	**Laguna Peak**	**59.18**	**298**	⇓pP		pP		07 33 20.4	+3.7
	baz=59								
PFO	**Pinyon Flat Ob**	**59.38**	**295**	⇓pP		pP		07 33 21.7	+3.6
	baz=59								
MJAR	**Matsushiro Arr**	**59.57**	**33**	P		**P**		**07 33 14.8**	**-1.4**
MJAR	**Matsushiro Arr**	**59.57**	**33**	P		**P**		**07 33 14.8**	**-1.4**
	comp=Z,2.1nm,0.9s,mb4.2,baz=343,slow=8.5,SNR=5.1								
GLA	**Glamis**	**59.74**	**293**	⇑P		**P**		**07 33 16.9**	**-0.5**
	baz=60								
GLA				⇑pP		pP		07 33 25.5	+4.8
	baz=60								
116A	**Eloy**	**59.86**	**290**	⇑P		**P**		**07 33 18.1**	**-0.2**
	baz=60								
TUC	**Tucson**	**60.00**	**289**	*e*P		**P**		**07 33 18.9**	**-0.4**
	comp=Z,2.1nm,0.8s,mb4.2								
TUC	**Tucson**	**60.00**	**289**	*e*P		**P**		**07 33 18.9**	**-0.3**
TUC				pmax		pmax			
	comp=Z,2.0nm,0.8s,mb4.2								
218A	**Dragoon**	**60.25**	**289**	⇑P		**P**		**07 33 21.2**	**+0.3**
	baz=60								
JCT	**Junction City**	**60.47**	**278**	*e*P		**P**		**07 33 22.1**	**-0.4**
217A	**Green Valley**	**60.53**	**289**	⇑P		**P**		**07 33 23.0**	**+0.1**
	baz=60								
319A	**Douglas**	**60.74**	**288**	⇓P		**P**		**07 33 24.1**	**-0.2**
	baz=60								
318A	**Bisbee**	**60.77**	**288**	⇓P		**P**		**07 33 24.3**	**-0.2**
	baz=60								
CD2	**Chengdu**	**61.88**	**67**	*e*P		**P**		**07 33 32.3**	**+0.3**
CD2				AP		pP		07 33 36.9	+1.6
CD2				XP		sP		07 33 39.6	+3.1
CD2				PP		PP		07 35 50.6	+2.8
CD2				S		**S**		**07 41 53.4**	**-1.9**
CD2				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb5.0								
CD2				AMB		AMB			
	comp=Z,20nm,5.8s								
CD2				LR		LR			
	comp=N,110nm,13.2s								
CD2				LR		LR			
	comp=Z,160nm,10.8s,MS4.4								
NJ2	**Nanjing**	**62.38**	**52**	*e*P		**P**		**07 33 40.3**	**+4.9**
NJ2				AMB		AMB			
	comp=Z,20nm,0.5s,mb5.5								
GYA	**Guiyang**	**66.61**	**65**	*e*P		**P**		**07 34 05.3**	**+2.2**
GYA				AP		pP		07 34 09.8	+3.5
GYA				XP		sP		07 34 12.4	+4.9
GYA				PCP		PcP		07 34 34.3	+2.0
GYA				PP		PP		07 36 33.4	+4.0
GYA				SCP				07 38 36.4	
GYA				S		S		07 42 54.8	+0.8
GYA				SKS				07 43 57.6	
GYA				AMB		AMB			
	comp=Z,10.0nm,0.6s,mb5.0								
GYA				AMB		AMB			
	comp=Z,80nm,5.2s								
GYA				LR		LR			
	comp=N,350nm,18.8s,MS4.8								
GYA				LR		LR			
	comp=E,430nm,19.0s,MS4.8								
GYA				LR		LR			
	comp=Z,490nm,18.4s,MS4.8								
KMI	**Kunming**	**67.48**	**69**	P		**P**		**07 34 10.6**	**+2.0**
KMI				S		S		07 43 04.0	-0.4
KMI				AMB		AMB			
	comp=Z,7.0nm,0.6s,mb4.9								
KMI				LR		LR			
	comp=Z,79nm,25.5s,MS3.8								
TORD	**Torodi Ar. Bea**	**69.79**	**172**	P		**P**		**07 34 21.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**69.79**	**172**	P		**P**		**07 34 21.8**	**-1.3**
	comp=Z,2.3nm,1.1s,mb4.0,baz=342,slow=4.6,SNR=6.6								
ASAR	**Alice Springs**	**118.92**	**43**	PKP		PKPdf		07 42 01.6	+0.7
	comp=Z,0.2nm,0.5s,baz=350,slow=10,SNR=5.5								
PLCA	**Paso Flores**	**127.19**	**240**	PKIKP		PKPdf		07 42 15.9	-0.2
PLCA				pmax		pmax			
	comp=Z,3.0nm,0.7s								
PLCA	**Paso Flores**	**127.19**	**240**	PKP		PKPdf		07 42 15.8	-0.3
	comp=Z,2.6nm,0.7s,baz=44,slow=3.5,SNR=7.8								

MEX 24 07:36:09.0±0.8, 1562N×9609W, h13$^{km}_{\pm 3}$, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
HUIG	**Huatulco**	**0.15**	**352**	*i* P	Pg	07	36 12.1	-0.4
HUIG				*i* S	Sg	07	36 14.6	-0.5
VHO	**Vista Hermosa**	**1.57**	**337**	*i* P	Pn	07	36 33.7	-2.9
VHO				*i* S	Sn	07	36 51.8	-5.0
OXX	**Oaxaca**	**1.57**	**337**	*e*P	Pn	07	36 32.0	-4.7
CMIG	**Matias Romero**	**1.86**	**38**	*i* P	Pn	07	36 36.2	-4.4
CMIG				*i* S	Sn	07	36 60.0	-4.1

MOS ***24*** *07:39:37.5±1.3, 4256S×4206E, h10^{km}, mb5.6/31, MS5.0/38, Error ellipse: s-maj=18.0km s-min=6.5km az=102.5*

BJI ***24*** *07:39:37.9, 4238S×4167E, h19^{km}, mB5.6, mb5.3, Ms5.4, Msz5.1*

IDC ***24*** *07:39:37.3±0.4, 4270S×42.11E, h0^{km}, mb5.0/22, mb1 5.0/24, mb1mx5.0/24, mbtmp5.0/24, ML4.1/2, MS4.8/19, Ms1 4.8/19, ms1mx4.8/19, Error ellipse: s-maj=17.4km s-min=10.6km az=63.0*

ISCJB ***24*** *07:39:37.1±0.2, 4266S±004×4200E±007, h10^{km}, mb5.2/84, MS5.0/147, Error ellipse: s-maj=7.2km s-min=5.4km az=159.4*

GCMT ***24*** *07:39:38.7±0.1, 4257S×42.19E, h12^{km}, MW5.4/100, Moment Tensor Solution. s64,c97; s100,c193; Duration: 1ŝ3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.73±.02; $M_{\theta\theta}$1.56±.02; $M_{\phi\phi}$0.16±.02; $M_{r\theta}$0.01±.06; $M_{\theta\phi}$-0.47±.02; $M_{\phi r}$0.03±.06; Best double couple: $M_0$1.71600×10^{17} NP1:ϕ_s108.00000°, δ45.00000°, λ-88.00000°. NP2:ϕ_s286.00000°, δ45.00000°, λ-92.00000°. Principal axes: T 1.7020, Plg0.0000°, Azm17.0000°; N 0.0240, Plg1.0000°, Azm287.0000°; P -1.7310, Plg89.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***24*** *07:39:38.6±0.2, 4263S×4204E, h10^{km}, mb4.8, mb5.3/43, MS5.0/120 Error ellipse: s-maj=8.8km s-min=5.9km az=59.0*

ISC 24 07:39:38.8±0.2, **4265S**±004×**4197E**±006, **h10**^{km}, **(h12**$^{km}_{\pm}$, 9^{km}**:pP-P), n447**, σ**1ŝ08**/270, **mb5.2**/84, **MS5.0**/147, **14C-10D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BOSA	**Boshof**	**19.46**	**311**	P	**Pn**	**07**	**44 08.0**	**+1.2**
	0.5nm,0.3s,baz=142,slow=13,SNR=14							
BOSA				S	**Sn**	**07**	**47 29.2**	**-16**
	0.3nm,0.3s,baz=261,slow=14,SNR=3.1							
BOSA				LR	LR	07	50 04.2	
	comp=Z,3μm,20.7s,baz=144,slow=32							
SUR	**Sutherland**	**19.62**	**295**	*e*P	**Pn**	**07**	**44 09.0**	**+0.4**
	376nm,2.0s							
SUR	**Sutherland**	**19.62**	**295**	P	**Pn**	**07**	**44 09.4**	**+0.8**
	0.5nm,0.3s,baz=125,slow=12,SNR=7.9							
SUR				S	**Sn**	**07**	**47 36.1**	**-13**
	0.4nm,0.3s,baz=280,slow=18,SNR=3.7							
SUR				LR	LR	07	50 05.8	
	comp=Z,1μm,20.6s,baz=301,slow=32							
LBTB	**Lobatse**	**22.17**	**317**	*e*P	**P**	**07**	**44 35.5**	**+0.7**
	25nm,0.8s,mb4.7							
LBTB	**Lobatse**	**22.17**	**317**	*e*P	**P**	**07**	**44 35.5**	**+0.7**
LBTB				pmax	pmax			
	comp=Z,25nm,0.8s,mb4.7							
LBTB	**Lobatse**	**22.17**	**317**	P	**P**	**07**	**44 35.7**	**+0.9**
	comp=Z,45nm,1.0s,mb4.8,baz=159,slow=11,SNR=30							
LBTB				S	**S**	**07**	**48 37.6**	**-1.5**
	comp=Z,5.3nm,0.8s,baz=60,slow=23,SNR=2.5							
LBTB				LR	LR	07	51 46.4	
	comp=Z,4μm,19.2s,MS4.9,baz=153,slow=33							
OPO	**Ambohidratompo**	**24.41**	**12**	P	**P**	**07**	**44 58.9**	**+1.6**
	comp=Z,14nm,0.7s,mb4.5,baz=194,slow=8.3,SNR=28							
MATP	**Matopo**	**24.89**	**329**	P	**P**	**07**	**45 01.6**	**-0.2**
	comp=Z,88nm,0.9s,mb5.3,baz=157,slow=9.2,SNR=94							
MATP				LR	LR	07	53 30.2	
	comp=Z,4μm,19.6s,MS4.9,baz=160,slow=33							
SYO	**Syowa Base**	**26.45**	**182**	⇓*e*P	**P**	**07**	**45 13.2**	**-2.2**
SYO	**Syowa Base**	**26.45**	**182**	⇓*e*pP	**P**	**07**	**45 17.6**	**+2.2**
MAW	**Mawson**	**27.42**	**163**	P	**P**	**07**	**45 24.3**	**+0.1**
	comp=Z,36nm,1.0s,mb4.9,baz=315,slow=10,SNR=14							
MAW				LR	LR	07	53 40.1	
	comp=Z,2μm,20.2s,MS4.8,baz=327,slow=31							
LSZ	**Lusaka**	**29.74**	**332**	*e*P	**P**	**07**	**45 45.9**	**+0.6**
	comp=Z,293nm,2.2s,mb5.6							
LSZ				LR	LR			
	comp=Z,2μm,20.0s,MS4.8							
LSZ	**Lusaka**	**29.74**	**332**	*e*P	**P**	**07**	**45 45.9**	**+0.6**
LSZ				pmax	pmax			
	comp=Z,293nm,2.2s,mb5.6							
LSZ				MLR	MLR			
	comp=Z,2μm,20.0s,MS4.8							
LSZ	**Lusaka**	**29.74**	**332**	P	**P**	**07**	**45 46.4**	**+1.1**
	SNR=20

comp=Z,56nm,1.5s,mb5.3
KAKA Kakadu 81.85 100 *e*P **P 07 51 57.9 -0.5**
SHL Shillong 81.99 44⇓*i*P **P 07 51 59.0 +0.2**
SHL *e*S S 08 02 14.0 +1.2
ANTO Ankara 82.56 353 PFAKE 07 52 10.0 +8.6
ANTO LR LR
comp=Z,749nm,19.0s,MS5.1
ARMA Armidale 82.78 125 *e*P **P 07 52 04.1 +1.0**
KEST Kesra 83.51 334 P **P 07 52 08.4 +2.0**
comp=Z,8.7nm,1.1s,mb4.8,baz=209,slow=5.4,SNR=8.5
KEST LR LR 08 31 05.7
comp=Z,360nm,18.1s,MS4.8,baz=161,slow=37
LSA Lhasa 85.02 41 P **P 07 52 15.3 +1.1**
LSA Lhasa 85.02 41 *e*P **P 07 52 15.3 +1.0**
comp=Z,127nm,1.5s,mb5.8
LSA LR LR
comp=Z,428nm,19.0s,MS4.9
LSA Lhasa 85.02 41 *e*P **P 07 52 15.3 +1.1**
LSA pmax pmax
comp=Z,127nm,1.5s,mb5.8
LSA MLR MLR
comp=Z,428nm,19.0s,MS4.9
ZEI Tsey 85.05 1 *e*P **P 07 52 15.2 +1.1**
ZEI pmax pmax
comp=Z,18nm,1.4s,mb5.0
MAK Makhachkala 85.37 4 *e*P **P 07 52 15.9 +0.2**
MAK *e*S S 08 02 38.9 -7.3
MAK pmax pmax
comp=Z,37nm,0.4s,mb5.9
MAK MLR MLR
comp=Z,1μm,20.0s,MS5.3
LCO Las Campanas 85.61 234 *e*P **P 07 52 18.4 +0.9**
comp=Z,45nm,1.4s,mb5.5
LCO LR LR
comp=Z,1μm,22.0s,MS5.2
SOC Sochi 85.87 358 *e*P **P 07 52 17.7 -0.4**
SOC *e*S S 08 02 39.3 -12
SOC MLR MLR
comp=Z,680nm,20.0s,MS5.0
KIV Kislovodsk 86.22 1 P **P 07 52 21.9 +2.0**
comp=Z,194nm,1.1s,mb6.2,SNR=6.6
KIV Kislovodsk 86.22 1 *e*P **P 07 52 20.7 +0.8**
comp=Z,89nm,1.4s,mb5.8
KIV LR LR
comp=Z,614nm,21.0s,MS5.0
KIV Kislovodsk 86.22 1*d i*P **P 07 52 20.0 +0.1**
KIV *i* 07 52 27.7
KIV pmax pmax
comp=Z,90nm,1.6s,mb5.8
KIV MLR MLR
comp=Z,600nm,20.0s,MS5.0
KIV Kislovodsk 86.22 1 P **P 07 52 21.6 +1.7**
SNR=9.4
KIV Kislovodsk 86.22 1 P **P 07 52 21.6 +1.7**
SNR=9.4
CTA Charters Tower 86.59 114 *e*P **P 07 52 21.7 -0.8**
comp=Z,8.9nm,1.5s,mb4.8
CTA Charters Tower 86.59 114 *e*P **P 07 52 21.7 -0.8**
CTA pmax pmax
comp=Z,9.0nm,1.5s
CTAO Charters Tower 86.59 114 PFAKE 07 52 30.0 +7.5
CTAO LR LR
comp=Z,527nm,19.0s,MS5.0
QIZ Qiongzhong 87.47 61 P **P 07 52 27.4 +0.8**
QIZ PP PP 07 55 51.6 0.0
QIZ S S 08 03 07.9 +0.2
QIZ PS 08 04 14.1
QIZ SS SS 08 08 55.5 +2.1
QIZ AMB AMB
comp=Z,20nm,1.5s,mb5.1
QIZ AMB AMB
comp=Z,104nm,3.7s
QIZ LR LR
comp=N,422nm,18.4s
QIZ LR LR
comp=Z,564nm,24.7s
QIZ Qiongzhong 87.47 61 PFAKE 07 52 40.0 +13
QIZ LR LR
comp=Z,240nm,19.0s,MS4.6
KMI Kunming 87.62 52 P **P 07 52 28.0 +0.8**
KMI AP pP 07 52 31.1 +0.6
KMI PP PP 07 55 56.1 +3.3
KMI PPP 07 57 54.4
KMI SKS 08 02 55.3
KMI S S 08 03 08.3 -0.5
KMI XS sS 08 03 15.8 +1.4
KMI PS 08 04 14.8
KMI SS SS 08 08 56.6 +1.1
KMI SSS 08 12 32.4
KMI AMB AMB
comp=Z,33nm,1.5s,mb5.3
KMI AMB AMB
comp=Z,186nm,3.1s
KMI LR LR
comp=N,309nm,16.6s,MS5.0
KMI LR LR
comp=E,336nm,18.0s,MS5.0
KMI LR LR
comp=Z,663nm,24.2s
AML Almayashu 89.10 23 *e*P **P 07 52 30.6 -3.2**
comp=Z,6.4nm,0.6s,mb5.1
AML LR LR
comp=Z,423nm,21.0s,MS4.8
PLOR Plostina 89.17 349 P **P 07 52 35.7 +1.8**
VRI Vrincioaia 89.17 349 P **P 07 52 35.6 +1.6**
VRI Vrincioaia 89.17 349⇓*i*P **P 07 52 35.1 +1.1**
GZR Gura Zlata 89.32 347 P **P 07 52 36.6 +2.0**
GZR Gura Zlata 89.32 347⇑*i*P **P 07 52 34.9 +0.3**
UCH Uchtor 89.43 24 PFAKE 07 52 50.0 +15
UCH LR LR
comp=Z,423nm,21.0s,MS4.8
EKS2 Erkin-Say 89.62 23 *e*P **P 07 52 36.5 +0.3**
comp=Z,3.3nm,0.6s,mb4.8
EKS2 LR LR
comp=Z,391nm,20.0s,MS4.8
URZ Urewera 89.73 146 P **P 07 52 35.8 -1.4**
comp=Z,18nm,1.0s,mb5.3,baz=245,slow=2.5,SNR=3.9
BZS Buzias 89.74 346 P **P 07 52 38.3 +1.7**
BZS Buzias 89.74 346⇓*i*P **P 07 52 37.5 +0.9**
AAK Ala-Archa 89.80 23 P **P 07 52 36.2 -0.8**
comp=Z,58nm,0.4s,SNR=6.6
FRU Bishkek 90.02 23 *e*P **P 07 52 37.0 -1.0**
FRU pmax pmax
comp=Z,50nm,1.8s,mb5.5
KIS Kishinev 90.02 351⇑*i*P **P 07 52 38.0 +0.1**
KIS *i* pP 07 52 42.0 +0.7
KIS pmax pmax
comp=Z,290nm,2.0s
KIS MLR MLR
comp=Z,800nm,20.0s
KIS MLR MLR
comp=Z,800nm,20.0s
KIS Kishinev 90.02 351⇑*i*P **P 07 52 38.0 +0.1**
comp=Z,300nm,2.0s
KIS LRM 08 33 42.0
comp=Z,800nm,20.0s
TKM2 Tokmak 2 90.39 24 *e*P **P 07 52 38.9 -0.8**
comp=Z,2.7nm,0.4s,mb4.9
TKM2 LR LR
comp=Z,333nm,22.0s,MS4.7
TKM2 Tokmak 2 90.39 24 *e*P **P 07 52 38.9 -0.8**
TKM2 pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
TKM2 MLR MLR
comp=Z,333nm,22.0s,MS4.7
DRGR 90.68 347⇑P **P 07 52 42.5 +1.5**
DRGR 90.68 347⇑*i*P **P 07 52 42.5 +1.5**
GYA Guiyang 90.94 54 P **P 07 52 42.8 +0.1**
GYA PP PP 07 56 24.3 +5.0
GYA PPP 07 58 24.8
GYA SKS 08 03 15.3
GYA S S 08 03 40.6 +0.7
GYA PS PS 08 04 52.8 +3.9
GYA AMB AMB
comp=Z,20nm,1.3s,mb5.3
GYA AMB AMB
comp=Z,140nm,6.4s
GYA LR LR
comp=N,850nm,21.8s,MS5.2
GYA LR LR
comp=E,630nm,22.0s,MS5.2
GYA LR LR
comp=Z,890nm,21.4s,MS5.2
LMR La Mourre 91.33 335 *e*P **P 07 52 42.9 -1.2**
FRF La Foret Royal 91.49 335 *e*P **P 07 52 43.5 -1.3**
comp=Z,39nm,1.2s,mb5.3
FRF La Foret Royal 91.49 335 *e*P **P 07 52 43.5 -1.3**
comp=Z,20nm,1.3s,mb5.3
FRF La Foret Royal 91.49 335 *e*P **P 07 52 43.5 -1.3**
FRF pmax pmax
comp=Z,19nm,1.3s,mb5.3
SBF Sospel 91.52 336 *e*P **P 07 52 43.6 -1.4**
ESDC Sonseca Array 91.91 326 P **P 07 52 47.4 +0.5**
ESDC LR LR
ESDC Sonseca Array 91.91 326 P **P 07 52 47.4 +0.5**
comp=Z,3.5nm,0.7s,mb4.8,baz=159,slow=4.9,SNR=11
ESDC LR LR 08 34 41.5
comp=Z,475nm,19.4s,MS5.0,baz=140,slow=36
ESLA Sonseca Array 91.91 326 PFAKE 07 53 00.0 +13
ESLA LR LR
comp=Z,4μm,19.0s,MS5.8
PAB San Pablo 91.95 326 PFAKE 07 53 00.0 +13
PAB LR LR
comp=Z,523nm,20.0s,MS5.0
SMRF Simiane la Rot 92.20 335 *e*P **P 07 52 46.8 -1.3**
PSZ Piszkesteto 92.27 345 *e*P **P 07 52 49.3 +1.0**
comp=Z,22nm,1.5s,mb5.3
PSZ Piszkesteto 92.27 345 *e*P **P 07 52 49.3 +1.0**
PSZ pmax pmax
comp=Z,22nm,1.5s,mb5.3
PSZ Piszkesteto 92.27 345⇑*e*PcP PcP 07 52 49.4 +0.3
PSZ Piszkesteto 92.27 345⇑*i*P **P 07 52 55.4 +7.1**
MBDF Montbardon 92.50 336 *e*P **P 07 52 48.5 -1.0**
comp=Z,12nm,0.9s,mb5.0
MBDF Montbardon 92.50 336 *e*P **P 07 52 48.5 -1.0**
comp=Z,5.8nm,0.9s,mb5.0
MBDF Montbardon 92.50 336 *e*P **P 07 52 48.5 -1.0**
MBDF pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
CD2 Chengdu 92.59 49⇑*i*P **P 07 52 50.4 +0.1**
CD2 AP pP 07 52 55.3 +1.7
CD2 XP sP 07 52 58.0 +3.2
CD2 PP PP 07 56 35.3 +3.0
CD2 SKS 08 03 22.0
CD2 S S 08 03 52.0 -2.6
CD2 XS sS 08 04 00.8 +0.6
CD2 PS PS 08 05 11.3 +4.1
CD2 SS SS 08 10 09.5 +2.0
CD2 AMB AMB
comp=Z,30nm,0.9s,mb5.7
CD2 AMB AMB
comp=Z,160nm,12.0s
CD2 LR LR
comp=N,530nm,21.6s,MS5.1
CD2 LR LR
comp=E,520nm,20.4s,MS5.1
CD2 LR LR
comp=Z,750nm,20.4s,MS5.1
KECS Kecovo 92.71 346 *e*P **P 07 52 51.3 +1.0**
KECS Kecovo 92.71 346 *e*P **P 07 52 51.2 +0.9**
MTLF Montolieu 92.74 332 *e*P **P 07 52 49.5 -1.1**
comp=Z,62nm,1.5s,mb5.5
MTLF Montolieu 92.74 332 *e*P **P 07 52 49.5 -1.1**
comp=Z,31nm,1.5s,mb5.5
MTLF Montolieu 92.74 332 *e*P **P 07 52 49.5 -1.1**
MTLF pmax pmax
comp=Z,31nm,1.5s,mb5.5
KOLS Kolonicke sedl 92.83 347 *e*P **P 07 52 52.2 +1.3**
LASF Ste Croix 92.84 334 *e*P **P 07 52 49.8 -1.3**
comp=Z,72nm,1.4s,mb5.6
CRVS Cervenica-Dubn 92.94 347 *e*P **P 07 52 52.9 +1.5**
ORIF Oris-en-Rattie 92.95 335 *e*P **P 07 52 50.2 -1.4**
comp=Z,87nm,1.7s,mb5.6
ORIF *e*MLR MLR
comp=Z,1μm,21.8s,MS5.1
ORIF Oris-en-Rattie 92.95 335 *e*P **P 07 52 50.2 -1.4**
comp=Z,44nm,1.7s,mb5.6
ORIF Oris-en-Rattie 92.95 335 *e*P **P 07 52 50.2 -1.4**
ORIF pmax pmax
comp=Z,44nm,1.7s,mb5.6
VYHS Vyhne 93.02 345 *e*P **P 07 52 52.9 +1.1**
comp=Z,8.9nm,1.5s,mb5.0
VYHS *e*PP PP 07 56 37.6 +2.2
VYHS Vyhne 93.02 345 *e*P **P 07 52 52.9 +1.1**
VYHS pmax pmax
comp=Z,9.0nm,1.5s,mb5.0
ZST Bratislava 93.09 344 *e*P **P 07 52 52.7 +0.6**
comp=Z,7.6nm,0.8s,mb5.2
ZST LR LR
comp=Z,300nm,17.5s,MS4.8
EPF Esparros 93.13 331 *e*P **P 07 52 51.1 -1.4**
comp=Z,62nm,1.3s,mb5.6
EPF Esparros 93.13 331 *e*P **P 07 52 51.1 -1.4**
comp=Z,31nm,1.3s,mb5.6
EPF Esparros 93.13 331 *e*P **P 07 52 51.1 -1.4**
EPF pmax pmax
comp=Z,31nm,1.3s,mb5.6
LPAZ La Paz 93.17 245 P **P 07 52 55.2 +1.8**
comp=Z,4.2nm,1.0s,mb4.8,baz=97,slow=9.6,SNR=8.9
LPAZ LR LR 08 32 32.7
comp=Z,263nm,18.7s,MS4.7,baz=278,slow=34
LPG La Plagne 93.21 336 *e*P **P 07 52 51.8 -0.9**
MODS Modra-Piesok 93.22 344 *e*P **P 07 52 53.7 +1.0**
LPL La Plagne 93.23 336 *e*P **P 07 52 51.6 -1.2**
VIVF Saint-Julien-l 93.27 334 *e*P **P 07 52 51.6 -1.5**
ETSF Etsaut 93.34 330 *e*P **P 07 52 52.3 -1.1**
comp=Z,30nm,1.2s,mb5.3
ETSF Etsaut 93.34 330 *e*P **P 07 52 52.3 -1.1**
comp=Z,15nm,1.2s,mb5.3
ETSF Etsaut 93.34 330 *e*P **P 07 52 52.3 -1.1**
ETSF pmax pmax
comp=Z,15nm,1.2s,mb5.3
STHS Stebnicka Huta 93.47 347 *e*P **P 07 52 55.1 +1.2**
comp=Z,2.8nm,1.1s,mb4.6
STHS Stebnicka Huta 93.47 347 *e*P **P 07 52 55.1 +1.2**
STHS pmax pmax
comp=Z,3.0nm,1.1s,mb4.6
VRSR Storozhevoye 93.52 358 *e*P **P 07 52 54.1 +0.1**
VRSR pmax pmax
comp=Z,4.0nm,1.2s,mb4.7
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,1.0nm,0.8s
KIEV Kiev 93.63 352 PFAKE 07 53 10.0 +15
KIEV LR LR
comp=Z,293nm,20.0s,MS4.7
AKASG Malin Array Be 93.64 352 P **P 07 52 54.1 -0.5**
comp=Z,0.2nm,0.3s,baz=180,slow=4.6,SNR=16
AKASG LR LR 08 36 03.6
comp=Z,217nm,20.7s,baz=165,slow=36
SJPF Ste Jean 93.78 330 *e*P **P 07 52 54.1 -1.3**
comp=Z,31nm,1.0s,mb5.4
SJPF Ste Jean 93.78 330 *e*P **P 07 52 54.1 -1.3**
comp=Z,15nm,1.0s,mb5.4
SJPF Ste Jean 93.78 330 *e*P **P 07 52 54.1 -1.3**
SJPF pmax pmax
comp=Z,15nm,1.0s,mb5.4
CAF Calviac 94.19 333 *e*P **P 07 52 55.9 -1.4**
CABF La Chapelle 94.41 336 *e*P **P 07 52 56.8 -1.4**
comp=Z,21nm,1.1s,mb5.2
CABF La Chapelle 94.41 336 *e*P **P 07 52 56.8 -1.4**
comp=Z,10nm,1.1s,mb5.2
CABF La Chapelle 94.41 336 *e*P **P 07 52 56.8 -1.4**
CABF pmax pmax
comp=Z,10.0nm,1.1s,mb5.2
GERES GERESS Array B 94.45 342 P **P 07 52 58.0 -0.4**
comp=Z,1.0nm,0.8s,mb4.3,baz=140,slow=2.9,SNR=5.1
GERES LR LR 08 36 20.6
comp=Z,359nm,20.6s,MS4.8,baz=140,slow=36
LFF La Frestale 94.66 332 *e*P **P 07 52 57.8 -1.6**
RJF Les Rejaudoux 94.71 333 *e*P **P 07 52 58.3 -1.3**
RJF *e*MLR MLR
comp=Z,1μm,19.0s,MS5.0
RJF Les Rejaudoux 94.71 333 *e*P **P 07 52 58.3 -1.3**
RJF MLR MLR
comp=Z,1μm,19.0s,MS5.4
KHC Kasperske Hory 94.74 342 *e*P **P 07 53 00.2 +0.5**
KHC AMS AMS 08 33 30.0
comp=Z,600nm,27.0s
SMF Signal de Mont 95.13 335 *e*P **P 07 53 00.2 -1.4**
HINF Hinteralfeld 95.28 337 *e*P **P 07 53 01.0 -1.2**
DPC Dobruska-Polom 95.30 344 *e*P **P 07 53 03.3 +1.1**
BFO Black Forest 95.33 338 PFAKE 07 53 10.0 +7.6
BFO LR LR
comp=Z,392nm,20.0s,MS4.9
PRU Pruhonice 95.33 343 *e*P **P 07 53 02.5 +0.1**
PRU AMS AMS 08 41 10.0
comp=Z,300nm,16.9s
WMQ Urumqi 95.33 31⇑P **P 07 53 03.3 +0.8**
WMQ AP pP 07 53 08.3 +2.4
WMQ XP sP 07 53 10.3 +3.2
WMQ PP PP 07 56 55.8 +2.3
WMQ SKS 08 03 37.3
WMQ *e*S S 08 04 15.3 -2.7
WMQ AMB AMB
comp=Z,12nm,1.3s,mb5.2
WMQ LR LR
comp=N,312nm,28.2s,MS4.7
WMQ LR LR
comp=E,202nm,30.1s,MS4.7
WMQ LR LR
comp=Z,457nm,29.4s,MS4.8
TCF Toulx Ste Croi 95.34 334 *e*P **P 07 53 01.3 -1.2**
BGF Bois d'Agland 95.37 334 *e*P **P 07 53 01.3 -1.4**
AVF Avril sur Loir 95.42 334 *e*P **P 07 53 01.4 -1.4**
UPC Upice 95.51 344 *e*P **P 07 53 04.5 +1.3**
HAU Haudompre 95.59 337 *e*P **P 07 53 02.4 -1.2**
HAU *e*MLR MLR
comp=Z,698nm,20.0s,MS4.8
HAU Haudompre 95.59 337 *e*P **P 07 53 02.4 -1.2**
HAU MLR MLR
comp=Z,700nm,20.0s,MS5.1
SSF Saint Saulge 95.61 335 *e*P **P 07 53 02.3 -1.4**
LOR Lormes 95.68 335 *e*P **P 07 53 02.8 -1.2**
comp=Z,2.4nm,0.4s,mb4.6
LOR *e*MLR MLR
comp=Z,724nm,18.5s,MS4.9
CDF Champ du Feu 95.70 338 *e*P **P 07 53 02.8 -1.3**
GRFO Grafenberg 95.83 340 PFAKE 07 53 20.0 +15
GRFO LR LR
comp=Z,446nm,20.0s,MS4.9
GRA1 Grafenberg Arr 95.83 341 *e*P **P 07 53 05.9 +1.3**
comp=Z,36nm,2.1s,mb5.4
GRA1 LR LR
comp=Z,400nm,20.2s,MS4.9
GRF Grafenberg Arr 95.83 341 *e*P **P 07 53 05.9 +1.3**
GRF pmax pmax
comp=Z,36nm,2.1s,mb5.4
GRF MLR MLR
comp=Z,400nm,20.2s,MS4.9
GRF Grafenberg Arr 95.83 341 *e*P **P 07 53 05.9 +1.3**
GRF pmax pmax
comp=Z,36nm,2.1s,mb5.4
GRF MLR MLR
comp=Z,400nm,20.2s,MS4.9
GRF Grafenberg Arr 95.83 341 *e*P **P 07 53 05.9 +1.3**
comp=Z,36nm,2.1s,mb5.4
GRF *e*L 08 36 22.5
comp=Z,382nm,20.2s
MKAR Makanchi Array 95.97 27 P **P 07 53 04.0 -1.4**
MKAR LR LR 08 33 48.0
MKAR Makanchi Array 95.97 27 P **P 07 53 04.0 -1.4**
comp=Z,1.2nm,0.8s,mb4.4,baz=217,slow=5.9,SNR=15
MKAR LR LR 08 33 48.0
comp=Z,272nm,20.4s,MS4.7,baz=200,slow=34
NKC Novy Kostel 96.04 341 AMS AMS 08 39 40.0
comp=Z,800nm,16.8s
MFF Saint Martin d 96.41 332 *e*P **P 07 53 05.7 -1.7**
comp=Z,49nm,1.4s,mb5.4
MFF Saint Martin d 96.41 332 *e*P **P 07 53 05.7 -1.7**
comp=Z,24nm,1.4s,mb5.4
MFF Saint Martin d 96.41 332 *e*P **P 07 53 05.7 -1.7**
MFF pmax pmax
comp=Z,24nm,1.4s,mb5.4
MEZF Maizieres J'vi 96.42 336 *e*P **P 07 53 06.2 -1.2**
LZH Lanzhou 96.55 46 *e*P **P 07 53 08.6 +0.3**
LZH AP pP 07 53 11.5 -0.2
LZH PP PP 07 57 07.5 +4.4
LZH *e*SKS 08 03 44.0
LZH *e*S S 08 04 27.1 -1.9
LZH AMB AMB
comp=Z,28nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,100nm,4.0s
LZH LR LR
comp=N,820nm,19.0s
LZH LR LR
comp=Z,930nm,20.4s,MS5.2
CLL Collm 96.91 342 *e*P **P 07 53 13.0 +3.5**
comp=Z,9.0nm,1.2s,mb5.1
CLL *e*S S 08 04 38.0 +6.7
CLL LR LR
comp=Z,600nm,19.4s,MS5.1
CLL Collm 96.91 342 *e*P **P 07 53 13.0 +3.5**
CLL pmax pmax
comp=Z,9.0nm,1.2s,mb5.1
CLL MLR MLR
comp=Z,600nm,19.4s,MS5.1
CLL Collm 96.91 342 *e*(P) **P 07 53 13.0 +3.5**
comp=Z,9.0nm,1.2s,mb5.1
CLL *e*S S 08 04 38.0 +6.7
CLL *e*SS SS 08 11 12.0 +3.6
CLL LmV 08 40 00.0
comp=Z,600nm,19.4s
GTA Gaotai 97.04 41 P **P 07 53 10.3 -0.2**
GTA AP pP 07 53 14.0 +0.2
GTA PP PP 07 57 11.4 +4.6
GTA PPP 07 59 18.1
GTA S S 08 04 32.1 -0.9
GTA XS sS 08 04 41.3 +2.7
GTA PS PS 08 06 01.1 +5.2
GTA AMB AMB
comp=Z,11nm,1.4s,mb5.1
GTA AMB AMB
comp=Z,56nm,4.6s
GTA LR LR
comp=N,416nm,22.0s,MS5.0
GTA LR LR
comp=E,366nm,23.2s,MS5.0
GTA LR LR
comp=Z,769nm,22.8s,MS5.1
OBN Obninsk 97.50 357 PFAKE 07 53 20.0 +7.9
OBN LR LR
comp=Z,522nm,22.0s,MS5.0
OBN Obninsk 97.50 357⇑*e*P **P 07 53 12.5 +0.4**
OBN pmax pmax
comp=Z,25nm,1.6s,mb5.5
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.8
BAIF Baives 98.06 337 *e*P **P 07 53 13.3 -1.4**
LDF La Druitiere 98.13 333 *e*P **P 07 53 13.9 -1.2**
GRR Gorron 98.20 333 *e*P **P 07 53 13.8 -1.6**
KURK Kurchatov 98.33 23 PFAKE 07 53 30.0 +14
KURK LR LR
comp=Z,375nm,20.0s,MS4.9
KURK Kurchatov 98.33 23⇑*e*P **P 07 53 17.1 +1.2**
FLN La Foliniere 98.39 333 *e*P **P 07 53 15.0 -1.3**
FLN *e*MLR MLR
comp=Z,694nm,19.0s,MS4.9
FLN La Foliniere 98.39 333 *e*P **P 07 53 15.0 -1.3**
FLN MLR MLR
comp=Z,690nm,19.0s,MS5.2
BRVK Borovoye 98.41 17 PFAKE 07 53 30.0 +14
BRVK LR LR
comp=Z,414nm,19.0s,MS5.0
QUIF Quistinic 98.59 331 *e*P **P 07 53 15.6 -1.6**
SGMF Saint Gilles 98.67 332 *e*P **P 07 53 16.0 -1.5**
comp=Z,37nm,1.0s,mb5.6
SGMF Saint Gilles 98.67 332 *e*P **P 07 53 16.0 -1.5**
comp=Z,19nm,1.0s,mb5.6
SGMF Saint Gilles 98.67 332 *e*P **P 07 53 16.0 -1.5**
SGMF pmax pmax
comp=Z,19nm,1.0s,mb5.6
ROSF Rostrenen 98.99 331 *e*P **P 07 53 17.6 -1.3**
comp=Z,101nm,1.5s,mb5.8
ROSF Rostrenen 98.99 331 *e*P **P 07 53 17.6 -1.3**
comp=Z,51nm,1.5s,mb5.8
ROSF Rostrenen 98.99 331 *e*P **P 07 53 17.6 -1.3**
ROSF pmax pmax
comp=Z,51nm,1.5s,mb5.8
TATO Taipei 99.30 65 PFAKE 07 53 30.0 +9.0
TATO LR LR
comp=Z,335nm,20.0s,MS4.8
ARU Arti 99.70 9 PFAKE 07 53 30.0 +7.2
ARU LR LR
comp=Z,392nm,20.0s,MS4.9
ARU Arti 99.70 9*d i*P Pdif 07 53 20.8 -2.0
ARU 07 57 25.5
ARU PPP 07 59 31.6
ARU S SKSac 08 03 56.7 -3.1
ARU SS SS 08 11 48.5 +1.1
ARU pmax pmax
comp=Z,16nm,2.5s,mb5.0
NNA Nana 102.04 241 PFAKE 07 53 40.0 +6.8
NNA LR LR

comp=Z,409nm,22.0s,MS4.9
NJ2 Nanjing 102.38 58 *e*P Pdif 07 53 35.6 +0.9
NJ2 AP 07 53 40.8
NJ2 PP PP 07 57 50.8 +3.3
NJ2 PPP 08 00 01.8
NJ2 S Sdif 08 05 14.5 -4.1
NJ2 LR LR
comp=N,940nm,24.4s,MS5.3
NJ2 LR LR
comp=E,580nm,26.4s,MS5.3
NJ2 LR LR
comp=Z,420nm,23.3s,MS4.9
HNR Honiara 103.39 116 PFAKE 07 53 50.0 +11
HNR LR LR
comp=Z,526nm,22.0s,MS5.0
ESK Eskdalemuir 104.87 335 PFAKE 07 54 00.0 +14
ESK LR LR
comp=Z,745nm,19.0s,MS5.2
KONO Kongsberg 105.37 344 PFAKE 07 58 10.0 +9.3
KONO LR LR
comp=Z,502nm,20.0s,MS5.1
BJT Baijiatuau 106.14 50 PFAKE 07 58 10.0 +7.2
BJT LR LR
comp=Z,488nm,19.0s,MS5.1
BJI Beijing 106.16 50 PDIF Pdif 07 53 49.8 -1.7
BJI PP PP 07 58 15.9 +0.3
BJI PP PP
comp=Z,214nm,5.0s
BJI LR LR
comp=N,363nm,20.7s,MS5.0
BJI LR LR
comp=E,167nm,19.8s,MS5.0
BJI LR LR
comp=Z,441nm,24.9s
ULN Ulaanbaatar 106.84 40 PFAKE 07 58 20.0 +16
ULN LR LR
comp=Z,359nm,19.0s,MS4.9
TLY Talaya 108.08 35 PFAKE 07 58 20.0 +14
TLY LR LR
comp=Z,461nm,21.0s,MS5.0
LVZ Lovozero 110.36 357 PFAKE 07 58 20.0 +10
LVZ LR LR
comp=Z,546nm,20.0s,MS5.1
INCN Inchon 110.76 58 PFAKE 07 58 20.0 +8.5
INCN LR LR
comp=Z,593nm,21.0s,MS5.1
OTAV Otavalo 112.11 249 PFAKE 07 58 30.0 +15
OTAV LR LR
comp=Z,377nm,21.0s,MS5.0
SDV Santo Domingo 112.57 261 PFAKE 07 58 30.0 +14
SDV LR LR
comp=Z,251nm,21.0s,MS4.8
KEV Kevo 112.63 354 PFAKE 07 58 30.0 +16
KEV LR LR
comp=Z,807nm,21.0s,MS5.3
TBI Tubuai 113.49 169 *e*PS PS 08 08 41.3 -2.1
comp=Z,304nm,33.0s
TBI *e*SS SS 08 14 55.9 +2.9
comp=Z,236nm,24.0s
TBI Tubuai 113.49 169 *e*LR LR 08 31 59.6
comp=Z,890nm,38.8s,baz=191
HIA Hailar 114.06 45 PFAKE 07 58 30.0 +13
HIA LR LR
comp=Z,436nm,21.0s,MS5.0
RKT Rikitea 114.50 183 *e*SS SS 08 15 09.2 +2.9
comp=Z,794nm,31.5s
RKT Rikitea 114.50 183 *e*LR LR 08 32 42.3
comp=Z,1μm,24.2s,baz=172
SJG San Juan 115.27 272 PFAKE 07 58 30.0 +9.4
SJG LR LR
comp=Z,378nm,20.0s,MS5.0
FUNA Funafuti 115.86 132 PFAKE 07 58 30.0 +8.0
FUNA LR LR
comp=Z,2μm,19.0s,MS5.8
MDJ Mudanjiang 116.78 53 PKP PKPdf 07 58 23.8 +1.0
MAJO Matsushiro 117.69 65 PFAKE 07 58 40.0 +15
MAJO LR LR
comp=Z,353nm,19.0s,MS5.0
PPT Papeete 119.14 167 *e*PS PS 08 09 33.4 -1.4
comp=Z,462nm,25.0s
PPT *e*SS SS 08 16 06.5 -0.5
comp=Z,638nm,28.0s
PPT Papeete 119.14 167 *e*LR LR 08 34 52.3
comp=Z,856nm,22.0s,baz=194
SDDR Presa de Saban 119.60 269 PFAKE 07 58 40.0 +11
SDDR LR LR
comp=Z,215nm,19.0s,MS4.8
KLR Kul'dur 120.52 50 *e*PKIKP PKPdf 07 58 29.7 -0.1
KLR *e* 07 59 58.8
JTS JuntasAbangare 123.78 251 PFAKE 07 58 50.0 +13
JTS LR LR
comp=Z,298nm,19.0s,MS5.0
JTS JuntasAbangare 123.78 251 ǁ *i*PKIKP PKPdf 07 58 35.7 -1.5
ERM Erimo 123.83 62 PFAKE 07 58 50.0 +14
ERM LR LR
comp=Z,442nm,20.0s,MS5.1
YAK Yakutsk 125.55 35 PFAKE 07 58 50.0 +11
YAK LR LR
comp=Z,345nm,21.0s,MS5.0
YSS Yuzh-Sakhalins 125.90 56 PFAKE 07 58 50.0 +10
YSS LR LR
comp=Z,245nm,20.0s,MS4.9
TGUH Tegucigalpa,Un 128.01 253 PFAKE 07 59 00.0 +15
TGUH LR LR
comp=Z,274nm,20.0s,MS4.9
TAOE Nuku Hiva Isla 128.71 177 *e*LR LR 08 39 21.4
comp=Z,3μm,23.8s
TIXI Tiksi 128.88 24 *e*PKPdf PKPdf 07 58 43.8 -1.3
TIXI LR LR
comp=Z,253nm,22.0s,MS4.9
TIXI Tiksi 128.88 24 *i* PKIKP PKPdf 07 58 43.5 -1.6
TIXI pmax pmax
comp=Z,8.0nm,1.4s
SFJD Kangerlussuaq 129.34 329 PFAKE 07 59 00.0 +14
SFJD LR LR
comp=Z,303nm,21.0s,MS5.0
WES Weston 132.03 294 PFAKE 07 59 00.0 +8.0
WES LR LR
comp=Z,444nm,22.0s,MS5.1
HRV Harvard--Oak R 132.24 294 PFAKE 07 59 00.0 +7.6
HRV LR LR
comp=Z,124nm,19.0s,MS4.6
TEIG Tepich 132.82 258 PFAKE 07 59 10.0 +16
TEIG LR LR
comp=Z,318nm,21.0s,MS5.0
LBNH Lisbon 133.17 296 PFAKE 07 59 10.0 +16
LBNH LR LR
comp=Z,307nm,19.0s,MS5.0
CNNC Cliffs of the 133.51 282 PFAKE 07 59 10.0 +15
CNNC LR LR
comp=Z,379nm,20.0s,MS5.1
NHSC New Hope 134.15 278 PFAKE 07 59 10.0 +14
NHSC LR LR
comp=Z,266nm,20.0s,MS5.0
CBN Corbin 134.48 286 PFAKE 07 59 10.0 +13
CBN LR LR
comp=Z,275nm,20.0s,MS5.0
MA2 Magadan 134.59 43 PFAKE 07 59 10.0 +14
MA2 LR LR
comp=Z,281nm,21.0s,MS5.0
NCB Newcomb 134.60 295 PFAKE 07 59 10.0 +13
NCB LR LR
comp=Z,326nm,20.0s,MS5.0
LONY Lake Ozonia 135.08 295 PFAKE 07 59 10.0 +12
LONY LR LR
comp=Z,339nm,20.0s,MS5.1
SSPA Standing Stone 135.85 289 PFAKE 07 59 10.0 +11
SSPA LR LR
comp=Z,245nm,20.0s,MS4.9
SEY Seymchan 135.89 38 ǁ *i*PKIKP PKPdf 07 58 57.8 -0.8
BLA Blacksburg 136.22 283 PFAKE 07 59 10.0 +10
BLA LR LR
comp=Z,264nm,19.0s,MS5.0
ELN Prospectdale 136.47 283 *e*PKPdf PKPdf 07 59 00.8 +0.3
GOGA Godfrey 136.70 276 PFAKE 07 59 10.0 +8.9
GOGA LR LR
comp=Z,206nm,21.0s,MS4.8
MCWV Mont Chateau 136.83 286 PFAKE 07 59 10.0 +8.9
MCWV LR LR
comp=Z,295nm,21.0s,MS5.0
PET Petropavlovsk 137.57 53 PFAKE 07 59 10.0 +8.0
PET LR LR
comp=Z,322nm,21.0s,MS5.0
ERPA Erie 137.87 290 PFAKE 07 59 10.0 +7.1
ERPA LR LR

comp=Z,321nm,19.0s,MS5.1
BRAL Brewton 138.16 271 PFAKE 07 59 20.0 +16
BRAL LR LR
comp=Z,168nm,19.0s,MS4.8
TZTN Tazewell 138.19 281 PFAKE 07 59 20.0 +16
TZTN LR LR
comp=Z,227nm,21.0s,MS4.9
LRAL Lakeview Retre 139.12 274 PFAKE 07 59 20.0 +14
LRAL LR LR
comp=Z,285nm,21.0s,MS5.0
ACSO Alum Creek Sta 139.28 286 PFAKE 07 59 20.0 +14
ACSO LR LR
comp=Z,245nm,19.0s,MS5.0
AAM Ann Arbor 140.49 289 PFAKE 07 59 20.0 +12
AAM LR LR
comp=Z,317nm,19.0s,MS5.1
PLAL Pickwick Lake 140.81 276 *e*PKPdf PKPdf 07 59 08.6 +0.1
PLAL LR LR
comp=Z,324nm,22.0s,MS5.0
WCI Wyandotte Cave 140.88 281 *e*PKPdf PKPdf 07 59 01.0 -7.5
WCI LR LR
comp=Z,262nm,19.0s,MS5.0
WVT Waverly 141.13 278 *e*PKPdf PKPdf 07 59 08.6 -0.5
WVT LR LR
comp=Z,338nm,22.0s,MS5.0
BILL Bilibino 141.43 30 PFAKE 07 59 20.0 +11
BILL LR LR
comp=Z,425nm,21.0s,MS5.2
BILL Bilibino 141.43 30 *e*PKHKP 07 59 02.7
BILL pmax pmax
comp=Z,4.0nm,0.7s
OXF Oxford 141.58 274 *e*PKPdf PKPdf 07 59 07.4 -2.5
OXF LR LR
comp=Z,225nm,19.0s,MS4.9
GLMI Grayling 141.93 292 PFAKE 07 59 20.0 +10
GLMI LR LR
comp=Z,532nm,21.0s,MS5.3
RES Resolute Bay 142.55 343 *e*PKPdf PKPdf 07 59 06.1 -4.4
SIUC Southern Illin 142.80 279 *e*PKPdf PKPdf 07 59 07.8 -4.2
FVM French Village 143.78 279 *e*PKPdf PKPdf 07 59 11.3 -2.5
UALR University of 143.86 273 *e*PKPdf PKPdf 07 59 11.6 -2.3
HDIL Hopedale 143.90 284 *e*PKPdf PKPdf 07 59 11.8 -2.1
HDIL LR LR
comp=Z,359nm,22.0s,MS5.1
HKT Hockley 144.07 263 *e*PKPdf PKPdf 07 59 13.5 -1.0
HKT LR LR
comp=Z,296nm,20.0s,MS5.0
NATX Nacogdoches 144.14 267 *e*PKPdf PKPdf 07 59 13.7 -0.9
NATX LR LR
comp=Z,300nm,19.0s,MS5.1
MIAR Mount Ida 144.66 272 *e*PKPdf PKPdf 07 59 13.9 -1.4
MIAR LR LR
comp=Z,255nm,19.0s,MS5.0
JFWS Jewell Farm 145.31 287 *e*PKPdf PKPdf 07 59 16.4 +0.2
JFWS LR LR
comp=Z,425nm,20.0s,MS5.2
COWI Conover 145.32 293 *e*PKPdf PKPdf 07 59 16.3 +0.1
COWI LR LR
comp=Z,452nm,21.0s,MS5.2
EYMN Ely 147.24 296 *e*PKPdf PKPdf 07 59 19.3 0.0
EYMN *e*PKPbc PKPbc 07 59 22.1 +0.5
EYMN LR LR
comp=Z,393nm,21.0s,MS5.2
JCT Junction City 147.25 261 *e*PKPdf PKPdf 07 59 20.9 +0.9
JCT *e*PKPbc PKPbc 07 59 23.0 +0.7
JCT LR LR
comp=Z,283nm,20.0s,MS5.0
FCC Fort Churchill 148.54 316 *e*PKPdf PKPdf 07 59 19.5 -1.6
FCC *e*PKPbc PKPbc 07 59 25.1 +0.3
WMOK Wichita Mounta 148.59 269 *e*PKPdf PKPdf 07 59 22.8 +0.8
WMOK LR LR
comp=Z,233nm,20.0s,MS5.0
KSU1 Kansas State U 148.71 278 *e*PKPdf PKPdf 07 59 22.4 +0.4
KSU1 *e*PKPbc PKPbc 07 59 26.6 +0.7
KSU1 *e*PKPab PKPab 07 59 30.0 +0.4
KSU1 LR LR
comp=Z,332nm,21.0s,MS5.1
LTX Lajitas 149.41 256 *e*PKPdf PKPdf 07 59 24.8 +1.3
LTX *e*PKPbc PKPbc 07 59 29.3 +1.4
LTX LR LR
comp=Z,826nm,22.0s,MS5.5
TXAR Lajitas Array 149.41 256 PKP PKPdf 07 59 24.4 +0.9
comp=Z,17nm,1.2s,baz=156,slow=2.9,SNR=43
TXAR PKPbc PKPbc 07 59 28.8 +0.9
comp=Z,40nm,1.1s,baz=151,slow=4.1,SNR=50
ECSD EROS,Sioux Fal 150.01 286 *e*PKPdf PKPdf 07 59 24.0 0.0
ECSD *e*PKPbc PKPbc 07 59 29.3 +0.4
ECSD *e*PKPab PKPab 07 59 36.0 +1.2
ECSD LR LR
comp=Z,370nm,21.0s,MS5.2
AGMN Agassiz Refuge 150.19 296 *e*PKPdf PKPdf 07 59 23.9 -0.2
AGMN *e*PKPbc PKPbc 07 59 29.5 +0.3
AGMN *e*PKPab PKPab 07 59 36.3 +0.9
AGMN LR LR
comp=Z,293nm,20.0s,MS5.1
CBKS Cedar Bluff 150.90 275 *e*PKPdf PKPdf 07 59 26.7 +1.2
CBKS *e*PKPbc PKPbc 07 59 31.3 0.0
CBKS *e*PKPab PKPab 07 59 38.7 +0.1
CBKS LR LR
comp=Z,332nm,21.0s,MS5.1
GAMB Gambell 151.35 31 *e*PKPdf PKPdf 07 59 26.6 +1.2
GAMB *e*PKPbc PKPbc 07 59 31.8 +0.3
GAMB *e*PKPab PKPab 07 59 39.3 -0.4
TNA Tin City 151.64 26 *e*PKPdf PKPdf 07 59 26.1 +0.3
TNA *e*PKPbc PKPbc 07 59 33.1 +1.0
TNA *e*PKPab PKPab 07 59 40.2 -0.6
TNA *e*PP PP 08 03 14.0 +1.6
TNA LR LR
comp=Z,262nm,21.0s,MS5.0
MNTX Cornudas Mount 151.95 258 *e*PKPdf PKPdf 07 59 27.5 +0.1
MNTX *e*PKPbc PKPbc 07 59 34.3 +0.4
MNTX LR LR
comp=Z,329nm,20.0s,MS5.1
FFC Flin Flon 153.62 310 *e*PKPdf PKPdf 07 59 28.9 -0.2
FFC *e*PKPbc PKPbc 07 59 36.0 -0.8
FFC LR LR
comp=Z,592nm,21.0s,MS5.4
BNM Barren Site 154.09 261 *e*PKPdf PKPdf 07 59 31.3 +0.9
BNM *e*PKPbc PKPbc 07 59 40.6 +2.1
BNM *e*PKPab PKPab 07 59 54.4 +2.2
LPM Los Pinos Moun 154.16 262 *e*PKPdf PKPdf 07 59 32.1 +1.6
LPM *e*PKPbc PKPbc 07 59 40.6 +2.0
LPM *e*PKPab PKPab 07 59 54.7 +2.2
INK Inuvik 154.17 356 *e*PKPdf PKPdf 07 59 28.5 -0.9
INK *e*PKPbc PKPbc 07 59 37.6 0.0
INK *e*PKPab PKPab 07 59 51.9 +0.5
ANMO Albuquerque 154.33 263 *e*PKPdf PKPdf 07 59 31.7 +0.9
ANMO LR LR
comp=Z,294nm,20.0s,MS5.1
LENM Lemitar 154.34 261 *e*PKPdf PKPdf 07 59 32.4 +1.6
LENM *e*PKPbc PKPbc 07 59 41.0 +2.0
LENM *e*PKPab PKPab 07 59 56.0 +2.8
LAZ Ladron 154.58 261 *e*PKPdf PKPdf 07 59 32.3 +1.2
LAZ *e*PKPab PKPab 07 59 57.3 +3.0
SDCO Great Sand Dun 154.77 270 *e*PKPdf PKPdf 07 59 31.8 +0.6
SDCO *e*PKPbc PKPbc 07 59 41.2 +1.4
SDCO *e*PKPab PKPab 07 59 56.7 +1.7
SDCO LR LR
comp=Z,507nm,22.0s,MS5.3
IMA2 Indian Mountai 154.97 15 *e*P PKPdf 07 59 33.2 +2.6
ISCO Idaho Springs 155.53 274 *e*PKPdf PKPdf 07 59 33.7 +1.5
ISCO LR LR
comp=Z,400nm,20.0s,MS5.2
DGMT Dagmar 155.74 296 *e*PKPdf PKPdf 07 59 30.9 -1.2
DGMT LR LR
comp=Z,495nm,19.0s,MS5.4
YKA Yellowknife Ar 155.81 333 PKP PKPdf 07 59 29.9 -1.9
YKA PKPab PKPab 07 59 58.7 +0.1
YKA Yellowknife Ar 155.81 333 PKP PKPdf 07 59 29.9 -1.9
comp=Z,1.2nm,0.8s,baz=42,slow=1.5,SNR=18
YKA PKPab PKPab 07 59 58.7 +0.1
comp=Z,5.8nm,1.0s,baz=37,slow=1.9,SNR=5.7
TUC Tucson 156.14 253 *e*PKPdf PKPdf 07 59 34.6 +1.3
TUC *e*PKPab PKPab 08 00 01.8 +0.8
TUC LR LR
comp=Z,336nm,22.0s,MS5.1
SMCO Snowmass 156.35 272 *e*PKPdf PKPdf 07 59 35.5 +2.2
SMCO *e*PKPab PKPab 08 00 04.0 +2.3
MVCO Mesa Verde 156.78 266 *e*PKPdf PKPdf 07 59 35.0 +1.1
MVCO *e*PKPab PKPab 08 00 06.2 +2.6
MVCO LR LR
comp=Z,410nm,20.0s,MS5.3
COLA College 157.05 11 PFAKE 07 59 40.0 +6.6
COLA LR LR

comp=Z,375nm,19.0s,MS5.2
LAO LASA Array 157.11 291 *e*PKPdf PKPdf 07 59 33.3 -0.7
LAO LR LR
comp=Z,423nm,21.0s,MS5.2
PV01 Paradox Valley 157.17 269 *e*PKPdf PKPdf 07 59 35.3 +0.9
PV01 *e*PKPab PKPab 08 00 07.5 +2.2
RWWY Rawlins 157.20 278 *e*PKPdf PKPdf 07 59 34.4 +0.1
RWWY *e*PKPab PKPab 08 00 07.6 +2.3
PV10 Paradox Valley 157.60 269 *e*PKPdf PKPdf 07 59 36.7 +1.8
PV10 *e*PP PP 08 03 41.6 -5.4
EGAK Eagle 157.76 4 *e*PKPdf PKPdf 07 59 32.8 -1.4
EGAK *e*PKPab PKPab 08 00 07.6 +0.7
EGAK LR LR
comp=Z,632nm,21.0s,MS5.4
UNV Unalaska Valle 158.13 49 PFAKE 07 59 50.0 +15
UNV LR LR
comp=Z,936nm,20.0s,MS5.6
WUAZ Wupatki 158.18 260 *e*PKPdf PKPdf 07 59 36.5 +0.8
WUAZ LR LR
comp=Z,335nm,21.0s,MS5.2
SVW2 Sparrevohn 158.71 24 *e*P PKPdf 07 59 36.3 +0.8
SRU San Rafael 158.94 270 *e*PKPdf PKPdf 07 59 37.4 +0.9
SRU *e*PKPab PKPab 08 00 14.1 +1.2
PDAR Pinedale Array 159.12 280 PKP PKPdf 07 59 35.4 -1.3
comp=Z,5.7nm,1.0s,baz=169,slow=1.5,SNR=12
BW06 Boulder Array 159.12 280 PFAKE 07 59 50.0 +13
BW06 LR LR
comp=Z,575nm,21.0s,MS5.4
RLMT Red Lodge 159.17 287 *e*PKPdf PKPdf 07 59 36.0 -0.5
RLMT *e*PKPab PKPab 08 00 14.6 +0.9
RLMT LR LR
comp=Z,536nm,21.0s,MS5.4
EGMT Eagleton 159.48 295 *e*PKPdf PKPdf 07 59 36.3 -0.6
EGMT LR LR
comp=Z,440nm,22.0s,MS5.3
TMUT Trail Mountain 159.51 270 *e*PKPdf PKPdf 07 59 38.5 +1.3
TMUT *e*PKPab PKPab 08 00 17.5 +2.1
DAU Daniels Canyon 159.86 273 *e*PKPdf PKPdf 07 59 38.8 +1.2
PMR Palmer 159.90 16 PFAKE 07 59 50.0 +13
PMR LR LR
comp=Z,629nm,20.0s,MS5.5
LKWY Lake 159.94 285 PFAKE 07 59 50.0 +13
LKWY LR LR
comp=Z,614nm,21.0s,MS5.4
MSU Marysvale 159.97 267 *e*PKPdf PKPdf 07 59 39.1 +1.4
MSU *e*PKPab PKPab 08 00 20.1 +2.7
MPU Maple Canyon 160.03 271 PFAKE 07 59 50.0 +12
MPU LR LR
comp=Z,1μm,21.0s
JLU Jordanelle 160.05 273 *e*PKPdf PKPdf 07 59 38.5 +0.7
JLU *e*PKPab PKPab 08 00 19.6 +1.9
SNOW Snow King Moun 160.08 282 *e*PKPdf PKPdf 07 59 37.1 -0.5
FLWY Flagg Ranch 160.11 283 *e*PKPdf PKPdf 07 59 37.8 +0.1
TPAW Teton Pass 160.23 282 *e*PKPdf PKPdf 07 59 38.0 +0.1
TPAW *e*PKPab PKPab 08 00 20.2 +1.8
AHID Auburn Hatcher 160.24 280 PFAKE 07 59 50.0 +12
AHID LR LR
comp=Z,476nm,22.0s
IMW Indian Meadow 160.26 283 *e*PKPdf PKPdf 07 59 38.0 +0.2
IMW *e*PKPab PKPab 08 00 20.7 +2.2
NLU North Lily Min 160.34 271 *e*PKPdf PKPdf 07 59 39.4 +1.3
NLU *e*PKPab PKPab 08 00 20.3 +1.3
YMR Madison River 160.35 285 PFAKE 07 59 50.0 +12
YMR LR LR
comp=Z,993nm,21.0s
HWUT Hardware Ranch 160.37 276 *e*PKPdf PKPdf 07 59 37.8 -0.3
HWUT LR LR
comp=Z,419nm,21.0s
DCID1 Drake Creek 160.41 282 *e*PKPdf PKPdf 07 59 38.5 +0.5
DCID1 *e*PKPab PKPab 08 00 21.6 +2.4
CCUT Cedar City 160.49 263 *e*PKPdf PKPdf 07 59 40.2 +1.9
CCUT *e*PKPab PKPab 08 00 22.6 +3.0
QLMT Earthquake Lak 160.69 286 *e*PKPdf PKPdf 07 59 39.0 +0.7
PFO Pinyon Flat Ob 160.82 249 PFAKE 07 59 50.0 +11
PFO LR LR
comp=Z,381nm,20.0s
BOZ Bozeman (W) 160.85 288 PFAKE 07 59 50.0 +12
BOZ LR LR
comp=Z,382nm,22.0s
DUG Dugway 160.95 271 *e*PKPdf PKPdf 07 59 39.4 +0.6
DUG *e*PKPab PKPab 08 00 23.1 +1.4
DUG LR LR
comp=Z,420nm,21.0s
BGU Big Grassy Mou 161.29 273 *e*PKPdf PKPdf 07 59 40.0 +1.0
CHMT Chamberlain Mo 161.93 292 *e*PKPdf PKPdf 07 59 39.1 -0.4
KDAK Kodiak Island 162.28 26 PFAKE 07 59 50.0 +10
KDAK LR LR
comp=Z,130nm,19.0s
TPNV Topopah Spring 162.34 258 *e*PKPdf PKPdf 07 59 41.6 +1.3
TPNV LR LR
comp=Z,248nm,21.0s
MSO Missoula 162.41 292 PFAKE 07 59 50.0 +10
MSO LR LR
comp=Z,357nm,21.0s
TRCR Troy Canyon 162.41 263 *e*PKPdf PKPdf 07 59 41.4 +1.1
HLID Hailey 162.74 281 PFAKE 07 59 50.0 +10
HLID LR LR
comp=Z,473nm,21.0s
ELK Elko 162.88 271 PFAKE 07 59 50.0 +9.3
ELK LR LR
comp=Z,60nm,20.0s
MTUM Tungsten Hills 164.18 257 *e*PKPdf PKPdf 07 59 41.7 -0.4
NEW Newport 164.31 298 PFAKE 07 59 50.0 +8.2
NEW LR LR
comp=Z,533nm,19.0s
NVAR Mina Array Bea 164.43 261 PKP PKPdf 07 59 43.1 +0.9
comp=Z,2.4nm,0.9s,baz=151,slow=2.1,SNR=15
NVAR PKPab PKPab 08 00 38.6 +1.6
BMO Blue Mountains 164.87 285 PFAKE 07 59 50.0 +7.6
BMO LR LR
comp=Z,505nm,20.0s
WVOR Wild Horse Val 165.70 276 *e*PKPdf PKPdf 07 59 43.9 +0.7
WVOR LR LR
comp=Z,611nm,21.0s
CMB Columbia Colle 165.78 257 PFAKE 07 59 50.0 +6.6
CMB LR LR
comp=Z,399nm,20.0s
SAO San Andreas Ge 165.96 251 PFAKE 07 59 50.0 +6.4
SAO LR LR
comp=Z,359nm,20.0s
HAWA Hanford 166.29 292 PFAKE 07 59 50.0 +6.5
HAWA LR LR
comp=Z,584nm,21.0s
MOD Modoc 166.85 273 PFAKE 08 00 00.0 +16
MOD LR LR
comp=Z,613nm,19.0s
HOPS Hopland 168.10 257 PFAKE 08 00 00.0 +15
HOPS LR LR
comp=Z,447nm,19.0s
WDC Whiskeytown Da 168.22 265 PFAKE 08 00 00.0 +15
WDC LR LR
comp=Z,513nm,22.0s
YBH Yreka Blue Hor 168.60 271 PFAKE 08 00 00.0 +15
YBH LR LR
comp=Z,395nm,22.0s
NLWA Neilton Lookou 168.92 300 PFAKE 08 00 00.0 +15
NLWA LR LR
comp=Z,834nm,21.0s

IDC 24 08:21:16.0±6.0, 1609S×17460W, h0km, mb4.1/4, mb1 4.5/4, mb1mx3.9/13, mbtmp4.1/4, Error ellipse: s-maj=483.0km s-min=26.0km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.57**	**257**	P	P	P	08 30 01.3	-0.3
	0.8nm,0.4s,baz=89,slow=7.1,SNR=6.6							
ASAR	**Alice Springs**	**48.81**	**252**	P	P	P	08 30 03.5	+0.2
	11nm,0.6s,baz=87,slow=7.8,SNR=226							
NVAR	**Mina Array Bea**	**75.61**	**42**	P	P	P	08 33 03.9	+1.0
	0.7nm,0.8s,baz=225,slow=8.9,SNR=5.0							
PDAR	**Pinedale Array**	**83.54**	**42**	P	P	P	08 33 45.6	-0.4
	0.6nm,0.6s,baz=218,slow=2.6,SNR=5.5							

MAN 24 08:38:21.936N×12699E, h39km, mb4.5, ML3.4, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.54**	**286**	*e*P	Pn	Pn	08 38 46.8	+0.9
SCPH				*e*S	Sn	Sn	08 39 02.6	-2.0
MSLP	**Maasin**	**2.23**	**290**	*e*P	Pn	Pn	08 38 58.1	+2.6

BUKP	**Musuan**	**2.41**	**232**	*e*P	Pn	08 38 59.4	+1.5
BUKP				*e*S	Sn	08 39 28.1	+1.9

*IDC **24** 08:47:31.0±2.8, 4276N×14733E, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.4/21, mbtmp3.6/6, ML3.2/2, MS3.7/3, Ms1mx3 3.7/3, ms1mx3.1/23, Error ellipse: s-maj=54.9km s-min=36.4km az=152.0*
*JMA **24** 08:47:35.0±0.2, 4276N×14699E, h43km, M3.3*
*MOS **24** 08:47:35.1±0.6, 4268N×14713E, h48km, mb4.2/2, Error ellipse: s-maj=33.6km s-min=21.4km az=125.2*

ISC 24 08:47:37.3±2.0, 4279N±007×14687E±009, h29km±18km, n26, σ0s78/32, mb3.6/4, MS4.0/2, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.01**	**305**	P	**Pn**	**08 47 54.3**	**-1.2**
NEM2				*e*S	**Sn**	**08 48 08.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**1.45**	**330**	*e*PN	**Pn**	**08 48 02.1**	**+0.6**
YUK				*i* S	**Sn**	**08 48 20.8**	**+1.3**
YUK				pmax	pmax		
	comp=Z,320nm,0.4s						
YUK				smax			
	comp=N,2μm,1.0s						
YUK				smax			
	comp=E,2μm,1.0s						
YUK				smax			
	comp=N,2μm,0.5s						
YUK				smax			
	comp=E,710nm,0.4s						
JAK	**Akkeshi**	**1.61**	**278**	P	**Pn**	**08 48 02.8**	**-0.9**
JAK				*e*S	**Sn**	**08 48 23.1**	**-0.4**
JRA	**Rausu**	**1.72**	**313**	P	**Pn**	**08 48 04.3**	**-0.9**
JNK	**Nakash**	**1.76**	**298**	P	**Pn**	**08 48 04.7**	**-1.1**
JNK				*e*S	**Sn**	**08 48 27.1**	**-0.2**
JOB	**Onbets**	**2.23**	**274**	P	**Pn**	**08 48 11.7**	**-0.6**
JOB				*e*S	**Sn**	**08 48 39.2**	**+0.3**
JAR	**Ashorobuto**	**2.33**	**284**	P	**Pn**	**08 48 12.9**	**-0.7**
JAR				*e*S	**Sn**	**08 48 41.3**	**+0.1**
JTKR	**Abashiri--Toko**	**2.46**	**300**	P	**Pn**	**08 48 15.4**	**0.0**
JCH	**Churui**	**2.59**	**267**	P	**Pn**	**08 48 17.0**	**-0.2**
JCH				*e*S	**Sn**	**08 48 47.7**	**0.0**
JMP	**Maruseppu**	**2.83**	**297**	P	**Pn**	**08 48 21.0**	**+0.4**
JEM	**Erimo**	**2.85**	**256**	P	**Pn**	**08 48 21.8**	**+1.0**
JNBK	**Urakawa-nobuka**	**3.08**	**262**	P	**Pn**	**08 48 24.1**	**+0.1**
JKK2	**Kamakawa 2**	**3.20**	**291**	P	**Pn**	**08 48 26.9**	**+1.4**
JBT2	**Biratori 2**	**3.32**	**271**	P	**Pn**	**08 48 26.5**	**-0.7**
ASAJ	**Asahikawa**	**3.38**	**295**	PN	**Pn**	**08 48 30.1**	**+2.0**
ASAJ						08 49 16.1	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**3.38**	**295**	Pn	**Pn**	**08 48 30.1**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=117,slow=16,SNR=9.5						
ASAJ				Sn	**Sn**	**08 49 16.1**	**+8.9**
	baz=248,slow=31,SNR=2.5						
MJAR	**Matsushiro Arr**	**9.13**	**230**	PN	**Pn**	**08 49 48.1**	**+1.0**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**9.13**	**230**	Pn	**Pn**	**08 49 48.1**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=218,slow=7.6,SNR=5.4						
JHJ	**Hachijo jima 2**	**11.15**	**212**	LR	LR	08 53 44.1	
	comp=Z,95nm,21.3s,baz=53,slow=33						
SONM	**Songino Array**	**28.67**	**294**	P	**P**	**08 53 31.8**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,153nm,19.5s						
SONM	**Songino Array**	**28.67**	**294**	P	**P**	**08 53 31.8**	**+0.5**
	comp=Z,1.3nm,0.7s,mb3.8,baz=88,slow=8.4,SNR=8.6						
SONM				LR	LR	09 04 58.0	
	comp=Z,153nm,19.5s,MS3.6,baz=78,slow=36						
MKAR	**Makanchi Array**	**44.86**	**298**	P	**P**	**08 55 48.5**	**-0.2**
	comp=Z,0.2nm,0.2s,mb3.5,baz=66,slow=7.0,SNR=3.6						
FINES	**FINESS Array B**	**65.64**	**333**	P	**P**	**08 58 17.5**	**-0.7**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**65.64**	**333**	P	**P**	**08 58 17.5**	**-0.8**
	comp=Z,0.8nm,0.7s,mb3.9,baz=46,slow=8.0,SNR=3.2						
NOA	**NORSAR Array B**	**70.43**	**339**	P	**P**	**08 58 48.2**	**-0.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=46,slow=5.2,SNR=2.8						
SCHQ	**Schefferville**	**78.60**	**19**	LR	LR	09 37 54.0	
	comp=Z,194nm,18.3s,MS4.5,baz=193,slow=38						

*CSEM **24** 09:42:42.1, 3754N×4419E, h3km, MD3.0, After ISK*

ISK 24 09:42:42.1, 3754N×4419E, h3km, MD3.0, ML2.7, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.36**	**277**	*i* PG	Pg	09 42 50.0	+1.0
CUKT	**Cukurca**	**0.55**	**238**	*i* PG	Pg	09 42 53.3	+0.7
CUKT				*i* SG	Sg	09 43 01.9	+2.2
VANB	**Van**	**1.23**	**329**	*e*PN	Pn	09 43 06.1	-0.1
SIRT	**Sirnak**	**1.39**	**269**	*e*PN	Pn	09 43 09.6	+1.2
SIRT				*e*SN	Sn	09 43 28.6	+1.3
MSL	**Mosul**	**1.52**	**216**	*e*x	x	09 43 09.5	
MSL				*e*x	x	09 43 31.5	
CLDR	**Caldiran**	**1.62**	**352**	*e*PN	Pn	09 43 12.5	+1.0
AGRB	**Hanur-Agry**	**2.24**	**336**	*e*PN	Pn	09 43 22.2	+2.1

*IDC **24** 09:44:01.7±0.7, 1511S×17366W, h0km, mb4.5/10, mb1 4.6/10, mb1mx4.4/15, mbtmp4.5/10, MS3.9/4, Ms1 3.9/4, ms1mx3.5/18, Error ellipse: s-maj=31.5km s-min=17.3km az=125.0*
*NEIC **24** 09:44:03.7±0.4, 1521S×17356W, h10km, mb4.5/2, Error ellipse: s-maj=21.2km s-min=9.8km az=130.0*
*ISCJB **24** 09:44:05.2±0.5, 152S±0.1×1736W±0.1, h33km, mb4.3/12, MS3.9/4, Error ellipse: s-maj=23.2km s-min=10.6km az=41.9*

ISC 24 09:44:07.2±0.5, 152S±01×1736W±01, h35km, n27, σ0s77/20, mb4.3/12, MS3.9/4, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.18**	**56**	*i* Pn	**Pn**	**09 44 37.5**	**-3.5**
AFI				*e*Sn	**Sn**	**09 44 58.4**	**-8.5**
URZ	**Urewera**	**24.42**	**198**	P	**P**	**09 49 22.1**	**-0.4**
	7.5nm,0.5s,mb4.4,baz=295,slow=3.2,SNR=9.2						
RPZ	**Rata Peaks**	**31.32**	**202**	P	**P**	**09 50 23.9**	**-0.2**
	10nm,0.6s,mb4.8,baz=3.2,slow=4.3,SNR=8.2						
RPZ				LR	LR	10 02 01.1	
	comp=Z,214nm,19.5s,MS3.8,baz=69,slow=34						
STKA	**Stephens Creek**	**43.97**	**240**	*e*P	**P**	**09 52 11.5**	**+0.3**
	3.4nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**43.97**	**240**	P	**P**	**09 52 11.2**	**0.0**
	6.4nm,0.8s,mb4.4,baz=96,slow=22,SNR=10						
MCQ	**Macquarie Isla**	**44.67**	**202**	*e*P	**P**	**09 52 15.9**	**-0.6**
WB2	**Warramunga Arr**	**49.67**	**257**	*e*P	**P**	**09 52 56.0**	**0.0**
WRA	**Warramunga Arr**	**49.68**	**257**	P	**P**	**09 52 54.9**	**-1.1**
	2.6nm,0.8s,mb4.3,baz=90,slow=7.0,SNR=15						
ASAR	**Alice Springs**	**49.97**	**252**	P	**P**	**09 52 58.0**	**-0.2**
	17nm,0.7s,mb5.2,baz=86,slow=8.2,SNR=224						
VNDA	**Vanda**	**63.59**	**186**	P	**P**	**09 54 34.9**	**+0.9**
VNDA	**Vanda**	**63.59**	**186**	P	**P**	**09 54 34.9**	**+0.9**
	3.1nm,0.9s,mb4.3,baz=345,slow=6.3,SNR=7.5						
NVAR	**Mina Array Bea**	**74.30**	**42**	P	**P**	**09 55 41.3**	**+0.2**
	1.6nm,0.7s,mb4.0,baz=234,slow=12,SNR=12						
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**09 55 44.1**	**+0.3**
QSPA				LR	LR	10 27 02.3	
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**09 55 44.1**	**+0.3**
	7.0nm,1.0s,mb4.5,baz=9.8,slow=3.2,SNR=20						
QSPA				LR	LR	10 27 02.3	
	comp=Z,81nm,18.1s,MS4.1,baz=118,slow=34						
PV10	**Paradox Valley**	**80.50**	**46**	*e*P	**P**	**09 56 17.8**	**+2.0**
COLA	**College**	**82.17**	**11**	*e*P	**P**	**09 56 24.8**	**+0.8**
	5.6nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**82.23**	**42**	P	**P**	**09 56 24.8**	**-0.1**
	0.6nm,0.7s,mb3.6,baz=237,slow=2.0,SNR=6.6						
PDAR				LR	LR	10 27 29.3	
	comp=Z,48nm,18.7s,MS3.9,baz=14,slow=32						
MAW	**Mawson**	**87.95**	**199**	P	**P**	**09 56 53.3**	**+0.2**
	3.8nm,0.7s,mb4.7,baz=101,slow=7.8,SNR=3.6						
YKA	**Yellowknife Ar**	**89.97**	**23**	P	**P**	**09 57 02.4**	**-0.1**
	0.1nm,0.6s,mb3.4,baz=231,slow=5.3,SNR=4.4						
JTS	**JuntasAbangare**	**91.39**	**80**	LR	LR	10 26 39.8	
	comp=Z,58nm,21.9s,MS4.0,baz=62,slow=28						
VYHS	**Vyhne**	**145.21**	**345**	*e*PKP	PKPdf	10 03 41.9	+0.8
GRA1	**Grafenberg Arr**	**145.33**	**354**	*e*PKP	PKPdf	10 03 41.9	+0.6
GRA1				*e*		10 03 57.0	
GRF	**Grafenberg Arr**	**145.33**	**354**	*e*PKP	PKPdf	10 03 41.9	+0.6
GRF				*e*		10 03 57.0	
KHC	**Kasperske Hory**	**145.61**	**352**	*e*PKP	PKPdf	10 03 43.0	+1.2
KHC				*ex*	x	10 04 02.0	
MODS	**Modra-Piesok**	**145.68**	**347**	*e*PKP	PKPdf	10 03 43.8	+1.9
GERES	**GERESS Array B**	**145.87**	**351**	PKPbc	PKPbc	10 03 42.7	-0.2
	1.1nm,0.9s,baz=354,slow=1.3,SNR=6.5						
ANTO	**Ankara**	**146.25**	**322**	*e*PKPdf	PKPdf	10 03 46.2	+3.0

MAN 24 09:44:44, 1642N×12100E, h22km, mb4.6, ML3.5, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALP	**Baler**	**0.87**	**141**	*e*P	Pb	09 45 00.2	-0.2
BALP				*e*S	Sb	09 45 13.7	+2.1
BOLP	**Bolinao**	**1.05**	**268**	*e*P	Pn	09 45 02.6	-0.8
BOLP				*e*S	Sb	09 45 17.9	+1.2
SCZP	**Santa Cruz**	**1.23**	**239**	*e*P	Pn	09 45 06.2	+0.4
ABRA	**Dolores**	**1.25**	**347**	*e*P	Pn	09 45 05.7	-0.5
ABRA				*e*S	Sn	09 45 22.1	-0.3
APYP	**Conner**	**1.45**	**9**	*e*P	Pn	09 45 09.4	+0.5
APYP				*e*S	Sn	09 45 31.0	+3.6
LUBP	**Lubang**	**2.77**	**195**	*e*P	Pn	09 45 32.9	+5.9

*IDC **24** 09:52:30.9±1.1, 4902S×12413E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.9/15, mbtmp4.1/5, ML2.0/1, MS3.9/5, Ms1 3.9/5, ms1mx3.6/18, Error ellipse: s-maj=64.1km s-min=21.0km az=106.0*

NEIC 24 09:52:32.0±0.7, 4908S×12421E, h10km, mb3.5/1, Error ellipse: s-maj=30.3km s-min=13.7km az=98.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.96**	**339**	Pn	Pn	09 56 30.0	+0.8
	0.2nm,0.3s,baz=172,slow=3.6,SNR=4.1						
NWAO				LR	LR	10 01 27.5	
	comp=Z,729nm,19.6s,baz=125,slow=32						
FORT	**Forrest**	**18.51**	**10**	*e*P	Pn	09 56 48.5	+0.1
	3.0nm,0.8s						
STKA	**Stephens Creek**	**21.59**	**44**	P	P	09 57 22.7	+0.9
	4.1nm,0.9s,baz=208,slow=13,SNR=3.3						
ASAR	**Alice Springs**	**26.49**	**20**	P	P	09 58 08.9	-0.4
	3.7nm,1.0s,baz=191,slow=9.4,SNR=17						
VNDA	**Vanda**	**31.94**	**165**	LR	LR	10 10 49.0	
	comp=Z,421nm,20.0s,baz=334,slow=34						
QSPA	**South Pole Qui**	**41.05**	**180**	P	P	10 00 16.6	+1.7
	1.6nm,0.9s,baz=350,slow=8.5,SNR=5.9						
SNAA	**Sanae**	**53.89**	**198**	P	P	10 01 55.0	+0.3
	2.0nm,0.8s,baz=157,slow=9.5,SNR=5.8						
KSRS	**Korea Array**	**86.22**	**3**	LR	LR	10 44 26.1	
	comp=Z,24nm,18.4s,baz=99,slow=36						
PLCA	**Paso Flores**	**89.63**	**169**	LR	LR	10 46 42.0	
	comp=Z,63nm,19.0s,baz=182,slow=36						
SONM	**Songino Array**	**97.75**	**348**	LR	LR	10 51 32.0	
	comp=Z,36nm,18.2s,baz=137,slow=36						
NOA	**NORSAR Array B**	**141.55**	**314**	PKP	PKPdf	10 12 01.1	-0.9
	0.7nm,0.8s,baz=48,slow=2.2,SNR=3.3						
PDAR	**Pinedale Array**	**142.74**	**79**	PKP	PKPdf	10 12 03.1	-1.7
	0.3nm,0.6s,baz=191,slow=4.3,SNR=3.2						
YKA	**Yellowknife Ar**	**145.62**	**45**	PKPbc	PKPbc	10 12 09.8	+0.3
	1.9nm,0.9s,baz=262,slow=3.3,SNR=24						

*ISCJB **24** 10:14:38.8±0.5, 3192S±002×7159W±007, h66km±4km, mb4.2/7, Error ellipse: s-maj=9.3km s-min=3.4km az=176.5*
*GUC **24** 10:14:39.7±0.6, 3192S×7139W, h55km±4km, MD4.4, ML4.5*
*NEIC **24** 10:14:39.6±0.5, 3191S×7159W, h54km±7km, MG4.5(GUC), Error ellipse: s-maj=11.4km s-min=3.3km az=91.0*
*IDC **24** 10:14:41.6±2.4, 3191S×7151W, h78km±20km, mb4.1/8, mb1 4.2/12, mb1mx4.1/17, mbtmp4.1/12, MS3.4/3, Ms1 3.4/3, ms1mx3.1/17, Error ellipse: s-maj=19.4km s-min=15.3km az=105.0*

ISC 24 10:14:39.8±0.5, 3192S±002×7158W±007, h58km±5km, n59, σ0s62/84, mb4.3/7, MS3.7/2, 13C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.07**	**62**	*i* P	**Pn**	**10 14 32.0**	**-17**
CHNG				*i* S	**Sn**	**10 14 38.3**	**-17**
CHNG				AML	AML	10 14 39.5	
	comp=E,62μm,0.5s						
PACH	**Papudo**	**0.63**	**169**	*i* P	**Pn**	**10 14 53.1**	**0.0**
PACH				*i* S	**Sn**	**10 15 03.2**	**+0.4**
CMCH	**Combarbala**	**0.89**	**34**	*i* P	**Pn**	**10 14 55.7**	**-0.7**
CMCH				*i* S	**Sn**	**10 15 07.8**	**-0.7**
CMCH	**Combarbala**	**0.89**	**34**	*i* P	**Pn**	**10 14 55.7**	**-0.7**
CMCH				*i* S	**Sn**	**10 15 07.8**	**-0.7**
CMCH				AML	AML	10 15 11.2	
	comp=E,103μm,0.7s						
IHA	**Instituto Hidr**	**1.10**	**183**	*i* P	**Pn**	**10 14 58.8**	**-0.4**
IHA				*i* S	**Sn**	**10 15 13.8**	**+0.3**
ROCH	**El Roble**	**1.16**	**156**	*i* P	**Pn**	**10 14 59.6**	**-0.1**
ROCH				*i* S	**Sn**	**10 15 15.2**	**+0.5**
OVCH	**Ovalle**	**1.35**	**14**	*e*P	**Pn**	**10 15 02.2**	**-0.2**
OVCH				*i* S	**Sn**	**10 15 19.3**	**+0.1**
OVCH	**Ovalle**	**1.35**	**14**	*e*P	**Pn**	**10 15 02.2**	**-0.2**
OVCH				*i* S	**Sn**	**10 15 19.3**	**+0.1**
OVCH				AML	AML	10 15 26.0	
	comp=N,11μm,0.7s						
PEL	**Peldehue**	**1.44**	**149**	*e*P	**Pn**	**10 15 03.3**	**-0.2**
PEL				*i* S	**Sn**	**10 15 20.6**	**-0.8**
PEL				AML	AML	10 15 26.6	
	comp=N,21μm,0.3s						
DSCH	**Colegio Aleman**	**1.70**	**150**	*i* P	**Pn**	**10 15 06.6**	**-0.6**
DSCH				*i* S	**Sn**	**10 15 27.1**	**-0.8**
DSCH	**Colegio Aleman**	**1.70**	**150**	*i* P	**Pn**	**10 15 06.6**	**-0.6**
DSCH				*i* S	**Sn**	**10 15 27.1**	**-0.8**
DSCH				AML	AML	10 15 28.2	
	comp=E,4μm,0.3s						
STL	**Santa Lucia**	**1.71**	**153**	*e*P	**Pn**	**10 15 06.7**	**-0.5**
STL				*i* S	**Sn**	**10 15 27.5**	**-0.4**
SAN	**Santiago**	**1.71**	**153**	*i* P	**Pn**	**10 15 06.9**	**-0.4**
SAN				*i* S	**Sn**	**10 15 27.7**	**-0.4**
SAN	**Santiago**	**1.71**	**153**	*i* P	**Pn**	**10 15 06.9**	**-0.4**
SAN				*i* S	**Sn**	**10 15 27.7**	**-0.4**
SAN				AML	AML	10 15 29.8	
	comp=E,6μm,0.4s						
CLCH	**Cerro Calan**	**1.71**	**149**	*e*P	**Pn**	**10 15 07.8**	**+0.5**
CLCH				*i* S	**Sn**	**10 15 28.4**	**+0.2**
CLCH	**Cerro Calan**	**1.71**	**149**	*e*P	**Pn**	**10 15 07.8**	**+0.5**
CLCH				*i* S	**Sn**	**10 15 28.4**	**+0.2**
CLCH				AML	AML	10 15 31.4	
	comp=E,16μm,0.8s						
FCH	**Farellones**	**1.78**	**143**	*i* P	**Pn**	**10 15 08.5**	**+0.4**
FCH				*i* S	**Sn**	**10 15 30.2**	**+0.6**
FCH				AML	AML	10 15 31.3	
	comp=E,6μm,0.2s						
FSR	**Penalolen**	**1.79**	**151**	*e*P	**Pn**	**10 15 08.0**	**-0.4**
FSR				*i* S	**Sn**	**10 15 29.4**	**-0.5**
FSR	**Penalolen**	**1.79**	**151**	*e*P	**Pn**	**10 15 08.0**	**-0.4**
FSR				*i* S	**Sn**	**10 15 29.4**	**-0.5**
FSR				AML	AML	10 15 32.9	
	comp=N,10μm,0.3s						
TACH	**Talagante**	**1.81**	**163**	*i* P	**Pn**	**10 15 08.8**	**+0.1**
TACH				*i* S	**Sn**	**10 15 30.4**	**-0.1**
ANTU	**Antumapu**	**1.83**	**154**	*e*P	**Pn**	**10 15 08.9**	**0.0**
ANTU				*i* S	**Sn**	**10 15 30.4**	**-0.6**
ANTU	**Antumapu**	**1.83**	**154**	*e*P	**Pn**	**10 15 08.9**	**0.0**
ANTU				*i* S	**Sn**	**10 15 30.4**	**-0.6**
ANTU				AML	AML	10 15 32.3	
	comp=N,9μm,0.3s						
TLL	**Tololo Astrono**	**1.87**	**21**	*i* P	**Pn**	**10 15 09.4**	**0.0**
TLL				*i* S	**Sn**	**10 15 32.3**	**+0.4**
TLL	**Tololo Astrono**	**1.87**	**21**	*i* P	**Pn**	**10 15 09.4**	**0.0**
TLL				*i* S	**Sn**	**10 15 32.3**	**+0.4**
TLL				AML	AML	10 15 43.0	
	comp=E,3μm,0.6s						
PCH	**Pirque**	**1.92**	**152**	*i* P	**Pn**	**10 15 10.1**	**0.0**
PCH				*i* S	**Sn**	**10 15 32.5**	**-0.7**
SJCH	**San Jose de Ma**	**2.00**	**149**	*i* P	**Pn**	**10 15 10.6**	**-0.6**
SJCH				*i* S	**Sn**	**10 15 34.3**	**-0.8**
SJCH	**San Jose de Ma**	**2.00**	**149**	*i* P	**Pn**	**10 15 10.6**	**-0.6**
SJCH				*i* S	**Sn**	**10 15 34.3**	**-0.8**
SJCH				AML	AML	10 15 35.9	
	comp=E,6μm,0.6s						
YECH	**El Yeso**	**2.15**	**145**	*e*P	**Pn**	**10 15 13.8**	**+0.6**
YECH				*i* S	**Sn**	**10 15 39.1**	**+0.4**
YECH				AML	AML	10 15 42.9	
	comp=E,6μm,0.4s						
CHCH	**Chadas Angostu**	**2.15**	**159**	*i* P	**Pn**	**10 15 13.4**	**+0.1**
CHCH				*i* S	**Sn**	**10 15 38.8**	**-0.1**
LMEL	**Las Melosas**	**2.25**	**149**	*i* P	**Pn**	**10 15 15.2**	**+0.7**
LMEL				*i* S	**Sn**	**10 15 41.5**	**+0.5**
LMEL	**Las Melosas**	**2.25**	**149**	*i* P	**Pn**	**10 15 15.2**	**+0.7**
LMEL				*i* S	**Sn**	**10 15 41.5**	**+0.5**
LMEL				AML	AML	10 15 46.0	
	comp=N,7μm,0.2s						
CACH	**El Canelo**	**2.34**	**160**	*i* P	**Pn**	**10 15 16.6**	**+0.8**
CACH				*i* S	**Sn**	**10 15 44.7**	**+1.2**
SFDO	**San Fernando**	**2.73**	**170**	*i* P	**Pn**	**10 15 21.2**	**+0.1**
CFAA	**Coronel Fontan**	**2.86**	**85**	P	**Pn**	**10 15 23.9**	**+1.0**
CFAA				S	**Sn**	**10 15 58.2**	**+2.0**
CFAA	**Coronel Fontan**	**2.86**	**85**	P	**Pn**	**10 15 23.9**	**+1.0**
	comp=N,6.1nm,0.3s,baz=248,slow=10,SNR=321						
CFAA				S	**Sn**	**10 15 58.2**	**+2.0**
	comp=N,34nm,0.3s,baz=172,slow=24,SNR=9.3						
LCO	**Las Campanas**	**3.00**	**15**	*e*Pn	**Pn**	**10 15 24.6**	**-0.2**
PLCA	**Paso Flores**	**8.84**	**175**	P	**Pn**	**10 16 44.7**	**0.0**
	comp=N,1.5nm,0.3s,baz=340,slow=12,SNR=49						
PLCA				LR	LR	10 19 41.0	
	comp=N,82nm,20.3s,baz=344,slow=34						
LPAZ	**La Paz**	**15.87**	**12**	P	**Pn**	**10 18 20.1**	**+0.6**
	comp=N,0.5nm,0.3s,baz=191,slow=7.5,SNR=17						
SIV	**San Ignacio**	**18.52**	**34**	P	**Pn**	**10 18 50.5**	**-1.6**
	comp=N,1.3nm,0.3s,baz=212,slow=10,SNR=51						
NNA	**Nana**	**20.42**	**345**	P	**P**	**10 19 12.7**	**+0.5**
	comp=N,6.0nm,0.7s,baz=225,slow=10,SNR=4.2						
USHA	**Ushuaia**	**23.01**	**175**	P	**P**	**10 19 40.2**	**+0.7**
	comp=N,28nm,0.9s,mb4.7,baz=337,slow=5.9,SNR=6.8						
VNA3	**Neumayer Olymp**	**51.14**	**158**	*e*	**P**	**10 23 36.4**	**+0.1**
VNA3				*e*		10 23 40.8	
VNA2	**Neumayer--Watz**	**51.78**	**158**	*e*	**P**	**10 23 41.3**	**+0.2**
	baz=286,slow=9.3						
VNA2				*e*		10 23 44.6	
SNAA	**Sanae**	**53.37**	**158**	*e*	**P**	**10 23 52.5**	**-0.3**
SNAA				*e*		10 23 56.4	
RKT	**Rikitea**	**56.22**	**262**	*e*T		11 24 58.2	
	comp=N,2.7nm,0.2s						
QSPA	**South Pole Qui**	**58.31**	**180**	P	**P**	**10 24 28.9**	**+0.8**
	comp=N,4.6nm,0.8s,mb4.6,baz=170,slow=3.7,SNR=17						
LPIG	**La Paz**	**66.89**	**322**	LR	LR	10 49 47.9	
	comp=N,49nm,19.7s,MS3.7,baz=25,slow=32						
TBI	**Tubuai**	**68.20**	**255**	*e*LR	LR	10 46 17.3	
	comp=N,117nm,31.5s						
TBI	**Tubuai**	**68.20**	**255**	*e*T		11 39 55.1	
	comp=N,4.9nm,0.2s						
TVO	**Taravao**	**70.57**	**261**	*e*T		11 42 53.6	
	comp=N,3.3nm,0.2s						
DBIC	**Dimbokro**	**74.15**	**72**	P	**P**	**10 26 09.2**	**-1.2**
	comp=N,7.2nm,0.6s,mb4.8,baz=210,slow=6.0,SNR=19						
DBIC				LR	LR	10 53 56.2	
	comp=N,42nm,21.8s,MS3.7,baz=112,slow=32						
BOSA	**Boshof**	**80.69**	**118**	P	**P**	**10 26 46.1**	**-0.7**
	comp=N,3.2nm,0.8s,mb4.3,baz=226,slow=6.4,SNR=6.4						
PDAR	**Pinedale Array**	**82.09**	**333**	P	**P**	**10 26 53.5**	**-0.1**
	comp=N,0.5nm,0.6s,mb3.6,baz=130,slow=6.9,SNR=5.3						
NVAR	**Mina Array Bea**	**82.41**	**325**	P	**P**	**10 26 56.5**	**+1.1**
	comp=N,1.3nm,0.8s,mb3.9,baz=148,slow=6.9,SNR=8.2						
TORD	**Torodi Ar. Bea**	**83.14**	**70**	P	**P**	**10 26 58.9**	**-0.8**
	comp=N,4.8nm,0.8s,mb4.6,baz=260,slow=4.7,SNR=25						
YKA	**Yellowknife Ar**	**100.22**	**341**	P	Pdif	10 28 17.6	-1.8
	comp=N,0.1nm,0.5s,baz=141,slow=4.3,SNR=5.3						
ASAR	**Alice Springs**	**119.59**	**207**	PKP	PKPdf	10 33 21.9	-1.6
	comp=N,0.2nm,0.7s,baz=142,slow=2.1,SNR=2.9						
WRA	**Warramunga Arr**	**122.76**	**209**	PKP	PKPdf	10 33 28.6	-1.0
	comp=N,0.4nm,0.6s,baz=170,slow=1.6,SNR=4.0						
MKAR	**Makanchi Array**	**155.07**	**46**	PKPbc	PKPdf	10 34 34.3	+8.5
	comp=N,0.2nm,0.3s,baz=299,slow=1.5,SNR=2.9						
MKAR				PKPab	PKPab	10 34 50.0	-0.6
	comp=N,0.5nm,0.5s,baz=288,slow=3.2,SNR=7.4						

*ROM **24** 10:31:50.2±0.7, 4067N×1507E, h318km±10km, Ml3.3/1, Error ellipse: s-maj=8.9km s-min=8.5km az=111.0*
*ISCJB **24** 10:31:51.7±0.4, 4061N±005×149E±0.1, h309km±4km, mb3.4/5, Error ellipse: s-maj=12.2km s-min=8.6km az=6.6*
*IDC **24** 10:31:52.7±1.2, 4063N×1487E, h308km±16km, mb3.1/5, mb1 3.1/12, mb1mx3.0/22, mbtmp3.0/12, Error ellipse: s-maj=21.5km s-min=11.8km az=124.0*
*NEIC **24** 10:31:52.4±0.4, 4059N×1509E, h309km±4km, MG3.3(ROM), Error ellipse: s-maj=12.2km s-min=8.4km az=116.0*

ISC 24 10:31:52.7±0.4, 4059N±005×1493E±010, h303km±4km, n28, σ0s77/31, mb3.4/5, 1C-7D, Southern Italy

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

*CSEM **24** 10:47:20.9±0.1, 3558N×3140E, h10km, Mw3.2, Error ellipse: s-maj=2.2km s-min=1.4km az=40.0*
*NIC **24** 10:47:21.1±0.3, 3582N×3145E, h10km, ML3.5, MW3.2*
*NEIC **24** 10:47:21.1, 3582N×3145E, h10km, ML3.5(NIC), ML3.4(ISK), After NIC.*
*HLW **24** 10:47:33.1, 3494N×3174E, h33km, Mb3.8*
ISC 24 10:47:21.4±0.9**, 3559N**±003×**3130E**±005**, h5**km±7km**, n34, σ1ş01**/42**, 1C-4D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	**Akamas**	**1.01**	**123**	P	**Pg**	**10 47 41.0**	**+0.3**
AKMC				S	**Sg**	**10 47 53.5**	**-0.3**
PPCY	**Paphos**	**1.10**	**129**	P	**Pg**	**10 47 43.5**	**+1.0**
ALFC	**Alevga**	**1.14**	**112**	P	**Pg**	**10 47 42.2**	**-1.1**
	23nm,0.3s						
ALFC				S	**Sg**	**10 47 58.8**	**+0.7**
LEF	**Lefka**	**1.38**	**109**	*e*PN	**Pn**	**10 47 44.8**	**-2.4**
ANTB	**Antalya**	**1.41**	**338**	*e*PN	**Pn**	**10 47 47.9**	**+0.3**
SZAC	**Souni-Zanaja**	**1.54**	**122**	P	**Pn**	**10 47 50.6**	**+1.2**
	12nm,0.3s						
SZAC				S	**Sn**	**10 48 11.5**	**+1.8**
ELL	**Elmali**	**1.62**	**316**	*e*PN	**Pn**	**10 47 51.3**	**+0.8**
ERMK	**Ermenek**	**1.67**	**51**	*i* P	**Pn**	**10 47 51.6**	**+0.4**
ERMK				*i* S	**Sn**	**10 48 15.3**	**+2.3**
CSS	**Prodhromos**	**1.77**	**110**	P	**Pn**	**10 47 51.7**	**-0.9**
CSS				S	**Sn**	**10 48 16.2**	**+0.7**
LFK	**Lefkose**	**1.85**	**99**	*e*PN	**Pn**	**10 47 52.0**	**-1.6**
BCK	**Bucak**	**1.95**	**343**	*e*PN	**Pn**	**10 47 55.8**	**+0.7**
IKL	**Isikli**	**2.04**	**71**	*e*PN	**Pn**	**10 47 55.0**	**-1.3**
FETY	**Fethiye**	**2.08**	**301**	*e*PN	**Pn**	**10 47 57.9**	**+1.1**
EREN	**Erenkoy**	**2.34**	**91**	*e*PN	**Pn**	**10 47 59.0**	**-1.4**
KONT	**Konya--Tatoy**	**2.50**	**20**	*e*PN	**Pn**	**10 48 02.9**	**+0.3**
MERS	**Mersin**	**2.90**	**63**	*e*PN	**Pn**	**10 48 07.6**	**-0.5**
SHUT	**Suhut-Afyon**	**3.02**	**349**	*e*PN	**Pn**	**10 48 10.9**	**+1.1**
KHL	**Karahalli**	**3.08**	**333**	*e*PN	**Pn**	**10 48 11.4**	**+0.8**
KIZT	**Kizilcal**	**3.32**	**8**	*e*PN	**Pn**	**10 48 14.5**	**+0.6**
KARA	**Karaisali**	**3.45**	**60**	*e*PN	**Pn**	**10 48 16.2**	**+0.5**
ESKT	**Eskisehir**	**3.94**	**355**	*i* P	**Pn**	**10 48 22.3**	**-0.1**
ESKT				*i* S	**Sn**	**10 49 07.7**	**-1.3**
ESKT	**Eskisehir**	**3.94**	**355**	*e*Pn	**Pn**	**10 48 23.4**	**+1.0**
SEYT	**Eskypehyr**	**3.94**	**355**	*i* P	**Pn**	**10 48 22.3**	**-0.1**
SEYT				*i* S	**Sn**	**10 49 07.7**	**-1.3**
HTY	**Hatay**	**3.96**	**81**	*e*PN	**Pn**	**10 48 22.5**	**-0.2**
KOZT	**Kozan**	**4.10**	**61**	*e*PN	**Pn**	**10 48 24.2**	**-0.4**
KAMT	**Kaman**	**4.23**	**26**	*e*PN	**Pn**	**10 48 27.4**	**+1.0**
ULDT	**Uludag**	**4.86**	**340**	*i* P	**Pn**	**10 48 33.5**	**-1.6**
ULDT				*i* S	**Sn**	**10 49 30.1**	**-1.5**
KMRS	**Kahramanmaras**	**4.89**	**65**	*e*PN	**Pn**	**10 48 35.3**	**-0.2**
AMAG	**Maghara**	**5.18**	**162**	⇓P	**Pn**	**10 48 38.5**	**-1.0**
KOT	**Kottamia**	**5.66**	**175**	⇓P	**Pn**	**10 48 46.0**	**-0.1**
SUZ		**5.88**	**167**	P	**Pn**	**10 48 48.3**	**-0.7**
FYM	**Al Fayyum**	**5.88**	**182**	⇓P	**Pn**	**10 48 50.4**	**+1.2**
HSAF	**As Saff**	**5.96**	**178**	⇓P	**Pn**	**10 48 50.0**	**-0.2**
GLL	**Jalalah**	**6.00**	**177**	⇑P	**Pn**	**10 48 50.7**	**-0.1**

IDC 24 10:58:44.1±1.7**, 078S**×**12793E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/14**, mbtmp3.6**/4**, Error ellipse: s-maj=124.0km s-min=23.7km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.05**	**162**	P	P	11 03 19.1	+0.2
	0.8nm,0.7s,baz=342,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**23.48**	**166**	P	P	11 03 55.2	-0.4
	1.0nm,0.8s,baz=346,slow=12,SNR=12						
STKA	**Stephens Creek**	**33.52**	**159**	P	P	11 05 26.0	+0.5
	2.5nm,0.8s,baz=328,slow=9.5,SNR=2.9						
MKAR	**Makanchi Array**	**61.93**	**326**	P	P	11 09 05.6	0.0
	0.3nm,0.4s,baz=121,slow=5.4,SNR=3.2						

*IDC **24** 10:58:04.3±1.9, 3078S×17870W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, Error ellipse: s-maj=65.5km s-min=43.4km az=6.0*
*NEIC **24** 10:58:48.0±2.8, 3133S×18000W, h354km±22km, mb4.4/1, Error ellipse: s-maj=37.2km s-min=27.4km az=59.0*
ISC 24 10:58:52.3±0.9**, 3159S**±007×**1796E**±02**, h371**km±8km**, n49, σ1ş09**/59**, mb3.6**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.05**	**190**	PN	**Pn**	**11 00 25.2**	**+0.9**
MXZ				SN	**S**	**11 01 39.4**	**+0.3**
PUZ	**Puketiti**	**6.56**	**189**	*e*P	**Pn**	**11 00 29.2**	**-0.8**
PUZ	**Puketiti**	**6.56**	**189**	PN	**Pn**	**11 00 29.1**	**-0.9**
PUZ				SN	**S**	**11 01 49.3**	**-0.2**
MWZ	**Matawai**	**6.94**	**194**	*e*P	**Pn**	**11 00 33.8**	**-0.6**
MWZ	**Matawai**	**6.94**	**194**	PN	**Pn**	**11 00 33.4**	**-1.0**
MWZ				*e*SN	**S**	**11 01 59.6**	**+2.1**
URZ	**Urewera**	**6.96**	**196**	*e*P	**Pn**	**11 00 35.8**	**+1.2**
URZ	**Urewera**	**6.96**	**196**	PN	**Pn**	**11 00 33.4**	**-1.2**
URZ				*e*SN	**S**	**11 01 58.5**	**+0.5**
KNZ	**Kokohu**	**7.58**	**191**	*e*PN	**Pn**	**11 00 42.1**	**+0.4**
KNZ				SN	**S**	**11 02 11.8**	**+0.8**
BKZ	**Black Stump Fm**	**7.97**	**198**	PN	**Pn**	**11 00 46.5**	**+0.2**
BKZ				SN	**S**	**11 02 21.5**	**+2.0**
FWVZ	**Far West T-bar**	**8.33**	**202**	S	**Pn**	**11 00 54.8**	**+4.3**
WNVZ	**Wahianoa**	**8.38**	**202**	P	**Pn**	**11 00 52.6**	**+1.5**
WAZ	**Wanganui**	**8.97**	**203**	P	**Pn**	**11 00 59.2**	**+1.2**
WAZ	**Wanganui**	**8.97**	**203**	PN	**Pn**	**11 00 59.5**	**+1.5**
BFZ	**Birch Farm**	**9.47**	**196**	*e*P	**Pn**	**11 01 02.1**	**-1.7**
BFZ	**Birch Farm**	**9.47**	**196**	PN	**Pn**	**11 01 02.1**	**-1.7**
BFZ				SN	**S**	**11 02 50.3**	**-1.4**
MRZ	**Mangatainoka R**	**9.62**	**199**	*e*P	**Pn**	**11 01 03.6**	**-2.0**
MRZ	**Mangatainoka R**	**9.62**	**199**	PN	**Pn**	**11 01 03.5**	**-2.0**
MRZ				*e*SN	**S**	**11 02 51.9**	**-3.0**
KIW	**Kapiti Island**	**9.99**	**201**	P	**Pn**	**11 01 10.5**	**+0.5**
KIW	**Kapiti Island**	**9.99**	**201**	PN	**Pn**	**11 01 10.5**	**+0.5**
MTW	**Mount Morrison**	**10.10**	**198**	P	**Pn**	**11 01 10.3**	**-1.0**
CAW	**Cannon Point**	**10.17**	**200**	P	**Pn**	**11 01 11.7**	**-0.4**
MRW	**Makara Radio**	**10.39**	**201**	P	**Pn**	**11 01 14.9**	**+0.2**
TCW	**Tory Channel**	**10.51**	**203**	P	**Pn**	**11 01 15.9**	**-0.2**
TCW	**Tory Channel**	**10.51**	**203**	PN	**Pn**	**11 01 15.9**	**-0.2**
TCW				SN	**S**	**11 03 14.0**	**-0.5**
NNZ	**Nelson**	**10.83**	**206**	*e*P	**Pn**	**11 01 19.3**	**-0.6**
NNZ	**Nelson**	**10.83**	**206**	PN	**Pn**	**11 01 19.1**	**-0.8**
NNZ				SN	**S**	**11 03 21.1**	**-0.3**
QRZ	**Quartz Range**	**10.84**	**210**	*e*P	**Pn**	**11 01 20.3**	**+0.3**
QRZ	**Quartz Range**	**10.84**	**210**	PN	**Pn**	**11 01 20.3**	**+0.3**
BSWZ	**Blackbirch Sta**	**11.10**	**203**	P	**Pn**	**11 01 23.3**	**+0.3**
THZ	**Tophouse**	**11.48**	**206**	*e*P	**Pn**	**11 01 26.2**	**-1.3**
THZ	**Tophouse**	**11.48**	**206**	PN	**Pn**	**11 01 25.3**	**-2.2**
THZ				SN	**S**	**11 03 35.3**	**+0.1**
KHZ	**Kahutara**	**11.84**	**202**	*e*P	**Pn**	**11 01 30.3**	**-1.4**
KHZ	**Kahutara**	**11.84**	**202**	PN	**Pn**	**11 01 30.1**	**-1.6**
KHZ				SN	**S**	**11 03 41.9**	**-0.5**
DSZ	**Denniston Nort**	**11.90**	**209**	*e*P	**Pn**	**11 01 31.2**	**-1.3**
DSZ	**Denniston Nort**	**11.90**	**209**	SN	**S**	**11 03 44.5**	**+0.6**
LTZ	**Lake Taylor**	**12.60**	**206**	*e*P	**P**	**11 01 40.6**	**+1.1**
LTZ	**Lake Taylor**	**12.60**	**206**	PN	**Pn**	**11 01 40.6**	**0.0**
MQZ	**McQueen's Vall**	**13.28**	**202**	SN	**S**	**11 04 11.3**	**-0.4**
WVZ	**Waitaha Valley**	**13.45**	**209**	*e*P	**P**	**11 01 51.2**	**+2.4**
WVZ	**Waitaha Valley**	**13.45**	**209**	PN	**Pn**	**11 01 50.3**	**-0.3**
STKA	**Stephens Creek**	**32.22**	**259**	P	**P**	**11 04 49.6**	**+2.2**
	3.2nm,1.1s,mb3.5,baz=98,slow=4.5,SNR=3.1						
ASAR	**Alice Springs**	**41.01**	**269**	P	**P**	**11 06 00.9**	**0.0**
	0.2nm,0.4s,baz=107,slow=7.4,SNR=6.2						
WRA	**Warramunga Arr**	**42.11**	**275**	P	**P**	**11 06 09.0**	**-0.9**
	0.3nm,0.3s,mb2.9,baz=113,slow=7.9,SNR=4.1						
QSPA	**South Pole Qui**	**58.52**	**180**	*e*P	**P**	**11 08 12.2**	**+1.8**
	12nm,0.7s,mb4.4						
KKM	**Kota Kinabalu**	**70.99**	**290**	*e*P	**P**	**11 09 22.8**	**-8.3**
VNA3	**Neumayer Olymp**	**77.24**	**177**	*e*	**P**	**11 10 05.6**	**-0.3**
VNA3				*e*		11 10 07.7	
VNA2	**Neumayer--Watz**	**77.65**	**178**	*e*	**P**	**11 10 08.0**	**-0.2**
	baz=198,slow=4.0						
VNA2				*e*		11 10 10.7	
FINES	**FINESS Array B**	**145.51**	**338**	PKPbc	PKPbc	11 17 42.5	-4.4
	0.6nm,0.5s,baz=37,slow=4.8,SNR=9.0						
TORD	**Torodi Ar. Bea**	**161.54**	**186**	PKPab	PKPab	11 18 55.4	-1.2
	0.7nm,0.7s,baz=166,slow=4.7,SNR=6.1						

MAN 24 11:19:24, 905N×**12239E, h27**km**, mb4.3, ML3.1, MS2.9, 3C, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.89**	**71**	⇑*e*P	Pn	11 19 40.5	-0.2
DCPH	**Dipolog City**	**1.06**	**116**	⇑*e*P	Pn	11 19 41.6	-1.5
DCPH				*e*S	Sn	11 19 54.7	-2.3
PAGZ	**Pagadian**	**1.55**	**141**	*e*P	Pn	11 19 50.3	+0.4
PAGZ				*e*S	Sn	11 20 10.2	+1.1
GUIM	**Jordan**	**1.58**	**7**	*e*P	Pn	11 19 51.5	+1.3
GUIM				*e*S	Sn	11 20 12.5	+2.8
LLP	**Lapu-Lapu**	**2.00**	**51**	⇑*i*P	Pn	11 19 56.8	+0.8
LLP				*e*S	Sn	11 20 21.1	+1.0
CUYO	**Cuyo Island**	**2.24**	**323**	*e*P	Pn	11 20 00.6	+1.2
CUYO				*e*S	Sn	11 20 27.1	+1.0
MSLP	**Maasin**	**2.66**	**66**	*e*P	Pn	11 20 07.0	+1.9
BUKP	**Musuan**	**2.89**	**114**	*e*P	Pn	11 19 59.5	-8.8

*ISCJB **24** 11:29:38.5±0.6, 1036N±006×6229W±003, h33km, Error ellipse: s-maj=9.0km s-min=4.1km az=168.5*
*FUNV **24** 11:29:39.8, 1039N×6238W, h7km, MW2.4*
*TRN **24** 11:29:42.9, 1112N×6186W, h32km, MD2.8*
*NEIC **24** 11:29:42.9, 1112N×6186W, h32km, MD2.8(TRN), After TRN.*
ISC 24 11:29:39.0±0.6**, 1039N**±007×**6229W**±003**, h35**km**, n11, σ1ş39**/19**, 1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.26**	**14**	⇑*e*P	**Pn**	**11 29 45.4**	**-1.1**
GUIV				*e*S	**Sn**	**11 29 50.5**	**-1.2**
TCE	**Chacachacare**	**0.61**	**60**	*e*P	**Pn**	**11 29 51.5**	**+0.4**
TCE				*e*S	**Sn**	**11 29 59.5**	**-0.3**
GUNV	**Guanoco**	**0.69**	**251**	⇓*i*P	**Pn**	**11 29 50.5**	**-1.7**
GUNV				*e*S	**Sn**	**11 30 00.5**	**-1.2**
TRN	**Trinidad (W)**	**0.91**	**73**	*e*P	**Pn**	**11 29 56.6**	**+1.4**
TRN				*e*S	**Sn**	**11 30 05.9**	**-1.2**
CRUV	**Carupano**	**0.98**	**287**	*e*P	**Pn**	**11 29 55.1**	**-1.1**
CRUV				*e*S	**Sn**	**11 30 07.0**	**-1.8**
TBH	**Brigand Hill**	**1.20**	**85**	*e*P	**Pn**	**11 30 01.7**	**+2.4**
TBH				*e*S	**Sn**	**11 30 13.9**	**-0.5**
ITEV	**Isla Los Testi**	**1.27**	**319**	*e*P	**Pn**	**11 30 02.2**	**+2.0**
ITEV				*e*S	**Sn**	**11 30 18.0**	**+1.9**
TPR	**Prospect**	**1.68**	**62**	*e*P	**Pn**	**11 30 02.3**	**-3.6**
TPR				*e*S	**Sn**	**11 30 14.8**	**-11**
PCRV	**Puerto La Cruz**	**2.32**	**265**	*e*P	**Pn**	**11 30 15.6**	**+0.9**
BIRV	**Birongo**	**3.92**	**272**	*e*P	**Pn**	**11 30 38.6**	**+1.9**
CAOV	**Caicara del Or**	**5.02**	**233**	*e*P	**Pn**	**11 30 52.8**	**+1.0**

KRSC 24 11:35:24.5±0.8**, 5113N**×**15830E, h10**km±10km**, ML3.7, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.31**	**6**	*i* P	Pn	11 35 49.2	+0.4
RUS				*i* S	Sb	11 36 07.0	+0.9
GRL	**Gorelyy**	**1.43**	**354**	*i* P	Pn	11 35 51.6	+1.1
GRL				*i* S	Sn	11 36 11.1	+1.8
MIPR	**Malaya Ipel'ka**	**1.50**	**321**	*e*P	Pn	11 35 51.6	+0.2
MIPR				*i* S	Sn	11 36 11.1	+0.2
PET	**Petropavlovsk**	**1.91**	**6**	*e*P	Pn	11 35 58.2	+1.1
PET				*i* S	Sn	11 36 23.3	+2.2
NLC	**Nalytchevo**	**2.14**	**17**	*e*P	Pn	11 36 00.1	-0.2
NLC				*i* S	Sn	11 36 26.3	-0.6
AVH	**Avacha**	**2.15**	**7**	*e*P	Pn	11 36 02.7	+2.3
SDLR	**Sedlovina**	**2.18**	**9**	*e*P	Pn	11 36 02.2	+1.4
SDLR				*i* S	Sn	11 36 29.5	+1.7
SPN	**Mys Shipunski**	**2.24**	**28**	*e*P	Pn	11 36 03.5	+1.9
SPN				*i* S	Sn	11 36 32.3	+3.1
GNL	**Ganaly**	**2.58**	**355**	*i* P	Pn	11 36 08.2	+2.0
GNL				*i* S	Sn	11 36 40.9	+3.3
MKZ	**Mys Kozlova**	**4.01**	**30**	P	Pn	11 36 27.8	+1.9
MKZ				*i* S	Sn	11 37 13.9	+1.0
TUMR	**Tumrok**	**4.31**	**14**	P	Pn	11 36 30.6	+0.6
KBTR	**Krutoberegovo**	**5.75**	**26**	*e*P	Pn	11 36 52.4	+2.6

IDC 24 11:41:55.0±2.3**, 722S**×**12942E, h0**km**, mb3.6**/1**, mb1 3.6**/3**, mb1mx3.4**/12**, mbtmp3.4**/3**, ML3.2**/2**, Error ellipse: s-maj=142.6km s-min=32.8km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.52**	**160**	Pn	Pn	11 45 06.5	-1.7
	0.1nm,0.3s,baz=342,slow=13,SNR=2.5						
WRA				Sn	Sn	11 47 29.1	-10
	0.6nm,0.3s,baz=342,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.91**	**166**	Pn	Pn	11 45 54.9	+1.7
	0.1nm,0.3s,baz=350,slow=9.7,SNR=8.6						
ASAR				Sn	Sn	11 48 52.0	-10
	0.1nm,0.3s,baz=354,slow=28,SNR=4.5						
MKAR	**Makanchi Array**	**68.09**	**327**	P	P	11 52 56.7	+0.1
	0.3nm,0.4s,baz=116,slow=5.6,SNR=4.5						

*ISCJB **24** 11:58:37.3±2.2, 102N±0.1×936E±02, h75km±21km, mb4.0/11, Error ellipse: s-maj=28.5km s-min=11.5km az=148.8*
*IDC **24** 11:58:37.5±4.3, 10.15N×9368E, h56km±39km, mb3.7/9, mb1 3.8/10, mb1mx3.6/22, mbtmp3.7/10, ML3.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.3/21, Error ellipse: s-maj=39.1km s-min=17.4km az=57.0*
*BJI **24** 11:58:38.3, 1034N×9349E, h69km, mb4.2*
*NEIC **24** 11:58:40.1±1.9, 10.14N×9372E, h88km±20km, mb4.4/4, Error ellipse: s-maj=45.6km s-min=11.0km az=60.0*
ISC 24 11:58:39.2±1.7**, 102N**±01×**937E**±02**, h72**km±17km**, n26, σ1ş15**/23**, mb4.0**/11**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.69**	**328**	*e*P	x	11 59 11.8	
PBA				*e*S	x	11 59 34.6	
PBA				*e*x	x	11 59 46.5	
	comp=E,1μm,0.7s						
PBA				*e*x	x	11 59 46.8	
	comp=N,1μm,0.6s						
PSI	**Prapat**	**9.03**	**144**	P	**Pn**	**12 00 47.8**	**+1.0**
	comp=N,0.4nm,0.3s,baz=312,slow=12,SNR=8.8						
PSI				LR	LR	12 04 33.0	
	comp=N,189nm,20.6s,baz=316,slow=39						
SHL	**Shillong**	**15.36**	**354**	*e*P	**Pn**	**12 02 09.0**	**-2.8**
ODAN	**Odare**	**17.59**	**341**	*e*P	**Pn**	**12 02 46.0**	**+6.5**
	comp=N,12nm,0.4s						
TAPN	**Taplejung**	**17.95**	**343**	*e*P	**Pn**	**12 02 44.9**	**+1.1**
	comp=N,22nm,0.7s						
JIRN	**Jiri**	**18.73**	**339**	*e*P	**Pn**	**12 02 52.3**	**-0.9**
	comp=N,15nm,0.5s						
LSA	**Lhasa**	**19.53**	**353**	P	**Pn**	**12 03 01.6**	**-1.1**
LSA	**Lhasa**	**19.53**	**353**	*e*P	**Pn**	**12 03 01.5**	**-1.2**
	comp=N,10nm,0.5s						
GKN	**Gorkha**	**19.63**	**336**	*e*P	**Pn**	**12 02 59.3**	**-4.6**
	comp=N,9.6nm,0.3s						
KOLN	**Koldanda**	**19.87**	**333**	*e*P	**Pn**	**12 03 02.9**	**-3.8**
	comp=N,16nm,0.5s						
GYA	**Guiyang**	**20.30**	**36**	P	**P**	**12 03 11.1**	**+1.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s						
AML	**Almayashu**	**36.30**	**335**	*e*P	**P**	**12 05 37.3**	**+1.6**
	comp=Z,13nm,1.2s,mb4.7						
EKS2	**Erkin-Say**	**36.70**	**335**	*e*P	**P**	**12 05 40.4**	**+1.3**
	comp=Z,3.1nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**37.72**	**347**	P	**P**	**12 05 48.2**	**+0.6**
	comp=Z,2.8nm,0.8s,mb4.1,baz=162,slow=8.4,SNR=19						
MKAR				LR	LR	12 22 53.5	
	comp=Z,43nm,18.1s,baz=164,slow=38						
SONM	**Songino Array**	**39.01**	**14**	P	**P**	**12 05 59.1**	**+0.7**
	comp=Z,0.9nm,0.6s,mb3.8,baz=203,slow=7.5,SNR=11						
SONM				PcP	PcP	12 08 08.8	+1.3
	comp=Z,0.3nm,0.4s,baz=218,slow=2.6,SNR=3.4						
KSRS	**Korea Array**	**41.05**	**43**	P	**P**	**12 06 15.1**	**-0.6**
	comp=Z,1.9nm,1.0s,mb3.9,baz=252,slow=12,SNR=5.7						
KSRS				LR	LR	12 24 16.3	
	comp=Z,34nm,19.9s,baz=252,slow=38						
KURK	**Kurchatov**	**42.24**	**346**	*e*P	**P**	**12 06 24.3**	**-0.8**
	comp=Z,7.1nm,1.4s,mb4.2						
AKTK	**Aktyubinsk**	**49.69**	**331**	P	**P**	**12 07 22.9**	**-0.7**
AKTO	**Aktyubinsk**	**49.69**	**331**	P	**P**	**12 07 22.9**	**-0.7**
	comp=Z,1.0nm,0.4s,mb4.1,baz=132,slow=3.3,SNR=5.9						
WRA	**Warramunga Arr**	**50.02**	**127**	P	**P**	**12 07 25.2**	**-1.4**
	comp=Z,0.7nm,0.7s,mb3.7,baz=306,slow=9.0,SNR=4.7						
ASAR	**Alice Springs**	**51.78**	**131**	P	**P**	**12 07 38.8**	**-1.1**
	comp=Z,1.1nm,0.9s,mb3.9,baz=308,slow=8.1,SNR=8.1						
FINES	**FINESS Array B**	**70.44**	**332**	P	**P**	**12 09 45.5**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.6,baz=95,slow=9.6,SNR=6.4						
FINES				LR	LR	12 46 32.5	
	comp=Z,50nm,18.2s,baz=184,slow=41						
ARCES	**ARCESS Array B**	**72.92**	**340**	P	**P**	**12 10 01.4**	**+1.1**
	comp=Z,0.9nm,0.3s,mb4.0,baz=99,slow=7.1,SNR=26						
ARCES				LR	LR	12 45 49.3	
	comp=Z,79nm,18.2s,baz=358,slow=39						
GERES	**GERESS Array B**	**75.78**	**318**	P	**P**	**12 10 17.6**	**+0.4**
	comp=Z,0.2nm,3.1s,baz=90,slow=4.4,SNR=4.8						
NVAR	**Mina Array Bea**	**123.15**	**30**	PKP	PKPdf	12 17 30.2	+2.2
	comp=Z,0.2nm,0.6s,baz=257,slow=3.6,SNR=3.4						
PDAR	**Pinedale Array**	**123.16**	**20**	PKP	PKPdf	12 17 28.8	+1.0
	comp=Z,0.4nm,0.7s,baz=70,slow=1.7,SNR=4.3						

*ISCJB **24** 12:10:30.7±0.5, 3890N±002×2628E±003, h10km±4km, Error ellipse: s-maj=4.0km s-min=3.3km az=163.3*
*ATH **24** 12:10:30.6, 3889N×2609E, h18km±8km, MD3.7/5*
*ISK **24** 12:10:30.5, 3892N×2626E, h15km, MD3.5*
*NEIC **24** 12:10:30.0, 3889N×2623E, h14km, MD3.8(ATH), MD3.3(ISK), ML3.7(THE), After ISK.*
*CSEM **24** 12:10:31.1±0.1, 3893N×2636E, h12km, MD3.8, Error ellipse: s-maj=1.6km s-min=1.5km az=52.0*
*THE **24** 12:10:32.4, 3887N×2631E, h14km, ML3.7*
*DDA **24** 12:10:33.9, 3901N×2641E, h11km, Md3.2*
ISC 24 12:10:31.8±0.4**, 3891N**±002×**2628E**±003**, h13**km±3km**, n62, σ0ş73**/73**, 1C-3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.34**	**359**	*e*PB	**Pg**	**12 10 38.4**	**-0.3**
PRK				*e*SB	**Sg**	**12 10 44.2**	**+0.8**
AYVA	**Ayvalik**	**0.51**	**38**	*i* P	**Pg**	**12 10 41.6**	**-0.3**
AYVA				*i* S	**Sg**	**12 10 48.5**	**-0.3**
CHOS	**Chios island**	**0.55**	**199**	*e*Pg	**Pg**	**12 10 42.3**	**-0.2**
CHOS				*e*Sg	**Sg**	**12 10 50.4**	**+0.7**
BLCB	**Balcova**	**0.79**	**131**	*i* PG	**Pg**	**12 10 46.6**	**-0.5**
BLCB	**Balcova**	**0.79**	**131**	*e*Pg	**Pg**	**12 10 46.7**	**-0.4**
BLCB				*e*Sg	**Sg**	**12 10 57.7**	**+0.2**
EZN	**Ezine**	**0.92**	**2**	*i* PG	**Pg**	**12 10 49.1**	**-0.5**
EZN				*i* SG	**Sg**	**12 11 01.3**	**-0.3**
BOZC	**Bozcaada**	**0.95**	**349**	*i* P	**Pb**	**12 10 49.5**	**-0.6**
BOZC				*i* S	**Sg**	**12 11 03.1**	**+0.5**
AKS	**Akhisar**	**1.20**	**91**	*i* PN	**Pn**	**12 10 53.6**	**-0.6**
AKHS	**Akhisar**	**1.20**	**91**	*i* P	**Pn**	**12 10 54.1**	**0.0**
AKHS				*i* S	**Sb**	**12 11 11.2**	**+1.5**
SMG	**Samos**	**1.27**	**160**	*e*PN	**Pn**	**12 10 55.8**	**+0.6**
GADA	**Gvkgeada**	**1.32**	**347**	*i* PN	**Pn**	**12 10 54.7**	**-1.1**
BALB	**Balikesir**	**1.44**	**59**	PN	**Pn**	**12 10 57.0**	**-0.6**
BTOK	**Tokmak**	**1.60**	**57**	*i* P	**Pn**	**12 10 59.7**	**-0.1**
BTOK				*i* S	**Sn**	**12 11 20.3**	**-0.1**
ENEZ	**Enez**	**1.83**	**357**	PN	**Pn**	**12 11 02.2**	**-0.7**
EDC	**Edincik**	**1.89**	**40**	PN	**Pn**	**12 11 03.1**	**-0.6**
KULA	**Kula-Manisa**	**1.90**	**101**	PN	**Pn**	**12 11 03.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.91**	**21**	PN	**Pn**	**12 11 03.7**	**-0.3**
BNT	**Bandirma**	**1.93**	**41**	PN	**Pn**	**12 11 03.1**	**-1.1**
APE	**Apeiranthos**	**1.93**	**198**	*e*Pb	**Pb**	**12 11 03.0**	**-3.7**
APE	**Apeiranthos**	**1.93**	**198**	*e*Pb	**Pb**	**12 11 03.9**	**-2.8**
DST	**Dursunbey**	**1.95**	**68**	PN	**Pn**	**12 11 03.9**	**-0.7**
MRMT	**Marmara Adasi**	**1.98**	**30**	PN	**Pn**	**12 11 04.8**	**-0.1**
MLSB	**Milas**	**2.00**	**143**	PN	**Pn**	**12 11 05.5**	**+0.4**
ALN	**Alexandroupoli**	**2.00**	**355**	*e*Pn	**Pn**	**12 11 04.9**	**-0.3**
ALN				*e*Sn	**Sn**	**12 11 30.7**	**+0.7**
BODT	**Bodrum**	**2.01**	**156**	PN	**Pn**	**12 11 04.8**	**-0.6**
MFT	**Murefte**	**2.03**	**22**	PN	**Pn**	**12 11 05.4**	**-0.3**
BDRM	**Kayabasi**	**2.06**	**153**	*i* P	**Pn**	**12 11 09.3**	**+3.3**
BDRM				*i* S	**Sg**	**12 11 37.8**	**0.0**
PAIG	**Paliouri**	**2.26**	**298**	*e*Pn	**Pn**	**12 11 08.4**	**-0.3**
OUR	**Ouranopolis**	**2.28**	**310**	*e*Pn	**Pn**	**12 11 09.3**	**+0.3**
RDO	**Rodhopi**	**2.31**	**346**	P	**Pn**	**12 11 10.6**	**+1.1**
DAT	**Datca**	**2.40**	**154**	*e*PN	**Pn**	**12 11 10.0**	**-0.8**
GDZ	**Gediz**	**2.50**	**85**	*i* P	**Pn**	**12 11 12.2**	**+0.1**
GDZ				*i* S	**Sg**	**12 11 52.2**	**0.0**
PLG	**Polygyros**	**2.63**	**305**	*e*PN	**Pn**	**12 11 12.8**	**-1.1**
GEMT	**Gemlik**	**2.72**	**55**	*e*PN	**Pn**	**12 11 15.6**	**+0.5**
CTT	**Catalca**	**2.78**	**36**	*e*PN	**Pn**	**12 11 16.3**	**+0.3**
KDZ	**Kurdzhali**	**2.82**	**347**	P	**Pn**	**12 11 16.0**	**-0.5**
IZI	**Iznik**	**2.85**	**59**	*e*PN	**Pn**	**12 11 16.3**	**-0.6**
YLV	**Yalova**	**2.91**	**54**	*e*PN	**Pn**	**12 11 17.8**	**+0.1**
SOH	**Sokhos**	**2.96**	**311**	*e*Pn	**Pn**	**12 11 18.5**	**+0.1**
EDRB	**Edirne**	**2.96**	**7**	*e*PN	**Pn**	**12 11 17.7**	**-0.7**
HORT	**Hortiatis**	**2.98**	**306**	*e*Pn	**Pn**	**12 11 19.1**	**+0.4**
HORT	**Hortiatis**	**2.98**	**306**	*e*Pn	**Pn**	**12 11 19.0**	**+0.3**
ISK	**Istanbul-Kandi**	**3.04**	**44**	*e*PN	**Pn**	**12 11 19.9**	**+0.4**
NVR	**Nevrokopi**	**3.06**	**324**	*e*PN	**Pn**	**12 11 20.0**	**+0.1**
ADVT	**Abdulvahap**	**3.08**	**59**	*e*PN	**Pn**	**12 11 19.8**	**-0.2**
AGG	**Agios Georgios**	**3.08**	**273**	*e*Pn	**Pn**	**12 11 20.4**	**+0.3**
FETY	**Fethiye**	**3.17**	**135**	*e*PN	**Pn**	**12 11 21.9**	**+0.5**
HRT	**Hereke**	**3.23**	**53**	*e*PN	**Pn**	**12 11 21.9**	**-0.3**
MMB	**Musomiste**	**3.32**	**325**	P	**Pn**	**12 11 23.2**	**-0.1**
GPA	**Golpazari**	**3.41**	**65**	*e*PN	**Pn**	**12 11 24.6**	**+0.1**
SELA	**Sela**	**3.49**	**261**	*e*Pn	**Pn**	**12 11 26.1**	**+0.3**
SELA	**Sela**	**3.49**	**261**	*e*Pn	**Pn**	**12 11 26.0**	**+0.2**
JMB	**Yambol**	**3.56**	**4**	*e*P	**Pb**	**12 11 36.6**	**+1.9**
ESKT	**Eskisehir**	**3.60**	**79**	*e*PN	**Pn**	**12 11 28.4**	**+1.1**
GULT	**Gulveren**	**3.61**	**64**	*e*PN	**Pn**	**12 11 26.9**	**-0.4**
ITM	**Ithomi**	**3.84**	**245**	P	**Pn**	**12 11 34.7**	**+4.1**
VTS	**Vitosha**	**4.36**	**329**	P	**Pn**	**12 11 38.5**	**+0.9**
VTS	**Vitosha**	**4.36**	**329**	⇓*i*P	**Pn**	**12 11 38.8**	**+1.2**
PVL	**Pavlikeni**	**4.37**	**351**	P	**Pn**	**12 11 37.0**	**-0.7**
PLOR	**Plostina**	**6.95**	**2**	⇑*i*P	**Pn**	**12 12 14.8**	**+1.6**
VRI	**Vrincioaia**	**6.96**	**3**	⇓*i*P	**Pn**	**12 12 15.2**	**+1.8**
GZR	**Gura Zlata**	**6.99**	**339**	⇓*i*P	**Pn**	**12 12 12.8**	**-0.9**

*ATH **24** 13:03:55.7, 3820N×2030E, h20km±1km, MD3.8/13, ML4.0*
*NEIC **24** 13:03:55.6, 3820N×2030E, h20km, ML4.2(THE), ML4.0(ATH), ML3.8(PDG), After ATH.*
*ISCJB **24** 13:03:55.0±0.7, 3840N±002×2035E±004, h3km±4km, mb3.6/9, Error ellipse: s-maj=5.9km s-min=2.9km az=145.0*
*PDG **24** 13:03:56.6±0.4, 3834N×2036E, h19km±1km, ML3.8/10, Error ellipse: s-maj=2.1km s-min=2.0km az=90.0*
*CSEM **24** 13:03:56.2±0.1, 3801N×2036E, h36km, mb3.6/6, Error ellipse: s-maj=3.5km s-min=1.4km az=33.0*
*MOS **24** 13:03:56.6±1.1, 3833N×2034E, h15km, mb3.8/6, Error ellipse: s-maj=10.1km s-min=5.6km az=82.3*
*THE **24** 13:03:57.3, 3838N×2047E, h3km, ML4.2*
*IDC **24** 13:03:57.0±1.3, 3854N×2044E, h0km, mb3.7/9, mb1 3.8/12, mb1mx3.7/25, mbtmp3.7/12, ML3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=22.7km s-min=18.3km az=51.0*
*NAO **24** 13:04:09.9, 3835N×2018E, h33km, mb3.3*
ISC 24 13:03:56.3±0.6**, 3838N**±002×**2037E**±004**, h0**km±4km**, n83, σ1ş20**/117**, mb3.7**/9**, 16C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.27**	**139**	*e*PB	**Pg**	**13 04 01.7**	**+0.3**
VLS				*e*SB	**Sg**	**13 04 05.4**	**+0.6**
KFL	**Anninata**	**0.42**	**129**	*e*Pg	**Pg**	**13 04 04.2**	**-0.3**
KFL				*e*Sg	**Sg**	**13 04 09.9**	**-0.1**
RLS	**Riolos of Patr**	**0.92**	**110**	*e*PN	**Pn**	**13 04 13.5**	**-3.0**
IGT	**Igoumenitsa**	**1.15**	**359**	*e*Pg	**Pg**	**13 04 18.9**	**+0.4**
IGT				*e*Sg	**Sg**	**13 04 36.6**	**+3.2**
SELA	**Sela**	**1.20**	**94**	*e*Pg	**Pg**	**13 04 18.1**	**-1.2**
SELA				*e*Sg	**Sg**	**13 04 34.7**	**-0.3**
EVR	**Evrytania**	**1.25**	**64**	*e*PN	**Pn**	**13 04 22.4**	**+1.4**
EVR				*e*SN	**Sn**	**13 04 41.0**	**+2.5**
JAN	**Janina**	**1.33**	**16**	*e*PN	**Pn**	**13 04 23.2**	**+1.1**
JAN				*e*SN	**Sn**	**13 04 44.1**	**+3.6**
KEK	**Kerkira**	**1.41**	**342**	*e*PN	**Pn**	**13 04 24.5**	**+1.3**
MEV	**Metsovon**	**1.56**	**25**	*e*Pg	**Pg**	**13 04 25.3**	**-0.8**
MEV				*e*Sg	**Sg**	**13 04 46.5**	**+0.2**
AGG	**Agios Georgios**	**1.66**	**67**	*e*Pg	**Pg**	**13 04 25.8**	**-2.4**
AGG				*e*Sg	**Sg**	**13 04 48.5**	**-1.3**
ITM	**Ithomi**	**1.72**	**134**	*e*PN	**Pn**	**13 04 25.9**	**-1.6**
THL	**Klokotos Trika**	**1.75**	**47**	*e*PN	**Pn**	**13 04 29.5**	**+1.7**
THL				*e*SN	**Sn**	**13 04 54.1**	**+3.3**
PYL	**PYLOS**	**1.84**	**143**	*e*Pb	**Pb**	**13 04 28.8**	**-2.0**
VLX	**Vlachokerasia**	**1.88**	**122**	*e*Pb	**Pb**	**13 04 29.3**	**-2.3**
VLX				*e*Sb	**Sb**	**13 04 53.7**	**-1.9**
LKR	**Lokris**	**2.08**	**82**	*e*PN	**Pn**	**13 04 33.8**	**+1.4**
KZN	**Kozani**	**2.21**	**29**	*e*PN	**Pn**	**13 04 36.4**	**+2.2**
KZN				*e*SN	**Sn**	**13 05 05.9**	**+3.6**
LIT	**Litokhoron**	**2.38**	**43**	*e*Pn	**Pn**	**13 04 36.8**	**+0.2**
LIT				*e*Sn	**Sn**	**13 05 06.7**	**+0.3**
XOR	**Xorichti**	**2.41**	**65**	*e*Pn	**Pn**	**13 04 36.3**	**-0.8**
FNA	**Florina**	**2.52**	**18**	*e*Pn	**Pn**	**13 04 39.5**	**+0.9**
NAIG	**Nisos Aigina**	**2.54**	**103**	*e*PN	**Pn**	**13 04 38.5**	**-0.2**
ATH	**Athens Observa**	**2.67**	**98**	*e*PN	**Pn**	**13 04 40.0**	**-0.5**
BIA	**Bitola**	**2.74**	**15**	*e*Pn	**Pn**	**13 04 48.2**	**+6.7**

OHR	**Ohrid**	**2.75**	**7**	*e*Pn		**Pn**	**13 04 43.6 +2.0**
PTL	**Penteli**	**2.77**	**96**	*e*PN		**Pn**	**13 04 41.5 -0.5**
TIP	**Timpagrande**	**2.93**	**287**	P		**Pn**	**13 04 46.7 +2.5**
PAIG	**Paliouri**	**3.00**	**58**	*e*Pn		**Pn**	**13 04 45.0 -0.2**
KRUS	**Krusevo**	**3.06**	**12**	*e*Pn		**Pn**	**13 04 48.2 +2.2**
PLG	**Polygyros**	**3.11**	**49**	*e*Pn		**Pn**	**13 04 46.5 0.0**
PLG	**Polygyros**	**3.11**	**49**	*e*PN		**Pn**	**13 04 47.7 +1.1**
PLG	**Polygyros**	**3.11**	**49**	*e*Pn		**Pn**	**13 04 46.5 -0.1**
PE1	**Pezze di Greco**	**3.33**	**318**	*e*Pn		**Pn**	**13 04 50.5 +0.9**
SOH	**Sokhos**	**3.36**	**42**	*e*Pn		**Pn**	**13 04 50.0 0.0**
VAY	**Valandovo**	**3.39**	**29**	*e*Pn		**Pn**	**13 04 57.3 +6.8**
STIP	**Stip**	**3.59**	**22**	*e*Pn		**Pn**	**13 04 55.8 +2.5**
STIP	**Stip**	**3.59**	**22**	*e*Pn		**Pn**	**13 04 55.7 +2.5**
SKO	**Skopje**	**3.68**	**13**	*e*Pn		**Pg**	**13 05 06.9 0.0**
ULC	**Ulcinj**	**3.68**	**347**⇑	*i*Pn		**Pn**	**13 04 54.9 +0.4**
ULC				*e*Sn		**Sn**	**13 05 37.8 -0.8**
SG1	**Sgolgore (BA)**	**3.77**	**312**	*e*Pn		**Pn**	**13 04 56.9 +1.3**
BUM	**Brajici-Budva**	**4.08**	**344**⇑	*i*Pn		**Pn**	**13 04 59.9 0.0**
BUM				*e*Sn		**Sn**	**13 05 47.5 -0.8**
PDG	**Podgorica**	**4.13**	**349**⇑	*i*Pn		**Pn**	**13 05 00.7 0.0**
PDG				*e*Sn		**Sn**	**13 05 48.6 -1.1**
TTG	**Podgorica**	**4.13**	**349**⇑	*i*Pn		**Pn**	**13 05 00.7 0.0**
TTG				*e*Sn		**Sn**	**13 05 48.6 -1.1**
CDT	**Castel del Mon**	**4.16**	**312**	*e*Pn		**Pn**	**13 05 02.6 +1.6**
PVY	**Plav**	**4.22**	**356**⇑	*i*Pn		**Pn**	**13 05 02.3 +0.4**
PVY				*e*Sn		**Sn**	**13 05 51.2 -0.7**
APE	**Apeiranthos**	**4.29**	**106**⇓	*e*P		**Pn**	**13 05 06.4 +3.5**
HCY	**Herceg Novi**	**4.31**	**341**⇑	*i*Pn		**Pn**	**13 05 02.7 -0.4**
HCY				*e*Sn		**Sn**	**13 05 53.0 -1.0**
BEY	**Berane**	**4.50**	**356**⇑	*i*Pn		**Pn**	**13 05 06.0 +0.3**
BEY				*e*Sn		**Sn**	**13 05 58.4 -0.4**
IVA	**Berane**	**4.50**	**356**⇑	*i*Pn		**Pn**	**13 05 06.0 +0.3**
IVA				*e*Sn		**Sn**	**13 05 58.4 -0.4**
NKY	**Niksic**	**4.55**	**347**⇑	*i*Pn		**Pn**	**13 05 06.9 +0.5**
NKY				*e*Sn		**Sn**	**13 05 58.9 -1.1**
BRY	**Bratogost**	**4.73**	**343**⇑	*i*Pn		**Pn**	**13 05 08.6 -0.2**
BRY				*e*Sn		**Sn**	**13 06 03.0 -1.3**
IDI	**Anoyia**	**4.76**	**129**	Pn		**Pn**	**13 05 15.9 +6.6**
	1.0nm,0.3s,baz=315,slow=13,SNR=4.6						
IDI				Sn		**Sn**	**13 06 07.6 +2.5**
	1.9nm,0.3s,baz=4.2,slow=20,SNR=6.4						
VAE	**Valguarnera**	**4.80**	**261**	Sn		**Sn**	**13 06 11.2 +5.1**
	2.1nm,0.3s,baz=176,slow=20,SNR=4.3						
UPM	**Unac-Piva**	**4.95**	**348**⇑	*i*Pn		**Pn**	**13 05 12.0 +0.2**
UPM				*e*Sn		**Sn**	**13 06 08.5 -1.2**
PLE	**Pljevlja**	**5.00**	**352**⇑	*i*Pn		**Pn**	**13 05 13.3 +0.7**
PLE				*e*Sn		**Sn**	**13 06 09.8 -1.3**
BOJS	**Bojanci**	**8.07**	**333**	*i* Pn		**Pn**	**13 05 54.7 -0.1**
BOJS				*i* Sn		**Sn**	**13 07 22.8 -4.0**
MLR	**Muntele Rosu**	**8.23**	**29**	Pn		**Pn**	**13 05 57.1 +0.2**
	0.1nm,0.3s,baz=259,slow=5.2,SNR=1.9						
CEY	**Cerknica**	**8.58**	**331**	*i* Pn		**Pn**	**13 06 01.2 -0.5**
CEY				*e*Sn		**Sn**	**13 07 34.9 -4.3**
JAVS	**Javornik**	**8.85**	**330**	*i* Pn		**Pn**	**13 06 04.8 -0.5**
JAVS				*e*Sn		**Sn**	**13 07 40.0 -5.7**
VOY	**Vojsko**	**9.03**	**330**	*e*Pn		**Pn**	**13 06 07.3 -0.6**
VOY				*e*			13 06 25.3
VOY				*e*Sn		**Sn**	**13 07 43.9 -6.3**
PERS	**Pernice**	**9.12**	**337**	*i* Pn		**Pn**	**13 06 08.0 -1.1**
PERS				*e*Sn		**Sn**	**13 07 44.7 -7.6**
OBKA	**Obir**	**9.19**	**334**⇑	*i*Pn		**Pn**	**13 06 09.7 -0.4**
OBKA				⇓*i*Sn		**Sn**	**13 07 45.4 -8.7**
OBKA	**Obir**	**9.19**	**334**⇑	*i*Pn		**Pn**	**13 06 09.7 -0.4**
OBKA				⇑*i*Sn		**Sn**	**13 07 50.2 -4.0**
VYHS	**Vyhne**	**10.17**	**354**	*e*SN		**Sn**	**13 08 02.5 -16**
KOLS	**Kolonicke sedl**	**10.64**	**7**	*e*SN		**Sn**	**13 08 17.0 -13**
DAVOX	**Davos/Dischmat**	**11.41**	**321**	Pn		**Pn**	**13 06 39.9 -0.5**
	0.1nm,0.3s,baz=162,slow=19,SNR=2.2						
DAVOX				Sn		**Sn**	**13 08 46.6 -1.9**
	0.3nm,0.3s,baz=171,slow=19,SNR=2.8						
GERES	**GERESS Array B**	**11.52**	**337**	Pn		**Pn**	**13 06 40.4 -1.6**
	0.2nm,0.3s,baz=162,slow=14,SNR=5.3						
GERES				Sn		**Sn**	**13 08 47.0 -4.3**
	0.2nm,0.3s,baz=158,slow=22,SNR=3.1						
GERES				LR		LR	13 11 34.4
	comp=Z,95nm,18.1s,baz=259,slow=40						
ANN	**Anapa**	**14.28**	**58**	*e*P		**Pn**	**13 07 13.2 -6.4**
ANN				pmax	pmax		
	comp=Z,56nm,1.2s						
KIV	**Kislovodsk**	**17.68**	**65**⇑	*e*P		**Pn**	**13 08 06.2 +2.3**
KIV				pmax	pmax		
	comp=Z,12nm,1.2s						
HFS	**Hagfors**	**22.18**	**351**	P		**P**	**13 08 53.3 -0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	**Hagfors**	**22.18**	**351**	P		**P**	**13 08 53.3 -0.5**
	comp=Z,2.4nm,0.6s,mb3.8,baz=152,slow=9.4,SNR=5.8						
EKA	**Eskdalemuir Ar**	**23.20**	**325**	P		**P**	**13 09 06.1 +1.6**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**23.20**	**325**	P		**P**	**13 09 06.1 +1.6**
	comp=Z,0.9nm,0.8s,mb3.4,baz=126,slow=7.2,SNR=3.7						
FINES	**FINESS Array B**	**23.36**	**7**	P		**P**	**13 09 05.6 -0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**23.36**	**7**	P		**P**	**13 09 05.6 -0.6**
	comp=Z,1.4nm,0.7s,mb3.6,baz=175,slow=11,SNR=7.1						
NB2	**NORSAR Subarra**	**23.40**	**349**	P		**P**	**13 09 06.0 -0.6**
	comp=Z,1.8nm,1.0s,mb3.6,baz=162,slow=11						
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**13 09 06.8 +0.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**13 09 06.8 +0.2**
	comp=Z,0.7nm,0.6s,mb3.4,baz=164,slow=11,SNR=4.1						
TORD	**Torodi Ar. Bea**	**30.11**	**218**	P		**P**	**13 10 09.6 +1.9**
	comp=Z,0.6nm,0.9s,mb3.4,baz=40,slow=8.9,SNR=4.1						
ARCES	**ARCESS Array B**	**31.34**	**3**	P		**P**	**13 10 17.9 -0.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**31.34**	**3**	P		**P**	**13 10 17.9 -0.2**
	comp=Z,1.2nm,0.7s,mb4.0,baz=193,slow=7.4,SNR=3.4						
MKAR	**Makanchi Array**	**45.30**	**59**	P		**P**	**13 12 14.7 -0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**45.30**	**59**	P		**P**	**13 12 14.7 -1.0**
	comp=Z,0.9nm,0.5s,mb3.9,baz=272,slow=6.5,SNR=15						
ZALV	**Zalesovo Beam**	**45.65**	**48**	P		**P**	**13 12 18.2 -0.1**
	comp=Z,2.2nm,0.5s,mb4.4,baz=276,slow=8.5,SNR=12						
SONM	**Songino Array**	**60.42**	**51**	P		**P**	**13 14 06.5 -0.9**
	comp=Z,0.3nm,0.8s,mb3.4,baz=299,slow=3.0,SNR=4.0						

MAN 24 13:09:39,945N×12542E,h15km,mb4.8,ML3.7,MS3.6, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCPH	**Surigao**	**0.34**	**11**	*e*P		Pg	13 09 46.8	+0.9
SCPH				*e*S		Sg	13 09 53.3	+2.6
MSLP	**Maasin**	**0.88**	**321**	*e*P		Pb	13 09 56.0	+0.1
MSLP				*e*S		Sb	13 10 09.9	+2.4
CGP	**Cagayan de Oro**	**1.22**	**216**⇑	*i*P		Pn	13 10 00.8	-0.8
CGP				*i* S		Sb	13 10 17.9	+0.4
BUKP	**Musuan**	**1.60**	**193**	*e*P		Pn	13 10 06.8	0.0
BUKP				*e*S		Sn	13 10 29.6	+2.4
DCPH	**Dipolog City**	**2.22**	**247**⇑	*e*P		Pn	13 10 15.6	+0.3
DCPH				*i* S		Sn	13 10 44.1	+1.6
CNP	**Catarman**	**3.13**	**346**	*e*P		Pn	13 10 34.0	+6.2
PVCP	**Virac**	**4.30**	**343**	*e*P		Pn	13 10 50.2	+6.3

IDC 24 13:12:21.6±2.2,139N×12671E,h0km,mb3.3/3,mb1 3.6/3, mb1mx3.4/14,mbtmp3.4/3,Error ellipse: s-maj=174.2km s-min=27.1km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.49**	**161**	P		P	13 17 23.2	+0.4
	2.2nm,0.7s,baz=339,slow=11,SNR=6.8							
ASAR	**Alice Springs**	**25.87**	**165**	P		P	13 17 55.0	-0.2
	0.2nm,0.5s,baz=354,slow=7.1,SNR=4.3							
MKAR	**Makanchi Array**	**59.46**	**326**	P		P	13 22 26.4	+0.1
	0.2nm,0.4s,baz=124,slow=8.3,SNR=4.5							

*IDC **24** 13:35:15.1±0.9,559S×1158W,h0km,mb3.9/9,mb1 4.0/10, mb1mx3.9/21,mbtmp4.0/10,ML3.4/1,Error ellipse: s-maj=28.0km s-min=19.0km az=99.0*
*MOS **24** 13:35:19.4±0.9,628S×1130W,h10km,mb4.8/17,Error ellipse: s-maj=21.6km s-min=7.4km az=71.4*
*ISCJB **24** 13:35:22.2±0.6,593S±009×110W±02,h10km,mb4.6/39,*

MS4.1/3,Error ellipse: s-maj=21.7km s-min=12.1km az=7.4
*NEIC **24** 13:35:24.1±0.6,604S×1083W,h10km,mb4.8/19,Error ellipse: s-maj=20.1km s-min=11.1km az=97.0*
*SZGRF **24** 13:35:28.7,549S×1154W,h36km,mb4.9,Ascension Island region*

ISC 24 13:35:24.2±0.6,600S±008×109W±01,h10km, (h32km±4.4km:pP-P),n94,σ0s90/92,mb4.6/39,MS4.1/3, 4C-1D,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LIC	**Lamto**	**13.49**	**26**	*e*P		**Pn**	**13 38 34.3**	**-1.5**
	106nm,1.5s,baz=228							
LIC	**Lamto**	**13.49**	**26**	*e*P		**Pn**	**13 38 34.3**	**-1.5**
	53nm,1.5s							
DBIC	**Dimbokro**	**13.96**	**26**	Pn		**Pn**	**13 38 32.7**	**-10**
	0.2nm,0.3s,baz=175,slow=12,SNR=3.8							
TOA0	**Torodi Ar. Sit**	**22.77**	**33**	*e*P		**P**	**13 40 25.6**	**-1.4**
TORD	**Torodi Ar. Bea**	**22.77**	**33**	P		**P**	**13 40 20.6**	**-6.4**
	4.6nm,0.8s,mb3.9,baz=216,slow=11,SNR=23							
LSZ	**Lusaka**	**39.44**	**107**	*e*P		**P**	**13 42 52.8**	**-2.1**
	13nm,1.4s,mb4.5							
LSZ	**Lusaka**	**39.44**	**107**	*e*P		**P**	**13 42 52.8**	**-2.1**
LSZ				pmax	pmax			
	comp=Z,13nm,1.4s,mb4.5							
LSZ	**Lusaka**	**39.44**	**107**	P		**P**	**13 42 53.5**	**-1.4**
	comp=Z,1.2nm,0.5s,mb3.9,baz=286,slow=7.4,SNR=3.2							
BOSA	**Boshof**	**40.92**	**128**	P		**P**	**13 43 07.0**	**-0.1**
	comp=Z,2.0nm,0.9s,mb3.7,baz=307,slow=5.1,SNR=2.0							
EVO	**Evora**	**44.39**	**3**	*e*P		**P**	**13 43 34.2**	**-0.8**
	comp=Z,50nm,1.5s,mb4.7							
SIV	**San Ignacio**	**50.13**	**254**	P		**P**	**13 44 09.1**	**-11**
	comp=Z,0.8nm,0.7s,mb3.8,baz=86,slow=13,SNR=5.2							
TCF	**Toulx Ste Croi**	**53.35**	**11**	*e*P		**P**	**13 44 43.9**	**+0.2**
	comp=Z,90nm,1.7s,mb5.1							
TCF	**Toulx Ste Croi**	**53.35**	**11**	*e*P		**P**	**13 44 43.9**	**+0.2**
	comp=Z,45nm,1.7s,mb5.1							
TCF	**Toulx Ste Croi**	**53.35**	**11**	*e*P		**P**	**13 44 43.9**	**+0.2**
TCF				pmax	pmax			
	comp=Z,45nm,1.7s,mb5.1							
SSF	**Saint Saulge**	**54.35**	**12**	*e*P		**P**	**13 44 51.1**	**+0.1**
	comp=Z,18nm,1.1s,mb4.6							
SSF	**Saint Saulge**	**54.35**	**12**	*e*P		**P**	**13 44 51.1**	**+0.1**
	comp=Z,9.1nm,1.1s,mb4.6							
SSF	**Saint Saulge**	**54.35**	**12**	*e*P		**P**	**13 44 51.1**	**+0.1**
SSF				pmax	pmax			
	comp=Z,9.0nm,1.1s,mb4.6							
LOR	**Lormes**	**54.62**	**12**	*e*P		**P**	**13 44 52.8**	**-0.2**
	comp=Z,80nm,1.6s,mb5.2							
LOR	**Lormes**	**54.62**	**12**	*e*P		**P**	**13 44 52.8**	**-0.2**
	comp=Z,40nm,1.6s,mb5.2							
LOR	**Lormes**	**54.62**	**12**	*e*P		**P**	**13 44 52.8**	**-0.2**
LOR				pmax	pmax			
	comp=Z,40nm,1.6s,mb5.2							
APE	**Apeiranthos**	**54.71**	**36**⇑	*e*P		**P**	**13 44 56.1**	**+2.3**
DAVOX	**Davos/Dischmat**	**55.70**	**17**	P		**P**	**13 44 52.6**	**-8.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=316,slow=14,SNR=2.1							
MEZF	**Maizieres J'vi**	**56.05**	**13**	*e*P		**P**	**13 45 03.2**	**-0.1**
	comp=Z,52nm,1.4s,mb5.1							
MEZF	**Maizieres J'vi**	**56.05**	**13**	*e*P		**P**	**13 45 03.2**	**-0.1**
	comp=Z,52nm,1.4s,mb5.4							
TRQA	**Tornquist**	**56.15**	**228**	*e*P		**P**	**13 45 03.8**	**-0.4**
	comp=Z,7.5nm,1.4s,mb4.5							
GIVF	**Givet**	**57.52**	**12**	*e*P		**P**	**13 45 14.1**	**+0.4**
TNS	**Taunus Mts**	**58.45**	**14**	*e*P		**P**	**13 45 20.3**	**+0.1**
TNS				pmax	pmax			
	comp=Z,21nm,1.5s,mb5.0							
TNS	**Taunus Mts**	**58.45**	**14**	*e*P		**P**	**13 45 20.3**	**+0.1**
	comp=Z,21nm,1.5s,mb5.0							
GEC2	**GERESS Array S**	**58.71**	**19**	*e*P		**P**	**13 45 22.2**	**+0.2**
GEC2				pmax	pmax			
	comp=Z,11nm,1.0s,mb4.8							
GEC2	**GERESS Array S**	**58.71**	**19**	*e*P		**P**	**13 45 22.2**	**+0.2**
	comp=Z,11nm,1.0s,mb4.8							
GERES	**GERESS Array B**	**58.71**	**19**	P		**P**	**13 45 13.5**	**-8.5**
GERES							13 47 28.5	
GERES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
GERES	**GERESS Array B**	**58.71**	**19**	P		**P**	**13 45 13.5**	**-8.5**
	comp=Z,0.8nm,0.6s,mb4.0,baz=190,slow=6.8,SNR=7.0							
GERES				PP		PP	13 47 28.5	-3.5
	comp=Z,0.2nm,0.2s,baz=209,slow=7.5,SNR=4.3							
GRA1	**Grafenberg Arr**	**58.71**	**17**	*e*P		**P**	**13 45 22.1**	**+0.1**
GRF	**Grafenberg Arr**	**58.71**	**17**	*e*P		**P**	**13 45 22.1**	**+0.1**
WET	**Wettzell**	**58.71**	**18**	*e*P		**P**	**13 45 21.8**	**-0.2**
WET				pmax	pmax			
	comp=Z,14nm,1.3s,mb4.8							
WET	**Wettzell**	**58.71**	**18**	*e*P		**P**	**13 45 21.8**	**-0.2**
	comp=Z,14nm,1.3s,mb4.8							
WET				*e*pP		pP	13 45 32.7	+7.4
ROTZ	**Rotzenmuhle**	**59.06**	**17**	*e*P		**P**	**13 45 24.3**	**-0.2**
	comp=Z,11nm,1.5s,mb4.7							
MANZ	**Manzenberg**	**59.23**	**17**	*e*P		**P**	**13 45 25.5**	**-0.1**
	comp=Z,9.0nm,1.1s,mb4.7							
ZST	**Bratislava**	**59.31**	**21**	*e*P		**P**	**13 45 26.1**	**-0.1**
	comp=Z,5.8nm,0.6s,mb4.8							
ZST				LR		LR		
	comp=Z,100nm,17.8s,MS4.0							
ZST	**Bratislava**	**59.31**	**21**	*e*P		**P**	**13 45 26.1**	**-0.1**
ZST				pmax	pmax			
	comp=Z,6.0nm,0.6s,mb4.8							
ZST				MLR		MLR		
	comp=Z,100nm,17.8s,MS4.0							
MODS	**Modra-Piesok**	**59.53**	**21**	*e*P		**P**	**13 45 29.0**	**+1.3**
NKC	**Novy Kostel**	**59.55**	**17**	*e*P		**P**	**13 45 27.2**	**-0.6**
WERN	**Wernitzgrun**	**59.58**	**17**	*e*P		**P**	**13 45 27.7**	**-0.3**
	comp=Z,11nm,1.3s,mb4.7							
WERN				*e*pP		pP	13 45 38.8	+7.6
GUNZ	**Gunzen**	**59.63**	**17**	*e*P		**P**	**13 45 27.6**	**-0.8**
	comp=Z,26nm,1.8s,mb5.0							
GUNZ				*e*pP		pP	13 45 38.9	+7.3
MOX	**Moxa**	**59.68**	**16**	*e*P		**P**	**13 45 27.8**	**-0.9**
	comp=Z,8.0nm,1.3s,mb4.6							
WERD	**Werda**	**59.70**	**17**	*e*P		**P**	**13 45 29.3**	**+0.5**
	comp=Z,9.0nm,1.2s,mb4.7							
WERD				*e*pP		pP	13 45 39.9	+7.8
TANN	**Tannenbergstha**	**59.72**	**17**	*e*P		**P**	**13 45 28.3**	**-0.7**
PRU	**Pruhonice**	**59.97**	**19**	*e*P		**P**	**13 45 30.6**	**-0.2**
PSZ	**Piszkesteto**	**60.14**	**23**	*e*P		**P**	**13 45 30.7**	**-1.3**
	comp=Z,16nm,0.9s,mb5.0							
PSZ	**Piszkesteto**	**60.14**	**23**	*e*P		**P**	**13 45 30.7**	**-1.3**
PSZ				pmax	pmax			
	comp=Z,16nm,0.9s,mb5.0							
VYHS	**Vyhne**	**60.20**	**22**	*e*P		**P**	**13 45 33.5**	**+1.1**
	comp=Z,7.3nm,1.3s,mb4.5							
VYHS				*e*		pP	13 45 38.2	+2.6
VYHS	**Vyhne**	**60.20**	**22**	*e*P		**P**	**13 45 33.5**	**+1.1**
VYHS				*e*		pP	13 45 38.2	+2.6
VYHS				pmax	pmax			
	comp=Z,7.0nm,1.3s,mb4.5							
VYHS	**Vyhne**	**60.20**	**22**	*e*P		**P**	**13 45 33.5**	**+1.1**
VYHS				*e*pP		pP	13 45 38.2	+2.6
FBE	**Freiberg**	**60.43**	**17**	*e*P		**P**	**13 45 33.1**	**-0.7**
	comp=Z,4.0nm,0.6s,mb4.6							
FBE				*e*pP		pP	13 45 42.4	+5.3
PVCC	**Panska Ves**	**60.45**	**18**	*e*P		**P**	**13 45 34.8**	**+0.8**
BRG	**Berggiesshubel**	**60.56**	**18**	P		**P**	**13 45 36.0**	**+1.2**
BRG				pmax	pmax			
	comp=Z,5.0nm,1.4s,mb4.5							
BRG	**Berggiesshubel**	**60.56**	**18**	*e*P		**P**	**13 45 33.9**	**-0.9**
BRG	**Berggiesshubel**	**60.56**	**18**	*e*(P)		**P**	**13 45 36.0**	**+1.2**
	comp=Z,7.5nm,1.4s,mb4.6							
CLL	**Collm**	**60.67**	**17**	*e*P		**P**	**13 45 35.0**	**-0.5**
CLL				*e*PP		PP	13 47 49.0	-0.3
KECS	**Kecovo**	**60.83**	**23**	*e*P		**P**	**13 45 38.0**	**+1.3**
	comp=Z,4.3nm,1.0s,mb4.5							
KECS				*e*			13 45 43.9	
KECS	**Kecovo**	**60.83**	**23**	*e*P		**P**	**13 45 38.0**	**+1.3**
KECS				*e*			13 45 43.9	
KECS				pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.5							
KECS	**Kecovo**	**60.83**	**23**	*e*P		**P**	**13 45 38.0**	**+1.3**
KECS				*e*pP		pP	13 45 43.9	+4.0
DPC	**Dobruska-Polom**	**60.87**	**20**	*e*P		**P**	**13 45 36.7**	**-0.2**
UPC	**Upice**	**60.90**	**19**	*e*P		**P**	**13 45 32.7**	**-4.4**
OKC	**Ostrava-Krasne**	**61.06**	**21**	*e*P		**P**	**13 45 38.8**	**+0.6**
NIE	**Niedzica**	**61.52**	**23**	*e*P		**P**	**13 45 41.4**	**+0.1**
CRVS	**Cervenica-Dubn**	**61.55**	**24**	*e*P		**P**	**13 45 42.6**	**+1.0**
STHS	**Stebnicka Huta**	**61.88**	**23**	*e*P		**P**	**13 45 46.1**	**+2.4**
	comp=Z,3.4nm,1.0s,mb4.4							
STHS	**Stebnicka Huta**	**61.88**	**23**	*e*P		**P**	**13 45 46.1**	**+2.4**
STHS				pmax	pmax			
	comp=Z,3.0nm,1.0s,mb4.4							
KOLS	**Kolonicke sedl**	**61.91**	**24**	*e*P		**P**	**13 45 45.6**	**+1.7**
OJC	**Ojcow**	**61.98**	**22**	*e*P		**P**	**13 45 43.6**	**-0.8**
SNAA	**Sanae**	**65.79**	**177**	P		**P**	**13 46 04.0**	**-5.2**
	comp=Z,1.0nm,0.9s,mb3.9,baz=316,slow=10,SNR=3.2							
KIEV	**Kiev**	**66.19**	**27**	*e*P		**P**	**13 46 11.9**	**-0.1**
	comp=Z,29nm,1.1s,mb5.2							
KIEV	**Kiev**	**66.19**	**27**	*e*P		**P**	**13 46 12.0**	**-0.1**
KIEV				pmax	pmax			
	comp=Z,29nm,1.1s,mb5.2							
AKASG	**Malin Array Be**	**66.20**	**27**	P		**P**	**13 46 03.8**	**-8.4**
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.9s							
AKASG	**Malin Array Be**	**66.20**	**27**	P		**P**	**13 46 03.8**	**-8.4**
	comp=Z,2.7nm,0.9s,mb4.3,baz=226,slow=7.2,SNR=6.6							
AKBB	**Malin Array Si**	**66.20**	**27**	*e*P		**P**	**13 46 12.2**	**0.0**
KIV	**Kislovodsk**	**69.23**	**38**⇑	*e*P		**P**	**13 46 31.2**	**-0.2**
KIV				pmax	pmax			
	comp=Z,19nm,1.6s,mb4.8							
KIV				MLR	MLR			
	comp=Z,100nm,19.0s,MS4.1							
VRSR	**Storozhevoye**	**71.30**	**31**	*e*P		**P**	**13 46 43.1**	**-0.8**
VRSR				pmax	pmax			
	comp=Z,5.0nm,1.1s,mb4.4							
VRSR				pmax	pmax			
	comp=N,10.0nm,2.7s							
VRSR				pmax	pmax			
	comp=E,3.0nm,0.7s							
OBN	**Obninsk**	**72.47**	**26**⇑	*e*P		**P**	**13 46 51.5**	**+0.7**
OBN				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.7							
OBN				MLR	MLR			
	comp=Z,100nm,19.0s,MS4.1							
FINES	**FINESS Array B**	**73.10**	**18**	*i* P		**P**	**13 46 54.5**	**0.0**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**73.10**	**18**	P		**P**	**13 46 45.4**	**-9.1**
	comp=Z,0.8nm,0.7s,mb3.8,baz=197,slow=4.4,SNR=3.0							
MOS	**Moscow**	**73.33**	**26**	*e*P		**P**	**13 46 55.7**	**-0.2**
WVT	**Waverly**	**83.05**	**307**	*e*P		**P**	**13 47 45.0**	**-5.3**
	comp=Z,10nm,1.2s,mb4.7							
WVT	**Waverly**	**83.05**	**307**	*e*P		**P**	**13 47 45.0**	**-5.3**
WVT				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.7							
ARU	**Arti**	**83.83**	**32***d*	*i*P		**P**	**13 47 53.4**	**-0.4**
ARU				*e*			13 51 07.4	
ARU				PPP			13 52 57.7	
ARU				S		S	13 58 13.1	-4.0
ARU				SS		SS	14 03 48.0	+3.3
ARU				pmax	pmax			
	comp=Z,14nm,1.2s,mb5.0							
QSPA	**South Pole Qui**	**84.10**	**180**	*e*P		**P**	**13 47 54.9**	**0.0**
	comp=Z,17nm,1.3s,mb5.0							
EKS2	**Erkin-Say**	**90.12**	**47**	*e*P		**P**	**13 48 26.3**	**+1.5**
	comp=Z,1.5nm,0.8s,mb4.4							
RES	**Resolute Bay**	**94.16**	**345**	*e*P		**P**	**13 48 40.7**	**-2.1**
	comp=Z,303nm,1.4s							
RES	**Resolute Bay**	**94.16**	**345**	*e*P		**P**	**13 48 40.7**	**-2.1**
RES				pmax	pmax			
	comp=Z,303nm,1.4s							
KURK	**Kurchatov**	**94.29**	**40**⇑	*e*P		**P**	**13 48 45.2**	**+1.3**
MKAR	**Makanchi Array**	**96.52**	**44**	P		**P**	**13 48 54.8**	**+0.7**
	comp=Z,0.1nm,0.2s,mb3.8,baz=279,slow=2.

LPAZ	**La Paz**	**56.38**	**254**	PcP	PcP	13 49 00.3	0.0
	2.3nm,0.8s,baz=81,slow=4.8,SNR=6.1						
LPAZ				LR	LR	14 09 54.4	
	comp=Z,209nm,19.1s,MS4.2,baz=106,slow=34						
BAIF	**Baives**	**57.19**	**12**	*eP*	**P**	**13 48 08.9**	**+0.7**
	104nm,1.6s,mb5.3						
BAIF	**Baives**	**57.19**	**12**	*eP*	**P**	**13 48 08.9**	**+0.7**
	52nm,1.6s,mb5.3						
GIVF	**Givet**	**57.36**	**12**	*eP*	**P**	**13 48 10.1**	**+0.7**
GRA1	**Grafenberg Arr**	**58.61**	**17**	*eP*	**P**	**13 48 17.2**	**-1.0**
	6.0nm,1.0s,mb4.6						
GRA1				*ep*P	pP	13 48 24.2	+2.8
GRF	**Grafenberg Arr**	**58.61**	**17**	*eP*	**P**	**13 48 17.2**	**-1.0**
	comp=Z,6.0nm,1.0s,mb4.6						
GRF				*ep*P	pP	13 48 24.2	+2.8
GERES	**GERESS Array B**	**58.63**	**19**	P	**P**	**13 48 17.7**	**-0.7**
GERES				PP	PP	13 50 27.5	-0.8
GERES	**GERESS Array B**	**58.63**	**19**	P	**P**	**13 48 17.7**	**-0.7**
	comp=Z,4.4nm,0.7s,mb4.6,baz=191,slow=6.6,SNR=17						
GERES				PP	PP	13 50 27.5	-0.8
	comp=Z,0.7nm,0.7s,baz=210,slow=10,SNR=3.6						
GERES				LR	LR	14 14 06.8	
	comp=Z,187nm,18.1s,MS4.2,baz=79,slow=37						
CFAA	**Coronel Fontan**	**58.83**	**236**	P	**P**	**13 48 20.2**	**+0.1**
	comp=Z,0.3nm,0.8s,mb4.4,baz=54,slow=2.7,SNR=4.1						
MODS	**Modra-Piesok**	**59.48**	**22**	*eP*	**P**	**13 48 28.7**	**+4.4**
PSZ	**Piszkesteto**	**60.12**	**24**	*eP*	**P**	**13 48 28.7**	**0.0**
	comp=Z,15nm,0.9s,mb5.0						
VYHS	**Vyhne**	**60.17**	**23**	*eP*	**P**	**13 48 29.2**	**+0.2**
VYHS				*ep*P	pP	13 48 35.2	+3.0
VYHS				*e*		16 13 22.8	
SDV	**Santo Domingo**	**60.67**	**283**	*eP*	**P**	**13 48 33.3**	**+0.2**
	comp=Z,5.1nm,0.9s,mb4.7						
KECS	**Kecovo**	**60.81**	**24**	*eP*	**P**	**13 48 34.1**	**+0.7**
KECS				*ep*P	pP	13 48 40.6	+4.0
KECS				*e*		16 46 41.9	
CRVS	**Cervenica-Dubn**	**61.54**	**24**	*eP*	**P**	**13 48 38.7**	**+0.4**
STHS	**Stebnicka Huta**	**61.86**	**24**	*eP*	**P**	**13 48 41.1**	**+0.6**
STHS				*ep*P	pP	13 48 47.8	+4.1
KOLS	**Kolonicke sedl**	**61.90**	**25**	*eP*	**P**	**13 48 40.9**	**+0.2**
KOLS				*ep*P	pP	13 48 47.6	+3.6
PLCA	**Paso Flores**	**63.03**	**227**	LR	LR	14 13 15.4	
	comp=Z,148nm,18.1s,MS4.2,baz=77,slow=33						
ROSC	**El Rosal**	**63.58**	**278**	LR	LR	14 14 49.6	
	comp=Z,152nm,19.6s,MS4.2,baz=4.7,slow=34						
KIEV	**Kiev**	**66.21**	**27**	*eP*	**P**	**13 49 07.7**	**-1.4**
	comp=Z,30nm,1.2s,mb5.2						
AKASG	**Malin Array Be**	**66.22**	**27**	P	**P**	**13 49 08.0**	**-1.2**
AKASG	**Malin Array Be**	**66.22**	**27**	P	**P**	**13 49 08.0**	**-1.2**
	comp=Z,7.8nm,0.8s,mb4.8,baz=226,slow=7.1,SNR=20						
AKBB	**Malin Array Si**	**66.22**	**27**	*eP*	**P**	**13 49 07.9**	**-1.3**
NOA	**NORSAR Array B**	**68.87**	**12**	LR	LR	14 17 14.4	
	comp=Z,86nm,19.2s,MS4.0,baz=80,slow=34						
FINES	**FINESS Array B**	**73.01**	**18**	P	**P**	**13 49 50.3**	**-0.5**
	comp=Z,5.8nm,1.0s,mb4.5,baz=204,slow=3.0,SNR=10						
FINES				LR	LR	14 21 16.9	
	comp=Z,75nm,18.2s,MS4.0,baz=224,slow=35						
KAF	**Kangasniemi**	**73.59**	**17**	*ep*	**P**	**13 49 52.7**	**-1.6**
	comp=Z,9.4nm,1.0s,mb4.7						
SCHQ	**Schefferville**	**75.68**	**331**	P	**P**	**13 50 06.6**	**+0.1**
	comp=Z,2.6nm,0.9s,mb4.2,baz=90,slow=3.0,SNR=2.9						
MAW	**Mawson**	**78.83**	**158**	LR	LR	14 14 49.7	
	comp=Z,92nm,21.8s,MS4.1,baz=72,slow=28						
ARCES	**ARCESS Array B**	**79.22**	**12**	LR	LR	14 27 36.9	
	comp=Z,135nm,18.4s,MS4.3,baz=49,slow=37						
AKTO	**Aktyubinsk**	**81.58**	**37**	LR	LR	14 29 18.1	
	comp=Z,87nm,18.1s,MS4.2,baz=246,slow=38						
FVM	**French Village**	**84.78**	**309**	*eP*	**P**	**13 50 54.5**	**-1.5**
	comp=Z,3.2nm,0.4s,mb4.8						
ULM	**Lac du Bonnet**	**90.72**	**320**	P	**P**	**13 51 22.4**	**-1.8**
	comp=Z,0.5nm,0.4s,mb4.2,baz=82,slow=7.1,SNR=3.0						
ULM				LR	LR	14 25 15.0	
	comp=Z,114nm,20.2s,MS4.3,baz=255,slow=31						
TXAR	**Lajitas Array**	**94.61**	**299**	P	**P**	**13 51 42.7**	**-0.1**
	comp=Z,0.9nm,0.9s,mb4.2,baz=69,slow=5.1						
MKAR	**Makanchi Array**	**96.74**	**44**	P	**P**	**13 51 51.6**	**-0.4**
MKAR	**Makanchi Array**	**96.74**	**44**	P	**P**	**13 51 51.6**	**-0.4**
	comp=Z,0.1nm,0.2s,mb3.8,baz=260,slow=2.5,SNR=3.5						
MKAR				LR	LR	14 41 16.8	
	comp=Z,90nm,19.5s,MS4.3,baz=268,slow=39						
VNDA	**Vanda**	**96.82**	**179**	LR	LR	14 26 53.6	
	comp=Z,92nm,21.5s,MS4.2,baz=70,slow=30						
ZALV	**Zalesovo Beam**	**98.32**	**36**	LR	LR	14 41 57.7	
	comp=Z,41nm,18.1s,MS4.0,baz=223,slow=39						
PDAR	**Pinedale Array**	**99.73**	**312**	LR	LR	14 32 22.5	
	comp=Z,84nm,19.0s,MS4.3,baz=95,slow=32						
WRA	**Warramunga Arr**	**137.86**	**128**	PKP	PKPdf	13 57 47.7	+0.8
	comp=Z,1.1nm,1.1s,baz=208,slow=1.0,SNR=6.3						

*NEIC **24** 13:58:55.1, 1732N×10048W, h48km, MD3.7(MEX), After MEX.*

MEX 24 13:58:55.1±0.5, 1732N×10048W, h48km±7km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CAIG	**El Cayaco**	**0.34**	**143**	*i* P		Pn	13 59 03.0	-1.4
CAIG				*i* S		Sn	13 59 09.4	-1.6
ACX	**Acapulco**	**0.70**	**130**	*i* P		Pn	13 59 07.4	-1.4
ACX				*i* S		Sn	13 59 16.2	-2.5
MEIG	**Mezcala**	**1.01**	**54**	*i* P		Pn	13 59 11.4	-1.6
MEIG				*i* S		Sn	13 59 24.1	-2.0
PLIG	**Platanillo**	**1.41**	**41**	*i* P		Pn	13 59 16.8	-1.6
PLIG				*i* S		Sn	13 59 34.0	-1.8
UTMO	**Huajuapan**	**2.60**	**78**	*e*P		Pn	13 59 34.3	-0.4
UTMO				*i* S		Sn	14 00 04.3	-0.7
IIO	**Organos**	**2.81**	**36**	*i* P		Pn	13 59 37.4	0.0
IIO				*i* S		Sn	14 00 08.6	-1.5

NNC 24 13:48:02.6±6.8, 3977N×6995E, h0km, mb3.6, mpv3.0, 4C-2D, Error ellipse: s-maj=66.5km s-min=33.5km az=2.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**3.35**	**7**	Pn		Pn	13 49 00.3	+4.1
	1.1nm,0.3s,baz=193,slow=16,SNR=20							
KK31				⇑Lg			13 49 49.8	
	4.7nm,0.3s,baz=180,slow=29,SNR=13							
TKM2	**Tokmak 2**	**5.29**	**52**	⇑Pn		Pn	13 49 23.4	+0.6
	1.1nm,0.4s							
TKM2				⇓S		Sn	13 50 24.1	-0.3
	4.1nm,0.7s							
AB31	**Akbulak array**	**11.86**	**326**	⇓Pn		Pn	13 50 52.6	-0.2
	2.4nm,1.0s,baz=244,slow=7.7,SNR=7.3							
AB31				⇑S		Sn	13 53 01.9	-3.8
	0.2nm,0.6s,baz=168,slow=10,SNR=4.9							
AKTO	**Aktyubinsk**	**13.57**	**326**	⇑Pn		Pn	13 51 11.4	-4.7
	3.8nm,2.5s							

*NEIC **24** 13:59:43.4±0.1, 5548N×16413E, h41km±41km, ML3.8, Komandorsky Islands region*

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBTR	**Krutoberegovo**	**1.04**	**315**	*i* P		Pn	14 00 00.2	-1.2
KBTR				*i* S		Sn	14 00 12.6	-2.1
MKZ	**Mys Kozlova**	**1.66**	**237**	*i* P		Pn	14 00 11.4	+1.4
MKZ				*i* S		Sn	14 00 31.8	+1.7
ZLN	**Zelenaya**	**1.96**	**287**	*e*P		Pn	14 00 17.3	+3.3
ZLN				*i* S		Sn	14 00 42.3	+5.0
BDR	**Baidarnaya**	**1.97**	**305**	*e*P		Pn	14 00 15.6	+1.4
BDR				*i* S		Sn	14 00 39.5	+1.9
SRKR	**Sorokina**	**2.04**	**307**	*e*P		Pn	14 00 16.3	+1.2
SRKR				*i* S		Sn	14 00 39.8	+0.6
KLY	**Klyuchi**	**2.13**	**295**	*e*P		Pn	14 00 16.8	+0.4
KLY				*i* S		Sn	14 00 42.1	+0.5
KRSR	**Krestovskiy**	**2.14**	**292**	*e*P		Pn	14 00 19.1	+2.6
KRSR				*i* S		Sn	14 00 44.1	+2.2
KMNR	**Kamenistaya**	**2.23**	**279**	*e*P		Pn	14 00 21.2	+3.5
KMNR				*i* S		Sn	14 00 48.3	+4.4
KPT	**Kopyto**	**2.26**	**284**	*e*P		Pn	14 00 21.9	+3.7
KPT				*i* S		Sn	14 00 48.9	+4.0
TUMR	**Tumrok**	**2.28**	**267**	*e*P		Pn	14 00 21.8	+3.3
TUMR				*i* S		Sn	14 00 49.6	+4.3
KOZ	**Kozyrevsk**	**2.47**	**285**	*e*P		Pn	14 00 25.8	+4.7
KOZ				*i* S		Sn	14 00 55.6	+5.6
SRDR	**Sredinnyy**	**2.62**	**290**	*e*P		Pn	14 00 26.2	+3.0
SRDR				*i* S		Sn	14 00 57.1	+3.4
KII	**Karymskiy**	**3.07**	**244**	*e*P		Pn	14 00 32.3	+2.9
KII				*i* S		Sn	14 01 08.5	+3.7
SPN	**Mys Shipunski**	**3.39**	**227**	*e*P		Pn	14 00 34.7	+1.0
SPN				*i* S		Sn	14 01 12.0	-0.6
NLC	**Nalytchevo**	**3.63**	**232**	*e*P		Pn	14 00 39.3	+2.3
NLC				*i* S		Sn	14 01 19.7	+1.1
AVH	**Avacha**	**3.86**	**237**	*e*P		Pn	14 00 43.9	+3.8
AVH				*i* S		Sn	14 01 27.0	+2.9
GNL	**Ganaly**	**4.02**	**246**	*e*P		Pn	14 00 45.8	+3.5
PET	**Petropavlovsk**	**4.05**	**235**	*e*P		Pn	14 00 45.7	+3.0
PET				*i* S		Sn	14 01 30.8	+2.0
RUS	**Russkaya**	**4.51**	**230**	*e*P		Pn	14 00 51.2	+2.2
RUS				*e*S		Sn	14 01 40.8	+0.7
GRL	**Gorelyy**	**4.62**	**233**	*e*P		Pn	14 00 54.3	+3.7

*NEIC **24** 14:05:04.5±1.2, 4978N×15681E, h10km, mb4.2/4, Error ellipse: s-maj=23.4km s-min=13.7km az=143.0*
*ISCJB **24** 14:05:09.9±1.0, 4990N±007×15689E±0.10, h73km±7km, mb3.9/13, Error ellipse: s-maj=13.9km s-min=6.8km az=140.3*
*MOS **24** 14:05:09.0±1.1, 4992N×15673E, h65km, mb4.2/6, Error ellipse: s-maj=16.5km s-min=7.0km az=79.2*
*KRSC **24** 14:05:09.6±1.0, 5000N×15784E, h5km±5km, ML4.7*
*IDC **24** 14:05:12.1±1.1, 5000N×15668E, h67km±7km, mb3.6/10, mb1 3.8/12, mb1mx3.6/23, mbtmp3.6/12, Error ellipse: s-maj=32.2km s-min=16.6km az=162.0*

ISC 24 14:05:10.7±0.9, 4986N±006×15686E±009, h65km±7km, h67km±2.4km: pP-P, n49, σ1§16/60, mb3.9/13, 4C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**0.95**	**330**	⇓*i* PN		**Pn**	**14 05 27.7**	**-0.6**
SKR				*i* S		**Sn**	**14 05 42.5**	**+1.1**
SKR				pmax	pmax			
	comp=N,390nm,0.5s							
SKR				pmax	pmax			
	comp=E,1μm,0.5s							
SKR				pmax	pmax			
	comp=Z,400nm,0.5s							
SKR				pmax	pmax			
	comp=Z,2μm,1.0s							
SKR				smax				
	comp=E,6μm,0.4s							
MIPR	**Malaya Ipel'ka**	**2.42**	**359**	*e*P		**Pn**	**14 05 49.1**	**+1.2**
MIPR				*i* S		**Sn**	**14 06 18.3**	**+1.9**
RUS	**Russkaya**	**2.78**	**21**	*i* P		**Pn**	**14 05 51.9**	**-0.9**
RUS				*i* S		**Sn**	**14 06 22.9**	**-2.3**
GRL	**Gorelyy**	**2.80**	**15**	*i* P		**Pn**	**14 05 53.8**	**+0.7**
GRL				*i* S		**Sn**	**14 06 25.4**	**-0.3**
PET	**Petropavlovsk**	**3.36**	**19**	*e*Pn		**Pn**	**14 05 59.7**	**-1.0**
PET				*e*Sn		**Sn**	**14 06 37.5**	**-1.9**
PET	**Petropavlovsk**	**3.36**	**19**	*e*P		**Pn**	**14 06 00.9**	**+0.2**
PET				*i* S		**Sn**	**14 06 38.9**	**-0.5**
SDLR	**Sedlovina**	**3.65**	**19**	*i* P		**Pn**	**14 06 04.8**	**+0.1**
SDLR				*i* S		**Sn**	**14 06 44.8**	**-1.6**
SPN	**Mys Shipunski**	**3.80**	**30**	*e*P		**Pn**	**14 06 06.0**	**-0.7**
SPN				*i* S		**Sn**	**14 06 47.3**	**-2.8**
GNL	**Ganaly**	**3.90**	**10**	*i* P		**Pn**	**14 06 09.9**	**+1.8**
GNL				*i* S		**Sn**	**14 06 54.4**	**+1.9**
KII	**Karymskiy**	**4.48**	**20**	*e*P		**Pn**	**14 06 17.5**	**+1.5**
KII				*i* S		**Sn**	**14 07 07.3**	**+0.6**
MKZ	**Mys Kozlova**	**5.58**	**31**	*e*P		**Pn**	**14 06 29.3**	**-1.7**
MKZ				*i* S		**Sn**	**14 07 28.0**	**-5.6**
TUMR	**Tumrok**	**5.79**	**19**	P		**Pn**	**14 06 34.5**	**+0.6**
KMNR	**Kamenistaya**	**6.25**	**18**	P		**Pn**	**14 06 39.5**	**-0.7**
SRDR	**Sredinnyy**	**6.70**	**14**	P		**Pn**	**14 06 48.0**	**+1.8**
SRKR	**Sorokina**	**7.28**	**19**	P		**Pn**	**14 06 54.9**	**+0.6**
KBTR	**Krutoberegovo**	**7.30**	**27**	*e*P		**Pn**	**14 06 53.6**	**-1.0**
MA2	**Magadan**	**10.35**	**343**	*e*P		**Pn**	**14 07 36.2**	**+0.1**
MA2	**Magadan**	**10.35**	**343**	⇑*e*PN		**Pn**	**14 07 36.5**	**+0.4**
ASAJ	**Asahikawa**	**11.30**	**245**	P		**Pn**	**14 07 50.9**	**+1.6**
	comp=E,0.3nm,0.3s,baz=61,slow=13,SNR=3.9							
ERM	**Erimo**	**12.34**	**236**	⇑*e*PN		**Pn**	**14 08 00.8**	**-2.5**
BILL	**Bilibino**	**18.83**	**11**	*e*P		**Pn**	**14 09 25.1**	**-0.9**
	comp=E,62nm,0.8s							
BILL	**Bilibino**	**18.83**	**11**	⇑*e*P		**Pn**	**14 09 24.9**	**-1.1**
BILL				pmax	pmax			
	comp=Z,2.0nm,0.8s							
MJAR	**Matsushiro Arr**	**18.96**	**232**	P		**Pn**	**14 09 27.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=31,slow=9.6,SNR=8.4							
YAK	**Yakutsk**	**19.31**	**319**	*e*P		**Pn**	**14 09 29.9**	**-2.0**
YAK	**Yakutsk**	**19.31**	**319**	⇑*e*P		**Pn**	**14 09 29.4**	**-2.4**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.6s							
TNA	**Tin City**	**24.05**	**36**	*e*P		**P**	**14 10 19.7**	**+0.4**
	comp=Z,8.1nm,1.4s,mb3.9							
TIXI	**Tiksi**	**25.30**	**340**	*e*P		**P**	**14 10 29.8**	**-0.8**
	comp=Z,2.6nm,0.6s,mb3.8							
TIXI	**Tiksi**	**25.30**	**340**	⇓*i* P		**P**	**14 10 29.2**	**-1.5**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb3.8							
COLA	**College**	**32.15**	**41**	*e*P		**P**	**14 11 32.0**	**+0.4**
	comp=Z,3.7nm,0.9s,mb4.1							
COLA	**College**	**32.15**	**41**	*e*P		**P**	**14 11 32.1**	**+0.5**
COLA				pmax	pmax			
	comp=Z,4.0nm,0.9s,mb4.2							
INK	**Inuvik**	**37.68**	**35**	P		**P**	**14 12 20.3**	**+1.2**
	comp=Z,0.9nm,0.6s,mb3.8,baz=289,slow=8.0,SNR=13							
INK				pP	pP		14 12 35.5	+0.4
	comp=Z,1.8nm,0.9s,baz=262,slow=9.3,SNR=4.9							
ZALV	**Zalesovo Beam**	**42.88**	**304**	P		**P**	**14 13 01.7**	**-0.5**
	comp=Z,6.6nm,0.4s,mb3.6,baz=66,slow=7.1,SNR=4.0							
ZAL	**Zalesovo**	**42.89**	**304**	P		**P**	**14 13 01.7**	**-0.7**
YKA	**Yellowknife Ar**	**46.94**	**39**	P		**P**	**14 13 35.4**	**+1.1**
YKA				pP	pP		14 13 51.4	+0.7
YKA	**Yellowknife Ar**	**46.94**	**39**	P		**P**	**14 13 35.4**	**+1.1**
	comp=Z,1.4nm,0.6s,mb3.9,baz=297,slow=7.6,SNR=21							
YKA				pP	pP		14 13 51.4	+0.7
	comp=Z,0.6nm,0.6s,baz=298,slow=7.7,SNR=4.9							
KURK	**Kurchatov**	**47.76**	**303**	⇓*e*P		**P**	**14 13 40.4**	**-0.5**
MK31	**Makanchi Array**	**47.76**	**297**	*e*P		**P**	**14 13 40.5**	**-0.5**
MKAR	**Makanchi Array**	**47.76**	**297**	P		**P**	**14 13 41.0**	**0.0**
	comp=Z,0.4nm,0.3s,mb3.7,baz=51,slow=6.4,SNR=6.3							
ARCES	**ARCESS Array B**	**55.72**	**341**	P		**P**	**14 14 39.6**	**-0.3**
	comp=Z,10nm,1.1s,mb4.8,baz=23,slow=6.6,SNR=5.4							
PDAR	**Pinedale Array**	**60.93**	**57**	P		**P**	**14 15 18.1**	**+1.6**
	comp=Z,1.0nm,0.9s,mb3.8,baz=308,slow=4.9,SNR=6.5							
PDAR				pP	pP		14 15 36.4	+2.7
	comp=Z,1.1nm,0.8s,baz=338,slow=1.6,SNR=5.8							
FINES	**FINESS Array B**	**62.26**	**336**	P		**P**	**14 15 24.6**	**-0.7**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**62.26**	**336**	P		**P**	**14 15 24.6**	**-0.7**
	comp=Z,0.9nm,0.6s,mb4.0,baz=31,slow=8.3,SNR=5.0							
NB2	**NORSAR Subarra**	**66.05**	**343**	P		**P**	**14 15 49.9**	**-0.2**
	comp=Z,2.9nm,0.9s,mb4.1,baz=23,slow=6.5							
NOA	**NORSAR Array B**	**66.05**	**343**	P		**P**	**14 15 50.2**	**+0.1**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.7s							
NOA	**NORSAR Array B**	**66.05**	**343**	P		**P**	**14 15 50.1**	**+0.1**
	comp=Z,1.1nm,0.7s,mb3.8,baz=24,slow=6.5,SNR=4.5							
TXAR	**Lajitas Array**	**73.83**	**64**	P		**P**	**14 16 39.3**	**+1.0**
TXAR				*PP	pP		14 16 57.9	+2.1
TXAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
TXAR				pmax	pmax			
	comp=N,1.0nm,0.7s							
TXAR	**Lajitas Array**	**73.83**	**64**	P		**P**	**14 16 39.3**	**+1.0**
	comp=N,1.4nm,0.6s,mb3.9,baz=309,slow=4.5,SNR=10							
TXAR				pP	pP		14 16 57.9	+2.0
	comp=N,1.0nm,0.7s,baz=288,slow=4.6,SNR=5.4							
GERES	**GERESS Array B**	**76.70**	**336**	P		**P**	**14 16 55.4**	**+1.0**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.5s							
GERES	**GERESS Array B**	**76.70**	**336**	P		**P**	**14 16 55.4**	**+1.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=28,slow=6.3,SNR=6.0							

MAN 24 14:15:11,947N×12565E, h30km, mb4.4, ML3.2, MS3.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SCPH	**Surigao**	**0.35**	**333**	*e*P		Pb	14 15 20.9	+1.8
SCPH				*e*S		Sb	14 15 26.8	+2.0
MSLP	**Maasin**	**1.02**	**310**	*e*P		Pn	14 15 30.1	+0.8
MSLP				*e*S		Sn	14 15 43.3	+0.6
CGP	**Cagayan de Oro**	**1.38**	**223**	⇑*e*P		Pn	14 15 35.6	+1.3
CGP				*e*S		Sn	14 15 52.4	+0.9
PAGZ	**Pagadian**	**2.76**	**235**	*e*P		Pn	14 15 56.1	+2.9

*ISCJB **24** 14:19:46.5±0.7, 85S±0.1×30.1E±02, h10km, mb3.7/4, MS3.1/2, Error ellipse: s-maj=23.8km s-min=10.9km az=27.9*
*IDC **24** 14:19:47.8±1.4, 837S×3001E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/18, mbtmp3.9/6, ML4.1/1, MS3.1/3, Ms1 3.1/3, ms1mx2.9/20, Error ellipse: s-maj=37.9km s-min=24.9km az=126.0*
*NEIC **24** 14:19:48.6±0.7, 851S×3004E, h10km, mb3.9/2, Error ellipse: s-maj=25.5km s-min=11.6km az=117.0*

ISC 24 14:19:48.8±0.7, 85S±01×300E±02, h10km, n11, σ1§07/13, mb3.7/4, MS3.1/2, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KMBO	**Kilima Mbogo**	**10.26**	**45**	Pn		**Pn**	**14 22 15.6**	**-0.6**
KMBO				Sn		**Sn**	**14 24 03.3**	**-8.1**
KMBO				Lg			14 25 10.0	
KMBO	**Kilima Mbogo**	**10.26**	**45**	Pn		**Pn**	**14 22 15.6**	**-0.6**
	1.5nm,0.3s,baz=218,slow=16,SNR=15							
KMBO				Sn		**Sn**	**14 24 03.3**	**-8.1**
	3.4nm,0.3s,baz=323,slow=22,SNR=7.8							
KMBO				Lg			14 25 10.0	
	3.1nm,0.3s,baz=287,slow=19,SNR=3.8							
KMBO				LR	LR	14 26 01.9		
	comp=Z,69nm,20.6s,baz=43,slow=37							
TSUM	**Tsumeb**	**16.09**	**227**	*e*Pn		**Pn**	**14 23 35.6**	**+0.3**
	4.5nm,0.6s							
LBTB	**Lobatse**	**16.97**	**194**	*e*Pn		**Pn**	**14 23 43.9**	**-2.5**
	8.9nm,0.7s							
BOSA	**Boshof**	**20.52**	**192**	P		**P**	**14 24 28.6**	**+1.3**
	2.3nm,0.6s,baz=23,slow=13,SNR=5.6							
BOSA				LR	LR	14 31 35.0		
	comp=Z,33nm,18.4s,MS2.7,baz=197,slow=34							
TORD	**Torodi Ar. Bea**	**35.41**	**307**	P		**P**	**14 26 45.4**	**+0.1**
	0.5nm,0.6s,mb3.6,baz=117,slow=7.8,SNR=4.2							
TORD				LR	LR	14 41 45.8		
	comp=Z,82nm,18.7s,MS3.5,baz=35,slow=37							
GERES	**GERESS Array B**	**58.87**	**347**	P		**P**	**14 29 47.6**	**-0.1**
	0.3nm,0.3s,mb3.8,baz=152,slow=5.9,SNR=4.1							
AKASG	**Malin Array Be**	**58.95**	**359**	P		**P**	**14 29 47.0**	**-1.2**
AKASG	**Malin Array Be**	**58.95**	**359**	P		**P**	**14 29 47.0**	**-1.2**
	0.1nm,0.2s,mb3.4,baz=185,slow=7.2,SNR=4.0							
MK31	**Makanchi Array**	**71.97**	**35**	*e*P		**P**	**14 31 13.7**	**+1.0**
MKAR	**Makanchi Array**	**71.97**	**35**	P		**P**	**14 31 13.6**	**+1.0**
	1.5nm,0.7s,mb4.0,baz=236,slow=5.7,SNR=16							

NNC 24 14:24:06.8±12.0, 3713N×7095E, h223km±162km, mb2.4, mpv3.6, 4C-2D, Error ellipse: s-maj=118.9km s-min=68.3km az=17.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**5.98**	**357**	⇑P		Pn	14 25 34.1	+0.1
	3.6nm,0.3s,baz=179,slow=13,SNR=27							
KK31				⇓S		S	14 26 45.3	+1.8
	1.1nm,0.3s,baz=183,slow=24							
TKM2	**Tokmak 2**	**6.79**	**30**	⇑P		Pn	14 25 44.1	-0.3
	1.9nm,0.6s							
TKM2				⇑S		S	14 27 01.5	-0.9
	1.1nm,0.7s							
AB31	**Akbulak array**	**14.52**	**330**	⇓P		Pn	14 27 24.7	+2.8
	0.1nm,0.2s,baz=154,slow=13,SNR=5.2							
AB31				⇑S		S	14 30 01.0	-1.7
	0.6nm,0.7s							

*NIED **24** 14:25:00, 2550N×14090E, h125km, Mw3.9 Best double couple: M0 9.16000×10^14 NP1:φs=44.00000°, δ56.00000°, λ-1.00000°. NP2:φs=135.00000°, δ89.00000°, λ-146.00000°.*
*ISCJB **24** 14:25:45.9±1.2, 2549N±009×14101E±0.1, h138km±9km, mb3.6/11, Error ellipse: s-maj=20.4km s-min=13.9km az=159.4*
*IDC **24** 14:25:47.0±1.5, 2551N×14103E, h133km±12km, mb3.5/10, mb1 3.7/13, mb1mx3.6/20, mbtmp3.5/13, Error ellipse: s-maj=20.3km s-min=14.9km az=90.0*
*JMA **24** 14:25:48.6±0.2, 2548N×14087E, h80km, M4.4*
*MOS **24** 14:25:48.9±0.8, 2548N×14081E, h168km, mb4.0/6, Error ellipse: s-maj=39.0km s-min=12.9km az=94.0*

**ISC 24 14:25:47.

After AEIC.

ISC 24 14:34:58.0±2.7,**535N**L003×**1707W**±04,**h167**km±22km,**n9,**
σ0§93/10,mb3.4/4,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**2.51**	**81**	P	**Pn**	**14 35 40.9**	**+0.9**
FALS	**False Pass**	**4.47**	**70**	*e*Pn	**Pn**	**14 36 05.3**	**+0.7**
FALS				*e*Sn	**Sn**	**14 36 56.0**	**-0.8**
KDAK	**Kodiak Island**	**11.06**	**60**	P	**Pn**	**14 37 29.8**	**-1.6**
KDAK	**Kodiak Island**	**11.06**	**60**	P	**Pn**	**14 37 29.8**	**-1.6**
	2.0nm,0.3s,baz=243,slow=5.9,SNR=14						
SML	**Sawmill**	**14.48**	**46**	*e*Pn	**Pn**	**14 38 14.4**	**-0.4**
INK	**Inuvik**	**22.83**	**35**	P	**P**	**14 39 46.8**	**+0.6**
	1.2nm,0.4s,mb3.7,baz=255,slow=7.5,SNR=25						
YKA	**Yellowknife Ar**	**30.09**	**50**	P	**P**	**14 40 52.4**	**+1.2**
	0.1nm,0.3s,mb3.0,baz=275,slow=9.1,SNR=4.5						
PDAR	**Pinedale Array**	**40.97**	**80**	P	**P**	**14 42 24.6**	**+0.5**
	0.5nm,0.5s,mb3.4,baz=299,slow=2.8,SNR=5.2						
ASAR	**Alice Springs**	**90.55**	**229**	P	**P**	**14 47 39.6**	**-1.1**
	0.4nm,0.7s,mb3.6,baz=16,slow=4.5,SNR=9.8						

MDD ***24*** *14:35:37.3±2.0,3861N×1287W,h82km±116km,mb3.0/6, Error ellipse: s-maj=21.9km s-min=15.0km az=90.0, PRXIMO*

NEIC ***24*** *14:35:39.5,3895N×1241W,h0km,MG3.6(MDD),After MDD.*

INMG ***24*** *14:35:39.1±0.9,3852N×1302W,h10km,ML2.1,Error ellipse: s-maj=7.7km s-min=7.3km az=29.0*

CSEM ***24*** *14:35:40.3±0.5,3907N×1219W,h10km,ML3.4/3,Error ellipse: s-maj=10.9km s-min=4.6km az=78.0*

ISC 24 14:35:38.8±1.1,**3867N**±006×**1241W**±008,**h10**km,**n41,**
σ1§10/81,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.46**	**82**	*e*Pn	**Pn**	**14 36 19.7**	**+0.8**
PMAFR				*e*Sn	**Sn**	**14 36 51.6**	**+2.6**
PMAFR				A		14 36 54.0	
	25nm,0.3s						
PMAFR	**Mafra**	**2.46**	**82**	Pn	**Pn**	**14 36 19.7**	**+0.8**
PMAFR				Sn	**Sn**	**14 36 51.6**	**+2.6**
	12nm,0.3s						
PTEO	**Sao Teotonio**	**3.12**	**110**	*e*Pn	**Pn**	**14 36 27.9**	**-0.1**
PTEO				*e*Sn	**Sn**	**14 37 04.2**	**-1.0**
PTEO				A		14 37 07.5	
	11nm,0.4s						
PTEO	**Sao Teotonio**	**3.12**	**110**	*e*Pn	**Pn**	**14 36 27.9**	**-0.1**
PTEO				*e*Sn	**Sn**	**14 37 04.2**	**-1.0**
	11nm,0.4s						
PFVI	**Vila Bisbo**	**3.22**	**117**	*e*Pn	**Pn**	**14 36 29.1**	**-0.3**
PFVI				*e*Sn	**Sn**	**14 37 06.2**	**-1.7**
PFVI				A		14 37 09.3	
	3.3nm,0.1s						
PFVI	**Vila Bisbo**	**3.22**	**117**	*e*Pn	**Pn**	**14 36 29.1**	**-0.3**
PFVI				*e*Sn	**Sn**	**14 37 06.2**	**-1.7**
	3.3nm,0.1s						
MORF	**Marmelete**	**3.27**	**113**	*e*Pn	**Pn**	**14 36 29.9**	**-0.1**
MORF				*e*Sn	**Sn**	**14 37 08.3**	**-0.7**
MORF				A		14 37 11.0	
	6.1nm,0.1s						
MORF	**Marmelete**	**3.27**	**113**	P	**Pn**	**14 36 29.9**	**-0.1**
MORF				Pn	**Pn**	**14 36 29.9**	**-0.1**
MORF				S	**Sn**	**14 37 07.8**	**-1.2**
MORF				Sn	**Sn**	**14 37 08.3**	**-0.7**
	6.1nm,0.1s						
MORF	**Marmelete**	**3.27**	**113**	*e*Pn	**Pn**	**14 36 29.9**	**-0.1**
MORF				*e*Sn	**Sn**	**14 37 08.3**	**-0.7**
	6.1nm,0.1s						
EVO	**Evora**	**3.45**	**91**	*e*Sn	**Sn**	**14 37 14.2**	**+0.8**
EVO				A		14 37 19.8	
	5.8nm,0.1s						
EVO	**Evora**	**3.45**	**91**	Sn	**Sn**	**14 37 14.2**	**+0.8**
	5.8nm,0.1s						
PBEJ	**Beja**	**3.63**	**99**	*e*Pn	**Pn**	**14 36 35.8**	**+0.8**
PBEJ				*e*Sn	**Sn**	**14 37 18.0**	**+0.1**
PBEJ				A		14 37 21.8	
	3.2nm,0.1s						
PBEJ	**Beja**	**3.63**	**99**	Pn	**Pn**	**14 36 35.8**	**+0.8**
PBEJ				Sn	**Sn**	**14 37 18.0**	**+0.1**
	1.6nm,0.1s						
PESTR	**Estremoz**	**3.77**	**86**	*e*Pn	**Pn**	**14 36 38.3**	**+1.3**
PESTR				*e*Sn	**Sn**	**14 37 22.1**	**+0.7**
PESTR				A		14 37 28.4	
	1.9nm,0.3s						
PBDV	**Barranco-do-Ve**	**3.82**	**111**	*e*Pn	**Pn**	**14 36 38.0**	**+0.4**
PBDV				*e*Sn	**Sn**	**14 37 22.6**	**+0.1**
PBDV				A		14 37 28.9	
	5.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.82**	**111**	Pn	**Pn**	**14 36 38.0**	**+0.4**
PBDV				Sn	**Sn**	**14 37 22.6**	**+0.1**
	3.0nm,0.5s						
PVAQ	**Vaqueiros**	**3.92**	**107**	*e*Pn	**Pn**	**14 36 39.4**	**+0.5**
PVAQ				*e*Sn	**Sn**	**14 37 24.5**	**-0.4**
PVAQ				A		14 37 29.6	
	3.5nm,0.3s						
PVAQ	**Vaqueiros**	**3.92**	**107**	Pn	**Pn**	**14 36 39.4**	**+0.5**
PVAQ				Sn	**Sn**	**14 37 24.5**	**-0.4**
	1.8nm,0.3s						
PCBR	**Castelo Branco**	**4.00**	**72**	*e*Pn	**Pn**	**14 36 41.3**	**+1.2**
PCBR				*e*Sn	**Sn**	**14 37 27.5**	**+0.4**
EGRO	**El Granado**	**4.05**	**105**	P	**Pn**	**14 36 43.1**	**+2.3**
EGRO				S	**Sn**	**14 37 27.4**	**-0.9**
EGRO	**El Granado**	**4.05**	**105**	P	**Pn**	**14 36 40.9**	**+0.1**
	0.7nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**14 37 27.4**	**-0.9**
	3.4nm,0.2s,SNR=4.5						
EGRO	**El Granado**	**4.05**	**105**	P	**Pn**	**14 36 43.1**	**+2.3**
	0.7nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**14 37 27.4**	**-0.8**
	3.4nm,0.2s,SNR=4.5						
MTE	**Manteigas**	**4.14**	**64**	*e*Sn	**Sn**	**14 37 31.9**	**+1.5**
EBAD	**Badajoz**	**4.22**	**87**	P	**Pn**	**14 36 43.6**	**+0.4**
EBAD				S	**Sn**	**14 37 32.2**	**-0.3**
EBAD	**Badajoz**	**4.22**	**87**	P	**Pn**	**14 36 43.6**	**+0.4**
	0.4nm,0.1s,SNR=4.0						
EBAD				S	**Sn**	**14 37 32.2**	**-0.3**
	2.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.22**	**87**	P	**Pn**	**14 36 43.6**	**+0.4**
	0.4nm,0.1s,SNR=4.0						
EBAD				S	**Sn**	**14 37 32.2**	**-0.3**
	2.5nm,0.1s,SNR=7.9						
PBAR	**Barrancos**	**4.25**	**95**	*e*Pn	**Pn**	**14 36 44.3**	**+0.8**
PBAR				*e*Sn	**Sn**	**14 37 32.0**	**-1.1**
PBAR				A		14 37 35.2	
	1.7nm,0.2s						
PBAR	**Barrancos**	**4.25**	**95**	Pn	**Pn**	**14 36 44.3**	**+0.8**
PBAR				Sn	**Sn**	**14 37 32.0**	**-1.1**
	0.9nm,0.2s						
EMIN	**Mina Concepcio**	**4.61**	**100**	P	**Pn**	**14 36 48.6**	**+0.2**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**14 37 41.0**	**-1.0**
	1.4nm,0.1s,SNR=7.3						
EMIN	**Mina Concepcio**	**4.61**	**100**	P	**Pn**	**14 36 48.6**	**+0.1**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**14 37 41.0**	**-1.0**
	1.4nm,0.1s,SNR=7.3						
ELOB	**Lobios**	**4.61**	**45**	P	**Pn**	**14 36 46.9**	**-1.6**
ELOB				S	**Sn**	**14 37 36.4**	**-5.6**
ELOB	**Lobios**	**4.61**	**45**	P	**Pn**	**14 36 46.9**	**-1.6**
	0.7nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**14 37 38.9**	**-3.2**
	0.8nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**4.61**	**45**	P	**Pn**	**14 36 46.9**	**-1.6**
	0.7nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**14 37 36.4**	**-5.6**
	0.8nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**5.00**	**30**	P	**Pn**	**14 36 51.1**	**-2.8**
EMAZ				S	**Sn**	**14 37 42.8**	**-8.9**
EMAZ	**Mazaricos**	**5.00**	**30**	P	**Pn**	**14 36 51.1**	**-2.8**
EMAZ				S	**Sn**	**14 37 42.8**	**-8.9**
	1.2nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.43**	**51**	P	**Pn**	**14 36 58.5**	**-1.2**
ECAL				S	**Sn**	**14 37 56.5**	**-5.7**
ECAL	**Calabor**	**5.43**	**51**	P	**Pn**	**14 36 58.5**	**-1.2**
	0.7nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**14 38 00.7**	**-1.5**
	0.3nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.43**	**51**	P	**Pn**	**14 36 58.5**	**-1.2**
	0.7nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**14 37 56.5**	**-5.7**
	0.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.50**	**107**	P	**Pn**	**14 37 03.6**	**+3.0**
ESPR				S	**Sn**	**14 38 05.1**	**+1.2**
ESPR	**Espera**	**5.50**	**107**	P	**Pn**	**14 37 00.0**	**-0.6**
	1.1nm,0.2s,SNR=4.0						
ESPR				S	**Sn**	**14 38 01.4**	**-2.5**
	3.1nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.50**	**107**	P	**Pn**	**14 37 03.6**	**+2.9**
	1.1nm,0.2s,SNR=4.0						
ESPR				S	**Sn**	**14 38 05.1**	**+1.2**
	3.1nm,0.2s,SNR=7.9						

IDC 24 15:22:47.3±1.2,**3388N**×**9090E**,**h0**km,**mb3.7**/5,**mb1 4.0**/6,
mb1mx3.7/21,**mbtmp3.7**/6,**ML2.9**/1,**MS3.4**/1,**Ms1 3.4**/1,
ms1mx2.5/35,**Error ellipse: s-maj=72.0km**
s-min=21.2km az=60.0,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.46**	**336**	Pn	**Pn**	15 26 11.2	-1.9
	0.1nm,0.3s,baz=150,slow=12,SNR=4.9						
ZALV	**Zalesovo Beam**	**20.52**	**350**	P	P	15 27 26.8	-0.1
	2.3nm,0.9s,baz=160,slow=9.5,SNR=11						
GERES	**GERESS Array B**	**57.43**	**310**	P	P	15 32 37.6	-0.1
	0.5nm,0.7s,baz=66,slow=5.5,SNR=4.6						
GERES				LR	LR	15 59 25.6	
	comp=Z,29nm,18.3s,baz=337,slow=38						
WRA	**Warramunga Arr**	**67.66**	**136**	P	P	15 33 46.3	0.0
	1.7nm,0.9s,baz=328,slow=6.3,SNR=5.9						
ASAR	**Alice Springs**	**70.34**	**138**	P	P	15 34 03.2	+0.3
	0.9nm,0.7s,baz=326,slow=6.6,SNR=18						
YKA	**Yellowknife Ar**	**81.79**	**12**	P	P	15 35 07.6	-0.1
	0.6nm,0.8s,baz=332,slow=5.2,SNR=9.7						

ISCJB ***24*** *15:42:35.6±2.9,585S±007×1476E±0.1,h45km±26km, mb4.2/12,MS3.3/3, Error ellipse: s-maj=21.7km s-min=10.2km az=20.5*

NEIC ***24*** *15:42:43.6±4.4,590S×14736E,h102km±39km,mb4.4/7, Error ellipse: s-maj=26.5km s-min=13.4km az=77.0*

IDC ***24*** *15:42:45.5±3.5,588S×14723E,h112km±30km,mb3.8/9, mb1 3.9/10,mb1mx3.8/15,mbtmp3.8/10,MS3.2/5, Ms1 3.2/5,ms1mx3.0/18,Error ellipse: s-maj=32.7km s-min=10.6km az=111.0*

ISC 24 15:42:44.0±2.3,**594S**±007×**1474E**±01,**h105**km±21km,**n27,**
σ0§92/23,mb4.0/12,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.92**	**106**	LR	LR	15 50 03.5	
	comp=Z,47nm,19.8s,baz=355,slow=34						
CTA	**Charters Tower**	**14.11**	**184**	LR	LR	15 50 55.0	
	comp=Z,92nm,18.7s,baz=174,slow=35						
KAKA	**Kakadu**	**16.21**	**244**	*e*P	**Pn**	**15 46 25.3**	**-0.4**
	12nm,0.4s						
KAKA	**Kakadu**	**16.21**	**244**	*e*P	**Pn**	**15 46 25.1**	**-0.7**
	28nm,0.5s						
WB2	**Warramunga Arr**	**18.82**	**221**	*e*P	**P**	**15 46 55.5**	**-0.2**
WRA	**Warramunga Arr**	**18.83**	**221**	P	**P**	**15 46 55.3**	**-0.5**
	0.9nm,0.3s,baz=47,slow=11,SNR=22						
WRA				S	**S**	**15 50 23.1**	**-1.3**
	0.2nm,0.3s,baz=44,slow=20,SNR=8.8						
WRA				PcP	PcP	15 51 19.0	+0.4
	0.1nm,0.3s,baz=6.6,slow=1.5,SNR=6.4						
EIDS	**Eidsvold**	**19.64**	**170**	*e*P	**P**	**15 47 04.3**	**-0.1**
	1.6nm,0.7s						
ASAR	**Alice Springs**	**21.89**	**215**	P	**P**	**15 47 28.3**	**-0.3**
	2.9nm,0.4s,mb4.0,baz=51,slow=9.0,SNR=88						
ASAR				S	**S**	**15 51 25.9**	**+1.5**
	1.8nm,0.8s,baz=28,slow=23,SNR=8.0						
BATI	**Kupang**	**23.87**	**258**	P	**P**	**15 47 49.5**	**+1.5**
	11nm,0.5s,mb4.4,baz=117,slow=5.6,SNR=7.9						
FITZ	**Fitzroy Crossi**	**24.43**	**238**	*e*P	**P**	**15 47 54.5**	**+1.4**
	15nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**24.43**	**238**	*e*P	**P**	**15 47 54.1**	**+1.0**
	19nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**24.43**	**238**	P	**P**	**15 47 54.2**	**+1.1**
	8.0nm,0.5s,mb4.3,baz=68,slow=8.8,SNR=36						
FITZ				LR	LR	15 58 08.7	
	comp=Z,45nm,18.9s,baz=125,slow=38						
STKA	**Stephens Creek**	**26.37**	**191**	*e*P	**P**	**15 48 12.7**	**+2.3**
	4.1nm,0.8s,mb3.9						
STKA	**Stephens Creek**	**26.37**	**191**	P	**P**	**15 48 12.0**	**+1.6**
	1.2nm,0.5s,mb3.5,baz=288,slow=7.8,SNR=5.2						
STKA				LR	LR	15 59 00.7	
	comp=Z,102nm,18.6s,baz=26,slow=37						
MJAR	**Matsushiro Arr**	**43.12**	**349**	P	**P**	**15 50 33.9**	**-0.2**
	2.0nm,0.9s,mb3.8,baz=167,slow=7.4,SNR=6.9						
KSRS	**Korea Array**	**46.84**	**339**	P	**P**	**15 51 03.5**	**+0.1**
	0.7nm,0.8s,mb3.5,baz=161,slow=7.6,SNR=4.0						
RAR	**Rarotonga**	**53.30**	**112**	LR	LR	16 11 43.7	
	comp=Z,44nm,19.5s,baz=270,slow=32						
HIA	**Hailar**	**60.03**	**339**	*e*P	**P**	**15 52 39.7**	**0.0**
	4.7nm,0.8s,mb4.6						
ULN	**Ulaanbaatar**	**64.24**	**331**	*e*P	**P**	**15 53 08.0**	**+0.1**
	0.7nm,0.5s,mb3.8						
SONM	**Songino Array**	**64.54**	**331**	P	**P**	**15 53 10.9**	**+1.1**
	0.7nm,0.5s,mb3.7,baz=153,slow=6.1,SNR=5.8						
MKAR	**Makanchi Array**	**77.70**	**320**	P	**P**	**15 54 28.8**	**-0.5**
	0.2nm,0.3s,mb3.3,baz=110,slow=5.5,SNR=7.8						
ZALV	**Zalesovo Beam**	**79.17**	**328**	P	**P**	**15 54 35.4**	**-1.8**
	0.9nm,0.4s,mb3.9,baz=115,slow=5.5,SNR=6.7						
QSPA	**South Pole Qui**	**84.03**	**180**	*e*P	**P**	**15 55 01.4**	**-0.9**
	37nm,2.0s,mb4.9						
DAWY	**Dawson**	**88.05**	**25**	*e*P	**P**	**15 55 22.0**	**-0.3**
PLCA	**Paso Flores**	**121.96**	**147**	PKP	PKPdf	16 01 28.3	+1.9
	0.8nm,0.6s,baz=187,slow=6.6,SNR=3.1						
LPAZ	**La Paz**	**138.49**	**123**	PKP	PKPdf	16 01 57.9	-0.4
	1.3nm,0.8s,baz=270,slow=3.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**145.45**	**285**	PKPbc	PKPbc	16 02 10.2	-0.7
	1.1nm,0.4s,baz=42,slow=2.5,SNR=24						

ISCJB ***24*** *15:50:41.6±0.7,3573N±004×13878E±006,h11km±10km, Error ellipse: s-maj=8.7km s-min=5.9km az=25.7*

JMA ***24*** *15:50:42.0,3573N×13879E,h14km±1km,M3.3 Broadband fault plane solution: P waves. NP1: φs1.00000°,δ24.00000°,λ124.00000°. NP2:φs144.00000°, δ70.00000°,λ76.00000°. Principal axes: T Plg62.0000°, Azm33.0000°; N Plg13.0000°, Azm149.0000°; P Plg24.0000°, Azm245.0000°;*

JMA Felt II J1.

ISC 24 15:50:41.7±0.8,**3573N**L004×**13877E**±006,**h15**km±10km,
n5,σ0§25/10,1C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYN	**Shimob**	**0.30**	**218**	⇓P	**Pg**	**15 50 48.3**	**+0.4**
JYN				S	**Sg**	**15 50 51.7**	**-0.4**
JRY	**Ryogami san**	**0.30**	**21**	⇓P	**Pg**	**15 50 48.3**	**+0.2**
JRY				S	**Sg**	**15 50 52.5**	**+0.2**
JHU	**Hanno**	**0.43**	**74**	⇓P	**Pg**	**15 50 50.2**	**-0.2**
JHU				S	**Sg**	**15 50 55.9**	**-0.3**
JOD2	**Odawara 2**	**0.54**	**151**	⇑P	**Pg**	**15 50 52.2**	**0.0**
JOD2				S	**Sg**	**15 50 59.7**	**+0.3**
MAT	**Matsushiro**	**0.93**	**331**	P	**Pb**	**15 50 59.4**	**-0.1**
MAT				S	**Sb**	**15 51 11.7**	**0.0**

SOF ***24*** *16:11:50.4,3979N×2357E,h4km,MD3.3*

ISCJB ***24*** *16:11:53.5±0.5,3994N±002×2401E±004,h10km±4km, Error ellipse: s-maj=4.7km s-min=3.9km az=177.4*

THE ***24*** *16:11:54.3,3995N×2404E,h16km,ML3.7*

CSEM ***24*** *16:11:54.5±0.1,3993N×2401E,h21km±1km,ML3.7,Error ellipse: s-maj=2.5km s-min=1.5km az=88.0*

NEIC ***24*** *16:11:54.3,3995N×2404E,h16km,ML3.7(THE),After THE.*

ATH ***24*** *16:11:55.1,3998N×2390E,h39km±3km,MD3.6/12*

ISC 24 16:11:54.0±0.5,**3991N**±002×**2399E**±004,**h10**km±4km,**n40,**
σ1§23/55,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.24**	**273**	*e*Pg	**Pg**	**16 12 00.3**	**+1.4**
PAIG				*e*Sg	**Sg**	**16 12 05.0**	**+2.8**
OUR	**Ouranopolis**	**0.42**	**359**	*e*Pg	**Pg**	**16 12 02.2**	**0.0**
PLG	**Polygyros**	**0.62**	**318**	*e*Pg	**Pg**	**16 12 06.0**	**0.0**
PLG				*e*Sg	**Sg**	**16 12 14.9**	**+0.7**
AOS	**Alonnisos**	**0.75**	**187**	*e*Pg	**Pg**	**16 12 08.6**	**+0.2**
XOR	**Xorichti**	**0.83**	**229**	*e*Pg	**Pg**	**16 12 11.0**	**+1.1**
XOR				*e*Sg	**Sg**	**16 12 23.0**	**+2.3**
LOS	**Limnos**	**0.84**	**88**	*e*Pg	**Pg**	**16 12 08.8**	**-1.3**
NEO	**Neokhori**	**0.85**	**225**	*e*PN	**Pn**	**16 12 11.5**	**-0.5**
NEO				*e*SN	**Sn**	**16 12 23.5**	**-1.1**
LIA	**Limnos Island**	**0.92**	**91**	*e*PN	**Pn**	**16 12 14.5**	**+1.6**
HORT	**Hortiatis**	**0.97**	**315**	*e*Pg	**Pg**	**16 12 11.8**	**-0.8**
HORT				*e*Sg	**Sg**	**16 12 25.8**	**+0.6**
SOH	**Sokhos**	**1.03**	**332**	*e*Pg	**Pg**	**16 12 13.5**	**-0.3**
SOH				*e*Sg	**Sg**	**16 12 27.6**	**+0.4**
THE	**Thessaloniki**	**1.06**	**313**	*e*Pg	**Pg**	**16 12 14.0**	**-0.5**
THE				*e*Sg	**Sg**	**16 12 28.4**	**+0.1**
LIT	**Litokhoron**	**1.17**	**280**	*e*Pg	**Pg**	**16 12 15.9**	**-0.5**
NVR	**Nevrokopi**	**1.44**	**356**	*e*PB	**Pb**	**16 12 19.2**	**-1.7**
LKR	**Lokris**	**1.48**	**212**	*e*PN	**Pn**	**16 12 20.3**	**-0.4**
KNT	**Kendrikon**	**1.50**	**327**	*e*Pg	**Pg**	**16 12 20.6**	**-2.2**
KNT				*e*Sg	**Sg**	**16 12 39.3**	**-2.9**
AGG	**Agios Georgios**	**1.57**	**236**	*e*Pg	**Pg**	**16 12 22.2**	**-1.8**
AGG				*e*Sg	**Sg**	**16 12 42.1**	**-2.2**
THL	**Klokotos Trika**	**1.57**	**258**	*e*PB	**Pb**	**16 12 22.0**	**-1.1**
MMB	**Musomiste**	**1.69**	**353**	P	**Pn**	**16 12 22.3**	**-1.2**
MMB				Pg	**Pg**	**16 12 25.6**	**-0.7**
RDO	**Rodhopi**	**1.70**	**43**	*e*PN	**Pn**	**16 12 23.7**	**-0.1**
KZN	**Kozani**	**1.75**	**284**	*e*PB	**Pb**	**16 12 24.5**	**-1.7**
VAY	**Valandovo**	**1.77**	**323**	*e*Pn	**Pn**	**16 12 27.5**	**+2.8**
VAY				*i* Sg	**Sg**	**16 12 51.7**	**+0.7**
VAY				*i* Sg	**Sg**	**16 12 52.5**	**+1.4**
VAY	**Valandovo**	**1.77**	**323**	*e*Pn	**Pn**	**16 12 27.5**	**+2.7**
VAY				*i* Sg	**Sg**	**16 12 51.7**	**+0.6**
ALN	**Alexandroupoli**	**1.85**	**57**	*e*Pb	**Pb**	**16 12 24.1**	**-3.8**
PTL	**Penteli**	**1.87**	**183**	*e*PN	**Pn**	**16 12 26.0**	**0.0**
PRK	**Paraskevi**	**1.88**	**110**	*e*PB	**Pb**	**16 12 28.5**	**0.0**
PRK				*e*SN	**Sn**	**16 12 51.5**	**+1.4**
EVR	**Evrytania**	**1.96**	**240**	*e*PN	**Pn**	**16 12 27.5**	**+0.1**
KDZ	**Kurdzhali**	**2.04**	**31**	P	**Pn**	**16 12 31.0**	**+2.5**
LTK	**Loutraki**	**2.05**	**203**	*e*Pn	**Pn**	**16 12 28.3**	**-0.3**
KKB	**Kyupnik**	**2.07**	**341**	P	**Pn**	**16 12 28.4**	**-0.4**
NAIG	**Nisos Aigina**	**2.19**	**191**	*e*PN	**Pn**	**16 12 32.0**	**+1.5**
CHOS	**Chios island**	**2.21**	**133**	*e*Pn	**Pn**	**16 12 30.0**	**-0.8**
STIP	**Stip**	**2.25**	**323**	*e*Pn	**Pn**	**16 12 35.0**	**+3.7**
STIP				*i* Sg	**Sg**	**16 13 09.3**	**+3.2**
SELA	**Sela**	**2.31**	**226**	*e*Pn	**Pn**	**16 12 32.3**	**+0.1**
DIM	**Dimitrovgrad**	**2.43**	**28**	P	**Pn**	**16 12 39.8**	**+6.0**
KRUS	**Krusevo**	**2.54**	**306**	*e*Pn	**Pn**	**16 12 36.7**	**+1.3**
KRUS	**Krusevo**	**2.54**	**306**	*e*Pn	**Pn**	**16 12 36.6**	**+1.3**
VTS	**Vitosha**	**2.74**	**348**	P	**Pn**	**16 12 38.2**	**+0.2**
JMB	**Yambol**	**3.21**	**37**	P	**Pn**	**16 12 52.9**	**+8.4**
BARS	**Barje**	**3.33**	**331**	Pn	**Pn**	**16 12 46.4**	**+0.2**
DIVS	**Divcibare**	**5.13**	**326**	Pn	**Pn**	**16 13 05.4**	**-5.5**

NIED ***24*** *16:28:00,3060N×14230E,h5km,Mw4.3 Best double couple: M03.22000×10^15 NP1:φs194.00000°,δ35.00000°, λ137.00000°. NP2:φs321.00000°,δ67.00000°,λ62.00000°.*

IDC ***24*** *16:28:32.8±0.6,3053N×14209E,h0km,mb4.2/14, mb1 4.3/17,mb1mx4.2/22,mbtmp4.2/17,ML4.1/3,MS3.3/9, Ms1 3.3/9,ms1mx3.2/26,Error ellipse: s-maj=20.9km s-min=15.1km az=78.0*

ISCJB ***24*** *16:28:33.1±1.1,3059N±003×14204E±006,h16km±8km, mb4.5/60,MS3.6/9, Error ellipse: s-maj=8.4km s-min=4.0km az=168.7*

JMA ***24*** *16:28:34.2±0.2,3062N×14230E,h48km,M4.6*

MOS ***24*** *16:28:35.3±1.0,3056N×14206E,h33km,mb4.6/15,Error ellipse: s-maj=16.4km s-min=6.2km az=109.2*

BJI ***24*** *16:28:35.3,3070N×14205E,h26km,mB4.6,mb4.5,Ms4.1, Msz3.8*

NEIC ***24*** *16:28:37.1±0.3,3052N×14200E,h35km,mb4.6/20, MW4.3(NIED),Error ellipse: s-maj=7.6km s-min=5.4km az=84.0*

ISC 24 16:28:36.0±1.2,**3060N**±003×**14204E**±006,**h23**km±8km,
h36km±1.2km:**pP-P,n127,**σ1§10/137,**mb4.5**/60,**MS3.6**/9,**6C,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.14**	**324**	P	**Pn**	**16 29 24.9**	**+0.8**
JHJ2				*e*S	**Sn**	**16 30 00.5**	**-0.4**
JHJ	**Hachijo jima 2**	**3.17**	**323**	Pn	**Pn**	**16 29 24.3**	**-0.1**
	20nm,0.3s,baz=49,slow=20,SNR=4.1						
JHJ				Sn	**Sn**	**16 29 58.7**	**-2.8**
	32nm,0.3s,baz=76,slow=18,SNR=4.1						
JHJ				LR	LR	16 30 39.7	
	comp=Z,639nm,21.2s,baz=7.0,slow=39						
CBIJ	**Chichi jima**	**3.49**	**178**	P	**Pn**	**16 29 27.5**	**-1.4**
CBIJ	**Chichi jima**	**3.49**	**178**	Pn	**Pn**	**16 29 27.4**	**-1.5**
	25nm,0.3s,baz=315,slow=20,SNR=19						
CBIJ				Sn	**Sn**	**16 30 07.2**	**-2.3**
	48nm,0.3s,baz=64,slow=22,SNR=5.8						
CBIJ				LR	LR	16 30 40.6	
	comp=Z,264nm,18.8s,baz=90,slow=37						
BSO1	**Boso 1**	**4.14**	**348**	P	**Pn**	**16 29 37.2**	**-0.7**
BSO1				*e*S	**Sn**	**16 30 22.3**	**

KLR	**Kul'dur**	**20.18 340**	*eP*	**P**	**16 33 07.7**	**-1.1**
BJT	**Baijiatuau**	**23.05 301**	P	**P**	**16 33 38.2**	**-1.5**
	comp=Z,9.5nm,0.6s,mb4.4					
BJT	**Baijiatuau**	**23.05 301**	P	**P**	**16 33 38.2**	**-1.5**
BJT			pmax	pmax		
	comp=Z,9.0nm,0.6s					
BJI	**Beijing**	**23.05 301**	P	**P**	**16 33 38.6**	**-1.1**
BJI			AMB	AMB		
	comp=Z,9.0nm,0.5s,mb4.5					
BJI			LR	LR		
	comp=N,111nm,15.1s,MS3.8					
BJI			LR	LR		
	comp=E,232nm,15.1s,MS3.8					
BJI			LR	LR		
	comp=Z,93nm,15.1s,MS3.4					
HIA	**Hailar**	**25.14 324**	*eP*	**P**	**16 34 00.1**	**+0.8**
	comp=Z,7.2nm,0.8s,mb4.2					
HIA	**Hailar**	**25.14 324**	*eP*	**P**	**16 34 00.1**	**+0.8**
HIA			pmax	pmax		
	comp=Z,7.0nm,0.8s					
PET	**Petropavlovsk**	**25.48 24**↑	*eP*	**P**	**16 34 04.0**	**+1.7**
PET			pmax	pmax		
	comp=Z,28nm,1.7s,mb4.5					
HHC	**Hu-ho-hao-te**	**26.66 301**	*eP*	**P**	**16 34 13.6**	**+0.5**
HHC			AP	pP	16 34 22.9	+3.0
HHC			XP	sP	16 34 27.6	+4.9
HHC			PP		16 34 57.8	
HHC			S	**S**	**16 38 45.1**	**-1.8**
HHC			XS	sS	16 39 01.3	+3.1
HHC			SS		16 39 58.1	
HHC			SCS	ScS	16 45 01.1	-4.5
HHC			AMB	AMB		
	comp=Z,11nm,0.9s,mb4.4					
HHC			AMB	AMB		
	comp=Z,80nm,4.9s					
HHC			LR	LR		
	comp=N,87nm,11.9s,MS3.9					
HHC			LR	LR		
	comp=E,194nm,13.9s,MS3.9					
HHC			LR	LR		
	comp=Z,232nm,13.9s,MS3.9					
XAN	**Xi'an**	**28.13 286**	P	**P**	**16 34 26.1**	**-0.3**
XAN			AP	pP	16 34 37.3	+4.1
XAN			AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.3					
CIT	**Chita**	**29.95 324**	*eP*	**P**	**16 34 46.0**	**+3.7**
CIT			*e*		16 34 57.2	
GYA	**Guiyang**	**31.28 271**	P	**P**	**16 34 56.3**	**+2.0**
GYA			AP	pP	16 35 06.4	+5.2
GYA			XP	sP	16 35 10.6	+6.6
GYA			PP	PP	16 36 01.3	-3.7
GYA			PCP	PcP	16 37 49.8	+1.4
GYA			XS	sS	16 40 17.3	+6.2
GYA			SCP	ScP	16 41 28.8	-1.2
GYA			SCS	ScS	16 45 24.6	-3.0
GYA			AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7					
GYA			LR	LR		
	comp=N,350nm,17.8s,MS4.3					
GYA			LR	LR		
	comp=E,430nm,18.0s,MS4.3					
GYA			LR	LR		
	comp=Z,390nm,18.4s,MS4.1					
ULN	**Ulaanbaatar**	**31.78 313**	*eP*	**P**	**16 34 59.3**	**+0.9**
	comp=Z,5.0nm,0.8s,mb4.4					
ULN	**Ulaanbaatar**	**31.78 313**	*eP*	**P**	**16 34 59.3**	**+0.8**
ULN			pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4					
SONM	**Songino Array**	**32.19 313**	P	**P**	**16 35 03.7**	**+1.7**
	comp=Z,2.3nm,0.8s,mb4.1,baz=113,slow=7.5,SNR=11					
SONM			LR	LR	16 48 42.6	
	comp=Z,65nm,19.4s,MS3.3,baz=18,slow=38					
LZH	**Lanzhou**	**32.23 290**	*eP*	**P**	**16 35 05.1**	**+2.5**
LZH			AP	pP	16 35 14.5	+5.0
LZH			XP	sP	16 35 17.9	+5.6
LZH			AMB	AMB		
	comp=Z,16nm,1.0s,mb4.8					
LZH			AMB	AMB		
	comp=Z,68nm,4.0s					
YAK	**Yakutsk**	**32.47 349**↑	*eP*	**P**	**16 35 03.7**	**-0.6**
YAK			pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4					
CD2	**Chengdu**	**32.80 281**	*eP*	**P**	**16 35 08.8**	**+1.2**
CD2			XP	sP	16 35 22.3	+5.0
CD2			PP	PP	16 36 19.8	-2.1
CD2			S	**S**	**16 40 22.8**	**-0.7**
CD2			XS	sS	16 40 38.8	+4.0
CD2			SS	SS	16 42 21.8	-23
CD2			AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8					
CD2			AMB	AMB		
	comp=Z,20nm,5.2s					
CD2			LR	LR		
	comp=N,120nm,12.6s					
CD2			LR	LR		
	comp=Z,110nm,13.4s,MS3.7					
SEY	**Seymchan**	**33.03 9**↑	*eP*	**P**	**16 35 09.8**	**+0.6**
BOD	**Bodaibo**	**33.37 333**	*eP*	**P**	**16 35 12.2**	**-0.1**
BOD			pmax	pmax		
	comp=Z,3.0nm,1.6s,mb4.0					
ZAK	**Zakamensk**	**34.97 316**	*eP*	**P**	**16 35 27.3**	**+1.1**
ZAK			pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2					
KMI	**Kunming**	**35.05 271**	P	**P**	**16 35 28.8**	**+1.6**
KMI			AMB	AMB		
	comp=Z,5.0nm,0.6s,mb4.6					
IRK	**Irkutsk**	**35.07 319**	*eP*	**P**	**16 35 28.1**	**+1.0**
IRK			pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8					
TLY	**Talaya**	**35.21 318**	*eP*	**P**	**16 35 29.9**	**+1.6**
	comp=Z,4.9nm,0.8s,mb4.5					
TLY	**Talaya**	**35.21 318**	*eP*	**P**	**16 35 30.5**	**+2.2**
TLY			*e*		16 36 51.7	
TLY			pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7					
TLY			MLR	MLR		
	comp=Z,96nm,16.0s,MS3.6					
GTA	**Gaotai**	**35.43 296**	*eP*	**P**	**16 35 30.3**	**0.0**
GTA			AMB	AMB		
	comp=Z,2.0nm,0.9s,mb4.0					
BILL	**Bilibino**	**40.09 14**	*eP*	**P**	**16 36 07.1**	**-2.3**
BILL			pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0					
TIXI	**Tiksi**	**41.73 354**↑	*eP*	**P**	**16 36 22.5**	**-0.3**
TIXI			pmax	pmax		
	comp=Z,3.0nm,1.7s,mb3.6					
KSM	**Kuching**	**41.75 232**	P	**P**	**16 36 22.5**	**-1.2**
KAKA	**Kakadu**	**44.04 194**	*eP*	**P**	**16 36 41.8**	**-0.3**
	comp=Z,4.8nm,0.5s,mb4.5					
KAKA	**Kakadu**	**44.04 194**	*eP*	**P**	**16 36 40.8**	**-1.3**
	comp=Z,9.7nm,0.6s,mb4.7					
WMQ	**Urumqi**	**44.50 303**	*eP*	**P**	**16 36 45.3**	**-0.3**
WMQ			AP	pP	16 36 55.3	+2.6
WMQ			XP	sP	16 36 59.8	+4.4
WMQ			PCP	PcP	16 38 28.3	-0.4
WMQ			PP	PP	16 38 30.5	+1.0
WMQ			PPP		16 39 10.3	
WMQ			SCP	ScP	16 42 16.5	-3.0
WMQ			S	**S**	**16 43 18.3**	**-1.3**
WMQ			XS	sS	16 43 34.8	+3.6
WMQ			AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.1					
WMQ			AMB	AMB		
	comp=Z,73nm,4.0s					
WMQ			LR	LR		
	comp=N,78nm,21.6s					
WMQ			LR	LR		
	comp=E,22nm,15.6s					
WMQ			LR	LR		
	comp=Z,22nm,16.8s,MS3.1					
KULM	**Kulim**	**46.33 246**	P	**P**	**16 37 00.3**	**-0.1**
ZALV	**Zalesovo Beam**	**46.81 317**	P	**P**	**16 37 04.1**	**+0.4**
	comp=Z,0.9nm,0.5s,mb4.0,baz=96,slow=8.0,SNR=5.9					
ZALV			LR	LR	16 56 26.3	
	comp=Z,33nm,18.1s,MS3.3,baz=55,slow=36					
ZAL	**Zalesovo**	**46.82 317**	P	**P**	**16 37 04.2**	**+0.4**
TAPN	**Taplejung**	**47.26 280**	*eP*	**P**	**16 37 07.8**	**+0.2**
	comp=Z,2.9nm,0.4s,mb4.5					
ODAN	**Odare**	**47.68 280**	*eP*	**P**	**16 37 08.3**	**-2.6**
	comp=Z,6.1nm,0.5s,mb4.9					
NVS	**Novosibirsk**	**47.82 318**	*eP*	**P**	**16 37 10.7**	**-0.9**
MKAR	**Makanchi Array**	**48.21 307**	P	**P**	**16 37 15.7**	**+1.0**
	comp=Z,1.8nm,0.6s,mb4.3,baz=90,slow=9.5,SNR=32					
MKAR			LR	LR	17 00 11.7	
	comp=Z,26nm,18.7s,MS3.2,baz=343,slow=39					
JIRN	**Jiri**	**48.46 281**	*eP*	**P**	**16 37 16.8**	**-0.1**
	comp=Z,7.1nm,0.4s,mb5.0					
KKN	**Kakani**	**49.19 282**	*eP*	**P**	**16 37 23.1**	**+0.6**
	comp=Z,3.3nm,0.4s,mb4.7					
KURK	**Kurchatov**	**50.49 313**	*eP*	**P**	**16 37 31.0**	**-1.0**
	comp=Z,6.6nm,1.0s,mb4.6					
KURK	**Kurchatov**	**50.49 313**	*eP*	**P**	**16 37 31.0**	**-1.1**
KURK			pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7					
CTAO	**Charters Tower**	**50.55 175**	*eP*	**P**	**16 37 31.9**	**-0.9**
	comp=Z,10nm,1.1s,mb4.7					
CTAO	**Charters Tower**	**50.55 175**	*eP*	**P**	**16 37 31.9**	**-0.9**
CTAO			pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7					
KOLN	**Koldanda**	**50.61 282**	*eP*	**P**	**16 37 32.3**	**-1.0**
	comp=Z,5.8nm,0.5s,mb4.8					
WB2	**Warramunga Arr**	**50.79 189**	*eP*	**P**	**16 37 34.0**	**-0.5**
WRA	**Warramunga Arr**	**50.79 189**	P	**P**	**16 37 34.3**	**-0.3**
	comp=Z,8.0nm,0.5s,mb4.9,baz=6.2,slow=7.7,SNR=57					
FITZ	**Fitzroy Crossi**	**50.92 200**	*eP*	**P**	**16 37 35.6**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.4					
KDAK	**Kodiak Island**	**51.67 38**	P	**P**	**16 37 41.4**	**+0.5**
	comp=Z,12nm,1.0s,mb4.8,baz=188,slow=7.1,SNR=3.1					
TKM2	**Tokmak 2**	**53.36 303**	*eP*	**P**	**16 37 53.8**	**+0.2**
	comp=Z,6.7nm,1.2s,mb4.5					
TKM2	**Tokmak 2**	**53.36 303**	*eP*	**P**	**16 37 53.8**	**+0.2**
TKM2			pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5					
UCH	**Uchtor**	**54.28 302**	P	**P**	**16 38 02.0**	**+1.7**
	comp=Z,2.1nm,0.7s,mb4.2					
ASAR	**Alice Springs**	**54.51 189**	P	**P**	**16 38 01.8**	**-0.3**
	comp=Z,2.1nm,0.5s,mb4.4,baz=359,slow=5.2,SNR=78					
EKS2	**Erkin-Say**	**54.73 303**	*eP*	**P**	**16 38 04.0**	**+0.5**
	comp=Z,2.0nm,0.9s,mb4.2					
AML	**Almayashu**	**54.89 302**	*eP*	**P**	**16 38 06.4**	**+1.6**
	comp=Z,6.2nm,0.4s,mb5.0					
BRVK	**Borovoye**	**55.48 316**	*eP*	**P**	**16 38 09.5**	**+0.6**
MBWA	**Marble Bar**	**55.75 205**	*eP*	**P**	**16 38 10.7**	**-0.3**
	comp=Z,18nm,1.1s,mb5.0					
INK	**Inuvik**	**59.92 25**	*eP*	**P**	**16 38 38.7**	**-1.1**
	comp=Z,196nm,1.3s,mb6.0					
INK	**Inuvik**	**59.92 25**	P	**P**	**16 38 40.1**	**+0.3**
INK			pmax	pmax		
	comp=Z,1.0nm,0.6s					
INK	**Inuvik**	**59.92 25**	P	**P**	**16 38 40.1**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.9,baz=259,slow=3.8,SNR=3.6					
KBL	**Kabul**	**60.40 295**	*eP*	**P**	**16 38 44.0**	**+0.3**
	comp=Z,4.0nm,0.8s,mb4.5					
KBL			*e*		16 38 54.2	
SVE	**Sverdlovsk**	**60.41 321**	*eP*	**P**	**16 38 44.5**	**+1.2**
ARU	**Arti**	**61.61 321**	*eP*	**P**	**16 38 51.4**	**-0.1**
	comp=Z,6.8nm,0.8s,mb4.8					
ARU			*e*		16 39 05.2	
ARU	**Arti**	**61.61 321**	*eP*	**P**	**16 38 52.1**	**+0.6**
ARU					16 41 05.0	
ARU			S	**S**	**16 47 10.6**	**-1.5**
ARU			SS	SS	16 51 08.0	-5.0
PALK	**Pallekele**	**61.71 261**	*eP*	**P**	**16 38 52.5**	**-0.3**
	comp=Z,7.7nm,1.0s,mb4.8					
PRGR	**Permogore**	**66.49 329**	*eP*	**P**	**16 39 23.5**	**+0.1**
PRGR			pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7					
NWAO	**Narrogin (SRO)**	**67.40 202**	*eP*	**P**	**16 39 28.4**	**-1.1**
	comp=Z,27nm,1.3s,mb5.1					
NWAO	**Narrogin (SRO)**	**67.40 202**	*eP*	**P**	**16 39 28.4**	**-1.1**
NWAO			pmax	pmax		
	comp=Z,27nm,1.3s					
RES	**Resolute Bay**	**68.70 14**	P	**P**	**16 39 36.3**	**-1.0**
	comp=Z,111nm,1.1s,mb5.7					
YKA	**Yellowknife Ar**	**69.14 29**	P	**P**	**16 39 40.2**	**+0.1**
YKA	**Yellowknife Ar**	**69.14 29**	P	**P**	**16 39 40.2**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.6,baz=294,slow=6.2,SNR=12					
ARCES	**ARCESS Array B**	**70.21 340**	P	**P**	**16 39 48.2**	**+1.6**
ARCES	**ARCESS Array B**	**70.21 340**	P	**P**	**16 39 48.2**	**+1.6**
	comp=Z,2.9nm,0.9s,mb4.2,baz=72,slow=2.9,SNR=2.9					
JOF	**Joensuu**	**71.91 333**	*ep*	**P**	**16 39 57.0**	**0.0**
	comp=Z,1.2nm,0.4s,mb4.2					
KAF	**Kangasniemi**	**74.28 334**	*ep*	**P**	**16 40 10.6**	**-0.5**
	comp=Z,2.3nm,0.4s,mb4.5,baz=51,slow=5.5					
KAF	**Kangasniemi**	**74.28 334**	*eP*	**P**	**16 40 10.6**	**-0.5**
KAF			pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4					
FINES	**FINESS Array B**	**74.77 333**	P	**P**	**16 40 14.4**	**+0.5**
	comp=Z,0.9nm,0.5s,mb4.0,baz=74,slow=5.2,SNR=17					
NVAR	**Mina Array Bea**	**78.47 52**	P	**P**	**16 40 36.5**	**+1.2**
NVAR	**Mina Array Bea**	**78.47 52**	P	**P**	**16 40 36.5**	**+1.2**
	comp=Z,1.3nm,0.5s,mb4.1,baz=288,slow=7.2,SNR=15					
UMR	**Umm Al-Rimmam**	**78.94 298**	*eP*	**P**	**16 40 38.9**	**+0.9**
UMR			AMb	AMB	16 40 44.3	
	comp=Z,14nm,0.4s,mb5.2					
MIB	**Mutribah**	**79.11 298**	*eP*	**P**	**16 40 38.9**	**-0.1**
MIB			AMb	AMB	16 40 44.5	
	comp=Z,6.8nm,0.9s,mb4.6					
RDF	**Al-Radifah**	**79.37 297**	*eP*	**P**	**16 40 41.1**	**+0.7**
RDF			AMb	AMB	16 40 42.8	
	comp=Z,11nm,0.6s,mb5.0					
NAY	**Al-Naaiem**	**79.45 298**	*eP*	**P**	**16 40 41.0**	**+0.1**
NAY			AMb	AMB	16 40 43.0	
	comp=Z,7.0nm,0.7s,mb4.7					
AKASG	**Malin Array Be**	**79.74 323**	P	**P**	**16 40 42.6**	**+0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=51,slow=5.4,SNR=5.0					
NB2	**NORSAR Subarra**	**80.33 338**	P	**P**	**16 40 45.3**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=41,slow=5.3					
NB2	**NORSAR Subarra**	**80.33 338**	P	**P**	**16 40 45.3**	**+0.4**
NB2			pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0					
NOA	**NORSAR Array B**	**80.33 338**	P	**P**	**16 40 45.4**	**+0.4**
	comp=Z,2.0nm,0.8s,mb4.1,baz=40,slow=5.2,SNR=6.6					
PDAR	**Pinedale Array**	**81.82 45**	P	**P**	**16 40 54.0**	**+0.8**
	comp=Z,1.0nm,0.8s,mb3.8,baz=274,slow=2.4,SNR=8.2					
ANMO	**Albuquerque**	**88.32 50**↑	*eP*	**P**	**16 41 27.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**122.16 313**	PKP	PKPdf	16 47 29.6	+0.1
	comp=Z,0.3nm,0.5s,baz=124,slow=1.5,SNR=4.9					
LPAZ	**La Paz**	**148.99 70**	PKPbc	PKPbc	16 48 24.9	+2.2
LPAZ	**La Paz**	**148.99 70**	PKPbc	PKPbc	16 48 24.9	+2.2
	comp=Z,2.1nm,1.0s,baz=347,slow=3.4,SNR=5.4					
PLCA	**Paso Flores**	**151.79 120**	PKPbc	PKPbc	16 48 29.7	+1.0
	comp=Z,1.4nm,0.8s,baz=18,slow=2.4,SNR=3.2					

*ISCJB **24** 16:42:00.2±1.0, 4305N±006×067W±004, h8km±9km, Error ellipse: s-maj=10.1km s-min=4.7km az=16.9*
*STR **24** 16:42:00.0±0.1, 4306N×065W, h5km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*NEIC **24** 16:42:00.6, 4304N×068W, h2km, ML2.6(LDG), ML2.1(STR), After LDG.*
*LDG **24** 16:42:00.6±0.1, 4304N×068W, h2km, Md1.4/2, Error ellipse: s-maj=2.2km s-min=1.1km az=21.0*
ISC 24 16:42:00.7±0.9, 4305N±006×068W±004, h5km±11km, n7, σ0s31/12, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATE	**Arette**	**0.04**	**336**	Pg	**Pg**	**16 42 01.8**	**-0.1**
ATE				Sg	**Sg**	**16 42 03.0**	**+0.2**
ETSF	**Etsaut**	**0.17**	**150**	*e*Pg	**Pg**	**16 42 04.0**	**-0.1**
ETSF				*e*Sg	**Sg**	**16 42 06.5**	**+0.1**
	32nm,0.2s						
REYF	**Montagne du Re**	**0.21**	**84**	Pg	**Pg**	**16 42 04.2**	**-0.6**
REYF				Sg	**Sg**	**16 42 07.3**	**-0.3**
LARF	**Larrau**	**0.23**	**268**	Pg	**Pg**	**16 42 05.1**	**-0.1**
ORDF	**Ordiarp**	**0.25**	**311**	Sg	**Sg**	**16 42 09.1**	**+0.1**
SJPF	**Ste Jean**	**0.41**	**280**	*e*Pg	**Pg**	**16 42 08.4**	**-0.1**
SJPF				*e*Sg	**Sg**	**16 42 14.0**	**+0.1**
	4.3nm,0.2s						
EPF	**Esparros**	**0.75**	**91**	*e*Pg	**Pg**	**16 42 15.1**	**+0.1**
EPF				*e*Sg	**Sg**	**16 42 25.4**	**+0.7**
	1.3nm,0.2s						

*ISCJB **24** 16:43:11.2±0.2, 4438N±001×7.17E±002, h11km±2km, Error ellipse: s-maj=3.2km s-min=2.1km az=147.4*
*GEN **24** 16:43:11.8, 4437N×7.16E, h7km, ML2.0*
*STR **24** 16:43:11.6±0.4, 4442N×723E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **24** 16:43:11.8±0.1, 4439N×722E, h5km, ML2.6/10, Error ellipse: s-maj=1.4km s-min=0.8km az=53.0*
*ROM **24** 16:43:11.2±0.2, 4438N×7.19E, h8km±1km, Md2.3/7, Ml1.9/2, Error ellipse: s-maj=4.2km s-min=1.7km az=11.0*
*LDG **24** 16:43:12.2±0.1, 4439N×7.19E, h2km, Md2.5/2, Ml2.6/11, Error ellipse: s-maj=2.0km s-min=0.9km az=71.0*
ISC 24 16:43:11.9±0.2, 4440N±001×720E±002, h9km±3km, n52, σ0s80/88, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DOI	**San Damiano**	**0.11**	**19**	Pg	**Pg**	**16 43 14.9**	**+0.4**
DOI				Sg	**Sg**	**16 43 16.8**	**+0.5**
	744nm,0.2s						
PZZ	**Prazzo**	**0.12**	**327**	Pg	**Pg**	**16 43 14.9**	**+0.2**
PZZ				Sg	**Sg**	**16 43 17.0**	**+0.3**
STV	**Sta Anna Valdi**	**0.18**	**149**	Pg	**Pg**	**16 43 15.4**	**-0.2**
STV				Sg	**Sg**	**16 43 17.7**	**-0.5**
	120nm,0.3s						
ENR	**Entracque**	**0.24**	**137**	P	**Pg**	**16 43 16.5**	**-0.1**
SURF	**Saint Ours**	**0.29**	**287**	Pg	**Pg**	**16 43 17.7**	**+0.1**
SURF				Sg	**Sg**	**16 43 22.1**	**+0.7**
TOUF	**Mont Tournerai**	**0.39**	**174**	Pg	**Pg**	**16 43 19.5**	**+0.1**
AUTN	**L'Aution**	**0.44**	**157**	Pg	**Pg**	**16 43 20.4**	**0.0**
AUTN				Sg	**Sg**	**16 43 26.2**	**+0.1**
MBDF	**Montbardon**	**0.45**	**317**	*e*Pg	**Pg**	**16 43 20.6**	**0.0**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**16 43 27.5**	**+1.0**
	134nm,0.3s						
MBDF	**Montbardon**	**0.45**	**317**	*e*Pg	**Pg**	**16 43 20.6**	**0.0**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**16 43 27.5**	**+1.0**
	67nm,0.3s						
SAOF	**Saorge**	**0.49**	**148**	Sg	**Sg**	**16 43 27.6**	**-0.1**
ROB	**Roburent**	**0.49**	**102**	P	**Pg**	**16 43 21.8**	**+0.3**
MVIF	**Mont Vial**	**0.50**	**184**	Pg	**Pg**	**16 43 21.8**	**+0.2**
LUCF	**Luceram**	**0.52**	**168**	Pg	**Pg**	**16 43 22.0**	**+0.1**
LUCF				Sg	**Sg**	**16 43 29.4**	**+0.7**
SBF	**Sospel**	**0.56**	**162**	*e*Pn	**Pg**	**16 43 23.1**	**+0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**16 43 30.0**	**-0.1**
	44nm,0.3s						
SBF	**Sospel**	**0.56**	**162**	*e*Pn	**Pg**	**16 43 23.1**	**+0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**16 43 30.0**	**-0.1**
	22nm,0.3s						
RRL	**Cesana Torines**	**0.60**	**331**	P	**Pg**	**16 43 23.6**	**+0.2**
REVF	**Revere**	**0.67**	**169**	Pg	**Pg**	**16 43 25.3**	**+0.5**
CALN	**Calern**	**0.68**	**199**	Pg	**Pg**	**16 43 25.2**	**+0.2**
RORO		**0.69**	**114**	S	**Sg**	**16 43 34.6**	**+0.5**
IMI	**Imperia**	**0.70**	**134**	Pg	**Pg**	**16 43 25.2**	**-0.1**
IMI				Sg	**Sg**	**16 43 34.6**	**+0.2**
BNI	**Bardonecchia**	**0.75**	**331**	Pg	**Pg**	**16 43 26.6**	**+0.3**
BNI				Sg	**Sg**	**16 43 36.5**	**+0.4**
FIN	**Finale Ligure**	**0.75**	**104**	Pg	**Pg**	**16 43 26.3**	**0.0**
FIN				S	**Sg**	**16 43 36.2**	**+0.1**
RSP	**Reno Superiore**	**0.75**	**3**	Pg	**Pg**	**16 43 25.9**	**-0.5**
FRF	**La Foret Royal**	**0.93**	**205**	*e*Pg	**Pg**	**16 43 29.4**	**-0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**16 43 41.1**	**-0.6**
	39nm,0.2s,SNR=1.0						
PCP	**Pian Castagno**	**0.98**	**81**	P	**Pg**	**16 43 30.5**	**-0.1**
PCP				S	**Sg**	**16 43 42.7**	**-0.6**
LSD	**Ceresole Reale**	**1.06**	**358**	P	**Pg**	**16 43 32.1**	**-0.1**
LSD				S	**Sg**	**16 43 45.8**	**-0.2**
ORIF	**Oris-en-Rattie**	**1.07**	**299**	*e*Pg	**Pg**	**16 43 32.2**	**-0.3**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.07**	**299**	*e*Pn	**Pn**	**16 43 32.8**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**16 43 46.9**	**+0.5**
	12nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.07**	**299**	*e*Pn	**Pn**	**16 43 32.8**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**16 43 46.9**	**+0.5**
	6.2nm,0.2s						
LPG	**La Plagne**	**1.14**	**344**	*e*Pg	**Pg**	**16 43 33.7**	**-0.1**
LPG				*e*Sg	**Sg**	**16 43 49.5**	**+0.8**
	20nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**1.16**	**344**	*e*Pg	**Pg**	**16 43 34.1**	**-0.1**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**16 43 50.5**	**+1.1**
	18nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**1.18**	**205**	*e*Pg	**Pg**	**16 43 34.1**	**-0.3**
LMR				*e*Sg	**Sg**	**16 43 48.9**	**-0.8**
	60nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.18**	**205**	*e*Pg	**Pg**	**16 43 34.1**	**-0.3**
LMR				*e*Sg	**Sg**	**16 43 48.9**	**-0.8**
	30nm,0.2s,SNR=1.0						
TRAV		**1.18**	**19**	P	**Pb**	**16 43 32.6**	**-1.8**
TRAV				S	**Sb**	**16 43 47.8**	**-2.0**
SMRF	**Simiane la Rot**	**1.24**	**251**	*e*Pg	**Pg**	**16 43 35.4**	**-0.3**
SMRF				*e*Sg	**Sg**	**16 43 51.2**	**-0.6**
	28nm,0.3s,SNR=1.0						
SMRF				*e*S	**Sb**	**16 43 54.2**	**+2.7**
	SNR=1.0						
SMRF	**Simiane la Rot**	**1.24**	**251**	*e*Pg	**Pg**	**16 43 35.4**	**-0.3**
SMRF				*e*Sg	**Sg**	**16 43 51.2**	**-0.6**
	14nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.86**	**285**	*e*Pn	**Pn**	**16 43 43.4**	**-0.5**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.86**	**285**	*e*P	**Pn**	**16 43 45.2**	**+1.3**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.86**	**285**	*e*Pg	**Pg**	**16 43 46.6**	**-0.9**
VIVF				*e*Sn	**Sn**	**16 44 06.1**	**-1.4**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**16 44 11.0**	**-0.6**
	4.4nm,0.3s						
VIVF	**Saint-Julien-l**	**1.86**	**285**	*e*Pg	**Pg**	**16 43 46.6**	**-0.9**
VIVF				*e*Sn	**Sn**	**16 44 06.1**	**-1.4**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**16 44 11.0**	**-0.6**
	2.2nm,0.3s						
CABF	**La Chapelle**	**2.34**	**341**	*e*Pg	**Pg**	**16 43 56.5**	**-0.3**
LASF	**Ste Croix**	**2.42**	**263**	*e*P	**Pn**	**16 43 53.2**	**+1.6**
LASF				*e*Sg	**Sg**	**16 44 28.3**	**-1.3**
	1

	14nm,0.5s							
KOLL	**Kolacno**	**1.23**	**182**	*e*PN	**Pn**	**16 46 33.1**	**-1.0**
KOLL				*e*SN	**Sn**	**16 46 50.3**	**-1.0**
NIE	**Niedzica**	**1.26**	**107**	*e*Pg	**Pg**	**16 46 33.2**	**-0.7**
NIE				*e*Sg	**Sg**	**16 46 51.5**	**+1.3**
VRAC	**Vranov**	**1.32**	**249**	*e*Pg	**Pg**	**16 46 34.6**	**-0.3**
VRAC				*e*Sg	**Sg**	**16 46 52.4**	**+0.5**
	15nm,0.3s							
VYHS	**Vyhne**	**1.33**	**169**	*e*PN	**Pn**	**16 46 34.6**	**-0.9**
VYHS				*e*SN	**Sn**	**16 46 52.9**	**-1.0**
SMOL	**Smolenice**	**1.46**	**208**	*e*PN	**Pn**	**16 46 37.4**	**+0.1**
SMOL				*e*SN	**Sn**	**16 46 57.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.48**	**292**	*e*PG	**Pg**	**16 46 37.4**	**-0.7**
DPC				*e*SG	**Sg**	**16 46 57.8**	**+0.4**
	17nm,0.6s							
DPC	**Dobruska-Polom**	**1.48**	**292**	*e*Pg	**Pg**	**16 46 37.2**	**-0.9**
DPC				*e*Sg	**Sg**	**16 46 57.9**	**+0.5**
KRUC	**Moravsky**	**1.54**	**242**	*e*Pg	**Pg**	**16 46 38.2**	**-1.0**
KRUC				*e*Sg	**Sg**	**16 46 59.2**	**0.0**
	9.7nm,0.3s							
MODS	**Modra-Piesok**	**1.63**	**209**	*e*PN	**Pn**	**16 46 39.6**	**0.0**
MODS				*e*SN	**Sn**	**16 47 01.8**	**+0.5**
STHS	**Stebnicka Huta**	**1.85**	**101**	*e*PN	**Pn**	**16 46 44.7**	**+2.1**
STHS				*e*SN	**Sn**	**16 47 10.1**	**+3.4**
KECS	**Kecovo**	**1.87**	**134**	*e*PG	**Pg**	**16 46 44.1**	**-1.5**
KECS				*e*SN	**Sn**	**16 47 06.8**	**-0.5**
CRVS	**Cervenica-Dubn**	**2.16**	**114**	*e*PN	**Pn**	**16 46 50.0**	**+3.1**
CRVS				*e*SN	**Sn**	**16 47 17.4**	**+3.1**
PRU	**Pruhonice**	**2.54**	**276**	*e*PG	**Pg**	**16 46 56.2**	**-2.2**
PRU				*e*SG	**Sg**	**16 47 30.0**	**-1.4**
	15nm,1.5s							
PVCC	**Panska Ves**	**2.61**	**288**	*e*SG	**Sg**	**16 47 33.5**	**+0.1**
	10nm,0.4s							
KOLS	**Kolonicke sedl**	**2.64**	**108**	*e*PG	**Pg**	**16 47 00.4**	**+0.2**
KOLS				*e*SG	**Sg**	**16 47 36.0**	**+1.6**
BRG	**Berggiesshubel**	**3.09**	**292**	SG	**Sg**	**16 47 49.2**	**+0.3**
	3.7nm,0.5s							
KHC	**Kasperske Hory**	**3.26**	**260**	*e*PG	**Pg**	**16 47 08.8**	**-3.3**
KHC				*e*SG	**Sg**	**16 47 54.3**	**0.0**
	6.5nm,0.7s							

*ZUR **24** 17:02:57.4,4738N×1011E,h-5km±2km,ML2.2/9*
*ISCJB **24** 17:02:57.5±0.3,4734N±002×1005E±002,h5km±3km, Error ellipse: s-maj=2.7km s-min=2.0km az=178.8*
*LDG **24** 17:02:57.5±0.3,4738N×1013E,h10km,Ml2.7/12, Error ellipse: s-maj=5.7km s-min=3.8km az=64.0*
*CSEM **24** 17:02:58.3±0.1,4733N×1003E,h10km,ML2.8/16, Error ellipse: s-maj=2.0km s-min=0.9km az=172.0*
*NEIC **24** 17:02:58.1±0.4,4722N×1008E,h10km,ML2.7(LDG), ML2.5(SZGRF),ML2.5(STR), Error ellipse: s-maj=9.0km s-min=4.2km az=170.0*
*VIE **24** 17:02:58.7±0.2,4737N×1007E,h8km,mb1.7/7,ML2.5/10, Error ellipse: s-maj=2.1km s-min=0.9km az=169.0 13 km ESE of Bezau*
*PRU **24** 17:02:59.4,4739N×1011E,h0km*
*BGR **24** 17:03:01.0±0.7,4741N×1011E,h10km,ML2.6/9, Error ellipse: s-maj=6.7km s-min=3.3km az=4.0*
*STR **24** 17:03:02.8±1.2,4743N×995E,h5km,Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 24 17:02:58.4±0.2,4733N±001×1005E±002,h9km±2km,n92, σ1§34/167,8C-9D,Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAVA	**Damuels**	**0.12**	**252**	*e*Pg	**Pg**	**17 03 01.9**	**+0.8**
	comp=Z,262nm,0.2s,SNR=427						
DAVA				⇓*i*Sg	**Sg**	**17 03 04.3**	**+1.2**
	comp=N,261nm,0.3s						
DAVA	**Damuels**	**0.12**	**252**	*e*Pg	**Pg**	**17 03 01.7**	**+0.6**
DAVA	**Damuels**	**0.12**	**252**	Pg	**Pg**	**17 03 01.7**	**+0.5**
DAVA				Sg	**Sg**	**17 03 04.3**	**+1.2**
	261nm,0.3s						
OBER	**Oberstdorf**	**0.18**	**63**	⇑*i*Pg	**Pg**	**17 03 01.4**	**-0.8**
OBER				*i* Sg	**Sg**	**17 03 04.0**	**-0.8**
UBR	**Ueberruh**	**0.36**	**6**	P*	**Pg**	**17 03 05.5**	**+0.1**
UBR				S*	**Sg**	**17 03 12.0**	**+1.8**
LIENZ	**Kamor/St.Gall**	**0.38**	**266**	*e*Pg	**Pg**	**17 03 06.7**	**+0.9**
	177nm,0.9s						
RETA	**Reutte**	**0.51**	**71**	⇓*e*Pg	**Pg**	**17 03 07.8**	**-0.5**
	9.5nm,0.2s,SNR=28						
RETA				⇓*i*Sg	**Sg**	**17 03 15.3**	**+0.4**
	15nm,0.2s						
PLONS	**Plons/SG**	**0.53**	**239**	⇓*i*Pg	**Pg**	**17 03 10.0**	**+1.3**
	129nm,0.6s						
FETA	**Feichten**	**0.55**	**123**	*e*Pg	**Pg**	**17 03 09.2**	**+0.1**
	5.5nm,0.2s,SNR=14						
FETA				⇓*i*Sg	**Sg**	**17 03 17.7**	**+1.4**
	26nm,0.4s						
DAVOX	**Davos/Dischmat**	**0.56**	**192**	*e*Pg	**Pg**	**17 03 10.3**	**+1.1**
	210nm,0.4s						
DAVOX				*e*Sg	**Sg**	**17 03 19.8**	**+3.4**
	210nm,0.4s						
MOTA	**Moosalm**	**0.72**	**88**	⇑*e*Pg	**Pg**	**17 03 11.7**	**-0.5**
	3.4nm,0.1s,SNR=12						
MOTA				⇓*i*Sg	**Sg**	**17 03 22.8**	**+1.3**
	25nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**0.72**	**168**	*e*Pg	**Pg**	**17 03 13.1**	**+0.9**
	89nm,0.5s						
WEIN	**Weingarten**	**0.75**	**286**	⇑*i*Pg	**Pg**	**17 03 14.0**	**+1.1**
	238nm,0.4s						
WILA	**Wila**	**0.78**	**277**	⇑*i*Pg	**Pg**	**17 03 14.6**	**+1.2**
	705nm,0.6s						
SQTA	**Sankt Quirin**	**0.80**	**97**	*e*Pg	**Pg**	**17 03 13.6**	**-0.1**
	8.8nm,0.2s,SNR=17						
SQTA				⇓*i*Sg	**Sg**	**17 03 26.3**	**+2.2**
	16nm,0.2s						
SISB	**Singen-Schiene**	**0.82**	**297**	P*	**Pb**	**17 03 15.2**	**+0.4**
SISB				PmP		17 03 17.2	
SISB				S*	**Sb**	**17 03 27.4**	**+1.5**
SISB				SmS		17 03 30.5	
LLS	**Linth-Limmern**	**0.86**	**237**	*e*Pg	**Pg**	**17 03 17.1**	**+2.2**
	134nm,0.6s						
VDL	**Val di Lei**	**0.94**	**206**	*e*Pg	**Pg**	**17 03 15.7**	**-0.7**
	71nm,0.5s						
GUT	**Gutenstein**	**0.98**	**320**	P*	**Pb**	**17 03 17.4**	**0.0**
GUT				S*	**Sb**	**17 03 31.3**	**+0.9**
WATA	**Walderalm**	**1.04**	**89**	⇓*i*Pg	**Pg**	**17 03 18.4**	**+0.1**
	5.3nm,0.1s						
WATA				⇑*i*Sg	**Sg**	**17 03 32.4**	**+0.6**
	29nm,0.2s						
WTTA	**Wattenberg**	**1.08**	**93**	⇑*e*Pg	**Pg**	**17 03 19.4**	**+0.3**
	4.9nm,0.2s,SNR=6.1						
WTTA				⇑*i*Sg	**Sg**	**17 03 34.1**	**+1.0**
	58nm,0.3s						
SLE	**Schleitheim**	**1.14**	**293**	*e*Pg	**Pg**	**17 03 17.3**	**-3.0**
	259nm,0.4s						
SPAK	**Spaichingen-Ko**	**1.16**	**313**	Pg	**Pg**	**17 03 21.7**	**+1.1**
SPAK				Sg	**Sg**	**17 03 37.4**	**+1.8**
FUR	**Furstenfeldbru**	**1.18**	**44**	*e*Pg	**Pg**	**17 03 20.9**	**-0.1**
	SNR=2.4						
FUR				*e*Sg	**Sg**	**17 03 36.9**	**+0.6**
FUR	**Furstenfeldbru**	**1.18**	**44**	*e*Pg	**Pg**	**17 03 20.8**	**-0.2**
FUR				*e*Sg	**Sg**	**17 03 37.1**	**+0.8**
BUCH	**Bad Urach**	**1.22**	**338**	P	**Pn**	**17 03 22.2**	**+0.6**
BUCH				Sg	**Sg**	**17 03 39.5**	**+1.9**
HDH	**Heidenheim-Cha**	**1.26**	**5**	P	**Pn**	**17 03 21.6**	**-0.6**
HDH				Pg	**Pg**	**17 03 22.4**	**-0.2**
HDH				S	**Sb**	**17 03 38.2**	**-0.5**
HDH				Sg	**Sg**	**17 03 40.6**	**+1.6**
FELD	**Feldberg im Sc**	**1.49**	**292**	Pn	**Pn**	**17 03 25.9**	**+0.6**
FELD				Pg	**Pg**	**17 03 28.0**	**+1.0**
FELD				Sg	**Sg**	**17 03 48.0**	**+1.7**
FELD	**Feldberg im Sc**	**1.49**	**292**	Pg	**Pg**	**17 03 28.0**	**+1.0**
FELD				Sg	**Sg**	**17 03 48.0**	**+1.7**
BFO	**Black Forest**	**1.54**	**312**	*e*Pn	**Pn**	**17 03 26.8**	**+0.9**
	SNR=7.5						
BFO				*e*Sg	**Sg**	**17 03 48.1**	**+0.4**
BFO	**Black Forest**	**1.54**	**312**	*e*Pn	**Pn**	**17 03 26.7**	**+0.8**
BFO				*e*Sn	**Sn**	**17 03 47.4**	**+1.5**
STU	**Stuttgart**	**1.56**	**339**	*e*Sg	**Sg**	**17 03 49.1**	**+0.7**
KIZ	**Kirchzarten**	**1.57**	**294**	P	**Pn**	**17 03 27.1**	**+0.7**
KIZ				Pg	**Pg**	**17 03 29.7**	**+1.2**
KIZ				S	**Sn**	**17 03 46.4**	**-0.5**
KIZ				Sg	**Sg**	**17 03 50.1**	**+1.1**
LBG	**Lerchenberg**	**1.58**	**328**	P	**Pn**	**17 03 26.9**	**+0.3**
LBG				Pg	**Pg**	**17 03 28.9**	**+0.2**
LBG				S	**Sn**	**17 03 46.2**	**-0.9**
LBG				Sg	**Sg**	**17 03 50.3**	**+1.0**
BBS	**Basel-Blauen**	**1.73**	**276**	Pn	**Pn**	**17 03 32.2**	**+3.6**
MOF	**Molkenrain**	**2.04**	**286**	Pn	**Pn**	**17 03 36.2**	**+3.3**
SIND	**Sindeldorf**	**2.05**	**352**	P	**Pn**	**17 03 32.1**	**-0.8**
SIND				Sg	**Sg**	**17 04 02.9**	**-1.3**
ECH	**Echery**	**2.15**	**296**	Pn	**Pn**	**17 03 36.9**	**+2.6**
CDF	**Champ du Feu**	**2.16**	**301**	*e*P	**Pn**	**17 03 34.2**	**-0.3**
CDF	**Champ du Feu**	**2.16**	**301**	*e*Pg	**Pg**	**17 03 37.8**	**-2.0**
CDF				*e*Sg	**Sg**	**17 04 05.8**	**-2.0**
	26nm,0.6s						
CDF	**Champ du Feu**	**2.16**	**301**	*e*Pn	**Pn**	**17 03 31.6**	**-2.9**
CDF				*e*P		17 03 34.2	
CDF				*e*Pg	**Pg**	**17 03 37.8**	**-2.0**
CDF				*e*Sg	**Sg**	**17 04 05.8**	**-2.0**
CDF	**Champ du Feu**	**2.16**	**301**	*e*P	**Pn**	**17 03 34.2**	**-0.3**
CDF	**Champ du Feu**	**2.16**	**301**	*e*Pg	**Pg**	**17 03 37.8**	**-2.0**
CDF				*e*Sg	**Sg**	**17 04 05.8**	**-2.0**
	13nm,0.6s						
HINF	**Hinteralfeld**	**2.22**	**284**	*e*P	**Pn**	**17 03 35.8**	**+0.5**
HINF				*e*Sg	**Sg**	**17 04 07.6**	**-2.1**
	18nm,0.4s						
HINF	**Hinteralfeld**	**2.22**	**284**	*e*P	**Pn**	**17 03 35.8**	**+0.5**
HINF				*e*Sg	**Sg**	**17 04 07.6**	**-2.1**
	9.2nm,0.4s						
KBA	**Koelnbreinsper**	**2.26**	**95**	⇓*e*Pg	**Pg**	**17 03 40.4**	**-1.3**
	comp=Z,12nm,0.4s,SNR=19						
KBA				⇑*i*Sg	**Sg**	**17 04 11.8**	**+0.9**
	comp=E,7.2nm,0.3s						
KBA	**Koelnbreinsper**	**2.26**	**95**	*e*Pg	**Pg**	**17 03 40.1**	**-1.5**
GRF	**Grafenberg Arr**	**2.49**	**18**	*e*Sg	**Sg**	**17 04 17.4**	**-1.0**
HAU	**Haudompre**	**2.59**	**287**	*e*Pg	**Pg**	**17 03 45.9**	**-2.2**
HAU				*e*Sg	**Sg**	**17 04 19.7**	**-2.0**
	19nm,0.3s						
HAU	**Haudompre**	**2.59**	**287**	*e*P	**Pn**	**17 03 40.7**	**+0.3**
HAU				*e*Pg	**Pg**	**17 03 45.9**	**-2.2**
HAU				*e*Sg	**Sg**	**17 04 19.7**	**-2.0**
HAU	**Haudompre**	**2.59**	**287**	*e*Pg	**Pg**	**17 03 45.9**	**-2.2**
HAU				*e*Sg	**Sg**	**17 04 19.7**	**-2.0**
	9.6nm,0.3s						
WET	**Wettzell**	**2.62**	**45**	*e*Pn	**Pn**	**17 03 41.0**	**+0.2**
	SNR=3.8						
WET				*e*Pg	**Pg**	**17 03 49.1**	**+0.5**
	SNR=3.3						
WET				*e*Sn	**Sn**	**17 04 10.3**	**-2.5**
WET				*e*Sg	**Sg**	**17 04 21.0**	**-1.6**
WET	**Wettzell**	**2.62**	**45**	*e*Pn	**Pn**	**17 03 40.9**	**0.0**
CABF	**La Chapelle**	**2.81**	**257**	*e*P	**Pn**	**17 03 44.2**	**+0.8**
CABF	**La Chapelle**	**2.81**	**257**	*e*Pg	**Pg**	**17 03 50.5**	**-1.6**
CABF				*e*Sg	**Sg**	**17 04 27.6**	**-0.9**
	4.6nm,0.2s						
CABF	**La Chapelle**	**2.81**	**257**	*e*Pn	**Pn**	**17 03 41.1**	**-2.3**
CABF				*e*P		17 03 44.2	
CABF				*e*Pg	**Pg**	**17 03 50.5**	**-1.6**
CABF				*e*Sg	**Sg**	**17 04 27.6**	**-0.9**
CABF	**La Chapelle**	**2.81**	**257**	*e*P	**Pn**	**17 03 44.2**	**+0.8**
CABF	**La Chapelle**	**2.81**	**257**	*e*Pg	**Pg**	**17 03 50.5**	**-1.6**
CABF				*e*Sg	**Sg**	**17 04 27.6**	**-0.9**
	2.3nm,0.2s						
GEC2	**GERESS Array S**	**2.88**	**57**	*e*Pn	**Pn**	**17 03 44.6**	**+0.3**
	SNR=2.2						
GEC2				*e*Sn	**Sn**	**17 04 18.4**	**-0.7**
GEC2				*e*Sg	**Sg**	**17 04 29.0**	**-1.9**
GEC2	**GERESS Array S**	**2.88**	**57**	*e*Pn	**Pn**	**17 03 45.1**	**+0.7**
GEC2				*e*Sn	**Sn**	**17 04 18.4**	**-0.7**
LPL	**La Plagne**	**2.92**	**233**	*e*Pg	**Pg**	**17 03 53.1**	**-1.3**
LPL				*e*Sg	**Sg**	**17 04 31.7**	**-0.5**
	7.5nm,0.6s						
LPL	**La Plagne**	**2.92**	**233**	*e*Pg	**Pg**	**17 03 53.1**	**-1.3**
LPL				*e*Sg	**Sg**	**17 04 31.7**	**-0.5**
	3.8nm,0.6s						
LPG	**La Plagne**	**2.92**	**233**	*e*Pg	**Pg**	**17 03 53.2**	**-1.2**
LPG				*e*Sg	**Sg**	**17 04 32.0**	**-0.3**
	3.1nm,0.4s						
LPG	**La Plagne**	**2.92**	**233**	*e*P	**Pn**	**17 03 46.1**	**+1.1**
LPG				*e*Pg	**Pg**	**17 03 53.2**	**-1.2**
LPG				*e*Sg	**Sg**	**17 04 32.0**	**-0.3**
LPG	**La Plagne**	**2.92**	**233**	*e*Pg	**Pg**	**17 03 53.2**	**-1.2**
LPG				*e*Sg	**Sg**	**17 04 32.0**	**-0.3**
	1.5nm,0.4s						
KHC	**Kasperske Hory**	**2.97**	**51**	*e*PN	**Pn**	**17 03 45.8**	**+0.2**
KHC				*e*SN	**Sn**	**17 04 20.7**	**-0.6**
KHC				*e*SG	**Sg**	**17 04 31.4**	**-2.3**
	11nm,0.5s						
TNS	**Taunus Mts**	**3.09**	**340**	*e*Pn	**Pn**	**17 03 48.4**	**+1.1**
	SNR=1.2						
TNS				*e*Sg	**Sg**	**17 04 37.5**	**0.0**
NKC	**Novy Kostel**	**3.31**	**28**	*e*SG	**Sg**	**17 04 42.3**	**-2.4**
	9.4nm,0.8s						
MBDF	**Montbardon**	**3.46**	**223**	*e*Pg	**Pg**	**17 04 02.2**	**-2.4**
MBDF				*e*Sg	**Sg**	**17 04 48.2**	**-1.2**
	3.4nm,0.5s						
MBDF	**Montbardon**	**3.46**	**223**	*e*Pn	**Pn**	**17 03 49.8**	**-2.5**
MBDF				*e*Pg	**Pg**	**17 04 02.2**	**-2.4**
MBDF				*e*Sg	**Sg**	**17 04 48.2**	**-1.2**
MBDF	**Montbardon**	**3.46**	**223**	*e*Pg	**Pg**	**17 04 02.2**	**-2.4**
MBDF				*e*Sg	**Sg**	**17 04 48.2**	**-1.2**
	1.7nm,0.5s						
WERD	**Werda**	**3.46**	**25**	*e*Pg	**Pg**	**17 04 05.5**	**+0.9**
	SNR=1.7						
WERD				*e*Sg	**Sg**	**17 04 47.0**	**-2.5**
MOX	**Moxa**	**3.48**	**17**	*e*Sg	**Sg**	**17 04 47.6**	**-2.5**
MOX	**Moxa**	**3.48**	**17**	*e*SG	**Sg**	**17 04 48.9**	**-1.1**
ORIF	**Oris-en-Rattie**	**3.77**	**232**	*e*Pg	**Pg**	**17 04 08.4**	**-2.2**
ORIF				*e*Sg	**Sg**	**17 04 57.9**	**-1.5**
	3.7nm,0.4s						
ORIF	**Oris-en-Rattie**	**3.77**	**232**	*e*Pn	**Pn**	**17 03 55.0**	**-1.6**
ORIF				*e*Pg	**Pg**	**17 04 08.4**	**-2.2**
ORIF				*e*Sg	**Sg**	**17 04 57.9**	**-1.5**
ORIF	**Oris-en-Rattie**	**3.77**	**232**	*e*Pg	**Pg**	**17 04 08.4**	**-2.2**
ORIF				*e*Sg	**Sg**	**17 04 57.9**	**-1.5**
	1.9nm,0.4s						
PRU	**Pruhonice**	**4.00**	**47**	*e*SG	**Sg**	**17 05 04.0**	**-2.6**
	7.6nm,0.9s						
LOR	**Lormes**	**4.21**	**271**	*e*Sg	**Sg**	**17 05 10.9**	**-2.7**
	4.2nm,0.3s						
LOR	**Lormes**	**4.21**	**271**	*e*Sg	**Sg**	**17 05 10.9**	**-2.7**
	2.1nm,0.3s						
SMF	**Signal de Mont**	**4.30**	**263**	*e*Pn	**Pn**	**17 04 01.4**	**-2.6**
SMF				*e*Sg	**Sg**	**17 05 13.8**	**-2.7**
	2.3nm,0.3s						
SMF	**Signal de Mont**	**4.30**	**263**	*e*Pn	**Pn**	**17 04 01.4**	**-2.6**
SMF				*e*Sg	**Sg**	**17 05 13.8**	**-2.7**
	1.1nm,0.3s						
BRG	**Berggiesshubel**	**4.38**	**34**	SG	**Sg**	**17 05 21.0**	**+2.2**
	4.2nm,0.5s						
CLL	**Collm**	**4.43**	**25**	*e*Sg	**Sg**	**17 05 21.0**	**+0.5**
SSF	**Saint Saulge**	**4.47**	**269**	*e*P	**Pn**	**17 04 07.8**	**+1.6**
SSF				*e*Sg	**Sg**	**17 05 18.8**	**-3.0**
	1.9nm,0.3s						
SSF	**Saint Saulge**	**4.47**	**269**	*e*P	**Pn**	**17 04 07.8**	**+1.6**
SSF				*e*Sg	**Sg**	**17 05 18.8**	**-3.0**
	0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**4.48**	**239**	*e*P	**Pn**	**17 04 08.4**	**+2.0**
AVF	**Avril sur Loir**	**4.61**	**266**	*e*P	**Pn**	**17 04 09.6**	**+1.5**
BGF	**Bois d'Agland**	**4.99**	**264**	*e*P	**Pn**	**17 04 14.7**	**+1.3**
BGF	**Bois d'Agland**	**4.99**	**264**	*e*Pn	**Pn**	**17 04 11.0**	**-2.4**
BGF				*e*P		17 04 14.7	
BGF	**Bois d'Agland**	**4.99**	**264**	*e*P	**Pn**	**17 04 14.7**	**+1.3**
TCF	**Toulx Ste Croi**	**5.48**	**262**	*e*P	**Pn**	**17 04 21.4**	**+1.3**

*IDC **24** 17:04:21.6±7.8,3010S×17923W,h365km±78km,mb3.0/2, mb1 3.4/3,mb1mx3.1/13,mbtmp3.2/3,Error ellipse: s-maj=79.3km s-min=33.0km az=13.0*

ISC 24 17:04:21.9±1.3,3027S±008×1791W±0.3,h377km±11km, n29,σ1§26/39,mb3.1/2,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**7.60**	**196**	PN	**Pn**	**17 06 15.8**	**+4.2**
MXZ				SN	**S**	**17 07 41.3**	**0.0**
PUZ	**Puketiti**	**8.09**	**195**	PN	**Pn**	**17 06 16.8**	**-0.6**
PUZ				SN	**S**	**17 07 49.2**	**-2.7**
MWZ	**Matawai**	**8.53**	**198**	PN	**Pn**	**17 06 23.6**	**+1.2**
MWZ				SN	**S**	**17 08 01.8**	**+0.8**
URZ	**Urewera**	**8.57**	**201**	P	**Pn**	**17 06 24.5**	**+1.5**
	3.9nm,0.3s,baz=283,slow=2.5,SNR=91						
URZ				S	**S**	**17 08 03.5**	**+1.4**
	6.8nm,0.3s,baz=156,slow=22,SNR=14						
URZ	**Urewera**	**8.57**	**201**	PN	**Pn**	**17 06 22.9**	**0.0**
URZ				SN	**S**	**17 08 02.5**	**+0.4**
KNZ	**Kokohu**	**9.13**	**196**	PN	**Pn**	**17 06 32.9**	**+3.5**
KNZ				SN	**S**	**17 08 13.2**	**-1.0**
BKZ	**Black Stump Fm**	**9.60**	**201**	PN	**Pn**	**17 06 36.7**	**+1.7**
BKZ				SN	**S**	**17 08 23.7**	**-0.5**
PXZ	**Pawanui**	**10.29**	**198**	PN	**Pn**	**17 06 42.9**	**-0.2**
PXZ				SN	**S**	**17 08 36.9**	**-2.4**
TSZ	**Takapari Road**	**10.58**	**201**	PN	**Pn**	**17 06 47.7**	**+1.2**
TSZ				SN	**S**	**17 08 41.0**	**-4.5**
WAZ	**Wanganui**	**10.64**	**206**	PN	**Pn**	**17 06 48.8**	**+1.6**
WAZ				SN	**S**	**17 08 47.7**	**+0.8**
BFZ	**Birch Farm**	**11.07**	**199**	SN	**S**	**17 08 55.6**	**-0.3**
MRZ	**Mangatainoka R**	**11.25**	**201**	PN	**Pn**	**17 06 54.8**	**+0.5**
TIWZ	**Tintock**	**11.26**	**200**	SN	**S**	**17 09 00.4**	**+0.6**
KIW	**Kapiti Island**	**11.65**	**203**	PN	**Pn**	**17 06 59.4**	**+0.4**
SNZO	**South Karori**	**12.12**	**203**	SN	**S**	**17 09 16.8**	**-0.3**
TCW	**Tory Channel**	**12.18**	**204**	PN	**Pn**	**17 07 03.7**	**-1.5**
TCW				SN	**S**	**17 09 17.9**	**-0.5**
NNZ	**Nelson**	**12.52**	**207**	PN	**Pn**	**17 07 06.7**	**-2.5**
NNZ				SN	**S**	**17 09 23.3**	**-2.1**
QRZ	**Quartz Range**	**12.55**	**211**	PN	**Pn**	**17 07 10.2**	**+0.6**
QRZ				SN	**S**	**17 09 28.1**	**+2.1**
THZ	**Tophouse**	**13.17**	**207**	PN	**Pn**	**17 07 15.3**	**-1.4**
THZ				SN	**S**	**17 09 37.0**	**-1.5**
KHZ	**Kahutara**	**13.50**	**204**	PN	**Pn**	**17 07 18.9**	**-1.6**
KHZ				SN	**S**	**17 09 46.1**	**+1.0**
DSZ	**Denniston Nort**	**13.62**	**210**	SN	**S**	**17 09 48.6**	**+1.1**
MQZ	**McQueen's Vall**	**14.94**	**204**	SN	**S**	**17 10 15.8**	**+1.8**
ASAR	**Alice Springs**	**42.19**	**267**	P	**P**	**17 11 38.6**	**-0.8**
	0.4nm,0.6s,mb2.7,baz=99,slow=7.4,SNR=9.4						
ASAR				PcP	PcP	17 13 26.9	+1.3
	0.2nm,0.5s,baz=106,slow=4.2,SNR=4.5						
WRA	**Warramunga Arr**	**43.16**	**273**	P	**P**	**17 11 46.9**	**-0.3**
	2.0nm,0.4s,mb3.6,baz=110,slow=7.7,SNR=28						
ARCES	**ARCESS Array B**	**138.26**	**347**	PKP	PKPdf	17 23 03.9	+2.2
	1.9nm,0.9s,baz=84,slow=3.7,SNR=3.6						
FINES	**FINESS Array B**	**144.70**	**339**	PKP	PKPdf	17 23 12.6	-0.8
	2.6nm,0.4s,baz=57,slow=3.8,SNR=48						
NB2	**NORSAR Subarra1**	**148.47**	**350**	PKP	PKPdf	17 23 23.5	+3.8
	comp=Z,1.2nm,0.5s,baz=15,slow=4.1						
NOA	**NORSAR Array B**	**148.47**	**350**	PKPbc	PKPbc	17 23 23.8	-0.1
	comp=Z,1.2nm,0.6s,baz=17,slow=4.2,SNR=6.0						
AKASG	**Malin Array Be**	**150.63**	**322**	PKPbc	PKPbc	17 23 29.6	+0.3
	comp=Z,0.7nm,0.5s,baz=51,slow=3.0,SNR=5.8						

*BJI **24** 17:15:33.6,1207S×16771E,h237km,mB4.3,mb4.5*
*NEIC **24** 17:15:35.7±1.6,1208S×16718E,h229km±14km,mb4.4/16, Error ellipse: s-maj=10.9km s-min=7.6km az=100.0*
*ISCJB **24** 17:15:36.2±2.5,1216S±007×16706E±006,h239km±23km, mb4.2/31,Error ellipse: s-maj=11.9km s-min=9.3km az=163.6*
*IDC **24** 17:15:39.5±2.3,1221S×16714E,h262km±21km,mb3.8/16, mb1 4.0/17,mb1mx3.9/20,mbtmp3.9/17,Error ellipse: s-maj=15.1km s-min=12.9km az=91.0*

ISC 24 17:15:36.1±2.5,1211S±007×16710E±006,h225km±24km, n249,σ0§57/221,mb4.2/31,85C-78D,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.52**	**290**	*e*Pn	**Pn**	**17 17 23.2**	**-0.1**
HNR	**Honiara**	**7.52**	**290**	P	**Pn**	**17 17 28.5**	**+5.2**
	4.9nm,0.3s,baz=101,slow=5.9,SNR=3.5						
EIDS	**Eidsvold**	**20.07**	**227**	*e*P	**P**	**17 19 53.4**	**+0.8**
	20nm,0.6s						
CTA	**Charters Tower**	**21.53**	**246**	*e*P	**P**	**17 20 08.1**	**+0.1**
	10.0nm,0.6s,mb4.5						
CTA	**Charters Tower**	**21.53**	**246**	P	**P**	**17 20 08.6**	**+0.6**
	12nm,0.7s,mb4.5,baz=83,slow=11,SNR=31						
CTAO	**Charters Tower**	**21.53**	**246**	⇓*e*P	**P**	**17 20 08.4**	**+0.4**
	9.5nm,0.6s,mb4.5						
CTAO				*e*		17 20 25.4	
ARMA	**Armidale**	**23.18**	**216**	*e*P	**P**	**17 20 23.9**	**+0.9**
URZ	**Urewera**	**27.53**	**163**	P	**P**	**17 21 01.2**	**-0.7**
	8.2nm,0.7s,mb4.5,baz=1.7,slow=9.2,SNR=7.2						
STKA	**Stephens Creek**	**30.62**	**226**	*e*P	**P

comp=E,2.2nm,0.7s,mb4.0
P05C Yuba Gap, Truc 84.30 48 ⇓P P 17 27 43.1 +0.2
baz=84
O05C Quincy 84.31 47 ⇑P P 17 27 43.1 +0.2
baz=84
M04C Macdoel 84.32 45 ⇑P P 17 27 42.8 -0.1
baz=84
O04C Chester 84.32 47 ⇑P P 17 27 42.9 0.0
baz=84
H03A Soap Creek Ran 84.43 42 ⇓P P 17 27 44.0 +0.6
baz=84
R05C Kirkwood Meado 84.48 49 ⇑P P 17 27 43.7 -0.1
baz=84
KCC Kaiser Creek 84.58 50 ⇓P P 17 27 43.9 -0.4
baz=85
HELL Mitchell Peak, 84.58 51 ⇑P P 17 27 44.1 -0.3
baz=85
J04A Umpqua Nationa 84.67 44 ⇑P P 17 27 45.1 +0.5
baz=85
ISA Isabella 84.67 52 ⇓P P 17 27 44.5 -0.3
baz=85
I04A Tendick Farm, 84.68 43 ⇓P P 17 27 44.3 -0.3
baz=85
ELFS Eagle Lake Fie 84.68 47 ⇑P P 17 27 45.1 +0.4
baz=85
BEKR Beckwourth 84.68 48 ⇑P P 17 27 44.4 -0.4
baz=85
EDW2 Edwards Air Fo 84.80 53 ⇓P P 17 27 45.3 -0.1
baz=85
R06C Coleville 84.88 49 ⇓P P 17 27 46.0 +0.2
baz=85
WCN Washoe City 84.92 48 ⇓P P 17 27 46.6 +0.7
baz=85
NLWA Neilton Lookou 85.13 40 ⇑P P 17 27 46.6 -0.2
baz=85
MTUM Tungsten Hills 85.15 50 P P 17 27 44.1 -3.1
H04A Detroit Lake 85.16 43 ⇓P P 17 27 46.7 -0.3
baz=85
O06A Flanigan 85.16 47 ⇑P P 17 27 46.8 -0.3
baz=85
LRMC Laurel Mountai 85.22 52 ⇑P P 17 27 47.3 -0.3
baz=85
J05A Fort Rock 85.28 44 ⇑P P 17 27 48.2 +0.6
baz=85
K05A Summer Lake 85.31 45 ⇓P P 17 27 48.2 +0.4
baz=85
N06A Buffalo Meadow 85.36 47 ⇑P P 17 27 47.6 -0.5
baz=85
MONP Monument Peak 85.43 55 ⇑P P 17 27 48.2 -0.4
baz=85
MOD Modoc 85.43 46 ⇑P P 17 27 47.9 -0.5
baz=85
F04A Amboy 85.48 41 ⇑P P 17 27 48.4 -0.2
baz=86
S08C White Mtn Res 85.50 50 ⇓P P 17 27 49.1 +0.3
baz=86
MPMC Manual Prospec 85.56 52 ⇓P P 17 27 48.9 -0.3
baz=86
I05A Bend 85.58 43 ⇓P P 17 27 49.8 +0.7
baz=86
NVAR Mina Array Bea 85.70 49 P P 17 27 50.0 +0.1
NVAR Mina Array Bea 85.70 49 P P 17 27 50.0 +0.2
comp=E,1.9nm,0.8s,mb3.9,baz=238,slow=12,SNR=14
K06A Valley Falls 85.78 45 ⇑P P 17 27 50.2 0.0
baz=86
O07A Toulon 85.85 48 ⇑P P 17 27 50.2 -0.3
baz=86
EGAK Eagle 85.92 20 eP P 17 27 49.5 -0.8
comp=E,6.6nm,0.6s,mb4.5
G05A Wamic 85.94 42 ⇑P P 17 27 50.1 -0.8
baz=86
N07B Gerlach 85.99 47 ⇓P P 17 27 51.0 -0.1
baz=86
J06A Christmas Vall 86.01 44 ⇑P P 17 27 50.8 -0.4
baz=86
M07A Soldier Meadow 86.05 46 ⇓P P 17 27 51.1 -0.3
baz=86
HEC Hector,Ludlow 86.08 53 ⇓P P 17 27 51.5 -0.3
baz=86
F05A White Salmon 86.08 42 ⇓P P 17 27 51.5 0.0
baz=86
BELC Belle Mtn. 86.09 54 ⇓P P 17 27 51.3 -0.6
baz=86
Q08A Gabbs 86.11 49 ⇑P P 17 27 51.2 -0.6
baz=86
E05A Randle 86.14 41 ⇓P P 17 27 51.2 -0.6
baz=86
L07A Adell 86.14 46 ⇓P P 17 27 52.1 +0.2
baz=86
FURC Furnace Creek, 86.17 52 ⇓P P 17 27 52.3 +0.1
baz=86
I06A Prineville 86.21 44 ⇓P P 17 27 52.8 +0.5
baz=86
S09A Goldfield 86.28 50 ⇓P P 17 27 52.2 -0.4
baz=86
H06A Lindquist Farm 86.41 43 ⇑P P 17 27 52.9 -0.2
baz=86
BC3 Big Chuckw Mtn 86.43 55 ⇓P P 17 27 53.8 +0.3
baz=86
K07A Rock Creek Ran 86.44 45 ⇓P P 17 27 53.6 +0.3
baz=86
R09A Tonopah 86.56 50 ⇓P P 17 27 53.8 -0.2
baz=86
TUQ Turquoise Mtn. 86.58 53 ⇓P P 17 27 54.2 0.0
baz=86
N08A GE Springer Mi 86.59 47 ⇓P P 17 27 54.1 0.0
baz=87
J07A Hines 86.63 44 ⇑P P 17 27 54.2 -0.1
baz=87
M08A Happy Creek Ra 86.63 47 ⇓P P 17 27 54.7 +0.4
baz=87
E06A Yakima 86.64 41 ⇓P P 17 27 54.0 -0.2
baz=87
I07A Izee 86.74 44 ⇑P P 17 27 54.7 -0.1
baz=87
GLA Glamis 86.75 55 ⇓P P 17 27 54.7 -0.4
baz=87
TPNV Topopah Spring 86.78 51 ⇑P P 17 27 55.2 +0.1
baz=87
IRM Iron Mountain 86.81 54 ⇑P P 17 27 55.5 +0.1
baz=87
S10A Tonopah Range, 86.82 50 ⇑P P 17 27 55.0 -0.2
baz=87
A05A Maple Falls 86.86 39 ⇓P P 17 27 55.0 -0.2
baz=87
H07A Lands Inn, Kim 86.87 43 ⇓P P 17 27 55.4 0.0
baz=87
L08A Fields 86.90 46 ⇑P P 17 27 56.5 +0.9
baz=87
K08A Mann Creek Ran 86.98 45 ⇑P P 17 27 56.1 +0.2
baz=87
G07A Ruggs Ranch, H 87.04 43 ⇑P P 17 27 56.0 -0.2
baz=87
J08A Circle Bar Ran 87.20 45 ⇑P P 17 27 57.1 +0.2
baz=87
Q10A Clear Creek Ra 87.24 50 ⇑P P 17 27 57.2 -0.1
baz=87
TIXI Tiksi 87.39 349 eP P 17 27 56.3 -0.9
comp=E,0.9nm,0.5s,mb3.8
H08A Prairie City 87.45 44 ⇓P P 17 27 58.1 0.0
baz=87
K09A Rome 87.50 46 ⇓P P 17 27 58.5 +0.1
baz=88
V12A Nelson 87.50 53 ⇑P P 17 27 58.4 -0.2
baz=88
G08A Pilot Rock 87.52 43 ⇑P P 17 27 58.5 0.0
baz=88
O10A Cortez Mining, 87.61 48 ⇓P P 17 27 59.5 +0.4
baz=88
C07A Waterville 87.63 40 ⇑P P 17 27 58.5 -0.4
baz=88
PDMCI Parker Dam,Lak 87.66 54 ⇓P P 17 27 59.2 -0.2
baz=88
J09A Fry Pan Ranch, 87.69 45 ⇑P P 17 27 59.5 +0.2
baz=88
R11A Troy Canyon, C 87.70 50 ⇑P P 17 27 58.9 -0.6
baz=88
Y13A Salome 87.77 55 ⇓P P 17 28 00.6 +0.6
baz=88
Q11A Duckwater 87.80 50 ⇑P P 17 27 60.0 0.0
baz=88
E08A Dider Farm, El 87.86 42 ⇑P P 17 28 00.8 +0.8
baz=88
B07A Winthrop 87.87 40 ⇓P P 17 28 00.0 0.0
baz=88
I09A Lost Marbles R 87.90 44 ⇓P P 17 28 00.2 -0.1
baz=88
A07A Ashnola River, 87.92 39 ⇓P P 17 28 00.4 +0.2
baz=88
M10A I.L. Ranch, Tu 87.96 47 ⇑P P 17 28 01.4 +0.8
baz=88
X13A Yucca 87.98 54 ⇓P P 17 28 01.1 +0.1
baz=88
K10A MacKenzie Ranc 88.12 46 ⇓P P 17 28 01.5 +0.2
baz=88
D08A Wollman Farm, 88.14 41 ⇓P P 17 28 01.1 -0.2
baz=88
H09A Durkee 88.18 44 ⇓P P 17 28 01.6 0.0
baz=88
O11A Cowboy Ranch, 88.18 48 ⇑P P 17 28 02.1 +0.4
baz=88
L10A Juniper Basin 88.18 46 ⇑P P 17 28 01.8 +0.1
baz=88
G09A Cove 88.30 43 ⇓P P 17 28 02.1 0.0
baz=88
U13A Pakoon Wash 88.38 52 ⇑P P 17 28 02.9 +0.1
baz=88
R12A Pony Springs, 88.43 50 ⇓P P 17 28 03.8 +0.9
baz=88
E09A Wood Farm, Sta 88.46 42 ⇑P P 17 28 02.4 -0.5
baz=88
Q12A Willow Creek R 88.47 50 ⇓P P 17 28 03.7 +0.6
baz=88
M11A Holland Ranch, 88.47 47 ⇑P P 17 28 03.9 +0.8
baz=88
P12A McGill 88.54 49 ⇑P P 17 28 03.8 +0.4
baz=88
A08A Turner Farm, O 88.57 39 ⇑P P 17 28 03.4 +0.1
baz=89
I10A Payette 88.58 44 ⇓P P 17 28 04.4 +0.9
baz=89
T13A Saint George 88.60 52 ⇑P P 17 28 04.2 +0.5
baz=89
X14A Yava 88.70 54 ⇓P P 17 28 04.9 +0.6
baz=89
K11A Parker Ranch, 88.71 46 ⇓P P 17 28 04.5 +0.4
baz=89
W14A Seligman 88.74 54 ⇓P P 17 28 05.4 +0.9
baz=89
G10A Bishop Farm, J 88.74 43 P P 17 28 04.2 -0.1
baz=89,SNR=19
115A Sonoran Desert 88.76 56 ⇑P P 17 28 05.0 +0.4
baz=89
H10A Noah's Angus R 88.77 44 ⇑P P 17 28 04.2 -0.2
baz=89,SNR=5.6
S13A Holt Ranch, En 88.79 51 ⇓P P 17 28 05.1 +0.5
baz=89
N12A Clover Valley, 88.84 48 P P 17 28 05.5 +0.7
baz=89,SNR=7.0
O12A Currie 88.89 49 P P 17 28 05.2 +0.2
baz=89,SNR=7.0
F10A Beach Ranch, E 88.89 43 ⇑P P 17 28 04.7 -0.2
baz=89
U14A Mt Trumbull 88.99 53 ⇑P P 17 28 05.9 +0.2
baz=89
A09A Danville 89.00 39 ⇓P P 17 28 05.4 +0.1
baz=89
MFID Camas Ranch 89.04 45 ⇓P P 17 28 05.8 +0.2
baz=89
Q13A Wheeler Ranch, 89.05 50 ⇓P P 17 28 06.3 +0.5
baz=89
M12A Wells 89.10 47 P P 17 28 06.5 +0.5
baz=89,SNR=8.0
P13A Bates Ranch, G 89.19 49 ⇑P P 17 28 06.6 +0.2
baz=89
D10A Wagner Farm, O 89.20 41 ⇓P P 17 28 05.6 -0.8
baz=89
X15A Humboldt 89.22 55 ⇓P P 17 28 07.1 +0.4
baz=89
L12A House Creek Ra 89.24 47 ⇓P P 17 28 07.1 +0.5
baz=89
T14A Hurricane 89.24 52 ⇓P P 17 28 07.0 +0.2
baz=89
H11A Donnelly 89.31 44 ⇑P P 17 28 06.9 0.0
baz=89
G11A Walters Elk Ra 89.35 43 ⇓P P 17 28 06.5 -0.6
baz=89,SNR=11
N13A Wendover, West 89.45 48 ⇑P P 17 28 07.7 +0.1
baz=89
K12A Draper Farm, C 89.46 46 ⇑P P 17 28 07.7 0.0
baz=89
J12A Stokes Ranch, 89.50 46 ⇑P P 17 28 08.3 +0.5
baz=90
F11A Grangeville 89.57 43 ⇓P P 17 28 06.8 -1.3
baz=90
M13A Montello 89.62 48 P P 17 28 08.9 +0.5
baz=90,SNR=10
A10A Northport 89.64 40 ⇑P P 17 28 08.1 -0.2
baz=90
E11A Bogner Ranch, 89.68 42 ⇓P P 17 28 07.8 -0.8
baz=90,SNR=5.4
217A Green Valley 89.68 58 ⇑P P 17 28 09.3 +0.4
baz=90
T15A Red Dirt Ranch 89.77 52 ⇑P P 17 28 09.7 +0.5
baz=90
L13A Double Diamond 89.98 47 ⇑P P 17 28 10.5 +0.5
baz=90
K13A Stover Farm, H 90.04 46 ⇑P P 17 28 11.1 +0.7
baz=90
H12A Diamond D Ranc 90.05 44 P P 17 28 10.2 -0.1
baz=90,SNR=6.4
HLID Hailey 90.07 45 P P 17 28 10.9 +0.4
baz=90,SNR=8.2
F12A Elk City 90.13 43 P P 17 28 10.3 -0.4
baz=90,SNR=8.8
WUAZ Wupatki 90.17 54 ⇑P P 17 28 11.4 +0.3
baz=90
J13A Cove Ranch, Pi 90.19 46 ⇑P P 17 28 11.6 +0.6
baz=90
B11A Sandpoint 90.22 40 ⇓P P 17 28 10.7 -0.3
baz=90,SNR=5.2
M14A Sheep Mountain 90.25 48 ⇑P P 17 28 11.7 +0.4
baz=90
318A Bisbee 90.28 58 ⇑P P 17 28 11.8 +0.1
baz=90
218A Dragoon 90.37 57 ⇑P P 17 28 12.7 +0.6
baz=90
I13A Wildhorse Cree 90.38 45 ⇑P P 17 28 11.7 -0.2
baz=90
A11A Hall Mountain, 90.38 40 ⇑P P 17 28 12.3 +0.5
baz=90,SNR=9.3
D12A Red Ives Fores 90.45 42 ⇓P P 17 28 12.1 -0.1
baz=90
H13A Challis 90.47 44 ⇑P P 17 28 12.7 +0.4
baz=90
G13A Cobalt 90.63 44 P P 17 28 12.9 -0.1
baz=91,SNR=8.4
K14A Jones Ranch, D 90.66 47 ⇓P P 17 28 14.2 +1.0
baz=91
F13A Darby 90.76 43 ⇓P P 17 28 13.1 -0.5
baz=91
WMQ Urumqi 90.79 315 eP P 17 28 13.4 -0.4
319A Douglas 90.86 58 ⇓P P 17 28 14.1 -0.3
baz=91
E13A Victor 91.04 43 ⇑P P 17 28 14.2 -0.7
baz=91
D13A Huson 91.05 42 ⇓P P 17 28 14.3 -0.6
baz=91
C13A Hot Springs 91.14 41 ⇑P P 17 28 14.6 -0.7
baz=91
G14A Jackson 91.20 44 ⇑P P 17 28 16.0 +0.4
baz=91
B13A Whitefish 91.41 41 ⇓P P 17 28 16.5 -0.1
baz=91
F14A Wisdom 91.41 43 ⇓P P 17 28 16.6 0.0
baz=91
E14A Clinton 91.50 43 ⇓P P 17 28 16.9 -0.1
baz=92
D14A Greenough 91.67 42 ⇑P P 17 28 17.8 0.0
baz=92
G15A Dillon 91.84 44 ⇓P P 17 28 18.9 +0.3
baz=92
F15A Butte 92.01 44 ⇑P P 17 28 19.3 -0.1
baz=92
E15A Deer Lodge 92.07 43 ⇑P P 17 28 19.5 -0.2
baz=92
PDAR Pinedale Array 93.30 47 P P 17 28 24.9 -0.5
comp=E,0.7nm,0.8s,mb3.7,baz=297,slow=1.3,SNR=5.6
ZALV Zalesovo Beam 95.20 324 P P 17 28 32.4 -1.4
comp=E,0.4nm,0.6s,mb3.8,baz=112,slow=4.0,SNR=4.1
MKAR Makanchi Array 95.21 317 P P 17 28 33.9 -0.1
MKAR Makanchi Array 95.21 317 P P 17 28 33.9 -0.1
comp=E,4.0nm,0.7s,mb4.7,baz=93,slow=6.5,SNR=54
YKA Yellowknife Ar 95.31 27 P P 17 28 32.3 -1.8
comp=E,1.0nm,0.4s,mb4.3,baz=256,slow=4.8,SNR=23
ARCES ARCESS Array B 117.69 346 PKP PKPdf 17 33 53.8 -1.0
comp=E,4.2nm,0.6s,baz=77,slow=2.3,SNR=39
JOF Joensuu 120.41 338 ep PKPdf 17 33 58.4 -1.8
comp=E,3.2nm,0.6s
KAF Kangasniemi 122.71 339 ep PKPdf 17 34 01.6 -3.0
comp=E,2.0nm,0.4s
FINES FINESS Array B 123.24 339 PKP PKPdf 17 34 04.7 -1.0
FINES FINESS Array B 123.24 339 PKP PKPdf 17 34 04.7 -1.0
comp=E,0.9nm,0.4s,baz=82,slow=2.4,SNR=17
NB2 NORSAR Subarra 128.07 345 PKPdf PKPdf 17 34 14.1 -0.8
comp=Z,0.3nm,0.4s,baz=31,slow=1.9
NB2 NORSAR Subarra 128.07 345 PKPdf PKPdf 17 34 14.1 -0.8
NOA NORSAR Array B 128.07 345 PKP PKPdf 17 34 14.4 -0.5
comp=Z,0.7nm,0.6s,baz=33,slow=2.1,SNR=6.3
GERES GERESS Array B 137.24 334 PKP PKPdf 17 34 32.7 +0.1
comp=Z,0.5nm,0.5s,baz=46,slow=3.9,SNR=4.9
LOR Lormes 142.23 341 ePKP1 PKPdf 17 34 38.5 -3.2
SSF Saint Saulge 142.52 342 ePKP1 PKPdf 17 34 39.5 -2.7
LPG La Plagne 142.75 337 ePKP1 PKPdf 17 34 40.3 -2.4
comp=Z,11nm,0.9s
SMF Signal de Mont 142.79 341 ePKP1 PKPdf 17 34 39.8 -2.9
AVF Avril sur Loir 142.81 341 ePKP1 PKPdf 17 34 39.0 -3.7
BGF Bois d'Agland 143.18 342 ePKP1 PKPdf 17 34 40.5 -2.9
comp=Z,6.5nm,0.6s
MBDF Montbardon 143.39 336 ePKP1 PKPdf 17 34 41.1 -2.7
comp=Z,8.2nm,0.8s
QUIF Quistinic 143.39 349 ePKP1 PKPdf 17 34 41.1 -2.6
ORIF Oris-en-Rattie 143.57 337 ePKP1 PKPdf 17 34 42.1 -2.0
comp=Z,17nm,0.7s
TCF Toulx Ste Croi 143.61 342 ePKP1 PKPdf 17 34 41.9 -2.2
SBF Sospel 143.84 335 ePKP1 PKPdf 17 34 42.3 -2.3
comp=Z,59nm,0.9s
MFF Saint Martin d 143.97 345 ePKP1 PKPdf 17 34 42.9 -1.9
comp=Z,14nm,0.6s
VIVF Saint-Julien-l 144.07 339 ePKP1 PKPdf 17 34 43.6 -1.4
FRF La Foret Royal 144.41 335 ePKP1 PKPdf 17 34 43.5 -2.1
comp=Z,29nm,0.7s
LMR La Mourre 144.65 335 ePKP1 PKPdf 17 34 45.1 -1.0
MTLF Montolieu 146.25 340 ePKP1 PKPbc 17 34 50.3 0.0
KEST Kesra 149.06 323 PKPbc PKPbc 17 34 58.0 -0.1
comp=Z,2.3nm,0.6s,baz=7.6,slow=0.4,SNR=8.0
ESDC Sonseca Array 151.43 345 PKPbc PKPbc 17 35 03.3 -0.2
comp=Z,1.3nm,0.6s,baz=10,slow=3.8,SNR=7.3
ESDC PKPab PKPab 17 35 13.0 +0.4
comp=Z,1.8nm,0.7s,baz=11,slow=3.8,SNR=5.9
TORD Torodi Ar. Bea 165.72 276 PKP PKPdf 17 35 13.8 -1.0
comp=Z,1.6nm,1.0s,baz=82,slow=2.1,SNR=6.1
TORD PKPab PKPab 17 36 14.6 -0.8
comp=Z,0.9nm,0.9s,baz=90,slow=5.9,SNR=5.3

IDC ***24*** *17:20:20.7±1.4, 7.14N×12704E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.8/19, mbtmp4.0/7, ML4.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/28, Error ellipse: s-maj=112.7km s-min=17.9km az=70.0*

NEIC ***24*** *17:20:22.1±0.6, 7.06N×12683E, h10km, mb4.5/6, Error ellipse: s-maj=38.6km s-min=11.1km az=72.0*

ISCJB ***24*** *17:20:24.5±0.8, 6.62N±0.05×126.18E±0.06, h34km±6km, mb4.2/12, Error ellipse: s-maj=10.6km s-min=7.5km az=25.1*

MAN ***24*** *17:20:24, 6.73N×126.34E, h30km, mb5.0, ML3.9, MS4.0*

ISC 24 17:20:25.2±0.9, 6.64N±0.05×126.22E±0.06, h27km±5km, n27, σ1°09/32, mb4.2/12, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MATI	Mati	0.31	6	eP		Pb	17 20 32.4	-0.1
MATI				eS		Sb	17 20 37.9	+0.4
DMPH	Davao City--Mi	0.84	302	⇓iP		Pb	17 20 40.8	-0.3
DMPH				iS		Sb	17 20 53.2	+1.2
GSPH	General Santos	1.38	247	⇑eP		Pn	17 20 46.4	-2.3
GSPH				eS		Sn	17 21 02.0	-4.1
BIPH	Bislig	1.54	5	⇑iP		Pn	17 20 49.5	-1.4
BIPH				iS		Sn	17 21 10.7	+0.7
BUKP	Musuan	1.69	317	eP		Pn	17 20 51.7	-1.2
CGP	Cagayan de Oro	2.36	320	⇑eP		Pn	17 21 01.4	-0.7
CGP				iS		Sn	17 21 32.2	+2.0
PAGZ	Pagadian	3.06	293	eP		Pn	17 21 12.1	+0.2
SCPH	Surigao	3.21	347	eP		Pn	17 21 13.1	-0.7
SCPH				eS		Sn	17 21 52.7	+1.6
MSLP	Maasin	3.73	339	eP		Pn	17 21 20.1	-0.8
GUIM	Jordan	5.35	318	eP		Pn	17 21 43.1	-0.2
CUYO	Cuyo Island	6.63	309	eP		Pn	17 22 01.0	+0.1
BATI	Kupang	16.93	189	P		Pn	17 24 26.4	+6.2
	1.5nm,0.3s,baz=320,slow=22,SNR=4.2							
JOW	Kunigami	20.18	5	LR		LR	17 31 13.1	
	comp=Z,43nm,21.7s,baz=267,slow=33							
WRA	Warramunga Arr	27.59	163	P		P	17 26 13.8	+3.5
	0.5nm,0.5s,mb3.4,baz=344,slow=10,SNR=4.8							
ASAR	Alice Springs	31.04	166	P		P	17 26 42.8	+1.9
	0.4nm,0.8s,mb3.7,baz=344,slow=6.9,SNR=9.2							
CD2	Chengdu	32.04	322	eP		P	17 26 49.3	-0.3
CD2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8							
CD2					AMB	AMB		
	comp=Z,20nm,8.4s							
NWAO	Narrogin (SRO)	40.26	192	P		P	17 28 02.6	+2.7
	comp=Z,6.5nm,0.9s,mb4.4							
STKA	Stephens Creek	41.01	160	P		P	17 28 06.6	+0.5
	comp=Z,2.0nm,0.9s,mb3.7,baz=335,slow=14,SNR=2.6							
MK31	Makanchi Array	54.90	324	eP		P	17 29 53.8	+0.3
MKAR	Makanchi Array	54.90	324	P		P	17 29 54.1	+0.7
	comp=Z,1.7nm,0.5s,mb4.4,baz=121,slow=8.1,SNR=23							
ZALV	Zalesovo Beam	57.79	332	P		P	17 30 12.7	-1.2
	comp=Z,0.6nm,0.3s,mb4.1,baz=123,slow=6.5,SNR=5.6							
KURK	Kurchatov	59.04	327	eP		P	17 30 22.1	-0.6
	comp=Z,1.9nm,0.6s,mb4.3							
BRVK	Borovoye	64.70	326	eP		P	17 31 00.3	-0.4
	comp=Z,2.6nm,0.8s,mb4.3							
ARU	Arti	72.23	327	eP		P	17 31 46.7	-1.0
	comp=Z,5.3nm,0.5s,mb4.7							
MALT	Malatya	84.21	308	P		P	17 32 55.3	+0.8
	comp=Z,4.7nm,1.0s,mb4.6							
FINES	FINESS Array B	89.05	332	P		P	17 33 17.1	-0.5
	comp=Z,0.7nm,0.7s,mb4.1,baz=85,slow=4.0,SNR=5.8							
RES	Resolute Bay	95.06	10	eP		P	17 33 44.0	-1.2
	comp=Z,67nm,0.9s							

MAN 24 17:28:04, 941N×12539E, h5km, mb5.1, ML4.0, MS4.2, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
SCPH	Surigao	0.39	15	eP		Pg	17 28 12.9	+1.4
SCPH				eS		Sg	17 28 19.3	+2.8
MSLP	Maasin	0.89	324	eP		Pg	17 28 22.1	+0.9
MSLP				eS		Sg	17 28 36.0	+3.3
CGP	Cagayan de Oro	1.17	216	⇑eP		Pg	17 28 27.0	+0.6
CGP				eS		Sg	17 28 42.5	+0.9
BUKP	Musuan	1.55	192	eP		Pn	17 28 32.7	+0.4
BUKP				eS		Sn	17 28 57.5	+4.7
LLP	Lapu-Lapu	1.67	303	⇑eP		Pn	17 28 34.1	+0.2
LLP				iS		Sn	17 28 56.7	+1.0
PLP	Palo	1.79	347	eP		Pn	17 28 36.0	+0.3
PLP				eS		Sn	17 29 01.2	+2.4
OCLP	Ormoc	1.81	335	eP		Pn	17 28 36.6	+0.8
DCPH	Dipolog City	2.17	248	⇑iP		Pn	17 28 41.6	+0.8
DCPH				iS		Sn	17 29 10.3	+2.2
BESP	Borongan	2.18	1	eP		Pn	17 28 44.9	+3.9
BESP				eS		Sn	17 29 13.3	+4.9
MATI	Mati	2.59	161	eP		Pn	17 28 47.7	+1.1
GUIM	Jordan	3.01	294	eP		Pn	17 28 54.6	+2.2
CNP	Catarman	3.17	347	eP		Pn	17 28 59.3	+4.8
PVCP	Virac	4.34	344	eP		Pn	17 29 16.4	+5.7

IDC ***24*** *17:29:29.0±0.4, 5379S×14078E, h0km, mb4.9/17, mb1 5.0/17, mb1mx4.9/19, mbtmp4.9/17, MS5.5/17, Ms1 5.5/17, ms1mx5.4/23, Error ellipse: s-maj=18.2km s-min=12.5km az=83.0*

NEIC ***24*** *17:29:30.0±0.2, 5381S×14079E, h10km, mb5.4/23, MS5.6/174, MW5.8, Error ellipse: s-maj=9.8km s-min=7.0km az=79.0, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17}Nm; M_{rr}0.51; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-0.03; $M_{r\theta}$-0.77; $M_{\theta\phi}$-5.43; $M_{\phi r}$-1.62; Best double couple: $M_0$5.70000×10^{17} NP1:ϕ_s92.00000°, δ74.00000°, λ-176.00000°. NP2:ϕ_s1.00000°, δ86.00000°, λ-16.00000°. Principal axes: T 5.2700, Plg8.0000°, Azm47.0000°; N 0.8500, Plg74.0000°, Azm166.0000°; P -6.1100, Plg14.0000°, Azm315.0000°;*

BJI ***24*** *17:29:29.9, 5380S×14080E, h10km, mB5.4, mb5.1, Ms5.5,*

Msz5.3

ISCJB ***24*** *17:29:29.1±0.2,5386S±004×14078E±010,h10km, mb5.3/50,MS5.6/202,Error ellipse: s-maj=8.1km s-min=5.7km az=178.7*

GCMT ***24*** *17:29:30.0±0.1,5385S×14074E,h12km,MW5.8/101, Moment Tensor Solution. s94,c193; s101,c296; Duration: 1§9 Moment tensor: Scale 10¹⁷Nm; Mrr-0.19±.04; Mθθ0.57±.05; Mφφ-0.38±.05; Mrθ-0.01±.12; Mθφ-6.22±.04; Mφr0.34±.12; Best double couple: M₀6.24800×10¹⁷ NP1:φs268.00000°,δ87.00000°, λ-180.00000°. NP2:φs178.00000°,δ90.00000°, λ-3.00000°. Principal axes: T 6.3430, Plg2.0000°, Azm223.0000°; N -0.1900, Plg87.0000°, Azm356.0000°; P -6.1520, Plg2.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***24*** *17:29:31.7±2.2,5380S×14165E,h10km,mb5.5/14, MS5.4/30 Error ellipse: s-maj=24.4km s-min=10.7km az=87.3*

ISC 24 17:29:30.1±2.0,5384S±004×14075E±010,h6km±12km, h12km±.9km:pP-P,n463,σ1§32/109,mb5.3/50,MS5.6/202, 12C-5D,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**11.77**	**24**	*e*	Pn		**Pn**	**17 32 18.3**	**0.0**
	198nm,1.4s								
TAU	**Tasmania Unive**	**11.77**	**24**	*e*	P		**Pn**	**17 32 18.3**	**0.0**
TAU					pmax		pmax		
	comp=Z,198nm,1.4s								
DRV	**Dumont d'Urvil**	**12.88**	**181**		P		**Pn**	**17 32 42.0**	**+8.6**
DRV					R			17 35 00.0	
DRV					L			17 35 00.0	
CASY	**Casey**	**19.30**	**218**	*e*	P		**Pn**	**17 33 54.7**	**-1.6**
	comp=Z,414nm,1.5s								
CNB	**Canberra Magne**	**19.48**	**22**	*e*	P		**Pn**	**17 33 59.4**	**+0.7**
	comp=Z,199nm,1.7s								
STKA	**Stephens Creek**	**21.96**	**2**	*e*	P		**P**	**17 34 23.1**	**-1.2**
	comp=Z,118nm,1.0s,mb5.3								
STKA					eS		**S**	**17 38 25.8**	**-1.1**
STKA	**Stephens Creek**	**21.96**	**2**		P		**P**	**17 34 22.2**	**-2.1**
	comp=Z,60nm,1.0s,mb5.0,baz=164,slow=12,SNR=26								
RPZ	**Rata Peaks**	**22.23**	**75**		P		**P**	**17 34 26.8**	**-0.3**
	comp=Z,59nm,0.9s,mb5.0,baz=218,slow=8.1,SNR=12								
RPZ					LR		LR	17 41 25.2	
	comp=Z,35μm,18.9s,MS5.8,baz=234,slow=32								
ARMA	**Armidale**	**24.70**	**23**	*e*	P		**P**	**17 34 53.0**	**+1.3**
ARMA					eS		**S**	**17 39 22.8**	**+9.1**
FORT	**Forrest**	**24.80**	**333**	*e*	P		**P**	**17 34 53.0**	**+0.3**
	comp=Z,169nm,0.9s,mb5.6								
FORT					eS		**S**	**17 39 19.7**	**+4.3**
VNDA	**Vanda**	**24.98**	**169**		P		**P**	**17 34 53.8**	**-0.2**
	comp=Z,16nm,0.8s,mb4.6,baz=327,slow=8.8,SNR=54								
VNDA					LR		LR	17 44 02.5	
	comp=Z,9μm,19.1s,MS5.3,baz=156,slow=35								
SNZO	**South Karori**	**25.84**	**75**		PFAKE			17 35 10.0	+8.0
SNZO					LR		LR		
	comp=Z,14μm,20.0s,MS5.5								
SBA	**Scott Base**	**25.84**	**168**	*e*	P		**P**	**17 35 01.9**	**+0.2**
	comp=Z,86nm,1.0s,mb5.2								
SBA					LR		LR		
	comp=Z,9μm,21.0s,MS5.3								
SBA	**Scott Base**	**25.84**	**168**	*e*	P		**P**	**17 35 01.9**	**+0.2**
SBA					pmax		pmax		
	comp=Z,86nm,1.0s,mb5.2								
SBA					MLR		MLR		
	comp=Z,9μm,21.0s,MS5.3								
MIR	**Mirnyy**	**26.15**	**222**	*i*	P		**P**	**17 35 11.0**	**+6.4**
MIR				*i*				17 35 17.0	
MIR					pmax		pmax		
	comp=Z,300nm,1.0s,mb5.8								
NWAO	**Narrogin (SRO)**	**26.77**	**312**	*e*	P		**P**	**17 35 10.3**	**-0.2**
	comp=Z,30nm,1.3s,mb4.7								
NWAO					LR		LR		
	comp=Z,17μm,21.0s,MS5.6								
NWAO	**Narrogin (SRO)**	**26.77**	**312**	*e*	P		**P**	**17 35 10.3**	**-0.2**
NWAO					pmax		pmax		
	comp=Z,31nm,1.3s								
NWAO					MLR		MLR		
	comp=Z,17μm,21.0s								
NWAO	**Narrogin (SRO)**	**26.77**	**312**		P		**P**	**17 35 11.0**	**+0.5**
	comp=Z,18nm,1.0s,mb4.5,baz=170,slow=18,SNR=4.2								
NWAO					LR		LR	17 43 17.3	
	comp=Z,20μm,20.1s,MS5.7,baz=130,slow=31								
KLBR	**Kellerberrin**	**27.69**	**314**	*e*	P		**P**	**17 35 17.9**	**-0.8**
	comp=Z,109nm,1.5s,mb5.3								
MUN	**Mundaring**	**28.03**	**311**	*e*	P		**P**	**17 35 20.3**	**-1.5**
MUN					eS		**S**	**17 40 04.4**	**-2.1**
URZ	**Urewera**	**29.26**	**73**		P		**P**	**17 35 30.9**	**-1.7**
	comp=Z,28nm,0.8s,mb5.0,baz=265,slow=3.6,SNR=7.8								
URZ					LR		LR	17 45 33.2	
	comp=Z,17μm,21.9s,MS5.6,baz=14,slow=33								
EIDS	**Eidsvold**	**29.46**	**19**	*e*	P		**P**	**17 35 32.3**	**-2.2**
	comp=Z,22nm,0.9s,mb4.9								
ASAR	**Alice Springs**	**30.57**	**348**		P		**P**	**17 35 42.1**	**-2.2**
	comp=Z,12nm,0.7s,mb4.8,baz=166,slow=8.7,SNR=54								
ASAR					PcP		PcP	17 38 43.4	+0.4
	comp=Z,1.6nm,0.8s,baz=132,slow=1.4,SNR=5.7								
CTA	**Charters Tower**	**33.95**	**9**	*e*	P		**P**	**17 36 15.0**	**+1.0**
	comp=Z,17nm,1.2s,mb4.8								
CTA					eS		**S**	**17 41 38.5**	**-0.6**
CTA	**Charters Tower**	**33.95**	**9**	*e*	P		**P**	**17 36 15.0**	**+1.0**
CTA					eS		**S**	**17 41 38.5**	**-0.6**
CTA					pmax		pmax		
	comp=Z,17nm,1.2s								
CTA	**Charters Tower**	**33.95**	**9**		P		**P**	**17 36 13.3**	**-0.7**
	comp=Z,17nm,1.0s,mb4.9,baz=216,slow=12,SNR=6.2								
CTAO	**Charters Tower**	**33.95**	**9**	*e*	P		**P**	**17 36 14.4**	**+0.4**
	comp=Z,80nm,1.5s,mb5.4								
CTAO					LR		LR		
	comp=Z,6μm,19.0s,MS5.3								
CTAO	**Charters Tower**	**33.95**	**9**	*e*	P		**P**	**17 36 14.4**	**+0.4**
CTAO					pmax		pmax		
	comp=Z,80nm,1.5s,mb5.4								
CTAO					MLR		MLR		
	comp=Z,6μm,19.0s,MS5.3								
WB2	**Warramunga Arr**	**34.19**	**349**	*e*	P		**P**	**17 36 13.5**	**-2.6**
WRA	**Warramunga Arr**	**34.19**	**349**		P		**P**	**17 36 13.6**	**-2.5**
WRA								17 38 54.2	
WRA	**Warramunga Arr**	**34.19**	**349**		P		**P**	**17 36 13.6**	**-2.5**
	comp=Z,29nm,0.8s,mb5.3,baz=170,slow=7.6,SNR=55								
WRA					PcP		PcP	17 38 54.2	+1.3
	comp=Z,5.3nm,0.9s,baz=185,slow=2.5,SNR=5.3								
WRA					LR		LR	17 49 25.7	
	comp=Z,5μm,19.2s,MS5.2,baz=205,slow=35								
QSPA	**South Pole Qui**	**36.28**	**180**		P		**P**	**17 36 33.5**	**0.0**
QSPA					LR		LR		
	comp=Z,12μm,19.0s,MS5.7								
QSPA	**South Pole Qui**	**36.28**	**180**		P		**P**	**17 36 33.5**	**0.0**
	comp=Z,33nm,1.0s,mb5.2,baz=1.9,slow=4.0,SNR=71								
MBWA	**Marble Bar**	**36.35**	**326**	*e*	P		**P**	**17 36 33.4**	**-1.2**
	comp=Z,48nm,1.1s,mb5.3								
MBWA					LR		LR		
	comp=Z,14μm,20.0s,MS5.7								
FITZ	**Fitzroy Crossi**	**37.54**	**336**	*e*	P		**P**	**17 36 42.5**	**-2.3**
	comp=Z,47nm,0.9s,mb5.2								
FITZ					eS		**S**	**17 42 30.0**	**-4.1**
FITZ	**Fitzroy Crossi**	**37.54**	**336**		P		**P**	**17 36 43.3**	**-1.5**
	comp=Z,16nm,0.8s,mb4.8,baz=176,slow=12,SNR=17								
FITZ					LR		LR	17 50 35.1	
	comp=Z,11μm,21.8s,MS5.6,baz=171,slow=34								
MAW	**Mawson**	**37.66**	**218**		P		**P**	**17 36 44.3**	**-1.1**
	comp=Z,13nm,0.9s,mb4.7,baz=90,slow=7.1,SNR=7.2								
MAW					LR		LR	17 50 59.4	
	comp=Z,20μm,19.6s,MS5.9,baz=86,slow=34								
RAO	**Raoul Island**	**38.70**	**67**		PFAKE			17 37 10.0	+15
RAO					LR		LR		
	comp=Z,9μm,21.0s,MS5.6								
KAKA	**Kakadu**	**41.55**	**348**	*e*	P		**P**	**17 37 16.1**	**-2.2**
	comp=Z,28nm,0.6s,mb5.1								
SYO	**Syowa Base**	**44.77**	**210**	*e*	P		**P**	**17 37 41.8**	**-1.9**
SYO	**Syowa Base**	**44.77**	**210**	*i*	pP		pP	17 37 44.9	-0.8
SYO	**Syowa Base**	**44.77**	**210**	*e*	PcP		PcP	17 39 24.0	-1.6
BATI	**Kupang**	**45.62**	**336**		P		**P**	**17 37 52.1**	**+1.1**
	comp=Z,69nm,1.0s,mb5.5,baz=235,slow=0.4,SNR=10								
HNR	**Honiara**	**46.89**	**26**		PFAKE			17 38 10.0	+8.9
HNR					LR		LR		
	comp=Z,4μm,20.0s,MS5.4								
HNR	**Honiara**	**46.89**	**26**		LR		LR	17 55 07.1	
	comp=Z,4μm,19.2s,MS5.4,baz=180,slow=33								
NVL	**N'lazarevskaya**	**50.47**	**200**	*i*	P		**P**	**17 38 29.5**	**+1.5**
NVL					eS		**S**	**17 45 46.4**	**+5.0**
NVL					pmax		pmax		
	comp=N,28nm,1.1s								
NVL					pmax		pmax		
	comp=E,17nm,1.1s								
NVL					pmax		pmax		
	comp=Z,44nm,1.1s,mb5.4								
NVL					MLR		MLR		
	comp=N,9μm,14.1s,MS6.0								
NVL					MLR		MLR		
	comp=E,4μm,14.1s,MS6.0								
NVL					MLR		MLR		
	comp=Z,13μm,14.1s,MS6.1								
MAIT	**Maitri**	**50.48**	**199**	*e*	P		**P**	**17 38 26.5**	**-1.6**
SNAA	**Sanae**	**52.18**	**194**	*e*	P		**P**	**17 38 41.1**	**+0.3**
SNAA				*e*	pP			17 38 43.7	+0.9
SNAA				*e*				17 38 46.7	
SNAA				*e*				17 38 48.8	
SNAA				*e*				17 38 53.7	
SNAA				*e*				17 39 00.6	
SNAA	**Sanae**	**52.18**	**194**	*e*	P		**P**	**17 38 40.7**	**-0.1**
VNA3	**Neumayer Olymp**	**53.46**	**191**	*e*	P		**P**	**17 38 49.8**	**-0.5**
VNA3				*e*	pP			17 38 52.8	+0.5
VNA3				*e*				17 38 56.1	
VNA3				*e*				17 38 58.1	
VNA3				*e*				17 39 01.5	
VNA3				*e*				17 39 09.5	
VNA2	**Neumayer--Watz**	**53.48**	**192**	*e*	P		**P**	**17 38 50.0**	**-0.4**
	baz=168,slow=6.5								
VNA2				*e*	pP			17 38 53.2	+0.8
VNA2				*e*				17 38 56.2	
VNA2				*e*				17 38 58.4	
VNA2				*e*				17 39 03.0	
VNA2				*e*				17 39 09.7	
VNA1	**Neumayer--Stat**	**53.84**	**192**	*e*	P		**P**	**17 38 53.4**	**+0.3**
VNA1				*e*	pP			17 38 56.3	+1.2
VNA1				*e*				17 38 59.4	
VNA1				*e*				17 39 01.6	
VNA1				*e*				17 39 06.1	
AFI	**Afiamalu**	**54.45**	**62**		PFAKE			17 39 10.0	+12
AFI					LR		LR		
	comp=Z,4μm,21.0s,MS5.5								
FUNA	**Funafuti**	**54.71**	**49**		PFAKE			17 39 10.0	+10
FUNA					LR		LR		
	comp=Z,8μm,19.0s,MS5.8								
RAR	**Rarotonga**	**55.21**	**78**		LR		LR	17 57 11.1	
	comp=Z,1μm,21.5s,MS5.0,baz=237,slow=30								
TBI	**Tubuai**	**59.63**	**89**	*e*	S		**S**	**17 47 43.7**	**-1.7**
	comp=Z,2μm,28.8s								
TBI				*e*	SS		SS	17 51 42.3	+1.7
	comp=Z,444nm,33.2s								
TBI				*e*	LQ			17 54 34.0	
	comp=Z,5μm,26.2s								
TBI				*e*	LR		LR	17 57 04.8	
	comp=Z,5μm,24.5s,baz=226								
PMSA	**Palmer Station**	**60.19**	**168**		P		**P**	**17 39 35.0**	**-3.0**
	comp=Z,28nm,1.1s,mb5.2								
PMSA					LR		LR		
	comp=Z,3μm,20.0s,MS5.5								
KSM	**Kuching**	**60.64**	**324**	*e*	P		**P**	**17 39 41.2**	**-0.6**
PPT	**Papeete**	**64.02**	**84**	*e*	P		**P**	**17 40 06.0**	**+1.6**
	comp=Z,44nm,1.4s,mb5.3								
PPT				*e*	S		**S**	**17 48 38.0**	**-3.1**
PPT				*e*	LQ			17 56 19.0	
	comp=Z,1μm,24.2s								
PPT				*e*	SS		SS	17 52 51.7	+2.2
	comp=Z,555nm,28.2s								
PPT				*e*	LQ			17 56 19.0	
	comp=Z,18μm,29.0s								
PPT				*e*	LR		LR	17 58 51.7	
	comp=Z,4μm,23.0s,baz=219								
PPT	**Papeete**	**64.02**	**84**	*e*	P		**P**	**17 40 06.0**	**+1.6**
	comp=Z,44nm,1.4s,mb5.3								
PPT				*e*	S		**S**	**17 48 38.0**	**-3.1**
PPT				*e*	SS		SS	17 52 51.7	+2.2
PPT				*e*	LQ			17 56 19.0	
PPT	**Papeete**	**64.02**	**84**	*e*	P		**P**	**17 40 06.0**	**+1.6**
PPT				*e*	S		**S**	**17 48 38.0**	**-3.1**
PPT				*e*	SS		SS	17 52 51.7	+2.2
PPT					pmax		pmax		
	comp=Z,44nm,1.4s								
PPT	**Papeete**	**64.02**	**84**		LR		LR	18 02 18.8	
	comp=Z,2μm,19.0s,MS5.4,baz=228,slow=31								
TVO	**Taravao**	**64.05**	**85**	*e*	P		**P**	**17 40 06.3**	**+1.7**
	comp=Z,64nm,1.2s,mb5.5								
TVO	**Taravao**	**64.05**	**85**	*e*	P		**P**	**17 40 06.3**	**+1.7**
TVO					pmax		pmax		
	comp=Z,64nm,1.2s,mb5.5								
PSI	**Prapat**	**66.29**	**313**		P		**P**	**17 40 19.1**	**0.0**
	comp=Z,5.0nm,0.3s,mb5.0,baz=155,slow=12,SNR=5.2								
VAH	**Vaihoa**	**67.00**	**84**	*e*	P		**P**	**17 40 24.9**	**+1.2**
	comp=Z,43nm,1.0s,mb5.5								
GUMO	**Guam**	**67.25**	**4**		PFAKE			17 40 40.0	+15
GUMO					LR		LR		
	comp=Z,3μm,22.0s,MS5.4								
KULM	**Kulim**	**67.81**	**316**	*e*	P		**P**	**17 40 26.5**	**-2.3**
RKT	**Rikitea**	**68.36**	**100**	*e*	S		**S**	17 49 30.9	-2.8
	comp=Z,1μm,32.5s								
RKT	**Rikitea**	**68.36**	**100**	*e*	LR		LR	18 01 11.6	
	comp=Z,4μm,28.5s								
SNG	**Songkhla**	**69.53**	**317**		P		**P**	**17 40 43.0**	**+3.5**
PTCN	**Pitcairn Islan**	**69.68**	**105**		PFAKE			17 40 50.0	+10
PTCN					LR		LR		
	comp=Z,3μm,22.0s,MS5.5								
EFI	**East Falkland**	**73.69**	**168**	*e*	P		**P**	**17 41 02.8**	**-1.4**
	comp=Z,93nm,1.1s,mb5.6								
EFI					LR		LR		
	comp=Z,3μm,22.0s,MS5.5								
EFI	**East Falkland**	**73.69**	**168**	*e*	P		**P**	**17 41 02.8**	**-1.3**
EFI					pmax		pmax		
	comp=Z,93nm,1.1s,mb5.6								
EFI					MLR		MLR		
	comp=Z,3μm,22.0s,MS5.5								
TAOE	**Nuku Hiva Isla**	**76.47**	**86**	*e*	LR		LR	18 04 47.6	
	comp=Z,9μm,23.6s								
QIZ	**Qiongzhong**	**77.29**	**330**		P		**P**	**17 41 26.5**	**+1.5**
QIZ					XP		sP	17 41 33.9	+6.0
QIZ					PS			17 52 03.9	
QIZ					AMB		AMB		
	comp=Z,176nm,5.9s								
QIZ					LR		LR		
	comp=E,881nm,21.6s								
QIZ					LR		LR		
	comp=Z,1μm,22.7s,MS5.2								
QIZ	**Qiongzhong**	**77.29**	**330**		PFAKE			17 41 40.0	+15
QIZ					LR		LR		
	comp=Z,1μm,21.0s,MS5.2								
PALK	**Pallekele**	**78.91**	**299**		PFAKE			17 41 50.0	+16
PALK					LR		LR		
	comp=Z,4μm,19.0s,MS5.8								
RPN	**Rapa Nui**	**79.32**	**121**		PFAKE			17 41 50.0	+14
RPN					LR		LR		
	comp=Z,3μm,21.0s,MS5.6								
BDT	**Bhumibol Dam**	**79.32**	**320**		P		**P**	**17 41 40.0**	**+3.6**
SUR	**Sutherland**	**79.69**	**228**		PFAKE			17 41 50.0	+12
SUR					LR		LR		
	comp=Z,6μm,20.0s,MS5.9								
TATO	**Taipei**	**80.23**	**342**		PFAKE			17 41 50.0	+8.9
TATO					LR		LR		
	comp=Z,1μm,21.0s,MS5.2								
CBIJ	**Chichi jima**	**80.60**	**1**		LR		LR	18 14 36.7	
	comp=Z,2μm,21.9s,MS5.4,baz=22,slow=34								
CHG	**Chiang Mai**	**80.78**	**320**	↓	P		**P**	**17 41 46.0**	**+1.8**
	comp=Z,69nm,1.0s,mb5.5								
CHTO	**Chiang Mai**	**80.78**	**320**	*e*	P		**P**	**17 41 44.4**	**+0.3**
	comp=Z,36nm,1.0s,mb5.2								
CHTO					LR		LR		
	comp=Z,3μm,21.0s,MS5.6								
CHTO	**Chiang Mai**	**80.78**	**320**	*e*	P		**P**	**17 41 44.4**	**+0.2**
CHTO					pmax		pmax		
	comp=Z,35nm,1.0s,mb5.2								
CHTO					MLR		MLR		
	comp=Z,3μm,21.0s,MS5.6								
BOSA	**Boshof**	**80.83**	**234**		P		**P**	**17 41 45.2**	**+0.6**
BOSA					LR		LR	18 10 02.9	
BOSA	**Boshof**	**80.83**	**234**		P		**P**	**17 41 45.2**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.5,baz=142,slow=5.6,SNR=7.9								
BOSA					LR		LR	18 10 02.9	
	comp=Z,6μm,21.6s,MS5.9,baz=136,slow=30								
JOW	**Kunigami**	**81.06**	**349**		LR		LR	18 18 09.4	
	comp=Z,1μm,21.2s,MS5.3,baz=135,slow=36								
CHRT	**Chiangrai**	**81.43**	**321**	↑	P		**P**	**17 41 50.0**	**+2.4**
	comp=Z,171nm,1.3s,mb5.8								
PLCA	**Paso Flores**	**82.03**	**157**		P		**P**	**17 41 50.6**	**-0.1**
PLCA					LR		LR		
	comp=Z,1μm,19.0s,MS5.3								
PLCA	**Paso Flores**	**82.03**	**157**		P		**P**	**17 41 50.6**	**-0.1**
	comp=Z,13nm,1.1s,mb4.8,baz=164,slow=9.3,SNR=7.8								
LBTB	**Lobatse**	**83.68**	**236**		PFAKE			17 42 10.0	+10
LBTB					LR		LR		
	comp=Z,5μm,20.0s,MS5.9								
KMI	**Kunming**	**85.22**	**326**		P		**P**	**17 42 10.6**	**+3.5**
KMI					AP		pP	17 42 14.4	+5.2
KMI					XP		sP	17 42 15.9	+5.9
KMI					PPP			17 47 28.3	
KMI					PS			17 53 39.0	
KMI					SSS			18 01 48.8	
KMI					AMB		AMB		
	comp=Z,7.0nm,1.7s,mb4.5								
KMI					AMB		AMB		
	comp=Z,147nm,4.1s								
KMI					LR		LR		
	comp=N,2μm,17.3s,MS5.6								
KMI					LR		LR		
	comp=E,1μm,18.5s,MS5.6								
KMI					LR		LR		
	comp=Z,2μm,23.1s,MS5.5								
GYA	**Guiyang**	**85.23**	**330**		P		**P**	**17 42 08.6**	**+1.5**
GYA					AP		pP	17 42 13.4	+4.2
GYA					XP		sP	17 42 15.8	+5.8
GYA					PPP			17 47 26.0	
GYA					S		S	17 52 31.5	-5.9
GYA					PS			17 53 38.9	
GYA					AMB		AMB		
	comp=Z,10.0nm,0.5s,mb5.2								
GYA					AMB		AMB		
	comp=Z,120nm,4.9s								
GYA					LR		LR		
	comp=N,580nm,27.5s,MS5.1								
GYA					LR		LR		
	comp=E,830nm,23.9s,MS5.1								
GYA					LR		LR		
	comp=Z,810nm,27.0s,MS5.0								
SSE	**Sheshan**	**86.26**	**343**	*e*	P		**P**	**17 42 11.6**	**-0.5**
SSE					AMB		AMB		
	comp=Z,23nm,0.8s,mb5.5								
SSE					AMB		AMB		
	comp=Z,86nm,5.1s								
SSE					LR		LR		
	comp=N,679nm,21.1s,MS5.0								
SSE					LR		LR		
	comp=E,148nm,21.1s,MS5.0								
SSE					LR		LR		
	comp=Z,943nm,20.2s,MS5.2								
TRQA	**Tornquist**	**86.39**	**162**	*e*	P		**P**	**17 42 12.0**	**-1.0**
	comp=Z,61nm,1.8s,mb5.5								
TRQA					LR		LR		
	comp=Z,2μm,22.0s,MS5.5								
TRIS	**Tristan da Cun**	**86.52**	**201**		PFAKE			17 42 20.0	+6.4
TRIS					LR		LR		
	comp=Z,7μm,20.0s,MS6.0								
HYB	**Hyderabad**	**88.61**	**302**	*e*	P		**P**	**17 42 26.0**	**+2.3**
HYB				*e*	S		S	17 52 52.0	-18
HYB	**Hyderabad**	**88.61**	**302**	*i*	P		**P**	**17 42 26.0**	**+2.3**
HYB				*e*	SKS			17 52 52.0	
HYB				*e*	S		S	17 53 10.0	-0.4
HYB				*e*	PS			17 54 16.0	
HYB				*e*	SS		SS	17 59 06.0	+4.2
SHL	**Shillong**	**89.63**	**317**	*e*	P		**P**	**17 42 29.0**	**+0.7**
SHL				*e*	S		S	17 53 21.0	+1.3
MJAR	**Matsushiro Arr**	**90.04**	**358**		P		**P**	**17 42 30.7**	**+0.8**
	comp=Z,3.2nm,0.8s,mb4.7,baz=171,slow=5.8,SNR=7.6								
MJAR					LR		LR	18 25 14.0	
	comp=Z,852nm,18.4s,MS5.2,baz=180,slow=37								
MAJO	**Matsushiro**	**90.04**	**358**	*e*	P		**P**	**17 42 30.7**	**+0.8**
	comp=Z,36nm,1.4s,mb5.5								
MAJO				*e*				17 42 40.7	
MAJO					LR		LR		
	comp=Z,1μm,21.0s,MS5.2								
MAJO	**Matsushiro**	**90.04**	**358**	*e*	P		**P**	**17 42 30.7**	**+0.7**
MAJO					pmax		pmax		
	comp=Z,36nm,1.4s,mb5.5								
MAJO					MLR		MLR		
	comp=Z,1μm,21.0s,MS5.2								
MAT	**Matsushiro**	**90.04**	**358**		P		**P**	**17 42 30.0**	**0.0**
CD2	**Chengdu**	**90.28**	**329**	*e*	P		**P**	**17 42 34.3**	**+3.1**
CD2					AP		pP	17 42 39.1	+5.7
CD2					XP		sP	17 42 41.8	+7.7
CD2					PS		PS	17 54 39.6	+6.8
CD2					AMB		AMB		
	comp=Z,20nm,1.2s,mb5.3								
CD2					AMB		AMB		
	comp=Z,170nm,8.4s								
CD2					LR		LR		
	comp=N,1μm,24.0s,MS5.6								
CD2					LR		LR		
	comp=E,2μm,19.2s,MS5.6								
CD2					LR		LR		
	comp=Z,1μm,26.4s								
LSZ	**Lusaka**	**90.49**	**243**	*e*	P		**P**	**17 42 34.6**	**+1.9**
	comp=Z,180nm,2.4s,mb6.0								
LSZ					LR		LR		
	comp=Z,5μm,20.0s,MS5.9								
LSZ	**Lusaka**	**90.49**	**243**	*e*	P		**P**	**17 42 34.7**	**+1.9**
LSZ					pmax		pmax		
	comp=Z,180nm,2.4s,mb6.0								
LSZ					MLR		MLR		
	comp=Z,5μm,20.0s,MS5.9								
KAD	**Karad**	**90.74**	**299**	*ex*			**P**	**17 42 35.0**	**+1.3**
POHA	**Pohakuloa**	**91.34**	**58**		PFAKE			17 42 50.0	+14
POHA					LR		LR		
	comp=Z,2μm,19.0s,MS5.6								
KIP	**Kipapa**	**91.53**	**55**		PFAKE			17 42 50.0	+13
KIP					LR		LR		
	comp=Z,1μm,20.0s,MS5.4								
KSRS	**Korea Array**	**91.59**	**350**		P		**P**	**17 42 38.0**	**+0.8**
	comp=Z,1.5nm,0.8s,mb4.4,baz=182,slow=3.3,SNR=4.5								
KSRS					LR		LR	18 23 48.1	
	comp=Z,1μm,21.1s,MS5.3,baz=282,slow=36								
XAN	**Xi'an**	**91.75**	**334**		P		**P**	**17 42 38.9**	**

comp=N,600nm,24.4s
BJI LR LR
comp=E,486nm,31.9s
BJI LR LR
comp=Z,1µm,24.4s,MS5.4
KMBO Kilima Mbogo 97.04 258 PFAKE 17 43 10.0 +7.1
KMBO LR LR
comp=Z,3µm,20.0s,MS5.7
KMBO Kilima Mbogo 97.04 258 LR LR 18 18 29.9
comp=Z,3µm,20.7s,MS5.8,baz=102,slow=30
ASAJ Asahikawa 97.59 1 LR LR 18 27 17.7
comp=Z,1µm,20.6s,MS5.3,baz=3.5,slow=36
HHC Hu-ho-hao-te 97.60 338 *e*P **P** **17 43 06.9 +2.3**
HHC PS PS 17 55 59.8 +6.5
HHC AMB AMB
comp=Z,19nm,0.8s,mb5.7
HHC AMB AMB
comp=Z,70nm,4.6s
HHC LR LR
comp=N,567nm,19.6s,MS5.3
HHC LR LR
comp=E,670nm,18.0s,MS5.3
HHC LR LR
comp=Z,1µm,28.6s
HIA Hailar 104.25 346 PFAKE 17 43 40.0 +5.0
HIA LR LR
comp=Z,891nm,20.0s,MS5.3
ULN Ulaanbaatar 105.27 337 PFAKE 17 48 00.0 +7.5
ULN LR LR
comp=Z,1µm,21.0s,MS5.4
LPAZ La Paz 105.90 151 PFAKE 17 48 10.0 +15
LPAZ LR LR
comp=Z,793nm,21.0s,MS5.2
NNA Nana 107.06 141 PFAKE 17 48 10.0 +13
NNA LR LR
comp=Z,1µm,21.0s,MS5.4
WMQ Urumqi 107.33 323 PDIF Pdif 17 43 47.6 -1.1
WMQ PP PP 17 48 18.0 +2.2
WMQ PP PP
comp=Z,91nm,9.5s
WMQ LR LR
comp=N,1µm,29.0s,MS5.4
WMQ LR LR
comp=E,1µm,26.3s,MS5.4
WMQ LR LR
comp=Z,1µm,27.6s,MS5.3
PET Petropavlovsk 107.53 11 PFAKE 17 48 10.0 +13
PET LR LR
comp=Z,700nm,20.0s,MS5.2
MSKU Masuku 109.55 238 PFAKE 17 48 10.0 +8.3
MSKU LR LR
comp=Z,9.0nm,19.0s
TLY Talaya 109.63 336 PFAKE 17 48 10.0 +10
TLY LR LR
comp=Z,1µm,21.0s,MS5.4
SMY Shemya 109.77 21 PFAKE 17 48 10.0 +9.3
SMY LR LR
comp=Z,2µm,21.0s,MS5.7
ADK Adak 111.19 27 PFAKE 17 48 10.0 +6.6
ADK LR LR
comp=Z,2µm,22.0s,MS5.5
UCH Uchtor 111.22 313 PFAKE 17 48 20.0 +16
UCH LR LR
comp=Z,766nm,19.0s,MS5.3
PAYG Puerto Ayora 111.30 123 PFAKE 17 48 20.0 +15
PAYG LR LR
comp=Z,3µm,20.0s,MS5.9
TKM2 Tokmak 2 111.32 314 PFAKE 17 48 20.0 +16
TKM2 LR LR
comp=Z,749nm,21.0s,MS5.2
AML Almayashu 111.50 313 PFAKE 17 48 20.0 +16
AML LR LR
comp=Z,1µm,21.0s,MS5.4
MKAR Makanchi Array 111.85 321 PKPdf PKiKP 17 48 03.4 -1.4
MKAR Makanchi Array 111.85 321 PKiKP PKiKP 17 48 03.4 -1.4
comp=Z,0.1nm,0.3s,baz=104,slow=6.1,SNR=2.6
EKS2 Erkin-Say 111.89 313 PFAKE 17 48 20.0 +15
EKS2 LR LR
comp=Z,819nm,20.0s,MS5.3
MA2 Magadan 113.34 6 PFAKE 17 48 20.0 +13
MA2 LR LR
comp=Z,627nm,20.0s,MS5.2
ASCN Ascension 114.97 207 PFAKE 17 48 20.0 +8.0
ASCN LR LR
comp=Z,3µm,21.0s,MS5.8
YAK Yakutsk 115.85 354 PFAKE 17 48 20.0 +8.0
YAK LR LR
comp=Z,831nm,22.0s,MS5.3
UNV Unalaska Valle 115.86 32 PFAKE 17 48 20.0 +7.7
UNV LR LR
comp=Z,6µm,22.0s,MS6.2
KURK Kurchatov 116.46 321 PFAKE 17 48 20.0 +6.5
KURK LR LR
comp=Z,899nm,21.0s,MS5.4
KURK Kurchatov 116.46 321 *i* PKIKP PKPdf 17 48 15.6 +2.1
OTAV Otavalo 117.56 135 PFAKE 17 48 30.0 +13
OTAV LR LR
comp=Z,940nm,20.0s,MS5.4
NVS Novosibirsk 118.22 326 *e*PKIKP PKPdf 17 48 21.4 +4.6
RCBR Riachuelo 120.49 184 PFAKE 17 48 30.0 +7.4
RCBR LR LR
comp=Z,2µm,20.0s,MS5.7
BRVK Borovoye 121.50 318 PFAKE 17 48 30.0 +6.8
BRVK LR LR
comp=Z,913nm,21.0s,MS5.4
SAO San Andreas Ge 123.00 72 PFAKE 17 48 40.0 +13
SAO LR LR
comp=Z,2µm,20.0s,MS5.8
BILL Bilibino 123.03 11 *e*PKPdf PKPdf 17 48 25.3 -0.4
BILL LR LR
comp=Z,858nm,20.0s,MS5.4
BILL Bilibino 123.03 11 *i* PKIKP PKPdf 17 48 28.1 +2.4
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,800nm,21.0s,MS5.3
MCCM Marconi Confer 123.18 69 PFAKE 17 48 40.0 +13
MCCM LR LR
comp=Z,2µm,19.0s,MS5.8
JTS JuntasAbangare 123.39 122 PFAKE 17 48 40.0 +12
JTS LR LR
comp=Z,2µm,19.0s,MS5.7
JTS JuntasAbangare 123.39 122 *i* PKIKP PKPdf 17 48 30.2 +2.1
PFO Pinyon Flat Ob 123.59 78 PFAKE 17 48 40.0 +12
PFO LR LR
comp=Z,2µm,20.0s,MS5.8
HOPS Hopland 123.67 69 PFAKE 17 48 40.0 +12
HOPS LR LR
comp=Z,2µm,20.0s,MS5.8
CMB Columbia Colle 124.49 71 PFAKE 17 48 40.0 +11
CMB LR LR
comp=Z,1µm,21.0s,MS5.6
BCIP Isla Barro Col 124.88 128 PFAKE 17 48 40.0 +9.1
BCIP LR LR
comp=Z,1µm,19.0s,MS5.7
LIC Lamto 125.03 223 *e*PKIKP PKPdf 17 48 34.8 +3.5
comp=Z,18nm,1.0s
LIC *e*MLR MLR
comp=Z,3µm,22.0s,MS5.5
LIC Lamto 125.03 223 *e*PKPdf PKPdf 17 48 34.8 +3.5
LIC LR LR
comp=Z,1µm,22.0s,MS5.5
WDC Whiskeytown Da 125.08 68 PFAKE 17 48 40.0 +10
WDC LR LR
comp=Z,2µm,22.0s,MS5.8
TNA Tin City 125.33 23 *e*PKPdf PKPdf 17 48 29.2 -0.9
TNA LR LR
comp=Z,787nm,22.0s,MS5.3
DBIC Dimbokro 125.36 223 PFAKE 17 48 40.0 +8.1
DBIC LR LR
comp=Z,350nm,19.0s,MS5.0
TGUH Tegucigalpa,Un 125.39 118 PFAKE 17 48 40.0 +8.2
TGUH LR LR
comp=Z,465nm,20.0s,MS5.2
TIXI Tiksi 125.47 355 *e*PKPdf PKPdf 17 48 30.1 -0.2
TIXI LR LR
comp=Z,720nm,21.0s,MS5.3
TIXI Tiksi 125.47 355 *i* PKIKP PKPdf 17 48 32.5 +2.2
TIXI pmax pmax
comp=Z,10.0nm,1.1s
YBH Yreka Blue Hor 125.78 66 PFAKE 17 48 40.0 +8.2
YBH LR LR
comp=Z,2µm,22.0s,MS5.7
NVAR Mina Array Bea 125.94 72 PKP PKPdf 17 48 34.1 +1.9
comp=Z,2.6nm,0.8s,baz=206,slow=2.5,SNR=10
TUC Tucson 125.97 83 PFAKE 17 48 40.0 +7.5
TUC LR LR
comp=Z,1µm,20.0s,MS5.6
TPNV Topopah Spring 126.08 75 PFAKE 17 48 40.0 +7.5
TPNV LR LR
comp=Z,2µm,21.0s,MS5.7
MALT Malatya 126.64 287 *e*PKPdf PKPdf 17 48 36.0 +2.4
MOD Modoc 127.21 68 PFAKE 17 48 50.0 +16
MOD LR LR
comp=Z,2µm,21.0s,MS5.7
COR Corvallis 127.40 63 PFAKE 17 48 50.0 +15
COR LR LR
comp=Z,2µm,20.0s,MS5.8
TRCR Troy Canyon 127.43 74 PKPdf PKPdf 17 48 38.4 +3.4
PMR Palmer 127.66 35 PFAKE 17 48 50.0 +15
PMR LR LR
comp=Z,3µm,21.0s,MS5.9
WUAZ Wupatki 127.90 80 PFAKE 17 48 50.0 +14
WUAZ LR LR
comp=Z,2µm,19.0s,MS5.7
LTX Lajitas 128.03 91 PFAKE 17 48 50.0 +14
LTX LR LR
comp=Z,2µm,22.0s,MS5.8
KIV Kislovodsk 128.11 295 PFAKE 17 48 50.0 +14
KIV LR LR
comp=Z,868nm,21.0s,MS5.4
KIV Kislovodsk 128.11 295 ⇑*i* PKIKP PKPdf 17 48 37.4 +1.3
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,800nm,20.0s,MS5.4
TORD Torodi Ar. Bea 128.18 234 PKP PKPdf 17 48 37.1 -0.1
comp=Z,1.7nm,1.0s,baz=111,slow=1.4,SNR=5.1
WVOR Wild Horse Val 128.48 68 PFAKE 17 48 50.0 +13
WVOR LR LR
comp=Z,2µm,20.0s,MS5.8
SDV Santo Domingo 128.58 139 PFAKE 17 48 50.0 +12
SDV LR LR
comp=Z,1µm,19.0s,MS5.5
ARU Arti 128.68 315 *e*PKPdf PKPdf 17 48 37.4 +0.6
ARU LR LR
comp=Z,940nm,20.0s,MS5.5
ARU Arti 128.68 315 *i* PKIKP PKPdf 17 48 40.8 +4.0
ARU 17 50 46.8
ARU 17 55 47.6
ARU SS SS 18 08 11.2 +10
ARU MLR MLR
comp=Z,796nm,18.0s,MS5.5
ARU MLR MLR
comp=N,673nm,18.0s,MS5.4
ARU MLR MLR
comp=E,263nm,19.0s,MS5.4
MNTX Cornudas Mount 128.72 88 *e*PKPdf PKPdf 17 48 37.4 -0.3
MNTX LR LR
comp=Z,1µm,19.0s,MS5.6
NLWA Neilton Lookou 128.96 60 PFAKE 17 48 50.0 +12
NLWA LR LR
comp=Z,1µm,19.0s,MS5.6
ELK Elko 129.25 72 PFAKE 17 48 50.0 +12
ELK LR LR
comp=Z,49nm,20.0s,MS4.2
IMA2 Indian Mountai 129.45 29 *e*PKPdf PKPdf 17 48 39.3 +1.4
MSU Marysvale 129.49 76 *e*PKPdf PKPdf 17 48 38.3 -0.7
LENM Lemitar 129.53 84 *e*PKPdf PKPdf 17 48 41.8 +2.6
BNM Barren Site 129.73 84 *e*PKPdf PKPdf 17 48 39.4 -0.1
SIT Sitka 129.81 45 PFAKE 17 48 50.0 +11
SIT LR LR
comp=Z,3µm,20.0s,MS6.0
TEIG Tepich 129.93 112 PFAKE 17 48 50.0 +10
TEIG LR LR
comp=Z,928nm,21.0s,MS5.5
KVTX Kingsville 130.12 97 PFAKE 17 48 50.0 +9.5
KVTX LR LR
comp=Z,2µm,19.0s,MS5.7
DUG Dugway 130.26 74 PFAKE 17 48 50.0 +10
DUG LR LR
comp=Z,1µm,19.0s,MS5.6
COLA College 130.36 32 PFAKE 17 48 50.0 +10
COLA LR LR
comp=Z,2µm,21.0s,MS5.7
ANMO Albuquerque 130.38 84 *e*PKPdf PKPdf 17 48 42.7 +1.9
ANMO LR LR
comp=Z,1µm,21.0s,MS5.5
ANMO Albuquerque 130.38 84 *i* PKIKP PKPdf 17 48 43.1 +2.3
ANMO Albuquerque 130.38 84 PKP PKPdf 17 48 41.7 +0.9
comp=Z,1.6nm,0.9s,baz=220,slow=3.9,SNR=3.9
HAWA Hanford 130.59 64 PFAKE 17 48 50.0 +9.2
HAWA LR LR
comp=Z,2µm,21.0s,MS5.7
WRAK Wrangell Islan 130.68 47 PFAKE 17 48 50.0 +9.4
WRAK LR LR
comp=Z,2µm,21.0s,MS5.7
MVCO Mesa Verde 130.74 80 *e*PKPdf PKPdf 17 48 42.8 +1.4
MVCO LR LR
comp=Z,1µm,21.0s,MS5.6
BMO Blue Mountains 130.80 67 PFAKE 17 48 50.0 +8.8
BMO LR LR
comp=Z,2µm,20.0s,MS5.8
MPU Maple Canyon 130.81 75 PFAKE 17 48 50.0 +8.6
MPU LR LR
comp=Z,1µm,20.0s,MS5.6
ANTO Ankara 130.91 284 PFAKE 17 48 50.0 +8.4
ANTO LR LR
comp=Z,1µm,22.0s,MS5.5
JCT Junction City 131.15 93 PFAKE 17 48 50.0 +7.6
JCT LR LR
comp=Z,1µm,19.0s,MS5.6
PV10 Paradox Valley 131.22 79 *e*PKPdf PKPdf 17 48 40.7 -1.5
PV01 Paradox Valley 131.33 79 *e*PKPdf PKPdf 17 48 43.2 +0.8
HLID Hailey 131.56 70 PFAKE 17 48 50.0 +7.3
HLID LR LR
comp=Z,1µm,21.0s,MS5.5
HWUT Hardware Ranch 131.90 74 PFAKE 17 48 50.0 +6.6
HWUT LR LR
comp=Z,1µm,19.0s,MS5.6
EGAK Eagle 132.48 35 PFAKE 17 48 50.0 +6.2
EGAK LR LR
comp=Z,1µm,21.0s,MS5.6
SDCO Great Sand Dun 132.86 82 *e*PKPdf PKPdf 17 48 45.9 +0.6
SDCO LR LR
comp=Z,1µm,20.0s,MS5.6
AHID Auburn Hatcher 132.91 73 PFAKE 17 49 00.0 +15
AHID LR LR
comp=Z,925nm,20.0s,MS5.5
NEW Newport 133.03 63 PFAKE 17 49 00.0 +15
NEW LR LR
comp=Z,2µm,22.0s,MS5.7
HKT Hockley 133.11 97 PFAKE 17 49 00.0 +14
HKT LR LR
comp=Z,1µm,19.0s,MS5.6
BW06 Boulder Array 133.79 74 PFAKE 17 49 00.0 +13
BW06 LR LR
comp=Z,1µm,19.0s,MS5.7
PDAR Pinedale Array 133.79 74 PKP PKPdf 17 48 45.4 -1.5
comp=Z,0.2nm,0.4s,baz=116,slow=2.1,SNR=3.3
MSO Missoula 133.87 67 PFAKE 17 49 00.0 +13
MSO LR LR
comp=Z,896nm,21.0s,MS5.5
ISCO Idaho Springs 134.15 80 PFAKE 17 49 00.0 +12
ISCO LR LR
comp=Z,1µm,20.0s,MS5.6
YMR Madison River 134.19 71 PFAKE 17 49 00.0 +12
YMR LR LR
comp=Z,907nm,22.0s,MS5.5
BOZ Bozeman (W) 134.42 69 PFAKE 17 49 00.0 +12
BOZ LR LR
comp=Z,2µm,21.0s,MS5.7
LKWY Lake 134.44 71 PFAKE 17 49 00.0 +12
LKWY LR LR
comp=Z,1µm,20.0s,MS5.6
WMOK Wichita Mounta 134.78 90 *e*PKPdf PKPdf 17 48 47.1 -2.0
WMOK LR LR
comp=Z,2µm,19.0s,MS5.9
NATX Nacogdoches 135.11 96 PFAKE 17 49 00.0 +10
NATX LR LR
comp=Z,919nm,19.0s,MS5.5
RLMT Red Lodge 135.42 71 PFAKE 17 49 00.0 +10
RLMT LR LR
comp=Z,1µm,21.0s,MS5.6
BBGH Gun Hill 136.34 151 PFAKE 17 49 00.0 +7.4
BBGH LR LR
comp=Z,3µm,20.0s,MS6.0
EGMT Eagleton 136.87 68 PFAKE 17 49 00.0 +7.5
EGMT LR LR
comp=Z,1µm,22.0s,MS5.7
CBKS Cedar Bluff 136.96 85 PFAKE 17 49 00.0 +7.0
CBKS LR LR
comp=Z,1µm,19.0s,MS5.6
INK Inuvik 137.00 33 *e*PKPdf PKPdf 17 48 51.9 -0.2
INK Inuvik 137.00 33 PKP PKPdf 17 48 52.0 -0.2
comp=Z,0.7nm,0.8s,baz=346,slow=3.1,SNR=2.6
SDDR Presa de Saban 137.38 132 PFAKE 17 49 10.0 +16
SDDR LR LR
comp=Z,881nm,22.0s,MS5.5
MIAR Mount Ida 137.73 95 PFAKE 17 49 10.0 +15
MIAR LR LR
comp=Z,688nm,20.0s,MS5.4
OBN Obninsk 137.96 304 PFAKE 17 49 10.0 +16
OBN LR LR
comp=Z,1µm,22.0s,MS5.6
OBN Obninsk 137.96 304 ⇑*i* PKIKP PKPdf 17 48 57.0 +2.7
OBN *e* 17 51 46.5
OBN pmax pmax
comp=Z,10.0nm,1.7s
OBN MLR MLR
comp=Z,900nm,21.0s,MS5.5
LAO LASA Array 138.06 71 PFAKE 17 49 10.0 +15
LAO LR LR
comp=Z,1µm,21.0s,MS5.7
SJG San Juan 138.73 139 PFAKE 17 49 10.0 +13
SJG LR LR
comp=Z,1µm,20.0s,MS5.6
KSU1 Kansas State U 139.00 87 PFAKE 17 49 10.0 +13
KSU1 LR LR
comp=Z,1µm,20.0s,MS5.6
BRAL Brewton 139.00 104 PFAKE 17 49 10.0 +13
BRAL LR LR
comp=Z,734nm,20.0s,MS5.4
AKASG Malin Array Be 139.45 294 PKP PKPdf 17 48 55.1 -2.1
comp=Z,0.8nm,0.6s,baz=89,slow=2.5,SNR=6.8
KIEV Kiev 139.46 294 PFAKE 17 49 10.0 +13
KIEV LR LR
comp=Z,981nm,21.0s,MS5.5
DWPF Disney 139.95 113 PFAKE 17 49 10.0 +11
DWPF LR LR
comp=Z,818nm,22.0s,MS5.4
OXF Oxford 140.16 98 PFAKE 17 49 10.0 +11
OXF LR LR
comp=Z,795nm,21.0s,MS5.4
DGMT Dagmar 140.19 70 PFAKE 17 49 10.0 +11
DGMT LR LR
comp=Z,2µm,21.0s,MS5.8
LRAL Lakeview Retre 140.51 102 PFAKE 17 49 10.0 +10
LRAL LR LR
comp=Z,776nm,20.0s,MS5.5
PLAL Pickwick Lake 141.27 99 PFAKE 17 49 10.0 +9.0
PLAL LR LR
comp=Z,816nm,20.0s,MS5.5
YKA Yellowknife Ar 141.53 46 PKP PKPdf 17 48 57.4 -3.1
YKA Yellowknife Ar 141.53 46 PKP PKPdf 17 48 57.4 -3.1
comp=Z,1.1nm,0.7s,baz=237,slow=2.8,SNR=20
ECSD EROS,Sioux Fal 141.86 81 *e*PKPpre 17 48 55.6
ECSD LR LR
comp=Z,1µm,22.0s,MS5.7
KEST Kesra 141.92 262 PKP PKPdf 17 49 03.1 +0.9
comp=Z,3.7nm,0.9s,baz=279,slow=6.3,SNR=6.9
WVT Waverly 142.21 98 PFAKE 17 49 10.0 +7.4
WVT LR LR
comp=Z,893nm,21.0s,MS5.5
SIUC Southern Illin 142.46 95 *e*PKPpre 17 48 55.0
SIUC *e*PKPdf PKPdf 17 48 59.7 -3.4
GOGA Godfrey 142.82 105 PFAKE 17 49 10.0 +6.2
GOGA LR LR
comp=Z,799nm,20.0s,MS5.5
KECS Kecovo 143.13 287 *e*PKP PKPdf 17 49 03.6 -0.3
KECS *e* 17 49 11.1
STHS Stebnicka Huta 143.19 288 *e*PKP PKPdf 17 49 06.1 +2.2
STHS *e* 17 49 12.4
USIN University of 143.55 96 *e*PKPpre 17 49 01.4
CPCT Cooper Cave 143.67 102 *e*PKPdf PKPdf 17 49 03.2 -2.0
JOF Joensuu 143.74 313 *ep* PKPdf 17 49 02.1 -2.4
comp=Z,13nm,0.7s
LVZ Lovozero 143.87 322 PFAKE 17 49 20.0 +15
LVZ LR LR
comp=Z,2µm,22.0s,MS5.7
LVZ Lovozero 143.87 322 ⇑*i* PKIKP PKPdf 17 49 07.9 +3.3
LVZ MLR MLR
comp=Z,1µm,23.0s,MS5.6
VYHS Vyhne 144.08 286 *e*PKP PKPdf 17 49 04.4 -1.1
VYHS *e* 17 49 12.9
VYHS *e*PP PP 17 52 38.4 +18
APA Apatity 144.25 321 ⇓*i* PKHKP PKPdf 17 49 03.7 -1.5
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,2µm,20.0s,MS5.8
TKL Tuckaleechee C 144.25 102 PKP PKPdf 17 49 04.8 -1.5
comp=Z,17nm,0.9s,baz=178,slow=8.3,SNR=7.6
HDIL Hopedale 144.26 91 *e*PKPdf PKPdf 17 49 01.2 -4.9
HDIL LR LR
comp=Z,2µm,21.0s,MS5.8
KOLL Kolacno 144.37 286 *e*PKP PKPdf 17 49 05.1 -0.9
KOLL *e* 17 49 10.8
COW Cow Castle Cre 144.37 108 *e*PKPdf PKPdf 17 49 04.9 -1.6
OJC Ojcow 144.40 289 *e*PKP PKPdf 17 49 03.1 -2.9
FFC Flin Flon 144.45 62 *e*PKPdf PKPdf 17 49 04.5 -1.4
FFC LR LR
comp=Z,1µm,20.0s,MS5.6
NHSC New Hope 144.46 109 PFAKE 17 49 20.0 +13
NHSC LR LR
comp=Z,709nm,19.0s,MS5.5
WCI Wyandotte Cave 144.53 97 *e*PKPdf PKPdf 17 49 03.6 -3.0
WCI LR LR
comp=Z,799nm,21.0s,MS5.5
BOJS Bojanci 144.55 279 *i* PKPbc PKPdf 17 49 11.9 +5.4
JSC Jenkinsville 144.71 106 *e*PKPdf PKPdf 17 49 03.8 -3.3
AGMN Agassiz Refuge 144.82 75 *e*PKPdf PKPdf 17 49 05.7 -1.1
AGMN LR LR
comp=Z,1µm,19.0s,MS5.6
MODS Modra-Piesok 144.91 285 *e*PKP PKPdf 17 49 05.8 -1.2
MODS *e* 17 49 15.5
ZST Bratislava 144.92 284 *e*PKP PKPdf 17 49 07.1 +0.1
ZST LR LR
comp=Z,400nm,19.1s,MS5.2
TZTN Tazewell 145.00 101 *e*PKPdf PKPdf 17 49 05.8 -1.7
TZTN LR LR
comp=Z,738nm,20.0s,MS5.5
BLO Bloomington 145.01 95 *e*PKPdf PKPdf 17 49 07.8 +0.3
LHS Liberty Hill 145.11 107 *e*PKPdf PKPdf 17 49 07.4 -0.4
JFWS Jewell Farm 145.13 87 *e*PKPdf PKPdf 17 49 05.8 -1.8
JFWS LR LR
comp=Z,976nm,20.0s,MS5.6
OKC Ostrava-Krasne 145.14 287 *e*PKP PKPdf 17 49 07.0 -0.3
OKC *e* 17 49 16.1
OKC Ostrava-Krasne 145.14 287 *e*PKP PKPdf 17 49 07.0 -0.3
OKC *ex* x 17 49 16.1
OKC AMS AMS 19 05 00.0
comp=Z,800nm,17.2s
CEY Cerknica 145.16 279 *i* PKPbc PKPbc 17 49 13.6 +6.5
PERS Pernice 145.25 281 *e*PKPdf PKPdf 17 49 08.3 +0.7
PERS *e*PKPbc PKPbc 17 49 14.4 +7.1
ARSA Arzberg 145.34 282 ⇑*iP* PKPbc 17 49 06.8 -0.8
comp=Z,144nm,1.0s,SNR=24
MORC Moravsky Berou 145.45 287 *e*PKPdf PKPdf 17 49 07.2 -0.6
JAVS Javornik 145.46 279 *i* PKPdf PKPdf 17 49 10.0 +2.0
JAVS *e*PKPbc PKPbc 17 49 14.8 +6.7
CONA Conrad Observa 145.49 283 *i* PKPbc PKPbc 17 49 08.2 +0.1
comp=Z,41nm,1.1s,SNR=11
FINES FINESS Array B 145.61 309 PKPbc PKPbc 17 49 08.2 +0.1
comp=Z,3.8nm,0.8s,baz=83,slow=6.0,SNR=12
VOY Vojsko 145.64 279 *e*PKPdf PKPdf 17 49 08.6 +0.3
VOY *e*PKPbc PKPbc 17 49 14.3 +5.7
VOY *e* 17 49 36.2
KAF Kangasniemi 145.71 311 *ep* PKPdf 17 49 08.1 +0.2
comp=Z,23nm,0.9s
CORF Corte 146.30 270 PKP PKPbc 17 49 14.6 +3.8
TREC Trest 146.39 285 *e*PKP PKPdf 17 49 12.3 +2.8
DPC Dobruska-Polom 146.42 287 *e*PKP PKPdf 17 49 11.7 +2.2
DPC *ep*PKP pPKPdf 17 49 17.6 +5.9
DPC AMS AMS 18 59 20.0
comp=Z,800nm,17.7s
KSP Ksiaz 146.66 288 *e*PKP PKPdf 17 49 12.5 +2.6
UPC Upice 146.67 287 *e*PKP PKPdf 17 49 11.8 +1.9
UPC *ep*PKP pPKPdf 17 49 18.7 +6.6
ABTA Abfaltersbach 146.83 279 ⇑*i* PKPbc PKPbc 17 49 12.1 0.0
comp=Z,47nm,1.0s,SNR=7.7
KEV Kevo 146.94 324 PFAKE 17 49 20.0 +10
KEV LR LR
comp=Z,1µm,20.0s,MS5.7
ELN Prospectdale 147.09 103 *e*PKPdf PKPdf 17 49 09.9 -1.1

EYMN Ely 147.16 79 *e*PKPdf PKPdf 17 49 11.7 +0.9
EYMN LR LR
comp=Z,1μm,19.0s,MS5.7
GERES GERESS Array B 147.20 283 PKPbc PKPbc 17 49 13.0 -0.1
comp=Z,3.9nm,0.8s,baz=144,slow=3.1,SNR=18
PRU Pruhonice 147.26 286 *e*PKP PKPdf 17 49 13.4 +2.5
PRU *ex* x 17 49 26.6
PRU AMS AMS 18 57 20.0
comp=Z,900nm,23.5s
BLA Blacksburg 147.27 104 *e*PKPbc PKPbc 17 49 15.6 +1.9
BLA LR LR
comp=Z,857nm,22.0s,MS5.5
CNNC Cliffs of the 147.31 109 PFAKE 17 49 20.0 +8.5
CNNC LR LR
comp=Z,930nm,21.0s,MS5.5
PRA Prague 147.36 286 PKP PKPdf 17 49 15.0 +3.9
PRA *ex* x 17 49 28.0
KHC Kasperske Hory 147.41 284 *e*PKP PKPdf 17 49 14.2 +3.0
KHC *ex* x 17 49 23.0
KHC AMS AMS 18 57 00.0
comp=Z,1μm,29.3s
ARCES ARCESS Array B 147.44 324 PKPbc PKPbc 17 49 12.3 -0.9
ARCES ARCESS Array B 147.44 324 PKPbc PKPbc 17 49 12.3 -0.9
comp=Z,5.8nm,0.8s,baz=94,slow=3.2,SNR=12
PVCC Panska Ves 147.50 287 *e*PKP PKPdf 17 49 14.3 +3.0
PVCC *ep*PKP pPKPdf 17 49 20.6 +7.1
COWI Conover 147.59 83 *e*PKPdf PKPdf 17 49 11.9 +0.3
COWI LR LR
comp=Z,2μm,19.0s,MS5.9
WTTA Wattenberg 147.61 279 PKPdf 17 49 12.9 +1.3
comp=Z,78nm,1.2s
WTTA Wattenberg 147.61 279 *i* PKHKP PKPdf 17 49 12.9 +1.3
ACSO Alum Creek Sta 147.78 97 *e*PKPbc PKPbc 17 49 13.2 -1.8
ACSO LR LR
comp=Z,1μm,19.0s,MS5.7
SQTA Sankt Quirin 147.84 279⇑ *i*P PKPdf 17 49 13.5 +1.5
comp=Z,24nm,0.7s,SNR=5.7
MOTA Moosalm 147.96 279⇑ *i*P PKPdf 17 49 14.3 +2.1
comp=Z,18nm,0.7s,SNR=8.7
BRG Berggiesshubel 148.01 287 *e*PKP PKPdf 17 49 15.2 +3.1
BRG *i* 17 49 28.5
BRG LR LR
comp=Z,750nm,24.8s,MS5.4
BRG Berggiesshubel 148.01 287 *e*PKIKP PKPdf 17 49 15.2 +3.1
BRG pmax pmax
comp=Z,4.0nm,1.3s
BRG pmax pmax
comp=Z,13nm,1.0s
BRG MLR MLR
comp=N,460nm,20.7s,MS5.4
BRG MLR MLR
comp=E,474nm,22.9s,MS5.4
BRG MLR MLR
comp=Z,753nm,24.8s,MS5.4
BRG Berggiesshubel 148.01 287 *e*PKP PKPdf 17 49 15.2 +3.1
comp=Z,7.0nm,1.2s
BRG *i* 17 49 28.5
comp=Z,21nm,1.0s
BRG
comp=N,768nm,20.7s
BRG
comp=E,792nm,22.9s
BRG
comp=Z,1μm,24.8s
FETA Feichten 148.01 278⇑ *i*PKPbc PKPbc 17 49 15.3 -0.1
comp=Z,23nm,0.9s
RETA Reutte 148.23 279 *i* pPKPdf pPKPdf 17 49 15.7 +0.9
comp=Z,58nm,1.6s,SNR=8.3
SBF Sospel 148.24 271 *e*PKIKP PKPbc 17 49 16.8 +0.7
comp=Z,96nm,1.1s
AUTN L'Aution 148.32 271 PKP PKPdf 17 49 15.9 +3.0
TOUF Mont Tournerai 148.44 271 PKP PKPbc 17 49 16.8 +0.2
LMR La Mourre 148.48 269 *e*PKIKP PKPbc 17 49 17.3 +0.5
FRF La Foret Royal 148.53 270 *e*PKIKP PKPdf 17 49 16.5 +3.3
comp=Z,37nm,0.8s
NKC Novy Kostel 148.57 285 *e*PKP PKPbc 17 49 18.8 +2.0
NKC AMS AMS 18 58 20.0
comp=Z,1μm,21.5s
DAVA Damuels 148.65 278⇑ *i*P PKPdf 17 49 17.0 +3.7
comp=Z,57nm,1.1s
AAM Ann Arbor 148.67 93 PFAKE 17 49 20.0 +6.5
AAM LR LR
comp=Z,2μm,21.0s,MS5.8
CLL Collm 148.73 287 *e*PKIKP PKPdf 17 49 16.0 +2.7
CLL pmax pmax
comp=Z,71nm,1.5s
CLL MLR MLR
comp=Z,1μm,19.5s,MS5.7
CLL Collm 148.73 287 *e*(PKPdf) PKPdf 17 49 16.0 +2.7
CLL *i* PKPab PKPab 17 49 22.8 +1.9
comp=Z,30nm,1.4s
CLL *i* x x 17 49 38.2
comp=Z,70nm,1.5s
CLL *e*SS SS 18 11 55.0 -3.4
CLL *e*SSS 18 17 18.0
CLL LmV 19 02 00.0
comp=Z,1μm,19.5s
GRA1 Grafenberg Arr 149.03 283 *e*PKP PKPbc 17 49 17.8 -0.1
GRF Grafenberg Arr 149.03 283 *e*PKP PKPbc 17 49 17.8 -0.1
GRFO Grafenberg 149.03 283 *e*PKPbc PKPbc 17 49 16.5 -1.5
GRFO LR LR
comp=Z,1μm,22.0s,MS5.7
MBDF Montbardon 149.12 272 *e*PKIKP PKPbc 17 49 18.5 +0.2
comp=Z,22nm,0.8s
URVA University of 149.17 106 *e*PKPbc PKPbc 17 49 18.2 -0.5
MOX Moxa 149.23 285 *e*PKP PKPbc 17 49 19.9 +1.5
comp=Z,50nm,1.6s
MOX
comp=Z,800nm,22.0s
MOX Moxa 149.23 285 *e*PKHKP PKPbc 17 49 19.9 +1.5
MOX pmax pmax
comp=Z,50nm,1.6s
MOX MLR MLR
comp=Z,800nm,22.0s,MS5.5
MCWV Mont Chateau 149.25 101 *e*PKPdf PKPdf 17 49 15.7 +1.2
MCWV LR LR
comp=Z,1μm,19.0s,MS5.8
SMRF Simiane la Rot 149.41 270 *e*PKIKP PKPbc 17 49 18.5 -0.6
comp=Z,56nm,1.3s
EMUR La Murta 149.51 254 PKP PKPab 17 49 25.6 +1.1
EBEN Beniarda 149.52 256 PKP PKPab 17 49 26.1 +1.5
KBS Kingsbay 149.55 343 PFAKE 17 49 20.0 +6.1
KBS LR LR
comp=Z,2μm,21.0s,MS5.8
LPG La Plagne 149.55 273 *e*PKIKP PKPbc 17 49 19.2 -0.2
comp=Z,12nm,0.8s
GLMI Grayling 149.56 88 *e*PKPbc PKPbc 17 49 19.1 -0.3
GLMI LR LR
comp=Z,2μm,19.0s,MS5.9
LPL La Plagne 149.57 273 *e*PKIKP PKPbc 17 49 18.7 -0.7
SPAK Spaichingen-Ko 149.69 279 PKP PKPbc 17 49 21.2 +1.6
CBN Corbin 149.70 105 PFAKE 17 49 30.0 +15
CBN LR LR
comp=Z,999nm,20.0s,MS5.6
ORIF Oris-en-Rattie 149.75 272 *e*PKIKP PKPbc 17 49 19.2 -0.7
ORIF *e*MLR MLR
comp=Z,2μm,22.2s,MS5.7
EBER Berja 149.78 251 PKP PKPbc 17 49 24.7 +4.5
FCC Fort Churchill 149.92 58 *e*PKPbc PKPbc 17 49 18.9 -0.9
RES Resolute Bay 149.92 26 *e*PKPdf PKPdf 17 49 15.2 +0.7
RES *e*PKPbc PKPbc 17 49 19.2 -0.2
FELD Feldberg im Sc 150.04 278 PKP PKPbc 17 49 21.5 +1.0
BFO Black Forest 150.07 279 *e*PKPbc PKPbc 17 49 20.1 -0.5
BFO LR LR
comp=Z,896nm,20.0s,MS5.6
EGUA Guajares 150.11 250 PKP PKPbc 17 49 22.4 +1.4
BBS Basel-Blauen 150.13 277 PKP PKPbc 17 49 19.8 -0.9
ETOB Tobarra 150.24 255 PKP PKPbc 17 49 22.5 +1.2
ERON Agron 150.38 250 PKP PKPbc 17 49 22.2 +0.5
VIVF Saint-Julien-I 150.44 270 *e*PKIKP PKPbc 17 49 20.5 -1.0
comp=Z,120nm,1.6s
LOMF Lomont 150.47 276 PKP PKPbc 17 49 22.2 +0.7
LASF Ste Croix 150.48 268 *e*PKIKP PKPbc 17 49 20.3 -1.4
comp=Z,159nm,1.6s
EPOB Poblet 150.49 262 PKP PKPab 17 49 28.4 -0.1
EQES Quesada 150.52 252 PKP PKPab 17 49 32.4 +3.7
CABF La Chapelle 150.53 275 *e*PKIKP PKPbc 17 49 20.7 -1.0
comp=Z,17nm,0.9s
ECHE Chera 150.54 257 PKP PKPbc 17 49 23.2 +1.3
EMIJ Mijas 150.59 248 PKP PKPbc 17 49 24.5 +2.3
ELOJ Sierra Loja 150.66 250 PKP PKPbc 17 49 22.9 +0.6
ERTA Horta de San J 150.68 260 PKP PKPab 17 49 28.4 -0.8
LANF Langenberg 150.69 280 PKP PKPbc 17 49 22.2 +0.2
HINF Hinteralfeld 150.69 277 *e*PKIKP PKPbc 17 49 21.0 -1.0
comp=Z,14nm,1.0s

ECH Echery 150.70 278 PKP PKPbc 17 49 23.2 +1.2
ERPA Erie 150.72 97 *e*PKPdf PKPdf 17 49 15.6 -1.2
ERPA LR LR
comp=Z,1μm,21.0s,MS5.7
CDF Champ du Feu 150.73 279 *e*PKIKP PKPbc 17 49 20.5 -1.6
comp=Z,3.8nm,0.7s
EVIA Vianos 150.78 254 PKP PKPbc 17 49 23.3 +0.8
SDMD Soldier's Deli 150.82 104 *e*PKPbc PKPbc 17 49 20.9 -1.8
EJIF Jimena Fronter 150.88 247 PKP PKPbc 17 49 24.0 +1.1
ELUQ Luque 151.02 250 PKP PKPbc 17 49 22.8 -0.3
SSPA Standing Stone 151.02 101 *e*PKPbc PKPbc 17 49 20.7 -2.3
SSPA LR LR
comp=Z,1μm,19.0s,MS5.6
MTLF Montolieu 151.03 266 *e*PKIKP PKPdf 17 49 20.9 +3.7
comp=Z,70nm,1.4s
HAU Haudompre 151.08 277 *e*PKIKP PKPbc 17 49 21.5 -1.4
comp=Z,17nm,0.9s
HAU *e*MLR MLR
comp=Z,1μm,20.5s,MS5.4
HAU Haudompre 151.08 277 *e*PKPdf PKPbc 17 49 21.5 -1.4
HAU LR LR
comp=Z,1μm,20.5s,MS5.7
EBAN Banos Encina 151.18 252 PKP PKPbc 17 49 25.0 +1.5
THEF They Montfort 151.40 277 PKP PKPbc 17 49 24.6 +0.9
LBL Lubilhac 151.49 270 PKP PKPbc 17 49 22.7 -1.3
MVL Millersville 151.50 104 *e*PKPbc PKPbc 17 49 23.8 -0.4
EADA Adamuz 151.62 251 PKP PKPbc 17 49 25.1 +0.5
ESAC San Caprasio 151.63 261 PKP PKPab 17 49 31.1 -2.1
PLDF La Plantade 151.66 272 PKP PKPbc 17 49 26.6 +2.2
EBIE Bielsa 151.86 263 PKP PKPab 17 49 34.1 0.0
SMF Signal de Mont 151.88 273 *e*PKIKP PKPbc 17 49 22.6 -2.2
comp=Z,16nm,1.0s
BBSR BB Station 151.89 129 PFAKE 17 49 30.0 +11
BBSR LR LR
comp=Z,964nm,19.0s,MS5.6
EPF Esparros 151.95 264 *e*PKIKP PKPbc 17 49 22.5 -2.6
comp=Z,11nm,0.9s
WLF Walferdange 151.96 280 PKPbc PKPab 17 49 37.8 +3.5
ETOR Torete 151.98 258 PKP PKPbc 17 49 26.3 +1.1
CAF Calviac 152.02 268 *e*PKIKP PKPbc 17 49 22.8 -2.4
comp=Z,59nm,1.4s
MEZF Maizieres J'vi 152.08 277 *e*PKIKP PKPbc 17 49 22.9 -2.3
LOR Lormes 152.18 274 *e*PKIKP PKPbc 17 49 23.1 -2.4
comp=Z,17nm,1.1s
LOR *e*MLR MLR
comp=Z,2μm,19.2s,MS5.5
LOR Lormes 152.18 274 *e*PKPdf PKPbc 17 49 23.1 -2.4
LOR LR LR
comp=Z,2μm,19.3s,MS5.8
AVF Avril sur Loir 152.24 273 *e*PKIKP PKPbc 17 49 23.2 -2.4
comp=Z,10.0nm,1.0s
SSF Saint Saulge 152.29 273 *e*PKIKP PKPbc 17 49 23.0 -2.7
comp=Z,9.0nm,0.9s
ESDC Sonseca Array 152.32 254 PKP PKPbc 17 49 26.4 +0.4
ESDC Sonseca Array 152.32 254 PKPbc PKPbc 17 49 25.5 -0.5
comp=Z,2.8nm,0.6s,baz=92,slow=1.5,SNR=15
ESDC PKPab PKPab 17 49 34.8 -1.4
comp=Z,15nm,1.0s,baz=122,slow=1.1,SNR=14
ESLA Sonseca Array 152.32 254 PFAKE 17 49 30.0 +11
ESLA LR LR
comp=Z,7μm,20.0s,MS6.5
ETSF Etsaut 152.40 263 *e*PKIKP PKPbc 17 49 23.1 -3.0
comp=Z,11nm,0.9s
BGF Bois d'Agland 152.43 272 *e*PKIKP PKPbc 17 49 23.3 -2.8
MEM Membach 152.45 282 PKPab PKPab 17 49 40.2 +3.9
PAB San Pablo 152.45 253 *e*PKPbc PKPbc 17 49 29.3 +2.9
PAB LR LR
comp=Z,2μm,20.0s,MS5.9
EMIN Mina Concepcio 152.50 248 PKP PKPbc 17 49 27.8 +1.2
NB2 NORSAR Subarra1 52.53 306 PKP PKPbc 17 49 25.0 -0.8
comp=Z,13nm,1.0s,baz=89,slow=3.6
NOA NORSAR Array B 152.53 306 PKPbc PKPbc 17 49 26.1 +0.3
comp=Z,1.2nm,0.8s,baz=87,slow=2.0,SNR=6.3
NOA PKPab PKPab 17 49 35.2 -1.2
comp=Z,4.0nm,0.9s,baz=248,slow=3.1,SNR=6.6
NAO01 NORSAR Array S 152.66 305 PFAKE 17 49 30.0 +11
NAO01 LR LR
comp=Z,745nm,19.0s,MS5.5
TCF Toulx Ste Croi 152.66 271 *e*PKIKP PKPdf 17 49 23.6 +4.1
EGRO El Granado 152.77 246 PKP PKPdf 17 49 24.1 +4.1
SADO Sadowa 152.78 93 PKPbc PKPbc 17 49 27.5 +0.6
SADO Sadowa 152.78 93 PKPbc PKPbc 17 49 27.5 +0.6
baz=270,slow=3.0
BCLA Clavier 152.78 281 PKPbc PKPbc 17 49 32.1 +5.3
PBDV Barranco-do-Ve 152.80 245 *e*LQ 18 33 53.8
PBDV *e*LR LR 18 41 32.9
comp=Z,2μm,16.7s
PVAQ Vaqueiros 152.80 246 *e*PKP PKPbc 17 49 30.4 +3.2
PVAQ Vaqueiros 152.80 246 *e*LQ 18 34 31.8
PVAQ *e*LR LR 18 41 52.1
comp=Z,2μm,14.9s
LFF La Frestale 152.81 267 *e*PKIKP PKPdf 17 49 23.7 +3.9
SJPF Ste Jean 152.92 262 *e*PKIKP PKPdf 17 49 24.3 +4.3
comp=Z,32nm,1.0s
GIVF Givet 152.92 280 *e*PKIKP PKPdf 17 49 24.0 +4.2
PBAR Barrancos 152.99 248 *e*PKP PKPbc 17 49 31.0 +3.4
PBAR Barrancos 152.99 248 *e*LQ 18 31 33.4
PBAR *e*LR LR 18 40 53.8
comp=Z,1μm,30.9s
GUD Guadarrama 153.07 255 PKP PKPbc 17 49 28.7 +1.0
KONO Kongsberg 153.11 302 PFAKE 17 49 30.0 +10
KONO LR LR
comp=Z,1μm,21.0s,MS5.8
BINY Binghamton 153.12 101 PFAKE 17 49 30.0 +10
BINY LR LR
comp=Z,1μm,19.0s,MS5.8
PFVI Vila Bisbo 153.20 244 *e*LR LR 18 41 34.5
comp=Z,943nm,19.5s
MORF Marmelete 153.23 244 *e*LR LR 18 43 05.3
comp=Z,1μm,10.3s
BAIF Baives 153.26 280 *e*PKIKP PKPdf 17 49 24.5 +4.2
comp=Z,54nm,1.6s
EBAD Badajoz 153.39 249 PKP PKPbc 17 49 33.8 +5.3
EVO Evora 153.78 247 *e*PKP1 PKPbc 17 49 32.2 +2.9
comp=Z,25nm,1.0s
EVO *e*MLR MLR
comp=Z,2μm,22.2s,MS5.5
PESTR Estremoz 153.79 248 *e*LQ 18 32 46.6
PESTR *e*LR LR 18 41 21.5
comp=Z,1μm,18.9s
MFF Saint Martin d 154.22 270 *e*PKIKP PKPdf 17 49 25.8 +4.0
comp=Z,75nm,1.7s
PMAFR Mafra 154.78 246 *e*LQ 18 35 29.4
PMAFR *e*LR LR 18 42 36.7
comp=Z,1μm,26.7s
MTE Manteigas 154.83 251 *e*PKP PKPbc 17 49 33.0 +1.5
MTE Manteigas 154.83 251 *e*LQ 18 35 02.2
MTE *e*LR LR 18 43 02.3
comp=Z,2μm,15.0s
MVO Moncorvo 155.05 253 *e*LQ 18 35 09.9
MVO *e*LR LR 18 43 16.6
comp=Z,2μm,21.0s
LDF La Druitiere 155.17 274 *e*PKIKP PKPdf 17 49 26.8 +3.8
NCB Newcomb 155.22 99 PFAKE 17 49 30.0 +6.8
NCB LR LR
comp=Z,1μm,20.0s,MS5.7
LONY Lake Ozonia 155.38 98 PFAKE 17 49 30.0 +6.6
LONY LR LR
comp=Z,1μm,20.0s,MS5.8
FLN La Foliniere 155.46 274 *e*PKIKP PKPdf 17 49 27.6 +4.2
comp=Z,93nm,1.4s
FLN *e*MLR MLR
comp=Z,2μm,20.8s,MS5.7
FLN La Foliniere 155.46 274 *e*PKPdf PKPdf 17 49 27.6 +4.2
FLN LR LR
comp=Z,2μm,20.8s,MS6.0
GRR Gorron 155.51 273 *e*PKIKP PKPdf 17 49 27.4 +3.9
HRV Harvard--Oak R 155.87 105 PFAKE 17 49 30.0 +5.8
HRV LR LR
comp=Z,2μm,20.0s,MS5.8
WES Weston 155.93 105 PFAKE 17 49 30.0 +5.7
WES LR LR
comp=Z,763nm,21.0s,MS5.5
SGMF Saint Gilles 156.46 271 *e*PKIKP PKPdf 17 49 28.5 +3.8
QUIF Quistinic 156.66 270 *e*PKIKP PKPdf 17 49 29.1 +4.1
LBNH Lisbon 156.72 101 PFAKE 17 49 40.0 +15
LBNH LR LR
comp=Z,2μm,20.0s,MS5.8
ROSF Rostrenen 156.92 271 *e*PKIKP PKPdf 17 49 29.4 +4.1
comp=Z,124nm,1.6s
PKME Peaks-Kenny Pk 158.84 102 PFAKE 17 49 40.0 +12
PKME LR LR
comp=Z,1μm,20.0s,MS5.8
ESK Eskdalemuir 159.20 289 PFAKE 17 49 40.0 +12
ESK LR LR
comp=Z,2μm,19.0s,MS5.9
SCHQ Schefferville 163.92 75 PKPab PKPab 17 50 26.0 +0.2
comp=Z,3.2nm,0.8s,baz=286,slow=8.0,SNR=4.9
SFJD Kangerlussuaq 165.69 18 PFAKE 17 49 40.0 +6.0
SFJD LR LR
comp=Z,2μm,21.0s

NIED ***24*** *17:42:00,3370N×13720E,h340km,Mw4.0 Best double couple: M₀1.08000×10¹⁵ NP1:φ=260.00000°,δ55.00000°, λ-23.00000°. NP2:φ=3.00000°,δ71.00000°,λ-143.00000°.*
ISCJB ***24*** *17:42:32.2±0.4,3365N±006×13729E±007,h371km±2km, mb3.8/21, Error ellipse: s-maj=10.0km s-min=8.5km az=165.7*
JMA ***24*** *17:42:32.9±0.5,3374N×13721E,h373km±5km,M3.5*
IDC ***24*** *17:42:33.8±0.6,3369N×13726E,h365km±8km,mb3.4/10, mb1 3.5/14,mb1mx3.3/25,mbtmp3.4/14, Error ellipse: s-maj=21.2km s-min=9.7km az=70.0*
NEIC ***24*** *17:42:33.4±0.5,3368N×13729E,h365km±4km,mb3.8/7, Error ellipse: s-maj=11.1km s-min=8.4km az=89.0*

ISC 24 17:42:33.7±0.4,3372N±006×13721E±007,h364km±2km, n47,σ0974/56,mb3.8/21,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK02	**Tokai 2**	**0.51**	**63**	P	**Pn**	**17 43 20.1**	**+0.6**
TK03	**Tokai 3**	**0.77**	**54**	P	**Pn**	**17 43 21.1**	**+1.0**
JIE	**Ise**	**0.79**	**328**	P	**Pn**	**17 43 20.6**	**+0.4**
TK04	**Tokai 4**	**0.86**	**39**	P	**Pn**	**17 43 21.3**	**+0.9**
JWZ	**Kozaga**	**1.26**	**262**	P	**Pn**	**17 43 21.8**	**-0.2**
JWZ				*e*S	**S**	**17 43 59.6**	**-1.3**
JWY	**Kouya**	**1.44**	**291**	P	**Pn**	**17 43 23.4**	**+0.6**
JWY				S	**S**	**17 44 01.4**	**-1.0**
JGM	**Miyama**	**2.02**	**349**	P	**Pn**	**17 43 27.0**	**+0.7**
JYN	**Shimob**	**2.09**	**31**	P	**Pn**	**17 43 26.9**	**+0.1**
JWT	**Wachi**	**2.16**	**317**	P	**Pn**	**17 43 27.6**	**+0.3**
JWT				*e*S	**S**	**17 44 09.0**	**-1.5**
JOD2	**Odawara 2**	**2.19**	**45**	P	**Pn**	**17 43 27.7**	**+0.2**
JHJ	**Hachijo jima 2**	**2.23**	**105**	P	**Pn**	**17 43 28.4**	**+0.4**
	37nm,0.3s,baz=207,slow=23,SNR=5.7						
JHJ				S	**S**	**17 44 13.1**	**+1.6**
	13nm,0.3s,baz=251,slow=22,SNR=2.6						
JAI	**Aioi**	**2.30**	**273**	P	**Pn**	**17 43 28.4**	**0.0**
JKG	**Kaga**	**2.65**	**344**	P	**Pn**	**17 43 31.5**	**+0.4**
JRY	**Ryogami san**	**2.68**	**31**	P	**Pn**	**17 43 32.0**	**+0.7**
JMN	**Monobe**	**2.78**	**271**	P	**Pn**	**17 43 32.4**	**+0.2**
MJAR	**Matsushiro Arr**	**2.93**	**16**	P	**Pn**	**17 43 33.4**	**0.0**
	4.0nm,0.3s,baz=173,slow=6.4,SNR=70						
MJAR				S	**S**	**17 44 21.2**	**-0.4**
	1.1nm,0.3s,baz=131,slow=14,SNR=5.1						
MAJO	**Matsushiro**	**2.94**	**16**	*e*Pn	**Pn**	**17 43 33.3**	**-0.1**
MAT	**Matsushiro**	**2.94**	**16**	P	**Pn**	**17 43 33.4**	**0.0**
MAT				*e*S	**S**	**17 44 22.5**	**+0.9**
MAT	**Matsushiro**	**2.94**	**16**	P	**Pn**	**17 43 33.4**	**0.0**
MAT				*e*S	**S**	**17 44 20.6**	**-1.0**
BSO1	**Boso 1**	**3.26**	**72**	P	**Pn**	**17 43 34.0**	**-2.4**
BSO1				*e*S	**S**	**17 44 22.8**	**-4.1**
JAG	**Ashikaga**	**3.27**	**34**	P	**Pn**	**17 43 35.2**	**-1.2**
JNU	**Nakatsue**	**5.33**	**265**	P	**Pn**	**17 43 57.9**	**+0.4**
	3.4nm,0.3s,baz=80,slow=13,SNR=25						
CBIJ	**Chichi jima**	**7.87**	**146**	P	**Pn**	**17 44 21.9**	**-4.7**
	5.4nm,0.3s,baz=302,slow=22,SNR=10						
CBIJ				S	**S**	**17 45 48.1**	**-11**
	27nm,0.3s,baz=294,slow=23,SNR=14						
KSRS	**Korea Array**	**8.43**	**299**	P	**Pn**	**17 44 34.0**	**+0.9**
	0.4nm,0.3s,baz=112,slow=12,SNR=20						
SONM	**Songino Array**	**27.05**	**311**	P	**P**	**17 47 45.5**	**+1.6**
	0.7nm,0.6s,mb3.0,baz=116,slow=8.0,SNR=5.9						
ZALV	**Zalesovo Beam**	**41.73**	**315**	P	**P**	**17 49 48.8**	**+0.7**
	1.2nm,0.5s,mb3.3,baz=85,slow=7.3,SNR=6.8						
ZALV				PcP	PcP	17 51 36.5	-0.2
	0.9nm,0.5s,baz=121,slow=2.2,SNR=4.6						
MKAR	**Makanchi Array**	**43.07**	**305**	P	**P**	**17 49 59.5**	**+0.6**
	0.7nm,0.4s,mb3.2,baz=86,slow=9.9,SNR=12						
KURK	**Kurchatov**	**45.36**	**310**	*e*P	**P**	**17 50 16.9**	**0.0**
	4.0nm,0.4s,mb3.9						
EKS2	**Erkin-Say**	**49.61**	**300**	*e*P	**P**	**17 50 48.4**	**-0.9**
	1.2nm,0.6s,mb3.3						
AML	**Almayashu**	**49.78**	**299**	*e*P	**P**	**17 50 51.0**	**+0.5**
	1.9nm,0.4s,mb3.7						
BRVK	**Borovoye**	**50.38**	**314**	P	**P**	**17 50 54.8**	**0.0**
	2.6nm,0.8s,mb3.5						
FITZ	**Fitzroy Crossi**	**52.70**	**194**	P	**P**	**17 51 11.5**	**-0.6**
	1.1nm,0.5s,mb3.5,baz=8.0,slow=7.2,SNR=5.4						
WRA	**Warramunga Arr**	**53.43**	**183**	P	**P**	**17 51 17.0**	**-0.5**
	1.8nm,0.3s,mb3.9,baz=360,slow=7.5,SNR=26						
SML	**Sawmill**	**53.68**	**35**	P	**P**	**17 51 18.0**	**-0.7**
ARU	**Arti**	**56.60**	**319**	*e*P	**P**	**17 51 39.3**	**-0.2**
	2.5nm,0.4s,mb3.9						
ASAR	**Alice Springs**	**57.15**	**184**	P	**P**	**17 51 43.5**	**-0.2**
	0.5nm,0.4s,mb3.2,baz=356,slow=4.8,SNR=46						
ARCES	**ARCESS Array B**	**65.87**	**339**	P	**P**	**17 52 41.5**	**+0.7**
	2.9nm,0.9s,mb4.0,baz=53,slow=9.1,SNR=4.8						
JOF	**Joensuu**	**67.25**	**331**	*e*p	**P**	**17 52 49.3**	**-0.2**
	1.7nm,0.4s,mb4.1						
KAF	**Kangasniemi**	**69.65**	**332**	*e*p	**P**	**17 53 03.7**	**-0.5**
	3.5nm,0.5s,mb4.3,baz=53,slow=5.6						
FINES	**FINESS Array B**	**70.11**	**332**	P	**P**	**17 53 07.3**	**+0.2**
	2.1nm,0.4s,mb4.2,baz=60,slow=6.5,SNR=41						
MIB	**Mutribah**	**74.05**	**295**	*e*P	**P**	**17 53 30.2**	**-0.5**
MIB				AMb	AMB	17 53 31.2	
	comp=Z,6.8nm,0.5s,mb4.6						
RDF	**Al-Radifah**	**74.33**	**294**	*e*P	**P**	**17 53 32.2**	**-0.1**
RDF				AMb	AMB	17 53 33.0	
	comp=Z,8.8nm,0.6s,mb4.7						
NAY	**Al-Naaiem**	**74.40**	**295**	*e*P	**P**	**17 53 32.3**	**-0.5**
NAY				AMb	AMB	17 53 32.7	
	comp=Z,3.1nm,0.5s,mb4.3						
RST	**Umm Al-Ruwaisa**	**74.46**	**295**	*e*P	**P**	**17 53 32.4**	**-0.7**
RST				AMb	AMB	17 53 33.1	
	comp=Z,5.1nm,0.5s,mb4.5						
AKASG	**Malin Array Be**	**74.77**	**321**	P	**P**	**17 53 34.5**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.5,baz=50,slow=5.7,SNR=6.2						
NB2	**NORSAR Subarra**	**75.86**	**336**	P	**P**	**17 53 40.5**	**+0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=43,slow=5.6						
NOA	**NORSAR Array B**	**75.86**	**336**	P	**P**	**17 53 40.8**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.8,baz=44,slow=5.6,SNR=6.0						

MOS ***24*** *17:42:36.1±1.7,5737N×12085E,h4km,mb4.3/1, Error ellipse: s-maj=19.3km s-min=13.6km az=50.4*

BYKL 24 17:42:36.0±0.5,5738N×12087E,h3km±12km,3C-1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHNR	**Khani**	**0.67**	**227**	*e*Pg	Pg	17 42 48.3	-0.5
KHNR				*e*Sg	Sg	17 42 56.7	-0.8
CRS	**Chara**	**1.50**	**252**	*e*P	Pn	17 43 03.1	-0.6
CRS				*e*		17 43 22.2	
CRS				pmax	pmax		
	comp=Z,280nm,0.6s						
CRS				smax			
	comp=E,324nm,0.6s						
CRS	**Chara**	**1.50**	**252**	*i*Pg	Pg	17 43 03.1	-1.6
CRS				*e*Sg	Sg	17 43 22.2	-1.8
CRS				Pmax			
	comp=E,357nm,0.9s						
CRS				Smax			
	comp=E,353nm,1.0s						
NRGR	**Nerungri**	**2.23**	**107**	*e*P	Pn	17 43 17.5	+3.8
NRGR				S	Sn	17 43 45.3	+3.6
NRGR				smax			
	comp=N,158nm,0.6s						
CLNS	**Chul'man**	**2.26**	**102**	*e*P	Pn	17 43 18.0	+3.8
CLNS				*e*		17 43 47.9	
CLNS				pmax	pmax		
	comp=N,27nm,0.4s						
CLNS				pmax	pmax		
	comp=Z,33nm,0.4s						
CLNS				pmax	pmax		
	comp=E,16nm,0.3s						
CLNS				smax			
	comp=N,296nm,0.4s						
CLNS				smax			
	comp=Z,116nm,0.4s						
CLNS				smax			
	comp=E,123nm,0.3s						
CLNS	**Chul'man**	**2.26**	**102**	*e*Pg	Pg	17 43 17.7	-1.6
CLNS				*e*		17 43 23.0	
CLNS				*e*		17 43 45.3	
CLNS				*e*Sg	Sg	17 43 47.5	-1.1
ALDR	**Aldan**	**2.71**	**61**	*e*Pg	Pg	17 43 24.0	-3.9

ALDR				*e*		Sn	17 43 30.4	
ALDR				*e*Sg	Sg		17 43 59.1	-4.0
NLYR	**Nelyaty**	**2.97**	**255**	⇑*i*Pn	Pn		17 43 24.7	+0.8
NLYR				*e*Pg	Pg		17 43 28.7	-4.1
NLYR				*e*Sg	Sg		17 44 06.5	-4.8
TUP	**Tupik**	**3.01**	**190**	*e*P	Pn		17 43 24.3	-0.1
TUP				*e*S	Sn		17 43 59.8	-1.1
TUP				pmax	pmax			
	comp=Z,52nm,0.4s							
TUP				smax				
	comp=E,280nm,0.7s							
TUP	**Tupik**	**3.01**	**190**	*e*Pn	Pn		17 43 24.6	+0.2
TUP				*e*Pg	Pg		17 43 29.8	-3.8
TUP				*e*Sg	Sg		17 44 08.4	-4.1
TUP				Pmax				
	comp=E,60nm,0.8s							
TUP				Smax				
	comp=E,281nm,0.9s							
BOD	**Bodaibo**	**3.72**	**280**	*e*P	Pn		17 43 33.6	-0.7
BOD				*e*			17 44 29.9	
BOD				pmax	pmax			
	comp=Z,24nm,0.3s							
BOD				smax				
	comp=N,169nm,0.8s							
BOD	**Bodaibo**	**3.72**	**280**	*e*Pn	Pn		17 43 34.4	+0.1
BOD				*e*Pg	Pg		17 43 41.9	-5.3
BOD				*e*Sg	Sg		17 44 29.8	-5.6
BOD				Pmax				
	comp=N,24nm,0.6s							
BOD				Smax				
	comp=N,186nm,1.2s							
SVKR	**Severomuysk**	**4.22**	**256**	*e*Pn	Pn		17 43 40.9	-0.2
SVKR				*e*Pg	Pg		17 43 51.6	-5.2
SVKR				*e*Sg	Sg		17 44 46.5	-4.9
SVKR				Pmax				
	comp=N,73nm,0.5s							
SVKR				Smax				
	comp=N,173nm,1.1s							
UKT	**Uakit**	**4.45**	**248**	⇑*i*P	Pn		17 43 55.2	+11
UKT				*e*S	Sn		17 44 34.0	-2.4
UKT				pmax	pmax			
	comp=Z,14nm,0.4s							
UKT				smax				
	comp=N,71nm,0.4s							
UKT	**Uakit**	**4.45**	**248**	*e*	Pn		17 43 37.1	-7.1
UKT				*e*Pg	Pg		17 43 55.0	-6.1
UKT				*e*Sg	Sg		17 44 52.4	-6.2
UKT				Pmax				
	comp=N,31nm,1.9s							
UKT				Smax				
	comp=N,74nm,0.9s							
YOA	**Uoyan**	**5.19**	**260**	⇑*i*P	Pn		17 44 09.1	+15
YOA				pmax	pmax			
	comp=Z,92nm,0.8s							
YOA	**Uoyan**	**5.19**	**260**	*e*Pg	Pg		17 44 09.4	-5.9
YOA				*e*Sg	Sg		17 45 17.0	-5.4
YOA				Pmax				
	comp=Z,29nm,0.5s							
YOA				Smax				
	comp=Z,463nm,1.5s							
KMO	**Kumora**	**5.54**	**258**	*e*P	Pn		17 43 59.0	-0.3
KMO				*e*S	Sn		17 44 59.2	-4.2
KMO	**Kumora**	**5.54**	**258**	*e*	Pn		17 44 00.6	+1.3
KMO				*e*Pg	Pg		17 44 15.1	-7.0
KMO				*e*Sg	Sg		17 45 26.3	-7.6
KMO				Pmax				
	comp=Z,8.0nm,0.4s							
KMO				Smax				
	comp=Z,101nm,0.9s							
YLYR	**Ulyunkhan**	**5.98**	**249**	*e*P	Pn		17 44 06.7	+1.4
YLYR				pmax	pmax			
	comp=Z,10.0nm,0.6s							
YLYR	**Ulyunkhan**	**5.98**	**249**	*e*	Pn		17 44 14.3	+9.0
YLYR				*e*Pg	Pg		17 44 23.9	-6.6
YLYR				*e*Sg	Sg		17 45 41.6	-6.3
YLYR				Pmax				
	comp=Z,10.0nm,1.5s							
YLYR				Smax				
	comp=Z,58nm,1.6s							
YAK	**Yakutsk**	**6.45**	**40**	*e*P	Pn		17 44 12.1	+0.4
YAK				*e*			17 45 22.2	
YAK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
YAK				pmax	pmax			
	comp=N,2.0nm,1.3s							
YAK				pmax	pmax			
	comp=E,2.0nm,1.4s							
YAK				pmax	pmax			
	comp=Z,5.0nm,0.7s							
YAK				pmax	pmax			
	comp=N,7.0nm,1.4s							
YAK				pmax	pmax			
	comp=E,4.0nm,1.1s							
YAK				smax				
	comp=N,24nm,1.2s							
YAK				smax				
	comp=Z,7.0nm,0.9s							
YAK				smax				
	comp=E,15nm,1.1s							
YAK				smax				
	comp=N,86nm,1.2s							
YAK				smax				
	comp=Z,43nm,0.9s							
YAK				smax				
	comp=E,66nm,1.1s							
YAK				MLR	MLR			
	comp=Z,50nm,13.0s							
NIZ	**Nizh Angarsk**	**6.46**	**260**	*e*P	Pn		17 44 13.3	+1.4
NIZ				*e*S	Sn		17 45 32.4	+6.3
NIZ				pmax	pmax			
	comp=Z,5.0nm,0.4s							
NIZ				smax				
	comp=N,44nm,1.1s							
NIZ	**Nizh Angarsk**	**6.46**	**260**	*e*	Pn		17 44 23.5	+12
NIZ				*e*Pg	Pg		17 44 31.8	-7.9
NIZ				*e*Sg	Sg		17 45 55.0	-8.4
NIZ				Pmax				
	comp=N,3.0nm,0.3s							
NIZ				Smax				
	comp=N,44nm,1.1s							
CIT	**Chita**	**6.84**	**221**	*e*Pg	Pg		17 44 37.4	-10
CIT				*e*Sg	Sg		17 46 06.4	-9.0
CIT				Pmax				
	comp=N,4.0nm,0.7s							
CIT				Smax				
	comp=N,166nm,1.1s							
SYVR	**Suvo**	**7.21**	**243**	*e*Pg	Pg		17 44 46.6	-7.4
SYVR				*e*Sg	Sg		17 46 20.1	-7.2
SYVR				Pmax				
	comp=N,3.0nm,0.8s							
SYVR				Smax				
	comp=N,116nm,1.5s							
MXMB	**Maximikha**	**8.05**	**244**	*e*Pg	Pg		17 45 02.0	-8.0
MXMB				*e*Sg	Sg		17 46 46.2	-8.0
MXMB				Pmax				
	comp=N,6.0nm,1.1s							
MXMB				Smax				
	comp=N,132nm,1.4s							
OGRR	**Ongureny**	**8.41**	**249**	*e*Pg	Pg		17 45 06.8	-10
OGRR				*e*Sg	Sg		17 46 54.7	-11
OGRR				Pmax				
	comp=N,2.0nm,0.9s							
OGRR				Smax				
	comp=N,26nm,1.2s							
KPC	**Khapcheranga**	**9.20**	**217**	*e*	Sn		17 46 28.6	-4.6
KPC				*e*Sg	Sn		17 47 18.9	+46
KPC				Smax				
	comp=N,50nm,1.3s							
TRG	**Tyrgan**	**9.52**	**247**	*e*	Pn		17 45 53.1	+59
TRG				*e*Sg	Sn		17 47 31.4	+50
TRG				Smax				
	comp=N,9.0nm,1.3s							
FFNB	**Fofonovo**	**9.75**	**243**	*e*Sg	Sn		17 47 38.2	+51
FFNB				Smax				
	comp=N,50nm,0.6s							
HRMR	**Khuramsha**	**9.93**	**240**	*e*Pg	Pn		17 45 35.2	+36
HRMR				*e*Sg	Sn		17 47 43.8	+53
HRMR				Pmax				
	comp=N,2.0nm,0.4s							
HRMR				Smax				
	comp=N,126nm,1.2s							
LSTR	**Listvyanka**	**10.80**	**246**	*e*	Sn		17 46 50.8	-22
LSTR				*e*Sg	Sn		17 48 09.2	+57
LSTR				Smax				
	comp=N,14nm,1.1s							
ARS	**Arshan**	**11.98**	**251**	*e*	Sn		17 48 11.9	+30
ARS				*e*Sg	Sn		17 48 48.2	+67
ARS				Smax				
	comp=N,19nm,1.1s							
TIXI	**Tiksi**	**14.71**	**10**	*e*P	Pn		17 46 08.0	+3.4
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.6s							

BJI ***24*** *17:59:13.0, 297S×140.48E, h7km, mB4.9, mb4.6, Ms5.0, Msz5.0*
MOS ***24*** *17:59:17.7±0.9, 243S×140.10E, h10km, mb4.7/14, Error ellipse: s-maj=23.3km s-min=9.3km az=107.5*
IDC ***24*** *17:59:18.3±0.8, 247S×140.09E, h0km, mb4.3/9, mb1 4.6/11, mb1mx4.5/14, mbtmp4.5/11, ML4.6/2, Error ellipse: s-maj=32.2km s-min=15.8km az=86.0*
NEIC ***24*** *17:59:18.8±5.6, 244S×140.06E, h7km±35km, mb4.7/24, Error ellipse: s-maj=11.2km s-min=8.6km az=62.0*
ISCJB ***24*** *17:59:19.3±0.3, 247S±004×140.11E±007, h20km, mb4.5/42, Error ellipse: s-maj=10.2km s-min=6.3km az=176.3*

ISC 24 17:59:21.3±0.3, 249S±004×14012E±007, h22km, h22km±3.9km: pP-P, n83, σ1s07/81, mb4.5/42, 3C-1D, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**12.68**	**216**	*e*P		**Pn**	**18 02 18.4**	**-2.2**
	92nm,0.6s							
BATI	**Kupang**	**18.05**	**244**	P		**Pn**	**18 03 32.0**	**+1.0**
	12nm,0.3s,baz=103,slow=0.9,SNR=22							
WB2	**Warramunga Arr**	**18.24**	**198**	*e*P		**Pn**	**18 03 29.7**	**-3.5**
WRA	**Warramunga Arr**	**18.24**	**198**	P		**Pn**	**18 03 25.9**	**-7.3**
	0.1nm,0.3s,baz=14,slow=13,SNR=5.1							
WRA				S		**Sn**	**18 06 45.5**	**-11**
	0.3nm,0.3s,baz=17,slow=23,SNR=4.4							
CTA	**Charters Tower**	**18.49**	**162**	*e*P		**Pn**	**18 03 36.8**	**+0.5**
	11nm,0.9s							
CTA	**Charters Tower**	**18.49**	**162**	*e*P		**Pn**	**18 03 36.8**	**+0.5**
CTA				pmax	pmax			
	comp=Z,11nm,0.9s							
CTA	**Charters Tower**	**18.49**	**162**	P		**Pn**	**18 03 36.8**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=348,slow=13,SNR=4.8							
CTAO	**Charters Tower**	**18.49**	**162**	*e*P		**Pn**	**18 03 36.1**	**-0.2**
	comp=Z,41nm,1.2s							
CTAO	**Charters Tower**	**18.49**	**162**	*e*P		**Pn**	**18 03 36.1**	**-0.2**
CTAO				pmax	pmax			
	comp=Z,41nm,1.2s							
HNR	**Honiara**	**20.88**	**110**	P		**P**	**18 04 03.3**	**+1.0**
	comp=Z,54nm,0.7s							
HNR	**Honiara**	**20.88**	**110**	P		**P**	**18 04 03.3**	**+1.0**
HNR				pmax	pmax			
	comp=Z,54nm,0.7s							
FITZ	**Fitzroy Crossi**	**21.03**	**221**	*e*P		**P**	**18 04 02.5**	**-1.3**
	comp=Z,43nm,0.8s,mb4.8							
FITZ				*e*S		**S**	**18 07 46.5**	**-11**
FITZ	**Fitzroy Crossi**	**21.03**	**221**	P		**P**	**18 04 03.9**	**+0.1**
	comp=Z,25nm,0.8s,mb4.6,baz=52,slow=11,SNR=22							
FITZ				S		**S**	**18 07 51.5**	**-5.7**
	comp=Z,8.7nm,0.8s,baz=187,slow=16,SNR=3.8							
ASAR	**Alice Springs**	**21.89**	**195**	P		**P**	**18 04 12.7**	**-0.4**
	comp=Z,19nm,0.8s,mb4.6,baz=29,slow=9.7,SNR=95							
ASAR				S		**S**	**18 08 12.1**	**-1.9**
	comp=Z,5.8nm,0.9s,baz=21,slow=22,SNR=4.2							
EIDS	**Eidsvold**	**25.08**	**156**	*e*P		**P**	**18 04 45.8**	**+1.3**
	comp=Z,93nm,1.3s,mb5.2							
KKM	**Kota Kinabalu**	**25.33**	**290**	*e*P		**P**	**18 04 44.9**	**-2.0**
MBWA	**Marble Bar**	**27.18**	**225**	*e*P		**P**	**18 05 03.4**	**-0.1**
	comp=Z,31nm,1.1s,mb4.8							
STKA	**Stephens Creek**	**29.26**	**177**	*e*P		**P**	**18 05 22.5**	**+0.5**
	comp=Z,6.6nm,1.1s,mb4.3							
STKA	**Stephens Creek**	**29.26**	**177**	P		**P**	**18 05 20.8**	**-1.2**
	comp=Z,10nm,1.0s,mb4.5,baz=336,slow=9.1,SNR=7.9							
FORT	**Forrest**	**30.36**	**201**	*e*P		**P**	**18 05 32.7**	**+1.0**
	comp=Z,20nm,0.7s,mb5.0							
KLBR	**Kellerberrin**	**35.81**	**214**	*e*P		**P**	**18 06 19.9**	**+0.6**
	comp=Z,14nm,1.0s,mb4.8							
NJ2	**Nanjing**	**39.84**	**331**	*e*P		**P**	**18 06 52.3**	**-1.0**
NJ2				AMB	AMB			
	comp=Z,20nm,0.5s,mb5.1							
KSRS	**Korea Array**	**41.32**	**345**	P		**P**	**18 07 05.9**	**+0.4**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.5							
KSRS	**Korea Array**	**41.32**	**345**	P		**P**	**18 07 05.9**	**+0.4**
	comp=Z,0.8nm,0.7s,mb3.5,baz=163,slow=9.9,SNR=4.0							
KMI	**Kunming**	**45.46**	**309**	P		**P**	**18 07 40.3**	**+1.2**
KMI				AP	pP		18 07 48.3	+2.5
KMI				XP	sP		18 07 50.8	+2.3
KMI				AMB	AMB			
	comp=Z,6.0nm,1.3s,mb4.3							
XAN	**Xi'an**	**46.72**	**324**	P		**P**	**18 07 48.1**	**-0.8**
XAN				AP	pP		18 07 56.5	+0.9
XAN				AMB	AMB			
	comp=Z,4.0nm,1.4s,mb4.2							
YSS	**Yuzh-Sakhalins**	**49.29**	**2**	*e*P		**P**	**18 08 06.7**	**-1.8**
	comp=Z,15nm,1.0s,mb5.0							
YSS	**Yuzh-Sakhalins**	**49.29**	**2**⇑	*e*P		**P**	**18 08 09.6**	**+1.1**
YSS				pmax	pmax			
	comp=Z,15nm,1.2s,mb4.9							
LZH	**Lanzhou**	**51.16**	**322**	*e*P		**P**	**18 08 24.1**	**+1.1**
LZH				AP	pP		18 08 28.6	-1.2
LZH				XP	sP		18 08 30.0	-2.4
LZH				AMB	AMB			
	comp=Z,16nm,1.4s,mb4.8							
LZH				AMB	AMB			
	comp=Z,78nm,4.5s							
KLR	**Kul'dur**	**52.02**	**353**	*e*P		**P**	**18 08 24.3**	**-4.8**
GTA	**Gaotai**	**55.74**	**323**	*e*P		**P**	**18 08 58.4**	**+1.9**
GTA				AP	pP		18 09 02.4	-1.0
GTA				XP	sP		18 09 05.5	-0.5
GTA				AMB	AMB			
	comp=Z,5.0nm,0.9s,mb4.5							
ULN	**Ulaanbaatar**	**57.87**	**334**	*e*P		**P**	**18 09 12.1**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.2							
ULN	**Ulaanbaatar**	**57.87**	**334**	*e*P		**P**	**18 09 12.1**	**+0.6**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2							
SONM	**Songino Array**	**58.13**	**334**	P		**P**	**18 09 15.3**	**+2.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=150,slow=9.8,SNR=4.2							
TAPN	**Taplejung**	**58.51**	**304**	*e*P		**P**	**18 09 17.1**	**+0.7**
	comp=Z,17nm,1.2s,mb5.0							
ODAN	**Odare**	**58.59**	**304**	*e*P		**P**	**18 09 20.9**	**+3.9**
	comp=Z,15nm,0.9s,mb5.0							
KKN	**Kakani**	**60.68**	**304**	*e*P		**P**	**18 09 31.8**	**+0.5**
	comp=Z,17nm,1.0s,mb5.2							
GKN	**Gorkha**	**61.28**	**304**	*e*P		**P**	**18 09 35.6**	**+0.2**
	comp=Z,19nm,0.9s,mb5.2							
ZAK	**Zakamensk**	**61.40**	**334**	*e*P		**P**	**18 09 35.6**	**-0.1**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.2s,mb4.1							
KOLN	**Koldanda**	**62.07**	**303**	*e*P		**P**	**18 09 41.4**	**+0.7**
	comp=Z,26nm,1.3s,mb5.2							
TLY	**Talaya**	**62.20**	**335**	*e*P		**P**	**18 09 41.1**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.5							
TLY	**Talaya**	**62.20**	**335**	*e*P		**P**	**18 09 41.9**	**+0.8**
TLY				*e*S		**S**	**18 18 03.6**	**-1.9**
TLY				*e*SS		SS	18 22 11.0	+2.1
TLY				pmax	pmax			
	comp=Z,2.0nm,0.7s,mb4.4							
TLY				MLR	MLR			
	comp=Z,999nm,20.0s							
YAK	**Yakutsk**	**64.84**	**355**	P		**P**	**18 09 57.5**	**-0.9**
	comp=Z,7.6nm,0.8s,mb4.8							
YAK	**Yakutsk**	**64.84**	**355**⇑	*e*P		**P**	**18 09 57.9**	**-0.5**
YAK				pmax	pmax			
	comp=Z,17nm,1.8s,mb4.8							
MKAR	**Makanchi Array**	**70.48**	**322**	P		**P**	**18 10 34.5**	**+0.2**
MKAR	**Makanchi Array**	**70.48**	**322**	P		**P**	**18 10 34.5**	**+0.2**
	comp=Z,3.0nm,0.7s,mb4.3,baz=102,slow=7.1,SNR=38							
ZALV	**Zalesovo Beam**	**72.46**	**329**	P		**P**	**18 10 45.3**	**-0.7**
	comp=Z,2.3nm,0.6s,mb4.3,baz=110,slow=6.5,SNR=12							
ZAL	**Zalesovo**	**72.46**	**329**	P		**P**	**18 10 45.3**	**-0.8**
BILL	**Bilibino**	**72.70**	**10**	*e*P		**P**	**18 10 46.9**	**-0.3**
BILL				pmax	pmax			
	comp=Z,4.0nm,1.6s,mb4.1							
TKM2	**Tokmak 2**	**73.36**	**316**	*e*P		**P**	**18 10 52.5**	**+0.8**
	comp=Z,3.7nm,0.7s,mb4.4							
TKM2	**Tokmak 2**	**73.36**	**316**	*e*P		**P**	**18 10 52.5**	**+0.9**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
NVS	**Novosibirsk**	**73.71**	**330**	*e*P		**P**	**18 10 52.0**	**-1.4**
NVS				pmax	pmax			
	comp=Z,10.0nm,1.3s,mb4.6							
NVS				pmax	pmax			
	comp=N,4.0nm,1.4s							
NVS				pmax	pmax			
	comp=E,6.0nm,1.3s							
UCH	**Uchtor**	**73.88**	**315**	*e*P		**P**	**18 10 56.1**	**+1.3**
	comp=E,5.7nm,0.9s,mb4.5							
KURK	**Kurchatov**	**74.35**	**325**	*e*P		**P**	**18 10 56.8**	**-0.5**
	comp=E,4.8nm,1.0s,mb4.4							
KURK	**Kurchatov**	**74.35**	**325**	*e*P		**P**	**18 10 56.8**	**-0.5**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.4							
TIXI	**Tiksi**	**74.37**	**356**	*e*P		**P**	**18 10 56.4**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1							
TIXI	**Tiksi**	**74.37**	**356**	*e*P		**P**	**18 10 55.3**	**-1.7**
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.6s,mb4.2							
AML	**Almayashu**	**74.43**	**315**	*e*P		**P**	**18 10 59.0**	**+1.1**
	comp=Z,7.9nm,0.8s,mb4.7							
EKS2	**Erkin-Say**	**74.54**	**315**	*e*P		**P**	**18 10 59.4**	**+0.8**
	comp=Z,8.7nm,1.1s,mb4.6							
VNDA	**Vanda**	**75.88**	**175**	P		**P**	**18 11 07.7**	**+2.1**
VNDA	**Vanda**	**75.88**	**175**	P		**P**	**18 11 07.7**	**+2.1**
	comp=Z,2.7nm,1.0s,mb4.1,baz=312,slow=5.7,SNR=5.8							
SBA	**Scott Base**	**76.62**	**174**	*e*P		**P**	**18 11 10.6**	**+0.7**
	comp=Z,15nm,1.3s,mb4.8							
SBA	**Scott Base**	**76.62**	**174**	*e*P		**P**	**18 11 10.6**	**+0.7**
SBA				pmax	pmax			
	comp=Z,15nm,1.3s,mb4.8							
BRVK	**Borovoye**	**80.01**	**325**	*e*P		**P**	**18 11 28.6**	**-0.4**
	comp=Z,3.8nm,0.7s,mb4.4							
BRVK	**Borovoye**	**80.01**	**325**	*e*P		**P**	**18 11 28.6**	**-0.4**
BRVK				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
TTA	**Tatalina**	**80.62**	**25**	*e*P		**P**	**18 11 32.1**	**-0.1**
	comp=Z,12nm,1.3s,mb4.7							
TTA	**Tatalina**	**80.62**	**25**	*e*P		**P**	**18 11 32.1**	**0.0**
TTA				pmax	pmax			
	comp=Z,13nm,1.3s,mb4.7							
IMA2	**Indian Mountai**	**82.81**	**22**	*e*P		**P**	**18 11 43.3**	**-0.4**
SML	**Sawmill**	**83.56**	**27**	P		**P**	**18 11 43.7**	**-3.8**
COLA	**College**	**84.69**	**24**	‖*i*P		**P**	**18 11 50.9**	**-2.3**
ARU	**Arti**	**87.39**	**327**	*e*P		**P**	**18 12 06.1**	**-0.7**
	comp=Z,6.0nm,1.1s,mb4.7							
ARU	**Arti**	**87.39**	**327**	*c i*P		**P**	**18 12 06.6**	**-0.1**
ARU							18 15 27.7	
ARU				S		S	18 22 33.9	-12
ARU				SS		SS	18 28 37.5	+6.5
ARU				SSS			18 32 03.6	
ARU				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.5							
QSPA	**South Pole Qui**	**87.45**	**180**	*e*P		**P**	**18 12 05.8**	**-0.9**
	comp=Z,8.3nm,1.1s,mb4.9							
DAWY	**Dawson**	**88.06**	**26**	*e*P		**P**	**18 12 09.0**	**-0.8**
INK	**Inuvik**	**90.95**	**22**	P		**P**	**18 12 23.1**	**-0.2**
	comp=Z,0.6nm,0.5s,mb4.2,baz=247,slow=7.5,SNR=2.5							
YKA	**Yellowknife Ar**	**99.23**	**27**	P		**P**	**18 13 00.4**	**-0.8**
	comp=Z,0.1nm,0.5s,mb3.6,baz=292,slow=4.0,SNR=4.3							
TORD	**Torodi Ar. Bea**	**137.54**	**287**	PKP		PKPdf	18 18 44.5	-0.1
	comp=Z,0.5nm,0.9s,baz=135,slow=1.0,SNR=3.0							
DBIC	**Dimbokro**	**144.85**	**278**	*e*PKPdf		PKPdf	18 18 56.4	-1.4
DBIC	**Dimbokro**	**144.85**	**278**	PKIKP		PKPdf	18 18 56.5	-1.4
DBIC				pmax	pmax			
	comp=Z,9.0nm,0.8s							
DBIC	**Dimbokro**	**144.85**	**278**	PKP		PKPdf	18 18 56.5	-1.3
	comp=Z,8.5nm,0.8s,baz=61,slow=3.5,SNR=16							
SDDR	**Presa de Saban**	**145.17**	**60**	*e*PKPdf		PKPdf	18 18 56.6	-1.6
LPAZ	**La Paz**	**146.43**	**125**	PKPbc		PKPbc	18 19 03.8	+2.1
	comp=Z,11nm,1.1s,baz=262,slow=4.1,SNR=17							
SDV	**Santo Domingo**	**148.77**	**77**	*e*PKPbc		PKPbc	18 19 06.2	-2.0

ISCJB ***24*** *18:15:48.8±1.1, 467N±0.1×1524E±0.1, h91km±10km, mb3.7/13, Error ellipse: s-maj=21.0km s-min=8.3km az=138.3*
MOS ***24*** *18:15:49.8±1.6, 4687N×15265E, h95km, mb4.1/5, Error ellipse: s-maj=16.4km s-min=12.3km az=56.3*
IDC ***24*** *18:15:50.8±4.5, 4687N×15256E, h86km±39km, mb3.4/10, mb1 3.6/11, mb1mx3.5/21, mbtmp3.4/11, Error ellipse: s-maj=25.6km s-min=18.8km az=94.0*
NEIC ***24*** *18:15:50.2±2.0, 4691N×15252E, h82km±17km, mb4.0/5, Error ellipse: s-maj=16.4km s-min=12.1km az=91.0*

ISC 24 18:15:50.6±1.0, 4675N±010×1524E±01, h86km±9km, n49, σ1s28/54, mb3.7/13, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.50**	**246**	*e*PN		**Pn**	**18 16 43.0**	**+0.2**
KUR				*e*S		**Sn**	**18 17 29.0**	**+5.9**
KUR				pmax	pmax			
	comp=Z,90nm,0.7s							
KUR				smax				
	comp=N,320nm,0.8s							
KUR				smax				
	comp=E,220nm,0.8s							
SKR	**Severo-Kuril's**	**4.64**	**31**	*e*PN		**Pn**	**18 16 57.1**	**-1.1**
SKR				*e*			18 17 39.9	
NEM2	**Nemuro 2**	**5.80**	**237**	P		**Pn**	**18 17 12.6**	**-1.4**
NEM2				*e*S		**Sn**	**18 18 17.6**	**-1.5**
JRA	**Rausu**	**5.85**	**244**	P		**Pn**	**18 17 16.3**	**+1.7**
JNK	**Nakash**	**6.28**	**243**	P		**Pn**	**18 17 21.0**	**+0.4**
JTKR	**Abashiri--Toko**	**6.59**	**248**	P		**Pn**	**18 17 26.4**	**+1.6**
YSS	**Yuzh-Sakhalins**	**6.62**	**275**	Pn		**Pn**	**18 17 25.1**	**0.0**
YSS	**Yuzh-Sakhalins**	**6.62**	**275**	*e*PN		**Pn**	**18 17 28.7**	**+3.6**
JAK	**Akkeshi**	**6.63**	**238**	P		**Pn**	**18 17 23.9**	**-1.4**
JAK				*e*S		**Sn**	**18 18 38.2**	**-1.2**
JMP	**Maruseppu**	**6.93**	**250**	P		**Pn**	**18 17 31.7**	**+2.3**
JAR	**Ashorobuto**	**7.02**	**244**	P		**Pn**	**18 17 31.4**	**+0.8**
JOB	**Onbets**	**7.20**	**241**	*e*S		**Sn**	**18 18 53.7**	**+0.5**
ASAJ	**Asahikawa**	**7.38**	**253**	P		**Pn**	**18 17 38.3**	**+2.8**
ASAJ	**Asahikawa**	**7.38**	**253**	PN		**Pn**	**18 17 38.5**	**+3.0**
ASAJ				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ASAJ	**Asahikawa**	**7.38**	**253**	P		**Pn**	**18 17 38.5**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=78,slow=21,SNR=12							
JKK2	**Kamakawa 2**	**7.38**	**251**	P		**Pn**	**18 17 37.7**	**+2.1**
JCH	**Churui**	**7.65**	**241**	P		**Pn**	**18 17 38.5**	**-0.7**
JCH				*e*S		**Sn**	**18 19 02.6**	**-1.6**
JBT2	**Biratori 2**	**8.17**	**245**	P		**Pn**	**18 17 46.6**	**+0.3**
JNB	**Noboribetsu**	**9.16**	**246**

TKM2	**Tokmak 2**	**52.55**	**296**	P	**P**	**18 24 58.7**	**+3.7**
	comp=Z,2.3nm,0.6s,mb4.4						
TKM2	**Tokmak 2**	**52.55**	**296**	P	**P**	**18 24 58.7**	**+3.8**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
FINES	**FINESS Array B**	**63.83**	**334**	P	**P**	**18 26 12.8**	**-0.4**
	comp=Z,1.1nm,0.4s,mb4.0,baz=38,slow=7.8,SNR=19						
PDAR	**Pinedale Array**	**65.14**	**53**	P	**P**	**18 26 21.4**	**-0.7**
	comp=Z,0.4nm,0.8s,mb3.3,baz=4.6,slow=4.5,SNR=3.1						
NB2	**NORSAR Subarra**	**68.07**	**341**	P	**P**	**18 26 39.9**	**-0.5**
	comp=Z,0.9nm,0.6s,mb3.8,baz=27,slow=6.5						
NB2	**NORSAR Subarra**	**68.07**	**341**	P	**P**	**18 26 39.9**	**-0.5**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
NOA	**NORSAR Array B**	**68.07**	**341**	P	**P**	**18 26 40.1**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.9,baz=28,slow=6.5,SNR=7.2						
WRA	**Warramunga Arr**	**68.36**	**198**	P	**P**	**18 26 42.7**	**+0.1**
	comp=Z,0.3nm,0.5s,mb3.3,baz=20,slow=6.8,SNR=4.4						
AKASG	**Malin Array Be**	**71.27**	**326**	P	**P**	**18 27 00.0**	**-0.2**
	comp=Z,0.8nm,0.3s,mb4.0,baz=33,slow=6.0,SNR=6.4						
ASAR	**Alice Springs**	**72.06**	**198**	P	**P**	**18 27 06.5**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=12,slow=5.2,SNR=13						
PLCA	**Paso Flores**	**148.70**	**95**	PKPbc	PKPbc	18 35 27.5	+0.3
	comp=Z,1.0nm,0.8s,baz=4.4,slow=13,SNR=2.9						

*NEIC **24** 18:16:24.4, 3809S×17635E, h161km, MG4.2(WEL), After WEL.*

WEL 24 18:16:24.5±0.4, 3812S×17636E, h161km±3km, ML4.3/24, Error ellipse: s-maj=2.3km s-min=2.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARZ	**Kaharoa**	**0.13**	**315**	P	Pn	18 16 45.8	-0.2
KARZ				S	Sn	18 17 02.4	+0.1
KARZ	**Kaharoa**	**0.13**	**315**	PN	Pn	18 16 45.8	-0.2
KARZ				SN	Sn	18 17 02.4	+0.1
MARZ	**Manawahe**	**0.28**	**62**	P	Pn	18 16 46.3	+0.1
MARZ	**Manawahe**	**0.28**	**62**	PN	Pn	18 16 46.2	0.0
PATZ	**Paeroa**	**0.28**	**197**	P	Pn	18 16 46.5	+0.3
PATZ	**Paeroa**	**0.28**	**197**	PN	Pn	18 16 46.5	+0.3
OPRZ	**Ohinepanea**	**0.31**	**29**	PN	Pn	18 16 46.0	-0.4
OPRZ				SN	Sn	18 17 02.7	-0.3
URZ	**Urewera**	**0.60**	**104**	P	Pn	18 16 47.3	-0.3
URZ	**Urewera**	**0.60**	**104**	PN	Pn	18 16 47.3	-0.3
WHTZ	**Whakaora**	**0.64**	**210**	P	Pn	18 16 48.2	+0.4
WHTZ	**Whakaora**	**0.64**	**210**	PN	Pn	18 16 48.2	+0.4
WATZ	**Wairara**	**0.77**	**220**	P	Pn	18 16 48.8	+0.2
WATZ	**Wairara**	**0.77**	**220**	PN	Pn	18 16 48.8	+0.2
HATZ	**Hinemaiaia**	**0.80**	**195**	P	Pn	18 16 48.8	0.0
HATZ	**Hinemaiaia**	**0.80**	**195**	PN	Pn	18 16 48.8	0.0
RATZ	**Rangitukua**	**0.88**	**212**	P	Pn	18 16 49.5	+0.1
RATZ	**Rangitukua**	**0.88**	**212**	PN	Pn	18 16 49.5	+0.2
MWZ	**Matawai**	**0.94**	**104**	P	Pn	18 16 50.1	+0.3
MWZ	**Matawai**	**0.94**	**104**	PN	Pn	18 16 50.1	+0.3
RITZ	**Rihia Road**	**0.95**	**205**	P	Pn	18 16 50.4	+0.5
RITZ	**Rihia Road**	**0.95**	**205**	PN	Pn	18 16 50.4	+0.6
KATZ	**Kakaramea**	**1.01**	**211**	P	Pn	18 16 50.5	+0.2
KATZ				S	Sn	18 16 53.3	-17
KATZ	**Kakaramea**	**1.01**	**211**	PN	Pn	18 16 50.5	+0.1
BKZ	**Black Stump Fm**	**1.05**	**175**	P	Pn	18 16 50.8	+0.1
BKZ	**Black Stump Fm**	**1.05**	**175**	PN	Pn	18 16 50.8	+0.1
WTVZ	**West Tongariro**	**1.17**	**211**	P	Pn	18 16 51.8	+0.1
WTVZ	**West Tongariro**	**1.17**	**211**	PN	Pn	18 16 51.8	+0.1
OTVZ	**Oturere**	**1.18**	**207**	PN	Pn	18 16 52.2	+0.4
TWVZ	**Taurewa**	**1.20**	**217**	PN	Pn	18 16 52.0	+0.1
NGZ	**Ngauruhoe**	**1.22**	**209**	P	Pn	18 16 52.3	+0.2
NGZ	**Ngauruhoe**	**1.22**	**209**	PN	Pn	18 16 52.3	+0.2
HIZ	**Hauiti**	**1.25**	**251**	P	Pn	18 16 52.4	0.0
HIZ	**Hauiti**	**1.25**	**251**	PN	Pn	18 16 52.4	-0.1
WPVZ	**Whakapapa**	**1.26**	**210**	P	Pn	18 16 52.5	0.0
WPVZ	**Whakapapa**	**1.26**	**210**	PN	Pn	18 16 52.5	-0.1
TUVZ	**Tukino**	**1.28**	**206**	PN	Pn	18 16 53.0	+0.3
FWVZ	**Far West T-bar**	**1.30**	**209**	P	Pn	18 16 52.9	0.0
FWVZ	**Far West T-bar**	**1.30**	**209**	PN	Pn	18 16 52.9	0.0
TRVZ	**Turoa**	**1.34**	**208**	PN	Pn	18 16 53.4	+0.1
WNVZ	**Wahianoa**	**1.35**	**206**	P	Pn	18 16 53.5	+0.1
WNVZ	**Wahianoa**	**1.35**	**206**	PN	Pn	18 16 53.5	+0.2
KNZ	**Kokohu**	**1.37**	**132**	*e*P	Pn	18 16 54.1	+0.6
KNZ	**Kokohu**	**1.37**	**132**	PN	Pn	18 16 54.1	+0.5
MOVZ	**Moawhango**	**1.38**	**200**	P	Pn	18 16 53.3	-0.3
MOVZ	**Moawhango**	**1.38**	**200**	PN	Pn	18 16 53.3	-0.3
PKVZ	**Pokaka**	**1.42**	**214**	PN	Pn	18 16 53.9	-0.1
PUZ	**Puketiti**	**1.49**	**89**	P	Pn	18 16 54.7	-0.1
PUZ	**Puketiti**	**1.49**	**89**	PN	Pn	18 16 54.7	-0.1
VRZ	**Vera Road**	**1.61**	**231**	P	Pn	18 16 56.2	+0.2
VRZ	**Vera Road**	**1.61**	**231**	PN	Pn	18 16 56.2	+0.2
MXZ	**Matakaoa Point**	**1.63**	**71**	P	Pn	18 16 56.6	+0.3
MXZ	**Matakaoa Point**	**1.63**	**71**	PN	Pn	18 16 56.6	+0.4
PXZ	**Pawanui**	**1.95**	**169**	PN	Pn	18 16 59.7	0.0
WAZ	**Wanganui**	**1.96**	**213**	PN	Pn	18 16 59.5	-0.3
TSZ	**Takapari Road**	**1.97**	**189**	P	Pn	18 16 59.3	-0.6
TSZ	**Takapari Road**	**1.97**	**189**	PN	Pn	18 16 59.3	-0.5
BFZ	**Birch Farm**	**2.56**	**182**	*e*P	Pn	18 17 05.9	-1.0
BFZ	**Birch Farm**	**2.56**	**182**	PN	Pn	18 17 05.9	-1.0
MRZ	**Mangatainoka R**	**2.62**	**193**	PN	Pn	18 17 06.1	-1.4
TIWZ	**Tintock**	**2.68**	**188**	PN	Pn	18 17 07.2	-1.1
KIW	**Kapiti Island**	**2.96**	**202**	P	Pn	18 17 09.7	-2.1
KIW	**Kapiti Island**	**2.96**	**202**	PN	Pn	18 17 09.7	-2.1
MTW	**Mount Morrison**	**3.11**	**192**	P	Pn	18 17 11.5	-2.1
MTW	**Mount Morrison**	**3.11**	**192**	PN	Pn	18 17 11.5	-2.1
CAW	**Cannon Point**	**3.15**	**198**	P	Pn	18 17 12.0	-2.1
CAW	**Cannon Point**	**3.15**	**198**	PN	Pn	18 17 12.0	-2.1
DUWZ	**D'Urville Isla**	**3.28**	**214**	PN	Pn	18 17 13.6	-2.2
TRWZ	**Traveller**	**3.32**	**189**	PN	Pn	18 17 14.2	-2.1
PAWZ	**Paruwai Farm**	**3.34**	**192**	P	Pn	18 17 14.2	-2.3
PAWZ	**Paruwai Farm**	**3.34**	**192**	PN	Pn	18 17 14.2	-2.3
MRW	**Makara Radio**	**3.37**	**202**	P	Pn	18 17 14.4	-2.4
MRW	**Makara Radio**	**3.37**	**202**	PN	Pn	18 17 14.4	-2.4
WEL	**Wellington**	**3.40**	**201**	P	Pn	18 17 14.9	-2.3
WEL	**Wellington**	**3.40**	**201**	PN	Pn	18 17 14.9	-2.3
MSWZ	**Moikau Station**	**3.41**	**194**	P	Pn	18 17 14.9	-2.4
MSWZ	**Moikau Station**	**3.41**	**194**	PN	Pn	18 17 14.9	-2.5
SNZO	**South Karori**	**3.44**	**201**	P	Pn	18 17 15.1	-2.6
SNZO	**South Karori**	**3.44**	**201**	PN	Pn	18 17 15.1	-2.6
BHW	**Baring Head**	**3.48**	**199**	PN	Pn	18 17 15.6	-2.7
TCW	**Tory Channel**	**3.49**	**207**	P	Pn	18 17 15.9	-2.5
TCW	**Tory Channel**	**3.49**	**207**	PN	Pn	18 17 15.9	-2.5
TUWZ	**Tuamarina**	**3.80**	**209**	PN	Pn	18 17 19.8	-2.6
NNZ	**Nelson**	**3.86**	**216**	P	Pn	18 17 20.1	-3.1
NNZ	**Nelson**	**3.86**	**216**	PN	Pn	18 17 20.1	-3.0
BSWZ	**Blackbirch Sta**	**4.07**	**207**	P	Pn	18 17 23.2	-2.7
BSWZ	**Blackbirch Sta**	**4.07**	**207**	PN	Pn	18 17 23.2	-2.7
THZ	**Tophouse**	**4.51**	**215**	*e*P	Pn	18 17 28.4	-3.2
THZ	**Tophouse**	**4.51**	**215**	PN	Pn	18 17 28.4	-3.2
KHZ	**Kahutara**	**4.81**	**206**	P	Pn	18 17 32.4	-3.1
KHZ	**Kahutara**	**4.81**	**206**	PN	Pn	18 17 32.4	-3.1
LTZ	**Lake Taylor**	**5.61**	**213**	*e*P	Pn	18 17 41.9	-4.1
LTZ	**Lake Taylor**	**5.61**	**213**	PN	Pn	18 17 41.9	-4.1
MQZ	**McQueen's Vall**	**6.25**	**206**	*e*P	Pn	18 17 49.7	-4.8
MQZ	**McQueen's Vall**	**6.25**	**206**	PN	Pn	18 17 49.7	-4.8
WVZ	**Waitaha Valley**	**6.55**	**219**	*e*P	Pn	18 17 55.7	-2.8
WVZ	**Waitaha Valley**	**6.55**	**219**	PN	Pn	18 17 55.7	-2.8
ODZ	**Otahua Downs**	**8.14**	**210**	*e*P	Pn	18 18 14.6	-5.0
ODZ	**Otahua Downs**	**8.14**	**210**	PN	Pn	18 18 14.6	-5.0

*BJI **24** 18:31:01.4, 960S×12406E, h66km, mB4.9, mb4.7*
*NEIC **24** 18:31:03.8±1.3, 923S×12369E, h42km±14km, mb4.6/14, Error ellipse: s-maj=13.9km s-min=9.4km az=57.0*
*ISCJB **24** 18:31:07.3±0.6, 957S±007×12395E±007, h115km±7km, mb4.5/24, Error ellipse: s-maj=14.7km s-min=7.4km az=42.4*
*IDC **24** 18:31:07.4±1.5, 921S×12370E, h72km±20km, mb4.0/6, mb1 4.0/6, mb1mx3.9/12, mbtmp4.0/6, Error ellipse: s-maj=44.9km s-min=23.0km az=75.0*

ISC 24 18:31:08.4±0.7, 953S±009×12394E±007, h104km±9km, n37, σ0§74/43, mb4.5/24, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**0.73**	**202**	P	**Pn**	**18 31 26.4**	**-0.1**
	171nm,0.3s,baz=30,slow=2.1,SNR=442						
BATI				S	**Sn**	**18 31 40.1**	**+0.2**
	520nm,0.3s,baz=341,slow=1.7,SNR=53						
FITZ	**Fitzroy Crossi**	**8.68**	**169**	*e*P	**Pn**	**18 33 11.0**	**-0.2**
	18nm,0.3s						
FITZ				*e*S	**Sn**	**18 34 39.8**	**-7.6**
FITZ	**Fitzroy Crossi**	**8.68**	**169**	P	**Pn**	**18 33 11.3**	**+0.1**
	4.5nm,0.3s,baz=4.6,slow=11,SNR=76						
FITZ				S	**Sn**	**18 34 40.5**	**-6.9**
	6.3nm,0.3s,baz=224,slow=21,SNR=22						
KAKA	**Kakadu**	**8.92**	**112**	*e*P	**Pn**	**18 33 15.4**	**+0.9**
	10.0nm,0.3s						
KAKA				*e*S	**Sn**	**18 34 52.8**	**-0.4**
MBWA	**Marble Bar**	**12.25**	**199**	*e*Pn	**Pn**	**18 33 58.6**	**-0.8**
MBWA				*e*Sn	**Sn**	**18 36 01.0**	**-13**
WRA	**Warramunga Arr**	**14.43**	**137**	P	**Pn**	**18 34 26.3**	**-1.4**
	0.1nm,0.3s,baz=311,slow=11,SNR=10						
WRA				S	**Sn**	**18 36 57.3**	**-10**
	1.4nm,0.3s,baz=310,slow=24,SNR=17						
ASAR	**Alice Springs**	**16.98**	**147**	P	**Pn**	**18 35 01.6**	**+1.9**
	1.0nm,0.3s,baz=322,slow=12,SNR=97						
ASAR				S	**S**	**18 38 00.6**	**-8.7**
	0.7nm,0.3s,baz=320,slow=23,SNR=20						
KKM	**Kota Kinabalu**	**17.28**	**333**	*e*Pn	**Pn**	**18 35 03.1**	**-0.3**
KSM	**Kuching**	**17.43**	**308**	*e*P	**Pn**	**18 34 58.9**	**-6.3**
FORT	**Forrest**	**21.49**	**170**	*e*P	**P**	**18 35 52.7**	**+3.9**
	29nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**27.61**	**146**	*e*P	**P**	**18 36 51.8**	**+5.6**
	3.1nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**27.61**	**146**	P	**P**	**18 36 51.6**	**+5.4**
	2.7nm,0.7s,mb3.9,baz=322,slow=12,SNR=6.4						
KSRS	**Korea Array**	**46.88**	**4**	P	**P**	**18 39 28.5**	**+0.3**
	0.6nm,0.7s,mb3.4,baz=174,slow=8.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**47.75**	**16**	P	**P**	**18 39 35.1**	**+0.1**
	2.1nm,0.6s,mb4.2,baz=189,slow=9.2,SNR=15						
MAJO	**Matsushiro**	**47.75**	**16**	P	**P**	**18 39 34.8**	**-0.2**
	12nm,1.1s,mb4.7						
LSA	**Lhasa**	**50.18**	**322**	P	**P**	**18 39 55.4**	**+1.7**
LSA	**Lhasa**	**50.18**	**322**	*e*P	**P**	**18 39 54.5**	**+0.8**
	5.8nm,0.5s,mb4.8						
ODAN	**Odare**	**50.66**	**317**	*e*P	**P**	**18 39 56.8**	**-0.6**
	12nm,0.6s,mb5.1						
TAPN	**Taplejung**	**50.76**	**317**	*e*P	**P**	**18 39 58.0**	**-0.1**
	12nm,0.4s,mb5.2						
KKN	**Kakani**	**52.69**	**316**	*e*P	**P**	**18 40 12.0**	**-0.5**
	16nm,0.8s,mb5.1						
GKN	**Gorkha**	**53.27**	**316**	*e*P	**P**	**18 40 16.1**	**-0.6**
	18nm,0.6s,mb5.3						
KOLN	**Koldanda**	**53.84**	**315**	*e*P	**P**	**18 40 20.5**	**-0.4**
	17nm,0.6s,mb5.2						
ULN	**Ulaanbaatar**	**59.07**	**347**	*e*P	**P**	**18 40 57.3**	**-0.3**
	3.7nm,1.1s,mb4.3						
SONM	**Songino Array**	**59.19**	**346**	P	**P**	**18 40 58.8**	**+0.3**
	1.2nm,0.6s,mb4.1,baz=166,slow=8.0,SNR=12						
TLY	**Talaya**	**63.43**	**346**	*e*P	**P**	**18 41 27.3**	**+0.4**
	3.2nm,1.0s,mb4.2						
TLY				*e*		18 41 31.1	
MK31	**Makanchi Array**	**67.24**	**330**	*e*P	**P**	**18 41 51.8**	**+0.2**
MKAR	**Makanchi Array**	**67.24**	**330**	P	**P**	**18 41 52.0**	**+0.3**
	5.9nm,0.6s,mb4.6,baz=133,slow=7.7,SNR=87						
TKM2	**Tokmak 2**	**68.28**	**324**	*e*P	**P**	**18 41 59.1**	**+0.8**
	1.2nm,0.6s,mb3.9						
UCH	**Uchtor**	**68.51**	**323**	*e*P	**P**	**18 42 00.1**	**+0.4**
	2.2nm,0.8s,mb4.0						
UCH				*e*		18 42 06.7	
AML	**Almayashu**	**68.94**	**322**	*e*P	**P**	**18 42 03.3**	**+0.9**
	5.4nm,0.8s,mb4.4						
EKS2	**Erkin-Say**	**69.20**	**323**	P	**P**	**18 42 04.3**	**+0.3**
	5.0nm,0.9s,mb4.3						
ZALV	**Zalesovo Beam**	**71.36**	**337**	P	**P**	**18 42 16.4**	**-0.5**
	7.2nm,0.8s,mb4.6,baz=135,slow=4.4,SNR=33						
YAK	**Yakutsk**	**71.48**	**3**	*e*P	**P**	**18 42 15.1**	**-2.3**
	12nm,0.8s,mb4.8						
KURK	**Kurchatov**	**71.70**	**332**	*e*P	**P**	**18 42 19.0**	**0.0**
	8.7nm,0.8s,mb4.6						
BRVK	**Borovoye**	**77.19**	**330**	*e*P	**P**	**18 42 50.7**	**-0.1**
	1.0nm,0.5s,mb3.8						
ARU	**Arti**	**84.75**	**330**	*e*P	**P**	**18 43 30.8**	**0.0**
	12nm,1.3s,mb4.7						
TORD	**Torodi Ar. Bea**	**123.36**	**279**	PKP	PKPdf	18 49 57.4	+3.0
	0.8nm,0.7s,baz=66,slow=2.6,SNR=5.0						

*IDC **24** 18:52:12.8±1.1, 1965S×17245W, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.2/20, mbtmp4.2/11, ML5.1/1, MS3.7/2, Ms1 3.7/2, ms1mx3.4/40, Error ellipse: s-maj=46.8km s-min=19.2km az=156.0*
*NEIC **24** 18:52:16.1±0.6, 1911S×17277W, h10km, mb4.7/3, Error ellipse: s-maj=22.5km s-min=12.7km az=136.0*
*ISCJB **24** 18:52:18.2±0.7, 192S±0.1×1728W±0.1, h33km, mb4.2/12, Error ellipse: s-maj=24.1km s-min=14.3km az=42.3*

ISC 24 18:52:20.2±0.7, 192S±01×1728W±01, h35km, n21, σ1§06/19, mb4.2/12, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.31**	**10**	*e*Pn	**Pn**	**18 53 30.5**	**-6.6**
AFI				*e*Sn	**Sn**	**18 54 25.2**	**-12**
RAR	**Rarotonga**	**12.37**	**102**	Pn	**Pn**	**18 55 04.9**	**-8.9**
	12nm,0.3s,baz=256,slow=3.9,SNR=16						
RAR				LR	LR	18 58 41.0	
	comp=Z,354nm,19.2s,baz=254,slow=32						
URZ	**Urewera**	**20.97**	**203**	P	**P**	**18 57 00.8**	**+0.6**
	5.8nm,0.7s,baz=351,slow=17,SNR=3.2						
CTA	**Charters Tower**	**38.54**	**262**	P	**P**	**18 59 38.8**	**-0.9**
	1.8nm,0.5s,mb4.1,baz=76,slow=8.0,SNR=5.6						
CTAO	**Charters Tower**	**38.54**	**262**	*e*P	**P**	**18 59 38.5**	**-1.2**
	13nm,1.1s,mb4.6						
STKA	**Stephens Creek**	**42.80**	**244**	P	**P**	**19 00 13.0**	**-1.7**
	1.7nm,0.7s,mb3.9,baz=166,slow=17,SNR=3.9						
ASAR	**Alice Springs**	**49.62**	**255**	P	**P**	**19 01 08.0**	**-0.5**
	8.0nm,1.0s,mb4.7,baz=88,slow=8.3,SNR=37						
WRA	**Warramunga Arr**	**49.67**	**260**	P	**P**	**19 01 07.9**	**-1.0**
	4.6nm,1.0s,mb4.5,baz=97,slow=7.0,SNR=20						
QSPA	**South Pole Qui**	**70.90**	**180**	*e*P	**P**	**19 03 34.2**	**+1.0**
	13nm,1.5s,mb4.6						
MJAR	**Matsushiro Arr**	**72.20**	**320**	P	**P**	**19 03 42.7**	**+1.1**
	2.0nm,0.9s,mb4.0,baz=149,slow=6.7,SNR=3.6						
KKM	**Kota Kinabalu**	**74.24**	**282**	P	**P**	**19 03 55.4**	**+1.2**
NVAR	**Mina Array Bea**	**76.73**	**41**	P	**P**	**19 04 07.0**	**-0.9**
	0.3nm,0.5s,mb3.5,baz=218,slow=7.5,SNR=4.7						
KSM	**Kuching**	**78.14**	**276**	*e*P	**P**	**19 04 17.6**	**+1.2**
KSRS	**Korea Array**	**79.26**	**316**	P	**P**	**19 04 24.1**	**+2.0**
	3.0nm,0.9s,mb4.2,baz=139,slow=6.0,SNR=6.9						
PDAR	**Pinedale Array**	**84.67**	**41**	P	**P**	**19 04 50.5**	**+0.2**
	0.5nm,0.8s,mb3.7,baz=188,slow=3.0,SNR=4.4						
COLA	**College**	**85.93**	**10**	P	**P**	**19 04 56.3**	**+0.2**
	5.8nm,0.9s,mb4.8						
INK	**Inuvik**	**91.76**	**14**	P	**P**	**19 05 22.6**	**-1.1**
	0.6nm,0.7s,mb4.0,baz=260,slow=6.1,SNR=2.1						
YKA	**Yellowknife Ar**	**93.30**	**23**	P	**P**	**19 05 29.9**	**-0.9**
	0.1nm,0.4s,mb3.6,baz=238,slow=4.6,SNR=4.1						
AKASG	**Malin Array Be**	**144.02**	**336**	PKP	PKPdf	19 11 49.9	-2.0
	0.1nm,0.3s,baz=40,slow=4.1,SNR=4.6						
CLL	**Collm**	**147.60**	**353**	*e*PKPbc	PKPbc	19 12 01.0	+0.3
	comp=Z,13nm,1.6s						
GERES	**GERESS Array B**	**149.94**	**351**	PKPbc	PKPbc	19 12 06.9	+0.2
	comp=Z,0.2nm,0.3s,baz=90,slow=4.0,SNR=3.6						

*ISCJB **24** 18:58:15.3±0.8, 5149N±004×1602E±004, h0km, Error ellipse: s-maj=6.2km s-min=3.0km az=16.4*
*IPEC **24** 18:58:15.6±0.3, 5161N×1615E, h0km, ML1.9/3, Error ellipse: s-maj=1.9km s-min=1.5km az=43.0*
*CSEM **24** 18:58:17.9±0.2, 5150N×1603E, h1km, ML2.9/6, Error ellipse: s-maj=3.2km s-min=1.8km az=5.0*
*WAR **24** 18:58:17.6, 5154N×1603E, ML2.5, Mining Induced*
*PRU **24** 18:58:17.9, 5148N×1603E, h0km*

ISC 24 18:58:16.6±0.8, 5152N±004×1604E±004, h0km, n18, σ0§69/38, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**167**	*e*Pg	**Pg**	**18 58 30.5**	**+0.7**
KSP				*e*Sg	**Sg**	**18 58 40.0**	**+1.2**
KSP	**Ksiaz**	**0.69**	**167**	*e*Pg	**Pg**	**18 58 30.5**	**+0.7**
KSP				*e*Sg	**Sg**	**18 58 39.7**	**+0.9**
UPC	**Upice**	**1.01**	**181**	*e*PG	**Pg**	**18 58 36.4**	**+0.5**
DPC	**Dobruska-Polom**	**1.18**	**171**	*e*PG	**Pg**	**18 58 39.2**	**0.0**
DPC				*e*SG	**Sg**	**18 58 54.7**	**+0.2**
	23nm,0.3s						
DPC	**Dobruska-Polom**	**1.18**	**171**	*e*Pg	**Pg**	**18 58 39.1**	**-0.1**
DPC				*e*Sg	**Sg**	**18 58 55.0**	**+0.5**
PVCC	**Panska Ves**	**1.36**	**224**	*e*PG	**Pg**	**18 58 42.8**	**+0.2**
PVCC				*e*SG	**Sg**	**18 59 01.3**	**+1.1**
	52nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**224**	*e*Pg	**Pg**	**18 58 42.6**	**0.0**
PVCC				*e*Sg	**Sg**	**18 59 01.5**	**+1.3**
BRG	**Berggiesshubel**	**1.47**	**245**	PG	**Pg**	**18 58 44.8**	**+0.1**
BRG				SG	**Sg**	**18 59 04.6**	**+0.8**
	22nm,0.4s						
PRU	**Pruhonice**	**1.80**	**212**	*e*PN	**Pn**	**18 58 48.9**	**+0.1**
PRU				*e*PG	**Pg**	**18 58 50.3**	**-0.8**
PRU				*e*SG	**Sg**	**18 59 14.3**	**-0.1**
	12nm,0.3s						
CLL	**Collm**	**1.92**	**265**	*e*Pg	**Pg**	**18 58 52.0**	**-1.2**
CLL				*e*Sg	**Sg**	**18 59 18.0**	**0.0**
	comp=Z,7.0nm,0.4s						
MORC	**Moravsky Berou**	**1.99**	**151**	*e*Pn	**Pn**	**18 58 51.0**	**-0.4**
MORC				*e*Sg	**Sg**	**18 59 19.4**	**-1.0**
	comp=Z,6.4nm,0.3s						
OKC	**Ostrava-Krasne**	**2.15**	**141**	*e*PG	**Pg**	**18 58 57.3**	**-0.4**
OKC				*e*SG	**Sg**	**18 59 25.0**	**-0.6**
VRAC	**Vranov**	**2.24**	**171**	*e*Pn	**Pn**	**18 58 55.0**	**+0.2**
VRAC				*e*Sg	**Sg**	**18 59 28.2**	**-0.3**
	comp=Z,7.0nm,0.2s						
KRUC	**Moravsky**	**2.47**	**175**	*e*Pn	**Pn**	**18 58 58.4**	**+0.4**
KRUC				*e*Sg	**Sg**	**18 59 35.3**	**-0.5**
	comp=Z,4.0nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**242**	*e*PN	**Pn**	**18 59 00.3**	**+0.3**
NKC				*e*PG	**Pg**	**18 59 05.6**	**-1.0**
NKC				*e*SG	**Sg**	**18 59 41.0**	**+0.5**
	comp=Z,12nm,0.3s						
OJC	**Ojcow**	**2.71**	**117**	*e*Pg	**Pg**	**18 59 09.2**	**+0.7**
OJC				*e*Sg	**Sg**	**18 59 44.4**	**+0.8**
KHC	**Kasperske Hory**	**2.86**	**214**	*e*PN	**Pn**	**18 59 03.9**	**+0.5**
KHC				*e*PG	**Pg**	**18 59 10.1**	**-1.3**
KHC				*e*SG	**Sg**	**18 59 47.4**	**-1.1**
	comp=Z,4.2nm,0.4s						
MOX	**Moxa**	**2.92**	**254**	*e*PG	**Pg**	**18 59 12.1**	**-0.5**
MOX				*e*SG	**Sg**	**18 59 51.4**	**+0.9**

*LDG **24** 19:13:47.1±0.3, 1905S×7040W, h10km, Mb5.6/36, Ms5.1/10, Error ellipse: s-maj=21.1km s-min=11.1km az=32.0*
*ISCJB **24** 19:13:48.8±0.1, 1971S±002×7013W±003, h26km, mb5.6/221, MS5.2/166, Error ellipse: s-maj=4.2km s-min=3.1km az=150.3*
*MOS **24** 19:13:49.4±1.0, 1948S×7021W, h26km, mb5.9/83, MS5.1/49, Error ellipse: s-maj=9.1km s-min=5.7km az=90.6*
*IDC **24** 19:13:49.2±1.3, 1973S×7011W, h19km±7km, mb5.2/29, mb1 5.3/31, mb1mx5.3/32, mbtmp5.2/31, ML4.2/2, MS5.2/26, Ms1 5.2/26, ms1mx5.0/34, Error ellipse: s-maj=11.6km s-min=6.9km az=86.0*
*GCMT **24** 19:13:50.6±0.1, 1985S×7048W, h33km, MW5.5/90, Moment Tensor Solution. s80,c130; s90,c208; Duration: 1§4 Moment tensor: Scale 10^17Nm; Mrr2.00±.04; Mθθ-2.28±.03; Mϕϕ0.27±.04; Mrθ-0.41±.03; Mθϕ0.49±.03; Mϕr-0.13±.05; Best double couple: Mo2.22900×10^17 NP1:ϕs107.00000°, δ41.00000°, λ100.00000°. NP2:ϕs274.00000°, δ50.00000°, λ81.00000°. Principal axes: T 2.0550, Plg82.0000°, Azm136.0000°; N 0.3420, Plg7.0000°, Azm280.0000°; P -2.4020, Plg5.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **24** 19:13:50.6±0.1, 1972S×7014W, h30km, mb5.8/182, MS5.2/135, MW5.7 Error ellipse: s-maj=4.4km s-min=3.1km az=61.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^17Nm; Mrr3.24; Mθθ-4.23; Mϕϕ0.98; Mrθ-1.70; Mθϕ-1.37; Mϕr0.69; Best double couple: Mo4.40000×10^17 NP1:ϕs53.00000°, δ39.00000°, λ55.00000°. NP2:ϕs276.00000°, δ59.00000°, λ115.00000°. Principal axes: T 3.9400, Plg66.0000°, Azm233.0000°; N 0.9000, Plg21.0000°, Azm82.0000°; P -4.8400, Plg11.0000°, Azm348.0000°;*
*NEIC Felt [V] at Alto Hospico, Chiapa, Iquique, La Tirana and Pisagua; [IV] at Camina, Colchane, Huara, Pica and Mamina; [III

JTS e 19 20 35.6
JTS LR LR
comp=Z,5µm,22.0s,MS5.2
JTS JuntasAbangare 33.22 333⇑ *iP* **P 19 20 25.6 -0.1**
JTS e 19 20 35.6
JTS pmax pmax
comp=Z,84nm,1.4s
JTS MLR MLR
comp=Z,5µm,22.0s
EFI East Falkland 33.26 166 *eP* **P 19 20 25.1 -0.6**
comp=Z,112nm,1.1s,mb5.7
EFI e 19 20 35.3
EFI LR LR
comp=Z,12µm,20.0s,MS5.6
EFI East Falkland 33.26 166 *eP* **P 19 20 25.1 -0.6**
EFI e 19 20 35.3
EFI pmax pmax
comp=Z,112nm,1.1s,mb5.7
EFI MLR MLR
comp=Z,12µm,20.0s,MS5.6
BBGH Gun Hill 34.24 18 PFAKE 19 20 50.0 +15
BBGH LR LR
comp=Z,8µm,22.0s,MS5.4
USHA Ushuaia 35.09 178 P **P 19 20 40.5 -1.0**
comp=Z,46nm,1.1s,mb5.3,baz=344,slow=7.4,SNR=15
USHA PcP PcP 19 23 11.3 -1.4
comp=Z,21nm,1.0s,baz=25,slow=2.5,SNR=4.2
USHA S **S 19 26 14.0 +1.8**
comp=Z,1.6nm,0.3s,baz=29,slow=23,SNR=2.7
RCBR Riachuelo 35.96 72⇑ *iP* **P 19 20 50.2 +0.7**
comp=Z,152nm,1.4s,mb5.7
RCBR LR LR
comp=Z,3µm,20.0s,MS5.1
RPN Rapa Nui 36.67 251 P **P 19 20 53.8 -1.6**
comp=Z,93nm,0.9s,mb5.6,baz=20,slow=3.4,SNR=3.9
RPN LR LR 19 32 13.1
comp=Z,5µm,18.0s,MS5.3,baz=111,slow=30
TGUH Tegucigalpa,Un 37.59 332⇑ *eP* **P 19 21 03.0 -0.2**
comp=Z,108nm,1.0s,mb5.5
TGUH LR LR
comp=Z,3µm,22.0s,MS5.1
CPD Cerro la Pandu 37.73 6⇑ *iP* **P 19 21 02.5 -1.9**
comp=Z,273nm,1.5s,mb5.8
CPD *e*S **S 19 26 47.4 -5.8**
CPD Cerro la Pandu 37.73 6⇑ *iP* **P 19 21 02.5 -1.9**
CPD *e*S **S 19 26 47.4 -5.8**
CPD pmax pmax
comp=Z,273nm,1.5s,mb5.8
SJG San Juan 37.78 6 *eP* **P 19 21 02.8 -2.1**
comp=Z,162nm,1.1s,mb5.7
SJG *e*PP PP 19 22 25.8 -5.7
SJG LR LR
comp=Z,3µm,20.0s,MS5.0
SJG San Juan 37.78 6 *eP* **P 19 21 02.8 -2.0**
SJG *e* 19 22 25.8
SJG pmax pmax
comp=Z,162nm,1.1s
SJG MLR MLR
comp=Z,3µm,20.0s
SJG San Juan 37.78 6 LR LR 19 38 35.2
comp=Z,4µm,18.0s,MS5.3,baz=10,slow=39
MTP Monte Pirata 37.83 7⇑ *eP* **P 19 21 03.4 -1.9**
SDDR Presa de Saban 38.47 358 *eP* **P 19 21 09.3 -1.3**
comp=Z,97nm,1.2s,mb5.4
SDDR *e* 19 21 21.7
SDDR LR LR
comp=Z,7µm,20.0s,MS5.5
HLGC Holguin 40.77 351 *eP* **P 19 21 30.1 +0.3**
MGV Manicaragua 42.68 346 *eP* **P 19 21 46.1 +0.7**
TEIG Tepich 43.52 335⇑ *iP* **P 19 21 50.9 -1.2**
comp=Z,97nm,1.0s,mb5.5
TEIG LR LR
comp=Z,3µm,22.0s,MS5.1
TEIG Tepich 43.52 335 LR LR 19 42 32.1
comp=Z,2µm,18.2s,MS5.0,baz=331,slow=40
CMIG Matias Romero 43.95 325 P **P 19 21 55.5 -0.3**
CMIG S **S 19 28 29.2 +3.3**
CMIG LR LR 19 39 31.4
CMIG Matias Romero 43.95 325 P **P 19 21 55.5 -0.3**
comp=Z,27nm,1.0s,mb4.9,baz=133,slow=5.3,SNR=23
CMIG S **S 19 28 29.2 +3.3**
comp=Z,0.4nm,0.4s,baz=306,slow=20,SNR=1.9
CMIG LR LR 19 39 31.4
comp=Z,2µm,20.0s,MS5.0,baz=120,slow=35
SOR Soroa 44.09 343 *eP* **P 19 21 56.5 -0.3**
PMSA Palmer Station 45.22 176⇑ *iP* **P 19 22 05.3 0.0**
comp=Z,186nm,1.4s,mb5.7
PMSA LR LR
comp=Z,3µm,20.0s,MS5.3
PMSA Palmer Station 45.22 176 P **P 19 22 05.5 +0.3**
comp=Z,53nm,1.0s,mb5.3,baz=9.3,slow=8.1,SNR=8.8
PMSA S **S 19 28 44.3 +1.1**
comp=Z,2.7nm,0.4s,baz=270,slow=1.7,SNR=2.3
PMSA LR LR 19 41 13.5
comp=Z,3µm,19.0s,MS5.3,baz=11,slow=36
DWPF Disney 48.79 347 *eP* **P 19 22 33.1 -0.5**
comp=Z,97nm,1.2s,mb5.7
DWPF LR LR
comp=Z,2µm,21.0s,MS5.1
BBSR BB Station 52.04 6⇑ *iP* **P 19 22 57.0 -1.0**
comp=Z,53nm,0.8s,mb5.5
BBSR *e* pP 19 23 05.4 -1.2
BBSR LR LR
comp=Z,1µm,22.0s,MS4.9
BRAL Brewton 53.01 342⇑ *eP* **P 19 23 05.5 +0.2**
comp=Z,677nm,1.2s,mb6.5
BRAL LR LR
comp=Z,2µm,21.0s,MS5.1
NHSC New Hope 53.40 349⇑ *iP* **P 19 23 08.2 +0.1**
comp=Z,670nm,1.3s,mb6.4
NHSC LR LR
comp=Z,2µm,20.0s,MS5.0
COW Cow Castle Cre 53.76 349 *eP* **P 19 23 10.8 +0.1**
KVTX Kingsville 54.16 329 PFAKE 19 23 30.0 +16
KVTX LR LR
comp=Z,2µm,20.0s,MS5.1
GOGA Godfrey 54.35 346⇑ *iP* **P 19 23 13.4 -1.7**
comp=Z,112nm,1.3s,mb5.6
GOGA LR LR
comp=Z,1µm,22.0s,MS5.0
GOGA Godfrey 54.35 346 P **P 19 23 14.4 -0.7**
GOGA pmax pmax
comp=Z,110nm,1.3s,mb5.6
JSC Jenkinsville 54.74 349 *eP* **P 19 23 17.9 0.0**
JSC Jenkinsville 54.74 349 P **P 19 23 18.3 +0.4**
LHS Liberty Hill 54.84 349 *eP* **P 19 23 16.4 -2.2**
LHS Liberty Hill 54.84 349 *eP* **P 19 23 18.0 -0.7**
LRAL Lakeview Retre 54.89 343⇑ *iP* **P 19 23 16.9 -2.0**
comp=Z,87nm,1.1s,mb5.7
LRAL LR LR
comp=Z,1µm,19.0s,MS5.1
ASCN Ascension 55.12 86 PFAKE 19 23 30.0 +8.9
ASCN LR LR
comp=Z,2µm,19.0s,MS5.2
CNNC Cliffs of the 55.15 352⇑ *eP* **P 19 23 20.2 -0.6**
comp=Z,274nm,1.2s,mb6.2
CNNC LR LR
comp=Z,1µm,20.0s,MS5.0
HKT Hockley 55.26 333⇑ *iP* **P 19 23 20.9 -0.8**
comp=Z,121nm,1.2s,mb5.8
HKT LR LR
comp=Z,967nm,20.0s,MS4.9
HKT Hockley 55.26 333⇑ *iP* **P 19 23 20.9 -0.9**
HKT pmax pmax
comp=Z,121nm,1.2s,mb5.8
HKT MLR MLR
comp=Z,967nm,20.0s,MS4.9
PTCN Pitcairn Islan 55.39 253 PFAKE 19 23 30.0 +7.1
PTCN LR LR
comp=Z,3µm,21.0s,MS5.4
NATX Nacogdoches 56.35 335⇑ *eP* **P 19 23 29.2 -0.3**
comp=Z,325nm,1.2s,mb6.2
NATX LR LR
comp=Z,936nm,21.0s,MS4.9
CPCT Cooper Cave 56.55 346⇑ *iP* **P 19 23 29.6 -1.2**
TKL Tuckaleechee C 56.58 347 LR LR 19 52 24.9
comp=Z,1µm,18.1s,MS5.0,baz=155,slow=41
SWET Sewanee 56.66 344⇑ *iP* **P 19 23 30.1 -1.6**
OXF Oxford 56.98 341⇑ *iP* **P 19 23 31.4 -2.5**
comp=Z,266nm,1.1s,mb6.2
OXF LR LR
comp=Z,898nm,20.0s,MS4.9
OXF Oxford 56.98 341⇑ *iP* **P 19 23 31.4 -2.5**
OXF pmax pmax
comp=Z,266nm,1.1s,mb6.2
OXF MLR MLR
comp=Z,898nm,20.0s,MS4.9
PLAL Pickwick Lake 57.02 342⇑ *iP* **P 19 23 31.7 -2.5**
comp=Z,114nm,1.0s,mb5.9
PLAL LR LR
comp=Z,1µm,22.0s,MS4.9
TZTN Tazewell 57.38 347⇑ *iP* **P 19 23 35.3 -1.4**
comp=Z,157nm,1.4s,mb5.8
TZTN LR LR
comp=Z,2µm,19.0s,MS5.1
URVA University of 57.41 353 *eP* **P 19 23 36.6 -0.3**
BLA Blacksburg 57.45 350⇑ *iP* **P 19 23 37.0 -0.2**
comp=Z,319nm,1.7s,mb6.1
BLA LR LR
comp=Z,3µm,22.0s,MS5.3
BLA Blacksburg 57.45 350⇑ *iP* **P 19 23 37.0 -0.2**
BLA pmax pmax
comp=Z,319nm,1.7s,mb6.1
BLA MLR MLR
comp=Z,3µm,22.0s,MS5.3
JCT Junction City 57.52 329⇑ *iP* **P 19 23 36.5 -1.4**
comp=Z,71nm,1.0s,mb5.7
JCT LR LR
comp=Z,491nm,20.0s,MS4.6
JCT Junction City 57.52 329⇑ *iP* **P 19 23 36.5 -1.3**
JCT pmax pmax
comp=Z,71nm,1.0s,mb5.7
JCT MLR MLR
comp=Z,491nm,20.0s,MS4.6
ELN Prospectdale 57.52 350⇑ *iP* **P 19 23 37.7 0.0**
CBN Corbin 58.01 353 *eP* **P 19 23 40.6 -0.5**
comp=Z,270nm,1.4s,mb6.1
CBN LR LR
comp=Z,2µm,20.0s,MS5.2
WVT Waverly 58.02 343⇑ *iP* **P 19 23 39.0 -2.3**
comp=Z,129nm,0.9s,mb6.0
WVT LR LR
comp=Z,903nm,20.0s,MS4.9
WVT Waverly 58.02 343⇑ *iP* **P 19 23 39.0 -2.3**
WVT pmax pmax
comp=Z,129nm,0.9s,mb6.0
WVT MLR MLR
comp=Z,903nm,20.0s,MS4.9
UALR University of 58.18 338⇑ *iP* **P 19 23 40.7 -1.7**
comp=Z,163nm,1.3s,mb5.9
HBAR Harrisburg 58.33 340 P **P 19 23 42.9 -0.5**
MIAR Mount Ida 58.41 337⇑ *iP* **P 19 23 42.8 -1.2**
comp=Z,245nm,1.3s,mb6.1
MIAR LR LR
comp=Z,1µm,21.0s,MS5.0
MIAR Mount Ida 58.41 337⇑ *iP* **P 19 23 42.8 -1.2**
MIAR pmax pmax
comp=Z,245nm,1.3s,mb6.1
MIAR MLR MLR
comp=Z,1µm,21.0s,MS5.0
UTMT University of 58.52 342 *eP* **P 19 23 42.7 -2.0**
comp=Z,615nm,1.3s,mb6.5
LTX Lajitas 58.55 325⇑ *iP* **P 19 23 43.7 -1.4**
comp=Z,45nn,1.2s,mb5.4
LTX LR LR
comp=Z,2µm,21.0s,MS5.3
LTX Lajitas 58.55 325⇑ *iP* **P 19 23 43.7 -1.4**
LTX pmax pmax
comp=Z,45nn,1.2s,mb5.4
LTX MLR MLR
comp=Z,2µm,21.0s,MS5.3
TXAR Lajitas Array 58.55 325 P **P 19 23 44.0 -1.1**
comp=Z,21nn,1.0s,mb5.1,baz=146,slow=8.5,SNR=102
PARMO Parma 59.07 342 *eP* **P 19 23 47.8 -0.8**
SDMD Soldier's Deli 59.15 354⇑ *iP* **P 19 23 48.7 -0.3**
comp=Z,123nm,1.1s,mb5.8
WCI Wyandotte Cave 59.61 345 PFAKE 19 24 00.0 +7.7
WCI LR LR
comp=Z,2µm,20.0s,MS5.2
MVL Millersville 59.69 354⇑ *iP* **P 19 23 52.6 -0.1**
comp=Z,122nm,1.0s,mb5.9
USIN University of 59.71 344⇑ *eP* **P 19 23 50.8 -2.1**
comp=Z,225nm,1.3s,mb6.0
MCWV Mont Chateau 59.76 351⇑ *iP* **P 19 23 53.1 -0.2**
comp=Z,187nm,1.0s,mb6.1
MCWV LR LR
comp=Z,3µm,21.0s,MS5.4
SIUC Southern Illin 59.90 342 *eP* **P 19 23 52.7 -1.6**
comp=Z,352nm,1.2s,mb6.3
SIUC *e* pP 19 24 00.1 -2.8
RKT Rikitea 60.09 254 *e*S **S 19 32 03.8 -3.9**
comp=Z,1µm,29.5s
RKT *e*LR LR 19 41 42.8
comp=Z,2µm,28.2s
BRNJ Basking Ridge 60.23 356⇑ *eP* **P 19 23 56.8 +0.4**
comp=Z,111nm,1.2s,mb5.8
CPNY Central Park 60.30 357⇑ *eP* **P 19 23 56.4 -0.5**
comp=Z,136nm,1.4s,mb5.8
CPNY *e* pP 19 24 04.4 -1.1
SSPA Standing Stone 60.47 353 PFAKE 19 24 10.0 +12
SSPA LR LR
comp=Z,2µm,20.0s,MS5.2
FVM French Village 60.50 342⇑ *iP* **P 19 23 56.7 -1.6**
comp=Z,242nm,1.1s,mb6.1
FVM French Village 60.50 342 P **P 19 23 56.8 -1.5**
FVM pmax pmax
comp=Z,240nm,1.1s,mb6.1
PAL Palisades 60.51 357⇑ *iP* **P 19 23 57.1 -1.2**
comp=Z,165nm,1.3s,mb6.0
PAL *e* pP 19 24 05.0 -2.0
PAL Palisades 60.51 357 P **P 19 23 58.6 +0.3**
PAL pmax pmax
comp=Z,140nm,1.2s,mb6.0
BLO Bloomington 60.56 345⇑ *eP* **P 19 23 56.3 -2.5**
comp=Z,167nm,1.4s,mb6.0
BLO Bloomington 60.56 345 P **P 19 23 56.6 -2.2**
BLO pmax pmax
comp=Z,170nm,1.3s,mb6.0
WMOK Wichita Mounta 60.64 333⇑ *iP* **P 19 23 57.3 -2.1**
comp=Z,20nm,0.9s,mb5.2
WMOK LR LR
comp=Z,885nm,22.0s,MS4.9
WMOK Wichita Mounta 60.64 333⇑ *iP* **P 19 23 57.3 -2.1**
WMOK pmax pmax
comp=Z,20nm,0.9s,mb5.2
WMOK MLR MLR
comp=Z,885nm,22.0s,MS4.9
ACSO Alum Creek Sta 60.83 349⇑ *iP* **P 19 23 59.2 -1.4**
comp=Z,270nm,1.1s,mb6.3
ACSO *e* pP 19 24 07.2 -2.1
ACSO LR LR
comp=Z,1µm,21.0s,MS5.1
MNTX Cornudas Mount 61.32 326⇑ *iP* **P 19 24 02.1 -2.0**
comp=Z,93nm,1.1s,mb5.8
MNTX LR LR
comp=Z,1µm,19.0s,MS5.0
BRYW Bryant College 61.33 359⇑ *eP* **P 19 24 03.7 -0.2**
comp=Z,661nm,1.0s
QUA2 Belchertown 61.71 358⇑ *iP* **P 19 24 05.8 -0.6**
comp=Z,1µm,1.8s
ALLY Alegheny Colle 61.76 351⇑ *iP* **P 19 24 06.1 -0.7**
comp=Z,380nm,1.1s,mb6.4
WES Weston 61.79 359⇑ *iP* **P 19 24 06.7 -0.3**
comp=Z,233nm,1.2s,mb6.2
WES LR LR
comp=Z,985nm,22.0s,MS4.9
WES Weston 61.79 359⇑ *iP* **P 19 24 06.7 -0.3**
WES pmax pmax
comp=Z,233nm,1.2s,mb6.2
WES MLR MLR
comp=Z,985nm,22.0s,MS4.9
BINY Binghamton 61.84 355⇑ *iP* **P 19 24 07.5 +0.2**
comp=Z,253nm,1.0s,mb6.3
BINY LR LR
comp=Z,3µm,21.0s,MS5.4
HRV Harvard--Oak R 61.92 359⇑ *iP* **P 19 24 08.0 +0.1**
comp=Z,182nm,1.0s,mb6.2
HRV LR LR
comp=Z,2µm,22.0s,MS5.2
HRV Harvard--Oak R 61.92 359⇑ *iP* **P 19 24 08.0 +0.1**
HRV pmax pmax
comp=Z,182nm,1.0s,mb6.2
HRV MLR MLR
comp=Z,2µm,22.0s,MS5.2
VNA3 Neumayer Olymp 62.11 161⇑ *iP* **P 19 24 09.3 +0.4**
VNA3 *e* 19 24 12.1
VNA3 *e* 19 24 22.2
VNA3 *e* 19 24 28.9
VNA3 *e* 19 24 36.6
ERPA Erie 62.19 352⇓ *iP* **P 19 24 09.2 -0.5**
comp=Z,424nm,1.1s,mb6.5
ERPA LR LR
comp=Z,3µm,21.0s,MS5.4
VNA1 Neumayer--Stat 62.32 161⇑ *iP* **P 19 24 11.0 +0.7**
VNA1 *e* 19 24 14.0
VNA1 *e* 19 24 23.7
VNA1 *e* 19 24 31.1
VNA1 *e* 19 24 39.2
HDIL Hopedale 62.57 344⇑ *iP* **P 19 24 09.7 -2.6**
comp=Z,225nm,1.2s,mb6.2
HDIL LR LR
comp=Z,1µm,19.0s,MS5.0
VNA2 Neumayer--Watz 62.69 161⇑ *iP* **P 19 24 12.9 +0.1**
baz=285,slow=6.3
VNA2 *e* 19 24 15.8
VNA2 *e* 19 24 25.9
VNA2 *e* 19 24 33.2
VNA2 *e* 19 24 41.4
BBTS Babate 62.76 61 P **P 19 24 14.6 +0.5**
comp=Z,47nm,1.0s,mb5.6,baz=217,slow=2.1,SNR=6.0
BBTS S **S 19 32 44.5 +2.9**
comp=Z,7.2nm,0.3s,baz=338,slow=6.3,SNR=2.0
BBTS LR LR 19 51 42.2
comp=Z,2µm,18.1s,MS5.4,baz=49,slow=36
ACCN Adirondack Com 62.87 357⇑ *eP* **P 19 24 14.2 0.0**
comp=Z,572nm,1.9s,mb6.4
FFD Franklin Falls 62.88 359⇑ *eP* **P 19 24 14.6 +0.3**
comp=Z,488nm,1.4s,mb6.4
AAM Ann Arbor 62.96 349⇑ *eP* **P 19 24 13.2 -1.7**
comp=Z,47nn,0.8s,mb5.7
AAM LR LR
comp=Z,2µm,20.0s,MS5.2
AAM Ann Arbor 62.96 349⇑ *eP* **P 19 24 13.2 -1.7**
AAM pmax pmax
comp=Z,47nn,0.8s,mb5.7
AAM MLR MLR
comp=Z,2µm,20.0s,MS5.2
HNH Hanover 63.13 358⇑ *eP* **P 19 24 16.6 +0.7**
comp=Z,727nm,1.5s,mb6.6
HNH *e* 19 25 12.5
319A Douglas 63.22 323 ⇓P **P 19 24 16.6 -0.2**
baz=63
NCB Newcomb 63.48 357⇑ *eP* **P 19 24 18.3 0.0**
comp=Z,184nm,1.3s,mb6.0
KSU1 Kansas State U 63.56 337⇑ *iP* **P 19 24 17.1 -1.8**
comp=Z,112nm,1.1s,mb5.8
KSU1 LR LR
comp=Z,682nm,20.0s,MS4.8
LBNH Lisbon 63.66 359⇑ *iP* **P 19 24 20.1 +0.7**
comp=Z,201nm,1.1s,mb6.1
LBNH *e* 19 24 46.9
LBNH LR LR
comp=Z,2µm,22.0s,MS5.2
LBNH Lisbon 63.66 359⇑ *iP* **P 19 24 20.1 +0.7**
LBNH pmax pmax
comp=Z,201nm,1.1s,mb6.1
LBNH MLR MLR
comp=Z,2µm,22.0s,MS5.2
318A Bisbee 63.67 322 ⇓P **P 19 24 19.5 -0.3**
baz=64
Y22C IRIS PASSCAL I 63.98 326 ⇓P **P 19 24 23.2 +1.4**
baz=64
218A Dragoon 64.10 323 ⇑P **P 19 24 22.5 -0.1**
baz=64
LONY Lake Ozonia 64.15 356⇑ *iP* **P 19 24 22.7 +0.1**
comp=Z,334nm,1.5s,mb6.2
LONY LR LR
comp=Z,3µm,22.0s,MS5.5
FRNY Flat Rock 64.31 357⇑ *iP* **P 19 24 23.5 -0.2**
comp=Z,301nm,1.2s,mb6.2
SNAA Sanae 64.31 161⇑ *iP* **P 19 24 23.4 -0.1**
SNAA *e* 19 24 26.3
SNAA *e* 19 24 35.3
SNAA *e* 19 24 43.5
SNAA *e* 19 24 52.3
SNAA Sanae 64.31 161 *c iP* **P 19 24 23.4 -0.1**
217A Green Valley 64.39 322 ⇓P **P 19 24 24.4 -0.1**
baz=65
ANMO Albuquerque 64.42 327⇑ *iP* **P 19 24 24.0 -0.6**
comp=Z,53nm,1.1s,mb5.5
ANMO LR LR
comp=Z,1µm,21.0s,MS5.1
ANMO Albuquerque 64.42 327⇑ *iP* **P 19 24 24.0 -0.7**
ANMO pmax pmax
comp=Z,53nm,1.1s
ANMO MLR MLR
comp=Z,1µm,21.0s
CBKS Cedar Bluff 64.52 335⇑ *iP* **P 19 24 24.2 -1.0**
comp=Z,257nm,1.2s,mb6.1
CBKS LR LR
comp=Z,1µm,22.0s,MS5.0
CBKS Cedar Bluff 64.52 335⇑ *iP* **P 19 24 24.2 -1.0**
CBKS pmax pmax
comp=Z,257nm,1.2s,mb6.1
CBKS MLR MLR
comp=Z,1µm,22.0s,MS5.0
MSNY Massena 64.54 356 *eP* **P 19 24 24.9 -0.3**
PKME Peaks-Kenny Pk 64.66 1⇑ *eP* **P 19 24 26.2 +0.2**
comp=Z,297nm,1.4s,mb6.1
PKME LR LR
comp=Z,2µm,21.0s,MS5.3
SADO Sadowa 64.70 353 S **S 19 33 03.0 -1.6**
TUC Tucson 64.77 322⇑ *iP* **P 19 24 26.1 -0.9**
comp=Z,75nm,1.6s,mb5.5
TUC LR LR
comp=Z,577nm,20.0s,MS4.8
TUC Tucson 64.77 322⇑ *iP* **P 19 24 26.1 -0.9**
TUC pmax pmax
comp=Z,75nm,1.6s,mb5.5
TUC MLR MLR
comp=Z,577nm,20.0s,MS4.8
216A Three Points, 64.93 322 ⇑P **P 19 24 27.8 -0.3**
baz=65
JFWS Jewell Farm 65.03 344⇑ *eP* **P 19 24 26.5 -2.0**
comp=Z,118nm,1.1s,mb5.8
JFWS LR LR
comp=Z,1µm,19.0s,MS5.1
JFWS Jewell Farm 65.03 344⇑ *eP* **P 19 24 26.5 -1.9**
JFWS pmax pmax
comp=Z,117nm,1.1s,mb5.8
JFWS MLR MLR
comp=Z,1µm,19.0s,MS5.1
116A Eloy 65.48 322 ⇓P **P 19 24 31.9 +0.2**
baz=66,SNR=24
GLMI Grayling 65.58 349 *eP* **P 19 24 30.7 -1.3**
comp=Z,248nm,1.3s,mb6.1
115A Sonoran Desert 65.89 322 ⇓P **P 19 24 34.8 +0.6**
baz=66,SNR=25
SDCO Great Sand Dun 66.16 330⇑ *iP* **P 19 24 35.9 0.0**
comp=Z,218nm,1.0s,mb6.1
Z14A Wintersburg 66.78 322 ⇑P **P 19 24 40.2 +0.2**
baz=67,SNR=6.9
X15A Humboldt 67.18 323 ⇑P **P 19 24 42.7 +0.2**
baz=67,SNR=44
MVCO Mesa Verde 67.21 327⇑ *iP* **P 19 24 42.3 -0.3**
comp=Z,127nm,1.1s,mb5.9
MVCO LR LR
comp=Z,1µm,22.0s,MS5.1
MVCO Mesa Verde 67.21 327 ⇑P **P 19 24 42.9 +0.3**
baz=68,SNR=54
Y14A Wickenburg 67.23 322 ⇑P **P 19 24 42.9 +0.1**
baz=67,SNR=25
WUAZ Wupatki 67.45 324⇑ *iP* **P 19 24 44.3 +0.1**
comp=Z,149nm,1.1s,mb5.9
WUAZ *e* 19 25 03.5
WUAZ LR LR
comp=Z,1µm,20.0s,MS5.1
WUAZ Wupatki 67.45 324 ⇓P **P 19 24 44.8 +0.6**
baz=68
X14A Yava 67.54 323 ⇓P **P 19 24 45.5 +0.7**
baz=68,SNR=36
Y13A Salome 67.62 321 P **P 19 24 45.5 +0.2**
baz=68,SNR=16
ECSD EROS,Sioux Fal 67.67 339⇑ *iP* **P 19 24 43.8 -1.5**
comp=Z,185nm,1.5s,mb5.9
ECSD LR LR
comp=Z,1µm,20.0s,MS5.1
GLA Glamis 67.68 320 ⇓P **P 19 24 45.6 0.0**
baz=68,SNR=17
W15A Williams 67.70 324 ⇓P **P 19 24 46.7 +1.0**
baz=68,SNR=41
COWI Conover 67.74 346⇑ *iP* **P 19 24 44.2 -1.6**
comp=Z,63nm,1.2s,mb5.5
COWI LR LR
comp=Z,2µm,20.0s,MS5.3
ISCO Idaho Springs 67.86 331⇑ *iP* **P 19 24 46.4 -0.3**
comp=Z,83nm,1.0s,mb5.7
ISCO Idaho Springs 67.86 331 P **P 19 24 46.6 -0.1**
ISCO pmax pmax

comp=Z,83nm,1.0s,mb5.7
PV01 Paradox Valley 67.96 328 *e*P **P** 19 24 47.4 +0.1
Y12C Blythe 67.98 321 ⇑P **P** 19 24 48.0 +0.5
baz=68,SNR=17
SMCO Snowmass 68.00 330⇑ *i*P **P** 19 24 47.8 +0.3
comp=Z,77nm,0.9s,mb5.7
PDMCI Parker Dam,Lak 68.14 322 P **P** 19 24 48.5 0.0
baz=68,SNR=8.4
X13A Yucca 68.17 322 ⇓P **P** 19 24 49.0 +0.3
baz=68,SNR=41
DVTC Desert V Tower 68.18 319 P **P** 19 24 49.3 +0.5
baz=68,SNR=23
W14A Seligman 68.19 323 P **P** 19 24 49.4 +0.6
baz=68,SNR=62
SWSC Sam W. Stewart 68.19 320 ⇑P **P** 19 24 49.3 +0.4
baz=68,SNR=11
PV10 Paradox Valley 68.38 328 *e*P **P** 19 24 49.2 -0.8
TAOE Nuku Hiva Isla 68.39 268 *e*S S 19 33 51.9 +1.3
comp=Z,820nm,26.7s
TAOE Nuku Hiva Isla 68.39 268 *e*LR LR 19 45 19.2
comp=Z,2µm,22.6s
BC3 Big Chuckw Mtn 68.47 320 ⇑P **P** 19 24 51.0 +0.4
baz=69,SNR=50
MONP Monument Peak 68.54 319 P **P** 19 24 51.5 +0.4
baz=69,SNR=28
W13A Hualapai Mount 68.56 322 ⇓P **P** 19 24 51.9 +0.8
baz=69,SNR=19
IRM Iron Mountain 68.64 321 ⇓P **P** 19 24 52.1 +0.4
baz=69,SNR=70
NEE2 Needles Airpor 68.75 322 ⇑P **P** 19 24 53.0 +0.7
baz=69
MAIT Maitri 68.85 159 *e*P **P** 19 24 50.9 -1.6
NVL N'lazarevskaya 68.88 159 *i* P **P** 19 24 53.8 +1.1
NVL *i* SP 19 25 06.2
NVL *e*S S 19 33 55.9 +1.2
NVL pmax pmax
comp=Z,268nm,1.4s,mb6.0
NVL pmax pmax
comp=N,6.0nm,0.7s
NVL pmax pmax
comp=E,108nm,1.4s
NVL MLR MLR
comp=Z,1µm,15.7s,MS5.3
NVL MLR MLR
comp=N,77nm,5.2s
NVL MLR MLR
comp=E,714nm,15.7s
LIC Lamto 68.95 75 *e*P **P** 19 24 54.0 0.0
comp=E,39nm,0.8s,mb5.1,baz=265
LIC *e*MLR MLR
comp=Z,2µm,22.5s,MS4.9
LIC Lamto 68.95 75 *e*P **P** 19 24 54.0 0.0
comp=Z,20nm,0.8s,mb5.1
LIC LR LR
comp=Z,870nm,22.5s,MS4.9
109C Camp Elliot, M 68.96 319 ⇑P **P** 19 24 54.3 +0.6
baz=69
PHWY Pilot Hill 69.01 332⇑ *i*P **P** 19 24 53.0 -0.8
BELC Belle Mtn. 69.04 320 ⇑P **P** 19 24 54.6 +0.5
baz=69,SNR=25
PFO Pinyon Flat Ob 69.05 320 P **P** 19 24 54.0 -0.2
comp=Z,255nm,1.1s,mb6.1,SNR=15
PFO Pinyon Flat Ob 69.05 320⇑ *i*P **P** 19 24 54.5 +0.2
comp=Z,35nm,1.0s,mb5.2
PFO LR LR
comp=Z,1µm,20.0s,MS5.1
PFO Pinyon Flat Ob 69.05 320⇑ *i*P **P** 19 24 54.5 +0.3
PFO pmax pmax
comp=Z,35nm,1.0s,mb5.2
PFO MLR MLR
comp=Z,1µm,20.0s,MS5.1
PFO Pinyon Flat Ob 69.05 320 P **P** 19 24 54.6 +0.4
comp=Z,28nm,0.9s,mb5.2,baz=118,slow=5.2,SNR=32
PFO Pinyon Flat Ob 69.05 320 ⇑P **P** 19 24 54.9 +0.7
baz=69,SNR=22
T15A Red Dirt Ranch 69.11 325 ⇑P **P** 19 24 55.4 +0.9
baz=69
U14A Mt Trumbull 69.11 324 ⇑P **P** 19 24 55.2 +0.6
baz=69
W12A Cal Nev Ari 69.28 322 P **P** 19 24 56.3 +0.7
baz=70,SNR=18
DBIC Dimbokro 69.28 75 P **P** 19 24 55.9 -0.3
comp=Z,25nm,0.6s,mb5.3,baz=219,slow=6.7,SNR=42
DBIC LR LR 19 55 11.8
comp=Z,1µm,18.6s,MS5.2,baz=234,slow=36
GMRC Granite Mounta 69.38 321 ⇓P **P** 19 24 56.7 +0.5
baz=70,SNR=73
MURC Murrieta 69.50 319 P **P** 19 24 57.2 +0.2
baz=70,SNR=8.1
T14A Hurricane 69.52 324 ⇓P **P** 19 24 57.9 +0.8
baz=70
U13A Pakoon Wash 69.55 323 ⇓P **P** 19 24 57.8 +0.5
baz=70
V12A Nelson 69.56 322 ⇑P **P** 19 24 57.7 +0.3
baz=70,SNR=64
SRU San Rafael 69.69 327⇑ *i*P **P** 19 24 57.7 -0.4
SRU San Rafael 69.69 327 *e*P **P** 19 24 58.0 -0.1
BBRC Big Bear Sol-O 69.78 320 ⇓P **P** 19 24 59.9 +1.2
baz=70
HEC Hector,Ludlow 69.81 321 ⇓P **P** 19 24 59.8 +0.9
baz=70,SNR=18
U12A Valley of Fire 69.88 323 ⇑P **P** 19 25 00.0 +0.7
baz=70,SNR=46
SCI San Clemente I 69.92 318 ⇓P **P** 19 25 00.4 +0.8
baz=70
T13A Saint George 69.95 324 ⇑P **P** 19 25 00.2 +0.5
baz=70
V11A Goodsprings 69.98 322 ⇓P **P** 19 25 00.4 +0.5
baz=70,SNR=16
TUQ Turquoise Mtn. 69.98 321 ⇑P **P** 19 25 00.4 +0.4
baz=70,SNR=20
CCUT Cedar City 70.03 325⇑ *i*P **P** 19 25 01.0 +0.8
EYMN Ely 70.03 345⇑ *i*P **P** 19 24 58.2 -1.8
comp=Z,42nm,1.3s,mb5.2
EYMN LR LR
comp=Z,2µm,20.0s,MS5.3
S14A Cedar City 70.08 325 ⇑P **P** 19 25 01.7 +1.3
baz=70
MSU Marysvale 70.10 326 *e*P **P** 19 25 00.7 +0.1
MSU Marysvale 70.10 326 P **P** 19 25 01.0 +0.4
RWWY Rawlins 70.10 331⇑ *i*P **P** 19 25 00.3 -0.2
comp=Z,202nm,1.4s,mb5.9
CIS Catalina Islan 70.12 318 P **P** 19 25 01.5 +0.7
baz=70,SNR=5.4
TMUT Trail Mountain 70.18 327⇑ *i*P **P** 19 25 01.0 -0.1
BFSC Mount Baldy St 70.21 319 ⇓P **P** 19 25 01.2 -0.1
baz=70,SNR=27
ARUT Antelope Range 70.25 325 *e*P **P** 19 25 02.0 +0.5
CCAN Las Canadas 70.28 49 P **P** 19 25 04.9 +2.9
comp=Z,1.6nm,0.4s,mb4.3
S13A Holt Ranch, En 70.33 324 ⇑P **P** 19 25 02.9 +0.9
baz=70
U11A Corn Creek 70.36 322 ⇓P **P** 19 25 03.6 +1.4
baz=71,SNR=8.2
R14A James Farms, M 70.39 325 ⇓P **P** 19 25 03.2 +0.8
baz=71
GSC Goldstone 70.42 321 ⇓P **P** 19 25 02.7 +0.1
baz=71,SNR=38
QSPA South Pole Qui 70.47 180⇑ *i*P **P** 19 25 02.2 -0.1
comp=Z,245nm,1.2s,mb6.0
QSPA South Pole Qui 70.47 180 PKP2ab 19 52 58.6
comp=Z,3.8nm,1.0s,baz=303,slow=2.4,SNR=4.7
QSPA PKPPKP 19 53 04.0
comp=Z,9.5nm,1.1s,baz=264,slow=1.2,SNR=6.7
SHOC Shoshone 70.52 322 ⇓P **P** 19 25 03.4 +0.2
baz=71,SNR=15
DECC Green Verdugo 70.63 319 P **P** 19 25 04.8 +0.9
baz=71,SNR=5.9
SNCC San Nicolas Is 70.72 318 ⇓P **P** 19 25 04.6 +0.1
baz=71
EDW2 Edwards Air Fo 70.84 320 ⇓P **P** 19 25 05.4 +0.2
baz=71,SNR=27
T11A Corn Creek, Al 70.84 323 ⇓P **P** 19 25 05.8 +0.6
baz=71
S12A Delamar Landin 70.89 324 ⇑P **P** 19 25 06.5 +1.0
baz=71
U10A Ash Meadows, A 70.90 322 ⇓P **P** 19 25 06.3 +0.7
baz=71,SNR=26
MPU Maple Canyon 70.94 327⇑ *i*P **P** 19 25 05.8 +0.1
comp=Z,185nm,1.1s,mb5.9
MPU LR LR
comp=Z,1µm,21.0s,MS5.1
EOSO Osorio 70.95 50 P **P** 19 25 08.4 +2.4
comp=Z,4.0nm,0.4s,mb4.7
BLG Laguna Peak 70.99 319 ⇑P **P** 19 25 06.3 +0.2
baz=71,SNR=7.2
DAU Daniels Canyon 71.05 328 *e*P **P** 19 25 06.6 +0.3
LRMC Laurel Mountai 71.06 320 ⇓P **P** 19 25 07.0 +0.4
baz=71,SNR=42
OSI Osito Adit 71.11 319 ⇑P **P** 19 25 07.1 +0.3
baz=71,SNR=6.9
NLU North Lily Min 71.12 327⇑ *i*P **P** 19 25 07.0 +0.2
TPNV Topopah Spring 71.22 322⇑ *i*P **P** 19 25 07.9 +0.4
comp=Z,104nm,1.2s,mb5.6
TPNV LR LR
comp=Z,1µm,20.0s,MS5.1
TPNV Topopah Spring 71.22 322⇑ *i*P **P** 19 25 07.9 +0.4
TPNV pmax pmax
comp=Z,104nm,1.2s,mb5.6
TPNV MLR MLR
comp=Z,1µm,20.0s,MS5.1
TPNV Topopah Spring 71.22 322 ⇓P **P** 19 25 08.3 +0.8
baz=71,SNR=75
FURC Furnace Creek, 71.25 322 ⇑P **P** 19 25 08.2 +0.6
baz=72,SNR=34
BSC Santa Cruz Isl 71.27 318 ⇓P **P** 19 25 08.5 +0.6
baz=72,SNR=5.3
R12A Pony Springs, 71.27 324 ⇓P **P** 19 25 08.6 +0.8
baz=72
JLU Jordanelle 71.28 328⇑ *i*P **P** 19 25 07.9 +0.2
MPMC Manual Prospec 71.34 321 ⇑P **P** 19 25 08.4 +0.2
baz=72,SNR=30
Q13A Wheeler Ranch, 71.41 325 ⇓P **P** 19 25 09.4 +0.8
baz=72
S11A Rachel 71.42 323 ⇑P **P** 19 25 09.9 +1.3
baz=72
CTU Camp Tracy 71.50 328⇑ *e*P **P** 19 25 08.7 -0.4
comp=Z,54nm,1.0s,mb5.4
ARVC Arvin 71.52 319 ⇓P **P** 19 25 09.7 +0.4
baz=72
AGMN Agassiz Refuge 71.53 342⇑ *i*P **P** 19 25 07.5 -1.6
comp=Z,53nm,1.1s,mb5.4
AGMN LR LR
comp=Z,870nm,19.0s,MS5.0
SBC Santa Barbara 71.62 318 ⇑P **P** 19 25 10.0 +0.1
baz=72
ISA Isabella 71.66 320 ⇓P **P** 19 25 10.2 +0.1
baz=72,SNR=53
NOQ North Oquirrh 71.66 328⇑ *i*P **P** 19 25 09.5 -0.5
comp=Z,54nm,0.9s,mb5.5
DUG Dugway 71.67 327⇑ *i*P **P** 19 25 10.2 0.0
comp=Z,177nm,1.1s,mb5.9
DUG LR LR
comp=Z,820nm,20.0s,MS5.0
DUG Dugway 71.67 327⇑ *i*P **P** 19 25 10.2 +0.1
DUG pmax pmax
comp=Z,177nm,1.1s,mb5.9
DUG MLR MLR
comp=Z,820nm,20.0s,MS5.0
DUG Dugway 71.67 327 ⇓P **P** 19 25 10.5 +0.3
baz=72,SNR=150
P13A Bates Ranch, G 71.76 326 ⇓P **P** 19 25 11.3 +0.6
baz=72
R11A Troy Canyon, C 71.83 324 ⇑P **P** 19 25 11.6 +0.5
baz=72
TRCR Troy Canyon 71.83 324⇑ *i*P **P** 19 25 11.7 +0.6
Q12A Willow Creek R 71.90 325 ⇓P **P** 19 25 11.7 +0.2
baz=72,SNR=43
GRAC Grapevine Rang 71.91 322 P **P** 19 25 12.0 +0.4
baz=72,SNR=12
CWC Cottonwood Cre 71.95 321 ⇑P **P** 19 25 12.7 +0.9
baz=72,SNR=7.9
PKM Peak Mountain 71.98 319 ⇑P **P** 19 25 12.1 0.0
baz=72,SNR=28
BW06 Boulder Array 72.03 331 PFAKE 19 25 20.0 +7.8
BW06 LR LR
comp=Z,1µm,22.0s,MS5.2
PDAR Pinedale Array 72.03 331 P **P** 19 25 11.4 -0.7
comp=Z,18nm,1.0s,mb4.9,baz=146,slow=6.4,SNR=93
PDAR PKPPKP 19 52 58.1
comp=Z,0.3nm,0.5s,baz=178,slow=4.0,SNR=4.5
PDAR LR LR 19 59 11.0
comp=Z,955nm,21.1s,MS5.0,baz=135,slow=38
N15A Stansbury Isla 72.04 327 ⇓P **P** 19 25 12.2 -0.1
baz=72
S10A Tonopah Range, 72.10 323 ⇑P **P** 19 25 13.0 +0.3
baz=72
HWUT Hardware Ranch 72.10 329⇑ *i*P **P** 19 25 12.1 -0.6
comp=Z,78nm,0.9s,mb5.6
HWUT LR LR
comp=Z,1µm,20.0s,MS5.2
R10A Warm Springs 72.19 323 ⇑P **P** 19 25 14.0 +0.8
baz=72,SNR=38
Q11A Duckwater 72.22 324 P **P** 19 25 13.9 +0.5
baz=72,SNR=120
O13A Hicks Ranch, I 72.24 326 ⇓P **P** 19 25 13.7 +0.2
baz=72
P12A McGill 72.26 325 P **P** 19 25 14.2 +0.6
baz=72,SNR=124
SPUT South Promonto 72.31 328⇑ *i*P **P** 19 25 13.6 -0.3
S09A Goldfield 72.32 322 P **P** 19 25 14.3 +0.2
baz=72,SNR=25
BGU Big Grassy Mou 72.33 327⇑ *i*P **P** 19 25 13.7 -0.3
N14A Grayback Hills 72.35 327 ⇑P **P** 19 25 14.3 +0.1
baz=73
SMMC Simmler 72.36 319 ⇓P **P** 19 25 13.8 -0.5
baz=73
M15A Larsen Ranch, 72.43 328 ⇑P **P** 19 25 14.5 -0.1
baz=73
TIN Tinemaha 72.45 321 ⇓P **P** 19 25 16.1 +1.3
baz=73,SNR=7.8
RCTC Rector, Farmer 72.55 320 ⇑P **P** 19 25 15.5 0.0
baz=73,SNR=8.1
R09A Tonopah 72.59 323 ⇑P **P** 19 25 15.8 +0.2
baz=73,SNR=74
Q10A Clear Creek Ra 72.62 324 ⇑P **P** 19 25 16.4 +0.6
baz=73
V05C Boulder Hill, 72.67 319 ⇑P **P** 19 25 16.8 +0.6
baz=73
HELL Mitchell Peak, 72.67 321 ⇑P **P** 19 25 15.9 -0.2
baz=73,SNR=56
S08C White Mtn Res 72.72 322 ⇓P **P** 19 25 16.9 +0.5
baz=73,SNR=38
O12A Currie 72.74 326 ⇓P **P** 19 25 16.8 +0.4
baz=73,SNR=130
AHID Auburn Hatcher 72.75 330⇑ *i*P **P** 19 25 15.9 -0.6
comp=Z,104nm,1.0s,mb5.7
AHID LR LR
comp=Z,947nm,21.0s,MS5.0
P11A Circle Ranch, 72.77 325 ⇑P **P** 19 25 17.2 +0.5
baz=73,SNR=17
HVU Hansel Valley 72.83 328⇑ *i*P **P** 19 25 16.5 -0.5
comp=Z,116nm,1.0s,mb5.8
HVU Hansel Valley 72.83 328⇑ *i*P **P** 19 25 16.5 -0.5
HVU pmax pmax
comp=Z,117nm,1.0s,mb5.8
MTUM Tungsten Hills 72.85 321⇑ *i*P **P** 19 25 17.6 +0.4
N13A Wendover, West 72.88 326 ⇑P **P** 19 25 17.6 +0.3
baz=73,SNR=15
M14A Sheep Mountain 72.91 327 ⇑P **P** 19 25 17.4 -0.1
baz=73
TBI Tubuai 73.06 251 *e*S S 19 34 41.6 -3.2
comp=Z,385nm,31.5s
TBI Tubuai 73.06 251 *e*LR LR 19 47 44.3
comp=Z,2µm,26.2s,baz=102
Q09A Carvers 73.06 323 P **P** 19 25 19.2 +0.8
baz=73,SNR=17
REDW Red Top Meadow 73.09 330⇑ *i*P **P** 19 25 18.3 -0.2
comp=Z,134nm,1.3s,mb5.7
PKD Parkfield 73.11 319 ⇓P **P** 19 25 18.1 -0.7
baz=73,SNR=13
V04C Ramage Ranch, 73.11 319 ⇑P **P** 19 25 19.3 +0.5
baz=73
SNOW Snow King Moun 73.12 330⇑ *i*P **P** 19 25 18.6 -0.1
comp=Z,75nm,1.0s,mb5.6
LOHW Long Hollow 73.17 330⇑ *i*P **P** 19 25 18.7 -0.2
comp=Z,88nm,1.2s,mb5.6
MLAC Mammoth Lakes 73.19 321 P **P** 19 25 20.1 +0.8
baz=73,SNR=15
P10A Eureka 73.21 324 ⇓P **P** 19 25 20.5 +1.2
baz=73,SNR=41
M13A Montello 73.23 327 ⇑P **P** 19 25 19.6 +0.2
baz=74,SNR=8.1
TPAW Teton Pass 73.23 330⇑ *e*P **P** 19 25 18.9 -0.5
comp=Z,135nm,1.2s,mb5.8
R08A Mina 73.25 322 ⇑P **P** 19 25 20.1 +0.5
baz=74,SNR=8.8
KCC Kaiser Creek 73.27 321 ⇑P **P** 19 25 19.8 +0.1
baz=74,SNR=13
ULM Lac du Bonnet 73.29 343 P **P** 19 25 18.0 -1.6
comp=Z,33nm,1.1s,mb5.2,baz=153,slow=5.8,SNR=37
ULM S S 19 34 49.5 +3.3
comp=Z,0.8nm,0.5s,baz=20,slow=16,SNR=2.3
ULM LR LR 20 00 29.1
comp=Z,854nm,20.3s,MS5.0,baz=254,slow=38
T06C Millerton Lake 73.30 320 ⇓P **P** 19 25 19.0 -0.9
baz=74,SNR=7.2
N12A Clover Valley, 73.31 326 P **P** 19 25 19.9 0.0
baz=74,SNR=24
MOOW Moose Ponds 73.34 330⇑ *i*P **P** 19 25 19.4 -0.5
comp=Z,80nm,1.3s,mb5.5
DCID1 Drake Creek 73.42 330⇑ *i*P **P** 19 25 20.4 -0.1
NVAR Mina Array Bea 73.42 322 P **P** 19 25 21.1 +0.5
comp=Z,24nm,0.9s,mb5.1,baz=134,slow=7.1,SNR=124
Q08A Gabbs 73.50 323 P **P** 19 25 21.1 0.0
baz=74,SNR=43
U04C Hernandez Rese 73.53 319 P **P** 19 25 21.7 +0.5
baz=74,SNR=14
P09A Austin 73.53 324 P **P** 19 25 21.7 +0.5
baz=74,SNR=21
VAH Vaihoa 73.54 259 *e*P **P** 19 25 21.2 -0.6
comp=Z,161nm,1.2s,mb5.8
IMW Indian Meadow 73.54 330⇑ *i*P **P** 19 25 20.9 -0.3
comp=Z,171nm,1.3s,mb5.8
FLWY Flagg Ranch 73.57 331⇑ *i*P **P** 19 25 21.5 +0.2
comp=Z,252nm,1.1s,mb6.1
V03C Hunter Liggett 73.59 319 P **P** 19 25 22.1 +0.4
baz=74,SNR=7.0
K14A Jones Ranch, D 73.60 328 ⇓P **P** 19 25 21.4 -0.1
baz=74
R07C Lee Vining 73.62 322 ⇑P **P** 19 25 22.9 +1.1
baz=74,SNR=42
L13A Double Diamond 73.64 327 ⇑P **P** 19 25 22.2 +0.4
baz=74
M12A Wells 73.66 326 ⇓P **P** 19 25 22.0 +0.1
baz=74,SNR=41
N11A Elko Archery C 73.66 326 ⇑P **P** 19 25 22.2 +0.3
baz=74,SNR=6.0
O10A Cortez Mining, 73.70 325 P **P** 19 25 22.6 +0.5
baz=74,SNR=38
LAO LASA Array 73.71 335⇑ *e*P **P** 19 25 21.5 -0.6
comp=Z,195nm,1.3s,mb5.9
LAO LR LR
comp=Z,868nm,21.0s,MS5.0
RLMT Red Lodge 73.73 332⇑ *e*P **P** 19 25 22.0 -0.3
comp=Z,121nm,1.2s,mb5.7
RLMT LR LR
comp=Z,840nm,20.0s,MS5.0
LKWY Lake 73.81 331⇑ *i*P **P** 19 25 23.7 +1.0
comp=Z,82nm,1.0s,mb5.6
LKWY LR LR
comp=Z,1µm,21.0s,MS5.1
LKWY Lake 73.81 331⇑ *i*P **P** 19 25 23.7 +1.0
LKWY pmax pmax
comp=Z,82nm,1.0s,mb5.6
LKWY MLR MLR
comp=Z,1µm,21.0s,MS5.1
T05C Eagle Field, D 73.81 320 ⇓P **P** 19 25 24.0 +1.1
baz=74
PMOR Pomariorio Ree 73.85 260 *e*P **P** 19 25 23.0 -0.7
comp=Z,133nm,1.3s,mb5.7
S05C Merced 73.89 320 P **P** 19 25 23.7 +0.4
baz=74,SNR=36
YFT Old Faithful 73.92 331⇑ *i*P **P** 19 25 24.5 +1.2
O09A Fish Creek Ran 73.99 324 P **P** 19 25 23.8 -0.1
baz=74,SNR=6.3
HAST UC Hastings Re 74.02 319 ⇑P **P** 19 25 24.5 +0.4
baz=74
Q07A Schurz 74.06 322 ⇑P **P** 19 25 25.2 +0.9
baz=74
M11A Holland Ranch, 74.12 326 ⇓P **P** 19 25 25.3 +0.7
baz=74,SNR=102
K13A Stover Farm, H 74.13 328 ⇑P **P** 19 25 24.9 +0.3
baz=74
YMR Madison River 74.14 331⇑ *i*P **P** 19 25 25.3 +0.6
comp=Z,260nm,1.3s,mb6.0
YMR LR LR
comp=Z,1µm,21.0s,MS5.2
R06C Coleville 74.15 322 ⇓P **P** 19 25 25.5 +0.7
baz=74,SNR=22
P08A Dixie Valley 74.16 323 ⇓P **P** 19 25 25.3 +0.5
baz=74,SNR=34
L12A House Creek Ra 74.23 327 ⇓P **P** 19 25 26.0 +0.8
baz=74
PACP Pacheco Peak 74.25 320 ⇓P **P** 19 25 25.9 +0.4
baz=74
SCHQ Schefferville 74.29 2 P **P** 19 25 25.3 +0.1
comp=Z,44nm,1.0s,mb5.3,baz=174,slow=4.9,SNR=31
SCHQ S S 19 34 56.5 -0.7
comp=Z,2.0nm,1.0s,baz=154,slow=16,SNR=1.6
SCHQ LR LR 19 58 35.7
comp=Z,1µm,20.8s,MS5.1,baz=27,slow=36
TVO Taravao 74.33 256 *e*P **P** 19 25 26.0 -0.4
comp=Z,263nm,1.4s,mb6.0
TVO Taravao 74.33 256 *e*P **P** 19 25 26.0 -0.4
TVO pmax pmax
comp=Z,263nm,1.4s,mb6.0
CMB Columbia Colle 74.38 321⇑ *e*P **P** 19 25 24.9 -1.3
comp=Z,38nm,1.4s,mb5.1
CMB LR LR
comp=Z,643nm,20.0s,MS4.9
CMB Columbia Colle 74.38 321⇑ *e*P **P** 19 25 24.9 -1.3
CMB pmax pmax
comp=Z,39nm,1.4s,mb5.1
CMB MLR MLR
comp=Z,643nm,20.0s,MS4.9
CMB Columbia Colle 74.38 321 ⇑P **P** 19 25 26.2 0.0
baz=75,SNR=12
DGMT Dagmar 74.41 337⇑ *i*P **P** 19 25 25.8 -0.3
comp=Z,140nm,1.1s,mb5.8
DGMT LR LR
comp=Z,987nm,20.0s,MS5.1
GCMT Greycliff 74.43 332⇑ *e*P **P** 19 25 26.1 -0.2
QLMT Earthquake Lak 74.48 331⇑ *e*P **P** 19 25 27.3 +0.7
P07A Fallon 74.51 323 ⇓P **P** 19 25 27.6 +0.6
baz=75
K12A Draper Farm, C 74.53 327 ⇓P **P** 19 25 28.0 +1.0
baz=75
M10A I.L. Ranch, Tu 74.59 326 ⇑P **P** 19 25 27.9 +0.6
baz=75,SNR=20
S04C Ingram Canyon, 74.60 320 ⇓P **P** 19 25 27.6 +0.1
baz=75,SNR=8.8
R05C Kirkwood Meado 74.64 322 ⇓P **P** 19 25 28.5 +0.9
baz=75,SNR=24
N09A Rock Creek Ran 74.65 325 ⇓P **P** 19 25 27.5 -0.2
baz=75,SNR=12
PAE Paea 74.66 256 *e*P **P** 19 25 27.7 -0.7
comp=Z,168nm,1.2s,mb5.9
PAE Paea 74.66 256 *e*P **P** 19 25 27.7 -0.7
PAE pmax pmax
comp=Z,168nm,1.2s,mb5.8
PPT Papeete 74.69 257 *e*P **P** 19 25 28.2 -0.3
comp=Z,106nm,1.4s,mb5.6
PPT *e*S S 19 34 59.2 -4.1
comp=Z,969nm,31.8s
PPT Papeete 74.69 257 *e*LQ 19 45 17.2
comp=Z,752nm,28.8s
PPT *e*LR LR 19 48 28.9
comp=Z,2µm,24.0s,baz=112
PPT Papeete 74.69 257 P **P** 19 25 27.5 -1.0
comp=Z,12nm,0.3s,mb5.3,baz=118,slow=8.5,SNR=8.0
PPT LR LR 19 49 54.7
comp=Z,843nm,18.5s,MS5.1,baz=97,slow=29
J13A Cove Ranch, Pi 74.72 328 ⇑P **P** 19 25 28.6 +0.6
baz=75
WCN Washoe City 74.85 322 P **P** 19 25 29.5 +0.6
baz=75,SNR=10
R04C Big Horse Ranc 74.85 321 ⇑P **P** 19 25 29.7 +0.8
baz=75
BNLO Ben Lomond (Sa 74.88 319 ⇑P **P** 19 25 29.0 -0.1
baz=75
PAHR Pah Rah Range 74.91 323⇑ *i*P **P** 19 25 29.5 +0.3
comp=Z,155nm,1.1s,mb5.8
N08A GE Springer Mi 74.93 324 ⇑P **P** 19 25 29.0 -0.4
baz=75,SNR=25
L10A Juniper Basin 74.94 326 ⇑P **P** 19 25 29.8 +0.5
baz=75
HLID Hailey 74.96 328⇑ *e*P **P** 19 25 29.6 +0.1
comp=Z,136nm,1.1s,mb5.8
HLID LR LR
comp=Z,902nm,22.0s,MS5.0
HLID Hailey 74.96 328 P **P** 19 25 30.0 +0.6
baz=75,SNR=194
M09A Marrel Ranch, 75.00 325 P **P** 19 25 30.1 +0.3
baz=75,SNR=23
LAVA Lava Cap Winer 75.06 321 P **P** 19 25 30.1 0.0
baz=75,SNR=16
I13A Wildhorse Cree 75.07 329 ⇓P **P** 19 25 30.6 +0.6
baz=75
J12A Stokes Ranch, 75.07 328 ⇑P **P** 19 25 30.2 +0.1
baz=75
JRSC Jasper Ridge 75.09 319 ⇑P **P** 19 25 29.9 -0.5
baz=75
MCMT McKenzie Canyo 75.14 330⇑ *e*P **P** 19 25 30.8 +0.4

P06A Stead Airport, 75.18 322 ⇓P **P** **19 25 32.4 +1.6**
baz=75
BOZ Bozeman (W) 75.19 331 ⇑*i*P **P** **19 25 29.8 -0.9**
comp=Z,85nm,1.3s,mb5.5
BOZ LR LR
comp=Z,843nm,20.0s,MS5.0
BOZ Bozeman (W) 75.19 331 ⇑*i*P **P** **19 25 29.8 -0.9**
BOZ pmax pmax
comp=Z,85nm,1.3s,mb5.5
BOZ MLR MLR
comp=Z,843nm,20.0s,MS5.0
BOZ Bozeman (W) 75.19 331 P **P** **19 25 30.5 -0.3**
baz=75,SNR=66
K11A Parker Ranch, 75.21 327 ⇑P **P** **19 25 31.0 +0.2**
baz=75
BDM Black Diamond 75.21 320 P **P** **19 25 32.0 +0.9**
baz=75,SNR=8.8
G15A Dillon 75.22 330 P **P** **19 25 31.1 +0.2**
baz=76,SNR=72
P05C Yuba Gap, Truc 75.34 322 P **P** **19 25 32.2 +0.5**
baz=76,SNR=22
N07B Gerlach 75.40 324 P **P** **19 25 31.9 -0.1**
baz=76,SNR=65
DLMT Dillon 75.42 330 ⇑*i*P **P** **19 25 32.0 0.0**
comp=Z,139nm,1.2s,mb5.8
O06A Flanigan 75.47 323 ⇓P **P** **19 25 32.4 -0.1**
baz=76,SNR=14
Q04C Lincoln 75.49 321 ⇑P **P** **19 25 33.8 +1.1**
baz=76,SNR=8.8
M08A Happy Creek Ra 75.53 325 ⇑P **P** **19 25 32.5 -0.2**
baz=76,SNR=24
L09A Wilkinson Ranc 75.54 325 P **P** **19 25 33.0 +0.2**
baz=76,SNR=39
MFID Camas Ranch 75.56 327 ⇓P **P** **19 25 33.4 +0.5**
baz=76
BEKR Beckwourth 75.57 322 P **P** **19 25 33.4 +0.3**
baz=76,SNR=45
H13A Challis 75.61 329 ⇑P **P** **19 25 33.5 +0.4**
baz=76
K10A MacKenzie Ranc 75.65 326 ⇓P **P** **19 25 33.7 +0.3**
baz=76
F15A Butte 75.74 331 ⇑P **P** **19 25 34.3 +0.5**
baz=76,SNR=67
G14A Jackson 75.74 330 P **P** **19 25 34.2 +0.3**
baz=76,SNR=24
CVS Carmenet Viney 75.82 320 ⇑P **P** **19 25 34.5 0.0**
baz=76,SNR=5.8
N06A Buffalo Meadow 75.86 323 ⇑P **P** **19 25 34.6 -0.1**
baz=76,SNR=69
OHCM Honcut 75.88 321 *e*P **P** **19 25 34.3 -0.5**
H12A Diamond D Ranc 75.90 329 P **P** **19 25 35.2 +0.5**
baz=76,SNR=52
M07A Soldier Meadow 75.92 324 ⇑P **P** **19 25 35.0 0.0**
baz=76,SNR=41
MCCM Marconi Confer 75.95 320 PFAKE 19 25 50.0 +15
MCCM LR LR
comp=Z,664nm,20.0s,MS4.9
O05C Quincy 75.96 322 ⇑P **P** **19 25 35.9 +0.7**
baz=76,SNR=10
SUTB Sutter Butte 75.99 321 P **P** **19 25 35.1 -0.3**
baz=76
G13A Cobalt 75.99 329 P **P** **19 25 35.9 +0.5**
baz=76,SNR=275
L08A Fields 76.02 325 P **P** **19 25 35.3 -0.2**
baz=76,SNR=41
NSHM Saint Helena R 76.02 320 *e*P **P** **19 25 35.6 -0.1**
ORV Oroville 76.03 321 ⇑P **P** **19 25 35.6 -0.1**
baz=76,SNR=84
K09A Rome 76.04 326 P **P** **19 25 35.6 0.0**
baz=76,SNR=68
J10A Berg Farm, Mel 76.05 327 ⇑P **P** **19 25 36.3 +0.6**
baz=76
F14A Wisdom 76.12 330 P **P** **19 25 36.7 +0.7**
baz=76,SNR=77
MNRC McLaughlin Nat 76.15 320 ⇑P **P** **19 25 36.5 +0.1**
baz=76
EGMT Eagleton 76.22 334 ⇑*i*P **P** **19 25 35.6 -1.0**
comp=Z,149nm,1.2s,mb5.8
EGMT LR LR
comp=Z,632nm,20.0s,MS4.9
EGMT Eagleton 76.22 334 ⇑P **P** **19 25 36.5 -0.1**
baz=76,SNR=28
E15A Deer Lodge 76.24 331 ⇑P **P** **19 25 37.2 +0.5**
baz=76,SNR=63
ELFS Eagle Lake Fie 76.28 323 P **P** **19 25 37.5 +0.5**
baz=76,SNR=72
O04C Chester 76.29 322 ⇑P **P** **19 25 37.3 +0.2**
baz=76,SNR=22
WVOR Wild Horse Val 76.34 325 ⇑*i*P **P** **19 25 36.9 -0.5**
comp=Z,37nm,1.3s,mb5.2
WVOR *e*PP PP 19 28 27.9 -1.5
WVOR LR LR
comp=Z,1μm,20.0s,MS5.2
WVOR Wild Horse Val 76.34 325 ⇑*i*P **P** **19 25 36.9 -0.5**
WVOR *e* 19 28 27.9
WVOR pmax pmax
comp=Z,37nm,1.3s,mb5.2
WVOR MLR MLR
comp=Z,1μm,20.0s,MS5.2
L07A Adell 76.44 324 ⇑P **P** **19 25 38.2 +0.2**
baz=77,SNR=25
K08A Mann Creek Ran 76.47 325 ⇓P **P** **19 25 38.0 -0.1**
baz=77,SNR=8.8
J09A Fry Pan Ranch, 76.51 326 P **P** **19 25 38.2 -0.1**
baz=77,SNR=31
M06C Likely Place G 76.53 323 ⇑P **P** **19 25 38.8 +0.4**
baz=77,SNR=35
I10A Payette 76.54 327 ⇓P **P** **19 25 38.6 +0.2**
baz=77,SNR=7.3
F13A Darby 76.55 330 P **P** **19 25 38.8 +0.3**
baz=77,SNR=155
H11A Donnelly 76.58 328 ⇑P **P** **19 25 38.7 0.0**
baz=77,SNR=15
HOPS Hopland 76.61 320 PFAKE 19 25 50.0 +11
HOPS LR LR
comp=Z,876nm,20.0s,MS5.1
E14A Clinton 76.63 331 P **P** **19 25 39.5 +0.6**
baz=77,SNR=62
O03C Acorn Hollow, 76.63 322 ⇓P **P** **19 25 38.3 -0.8**
baz=77
D15A Lincoln 76.66 332 P **P** **19 25 39.4 +0.4**
baz=77,SNR=57
LBCM Butte Creek Ri 76.78 323 P **P** **19 25 39.5 -0.4**
GASB Alder Springs 76.81 321 P **P** **19 25 41.1 +1.0**
baz=77,SNR=12
HATC Hat Creek Radi 76.83 322 ⇑P **P** **19 25 40.4 +0.3**
baz=77
K07A Rock Creek Ran 76.85 325 ⇑P **P** **19 25 40.6 +0.4**
baz=77,SNR=18
H10A Noah's Angus R 76.86 328 P **P** **19 25 40.0 -0.3**
baz=77,SNR=12
CHMT Chamberlain Mo 76.89 331 ⇑*e*P **P** **19 25 40.3 0.0**
J08A Circle Bar Ran 76.89 326 ⇑P **P** **19 25 40.3 -0.1**
baz=77,SNR=14
MOD Modoc 76.89 324 ⇑*e*P **P** **19 25 40.2 -0.3**
comp=Z,100nm,1.3s,mb5.6
MOD LR LR
comp=Z,855nm,19.0s,MS5.1
MOD Modoc 76.89 324 ⇓P **P** **19 25 40.9 +0.4**
baz=77,SNR=31
I09A Lost Marbles R 76.94 327 ⇓P **P** **19 25 41.2 +0.5**
baz=77,SNR=8.7
E13A Victor 76.97 330 P **P** **19 25 41.3 +0.5**
baz=77,SNR=64
F12A Elk City 76.97 329 ⇑P **P** **19 25 40.7 -0.1**
baz=77,SNR=50
M05C Lookout 77.01 323 P **P** **19 25 41.2 +0.1**
baz=77,SNR=18
P01C Double 8 Ranch 77.07 320 ⇑P **P** **19 25 41.6 +0.1**
baz=77
D14A Greenough 77.13 331 P **P** **19 25 41.8 +0.1**
baz=77,SNR=30
MSO Missoula 77.14 331 ⇑*i*P **P** **19 25 41.7 -0.1**
comp=Z,63nm,1.3s,mb5.4
MSO LR LR
comp=Z,826nm,21.0s,MS5.0
O02C Red Bluff 77.19 321 ⇑P **P** **19 25 41.7 -0.5**
baz=77,SNR=5.7
G11A Walters Elk Ra 77.20 329 ⇓P **P** **19 25 42.2 +0.1**
baz=77,SNR=88
L05A Lakeview 77.29 324 P **P** **19 25 43.4 +0.6**
baz=78,SNR=30
WDC Whiskeytown Da 77.30 322 *e*P **P** **19 25 40.7 -2.2**
comp=Z,23nm,1.0s,mb5.1
WDC LR LR
comp=Z,618nm,20.0s,MS4.9
WDC Whiskeytown Da 77.30 322 *e*P **P** **19 25 40.7 -2.1**
WDC pmax pmax
comp=Z,23nm,1.0s,mb5.1
WDC MLR MLR
comp=Z,618nm,20.0s,MS4.9
WDC Whiskeytown Da 77.30 322 ⇓P **P** **19 25 41.3 -1.6**
baz=78,SNR=10
I08A Drewsey 77.32 326 P **P** **19 25 43.3 +0.4**
baz=78,SNR=47
BMO Blue Mountains 77.33 328 ⇑*e*P **P** **19 25 42.0 -0.8**
comp=Z,82nm,1.1s,mb5.6
BMO LR LR
comp=Z,1μm,20.0s,MS5.2
J07A Hines 77.35 326 ⇓P **P** **19 25 43.5 +0.5**
baz=78,SNR=18
H09A Durkee 77.38 327 ⇑P **P** **19 25 43.3 +0.1**
baz=78,SNR=13
SBA Scott Base 77.39 190 ⇑*e*P **P** **19 25 43.4 +0.6**
comp=Z,165nm,1.4s,mb5.8
SBA Scott Base 77.39 190 ⇑*e*P **P** **19 25 43.4 +0.6**
SBA pmax pmax
comp=Z,165nm,1.4s,mb5.8
K06A Valley Falls 77.47 325 ⇑P **P** **19 25 44.4 +0.7**
baz=78,SNR=28
F11A Grangeville 77.50 329 ⇓P **P** **19 25 43.5 -0.3**
baz=78,SNR=69
M03C McCloud 77.51 322 ⇓P **P** **19 25 43.5 -0.4**
baz=78,SNR=13
G10A Bishop Farm, J 77.55 328 P **P** **19 25 44.5 +0.5**
baz=78,SNR=151
D13A Huson 77.58 331 P **P** **19 25 44.5 +0.3**
baz=78,SNR=54
M04C Macdoel 77.68 323 ⇓P **P** **19 25 44.6 -0.3**
baz=78,SNR=21
J06A Christmas Vall 77.72 325 ⇓P **P** **19 25 45.0 -0.1**
baz=78,SNR=24
C14A Swan Lake 77.75 332 ⇑P **P** **19 25 45.4 +0.2**
baz=78
K05A Summer Lake 77.77 324 P **P** **19 25 46.1 +0.7**
baz=78,SNR=28
O01C Eel River Cons 77.78 321 ⇓P **P** **19 25 46.2 +0.7**
baz=78
TOA0 Torodi Ar. Sit 77.79 71 *e*P **P** **19 25 45.5 -0.6**
TORD Torodi Ar. Bea 77.79 71 P **P** **19 25 45.7 -0.4**
TORD S S 19 35 35.2 -2.2
TORD LR LR 19 59 47.3
TORD Torodi Ar. Bea 77.79 71 P **P** **19 25 45.7 -0.4**
comp=Z,37nm,0.5s,mb5.6,baz=249,slow=5.6,SNR=386
TORD S S 19 35 35.2 -2.2
comp=Z,3.0nm,1.0s,baz=229,slow=5.5,SNR=3.7
TORD LR LR 19 59 47.3
comp=Z,2μm,18.0s,MS5.5,baz=240,slow=35
LHEM Herd Peak 77.79 323 P **P** **19 25 45.3 -0.3**
H08A Prairie City 77.80 327 P **P** **19 25 45.9 +0.4**
baz=78,SNR=26
E11A Bogner Ranch, 77.86 329 P **P** **19 25 45.4 -0.5**
baz=78,SNR=21
G09A Cove 77.87 328 ⇓P **P** **19 25 46.4 +0.5**
baz=78
N02C Big Bar 77.90 322 ⇑P **P** **19 25 46.3 +0.1**
baz=78,SNR=25
I07A Izee 77.93 326 ⇓P **P** **19 25 46.6 +0.3**
baz=78,SNR=47
D12A Red Ives Fores 77.96 330 ⇑P **P** **19 25 46.3 0.0**
baz=78
M02C Callahan 78.00 322 P **P** **19 25 46.2 -0.6**
baz=78,SNR=9.8
C13A Hot Springs 78.06 331 P **P** **19 25 47.2 +0.3**
baz=78,SNR=52
F10A Beach Ranch, E 78.08 328 P **P** **19 25 47.2 +0.1**
baz=78,SNR=19
YBH Yreka Blue Hor 78.14 323 *e*P **P** **19 25 46.3 -1.2**
comp=Z,24nm,1.2s,mb5.0
YBH LR LR
comp=Z,734nm,20.0s,MS5.0
YBH Yreka Blue Hor 78.14 323 *e*P **P** **19 25 46.3 -1.2**
YBH pmax pmax
comp=Z,24nm,1.2s
YBH MLR MLR
comp=Z,734nm,20.0s
YBH Yreka Blue Hor 78.14 323 ⇓P **P** **19 25 46.4 -1.1**
baz=78,SNR=8.9
I06A Prineville 78.21 325 ⇓P **P** **19 25 48.7 +0.9**
baz=78,SNR=31
F09A S2 Ranch, Elgi 78.24 328 P **P** **19 25 48.1 +0.2**
baz=78,SNR=14
H07A Lands Inn, Kim 78.31 326 ⇑P **P** **19 25 48.2 -0.2**
baz=78,SNR=22
J05A Fort Rock 78.33 324 P **P** **19 25 48.7 +0.3**
baz=78,SNR=25
JCC Jacoby Creek 78.33 321 ⇓P **P** **19 25 48.9 +0.3**
baz=78
E10A Myers Farm, Un 78.39 329 ⇑P **P** **19 25 48.9 +0.2**
baz=79,SNR=37
VNDA Vanda 78.42 190 P **P** **19 25 48.7 +0.2**
VNDA S S 19 35 44.2 +2.0
VNDA LR LR 19 59 00.4
VNDA Vanda 78.42 190 P **P** **19 25 48.7 +0.1**
VNDA S S 19 35 44.2 +2.0
VNDA Vanda 78.42 190 P **P** **19 25 48.7 +0.2**
comp=Z,36nm,1.1s,mb5.2,baz=132,slow=5.1,SNR=53
VNDA S S 19 35 44.2 +2.0
comp=Z,0.6nm,0.7s,baz=285,slow=23,SNR=4.1
VNDA LR LR 19 59 00.4
comp=Z,1μm,20.4s,MS5.2,baz=137,slow=35
G08A Pilot Rock 78.48 327 P **P** **19 25 49.3 +0.1**
baz=79,SNR=20
B13A Whitefish 78.53 332 P **P** **19 25 49.6 +0.1**
baz=79,SNR=29
SYO Syowa Base 78.55 160 ⇓*i*P **P** **19 25 47.8 -1.6**
SYO Syowa Base 78.55 160 ⇓*i*pP pP 19 25 50.6 -7.7
KRMB Red Mountain 78.70 322 ⇑*i*P **P** **19 25 50.5 -0.1**
F08A Pendleton 78.73 328 ⇓P **P** **19 25 50.3 -0.3**
baz=79,SNR=7.8
J04A Umpqua Nationa 78.78 324 P **P** **19 25 51.1 +0.1**
baz=79,SNR=9.7
WALA Waterton Lakes 78.79 332 ⇑*i*P **P** **19 25 49.9 -1.0**
comp=Z,94nm,1.1s,mb5.6
VIPM Ingram Point 78.81 326 P **P** **19 25 51.5 +0.4**
H06A Lindquist Farm 78.81 326 ⇑P **P** **19 25 51.6 +0.5**
baz=79,SNR=30
G07A Ruggs Ranch, H 78.83 327 P **P** **19 25 51.5 +0.3**
baz=79,SNR=32
D10A Wagner Farm, O 78.88 329 P **P** **19 25 51.0 -0.4**
baz=79,SNR=31
A13A Flathead Natio 78.92 332 P **P** **19 25 52.0 +0.4**
baz=79,SNR=98
E09A Wood Farm, Sta 78.92 328 ⇑P **P** **19 25 51.3 -0.4**
baz=79,SNR=19
L02A Cave Junction 78.92 322 ⇓P **P** **19 25 52.0 +0.2**
baz=79,SNR=10
I05A Bend 78.93 325 ⇓P **P** **19 25 52.7 +1.0**
baz=79,SNR=12
FFC Flin Flon 79.00 342 P **P** **19 25 50.1 -1.8**
comp=Z,129nm,1.3s,mb5.7,SNR=9.7
FFC Flin Flon 79.00 342 ⇑*i*P **P** **19 25 50.4 -1.4**
comp=Z,46nm,1.4s,mb5.2
FFC LR LR
comp=Z,2μm,21.0s,MS5.3
FFC Flin Flon 79.00 342 ⇑*i*P **P** **19 25 50.4 -1.5**
FFC pmax pmax
comp=Z,46nm,1.4s,mb5.2
FFC MLR MLR
comp=Z,2μm,21.0s,MS5.3
M01C Crescent City 79.03 322 ⇓P **P** **19 25 52.6 +0.3**
baz=79
B12A Libby 79.10 331 P **P** **19 25 53.0 +0.4**
baz=79,SNR=30
H05A Madras 79.23 326 ⇑P **P** **19 25 54.2 +0.8**
baz=79
K02A Glendale 79.25 323 ⇑P **P** **19 25 53.1 -0.4**
baz=80,SNR=11
G06A Carlson Farm, 79.31 326 ⇑P **P** **19 25 54.0 +0.2**
baz=80,SNR=11
I04A Tendick Farm, 79.31 324 ⇓P **P** **19 25 53.3 -0.5**
baz=80,SNR=8.3
J03A Ideyld Park 79.34 324 ⇑P **P** **19 25 53.5 -0.6**
baz=80
D09A Jones Farm, Ri 79.38 329 ⇓P **P** **19 25 54.1 0.0**
baz=80,SNR=27
F07A Phinny Hill Vi 79.39 327 P **P** **19 25 55.5 +1.3**
baz=80,SNR=6.8
B11A Sandpoint 79.44 331 P **P** **19 25 54.1 -0.3**
baz=80,SNR=11
A12A Yaak River Ran 79.47 331 ⇓P **P** **19 25 55.3 +0.7**
baz=80,SNR=16
HAWA Hanford 79.53 328 ⇑*i*P **P** **19 25 54.8 -0.2**
comp=Z,260nm,1.7s,mb5.9
HAWA LR LR
comp=Z,2μm,22.0s,MS5.4
NEW Newport 79.66 330 ⇑*e*P **P** **19 25 54.6 -1.1**
comp=Z,36nm,1.4s,mb5.1
NEW LR LR
comp=Z,749nm,20.0s,MS5.0
NEW Newport 79.66 330 ⇑*e*P **P** **19 25 54.6 -1.1**
NEW pmax pmax
comp=Z,36nm,1.4s
NEW MLR MLR
comp=Z,749nm,20.0s
NEW Newport 79.66 330 P **P** **19 25 54.9 -0.7**
comp=Z,19nm,1.2s,mb4.9,baz=125,slow=5.9,SNR=18
NEW S S 19 35 58.0 +1.9
comp=Z,0.6nm,0.5s,baz=195,slow=7.3,SNR=1.9
G05A Wamic 79.67 326 ⇓P **P** **19 25 56.4 +0.7**
baz=80,SNR=8.6
J02A Umpqua 79.68 323 ⇑P **P** **19 25 56.2 +0.3**
baz=80,SNR=5.7
D08A Wollman Farm, 79.68 328 P **P** **19 25 55.9 +0.1**
baz=80,SNR=11
F06A Goldendale 79.74 327 P **P** **19 25 56.8 +0.7**
baz=80,SNR=11
H04A Detroit Lake 79.77 325 ⇓P **P** **19 25 56.0 -0.3**
baz=80,SNR=10
OD2 Odessa Site #2 79.81 329 P **P** **19 25 56.5 0.0**
A11A Hall Mountain, 79.81 331 P **P** **19 25 56.3 -0.2**
baz=80,SNR=54
K01A Sixes 79.83 323 ⇑P **P** **19 25 56.9 +0.2**
baz=80
C09A Chrisman Ranch 79.88 329 P **P** **19 25 57.0 +0.2**
baz=80,SNR=21
I03A Eugene 79.90 324 ⇑P **P** **19 25 57.2 +0.1**
baz=80,SNR=7.7
I02A Mapleton 80.23 324 ⇑P **P** **19 25 58.9 +0.1**
baz=80
C08A Higginbotham F 80.24 329 P **P** **19 25 58.7 -0.2**
baz=80,SNR=8.8
B09A Rice 80.26 330 ⇓P **P** **19 25 58.2 -0.7**
baz=80,SNR=23
G04A Mulino 80.26 325 ⇓P **P** **19 25 59.1 +0.1**
baz=80,SNR=6.4
D07A Quincy 80.30 328 ⇓P **P** **19 25 59.5 +0.4**
baz=80,SNR=11
COR Corvallis 80.31 324 PFAKE 19 26 10.0 +11
COR LR LR
comp=Z,854nm,20.0s,MS5.1
H03A Soap Creek Ran 80.36 325 ⇓P **P** **19 26 00.0 +0.5**
baz=81,SNR=9.1
E06A Yakima 80.36 327 P **P** **19 25 59.6 +0.2**
baz=81,SNR=11
A10A Northport 80.38 330 ⇑P **P** **19 25 59.4 -0.2**
baz=81,SNR=5.8
SUR Sutherland 80.41 121 P **P** **19 26 02.1 +1.8**
comp=Z,417nm,1.6s,mb6.1,SNR=9.2
SUR Sutherland 80.41 121 ⇑*e*P **P** **19 26 01.7 +1.4**
comp=Z,209nm,1.6s,mb5.8
SUR *e* pP 19 26 10.8 +1.6
SUR LR LR
comp=Z,981nm,19.0s,MS5.2
TBM Table Mountain 80.59 328 P **P** **19 26 01.4 +0.7**
FCC Fort Churchill 80.66 348 ⇑*i*P **P** **19 25 59.4 -1.4**
comp=Z,236nm,2.0s,mb5.8
FCC Fort Churchill 80.66 348 ⇑*i*P **P** **19 25 59.4 -1.4**
FCC pmax pmax
comp=Z,236nm,2.0s,mb5.8
C07A Waterville 80.68 328 ⇓P **P** **19 26 01.1 -0.1**
baz=81,SNR=31
F04A Amboy 80.71 326 P **P** **19 26 01.2 -0.1**
baz=81,SNR=12
D06A Cle Elum 80.73 328 ⇓P **P** **19 26 01.8 +0.3**
baz=81,SNR=15
PFVI Vila Bisbo 80.75 45 *i*P **P** **19 26 02.6 +0.8**
comp=Z,87nm,1.4s,mb5.5
PFVI Vila Bisbo 80.75 45 *e*LR LR 19 53 18.4
comp=Z,672nm,20.0s
G03A Yamhill 80.77 325 ⇑P **P** **19 26 02.2 +0.5**
baz=81
E05A Randle 80.78 327 ⇓P **P** **19 26 01.6 -0.1**
baz=81,SNR=7.9
B08A Colville Reser 80.78 329 ⇑P **P** **19 26 00.8 -0.9**
baz=81,SNR=28
A09A Danville 80.85 330 P **P** **19 26 01.6 -0.5**
baz=81,SNR=24
MORF Marmelete 80.96 45 *i*P **P** **19 26 04.3 +1.4**
comp=Z,102nm,1.5s,mb5.5
PTEO Sao Teotonio 81.04 45 *e*P **P** **19 26 05.0 +1.7**
comp=Z,145nm,1.5s,mb5.7
A08A Turner Farm, O 81.16 330 P **P** **19 26 03.6 -0.1**
baz=81,SNR=46
B07A Winthrop 81.23 329 P **P** **19 26 03.7 -0.4**
baz=82,SNR=36
D05A Enumclaw 81.31 327 P **P** **19 26 04.4 -0.2**
baz=82,SNR=11
PBDV Barranco-do-Ve 81.41 46 *i*P **P** **19 26 06.5 +1.2**
comp=Z,75nm,1.3s,mb5.5
PBDV Barranco-do-Ve 81.41 46 *e*LR LR 19 53 59.1
comp=Z,731nm,24.5s
MDT Midelt 81.44 51 P **P** **19 26 06.9 +1.3**
comp=Z,32nm,1.1s,mb5.2,baz=248,slow=5.3,SNR=31
MDT S S 19 36 18.6 +3.2
comp=Z,0.3nm,0.3s,baz=240,slow=9.5,SNR=11
PMAFR Mafra 81.45 43 *e*P **P** **19 26 06.4 +0.9**
comp=Z,92nm,1.8s,mb5.4
PMAFR Mafra 81.45 43 *e*LR LR 19 54 31.2
comp=Z,1μm,23.7s
TSUM Tsumeb 81.59 107 ⇑*i*P **P** **19 26 07.4 +0.6**
comp=Z,120nm,1.2s,mb5.7
TSUM LR LR
comp=Z,857nm,19.0s,MS5.1
PVAQ Vaqueiros 81.64 45 *e*P **P** **19 26 07.8 +1.3**
PVAQ Vaqueiros 81.64 45 *e*LR LR 19 53 47.8
comp=Z,750nm,21.4s
EDM Edmonton 81.69 335 ⇑*i*P **P** **19 26 04.8 -1.6**
E03A Lebam 81.71 326 ⇓P **P** **19 26 06.9 +0.2**
baz=82,SNR=6.1
A07A Ashnola River, 81.76 329 P **P** **19 26 07.1 +0.2**
baz=82,SNR=45
EGRO El Granado 81.86 45 P **P** **19 26 09.5 +1.8**
comp=Z,3.5nm,0.7s,mb4.4
PBEJ Beja 81.87 45 *e*P **P** **19 26 08.8 +1.1**
comp=Z,46nm,1.9s,mb5.1
B06A Marblemount 81.94 328 ⇑P **P** **19 26 07.3 -0.6**
baz=82
EVO Evora 82.05 44 ⇑*i*P **P** **19 26 09.0 +0.4**
comp=Z,102nm,1.3s,mb5.3
EVO *e*MLR MLR
comp=Z,2μm,19.2s,MS5.1
EVO Evora 82.05 44 *i*P **P** **19 26 09.4 +0.8**
B05A Bryant 82.08 328 P **P** **19 26 07.6 -1.0**
baz=82,SNR=13
C04A Brinnon 82.16 327 P **P** **19 26 09.3 +0.3**
baz=82,SNR=6.7
D03A Wishkah Elem. 82.19 326 ⇓P **P** **19 26 09.4 +0.3**
baz=82
A06A Chilliwack 82.33 329 ⇓P **P** **19 26 09.7 -0.2**
baz=83
NLWA Neilton Lookou 82.41 326 PFAKE 19 26 20.0 +10
NLWA LR LR
comp=Z,2μm,21.0s,MS5.4
NLWA Neilton Lookou 82.41 326 ⇑P **P** **19 26 10.6 +0.2**
baz=83
PBAR Barrancos 82.50 45 *i*P **P** **19 26 11.9 +0.9**
comp=Z,39nm,1.6s,mb5.2
PBAR Barrancos 82.50 45 *e*LQ 19 49 41.3
PBAR *e*LR LR 19 54 12.7
comp=Z,857nm,20.2s
PESTR Estremoz 82.50 44 *i*P **P** **19 26 11.9 +0.9**
comp=Z,78nm,1.7s,mb5.5
PESTR Estremoz 82.50 44 *e*LQ 19 49 08.3
PESTR *e*LR LR 19 54 55.5
comp=Z,680nm,20.7s
EMIN Mina Concepcio 82.53 46 P **P** **19 26 12.7 +1.5**
comp=Z,4.5nm,0.8s,mb4.5
A05A Maple Falls 82.56 328 ⇓P **P** **19 26 10.5 -0.6**
baz=83,SNR=12
ESPR Espera 82.62 47 P **P** **19 26 12.3 +0.6**
comp=Z,44nm,1.2s,mb5.4
B04A Port Angeles 82.65 327 ⇑P **P** **19 26 11.7 +0.1**
baz=83,SNR=6.1
EJIF Jimena Fronter 82.67 47 P **P** **19 26 14.3 +2.3**
comp=Z,8.1nm,0.8s,mb4.8
EJIF Jimena Fronter 82.67 47 P **P** **19 26 14.3 +2.3**
EJIF pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
A04A Legoe Bay, Lum 82.68 328 ⇑P **P** **19 26 12.4 +0.7**
baz=83,SNR=5.2
EBAD Badajoz 82.83 45 P **P** **19 26 13.3 +0.5**
comp=Z,38nm,1.3s,mb5.3
PGC Sidney 83.01 328 ⇑*e*P **P** **19 26 13.1 -0.3**

PGC *e* pP 19 26 21.6 -0.7
PCBR Castelo Branco 83.10 44 *e*P **P 19 26 14.5 +0.4**
comp=Z,600nm,1.7s,mb5.3
PVIS Viseu 83.31 43 *e*P **P 19 26 16.4 +1.2**
comp=Z,89nm,1.7s,mb5.5
MTE Manteigas 83.36 43 *i* P **P 19 26 15.9 +0.5**
comp=Z,97nm,1.3s,mb5.7
MTE Manteigas 83.36 43 *e*LQ 19 49 31.0
MTE *e*LR LR 19 54 02.8
comp=Z,2µm,21.0s
MTE Manteigas 83.36 43⇑ *i*P **P 19 26 15.4 -0.1**
comp=Z,77nm,1.3s,mb5.6
PVRL Vila Real 83.72 42 *e*P **P 19 26 18.0 +0.7**
comp=Z,110nm,1.6s,mb5.7
PCAB Cabril 83.77 42 *e*P **P 19 26 18.0 +0.5**
comp=Z,111nm,1.8s,mb5.7
ELOB Lobios 83.83 42 P **P 19 26 18.9 +1.1**
comp=Z,54nm,1.4s,mb5.5
ELOJ Sierra Loja 83.93 47 P **P 19 26 20.0 +1.6**
comp=Z,57nm,1.3s,mb5.5
ELOJ Sierra Loja 83.93 47 P **P 19 26 20.0 +1.5**
ELOJ pmax pmax
comp=Z,57nm,1.3s,mb5.5
ELUQ Luque 84.06 47 P **P 19 26 20.8 +1.7**
comp=Z,58nm,1.2s,mb5.6
ELUQ Luque 84.06 47 P **P 19 26 20.8 +1.7**
ELUQ pmax pmax
comp=Z,59nm,1.2s,mb5.6
STS Santiago 84.09 40 P **P 19 26 19.5 +0.4**
comp=Z,60nm,1.6s,mb5.5
STS Santiago 84.09 40 P **P 19 26 19.5 +0.4**
STS pmax pmax
comp=Z,60nm,1.6s,mb5.5
MVO Moncorvo 84.10 43 *i* P **P 19 26 19.7 +0.5**
comp=Z,131nm,1.6s,mb5.8
MVO Moncorvo 84.10 43 *e*LQ 19 49 18.6
MVO *e*LR LR 19 56 00.9
comp=Z,2µm,16.3s
ERON Agron 84.11 47 P **P 19 26 20.7 +1.4**
comp=Z,4.6nm,0.8s,mb4.7
EADA Adamuz 84.15 46 P **P 19 26 19.8 +0.2**
comp=Z,24nm,1.1s,mb5.2
ECOG Cogollos-Vega 84.40 47 P **P 19 26 21.6 +0.8**
comp=Z,8.2nm,1.1s,mb4.8
ECOG Cogollos-Vega 84.40 47 P **P 19 26 21.6 +0.8**
ECOG pmax pmax
comp=Z,8.0nm,1.1s,mb4.8
PBRG Braganca 84.63 42 *i* P **P 19 26 22.3 +0.4**
comp=Z,132nm,1.4s,mb5.9
EBER Berja 84.69 48 P **P 19 26 23.0 +0.7**
comp=Z,27nm,1.2s,mb5.2
EBAN Banos Encina 84.69 46 P **P 19 26 23.4 +1.2**
comp=Z,34nm,1.0s,mb5.4
EBAN Banos Encina 84.69 46 P **P 19 26 23.4 +1.1**
EBAN pmax pmax
comp=Z,34nm,1.0s,mb5.4
ECAL Calabor 84.70 42 P **P 19 26 23.4 +1.1**
comp=Z,63nm,1.2s,mb5.6
EQES Quesada 85.00 47 P **P 19 26 24.2 +0.3**
comp=Z,32nm,1.2s,mb5.3
PAB San Pablo 85.01 45⇑ *i*P **P 19 26 24.3 +0.4**
comp=Z,99nm,1.5s,mb5.7
PAB LR LR
comp=Z,700nm,20.0s,MS5.0
PAB San Pablo 85.01 45⇑ *i*P **P 19 26 24.3 +0.5**
PAB pmax pmax
comp=Z,99nm,1.5s,mb5.7
PAB MLR MLR
comp=Z,700nm,20.0s,MS5.0
EPON Pontenova 85.19 41 P **P 19 26 25.8 +1.1**
comp=Z,36nm,1.5s,mb5.3
ENIJ Nijar 85.20 48 P **P 19 26 25.1 +0.3**
comp=Z,8.6nm,0.8s,mb4.9
ENIJ Nijar 85.20 48 P **P 19 26 25.1 +0.2**
ENIJ pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
BOSA Boshof 85.24 119 P **P 19 26 25.6 +0.2**
comp=Z,20nm,1.0s,mb5.2,baz=249,slow=4.7,SNR=25
BOSA LR LR 20 03 10.4
comp=Z,910nm,18.1s,MS5.2,baz=267,slow=35
ESDC Sonseca Array 85.33 45 P **P 19 26 26.6 +1.1**
comp=Z,22nm,1.1s,mb5.2,baz=242,slow=5.4,SNR=42
ESDC LR LR 20 01 09.9
comp=Z,636nm,21.8s,MS5.0,baz=230,slow=33
GUD Guadarrama 85.69 44 P **P 19 26 28.2 +1.0**
comp=Z,6.4nm,0.9s,mb4.8
GUD Guadarrama 85.69 44 P **P 19 26 28.2 +1.0**
GUD pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
EVIA Vianos 85.80 47 P **P 19 26 28.8 +1.0**
comp=Z,2.8nm,0.5s,mb4.8
EVIA Vianos 85.80 47 P **P 19 26 28.8 +1.0**
EVIA pmax pmax
comp=Z,3.0nm,0.5s,mb4.8
MAW Mawson 86.35 164 P **P 19 26 29.7 -0.4**
comp=Z,24nm,0.8s,mb5.5,baz=216,slow=7.1,SNR=21
MAW LR LR 20 04 47.0
comp=Z,2µm,20.0s,MS5.5,baz=243,slow=35
LBTB Lobatse 86.75 115⇑ *e*P **P 19 26 32.4 -0.6**
comp=Z,173nm,1.7s,mb6.0
LBTB Lobatse 86.75 115⇑ *e*P **P 19 26 32.4 -0.5**
LBTB pmax pmax
comp=Z,173nm,1.7s,mb6.0
ETOR Torete 87.16 45 P **P 19 26 35.8 +1.3**
comp=Z,11nm,0.7s,mb5.2
ETOR Torete 87.16 45 P **P 19 26 35.8 +1.3**
ETOR pmax pmax
comp=Z,11nm,0.7s,mb5.2
ELAN Lanestosa 87.46 42 P **P 19 26 36.1 +0.3**
comp=Z,33nm,1.0s,mb5.5
SFJD Kangerlussuaq 87.66 8 P **P 19 26 36.0 -0.1**
SFJD LR LR
comp=Z,835nm,20.0s,MS5.2
SFJD Kangerlussuaq 87.66 8 *i* P **P 19 26 36.0 -0.2**
SFJD *i* pP 19 26 44.5 -0.7
SFJD pmax pmax
comp=Z,28nm,1.0s,mb5.5
SFJD Kangerlussuaq 87.66 8 P **P 19 26 36.1 -0.1**
comp=Z,22nm,1.0s,mb5.3,baz=207,slow=4.6,SNR=6.1
SFJD Kangerlussuaq 87.66 8 *i* P **P 19 26 36.0 -0.2**
comp=Z,28nm,1.0s,mb5.5
SFJD *i* pP 19 26 44.5 -0.7
ECRI Cripan 87.74 43 P **P 19 26 38.4 +1.2**
comp=Z,7.2nm,0.7s,mb5.0
ECRI Cripan 87.74 43 P **P 19 26 38.4 +1.2**
ECRI pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
SJPF Ste Jean 88.81 43 *e*P **P 19 26 41.4 -0.8**
comp=Z,114nm,1.3s,mb5.7
SJPF Ste Jean 88.81 43 *e*P **P 19 26 41.4 -0.8**
comp=Z,57nm,1.3s,mb5.7
SJPF Ste Jean 88.81 43 *e*P **P 19 26 41.4 -0.8**
SJPF pmax pmax
comp=Z,57nm,1.3s,mb5.7
ETSF Etsaut 89.14 44 *e*P **P 19 26 43.1 -0.7**
comp=Z,82nm,1.6s,mb5.5
ETSF Etsaut 89.14 44 *e*P **P 19 26 43.1 -0.7**
comp=Z,41nm,1.6s,mb5.5
ETSF Etsaut 89.14 44 *e*P **P 19 26 43.1 -0.7**
ETSF pmax pmax
comp=Z,41nm,1.6s,mb5.5
YKA Yellowknife Ar 89.15 341 P **P 19 26 42.5 -0.8**
YKA PP PP 19 30 11.4 -2.7
YKA PKKP PKKPbc 19 44 19.8 -3.7
YKA LR LR 20 10 04.2
YKA Yellowknife Ar 89.15 341 P **P 19 26 42.5 -0.9**
YKA 19 30 11.4
YKA Yellowknife Ar 89.15 341 P **P 19 26 42.5 -0.8**
comp=Z,57nm,1.0s,mb5.9,baz=135,slow=4.8,SNR=344
YKA PP PP 19 30 11.4 -2.7
comp=Z,4.3nm,1.2s,baz=136,slow=7.1,SNR=3.2
YKA PKKP PKKPbc 19 44 19.8 -3.7
comp=Z,0.4nm,0.7s,baz=322,slow=2.4,SNR=6.2
YKA LR LR 20 10 04.2
comp=Z,903nm,19.4s,MS5.2,baz=155,slow=38
EBIE Bielsa 89.50 44 P **P 19 26 46.5 +1.0**
EPF Esparros 89.78 44 *e*P **P 19 26 46.2 -0.6**
QUIF Quistinic 89.96 38 *e*P **P 19 26 46.8 -0.7**
ROSF Rostrenen 90.11 38 *e*P **P 19 26 47.4 -0.8**
comp=Z,131nm,1.3s,mb5.8
ROSF Rostrenen 90.11 38 *e*P **P 19 26 47.4 -0.8**
ROSF pmax pmax
comp=Z,66nm,1.3s,mb5.8
SGMF Saint Gilles 90.48 38 *e*P **P 19 26 49.2 -0.7**
comp=Z,36nm,1.1s,mb5.3
SGMF Saint Gilles 90.48 38 *e*P **P 19 26 49.2 -0.7**
comp=Z,18nm,1.1s,mb5.3
SGMF Saint Gilles 90.48 38 *e*P **P 19 26 49.2 -0.7**
SGMF pmax pmax
comp=Z,18nm,1.1s,mb5.3
LFF La Frestale 90.91 42 *e*P **P 19 26 51.4 -0.6**
comp=Z,165nm,1.3s,mb5.9
LFF La Frestale 90.91 42 *e*P **P 19 26 51.4 -0.6**
comp=Z,83nm,1.3s,mb5.9
LFF La Frestale 90.91 42 *e*P **P 19 26 51.4 -0.6**
LFF pmax pmax
comp=Z,83nm,1.3s,mb5.9
MFF Saint Martin d 91.13 40 *e*P **P 19 26 52.1 -0.9**
comp=Z,91nm,1.5s,mb5.6
MFF Saint Martin d 91.13 40 *e*P **P 19 26 52.1 -0.9**
comp=Z,46nm,1.5s,mb5.6
MFF Saint Martin d 91.13 40 *e*P **P 19 26 52.1 -0.9**
MFF pmax pmax
comp=Z,46nm,1.5s,mb5.6
MTLF Montolieu 91.15 44 *e*P **P 19 26 52.0 -1.2**
comp=Z,55nm,1.3s,mb5.4
MTLF Montolieu 91.15 44 *e*P **P 19 26 52.0 -1.2**
comp=Z,27nm,1.3s,mb5.4
MTLF Montolieu 91.15 44 *e*P **P 19 26 52.0 -1.2**
MTLF pmax pmax
comp=Z,27nm,1.3s,mb5.4
GRR Gorron 91.54 39 *e*P **P 19 26 53.9 -1.0**
comp=Z,121nm,1.5s,mb5.7
GRR Gorron 91.54 39 *e*P **P 19 26 53.9 -1.0**
comp=Z,60nm,1.5s,mb5.7
GRR Gorron 91.54 39 *e*P **P 19 26 53.9 -1.0**
GRR pmax pmax
comp=Z,61nm,1.5s,mb5.7
RJF Les Rejaudoux 91.57 42 *e*P **P 19 26 53.6 -1.5**
comp=Z,119nm,1.5s,mb5.7
RJF *e*MLR MLR
comp=Z,2µm,22.8s,MS5.2
RJF Les Rejaudoux 91.57 42 *e*P **P 19 26 53.6 -1.5**
comp=Z,59nm,1.5s,mb5.7
RJF LR LR
comp=Z,2µm,22.8s,MS5.5
RJF Les Rejaudoux 91.57 42 *e*P **P 19 26 53.6 -1.5**
RJF pmax pmax
comp=Z,59nm,1.5s,mb5.7
RJF MLR MLR
comp=Z,2µm,22.8s,MS5.5
CAF Calviac 91.75 43 *e*P **P 19 26 55.0 -0.9**
comp=Z,172nm,1.8s,mb5.8
CAF Calviac 91.75 43 *e*P **P 19 26 55.0 -0.9**
comp=Z,86nm,1.8s,mb5.8
CAF Calviac 91.75 43 *e*P **P 19 26 55.0 -0.9**
CAF pmax pmax
comp=Z,86nm,1.8s,mb5.8
FLN La Foliniere 91.94 38 *e*P **P 19 26 56.0 -0.7**
comp=Z,78nm,1.2s,mb5.6
FLN *e*MLR MLR
comp=Z,2µm,21.8s,MS5.2
FLN La Foliniere 91.94 38 *e*P **P 19 26 56.0 -0.7**
comp=Z,39nm,1.2s,mb5.6
FLN LR LR
comp=Z,2µm,21.8s,MS5.5
FLN La Foliniere 91.94 38 *e*P **P 19 26 56.0 -0.7**
FLN pmax pmax
comp=Z,39nm,1.2s,mb5.6
FLN MLR MLR
comp=Z,2µm,21.8s,MS5.5
WRAK Wrangell Islan 92.02 331 PFAKE 19 27 10.0 +13
WRAK LR LR
comp=Z,947nm,19.0s,MS5.3
LDF La Druitiere 92.07 39 *e*P **P 19 26 56.6 -0.7**
DLBC Dease Lake 92.12 333⇑ *e*P **P 19 26 56.3 -1.0**
DLBC Dease Lake 92.12 333 P **P 19 26 57.0 -0.4**
POHA Pohakuloa 92.44 290 PFAKE 19 27 10.0 +10
POHA LR LR
comp=Z,2µm,19.0s,MS5.5
TCF Toulx Ste Croi 92.44 41 *e*P **P 19 26 58.1 -1.0**
comp=Z,53nm,1.4s,mb5.4
TCF Toulx Ste Croi 92.44 41 *e*P **P 19 26 58.1 -1.0**
comp=Z,26nm,1.4s,mb5.4
TCF Toulx Ste Croi 92.44 41 *e*P **P 19 26 58.1 -1.0**
TCF pmax pmax
comp=Z,26nm,1.4s,mb5.4
LSZ Lusaka 92.45 107⇑ *i*P **P 19 27 01.1 +1.2**
comp=Z,45nm,1.8s,mb5.5
LSZ LR LR
comp=Z,1µm,21.0s,MS5.3
LSZ Lusaka 92.45 107⇑ *i*P **P 19 27 01.1 +1.2**
LSZ pmax pmax
comp=Z,45nm,1.8s,mb5.5
LSZ MLR MLR
comp=Z,1µm,21.0s,MS5.3
LSZ Lusaka 92.45 107 P **P 19 27 02.5 +2.6**
SNR=5.0
LSZ Lusaka 92.45 107 P **P 19 27 02.5 +2.6**
SNR=5.0
LSZ Lusaka 92.45 107 P **P 19 27 02.5 +2.6**
SNR=5.0
LSZ Lusaka 92.45 107 P **P 19 27 02.5 +2.6**
SNR=5.0
LASF Ste Croix 92.54 44 *e*P **P 19 26 58.1 -1.5**
BGF Bois d'Agland 92.95 41 *e*P **P 19 27 00.8 -0.6**
comp=Z,127nm,1.5s,mb5.8
BGF Bois d'Agland 92.95 41 *e*P **P 19 27 00.8 -0.6**
comp=Z,63nm,1.5s,mb5.8
BGF Bois d'Agland 92.95 41 *e*P **P 19 27 00.8 -0.6**
BGF pmax pmax
comp=Z,63nm,1.5s,mb5.8
KEST Kesra 93.09 53 LR LR 20 10 28.1
comp=Z,518nm,19.6s,MS5.0,baz=4.4,slow=36
HYF Humbligny 93.14 41 *e*P **P 19 27 01.3 -1.0**
AVF Avril sur Loir 93.37 41 *e*P **P 19 27 02.7 -0.6**
comp=Z,74nm,1.7s,mb5.5
AVF Avril sur Loir 93.37 41 *e*P **P 19 27 02.7 -0.6**
comp=Z,37nm,1.7s,mb5.5
AVF Avril sur Loir 93.37 41 *e*P **P 19 27 02.7 -0.6**
AVF pmax pmax
comp=Z,37nm,1.7s,mb5.5
VIVF Saint-Julien-l 93.39 43 *e*P **P 19 27 01.8 -1.7**
comp=Z,71nm,1.3s,mb5.6
VIVF Saint-Julien-l 93.39 43 *e*P **P 19 27 01.8 -1.7**
comp=Z,36nm,1.3s,mb5.6
VIVF Saint-Julien-l 93.39 43 *e*P **P 19 27 01.8 -1.7**
VIVF pmax pmax
comp=Z,36nm,1.3s,mb5.6
SSF Saint Saulge 93.58 41 *e*P **P 19 27 03.5 -0.8**
comp=Z,63nm,1.6s,mb5.5
SSF Saint Saulge 93.58 41 *e*P **P 19 27 03.5 -0.8**
comp=Z,31nm,1.6s,mb5.5
SSF Saint Saulge 93.58 41 *e*P **P 19 27 03.5 -0.8**
SSF pmax pmax
comp=Z,31nm,1.6s,mb5.5
SMF Signal de Mont 93.61 42 *e*P **P 19 27 03.9 -0.6**
comp=Z,160nm,1.6s,mb5.9
SMF Signal de Mont 93.61 42 *e*P **P 19 27 03.9 -0.6**
comp=Z,80nm,1.6s,mb5.9
SMF Signal de Mont 93.61 42 *e*P **P 19 27 03.9 -0.6**
SMF pmax pmax
comp=Z,80nm,1.6s,mb5.9
SMRF Simiane la Rot 93.62 44 *e*P **P 19 27 03.5 -1.1**
comp=Z,218nm,1.8s,mb6.0
SMRF Simiane la Rot 93.62 44 *e*P **P 19 27 03.5 -1.1**
comp=Z,218nm,1.8s,mb6.3
ESK Eskdalemuir 93.63 32 PFAKE 19 27 20.0 +16
ESK LR LR
comp=Z,663nm,20.0s,MS5.1
EKA Eskdalemuir Ar 93.67 32 P **P 19 27 04.2 -0.3**
comp=Z,14nm,1.1s,mb5.3,baz=227,slow=4.4,SNR=15
SIT Sitka 93.75 330 PFAKE 19 27 20.0 +15
SIT LR LR
comp=Z,1µm,21.0s,MS5.4
LOR Lormes 93.89 41 *e*P **P 19 27 04.7 -1.0**
comp=Z,8.6nm,0.8s,mb4.9
LOR *e*MLR MLR
comp=Z,1µm,20.2s,MS5.0
LOR Lormes 93.89 41 *e*P **P 19 27 04.7 -1.0**
comp=Z,4.3nm,0.8s,mb4.9
LOR LR LR
comp=Z,1µm,20.3s,MS5.3
LOR Lormes 93.89 41 *e*P **P 19 27 04.7 -1.0**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.9
LOR MLR MLR
comp=Z,1µm,20.3s,MS5.3
LMR La Mourre 93.99 45 *e*P **P 19 27 05.5 -0.8**
comp=Z,213nm,1.8s,mb6.0
LMR La Mourre 93.99 45 *e*P **P 19 27 05.5 -0.8**
comp=Z,107nm,1.8s,mb6.0
LMR La Mourre 93.99 45 *e*P **P 19 27 05.5 -0.8**
LMR pmax pmax
comp=Z,107nm,1.8s,mb6.0
FRF La Foret Royal 94.17 45 *e*P **P 19 27 06.4 -0.7**
comp=Z,46nm,1.1s,mb5.5
FRF La Foret Royal 94.17 45 *e*P **P 19 27 06.4 -0.7**
comp=Z,23nm,1.1s,mb5.5
FRF La Foret Royal 94.17 45 *e*P **P 19 27 06.4 -0.7**
FRF pmax pmax
comp=Z,23nm,1.1s,mb5.5
ORIF Oris-en-Rattie 94.20 44 *e*P **P 19 27 05.4 -1.8**
comp=Z,44nm,1.4s,mb5.4
ORIF *e*MLR MLR
comp=Z,3µm,20.0s,MS5.4
ORIF Oris-en-Rattie 94.20 44 *e*P **P 19 27 05.4 -1.8**
comp=Z,22nm,1.4s,mb5.4
ORIF Oris-en-Rattie 94.20 44 *e*P **P 19 27 05.4 -1.8**
ORIF pmax pmax
comp=Z,22nm,1.4s,mb5.4
URZ Urewera 94.65 227 LR LR 20 01 16.2
comp=Z,2µm,18.3s,MS5.7,baz=81,slow=30
SNZO South Karori 94.71 223 PFAKE 19 27 20.0 +10
SNZO LR LR
comp=Z,2µm,20.0s,MS5.5
MBDF Montbardon 94.71 44 *e*P **P 19 27 07.8 -1.8**
SBF Sospel 94.81 45 *e*P **P 19 27 09.1 -1.0**
comp=Z,57nm,1.0s,mb5.7
SBF Sospel 94.81 45 *e*P **P 19 27 09.1 -1.0**
comp=Z,28nm,1.0s,mb5.7
SBF Sospel 94.81 45 *e*P **P 19 27 09.1 -1.0**
SBF pmax pmax
comp=Z,29nm,1.0s,mb5.7
LPL La Plagne 94.99 43 *e*P **P 19 27 10.2 -0.6**
comp=Z,53nm,1.4s,mb5.5
LPL La Plagne 94.99 43 *e*P **P 19 27 10.2 -0.6**
comp=Z,26nm,1.4s,mb5.5
LPL La Plagne 94.99 43 *e*P **P 19 27 10.2 -0.6**
LPL pmax pmax
comp=Z,27nm,1.4s,mb5.5
LPG La Plagne 95.00 43 *e*P **P 19 27 10.1 -0.8**
comp=Z,79nm,1.5s,mb5.6
LPG La Plagne 95.00 43 *e*P **P 19 27 10.1 -0.8**
comp=Z,40nm,1.5s,mb5.6
LPG La Plagne 95.00 43 *e*P **P 19 27 10.1 -0.8**
LPG pmax pmax
comp=Z,40nm,1.5s,mb5.6
CABF La Chapelle 95.01 42 *e*P **P 19 27 10.2 -0.7**
comp=Z,33nm,1.3s,mb5.3
CABF La Chapelle 95.01 42 *e*P **P 19 27 10.2 -0.7**
comp=Z,16nm,1.3s,mb5.3
CABF La Chapelle 95.01 42 *e*P **P 19 27 10.2 -0.7**
CABF pmax pmax
comp=Z,16nm,1.3s,mb5.3
MEZF Maizieres J'vi 95.13 40 *e*P **P 19 27 10.3 -1.1**
BAIF Baives 95.26 39 *e*P **P 19 27 10.9 -1.0**
comp=Z,18nm,1.0s,mb5.1
BAIF Baives 95.26 39 *e*P **P 19 27 10.9 -1.0**
comp=Z,8.8nm,1.0s,mb5.1
BAIF Baives 95.26 39 *e*P **P 19 27 10.9 -1.0**
BAIF pmax pmax
comp=Z,9.0nm,1.0s,mb5.2
SNF Seneffe 95.49 38 P **P 19 27 13.0 0.0**
DOU Dourbes 95.50 39 P **P 19 27 12.7 -0.3**
GIVF Givet 95.64 39 *e*P **P 19 27 12.9 -0.8**
UCC Uccle 95.65 38 P **P 19 27 13.1 -0.7**
RPZ Rata Peaks 95.69 220 P **P 19 27 14.4 +0.2**
comp=Z,35nm,1.1s,mb5.7,baz=161,slow=2.9,SNR=6.1
RPZ LR LR 20 00 50.5
comp=Z,2µm,18.1s,MS5.6,baz=98,slow=30
HAU Haudompre 95.72 41 *e*P **P 19 27 13.2 -0.9**
HAU *e*MLR MLR
comp=Z,1µm,21.0s,MS5.0
HAU Haudompre 95.72 41 *e*P **P 19 27 13.2 -0.9**
HAU MLR MLR
comp=Z,1µm,21.0s,MS5.3
HINF Hinteralfeld 95.96 41 *e*P **P 19 27 14.1 -1.1**
comp=Z,16nm,1.0s,mb5.1
HINF Hinteralfeld 95.96 41 *e*P **P 19 27 14.1 -1.1**
comp=Z,8.1nm,1.0s,mb5.1
HINF Hinteralfeld 95.96 41 *e*P **P 19 27 14.1 -1.1**
HINF pmax pmax
comp=Z,8.0nm,1.0s,mb5.1
BCLA Clavier 96.05 38 P **P 19 27 15.5 -0.1**
WLF Walferdange 96.25 39 P **P 19 27 16.8 +0.3**
CDF Champ du Feu 96.45 41 *e*P **P 19 27 16.6 -0.8**
comp=Z,46nm,1.3s,mb5.4
CDF Champ du Feu 96.45 41 *e*P **P 19 27 16.6 -0.8**
comp=Z,23nm,1.3s,mb5.5
CDF Champ du Feu 96.45 41 *e*P **P 19 27 16.6 -0.8**
CDF pmax pmax
comp=Z,23nm,1.3s,mb5.5
MEM Membach 96.54 38 P **P 19 27 18.2 +0.5**
BFO Black Forest 97.07 41 PFAKE 19 27 30.0 +10
BFO LR LR
comp=Z,934nm,22.0s,MS5.2
DAVOX Davos/Dischmat 97.50 43 P **P 19 27 22.4 +0.2**
comp=Z,3.6nm,0.8s,mb4.8,baz=257,slow=6.7,SNR=3.6
INK Inuvik 98.90 340 P **P 19 27 26.6 -1.4**
comp=Z,8.0nm,1.0s,mb5.2,baz=117,slow=6.1,SNR=4.2
INK PKKPbc PKKPbc 19 43 55.0 -2.6
comp=Z,1.2nm,0.8s,baz=323,slow=5.6,SNR=5.0
GRFO Grafenberg 99.33 41 PFAKE 19 27 40.0 +10
GRFO LR LR
comp=Z,633nm,19.0s,MS5.1
GRA1 Grafenberg Arr 99.33 41 *e*Pdif **P 19 27 30.5 +0.2**
GRA1 *e*PP PP 19 31 28.1 -5.8
GRA1 *e*PKKP PKKPbc 19 43 52.1 -3.7
GRA1 *e* 19 44 20.8
GRA1 LR LR
comp=Z,600nm,20.3s,MS5.1
GRF Grafenberg Arr 99.33 41 *e*P **P 19 27 30.5 +0.2**
GRF *e* 19 31 28.1
GRF MLR MLR
comp=Z,600nm,20.3s,MS5.1
GRF Grafenberg Arr 99.33 41 *e*P **P 19 27 30.5 +0.2**
GRF *e* 19 31 28.1
GRF MLR MLR
comp=Z,600nm,20.3s,MS5.1
GRF Grafenberg Arr 99.33 41 *e*Pdiff **P 19 27 30.5 +0.2**
GRF *e*PP PP 19 31 28.1 -5.8
GRF *e*PKKP PKKPbc 19 43 52.1 -3.7
GRF *e* 19 44 20.8
GRF *e*L 20 10 36.0
comp=Z,626nm,20.3s
EGAK Eagle 99.91 336 PFAKE 19 27 40.0 +7.0
EGAK LR LR
comp=Z,865nm,20.0s,MS5.3
NKC Novy Kostel 100.26 40 AMS AMS 20 10 40.0
comp=Z,1µm,19.4s
GERES GERESS Array B 100.61 42 P Pdif 19 27 36.1 -0.1
comp=Z,2.0nm,1.0s,baz=226,slow=3.5,SNR=7.4
GERES PKKPbc PKKPbc 19 43 49.0 -3.1
comp=Z,0.8nm,0.6s,baz=57,slow=3.6,SNR=4.0
KHC Kasperske Hory 100.61 42 *e*PDIF Pdif 19 27 36.0 -0.2
KHC *e*PP PP 19 31 40.2 -3.5
KHC AMS AMS 20 12 40.0
comp=Z,600nm,18.0s
CLL Collm 100.93 39 *e*P Pdif 19 27 38.0 +0.5
CLL pmax pmax
comp=Z,13nm,1.4s
CLL MLR MLR
comp=Z,1µm,22.5s,MS5.4
CLL Collm 100.93 39 *e*Pdif Pdif 19 27 38.0 +0.5
comp=Z,13nm,1.4s
CLL *e*PP PP 19 31 43.0 -3.0
comp=Z,39nm,1.9s
BRG Berggiesshubel 101.36 40 *e*P Pdif 19 27 39.9 +0.4
BRG pmax pmax
comp=Z,9.0nm,1.4s
BRG Berggiesshubel 101.36 40 *e*P Pdif 19 27 39.9 +0.5
comp=Z,14nm,1.4s
PRU Pruhonice 101.47 41 *e*PP PP 19 31 47.7 -2.4
PRU AMS AMS 20 13 10.0
comp=Z,700nm,17.0s
PVCC Panska Ves 101.64 40 AMS AMS 20 09 00.0
comp=Z,900nm,20.2s
KONO Kongsberg 101.71 31 PFAKE 19 27 50.0 +9.0
KONO LR LR
comp=Z,1µm,21.0s,MS5.5
TREC Trest 101.86 42 AMS AMS 20 09 50.0
comp=Z,700nm,20.8s
PMR Palmer 102.06 331 PFAKE 19 27 50.0 +7.4
PMR LR LR

comp=Z,1µm,20.0s,MS5.5
UPC Upice 102.52 41 *e*PP PP 19 31 56.9 -1.1
COLA College 102.60 335 PFAKE 19 28 00.0 +15
COLA LR LR
comp=Z,674nm,20.0s,MS5.2
DPC Dobruska-Polom 102.67 41 *e*PP PP 19 31 56.5 -2.6
DPC AMS AMS 20 13 00.0
comp=Z,600nm,18.9s
NOA NORSAR Array B 102.90 30 Pdif Pdif 19 27 46.5 +0.2
NOA PKKPbc PKKPbc 19 43 42.2 -3.6
NOA NORSAR Array B 102.90 30 Pdiff Pdif 19 27 46.5 +0.2
comp=Z,2.6nm,1.1s,baz=252,slow=4.4,SNR=2.9
NOA PKKPbc PKKPbc 19 43 42.2 -3.6
comp=Z,1.8nm,1.0s,baz=261,slow=3.1,SNR=3.3
OKC Ostrava-Krasne 103.67 42 *e*PP PP 19 32 05.1 -1.5
HFS Hagfors 103.82 31 PP PP 19 32 06.5 -0.9
comp=Z,12nm,1.2s,baz=284,slow=5.8,SNR=6.3
TTA Tatalina 105.53 332 *e*PKPdf PKiKP 19 32 18.6 +7.8
KMBO Kilima Mbogo 105.89 97 PFAKE 19 32 20.0 +7.0
KMBO LR LR
comp=Z,814nm,19.0s,MS5.3
KMBO Kilima Mbogo 105.89 97 PP PP 19 32 22.3 -1.5
comp=Z,0.4nm,0.5s,baz=51,slow=21,SNR=4.7
KMBO PKKPab PKKPab 19 43 52.0 -0.5
comp=Z,0.4nm,0.4s,baz=48,slow=6.6,SNR=4.8
FUNA Funafuti 106.30 255 PFAKE 19 32 20.0 +6.2
FUNA LR LR
comp=Z,4µm,22.0s,MS5.9
TAU Tasmania Unive 108.82 208 PFAKE 19 32 30.0 +12
TAU LR LR
comp=Z,433nm,19.0s,MS5.0
UNV Unalaska Valle 109.43 321 PFAKE 19 32 30.0 +12
UNV LR LR
comp=Z,1µm,20.0s,MS5.5
ARCES ARCESS Array B 110.24 22 PKKPbc PKKPbc 19 43 19.0 -4.1
comp=Z,3.0nm,0.8s,baz=83,slow=3.1,SNR=15
KIEV Kiev 110.81 42 PFAKE 19 32 30.0 +8.9
KIEV LR LR
comp=Z,729nm,20.0s,MS5.3
AKASG Malin Array Be 110.82 42 PKiKP PKiKP 19 32 20.1 -0.9
comp=Z,1.1nm,0.4s,baz=270,slow=2.8,SNR=11
AKASG PP PP 19 32 52.7 -6.3
comp=Z,0.4nm,0.5s,baz=258,slow=7.6,SNR=7.6
AKASG PKKPbc PKKPbc 19 43 18.4 -2.3
comp=Z,0.3nm,0.3s,baz=83,slow=2.5,SNR=7.1
AKASG PKKPab PKKPab 19 43 27.6 -0.7
comp=Z,0.2nm,0.3s,baz=79,slow=3.8,SNR=6.8
TNA Tin City 111.01 334 PFAKE 19 32 30.0 +9.0
TNA LR LR
comp=Z,418nm,20.0s,MS5.0
ANTO Ankara 112.05 54 PFAKE 19 32 40.0 +16
ANTO LR LR
comp=Z,431nm,19.0s,MS5.1
LVZ Lovozero 113.63 24 PFAKE 19 32 40.0 +14
LVZ LR LR
comp=Z,832nm,19.0s,MS5.3
OBN Obninsk 115.42 38⇑ *e*PKP PKPdf 19 32 29.2 -0.5
OBN LR LR
comp=Z,600nm,19.0s,MS5.2
OBN Obninsk 115.42 38⇓ *i*PKIKP PKPdf 19 32 29.1 -0.6
OBN *i* 19 32 38.4
OBN *i* 19 33 29.9
OBN pmax pmax
comp=Z,35nm,1.1s
OBN MLR MLR
comp=Z,600nm,19.0s,MS5.2
ADK Adak 115.48 319 PFAKE 19 32 40.0 +10
ADK LR LR
comp=Z,476nm,20.0s,MS5.1
ANN Anapa 115.92 49 *i* PKIKP PKPdf 19 32 30.1 -0.9
ANN *e* 19 32 33.9
ANN pmax pmax
comp=Z,80nm,1.3s
MOS Moscow 116.00 37 *e*PKIKP PKPdf 19 32 30.2 -0.6
MOS *e* 19 33 32.8
MOS MLR MLR
comp=Z,800nm,19.0s,MS5.3
MALT Malatya 116.23 56⇑ *e*P PKPdf 19 32 31.7 -0.1
PRGR Permogore 119.31 30 *e*PKIKP PKPdf 19 32 36.0 -1.0
KIV Kislovodsk 119.67 50 *e*PKPdf PKPdf 19 32 37.1 -1.1
KIV LR LR
comp=Z,372nm,21.0s,MS5.0
KIV Kislovodsk 119.67 50⇓ *i*PKIKP PKPdf 19 32 38.6 +0.3
KIV *i* 19 32 46.7
KIV *i* 19 34 00.5
KIV *e*SS SS 19 50 25.2 +1.0
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,400nm,22.0s,MS5.0
STKA Stephens Creek 120.41 211⇓ *i*P PKPdf 19 32 39.1 -1.1
comp=Z,4.4nm,0.9s
STKA Stephens Creek 120.41 211 PKP PKPdf 19 32 39.0 -1.2
comp=Z,5.1nm,0.7s,baz=191,slow=6.8,SNR=16
BILL Bilibino 120.47 339⇑ *i*PKPdf PKPdf 19 32 38.1 -1.0
BILL *e*PP PP 19 34 02.6 -3.4
BILL LR LR
comp=Z,738nm,20.0s,MS5.3
BILL Bilibino 120.47 339⇓ *i*PKIKP PKPdf 19 32 38.0 -1.1
BILL *i* 19 34 04.5
BILL pmax pmax
comp=Z,10.0nm,1.0s
ZEI Tsey 120.57 51 *e*PKIKP PKPdf 19 32 40.2 +0.2
ZEI *e* 19 34 11.1
RST Umm Al-Ruwaisa 122.54 67 *e*P PKPdf 19 32 43.9 -0.3
RST AMb AMB 19 32 45.8
comp=Z,64nm,0.8s
NAY Al-Naaiem 122.73 67 *e*P PKPdf 19 32 44.1 -0.6
NAY AMb AMB 19 32 46.3
comp=Z,22nm,1.4s
MIB Mutribah 122.86 67 *e*P PKPdf 19 32 44.4 -0.4
MIB AMb AMB 19 32 46.6
comp=Z,52nm,1.2s
HNR Honiara 122.88 244 PFAKE 19 33 00.0 +15
HNR LR LR
comp=Z,617nm,21.0s,MS5.2
RDF Al-Radifah 122.96 68 *e*P PKPdf 19 32 44.4 -0.7
RDF AMb AMB 19 32 46.7
comp=Z,36nm,1.3s
UMR Umm Al-Rimmam 123.17 67 *e*P PKPdf 19 32 45.4 -0.1
UMR AMb AMB 19 32 46.3
comp=Z,53nm,0.7s
SOKR Solikamsk 125.18 30 *i* PKIKP PKPdf 19 32 49.0 +0.6
SOKR pmax pmax
comp=Z,20nm,0.9s
SOKR MLR MLR
comp=Z,490nm,19.0s,MS5.2
CTA Charters Tower 126.80 224 *e*PKP PKPdf 19 32 51.9 -0.9
comp=Z,19nm,1.3s
CTA Charters Tower 126.80 224 PKP PKPdf 19 32 51.5 -1.2
comp=Z,20nm,1.0s,baz=210,slow=2.5,SNR=9.9
CTAO Charters Tower 126.80 224 PFAKE 19 33 00.0 +7.2
CTAO LR LR
comp=Z,793nm,21.0s,MS5.4
FORT Forrest 126.87 200 *e*PKP PKPdf 19 32 51.0 -1.6
comp=Z,11nm,0.7s
TIXI Tiksi 126.89 353⇑ *i*PKPdf PKPdf 19 32 49.7 -1.7
TIXI LR LR
comp=Z,1µm,22.0s,MS5.5
TIXI Tiksi 126.89 353 *i* PKIKP PKPdf 19 32 49.6 -1.7
TIXI pmax pmax
comp=Z,20nm,1.0s
TIXI MLR MLR
comp=Z,1µm,22.0s,MS5.6
NWAO Narrogin (SRO) 127.20 188 PKP PKPdf 19 32 51.6 -1.6
NWAO LR LR
comp=Z,750nm,20.0s,MS5.4
NWAO Narrogin (SRO) 127.20 188 PKP PKPdf 19 32 51.6 -1.6
comp=Z,35nm,1.2s,baz=124,slow=3.4,SNR=4.8
ARU Arti 127.26 33⇑ *i*PKPdf PKPdf 19 32 52.3 -0.2
ARU *e*PP PP 19 34 51.6 -0.4
ARU LR LR
comp=Z,711nm,20.0s,MS5.3
ARU Arti 127.26 33 *i* PKIKP PKPdf 19 32 52.6 +0.2
ARU 19 34 53.2
SEY Seymchan 128.04 337⇑ *e*PKIKP PKPdf 19 32 53.5 -0.2
SVE Sverdlovsk 128.15 32⇑ *i*PKIKP PKPdf 19 32 54.9 +0.8
SVE pmax pmax
comp=Z,37nm,1.3s
SVE MLR MLR
comp=Z,1µm,21.0s,MS5.5
MUN Mundaring 128.26 187 *e*PKP PKPdf 19 32 53.9 -1.4
KLBR Kellerberrin 128.44 189 *e*PKP PKPdf 19 32 54.2 -1.4
comp=Z,77nm,1.3s
AKTK Aktyubinsk 129.00 40 PKP PKPdf 19 32 56.2 +0.3
AKTO Aktyubinsk 129.00 40 PKP PKPdf 19 32 56.2 +0.3
comp=Z,15nm,0.9s,baz=289,slow=1.6,SNR=56
PET Petropavlovsk 129.99 324⇑ *e*PKP PKPdf 19 32 57.4 -0.3
PET LR LR
comp=Z,449nm,21.0s,MS5.1
PET Petropavlovsk 129.99 324⇑ *i*PKIKP PKPdf 19 32 57.3 -0.4
ASHO Ashiyiah 130.12 74 P PKPdf 19 32 59.2 +0.3
SNR=9.6
ASHO Ashiyiah 130.12 74 PKPdf PKPdf 19 32 59.2 +0.3
SNR=9.6
ASHO Ashiyiah 130.12 74 P PKPdf 19 32 59.2 +0.3
SNR=9.6
ASHO Ashiyiah 130.12 74 P PKPdf 19 32 59.2 +0.3
SNR=9.6
ASHO Ashiyiah 130.12 74 P PKPdf 19 32 59.2 +0.3
SNR=9.6
HATD Hatta, Dubai 130.20 74 P PKPdf 19 32 59.4 +0.4
SNR=13
HATD Hatta, Dubai 130.20 74 PKPdf PKPdf 19 32 59.4 +0.4
SNR=13
HATD Hatta, Dubai 130.20 74 P PKPdf 19 32 59.4 +0.4
SNR=13
HATD Hatta, Dubai 130.20 74 P PKPdf 19 32 59.4 +0.4
SNR=13
HATD Hatta, Dubai 130.20 74 P PKPdf 19 32 59.4 +0.4
SNR=13
AB31 Akbulak array 130.55 41⇑ *e*PKP PKPdf 19 32 59.3 +0.4
MA2 Magadan 130.65 334 *e*PKPdf PKPdf 19 32 57.9 -0.9
MA2 LR LR
comp=Z,757nm,20.0s,MS5.4
MA2 Magadan 130.65 334 *i* PKIKP PKPdf 19 32 58.4 -0.4
MA2 *e*SS SS 19 52 38.2 -2.4
MA2 pmax pmax
comp=Z,70nm,1.6s
BSY Bisya 130.95 77 P PKPdf 19 33 00.6 +0.1
SNR=18
BSY Bisya 130.95 77 PKPdf PKPdf 19 33 00.6 +0.1
SNR=18
BSY Bisya 130.95 77 P PKPdf 19 33 00.6 +0.1
SNR=18
BSY Bisya 130.95 77 P PKPdf 19 33 00.6 +0.1
SNR=18
BSY Bisya 130.95 77 P PKPdf 19 33 00.6 +0.1
SNR=18
ASAR Alice Springs 130.96 210 PKP PKPdf 19 32 59.0 -1.7
comp=Z,27nm,1.0s,baz=148,slow=2.4,SNR=87
ASAR PP PP 19 35 11.9 -4.0
comp=Z,3.1nm,1.1s,baz=141,slow=5.8,SNR=5.7
ASAR SKPbc SKPbc 19 36 21.2 -1.9
comp=Z,4.6nm,1.1s,baz=161,slow=3.9,SNR=4.6
ASAR PKKP 19 42 58.4
comp=Z,0.4nm,0.9s,baz=326,slow=1.1,SNR=6.4
HOQ Hoqain 131.15 76 P PKPdf 19 33 00.5 -0.4
SNR=6.9
HOQ Hoqain 131.15 76 PKPdf PKPdf 19 33 00.5 -0.4
SNR=6.9
HOQ Hoqain 131.15 76 P PKPdf 19 33 00.5 -0.4
SNR=6.9
HOQ Hoqain 131.15 76 P PKPdf 19 33 00.5 -0.4
SNR=6.9
HOQ Hoqain 131.15 76 P PKPdf 19 33 00.5 -0.4
SNR=6.9
JMDO Jabal Madar 131.74 77 P PKPdf 19 33 01.5 -0.5
SNR=8.9
JMDO Jabal Madar 131.74 77 PKPdf PKPdf 19 33 01.5 -0.5
SNR=8.9
JMDO Jabal Madar 131.74 77 P PKPdf 19 33 01.5 -0.5
SNR=8.9
JMDO Jabal Madar 131.74 77 P PKPdf 19 33 01.5 -0.5
SNR=8.9
JMDO Jabal Madar 131.74 77 P PKPdf 19 33 01.5 -0.5
SNR=8.9
SMDO Samad 131.77 76 P PKPdf 19 33 02.3 +0.2
SNR=30
SMDO Samad 131.77 76 PKPdf PKPdf 19 33 02.3 +0.2
SNR=30
SMDO Samad 131.77 76 P PKPdf 19 33 02.3 +0.2
SNR=30
SMDO Samad 131.77 76 P PKPdf 19 33 02.3 +0.2
SNR=30
SMDO Samad 131.77 76 P PKPdf 19 33 02.3 +0.2
SNR=30
BIDO Bidbid 131.89 76 P PKPdf 19 33 02.6 +0.3
SNR=5.4
BIDO Bidbid 131.89 76 PKPdf PKPdf 19 33 02.6 +0.3
SNR=5.4
BIDO Bidbid 131.89 76 P PKPdf 19 33 02.6 +0.3
SNR=5.4
BIDO Bidbid 131.89 76 P PKPdf 19 33 02.6 +0.3
SNR=5.4
WBK Wadi Bani Khal 132.56 77 P PKPdf 19 33 04.4 +0.8
SNR=18
WBK Wadi Bani Khal 132.56 77 PKPdf PKPdf 19 33 04.4 +0.8
SNR=18
WBK Wadi Bani Khal 132.56 77 P PKPdf 19 33 04.4 +0.8
SNR=18
WBK Wadi Bani Khal 132.56 77 P PKPdf 19 33 04.4 +0.8
SNR=18
WBK Wadi Bani Khal 132.56 77 P PKPdf 19 33 04.4 +0.8
SNR=18
WB2 Warramunga Arr 133.90 213⇑ *i*PKP PKPdf 19 33 04.9 -1.3
WB2 *e*PP PP 19 35 35.8 +0.9
WB2 *e*PKS 19 36 32.8
WRA Warramunga Arr 133.91 213 PKHKP 19 32 53.3
WRA 19 33 05.1
WRA Warramunga Arr 133.91 213 PKhKP 19 32 53.3
comp=Z,1.6nm,0.8s,baz=149,slow=1.8,SNR=6.9
WRA PKP PKPdf 19 33 05.1 -1.2
comp=Z,25nm,1.0s,baz=146,slow=1.6,SNR=40
WRA SKPbc SKPbc 19 36 32.4 -1.2
comp=Z,7.5nm,1.0s,baz=135,slow=2.6,SNR=8.0
BRVK Borovoye 134.84 33⇑ *e*PKPdf PKPdf 19 33 07.1 +0.2
BRVK LR LR
comp=Z,1µm,21.0s,MS5.5
BRVK Borovoye 134.84 33 P PKPdf 19 33 07.9 +1.0
SNR=11
BRVK Borovoye 134.84 33 PKPdf PKPdf 19 33 07.9 +1.0
SNR=11
BRVK Borovoye 134.84 33 P PKPdf 19 33 07.9 +1.0
SNR=11
BRVK Borovoye 134.84 33 P PKPdf 19 33 07.9 +1.0
SNR=11
YAK Yakutsk 135.54 347 *e*PKPdf PKPdf 19 33 06.8 -1.1
YAK LR LR
comp=Z,697nm,22.0s,MS5.3
YAK Yakutsk 135.54 347 *e*PKIKP PKPdf 19 33 06.6 -1.3
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.9s
YAK pmax pmax
comp=E,9.0nm,1.8s
MBWA Marble Bar 138.27 194 PFAKE 19 33 30.0 +16
MBWA LR LR
comp=Z,904nm,19.0s,MS5.5
FITZ Fitzroy Crossi 139.39 203 *e*PKP 19 33 04.7
comp=Z,7.3nm,0.9s
FITZ *e* 19 33 15.6
FITZ *e*PKS 19 36 50.4
FITZ Fitzroy Crossi 139.39 203 *e*PKP 19 33 04.7
FITZ PKP PKPdf 19 33 15.4 -1.0
FITZ *e* 19 33 15.6
FITZ *e*PKS 19 36 50.4
FITZ Fitzroy Crossi 139.39 203 PKhKP 19 33 06.1
comp=Z,3.4nm,0.9s,baz=140,slow=6.3,SNR=3.4
FITZ PKP PKPdf 19 33 15.4 -1.0
comp=Z,12nm,0.9s,baz=173,slow=2.8,SNR=8.7
NVS Novosibirsk 139.49 24 *e*PKHKP 19 33 04.6
NVS pmax pmax
comp=E,35nm,1.4s
NVS pmax pmax
comp=Z,104nm,1.4s
KURK Kurchatov 140.39 31 *e*PKPpre 19 33 12.5
KURK *i* PKP PKPdf 19 33 16.8 -0.4
KURK ⇑ *e*PKPdf PKPdf 19 33 17.6 +0.4
KURK *e*PP PP 19 36 27.7 +12
KURK Kurchatov 140.39 31 *e*PKIKP PKPdf 19 33 12.5 -4.7
KURK *e* 19 33 17.6
KURK Kurchatov 140.39 31 P PKPdf 19 33 18.7 +1.5
SNR=10
KURK Kurchatov 140.39 31 PKPdf PKPdf 19 33 18.7 +1.5
SNR=10
KURK Kurchatov 140.39 31 P PKPdf 19 33 18.7 +1.5
SNR=10
ZALV Zalesovo Beam 140.77 23 PKhKP 19 33 10.3
comp=Z,7.0nm,0.8s,baz=320,slow=4.4,SNR=38
ZALV PKP PKPdf 19 33 18.4 +0.6
comp=Z,47nm,0.8s,baz=298,slow=3.1,SNR=47
ZAL Zalesovo 140.77 23 PKHKP 19 33 10.3
ZAL 19 33 18.4
KAKA Kakadu 140.90 216 *e*P PKPdf 19 33 10.7 -8.6
comp=Z,34nm,1.2s
CLNS Chul'man 141.29 347 *e*PKIKP PKPdf 19 33 18.7 +0.1
CLNS pmax pmax
comp=Z,27nm,1.0s
CLNS pmax pmax
comp=N,12nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.1s
BOD Bodaibo 141.82 356 *e*PKHKP 19 33 12.6
BOD pmax pmax
comp=Z,20nm,1.2s
YSS Yuzh-Sakhalins 141.87 323 *e*PKPdf PKPdf 19 33 20.2 +0.2
YSS LR LR
comp=Z,564nm,21.0s,MS5.3
YSS Yuzh-Sakhalins 141.87 323 *i* PKIKP PKPdf 19 33 18.6 -1.4
YSS pmax pmax
comp=Z,140nm,1.8s
EKS2 Erkin-Say 141.95 45 *e*PKPpre 19 33 15.8
EKS2 LR LR
comp=Z,586nm,19.0s,MS5.4
EKS2 Erkin-Say 141.95 45 P PKPdf 19 33 22.3 +2.1
SNR=9.3
AML Almayashu 142.12 46 *e*PKPpre 19 33 16.9
AML *e*PKPdf PKPdf 19 33 20.2 -0.3
AML Almayashu 142.12 46 P PKPdf 19 33 22.7 +2.1
SNR=7.0
USP Ospenovka 142.15 44 P PKPdf 19 33 22.1 +1.5
SNR=7.1
FRU Bishkek 142.43 44 *e*PKIKP PKPdf 19 33 19.0 -2.1
FRU pmax pmax
comp=Z,100nm,2.0s
BHJ Bhuj 142.43 77 *e*P PKPdf 19 33 18.9 -2.8
AAK Ala-Archa 142.43 45 P PKPdf 19 33 19.8 -1.3
SNR=10
UCH Uchtor 142.62 45 P PKPdf 19 33 21.0 -0.5
SNR=33
KBK Karagaybulak 142.72 44 P PKPdf 19 33 20.6 -1.0
SNR=14
TKM2 Tokmak 2 143.03 44 *e*PKPdf PKPdf 19 33 20.8 -1.4
TKM2 Tokmak 2 143.03 44 P PKPdf 19 33 20.9 -1.3
SNR=19
KZA Kyzart 143.18 45 P PKPdf 19 33 21.4 -1.1
SNR=14
ASAJ Asahikawa 143.50 319 PKP PKPdf 19 33 20.9 -2.0
comp=Z,26nm,1.0s,baz=237,slow=3.2,SNR=6.3
ULHL Ulahol 143.76 44 P PKPdf 19 33 23.1 -0.5
SNR=48
KSH Kashi 144.77 49 *e*PKP PKPdf 19 33 25.8 +0.4
KSH *e*PKP2 PKPdf 19 33 28.0 +2.6
KSH *e*APKP 19 33 36.3
KSH *e*XPKP 19 33 40.1
KSH *e*PKS 19 36 59.0
KSH *e*PPP 19 40 04.9
KSH *e*SKS SKSdf 19 40 29.5 -3.4
KSH *e*SKKS SKKSac 19 43 34.5 +1.1
KSH *e*SS SS 19 55 35.6 +6.1
KSH PP PP
comp=Z,847nm,5.3s
KSH LR LR
comp=N,594nm,5.6s
KSH LR LR
comp=E,1µm,5.0s
KSH LR LR
comp=Z,736nm,7.0s
MKAR Makanchi Array 144.78 34 PKP PKPdf 19 33 24.3 -0.8
comp=Z,99nm,0.8s,baz=320,slow=3.4,SNR=537
HABR Khabarovsk 144.88 331⇑ *i*PKIKP PKPdf 19 33 23.8 -1.4
HABR *i* 19 33 27.9
HABR *e* 19 36 42.7
HABR *e* 19 40 33.2
HABR *e*SS SS 19 55 31.4 +2.0
HABR *e*SSS 20 00 56.4
MNGI Mangalore 145.68 96 *i* P PKPdf 19 33 28.1 +0.4
MNGI *i* x x 19 39 02.5
KLR Kul'dur 145.75 334⇓ *i*PKHKP 19 33 23.0
KLR *i* 19 33 23.5
KLR pmax pmax
comp=N,28nm,1.6s
KLR pmax pmax
comp=E,62nm,1.6s
KLR pmax pmax
comp=Z,400nm,1.6s
KLR pmax pmax
comp=Z,1µm,6.5s
POO Poona 145.92 86 *e*P PKPdf 19 33 26.8 -1.1
POO ⇑ *i*P 19 33 28.0
comp=Z,270nm,1.0s
GUMO Guam 146.03 265 *e*PKPdf PKPdf 19 33 26.4 -1.8
KAD Karad 146.05 88 *e*P PKPdf 19 33 27.6 -0.6
TRD Trivandrum 146.20 105 *e*P PKPdf 19 33 26.9 -1.6
THN Thein Dam 146.90 61 *e*P PKPdf 19 33 28.8 -0.4
AJM Ajmer 146.92 72 *e*P PKPdf 19 33 28.6 -0.8
DLH Dalhousie 147.08 60 *ex* PKPbc 19 33 32.0 +0.4
IRK Irkutsk 147.23 6⇑ *i*PKP2 PKPdf 19 33 29.3 +0.2
IRK *e* 19 36 51.8
IRK pmax pmax
comp=Z,297nm,1.8s
MOY Mondy 147.34 10 *e*PKP2 PKPdf 19 33 30.9 +1.6
MOY pmax pmax
comp=Z,296nm,1.9s
BATI Kupang 147.34 206 PKPbc PKPbc 19 33 31.2 -1.7
comp=Z,189nm,1.1s,baz=19,slow=1.5,SNR=27
CIT Chita 147.63 356 *e*PKP2 PKPdf 19 33 30.5 +0.7
CIT pmax pmax
comp=Z,287nm,2.1s
TLY Talaya 147.71 7 *e*PKPdf PKPdf 19 33 30.2 +0.3
TLY LR LR
comp=Z,759nm,21.0s,MS5.5
TLY Talaya 147.71 7 *i* PKIKP PKPdf 19 33 29.4 -0.5
TLY pmax pmax
comp=Z,45nm,1.6s
TLY Talaya 147.71 7 P PKPdf 19 33 31.1 +1.2
SNR=94
TLY Talaya 147.71 7 PKPdf PKPdf 19 33 31.1 +1.2
SNR=94
TLY Talaya 147.71 7 P PKPdf 19 33 31.1 +1.2
SNR=94
NDI New Delhi 148.93 67 *e*P PKPdf 19 33 32.0 -0.7
ZAK Zakamensk 148.94 8⇓ *i*PKIKP PKPdf 19 33 32.3 +0.3
ZAK pmax pmax
comp=Z,216nm,1.4s
PALK Pallekele 149.06 110 *e*PKPdf PKPdf 19 33 33.3 0.0
PALK *e*PKPbc PKPbc 19 33 37.4 0.0
AKL Akola 149.11 82⇓ *i*P PKPdf 19 33 31.9 -1.3
AKL *ex* x 19 33 40.2
comp=Z,395nm,1.8s
AKL *i* x x 19 37 37.5
HIA Hailar 149.48 347 *e*PKPdf PKPdf 19 33 31.9 -1.0
HIA *e*PKPbc PKPbc 19 33 36.7 -0.7
CBIJ Chichi jima 149.57 290 PKPbc PKPbc 19 33 35.3 -3.0
comp=Z,232nm,1.0s,baz=284,slow=2.0,SNR=6.5
BHPL Bhopal 149.57 77 *e*P PKPdf 19 33 34.6 +0.7
WMQ Urumqi 149.60 33 PKP PKPdf 19 33 33.9 +0.6
WMQ APKP 19 33 38.9
WMQ XPKP 19 33 41.8
WMQ PKP2 PKPab 19 33 46.1 +3.2
WMQ PP PP 19 37 15.9 +5.5
WMQ PPP 19 40 38.9
WMQ PP PP
comp=Z,119nm,9.7s
WMQ LR LR
comp=N,452nm,22.2s,MS5.5
WMQ LR LR
comp=E,729nm,21.0s,MS5.5
WMQ LR LR
comp=Z,735nm,22.2s,MS5.4
MJAR Matsushiro Arr 150.11 310 PKP PKPdf 19 33 33.9 -0.4
MJAR PKPbc PKPbc 19 33 38.7 -0.6
MJAR Matsushiro Arr 150.11 310 PKP PKPdf 19 33 33.9 -0.4
comp=Z,34nm,1.1s,baz=93,slow=1.9,SNR=9.9
MJAR PKPbc PKPbc 19 33 38.7 -0.6
comp=Z,68nm,1.0s,baz=98,slow=1.4,SNR=96
MAJO Matsushiro 150.11 310 *e*PKPdf PKPdf 19 33 33.6 -0.7
MAJO *e*PKPbc PKPbc 19 33 38.6 -0.7
MAJO LR LR
comp=Z,1µm,20.0s,MS5.7
MAT Matsushiro 150.11 310 PKP PKPdf 19 33 37.7 +3.4
HYB Hyderabad 150.18 89 *e*P PKPdf 19 33 35.0 +0.1
HYB *e* 19 33 40.0
HYB *e* 19 33 45.5
HYB Hyderabad 150.18 89 *i* PKP PKPdf 19 33 35.0 +0.1

comp=Z,50nm,1.0s
HYB e 19 33 40.0
HYB ePKPAB PKPab 19 33 45.5 -0.6
JHJ Hachijo jima 2 150.24 303 PKPbc PKPbc 19 33 39.0 -0.8
comp=Z,327nm,0.9s,baz=151,slow=5.4,SNR=5.2
MDJ Mudanjiang 150.26 331 PKP PKPdf 19 33 32.4 -1.9
MDJ PKS 19 37 06.6
MDJ PP PP 19 37 13.4 -0.7
MDJ PP PP
comp=Z,224nm,12.7s
MDJ LR LR
comp=N,324nm,31.2s
MDJ LR LR
comp=E,429nm,24.8s
MDJ LR LR
comp=Z,601nm,24.8s
MDRS Chennai 150.79 98 eP PKPdf 19 33 35.1 -0.9
NGP Nagpur 151.04 82 eP PKPdf 19 33 34.6 -1.6
LGTI Lohaghat 151.38 64 ex PKPbc 19 33 41.0 -1.6
SONM Songino Array 151.80 5 PKIKP PKPdf 19 33 36.9 +0.4
SONM 19 33 43.5
SONM Songino Array 151.80 5 PKP PKPdf 19 33 36.9 +0.4
comp=Z,16nm,1.1s,baz=213,slow=0.3,SNR=70
SONM PKPbc PKPbc 19 33 43.5 +0.6
comp=Z,48nm,1.0s,baz=331,slow=1.4,SNR=80
SONM PKPab PKPab 19 33 53.1 +1.3
comp=Z,37nm,0.9s,baz=327,slow=1.9,SNR=17
ULN Ulaanbaatar 151.82 4 ePKPdf PKPdf 19 33 36.7 +0.2
ULN ePKPbc PKPbc 19 33 43.1 +0.1
ULN ePKPab PKPab 19 33 52.0 +0.1
ULN ePP PP 19 37 19.8 -2.7
ULN Ulaanbaatar 151.82 4 ePKIKP PKPdf 19 33 36.7 +0.1
ULN e 19 33 43.1
ULN e 19 37 19.8
ULN Ulaanbaatar 151.82 4 P PKPdf 19 33 37.4 +0.9
SNR=44
ULN Ulaanbaatar 151.82 4 PKPdf PKPdf 19 33 37.4 +0.9
SNR=44
CN2 Changchun 152.69 335 ePKP PKPdf 19 33 35.9 -2.1
CN2 APKP 19 33 43.4
CN2 PKP2 PKPab 19 33 54.0 -1.7
CN2 PP PP 19 37 29.6 +1.7
CN2 PP PP
comp=Z,310nm,9.0s
CN2 LR LR
comp=N,700nm,23.0s,MS5.6
CN2 LR LR
comp=E,700nm,23.0s,MS5.6
CN2 LR LR
comp=Z,700nm,24.0s,MS5.4
BLSP Bilaspur 153.93 80 eP PKPdf 19 33 39.4 -1.1
KOLN Koldanda 154.63 67 eP PKPdf 19 33 40.5 -0.8
comp=Z,203nm,1.6s
SNY Shenyang 155.09 335 ⇑PKP PKPdf 19 33 40.3 -1.2
SNY XPKP 19 33 50.8
SNY PKP2 PKPab 19 34 04.1 -1.9
SNY PP PP 19 37 44.9 +3.5
SNY LR LR
comp=E,456nm,17.8s
SNY LR LR
comp=Z,608nm,25.5s
GKN Gorkha 155.47 66 eP PKPdf 19 33 41.9 -0.5
comp=Z,426nm,1.3s
KKN Kakani 156.07 66 eP PKPdf 19 33 42.7 -0.5
comp=Z,424nm,1.6s
KSRS Korea Array 156.37 322 PKP PKPdf 19 33 43.2 -0.1
comp=Z,19nm,1.0s,baz=34,slow=1.1,SNR=50
KSRS PKPbc PKPdf 19 33 51.9 +8.5
comp=Z,17nm,1.1s,baz=24,slow=1.1,SNR=11
KSRS PKPab PKPab 19 34 10.8 -0.9
comp=Z,14nm,1.2s,baz=68,slow=3.5,SNR=5.8
KSRS PP PP 19 37 46.8 -2.1
comp=Z,1.9nm,1.1s,baz=266,slow=31,SNR=2.8
BOK Bokaro 157.30 75 eP PKPdf 19 33 42.1 -2.8
ODAN Odare 158.12 67 eP PKPdf 19 33 45.5 -0.4
comp=Z,240nm,1.5s
TAPN Taplejung 158.27 65 eP PKPdf 19 33 45.6 -0.4
comp=Z,155nm,1.6s
DL2 Dalian 158.36 335 i PKP PKPdf 19 33 44.3 -1.5
DL2 XPKP 19 33 54.1
DL2 PKP2 PKPab 19 34 17.1 -3.0
DL2 PP PP 19 37 55.1 -4.4
DL2 SS SS 19 57 49.3 -8.7
DL2 PP PP
comp=Z,140nm,7.7s
DL2 LR LR
comp=N,200nm,22.2s,MS5.1
DL2 LR LR
comp=E,220nm,21.9s,MS5.1
DL2 LR LR
comp=Z,320nm,24.3s,MS5.1
GTA Gaotai 158.51 22 ⇑PKP PKPdf 19 33 46.3 +0.4
GTA APKP 19 33 55.5
GTA XPKP 19 33 59.8
GTA PKP2 PKPab 19 34 21.3 +0.6
GTA PKS 19 37 18.6
GTA PP PP 19 38 01.8 +1.6
GTA PPP 19 41 42.0
GTA SKKS SKKSac 19 44 48.5 +0.3
GTA SS SS 19 57 57.6 -1.8
GTA PP PP
comp=Z,171nm,6.5s
GTA LR LR
comp=N,316nm,22.8s,MS5.2
GTA LR LR
comp=E,213nm,22.8s,MS5.2
GTA LR LR
comp=Z,374nm,22.4s,MS5.2
HHC Hu-ho-hao-te 158.88 357 ePKP PKPdf 19 33 47.1 +0.8
HHC APKP 19 33 55.8
HHC XPKP 19 34 01.3
HHC PKP2 PKPab 19 34 25.6 +3.4
HHC PKS 19 37 18.1
HHC PP PP 19 38 05.6 +3.7
HHC SKS SKSdf 19 40 46.3 -3.8
HHC SKKS SKKSac 19 44 50.0 +0.1
HHC PP PP
comp=Z,341nm,13.7s
HHC LR LR
comp=N,207nm,18.1s,MS5.3
HHC LR LR
comp=E,304nm,16.9s,MS5.3
HHC LR LR
comp=Z,376nm,19.8s,MS5.2
BJI Beijing 159.04 347 PKP PKPdf 19 33 45.0 -1.6
BJI PP PP 19 38 01.1 -1.8
BJI PP PP
comp=Z,193nm,12.6s
BJI LR LR
comp=N,357nm,22.0s,MS5.4
BJI LR LR
comp=E,453nm,20.3s,MS5.4
BJI LR LR
comp=Z,761nm,25.4s
BJT Baijiatuau 159.06 347⇑i PKPdf PKPdf 19 33 45.9 -0.7
BTO Baotou 159.17 360 ePKP PKPdf 19 33 46.1 -0.6
PSI Prapat 160.04 146 PKP PKPdf 19 33 47.5 -1.0
comp=Z,14nm,1.0s,baz=195,slow=7.0,SNR=15
LSA Lhasa 160.27 56 PKP PKPdf 19 33 49.0 +0.7
LSA Lhasa 160.27 56⇑i PKPdf PKPdf 19 33 49.0 +0.7
LSA ePKPab PKPab 19 34 30.5 +1.7
LSA ePP PP 19 38 09.9 -1.2
JOW Kunigami 161.73 296 PKP PKPdf 19 33 51.4 +1.4
comp=Z,28nm,0.9s,baz=190,slow=3.7,SNR=3.6
KSM Kuching 161.87 181 ePKPdf PKPdf 19 33 49.4 -1.1
KSM ePKPab PKPab 19 34 35.0 -0.9
KSM ePP PP 19 38 16.4 -1.6
AGT Agartala 162.16 73 ex x 19 33 44.0
SHL Shillong 162.35 67 eP PKPdf 19 33 50.0 -0.6
SHL ex x 19 34 40.0
TIA Tai'an 162.39 340 PKP PKPdf 19 33 50.0 -0.3
LZH Lanzhou 162.83 17 ⇑PKP PKPdf 19 33 51.5 +0.7
LZH APKP 19 33 57.5
LZH XPKP 19 34 00.6
LZH PP PP 19 38 28.5 +5.2
LZH SKKS SKKSac 19 45 13.0 +2.5
LZH SS SS 19 58 44.9 +0.5
LZH PP PP
comp=Z,220nm,4.8s
LZH LR LR
comp=E,582nm,19.7s
LZH LR LR
comp=Z,797nm,20.5s
KULM Kulim 163.05 147 ePKPdf PKPdf 19 33 50.5 -1.2
SSE Sheshan 164.79 320 PKP PKPdf 19 33 52.8 +0.1
SSE PP PP 19 38 37.8 +3.4
SSE PP PP
comp=Z,108nm,12.0s
SSE LR LR
comp=N,357nm,21.7s
SSE LR LR
comp=E,159nm,21.7s
SSE LR LR
comp=Z,752nm,23.2s
KKM Kota Kinabalu 165.11 205 ePKPdf PKPdf 19 33 51.6 -1.9
KKM ePKPab PKPab 19 34 47.9 -2.2
NJ2 Nanjing 165.33 329 ePKP PKPdf 19 33 45.3 -7.9
NJ2 XPKP 19 34 00.9
NJ2 PKP2 PKPab 19 34 45.8 -5.0
NJ2 PKS 19 37 20.0
NJ2 PP PP 19 38 37.5 +0.6
NJ2 PP PP
comp=Z,190nm,6.3s
NJ2 LR LR
comp=N,540nm,22.0s
NJ2 LR LR
comp=E,390nm,17.8s
NJ2 LR LR
comp=Z,390nm,17.8s
XAN Xi'an 165.70 3 PKP PKPdf 19 33 52.8 -0.6
XAN Xi'an 165.70 3 PKPdf PKPdf 19 33 53.2 -0.2
CD2 Chengdu 167.53 25 ePKP PKPdf 19 33 54.3 -0.6
CD2 APKP 19 33 59.8
CD2 XPKP 19 34 05.3
CD2 SKS SKSdf 19 40 53.9 -3.2
CD2 PP PP
comp=Z,250nm,9.6s
CD2 LR LR
comp=N,590nm,24.0s
CD2 LR LR
comp=E,670nm,21.6s
CD2 LR LR
comp=Z,990nm,19.2s
WHN Wuhan 168.50 341 ⇓PKP PKPdf 19 33 55.8 +0.2
WHN LR LR
comp=Z,2μm,20.3s
CHG Chiang Mai 169.58 93 ⇑P PKPdf 19 33 55.8 -0.8
CHTO Chiang Mai 169.58 93 ePKPdf PKPdf 19 33 55.1 -1.4
CHTO ePKPab PKPab 19 35 09.3 -0.9
CHTO ePP PP 19 38 53.4 -6.9
CHTO Chiang Mai 169.58 93 ePKIKP PKPdf 19 33 55.1 -1.5
CHTO e 19 35 09.3
CHTO Chiang Mai 169.58 93 P PKPdf 19 33 55.8 -0.7
SNR=19
CHTO Chiang Mai 169.58 93 PKPdf PKPdf 19 33 55.8 -0.7
SNR=19
CHTO Chiang Mai 169.58 93 P PKPdf 19 33 55.8 -0.7
SNR=19
CHRT Chiangrai 170.44 87 ⇑P PKPdf 19 33 56.5 -0.5
QZH Quanzhou 170.45 305 PKP PKPdf 19 33 54.6 -2.3
QZH PP PP 19 39 03.8 -0.2
QZH LR LR
comp=N,2μm,22.7s
QZH LR LR
comp=E,700nm,18.6s
QZH LR LR
comp=Z,1μm,22.7s
KMI Kunming 171.44 50 PKP PKPdf 19 33 57.5 +0.1
GYA Guiyang 172.64 24 PKP PKPdf 19 33 57.4 -0.5
GYA PKP2 PKPab 19 35 23.8 +0.6
GYA PKS 19 37 27.0
GYA PP PP 19 39 16.3 +2.7
GYA SKS SKSdf 19 40 56.8 -2.7
GYA PPP 19 43 26.9
GYA SKKS SKKSac 19 46 00.4 +0.9
GYA SS SS 20 00 25.3 +1.9
GYA SSS 20 07 17.6
GYA PP PP
comp=Z,230nm,8.8s
GYA LR LR
comp=N,3μm,24.8s
GYA LR LR
comp=E,4μm,22.6s
GYA LR LR
comp=Z,4μm,22.4s
QIZ Qiongzhong 179.32 172 PKP PKPdf 19 33 54.9 -4.8
QIZ PP PP 19 39 43.3 -1.8
QIZ LR LR
comp=N,461nm,20.4s
QIZ LR LR
comp=Z,772nm,22.7s

*ISCJB **24** 19:13:52.7±0.4, 6807N±004×167.1W±0.1, h10km, mb4.1/19, Error ellipse: s-maj=6.5km s-min=5.5km az=21.4*
*IDC **24** 19:13:53.7±0.9, 6809N×16754W, h0km, mb4.0/14, mb1 4.3/15, mb1mx4.1/23, mbtmp4.0/15, ML4.7/1, Error ellipse: s-maj=26.0km s-min=14.9km az=25.0*
*NEIC **24** 19:13:54.4±0.5, 6805N×167.19W, h10km, mb4.1/4, ML4.0(AEIC), Error ellipse: s-maj=9.9km s-min=6.4km az=207.0*

ISC 24 19:13:55.0±0.4, 6811N±004×1671W±01, h10km, n41, σ1§29/46, mb4.1/19, Chukchi Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNA	**Tin City**	**2.58**	**188**	P	**Pn**	**19 14 34.3**	**-2.4**
TNA				S	**Sn**	**19 15 10.9**	**+2.8**
GAMB	**Gambell**	**4.74**	**205**	P	**Pn**	**19 15 03.3**	**-3.1**
GAMB				S	**Sn**	**19 16 01.9**	**+0.6**
IMA2	**Indian Mountai**	**5.63**	**105**	eP	**Pn**	**19 15 18.2**	**-0.3**
IM3	**Indian Mountai**	**5.64**	**106**	P	**Pn**	**19 15 18.2**	**-0.6**
COLD	**Coldfoot**	**6.50**	**90**	P	**Pn**	**19 15 29.3**	**-1.2**
COLD				S	**Sn**	**19 16 48.2**	**+3.7**
TTA	**Tatalina**	**6.94**	**133**	ePn	**Pn**	**19 15 37.6**	**+1.0**
	8.2nm,0.5s						
KTH	**Kantishna Hill**	**8.05**	**117**	P	**Pn**	**19 15 51.4**	**-0.4**
COLA	**College**	**8.34**	**104**	ePn	**Pn**	**19 15 54.8**	**-0.9**
	6.8nm,0.5s						
BM3	**Burnt Mountain**	**8.54**	**84**	P	**Pn**	**19 15 57.2**	**-1.3**
SVW2	**Sparrevohn**	**8.59**	**139**	eP	**Pn**	**19 16 00.4**	**+1.2**
IL1	**Eielson Array**	**8.74**	**103**	P	**Pn**	**19 15 59.0**	**-2.3**
BILL	**Bilibino**	**9.92**	**282**	ePn	**Pn**	**19 16 09.6**	**-7.8**
	5.3nm,0.4s						
BCA3	**Beaver Creek A**	**11.57**	**104**	P	**Pn**	**19 16 37.5**	**-2.4**
DAWY	**Dawson**	**11.88**	**97**	ePn	**Pn**	**19 16 45.2**	**+1.0**
INK	**Inuvik**	**12.39**	**73**	ePn	**Pn**	**19 16 49.2**	**-1.9**
INK				eSn	**Sn**	**19 18 58.3**	**-11**
INK	**Inuvik**	**12.39**	**73**	Pn	**Pn**	**19 16 50.0**	**-1.1**
	2.8nm,0.3s,baz=322,slow=6.9,SNR=44						
INK				Sn	**Sn**	**19 19 01.2**	**-7.7**
	0.5nm,0.3s,baz=225,slow=13,SNR=3.1						
DLBC	**Dease Lake**	**18.95**	**102**	P	**Pn**	**19 18 17.4**	**+0.9**
	baz=345,slow=12						
TIXI	**Tiksi**	**21.36**	**309**	eP	**P**	**19 18 41.4**	**-0.4**
	5.8nm,0.8s,mb4.0						
YKA	**Yellowknife Ar**	**22.02**	**79**	P	**P**	**19 18 49.8**	**+0.7**
YKA				PcP	PcP	19 22 45.4	-1.1
YKA	**Yellowknife Ar**	**22.02**	**79**	P	**P**	**19 18 49.8**	**+0.7**
	3.6nm,0.5s,mb4.0,baz=305,slow=10,SNR=43						
YKA				PcP	PcP	19 22 45.4	-1.1
	0.3nm,0.5s,baz=310,slow=1.8,SNR=4.3						
RES	**Resolute Bay**	**22.46**	**41**	ePn	**P**	**19 18 46.9**	**-6.7**
RES				eSn	**S**	**19 22 55.2**	**-4.7**
ULM	**Lac du Bonnet**	**37.98**	**81**	PcP	PcP	19 23 27.2	-0.5
	0.8nm,0.4s,baz=346,slow=4.2,SNR=3.7						
PDAR	**Pinedale Array**	**39.16**	**100**	P	**P**	**19 21 24.6**	**+2.1**
	0.9nm,0.9s,mb3.5,baz=330,slow=8.6,SNR=5.4						
NVAR	**Mina Array Bea**	**39.84**	**113**	P	**P**	**19 21 30.8**	**+2.6**
	1.5nm,0.6s,mb3.9,baz=325,slow=7.7,SNR=15						
ARCES	**ARCESS Array B**	**42.34**	**353**	P	**P**	**19 21 48.3**	**0.0**
	5.3nm,1.0s,mb4.1,baz=8.1,slow=8.2,SNR=5.4						
PV01	**Paradox Valley**	**43.58**	**103**	eP	**P**	**19 22 00.5**	**+1.8**
MJAR	**Matsushiro Arr**	**43.60**	**252**	P	**P**	**19 21 57.8**	**-1.2**
	3.2nm,0.8s,mb4.1,baz=26,slow=8.0,SNR=6.0						
SONM	**Songino Array**	**45.53**	**290**	P	**P**	**19 22 17.5**	**+3.3**
	0.4nm,0.6s,mb3.5,baz=37,slow=7.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**47.24**	**310**	P	**P**	**19 22 26.7**	**-0.8**
	1.5nm,0.6s,mb4.1,baz=31,slow=7.1,SNR=10						
JOF	**Joensuu**	**48.59**	**349**	ep	**P**	**19 22 37.9**	**0.0**
	4.6nm,0.6s,mb4.7						
KAF	**Kangasniemi**	**49.71**	**352**	ep	**P**	**19 22 46.7**	**+0.3**
	3.1nm,0.6s,mb4.5						
FINES	**FINESS Array B**	**50.39**	**352**	P	**P**	**19 22 52.1**	**+0.5**
	1.9nm,0.4s,mb4.4,baz=24,slow=7.8,SNR=45						
NB2	**NORSAR Subarra**	**51.14**	**1**	P	**P**	**19 22 58.5**	**+1.2**
	comp=Z,1.3nm,0.8s,mb3.9,baz=16,slow=7.4						
NOA	**NORSAR Array B**	**51.14**	**1**	P	**P**	**19 22 57.6**	**+0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=357,slow=7.4,SNR=6.7						
BRVK	**Borovoye**	**51.89**	**320**	eP	**P**	**19 23 02.1**	**-0.9**
	comp=Z,3.3nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**54.34**	**308**	P	**P**	**19 23 20.1**	**-1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=41,slow=6.6,SNR=17						
EKA	**Eskdalemuir Ar**	**56.30**	**11**	P	**P**	**19 23 36.2**	**+1.2**
	comp=Z,2.9nm,0.8s,mb4.4,baz=7.8,slow=6.7,SNR=3.7						
AKTO	**Aktyubinsk**	**57.08**	**327**	P	**P**	**19 23 40.5**	**-0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=37,slow=6.7,SNR=5.4						
AKASG	**Malin Array Be**	**60.88**	**348**	P	**P**	**19 24 07.3**	**+0.2**
	comp=Z,1.3nm,0.5s,mb4.3,baz=7.1,slow=6.5,SNR=11						
GERES	**GERESS Array B**	**63.37**	**359**	P	**P**	**19 24 25.3**	**+1.5**
	comp=Z,1.3nm,0.8s,mb4.1,baz=19,slow=5.7,SNR=5.3						
ESDC	**Sonseca Array**	**71.79**	**14**	P	**P**	**19 25 17.6**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.8,baz=352,slow=5.6,SNR=4.7						

IDC 24 19:19:11.3±1.7, 359N×12597E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/18, mbtmp3.7/5, Error ellipse: s-maj=107.4km s-min=22.9km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.56**	**181**	eP	P	19 24 03.0	+0.5
	5.9nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.56**	**181**	P	P	19 24 02.8	+0.3
	2.6nm,0.4s,baz=7.0,slow=13,SNR=21						
WRA	**Warramunga Arr**	**24.79**	**161**	P	P	19 24 35.1	0.0
	1.3nm,0.4s,baz=340,slow=10.0,SNR=14						
WB2	**Warramunga Arr**	**24.80**	**161**	eP	P	19 24 35.1	0.0
ASAR	**Alice Springs**	**28.18**	**164**	P	P	19 25 05.3	-0.3
	0.2nm,0.4s,baz=342,slow=6.7,SNR=8.3						
FORT	**Forrest**	**34.24**	**177**	eP	P	19 25 57.8	-1.1
	13nm,0.9s						
KLBR	**Kellerberrin**	**35.85**	**192**	eP	P	19 26 10.6	-2.3
	66nm,1.7s						
STKA	**Stephens Creek**	**38.28**	**158**	P	P	19 26 33.6	+0.1
	2.4nm,0.7s,baz=336,slow=9.7,SNR=5.0						
MKAR	**Makanchi Array**	**57.24**	**326**	P	P	19 29 00.5	0.0
	0.1nm,0.4s,baz=116,slow=7.4,SNR=3.8						

IDC 24 19:38:00.9±2.1, 4732N×15600E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/19, mbtmp3.8/9, ML3.5/1, MS4.6/1, Ms1 4.6/1, ms1mx3.4/28, Error ellipse: s-maj=56.6km s-min=20.2km az=159.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**9.91**	**256**	Pn	Pn	19 40 24.8	+0.4
	0.5nm,0.3s,baz=123,slow=27,SNR=5.0						
KSRS	**Korea Array**	**22.85**	**255**	P	P	19 43 06.1	+0.6
	2.5nm,0.8s,baz=60,slow=10,SNR=8.2						
INK	**Inuvik**	**40.10**	**33**	P	P	19 45 38.0	+0.4
	0.7nm,0.5s,baz=264,slow=10,SNR=5.6						
ZALV	**Zalesovo Beam**	**43.88**	**306**	P	P	19 46 08.7	+0.1
	0.3nm,0.5s,baz=72,slow=9.3,SNR=2.2						
MKAR	**Makanchi Array**	**48.42**	**298**	P	P	19 46 44.2	-0.3
	0.5nm,0.6s,baz=75,slow=10,SNR=6.2						
YKA	**Yellowknife Ar**	**49.27**	**38**	P	P	19 46 50.9	+0.1
	0.4nm,0.6s,baz=296,slow=7.3,SNR=6.5						
ARCES	**ARCESS Array B**	**57.95**	**342**	P	P	19 47 54.6	+0.3
	6.0nm,0.9s,baz=32,slow=7.1,SNR=6.4						
ARCES				LR	LR	20 15 56.8	
	comp=Z,446nm,18.3s,baz=269,slow=39						
PDAR	**Pinedale Array**	**62.80**	**56**	P	P	19 48 27.9	-0.1
	0.6nm,0.8s,baz=336,slow=3.3,SNR=3.7						
FINES	**FINESS Array B**	**64.35**	**336**	P	P	19 48 37.2	-0.7
	0.4nm,0.4s,baz=39,slow=7.3,SNR=4.7						

*ISCJB **24** 19:42:58.1±2.4, 3925±009×1399E±02, h54km±23km, Error ellipse: s-maj=27.2km s-min=13.8km az=14.3*
*IDC **24** 19:43:03.2±3.8, 3915×13959E, h75km±35km, mb3.3/2, mb1 3.9/5, mb1mx3.6/13, mbtmp3.8/5, ML4.5/3, Error ellipse: s-maj=42.3km s-min=17.7km az=98.0*

ISC 24 19:43:02.4±2.2, 39S±01×1398E±02, h81km±18km, n8, σ1§05/14, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**11.36**	**219**	eP	**Pn**	**19 45 41.4**	**-0.5**
	31nm,0.6s						
KAKA				eS	**Sn**	**19 47 48.4**	**+1.4**
WB2	**Warramunga Arr**	**16.79**	**198**	eP	**Pn**	**19 46 52.3**	**-0.2**
WB2				eS	**S**	**19 49 55.2**	**-9.4**
WRA	**Warramunga Arr**	**16.79**	**198**	P	**Pn**	**19 46 52.2**	**-0.4**
	1.5nm,0.3s,baz=19,slow=12,SNR=67						
WRA				S	**S**	**19 49 55.1**	**-10**
	0.2nm,0.3s,baz=18,slow=20,SNR=3.8						
BATI	**Kupang**	**17.17**	**248**	P	**Pn**	**19 46 57.6**	**+0.3**
	4.0nm,0.3s,baz=79,slow=9.5,SNR=12						
FITZ	**Fitzroy Crossi**	**19.76**	**223**	eP	**Pn**	**19 47 26.0**	**-2.3**
	6.3nm,0.7s						
FITZ				eS	**S**	**19 51 03.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.76**	**223**	P	**Pn**	**19 47 26.1**	**-2.2**
	0.7nm,0.3s,baz=45,slow=14,SNR=21						
FITZ				S	**S**	**19 51 03.7**	**-0.9**
	0.3nm,0.3s,baz=177,slow=21,SNR=3.8						
ASAR	**Alice Springs**	**20.44**	**196**	P	P	**19 47 34.1**	**+0.7**
	4.0nm,0.7s,baz=30,slow=10,SNR=72						
ASAR				S	**S**	**19 51 20.2**	**+2.2**
	0.5nm,0.9s,baz=16,slow=24,SNR=2.9						
MKAR	**Makanchi Array**	**71.39**	**322**	P	**P**	**19 54 14.7**	**+0.8**
	0.3nm,0.9s,baz=114,slow=6.2,SNR=3.6						

WEL 24 19:46:52.8±0.1, 3781S×17675E, h5km, ML3.6/12, 3C, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.16**	**256**	⇑PG	Pg	19 46 56.3	+0.4
OPRZ				SG	Sg	19 46 58.8	+0.8
MARZ	**Manawahe**	**0.19**	**198**	⇑PG	Pg	19 46 57.0	+0.5
MARZ				SG	Sg	19 47 00.0	+1.1
EDRZ	**Edgecumbe**	**0.30**	**181**	PG	Pg	19 46 59.1	+0.5
LIRZ	**Lichensteins R**	**0.35**	**236**	PG	Pg	19 47 00.2	+0.7
TGRZ	**Tauranga**	**0.39**	**281**	PG	Pg	19 47 00.9	+0.5
MKRZ	**Makatiti**	**0.40**	**214**	PG	Pg	19 47 01.4	+0.9
WIZ	**White Island**	**0.45**	**51**	PG	Pg	19 47 01.9	+0.5
KARZ	**Kaharoa**	**0.45**	**242**	PG	Pg	19 47 02.0	+0.6
TAZ	**Tarawera**	**0.46**	**204**	PG	Pg	19 47 02.7	+1.0
URZ	**Urewera**	**0.53**	**148**	PG	Pg	19 47 03.0	0.0
MWZ	**Matawai**	**0.81**	**131**	⇑P*	Pb	19 47 08.2	-1.1
MWZ				S*	Sb	19 47 19.3	-1.3

IDC 24 19:54:56.4±25.0, 1816S×17950W, h672km±276km, mb3.0/4, mb1 3.1/4, mb1mx2.9/15, mbtmp3.0/4, Error ellipse: s-maj=177.4km s-min=102.6km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**32.39**	**261**	P	P	20 00 34.4	-0.5
	3.5nm,0.6s,baz=96,slow=9.2,SNR=3.3						
STKA	**Stephens Creek**	**37.60**	**241**	P	P	20 01 17.8	+0.3
	0.9nm,0.4s,baz=97,slow=6.2,SNR=7.0						
WRA	**Warramunga Arr**	**43.57**	**260**	P	P	20 02 04.5	-0.1
	0.6nm,0.5s,baz=98,slow=6.8,SNR=19						
ASAR	**Alice Springs**	**43.73**	**255**	P	P	20 02 06.2	+0.5
	4.6nm,0.5s,baz=90,slow=8.2,SNR=216						
GERES	**GERESS Array B**	**147.57**	**344**	PKPbc	PKPbc	20 13 26.9	-0.3
	0.9nm,0.6s,baz=46,slow=3.9,SNR=11						

MAN 24 20:15:28, 628N×12485E, h13km, mb4.2, ML3.0, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.55**	**64**	eP	Pn	20 15 55.6	+0.4
MATI				eS	Sn	20 15 59.9	-15
BUKP	**Musuan**	**1.61**	**7**	eP	Pn	20 15 55.6	-0.5

*ISCJB **24** 20:19:41.5±1.4, 37N±0.1×1228E±02, h572km±19km, mb4.2/17, Error ellipse: s-maj=28.8km s-min=7.6km az=150.4*
*NEIC **24** 20:19:42.1±1.3, 372N×12277E, h561km±16km, mb4.5/10, Error ellipse: s-maj=24.3km s-min=7.1km az=63.0*
*IDC **24** 20:19:43.5±1.6, 371N×12295E, h581km±19km, mb3.3/8, mb1 3.4/8, mb1mx3.2/20, mbtmp3.3/8, Error ellipse:*

s-maj=45.2km s-min=8.2km az=68.0

ISC 24 20:19:42.4±1.4, 370N×009×1228E±02, h562km±17km, n34, σ0°73/37, mb4.2/17, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	6.94	290	eP	P		20 21 29.8	-0.5
KSM	Kuching	12.65	260	eP	P		20 22 27.7	0.0
BATI	Kupang	13.84	176	P	P		20 22 40.2	+0.3
	22nm,0.3s,baz=350,slow=1.0,SNR=77							
BATI				S	S		20 25 06.1	0.0
	0.5nm,0.3s,baz=107,slow=20,SNR=3.6							
KAKA	Kakadu	18.92	150	eP	P		20 23 28.0	-0.2
	16nm,0.6s							
FITZ	Fitzroy Crossi	21.85	173	eP	P		20 23 54.7	+0.1
	5.1nm,0.9s,mb4.2							
FITZ	Fitzroy Crossi	21.85	173	P	P		20 23 54.5	-0.1
	2.1nm,0.5s,mb4.0,baz=347,slow=11,SNR=12							
KULM	Kulim	22.12	275	P	P		20 24 01.9	+4.8
MBWA	Marble Bar	24.89	187	eP	P		20 24 21.1	-0.5
	23nm,1.1s,mb4.7							
WRA	Warramunga Arr	26.10	155	P	P		20 24 31.8	-0.5
	6.3nm,0.3s,mb4.7,baz=336,slow=9.6,SNR=106							
WRA				S	S		20 28 19.7	-5.1
	0.2nm,0.7s,baz=348,slow=15,SNR=3.3							
WRA				ScP	ScP		20 30 26.7	-1.2
	0.7nm,0.5s,baz=341,slow=3.1,SNR=12							
WB2	Warramunga Arr	26.10	155	eP	P		20 24 31.8	-0.5
ASAR	Alice Springs	29.28	159	P	P		20 25 00.3	+0.2
	3.7nm,0.5s,mb4.3,baz=338,slow=7.6,SNR=193							
ASAR				S	S		20 29 13.2	-1.1
	0.6nm,0.8s,baz=327,slow=13,SNR=5.6							
ASAR				ScP	ScP		20 30 36.4	-1.3
	0.4nm,0.4s,baz=338,slow=3.1,SNR=8.2							
FORT	Forrest	34.65	172	eP	P		20 25 46.0	+0.4
	17nm,0.5s							
KLBR	Kellerberrin	35.42	187	eP	P		20 25 51.9	-0.1
	50nm,1.5s							
MUN	Mundaring	36.03	190	eP	P		20 25 56.7	-0.3
NWAO	Narrogin (SRO)	36.80	188	eP	P		20 26 03.7	+0.4
	4.5nm,0.5s,mb4.2							
NWAO	Narrogin (SRO)	36.80	188	P	P		20 26 03.8	+0.4
	5.3nm,0.4s,mb4.4,baz=50,slow=8.8,SNR=11							
LSA	Lhasa	39.56	314	eP	P		20 26 27.7	+1.9
	2.9nm,0.7s,mb3.9							
STKA	Stephens Creek	39.65	155	eP	P		20 26 27.3	+0.9
	4.5nm,0.9s,mb4.0							
STKA	Stephens Creek	39.65	155	eP	P		20 26 25.4	-1.0
	4.0nm,0.6s,mb4.1							
STKA	Stephens Creek	39.65	155	P	P		20 26 27.4	+0.9
	4.1nm,0.6s,mb4.1,baz=322,slow=6.7,SNR=13							
TAPN	Taplejung	40.91	309	eP	P		20 26 37.1	+0.5
	3.9nm,0.4s,mb4.3							
ODAN	Odare	40.92	308	eP	P		20 26 36.8	+0.1
	6.2nm,0.7s,mb4.3							
JIRN	Jiri	42.24	308	eP	P		20 26 47.8	+0.7
	2.1nm,0.2s,mb4.3							
KKN	Kakani	43.02	308	eP	P		20 26 52.7	-0.5
	4.2nm,0.5s,mb4.2							
KOLN	Koldanda	44.34	307	eP	P		20 27 04.0	+0.6
	18nm,0.7s,mb4.7							
CNB	Canberra Magne	46.13	149	eP	P		20 27 18.7	+1.7
	38nm,1.4s,mb4.7							
SONM	Songino Array	46.18	345	P	P		20 27 17.4	+0.4
	0.1nm,0.5s,baz=146,slow=8.7,SNR=2.5							
MKAR	Makanchi Array	55.39	327	P	P		20 28 24.2	+0.2
MKAR	Makanchi Array	55.39	327	P	P		20 28 24.2	+0.2
	1.6nm,0.4s,mb3.6,baz=126,slow=7.7,SNR=38							
EKS2	Erkin-Say	58.25	319	P	P		20 28 41.4	-2.3
ZALV	Zalesovo Beam	58.88	335	P	P		20 28 46.7	-0.9
	0.4nm,0.3s,mb3.1,baz=129,slow=6.5,SNR=3.2							
KURK	Kurchatov	59.69	329	eP	P		20 28 52.7	-0.4
	2.0nm,0.6s,mb3.6							
AKTK	Aktyubinsk	71.25	322	P	P		20 30 05.0	-0.3
AKTO	Aktyubinsk	71.25	322	P	P		20 30 05.0	-0.3
	0.8nm,0.4s,mb3.6,baz=102,slow=8.3,SNR=5.3							

IDC 24 20:34:25.6±0.9, 3395N×9087E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, Error ellipse: s-maj=49.5km s-min=20.9km az=52.0

ISCJB 24 20:34:28.3±0.8, 3387N±007×906E±02, h33km, mb3.6/6, Error ellipse: s-maj=19.0km s-min=9.8km az=10.8

ISC 24 20:34:30.6±0.8, 3389N±007×907E±02, h35km, n14, σ1°22/14, mb3.6/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	6.99	202	eP		Pn	20 36 07.8	-2.7
	11nm,0.7s							
JIRN	Jiri	7.30	213	eP		Pn	20 36 15.6	+0.9
	9.8nm,0.5s							
ODAN	Odare	7.55	203	eP		Pn	20 36 11.8	-6.3
	17nm,0.7s							
KKN	Kakani	7.63	219	eP		Pn	20 36 19.8	+0.5
	5.9nm,0.5s							
GKN	Gorkha	7.82	223	eP		Pn	20 36 22.5	+0.7
KOLN	Koldanda	8.60	227	eP		Pn	20 36 29.5	-3.0
MKAR	Makanchi Array	14.37	336	Pn		Pn	20 37 50.7	-0.7
	baz=132,slow=8.3,SNR=4.6							
ZALV	Zalesovo Beam	20.48	350	P		P	20 39 04.7	-0.4
	1.8nm,0.8s,baz=163,slow=11,SNR=12							
AKTO	Aktyubinsk	29.00	315	P		P	20 40 26.1	-0.8
	1.3nm,0.8s,mb3.7,baz=112,slow=4.4,SNR=5.3							
GERES	GERESS Array B	57.27	310	P		P	20 44 17.4	+2.9
	0.2nm,0.4s,mb3.5,baz=64,slow=7.7,SNR=4.0							
WRA	Warramunga Arr	67.80	135	P		P	20 45 24.5	-0.6
	1.3nm,0.9s,mb3.9,baz=332,slow=6.6,SNR=5.8							
ASAR	Alice Springs	70.48	138	P		P	20 45 42.3	+0.7
	0.5nm,0.6s,mb3.6,baz=322,slow=6.4,SNR=8.3							
YKA	Yellowknife Ar	81.83	12	P		P	20 46 45.8	+0.1
	0.2nm,0.4s,mb3.4,baz=344,slow=5.0,SNR=8.7							
TORD	Torodi Ar. Bea	81.95	280	P		P	20 46 48.4	+1.3
	1.0nm,1.0s,mb3.7,baz=72,slow=4.8,SNR=4.3							

ISCJB 24 21:18:35.4±0.5, 165N±007×12884E±0.10, h10km, mb4.4/27, Error ellipse: s-maj=15.3km s-min=8.2km az=156.3

IDC 24 21:18:35.4±0.8, 168N×12881E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.9/17, mbtmp4.0/9, ML3.4/1, Error ellipse: s-maj=38.6km s-min=15.0km az=75.0

BJI 24 21:18:36.0, 170N×12880E, h10km, mB4.9, mb4.5

NEIC 24 21:18:37.0±0.4, 167N×12883E, h10km, mb4.5/12, Error ellipse: s-maj=14.1km s-min=7.7km az=67.0

ISC 24 21:18:37.3±0.5, 163N±007×12884E±010, h10km, n38, σ1°04/37, mb4.4/27, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	13.34	290	ePn		Pn	21 21 45.3	-1.5
KSM	Kuching	18.52	270	eP		Pn	21 22 55.2	+0.9
FITZ	Fitzroy Crossi	19.86	189	P		Pn	21 23 08.0	-2.2
	0.1nm,0.3s,baz=16,slow=11,SNR=3.9							
WRA	Warramunga Arr	22.10	166	P		P	21 23 33.5	+0.6
	1.8nm,0.6s,mb3.7,baz=343,slow=11,SNR=19							
WB2	Warramunga Arr	22.11	166	eP		P	21 23 33.6	+0.6
QIZ	Qiongzhong	25.41	314	eP		P	21 24 04.9	-0.3
	10nm,0.8s,mb4.4							
ASAR	Alice Springs	25.62	169	P		P	21 24 06.7	-0.4
	0.7nm,0.9s,mb3.2,baz=346,slow=7.0,SNR=6.3							
ASAR				PcP		PcP	21 27 37.9	-0.2
	0.5nm,0.7s,baz=2.9,slow=1.8,SNR=5.8							
PSI	Prapat	29.91	273	P		P	21 24 45.9	+0.1
	4.8nm,0.7s,mb4.4,baz=92,slow=7.0,SNR=4.6							
KMI	Kunming	34.35	315	P		P	21 25 26.5	+2.0
KMI				AMB		AMB		
	comp=Z,8.0nm,0.9s,mb4.7							
STKA	Stephens Creek	35.45	161	eP		P	21 25 34.6	+0.7
	comp=Z,4.0nm,0.9s,mb4.3							
STKA	Stephens Creek	35.45	161	P		P	21 25 34.4	+0.5
	comp=Z,2.1nm,0.7s,mb4.2,baz=353,slow=7.0,SNR=6.7							
MJAR	Matsushiro Arr	35.81	13	P		P	21 25 36.5	-0.4
	comp=Z,2.0nm,0.7s,mb4.2,baz=175,slow=9.3,SNR=6.2							
LZH	Lanzhou	41.38	329	eP		P	21 26 24.0	+0.3
LZH				AP		pP	21 26 28.9	+2.0
LZH				XP		sP	21 26 32.1	+4.0
LZH				AMB		AMB		
	comp=Z,18nm,1.0s,mb4.7							
LZH				AMB		AMB		
	comp=Z,80nm,4.0s							
SHL	Shillong	42.81	307	eP		P	21 26 38.0	+2.3
LSA	Lhasa	45.40	312	P		P	21 26 58.0	+1.6
LSA	Lhasa	45.40	312	eP		P	21 26 57.9	+1.6
	comp=Z,8.3nm,0.8s,mb4.6							
GTA	Gaotai	45.98	328	eP		P	21 27 01.8	+1.1
GTA				AP		pP	21 27 06.4	+2.5
GTA				XP		sP	21 27 08.9	+3.8
GTA				AMB		AMB		
	comp=Z,4.0nm,1.1s,mb4.3							
TAPN	Taplejung	46.95	307	eP		P	21 27 08.6	0.0
	comp=Z,16nm,0.9s,mb4.9							
ODAN	Odare	47.00	306	eP		P	21 27 09.3	+0.3
	comp=Z,15nm,0.6s,mb5.1							
PALK	Pallekele	48.29	278	P		P	21 27 20.3	+1.1
	comp=Z,4.3nm,1.0s,mb4.4							
KKN	Kakani	49.09	306	eP		P	21 27 25.1	-0.1
	comp=Z,8.9nm,0.8s,mb4.9							
GKN	Gorkha	49.70	306	eP		P	21 27 29.6	-0.2
	comp=Z,1.6nm,0.2s,mb4.7							
ULN	Ulaanbaatar	49.77	341	eP		P	21 27 30.4	+0.4
	comp=Z,1.9nm,0.8s,mb4.2							
SONM	Songino Array	49.96	340	P		P	21 27 30.4	-1.0
	comp=Z,1.1nm,0.8s,mb3.9,baz=151,slow=8.5,SNR=6.0							
SONM				PcP		PcP	21 28 52.1	+0.5
	comp=Z,0.6nm,0.7s,baz=150,slow=3.2,SNR=3.2							
KOLN	Koldanda	50.45	305	eP		P	21 27 35.8	+0.3
	comp=Z,20nm,0.7s,mb5.2							
WMQ	Urumqi	55.64	325	eP		P	21 28 14.0	+0.4
MK31	Makanchi Array	60.47	325	eP		P	21 28 46.9	-0.5
MKAR	Makanchi Array	60.47	325	P		P	21 28 47.2	-0.1
	comp=Z,4.8nm,0.7s,mb4.6,baz=122,slow=8.2,SNR=74							
MKAR				PcP		PcP	21 29 31.4	-0.7
	comp=Z,0.7nm,0.7s,baz=119,slow=4.9,SNR=1.8							
TKM2	Tokmak 2	62.71	319	eP		P	21 29 02.0	-0.5
	comp=Z,2.5nm,0.8s,mb4.4							
UCH	Uchtor	63.14	317	eP		P	21 29 05.9	+0.4
	comp=Z,2.2nm,0.8s,mb4.3							
ZALV	Zalesovo Beam	63.41	333	P		P	21 29 05.3	-1.7
	comp=Z,0.5nm,0.3s,mb4.0,baz=103,slow=6.7,SNR=6.9							
EKS2	Erkin-Say	63.81	318	eP		P	21 29 09.9	0.0
	comp=Z,2.6nm,0.8s,mb4.3							
KBL	Kabul	64.47	308	eP		P	21 29 12.2	-2.2
	comp=Z,3.2nm,0.7s,mb4.5							
KURK	Kurchatov	64.64	327	eP		P	21 29 14.5	-0.7
	comp=Z,11nm,0.8s,mb4.9							
BRVK	Borovoye	70.29	327	eP		P	21 29 50.0	-0.9
	comp=Z,4.1nm,0.8s,mb4.4							
ARU	Arti	77.83	328	eP		P	21 30 32.9	-2.0
	comp=Z,2.4nm,0.8s,mb4.2							
IMA2	Indian Mountai	83.44	24	eP		P	21 31 06.4	+1.6
TORD	Torodi Ar. Bea	125.56	287	PKP		PKPdf	21 37 38.9	-1.1
	comp=Z,0.6nm,0.8s,baz=79,slow=3.1,SNR=3.4							

IDC 24 21:37:46.4±1.0, 3382S×5820E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, Error ellipse: s-maj=44.7km s-min=27.8km az=42.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	60.13	166	P	P		21 47 54.8	-0.3
	0.7nm,0.6s,baz=258,slow=7.1,SNR=3.5							
ASAR	Alice Springs	65.82	103	P	P		21 48 33.8	0.0
	0.5nm,0.8s,baz=236,slow=6.6,SNR=5.6							
WRA	Warramunga Arr	67.95	100	P	P		21 48 48.4	+1.0
	0.6nm,0.8s,baz=241,slow=5.5,SNR=4.8							
TORD	Torodi Ar. Bea	71.20	301	P	P		21 49 08.6	+1.2
	0.7nm,0.8s,baz=125,slow=4.8,SNR=4.6							
MKAR	Makanchi Array	83.13	16	P	P		21 50 13.6	-0.1
	0.2nm,0.6s,baz=207,slow=5.2,SNR=3.5							
INK	Inuvik	144.82	8	PKP	PKPdf		21 57 22.1	-2.2
	2.1nm,1.1s,baz=48,slow=2.7,SNR=5.8							
YKA	Yellowknife Ar	150.95	353	PKPbc	PKPbc		21 57 39.2	-1.0
	1.0nm,0.8s,baz=3.2,slow=2.2,SNR=12							

TRN 24 22:00:57.8, 1781N×6074W, h68km, MD3.8, M4.4(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BPA	Boggy Peak	1.31	235	eP		Pn	22 01 20.9	+0.7
BPA				eS		Sn	22 01 38.9	+1.9
DEG	La Desirade	1.52	192	eP		Pn	22 01 23.8	+0.8
DEG				eS		Sn	22 01 44.4	+2.5
BCG	Bois Riant Cap	1.91	206	eP		Pn	22 01 30.8	+2.5
LZG	Guadaloupe-1	1.93	211	eP		Pn	22 01 31.7	+3.1
DOG	Dongo Capester	1.96	206	eP		Pn	22 01 31.4	+2.5
MGG	Marie-Galante	1.96	196	eP		Pn	22 01 31.2	+2.3
SCG	Saint Claude	1.99	207	eP		Pn	22 01 32.3	+3.0
HMG	Houelmont	2.04	207	eP		Pn	22 01 33.5	+3.5
TBG	Guadaloupe-3	2.13	204	eP		Pn	22 01 33.8	+2.6
FDF	Fort de France	3.08	187	eP		Pn	22 01 45.1	+0.9
FDF				eS		Sn	22 02 20.7	+0.8
MVM	Montagne Vaucl	3.24	183	eP		Pn	22 01 47.5	+1.2
BIM	Bigot	3.29	186	eP		Pn	22 01 48.5	+1.5

ISCJB 24 22:06:17.8±5.0, 1808N±009×1456E±0.3, h246km±48km, mb3.5/11, Error ellipse: s-maj=39.5km s-min=15.1km az=3.0

NEIC 24 22:06:18.9±3.8, 1809N×14570E, h245km±36km, mb4.0/1, Error ellipse: s-maj=29.7km s-min=11.7km az=92.0

IDC 24 22:06:22.4±4.3, 1805N×14576E, h284km±42km, mb3.3/11, mb1 3.4/12, mb1mx3.3/21, mbtmp3.2/12, Error ellipse: s-maj=32.9km s-min=11.5km az=92.0

ISC 24 22:06:19.3±4.5, 1808N±010×1457E±03, h247km±44km, n15, σ0°76/15, mb3.5/11, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	19.54	342	P	P		22 10 28.8	+0.3
	0.4nm,0.3s,baz=169,slow=10,SNR=8.0							
MAJO	Matsushiro	19.54	342	eP	P		22 10 27.7	-0.8
	2.6nm,0.5s							
ASAJ	Asahikawa	26.09	355	P	P		22 11 30.9	+0.5
	3.2nm,0.6s,mb4.1,baz=180,slow=7.1,SNR=4.8							
WRA	Warramunga Arr	39.38	197	P	P		22 13 25.5	+0.1
	0.5nm,0.4s,mb3.4,baz=7.5,slow=8.3,SNR=11							
WRA				PcP	PcP		22 15 24.1	-4.3
	0.4nm,0.4s,baz=15,slow=3.3,SNR=5.8							
FITZ	Fitzroy Crossi	40.99	210	P	P		22 13 38.7	+0.1
	1.4nm,0.5s,mb3.6,baz=29,slow=12,SNR=7.2							
ASAR	Alice Springs	43.05	196	P	P		22 13 54.6	-0.4
	0.4nm,0.5s,mb3.1,baz=19,slow=12,SNR=11							
SONM	Songino Array	43.61	322	P	P		22 13 59.5	+0.3
	0.3nm,0.6s,mb2.8,baz=136,slow=6.3,SNR=2.8							
ZALV	Zalesovo Beam	58.49	323	P	P		22 15 49.1	-0.4
	0.7nm,0.6s,mb3.5,baz=98,slow=6.4,SNR=3.9							
MKAR	Makanchi Array	58.87	314	P	P		22 15 53.7	+1.4
MKAR	Makanchi Array	58.87	314	P	P		22 15 53.7	+1.4
	0.3nm,0.4s,mb3.3,baz=88,slow=8.4,SNR=10							
YKA	Yellowknife Ar	78.55	28	P	P		22 17 52.4	-0.7
	0.3nm,0.3s,mb3.4,baz=288,slow=5.7,SNR=4.7							
ARCES	ARCESS Array B	83.07	342	P	P		22 18 17.1	+0.2
	8.8nm,1.1s,mb4.4,baz=38,slow=6.1,SNR=6.6							
NVAR	Mina Array Bea	83.55	52	P	P		22 18 21.0	+1.0
	0.4nm,0.6s,mb3.3,baz=272,slow=6.2,SNR=3.5							
FINES	FINESS Array B	87.43	335	P	P		22 18 36.9	-1.6
FINES	FINESS Array B	87.43	335	P	P		22 18 36.9	-1.6
	0.5nm,0.3s,mb3.7,baz=71,slow=4.8,SNR=14							

ISCJB 24 22:51:23.0±0.4, 4222N±003×14249E±004, h77km±3km, mb3.6/9, Error ellipse: s-maj=5.7km s-min=4.8km az=143.7

JMA 24 22:51:23.9±0.2, 4227N×14252E, h72km±2km, M3.3

NEIC 24 22:51:23.9, 4227N×14252E, h72km, mb3.9/1, After JMA.

IDC 24 22:51:25.4±2.0, 4230N×14254E, h84km±15km, mb3.3/8, mb1 3.4/9, mb1mx3.3/22, mbtmp3.3/9, MS4.3/1, Ms1 4.3/1, ms1mx2.8/16, Error ellipse: s-maj=28.9km s-min=15.8km az=101.0

ISC 24 22:51:24.0±0.4, 4222N±003×14248E±004, h71km±3km, n30, σ0°64/45, mb3.6/9, 3C-6D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.21	73	⇑P		Pn	22 51 34.4	-0.3
JNBK				eS		Sn	22 51 42.4	-0.1
ERM	Erimo	0.54	112	eP		Pn	22 51 37.6	+0.4
ERM				eSn		Sn	22 51 47.1	+0.1
JEM	Erimo	0.54	112	⇑P		Pn	22 51 37.6	+0.4
JEM				eS		Sn	22 51 47.5	+0.5
JBT2	Biratori 2	0.57	351	⇓P		Pn	22 51 36.8	-0.7
JBT2				S		Sn	22 51 46.6	-0.8
JCH	Churui	0.76	58	⇑P		Pn	22 51 39.3	-0.3
JCH				eS		Sn	22 51 50.6	-0.6
JFR	Furan	0.95	5	P		Pn	22 51 41.2	-0.6
JFR				eS		Sn	22 51 53.8	-1.3
JEW	Eniwo	0.98	309	⇓P		Pn	22 51 42.4	+0.1
JEW				eS		Sn	22 51 56.4	+0.5
JNB	Noboribetsu	1.10	284	⇓P		Pn	22 51 43.1	-0.6
JNB				eS		Sn	22 51 57.5	-1.0
JKB	Kayabe	1.13	253	⇓P		Pn	22 51 44.1	0.0
JKB				eS		Sn	22 51 59.2	+0.1
JOB	Onbets	1.21	55	P		Pn	22 51 45.5	+0.4
JOB				eS		Sn	22 52 01.7	+0.7
JAB	Ashibetsu	1.30	352	P		Pn	22 51 46.5	+0.2
JAB				eS		Sn	22 52 03.8	+0.8
JOT	Ohata	1.36	233	P		Pn	22 51 47.4	+0.3
JOT				eS		Sn	22 52 04.5	0.0
JAR	Ashorobuto	1.44	41	P		Pn	22 51 47.5	-0.6
JAR				eS		Sn	22 52 05.5	-0.7
JYM2	Yakumo 2	1.57	267	⇓P		Pn	22 51 49.8	-0.1
JHR	Hokuryu	1.62	340	⇓P		Pn	22 51 51.4	+0.9
JHR				eS		Sn	22 52 12.4	+1.8
JKK2	Kamakawa 2	1.66	7	P		Pn	22 51 51.5	+0.4
JKK2				eS		Sn	22 52 11.6	0.0
ASAJ	Asahikawa	1.90	2	P		Pn	22 51 54.9	+0.7
	23nm,0.3s,baz=224,slow=10,SNR=160							
ASAJ				S		Sn	22 52 17.8	+0.5
	20nm,0.3s,baz=360,slow=29,SNR=13							
MJAR	Matsushiro Arr	6.56	212	P		Pn	22 53 01.4	+3.6
	0.3nm,0.3s,baz=21,slow=14,SNR=3.6							
JHJ	Hachijo jima 2	9.33	194	LR		LR	22 57 01.8	
	comp=Z,2μm,20.0s,baz=83,slow=36							
KSRS	Korea Array	12.16	252	P		Pn	22 54 20.1	+6.0
	0.2nm,0.3s,baz=60,slow=14,SNR=2.9							
SONM	Songino Array	25.95	295	P		P	22 56 50.5	+1.0
	0.3nm,0.4s,mb3.0,baz=77,slow=6.6,SNR=5.0							
ZALV	Zalesovo Beam	39.21	308	P		P	22 58 45.1	+0.2
	1.8nm,0.7s,mb4.0,baz=85,slow=7.3,SNR=11							
MK31	Makanchi Array	42.26	298	eP		P	22 59 09.0	-1.0
MKAR	Makanchi Array	42.26	298	P		P	22 59 10.2	+0.1
	0.4nm,0.7s,mb3.3,baz=79,slow=10,SNR=7.0							
KURK	Kurchatov	43.55	304	eP		P	22 59 20.2	-0.2
	0.7nm,0.3s,mb3.9							
YKA	Yellowknife Ar	58.94	32	P		P	23 01 15.7	+0.3
	0.4nm,1.0s,mb3.4,baz=305,slow=6.7,SNR=5.4							
WRA	Warramunga Arr	62.30	189	P		P	23 01 38.6	0.0
	0.3nm,0.7s,mb3.4,baz=6.6,slow=6.9,SNR=5.3							
FINES	FINESS Array B	64.64	332	P		P	23 01 52.9	-0.7
	0.7nm,0.5s,mb3.7,baz=54,slow=9.7,SNR=10							
HFS	Hagfors	69.72	335	P		P	23 02 25.6	-0.2
	0.5nm,0.4s,mb3.7,baz=61,slow=9.0,SNR=6.0							
NOA	NORSAR Array B	69.73	337	P		P	23 02 25.1	-0.8
	1.0nm,0.9s,mb3.7,baz=35,slow=6.1,SNR=3.7							

IDC 24 23:01:21.2±6.3, 3886N×7330E, h38km±43km, mb3.3/5, mb1 3.5/8, mb1mx3.3/25, mbtmp3.4/8, ML3.6/3, Error ellipse: s-maj=61.4km s-min=23.6km az=176.0

ISCJB 24 23:01:24.2±0.6, 3948N±004×7270E±008, h68km±9km, mb3.3/5, Error ellipse: s-maj=10.2km s-min=6.4km az=16.0

NEIC 24 23:01:25.8±1.0, 3944N×7314E, h35km, Error ellipse: s-maj=22.2km s-min=12.3km az=129.0

BJI 24 23:01:25.7, 3940N×7310E, h25km, ML3.3

NNC 24 23:01:30.4±6.6, 4033N×7277E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=73.4km s-min=31.5km az=1.0

ISC 24 23:01:25.6±0.6, 3950N±004×7268E±008, h60km±9km, n39, σ1°04/49, mb3.4/5, 7C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.55	89	P		Pn	23 02 03.0	-1.6
KSH				S		Sn	23 02 34.8	+0.3
KSH				Smax				
	comp=N,930nm,0.6s							
KSH				Smax				
	comp=E,1μm,0.7s							
AML	Almayashu	2.74	16	ePn		Pn	23 02 06.8	-0.3
AML				eSn		Sn	23 02 45.1	+6.0
AML	Almayashu	2.74	16	P		Pn	23 02 07.7	+0.5
	SNR=88							
UCH	Uchtor	3.06	26	⇑iPn		Pn	23 02 11.4	-0.1
UCH				eSn		Sn	23 02 51.8	+4.8
UCH	Uchtor	3.06	26	P		Pn	23 02 11.8	+0.2
	SNR=56							
KZA	Kyzart	3.23	36	P		Pn	23 02 13.4	-0.5
	SNR=42							
EKS2	Erkin-Say	3.27	14	ePn		Pn	23 02 15.0	+0.6
EKS2				eSn		Sn	23 02 58.7	+6.7
EKS2	Erkin-Say	3.27	14	P		Pn	23 02 15.3	+0.9
	SNR=21							
AAK	Ala-Archa	3.42	23	P		Pn	23 02 19.0	+2.5
	SNR=29							
KBK	Karagaybulak	3.59	28	P		Pn	23 02 19.5	+0.7
	SNR=36							
CHMS	Chumysh	3.83	23	P		Pn	23 02 22.9	+0.8
	SNR=15							
ULHL	Ulahol	3.85	43	P		Pn	23 02 21.6	-0.7
	SN

*BJI **24** 23:05:01.1, 596S×154 93E, h15km, mB4.9, mb4.8*
*NEIC **24** 23:05:02.8±0.3, 682S×154 49E, h35km, mb4.7/5, Error ellipse: s-maj=10.8km s-min=9.2km az=132.0*
ISC 24 23:05:05.6±4.3, **69S**±01×**15454E**±009, **h59**km±40km, **n39**, σ0**95**/33, **mb4.6**/27, **MS3.5**/2, **1D**, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**15.36**	**211**	Pn	**Pn**	**23 08 42.6**	**+3.8**
	0.3nm,0.3s,baz=38,slow=14,SNR=11						
DZM	**Mont Dzumac**	**18.95**	**144**	P	**Pn**	**23 09 23.4**	**+0.2**
	1.0nm,0.3s,baz=340,slow=16,SNR=6.0						
KAKA	**Kakadu**	**22.51**	**253**	*e*P	**P**	**23 09 59.7**	**-0.9**
	12nm,0.6s,mb4.5						
WB2	**Warramunga Arr**	**23.48**	**235**	*e*P	**P**	**23 10 08.8**	**-1.5**
WRA	**Warramunga Arr**	**23.49**	**235**	P	**P**	**23 10 09.3**	**-1.1**
	8.9nm,0.9s,mb4.2,baz=58,slow=9.7,SNR=42						
WRA				PcP	PcP	23 13 55.9	+1.0
	0.9nm,0.8s,baz=58,slow=2.5,SNR=4.7						
ASAR	**Alice Springs**	**25.89**	**228**	P	**P**	**23 10 32.0**	**-0.1**
	3.0nm,0.8s,mb3.9,baz=63,slow=8.9,SNR=29						
ASAR				ScP	ScP	23 17 41.1	+6.3
	1.0nm,1.0s,baz=51,slow=5.3,SNR=5.5						
STKA	**Stephens Creek**	**27.61**	**204**	P	**P**	**23 10 46.8**	**-0.8**
	3.2nm,0.8s,mb4.0,baz=16,slow=15,SNR=4.3						
STKA				LR	LR	23 22 28.6	
	comp=Z,146nm,19.1s,MS3.6,baz=23,slow=38						
FITZ	**Fitzroy Crossi**	**30.27**	**246**	⇓*i*P	**P**	**23 11 11.1**	**-0.3**
	13nm,1.3s,mb4.5						
KKM	**Kota Kinabalu**	**40.35**	**288**	P	**P**	**23 12 37.3**	**-0.7**
KSM	**Kuching**	**44.92**	**279**	*e*P	**P**	**23 13 14.6**	**-0.5**
KSRS	**Korea Array**	**50.66**	**333**	P	**P**	**23 13 57.2**	**-1.8**
	2.5nm,0.9s,mb4.1,baz=146,slow=9.1,SNR=5.1						
XAN	**Xi'an**	**59.34**	**316**	P	**P**	**23 15 01.5**	**-0.3**
XAN				AMB	AMB		
	comp=Z,14nm,0.8s,mb5.0						
KMI	**Kunming**	**59.60**	**304**	P	**P**	**23 15 06.5**	**+2.7**
KMI				AMB	AMB		
	comp=Z,5.0nm,1.0s,mb4.5						
LZH	**Lanzhou**	**63.95**	**316**	*e*P	**P**	**23 15 33.8**	**+1.0**
LZH				AP	pP	23 15 38.5	-10
LZH				XP	sP	23 15 41.0	-14
LZH				AMB	AMB		
	comp=Z,15nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,62nm,4.0s						
GTA	**Gaotai**	**68.38**	**317**	*e*P	**P**	**23 16 02.5**	**+1.4**
GTA				AP	pP	23 16 07.0	-10
GTA				XP	sP	23 16 09.6	-14
GTA				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb4.9						
SONM	**Songino Array**	**69.03**	**327**	P	**P**	**23 16 05.0**	**0.0**
	comp=Z,2.1nm,0.7s,mb4.2,baz=137,slow=5.3,SNR=17						
VNDA	**Vanda**	**70.67**	**178**	P	**P**	**23 16 16.1**	**+1.4**
	comp=Z,0.6nm,0.7s,mb3.6,baz=334,slow=5.5,SNR=3.3						
LSA	**Lhasa**	**70.86**	**305**	P	**P**	**23 16 17.4**	**+0.8**
LSA	**Lhasa**	**70.86**	**305**	*e*P	**P**	**23 16 17.5**	**+0.9**
	comp=Z,6.4nm,0.8s,mb4.6						
TAPN	**Taplejung**	**72.97**	**301**	*e*P	**P**	**23 16 29.8**	**+0.4**
	comp=Z,13nm,0.8s,mb4.9						
ODAN	**Odare**	**73.10**	**301**	*e*P	**P**	**23 16 30.9**	**+0.8**
	comp=Z,32nm,0.7s,mb5.4						
JIRN	**Jiri**	**74.36**	**301**	*e*P	**P**	**23 16 38.2**	**+0.7**
	comp=Z,8.1nm,0.5s,mb4.9						
PALK	**Pallekele**	**74.98**	**279**	*e*P	**P**	**23 16 41.8**	**+0.4**
	comp=Z,14nm,1.4s,mb4.7						
KKN	**Kakani**	**75.17**	**301**	*e*P	**P**	**23 16 42.8**	**+0.6**
	comp=Z,21nm,0.7s,mb5.2						
GKN	**Gorkha**	**75.77**	**301**	*e*P	**P**	**23 16 46.1**	**+0.5**
	comp=Z,26nm,0.8s,mb5.2						
KOLN	**Koldanda**	**76.59**	**301**	*e*P	**P**	**23 16 50.2**	**-0.1**
	comp=Z,26nm,0.8s,mb5.2						
MKAR	**Makanchi Array**	**83.05**	**319**	P	**P**	**23 17 25.1**	**+0.3**
	comp=Z,6.2nm,0.7s,mb4.8,baz=102,slow=5.2,SNR=88						
ZALV	**Zalesovo Beam**	**83.86**	**326**	P	**P**	**23 17 28.1**	**-0.7**
	comp=Z,2.1nm,0.6s,mb4.4,baz=114,slow=5.3,SNR=11						
ZALV				LR	LR	23 55 02.0	
	comp=Z,13nm,18.2s,MS3.4,baz=97,slow=36						
AML	**Almayashu**	**87.85**	**313**	*e*P	**P**	**23 17 48.4**	**-0.4**
	comp=Z,2.8nm,0.7s,mb4.6						
INK	**Inuvik**	**89.81**	**21**	P	**P**	**23 17 55.6**	**-1.8**
	comp=Z,0.5nm,0.4s,mb4.2,baz=207,slow=6.8,SNR=4.7						
NVAR	**Mina Array Bea**	**92.03**	**52**	P	**P**	**23 18 09.2**	**+0.8**
	comp=Z,2.5nm,0.8s,mb4.6,baz=248,slow=4.3,SNR=13						
YKA	**Yellowknife Ar**	**96.48**	**28**	P	**P**	**23 18 27.7**	**-0.5**
	comp=Z,0.5nm,0.6s,mb4.1,baz=266,slow=4.6,SNR=9.0						
PDAR	**Pinedale Array**	**98.98**	**48**	P	**P**	**23 18 38.9**	**-1.1**
	comp=Z,0.4nm,0.8s,mb4.0,baz=256,slow=3.6,SNR=3.7						
AKASG	**Malin Array Be**	**117.21**	**324**	PKP	PKPdf	23 23 43.9	-0.4
	comp=Z,1.5nm,0.6s,baz=55,slow=2.3,SNR=14						
NB2	**NORSAR Subarra**	**119.48**	**340**	PKPdf	PKPdf	23 23 47.5	-0.8
	comp=Z,1.5nm,1.0s,baz=44,slow=1.9						
NOA	**NORSAR Array B**	**119.48**	**340**	PKP	PKPdf	23 23 48.2	-0.1
	comp=Z,0.7nm,0.7s,baz=47,slow=1.9,SNR=5.2						
CLL	**Collm**	**125.53**	**331**	*e*PKPdf	PKPdf	23 24 00.0	-0.2
GERES	**GERESS Array B**	**126.75**	**329**	PKP	PKPdf	23 24 03.2	+0.6
	comp=Z,1.6nm,0.7s,baz=157,slow=1.5,SNR=8.9						
TORD	**Torodi Ar. Bea**	**152.57**	**285**	PKP	PKPdf	23 24 49.5	0.0
	comp=Z,0.4nm,0.9s,baz=30,slow=0.9,SNR=3.1						
TORD				PKPbc	PKPbc	23 24 56.6	+0.1
	comp=Z,3.4nm,0.7s,baz=86,slow=1.8,SNR=25						

IDC 24 23:20:21.4±3.8, **2986S**×**17774W**, **h0**km, **mb3.8**/2, **mb1 4.0**/3, **mb1mx3.7**/14, **mbtmp3.8**/3, **ML3.2**/1, **Error ellipse: s-maj=75.9km s-min=54.3km az=97.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**9.41**	**206**	Pn	Pn	23 22 38.1	-0.1
	0.3nm,0.3s,baz=5.3,slow=14,SNR=2.8						
URZ				Sn	Sn	23 24 18.3	-6.4
	1.0nm,0.3s,baz=198,slow=20,SNR=8.8						
ASAR	**Alice Springs**	**43.37**	**266**	P	P	23 28 25.2	-0.5
	0.4nm,0.5s,baz=100,slow=7.5,SNR=5.6						
WRA	**Warramunga Arr**	**44.30**	**271**	P	P	23 28 33.6	+0.3
	0.9nm,0.3s,baz=110,slow=8.1,SNR=23						
FINES	**FINESS Array B**	**144.71**	**340**	PKP	PKPdf	23 39 58.9	-0.6
	0.4nm,0.7s,baz=58,slow=5.2,SNR=4.4						

*NEIC **24** 23:22:49.1±10.0, 2352S×179 60W, h556km±30km, Error ellipse: s-maj=201.0km s-min=22.7km az=53.0*
*IDC **24** 23:22:55.2±7.9, 2399S×179 66E, h556km±52km, mb3.2/4, mb1 3.4/6, mb1mx3.1/16, mbtmp3.3/6, Error ellipse: s-maj=111.1km s-min=35.7km az=54.0*
ISC 24 23:22:55.8±3.6, **241S**×02s**1796E**±03, **h563**km±30km, **n8**, σ0**43**/10, **mb3.9**/4, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.29**	**277**	P	**P**	**23 25 37.5**	**+0.1**
	0.5nm,0.3s,baz=74,slow=18,SNR=5.2						
DZM				S	**S**	23 27 50.2	-0.1
	1.5nm,0.3s,baz=146,slow=20,SNR=8.1						
URZ	**Urewera**	**14.32**	**188**	P	**P**	**23 25 57.9**	**-0.1**
	1.2nm,0.3s,baz=334,slow=4.4,SNR=6.9						
URZ				S	**S**	**23 28 27.9**	**-0.1**
	0.1nm,0.3s,baz=286,slow=19,SNR=3.2						
CTA	**Charters Tower**	**31.13**	**271**	P	**P**	**23 28 29.7**	**+0.4**
	8.3nm,0.4s,mb4.7,baz=90,slow=12,SNR=31						
STKA	**Stephens Creek**	**34.34**	**248**	P	**P**	**23 28 57.2**	**+0.8**
STKA	**Stephens Creek**	**34.34**	**248**	P	**P**	**23 28 57.2**	**+0.8**
	0.7nm,0.5s,mb3.5,baz=100,slow=5.4,SNR=3.1						
ASAR	**Alice Springs**	**41.67**	**261**	P	**P**	**23 29 56.1**	**+0.2**
	0.9nm,0.4s,mb3.6,baz=100,slow=6.9,SNR=17						
WB2	**Warramunga Arr**	**42.04**	**266**	*e*P	**P**	**23 29 58.1**	**-0.8**
WRA	**Warramunga Arr**	**42.05**	**266**	P	**P**	**23 29 58.5**	**-0.4**
	1.0nm,0.3s,mb3.8,baz=103,slow=8.4,SNR=57						

*NEIC **24** 23:24:00.0, 1738N×101 23W, h24km, MD3.5(MEX), After MEX.*
MEX 24 23:24:00.0±0.7, **1736N**×**10123W**, **h23**km±30km, **MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.33**	**318**	*i* P	Pb	23 24 05.8	-1.5
ZIIG				*i* S	Sb	23 24 11.0	-1.2
CAIG	**El Cayaco**	**0.97**	**109**	*i* P	Pb	23 24 16.1	-2.1
CAIG				*i* S	Sb	23 24 26.2	-4.4
ACX	**Acapulco**	**1.35**	**111**	*i* P	Pn	23 24 24.0	+0.5
ACX				*i* S	Sn	23 24 38.5	-2.3
ACX	**Acapulco**	**1.35**	**111**	*i* P	Pn	23 24 20.9	-2.6
ACX				*i* S	Sn	23 24 38.5	-2.3
MEIG	**Mezcala**	**1.64**	**70**	*i* P	Pn	23 24 25.2	-2.2
MEIG				*i* S	Sn	23 24 43.7	-4.1
PPM	**Popocatepetl**	**3.00**	**55**	*i* P	Pn	23 24 44.1	-2.1
PPM				*i* S	Sn	23 25 29.7	+8.2
PPM	**Popocatepetl**	**3.00**	**55**	*i* P	Pn	23 24 44.1	-2.1
PPM				*i* S	Sn	23 25 20.6	-0.8
UTMO	**Huajuapan**	**3.30**	**81**	*i* P	Pn	23 24 48.3	-2.1
UTMO				*i* S	Sn	23 25 25.9	-3.1

*IDC **24** 23:39:42.3±3.8, 2758N×54 37E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.2/22, mbtmp3.6/3, Error ellipse: s-maj=101.3km s-min=34.4km az=142.0*
*CSEM **24** 23:39:44.5±1.6, 2749N×54 35E, h10km, ML3.5, Error ellipse: s-maj=50.0km s-min=11.7km az=176.0*
*ISCJB **24** 23:39:47.3±2.4, 275N±02×5436E±010, h58km±33km, mb3.6/3, Error ellipse: s-maj=33.4km s-min=9.7km az=159.7*
*OMAN **24** 23:40:02.0, 2651N×5525E*
ISC 24 23:39:48.1±2.3, **276N**±02×**5439E**±009, **h44**km±33km, **n12**, σ0**85**/14, **mb3.6**/3, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANOM	**Banah**	**2.37**	**133**	P	**Pn**	**23 40 23.2**	**-1.2**
	SNR=19						
ASUD	**Al Ashush, Dub**	**3.05**	**164**	P	**Pn**	**23 40 35.3**	**+1.4**
	SNR=34						
ASHO	**Ashiyiah**	**3.24**	**152**	P	**Pn**	**23 40 36.9**	**+0.4**
	SNR=9.9						
SLWS		**4.35**	**232**	P	**Pn**	**23 40 52.0**	**+0.3**
SLWS		**4.35**	**232**	P	**Pn**	**23 40 52.0**	**+0.3**
SLWS				S	**Sn**	**23 41 42.8**	**+1.6**
BTHS		**4.74**	**223**	P	**Pn**	**23 40 56.7**	**-0.4**
BTHS		**4.74**	**223**	P	**Pn**	**23 40 56.7**	**-0.4**
BTHS				S	**Sn**	**23 41 50.6**	**-0.3**
HRDDS		**6.42**	**225**	S	**Sn**	**23 42 30.7**	**-1.5**
HRDDS		**6.42**	**225**	P	**Pn**	**23 41 19.9**	**-0.3**
ZALV	**Zalesovo Beam**	**34.53**	**32**	P	**P**	**23 46 32.1**	**0.0**
	0.3nm,0.4s,mb3.6,baz=238,slow=10,SNR=3.7						
FINES	**FINESS Array B**	**38.81**	**339**	P	**P**	**23 47 08.3**	**-0.1**
	1.1nm,0.9s,mb3.6,baz=141,slow=9.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**51.09**	**265**	P	**P**	**23 48 46.7**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=64,slow=7.2,SNR=10.0						

IDC 24 23:46:33.6±16.0, **669S**×**12975E**, **h218**km±192km, **mb3.0**/1, **mb1 3.0**/3, **mb1mx2.8**/12, **mbtmp2.8**/3, **ML3.4**/2, **Error ellipse: s-maj=139.1km s-min=78.4km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.90**	**162**	P	Pn	23 49 41.6	-0.1
	0.2nm,0.3s,baz=344,slow=12,SNR=13						
WRA				S	S	23 52 05.2	-11
	0.1nm,0.3s,baz=326,slow=26,SNR=4.7						
ASAR	**Alice Springs**	**17.34**	**167**	P	P	23 50 21.2	+0.1
	0.1nm,0.3s,baz=348,slow=11,SNR=12						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	23 57 08.3	+0.1
	0.2nm,0.5s,baz=122,slow=7.9,SNR=5.9						

*KISR **24** 23:55:57.1±0.7, 2766N×54 47E, h24km±999km, ML3.0*
*IDC **24** 23:55:59.6±2.3, 2762N×54 29E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/23, mbtmp3.8/8, Error ellipse: s-maj=55.6km s-min=25.5km az=148.0*
*ISCJB **24** 23:56:02.6±0.9, 2759N±006×5431E±004, h33km±13km, mb3.8/8, Error ellipse: s-maj=10.0km s-min=5.0km az=24.1*
*CSEM **24** 23:56:02.2±0.1, 2764N×54 35E, h33km, ML4.0/4, Error ellipse: s-maj=4.4km s-min=2.8km az=29.0*
*NEIC **24** 23:56:03.9, 2751N×54 41E, h18km, MN3.3(TEH), After TEH.*
ISC 24 23:56:03.3±2.2, **2760N**±004×**5438E**±004, **h25**km±18km, **n30**, σ0**90**/38, **mb3.8**/8, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANOM	**Banah**	**2.40**	**134**	P	**Pn**	**23 56 40.2**	**-0.7**
	SNR=16						
BANOM				S	**Sn**	**23 57 08.5**	**-1.0**
FAQ	**Al Faqa, Dubai**	**3.05**	**159**	P	**Pn**	**23 56 50.7**	**+0.8**
ASUD	**Al Ashush, Dub**	**3.08**	**164**	P	**Pn**	**23 56 51.9**	**+1.5**
	SNR=43						
HATD	**Hatta, Dubai**	**3.18**	**150**	P	**Pn**	**23 56 52.2**	**+0.5**
ASHO	**Ashiyiah**	**3.27**	**152**	P	**Pn**	**23 56 53.5**	**+0.5**
	SNR=13						
BTHS		**4.76**	**223**	P	**Pn**	**23 57 13.6**	**+0.1**
BTHS		**4.76**	**223**	P	**Pn**	**23 57 13.6**	**+0.1**
BTHS				S	**Sn**	**23 58 08.5**	**+0.6**
KBD	**Kabd**	**6.09**	**286**	*e*P	**Pn**	**23 57 31.6**	**-0.2**
KBD				*e*S	**Sn**	**23 58 41.9**	**+1.2**
RDF	**Al-Radifah**	**6.17**	**284**	*e*P	**Pn**	**23 57 32.1**	**-0.6**
RDF				*e*S	**Sn**	**23 58 43.3**	**+0.8**
RDF				AML	AML	23 58 47.5	
	comp=Z,6.2nm,0.4s						
RDF	**Al-Radifah**	**6.17**	**284**	*e*P	**Pn**	**23 57 32.2**	**-0.6**
RDF				*e*S	**Sn**	**23 58 43.3**	**+0.8**
	comp=Z,6.2nm,0.4s						
HRDDS		**6.44**	**225**	S	**Sn**	**23 58 48.4**	**-0.9**
HRDDS		**6.44**	**225**	P	**Pn**	**23 57 37.1**	**+0.6**
NAY	**Al-Naaiem**	**6.50**	**286**	*e*P	**Pn**	**23 57 36.3**	**-1.0**
NAY				*e*S	**Sn**	**23 58 51.9**	**+1.3**
NAY				AML	AML	23 58 55.0	
	comp=Z,2.2nm,0.5s						
NAY	**Al-Naaiem**	**6.50**	**286**	*e*P	**Pn**	**23 57 36.3**	**-1.0**
NAY				*e*S	**Sn**	**23 58 51.9**	**+1.3**
MIB	**Mutribah**	**6.56**	**291**	*e*P	**Pn**	**23 57 37.7**	**-0.5**
MIB				*e*S	**Sn**	**23 58 52.9**	**+0.7**
ASYS		**8.91**	**272**	S	**Sn**	**23 59 47.8**	**-2.3**
ASYS		**8.91**	**272**	P	**Pn**	**23 58 09.3**	**-1.1**
AKTK	**Aktyubinsk**	**22.97**	**6**	P	**Pn**	**00 01 06.2**	**+0.5**
AKTK	**Aktyubinsk**	**22.97**	**6**	P	**Pn**	**00 01 06.2**	**+0.5**
AKTO	**Aktyubinsk**	**22.97**	**6**	P	**P**	**00 01 06.2**	**+0.5**
	comp=Z,1.7nm,0.6s,mb3.7,baz=164,slow=12,SNR=6.0						
MKAR	**Makanchi Array**	**29.11**	**41**	P	**P**	**00 02 02.2**	**+0.3**
	comp=Z,0.3nm,0.4s,mb3.4,baz=232,slow=10,SNR=11						
MKAR	**Makanchi Array**	**29.11**	**41**	P	**P**	**00 02 02.2**	**+0.3**
ZALV	**Zalesovo Beam**	**34.51**	**32**	P	**P**	**00 02 49.0**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=239,slow=8.0,SNR=6.9						
FINES	**FINESS Array B**	**38.77**	**339**	P	**P**	**00 03 24.5**	**-0.9**
FINES	**FINESS Array B**	**38.77**	**339**	P	**P**	**00 03 24.5**	**-0.9**
	comp=Z,0.7nm,0.4s,mb3.7,baz=130,slow=13,SNR=2.3						
NOA	**NORSAR Array B**	**44.14**	**331**	P	**P**	**00 04 07.6**	**-1.9**
NOA	**NORSAR Array B**	**44.14**	**331**	P	**P**	**00 04 07.6**	**-1.9**
	comp=Z,0.9nm,0.9s,mb3.5,baz=120,slow=7.6,SNR=3.2						
ARCES	**ARCESS Array B**	**45.19**	**346**	P	**P**	**00 04 18.7**	**+1.0**
	comp=Z,7.0nm,1.1s,mb4.4,baz=143,slow=9.1,SNR=6.5						
TORD	**Torodi Ar. Bea**	**51.08**	**265**	P	**P**	**00 05 03.6**	**-0.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=68,slow=5.5,SNR=16						
YKA	**Yellowknife Ar**	**89.79**	**355**	P	**P**	**00 08 59.8**	**+0.5**
	comp=Z,0.6nm,0.7s,mb4.0,baz=4.6,slow=5.0,SNR=14						

IDC 25 00:12:52.0±2.5, **142N**×**12842E**, **h0**km, **mb3.4**/3, **mb1 3.6**/3, **mb1mx3.4**/15, **mbtmp3.5**/3, **1D**, **Error ellipse: s-maj=199.5km s-min=24.0km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNE	**Ternate**	**1.23**	**239**	‖*e*P	Pg	00 13 21.5	+5.9
WRA	**Warramunga Arr**	**22.01**	**165**	P	P	00 17 47.1	-1.0
	0.6nm,0.9s,baz=345,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**25.50**	**168**	P	P	00 18 23.1	+0.9
	0.5nm,0.9s,baz=339,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**60.40**	**325**	P	P	00 23 03.2	0.0
	1.1nm,0.7s,baz=121,slow=8.5,SNR=17						

IDC 25 00:37:03.3±2.3, **2204S**×**6829W**, **h107**km±22km, **mb3.4**/2, **mb1 3.4**/5, **mb1mx3.3**/15, **mbtmp3.2**/5, **Error ellipse: s-maj=37.5km s-min=18.1km az=105.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.72**	**2**	P	Pn	00 38 27.6	+1.6
	1.4nm,0.3s,baz=202,slow=6.7,SNR=42						
SIV	**San Ignacio**	**9.10**	**50**	P	Pn	00 39 11.2	-0.7
	0.9nm,0.3s,baz=241,slow=12,SNR=15						
SIV				S	Sn	00 40 51.8	-0.7
	0.1nm,0.3s,baz=144,slow=22,SNR=3.6						
CFAA	**Coronel Fontan**	**9.53**	**180**	P	Pn	00 39 18.4	+0.9
	0.1nm,0.3s,baz=350,slow=13,SNR=11						
CFAA				S	Sn	00 41 01.6	-1.0
	0.1nm,0.3s,baz=108,slow=20,SNR=3.0						
TORD	**Torodi Ar. Bea**	**77.00**	**70**	P	P	00 48 45.5	+0.7
	0.4nm,0.5s,baz=253,slow=5.7,SNR=6.7						
YKA	**Yellowknife Ar**	**91.89**	**340**	P	P	00 49 58.2	-0.8
	0.3nm,0.7s,baz=133,slow=4.0,SNR=6.2						

*BJI **25** 00:39:55.3, 2128S×170 31E, h34km, mB7.2, mb6.4, Ms7.2, Msz6.9*
*NEIC **25** 00:40:01.6±0.1, 2062S×169 36E, h34km, mb6.5/77, ME6.8, MS7.0/151, MW7.1, Error ellipse: s-maj=5.1km s-min=3.4km az=163.0 Broadband fault plane solution: P waves. NP1:φs150.00000°, δ60.00000°, λ90.00000°. NP2:φs330.00000°, δ30.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm60.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm240.0000°; Moment Tensor Solution. s41 Moment tensor: Scale 10^19 Nm; Mrr5.21; Mθθ-0.04; Mφφ-5.17; Mrθ0.06; Mθφ0.55; Mφr-1.86; Best double couple: M0 5.50000×10^19 NP1:φs353.00000°, δ35.00000°, λ88.00000°. NP2:φs175.00000°, δ55.00000°, λ92.00000°. Principal axes: T 5.5300, Plg80.0000°, Azm92.0000°; N 0.0200, Plg1.0000°, Azm354.0000°; P -5.5500, Plg10.0000°, Azm264.0000°; Complex earthquake with two events occuring about 5 seconds apart observed on broadband displacement seismograms. Depth based on first event. Energy computed from BB mechanism.*
NEIC A tsunami was generated with maximum recorded wave heights [peak-to-trough] of 16 cm at Port-Vila, Vanuatu and 4 cm at Honiara, Solomon Islands. Felt [III] at Port-Vila. Felt [III] at Mont-Dore, New Caledonia. Also felt at Noumea and Yate, New Caledonia.
*GCMT **25** 00:40:01.6±0.1, 2060S×169.12E, h41km, MW7.1/113, Moment Tensor Solution. s113,c300; s110,c485; Duration: 9s0 Moment tensor: Scale 10^19Nm; Mrr5.83±.04; Mθθ-1.02±.02; Mφφ-4.80±.03; Mrθ0.79±.07; Mθφ2.49±.02; Mφr-1.75±.07; Best double couple: M0 6.23600×10^19 NP1:φs333.00000°, δ36.00000°, λ89.00000°. NP2:φs154.00000°, δ54.00000°, λ91.00000°. Principal axes: T 6.1330, Plg81.0000°, Azm68.0000°; N 0.2150, Plg1.0000°, Azm334.0000°; P -6.3390, Plg9.0000°, Azm244.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s.*
*CRAAG **25** 00:40:01.7, 2059S×169 30E, Mw7.2*
*MOS **25** 00:40:01.2±1.0, 2057S×169.34E, h36km, mb6.7/54, MS7.0/73, Error ellipse: s-maj=6.8km s-min=6.7km az=26.4*
*ISCJB **25** 00:40:01.2±0.1, 2058S±002×169 30E±002, h34km, mb6.4/116, MS7.0/197, Error ellipse: s-maj=3.1km s-min=2.6km az=25.2*
*IDC **25** 00:40:02.7±1.2, 2060S×169 46E, h37km±8km, mb5.9/28, mb1 5.9/31, mb1mx5.9/32, mbtmp5.9/31, ML5.2/3, MS6.8/21, Ms1 6.8/21, ms1mx6.6/29, Error ellipse: s-maj=9.8km s-min=9.1km az=26.0*
*ORF **25** 00:40:13.8, 1600S×162 85E, h30km, mb7.4*
ISC 25 00:40:03.1±0.1, **2057S**±002×**16935E**±002, **h36**km, **h36**km±1.6km**:pP-P, n1428,** σ0**75**/710, **mb6.4**/116, **MS7.0**/197, **240C-113D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.09**	**241**	⇓*i*P	**Pn**	**00 40 47.4**	**-2.0**
DZM	**Mont Dzumac**	**3.09**	**241**	Pn	**Pn**	**00 40 48.0**	**-1.3**
	404nm,0.3s,baz=62,slow=18,SNR=1171						
DZM				LR	LR	00 41 44.4	
	comp=Z,1011μm,18.4s,baz=264,slow=32						
HNR	**Honiara**	**14.31**	**319**	⇑*i*P	**Pn**	**00 43 24.4**	**+1.1**
	25μm,1.8s						
HNR	**Honiara**	**14.31**	**319**	P	**Pn**	**00 43 23.8**	**+0.6**
HNR						00 46 08.7	
HNR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
HNR				smax			
	comp=N,19nm,0.3s						
HNR				MLR	MLR		
	comp=Z,308μm,20.3s						
HNR	**Honiara**	**14.31**	**319**	Pn	**Pn**	**00 43 23.8**	**+0.5**
	comp=Z,4.9nm,0.3s,baz=252,slow=3.0,SNR=28						
HNR				Sn	**Sn**	**00 46 08.7**	**+8.0**
	comp=Z,19nm,0.3s,baz=86,slow=19,SNR=2.4						
HNR				LR	LR	00 48 08.5	
	comp=Z,308μm,20.3s,baz=172,slow=34						
RAO	**Raoul Island**	**14.42**	**129**	*e*Pn	**Pn**	**00 43 28.8**	**+4.1**
	comp=Z,2μm,0.8s						
RAO	**Raoul Island**	**14.42**	**129**	*e*P	**Pn**	**00 43 28.8**	**+4.1**
RAO				pmax	pmax		
	comp=Z,2μm,0.8s						
OUZ	**Omahuta**	**15.07**	**167**	Pn	**Pn**	**00 43 33.3**	**-0.1**
FUNA	**Funafuti**	**15.29**	**40**	⇓*i*Pn	**Pn**	**00 43 37.5**	**+1.1**
	comp=Z,6μm,1.3s						
WCZ	**Waipu Caves**	**15.93**	**165**	PN	**Pn**	**00 43 46.0**	**+1.5**
WTAZ	**Waiatarua**	**16.93**	**165**	PN	**Pn**	**00 43 58.9**	**+1.7**
KUZ	**Kuaotunu**	**17.05**	**162**	PN	**Pn**	**00 44 00.1**	**+1.4**
**EID

comp=Z,1μm,1.4s,mb6.1
CTA *eS* **S** **00 48 53.5 +5.0**
CTA Charters Tower 21.66 267 P **P** **00 44 52.6 +2.0**
CTA S **S** **00 48 53.3 +4.8**
CTA pmax pmax
comp=Z,150nm,0.7s
CTA smax
comp=N,76nm,1.0s
CTA MLR MLR
comp=Z,604μm,21.2s
CTA Charters Tower 21.66 267 P **P** **00 44 52.5 +1.9**
comp=Z,150nm,0.7s,mb5.5,baz=89,slow=12,SNR=43
CTA S **S** **00 48 53.3 +4.8**
comp=Z,76nm,1.0s,baz=253,slow=14,SNR=2.3
CTA LR LR 00 52 31.1
comp=Z,604μm,21.2s,MS7.0,baz=342,slow=34
CTAO Charters Tower 21.66 267 *eP* **P** **00 44 51.6 +1.0**
CTAO LR LR
comp=Z,572μm,21.0s,MS7.0
KHZ Kahutara 22.07 172 PN **P** **00 44 53.9 -0.8**
LTZ Lake Taylor 22.29 174 PN **P** **00 44 57.3 +0.2**
WVZ Waitaha Valley 22.47 177 PN **P** **00 44 59.6 +0.6**
CNB Canberra Magne 22.90 226 *eP* **P** **00 45 04.6 +0.9**
comp=Z,6μm,1.8s,mb6.7
CNB *eS* **S** **00 49 16.0 +4.8**
FOZ Fox Glacier 22.93 179 PN **P** **00 45 03.7 -0.2**
RPZ Rata Peaks 23.13 177 P **P** **00 45 05.5 -0.5**
comp=Z,228nm,1.0s,mb5.6,baz=7.9,slow=3.7,SNR=54
RPZ S **S** **00 49 20.2 +5.6**
comp=Z,160nm,1.2s,baz=140,slow=12,SNR=1.9
RPZ LR LR 00 53 01.4
comp=Z,402μm,21.0s,MS6.8,baz=347,slow=34
RPZ Rata Peaks 23.13 177 PN **P** **00 45 05.8 -0.1**
MQZ McQueen's Vall 23.24 174 PN **P** **00 45 06.4 -0.7**
JCZ Jackson Bay 23.45 181 PN **P** **00 45 09.9 +0.7**
LBZ Lake Benmore 23.76 179 PN **P** **00 45 11.0 -1.1**
ODZ Otahua Downs 24.43 178 PN **P** **00 45 17.3 -0.9**
EAZ Earnscleugh 24.60 180 PN **P** **00 45 19.2 -0.5**
MLZ Mavora Lakes 24.73 182 PN **P** **00 45 20.7 -0.2**
WHZ Wether Hill Ro 25.29 182 PN **P** **00 45 25.7 -0.3**
TUZ Tuapeka 25.32 180 PN **P** **00 45 26.4 +0.1**
STKA Stephens Creek 27.25 240 *eP* **P** **00 45 44.1 +0.2**
comp=Z,498nm,1.0s,mb6.0
STKA *ePCP* PcP 00 49 02.1 -1.1
STKA *eS* **S** **00 50 23.3 +2.6**
STKA Stephens Creek 27.25 240 *eP* **P** **00 45 43.9 0.0**
comp=Z,417nm,0.8s,mb6.0
STKA *ePcP* PcP 00 49 03.6 +0.4
STKA Stephens Creek 27.25 240 P **P** **00 45 44.4 +0.6**
comp=Z,93nm,0.8s,mb5.4,baz=77,slow=9.3,SNR=74
STKA PcP PcP 00 49 02.3 -1.0
comp=Z,88nm,0.8s,baz=29,slow=4.2,SNR=2.7
STKA S **S** **00 50 20.0 -0.7**
comp=Z,34nm,0.8s,baz=90,slow=8.1,SNR=1.3
STKA ScP ScP 00 52 42.5 +1.6
comp=Z,43nm,1.0s,baz=94,slow=4.0,SNR=3.9
STKA PKiKP PKiKP 00 56 39.7 -1.0
comp=Z,9.6nm,0.8s,baz=282,slow=3.8,SNR=2.8
RAR Rarotonga 28.84 97 P **P** **00 45 57.4 -0.8**
RAR 00 49 06.3
RAR S **S** **00 50 52.6 +6.7**
RAR Rarotonga 28.84 97 P **P** **00 45 57.4 -0.8**
comp=Z,52nm,0.8s,mb5.3,baz=243,slow=6.8,SNR=7.0
RAR PcP PcP 00 49 06.2 -1.1
comp=Z,75nm,1.0s,baz=210,slow=8.7,SNR=3.1
RAR S **S** **00 50 52.6 +6.7**
comp=Z,8.9nm,0.7s,baz=132,slow=14,SNR=2.0
RAR LR LR 00 55 21.2
comp=Z,143μm,21.3s,MS6.5,baz=259,slow=32
TAU Tasmania Unive 28.94 215 *eP* **P** **00 45 58.5 -0.3**
WB2 Warramunga Arr 32.80 265⇑ *iP* **P** **00 46 31.4 -1.8**
WRA Warramunga Arr 32.81 265 P **P** **00 46 31.8 -1.4**
WRA PcP PcP 00 49 18.0 +0.2
WRA Warramunga Arr 32.81 265 P **P** **00 46 31.8 -1.4**
comp=Z,82nm,1.1s,mb5.6,baz=96,slow=8.7,SNR=84
WRA PcP PcP 00 49 18.0 +0.2
comp=Z,97nm,1.1s,baz=91,slow=2.9,SNR=3.0
WRA PKiKP PKiKP 00 56 44.3 -0.4
comp=Z,13nm,1.0s,baz=358,slow=0.4,SNR=7.5
WRA LR LR 01 00 06.3
comp=Z,489μm,18.5s,MS7.2,baz=90,slow=37
ASAR Alice Springs 32.93 258 P **P** **00 46 33.1 -1.1**
ASAR PcP PcP 00 49 18.2 +0.1
ASAR ScP ScP 00 52 59.8 +0.2
ASAR Alice Springs 32.93 258 P **P** **00 46 33.2 -1.0**
ASAR 00 49 18.2
ASAR Alice Springs 32.93 258 P **P** **00 46 33.1 -1.1**
comp=Z,134nm,0.8s,mb5.9,baz=86,slow=8.3,SNR=375
ASAR PcP PcP 00 49 18.2 +0.1
comp=Z,126nm,0.9s,baz=94,slow=2.9,SNR=6.2
ASAR ScP ScP 00 52 59.8 +0.2
comp=Z,33nm,0.8s,baz=118,slow=4.5,SNR=4.5
ASAR PKiKP PKiKP 00 56 44.3 -0.3
comp=Z,7.4nm,0.9s,baz=66,slow=1.0,SNR=4.5
ASAR P3KPbc 01 17 53.7
comp=Z,12nm,0.6s,baz=276,slow=4.2,SNR=12
JAY Jayapura 33.20 299 P **P** **00 46 36.0 -0.6**
MCQ Macquarie Isla 34.79 191 *eP* **P** **00 46 53.1 +3.1**
MCQ Macquarie Isla 34.79 191 *eP* **P** **00 46 49.9 -0.1**
KAKA Kakadu 36.15 277 *eP* **P** **00 47 01.0 -1.2**
comp=Z,395nm,0.9s,mb6.3
KAKA Kakadu 36.15 277 *eP* **P** **00 47 01.2 -1.0**
TBI Tubuai 38.22 102 *ePcP* PcP 00 49 31.1 -2.6
comp=Z,417nm,1.1s
TBI *eS* **S** **00 53 11.1 0.0**
comp=Z,107μm,36.8s
TBI *eLQ* 00 56 06.3
comp=Z,663μm,34.0s
TBI *eLR* LR 00 57 44.9
comp=Z,432μm,27.8s,baz=264
TBI Tubuai 38.22 102 *eP* **P** **00 47 19.5 -0.2**
comp=Z,274nm,1.1s,mb5.9
TBI *ePcP* PcP 00 49 31.1 -2.6
TBI *eS* **S** **00 53 11.1 0.0**
TBI *eLQ* 00 56 06.3
FORT Forrest 38.39 246 *eP* **P** **00 47 20.2 -0.8**
comp=Z,531nm,0.8s,mb6.3
FORT *ePcP* pP 00 47 26.9 -4.6
KNA Kununurra 38.78 270 P **P** **00 47 23.3 -1.2**
PAE Paea 38.85 93 *ePcP* PcP 00 49 33.1 -2.7
comp=Z,289nm,1.0s
PAE *eScP* ScP 00 53 19.3 -2.0
comp=Z,158nm,1.4s
PAE Paea 38.85 93 *eP* **P** **00 47 24.7 -0.3**
comp=Z,155nm,0.7s,mb5.8
PAE *ePcP* PcP 00 49 33.1 -2.7
PAE *eScP* ScP 00 53 19.3 -2.0
PAE Paea 38.85 93 *eP* **P** **00 47 24.7 -0.3**
PAE *e* 00 49 33.1
PAE *e* 00 53 19.3
PAE pmax pmax
comp=Z,155nm,0.7s,mb5.8
PPT Papeete 38.87 93 *eP* **P** **00 47 24.5 -0.7**
comp=Z,197nm,1.0s,mb5.8
PPT Papeete 38.87 93 *ePcP* PcP 00 49 33.3 -2.5
comp=Z,243nm,1.1s
PPT *eS* **S** **00 53 19.6 -1.4**
comp=Z,157μm,28.5s
PPT *eScP* ScP 00 53 19.7 -1.7
comp=Z,67nm,1.4s
PPT *eLQ* 00 56 24.2
comp=Z,936μm,31.5s
PPT *eLR* LR 00 58 03.3
comp=Z,696μm,27.8s
PPT Papeete 38.87 93 P **P** **00 47 23.7 -1.5**
PPT 00 49 36.4
PPT Papeete 38.87 93 P **P** **00 47 23.7 -1.5**
comp=Z,162nm,0.7s,mb5.8,baz=221,slow=3.2,SNR=27
PPT PcP PcP 00 49 36.4 +0.6
comp=Z,280nm,1.0s,baz=211,slow=7.4,SNR=4.6
PPT LR LR 00 59 59.5
comp=Z,102μm,21.9s,MS6.6,baz=260,slow=31
TVO Taravao 39.13 93 *ePcP* PcP 00 49 34.1 -2.5
comp=Z,585nm,1.4s
TVO Taravao 39.13 93 *eP* **P** **00 47 26.9 -0.5**
comp=Z,282nm,0.7s,mb6.1
TVO *ePcP* PcP 00 49 34.1 -2.5
TVO Taravao 39.13 93 *eP* **P** **00 47 26.9 -0.5**
TVO *e* 00 49 34.1
TVO pmax pmax
comp=Z,282nm,0.7s,mb6.1
MEH Mehetia 40.22 94 *eP* **P** **00 47 36.1 -0.4**
comp=Z,148nm,0.9s,mb5.7
MEH *ePcP* PcP 00 49 37.6 -2.5
PMOR Pomariorio Ree 41.00 89 *ePcP* PcP 00 49 39.8 -2.9
comp=Z,256nm,1.1s
PMOR *eScP* ScP 00 53 28.0 -1.8
comp=Z,164nm,1.2s
PMOR Pomariorio Ree 41.00 89 *eP* **P** **00 47 42.3 -0.7**
comp=Z,291nm,0.8s,mb6.0
PMOR *ePcP* PcP 00 49 39.8 -2.9
PMOR *eScP* ScP 00 53 28.0 -1.8
VAH Vaihoa 41.20 90 *ePcP* PcP 00 49 40.6 -2.7
comp=Z,200nm,1.0s
VAH *eScP* ScP 00 53 28.5 -2.0
comp=Z,183nm,1.2s
VAH Vaihoa 41.20 90 *eP* **P** **00 47 43.6 -0.9**
comp=Z,382nm,0.7s,mb6.1
VAH *ePcP* PcP 00 49 40.6 -2.7
VAH *eScP* ScP 00 53 28.5 -2.0
FITZ Fitzroy Crossi 41.23 266⇑ *iP* **P** **00 47 44.3 -0.5**
comp=Z,1μm,1.4s,mb6.3
FITZ *eS* **S** **00 53 54.6 -1.7**
AAI Ambon 43.41 287 P **P** **00 48 01.1 -1.5**
BATI Kupang 45.10 276 P **P** **00 48 17.0 +0.9**
comp=Z,268nm,0.9s,mb6.1,baz=86,slow=0.5,SNR=37
BATI S **S** **00 54 55.6 +2.5**
comp=Z,22nm,0.9s,baz=60,slow=20,SNR=2.0
MBWA Marble Bar 46.21 260 *eP* **P** **00 48 24.8 0.0**
comp=Z,890nm,0.9s,mb6.7
MBWA LR LR
comp=Z,667μm,19.0s,MS7.6
TNE Ternate 46.23 292⇓ *eP* **P** **00 48 22.5 -2.5**
KLBR Kellerberrin 47.25 246 *eP* **P** **00 48 31.3 -1.5**
comp=Z,867nm,0.9s,mb6.7
NWAO Narrogin (SRO) 47.71 244 *eP* **P** **00 48 35.8 -0.6**
NWAO LR LR
comp=Z,154μm,20.0s,MS7.0
MUN Mundaring 48.56 245 *eP* **P** **00 48 42.5 -0.5**
MUN *eS* **S** **00 55 41.7 -0.6**
DRV Dumont d'Urvil 49.78 195 P pP 00 49 04.0 +1.5
DRV Dumont d'Urvil 49.78 195 PP PP 00 50 35.0 -11
DRV S **S** **00 56 17.0 +19**
DRV SS SS 00 59 58.0 +27
DRV L 01 01 00.0
DRV R 01 04 00.0
TAOE Nuku Hiva Isla 50.03 84 *eP* **P** **00 48 54.2 -0.3**
comp=Z,4μm,0.8s,mb7.5
TAOE *eS* **S** **00 56 02.1 -1.2**
comp=Z,224μm,33.0s
TAOE *eLQ* 01 01 03.5
comp=Z,323μm,27.6s
TAOE *eLR* LR 01 03 12.4
comp=Z,887μm,28.8s,baz=253
TAOE Nuku Hiva Isla 50.03 84 *eP* **P** **00 48 54.2 -0.3**
comp=Z,4μm,0.8s,mb7.5
TAOE *eS* **S** **00 56 02.1 -1.2**
TAOE *eLQ* 01 01 03.5
KAPI Kappang 50.55 281 P **P** **00 48 56.9 -1.5**
RKT Rikitea 51.48 104 *eP* **P** **00 49 05.2 -0.1**
comp=Z,198nm,1.2s,mb5.9
RKT *eS* **S** **00 56 22.3 -1.0**
comp=Z,41μm,28.2s
RKT *eLR* LR 01 03 50.9
comp=Z,224μm,26.8s,baz=257
RKT Rikitea 51.48 104 *eP* **P** **00 49 05.2 -0.1**
comp=Z,198nm,1.2s,mb5.9
RKT *eS* **S** **00 56 22.3 -1.0**
BUKP Musuan 51.90 298 *eS* **P** **00 49 10.2 +1.8**
PCI Palu 52.13 286 P **P** **00 49 10.9 +0.7**
CTBH Cotabato--PC H 52.22 297 *i S* **P** **00 49 11.7 +0.9**
HON Honolulu 52.46 39 *eP* **P** **00 49 14.4 +2.0**
KIP Kipapa 52.53 39⇑ *eP* **P** **00 49 12.7 -0.3**
comp=Z,179nm,0.6s,mb6.2
KIP LR LR
comp=Z,67μm,20.0s,MS6.7
KIP Kipapa 52.53 39⇑ *eP* **P** **00 49 12.7 -0.2**
KIP pmax pmax
comp=Z,179nm,0.6s,mb6.2
KIP MLR MLR
comp=Z,67μm,20.0s,MS6.7
STCH Steam Cracks 52.80 44 *eP* **P** **00 49 13.9 -1.1**
POHA Pohakuloa 52.81 43 *eP* **P** **00 49 15.1 +0.1**
comp=Z,366nm,0.8s,mb6.4
POHA LR LR
comp=Z,88μm,22.0s,MS6.8
MSLP Maasin 53.33 301 *eS* **P** **00 49 29.3 +10**
DNP Denpasar 53.48 274 P **P** **00 49 20.5 +0.3**
NBBI Negara 54.13 275 P **P** **00 49 24.1 -0.9**
LLP Lapu-Lapu 54.16 300 *eS* **P** **00 49 23.7 -1.4**
CBIJ Chichi jima 54.20 330 P **P** **00 49 24.4 -0.7**
comp=Z,940nm,0.9s,mb6.7,baz=160,slow=6.3,SNR=12
CBIJ LR LR 01 10 04.8
comp=Z,98μm,21.0s,MS6.8,baz=353,slow=33
CNP Catarman 54.87 303 *eS* **P** **00 49 37.5 +7.3**
KMMI Kalianget 55.18 276 P **P** **00 49 33.0 +0.4**
RCP Roxas 55.85 301⇑ *eP* **P** **00 49 37.3 0.0**
MYLDM Lahad Datu 56.09 291 ⇓P **P** **00 49 48.4 +9.3**
TSM Tawau 56.22 290 ⇓P pP 00 49 50.4 -0.5
OTRP Odiongan 56.88 301 *eS* **P** **00 49 48.7 +4.0**
VNDA Vanda 57.11 182⇑ *iP* **P** **00 49 44.9 -0.6**
comp=Z,242nm,0.9s,mb6.2
VNDA S **S** **00 57 37.3 -0.4**
VNDA Vanda 57.11 182⇑ *iP* **P** **00 49 44.9 -0.5**
VNDA S **S** **00 57 37.3 -0.3**
VNDA pmax pmax
comp=Z,242nm,0.9s
VNDA Vanda 57.11 182 P **P** **00 49 44.9 -0.6**
comp=Z,67nm,1.0s,mb5.6,baz=2.0,slow=7.5,SNR=85
VNDA S **S** **00 57 37.3 -0.4**
comp=Z,5.7nm,1.0s,baz=333,slow=9.0,SNR=3.4
VNDA LR LR 01 10 22.2
comp=Z,47μm,20.5s,MS6.6,baz=18,slow=32
VNDA PKiKP 01 11 22.6
comp=Z,3.8nm,1.1s,baz=198,slow=3.2,SNR=3.6
SBA Scott Base 57.34 181 *eP* **P** **00 49 47.5 +0.5**
SDKM Sandakan 57.45 291⇑ P **P** **00 49 51.7 +3.0**
ENPP El Nido 58.36 298 *eS* **P** **00 49 59.0 +3.9**
KKM Kota Kinabalu 58.49 291⇑ P **P** **00 49 58.3 +2.2**
CASY Casey 58.96 204 *eP* **P** **00 49 58.4 0.0**
CASY *eS* **S** **00 58 00.5 -1.4**
CASY Casey 58.96 204 *eP* **P** **00 49 58.0 -0.4**
comp=Z,3μm,1.7s,mb7.0
BJII Banjamegara 59.06 274⇑ *iP* **P** **00 50 01.1 +1.0**
BJII *i S* **S** **00 58 08.6 +3.7**
BALP Baler 59.18 304 *eS* **P** **00 50 07.7 +6.9**
NBP Mount Natib 59.52 302⇑ *eP* **P** **00 50 04.5 +1.4**
BTM Bintulu 59.98 286⇑ P **P** **00 50 14.6 +8.2**
JHJ Hachijo jima 2 60.39 332 P **P** **00 50 08.0 -0.8**
comp=Z,554nm,1.1s,mb6.5,baz=182,slow=12,SNR=3.6
JHJ PcP PcP 00 50 53.8 +0.3
comp=Z,914nm,0.8s,baz=206,slow=7.7,SNR=6.6
JHJ LR LR 01 16 47.9
comp=Z,58μm,18.2s,MS6.8,baz=128,slow=36
SBUM Sibu 60.44 285 ⇓P pP 00 50 20.0 -0.5
LEM Lembang 61.19 274 P **P** **00 50 14.1 -0.5**
JOW Kunigami 61.68 318 P **P** **00 50 18.4 +0.8**
comp=Z,297nm,0.8s,mb6.5,baz=152,slow=6.3,SNR=27
JOW LR LR 01 11 33.9
comp=Z,55μm,21.5s,MS6.7,baz=295,slow=31
KSM Kuching 61.77 283 *eP* **P** **00 50 18.1 -0.5**
KSM Kuching 61.77 283 ⇓P **P** **00 50 18.6 +0.1**
XMIS Christmas Isla 61.87 269 *eP* **P** **00 50 20.6 +1.4**
CBJI Citeko 62.04 274 P **P** **00 50 18.7 -1.7**
TPI Tanjungpandan 62.58 278 P **P** **00 50 22.7 -1.3**
SBJI Serang 62.81 274 P **P** **00 50 24.3 -1.3**
MJAR Matsushiro Arr 63.97 332 P **P** **00 50 32.8 +0.1**
comp=Z,268nm,0.9s,mb6.3,baz=165,slow=6.6,SNR=7.4
MJAR LR LR 01 18 22.1
comp=Z,43μm,18.6s,MS6.7,baz=145,slow=36
MAJO Matsushiro 63.97 332 *eP* **P** **00 50 32.1 -0.5**
comp=Z,368nm,0.8s,mb6.5
MAJO Matsushiro 63.97 332 *eP* **P** **00 50 32.2 -0.5**
MAJO pmax pmax
comp=Z,368nm,0.8s,mb6.5
MAT Matsushiro 63.97 332 P **P** **00 50 32.3 -0.4**
NACB Ninganchiao 64.33 311 *eP* **P** **00 50 34.8 -0.5**
KLI Kotabumi 64.44 275 P **P** **00 50 34.7 -1.6**
YHNB Yeheng 64.80 312 *eP* **P** **00 50 38.4 +0.1**
JNU Nakatsue 64.80 325 P **P** **00 50 38.9 +0.7**
comp=Z,378nm,0.9s,mb6.4,baz=96,slow=9.9,SNR=11
JNU LR LR 01 14 18.4
comp=Z,102μm,21.9s,MS7.0,baz=132,slow=32
TATO Taipei 64.92 312 *eP* **P** **00 50 39.2 +0.1**
comp=Z,1μm,1.1s,mb6.9
TATO LR LR
comp=Z,82μm,20.0s,MS6.9
ERM Erimo 66.81 339 *eP* **P** **00 50 52.5 +1.6**
comp=Z,145nm,0.7s,mb6.1
ERM LR LR
comp=Z,156μm,22.0s,MS7.2
ERM Erimo 66.81 339 *eP* **P** **00 50 52.5 +1.6**
ERM pmax pmax
comp=Z,145nm,0.7s,mb6.1
ERM MLR MLR
comp=Z,156μm,22.0s,MS7.2
QZH Quanzhou 66.94 310 P **P** **00 50 56.1 +4.0**
QZH AMB AMB
comp=Z,1μm,1.7s,mb6.6
KSI Kapahiang 66.97 275 P **P** **00 50 50.7 -1.9**
KSI Kapahiang 66.97 275 *eP* **P** **00 50 53.0 +0.4**
MYKOM Kota Tinggi 67.81 281 ⇓P **P** **00 51 00.9 +2.9**
KGM Kluang 68.39 281⇑ P **P** **00 51 02.9 +1.3**
ASAJ Asahikawa 68.87 340 P **P** **00 51 04.7 +0.8**
comp=Z,958nm,0.9s,mb6.7,baz=228,slow=11,SNR=48
ASAJ LR LR 01 16 20.9
comp=Z,130μm,21.3s,MS7.1,baz=161,slow=32
ASAJ PKPPKP 01 19 14.4
comp=Z,59nm,1.1s,baz=340,slow=3.8,SNR=12
SSE Sheshan 69.10 317 *eP* **P** **00 51 09.3 +3.7**
SSE AP pP 00 51 20.8 +4.1
SSE XP sP 00 51 26.4 +5.5
SSE S S 01 00 16.4 +7.8
SSE XS sS 01 00 35.4 +8.5
SSE AMB AMB
comp=Z,228nm,1.5s,mb5.9
SSE LR LR
comp=N,18μm,23.8s,MS6.5
SSE LR LR
comp=E,33μm,23.7s,MS6.5
SSE LR LR
comp=Z,53μm,25.8s,MS6.7
QSPA South Pole Qui 69.49 180 *eP* **P** **00 51 07.0 -0.3**
comp=Z,3μm,1.1s,mb7.1
QSPA PKKP 01 10 57.4
QSPA LR LR
comp=Z,89μm,20.0s,MS7.0
QSPA South Pole Qui 69.49 180 P **P** **00 51 07.5 +0.2**
comp=Z,1μm,0.9s,mb6.8,baz=12,slow=2.8,SNR=24
QSPA S S 01 00 11.1 -0.8
comp=Z,12nm,1.0s,baz=166,slow=23,SNR=8.6
QSPA PKKP 01 10 57.4
comp=Z,6.3nm,1.0s,baz=279,slow=2.6,SNR=2.7
KSRS Korea Array 69.65 326 P **P** **00 51 09.0 +0.1**
comp=Z,90nm,0.9s,mb5.7,baz=142,slow=6.0,SNR=16
KSRS PKP2bc 01 19 12.6
comp=Z,26nm,1.1s,baz=324,slow=3.6,SNR=13
KSRS LR LR 01 19 55.4
comp=Z,62μm,20.5s,MS6.8,baz=135,slow=34
QIZ Qiongzhong 70.33 300 P **P** **00 51 14.3 +0.9**
QIZ XP sP 00 51 27.1 -1.6
QIZ S S 01 00 21.8 -1.6
QIZ LR LR
comp=N,67μm,14.3s,MS7.3
QIZ LR LR
comp=E,86μm,13.6s,MS7.3
QIZ LR LR
comp=Z,84μm,14.2s,MS7.1
INCN Inchon 70.36 325 *eP* **P** **00 51 13.0 -0.2**
comp=Z,933nm,1.1s,mb6.6
INCN LR LR
comp=Z,50μm,20.0s,MS6.8
NJ2 Nanjing 71.23 316 *eP* **P** **00 51 20.8 +2.2**
NJ2 AP pP 00 51 31.3 +1.5
NJ2 XP sP 00 51 34.0 +0.1
NJ2 PP PP 00 54 02.8 +5.6
NJ2 S S 01 00 35.0 +1.5
NJ2 AMB AMB
comp=Z,3μm,1.0s,mb7.1
NJ2 AMB AMB
comp=Z,31μm,9.0s
NJ2 LR LR
comp=Z,126μm,23.2s,MS7.1
YSS Yuzh-Sakhalins 71.36 341 *eP* **P** **00 51 20.2 +1.1**
comp=Z,910nm,1.0s,mb6.7
YSS LR LR
comp=Z,100μm,20.0s,MS7.1
YSS Yuzh-Sakhalins 71.36 341⇑ *iP* **P** **00 51 19.6 +0.6**
YSS *e* 00 51 40.6
YSS pmax pmax
comp=Z,1μm,1.0s,mb6.7
YSS pmax pmax
comp=N,119nm,0.8s
YSS pmax pmax
comp=E,320nm,1.2s
SKR Severo-Kuril's 71.89 351 *eP* **P** **00 51 20.0 -2.1**
SKR *e* 00 51 26.1
SKR *e* 00 51 40.0
SKR pmax pmax
comp=Z,270nm,1.0s,mb6.1
KULM Kulim 72.12 283 *eP* **P** **00 51 23.8 -0.6**
KULM *e* pP 00 51 33.0 -2.5
VLA Vladivostok 72.13 332 ⇓ *iP* **P** **00 51 24.1 +0.3**
VLA Vladivostok 72.13 332 ⇓ *iP* **P** **00 51 24.0 +0.2**
VLA pmax pmax
comp=Z,2μm,2.5s,mb6.6
VLA MLR MLR
comp=Z,41μm,21.0s,MS6.7
PSI Prapat 72.74 280 P **P** **00 51 26.6 -1.5**
comp=Z,169nm,1.0s,mb5.9,baz=34,slow=12,SNR=4.0
PSI LR LR 01 24 08.3
comp=Z,94μm,21.0s,MS7.0,baz=143,slow=36
SMY Shemya 73.10 3 *eP* **P** **00 51 29.4 +0.1**
comp=Z,1μm,0.9s,mb6.8
SMY LR LR
comp=Z,103μm,21.0s,MS7.1
SMY Shemya 73.10 3 *eP* **P** **00 51 29.4 +0.1**
SMY pmax pmax
comp=Z,1μm,0.9s,mb6.8
SMY MLR MLR
comp=Z,103μm,21.0s,MS7.1
ADK Adak 73.17 9 *eP* **P** **00 51 29.5 -0.3**
comp=Z,724nm,0.9s,mb6.6
ADK LR LR
comp=Z,102μm,22.0s,MS7.1
ADK Adak 73.17 9 *eP* **P** **00 51 29.5 -0.2**
ADK pmax pmax
comp=Z,724nm,0.9s,mb6.6
ADK MLR MLR
comp=Z,102μm,22.0s,MS7.1
RPN Rapa Nui 73.47 113 P **P** **00 51 30.4 -1.9**
comp=Z,247nm,1.2s,mb6.0
RPN LR LR
comp=Z,55μm,22.0s,MS6.8
RPN Rapa Nui 73.47 113 LR LR 01 16 24.3
comp=Z,48μm,21.7s,MS6.7,baz=75,slow=30
PET Petropavlovsk 73.87 353⇓ *eP* **P** **00 51 33.1 -0.7**
PET LR LR
comp=Z,116μm,22.0s,MS7.1
PET Petropavlovsk 73.87 353 *eP* **P** **00 51 40.3 +6.5**
PET *eS* S 01 01 09.3 +6.6
PET *eSS* SS 01 05 56.2 +8.3
PET pmax pmax
comp=Z,277nm,0.6s,mb6.4
PET pmax pmax
comp=Z,32μm,9.6s
PET MLR MLR
comp=Z,31μm,14.0s,MS6.7
DL2 Dalian 74.13 323⇓ *iP* **P** **00 51 37.0 +1.3**
DL2 S S 01 01 10.8 +4.5
DL2 AMB AMB
comp=Z,870nm,0.8s,mb6.7
DL2 LR LR
comp=N,26μm,22.4s,MS6.6
DL2 LR LR
comp=E,26μm,21.7s,MS6.6
DL2 LR LR
comp=Z,57μm,24.7s,MS6.8
MDJ Mudanjiang 74.33 332 P **P** **00 51 37.6 +0.9**
MDJ AP pP 00 51 47.0 -0.9
MDJ XP sP 00 51 50.6 -1.5
MDJ PCP PcP 00 51 51.8 +0.5
MDJ PP PP 00 54 23.3 -0.1
MDJ S S 01 01 13.6 +5.3
MDJ XS sS 01 01 27.3 +0.5
MDJ SCS ScS 01 01 46.0 +1.4
MDJ AMB AMB
comp=Z,668nm,1.1s,mb6.5
MDJ LR LR
comp=N,53μm,25.0s,MS6.8
MDJ LR LR
comp=E,21μm,22.1s,MS6.8
MDJ LR LR
comp=Z,73μm,26.4s,MS6.8
SNY Shenyang 75.14 326 ⇓P **P** **00 51 43.3 +1.8**
SNY AP pP 00 51 56.1 +3.4

SNY XP sP 00 52 01.0 +4.2
SNY AMB AMB
comp=Z,723nm,2.4s,mb6.2
HABR Khabarovsk 75.26 337 *e*P **P** **00 51 42.8 +0.8**
HABR *e* pP 00 51 55.1 +1.9
HABR *e* 00 54 32.7
HABR S S 01 01 21.2 +2.8
CN2 Changchun 75.64 329 ⇑P **P** **00 51 44.5 +0.2**
CN2 *e*S S 01 01 24.3 +1.4
CN2 LR LR
comp=N,50μm,18.0s,MS7.0
CN2 LR LR
comp=E,49μm,18.0s,MS7.0
CN2 LR LR
comp=Z,60μm,19.0s,MS6.9
GYA Guiyang 76.66 305 ⇑*i*P **P** **00 51 49.8 -0.7**
GYA AP pP 00 52 00.1 -1.6
GYA PCP PcP 00 52 04.8 +3.0
GYA XP sP 00 52 08.3 +2.4
GYA PP PP 00 54 48.0 +4.5
GYA PPP 00 56 36.0
GYA S S 01 01 37.3 +2.5
GYA XS sS 01 01 55.0 +1.6
GYA SKS 01 01 57.5
GYA SCS ScS 01 02 04.3 +0.1
GYA PS 01 02 20.8
GYA SSS 01 09 38.4
GYA AMB AMB
comp=Z,170nm,1.0s,mb5.9
GYA AMB AMB
comp=Z,12μm,5.0s
GYA LR LR
comp=N,27μm,23.6s,MS6.6
GYA LR LR
comp=E,11μm,18.9s,MS6.6
GYA LR LR
comp=Z,25μm,22.2s,MS6.5
UNV Unalaska Valle 76.98 14 *e*P **P** **00 51 50.3 -1.3**
comp=Z,864nm,0.9s,mb6.7
UNV LR LR
comp=Z,333μm,22.0s,MS7.6
MAW Mawson 77.25 202 *e*P **P** **00 51 53.0 -0.2**
comp=Z,362nm,1.0s,mb6.3
MAW Mawson 77.25 202 P **P** **00 51 53.2 0.0**
MAW pmax pmax
comp=Z,233nm,0.9s
MAW Mawson 77.25 202 P **P** **00 51 53.2 +0.1**
comp=Z,233nm,0.9s,mb6.1,baz=107,slow=7.4,SNR=54
AKUT Akutan 77.42 15 *e*P **P** **00 51 46.1 -8.0**
comp=Z,385nm,0.9s,mb6.3
BJT Baijiatuan 78.02 321 *e*P **P** **00 51 58.4 +0.6**
BJT LR LR
comp=Z,66μm,21.0s,MS6.9
BJI Beijing 78.03 321 P **P** **00 52 00.3 +2.4**
BJI AP pP 00 52 09.8 +0.7
BJI XP sP 00 52 13.5 +0.2
BJI S S 01 01 53.9 +4.8
BJI AMB AMB
comp=Z,488nm,1.3s,mb6.3
BJI LR LR
comp=N,37μm,24.7s,MS6.9
BJI LR LR
comp=E,56μm,20.3s,MS6.9
BJI LR LR
comp=Z,52μm,22.1s,MS6.8
TIY Taiyuan 78.87 317 P **P** **00 52 03.9 +1.3**
TIY S S 01 01 58.6 +0.3
TIY LR LR
comp=N,19μm,11.8s,MS6.9
TIY LR LR
comp=E,23μm,11.5s,MS6.9
TIY LR LR
comp=Z,74μm,21.5s
KMI Kunming 79.06 302 ⇑P **P** **00 52 05.5 +1.6**
KMI AP pP 00 52 16.8 +1.6
KMI XP sP 00 52 21.4 +2.1
KMI PP PP 00 55 08.0 +4.4
KMI S S 01 02 03.8 +3.0
KMI SSS 01 10 29.1
KMI AMB AMB
comp=Z,297nm,1.7s,mb5.9
KMI AMB AMB
comp=Z,11μm,4.5s
KMI LR LR
comp=N,35μm,18.7s,MS6.8
KMI LR LR
comp=E,39μm,22.8s,MS6.8
KMI LR LR
comp=Z,52μm,27.7s,MS6.7
XAN Xi'an 79.08 313 P **P** **00 52 04.1 +0.3**
XAN AP pP 00 52 14.8 -0.3
XAN S S 01 01 57.0 -3.6
XAN AMB AMB
comp=Z,259nm,1.9s,mb5.8
XAN LR LR
comp=N,28μm,24.3s,MS6.7
XAN LR LR
comp=E,24μm,19.3s,MS6.7
XAN LR LR
comp=Z,57μm,24.3s,MS6.8
SDPT Sand Point 79.86 17 *e*P **P** **00 52 05.4 -2.1**
comp=Z,964nm,1.0s,mb6.7
CD2 Chengdu 81.12 308 P **P** **00 52 16.8 +1.9**
CD2 AP pP 00 52 27.1 +0.9
CD2 XP sP 00 52 31.5 +1.1
CD2 PP PP 00 55 24.9 +4.3
CD2 S S 01 02 24.0 +1.7
CD2 PS 01 03 16.5
CD2 AMB AMB
comp=Z,500nm,1.1s,mb6.4
CD2 AMB AMB
comp=Z,18μm,7.2s
CD2 LR LR
comp=N,49μm,21.6s,MS7.2
CD2 LR LR
comp=E,95μm,21.6s,MS7.2
CD2 LR LR
comp=Z,107μm,19.2s,MS7.2
CHGN Chignik 81.27 18 *e*P **P** **00 52 13.7 -1.3**
HHC Hu-ho-hao-te 81.29 320 *e*P **P** **00 52 16.3 +0.7**
HHC AP pP 00 52 24.4 -2.5
HHC XP sP 00 52 29.0 -2.0
HHC AMB AMB
comp=Z,302nm,1.2s,mb6.1
MA2 Magadan 81.29 351 *e*P **P** **00 52 13.9 -1.2**
comp=Z,58nm,0.7s,mb5.6
MA2 LR LR
comp=Z,119μm,20.0s,MS7.2
MA2 Magadan 81.29 351 ⇑*e*P **P** **00 52 15.8 +0.7**
MA2 pmax pmax
comp=Z,453nm,2.5s,mb6.0
HIA Hailar 82.30 330 *e*P **P** **00 52 20.1 -0.6**
comp=Z,308nm,1.0s,mb6.2
HIA LR LR
comp=Z,38μm,19.0s,MS6.8
HIA Hailar 82.30 330 *e*P **P** **00 52 20.1 -0.6**
HIA pmax pmax
comp=Z,308nm,1.0s
HIA MLR MLR
comp=Z,38μm,19.0s
LZH Lanzhou 83.69 312 *e*P **P** **00 52 29.9 +1.7**
LZH AP pP 00 52 39.0 -0.5
LZH XP sP 00 52 42.8 -0.9
LZH PP PP 00 55 45.0 +3.3
LZH *e*SKS 01 02 47.0
LZH *e*S S 01 02 49.3 +1.0
LZH XS sS 01 03 08.0 +0.9
LZH AMB AMB
comp=Z,736nm,1.2s,mb6.7
LZH AMB AMB
comp=Z,8μm,6.6s
LZH LR LR
comp=E,32μm,16.6s
LZH LR LR
comp=Z,77μm,18.6s,MS7.1
SYO Syowa Base 83.69 196 ⇓*i*P **P** **00 52 25.0 -2.7**
KDAK Kodiak Island 84.25 19 *e*P **P** **00 52 30.2 -0.3**
comp=Z,539nm,0.9s,mb6.7
KDAK LR LR
comp=Z,17μm,21.0s,MS6.4
KDAK Kodiak Island 84.25 19 P **P** **00 52 30.2 -0.2**
comp=Z,561nm,0.9s,mb6.7,baz=226,slow=1.9,SNR=10
KDAK PKKPbc PKKPbc 01 10 43.7 -2.6
comp=Z,7.6nm,0.9s,baz=315,slow=4.3,SNR=2.4
SEY Seymchan 84.29 352 ⇑*i*P **P** **00 52 29.9 -0.7**
SEY Seymchan 84.29 352*c i*P **P** **00 52 29.8 -0.8**
GAMB Gambell 85.36 8 *e*P **P** **00 52 36.4 +0.4**
PMSA Palmer Station 85.64 160 ⇑*i*P **P** **00 52 36.6 -1.0**
comp=Z,236nm,0.4s,mb6.8
PMSA LR LR
comp=Z,35μm,20.0s,MS6.8
PMSA Palmer Station 85.64 160 P **P** **00 52 36.6 -1.0**
comp=Z,308nm,0.9s,mb6.5,baz=222,slow=4.3,SNR=38
CLNS Chul'man 85.65 337*c i*P **P** **00 52 38.5 +1.0**
CLNS *e* 00 55 54.0
CLNS *e*S S 01 03 06.2 -0.7
CLNS *e*PS 01 04 09.0
CLNS pmax pmax
comp=Z,1μm,0.7s,mb7.2
CLNS pmax pmax
comp=N,665nm,1.1s
CLNS pmax pmax
comp=E,110nm,0.8s
CLNS pmax pmax
comp=Z,79nm,1.2s,mb5.8
CLNS pmax pmax
comp=N,74nm,1.1s
CLNS pmax pmax
comp=E,111nm,1.4s
CLNS smax
comp=E,50μm,11.2s
CLNS smax
comp=Z,22μm,10.9s
CLNS smax
comp=N,40μm,12.5s
FARB Farallon Islan 85.99 47 ⇑P **P** **00 52 39.9 +0.2**
baz=86
BNLO Ben Lomond (Sa 86.28 48 P **P** **00 52 41.6 +0.4**
baz=86,SNR=19
MCCM Marconi Confer 86.29 47 *e*P **P** **00 52 41.9 +0.6**
MCCM LR LR
comp=Z,44μm,20.0s,MS6.8
MCCM Marconi Confer 86.29 47 P **P** **00 52 41.5 +0.3**
baz=86,SNR=16
SAC San Andreas 86.33 48 *e*P **P** **00 52 41.1 -0.4**
HAST UC Hastings Re 86.36 49 P **P** **00 52 42.2 +0.6**
baz=86,SNR=101
SNCC San Nicolas Is 86.36 53 P **P** **00 52 42.1 +0.4**
baz=86,SNR=29
JRSC Jasper Ridge 86.37 48 P **P** **00 52 42.1 +0.5**
baz=86,SNR=20
V03C Hunter Liggett 86.41 50 P **P** **00 52 42.6 +0.8**
baz=87,SNR=84
V04C Ramage Ranch, 86.49 50 ⇓P **P** **00 52 42.8 +0.5**
baz=87
HOPS Hopland 86.58 46 *e*P **P** **00 52 42.9 +0.3**
comp=Z,450nm,0.9s,mb6.7
HOPS LR LR
comp=Z,50μm,19.0s,MS6.9
HOPS Hopland 86.58 46 P **P** **00 52 43.1 +0.5**
baz=87,SNR=40
KCPM Cahto Peak 86.58 45 *e*P **P** **00 52 43.3 +0.7**
SAO San Andreas Ge 86.62 49 *e*P **P** **00 52 42.5 -0.3**
comp=Z,304nm,1.0s,mb6.5
SAO LR LR
comp=Z,72μm,22.0s,MS7.0
SAO San Andreas Ge 86.62 49 *e*P **P** **00 52 42.5 -0.3**
SAO pmax pmax
comp=Z,304nm,1.0s,mb6.5
SAO MLR MLR
comp=Z,72μm,22.0s,MS7.0
BSC Santa Cruz Isl 86.63 52 ⇑P **P** **00 52 43.1 +0.2**
baz=87,SNR=39
P01C Double 8 Ranch 86.64 46 ⇑P **P** **00 52 43.3 +0.4**
baz=87,SNR=44
O01C Eel River Cons 86.66 45 P **P** **00 52 43.9 +1.0**
baz=87,SNR=73
NSHM Saint Helena R 86.66 47 *e*P **P** **00 52 42.9 -0.1**
CVS Carmenet Viney 86.68 47 P **P** **00 52 43.3 +0.2**
baz=87,SNR=30
KIPM Iron Peak 86.71 45 ⇑*i*P **P** **00 52 43.7 +0.5**
SBC Santa Barbara 86.77 51 ⇓P **P** **00 52 44.0 +0.3**
baz=87,SNR=13
WENL Wente Brothers 86.81 48 ⇑P **P** **00 52 44.3 +0.5**
baz=87,SNR=18
PACP Pacheco Peak 86.85 49 P **P** **00 52 44.6 +0.7**
baz=87,SNR=67
JCC Jacoby Creek 86.86 44 ⇓P **P** **00 52 44.6 +0.6**
baz=87,SNR=17
PKD Parkfield 86.87 50 P **P** **00 52 44.5 +0.4**
baz=87,SNR=215
U04C Hernandez Rese 86.90 49 P **P** **00 52 45.1 +0.9**
baz=87,SNR=162
BDM Black Diamond 86.90 48 ⇑P **P** **00 52 44.7 +0.5**
baz=87,SNR=15
PKM Peak Mountain 86.91 51 P **P** **00 52 45.0 +0.7**
baz=87,SNR=150
MNRC McLaughlin Nat 86.95 47 P **P** **00 52 45.1 +0.7**
baz=87,SNR=91
SMMC Simmler 86.97 51 P **P** **00 52 45.4 +0.8**
baz=87,SNR=39
PTRM Twisselman Ran 86.97 50 *e*P **P** **00 52 45.0 +0.4**
SCI San Clemente I 86.97 53 P **P** **00 52 44.7 0.0**
baz=87,SNR=25
S04C Ingram Canyon, 87.06 48 P **P** **00 52 45.3 +0.3**
baz=87,SNR=64
CIT Chita 87.08 329 *e*P **P** **00 52 42.4 -2.3**
CIT *e* pP 00 52 55.2 -0.9
CIT *e* 01 04 56.9
KHMM Horse Mountain 87.08 44 *e*P **P** **00 52 46.0 +0.9**
BLG Laguna Peak 87.10 52 ⇓P **P** **00 52 45.0 -0.3**
baz=87,SNR=12
Q03C Winters 87.12 47 P **P** **00 52 46.4 +1.1**
baz=87,SNR=35
GASB Alder Springs 87.14 46 P **P** **00 52 46.6 +1.3**
baz=87,SNR=105
T05C Eagle Field, D 87.22 49 ⇓P **P** **00 52 46.7 +0.9**
baz=87,SNR=9.9
CIS Catalina Islan 87.27 53 P **P** **00 52 45.8 -0.3**
baz=87,SNR=17
V05C Boulder Hill, 87.29 50 P **P** **00 52 47.2 +1.1**
baz=87,SNR=24
KRMB Red Mountain 87.30 44 ⇑*i*P **P** **00 52 46.6 +0.6**
M01C Crescent City 87.32 43 ⇓P **P** **00 52 46.7 +0.6**
baz=88,SNR=21
N02C Big Bar 87.34 45 P **P** **00 52 46.8 +0.6**
baz=88,SNR=93
U05C Westside ANR, 87.36 50 ⇓P **P** **00 52 47.3 +0.9**
baz=88
O02C Red Bluff 87.36 45 ⇓P **P** **00 52 47.3 +0.9**
baz=88,SNR=199
FMP Fort Macarthur 87.49 53 ⇑P **P** **00 52 47.1 0.0**
baz=88,SNR=13
NVL N'lazarevskaya 87.56 187 ⇑*i*P **P** **00 52 46.6 -0.3**
NVL *e*S S 01 03 20.3 -5.1
NVL pmax pmax
comp=Z,800nm,1.6s,mb6.7
NVL pmax pmax
comp=N,242nm,1.7s
NVL pmax pmax
comp=E,60nm,0.8s
NVL MLR MLR
comp=N,44μm,16.1s,MS7.0
NVL MLR MLR
comp=E,11μm,16.1s,MS7.0
NVL MLR MLR
comp=Z,61μm,16.1s,MS7.1
MAIT Maitri 87.56 187 *e*P **P** **00 52 43.1 -3.8**
SUTB Sutter Butte 87.57 46 ⇓P **P** **00 52 47.3 -0.1**
baz=88
OSI Osito Adit 87.58 52 ⇑P **P** **00 52 47.8 +0.2**
baz=88,SNR=14
K01A Sixes 87.59 42 ⇑P **P** **00 52 48.0 +0.6**
baz=88,SNR=14
Q04C Lincoln 87.66 47 ⇑P **P** **00 52 47.8 0.0**
baz=88,SNR=39
S05C Merced 87.68 49 ⇓P **P** **00 52 48.0 0.0**
baz=88,SNR=31
R04C Big Horse Ranc 87.69 48 ⇑P **P** **00 52 47.4 -0.5**
baz=88
DECC Green Verdugo 87.71 52 ⇓P **P** **00 52 47.9 -0.3**
baz=88,SNR=28
WDC Whiskeytown Da 87.72 45 ⇑*i*P **P** **00 52 47.9 -0.2**
comp=Z,492nm,1.2s,mb6.6
WDC LR LR
comp=Z,76μm,22.0s,MS7.1
WDC Whiskeytown Da 87.72 45 ⇑*i*P **P** **00 52 47.9 -0.2**
WDC pmax pmax
comp=Z,492nm,1.2s,mb6.6
WDC MLR MLR
comp=Z,76μm,22.0s,MS7.1
WDC Whiskeytown Da 87.72 45 P **P** **00 52 48.3 +0.2**
baz=88,SNR=97
ARVC Arvin 87.73 51 P **P** **00 52 48.3 0.0**
baz=88,SNR=46
O03C Acorn Hollow, 87.78 46 ⇓P **P** **00 52 48.4 0.0**
baz=88,SNR=45
L02A Cave Junction 87.81 43 P **P** **00 52 49.0 +0.5**
baz=88,SNR=39
OHCM Honcut 87.83 46 *e*P **P** **00 52 48.3 -0.3**
SNAA Sanae 87.85 182 *e*P **P** **00 52 46.9 -1.4**
SNAA *e* 00 52 49.4
SNAA *e* 00 52 53.5
SNAA *e* pP 00 52 57.3 -2.4
SNAA *e* pP 00 53 00.3 +0.6
SNAA *e* 00 53 08.4
SNAA *e* 00 53 19.6
SNAA *e* 00 53 31.1
SNAA *e* 00 53 42.8
SNAA *e* 00 54 01.6
SNAA *e* 00 54 06.2
SNAA *e* 00 57 50.5
SNAA *e* 00 57 59.5
SNAA *e* 00 58 02.7
SNAA *e* 00 58 07.0
SNAA Sanae 87.85 182*c i*P **P** **00 52 46.6 -1.7**
SNAA Sanae 87.85 182 P **P** **00 52 46.8 -1.4**
comp=Z,53nm,0.7s,mb5.9,baz=190,slow=4.6,SNR=69
SNAA PKKP PKKPbc 01 10 30.6 -6.1
comp=Z,5.3nm,1.0s,baz=308,slow=2.9,SNR=7.3
M02C Callahan 87.92 44 ⇑P **P** **00 52 50.0 +1.0**
baz=88,SNR=223
ORV Oroville 87.92 46 ⇑P **P** **00 52 49.0 -0.1**
baz=88,SNR=208
T06C Millerton Lake 87.96 49 ⇓P **P** **00 52 49.4 0.0**
baz=88,SNR=304
CMB Columbia Colle 87.96 48 ⇑*i*P **P** **00 52 48.9 -0.4**
comp=Z,194nm,0.9s,mb6.3
CMB LR LR
comp=Z,69μm,22.0s,MS7.0
CMB Columbia Colle 87.96 48 ⇑*i*P **P** **00 52 48.9 -0.4**
CMB pmax pmax
comp=Z,194nm,0.9s,mb6.3
CMB MLR MLR
comp=Z,69μm,22.0s,MS7.0
CMB Columbia Colle 87.96 48 P **P** **00 52 49.1 -0.2**
baz=88,SNR=208
RCTC Rector, Farmer 87.97 50 P **P** **00 52 49.0 -0.4**
baz=88,SNR=31
ULN Ulaanbaatar 87.98 323 PFAKE 00 53 00.0 +11
ULN LR LR
comp=Z,48μm,20.0s,MS6.9
109C Camp Elliot, M 88.02 54 P **P** **00 52 49.5 -0.2**
baz=88,SNR=55
LAVA Lava Cap Winer 88.06 47 P **P** **00 52 49.6 -0.1**
baz=88,SNR=108
GTA Gaotai 88.11 313 P **P** **00 52 52.3 +2.3**
GTA AP pP 00 53 03.1 +1.7
GTA XP sP 00 53 06.8 +1.3
GTA PP PP 00 56 24.3 +6.9
GTA PPP 00 58 23.6
GTA SKS 01 03 16.8
GTA S S 01 03 35.8 +4.3
GTA XS sS 01 03 53.3 +2.9
GTA PS 01 04 47.8
GTA SS SS 01 09 32.8 +12
GTA AMB AMB
comp=Z,235nm,2.2s,mb6.0
GTA LR LR
comp=N,30μm,17.9s,MS6.9
GTA LR LR
comp=E,28μm,19.0s,MS6.9
GTA LR LR
comp=Z,23μm,19.4s,MS6.6
YAK Yakutsk 88.16 342 *e*P **P** **00 52 49.0 -0.7**
comp=Z,473nm,0.9s,mb6.7
YAK LR LR
comp=Z,95μm,22.0s,MS7.2
YAK Yakutsk 88.16 342*c i*P **P** **00 52 48.7 -0.9**
YAK pmax pmax
comp=Z,632nm,1.0s,mb6.8
YBH Yreka Blue Hor 88.18 44 *e*P **P** **00 52 50.8 +0.6**
comp=Z,448nm,1.1s,mb6.6
YBH LR LR
comp=Z,63μm,22.0s,MS7.0
YBH Yreka Blue Hor 88.18 44 *e*P **P** **00 52 50.8 +0.6**
YBH pmax pmax
comp=Z,449nm,1.1s
YBH MLR MLR
comp=Z,63μm,22.0s
YBH Yreka Blue Hor 88.18 44 P **P** **00 52 50.9 +0.6**
baz=88,SNR=130
K02A Glendale 88.19 43 ⇑P **P** **00 52 50.8 +0.5**
baz=88,SNR=50
BFSC Mount Baldy St 88.20 52 P **P** **00 52 50.3 -0.2**
baz=88,SNR=122
ISA Isabella 88.23 51 P **P** **00 52 50.9 +0.2**
baz=88,SNR=194
EDW2 Edwards Air Fo 88.24 52 ⇓P **P** **00 52 50.8 +0.1**
baz=88,SNR=173
MURC Murrieta 88.26 53 P **P** **00 52 50.9 0.0**
baz=88,SNR=55
HELL Mitchell Peak, 88.30 50 P **P** **00 52 50.6 -0.3**
baz=88,SNR=174
SONM Songino Array 88.34 323 P **P** **00 52 50.9 +0.1**
comp=Z,217nm,0.9s,mb6.4,baz=126,slow=2.8,SNR=31
SONM PKiKP PKiKP 00 57 51.8 -0.1
comp=Z,5.4nm,0.9s,baz=100,slow=1.2,SNR=5.6
SONM PKKPbc PKKPbc 01 10 33.8 -2.0
comp=Z,15nm,1.0s,baz=274,slow=2.2,SNR=8.4
SONM PKPPKP 01 18 40.8
comp=Z,10nm,1.1s,baz=141,slow=1.3,SNR=4.9
SONM LR LR 01 29 01.5
comp=Z,53μm,21.5s,MS6.9,baz=128,slow=33
M03C McCloud 88.34 45 P **P** **00 52 51.3 +0.3**
baz=88,SNR=179
PMR Palmer 88.35 18 *e*P **P** **00 52 49.6 -0.9**
comp=Z,212nm,0.8s,mb6.4
PMR LR LR
comp=Z,75μm,20.0s,MS7.1
PMR Palmer 88.35 18 *e*P **P** **00 52 49.6 -0.9**
PMR pmax pmax
comp=Z,212nm,0.8s,mb6.4
PMR MLR MLR
comp=Z,75μm,20.0s,MS7.1
BILL Bilibino 88.37 359 *e*P **P** **00 52 49.7 -0.8**
comp=Z,201nm,1.0s,mb6.3
BILL LR LR
comp=Z,57μm,20.0s,MS7.0
BILL Bilibino 88.37 359*αe*P **P** **00 52 49.6 -0.9**
BILL *e* 01 03 15.0
BILL *e* 01 03 27.0
BILL pmax pmax
comp=Z,170nm,1.0s,mb6.2
BILL pmax pmax
comp=Z,3μm,3.2s
BILL MLR MLR
comp=Z,40μm,21.0s,MS6.8
KCC Kaiser Creek 88.38 49 P **P** **00 52 51.5 +0.2**
baz=88,SNR=106
P05C Yuba Gap, Truc 88.41 47 ⇑P **P** **00 52 51.9 +0.5**
baz=89,SNR=202
VNA3 Neumayer Olymp 88.43 180 *e*P **P** **00 52 49.8 -1.2**
VNA3 *e* 00 52 51.9
VNA3 *e* 00 52 56.6
VNA3 *e* pP 00 53 00.5 -2.0
VNA3 *e* pP 00 53 03.4 +0.9
VNA3 *e* 00 53 11.1
VNA3 *e* 00 53 22.6
VNA3 *e* 00 53 43.0
VNA3 *e* 00 53 54.3
VNA3 *e* 00 54 04.6
VNA3 *e* 00 57 35.3
VNA3 *e* 00 57 51.7
VNA3 *e* 00 58 01.4
VNA3 *e* 00 58 04.6
VNA3 *e* 00 58 08.8
J02A Umpqua 88.44 42 P **P** **00 52 51.8 +0.3**
baz=89,SNR=45
R05C Kirkwood Meado 88.49 48 P **P** **00 52 52.0 +0.2**
baz=89,SNR=136
O05C Quincy 88.51 46 P **P** **00 52 52.1 +0.3**
baz=89,SNR=117
MONP Monument Peak 88.54 54 ⇓P **P** **00 52 52.6 +0.4**
baz=89,SNR=249
HATC Hat Creek Radi 88.55 45 P **P** **00 52 52.5 +0.5**
baz=89,SNR=99
O04C Chester 88.57 46 P **P** **00 52 52.5 +0.4**

baz=89,SNR=49
I02A **Mapleton** 88.60 42 P P 00 52 52.9 +0.7
baz=89,SNR=36
DVTC **Desert V Tower** 88.68 54 ⇓P P 00 52 53.2 +0.4
baz=89,SNR=94
LRMC **Laurel Mountai** 88.72 51 P P 00 52 53.3 +0.3
baz=89,SNR=58
VNA2 **Neumayer--Watz** 88.72 181 eP P 00 52 51.5 -0.9
baz=189,slow=3.3
VNA2 e 00 52 53.9
VNA2 e 00 52 58.2
VNA2 e pP 00 53 02.1 -1.8
VNA2 e pP 00 53 04.7 +0.8
VNA2 e 00 53 12.9
VNA2 e 00 53 24.3
VNA2 e 00 53 36.7
VNA2 e 00 53 44.6
VNA2 e 00 53 51.8
VNA2 e 00 54 06.3
VNA2 e 00 54 10.4
VNA2 e 00 57 37.1
VNA2 e 00 57 51.2
VNA2 e 00 58 00.1
VNA2 e 00 58 03.1
VNA2 e 00 58 07.9
BBRC **Big Bear Sol-O** 88.76 53 ⇑P P 00 52 53.3 +0.1
baz=89,SNR=8.1
M04C **Macdoel** 88.77 44 ⇑P P 00 52 53.4 +0.3
baz=89,SNR=106
PFO **Pinyon Flat Ob** 88.82 53 eP P 00 52 53.1 -0.4
PFO **Pinyon Flat Ob** 88.82 53 P P 00 52 53.5 +0.1
baz=89,SNR=92
J03A **Ideyld Park** 88.83 42 P P 00 52 53.8 +0.5
baz=89,SNR=57
R06C **Coleville** 88.84 48 P P 00 52 54.0 +0.5
baz=89,SNR=167
H02A **Toledo** 88.84 41 ⇓P P 00 52 53.9 +0.6
baz=89,SNR=6.0
BEKR **Beckwourth** 88.84 46 P P 00 52 53.6 +0.2
baz=89,SNR=156
WAKR **Walker** 88.84 48 eP P 00 52 53.9 +0.5
MLAC **Mammoth Lakes** 88.86 49 ⇓P P 00 52 54.1 +0.5
baz=89,SNR=43
CWC **Cottonwood Cre** 88.87 50 P P 00 52 53.8 +0.2
baz=89,SNR=171
R07C **Lee Vining** 88.92 48 ⇑P P 00 52 54.3 +0.4
baz=89,SNR=9.8
MTUM **Tungsten Hills** 88.93 49 eP P 00 52 54.3 +0.4
I03A **Eugene** 88.93 42 ⇓P P 00 52 54.0 +0.2
baz=89,SNR=17
ELFS **Eagle Lake Fie** 88.95 46 ⇑P P 00 52 54.5 +0.6
baz=89
RRX **Edison Barstow** 88.97 52 ⇑P P 00 52 54.2 +0.1
baz=89,SNR=7.9
WCN **Washoe City** 88.99 47 P P 00 52 54.5 +0.4
baz=89,SNR=57
VNA1 **Neumayer--Stat** 89.02 181 eP P 00 52 52.9 -0.9
VNA1 e 00 52 55.0
VNA1 e 00 52 59.4
VNA1 e pP 00 53 03.4 -1.8
VNA1 e pP 00 53 06.3 +1.1
VNA1 e 00 53 13.8
VNA1 e 00 53 25.1
VNA1 e 00 53 47.5
VNA1 e 00 53 55.2
M05C **Lookout** 89.02 45 P P 00 52 54.5 +0.2
baz=89,SNR=208
SWSC **Sam W. Stewart** 89.04 54 P P 00 52 54.6 +0.1
baz=89,SNR=132
TIN **Tinemaha** 89.04 50 P P 00 52 54.9 +0.5
baz=89,SNR=125
P06A **Stead Airport,** 89.07 47 P P 00 52 55.0 +0.6
baz=89,SNR=76
MPMC **Manual Prospec** 89.13 51 P P 00 52 55.0 +0.2
baz=89,SNR=307
COR **Corvallis** 89.22 41 eP P 00 52 56.1 +1.0
K04A **Chiluiin** 89.25 44 ⇑P P 00 52 55.6 +0.4
baz=89,SNR=16
H03A **Soap Creek Ran** 89.28 41 P P 00 52 55.9 +0.5
baz=90,SNR=83
S08C **White Mtn Res** 89.28 49 P P 00 52 56.2 +0.7
baz=89,SNR=613
GSC **Goldstone** 89.30 52 P P 00 52 55.7 0.0
baz=89,SNR=104
J04A **Umpqua Nationa** 89.31 43 P P 00 52 56.0 +0.5
baz=90,SNR=111
BELC **Belle Mtn.** 89.33 53 P P 00 52 56.2 +0.3
baz=90,SNR=331
O06A **Flanigan** 89.34 46 P P 00 52 56.0 +0.2
baz=90,SNR=368
I04A **Tendick Farm,** 89.39 42 P P 00 52 55.8 -0.1
baz=90,SNR=66
M06C **Likely Place G** 89.39 45 ⇑P P 00 52 56.3 +0.4
baz=90,SNR=104
PAHR **Pah Rah Range** 89.43 47 eP P 00 52 56.3 +0.1
comp=Z,932nm,1.4s,mb6.9
HEC **Hector,Ludlow** 89.44 52 P P 00 52 56.3 -0.1
baz=90,SNR=112
Q07A **Schurz** 89.48 48 ⇑P P 00 52 56.8 +0.4
baz=90
L05A **Lakeview** 89.56 44 P P 00 52 57.3 +0.6
baz=90,SNR=152
BC3 **Big Chuckw Mtn** 89.60 54 P P 00 52 57.5 +0.4
baz=90,SNR=196
NVAR **Mina Array Bea** 89.60 48 P P 00 52 57.0 0.0
NVAR PKKP PKKPbc 01 10 31.7 -0.5
NVAR P'P' 01 18 40.0
NVAR **Mina Array Bea** 89.60 48 P P 00 52 57.0 0.0
comp=Z,195nm,0.8s,mb6.5,baz=213,slow=6.0,SNR=316
NVAR PKKP PKKPbc 01 10 31.7 -0.5
comp=Z,2.0nm,0.7s,baz=207,slow=2.6,SNR=4.6
NVAR PKPPKP 01 18 40.0
comp=Z,3.3nm,0.8s,baz=87,slow=4.4,SNR=11
G03A **Yamhill** 89.61 41 ⇓P P 00 52 57.2 +0.4
baz=90,SNR=24
N06A **Buffalo Meadow** 89.61 46 P P 00 52 57.0 +0.1
baz=90,SNR=314
GRAC **Grapevine Rang** 89.63 50 P P 00 52 57.6 +0.4
baz=90,SNR=120
P07A **Fallon** 89.70 47 ⇑P P 00 52 57.9 +0.5
baz=90,SNR=13
R08A **Mina** 89.70 49 ⇓P P 00 52 57.7 +0.2
baz=90,SNR=18
F03A **Seaside** 89.75 40 ⇓P P 00 52 57.7 +0.2
baz=90,SNR=29
FURC **Furnace Creek,** 89.76 51 P P 00 52 57.9 +0.1
baz=90,SNR=148
GLA **Glamis** 89.82 55 P P 00 52 58.7 +0.6
baz=90,SNR=302
MOD **Modoc** 89.84 45 eP P 00 52 58.1 0.0
MOD LR LR
comp=Z,36μm,20.0s,MS6.8
MOD **Modoc** 89.84 45 P P 00 52 58.1 +0.1
baz=90,SNR=152
K05A **Summer Lake** 89.84 44 P P 00 52 58.6 +0.6
baz=90,SNR=202
J05A **Fort Rock** 89.89 43 ⇑P P 00 52 58.8 +0.6
baz=90,SNR=387
LPIG **La Paz** 89.90 64 LR LR 01 24 06.7
comp=Z,68μm,21.4s,MS7.0,baz=305,slow=29
GMRC **Granite Mounta** 89.92 53 ⇓P P 00 52 58.7 +0.1
baz=90,SNR=194
SHOC **Shoshone** 89.94 51 P P 00 52 58.6 -0.1
baz=90,SNR=74
H04A **Detroit Lake** 89.97 42 P P 00 52 58.4 -0.2
baz=90,SNR=97
TUQ **Turquoise Mtn.** 90.00 52 ⇓P P 00 52 59.2 +0.2
baz=90,SNR=260
IRM **Iron Mountain** 90.04 53 P P 00 52 59.5 +0.3
baz=90,SNR=235
G04A **Mulino** 90.04 41 P P 00 52 59.0 +0.1
baz=90,SNR=154
S09A **Goldfield** 90.05 49 P P 00 52 59.0 -0.1
baz=90,SNR=369
E03A **Lebam** 90.05 39 P P 00 52 59.5 +0.5
baz=90,SNR=122
Q08A **Gabbs** 90.05 48 P P 00 52 59.1 0.0
baz=90,SNR=364
SIT **Sitka** 90.07 27 PFAKE 00 53 10.0 +11
SIT LR LR
comp=Z,105μm,22.0s,MS7.2
U10A **Ash Meadows, A** 90.13 51 ⇓P P 00 53 00.0 +0.5
baz=90,SNR=333
N07B **Gerlach** 90.20 46 P P 00 53 00.0 +0.2
baz=90,SNR=208
D03A **Wishkah Elem.** 90.22 39 P P 00 53 00.6 +0.9
baz=90,SNR=63
USHA **Ushuaia** 90.24 151 P P 00 52 59.3 -0.5
comp=Z,93nm,1.0s,mb6.1,baz=214,slow=5.2,SNR=23
USHA PKKPbc PKKPbc 01 10 27.5 -2.9
comp=Z,16nm,1.0s,baz=336,slow=3.5,SNR=5.0
I05A **Bend** 90.29 42 P P 00 53 00.4 +0.3
baz=90,SNR=154
K06A **Valley Falls** 90.29 44 P P 00 53 00.4 +0.3
baz=90,SNR=275
NLWA **Neilton Lookou** 90.30 39 eP P 00 53 00.5 +0.5
NLWA LR LR
comp=Z,50μm,20.0s,MS7.0
NLWA **Neilton Lookou** 90.30 39 P P 00 53 00.7 +0.6
baz=90,SNR=92
LSA **Lhasa** 90.31 302 eP P 00 52 59.6 -1.0
LSA LR LR
comp=Z,53μm,22.0s,MS6.9
P08A **Dixie Valley** 90.32 47 ⇑P P 00 53 00.7 +0.3
baz=90,SNR=37
Y12C **Blythe** 90.34 54 ⇑P P 00 53 00.8 +0.2
baz=90,SNR=286
M07A **Soldier Meadow** 90.35 46 ⇓P P 00 53 00.9 +0.5
baz=90,SNR=204
R09A **Tonopah** 90.38 49 ⇑P P 00 53 00.8 +0.2
baz=90,SNR=294
TPNV **Topopah Spring** 90.41 51 eP P 00 53 00.8 0.0
comp=Z,346nm,0.8s,mb6.7
TPNV LR LR
comp=Z,55μm,22.0s,MS7.0
TPNV **Topopah Spring** 90.41 51 eP P 00 53 00.8 0.0
TPNV pmax pmax
comp=Z,346nm,0.8s,mb6.7
TPNV MLR MLR
comp=Z,55μm,22.0s,MS7.0
TPNV **Topopah Spring** 90.41 51 P P 00 53 01.0 +0.2
baz=90,SNR=506
F04A **Amboy** 90.44 40 P P 00 53 00.7 0.0
baz=91,SNR=86
L07A **Adell** 90.53 45 P P 00 53 01.8 +0.6
baz=91,SNR=248
V11A **Goodsprings** 90.54 52 ⇑P P 00 53 01.5 +0.1
baz=91,SNR=32
O08A **Rochester Mine** 90.54 47 ⇓P P 00 53 01.8 +0.4
baz=91,SNR=14
H05A **Madras** 90.55 42 P P 00 53 01.4 +0.1
baz=91,SNR=62
BOD **Bodaibo** 90.56 334 eP P 00 52 59.9 -1.1
BOD pmax pmax
comp=Z,534nm,1.0s,mb6.8
Q09A **Carvers** 90.57 48 P P 00 53 01.6 +0.1
baz=91,SNR=57
J06A **Christmas Vall** 90.57 44 P P 00 53 01.2 -0.2
baz=91,SNR=156
E04A **Onalaska** 90.58 40 P P 00 53 02.2 +0.8
baz=91,SNR=37
S10A **Tonopah Range,** 90.58 50 ⇓P P 00 53 01.9 +0.3
baz=91
HOOD **Mount Hood Mea** 90.61 41 eP P 00 53 02.2 +0.6
NEE2 **Needles Airpor** 90.69 53 ⇓P P 00 53 02.6 +0.4
baz=91,SNR=16
W12A **Cal Nev Ari** 90.73 52 ⇓P P 00 53 02.7 +0.3
baz=91,SNR=37
N08A **GE Springer Mi** 90.77 46 P P 00 53 02.6 +0.1
baz=91,SNR=377
D04A **Dobbs Creek Ra** 90.79 39 ⇓P P 00 53 03.2 +0.8
baz=91,SNR=38
U11A **Corn Creek** 90.82 51 ⇓P P 00 53 03.0 +0.3
baz=91,SNR=19
I06A **Prineville** 90.86 43 P P 00 53 03.1 +0.4
baz=91,SNR=204
PDMCI **Parker Dam,Lak** 90.86 54 P P 00 53 03.2 +0.2
baz=91,SNR=245
Y13A **Salome** 90.90 54 P P 00 53 03.8 +0.6
baz=91,SNR=335
K07A **Rock Creek Ran** 90.90 44 P P 00 53 03.2 +0.3
baz=91,SNR=289
M08A **Happy Creek Ra** 90.91 46 ⇑P P 00 53 03.7 +0.7
baz=91,SNR=130
P09A **Austin** 90.91 48 P P 00 53 03.3 +0.2
baz=91,SNR=35
V12A **Nelson** 90.92 52 P P 00 53 03.4 +0.1
baz=91,SNR=179
R10A **Warm Springs** 90.95 49 P P 00 53 03.9 +0.6
baz=91,SNR=97
WRAK **Wrangell Islan** 90.96 28 PFAKE 00 53 10.0 +7.1
WRAK LR LR
comp=Z,67μm,22.0s,MS7.0
C04A **Brinnon** 90.99 39 ⇑P P 00 53 03.7 +0.5
baz=91,SNR=112
F05A **White Salmon** 91.00 41 P P 00 53 03.4 0.0
baz=91,SNR=44
GNW **Green Mountain** 91.00 39 eP P 00 53 03.4 0.0
SHPR **Sheep Range** 91.02 51 eP P 00 53 03.9 +0.2
S11A **Rachel** 91.07 50 ⇑P P 00 53 04.1 +0.2
baz=91
Q10A **Clear Creek Ra** 91.11 49 ⇑P P 00 53 04.3 +0.3
baz=91
E05A **Randle** 91.14 40 P P 00 53 03.8 -0.2
baz=91,SNR=89
O09A **Fish Creek Ran** 91.15 47 ⇓P P 00 53 04.5 +0.3
baz=91,SNR=42
H06A **Lindquist Farm** 91.15 42 P P 00 53 04.0 0.0
baz=91,SNR=389
J07A **Hines** 91.17 44 P P 00 53 04.3 +0.1
baz=91,SNR=131
PGC **Sidney** 91.18 38 eP P 00 53 03.6 -0.6
WVOR **Wild Horse Val** 91.18 45 ⇑iP P 00 53 04.1 -0.2
comp=Z,373nm,1.1s,mb6.6
WVOR LR LR
comp=Z,52μm,22.0s,MS6.9
WVOR **Wild Horse Val** 91.18 45 ⇑iP P 00 53 04.1 -0.2
WVOR pmax pmax
comp=Z,373nm,1.1s,mb6.6
WVOR MLR MLR
comp=Z,52μm,22.0s,MS6.9
G06A **Carlson Farm,** 91.20 42 P P 00 53 03.9 -0.4
baz=91,SNR=55
X13A **Yucca** 91.21 53 ⇓P P 00 53 04.9 +0.3
baz=91,SNR=359
N09A **Rock Creek Ran** 91.22 47 P P 00 53 04.7 +0.2
baz=91,SNR=68
PALK **Pallekele** 91.26 277 eP P 00 53 04.2 -1.1
comp=Z,944nm,1.7s,mb6.8
PALK LR LR
comp=Z,58μm,21.0s,MS7.0
L08A **Fields** 91.26 45 P P 00 53 05.0 +0.3
baz=91,SNR=161
COLA **College** 91.28 17 eP P 00 53 02.6 -1.6
comp=Z,307nm,1.2s,mb6.5
COLA LR LR
comp=Z,53μm,20.0s,MS7.0
COLA **College** 91.28 17 eP P 00 53 02.6 -1.6
COLA pmax pmax
comp=Z,307nm,1.2s,mb6.5
COLA MLR MLR
comp=Z,53μm,20.0s,MS7.0
T11A **Corn Creek, Al** 91.28 51 ⇑P P 00 53 05.2 +0.4
baz=91
D05A **Enumclaw** 91.31 39 P P 00 53 05.3 +0.5
baz=92,SNR=79
F06A **Goldendale** 91.36 41 P P 00 53 05.1 +0.1
baz=92,SNR=61
I07A **Izee** 91.37 43 ⇓P P 00 53 05.4 +0.3
baz=92,SNR=158
W13A **Hualapai Mount** 91.38 53 ⇓P P 00 53 05.8 +0.4
baz=92,SNR=273
Z14A **Wintersburg** 91.39 55 P P 00 53 06.0 +0.5
baz=92,SNR=74
P10A **Eureka** 91.41 48 P P 00 53 05.7 +0.3
baz=92,SNR=56
K08A **Mann Creek Ran** 91.41 45 P P 00 53 05.5 +0.2
baz=92,SNR=213
ZAK **Zakamensk** 91.43 324 eP P 00 53 05.6 +0.4
ZAK pmax pmax
comp=Z,253nm,1.2s,mb6.4
T12A **Moapa** 91.43 51 ⇑P P 00 53 06.0 +0.4
baz=92
U12A **Valley of Fire** 91.44 52 ⇓P P 00 53 06.1 +0.4
baz=92
R11A **Troy Canyon, C** 91.49 49 ⇑P P 00 53 05.9 +0.1
baz=92
TRCR **Troy Canyon** 91.49 49 ⇑iP P 00 53 05.4 -0.4
M09A **Marrel Ranch,** 91.52 46 P P 00 53 06.5 +0.6
baz=92,SNR=59
H07A **Lands Inn, Kim** 91.57 43 ⇓P P 00 53 06.1 0.0
baz=92
Y14A **Wickenburg** 91.57 54 P P 00 53 06.3 0.0
baz=92,SNR=207
E06A **Yakima** 91.61 40 P P 00 53 06.2 0.0
baz=92,SNR=92
L09A **Wilkinson Ranc** 91.64 45 ⇓P P 00 53 06.7 +0.3
baz=92,SNR=180
Q11A **Duckwater** 91.65 49 ⇑P P 00 53 06.7 +0.2
baz=92,SNR=186
O10A **Cortez Mining,** 91.68 47 P P 00 53 06.9 +0.3
baz=92,SNR=54
115A **Sonoran Desert** 91.68 56 ⇑P P 00 53 07.1 +0.3
baz=92,SNR=41
S12A **Delamar Landin** 91.70 50 ⇑P P 00 53 07.6 +0.7
baz=92
J08A **Circle Bar Ran** 91.70 44 P P 00 53 06.7 0.0
baz=92,SNR=195
C05A **Tolt Reservoir** 91.73 39 ⇓P P 00 53 06.5 -0.2
baz=92
G07A **Ruggs Ranch, H** 91.81 42 ⇑P P 00 53 06.9 -0.3
baz=92,SNR=154
N10A **Dunphy** 91.86 47 ⇑P P 00 53 07.7 +0.3
baz=92
U13A **Pakoon Wash** 91.86 52 ⇑P P 00 53 08.0 +0.4
baz=92
IRK **Irkutsk** 91.87 326 eP P 00 53 05.2 -2.0
IRK pmax pmax
comp=Z,808nm,1.6s,mb6.8
X14A **Yava** 91.87 54 ⇓P P 00 53 08.1 +0.4
baz=92,SNR=358
P11A **Circle Ranch,** 91.88 48 ⇑P P 00 53 07.8 +0.2
baz=92,SNR=79
I08A **Drewsey** 91.89 43 ⇑P P 00 53 07.6 +0.1
baz=92,SNR=75
K09A **Rome** 91.90 45 ⇑P P 00 53 07.8 +0.2
baz=92,SNR=274
TLY **Talaya** 91.90 325 eP P 00 53 07.0 -0.4
comp=Z,429nm,1.2s,mb6.7
TLY LR LR
comp=Z,46μm,22.0s,MS6.9
TLY **Talaya** 91.90 325 ⇑eP P 00 53 07.2 -0.2
TLY pmax pmax
comp=Z,209nm,2.5s,mb6.0
F07A **Phinny Hill Vi** 91.94 41 ⇓P P 00 53 07.8 +0.1
baz=92,SNR=86
D06A **Cle Elum** 92.00 40 ⇓P P 00 53 07.8 -0.1
baz=92,SNR=116
216A **Three Points,** 92.00 57 ⇓P P 00 53 09.1 +0.8
baz=92
W14A **Seligman** 92.02 53 ⇑P P 00 53 09.2 +0.8
baz=92,SNR=244
116A **Eloy** 92.03 56 ⇓P P 00 53 08.8 +0.3
baz=92,SNR=162
H08A **Prairie City** 92.10 43 ⇑P P 00 53 08.3 -0.2
baz=92,SNR=36
T13A **Saint George** 92.14 51 ⇓P P 00 53 09.4 +0.5
baz=92
J09A **Fry Pan Ranch,** 92.17 44 ⇓P P 00 53 09.0 +0.2
baz=92,SNR=401
R12A **Pony Springs,** 92.18 50 ⇑P P 00 53 09.4 +0.4
baz=92
M10A **I.L. Ranch, Tu** 92.18 46 P P 00 53 09.3 +0.4
baz=92,SNR=205
O11A **Cowboy Ranch,** 92.19 48 ⇓P P 00 53 09.3 +0.3
baz=92,SNR=26
G08A **Pilot Rock** 92.27 42 ⇑P P 00 53 09.2 0.0
baz=92,SNR=242
Q12A **Willow Creek R** 92.31 49 ⇓P P 00 53 09.9 +0.3
baz=92,SNR=31
C06A **Tall Timber Ra** 92.31 39 ⇓P P 00 53 09.0 -0.4
baz=92
X15A **Humboldt** 92.37 54 ⇓P P 00 53 10.6 +0.6
baz=92,SNR=509
S13A **Holt Ranch, En** 92.41 51 ⇓P P 00 53 10.6 +0.5
baz=92
217A **Green Valley** 92.42 57 ⇓P P 00 53 10.8 +0.5
baz=92
HAWA **Hanford** 92.42 41 eP P 00 53 09.7 -0.2
comp=Z,543nm,1.2s,mb6.8
HAWA LR LR
comp=Z,44μm,22.0s,MS6.9
N11A **Elko Archery C** 92.43 47 ⇑P P 00 53 10.2 +0.1
baz=93,SNR=21
U14A **Mt Trumbull** 92.44 52 ⇑P P 00 53 10.8 +0.6
baz=93
P12A **McGill** 92.44 49 ⇓P P 00 53 10.5 +0.3
baz=93,SNR=101
I09A **Lost Marbles R** 92.46 44 P P 00 53 09.9 -0.2
baz=93,SNR=25
L10A **Juniper Basin** 92.47 46 ⇑P P 00 53 10.4 +0.1
baz=93
K10A **MacKenzie Ranc** 92.50 45 ⇓P P 00 53 10.6 +0.2
baz=93
D07A **Quincy** 92.52 40 P P 00 53 10.2 -0.2
baz=93,SNR=22
F08A **Pendleton** 92.61 42 ⇓P P 00 53 10.6 -0.3
baz=93,SNR=31
W15A **Williams** 92.62 53 P P 00 53 11.9 +0.8
baz=93,SNR=77
TUC **Tucson** 92.65 57 eP P 00 53 11.1 -0.2
TUC LR LR
comp=Z,31μm,20.0s,MS6.8
M11A **Holland Ranch,** 92.65 47 P P 00 53 11.6 +0.5
baz=93,SNR=75
C07A **Waterville** 92.70 40 P P 00 53 10.6 -0.6
baz=93,SNR=41
E08A **Dider Farm, El** 92.75 41 ⇑P P 00 53 11.3 -0.2
baz=93
CCUT **Cedar City** 92.76 51 ⇑iP P 00 53 12.1 +0.3
CJM **Chamela** 92.76 70 iP P 00 53 12.4 +0.3
T14A **Hurricane** 92.76 51 ⇑P P 00 53 12.2 +0.4
baz=93
ARUT **Antelope Range** 92.80 51 eP P 00 53 11.6 -0.2
H09A **Durkee** 92.81 43 P P 00 53 11.4 -0.3
baz=93,SNR=63
J10A **Berg Farm, Mel** 92.85 44 ⇓P P 00 53 11.6 -0.4
baz=93,SNR=27
Q13A **Wheeler Ranch,** 92.85 49 ⇑P P 00 53 12.2 +0.1
baz=93
O12A **Currie** 92.88 48 P P 00 53 12.1 -0.1
baz=93,SNR=180
N12A **Clover Valley,** 92.92 47 P P 00 53 12.5 +0.1
baz=93,SNR=146
318A **Bisbee** 92.94 58 ⇓P P 00 53 13.0 +0.3
baz=93
S14A **Cedar City** 92.98 51 ⇑P P 00 53 13.1 +0.3
baz=93
B07A **Winthrop** 93.03 39 P P 00 53 12.4 -0.3
baz=93,SNR=117
K11A **Parker Ranch,** 93.06 45 ⇓P P 00 53 13.1 +0.1
baz=93
P13A **Bates Ranch, G** 93.06 49 ⇑P P 00 53 13.4 +0.3
baz=93
D08A **Wollman Farm,** 93.10 41 P P 00 53 12.9 -0.1
baz=93,SNR=27
218A **Dragoon** 93.10 57 ⇓P P 00 53 14.0 +0.5
baz=93
I10A **Payette** 93.11 44 ⇑P P 00 53 13.0 -0.2
baz=93,SNR=8.9
F09A **S2 Ranch, Elgi** 93.12 42 ⇑P P 00 53 12.9 -0.2
baz=93,SNR=8.4
BMO **Blue Mountains** 93.12 43 eP P 00 53 12.4 -0.8
comp=Z,502nm,1.3s,mb6.8
BMO LR LR
comp=Z,72μm,21.0s,MS7.1
BMO **Blue Mountains** 93.12 43 eP P 00 53 12.4 -0.8
BMO pmax pmax
comp=Z,502nm,1.3s,mb6.8
BMO MLR MLR
comp=Z,72μm,21.0s,MS7.1
M12A **Wells** 93.24 47 P P 00 53 13.9 0.0
baz=93,SNR=39
T15A **Red Dirt Ranch** 93.26 52 ⇓P P 00 53 14.1 +0.1
baz=93
R14A **James Farms, M** 93.30 50 ⇑P P 00 53 14.6 +0.4
baz=93
E09A **Wood Farm, Sta** 93.33 41 P P 00 53 13.6 -0.6
baz=94,SNR=25
C08A **Higginbotham F** 93.35 40 ⇓P P 00 53 13.4 -0.8
baz=94,SNR=27
O13A **Hicks Ranch, I** 93.36 48 ⇓P P 00 53 14.8 +0.4
baz=94
H10A **Noah's Angus R** 93.37 43 P P 00 53 13.6 -0.8
baz=94,SNR=109
WUAZ **Wupatki** 93.43 53 ⇑iP P 00 53 14.9 +0.1
comp=Z,215nm,0.9s,mb6.6
WUAZ LR LR
comp=Z,34μm,20.0s,MS6.8
WUAZ **Wupatki** 93.43 53 ⇑P P 00 53 15.1 +0.3
baz=94
G10A **Bishop Farm, J** 93.43 43 P P 00 53 13.9 -0.7
baz=94,SNR=105

B08A Colville Reser 93.44 39 ⇓P P 00 53 13.7 -0.9
baz=94,SNR=124
MFID Camas Ranch 93.47 45 ⇑P P 00 53 14.5 -0.3
baz=94
D09A Jones Farm, Ri 93.47 41 P P 00 53 14.4 -0.4
baz=94,SNR=62
L12A House Creek Ra 93.47 46 ⇑P P 00 53 14.9 +0.1
baz=94
319A Douglas 93.48 58 ⇑P P 00 53 15.8 +0.6
baz=94
N13A Wendover, West 93.50 48 ⇓P P 00 53 15.0 -0.1
baz=94,SNR=47
F10A Beach Ranch, E 93.66 42 P P 00 53 14.8 -0.8
baz=94,SNR=116
M13A Montello 93.73 47 ⇓P P 00 53 16.0 -0.1
baz=94,SNR=74
K12A Draper Farm, C 93.75 46 ⇑P P 00 53 16.1 0.0
baz=94
C09A Chrisman Ranch 93.82 40 ⇑P P 00 53 15.7 -0.7
baz=94,SNR=16
J12A Stokes Ranch, 93.88 45 ⇓P P 00 53 16.8 0.0
baz=94
H11A Donnelly 93.89 44 ⇓P P 00 53 16.3 -0.5
baz=94,SNR=159
E10A Myers Farm, Un 93.96 42 ⇓P P 00 53 15.9 -1.1
baz=94,SNR=26
MSU Marysvale 94.00 50 *e*P P 00 53 17.6 +0.2
G11A Walters Elk Ra 94.02 43 P P 00 53 16.3 -1.0
baz=94,SNR=129
D10A Wagner Farm, O 94.10 41 P P 00 53 16.6 -1.0
baz=94,SNR=37
B09A Rice 94.18 40 P P 00 53 17.2 -0.7
baz=94,SNR=85
L13A Double Diamond 94.18 47 ⇑P P 00 53 17.9 -0.3
baz=94
N14A Grayback Hills 94.20 48 ⇑P P 00 53 18.0 -0.3
baz=94
DUG Dugway 94.20 49 *e*P P 00 53 17.8 -0.5
comp=Z,321nm,1.1s,mb6.7
DUG LR LR
comp=Z,54μm,21.0s,MS7.0
DUG Dugway 94.20 49 *e*P P 00 53 17.8 -0.5
DUG pmax pmax
comp=Z,321nm,1.1s,mb6.7
DUG MLR MLR
comp=Z,54μm,21.0s,MS7.0
DUG Dugway 94.20 49 P P 00 53 17.8 -0.5
baz=94,SNR=69
F11A Grangeville 94.30 42 P P 00 53 16.6 -1.9
baz=94,SNR=66
K13A Stover Farm, H 94.31 46 ⇓P P 00 53 18.7 0.0
baz=94
BGU Big Grassy Mou 94.34 48⇑*i*P P 00 53 18.4 -0.6
M14A Sheep Mountain 94.35 47 ⇑P P 00 53 18.8 -0.1
baz=94
C10A Spilker Farm, 94.42 40 ⇓P P 00 53 18.4 -0.7
baz=95
HLID Hailey 94.46 45 *e*P P 00 53 19.1 -0.3
HLID LR LR
comp=Z,44μm,21.0s,MS6.9
HLID Hailey 94.46 45 P P 00 53 19.2 -0.1
baz=95,SNR=143
E11A Bogner Ranch, 94.47 42 P P 00 53 17.7 -1.6
baz=95,SNR=26
J13A Cove Ranch, Pi 94.56 45 ⇑P P 00 53 19.7 -0.2
baz=95
H12A Diamond D Ranc 94.58 44 P P 00 53 19.3 -0.6
baz=95,SNR=198
NLU North Lily Min 94.63 49⇑*i*P P 00 53 19.9 -0.4
B10A Chitwood Farm, 94.68 40 ⇑P P 00 53 19.6 -0.7
baz=95,SNR=14
N15A Stansbury Isla 94.68 48 ⇓P P 00 53 20.2 -0.3
baz=95
NEW Newport 94.72 40 *e*P P 00 53 19.4 -1.1
comp=Z,284nm,1.0s,mb6.7
NEW LR LR
comp=Z,35μm,20.0s,MS6.8
A10A Northport 94.77 39 ⇓P P 00 53 20.2 -0.5
baz=95,SNR=43
I13A Wildhorse Cree 94.80 45 ⇓P P 00 53 21.0 0.0
baz=95
F12A Elk City 94.82 43 P P 00 53 20.1 -0.9
baz=95,SNR=58
HVU Hansel Valley 94.86 47⇑*i*P P 00 53 20.9 -0.4
comp=Z,329nm,1.2s,mb6.6
HVU Hansel Valley 94.86 47⇑*i*P P 00 53 20.9 -0.3
HVU pmax pmax
comp=Z,329nm,1.2s,mb6.6
NOQ North Oquirrh 94.87 48 *e*P P 00 53 20.8 -0.6
SFJM Santa Fe 94.87 70 *i*P P 00 53 22.5 +0.7
K14A Jones Ranch, D 94.88 46 ⇑P P 00 53 21.1 -0.3
baz=95
SPUT South Promonto 94.90 48 *e*P P 00 53 21.1 -0.4
M15A Larsen Ranch, 94.96 48 ⇑P P 00 53 21.2 -0.5
baz=95
MPU Maple Canyon 94.97 49 *e*P P 00 53 21.4 -0.4
MPU LR LR
comp=Z,49μm,21.0s,MS7.0
H13A Challis 94.97 44 ⇓P P 00 53 21.3 -0.4
baz=95
TMUT Trail Mountain 95.00 50 *e*P P 00 53 22.4 +0.4
CTU Camp Tracy 95.15 49 *e*P P 00 53 22.8 +0.2
G13A Cobalt 95.20 44 P P 00 53 22.0 -0.7
baz=95,SNR=73
B11A Sandpoint 95.25 40 P P 00 53 22.1 -0.8
baz=95,SNR=33
D12A Red Ives Fores 95.29 42 P P 00 53 22.0 -1.1
baz=95,SNR=52
JLU Jordanelle 95.32 49 *e*P P 00 53 17.5 -5.9
DAU Daniels Canyon 95.39 49 *e*P P 00 53 23.5 -0.2
SRU San Rafael 95.42 50 *e*P P 00 53 23.6 -0.3
F13A Darby 95.42 43 ⇑P P 00 53 22.8 -1.0
baz=96
A11A Hall Mountain, 95.47 40 ⇓P P 00 53 23.7 -0.2
baz=96
HWUT Hardware Ranch 95.62 48 *e*P P 00 53 24.0 -0.8
comp=Z,593nm,1.4s,mb6.8
HWUT LR LR
comp=Z,31μm,21.0s,MS6.8
B12A Libby 95.74 40 ⇓P P 00 53 24.5 -0.6
baz=96
G14A Jackson 95.76 44 P P 00 53 24.9 -0.4
baz=96,SNR=88
E13A Victor 95.78 43 ⇓P P 00 53 24.0 -1.3
baz=96,SNR=37
D13A Huson 95.87 42 ⇓P P 00 53 24.5 -1.3
baz=96
A12A Yaak River Ran 95.89 40 ⇑P P 00 53 25.5 -0.3
baz=96,SNR=14
MCMT McKenzie Canyo 96.00 44 *e*P P 00 53 25.7 -0.7
C13A Hot Springs 96.03 41 ⇑P P 00 53 25.3 -1.2
baz=96,SNR=14
F14A Wisdom 96.05 43 P P 00 53 25.8 -0.8
baz=96,SNR=38
TIXI Tiksi 96.06 348⇑*e*P P 00 53 26.3 +0.3
TIXI LR LR
comp=Z,51μm,20.0s,MS7.0
TIXI Tiksi 96.06 348⇑*e*P P 00 53 26.2 +0.2
TIXI pmax pmax
comp=Z,31nm,0.7s,mb5.8
ZAIG Zacatecas 96.06 68 *i*P P 00 53 26.7 -0.4
MSO Missoula 96.09 42 *e*P P 00 53 25.7 -1.1
MSO LR LR
comp=Z,24μm,20.0s,MS6.7
E14A Clinton 96.21 43 P P 00 53 26.4 -0.9
baz=96,SNR=75
MVCO Mesa Verde 96.21 53 *e*P P 00 53 27.2 -0.4
MVCO LR LR
comp=Z,32μm,20.0s,MS6.8
MVCO Mesa Verde 96.21 53 P P 00 53 27.2 -0.3
baz=96,SNR=27
PV10 Paradox Valley 96.23 51 *e*P P 00 53 26.4 -1.2
LAZ Ladron 96.25 56 *e*P P 00 53 27.4 -0.5
LENM Lemitar 96.30 56 *e*P P 00 53 28.0 0.0
Y22C IRIS PASSCAL I 96.31 56 ⇓P P 00 53 27.9 -0.1
baz=96
G15A Dillon 96.37 44 ⇓P P 00 53 27.2 -0.9
baz=96,SNR=29
DLMT Dillon 96.37 44 *e*P P 00 53 27.8 -0.2
B13A Whitefish 96.38 41 P P 00 53 26.9 -1.1
baz=96,SNR=24
AHID Auburn Hatcher 96.38 47 *e*P P 00 53 28.4 +0.2
AHID LR LR
comp=Z,37μm,22.0s,MS6.8
D14A Greenough 96.46 42 ⇓P P 00 53 27.1 -1.4
baz=97,SNR=34
PV01 Paradox Valley 96.49 52 *e*P P 00 53 28.4 -0.3

CHMT Chamberlain Mo 96.55 42 *e*P P 00 53 27.6 -1.3
BNM Barren Site 96.56 56 *e*P P 00 53 28.5 -0.7
C14A Swan Lake 96.58 41 P P 00 53 27.9 -1.1
baz=97,SNR=39
LPM Los Pinos Moun 96.61 56 *e*P P 00 53 28.9 -0.6
F15A Butte 96.62 44 P P 00 53 28.3 -0.9
baz=97,SNR=48
DCID1 Drake Creek 96.64 46 *e*P P 00 53 29.6 +0.3
A13A Flathead Natio 96.64 40 ⇓P P 00 53 28.4 -0.8
baz=97,SNR=42
LRM Limekiln Ridge 96.64 44 *e*P P 00 53 28.5 -0.8
HYB Hyderabad 96.68 286 *e*P P 00 53 30.0 -0.1
comp=Z,250nm,1.2s,mb6.5
HYB *e*PP PP 00 57 24.0 -1.3
HYB *e*SKS 01 04 04.0
HYB Hyderabad 96.68 286 *e*P P 00 53 30.0 -0.1
HYB *e* 00 57 24.0
HYB *e* 01 04 04.0
HYB pmax pmax
comp=Z,250nm,1.2s,mb6.5
HYB Hyderabad 96.68 286 *i*P P 00 53 30.0 -0.1
comp=Z,250nm,1.2s,mb6.5
HYB *e*PP PP 00 57 24.0 -1.3
HYB *e*SKS 01 03 56.0
MNTX Cornudas Mount 96.71 59 *e*P P 00 53 28.8 -1.2
comp=Z,21nm,0.7s,mb5.7
MNTX LR LR
comp=Z,37μm,21.0s,MS6.8
E15A Deer Lodge 96.75 43 P P 00 53 28.9 -0.9
baz=97,SNR=43
TPAW Teton Pass 96.75 46 *e*P P 00 53 29.4 -0.5
REDW Red Top Meadow 96.77 46 *e*P P 00 53 29.5 -0.5
comp=Z,437nm,1.3s,mb6.7
SNOW Snow King Moun 96.88 46 *e*P P 00 53 30.4 -0.1
comp=Z,249nm,1.0s,mb6.6
IMW Indian Meadow 96.91 46 *e*P P 00 53 30.2 -0.3
QLMT Earthquake Lak 96.93 45 *e*P P 00 53 30.6 0.0
ANMO Albuquerque 96.97 55 *e*P P 00 53 30.4 -0.7
ANMO LR LR
comp=Z,25μm,21.0s,MS6.7
EFI East Falkland 96.98 152 *e*P P 00 53 29.3 -1.6
comp=Z,108nm,0.8s,mb6.3
EFI LR LR
comp=Z,40μm,22.0s,MS6.9
EFI East Falkland 96.98 152 *e*P P 00 53 29.3 -1.6
EFI pmax pmax
comp=Z,108nm,0.8s,mb6.3
EFI MLR MLR
comp=Z,40μm,22.0s,MS6.9
MOOW Moose Ponds 96.99 46 *e*P P 00 53 30.2 -0.7
comp=Z,331nm,1.2s,mb6.6
WALA Waterton Lakes 96.99 40 *e*P P 00 53 30.6 -0.2
comp=Z,343nm,1.3s,mb6.6
LOHW Long Hollow 97.03 46 *e*P P 00 53 30.4 -0.7
comp=Z,376nm,1.4s,mb6.6
D15A Lincoln 97.07 42 P P 00 53 30.2 -0.9
baz=97,SNR=32
BOZ Bozeman (W) 97.11 44 *e*P P 00 53 30.6 -0.8
BOZ LR LR
comp=Z,73μm,22.0s,MS7.1
BOZ Bozeman (W) 97.11 44 P P 00 53 30.8 -0.6
baz=97,SNR=32
FLWY Flagg Ranch 97.14 46 *e*P P 00 53 31.4 -0.2
YMR Madison River 97.18 45 *e*P P 00 53 31.7 0.0
comp=Z,58nm,0.8s,mb6.1
YMR LR LR
comp=Z,64μm,22.0s,MS7.1
YFT Old Faithful 97.19 45 *e*P P 00 53 33.3 +1.5
LTX Lajitas 97.31 62 *e*P P 00 53 32.6 -0.1
LTX LR LR
comp=Z,62μm,22.0s,MS7.0
BW06 Boulder Array 97.44 47 *e*P P 00 53 31.8 -1.2
PDAR Pinedale Array 97.44 47 P P 00 53 31.6 -1.3
comp=Z,21nm,0.8s,mb5.6,baz=212,slow=4.7,SNR=32
PDAR PKKP PKKPbc 01 10 10.4 -1.3
comp=Z,7.4nm,0.8s,baz=77,slow=5.5,SNR=12
PDAR PKPPKP 01 18 24.4
comp=Z,4.0nm,0.9s,baz=126,slow=2.9,SNR=12
PDAR LR LR 01 29 07.3
comp=Z,27μm,21.4s,MS6.7,baz=88,slow=30
PLCA Paso Flores 97.48 138 *e*P P 00 53 32.3 -1.1
PLCA PKKP PKKPbc 01 10 11.2 +0.2
PLCA P'P' 01 18 20.9
PLCA Paso Flores 97.48 138 P P 00 53 32.5 -0.8
comp=Z,27nm,1.0s,mb5.6,baz=232,slow=3.8,SNR=21
PLCA PKKP PKKPbc 01 10 11.2 +0.2
comp=Z,15nm,0.9s,baz=51,slow=2.7,SNR=12
PLCA PKPPKP 01 18 20.9
comp=Z,3.8nm,0.9s,baz=15,slow=0.6,SNR=3.7
LKWY Lake 97.52 45 *e*P P 00 53 34.7 +1.4
LKWY LR LR
comp=Z,88μm,21.0s,MS7.2
GDL2 Guadalupe Moun 97.69 59 *e*P P 00 53 34.1 -0.2
INK Inuvik 97.77 18 *e*P P 00 53 32.5 -1.4
comp=Z,5μm,1.1s
INK Inuvik 97.77 18 P P 00 53 32.7 -1.2
comp=Z,96nm,1.1s,mb6.2,baz=185,slow=6.5,SNR=2.3
INK PP PP 00 57 21.9 -11
comp=Z,14nm,1.0s,baz=280,slow=12,SNR=2.1
INK PKiKP PKiKP 00 58 06.3 -1.2
comp=Z,16nm,1.0s,baz=124,slow=4.4,SNR=5.9
INK PKKPbc PKKPbc 01 10 08.7 -3.0
comp=Z,6.4nm,0.5s,baz=67,slow=4.7,SNR=11
SMCO Snowmass 98.02 51 *e*P P 00 53 35.4 -0.3
WMQ Urumqi 98.19 314 ⇑P P 00 53 36.0 -0.3
WMQ AP pP 00 53 46.6 -1.2
WMQ XP sP 00 53 50.6 -1.3
WMQ PP PP 00 57 38.5 +2.1
WMQ PPP 00 59 46.0
WMQ SKS 01 04 10.0
WMQ S S 01 04 57.5 -3.7
WMQ PS PS 01 06 31.0 +0.9
WMQ AMB AMB
comp=Z,195nm,1.5s,mb6.4
WMQ AMB AMB
comp=Z,11μm,11.3s
WMQ LR LR
comp=N,30μm,21.3s,MS7.0
WMQ LR LR
comp=E,59μm,26.2s,MS7.0
WMQ LR LR
comp=Z,59μm,22.1s,MS7.0
GCMT Greycliff 98.44 44 *e*P P 00 53 36.9 -0.5
RLMT Red Lodge 98.47 45 *e*P P 00 53 37.8 +0.2
RLMT LR LR
comp=Z,72μm,21.0s,MS7.1
SDCO Great Sand Dun 98.63 53 *e*P P 00 53 38.0 -0.5
SDCO LR LR
comp=Z,46μm,20.0s,MS7.0
RWWY Rawlins 98.70 49 *e*P P 00 53 38.4 -0.3
comp=Z,300nm,1.0s,mb6.8
EGMT Eagleton 99.17 42 *e*P P 00 53 40.3 -0.3
EGMT LR LR
comp=Z,39μm,20.0s,MS6.9
EGMT Eagleton 99.17 42 ⇑P P 00 53 39.8 -0.7
baz=99,SNR=19
ISCO Idaho Springs 99.22 51 *e*P P 00 53 40.7 -0.3
comp=Z,326nm,1.7s,mb6.6
ISCO LR LR
comp=Z,35μm,19.0s,MS6.9
ISCO Idaho Springs 99.22 51 *e*P P 00 53 40.7 -0.3
ISCO pmax pmax
comp=Z,326nm,1.7s,mb6.6
ISCO MLR MLR
comp=Z,35μm,19.0s,MS6.9
PHWY Pilot Hill 99.82 50 *e*Pdif Pdif 00 53 43.5 -0.1
JCT Junction City 100.85 62 *e*Pdif Pdif 00 53 50.2 +2.0
JCT LR LR
comp=Z,46μm,19.0s,MS7.0
LAO LASA Array 100.99 44 *e*Pdif Pdif 00 53 48.9 +0.1
LAO LR LR
comp=Z,72μm,22.0s,MS7.1
KVTX Kingsville 101.58 65 PFAKE 00 54 00.0 +8.6
KVTX LR LR
comp=Z,44μm,20.0s,MS7.0
YKA Yellowknife Ar 101.80 27 P Pdif 00 53 52.0 -0.4
YKA PP PP 00 57 56.2 -7.1
YKA Yellowknife Ar 101.80 27 P Pdif 00 53 52.0 -0.4
comp=Z,16nm,0.8s,baz=257,slow=5.2,SNR=8.2
YKA PP PP 00 57 56.2 -7.0
comp=Z,6.9nm,0.9s,baz=245,slow=7.4,SNR=4.1
YKA PKiKP PKiKP 00 58 13.8 -1.1
comp=Z,8.3nm,0.9s,baz=229,slow=1.0,SNR=3.9
YKA PKKPbc PKKPbc 01 09 55.4 -4.5
comp=Z,3.1nm,0.7s,baz=75,slow=3.1,SNR=6.7
YKA PKPPKP 01 18 11.7

comp=Z,0.9nm,0.8s,baz=55,slow=3.0,SNR=4.3
MKAR Makanchi Array 102.75 315 Pdif Pdif 00 53 57.6 +1.0
MKAR PP PP 00 58 07.8 -3.0
MKAR Makanchi Array 102.75 315 Pdiff Pdif 00 53 57.6 +1.0
comp=Z,30nm,0.9s,baz=126,slow=5.0,SNR=14
MKAR PP PP 00 58 07.8 -3.0
comp=Z,7.1nm,0.9s,baz=99,slow=8.0,SNR=2.9
MKAR PKiKP PKiKP 00 58 17.5 +0.4
comp=Z,22nm,0.9s,baz=101,slow=3.8,SNR=5.9
MKAR PKKPbc PKKPbc 01 09 52.8 -3.8
comp=Z,7.9nm,0.7s,baz=313,slow=1.2,SNR=18
MKAR PKPPKP 01 18 14.6
comp=Z,6.5nm,1.0s,baz=286,slow=2.1,SNR=8.7
DGMT Dagmar 102.83 43 *e*Pdif Pdif 00 53 58.2 +1.2
DGMT LR LR
comp=Z,38μm,19.0s,MS6.9
WMOK Wichita Mounta 102.90 58 *e*P Pdif 00 53 55.9 -1.4
comp=Z,978nm,0.6s
WMOK LR LR
comp=Z,27μm,20.0s,MS6.8
WMOK Wichita Mounta 102.90 58 *e*P Pdif 00 53 55.9 -1.4
WMOK pmax pmax
comp=Z,978nm,0.6s
WMOK MLR MLR
comp=Z,27μm,20.0s,MS6.8
ZALV Zalesovo Beam 103.23 323 Pdiff Pdif 00 54 00.2 +1.5
comp=Z,22nm,0.7s,baz=121,slow=3.1,SNR=5.2
ZALV PKiKP PKiKP 00 58 18.7 +0.9
comp=Z,14nm,0.7s,baz=90,slow=1.1,SNR=8.6
ZALV PKKPbc PKKPbc 01 09 49.7 -5.8
comp=Z,4.8nm,0.7s,baz=283,slow=3.0,SNR=4.5
ZALV PKPPKP 01 17 53.3
comp=Z,3.7nm,1.0s,baz=316,slow=4.0,SNR=4.4
ZAL Zalesovo 103.24 323 P Pdif 00 54 00.3 +1.5
CBKS Cedar Bluff 103.28 53 *e*Pdif Pdif 00 53 54.0 -4.9
comp=Z,30nm,0.9s
CBKS LR LR
comp=Z,33μm,19.0s,MS6.9
CBKS Cedar Bluff 103.28 53 *e*P Pdif 00 53 54.1 -4.9
CBKS pmax pmax
comp=Z,30nm,0.9s
CBKS MLR MLR
comp=Z,33μm,19.0s,MS6.9
LCO Las Campanas 103.96 129 *e*Pdif Pdif 00 54 04.4 +2.4
comp=Z,14nm,0.9s
LCO LR LR
comp=Z,46μm,22.0s,MS7.0
HKT Hockley 103.99 63 PFAKE 00 54 10.0 +7.9
HKT LR LR
comp=Z,51μm,22.0s,MS7.0
CFAA Coronel Fontan 104.27 132 Pdif Pdif 00 54 02.6 -0.7
CFAA PP PP 00 58 18.4 -3.5
CFAA PKKPbc PKKPbc 01 09 48.4 -3.0
CFAA Coronel Fontan 104.27 132 Pdiff Pdif 00 54 02.6 -0.7
baz=270,slow=6.1
CFAA PP PP 00 58 18.4 -3.5
comp=Z,0.4nm,0.9s,baz=243,slow=6.8,SNR=2.2
CFAA PKKPbc PKKPbc 01 09 48.4 -2.9
comp=Z,0.9nm,0.9s,baz=63,slow=4.5,SNR=3.0
TRQA Tornquist 104.35 140 *e*Pdif Pdif 00 54 00.9 -2.8
comp=Z,18nm,1.4s
TRQA *e* 00 58 17.8
TRQA LR LR
comp=Z,24μm,22.0s,MS6.7
NVS Novosibirsk 104.37 323 *e*P Pdif 00 54 00.8 -3.0
NVS pmax pmax
comp=Z,530nm,3.1s
NVS pmax pmax
comp=N,210nm,2.3s
NVS pmax pmax
comp=E,288nm,2.5s
NATX Nacogdoches 105.44 62 PFAKE 00 58 30.0 +7.5
NATX LR LR
comp=Z,57μm,19.0s,MS7.1
KSU1 Kansas State U 105.71 54 *e*Pdif Pdif 00 54 14.2 +4.4
KSU1 LR LR
comp=Z,36μm,21.0s,MS6.9
FFC Flin Flon 105.78 37 PFAKE 00 58 30.0 +7.6
FFC LR LR
comp=Z,50μm,20.0s,MS7.1
KURK Kurchatov 106.09 319 PFAKE 00 58 30.0 +6.9
KURK LR LR
comp=Z,50μm,21.0s,MS7.0
ECSD EROS,Sioux Fal 106.76 49 *e*P Pdif 00 54 12.7 -1.7
comp=Z,12nm,0.6s
ECSD LR LR
comp=Z,63μm,22.0s,MS7.1
MIAR Mount Ida 107.01 59 *e*Pdif Pdif 00 54 16.4 +0.9
comp=Z,6.4nm,0.7s
MIAR LR LR
comp=Z,37μm,20.0s,MS6.9
MIAR Mount Ida 107.01 59 P Pdif 00 54 19.3 +3.8
MIAR pmax pmax
comp=Z,6.0nm,0.7s
UCH Uchtor 107.01 309 PFAKE 00 58 40.0 +15
UCH LR LR
comp=Z,39μm,19.0s,MS7.0
TGUH Tegucigalpa,Un 107.14 81 PFAKE 00 58 40.0 +14
TGUH LR LR
comp=Z,27μm,22.0s,MS6.8
NNA Nana 107.34 110 *e*PKPdf PKiKP 00 58 27.3 +0.7
AML Almayashu 107.58 309 PFAKE 00 58 40.0 +14
AML LR LR
comp=Z,28μm,20.0s,MS6.8
EKS2 Erkin-Say 107.63 310 PFAKE 00 58 40.0 +14
EKS2 LR LR
comp=Z,37μm,20.0s,MS6.9
TEIG Tepich 107.98 75 PFAKE 00 58 40.0 +12
TEIG LR LR
comp=Z,49μm,21.0s,MS7.0
UALR University of 108.05 59 *e*PKPdf PKiKP 00 58 25.7 -1.6
UALR *e*PP PP 00 58 48.3 -2.1
ATAH Atahualpa 108.06 105 PKiKP PKiKP 00 58 28.4 +0.5
comp=Z,20nm,0.9s,baz=270,slow=3.0,SNR=8.9
JTS JuntasAbangare 108.15 86 *e*Pdif Pdif 00 54 20.9 +0.3
comp=Z,14nm,1.0s
JTS LR LR
comp=Z,43μm,19.0s,MS7.0
JTS JuntasAbangare 108.15 86 *e*P Pdif 00 54 24.6 +4.0
JTS pmax pmax
comp=Z,13nm,1.0s
JTS JuntasAbangare 108.15 86 Pdiff Pdif 00 54 20.1 -0.5
comp=Z,10nm,0.9s,baz=317,slow=19,SNR=2.1
AGMN Agassiz Refuge 108.19 44 PFAKE 00 58 40.0 +13
AGMN LR LR
comp=Z,59μm,21.0s,MS7.1
ULM Lac du Bonnet 108.53 42 PKPdf PKiKP 00 58 24.9 -2.8
ULM PKKPbc PKKPbc 01 09 38.1 -0.8
ULM Lac du Bonnet 108.53 42 PKiKP PKiKP 00 58 24.9 -2.8
comp=Z,25nm,1.0s,baz=274,slow=4.2,SNR=7.9
ULM PKKPbc PKKPbc 01 09 38.1 -0.8
comp=Z,8.2nm,0.9s,baz=93,slow=4.9,SNR=5.9
LPA La Plata 108.88 140 *ce*P Pdif 00 54 19.0 -4.8
LPA *e*PP PP 00 58 53.0 -2.4
LPA *e*PKS 01 02 06.0
LPA *es*S 01 06 46.0
LPA
comp=Z,31μm,22.0s
GNAR Gosnell 110.15 58 *e*PKPdf PKiKP 00 58 29.4 -1.8
FVM French Village 110.21 56 *e*Pdif Pdif 00 54 31.7 +1.9
OXF Oxford 110.36 60 *e*PKPdf PKiKP 00 58 27.3 -4.4
OXF LR LR
comp=Z,67μm,22.0s,MS7.2
PARMO Parma 110.50 57 *e*PKPdf PKiKP 00 58 29.8 -2.0
FCC Fort Churchill 110.73 34 *e*P PKiKP 00 58 27.5 -4.1
OTAV Otavalo 110.83 98 *e*PKPdf PKiKP 00 58 29.8 -3.4
OTAV LR LR
comp=Z,23μm,21.0s,MS6.7
EYMN Ely 111.03 45 PFAKE 00 58 40.0 +7.5
EYMN LR LR
comp=Z,62μm,19.0s,MS7.2
SIUC Southern Illin 111.11 56 *e*PKPdf PKiKP 00 58 31.3 -1.7
JFWS Jewell Farm 111.18 51 *e*Pdif Pdif 00 54 32.1 -1.9
JFWS *e*PKPdf PKiKP 00 58 31.0 -2.0
JFWS LR LR
comp=Z,56μm,22.0s,MS7.1
RES Resolute Bay 111.20 16 *e*PKPdf PKiKP 00 58 29.6 -2.5
OPO Ambohidratompo 111.26 240 PKiKP PKiKP 00 58 33.2 -0.6
comp=Z,17nm,0.8s,baz=66,slow=2.5,SNR=9.5
HDIL Hopedale 111.52 53 PFAKE 00 58 40.0 +6.4
HDIL LR LR
comp=Z,34μm,20.0s,MS6.9
PLAL Pickwick Lake 111.52 59 *e*Pdif Pdif 00 54 38.4 +2.8
PLAL *e*PKPdf PKiKP 00 58 30.9 -2.9
PLAL LR LR
comp=Z,64μm,21.0s,MS7.2

BRVK Borovoye 111.56 320 *i* PKP PKiKP 00 58 31.8 -1.5
BRVK LR LR
comp=Z,40µm,20.0s,MS7.0
BRAL Brewton 111.60 64 PFAKE 00 58 40.0 +5.9
BRAL LR LR
comp=Z,27µm,20.0s,MS6.8
WVT Waverly 111.92 58 *e*Pdif Pdif 00 54 37.7 +0.3
WVT *e*PKPdf PKiKP 00 58 33.1 -1.5
WVT LR LR
comp=Z,34µm,19.0s,MS7.0
LRAL Lakeview Retre 112.04 62 *e*Pdif Pdif 00 54 40.7 +2.8
LRAL *e*PKPdf PKiKP 00 58 33.0 -1.8
LRAL LR LR
comp=Z,46µm,20.0s,MS7.1
COWI Conover 112.40 48 PFAKE 00 58 50.0 +15
COWI LR LR
comp=Z,59µm,19.0s,MS7.2
BCIP Isla Barro Col 112.59 88 *e*PKPdf PKiKP 00 58 34.4 -2.1
BCIP LR LR
comp=Z,18µm,20.0s,MS6.7
LPAZ La Paz 112.74 119 Pdif Pdif 00 54 41.3 +0.3
LPAZ PKPdf PKiKP 00 58 35.9 -0.8
LPAZ PKKPbc PKKPbc 01 09 24.6 +0.3
LPAZ La Paz 112.74 119 *i* PKIKP PKiKP 00 58 35.9 -0.8
LPAZ pmax pmax
comp=Z,15nm,1.0s
LPAZ La Paz 112.74 119 Pdiff Pdif 00 54 41.3 +0.3
comp=Z,1.3nm,1.1s,baz=202,slow=5.4,SNR=2.8
LPAZ PKiKP PKiKP 00 58 35.9 -0.8
comp=Z,15nm,1.0s,baz=328,slow=1.3,SNR=17
LPAZ PKKPbc PKKPbc 01 09 24.6 +0.2
comp=Z,4.8nm,1.0s,baz=76,slow=4.2,SNR=3.6
SOR Soroa 113.37 73 *e*P PKiKP 00 58 54.6 +17
BLO Bloomington 113.42 55 *e*PKPdf PKiKP 00 58 35.5 -1.9
WCI Wyandotte Cave 113.47 56 *e*PKPdf PKiKP 00 58 34.8 -2.7
WCI LR LR
comp=Z,46µm,22.0s,MS7.0
CPCT Cooper Cave 114.47 60 *e*Pdif Pdif 00 54 48.5 -0.2
GOGA Godfrey 115.02 62 *e*PKPdf PKiKP 00 58 38.0 -2.6
GOGA LR LR
comp=Z,60µm,22.0s,MS7.2
TZTN Tazewell 115.40 58 *e*PKPdf PKPdf 00 58 39.5 -1.7
TZTN LR LR
comp=Z,45µm,21.0s,MS7.0
GLMI Grayling 115.44 49 PFAKE 00 58 50.0 +9.0
GLMI LR LR
comp=Z,47µm,19.0s,MS7.1
DWPF Disney 115.86 68 *e*PKPdf PKPdf 00 58 40.9 -1.5
DWPF LR LR
comp=Z,30µm,20.0s,MS6.9
AAM Ann Arbor 115.94 52 *e*PKPdf PKPdf 00 58 39.9 -2.2
AAM LR LR
comp=Z,39µm,19.0s,MS7.0
MGV Manicaragua 115.94 75 *e*P PKPdf 00 58 44.9 +2.2
ACSO Alum Creek Sta 116.26 54 *e*PKPdf PKPdf 00 58 40.3 -2.4
ACSO LR LR
comp=Z,30µm,19.0s,MS6.9
ROSC El Rosal 116.32 95 PKP PKPdf 00 58 42.0 -1.6
comp=Z,51nm,0.8s,baz=113,slow=5.7,SNR=22
ROSC PKKPbc PKKPbc 01 09 12.9 +1.0
comp=Z,7.4nm,0.6s,baz=100,slow=18,SNR=4.1
JSC Jenkinsville 116.97 61 *e*PKPdf PKPdf 00 58 42.8 -1.5
SVE Sverdlovsk 117.19 324 *e*PKIKP PKPdf 00 58 43.0 -1.0
COW Cow Castle Cre 117.31 62 *e*PKPdf PKPdf 00 58 43.7 -1.2
LHS Liberty Hill 117.36 61 *e*PKPdf PKPdf 00 58 43.6 -1.5
NHSC New Hope 117.71 63 *e*PKPdf PKPdf 00 58 43.5 -2.3
NHSC LR LR
comp=Z,37µm,22.0s,MS7.0
ELN Prospectdale 117.71 58 *e*PKPdf PKPdf 00 58 42.6 -3.0
CCCC Cccc 117.75 76 *e*P PP 01 00 00.6 +0.7
BLA Blacksburg 117.97 58 *e*PKPdf PKPdf 00 58 44.6 -1.5
BLA LR LR
comp=Z,44µm,21.0s,MS7.1
LMGC Las Mercedes 118.19 78 *e*P PP 01 00 02.4 -0.6
ARU Arti 118.37 324 *i* PKP PKPdf 00 58 44.2 -2.1
ARU LR LR
comp=Z,37µm,20.0s,MS7.0
ARU Arti 118.37 324 *i* PKIKP PKPdf 00 58 44.1 -2.2
ARU 01 02 31.9
ARU 01 05 35.1
ALLY Alegheny Colle 118.51 53 *e*PKPdf PKPdf 00 58 44.6 -2.4
MCWV Mont Chateau 118.62 55 *e*PKPdf PKPdf 00 58 45.2 -2.1
MCWV LR LR
comp=Z,74µm,20.0s,MS7.3
ERPA Erie 118.64 52 *e*PKPdf PKPdf 00 58 44.1 -3.1
ERPA LR LR
comp=Z,55µm,19.0s,MS7.2
SOKR Solikamsk 118.92 328*c* *i*PKIKP PKPdf 00 58 45.6 -1.6
SOKR pmax pmax
comp=Z,320nm,1.0s
AKTK Aktyubinsk 119.11 317 PKP PKPdf 00 58 47.1 -0.8
AKTK PKKPbc PKKPbc 01 08 59.5 -3.4
AKTO Aktyubinsk 119.11 317 PKP PKPdf 00 58 47.1 -0.8
comp=Z,46nm,0.9s,baz=96,slow=3.7,SNR=30
AKTO PKKPbc PKKPbc 01 08 59.5 -3.4
comp=Z,18nm,0.7s,baz=241,slow=4.0,SNR=21
SUR Sutherland 119.35 210 *e*PKPdf PKPdf 00 58 48.6 -0.4
SUR LR LR
comp=Z,38µm,21.0s,MS7.0
RCC Rio Carpintero 119.38 78 *e*P PP 01 00 08.1 -3.1
CNNC Cliffs of the 119.83 60 *e*PKPdf PKPdf 00 58 47.9 -1.8
CNNC LR LR
comp=Z,85µm,20.0s,MS7.4
BOSA Boshof 120.06 217 PKP PKPdf 00 58 49.7 -0.8
BOSA PKKPbc PKKPbc 01 08 56.8 -2.2
BOSA Boshof 120.06 217 PKP PKPdf 00 58 49.7 -0.8
comp=Z,23nm,0.8s,baz=114,slow=2.6,SNR=22
BOSA PKKPbc PKKPbc 01 08 56.8 -2.2
comp=Z,19nm,0.9s,baz=306,slow=3.1,SNR=10
SSPA Standing Stone 120.17 54 *e*PKPdf PKPdf 00 58 48.3 -1.9
SSPA LR LR
comp=Z,39µm,19.0s,MS7.1
URVA University of 120.29 58 *e*PKPdf PKPdf 00 58 48.7 -1.9
CBN Corbin 120.45 57 *e*PKPdf PKPdf 00 58 48.1 -2.7
CBN LR LR
comp=Z,38µm,19.0s,MS7.1
KBS Kingsbay 120.66 355⇑ *e*PKP PKPdf 00 58 48.6 -1.6
MASC Masc 120.76 78 *e*P PP 01 00 19.2 -1.5
SDMD Soldier's Deli 120.93 56 *e*PKPdf PKPdf 00 58 49.4 -2.3
SDV Santo Domingo 121.12 92 *e*PKPdf PKPdf 00 58 50.2 -2.7
MVL Millersville 121.32 55 *e*PKPdf PKPdf 00 58 50.6 -1.9
BINY Binghamton 121.62 52 *e*PKPdf PKPdf 00 58 51.4 -1.6
BINY LR LR
comp=Z,55µm,19.0s,MS7.2
MSNY Massena 122.37 49 *e*PKPdf PKPdf 00 58 51.8 -2.5
LONY Lake Ozonia 122.59 50 PFAKE 00 59 10.0 +15
LONY LR LR
comp=Z,49µm,20.0s,MS7.2
LBTB Lobatse 122.60 220 *e*PKPdf PKPdf 00 58 54.5 -1.0
LBTB LR LR
comp=Z,52µm,21.0s,MS7.2
TRIS Tristan da Cun 122.66 178 *e*PKPdf PKPdf 00 58 55.0 -0.3
TRIS LR LR
comp=Z,31µm,22.0s,MS6.9
BRNJ Basking Ridge 122.69 54 *e*PKPdf PKPdf 00 58 53.7 -1.4
NCB Newcomb 122.87 50 *e*PKPdf PKPdf 00 58 53.3 -2.1
NCB LR LR
comp=Z,76µm,20.0s,MS7.3
CPNY Central Park 123.15 54 *e*PKPdf PKPdf 00 58 53.9 -2.1
PAL Palisades 123.19 54 *e*PKPdf PKPdf 00 58 53.8 -2.3
SDDR Presa de Saban 123.21 80 *e*PKPdf PKPdf 00 58 54.8 -1.9
SDDR LR LR
comp=Z,40µm,22.0s,MS7.0
ACCN Adirondack Com 123.30 51 *e*PKPdf PKPdf 00 58 53.5 -2.7
PRGR Permogore 123.73 331 *i* PKIKP PKPdf 00 58 55.2 -1.2
HNH Hanover 124.29 51 *e*PKPdf PKPdf 00 58 56.0 -2.0
QUA2 Belchertown 124.32 52 *e*PKPdf PKPdf 00 58 56.5 -1.6
LBNH Lisbon 124.51 50 PFAKE 00 59 10.0 +12
LBNH LR LR
comp=Z,61µm,19.0s,MS7.3
FFD Franklin Falls 124.76 51 *e*PKPdf PKPdf 00 58 57.5 -1.4
HRV Harvard--Oak R 124.89 52 *e*PKPdf PKPdf 00 58 57.4 -1.8
HRV LR LR
comp=Z,71µm,19.0s,MS7.3
LVZ Lovozero 124.94 341⇑ *e*PKP PKPdf 00 58 57.9 -0.7
LVZ LR LR
comp=Z,74µm,22.0s,MS7.3
LVZ Lovozero 124.94 341⇑ *i*PKIKP PKPdf 00 58 57.8 -0.8
LVZ MLR MLR
comp=Z,75µm,23.0s,MS7.3
BRYW Bryant College 124.94 53 *e*PKPdf PKPdf 00 58 57.8 -1.6
WES Weston 125.08 52 *e*PKPdf PKPdf 00 58 57.6 -2.0
WES LR LR
comp=Z,45µm,19.0s,MS7.2

APA Apatity 125.52 341⇑ *i*PKIKP PKPdf 00 58 58.5 -1.2
APA *i* 01 00 48.7
APA pmax pmax
comp=Z,200nm,1.2s
APA MLR MLR
comp=Z,54µm,20.0s,MS7.2
KEV Kevo 125.85 345 *e*PKPdf PKPdf 00 58 59.1 -1.2
KEV LR LR
comp=Z,69µm,21.0s,MS7.3
SCHQ Schefferville 125.92 36 PKP PKPdf 00 58 57.9 -2.9
SCHQ Schefferville 125.92 36 PKP PKPdf 00 58 57.9 -2.9
comp=Z,76nm,0.9s,baz=290,slow=3.4,SNR=14
PKME Peaks-Kenny Pk 126.28 48 *e*PKPdf PKPdf 00 58 59.9 -1.9
PKME LR LR
comp=Z,76µm,20.0s,MS7.4
ARCES ARCESS Array B 126.37 345 PKP PKPdf 00 58 59.7 -1.6
ARCES PKKPbc 01 08 37.5
ARCES ARCESS Array B 126.37 345 PKhKP 00 58 47.6
comp=Z,6.9nm,0.9s,baz=32,slow=0.7,SNR=7.1
ARCES PKP PKPdf 00 58 59.7 -1.6
comp=Z,153nm,0.8s,baz=314,slow=0.5,SNR=16
ARCES PKKPbc 01 08 37.5
comp=Z,5.0nm,0.6s,baz=228,slow=2.2,SNR=8.4
QRN Al-Qurain 126.59 291 *e*P PKPdf 00 59 01.7 -1.3
QRN AMb AMB 00 59 08.1
comp=Z,501nm,0.9s
UMR Umm Al-Rimmam 126.84 292 *e*P PKPdf 00 59 02.0 -1.4
UMR AMb AMB 00 59 09.6
comp=Z,469nm,1.1s
MAK Makhachkala 126.87 309*c* *i*PKIKP PKPdf 00 59 02.4 -0.6
MAK *i* 01 01 00.4
MAK *e*PPP 01 03 41.0
MAK *i* 01 06 07.4
MAK *e*SP SP 01 10 58.8 -2.0
MAK pmax pmax
comp=Z,377nm,0.9s
MAK pmax pmax
comp=N,361nm,0.8s
MAK pmax pmax
comp=E,471nm,0.9s
RDF Al-Radifah 126.93 291 *e*P PKPdf 00 59 02.0 -1.6
RDF AMb AMB 00 59 09.2
comp=Z,655nm,1.1s
SFJD Kangerlussuaq 127.11 18 *e*PKPdf PKPdf 00 58 59.8 -3.0
SFJD LR LR
comp=Z,56µm,21.0s,MS7.2
SFJD Kangerlussuaq 127.11 18⇑ *i*PKIKP PKPdf 00 59 00.4 -2.4
SFJD pmax pmax
comp=Z,130nm,0.9s
SFJD Kangerlussuaq 127.11 18⇑ *i*P PKPdf 00 59 00.4 -2.4
comp=Z,133nm,0.9s
SFJD *e*S SKPdf 01 02 21.9 -14
SFJD
comp=Z,46µm,19.0s
SFJD Kangerlussuaq 127.11 18 *i* PKPdf 00 59 09.2 +6.4
MIB Mutribah 127.18 292 *e*P PKPdf 00 59 02.3 -1.7
MIB AMb AMB 00 59 10.1
comp=Z,360nm,1.1s
NAY Al-Naaiem 127.23 292 *e*P PKPdf 00 59 02.2 -1.9
NAY AMb AMB 00 59 09.5
comp=Z,155nm,1.1s
KTK1 Kautokeino 127.30 345 *e*P PKPdf 00 59 01.8 -1.3
KTK1 AMb AMB 00 59 17.5
comp=Z,218nm,1.4s
RST Umm Al-Ruwaisa 127.46 292 *e*P PKPdf 00 59 02.9 -1.7
RST AMb AMB 00 59 10.4
comp=Z,405nm,1.2s
TRO Tromso 127.77 347 *e*P PKPdf 00 58 56.8 -7.1
SJG San Juan 127.79 83 *e*PKPdf PKPdf 00 59 00.3 -5.2
SJG *e*PKPdf PKPdf 00 59 03.6 -1.9
LSZ Lusaka 127.80 230 *e*P PKPdf 00 59 05.1 -0.6
LSZ LR LR
comp=Z,41µm,21.0s,MS7.1
LSZ Lusaka 127.80 230 PKP PKPdf 00 59 04.6 -1.0
comp=Z,44nm,0.8s,baz=165,slow=2.1,SNR=33
CPD Cerro la Pandu 127.99 83 *e*PKPdf PKPdf 00 59 03.6 -2.3
ATD Arta Tunnel 128.00 269 PKP PKPdf 00 59 06.6 +0.6
comp=Z,23nm,1.0s,baz=84,slow=11,SNR=4.5
MTP Monte Pirata 128.34 83 *e*PKPdf PKPdf 00 59 04.1 -2.4
KMBO Kilima Mbogo 128.40 251 *e*P PKPdf 00 59 05.7 -1.2
KMBO LR LR
comp=Z,41µm,20.0s,MS7.1
KMBO Kilima Mbogo 128.40 251 PKP PKPdf 00 59 07.0 +0.1
comp=Z,23nm,1.0s,baz=70,slow=4.0,SNR=3.6
VRHR Novokhopersk 129.24 320 *e*PKIKP PKPdf 00 59 06.0 -1.3
VRHR pmax pmax
comp=Z,60nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.5s
ZEI Tsey 129.53 309 *e*PKIKP PKPdf 00 59 07.9 -0.2
JMIC Jan Mayen 129.56 359 PKP PKPdf 00 59 07.5 +0.1
comp=E,137nm,0.8s,baz=162,slow=3.2,SNR=3.1
BHD Baghdad 129.84 297 *ex* x 00 55 56.0
BHD *ex* x 00 56 08.0
BHD *ex* x 00 59 06.0
BHD *ex* x 01 01 21.0
BHD *i* x 01 02 30.0
MOS Moscow 129.84 327 *e*PKIKP PKPdf 00 59 05.0 -3.3
MOS MLR MLR
comp=Z,48µm,22.5s,MS7.1
TCE Chacachacare 130.00 93 *e*P PKPdf 00 59 08.5 -1.3
TCE Chacachacare 130.00 93 *e* PKPdf 00 59 08.5 -1.3
TPP Pointe-a-Pierr 130.16 94 *e* PKPdf 00 59 11.3 +1.1
KIV Kislovodsk 130.21 311 *e*P PKPdf 00 59 05.3 -4.1
KIV LR LR
comp=Z,25µm,21.0s,MS6.9
KIV Kislovodsk 130.21 311 *i* PKIKP PKPdf 00 59 10.4 +1.0
KIV *e* 01 01 24.4
KIV *e*SP SP 01 11 26.1 -3.6
KIV *e*SS SS 01 18 49.7 +2.7
KIV pmax pmax
comp=Z,67nm,1.1s
KIV MLR MLR
comp=Z,31µm,21.0s,MS7.0
KIV Kislovodsk 130.21 311⇑ *i*P PKPdf 00 59 11.6 +2.2
TRN Trinidad (W) 130.31 93 *e* PKPdf 00 59 09.8 -0.7
VOR Voronezh 130.48 321⇓ *i*PKIKP PKPdf 00 59 09.0 -0.6
VOR pmax pmax
comp=Z,2µm,3.0s
GRGR Grenville 130.51 91 *e*PKPdf PKPdf 00 59 07.3 -3.4
GRGR LR LR
comp=Z,17µm,20.0s,MS6.7
TBH Brigand Hill 130.57 94 *e* PKPdf 00 59 11.0 0.0
OBN Obninsk 130.65 326⇑ *e*PKP PKPdf 00 59 09.1 -0.7
OBN LR LR
comp=Z,36µm,20.0s,MS7.1
OBN Obninsk 130.65 326α *i*PKIKP PKPdf 00 59 08.6 -1.2
OBN *i* 00 59 14.6
OBN pmax pmax
comp=Z,243nm,1.7s
OBN pmax pmax
comp=Z,200nm,2.6s
VRSR Storozhevoye 130.66 321 *i* PKIKP PKPdf 00 59 08.1 -1.9
VRSR pmax pmax
comp=N,80nm,4.8s
VRSR pmax pmax
comp=Z,340nm,4.8s
VRSR pmax pmax
comp=E,110nm,4.0s
BBSR BB Station 130.67 65 *e*PKPdf PKPdf 00 59 08.6 -2.1
BBSR LR LR
comp=Z,24µm,21.0s,MS6.9
MSL Mosul 130.81 301 *i* x x 00 59 10.0
MSL *i* x x 01 01 25.0
MSL *ex* x 01 02 35.0
TPR Prospect 131.06 93 *e*P PKPdf 00 59 11.8 0.0
TPR Prospect 131.06 93 *e* PKPdf 00 59 11.8 0.0
PUL Pulkovo 131.24 334⇓ *i*PKIKP PKPdf 00 59 11.8 +1.0
LZG Guadaloupe-1 131.43 86 *e*P PKPdf 00 59 11.3 -1.2
TBG Guadaloupe-3 131.49 87 *e*P PKPdf 00 59 11.3 -1.3
BPA Boggy Peak 131.56 85 *e* 00 59 01.1
MOR8 Moi Rana 131.60 347 *e*P 00 59 00.6
MOR8 AMb AMB 00 59 13.5
comp=Z,149nm,1.7s
FDF Fort de France 131.68 88 *e*P PKPdf 00 59 11.5 -1.5
STOK Stokkvaagen 131.76 347 *e*P PKPdf 00 59 02.8 -8.8
TSUM Tsumeb 131.76 217 *e*PKPdf PKPdf 00 59 12.3 -0.8
TSUM LR LR
comp=Z,57µm,21.0s,MS7.2
MGG Marie-Galante 131.81 87 *e*P PKPdf 00 59 12.0 -1.2
FINES FINESS Array B 131.85 337 PKP PKPdf 00 59 10.8 -1.2
FINES SKPbc SKPbc 01 02 32.8 -2.2

FINES FINESS Array B 131.85 337 PKhKP 00 58 56.9
comp=Z,3.7nm,0.7s,baz=71,slow=3.8,SNR=8.2
FINES PKP PKPdf 00 59 10.8 -1.2
comp=Z,59nm,0.8s,baz=98,slow=3.0,SNR=14
FINES SKPbc SKPbc 01 02 32.8 -2.2
comp=Z,159nm,0.9s,baz=72,slow=6.2,SNR=20
SOC Sochi 132.39 311 *i* PKIKP PKPdf 00 59 19.3 +5.8
SOC *e* 00 59 32.4
SOC *i* PPP 01 04 29.3
SOC pmax pmax
comp=Z,186nm,1.7s
SOC MLR MLR
comp=Z,44µm,23.0s,MS7.1
BBGH Gun Hill 132.76 91 *e*PKPdf PKPdf 00 59 16.2 +1.2
BBGH LR LR
comp=Z,30µm,20.0s,MS7.0
VSU Vasula 133.51 334 *i* PKP PKPdf 00 59 15.2 +0.1
NSS Namsos 133.54 347 *e*P 00 59 01.9
ANN Anapa 133.70 313 *i* PKIKP PKPdf 00 59 16.0 +0.1
ANN *e* 01 06 23.8
ANN pmax pmax
comp=Z,119nm,1.0s
MALT Malatya 134.30 304⇓ P PKPdf 00 59 19.0 +1.7
MALT Malatya 134.30 304⇓ *i*P PKPdf 00 59 19.0 +1.7
BORG Borgarnes 135.27 6 PKP PKPdf 00 59 17.7 -0.5
BORG LR LR
comp=Z,27µm,21.0s,MS7.0
BORG Borgarnes 135.27 6 PKP PKPdf 00 59 17.7 -0.5
comp=Z,103nm,0.9s,baz=346,slow=3.5,SNR=7.2
SIM Simferopol' 135.91 314 *i* PKIKP PKPdf 00 59 13.0 -7.1
SIM *e* 01 01 59.0
SIM *e*PS PS 01 12 18.0 -5.7
SIM pmax pmax
comp=Z,85nm,0.8s
SIM pmax pmax
comp=Z,9µm,19.0s
DOMB Dombas 136.36 347 *e*P 00 59 07.8
AKASG Malin Array Be 136.62 324 *i* PKHKP 00 59 08.0
AKASG Malin Array Be 136.62 324 PKhKP 00 59 08.0
comp=Z,2.2nm,0.4s,baz=39,slow=3.7,SNR=8.4
AKASG PP PP 01 01 52.9 -10
comp=Z,11nm,1.0s,baz=46,slow=6.3,SNR=3.4
AKASG SKPbc SKPbc 01 02 49.8 -1.2
comp=Z,61nm,1.0s,baz=47,slow=3.3,SNR=8.9
KIEV Kiev 136.63 324 PFAKE 00 59 30.0 +8.8
KIEV LR LR
comp=Z,40µm,21.0s,MS7.1
NB2 NORSAR Subarra1 136.75 345 PKPdf 00 59 09.4
comp=Z,110nm,1.1s,baz=31,slow=1.9
NB2 NORSAR Subarra1 136.75 345 PKPdf 00 59 09.4
baz=31,slow=1.9
NOA NORSAR Array B 136.75 345 *i* PKHKP 00 59 09.0
NOA 01 02 05.8
NOA NORSAR Array B 136.75 345 PKhKP 00 59 09.0
comp=Z,21nm,1.0s,baz=34,slow=2.0,SNR=16
NOA PP PP 01 02 05.8 +2.3
comp=Z,12nm,0.9s,baz=38,slow=5.7,SNR=3.6
NOA SKPbc SKPbc 01 02 49.0 -2.0
comp=Z,42nm,1.0s,baz=17,slow=4.3,SNR=7.9
HFS Hagfors 136.85 342 PKP PKPdf 00 59 20.7 -0.7
HFS SKPbc SKPbc 01 02 49.4 -2.0
HFS Hagfors 136.85 342 PKhKP 00 59 08.3
comp=Z,14nm,0.6s,baz=66,slow=5.1,SNR=26
HFS PKP PKPdf 00 59 20.7 -0.7
comp=Z,78nm,0.8s,baz=104,slow=6.1,SNR=13
HFS SKPbc SKPbc 01 02 49.4 -2.0
comp=Z,72nm,0.9s,baz=90,slow=2.9,SNR=8.7
NAO01 NORSAR Array S 137.00 345 PFAKE 00 59 30.0 +8.4
NAO01 LR LR
comp=Z,47µm,21.0s,MS7.2
FOO Floro 137.57 349 *e*P 00 59 10.9
SUW Suwalki 137.84 331 *e*PKP 00 59 12.6
ANTO Ankara 138.29 307 *e*PKPdf PKPdf 00 59 18.8 -5.9
ANTO ⇓P 00 59 27.4
ANTO LR LR
comp=Z,29µm,22.0s,MS7.0
ANTO Ankara 138.29 307⇓ *i*P PKPdf 00 59 27.4 +2.8
KONO Kongsberg 138.36 345 PFAKE 00 59 30.0 +5.9
KONO LR LR
comp=Z,39µm,21.0s,MS7.1
KIS Kishinev 138.57 319 *e*PKIKP PKPdf 00 59 20.0 -4.9
KIS pmax pmax
comp=Z,1µm,3.0s
KIS MLR MLR
comp=Z,41µm,26.0s,MS7.0
KIS Kishinev 138.57 319 *e*PKP PKPdf 00 59 20.0 -4.9
comp=Z,5µm,8.0s
KIS Kishinev 138.57 319 *e*PP PP 01 02 22.0 +6.4
KIS *e*SKP 01 02 55.0
KIS LRM 01 59 12.0
comp=Z,41µm,26.0s
ASK Askoy 138.57 348 *e*P 00 59 13.7
RUND Rundenannen 138.60 348 *e*P PKPdf 00 59 16.7 -7.8
BER Bergen 138.64 348 *e*P PKPdf 00 59 14.5 -10
BER AMb AMB 00 59 28.7
comp=Z,202nm,1.0s
JAWL J.Aulia 138.70 270 *e* PP 01 02 15.2 -2.4
EGD Espegrend 138.76 348 *e*P PKPdf 00 59 15.8 -9.0
EGD AMb AMB 00 59 29.8
comp=Z,191nm,1.2s
ODD1 Odda 138.81 347 *e*P 00 59 13.7
ODD1 AMb AMB 00 59 28.9
comp=Z,234nm,1.1s
CSS Prodhromos 138.85 300 P PKPdf 00 59 27.4 +1.6
comp=Z,2.0nm,0.7s
CSS Prodhromos 138.85 300 *e*PKPdf PKPdf 00 59 17.1 -8.7
CSS P 00 59 27.4
MAMC Mammari 138.91 300 P PKPdf 00 59 25.0 -0.9
MRKH Merkhyat 138.92 271 *e* PP 01 02 16.6 -2.4
MRKH *e* 01 20 22.0
SZAC Souni-Zanaja 139.24 300 P PKPdf 00 59 26.9 +0.4
comp=Z,4.8nm,0.8s
IAS Iasi 139.25 320⇑ P PKPdf 00 59 21.3 -4.8
IAS Iasi 139.25 320⇑ *i*P PKPdf 00 59 21.3 -4.8
BLS5 Blasjo 139.29 347 *e*P PKPdf 00 59 17.1 -8.8
BLS5 AMb AMB 00 59 30.0
comp=Z,97nm,1.1s
ALFC Alevga 139.41 300 P PKPdf 00 59 23.8 -3.0
comp=Z,2.6nm,0.8s
STAV Stavanger 139.90 347 *e*P PKPdf 00 59 18.1 -8.8
STAV AMb AMB 00 59 30.1
comp=Z,172nm,1.3s
LRW Lerwick 139.90 353 *e*P PKPdf 00 59 21.0 -5.9
LRW AMb AMB 00 59 30.9
comp=Z,437nm,1.2s
LVV L'vov 139.92 325 *i* PKIKP PKPdf 00 59 26.0 -1.3
LVV *i* 01 02 23.6
LVV *e* 01 06 31.6
WAR Warsaw 139.97 330 *e*PKP PKPdf 00 59 23.8 -3.5
WAR Warsaw 139.97 330 *e*PKP PKPdf 00 59 23.8 -3.5
HARR Harsova 140.11 316⇓ P PKPdf 00 59 22.8 -5.0
HARR Harsova 140.11 316⇓ *i*P PKPdf 00 59 22.8 -5.0
PSN Preselentsi 140.34 315 P PKPdf 00 59 26.9 -1.3
VRI Vrincioaia 140.36 318⇑ P PKPdf 00 59 24.1 -4.2
VRI Vrincioaia 140.36 318⇑ *i*P PKPdf 00 59 24.0 -4.2
PLOR Plostina 140.42 318⇓ *i*P PKPdf 00 59 23.7 -4.6
BSD Bornholm Skovb 140.49 337 *e*PKHKP 00 59 22.2
BSD Bornholm Skovb 140.49 337 *i* P PKPdf 00 59 22.2 -5.9
comp=Z,381nm,1.5s
BSD Bornholm Skovb 140.49 337 *i* S PP 01 02 20.1 -6.7
ISP Isparta 140.52 305 *e*PKPdf PKPdf 00 59 24.8 -4.0
KWP Kalwaria 140.74 326 *e*PKP PKPdf 00 59 25.4 -3.4
KWP Kalwaria 140.74 326⇓ *i*P PKPdf 00 59 23.7 -5.1
ISR Istrita 140.81 317⇓ P PKPdf 00 59 25.8 -3.3
ISR Istrita 140.81 317⇓ *i*P PKPdf 00 59 25.8 -3.3
COP Copenhagen 140.90 339 *i* P PKPdf 00 59 22.5 -6.4
comp=Z,177nm,0.9s
MLR Muntele Rosu 141.02 318 PKhKP 00 59 24.8
comp=Z,17nm,0.6s,baz=328,slow=10,SNR=24
MLR SKP 01 03 03.3
comp=Z,218nm,1.2s,baz=358,slow=3.6,SNR=6.8
PRD Provadia 141.06 314 P PKPdf 00 59 29.3 -0.3
MUD Monsted U'grnd 141.25 342 *i* PKHKP 00 59 22.5
MUD pmax pmax
comp=Z,190nm,0.8s
MUD Monsted U'grnd 141.25 342 *i* P PKPdf 00 59 22.5 -7.0
comp=Z,186nm,0.8s
KOLS Kolonicke sedl 141.37 325 *e*PKP PKPdf 00 59 25.7 -4.2
KOLS *e* SKPbc 01 03 03.1 -1.2
KOLS Kolonicke sedl 141.37 325 *e*S PP 01 02 32.1 -0.5
UZH Uzhgorod 141.53 325 *i* PKIKP PKPdf 00 59 25.0 -5.2
UZH *i* 00 59 33.2
UZH *e* 00 59 41.6
UZH *i* 01 02 41.0

STHS Stebnicka Huta 141.63 326 *i* PKP PKPdf 00 59 25.9 -4.5
TRPA Tarpa 141.68 324 ⇓*i*P PKPdf 00 59 26.4 -4.1
ORE Reay 141.74 354 ⇓*e*P PKPdf 00 59 24.7 -5.6
CRVS Cervenica-Dubn 141.82 325 *e*PKP PKPdf 00 59 25.6 -5.1
CRVS *e* 01 03 05.4
CRVS Cervenica-Dubn 141.82 325 *e*S PP 01 02 36.8 +1.5
OJC Ojcow 141.87 328 *e*PKPdf PKPdf 00 59 25.6 -5.2
OJC *e*PP PP 01 02 36.5 +1.0
OJC L 02 06 08.7
comp=Z,33nm,19.1s
OJC Ojcow 141.87 328 *e*PKIKP PKPdf 00 59 25.6 -5.2
OJC *e* 01 02 36.6
JMB Yambol 141.90 313 *e*P PKPdf 00 59 27.2 -3.8
JMB Yambol 141.90 313 P PKPdf 00 59 30.3 -0.8
SZH Strazhica 142.01 315 P PKPdf 00 59 28.2 -3.1
RSC Scourie 142.05 355 ⇑*e*P PKPdf 00 59 24.6 -6.3
RTO Tolsta 142.10 356 ⇑*e*P PKPdf 00 59 24.7 -6.2
NIE Niedzica 142.11 327 *e*PKPdf PKPdf 00 59 27.0 -4.2
NIE *e*PP PP 01 02 54.9 +18
REB Eisghbrachaidh 142.29 355 ⇑*e*P PKPdf 00 59 24.6 -6.7
DRGR 142.32 322 ⇑P PKPdf 00 59 26.4 -5.3
DRGR 142.32 322 ⇑*i*P PKPdf 00 59 26.4 -5.3
MVH1 Achvaich 142.39 354 *e*P PKPdf 00 59 24.3 -7.2
PVL Pavlikeni 142.43 315 P PKPdf 00 59 27.4 -4.6
RRR Rubha Reidh 142.59 356 ⇑*e*P PKPdf 00 59 26.1 -5.7
KECS Kecovo 142.59 326 *e*PKP PKPdf 00 59 27.5 -4.6
MCD Coleburn Disti 142.63 353 *e*P PKPdf 00 59 25.5 -6.4
RAC Raciborz 142.74 329 *e*PKHKP 00 59 23.0
RAC MLR MLR
comp=Z,54µm,21.2s,MS7.3
ARG Arkhangelos 142.76 303 *e*P 00 59 22.0
MME1 Meikle Cairn 142.87 353 *e*P PKPdf 00 59 25.6 -6.7
ALN Alexandroupoli 142.87 311 *e*P PKPdf 00 59 27.6 -5.3
MDO Dochfour 142.88 354 *e*P PKPdf 00 59 26.7 -5.6
KAC Achnashellach 142.91 355 *e*P PKPdf 00 59 25.2 -7.2
OKC Ostrava-Krasne 142.92 329 *e*PKIKP PKPdf 00 59 28.5 -4.2
OKC MLR MLR
comp=Z,55µm,24.5s,MS7.2
OKC Ostrava-Krasne 142.92 329 *e*PKP PKPdf 00 59 28.5 -4.2
OKC AMS AMS 01 00 40.0
comp=Z,55µm,24.5s
OKC *e*PP PP 01 02 48.3 +6.4
RUE Ruedersdorf 142.95 335 *e*PKPdf PKPdf 00 59 28.0 -4.6
LIKS Likavka 142.96 327 *i* PKP PKPdf 00 59 31.6 -1.2
BLCB Balcova 143.00 307 *e*P PKPdf 00 59 27.3 -5.9
GZR Gura Zlata 143.02 320 ⇑P PKPdf 00 59 29.8 -3.2
GZR Gura Zlata 143.02 320 ⇑*i*P PKPdf 00 59 29.8 -3.2
KDZ Kurdzhali 143.02 313 P PKPdf 00 59 28.8 -4.3
KPL Plockton 143.09 355 *e*P PKPdf 00 59 27.4 -5.3
KPL AMb AMB 00 59 31.0
comp=Z,472nm,1.0s
KPL Plockton 143.09 355 P PKPdf 00 59 27.4 -5.3
KPL AMb AMB 00 59 31.0
comp=Z,472nm,1.0s
KSP Ksiaz 143.10 331 *e*PKP PKPdf 00 59 29.7 -3.3
KSP Ksiaz 143.10 331 *e*PKP PKPdf 00 59 27.9 -5.0
KSP *e*PP PP 01 02 39.5 -3.3
KSP LR LR
comp=Z,162µm,24.8s
KSP Ksiaz 143.10 331 *e*PKHKP 00 59 27.9
KSP *e* 01 02 39.5
RDO Rodhopi 143.13 312 *e*P 00 59 20.5
KSB Sheil Bridge 143.20 355 ⇑*e*P PKPdf 00 59 26.6 -6.3
PSZ Piszkesteto 143.25 325 ⇑P PKPdf 00 59 28.7 -4.6
PSZ Piszkesteto 143.25 325 ⇑*i*P PKPdf 00 59 28.7 -4.6
MORC Moravsky Berou 143.25 329 ⇑P PKPdf 00 59 29.2 -4.1
MORC Moravsky Berou 143.25 329 ⇑*i*P PKPdf 00 59 29.2 -4.1
PRK Paraskevi 143.30 309 *e*P PKPdf 00 59 25.0 -8.7
PLD Plovdiv 143.32 314 *e*P PKPdf 00 59 29.3 -4.3
SMG Samos 143.36 306 *e*P PKPdf 00 59 27.0 -6.8
DPC Dobruska-Polom 143.43 331 *e*PKP PKPdf 00 59 30.3 -3.2
DPC *e*PP PP 01 02 48.3 +3.4
DPC AMS AMS 01 56 00.0
comp=Z,76µm,30.2s
VYHS Vyhne 143.45 327 *e*PKP PKPdf 00 59 30.3 -3.3
VYHS LR LR
comp=Z,34µm,24.0s,MS7.0
VYHS *e* 01 03 09.1
VYHS Vyhne 143.45 327 *e*S PP 01 02 54.5 +9.4
UPC Upice 143.46 331 *e*PKP PKPdf 00 59 30.4 -3.2
RZN Rozhen 143.49 313 P PKPdf 00 59 30.3 -3.6
PGB Panagyurishte 143.49 315 P PKPdf 00 59 30.3 -3.6
KAR1 Arisaig 143.52 356 ⇑*e*P PKPdf 00 59 27.8 -5.7
BZS Buzias 143.60 321 ⇑P PKPdf 00 59 30.6 -3.4
BZS Buzias 143.60 321 ⇑*i*P PKPdf 00 59 30.5 -3.5
KOLL Kolacno 143.62 327 *e*PKP PKPdf 00 59 31.1 -2.8
KARP Karpathos 143.69 302 *e*P PKPdf 00 59 28.5 -6.0
CHOS Chios island 143.74 307 *e*P PKPdf 00 59 30.2 -4.3
LIA Limnos Island 143.85 310 *e*P PKPdf 00 59 29.5 -5.1
RCBR Riachuelo 143.90 134 *e*PKPdf PKPdf 00 59 30.9 -4.6
RCBR LR LR
comp=Z,42µm,22.0s,MS7.2
LOS Limnos 143.91 310 *e*P PKPdf 00 59 31.8 -3.0
EBH Black Hill 143.97 353 *e*P PKPdf 00 59 29.2 -5.1
VRAC Vranov 144.03 329 ⇑P PKPdf 00 59 32.0 -2.6
VRAC Vranov 144.03 329 PKIKP PKPdf 00 59 32.2 -2.4
VRAC pmax pmax
comp=Z,389nm,0.9s
VRAC Vranov 144.03 329 PKP PKPdf 00 59 32.2 -2.4
comp=Z,388nm,0.9s,baz=66,slow=2.9,SNR=84
VRAC Vranov 144.03 329 ⇑*i*P PKPdf 00 59 32.0 -2.6
PVCC Panska Ves 144.09 332 *e*PKP PKPdf 00 59 32.4 -2.3
PVCC *e*PP PP 01 02 49.7 +1.0
PVCC AMS AMS 01 58 10.0
comp=Z,78µm,26.1s
PVCC Panska Ves 144.09 332 AMS AMS 00 31 00.0
comp=Z,110µm,14.1s
BRG Berggiesshubel 144.10 333 ⇑*i*P PKPdf 00 59 32.6 -2.1
BRG *i* 00 59 54.0
BRG PP PP 01 02 20.0 -29
BRG *i* 01 03 09.5
BRG *i* 01 04 03.0
BRG S SKKSac 01 09 11.0 -28
BRG *i* 01 09 12.0
BRG SS 01 13 33.0
BRG Berggiesshubel 144.10 333 *e*PKPbc PKPdf 00 59 31.8 -2.9
BRG Berggiesshubel 144.10 333 ⇑*i*P PKPdf 00 59 32.6 -2.1
comp=Z,1µm,0.9s
BRG *i* 00 59 54.0
comp=Z,3µm,1.6s
BRG PP PP 01 02 20.0 -29
BRG *i* 01 03 09.5
comp=Z,153nm,1.1s
BRG *i* 01 04 03.0
BRG S SKKSac 01 09 11.0 -28
BRG *i* 01 09 12.0
BRG SS 01 13 33.0
BRG
comp=N,157µm,12.4s
BRG
comp=E,90µm,13.2s
BRG
comp=Z,189µm,13.7s
VTS Vitosha 144.10 315 *e*P PKPdf 00 59 32.9 -2.1
VTS Vitosha 144.10 315 P PKPdf 00 59 32.6 -2.4
VTS Vitosha 144.10 315 ⇑*i*P PKPdf 00 59 33.0 -2.0
EAB Aberfoyle 144.12 354 *e*P PKPdf 00 59 30.7 -3.8
SMOL Smolenice 144.15 328 *i* PKP PKPdf 00 59 33.0 -1.9
SMOL *e*PP PP 01 02 48.4 -0.9
CLL Collm 144.16 335 ⇑*i*PKP PKPdf 00 59 31.9 -2.9
CLL *i* pPKP pPKPdf 00 59 44.6 -2.0
CLL LR LR
comp=Z,36µm,22.0s,MS7.1
CLL Collm 144.16 335 ⇑*i*PKIKP PKPdf 00 59 31.9 -2.9
CLL *i* 00 59 44.6
CLL pmax pmax
comp=Z,1µm,1.0s
CLL MLR MLR
comp=Z,36µm,22.0s,MS7.1
CLL Collm 144.16 335 ⇑*i*PKPdf PKPdf 00 59 31.9 -2.9
comp=Z,1µm,1.0s
CLL *e*PKPlp 00 59 30.0
comp=Z,42µm,22.4s
CLL *i* pPKPdf pPKPdf 00 59 44.6 -2.0
comp=Z,6µm,2.2s
CLL *e*PP PP 01 02 50.0 +0.9
comp=N,10µm,20.8s
CLL *e*PP PP 01 02 50.0 +0.9
comp=E,10µm,22.9s
CLL *e*PP PP 01 02 50.0 +0.9
comp=Z,20µm,17.8s
CLL *e*PPS 01 15 27.0

CLL L 02 04 00.0
comp=Z,36µm,22.0s
CLL Collm 144.16 335 *e*PKPpre 00 59 32.1
CLL *e*PKPdf PKPdf 00 59 34.4 -0.4
CLL *e*PKiKP PKiKP 00 59 36.8 -1.5
CLL *e*pPKPdf pPKPdf 00 59 45.1 -1.5
CLL *e*PP PP 01 02 46.0 -3.1
CLL *e*SKPdf SKPdf 01 03 09.4 +2.9
ESY Stoneypath 144.19 352 ⇑*e*P PKPdf 00 59 30.8 -3.9
MMB Musomiste 144.20 314 P PKPdf 00 59 32.2 -3.0
NVR Nevrokopi 144.21 313 *e*P 00 59 25.0
EDI Edinburgh 144.26 353 ⇑*e*P PKPdf 00 59 30.9 -3.9
EDI AMb AMB 00 59 36.3
comp=Z,706nm,1.2s
EDI AMS AMS 01 31 57.9
comp=Z,43µm,20.4s,MS7.2
EDI Edinburgh 144.26 353 P PKPdf 00 59 30.9 -3.9
EDI AMb AMB 00 59 36.3
comp=Z,706nm,1.2s
NRDL Niedersach Rie 144.30 338 *e*PKPbc PKPdf 00 59 32.8 -2.2
FBE Freiberg 144.31 334 *e*PKPbc PKPdf 00 59 32.8 -2.3
MODS Modra-Piesok 144.32 328 *e*PKP PKPdf 00 59 33.7 -1.5
MODS *e* 01 03 11.7
MODS Modra-Piesok 144.32 328 *e*S PP 01 03 08.6 +18
EAU Auchincon 144.36 353 ⇑*e*P PKPdf 00 59 31.5 -3.5
EBL Broad Law 144.39 353 ⇑*e*P PKPdf 00 59 31.0 -4.0
PRA Prague 144.48 332 PKP PKPdf 00 59 34.0 -1.4
PRU Pruhonice 144.49 332 *e*PKP PKPdf 00 59 33.5 -1.9
PRU *e*PP PP 01 02 53.4 +2.2
PRU AMS AMS 01 59 50.0
comp=Z,118µm,25.0s
PRU Pruhonice 144.49 332 AMS AMS 00 29 20.0
comp=Z,103µm,16.8s
PMSU Muirshiel 144.50 354 ⇑*e*P PKPdf 00 59 31.8 -3.5
PGBU Glenifferbraes 144.51 354 ⇑*e*P PKPdf 00 59 31.0 -4.2
PGBU AMb AMB 00 59 34.3
comp=Z,2µm,1.1s
KKB Krupnik 144.51 314 P PKPdf 00 59 34.1 -1.6
ZST Bratislava 144.52 328 *e*PKP PKPdf 00 59 33.9 -1.6
ZST *e* 01 03 02.8
ZST LR LR
comp=Z,41µm,24.2s,MS7.1
ZST *e* PP 01 03 02.8 +11
ZST Bratislava 144.52 328 *e*S SKPbc 01 03 12.3 +0.3
ZST Bratislava 144.52 328 *e*S PP 01 03 12.3 +21
OUR Ouranopolis 144.54 312 *e*P PKPdf 00 59 33.5 -2.3
ZKR Zakros 144.54 302 *e*P PKPdf 00 59 33.7 -2.3
APE Apeiranthos 144.54 306 *e*P PKPdf 00 59 32.2 -3.7
APE Apeiranthos 144.54 306 *i*P PKPdf 00 59 32.6 -3.3
TREC Trest 144.56 330 *e*PKP PKPdf 00 59 34.0 -1.5
TREC *e*PP PP 01 02 52.5 +0.9
TREC AMS AMS 01 57 20.0
comp=Z,90µm,31.1s
TREC Trest 144.56 330 AMS AMS 00 29 30.0
comp=Z,126µm,19.7s
XSO Sourhope Farm 144.56 352 ⇑*e*P PKPdf 00 59 32.5 -2.9
CLZ Clausthal 144.74 337 *e*PKPbc PKPdf 00 59 33.0 -2.8
SOH Sokhos 144.78 313 *e*P PKPdf 00 59 33.9 -2.3
SANT Santorini 144.80 304 *e*PKPdf PKPdf 00 59 33.6 -2.8
SANT Santorini 144.80 304 *e*P PKPdf 00 59 33.8 -2.6
THR1 Thera Island 144.80 304 *e*P PKPdf 00 59 33.8 -2.6
EKA Eskdalemuir Ar 144.83 353 PKP PKPdf 00 59 33.3 -2.5
comp=Z,443nm,0.7s,baz=358,slow=2.5,SNR=333
EKA SKPbc SKPbc 01 03 10.4 -2.1
comp=Z,42nm,1.0s,baz=21,slow=4.1,SNR=7.5
ESK Eskdalemuir 144.85 353 ⇑*e*P PKPdf 00 59 33.0 -2.8
ESK AMb AMB 00 59 37.2
comp=Z,1µm,1.2s
ESK AMS AMS 01 33 43.1
comp=Z,71µm,18.7s,MS7.5
ESK Eskdalemuir 144.85 353 P PKPdf 00 59 33.0 -2.8
ESK AMb AMB 00 59 37.2
comp=Z,1µm,1.2s
ESK Eskdalemuir 144.85 353 *e*PKIKP PKPdf 00 59 33.6 -2.3
ESK MLR MLR
comp=Z,34µm,22.0s,MS7.1
PLG Polygyros 144.90 312 *e*P PKPdf 00 59 34.2 -2.2
PLG Polygyros 144.90 312 *e*P PKPdf 00 59 28.5 -7.9
PAIG Paliouri 144.91 311 *e*P PKPdf 00 59 34.1 -2.4
KNT Kendrikon 144.95 313 *e*P PKPdf 00 59 34.4 -2.1
PKSM Moragy 144.96 324 ⇑P PKPdf 00 59 35.4 -0.9
PKSM Moragy 144.96 324 ⇑*i*P PKPdf 00 59 35.4 -1.0
ECK Cauldkaine Hil 144.98 352 ⇑*e*P PKPdf 00 59 33.6 -2.5
NPS Neapolis 144.98 302 *e*P PKPdf 00 59 32.0 -4.7
HORT Hortiatis 145.05 312 *e*P PKPbc 00 59 34.1 -2.0
AOS Alonnisos 145.06 310 *e*P PKPbc 00 59 34.7 -1.6
TANN Tannenbergstha 145.06 334 *e*PKPbc PKPbc 00 59 35.1 -0.7
GMK Mull of Kintyr 145.07 355 ⇑*e*P PKPbc 00 59 34.5 -1.2
VAY Valandovo 145.10 314 *e*P PKPbc 00 59 34.4 -1.9
VAY Valandovo 145.10 314 ⇑*i*PKP PKPdf 00 59 34.2 -2.5
VAY *i* 01 04 26.1
WERD Werda 145.10 334 *e*PKPbc PKPbc 00 59 35.1 -0.9
LAST Lasithi 145.12 302 *e*P PKPbc 00 59 36.2 -0.3
THE Thessaloniki 145.13 313 *e*P PKPbc 00 59 34.5 -1.9
WIT Witteveen 145.14 342 ⇑*i*PKiKP PKiKP 00 59 36.0 -4.3
comp=Z,10µm,1.2s
GUNZ Gunzen 145.16 334 *e*PKPbc PKPbc 00 59 35.6 -0.5
XAL Allendale 145.17 351 ⇑*e*P PKPbc 00 59 34.6 -1.4
STIP Stip 145.19 315 *e*P PKPbc 00 59 35.0 -1.5
STIP Stip 145.19 315 ⇑*i*PKP PKPdf 00 59 34.7 -2.2
NKC Novy Kostel 145.21 334 *e*PKP PKPdf 00 59 36.3 -0.3
NKC AMS AMS 01 07 00.0
comp=Z,38µm,20.6s
MOX Moxa 145.22 335 *e*PKP PKPdf 00 59 35.9 -0.8
comp=Z,2µm,1.2s
MOX
comp=Z,21µm,23.0s
MOX Moxa 145.22 335 *e*PKIKP PKPdf 00 59 35.9 -0.8
MOX pmax pmax
comp=Z,2µm,1.2s
MOX MLR MLR
comp=Z,21µm,23.0s,MS6.8
MOX Moxa 145.22 335 *e*PKPbc PKPbc 00 59 35.8 -0.6
CONA Conrad Observa 145.32 328 ⇑*i*PKPdf PKPdf 00 59 36.1 -0.8
comp=Z,19µm,2.9s,SNR=553
GCL Cushendall 145.38 355 ⇑*e*P PKPbc 00 59 35.2 -1.5
GCD Castle Douglas 145.38 353 ⇑*e*P PKPbc 00 59 34.9 -1.9
DIVS Divcibare 145.39 320 *e*P PKPbc 00 59 36.0 -1.1
GAL1 Galloway 145.46 354 ⇑*e*P PKPdf 00 59 35.1 -1.8
GAL1 AMb AMB 00 59 39.3
comp=Z,5µm,1.1s
GAL1 AMS AMS 01 31 07.2
comp=Z,56µm,19.8s,MS7.3
GAL1 Galloway 145.46 354 P PKPdf 00 59 35.1 -1.8
GAL1 AMb AMB 00 59 39.3
comp=Z,5µm,1.1s
NEO Neokhori 145.48 310 *e*P PKPdf 00 59 30.5 -7.0
XOR Xorichti 145.48 310 *e*P PKPdf 00 59 36.0 -1.5
MANZ Manzenberg 145.54 334 *e*PKPbc PKPbc 00 59 36.1 -1.3
IDI Anoyia 145.55 303 PKPbc PKPbc 00 59 36.9 -1.0
comp=Z,243nm,0.5s,baz=127,slow=5.0,SNR=101
IDI SKPbc SKPbc 01 03 14.7 -0.1
comp=Z,63nm,0.9s,baz=315,slow=2.9,SNR=3.9
KHC Kasperske Hory 145.55 332 *e*PKP PKPdf 00 59 35.8 -1.5
KHC LR LR
comp=Z,80µm,27.6s,MS7.3
KHC Kasperske Hory 145.55 332 *e*PKP PKPdf 00 59 35.8 -1.5
KHC AMS AMS 01 00 40.0
comp=Z,80µm,27.6s
KHC *e*PP PP 01 02 57.3 -0.2
KHC LR LR
comp=Z,133µm,13.5s,MS7.9
KHC Kasperske Hory 145.55 332 *e*S PP 01 02 57.3 -0.2
CKE Keswick 145.55 352 *e*P PKPdf 00 59 35.0 -2.1
SKO Skopje 145.55 316 *e*P PKPdf 00 59 37.8 +0.3
SKO Skopje 145.55 316 ⇑*i*PKP PKPdf 00 59 38.0 +0.5
SKO *i* 01 04 28.8
ATH Athens Observa 145.61 308 *e*P 00 59 26.0
ROTZ Rotzenmuhle 145.66 333 *e*PKPbc PKPbc 00 59 36.0 -1.8
LIT Litokhoron 145.68 312 *e*P PKPdf 00 59 36.0 -1.8
SIVA Sivas 145.68 302 *e*P PKPdf 00 59 37.8 -0.2
GEC2 GERESS Array S 145.70 331 *e*PKPbc PKPbc 00 59 36.4 -1.5
GERES GERESS Array B 145.70 331 PKPbc PKPbc 00 59 37.4 -0.5
comp=Z,928nm,0.9s,baz=34,slow=2.2,SNR=342
GERES SKPbc SKPbc 01 03 13.8 -0.9
comp=Z,47nm,0.9s,baz=35,slow=3.6,SNR=11
WTSB Winterswijk 145.84 341 ⇑*i*PKiKP PKiKP 00 59 36.5 -5.3
comp=Z,2µm,1.2s
WET Wettzell 145.85 332 *e*PKPbc PKPbc 00 59 36.2 -2.2
LKR Lokris 145.89 309 *e*P PKPdf 00 59 33.0 -5.2
ARSA Arzberg 145.95 328 ⇑*i*P PKPdf 00 59 36.7 -1.3
comp=Z,14µm,3.0s,SNR=55
HPK Haverah Park 145.96 350 ⇑*e*P PKPdf 00 59 36.4 -1.4

HPK AMb AMB 00 59 41.5
comp=Z,4µm,1.3s
HPK AMS AMS 01 34 43.9
comp=Z,66µm,17.5s,MS7.5
HPK Haverah Park 145.96 350 P PKPdf 00 59 36.4 -1.4
HPK AMb AMB 00 59 41.5
comp=Z,4µm,1.3s
KRUS Krusevo 145.96 315 *i* PKP PKPdf 00 59 37.0 -1.3
GIM North Isle of 146.00 354 *e*P PKPdf 00 59 36.4 -1.5
VAM Vamos 146.06 303 *e*P PKPdf 00 59 33.0 -5.6
BIA Bitola 146.07 314 *e*P PKPdf 00 59 36.1 -2.3
BIA Bitola 146.07 314 *i* PKP PKPdf 00 59 35.8 -2.7
KZN Kozani 146.09 313 *e*P PKPdf 00 59 32.0 -6.5
KOGS Kog 146.11 326 *e*PKPdf PKPdf 00 59 36.8 -1.6
KOGS *e*PP PP 01 03 00.0 -1.0
GRF Grafenberg Arr 146.13 334 *e*PKPbc PKPbc 00 59 36.7 -2.5
GRF *e*SKPdf SKPdf 01 03 14.8 +5.1
GRF *e*L 02 07 57.8
comp=Z,36µm,21.7s
GRFO Grafenberg 146.13 334 P PKPdf 00 59 37.9 -0.3
DID Didima 146.13 307 *e*P PKPdf 00 59 37.2 -1.4
FNA Florina 146.15 314 *e*P PKPdf 00 59 36.1 -2.5
LTK Loutraki 146.15 308 *e*P PKPdf 00 59 37.0 -1.6
MOA Molln 146.15 329 *i* P PKPdf 00 59 37.2 -1.2
comp=Z,17µm,4.0s,SNR=148
GMM Mts of Mourne 146.19 355 *e*P PKPdf 00 59 36.4 -1.8
AGG Agios Georgios 146.23 310 *e*P PKPdf 00 59 36.5 -2.2
THL Klokotos Trika 146.23 311 *e*P PKPdf 00 59 30.5 -8.2
KARN Karanos 146.28 303 *e*P PKPdf 00 59 37.9 -1.1
GVD Gavdhos 146.30 302 *e*PKPdf PKPdf 00 59 38.2 -0.8
GVD Gavdhos 146.30 302 *e*P PKPdf 00 59 37.5 -1.5
OHR Ohrid 146.38 315 *e*P PKPdf 00 59 39.1 +0.1
OHR Ohrid 146.38 315 *i* PKP PKPdf 00 59 36.8 -2.1
OHR *i* 01 04 37.8
LHO Holmfirth 146.39 351 ⇑*e*P PKPdf 00 59 36.7 -1.9
AWI1 Witton 146.46 347 *e*P PKPdf 00 59 37.1 -1.6
ABA1 Baconsthorpe 146.47 347 ⇑*e*P PKPdf 00 59 36.7 -2.0
GROS Grobnik 146.49 326 P PKPdf 00 59 39.3 +0.3
PUK Puka 146.53 317 *e*PN PKPdf 00 59 40.2 +1.0
DMUB Kingscourt 146.60 356 ⇑*i*P PKPdf 00 59 37.0 -1.9
KBN Korca 146.62 314 *e*PN PKPdf 00 59 40.4 +1.0
KBI1 Birley Grange 146.62 350 *e*P PKPdf 00 59 37.2 -1.7
VLI Veliai 146.62 306 *e*P PKPdf 00 59 32.0 -7.5
EVR Evrytania 146.64 310 *e*P PKPdf 00 59 34.0 -5.5
SISC Sisak 146.67 324 *i* P PKPdf 00 59 38.2 -1.1
AEU East Anglia Un 146.71 347 *e*P PKPdf 00 59 38.5 -0.7
TNS Taunus Mts 146.76 337 *e*PKPbc PKPbc 00 59 37.4 -3.6
VLX Vlachokerasia 146.82 307 *e*P PKPdf 00 59 38.6 -1.2
SELA Sela 146.84 309 *e*P PKPdf 00 59 41.6 +1.8
TIR Tirane 146.89 316 *e*P PKPdf 00 59 41.3 +1.5
TIR Tirane 146.89 316 *e*PN PKPdf 00 59 41.6 +1.8
KWE Weaver Farm 146.90 350 *e*P PKPdf 00 59 38.0 -1.4
OBKA Obir 146.94 327 ⇑*i*P PKPdf 00 59 38.5 -1.2
comp=Z,13µm,4.7s,SNR=44
JAN Janina 147.01 312 *e*P PKPdf 00 59 35.0 -5.1
CWF Charnwood Fore 147.08 350 *e*P PKPdf 00 59 40.1 +0.4
KBA Koelnbreinsper 147.14 329 *i* P PKPdf 00 59 38.6 -1.5
comp=Z,5µm,3.2s,SNR=122
TOD Tromm 147.14 336 PKP PKPdf 00 59 39.3 -0.6
HGN Heimansgroeve 147.15 340 ⇑*i*PKiKP PKiKP 00 59 38.4 -6.1
comp=Z,1µm,2.6s
DLF Lyons Farm 147.18 355 ⇑*i*P PKPdf 00 59 38.2 -1.7
DCN Croghan 147.18 356 ⇑*i*P PKPdf 00 59 38.2 -1.7
BEBN Eben Emael 147.20 341 PKPbc PKPbc 00 59 41.1 -1.1
DSB Dublin 147.22 355 *e*PKPdf PKPdf 00 59 38.4 -1.6
SBD1 Bryn Du 147.22 352 *e*P PKPdf 00 59 38.4 -1.6
ITM Ithomi 147.22 307 *e*P PKPdf 00 59 35.0 -5.5
RLS Riolos of Patr 147.23 309 *e*P PKPdf 00 59 34.0 -6.5
BOJS Bojanci 147.25 325 *e*PKPdf PKPdf 00 59 39.4 -0.9
MEM Membach 147.26 340 PKPbc PKPbc 00 59 41.7 -0.7
LJU Ljubljana 147.27 327 P PKPdf 00 59 39.3 -1.0
LJU Ljubljana 147.27 327 *e*PKPdf PKPdf 00 59 39.1 -1.2
LJU *e*PP PP 01 03 08.8 +0.9
ABH Alteburg 147.37 338 PKP PKPdf 00 59 39.3 -1.0
IGT Igoumenitsa 147.42 312 *e*P PKPdf 00 59 42.2 +1.5
STON Ston 147.46 320 *i* P PKPdf 00 59 38.6 -2.1
PYL PYLOS 147.46 307 *e*P PKPdf 00 59 42.2 +1.3
SRN Sarande 147.49 313 *e*PN PKPdf 00 59 42.6 +1.7
HLM1 Long Mynd 147.54 351 *e*P PKPdf 00 59 38.9 -1.6
CADS Cadrg 147.55 328 *e*PKPdf PKPdf 00 59 39.0 -1.7
UCC Uccle 147.59 342 PKPbc PKPbc 00 59 42.7 -0.7
VOY Vojsko 147.60 327 ⇑*e*P PKPdf 00 59 38.7 -2.1
VOY *e* 00 59 43.3
VOY *e*S 01 05 01.8
VOY Vojsko 147.60 327 *e*PKPdf PKPdf 00 59 38.7 -2.1
VOY *e* 00 59 43.3
KTD Kalmit 147.65 337 PKP PKPdf 00 59 41.0 +0.2
BCA Clavier 147.65 341 PKPbc PKPbc 00 59 42.2 -0.8
STU Stuttgart 147.67 335 *e*PKPbc PKPbc 00 59 39.6 -4.0
RUP Ruppelstein 147.69 338 PKP PKPdf 00 59 40.6 -0.3
KFL Anninata 147.70 310 *e*P PKPdf 00 59 43.4 +2.1
KEK Kerkira 147.71 313 *e*P PKPdf 00 59 34.0 -7.2
ABTA Abfaltersbach 147.78 330 ⇑*i*PKPdf PKPdf 00 59 39.3 -1.8
comp=Z,2µm,1.3s,SNR=149
WATA Walderalm 147.78 331 ⇑*i*P PKPdf 00 59 39.5 -1.5
comp=Z,824nm,1.2s,SNR=48
WTTA Wattenberg 147.80 331 *i* P PKPdf 00 59 40.0 -1.1
comp=Z,8µm,2.7s,SNR=43
VLS Valsamata 147.82 310 *e*P PKPdf 00 59 35.0 -6.4
SKDS Skadanscina 147.87 327 *e*PKPdf PKPdf 00 59 40.0 -1.3
TRI Trieste 147.89 327 P PKPdf 00 59 40.4 -0.9
SSW Stow on the Wo 147.92 350 *e*P PKPdf 00 59 40.1 -1.1
HAE Alders End 147.96 351 *e*P PKPdf 00 59 43.0 +1.8
SKP1 Kophill 147.97 348 *e*P PKPdf 00 59 40.2 -1.0
MOTA Moosalm 147.98 332 ⇑*i*P PKPdf 00 59 39.8 -1.6
comp=Z,1µm,1.0s,SNR=181
RETA Reutte 148.03 332 *i* PKPdf PKPdf 00 59 40.4 -1.1
comp=Z,6µm,3.1s,SNR=28
HTR Trewern Hill 148.03 351 *e*P PKPdf 00 59 39.5 -1.9
LANF Langenberg 148.03 337 PKP PKPdf 00 59 40.4 -1.0
SQTA Sankt Quirin 148.03 331 ⇑*i*P PKPdf 00 59 40.2 -1.3
comp=Z,1µm,1.4s,SNR=166
WLF Walferdange 148.03 339 *e*PKPdf PKPdf 00 59 41.2 -0.2
WLF Walferdange 148.03 339 PKPbc PKPbc 00 59 44.8 +0.2
WLF Walferdange 148.03 339 *e*PKPbc PKPbc 00 59 41.0 -3.6
MCH1 Michaelchurch 148.07 351 ⇑*e*P PKPdf 00 59 38.6 -2.8
MCH1 AMb AMB 00 59 46.5
comp=Z,2µm,1.1s
NVLJ Novalja 148.07 324 *i* P PKPdf 00 59 39.6 -2.1
GIVF Givet 148.07 341 *e*PKIKP PKPdf 00 59 40.3 -1.2
TFO1 Folkestone 148.14 346 *e*P PKPdf 00 59 44.1 +2.6
DOU Dourbes 148.15 341 PKPbc PKPbc 00 59 44.3 -0.6
BAIF Baives 148.30 342 *e*PKIKP PKPdf 00 59 40.6 -1.2
SWN1 Swindon 148.35 349 *e*P PKPdf 00 59 44.5 +2.6
BFO Black Forest 148.37 336 *e*PKPdf PKPdf 00 59 40.4 -1.6
BFO *e*PKPbc PKPbc 00 59 44.4 -1.1
BFO LR LR
comp=Z,33µm,22.0s,MS7.1
SPAK Spaichingen-Ko 148.37 335 PKP PKPdf 00 59 40.4 -1.6
STR Strasbourg 148.37 336 PKP PKPdf 00 59 41.9 -0.1
HGH Gray Hill 148.39 351 *e*P PKPdf 00 59 41.1 -0.8
FETA Feichten 148.40 332 ⇑*i*PKPdf PKPdf 00 59 41.1 -1.0
comp=Z,16µm,3.8s,SNR=156
MENF Mencas 148.41 344 PKP PKPdf 00 59 40.7 -1.3
DAVA Damuels 148.56 333 *i* P PKPdf 00 59 41.6 -0.8
comp=Z,6µm,2.7s,SNR=77
VAL Valentia 148.69 360 *e*P PKPdf 00 59 39.9 -2.5
CDF Champ du Feu 148.70 337 *e*PKIKP PKPdf 00 59 40.7 -1.8
LIENZ Kamor/St.Gall 148.72 333 ⇑*i*PKPdf PKPdf 00 59 40.8 -1.8
comp=Z,4µm,1.5s
WEIN Weingarten 148.75 334 ⇑*i*PKPdf PKPdf 00 59 40.8 -1.9
comp=Z,3µm,2.5s
SLE Schleitheim 148.76 335 ⇑*i*PKPdf PKPdf 00 59 40.9 -1.8
comp=Z,2µm,1.0s
SWK Warminster 148.77 350 *e*P PKPdf 00 59 42.9 +0.3
TRULL Truellikon 148.78 334 ⇑*i*PKPdf PKPdf 00 59 41.1 -1.6
comp=Z,3µm,1.6s
FELD Feldberg im Sc 148.86 335 PKP PKPdf 00 59 40.6 -2.2
FLACH Flaach 148.88 334 ⇑*i*PKPdf PKPdf 00 59 41.5 -1.4
comp=Z,4µm,2.4s
ECH Echery 148.90 337 PKP PKPdf 00 59 41.3 -1.6
DAVOX Davos/Dischmat 148.95 332 PKP PKPdf 00 59 42.2 -0.8
comp=Z,1µm,0.9s,baz=1.9,slow=1.0,SNR=64
DAVOX PKPbc PKPbc 00 59 47.0 -0.1
comp=Z,1µm,0.9s,baz=43,slow=5.0,SNR=243
DAVOX Davos/Dischmat 148.95 332 ⇑*i*PKPdf PKPdf 00 59 41.5 -1.5
comp=Z,2µm,0.6s
PLONS Plons/SG 148.96 333 ⇑*i*PKPdf PKPdf 00 59 41.6 -1.4
comp=Z,3µm,2.2s
ZUR Degenried 149.04 334 ⇑*i*PKPdf PKPdf 00 59 42.0 -1.1
comp=Z,4µm,2.6s
HEX Exmoor 149.09 352 *e*P PKPdf 00 59 40.9 -2.2

SULZ	Cheisacher	149.10 335	⇑	*i*PKPdf	PKPdf	00 59 42.3	-0.9	
	comp=Z,3μm,1.0s							
BERNI	Berninapass	149.17 332	⇑	*i*PKPdf	PKPdf	00 59 42.1	-1.3	
	comp=Z,2μm,1.1s							
MOF	Molkenrain	149.22 336		PKP	PKPdf	00 59 42.1	-1.3	
HTL	Hartland	149.25 352	⇑	*e*P	PKPdf	00 59 41.1	-2.2	
HTL				AMb	AMB	00 59 52.4		
	comp=Z,1μm,1.3s							
HTL	Hartland	149.25 352		P	PKPdf	00 59 41.1	-2.2	
HTL				AMb	AMB	00 59 52.4		
	comp=Z,1μm,1.3s							
LLS	Linth-Limmern	149.28 333	⇑	*i*PKPdf	PKPdf	00 59 42.3	-1.2	
	comp=Z,1μm,1.1s							
THEF	They Montfort	149.32 338		PKP	PKPdf	00 59 42.1	-1.5	
MUO	Muotathal	149.34 334	⇑	*i*PKPdf	PKPdf	00 59 42.4	-1.2	
	comp=Z,3μm,1.1s							
HINF	Hinteralfeld	149.35 337		*e*PKIKP	PKPdf	00 59 42.0	-1.6	
	comp=Z,235nm,1.2s							
VDL	Val di Lei	149.37 332	⇑	*i*PKPdf	PKPdf	00 59 42.4	-1.3	
	comp=Z,2μm,1.0s							
HAU	Haudompre	149.38 337		*e*PKIKP	PKPdf	00 59 42.1	-1.6	
HAU				*e*MLR	MLR			
	comp=Z,46μm,22.0s,MS6.9							
HAU	Haudompre	149.38 337		*e*PKIKP	PKPdf	00 59 42.1	-1.6	
HAU				MLR	MLR			
	comp=Z,46μm,22.0s,MS7.2							
BBS	Basel-Blauen	149.39 335		PKP	PKPdf	00 59 42.1	-1.6	
MEZF	Maizieres J'vi	149.40 339		*e*PKIKP	PKPdf	00 59 42.6	-1.1	
	comp=Z,269nm,1.0s,baz=42							
BALST	Balsthal	149.42 335	⇑	*i*PKPdf	PKPdf	00 59 42.4	-1.4	
	comp=Z,1μm,1.1s							
BNALP	Bannalp	149.50 334	⇑	*i*PKPdf	PKPdf	00 59 42.4	-1.5	
	comp=Z,2μm,0.9s							
BOURR	Bourrignon	149.56 336	⇑	*i*PKPdf	PKPdf	00 59 42.6	-1.4	
	comp=Z,2μm,0.9s							
HASLI	Hasliberg/Brie	149.71 334	⇑	*i*PKPdf	PKPdf	00 59 42.8	-1.4	
	comp=Z,2μm,0.9s							
DYA	Yadsworthy	149.72 351	⇑	*e*P	PKPdf	00 59 42.3	-1.8	
DYA				AMb	AMB	00 59 51.2		
	comp=Z,1μm,1.3s							
DYA				AMS	AMS	01 35 12.3		
	comp=Z,55μm,18.3s,MS7.4							
DYA	Yadsworthy	149.72 351		P	PKPdf	00 59 42.3	-1.8	
DYA				AMb	AMB	00 59 51.2		
	comp=Z,1μm,1.3s							
FUSIO	Fusio	149.73 333	⇑	*i*PKPdf	PKPdf	00 59 42.6	-1.7	
	comp=Z,3μm,1.0s							
LOMF	Lomont	149.75 336		PKP	PKPdf	00 59 43.0	-1.3	
CSA1	St Austell	149.93 353		*e*P	PKPdf	00 59 44.6	+0.2	
MUGIO	Muggio	149.99 332	⇑	*i*PKPdf	PKPdf	00 59 43.1	-1.6	
	comp=Z,895nm,0.6s							
WIMIS	Wimmis	150.00 334	⇑	*i*PKPdf	PKPdf	00 59 43.2	-1.5	
	comp=Z,838nm,1.0s							
TIP	Timpagrande	150.03 314		*e*PKPdf	PKPdf	00 59 43.4	-1.6	
CCA1	Carnmenellis	150.13 353		*e*P	PKPdf	00 59 44.1	-0.7	
CRQ2	Rosemanowes 2	150.15 353		*e*P	PKPdf	00 59 44.9	+0.1	
TORNY	Torny/Romont	150.17 335	⇑	*i*PKPdf	PKPdf	00 59 43.9	-1.1	
	comp=Z,3μm,1.2s							
LKBD	Leukerbad	150.22 334	⇑	*i*PKPdf	PKPdf	00 59 43.8	-1.2	
	comp=Z,880nm,1.0s							
CMA1	Manaccan	150.22 353		*e*P	PKPdf	00 59 43.3	-1.6	
BRANT	Les Verrieres	150.22 336	⇑	*i*PKPdf	PKPdf	00 59 44.3	-0.7	
	comp=Z,2μm,1.9s							
MMK	Mattmark	150.35 333	⇑	*i*PKPdf	PKPdf	00 59 44.0	-1.3	
	comp=Z,1μm,1.2s							
SENIN	Lac Senin/Sane	150.37 334	⇑	*i*PKPdf	PKPdf	00 59 44.3	-1.0	
	comp=Z,800nm,1.1s							
AIGLE	Aigle	150.53 335	⇑	*i*PKPdf	PKPdf	00 59 44.7	-0.8	
	comp=Z,1μm,1.1s							
GRYON	Gryon	150.54 335	⇑	*i*PKPdf	PKPdf	00 59 44.7	-0.9	
	comp=Z,945nm,1.1s							
DIX	Grande Dixence	150.56 334	⇑	*i*PKPdf	PKPdf	00 59 44.5	-1.1	
	comp=Z,739nm,1.0s							
JRS	Jersey	150.63 349		*e*P	PKPdf	00 59 46.1	+0.5	
GIMEL	St. Georges /	150.64 336	⇑	*i*PKPdf	PKPdf	00 59 44.9	-0.8	
	comp=Z,3μm,2.9s							
CABF	La Chapelle	150.64 336		*e*PKIKP	PKPdf	00 59 44.7	-1.0	
	comp=Z,368nm,1.2s							
VLC	Villacollemand	150.68 328		*e*PKPdf	PKPdf	00 59 43.8	-2.1	
VLC				*e*PKPbc	PKPbc	00 59 50.0	-1.3	
SALAN	Lac Salanfe	150.68 335	⇑	*i*PKPdf	PKPdf	00 59 44.9	-0.9	
	comp=Z,1μm,1.0s							
FLN	La Foliniere	150.71 346		*e*PKIKP	PKPdf	00 59 44.1	-1.6	
	comp=Z,471nm,1.1s,baz=352							
FLN				*e*MLR	MLR			
	comp=Z,24μm,20.5s,MS6.7							
FLN	La Foliniere	150.71 346		*e*PKIKP	PKPdf	00 59 44.1	-1.6	
FLN				MLR	MLR			
	comp=Z,24μm,20.5s,MS7.0							
EMV	Vieux Emosson	150.78 335	⇑	*i*PKPdf	PKPdf	00 59 45.0	-0.9	
	comp=Z,939nm,1.0s							
LDF	La Druitiere	150.78 346		*e*PKIKP	PKPdf	00 59 44.2	-1.7	
	comp=Z,343nm,1.2s							
LOR	Lormes	150.87 339		*e*PKIKP	PKPdf	00 59 44.7	-1.3	
	comp=Z,142nm,1.1s,baz=9.3							
LOR				*e*MLR	MLR			
	comp=Z,59μm,22.5s,MS7.0							
LOR	Lormes	150.87 339		*e*PKIKP	PKPdf	00 59 44.7	-1.3	
LOR				MLR	MLR			
	comp=Z,59μm,22.5s,MS7.3							
GRR	Gorron	151.14 346		*e*PKIKP	PKPdf	00 59 44.9	-1.5	
	comp=Z,272nm,1.1s							
SSF	Saint Saulge	151.17 340		*e*PKIKP	PKPdf	00 59 45.0	-1.5	
	comp=Z,164nm,1.0s							
HYF	Humbligny	151.26 341		*e*PKIKP	PKPdf	00 59 45.5	-1.1	
LPL	La Plagne	151.29 334		*e*PKIKP	PKPdf	00 59 45.7	-1.0	
LPG	La Plagne	151.30 334		*e*PKIKP	PKPdf	00 59 46.2	-0.5	
SMF	Signal de Mont	151.42 339		*e*PKIKP	PKPdf	00 59 45.2	-1.7	
	comp=Z,106nm,1.1s							
ASCN	Ascension	151.45 172		*e*PKPdf	PKPdf	00 59 46.4	-1.6	
ASCN				*e*PKPbc	PKPbc	00 59 53.2	-0.9	
ASCN				LR	LR			
	comp=Z,29μm,21.0s,MS7.1							
AVF	Avril sur Loir	151.46 340		*e*PKIKP	PKPdf	00 59 45.2	-1.7	
	comp=Z,64nm,1.1s							
SGMF	Saint Gilles	151.62 349		*e*PKIKP	PKPdf	00 59 45.3	-1.8	
	comp=Z,130nm,1.0s							
ROSF	Rostrenen	151.66 350		*e*PKIKP	PKPdf	00 59 45.3	-1.9	
	comp=Z,103nm,1.1s							
BNI	Bardonecchia	151.69 334		*e*PKPdf	PKPdf	00 59 46.5	-0.9	
BNI				*e*PKPbc	PKPbc	00 59 52.6	-1.1	
BGF	Bois d'Agland	151.82 340		*e*PKIKP	PKPdf	00 59 46.1	-1.4	
	comp=Z,210nm,1.2s							
MBDF	Montbardon	151.91 333		*e*PKIKP	PKPdf	00 59 46.3	-1.4	
QUIF	Quistinic	152.05 349		*e*PKIKP	PKPdf	00 59 46.1	-1.7	
PLDF	La Plantade	152.08 338		PKP	PKPdf	00 59 47.4	-0.5	
ORIF	Oris-en-Rattie	152.13 334		*e*PKIKP	PKPdf	00 59 46.5	-1.5	
ORIF				*e*MLR	MLR			
	comp=Z,48μm,22.5s,MS7.0							
SAOF	Saorge	152.16 331		PKP	PKPdf	00 59 47.7	-0.4	
AGO	Saint Agoulin	152.18 339		PKP	PKPdf	00 59 47.0	-1.1	
AUTN	L'Aution	152.21 331		PKP	PKPdf	00 59 48.0	-0.2	
TCF	Toulx Ste Croi	152.27 341		*e*PKIKP	PKPdf	00 59 46.7	-1.5	
	comp=Z,277nm,1.1s							
TOUF	Mont Tournerai	152.27 332		PKP	PKPdf	00 59 47.7	-0.6	
SBF	Sospel	152.31 331		*e*PKIKP	PKPdf	00 59 46.4	-1.9	
	comp=Z,706nm,1.8s							
LUCF	Luceram	152.32 331		PKP	PKPdf	00 59 47.7	-0.6	
MVIF	Mont Vial	152.41 331		PKP	PKPdf	00 59 47.2	-1.3	
REVF	Revere	152.43 331		PKP	PKPdf	00 59 47.8	-0.7	
COLF	Collangettes	152.45 338		PKP	PKPdf	00 59 47.4	-1.1	
VAE	Valguarnera	152.48 313		PKP	PKPdf	00 59 48.6	-0.2	
	comp=Z,9.8nm,0.8s,baz=124,slow=19,SNR=3.3							
VAE				PKPbc	PKPbc	00 59 57.2	+1.5	
	comp=Z,44nm,0.9s,baz=216,slow=3.9,SNR=8.5							
PYM	Petit Puy Mans	152.48 339		PKP	PKPdf	00 59 47.6	-0.9	
CALN	Calern	152.64 332		PKP	PKPdf	00 59 48.0	-0.8	
OCF	Saint Nazaire	152.64 335		PKP	PKPdf	00 59 47.8	-1.0	
OG26	St.-Nazaire-De	152.64 335		PKP	PKPdf	00 59 47.8	-1.0	
MFF	Saint Martin d	152.65 344		*e*PKIKP	PKPdf	00 59 47.2	-1.5	
	comp=Z,380nm,1.1s							
CORF	Corte	152.65 327		PKP	PKPdf	00 59 49.6	+0.7	
VIVF	Saint-Julien-l	152.66 336		*e*PKIKP	PKPdf	00 59 47.5	-1.3	
	comp=Z,393nm,1.6s							
VERF	Verneugheol	152.66 340		PKP	PKPdf	00 59 47.6	-1.2	
LBL	Lubilhac	152.85 338		PKP	PKPdf	00 59 48.4	-0.7	
FRF	La Foret Royal	152.90 332		*e*PKIKP	PKPdf	00 59 47.3	-1.9	
	comp=Z,154nm,1.2s							
FRNF	Fournols	152.95 339		PKP	PKPdf	00 59 48.7	-0.5	
SMRF	Simiane la Rot	153.02 334		*e*PKIKP	PKPdf	00 59 48.1	-1.3	
OSPF	L'Ospedale	153.09 326		PKP	PKPdf	00 59 45.8	-3.7	
LMR	La Mourre	153.14 332		*e*PKIKP	PKPdf	00 59 47.7	-1.9	
	comp=Z,311nm,1.6s							
RJF	Les Rejaudoux	153.36 341		*e*PKIKP	PKPdf	00 59 48.5	-1.3	
	comp=Z,248nm,1.4s							
RJF				*e*MLR	MLR			
	comp=Z,45μm,21.0s,MS7.0							
RJF	Les Rejaudoux	153.36 341		*e*PKIKP	PKPdf	00 59 48.5	-1.3	
RJF				MLR	MLR			
	comp=Z,45μm,21.0s,MS7.3							
MATF	Mathat	153.40 344		PKP	PKPdf	00 59 48.4	-1.4	
CAF	Calviac	153.53 339		*e*PKIKP	PKPdf	00 59 48.9	-1.2	
	comp=Z,262nm,1.4s							
OLEF	Ile d'Oleron	153.56 345		PKP	PKPdf	00 59 48.1	-2.0	
LASF	Ste Croix	153.63 336		*e*PKIKP	PKPdf	00 59 49.0	-1.2	
	comp=Z,286nm,1.5s							
LFF	La Frestale	153.93 341		*e*PKIKP	PKPdf	00 59 49.3	-1.3	
	comp=Z,221nm,1.1s							
VSL	Villasalto	154.48 322		*e*PKPdf	PKPdf	00 59 50.0	-1.6	
VSL				*e*PKPbc	PKPbc	00 59 59.6	-0.4	
MTLF	Montolieu	154.87 338		*e*PKIKP	PKPdf	00 59 50.4	-1.6	
	comp=Z,325nm,1.6s							
LRDF	Laroque-de-Fa	155.10 337		PKP	PKPdf	01 00 01.0	+8.7	
FILF	Fillols	155.41 336		PKP	PKPdf	00 59 51.4	-1.4	
CARF	Carcanieres	155.45 337		PKP	PKPdf	01 00 01.2	+8.4	
MLS	Moulis	155.59 339		PKP	PKPdf	01 00 01.0	+8.0	
VALF	Valcebollere	155.75 337		PKP	PKPdf	00 59 52.1	-1.1	
PLUZ	Luz	155.77 37		*e*PP	PKPab	01 00 22.7	+2.8	
EPF	Esparros	155.78 340		*e*PKIKP	PKPdf	00 59 51.9	-1.3	
	comp=Z,448nm,1.6s							
MELF	Melles	155.78 339		PKP	PKPdf	00 59 56.3	+3.0	
LABF	Labassere	155.85 341		PKP	PKPdf	00 59 52.1	-1.2	
REYF	Montagne du Re	155.97 341		PKP	PKPdf	00 59 52.5	-1.0	
RESF	Ens	155.98 340		PKP	PKPdf	00 59 53.0	-0.5	
VIEF	Viey	156.01 340		PKP	PKPdf	00 59 52.5	-1.1	
ATE	Arette	156.04 342		PKP	PKPdf	00 59 51.2	-2.4	
SJPF	Ste Jean	156.17 343		*e*PKIKP	PKPdf	00 59 52.5	-1.3	
	comp=Z,202nm,1.2s							
LARF	Larrau	156.17 342		PKP	PKPdf	00 59 53.0	-0.8	
ETSF	Etsaut	156.18 341		*e*PKIKP	PKPdf	00 59 53.0	-0.8	
	comp=Z,180nm,1.3s							
CALA	Caldeira	156.23 37		*e*PP	PKPdf	00 59 58.4	+4.4	
PVIA	Vitoria	156.25 35		*e*PP	PKPab	01 00 23.0	+1.0	
STGR	Santa Cruz	156.26 35		*e*PP	PKPab	01 00 22.6	+0.6	
ROSA	Rosais	156.39 36		*e*PP	PKPdf	00 59 55.1	+0.9	
PICO	Pico	156.44 37		*e*PP	PKPdf	00 59 58.9	+4.6	
PCND	Candelaria	156.44 37		*e*PP	PKPab	01 00 23.3	+0.5	
PAMA	Santo Amaro	156.45 36		*e*PP	PKPab	01 00 22.0	-0.9	
PTEI	Pico do Teixo	156.49 37		*e*PP	PKPab	01 00 23.1	+0.1	
PBOI	Pico dos Bois	156.52 37		*e*PP	PKPab	01 00 23.8	+0.7	
KEST	Kesra	156.85 315		PKP	PKPdf	00 59 53.8	-1.1	
	comp=Z,20nm,0.9s,baz=317,slow=2.1,SNR=4.1							
KEST				PKPab	PKPab	01 00 25.1	+0.4	
	comp=Z,31nm,0.8s,baz=317,slow=9.8,SNR=5.9							
ASBA	Santa Barbara	156.89 35		*e*PP	PKPab	01 00 25.3	+0.6	
PBIS	Biscoitos	156.90 35		*e*PP	PKPab	01 00 25.3	+0.5	
PPAD	Pico dos Padre	156.93 35		*e*PP	PKPab	01 00 25.4	+0.5	
PVNV	Vila Nova	156.95 35		*e*PP	PKPab	01 00 25.4	+0.4	
RIB2	Ribeirinha	157.01 35		*e*PP	PKPab	01 00 25.7	+0.5	
PFAV	Pico das Favas	157.03 35		*e*PP	PKPab	01 00 25.3	0.0	
PVER	Pico Vermelho	158.53 34		*e*PP	PKPab	01 00 32.9	+1.1	
CML	Cha da Macela	158.53 34		*e*PP	PKPab	01 00 31.9	0.0	
PMAT	Coroa da Mata	158.54 34		*e*PP	PKPab	01 00 26.5	-5.4	
LFA	Lagoa do Fogo	158.56 34		*e*PP	PKPab	01 00 21.5	-10	
MESC	Monte Escuro	158.57 34		*e*PP	PKPab	01 00 33.4	+1.4	
PFAD	Fenais da Ajud	158.60 33		*e*PP	PKPab	01 00 32.5	+0.4	
PRCH	Ribeira Ch	158.60 34		*e*PP	PKPab	01 00 33.0	+0.9	
VIF	Vila Franca	158.61 34		*e*PP	PKPab	01 00 33.5	+1.3	
FRA1	Furnas	158.65 34		*e*PP	PKPab	01 00 32.6	+0.2	
PCAB	Cabril	158.81 355		*e*PKPdf	PKPdf	00 59 55.7	-1.4	
PCAB	Cabril	158.81 355		*e*PKPab	PKPab	01 00 34.0	+1.2	
PVRL	Vila Real	159.21 354		*e*PKPdf	PKPdf	00 59 56.6	-1.0	
PVRL	Vila Real	159.21 354		*e*PKPab	PKPab	01 00 36.3	+1.7	
MVO	Moncorvo	159.24 352		*e*PKPdf	PKPdf	00 59 56.7	-0.9	
PTO	Porto	159.42 356		*e*PKPdf	PKPdf	00 59 57.2	-0.6	
PVIS	Viseu	159.78 354		*e*PKPdf	PKPdf	00 59 57.1	-1.2	
PVIS	Viseu	159.78 354		*e*PKPab	PKPab	01 00 36.9	-0.2	
ABA	Alger-Bouzarea	159.89 326		P	PKPdf	01 00 06.3	+7.8	
ATAF	Djebel Tarf	159.90 322		P	PKPdf	01 00 09.1	+11	
AKET	Djebel Ketaf	160.00 324		P	PKPdf	01 00 08.7	+10	
MTE	Manteigas	160.05 353		*e*PKPdf	PKPdf	00 59 57.6	-1.0	
MTE	Manteigas	160.05 353		*e*PKPdf	PKPdf	00 59 56.7	-1.8	
ESDC	Sonseca Array	160.11 345		PKP	PKPdf	00 59 57.2	-1.5	
	comp=Z,24nm,0.9s,baz=1.8,slow=3.3,SNR=16							
ESDC				PKPab	PKPab	01 00 38.1	-0.5	
	comp=Z,82nm,0.9s,baz=8.4,slow=3.5,SNR=11							
ESDC				PP	PP	01 04 09.2	-10	
	comp=Z,6.5nm,0.9s,baz=20,slow=4.2,SNR=3.9							
ESLA	Sonseca Array	160.11 345		*e*PKPdf	PKPdf	00 59 57.4	-1.3	
ADJB	Djebel Djouab	160.16 325		P	PKPdf	01 00 07.3	+8.5	
PAB	San Pablo	160.32 345		PFAKE		01 00 10.0	+11	
PAB				LR	LR			
	comp=Z,40μm,21.0s							
PCBR	Castelo Branco	160.60 353		*e*PKPdf	PKPdf	00 59 57.9	-1.3	
CART	Cartagena	161.08 336		*e*PKPdf	PKPdf	00 59 58.0	-1.8	
PESTR	Estremoz	161.57 352		*e*PKPdf	PKPdf	00 59 58.9	-1.4	
PMAFR	Mafra	161.64 357		*e*PKPdf	PKPdf	00 59 59.1	-1.2	
EVO	Evora	161.95 353	⇑	*i*PKIKP	PKPdf	00 59 59.4	-1.3	
	comp=Z,361nm,1.1s							
EVO				*e*MLR	MLR			
	comp=Z,56μm,22.8s							
EVO	Evora	161.95 353		*e*PKPdf	PKPdf	00 59 59.6	-1.1	
PBAR	Barrancos	162.18 351		*e*PKPdf	PKPdf	00 59 59.9	-1.0	
PBAR	Barrancos	162.18 351		*e*PKPab	PKPab	01 00 47.1	-0.5	
PBEJ	Beja	162.44 353		*e*PKPdf	PKPdf	01 00 00.3	-0.9	
PBEJ	Beja	162.44 353		*e*PKPab	PKPab	01 00 48.8	+0.1	
USTO	Oran	162.48 332		P	PKPdf	01 00 04.0	+2.7	
ODJA	Bouhanifia	162.63 330		P	PKPdf	01 00 02.0	+0.5	
PTEO	Sao Teotonio	163.00 355		*e*PKPdf	PKPdf	01 00 00.9	-0.9	
PTEO	Sao Teotonio	163.00 355		*e*PKPab	PKPab	01 00 51.4	+0.2	
PVAQ	Vaqueiros	163.03 352		*e*PKPdf	PKPdf	01 00 00.9	-0.9	
PBDV	Barranco-do-Ve	163.22 352		*e*PKPdf	PKPdf	01 00 01.6	-0.4	
MORF	Marmelete	163.23 354		*e*PKPdf	PKPdf	01 00 01.4	-0.6	
MORF	Marmelete	163.23 354		*e*PKPab	PKPab	01 00 53.0	+0.8	
PFVI	Vila Bisbo	163.42 355		*e*PKPdf	PKPdf	01 00 01.4	-0.8	
SFS	San Fernando	163.69 347		*e*PKPdf	PKPdf	01 00 02.0	-0.5	
LIC	Lamto	164.73 202	⇑	*i*PKIKP	PKPdf	01 00 02.5	-1.6	
	comp=Z,385nm,1.2s							
LIC				*e*MLR	MLR			
	comp=Z,71μm,22.5s							
LIC	Lamto	164.73 202	⇑	*i*PKPdf	PKPdf	01 00 02.5	-1.6	
LIC				LR	LR			
	comp=Z,36μm,22.5s							
DBIC	Dimbokro	165.09 203		PKP	PKPdf	01 00 02.8	-1.6	
	comp=Z,66nm,0.9s,baz=147,slow=1.5,SNR=39							
DBIC				PP	PP	01 04 29.4	-17	
	comp=Z,28nm,0.9s,baz=119,slow=11,SNR=2.9							
TORD	Torodi Ar. Bea	166.07 240		PKP	PKPdf	01 00 03.4	-1.7	
TORD				PKPab	PKPab	01 01 06.7	+1.2	
TORD				PP	PP	01 04 49.3	-3.5	
TORD	Torodi Ar. Bea	166.07 240		PKP	PKPdf	01 00 03.4	-1.7	
	comp=Z,49nm,0.9s,baz=10.0,slow=0.2,SNR=64							
TORD				PKPab	PKPab	01 01 06.7	+1.2	
	comp=Z,58nm,0.8s,baz=128,slow=2.8,SNR=4.8							
TORD				PP	PP	01 04 49.3	-3.5	
	comp=Z,14nm,0.9s,baz=130,slow=9.1,SNR=3.0							
PMPS	Porto Santo	166.57 21		*i* PKPdf	PKPdf	01 00 04.6	-0.4	
PMPS	Porto Santo	166.57 21		*e*PKPab	PKPab	01 01 06.7	-0.4	
MDT	Midelt	166.66 337		PKP	PKPdf	01 00 03.8	-1.3	
	comp=Z,76nm,0.9s,baz=38,slow=2.0							
MDT				PKPab	PKPab	01 01 06.7	-0.8	
	comp=Z,61nm,0.9s,baz=27,slow=1.5,SNR=5.6							
PMAR	Madeira	166.67 23		*i* PKPdf	PKPdf	01 00 05.2	+0.1	
PMAR	Madeira	166.67 23		*e*PKPab	PKPab	01 01 08.6	+1.1	
BBTS	Babate	171.88 135		PKP	PKPdf	01 00 07.9	-0.8	
	comp=Z,297nm,1.0s,baz=169,slow=1.1							
BBTS				PKPab	PKPab	01 01 29.6	-1.5	
	comp=Z,84nm,1.0s,baz=142,slow=3.8,SNR=2.3							

BJI ***25*** *00:41:49.5, 37.14N×137.47E, h8km, mB7.0, mb5.9, Ms7.2, Mse6.9*

IGIL ***25*** *00:41:55.7, 3728N×13660E, h5km, MS7.3*

ISCJB ***25*** *00:41:55.8±0.5, 3732N±001×13657E±001, h4km±3km, mb6.0/304, MS7.0/75, Error ellipse: s-maj=2.6km s-min=1.8km az=154.6*

IDC ***25*** *00:41:56.7±0.3, 3735N×13649E, h0km, mb5.5/35, mb1 5.6/40, mb1mx5.6/40, mbtmp5.5/40, ML4.5/5, MS6.8/14, Ms1 6.9/14, ms1mx6.5/34, Error ellipse: s-maj=12.6km s-min=9.2km az=69.0*

JMA ***25*** *00:41:57.9, 3722N×13669E, h11km±1km, M6.9 Broadband fault plane solution: P waves. NP1: φs155.00000°, δ56.00000°, λ13.00000°. NP2: φs58.00000°, δ79.00000°, λ145.00000°. Principal axes: T Plg32.0000°, Azm11.0000°; N Plg54.0000°, Azm222.0000°; P Plg15.0000°, Azm111.0000°;*

NEIC ***25*** *00:41:57.8±0.1, 37.34N×136.59E, h8km, mb6.1/188, ME6.5, MS6.8/17, MW6.6, MW6.7(NIED), MW6.7(MOS) Error ellipse: s-maj=3.0km s-min=2.8km az=179.0 Broadband fault plane solution: P waves. NP1: φs200.00000°, δ40.00000°, λ90.00000°. NP2: φs20.00000°, δ50.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm290.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm110.0000°; Moment Tensor Solution. s33 Moment tensor: Scale 10^18 Nm; Mrr6.95; Mθθ-1.78; Mφφ-5.16; Mrθ4.27; Mθφ-5.01; Mφr0.45; Best double couple: Mo9.10000×10^18 NP1: φs193.00000°, δ40.00000°, λ52.00000°. NP2: φs58.00000°, δ60.00000°, λ117.00000°. Principal axes: T 8.8600, Plg64.0000°, Azm16.0000°; N 0.4300, Plg23.0000°, Azm223.0000°; P -9.2900, Plg11.0000°, Azm129.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC At least one person killed and 359 injured and more than 13,556 houses destroyed. More than 60 landslides occurred on and near the Noto-hanto. Roads damaged and cracks occurred in the landing field of Noto airport. Train service and water supply were interrupted. A tsunami was generated with maximum observed wave heights [peak-to-trough] of 22 cm at Suzushi Nagahashi, 18 cm at Kanazawa and 6 cm Toyama. Felt [V] at Kanazawa; [III] at Nagoya and Osaka; [II] at Kobe, Kyoto, Tokyo and Yokohama. Recorded [6U JMA] in Ishikawa Prefecture, [3 JMA] in much of central Honshu and [2 JMA] throughout Honshu. Also recorded [1 JMA] in southwestern Hokkaido.

GCMT ***25*** *00:41:57.8±0.1, 3728N×13661E, h12km, MW6.7/94, Moment Tensor Solution. s66,c135; s94,c319; Duration: 5±3 Moment tensor: Scale 10^19Nm; Mrr1.01±.01; Mθθ0.19±.01; Mφφ-1.20±.01; Mrθ0.01±.04; Mθφ-0.68±.01; Mφr-0.30±.04; Best double couple: Mo1.28500×10^19 NP1: φs34.00000°, δ40.00000°, λ108.00000°. NP2: φs192.00000°, δ52.00000°, λ76.00000°. Principal axes: T 1.0640, Plg77.0000°, Azm51.0000°; N 0.4390, Plg11.0000°, Azm201.0000°; P -1.5070, Plg6.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

CRAAG ***25*** *00:41:57.9, 3761N×13652E, Mw7.1*

MOS ***25*** *00:41:58.5±0.9, 3733N×13660E, h23km, mb6.2/139, MS7.0/50, Error ellipse: s-maj=6.4km s-min=3.1km az=112.4*

BGS ***25*** *00:41:58.1, 3721N×13604E, h10km, mb6.0*

NIED ***25*** *00:42:00, 3730N×13650E, h8km, Mw6.7 Best double couple: Mo1.36000×1019 NP1: φs173.00000°, δ48.00000°, λ34.00000°. NP2: φs58.00000°, δ66.00000°, λ132.00000°.*

SZGRF ***25*** *00:42:01.2, 3774N×13741E, h33km, mb6.1, MS7.1, Near west coast of eastern Honshu, Japan*

ISC 25 00:41:57.0±0.5, 3733N±002×13657E±001, h3km±3km, h21km±2.1km: pP-P, n1741, c0s86/1716, mb6.0/304, MS7.0/75, 622C-197D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	Hakui	0.44	157	⇑	*i*	P	Pg	00 42 04.2	-1.3
JHG	Hegura jima	0.58	28	⇑	*i*	P	Pg	00 42 10.3	+2.0
JSZ	Suzu	0.64	79	⇓	*i*	P	Pg	00 42 09.0	-0.3
JSZ					*e*	S	Sg	00 42 17.1	-0.6
JTT	Ttatey	0.95	140	⇓	*i

ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,509μm,18.4s
ASAJ Asahikawa 8.17 32 Pn **Pn 00 43 56.9 +0.4**
comp=Z,1.1nm,0.3s,baz=233,slow=12,SNR=9.7
ASAJ Sn **Sn 00 45 41.5 +12**
baz=322,slow=19,SNR=1.1
ASAJ LR LR 00 47 10.0
comp=Z,509μm,18.4s,baz=240,slow=38
MDJ Mudanjiang 8.98 326 P **Pn 00 44 09.3 +1.7**
MDJ S **Sn 00 45 52.5 +3.2**
MDJ AMB AMB
comp=Z,92nm,0.7s
MDJ LR LR
comp=N,1667μm,13.9s
MDJ LR LR
comp=E,1267μm,13.5s
MDJ LR LR
comp=Z,733μm,18.0s
YUK Yuzh-Kuril'sk 9.72 44 *c iP* **Pn 00 44 18.0 +0.2**
YUK *i* S **Sn 00 46 05.0 -2.5**
YUK pmax pmax
comp=N,75μm,5.0s
YUK pmax pmax
comp=E,50μm,5.0s
YUK pmax pmax
comp=Z,55μm,5.0s
YUK pmax pmax
comp=N,4μm,0.8s
YUK pmax pmax
comp=E,4μm,0.8s
YUK pmax pmax
comp=Z,3μm,0.8s
YUK smax
comp=N,70μm,8.0s
YUK smax
comp=E,102μm,8.0s
YUK MLR MLR
comp=N,562μm,16.0s
YUK MLR MLR
comp=E,646μm,16.0s
YUK MLR MLR
comp=Z,590μm,16.0s
CN2 Changchun 10.64 311 ⇓P **Pn 00 44 35.8 +5.5**
CN2 *e*S **Sn 00 46 43.3 +13**
JAM Amami Oshima 10.65 215 P **Pn 00 44 32.5 +2.0**
YSS Yuzh-Sakhalins 10.65 24 ⇑Pn **Pn 00 44 34.6 +4.2**
YSS Yuzh-Sakhalins 10.65 24 *α iP* **Pn 00 44 34.8 +4.4**
YSS *i* S **Sn 00 46 37.0 +6.8**
YSS pmax pmax
comp=E,2μm,1.2s
YSS pmax pmax
comp=Z,4μm,1.2s
YSS pmax pmax
comp=N,3μm,0.9s
YSS pmax pmax
comp=N,91μm,7.0s
YSS pmax pmax
comp=E,41μm,7.0s
YSS pmax pmax
comp=Z,143μm,7.0s
YSS MLR MLR
comp=N,420μm,13.0s
YSS MLR MLR
comp=Z,663μm,13.0s
YSS MLR MLR
comp=E,383μm,12.0s
SNY Shenyang 10.98 298 ⇓P **Pn 00 44 40.6 +5.6**
SNY AP 00 44 44.3
SNY XP 00 44 47.3
SNY PP 00 44 51.5
SNY AMB AMB
comp=Z,1μm,2.5s
SNY AMB AMB
comp=Z,88μm,11.2s
SNY LR LR
comp=N,317μm,12.3s
SNY LR LR
comp=E,549μm,18.3s
SNY LR LR
comp=Z,647μm,19.8s
HABR Khabarovsk 11.19 355 ⇑*iP* **Pn 00 44 41.8 +4.0**
HABR *e* 00 46 48.8
HABR pmax pmax
comp=Z,2μm,1.8s
HABR MLR MLR
comp=Z,820μm,14.0s
CBIJ Chichi jima 11.26 153 Pn **Pn 00 44 39.3 +0.5**
comp=Z,22nm,0.3s,baz=23,slow=2.8,SNR=9.4
CBIJ Sn **Sn 00 46 43.9 -1.4**
comp=Z,2.4nm,0.3s,baz=288,slow=19,SNR=2.1
CBIJ LR LR 00 47 48.5
comp=Z,178μm,21.2s,baz=129,slow=31
KUR Kuril'sk 11.59 44 *i* P **Pn 00 44 42.0 -1.3**
KUR S **Sn 00 46 47.0 -6.2**
KUR pmax pmax
comp=N,570nm,0.9s
KUR pmax pmax
comp=E,1μm,0.9s
KUR pmax pmax
comp=Z,7μm,0.9s
KUR smax
comp=N,2μm,1.0s
KUR smax
comp=E,750nm,1.0s
DL2 Dalian 11.88 282 *i* P **Pn 00 44 51.4 +4.1**
DL2 S **Sn 00 47 06.6 +6.3**
DL2 LG1 00 48 11.8
DL2 LG2 00 48 46.3
DL2 AMB AMB
comp=Z,470nm,1.1s
DL2 AMB AMB
comp=Z,47μm,9.8s
DL2 LR LR
comp=N,266μm,12.2s
DL2 LR LR
comp=E,261μm,17.7s
DL2 LR LR
comp=Z,352μm,17.8s
UGL Uglegorsk 12.40 17 *α iP* **Pn 00 44 59.5 +5.1**
UGL *e* 00 47 25.0
UGL pmax pmax
comp=N,3μm,1.5s
UGL pmax pmax
comp=E,3μm,1.5s
UGL pmax pmax
comp=Z,15μm,1.5s
UGL pmax pmax
comp=N,160μm,8.0s
UGL pmax pmax
comp=E,95μm,8.0s
UGL pmax pmax
comp=Z,160μm,8.0s
JOW Kunigami 12.61 216 Pn **Pn 00 44 57.1 -0.2**
comp=Z,6.8nm,0.3s,baz=31,slow=9.9,SNR=24
JOW Sn **Sn 00 47 29.9 +12**
comp=Z,1.5nm,0.3s,baz=287,slow=17,SNR=2.2
SSE Sheshan 14.16 248 ⇓P **Pn 00 45 22.0 +3.5**
SSE XP sP 00 45 26.9 -0.4
SSE S **Sn 00 48 03.6 +7.4**
SSE AMB AMB
comp=Z,130nm,1.5s
SSE AMB AMB
comp=Z,45μm,12.0s
SSE LR LR
comp=N,834μm,17.8s
SSE LR LR
comp=E,405μm,17.8s
SSE LR LR
comp=Z,358μm,13.3s
NJ2 Nanjing 15.49 255 *eP* **Pn 00 45 39.5 +3.1**
NJ2 AP pP 00 45 42.3 +0.5
NJ2 XP sP 00 45 45.1 +3.0
NJ2 PP 00 45 47.6
NJ2 S **Sn 00 48 30.0 +1.4**
NJ2 AMB AMB
comp=Z,78μm,5.9s
NJ2 LR LR
comp=N,1030μm,15.6s
NJ2 LR LR
comp=E,579μm,19.8s
NJ2 LR LR
comp=Z,578μm,19.8s
TIA Tai'an 15.63 272 ⇓P **Pn 00 45 42.1 +3.9**
TIA S **Sn 00 48 43.3 +11**

TIA AMB AMB
comp=Z,3μm,2.5s
TIA AMB AMB
comp=Z,12μm,3.0s
TIA LR LR
comp=N,290μm,14.0s
BJI Beijing 16.15 286 P **Pn 00 45 48.1 +3.1**
BJI AP pP 00 45 57.6 +8.6
BJI XP sP 00 46 01.6 +12
BJI S **Sn 00 48 58.1 +14**
BJI AMB AMB
comp=Z,133μm,7.5s
BJI LR LR
comp=N,278μm,12.1s
BJI LR LR
comp=E,306μm,12.4s
BJI LR LR
comp=Z,475μm,29.0s
BJT Baijiatuau 16.16 286 *eP* **Pn 00 45 48.2 +3.1**
comp=Z,10μm,1.9s
OKH Okha 16.81 13 ⇑*iP* **Pn 00 45 54.0 +0.7**
OKH pmax pmax
comp=Z,77μm,8.0s
HIA Hailar 17.05 320 *eP* **Pn 00 45 58.2 +1.8**
comp=Z,4μm,1.8s
HIA Hailar 17.05 320 *eP* **Pn 00 45 58.2 +1.9**
HIA pmax pmax
comp=Z,4μm,1.8s
TATO Taipei 17.81 231 *eP* **Pn 00 46 07.2 +1.2**
comp=Z,313nm,0.9s
TATO Taipei 17.81 231 ⇓P **Pn 00 46 10.4 +4.4**
SNR=9.3
TATO Taipei 17.81 231 ⇓Pn **Pn 00 46 10.4 +4.4**
SNR=9.3
YHNB Yeheng 18.11 230 *eP* **Pn 00 46 12.0 +2.4**
NACB Ninganchiao 18.34 229 *eP* **Pn 00 46 13.7 +1.1**
TIY Taiyuan 19.14 279 P **Pn 00 46 24.4 +2.3**
TIY PP 00 46 41.6
TIY S **Sn 00 50 02.1 +5.1**
TIY AMB AMB
comp=Z,106μm,9.8s
TIY LR LR
comp=N,282μm,13.1s
TIY LR LR
comp=E,232μm,12.5s
TIY LR LR
comp=Z,280μm,13.6s
SKR Severo-Kuril's 19.31 40 *eP* **Pn 00 46 22.0 -2.0**
SKR *i* S **Sn 00 49 54.0 -6.8**
SKR pmax pmax
comp=N,670nm,1.0s
SKR pmax pmax
comp=E,450nm,1.0s
SKR pmax pmax
comp=Z,2μm,1.0s
SKR pmax pmax
comp=N,50μm,10.0s
SKR pmax pmax
comp=E,70μm,10.0s
SKR pmax pmax
comp=Z,64μm,10.0s
SKR smax
comp=N,27μm,12.0s
SKR smax
comp=E,69μm,12.0s
SKR smax
comp=N,4μm,2.5s
SKR smax
comp=E,4μm,2.5s
SKR MLR MLR
comp=N,240μm,16.0s
SKR MLR MLR
comp=E,167μm,16.0s
SKR MLR MLR
comp=Z,303μm,16.0s
WHN Wuhan 19.62 256 *eP* **Pn 00 46 27.5 -0.4**
WHN S **Sn 00 50 13.8 +5.2**
WHN LR LR
comp=Z,949μm,15.0s
QZH Quanzhou 19.69 236 ⇑*iP* **Pn 00 46 30.8 +2.0**
QZH S **Sn 00 50 07.3 -3.1**
QZH AMB AMB
comp=Z,2μm,1.1s
QZH AMB AMB
comp=Z,51μm,5.9s
QZH LR LR
comp=N,240μm,11.8s
QZH LR LR
comp=E,567μm,13.4s
QZH LR LR
comp=Z,779μm,13.2s
HHC Hu-ho-hao-te 19.70 288 *eP* **Pn 00 46 29.8 +0.9**
HHC AP pP 00 46 38.1 +10
HHC XP sP 00 46 42.6 +14
HHC PP 00 46 48.3
HHC S **Sn 00 50 12.5 +1.9**
HHC AMB AMB
comp=Z,109μm,8.7s
HHC LR LR
comp=N,212μm,15.8s
HHC LR LR
comp=E,246μm,13.9s
HHC LR LR
comp=Z,207μm,11.9s
BTO Baotou 20.87 287 *eP* **P 00 46 41.3 +1.1**
BTO S **S 00 50 44.3 +11**
BTO LR LR
comp=N,101μm,13.2s,MS6.5
BTO LR LR
comp=E,45μm,10.8s,MS6.5
NRGR Nerungri 20.89 341 *eP* **P 00 46 40.6 +0.3**
CLNS Chul'man 21.01 342 *c iP* **P 00 46 41.8 +0.3**
CLNS *e**PP 00 46 51.3
CLNS *e*PPP 00 47 00.7
CLNS *e*S **S 00 50 23.8 -12**
CLNS *e*SS 00 51 13.7
CLNS pmax pmax
comp=Z,1μm,0.7s,mb6.3
CLNS pmax pmax
comp=N,665nm,1.1s
CLNS pmax pmax
comp=E,154nm,1.1s
CLNS smax
comp=N,216nm,1.3s
CLNS smax
comp=Z,135nm,1.8s
CLNS smax
comp=E,155nm,1.1s
CLNS MLR MLR
comp=Z,407μm,13.0s,MS7.0
CLNS MLR MLR
comp=N,367μm,12.0s,MS7.1
CLNS MLR MLR
comp=E,298μm,12.0s,MS7.1
CIT Chita 21.86 320 ⇑*iP* **P 00 46 52.1 +1.4**
CIT *e* 00 47 19.2
CIT *e* 00 50 47.1
CIT *e* 00 51 32.2
PET Petropavlovsk 21.97 37 *eP* **P 00 46 51.0 -0.8**
comp=E,5μm,1.9s,mb6.7
PET LR LR
comp=Z,248μm,19.0s,MS6.6
PET Petropavlovsk 21.97 37 *α iP* **P 00 46 51.0 -0.8**
PET *i* S **S 00 50 49.7 -5.1**
PET *e* 00 58 05.0
PET pmax pmax
comp=Z,50μm,7.4s
PET pmax pmax
comp=Z,53μm,10.3s
PET pmax pmax
comp=Z,912nm,1.1s,mb6.1
PET smax
comp=E,48μm,10.4s
PET smax
comp=N,57μm,22.2s
PET smax
comp=E,93μm,19.8s
PET MLR MLR
comp=Z,229μm,17.0s,MS6.7
PET MLR MLR
comp=Z,229μm,17.0s
XAN Xi'an 22.66 270 P **P 00 46 58.8 -0.7**
XAN LR LR
comp=N,146μm,18.8s,MS6.7
XAN LR LR
comp=E,262μm,20.8s,MS6.7

XAN LR LR
comp=Z,297μm,18.1s,MS6.8
SGCP Mt. Cagua 22.90 218 *eP* **P 00 47 04.8 +2.8**
ENH Enshi 23.53 261 *eP* **P 00 47 08.8 +0.2**
comp=Z,1.5nm,0.8s
ENH LR LR
comp=Z,3.0nm,22.0s
PIP Pasuquin 23.55 221 ⇑*eP* **P 00 47 08.7 -0.1**
PIP *e*S **S 00 51 28.4 +5.0**
APYP Conner 23.62 219 *eP* **P 00 47 08.5 -1.0**
ULN Ulaanbaatar 24.00 305 PFAKE 00 47 20.0 +7.1
ULN LR LR
comp=Z,460μm,20.0s,MS7.0
MA2 Magadan 24.07 18 *eP* **P 00 47 13.2 -0.1**
comp=Z,1μm,1.0s,mb6.3
MA2 LR LR
comp=Z,104μm,19.0s,MS6.3
MA2 Magadan 24.07 18 *eP* **P 00 47 13.1 -0.2**
CAUP Cauayan 24.12 217 *eP* **P 00 47 15.8 +1.7**
SONM Songino Array 24.43 305 P **P 00 47 18.0 +1.3**
SONM PcP PcP 00 50 56.0 +0.4
SONM Songino Array 24.43 305 P **P 00 47 18.0 +1.3**
comp=Z,130nm,0.7s,baz=112,slow=7.1,SNR=215
SONM PcP PcP 00 50 56.0 +0.4
comp=Z,17nm,0.5s,baz=120,slow=2.2,SNR=15
SONM LR LR 00 57 10.5
comp=Z,561μm,19.1s,MS7.1,baz=105,slow=38
SONM P3KPbc 01 20 34.8
comp=Z,4.6nm,1.0s,baz=263,slow=4.7,SNR=5.7
HKC Hong Kong Obse 24.45 238 ⇑*iP* **P 00 47 18.0 +0.9**
HKC *i* S **S 00 51 38.0 +0.1**
HKC Hong Kong Obse 24.45 238 *eP* **P 00 47 18.0 +0.9**
GZH Guangzhou 24.50 241 P **P 00 47 11.9 -5.7**
GZH S **S 00 51 27.8 -11**
GZH LR LR
comp=N,944μm,17.7s,MS7.5
GZH LR LR
comp=E,902μm,17.7s,MS7.5
GZH LR LR
comp=Z,424μm,12.7s,MS7.1
GUMO Guam 24.78 160 *eP* **P 00 47 18.6 -1.5**
comp=Z,3μm,1.1s,mb6.7
GUMO Guam 24.78 160 *eP* **P 00 47 18.6 -1.6**
GUMO pmax pmax
comp=Z,3μm,1.1s,mb6.7
YAK Yakutsk 25.09 352 ⇑*iP* **P 00 47 21.7 -0.9**
comp=Z,2μm,0.9s,mb6.6
YAK LR LR
comp=Z,192μm,21.0s,MS6.6
YAK Yakutsk 25.09 352 *c iP* **P 00 47 23.2 +0.6**
YAK *e*PPP 00 48 03.3
YAK *e*S **S 00 51 45.4 -2.2**
YAK pmax pmax
comp=Z,1μm,0.9s,mb6.5
YAK pmax pmax
comp=N,1μm,1.4s
YAK pmax pmax
comp=E,492nm,1.7s
YAK pmax pmax
comp=Z,21μm,10.2s
YAK pmax pmax
comp=N,15μm,5.8s
YAK pmax pmax
comp=E,5μm,5.0s
YAK smax
comp=E,60μm,9.0s
YAK smax
comp=Z,45μm,16.0s
YAK smax
comp=N,154μm,10.0s
YAK MLR MLR
comp=Z,516μm,16.0s,MS7.1
YAK MLR MLR
comp=N,396μm,15.0s,MS7.2
YAK MLR MLR
comp=E,229μm,10.0s,MS7.2
BCPH Baguio City Da 25.20 218 ⇓*iP* **P 00 47 24.8 +0.8**
BALP Baler 25.28 216 *eP* **P 00 47 23.3 -1.4**
BOD Bodaibo 25.31 331 ⇓*iP* **P 00 47 23.8 -0.8**
BOD pmax pmax
comp=Z,376nm,1.7s,mb5.6
BOLP Bolinao 25.54 220 *eP* **P 00 47 27.4 +0.4**
PCPH Palayan 25.66 216 ⇑*eP* **P 00 47 29.6 +1.4**
SCZP Santa Cruz 26.05 219 *eP* **P 00 47 32.6 +0.9**
PVCP Virac 26.11 208 *eP* **P 00 47 34.0 +1.7**
LZH Lanzhou 26.20 277 ⇑P **P 00 47 33.1 +0.2**
LZH AP pP 00 47 36.1 +2.4
LZH XP sP 00 47 37.8 +3.8
LZH PP 00 48 15.0
LZH S **S 00 52 05.0 -0.6**
LZH AMB AMB
comp=Z,3μm,1.3s,mb6.6
LZH AMB AMB
comp=Z,13μm,6.0s
LZH LR LR
comp=N,345μm,14.1s
LZH LR LR
comp=Z,483μm,15.2s,MS7.2
GQP Guinayangan 26.51 212 ⇓*eP* **P 00 47 36.1 +0.2**
NBP Mount Natib 26.69 217 ⇑*eP* **P 00 47 36.0 -1.5**
CNP Catarman 26.92 206 *eP* **P 00 47 41.5 +2.0**
TGY Tagaytay City 27.00 215 ⇑*eP* **P 00 47 43.8 +3.5**
IRK Irkutsk 27.06 314 *eP* **P 00 47 41.0 +0.4**
IRK *e* 00 48 36.6
IRK pmax pmax
comp=Z,1μm,1.6s,mb6.2
ZAK Zakamensk 27.07 309 *eP* **P 00 47 41.6 +1.0**
ZAK pmax pmax
comp=Z,238nm,1.1s,mb5.6
TLY Talaya 27.24 312 *eP* **P 00 47 42.5 +0.4**
comp=Z,845nm,1.2s,mb6.2
TLY LR LR
comp=Z,224μm,21.0s,MS6.7
TLY Talaya 27.24 312 *c iP* **P 00 47 42.7 +0.5**
TLY *e* 00 48 37.7
TLY *e*S **S 00 52 24.7 +2.9**
TLY *e*SS 00 53 39.6
TLY pmax pmax
comp=Z,875nm,1.1s,mb6.2
TLY MLR MLR
comp=Z,193μm,16.0s,MS6.8
TLY Talaya 27.24 312 P **P 00 47 43.4 +1.2**
SNR=442
TLY Talaya 27.24 312 P **P 00 47 43.4 +1.2**
SNR=442
SEY Seymchan 27.40 16 ⇑*eP* **P 00 47 44.2 +0.7**
SEY Seymchan 27.40 16 ⇑*eP* **P 00 47 44.1 +0.6**
GYA Guiyang 27.50 255 ⇑*iP* **P 00 47 44.3 -0.5**
GYA AP pP 00 47 48.3 +2.8
GYA XP sP 00 47 51.1 +5.3
GYA PP 00 48 33.4
GYA PPP 00 48 45.8
GYA AMB AMB
comp=Z,160nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,18μm,10.6s
GYA LR LR
comp=N,167μm,12.6s,MS6.8
GYA LR LR
comp=E,117μm,15.9s,MS6.8
GYA LR LR
comp=Z,208μm,15.9s,MS6.8
LUBP Lubang 27.65 216 *eP* **P 00 47 45.6 -0.5**
CD2 Chengdu 27.82 266 ⇑*iP* **P 00 47 46.6 -0.9**
CD2 AP pP 00 47 49.8 +1.5
CD2 XP sP 00 47 52.0 +3.4
CD2 PP 00 48 35.6
CD2 PCP PcP 00 51 03.3 -0.5
CD2 AMB AMB
comp=Z,350nm,1.0s,mb5.9
CD2 AMB AMB
comp=Z,29μm,9.8s
CD2 LR LR
comp=N,545μm,17.4s,MS7.4
CD2 LR LR
comp=E,488μm,13.2s,MS7.4
CD2 LR LR
comp=Z,241μm,22.8s
OTRP Odiongan 28.08 211 *eP* **P 00 47 50.6 +0.7**
GTA Gaotai 28.77 286 ⇑*iP* **P 00 47 56.6 +0.7**
GTA AP pP 00 48 05.6 +8.9
GTA XP sP 00 48 09.9 +13
GTA PP PP 00 48 50.8 -10
GTA PPP 00 49 03.8
GTA PCP PcP 00 51 05.3 -0.7

GTA S S 00 52 44.3 -1.8
GTA AMB AMB
comp=Z,70nm,1.1s
GTA AMB AMB
comp=Z,18μm,6.1s
GTA LR LR
comp=N,147μm,19.0s
GTA LR LR
comp=E,159μm,21.3s
GTA LR LR
comp=Z,249μm,22.8s
MOY Mondy 28.81 311 *e*P **P 00 47 56.6 +0.4**
MSLP Maasin 29.07 204 *e*P **P 00 47 59.9 +1.1**
LLP Lapu-Lapu 29.20 206 *e*P **P 00 47 58.0 -1.9**
GUIM Jordan 29.42 209 *e*P **P 00 48 03.1 +1.2**
QIZ Qiongzhong 29.63 239 P **P 00 48 05.3 +1.5**
QIZ AMB AMB
comp=Z,130nm,1.8s
QIZ AMB AMB
comp=Z,11μm,13.3s
QIZ LR LR
comp=N,398μm,18.7s,MS7.2
QIZ LR LR
comp=E,429μm,18.7s,MS7.2
QIZ LR LR
comp=Z,204μm,15.2s,MS6.9
QIZ Qiongzhong 29.63 239 *e*P **P 00 48 04.8 +1.1**
TBP Tagbilaran 29.82 206 *e*P **P 00 48 06.4 +1.0**
ENPP El Nido 30.24 215 *e*P **P 00 48 11.0 +1.8**
SMY Shemya 30.26 47 *e*P **P 00 48 09.9 +0.9**
comp=Z,345nm,1.0s,mb6.0
SMY Shemya 30.26 47 *e*P **P 00 48 09.9 +0.9**
SMY pmax pmax
comp=Z,345nm,1.0s,mb6.0
SNPH Sibulan 30.36 207 *e*P **P 00 48 10.0 -0.2**
BIPH Bislig 30.46 200⇓ *e*P **P 00 48 09.1 -2.0**
CGP Cagayan de Oro 30.70 204⇓ *e*P **P 00 48 12.4 -0.8**
CGP 06 15 36.5
BUKP Musuan 31.13 202 *e*P **P 00 48 17.5 +0.5**
KMI Kunming 31.22 257 ⇑P **P 00 48 17.8 0.0**
KMI AP pP 00 48 27.6 +9.0
KMI XP sP 00 48 31.5 +13
KMI PP PP 00 49 22.3 -5.8
KMI PPP 00 49 37.3
KMI PCP PcP 00 51 12.8 +0.3
KMI AMB AMB
comp=Z,533nm,1.6s,mb6.1
KMI AMB AMB
comp=Z,10μm,7.9s
KMI LR LR
comp=N,293μm,14.8s,MS7.2
KMI LR LR
comp=E,219μm,16.3s,MS7.2
KMI LR LR
comp=Z,206μm,16.3s,MS6.9
PPR Puerto Princes 31.82 215⇓ *e*P **P 00 48 28.0 +4.9**
CTBH Cotabato--PC H 32.00 204⇓ *e*P **P 00 48 26.2 +1.5**
GSPH General Santos 32.86 202⇑ *i*P **P 00 48 33.1 +0.9**
BATP Bataraza 33.10 216 *e*P **P 00 48 34.3 0.0**
TIXI Tiksi 34.62 356 *e*P **P 00 48 46.9 -0.1**
comp=Z,705nm,1.1s,mb6.5
TIXI Tiksi 34.62 356 *c i*P **P 00 48 46.8 -0.2**
TIXI *e* 00 50 01.6
TIXI *e*S **S 00 54 16.4 -0.3**
TIXI *e*SS SS 00 56 25.7 -21
TIXI pmax pmax
comp=Z,761nm,1.1s,mb6.5
TIXI pmax pmax
comp=N,298nm,1.2s
TIXI pmax pmax
comp=E,227nm,1.2s
TIXI pmax pmax
comp=Z,11μm,10.6s
TIXI smax
comp=E,22μm,22.3s
TIXI smax
comp=N,55μm,20.6s
TIXI MLR MLR
comp=N,129μm,10.0s,MS7.0
TIXI MLR MLR
comp=Z,208μm,11.0s,MS7.1
TIXI MLR MLR
comp=E,65μm,13.0s,MS7.0
BILL Bilibino 34.92 19⇑ *i*P **P 00 48 49.6 0.0**
comp=E,779nm,1.5s,mb6.4
BILL LR LR
comp=Z,104μm,20.0s,MS6.6
BILL Bilibino 34.92 19 *α i*P **P 00 48 49.6 0.0**
BILL *e* pP 00 48 51.9 +1.5
BILL *e* 00 50 15.8
BILL *i*S **S 00 54 21.7 +0.3**
BILL *e*SSS 00 56 58.8
BILL pmax pmax
comp=Z,710nm,1.4s,mb6.4
BILL MLR MLR
comp=Z,119μm,15.0s,MS6.8
KDM Kudat 35.20 216 ⇓P **P 00 48 56.8 +4.2**
ADK Adak 35.67 51 *e*P **P 00 48 55.4 -0.8**
comp=Z,539nm,1.4s,mb6.3
ADK LR LR
comp=Z,49μm,21.0s,MS6.2
ADK Adak 35.67 51 *e*P **P 00 48 55.4 -0.8**
ADK pmax pmax
comp=Z,539nm,1.4s,mb6.3
ADK MLR MLR
comp=Z,49μm,21.0s,MS6.2
MYLDM Lahad Datu 36.01 212 ⇑P **P 00 49 00.7 +1.2**
SDKM Sandakan 36.16 214 ⇑P **P 00 49 00.7 -0.2**
KKM Kota Kinabalu 36.26 216 *e*P **P 00 49 01.4 -0.2**
KKM Kota Kinabalu 36.26 216 ⇓P **P 00 49 03.0 +1.4**
KKTK Khon Kaen 36.37 244 PG **P 00 49 02.5 -0.1**
CHRT Chiangrai 36.40 252 ⇑P **P 00 49 03.5 +0.6**
comp=Z,2μm,1.0s,mb7.0
TSM Tawau 37.08 212 ⇑P **P 00 49 09.0 +0.3**
WMQ Urumqi 37.24 296⇑ *i*P **P 00 49 10.4 +0.6**
WMQ AP pP 00 49 20.4 +10
WMQ PP PP 00 50 37.9 +3.5
WMQ PPP 00 50 58.5
WMQ AMB AMB
comp=Z,109nm,1.2s,mb5.6
WMQ AMB AMB
comp=Z,19μm,6.8s
WMQ LR LR
comp=N,82μm,23.6s,MS6.7
WMQ LR LR
comp=E,108μm,23.7s,MS6.7
WMQ LR LR
comp=Z,127μm,20.5s,MS6.7
CHG Chiang Mai 37.67 251 ⇑P **P 00 49 14.0 +0.3**
comp=Z,150nm,1.2s,mb5.6
CHTO Chiang Mai 37.67 251 *e*P **P 00 49 13.9 +0.3**
CHTO Chiang Mai 37.67 251 P **P 00 49 14.2 +0.5**
SNR=257
CHTO Chiang Mai 37.67 251 P **P 00 49 14.2 +0.5**
SNR=257
IMP Imphal 38.30 263 *e*P **P 00 49 19.0 0.0**
LSA Lhasa 38.33 272 *e*P **P 00 49 19.7 +0.5**
comp=Z,253nm,1.5s,mb5.7
LSA LR LR
comp=Z,168μm,20.0s,MS6.8
LSA Lhasa 38.33 272 *e*P **P 00 49 19.7 +0.5**
LSA pmax pmax
comp=Z,253nm,1.5s,mb5.7
LSA MLR MLR
comp=Z,168μm,20.0s,MS6.8
NST Nakhon Sawan 38.75 246 P **P 00 49 22.7 -0.1**
comp=Z,498nm,1.3s,mb6.1
ZALV Zalesovo Beam 38.85 312 P **P 00 49 22.4 -0.8**
comp=Z,23nm,0.5s,mb5.2,baz=97,slow=7.6,SNR=74
ZALV PcP PcP 00 51 33.8 -0.5
comp=Z,63nm,0.6s,baz=105,slow=2.2,SNR=22
ZALV LR LR 01 05 29.9
comp=Z,71μm,19.8s,MS6.5,baz=93,slow=36
ZAL Zalesovo 38.86 312 P **P 00 49 22.4 -0.9**
SHL Shillong 39.55 266 *i* x x 00 49 21.0
SHL *e*S **S 00 55 37.0 +4.2**
NVS Novosibirsk 39.83 314⇑ *i*P **P 00 49 30.4 -1.0**
NVS *e* 00 51 04.1
NVS *e*S **S 00 55 27.3 -9.1**
NVS pmax pmax
comp=Z,330nm,1.6s,mb5.8
NVS pmax pmax
comp=N,175nm,2.0s
NVS pmax pmax
comp=E,420nm,2.0s

BTM Bintulu 40.23 218 ⇑P **P 00 49 35.6 +0.4**
MK31 Makanchi Array 40.67 301⇑ *i*P **P 00 49 38.0 -0.5**
MK31 Makanchi Array 40.67 301 *i*P **P 00 49 37.8 -0.7**
MK31 pmax pmax
comp=Z,440nm,1.3s,mb5.9
MKAR Makanchi Array 40.67 301 P **P 00 49 38.3 -0.2**
MKAR PcP PcP 00 51 41.6 +1.5
MKAR Makanchi Array 40.67 301 *i*P **P 00 49 38.2 -0.3**
MKAR pmax pmax
comp=Z,19nm,0.6s
MKAR Makanchi Array 40.67 301 P **P 00 49 38.3 -0.2**
comp=Z,19nm,0.6s,baz=88,slow=9.6,SNR=128
MKAR PcP PcP 00 51 41.6 +1.5
comp=Z,26nm,0.9s,baz=73,slow=3.4,SNR=6.1
MKAR LR LR 01 07 04.0
comp=Z,271μm,19.7s,MS7.1,baz=82,slow=37
TURI Tura 40.79 267 *ex* x 00 49 33.0
AGT Agartala 40.87 264 *ex* x 00 49 32.0
NNT Nongplab 41.10 243 P **P 00 49 40.0 -2.3**
SBUM Sibu 41.31 219 ⇓P **P 00 49 44.0 -0.1**
UNV Unalaska Valle 41.91 48 PFAKE 00 50 00.0 +11
UNV LR LR
comp=Z,143μm,22.0s,MS6.8
TAPN Taplejung 42.06 271 *e*P **P 00 49 50.6 +0.4**
comp=Z,661nm,1.3s,mb6.1
TNA Tin City 42.53 30 *e*P **P 00 49 54.1 +0.6**
TNA LR LR
comp=Z,52μm,22.0s,MS6.4
ODAN Odare 42.54 270 *e*P **P 00 49 54.2 +0.2**
comp=Z,190nm,1.1s,mb5.8
KURK Kurchatov 42.69 307 *e*P **P 00 49 54.1 -0.9**
KURK Kurchatov 42.69 307 *i*P **P 00 49 53.7 -1.3**
KURK pmax pmax
comp=Z,377nm,1.6s,mb5.9
KURK Kurchatov 42.69 307 P **P 00 49 54.6 -0.4**
SNR=135
KURK Kurchatov 42.69 307 P **P 00 49 54.6 -0.4**
SNR=135
KSM Kuching 43.11 220⇑ *i*P **P 00 49 58.7 0.0**
KSM Kuching 43.11 220 ⇑P **P 00 49 59.2 +0.4**
JIRN Jiri 43.14 272 *e*P **P 00 49 59.8 +0.9**
comp=Z,594nm,1.0s,mb6.3
KKN Kakani 43.80 273 *e*P **P 00 50 04.5 +0.2**
comp=Z,331nm,0.9s,mb6.1
KTGM Kuala Trenggan 44.11 232 ⇓P **P 00 50 08.1 +1.3**
GKN Gorkha 44.22 274 *e*P **P 00 50 07.7 +0.1**
comp=Z,842nm,1.0s,mb6.4
SNG Songkhla 44.34 236 P **P 00 50 12.0 +3.3**
comp=Z,1μm,1.0s,mb6.6
AAA Alma-Ata 45.02 297 *i*P **P 00 50 15.3 +1.5**
AAA *i*S **S 00 56 57.1 +4.0**
AAA pmax pmax
comp=Z,23μm,10.9s
AAA smax
comp=N,62μm,19.6s
AAA MLR MLR
comp=Z,182μm,19.7s,MS7.0
KOLN Koldanda 45.15 274 *e*P **P 00 50 15.5 +0.5**
comp=Z,721nm,1.3s,mb6.3
BOK Bokaro 45.18 268 *e*P **P 00 50 14.9 -0.4**
BOK *ex* x 00 50 22.8
comp=Z,136nm,1.7s
SDPT Sand Point 45.36 46 *e*P **P 00 50 16.3 0.0**
comp=Z,174nm,1.0s,mb5.8
KULM Kulim 45.73 235 *e*P **P 00 50 18.9 -0.8**
KULM Kulim 45.73 235 ⇓P **P 00 50 20.7 +1.0**
TKM2 Tokmak 2 46.06 297⇑ *i*P **P 00 50 22.8 +0.7**
comp=Z,243nm,0.8s,mb6.2
TKM2 Tokmak 2 46.06 297⇑ *i*P **P 00 50 22.8 +0.7**
TKM2 pmax pmax
comp=Z,243nm,0.8s,mb6.2
TKM2 Tokmak 2 46.06 297 P **P 00 50 23.1 +1.0**
SNR=63
MYKOM Kota Tinggi 46.45 228 ⇑P **P 00 50 26.5 +1.1**
CHGN Chignik 46.45 44 *e*P **P 00 50 26.0 +1.1**
KZA Kyzart 46.53 296 P **P 00 50 27.1 +1.4**
SNR=42
KBK Karagaybulak 46.59 297 P **P 00 50 26.8 +0.5**
SNR=51
CHMS Chumysh 46.65 297 P **P 00 50 27.0 +0.4**
SNR=14
KSH Kashi 46.73 292 *e*P **P 00 50 29.3 +1.9**
KSH *e*AP pP 00 50 33.5 +5.3
KSH *e*XP sP 00 50 38.0 +10
KSH *e*PCP PcP 00 51 57.8 -3.0
KSH PP PP 00 52 20.6 +3.7
KSH *e*PPP 00 53 11.1
KSH *e*SCP ScP 00 55 50.3 -5.1
KSH *e*PCS PcS 00 55 51.4 -4.2
KSH *e*S **S 00 57 17.6 -0.3**
KSH *e*XS sS 00 57 33.9 +15
KSH *e*SCS ScS 01 00 19.3 -3.9
KSH AMB AMB
comp=Z,435nm,1.0s,mb6.3
KSH AMB AMB
comp=Z,54μm,5.9s
KSH LR LR
comp=N,335μm,13.4s,MS7.5
KSH LR LR
comp=E,113μm,10.2s,MS7.5
KSH LR LR
comp=Z,243μm,18.7s
USP Ospenovka 46.75 298 P **P 00 50 27.4 -0.1**
SNR=41
FRU Bishkek 46.78 297⇓ *i*P **P 00 50 28.0 +0.3**
FRU *i*S **S 00 57 22.0 +3.5**
FRU pmax pmax
comp=Z,550nm,2.0s,mb6.1
FRU pmax pmax
comp=Z,17μm,10.0s
FRU smax
comp=N,26μm,18.0s
FRU MLR MLR
comp=Z,175μm,18.0s,MS7.1
PBA Port Blair 46.80 249 *e*P **P 00 50 28.1 -0.1**
PBA *ex* x 00 51 23.2
comp=Z,344nm,2.6s
PBA *ex* x 00 52 40.0
AAK Ala-Archa 46.92 297 P **P 00 50 29.1 +0.3**
SNR=26
UCH Uchtor 47.02 296⇑ *i*P **P 00 50 30.5 +0.9**
comp=Z,227nm,1.4s,mb5.9
UCH Uchtor 47.02 296 P **P 00 50 30.6 +1.1**
SNR=20
LGTI Lohaghat 47.09 278 *e*P **P 00 50 29.5 -0.8**
LGTI *ex* x 00 53 39.5
CHKZ Chkalovo 47.27 312 *i*P **P 00 50 29.5 -1.8**
TTA Tatalina 47.39 35⇑ *i*P **P 00 50 32.7 +0.5**
EKS2 Erkin-Say 47.42 297⇑ *i*P **P 00 50 32.5 -0.3**
comp=Z,107nm,1.2s,mb5.7
EKS2 Erkin-Say 47.42 297 P **P 00 50 32.9 +0.1**
SNR=19
BRVK Borovoye 47.55 312 *e*P **P 00 50 32.3 -1.3**
BRVK Borovoye 47.55 312 P **P 00 50 33.3 -0.2**
SNR=60
BRVK Borovoye 47.55 312 P **P 00 50 33.3 -0.2**
SNR=60
AML Almayashu 47.63 296⇑ *i*P **P 00 50 35.4 +1.0**
comp=Z,344nm,0.8s,mb6.4
AML Almayashu 47.63 296 P **P 00 50 35.6 +1.2**
SNR=91
SVW2 Sparrevohn 47.64 38⇑ *i*P **P 00 50 35.5 +1.4**
ALBI Allahabad 47.70 272 *ex* x 00 50 32.0
IMA2 Indian Mountai 48.40 31 *e*P **P 00 50 40.7 +0.7**
PSI Prapat 48.72 234 P **P 00 50 42.5 -0.6**
comp=Z,49nm,0.9s,mb5.5,baz=347,slow=2.9,SNR=15
SDNR Sundarnagar 48.81 282 *e*P **P 00 50 44.0 +0.4**
BATI Kupang 48.81 197 P **P 00 50 45.5 +1.9**
comp=Z,1μm,1.0s,mb6.9,baz=198,slow=2.3,SNR=7.3
DLH Dalhousie 49.17 283 *e*P **P 00 50 45.0 -1.4**
DLH *ex* x 00 51 11.0
THN Thein Dam 49.41 283 *e*P **P 00 50 46.6 -1.6**
THN *ex* x 00 58 03.1
KDAK Kodiak Island 49.46 42 *e*P **P 00 50 47.7 -0.5**
comp=Z,208nm,1.0s,mb6.1
KDAK Kodiak Island 49.46 42 P **P 00 50 47.9 -0.3**
comp=Z,114nm,0.8s,mb6.0,baz=276,slow=5.2,SNR=55
KK31 Karatay Array 49.60 298 *i*P **P 00 50 49.2 -0.3**
KK31 Karatay Array 49.60 298 *i*P **P 00 50 49.1 -0.4**
KK31 pmax pmax
comp=Z,484nm,1.4s,mb6.3
NDI New Delhi 49.81 278 *e*P **P 00 50 49.0 -2.3**
NDI *e*S **S 00 58 05.0 +3.4**
KAKA Kakadu 49.93 185 *e*P **P 00 50 51.5 -0.7**
comp=Z,1μm,1.5s,mb6.8

JBP Jabalpur 50.20 270⇑ *e*P **P 00 50 54.6 +0.3**
JBP *ex* x 00 51 19.8
comp=Z,664nm,1.5s
JBP *i*S **S 00 58 08.2 +1.1**
SLKM Skilak Lake 50.31 38 *e*P **P 00 50 53.9 -0.7**
VIS Vishakhapatnam 50.41 262 *e*P **P 00 50 55.2 -0.7**
VIS *ex* x 00 51 04.0
comp=Z,602nm,1.4s
VIS *i*S **S 00 58 13.6 +3.4**
PMR Palmer 50.69 37 *e*P **P 00 50 57.3 -0.2**
comp=Z,342nm,1.3s,mb6.1
PMR Palmer 50.69 37 *e*P **P 00 50 56.9 -0.6**
PMR pmax pmax
comp=Z,330nm,1.1s,mb6.2
COLA College 50.89 32⇑ *i*P **P 00 50 59.4 +0.4**
comp=Z,525nm,1.3s,mb6.3
COLA College 50.89 32⇑ *i*P **P 00 50 59.4 +0.5**
COLA pmax pmax
comp=Z,525nm,1.3s,mb6.3
SML Sawmill 51.04 36 *e*P **P 00 51 00.2 +0.1**
HNR Honiara 51.42 150 *e*P **P 00 51 02.4 -1.1**
comp=Z,439nm,0.9s,mb6.4
HNR Honiara 51.42 150 *e*P **P 00 51 02.4 -1.1**
HNR pmax pmax
comp=Z,439nm,0.9s,mb6.4
HNR Honiara 51.42 150 P **P 00 51 03.4 -0.1**
comp=Z,218nm,0.8s,mb6.1,baz=225,slow=2.5,SNR=4.9
NGP Nagpur 51.96 269 *i*P **P 00 51 05.5 -2.1**
NGP *ex* x 00 51 13.0
comp=Z,407nm,1.3s
NGP *e*S **S 00 58 33.8 +2.1**
BHPL Bhopal 52.20 272 *e*P **P 00 51 08.4 -0.9**
BHPL *ex* x 00 51 15.8
comp=Z,248nm,1.9s
SVE Sverdlovsk 52.34 318 *d i*P **P 00 51 09.9 0.0**
SVE *e*S **S 00 58 41.0 +5.0**
SVE MLR MLR
comp=Z,114μm,14.0s,MS7.1
EYAK Cordova Ski Ar 52.48 37 *e*P **P 00 51 07.2 -3.7**
comp=Z,370nm,1.1s,mb6.2
AJM Ajmer 52.84 277 *e*P **P 00 51 14.3 +0.2**
AJM *ex* x 00 51 21.2
comp=Z,267nm,1.6s
MENT Mentasta 52.98 34 *e*P **P 00 51 15.4 +0.9**
ARU Arti 53.55 318 P **P 00 51 18.9 +0.1**
comp=Z,1μm,1.0s,mb6.7,SNR=44
ARU Arti 53.55 318 *i*P **P 00 51 18.2 -0.6**
comp=Z,2μm,2.0s,mb6.6
ARU Arti 53.55 318 *c i*P **P 00 51 18.2 -0.6**
ARU *e*PPP 00 54 26.1
ARU *e*S **S 00 58 50.4 -2.0**
ARU *e* 01 01 03.7
ARU SS SS 01 02 26.7 -5.4
ARU *e*SSS 01 04 20.9
ARU pmax pmax
comp=Z,205nm,1.7s,mb5.8
ARU pmax pmax
comp=Z,13μm,14.0s
ARU MLR MLR
comp=Z,102μm,16.0s,MS7.0
SOKR Solikamsk 53.72 322 *c i*P **P 00 51 19.8 -0.2**
SOKR S **S 00 58 53.9 -0.7**
SOKR pmax pmax
comp=Z,240nm,1.2s,mb6.0
SOKR MLR MLR
comp=Z,120μm,13.0s,MS7.1
EGAK Eagle 53.73 32 *e*P **P 00 51 20.1 0.0**
AKL Akola 53.82 270 ⇑P **P 00 51 21.7 +0.4**
AKL *ex* x 00 51 28.9
comp=Z,858nm,1.6s
AKL *i* x x 00 58 45.4
HYB Hyderabad 54.36 265 *e*P **P 00 51 25.5 +0.2**
comp=Z,630nm,1.0s,mb6.5
HYB *e*S **S 00 59 06.0 +1.7**
HYB *e* 01 16 36.0
HYB Hyderabad 54.36 265 *e*P **P 00 51 25.5 +0.2**
HYB *e*S **S 00 59 06.0 +1.7**
HYB pmax pmax
comp=Z,630nm,1.0s,mb6.5
HYB Hyderabad 54.36 265⇑ *i*P **P 00 51 25.5 +0.2**
comp=Z,630nm,1.0s,mb6.5
HYB *e*S **S 00 59 06.0 +1.7**
HYB LR LR 01 16 36.0
comp=Z,87nm,16.0s
DAWY Dawson 54.64 32 *e*P **P 00 51 27.3 +0.6**
AB31 Akbulak array 54.76 309 *i*P **P 00 51 26.7 -1.1**
LATR Latur 55.40 267 *e*P **P 00 51 29.3 -3.5**
MDRS Chennai 55.50 260⇑ *i*P **P 00 51 32.5 -1.1**
AKTK Aktyubinsk 55.57 311 P **P 00 51 32.6 -1.0**
AKTO Aktyubinsk 55.57 311 *i*P **P 00 51 32.3 -1.3**
AKTO Aktyubinsk 55.57 311 P **P 00 51 32.6 -1.0**
comp=Z,23nm,0.7s,baz=72,slow=7.5,SNR=50
AKTO LR LR 01 16 34.5
comp=Z,151μm,18.7s,MS7.1,baz=247,slow=37
INK Inuvik 55.87 27 *e*P **P 00 51 36.1 +0.6**
INK Inuvik 55.87 27 P **P 00 51 36.1 +0.6**
comp=Z,156nm,0.7s,mb6.1,baz=292,slow=6.9,SNR=203
FITZ Fitzroy Crossi 56.09 193 *e*P **P 00 51 38.9 +1.3**
comp=Z,790nm,1.4s,mb6.5
FITZ *e*PCP PcP 00 52 37.9 +2.2
WB2 Warramunga Arr 57.01 182 *e*P **P 00 51 43.0 -1.1**
WRA Warramunga Arr 57.01 183 P **P 00 51 42.8 -1.2**
WRA ⇑*e* 01 21 49.6
WRA Warramunga Arr 57.01 183 *i*P **P 00 51 42.2 -1.9**
WRA pmax pmax
comp=Z,166nm,0.8s
WRA Warramunga Arr 57.01 183 P **P 00 51 42.8 -1.2**
comp=Z,166nm,0.8s,mb6.1,baz=358,slow=7.6,SNR=28
WRA PKP2bc 01 21 49.6
comp=Z,10nm,1.0s,baz=173,slow=2.6,SNR=4.8
BHV Bhavnagar 57.16 274 *e*P **P 00 51 45.5 +0.2**
POO Poona 57.49 269 *e*P **P 00 51 46.9 -0.9**
POO AMb AMB 00 51 54.6
comp=Z,924nm,2.7s,mb6.3
POO *i*PCP PcP 00 52 38.5 -2.9
POO *i*PP PP 00 53 57.5 +2.3
POO *i*S **S 00 59 48.0 +1.9**
CTA Charters Tower 57.84 169 *e*P **P 00 51 50.4 +0.5**
comp=Z,214nm,1.1s,mb6.1
CTA Charters Tower 57.84 169 *e*P **P 00 51 50.4 +0.5**
CTA pmax pmax
comp=Z,215nm,1.1s
CTA Charters Tower 57.84 169 P **P 00 51 50.7 +0.8**
comp=Z,200nm,1.0s,mb6.1,baz=342,slow=7.5,SNR=10
CTAO Charters Tower 57.84 169 *e*P **P 00 51 50.0 +0.1**
comp=Z,224nm,0.8s,mb6.2
CTAO Charters Tower 57.84 169 *e*P **P 00 51 50.0 +0.1**
CTAO pmax pmax
comp=Z,224nm,0.8s,mb6.2
KAD Karad 57.89 268 *e*P **P 00 51 49.8 -0.8**
KAD *ex* x 00 51 58.2
comp=Z,937nm,1.6s
KIP Kipapa 58.11 86 *e*P **P 00 51 52.9 +0.8**
comp=Z,155nm,0.7s,mb6.2
KIP Kipapa 58.11 86 *e*P **P 00 51 52.9 +0.8**
KIP pmax pmax
comp=Z,155nm,0.7s,mb6.2
BOM Bombay 58.12 270 *e*P **P 00 51 54.4 +2.2**
BOM *ex* x 00 52 00.2
comp=Z,964nm,1.6s
BOM *e*S **S 00 59 52.8 -1.5**
BHJ Bhuj 58.37 276 *e*P **P 00 51 54.5 +0.6**
BHJ *ex* x 00 52 00.6
comp=Z,335nm,1.2s
BHJ *e*S **S 00 59 56.6 -0.8**
PRGR Permogore 58.38 326⇑ *i*P **P 00 51 53.2 -0.1**
PRGR *e* 00 52 42.6
PRGR *e* 00 54 03.0
PRGR *e*PPP 00 55 24.4
PRGR *e*S **S 00 59 58.9 +2.4**
PRGR *e*SS SS 01 03 51.4 +3.5
SIT Sitka 58.66 40 *e*P **P 00 51 56.5 +1.1**
comp=Z,531nm,1.7s,mb6.3
SIT LR LR
comp=Z,105μm,22.0s,MS6.9
SIT Sitka 58.66 40 *e*P **P 00 51 56.5 +1.1**
SIT pmax pmax
comp=Z,531nm,1.7s,mb6.3
SIT MLR MLR
comp=Z,105μm,22.0s,MS6.9
PALK Pallekele 58.69 254⇑ *i*P **P 00 51 56.4 +0.2**
comp=Z,197nm,1.0s,mb6.1
PALK Pallekele 58.69 254 P **P 00 51 56.8 +0.6**
SNR=53
PALK Pallekele 58.69 254 P **P 00 51 56.8 +0.6**

SNR=53
KBS Kingsbay 59.67 349⇑ *i*P P 00 52 02.5 +0.4
KBS Kingsbay 59.67 349⇑ *i*P P 00 52 02.6 +0.5
KBS Kingsbay 59.67 349 *c i*P P 00 52 02.4 +0.3
MNGI Mangalore 59.85 263 *i* P P 00 52 04.2 -0.1
MNGI *i* x x 01 00 10.3
ALE Alert 60.03 3 P P 00 52 05.0 +0.5
comp=Z,2μm,1.1s,mb7.1,SNR=100
ASH Ashkhabad 60.10 297⇑ *i*P P 00 52 02.7 -3.0
ASH S S 01 00 07.0 -13
LVZ Lovozero 60.22 335⇑ *e*P P 00 52 04.8 -1.2
VAN Vannovskaya 60.27 297⇑ *i*P P 00 52 07.2 +0.3
MBWA Marble Bar 60.30 198 *e*P P 00 52 06.8 -0.3
comp=Z,482nm,1.2s,mb6.4
CRAG Craig 60.40 41 *e*P P 00 52 07.6 +0.2
comp=Z,284nm,1.3s,mb6.1
WRAK Wrangell Islan 60.42 40 *e*P P 00 52 08.4 +0.8
comp=Z,730nm,1.0s,mb6.7
FUNA Funafuti 60.58 130 P P 00 52 07.2 -2.0
comp=Z,1μm,1.8s,mb6.8
ASAR Alice Springs 60.72 183 P P 00 52 09.7 -0.2
ASAR ⇑ *e* 01 21 40.4
ASAR Alice Springs 60.72 183 P P 00 52 09.7 -0.2
comp=Z,129nm,0.8s,mb6.1,baz=14,slow=12,SNR=23
ASAR PKP2bc 01 21 40.4
comp=Z,16nm,1.1s,baz=129,slow=2.8,SNR=4.3
DLBC Dease Lake 60.75 37 *e*P P 00 52 11.3 +1.6
APA Apatity 60.79 335⇓ *i*P P 00 52 09.8 -0.1
APA *i* 00 52 24.2
APA *i* 00 54 24.0
APA *i* PPP 00 56 03.0
APA *i* S S 01 00 28.0 +0.5
APA pmax pmax
comp=Z,340nm,1.4s,mb6.3
APA pmax pmax
comp=Z,25μm,10.0s
APA MLR MLR
comp=Z,190μm,16.0s,MS7.3
TRD Trivandrum 60.82 258 *e*P P 00 52 10.4 -0.5
TRD *e*x x 00 52 17.2
comp=Z,441nm,1.1s
BJO Bjornoya 61.11 344 *e*P P 00 52 12.5 +0.5
BJO AMS AMS 01 20 17.5
comp=Z,118μm,20.0s,MS7.0
BJO1 Bjornoya 61.16 344 *e*P P 00 52 12.5 +0.2
KEV Kevo 61.76 338⇑ *i*P P 00 52 16.3 -0.1
comp=Z,443nm,1.5s,mb6.4
KEV Kevo 61.76 338⇑ *i*P P 00 52 16.3 -0.1
KEV pmax pmax
comp=Z,443nm,1.5s,mb6.4
ARCES ARCESS Array B 62.32 338 P P 00 52 20.4 +0.2
ARCES ARCESS Array B 62.32 338 P P 00 52 20.4 +0.2
comp=Z,44nm,0.7s,mb5.7,baz=59,slow=4.9,SNR=54
ARCES LR LR 01 23 09.2
comp=Z,164μm,18.4s,MS7.2,baz=68,slow=40
RES Resolute Bay 63.24 13 *e*P P 00 52 26.1 -0.2
comp=Z,38nm,0.8s,mb5.6
RES Resolute Bay 63.24 13 *e*P P 00 52 26.1 -0.2
RES pmax pmax
comp=Z,38nm,0.8s,mb5.6
JOF Joensuu 63.84 331 *e*p P 00 52 30.0 -0.4
comp=Z,202nm,1.4s,mb6.0
TRO Tromso 64.14 340 *e*P P 00 52 28.7 -3.5
TRO AMS AMS 01 25 57.9
comp=Z,136μm,17.6s,MS7.2
MOS Moscow 64.66 322 *c i*P P 00 52 36.2 +0.3
MOS *e* 00 54 58.0
MOS *i* PPP 00 56 33.3
MOS *i* S S 01 01 15.8 -0.7
MOS *e* 01 02 27.9
MOS *i* SS SS 01 05 27.7 +1.3
MOS pmax pmax
comp=Z,13μm,6.5s
MOS pmax pmax
comp=N,4μm,5.5s
MOS pmax pmax
comp=E,7μm,6.0s
MOS pmax pmax
comp=N,176nm,1.6s
MOS pmax pmax
comp=Z,647nm,1.6s
MOS smax
comp=N,19μm,10.0s
MOS MLR MLR
comp=Z,191μm,15.0s
MOS MLR MLR
comp=N,173μm,13.5s
MOS MLR MLR
comp=E,176μm,13.0s
VRHR Novokhopersk 64.83 316 *e*P P 00 52 36.1 -0.9
VRHR *e* 00 54 57.6
VRHR *e*PPP 00 56 31.2
VRHR *e*S S 01 01 16.3 -2.3
VRHR *e*SS SS 01 05 30.0 +0.9
VRHR pmax pmax
comp=Z,40nm,0.5s,mb5.7
VRHR pmax pmax
comp=N,40nm,1.0s
VRHR pmax pmax
comp=E,8.0nm,0.4s
VRHR smax
comp=N,7μm,13.1s
VRHR smax
comp=Z,4μm,13.6s
VRHR smax
comp=E,14μm,17.2s
DAG Danmarks Havn 65.11 354⇓ *i*P P 00 52 38.3 -0.2
DAG pmax pmax
comp=Z,510nm,1.4s,mb6.4
DAG MLR MLR
comp=Z,64μm,17.0s,MS6.9
DAG Danmarks Havn 65.11 354⇓ *i*P P 00 52 38.3 -0.2
DAG
comp=Z,64μm,17.0s
MAK Makhachkala 65.19 306 *c i*P P 00 52 38.4 -1.2
MAK *i* 00 53 12.5
MAK *e* 00 55 04.1
MAK *e*PPP 00 56 41.5
MAK *e*S S 01 01 20.6 -2.8
MAK *i* 01 02 33.1
MAK pmax pmax
comp=E,317nm,1.5s
MAK pmax pmax
comp=N,412nm,1.6s
MAK pmax pmax
comp=Z,392nm,1.6s
MAK MLR MLR
comp=E,207μm,13.0s
MAK MLR MLR
comp=N,206μm,15.0s
MAK MLR MLR
comp=Z,257μm,20.0s
YKA Yellowknife Ar 65.46 29 P P 00 52 40.7 -0.2
YKA P'P' 01 21 14.2
YKA Yellowknife Ar 65.46 29 P P 00 52 40.7 -0.2
comp=Z,45nm,0.9s,mb5.5,baz=306,slow=6.6,SNR=252
YKA PKPPKP 01 21 14.2
comp=Z,3.1nm,1.1s,baz=142,slow=2.6,SNR=4.5
YKA P4KPbc 01 29 36.4
comp=Z,1.4nm,0.8s,baz=301,slow=4.2,SNR=6.1
OBN Obninsk 65.50 322 *e*P P 00 52 40.7 -0.7
OBN Obninsk 65.50 322 *c i*P P 00 52 40.9 -0.4
OBN *i* 00 52 45.2
OBN *i* 00 52 50.1
OBN *i* 00 55 02.8
OBN *e*PPP 00 56 46.0
OBN *i* S S 01 01 24.4 -2.3
OBN *i* 01 02 33.5
OBN pmax pmax
comp=Z,293nm,1.7s,mb6.0
OBN pmax pmax
comp=Z,10μm,7.2s
OBN MLR MLR
comp=Z,239μm,20.0s,MS7.4
VOR Voronezh 65.84 317⇑ *i*P P 00 52 42.0 -1.6
VOR pmax pmax
comp=Z,800nm,2.0s,mb6.4
PUL Pulkovo 65.92 328⇑ *e*P P 00 52 44.6 +0.6
VRSR Storozhevoye 66.10 317 *c i*P P 00 52 44.4 -0.9
VRSR *e**PP pP 00 52 51.5 +5.4
VRSR *e* 00 53 15.9
VRSR *e*S S 01 01 32.7 -1.6
VRSR *e* 01 02 34.7
VRSR pmax pmax
comp=Z,20nm,0.9s,mb5.2
VRSR pmax pmax
comp=N,20nm,0.8s
VRSR pmax pmax
comp=E,60nm,2.4s
VRSR smax
comp=N,2μm,16.2s
VRSR smax
comp=Z,2μm,19.8s
VRSR smax
comp=E,2μm,16.9s
VRSR MLR MLR
comp=Z,12μm,18.0s,MS6.2
VRSR MLR MLR
comp=N,5μm,14.0s,MS6.3
VRSR MLR MLR
comp=E,15μm,16.0s,MS6.3
VORD Divnogorie 66.17 317 *e*P P 00 52 45.0 -0.8
VORD *e*S S 01 01 30.6 -4.5
VORD pmax pmax
comp=Z,230nm,1.7s,mb5.9
VORD pmax pmax
comp=N,120nm,1.4s
VORD pmax pmax
comp=E,70nm,1.2s
VORD smax
comp=N,9μm,10.9s
VORD smax
comp=Z,7μm,13.6s
VORD smax
comp=E,4μm,6.7s
VORD MLR MLR
comp=Z,48μm,13.0s,MS6.9
VORD MLR MLR
comp=N,49μm,12.0s,MS7.0
VORD MLR MLR
comp=E,49μm,14.0s,MS7.0
KAF Kangasniemi 66.22 331 *e*p P 00 52 45.4 -0.5
comp=E,322nm,1.5s,mb6.1,baz=52,slow=6.1
KAF Kangasniemi 66.22 331 *e*P P 00 52 45.4 -0.5
KAF pmax pmax
comp=Z,322nm,1.5s,mb6.1
FINES FINESS Array B 66.70 331 *i* P P 00 52 48.0 -1.0
FINES pmax pmax
comp=Z,73nm,0.8s
FINES FINESS Array B 66.70 331 P P 00 52 48.1 -0.9
comp=Z,72nm,0.8s,mb5.8,baz=66,slow=3.6,SNR=96
FINES LR LR 01 23 32.1
comp=Z,66μm,19.4s,MS6.9,baz=247,slow=37
WBK Wadi Bani Khal 67.11 282 ⇓P P 00 52 52.7 +0.5
SNR=86
WBK Wadi Bani Khal 67.11 282 ⇓P P 00 52 52.7 +0.5
SNR=86
BIDO Bidbid 67.28 283 P P 00 52 54.1 +0.9
SNR=54
BIDO Bidbid 67.28 283 P P 00 52 54.1 +0.9
SNR=54
BANOM Banah 67.43 286 P P 00 52 54.4 +0.2
SNR=49
BANOM Banah 67.43 286 P P 00 52 54.4 +0.2
SNR=49
MTA Mtatsminda 67.56 306 P P 00 52 54.5 -0.3
TBLG Delisi 67.58 306 P P 00 52 54.9 0.0
SMDO Samad 67.59 282 P P 00 52 55.6 +0.4
SNR=119
SMDO Samad 67.59 282 P P 00 52 55.6 +0.4
SNR=119
ZEI Tsey 67.59 307 *i* P P 00 52 53.7 -1.2
ZEI *e* 00 53 19.2
ZEI *e* 00 55 24.4
ZEI pmax pmax
comp=Z,111nm,1.4s,mb5.7
ZEI MLR MLR
comp=Z,134μm,17.0s,MS7.2
MOR8 Moi Rana 67.69 338⇑ *i*P P 00 52 53.8 -1.4
comp=Z,393nm,1.9s,mb6.1
MOR8 Moi Rana 67.69 338⇑ *i*P P 00 52 53.8 -1.4
MOR8 AMb AMB 00 53 14.4
comp=Z,393nm,1.9s,mb6.1
KIV Kislovodsk 67.75 309 *e*P P 00 52 55.8 -0.2
comp=Z,471nm,1.2s,mb6.4
KIV Kislovodsk 67.75 309 *c i*P P 00 52 56.1 +0.2
KIV *e* 00 53 22.5
KIV *e* 00 55 26.0
KIV *e*PPP 00 57 11.8
KIV *e*S S 01 01 54.3 0.0
KIV *e*SS SS 01 06 09.4 -5.4
KIV pmax pmax
comp=Z,324nm,1.1s,mb6.3
KIV pmax pmax
comp=Z,10μm,9.8s
KIV MLR MLR
comp=Z,97μm,17.0s,MS7.1
KIV Kislovodsk 67.75 309 P P 00 52 56.2 +0.3
SNR=67
KIV Kislovodsk 67.75 309 P P 00 52 56.2 +0.3
SNR=67
KIV Kislovodsk 67.75 309⇑ *i*P P 00 52 56.0 +0.1
GOR Gori 67.86 306 P P 00 52 57.4 +0.8
HOQ Hoqain 67.88 283 P P 00 52 57.4 +0.3
SNR=91
HOQ Hoqain 67.88 283 P P 00 52 57.4 +0.3
SNR=91
JMDO Jabal Madar 67.91 282 ⇓P P 00 52 57.2 -0.1
SNR=69
JMDO Jabal Madar 67.91 282 ⇓P P 00 52 57.2 -0.1
SNR=69
HATD Hatta, Dubai 68.13 285 P P 00 52 58.8 +0.2
SNR=104
HATD Hatta, Dubai 68.13 285 P P 00 52 58.8 +0.2
SNR=104
VSU Vasula 68.19 328⇑ *i*P P 00 52 58.3 -0.1
VSU Vasula 68.19 328 *c i*P P 00 52 58.2 -0.2
FORT Forrest 68.22 188 *e*P P 00 52 59.8 +1.0
comp=Z,270nm,0.9s,mb6.3
ASHO Ashiyiah 68.27 285 P P 00 52 59.5 +0.1
SNR=103
ASHO Ashiyiah 68.27 285 P P 00 52 59.5 +0.1
SNR=103
BSY Bisya 68.42 283 P P 00 53 00.7 +0.2
SNR=174
BSY Bisya 68.42 283 P P 00 53 00.7 +0.2
SNR=174
C03A Quillayute Air 68.63 46 ⇑P P 00 53 00.3 -1.1
baz=68,SNR=19
ARMA Armidale 68.86 166 *e*P P 00 53 03.3 +0.5
STKA Stephens Creek 69.01 175 *e*P P 00 53 03.5 -0.2
comp=Z,172nm,1.1s,mb5.9
STKA Stephens Creek 69.01 175 P P 00 53 03.5 -0.2
comp=Z,120nm,0.8s,mb5.9,baz=347,slow=6.0,SNR=12
JMIC Jan Mayen 69.13 348 *e*P P 00 53 04.8 +0.8
JMIC AMS AMS 01 20 18.9
comp=Z,25μm,18.5s,MS6.5
JMIC Jan Mayen 69.13 348 LR LR 01 21 37.5
comp=Z,32μm,19.9s,MS6.6,baz=219,slow=34
DIGO Kars 69.14 305⇑ *i*P P 00 53 05.9 +1.2
B04A Port Angeles 69.17 45 P P 00 53 03.2 -1.5
baz=69,SNR=84
KARS Kars 69.22 306 *e*P P 00 53 03.1 -2.1
A04A Legoe Bay, Lum 69.25 44 ⇑P P 00 53 05.6 +0.3
baz=69,SNR=88
NLWA Neilton Lookou 69.32 46 ⇓P P 00 53 06.6 +0.9
baz=69
DYDN Diyadin 69.39 304⇑ *i*P P 00 53 07.6 +1.4
A05A Maple Falls 69.44 44 ⇑P P 00 53 06.7 +0.3
baz=69,SNR=45
CLDR Caldiran 69.45 304 *e*P P 00 53 06.5 -0.2
D03A Wishkah Elem. 69.53 46 ⇓P P 00 53 08.0 +1.1
baz=69
NSS Namsos 69.59 338 *e*P P 00 53 05.0 -2.0
NSS AMS AMS 01 29 37.3
comp=Z,94μm,21.3s,MS7.0
C04A Brinnon 69.66 45 ⇑P P 00 53 08.0 +0.3
baz=69
ARTV Artvin 69.67 307⇑ *i*P P 00 53 08.5 +0.5
A06A Chilliwack 69.72 43 ⇑P P 00 53 08.2 +0.1
baz=70,SNR=45
BCA Borcka 69.73 307 *e*P P 00 53 03.1 -5.1
SOC Sochi 69.77 310 *c i*P P 00 53 07.9 -0.6
SOC *e**PP pP 00 53 17.1 +7.7
SOC *e* 00 53 28.5
SOC *e* 00 55 47.3
SOC *e*PPP 00 57 26.0
SOC *i* S S 01 02 17.0 -1.4
SOC *e* 01 03 11.8
SOC *e*SS SS 01 06 44.1 -1.9
SOC pmax pmax
comp=Z,6μm,4.8s
SOC pmax pmax
comp=Z,133nm,1.1s,mb5.8
AGRB Hanur-Agry 69.83 305 *e*P P 00 53 06.2 -2.8
B05A Bryant 69.84 44 P P 00 53 07.0 -1.9
baz=70,SNR=186
E03A Lebam 69.96 46 ⇑P P 00 53 09.3 -0.4
baz=70
B06A Marblemount 70.04 44 ⇓P P 00 53 08.7 -1.4
baz=70
TUTA Tutak 70.04 305⇑ *i*P P 00 53 11.4 +1.1
MNK Minsk 70.05 324 *c i*P P 00 53 08.0 -2.1
MNK *e* 00 55 40.0
MNK *e*S S 01 02 14.0 -7.3
MNK *e*SS SS 01 06 46.0 -3.7
MNK *e*SSS 01 10 02.0
MNK pmax pmax
comp=E,590nm,1.0s
MNK pmax pmax
comp=N,500nm,1.5s
MNK pmax pmax
comp=Z,360nm,1.0s,mb6.3
MNK pmax pmax
comp=E,9μm,4.0s
MNK pmax pmax
comp=N,11μm,8.0s
MNK pmax pmax
comp=Z,42μm,8.0s
MNK pmax pmax
comp=Z,18μm,10.0s
MNK smax
comp=E,35μm,18.0s
MNK smax
comp=N,38μm,13.0s
D04A Dobbs Creek Ra 70.08 46 ⇓P P 00 53 09.7 -0.7
baz=70
TVAN Van 70.12 304⇑ *i*P P 00 53 11.4 +0.7
F03A Seaside 70.30 47 ⇑P P 00 53 11.7 -0.1
baz=70
PZAR Pazar-Rize 70.33 307 *e*P P 00 53 11.3 -0.7
A07A Ashnola River, 70.34 43 ⇑P P 00 53 12.7 +0.7
baz=70
AFI Afiamalu 70.37 126 P P 00 53 10.9 -1.5
comp=N,194nm,1.1s,mb6.0
AFI Afiamalu 70.37 126 P P 00 53 10.9 -1.6
AFI pmax pmax
comp=Z,194nm,1.1s,mb6.0
C05A Tolt Reservoir 70.39 45 ⇓P P 00 53 13.5 +1.2
baz=70
HKR Hakkari 70.40 303 *e*P P 00 53 08.6 -3.9
E04A Onalaska 70.42 46 ⇓P P 00 53 13.3 +0.9
baz=70
HAKT HAKKARI 70.43 303⇑ *i*P P 00 53 13.0 +0.3
ANN Anapa 70.49 312 *c i*P P 00 53 12.3 -0.6
ANN *e* 00 55 49.4
ANN *e*PPP 00 57 32.7
ANN *e*S S 01 02 26.8 0.0
ANN pmax pmax
comp=Z,253nm,1.7s,mb5.9
ANN pmax pmax
comp=Z,11μm,10.1s
D05A Enumclaw 70.50 45 ⇓P P 00 53 12.9 -0.1
baz=70
CUKT Cukurca 70.67 302 *e*P P 00 53 14.2 +0.1
C06A Tall Timber Ra 70.70 44 ⇓P P 00 53 15.1 +0.9
baz=70
ERZM Erzurum 70.72 306⇑ *i*P P 00 53 15.4 +1.0
EZM Erzurum 70.72 306 *e*P P 00 53 17.5 +3.1
H02A Toledo 70.73 48 ⇑P P 00 53 15.6 +1.2
baz=70
KLBR Kellerberrin 70.79 197 *e*P P 00 53 16.4 +1.7
comp=Z,342nm,1.2s,mb6.2
G03A Yamhill 70.81 47 ⇓P P 00 53 15.4 +0.6
baz=71
B07A Winthrop 70.82 43 ⇓P P 00 53 16.1 +1.2
baz=71
F04A Amboy 70.96 46 ⇑P P 00 53 16.0 +0.3
baz=71
E05A Randle 70.98 46 ⇑P P 00 53 16.2 +0.3
baz=71
A08A Turner Farm, O 71.00 43 P P 00 53 15.4 -0.5
baz=71,SNR=150
D06A Cle Elum 71.14 45 ⇓P P 00 53 17.7 +0.9
baz=71
KTUT Trabzon 71.15 307 *e*P P 00 53 15.7 -1.3
H03A Soap Creek Ran 71.15 48 ⇑P P 00 53 17.2 +0.2
baz=71
MACK Trabzon 71.17 307⇑ *i*P P 00 53 17.1 0.0
I02A Mapleton 71.21 49 ⇑P P 00 53 16.6 -0.7
baz=71
C07A Waterville 71.30 44 ⇑P P 00 53 17.4 -0.4
baz=71
B08A Colville Reser 71.31 43 ⇓P P 00 53 18.4 +0.6
baz=71
G04A Mulino 71.33 47 ⇑P P 00 53 18.0 -0.1
baz=71
A09A Danville 71.36 42 ⇓P P 00 53 17.4 -0.7
baz=71,SNR=195
E06A Yakima 71.44 45 ⇓P P 00 53 19.2 +0.6
baz=71
EDM Edmonton 71.46 37 *e*P P 00 53 12.9 -5.8
K01A Sixes 71.49 50 ⇑P P 00 53 19.9 +0.9
baz=71
MUN Mundaring 71.53 198 *e*P P 00 53 22.4 +3.3
MSL Mosul 71.53 302 *i* x x 00 53 18.5
MSL *i* x x 00 53 21.0
MSL *i* x x 00 53 36.0
MSL *e*x x 01 02 42.0
MSL *e*x x 01 03 20.0
F05A White Salmon 71.54 46 ⇓P P 00 53 19.5 +0.2
baz=71
I03A Eugene 71.56 49 ⇑P P 00 53 20.3 +0.9
baz=71
BTMT Batman 71.57 304 *e*P P 00 53 18.8 -0.7
GUMT Gumushane 71.62 307 *e*P P 00 53 20.0 +0.1
D07A Quincy 71.63 44 ⇑P P 00 53 20.7 +0.9
baz=71
AKASG Malin Array Be 71.64 320 P P 00 53 19.4 -0.4
comp=Z,106nm,0.8s,mb5.8,baz=49,slow=6.4,SNR=350
AKASG LR LR 01 26 59.9
comp=Z,105μm,18.6s,MS7.1,baz=50,slow=38
AKBB Malin Array Si 71.64 320 *e*P P 00 53 19.2 -0.6
KIEV Kiev 71.66 320⇑ *i*P P 00 53 19.1 -0.8
comp=Z,337nm,1.0s,mb6.2
KIEV Kiev 71.66 320⇑ *i*P P 00 53 19.1 -0.8
KIEV pmax pmax
comp=Z,337nm,1.0s,mb6.2
J02A Umpqua 71.72 49 ⇑P P 00 53 20.6 +0.2
baz=72
C08A Higginbotham F 71.80 43 ⇑P P 00 53 21.4 +0.6
baz=72
EZC Erzincan 71.80 306 *e*P P 00 53 22.9 +2.0
H04A Detroit Lake 71.80 47 ⇑P P 00 53 21.4 +0.6
baz=72
BINT Bingol 71.85 305 *e*P P 00 53 20.6 -0.6
ESPY Espiye-Giresun 71.85 308 *e*P P 00 53 18.2 -3.0
B09A Rice 71.92 43 ⇓P P 00 53 21.7 +0.3
baz=72
UMR Umm Al-Rimmam 71.93 294 *e*P P 00 53 20.8 -1.1
UMR AMb AMB 00 53 34.5
comp=Z,306nm,1.6s,mb6.0
F06A Goldendale 72.00 46 ⇓P P 00 53 22.3 +0.2
baz=72
MIB Mutribah 72.07 294 *e*P P 00 53 21.7 -1.1
MIB AMb AMB 00 53 28.9
comp=Z,315nm,0.8s,mb6.3
J03A Ideyld Park 72.08 49 ⇓P P 00 53 22.8 +0.2
baz=72
K02A Glendale 72.11 50 ⇓P P 00 53 23.3 +0.6
baz=72
GRSN GIRESUNGRSN 72.13 308⇓ *i*P P 00 53 21.5 -1.4
KBD Kabd 72.15 293 *e*P P 00 53 22.7 -0.6
KBD AMb AMB 00 53 36.6
comp=Z,993nm,1.4s,mb6.5
HFA0 Hagfors New Ar 72.17 334 P P 00 53 24.3 +1.5
HFS Hagfors 72.17 334 P P 00 53 22.4 -0.4
HFS Hagfors 72.17 334 P P 00 53 22.4 -0.4
comp=Z,25nm,0.6s,mb5.3,baz=75,slow=6.3,SNR=26
I04A Tendick Farm, 72.17 48 ⇓P P 00 53 23.4 +0.2
baz=72
NWAO Narrogin (SRO) 72.19 197 *e*P P 00 53 23.8 +0.7
comp=Z,1μm,1.7s,mb6.5
NWAO Narrogin (SRO) 72.19 197 *e*P P 00 53 23.8 +0.7
NWAO pmax pmax
comp=Z,1μm,1.7s

NWAO	Narrogin (SRO)	72.19	197		P		P	00 53 25.9	+2.8	
	SNR=10									
NWAO	Narrogin (SRO)	72.19	197		P		P	00 53 25.9	+2.8	
	SNR=10									
C09A	Chrisman Ranch	72.21	43	⇓	P		P	00 53 23.2	-0.1	
	baz=72									
QRN	Al-Qurain	72.22	293		*e*P		P	00 53 23.1	-0.5	
QRN						AMb	AMB	00 53 29.6		
	comp=Z,343nm,0.8s,mb6.3									
SHAO	Shalim	72.24	279		P		P	00 53 24.0	+0.2	
	SNR=26									
SHAO	Shalim	72.24	279		P		P	00 53 24.0	+0.2	
	SNR=26									
M01C	Crescent City	72.24	51	⇑	P		P	00 53 23.2	-0.4	
	baz=72									
BHD	Baghdad	72.29	298		*ex*		x	00 53 22.0		
BHD					*ex*		x	00 53 25.0		
BHD					*ex*		x	00 56 02.0		
BHD					*ex*		x	01 02 44.0		
BHD					*i x*		x	01 02 54.0		
BHD					*ex*		x	01 03 24.0		
D08A	Wollman Farm,	72.30	44	⇑	P		P	00 53 23.7	-0.1	
	baz=72									
DOMB	Dombas	72.31	337	⇑	*i*P		P	00 53 23.6	0.0	
	comp=Z,370nm,1.6s,mb6.1									
DOMB	Dombas	72.31	337	⇑	*i*P		P	00 53 23.6	0.0	
DOMB						AMb	AMB	00 53 44.4		
	comp=Z,370nm,1.6s,mb6.0									
SIM	Simferopol'	72.36	313	*c*	*i*P		P	00 53 22.5	-1.7	
SIM					*e*			00 56 05.0		
SIM					*e*PPP			00 57 48.0		
SIM					*e*S		S	01 02 45.0	-3.3	
SIM						pmax	pmax			
	comp=Z,82nm,0.8s,mb5.7									
SIM						pmax	pmax			
	comp=Z,5μm,11.5s									
SIM						MLR	MLR			
	comp=Z,50μm,15.7s,MS6.9									
NB2	NORSAR Subarra	72.36	335		P		P	00 53 23.5	-0.4	
	comp=Z,302nm,1.4s,mb6.0,baz=43,slow=5.9									
NOA	NORSAR Array B	72.36	335		P		P	00 53 23.7	-0.2	
	comp=Z,34nm,0.7s,mb5.4,baz=42,slow=5.9,SNR=76									
MOL	Molde	72.38	338	⇑	*i*P		P	00 53 23.7	-0.3	
	comp=Z,284nm,1.6s,mb6.0									
MOL	Molde	72.38	338	⇑	*i*P		P	00 53 23.7	-0.3	
MOL						AMb	AMB	00 53 32.8		
	comp=Z,284nm,1.6s,mb5.9									
MOL						AMS	AMS	01 30 34.7		
	comp=Z,69μm,17.1s,MS7.0									
H05A	Madras	72.38	47	⇑	P		P	00 53 24.6	+0.2	
	baz=72									
L02A	Cave Junction	72.39	50	⇑	P		P	00 53 25.3	+0.9	
	baz=72									
G06A	Carlson Farm,	72.39	46	⇑	P		P	00 53 24.6	+0.2	
	baz=72									
RDF	Al-Radifah	72.39	293		*e*P		P	00 53 23.9	-0.8	
RDF						AMb	AMB	00 53 37.3		
	comp=Z,488nm,1.8s,mb6.1									
F07A	Phinny Hill Vi	72.41	45	⇓	P		P	00 53 25.1	+0.6	
	baz=72									
NAY	Al-Naaiem	72.44	294		*e*P		P	00 53 24.0	-1.0	
NAY						AMb	AMB	00 53 36.3		
	comp=Z,226nm,1.6s,mb5.8									
RST	Umm Al-Ruwaisa	72.48	294		*e*P		P	00 53 23.9	-1.4	
RST						AMb	AMB	00 53 37.2		
	comp=Z,249nm,1.8s,mb5.8									
B10A	Chitwood Farm,	72.48	42	⇑	P		P	00 53 25.1	+0.3	
	baz=72									
SUW	Suwalki	72.50	325		*e*P		P	00 53 24.8	-0.1	
	comp=Z,16μm,8.9s									
SUW						*e*pP	pP	00 53 30.8	+5.1	
SUW						*es*P	sP	00 53 35.6	+10	
SUW						*e*PP	PP	00 56 08.2	+2.8	
SUW						*e*S	S	01 02 48.4	-1.3	
SUW						*es*S	sS	01 02 58.8	+7.8	
SUW						LMZ		01 26 20.1		
	comp=Z,95μm,19.1s									
SUW	Suwalki	72.50	325		*e*P		P	00 53 24.7	-0.2	
SUW						*e**PP	pP	00 53 30.8	+5.1	
SUW						*e**SP	sP	00 53 35.7	+10	
SUW						*e*		00 56 08.2		
MARD	Mardin	72.52	304	⇑	*i*P		P	00 53 25.6	+0.2	
E08A	Dider Farm, El	72.55	45	⇑	P		P	00 53 25.2	-0.1	
	baz=72									
D09A	Jones Farm, Ri	72.63	44	⇓	P		P	00 53 25.4	-0.4	
	baz=72									
I05A	Bend	72.64	47	⇓	P		P	00 53 25.5	-0.4	
	baz=72									
J04A	Umpqua Nationa	72.67	49	⇑	P		P	00 53 26.0	-0.1	
	baz=72									
C10A	Spilker Farm,	72.73	43	⇓	P		P	00 53 26.0	-0.4	
	baz=72									
H06A	Lindquist Farm	72.85	47	⇑	P		P	00 53 27.1	-0.1	
	baz=73									
B11A	Sandpoint	72.86	42	⇑	P		P	00 53 27.7	+0.6	
	baz=73									
JCC	Jacoby Creek	72.88	52	⇓	P		P	00 53 27.3	-0.1	
	baz=73									
G07A	Ruggs Ranch, H	72.92	46	⇑	P		P	00 53 27.6	0.0	
	baz=73									
A12A	Yaak River Ran	72.94	41	⇑	P		P	00 53 28.8	+1.2	
	baz=73									
E09A	Wood Farm, Sta	73.05	44	⇓	P		P	00 53 28.8	+0.6	
	baz=73									
F08A	Pendleton	73.12	45	⇓	P		P	00 53 29.3	+0.6	
	baz=73									
J05A	Fort Rock	73.17	48	⇑	P		P	00 53 29.6	+0.6	
	baz=73									
YBH	Yreka Blue Hor	73.17	50	⇑	P		P	00 53 29.0	-0.1	
	baz=73									
D10A	Wagner Farm, O	73.20	43	⇑	P		P	00 53 28.8	-0.4	
	baz=73									
B12A	Libby	73.25	41	⇑	P		P	00 53 30.0	+0.6	
	baz=73									
CNB	Canberra Magne	73.25	169		*e*P		P	00 53 30.0	+0.6	
	comp=Z,253nm,1.3s,mb6.0									
K04A	Chilquin	73.26	49	⇑	P		P	00 53 29.5	-0.1	
	baz=73									
M02C	Callahan	73.28	51	⇓	P		P	00 53 30.0	+0.3	
	baz=73									
G08A	Pilot Rock	73.31	46	⇑	P		P	00 53 29.8	-0.1	
	baz=73									
N02C	Big Bar	73.33	51	⇓	P		P	00 53 30.3	+0.2	
	baz=73									
OSL	Oslo	73.34	335		*e*P		P	00 53 29.5	-0.2	
H07A	Lands Inn, Kim	73.38	46	⇓	P		P	00 53 30.2	-0.1	
	baz=73									
I06A	Prineville	73.39	47	⇑	P		P	00 53 30.9	+0.6	
	baz=73									
O01C	Eel River Cons	73.40	52	⇓	P		P	00 53 31.0	+0.5	
	baz=73									
KVT	Kavak	73.43	309		*e*P		P	00 53 30.2	-0.4	
MYA	Malataya	73.49	306		*e*P		P	00 53 31.8	+0.8	
MALT	Malatya	73.50	306		*e*P		P	00 53 27.5	-3.6	
MALT	Malatya	73.50	306		P		P	00 53 32.2	+1.1	
MALT	Malatya	73.50	306		P		P	00 53 31.8	+0.7	
MALT						pmax	pmax			
	comp=Z,150nm,1.3s,mb5.8									
MALT	Malatya	73.50	306	⇑	*i*P		P	00 53 31.6	+0.5	
TOKT	Tokat	73.55	308		*e*P		P	00 53 31.4	+0.1	
A13A	Flathead Natio	73.58	41	⇓	P		P	00 53 32.3	+0.9	
	baz=73									
DIKM	Dikmen	73.58	310		*e*P		P	00 53 29.5	-2.0	
E10A	Myers Farm, Un	73.64	44	⇑	P		P	00 53 32.0	+0.2	
	baz=73									
RBK	Rabkut	73.65	280		P		P	00 53 31.6	-0.6	
	SNR=63									
RBK	Rabkut	73.65	280		P		P	00 53 31.6	-0.6	
	SNR=63									
F09A	S2 Ranch, Elgi	73.66	45	⇑	P		P	00 53 32.1	+0.2	
	baz=73									
M04C	Macdoel	73.68	50	⇑	P		P	00 53 32.3	+0.2	
	baz=74									
K05A	Summer Lake	73.70	49	⇑	P		P	00 53 31.5	-0.7	
	baz=74									
I07A	Izee	73.72	47	⇑	P		P	00 53 32.2	-0.1	
	baz=74									
WHFO	Wadi Hawf	73.75	280		P		P	00 53 32.1	-0.8	
	SNR=62									
WHFO	Wadi Hawf	73.75	280		P		P	00 53 32.1	-0.8	
	SNR=62									
M03C	McCloud	73.80	50	⇑	P		P	00 53 32.7	-0.1	
	baz=74									
J06A	Christmas Vall	73.83	48	⇑	P		P	00 53 33.8	+0.9	
	baz=74									
HYA	Hoyanger	73.87	337	⇑	*i*P		P	00 53 33.6	+0.8	
	comp=Z,215nm,1.2s,mb6.0									
HYA	Hoyanger	73.87	337	⇑	*i*P		P	00 53 33.6	+0.8	
HYA						AMb	AMB	00 53 38.2		
	comp=Z,215nm,1.2s,mb5.9									
F10A	Beach Ranch, E	73.88	44	⇓	P		P	00 53 34.1	+0.9	
	baz=74									
B13A	Whitefish	73.90	41	⇓	P		P	00 53 33.8	+0.6	
	baz=74									
BOYT	Boyabat	73.93	310	⇓	*i*P		P	00 53 34.0	+0.4	
KONO	Kongsberg	73.93	335	⇑	*e*P		P	00 53 32.8	-0.4	
KONO	Kongsberg	73.93	335	⇑	*e*P		P	00 53 32.9	-0.3	
KONO	Kongsberg	73.93	335	⇑	*i*P		P	00 53 33.0	-0.3	
KONO	Kongsberg	73.93	335		P		P	00 53 33.4	+0.2	
KONO						pmax	pmax			
	comp=Z,250nm,1.7s,mb5.9									
H08A	Prairie City	73.94	46	⇓	P		P	00 53 34.1	+0.6	
	baz=74									
WDC	Whiskeytown Da	73.94	51	⇓	P		P	00 53 33.6	-0.1	
	baz=74									
BYBT	Boyabat	73.99	310		*e*P		P	00 53 33.3	-0.6	
O02C	Red Bluff	74.02	52	⇑	P		P	00 53 35.0	+0.9	
	baz=74									
K06A	Valley Falls	74.04	48	⇑	P		P	00 53 34.1	-0.1	
	baz=74									
ATAB	Bozova	74.07	305	⇑	*i*P		P	00 53 35.3	+0.9	
P01C	Double 8 Ranch	74.09	52	⇓	P		P	00 53 35.2	+0.7	
	baz=74									
KIS	Kishinev	74.10	317	⇑	*i*P		P	00 53 33.0	-1.5	
KIS					*i*			00 53 45.0		
KIS					*e*			00 56 16.0		
KIS					*e*PPP			00 58 06.0		
KIS					*i*S		S	01 02 59.0	-9.1	
KIS					*e*PS			01 03 36.0		
KIS						pmax	pmax			
	comp=E,4μm,9.0s									
KIS						pmax	pmax			
	comp=Z,13μm,9.0s									
KIS						pmax	pmax			
	comp=N,4μm,8.6s									
KIS						pmax	pmax			
	comp=Z,12μm,12.0s									
KIS						smax				
	comp=N,14μm,16.0s									
KIS						smax				
	comp=E,19μm,16.0s									
KIS						MLR	MLR			
	comp=Z,84μm,16.0s,MS7.1									
KIS	Kishinev	74.10	317		*i* P		P	00 53 33.0	-1.5	
	comp=Z,4μm,3.7s									
KIS	Kishinev	74.10	317		*i* PcP		PcP	00 53 45.0	-4.6	
KIS	Kishinev	74.10	317		*e*PP		PP	00 56 16.0	-3.3	
KIS	Kishinev	74.10	317		*e*PS		SKSac	01 03 36.0	-6.8	
KIS					*es*S		SS	01 08 12.0	+20	
KIS					*e*SSS			01 11 25.0		
KIS					*e*LQ			01 17 18.0		
KIS					LRM			01 30 58.0		
	comp=Z,84μm,16.0s									
L05A	Lakeview	74.13	49	⇑	P		P	00 53 35.0	+0.2	
	baz=74									
BZK	Bozkurt	74.16	311		*e*P		P	00 53 32.0	-2.9	
E11A	Bogner Ranch,	74.21	43	⇑	P		P	00 53 35.0	-0.1	
	baz=74									
D12A	Red Ives Fores	74.25	42	⇑	P		P	00 53 35.2	-0.1	
	baz=74									
J07A	Hines	74.25	47	⇑	P		P	00 53 36.1	+0.7	
	baz=74									
C13A	Hot Springs	74.28	42	⇑	P		P	00 53 36.0	+0.6	
	baz=74									
M05C	Lookout	74.35	50	⇓	P		P	00 53 35.6	-0.4	
	baz=74									
G10A	Bishop Farm, J	74.35	45	⇓	P		P	00 53 36.8	+0.9	
	baz=74									
I08A	Drewsey	74.36	47	⇑	P		P	00 53 36.4	+0.3	
	baz=74									
GASB	Alder Springs	74.37	52	⇓	P		P	00 53 36.7	+0.5	
	baz=74									
H09A	Durkee	74.43	45	⇓	P		P	00 53 36.5	+0.1	
	baz=74									
ABTO	Aybut	74.44	280		P		P	00 53 36.5	-0.4	
	SNR=58									
ABTO	Aybut	74.44	280		P		P	00 53 36.5	-0.4	
	SNR=58									
CTKT	Corum	74.47	309	⇑	*i*P		P	00 53 37.0	+0.2	
HATC	Hat Creek Radi	74.47	50	⇑	P		P	00 53 37.0	+0.2	
	baz=74									
F11A	Grangeville	74.53	44	⇓	P		P	00 53 37.2	+0.2	
	baz=74									
HOPS	Hopland	74.53	53	⇑	P		P	00 53 37.3	+0.2	
	baz=74									
MOD	Modoc	74.54	49	⇑	P		P	00 53 37.0	-0.1	
	baz=74									
O03C	Acrn Hollow,	74.60	51	⇓	P		P	00 53 37.4	-0.1	
	baz=74									
GZT	Gaziantep	74.61	305	⇑	*i*P		P	00 53 38.4	+0.8	
WAR	Warsaw	74.64	325		*e*P		P	00 53 38.2	+0.7	
WAR					*e*pP		pP	00 53 41.7	+3.4	
WAR					*e*PP		PP	00 56 24.1	+0.5	
WAR					*e*S		S	01 03 11.0	-2.9	
WAR					LMZ			01 29 11.8		
	comp=Z,119μm,19.6s									
WAR	Warsaw	74.64	325		*e*P		P	00 53 38.2	+0.7	
	comp=Z,10.0nm,4.4s									
WAR					*e*pP		pP	00 53 41.7	+3.4	
WAR					*e*PP		PP	00 56 24.1	+0.4	
C14A	Swan Lake	74.66	41	⇑	P		P	00 53 38.2	+0.6	
	baz=74									
IAS	Iasi	74.66	318		P		P	00 53 38.0	+0.3	
IAS	Iasi	74.66	318	⇓	*i*P		P	00 53 37.0	-0.7	
K07A	Rock Creek Ran	74.70	48	⇑	P		P	00 53 38.6	+0.6	
	baz=74									
D13A	Huson	74.70	42	⇓	P		P	00 53 38.2	+0.2	
	baz=74									
ODD1	Odda	74.71	336	⇑	*i*P		P	00 53 37.1	-0.6	
	comp=Z,312nm,1.4s,mb6.0									
ODD1	Odda	74.71	336	⇑	*i*P		P	00 53 37.1	-0.6	
ODD1						AMb	AMB	00 53 56.5		
	comp=Z,312nm,1.4s,mb6.0									
ASK	Askoy	74.71	337		*e*P		P	00 53 38.2	+0.5	
RUND	Rundenannen	74.71	337	⇑	*i*P		P	00 53 40.4	+2.7	
BER	Bergen	74.74	337	⇑	*i*P		P	00 53 37.9	0.0	
BER					*e*P		pP	00 53 38.3	-0.5	
BER						AMS	AMS	01 28 52.1		
	comp=Z,99μm,20.5s,MS7.1									
BER	Bergen	74.74	337		*e*P		P	00 53 38.3	+0.4	
J08A	Circle Bar Ran	74.75	47	⇑	P		P	00 53 38.8	+0.5	
	baz=74									
G11A	Walters Elk Ra	74.76	44	⇓	P		P	00 53 38.6	+0.2	
	baz=74									
BALT	Daday	74.79	311		*i* P		P	00 53 39.4	+0.8	
I09A	Lost Marbles R	74.80	46	⇓	P		P	00 53 39.5	+0.9	
	baz=75									
LVV	L'vov	74.80	322	⇓	*i*P		P	00 53 38.6	+0.1	
LVV					*e*			00 53 54.2		
LVV					*i*			00 56 27.6		
LVV					*i*S		S	01 03 18.4	+2.6	
LVV					*i*			01 03 59.2		
LVV						MLR	MLR			
	comp=E,133μm,18.0s,MS7.3									
LVV						MLR	MLR			
	comp=Z,127μm,18.0s,MS7.3									
LVV						MLR	MLR			
	comp=N,77μm,17.0s,MS7.3									
CORM	Corum	74.83	309		*e*P		P	00 53 37.6	-1.2	
BNN	Bunyan	74.84	307		*e*P		P	00 53 38.2	-0.7	
M06C	Likely Place G	74.84	50	⇓	P		P	00 53 39.1	+0.2	
	baz=75									
EGD	Espegrend	74.87	337		*e*P		P	00 53 39.0	+0.4	
H10A	Noah's Angus R	74.99	45	⇑	P		P	00 53 40.0	+0.3	
	baz=75									
O04C	Chester	75.00	51	⇓	P		P	00 53 40.6	+0.9	
	baz=75									
MNRC	McLaughlin Nat	75.00	52	⇑	P		P	00 53 40.4	+0.5	
	baz=75									
ELFS	Eagle Lake Fie	75.04	50	⇑	P		P	00 53 40.6	+0.5	
	baz=75									
L07A	Adell	75.04	48	⇓	P		P	00 53 40.3	+0.2	
	baz=75									
F12A	Elk City	75.10	43	⇑	P		P	00 53 40.5	+0.2	
	baz=75									
K08A	Mann Creek Ran	75.12	47	⇓	P		P	00 53 41.0	+0.5	
	baz=75									
BLS5	Blasjo	75.14	336	⇑	*i*P		P	00 53 41.6	+1.3	
MCCM	Marconi Confer	75.15	53	⇑	P		P	00 53 41.2	+0.5	
	baz=75									
J09A	Fry Pan Ranch,	75.17	47	⇓	P		P	00 53 41.0	+0.3	
	baz=75									
ORV	Oroville	75.19	51	⇑	P		P	00 53 40.5	-0.4	
	baz=75									
CANT	Cankiri	75.20	310		*e*P		P	00 53 40.6	-0.3	
SUTB	Sutter Butte	75.20	52	⇑	P		P	00 53 40.6	-0.4	
	baz=75									
D14A	Greenough	75.22	42	⇓	P		P	00 53 40.8	-0.1	
	baz=75									
E13A	Victor	75.25	42	⇑	P		P	00 53 41.1	-0.1	
	baz=75									
I10A	Payette	75.27	46	⇑	P		P	00 53 41.5	+0.2	
	baz=75									
BSD	Bornholm Skovb	75.29	330	⇑	*i*P		P	00 53 40.9	-0.3	
BSD					*i*			01 03 19.9		
BSD						pmax	pmax			
	comp=Z,270nm,1.2s,mb6.0									
BSD						MLR	MLR			
	comp=Z,61μm,17.0s,MS7.0									
BSD	Bornholm Skovb	75.29	330	⇑	*i*P		P	00 53 40.9	-0.3	
	comp=Z,274nm,1.2s,mb6.1									
BSD					*i*		S	01 03 19.9	-1.2	
BSD										
	comp=Z,61μm,17.0s									
CVS	Carmenet Viney	75.30	53	⇓	P		P	00 53 41.5	-0.1	
	baz=75									
O05C	Quincy	75.31	51	⇑	P		P	00 53 41.8	+0.2	
	baz=75									
CDAG	Cicekdag	75.32	309	⇑	*i*P		P	00 53 42.5	+0.8	
FARB	Farallon Islan	75.33	54	⇑	P		P	00 53 41.5	-0.3	
	baz=75									
H11A	Donnelly	75.33	45	⇑	P		P	00 53 41.3	-0.4	
	baz=75									
ELDT	Eldivan	75.38	310	⇓	*i*P		P	00 53 42.5	+0.5	
SAFT	Safranbolu	75.39	311		*e*P		P	00 53 41.8	-0.2	
FCC	Fort Churchill	75.40	25	⇑	*i*P		P	00 53 41.6	-0.1	
	comp=Z,504nm,1.2s,mb6.3									
FCC	Fort Churchill	75.40	25	⇑	*i*P		P	00 53 41.6	-0.2	
FCC						pmax	pmax			
	comp=Z,504nm,1.2s,mb6.3									
Q03C	Winters	75.41	52	⇓	P		P	00 53 42.2	-0.1	
	baz=75									
FFC	Flin Flon	75.49	31	⇑	*i*P		P	00 53 42.1	-0.3	
	comp=Z,347nm,1.0s,mb6.2									
FFC						LR	LR			
	comp=Z,50μm,20.0s,MS6.8									
FFC	Flin Flon	75.49	31	⇑	*i*P		P	00 53 42.1	-0.2	
FFC						pmax	pmax			
	comp=Z,347nm,1.0s,mb6.2									
FFC						MLR	MLR			
	comp=Z,50μm,20.0s,MS6.8									
N06A	Buffalo Meadow	75.51	50	⇓	P		P	00 53 42.3	-0.4	
	baz=75									
AVNT	Avonos	75.51	308	⇑	*i*P		P	00 53 42.9	+0.1	
M07A	Soldier Meadow	75.52	49	⇓	P		P	00 53 43.0	+0.2	
	baz=75									
L08A	Fields	75.53	48	⇓	P		P	00 53 43.1	+0.2	
	baz=75									
KWP	Kalwaria	75.58	322		*e*P		P	00 53 43.8	+0.8	
	comp=Z,13μm,5.4s									
KWP					*ep*P		pP	00 53 47.6	+3.8	
KWP					*es*P		sP	00 53 52.2	+8.1	
KWP					*e*PP		PP	00 56 35.2	+3.5	
KWP					*e*S		S	01 03 15.4	-9.0	
KWP					*es*S		sS	01 03 30.2	+4.4	
KWP					LMZ			01 29 29.6		
	comp=Z,260μm,18.3s									
KWP	Kalwaria	75.58	322		*e*P		P	00 53 43.8	+0.9	
KWP					*e**PP		pP	00 53 47.6	+3.8	
KWP					*e**SP		sP	00 53 52.2	+8.1	
KWP					*e*			00 56 35.2		
KWP	Kalwaria	75.58	322	⇑	*i*P		P	00 53 43.6	+0.7	
K09A	Rome	75.58	47	⇓	P		P	00 53 43.7	+0.6	
	baz=75									
F13A	Darby	75.59	43	⇓	P		P	00 53 43.0	-0.1	
	baz=75									
E14A	Clinton	75.64	42	⇑	P		P	00 53 43.4	0.0	
	baz=75									
KOZT	Kozan	75.66	306		*e*P		P	00 53 41.6	-2.1	
Q04C	Lincoln	75.69	52	⇑	P		P	00 53 44.3	+0.4	
	baz=76									
J10A	Berg Farm, Mel	75.69	46	⇑	P		P	00 53 44.1	+0.4	
	baz=76									
KMY	Karmoy	75.69	337	⇑	*i*P		P	00 53 43.8	+0.3	
BEKR	Beckwourth	75.71	51	⇓	P		P	00 53 44.5	+0.5	
	baz=76									
D15A	Lincoln	75.76	41	⇑	P		P	00 53 44.6	+0.6	
	baz=76									
STAV	Stavanger	75.77	336		*e*P		P	00 53 42.9	-0.9	
	comp=Z,161nm,1.4s,mb5.8									
STAV	Stavanger	75.77	336		*e*P		P	00 53 42.9	-0.9	
STAV						AMb	AMB	00 53 47.6		
	comp=Z,161nm,1.4s,mb5.8									
SFJD	Kangerlussuaq	75.85	3		*e*P		P	00 53 44.1	-0.1	
	comp=Z,116nm,0.9s,mb5.8									
SFJD	Kangerlussuaq	75.85	3	⇑	*i*P		P	00 53 44.4	+0.2	
SFJD						pmax	pmax			
	comp=Z,160nm,1.0s,mb5.9									
SFJD						MLR	MLR			
	comp=Z,46μm,19.0s,MS6.8									
SFJD	Kangerlussuaq	75.85	3	⇑	*i*P		P	00 53 44.4	+0.2	
	comp=Z,156nm,1.0s,mb5.9									
SFJD					*i*		S	01 03 35.4	+8.5	
SFJD					*i*			01 27 46.0		
COP	Copenhagen	75.86	331	⇑	*i*P		P	00 53 44.6	+0.2	
COP					*i*			00 56 36.1		
COP					*i*S		S	01 03 28.2	+0.9	
COP						pmax	pmax			
	comp=Z,100nm,1.0s,mb5.7									
COP						MLR	M

baz=76
MFID Camas Ranch 76.24 46 ⇑P P 00 53 47.7 +0.9
baz=76
KOLS Kolonicke sedl 76.25 322 eP P 00 53 47.0 +0.2
KOLS e 00 53 55.9
KOLS Kolonicke sedl 76.25 322 eP P 00 53 47.0 +0.2
KOLS epP pP 00 53 55.9 +8.3
HTY Hatay 76.26 305 eP P 00 53 47.4 +0.3
KARA Karaisali 76.28 306 eP P 00 53 46.0 -1.3
R04C Big Horse Ranc 76.31 52 ⇑P P 00 53 47.6 +0.2
baz=76
RGN Rugen 76.34 330 eP P 00 53 47.4 +0.2
comp=Z,530nm,1.5s,mb6.2
H13A Challis 76.40 44 ⇓P P 00 53 48.3 +0.5
baz=76
G14A Jackson 76.41 43 ⇑P P 00 53 47.7 -0.1
baz=76
WCN Washoe City 76.42 51 ⇑P P 00 53 47.9 -0.1
baz=76
STHS Stebnicka Huta 76.43 323 i P P 00 53 48.5 +0.7
comp=Z,145nm,1.3s,mb5.8
STHS e 00 54 04.2
STHS e 01 03 05.0
STHS Stebnicka Huta 76.43 323 i P P 00 53 48.5 +0.7
STHS e 00 54 04.2
STHS pmax pmax
comp=Z,145nm,1.3s,mb5.8
STHS Stebnicka Huta 76.43 323 i P P 00 53 48.5 +0.7
STHS ePCP PcP 00 54 04.1 +4.5
STHS e 01 03 05.0
UZH Uzhgorod 76.44 322 eP P 00 53 47.2 -0.7
UZH e 00 54 00.8
UZH e 00 56 38.6
UZH e 01 03 33.2
UZH e 01 04 13.0
UZH MLR MLR
comp=Z,123µm,15.0s,MS7.3
MUD Monsted U'grnd 76.50 333 ⇑iP P 00 53 48.1 0.0
MUD i 00 56 41.1
MUD pmax pmax
comp=Z,110nm,1.2s,mb5.7
MUD MLR MLR
comp=Z,86µm,18.0s,MS7.1
MUD Monsted U'grnd 76.50 333 ⇑iP P 00 53 48.1 0.0
comp=Z,114nm,1.2s,mb5.7
MUD i 00 56 41.1
MUD iS 01 02 41.6
MUD
comp=Z,86µm,18.0s
N08A GE Springer Mi 76.51 49 ⇑P P 00 53 48.4 -0.1
baz=76
PSN Preselentsi 76.52 315 P P 00 53 49.1 +0.7
S04C Ingram Canyon, 76.52 53 ⇓P P 00 53 48.8 +0.3
baz=76
K11A Parker Ranch, 76.52 46 ⇓P P 00 53 49.0 +0.5
baz=76
M09A Marrel Ranch, 76.53 48 ⇑P P 00 53 49.1 +0.5
baz=76
EGMT Eagleton 76.54 39 ⇓P P 00 53 48.9 +0.4
baz=76
F15A Butte 76.55 42 ⇓P P 00 53 49.2 +0.6
baz=76
OJC Ojcow 76.58 324 eP P 00 53 49.1 +0.5
OJC epP pP 00 53 58.0 +8.5
OJC eS S 01 03 34.0 -1.4
OJC L 01 29 50.8
comp=Z,148nm,17.4s
OJC Ojcow 76.58 324 eP P 00 53 49.1 +0.5
OJC epP pP 00 53 58.0 +8.5
OJC eS S 01 03 34.0 -1.4
R05C Kirkwood Meado 76.59 52 ⇑P P 00 53 48.8 -0.1
baz=76
MLR Muntele Rosu 76.60 317 P P 00 53 49.2 +0.3
comp=Z,19nm,1.0s,baz=4.2,slow=5.2,SNR=21
MLR LR LR 01 32 28.4
comp=Z,79µm,18.9s,MS7.0,baz=38,slow=40
TRPA Tarpa 76.65 321 ⇑iP P 00 53 49.8 +0.7
CRVS Cervenica-Dubn 76.67 322 eP P 00 53 49.5 +0.3
CRVS e 00 53 59.8
CRVS Cervenica-Dubn 76.67 322 eP P 00 53 49.5 +0.3
CRVS epP pP 00 53 59.8 +10
L10A Juniper Basin 76.70 47 ⇑P P 00 53 50.3 +0.9
baz=76
HENT Hendek 76.71 311 ⇑iP P 00 53 49.2 -0.4
J12A Stokes Ranch, 76.76 45 ⇑P P 00 53 49.7 -0.1
baz=76
BORG Borgarnes 76.78 350 P P 00 53 51.4 +1.9
comp=Z,29nm,0.9s,baz=80,slow=3.8,SNR=3.3
CMB Columbia Colle 76.80 52 ⇓P P 00 53 50.2 +0.1
baz=77
O08A Rochester Mine 76.80 49 ⇓P P 00 53 50.6 +0.5
baz=77
P07A Fallon 76.81 50 ⇑P P 00 53 50.0 -0.1
baz=77
N09A Rock Creek Ran 76.83 49 ⇑P P 00 53 50.5 +0.2
baz=77
PACP Pacheco Peak 76.84 53 ⇓P P 00 53 50.3 -0.1
baz=77
LRW Lerwick 76.85 340 ⇑eP P 00 53 49.4 -0.6
LRW AMb AMB 00 54 09.8
comp=Z,263nm,1.4s,mb6.0
NIE Niedzica 76.88 323 eP P 00 53 51.2 +0.9
I13A Wildhorse Cree 76.89 44 ⇑P P 00 53 51.1 +0.5
baz=77
HLID Hailey 76.95 45 ⇑P P 00 53 51.2 +0.4
baz=77
G15A Dillon 76.98 43 ⇑P P 00 53 51.6 +0.5
baz=77
M10A I.L. Ranch, Tu 77.00 48 ⇓P P 00 53 51.5 +0.3
baz=77
HAST UC Hastings Re 77.04 54 ⇓P P 00 53 52.3 +0.8
baz=77
R06C Coleville 77.08 51 ⇓P P 00 53 52.3 +0.5
baz=77
BOZ Bozeman (W) 77.13 42 ⇑P P 00 53 52.7 +0.9
baz=77
GULT Gulveren 77.18 311 eP P 00 53 52.1 -0.1
J13A Cove Ranch, Pi 77.19 45 ⇑P P 00 53 53.1 +0.9
baz=77
P08A Dixie Valley 77.21 50 ⇓P P 00 53 53.3 +0.9
baz=77
Q07A Schurz 77.23 51 ⇑P P 00 53 53.1 +0.5
baz=77
S05C Merced 77.25 53 ⇓P P 00 53 52.6 -0.1
baz=77
K12A Draper Farm, C 77.25 46 ⇓P P 00 53 53.1 +0.5
baz=77
PRD Provadia 77.26 315 P P 00 53 53.9 +1.3
BUC1 Bucharest 77.29 316 P P 00 53 53.8 +1.0
T05C Eagle Field, D 77.30 53 ⇑P P 00 53 53.2 +0.2
baz=77
KIZT Kizilcal 77.31 309 eP P 00 53 51.5 -1.4
RAC Raciborz 77.42 324 eP P 00 53 54.2 +0.8
RAC MLR MLR
comp=N,266µm,15.9s
RAC MLR MLR
comp=E,200µm,19.2s
RAC MLR MLR
comp=Z,128µm,19.4s
KECS Kecovo 77.43 322 eP P 00 53 53.8 +0.3
comp=Z,59nm,1.4s
KECS ePP PP 00 56 57.5 +10
KECS Kecovo 77.43 322 eP P 00 53 53.8 +0.3
KECS pmax pmax
comp=Z,59nm,1.4s
HRT Hereke 77.45 312 eP P 00 53 53.5 -0.2
DRGR 77.45 320 P P 00 53 54.1 +0.5
DRGR 77.45 320 ⇓iP P 00 53 53.7 +0.1
O09A Fish Creek Ran 77.46 49 ⇓P P 00 53 53.7 -0.1
baz=77
V03C Hunter Liggett 77.46 54 ⇑P P 00 53 53.8 -0.1
baz=77
HWQ Hawqa 77.47 304 eP P 00 53 53.4 -0.6
L12A House Creek Ra 77.50 46 ⇓P P 00 53 54.8 +0.9
baz=77
M11A Holland Ranch, 77.50 47 ⇓P P 00 53 54.9 +0.9
baz=77
N10A Dunphy 77.52 48 ⇓P P 00 53 55.1 +0.9
baz=77
ESKT Eskisehir 77.54 310 eP P 00 53 53.7 -0.6
ESKT Eskisehir 77.54 310 ⇑iP P 00 53 54.0 -0.3
U04C Hernandez Rese 77.55 54 ⇓P P 00 53 54.9 +0.5
baz=77
KONT Konya--Tatoy 77.58 308 eP P 00 53 52.3 -2.2
R07C Lee Vining 77.60 51 ⇑P P 00 53 54.9 +0.2
baz=77
OKC Ostrava-Krasne 77.61 324 ⇑iP P 00 53 54.8 +0.3
OKC e 00 54 01.2
OKC epP PP 00 56 51.1 +2.4
OKC Ostrava-Krasne 77.61 324 ⇑iP P 00 53 54.8 +0.3
OKC e 00 54 01.2
OKC e 00 56 51.1
OKC MLR MLR
comp=Z,126µm,14.6s,MS7.4
OKC Ostrava-Krasne 77.61 324 AMS AMS 00 30 30.0
comp=Z,126µm,14.6s
OKC ⇑iP 00 53 54.8
OKC epP pP 00 54 01.2 +5.9
OKC ePP PP 00 56 51.1 +2.4
ADVT Abdulvahap 77.65 312 eP P 00 53 55.1 +0.3
ISK Istanbul-Kandi 77.65 312 eP P 00 53 55.2 +0.3
RUE Ruedersdorf 77.66 328 eP P 00 53 54.9 +0.2
comp=Z,555nm,1.8s,mb6.2
RUE Ruedersdorf 77.66 328 eP P 00 53 54.9 +0.2
comp=Z,679nm,1.9s,mb6.2
LIKS Likavka 77.71 323 eP P 00 53 55.7 +0.7
comp=Z,110nm,1.1s,mb5.7
LIKS Likavka 77.71 323 eP P 00 53 55.7 +0.7
LIKS pmax pmax
comp=Z,110nm,1.1s,mb5.7
K13A Stover Farm, H 77.71 45 ⇑P P 00 53 55.7 +0.5
baz=78
KSP Ksiaz 77.75 326 eP P 00 53 56.1 +0.9
comp=Z,13µm,5.4s
KSP epP pP 00 54 03.2 +7.2
KSP eS S 01 03 50.4 +2.2
KSP LMZ 01 28 37.6
comp=Z,257µm,18.7s
KSP Ksiaz 77.75 326 ⇑eP P 00 53 55.7 +0.5
KSP ePcP PcP 00 54 05.1 -0.2
KSP ePP PP 00 56 42.5 -7.4
KSP eS S 01 03 47.5 -0.7
KSP eSS SS 01 08 40.0 -6.9
KSP Ksiaz 77.75 326 ⇑eP P 00 53 55.7 +0.5
KSP e 00 54 05.1
KSP eS S 01 03 47.5 -0.7
KSP MLR MLR
comp=Z,296µm,18.7s,MS7.6
IKL Isikli 77.78 306 eP P 00 53 52.8 -2.9
O10A Cortez Mining, 77.80 48 ⇑P P 00 53 56.5 +0.9
baz=78
Q08A Gabbs 77.82 50 ⇓P P 00 53 56.4 +0.5
baz=78
T06C Millerton Lake 77.85 53 ⇓P P 00 53 56.2 +0.2
baz=78
NVAR Mina Array Bea 77.85 51 P P 00 53 57.3 +1.3
comp=Z,140nm,0.9s,mb5.9,baz=295,slow=2.9,SNR=7.9
IZI Iznik 77.86 312 eP P 00 53 55.8 -0.3
P09A Austin 77.87 49 ⇓P P 00 53 56.6 +0.5
baz=78
EREN Erenkoy 77.89 305 eP P 00 53 54.0 -2.3
BHL Bhannes 77.89 303 eP P 00 53 55.9 -0.4
KCC Kaiser Creek 77.90 52 ⇑P P 00 53 56.6 +0.3
baz=78
N11A Elko Archery C 77.92 48 ⇑P P 00 53 56.9 +0.5
baz=78
V04C Ramage Ranch, 77.93 54 ⇑P P 00 53 56.9 +0.4
baz=78
MORC Moravsky Berou 77.93 325 P P 00 53 56.7 +0.4
MORC Moravsky Berou 77.93 325 P P 00 53 56.5 +0.2
MORC pmax pmax
comp=Z,95nm,1.0s,mb5.7
MORC Moravsky Berou 77.93 325 ⇑iP P 00 53 56.5 +0.2
PKD Parkfield 77.96 54 ⇓P P 00 53 56.9 +0.2
baz=78
CTT Catalca 77.97 313 eP P 00 53 55.9 -0.7
BSEG Bad Segeberg 77.98 331 eP P 00 53 56.5 +0.1
BSEG pmax pmax
comp=Z,182nm,1.3s,mb5.8
BSEG Bad Segeberg 77.98 331 eP P 00 53 56.5 +0.1
comp=Z,182nm,1.3s,mb5.8
U05C Westside ANR, 77.99 53 ⇑P P 00 53 57.4 +0.5
baz=78
MLAC Mammoth Lakes 78.01 52 ⇑P P 00 53 57.5 +0.5
baz=78
M12A Wells 78.02 47 ⇓P P 00 53 57.1 +0.2
baz=78
R08A Mina 78.03 51 ⇑P P 00 53 57.5 +0.5
baz=78
SZH Strazhica 78.04 316 P P 00 53 53.5 -3.5
GCMT Greycliff 78.07 41 eP P 00 53 58.0 +0.8
DPC Dobruska-Polom 78.09 326 ⇑iP P 00 53 57.9 +0.8
DPC e 00 54 04.2
DPC Dobruska-Polom 78.09 326 ⇑iP P 00 53 57.9 +0.8
DPC e 00 54 04.2
DPC MLR MLR
comp=Z,142µm,14.1s,MS7.4
DPC Dobruska-Polom 78.09 326 AMS AMS 00 32 40.0
comp=Z,142µm,14.1s
DPC ⇑iP 00 53 57.9
DPC epP pP 00 54 04.2 +6.3
ZIMR 78.10 316 P P 00 53 57.9 +0.6
PSZ Piszkesteto 78.11 322 P P 00 53 57.9 +0.7
PSZ Piszkesteto 78.11 322 ⇑iP P 00 53 58.1 +0.9
PSZ Piszkesteto 78.11 322 ⇑iP P 00 53 57.9 +0.7
UPC Upice 78.11 326 ⇑iP P 00 53 57.8 +0.6
UPC epP pP 00 54 04.2 +6.1
YMR Madison River 78.13 42 eP P 00 53 58.3 +0.9
comp=Z,492nm,1.3s,mb6.3
L13A Double Diamond 78.15 46 ⇓P P 00 53 58.0 +0.3
baz=78
JMB Yambol 78.19 315 eP P 00 53 58.2 +0.3
JMB Yambol 78.19 315 P P 00 53 58.6 +0.8
JMB Yambol 78.19 315 P P 00 54 00.6 +2.8
VYHS Vyhne 78.22 323 iP P 00 53 58.3 +0.4
comp=Z,233nm,1.9s,mb5.8
VYHS Vyhne 78.22 323 iP P 00 53 58.3 +0.4
VYHS pmax pmax
comp=Z,233nm,1.9s,mb5.8
P10A Eureka 78.24 49 ⇓P P 00 53 58.6 +0.4
baz=78
Q09A Carvers 78.29 50 ⇑P P 00 53 58.7 +0.2
baz=78
K14A Jones Ranch, D 78.29 45 ⇑P P 00 53 59.3 +0.8
baz=78
N12A Clover Valley, 78.31 47 ⇑P P 00 53 58.4 -0.1
baz=78
PTRM Twissleman Ran 78.35 54 P P 00 53 59.9 +1.0
GZR Gura Zlata 78.35 319 P P 00 53 58.9 +0.3
GZR Gura Zlata 78.35 319 ⇓iP P 00 53 59.1 +0.4
KOLL Kolacno 78.37 323 iP P 00 53 59.2 +0.5
KOLL e 01 03 08.8
O11A Cowboy Ranch, 78.40 48 ⇑P P 00 53 59.2 +0.2
baz=78
PVL Pavlikeni 78.41 316 P P 00 53 59.5 +0.5
V05C Boulder Hill, 78.42 54 ⇑P P 00 53 59.8 +0.5
baz=78
LFK Lefkose 78.46 306 eP P 00 53 55.4 -4.0
HELL Mitchell Peak, 78.48 53 ⇓P P 00 53 59.4 -0.1
baz=78
M13A Montello 78.49 46 ⇓P P 00 54 00.0 +0.5
baz=78
EDRB Edirne 78.50 314 eP P 00 53 59.3 -0.2
S08C White Mtn Res 78.51 52 ⇑P P 00 53 59.5 -0.2
baz=78
RCTC Rector, Farmer 78.57 53 ⇓P P 00 53 59.6 -0.4
baz=78
GDZ Gediz 78.64 311 ⇑iP P 00 54 00.6 +0.2
SMMC Simmler 78.69 54 ⇑P P 00 54 00.7 -0.1
baz=78
VRAC Vranov 78.70 325 P P 00 54 01.1 +0.5
VRAC Vranov 78.70 325 P P 00 54 01.2 +0.7
VRAC pmax pmax
comp=Z,56nm,1.0s
VRAC Vranov 78.70 325 P P 00 54 01.2 +0.7
comp=Z,56nm,1.0s,mb5.5,baz=54,slow=5.7,SNR=60
VRAC Vranov 78.70 325 ⇑iP P 00 54 01.0 +0.5
P11A Circle Ranch, 78.70 49 ⇑P P 00 54 01.5 +0.7
baz=78
R09A Tonopah 78.73 50 ⇑P P 00 54 01.4 +0.5
baz=78
PVCC Panska Ves 78.74 327 ⇑iP P 00 54 01.3 +0.6
PVCC e 00 54 07.8
PVCC ePP PP 00 57 01.0 +2.9
PVCC Panska Ves 78.74 327 ⇑iP P 00 54 01.3 +0.6
PVCC e 00 54 07.8
PVCC e 00 57 01.0
PVCC MLR MLR
comp=Z,110µm,14.1s,MS7.3
PVCC Panska Ves 78.74 327 ⇑iP P 00 54 01.3 +0.6
PVCC epP pP 00 54 07.8 +6.3
PVCC ePP PP 00 57 01.0 +2.9
TIN Tinemaha 78.75 52 ⇑P P 00 54 01.2 +0.2
baz=78
BRG Berggiesshubel 78.76 327 i P P 00 54 01.3 +0.5
BRG pmax pmax
comp=Z,101nm,1.7s,mb5.5
BRG MLR MLR
comp=N,25µm,21.1s,MS6.6
BRG MLR MLR
comp=E,16µm,19.2s,MS6.6
BRG MLR MLR
comp=Z,29µm,21.4s,MS6.6
BRG Berggiesshubel 78.76 327 eP P 00 54 00.9 +0.1
comp=Z,240nm,1.5s,mb5.9
BRG Berggiesshubel 78.76 327 i PKP P 00 54 01.3 +0.5
comp=Z,169nm,1.7s,mb5.7
BRG PP PP 00 56 44.0 -14
BRG
comp=N,42µm,21.1s
BRG
comp=E,28µm,19.2s
BRG
comp=Z,49µm,21.4s
BNT Bandirma 78.77 312 eP P 00 54 00.8 -0.3
Q10A Clear Creek Ra 78.77 50 ⇑P P 00 54 01.1 -0.1
baz=78
CSS Prodhromos 78.78 305 eP P 00 54 01.6 +0.4
comp=Z,180nm,1.1s,mb5.9
CSS Prodhromos 78.78 305 eP P 00 54 01.0 -0.3
N13A Wendover, West 78.79 47 ⇓P P 00 54 01.7 +0.5
baz=79
ISP Isparta 78.79 309 eP P 00 54 00.6 -0.6
comp=Z,133nm,1.0s,mb5.8
ISP Isparta 78.79 309 eP P 00 54 00.6 -0.7
ISP pmax pmax
comp=Z,133nm,1.0s,mb5.8
BZS Buzias 78.81 320 P P 00 54 01.4 +0.2
BZS Buzias 78.81 320 ⇓iP P 00 54 01.0 -0.2
EDC Edincik 78.81 312 eP P 00 54 01.1 -0.2
BUD Budapest 78.83 322 P P 00 54 01.5 +0.2
BUD Budapest 78.83 322 ⇑iP P 00 54 01.7 +0.4
CLL Collm 78.85 328 ⇑iP P 00 54 01.1 -0.2
comp=Z,214nm,1.1s,mb6.0
CLL eS S 01 03 58.0 -1.9
CLL eP'P' 01 21 03.0
CLL Collm 78.85 328 ⇑iP P 00 54 01.1 -0.2
CLL eS S 01 03 58.0 -1.9
CLL pmax pmax
comp=Z,214nm,1.1s,mb6.0
CLL MLR MLR
comp=Z,113µm,18.8s,MS7.2
CLL Collm 78.85 328 ⇑iP P 00 54 01.1 -0.2
comp=Z,214nm,1.1s,mb6.0
CLL ePmax pP 00 54 02.0 -0.1
CLL ex x 00 54 11.0
CLL ePPlp 00 56 42.0
comp=Z,5µm,10.3s
CLL ePP PP 00 57 01.0 +2.0
comp=Z,466nm,2.4s
CLL eS S 01 03 58.0 -1.9
comp=N,17µm,20.3s
CLL eS S 01 03 58.0 -1.9
comp=E,22µm,22.4s
CLL ePS 01 04 52.0
CLL eSS SS 01 08 59.0 -4.4
CLL eSSS 01 12 30.0
CLL ePKPPKPdf 01 21 03.0
comp=Z,57nm,2.3s
CLL LmH 01 26 00.0
comp=N,101µm,18.8s
CLL LmH 01 26 00.0
comp=E,172µm,19.7s
CLL LmV 01 29 00.0
comp=Z,113µm,18.8s
CLL Collm 78.85 328 eP P 00 54 01.2 -0.1
comp=Z,216nm,1.1s,mb6.0
CLL ePP PP 00 57 05.3 +6.3
CLL eS S 01 03 59.0 -0.9
CLL eSP 01 04 42.7
CLL eSS SS 01 09 03.5 +0.1
CLL eSSS 01 12 35.8
CLL eLR LR 01 19 59.2
CLL ePKPPKPdf 01 21 02.8
O12A Currie 78.85 48 ⇑P P 00 54 02.0 +0.5
baz=79
M14A Sheep Mountain 78.87 46 ⇑P P 00 54 02.1 +0.5
baz=79
SMOL Smolenice 78.88 324 i P P 00 54 02.4 +0.9
SMOL e 01 03 10.1
S09A Goldfield 78.96 51 ⇑P P 00 54 02.4 +0.2
baz=79
KRUC Moravsky 78.97 325 P P 00 54 00.8 -1.2
LEF Lefka 78.97 306 eP P 00 53 59.7 -2.5
FBE Freiberg 78.98 327 eP P 00 54 02.2 +0.2
comp=Z,338nm,1.4s,mb6.1
BCK Bucak 78.98 309 eP P 00 54 00.2 -2.1
SART Tekirdag 78.99 313 ⇑iP P 00 54 02.6 +0.4
MODS Modra-Piesok 79.05 324 eP P 00 54 03.5 +1.1
PKM Peak Mountain 79.06 54 ⇓P P 00 54 02.7 -0.1
baz=79
BTOK Tokmak 79.09 312 i P P 00 54 01.8 -1.0
KHL Karahalli 79.10 310 eP P 00 54 02.8 -0.1
PRA Prague 79.13 326 ⇑P P 00 54 03.0 +0.1
PRA AMS AMS 01 29 30.0
PRU Pruhonice 79.14 326 ⇑iP P 00 54 03.3 +0.4
PRU e 00 54 09.6
PRU ePP PP 00 57 04.6 +3.1
PRU Pruhonice 79.14 326 ⇑iP P 00 54 03.3 +0.4
PRU e 00 54 09.6
PRU e 00 57 04.6
PRU MLR MLR
comp=Z,103µm,16.8s,MS7.2
PRU Pruhonice 79.14 326 ⇑iP P 00 54 03.3 +0.4
PRU epP pP 00 54 09.6 +5.8
PRU ePP PP 00 57 04.6 +3.1
NRDL Niedersach Rie 79.15 330 eP P 00 54 03.0 +0.1
comp=Z,375nm,2.1s,mb6.0
R10A Warm Springs 79.17 50 ⇑P P 00 54 03.4 +0.1
baz=79
Q11A Duckwater 79.21 49 ⇓P P 00 54 03.5 -0.1
baz=79
TREC Trest 79.22 325 ⇑iP P 00 54 04.0 +0.6
TREC e 00 54 10.3
TREC e 00 57 04.0
TREC MLR MLR
comp=Z,126µm,19.7s,MS7.3
TREC Trest 79.22 325 ⇑iP P 00 54 04.0 +0.6
TREC epP pP 00 54 10.3 +6.1
TREC ePP PP 00 57 04.0 +1.8
S10A Tonopah Range, 79.22 50 ⇓P P 00 54 03.8 +0.2
baz=79
CWC Cottonwood Cre 79.22 52 ⇑P P 00 54 03.9 +0.2
baz=79
BALB Balikesir 79.25 312 eP P 00 54 01.4 -2.3
ZST Bratislava 79.25 324 eP P 00 54 04.2 +0.6
comp=Z,74nm,1.4s
ZST ePP PP 00 57 05.7 +3.2
ZST Bratislava 79.25 324 eP P 00 54 04.2 +0.6
ZST pmax pmax
comp=Z,74nm,1.4s
ZST Bratislava 79.25 324 eP P 00 54 04.2 +0.6
ZST ePP PP 00 57 05.7 +3.2
P12A McGill 79.26 48 ⇓P P 00 54 04.0 +0.2
baz=79
ANTB Antalya 79.29 308 eP P 00 53 58.5 -5.5
GRAC Grapevine Rang 79.32 52 ⇑P P 00 54 04.2 0.0
baz=79
KDZ Kurdzhali 79.38 315 P P 00 54 05.1 +0.7
N14A Grayback Hills 79.38 46 ⇓P P 00 54 05.3 +0.8
baz=79
O13A Hicks Ranch, I 79.39 47 ⇓P P 00 54 05.0 +0.5
baz=79
M15A Larsen Ranch, 79.41 46 ⇓P P 00 54 05.1 +0.5
baz=79
SBC Santa Barbara 79.41 55 ⇓P P 00 54 04.6 -0.1
baz=79
ISA Isabella 79.46 53 ⇑P P 00 54 04.8 -0.1
baz=79
PLD Plovdiv 79.49 315 eP P 00 54 05.0 0.0
PLD Plovdiv 79.49 315 P P 00 54 05.4 +0.4
PGB Panagyurishte 79.49 316 P P 00 54 05.8 +0.8
KULA Kula-Manisa 79.50 311 eP P 00 54 04.5 -0.6
ALN Alexandroupoli 79.52 314 eP P 00 54 05.7 +0.6
CLZ Clausthal 79.54 329 eP P 00 54 05.4 +0.3

CLZ pmax pmax
comp=Z,248nm,1.3s,mb6.0
CLZ Clausthal 79.54 329 *e*P **P 00 54 05.4 +0.3**
comp=Z,248nm,1.3s,mb6.0
ENEZ Enez 79.56 314 *e*P **P 00 54 03.8 -1.6**
ARVC Arvin 79.56 54 ⇓P **P 00 54 05.8 +0.3**
baz=79
R11A Troy Canyon, C 79.57 50 ⇓P **P 00 54 06.0 +0.5**
baz=79
Q12A Willow Creek R 79.58 49 ⇓P **P 00 54 06.0 +0.4**
baz=79
MCD Coleburn Disti 79.59 339⇑*i*P **P 00 54 05.0 -0.2**
RDO Rodhopi 79.64 314 P **P 00 54 05.4 -0.4**
RDO Rodhopi 79.64 314 *e*P **P 00 54 02.5 -3.3**
REB Eisghbrachaidh 79.68 341⇑*e*P **P 00 54 05.5 -0.2**
RTO Tolsta 79.70 341⇑*e*P **P 00 54 05.8 0.0**
MME1 Meikle Cairn 79.73 339⇑*e*P **P 00 54 05.4 -0.6**
TANN Tannenbergstha 79.74 327 *e*P **P 00 54 06.4 +0.2**
comp=Z,144nm,1.5s,mb5.7
BSC Santa Cruz Isl 79.74 55 ⇑P **P 00 54 06.1 -0.4**
baz=80
N15A Stansbury Isla 79.74 46 ⇑P **P 00 54 07.2 +0.8**
baz=80
RZN Rozhen 79.75 315 P **P 00 54 07.3 +0.9**
DENT Denizli 79.76 310 *e*P **P 00 54 05.9 -0.7**
GOLH Golhisar 79.76 309⇑*i*P **P 00 54 06.2 -0.4**
AKHS Akhisar 79.78 311 *i*P **P 00 54 05.7 -0.9**
AKS Akhisar 79.78 311 *e*P **P 00 54 05.2 -1.4**
WERD Werda 79.78 328 *e*P **P 00 54 06.5 +0.1**
comp=Z,120nm,1.3s,mb5.7
P13A Bates Ranch, G 79.80 48 ⇑P **P 00 54 06.9 +0.2**
baz=80
GUNZ Gunzen 79.83 327 *e*P **P 00 54 06.9 +0.2**
comp=Z,165nm,1.4s,mb5.8
MPMC Manual Prospec 79.83 52 ⇓P **P 00 54 06.9 -0.1**
baz=80
ELL Elmali 79.85 309 *e*P **P 00 54 05.7 -1.4**
WERN Wernitzgruen 79.87 327 *e*P **P 00 54 07.1 +0.2**
comp=Z,150nm,1.4s,mb5.7
NKC Novy Kostel 79.88 327⇑*i*P **P 00 54 07.2 +0.3**
NKC *e* 00 54 13.5
NKC *e*PP PP 00 57 11.0 +3.4
NKC Novy Kostel 79.88 327⇑*i*P **P 00 54 07.2 +0.3**
NKC *e*pP pP 00 54 13.5 +5.7
NKC *e*PP PP 00 57 11.0 +3.4
NKC AMS AMS 01 32 40.0
comp=Z,136µm,14.4s
PKSM Moragy 79.91 321 P **P 00 54 07.0 -0.2**
S11A Rachel 79.92 50 ⇑P **P 00 54 07.6 +0.2**
baz=80
MOX Moxa 79.93 328⇑*i*P **P 00 54 07.2 0.0**
comp=Z,309nm,1.8s,mb5.9
MOX
comp=Z,67µm,20.0s
MOX Moxa 79.93 328⇑*i*P **P 00 54 07.2 0.0**
MOX pmax pmax
comp=Z,309nm,1.8s,mb5.9
MOX MLR MLR
comp=Z,67µm,20.0s,MS7.0
MOX Moxa 79.93 328 *e*P **P 00 54 07.2 0.0**
comp=Z,189nm,1.5s,mb5.8
OSI Osito Adit 79.95 54 ⇑P **P 00 54 08.5 +0.8**
baz=80
FURC Furnace Creek, 79.97 52 ⇑P **P 00 54 08.2 +0.5**
baz=80
VTS Vitosha 79.99 316 P **P 00 54 08.4 +0.7**
VTS Vitosha 79.99 316 *e*P **P 00 54 08.8 +1.1**
VTS Vitosha 79.99 316 P **P 00 54 08.1 +0.4**
VTS Vitosha 79.99 316⇑*i*P **P 00 54 08.3 +0.6**
MDO Dochfour 80.02 340⇑*e*P **P 00 54 07.1 -0.4**
DUG Dugway 80.03 47 ⇓P **P 00 54 08.7 +0.7**
baz=80
CONA Conrad Observa 80.03 324 *i*pP pP 00 54 08.6 0.0
comp=Z,11µm,5.6s,SNR=60
BLG Laguna Peak 80.04 55 ⇓P **P 00 54 07.7 -0.4**
baz=80
EZN Ezine 80.05 313 *e*P **P 00 54 08.3 +0.2**
EZN Ezine 80.05 313 *e*P **P 00 54 08.3 +0.2**
TPNV Topopah Spring 80.05 51 ⇓P **P 00 54 08.3 +0.2**
baz=80
GADA Gvkgeada 80.06 313 *e*P **P 00 54 04.7 -3.4**
LRMC Laurel Mountai 80.07 53 ⇑P **P 00 54 08.6 +0.3**
baz=80
Q13A Wheeler Ranch, 80.12 48 ⇑P **P 00 54 09.3 +0.8**
baz=80
PDAR Pinedale Array 80.16 43 P **P 00 54 08.8 +0.3**
comp=Z,156nm,0.9s,mb5.9,baz=284,slow=2.0,SNR=18
PDAR PKKPbc PKKPbc 01 12 50.9 -0.4
comp=Z,1.6nm,0.8s,baz=111,slow=2.0,SNR=3.6
PDAR PKPPKP 01 20 56.0
comp=Z,1.5nm,1.0s,baz=114,slow=4.0,SNR=4.0
AYVA Ayvalik 80.17 312⇑*i*P **P 00 54 08.4 -0.3**
R12A Pony Springs, 80.17 49 ⇑P **P 00 54 09.4 +0.7**
baz=80
BOZC Bozcaada 80.20 313⇑*i*P **P 00 54 08.6 -0.3**
KHC Kasperske Hory 80.20 326⇑*i*P **P 00 54 08.9 +0.2**
KHC *e* 00 54 18.7
KHC *e*PP PP 00 57 13.9 +3.6
KHC Kasperske Hory 80.20 326 AMS AMS 00 33 00.0
comp=Z,133µm,13.5s
KHC ⇑*i*P 00 54 08.9
KHC *e*pP pP 00 54 18.7 +9.2
KHC *e*PP PP 00 57 13.9 +3.6
MANZ Manzenberg 80.21 327 *e*P **P 00 54 08.9 +0.2**
comp=Z,225nm,1.7s,mb5.8
IBBN Ibbenburen 80.22 331 *e*P **P 00 54 08.4 -0.3**
comp=Z,224nm,1.1s,mb6.0
KAC Achnashellach 80.22 340⇑*i*P **P 00 54 08.4 -0.2**
RRH Rhenigidale 80.22 341⇑*e*P **P 00 54 08.5 -0.2**
WIT Witteveen 80.24 332⇑*i*P **P 00 54 09.4 +0.6**
comp=Z,932nm,1.8s,mb6.4
EDW2 Edwards Air Fo 80.25 54 ⇑P **P 00 54 09.9 +0.7**
baz=80
SNCC San Nicolas Is 80.27 56 ⇑P **P 00 54 09.9 +0.5**
baz=80
ROTZ Rotzenmuhle 80.33 327 *e*P **P 00 54 09.9 +0.5**
comp=Z,238nm,1.4s,mb5.9
ROTZ *e*PP PP 00 57 05.7 -5.7
U10A Ash Meadows, A 80.33 51 ⇑P **P 00 54 10.1 +0.4**
baz=80
GEC2 GERESS Array S 80.35 326 *e*P **P 00 54 09.5 0.0**
GEC2 pmax pmax
comp=Z,133nm,1.5s,mb5.7
GEC2 GERESS Array S 80.35 326 *e*P **P 00 54 09.5 0.0**
comp=Z,133nm,1.5s,mb5.7
GERES GERESS Array B 80.35 326 P **P 00 54 09.6 +0.1**
GERES P'P' 01 20 49.8
GERES LR LR 01 30 32.0
GERES GERESS Array B 80.35 326 P **P 00 54 09.6 +0.1**
comp=Z,23nm,0.8s,mb5.1,baz=46,slow=4.1,SNR=66
GERES PKPPKP 01 20 49.8
comp=Z,0.4nm,0.5s,baz=243,slow=4.3,SNR=4.3
GERES LR LR 01 30 32.0
comp=Z,113µm,18.5s,MS7.2,baz=35,slow=36
MMB Musomiste 80.37 315 P **P 00 54 09.9 +0.1**
KDAG Bornova 80.41 311⇑*i*P **P 00 54 09.9 -0.2**
DECC Green Verdugo 80.43 54 ⇓P **P 00 54 10.4 +0.2**
baz=80
FETY Fethiye 80.44 309 *e*P **P 00 54 05.1 -5.1**
NVR Nevrokopi 80.46 315 *e*P **P 00 54 10.5 +0.3**
PRK Paraskevi 80.46 312 *e*P **P 00 54 09.0 -1.3**
KPL Plockton 80.46 340⇑*e*P **P 00 54 08.1 -1.8**
KPL AMb AMB 00 54 13.6
comp=Z,159nm,1.3s,mb5.8
TAU Tasmania Unive 80.46 172 P **P 00 54 10.4 +0.5**
comp=Z,1µm,1.9s,mb6.5
TAU Tasmania Unive 80.46 172 *e*P **P 00 54 12.8 +2.9**
TAU pmax pmax
comp=Z,1µm,1.9s,mb6.5
S12A Delamar Landin 80.49 50 ⇑P **P 00 54 11.0 +0.5**
baz=80
T11A Corn Creek, Al 80.50 50 ⇑P **P 00 54 11.7 +1.2**
baz=80
WET Wettzell 80.50 326 *e*P **P 00 54 10.7 +0.4**
WET pmax pmax
comp=Z,182nm,1.4s,mb5.8
WET Wettzell 80.50 326 *e*P **P 00 54 10.7 +0.4**
comp=Z,182nm,1.4s,mb5.8
KSB Sheil Bridge 80.51 340 *e*P **P 00 54 08.8 -1.4**
KKB Krupnik 80.55 316 P **P 00 54 11.0 +0.3**
BLCB Balcova 80.56 311 *e*P **P 00 54 07.8 -3.0**
BLCB Balcova 80.56 311 *e*P **P 00 54 11.2 +0.4**
LIA Limnos Island 80.67 313 *e*P **P 00 54 13.5 +2.1**
ARSA Arzberg 80.68 324 *i*P **P 00 54 11.6 +0.3**
comp=Z,8µm,5.7s,SNR=32
ARSA Arzberg 80.68 324 *i*pP pP 00 54 11.6 -0.5
comp=Z,8µm,5.7s,SNR=32
DIVS Divcibare 80.69 319 *e*P **P 00 54 11.8 +0.4**
SHOC Shoshone 80.70 52 ⇓P **P 00 54 12.5 +0.9**
baz=80
GSC Goldstone 80.74 53 ⇑P **P 00 54 12.4 +0.5**
baz=80
FMP Fort Macarthur 80.79 55 ⇑P **P 00 54 12.4 +0.2**
baz=81
EBH Black Hill 80.80 339⇑*i*P **P 00 54 11.6 -0.2**
GRA1 Grafenberg Arr 80.81 328 *e*P **P 00 54 12.5 +0.5**
comp=Z,430nm,1.2s,mb6.2
GRF Grafenberg Arr 80.81 328 *e*P **P 00 54 12.5 +0.5**
GRF pmax pmax
comp=Z,430nm,1.2s,mb6.2
GRF MLR MLR
comp=Z,87µm,18.4s,MS7.1
GRF Grafenberg Arr 80.81 328 *e*P **P 00 54 12.5 +0.5**
comp=Z,430nm,1.2s,mb6.2
GRF *e*L 01 30 40.7
comp=Z,87µm,18.4s
GRFO Grafenberg 80.81 328 P **P 00 54 11.8 -0.2**
GRFO pmax pmax
comp=Z,510nm,1.4s,mb6.3
GRFO Grafenberg 80.81 328 *e*P **P 00 54 12.5 +0.5**
comp=Z,407nm,1.2s,mb6.2
ESY Stoneypath 80.82 338⇑*e*P **P 00 54 10.3 -1.6**
MOA Molln 80.83 325 *i*P **P 00 54 12.2 +0.1**
comp=Z,11µm,6.1s,SNR=22
MOA Molln 80.83 325 *i*pP pP 00 54 12.2 -0.7
comp=Z,11µm,6.1s,SNR=22
URLA Izmir 80.84 312⇑*i*P **P 00 54 12.2 -0.2**
WTSB Winterswijk 80.86 331⇑*i*P **P 00 54 11.9 -0.3**
comp=Z,205nm,1.8s,mb5.8
BFSC Mount Baldy St 80.87 54 ⇓P **P 00 54 12.8 +0.2**
baz=81
KAR1 Arisaig 80.87 340⇑*i*P **P 00 54 11.6 -0.6**
RRX Edison Barstow 80.89 53 ⇑P **P 00 54 12.3 -0.4**
baz=81
CIS Catalina Islan 80.91 55 ⇑P **P 00 54 12.6 -0.2**
baz=81
KOGS Kog 80.91 323 *e*P **P 00 54 12.1 -0.5**
KOGS *e*PP PP 00 57 18.6 +2.3
KOGS *e*S S 01 04 22.5 +0.6
U11A Corn Creek 80.92 51 ⇑P **P 00 54 13.3 +0.5**
baz=81
EDI Edinburgh 80.99 338⇑*e*P **P 00 54 12.1 -0.6**
OUR Ouranopolis 81.07 314 *e*P **P 00 54 13.0 -0.5**
EBL Broad Law 81.08 338⇑*e*P **P 00 54 13.0 -0.3**
XSO Sourhope Farm 81.08 338⇑*e*P **P 00 54 12.3 -1.0**
SCI San Clemente I 81.08 55 ⇓P **P 00 54 13.6 -0.1**
baz=81
EAB Aberfoyle 81.09 339⇑*i*P **P 00 54 13.1 -0.2**
SOH Sokhos 81.10 315 *e*P **P 00 54 13.4 -0.3**
S13A Holt Ranch, En 81.11 49 ⇓P **P 00 54 14.3 +0.5**
baz=81
SMG Samos 81.12 311 *e*P **P 00 54 13.5 -0.4**
KNT Kendrikon 81.12 316 *e*P **P 00 54 13.0 -0.8**
KNT Kendrikon 81.12 316 P **P 00 54 14.1 +0.3**
EAU Auchinoon 81.13 338⇑*i*P **P 00 54 13.4 -0.1**
T12A Moapa 81.14 50 ⇑P **P 00 54 13.8 -0.1**
baz=81
R14A James Farms, M 81.14 48 ⇓P **P 00 54 14.5 +0.5**
baz=81
CHOS Chios island 81.15 312 *e*P **P 00 54 15.3 +1.3**
STIP Stip 81.16 316 *e*P **P 00 54 13.3 -0.6**
STIP Stip 81.16 316⇑*i*P **P 00 54 13.2 -0.8**
BDRM Kayabasi 81.17 310⇑*i*P **P 00 54 14.1 0.0**
VAY Valandovo 81.20 316 *e*P **P 00 54 14.0 -0.2**
VAY Valandovo 81.20 316⇑*i*P **P 00 54 13.8 -0.4**
TUQ Turquoise Mtn. 81.21 52 ⇑P **P 00 54 14.5 +0.1**
baz=81
BODT Bodrum 81.25 310 *e*P **P 00 54 14.0 -0.6**
V11A Goodsprings 81.27 51 ⇑P **P 00 54 15.0 +0.3**
baz=81
ARG Arkhangelos 81.30 309 *e*P **P 00 54 15.0 +0.2**
ULM Lac du Bonnet 81.31 31 P **P 00 54 14.0 -0.6**
ULM Lac du Bonnet 81.31 31 P **P 00 54 14.0 -0.6**
baz=322,slow=7.5
PERS Pernice 81.31 324 *e*P **P 00 54 15.0 +0.3**
BBRC Big Bear Sol-O 81.33 53 ⇓P **P 00 54 14.9 -0.1**
baz=81
HEC Hector,Ludlow 81.34 53 ⇑P **P 00 54 15.3 +0.2**
baz=81
PLG Polygyros 81.34 315 *e*P **P 00 54 15.2 +0.2**
PLG Polygyros 81.34 315 *e*P **P 00 54 13.5 -1.5**
SKO Skopje 81.38 317 *e*P **P 00 54 15.9 +0.7**
SKO Skopje 81.38 317⇑*i*P **P 00 54 16.4 +1.2**
HORT Hortiatis 81.39 315 *e*P **P 00 54 14.8 -0.4**
S14A Cedar City 81.41 49 ⇓P **P 00 54 16.2 +0.8**
baz=81
U12A Valley of Fire 81.44 50 ⇑P **P 00 54 16.4 +0.8**
baz=81
T13A Saint George 81.44 50 ⇑P **P 00 54 15.8 +0.2**
baz=81
THE Thessaloniki 81.44 315 *e*P **P 00 54 14.2 -1.3**
PGBU Glenifferbraes 81.46 339⇑*e*P **P 00 54 14.3 -1.0**
PGBU AMb AMB 00 54 20.5
comp=Z,365nm,1.4s,mb6.1
EKA Eskdalemuir Ar 81.48 338 P **P 00 54 15.3 -0.1**
comp=Z,9.6nm,0.8s,baz=30,slow=4.3,SNR=20
EKA PP PP 00 57 19.7 -1.0
comp=Z,19nm,1.1s,baz=39,slow=7.2,SNR=4.4
PMSU Muirshiel 81.50 339 *e*P **P 00 54 15.2 -0.3**
PAIG Paliouri 81.51 314 *e*P **P 00 54 15.4 -0.5**
ESK Eskdalemuir 81.51 338⇑*e*P **P 00 54 14.6 -1.0**
ESK Eskdalemuir 81.51 338 *e*P **P 00 54 15.2 -0.4**
comp=Z,147nm,1.3s,mb5.8
ESK Eskdalemuir 81.51 338 *e*P **P 00 54 15.2 -0.4**
ESK pmax pmax
comp=Z,147nm,1.3s,mb5.8
PLE Pljevlja 81.53 319⇑*i*P **P 00 54 16.7 +0.8**
SISC Sisak 81.55 322 *i*P **P 00 54 15.9 0.0**
TNS Taunus Mts 81.56 329 *e*P **P 00 54 15.9 -0.1**
TNS pmax pmax
comp=Z,204nm,1.5s,mb5.8
TNS Taunus Mts 81.56 329 *e*P **P 00 54 15.9 -0.1**
comp=Z,204nm,1.5s,mb5.8
MURC Murrieta 81.57 54 ⇓P **P 00 54 16.2 -0.1**
baz=81
IVA Berane 81.59 318⇑*i*P **P 00 54 16.3 +0.1**
XAL Allendale 81.60 337⇑*e*P **P 00 54 15.5 -0.6**
ECK Cauldkaine Hil 81.61 338⇑*i*P **P 00 54 15.4 -0.6**
V12A Nelson 81.70 51 ⇑P **P 00 54 17.5 +0.5**
baz=82
PVY Plav 81.74 318⇑*i*P **P 00 54 17.1 +0.1**
CRES Cresnjev 81.74 323 *e*P **P 00 54 16.8 -0.1**
SIND Sindeldorf 81.76 328 P **P 00 54 17.3 +0.3**
U13A Pakoon Wash 81.80 50 ⇓P **P 00 54 18.1 +0.7**
baz=82
GMRC Granite Mounta 81.80 52 ⇓P **P 00 54 17.6 +0.1**
baz=82
KBA Koenbreinsper 81.82 325 *i*P **P 00 54 17.6 +0.2**
comp=Z,8µm,6.0s,SNR=32
KBA Koelnbreinsper 81.82 325 *i*pP pP 00 54 17.6 -0.6
comp=Z,8µm,6.0s,SNR=32
UPM Unac-Piva 81.88 319⇑*i*P **P 00 54 17.3 -0.4**
TOD Tromm 81.89 329⇑*e*P **P 00 54 17.9 +0.2**
KRUS Krusevo 81.89 317⇑*i*P **P 00 54 18.2 +0.3**
AOS Alonnisos 81.90 314 *e*P **P 00 54 17.9 -0.1**
T14A Hurricane 81.91 49 ⇑P **P 00 54 17.9 -0.2**
baz=82
FUR Furstenfeldbru 81.94 327 *e*P **P 00 54 18.2 +0.2**
FUR pmax pmax
comp=Z,715nm,1.9s,mb6.3
FUR Furstenfeldbru 81.94 327 *e*P **P 00 54 18.2 +0.2**
comp=Z,715nm,1.9s,mb6.3
W12A Cal Nev Ari 81.96 52 ⇑P **P 00 54 17.7 -0.7**
baz=82
MYKA Terra Mystica 82.01 324⇑*i*P **P 00 54 17.9 -0.5**
comp=Z,186µm,5.4s
LJU Ljubljana 82.03 323 *e*P **P 00 54 18.4 -0.1**
LJU *e* 00 57 28.7
LJU *e*S S 01 04 35.1 +1.6
LJU *e*SS SS 01 09 50.2 -0.9
LJU Ljubljana 82.03 323 *e*P **P 00 54 18.4 -0.1**
LJU *e*PcP PcP 00 54 20.6 -3.4
LJU *e*PP PP 00 57 28.7 +3.3
LJU *e*S S 01 04 35.1 +1.6
LJU *e*SS SS 01 09 50.1 -0.9
LJU *e* 01 13 38.7
LJU *e* 01 15 56.6
SWS Schriesheim-Wi 82.03 329 P **P 00 54 18.8 +0.4**
PFO Pinyon Flat Ob 82.04 54 ⇑P **P 00 54 18.7 -0.1**
baz=82
SRU San Rafael 82.07 46 *e*P **P 00 54 19.7 +0.8**
comp=Z,111nm,0.9s,mb5.8
SRU San Rafael 82.07 46 *e*P **P 00 54 19.7 +0.9**
SRU pmax pmax
comp=Z,111nm,0.9s,mb5.8
LIT Litokhoron 82.07 315 *e*P **P 00 54 18.4 -0.4**
BOJS Bojanci 82.07 323 *e*P **P 00 54 18.6 -0.1**
BOJS *e*PP PP 00 57 28.8 +2.9
BOJS *e*S S 01 04 34.6 +0.6
109C Camp Elliot, M 82.08 55 ⇑P **P 00 54 18.9 -0.1**
baz=82
BELC Belle Mtn. 82.08 53 ⇓P **P 00 54 18.6 -0.4**
baz=82
HDH Heidenheim-Cha 82.08 327 P **P 00 54 18.9 +0.2**
BIA Bitola 82.09 316 P **P 00 54 20.1 +1.2**
BIA Bitola 82.09 316 *e*P **P 00 54 16.8 -2.1**
BIA Bitola 82.09 316 *i*P **P 00 54 19.1 +0.2**
NKY Niksic 82.10 319⇑*i*P **P 00 54 18.9 0.0**
CKE Keswick 82.11 338⇑*i*P **P 00 54 18.5 -0.2**
HGN Heimansgroeve 82.14 331⇑*i*P **P 00 54 18.6 -0.3**
comp=Z,195nm,1.8s,mb5.7
HGN *e*PP PP 00 57 26.7 +0.4
XOR Xorichti 82.17 314 *e*P **P 00 54 18.6 -0.8**
GMK Mull of Kintyr 82.18 339⇑*i*P **P 00 54 18.9 -0.2**
HPK Haverah Park 82.18 337⇑*e*P **P 00 54 18.8 -0.4**
HPK AMb AMB 00 54 21.0
comp=Z,180nm,1.2s,mb5.9
NEO Neokhori 82.19 314 *e*P **P 00 54 18.0 -1.5**
ABH Alteburg 82.19 330⇑*e*P **P 00 54 19.5 +0.2**
BEBN Eben Emael 82.21 331 P **P 00 54 19.1 -0.3**
comp=Z,38nm,0.9s
FNA Florina 82.22 316 *e*P **P 00 54 19.2 -0.4**
FNA Florina 82.22 316 P **P 00 54 21.4 +1.8**
TTG Podgorica 82.23 318⇑*i*P **P 00 54 18.9 -0.7**
MEM Membach 82.23 331 P **P 00 54 19.1 -0.4**
comp=Z,124nm,1.3s,mb5.7
CADS Cadrg 82.26 324 *e*P **P 00 54 18.8 -1.0**
U14A Mt Trumbull 82.28 50 ⇑P **P 00 54 19.9 -0.1**
baz=82
BRY Bratogost 82.28 319⇑*i*P **P 00 54 18.7 -1.2**
OHR Ohrid 82.32 317 *e*P **P 00 54 18.8 -1.3**
OHR Ohrid 82.32 317 P **P 00 54 21.1 +1.0**
OHR Ohrid 82.32 317 *i*P **P 00 54 18.7 -1.4**
APE Apeiranthos 82.33 311 *e*P **P 00 54 18.5 -1.7**
APE Apeiranthos 82.33 311 *e*P **P 00 54 18.0 -2.2**
APE Apeiranthos 82.33 311⇓*i*P **P 00 54 18.6 -1.6**
KARP Karpathos 82.33 309 *e*P **P 00 54 18.0 -2.3**
KZN Kozani 82.33 316 *e*P **P 00 54 17.0 -3.2**
GAL1 Galloway 82.34 339⇑*e*P **P 00 54 19.7 -0.3**
GAL1 AMb AMB 00 54 24.8
comp=Z,173nm,1.3s,mb5.8
T15A Red Dirt Ranch 82.36 49 ⇓P **P 00 54 20.1 -0.3**
baz=82
STU Stuttgart 82.37 328 *e*P **P 00 54 20.1 -0.1**
comp=Z,246nm,1.3s,mb6.0
KTD Kalmit 82.41 329 *e*P **P 00 54 20.8 +0.4**
WATA Walderalm 82.43 326 *i*P **P 00 54 20.6 0.0**
comp=Z,234nm,1.6s,mb5.9,SNR=28
WATA Walderalm 82.43 326 *i*pP pP 00 54 20.6 -0.8
comp=Z,234nm,1.6s,SNR=28
WATA Walderalm 82.43 326 *i*P **P 00 54 20.6 0.0**
WATA pmax pmax
comp=Z,234nm,1.6s,mb5.9
FVI Forni Avoltri 82.44 325 P **P 00 54 20.3 -0.3**
ABTA Abfaltersbach 82.45 325 *i*P **P 00 54 20.3 -0.4**
comp=Z,4µm,5.7s,SNR=18
WTTA Wattenberg 82.46 326 *i*P **P 00 54 20.7 0.0**
comp=Z,8µm,5.5s,SNR=30
WTTA Wattenberg 82.46 326 *i*pP pP 00 54 20.7 -0.9
comp=Z,8µm,5.5s,SNR=30
GMNA Gemona 82.46 324 P **P 00 54 20.5 -0.3**
NEE2 Needles Airpor 82.46 52 ⇑P **P 00 54 20.5 -0.5**
baz=82
BUM Brajici-Budva 82.51 318⇑*i*P **P 00 54 21.3 +0.2**
IRM Iron Mountain 82.52 53 ⇑P **P 00 54 21.5 +0.2**
baz=82
MONP Monument Peak 82.52 54 ⇓P **P 00 54 21.2 -0.1**
baz=82
RUP Ruppelstein 82.53 330⇑*e*P **P 00 54 21.1 +0.1**
BUCH Bad Urach 82.55 328 P **P 00 54 21.6 +0.4**
ULC Ulcinj 82.56 318⇑*i*P **P 00 54 21.4 0.0**
GCL Cushendall 82.57 339⇑*i*P **P 00 54 21.0 -0.1**
SEST Monte Rota 82.58 325 P **P 00 54 20.7 -0.7**
LHO Holmfirth 82.61 336⇑*i*P **P 00 54 21.1 -0.3**
HCY Herceg Novi 82.62 319⇑*i*P **P 00 54 21.2 -0.5**
LBG Lerchenberg 82.62 328 P **P 00 54 21.7 +0.1**
MOTA Moosalm 82.63 326 *i*P **P 00 54 21.9 +0.3**
comp=Z,276nm,1.4s,mb6.1,SNR=22
MOTA Moosalm 82.63 326 *i*pP pP 00 54 21.9 -0.5
comp=Z,276nm,1.4s,SNR=22
MOTA Moosalm 82.63 326 *i*P **P 00 54 21.9 +0.3**
MOTA pmax pmax
comp=Z,276nm,1.4s,mb6.1
SKDS Skadanscina 82.63 323 *e*P **P 00 54 20.9 -0.7**
BC3 Big Chuckw Mtn 82.65 53 ⇑P **P 00 54 21.6 -0.4**
baz=82
BCLA Clavier 82.66 331 P **P 00 54 21.4 -0.3**
comp=Z,54nm,1.6s
TIR Tirane 82.66 317 *e*P **P 00 54 21.2 -0.7**
RETA Reutte 82.68 326 *i*pP pP 00 54 22.1 -0.6
comp=Z,9µm,5.9s,SNR=68
SQTA Sankt Quirin 82.68 326 *i*P **P 00 54 22.1 +0.3**
comp=Z,280nm,1.6s,mb6.0,SNR=21
SQTA Sankt Quirin 82.68 326 *i*pP pP 00 54 22.1 -0.6
comp=Z,280nm,1.6s,SNR=21
SQTA Sankt Quirin 82.68 326 *i*P **P 00 54 22.2 +0.3**
SQTA pmax pmax
comp=Z,280nm,1.6s,mb6.0
THL Klokotos Trika 82.70 315 *e*P **P 00 54 18.0 -4.1**
W13A Hualapai Mount 82.70 51 ⇑P **P 00 54 21.8 -0.4**
baz=82
UCC Uccle 82.71 332 P **P 00 54 21.4 -0.6**
STON Ston 82.74 320 *i*P **P 00 54 18.5 -3.8**
KBI1 Birley Grange 82.75 336⇑*i*P **P 00 54 21.5 -0.6**
LKR Lokris 82.76 314 *e*P **P 00 54 20.5 -2.0**
LBOS 82.76 282⇑*e*P **P 00 54 23.5 +0.7**
LBOS AMb AMB 00 54 24.1
comp=Z,175nm,0.9s,mb6.1
GIM North Isle of 82.77 338⇑*e*P **P 00 54 22.0 -0.2**
LANF Langenberg 82.79 329⇑*e*P **P 00 54 22.6 +0.2**
ATH Athens Observa 82.80 313 *e*P **P 00 54 19.5 -3.2**
UBR Ueberruh 82.82 327 P **P 00 54 22.9 +0.3**
AGMN Agassiz Refuge 82.82 32 *e*P **P 00 54 21.4 -1.2**
comp=Z,236nm,1.5s,mb6.0
SANT Santorini 82.83 311⇑*e*P **P 00 54 20.7 -2.1**
comp=Z,195nm,1.1s,mb6.0
SANT Santorini 82.83 311 *e*P **P 00 54 20.6 -2.3**
DVTC Desert V Tower 82.88 54 ⇑P **P 00 54 22.6 -0.6**
baz=83
AGG Agios Georgios 82.89 314 *e*P **P 00 54 19.3 -3.9**
SWSC Sam W. Stewart 82.89 54 ⇑P **P 00 54 22.5 -0.7**
baz=83
WLF Walferdange 82.92 330⇑*i*P **P 00 54 23.0 -0.1**
comp=Z,278nm,1.5s,mb6.1
WLF Walferdange 82.92 330⇑*i*P **P 00 54 23.0 -0.1**
WLF pmax pmax
comp=Z,278nm,1.5s,mb6.1
WLF Walferdange 82.92 330 P **P 00 54 23.3 +0.2**
comp=Z,108nm,1.8s,mb5.6
WLF Walferdange 82.92 330 *e*P **P 00 54 23.2 +0.1**
comp=Z,434nm,1.9s,mb6.2
NVLJ Novalja 82.94 322 *i*P **P 00 54 22.1 -1.2**
GUT Gutenstein 82.95 328 P **P 00 54 23.3 +0.1**
WIM Isle of Man 82.96 338 *e*P **P 00 54 22.8 -0.3**
SNF Seneffe 82.97 332 P **P 00 54 22.9 -0.4**
SNF Seneffe 82.97 332 PKPbc PKiKP 00 59 43.1 +0.8
DHBB Dhamar BB 83.02 283⇑*e*P **P 00 54 24.8 +0.7**
DHBB AMb AMB 00 54 26.3
comp=Z,288nm,1.0s,mb6.3
FETA Feichten 83.05 326 *i*pP pP 00 54 23.6 -1.0
comp=Z,6µm,5.6s,SNR=53
KWE Weaver Farm 83.05 336⇑*i*P **P 00 54 23.1 -0.6**
SPAK Spaichingen-Ko 83.06 328⇑*e*P **P 00 54 23.9 +0.1**
PDMCI Parker Dam,Lak 83.07 52 ⇓P **P 00 54 23.9 -0.3**
baz=83
X13A Yucca 83.07 52 ⇓P **P 00 54 24.0 -0.1**
baz=83
BFO Black Forest 83.08 328 *e*P **P 00 54 23.7 -0.2**
BFO pmax pmax
comp=Z,278nm,1.3s,mb6.1
BFO Black Forest 83.08 328 *e*P **P 00 54 23.7 -0.2**
comp=Z,278nm,1.3s,mb6.1
GIVF Givet 83.09 331⇑*i*P **P 00 54 23.6 -0.4**
comp=Z,270nm,1.3s,mb5.8

GIVF Givet 83.09 331⇑*i*P P 00 54 23.6 -0.4
comp=Z,135nm,1.3s,mb5.8
GIVF Givet 83.09 331⇑*i*P P 00 54 23.6 -0.4
GIVF pmax pmax
comp=Z,135nm,1.3s,mb5.8
CWF Charnwood Fore 83.11 336⇑*e*P P 00 54 23.4 -0.6
CWF AMb AMB 00 54 28.6
comp=Z,177nm,1.4s,mb5.9
W14A Seligman 83.13 51 ⇓P P 00 54 25.2 +0.8
baz=83
Y12C Blythe 83.18 53 ⇑P P 00 54 24.0 -0.8
baz=83
DOU Dourbes 83.19 331 P P 00 54 23.8 -0.7
comp=Z,54nm,2.4s,mb5.2
ZKR Zakros 83.19 309 *e*P P 00 54 24.6 -0.2
LTK Loutraki 83.20 313 *e*P P 00 54 23.0 -1.8
DAVA Damuels 83.22 327 *i* P P 00 54 24.8 +0.1
comp=Z,9µm,6.2s,SNR=93
DAVA Damuels 83.22 327 *i* pP pP 00 54 24.8 -0.7
comp=Z,9µm,6.2s,SNR=93
GMM Mts of Mourne 83.25 339⇑*i*P P 00 54 24.2 -0.5
EVR Evrytania 83.26 314 *e*P P 00 54 21.5 -3.6
JAN Janina 83.29 316 *e*P P 00 54 24.0 -1.2
SISB Singen-Schiene 83.31 327 P P 00 54 26.4 +1.3
STEIN Stein am Rhein 83.36 327⇑*i*P P 00 54 24.9 -0.5
comp=Z,146nm,1.3s,mb5.8
CTI Castel Tesino 83.36 325 P P 00 54 24.5 -0.9
BAIF Baives 83.37 331⇑*i*P P 00 54 25.0 -0.4
comp=Z,192nm,1.4s,mb5.6
BAIF Baives 83.37 331⇑*i*P P 00 54 25.0 -0.4
comp=Z,96nm,1.4s,mb5.6
BAIF Baives 83.37 331⇑*i*P P 00 54 25.0 -0.4
BAIF pmax pmax
comp=Z,96nm,1.4s,mb5.6
LIENZ Kamor/St.Gall 83.38 327⇑*i*P P 00 54 25.3 -0.2
comp=Z,1µm,4.2s
DID Didima 83.39 313 *e*P P 00 54 23.5 -2.3
WEIN Weingarten 83.42 327⇑*i*P P 00 54 25.3 -0.4
comp=Z,446nm,2.5s,mb6.0
GLA Glamis 83.44 53 ⇑P P 00 54 25.6 -0.5
baz=83
SLE Schleitheim 83.45 328 ⇑P P 00 54 25.3 -0.5
SLE Schleitheim 83.45 328⇑*i*P P 00 54 25.4 -0.4
comp=Z,690nm,4.2s
CDF Champ du Feu 83.45 329⇑*i*P P 00 54 25.9 0.0
comp=Z,270nm,1.1s,mb5.9
CDF Champ du Feu 83.45 329⇑*i*P P 00 54 25.9 0.0
comp=Z,135nm,1.1s,mb5.9
CDF Champ du Feu 83.45 329⇑*i*P P 00 54 25.9 0.0
CDF pmax pmax
comp=Z,135nm,1.1s,mb5.9
TRULL Truellikon 83.46 328⇑*i*P P 00 54 25.4 -0.5
comp=Z,710nm,2.5s,mb6.3
NPS Neapolis 83.47 310 *e*P P 00 54 25.0 -1.2
WME Myndd Eilian 83.49 338 *e*P P 00 54 25.5 -0.5
RAR Rarotonga 83.52 123 P P 00 54 29.3 +2.8
comp=Z,52nm,0.9s,mb5.7,baz=236,slow=5.2,SNR=5.0
WILA Wila 83.54 327⇑*i*P P 00 54 25.9 -0.4
comp=Z,696nm,3.5s
WILA Wila 83.54 327⇑*i*PKPdf PKiKP 00 59 41.3 -2.0
comp=Z,3µm,1.6s
KIZ Kirchzarten 83.54 328 P P 00 54 26.1 -0.2
FUORN Ofenpass-Fuorn 83.56 326⇑*i*P P 00 54 25.9 -0.5
comp=Z,831nm,2.3s,mb6.5
FUORN Ofenpass-Fuorn 83.56 326⇑*i*PKPdf PKiKP 00 59 41.0 -2.4
comp=Z,4µm,1.1s
FLACH Flaach 83.57 328⇑*i*P P 00 54 26.5 0.0
comp=Z,802nm,3.7s
FELD Feldberg im Sc 83.57 328⇑*e*P P 00 54 26.3 -0.2
Y13A Salome 83.58 52 ⇓P P 00 54 26.3 -0.5
baz=83
SBD1 Bryn Du 83.59 337⇑*i*P P 00 54 26.4 -0.1
DAVOX Davos/Dischmat 83.61 326 P P 00 54 26.9 +0.2
comp=Z,50nm,0.9s,mb5.6,baz=37,slow=2.1,SNR=37
DAVOX Davos/Dischmat 83.61 326⇑*i*P P 00 54 26.8 +0.1
comp=Z,536nm,2.4s,mb6.2
WLF1 Llynfaes 83.61 338⇑*i*P P 00 54 25.8 -0.8
LAST Lasithi 83.62 310 *e*P P 00 54 28.2 +1.3
BRMO Bormio 83.62 326 P P 00 54 26.9 +0.2
PLONS Plons/SG 83.62 327⇑*i*P P 00 54 26.8 +0.1
comp=Z,483nm,2.0s,mb6.3
SELA Sela 83.65 314 *e*P P 00 54 26.6 -0.5
W15A Williams 83.65 50 ⇓P P 00 54 27.0 -0.1
baz=83
ECH Echery 83.66 329⇑*e*P P 00 54 26.8 -0.1
ZUR Degenried 83.72 327⇑*i*P P 00 54 26.9 -0.3
comp=Z,760nm,3.9s
MENF Mencas 83.73 333 *e*P P 00 54 26.4 -0.8
X14A Yava 83.73 51 ⇑P P 00 54 28.0 +0.4
baz=84
SULZ Cheisacher 83.80 328 ⇑P P 00 54 27.3 -0.3
SULZ Cheisacher 83.80 328⇑*i*P P 00 54 28.1 +0.5
comp=Z,518nm,1.7s,mb6.4
SKP1 Kophill 83.80 335⇑*e*P P 00 54 26.6 -1.0
HLM1 Long Mynd 83.81 336⇑*e*P P 00 54 27.1 -0.5
DMUB Kingscourt 83.82 339⇑*i*P P 00 54 27.6 0.0
BERNI Berninapass 83.82 326⇑*i*P P 00 54 27.1 -0.7
comp=Z,508nm,1.5s,mb6.4
KEK Kerkira 83.84 316 *e*P P 00 54 26.0 -2.0
MABI Malga Bissina 83.88 326 P P 00 54 27.4 -0.7
IDI Anoyia 83.89 310 P P 00 54 27.2 -1.1
comp=Z,46nm,0.7s,mb5.7,baz=25,slow=6.7,SNR=26
LLS Linth-Limmern 83.94 327 ⇑P P 00 54 28.1 -0.3
LLS Linth-Limmern 83.94 327⇑*i*P P 00 54 28.2 -0.2
comp=Z,811nm,4.2s
SSW Stow on the Wo 83.94 336⇑*i*P P 00 54 28.1 -0.2
MOF Molkenrain 83.95 328⇑*e*P P 00 54 28.2 -0.2
WUAZ Wupatki 83.97 49 ⇑P P 00 54 28.6 -0.1
baz=84
VLX Vlachokerasia 83.99 313 *e*P P 00 54 27.3 -1.5
URZ Urewera 84.00 149 P P 00 54 28.1 -0.5
comp=Z,51nm,1.0s,mb5.6,baz=312,slow=3.2,SNR=7.2
MUO Muotathal 84.00 327 ⇑P P 00 54 28.7 0.0
MUO Muotathal 84.00 327⇑*i*P P 00 54 28.5 -0.2
comp=Z,581nm,2.4s,mb6.3
Y14A Wickenburg 84.01 52 ⇑P P 00 54 28.9 -0.1
baz=84
VDL Val di Lei 84.02 326 ⇑P P 00 54 28.9 +0.1
VDL Val di Lei 84.02 326⇑*i*P P 00 54 28.8 0.0
comp=Z,819nm,3.7s
TRBA At Turbah 84.03 282⇑*e*P P 00 54 29.9 +0.6
TRBA AMb AMB 00 54 31.0
comp=Z,75nm,0.9s,mb5.8
MAGA Magasa 84.04 325 P P 00 54 28.2 -0.7
RLS Riolos of Patr 84.04 314 *e*P P 00 54 27.0 -2.1
TUE Stuetta 84.08 326 P P 00 54 29.3 +0.2
HINF Hinteralfeld 84.10 329⇑*i*P P 00 54 28.7 -0.5
comp=Z,120nm,1.1s,mb5.6
HINF Hinteralfeld 84.10 329⇑*i*P P 00 54 28.7 -0.5
comp=Z,60nm,1.1s,mb5.6
HINF Hinteralfeld 84.10 329⇑*i*P P 00 54 28.7 -0.5
HINF pmax pmax
comp=Z,60nm,1.1s,mb5.6
BBS Basel-Blauen 84.10 328⇑*e*P P 00 54 28.9 -0.3
VLI Veliai 84.10 312 *e*P P 00 54 26.0 -3.4
HAE Alders End 84.11 336⇑*i*P P 00 54 28.9 -0.3
SIVA Sivas 84.12 310 *e*P P 00 54 29.2 -0.3
BALST Balsthal 84.12 328⇑*i*P P 00 54 28.9 -0.4
comp=Z,489nm,2.3s,mb6.2
X15A Humboldt 84.13 51 ⇓P P 00 54 29.4 -0.2
baz=84
THEF They Montfort 84.13 329⇑*e*P P 00 54 29.0 -0.3
HAU Haudompre 84.16 329⇑*i*P P 00 54 29.1 -0.4
comp=Z,62nm,0.7s,mb5.6
HAU *e*MLR MLR
comp=Z,91µm,20.2s,MS6.8
HAU Haudompre 84.16 329⇑*i*P P 00 54 29.1 -0.4
comp=Z,31nm,0.7s,mb5.5
HAU LR LR
comp=Z,91µm,20.3s,MS7.2
HAU Haudompre 84.16 329⇑*i*P P 00 54 29.1 -0.4
HAU pmax pmax
comp=Z,31nm,0.7s,mb5.5
HAU MLR MLR
comp=Z,91µm,20.3s,MS7.2
BNALP Bannalp 84.17 327⇑*i*P P 00 54 29.3 -0.3
comp=Z,596nm,3.6s
VAM Vamos 84.23 311 *e*P P 00 54 28.0 -2.1
DSB Dublin 84.24 339 *e*P P 00 54 29.5 -0.3
comp=Z,78nm,1.1s,mb5.8
DLF Lyons Farm 84.24 339⇑*i*P P 00 54 29.6 -0.2
BOURR Bourrignon 84.27 328⇑*i*P P 00 54 29.8 -0.3
comp=Z,792nm,3.6s
MEZF Maizieres J'vi 84.29 330⇑*i*P P 00 54 30.3 +0.2
comp=Z,717nm,1.6s,mb6.2,baz=17
MEZF Maizieres J'vi 84.29 330⇑*i*P P 00 54 30.3 +0.2
comp=Z,717nm,1.6s,mb6.5
MCH1 Michaelchurch 84.29 336⇑*e*P P 00 54 29.7 -0.4
MCH1 AMb AMB 00 54 34.0
comp=Z,268nm,1.7s,mb6.1
HTR Trewern Hill 84.31 336⇑*i*P P 00 54 29.9 -0.3
SWN1 Swindon 84.31 335⇑*e*P P 00 54 29.9 -0.3
SWN1 AMb AMB 00 54 35.2
comp=Z,651nm,1.6s,mb6.5
LCI Lecce 84.32 318 P P 00 54 30.2 -0.2
HASLI Hasliberg/Brie 84.38 327⇑*i*P P 00 54 30.3 -0.3
comp=Z,437nm,1.6s,mb6.3
ITM Ithomi 84.38 313 *e*P P 00 54 28.0 -2.8
PESA Pesaro 84.39 323 P P 00 54 31.5 +0.8
FUSIO Fusio 84.39 327⇑*i*P P 00 54 30.6 -0.1
comp=Z,540nm,2.5s,mb6.2
KARN Karanos 84.41 311 *e*P P 00 54 30.8 -0.2
DCN Croghan 84.41 339⇑*i*P P 00 54 30.7 0.0
Z14A Wintersburg 84.43 52 ⇓P P 00 54 31.0 -0.1
baz=84
VLS Valsamata 84.46 315 *e*P P 00 54 28.0 -3.2
FGMS Monte Sant'Ang 84.47 320 P P 00 54 31.1 -0.1
LOMF Lomont 84.48 328⇑*e*P P 00 54 30.8 -0.3
FIU Minerbio Fiu 84.50 324 P P 00 54 32.5 +1.2
MVCO Mesa Verde 84.53 47 ⇑P P 00 54 31.7 +0.2
baz=84
HGH Gray Hill 84.53 336⇑*e*P P 00 54 30.4 -0.9
SGRT San Giovanni R 84.55 320 P P 00 54 31.4 -0.2
RSM Repubblica di 84.58 323 P P 00 54 32.8 +1.1
RAVA Ravarino 84.59 324 P P 00 54 33.0 +1.3
FSSB Fossombrone 84.60 323 P P 00 54 31.9 +0.1
CING Cingoli 84.63 322 P P 00 54 31.1 -0.9
MUGIO Muggio 84.64 326⇑*i*P P 00 54 30.8 -1.1
comp=Z,350nm,2.6s,mb6.0
WIMIS Wimmis 84.68 327⇑*i*P P 00 54 31.6 -0.5
comp=Z,285nm,2.1s,mb6.0
GVD Gavdhos 84.68 310 *e*P P 00 54 31.6 -0.8
comp=Z,1µm,1.7s,mb6.7
GVD Gavdhos 84.68 310 *e*P P 00 54 31.2 -1.2
PYL PYLOS 84.68 313 *e*P P 00 54 30.6 -1.7
RGNG Rignano Grg 84.69 320 P P 00 54 32.0 -0.3
SWK Warminster 84.77 335⇑*i*P P 00 54 32.1 -0.4
VAI Varese 84.80 326 P P 00 54 31.9 -0.9
SNTG Esanatoglia 84.85 322 P P 00 54 33.3 +0.2
TORNY Torny/Romont 84.88 328⇑*i*P P 00 54 32.7 -0.4
comp=Z,393nm,2.2s,mb6.2
SFI Santa Sofia 84.89 323 P P 00 54 33.0 -0.2
LKBD Leukerbad 84.89 327 ⇑P P 00 54 33.0 -0.2
LKBD Leukerbad 84.89 327⇑*i*P P 00 54 32.8 -0.4
comp=Z,203nm,1.5s,mb6.0
EYMN Ely 84.90 30⇑*i*P P 00 54 31.9 -1.3
comp=Z,118nm,0.5s,mb6.3
BRANT Les Verrieres 84.95 328⇑*i*P P 00 54 33.2 -0.3
comp=Z,489nm,3.3s
ZCCA Zocca 84.96 324 P P 00 54 35.0 +1.4
VMG Vicchio 84.99 324 P P 00 54 34.7 +0.9
TERO Teramo 84.99 322 P P 00 54 34.0 +0.2
BADI Badiali 85.00 323 P P 00 54 34.3 +0.5
SEI Scarperia 85.01 324 P P 00 54 34.9 +1.1
MMK Mattmark 85.01 327 ⇑P P 00 54 33.9 +0.1
MMK Mattmark 85.01 327⇑*i*P P 00 54 33.8 0.0
comp=Z,749nm,3.6s
FNVD Fontana Vidola 85.03 324 P P 00 54 34.8 +0.8
CDCA Citt' di Caste 85.04 323 P P 00 54 34.3 +0.3
MURB Monte Urbino 85.04 323 P P 00 54 34.7 +0.7
CIGN Sant'Elia a Pi 85.05 320 P P 00 54 34.5 +0.4
CRE Caprese Michel 85.05 323 P P 00 54 34.2 +0.1
SENIN Lac Senin/Sane 85.05 327⇑*i*P P 00 54 33.8 -0.2
comp=Z,420nm,2.6s,mb6.1
NRCA Norcia 85.08 322 P P 00 54 34.6 +0.4
FG4 Candela 85.12 319 P P 00 54 34.7 +0.2
ASS Assisi 85.13 322 P P 00 54 34.8 +0.3
FG5 Orsara di Pugl 85.14 320 P P 00 54 34.9 +0.4
GSCL Gusciola 85.14 324 P P 00 54 35.2 +0.7
ERBM Eremo 85.17 325 P P 00 54 34.0 -0.7
AIGLE Aigle 85.22 328⇑*i*P P 00 54 34.2 -0.7
comp=Z,283nm,2.5s,mb5.9
GRYON Gryon 85.22 327⇑*i*P P 00 54 34.9 0.0
comp=Z,210nm,2.0s,mb5.9
DIX Grande Dixence 85.23 327 ⇑P P 00 54 35.1 +0.2
DIX Grande Dixence 85.23 327⇑*i*P P 00 54 34.4 -0.5
comp=Z,581nm,4.3s
AQU L'Aquila 85.29 321 P P 00 54 36.0 +0.7
INTR Introdacqua 85.29 321 P P 00 54 34.0 -1.3
115A Sonoran Desert 85.32 52 ⇓P P 00 54 35.5 -0.1
baz=85
ORO Oropa 85.33 327 P P 00 54 34.2 -1.2
HEX Exmoor 85.35 336⇑*i*P P 00 54 34.9 -0.5
GIMEL St. Georges / 85.36 328⇑*i*P P 00 54 35.2 -0.3
comp=Z,750nm,5.2s
SALAN Lac Salanfe 85.37 327⇑*i*P P 00 54 35.2 -0.4
comp=Z,436nm,3.4s
CABF La Chapelle 85.37 328⇑*i*P P 00 54 35.4 -0.2
comp=Z,94nm,1.1s,mb5.5
CABF La Chapelle 85.37 328⇑*i*P P 00 54 35.4 -0.2
comp=Z,47nm,1.1s,mb5.5
CABF La Chapelle 85.37 328⇑*i*P P 00 54 35.4 -0.2
CABF pmax pmax
comp=Z,47nm,1.1s,mb5.5
VLC Villacollemand 85.38 324 *e*P P 00 54 36.4 +0.7
comp=Z,405nm,1.6s,mb6.3
MIDA Miranda 85.39 321 P P 00 54 36.2 +0.4
RNI2 Rionero Sannit 85.40 321 P P 00 54 36.7 +0.9
MRB1 Monte Rocchett 85.40 320 P P 00 54 36.1 +0.2
ORI Oriolo Calabro 85.40 318 P P 00 54 36.6 +0.7
PSB1 Pescosannita 85.41 320 P P 00 54 36.0 +0.1
EMV Vieux Emosson 85.46 327 ⇑P P 00 54 35.8 -0.3
EMV Vieux Emosson 85.46 327⇑*i*P P 00 54 35.7 -0.4
comp=Z,580nm,5.4s
PTQR Pietraquaria 85.54 321 P P 00 54 36.3 -0.2
VVLD Villa Vallelon 85.54 321 P P 00 54 36.5 -0.1
SDI San Donato 85.56 321 P P 00 54 36.3 -0.4
MNS Montasola 85.62 322 P P 00 54 36.5 -0.5
HTL Hartland 85.63 337⇑*e*P P 00 54 36.1 -0.7
SNZO South Karori 85.69 152 *e*P P 00 54 36.1 -0.8
comp=Z,259nm,1.5s,mb6.2
116A Eloy 85.74 52 ⇓P P 00 54 37.1 -0.6
baz=86
LOR Lormes 85.76 330⇑*i*P P 00 54 37.0 -0.5
comp=Z,265nm,1.3s,mb6.0,baz=42
LOR *e*MLR MLR
comp=Z,122µm,20.5s,MS7.0
LOR Lormes 85.76 330⇑*i*P P 00 54 37.0 -0.5
comp=Z,132nm,1.3s,mb6.0
LOR LR LR
comp=Z,122µm,20.5s,MS7.3
LOR Lormes 85.76 330⇑*i*P P 00 54 37.0 -0.5
LOR pmax pmax
comp=Z,132nm,1.3s,mb6.0
LOR MLR MLR
comp=Z,122µm,20.5s,MS7.3
GRFL Gerfalco 85.87 323 P P 00 54 37.7 -0.5
TIP Timpagrande 85.88 317⇑*e*P P 00 54 38.0 -0.3
comp=Z,97nm,1.1s,mb5.9
LATE Laterza 85.88 323 P P 00 54 37.9 -0.3
DYA Yadsworthy 85.93 336⇑*e*P P 00 54 37.7 -0.7
DYA AMb AMB 00 54 42.0
comp=Z,216nm,1.8s,mb6.1
LPL La Plagne 85.96 327⇑*i*P P 00 54 38.6 0.0
comp=Z,190nm,1.1s,mb6.0
LPL La Plagne 85.96 327⇑*i*P P 00 54 38.6 0.0
comp=Z,95nm,1.1s,mb5.9
LPL La Plagne 85.96 327⇑*i*P P 00 54 38.6 0.0
LPL pmax pmax
comp=Z,95nm,1.1s,mb5.9
LPG La Plagne 85.97 327⇑*i*P P 00 54 38.8 +0.2
comp=Z,189nm,1.0s,mb6.0
LPG La Plagne 85.97 327⇑*i*P P 00 54 38.8 +0.2
comp=Z,95nm,1.0s,mb6.0
LPG La Plagne 85.97 327⇑*i*P P 00 54 38.8 +0.2
LPG pmax pmax
comp=Z,95nm,1.0s,mb6.0
ECSD EROS,Sioux Fal 86.00 36 *e*P P 00 54 38.0 -0.8
comp=Z,130nm,1.1s,mb6.1
RSP Reno Superiore 86.02 327 P P 00 54 37.6 -1.3
SCHQ Schefferville 86.03 13 P P 00 54 38.9 +0.2
SCHQ Schefferville 86.03 13 P P 00 54 38.9 +0.2
baz=342,slow=8.8
ATD Arta Tunnel 86.03 281 P P 00 54 40.5 +1.1
comp=Z,95nm,1.2s,mb5.9,baz=346,slow=3.5,SNR=15
SSF Saint Saulge 86.07 330⇑*i*P P 00 54 38.6 -0.5
comp=Z,131nm,0.9s,mb5.9
SSF Saint Saulge 86.07 330⇑*i*P P 00 54 38.6 -0.5
comp=Z,65nm,0.9s,mb5.9
SSF Saint Saulge 86.07 330⇑*i*P P 00 54 38.6 -0.5
SSF pmax pmax
comp=Z,65nm,0.9s,mb5.9
FLN La Foliniere 86.17 333⇑*i*P P 00 54 38.9 -0.7
comp=Z,217nm,1.1s,mb6.0,baz=17
FLN *e*MLR MLR
comp=Z,147µm,20.0s,MS7.1
FLN La Foliniere 86.17 333⇑*i*P P 00 54 38.9 -0.7
comp=Z,108nm,1.1s,mb6.0
FLN LR LR
comp=Z,147µm,20.0s,MS7.4
FLN La Foliniere 86.17 333⇑*i*P P 00 54 38.9 -0.7
FLN pmax pmax
comp=Z,109nm,1.1s,mb6.0
FLN MLR MLR
comp=Z,147µm,20.0s,MS7.4
LDF La Druitiere 86.19 333⇑*i*P P 00 54 39.0 -0.6
comp=Z,118nm,0.9s,mb5.8
LDF La Druitiere 86.19 333⇑*i*P P 00 54 39.0 -0.6
comp=Z,59nm,0.9s,mb5.8
LDF La Druitiere 86.19 333⇑*i*P P 00 54 39.0 -0.6
LDF pmax pmax
comp=Z,59nm,0.9s,mb5.8
QLNO Quiliano 86.19 326 P P 00 54 38.7 -1.0
HYF Humbligny 86.24 331⇑*i*P P 00 54 40.0 +0.1
SMF Signal de Mont 86.27 330⇑*i*P P 00 54 39.5 -0.6
comp=Z,234nm,1.4s,mb5.9
SMF Signal de Mont 86.27 330⇑*i*P P 00 54 39.5 -0.6
comp=Z,117nm,1.4s,mb5.9
SMF Signal de Mont 86.27 330⇑*i*P P 00 54 39.5 -0.6
SMF pmax pmax
comp=Z,117nm,1.4s,mb5.9
216A Three Points, 86.27 52 ⇑P P 00 54 39.8 -0.6
baz=86
CSA1 St Austell 86.31 336⇑*e*P P 00 54 39.5 -0.7
FIN Finale Ligure 86.34 326 P P 00 54 39.4 -1.1
AVF Avril sur Loir 86.35 330⇑*i*P P 00 54 40.1 -0.4
comp=Z,244nm,1.0s,mb6.1
AVF Avril sur Loir 86.35 330⇑*i*P P 00 54 40.1 -0.4
comp=Z,122nm,1.0s,mb6.1
AVF Avril sur Loir 86.35 330⇑*i*P P 00 54 40.1 -0.4
AVF pmax pmax
comp=Z,122nm,1.0s,mb6.1
BNI Bardonecchia 86.35 327 *e*P P 00 54 40.2 -0.3
comp=Z,48nm,0.9s,mb5.7
BNI Bardonecchia 86.35 327 *e*P P 00 54 40.2 -0.3
BNI pmax pmax
comp=Z,48nm,0.9s,mb5.7
JRS Jersey 86.38 334 *e*P P 00 54 40.2 -0.4
VAL Valentia 86.49 340 *e*P P 00 54 40.0 -1.0
RPZ Rata Peaks 86.53 156 P P 00 54 43.1 +2.0
comp=Z,25nm,0.8s,mb5.5,baz=50,slow=2.5,SNR=3.8
DOI San Damiano 86.54 326 P P 00 54 41.2 -0.2
CCA1 Carnmenellis 86.57 337⇑*e*P P 00 54 40.9 -0.6
MBDF Montbardon 86.57 327⇑*i*P P 00 54 40.8 -0.8
comp=Z,121nm,0.9s,mb5.8
MBDF Montbardon 86.57 327⇑*i*P P 00 54 40.8 -0.8
comp=Z,61nm,0.9s,mb5.8
MBDF Montbardon 86.57 327⇑*i*P P 00 54 40.8 -0.8
MBDF pmax pmax
comp=Z,61nm,0.9s,mb5.8
CMA1 Manaccan 86.62 336⇑*e*P P 00 54 40.8 -1.0
GRR Gorron 86.63 333⇑*i*P P 00 54 41.4 -0.4
comp=Z,404nm,1.2s,mb6.2
GRR Gorron 86.63 333⇑*i*P P 00 54 41.4 -0.4
comp=Z,202nm,1.2s,mb6.2
GRR Gorron 86.63 333⇑*i*P P 00 54 41.4 -0.4
GRR pmax pmax
comp=Z,202nm,1.2s,mb6.2
BGF Bois d'Agland 86.74 330⇑*i*P P 00 54 41.9 -0.5
comp=Z,111nm,1.0s,mb5.7
BGF Bois d'Agland 86.74 330⇑*i*P P 00 54 41.9 -0.5
comp=Z,56nm,1.0s,mb5.8
BGF Bois d'Agland 86.74 330⇑*i*P P 00 54 41.9 -0.5
BGF pmax pmax
comp=Z,56nm,1.0s,mb5.8
ORIF Oris-en-Rattie 86.81 327⇑*i*P P 00 54 42.4 -0.3
comp=Z,98nm,1.0s,mb5.7
ORIF *e*MLR MLR
comp=Z,111µm,22.2s,MS6.9
ORIF Oris-en-Rattie 86.81 327⇑*i*P P 00 54 42.4 -0.3
comp=Z,49nm,1.0s,mb5.7
ORIF Oris-en-Rattie 86.81 327⇑*i*P P 00 54 42.4 -0.3
ORIF pmax pmax
comp=Z,49nm,1.0s,mb5.7
SAOF Saorge 86.81 326⇑*e*P P 00 54 38.5 -4.3
217A Green Valley 86.83 52 ⇑P P 00 54 42.5 -0.6
baz=87
AUTN L'Aution 86.86 326 *e*P P 00 54 41.7 -1.3
PLDF La Plantade 86.91 329⇑*e*P P 00 54 43.2 0.0
TOUF Mont Tournerai 86.92 326⇑*e*P P 00 54 42.4 -0.9
SBF Sospel 86.96 326⇑*i*P P 00 54 42.4 -1.1
comp=Z,163nm,1.0s,mb5.9
SBF Sospel 86.96 326⇑*i*P P 00 54 42.4 -1.1
comp=Z,81nm,1.0s,mb5.9
SBF Sospel 86.96 326⇑*i*P P 00 54 42.4 -1.1
SBF pmax pmax
comp=Z,81nm,1.0s,mb5.9
LUCF Luceram 86.97 326 *e*P P 00 54 42.4 -1.2
AGO Saint Agoulin 87.04 330 *e*P P 00 54 43.9 +0.1
REVF Revere 87.08 326 *e*P P 00 54 40.6 -3.5
218A Dragoon 87.17 51 ⇓P P 00 54 44.3 -0.5
baz=87
TCF Toulx Ste Croi 87.21 330⇑*i*P P 00 54 44.4 -0.3
comp=Z,147nm,1.3s,mb5.8
TCF Toulx Ste Croi 87.21 330⇑*i*P P 00 54 44.4 -0.3
comp=Z,74nm,1.3s,mb5.8
TCF Toulx Ste Croi 87.21 330⇑*i*P P 00 54 44.4 -0.3
TCF pmax pmax
comp=Z,74nm,1.3s,mb5.8
COLF Collangettes 87.24 329 *e*P P 00 54 44.7 -0.2
ANMO Albuquerque 87.28 47*c*i*P P 00 54 45.5 +0.2
CALN Calern 87.29 326 *e*P P 00 54 45.7 +0.6
MTTG Motta San Giov 87.30 317 P P 00 54 45.1 -0.2
PYM Petit Puy Mans 87.33 329 *e*P P 00 54 45.2 -0.1
COWI Conover 87.34 30 *e*P P 00 54 43.9 -1.5
comp=Z,475nm,1.4s,mb6.3
SGMF Saint Gilles 87.34 334⇑*i*P P 00 54 45.2 -0.1
comp=Z,221nm,1.1s,mb6.0
SGMF Saint Gilles 87.34 334⇑*i*P P 00 54 45.2 -0.1
comp=Z,111nm,1.1s,mb6.0
SGMF Saint Gilles 87.34 334⇑*i*P P 00 54 45.2 -0.1
SGMF pmax pmax
comp=Z,111nm,1.1s,mb6.0
VIVF Saint-Julien-l 87.37 328⇑*i*P P 00 54 45.0 -0.5
comp=Z,129nm,1.1s,mb5.8
VIVF Saint-Julien-l 87.37 328⇑*i*P P 00 54 45.0 -0.5
comp=Z,64nm,1.1s,mb5.8
VIVF Saint-Julien-l 87.37 328⇑*i*P P 00 54 45.0 -0.5
VIVF pmax pmax
comp=Z,64nm,1.1s,mb5.8
CORF Corte 87.39 324⇑*e*P P 00 54 44.8 -0.8
ROSF Rostrenen 87.52 334⇑*i*P P 00 54 46.1 0.0
comp=Z,359nm,1.1s,mb6.2
ROSF Rostrenen 87.52 334⇑*i*P P 00 54 46.1 0.0
comp=Z,179nm,1.1s,mb6.2
ROSF Rostrenen 87.52 334⇑*i*P P 00 54 46.1 0.0
ROSF pmax pmax
comp=Z,179nm,1.1s,mb6.2
LENM Lemitar 87.53 48 P P 00 54 45.5 -1.0
VERF Verneugheol 87.55 330 *e*P P 00 54 47.2 +0.9
FRF La Foret Royal 87.55 326⇑*i*P P 00 54 45.2 -1.2
comp=Z,126nm,1.4s,mb5.7
FRF La Foret Royal 87.55 326⇑*i*P P 00 54 45.2 -1.2
comp=Z,63nm,1.4s,mb5.7
FRF La Foret Royal 87.55 326⇑*i*P P 00 54 45.2 -1.2
FRF pmax pmax
comp=Z,63nm,1.4s,mb5.7
318A Bisbee 87.57 52 ⇑P P 00 54 46.5 -0.2
baz=87
Y22C IRIS PASSCAL I 87.62 48 ⇑P P 00 54 47.1 +0.2
baz=87
LPM Los Pinos Moun 87.63 48 *e*P P 00 54 47.7 +0.7
LBL Lubilhac 87.66 329⇑*e*P P 00 54 46.9 0.0
SMRF Simiane la Rot 87.69 327⇑*i*P P 00 54 46.4 -0.6
comp=Z,307nm,1.9s,mb5.9
SMRF Simiane la Rot 87.69 327⇑*i*P P 00 54 46.4 -0.6
comp=Z,307nm,1.9s,mb6.2
LMR La Mourre 87.79 326⇑*i*P P 00 54 46.6 -0.9
comp=Z,234nm,1.4s,mb5.9
LMR La Mourre 87.79 326⇑*i*P P 00 54 46.6 -0.9
comp=Z,117nm,1.4s,mb5.9
LMR La Mourre 87.79 326⇑*i*P P 00 54 46.6 -0.9
LMR pmax pmax
comp=Z,117nm,1.4s,mb5.9
QUIF Quistinic 87.84 334⇑*i*P P 00 54 47.3 -0.4
comp=Z,191nm,1.3s,mb5.9

QUIF Quistinic 87.84 334⇑ iP P 00 54 47.3 -0.4
comp=Z,95nm,1.3s,mb5.9
QUIF Quistinic 87.84 334⇑ iP P 00 54 47.3 -0.4
QUIF pmax pmax
comp=Z,95nm,1.3s,mb5.9
MFF Saint Martin d 87.86 332 iP P 00 54 47.8 0.0
comp=Z,214nm,1.3s,mb5.9
MFF Saint Martin d 87.86 332⇑ iP P 00 54 47.8 0.0
comp=Z,107nm,1.3s,mb5.9
MFF Saint Martin d 87.86 332⇑ iP P 00 54 47.8 0.0
MFF pmax pmax
comp=Z,107nm,1.3s,mb5.9
PMOR Pomariorio Ree 87.88 111 eP P 00 54 50.4 +2.1
comp=Z,307nm,1.2s,mb6.4
319A Douglas 88.06 51⇑ P P 00 54 48.2 -0.8
baz=88
CBKS Cedar Bluff 88.19 41 eP P 00 54 48.9 -0.7
comp=Z,320nm,1.4s,mb6.4
CBKS Cedar Bluff 88.19 41 eP P 00 54 49.4 -0.2
CBKS pmax pmax
comp=Z,320nm,1.3s,mb6.4
VAH Vaihoa 88.22 111 eP P 00 54 51.9 +2.0
comp=Z,220nm,1.1s,mb6.3
PPT Papeete 88.27 114 eP P 00 54 52.5 +2.4
comp=Z,216nm,1.4s,mb6.2
PPT Papeete 88.27 114 eP P 00 54 53.6 +3.6
PPT Papeete 88.27 114 P P 00 54 52.0 +1.9
PPT pmax pmax
comp=Z,90nm,0.9s
PPT Papeete 88.27 114 P P 00 54 52.0 +1.9
comp=Z,90nm,0.9s,mb6.0,baz=279,slow=3.6,SNR=7.3
RJF Les Rejaudoux 88.30 330⇑ iP P 00 54 49.8 -0.1
comp=Z,246nm,1.5s,mb5.9
RJF eMLR MLR
comp=Z,141µm,21.5s,MS7.0
RJF Les Rejaudoux 88.30 330⇑ iP P 00 54 49.8 -0.1
comp=Z,123nm,1.5s,mb5.9
RJF LR LR
comp=Z,141µm,21.5s,MS7.3
RJF Les Rejaudoux 88.30 330⇑ iP P 00 54 49.8 -0.1
RJF pmax pmax
comp=Z,123nm,1.5s,mb5.9
RJF MLR MLR
comp=Z,141µm,21.5s,MS7.3
PAE Paea 88.32 114 eP P 00 54 52.5 +2.2
comp=Z,253nm,1.1s,mb6.3
PAE Paea 88.32 114 eP P 00 54 52.5 +2.2
PAE pmax pmax
comp=Z,253nm,1.1s,mb6.4
LASF Ste Croix 88.34 328⇑ iP P 00 54 49.9 -0.3
VAE Valguarnera 88.38 318 P P 00 54 50.7 +0.3
comp=Z,9.9nm,0.8s,baz=124,slow=7.3,SNR=3.2
CAF Calviac 88.39 330 eP P 00 54 49.3 -1.1
comp=Z,162nm,1.4s,mb5.8
CAF Calviac 88.39 330 eP P 00 54 49.3 -1.1
comp=Z,81nm,1.4s,mb5.8
CAF Calviac 88.39 330 eP P 00 54 49.3 -1.1
CAF pmax pmax
comp=Z,81nm,1.4s,mb5.8
HVZN Vizzini 88.43 317 P P 00 54 50.8 +0.1
TVO Taravao 88.64 114 eP P 00 54 54.5 +2.7
comp=Z,554nm,1.1s,mb6.8
TVO Taravao 88.64 114 eP P 00 54 54.5 +2.7
TVO pmax pmax
comp=Z,554nm,1.1s,mb6.8
DESE Dese 88.78 283 eP P 00 54 53.7 +1.0
DESE S PP 00 58 28.2 +6.7
LFF La Frestale 88.91 330⇑ iP P 00 54 52.9 +0.1
comp=Z,109nm,0.8s,mb5.9
LFF La Frestale 88.91 330⇑ iP P 00 54 52.9 +0.1
comp=Z,54nm,0.8s,mb5.9
LFF La Frestale 88.91 330⇑ iP P 00 54 52.9 +0.1
LFF pmax pmax
comp=Z,55nm,0.8s,mb5.9
VSL Villasalto 89.44 322 eP P 00 54 53.7 -1.7
comp=Z,149nm,1.5s,mb6.1
MEH Mehetia 89.57 113 eP P 00 54 58.8 +2.6
comp=Z,197nm,1.1s,mb6.3
MTLF Montolieu 89.63 329⇑ iP P 00 54 56.2 0.0
comp=Z,134nm,1.4s,mb5.8
MTLF Montolieu 89.63 329⇑ iP P 00 54 56.2 0.0
comp=Z,67nm,1.4s,mb5.8
MTLF Montolieu 89.63 329⇑ iP P 00 54 56.2 0.0
MTLF pmax pmax
comp=Z,67nm,1.4s,mb5.8
EJON La Jonquera 90.08 328 P P 00 54 58.7 +0.4
comp=Z,3µm,6.0s
GLMI Grayling 90.15 28 eP P 00 54 59.3 +0.6
comp=Z,452nm,0.9s,mb6.8
MLS Moulis 90.41 329⇑ eP P 00 54 59.6 -0.3
VALF Valcebollere 90.49 328 eP P 00 55 00.1 -0.1
MELF Melles 90.62 329 eP P 00 55 06.3 +5.5
EPF Esparros 90.66 330⇑ iP P 00 55 00.5 -0.5
comp=Z,72nm,1.0s,mb5.6
EPF Esparros 90.66 330⇑ iP P 00 55 00.5 -0.5
comp=Z,36nm,1.0s,mb5.7
EPF Esparros 90.66 330⇑ iP P 00 55 00.5 -0.5
EPF pmax pmax
comp=Z,36nm,1.0s,mb5.7
LABF Labassere 90.75 330 eP P 00 55 06.3 +4.8
RESF Ens 90.84 329 eP P 00 55 02.6 +0.7
VIEF Viey 90.91 330 eP P 00 55 02.7 +0.5
REYF Montagne du Re 90.92 330 eP P 00 55 03.0 +0.8
EBIE Bielsa 91.03 329 P P 00 55 03.3 +0.6
comp=Z,4µm,5.1s
ATE Arette 91.03 330 eP P 00 55 03.1 +0.4
EMIR Miracle 91.09 328 P P 00 55 03.1 0.0
comp=Z,2µm,5.8s
ETSF Etsaut 91.13 330⇑ iP P 00 55 03.6 +0.4
comp=Z,116nm,0.9s,mb5.9
ETSF Etsaut 91.13 330⇑ iP P 00 55 03.6 +0.4
comp=Z,58nm,0.9s,mb5.9
ETSF Etsaut 91.13 330⇑ iP P 00 55 03.6 +0.4
ETSF pmax pmax
comp=Z,58nm,0.9s,mb5.9
LARF Larrau 91.18 330 eP P 00 55 03.9 +0.4
SJPF Ste Jean 91.21 331⇑ iP P 00 55 03.3 -0.3
comp=Z,157nm,1.4s,mb5.8
SJPF Ste Jean 91.21 331⇑ iP P 00 55 03.3 -0.3
comp=Z,79nm,1.4s,mb5.8
SJPF Ste Jean 91.21 331⇑ iP P 00 55 03.3 -0.3
SJPF pmax pmax
comp=Z,79nm,1.4s,mb5.8
ELIZ Elizondo 91.29 331 P P 00 55 04.2 +0.3
comp=Z,74nm,1.6s,mb5.8
ELIZ Elizondo 91.29 331 P P 00 55 04.2 +0.3
ELIZ pmax pmax
comp=Z,74nm,1.6s,mb5.8
EPOB Poblet 91.75 328 P P 00 55 05.9 -0.2
comp=Z,23nm,0.8s,mb5.5
HDIL Hopedale 91.82 33 eP P 00 55 06.2 -0.3
comp=Z,437nm,1.4s,mb6.6
ELAN Lanestosa 91.96 332 P P 00 55 07.5 +0.5
comp=Z,2µm,4.3s
ESAC San Caprasio 92.08 329 P P 00 55 08.8 +1.2
comp=Z,45nm,0.5s,mb6.1
ECRI Cripan 92.14 331 P P 00 55 08.2 +0.3
comp=Z,17nm,1.0s,mb5.3
ECRI Cripan 92.14 331 P P 00 55 08.2 +0.3
ECRI pmax pmax
comp=Z,17nm,1.0s,mb5.3
KEST Kesra 92.36 320 P P 00 55 08.8 -0.2
comp=Z,6.9nm,1.1s,baz=349,slow=8.8,SNR=15
EARI Arriondas 92.55 333 P P 00 55 09.8 0.0
comp=Z,3µm,5.4s
AAM Ann Arbor 92.67 29 eP P 00 55 09.8 -0.5
comp=Z,184nm,1.4s,mb6.3
AAM Ann Arbor 92.67 29 eP P 00 55 09.8 -0.5
AAM pmax pmax
comp=Z,184nm,1.4s,mb6.3
SLM Saint Louis 92.97 35 eP P 00 55 11.7 -0.1
comp=Z,152nm,1.0s,mb6.4
SLM Saint Louis 92.97 35 eP P 00 55 11.7 -0.1
SLM pmax pmax
comp=Z,152nm,1.0s,mb6.4
EMOS Mosqueruela 93.22 329 P P 00 55 12.7 -0.2
comp=Z,2µm,4.8s
MSNY Massena 93.27 22 eP P 00 55 12.8 -0.3
ETOR Torete 93.48 330 P P 00 55 13.8 -0.3
comp=Z,16nm,1.2s
ETOR Torete 93.48 330 P P 00 55 13.8 -0.3
ETOR pmax pmax
comp=Z,16nm,1.2s
LONY Lake Ozonia 93.70 22 eP P 00 55 14.5 -0.5
comp=Z,56nm,1.0s,mb6.0
FRNY Flat Rock 93.79 21 eP P 00 55 13.9 -1.6
comp=Z,45nm,0.9s,mb5.9

BLO Bloomington 94.16 32 eP P 00 55 17.0 -0.2
comp=Z,93nm,1.3s,mb6.0
BLO Bloomington 94.16 32 eP P 00 55 17.0 -0.3
BLO pmax pmax
comp=Z,93nm,1.3s,mb6.0
ERPA Erie 94.18 26 eP P 00 55 17.2 -0.1
comp=Z,145nm,0.8s,mb6.5
SIUC Southern Illin 94.18 35 eP P 00 55 16.8 -0.6
comp=Z,180nm,1.0s,mb6.5
JCT Junction City 94.38 46 eP P 00 55 18.5 +0.1
comp=Z,232nm,1.2s,mb6.5
JCT Junction City 94.38 46 eP P 00 55 18.5 +0.1
JCT pmax pmax
comp=Z,232nm,1.2s,mb6.5
NCB Newcomb 94.39 22 eP P 00 55 18.0 -0.2
comp=Z,114nm,0.9s,mb6.3
GUD Guadarrama 94.46 331 P P 00 55 18.3 -0.3
comp=Z,9.1nm,0.8s
GUD Guadarrama 94.46 331 P P 00 55 18.3 -0.3
GUD pmax pmax
comp=Z,9.0nm,0.8s
PKME Peaks-Kenny Pk 94.53 18 eP P 00 55 19.0 +0.1
comp=Z,81nm,0.9s,mb6.2
ALLY Alegheny Colle 94.54 27 eP P 00 55 19.0 +0.1
comp=Z,206nm,1.0s,mb6.5
MIAR Mount Ida 94.64 39⇑ eP P 00 55 19.4 -0.2
comp=Z,139nm,0.9s,mb6.4
MIAR e 00 55 22.9
MIAR Mount Ida 94.64 39⇑ eP P 00 55 19.4 -0.1
MIAR e 00 55 22.9
MIAR pmax pmax
comp=Z,139nm,0.9s,mb6.4
ACSO Alum Creek Sta 94.71 29 eP P 00 55 19.8 +0.1
comp=Z,86nm,0.8s,mb6.2
PARMO Parma 94.80 36 eP P 00 55 20.5 +0.3
LBNH Lisbon 94.80 20 eP P 00 55 20.5 +0.4
comp=Z,147nm,1.4s,mb6.2
LBNH Lisbon 94.80 20 eP P 00 55 20.5 +0.4
LBNH pmax pmax
comp=Z,147nm,1.4s,mb6.2
ELOB Lobios 94.82 334 P P 00 55 20.0 -0.2
comp=Z,3µm,6.4s
PCAB Cabril 94.94 334 eP P 00 55 22.4 +1.6
PCAB Cabril 94.94 334 ePP PP 00 59 14.7 +5.9
WCI Wyandotte Cave 95.05 33 eP P 00 55 20.5 -0.9
comp=Z,82nm,1.1s,mb6.1
WCI Wyandotte Cave 95.05 33 eP P 00 55 20.5 -0.9
WCI pmax pmax
comp=Z,82nm,1.1s,mb6.1
UALR University of 95.07 39 eP P 00 55 20.6 -0.9
comp=Z,64nm,1.4s,mb5.9
MVO Moncorvo 95.07 333 iP P 00 55 21.1 -0.3
MVO Moncorvo 95.07 333 eLR LR 01 28 13.9
comp=Z,47µm,18.3s
ACCN Adirondack Com 95.09 22 eP P 00 55 21.2 -0.3
comp=Z,264nm,1.4s,mb6.5
HNH Hanover 95.19 21 eP P 00 55 22.2 +0.3
comp=Z,416nm,1.5s,mb6.6
ESDC Sonseca Array 95.22 330 P P 00 55 21.3 -0.8
comp=Z,2.4nm,0.6s
ESDC Sonseca Array 95.22 330 P P 00 55 21.1 -1.0
comp=Z,2.4nm,0.6s,baz=24,slow=4.2,SNR=20
PVRL Vila Real 95.22 334 eP P 00 55 23.7 +1.6
PVRL Vila Real 95.22 334 ePP PP 00 59 15.1 +4.2
GNAR Gosnell 95.24 36 eP P 00 55 21.8 -0.5
comp=Z,929nm,0.9s,mb7.2
HBAR Harrisburg 95.27 37 eP P 00 55 22.8 +0.4
GLAT Glass 95.33 36 eP P 00 55 22.2 -0.5
BINY Binghamton 95.46 24 eP P 00 55 23.1 -0.1
comp=Z,57nm,0.8s,mb6.0
UTMT University of 95.47 35 eP P 00 55 23.3 -0.1
comp=Z,150nm,0.9s,mb6.4
EVIA Vianos 95.52 329 P P 00 55 23.3 -0.2
comp=Z,20nm,1.0s,mb5.5
EVIA Vianos 95.52 329 P P 00 55 23.3 -0.2
EVIA pmax pmax
comp=Z,20nm,1.0s,mb5.5
FFD Franklin Falls 95.59 20 eP P 00 55 24.6 +0.9
comp=Z,135nm,0.9s,mb6.4
PVIS Viseu 95.78 334 eP P 00 55 26.2 +1.6
PVIS Viseu 95.78 334 ePP PP 00 59 19.9 +4.6
MTE Manteigas 95.93 333 eP P 00 55 25.1 -0.2
MTE Manteigas 95.93 333 ePP PP 00 59 19.6 +3.1
MTE Manteigas 95.93 333 eLR LR 01 28 10.6
comp=Z,59µm,18.6s
MTE Manteigas 95.93 333 eP P 00 55 24.1 -1.2
comp=Z,14nm,1.0s
SSPA Standing Stone 96.23 26 eP P 00 55 26.6 -0.1
comp=Z,82nm,1.2s,mb6.0
MCWV Mont Chateau 96.39 27 eP P 00 55 27.2 -0.2
comp=Z,72nm,1.3s,mb5.9
PCBR Castelo Branco 96.40 333 eP P 00 55 26.5 -1.0
PCBR Castelo Branco 96.40 333 ePP PP 00 59 23.1 +3.0
EBAN Banos Encina 96.44 330 P P 00 55 27.2 -0.5
comp=Z,20nm,1.0s,mb5.5
EBAN Banos Encina 96.44 330 P P 00 55 27.2 -0.5
EBAN pmax pmax
comp=Z,20nm,1.0s,mb5.5
EQES Quesada 96.46 329 P P 00 55 27.1 -0.8
comp=Z,2µm,5.2s
QUA2 Belchertown 96.49 21 eP P 00 55 30.4 +2.6
comp=Z,485nm,1.6s,mb6.7
HRV Harvard--Oak R 96.50 21 eP P 00 55 28.1 +0.2
comp=Z,63nm,0.8s,mb6.1
HRV Harvard--Oak R 96.50 21 eP P 00 55 28.1 +0.2
HRV pmax pmax
comp=Z,63nm,0.8s,mb6.1
WES Weston 96.68 20 eP P 00 55 28.9 +0.1
comp=Z,107nm,0.9s,mb6.3
WES Weston 96.68 20 eP P 00 55 28.9 +0.2
WES pmax pmax
comp=Z,107nm,0.9s,mb6.3
OXF Oxford 96.71 37 eP P 00 55 28.5 -0.5
comp=Z,207nm,1.4s,mb6.4
OXF Oxford 96.71 37 eP P 00 55 28.5 -0.5
OXF pmax pmax
comp=Z,207nm,1.4s,mb6.4
EADA Adamuz 96.76 330 P P 00 55 28.6 -0.5
comp=Z,1µm,5.1s
ENIJ Nijar 96.81 328 P P 00 55 27.7 -1.7
comp=Z,16nm,0.9s,mb5.5
ENIJ Nijar 96.81 328 P P 00 55 27.7 -1.7
ENIJ pmax pmax
comp=Z,16nm,0.9s,mb5.5
BRYW Bryant College 97.06 21 eP P 00 55 32.9 +2.5
comp=Z,28nm,0.6s,mb5.9
ECOG Cogollos-Vega 97.11 329 P P 00 55 28.9 -1.8
comp=Z,4.8nm,0.9s
ECOG Cogollos-Vega 97.11 329 P P 00 55 29.0 -1.8
ECOG pmax pmax
comp=Z,5.0nm,0.9s
ELUQ Luque 97.16 330 P P 00 55 30.4 -0.5
comp=Z,21nm,1.0s,mb5.5
ELUQ Luque 97.16 330 P P 00 55 30.4 -0.6
ELUQ pmax pmax
comp=Z,21nm,1.0s,mb5.5
EBER Berja 97.16 328 P P 00 55 31.0 0.0
comp=Z,1µm,5.7s
PAL Palisades 97.19 23 eP P 00 55 30.9 -0.1
comp=Z,130nm,1.4s,mb6.2
PAL Palisades 97.19 23 eP P 00 55 30.9 -0.2
PAL pmax pmax
comp=Z,130nm,1.4s,mb6.2
PESTR Estremoz 97.30 333 iP P 00 55 30.6 -1.0
PESTR Estremoz 97.30 333 ePP PP 00 59 29.7 +2.6
PESTR Estremoz 97.30 333 eLR LR 01 28 16.0
comp=Z,62µm,18.0s
MVL Millersville 97.32 25 eP P 00 55 31.4 -0.3
comp=Z,115nm,1.5s,mb6.1
CPNY Central Park 97.37 23 eP P 00 55 33.9 +2.0
comp=Z,58nm,1.1s,mb5.9
ALMR Almeirim 97.40 333 ePP PP 00 59 28.6 +0.8
ALMR Almeirim 97.40 333 ePP PP 00 59 28.6 +0.8
ERON Agron 97.43 329 P P 00 55 31.1 -1.2
comp=Z,8.7nm,0.7s
ELOJ Sierra Loja 97.47 329 P P 00 55 31.8 -0.6
comp=Z,13nm,1.0s
ELOJ Sierra Loja 97.47 329 P P 00 55 31.8 -0.6
ELOJ pmax pmax
comp=Z,13nm,1.0s,mb5.3
TZTN Tazewell 97.64 32 eP P 00 55 32.7 -0.4
comp=Z,65nm,1.3s,mb6.0
SDMD Soldier's Deli 97.68 25 eP P 00 55 32.9 -0.4
comp=Z,16nm,0.7s,mb5.7
PBAR Barrancos 97.70 332 iP P 00 55 32.7 -0.7
PBAR Barrancos 97.70 332 ePP PP 00 59 32.5 +2.3

PBAR Barrancos 97.70 332 eLR LR 01 28 15.8
comp=Z,60µm,21.6s
SWET Sewanee 97.73 34 eP P 00 55 32.9 -0.7
EVO Evora 97.75 333 eP P 00 55 33.0 -0.6
comp=Z,84nm,1.6s,mb5.7
EVO eMLR MLR
comp=Z,129µm,21.2s,MS7.1
EVO Evora 97.75 333 iP P 00 55 32.7 -0.9
EVO Evora 97.75 333 ePP PP 00 59 33.0 +2.5
PMAFR Mafra 97.83 334 eP P 00 55 33.1 -0.9
PMAFR Mafra 97.83 334 ePP PP 00 59 33.3 +2.2
PMAFR Mafra 97.83 334 eLR LR 01 28 16.5
comp=Z,42µm,18.7s
EMIN Mina Concepcio 97.92 331 P P 00 55 35.7 +1.3
LIS Lisbon 98.00 334 eP P 00 55 34.5 -0.2
LIS ePP PP 00 59 33.1 +0.7
LIS eSS SS 01 13 39.9 -2.2
LIS eSS SS 01 13 40.8 -1.3
LIS AMS AMS 01 38 38.6
comp=E,149µm,20.8s
KMBO Kilima Mbogo 98.09 275 P P 00 55 34.9 -0.7
KMBO pmax pmax
comp=Z,63nm,1.6s
KMBO Kilima Mbogo 98.09 275 P P 00 55 36.1 +0.5
SNR=22
KMBO Kilima Mbogo 98.09 275 P P 00 55 36.1 +0.5
SNR=22
KMBO Kilima Mbogo 98.09 275 P P 00 55 35.1 -0.4
comp=Z,4.1nm,1.0s,baz=37,slow=8.0,SNR=9.4
PBEJ Beja 98.14 332 eP P 00 55 37.2 +1.8
PBEJ Beja 98.14 332 ePP PP 00 59 36.7 +3.2
CPCT Cooper Cave 98.15 33 eP P 00 55 34.6 -0.9
ELN Prospectdale 98.17 29 eP P 00 55 34.9 -0.6
EMIJ Mijas 98.22 329 P P 00 55 34.8 -0.9
BLA Blacksburg 98.32 29 eP P 00 55 35.8 -0.4
comp=Z,91nm,1.3s,mb6.1
BLA Blacksburg 98.32 29 eP P 00 55 35.8 -0.4
BLA pmax pmax
comp=Z,91nm,1.3s,mb6.2
ESPR Espera 98.39 330 P P 00 55 36.0 -0.5
comp=Z,2µm,4.5s
CBN Corbin 98.57 26 eP P 00 55 36.2 -1.1
comp=Z,44nm,0.8s,mb6.0
EJIF Jimena Fronter 98.60 330 P P 00 55 36.5 -0.9
PVAQ Vaqueiros 98.64 332 iP P 00 55 36.9 -0.7
PVAQ Vaqueiros 98.64 332 ePP PP 00 59 39.8 +2.5
PBDV Barranco-do-Ve 98.86 332 eP P 00 55 38.6 0.0
PBDV Barranco-do-Ve 98.86 332 ePP PP 00 59 41.9 +2.9
PBDV Barranco-do-Ve 98.86 332 eLR LR 01 28 18.4
comp=Z,44µm,18.0s
PTEO Sao Teotonio 98.88 333 eP P 00 55 39.9 +1.2
PTEO Sao Teotonio 98.88 333 ePP PP 00 59 40.4 +1.2
LRAL Lakeview Retre 99.06 36 eP P 00 55 38.3 -1.3
comp=Z,16nm,1.1s,mb5.5
MORF Marmelete 99.07 333 eP P 00 55 39.1 -0.5
MORF Marmelete 99.07 333 ePP PP 00 59 42.5 +1.9
MORF Marmelete 99.07 333 eLR LR 01 28 17.0
comp=Z,66µm,15.6s
URVA University of 99.08 27 eP P 00 55 39.9 +0.3
PFVI Vila Bisbo 99.29 333 eP P 00 55 39.8 -0.7
PFVI Vila Bisbo 99.29 333 ePP PP 00 59 44.3 +2.0
GOGA Godfrey 100.34 33 eP Pdif 00 55 43.9 -1.2
comp=Z,18nm,0.9s
GOGA Godfrey 100.34 33 P Pdif 00 55 46.3 +1.1
GOGA pmax pmax
comp=Z,18nm,0.9s
OPO Ambohidratompo 100.54 255 P Pdif 00 55 44.5 -1.6
comp=Z,1.7nm,0.9s,baz=90,slow=7.8,SNR=1.9
LHS Liberty Hill 100.55 31 ePdif Pdif 00 55 45.7 -0.4
MDT Midelt 101.38 327 P Pdif 00 55 49.5 -0.3
comp=Z,7.6nm,0.9s,baz=52,slow=3.7,SNR=13
PMAR Madeira 106.04 337 eP Pdif 00 56 11.5 +1.0
TORD Torodi Ar. Bea 114.29 311 PKP PKiKP 01 00 39.3 +0.6
comp=Z,21nm,0.8s,baz=28,slow=1.0,SNR=3.9
TORD PKKPbc PKKPbc 01 11 19.0 +1.8
comp=Z,4.6nm,0.9s,baz=221,slow=2.9,SNR=4.7
VNDA Vanda 115.63 174 PKP PKPdf 01 00 39.4 0.0
VNDA PP PP 01 01 41.4 -1.2
VNDA Vanda 115.63 174 PKP PKPdf 01 00 39.4 +0.1
comp=Z,2.8nm,0.8s,baz=323,slow=5.3,SNR=4.8
VNDA PP PP 01 01 41.4 -1.2
comp=Z,16nm,1.1s,baz=328,slow=6.7,SNR=17
SJG San Juan 120.84 25 ePKPdf PKPdf 01 00 48.9 -2.3
BOSA Boshof 122.85 257 PKP PKPdf 01 00 55.1 +0.5
comp=Z,27nm,0.8s,baz=17,slow=1.1,SNR=3.7
DBIC Dimbokro 123.32 312 PKP PKPdf 01 00 55.6 -0.5
comp=Z,39nm,0.9s,baz=265,slow=3.0,SNR=8.7
LIC Lamto 123.78 312⇑ iPKIKP PKPdf 01 00 54.7 -2.3
comp=Z,2µm,1.3s
QSPA South Pole Qui 127.08 180 PKP PKPdf 01 01 01.9 +0.6
comp=Z,53nm,1.1s,baz=343,slow=0.2,SNR=6.2
QSPA PP PP 01 02 59.7 -0.7
comp=Z,55nm,1.1s,baz=321,slow=3.0,SNR=9.2
ROSC El Rosal 129.11 41 PKP PKPdf 01 01 07.6 +0.5
comp=Z,100nm,1.0s,baz=98,slow=12,SNR=9.5
OTAV Otavalo 130.56 49 ePKPdf PKPdf 01 01 12.4 +2.4
MAIT Maitri 136.10 203 ePKPdf PKPdf 01 01 13.7 -4.8
ATAH Atahualpa 136.18 55 PKP PKPdf 01 01 20.1 -0.3
comp=Z,11nm,0.9s,baz=270,slow=1.0,SNR=3.6
SNAA Sanae 139.85 199 ePKPdf PKPdf 01 01 16.3 -9.1
SNAA e 01 01 20.6
SNAA e 01 01 23.1
SNAA e 01 01 29.3
SNAA e 01 01 32.9
SNAA e 01 01 36.4
SNAA e 01 01 40.2
SNAA e 01 01 44.5
SNAA e 01 04 22.7
SNAA e 01 04 25.7
SNAA Sanae 139.85 199 PKhKP 01 01 16.3
comp=Z,15nm,0.9s,baz=100,slow=3.8,SNR=10
SNAA PP PP 01 04 24.4 +2.5
comp=Z,12nm,1.1s,baz=151,slow=5.4,SNR=5.9
NNA Nana 140.86 59 ePKPdf PKPdf 01 01 25.2 -3.8
VNA2 Neumayer--Watz 141.46 198 ePKPdf PKPdf 01 01 23.5 -4.8
baz=98,slow=2.2
VNA2 e 01 01 26.5
VNA2 e 01 01 30.6
VNA2 e 01 01 34.7
VNA2 e 01 01 39.3
VNA2 e 01 01 43.5
VNA2 e 01 01 47.9
VNA2 e 01 01 53.8
VNA2 e 01 01 57.9
VNA2 e 01 02 02.4
VNA2 e 01 04 33.0
VNA2 e 01 04 36.7
VNA3 Neumayer Olymp 141.79 197 ePKPdf PKPdf 01 01 22.6 -6.3
VNA3 e 01 01 26.0
VNA3 e 01 01 29.8
VNA3 e 01 01 35.2
VNA3 e 01 01 39.1
VNA3 e 01 01 43.8
VNA3 e 01 01 47.7
VNA3 e 01 01 51.3
VNA3 e 01 01 54.5
VNA3 e 01 01 57.8
VNA3 e 01 02 00.3
VNA3 e 01 02 06.0
VNA3 e 01 04 34.0
VNA3 e 01 04 37.7
VNA1 Neumayer--Stat 141.86 198 ePKPdf PKPdf 01 01 24.9 -4.2
VNA1 e 01 01 27.4
VNA1 e 01 01 31.0
VNA1 e 01 01 37.0
VNA1 e 01 01 43.1
VNA1 e 01 01 46.9
VNA1 e 01 01 50.5
VNA1 e 01 02 02.1
VNA1 e 01 04 32.1
VNA1 e 01 04 35.3
LPAZ La Paz 149.74 53 PKP PKPdf 01 01 44.9 +0.7
LPAZ PKPbc PKPbc 01 01 49.7 +0.9
LPAZ La Paz 149.74 53 PKP PKPdf 01 01 44.9 +0.7
comp=Z,24nm,1.1s,baz=316,slow=2.7,SNR=8.6
LPAZ PKPbc PKPbc 01 01 49.7 +0.9
comp=Z,25nm,0.6s,baz=2.1,slow=3.8,SNR=14
PMSA Palmer Station 149.92 162 PKP PKPdf 01 01 42.5 -0.4
PMSA ePKPbc PKPbc 01 01 46.5 -1.3
PMSA PKPbc PKPbc 01 01 46.6 -1.1
PMSA Palmer Station 149.92 162 PKP PKPdf 01 01 42.5 -0.4
comp=Z,53nm,1.2s,baz=107,slow=8.5,SNR=6.9
PMSA PKPbc PKPbc 01 01 46.6 -1.1

comp=Z,53nm,1.2s,baz=107,slow=0.8,SNR=6.7
USHA Ushuaia 155.57 144 PKP PKPdf 01 01 50.6 -0.9
comp=Z,5.5nm,0.9s,baz=220,slow=3.6,SNR=2.9
LCO Las Campanas 155.77 78 *e*PKPdf PKPdf 01 01 52.5 -0.1
PLCA Paso Flores 158.69 108 PKP PKPdf 01 01 55.5 -0.4
comp=Z,8.6nm,1.2s,baz=260,slow=4.8,SNR=4.2
PLCA PKPab PKPab 01 02 32.3 +0.9
comp=Z,57nm,1.1s,baz=233,slow=4.8,SNR=12
PLCA PP PP 01 06 13.7 +1.2
comp=Z,6.8nm,1.0s,baz=250,slow=6.2,SNR=3.2
CFAA Coronel Fontan 158.79 82 PKP PKPdf 01 01 54.4 -2.0
comp=Z,0.2nm,0.5s,baz=181,slow=4.1,SNR=3.9
CFAA PKPab PKPab 01 02 33.6 +1.5
comp=Z,11nm,0.9s,baz=274,slow=3.4,SNR=14
CFAA PP PP 01 06 15.7 +2.5
comp=Z,1.2nm,1.1s,baz=305,slow=3.5,SNR=4.4

JMA 25 00:43:12.8±0.1, 3726N×13672E, h0km, M5.1, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**172**	*e*S	Sg	00 43 24.9	+1.3
JKG	**Kaga**	**1.03**	**198**	*e*S	Sg	00 43 45.9	0.0

JMA 25 00:44:27.9±0.1, 3729N×13676E, h11km±1km, M4.4, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**177**	P	Pg	00 44 35.0	-0.1
JJH				S	Sg	00 44 40.9	+0.9

JMA 25 00:45:17.0, 3725N×13680E, h12km±1km, M4.3, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**183**	*e*S	Sg	00 45 28.3	+0.4
JKG	**Kaga**	**1.04**	**201**	*e*S	Sb	00 45 50.0	-0.5

JMA 25 00:45:50.2±0.1, 3720N×13667E, h6km±1km, M4.7, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.29**	**162**	P	Pg	00 45 56.1	+0.3
JJH				*e*S	Sg	00 46 00.2	+0.6
JTT	**Ttatey**	**0.80**	**138**	*e*S	Sg	00 46 17.0	+1.2
JKG	**Kaga**	**0.96**	**197**	P	Pg	00 46 08.1	-0.5
JKG				*e*S	Sg	00 46 20.9	-0.2
MAT	**Matsushiro**	**1.40**	**118**	P	Pn	00 46 16.1	-0.1
MAT				*e*S	Sb	00 46 34.6	-0.1

JMA 25 00:46:25.8±0.1, 3722N×13674E, h10km±1km, M4.1, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.30**	**174**	P	Pg	00 46 32.0	+0.3
JJH				*e*S	Sg	00 46 35.9	+0.2
JSZ	**Suzu**	**0.55**	**65**	*e*S	Sg	00 46 43.6	0.0
JTT	**Ttatey**	**0.78**	**142**	*e*S	Sg	00 46 51.7	+0.8
JKG	**Kaga**	**1.00**	**199**	P	Pg	00 46 44.2	-0.8
JKG				*e*S	Sg	00 46 57.7	-0.2

JMA 25 00:46:33.4±0.1, 3724N×13678E, h12km±1km, M3.8, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.31**	**180**	*e*S	Sg	00 46 44.6	+0.6

JMA 25 00:46:53.3±0.2, 3726N×13669E, h8km±1km, M3.7, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**168**	P	Pg	00 46 59.9	-0.1
JJH				S	Sg	00 47 04.6	+0.1

JMA 25 00:47:59.0±0.2, 3723N×13667E, h3km±1km, M3.7, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**164**	P	Pg	00 48 05.8	+0.7
JJH				S	Sg	00 48 10.2	+1.0
JKG	**Kaga**	**0.99**	**196**	S	Sg	00 48 30.9	+0.1

JMA 25 00:48:35.2±0.1, 3722N×13670E, h9km±1km, M4.4, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.30**	**167**	P	Pg	00 48 41.5	+0.3
JJH				*e*S	Sg	00 48 45.2	0.0
JSZ	**Suzu**	**0.58**	**66**	P	Pg	00 48 46.1	-0.2
JSZ				*e*S	Sg	00 48 54.2	+0.3
JHG	**Hegura jima**	**0.65**	**16**	*e*S	Sg	00 48 56.4	+0.1
JTT	**Ttatey**	**0.80**	**140**	P	Pg	00 48 50.6	+0.1
JTT				*e*S	Sg	00 49 01.6	+0.7
JKG	**Kaga**	**0.99**	**198**	P	Pg	00 48 53.8	-0.4
JKG				*e*S	Sg	00 49 06.9	-0.1
MAT	**Matsushiro**	**1.39**	**119**	P	Pn	00 49 00.3	-0.4
MAT				S	Sb	00 49 18.0	-1.0

JMA 25 00:49:34.6±0.1, 3728N×13678E, h10km±1km, M3.5, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.35**	**180**	S	Sg	00 49 46.6	+0.3
JSZ	**Suzu**	**0.49**	**70**	P	Pg	00 49 44.2	0.0
JKG	**Kaga**	**1.06**	**200**	*e*S	Sg	00 50 08.6	-0.3

JMA 25 00:49:44.0, 3728N×13667E, h1km, M3.5, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**166**	P	Pg	00 49 51.5	+0.5
JJH				*e*S	Sg	00 49 56.7	+1.0

JMA 25 00:50:25.2±0.2, 3725N×13666E, h10km±1km, M3.5, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**163**	S	Sg	00 50 36.9	+0.5

JMA 25 00:51:02.9±0.1, 3718N×13664E, h10km±1km, M4.1, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.28**	**156**	P	Pg	00 51 08.8	+0.3
JJH				S	Sg	00 51 12.8	+0.5
JSZ	**Suzu**	**0.64**	**65**	P	Pg	00 51 15.4	+0.2
JTT	**Ttatey**	**0.80**	**136**	P	Pg	00 51 18.4	+0.1
JTT				S	Sg	00 51 29.2	+0.5
JKG	**Kaga**	**0.94**	**195**	S	Sg	00 51 33.2	+0.2
JGN	**Niukaw**	**1.10**	**150**	P	Pb	00 51 23.6	-0.4
JGN				S	Sg	00 51 38.2	-0.1
MAT	**Matsushiro**	**1.41**	**116**	P	Pn	00 51 28.5	-0.1
MAT				S	Sn	00 51 46.7	-0.5

JMA 25 00:51:41.1±0.1, 3718N×13667E, h10km±1km, M3.7, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.27**	**161**	P	Pg	00 51 46.7	+0.2
JJH				S	Sg	00 51 50.7	+0.5
JSZ	**Suzu**	**0.61**	**64**	P	Pg	00 51 53.0	0.0
JHG	**Hegura jima**	**0.70**	**17**	*e*S	Sg	00 52 04.5	+0.8
JTT	**Ttatey**	**0.78**	**137**	P	Pg	00 51 56.1	-0.1
JTT				*e*S	Sg	00 52 07.4	+1.0

JMA 25 00:52:07.4±0.1, 3718N×13665E, h11km±1km, M3.9, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.28**	**157**	P	Pg	00 52 13.2	+0.2
JJH				S	Sg	00 52 17.5	+0.7
JSZ	**Suzu**	**0.63**	**65**	*e*S	Sg	00 52 27.7	-0.2
JHG	**Hegura jima**	**0.70**	**18**	P	Pg	00 52 21.1	+0.1
JHG				*e*S	Sg	00 52 29.9	-0.3
JTT	**Ttatey**	**0.79**	**136**	P	Pg	00 52 22.5	-0.2
JTT				S	Sg	00 52 33.7	+0.6
JKG	**Kaga**	**0.94**	**196**	P	Pg	00 52 24.9	-0.5
JKG				*e*S	Sg	00 52 37.4	-0.2

*ISCJB **25** 00:52:36.1±0.7, 3734N±003×13667E±003, h9km±4km, mb4.1/4, Error ellipse: s-maj=4.8km s-min=4.2km az=28.0*
*JMA **25** 00:52:36.6±0.1, 3731N×13671E, h5km±1km, M4.5*
JMA Felt IV J1.
*NEIC **25** 00:52:36.8±1.2, 3735N×13677E, h5km, MG4.5(JMA), Error ellipse: s-maj=24.1km s-min=13.7km az=175.0*
*IDC **25** 00:52:40.3±6.4, 3728N×13675E, h29km±46km, mb3.9/4, mb1 4.2/6, mb1mx4.0/20, mbtmp3.9/6, ML3.5/2, Error ellipse: s-maj=25.2km s-min=19.4km az=4.0*

ISC 25 00:52:36.9±0.6, 3732N±002×13674E±003, h4km±4km, n22, σ0§70/36, mb4.1/4, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.39**	**175**	P	**Pg**	**00 52 44.5**	**0.0**
JJH				S	**Sg**	**00 52 50.1**	**+0.5**
JSZ	**Suzu**	**0.52**	**75**	P	**Pg**	**00 52 46.7**	**-0.2**
JSZ				*e*S	**Sg**	**00 52 53.9**	**+0.3**
JHG	**Hegura jima**	**0.55**	**15**	P	**Pg**	**00 52 47.7**	**+0.2**
JHG				*e*S	**Sg**	**00 52 55.3**	**+0.6**
JTT	**Ttatey**	**0.86**	**146**	P	**Pg**	**00 52 53.8**	**+0.5**
JTT				*e*S	**Sg**	**00 53 05.2**	**+0.8**
JKG	**Kaga**	**1.09**	**197**	P	**Pg**	**00 52 56.8**	**-1.0**
JKG				S	**Sg**	**00 53 11.4**	**-0.4**
JJN	**Nakama**	**1.16**	**100**	P	**Pg**	**00 52 58.4**	**-0.7**
JJN				*e*S	**Sg**	**00 53 14.5**	**+0.3**
JGN	**Niukaw**	**1.19**	**157**	P	**Pg**	**00 52 58.7**	**-1.0**
JGN				*e*S	**Sg**	**00 53 14.2**	**-0.8**
JSD	**Sado**	**1.41**	**59**	P	**Pn**	**00 53 02.1**	**-1.2**
JSD				*e*S	**Sb**	**00 53 20.3**	**-1.7**
MAJO	**Matsushiro**	**1.41**	**123**	*e*Pn	**Pn**	**00 53 03.0**	**-0.3**
MAT	**Matsushiro**	**1.41**	**123**	P	**Pn**	**00 53 02.8**	**-0.5**
MAT				S	**Sb**	**00 53 22.6**	**+0.6**
MJAR	**Matsushiro Arr**	**1.41**	**123**	Pn	**Pn**	**00 53 03.8**	**+0.5**
	92nm,0.3s,baz=314,slow=17,SNR=12						
MJAR				Sn	**Sn**	**00 53 22.7**	**+0.4**
	97nm,0.3s,baz=319,slow=24,SNR=9.1						
JNG	**Nsakai**	**1.42**	**129**	P	**Pn**	**00 53 03.4**	**0.0**
JNG				*e*S	**Sb**	**00 53 22.5**	**+0.1**
JIZZ	**Izumozaki**	**1.59**	**82**	*e*S	**Sn**	**00 53 26.9**	**+0.3**
JGM	**Miyama**	**1.61**	**181**	P	**Pn**	**00 53 05.9**	**-0.2**
JGM				*e*S	**Sn**	**00 53 26.7**	**-0.6**
JGK	**Kuni**	**1.70**	**116**	P	**Pn**	**00 53 08.4**	**+1.1**
JGF	**Kuroka**	**1.78**	**164**	P	**Pn**	**00 53 09.8**	**+1.4**
JGF				*e*S	**Sn**	**00 53 31.3**	**-0.2**
JNU	**Nakatsue**	**6.36**	**231**	Pn	**Pn**	**00 54 12.5**	**+1.1**
	1.0nm,0.3s,baz=135,slow=6.4,SNR=5.2						
KSRS	**Korea Array**	**7.02**	**274**	Pn	**Pn**	**00 54 21.8**	**+1.4**
	0.7nm,0.3s,baz=88,slow=14,SNR=3.6						
KSRS				Sn	**Sn**	**00 55 40.1**	**-0.5**
	1.0nm,0.3s,baz=87,slow=24,SNR=5.1						
WRA	**Warramunga Arr**	**56.99**	**183**	P	**P**	**01 02 22.6**	**-1.0**
	2.5nm,0.5s,mb4.5,baz=359,slow=7.7,SNR=18						
ASAR	**Alice Springs**	**60.71**	**183**	P	**P**	**01 02 49.4**	**0.0**
	0.8nm,0.6s,mb4.0,baz=13,slow=8.6,SNR=5.8						
NVAR	**Mina Array Bea**	**77.76**	**51**	P	**P**	**01 04 35.1**	**0.0**
	1.2nm,0.7s,mb3.9,baz=306,slow=3.1,SNR=3.9						
PDAR	**Pinedale Array**	**80.08**	**43**	P	**P**	**01 04 47.8**	**0.0**
	0.9nm,0.7s,mb3.8,baz=264,slow=2.7,SNR=3.1						

*ISCJB **25** 00:54:51.7±0.8, 3730N±003×13669E±005, h9km±5km, mb4.3/7, Error ellipse: s-maj=6.6km s-min=5.5km az=16.0*
*IDC **25** 00:54:51.7±0.8, 3722N×13675E, h0km, mb4.3/7, mb1 4.5/10, mb1mx4.3/21, mbtmp4.3/10, ML3.7/3, Error ellipse: s-maj=19.4km s-min=16.6km az=44.0*
*JMA **25** 00:54:52.0±0.1, 3728N×13670E, h7km±1km, M4.5*
JMA Felt III J1.
*NEIC **25** 00:54:52.0, 3728N×13670E, h7km, MG4.5(JMA), After JMA.*

ISC 25 00:54:52.9±0.7, 3725N±003×13675E±005, h5km±5km, n20, σ0§88/26, mb4.3/7, 1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**176**	P	**Pg**	**00 54 59.3**	**+0.1**
JJH				S	**Sg**	**00 55 04.7**	**+1.2**
JSZ	**Suzu**	**0.52**	**68**	⇓P	**Pg**	**00 55 02.7**	**-0.2**
JSZ				S	**Sg**	**00 55 10.1**	**+0.3**
JHG	**Hegura jima**	**0.61**	**12**	P	**Pg**	**00 55 03.6**	**-1.0**
JTT	**Ttatey**	**0.80**	**144**	P	**Pg**	**00 55 08.1**	**-0.1**
JKG	**Kaga**	**1.03**	**199**	P	**Pg**	**00 55 11.8**	**-0.9**
JKG				S	**Sg**	**00 55 26.3**	**+0.2**
MAJO	**Matsushiro**	**1.36**	**121**	*e*Pn	**Pn**	**00 55 17.6**	**-0.9**
MAT	**Matsushiro**	**1.36**	**121**	P	**Pn**	**00 55 17.1**	**-1.4**
MAT				S	**Sb**	**00 55 36.6**	**0.0**
MJAR	**Matsushiro Arr**	**1.37**	**121**	Pn	**Pn**	**00 55 18.3**	**-0.3**
MJAR				Sn	**Sn**	**00 55 37.5**	**+0.5**
MJAR	**Matsushiro Arr**	**1.37**	**121**	Pn	**Pn**	**00 55 18.3**	**-0.3**
	145nm,0.3s,baz=311,slow=16,SNR=17						
MJAR				Sn	**Sn**	**00 55 37.5**	**+0.5**
	59nm,0.3s,baz=301,slow=24,SNR=6.3						
JNU	**Nakatsue**	**6.33**	**231**	Pn	**Pn**	**00 56 27.5**	**+0.6**
	2.4nm,0.3s,baz=59,slow=15,SNR=5.4						
KSRS	**Korea Array**	**7.04**	**274**	Pn	**Pn**	**00 56 36.5**	**0.0**
	2.2nm,0.3s,baz=90,slow=14,SNR=8.4						
ASAJ	**Asahikawa**	**8.16**	**31**	Pn	**Pn**	**00 56 52.7**	**+0.7**
	0.7nm,0.3s,baz=251,slow=12,SNR=3.6						
YSS	**Yuzh-Sakhalins**	**10.66**	**23**	*e*Pn	**Pn**	**00 57 28.0**	**+1.8**
SONM	**Songino Array**	**24.59**	**305**	P	**P**	**01 00 14.6**	**+0.9**
	3.4nm,0.7s,mb4.0,baz=108,slow=9.8,SNR=5.0						
WRA	**Warramunga Arr**	**56.93**	**183**	P	**P**	**01 04 37.6**	**-1.4**
	6.0nm,0.8s,mb4.7,baz=358,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**60.65**	**183**	P	**P**	**01 05 04.1**	**-0.7**
	3.2nm,0.7s,mb4.6,baz=12,slow=12,SNR=23						
STKA	**Stephens Creek**	**68.92**	**176**	P	**P**	**01 05 59.7**	**+1.1**
	3.0nm,0.8s,mb4.3,baz=306,slow=8.2,SNR=3.9						
AKASG	**Malin Array Be**	**71.80**	**320**	P	**P**	**01 06 14.4**	**-1.7**
	3.4nm,0.8s,mb4.3,baz=51,slow=5.9,SNR=4.3						
NVAR	**Mina Array Bea**	**77.79**	**51**	P	**P**	**01 06 52.1**	**+1.0**
	1.1nm,0.7s,mb3.9,baz=302,slow=5.2,SNR=3.9						
PDAR	**Pinedale Array**	**80.11**	**43**	P	**P**	**01 07 03.8**	**+0.1**
	2.2nm,0.9s,mb4.1,baz=349,slow=1.8,SNR=4.0						

JMA 25 00:55:43.3±0.1, 3723N×13672E, h11km±1km, M3.2, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.31**	**171**	P	Pg	00 55 49.7	+0.2
JJH				*e*S	Sg	00 55 53.7	0.0
JSZ	**Suzu**	**0.56**	**67**	P	Pg	00 55 54.0	-0.1
JSZ				*e*S	Sg	00 56 01.6	+0.1
JKG	**Kaga**	**1.00**	**198**	*e*S	Sg	00 56 15.4	-0.2

*ISCJB **25** 00:56:30.5±0.9, 3724N±003×13670E±005, h13km±6km, mb4.1/8, Error ellipse: s-maj=6.4km s-min=5.5km az=177.4*
*JMA **25** 00:56:31.0±0.1, 3723N×13672E, h10km±1km, M4.7*
JMA Felt III J1.
*NEIC **25** 00:56:31.0, 3723N×13672E, h10km, MG4.7(JMA), After JMA.*
*IDC **25** 00:56:34.4±3.5, 3708N×13683E, h34km±29km, mb3.9/8, mb1 4.1/10, mb1mx4.0/21, mbtmp3.9/10, ML3.6/2, Error ellipse: s-maj=19.6km s-min=17.4km az=35.0*

ISC 25 00:56:31.1±0.6, 3722N±003×13674E±005, h11km±4km, n18, σ0§91/26, mb4.1/8, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.30**	**173**	P	**Pg**	**00 56 37.5**	**+0.3**
JJH				S	**Sg**	**00 56 41.7**	**+0.5**
JSZ	**Suzu**	**0.55**	**66**	P	**Pg**	**00 56 41.5**	**-0.3**
JSZ				S	**Sg**	**00 56 49.0**	**0.0**
JHG	**Hegura jima**	**0.64**	**13**	P	**Pg**	**00 56 43.1**	**-0.5**
JHG				S	**Sg**	**00 56 51.9**	**-0.1**
JTT	**Ttatey**	**0.78**	**142**	P	**Pg**	**00 56 45.9**	**-0.3**
JTT				S	**Sg**	**00 56 57.3**	**+0.9**
JKG	**Kaga**	**1.00**	**199**	P	**Pg**	**00 56 49.2**	**-1.2**
JKG				S	**Sg**	**00 57 03.3**	**-0.1**
MAJO	**Matsushiro**	**1.36**	**120**	*e*Pn	**Pn**	**00 56 55.4**	**-0.7**
MAJO				*e*Sn	**Sn**	**00 57 13.8**	**-0.4**
MJAR	**Matsushiro Arr**	**1.36**	**120**	Pn	**Pn**	**00 56 55.9**	**-0.2**
	120nm,0.3s,baz=24,slow=13,SNR=9.2						
MJAR				Sn	**Sn**	**00 57 15.2**	**+1.0**
	160nm,0.3s,baz=336,slow=15,SNR=6.0						
JNU	**Nakatsue**	**6.30**	**231**	Pn	**Pn**	**00 58 05.2**	**+1.1**
	1.4nm,0.3s,baz=50,slow=7.9,SNR=3.3						
KSRS	**Korea Array**	**7.03**	**275**	Pn	**Pn**	**00 58 14.9**	**+0.9**
	0.9nm,0.3s,baz=92,slow=14,SNR=3.0						
KSRS				Sn	**Sn**	**00 59 30.5**	**-3.3**
	0.9nm,0.3s,baz=89,slow=25,SNR=3.8						
SONM	**Songino Array**	**24.60**	**305**	P	**P**	**01 01 53.0**	**+1.8**
	2.9nm,0.5s,mb4.0,baz=111,slow=9.7,SNR=9.1						
MKAR	**Makanchi Array**	**40.84**	**301**	P	**P**	**01 04 14.2**	**+1.5**
MKAR	**Makanchi Array**	**40.84**	**301**	P	**P**	**01 04 14.2**	**+1.5**
	1.7nm,0.8s,mb3.7,baz=92,slow=7.6,SNR=4.5						
INK	**Inuvik**	**55.91**	**27**	P	**P**	**01 06 08.2**	**-0.4**
	1.9nm,0.7s,mb4.2,baz=295,slow=2.9,SNR=3.7						
WRA	**Warramunga Arr**	**56.90**	**183**	P	**P**	**01 06 14.7**	**-1.4**
	1.7nm,0.5s,mb4.3,baz=360,slow=7.5,SNR=8.2						
ASAR	**Alice Springs**	**60.62**	**183**	P	**P**	**01 06 40.6**	**-1.4**
	1.3nm,0.7s,mb4.2,baz=112,slow=13,SNR=7.4						
STKA	**Stephens Creek**	**68.89**	**176**	P	**P**	**01 07 34.7**	**-1.1**
	2.6nm,0.7s,mb4.2,baz=351,slow=13,SNR=4.5						
NVAR	**Mina Array Bea**	**77.82**	**51**	P	**P**	**01 08 29.3**	**+0.7**
	0.9nm,0.7s,mb3.8,baz=285,slow=6.2,SNR=4.0						
PDAR	**Pinedale Array**	**80.14**	**43**	P	**P**	**01 08 41.6**	**+0.3**
	1.1nm,0.7s,mb3.9,baz=304,slow=0.9,SNR=3.9						

*ISCJB **25** 00:59:56.4±0.9, 3725N±004×13671E±007, h8km±8km, Error ellipse: s-maj=10.0km s-min=5.9km az=18.6*
*JMA **25** 00:59:57.0, 3723N×13673E, h9km±1km, M3.7*
JMA Felt II J1.

ISC 25 00:59:56.6±1.0, 3725N±003×13670E±008, h11km±8km, n6, σ0§26/12, 1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**169**	⇓P	**Pg**	**01 00 03.5**	**+0.3**
JJH				S	**Sg**	**01 00 07.4**	**-0.2**
JSZ	**Suzu**	**0.56**	**69**	P	**Pg**	**01 00 07.6**	**0.0**
JSZ				*e*S	**Sg**	**01 00 14.9**	**-0.1**
JHG	**Hegura jima**	**0.62**	**16**	P	**Pg**	**01 00 08.8**	**0.0**
JHG				*e*S	**Sg**	**01 00 17.1**	**+0.1**
JTT	**Ttatey**	**0.82**	**142**	P	**Pg**	**01 00 12.2**	**-0.2**
JTT				*e*S	**Sg**	**01 00 23.1**	**+0.1**
JKG	**Kaga**	**1.01**	**197**	P	**Pg**	**01 00 15.9**	**-0.2**
JKG				*e*S	**Sg**	**01 00 29.5**	**+0.2**
MAT	**Matsushiro**	**1.40**	**120**	P	**Pn**	**01 00 21.4**	**-0.6**
MAT				S	**Sn**	**01 00 40.8**	**+0.4**

*ISCJB **25** 01:01:18.3±1.7, 3727N±007×13671E±009, h11km±7km, Error ellipse: s-maj=15.5km s-min=7.3km az=43.2*
*JMA **25** 01:01:19.1±0.1, 3723N×13673E, h11km±1km, M3.7*
JMA Felt II J1.

ISC 25 01:01:18.5±1.8, 3726N±007×13670E±010, h14km±7km, n5, σ0§16/10, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**169**	P	**Pg**	**01 01 25.5**	**0.0**
JJH				S	**Sg**	**01 01 30.3**	**+0.2**
JSZ	**Suzu**	**0.56**	**70**	P	**Pg**	**01 01 29.5**	**0.0**
JSZ				*e*S	**Sg**	**01 01 37.1**	**+0.1**
JTT	**Ttatey**	**0.82**	**142**	P	**Pg**	**01 01 34.3**	**-0.2**
JTT				*e*S	**Sg**	**01 01 45.2**	**-0.1**
JKG	**Kaga**	**1.02**	**197**	P	**Pb**	**01 01 37.7**	**-0.3**
JKG				S	**Sb**	**01 01 51.4**	**+0.2**
MAT	**Matsushiro**	**1.40**	**120**	P	**Pn**	**01 01 43.8**	**+0.2**
MAT				S	**Sn**	**01 02 01.8**	**0.0**

*ISCJB **25** 01:06:17.0±1.5, 3725N±006×1367E±0.1, h7km±14km, Error ellipse: s-maj=15.5km s-min=10.1km az=8.0*
*JMA **25** 01:06:17.4, 3724N×13673E, h10km±1km, M3.7*
JMA Felt III J1.

ISC 25 01:06:17.3±1.6, 3724N±006×1367E±01, h10km±11km, n4, σ0§28/7, 1C, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**171**	P	**Pg**	**01 06 23.9**	**+0.1**
JSZ	**Suzu**	**0.55**	**68**	⇑P	**Pg**	**01 06 27.8**	**-0.3**
JSZ				*e*S	**Sg**	**01 06 35.4**	**+0.1**
JHG	**Hegura jima**	**0.62**	**15**	P	**Pg**	**01 06 29.3**	**-0.2**
JHG				*e*S	**Sg**	**01 06 37.9**	**+0.3**
MAT	**Matsushiro**	**1.38**	**120**	P	**Pn**	**01 06 42.4**	**-0.2**
MAT				S	**Sn**	**01 07 01.1**	**+0.2**

*SZGRF **25** 01:08:10.1, 24.11S×16967E, h35km, Southeast of Loyalty Islands*
*CRAAG **25** 01:08:14.7, 2066S×16936E, Mb6.0*
*ISCJB **25** 01:08:17.7±0.1, 2074S±003×16931E±003, h32km, mb5.7/97, MS6.8/35, Error ellipse: s-maj=4.3km s-min=3.7km az=160.1*
*MOS **25** 01:08:17.5±1.0, 2069S×16933E, h27km, mb6.2/35, MS7.0/15, Error ellipse: s-maj=9.5km s-min=7.9km az=103.1*
*BJI **25** 01:08:17.4, 2039S×16964E, h26km, mB7.0, mb5.7, Ms6.9, Msz6.6*
*IDC **25** 01:08:18.5±2.3, 2070S×16920E, h26km±14km, mb5.2/22, mb1 5.3/24, mb1mx5.3/24, mbtmp5.2/24, ML4.6/2, MS6.9/18, Ms1 6.9/18, ms1mx6.8/24, Error ellipse: s-maj=11.9km s-min=9.6km az=84.0*
*NEIC **25** 01:08:19.1±0.1, 2075S×16935E, h35km, mb5.9/50, MS7.1/6, Error ellipse: s-maj=6.4km s-min=4.6km az=154.0*
*GCMT **25** 01:08:19.0±0.1, 2089S×16899E, h31km, MW6.9/110, Moment Tensor Solution. s110,c245; s110,c443; Duration: 68s8 Moment tensor: Scale 10^{19}Nm; M_{rr}2.31±.03; $M_{\theta\theta}$-0.26±.02; $M_{\phi\phi}$-2.05±.02; $M_{r\theta}$0.39±.04; $M_{\theta\phi}$1.05±.01; $M_{\phi r}$-1.21±.04; Best double couple: $M_0$2.73600×10^{19} NP1:ϕ_s331.00000°, δ31.00000°, λ83.00000°. NP2:ϕ_s159.00000°, δ59.00000°, λ94.00000°. Principal axes: T 2.6280, Plg76.0000°, Azm80.0000°; N 0.2130, Plg3.0000°, Azm337.0000°; P -2.8440, Plg14.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 25 01:08:19.7±0.1, 2075S±003×16936E±003, h35km, h35km±1.1km:pP-P, n755, σ1§03/262, mb5.7/96, MS6.8/35, 107C-35D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.02**	**244**	⇓*i*P	**Pn**	**01 09 02.0**	**-3.1**
DZM	**Mont Dzumac**	**3.02**	**244**	Pn	**Pn**	**01 09

HNR LR LR 01 16 43.8
comp=Z,294µm,18.8s,baz=172,slow=35
OUZ Omahuta 14.89 166 PN **Pn 01 11 48.2 +0.4**
FUNA Funafuti 15.43 39 *eP* **Pn 01 11 56.5 +1.7**
comp=Z,2µm,1.4s
WCZ Waipu Caves 15.76 165 PN **Pn 01 12 01.8 +2.8**
EIDS Eidsvold 17.43 251 *eP* **Pn 01 12 21.0 +0.7**
comp=Z,5µm,2.5s
HIZ Hauiti 18.33 166 PN **Pn 01 12 33.2 +2.0**
ARMA Armidale 18.64 235⇓*iP* **Pn 01 12 35.5 +0.4**
ARMA *eS* **Sn 01 16 14.1 +12**
URZ Urewera 18.70 161 P **Pn 01 12 36.4 +0.7**
comp=Z,1.6nm,0.3s,baz=0.6,slow=6.1,SNR=41
URZ S **Sn 01 16 09.4 +5.7**
comp=Z,0.4nm,0.3s,baz=346,slow=17,SNR=1.6
URZ LR LR 01 18 51.0
comp=Z,591µm,18.9s,baz=347,slow=34
URZ Urewera 18.70 161 PN **Pn 01 12 36.3 +0.7**
MWZ Matawai 18.90 160 PN **Pn 01 12 39.2 +1.2**
BKZ Black Stump Fm 19.36 163 PN **Pn 01 12 43.2 -0.3**
KNZ Kokohu 19.57 160 PN **Pn 01 12 44.8 -1.3**
QRZ Quartz Range 20.20 173 PN **P 01 12 53.1 +1.7**
MRZ Mangatainoka R 20.55 166 PN **P 01 12 54.2 -1.1**
BFZ Birch Farm 20.72 165 PN **P 01 12 56.6 -0.5**
RIV Riverview 20.73 227 *eP* **P 01 12 58.8 +1.6**
SNZO South Karori 21.00 169 *eP* **P 01 12 59.2 -0.9**
comp=Z,390nm,0.9s
SNZO *eS* **S 01 16 49.1 -2.9**
DSZ Denniston Nort 21.04 175 PN **P 01 13 01.3 +0.8**
CTA Charters Tower 21.66 268⇓*iP* **P 01 13 08.0 +0.6**
comp=Z,278nm,0.9s,mb5.7
CTA *eS* **S 01 17 13.2 +7.8**
CTA Charters Tower 21.66 268⇓*iP* **P 01 13 08.0 +0.6**
CTA *eS* **S 01 17 13.2 +7.8**
CTA pmax pmax
comp=Z,278nm,0.9s
CTA Charters Tower 21.66 268 P **P 01 13 06.0 -1.4**
comp=Z,268nm,1.1s,mb5.6,baz=94,slow=12,SNR=29
CTA S **S 01 17 06.9 +1.4**
comp=Z,32nm,1.0s,baz=153,slow=9.0,SNR=1.6
CTAO Charters Tower 21.66 268 *eP* **P 01 13 07.7 +0.3**
comp=Z,3µm,1.8s,mb6.3
CTAO *eSn* **S 01 17 14.5 +9.1**
CTAO Charters Tower 21.66 268 *eP* **P 01 13 07.7 +0.3**
CTAO *e* 01 17 14.5
CTAO pmax pmax
comp=Z,3µm,1.8s,mb6.3
KHZ Kahutara 21.89 172 PN **P 01 13 09.0 -0.7**
LTZ Lake Taylor 22.11 174 PN **P 01 13 12.4 +0.5**
CNB Canberra Magne 22.79 226⇓*iP* **P 01 13 20.0 +0.7**
comp=Z,722nm,1.1s,mb6.0
CNB *ep*P 01 13 30.4
CNB *eS* **S 01 17 32.5 +6.3**
RPZ Rata Peaks 22.95 177 P **P 01 13 20.9 0.0**
comp=Z,156nm,1.1s,mb5.3,baz=19,slow=5.3,SNR=20
RPZ S **S 01 17 31.4 +2.8**
comp=Z,3.2nm,0.3s,baz=338,slow=5.4,SNR=1.6
RPZ LR LR 01 21 19.2
comp=Z,667µm,21.1s,baz=346,slow=34
MQZ McQueen's Vall 23.06 174 PN **P 01 13 21.4 -0.6**
JCZ Jackson Bay 23.27 181 PN **P 01 13 24.8 +0.6**
LBZ Lake Benmore 23.58 179 PN **P 01 13 25.9 -1.4**
MLZ Mavora Lakes 24.55 182 PN **P 01 13 36.1 0.0**
DCZ Deep Cove 24.73 184 PN **P 01 13 37.8 0.0**
WHZ Wether Hill Ro 25.11 182 PN **P 01 13 40.8 -0.4**
TUZ Tuapeka 25.14 180 PN **P 01 13 41.6 +0.1**
STKA Stephens Creek 27.16 240 *eP* **P 01 13 59.9 -0.1**
comp=Z,73nm,0.8s,mb5.3
STKA *ep*P pP 01 14 09.4 -0.5
STKA *eS* **S 01 18 45.8 +9.4**
STKA Stephens Creek 27.16 240 *eP* **P 01 13 59.4 -0.6**
STKA Stephens Creek 27.16 240 P **P 01 13 59.2 -0.8**
comp=Z,68nm,1.0s,mb5.2,baz=83,slow=9.1,SNR=36
STKA S **S 01 18 35.0 -1.3**
comp=Z,14nm,1.0s,baz=335,slow=17,SNR=1.5
STKA LR LR 01 24 37.9
comp=Z,444µm,18.0s,baz=76,slow=36
TAU Tasmania Unive 28.80 215 *eP* **P 01 14 19.2 +4.8**
comp=Z,424nm,1.4s,mb6.0
TAU Tasmania Unive 28.80 215 *eP* **P 01 14 19.2 +4.8**
TAU pmax pmax
comp=Z,424nm,1.4s,mb6.0
RAR Rarotonga 28.81 97 S **S 01 19 13.3 +11**
comp=Z,30nm,1.0s,baz=117,slow=9.0,SNR=2.2
WB2 Warramunga Arr 32.80 265⇓*iP* **P 01 14 47.6 -2.3**
WB2 *e* pP 01 14 57.7 -2.2
WB2 *eS* **S 01 20 02.0 -2.9**
WRA Warramunga Arr 32.81 265 P **P 01 14 47.6 -2.5**
WRA S **S 01 19 58.6 -6.4**
WRA LR LR 01 28 28.1
WRA *e* 01 46 13.9
WRA Warramunga Arr 32.81 265 P **P 01 14 47.6 -2.4**
WRA S **S 01 19 58.7 -6.4**
WRA Warramunga Arr 32.81 265 P **P 01 14 47.6 -2.4**
comp=Z,28nm,0.9s,mb5.2,baz=102,slow=7.1,SNR=46
WRA S **S 01 19 58.7 -6.4**
comp=Z,2.1nm,0.8s,baz=102,slow=14,SNR=2.6
WRA LR LR 01 28 28.0
comp=Z,549µm,18.0s,baz=95,slow=37
WRA P3KPbc 01 46 13.9
comp=Z,0.9nm,0.9s,baz=289,slow=2.8,SNR=5.0
ASAR Alice Springs 32.90 258 P **P 01 14 49.4 -1.4**
ASAR *e* 01 46 10.5
ASAR Alice Springs 32.90 258 P **P 01 14 49.4 -1.4**
comp=Z,52nm,1.0s,mb5.4,baz=85,slow=8.2,SNR=79
ASAR P3KPbc 01 46 10.5
comp=Z,1.5nm,0.6s,baz=275,slow=4.0,SNR=21
ASAR PKP2ab 01 50 12.7
comp=Z,1.3nm,1.1s,baz=270,slow=5.3,SNR=4.6
KAKA Kakadu 36.18 277 *eP* **P 01 15 19.0 -0.3**
comp=Z,94nm,0.9s,mb5.7
TBI Tubuai 38.17 102 *eS* **S 01 21 29.6 +2.2**
comp=Z,66µm,33.0s
TBI *e*LR LR 01 25 49.5
comp=Z,167µm,25.5s
FORT Forrest 38.33 246⇓*iP* **P 01 15 37.2 -0.1**
comp=Z,52nm,0.7s,mb5.4
FORT *ep*P pP 01 15 47.1 -0.3
PAE Paea 38.83 93 *eP* **P 01 15 41.4 -0.3**
comp=Z,55nm,1.1s,mb5.2
PAE Paea 38.83 93 *eP* **P 01 15 41.4 -0.3**
PAE pmax pmax
comp=Z,55nm,1.1s,mb5.2
PPT Papeete 38.85 93 *eP* **P 01 15 41.3 -0.6**
comp=Z,42nm,1.2s,mb5.0
PPT *eS* **S 01 21 39.1 +1.4**
comp=Z,232µm,31.2s
PPT *e*LR LR 01 26 06.1
comp=Z,253µm,24.0s
PPT Papeete 38.85 93 P **P 01 15 42.9 +1.0**
comp=Z,22nm,0.6s,mb5.1,baz=246,slow=4.1,SNR=3.9
TVO Taravao 39.11 93 *eP* **P 01 15 43.5 -0.6**
comp=Z,61nm,1.0s,mb5.3
TVO Taravao 39.11 93 *eP* **P 01 15 43.5 -0.6**
TVO pmax pmax
comp=Z,61nm,1.0s,mb5.3
MEH Mehetia 40.20 93 *eP* **P 01 15 52.7 -0.4**
comp=Z,54nm,1.1s,mb5.2
PMOR Pomariorio Ree 41.00 89 *eP* **P 01 15 59.1 -0.6**
comp=Z,163nm,1.2s,mb5.5
VAH Vaihoa 41.19 90 *eP* **P 01 16 00.6 -0.7**
comp=Z,136nm,1.1s,mb5.5
FITZ Fitzroy Crossi 41.22 266⇓*iP* **P 01 16 00.9 -0.7**
comp=Z,239nm,0.9s,mb5.8
FITZ *ep*P pP 01 16 10.5 -1.2
FITZ Fitzroy Crossi 41.22 266 LR LR 01 33 01.9
comp=Z,322µm,19.8s,baz=100,slow=36
BATI Kupang 45.13 276 LR LR 01 36 16.1
comp=Z,199µm,18.4s,baz=140,slow=37
MBWA Marble Bar 46.19 260 *eP* **P 01 16 41.1 -0.4**
comp=Z,254nm,0.9s,mb6.2
TNE Ternate 46.31 292⇓*eP* **P 01 16 41.0 -1.5**
KLBR Kellerberrin 47.18 246⇓*iP* **P 01 16 47.6 -1.5**
comp=Z,143nm,1.0s,mb5.9
KLBR *ep*P pP 01 16 57.2 -2.3
NWAO Narrogin (SRO) 47.64 244 *eP* **P 01 16 52.5 -0.1**
comp=Z,139nm,0.9s,mb6.0
NWAO Narrogin (SRO) 47.64 244 P **P 01 16 53.3 +0.6**
NWAO pmax pmax
comp=Z,140nm,1.0s
NWAO Narrogin (SRO) 47.64 244 LR LR 01 35 28.9
comp=Z,281µm,21.8s,baz=83,slow=34
TAOE Nuku Hiva Isla 50.04 84 *eLQ* 01 29 19.3
comp=Z,315µm,25.8s
TAOE *e*LR LR 01 31 28.8
comp=Z,393µm,23.4s,baz=251
TAOE Nuku Hiva Isla 50.04 84 *eP* **P 01 17 10.6 -0.8**
comp=Z,1µm,1.2s,mb6.7
TAOE *e*LQ 01 29 19.3
RKT Rikitea 51.43 104 *eS* **S 01 24 41.3 +1.8**
comp=Z,90µm,27.0s
RKT *e*LQ 01 29 47.3
comp=Z,68µm,29.0s
RKT *e*LR LR 01 32 04.9
comp=Z,80µm,30.2s
BUKP Musuan 52.00 299 *eP* **P 01 17 27.1 +1.1**
KIP Kipapa 52.66 39⇓*eP* **P 01 17 30.4 -0.4**
MSLP Maasin 53.43 301 *eP* **P 01 17 36.9 +0.3**
TBP Tagbilaran 53.99 300 *eP* **P 01 17 40.6 -0.1**
CBIJ Chichi jima 54.36 330 P **P 01 17 42.5 -0.6**
comp=Z,161nm,0.8s,mb6.0,baz=278,slow=18,SNR=5.2
CNP Catarman 54.97 303 *eP* **P 01 17 47.5 -0.3**
RCP Roxas 55.95 301 *eP* **P 01 17 54.7 -0.1**
PVCP Virac 56.02 304⇓*eP* **P 01 17 54.5 -0.8**
PVCP Virac 56.02 304 *eP* pP 01 18 07.8 +2.0
MYLDM Lahad Datu 56.16 292⇑*iP* **P 01 17 58.3 +1.9**
TSM Tawau 56.29 290⇓*iP* **P 01 17 58.7 +1.4**
KALP Kalibo 56.34 301⇓*eP* **P 01 18 04.1 +6.4**
VNDA Vanda 56.94 182 P **P 01 18 00.5 -0.5**
VNDA LR LR 01 39 09.8
VNDA Vanda 56.94 182 P **P 01 18 00.5 -0.5**
comp=Z,14nm,1.2s,mb4.9,baz=2.7,slow=7.6,SNR=12
VNDA LR LR 01 39 09.8
comp=Z,59µm,18.9s,MS6.7,baz=17,slow=32
OTRP Odiongan 56.98 301 *eP* **P 01 18 01.6 -0.6**
SBA Scott Base 57.16 181 *eP* **P 01 18 02.9 +0.3**
comp=Z,299nm,1.2s,mb6.2
SBA Scott Base 57.16 181 P **P 01 18 03.5 +0.9**
SBA pmax pmax
comp=Z,300nm,1.1s,mb6.2
SDKM Sandakan 57.52 291⇓*iP* **P 01 18 07.5 +1.4**
KDM Kudat 58.45 292⇑*iP* **P 01 18 14.3 +1.7**
ENPP El Nido 58.46 298 *eP* **P 01 18 12.8 +0.2**
KKM Kota Kinabalu 58.57 291 *eP* **P 01 18 13.5 +0.1**
KKM Kota Kinabalu 58.57 291⇑*iP* **P 01 18 14.5 +1.1**
CASY Casey 58.80 204 *eP* **P 01 18 17.5 +3.3**
comp=Z,450nm,1.5s,mb6.3
CASY *e* 01 18 23.3
LUBP Lubang 59.18 301 *eP* **P 01 18 16.1 -1.5**
BALP Baler 59.29 304 *eP* **P 01 18 17.5 -0.8**
BTM Bintulu 60.04 287⇑*iP* **P 01 18 25.2 +1.5**
SBUM Sibu 60.50 285⇑*iP* **P 01 18 27.5 +0.7**
JHJ Hachijo jima 2 60.55 332 LR LR 01 45 03.8
comp=Z,51µm,18.2s,MS6.7,baz=111,slow=36
JOW Kunigami 61.82 318 P **P 01 18 36.3 +0.9**
comp=Z,68nm,1.1s,mb5.7,baz=158,slow=11,SNR=7.5
KSM Kuching 61.82 283 *eP* **P 01 18 35.7 0.0**
KSM Kuching 61.82 283⇓*iP* **P 01 18 36.5 +0.7**
MJAR Matsushiro Arr 64.13 332 P **P 01 18 50.7 +0.1**
comp=Z,41nm,0.7s,mb5.6,baz=169,slow=7.5,SNR=3.0
NACB Ninganchiao 64.45 311 *eP* **P 01 18 52.4 -0.5**
YHNB Yeheng 64.92 312 *eP* **P 01 18 56.1 +0.1**
JNU Nakatsue 64.95 325 P **P 01 18 56.0 0.0**
comp=Z,42nm,0.9s,mb5.5,baz=91,slow=6.5,SNR=7.8
JNU LR LR 01 45 06.4
comp=Z,37µm,20.8s,MS6.5,baz=29,slow=34
ERM Erimo 66.98 339⇓*eP* **P 01 19 08.7 -0.2**
KSI Kapahiang 67.00 275 *eP* **P 01 19 12.0 +2.4**
KSI Kapahiang 67.00 275⇑*eP* **P 01 19 10.6 +1.0**
QZH Quanzhou 67.06 310 P **P 01 19 12.8 +3.0**
QZH AMB AMB
comp=Z,420nm,1.8s,mb6.2
MYKOM Kota Tinggi 67.86 281⇓*iP* **P 01 19 12.3 -2.8**
KGM Kluang 68.43 281⇓*iP* **P 01 19 15.6 -3.1**
KUR Kuril'sk 68.52 344 *eP* **P 01 19 17.0 -1.5**
KUR pmax pmax
comp=Z,190nm,0.8s,mb6.1
ASAJ Asahikawa 69.05 340 LR LR 01 45 17.4
comp=Z,115µm,20.7s,baz=169,slow=32
SSE Sheshan 69.24 317 *eP* **P 01 19 23.8 +0.5**
SSE AP pP 01 19 35.0 +1.0
SSE PCP PcP 01 19 45.9 -0.9
SSE S S 01 28 30.9 +3.7
SSE XS sS 01 28 47.6 +2.7
SSE AMB AMB
comp=Z,65nm,1.8s,mb5.3
SSE AMB AMB
comp=Z,7µm,5.9s
SSE LR LR
comp=N,25µm,32.9s,MS6.4
SSE LR LR
comp=E,27µm,33.3s,MS6.4
SSE LR LR
comp=Z,29µm,27.2s
QSPA South Pole Qui 69.31 180 *eP* **P 01 19 23.2 +0.2**
comp=Z,469nm,1.1s,mb6.3
QSPA South Pole Qui 69.31 180 PKPPKP 01 47 28.1
comp=Z,30nm,1.1s,baz=222,slow=2.5,SNR=17
QSPA LR LR 01 48 48.2
comp=Z,141µm,18.4s,baz=231,slow=35
KSRS Korea Array 69.81 326 PKPPKP 01 47 26.4
comp=Z,2.6nm,0.9s,baz=344,slow=3.3,SNR=6.5
KSRS LR LR 01 48 11.7
comp=Z,43µm,20.5s,MS6.7,baz=132,slow=34
NJ2 Nanjing 71.37 316 *eP* **P 01 19 36.6 +0.3**
NJ2 AP pP 01 19 47.8 +0.8
NJ2 XP sP 01 19 50.9 -0.2
NJ2 PP PP 01 22 18.3 +3.1
NJ2 S S 01 28 53.0 +1.0
NJ2 XS sS 01 29 08.5 -1.3
NJ2 AMB AMB
comp=Z,70nm,1.1s,mb5.5
NJ2 LR LR
comp=N,70µm,32.8s
NJ2 LR LR
comp=E,33µm,24.0s
NJ2 LR LR
comp=Z,33µm,24.0s
IPM Ipoh 71.50 282⇓*iP* **P 01 19 38.9 +1.4**
YSS Yuzh-Sakhalins 71.53 341 *eP* **P 01 19 37.8 +0.9**
comp=Z,341nm,1.2s,mb6.2
YSS Yuzh-Sakhalins 71.53 341⇑*iP* **P 01 19 38.3 +1.4**
YSS *e* 01 19 44.8
YSS *e* 01 19 54.1
YSS pmax pmax
comp=Z,160nm,0.9s,mb6.0
YSS pmax pmax
comp=N,240nm,1.5s
YSS pmax pmax
comp=E,110nm,1.1s
YSS MLR MLR
comp=Z,69µm,18.0s,MS7.0
YSS MLR MLR
comp=N,41µm,19.0s,MS6.8
YSS MLR MLR
comp=E,26µm,17.0s,MS6.8
SKR Severo-Kuril's 72.07 351 *eP* **P 01 19 37.5 -2.6**
SKR *e* 01 19 56.0
SKR pmax pmax
comp=Z,640nm,1.5s,mb6.3
KULM Kulim 72.17 283 *eP* **P 01 19 41.5 -0.1**
KULM Kulim 72.17 283⇓*iP* **P 01 19 42.3 +0.7**
VLA Vladivostok 72.30 332⇑*iP* **P 01 19 42.6 +1.0**
VLA Vladivostok 72.30 332⇑*iP* **P 01 19 41.6 0.0**
VLA pmax pmax
comp=Z,292nm,1.7s,mb5.9
PSI Prapat 72.78 280 P **P 01 19 44.1 -1.1**
comp=Z,31nm,1.2s,mb5.1,baz=169,slow=7.6,SNR=7.7
SMY Shemya 73.28 3 *eP* **P 01 19 52.4 +5.2**
comp=Z,529nm,1.3s,mb6.3
SMY Shemya 73.28 3 *eP* **P 01 19 52.4 +5.2**
SMY pmax pmax
comp=Z,529nm,1.3s,mb6.3
PET Petropavlovsk 74.05 353⇑*eP* **P 01 19 51.0 -0.7**
PET Petropavlovsk 74.05 353 *eP* **P 01 19 52.9 +1.2**
PET *eS* S 01 29 22.2 +0.5
PET pmax pmax
comp=Z,58nm,1.6s,mb5.3
PET smax
comp=N,28µm,19.8s
PET smax
comp=N,22µm,25.7s
PET MLR MLR
comp=Z,56µm,16.0s,MS7.0
PET MLR MLR
comp=Z,34µm,18.0s
DL2 Dalian 74.28 323⇑*iP* **P 01 19 54.0 +0.6**
DL2 S S 01 29 26.3 +1.4
DL2 AMB AMB
comp=Z,130nm,1.0s,mb5.8
DL2 LR LR
comp=N,17µm,25.8s,MS6.3
DL2 LR LR
comp=E,10µm,25.8s,MS6.3
DL2 LR LR
comp=Z,20µm,22.3s,MS6.4
MDJ Mudanjiang 74.50 332 P **P 01 19 55.3 +0.8**
MDJ AP pP 01 20 04.8 -0.5
MDJ XP sP 01 20 08.3 -1.0
MDJ S S 01 29 32.8 +5.7
MDJ XS sS 01 29 43.8 -1.2
MDJ SCS ScS 01 30 03.1 +0.2
MDJ AMB AMB
comp=Z,141nm,1.7s,mb5.6
MDJ AMB AMB
comp=Z,23µm,14.2s
MDJ LR LR
comp=N,25µm,27.8s,MS6.5
MDJ LR LR
comp=E,22µm,28.7s,MS6.5
MDJ LR LR
comp=Z,35µm,20.4s
KKTK Khon Kaen 74.97 294 PG **P 01 19 58.5 +0.6**
KKTK SG pP 01 20 06.0 -2.7
TIA Tai'an 75.14 319⇑*iP* **P 01 19 58.6 +0.1**
TIA AMB AMB
comp=Z,45nm,1.0s,mb5.3
HABR Khabarovsk 75.43 337 *eP* **P 01 19 59.6 -0.2**
HABR *e* pP 01 20 11.2 +0.6
HABR *eS* S 01 29 37.9 +0.6
HABR *e* 01 30 08.5
HABR *e*SS SS 01 34 25.5 -3.3
HABR pmax pmax
comp=Z,819nm,3.2s
CN2 Changchun 75.80 329 *eP* **P 01 20 02.0 -0.1**
CN2 *eS* S 01 29 48.4 +6.8
CN2 AMB AMB
comp=Z,120nm,1.0s,mb5.8
CN2 LR LR
comp=N,22µm,18.0s,MS6.7
CN2 LR LR
comp=E,29µm,18.0s,MS6.7
CN2 LR LR
comp=Z,30µm,19.0s,MS6.6
GYA Guiyang 76.77 305⇑*iP* **P 01 20 08.8 +0.8**
GYA AP pP 01 20 21.8 +3.0
GYA XP sP 01 20 25.8 +3.0
GYA PP PP 01 23 06.3 +5.1
GYA PPP 01 24 54.0
GYA S S 01 29 55.3 +2.3
GYA XS sS 01 30 13.4 +2.5
GYA SKS 01 30 15.8
GYA SCS ScS 01 30 22.0 -0.1
GYA PS 01 30 39.3
GYA SS SS 01 34 55.0 +5.0
GYA SSS 01 38 11.8
GYA AMB AMB
comp=Z,80nm,1.0s,mb5.6
GYA AMB AMB
comp=Z,10µm,13.5s
GYA LR LR
comp=N,14µm,17.3s,MS6.6
GYA LR LR
comp=E,26µm,20.6s,MS6.6
GYA LR LR
comp=Z,37µm,22.0s,MS6.7
MAW Mawson 77.08 202 P **P 01 20 09.3 +0.2**
comp=Z,28nm,0.9s,mb5.2,baz=108,slow=7.8,SNR=10
MAW LR LR 01 48 52.7
comp=Z,86µm,21.5s,MS7.0,baz=97,slow=32
UNV Unalaska Valle 77.15 14 *eP* **P 01 20 08.1 -1.3**
comp=Z,225nm,1.4s,mb5.9
BJT Baijiatuao 78.16 321 *eP* **P 01 20 16.0 +0.6**
comp=Z,186nm,1.4s,mb5.8
BJT Baijiatuao 78.16 321 *eP* **P 01 20 16.0 +0.5**
BJT pmax pmax
comp=Z,186nm,1.4s
BJI Beijing 78.17 321 P **P 01 20 16.3 +0.8**
BJI AP pP 01 20 25.8 -0.6
BJI XP sP 01 20 29.5 -0.9
BJI PP PP 01 23 12.1 -0.6
BJI SS SS 01 35 11.6 +0.9
BJI AMB AMB
comp=Z,91nm,2.3s,mb5.3
BJI AMB AMB
comp=Z,30µm,11.8s
BJI LR LR
comp=N,40µm,18.7s,MS6.9
BJI LR LR
comp=E,41µm,19.5s,MS6.9
BJI LR LR
comp=Z,49µm,19.5s,MS6.8
KMI Kunming 79.16 302⇑*iP* **P 01 20 23.3 +2.0**
KMI PCP PcP 01 20 31.9 +2.3
KMI AP pP 01 20 34.8 +2.6
KMI XP sP 01 20 38.6 +2.4
KMI PP PP 01 23 25.9 +4.6
KMI PPP 01 25 16.3
KMI S S 01 30 20.3 +1.4
KMI SKS 01 30 29.8
KMI PS 01 31 07.8
KMI SS SS 01 35 31.0 +4.9
KMI SSS 01 38 51.3
KMI AMB AMB
comp=Z,112nm,1.6s,mb5.5
KMI AMB AMB
comp=Z,24µm,11.3s
KMI LR LR
comp=N,27µm,18.7s,MS6.7
KMI LR LR
comp=E,23µm,18.7s,MS6.7
KMI LR LR
comp=Z,32µm,23.8s
XAN Xi'an 79.21 313 P **P 01 20 21.4 0.0**
CHG Chiang Mai 79.38 295⇑*iP* **P 01 20 24.1 +1.5**
CHTO Chiang Mai 79.38 295 *eP* **P 01 20 23.8 +1.2**
comp=Z,371nm,1.3s,mb6.2
CHTO Chiang Mai 79.38 295 *eP* **P 01 20 24.0 +1.4**
CHTO pmax pmax
comp=Z,370nm,1.3s,mb6.2
SDPT Sand Point 80.03 17 *eP* **P 01 20 24.5 -0.8**
comp=Z,139nm,0.9s,mb5.9
CD2 Chengdu 81.24 308 *eP* **P 01 20 33.0 +0.6**
CD2 AP pP 01 20 43.4 +0.1
CD2 XP sP 01 20 47.9 +0.6
CD2 PP PP 01 23 42.3 +3.9
CD2 S S 01 30 40.3 -0.2
CD2 XS sS 01 30 57.5 -1.0
CD2 SS SS 01 36 01.0 +4.0
CD2 AMB AMB
comp=Z,60nm,1.4s,mb5.3
CD2 LR LR
comp=N,25µm,21.6s,MS6.8
CD2 LR LR
comp=E,33µm,20.4s,MS6.8
CD2 LR LR
comp=Z,43µm,21.6s,MS6.8
HHC Hu-ho-hao-te 81.43 320⇑*iP* **P 01 20 34.3 +1.1**
HHC AP pP 01 20 44.3 +0.2
HHC XP sP 01 20 48.6 +0.5
HHC PP PP 01 23 43.8 +4.0
HHC S S 01 30 43.5 +1.4
HHC SKS 01 30 47.1
HHC XS sS 01 31 00.1 0.0
HHC PS 01 31 36.3
HHC SS SS 01 36 04.6 +5.1
HHC AMB AMB
comp=Z,92nm,1.4s,mb5.5
HHC AMB AMB
comp=Z,16µm,7.0s
HHC LR LR
comp=N,25µm,18.6s,MS6.8
HHC LR LR
comp=E,34µm,18.6s,MS6.8
HHC LR LR
comp=Z,38µm,20.2s,MS6.7
CHGN Chignik 81.44 17 *eP* **P 01 20 31.5 -1.3**
MA2 Magadan 81.47 351 P **P 01 20 32.2 -0.7**
comp=Z,24nm,1.0s,mb5.1
MA2 Magadan 81.47 351⇑*eP* **P 01 20 31.8 -1.1**
MA2 pmax pmax
comp=Z,82nm,2.5s,mb5.2
HIA Hailar 82.46 330⇑*iP* **P 01 20 38.5 +0.1**
SYO Syowa Base 83.52 196⇓*iP* **P 01 20 41.3 -2.4**

SYO Syowa Base 83.52 196 ⇓ *i* P P 01 20 50.0 +6.3
LZH Lanzhou 83.82 312 ⇑ P P 01 20 47.5 +1.8
LZH AMB AMB
comp=Z,440nm,1.5s,mb6.4
LZH AMB AMB
comp=Z,1μm,4.3s
KDAK Kodiak Island 84.41 19 P P 01 20 48.5 +0.3
comp=Z,61nm,1.0s,mb5.7,baz=250,slow=6.0,SNR=13
SEY Seymchan 84.47 352⇑ *e*P P 01 20 47.4 -1.0
PMSA Palmer Station 85.46 160 *e*P P 01 20 52.3 -1.3
comp=Z,263nm,1.3s,mb6.2
NRGR Nerungri 85.74 337 *i* P P 01 20 56.1 +1.2
NRGR S S 01 31 32.5 +7.7
NRGR smax
comp=N,36nm,0.6s
CLNS Chul'man 85.82 337 *e*P P 01 20 57.8 +2.6
CLNS *e**PP pP 01 21 05.8 -0.4
CLNS *e* 01 31 15.6
CLNS pmax pmax
comp=E,50nm,0.9s
IMP Imphal 86.14 298 *e*P P 01 20 58.0 +0.4
SVW2 Sparrevohn 86.31 16 *e*P P 01 20 57.9 +0.3
HOPS Hopland 86.70 46 *e*P P 01 21 00.4 +0.3
comp=E,446nm,2.0s,mb6.3
SAO San Andreas Ge 86.73 49 *e*P P 01 21 00.7 +0.4
comp=E,65nm,1.1s,mb5.8
SAO San Andreas Ge 86.73 49 *e*P P 01 21 00.7 +0.5
SAO pmax pmax
comp=Z,65nm,1.1s,mb5.8
NSHM Saint Helena R 86.78 47 *e*P P 01 20 58.3 -2.1
KIPM Iron Peak 86.83 45 *e*P P 01 21 01.4 +0.8
CIT Chita 87.24 329 *e*P P 01 21 02.1 -0.2
CIT *e* 01 31 43.3
SLKM Skilak Lake 87.33 19 *e*P P 01 21 00.9 -1.7
SLKM Skilak Lake 87.33 19 P P 01 21 01.5 -1.1
NVL N'lazarevskaya 87.38 187 *e*P P 01 21 03.1 +0.2
NVL pmax pmax
comp=N,20nm,1.2s
NVL pmax pmax
comp=E,15nm,1.2s
NVL pmax pmax
comp=Z,181nm,1.2s
NVL MLR MLR
comp=N,67μm,16.0s
NVL MLR MLR
comp=E,22μm,16.0s
NVL MLR MLR
comp=Z,100μm,16.0s
MAIT Maitri 87.39 187 *e*P P 01 21 00.3 -2.6
SNAA Sanae 87.67 182 *e*P P 01 21 03.3 -1.0
SNAA *e* 01 21 06.4
SNAA *e* 01 21 08.1
SNAA *e* pP 01 21 12.5 -2.8
SNAA *e* pP 01 21 15.0 -0.3
SNAA *e* 01 21 19.0
SNAA *e* 01 21 22.1
SNAA *e* 01 21 24.3
SNAA *e* 01 21 28.7
SNAA *e* 01 21 32.6
SNAA *e* 01 21 42.5
SNAA *e* 01 21 48.4
SNAA Sanae 87.67 182⇑ *e*P P 01 21 03.2 -1.1
TTA Tatalina 87.75 15 *e*P P 01 21 04.1 -0.5
comp=Z,19nm,1.0s,mb5.3
TTA Tatalina 87.75 15 *e*P P 01 21 04.1 -0.4
TTA pmax pmax
comp=Z,19nm,1.0s,mb5.3
TNA Tin City 87.77 9 *e*P P 01 21 03.5 -1.1
comp=Z,26μm,1.1s
WDC Whiskeytown Da 87.84 45 *e*P P 01 21 05.9 +0.4
comp=Z,97nm,1.3s,mb5.9
WDC Whiskeytown Da 87.84 45 P P 01 21 06.2 +0.7
WDC pmax pmax
comp=Z,97nm,1.2s,mb5.9
OHCM Honcut 87.94 46 *e*P P 01 21 05.5 -0.5
GTA Gaotai 88.24 313 *e*P P 01 21 08.3 +0.9
GTA AP pP 01 21 17.8 -0.7
GTA XP sP 01 21 22.1 -0.3
GTA PP PP 01 24 41.0 +5.7
GTA PPP 01 26 39.6
GTA SKS 01 31 33.1
GTA S S 01 31 52.3 +2.6
GTA XS sS 01 32 10.0 +2.1
GTA PS 01 33 03.6
GTA AMB AMB
comp=Z,38nm,1.1s,mb5.5
GTA AMB AMB
comp=Z,17μm,8.4s
GTA LR LR
comp=N,15μm,19.0s,MS6.6
GTA LR LR
comp=E,19μm,20.5s,MS6.6
GTA LR LR
comp=Z,27μm,20.2s,MS6.7
VNA3 Neumayer Olymp 88.25 180 *e*P P 01 21 06.1 -1.0
VNA3 *e* 01 21 09.0
VNA3 *e* 01 21 11.2
VNA3 *e* pP 01 21 15.3 -2.8
VNA3 *e* pP 01 21 18.8 +0.7
VNA3 *e* 01 21 21.9
VNA3 *e* 01 21 24.6
VNA3 *e* 01 21 26.7
VNA3 *e* 01 21 31.3
VNA3 *e* 01 21 35.2
VNA3 *e* 01 21 44.4
VNA3 *e* 01 21 51.9
YAK Yakutsk 88.33 342⇑ *e*P P 01 21 06.9 -0.4
YAK Yakutsk 88.33 342 *c i*P P 01 21 07.7 +0.4
YAK *e*S S 01 31 32.3 -17
YAK pmax pmax
comp=Z,242nm,1.7s,mb6.2
YAK pmax pmax
comp=N,77nm,1.5s
YAK pmax pmax
comp=E,55nm,1.5s
YAK MLR MLR
comp=Z,59μm,18.0s,MS7.0
YAK MLR MLR
comp=N,48μm,19.0s,MS7.0
YAK MLR MLR
comp=E,22μm,19.0s,MS7.0
SONM Songino Array 88.49 323 P P 01 21 08.7 +0.3
comp=E,21nm,0.9s,mb5.4,baz=122,slow=4.4,SNR=31
SONM PKKP PKKPbc 01 38 50.8 -1.5
comp=E,2.6nm,1.1s,baz=265,slow=2.4,SNR=5.1
SONM PKPPKP 01 46 57.6
comp=E,0.8nm,0.9s,baz=318,slow=2.0,SNR=4.7
PMR Palmer 88.52 18 *e*P P 01 21 08.6 +0.4
comp=E,8.1nm,0.7s,mb5.2
PMR *e* 01 21 08.8
PMR Palmer 88.52 18 *e*P P 01 21 08.6 +0.4
PMR pmax pmax
comp=Z,8.0nm,0.7s,mb5.2
VNA2 Neumayer--Watz 88.55 181 *e*P P 01 21 08.0 -0.4
baz=174,slow=3.8
VNA2 *e* 01 21 10.6
VNA2 *e* 01 21 13.0
VNA2 *e* pP 01 21 17.1 -2.4
VNA2 *e* pP 01 21 19.9 +0.4
VNA2 *e* 01 21 23.5
VNA2 *e* 01 21 25.7
VNA2 *e* 01 21 28.9
VNA2 *e* 01 21 32.5
VNA2 *e* 01 21 36.9
VNA2 *e* 01 21 46.4
VNA2 *e* 01 21 53.3
BILL Bilibino 88.55 359 *e*P P 01 21 07.5 -0.7
comp=Z,267nm,1.8s,mb6.3
BILL Bilibino 88.55 359⇑ *i*P P 01 21 07.7 -0.5
BILL 01 31 34.0
BILL *e* 01 31 51.3
BILL pmax pmax
comp=Z,166nm,2.5s,mb5.9
BILL MLR MLR
comp=Z,32μm,17.0s,MS6.8
VNA1 Neumayer--Stat 88.83 181 *e*P P 01 21 09.5 -0.3
VNA1 *e* 01 21 11.6
VNA1 *e* 01 21 14.8
VNA1 *e* pP 01 21 19.1 -1.7
VNA1 *e* pP 01 21 22.3 +1.5
VNA1 *e* 01 21 24.9
VNA1 *e* 01 21 27.9
VNA1 *e* 01 21 31.2
VNA1 *e* 01 21 34.5
VNA1 *e* 01 21 39.0
VNA1 *e* 01 21 47.9
VNA1 *e* 01 21 55.0
PFO Pinyon Flat Ob 88.92 53 P P 01 21 11.0 +0.2
PFO Pinyon Flat Ob 88.92 53 P P 01 21 10.7 -0.1
PFO pmax pmax
comp=Z,48nm,1.2s,mb5.7
PFO Pinyon Flat Ob 88.92 53 P P 01 21 11.0 +0.2
comp=Z,26nm,1.1s,mb5.5,baz=261,slow=3.1,SNR=13
SML Sawmill 88.92 19 *e*P P 01 21 10.5 +0.4
MTUM Tungsten Hills 89.04 49 *e*P P 01 21 11.7 +0.4
PAHR Pah Rah Range 89.55 47 *e*P P 01 21 13.8 +0.2
comp=Z,148nm,1.5s,mb6.1
NVAR Mina Array Bea 89.71 48 P P 01 21 14.9 +0.5
comp=Z,11nm,0.7s,mb5.3,baz=233,slow=10,SNR=36
NVAR PKKP PKKPbc 01 38 45.6 -3.1
comp=Z,0.3nm,0.4s,baz=66,slow=2.2,SNR=3.0
NVAR PKPPKP 01 46 55.9
comp=Z,1.4nm,1.1s,baz=73,slow=5.6,SNR=3.8
MOD Modoc 89.96 45 *e*P P 01 21 15.9 +0.5
comp=Z,53nm,1.0s,mb5.8
LPIG La Paz 89.97 64 P P 01 21 17.2 +1.3
comp=Z,24nm,0.5s,mb5.8,baz=247,slow=5.5,SNR=6.1
LSA Lhasa 90.41 302 *e*P P 01 21 18.2 +0.3
comp=Z,103nm,1.3s,mb6.0
LSA Lhasa 90.41 302 *e*P P 01 21 18.2 +0.3
LSA pmax pmax
comp=Z,103nm,1.3s,mb6.0
NLWA Neilton Lookou 90.44 39 *e*P P 01 21 18.2 +0.6
comp=Z,79nm,1.3s,mb5.9
TPNV Topopah Spring 90.52 50 *e*P P 01 21 18.6 +0.4
comp=Z,186nm,1.7s,mb6.1
TPNV *e* 01 21 36.2
TPNV Topopah Spring 90.52 50 *e*P P 01 21 18.6 +0.4
TPNV pmax pmax
comp=Z,186nm,1.7s,mb6.1
BOD Bodaibo 90.73 334 ⇓ *i*P P 01 21 17.7 -0.9
BOD pmax pmax
comp=Z,94nm,1.7s,mb5.8
WVOR Wild Horse Val 91.30 45 *e*P P 01 21 22.1 +0.4
comp=Z,78nm,1.3s,mb5.9
WVOR Wild Horse Val 91.30 45 *e*P P 01 21 22.2 +0.5
WVOR pmax pmax
comp=Z,78nm,1.2s,mb5.9
PGC Sidney 91.32 38 *e*P P 01 21 21.5 -0.1
comp=Z,325nm,1.5s,mb6.4
COLA College 91.44 17 ⇓ *i*P P 01 21 20.4 -1.4
ZAK Zakamensk 91.58 324 *e*P P 01 21 22.5 -0.3
ZAK pmax pmax
comp=Z,37nm,1.8s,mb5.4
SKAG Skagway 91.76 25 *e*P P 01 21 22.6 -0.8
comp=Z,90nm,1.4s,mb5.9
IRK Irkutsk 92.02 326 *e*P P 01 21 21.9 -2.9
IRK *e* 01 33 38.0
TLY Talaya 92.06 325⇑ *e*P P 01 21 25.2 +0.2
TLY Talaya 92.06 325 *e*P P 01 21 24.9 -0.1
TLY pmax pmax
comp=Z,55nm,1.3s,mb5.7
TAPN Taplejung 92.29 298 *e*P P 01 21 27.1 +0.4
comp=Z,166nm,1.2s,mb6.2
ODAN Odare 92.37 298 *e*P P 01 21 27.5 +0.5
comp=Z,202nm,1.0s,mb6.4
HAWA Hanford 92.55 41 *e*P P 01 21 27.4 0.0
comp=Z,76nm,1.5s,mb5.9
TUC Tucson 92.74 57 *e*P P 01 21 27.8 -0.8
TUC Tucson 92.74 57 *e*P P 01 21 29.5 +0.9
ARUT Antelope Range 92.90 51 *e*P P 01 21 29.1 -0.1
ARUT Antelope Range 92.90 51 *e*P P 01 21 30.1 +0.9
EGAK Eagle 93.31 19 *e*P P 01 21 29.1 -1.3
comp=Z,96nm,1.4s,mb6.0
DAWY Dawson 93.36 20 *e*P P 01 21 29.6 -1.1
MOY Mondy 93.47 325 *e*P P 01 21 32.4 +0.9
WUAZ Wupatki 93.53 53 *e*P P 01 21 32.8 +0.6
comp=Z,57nm,1.1s,mb5.9
JIRN Jiri 93.66 298 *e*P P 01 21 33.5 +0.5
DUG Dugway 94.32 49 *e*P P 01 21 35.3 -0.4
comp=Z,13nm,1.1s,mb5.3
DUG Dugway 94.32 49 *e*P P 01 21 36.3 +0.6
DUG pmax pmax
comp=Z,13nm,1.1s,mb5.3
KKN Kakani 94.46 298 *e*P P 01 21 36.8 +0.2
HLID Hailey 94.58 45 P P 01 21 36.5 -0.3
comp=Z,3.9nm,0.7s,mb5.0
GKN Gorkha 95.07 298 *e*P P 01 21 38.9 -0.5
comp=Z,139nm,1.1s,mb6.3
CTU Camp Tracy 95.26 49 *e*P P 01 21 40.5 +0.5
comp=Z,20nm,1.3s,mb5.4
KOLN Koldanda 95.85 297 *e*P P 01 21 42.4 -0.6
comp=Z,72nm,0.9s,mb6.1
TIXI Tiksi 96.23 348⇑ *e*P P 01 21 41.6 -2.1
TIXI Tiksi 96.23 348⇑ *e*P P 01 21 41.5 -2.2
TIXI pmax pmax
comp=Z,33nm,1.1s,mb5.7
HYB Hyderabad 96.74 286 *e*P P 01 21 45.0 -2.2
HYB Hyderabad 96.74 286 *i*P P 01 21 45.0 -2.2
REDW Red Top Meadow 96.89 46 *e*P P 01 21 45.0 -2.3
comp=Z,20nm,1.2s,mb5.4
ANMO Albuquerque 97.06 55⇑ *e*P P 01 21 49.0 +0.7
PLCA Paso Flores 97.34 138 P P 01 21 49.5 -0.1
PLCA 01 25 48.7
PLCA Paso Flores 97.34 138 P P 01 21 49.5 -0.1
comp=Z,8.5nm,1.1s,mb5.1,baz=229,slow=4.5,SNR=7.4
PLCA PP PP 01 25 48.7 +2.7
comp=Z,4.5nm,1.2s,baz=244,slow=6.2,SNR=2.8
PLCA LR LR 01 59 14.7
comp=Z,21μm,20.2s,MS6.6,baz=200,slow=31
TXAR Lajitas Array 97.39 62 P P 01 21 50.8 +0.8
comp=Z,5.6nm,0.3s,mb5.5,baz=222,slow=6.4,SNR=14
PDAR Pinedale Array 97.55 47 P P 01 21 50.8 +0.5
PDAR PP PP 01 25 50.6 +2.2
PDAR Pinedale Array 97.55 47 P P 01 21 50.8 +0.5
comp=Z,13nm,1.3s,mb5.3,baz=194,slow=1.2,SNR=12
PDAR PP PP 01 25 50.6 +2.2
comp=Z,3.0nm,1.1s,baz=260,slow=5.4,SNR=3.4
PDAR PKiKP PKiKP 01 26 25.4 +0.5
comp=Z,7.8nm,1.3s,baz=197,slow=2.8,SNR=3.6
PDAR PKKPbc PKKPbc 01 38 27.4 -0.9
comp=Z,1.1nm,0.9s,baz=91,slow=4.5,SNR=3.4
PDAR LR LR 02 03 21.7
comp=Z,38μm,18.7s,MS6.9,baz=84,slow=34
INK Inuvik 97.93 18 P P 01 21 50.4 -1.1
comp=Z,5.5nm,1.0s,mb5.0,baz=245,slow=6.3,SNR=3.8
INK PKiKP PKiKP 01 26 23.5 -1.2
comp=Z,3.2nm,0.7s,baz=256,slow=0.4,SNR=7.8
WMQ Urumqi 98.32 314 P P 01 21 53.8 0.0
WMQ AP pP 01 22 04.3 -0.5
WMQ XP sP 01 22 08.3 -0.5
WMQ PP PP 01 25 56.8 +2.6
WMQ PPP 01 28 04.8
WMQ SKS 01 32 27.8
WMQ S S 01 33 16.1 -3.2
WMQ XS sS 01 33 33.0 -4.7
WMQ PS PS 01 34 49.8 +1.5
WMQ AMB AMB
comp=Z,25nm,1.5s,mb5.5
WMQ LR LR
comp=N,24μm,21.1s,MS6.8
WMQ LR LR
comp=E,27μm,22.5s,MS6.8
WMQ LR LR
comp=Z,28μm,26.7s,MS6.6
YKA Yellowknife Ar 101.95 27 P Pdif 01 22 08.8 -1.1
YKA Yellowknife Ar 101.95 27 P Pdif 01 22 08.8 -1.1
comp=Z,1.1nm,0.6s,baz=255,slow=4.8,SNR=17
YKA PKiKP PKiKP 01 26 29.9 -2.2
comp=Z,1.2nm,0.6s,baz=256,slow=1.5,SNR=14
YKA PKKPbc PKKPbc 01 38 03.1 -13
comp=Z,0.1nm,0.5s,baz=46,slow=4.0,SNR=4.6
MKAR Makanchi Array 102.88 315 Pdiff Pdif 01 22 14.7 +0.7
comp=Z,3.3nm,0.6s,baz=100,slow=5.8,SNR=15
MKAR PP PP 01 26 13.7 -15
comp=Z,2.2nm,1.0s,baz=111,slow=6.8,SNR=3.9
MKAR PKKPbc PKKPbc 01 38 11.1 -2.0
comp=Z,1.2nm,0.7s,baz=298,slow=2.6,SNR=6.3
MKAR PKKP PKKPbc 01 38 31.7 +19
comp=Z,4.8nm,0.9s,baz=292,slow=4.0,SNR=8.6
ZALV Zalesovo Beam 103.38 323 Pdiff Pdif 01 22 15.6 -0.6
comp=Z,2.5nm,0.8s,baz=104,slow=2.9,SNR=4.0
ZALV PP PP 01 26 17.2 -15
comp=Z,0.9nm,0.8s,baz=116,slow=6.8,SNR=3.9
ZAL Zalesovo 103.39 323 P Pdif 01 22 15.6 -0.7
CFAA Coronel Fontan 104.14 132 PP PP 01 26 32.7 -5.0
comp=Z,0.3nm,0.6s,baz=248,slow=9.6,SNR=2.6
ECSD EROS,Sioux Fal 106.87 49 *e*PKPdf PKiKP 01 26 39.4 -2.3
ULM Lac du Bonnet 108.66 42 PKiKP PKiKP 01 26 42.6 -2.1
comp=Z,7.1nm,0.9s,baz=269,slow=2.8,SNR=15
ULM PKKPbc PKKPbc 01 37 56.9 +1.5
comp=Z,0.9nm,0.6s,baz=135,slow=1.4,SNR=2.8
EYMN Ely 111.15 45 *e*PKPdf PKiKP 01 26 47.8 -1.8
OPO Ambohidratompo 111.17 239 PKiKP PKiKP 01 26 51.1 +0.5
comp=Z,4.0nm,1.0s,baz=150,slow=4.0,SNR=4.8
RES Resolute Bay 111.37 16 *e*PKPdf PKiKP 01 26 44.8 -4.5
RES Resolute Bay 111.37 16 PKiKP PKiKP 01 26 45.1 -4.2
PLAL Pickwick Lake 111.61 60 *e*PKPdf PKiKP 01 26 47.8 -3.1
BRVK Borovoye 111.71 320⇑ *e*PKP PKiKP 01 26 50.8 +0.3
COWI Conover 112.51 48 *e*PKPdf PKiKP 01 26 50.3 -1.9
LPAZ La Paz 112.64 119 *e*PKPdf PKiKP 01 26 50.0 -3.4
LPAZ La Paz 112.64 119 PKKPbc PKKPbc 01 37 39.3 -2.2
comp=Z,1.6nm,0.8s,baz=326,slow=3.6,SNR=4.4
ROSC El Rosal 116.30 95 PKP PKPdf 01 26 59.4 -1.1
comp=Z,4.4nm,0.3s,baz=94,slow=19,SNR=4.2
SMDO Samad 116.77 286 P PKPdf 01 27 01.0 -0.1
SNR=5.9
SMDO Samad 116.77 286 PKPdf PKPdf 01 27 01.0 -0.1
SNR=5.9
SVE Sverdlovsk 117.34 324 *e*PKIKP PKPdf 01 27 00.2 -0.9
COW Cow Castle Cre 117.39 62 *e*PKPdf PKPdf 01 27 01.0 -0.9
LHS Liberty Hill 117.44 61 P Pdif 01 23 11.1 -7.7
BSY Bisya 117.47 286 P PKPdf 01 27 01.8 -0.6
SNR=6.8
BSY Bisya 117.47 286 PKPdf PKPdf 01 27 01.8 -0.6
SNR=6.8
ELN Prospectdale 117.80 58 *e*PKPdf PKPdf 01 27 00.9 -1.8
ARU Arti 118.52 324⇑ *e*PKP PKPdf 01 27 01.9 -1.5
ARU Arti 118.52 324 *i* PKIKP PKPdf 01 27 02.0 -1.4
ARU 01 28 22.9
ARU 01 33 52.4
HATD Hatta, Dubai 118.84 288 P PKPdf 01 27 04.5 -0.6
SNR=6.9
HATD Hatta, Dubai 118.84 288 PKPdf PKPdf 01 27 04.5 -0.6
SNR=6.9
ASHO Ashiyiah 118.88 287 P PKPdf 01 27 04.5 -0.7
SNR=6.5
ASHO Ashiyiah 118.88 287 PKPdf PKPdf 01 27 04.5 -0.7
SNR=6.5
RBK Rabkut 119.00 279 P PKPdf 01 27 05.7 +0.2
SNR=7.4
RBK Rabkut 119.00 279 PKPdf PKPdf 01 27 05.7 +0.2
SNR=7.4
SOKR Solikamsk 119.07 327 *e*PKIKP PKPdf 01 27 04.1 -0.3
SOKR pmax pmax
comp=Z,20nm,0.9s
SUR Sutherland 119.20 210 PKP PKPdf 01 27 05.4 -0.2
SUR Sutherland 119.20 210 PKP PKPdf 01 27 05.4 -0.2
comp=Z,16nm,1.0s,baz=191,slow=3.8,SNR=5.1
AKTK Aktyubinsk 119.25 317 PKP PKPdf 01 27 04.1 -0.9
AKTK PKKPbc PKKPbc 01 37 15.5 -3.7
AKTO Aktyubinsk 119.25 317 PKP PKPdf 01 27 04.1 -0.9
comp=Z,7.3nm,0.8s,baz=96,slow=4.0,SNR=8.6
AKTO PKKPbc PKKPbc 01 37 15.5 -3.7
comp=Z,6.6nm,1.0s,baz=223,slow=2.9,SNR=5.6
ABTO Aybut 119.81 279 P PKPdf 01 27 07.2 +0.1
SNR=7.1
ABTO Aybut 119.81 279 PKPdf PKPdf 01 27 07.2 +0.1
SNR=7.1
BOSA Boshof 119.92 216 PKP PKPdf 01 27 06.4 -0.7
comp=Z,4.2nm,0.4s,baz=141,slow=0.8,SNR=28
SPB4 Spitsbergen Ar 121.10 354 *e*PKPdf PKPdf 01 27 06.7 -1.1
SDV Santo Domingo 121.11 92 *e*PKPdf PKPdf 01 27 08.0 -1.7
MVL Millersville 121.42 55 *e*PKPdf PKPdf 01 27 07.7 -1.8
LBTB Lobatse 122.47 219 PKP PKPdf 01 27 11.5 -0.6
comp=Z,9.4nm,0.9s,baz=161,slow=3.2,SNR=11
MSNY Massena 122.48 49 *e*PKPdf PKPdf 01 27 09.4 -2.0
NCB Newcomb 122.98 50 *e*PKPdf PKPdf 01 27 10.8 -1.5
SDDR Presa de Saban 123.23 80 *e*PKPdf PKPdf 01 27 12.1 -1.6
PAL Palisades 123.29 54 *e*PKPdf PKPdf 01 27 11.8 -1.3
PAL Palisades 123.29 54 PKIKP PKPdf 01 27 12.2 -0.9
ACCN Adirondack Com 123.41 51 *e*PKPdf PKPdf 01 27 11.1 -2.1
DAG Danmarks Havn 123.79 2 ⇑ *i*PKIKP PKPdf 01 27 10.1 -3.0
DAG pmax pmax
comp=Z,27nm,1.0s
DAG Danmarks Havn 123.79 2 ⇑ *i*P PKPdf 01 27 10.1 -3.0
comp=Z,27nm,1.0s
PRGR Permogore 123.89 331 *e*PKIKP PKPdf 01 27 11.4 -2.2
MATP Matopo 123.96 226 PKP PKPdf 01 27 14.7 -0.3
comp=Z,29nm,1.1s,baz=155,slow=3.8,SNR=30
QUA2 Belchertown 124.42 52 *e*PKPdf PKPdf 01 27 14.2 -1.0
FFD Franklin Falls 124.87 51 *e*PKPdf PKPdf 01 27 15.1 -1.0
HRV Harvard--Oak R 125.00 52 *e*PKPdf PKPdf 01 27 14.8 -1.5
HRV Harvard--Oak R 125.00 52 PKIKP PKPdf 01 27 15.4 -0.9
BRYW Bryant College 125.04 53 *e*PKPdf PKPdf 01 27 15.2 -1.2
LVZ Lovozero 125.11 341 ⇓ *i*PKIKP PKPdf 01 27 14.5 -1.3
APA Apatity 125.69 341 ⇓ *i*PKIKP PKPdf 01 27 15.6 -1.3
APA *i* 01 27 19.6
APA pmax pmax
comp=Z,47nm,1.2s
APA MLR MLR
comp=Z,80μm,23.0s
SCHQ Schefferville 126.06 36 PKP PKPdf 01 27 16.4 -1.6
comp=Z,48nm,1.2s,baz=358,slow=3.8,SNR=18
PKME Peaks-Kenny Pk 126.39 49 *e*PKPdf PKPdf 01 27 17.4 -1.5
ARCES ARCESS Array B 126.55 345 PKP PKPdf 01 27 17.6 -0.9
comp=Z,11nm,0.5s,baz=74,slow=1.3,SNR=26
MAK Makhachkala 126.99 309 *e*PKIKP PKPdf 01 27 21.3 +1.2
MAK *e* 01 29 26.7
SFJD Kangerlussuaq 127.28 19 *i*PKIKP PKPdf 01 27 18.5 -1.4
SFJD pmax pmax
comp=Z,41nm,1.2s
SFJD Kangerlussuaq 127.28 19 *i*P PKPdf 01 27 18.5 -1.4
comp=Z,41nm,1.2s
LSZ Lusaka 127.69 230 PKP PKPdf 01 27 21.9 -0.4
comp=Z,18nm,1.0s,baz=150,slow=2.2,SNR=24
SJG San Juan 127.80 83 *e*PKPdf PKPdf 01 27 20.8 -1.6
SJG San Juan 127.80 83 PKIKP PKPdf 01 27 20.9 -1.5
ATD Arta Tunnel 128.00 269 PKP PKPdf 01 27 23.7 +0.8
comp=Z,14nm,1.0s,baz=40,slow=22,SNR=3.6
CPD Cerro la Pandu 128.00 83 *e*PKPdf PKPdf 01 27 21.0 -1.7
CPD Cerro la Pandu 128.00 83 PKIKP PKPdf 01 27 21.6 -1.2
MTP Monte Pirata 128.35 83 *e*PKPdf PKPdf 01 27 21.4 -2.0
MTP *e*SKPdf SKPdf 01 30 43.7 -13
KMBO Kilima Mbogo 128.35 251 PKIKP PKPdf 01 27 27.1 +3.4
KMBO Kilima Mbogo 128.35 251 P PKPdf 01 27 24.7 +1.1
SNR=23
KMBO Kilima Mbogo 128.35 251 PKPdf PKPdf 01 27 24.7 +1.1
SNR=23
KMBO Kilima Mbogo 128.35 251 PKP PKPdf 01 27 24.1 +0.5
comp=Z,16nm,1.0s,baz=75,slow=2.1,SNR=30
VRHR Novokhopersk 129.38 320 *e*PKIKP PKPdf 01 27 24.0 -0.4
VRHR pmax pmax
comp=Z,20nm,1.4s
VRHR pmax pmax
comp=N,5.0nm,0.4s
VRHR pmax pmax
comp=E,30nm,1.6s
ZEI Tsey 129.65 309 *e*PKIKP PKPdf 01 27 25.2 0.0
GOF Gofitskoye 129.89 312 *e*PKHKP 01 27 05.9
BHD Baghdad 129.92 296 *ex* x 01 24 12.0
BHD *ex* x 01 27 26.0
BHD *i* x x 01 30 51.0
BHD *ex* x 01 39 43.5
MOS Moscow 130.00 327 *e*PKIKP PKPdf 01 27 22.7 -2.7
KIV Kislovodsk 130.34 311 *e*PKPdf PKPdf 01 27 26.6 +0.2
KIV Kislovodsk 130.34 311 *i*PKIKP PKPdf 01 27 26.9 +0.4
KIV pmax pmax
comp=Z,16nm,1.1s
KIV Kislovodsk 130.34 311 P PKPdf 01 27 27.0 +0.6
SNR=7.0
KIV Kislovodsk 130.34 311 PKPdf PKPdf 01 27 27.0 +0.6
SNR=7.0
VOR Voronezh 130.63 321 *e*PKIKP PKPdf 01 27 26.5 -0.3
VOR pmax pmax
comp=Z,180nm,1.8s
OBN Obninsk 130.81 326⇑ *e*PKP PKPdf 01 27 25.9 -1.1
OBN Obninsk 130.81 326⇑ *i*PKIKP PKPdf 01 27 26.6 -0.4
OBN *e*SS SS 01 47 18.3 +8.1
OBN pmax pmax
comp=Z,101nm,1.5s
MSL Mosul 130.91 300 *ex* x 01 24 18.0
MSL *ex* x 01 27 28.0
MSL *ex* x 01 30 53.0
TSUM Tsumeb 131.62 217 PKP PKPdf 01 27 29.6 -0.1
comp=Z,9.0nm,0.9s,baz=145,slow=1.8,SNR=8.0
FDF Fort de France 131.68 88 *e*P PKPdf 01 27 28.8 -1.1
BIM Bigot 131.70 89 *e*P PKPdf 01 27 29.7 -0.2
ERZM Erzurum 131.93 305 *i*P PKPdf 01 27 30.1 +0.5
FINES FINESS Array B 132.02 337 PKHKP 01 27 17.7
FINES 01 27 28.6
FINES FINESS Array B 132.02 337 PKhKP 01 27 17.7
comp=Z,4.2nm,0.9s,baz=47,slow=3.7,SNR=9.8
FINES PKP PKPdf 01 27 28.6 -0.5

comp=Z,2.8nm,0.5s,baz=48,slow=2.3,SNR=14
FINES SKPbc SKPbc 01 30 52.5 -0.2
comp=Z,11nm,0.8s,baz=50,slow=3.0,SNR=9.2
MALT Malatya 134.41 304 *e*PKPdf PKPdf 01 27 34.2 -0.1
MALT Malatya 134.41 304⇑ *i*P PKPdf 01 27 35.1 +0.8
GZT Gaziantep 135.22 302 *i* P PKPdf 01 27 35.3 -0.5
MNK Minsk 135.51 329 *e*PKIKP PKPdf 01 27 34.0 -1.9
SIM Simferopol' 136.04 314 *e*PKIKP PKPdf 01 27 37.0 -0.2
SIM pmax pmax
comp=Z,23nm,1.2s
BOYT Boyabat 136.47 309 *i* P PKPdf 01 27 35.2 -2.9
AKASG Malin Array Be 136.77 323 PKHKP 01 27 29.5
AKASG 01 27 38.5
AKASG Malin Array Be 136.77 323 PKhKP 01 27 29.5
comp=Z,2.1nm,0.7s,baz=51,slow=3.2,SNR=6.7
AKASG PKP PKPdf 01 27 38.5 +0.2
comp=Z,6.7nm,0.8s,baz=48,slow=2.8,SNR=20
AKASG SKPbc SKPbc 01 31 08.5 0.0
comp=Z,3.8nm,0.8s,baz=45,slow=3.9,SNR=22
AKBB Malin Array Si 136.77 323 *e*PKPdf PKPdf 01 27 38.0 -0.3
NOA NORSAR Array B 136.92 345 PKP 01 27 26.2
NOA PKP PKPdf 01 27 38.4 +0.1
NOA PP PP 01 30 21.8 +0.3
NOA SKPbc SKPbc 01 31 06.4 -2.2
NOA NORSAR Array B 136.92 345 PKHKP 01 27 26.2
NOA 01 27 38.4
NOA 01 30 21.8
NOA NORSAR Array B 136.92 345 PKhKP 01 27 26.2
comp=Z,1.3nm,0.7s,baz=33,slow=2.0,SNR=8.0
NOA PKP PKPdf 01 27 38.4 +0.1
comp=Z,5.3nm,0.8s,baz=35,slow=2.1,SNR=13
NOA PP PP 01 30 21.8 +0.3
comp=Z,3.1nm,1.0s,baz=33,slow=5.9,SNR=3.1
NOA SKPbc SKPbc 01 31 06.4 -2.2
comp=Z,5.1nm,0.9s,baz=18,slow=4.3,SNR=7.5
AVNT Avonos 137.09 305 *i* P PKPdf 01 27 35.8 -3.6
NAO01 NORSAR Array S 137.17 345 *e*PKPdf PKPdf 01 27 37.7 -1.1
ELDT Eldivan 137.79 308 *i* P PKPdf 01 27 41.7 +1.1
ANTO Ankara 138.41 307 P PKPdf 01 27 42.0 +0.3
ANTO Ankara 138.41 307 P PKPdf 01 27 42.4 +0.7
SNR=6.1
ANTO Ankara 138.41 307 PKPdf PKPdf 01 27 42.4 +0.7
SNR=6.1
KIS Kishinev 138.71 319 *e*PKIKP PKPdf 01 27 41.0 -1.0
KIS *e* 01 30 39.0
KIS MLR MLR
comp=Z,42μm,22.0s,MS7.1
KIS MLR MLR
comp=Z,54μm,22.0s
SGKT Sivrigoynuk 138.77 308 *i* P PKPdf 01 27 35.8 -6.6
MRKH Merkhyat 138.93 270 *e*PP PP 01 30 44.0 +8.1
KWP Kalwaria 140.89 325 *e*PKP PKPdf 01 27 41.4 -4.5
KWP Kalwaria 140.89 325 *e*PKPdf PKPdf 01 27 41.4 -4.5
KWP Kalwaria 140.89 325 PKIKP PKPdf 01 27 46.6 +0.7
KWP Kalwaria 140.89 325⇓ *i*P PKPdf 01 27 40.1 -5.8
MUD Monsted U'grnd 141.42 342 *i* P PKPdf 01 27 41.9 -4.7
comp=Z,32nm,0.9s
KOLS Kolonicke sedl 141.52 325 *e*PKP PKPdf 01 27 42.8 -4.3
STHS Stebnicka Huta 141.78 326 *e*PKP PKPdf 01 27 43.3 -4.2
TRPA Tarpa 141.83 324⇓ *i*P PKPdf 01 27 43.1 -4.5
BTOK Tokmak 141.96 309 *i* P PKPdf 01 27 42.9 -5.3
OJC Ojcow 142.02 328 *e*PKP PKPdf 01 27 43.5 -4.4
RSC Scourie 142.23 355 *e*P PKPdf 01 27 42.5 -5.6
NIE Niedzica 142.26 327 *e*PKP PKPdf 01 27 45.3 -3.1
RTO Tolsta 142.28 356 *e*P PKPdf 01 27 42.5 -5.6
DRGR 142.47 322 P PKPdf 01 27 45.0 -3.8
DRGR 142.47 322⇑ *i*P PKPdf 01 27 44.9 -3.9
PVL Pavlikeni 142.56 315 P PKPdf 01 27 47.0 -2.1
MVH1 Achvaich 142.57 354 *e*P PKPdf 01 27 43.6 -5.1
AYDN Tasoluk 142.69 305 *i* P pPKPdf 01 28 03.8 +3.0
KECS Kecovo 142.75 325 *e*PKP PKPdf 01 27 45.4 -3.9
RRH Rhenigidale 142.76 357 *e*P PKPdf 01 27 43.4 -5.6
RRR Rubha Reidh 142.77 356 *e*P PKPdf 01 27 43.9 -5.1
MCD Coleburn Distil 142.81 353 *e*P PKPdf 01 27 43.2 -5.8
ARG Arkhangelos 142.87 303 *e*P PKPdf 01 27 45.0 -4.9
KDAG Bornova 142.94 307 *i* P PKPdf 01 27 45.0 -5.0
ALN Alexandroupoli 143.00 311 *e*P PKPdf 01 27 45.5 -4.4
MME1 Meikle Cairn 143.04 353 *e*P PKPdf 01 27 43.0 -6.6
MDO Dochfour 143.06 354 *e*P PKPdf 01 27 43.3 -6.2
OKC Ostrava-Krasne 143.08 329 *e*PKP PKPdf 01 27 45.2 -4.6
OKC *ex* x 01 27 52.6
KAC Achnashellach 143.09 355 *e*P PKPdf 01 27 44.8 -4.8
RUE Ruedersdorf 143.11 335 *e*PKPdf PKPdf 01 27 46.1 -3.7
RUE Ruedersdorf 143.11 335 *e*PKPbc PKPdf 01 27 46.6 -3.2
BLCB Balcova 143.12 307 *e*P PKPdf 01 27 43.4 -6.8
GZR Gura Zlata 143.16 320 P PKPdf 01 27 47.0 -3.1
GZR Gura Zlata 143.16 320⇓ *i*P PKPdf 01 27 47.1 -3.0
BDRM Kayabasi 143.19 305 *i* P PKPdf 01 27 43.9 -6.5
BSEG Bad Segeberg 143.21 339 *e*PKPbc PKPdf 01 27 46.3 -3.6
KSP Ksiaz 143.26 331 *e*PKP PKPdf 01 27 47.5 -2.6
KSP Ksiaz 143.26 331 *e*PKIKP PKPdf 01 27 46.8 -3.3
KPL Plockton 143.27 355 *e*P PKPdf 01 27 45.7 -4.2
KPL AMb AMB 01 27 46.8
comp=Z,507nm,1.5s
KPL Plockton 143.27 355 P PKPdf 01 27 45.7 -4.2
KPL AMb AMB 01 27 46.8
comp=Z,507nm,1.5s
KSB Sheil Bridge 143.38 355⇑ *e*P PKPdf 01 27 45.5 -4.6
PSZ Piszkesteto 143.40 325 P PKPdf 01 27 47.9 -2.5
PSZ Piszkesteto 143.40 325⇑ *e*PKP PKPdf 01 27 47.6 -2.8
PSZ Piszkesteto 143.40 325⇓ *i*P PKPdf 01 27 47.7 -2.7
MORC Moravsky Berou 143.41 329 P PKPdf 01 27 48.0 -2.4
MORC Moravsky Berou 143.41 329 PKIKP PKPdf 01 27 49.2 -1.2
MORC Moravsky Berou 143.41 329⇓ *i*P PKPdf 01 27 47.4 -3.0
PRK Paraskevi 143.41 309 *e*P PKPdf 01 27 46.0 -4.8
SMG Samos 143.47 306 *e*P PKPdf 01 27 40.5 -10
DPC Dobruska-Polom 143.59 331 *e*PKP PKPdf 01 27 47.9 -2.8
DPC *ex* x 01 27 54.0
VYHS Vyhne 143.60 327 *e*PKP PKPdf 01 27 48.0 -2.8
VYHS LR LR
comp=Z,30μm,20.9s,MS7.0
UPC Upice 143.62 331 *e*PKP PKPdf 01 27 47.9 -2.8
UPC *ex* x 01 27 54.4
KAR1 Arisaig 143.70 356 *e*P PKPdf 01 27 46.6 -4.1
BZS Buzias 143.74 321 P PKPdf 01 27 48.3 -2.8
BZS Buzias 143.74 321⇑ *i*P PKPdf 01 27 48.6 -2.5
RCBR Riachuelo 143.77 134 *e*PKPdf PKPdf 01 27 47.5 -4.7
KOLL Kolacno 143.77 327 *e*PKP PKPdf 01 27 48.8 -2.3
CHOS Chios island 143.85 307 *e*P PKPdf 01 27 47.8 -3.8
LIA Limnos Island 143.98 310 *e*P PKPdf 01 27 55.0 +3.3
BUD Budapest 144.13 325⇑ *e*PKP PKPdf 01 27 50.0 -1.7
EBH Black Hill 144.15 353 *e*P PKPdf 01 27 48.2 -3.3
VRAC Vranov 144.19 329 P PKPdf 01 27 49.9 -1.9
VRAC Vranov 144.19 329⇓ *i*P PKPdf 01 27 50.3 -1.5
VTS Vitosha 144.24 315 *e*P PKPdf 01 27 51.2 -0.9
VTS Vitosha 144.24 315 P PKPdf 01 27 50.5 -1.6
VTS Vitosha 144.24 315⇑ *i*P PKPdf 01 27 51.1 -1.0
PVCC Panska Ves 144.25 332 *e*PKP PKPdf 01 27 50.2 -1.6
BRG Berggiesshubel 144.26 333 *e*PKPbc PKPdf 01 27 49.6 -2.2
EAB Aberfoyle 144.30 354⇑ *e*P PKPdf 01 27 48.9 -2.9
SMOL Smolenice 144.31 328 *e*PKP PKPdf 01 27 50.6 -1.4
CLL Collm 144.32 334⇑ *i*PKP PKPdf 01 27 49.9 -2.0
CLL *ep*PKP pPKPdf 01 28 03.0 -0.3
CLL LR LR
comp=Z,25μm,21.5s,MS7.0
CLL Collm 144.32 334⇑ *i*PKIKP PKPdf 01 27 49.9 -2.0
CLL *e* 01 28 03.0
CLL pmax pmax
comp=Z,832nm,2.0s
CLL MLR MLR
comp=Z,25μm,21.5s,MS7.0
CLL Collm 144.32 334⇑ *i*PKPdf PKPdf 01 27 49.9 -2.0
comp=Z,832nm,2.0s
CLL *ep*PKPdf pPKPdf 01 28 03.0 -0.3
CLL *e*PP PP 01 31 11.0 +4.1
CLL LmV 01 32 00.0
comp=Z,25μm,21.5s
CLL *e*PPP 01 34 20.0
CLL *e*SS SS 01 49 54.0 +4.0
CLL Collm 144.32 334 *e*PKPdf PKPdf 01 27 49.8 -2.1
CLL *ep*PKPdf pPKPdf 01 28 02.9 -0.4
CLL *e*PP PP 01 31 10.3 +3.4
CLL *e*PPP 01 34 20.0
CLL *e*SS SS 01 50 05.2 +15
MMB Musomiste 144.33 313 P PKPdf 01 27 49.7 -2.6
NVR Nevrokopi 144.34 313 *e*P PKPdf 01 27 49.0 -3.3
ESY Stoneypath 144.37 352⇑ *e*P PKPdf 01 27 48.4 -3.5
EDI Edinburgh 144.44 353 *e*P PKPdf 01 27 49.2 -2.8
EDI AMb AMB 01 27 49.3
comp=Z,280nm,1.2s
EDI AMS AMS 02 00 22.1
comp=Z,19μm,20.7s,MS6.8
EDI Edinburgh 144.44 353 P PKPdf 01 27 49.2 -2.8
EDI AMb AMB 01 27 49.3
comp=Z,280nm,1.2s
NRDL Niedersach Rie 144.47 338 *e*PKPbc PKPdf 01 27 50.4 -1.8
FBE Freiberg 144.47 334 *e*PKPbc PKPdf 01 27 50.6 -1.6
MODS Modra-Piesok 144.48 327 *e*PKP PKPdf 01 27 51.5 -0.8
EAU Auchinoon 144.54 353⇑ *e*P PKPdf 01 27 49.8 -2.3
EBL Broad Law 144.56 353⇑ *e*P PKPdf 01 27 49.4 -2.8
PRA Prague 144.64 332 PKP PKPdf 01 27 52.0 -0.5
APE Apeiranthos 144.65 305 *e*P PKPdf 01 27 49.3 -3.7
APE Apeiranthos 144.65 305 *e*P PKPdf 01 27 49.0 -4.0
APE Apeiranthos 144.65 305⇓ *i*P PKPdf 01 27 50.3 -2.7
PRU Pruhonice 144.66 332 *e*PKP PKPdf 01 27 51.3 -1.3
PRU *ex* x 01 27 57.8
OUR Ouranopolis 144.66 311 *e*P PKPdf 01 27 50.4 -2.5
ZST Bratislava 144.68 327 *e*PKP PKPdf 01 27 52.0 -0.7
ZST LR LR
comp=Z,34μm,20.9s
PGBU Glenifferbraes 144.69 354 *e*P PKPdf 01 27 49.8 -2.6
PGBU AMb AMB 01 27 51.5
comp=Z,679nm,1.2s
TREC Trest 144.72 330 *e*PKP PKPdf 01 27 51.6 -1.1
XSO Sourhope Farm 144.74 352⇑ *e*P PKPdf 01 27 49.9 -2.6
SOH Sokhos 144.91 312 *e*P PKPdf 01 27 51.6 -1.7
CLZ Clausthal 144.91 337 *e*PKPbc PKPdf 01 27 52.2 -0.7
SANT Santorini 144.91 304 *e*P PKPdf 01 27 51.6 -1.9
THR1 Thera Island 144.91 304 *e*P PKPdf 01 27 53.2 -0.2
PLG Polygyros 145.03 312 *e*P PKPbc 01 27 52.3 -0.6
PLG Polygyros 145.03 312 *e*P PKPbc 01 27 51.5 -1.4
ESK Eskdalemuir 145.03 353⇑ *e*P PKPbc 01 27 51.4 -1.0
ESK AMb AMB 01 27 52.5
comp=Z,394nm,1.1s
ESK AMS AMS 02 02 15.2
comp=Z,30μm,20.9s,MS7.0
ESK Eskdalemuir 145.03 353 P PKPbc 01 27 51.4 -1.0
ESK AMb AMB 01 27 52.5
comp=Z,394nm,1.1s
ESK Eskdalemuir 145.03 353 *e*PKIKP PKPdf 01 27 51.3 -1.7
PAIG Paliouri 145.04 311 *e*P PKPbc 01 27 51.6 -1.4
KNT Kandrikon 145.08 313 *e*P PKPbc 01 27 51.5 -1.6
NPS Neapolis 145.09 302 *e*P PKPbc 01 27 50.0 -3.3
PKSM Moragy 145.11 324 P PKPbc 01 27 52.5 -0.6
PKSM Moragy 145.11 324⇑ *i*P PKPbc 01 27 53.0 0.0
ECK Cauldkaine Hil 145.16 352⇑ *e*P PKPbc 01 27 51.7 -1.1
HORT Hortiatis 145.18 312 *e*P PKPbc 01 27 53.3 -0.1
LAST Lasithi 145.22 302 *e*P PKPbc 01 27 54.7 +1.0
TANN Tannenbergstha 145.23 334 *e*PKPbc PKPbc 01 27 52.1 -1.1
VAY Valandovo 145.23 314 *e*P PKPbc 01 27 52.2 -1.3
VAY Valandovo 145.23 314⇑ *i*PKP PKPdf 01 27 52.1 -1.7
GMK Mull of Kintyr 145.25 355⇑ *e*P PKPbc 01 27 52.3 -0.8
THE Thessaloniki 145.25 312 *e*P PKPbc 01 27 53.8 +0.1
WERD Werda 145.27 334 *e*PKPbc PKPbc 01 27 52.8 -0.6
WIT Witteveen 145.31 341⇑ *i*PKIKP PKiKP 01 27 54.0 -3.6
comp=Z,2μm,1.2s
STIP Stip 145.32 314 *i* PKP PKPdf 01 27 53.1 -0.9
XAL Allendale 145.35 351⇑ *e*P PKPbc 01 27 52.5 -0.9
WERN Wernitzgruen 145.36 334 *e*PKPbc PKPbc 01 27 53.7 0.0
NKC Novy Kostel 145.37 334 *e*PKP PKPdf 01 27 54.0 +0.2
MOX Moxa 145.39 335 *e*PKP PKPdf 01 27 53.7 -0.1
MOX comp=Z,866nm,1.9s
comp=Z,26μm,22.0s
MOX Moxa 145.39 335 *e*PKIKP PKPdf 01 27 53.7 -0.1
MOX pmax pmax
comp=Z,866nm,1.9s
MOX MLR MLR
comp=Z,26μm,22.0s,MS7.0
MOX Moxa 145.39 335 *e*PKPbc PKPbc 01 27 52.9 -0.9
IBBN Ibbenburen 145.41 340 *e*PKPbc PKPbc 01 27 53.5 -0.3
CONA Conrad Observa 145.48 328⇑ *i*PKPbc PKPbc 01 27 52.5 -1.6
comp=Z,475nm,1.6s,SNR=139
DIVS Divcibare 145.53 320 *e*P PKPdf 01 27 48.1 -6.2
GCL Cushendall 145.56 355⇑ *e*P PKPdf 01 27 53.4 -0.6
GCD Castle Douglas 145.56 353⇑ *e*P PKPdf 01 27 53.1 -0.8
NEO Neokhori 145.60 310 *e*P PKPdf 01 27 49.5 -5.0
GAL1 Galloway 145.64 354⇑ *e*P PKPdf 01 27 53.5 -0.6
GAL1 AMb AMB 01 27 55.7
comp=Z,1μm,1.6s
GAL1 AMS AMS 02 04 09.5
comp=Z,25μm,22.3s,MS7.0
GAL1 Galloway 145.64 354 P PKPdf 01 27 53.5 -0.6
GAL1 AMb AMB 01 27 55.7
comp=Z,1μm,1.6s
SKO Skopje 145.69 315 *e*P PKPdf 01 27 55.6 +1.0
SKO Skopje 145.69 315 *i* PKP PKPdf 01 27 53.8 -0.8
KHC Kasperske Hory 145.71 331 *e*PKP PKPdf 01 27 53.7 -0.7
KHC *ep*PKP pPKPdf 01 28 05.5 -0.3
ATH Athens Observa 145.73 308 *e*P PKPdf 01 27 46.0 -8.8
SIVA Sivas 145.79 302 *e*P PKPdf 01 27 56.1 +1.1
LIT Litokhoron 145.80 312 *e*P PKPdf 01 27 54.8 0.0
ROTZ Rotzenmuhle 145.83 333 *e*PKPbc PKPbc 01 27 53.6 -1.5
GEC2 GERESS Array S 145.86 331 *e*PKPbc PKPbc 01 27 53.4 -1.9
GERES GERESS Array B 145.86 331 PKPbc PKPbc 01 27 55.7 +0.4
comp=Z,27nm,0.5s,baz=38,slow=2.4,SNR=182
WTSB Winterswijk 146.01 341⇑ *i*PKiKP PKiKP 01 27 55.1 -3.8
comp=Z,60nm,1.5s
WET Wettzell 146.01 332 *e*PKPbc PKPbc 01 27 54.6 -1.1
LKR Lokris 146.01 309 *e*P PKPdf 01 27 53.0 -2.3
KRUS Krusevo 146.10 315 *i* PKP PKPdf 01 27 56.6 +1.3
ARSA Arzberg 146.11 327⇑ *i*P PKPdf 01 27 52.7 -2.4
comp=Z,137nm,1.6s,SNR=7.7
HPK Haverah Park 146.14 350 *e*P PKPdf 01 27 54.8 -0.2
HPK AMb AMB 01 27 58.0
comp=Z,1μm,1.5s
HPK AMS AMS 02 05 50.3
comp=Z,30μm,21.6s,MS7.0
HPK Haverah Park 146.14 350 P PKPdf 01 27 54.8 -0.2
HPK AMb AMB 01 27 58.0
comp=Z,1μm,1.5s
VAM Vamos 146.16 303 *e*P PKPdf 01 27 56.0 +0.4
BIA Bitola 146.21 314 *i* PKP PKPdf 01 27 54.8 -0.7
KZN Kozani 146.22 313 *e*P PKPdf 01 27 51.0 -4.6
IVA Berane 146.24 318⇑ *i*PKP PKPdf 01 27 55.7 +0.2
DID Didima 146.25 307 *e*P PKPdf 01 27 53.9 -1.8
KOGS Kog 146.26 326 *e*PKPdf PKPdf 01 27 54.4 -1.0
LTK Loutraki 146.27 308 *e*P PKPdf 01 27 56.1 +0.4
FNA Florina 146.28 314 *e*P PKPdf 01 27 54.1 -1.5
GRA1 Grafenberg Arr 146.29 334 *e*PKPbc PKPbc 01 27 54.8 -1.8
GRF Grafenberg Arr 146.29 334 *e*PKPbc PKPbc 01 27 54.8 -1.8
GRFO Grafenberg 146.30 334 *e*PKPdf PKPdf 01 27 56.1 +0.7
PLE Pljevlja 146.31 319⇑ *i*PKP PKPdf 01 27 55.6 0.0
MOA Molln 146.31 329⇓ *i*P PKPdf 01 27 54.5 -1.0
comp=Z,103nm,0.9s,SNR=54
PVY Plav 146.33 317⇑ *i*PKP PKPdf 01 27 56.8 +1.1
WIM Isle of Man 146.35 354⇑ *e*P PKPdf 01 27 53.5 -1.9
AGG Agios Georgios 146.35 310 *e*P PKPdf 01 27 55.7 -0.2
THL Klokotos Trika 146.36 311 *e*P PKPdf 01 27 52.0 -3.8
GMM Mts of Mourne 146.37 355⇑ *e*P PKPdf 01 27 55.1 -0.2
KARN Karanos 146.38 303 *e*P PKPdf 01 28 00.5 +4.4
GVD Gavdhos 146.41 302 *e*PKPdf PKPdf 01 27 57.0 +1.0
OHR Ohrid 146.52 314 *e*P PKPdf 01 27 56.5 +0.4
OHR Ohrid 146.52 314 *i* PKP PKPdf 01 27 56.4 +0.4
LHO Holmfirth 146.57 350 P PKPdf 01 27 56.8 +1.1
PUK Puka 146.66 316 *e*PN PKPdf 01 28 00.4 +4.1
UPM Unac-Piva 146.68 319⇑ *i*PKP PKPdf 01 27 56.5 +0.3
VLI Veliai 146.74 306 *e*P PKPdf 01 27 52.5 -4.1
KBN Korca 146.75 314 *e*PN PKPdf 01 27 54.3 -2.1
EVR Evrytania 146.77 310 *e*P PKPdf 01 27 57.5 +1.0
DMUB Kingscourt 146.78 356 *e*P PKPdf 01 27 54.4 -1.7
DMUB Kingscourt 146.78 356⇑ *i*P PKPdf 01 27 57.0 +0.9
DMUB Kingscourt 146.78 356⇑ *i*P PKPdf 01 27 57.0 +0.9
KBI1 Birley Grange 146.80 350⇑ *e*P PKPdf 01 27 56.8 +0.7
NKY Niksic 146.83 318⇑ *i*PKP PKPdf 01 27 57.8 +1.3
TTG Podgorica 146.87 318⇑ *i*PKP PKPdf 01 27 57.7 +1.1
VLX Vlachokerasia 146.93 307 *e*P PKPdf 01 27 58.5 +1.6
SELA Sela 146.96 309 *e*P PKPdf 01 27 59.4 +2.5
TIR Tirane 147.02 315 *e*PN PKPbc 01 28 00.9 +1.9
WME Myndd Eilian 147.05 353⇑ *e*P PKPdf 01 27 56.4 -0.1
BRY Bratogost 147.06 319⇑ *i*PKP PKPdf 01 27 57.5 +0.6
KWE Weaver Farm 147.08 350⇑ *e*P PKPdf 01 27 57.9 +1.3
OBKA Obir 147.10 327⇑ *i*P PKPdf 01 27 54.4 -2.5
comp=Z,57nm,1.1s,SNR=9.0
ULC Ulcinj 147.12 317⇑ *i*PKP PKPdf 01 27 58.0 +1.0
JAN Janina 147.13 312 *e*P PKPdf 01 27 59.0 +1.9
WLF1 Llynfaes 147.16 353⇑ *e*P PKPdf 01 27 57.3 +0.6
BUM Brajici-Budva 147.16 318⇑ *i*PKP PKPdf 01 27 59.0 +1.9
CWF Charnwood Fore 147.26 349 *e*P PKPdf 01 27 56.3 -0.6
CWF AMb AMB 01 28 03.0
comp=Z,501nm,1.4s
YLL Llanberis 147.28 353⇑ *e*P PKPdf 01 27 58.0 +1.0
KBA Koelnbreinsper 147.30 329⇑ *i*P PKPdf 01 27 55.7 -1.5
comp=Z,136nm,1.4s,SNR=19
TOD Tromm 147.31 336 PKP PKPdf 01 27 56.3 -0.8
HGN Heimansgroeve 147.32 340⇑ *i*PKiKP PKiKP 01 27 59.3 -2.5
comp=Z,413nm,1.7s
HCY Herceg Novi 147.34 318⇑ *i*PKP PKPdf 01 27 58.2 +0.8
ITM Ithomi 147.34 307 *e*P PKPbc 01 28 00.5 +0.5
RLS Riolos of Patr 147.35 309 *e*P PKPbc 01 28 00.5 +0.5
DLF Lyons Farm 147.36 355 *e*P PKPdf 01 27 55.8 -1.2
DLF Lyons Farm 147.36 355⇑ *i*P PKPdf 01 27 58.5 +1.5
DLF Lyons Farm 147.36 355⇑ *i*P PKPdf 01 27 58.5 +1.5
DCN Croghan 147.36 356 *e*P PKPdf 01 27 55.5 -1.5
DCN Croghan 147.36 356⇑ *i*P PKPdf 01 27 58.3 +1.3
DCN Croghan 147.36 356⇑ *i*P PKPdf 01 27 58.3 +1.3
BEBN Eben Emael 147.37 341 PKPbc PKPbc 01 27 59.5 -0.2
DSB Dublin 147.39 355 *e*PKPdf PKPdf 01 27 56.3 -0.8
SBD1 Bryn Du 147.40 352⇑ *e*P PKPdf 01 27 58.8 +1.7
BOJS Bojanci 147.40 325 *e*PKPdf PKPdf 01 27 56.7 -0.7
LJU Ljubljana 147.43 327 *e*PKPdf PKPdf 01 27 56.2 -1.2
MEM Membach 147.43 340 PKPbc PKPbc 01 27 59.4 -0.4
ABH Alteburg 147.54 338 PKP PKPdf 01 27 57.1 -0.4
IGT Igoumenitsa 147.55 312 *e*P PKPdf 01 27 59.0 +1.1
SRN Sarande 147.62 313 *e*PN PKPbc 01 28 01.8 +1.1
CADS Cadrg 147.70 328 *e*PKPdf PKPdf 01 27 58.1 +0.3
HLM1 Long Mynd 147.72 351⇑ *e*P PKPdf 01 27 59.7 +2.0
KTD Kalmit 147.81 337 PKP PKPbc 01 28 00.6 -0.3
BCLA Clavier 147.82 341 PKPbc PKPbc 01 28 00.5 -0.3
STU Stuttgart 147.84 335 *e*PKPbc PKPbc 01 27 59.5 -1.4
KEK Kerkira 147.84 313 *e*P PKPbc 01 28 03.0 +1.8
RUP Ruppelstein 147.86 338 PKP PKPdf 01 27 58.1 +0.1
ABTA Abfaltersbach 147.94 329 *i* PKPdf PKPdf 01 27 56.7 -1.5
comp=Z,168nm,1.2s,SNR=14
WATA Walderalm 147.94 331⇓ *i*P PKPdf 01 27 56.7 -1.5
comp=Z,891nm,2.4s,SNR=20
VLS Valsamata 147.94 310 *e*P PKPbc 01 28 01.5 -0.1
WTTA Wattenberg 147.97 331 *i* P PKPdf 01 27 57.8 -0.4
comp=Z,128nm,1.0s,SNR=31
SNF Seneffe 148.05 342 PKPbc PKPbc 01 27 59.8 -1.7
SSW Stow on the Wo 148.09 350⇑ *e*P PKPbc 01 28 00.9 -0.6
HAE Alders End 148.14 351⇑ *e*P PKPbc 01 28 00.7 -0.9
MOTA Moosalm 148.15 331⇑ *i*P PKPdf 01 27 57.4 -1.2
comp=Z,1μm,2.5s,SNR=46
SKP1 Kophill 148.15 348⇑ *e*P PKPdf 01 28 00.3 +1.9
RETA Reutte 148.19 332⇑ *i*PKPdf PKPdf 01 27 57.7 -0.9
comp=Z,213nm,1.8s,SNR=18
SQTA Sankt Quirin 148.19 331⇑ *i*P PKPdf 01 27 57.6 -1.0
comp=Z,721nm,2.1s,SNR=47
LANF Langenberg 148.20 337 PKP PKPdf 01 27 58.0 -0.6
WLF Walferdange 148.20 339 *e*PKPbc PKPbc 01 28 01.4 -0.5
WLF Walferdange 148.20 339 PKP2 PKPab 01 28 00.4 -4.4
WLF Walferdange 148.20 339 PKPbc PKPbc 01 28 02.3 +0.4
HTR Trewern Hill 148.21 351⇑ *e*P PKPdf 01 28 00.8 +2.3
GIVF Givet 148.25 341 *e*PKIKP PKPdf 01 27 58.5 -0.1
MCH1 Michaelchurch 148.25 351 *e*P PKPdf 01 28 00.5 +1.9
MCH1 AMb AMB 01 28 06.6
comp=Z,385nm,2.2s
DOU Dourbes 148.32 341 PKPbc PKPbc 01 28 01.7 -0.4
BAIF Baives 148.47 342 *e*PKIKP PKPdf 01 27 58.7 -0.3
SWN1 Swindon 148.52 349⇑ *e*P PKPbc 01 28 01.8 -0.8
SWN1 AMb AMB 01 28 05.4
comp=Z,798nm,1.6s
BFO Black Forest 148.53 335 *e*PKPbc PKPbc 01 28 01.7 -1.0
BFO Black Forest 148.53 335 *e*PKPbc PKPbc 01 28 00.6 -2.2
SPAK Spaichingen-Ko 148.54 335 PKP PKPdf 01 27 58.3 -0.9
STR Strasbourg 148.54 336 PKP PKPdf 01 27 59.6 +0.5
FETA Feichten 148.56 331⇑ *i*PKPdf PKPdf 01 27 58.7 -0.6
comp=Z,132nm,1.0s,SNR=37
HGH Gray Hill 148.57 351⇑ *e*P PKPdf 01 28 01.0 +1.9
MENF Mencas 148.58 344 PKP PKPdf 01 27 58.3 -0.9
DAVA Damuels 148.73 333⇑ *i*P PKPdf 01 27 57.5 -2.0
comp=Z,304nm,1.4s,SNR=18
CDF Champ du Feu 148.87 337 *e*PKIKP PKPdf 01 27 59.0 -0.7
VAL Valentia 148.87 360 *e*P PKPdf 01 28 01.0 +1.4
SWK Warminster 148.95 350⇑ *e*P PKPdf 01 28 02.3 +2.5
FELD Feldberg im Sc 149.03 335 PKP PKPdf 01 27 58.7 -1.3
ECH Echery 149.07 337 PKP PKPdf 01 27 58.6 -1.4
HEX Exmoor 149.27 352⇑ *e*P PKPbc 01 28 03.6 -1.0
MOF Molkenrain 149.38 336 PKP PKPdf 01 27 59.4 -1.1
HTL Hartland 149.43 352 *e*P PKPdf 01 28 03.0 +2.5
HTL AMb AMB 01 28 04.1
comp=Z,462nm,1.7s
HTL AMS AMS 02 02 19.2
comp=Z,36μm,19.9s
HTL Hartland 149.43 352 P PKPdf 01 28 03.0 +2.5
HTL AMb AMB 01 28 04.1
comp=Z,462nm,1.7s
HTL AMS AMS 01 33 06.5
comp=Z,71μm,18.8s
THEF They Montfort 149.49 338 PKP PKPdf 01 27 59.8 -0.9
HINF Hinteralfeld 149.52 336 *e*PKIKP PKPdf 01 27 59.9 -0.9
comp=Z,154nm,1.8s
HAU Haudompre 149.55 337 *e*PKIKP PKPdf 01 28 00.2 -0.6
comp=Z,110nm,1.8s
HAU *e*MLR MLR
comp=Z,38μm,21.8s,MS6.8
HAU Haudompre 149.55 337 *e*PKHKP 01 28 00.2
HAU MLR MLR
comp=Z,38μm,21.8s
BBS Basel-Blauen 149.56 335 PKP PKPdf 01 27 59.0 -1.8
MEZF Maizieres J'vi 149.57 339 *e*PKIKP PKPdf 01 28 00.6 -0.2
comp=Z,245nm,1.9s
DYA Yadsworthy 149.90 351 *e*P PKPdf 01 28 03.7 +2.4
DYA AMb AMB 01 28 04.4
comp=Z,682nm,1.6s
DYA AMS AMS 02 07 45.9
comp=Z,28μm,22.0s,MS7.0
DYA Yadsworthy 149.90 351 P PKPdf 01 28 03.7 +2.4
DYA AMb AMB 01 28 04.4
comp=Z,682nm,1.6s
TIP Timpagrande 150.16 314 *e*PKPbc PKPbc 01 28 05.2 -1.9
CABF La Chapelle 150.81 336 *e*PKIKP PKPdf 01 28 02.8 0.0
comp=Z,190nm,1.6s
VLC Villacollemand 150.84 328 *e*PKPbc PKPbc 01 28 06.9 -1.7
FLN La Foliniere 150.88 346 *e*PKIKP PKPdf 01 28 02.1 -0.8
comp=Z,100nm,1.2s,baz=349
FLN *e*MLR MLR
comp=Z,63μm,22.2s
FLN La Foliniere 150.88 346 *e*PKIKP PKPdf 01 28 02.1 -0.8
FLN MLR MLR
comp=Z,63μm,22.3s
LDF La Druitiere 150.96 346 *e*PKIKP PKPdf 01 28 02.1 -0.9
comp=Z,30nm,1.0s
LOR Lormes 151.04 339 *e*PKIKP PKPdf 01 28 02.6 -0.6
comp=Z,85nm,1.6s,baz=6.3
LOR *e*MLR MLR
comp=Z,45μm,22.8s,MS6.9
LOR Lormes 151.04 339 *e*PKIKP PKPdf 01 28 02.6 -0.6
LOR MLR MLR
comp=Z,45μm,22.8s
ASCN Ascension 151.27 172 *e*PKPbc PKPbc 01 28 08.0 -2.5
GRR Gorron 151.32 346 *e*PKIKP PKPdf 01 28 02.9 -0.6
comp=Z,30nm,0.9s
SSF Saint Saulge 151.34 340 *e*PKIKP PKPdf 01 28 03.0 -0.6
comp=Z,113nm,1.6s
HYF Humbligny 151.43 341 *e*PKIKP PKPdf 01 28 03.7 0.0
LPL La Plagne 151.46 334 *e*PKIKP PKPdf 01 28 03.8 -0.1
LPG La Plagne 151.46 334 *e*PKIKP PKPdf 01 28 04.0 +0.1
SMF Signal de Mont 151.59 339 *e*PKIKP PKPdf 01 28 03.2 -0.8
comp=Z,63nm,1.5s
AVF Avril sur Loir 151.63 340 *e*PKIKP PKPdf 01 28 03.2 -0.9
comp=Z,83nm,1.9s
SGMF Saint Gilles 151.79 349 *e*PKIKP PKPdf 01 28 03.4 -0.9
ROSF Rostrenen 151.84 350 *e*PKIKP PKPdf 01 28 03.8 -0.5
comp=Z,32nm,1.1s
BNI Bardonecchia 151.85 333 *e*PKPdf PKPdf 01 28 04.4 -0.1
BNI *e*PKPbc PKPbc 01 28 10.5 -0.4
BGF Bois d'Agland 152.00 340 *e*PKIKP PKPdf 01 28 04.1 -0.5
MBDF Montbardon 152.08 333 *e*PK

	comp=Z,245nm,1.9s							
VIVF	**Saint-Julien-l**	**152.82**	**336**	*e*PKIKP	PKPdf	01 28 05.5	-0.4	
	comp=Z,70nm,1.4s							
VERF	**Verneugheol**	**152.83**	**340**	PKP	PKPdf	01 28 05.3	-0.6	
LBL	**Lubilhac**	**153.03**	**338**	PKP	PKPdf	01 28 05.5	-0.7	
FRF	**La Foret Royal**	**153.06**	**332**	*e*PKIKP	PKPdf	01 28 05.5	-0.8	
FRNF	**Fournols**	**153.12**	**339**	PKP	PKPdf	01 28 05.9	-0.4	
SMRF	**Simiane la Rot**	**153.19**	**333**	*e*PKIKP	PKPdf	01 28 06.4	-0.1	
	comp=Z,171nm,1.8s							
LMR	**La Mourre**	**153.30**	**331**	*e*PKIKP	PKPdf	01 28 05.8	-0.9	
	comp=Z,89nm,1.6s							
RJF	**Les Rejaudoux**	**153.53**	**341**	*e*PKIKP	PKPdf	01 28 06.6	-0.3	
	comp=Z,187nm,1.7s							
RJF				*e*MLR	MLR			
	comp=Z,46μm,21.2s,MS7.0							
RJF	**Les Rejaudoux**	**153.53**	**341**	*e*PKIKP	PKPdf	01 28 06.6	-0.3	
RJF				MLR	MLR			
	comp=Z,46μm,21.3s							
CAF	**Calviac**	**153.70**	**339**	*e*PKIKP	PKPdf	01 28 07.0	-0.2	
	comp=Z,137nm,1.8s							
LASF	**Ste Croix**	**153.79**	**336**	*e*PKIKP	PKPdf	01 28 07.1	-0.2	
	comp=Z,186nm,1.8s							
LFF	**La Frestale**	**154.10**	**341**	*e*PKIKP	PKPdf	01 28 07.5	-0.2	
	comp=Z,97nm,1.6s							
VSL	**Villasalto**	**154.62**	**322**	*e*PKPbc	PKPbc	01 28 16.2	-0.9	
MTLF	**Montolieu**	**155.03**	**337**	*e*PKIKP	PKPdf	01 28 08.6	-0.5	
	comp=Z,181nm,1.8s							
EPF	**Esparros**	**155.95**	**340**	*e*PKIKP	PKPdf	01 28 10.2	-0.1	
	comp=Z,193nm,1.7s							
REYF	**Montagne du Re**	**156.14**	**341**	PKP	PKPdf	01 28 10.0	-0.6	
RESF	**Ens**	**156.15**	**340**	PKP	PKPdf	01 28 11.9	+1.3	
VIEF	**Viey**	**156.18**	**340**	PKP	PKPdf	01 28 11.7	+1.1	
SJPF	**Ste Jean**	**156.34**	**343**	*e*PKIKP	PKPdf	01 28 10.7	-0.2	
	comp=Z,50nm,1.3s							
ETSF	**Etsaut**	**156.35**	**341**	*e*PKIKP	PKPdf	01 28 11.1	+0.2	
	comp=Z,81nm,1.6s							
KEST	**Kesra**	**156.98**	**315**	PKP	PKPdf	01 28 11.1	-0.9	
	comp=Z,7.7nm,1.3s,baz=231,slow=3.9,SNR=3.7							
KEST				PKPab	PKPab	01 28 42.1	-0.1	
	comp=Z,5.2nm,0.8s,baz=8.4,slow=1.9,SNR=4.8							
PCAB	**Cabril**	**158.99**	**355**	*e*PP	PP	01 32 34.7	+4.4	
SET	**Setif**	**159.17**	**321**	P	PKPdf	01 28 13.5	-1.1	
CMER	**Merouana**	**159.26**	**319**	P	PKPdf	01 28 15.0	+0.3	
PVRL	**Vila Real**	**159.39**	**354**	*e*PKPdf	PKPdf	01 28 13.9	-0.8	
PVRL	**Vila Real**	**159.39**	**354**	*e*PKPab	PKPab	01 28 52.2	0.0	
PVRL	**Vila Real**	**159.39**	**354**	*e*PP	PP	01 32 36.6	+4.1	
MVO	**Moncorvo**	**159.42**	**352**	*e*PKPdf	PKPdf	01 28 14.5	-0.2	
MVO	**Moncorvo**	**159.42**	**352**	*e*PKPab	PKPab	01 28 52.5	+0.1	
PVIS	**Viseu**	**159.96**	**354**	*e*PKPdf	PKPdf	01 28 14.2	-1.1	
PVIS	**Viseu**	**159.96**	**354**	*e*PKPab	PKPab	01 28 54.9	+0.2	
PVIS	**Viseu**	**159.96**	**354**	*e*PP	PP	01 32 39.0	+3.4	
ABA	**Alger-Bouzarea**	**160.05**	**326**	P	PKPdf	01 28 15.0	-0.6	
AKET	**Djebel Ketaf**	**160.15**	**323**	P	PKPdf	01 28 17.6	+1.9	
MTE	**Manteigas**	**160.23**	**353**	*e*PKPdf	PKPdf	01 28 15.0	-0.7	
MTE	**Manteigas**	**160.23**	**353**	*e*PKPab	PKPab	01 28 56.6	+0.7	
MTE	**Manteigas**	**160.23**	**353**	*e*PKPdf	PKPdf	01 28 14.8	-0.9	
ESDC	**Sonseca Array**	**160.28**	**345**	PKP	PKPdf	01 28 14.7	-1.0	
	comp=Z,1.4nm,0.8s,baz=349,slow=2.2,SNR=12							
ESDC				PKPab	PKPab	01 28 56.2	0.0	
	comp=Z,20nm,0.9s,baz=17,slow=3.6,SNR=24							
ESDC				PP	PP	01 32 37.5	0.0	
	comp=Z,3.9nm,1.0s,baz=21,slow=5.8,SNR=4.2							
ADJB	**Djebel Djouab**	**160.31**	**324**	P	PKPdf	01 28 18.2	+2.3	
PAB	**San Pablo**	**160.50**	**345**	*e*PKPdf	PKPdf	01 28 15.3	-0.7	
EMHD	**Djebel Mahouad**	**160.54**	**325**	P	PKPdf	01 28 17.0	+0.9	
PCBR	**Castelo Branco**	**160.78**	**353**	*e*PKPdf	PKPdf	01 28 15.3	-1.0	
PCBR	**Castelo Branco**	**160.78**	**353**	*e*PKPab	PKPab	01 28 57.5	-0.8	
PCBR	**Castelo Branco**	**160.78**	**353**	*e*PP	PP	01 32 44.6	+4.6	
EBNR	**Beni Rached**	**161.21**	**328**	P	PKPdf	01 28 21.0	+4.2	
ECHA	**Ech Chlef**	**161.40**	**328**	P	PKPdf	01 28 20.0	+2.9	
EANR	**`Ain N'Sour**	**161.69**	**328**	P	PKPdf	01 28 17.5	+0.1	
PESTR	**Estremoz**	**161.75**	**352**	*e*PKPdf	PKPdf	01 28 17.1	-0.2	
PESTR	**Estremoz**	**161.75**	**352**	*e*PKPab	PKPab	01 29 02.9	+0.3	
PMAFR	**Mafra**	**161.82**	**357**	*e*PKPdf	PKPdf	01 28 17.4	0.0	
PMAFR	**Mafra**	**161.82**	**357**	*e*PKPab	PKPab	01 29 04.0	+1.1	
ETRT	**Tiaret**	**162.03**	**327**	P	PKPdf	01 28 18.0	+0.3	
EVO	**Evora**	**162.13**	**353**	⇑*i*PKIKP	PKPdf	01 28 16.9	-0.8	
	comp=Z,199nm,1.6s							
EVO	**Evora**	**162.13**	**353**	*e*PKPdf	PKPdf	01 28 17.3	-0.4	
EVO	**Evora**	**162.13**	**353**	*e*PKPab	PKPab	01 29 04.5	+0.2	
PBAR	**Barrancos**	**162.35**	**351**	*e*PKPdf	PKPdf	01 28 18.3	+0.3	
PBAR	**Barrancos**	**162.35**	**351**	*e*PKPab	PKPab	01 29 05.7	+0.5	
PBEJ	**Beja**	**162.61**	**353**	*e*PKPdf	PKPdf	01 28 17.9	-0.3	
PBEJ	**Beja**	**162.61**	**353**	*e*PKPab	PKPab	01 29 06.7	+0.3	
PBEJ	**Beja**	**162.61**	**353**	*e*PP	PP	01 32 54.1	+4.3	
PTEO	**Sao Teotonio**	**163.18**	**355**	*e*PKPdf	PKPdf	01 28 18.1	-0.7	
PTEO	**Sao Teotonio**	**163.18**	**355**	*e*PKPab	PKPab	01 29 09.4	+0.5	
PTEO	**Sao Teotonio**	**163.18**	**355**	*e*PP	PP	01 32 54.0	+1.2	
PVAQ	**Vaqueiros**	**163.21**	**352**	*e*PKPdf	PKPdf	01 28 17.6	-1.2	
PVAQ	**Vaqueiros**	**163.21**	**352**	*e*PKPab	PKPab	01 29 08.9	-0.1	
PBDV	**Barranco-do-Ve**	**163.39**	**352**	*e*PKPdf	PKPdf	01 28 19.1	+0.1	
PBDV	**Barranco-do-Ve**	**163.39**	**352**	*e*PKPab	PKPab	01 29 10.4	+0.6	
MORF	**Marmelete**	**163.41**	**354**	*e*PKPdf	PKPdf	01 28 18.2	-0.8	
MORF	**Marmelete**	**163.41**	**354**	*e*PKPab	PKPab	01 29 11.2	+1.3	
PFVI	**Vila Bisbo**	**163.60**	**355**	*e*PKPdf	PKPdf	01 28 18.0	-1.2	
PFVI	**Vila Bisbo**	**163.60**	**355**	*e*PKPab	PKPab	01 29 12.0	+1.3	
LIC	**Lamto**	**164.57**	**201**	⇑*i*PKIKP	PKPdf	01 28 19.6	-1.2	
	comp=Z,87nm,1.4s							
DBIC	**Dimbokro**	**164.92**	**203**	PKP	PKPdf	01 28 20.0	-1.1	
DBIC				PKPab	PKPab	01 29 16.9	-0.2	
DBIC	**Dimbokro**	**164.92**	**203**	PKP	PKPdf	01 28 20.0	-1.1	
	comp=Z,11nm,1.0s,baz=86,slow=3.0,SNR=8.6							
DBIC				PKPab	PKPab	01 29 16.9	-0.2	
	comp=Z,32nm,0.9s,baz=140,slow=4.5,SNR=9.9							
TOA0	**Torodi Ar. Sit**	**165.99**	**239**	*e*P	PKPdf	01 28 20.0	-1.9	
TORD	**Torodi Ar. Bea**	**165.99**	**239**	PKP	PKPdf	01 28 20.8	-1.1	
	comp=Z,7.0nm,1.1s,baz=324,slow=1.0,SNR=23							
TORD				PKPab	PKPab	01 29 22.2	+0.2	
	comp=Z,8.6nm,1.0s,baz=119,slow=1.9,SNR=7.4							
PMAR	**Madeira**	**166.83**	**24**	*e*PKPdf	PKPdf	01 28 21.8	-0.3	

JMA 25 01:10:11.7, 3725N×13669E, h6km±1km, M3.6, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**167**	P	Pg	01 10 18.6	+0.5
JJH				*e*S	Sg	01 10 23.7	+1.2
JSZ	**Suzu**	**0.57**	**70**	P	Pg	01 10 22.7	0.0
JSZ				*e*S	Sg	01 10 30.2	0.0
JTT	**Ttatey**	**0.82**	**141**	P	Pg	01 10 27.6	+0.1
JTT				*e*S	Sg	01 10 39.2	+1.0
JKG	**Kaga**	**1.01**	**197**	P	Pg	01 10 31.0	-0.1
JKG				*e*S	Sg	01 10 44.4	+0.1

*ISCJB **25** 01:11:26.5±0.7, 3731N±003×13671E±004, h10km±4km, mb4.0/10, Error ellipse: s-maj=5.5km s-min=4.4km az=169.5*
*IDC **25** 01:11:26.3±0.8, 3732N×13680E, h0km, mb4.1/9, mb1 4.3/11, mb1mx4.1/21, mbtmp4.1/11, ML3.8/2, Error ellipse: s-maj=23.2km s-min=15.3km az=32.0*
*JMA **25** 01:11:27.0, 3729N×13675E, h8km±1km, M4.5 Broadband fault plane solution: P waves. NP1: φs=64.00000°, δ49.00000°, λ156.00000°. NP2: φs=170.00000°, δ72.00000°, λ44.00000°. Principal axes: T Plg43.0000°, Azm36.0000°; N Plg44.0000°, Azm188.0000°; P Plg14.0000°, Azm292.0000°;*
JMA Felt III J1.
*NEIC **25** 01:11:27.0, 3730N×13675E, h8km, MG4.5(JMA), After JMA.*
*MOS **25** 01:11:28.9±1.5, 3720N×13670E, h33km, mb3.9/1, Error ellipse: s-maj=17.2km s-min=12.1km az=101.0*

ISC 25 01:11:27.4±0.6, 3728N±003×13677E±004, h7km±4km, n27, σ0$89/35, mb4.0/10, 3C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**178**	P	**Pg**	**01 11 34.5**	**+0.1**
JJH				S	**Sg**	**01 11 39.6**	**+0.5**
JSZ	**Suzu**	**0.50**	**71**	⇓P	**Pg**	**01 11 36.8**	**-0.3**
JSZ				S	**Sg**	**01 11 43.9**	**+0.2**
JHG	**Hegura jima**	**0.58**	**12**	⇑P	**Pg**	**01 11 38.0**	**-0.5**
JHG				*e*S	**Sg**	**01 11 46.1**	**0.0**
JTT	**Ttatey**	**0.82**	**146**	P	**Pg**	**01 11 42.7**	**-0.4**
JTT				*e*S	**Sg**	**01 11 54.6**	**+0.9**
JKG	**Kaga**	**1.06**	**199**	⇑P	**Pg**	**01 11 47.0**	**-0.8**
JKG				*e*S	**Sg**	**01 12 01.7**	**+0.1**
MAJO	**Matsushiro**	**1.37**	**122**	*e*Pn	**Pn**	**01 11 51.3**	**-1.7**
MAT	**Matsushiro**	**1.37**	**122**	P	**Pn**	**01 11 51.5**	**-1.5**
MAT				S	**Sb**	**01 12 10.6**	**-0.5**
MJAR	**Matsushiro Arr**	**1.37**	**122**	Pn	**Pn**	**01 11 52.6**	**-0.4**
	48nm,0.3s,baz=303,slow=16,SNR=39						
MJAR				Sn	**Sn**	**01 12 12.1**	**+0.6**
	78nm,0.3s,baz=314,slow=16,SNR=17						
JNU	**Nakatsue**	**6.36**	**231**	Pn	**Pn**	**01 13 02.8**	**+1.2**
	2.6nm,0.3s,baz=26,slow=8.3,SNR=15						
KSRS	**Korea Array**	**7.04**	**274**	Pn	**Pn**	**01 13 11.9**	**+1.0**
	1.2nm,0.3s,baz=88,slow=14,SNR=12						
KSRS				Sn	**Sn**	**01 14 30.0**	**-1.3**
	0.6nm,0.3s,baz=92,slow=26,SNR=3.1						
ASAJ	**Asahikawa**	**8.13**	**31**	P	**Pn**	**01 13 29.2**	**+3.3**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ	**Asahikawa**	**8.13**	**31**	Pn	**Pn**	**01 13 29.2**	**+3.3**
	comp=Z,1.7nm,0.3s,baz=221,slow=15,SNR=9.8						
YSS	**Yuzh-Sakhalins**	**10.63**	**23**	*e*Pn	**Pn**	**01 14 00.5**	**+0.4**
	comp=Z,33nm,1.3s						
YSS	**Yuzh-Sakhalins**	**10.63**	**23**	⇑*e*P	**Pn**	**01 14 03.0**	**+2.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YHNB	**Yeheng**	**18.20**	**231**	*e*Pn	**Pn**	**01 15 34.0**	**-6.6**
SONM	**Songino Array**	**24.58**	**305**	P	**Pn**	**01 16 48.5**	**+0.6**
	comp=Z,3.3nm,0.8s,mb3.9,baz=109,slow=9.8,SNR=8.9						
ZAK	**Zakamensk**	**27.22**	**309**	*e*P	**P**	**01 17 11.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb3.8						
BILL	**Bilibino**	**34.92**	**19**	P	**P**	**01 18 23.0**	**+3.7**
BILL				*e*		01 18 37.6	
MKAR	**Makanchi Array**	**40.83**	**301**	P	**P**	**01 19 08.9**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=86,slow=11,SNR=3.2						
INK	**Inuvik**	**55.85**	**27**	P	**P**	**01 21 05.1**	**+0.1**
	comp=Z,1.3nm,0.5s,mb4.2,baz=296,slow=6.4,SNR=5.2						
WRA	**Warramunga Arr**	**56.96**	**183**	P	**P**	**01 21 13.9**	**+0.5**
	comp=Z,1.7nm,0.6s,mb4.3,baz=360,slow=7.7,SNR=5.2						
SIT	**Sitka**	**58.59**	**40**	P	**P**	**01 21 24.6**	**0.0**
FINES	**FINESS Array B**	**66.82**	**331**	P	**P**	**01 22 18.6**	**-0.9**
	comp=Z,2.0nm,0.8s,mb4.2,baz=121,slow=7.4,SNR=5.2						
AKASG	**Malin Array Be**	**71.78**	**320**	P	**P**	**01 22 51.0**	**+0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=48,slow=6.1,SNR=5.8						
NOA	**NORSAR Array B**	**72.47**	**335**	P	**P**	**01 22 53.0**	**-1.3**
	comp=Z,0.4nm,0.7s,mb3.5,baz=40,slow=6.1,SNR=2.6						
NVAR	**Mina Array Bea**	**77.76**	**51**	P	**P**	**01 23 26.6**	**+1.4**
	comp=Z,3.0nm,1.0s,mb4.2,baz=292,slow=4.8,SNR=1.9						
PDAR	**Pinedale Array**	**80.08**	**43**	P	**P**	**01 23 38.0**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.2,baz=287,slow=2.0,SNR=3.8						

*ISCJB **25** 01:16:11.6±0.9, 3726N±003×13660E±005, h8km±6km, mb4.1/3, Error ellipse: s-maj=6.3km s-min=5.2km az=6.7*
*IDC **25** 01:16:11.9±1.2, 3720N×13673E, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.9/21, mbtmp3.9/5, ML3.1/2, Error ellipse: s-maj=22.5km s-min=20.2km az=162.0*
*JMA **25** 01:16:12.7, 3723N×13666E, h5km±1km, M4.1*
JMA Felt III J1.
*NEIC **25** 01:16:12.7, 3723N×13666E, h5km, mb4.1/1, After JMA.*
*MOS **25** 01:16:14.2±1.3, 3710N×13643E, h33km, mb4.0/1, Error ellipse: s-maj=25.4km s-min=18.0km az=111.6*

ISC 25 01:16:13.0±0.7, 3723N±003×13666E±005, h8km±5km, n17, σ0$72/24, mb4.1/3, 3C, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**162**	⇑P	**Pg**	**01 16 19.3**	**0.0**
JJH				*e*S	**Sg**	**01 16 23.6**	**0.0**
JSZ	**Suzu**	**0.60**	**69**	P	**Pg**	**01 16 24.5**	**-0.1**
JSZ				*e*S	**Sg**	**01 16 32.5**	**0.0**
JHG	**Hegura jima**	**0.65**	**19**	P	**Pg**	**01 16 25.3**	**-0.2**
JHG				*e*S	**Sg**	**01 16 34.2**	**+0.3**
JTT	**Ttatey**	**0.83**	**139**	P	**Pg**	**01 16 28.8**	**-0.1**
JTT				*e*S	**Sg**	**01 16 40.2**	**+0.5**
JKG	**Kaga**	**0.99**	**195**	⇑P	**Pg**	**01 16 31.2**	**-0.8**
JKG				*e*S	**Sg**	**01 16 45.0**	**+0.2**
MAJO	**Matsushiro**	**1.42**	**119**	*e*Pn	**Pn**	**01 16 38.5**	**-0.7**
MAT	**Matsushiro**	**1.42**	**119**	P	**Pn**	**01 16 38.5**	**-0.6**
MAT				S	**Sb**	**01 16 57.9**	**-0.1**
MJAR	**Matsushiro Arr**	**1.43**	**119**	Pn	**Pn**	**01 16 39.1**	**0.0**
	21nm,0.3s,baz=293,slow=16,SNR=25						
MJAR				Sn	**Sn**	**01 16 58.6**	**+0.6**
	75nm,0.3s,baz=302,slow=26,SNR=26						
JNU	**Nakatsue**	**6.26**	**231**	Pn	**Pn**	**01 17 47.0**	**+1.4**
	0.5nm,0.3s,baz=65,slow=14,SNR=4.7						
KSRS	**Korea Array**	**6.96**	**274**	Pn	**Pn**	**01 17 56.1**	**+0.9**
	0.2nm,0.3s,baz=90,slow=14,SNR=3.2						
YSS	**Yuzh-Sakhalins**	**10.71**	**23**	Pn	**Pn**	**01 18 49.2**	**+2.6**
	63nm,1.3s						
YSS	**Yuzh-Sakhalins**	**10.71**	**23**	⇑*e*P	**Pn**	**01 18 51.6**	**+5.0**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
HIA	**Hailar**	**17.17**	**320**	Pn	**Pn**	**01 20 11.2**	**-1.9**
	comp=Z,33nm,2.1s						
HIA	**Hailar**	**17.17**	**320**	P	**Pn**	**01 20 11.2**	**-1.9**
HIA				pmax	pmax		
	comp=Z,33nm,2.1s						
INK	**Inuvik**	**55.93**	**27**	P	**P**	**01 25 51.5**	**+0.5**
	comp=Z,2.7nm,0.9s,mb4.3,baz=284,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**56.91**	**183**	P	**P**	**01 25 57.7**	**-0.8**
	comp=Z,1.9nm,0.9s,mb4.1,baz=359,slow=7.5,SNR=5.2						
ASAR	**Alice Springs**	**60.63**	**183**	P	**P**	**01 26 24.3**	**0.0**
	comp=Z,1.1nm,0.8s,mb4.0,baz=13,slow=8.6,SNR=5.7						

*IDC **25** 01:17:00.6±3.5, 3748N×13676E, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/18, mbtmp3.8/2, Error ellipse: s-maj=64.4km s-min=32.1km az=9.0*
*ISCJB **25** 01:17:02.7±1.3, 3730N±005×13664E±007, h11km±7km, mb3.9/2, Error ellipse: s-maj=9.7km s-min=7.3km az=27.4*
*JMA **25** 01:17:03.7±0.1, 3726N×13672E, h3km±1km, M3.9*

ISC 25 01:17:03.6±1.0, 3728N±004×13668E±007, h9km±5km, n9, σ0$42/15, mb3.9/2, Near west coast of Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**167**	P	**Pg**	**01 17 10.6**	**-0.1**
JJH				S	**Sg**	**01 17 16.0**	**+0.6**
JSZ	**Suzu**	**0.57**	**72**	P	**Pg**	**01 17 14.1**	**-0.6**
JSZ				S	**Sg**	**01 17 22.1**	**-0.1**
JHG	**Hegura jima**	**0.60**	**19**	P	**Pg**	**01 17 16.0**	**+0.8**
JTT	**Ttatey**	**0.85**	**142**	P	**Pg**	**01 17 19.6**	**-0.4**
JTT				S	**Sg**	**01 17 30.9**	**-0.1**
JKG	**Kaga**	**1.04**	**196**	P	**Pg**	**01 17 22.9**	**-0.6**
JKG				S	**Sg**	**01 17 37.3**	**+0.4**
MAT	**Matsushiro**	**1.43**	**120**	P	**Pn**	**01 17 29.4**	**-0.3**
MAT				S	**Sn**	**01 17 48.3**	**-0.2**
MJAR	**Matsushiro Arr**	**1.43**	**120**	Pn	**Pn**	**01 17 30.1**	**+0.4**
	34nm,0.3s,baz=312,slow=17,SNR=4.5						
MJAR				Sn	**Sn**	**01 17 49.2**	**+0.6**
	62nm,0.3s,baz=112,slow=18,SNR=7.8						
WRA	**Warramunga Arr**	**56.95**	**183**	P	**P**	**01 26 48.9**	**-0.3**
	1.0nm,0.6s,mb4.0,baz=358,slow=7.6,SNR=9.2						
ASAR	**Alice Springs**	**60.67**	**183**	P	**P**	**01 27 14.9**	**-0.1**
	0.6nm,0.7s,mb3.9,baz=13,slow=13,SNR=6.4						

*IDC **25** 01:16:59.4±2.7, 2099S×16940E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.2/12, mbtmp4.2/4, Error ellipse: s-maj=139.8km s-min=31.0km az=158.0*
*ISCJB **25** 01:17:01.4±1.6, 215S±06×1696E±02, h33km, mb4.2/4, Error ellipse: s-maj=94.6km s-min=16.6km az=165.2*
*NEIC **25** 01:17:04.1±1.5, 2123S×16951E, h35km, mb4.3/1, Error ellipse: s-maj=97.7km s-min=17.4km az=165.0*

ISC 25 01:17:03.7±1.6, 214S±06×1696E±02, h35km, n27, σ1$61/6, mb4.2/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**19.22**	**70**	P	**Pn**	**01 21 25.1**	**-0.9**
	5.4nm,0.3s						
WRA	**Warramunga Arr**	**32.99**	**266**	P	**P**	**01 23 34.2**	**-1.4**
	0.8nm,0.4s,mb4.0,baz=90,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**33.01**	**259**	P	**P**	**01 23 36.5**	**+0.8**
	2.5nm,0.8s,mb4.2,baz=80,slow=8.8,SNR=9.3						
SONM	**Songino Array**	**89.11**	**323**	P	**P**	**01 29 55.1**	**-0.2**
	2.3nm,0.9s,mb4.5,baz=141,slow=4.0,SNR=5.0						
NVAR	**Mina Array Bea**	**89.95**	**48**	P	**P**	**01 30 01.2**	**+1.8**
NVAR	**Mina Array Bea**	**89.95**	**48**	P	**P**	**01 30 01.2**	**+1.8**
	1.4nm,0.9s,mb4.3,baz=210,slow=6.6,SNR=4.1						
ARCES	**ARCESS Array B**	**127.20**	**345**	PKP	PKPdf	01 36 02.8	-0.8
	7.2nm,1.0s,baz=32,slow=2.4,SNR=3.8						
DPC	**Dobruska-Polom**	**144.24**	**330**	*e*PKP	PKPdf	01 36 33.8	-1.9
UPC	**Upice**	**144.27**	**331**	*e*PKP	PKPdf	01 36 34.3	-1.5
PVCC	**Panska Ves**	**144.90**	**332**	*e*PKP	PKPdf	01 36 36.0	-0.9
BRG	**Berggiesshubel**	**144.91**	**333**	*i* (P)	PKPdf	01 36 35.7	-1.2
	19nm,1.1s						
CLL	**Collm**	**144.97**	**334**	*i* PKPdf	PKPdf	01 36 36.2	-0.8
	comp=Z,13nm,1.0s						
PRU	**Pruhonice**	**145.30**	**331**	*e*PKP	PKPdf	01 36 37.3	-0.3
NKC	**Novy Kostel**	**146.02**	**334**	*e*PKP	PKPdf	01 36 39.7	+0.9
KHC	**Kasperske Hory**	**146.36**	**331**	*e*PKP	PKPdf	01 36 40.9	+1.5
GERES	**GERESS Array B**	**146.51**	**331**	PKPbc	PKPbc	01 36 41.0	-0.2
	comp=Z,3.8nm,0.8s,baz=44,slow=4.1,SNR=9.2						
GIVF	**Givet**	**148.90**	**341**	*e*PKP1	PKPbc	01 36 47.5	-0.1
HINF	**Hinteralfeld**	**150.17**	**336**	*e*PKP1	PKPbc	01 36 50.7	-0.1
HAU	**Haudompre**	**150.20**	**337**	*e*PKP1	PKPbc	01 36 50.8	0.0
	comp=Z,30nm,1.1s						
MEZF	**Maizieres J'vi**	**150.23**	**339**	*e*PKP1	PKPbc	01 36 51.4	+0.5
CABF	**La Chapelle**	**151.47**	**336**	*e*PKP1	PKPbc	01 36 54.2	+0.3
FLN	**La Foliniere**	**151.53**	**346**	*e*PKP1	PKPbc	01 36 53.5	-0.4
	comp=Z,24nm,1.0s						
LOR	**Lormes**	**151.70**	**339**	*e*PKP1	PKPbc	01 36 54.2	-0.2
	comp=Z,23nm,1.1s						
GRR	**Gorron**	**151.97**	**346**	*e*PKP1	PKPbc	01 36 54.7	-0.2
SSF	**Saint Saulge**	**151.99**	**340**	*e*PKP1	PKPbc	01 36 54.9	-0.1
	comp=Z,20nm,1.2s						
LPG	**La Plagne**	**152.12**	**334**	*e*PKP1	PKPbc	01 36 55.8	+0.4
	comp=Z,13nm,1.0s						
AVF	**Avril sur Loir**	**152.28**	**339**	*e*PKP1	PKPbc	01 36 55.3	-0.4

*IDC **25** 01:21:20.2±1.4, 5.12S×10330E, h0km, mb4.2/13, mb1 4.3/13, mb1mx4.1/22, mbtmp4.2/13, Error ellipse: s-maj=50.7km s-min=14.5km az=53.0*
*ISCJB **25** 01:21:23.7±1.2, 50S±02×1035E±02, h33km, mb4.3/12, Error ellipse: s-maj=41.2km s-min=11.7km az=142.2*
*NEIC **25** 01:21:36.9±1.2, 572S×10458E, h35km, Error ellipse: s-maj=130.0km s-min=16.5km az=217.0*

ISC 25 01:21:25.6±1.1, 51S±02×1034E±02, h35km, n17, σ0$63/17, mb4.3/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.65**	**332**	*i* P	**Pn**	**01 22 01.0**	**+9.0**
BATI	**Kupang**	**20.74**	**105**	P	**P**	**01 26 04.2**	**+0.7**
	9.4nm,0.3s,baz=296,slow=6.2,SNR=4.4						
FITZ	**Fitzroy Crossi**	**25.31**	**122**	P	**P**	**01 26 50.0**	**+0.8**
	1.9nm,0.7s,mb3.7,baz=312,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**33.55**	**119**	P	**P**	**01 28 01.6**	**-0.8**
	0.9nm,0.3s,mb4.2,baz=304,slow=9.1,SNR=16						
WB2	**Warramunga Arr**	**33.56**	**119**	*e*P	**P**	**01 28 01.7**	**-0.8**
ASAR	**Alice Springs**	**34.72**	**125**	P	**P**	**01 28 12.4**	**-0.1**
	1.8nm,0.8s,mb4.1,baz=295,slow=7.7,SNR=23						
**C

0.4nm,0.5s,baz=28,slow=4.4,SNR=3.6

*ISCJB **25** 01:36:01.3±1.5, 372N×0.1×13668E±008, h7km±28km, Error ellipse: s-maj=23.6km s-min=9.6km az=166.0*
*JMA **25** 01:36:02.2±0.1, 3720N×13670E, h11km±1km, M4.1*
JMA Felt II J1.

ISC 25 01:36:01.6±1.2, 3721N±005×13667E±008, h13km±9km, n6, σ0§42/11, 1C-4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	**0.60**	**66**	⇓P	**Pg**	**01 36 13.3**	**0.0**
JSZ				S	**Sg**	**01 36 21.2**	**-0.1**
JHG	**Hegura jima**	**0.67**	**17**	⇓P	**Pg**	**01 36 14.9**	**+0.3**
JTT	**Ttatey**	**0.80**	**138**	⇓P	**Pg**	**01 36 17.0**	**-0.1**
JTT				S	**Sg**	**01 36 28.1**	**+0.5**
JKG	**Kaga**	**0.97**	**196**	⇑P	**Pb**	**01 36 20.1**	**-0.1**
JKG				S	**Sb**	**01 36 33.5**	**+0.6**
JGN	**Niukaw**	**1.11**	**152**	⇓P	**Pb**	**01 36 22.0**	**-0.7**
JGN				S	**Sb**	**01 36 36.5**	**-0.5**
MAT	**Matsushiro**	**1.40**	**118**	P	**Pn**	**01 36 26.4**	**-0.4**
MAT				S	**Sn**	**01 36 45.8**	**+0.7**

IDC 25 01:37:55.8±3.8, 2023S×16867E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.9/14, mbtmp3.9/4, ML3.4/1, Error ellipse: s-maj=114.4km s-min=29.3km az=131.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.77**	**228**	Pn	Pn	01 38 41.3	-0.2
DZM	6.0nm,0.3s,baz=67,slow=18,SNR=4.4			Sn	Sn	01 39 15.2	-0.4
WRA	14nm,0.3s,baz=97,slow=22,SNR=9.4 **Warramunga Arr**	**32.21**	**264**	P	P	01 44 26.1	+0.3
ASAR	0.9nm,0.6s,baz=91,slow=8.4,SNR=12 **Alice Springs**	**32.38**	**257**	P	P	01 44 27.5	+0.2
SONM	1.3nm,0.5s,baz=86,slow=9.2,SNR=15 **Songino Array**	**87.68**	**323**	P	P	01 50 47.0	+0.8
CLL	1.0nm,0.9s,baz=138,slow=6.2,SNR=5.9 **Collm**	**143.57**	**334**	*e*PKPdf	PKPdf	01 57 28.0	-4.4
KHC	**Kasperske Hory**	**144.94**	**331**	*e*P	PKPdf	01 57 32.0	-2.9
KHC				*ex*	x	01 57 44.0	
GERES	**GERESS Array B**	**145.09**	**331**	PKPbc	PKPbc	01 57 33.2	-1.4
CDF	1.7nm,0.8s,baz=27,slow=1.5,SNR=9.9 **Champ du Feu**	**148.13**	**336**	*e*PKP1	PKPbc	01 57 45.6	+2.1
HAU	30nm,1.3s **Haudompre**	**148.81**	**337**	*e*PKP1	PKPbc	01 57 48.3	+3.0
	12nm,1.1s						

*IDC **25** 01:40:27.5±1.6, 2052S×16934E, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.2/17, mbtmp4.2/9, ML4.0/1, Error ellipse: s-maj=69.6km s-min=20.3km az=149.0*
*ISCJB **25** 01:40:29.9±0.8, 207S±03×1695E±01, h33km, mb4.2/8, Error ellipse: s-maj=41.5km s-min=9.3km az=153.8*
*NEIC **25** 01:40:32.2±0.7, 2067S×16941E, h35km, mb4.6/2, Error ellipse: s-maj=37.7km s-min=10.9km az=159.0*

ISC 25 01:40:31.9±0.8, 206S±03×1695E±01, h35km, n38, σ1§02/12, mb4.2/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.16**	**242**	Pn	**Pn**	**01 41 18.3**	**-1.0**
DZM	20nm,0.3s,baz=78,slow=20,SNR=12			Sn	**Sn**	**01 41 56.7**	**+1.0**
AFI	69nm,0.3s,baz=0.5,slow=22,SNR=3.6 **Afiamalu**	**19.11**	**73**	P	**Pn**	**01 44 52.1**	**-0.8**
CTA	109nm,1.7s **Charters Tower**	**21.77**	**267**	P	**P**	**01 45 21.1**	**+0.4**
CTAO	2.5nm,0.4s,mb4.0,baz=88,slow=16,SNR=3.6 **Charters Tower**	**21.77**	**267**	P	**P**	**01 45 19.5**	**-1.3**
STKA	6.4nm,0.5s,mb4.3 **Stephens Creek**	**27.32**	**240**	P	**P**	**01 46 14.3**	**+0.8**
WRA	2.2nm,0.5s,mb3.9,baz=87,slow=11,SNR=8.5 **Warramunga Arr**	**32.92**	**265**	P	**P**	**01 47 01.5**	**-1.7**
ASAR	0.8nm,0.4s,mb4.0,baz=94,slow=8.5,SNR=20 **Alice Springs**	**33.03**	**258**	P	**P**	**01 47 03.7**	**-0.4**
FITZ	2.8nm,0.7s,mb4.3,baz=86,slow=9.3,SNR=12 **Fitzroy Crossi**	**41.34**	**266**	P	**P**	**01 48 15.0**	**+0.4**
NWAO	2.2nm,0.5s,mb4.0,baz=90,slow=4.7,SNR=4.4 **Narrogin (SRO)**	**47.78**	**244**	P	**P**	**01 49 05.5**	**-0.4**
NVAR	11nm,1.0s,mb4.8,baz=36,slow=8.7,SNR=3.7 **Mina Array Bea**	**89.56**	**48**	P	**P**	**01 53 21.2**	**+0.8**
ARCES	1.2nm,0.6s,mb4.4,baz=230,slow=10,SNR=7.9 **ARCESS Array B**	**126.46**	**345**	PKP	PKPdf	01 59 30.4	-0.1
DPC	2.8nm,0.8s,baz=73,slow=4.2,SNR=6.9 **Dobruska-Polom**	**143.54**	**331**	*e*PKP	PKPdf	02 00 00.7	-2.1
BRG	**Berggiesshubel** 7.8nm,1.2s	**144.21**	**333**	*e*(P)	Pdif	01 57 26.6	-3.4
BRG	**Berggiesshubel** 6.3nm,0.7s	**144.21**	**333**	*i* P	PKPdf	02 00 02.6	-1.3
CLL	**Collm** comp=Z,7.0nm,0.7s	**144.26**	**335**	*e*PKPdf	PKPdf	02 00 03.0	-1.0
PRU	**Pruhonice**	**144.60**	**332**	*e*PKP	PKPdf	02 00 03.8	-0.8
NKC	**Novy Kostel**	**145.31**	**334**	*e*PKP	PKPdf	02 00 06.7	+0.9
KHC	**Kasperske Hory**	**145.66**	**332**	*e*PKP	PKPdf	02 00 07.5	+1.0
GERES	**GERESS Array B** comp=Z,2.9nm,0.6s,baz=33,slow=3.2,SNR=14	**145.81**	**331**	PKPbc	PKPbc	02 00 07.8	+0.5
CDF	**Champ du Feu** comp=Z,16nm,1.0s	**148.80**	**337**	*e*PKP1	PKPbc	02 00 15.1	-0.5
HAU	**Haudompre**	**149.48**	**337**	*e*PKP1	PKPbc	02 00 17.6	+0.3
MEZF	**Maizieres J'vi**	**149.50**	**339**	*e*PKP1	PKPbc	02 00 17.4	0.0
CABF	**La Chapelle** comp=Z,9.8nm,0.8s	**150.75**	**336**	*e*PKP1	PKPbc	02 00 21.0	+0.6
FLN	**La Foliniere**	**150.79**	**346**	*e*PKP1	PKPbc	02 00 20.4	-0.1
LDF	**La Druitiere** comp=Z,8.0nm,0.6s	**150.87**	**346**	*e*PKP1	PKPbc	02 00 20.5	-0.2
LOR	**Lormes** comp=Z,5.4nm,0.7s	**150.97**	**340**	*e*PKP1	PKPbc	02 00 21.1	+0.2
GRR	**Gorron**	**151.23**	**347**	*e*PKP1	PKPbc	02 00 21.4	-0.1
SSF	**Saint Saulge** comp=Z,5.9nm,0.8s	**151.26**	**340**	*e*PKP1	PKPbc	02 00 21.9	+0.3
LPL	**La Plagne**	**151.40**	**334**	*e*PKP1	PKPbc	02 00 22.6	+0.6
LPG	**La Plagne** comp=Z,7.8nm,0.8s	**151.40**	**334**	*e*PKP1	PKPbc	02 00 22.8	+0.8
SGMF	**Saint Gilles**	**151.70**	**349**	*e*PKP1	PKPbc	02 00 22.3	-0.3
ROSF	**Rostrenen**	**151.75**	**350**	*e*PKP1	PKPbc	02 00 22.2	-0.5
BGF	**Bois d'Agland**	**151.92**	**340**	*e*PKP1	PKPbc	02 00 23.3	+0.1
ORIF	**Oris-en-Rattie** comp=Z,7.9nm,0.7s	**152.23**	**334**	*e*PKP1	PKPbc	02 00 24.1	+0.2
TCF	**Toulx Ste Croi**	**152.36**	**341**	*e*PKP1	PKPbc	02 00 24.1	-0.1
SBF	**Sospel** comp=Z,20nm,0.8s	**152.41**	**331**	*e*PKP1	PKPbc	02 00 24.7	+0.3
MFF	**Saint Martin d**	**152.74**	**344**	*e*PKP1	PKPbc	02 00 25.5	+0.5

JMA 25 01:40:41.6, 3729N×13678E, h9km±1km, M2.8, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**180**	P	Pg	01 40 49.0	+0.3
JJH				*e*S	Sg	01 40 54.6	+1.0
JSZ	**Suzu**	**0.49**	**71**	P	Pg	01 40 51.1	0.0
JSZ				*e*S	Sg	01 40 58.2	+0.6
MAT	**Matsushiro**	**1.36**	**123**	P	Pn	01 41 06.2	-0.6
MAT				S	Sb	01 41 25.0	+0.2

JMA 25 01:43:15.1±0.1, 3721N×13672E, h11km±1km, M3.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.29**	**170**	P	Pg	01 43 21.1	+0.2
JJH				*e*S	Sg	01 43 24.8	-0.1
JSZ	**Suzu**	**0.56**	**65**	P	Pg	01 43 25.8	-0.3
JSZ				*e*S	Sg	01 43 33.7	+0.1
MAT	**Matsushiro**	**1.37**	**119**	P	Pn	01 43 39.6	-0.5
MAT				S	Sb	01 43 58.6	+0.5

*ISCJB **25** 01:46:47.2±0.5, 3721N±003×13646E±004, h0km, mb3.7/8, Error ellipse: s-maj=4.8km s-min=4.2km az=161.9*
*IDC **25** 01:46:47.6±0.9, 3712N×13644E, h0km, mb3.6/8, mb1 3.9/8, mb1mx3.8/21, mbtmp3.6/8, Error ellipse: s-maj=29.8km s-min=17.0km az=30.0*
*JMA **25** 01:46:48.9±0.1, 3718N×13657E, h0km, M3.5*
JMA Felt I J1.
*NEIC **25** 01:46:49.0, 37.18N×136.57E, h0km, MG3.5(JMA), After JMA.*

ISC 25 01:46:49.3±0.7, 3719N±003×13652E±005, h8km±4km, n18, σ0§81/26, mb3.5/8, 1C, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**142**	P	**Pg**	**01 46 55.6**	**-0.2**
JJH				*e*S	**Sg**	**01 47 00.1**	**-0.1**
JSZ	**Suzu**	**0.72**	**69**	⇑P	**Pg**	**01 47 02.0**	**-1.1**
JSZ				*e*S	**Sg**	**01 47 13.4**	**+1.0**
JHG	**Hegura jima**	**0.73**	**26**	P	**Pg**	**01 47 03.3**	**0.0**
JHG				*e*S	**Sg**	**01 47 12.9**	**+0.1**
JTT	**Ttatey**	**0.87**	**132**	P	**Pg**	**01 47 05.9**	**-0.1**
JTT				*e*S	**Sg**	**01 47 17.6**	**+0.2**
JKG	**Kaga**	**0.93**	**190**	P	**Pg**	**01 47 06.4**	**-0.6**
JKG				*e*S	**Sg**	**01 47 19.6**	**+0.6**
MAJO	**Matsushiro**	**1.50**	**115**	*e*Pn	**Pn**	**01 47 15.8**	**-0.7**
MAJO				*e*Sn	**Sn**	**01 47 36.7**	**+0.5**
MAT	**Matsushiro**	**1.50**	**115**	P	**Pn**	**01 47 16.1**	**-0.3**
MAT				S	**Sn**	**01 47 34.8**	**-1.4**
MJAR	**Matsushiro Arr** 18nm,0.3s,baz=300,slow=16,SNR=38	**1.50**	**115**	Pn	**Pn**	**01 47 16.6**	**+0.2**
MJAR				Sn	**Sn**	**01 47 37.0**	**+0.8**
JNU	18nm,0.3s,baz=311,slow=26,SNR=11 **Nakatsue**	**6.15**	**230**	Pn	**Pn**	**01 48 22.2**	**+1.7**
SONM	0.4nm,0.3s,baz=29,slow=13,SNR=2.9 **Songino Array**	**24.48**	**305**	P	**P**	**01 52 09.1**	**+0.5**
MKAR	0.7nm,0.7s,mb3.2,baz=115,slow=9.4,SNR=6.4 **Makanchi Array**	**40.71**	**301**	P	**P**	**01 54 29.7**	**-0.6**
MKAR	**Makanchi Array** 0.3nm,0.7s,mb3.1,baz=88,slow=6.7,SNR=3.9	**40.71**	**301**	P	**P**	**01 54 29.7**	**-0.6**
WRA	**Warramunga Arr** 0.9nm,0.8s,mb3.8,baz=356,slow=7.9,SNR=7.4	**56.86**	**182**	P	**P**	**01 56 33.6**	**-0.9**
YKA	**Yellowknife Ar** 0.4nm,0.7s,mb3.5,baz=303,slow=6.9,SNR=6.4	**65.60**	**29**	P	**P**	**01 57 33.2**	**0.0**
FINES	**FINESS Array B** 1.7nm,0.8s,mb4.1,baz=131,slow=8.8,SNR=5.1	**66.81**	**331**	P	**P**	**01 57 39.8**	**-1.3**
AKASG	**Malin Array Be** 0.3nm,0.5s,mb3.5,baz=51,slow=7.0,SNR=4.9	**71.73**	**320**	P	**P**	**01 58 11.0**	**-0.7**
NVAR	**Mina Array Bea** 0.4nm,0.7s,mb3.5,baz=283,slow=5.5,SNR=4.0	**77.97**	**51**	P	**P**	**01 58 49.9**	**+1.7**
PDAR	**Pinedale Array** 0.6nm,0.8s,mb3.5,baz=270,slow=1.5,SNR=5.7	**80.28**	**43**	P	**P**	**01 59 01.6**	**+0.9**

*IDC **25** 02:00:30.7±1.4, 2041S×16903E, h0km, mb4.1/5, mb1 4.3/7, mb1mx4.1/16, mbtmp4.1/7, ML3.7/2, Error ellipse: s-maj=37.3km s-min=23.7km az=156.0*
*ISCJB **25** 02:00:35.4±3.7, 206S±02×169.1E±0.1, h53km±30km, mb4.2/7, Error ellipse: s-maj=32.6km s-min=19.2km az=19.9*
*NEIC **25** 02:00:35.6±0.9, 2054S×16906E, h35km, mb4.4/3, Error ellipse: s-maj=21.0km s-min=18.0km az=177.0*

ISC 25 02:00:36.6±3.6, 206S±02×1691E±01, h45km±30km, n15, σ1§04/15, mb4.2/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.87**	**239**	*e*P	**Pn**	**02 01 18.6**	**-1.1**
DZM				*e*S	**Sn**	**02 01 53.7**	**+0.7**
DZM	**Mont Dzumac** 5.6nm,0.3s,baz=64,slow=18,SNR=36	**2.87**	**239**	Pn	**Pn**	**02 01 18.7**	**-1.1**
DZM				Sn	**Sn**	**02 01 53.4**	**+0.4**
URZ	10nm,0.3s,baz=161,slow=20,SNR=7.3 **Urewera**	**18.93**	**160**	P	**Pn**	**02 04 54.9**	**+0.3**
CTA	0.4nm,0.3s,baz=334,slow=3.2,SNR=5.1 **Charters Tower**	**21.41**	**267**	P	**P**	**02 05 21.9**	**+1.1**
CTAO	5.5nm,0.7s,mb4.0,baz=102,slow=13,SNR=5.0 **Charters Tower**	**21.41**	**267**	*e*P	**P**	**02 05 22.6**	**+1.9**
STKA	7.2nm,0.8s,mb4.0 **Stephens Creek**	**27.02**	**240**	P	**P**	**02 06 15.3**	**+0.8**
STKA	**Stephens Creek** 2.9nm,0.7s,mb3.9,baz=49,slow=6.3,SNR=6.6	**27.02**	**240**	P	**P**	**02 06 15.3**	**+0.8**
WRA	**Warramunga Arr** 0.9nm,0.5s,mb4.0,baz=94,slow=8.4,SNR=20	**32.56**	**265**	P	**P**	**02 07 03.1**	**-0.6**
ASAR	**Alice Springs** 3.6nm,0.7s,mb4.4,baz=82,slow=9.3,SNR=37	**32.68**	**258**	P	**P**	**02 07 04.5**	**-0.3**
KSM	**Kuching**	**61.54**	**283**	*e*P	**P**	**02 10 49.8**	**+0.3**
QSPA	**South Pole Qui** 9.2nm,1.2s,mb4.6	**69.47**	**180**	*e*P	**P**	**02 11 38.8**	**-0.9**
CHTO	**Chiang Mai** 2.3nm,0.6s,mb4.3	**79.08**	**295**	*e*P	**P**	**02 12 34.3**	**-2.3**
NVAR	**Mina Array Bea** 0.4nm,0.6s,mb3.9,baz=229,slow=10,SNR=4.3	**89.80**	**49**	P	**P**	**02 13 31.7**	**+1.3**
KHC	**Kasperske Hory**	**145.45**	**331**	*e*P	PKPdf	02 20 11.5	+2.0
KHC				*e*		02 20 19.0	
GERES	**GERESS Array B** 0.5nm,0.6s,baz=68,slow=3.5,SNR=4.8	**145.60**	**331**	PKPbc	PKPbc	02 20 09.0	-1.0

JMA 25 02:04:54.8, 3724N×13669E, h5km±1km, M3.5, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**167**	P	Pg	02 05 01.4	+0.4
JJH				S	Sg	02 05 05.6	+0.3
JSZ	**Suzu**	**0.58**	**69**	P	Pg	02 05 05.8	-0.1
JSZ				S	Sg	02 05 13.8	+0.5
JTT	**Ttatey**	**0.82**	**141**	P	Pg	02 05 10.8	+0.3
JTT				S	Sg	02 05 22.0	+0.9
JKG	**Kaga**	**1.00**	**197**	S	Sg	02 05 27.0	0.0
MAT	**Matsushiro**	**1.40**	**119**	P	Pn	02 05 20.7	-0.3
MAT				S	Sb	02 05 39.9	+0.3

*ISCJB **25** 02:07:48.7±4.5, 2069S×0.09×16904E±008, h5km±28km, mb4.5/12, Error ellipse: s-maj=16.4km s-min=11.7km az=154.8*
*IDC **25** 02:07:49.6±1.0, 2066S×16903E, h0km, mb4.1/6, mb1 4.3/8, mb1mx4.2/16, mbtmp4.2/8, ML4.0/2, Error ellipse: s-maj=36.2km s-min=19.7km az=148.0*
*NEIC **25** 02:07:54.5±0.5, 2071S×16905E, h35km, mb4.8/7, Error ellipse: s-maj=15.2km s-min=11.0km az=158.0*

ISC 25 02:07:51.4±5.2, 2072S±009×16906E±008, h11km±32km, n56, σ0§63/22, mb4.5/12, 3C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.78**	**241**	*e*P	**Pn**	**02 08 35.4**	**-0.4**
DZM	**Mont Dzumac** 29nm,0.3s,baz=62,slow=18,SNR=10	**2.78**	**241**	Pn	**Pn**	**02 08 35.0**	**-0.8**
DZM				Sn	**Sn**	**02 09 09.7**	**+0.3**
URZ	66nm,0.3s,baz=118,slow=23,SNR=7.2 **Urewera**	**18.82**	**160**	P	**Pn**	**02 12 12.6**	**+1.1**
CTA	0.3nm,0.3s,baz=350,slow=6.1,SNR=3.0 **Charters Tower**	**21.38**	**268**	P	**P**	**02 12 40.1**	**+1.0**
CTAO	3.8nm,0.7s,mb3.8,baz=102,slow=12,SNR=4.4 **Charters Tower**	**21.38**	**268**	*e*P	**P**	**02 12 39.0**	**0.0**
STKA	20nm,1.1s,mb4.4 **Stephens Creek**	**26.93**	**240**	P	**P**	**02 13 33.0**	**+0.2**
WB2	1.9nm,0.6s,mb3.8,baz=85,slow=12,SNR=5.3 **Warramunga Arr**	**32.52**	**265**	*e*P	**P**	**02 14 21.8**	**-0.6**
WRA	**Warramunga Arr** 2.7nm,1.1s,mb4.1,baz=94,slow=7.8,SNR=12	**32.53**	**265**	P	**P**	**02 14 22.1**	**-0.4**
ASAR	**Alice Springs** 3.3nm,0.7s,mb4.3,baz=84,slow=8.6,SNR=24	**32.63**	**258**	P	**P**	**02 14 23.4**	**0.0**
FITZ	**Fitzroy Crossi** 12nm,0.6s,mb4.7	**40.94**	**266**	*e*P	**P**	**02 15 33.7**	**-0.6**
MBWA	**Marble Bar** 12nm,0.9s,mb4.8	**45.92**	**260**	*e*P	**P**	**02 16 14.5**	**+0.1**
KSM	**Kuching**	**61.54**	**284**	*e*P	**P**	**02 18 10.0**	**+1.0**
QSPA	**South Pole Qui** 11nm,1.1s,mb4.7	**69.34**	**180**	*e*P	**P**	**02 18 58.3**	**-0.1**
YSS	**Yuzh-Sakhalins** 7.4nm,0.4s,mb5.0	**71.42**	**341**	*e*P	**P**	**02 19 10.6**	**-0.8**
CHTO	**Chiang Mai** 8.5nm,0.9s,mb4.7	**79.11**	**295**	*e*P	**P**	**02 19 57.7**	**+1.3**
SNAA	**Sanae**	**87.68**	**183**	*e*	**P**	**02 20 38.6**	**-1.0**
SNAA				*e*		02 20 45.0	
SNAA				*e*		02 20 49.9	
SNAA				*e*		02 20 52.8	
SNAA				*e*		02 20 57.2	
ULN	**Ulaanbaatar** 3.1nm,0.9s,mb4.5	**87.94**	**323**	*e*P	**P**	**02 20 41.2**	**+0.1**
VNA3	**Neumayer Olymp**	**88.28**	**180**	*e*	**P**	**02 20 41.8**	**-0.7**
VNA3				*e*		02 20 47.5	
VNA3				*e*		02 20 53.7	
VNA3				*e*		02 20 57.0	
VNA3				*e*		02 21 00.2	
SONM	**Songino Array** 2.1nm,0.9s,mb4.4,baz=135,slow=5.4,SNR=13	**88.30**	**323**	P	**P**	**02 20 43.1**	**+0.3**
VNA2	**Neumayer--Watz** baz=181,slow=4.2	**88.57**	**181**	*e*	**P**	**02 20 43.7**	**-0.1**
VNA2				*e*		02 20 49.1	
VNA2				*e*		02 20 53.8	
VNA2				*e*		02 20 56.3	
VNA2				*e*		02 21 01.4	
NVAR	**Mina Array Bea** 0.9nm,0.6s,mb4.2,baz=211,slow=5.9,SNR=7.5	**89.91**	**49**	P	**P**	**02 20 50.8**	**+0.2**
ARCES	**ARCESS Array B**	**126.45**	**345**	PKP	PKPdf	02 26 52.2	-1.5
ARCES	**ARCESS Array B** 2.9nm,0.9s,baz=70,slow=1.4,SNR=9.1	**126.45**	**345**	PKP	PKPdf	02 26 52.2	-1.5
FINES	**FINESS Array B**	**131.88**	**337**	PKP	PKPdf	02 27 03.7	-0.5
FINES	**FINESS Array B** 0.9nm,0.9s,baz=48,slow=2.8,SNR=6.1	**131.88**	**337**	PKP	PKPdf	02 27 03.7	-0.5
DPC	**Dobruska-Polom**	**143.43**	**330**	*e*PKP	PKPdf	02 27 22.7	-3.1
PVCC	**Panska Ves**	**144.09**	**332**	*e*PKP	PKPdf	02 27 25.1	-1.9
BRG	**Berggiesshubel** 6.7nm,0.9s	**144.11**	**333**	*i* PKP	PKPdf	02 27 24.9	-2.1
BRG				*i*		02 27 36.5	
CLL	4.5nm,0.8s **Collm**	**144.18**	**334**	⇑*i*P	PKPdf	02 27 24.7	-2.4
CLL	**Collm** comp=Z,5.0nm,0.6s	**144.18**	**334**	⇑*i*PKPdf	PKPdf	02 27 24.7	-2.4
CLL				*e*pPKPdf	pPKPdf	02 27 37.0	+6.1
PRU	**Pruhonice**	**144.50**	**331**	*e*PKP	PKPdf	02 27 26.2	-1.5
NKC	**Novy Kostel**	**145.22**	**333**	*e*PKP	PKPdf	02 27 28.4	-0.5
KHC	**Kasperske Hory**	**145.55**	**331**	*e*PKP	PKPdf	02 27 29.8	+0.3
KHC				*e*		02 27 42.5	
GERES	**GERESS Array B** comp=Z,4.0nm,0.6s,baz=22,slow=3.2,SNR=33	**145.70**	**331**	PKPbc	PKPbc	02 27 30.1	-0.1
GRA1	**Grafenberg Arr**	**146.15**	**334**	*e*PKP	PKPdf	02 27 30.9	+0.4
GRF	**Grafenberg Arr**	**146.15**	**334**	*e*PKP	PKPdf	02 27 30.9	+0.4
GIVF	**Givet**	**148.13**	**341**	*e*PKP1	PKPbc	02 27 36.4	-0.6
BAIF	**Baives**	**148.35**	**341**	*e*PKP1	PKPbc	02 27 36.9	-0.7
CDF	**Champ du Feu** comp=Z,12nm,0.6s	**148.73**	**336**	*e*PKP1	PKPbc	02 27 37.8	-0.9
HINF	**Hinteralfeld** comp=Z,6.5nm,0.7s	**149.38**	**336**	*e*PKP1	PKPbc	02 27 39.2	-1.1
HAU	**Haudompre**	**149.41**	**337**	*e*PKP1	PKPbc	02 27 39.4	-1.0
MEZF	**Maizieres J'vi**	**149.45**	**339**	*e*PKP1	PKPbc	02 27 39.8	-0.7
CABF	**La Chapelle**	**150.67**	**336**	*e*PKP1	PKPbc	02 27 43.3	-0.2
FLN	**La Foliniere**	**150.79**	**346**	*e*PKP1	PKPbc	02 27 42.3	-1.4
LDF	**La Druitiere**	**150.86**	**345**	*e*PKP1	PKPbc	02 27 42.2	-1.7
LOR	**Lormes** comp=Z,20nm,1.2s	**150.92**	**339**	⇑*i*PKP1	PKPbc	02 27 43.0	-1.1
SSF	**Saint Saulge**	**151.21**	**339**	*e*PKP1	PKPbc	02 27 43.7	-1.1
GRR	**Gorron**	**151.23**	**346**	*e*PKP1	PKPbc	02 27 43.6	-1.1
LPL	**La Plagne**	**151.31**	**334**	*e*PKP1	PKPbc	02 27 44.4	-0.6
LPG	**La Plagne** comp=Z,2.5nm,0.6s	**151.31**	**334**	*e*PKP1	PKPbc	02 27 44.7	-0.3
SMF	**Signal de Mont**	**151.46**	**338**	*e*PKP1	PKPbc	02 27 44.2	-1.1
AVF	**Avril sur Loir**	**151.50**	**339**	*e*PKP1	PKPbc	02 27 44.2	-1.2
BGF	**Bois d'Agland**	**151.87**	**340**	*e*PKP1	PKPbc	02 27 45.2	-1.1
ORIF	**Oris-en-Rattie**	**152.15**	**334**	*e*PKP1	PKPbc	02 27 45.9	-1.1
TCF	**Toulx Ste Croi** comp=Z,12nm,1.1s	**152.32**	**340**	*e*PKP1	PKPbc	02 27 46.1	-1.2
ESDC	**Sonseca Array** comp=Z,1.0nm,0.7s,baz=12,slow=3.9,SNR=5.8	**160.18**	**344**	PKPab	PKPab	02 28 30.8	-0.2

*ISCJB **25** 02:19:00.9±0.8, 3729N±003×13669E±004, h10km±5km, mb3.8/10, Error ellipse: s-maj=5.6km s-min=5.1km az=168.6*
*IDC **25** 02:19:01.0±0.8, 3726N×13677E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/20, mbtmp3.7/9, ML3.4/2, MS5.0/1, Ms1 5.0/1, ms1mx4.6/33, Error ellipse: s-maj=20.8km s-min=16.4km az=29.0*
*JMA **25** 02:19:01.5, 3727N×13670E, h7km±1km, M4.2 Broadband fault plane solution: P waves. NP1: ϕs39.00000°, δ55.00000°, λ143.00000°. NP2: ϕs153.00000°, δ60.00000°, λ41.00000°. Principal axes: T Plg49.0000°, Azm8.0000°; N Plg41.0000°, Azm182.0000°; P Plg3.0000°, Azm275.0000°;*
JMA Felt III J1.
*NEIC **25** 02:19:02.3±0.4, 3728N×13683E, h10km, mb4.5/3 Error ellipse: s-maj=10.3km s-min=9.2km az=60.0*
NEIC Recorded [3 JMA] in Ishikawa and [1 JMA] in Toyama Prefectures.
*MOS **25** 02:19:03.6±1.0, 3727N×13677E, h33km, mb4.6/2, Error ellipse: s-maj=22.0km s-min=13.9km az=104.0*

ISC 25 02:19:02.0±0.7, 3726N±003×13676E±004, h6km±5km, n27, σ1§00/36, mb3.8/10, 3C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**177**	⇑P	**Pg**	**02 19 08.6**	**+0.2**
JJH				S	**Sg**	**02 19 13.3**	**+0.5**
JSZ	**Suzu**	**0.52**	**68**	⇓P	**Pg**	**02 19 12.3**	**+0.3**
JSZ				S	**Sg**	**02 19 20.0**	**+1.3**
JHG	**Hegura jima**	**0.60**	**12**	⇑P	**Pg**	**02 19 13.1**	**-0.5**
JTT	**Ttatey**	**0.80**	**145**	⇓P	**Pg**	**02 19 17.4**	**+0.1**
JTT				S	**Sg**	**02 19 28.9**	**+1.3**
JKG	**Kaga**	**1.04**	**200**	⇑P	**Pg**	**02 19 21.0**	**-0.9**
JKG				S	**Sg**	**02 19 34.9**	**-0.4**
MAJO	**Matsushiro**	**1.36**	**121**	*e*Pn	**Pn**	**02 19 26.1**	**-1.4**
MAJO				*e*Sg	**Sg**	**02 19 44.0**	**-1.7**
MAT	**Matsushiro**	**1.36**	**121**	P

JKG	**Kaga**	**1.00**	**196**	⇓P	Pg	02 33 27.2	-0.1
JKG				S	Sg	02 33 41.1	+0.8
MAT	**Matsushiro**	**1.41**	**119**	P	Pn	02 33 33.5	-0.8
MAT				S	Sb	02 33 54.1	+1.1

*ISCJB **25** 02:38:14.8±0.9, 37.30N±0.003×136.68E±0.005, h9km±5km, mb3.8/9, Error ellipse: s-maj=6.4km s-min=5.7km az=152.4*
*JMA **25** 02:38:15.1±0.1, 37.27N×136.67E, h8km±1km, M3.9*
JMA Felt II J1.
*IDC **25** 02:38:15.0±0.9, 37.20N×136.78E, h0km, mb3.5/6, mb1 3.8/7, mb1mx3.6/19, mbtmp3.5/7, ML3.0/1, MS4.6/2, Ms1 4.6/2, ms1mx3.9/24, Error ellipse: s-maj=23.8km s-min=18.4km az=37.0*
*NEIC **25** 02:38:16.0±0.5, 37.24N×136.69E, h10km, mb3.9/2, Error ellipse: s-maj=15.9km s-min=9.5km az=47.0*

ISC 25 02:38:15.9±0.8, 3726N±004×13671E±005, h8km±5km, n22, σ0°78/28, mb3.8/9, 1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**170**	P			**Pg**	**02 38 21.6**	**-1.0**
JJH				S			**Sg**	**02 38 28.0**	**+0.9**
JSZ	**Suzu**	**0.56**	**70**	⇓P			**Pg**	**02 38 26.4**	**-0.2**
JSZ				S			**Sg**	**02 38 34.2**	**+0.4**
JTT	**Ttatey**	**0.83**	**142**	P			**Pg**	**02 38 31.6**	**-0.2**
JTT				S			**Sg**	**02 38 43.2**	**+0.7**
JKG	**Kaga**	**1.03**	**197**	P			**Pg**	**02 38 35.0**	**-0.6**
JKG				S			**Sg**	**02 38 49.1**	**+0.1**
MAJO	**Matsushiro**	**1.40**	**120**	*e*Pn			**Pn**	**02 38 40.8**	**-0.9**
MAJO				*e*Sn			**Sn**	**02 39 00.6**	**+0.1**
MAT	**Matsushiro**	**1.40**	**120**	P			**Pn**	**02 38 40.9**	**-0.8**
MAT				S			**Sb**	**02 39 00.0**	**-0.3**
MJAR	**Matsushiro Arr**	**1.40**	**120**	Pn			**Pn**	**02 38 42.1**	**+0.3**
MJAR				Sn			**Sn**	**02 39 00.8**	**+0.3**
MJAR	**Matsushiro Arr**	**1.40**	**120**	Pn			**Pn**	**02 38 42.1**	**+0.3**
MJAR	18nm,0.3s,baz=313,slow=18,SNR=62			Sn			**Sn**	**02 39 00.8**	**+0.3**
JHJ	16nm,0.3s,baz=310,slow=23,SNR=21 **Hachijo jima 2**	**4.84**	**148**	LR			LR	02 41 03.3	
KSRS	comp=Z,4μm,18.8s,baz=78,slow=35 **Korea Array**	**7.00**	**274**	Pn			**Pn**	**02 40 01.8**	**+3.2**
ASAJ	0.3nm,0.3s,baz=87,slow=14,SNR=2.8 **Asahikawa**	**8.18**	**31**	LR			LR	02 43 31.4	
ULN	comp=Z,7μm,18.4s,baz=134,slow=39 **Ulaanbaatar**	**24.13**	**305**	*e*P			**P**	**02 43 31.4**	**-0.8**
SONM	3.6nm,1.2s,mb3.7 **Songino Array**	**24.55**	**305**	P			**P**	**02 43 37.3**	**+1.3**
TIXI	1.0nm,1.0s,mb3.3,baz=113,slow=9.9,SNR=5.1 **Tiksi**	**34.69**	**356**	*e*P			**P**	**02 45 04.5**	**-1.2**
INK	0.9nm,0.5s,mb4.0 **Inuvik**	**55.88**	**27**	*e*P			**P**	**02 47 54.0**	**+0.4**
WRA	26nm,0.8s,mb5.3 **Warramunga Arr**	**56.94**	**183**	P			**P**	**02 48 01.0**	**-0.6**
ASAR	0.6nm,0.5s,mb3.9,baz=359,slow=7.7,SNR=4.6 **Alice Springs**	**60.66**	**183**	P			**P**	**02 48 27.3**	**-0.2**
RES	0.5nm,0.7s,mb3.8,baz=19,slow=8.0,SNR=5.0 **Resolute Bay**	**63.29**	**13**	*e*P			**P**	**02 48 44.0**	**-0.6**
YKA	49nm,0.8s **Yellowknife Ar**	**65.46**	**29**	P			**P**	**02 48 58.8**	**-0.2**
NVAR	0.2nm,0.7s,mb3.3,baz=306,slow=6.6,SNR=6.3 **Mina Array Bea**	**77.81**	**51**	P			**P**	**02 50 15.0**	**+1.2**
NVAR	**Mina Array Bea**	**77.81**	**51**	P			**P**	**02 50 15.0**	**+1.2**
PDAR	0.3nm,0.6s,mb3.4,baz=291,slow=7.6,SNR=3.3 **Pinedale Array**	**80.13**	**43**	P			**P**	**02 50 27.4**	**+1.0**
	0.7nm,1.0s,mb3.6,baz=243,slow=1.8,SNR=5.1								

JMA 25 02:43:41.1, 3722N×13669E, h9km±1km, M3.6, 1C, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.30**	**166**	P			Pg	02 43 47.3	+0.2
JJH				S			Sg	02 43 51.2	0.0
JSZ	**Suzu**	**0.58**	**67**	P			Pg	02 43 52.1	-0.3
JSZ				S			Sg	02 44 00.2	+0.2
JHG	**Hegura jima**	**0.65**	**16**	P			Pg	02 43 53.7	0.0
JHG				*e*S			Sg	02 44 02.7	+0.4
JTT	**Ttatey**	**0.80**	**140**	P			Pg	02 43 56.4	-0.1
JTT				S			Sg	02 44 07.9	+0.9
JKG	**Kaga**	**0.98**	**197**	⇑P			Pg	02 43 59.3	-0.7
JKG				S			Sg	02 44 13.0	+0.2
MAT	**Matsushiro**	**1.39**	**119**	P			Pn	02 44 06.2	-0.5
MAT				S			Sb	02 44 26.7	+1.6

JMA 25 02:48:58.8, 3720N×13669E, h12km±1km, M3.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.28**	**165**	P			Pg	02 49 04.6	0.0
JJH				*e*S			Sg	02 49 08.6	+0.1
JSZ	**Suzu**	**0.59**	**65**	P			Pg	02 49 10.1	-0.2
JSZ				S			Sg	02 49 18.3	+0.2
JHG	**Hegura jima**	**0.67**	**16**	P			Pg	02 49 11.4	-0.5
JHG				S			Sg	02 49 20.9	+0.2
MAT	**Matsushiro**	**1.38**	**118**	P			Pn	02 49 23.2	-0.7
MAT				S			Sn	02 49 42.7	+0.6

JMA 25 02:49:42.2, 3726N×13670E, h7km±1km, M3.7, 3C, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**169**	⇑P			Pg	02 49 49.4	+0.6
JJH				S			Sg	02 49 54.5	+1.2
JSZ	**Suzu**	**0.56**	**70**	P			Pg	02 49 53.1	+0.1
JSZ				S			Sg	02 50 00.4	+0.1
JHG	**Hegura jima**	**0.61**	**17**	⇑P			Pg	02 49 53.9	-0.1
JTT	**Ttatey**	**0.83**	**142**	P			Pg	02 49 58.0	-0.1
JTT				S			Sg	02 50 09.6	+0.8
JKG	**Kaga**	**1.02**	**197**	⇑P			Pg	02 50 01.6	-0.3
JKG				S			Sg	02 50 15.8	+0.6
MAT	**Matsushiro**	**1.40**	**120**	P			Pn	02 50 07.8	-0.4
MAT				S			Sb	02 50 27.2	+0.4

JMA 25 02:51:03.0, 3723N×13674E, h11km±1km, M3.5, 2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.31**	**174**	⇓P			Pg	02 51 09.3	+0.1
JJH				S			Sg	02 51 13.4	+0.1
JSZ	**Suzu**	**0.54**	**66**	P			Pg	02 51 13.5	-0.1
JSZ				S			Sg	02 51 21.0	+0.3
JHG	**Hegura jima**	**0.63**	**13**	P			Pg	02 51 15.0	-0.3
JHG				S			Sg	02 51 23.6	0.0
JTT	**Ttatey**	**0.78**	**143**	⇓P			Pg	02 51 17.9	-0.2
JTT				*e*S			Sg	02 51 29.0	+0.6
JKG	**Kaga**	**1.01**	**199**	P			Pg	02 51 21.5	-0.9
JKG				*e*S			Sg	02 51 34.9	-0.6
MAT	**Matsushiro**	**1.36**	**120**	P			Pn	02 51 27.0	-0.9
MAT				S			Sb	02 51 47.1	+1.2

*ISCJB **25** 02:58:06.5±0.8, 3726N±0.003×136.60E±0.004, h8km±5km, mb3.6/11, Error ellipse: s-maj=6.1km s-min=5.2km az=36.5*
*IDC **25** 02:58:06.6±0.8, 3722N×136.67E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.7/21, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=22.4km s-min=15.9km az=31.0*
*JMA **25** 02:58:07.0±0.1, 3723N×136.62E, h3km±1km, M4.2*
JMA Felt II J1.
*NEIC **25** 02:58:07.8±0.5, 37.16N×136.60E, h10km, mb3.9/3, Error ellipse: s-maj=15.3km s-min=10.0km az=208.0*

ISC 25 02:58:07.6±0.7, 3723N±003×13665E±004, h5km±5km, n23, σ0°95/30, mb3.6/11, 2C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.32**	**161**	⇑P			**Pg**	**02 58 14.0**	**+0.1**
JJH				*e*S			**Sg**	**02 58 18.8**	**+0.7**
JSZ	**Suzu**	**0.61**	**69**	⇓P			**Pg**	**02 58 19.3**	**0.0**
JSZ				*e*S			**Sg**	**02 58 28.0**	**+0.8**
JHG	**Hegura jima**	**0.65**	**19**	P			**Pg**	**02 58 19.9**	**-0.2**
JTT	**Ttatey**	**0.83**	**139**	⇑P			**Pg**	**02 58 23.3**	**-0.2**
JKG	**Kaga**	**0.99**	**195**	P			**Pg**	**02 58 25.8**	**-0.8**
JKG				*e*S			**Sg**	**02 58 39.4**	**0.0**
MAJO	**Matsushiro**	**1.42**	**118**	*e*Pn			**Pn**	**02 58 32.3**	**-1.8**
MAJO				*e*Sn			**Sn**	**02 58 53.2**	**0.0**
MAT	**Matsushiro**	**1.42**	**118**	P			**Pn**	**02 58 32.8**	**-1.3**
MAT				S			**Sb**	**02 58 54.0**	**+0.9**
MJAR	**Matsushiro Arr**	**1.43**	**118**	Pn			**Pn**	**02 58 33.8**	**-0.3**
MJAR	55nm,0.3s,baz=289,slow=17,SNR=187			Sn			**Sn**	**02 58 54.4**	**+1.2**
KSRS	28nm,0.3s,baz=291,slow=28,SNR=11 **Korea Array**	**6.96**	**274**	Pn			**Pn**	**02 59 51.7**	**+1.5**
KSRS	0.5nm,0.3s,baz=91,slow=14,SNR=11			Sn			**Sn**	**03 01 12.2**	**+2.5**
ENH	0.2nm,0.3s,baz=87,slow=24,SNR=4.0 **Enshi**	**23.58**	**261**	*e*P			**P**	**03 03 16.1**	**-3.3**
ULN	2.8nm,1.1s,mb3.6 **Ulaanbaatar**	**24.12**	**306**	*e*P			**P**	**03 03 25.4**	**+1.2**
SONM	3.3nm,1.0s,mb3.7 **Songino Array**	**24.54**	**305**	P			**P**	**03 03 28.2**	**+0.2**
MKAR	1.2nm,0.6s,mb3.6,baz=112,slow=9.6,SNR=11 **Makanchi Array**	**40.78**	**301**	P			**P**	**03 05 48.3**	**-1.3**
EKS2	0.3nm,0.6s,mb3.1,baz=96,slow=11,SNR=3.6 **Erkin-Say**	**47.53**	**297**	*e*P			**P**	**03 06 43.0**	**-0.8**
INK	1.9nm,0.8s,mb4.2 **Inuvik**	**55.93**	**27**	*e*P			**P**	**03 07 46.2**	**+0.1**
WRA	**Warramunga Arr**	**56.91**	**183**	P			**P**	**03 07 53.3**	**-0.3**
ASAR	0.5nm,0.6s,mb3.7,baz=0.1,slow=7.4,SNR=4.9 **Alice Springs**	**60.63**	**183**	P			**P**	**03 08 19.5**	**+0.1**
RES	0.3nm,0.8s,mb3.6,baz=16,slow=12,SNR=6.9 **Resolute Bay**	**63.33**	**13**	*e*P			**P**	**03 08 36.4**	**-0.7**
YKA	**Yellowknife Ar**	**65.51**	**29**	P			**P**	**03 08 51.3**	**-0.2**
YKA	**Yellowknife Ar**	**65.51**	**29**	P			**P**	**03 08 51.3**	**-0.2**
STKA	0.1nm,0.5s,mb3.1,baz=300,slow=7.0,SNR=3.9 **Stephens Creek**	**68.91**	**175**	P			**P**	**03 09 12.9**	**-0.3**
NVAR	1.4nm,0.8s,mb3.9,baz=299,slow=11,SNR=3.1 **Mina Array Bea**	**77.87**	**51**	P			**P**	**03 10 07.8**	**+1.4**
PDAR	0.2nm,0.5s,mb3.3,baz=290,slow=5.4,SNR=3.4 **Pinedale Array**	**80.18**	**43**	P			**P**	**03 10 18.2**	**-0.7**
	0.5nm,0.8s,mb3.5,baz=264,slow=1.3,SNR=4.8								

*IDC **25** 03:18:41.5±0.7, 2863N×140.51E, h0km, mb4.0/9, mb1 4.3/9, mb1mx4.0/16, mbtmp4.0/9, ML3.9/1, MS3.5/1, Ms1 3.5/1, ms1mx3.4/32, Error ellipse: s-maj=26.6km s-min=18.3km az=75.0*
*ISCJB **25** 03:18:45.7±1.3, 2849N±0.006×140.5E±0.1, h38km±12km, mb4.0/20, Error ellipse: s-maj=16.6km s-min=7.8km az=152.4*
*NEIC **25** 03:18:50.5±1.8, 2858N×140.54E, h65km±16km, mb4.1/12, Error ellipse: s-maj=13.6km s-min=10.4km az=105.0*

ISC 25 03:18:48.3±1.1, 2847N±006×1406E±01, h46km±10km, n31, σ0°93/32, mb4.0/20, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.94**	**134**	P			**Pn**	**03 19 17.8**	**-1.1**
CBIJ	28nm,0.3s,baz=296,slow=22,SNR=18			Sn			**Sn**	**03 19 42.0**	**0.0**
CBIJ	109nm,0.3s,baz=272,slow=22,SNR=14			LR			LR	03 19 55.2	
MJAR	comp=Z,1μm,21.3s,baz=290,slow=35 **Matsushiro Arr**	**8.30**	**346**	Pn			**Pn**	**03 20 46.4**	**+0.3**
MJAR	0.2nm,0.3s,baz=169,slow=13,SNR=2.5			Sn			**Sn**	**03 22 19.5**	**+1.0**
WB2	0.4nm,0.3s,baz=257,slow=23,SNR=4.1 **Warramunga Arr**	**48.51**	**188**	*e*P			**P**	**03 27 27.5**	**+0.8**
WRA	**Warramunga Arr**	**48.51**	**188**	P			**P**	**03 27 27.7**	**+1.0**
MKAR	7.6nm,0.9s,mb4.7,baz=8.9,slow=8.2,SNR=37 **Makanchi Array**	**48.54**	**309**	P			**P**	**03 27 25.8**	**-1.0**
ASAR	0.1nm,0.3s,mb3.8,baz=81,slow=12.3,SNR=2.9 **Alice Springs**	**52.24**	**188**	P			**P**	**03 27 55.2**	**+0.4**
TKM2	1.0nm,0.9s,mb3.7,baz=1.4,slow=4.6,SNR=10 **Tokmak 2**	**53.51**	**304**	*e*P			**P**	**03 28 05.3**	**+1.1**
EKS2	1.0nm,0.6s,mb3.9 **Erkin-Say**	**54.87**	**304**	*e*P			**P**	**03 28 15.4**	**+1.4**
INK	1.3nm,0.6s,mb4.1 **Inuvik**	**62.36**	**25**	*e*P			**P**	**03 29 05.2**	**-0.6**
AKTK	**Aktyubinsk**	**64.09**	**315**	P			**P**	**03 29 16.4**	**-1.1**
AKTO	**Aktyubinsk**	**64.09**	**315**	P			**P**	**03 29 16.4**	**-1.1**
RES	0.7nm,0.5s,mb3.9,baz=41,slow=9.4,SNR=3.8 **Resolute Bay**	**71.05**	**13**	*e*P			**P**	**03 29 59.7**	**-1.3**
YKA	**Yellowknife Ar**	**71.59**	**28**	P			**P**	**03 30 03.7**	**-0.7**
YKA	**Yellowknife Ar**	**71.59**	**28**	P			**P**	**03 30 03.7**	**-0.7**
FINES	0.9nm,0.6s,mb3.9,baz=296,slow=6.2,SNR=22 **FINESS Array B**	**76.11**	**333**	P			**P**	**03 30 28.9**	**-1.9**
NEW	0.7nm,0.5s,mb3.9,baz=57,slow=7.0,SNR=8.2 **Newport**	**76.82**	**42**	*e*P			**P**	**03 30 35.4**	**+0.2**
NVAR	2.1nm,0.8s,mb4.1 **Mina Array Bea**	**80.75**	**51**	P			**P**	**03 30 58.2**	**+1.2**
NVAR	**Mina Array Bea**	**80.75**	**51**	P			**P**	**03 30 58.2**	**+1.2**
HLID	2.3nm,0.5s,mb4.3,baz=286,slow=7.1,SNR=31 **Hailey**	**80.77**	**45**	*e*P			**P**	**03 30 57.7**	**+0.8**
FFC	1.9nm,0.9s,mb4.0 **Flin Flon**	**81.30**	**31**	*e*P			**P**	**03 30 58.9**	**-0.7**
NB2	1.5nm,0.7s,mb4.0 **NORSAR Subarra**	**81.83**	**338**	P			**P**	**03 31 00.1**	**-2.1**
NB2	comp=Z,1.2nm,0.7s,mb3.9,baz=44,slow=5.3 **NORSAR Subarra**	**81.83**	**338**	P			**P**	**03 31 00.1**	**-2.1**
NOA	comp=Z,1.2nm,0.7s,mb3.9 **NORSAR Array B**	**81.83**	**338**	P			**P**	**03 31 00.4**	**-1.8**
FCC	comp=Z,0.9nm,0.6s,mb3.9,baz=44,slow=5.3,SNR=6.6 **Fort Churchill**	**81.97**	**25**	*e*P			**P**	**03 31 03.1**	**+0.1**
MOOW	comp=Z,3.6nm,1.1s,mb4.2 **Moose Ponds**	**82.94**	**44**	*e*P			**P**	**03 31 09.0**	**+0.7**
TPAW	comp=Z,0.7nm,0.7s,mb3.8 **Teton Pass**	**82.95**	**44**	*e*P			**P**	**03 31 09.2**	**+0.8**
DUG	comp=Z,1.6nm,0.7s,mb4.2 **Dugway**	**83.53**	**48**	*e*P			**P**	**03 31 12.1**	**+0.6**
BW06	comp=Z,1.6nm,0.8s,mb4.2 **Boulder Array**	**84.20**	**44**	*e*P			**P**	**03 31 14.9**	**0.0**
PDAR	comp=Z,1.4nm,0.9s,mb4.1 **Pinedale Array**	**84.20**	**44**	P			**P**	**03 31 15.0**	**+0.1**
SRU	comp=Z,0.9nm,0.8s,mb4.0,baz=321,slow=1.9,SNR=8.0 **San Rafael**	**85.60**	**48**	*e*P			**P**	**03 31 22.5**	**+0.5**
LPAZ	comp=Z,2.6nm,0.8s,mb4.5 **La Paz**	**150.85**	**72**	PKPbc	PKPbc			03 38 37.0	+0.6
	comp=Z,1.8nm,0.8s,baz=339,slow=5.0,SNR=7.1								

*IDC **25** 03:23:01.9±3.6, 3761N×136.80E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.2/18, mbtmp3.4/2, Error ellipse: s-maj=64.2km s-min=32.9km az=13.0*
*ISCJB **25** 03:23:04.5±1.1, 3729N±005×136.64E±007, h8km±6km, mb3.4/2, Error ellipse: s-maj=9.7km s-min=7.0km az=29.6*
*JMA **25** 03:23:05.5, 3726N×136.69E, h7km±1km, M3.7*
JMA Felt II J1.

ISC 25 03:23:05.4±1.0, 3727N±004×13667E±007, h7km±6km, n9, σ0°72/15, mb3.4/2, 1C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.36**	**165**	⇑P			**Pg**	**03 23 12.5**	**+0.1**
JJH				S			**Sg**	**03 23 17.0**	**-0.1**
JSZ	**Suzu**	**0.58**	**72**	⇓P			**Pg**	**03 23 16.3**	**-0.3**
JSZ				S			**Sg**	**03 23 24.3**	**+0.2**
JHG	**Hegura jima**	**0.61**	**19**	P			**Pg**	**03 23 17.5**	**+0.4**
JTT	**Ttatey**	**0.85**	**141**	P			**Pg**	**03 23 21.3**	**-0.5**
JTT				S			**Sg**	**03 23 33.2**	**+0.3**
JKG	**Kaga**	**1.03**	**195**	P			**Pg**	**03 23 24.7**	**-0.5**
JKG				S			**Sg**	**03 23 39.1**	**+0.5**
MAT	**Matsushiro**	**1.43**	**120**	P			**Pn**	**03 23 31.2**	**-0.5**
MAT				S			**Sn**	**03 23 49.8**	**-0.9**
MJAR	**Matsushiro Arr**	**1.44**	**120**	Pn			**Pn**	**03 23 31.5**	**-0.2**
MJAR	15nm,0.3s,baz=315,slow=17,SNR=68			Sn			**Sn**	**03 23 53.6**	**+2.8**
WRA	24nm,0.3s,baz=273,slow=34,SNR=21 **Warramunga Arr**	**56.95**	**183**	P			**P**	**03 32 50.6**	**-0.6**
ASAR	0.3nm,0.5s,mb3.6,baz=360,slow=7.7,SNR=5.2 **Alice Springs**	**60.67**	**183**	P			**P**	**03 33 17.9**	**+0.8**
	0.1nm,0.5s,mb3.2,baz=12,slow=14,SNR=5.4								

JMA 25 03:24:06.5, 3720N×13672E, h12km±1km, M3.7, 2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.28**	**170**	P			Pg	03 24 12.3	+0.1
JSZ	**Suzu**	**0.57**	**64**	⇓P			Pg	03 24 17.3	-0.3
JSZ				*e*S			Sg	03 24 25.3	+0.2
JHG	**Hegura jima**	**0.67**	**14**	P			Pg	03 24 19.2	-0.3
JTT	**Ttatey**	**0.77**	**140**	P			Pg	03 24 21.2	-0.2
JTT				*e*S			Sg	03 24 32.0	+0.5
JKG	**Kaga**	**0.97**	**199**	⇓P			Pg	03 24 24.3	-0.9
JKG				*e*S			Sg	03 24 37.4	-0.5

*IDC **25** 03:40:41.8±1.8, 3743N×136.96E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/19, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=43.1km s-min=19.2km az=33.0*
*ISCJB **25** 03:40:42.1±0.8, 3732N±004×136.71E±005, h9km±5km, mb3.3/3, Error ellipse: s-maj=6.4km s-min=6.2km az=139.7*
*JMA **25** 03:40:42.8, 3729N×136.73E, h9km±1km, M4.0*
Broadband fault plane solution: P waves. NP1: φs98.00000°, δ53.00000°, λ-156.00000°. NP2: φs353.00000°, δ71.00000°, λ-39.00000°. Principal axes: T Plg11.0000°, Azm49.0000°; N Plg47.0000°, Azm151.0000°; P Plg41.0000°, Azm309.0000°;
JMA Felt III J1.
*NEIC **25** 03:40:42.4±1.2, 3745N×136.86E, h10km, mb3.4/1 Error ellipse: s-maj=58.5km s-min=14.0km az=219.0*

ISC 25 03:40:43.1±0.8, 3729N±004×13675E±005, h7km±5km, n13, σ0°81/21, mb3.3/3, 4C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.37**	**176**	⇑P			**Pg**	**03 40 50.3**	**+0.1**
JJH				S			**Sg**	**03 40 55.1**	**+0.1**
JSZ	**Suzu**	**0.52**	**72**	⇑P			**Pg**	**03 40 53.0**	**0.0**
JSZ				S			**Sg**	**03 41 00.3**	**+0.5**
JHG	**Hegura jima**	**0.57**	**14**	⇑P			**Pg**	**03 40 53.9**	**-0.2**
JTT	**Ttatey**	**0.83**	**145**	⇓P			**Pg**	**03 40 58.7**	**-0.3**
JTT				S			**Sg**	**03 41 10.4**	**+0.6**
JKG	**Kaga**	**1.07**	**198**	⇑P			**Pg**	**03 41 02.8**	**-0.7**
JKG				S			**Sg**	**03 41 17.4**	**0.0**
MAJO	**Matsushiro**	**1.39**	**122**	*e*Pn			**Pn**	**03 41 07.8**	**-1.0**
MAJO				*e*Sn			**Sn**	**03 41 27.5**	**+0.2**
MAT	**Matsushiro**	**1.39**	**122**	P			**Pn**	**03 41 07.6**	**-1.2**
MAT				S			**Sb**	**03 41 27.9**	**+0.7**
MJAR	**Matsushiro Arr**	**1.39**	**122**	Pn			**Pn**	**03 41 08.6**	**-0.3**
MJAR				Sn			**Sn**	**03 41 27.4**	**0.0**
MJAR	**Matsushiro Arr**	**1.39**	**122**	Pn			**Pn**	**03 41 08.6**	**-0.3**
MJAR	21nm,0.3s,baz=315,slow=17,SNR=75			Sn			**Sn**	**03 41 27.4**	**0.0**
KSRS	26nm,0.3s,baz=308,slow=18,SNR=16 **Korea Array**	**7.03**	**274**	Pn			**Pn**	**03 42 28.0**	**+1.7**
ULN	0.2nm,0.3s,baz=88,slow=14,SNR=3.4 **Ulaanbaatar**	**24.14**	**305**	*e*P			**P**	**03 45 56.6**	**-2.9**
SONM	0.7nm,0.6s,mb3.3 **Songino Array**	**24.56**	**305**	P			**P**	**03 46 04.2**	**+0.9**
WRA	0.3nm,0.6s,mb3.0,baz=103,slow=9.1,SNR=3.5 **Warramunga Arr**	**56.97**	**183**	P			**P**	**03 50 29.7**	**+0.6**
	0.3nm,0.5s,mb3.6,baz=360,slow=7.8,SNR=5.5								

*MOS **25** 03:44:35.7±1.4, 1856S×17788W, h103km, mb4.9/15, Error ellipse: s-maj=13.2km s-min=10.7km az=47.2*
*ISCJB **25** 03:44:55.7±1.4, 1979S±0.006×177.81W±0.006, h328km±13km, mb4.3/54, Error ellipse: s-maj=11.1km s-min=6.2km az=135.5*
*NEIC **25** 03:45:00.9±0.1, 1987S×177.75W, mb4.4/37, Error ellipse: s-maj=9.0km s-min=4.1km az=142.0*
*IDC **25** 03:45:01.8±2.0, 1998S×177.68W, h378km±19km, mb3.8/14, mb1 4.1/15, mb1mx4.0/18, mbtmp3.8/15, Error ellipse: s-maj=13.6km s-min=9.8km az=125.0*
*SZGRF **25** 03:45:02.9, 1981S×176.44W, h33km, Fiji Islands region*
*BJI **25** 03:45:04.4, 1922S×178.57W, h370km, mb4.6*

ISC 25 03:44:56.6±1.4, 1976S±007×177.7W±006, h324km±14km, h367km±4.4km:pP-P, n235, σ0°88/116, mb4.3/54, 27C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.17**	**46**	*e*Pn			**Pn**	**03 46 51.7**	**-0.9**
AFI	106nm,0.6s			*e*Sn			**S**	**03 48 17.2**	**-10**
URZ	**Urewera**	**18.96**	**192**	P			**P**	**03 48 53.7**	**-1.4**
URZ	9.8nm,0.3s,baz=355,slow=4.6,SNR=44			S			**S**	**03 52 06.9**	**-5.9**
SNZO	2.1nm,0.3s,baz=228,slow=23,SNR=9.3 **South Karori**	**22.42**	**195**	*e*P			**P**	**03 49 28.1**	**-0.3**
RPZ	11nm,0.6s,mb4.3 **Rata Peaks**	**25.66**	**199**	P			**P**	**03 49 57.9**	**+0.3**
ARMA	14nm,0.6s,mb4.4,baz=258,slow=3.5,SNR=10 **Armidale**	**29.59**	**243**	*e*P			**P**	**03 50 34.6**	**+2.0**
CNB	**Canberra Magne**	**32.82**	**235**	*e*P			**P**	**03 51 02.0**	**+1.4**
CTA	26nm,0.9s,mb4.5 **Charters Tower**	**33.78**	**263**	⇑*i*P			**P**	**03 51 10.8**	**+1.7**
CTA	7.7nm,0.3s,mb4.4 **Charters Tower**	**33.78**	**263**	⇑*i*P			**P**	**03 51 10.8**	**+1.7**
CTA	comp=Z,8.0nm,0.3s			pmax	pmax				
CTA	**Charters Tower**	**33.78**	**263**	P			**P**	**03 51 10.8**	**+1.7**
CTAO	comp=Z,9.3nm,0.4s,mb4.4,baz=93,slow=9.7,SNR=31 **Charters Tower**	**33.78**	**263**	*e*P			**P**	**03 51 10.8**	**+1.7**
CTAO	comp=Z,9.8nm,0.6s,mb4.2			pmax	pmax				
TAU	**Tasmania Unive**	**37.30**	**224**	*e*P			**P**	**03 51 38.2**	**-0.3**
TAU	comp=Z,17nm,1.0s,mb4.2 **Tasmania Unive**	**37.30**	**224**	*e*P			**P**	**03 51 38.2**	**-0.3**
TAU	comp=Z,17nm,1.0s,mb4.2			pmax	pmax				
STKA	**Stephens Creek**	**38.30**	**243**	*e*P			**P**	**03 51 48.0**	**+1.0**
STKA	comp=Z,5.6nm,0.9s,mb3.8 **Stephens Creek**	**38.30**	**243**	*e*P			**P**	**03 51 47.9**	**+0.9**
STKA	comp=Z,13nm,0.9s,mb4.2 **Stephens Creek**	**38.30**	**243**	*e*P			**P**	**03 51 48.0**	**+1.0**
STKA	comp=Z,5

KSRS	**Korea Array**	**76.48**	**318**	P	**P**		**03 56 12.8**	**+1.5**
KSRS				pmax	pmax			
	comp=Z,1.0nm,0.7s,mb3.6							
KSRS	**Korea Array**	**76.48**	**318**	P	**P**		**03 56 12.8**	**+1.4**
	comp=Z,1.1nm,0.7s,mb3.7,baz=125,slow=5.2,SNR=3.7							
PFO	**Pinyon Flat Ob**	**78.93**	**48**	*e*P	**P**		**03 56 24.8**	**-0.1**
	comp=Z,4.3nm,1.1s,mb4.1							
PFO	**Pinyon Flat Ob**	**78.93**	**48**	*e*P	**P**		**03 56 24.8**	**-0.1**
PFO				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.1							
MTUM	**Tungsten Hills**	**79.56**	**44**	*e*P	**P**		**03 56 28.8**	**+0.6**
NJ2	**Nanjing**	**79.58**	**309**	*e*P	**P**		**03 56 27.3**	**-1.1**
WAKR	**Walker**	**79.66**	**43**	*e*P	**P**		**03 56 29.3**	**+0.7**
HABR	**Khabarovsk**	**79.91**	**330**	*e*P	**P**		**03 56 29.9**	**+0.1**
HABR				*e*			03 56 35.5	
HABR				*e*			03 59 34.9	
HABR				*e*			04 06 22.2	
NVAR	**Mina Array Bea**	**80.34**	**43**	P	**P**		**03 56 33.0**	**+0.7**
	comp=Z,3.6nm,0.7s,mb4.2,baz=228,slow=9.9,SNR=36							
PAHR	**Pah Rah Range**	**80.39**	**42**	*e*P	**P**		**03 56 33.3**	**+0.8**
TPNV	**Topopah Spring**	**80.87**	**45**	*e*P	**P**		**03 56 35.5**	**+0.3**
	comp=Z,6.5nm,1.0s,mb4.3							
TPNV	**Topopah Spring**	**80.87**	**45**	*e*P	**P**		**03 56 35.5**	**+0.4**
TPNV				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.3							
SHPR	**Sheep Range**	**81.37**	**46**	*e*P	**P**		**03 56 37.5**	**-0.3**
KLR	**Kul'dur**	**82.00**	**329**	*e*P	**P**		**03 56 38.7**	**-2.0**
TUC	**Tucson**	**82.36**	**52**	*e*P	**P**		**03 56 44.0**	**+1.0**
	comp=Z,14nm,1.2s,mb4.7							
TUC	**Tucson**	**82.36**	**52**	*e*P	**P**		**03 56 44.0**	**+1.0**
TUC				pmax	pmax			
	comp=Z,14nm,1.2s,mb4.7							
WVOR	**Wild Horse Val**	**82.43**	**40**	*e*P	**P**		**03 56 42.9**	**-0.2**
	comp=Z,15nm,1.0s,mb4.8							
WVOR	**Wild Horse Val**	**82.43**	**40**	*e*P	**P**		**03 56 42.9**	**-0.2**
WVOR				pmax	pmax			
	comp=Z,15nm,1.0s,mb4.8							
MA2	**Magadan**	**83.13**	**344**⇑	*e*P	**P**		**03 56 45.2**	**-1.0**
MA2				pmax	pmax			
	comp=Z,21nm,1.8s,mb4.7							
ARUT	**Antelope Range**	**83.22**	**46**	*e*P	**P**		**03 56 47.5**	**+0.3**
GAMB	**Gambell**	**83.40**	**3**	*e*P	**P**		**03 56 47.9**	**+0.4**
TTA	**Tatalina**	**84.18**	**10**	*e*P	**P**		**03 56 51.0**	**-0.4**
	comp=Z,19nm,1.3s,mb4.8							
TTA				*e*pP	pP		03 58 16.4	+9.3
TTA	**Tatalina**	**84.18**	**10**	*e*P	**P**		**03 56 51.0**	**-0.5**
TTA				pmax	pmax			
	comp=Z,19nm,1.3s,mb4.8							
HAWA	**Hanford**	**84.23**	**36**	*e*P	**P**		**03 56 52.6**	**+0.6**
	comp=Z,18nm,1.5s,mb4.7							
MSU	**Marysvale**	**84.44**	**46**	*e*P	**P**		**03 56 54.1**	**+0.8**
MSU				pP	pP		03 58 18.7	+10
BMO	**Blue Mountains**	**84.61**	**38**	*e*P	**P**		**03 56 53.9**	**-0.1**
	comp=Z,20nm,1.9s,mb4.6							
TNA	**Tin City**	**85.39**	**4**	*e*P	**P**		**03 56 56.9**	**-0.4**
	comp=Z,4.2nm,0.8s,mb4.3							
TNA				*e*pP	pP		03 58 24.3	+11
TMUT	**Trail Mountain**	**85.49**	**46**	*e*P	**P**		**03 56 57.8**	**-0.7**
HLID	**Hailey**	**85.63**	**41**	*e*P	**P**		**03 56 59.3**	**+0.2**
	comp=Z,3.6nm,0.9s,mb4.2							
SEY	**Seymchan**	**85.71**	**347**⇑	*e*P	**P**		**03 56 59.1**	**+0.1**
SRU	**San Rafael**	**85.86**	**46**	*e*P	**P**		**03 57 00.7**	**+0.4**
LAZ	**Ladron**	**86.03**	**51**	*e*P	**P**		**03 57 01.4**	**+0.2**
MNTX	**Cornudas Mount**	**86.15**	**55**	*e*P	**P**		**03 57 01.9**	**0.0**
	comp=Z,4.6nm,1.0s,mb4.3							
LTX	**Lajitas**	**86.48**	**57**	*e*P	**P**		**03 57 04.0**	**+0.4**
	comp=Z,25nm,1.7s,mb4.8							
LTX	**Lajitas**	**86.48**	**57**	*e*P	**P**		**03 57 04.0**	**+0.4**
LTX				pmax	pmax			
	comp=Z,25nm,1.7s,mb4.8							
TXAR	**Lajitas Array**	**86.48**	**57**	P	**P**		**03 57 04.3**	**+0.8**
TXAR	**Lajitas Array**	**86.48**	**57**	P	**P**		**03 57 04.3**	**+0.8**
	comp=Z,3.2nm,0.8s,mb4.2,baz=216,slow=7.3							
NEW	**Newport**	**86.65**	**36**	*e*P	**P**		**03 57 03.2**	**-0.7**
	comp=Z,1.4nm,0.7s,mb3.9							
NEW	**Newport**	**86.65**	**36**	*e*P	**P**		**03 57 03.2**	**-0.7**
NEW				pmax	pmax			
	comp=Z,1.0nm,0.7s							
PV01	**Paradox Valley**	**86.73**	**48**	*e*P	**P**		**03 57 04.5**	**-0.1**
ANMO	**Albuquerque**	**86.78**	**51**	*e*P	**P**		**03 57 05.3**	**+0.4**
GDL2	**Guadalupe Moun**	**87.15**	**54**	*e*P	**P**		**03 57 07.6**	**+0.9**
MCMT	**McKenzie Canyo**	**87.25**	**40**	*e*P	**P**		**03 57 07.5**	**+0.6**
COLA	**College**	**87.44**	**12**	*e*P	**P**		**03 57 05.8**	**-1.4**
	comp=Z,7.8nm,0.8s,mb4.6							
COLA	**College**	**87.44**	**12**⇓	*i*P	**P**		**03 57 05.3**	**-2.0**
DLMT	**Dillon**	**87.68**	**40**	*e*P	**P**		**03 57 09.5**	**+0.6**
	comp=Z,9.5nm,1.0s,mb4.6							
REDW	**Red Top Meadow**	**87.75**	**42**	*e*P	**P**		**03 57 09.7**	**+0.5**
	comp=Z,11nm,1.3s,mb4.5							
TPAW	**Teton Pass**	**87.75**	**42**	*e*P	**P**		**03 57 09.6**	**+0.3**
	comp=Z,5.9nm,1.1s,mb4.3							
SNOW	**Snow King Moun**	**87.86**	**42**	*e*P	**P**		**03 57 10.3**	**+0.6**
	comp=Z,8.2nm,0.9s,mb4.6							
IMW	**Indian Meadow**	**87.96**	**42**	*e*P	**P**		**03 57 11.0**	**+0.8**
	comp=Z,9.7nm,1.0s,mb4.6							
MOOW	**Moose Ponds**	**88.00**	**42**	*e*P	**P**		**03 57 09.9**	**-0.5**
	comp=Z,2.2nm,1.0s,mb3.9							
LOHW	**Long Hollow**	**88.03**	**42**	*e*P	**P**		**03 57 10.9**	**+0.4**
QLMT	**Earthquake Lak**	**88.12**	**41**	*e*P	**P**		**03 57 12.3**	**+1.3**
BW06	**Boulder Array**	**88.28**	**43**	*e*P	**P**		**03 57 11.1**	**-0.7**
	comp=Z,3.2nm,1.0s,mb4.1							
PDAR	**Pinedale Array**	**88.28**	**43**	P	**P**		**03 57 11.4**	**-0.3**
	comp=Z,2.7nm,1.0s,mb4.0,baz=232,slow=3.2,SNR=15							
SMCO	**Snowmass**	**88.32**	**47**	*e*P	**P**		**03 57 12.4**	**+0.4**
BILL	**Bilibino**	**88.33**	**354**⇓	*i*P	**P**		**03 57 10.5**	**-0.9**
BILL				pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.1							
DAWY	**Dawson**	**88.69**	**16**	*e*P	**P**		**03 57 12.3**	**-0.8**
SDCO	**Great Sand Dun**	**88.71**	**49**	*e*P	**P**		**03 57 14.0**	**+0.1**
	comp=Z,3.0nm,0.9s,mb4.4							
VNA3	**Neumayer Olymp**	**88.86**	**176**	*e*P	**P**		**03 57 12.2**	**-1.9**
HHC	**Hu-ho-hao-te**	**88.99**	**314**	*e*P	**P**		**03 57 14.0**	**-1.1**
HHC				AP	pP		03 58 36.1	+4.5
HHC				AMB	AMB			
	comp=Z,16nm,0.5s,mb5.1							
KMI	**Kunming**	**89.21**	**297**	P	**P**		**03 57 18.8**	**+2.3**
KMI				AMB	AMB			
	comp=Z,6.0nm,0.9s,mb4.4							
VNA2	**Neumayer--Watz**	**89.31**	**177**	*e*P	**P**		**03 57 14.8**	**-1.3**
RLMT	**Red Lodge**	**89.60**	**41**	*e*P	**P**		**03 57 18.2**	**+0.3**
	comp=Z,37nm,1.0s,mb4.3							
GCMT	**Greycliff**	**89.68**	**40**	*e*P	**P**		**03 57 18.6**	**+0.4**
CD2	**Chengdu**	**90.57**	**303**	*e*P	**P**		**03 57 21.9**	**-0.8**
CD2				AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8							
YAK	**Yakutsk**	**91.51**	**338**⇑	*e*P	**P**		**03 57 25.8**	**-0.5**
YAK				pmax	pmax			
	comp=Z,7.0nm,0.5s,mb4.8							
INK	**Inuvik**	**93.51**	**15**	*e*P	**P**		**03 57 33.8**	**-1.6**
	comp=Z,220nm,1.4s							
INK	**Inuvik**	**93.51**	**15**	*e*P	**P**		**03 57 33.8**	**-1.6**
INK				pmax	pmax			
	comp=Z,220nm,1.4s							
ULN	**Ulaanbaatar**	**94.94**	**319**⇓	*e*P	**P**		**03 57 41.3**	**-1.1**
SONM	**Songino Array**	**95.34**	**319**	P	**P**		**03 57 44.9**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.5,baz=140,slow=7.1,SNR=2.8							
YKA	**Yellowknife Ar**	**95.75**	**25**	P	**P**		**03 57 44.3**	**-1.4**
	comp=Z,0.7nm,0.8s,mb3.8,baz=241,slow=4.5,SNR=12							
TIXI	**Tiksi**	**98.09**	**345**⇓	*e*P	**P**		**03 57 54.5**	**-1.6**
TIXI				pmax	pmax			
	comp=Z,7.0nm,2.4s,mb4.5							
TLY	**Talaya**	**98.45**	**322**⇑	*e*P	**P**		**03 57 54.9**	**-3.2**
TLY				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.4							
MKAR	**Makanchi Array**	**110.85**	**314**	PKiKP	PKiKP		04 02 49.8	-1.4
	comp=Z,0.9nm,0.6s,baz=114,slow=0.7,SNR=6.5							
KURK	**Kurchatov**	**113.60**	**318**	*e*PKP	PKiKP		04 02 54.5	-1.9
TKM2	**Tokmak 2**	**115.22**	**309**	*e*PKPdf	PKPdf		04 02 58.6	-1.2
UCH	**Uchtor**	**115.97**	**308**	*e*PKPdf	PKPdf		04 03 00.8	-0.4
EKS2	**Erkin-Say**	**116.54**	**309**	*e*PKPdf	PKPdf		04 03 01.4	-0.9
BRVK	**Borovoye**	**118.71**	**320**	*e*PKPdf	PKPdf		04 03 04.7	-1.4
ARU	**Arti**	**124.72**	**326**	*i* PKIKP	PKPdf		04 03 15.8	-1.8
ARU							04 05 09.3	
ARCES	**ARCESS Array B**	**128.24**	**350**	PKP	PKPdf		04 03 23.2	-0.7
	comp=Z,2.6nm,0.5s,baz=11,slow=1.0,SNR=25							
FINES	**FINESS Array B**	**135.13**	**344**	*i* PKIKP	PKPdf		04 03 37.2	+0.1
FINES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
FINES	**FINESS Array B**	**135.13**	**344**	PKP	PKPdf		04 03 37.3	+0.1
	comp=Z,0.8nm,0.4s,baz=44,slow=3.7,SNR=13							
OBN	**Obninsk**	**136.21**	**332**	*i* PKIKP	PKPdf		04 03 40.0	+0.6
NB2	**NORSAR Subarra**	**138.28**	**353**	PKP	PKPdf		04 03 32.9	-10
	comp=Z,1.1nm,0.8s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**138.28**	**353**	PKP	PKPdf		04 03 42.9	-0.1
	comp=Z,1.1nm,0.6s,baz=14,slow=4.0,SNR=5.3							
KIV	**Kislovodsk**	**138.59**	**315**	*e*PKPdf	PKPdf		04 03 45.3	+1.2
KIV	**Kislovodsk**	**138.59**	**315**	*e*PKIKP	PKPdf		04 03 45.3	+1.2
SUW	**Suwalki**	**142.22**	**340**	*e*PKP	PKPdf		04 03 47.7	-2.6
AKASG	**Malin Array Be**	**142.47**	**332**	PKP	PKPdf		04 03 46.0	-4.9
	comp=Z,2.1nm,0.4s,baz=41,slow=3.9,SNR=32							
SIM	**Simferopol'**	**143.56**	**321**	*d i* PKHKP	PKPdf		04 03 50.0	-3.0
SIM				pmax	pmax			
	comp=Z,35μm,0.8s							
MALT	**Malatya**	**143.65**	**308**	*e*PKPdf	PKPdf		04 03 52.1	-1.3
MALT	**Malatya**	**143.65**	**308**⇑	*i*P	PKPdf		04 03 52.1	-1.3
ESK	**Eskdalemuir**	**144.26**	**5**	*e*PKPdf	PKPdf		04 03 52.2	-1.6
BSEG	**Bad Segeberg**	**145.33**	**352**	*e*PKPbc	PKPbc		04 03 56.0	-0.3
LVV	**L'vov**	**145.33**	**335**	*i* PKHKP	PKPbc		04 03 55.6	-0.9
KWP	**Kalwaria**	**146.00**	**336**	*e*PKP	PKPdf		04 03 58.3	+1.2
KWP	**Kalwaria**	**146.00**	**336**⇓	*i*P	PKPdf		04 03 58.1	+1.1
OJC	**Ojcow**	**146.55**	**339**	*e*PKP	PKPdf		04 04 00.0	+2.1
STHS	**Stebnicka Huta**	**146.72**	**337**	*e*PKP	PKPbc		04 04 00.7	+0.2
STHS				*e*			04 04 03.5	
STHS	**Stebnicka Huta**	**146.72**	**337**	*e*PKP	PKPbc		04 04 00.6	+0.1
STHS				*e*			04 04 03.5	
KOLS	**Kolonicke sedl**	**146.73**	**336**	*e*PKP	PKPbc		04 04 00.4	-0.1
NRDL	**Niedersach Rie**	**146.76**	**351**	*e*PKPbc	PKPbc		04 04 00.6	+0.1
UZH	**Uzhgorod**	**146.97**	**335**⇑	*i*PKHKP			04 03 59.8	
ANTO	**Ankara**	**147.01**	**314**	*e*PKPbc	PKPbc		04 04 01.3	-0.3
ANTO	**Ankara**	**147.01**	**314**⇓	*i*P	PKPbc		04 04 01.7	+0.1
KSP	**Ksiaz**	**147.05**	**344**	*e*PKP	PKPbc		04 04 01.6	+0.3
KSP				*e*			04 04 04.2	
NIE	**Niedzica**	**147.06**	**338**	*e*PKP	PKPbc		04 04 02.0	+0.6
VRI	**Vrincioaia**	**147.06**	**328**⇑	P	PKPdf		04 03 58.9	-0.1
VRI	**Vrincioaia**	**147.06**	**328**⇑	*i*P	PKPdf		04 03 58.9	0.0
CRVS	**Cervenica-Dubn**	**147.07**	**336**	*e*PKP	PKPbc		04 04 01.7	+0.2
CRVS	**Cervenica-Dubn**	**147.07**	**336**	*e*PKP	PKPbc		04 04 01.6	+0.1
CLL	**Collm**	**147.39**	**347**	*i* PKPbc	PKPbc		04 04 01.8	-0.5
	comp=Z,19nm,0.8s							
CLL				*i* PKPab	PKPab		04 04 05.3	+0.2
	comp=Z,16nm,0.9s							
CLL				*e*(pPKPbc)			04 05 34.0	
CLL	**Collm**	**147.39**	**347**	*e*PKPbc	PKPbc		04 04 01.6	-0.7
CLL				*e*PKPab	PKPab		04 04 05.5	+0.4
OKC	**Ostrava-Krasne**	**147.41**	**341**	*e*PKPAB	PKPab		04 04 05.3	+0.1
UPC	**Upice**	**147.43**	**344**	*e*PKP	PKPbc		04 04 02.4	0.0
UPC				*e*			04 04 06.2	
UPC	**Upice**	**147.43**	**344**⇑	*e*PKP	PKPbc		04 04 02.4	0.0
UPC				*e*PKPab	PKPab		04 04 06.2	+1.0
DPC	**Dobruska-Polom**	**147.49**	**343**	*e*PKP	PKPbc		04 04 02.9	+0.4
DPC				*e*			04 04 05.9	
DPC	**Dobruska-Polom**	**147.49**	**343**⇑	*e*PKP	PKPbc		04 04 02.9	+0.4
DPC				*e*PKPAB	PKPab		04 04 05.9	+0.4
BRG	**Berggiesshubel**	**147.60**	**346**	*i* PKIKP	PKPbc		04 04 03.0	+0.2
BRG				*i*			04 04 06.2	
BRG				pmax	pmax			
	comp=Z,9.0nm,1.1s							
BRG				pmax	pmax			
	comp=Z,5.0nm,0.8s							
BRG	**Berggiesshubel**	**147.60**	**346**	*e*PKPbc	PKPbc		04 04 02.8	0.0
BRG				*e*PKPab	PKPab		04 04 06.2	+0.3
BRG	**Berggiesshubel**	**147.60**	**346**	*i* PKP	PKPbc		04 04 03.0	+0.2
	comp=Z,14nm,1.1s							
BRG				*i*			04 04 06.2	
	comp=Z,7.7nm,0.8s							
MORC	**Moravsky Berou**	**147.65**	**341**	*e*PKPbc	PKPbc		04 04 03.0	0.0
MORC				*e*PKPab	PKPab		04 04 06.3	+0.2
PVCC	**Panska Ves**	**147.78**	**345**	*e*PKP	PKPbc		04 04 03.3	0.0
PVCC	**Panska Ves**	**147.78**	**345**⇑	*e*PKP	PKPbc		04 04 03.3	0.0
KECS	**Kecovo**	**147.78**	**337**	*e*PKP	PKPbc		04 04 03.2	-0.2
KECS				*i*			04 04 07.2	
DRGR		**148.26**	**333**	P	PKPbc		04 04 04.6	-0.1
DRGR		**148.26**	**333**⇑	*i*P	PKPbc		04 04 03.7	-1.0
PRU	**Pruhonice**	**148.28**	**345**	*e*PKP	PKPbc		04 04 04.3	-0.3
PRU				*e*			04 04 09.4	
PRU	**Pruhonice**	**148.28**	**345**⇑	*e*PKP	PKPbc		04 04 04.3	-0.3
PRU				*e*PKPAB	PKPab		04 04 09.4	+0.7
MOX	**Moxa**	**148.30**	**349**	*e*PKPbc	PKPbc		04 04 04.0	-0.6
MOX				*e*PKPab	PKPab		04 04 08.7	0.0
TANN	**Tannenbergstha**	**148.35**	**347**	*e*PKPbc	PKPbc		04 04 04.4	-0.4
VYHS	**Vyhne**	**148.35**	**339**	*e*PKP	PKPbc		04 04 04.8	0.0
VYHS				*e*			04 04 10.0	
KOLL	**Kolacno**	**148.43**	**339**	*e*PKP	PKPbc		04 04 05.1	+0.1
KOLL				*e*			04 04 10.1	
KOLL				*e*			04 22 07.5	
KOLL	**Kolacno**	**148.43**	**339**	*e*PKP	PKPbc		04 04 05.1	+0.1
KOLL				*e*			04 04 10.1	
PSZ	**Piszkesteto**	**148.47**	**337**	*e*PKPbc	PKPbc		04 04 03.7	-1.5
PSZ				*e*PKPab	PKPab		04 04 10.2	+0.6
PSZ	**Piszkesteto**	**148.47**	**337**⇓	*i*P	PKPbc		04 04 03.8	-1.4
BUC1	**Bucharest**	**148.47**	**326**	P	PKPbc		04 04 05.5	+0.2
NKC	**Novy Kostel**	**148.53**	**347**	*e*PKP	PKPbc		04 04 05.0	-0.2
NKC				*e*			04 04 10.0	
NKC	**Novy Kostel**	**148.53**	**347**⇑	*e*PKP	PKPbc		04 04 05.0	-0.2
NKC				*e*PKPAB	PKPab		04 04 10.4	+0.7
CSS	**Prodhromos**	**148.66**	**305**	*e*PKPbc	PKPbc		04 04 05.3	-0.8
TREC	**Trest**	**148.67**	**343**	*e*PKIKP	PKPbc		04 04 05.7	+0.1
TREC	**Trest**	**148.67**	**343**⇑	*e*PKP	PKPbc		04 04 05.7	+0.1
SMOL	**Smolenice**	**148.80**	**340**	*e*PKP	PKPbc		04 04 06.6	+0.6
SMOL				*e*			04 04 12.4	
MANZ	**Manzenberg**	**148.83**	**348**	*e*PKPbc	PKPbc		04 04 05.6	-0.4
MODS	**Modra-Piesok**	**148.97**	**340**	*e*PKP	PKPbc		04 04 07.1	+0.7
MODS				*e*			04 04 12.5	
ROTZ	**Rotzenmuhle**	**149.02**	**347**	*e*PKPbc	PKPbc		04 04 06.3	-0.2
ROTZ				*e*PKPab	PKPab		04 04 12.1	+0.4
MEM	**Membach**	**149.07**	**355**	PKPbc	PKPbc		04 04 06.6	+0.1
ZST	**Bratislava**	**149.18**	**340**	*e*PKP	PKPbc		04 04 07.3	+0.4
ZST				*e*			04 04 13.2	
TNS	**Taunus Mts**	**149.21**	**352**	*e*PKPbc	PKPbc		04 04 06.2	-0.7
TNS				*e*PKPab	PKPab		04 04 12.7	+0.2
SNF	**Seneffe**	**149.28**	**357**	PKPbc	PKPbc		04 04 06.8	-0.3
GRA1	**Grafenberg Arr**	**149.28**	**349**	*e*PKPbc	PKPbc		04 04 06.9	-0.2
GRA1				*e*PKPab	PKPab		04 04 13.4	+0.6
GRF	**Grafenberg Arr**	**149.28**	**349**	*e*PKPbc	PKPbc		04 04 06.9	-0.2
GRF				*e*PKPab	PKPab		04 04 13.4	+0.6
GRFO	**Grafenberg**	**149.28**	**349**	*e*PKPab	PKPab		04 04 12.4	-0.4
GZR	**Gura Zlata**	**149.31**	**331**	P	PKPbc		04 04 07.0	-0.3
GZR	**Gura Zlata**	**149.31**	**331**⇓	*i*P	PKPbc		04 04 07.1	-0.2
KHC	**Kasperske Hory**	**149.31**	**345**	*e*PKP	PKPbc		04 04 06.7	-0.5
KHC				*e*			04 04 12.0	
KHC	**Kasperske Hory**	**149.31**	**345**⇑	*e*PKP	PKPbc		04 04 06.7	-0.5
KHC				*e*PKPAB	PKPab		04 04 12.0	-0.9
WET	**Wettzell**	**149.46**	**346**	*e*PKPbc	PKPbc		04 04 07.6	0.0
WET				*e*PKPab	PKPab		04 04 13.8	+0.2
GEC2	**GERESS Array S**	**149.55**	**345**	*e*PKPbc	PKPbc		04 04 07.0	-0.8
GEC2				*e*PKPab	PKPab		04 04 14.4	+0.5
GERES	**GERESS Array B**	**149.55**	**345**	PKPbc	PKPbc		04 04 07.3	-0.5
	comp=Z,7.1nm,0.8s,baz=21,slow=2.5,SNR=26							
GERES				PKPab	PKPab		04 04 13.3	-0.6
	comp=Z,1.9nm,0.8s,baz=17,slow=5.6,SNR=6.0							
BZS	**Buzias**	**149.65**	**333**	P	PKPbc		04 04 07.7	-0.5
BZS	**Buzias**	**149.65**	**333**⇑	*i*P	PKPbc		04 04 07.8	-0.3
GIVF	**Givet**	**149.66**	**357**⇑	*i*PKP1	PKPbc		04 04 07.4	-0.6
	comp=Z,35nm,0.9s							
DOU	**Dourbes**	**149.67**	**357**	PKPbc	PKPbc		04 04 07.8	-0.2
BAIF	**Baives**	**149.73**	**357**⇑	*i*PKP1	PKPbc		04 04 07.7	-0.5
	comp=Z,20nm,0.8s							
CONA	**Conrad Observa**	**149.80**	**342**⇓	*i*PKiKP	PKiKP		04 04 08.1	-1.1
	comp=Z,9.7nm,0.6s							
WLF	**Walferdange**	**150.00**	**355**	*e*PKPbc	PKPbc		04 04 08.5	-0.4
WLF	**Walferdange**	**150.00**	**355**	PKPbc	PKPbc		04 04 09.1	+0.2
PKSM	**Moragy**	**150.37**	**337**	P	PKPbc		04 04 09.8	0.0
PKSM	**Moragy**	**150.37**	**337**⇑	*i*P	PKPbc		04 04 09.7	-0.1
STU	**Stuttgart**	**150.52**	**351**	*e*PKPbc	PKPbc		04 04 10.2	+0.1
STU				*e*PKPab	PKPab		04 04 18.1	+0.2
FUR	**Furstenfeldbru**	**150.73**	**348**	*e*PKPbc	PKPbc		04 04 10.2	-0.4
FUR				*e*PKPab	PKPab		04 04 19.0	+0.1
FLN	**La Foliniere**	**150.99**	**4**	*e*PKP1	PKPbc		04 04 09.6	-1.6
BFO	**Black Forest**	**151.08**	**352**	*e*PKPbc	PKPbc		04 04 10.7	-0.7
CDF	**Champ du Feu**	**151.13**	**353**⇑	*i*PKP1	PKPbc		04 04 11.0	-0.5
	comp=Z,15nm,0.6s							
VTS	**Vitosha**	**151.17**	**327**⇓	*i*P	PKPbc		04 04 11.5	-0.3
VTS	**Vitosha**	**151.17**	**327**⇓	*i*P	PKPbc		04 04 11.5	-0.3
LDF	**La Druitiere**	**151.18**	**3**	*e*PKP1	PKPbc		04 04 09.9	-1.7
MEZF	**Maizieres J'vi**	**151.24**	**356**	*e*PKP1	PKPbc		04 04 11.0	-0.8
	comp=Z,9.2nm,0.5s							
SGMF	**Saint Gilles**	**151.31**	**7**	*e*PKP1	PKPbc		04 04 10.7	-1.2
	comp=Z,29nm,0.7s							
GRR	**Gorron**	**151.33**	**4**	*e*PKP1	PKPbc		04 04 10.5	-1.5
	comp=Z,18nm,0.4s							
WTTA	**Wattenberg**	**151.51**	**346**⇑	*i*P	PKPbc		04 04 11.7	-0.7
	comp=Z,11nm,0.6s							
HAU	**Haudompre**	**151.63**	**354**	*e*PKP1	PKPbc		04 04 11.3	-1.4
	comp=Z,12nm,0.6s							
SQTA	**Sankt Quirin**	**151.65**	**347**⇑	*i*P	PKPbc		04 04 11.8	-0.9
	comp=Z,5.6nm,0.8s							
HINF	**Hinteralfeld**	**151.76**	**353**	*e*PKP1	PKPbc		04 04 12.0	-1.0
	comp=Z,7.8nm,0.7s							
LOR	**Lormes**	**152.53**	**358**	*e*PKP1	PKPbc		04 04 13.4	-1.3
	comp=Z,7.0nm,0.6s							
SSF	**Saint Saulge**	**152.75**	**358**	*e*PKP1	PKPbc		04 04 14.0	-1.2
	comp=Z,7.8nm,0.7s							
CABF	**La Chapelle**	**153.03**	**354**	*e*PKP1	PKPbc		04 04 15.8	0.0
MFF	**Saint Martin d**	**153.16**	**4**	*e*PKP1	PKPbc		04 04 14.5	-1.6
	comp=Z,8.8nm,0.6s							
BGF	**Bois d'Agland**	**153.27**	**359**	*e*PKP1	PKPbc		04 04 15.6	-0.7
BNI	**Bardonecchia**	**154.51**	**353**	*e*PKPbc	PKPbc		04 04 19.1	0.0
BNI				*e*PKPab	PKPab		04 04 35.0	+0.1
MBDF	**Montbardon**	**154.82**	**352**	*e*PKP1	PKPbc		04 04 19.2	-0.5
ESDC	**Sonseca Array**	**159.45**	**14**	PKPab	PKPab		04 04 56.3	-0.1
	comp=Z,0.7nm,0.8s,baz=328,slow=4.6,SNR=3.6							
TORD	**Torodi Ar. Bea**	**173.40**	**175**	PKP	PKPdf		04 04 25.2	-2.9
	comp=Z,0.4nm,0.9s,baz=262,slow=6.5,SNR=4.9							
TORD				PKPab	PKPab		04 05 56.2	-2.2
	comp=Z,0.3nm,0.7s,baz=207,slow=3.9,SNR=4.5							

**JMA 25 04:01:04.6, 3725N

CN2	**Changchun**	**75.73**	**329**	*e*P		**P**	**04 14 13.0**	**0.0**
CN2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
MAW	**Mawson**	**76.98**	**202**	P		**P**	**04 14 20.8**	**+1.0**
	comp=Z,6.2nm,0.8s,mb4.6,baz=89,slow=7.6,SNR=4.9							
CHTO	**Chiang Mai**	**79.22**	**295**	*e*P		**P**	**04 14 34.6**	**+1.5**
	comp=Z,8.5nm,0.9s,mb4.7							
CD2	**Chengdu**	**81.11**	**308**	*e*P		**P**	**04 14 39.5**	**-3.5**
CD2					XP	sP	04 14 53.8	-5.4
CD2					PP	PP	04 17 47.8	-1.0
CD2					S	S	04 24 46.8	-3.4
CD2					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8							
SYO	**Syowa Base**	**83.43**	**196**	⇓*e*P		**P**	**04 14 49.0**	**-5.6**
SNAA	**Sanae**	**87.62**	**183**	*e*		**P**	**04 15 14.8**	**-0.6**
SNAA				*e*			04 15 20.3	
SNAA				*e*		pP	04 15 23.8	-3.5
SNAA				*e*		pP	04 15 28.2	+0.9
SNAA				*e*			04 15 36.0	
SNAA				*e*			04 15 42.6	
ULN	**Ulaanbaatar**	**88.05**	**323**	*e*P		**P**	**04 15 18.3**	**+0.6**
	comp=Z,6.6nm,1.1s,mb4.8							
ULN				*e*pP		pP	04 15 28.9	-0.7
VNA3	**Neumayer Olymp**	**88.21**	**180**	*e*		**P**	**04 15 17.3**	**-0.9**
VNA3				*e*			04 15 25.0	
VNA3				*e*		pP	04 15 28.9	-1.2
VNA3				*e*		pP	04 15 31.4	+1.3
VNA3				*e*			04 15 38.4	
VNA3				*e*			04 15 43.2	
VNA3				*e*			04 15 48.1	
VNA3				*e*			04 15 53.6	
SONM	**Songino Array**	**88.40**	**323**	P		**P**	**04 15 19.3**	**0.0**
	comp=Z,2.6nm,0.8s,mb4.5,baz=127,slow=4.9,SNR=21							
VNA2	**Neumayer--Watz**	**88.50**	**181**	*e*		**P**	**04 15 19.3**	**-0.3**
	baz=188,slow=3.9							
VNA2				*e*			04 15 26.9	
VNA2				*e*		pP	04 15 30.3	-1.2
VNA2				*e*		pP	04 15 33.4	+1.9
VNA2				*e*			04 15 39.8	
VNA2				*e*			04 15 43.5	
VNA2				*e*			04 15 49.9	
VNA2				*e*			04 15 54.8	
NVAR	**Mina Array Bea**	**89.88**	**49**	P		**P**	**04 15 26.3**	**-0.3**
NVAR	**Mina Array Bea**	**89.88**	**49**	P		**P**	**04 15 26.3**	**-0.3**
	comp=Z,0.9nm,0.8s,mb4.2,baz=235,slow=11,SNR=7.4							
ARCES	**ARCESS Array B**	**126.53**	**345**	PKP		PKPdf	04 21 28.5	-1.3
	comp=Z,3.6nm,0.9s,baz=32,slow=3.0,SNR=5.3							
NOA	**NORSAR Array B**	**136.91**	**344**	PKP		PKPdf	04 21 49.6	0.0
	comp=Z,0.5nm,0.7s,baz=33,slow=2.1,SNR=3.3							
KECS	**Kecovo**	**142.67**	**325**	*e*PKP		PKPdf	04 22 04.2	+3.8
DPC	**Dobruska-Polom**	**143.53**	**331**	*e*PKP		PKPdf	04 21 59.0	-2.9
DPC				*ex*		x	04 22 07.7	
UPC	**Upice**	**143.56**	**331**	*e*PKP		PKPdf	04 21 58.9	-3.1
UPC				*ep*PKP		pPKPdf	04 22 09.6	-4.7
KOLL	**Kolacno**	**143.70**	**327**	*e*PKP		PKPdf	04 22 07.4	+5.1
PVCC	**Panska Ves**	**144.19**	**332**	*e*PKP		PKPdf	04 22 00.9	-2.2
PVCC				*ep*PKP		pPKPdf	04 22 11.6	-3.8
BRG	**Berggiesshubel**	**144.21**	**333**	*e*PKPbc		PKPdf	04 22 00.8	-2.3
BRG	**Berggiesshubel**	**144.21**	**333**	*i* PKP		PKPdf	04 22 01.1	-2.0
	comp=Z,15nm,0.9s							
BRG				*i*			04 22 11.6	
	comp=Z,16nm,0.7s							
CLL	**Collm**	**144.27**	**334**	*i* PKPdf		PKPdf	04 22 00.8	-2.4
	comp=Z,14nm,1.0s							
CLL				*ep*PKPdf		pPKPdf	04 22 12.0	-3.5
CLL	**Collm**	**144.27**	**334**	*e*PKPbc		PKPdf	04 22 00.7	-2.5
MODS	**Modra-Piesok**	**144.41**	**327**	*e*PKP		PKPdf	04 22 02.7	-0.8
FBE	**Freiberg**	**144.42**	**334**	*e*PKPbc		PKPdf	04 22 01.8	-1.6
PRU	**Pruhonice**	**144.60**	**331**	*e*PKP		PKPdf	04 22 02.2	-1.6
PRU				*ep*PKP		pPKPdf	04 22 12.7	-3.4
ZST	**Bratislava**	**144.61**	**327**	*e*PKP		PKPdf	04 22 02.7	-1.2
TREC	**Trest**	**144.66**	**330**	*e*PKP		PKPdf	04 22 02.5	-1.4
CLZ	**Clausthal**	**144.87**	**337**	*e*PKPbc		PKPdf	04 22 03.0	-1.2
CLZ				*ep*PKPbc			04 22 13.5	
TANN	**Tannenbergstha**	**145.18**	**334**	*e*PKPbc		PKPbc	04 22 03.7	-0.7
NKC	**Novy Kostel**	**145.32**	**333**	*e*PKP		PKPdf	04 22 04.5	-0.5
NKC				*ep*PKP		pPKPdf	04 22 13.8	-3.5
MOX	**Moxa**	**145.34**	**335**	*e*P		PKPbc	04 22 04.2	-0.7
	comp=Z,43nm,1.8s							
MOX				*e*			04 22 15.4	
MOX				*e*			04 24 33.6	
MOX	**Moxa**	**145.34**	**335**	*e*PKPbc		PKPbc	04 22 04.2	-0.7
MOX				*ep*PKPbc		pPKPbc	04 22 15.0	-2.1
IBBN	**Ibbenburen**	**145.38**	**340**	*e*PKPbc		PKPbc	04 22 04.5	-0.5
CONA	**Conrad Observa**	**145.41**	**328**	⇑*i*PKPab		PKPab	04 22 05.8	+0.4
	comp=Z,19nm,0.9s							
KHC	**Kasperske Hory**	**145.65**	**331**	*e*PKP		PKPdf	04 22 05.6	0.0
KHC				*ep*PKP		pPKPdf	04 22 13.6	-4.3
MANZ	**Manzenberg**	**145.65**	**333**	*e*PKPbc		PKPbc	04 22 05.7	-0.2
ROTZ	**Rotzenmuhle**	**145.78**	**333**	*e*PKPbc		PKPbc	04 22 06.2	-0.1
GEC2	**GERESS Array S**	**145.80**	**331**	*e*PKPbc		PKPbc	04 22 06.0	-0.4
GERES	**GERESS Array B**	**145.80**	**331**	*e*PKPbc		PKPbc	04 22 06.4	0.0
	comp=Z,6.1nm,0.7s,baz=36,slow=2.5,SNR=40							
WET	**Wettzell**	**145.95**	**332**	*e*PKPbc		PKPbc	04 22 06.6	-0.3
GRA1	**Grafenberg Arr**	**146.25**	**334**	*e*PKPbc		PKPbc	04 22 07.5	-0.2
GRA1				*ep*PKPbc		pPKPbc	04 22 18.0	-1.9
GRF	**Grafenberg Arr**	**146.25**	**334**	*e*PKPbc		PKPbc	04 22 07.5	-0.2
GRF				*ep*PKPbc		pPKPbc	04 22 18.0	-1.9
DMUB	**Kingscourt**	**146.81**	**356**	*e*P		PKPdf	04 22 11.0	+3.6
TNS	**Taunus Mts**	**146.90**	**337**	*e*PKPbc		PKPbc	04 22 09.5	-0.1
DCN	**Croghan**	**147.38**	**356**	*e*P		PKPdf	04 22 11.0	+2.6
MEM	**Membach**	**147.40**	**340**	PKPbc		PKPbc	04 22 10.7	-0.4
STU	**Stuttgart**	**147.79**	**335**	*e*PKPbc		PKPbc	04 22 12.0	-0.1
STU				*e*PKPab		PKPab	04 22 14.7	+0.1
BCLA	**Clavier**	**147.79**	**340**	PKPab		PKPab	04 22 14.1	-0.5
SNF	**Seneffe**	**148.02**	**342**	PKPab		PKPab	04 22 15.0	-0.4
MOTA	**Moosalm**	**148.09**	**331**	⇑*i*P		PKPdf	04 22 11.8	+2.0
	comp=Z,7.1nm,1.0s							
SQTA	**Sankt Quirin**	**148.13**	**331**	⇓*i*P		PKPdf	04 22 12.5	+2.6
	comp=Z,6.7nm,1.0s							
WLF	**Walferdange**	**148.17**	**339**	*e*PKPbc		PKPbc	04 22 13.0	-0.1
WLF	**Walferdange**	**148.17**	**339**	PKPbc		PKPbc	04 22 13.5	+0.3
WLF	**Walferdange**	**148.17**	**339**	*e*PKPbc		PKPbc	04 22 13.1	0.0
WLF				*e*PKPab		PKPab	04 22 16.5	+0.4
GIVF	**Givet**	**148.22**	**341**	*e*PKP1		PKPbc	04 22 12.3	-0.9
DOU	**Dourbes**	**148.29**	**341**	PKPbc		PKPbc	04 22 13.2	-0.3
BAIF	**Baives**	**148.44**	**341**	*e*PKP1		PKPbc	04 22 12.9	-0.9
BFO	**Black Forest**	**148.49**	**335**	*e*PKPab		PKPab	04 22 17.4	0.0
CDF	**Champ du Feu**	**148.82**	**336**	*e*PKP1		PKPbc	04 22 13.8	-1.1
HINF	**Hinteralfeld**	**149.48**	**336**	*e*PKP1		PKPbc	04 22 15.3	-1.2
	comp=Z,21nm,1.3s							
HAU	**Haudompre**	**149.51**	**337**	*e*PKP1		PKPbc	04 22 15.4	-1.2
	comp=Z,9.7nm,0.8s							
MEZF	**Maizieres J'vi**	**149.54**	**339**	*e*PKP1		PKPbc	04 22 16.0	-0.6
	comp=Z,23nm,0.8s							
CABF	**La Chapelle**	**150.77**	**336**	*e*PKP1		PKPbc	04 22 19.0	-0.7
	comp=Z,15nm,0.9s							
FLN	**La Foliniere**	**150.88**	**346**	*e*PKP1		PKPbc	04 22 18.4	-1.4
	comp=Z,20nm,0.8s							
LDF	**La Druitiere**	**150.95**	**345**	*e*PKP1		PKPbc	04 22 18.4	-1.6
	comp=Z,16nm,0.8s							
LOR	**Lormes**	**151.01**	**339**	*e*PKP1		PKPbc	04 22 19.1	-1.1
	comp=Z,7.4nm,0.8s							
SSF	**Saint Saulge**	**151.31**	**339**	*e*PKP1		PKPbc	04 22 19.8	-1.1
	comp=Z,10nm,0.9s							
GRR	**Gorron**	**151.31**	**346**	*e*PKP1		PKPbc	04 22 19.5	-1.4
LPL	**La Plagne**	**151.41**	**334**	*e*PKP1		PKPbc	04 22 20.6	-0.6
LPG	**La Plagne**	**151.41**	**334**	*e*PKP1		PKPbc	04 22 20.7	-0.5
	comp=Z,6.0nm,0.7s							
SGMF	**Saint Gilles**	**151.79**	**348**	*e*PKP1		PKPbc	04 22 20.4	-1.6
ROSF	**Rostrenen**	**151.84**	**349**	*e*PKP1		PKPbc	04 22 20.8	-1.3
BGF	**Bois d'Agland**	**151.97**	**340**	*e*PKP1		PKPbc	04 22 21.2	-1.2
MBDF	**Montbardon**	**152.02**	**333**	*e*PKP1		PKPbc	04 22 21.9	-0.7
	comp=Z,7.7nm,0.8s							
ORIF	**Oris-en-Rattie**	**152.24**	**334**	*e*PKP1		PKPbc	04 22 22.1	-1.0
TCF	**Toulx Ste Croi**	**152.41**	**340**	*e*PKP1		PKPbc	04 22 22.2	-1.2
	comp=Z,14nm,1.0s							
ESDC	**Sonseca Array**	**160.27**	**344**	PKPab		PKPab	04 23 07.2	-0.3
	comp=Z,1.9nm,0.9s,baz=27,slow=2.5,SNR=7.3							
DBIC	**Dimbokro**	**164.81**	**203**	PKP		PKPdf	04 22 30.9	-1.5
	comp=Z,3.4nm,0.9s,baz=98,slow=6.7,SNR=3.0							
DBIC				PKPab		PKPab	04 23 28.4	+0.4
	comp=Z,3.6nm,0.9s,baz=119,slow=5.5,SNR=3.3							
TORD	**Torodi Ar. Bea**	**165.81**	**240**	PKP		PKPdf	04 22 32.2	-0.9
	comp=Z,0.4nm,0.9s,baz=315,slow=0.4,SNR=2.6							
TORD				PKPab		PKPab	04 23 32.1	-0.4
	comp=Z,0.8nm,0.7s,baz=111,slow=3.3,SNR=6.3							

*KRSC **25** 04:08:56.7±0.3, 6095N×16588E, h5km±12km, ML4.1*
*IDC **25** 04:08:60.0±2.9, 6068N×16548E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=78.6km s-min=24.2km az=0.0*
*ISCJB **25** 04:09:01.0±2.3, 6088N±004×16548E±0.10, h10km±15km, mb4.1/15, Error ellipse: s-maj=8.8km s-min=6.2km az=39.9*
*MOS **25** 04:09:01.4±1.8, 6085N×16550E, h11km, mb4.1/8, Error ellipse: s-maj=17.3km s-min=9.2km az=85.7*
*NEIC **25** 04:09:02.6±0.6, 6081N×16546E, h10km, mb4.2/8, Error ellipse: s-maj=17.6km s-min=8.3km az=169.0*

ISC 25 04:09:04.7±2.4, 6088N±005×1655E±01, h21km±19km, n47, σ1♀22/50, mb4.1/15, 1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMKR	**Semkarok**	**4.81**	**208**	*e*P	**Pn**	**04 10 13.7**	**-2.0**
SRKR	**Sorokina**	**4.81**	**210**	*e*P	**Pn**	**04 10 15.1**	**-0.7**
KBTR	**Krutoberegovo**	**4.90**	**198**	*e*P	**Pn**	**04 10 15.4**	**-1.6**
KBTR				*i* S	**Sn**	**04 11 13.6**	**+0.6**
SEY	**Seymchan**	**6.54**	**294**	⇓*i*PN	**Pn**	**04 10 40.1**	**+0.5**
MKZ	**Mys Kozlova**	**6.67**	**199**	*e*P	**Pn**	**04 10 39.9**	**-1.3**
BILL	**Bilibino**	**7.19**	**2**	*e*Pn	**Pn**	**04 10 47.9**	**-0.5**
	14nm,0.8s						
BILL	**Bilibino**	**7.19**	**2**	PN	**Pn**	**04 10 54.0**	**+5.6**
BILL				*e*		04 12 15.5	
BILL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BILL				smax			
	comp=E,17nm,0.9s						
BILL	**Bilibino**	**7.19**	**2**	P	**Pn**	**04 10 48.0**	**-0.4**
MA2	**Magadan**	**7.47**	**266**	*e*Pn	**Pn**	**04 10 51.6**	**-0.7**
	comp=E,20nm,0.9s						
MA2				*e*Sn	**Sn**	**04 12 17.6**	**+1.3**
MA2	**Magadan**	**7.47**	**266**	*e*PN	**Pn**	**04 10 51.6**	**-0.7**
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
MA2	**Magadan**	**7.47**	**266**	*e*P	**Pn**	**04 10 51.8**	**-0.5**
MA2				*i* S	**Sn**	**04 12 19.0**	**+2.8**
GNL	**Ganaly**	**8.29**	**213**	*e*P	**Pn**	**04 11 04.5**	**+0.9**
AVH	**Avacha**	**8.48**	**209**	*e*P	**Pn**	**04 11 07.5**	**+1.3**
PET	**Petropavlovsk**	**8.73**	**209**	*i* PN	**Pn**	**04 11 12.6**	**+3.1**
YAK	**Yakutsk**	**17.04**	**290**	*e*P	**Pn**	**04 13 04.4**	**+3.1**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.2s						
TIXI	**Tiksi**	**17.90**	**322**	*e*P	**Pn**	**04 13 11.1**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.7s						
YSS	**Yuzh-Sakhalins**	**19.21**	**234**	*i* P	**Pn**	**04 13 28.0**	**+0.1**
COLA	**College**	**21.22**	**59**	*e*P	**P**	**04 13 50.6**	**+1.9**
	comp=Z,4.3nm,1.0s,mb3.7						
COLA	**College**	**21.22**	**59**	*e*P	**P**	**04 13 50.6**	**+2.0**
COLA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.7						
KLR	**Kul'dur**	**22.31**	**254**	*e*P	**P**	**04 14 02.7**	**+2.3**
DAWY	**Dawson**	**24.97**	**59**	*e*P	**P**	**04 14 26.7**	**+0.5**
BOD	**Bodaibo**	**25.89**	**286**	*e*P	**P**	**04 14 32.8**	**-1.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.1						
INK	**Inuvik**	**26.10**	**48**	*e*P	**P**	**04 14 37.0**	**+0.6**
	comp=Z,255nm,1.4s,mb5.6						
INK	**Inuvik**	**26.10**	**48**	P	**P**	**04 14 37.6**	**+1.2**
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**26.10**	**48**	P	**P**	**04 14 37.6**	**+1.2**
	comp=Z,2.5nm,0.9s,mb3.7,baz=294,slow=8.1,SNR=9.0						
VLA	**Vladivostok**	**26.85**	**244**	*i* P	**P**	**04 14 44.5**	**+1.1**
ULN	**Ulaanbaatar**	**35.22**	**275**	*e*P	**P**	**04 15 57.9**	**+0.9**
	comp=Z,2.1nm,0.9s,mb4.1						
ULN	**Ulaanbaatar**	**35.22**	**275**	*e*P	**P**	**04 15 57.9**	**+0.9**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
YKA	**Yellowknife Ar**	**35.66**	**52**	P	**P**	**04 15 59.4**	**-1.2**
YKA	**Yellowknife Ar**	**35.66**	**52**	P	**P**	**04 15 59.4**	**-1.2**
	comp=Z,0.6nm,0.7s,mb3.7,baz=303,slow=8.4,SNR=14						
NVS	**Novosibirsk**	**41.46**	**300**	*e*P	**P**	**04 16 47.6**	**-1.8**
FCC	**Fort Churchill**	**45.69**	**46**	*e*P	**P**	**04 17 24.6**	**+1.2**
	comp=Z,2.5nm,0.8s,mb4.2						
FCC	**Fort Churchill**	**45.69**	**46**	*e*P	**P**	**04 17 24.6**	**+1.2**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**46.37**	**299**	*e*P	**P**	**04 17 28.8**	**-0.1**
	comp=Z,7.3nm,0.9s,mb4.6						
KURK	**Kurchatov**	**46.37**	**299**	*e*P	**P**	**04 17 28.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
MK31	**Makanchi Array**	**47.68**	**293**	*e*P	**P**	**04 17 38.1**	**-1.0**
MKAR	**Makanchi Array**	**47.68**	**293**	*i* P	**P**	**04 17 38.5**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.68**	**293**	P	**P**	**04 17 38.5**	**-0.6**
	comp=Z,0.9nm,0.6s,mb4.0,baz=44,slow=7.0,SNR=10						
RLMT	**Red Lodge**	**49.83**	**67**	*e*P	**P**	**04 17 56.5**	**+0.8**
	comp=Z,2.6nm,1.1s,mb4.2						
FLWY	**Flagg Ranch**	**49.98**	**69**	*e*P	**P**	**04 17 57.2**	**+0.4**
	comp=Z,3.0nm,0.8s,mb4.4						
BW06	**Boulder Array**	**51.53**	**70**	*e*P	**P**	**04 18 08.2**	**-0.3**
	comp=Z,2.3nm,1.1s,mb4.0						
PDAR	**Pinedale Array**	**51.53**	**70**	P	**P**	**04 18 08.4**	**-0.1**
	comp=Z,0.9nm,0.9s,mb3.7,baz=302,slow=3.3,SNR=6.5						
FINES	**FINESS Array B**	**54.10**	**337**	P	**P**	**04 18 26.3**	**-0.9**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**54.10**	**337**	P	**P**	**04 18 26.3**	**-0.9**
	comp=Z,0.7nm,0.8s,mb3.6,baz=7.5,slow=12,SNR=3.0						
NOA	**NORSAR Array B**	**56.81**	**345**	P	**P**	**04 18 46.3**	**-0.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA	**NORSAR Array B**	**56.81**	**345**	P	**P**	**04 18 46.3**	**-0.4**
	comp=Z,1.2nm,0.8s,mb4.0,baz=14,slow=7.4,SNR=3.4						
ARMA	**Armidale**	**91.68**	**192**	*e*P	**P**	**04 22 08.0**	**-1.8**
	comp=Z,1.3nm,0.8s,mb4.3						

GUC 25 04:29:17.7±0.6, 3064S×7243W, h38km±3km, MD3.6, ML3.2, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.34**	**114**	⇑*i*P	Pn	04 29 41.1	+1.2
CMCH				*i* S	Sn	04 29 59.2	+2.7
CMCH				AML	AML	04 30 01.5	
	comp=E,621nm,0.5s						
CHNG	**Los Chungos**	**1.48**	**148**	*e*P	Pn	04 29 24.3	-18
CHNG				*i* S	Sn	04 29 43.2	-17
TLL	**Tololo Astrono**	**1.48**	**72**	⇑*i*P	Pn	04 29 43.7	+1.9
TLL				*i* S	Sn	04 30 03.4	+3.5
PEL	**Peldehue**	**2.91**	**150**	*e*P	Pn	04 30 02.8	+1.4
PEL				*i* S	Sn	04 30 36.9	+1.8
PEL				AML	AML	04 30 38.9	
	comp=N,89nm,0.3s						
FCH	**Farellones**	**3.24**	**146**	*e*P	Pn	04 30 08.2	+2.1
FCH				*i* S	Sn	04 30 46.1	+2.7
FCH				AML	AML	04 30 47.9	
	comp=N,34nm,0.2s						
LMEL	**Las Melosas**	**3.72**	**150**	*i* S	Sn	04 30 57.4	+2.3
LMEL				AML	AML	04 31 02.5	
	comp=N,44nm,0.4s						

*ISCJB **25** 04:42:24.7±0.3, 678N±003×7295W±003, h167km±3km, mb4.7/88, Error ellipse: s-maj=5.0km s-min=4.4km az=178.9*
*FUNV **25** 04:42:24.9, 675N×7316W, h167km, MW4.8*
*NEIC **25** 04:42:25.4±0.4, 672N×7302W, h158km±4km, mb4.8/70, Error ellipse: s-maj=4.3km s-min=3.8km az=218.0*
NEIC Felt at Bogota.
*IDC **25** 04:42:25.6±0.4, 676N×7293W, h160km±4km, mb4.2/20, mb1 4.4/25, mb1mx4.3/28, mbtmp4.2/25, MS3.1/2, Ms1 3.1/2, ms1mx2.8/31, Error ellipse: s-maj=9.2km s-min=6.2km az=123.0*
*BJI **25** 04:42:25.3, 670N×7300W, h157km, mB5.1*

ISC 25 04:42:25.7±0.3, 676N±003×7293W±003, h160km±3km, h167km±1.9km:pP-P, n225, σ0♀82/226, mb4.7/88, 12C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.25**	**29**	⇓*i*P	**Pn**	**04 42 54.3**	**+0.7**
CAPV				*e*S	**Sn**	**04 43 15.7**	**+0.7**
ROSC	**El Rosal**	**2.35**	**217**	P	**Pn**	**04 43 06.2**	**+0.6**
	623nm,0.3s,baz=355,slow=1.9,SNR=2142						
ROSC				S	**Sn**	**04 43 37.4**	**+1.1**
	2μm,0.3s,baz=74,slow=17,SNR=27						
ROSC				LR	LR	04 44 01.8	
	comp=Z,293nm,19.0s,baz=192,slow=41						
SOCV	**Socops**	**2.55**	**53**	*e*P	**Pn**	**04 43 09.2**	**+1.4**
SOCV				*e*S	**Sn**	**04 43 41.2**	**+0.7**
VIGV	**El Vigia**	**2.58**	**37**	⇓*i*P	**Pn**	**04 43 08.7**	**+0.5**
VIGV				*e*S	**Sn**	**04 43 40.6**	**-0.6**
SDV	**Santo Domingo**	**3.10**	**47**	*e*Pn	**Pn**	**04 43 15.9**	**+1.2**
SDV				*e*Sn	**Sn**	**04 43 53.2**	**+0.5**
SDV	**Santo Domingo**	**3.10**	**47**	P	**Pn**	**04 43 16.0**	**+1.3**
	334nm,0.3s,baz=240,slow=6.6,SNR=2291						
SDV				S	**Sn**	**04 43 53.0**	**+0.3**
	471nm,0.3s,baz=240,slow=17,SNR=26						
SDV				LR	LR	04 44 27.0	
	comp=Z,372nm,20.1s,baz=190,slow=39						
ELOV	**Elorza**	**3.43**	**86**	*e*P	**Pn**	**04 43 20.7**	**+1.9**
ELOV				*e*S	**Sn**	**04 44 00.5**	**+0.4**
VIRV	**Villa del Rosa**	**3.75**	**8**	⇓*i*P	**Pn**	**04 43 21.0**	**-2.0**
VIRV				*e*S	**Sn**	**04 44 03.9**	**-3.8**
QARV	**Quebrada Arrib**	**4.17**	**35**	⇓*i*P	**Pn**	**04 43 28.8**	**+0.4**
QARV				*e*S	**Sn**	**04 44 15.3**	**-1.9**
SANV	**Sanarito**	**4.32**	**51**	⇑*i*P	**Pn**	**04 43 30.9**	**+0.5**
SANV				*e*S	**Sn**	**04 44 19.7**	**-1.1**
CURV	**Curarigua**	**4.36**	**42**	⇑*i*P	**Pn**	**04 43 31.3**	**+0.4**
DABV	**Dabajuro**	**4.71**	**29**	⇑*e*P	**Pn**	**04 43 35.5**	**0.0**
TEPV	**Terepaima**	**4.88**	**49**	⇑*i*P	**Pn**	**04 43 38.1**	**+0.5**
SIQV	**Siquisique**	**4.94**	**38**	⇓*e*P	**Pn**	**04 43 38.2**	**-0.3**
BAUV	**El Baul**	**5.30**	**66**	⇑*i*P	**Pn**	**04 43 42.8**	**-0.4**
BAUV				*e*S	**Sn**	**04 44 41.9**	**-2.0**
JACV	**Jacura**	**5.90**	**43**	*e*P	**Pn**	**04 43 51.1**	**0.0**
IMOV	**Isla Los Monje**	**5.91**	**20**	*e*P	**Pn**	**04 43 49.4**	**-1.8**
TURV	**Turiamo**	**6.22**	**54**	⇑*i*P	**Pn**	**04 43 54.8**	**-0.6**
CAOV	**Caicara del Or**	**6.58**	**85**	⇑*i*P	**Pn**	**04 43 59.8**	**-0.3**
MERV	**Las Mercedes**	**7.01**	**69**	⇑*i*P	**Pn**	**04 44 05.5**	**-0.4**
FUNV	**FUNVISIS**	**7.08**	**58**	⇑*e*P	**Pn**	**04 44 06.4**	**-0.5**
BCIP	**Isla Barro Col**	**7.25**	**290**	*e*Pn	**Pn**	**04 44 03.7**	**-5.4**
BCIP				*e*Sn	**Sn**	**04 45 23.9**	**-6.5**
BIRV	**Birongo**	**7.54**	**60**	⇑*i*P	**Pn**	**04 44 12.1**	**-0.9**
PRGV	**PARIAGUAN**	**8.44**	**76**	⇑*i*P	**Pn**	**04 44 24.4**	**-0.6**
OTAV	**Otavalo**	**8.51**	**221**	*e*Pn	**Pn**	**04 44 24.0**	**-1.8**
OTAV				*e*Sn	**Sn**	**04 45 54.7**	**-6.0**
PCRV	**Puerto La Cruz**	**8.87**	**67**	*e*P	**Pn**	**04 44 30.1**	**-0.5**
PCRV	**Puerto La Cruz**	**8.87**	**67**	P	**Pn**	**04 44 30.2**	**-0.5**
	9.2nm,0.3s,baz=215,slow=5.7,SNR=28						
PCRV				S	**Sn**	**04 46 10.3**	**+0.9**
	8.8nm,0.3s,baz=147,slow=20,SNR=3.1						
GURV	**El Guri**	**9.81**	**84**	*e*P	**Pn**	**04 44 42.0**	**-1.1**
GUNV	**Guanoco**	**10.44**	**70**	*e*P	**Pn**	**04 44 50.9**	**-0.4**
RIOV	**Rio Grande**	**11.10**	**83**	*e*P	**Pn**	**04 44 59.7**	**-0.2**
LUEV	**Luepa**	**11.43**	**94**	*e*P	**Pn**	**04 45 03.7**	**-0.6**
PCJ	**Portland Cotta**	**11.67**	**340**	⇓*e*P	**Pn**	**04 45 06.7**	**-0.7**
PCJ				⇓*e*S	**Sn**	**04 47 03.8**	**-13**
CMJ	**Castle Mountai**	**11.79**	**344**	⇓*e*P	**Pn**	**04 45 08.8**	**-0.2**
STH	**Stony Hill**	**11.87**	**342**

FRNY Flat Rock 37.93 359 eP P 04 49 28.7 +1.3
MSNY Massena 38.13 358 eP P 04 49 29.9 +0.8
CFAA Coronel Fontan 38.41 174 P P 04 49 30.8 -0.9
comp=E,0.1nm,0.3s,baz=354,slow=10,SNR=9.1
AMTX Amarillo 38.52 321 eP P 04 49 31.5 -1.1
comp=E,45nm,0.9s,mb5.1
KSU1 Kansas State U 38.63 330 eP P 04 49 32.0 -1.4
comp=E,45nm,0.7s,mb5.2
GDL2 Guadalupe Moun 38.70 315 eP P 04 49 34.8 +0.6
RCBR Riachuelo 39.01 108 eP P 04 49 38.4 +1.4
comp=E,4.8nm,0.6s,mb4.3
JFWS Jewell Farm 39.12 340 eP P 04 49 36.7 -0.7
comp=E,63nm,0.6s,mb5.4
MNTX Cornudas Mount 39.15 314 eP P 04 49 37.2 -0.7
comp=E,25nm,0.8s,mb4.9
CBKS Cedar Bluff 40.05 327 eP P 04 49 44.1 -1.1
comp=E,32nm,1.1s,mb4.9
BNM Barren Site 41.36 316 eP P 04 49 55.6 -0.4
LENM Lemitar 41.61 316 eP P 04 49 58.4 +0.3
COWI Conover 41.62 343 eP P 04 49 57.5 -0.4
comp=E,30nm,0.9s,mb4.9
ANMO Albuquerque 41.69 317 eP P 04 49 58.9 +0.2
comp=E,7.3nm,1.0s,mb4.3
LAZ Ladron 41.85 316 eP P 04 50 00.3 +0.2
ECSD EROS,Sioux Fal 42.28 334 eP P 04 50 01.9 -1.4
comp=E,13nm,0.5s,mb4.8
SDCO Great Sand Dun 42.72 321 eP P 04 50 07.5 +0.6
comp=E,22nm,0.9s,mb4.8
SDCO epP pP 04 50 43.4 +1.3
SDCO ePcP PcP 04 51 56.6 +0.9
TUC Tucson 43.43 311 eP P 04 50 12.3 -0.5
comp=E,11nm,0.8s,mb4.5
EYMN Ely 43.98 342 eP P 04 50 16.2 -0.7
ISCO Idaho Springs 44.07 323 eP P 04 50 18.4 +0.6
comp=E,23nm,1.0s,mb4.8
ISCO ePcP PcP 04 52 01.1 +0.8
MVCO Mesa Verde 44.33 318 eP P 04 50 20.0 +0.1
comp=E,7.9nm,0.6s,mb4.5
SMCO Snowmass 44.51 322 eP P 04 50 21.9 +0.7
comp=E,6.5nm,0.6s,mb4.4
PHWY Pilot Hill 44.95 325 eP P 04 50 21.2 -3.5
PV10 Paradox Valley 45.34 319 eP P 04 50 27.6 -0.3
WUAZ Wupatki 45.40 315 eP P 04 50 28.8 +0.5
comp=E,42nm,0.9s,mb5.1
AGMN Agassiz Refuge 45.75 339 eP P 04 50 30.1 -0.7
comp=E,23nm,0.6s,mb5.0
AGMN ePcP PcP 04 52 06.4 +0.6
RWWY Rawlins 46.20 324 eP P 04 50 35.3 +0.8
comp=E,21nm,0.9s,mb4.8
SRU San Rafael 46.71 319 eP P 04 50 38.8 +0.2
comp=E,20nm,1.0s,mb4.7
TMUT Trail Mountain 47.26 319 eP P 04 50 43.3 +0.5
PLCA Paso Flores 47.31 178 P P 04 50 42.2 -0.8
comp=E,1.1nm,0.5s,mb3.7,baz=344,slow=9.6,SNR=5.2
ULM Lac du Bonnet 47.41 340 P P 04 50 42.8 -1.0
comp=E,34nm,0.5s,mb5.2,baz=147,slow=9.1,SNR=100
MSU Marysvale 47.48 318 eP P 04 50 45.0 +0.5
DAU Daniels Canyon 47.90 320 eP P 04 50 48.2 +0.5
MPU Maple Canyon 47.93 320 eP P 04 50 48.4 +0.5
comp=E,28nm,1.0s,mb4.8
ARUT Antelope Range 47.97 316 eP P 04 50 48.3 0.0
JLU Jordanelle 48.13 320 eP P 04 50 49.8 +0.3
NLU North Lily Min 48.18 319 eP P 04 50 50.2 +0.4
SCHQ Schefferville 48.18 5 P P 04 50 50.1 +0.5
comp=E,17nm,0.6s,mb4.9,baz=195,slow=9.5,SNR=119
BW06 Boulder Array 48.24 324 eP P 04 50 49.9 -0.4
PDAR Pinedale Array 48.24 324 eP P 04 50 49.8 -0.5
comp=E,7.3nm,0.6s,mb4.5,baz=128,slow=8.6,SNR=74
CTU Camp Tracy 48.37 320 eP P 04 50 51.7 +0.4
comp=E,9.0nm,0.8s,mb4.5
HWUT Hardware Ranch 48.77 321 eP P 04 50 54.2 -0.1
comp=E,12nm,0.7s,mb4.6
DUG Dugway 48.78 319 eP P 04 50 54.4 -0.1
comp=E,8.9nm,0.7s,mb4.5
LAO LASA Array 48.98 330 eP P 04 50 55.3 -0.6
comp=E,10nm,0.6s,mb4.6
SPUT South Promonto 49.15 321 eP P 04 50 56.8 -0.5
DGMT Dagmar 49.29 333 eP P 04 50 58.4 +0.2
comp=E,95nm,0.6s,mb5.6
BGU Big Grassy Mou 49.31 320 eP P 04 50 58.5 0.0
REDW Red Top Meadow 49.36 324 eP P 04 50 58.8 0.0
comp=E,30nm,0.7s,mb5.0
SNOW Snow King Moun 49.36 324 eP P 04 50 59.2 +0.4
comp=E,16nm,0.7s,mb4.8
LOHW Long Hollow 49.36 324 eP P 04 50 58.5 -0.3
comp=E,14nm,0.6s,mb4.8
TPAW Teton Pass 49.49 324 eP P 04 50 59.2 -0.6
comp=E,11nm,0.5s,mb4.7
MOOW Moose Ponds 49.52 324 eP P 04 50 59.4 -0.7
comp=E,12nm,0.8s,mb4.6
RLMT Red Lodge 49.54 327 eP P 04 50 59.9 -0.2
TPNV Topopah Spring 49.55 314 eP P 04 51 00.7 +0.3
comp=E,16nm,1.0s,mb4.6
HVU Hansel Valley 49.62 321 eP P 04 51 00.2 -0.6
comp=E,7.5nm,0.6s,mb4.5
DCID1 Drake Creek 49.69 324 eP P 04 51 01.6 +0.4
FLWY Flagg Ranch 49.70 325 eP P 04 51 00.9 -0.4
comp=E,14nm,1.1s,mb4.5
TRCR Troy Canyon 49.72 316 eP P 04 51 02.0 +0.3
IMW Indian Meadow 49.73 324 eP P 04 51 01.5 -0.1
YFT Old Faithful 50.00 325 eP P 04 51 05.2 +1.6
GCMT Greycliff 50.18 327 eP P 04 51 04.9 -0.1
YMR Madison River 50.20 325 eP P 04 51 06.0 +0.9
comp=E,5.9nm,0.5s,mb4.5
QLMT Earthquake Lak 50.57 325 eP P 04 51 08.9 +1.1
BOZ Bozeman (W) 51.17 326 eP P 04 51 12.0 -0.4
comp=E,20nm,1.3s,mb4.6
MCMT McKenzie Canyo 51.38 324 eP P 04 51 14.4 +0.4
MTUM Tungsten Hills 51.39 313 eP P 04 51 14.8 +0.6
DLMT Dillon 51.55 325 eP P 04 51 15.3 +0.1
comp=E,18nm,1.1s,mb4.6
HLID Hailey 51.60 322 eP P 04 51 15.5 -0.1
comp=E,17nm,1.0s,mb4.6
EGMT Eagleton 51.66 329 eP P 04 51 15.5 -0.4
comp=E,9.9nm,0.6s,mb4.6
NVAR Mina Array Bea 51.66 315 P P 04 51 16.4 +0.2
comp=E,5.2nm,0.8s,mb4.2,baz=118,slow=8.1,SNR=41
LRM Limekiln Ridge 51.73 325 eP P 04 51 16.7 +0.2
WAKR Walker 52.50 314 eP P 04 51 23.1 +0.7
CHMT Chamberlain Mo 52.83 326 eP P 04 51 24.6 0.0
PAHR Pah Rah Range 52.97 316 eP P 04 51 25.8 -0.1
FFC Flin Flon 53.21 339 eP P 04 51 26.1 -1.1
comp=E,9.0nm,0.5s,mb4.8
WVOR Wild Horse Val 53.70 319 eP P 04 51 30.6 -0.5
comp=E,21nm,0.9s,mb4.9
WVOR epP pP 04 52 08.2 +0.4
BMO Blue Mountains 54.05 322 eP P 04 51 31.9 -1.7
comp=E,3.5nm,0.6s,mb4.3
BSMT Bassoo Peak 54.22 326 eP P 04 51 35.4 +0.7
OHCM Honcut 54.30 314 eP P 04 51 35.3 -0.2
FCC Fort Churchill 54.37 347 eP P 04 51 34.4 -1.2
comp=E,25nm,1.1s,mb4.9
FCC eP 04 51 34.6
LBCM Butte Creek Ri 54.81 316 P P 04 51 38.9 -0.3
LTIM Timbered Crate 55.05 316 P P 04 51 40.6 -0.2
HOG Hogback Mounta 55.65 317 P P 04 51 45.3 +0.2
NEW Newport 55.75 326 eP P 04 51 44.7 -1.1
comp=E,16nm,1.3s,mb4.7
KHMM Horse Mountain 56.48 315 eP P 04 51 51.9 +0.8
EPH Ephrata 56.69 324 P P 04 51 52.6 +0.2
EDM Edmonton 56.77 332 eP P 04 51 51.8 -1.0
HOOD Mount Hood Mea 56.97 321 eP P 04 51 55.9 +1.5
YKA Yellowknife Ar 63.39 340 P P 04 52 37.0 -0.7
YKA Yellowknife Ar 63.39 340 P P 04 52 37.0 -0.6
comp=E,20nm,0.6s,mb5.2,baz=132,slow=6.7,SNR=496
DLBC Dease Lake 67.47 331 eP P 04 53 04.2 +0.2
DBIC Dimbokro 67.55 86 P P 04 53 05.1 -0.2
comp=E,14nm,0.7s,mb4.8,baz=266,slow=6.5,SNR=29
RES Resolute Bay 69.05 354 eP P 04 53 12.9 -0.7
comp=E,526nm,1.9s
ESDC Sonseca Array 69.54 50 P P 04 53 16.7 -0.6
comp=E,0.3nm,0.5s,baz=270,slow=6.3,SNR=6.2
INK Inuvik 73.15 340 eP P 04 53 37.9 -0.5
comp=E,164nm,0.6s
INK Inuvik 73.15 340 P P 04 53 38.2 -0.1
comp=E,6.7nm,0.6s,mb4.6,baz=108,slow=6.0,SNR=110
INK pP pP 04 54 17.9 +0.7
comp=E,1.4nm,0.5s,baz=10,slow=6.9,SNR=2.1
TORD Toroidi Ar. Bea 73.56 78 P P 04 53 40.9 -0.9
comp=E,1.0nm,0.3s,mb4.0,baz=286,slow=6.4,SNR=73
DAWY Dawson 73.77 335 eP P 04 53 41.7 -0.3
EGAK Eagle 74.72 336 eP P 04 53 47.6 +0.1
comp=E,12nm,1.1s,mb4.4
TTA Tatalina 80.87 333 eP P 04 54 21.6 +0.1
comp=E,2.0nm,0.5s,mb4.0
NB2 NORSAR Subarra 81.28 29 P P 04 54 24.5 +0.7
comp=Z,3.4nm,0.6s,mb4.2,baz=268,slow=5.3
NOA NORSAR Array B 81.28 29 P P 04 54 24.9 +1.1
NOA NORSAR Array B 81.28 29 P P 04 54 24.9 +1.1
comp=Z,3.4nm,0.6s,mb4.2,baz=268,slow=5.4,SNR=22
HFS Hagfors 82.50 30 P P 04 54 30.1 -0.1
comp=Z,1.0nm,0.4s,mb3.8,baz=259,slow=1.5,SNR=7.5
GERES GERESS Array B 82.74 42 P P 04 54 31.9 +0.2
comp=Z,1.2nm,0.7s,mb3.7,baz=186,slow=1.2,SNR=5.6
MORC Moravsky Berou 85.19 41 eP P 04 54 45.1 +1.1
comp=Z,1.8nm,0.7s,mb3.9
ARCES ARCESS Array B 86.66 20 P P 04 54 51.1 +0.2
comp=Z,1.2nm,0.3s,mb4.2,baz=273,slow=4.0,SNR=5.9
VNA3 Neumayer Olymp 88.06 163 eP P 04 54 57.4 0.0
VNA3 e 04 54 59.5
VNA3 e 04 55 04.4
VNA3 e 04 55 09.9
VNA3 e 04 55 16.7
FINES FINESS Array B 88.40 28 P P 04 54 59.3 0.0
FINES FINESS Array B 88.40 28 P P 04 54 59.3 0.0
comp=Z,0.4nm,0.4s,mb3.6,baz=263,slow=2.4,SNR=5.6
VNA2 Neumayer--Watz 88.58 163 eP P 04 54 59.9 0.0
baz=312,slow=6.6
VNA2 e 04 55 02.8
VNA2 e 04 55 08.7
VNA2 e 04 55 12.0
VNA2 e 04 55 21.3
SNAA Sanae 90.22 163 eP P 04 55 06.5 -1.0
SNAA e 04 55 09.7
SNAA e 04 55 15.5
SNAA e 04 55 18.9
SNAA e 04 55 25.1
ZALV Zalesovo Beam 116.68 15 PKP PKPdf 05 00 50.8 0.0
comp=Z,2.2nm,0.4s,baz=273,slow=1.7,SNR=17
KURK Kurchatov 117.70 20 ePKPdf PKPdf 05 00 53.1 +0.2
MKAR Makanchi Array 122.31 20 PKP PKPdf 05 01 01.4 -0.4
comp=Z,1.6nm,0.3s,baz=302,slow=2.4,SNR=57
UCH Uchtor 122.91 28 ePKPdf PKPdf 05 01 05.3 +2.2
ULN Ulaanbaatar 125.61 0 ePKPdf PKPdf 05 01 09.6 +1.4
SONM Songino Array 125.64 1 PKP PKPdf 05 01 09.6 +1.4
comp=Z,2.8nm,0.5s,baz=319,slow=1.7,SNR=15
WMQ Urumqi 126.69 17 PKP PKPdf 05 01 11.5 +1.2
WMQ PP PP 05 03 14.3 +6.5
WMQ PP PP
comp=Z,157nm,6.7s
WMQ LR LR
comp=N,140nm,23.8s
WMQ LR LR
comp=E,250nm,28.5s
WMQ LR LR
comp=Z,235nm,27.0s
HHC Hu-ho-hao-te 132.45 355 ePKP PKPdf 05 01 19.5 -1.9
HHC PP PP 05 03 47.9 +2.9
HHC PKS 05 04 53.3
HHC SKS SKSdf 05 08 13.1 -4.8
HHC SKKS SKKSac 05 10 19.3 -7.3
HHC PP PP
comp=Z,362nm,13.3s
BJI Beijing 132.68 350 PKP PKPdf 05 01 22.3 +0.5
LZH Lanzhou 137.27 4 ePKP PKPdf 05 01 25.5 -5.0
LZH LR LR
comp=N,27nm,19.5s
LZH LR LR
comp=Z,38nm,20.4s
NJ2 Nanjing 139.80 344 ePKP PKPdf 05 01 34.4 -0.9
CD2 Chengdu 142.41 5 ePKP PKPdf 05 01 38.9 -1.1
CD2 PP PP 05 04 50.4 +3.5
CD2 PKS 05 05 13.3
CD2 SKS SKSdf 05 08 30.9 -4.3
CD2 SKKS SKKSac 05 11 23.3 -2.7
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,130nm,26.2s
CD2 LR LR
comp=Z,110nm,24.4s
GYA Guiyang 146.98 1 PKP PKPdf 05 01 49.4 +1.4
GYA APKP 05 02 26.4
GYA XPKP 05 02 41.0
GYA PP PP 05 05 18.8 +4.7
GYA PKS 05 05 21.9
GYA SKS SKSdf 05 08 40.8 -1.3
GYA PP PP
comp=Z,120nm,7.9s
KMI Kunming 148.03 7 PKP PKPdf 05 01 49.3 -0.5
ASAR Alice Springs 149.23 234 PKP PKPdf 05 01 52.1 +0.4
comp=Z,3.4nm,0.6s,baz=115,slow=2.7,SNR=34
ASAR PKPbc PKPbc 05 01 55.6 -0.5
comp=Z,3.3nm,0.7s,baz=118,slow=3.3,SNR=34
ASAR pPKPbc pPKPbc 05 02 36.5 -1.6
comp=Z,2.3nm,0.9s,baz=121,slow=2.6,SNR=2.5
PALK Pallekele 150.23 63 ePKPbc PKPbc 05 01 59.6 +0.7
WRA Warramunga Arr 150.48 241 PKP PKPdf 05 01 54.5 +0.7
comp=Z,3.4nm,0.4s,baz=107,slow=2.7,SNR=49
WRA PKPbc PKPbc 05 01 58.7 -0.6
comp=Z,3.8nm,0.4s,baz=107,slow=2.4,SNR=45
WRA pPKPbc pPKPbc 05 02 40.6 -0.7
comp=Z,1.9nm,0.4s,baz=105,slow=3.1,SNR=2.1
CHTO Chiang Mai 153.35 17 ePKPbc PKPbc 05 02 05.7 -0.1

*ISCJB **25** 04:56:17.4±1.2,3725N±005×13665E±008,h9km±8km, Error ellipse: s-maj=11.4km s-min=7.2km az=29.5*
*JMA **25** 04:56:18.3,3721N×13669E,h10km±1km,M3.5*
JMA Felt I J1.
ISC 25 04:56:17.7±1.2,3724N±005×13664E±008,h10km±8km,n6, σ0°33/11,1C-1D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.34	160	⇑P	Pg	04 56 24.5	+0.1
JJH				S	Sg	04 56 29.2	+0.4
JSZ	Suzu	0.61	70	P	Pg	04 56 29.4	-0.2
JSZ				S	Sg	04 56 37.5	-0.1
JHG	Hegura jima	0.65	20	P	Pg	04 56 30.7	+0.5
JTT	Ttatey	0.84	139	⇓P	Pg	04 56 33.6	-0.4
JTT				S	Sg	04 56 44.9	-0.1
JKG	Kaga	0.99	195	P	Pg	04 56 36.6	-0.2
JKG				S	Sg	04 56 49.8	0.0
MAT	Matsushiro	1.44	119	P	Pn	04 56 43.2	-0.6
MAT				S	Sn	04 57 03.2	+0.5

*CSEM **25** 04:57:08.3±0.3,2815N×5553E,h30km, ML3.9/3, Error ellipse: s-maj=12.8km s-min=1.5km az=47.0*
*KISR **25** 04:57:09.8±0.8,2672N×5438E,h34km±999km,ML3.0*
*ISCJB **25** 04:57:10.3±2.0,275N±02×550E±02,h10km, Error ellipse: s-maj=37.6km s-min=4.8km az=36.6*
ISC 25 04:57:12.9±3.3,276N±02×551E±02,h23km±34km,n12, σ0°88/18,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BANOM	Banah	1.95	147	P	Pn	04 57 43.3	-1.3
	SNR=53						
BANOM	Banah	1.95	147	Pn	Pn	04 57 43.2	-1.4
	SNR=53						
BANOM				Sn	Sn	04 58 08.8	+0.5
FAQ	Al Faqa, Dubai	2.84	171	Pn	Pn	04 57 57.5	+0.6
HATD	Hatta, Dubai	2.88	161	Pn	Pn	04 57 57.2	-0.2
	SNR=5.9						
ASUD	Al Ashush, Dub	2.93	176	Pn	Pn	04 57 59.5	+1.4
	SNR=6.1						
ASHO	Ashiyiah	2.99	163	P	Pn	04 57 59.0	0.0
	SNR=25						
QRN	Al-Qurain	6.46	282	eP	Pn	04 58 46.4	-0.2
QRN				eS	Sn	04 59 58.0	-1.6
NAY	Al-Naaiem	7.13	285	eP	Pn	04 58 56.4	+0.6
NAY				eS	Sn	05 00 16.1	0.0
NAY				AML	AML	05 00 19.4	
	comp=Z,1.6nm,0.5s						
NAY	Al-Naaiem	7.13	285	eP	Pn	04 58 56.4	+0.6
NAY				eS	Sn	05 00 16.1	-0.1
	comp=Z,1.6nm,0.5s						
RST	Umm Al-Ruwaisa	7.39	287	eP	Pn	04 58 59.8	+0.4
RST				eS	Sn	05 00 23.7	+1.1
RST				AML	AML	05 00 25.1	
	comp=Z,4.1nm,0.6s						
RST	Umm Al-Ruwaisa	7.39	287	eP	Pn	04 58 59.8	+0.3
RST				eS	Sn	05 00 23.7	+1.1
	comp=Z,4.1nm,0.6s						
SHAO	Shalim	9.51	177	P	Pn	04 59 27.1	-1.3
	SNR=5.6						

*IDC **25** 04:57:45.3±2.9,2127S×16934E,h0km,mb3.9/3, mb1 4.1/4,mb1mx3.9/14,mbtmp3.9/4,ML3.5/1,MS4.1/1, Ms1 4.1/1,ms1mx3.3/29,Error ellipse: s-maj=142.2km s-min=25.9km az=155.0*
*ISCJB **25** 04:57:49.5±4.0,2155S±07×1694E±03,h45km±35km, mb4.0/4, Error ellipse: s-maj=116.1km s-min=30.0km az=165.3*
*NEIC **25** 04:57:49.8±9.8,2128S×16932E,h31km±69km,mb4.2/1, Error ellipse: s-maj=75.8km s-min=34.3km az=165.0*
ISC 25 04:57:49.2±7.3,213S±07×1693E±03,h25km±57km,n10, σ0°55/8,mb4.0/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.78	253	eP	Pn	04 58 31.7	-0.3
DZM				eS	Sn	04 59 04.0	-0.8
DZM	Mont Dzumac	2.78	253	Pn	Pn	04 58 32.4	+0.4
	6.7nm,0.3s,baz=87,slow=22,SNR=62						
DZM				Sn	Sn	04 59 05.6	+0.8
	16nm,0.3s,baz=0.0,slow=21,SNR=8.6						
ASAR	Alice Springs	32.75	259	P	P	05 04 20.2	-0.1
	1.1nm,1.0s,mb3.8,baz=84,slow=8.5,SNR=4.2						
ULN	Ulaanbaatar	88.54	323	eP	P	05 10 39.2	-0.3
	0.7nm,0.5s,mb4.2						
SONM	Songino Array	88.89	323	P	P	05 10 41.4	+0.3
	0.9nm,0.9s,mb4.1,baz=134,slow=11,SNR=5.2						
NVAR	Mina Array Bea	90.10	48	P	P	05 10 47.1	0.0
	0.6nm,0.7s,mb4.0,baz=207,slow=5.6,SNR=5.5						
KHC	Kasperske Hory	146.16	331	ePKP	PKPdf	05 17 26.0	-0.1
KHC				ex	x	05 17 46.5	
GERES	GERESS Array B	146.31	331	PKPbc	PKPbc	05 17 27.6	0.0
	0.6nm,0.5s,baz=46,slow=5.8,SNR=6.1						
GRA1	Grafenberg Arr	146.76	334	ePKP	PKPdf	05 17 30.4	+3.3
GRF	Grafenberg Arr	146.76	334	ePKP	PKPdf	05 17 30.4	+3.3

*ISCJB **25** 04:58:59.9±0.4,3967N±002×3857E±005,h5km,Error ellipse: s-maj=5.1km s-min=3.4km az=11.7*
*CSEM **25** 04:58:59.5±0.1,3966N×3853E,h5km,MD3.5,Error ellipse: s-maj=2.1km s-min=1.8km az=162.0*
*ISK **25** 04:58:59.3,3966N×3853E,h5km,MD3.5*
*DDA **25** 04:59:01.8,3968N×3862E,h12km±4km,Md3.2*
ISC 25 04:59:00.3±0.8,3967N±002×3858E±005,h5km±6km,n24, σ0°96/32,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EZC	Erzincan	0.96	85	PG	Pg	04 59 11.9	-6.7
EZC				SG	Sg	04 59 22.3	-8.7
GUMT	Gumushane	1.05	41	PN	Pn	04 59 19.9	-1.7
GUMT				SN	Sn	04 59 35.0	-1.6
ELZG	Elazig	1.21	165	*i* P	Pg	04 59 22.3	-1.2
ELZG				*i* S	Sg	04 59 39.7	+0.6
ESPY	Espiye-Giresun	1.25	5	PN	Pn	04 59 23.5	-0.9
ESPY				SN	Sn	04 59 41.6	-0.1
GRSN	GIRESUNGRSN	1.28	349	*i* P	Pg	04 59 23.7	-1.2
GRSN				*i* S	Sg	04 59 40.7	-0.8
MYA	Malataya	1.34	185	PN	Pn	04 59 24.5	-1.2
MYA				SN	Sn	04 59 43.0	-0.8
MALT	Malatya	1.36	185	PN	Pn	04 59 24.3	-1.5
MACK	Trabzon	1.56	35	*i* P	Pg	04 59 29.4	+0.7
MACK				*i* S	Sg	04 59 52.1	+1.5
KTUT	Trabzon	1.60	34	PN	Pn	04 59 29.8	+0.6
BINT	Bingol	1.68	117	PN	Pn	04 59 30.9	+0.7
TOKT	Tokat	1.70	293	PN	Pn	04 59 30.2	-0.3
EZM	Erzurum	2.16	83	PN	Pn	04 59 38.0	+1.2
URFA	Urfa	2.23	175	ePN	Pn	04 59 38.7	+0.9
BNN	Bunyan	2.27	250	ePN	Pn	04 59 38.5	0.0
PZAR	Pazar-Rize	2.33	49	ePN	Pn	04 59 40.2	+1.0
KVT	Kavak	2.40	307	ePN	Pn	04 59 40.0	-0.1
YOZ	Yozgat	2.52	270	ePN	Pn	04 59 41.1	-0.7
KMRS	Kahramanmaras	2.53	212	ePN	Pn	04 59 42.0	+0.1
GAZ	Gaziantep	2.71	204	ePN	Pn	04 59 45.0	+0.5
CTKT	Corum	3.06	289	*i* P	Pn	04 59 51.1	+1.9
CTKT				*i* S	Sn	05 00 30.4	+4.2
KOZT	Kozan	3.07	226	ePN	Pn	04 59 50.0	+0.6
CORM	Corum	3.08	281	ePN	Pn	04 59 50.3	+0.8
DIKM	Dikmen	3.21	309	ePN	Pn	04 59 51.5	+0.2
TOS	Tosya	3.74	293	ePN	Pn	04 59 59.4	+0.8

JMA 25 05:08:18.6,3721N×13671E,h13km±1km,M3.5,1C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.29	169	⇑P	Pg	05 08 24.7	+0.1
JSZ	Suzu	0.57	65	⇓P	Pg	05 08 29.6	-0.2
JSZ				S	Sg	05 08 37.7	+0.3
JHG	Hegura jima	0.66	15	P	Pg	05 08 31.3	-0.1
JHG				eS	Sg	05 08 40.3	+0.2
JTT	Ttatey	0.78	140	P	Pg	05 08 33.5	-0.3
JKG	Kaga	0.98	198	P	Pb	05 08 36.8	-0.6
JKG				S	Sb	05 08 50.1	-0.1
MAT	Matsushiro	1.37	119	P	Pn	05 08 43.2	-0.2
MAT				S	Sn	05 09 02.0	+0.5

*ISCJB **25** 05:08:47.2±2.3,2078S±007×169.14E±009,h37km±19km, mb4.9/37, MS4.6/5, Error ellipse: s-maj=14.3km s-min=10.6km az=152.1*
*BJI **25** 05:08:47.5,20.16S×16970E,h35km,mB5.1,mb4.9,Ms5.4, Msz4.8*
*NEIC **25** 05:08:48.9±2.0,2075S×169.17E,h40km±16km,mb4.8/15, Error ellipse: s-maj=12.3km s-min=9.0km az=46.0*
*BGS **25** 05:08:49.2,2075S×169.17E,h40km,mb4.9(NEIC)*
*MOS **25** 05:08:49.8±2.8,2057S×16867E,h33km,mb5.2/13, Error ellipse: s-maj=13.6km s-min=10.8km az=44.4*
*IDC **25** 05:08:49.7±3.3,2076S×169.10E,h43km±27km,mb4.5/16, mb1 4.6/18,mb1mx4.6/21,mbtmp4.5/18,ML4.1/2,MS4.5/6, Ms1 4.5/6,ms1mx4.0/21,Error ellipse: s-maj=21.0km s-min=16.2km az=67.0*
*SZGRF **25** 05:08:49.2,1994S×17055E,h33km,Vanuatu Islands*
ISC 25 05:08:48.8±2.1,2080S±007×16917E±009,h37km±18km, h38km±2.6km:pP-P,n199,σ1°01/79,mb4.9/37,MS4.6/5, 18C-6D,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.83	243	eP	Pn	05 09 30.2	-1.4
DZM				eS	Sn	05 10 04.5	0.0
DZM	Mont Dzumac	2.83	243	P	Pn	05 09 30.9	-0.7
	21nm,0.3s,baz=80,slow=21,SNR=78						
DZM				S	Sn	05 10 05.0	+0.5
	113nm,0.3s,baz=124,slow=22,SNR=11						
DZM				LR	LR	05 10 32.7	
	comp=Z,4μm,19.4s,baz=195,slow=37						
HNR	Honiara	14.37	320	LR	LR	05 17 13.9	
	comp=Z,673nm,19.0s,baz=173,slow=35						
EIDS	Eidsvold	17.25	251	ePn	Pn	05 12 45.3	-1.6
	37nm,1.5s						
ARMA	Armidale	18.47	235	eP	Pn	05 13 05.9	+4.0
URZ	Urewera	19.71	160	P	Pn	05 13 06.0	+1.3
	0.7nm,0.3s,baz=2.3,slow=6.0,SNR=7.4						
CTA	Charters Tower	21.48	268	eP	P	05 13 36.2	+1.9
	16nm,0.9s,mb4.3						
CTA	Charters Tower	21.48	268	eP	P	05 13 36.2	+1.9
CTA				pmax	pmax		
	comp=Z,16nm,0.9s						
CTA	Charters Tower	21.48	268	P	P	05 13 35.5	+1.1
	comp=Z,21nm,0.9s,mb4.5,baz=86,slow=12,SNR=17						
CTAO	Charters Tower	21.48	268	eP	P	05 13 35.0	+0.6
	comp=Z,70nm,1.4s,mb4.8						
CTAO	Charters Tower	21.48	268	eP	P	05 13 35.0	+0.7
CTAO				pmax	pmax		
	comp=Z,70nm,1.4s,mb4.8						
RPZ	Rata Peaks	22.91	176	P	P	05 13 51.0	+1.7
RPZ	Rata Peaks	22.91	176	P	P	05 13 51.0	+1.7
	comp=Z,14nm,1.0s,mb4.3,baz=328,slow=1.6,SNR=3.8						
STKA	Stephens Creek	26.98	240	eP	P	05 14 28.2	+1.0
	comp=Z,13nm,1.1s,mb4.4						
STKA	Stephens Creek	26.98	240	P	P	05 14 27.6	+0.5
	comp=Z,13nm,0.9s,mb4.5,baz=77,slow=9.5,SNR=17						
STKA				LR	LR	05 25 34.8	
	comp=Z,1μm,19.1s,MS4.5,baz=82,slow=37						
WB2	Warramunga Arr	32.61	265	⇑P	P	05 15 16.5	-0.6
WRA	Warramunga Arr	32.62	265	P	P	05 15 16.2	-1.0
WRA						05 18 02.7	
WRA	Warramunga Arr	32.62	265	P	P	05 15 16.2	-1.0
	comp=Z,12nm,1.0s,mb4.8,baz=91,slow=8.4,SNR=71						

WRA PcP PcP 05 18 02.7 -0.2
comp=Z,3.3nm,1.0s,baz=98,slow=2.6,SNR=6.0
WRA LR LR 05 28 37.8
comp=Z,1μm,18.4s,MS4.6,baz=100,slow=36
ASAR Alice Springs 32.72 258 P **P** **05 15 17.8 -0.2**
comp=Z,24nm,1.0s,mb5.1,baz=81,slow=9.0,SNR=96
ASAR PcP PcP 05 18 03.2 +0.1
comp=Z,3.6nm,0.9s,baz=96,slow=3.8,SNR=7.8
KAKA Kakadu 36.01 277 *e*P **P** **05 15 46.0 -0.6**
comp=Z,35nm,1.4s,mb5.1
TBI Tubuai 38.34 102 *e*LR LR 05 26 40.9
comp=Z,782nm,25.5s
KNA Kununurra 38.62 271 P **P** **05 16 08.6 -0.1**
PPT Papeete 39.03 93 *e*LR LR 05 27 00.2
comp=Z,2μm,28.0s
FITZ Fitzroy Crossi 41.04 266⇓ *i*P **P** **05 16 29.2 +0.3**
comp=Z,39nm,1.1s,mb5.0
FITZ Fitzroy Crossi 41.04 266 P **P** **05 16 29.2 +0.4**
comp=Z,29nm,1.0s,mb4.8,baz=97,slow=9.2,SNR=29
BATI Kupang 44.95 276 LR LR 05 35 33.2
comp=Z,1μm,21.2s,MS4.8,baz=286,slow=36
MBWA Marble Bar 46.00 260 *e*P **P** **05 17 08.8 -0.1**
comp=Z,59nm,1.1s,mb5.4
KLBR Kellerberrin 47.00 246 *e*P **P** **05 17 16.1 -0.4**
comp=Z,67nm,1.1s,mb5.5
NWAO Narrogin (SRO) 47.45 244 P **P** **05 17 18.3 -1.8**
NWAO Narrogin (SRO) 47.45 244 P **P** **05 17 19.5 -0.6**
NWAO pmax pmax
comp=Z,29nm,1.0s
NWAO Narrogin (SRO) 47.45 244 P **P** **05 17 19.5 -0.6**
comp=Z,28nm,1.0s,mb5.2,baz=88,slow=8.4,SNR=7.8
MUN Mundaring 48.31 245 *e*P **P** **05 17 26.6 -0.1**
TAOE Nuku Hiva Isla 50.23 84 *e*LR LR 05 32 11.6
comp=Z,2μm,28.4s
RKT Rikitea 51.60 103 *e*LR LR 05 32 46.5
comp=Z,918nm,29.8s
PCI Palu 52.03 286 P **P** **05 17 57.3 +2.2**
VNDA Vanda 56.88 182 P **P** **05 18 30.2 +0.8**
VNDA LR LR 05 38 42.5
VNDA Vanda 56.88 182 P **P** **05 18 30.2 +0.8**
comp=Z,1.1nm,0.8s,mb3.9,baz=1.1,slow=11,SNR=4.1
VNDA LR LR 05 38 42.5
comp=Z,415nm,20.8s,MS4.5,baz=272,slow=32
KKM Kota Kinabalu 58.42 291 *e*P **P** **05 18 42.2 +1.1**
KSM Kuching 61.66 284 *e*P **P** **05 19 03.9 +0.4**
MJAR Matsushiro Arr 64.09 333 P **P** **05 19 18.4 -0.7**
comp=Z,13nm,0.9s,mb4.9,baz=165,slow=6.7,SNR=5.1
MAJO Matsushiro 64.09 333 *e*P **P** **05 19 18.8 -0.3**
comp=Z,6.0nm,0.7s,mb4.7
MAJO Matsushiro 64.09 333 *e*P **P** **05 19 18.8 -0.3**
MAJO pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
ASAJ Asahikawa 69.03 340 P **P** **05 19 50.9 +0.5**
ASAJ pmax pmax
comp=Z,31nm,1.0s
ASAJ Asahikawa 69.03 340 P **P** **05 19 50.9 +0.5**
comp=Z,31nm,1.0s,mb5.2,baz=241,slow=15,SNR=8.2
QSPA South Pole Qui 69.27 180 *e*P **P** **05 19 51.4 -0.1**
comp=Z,16nm,0.9s,mb4.9
KSRS Korea Array 69.75 326 P **P** **05 19 55.8 +0.7**
KSRS pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
KSRS Korea Array 69.75 326 P **P** **05 19 55.8 +0.7**
comp=Z,3.7nm,1.1s,mb4.2,baz=148,slow=5.6,SNR=8.0
YSS Yuzh-Sakhalins 71.52 341 *e*P **P** **05 20 06.5 +0.9**
comp=Z,14nm,1.0s,mb4.9
YSS Yuzh-Sakhalins 71.52 341⇓ *e*P **P** **05 20 06.2 +0.6**
YSS *e* pP 05 20 17.2 +0.1
YSS pmax pmax
comp=Z,40nm,1.0s,mb5.3
KULM Kulim 72.01 283 *e*P **P** **05 20 09.6 +0.3**
PSI Prapat 72.61 280 P **P** **05 20 12.1 -0.9**
comp=Z,8.9nm,0.9s,mb4.7,baz=184,slow=8.5,SNR=12
DL2 Dalian 74.21 323 P **P** **05 20 22.1 +0.3**
DL2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
MDJ Mudanjiang 74.45 332 P **P** **05 20 23.4 +0.3**
MDJ AMB AMB
comp=Z,20nm,1.1s,mb5.0
MDJ AMB AMB
comp=Z,166nm,5.9s
CN2 Changchun 75.75 329 *e*P **P** **05 20 30.8 +0.3**
CN2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
MAW Mawson 76.97 202 P **P** **05 20 38.0 +0.8**
comp=Z,9.9nm,1.0s,mb4.7,baz=112,slow=12,SNR=6.5
KLR Kul'dur 77.25 336 *e*P **P** **05 20 36.5 -2.4**
KLR pmax pmax
comp=E,45nm,2.0s
KLR pmax pmax
comp=Z,94nm,2.0s,mb5.4
KMI Kunming 79.04 302 P **P** **05 20 51.8 +2.4**
KMI AMB AMB
comp=Z,19nm,1.4s,mb4.8
CHTO Chiang Mai 79.24 295 *e*P **P** **05 20 51.4 +0.8**
comp=Z,5.1nm,0.7s,mb4.6
CHTO Chiang Mai 79.24 295 *e*P **P** **05 20 51.4 +0.8**
CHTO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
CD2 Chengdu 81.13 308 *e*P **P** **05 21 02.3 +1.8**
CD2 PP PP 05 24 10.4 +4.1
CD2 AMB AMB
comp=Z,20nm,1.4s,mb4.8
CD2 AMB AMB
comp=Z,30nm,5.9s
CD2 LR LR
comp=N,1μm,22.8s
CD2 LR LR
comp=Z,300nm,14.4s
HIA Hailar 82.42 330 *e*P **P** **05 21 06.5 -0.4**
SYO Syowa Base 83.43 196⇑ *e*P **P** **05 21 10.0 -2.0**
LZH Lanzhou 83.72 312 *e*P **P** **05 21 15.0 +1.1**
LZH AMB AMB
comp=Z,15nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,67nm,4.3s
CLNS Chul'man 85.80 337 *e*P **P** **05 21 21.4 -2.5**
CLNS pmax pmax
comp=Z,38nm,0.8s,mb5.7
CLNS pmax pmax
comp=N,25nm,1.0s
CLNS pmax pmax
comp=E,12nm,1.0s
CIT Chita 87.19 329 *e*P **P** **05 21 30.8 -0.1**
SNAA Sanae 87.61 183 P **P** **05 21 31.4 -1.4**
SNAA Sanae 87.61 183 *e* **P** **05 21 32.3 -0.5**
SNAA *e* pP 05 21 40.6 -3.8
SNAA *e* pP 05 21 44.2 -0.2
SNAA *e* 05 21 49.2
SNAA *e* 05 21 54.5
SNAA Sanae 87.61 183 P **P** **05 21 32.1 -0.7**
SNAA pmax pmax
comp=Z,11nm,1.2s
SNAA Sanae 87.61 183 P **P** **05 21 32.1 -0.7**
comp=Z,10nm,1.2s,mb4.9,baz=146,slow=1.5,SNR=8.6
ULN Ulaanbaatar 88.07 323 *e*P **P** **05 21 35.6 +0.4**
comp=Z,6.6nm,1.1s,mb4.8
ULN Ulaanbaatar 88.07 323 *e*P **P** **05 21 35.6 +0.4**
ULN pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
GTA Gaotai 88.14 314 *e*P **P** **05 21 36.9 +1.2**
GTA AMB AMB
comp=Z,7.0nm,1.1s,mb4.8
VNA3 Neumayer Olymp 88.20 180 *e* **P** **05 21 34.8 -0.8**
VNA3 *e* 05 21 42.6
VNA3 *e* pP 05 21 46.2 -1.1
VNA3 *e* 05 21 50.7
VNA3 *e* 05 21 56.6
SONM Songino Array 88.42 323 P **P** **05 21 37.4 +0.6**
comp=Z,6.8nm,1.0s,mb4.8,baz=134,slow=5.0,SNR=34
VNA2 Neumayer--Watz 88.49 181 *e* **P** **05 21 36.2 -0.8**
baz=189,slow=4.4
VNA2 *e* 05 21 43.9
VNA2 *e* pP 05 21 47.6 -1.1
VNA2 *e* 05 21 53.3
VNA2 *e* 05 21 58.6
BILL Bilibino 88.60 359 *e*P **P** **05 21 36.4 -0.8**
comp=Z,1.1nm,0.3s,mb4.7
BILL Bilibino 88.60 359⇑ *e*P **P** **05 21 36.3 -0.9**
BILL pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
BILL MLR MLR
comp=Z,200nm,18.0s,MS4.6
VNA1 Neumayer--Stat 88.78 181 *e* **P** **05 21 37.6 -0.7**
VNA1 *e* 05 21 44.6
VNA1 *e* pP 05 21 49.7 -0.3
VNA1 *e* 05 21 55.7
VNA1 *e* 05 22 00.5
NVAR Mina Array Bea 89.88 49 P **P** **05 21 43.8 -0.1**
comp=Z,1.5nm,0.8s,mb4.4,baz=212,slow=6.2,SNR=13
BOD Bodaibo 90.69 334 *e*P **P** **05 21 45.1 -2.1**
BOD pmax pmax
comp=Z,12nm,1.7s,mb5.0
ZAK Zakamensk 91.51 324 *e*P **P** **05 21 51.1 -0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.2s,mb4.7
TUC Tucson 92.92 57 *e*P **P** **05 21 57.6 -0.5**
comp=Z,5.2nm,1.5s,mb4.7
TUC Tucson 92.92 57 *e*P **P** **05 21 57.7 -0.5**
TUC pmax pmax
comp=Z,5.0nm,1.5s,mb4.7
ARCES ARCESS Array B 126.55 345 PKP PKPdf 05 27 46.4 -0.8
comp=Z,2.5nm,0.9s,baz=76,slow=2.7,SNR=12
LSZ Lusaka 127.53 230 *e*PKPdf PKPdf 05 27 51.0 +0.3
KMBO Kilima Mbogo 128.17 251 *e*PKPdf PKPdf 05 27 53.5 +1.5
FINES FINESS Array B 131.99 337 PKP PKPdf 05 27 57.9 +0.1
comp=Z,0.3nm,0.3s,baz=88,slow=3.2,SNR=7.1
CRVS Cervenica-Dubn 141.91 325 *e*PKP PKPdf 05 28 14.1 -2.4
BSEG Bad Segeberg 143.19 339 *e*PKPbc PKPdf 05 28 15.0 -3.6
PSZ Piszkesteto 143.34 325 *e*PKPdf PKPdf 05 28 16.1 -2.9
MORC Moravsky Berou 143.36 329 *e*PKPdf PKPdf 05 28 15.6 -3.5
VYHS Vyhne 143.55 326 *e*PKP PKPdf 05 28 16.8 -2.6
DPC Dobruska-Polom 143.55 331 *e*PKP PKPdf 05 28 16.5 -2.9
UPC Upice 143.58 331 *e*PKP PKPdf 05 28 16.0 -3.4
KOLL Kolacno 143.72 327 *e*PKP PKPdf 05 28 17.8 -1.9
VTS Vitosha 144.15 315 *i* P PKPdf 05 28 18.3 -2.4
PVCC Panska Ves 144.21 332 *e*PKP PKPdf 05 28 18.6 -1.9
BRG Berggiesshubel 144.22 333 *e*PKPbc PKPdf 05 28 18.2 -2.3
BRG Berggiesshubel 144.22 333 *i* PKP PKPdf 05 28 18.4 -2.1
comp=Z,46nm,1.2s
BRG *i* 05 28 29.5
comp=Z,12nm,0.8s
MMB Musomiste 144.23 313 *i* P PKPdf 05 28 18.5 -2.3
CLL Collm 144.29 334⇓ *i*P PKPdf 05 28 18.1 -2.5
CLL Collm 144.29 334⇓ *i*PKPdf PKPdf 05 28 18.1 -2.5
comp=Z,35nm,1.1s
CLL *e*pPKPdf pPKPdf 05 28 31.0 -1.7
CLL Collm 144.29 334 *e*PKPbc PKPdf 05 28 18.1 -2.5
MODS Modra-Piesok 144.42 327 *e*PKP PKPdf 05 28 20.1 -0.8
NRDL Niedersach Rie 144.45 338 *e*PKPbc PKPdf 05 28 19.0 -1.9
KKB Krupnik 144.55 314 *i* P PKPdf 05 28 19.7 -1.7
EAU Auchinoon 144.57 353⇑ *i*P PKPdf 05 28 18.6 -2.3
EBL Broad Law 144.59 352⇑ *e*P PKPdf 05 28 18.6 -2.4
PRU Pruhonice 144.61 331 *e*PKP PKPdf 05 28 19.8 -1.4
PRU *ex* x 05 28 28.2
ZST Bratislava 144.62 327 *e*PKP PKPdf 05 28 20.5 -0.8
TREC Trest 144.67 330 *e*PKP PKPdf 05 28 19.9 -1.4
PGBU Glenifferbraes 144.72 354⇑ *e*P PKPdf 05 28 18.9 -2.3
PGBU AMb AMB 05 28 27.6
comp=Z,94nm,1.8s
CLZ Clausthal 144.88 337 *e*PKPbc PKPdf 05 28 20.4 -1.2
ESK Eskdalemuir 145.06 352⇑ *e*P PKPbc 05 28 19.9 -1.4
ESK AMb AMB 05 28 20.8
comp=Z,38nm,0.9s
ESK Eskdalemuir 145.06 352 *e*PKHKP PKPbc 05 28 19.7 -1.6
ECK Cauldkaine Hil 145.18 352⇑ *e*P PKPbc 05 28 20.4 -1.2
TANN Tannenbergstha 145.19 334 *e*PKPbc PKPbc 05 28 21.0 -0.9
GMK Mull of Kintyr 145.28 355⇑ *e*P PKPbc 05 28 20.9 -1.0
NKC Novy Kostel 145.34 333 *e*PKP PKPdf 05 28 22.1 -0.4
MOX Moxa 145.36 335 *e*P PKPbc 05 28 22.2 -0.2
comp=Z,98nm,1.7s
MOX *e* 05 28 30.8
MOX Moxa 145.36 335 *e*PKPbc PKPbc 05 28 21.8 -0.6
XAL Allendale 145.37 351⇑ *e*P PKPbc 05 28 21.1 -1.2
IBBN Ibbenburen 145.40 340 *e*PKPbc PKPbc 05 28 21.8 -0.7
CONA Conrad Observa 145.43 328 *i* PKPab PKPab 05 28 23.0 +0.1
comp=Z,53nm,1.3s,SNR=16
GCD Castle Douglas 145.59 353⇑ *e*P PKPdf 05 28 21.9 -0.9
GCL Cushendall 145.59 355⇑ *e*P PKPdf 05 28 22.0 -0.7
MANZ Manzenberg 145.67 334 *e*PKPbc PKPbc 05 28 22.8 -0.6
KHC Kasperske Hory 145.67 331 *e*PKP PKPdf 05 28 23.3 +0.2
KHC *e*pPKP pPKPdf 05 28 32.2 -2.9
GAL1 Galloway 145.67 354⇑ *e*P PKPdf 05 28 21.9 -1.0
GAL1 AMb AMB 05 28 23.9
comp=Z,160nm,1.2s
CKE Keswick 145.76 352 *e*P PKPdf 05 28 22.2 -0.8
ROTZ Rotzenmuhle 145.79 333 *e*PKPbc PKPbc 05 28 23.3 -0.5
GEC2 GERESS Array S 145.82 331 *e*PKPbc PKPbc 05 28 23.3 -0.6
GERES GERESS Array B 145.82 331 PKPbc PKPbc 05 28 23.3 -0.6
comp=Z,11nm,0.9s,baz=41,slow=2.5,SNR=41
WET Wettzell 145.97 332 *e*PKPbc PKPbc 05 28 24.0 -0.3
HPK Haverah Park 146.16 350 *e*P PKPdf 05 28 23.9 +0.2
HPK AMb AMB 05 28 26.0
comp=Z,181nm,1.4s
GIM North Isle of 146.21 353⇑ *e*P PKPdf 05 28 23.9 +0.1
GRA1 Grafenberg Arr 146.26 334 *e*PKPbc PKPbc 05 28 25.1 -0.1
GRF Grafenberg Arr 146.26 334 *e*PKPbc PKPbc 05 28 25.1 -0.1
GRFO Grafenberg 146.26 334 *e*PKPbc PKPbc 05 28 25.2 0.0
MOA Molln 146.26 329⇑ *i*P PKPdf 05 28 24.6 +0.5
comp=Z,13nm,1.1s,SNR=8.8
LHO Holmfirth 146.59 350⇑ *e*P PKPdf 05 28 25.2 +0.7
TNS Taunus Mts 146.91 337 *e*PKPbc PKPbc 05 28 26.6 -0.5
KWE Weaver Farm 147.10 350⇑ *e*P PKPdf 05 28 25.7 +0.3
CWF Charnwood Fore 147.28 349 *e*P PKPdf 05 28 26.7 +1.1
CWF AMb AMB 05 28 29.5
comp=Z,42nm,1.2s
TOD Tromm 147.28 336 PKP PKPbc 05 28 28.0 -0.1
BEBN Eben Emael 147.36 340 PKPab PKPab 05 28 30.2 0.0
FUR Furstenfeldbru 147.41 332 *e*PKPbc PKPbc 05 28 29.6 +1.1
MEM Membach 147.42 340 PKPbc PKPbc 05 28 28.2 -0.3
SBD1 Bryn Du 147.42 351 *e*P PKPdf 05 28 27.2 +1.3
ABH Alteburg 147.52 338 PKP PKPbc 05 28 29.0 +0.2
STU Stuttgart 147.80 335 *e*PKPbc PKPbc 05 28 29.3 -0.3
BCLA Clavier 147.81 341 PKPbc PKPbc 05 28 29.3 -0.3
RUP Ruppelstein 147.84 338 PKP PKPbc 05 28 29.7 0.0
SNF Seneffe 148.04 342 PKPbc PKPbc 05 28 29.8 -0.4
MOTA Moosalm 148.10 331⇓ *i*P PKPbc 05 28 29.2 -1.2
comp=Z,11nm,1.0s,SNR=8.1
SQTA Sankt Quirin 148.15 331⇓ *i*P PKPbc 05 28 29.9 -0.6
comp=Z,13nm,1.0s,SNR=7.3
LANF Langenberg 148.17 336 PKP PKPbc 05 28 30.8 +0.2
WLF Walferdange 148.18 339 *e*PKPbc PKPbc 05 28 30.7 +0.1
WLF *e*PKPab PKPab 05 28 33.8 +0.3
WLF Walferdange 148.18 339 PKPbc PKPbc 05 28 30.9 +0.3
WLF Walferdange 148.18 339 *e*PKPbc PKPbc 05 28 30.6 0.0
GIVF Givet 148.23 341 *e*PKP1 PKPbc 05 28 29.7 -1.0
MCH1 Michaelchurch 148.27 351 *e*P PKPbc 05 28 29.6 -1.1
MCH1 AMb AMB 05 28 29.9
comp=Z,96nm,1.1s
DOU Dourbes 148.31 341 PKPbc PKPbc 05 28 30.6 -0.3
BAIF Baives 148.46 341 *e*PKP1 PKPbc 05 28 30.3 -1.0
comp=Z,46nm,1.3s
BFO Black Forest 148.50 335 *e*PKPbc PKPbc 05 28 30.9 -0.5
FETA Feichten 148.51 331 *i* PKPbc PKPbc 05 28 31.5 -0.1
comp=Z,16nm,1.1s,SNR=8.7
HGH Gray Hill 148.54 350 *e*P PKPbc 05 28 30.4 -1.1
DAVA Damuels 148.69 332⇑ *i*P PKPbc 05 28 31.8 -0.2
comp=Z,29nm,1.2s
CDF Champ du Feu 148.84 336 *e*PKP1 PKPbc 05 28 31.2 -1.1
comp=Z,30nm,1.2s
FELD Feldberg im Sc 149.00 335 PKP PKPbc 05 28 32.5 -0.2
MOF Molkenrain 149.36 336 PKP PKPbc 05 28 33.4 -0.2
THEF They Montfort 149.47 338 PKP PKPbc 05 28 33.6 -0.3
HINF Hinteralfeld 149.49 336 *e*PKP1 PKPbc 05 28 32.6 -1.4
comp=Z,69nm,1.6s
HAU Haudompre 149.52 337 *e*PKP1 PKPbc 05 28 32.8 -1.2
comp=Z,38nm,1.2s
MEZF Maizieres J'vi 149.55 339 *e*PKP1 PKPbc 05 28 33.4 -0.7
comp=Z,51nm,1.2s
LOMF Lomont 149.89 336 PKP PKPbc 05 28 34.9 0.0
CABF La Chapelle 150.78 336 *e*PKP1 PKPbc 05 28 36.5 -0.6
comp=Z,24nm,1.1s
FLN La Foliniere 150.89 346 *e*PKP1 PKPbc 05 28 35.6 -1.7
comp=Z,67nm,1.1s
LDF La Druitiere 150.96 345 *e*PKP1 PKPbc 05 28 35.8 -1.7
LOR Lormes 151.02 339 *e*PKP1 PKPbc 05 28 36.4 -1.3
comp=Z,40nm,1.2s
SSF Saint Saulge 151.32 339 *e*PKP1 PKPbc 05 28 37.1 -1.3
comp=Z,21nm,1.0s
GRR Gorron 151.33 346 *e*PKP1 PKPbc 05 28 36.8 -1.5
HYF Humbligny 151.42 341 *e*PKP1 PKPbc 05 28 37.7 -0.9
LPL La Plagne 151.42 334 *e*PKP1 PKPbc 05 28 38.0 -0.6
comp=Z,18nm,1.2s
LPG La Plagne 151.43 334 *e*PKP1 PKPbc 05 28 38.1 -0.6
comp=Z,24nm,1.1s
SMF Signal de Mont 151.57 338 *e*PKP1 PKPbc 05 28 37.4 -1.5
comp=Z,27nm,1.4s
AVF Avril sur Loir 151.61 339 *e*PKP1 PKPbc 05 28 37.3 -1.7
comp=Z,45nm,1.6s
SGMF Saint Gilles 151.81 348 *e*PKP1 PKPbc 05 28 37.6 -1.8
BNI Bardonecchia 151.82 333 *e*PKPbc PKPbc 05 28 38.4 -1.1
ROSF Rostrenen 151.86 349 *e*PKP1 PKPbc 05 28 37.8 -1.7
comp=Z,18nm,0.9s
BGF Bois d'Agland 151.98 340 *e*PKP1 PKPbc 05 28 38.6 -1.3
comp=Z,16nm,0.9s
MBDF Montbardon 152.04 333 *e*PKP1 PKPbc 05 28 38.7 -1.4
comp=Z,11nm,1.0s
ORIF Oris-en-Rattie 152.26 334 *e*PKP1 PKPbc 05 28 39.4 -1.2
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 152.42 340 *e*PKP1 PKPbc 05 28 39.5 -1.4
MFF Saint Martin d 152.82 344 *e*PKP1 PKPbc 05 28 40.2 -1.6
comp=Z,12nm,1.0s
LFF La Frestale 154.09 341 *e*PKP1 PKPbc 05 28 44.1 -0.5
comp=Z,16nm,0.9s
ESDC Sonseca Array 160.28 344 PKPab PKPab 05 29 24.7 -0.2
comp=Z,4.3nm,1.0s,baz=19,slow=3.6,SNR=13
DBIC Dimbokro 164.81 203 PKPab PKPab 05 29 45.9 +0.5
comp=Z,6.7nm,1.0s,baz=125,slow=5.8,SNR=5.1
TORD Torodi Ar. Bea 165.81 240 PKP PKPdf 05 28 49.8 -0.7
comp=Z,1.4nm,1.1s,baz=213,slow=5.1,SNR=5.7
TORD PKPab PKPab 05 29 49.8 -0.2
comp=Z,1.7nm,1.0s,baz=143,slow=5.0,SNR=6.4

JMA 25 05:16:53.5,3728N×13676E,h8km±1km,M3.7,3C,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.35**	**177**	P		Pg	05 17 00.8	+0.4
JJH				S		Sg	05 17 06.1	+1.0
JSZ	**Suzu**	**0.51**	**71**	⇑P		Pg	05 17 03.2	-0.2
JSZ				S		Sg	05 17 10.2	+0.2
JHG	**Hegura jima**	**0.58**	**13**	⇑P		Pg	05 17 04.7	0.0
JTT	**Ttatey**	**0.81**	**146**	P		Pg	05 17 09.1	-0.1
JTT				*e*S		Sg	05 17 20.4	+0.6
JKG	**Kaga**	**1.06**	**199**	⇑P		Pg	05 17 13.4	-0.4
JKG				S		Sg	05 17 28.0	+0.4
MAT	**Matsushiro**	**1.37**	**122**	P		Pn	05 17 18.0	-0.9
MAT				S		Sb	05 17 37.0	-0.1

*ISCJB **25** 05:21:03.3±0.8,3725N±003×13655E±004,h8km±5km, mb3.9/17,Error ellipse: s-maj=5.8km s-min=4.6km az=142.6*
*IDC **25** 05:21:03.4±0.7,37.19N×13658E,h0km,mb3.7/8, mb1 4.0/10,mb1mx3.8/20,mbtmp3.7/10,ML3.3/2,Error ellipse: s-maj=18.5km s-min=16.4km az=28.0*
*JMA **25** 05:21:04.1±0.1,3722N×13661E,h3km±1km,M4.1*
JMA Felt III J1.
*NEIC **25** 05:21:04.8±0.4,3721N×13657E,h10km,mb4.1/8,Error ellipse: s-maj=10.4km s-min=9.0km az=19.0*
NEIC Recorded [3 JMA] in Ishikawa and [1 JMA] in Toyama Prefectures.
*MOS **25** 05:21:05.8±1.2,37.15N×13649E,h33km,mb4.3/5,Error ellipse: s-maj=15.3km s-min=11.2km az=105.6*

ISC 25 05:21:04.3±0.7,3723N±003×13660E±004,h6km±4km,n41, σ0°98/47,mb3.9/17,3C-1D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**154**	⇑P		**Pg**	**05 21 10.8**	**-0.1**
JJH				S		**Sg**	**05 21 15.9**	**+0.6**
JSZ	**Suzu**	**0.65**	**70**	⇓P		**Pg**	**05 21 16.4**	**-0.4**
JSZ				S		**Sg**	**05 21 25.4**	**+0.2**
JHG	**Hegura jima**	**0.67**	**22**	⇑P		**Pg**	**05 21 17.0**	**-0.2**
JTT	**Ttatey**	**0.86**	**136**	P		**Pg**	**05 21 20.6**	**-0.2**
JTT				*e*S		**Sg**	**05 21 32.3**	**+0.4**
JKG	**Kaga**	**0.97**	**193**	P		**Pg**	**05 21 22.7**	**-0.3**
JKG				S		**Sg**	**05 21 35.5**	**-0.2**
MAJO	**Matsushiro**	**1.46**	**118**	*e*Pn		**Pn**	**05 21 30.3**	**-0.9**
MAJO				*e*Sn		**Sn**	**05 21 50.3**	**-0.4**
MAT	**Matsushiro**	**1.46**	**118**	P		**Pn**	**05 21 30.3**	**-1.0**
MAT				S		**Sn**	**05 21 49.5**	**-1.2**
MJAR	**Matsushiro Arr**	**1.46**	**118**	Pn		**Pn**	**05 21 31.1**	**-0.2**
MJAR	42nm,0.3s,baz=303,slow=15,SNR=105			Sn		**Sn**	**05 21 52.6**	**+1.8**
JNU	**Nakatsue**	**6.22**	**230**	Pn		**Pn**	**05 22 38.1**	**+1.4**
	68nm,0.3s,baz=303,slow=23,SNR=17							
	0.9nm,0.3s,baz=343,slow=4.7,SNR=6.5							
KSRS	**Korea Array**	**6.91**	**274**	Pn		**Pn**	**05 22 47.4**	**+1.1**
	0.5nm,0.3s,baz=90,slow=14,SNR=4.1							
ASAJ	**Asahikawa**	**8.25**	**32**	Pn		**Pn**	**05 23 08.6**	**+4.0**
	0.4nm,0.3s,baz=238,slow=13,SNR=3.8							
YSS	**Yuzh-Sakhalins**	**10.73**	**23**	*e*Pn		**Pn**	**05 23 40.1**	**+1.6**
	14nm,0.8s							
YSS	**Yuzh-Sakhalins**	**10.73**	**23**⇑	*e*P		**Pn**	**05 23 41.7**	**+3.2**
YSS				pmax	pmax			
	comp=Z,20nm,0.9s							
ULN	**Ulaanbaatar**	**24.08**	**306**	*e*P		**P**	**05 26 20.9**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.4							
ULN	**Ulaanbaatar**	**24.08**	**306**	*e*P		**P**	**05 26 20.9**	**+0.5**
ULN				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.4							
SONM	**Songino Array**	**24.50**	**305**	P		**P**	**05 26 24.8**	**+0.6**
	comp=Z,1.0nm,0.6s,mb3.5,baz=111,slow=9.3,SNR=8.5							
TIXI	**Tiksi**	**34.72**	**356**	*e*P		**P**	**05 27 53.4**	**-1.3**
TIXI	**Tiksi**	**34.72**	**356**	*e*P		**P**	**05 27 52.7**	**-2.0**
TIXI				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0							
ZALV	**Zalesovo Beam**	**38.94**	**312**	PcP		PcP	05 30 40.8	-0.5
	comp=Z,0.1nm,0.3s,baz=90,slow=3.0,SNR=4.2							
MK31	**Makanchi Array**	**40.74**	**301**	*e*P		**P**	**05 28 44.5**	**-1.4**
MKAR	**Makanchi Array**	**40.74**	**301**	P		**P**	**05 28 44.1**	**-1.7**
MKAR	**Makanchi Array**	**40.74**	**301**	P		**P**	**05 28 44.1**	**-1.7**
	comp=Z,0.2nm,0.3s,mb3.2,baz=82,slow=10,SNR=2.9							
KURK	**Kurchatov**	**42.77**	**307**	*e*P		**P**	**05 29 00.7**	**-1.7**
	comp=Z,4.2nm,1.1s,mb4.1							
KURK	**Kurchatov**	**42.77**	**307**	*e*P		**P**	**05 29 00.7**	**-1.7**
KURK				pmax	pmax			
	comp=Z,4.0nm,1.1s,mb4.1							
TKM2	**Tokmak 2**	**46.13**	**297**	*e*P		**P**	**05 29 28.8**	**-0.6**
	comp=Z,1.1nm,0.4s,mb4.1							
TKM2	**Tokmak 2**	**46.13**	**297**	*e*P		**P**	**05 29 28.8**	**-0.6**
TKM2				pmax	pmax			
	comp=Z,1.0nm,0.4s,mb4.1							
INK	**Inuvik**	**55.95**	**27**	P		**P**	**05 30 43.5**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.2,baz=299,slow=5.8,SNR=23							
WRA	**Warramunga Arr**	**56.90**	**183**	P		**P**	**05 30 49.1**	**-1.1**
	comp=Z,1.1nm,0.8s,mb4.0,baz=360,slow=7.8,SNR=11							
ASAR	**Alice Springs**	**60.62**	**183**	P		**P**	**05 31 16.2**	**+0.2**
	comp=Z,0.6nm,0.8s,mb3.8,baz=1.3,slow=6.6,SNR=8.6							
RES	**Resolute Bay**	**63.34**	**13**	*e*P		**P**	**05 31 33.0**	**-0.8**
YKA	**Yellowknife Ar**	**65.53**	**29**	P		**P**	**05 31 48.2**	**0.0**
YKA	**Yellowknife Ar**	**65.53**	**29**	P		**P**	**05 31 48.2**	**0.0**
	comp=Z,0.4nm,0.7s,mb3.6,baz=302,slow=6.7,SNR=11							
FCC	**Fort Churchill**	**75.49**	**25**	*e*P		**P**	**05 32 48.8**	**-0.3**
	comp=Z,2.0nm,0.8s,mb4.1							
FCC	**Fort Churchill**	**75.49**	**25**	*e*P		**P**	**05 32 48.8**	**-0.2**
FCC				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
FFC	**Flin Flon**	**75.56**	**31**	*e*P		**P**	**05 32 49.4**	**-0.2**
	comp=Z,2.3nm,1.0s,mb4.1							
FFC	**Flin Flon**	**75.56**	**31**	*e*P		**P**	**05 32 49.4**	**-0.2**
FFC				pmax	pmax			
	comp=Z,2.0nm,1.0s,mb4.0							
NVAR	**Mina Array Bea**	**77.90**	**51**	P		**P**	**05 33 04.5**	**+1.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=312,slow=4.4,SNR=6.4							
CSS	**Prodhromos**	**78.86**	**305**	*e*P		**P**	**05 33 10.4**	**+2.0**
	comp=Z,8.3nm,0.7s,mb4.8							
TPAW	**Teton Pass**	**78.97**	**43**	*e*P		**P**	**05 33 10.4**	**+1.5**
	comp=Z,1.0nm,0.7s,mb3.9							
BW06	**Boulder Array**	**80.22**	**43**	*e*P		**P**	**05 33 16.0**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.8							
PDAR	**Pinedale Array**	**80.22**	**43**	P		**P**	**05 33 16.2**	**+0.6**
	comp=Z,0.6nm,0.7s,mb3.6,baz=286,slow=1.7,SNR=7.3							

*ISCJB **25** 05:41:02.1±0.9,3724N±004×13670E±009,h8km±8km, Error ellipse: s-maj

JHG			S	**Sg**	**05 41 23.5**	**+0.3**
JTT	**Ttatey**	**0.81 141**	P	**Pg**	**05 41 17.8**	**-0.1**
JTT			S	**Sg**	**05 41 28.3**	**-0.1**
JKG	**Kaga**	**1.00 197**	⇑P	**Pg**	**05 41 21.2**	**-0.4**
JKG			S	**Sg**	**05 41 34.8**	**+0.3**
MAT	**Matsushiro**	**1.39 119**	P	**Pn**	**05 41 27.3**	**-0.4**
MAT			S	**Sn**	**05 41 46.5**	**+0.4**

MAN 25 05:51:55,925N×12671E,h1km,mb4.4,ML3.3,MS3.2,1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.11**	**198**	⇑*iP*	Pg	05 52 16.2	-0.2
BIPH				*i* S	Sg	05 52 29.2	-1.6
MSLP	**Maasin**	**2.03**	**296**	*eP*	Pn	05 52 31.3	+0.9
MSLP				*eS*	Sn	05 53 00.4	+4.0
BUKP	**Musuan**	**2.12**	**230**	*eP*	Pn	05 52 32.5	+0.8
BUKP				*eS*	Sn	05 53 01.3	+2.6
BESP	**Borongan**	**2.66**	**332**	*eP*	Pn	05 52 40.5	+1.5

JMA 25 05:55:16.7,3717N×13670E,h10km±1km,M3.8,2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.25**	**165**	⇓P	Pg	05 55 21.9	+0.1
JJH				S	Sg	05 55 25.9	+0.6
JSZ	**Suzu**	**0.60**	**62**	P	Pg	05 55 28.0	-0.3
JSZ				*eS*	Sg	05 55 36.4	+0.3
JHG	**Hegura jima**	**0.70**	**14**	P	Pg	05 55 30.5	+0.3
JTT	**Ttatey**	**0.76**	**138**	⇓P	Pg	05 55 31.0	-0.3
JTT				S	Sg	05 55 41.8	+0.6
JKG	**Kaga**	**0.94**	**198**	P	Pg	05 55 33.8	-1.0
JKG				S	Sg	05 55 46.6	-0.4

MAN 25 06:05:53,1317N×12102E,h25km,mb4.1,ML2.9,MS2.7, 1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.85**	**70**	*eP*	Pb	06 06 09.7	+0.5
BOAC				*eS*	Sb	06 06 22.6	+2.4
TGY	**Tagaytay City**	**0.93**	**355**	⇓*iP*	Pb	06 06 16.7	+6.3
LUBP	**Lubang**	**0.94**	**307**	*eP*	Pn	06 06 10.9	+0.4
LUBP				*eS*	Sb	06 06 24.2	+1.6
OTRP	**Odiongan**	**1.27**	**129**	*eP*	Pn	06 06 16.0	+0.9
BUSP	**Coron**	**1.41**	**215**	*eP*	Pn	06 06 17.6	+0.5
BUSP				*eS*	Sn	06 06 36.7	+1.8
CUYO	**Cuyo Island**	**2.31**	**180**	*eP*	Pn	06 06 29.5	0.0
BALP	**Baler**	**2.61**	**12**	*eP*	Pn	06 06 41.1	+7.5

*IDC **25** 06:08:22.3±0.6,569S×13086E,h0km,mb4.5/9, mb1 4.7/12,mb1mx4.6/15,mbtmp4.6/12,ML5.1/3,Error ellipse: s-maj=42.0km s-min=14.2km az=75.0*
*MOS **25** 06:08:25.1±1.2,575S×13074E,h33km,mb4.7/12,Error ellipse: s-maj=30.2km s-min=9.0km az=108.5*
*ISCJB **25** 06:08:26.2±2.0,578S±006×13087E±009,h44km±18km, mb4.9/36,Error ellipse: s-maj=15.2km s-min=7.6km az=155.7*
*NEIC **25** 06:08:40.1±1.8,648S×13035E,h192km±21km,mb4.5/11, Error ellipse: s-maj=17.7km s-min=12.2km az=56.0*
*BJI **25** 06:08:40.1,650S×13030E,h192km,mB4.9,mb4.6*
ISC 25 06:08:31.9±1.8,600S±007×1307E±01,h84km±18km,n85, σ1$27/80,mb4.8/36,5C-2D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.89**	**165**	⇓*iP*	**Pn**	**06 10 13.1**	**+2.8**
	223nm,0.3s						
KAKA				*eS*	**Sn**	**06 11 28.8**	**+1.5**
BATI	**Kupang**	**8.10**	**238**	Pn	**Pn**	**06 10 32.5**	**+5.7**
	27nm,0.3s,baz=90,slow=2.4,SNR=16						
BATI				Sn	**Sn**	**06 12 04.3**	**+7.5**
	9.8nm,0.3s,baz=289,slow=20,SNR=4.6						
FITZ	**Fitzroy Crossi**	**12.99**	**202**	*eP*	**Pn**	**06 11 33.0**	**-0.2**
	26nm,0.3s						
FITZ				*eS*	**Sn**	**06 13 50.2**	**-5.9**
FITZ	**Fitzroy Crossi**	**12.99**	**202**	Pn	**Pn**	**06 11 33.1**	**-0.2**
	6.1nm,0.3s,baz=35,slow=12,SNR=68						
FITZ				Sn	**Sn**	**06 13 53.5**	**-2.5**
	2.6nm,0.3s,baz=176,slow=22,SNR=6.1						
WRA	**Warramunga Arr**	**14.31**	**166**	Pn	**Pn**	**06 11 49.3**	**-1.2**
	9.9nm,0.3s,baz=349,slow=14,SNR=85						
WRA				Sn	**Sn**	**06 14 22.0**	**-6.0**
	7.1nm,0.3s,baz=349,slow=23,SNR=9.4						
WB2	**Warramunga Arr**	**14.31**	**166**	⇑*iP*	**Pn**	**06 11 49.3**	**-1.2**
WB2				*eS*	**Sn**	**06 14 22.6**	**-5.5**
ASAR	**Alice Springs**	**17.84**	**170**	P	**Pn**	**06 12 36.3**	**+1.7**
	6.0nm,0.3s,baz=20,slow=13,SNR=208						
ASAR				S	**S**	**06 15 51.2**	**-2.7**
	2.2nm,0.3s,baz=352,slow=27,SNR=7.7						
MBWA	**Marble Bar**	**18.43**	**214**	*eP*	**Pn**	**06 12 34.5**	**-7.2**
KKM	**Kota Kinabalu**	**18.75**	**309**	*eP*	**Pn**	**06 12 44.8**	**-0.8**
CTA	**Charters Tower**	**20.62**	**134**	P	**P**	**06 13 04.2**	**-0.4**
CTA	**Charters Tower**	**20.62**	**134**	P	**P**	**06 13 04.2**	**-0.4**
	2.8nm,0.9s,baz=346,slow=12,SNR=1.8						
FORT	**Forrest**	**24.77**	**185**	⇑*iP*	**P**	**06 13 49.7**	**+3.9**
	21nm,0.6s,mb4.8						
FORT	**Forrest**	**24.77**	**185**	*eP*	**P**	**06 13 38.9**	**-6.9**
	3.8nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**27.70**	**160**	⇓*iP*	**P**	**06 14 15.5**	**+3.3**
	2.3nm,0.4s,mb4.1						
STKA	**Stephens Creek**	**27.70**	**160**	P	**P**	**06 14 15.5**	**+3.3**
	2.8nm,0.4s,mb4.1,baz=345,slow=8.5,SNR=11						
NJ2	**Nanjing**	**39.48**	**344**	*eP*	**P**	**06 15 53.3**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.3						
WHN	**Wuhan**	**39.56**	**338**	⇑P	**P**	**06 15 55.0**	**+0.1**
GYA	**Guiyang**	**39.78**	**325**	P	**P**	**06 15 56.9**	**+0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CHTO	**Chiang Mai**	**39.82**	**309**	*eP*	**P**	**06 15 55.2**	**-2.1**
	comp=Z,5.7nm,0.6s,mb4.6						
CHTO	**Chiang Mai**	**39.82**	**309**	*eP*	**P**	**06 15 55.2**	**-2.1**
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
KSRS	**Korea Array**	**43.30**	**357**	P	**P**	**06 16 25.0**	**-0.4**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
KSRS	**Korea Array**	**43.30**	**357**	P	**P**	**06 16 25.0**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.9,baz=172,slow=8.0,SNR=4.8						
LZH	**Lanzhou**	**48.85**	**331**	*eP*	**P**	**06 17 09.8**	**+0.8**
LZH				AMB	AMB		
	comp=Z,16nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,67nm,4.1s						
ODAN	**Odare**	**53.12**	**310**	*eP*	**P**	**06 17 41.4**	**+0.2**
	comp=Z,25nm,0.7s,mb5.4						
TAPN	**Taplejung**	**53.13**	**311**	*eP*	**P**	**06 17 41.6**	**+0.3**
	comp=Z,27nm,0.4s,mb5.6						
GTA	**Gaotai**	**53.43**	**330**	*eP*	**P**	**06 17 43.8**	**+0.6**
GTA				AMB	AMB		
	comp=Z,11nm,0.9s,mb4.9						
JIRN	**Jiri**	**54.45**	**310**	*eP*	**P**	**06 17 51.2**	**+0.3**
	comp=Z,10.0nm,0.3s,mb5.3						
KKN	**Kakani**	**55.21**	**310**	*eP*	**P**	**06 17 56.5**	**+0.1**
	comp=Z,14nm,0.5s,mb5.3						
GKN	**Gorkha**	**55.80**	**310**	*eP*	**P**	**06 18 00.7**	**+0.1**
	comp=Z,31nm,0.4s,mb5.6						
KOLN	**Koldanda**	**56.49**	**309**	*eP*	**P**	**06 18 05.9**	**+0.4**
	comp=Z,27nm,0.6s,mb5.5						
ULN	**Ulaanbaatar**	**57.53**	**341**	*eP*	**P**	**06 18 11.4**	**-1.1**
	comp=Z,5.7nm,0.7s,mb4.7						
ULN	**Ulaanbaatar**	**57.53**	**341**	*c iP*	**P**	**06 18 13.3**	**+0.8**
SONM	**Songino Array**	**57.72**	**341**	P	**P**	**06 18 14.4**	**+0.7**
	comp=Z,4.0nm,0.6s,mb4.7,baz=161,slow=6.5,SNR=31						
SONM				PcP	PcP	06 19 06.2	+0.4
	comp=Z,1.3nm,0.6s,baz=153,slow=4.7,SNR=3.6						
ZAK	**Zakamensk**	**60.95**	**340**	*eP*	**P**	**06 18 35.7**	**-0.3**
ZAK				*e*		06 19 19.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
TLY	**Talaya**	**61.94**	**341**	*eP*	**P**	**06 18 43.4**	**+0.7**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
MOY	**Mondy**	**62.81**	**340**	*eP*	**P**	**06 18 50.1**	**+1.6**
BOD	**Bodaibo**	**65.03**	**350**	*eP*	**P**	**06 19 01.4**	**-1.5**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
MKAR	**Makanchi Array**	**67.77**	**326**	P	**P**	**06 19 21.5**	**+0.9**
MKAR	**Makanchi Array**	**67.77**	**326**	P	**P**	**06 19 21.4**	**+0.8**
	comp=Z,20nm,0.5s,mb5.2,baz=113,slow=8.2,SNR=319						
YAK	**Yakutsk**	**67.83**	**359**	P	**P**	**06 19 21.5**	**+0.8**
YAK	**Yakutsk**	**67.83**	**359**	*eP*	**P**	**06 19 21.2**	**+0.5**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
TKM2	**Tokmak 2**	**69.65**	**320**	*eP*	**P**	**06 19 29.9**	**-2.5**
	comp=Z,5.6nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**69.65**	**320**	*eP*	**P**	**06 19 29.9**	**-2.5**
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**69.65**	**320**	P	**P**	**06 19 34.0**	**+1.6**
	SNR=9.5						
UCH	**Uchtor**	**70.01**	**319**	*eP*	**P**	**06 19 31.9**	**-2.8**
	comp=Z,11nm,0.9s,mb4.7						
UCH	**Uchtor**	**70.01**	**319**	P	**P**	**06 19 37.1**	**+2.4**
	SNR=10						
AAK	**Ala-Archa**	**70.22**	**319**	P	**P**	**06 19 37.7**	**+1.8**
	SNR=5.2						
AML	**Almayashu**	**70.50**	**319**	*eP*	**P**	**06 19 34.8**	**-2.9**
	comp=Z,27nm,1.1s,mb5.0						
AML	**Almayashu**	**70.50**	**319**	P	**P**	**06 19 39.6**	**+1.9**
	SNR=16						
USP	**Ospenovka**	**70.52**	**320**	P	**P**	**06 19 38.8**	**+1.1**
	SNR=12						
EKS2	**Erkin-Say**	**70.70**	**319**	*eP*	**P**	**06 19 36.3**	**-2.5**
	comp=Z,19nm,1.2s,mb4.8						
EKS2	**Erkin-Say**	**70.70**	**319**	P	**P**	**06 19 40.8**	**+2.0**
	SNR=8.8						
SEY	**Seymchan**	**70.71**	**10**	P	**P**	**06 19 38.4**	**0.0**
ZALV	**Zalesovo Beam**	**70.99**	**333**	P	**P**	**06 19 40.0**	**-0.4**
ZALV	**Zalesovo Beam**	**70.99**	**333**	P	**P**	**06 19 40.0**	**-0.4**
	comp=Z,4.9nm,0.3s,mb4.8,baz=134,slow=5.4,SNR=35						
ZAL	**Zalesovo**	**70.99**	**333**	P	**P**	**06 19 40.0**	**-0.3**
KURK	**Kurchatov**	**72.02**	**328**	*eP*	**P**	**06 19 43.8**	**-2.8**
	comp=Z,21nm,1.1s,mb4.9						
KURK	**Kurchatov**	**72.02**	**328**	⇑*eP*	**P**	**06 19 47.0**	**+0.4**
NVS	**Novosibirsk**	**72.28**	**333**	*eP*	**P**	**06 19 47.3**	**-0.7**
VNDA	**Vanda**	**73.35**	**173**	P	**P**	**06 19 57.3**	**+3.2**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNDA	**Vanda**	**73.35**	**173**	P	**P**	**06 19 57.2**	**+3.1**
	comp=Z,2.0nm,0.9s,mb4.0,baz=305,slow=5.8,SNR=8.7						
MAW	**Mawson**	**76.12**	**201**	P	**P**	**06 20 13.8**	**+3.6**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAW	**Mawson**	**76.12**	**201**	P	**P**	**06 20 13.8**	**+3.6**
	comp=Z,5.5nm,1.0s,mb4.2,baz=358,slow=3.8,SNR=9.4						
TIXI	**Tiksi**	**77.50**	**359**	*eP*	**P**	**06 20 15.5**	**-2.3**
	comp=Z,4.9nm,0.6s,mb4.4						
TIXI	**Tiksi**	**77.50**	**359**	*eP*	**P**	**06 20 17.3**	**-0.6**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
BRVK	**Borovoye**	**77.65**	**328**	*eP*	**P**	**06 20 16.2**	**-2.9**
	comp=Z,9.2nm,0.8s,mb4.6						
BRVK	**Borovoye**	**77.65**	**328**	*eP*	**P**	**06 20 16.2**	**-2.9**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
UMR	**Umm Al-Rimmam**	**86.83**	**300**	*eP*	**P**	**06 21 08.1**	**+0.6**
UMR				AMb	AMB	06 21 09.4	
	comp=Z,25nm,0.8s,mb5.2						
RDF	**Al-Radifah**	**86.88**	**299**	*eP*	**P**	**06 21 08.0**	**+0.2**
RDF				AMb	AMB	06 21 09.1	
	comp=Z,20nm,0.5s,mb5.3						
MIB	**Mutribah**	**87.19**	**300**	*eP*	**P**	**06 21 09.3**	**0.0**
MIB				AMb	AMB	06 21 11.1	
	comp=Z,23nm,0.7s,mb5.2						
NAY	**Al-Naaiem**	**87.19**	**300**	*eP*	**P**	**06 21 09.7**	**+0.4**
NAY				AMb	AMB	06 21 10.5	
	comp=Z,16nm,0.7s,mb5.1						
INK	**Inuvik**	**97.69**	**22**	P	**P**	**06 21 55.2**	**-1.7**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**97.69**	**22**	P	**P**	**06 21 55.2**	**-1.7**
	comp=Z,0.8nm,0.8s,mb4.3,baz=30,slow=11,SNR=5.8						
ARCES	**ARCESS Array B**	**100.88**	**340**	P	Pdif	06 22 11.1	-0.4
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARCES	**ARCESS Array B**	**100.88**	**340**	P	Pdif	06 22 11.1	-0.4
	comp=Z,6.8nm,1.1s,baz=76,slow=5.1,SNR=4.4						
FINES	**FINESS Array B**	**102.21**	**332**	*i* P	Pdif	06 22 17.6	+0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FINES	**FINESS Array B**	**102.21**	**332**	P	Pdif	06 22 16.3	-1.1
	comp=Z,1.3nm,1.0s,baz=80,slow=4.3,SNR=3.9						
GERES	**GERESS Array B**	**112.08**	**321**	*i* PKIKP	PKiKP	06 26 58.1	+0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**112.08**	**321**	PKiKP	PKiKP	06 26 58.1	+0.5
	comp=Z,0.5nm,0.5s,baz=57,slow=4.9,SNR=4.6						
PDAR	**Pinedale Array**	**115.72**	**45**	PKP	PKPdf	06 27 06.0	+1.2
	comp=Z,0.4nm,0.6s,baz=215,slow=1.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**129.26**	**282**	PKP	PKPdf	06 27 33.0	+1.5
	comp=Z,1.1nm,0.6s,baz=83,slow=2.2,SNR=14						
DBIC	**Dimbokro**	**135.81**	**273**	PKIKP	PKPdf	06 27 45.2	+1.2
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DBIC	**Dimbokro**	**135.81**	**273**	PKP	PKPdf	06 27 45.1	+1.2
	comp=Z,6.3nm,1.2s,baz=115,slow=19,SNR=5.5						
LPAZ	**La Paz**	**151.07**	**140**	PKIKP	PKPbc	06 28 19.3	+3.0
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
LPAZ	**La Paz**	**151.07**	**140**	PKPbc	PKPbc	06 28 19.3	+3.0
	comp=Z,2.5nm,0.4s,baz=61,slow=2.9,SNR=12						

JMA 25 06:14:55.5±0.1,3724N×13665E,h1km±1km,M2.7,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**161**	P	Pg	06 15 02.6	+0.8
JSZ	**Suzu**	**0.60**	**70**	P	Pg	06 15 07.3	+0.2
JSZ				*eS*	Sg	06 15 16.3	+1.3
JKG	**Kaga**	**0.99**	**195**	P	Pg	06 15 14.8	+0.2
MAT	**Matsushiro**	**1.43**	**119**	P	Pn	06 15 21.9	-0.6
MAT				S	Sg	06 15 41.3	-0.1

IDC 25 06:18:15.8±1.0,2866N×14033E,h0km,mb3.9/6, mb1 4.2/7,mb1mx3.8/16,mbtmp3.9/7,ML3.7/1,MS3.1/1, Ms1 3.1/1,ms1mx2.6/18,Error ellipse: s-maj=39.2km s-min=21.4km az=95.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.27**	**133**	Pn	Pn	06 18 53.5	-0.9
	18nm,0.3s,baz=96,slow=22,SNR=13						
CBIJ				Sn	Sn	06 19 17.4	-5.8
	95nm,0.3s,baz=289,slow=23,SNR=14						
CBIJ				LR	LR	06 19 21.9	
	comp=Z,438nm,21.0s,baz=107,slow=29						
WB2	**Warramunga Arr**	**48.66**	**187**	*eP*	P	06 27 01.7	0.0
WRA	**Warramunga Arr**	**48.66**	**188**	P	P	06 27 01.8	+0.1
	5.4nm,0.8s,baz=9.3,slow=8.1,SNR=30						
ASAR	**Alice Springs**	**52.39**	**187**	P	P	06 27 29.9	+0.1
	0.7nm,0.8s,baz=10,slow=7.6,SNR=6.1						
YKA	**Yellowknife Ar**	**71.55**	**28**	P	P	06 29 37.4	-0.9
	0.2nm,0.4s,baz=298,slow=5.9,SNR=7.8						
FINES	**FINESS Array B**	**75.82**	**333**	P	P	06 30 03.1	-0.3
	1.3nm,0.9s,baz=116,slow=4.4,SNR=4.2						
NVAR	**Mina Array Bea**	**80.84**	**51**	P	P	06 30 32.0	+0.3
	0.9nm,0.7s,baz=287,slow=6.4,SNR=7.6						
PDAR	**Pinedale Array**	**84.25**	**44**	P	P	06 30 51.6	+2.3
	0.5nm,0.8s,baz=225,slow=0.6,SNR=5.6						

JMA 25 06:25:11.3,3716N×13669E,h11km±1km,M3.8,3C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.25**	**163**	⇑P	Pg	06 25 16.5	+0.1
JJH				S	Sg	06 25 20.3	+0.5
JSZ	**Suzu**	**0.61**	**62**	⇓P	Pg	06 25 22.9	-0.2
JSZ				S	Sg	06 25 31.4	+0.3
JHG	**Hegura jima**	**0.71**	**15**	⇑P	Pg	06 25 24.7	-0.4
JTT	**Ttatey**	**0.76**	**137**	⇓P	Pg	06 25 25.7	-0.2
JTT				S	Sg	06 25 36.3	+0.5
JKG	**Kaga**	**0.93**	**198**	⇑P	Pg	06 25 28.3	-0.9
JKG				S	Sg	06 25 41.1	-0.1
MAT	**Matsushiro**	**1.36**	**116**	P	Pn	06 25 35.7	-0.6
MAT				S	Sb	06 25 54.5	+0.2

JMA 25 06:26:59.2±0.1,3721N×13661E,h4km±1km,M3.7,1C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**154**	⇓P	Pg	06 27 05.7	+0.4
JJH				S	Sg	06 27 10.1	+0.7
JSZ	**Suzu**	**0.65**	**68**	⇑P	Pg	06 27 11.5	-0.1
JHG	**Hegura jima**	**0.68**	**21**	P	Pg	06 27 12.7	+0.4
JTT	**Ttatey**	**0.84**	**136**	⇓P	Pg	06 27 15.5	+0.3
JTT				S	Sg	06 27 26.8	+0.7
JKG	**Kaga**	**0.96**	**194**	P	Pg	06 27 17.4	-0.2
JKG				S	Sg	06 27 30.2	+0.2
MAT	**Matsushiro**	**1.44**	**117**	P	Pn	06 27 25.4	-0.7
MAT				S	Sb	06 27 44.0	-1.3

MAN 25 06:28:23,1454N×12312E,h120km,mb4.2,ML3.0,MS2.8, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**0.91**	**226**	⇓*eP*	Pn	06 28 45.9	+1.7
GQP				*i* S	Sn	06 29 02.5	+2.4
POLP	**Polilio Island**	**1.16**	**279**	*eP*	Pn	06 28 48.5	+1.9
POLP				*eS*	Sn	06 29 06.3	+1.8
PVCP	**Virac**	**1.37**	**133**	*eP*	Pn	06 28 50.6	+1.6
PVCP				*eS*	Sn	06 29 08.9	+0.2
BALP	**Baler**	**1.91**	**309**	*eP*	Pn	06 28 56.9	+1.6

*NNC **25** 06:31:20.6±3.2,3723N×7076E,h0km,mb3.5,mpv3.3, Error ellipse: s-maj=34.1km s-min=22.0km az=105.0*
*IDC **25** 06:31:27.8±10.0,3883N×6985E,h0km,mb3.3/1, mb1 3.5/3,mb1mx3.2/21,mbtmp3.4/3,ML3.2/2,Error ellipse: s-maj=289.0km s-min=45.4km az=155.0*
ISC 25 06:31:22.1±2.6,373N±02×710E±02,h10km,n6,σ$54/9, mb3.3/1,6C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.77**	**356**	⇑Pn	**Pn**	**06 32 48.5**	**+0.8**
	0.9nm,0.4s,baz=184,slow=14,SNR=35						
KK31				⇑Pg	**Pg**	**06 33 06.6**	**-5.9**
	2.5nm,0.6s,baz=177,slow=15						
KK31				⇑Sn	**Sn**	**06 33 58.7**	**+4.8**
	5.2nm,0.6s,baz=165,slow=22						
KK31				⇑Lg		06 34 25.2	
	11nm,0.7s,baz=171,slow=29						
MKAR	**Makanchi Array**	**12.61**	**38**	Pn	**Pn**	**06 34 21.1**	**-0.3**
	0.1nm,0.3s,baz=222,slow=8.2,SNR=5.6						
AB31	**Akbulak array**	**14.36**	**330**	⇑Pn	**Pn**	**06 34 45.2**	**-0.1**
	0.3nm,0.5s,baz=143,slow=12,SNR=7.8						
AB31				⇑Sn	**Sn**	**06 37 24.0**	**-0.5**
	0.9nm,0.6s						
AKTO	**Aktyubinsk**	**16.06**	**329**	⇓Pn	**Pn**	**06 35 08.5**	**+0.6**
	1.2nm,1.8s						
ZALV	**Zalesovo Beam**	**19.15**	**25**	P	**Pn**	**06 35 41.2**	**-4.9**
	0.2nm,0.3s,baz=213,slow=11,SNR=6.0						
YKA	**Yellowknife Ar**	**80.41**	**3**	P	**P**	**06 43 32.9**	**-0.5**
	0.2nm,0.6s,mb3.3,baz=348,slow=5.4,SNR=4.7						

JMA 25 06:42:47.2,3719N×13665E,h9km±1km,M2.2,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.28**	**158**	P	Pg	06 42 53.1	+0.2
JJH				*eS*	Sg	06 42 57.0	+0.3
JSZ	**Suzu**	**0.62**	**65**	P	Pg	06 42 59.3	0.0
JTT	**Ttatey**	**0.80**	**137**	P	Pg	06 43 02.7	+0.1
JTT				*eS*	Sg	06 43 13.8	+0.8
JKG	**Kaga**	**0.95**	**196**	S	Sg	06 43 17.8	+0.1

*NIED **25** 06:43:00,3730N×13670E,h5km,Mw4.0 Best double couple: M0 1.25000×10$15 NP1:φs40.00000°,δ48.00000°, λ137.00000°. NP2:φs161.00000°,δ60.00000°,λ51.00000°.*
*IDC **25** 06:43:29.5±0.6,3729N×13676E,h0km,mb3.9/10, mb1 4.1/12,mb1mx4.0/20,mbtmp3.9/12,ML3.8/2,MS3.1/1, Ms1 3.1/1,ms1mx2.8/19,Error ellipse: s-maj=18.8km s-min=11.7km az=38.0*
*ISCJB **25** 06:43:30.0±0.7,3731N±003×13677E±004,h12km±4km, mb4.1/16,Error ellipse: s-maj=5.6km s-min=4.3km az=179.2*
*JMA **25** 06:43:30.5,3729N×13677E,h9km±1km,M4.5*
JMA Felt IV J1.
*NEIC **25** 06:43:31.2±1.7,3726N×13684E,h12km±11km,mb4.5/5, MW4.0(NIED),Error ellipse: s-maj=9.4km s-min=8.3km az=121.0*
NEIC Recorded [4 JMA] in Ishikawa, [2 JMA] in Toyama and [1 JMA] in Fukui and Niigata Prefectures.
*MOS **25** 06:43:33.5±1.4,3725N×13683E,h48km,mb4.3/6,Error ellipse: s-maj=14.2km s-min=8.2km az=94.9*
ISC 25 06:43:31.1±0.5,3728N±002×13682E±004,h11km±4km, n48,σ0$87/55,mb4.1/16,3C-3D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**185**	⇑P	**Pg**	**06 43 38.0**	**-0.2**
JJH				S	**Sg**	**06 43 43.4**	**+0.5**
JSZ	**Suzu**	**0.46**	**69**	⇓P	**Pg**	**06 43 40.0**	**-0.2**
JSZ				S	**Sg**	**06 43 47.1**	**+0.7**
JHG	**Hegura jima**	**0.57**	**8**	⇑P	**Pg**	**06 43 41.6**	**-0.7**
JHG				S	**Sg**	**06 43 49.6**	**-0.

BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
MKAR	**Makanchi Array**	**40.87**	**301**	P	**P**	**06 51 17.0**	**+4.1**
MKAR	**Makanchi Array**	**40.87**	**301**	P	**P**	**06 51 14.4**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=88,slow=10,SNR=4.3						
KURK	**Kurchatov**	**42.88**	**307**	P	**P**	**06 51 29.5**	**+0.1**
AML	**Almayashu**	**47.83**	**296**	*e*P	**P**	**06 52 08.9**	**+0.2**
	comp=Z,22nm,0.6s,mb5.4						
WRA	**Warramunga Arr**	**56.96**	**183**	P	**P**	**06 53 15.7**	**-0.9**
	comp=Z,1.4nm,0.4s,mb4.4,baz=359,slow=7.7,SNR=24						
ASAR	**Alice Springs**	**60.68**	**183**	P	**P**	**06 53 42.1**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.1,baz=11,slow=8.7,SNR=15						
RES	**Resolute Bay**	**63.25**	**14**	*e*P	**P**	**06 53 58.6**	**-0.5**
	comp=Z,147nm,0.8s						
YKA	**Yellowknife Ar**	**65.41**	**29**	P	**P**	**06 54 13.1**	**-0.3**
YKA	**Yellowknife Ar**	**65.41**	**29**	P	**P**	**06 54 13.2**	**-0.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=310,slow=6.8,SNR=12						
FINES	**FINESS Array B**	**66.85**	**331**	P	**P**	**06 54 22.0**	**-0.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**66.85**	**331**	P	**P**	**06 54 22.0**	**-0.7**
	comp=Z,2.5nm,1.0s,mb4.2,baz=49,slow=5.8,SNR=5.1						
AKASG	**Malin Array Be**	**71.81**	**320**	P	**P**	**06 54 53.0**	**-0.6**
AKASG	**Malin Array Be**	**71.81**	**320**	P	**P**	**06 54 52.8**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**71.81**	**320**	P	**P**	**06 54 52.8**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.1,baz=48,slow=6.1,SNR=10						
NOA	**NORSAR Array B**	**72.49**	**335**	P	**P**	**06 54 56.6**	**-0.9**
	comp=Z,0.8nm,0.9s,mb3.6,baz=41,slow=6.1,SNR=2.9						
DLMT	**Dillon**	**76.70**	**43**	*e*P	**P**	**06 55 22.8**	**+0.6**
	comp=Z,4.4nm,0.8s,mb4.4						
NVAR	**Mina Array Bea**	**77.73**	**51**	P	**P**	**06 55 29.7**	**+1.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=313,slow=4.1,SNR=12						
HVU	**Hansel Valley**	**78.91**	**46**	*e*P	**P**	**06 55 34.5**	**-0.1**
CLL	**Collm**	**79.00**	**328**	*e*P	**P**	**06 55 35.0**	**+0.1**
PDAR	**Pinedale Array**	**80.06**	**43**	P	**P**	**06 55 41.6**	**+0.8**
	comp=Z,2.1nm,0.7s,mb4.2,baz=286,slow=2.1,SNR=24						

NNC ***25*** *06:50:48.1±4.9, 3721N×7093E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=43.2km s-min=39.1km az=67.0*
ISCJB ***25*** *06:50:50.1±1.2, 37.11N±005×719E±0.1, h91km±21km, mb3.6/5, Error ellipse: s-maj=17.6km s-min=5.8km az=155.9*
IDC ***25*** *06:51:02.9±8.5, 3789N×7220E, h94km±69km, mb3.4/5, mb1 3.5/7, mb1mx3.2/21, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=66.7km s-min=26.6km az=37.0*
NEIC ***25*** *06:51:19.9±9.2, 3954N×7193E, h130km±27km, mb3.4/1, Error ellipse: s-maj=131.8km s-min=20.4km az=179.0*

ISC 25 06:50:47.1±3.2, 3703N±006×717E±01, h11km±22km, n26, σ1°49/34, mb3.6/5, 3C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**5.61**	**22**	*e*Pn		**Pn**	**06 52 11.5**	**+1.1**
THN	**Thein Dam**	**5.64**	**143**	*e*P		**Pn**	**06 52 16.1**	**+5.3**
THN				*ex*		**Sn**	**06 53 22.8**	**+7.3**
DLH	**Dalhousie**	**5.67**	**141**	*ex*		**Sn**	**06 53 25.0**	**+8.6**
KK31	**Karatay Array**	**6.13**	**352**	⇓Pn		**Pn**	**06 52 17.4**	**-0.2**
	1.6nm,0.3s,baz=184,slow=14							
KK31				⇓Sn		**Sn**	**06 53 26.3**	**-1.4**
	12nm,0.6s							
KK31				⇑Lg			06 53 54.5	
	21nm,0.7s,baz=188,slow=23							
TKM2	**Tokmak 2**	**6.58**	**26**	⇑Pn		**Pn**	**06 52 27.0**	**+3.3**
	3.1nm,0.5s							
TKM2				⇓Lg			06 54 21.9	
	16nm,1.4s							
TKM2	**Tokmak 2**	**6.58**	**26**	*e*Pn		**Pn**	**06 52 24.7**	**+1.0**
JOSI	**Joshimath**	**9.17**	**133**	*e*P		**Pn**	**06 52 59.2**	**0.0**
JOSI				*eS*		**Sn**	**06 54 48.7**	**+6.3**
KHET	**Khetri**	**9.57**	**158**	*e*P		**Pn**	**06 53 09.1**	**+4.3**
KHET				AMb		AMB	06 53 13.4	
	comp=Z,2.8nm,0.5s							
KHET				*ex*		**Sn**	**06 54 52.4**	**+0.1**
KUDL	**Kundal**	**9.72**	**154**	*e*P		**Pn**	**06 53 13.1**	**+6.2**
KUDL				AMb		AMB	06 53 17.1	
	comp=Z,5.4nm,0.8s							
KUDL				*ex*		**Sn**	**06 54 53.6**	**-2.5**
SONA	**Sohna**	**9.85**	**151**	*e*P		**Pn**	**06 53 09.9**	**+1.3**
MKAR	**Makanchi Array**	**12.51**	**36**	P		**Pn**	**06 53 45.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=225,slow=14,SNR=8.8							
KOLN	**Koldanda**	**13.62**	**129**	*e*P		**Pn**	**06 53 59.4**	**-0.7**
	comp=Z,9.1nm,0.6s							
KOLN				*eS*		**Sn**	**06 56 26.1**	**-5.3**
GKN	**Gorkha**	**14.11**	**126**	*e*P		**Pn**	**06 54 06.0**	**-0.9**
GKN				*eS*		**Sn**	**06 56 37.6**	**-5.9**
AB31	**Akbulak array**	**14.92**	**329**	⇑P		**Pn**	**06 54 15.2**	**-2.6**
	comp=Z,1.0nm,0.6s,baz=166,slow=11,SNR=12							
AB31				S		**Sn**	**06 56 54.1**	**-8.9**
	comp=Z,0.7nm,0.5s,baz=150,slow=23,SNR=3.1							
JIRN	**Jiri**	**15.36**	**123**	*e*P		**Pn**	**06 54 22.1**	**-1.7**
	comp=Z,4.9nm,0.3s							
TAPN	**Taplejung**	**16.59**	**121**	*e*P		**Pn**	**06 54 37.0**	**-2.7**
AKTK	**Aktyubinsk**	**16.63**	**328**	P		**Pn**	**06 54 40.4**	**+0.4**
AKTO	**Aktyubinsk**	**16.63**	**328**	⇓P		**Pn**	**06 54 36.4**	**-3.5**
	comp=Z,0.7nm,0.8s							
AKTO	**Aktyubinsk**	**16.63**	**328**	P		**Pn**	**06 54 40.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=147,slow=13,SNR=7.7							
ZALV	**Zalesovo Beam**	**19.18**	**24**	P		**Pn**	**06 55 07.8**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=220,slow=10,SNR=12							
FINES	**FINESS Array B**	**37.38**	**326**	P		**P**	**06 58 02.4**	**+3.0**
	comp=Z,1.3nm,1.0s,mb3.7,baz=124,slow=7.0,SNR=2.9							
ARCES	**ARCESS Array B**	**40.88**	**337**	P		**P**	**06 58 31.1**	**+2.5**
	comp=Z,3.3nm,0.9s,mb4.0,baz=105,slow=9.3,SNR=4.1							
NB2	**NORSAR Subarra**	**44.31**	**323**	P		**P**	**06 58 55.0**	**-1.6**
	comp=Z,0.5nm,0.6s,mb3.4,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.31**	**323**	P		**P**	**06 58 57.9**	**+1.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=96,slow=7.8,SNR=5.0							
YKA	**Yellowknife Ar**	**80.68**	**3**	P		**P**	**07 03 00.4**	**+0.8**
	comp=Z,0.2nm,0.6s,mb3.2,baz=349,slow=5.3,SNR=6.6							
WRA	**Warramunga Arr**	**81.77**	**122**	P		**P**	**07 03 12.3**	**+6.3**
	comp=Z,0.3nm,0.4s,mb3.5,baz=327,slow=4.9,SNR=5.6							

MAN 25 06:54:53, 1114N×12499E, h149km, mb4.1, ML2.9, MS2.6, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.03**	**333**	*e*P		Pn	06 55 13.5	+0.6
PLP				*eS*		Sn	06 55 28.0	-0.2
OCLP	**Ormoc**	**0.39**	**256**	*e*P		Pn	06 55 15.0	+1.3
BESP	**Borongan**	**0.63**	**44**	*e*P		Pn	06 55 15.7	+0.8
BESP				*eS*		Sn	06 55 34.3	+2.6
MSLP	**Maasin**	**1.01**	**187**	*e*P		Pn	06 55 18.1	+0.3
MSLP				*eS*		Sn	06 55 38.4	+1.7
CNP	**Catarman**	**1.40**	**347**	*e*P		Pn	06 55 22.2	+0.8
CNP				*eS*		Sn	06 55 45.1	+1.8
PVCP	**Virac**	**2.57**	**342**	*e*P		Pn	06 55 35.9	+1.0

ISCJB ***25*** *06:56:59.0±0.8, 3725N±004×13668E±006, h10km, mb3.4/2, Error ellipse: s-maj=7.0km s-min=4.9km az=17.9*
IDC ***25*** *06:56:59.4±2.2, 3707N×13663E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.2/18, mbtmp3.4/2, Error ellipse: s-maj=33.1km s-min=18.6km az=178.0*
JMA ***25*** *06:57:00.2, 3723N×13673E, h11km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φ±52.00000°, δ28.00000°, λ74.00000°. NP2:φ±250.00000°, δ64.00000°, λ98.00000°. Principal axes: T Plg70.0000°, Azm177.0000°; N Plg7.0000°, Azm66.0000°; P Plg18.0000°, Azm334.0000°;*
JMA Felt III J1.
NEIC ***25*** *06:57:00.2, 3723N×13673E, h11km, MG3.9(JMA), After JMA.*

ISC 25 06:56:59.8±0.8, 3723N±003×13671E±006, h10km±5km, n11, σ0°61/17, mb3.4/2, 2C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.31**	**170**	⇓P		**Pg**	**06 57 06.6**	**+0.6**
JSZ	**Suzu**	**0.56**	**67**	⇑P		**Pg**	**06 57 10.6**	**-0.1**
JSZ				*eS*		**Sg**	**06 57 18.3**	**+0.2**
JHG	**Hegura jima**	**0.64**	**15**	⇓P		**Pg**	**06 57 12.2**	**0.0**
JHG				*eS*		**Sg**	**06 57 21.0**	**+0.4**
JTT	**Ttatey**	**0.80**	**141**	⇓P		**Pg**	**06 57 15.1**	**-0.1**
JTT				*eS*		**Sg**	**06 57 26.1**	**+0.5**
JKG	**Kaga**	**1.00**	**198**	⇑P		**Pg**	**06 57 18.7**	**-0.4**
JKG				*eS*		**Sg**	**06 57 32.3**	**+0.2**
MAJO	**Matsushiro**	**1.38**	**119**	*e*Pn		**Pn**	**06 57 24.1**	**-1.0**
MAJO				*eS*		**Sn**	**06 57 43.6**	**+0.2**
MAT	**Matsushiro**	**1.38**	**119**	P		**Pn**	**06 57 24.4**	**-0.7**
MAT				S		**Sn**	**06 57 44.1**	**+0.8**
MJAR	**Matsushiro Arr**	**1.38**	**119**	Pg		**Pg**	**06 57 25.2**	**-1.2**
MJAR	**Matsushiro Arr**	**1.38**	**119**	Pg		**Pg**	**06 57 25.2**	**-1.2**
	22nm,0.3s,baz=294,slow=16,SNR=59							
MJAR				Lg			06 57 44.7	
	50nm,0.3s,baz=293,slow=28,SNR=18							
WRA	**Warramunga Arr**	**56.91**	**183**	P		**P**	**07 06 44.3**	**-0.6**
	0.3nm,0.5s,mb3.6,baz=358,slow=7.6,SNR=8.6							
ASAR	**Alice Springs**	**60.63**	**183**	P		**P**	**07 07 11.8**	**+1.1**
	0.1nm,0.6s,mb3.1,baz=14,slow=14,SNR=4.7							

JMA 25 07:53:11.6, 3724N×13674E, h10km±1km, M2.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.32**	**174**	P		Pg	07 53 18.0	+0.1
JJH				S		Sg	07 53 22.2	+0.1
JSZ	**Suzu**	**0.54**	**67**	P		Pg	07 53 21.9	-0.2
JSZ				S		Sg	07 53 29.4	+0.2
JHG	**Hegura jima**	**0.62**	**13**	S		Sg	07 53 32.3	+0.4

NIED ***25*** *07:53:00, 3720N×13670E, h5km, Mw3.6 Best double couple: M0≤2.42000×10^14 NP1:φ3166.00000°, δ86.00000°, λ1.00000°. NP2:φ876.00000°, δ89.00000°, λ176.00000°.*

JMA 25 07:53:22.8, 3722N×13667E, h8km±1km, M3.7, 1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.31**	**163**	⇓P		Pg	07 53 29.2	+0.4
JJH				S		Sg	07 53 33.4	+0.5
JSZ	**Suzu**	**0.60**	**67**	P		Pg	07 53 34.2	-0.1
JSZ				S		Sg	07 53 42.7	+0.5
JHG	**Hegura jima**	**0.66**	**18**	P		Pg	07 53 35.7	+0.2
JHG				S		Sg	07 53 44.8	+0.7
JTT	**Ttatey**	**0.81**	**139**	P		Pg	07 53 38.4	0.0
JTT				S		Sg	07 53 50.0	+1.0
JKG	**Kaga**	**0.98**	**196**	P		Pg	07 53 41.4	-0.2
JKG				S		Sg	07 53 54.3	0.0
MAT	**Matsushiro**	**1.41**	**118**	P		Pn	07 53 48.2	-0.5
MAT				*eS*		Sb	07 54 06.7	-0.6

NEIC ***25*** *07:54:28.3±3.2, 522S×14498E, h133km±28km, mb4.5/6, Error ellipse: s-maj=21.8km s-min=13.0km az=222.0*
ISCJB ***25*** *07:54:31.1±4.7, 53S±02×1448E±02, h172km±43km, mb4.4/6, Error ellipse: s-maj=35.0km s-min=20.2km az=141.8*
IDC ***25*** *07:54:40.8±8.1, 594S×14496E, h212km±69km, mb3.6/5, mb1 3.7/7, mb1mx3.5/14, mbtmp3.6/7, Error ellipse: s-maj=46.7km s-min=25.9km az=46.0*

ISC 25 07:54:28.5±4.8, 53S±02×1449E±02, h132km±44km, n17, σ0°92/15, mb4.4/6, 1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.39**	**238**	*e*P		**Pn**	**07 57 46.9**	**+0.8**
	14nm,0.6s							
CTA	**Charters Tower**	**14.80**	**175**	*e*P		**Pn**	**07 57 52.3**	**+1.0**
	7.1nm,1.1s							
CTA	**Charters Tower**	**14.80**	**175**	P		**Pn**	**07 57 52.5**	**+1.2**
	0.8nm,0.3s,baz=359,slow=15,SNR=7.7							
CTAO	**Charters Tower**	**14.80**	**175**	*e*Pn		**Pn**	**07 57 51.0**	**-0.3**
WB2	**Warramunga Arr**	**17.87**	**214**	*e*P		**Pn**	**07 58 27.7**	**-1.1**
WRA	**Warramunga Arr**	**17.87**	**214**	P		**Pn**	**07 58 28.0**	**-0.9**
	1.1nm,0.3s,baz=32,slow=12,SNR=42							
ASAR	**Alice Springs**	**21.17**	**209**	P		**P**	**07 59 03.3**	**0.0**
	3.6nm,0.5s,mb4.0,baz=41,slow=7.7,SNR=36							
FITZ	**Fitzroy Crossi**	**22.77**	**234**	*e*P		**P**	**07 59 21.8**	**+1.9**
	23nm,0.6s,mb4.8							
FITZ	**Fitzroy Crossi**	**22.77**	**234**	P		**P**	**07 59 22.3**	**+2.4**
	15nm,0.7s,mb4.5,baz=65,slow=9.3,SNR=33							
STKA	**Stephens Creek**	**26.67**	**186**	⇓*i*P		**P**	**07 59 54.4**	**-0.7**
	4.0nm,0.7s,mb4.2							
STKA	**Stephens Creek**	**26.67**	**186**	P		**P**	**07 59 54.5**	**-0.6**
	5.0nm,0.7s,mb4.2,baz=11,slow=10,SNR=12							
KKM	**Kota Kinabalu**	**30.79**	**291**	*e*P		**P**	**08 00 32.2**	**+0.3**
QIZ	**Qiongzhong**	**42.15**	**306**	*e*P		**P**	**08 02 07.0**	**-1.2**
	14nm,1.2s,mb4.5							
VNDA	**Vanda**	**72.78**	**176**	P		**P**	**08 05 41.9**	**0.0**
	1.4nm,0.8s,mb3.7,baz=332,slow=4.3,SNR=7.4							
MKAR	**Makanchi Array**	**75.62**	**321**	P		PcP	08 06 06.9	-4.3
	0.1nm,0.4s,baz=99,slow=7.6,SNR=3.8							
WVOR	**Wild Horse Val**	**98.26**	**48**	*e*P		**P**	**08 07 51.4**	**+0.4**
	5.6nm,0.6s,mb5.2							
SIV	**San Ignacio**	**146.71**	**130**	PKPbc		PKPbc	08 13 55.0	-0.8
	0.8nm,0.5s,baz=265,slow=7.0,SNR=6.8							

ISCJB ***25*** *08:01:08.7±0.5, 3839N±002×2201E±003, h6km±3km, mb3.6/9, Error ellipse: s-maj=3.7km s-min=3.0km az=174.6*
ATH ***25*** *08:01:08.9, 3838N×2202E, h17km±1km, MD3.7/13, ML3.3*
IDC ***25*** *08:01:08.8±0.9, 3840N×2205E, h0km, mb3.5/10, mb1 3.6/12, mb1mx3.6/24, mbtmp3.6/12, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/23, Error ellipse: s-maj=21.0km s-min=15.6km az=110.0*
NEIC ***25*** *08:01:08.9, 3838N×2202E, h17km, ML3.7(THE), ML3.1(ATH), After ATH.*
THE ***25*** *08:01:09.6, 3839N×2203E, h2km, ML3.7*
CSEM ***25*** *08:01:09.9±0.1, 3838N×2201E, h10km, ML3.7, Error ellipse: s-maj=1.6km s-min=1.3km az=39.0*
SKO ***25*** *08:01:11.6, 3844N×2272E, h0km*

ISC 25 08:01:09.5±0.4, 3839N±002×2202E±003, h5km±3km, n64, σ1°06/82, mb3.6/9, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SELA	**Sela**	**0.15**	**220**	*e*Pg		**Pg**	**08 01 12.7**	**+0.1**
SELA				*e*Sg		**Sg**	**08 01 15.2**	**+0.7**
EVR	**Evrytania**	**0.55**	**343**	*e*PN		**Pg**	**08 01 20.1**	**0.0**
EVR				*e*SN		**Sg**	**08 01 28.3**	**+1.1**
RLS	**Riolos of Patr**	**0.55**	**233**	*e*PN		**Pg**	**08 01 20.1**	**+0.1**
RLS				*e*SN		**Sg**	**08 01 27.7**	**+0.6**
AGG	**Agios Georgios**	**0.67**	**21**	*e*Pg		**Pg**	**08 01 22.2**	**-0.3**
AGG				*e*Sg		**Sg**	**08 01 31.9**	**+0.7**
LKR	**Lokris**	**0.81**	**71**	*e*PB		**Pb**	**08 01 24.1**	**-2.0**
LKR				*e*SN		**Sg**	**08 01 36.4**	**+0.8**
LTK	**Loutraki**	**0.83**	**116**	*e*Pg		**Pg**	**08 01 25.1**	**-0.3**
LTK				*e*Sg		**Sg**	**08 01 37.1**	**+0.8**
LTK	**Loutraki**	**0.83**	**116**	*e*Pg		**Pg**	**08 01 25.1**	**-0.4**
LTK				*e*Sg		**Sg**	**08 01 37.1**	**+0.8**
KFL	**Anninata**	**1.01**	**254**	*e*Pg		**Pg**	**08 01 28.4**	**-0.4**
VLX	**Vlachokerasia**	**1.06**	**164**	*e*Pg		**Pg**	**08 01 28.7**	**-1.1**
VLS	**Valsamata**	**1.14**	**260**	*e*PN		**Pn**	**08 01 30.2**	**-1.9**
VLS				*e*SN		**Sn**	**08 01 46.5**	**-1.7**
THL	**Klokotos Trika**	**1.17**	**360**	*e*PN		**Pn**	**08 01 31.4**	**-1.1**
THL				*e*SN		**Sn**	**08 01 47.7**	**-1.2**
ITM	**Ithomi**	**1.21**	**183**	*e*PN		**Pn**	**08 01 31.3**	**-1.8**
ITM				*e*SN		**Sn**	**08 01 48.1**	**-1.8**
DID	**Didima**	**1.31**	**132**	*e*Pg		**Pg**	**08 01 34.1**	**-0.5**
DID				*e*Sg		**Sg**	**08 01 51.7**	**+0.2**
NEO	**Neokhori**	**1.31**	**46**	*e*PN		**Pn**	**08 01 33.1**	**-1.3**
NEO				*e*SN		**Sn**	**08 01 51.4**	**-0.9**
NAIG	**Nisos Aigina**	**1.32**	**118**	*e*PN		**Pn**	**08 01 34.0**	**-0.6**
XOR	**Xorichti**	**1.34**	**43**	*e*Pg		**Pg**	**08 01 34.0**	**-1.1**
ATH	**Athens Observa**	**1.40**	**107**	*e*PN		**Pn**	**08 01 35.7**	**0.0**
ATH				*e*SN		**Sn**	**08 01 54.3**	**-0.3**
KVR	**Kavouri**	**1.49**	**112**	*e*PN		**Pn**	**08 01 36.8**	**-0.1**
PTL	**Penteli**	**1.49**	**103**	*e*PN		**Pn**	**08 01 37.0**	**0.0**
PYL	**PYLOS**	**1.51**	**188**	*e*Pg		**Pg**	**08 01 36.6**	**-1.8**
JAN	**Janina**	**1.56**	**325**	*e*PN		**Pn**	**08 01 37.7**	**-0.1**
AOS	**Alonnisos**	**1.65**	**61**	*e*Pb		**Pb**	**08 01 38.6**	**-1.7**
LIT	**Litokhoron**	**1.75**	**12**	*e*Pb		**Pb**	**08 01 40.5**	**-1.5**
LIT				*e*Sb		**Sb**	**08 02 03.4**	**-0.8**
VLI	**Veliai**	**1.82**	**156**	*e*PN		**Pn**	**08 01 41.2**	**-0.3**
VLI				*e*SN		**Sn**	**08 02 05.3**	**+0.3**
KZN	**Kozani**	**1.92**	**354**	*e*PN		**Pn**	**08 01 43.6**	**+0.8**
PAIG	**Paliouri**	**2.00**	**40**	*e*Pn		**Pn**	**08 01 43.3**	**-0.7**
KEK	**Kerkira**	**2.17**	**308**	*e*PN		**Pn**	**08 01 47.6**	**+1.3**
KYTH	**Kithira**	**2.26**	**159**	*e*PN		**Pn**	**08 01 48.5**	**+1.0**
PLG	**Polygyros**	**2.27**	**29**	*e*Pn		**Pn**	**08 01 47.1**	**-0.4**
PLG	**Polygyros**	**2.27**	**29**	*e*PB		**Pb**	**08 01 47.8**	**-3.1**
HORT	**Hortiatis**	**2.36**	**20**	*e*Pn		**Pn**	**08 01 48.4**	**-0.5**
FNA	**Florina**	**2.44**	**348**	*e*Pn		**Pn**	**08 01 50.0**	**0.0**
SOH	**Sokhos**	**2.64**	**23**	*e*Pn		**Pn**	**08 01 53.2**	**+0.6**
BIA	**Bitola**	**2.68**	**349**	*e*Pn		**Pn**	**08 01 54.7**	**+1.5**
KNT	**Kendrikon**	**2.85**	**13**	*e*Pn		**Pn**	**08 01 56.0**	**+0.5**
OHR	**Ohrid**	**2.87**	**341**	*e*Pn		**Pn**	**08 02 02.3**	**+6.4**
OHR				*i* Sn		**Sn**	**08 02 38.2**	**+7.3**
VAY	**Valandovo**	**2.96**	**8**	*e*Pn		**Pn**	**08 01 57.4**	**+0.3**
VAY	**Valandovo**	**2.96**	**8**	*e*Pn		**Pn**	**08 01 59.3**	**+2.3**
VAY				*i* Sn		**Sn**	**08 02 33.9**	**+1.0**
VAY	**Valandovo**	**2.96**	**8**	*e*Pn		**Pn**	**08 01 59.3**	**+2.2**
VAY				*i* Sn		**Sn**	**08 02 33.8**	**+0.9**
KRUS	**Krusevo**	**3.03**	**349**	*e*Pn		**Pn**	**08 02 03.0**	**+5.0**
APE	**Apeiranthos**	**3.08**	**114**	*e*Pn		**Pn**	**08 01 58.9**	**+0.1**
CHOS	**Chios island**	**3.17**	**89**	*e*Pn		**Pn**	**08 02 00.6**	**+0.5**
NVR	**Nevrokopi**	**3.28**	**25**	*e*PN		**Pn**	**08 02 02.9**	**+1.4**
KARN	**Karanos**	**3.35**	**152**	*e*Pn		**Pn**	**08 02 02.9**	**+0.4**
KARN	**Karanos**	**3.35**	**152**	*e*Pn		**Pn**	**08 02 02.8**	**+0.3**
VAM	**Vamos**	**3.46**	**149**	*e*PN		**Pn**	**08 02 04.5**	**+0.6**
IDI	**Anoyia**	**3.86**	**143**	Pn		**Pn**	**08 02 10.7**	**+1.2**
	1.1nm,0.3s,baz=61,slow=16,SNR=8.3							
IDI						Sn	**08 02 57.6**	**+2.3**
	3.1nm,0.3s,baz=269,slow=22,SNR=4.2							
SMG	**Samos**	**3.87**	**99**	P		**Pn**	**08 02 11.4**	**+1.8**
TIP	**Timpagrande**	**4.18**	**282**	P		**Pn**	**08 02 15.9**	**+2.0**
NPS	**Neapolis**	**4.25**	**136**	P		**Pn**	**08 02 17.2**	**+2.3**
ZKR	**Zakros**	**4.70**	**133**	P		**Pn**	**08 02 24.8**	**+3.8**
MLR	**Muntele Rosu**	**7.67**	**21**	Pn		**Pn**	**08 03 03.4**	**+1.5**
	0.1nm,0.3s,baz=162,slow=10,SNR=6.0							
DAVOX	**Davos/Dischmat**	**12.25**	**317**	LR		LR	08 09 18.1	
	comp=Z,58nm,21.6s,baz=101,slow=40							
ESDC	**Sonseca Array**	**20.21**	**282**	P		**P**	**08 05 45.9**	**+0.8**
	0.2nm,0.4s,baz=74,slow=11,SNR=4.5							
HFS	**Hagfors**	**22.39**	**349**	P		**P**	**08 06 08.8**	**+0.3**
	2.5nm,0.9s,mb3.7,baz=153,slow=11,SNR=3.6							
FINES	**FINESS Array B**	**23.21**	**5**	P		**P**	**08 06 16.2**	**-0.9**
	0.4nm,0.5s,mb3.1,baz=182,slow=11,SNR=3.5							
NB2	**NORSAR Subarra**	**23.66**	**347**	P		**P**	**08 06 21.3**	**-0.4**
	comp=Z,1.9nm,0.7s,mb3.6,baz=159,slow=11							
NOA	**NORSAR Array B**	**23.66**	**347**	P		**P**	**08 06 21.2**	**-0.5**
	comp=Z,1.4nm,0.7s,mb3.5,baz=157,slow=8.4,SNR=7.5							
EKA	**Eskdalemuir Ar**	**23.95**	**323**	P		**P**	**08 06 25.8**	**+1.4**
	comp=Z,2.9nm,1.0s,mb3.7,baz=106,slow=12,SNR=5.3							
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P		**P**	**08 07 28.2**	**+0.7**
	comp=Z,1.3nm,0.6s,mb3.9,baz=8.6,slow=4.0,SNR=3.8							
DBIC	**Dimbokro**	**39.86**	**224**	P		**P**	**08 08 43.0**	**-1.1**
	comp=Z,1.3nm,0.6s,mb3.9,baz=8.6,slow=4.0,SNR=3.8							
MKAR	**Makanchi Array**	**44.18**	**59**	P		**P**	**08 09 18.7**	**-0.5**
	comp=Z,0.6nm,0.5s,mb3.6,baz=274,slow=7.3,SNR=15							
ZALV	**Zalesovo Beam**	**44.67**	**48**	P		**P**	**08 09 22.6**	**-0.3**
	comp=Z,0.4nm,0.3s,mb3.7,baz=268,slow=8.9,SNR=4.0							
YKA	**Yellowknife Ar**	**73.59**	**341**	P		**P**	**08 12 43.1**	**-0.1**
	comp=Z,0.1nm,0.5s,mb3.0,baz=37,slow=5.5,SNR=4.5							

ISCJB ***25*** *08:17:32.7±0.5, 3889N±002×2626E±002, h11km±3km, Error ellipse: s-maj=3.1km s-min=2.5km az=150.1*
ATH ***25*** *08:17:32.7, 3889N×2626E, h23km±2km, MD3.8/6, ML3.6*
ISK ***25*** *08:17:32.0, 3886N×2619E, h17km, ML3.6*
NEIC ***25*** *08:17:32.7, 3887N×2618E, h18km, ML3.6(ATH), ML3.6(ISK), After ATH.*
CSEM ***25*** *08:17:33.7±0.1, 3890N×2635E, h20km, ML3.6, Error ellipse: s-maj=1.4km s-min=1.2km az=41.0*
DDA ***25*

ESKT	**Eskisehir**	**3.61**	**78**	*e*PN	**Pn**	**08 18 29.3**	**0.0**
GRG	**Griva**	**3.63**	**306**	*e*Pn	**Pn**	**08 18 30.6**	**+1.0**
VAY	**Valandovo**	**3.74**	**312**	*e*Pn	**Pg**	**08 18 43.1**	**-2.2**
VAY				*e*Sn	**Sg**	**08 19 37.3**	**+3.5**
KKB	**Krupnik**	**3.85**	**322**	*i* P	**Pn**	**08 18 33.5**	**+0.8**
KIZT	**Kizilcal**	**4.37**	**88**	*e*PN	**Pn**	**08 18 40.2**	**+0.4**
VTS	**Vitosha**	**4.38**	**329**	*i* P	**Pn**	**08 18 40.8**	**+0.9**
VTS	**Vitosha**	**4.38**	**329**	⇑*i* P	**Pn**	**08 18 41.6**	**+1.7**
VTS	**Vitosha**	**4.38**	**329**	P	**Pn**	**08 18 41.7**	**+1.8**
SZH	**Strazhica**	**4.39**	**357**	*i* P	**Pn**	**08 18 39.5**	**-0.5**
PVL	**Pavlikeni**	**4.39**	**351**	*i* P	**Pn**	**08 18 39.3**	**-0.7**
PRD	**Provadia**	**4.39**	**11**	*i* P	**Pn**	**08 18 39.6**	**-0.5**
BARS	**Barje**	**5.18**	**321**	Pn	**Pn**	**08 18 52.1**	**+1.1**
PLOR	**Plostina**	**6.97**	**2**	⇑*i* P	**Pn**	**08 19 18.0**	**+2.5**
GZR	**Gura Zlata**	**7.00**	**339**	⇑P	**Pn**	**08 19 15.8**	**-0.2**
GZR	**Gura Zlata**	**7.00**	**339**	⇑*i* P	**Pn**	**08 19 15.8**	**-0.2**
BZS	**Buzias**	**7.56**	**334**	⇑P	**Pn**	**08 19 23.7**	**0.0**
BZS	**Buzias**	**7.56**	**334**	⇑*i* P	**Pn**	**08 19 23.7**	**+0.1**
DRGR		**8.33**	**343**	⇓*i* P	**Pn**	**08 19 42.5**	**+8.4**

IDC 25 08:44:40.9±2.7, 3427N×9267E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, ML2.7/1, Error ellipse: s-maj=166.7km s-min=23.6km az=66.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**14.78**	**331**	Pn	Pn	08 48 09.4	-1.6
	0.0nm,0.3s,baz=147,slow=6.7,SNR=3.5						
ZALV	**Zalesovo Beam**	**20.44**	**347**	P	P	08 49 17.8	-1.9
	0.6nm,0.5s,baz=171,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**66.92**	**137**	P	P	08 55 35.6	+0.4
	1.0nm,1.0s,baz=329,slow=7.0,SNR=11						
ASAR	**Alice Springs**	**69.68**	**140**	P	P	08 55 52.0	-0.4
	0.4nm,0.8s,baz=329,slow=6.7,SNR=8.4						
YKA	**Yellowknife Ar**	**81.11**	**12**	P	P	08 56 58.5	+0.9
	0.3nm,0.6s,baz=327,slow=5.4,SNR=7.1						

IDC 25 08:52:45.5±2.6, 1946S×17166E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/14, mbtmp4.1/6, Error ellipse: s-maj=52.6km s-min=49.9km az=16.0
ISCJB 25 08:53:01.3±5.4, 220S±09×1706E±05, h10km, mb4.0/6, Error ellipse: s-maj=147.6km s-min=31.7km az=24.0

ISC 25 08:53:04.0±8.2, 22S±1×1699E±08, h10km, n7, σ0s89/8, mb4.0/6, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.24**	**270**	*e*P	**Pn**	**08 53 54.3**	**-0.6**
DZM				*e*S	**Sn**	**08 54 26.9**	**-6.7**
CTA	**Charters Tower**	**22.18**	**271**	P	**P**	**08 58 00.8**	**+0.4**
	6.3nm,0.8s,mb4.1,baz=91,slow=14,SNR=5.0						
STKA	**Stephens Creek**	**27.00**	**243**	P	**P**	**08 58 53.2**	**+7.0**
	1.8nm,0.7s,mb3.7,baz=62,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**33.18**	**260**	P	**P**	**08 59 42.6**	**+1.6**
	3.0nm,0.8s,mb4.3,baz=83,slow=8.7,SNR=26						
WRA	**Warramunga Arr**	**33.25**	**267**	P	**P**	**08 59 40.7**	**-1.0**
	1.2nm,0.8s,mb3.9,baz=90,slow=8.5,SNR=28						
MAW	**Mawson**	**76.05**	**202**	P	**P**	**09 04 50.9**	**-0.3**
	4.3nm,0.8s,mb4.4,baz=122,slow=5.2,SNR=4.3						
SONM	**Songino Array**	**89.88**	**323**	P	**P**	**09 05 41.9**	**-21**
	0.4nm,0.6s,mb4.0,baz=103,slow=6.4,SNR=2.6						

IDC 25 08:53:52.2±4.1, 4192N×14433E, h52km±34km, mb3.3/7, mb1 3.6/8, mb1mx3.4/18, mbtmp3.3/8, ML3.9/1, Error ellipse: s-maj=31.7km s-min=24.8km az=86.0
ISCJB 25 08:53:57.9±0.6, 4291N±006×14493E±006, h65km±4km, mb3.5/6, Error ellipse: s-maj=10.5km s-min=5.3km az=150.5
JMA 25 08:53:58.7±0.1, 4291N×14494E, h57km±1km, M3.9
JMA Felt I J1.
SKHL 25 08:53:58.9±1.0, 4311N×14480E, h33km, mb4.8/2
MOS 25 08:53:58.7±1.2, 4297N×14493E, h86km, mb4.6/1, Error ellipse: s-maj=25.9km s-min=15.5km az=82.9
NEIC 25 08:53:58.7, 4291N×14494E, h57km, MG3.9(JMA), After JMA.

ISC 25 08:53:58.9±0.6, 4291N±006×14493E±006, h58km±4km, n24, σ0s97/38, mb3.6/6, 4C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.19**	**298**	⇑P	**Pn**	**08 54 07.7**	**-0.3**
JAK				*e*S	**Sn**	**08 54 14.4**	**-0.2**
JNK	**Nakash**	**0.69**	**348**	⇓P	**Pn**	**08 54 12.3**	**-0.6**
JNK				*e*S	**Sn**	**08 54 22.3**	**-0.8**
NEM2	**Nemuro 2**	**0.75**	**52**	P	**Pn**	**08 54 12.8**	**-0.8**
NEM2				*e*S	**Sn**	**08 54 23.2**	**-1.2**
JOB	**Onbets**	**0.80**	**270**	⇑P	**Pn**	**08 54 14.1**	**-0.1**
JOB				*e*S	**Sn**	**08 54 25.3**	**-0.2**
JAR	**Ashorobuto**	**0.93**	**295**	⇑P	**Pn**	**08 54 15.8**	**-0.1**
JAR				*e*S	**Sn**	**08 54 28.4**	**-0.1**
JRA	**Rausu**	**1.04**	**8**	⇓P	**Pn**	**08 54 17.1**	**-0.2**
JRA				*e*S	**Sn**	**08 54 30.8**	**-0.2**
JCH	**Churui**	**1.19**	**256**	⇑P	**Pn**	**08 54 18.8**	**-0.5**
JCH				*e*S	**Sn**	**08 54 34.5**	**0.0**
JTKR	**Abashiri--Toko**	**1.29**	**325**	⇓P	**Pn**	**08 54 21.2**	**+0.5**
JTKR				*e*S	**Sn**	**08 54 38.1**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**1.32**	**31**	⇓*i* PN	**Pn**	**08 54 20.5**	**-0.5**
YUK				*i* S	**Sn**	**08 54 37.5**	**-0.1**
YUK				pmax	pmax		
	comp=Z,760nm,0.3s						
YUK				smax			
	comp=N,5μm,0.3s						
YUK				smax			
	comp=E,2μm,0.3s						
YUK				smax			
	comp=E,5μm,0.9s						
YUK	**Yuzh-Kuril'sk**	**1.32**	**31**	⇓*i* P	**Pn**	**08 54 20.5**	**-0.5**
YUK				AMB	AMB	08 54 21.0	
	comp=E,760nm,0.2s						
YUK				*i* S	**Sn**	**08 54 37.5**	**-0.1**
YUK				A		08 54 38.5	
	comp=E,5μm,0.2s						
YUK				A		08 54 38.5	
	comp=E,2μm,0.2s						
YUK				A		08 54 46.0	
	comp=E,5μm,0.9s						
ERM	**Erimo**	**1.58**	**236**	*e*PN	**Pn**	**08 54 26.6**	**+2.0**
ASAJ	**Asahikawa**	**2.08**	**306**	PN	**Pn**	**08 54 32.6**	**+1.2**
ASAJ				S	**Sn**	**08 55 00.9**	**+4.8**
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				smax			
	comp=N,32nm,0.3s						
ASAJ	**Asahikawa**	**2.08**	**306**	P	**Pn**	**08 54 32.6**	**+1.2**
	comp=N,18nm,0.3s,baz=145,slow=10.0,SNR=164						
ASAJ				S	**Sn**	**08 55 00.9**	**+4.8**
	comp=N,32nm,0.3s,baz=1.3,slow=31,SNR=18						
KUR	**Kuril'sk**	**3.15**	**41**	*e*PN	**Pn**	**08 54 48.0**	**+2.1**
KUR				*e*S	**Sn**	**08 55 24.1**	**+1.9**
KUR				pmax	pmax		
	comp=N,80nm,0.6s						
KUR				pmax	pmax		
	comp=E,70nm,0.6s						
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
KUR				smax			
	comp=N,300nm,0.5s						
KUR				smax			
	comp=E,230nm,0.5s						
KUR	**Kuril'sk**	**3.15**	**41**	*e*P	**Pn**	**08 54 48.0**	**+2.1**
KUR				AMB	AMB	08 54 48.5	
	comp=E,68nm,0.6s						
KUR				AMB	AMB	08 54 48.5	
	comp=E,76nm,0.6s						
KUR				*e*S	**Sn**	**08 55 24.1**	**+1.9**
KUR				A		08 55 32.5	
	comp=E,304nm,0.5s						
KUR				A		08 55 32.5	
	comp=E,228nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.33**	**340**	*e*P	**Pn**	**08 55 03.0**	**+0.9**
YKA	**Yellowknife Ar**	**57.40**	**33**	P	**P**	**09 03 40.5**	**-0.4**
YKA	**Yellowknife Ar**	**57.40**	**33**	P	**P**	**09 03 40.5**	**-0.4**
	comp=E,0.2nm,0.6s,mb3.3,baz=303,slow=6.6,SNR=6.3						
FINES	**FINESS Array B**	**64.88**	**332**	P	**P**	**09 04 30.2**	**-1.3**
	comp=E,0.5nm,0.5s,mb3.8,baz=43,slow=8.6,SNR=4.3						
MCMT	**McKenzie Canyo**	**68.54**	**48**	*e*P	**P**	**09 04 55.6**	**+0.5**
NVAR	**Mina Array Bea**	**69.40**	**56**	P	**P**	**09 05 01.8**	**+1.2**
	comp=E,0.5nm,0.7s,mb3.6,baz=293,slow=8.0,SNR=5.8						
NOA	**NORSAR Array B**	**69.79**	**338**	P	**P**	**09 05 00.5**	**-2.1**
	comp=E,0.7nm,0.8s,mb3.6,baz=34,slow=6.3,SNR=3.3						
AKASG	**Malin Array Be**	**71.28**	**323**	P	**P**	**09 05 10.4**	**-1.5**
	comp=E,0.3nm,0.3s,mb3.7,baz=38,slow=5.9,SNR=4.1						
PDAR	**Pinedale Array**	**71.69**	**48**	P	**P**	**09 05 14.8**	**+0.4**
	comp=E,0.7nm,0.6s,mb3.8,baz=4.9,slow=0.7,SNR=5.7						

JMA 25 08:54:24.2, 3724N×13673E, h10km±1km, M3.8, 1C-4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.32**	**172**	⇓P	**Pg**	**08 54 30.8**	**+0.3**
JJH				S	**Sg**	**08 54 35.6**	**+0.8**
JSZ	**Suzu**	**0.55**	**67**	⇑P	**Pg**	**08 54 34.6**	**-0.2**
JSZ				S	**Sg**	**08 54 42.3**	**+0.3**
JHG	**Hegura jima**	**0.63**	**14**	⇓P	**Pg**	**08 54 36.0**	**-0.3**
JTT	**Ttatey**	**0.80**	**142**	⇓P	**Pg**	**08 54 39.3**	**-0.3**
JTT				S	**Sg**	**08 54 50.7**	**+0.7**
JKG	**Kaga**	**1.01**	**199**	⇓P	**Pg**	**08 54 43.2**	**-0.5**
JKG				S	**Sg**	**08 54 57.2**	**+0.4**
MAT	**Matsushiro**	**1.37**	**120**	P	**Pn**	**08 54 48.3**	**-1.1**
MAT				*e*S	**Sb**	**08 55 06.3**	**-1.3**

NEIC 25 09:01:12.1, 3830S×17588E, h189km, MG3.9(WEL), After WEL.

WEL 25 09:01:12.5±0.3, 3832S×17592E, h187km±2km, ML3.8/16, Error ellipse: s-maj=2.8km s-min=2.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTVZ	**West Tongariro**	**0.84**	**198**	P	**Pn**	**09 01 40.0**	**+0.3**
WTVZ	**West Tongariro**	**0.84**	**198**	PN	**Pn**	**09 01 40.0**	**+0.3**
WTVZ				SN	**Sn**	**09 02 00.7**	**-0.3**
TWVZ	**Taurewa**	**0.84**	**207**	P	**Pn**	**09 01 39.8**	**+0.1**
TWVZ	**Taurewa**	**0.84**	**207**	PN	**Pn**	**09 01 39.8**	**+0.1**
TWVZ				SN	**Sn**	**09 02 01.1**	**+0.1**
HIZ	**Hauiti**	**0.86**	**256**	*e*P	**Pn**	**09 01 39.7**	**-0.2**
HIZ	**Hauiti**	**0.86**	**256**	PN	**Pn**	**09 01 39.7**	**-0.2**
HIZ				SN	**Sn**	**09 02 01.0**	**0.0**
NGZ	**Ngauruhoe**	**0.89**	**196**	P	**Pn**	**09 01 40.2**	**+0.1**
NGZ	**Ngauruhoe**	**0.89**	**196**	PN	**Pn**	**09 01 40.2**	**+0.1**
NGZ				SN	**Sn**	**09 02 01.8**	**+0.2**
WPVZ	**Whakapapa**	**0.93**	**198**	P	**Pn**	**09 01 40.6**	**+0.3**
WPVZ	**Whakapapa**	**0.93**	**198**	PN	**Pn**	**09 01 40.6**	**+0.3**
URZ	**Urewera**	**0.94**	**87**	P	**Pn**	**09 01 40.2**	**-0.2**
URZ	**Urewera**	**0.94**	**87**	PN	**Pn**	**09 01 40.2**	**-0.2**
URZ				SN	**Sn**	**09 02 01.1**	**-0.8**
BKZ	**Black Stump Fm**	**0.96**	**152**	P	**Pn**	**09 01 40.8**	**+0.3**
BKZ	**Black Stump Fm**	**0.96**	**152**	PN	**Pn**	**09 01 40.8**	**+0.3**
TUVZ	**Tukino**	**0.97**	**192**	P	**Pn**	**09 01 40.9**	**+0.3**
TUVZ	**Tukino**	**0.97**	**192**	PN	**Pn**	**09 01 40.9**	**+0.3**
TUVZ				SN	**Sn**	**09 02 02.0**	**-0.5**
FWVZ	**Far West T-bar**	**0.98**	**197**	P	**Pn**	**09 01 41.0**	**+0.3**
FWVZ	**Far West T-bar**	**0.98**	**197**	PN	**Pn**	**09 01 41.0**	**+0.3**
WNVZ	**Wahianoa**	**1.04**	**194**	P	**Pn**	**09 01 41.4**	**+0.3**
WNVZ	**Wahianoa**	**1.04**	**194**	PN	**Pn**	**09 01 41.4**	**+0.3**
PKVZ	**Pokaka**	**1.07**	**205**	PN	**Pn**	**09 01 41.3**	**-0.1**
MOVZ	**Moawhango**	**1.10**	**187**	P	**Pn**	**09 01 41.3**	**-0.2**
MOVZ	**Moawhango**	**1.10**	**187**	PN	**Pn**	**09 01 41.3**	**-0.2**
VRZ	**Vera Road**	**1.22**	**228**	PN	**Pn**	**09 01 42.3**	**-0.1**
MWZ	**Matawai**	**1.26**	**91**	P	**Pn**	**09 01 43.1**	**+0.2**
MWZ	**Matawai**	**1.26**	**91**	PN	**Pn**	**09 01 43.1**	**+0.2**
MWZ				SN	**Sn**	**09 02 06.3**	**-0.1**
KNZ	**Kokohu**	**1.54**	**118**	P	**Pn**	**09 01 45.9**	**+0.6**
KNZ	**Kokohu**	**1.54**	**118**	PN	**Pn**	**09 01 45.9**	**+0.6**
WAZ	**Wanganui**	**1.61**	**207**	P	**Pn**	**09 01 45.6**	**-0.4**
WAZ	**Wanganui**	**1.61**	**207**	PN	**Pn**	**09 01 45.6**	**-0.4**
TSZ	**Takapari Road**	**1.74**	**179**	P	**Pn**	**09 01 47.0**	**-0.2**
TSZ	**Takapari Road**	**1.74**	**179**	PN	**Pn**	**09 01 47.0**	**-0.2**
PUZ	**Puketiti**	**1.86**	**83**	*e*P	**Pn**	**09 01 48.6**	**+0.1**
PUZ	**Puketiti**	**1.86**	**83**	PN	**Pn**	**09 01 48.6**	**+0.2**
MXZ	**Matakaoa Point**	**2.03**	**69**	P	**Pn**	**09 01 50.5**	**+0.2**
MXZ	**Matakaoa Point**	**2.03**	**69**	PN	**Pn**	**09 01 50.5**	**+0.2**
MRZ	**Mangatainoka R**	**2.36**	**186**	P	**Pn**	**09 01 52.5**	**-1.3**
MRZ				S	**Sn**	**09 02 23.0**	**-3.1**
MRZ	**Mangatainoka R**	**2.36**	**186**	PN	**Pn**	**09 01 52.5**	**-1.4**
MRZ				SN	**Sn**	**09 02 23.0**	**-3.2**
BFZ	**Birch Farm**	**2.37**	**174**	*e*P	**Pn**	**09 01 53.0**	**-1.0**
BFZ	**Birch Farm**	**2.37**	**174**	PN	**Pn**	**09 01 53.0**	**-1.0**
TIWZ	**Tintock**	**2.46**	**181**	PN	**Pn**	**09 01 53.8**	**-1.1**
KIW	**Kapiti Island**	**2.66**	**197**	P	**Pn**	**09 01 55.3**	**-2.0**
KIW	**Kapiti Island**	**2.66**	**197**	PN	**Pn**	**09 01 55.3**	**-1.9**
MTW	**Mount Morrison**	**2.86**	**186**	P	**Pn**	**09 01 57.5**	**-2.1**
MTW	**Mount Morrison**	**2.86**	**186**	PN	**Pn**	**09 01 57.5**	**-2.1**
CAW	**Cannon Point**	**2.86**	**193**	P	**Pn**	**09 01 57.8**	**-1.9**
CAW	**Cannon Point**	**2.86**	**193**	PN	**Pn**	**09 01 57.8**	**-1.9**
DUWZ	**D'Urville Isla**	**2.92**	**211**	PN	**Pn**	**09 01 58.0**	**-2.4**
MRW	**Makara Radio**	**3.06**	**198**	P	**Pn**	**09 01 59.7**	**-2.3**
MRW	**Makara Radio**	**3.06**	**198**	PN	**Pn**	**09 01 59.7**	**-2.3**
TRWZ	**Traveller**	**3.08**	**183**	PN	**Pn**	**09 02 00.4**	**-2.0**
PAWZ	**Paruwai Farm**	**3.08**	**187**	PN	**Pn**	**09 02 00.1**	**-2.2**
SNZO	**South Karori**	**3.13**	**197**	P	**Pn**	**09 02 00.4**	**-2.5**
SNZO	**South Karori**	**3.13**	**197**	PN	**Pn**	**09 02 00.4**	**-2.5**
MSWZ	**Moikau Station**	**3.14**	**189**	P	**Pn**	**09 02 00.6**	**-2.4**
MSWZ	**Moikau Station**	**3.14**	**189**	PN	**Pn**	**09 02 00.6**	**-2.4**
TCW	**Tory Channel**	**3.16**	**203**	P	**Pn**	**09 02 00.8**	**-2.4**
TCW	**Tory Channel**	**3.16**	**203**	PN	**Pn**	**09 02 00.8**	**-2.4**
BHW	**Baring Head**	**3.19**	**194**	P	**Pn**	**09 02 01.1**	**-2.5**
BHW	**Baring Head**	**3.19**	**194**	PN	**Pn**	**09 02 01.1**	**-2.5**
TUWZ	**Tuamarina**	**3.46**	**205**	PN	**Pn**	**09 02 04.2**	**-2.7**
NNZ	**Nelson**	**3.50**	**213**	P	**Pn**	**09 02 04.3**	**-3.1**
NNZ	**Nelson**	**3.50**	**213**	PN	**Pn**	**09 02 04.3**	**-3.1**
QRZ	**Quartz Range**	**3.63**	**225**	P	**Pn**	**09 02 05.2**	**-3.8**
QRZ	**Quartz Range**	**3.63**	**225**	PN	**Pn**	**09 02 05.2**	**-3.8**
BSWZ	**Blackbirch Sta**	**3.74**	**204**	P	**Pn**	**09 02 07.7**	**-2.7**
BSWZ	**Blackbirch Sta**	**3.74**	**204**	PN	**Pn**	**09 02 07.7**	**-2.7**
THZ	**Tophouse**	**4.15**	**213**	*e*P	**Pn**	**09 02 11.8**	**-3.7**
THZ	**Tophouse**	**4.15**	**213**	PN	**Pn**	**09 02 11.8**	**-3.7**
KHZ	**Kahutara**	**4.48**	**203**	*e*P	**Pn**	**09 02 16.8**	**-3.0**
KHZ	**Kahutara**	**4.48**	**203**	PN	**Pn**	**09 02 16.8**	**-2.9**
DSZ	**Denniston Nort**	**4.66**	**221**	*e*P	**Pn**	**09 02 17.6**	**-4.5**
DSZ	**Denniston Nort**	**4.66**	**221**	PN	**Pn**	**09 02 17.6**	**-4.4**
LTZ	**Lake Taylor**	**5.25**	**211**	*e*P	**Pn**	**09 02 25.1**	**-4.6**
LTZ	**Lake Taylor**	**5.25**	**211**	PN	**Pn**	**09 02 25.1**	**-4.7**
MQZ	**McQueen's Vall**	**5.92**	**204**	*e*P	**Pn**	**09 02 33.4**	**-5.0**
MQZ	**McQueen's Vall**	**5.92**	**204**	PN	**Pn**	**09 02 33.4**	**-5.0**
WVZ	**Waitaha Valley**	**6.17**	**218**	*e*P	**Pn**	**09 02 37.4**	**-4.3**
WVZ	**Waitaha Valley**	**6.17**	**218**	PN	**Pn**	**09 02 37.4**	**-4.2**
RPZ	**Rata Peaks**	**6.53**	**213**	*e*P	**Pn**	**09 02 41.9**	**-4.4**
RPZ	**Rata Peaks**	**6.53**	**213**	PN	**Pn**	**09 02 41.9**	**-4.4**
ODZ	**Otahua Downs**	**7.79**	**209**	*e*P	**Pn**	**09 02 58.6**	**-4.2**
ODZ	**Otahua Downs**	**7.79**	**209**	PN	**Pn**	**09 02 58.6**	**-4.3**

SZGRF 25 09:07:14.4, 22.16S×168.19E, h32km, New Caledonia
ISCJB 25 09:07:17.1±2.9, 206S±0.1×162E±0.1, h41km±22km, mb4.5/13, MS4.2/10, Error ellipse: s-maj=22.1km s-min=15.2km az=29.4
NEIC 25 09:07:17.2±0.6, 2038S×16943E, h35km, mb4.5/6, Error ellipse: s-maj=16.1km s-min=12.4km az=189.0
IDC 25 09:07:22.2±6.6, 2057S×16926E, h75km±57km, mb4.1/11, mb1 4.3/12, mb1mx4.2/16, mbtmp4.2/12, ML4.4/1, MS4.2/13, Ms1 4.2/13, ms1mx4.0/25, Error ellipse: s-maj=27.7km s-min=19.9km az=34.0

ISC 25 09:07:19.4±2.9, 205S±01×1693E±01, h51km±23km, h45km±5.0km:pP-P, n84, σ1s16/28, mb4.5/13, MS4.2/10, 2C-4D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.08**	**240**	*e*P	**Pn**	**09 08 02.3**	**-3.2**
DZM				*e*S	**Sn**	**09 08 36.4**	**-4.7**
DZM	**Mont Dzumac**	**3.08**	**240**	LR	LR	09 09 11.5	
	comp=Z,2μm,19.9s,baz=273,slow=36						
HNR	**Honiara**	**14.27**	**319**	LR	LR	09 15 04.5	
	comp=Z,536nm,21.4s,baz=178,slow=32						
EIDS	**Eidsvold**	**17.46**	**251**	*e*Pn	**Pn**	**09 11 21.1**	**+1.8**
	13nm,0.9s						
ARMA	**Armidale**	**18.73**	**235**	*e*P	**Pn**	**09 11 37.3**	**+2.6**
URZ	**Urewera**	**18.90**	**161**	P	**Pn**	**09 11 37.1**	**+0.4**
	1.1nm,0.3s,baz=338,slow=7.3,SNR=15						
URZ				LR	LR	09 17 45.5	
	comp=Z,662nm,19.3s,baz=24,slow=33						
CTA	**Charters Tower**	**21.63**	**267**	⇓*i* P	**P**	**09 12 06.3**	**+0.9**
	13nm,0.9s,mb4.3						
CTA	**Charters Tower**	**21.63**	**267**	P	**P**	**09 12 06.7**	**+1.2**
	14nm,0.8s,mb4.4,baz=88,slow=11,SNR=15						
CTA				LR	LR	09 19 49.0	
	comp=Z,679nm,20.4s,MS4.0,baz=108,slow=35						
CTAO	**Charters Tower**	**21.63**	**267**	*e*P	**P**	**09 12 06.4**	**+0.9**
	29nm,1.1s,mb4.6						
RPZ	**Rata Peaks**	**23.15**	**177**	P	**P**	**09 12 22.7**	**+1.3**
	6.0nm,0.6s,mb4.2,baz=356,slow=7.7,SNR=3.8						
RPZ				LR	LR	09 20 55.0	
	comp=Z,843nm,18.2s,MS4.2,baz=206,slow=35						
STKA	**Stephens Creek**	**27.23**	**240**	*e*P	**P**	**09 12 59.4**	**+0.8**
	5.2nm,0.7s,mb4.2						
STKA	**Stephens Creek**	**27.23**	**240**	P	**P**	**09 12 59.3**	**+0.7**
	6.3nm,0.7s,mb4.3,baz=64,slow=8.3,SNR=16						
STKA				LR	LR	09 23 20.1	
	comp=Z,464nm,18.4s,MS4.1,baz=288,slow=35						
WB2	**Warramunga Arr**	**32.77**	**265**	*e*P	**P**	**09 13 46.6**	**-1.2**
WRA	**Warramunga Arr**	**32.78**	**265**	P	**P**	**09 13 46.7**	**-1.2**
	2.4nm,0.6s,mb4.3,baz=93,slow=8.5,SNR=36						
WRA				LR	LR	09 27 14.6	
	comp=Z,568nm,18.7s,MS4.3,baz=95,slow=36						
ASAR	**Alice Springs**	**32.90**	**258**	P	**P**	**09 13 48.2**	**-0.6**
	8.5nm,0.8s,mb4.8,baz=83,slow=9.1,SNR=98						
ASAR				PcP	PcP	09 16 31.9	-0.7
	1.4nm,0.8s,baz=117,slow=3.3,SNR=5.4						
TBI	**Tubuai**	**38.25**	**102**	*e*LQ		09 23 36.3	
	437nm,32.0s						
TBI				*e*LR	LR	09 25 19.3	
	465nm,27.0s,baz=274						
PPT	**Papeete**	**38.90**	**93**	*e*S	**S**	**09 20 48.8**	**+14**
	138nm,28.0s						
PPT				*e*LR	LR	09 25 24.5	
	587nm,25.8s,baz=254						
PPT	**Papeete**	**38.90**	**93**	LR	LR	09 27 10.8	
	comp=Z,233nm,20.0s,MS4.0,baz=93,slow=30						
FITZ	**Fitzroy Crossi**	**41.20**	**266**	*e*P	**P**	**09 14 59.8**	**+0.5**
	11nm,0.8s,mb4.5						
FITZ				*e*		09 15 07.5	
FITZ	**Fitzroy Crossi**	**41.20**	**266**	LR	LR	09 31 47.0	
	comp=Z,357nm,19.9s,MS4.2,baz=280,slow=36						
BATI	**Kupang**	**45.06**	**276**	LR	LR	09 34 28.9	
	comp=Z,518nm,20.3s,MS4.5,baz=266,slow=36						
TAOE	**Nuku Hiva Isla**	**50.06**	**84**	*e*S	**S**	**09 23 28.9**	**+12**
	369nm,27.8s						
TAOE				*e*LR	LR	09 30 37.3	
	706nm,25.4s						
RKT	**Rikitea**	**51.52**	**104**	*e*LR	LR	09 31 17.5	
	366nm,28.8s						
VNDA	**Vanda**	**57.14**	**182**	P	**P**	**09 17 00.2**	**-0.1**
	1.9nm,0.9s,mb4.1,baz=19,slow=9.8,SNR=3.7						
VNDA				LR	LR	09 36 46.9	
	comp=Z,180nm,18.8s,MS4.2,baz=72,slow=31						
ASAJ	**Asahikawa**	**68.84**	**340**	LR	LR	09 43 48.6	
	comp=Z,261nm,19.5s,MS4.5,baz=284,slow=32						
QSPA	**South Pole Qui**	**69.52**	**180**	*e*P	**P**	**09 18 22.4**	**+0.3**
	42nm,1.0s,mb5.3						
KSRS	**Korea Array**	**69.62**	**326**	LR	LR	09 46 27.5	
	comp=Z,115nm,20.4s,MS4.1,baz=255,slow=34						
MAW	**Mawson**	**77.26**	**202**	P	**P**	**09 19 08.3**	**+0.5**
	5.3nm,0.8s,mb4.5,baz=106,slow=6.5,SNR=4.4						
SYO	**Syowa Base**	**83.71**	**196**	*e*P	**P**	**09 19 40.6**	**-1.8**
SNAA	**Sanae**	**87.87**	**182**	*e*	**P**	**09 20 01.8**	**-1.1**
SNAA				*e*		09 20 05.7	
SNAA				*e*	pP	09 20 11.8	-6.1
SNAA				*e*	pP	09 20 16.7	-1.2
SNAA				*e*		09 20 23.4	
SNAA				*e*		09 20 28.6	
SNAA	**Sanae**	**87.87**	**182**	P	**P**	**09 20 02.4**	**-0.5**
	2.1nm,0.8s,mb4.4,baz=355,slow=6.4,SNR=4.4						
SONM	**Songino Array**	**88.30**	**323**	P	**P**	**09 20 06.6**	**+1.5**
	1.4nm,0.7s,mb4.3,baz=150,slow=6.1,SNR=2.8						
VNA3	**Neumayer Olymp**	**88.45**	**180**	*e*	**P**	**09 20 04.8**	**-0.9**
VNA3				*e*		09 20 08.5	
VNA3				*e*		09 20 12.2

	8.4nm,0.8s						
GRR	**Gorron**	**151.11 346**	*e*PKP1	PKPbc	09 27 06.2	-0.5	
SSF	**Saint Saulge**	**151.13 340**	*e*PKP1	PKPbc	09 27 06.5	-0.3	
	19nm,1.0s						
LPL	**La Plagne**	**151.26 334**	*e*PKP1	PKPbc	09 27 07.4	+0.3	
LPG	**La Plagne**	**151.26 334**	*e*PKP1	PKPbc	09 27 07.4	+0.3	
	14nm,0.8s						
AVF	**Avril sur Loir**	**151.42 340**	*e*PKP1	PKPbc	09 27 06.8	-0.7	
SGMF	**Saint Gilles**	**151.59 349**	*e*PKP1	PKPbc	09 27 07.0	-0.8	
ROSF	**Rostrenen**	**151.64 350**	*e*PKP1	PKPbc	09 27 07.1	-0.8	
BGF	**Bois d'Agland**	**151.79 340**	*e*PKP1	PKPbc	09 27 07.9	-0.4	
	13nm,0.8s						
MBDF	**Montbardon**	**151.88 333**	*e*PKP1	PKPbc	09 27 08.1	-0.5	
	13nm,0.9s						
QUIF	**Quistinic**	**152.02 349**	*e*PKP1	PKPbc	09 27 07.7	-1.1	
ORIF	**Oris-en-Rattie**	**152.09 334**	*e*PKP1	PKPbc	09 27 08.8	-0.2	
	12nm,0.8s						
TCF	**Toulx Ste Croi**	**152.23 341**	*e*PKP1	PKPbc	09 27 08.9	-0.4	
VIVF	**Saint-Julien-l**	**152.62 336**	*e*PKP1	PKPbc	09 27 09.9	-0.3	
	22nm,1.2s						
TORD	**Torodi Ar. Bea**	**166.06 240**	PKPab	PKPab	09 28 19.2	-0.8	
	0.4nm,0.8s,baz=114,slow=2.8,SNR=2.9						

IDC 25 09:09:07.8±2.5, 1957S×6841W, h71km±22km, mb3.8/3, mb1 4.0/5, mb1mx3.6/16, mbtmp3.8/5, MS3.8/5, Ms1 3.8/5, ms1mx3.5/23, Error ellipse: s-maj=38.8km s-min=21.3km az=101.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.27**	**5**	P		Pn	09 09 57.5	+0.8
	1.7nm,0.3s,baz=181,slow=9.0,SNR=60							
SIV	**San Ignacio**	**7.84**	**64**	P		Pn	09 10 58.9	-0.2
	0.8nm,0.3s,baz=253,slow=13,SNR=22							
CFAA	**Coronel Fontan**	**11.98**	**179**	P		Pn	09 11 56.7	+1.1
	0.0nm,0.3s,baz=356,slow=9.3,SNR=3.8							
ATAH	**Atahualpa**	**15.82**	**321**	LR		LR	09 18 43.5	
	comp=Z,180nm,19.3s,baz=44,slow=37							
PLCA	**Paso Flores**	**21.17**	**185**	P		P	09 13 46.5	-0.7
	3.0nm,0.7s,baz=5.8,slow=15,SNR=8.2							
PLCA				LR		LR	09 21 35.3	
	comp=Z,258nm,21.4s,baz=357,slow=35							
SDV	**Santo Domingo**	**28.36**	**355**	LR		LR	09 26 58.2	
	comp=Z,202nm,18.8s,baz=0.0,slow=38							
PCRV	**Puerto La Cruz**	**29.79**	**7**	LR		LR	09 28 11.2	
	comp=Z,249nm,18.8s,baz=176,slow=38							
BBTS	**Babate**	**61.33**	**60**	LR		LR	09 44 01.2	
	comp=Z,106nm,18.0s,baz=155,slow=34							
TORD	**Torodi Ar. Bea**	**76.27**	**71**	P		P	09 20 49.5	+0.1
	3.0nm,0.7s,baz=258,slow=4.2,SNR=16							
YKA	**Yellowknife Ar**	**89.53**	**340**	P		P	09 21 56.3	-0.4
	0.6nm,0.6s,baz=134,slow=4.7,SNR=11							
WRA	**Warramunga Arr**	**134.85**	**211**	PKP		PKPdf	09 28 20.5	+1.1
	0.3nm,0.8s,baz=125,slow=1.7,SNR=2.9							
MKAR	**Makanchi Array**	**143.79**	**35**	PKP		PKPdf	09 28 34.6	-0.1
	0.4nm,0.9s,baz=311,slow=2.9,SNR=2.6							

NIED ***25*** *09:11:00, 3730N×13690E, h8km, Mw5.2 Best double couple: M0 6.22000×10^16 NP1:φ=203.00000°, δ=38.00000°, λ=76.00000°. NP2:φ=40.00000°, δ=53.00000°, λ=101.00000°.*

IDC ***25*** *09:11:42.8±0.4, 3730N×13665E, h0km, mb5.0/22, mb1 5.1/22, mb1mx5.0/27, mbtmp4.9/22, MS4.5/25, Ms1 4.5/25, ms1mx4.3/39, Error ellipse: s-maj=13.6km s-min=9.7km az=55.0*

MOS ***25*** *09:11:43.6±0.9, 3731N×13669E, h13km, mb5.5/86, MS5.0/31, Error ellipse: s-maj=7.0km s-min=3.9km az=105.1*

ISCJB ***25*** *09:11:44.0±0.1, 3731N±002×13674E±002, h14km, mb5.2/201, MS4.9/56, Error ellipse: s-maj=2.5km s-min=2.0km az=164.4*

GCMT ***25*** *09:11:45.2±0.3, 3741N×13672E, h14km, MW5.2/63, Moment Tensor Solution. s35,c42; s63,c119; Duration: 1±0 Moment tensor: Scale 10^17Nm; Mrr0.80±.04; Mθθ-0.26±.03; Mφφ-0.53±.03; Mrθ-0.11±.06; Mθφ-0.42±.02; Mφr-0.15±.06; Best double couple: M0 8.4300×10^17 NP1:φ=36.00000°, δ=39.00000°, λ=89.00000°. NP2: φ=216.00000°, δ=51.00000°, λ=90.00000°. Principal axes: T 0.8210, Plg84.0000°, Azm129.0000°; N 0.0440, Plg0.0000°, Azm36.0000°; P -0.8650, Plg6.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***25*** *09:11:45.2±0.1, 3726N×13669E, mb5.4/133, MW5.1(NIED) Error ellipse: s-maj=3.5km s-min=2.6km az=175.0*

NEIC Felt at Kobe, Osaka, Suwa, Toyama, Toyota and Yokohama. Also felt in Kurobe. Recorded [5L JMA] in Ishikawa; [3 JMA] in Gifu, Niigata and Toyama; [2 JMA] in Fukui and Nagano; [1 JMA] in Aichi, Fukushima, Shiga and Shizuoka Prefectures.

JMA ***25*** *09:11:45.1, 3730N×13684E, h13km±1km, M5.3 Broadband fault plane solution: P waves. NP1: φ=24.00000°, δ=46.00000°, λ=76.00000°. NP2:φ=224.00000°, δ=46.00000°, λ=104.00000°. Principal axes: T Plg80.0000°, Azm214.0000°; N Plg10.0000°, Azm34.0000°; P Plg0.0000°, Azm304.0000°;*

BJI ***25*** *09:11:45.2, 3730N×13670E, h14km, mB5.3, mb5.0, Ms5.2, Msz5.0*

SZGRF ***25*** *09:11:49.7, 3786N×13630E, h15km, mb5.3, Near west coast of eastern Honshu, Japan*

ISC 25 09:11:45.5±0.1, 3729N±002×13678E±002, h15km, h15km±.4km: pP-P, n647, σ0.990/644, mb5.2/201, MS4.9/56, 89C-17D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.37**	**180**	⇓P		**Pg**	**09 11 52.9**	**-0.1**
JJH				S		**Sg**	**09 11 58.6**	**+0.6**
JSZ	**Suzu**	**0.49**	**71**	⇓P		**Pg**	**09 11 53.7**	**-1.6**
JSZ				*e*S		**Sg**	**09 12 00.0**	**-1.8**
JHG	**Hegura jima**	**0.57**	**11**	⇓P		**Pg**	**09 11 55.8**	**-0.9**
JHG				*e*S		**Sg**	**09 12 03.6**	**-0.7**
JTT	**Ttatey**	**0.82**	**147**	⇓P		**Pg**	**09 12 00.2**	**-1.2**
JKG	**Kaga**	**1.07**	**200**	⇑P		**Pb**	**09 12 05.1**	**-0.7**
JJN	**Nakama**	**1.12**	**99**	P		**Pb**	**09 12 04.5**	**-2.1**
MAJO	**Matsushiro**	**1.37**	**123**	*e*Pn		**Pn**	**09 12 08.7**	**-1.3**
MAJO				*e*Sn		**Sn**	**09 12 28.1**	**+0.3**
MAT	**Matsushiro**	**1.37**	**123**	P		**Pn**	**09 12 08.0**	**-2.0**
MAT				S		**Sn**	**09 12 27.1**	**-0.7**
MJAR	**Matsushiro Arr**	**1.37**	**123**	Pg		**Pg**	**09 12 10.1**	**-1.8**
	1μm,0.3s,baz=301,slow=15,SNR=2640							
MJAR				Lg			09 12 32.2	
	1μm,0.3s,baz=309,slow=28,SNR=16							
JNG	**Nsakai**	**1.38**	**129**	⇓P		**Pn**	**09 12 08.9**	**-1.3**
JSD	**Sado**	**1.39**	**57**	S		**Sn**	**09 12 26.0**	**-2.4**
JHK	**Hiroka**	**1.79**	**91**	⇓P		**Pn**	**09 12 14.1**	**-1.7**
JKT	**Katashina**	**2.04**	**104**	⇓P		**Pn**	**09 12 18.3**	**-1.0**
JRY	**Ryogami san**	**2.13**	**126**	P		**Pn**	**09 12 19.5**	**-1.0**
JKY	**Yasaka**	**2.14**	**220**	⇑P		**Pn**	**09 12 20.6**	**-0.1**
JYN	**Shimob**	**2.29**	**141**	P		**Pn**	**09 12 22.5**	**-0.2**
JWT	**Wachi**	**2.29**	**209**	⇑P		**Pn**	**09 12 23.1**	**+0.3**
JAG	**Ashikaga**	**2.31**	**111**	P		**Pn**	**09 12 22.4**	**-0.6**
JFY	**Yanaizu**	**2.33**	**86**	P		**Pn**	**09 12 22.6**	**-0.7**
JKSM	**Kasumi**	**2.41**	**226**	P		**Pn**	**09 12 24.4**	**0.0**
JYA	**Atsumi**	**2.66**	**60**	P		**Pn**	**09 12 27.0**	**-0.8**
JYS	**Shirataka**	**2.76**	**69**	⇑P		**Pn**	**09 12 28.7**	**-0.5**
JKS	**Kasai**	**2.79**	**215**	P		**Pn**	**09 12 30.2**	**+0.7**
JHO	**Hitachi**	**3.11**	**101**	⇓P		**Pn**	**09 12 33.3**	**-0.7**
JAD	**Aida**	**3.16**	**223**	P		**Pn**	**09 12 35.4**	**+0.7**
JWY	**Kouya**	**3.21**	**198**	⇑P		**Pn**	**09 12 36.1**	**+0.7**
JYK	**Kaneyama**	**3.26**	**59**	⇑P		**Pn**	**09 12 35.6**	**-0.4**
JOU	**Okura**	**3.26**	**70**	⇑P		**Pn**	**09 12 36.0**	**0.0**
JFK	**Kawauchi**	**3.26**	**87**	P		**Pn**	**09 12 35.7**	**-0.4**
JIO	**Ouri**	**3.80**	**71**	⇑P		**Pn**	**09 12 43.3**	**-0.1**
JMK	**Ichinoseki**	**3.87**	**63**	P		**Pn**	**09 12 44.5**	**0.0**
JJG	**Jouge**	**3.96**	**229**	P		**Pn**	**09 12 47.1**	**+1.5**
JAI	**Aioi**	**3.97**	**209**	P		**Pn**	**09 12 47.2**	**+1.3**
JIW	**Iwasaki**	**4.15**	**36**	⇑P		**Pn**	**09 12 48.3**	**+0.1**
JOM	**Ohasama**	**4.16**	**57**	⇑P		**Pn**	**09 12 48.8**	**+0.4**
JAH	**Hinai**	**4.18**	**45**	⇑P		**Pn**	**09 12 49.1**	**+0.4**
OFUJ	**Ofunato**	**4.25**	**64**	P		**Pn**	**09 12 50.0**	**+0.4**
JKZ	**Kuzumaki**	**4.46**	**52**	⇑P		**Pn**	**09 12 53.3**	**+0.7**
JTM	**Tenmabayashi**	**4.83**	**42**	P		**Pn**	**09 12 58.5**	**+0.9**
JHJ	**Hachijo jima 2**	**4.83**	**149**	Pn		**Pn**	**09 13 02.1**	**+4.4**
	144nm,0.3s,baz=5.5,slow=0.5,SNR=26							
JHJ				LR		LR	09 14 53.0	
	comp=Z,6μm,19.0s,baz=184,slow=39							
JOT	**Ohata**	**5.26**	**38**	⇑P		**Pn**	**09 13 04.4**	**+0.9**
JKI	**Kunimi**	**5.60**	**231**	P		**Pn**	**09 13 11.0**	**+2.7**
JSH	**Shimam**	**5.90**	**24**	P		**Pn**	**09 13 13.5**	**+1.1**
JNU	**Nakatsue**	**6.38**	**231**	P		**Pn**	**09 13 21.0**	**+2.1**
JNU	**Nakatsue**	**6.38**	**231**	Pn		**Pn**	**09 13 21.1**	**+2.2**
	14nm,0.3s,baz=32,slow=6.3,SNR=120							
JNU				LR		LR	09 15 40.7	
	comp=Z,2μm,21.4s,baz=34,slow=38							
ERM	**Erimo**	**6.81**	**44**	*e*Pn		**Pn**	**09 13 27.0**	**+2.1**
	182nm,0.8s							
ERM	**Erimo**	**6.81**	**44**	*e*P		**Pn**	**09 13 27.0**	**+2.1**
ERM				pmax		pmax		
	comp=Z,183nm,0.8s							
VLA	**Vladivostok**	**6.92**	**329**	*i* P		**Pn**	**09 13 27.7**	**+1.4**
VLA	**Vladivostok**	**6.92**	**329**	*i* P		**Pn**	**09 13 27.6**	**+1.3**
KSRS	**Korea Array**	**7.06**	**274**	Pn		**Pn**	**09 13 31.1**	**+2.8**
	comp=Z,6.4nm,0.3s,baz=88,slow=14,SNR=33							
KSRS				Sn		**Sn**	**09 14 51.9**	**+3.7**
	comp=Z,3.8nm,0.3s,baz=91,slow=26,SNR=4.6							
KSRS				LR		LR	09 15 47.2	
	comp=Z,3μm,19.9s,baz=84,slow=35							
INCN	**Inchon**	**8.08**	**274**	*e*Pn		**Pn**	**09 13 42.2**	**-0.1**
ASAJ	**Asahikawa**	**8.12**	**31**	P		**Pn**	**09 13 46.9**	**+4.1**
ASAJ				pmax		pmax		
	comp=Z,6.0nm,0.3s							
ASAJ				MLR		MLR		
	comp=Z,3μm,19.3s							
ASAJ	**Asahikawa**	**8.12**	**31**	Pn		**Pn**	**09 13 46.9**	**+4.1**
	comp=Z,5.8nm,0.3s,baz=226,slow=16,SNR=55							
ASAJ				LR		LR	09 16 40.5	
	comp=Z,3μm,19.3s,baz=237,slow=36							
MDJ	**Mudanjiang**	**9.11**	**326**	P		**Pn**	**09 13 57.5**	**+1.1**
MDJ				S		**Sn**	**09 15 40.5**	**+1.9**
MDJ				AMB		AMB		
	comp=Z,17nm,0.4s							
MDJ				AMB		AMB		
	comp=Z,818nm,6.8s							
MDJ				LR		LR		
	comp=N,8μm,12.8s							
MDJ				LR		LR		
	comp=E,3μm,10.2s							
MDJ				LR		LR		
	comp=Z,9μm,13.2s							
YUK	**Yuzh-Kuril'sk**	**9.64**	**43**	P		**Pn**	**09 14 03.2**	**-0.4**
YUK				pmax		pmax		
	comp=N,570nm,0.5s							
YUK				pmax		pmax		
	comp=E,380nm,0.5s							
YUK				pmax		pmax		
	comp=Z,380nm,0.5s							
YUK				pmax		pmax		
	comp=Z,5μm,2.0s							
YUK				pmax		pmax		
	comp=N,5μm,3.0s							
YUK				pmax		pmax		
	comp=E,5μm,3.0s							
YUK				MLR		MLR		
	comp=N,8μm,14.0s							
YUK				MLR		MLR		
	comp=E,3μm,14.0s							
YUK				MLR		MLR		
	comp=Z,8μm,14.0s							
YSS	**Yuzh-Sakhalins**	**10.62**	**23**	*e*Pn		**Pn**	**09 14 19.7**	**+2.6**
YSS	**Yuzh-Sakhalins**	**10.62**	**23**α	*i*P		**Pn**	**09 14 20.0**	**+3.0**
YSS				*e*S		**Sn**	**09 16 20.0**	**+4.4**
YSS				pmax		pmax		
	comp=N,290nm,1.0s							
YSS				pmax		pmax		
	comp=Z,320nm,1.0s							
YSS				pmax		pmax		
	comp=E,40nm,0.8s							
YSS				MLR		MLR		
	comp=Z,4μm,13.0s							
YSS				MLR		MLR		
	comp=N,6μm,14.0s							
CN2	**Changchun**	**10.79**	**311**	⇓P		**Pn**	**09 14 23.5**	**+4.1**
CN2				*e*S		**Sn**	**09 16 31.8**	**+12**
CN2				AMB		AMB		
	comp=Z,1μm,5.0s							
CN2				LR		LR		
	comp=N,3μm,14.0s							
CN2				LR		LR		
	comp=E,4μm,14.0s							
CN2				LR		LR		
	comp=Z,4μm,15.0s							
CBIJ	**Chichi jima**	**11.14**	**154**	LR		LR	09 18 46.1	
	comp=Z,2μm,18.3s,baz=352,slow=38							
SNY	**Shenyang**	**11.15**	**298**	⇑P		**Pn**	**09 14 28.8**	**+4.5**
SNY				AP			09 14 32.0	
SNY				XP			09 14 34.5	
SNY				S		**Sn**	**09 16 40.5**	**+12**
SNY				AMB		AMB		
	comp=Z,1μm,5.5s							
SNY				LR		LR		
	comp=N,5μm,12.0s							
SNY				LR		LR		
	comp=E,6μm,13.2s							
SNY				LR		LR		
	comp=Z,6μm,14.4s							
HABR	**Khabarovsk**	**11.25**	**354**	⇓*i*P		**Pn**	**09 14 30.9**	**+5.3**
HABR				*e*			09 16 40.8	
HABR				pmax		pmax		
	comp=Z,83nm,1.6s							
HABR				MLR		MLR		
	comp=Z,4μm,11.1s							
DL2	**Dalian**	**12.05**	**282**	*i* P		**Pn**	**09 14 43.3**	**+6.7**
DL2				LG1			09 18 00.5	
DL2				LG2			09 18 36.8	
DL2				AMB		AMB		
	comp=Z,20nm,1.0s							
DL2				AMB		AMB		
	comp=Z,550nm,6.6s							
DL2				LR		LR		
	comp=N,4μm,11.1s							
DL2				LR		LR		
	comp=E,4μm,14.5s							
DL2				LR		LR		
	comp=Z,6μm,12.1s							
UGL	**Uglegorsk**	**12.39**	**16**	*e*P		**Pn**	**09 14 44.0**	**+2.8**
UGL				*e*S		**Sn**	**09 17 09.0**	**+10**
UGL				pmax		pmax		
	comp=Z,356nm,1.2s							
UGL				pmax		pmax		
	comp=N,2μm,7.0s							
UGL				pmax		pmax		
	comp=E,2μm,7.0s							
UGL				pmax		pmax		
	comp=Z,2μm,7.0s							
UGL				smax				
	comp=N,1μm,9.0s							
UGL				smax				
	comp=E,2μm,9.0s							
UGL				smax				
	comp=Z,700nm,9.0s							
UGL				MLR		MLR		
	comp=N,6μm,14.0s							
UGL				MLR		MLR		
	comp=E,3μm,14.0s							
UGL				MLR		MLR		
	comp=Z,7μm,14.0s							
KLR	**Kul'dur**	**12.48**	**345**	*e*P		**Pn**	**09 14 43.2**	**+0.8**
KLR				pmax		pmax		
	comp=N,100nm,1.6s							
KLR				pmax		pmax		
	comp=E,100nm,1.6s							
KLR				pmax		pmax		
	comp=Z,260nm,1.6s							
KLR				pmax		pmax		
	comp=E,600nm,6.5s							
KLR				pmax		pmax		
	comp=Z,2μm,6.5s							
KLR				MLR		MLR		
	comp=E,10μm,14.5s							
SSE	**Sheshan**	**14.30**	**249**	*e*P		**Pn**	**09 15 07.0**	**-0.4**
SSE				AMB		AMB		
	comp=Z,25nm,0.7s							
SSE				AMB		AMB		
	comp=Z,39nm,5.6s							
SSE				LR		LR		
	comp=N,4μm,15.4s							
SSE				LR		LR		
	comp=E,2μm,15.3s							
SSE				LR		LR		
	comp=Z,6μm,13.4s							
TIA	**Tai'an**	**15.80**	**272**	*e*P		**Pn**	**09 15 31.5**	**+4.2**
TIA				LR		LR		
	comp=N,1μm,12.0s							
TIA				LR		LR		
	comp=E,3μm,11.0s							
BJI	**Beijing**	**16.32**	**286**	P		**Pn**	**09 15 37.5**	**+3.4**
BJI				AP		pP	09 15 42.8	+1.6
BJI				XP		sP	09 15 44.0	+0.8
BJI				AMB		AMB		
	comp=Z,82nm,1.6s							
BJI				AMB		AMB		
	comp=Z,1μm,3.2s							
BJI				LR		LR		
	comp=N,3μm,13.2s							
BJI				LR		LR		
	comp=E,4μm,12.1s							
BJI				LR		LR		
	comp=Z,2μm,12.9s							
BJT	**Baijiatuao**	**16.33**	**286**	*e*Pn		**Pn**	**09 15 36.7**	**+2.5**
	comp=Z,230nm,1.5s							
BJT	**Baijiatuao**	**16.33**	**286**	*e*P		**Pn**	**09 15 36.7**	**+2.5**
BJT				pmax		pmax		
	comp=Z,230nm,1.5s							
HIA	**Hailar**	**17.19**	**320**	*e*Pn		**Pn**	**09 15 46.1**	**+1.2**
	comp=Z,145nm,1.1s							
HIA	**Hailar**	**17.19**	**320**	*e*P		**Pn**	**09 15 46.1**	**+1.1**
HIA				pmax		pmax		
	comp=Z,145nm,1.1s							
YHNB	**Yeheng**	**18.21**	**231**	*e*Pn		**Pn**	**09 15 57.8**	**0.0**
SKR	**Severo-Kuril's**	**19.23**	**40**	*e*P		**Pn**	**09 16 07.5**	**-2.4**
SKR				*e*S		**Sn**	**09 19 43.0**	**-2.0**
SKR				pmax		pmax		
	comp=E,130nm,1.0s							
SKR				pmax		pmax		
	comp=Z,220nm,1.0s							
SKR				pmax		pmax		
	comp=Z,1μm,4.0s							
SKR				pmax		pmax		
	comp=E,1μm,6.0s							
SKR				smax				
	comp=N,800nm,14.0s							
SKR				smax				
	comp=E,1μm,10.0s							
SKR				MLR		MLR		
	comp=N,2μm,14.0s							
SKR				MLR		MLR		
	comp=E,2μm,14.0s							
SKR				MLR		MLR		
	comp=Z,2μm,14.0s							
TIY	**Taiyuan**	**19.31**	**279**	⇑P		**Pn**	**09 16 12.3**	**+1.3**
TIY				AMB		AMB		
	comp=Z,1μm,7.1s							
TIY				LR		LR		
	comp=N,3μm,13.1s							
TIY				LR		LR		
	comp=E,7μm,13.9s							
TIY				LR		LR		
	comp=Z,10μm,14.2s							
WHN	**Wuhan**	**19.77**	**257**	P		**Pn**	**09 16 17.5**	**+1.0**
WHN				AMB		AMB		
	comp=Z,175nm,1.5s							
WHN				LR		LR		
	comp=Z,13μm,13.8s							
QZH	**Quanzhou**	**19.81**	**237**	P		**Pn**	**09 16 18.0**	**+1.0**
QZH				S		**Sn**	**09 20 03.0**	**+3.7**
QZH				AMB		AMB		
	comp=Z,70nm,1.0s							
QZH				AMB		AMB		
	comp=Z,2μm,7.3s							
QZH				LR		LR		
	comp=N,4μm,13.7s							
QZH				LR		LR		
	comp=E,3μm,9.4s							
QZH				LR		LR		
	comp=Z,5μm,14.5s							
HHC	**Hu-ho-hao-te**	**19.88**	**288**	*e*P		**Pn**	**09 16 19.3**	**+1.6**
HHC				AP		pP	09 16 22.5	+2.1
HHC				XP		sP	09 16 26.3	+4.0
HHC				PP			09 16 37.5	
HHC				S		**Sn**	**09 19 59.5**	**-1.3**
HHC				AMB		AMB		
	comp=Z,52nm,1.2s							
HHC				AMB		AMB		
	comp=Z,1μm,6.1s							
HHC				LR		LR		
	comp=N,2μm,10.7s							
HHC				LR		LR		
	comp=E,4μm,10.7s							
HHC				LR		LR		
	comp=Z,4μm,11.6s							
NRGR	**Nerungri**	**20.99**	**341**	*e*P		**P**	**09 16 27.4**	**-0.6**
BTO	**Baotou**	**21.05**	**287**	*e*P		**P**	**09 16 35.8**	**+7.0**
CLNS	**Chul'man**	**21.11**	**342***c*	*i*P		**P**	**09 16 28.3**	**-0.9**
CLNS				*e*PP			09 16 33.7	
CLNS				*e*PPP			09 16 53.6	
CLNS				*e*S		**S**	**09 20 19.1**	**-4.3**
CLNS				*e*			09 20 38.2	
CLNS				*e*SS			09 20 51.4	
CLNS				*e*SSS			09 20 59.7	
CLNS				pmax		pmax		
	comp=N,15nm,1.0s							
CLNS				pmax		pmax		
	comp=Z,29nm,1.0s,mb4.6							
CLNS				pmax		pmax		
	comp=E,6.0nm,0.7s							
CLNS				pmax		pmax		
	comp=Z,50nm,0.8s,mb4.9							
CLNS				pmax		pmax		
	comp=N,108nm,1.1s							
CLNS				pmax		pmax		
	comp=E,25nm,0.9s							
CLNS				smax				
	comp=N,27nm,1.3s							
CLNS				smax				
	comp=Z,17nm,1.5s							
CLNS				smax				
	comp=E,18nm,0.9s							
CLNS				MLR		MLR		
	comp=N,4μm,14.0s,MS5.0							
CLNS				MLR		MLR		
	comp=Z,6μm,14.0s,MS5.1							
CLNS				MLR		MLR		
	comp=E,2μm,12.0s,MS5.0							
PET	**Petropavlovsk**	**21.90**	**37**	*e*P		**P**	**09 16 38.0**	**+0.2**
	comp=E,129nm,1.2s,mb5.2							
PET	**Petropavlovsk**	**21.90**	**37***j*	*i*P		**P**	**09 16 36.9**	**-0.9**
PET				*e*S		**S**	**09 20 35.3**	**-3.7**
PET				*e*SS			09 21 17.8	
PET				pmax		pmax		
	comp=Z,800nm,8.5s							
PET				pmax		pmax		
	comp=Z,700nm,10.0s							
PET				pmax		pmax		
	comp=Z,104nm,1.3s,mb5.1							
PET				smax				
	comp=N,600nm,21.7s							
PET				smax				
	comp=E,700nm,8.3s							
PET				smax				
	comp=N,800nm,13.9s							
PET				MLR		MLR		
	comp=Z,2μm,16.0s,MS4.6							
PET				MLR		MLR		
	comp=Z,2μm,19.0s							
CIT	**Chita**	**22.00**	**319**	*e*P		**P**	**09 16 39.2**	**+0.3**
CIT				*e*			09 20 44.6	
CIT				pmax		pmax		
	comp=Z,345nm,1.6s,mb5.5							
XAN	**Xi'an**	**22.83**	**270**	P		**P**	**09 16 47.0**	**-0.9**
XAN				AP			09 16 53.3	
XAN				AMB		AMB		
	comp=Z,481nm,9.0s							
XAN				LR		LR		
	comp=N,417nm,14.3s,MS4.9							
XAN				LR		LR		
	comp=E,3μm,14.0s,MS4.9							
XAN				LR		LR		
	comp=Z,4μm,13.2s,MS5.0							
MA2	**Magadan**	**24.05**	**18**	*e*P		**P**	**09 16 58.8**	**-1.0**
	comp=Z,140nm,1.0s,mb5.3							
MA2	**Magadan**	**24.05**	**18**	*e*P		**P**	**09 16 58.8**	**-1.0**
MA2				pmax		pmax		
	comp=Z,140nm,1.0s,mb5.3							
ULN	**Ulaanbaatar**	**24.17**	**305**	*e*P		**P**	**09 17 01.5**	**+0.5**
	comp=Z,139nm,1.1s,mb5.3							
ULN	**Ulaanbaatar**	**24.17**	**305**	*e*P		**P**	**09 17 01.5**	**+0.6**
ULN				pmax		pmax		
	comp=Z,139nm,1.1s,mb5.3							
SONM	**Songino Array**	**24.59**	**305**	P		**P**	**09 17 05.3**	**+0.5**

SONM 09 20 42.6
SONM Songino Array 24.59 305 P **P** **09 17 05.3 +0.5**
comp=Z,19nm,0.6s,mb4.8,baz=109,slow=9.6,SNR=71
SONM PcP PcP 09 20 42.6 +0.3
comp=Z,1.8nm,0.6s,baz=130,slow=2.6,SNR=5.4
SONM LR LR 09 26 43.8
comp=Z,1μm,18.7s,MS4.5,baz=38,slow=37
GZH Guangzhou 24.63 242 P **P** **09 17 01.3 -4.0**
GZH S **S** **09 21 19.5 -6.7**
GZH LR LR
comp=N,6μm,12.9s,MS5.4
GZH LR LR
comp=E,6μm,13.3s,MS5.4
GZH LR LR
comp=Z,12μm,13.6s,MS5.5
YAK Yakutsk 25.16 352 *eP* **P** **09 17 09.0 -0.8**
YAK Yakutsk 25.16 352 *c iP* **P** **09 17 09.9 +0.1**
YAK *e* 09 17 47.4
YAK *e*PPP 09 17 55.5
YAK *e* 09 20 43.4
YAK *e*S **S** **09 21 32.3 -1.7**
YAK *e*SS 09 22 33.3
YAK *e*SSS 09 22 51.5
YAK pmax pmax
comp=N,142nm,1.4s
YAK pmax pmax
comp=Z,169nm,1.4s,mb5.4
YAK pmax pmax
comp=E,24nm,1.0s
YAK pmax pmax
comp=Z,84nm,1.5s,mb5.0
YAK pmax pmax
comp=N,126nm,1.4s
YAK pmax pmax
comp=E,80nm,1.5s
YAK smax
comp=N,3μm,13.5s
YAK smax
comp=Z,1μm,10.7s
YAK smax
comp=E,541nm,5.0s
YAK MLR MLR
comp=Z,3μm,15.0s,MS5.0
YAK MLR MLR
comp=N,3μm,14.0s
YAK MLR MLR
comp=E,1μm,9.0s
BOD Bodaibo 25.43 331 ⇓ *iP* **P** **09 17 10.2 -2.1**
BOD pmax pmax
comp=Z,33nm,1.4s,mb4.7
LZH Lanzhou 26.37 277 *eP* **P** **09 17 20.8 -0.3**
LZH AP pP 09 17 24.0 -1.7
LZH *e*S **S** **09 21 52.0 -1.7**
LZH AMB AMB
comp=Z,125nm,1.5s,mb5.2
LZH AMB AMB
comp=Z,310nm,4.0s
LZH LR LR
comp=E,3μm,13.6s
LZH LR LR
comp=Z,4μm,14.6s,MS5.1
IRK Irkutsk 27.21 314 *eP* **P** **09 17 29.3 +0.8**
IRK pmax pmax
comp=Z,95nm,1.9s,mb5.0
ZAK Zakamensk 27.23 309 *eP* **P** **09 17 28.0 -0.6**
ZAK pmax pmax
comp=Z,25nm,1.4s,mb4.5
TLY Talaya 27.39 312 *eP* **P** **09 17 30.2 +0.1**
TLY Talaya 27.39 312 *eP* **P** **09 17 30.0 -0.1**
TLY *e* 09 18 19.6
TLY *e*PPP 09 18 29.3
TLY pmax pmax
comp=Z,63nm,1.6s,mb4.9
TLY MLR MLR
comp=Z,2μm,14.0s,MS4.9
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
TLY Talaya 27.39 312 P **P** **09 17 30.6 +0.5**
SNR=45
SEY Seymchan 27.39 16 ⇑ *iP* **P** **09 17 29.3 -0.7**
GYA Guiyang 27.65 256 ⇑ *iP* **P** **09 17 32.0 -0.7**
GYA AP pP 09 17 36.8 -0.5
GYA XP sP 09 17 39.5 +0.3
GYA PP 09 18 22.0
GYA PPP 09 18 34.3
GYA S **S** **09 22 13.3 -0.8**
GYA SSS 09 23 49.5
GYA AMB AMB
comp=Z,30nm,1.1s,mb4.8
GYA AMB AMB
comp=Z,270nm,6.5s
GYA LR LR
comp=N,3μm,13.2s,MS5.2
GYA LR LR
comp=E,3μm,14.4s,MS5.2
GYA LR LR
comp=Z,5μm,13.5s,MS5.2
CD2 Chengdu 27.98 267 ⇓ *iP* **P** **09 17 36.0 +0.4**
CD2 AP pP 09 17 40.5 +0.3
CD2 XP sP 09 17 43.3 +1.2
CD2 PP 09 18 25.8
CD2 S **S** **09 22 18.0 -1.2**
CD2 SCS ScS 09 28 21.0 -2.2
CD2 AMB AMB
comp=Z,30nm,1.0s,mb4.9
CD2 AMB AMB
comp=Z,260nm,8.4s
CD2 LR LR
comp=N,4μm,12.0s,MS5.3
CD2 LR LR
comp=E,4μm,15.6s,MS5.3
CD2 LR LR
comp=Z,5μm,13.2s,MS5.3
OTRP Odiongan 28.13 212 *eP* **P** **09 17 38.8 +1.8**
GTA Gaotai 28.94 286 P **P** **09 17 44.0 -0.1**
GTA AP pP 09 17 53.8 +5.1
GTA XP sP 09 17 58.3 +7.7
GTA PP PP 09 18 37.5 -12
GTA PPP 09 18 50.5
GTA AMB AMB
comp=Z,11nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,248nm,6.8s
GTA LR LR
comp=N,2μm,12.2s,MS5.1
GTA LR LR
comp=E,2μm,12.6s,MS5.1
GTA LR LR
comp=Z,3μm,12.9s,MS5.1
MOY Mondy 28.96 311 *eP* **P** **09 17 44.0 -0.1**
MOY pmax pmax
comp=Z,52nm,2.0s,mb4.9
QIZ Qiongzhong 29.76 240 P **P** **09 17 52.8 +1.3**
QIZ XP sP 09 18 01.0 +3.0
QIZ S **S** **09 22 50.5 +3.2**
QIZ AMB AMB
comp=Z,177nm,6.9s
QIZ LR LR
comp=N,2μm,17.6s,MS5.0
QIZ LR LR
comp=E,2μm,18.2s,MS5.0
QIZ LR LR
comp=Z,2μm,13.1s
KMI Kunming 31.37 257 P **P** **09 18 06.0 +0.3**
KMI AP pP 09 18 09.5 -0.8
KMI PP PP 09 19 10.0 -6.6
KMI PPP 09 19 25.0
KMI S **S** **09 23 11.5 -1.1**
KMI SSS 09 25 20.5
KMI AMB AMB
comp=Z,22nm,1.2s,mb4.9
KMI AMB AMB
comp=Z,92nm,3.1s
KMI LR LR
comp=N,3μm,13.9s,MS5.2
KMI LR LR
comp=E,2μm,13.4s,MS5.2
KMI LR LR
comp=Z,3μm,13.6s,MS5.2
TIXI Tiksi 34.67 356 *eP* **P** **09 18 33.5 -0.5**
comp=Z,57nm,0.9s,mb5.5
TIXI Tiksi 34.67 356 *c iP* **P** **09 18 33.0 -1.0**
TIXI *e* pP 09 18 36.6 -2.0
TIXI *e* 09 19 48.7
TIXI *e*S **S** **09 24 01.5 -1.3**
TIXI *e*SS SS 09 26 10.4 -23
TIXI pmax pmax
comp=Z,68nm,1.0s,mb5.5
TIXI MLR MLR
comp=Z,2μm,13.0s,MS5.0
BILL Bilibino 34.91 19 *eP* **P** **09 18 35.9 -0.2**
comp=Z,128nm,1.4s,mb5.7
BILL Bilibino 34.91 19 *α iP* **P** **09 18 35.4 -0.6**
BILL *e* pP 09 18 39.3 -1.4
BILL *e* 09 21 08.8
BILL pmax pmax
comp=Z,90nm,1.3s,mb5.5
BILL MLR MLR
comp=Z,1μm,17.0s,MS4.6
WMQ Urumqi 37.41 296 *eP* **P** **09 18 58.5 +0.7**
WMQ AP pP 09 19 03.0 +0.6
WMQ XP sP 09 19 05.5 +1.2
WMQ PPP 09 20 46.0
WMQ S **S** **09 24 44.8 -0.5**
WMQ AMB AMB
comp=Z,11nm,1.1s,mb4.6
WMQ AMB AMB
comp=Z,316nm,6.1s
WMQ LR LR
comp=N,316nm,18.0s
WMQ LR LR
comp=E,360nm,12.6s
WMQ LR LR
comp=Z,366nm,12.6s
CHTO Chiang Mai 37.81 251 *eP* **P** **09 19 02.2 +0.7**
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
CHTO Chiang Mai 37.81 251 P **P** **09 19 02.5 +1.1**
SNR=8.2
LSA Lhasa 38.50 272 P **P** **09 19 07.0 -0.1**
LSA AP pP 09 19 16.8 +5.0
LSA XP sP 09 19 20.5 +6.8
LSA XS sS 09 25 17.0 +7.1
LSA SCS ScS 09 29 16.0 -1.6
LSA AMB AMB
comp=Z,190nm,12.9s
LSA LR LR
comp=N,540nm,12.5s,MS5.1
LSA LR LR
comp=E,2μm,11.0s,MS5.1
LSA LR LR
comp=Z,2μm,15.7s,MS5.1
ZALV Zalesovo Beam 39.01 312 LR LR 09 35 49.4
comp=Z,333nm,18.6s,MS4.2,baz=264,slow=37
SHL Shillong 39.72 266 *eP* **P** **09 19 16.5 -0.9**
SHL *ex* x 09 25 11.8
NVS Novosibirsk 39.98 314 *eP* **P** **09 19 16.0 -3.2**
NVS *e* 09 20 50.8
NVS pmax pmax
comp=Z,36nm,1.5s,mb4.9
NVS pmax pmax
comp=N,14nm,1.6s
NVS pmax pmax
comp=E,42nm,1.5s
NVS pmax pmax
comp=Z,42nm,2.3s,mb4.8
NVS pmax pmax
comp=E,49nm,2.5s
GAMB Gambell 40.45 32 *eP* **P** **09 19 23.1 +0.1**
MKAR Makanchi Array 40.83 301 P **P** **09 19 25.4 -1.0**
MKAR 09 21 27.0
MKAR Makanchi Array 40.83 301 P **P** **09 19 25.4 -1.0**
comp=E,5.7nm,0.6s,mb4.4,baz=89,slow=11,SNR=18
MKAR PcP PcP 09 21 27.0 -0.1
comp=E,2.8nm,0.8s,baz=82,slow=5.4,SNR=4.5
MKAR LR LR 09 36 37.7
comp=E,969nm,19.0s,MS4.7,baz=82,slow=37
TAPN Taplejung 42.23 271 *eP* **P** **09 19 38.2 +0.1**
comp=E,31nm,0.8s,mb5.0
TNA Tin City 42.48 30 *eP* **P** **09 19 39.9 +0.3**
ODAN Odare 42.70 271 *eP* **P** **09 19 41.8 -0.1**
comp=E,19nm,0.7s,mb4.9
KURK Kurchatov 42.85 307 *eP* **P** **09 19 41.5 -1.3**
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KURK Kurchatov 42.85 307 P **P** **09 19 41.9 -0.9**
SNR=16
KSM Kuching 43.19 221 *eP* **P** **09 19 46.7 +0.8**
JIRN Jiri 43.31 272 *eP* **P** **09 19 47.3 +0.5**
comp=E,105nm,1.0s,mb5.5
KKN Kakani 43.98 273 *eP* **P** **09 19 52.1 -0.1**
comp=E,93nm,1.1s,mb5.4
GKN Gorkha 44.40 274 *eP* **P** **09 19 55.2 -0.3**
comp=E,158nm,1.1s,mb5.6
KOLN Koldanda 45.32 274 *eP* **P** **09 20 03.0 +0.1**
comp=E,66nm,1.0s,mb5.4
BOK Bokaro 45.35 268 *eP* **P** **09 20 03.1 0.0**
TKM2 Tokmak 2 46.23 297 *eP* **P** **09 20 10.4 +0.5**
comp=E,14nm,0.9s,mb4.9
TKM2 Tokmak 2 46.23 297 *eP* **P** **09 20 10.5 +0.6**
TKM2 pmax pmax
comp=Z,14nm,0.9s,mb4.9
FRU Bishkek 46.95 297 *eP* **P** **09 20 15.0 -0.6**
FRU *e* 09 20 23.0
FRU pmax pmax
comp=Z,60nm,2.2s,mb5.1
FRU MLR MLR
comp=Z,1μm,12.0s,MS5.1
UCH Uchtor 47.19 296 *eP* **P** **09 20 18.0 +0.6**
comp=Z,1μm,1.0s,mb6.7
TTA Tatalina 47.33 35 *eP* **P** **09 20 19.0 +0.8**
SVW2 Sparrevohn 47.57 37 *eP* **P** **09 20 20.2 +0.1**
EKS2 Erkin-Say 47.59 297 *eP* **P** **09 20 20.6 0.0**
comp=Z,4.2nm,0.8s,mb4.5
BRVK Borovoye 47.70 312 *eP* **P** **09 20 20.6 -0.7**
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
BRVK Borovoye 47.70 312 P **P** **09 20 20.6 -0.6**
SNR=6.1
AML Almayashu 47.80 296 *eP* **P** **09 20 22.0 -0.1**
comp=Z,17nm,0.7s,mb5.2
IMA2 Indian Mountai 48.35 31 *eP* **P** **09 20 26.6 +0.5**
BATI Kupang 48.82 197 P **P** **09 20 29.2 -1.0**
comp=Z,79nm,1.0s,mb5.7,baz=136,slow=9.4,SNR=4.7
PSI Prapat 48.84 235 P **P** **09 20 30.4 0.0**
PSI Prapat 48.84 235 P **P** **09 20 30.4 0.0**
comp=Z,3.3nm,0.4s,mb4.7,baz=175,slow=6.4,SNR=9.1
BLSP Bilaspur 49.17 268 *eP* **P** **09 20 32.4 -0.6**
KDAK Kodiak Island 49.38 42 P **P** **09 20 33.4 -0.7**
comp=Z,17nm,0.7s,mb5.2,baz=252,slow=6.6,SNR=12
KDAK LR LR 09 41 15.3
comp=Z,375nm,20.0s,MS4.4,baz=257,slow=36
KAKA Kakadu 49.90 186 ⇑ *iP* **P** **09 20 37.2 -1.3**
comp=Z,19nm,0.8s,mb5.2
VIS Vishakhapatnam 50.57 262 *eP* **P** **09 20 42.1 -1.6**
PMR Palmer 50.63 37 *eP* **P** **09 20 43.0 -0.5**
comp=Z,76nm,1.8s,mb5.3
PMR Palmer 50.63 37 *eP* **P** **09 20 43.0 -0.5**
PMR pmax pmax
comp=Z,76nm,1.8s,mb5.3
COLA College 50.84 32 *eP* **P** **09 20 45.3 +0.3**
comp=Z,18nm,1.0s,mb5.0
COLA College 50.84 32 *eP* **P** **09 20 45.3 +0.3**
COLA pmax pmax
comp=Z,18nm,1.0s,mb5.0
SML Sawmill 50.98 36 *eP* **P** **09 20 46.7 +0.5**
BHPL Bhopal 52.37 272 *eP* **P** **09 20 56.3 -0.8**
EYAK Cordova Ski Ar 52.41 38 *eP* **P** **09 20 57.4 +0.5**
comp=Z,23nm,1.0s,mb5.0
SVE Sverdlovsk 52.49 318 ⇑ *eP* **P** **09 20 57.2 -0.3**
SVE *eS* **S** **09 28 18.5 -4.6**
SVE pmax pmax
comp=Z,29nm,1.0s,mb5.2
SVE MLR MLR
comp=Z,1μm,17.0s,MS5.0
MENT Mentasta 52.92 34 *eP* **P** **09 21 01.0 +0.4**
AJM Ajmer 53.02 277 *eP* **P** **09 21 00.6 -1.2**
AJM *ex* x 09 21 04.8
comp=Z,31nm,0.7s
EGAK Eagle 53.68 32 *eP* **P** **09 21 06.1 -0.1**
ARU Arti 53.70 318 P **P** **09 21 06.9 +0.5**
comp=Z,193nm,1.1s,mb5.9,SNR=5.1
ARU Arti 53.70 318 *eP* **P** **09 21 05.7 -0.7**
ARU Arti 53.70 318 *c iP* **P** **09 21 05.5 -0.9**
ARU 09 23 03.1
ARU PPP 09 24 10.1
ARU S **S** **09 28 38.0 -1.6**
ARU SS SS 09 32 19.3 -0.4
ARU pmax pmax
comp=Z,52nm,1.7s,mb5.2
SOKR Solikamsk 53.85 322 *c iP* **P** **09 21 13.5 +6.0**
SOKR S **S** **09 28 44.4 +2.8**
SOKR pmax pmax
comp=Z,30nm,1.0s,mb5.2
SOKR MLR MLR
comp=E,1μm,15.0s,MS5.1
HYB Hyderabad 54.52 265 ⇑ *iP* **P** **09 21 13.0 0.0**
comp=Z,60nm,1.0s,mb5.6
HYB *e* pP 09 21 17.5 -0.3
HYB *e*S **S** **09 28 54.0 +2.3**
DAWY Dawson 54.58 32 *eP* **P** **09 21 13.4 +0.6**
AKTO Aktyubinsk 55.73 311 LR LR 09 46 24.1
comp=Z,465nm,19.7s,MS4.6,baz=84,slow=37
INK Inuvik 55.83 27 *eP* **P** **09 21 21.7 0.0**
INK Inuvik 55.83 27 LR LR 09 47 39.6
comp=Z,323nm,18.8s,MS4.4,baz=110,slow=39
FITZ Fitzroy Crossi 56.09 193 ⇑ *iP* **P** **09 21 23.8 -0.2**
comp=Z,25nm,0.8s,mb5.3
FITZ Fitzroy Crossi 56.09 193 P **P** **09 21 23.6 -0.5**
comp=Z,15nm,0.9s,mb5.0,baz=3.7,slow=6.8,SNR=14
WB2 Warramunga Arr 56.97 183 ⇑ *iP* **P** **09 21 29.4 -0.9**
WB2 *e* pP 09 21 33.7 -1.5
WRA Warramunga Arr 56.97 183 P **P** **09 21 29.4 -0.9**
WRA LR LR 09 45 00.8
WRA ⇑ *e* 09 51 34.1
WRA Warramunga Arr 56.97 183 P **P** **09 21 29.4 -0.9**
comp=Z,12nm,0.6s,mb5.1,baz=357,slow=7.6,SNR=159
WRA LR LR 09 45 00.8
comp=Z,235nm,19.3s,MS4.3,baz=15,slow=35
WRA PKP2bc 09 51 34.1
comp=Z,1.4nm,0.9s,baz=190,slow=1.9,SNR=6.8
POO Poona 57.66 269 *eP* **P** **09 21 35.6 +0.2**
comp=Z,70nm,1.6s,mb5.4
POO *ex* x 09 21 42.7
SKAG Skagway 57.75 37 *eP* **P** **09 21 36.6 +1.2**
CTA Charters Tower 57.76 169 *eP* **P** **09 21 35.9 0.0**
comp=Z,5.0nm,0.7s,mb4.7
CTA Charters Tower 57.76 169 *eP* **P** **09 21 35.9 0.0**
CTA pmax pmax
comp=Z,5.0nm,0.7s
CTA Charters Tower 57.76 169 P **P** **09 21 35.9 0.0**
comp=Z,6.0nm,0.8s,mb4.7,baz=336,slow=8.3,SNR=6.6
CTA LR LR 09 43 54.2
comp=Z,243nm,20.7s,MS4.3,baz=8.1,slow=33
KAD Karad 58.06 268 *eP* **P** **09 21 36.8 -1.5**
KAD AMb AMB 09 21 40.9
comp=Z,69nm,1.2s,mb5.5
PRGR Permogore 58.51 326 ⇑ *iP* **P** **09 21 39.3 -1.4**
PRGR *eS* **S** **09 29 42.7 -0.7**
PRGR *e* 09 31 25.7
PRGR *e*SS SS 09 33 36.4 +1.2
PRGR pmax pmax
comp=Z,102nm,1.6s,mb5.6
BHJ Bhuj 58.54 277 *eP* **P** **09 21 41.0 -0.6**
BHJ *ex* x 09 21 43.4
comp=Z,60nm,1.8s
ALE Alert 60.06 3 P **P** **09 21 51.0 -0.2**
comp=Z,242nm,0.9s,mb6.2,SNR=10
ASAR Alice Springs 60.69 183 P **P** **09 21 55.7 -0.4**
comp=Z,7.2nm,0.8s,mb4.9,baz=13,slow=6.6,SNR=75
APA Apatity 60.90 335 ⇓ *iP* **P** **09 21 56.6 -0.5**
APA pmax pmax
comp=Z,36nm,1.2s,mb5.4
ARCES ARCESS Array B 62.42 338 P **P** **09 22 07.1 -0.3**
ARCES LR LR 09 51 33.5
ARCES ARCESS Array B 62.42 338 P **P** **09 22 07.1 -0.3**
comp=Z,18nm,0.8s,mb5.2,baz=51,slow=7.9,SNR=28
ARCES LR LR 09 51 33.5
comp=Z,574nm,19.1s,MS4.8,baz=71,slow=38
RES Resolute Bay 63.25 14 *eP* **P** **09 22 12.4 -0.3**
JOF Joensuu 63.96 331 *ep* **P** **09 22 16.0 -1.6**
comp=Z,7.9nm,0.6s,mb4.9
MOS Moscow 64.80 322 *eP* **P** **09 22 22.1 -1.1**
MOS *e* 09 22 53.8
MOS *e* 09 24 45.9
MOS pmax pmax
comp=Z,114nm,1.4s,mb5.7
MOS MLR MLR
comp=Z,2μm,13.8s,MS5.3
DAG Danmarks Havn 65.17 354 ⇓ *iP* **P** **09 22 25.1 -0.2**
DAG pmax pmax
comp=Z,23nm,0.4s,mb5.6
DAG Danmarks Havn 65.17 354 ⇓ *iP* **P** **09 22 25.1 -0.2**
comp=Z,23nm,0.4s,mb5.6
YKW3 Yellowknife Ar 65.37 29 *eP* **P** **09 22 26.4 -0.4**
YKA Yellowknife Ar 65.41 29 P **P** **09 22 26.8 -0.3**
YKA ⇑ *e* 09 51 10.1
YKA Yellowknife Ar 65.41 29 P **P** **09 22 26.8 -0.3**
comp=Z,4.8nm,0.7s,mb4.6,baz=307,slow=6.7,SNR=72
YKA PKP2bc 09 51 10.0
comp=Z,0.4nm,0.9s,baz=120,slow=2.8,SNR=5.6
OBN Obninsk 65.64 322 *eP* **P** **09 22 28.5 -0.2**
comp=Z,44nm,0.9s,mb5.5
OBN Obninsk 65.64 322 *αeP* **P** **09 22 28.0 -0.7**
OBN *i* *PP pP 09 22 31.9 -1.7
OBN *e*S S 09 31 12.2 -1.3
OBN *e*SS SS 09 35 22.9 -3.9
OBN pmax pmax
comp=Z,73nm,1.4s,mb5.5
OBN MLR MLR
comp=Z,2μm,16.0s,MS5.4
KAF Kangasniemi 66.34 331 *ep* **P** **09 22 31.5 -1.6**
comp=Z,7.2nm,0.5s,mb5.0,baz=52,slow=6.0
KAF Kangasniemi 66.34 331 *eP* **P** **09 22 31.5 -1.6**
KAF pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
FINES FINESS Array B 66.82 331 *i* P **P** **09 22 35.5 -0.7**
FINES pmax pmax
comp=Z,12nm,0.6s
FINES FINESS Array B 66.82 331 P **P** **09 22 35.6 -0.6**
comp=Z,12nm,0.6s,mb5.1,baz=104,slow=6.2,SNR=64
GOF Gofitskoye 67.13 310 *eP* **P** **09 22 33.7 -4.7**
WBK Wadi Bani Khal 67.28 282 P **P** **09 22 40.8 +1.0**
SNR=8.4
WBK Wadi Bani Khal 67.28 282 P **P** **09 22 40.8 +1.0**
SNR=8.4
WBK Wadi Bani Khal 67.28 282 P **P** **09 22 40.8 +1.0**
SNR=8.4
WBK Wadi Bani Khal 67.28 282 P **P** **09 22 40.8 +1.0**
SNR=8.4
WBK Wadi Bani Khal 67.28 282 P **P** **09 22 40.8 +1.0**
SNR=8.4
BANOM Banah 67.60 286 P **P** **09 22 42.2 +0.4**
SNR=6.6
BANOM Banah 67.60 286 P **P** **09 22 42.2 +0.4**
SNR=6.6
BANOM Banah 67.60 286 P **P** **09 22 42.2 +0.4**
SNR=6.6
BANOM Banah 67.60 286 P **P** **09 22 42.2 +0.4**
SNR=6.6
ZEI Tsey 67.75 307 *eP* **P** **09 22 41.5 -0.9**
ZEI *e* 09 25 11.8
ZEI pmax pmax
comp=Z,16nm,1.1s,mb5.0

SMDO **Samad** 67.76 283 P P 09 22 43.5 +0.7
SNR=14
SMDO **Samad** 67.76 283 P P 09 22 43.5 +0.7
SNR=14
SMDO **Samad** 67.76 283 P P 09 22 43.5 +0.7
SNR=14
SMDO **Samad** 67.76 283 P P 09 22 43.5 +0.7
SNR=14
SMDO **Samad** 67.76 283 P P 09 22 43.5 +0.7
SNR=14
KIV **Kislovodsk** 67.91 309 eP P 09 22 43.3 -0.1
comp=Z,15nm,0.6s,mb5.2
KIV **Kislovodsk** 67.91 309c iP P 09 22 43.0 -0.3
KIV pmax pmax
comp=Z,41nm,1.1s,mb5.4
KIV **Kislovodsk** 67.91 309 P P 09 22 44.0 +0.7
SNR=9.4
KIV **Kislovodsk** 67.91 309 P P 09 22 44.0 +0.7
SNR=9.4
KIV **Kislovodsk** 67.91 309 P P 09 22 44.0 +0.7
SNR=9.4
KIV **Kislovodsk** 67.91 309 P P 09 22 44.0 +0.7
SNR=9.4
HOQ **Hoqain** 68.06 283 P P 09 22 44.6 0.0
SNR=12
HOQ **Hoqain** 68.06 283 P P 09 22 44.6 0.0
SNR=12
HOQ **Hoqain** 68.06 283 P P 09 22 44.6 0.0
SNR=12
HOQ **Hoqain** 68.06 283 P P 09 22 44.6 0.0
SNR=12
JMDO **Jabal Madar** 68.08 282 P P 09 22 45.1 +0.3
SNR=9.2
JMDO **Jabal Madar** 68.08 282 P P 09 22 45.1 +0.3
SNR=9.2
JMDO **Jabal Madar** 68.08 282 P P 09 22 45.1 +0.3
SNR=9.2
JMDO **Jabal Madar** 68.08 282 P P 09 22 45.1 +0.3
SNR=9.2
JMDO **Jabal Madar** 68.08 282 P P 09 22 45.1 +0.3
SNR=9.2
FORT **Forrest** 68.20 188 eP P 09 22 44.8 -0.4
comp=Z,23nm,0.7s,mb5.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
HATD **Hatta, Dubai** 68.31 285 P P 09 22 46.8 +0.7
SNR=7.3
ASHO **Ashiyiah** 68.44 285 P P 09 22 47.8 +0.8
SNR=9.5
ASHO **Ashiyiah** 68.44 285 P P 09 22 47.8 +0.8
SNR=9.5
ASHO **Ashiyiah** 68.44 285 P P 09 22 47.8 +0.8
SNR=9.5
ASHO **Ashiyiah** 68.44 285 P P 09 22 47.8 +0.8
SNR=9.5
ASHO **Ashiyiah** 68.44 285 P P 09 22 47.8 +0.8
SNR=9.5
BSY **Bisya** 68.59 283 P P 09 22 48.6 +0.7
SNR=13
BSY **Bisya** 68.59 283 P P 09 22 48.6 +0.7
SNR=13
BSY **Bisya** 68.59 283 P P 09 22 48.6 +0.7
SNR=13
BSY **Bisya** 68.59 283 P P 09 22 48.6 +0.7
SNR=13
STKA **Stephens Creek** 68.96 176 eP P 09 22 49.8 0.0
comp=Z,6.2nm,0.9s,mb4.5
STKA **Stephens Creek** 68.96 176 P P 09 22 49.9 0.0
comp=Z,6.9nm,0.9s,mb4.6,baz=330,slow=6.5,SNR=21
STKA LR LR 09 49 40.1
comp=Z,289nm,19.6s,MS4.5,baz=10.0,slow=33
NLWA **Neilton Lookou** 69.23 46 eP P 09 22 52.2 +0.6
comp=Z,41nm,1.0s,mb5.3
CMW **Cultus Mountai** 69.66 44 P P 09 22 55.4 +1.2
GNW **Green Mountain** 69.73 45 eP P 09 22 56.2 +1.6
SOC **Sochi** 69.93 310 eP P 09 22 57.4 +1.4
SOC e 09 23 17.3
SOC e 09 25 28.6
SOC ePPP 09 27 09.2
SOC eS S 09 32 05.2 -0.2
SOC eSS SS 09 36 38.1 +4.4
SOC MLR MLR
comp=Z,748nm,14.0s,MS5.1
MNK **Minsk** 70.19 324|| eP P 09 22 56.0 -1.3
MNK MLR MLR
comp=Z,5μm,12.0s,MS6.0
ANN **Anapa** 70.64 312 eP P 09 22 59.8 -0.5
FMW **Mount Fremont** 70.74 45 P P 09 23 01.9 +1.1
EDM **Edmonton** 71.39 37 eP P 09 23 04.5 -0.2
EDM ePcP PcP 09 23 25.1 +0.8
EPH **Ephrata** 71.66 44 P P 09 23 06.8 +0.4
MXC **Moxie City** 71.72 45 P P 09 23 08.1 +1.3
VFP **Flag Point** 71.77 47 P P 09 23 08.2 +1.2
AKASG **Malin Array Be** 71.78 320 iP P 09 23 01.5 -5.6
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG **Malin Array Be** 71.78 320 P P 09 23 06.5 -0.6
comp=Z,27nm,0.8s,mb5.2,baz=46,slow=6.3,SNR=84
AKASG LR LR 09 56 58.6
comp=Z,874nm,18.7s,MS5.0,baz=55,slow=38
KIEV **Kiev** 71.80 320 eP P 09 23 06.3 -0.8
comp=Z,50nm,1.0s,mb5.4
KIEV **Kiev** 71.80 320 eP P 09 23 06.3 -0.9
KIEV pmax pmax
comp=Z,50nm,1.0s,mb5.4
IRO **Indian Ridge** 72.05 48 P P 09 23 09.7 +0.9
OD2 **Odessa Site #2** 72.13 44 P P 09 23 09.6 +0.4
MIB **Mutribah** 72.24 294 eP P 09 23 08.8 -1.4
MIB AMb AMB 09 23 15.5
comp=Z,32nm,0.6s,mb5.4
HAWA **Hanford** 72.25 45 eP P 09 23 10.8 +0.8
comp=Z,27nm,0.9s,mb5.2
QRN **Al-Qurain** 72.39 293 eP P 09 23 10.1 -1.0
QRN AMb AMB 09 23 12.6
comp=Z,91nm,1.1s,mb5.6
NB2 **NORSAR Subarra** 72.47 335 P P 09 23 10.4 -0.6
comp=Z,69nm,1.4s,mb5.4,baz=43,slow=6.2
NB2 **NORSAR Subarra** 72.47 335 P P 09 23 10.4 -0.6
NB2 pmax pmax
comp=Z,69nm,1.4s,mb5.4
NOA **NORSAR Array B** 72.47 335 P P 09 23 10.5 -0.5
comp=Z,12nm,1.0s,mb4.8,baz=42,slow=6.0,SNR=23
NOA LR LR 09 54 51.5
comp=Z,336nm,21.6s,MS4.6,baz=25,slow=36
NEW **Newport** 72.48 42 eP P 09 23 11.7 +0.4
comp=Z,66nm,1.4s,mb5.4
NEW **Newport** 72.48 42 eP P 09 23 11.7 +0.4
NEW pmax pmax
comp=Z,66nm,1.4s
SIM **Simferopol'** 72.51 313 eP P 09 23 10.0 -1.5
SIM eS S 09 32 37.0 +1.8
SIM pmax pmax
comp=Z,16nm,1.1s,mb4.9
SIM MLR MLR
comp=Z,230nm,13.8s,MS4.6
RDF **Al-Radifah** 72.56 293 eP P 09 23 10.4 -1.7
RDF AMb AMB 09 23 14.1
comp=Z,91nm,1.0s,mb5.6
NAY **Al-Naaiem** 72.61 294 eP P 09 23 10.9 -1.5
NAY AMb AMB 09 23 17.0
comp=Z,29nm,0.8s,mb5.3
SUW **Suwalki** 72.63 325 eP P 09 23 10.6 -1.5
RST **Umm Al-Ruwaisa** 72.65 294 eP P 09 23 10.8 -1.8
RST AMb AMB 09 23 16.9
comp=Z,34nm,0.7s,mb5.4
MARD **Mardin** 72.68 304 iP P 09 23 12.8 +0.1
YBH **Yreka Blue Hor** 73.07 50 eP P 09 23 15.7 +0.8
comp=Z,58nm,1.4s,mb5.3
YBH **Yreka Blue Hor** 73.07 50 eP P 09 23 15.7 +0.8
YBH pmax pmax
comp=Z,58nm,1.4s
LHEM **Herd Peak** 73.43 50 P P 09 23 18.4 +1.4
MALT **Malatya** 73.66 306 eP P 09 23 18.2 -0.2
comp=Z,8.5nm,0.9s,mb4.7
MALT **Malatya** 73.66 306 eP P 09 23 18.3 -0.2
MALT pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
WALA **Waterton Lakes** 73.69 40 eP P 09 23 18.9 +0.5
comp=Z,51nm,1.3s,mb5.3
KIPM **Iron Peak** 73.69 52 eP P 09 23 20.0 +1.4
RBK **Rabkut** 73.82 280 P P 09 23 19.1 -0.6
SNR=8.6
RBK **Rabkut** 73.82 280 P P 09 23 19.1 -0.6
SNR=8.6
RBK **Rabkut** 73.82 280 P P 09 23 19.1 -0.6
SNR=8.6
WDC **Whiskeytown Da** 73.84 51 eP P 09 23 19.6 +0.2
comp=Z,41nm,1.1s,mb5.3
WDC **Whiskeytown Da** 73.84 51 eP P 09 23 19.6 +0.1
WDC pmax pmax
comp=Z,41nm,1.1s,mb5.3
WHFO **Wadi Hawf** 73.92 280 P P 09 23 19.4 -0.9
SNR=9.7
WHFO **Wadi Hawf** 73.92 280 P P 09 23 19.4 -0.9
SNR=9.7
WHFO **Wadi Hawf** 73.92 280 P P 09 23 19.4 -0.9
SNR=9.7
KIS **Kishinev** 74.25 317 eP P 09 23 20.0 -1.8
KIS e pP 09 23 25.0 -1.7
KIS e 09 26 12.0
KIS e 09 27 50.0
KIS MLR MLR
comp=Z,1μm,14.0s,MS5.3
KIS MLR MLR
comp=N,500nm,15.0s
KIS MLR MLR
comp=Z,1μm,14.0s
BMO **Blue Mountains** 74.42 45 eP P 09 23 23.7 +0.9
comp=Z,64nm,1.1s,mb5.5
LBCM **Butte Creek Ri** 74.42 50 P P 09 23 23.9 +1.0
MOD **Modoc** 74.44 49 eP P 09 23 23.7 +0.8
comp=Z,86nm,1.5s,mb5.5
ABTO **Aybut** 74.62 280 P P 09 23 23.5 -0.9
SNR=9.4
ABTO **Aybut** 74.62 280 P P 09 23 23.5 -0.9
SNR=9.4
ABTO **Aybut** 74.62 280 P P 09 23 23.5 -0.9
SNR=9.4
GZT **Gaziantep** 74.77 305 iP P 09 23 25.9 +0.9
LVV **L'vov** 74.94 322 eP P 09 23 26.4 +0.7
LVV e 09 23 39.2
BALT **Daday** 74.94 311 iP P 09 23 26.1 +0.3
MSO **Missoula** 75.06 42 eP P 09 23 26.7 +0.3
comp=Z,34nm,1.1s,mb5.2
WVOR **Wild Horse Val** 75.11 48 eP P 09 23 27.8 +0.9
comp=Z,67nm,1.3s,mb5.4
WVOR **Wild Horse Val** 75.11 48 eP P 09 23 27.8 +0.9
WVOR pmax pmax
comp=Z,67nm,1.3s,mb5.4
OHCM **Honcut** 75.22 52 eP P 09 23 27.4 -0.1
FCC **Fort Churchill** 75.37 25 eP P 09 23 27.8 -0.2
comp=Z,77nm,1.2s,mb5.5
FCC **Fort Churchill** 75.37 25 eP P 09 23 27.8 -0.2
FCC pmax pmax
comp=Z,77nm,1.2s,mb5.5
CHMT **Chamberlain Mo** 75.38 42 eP P 09 23 28.6 +0.4
FFC **Flin Flon** 75.44 31 eP P 09 23 28.2 -0.3
comp=Z,46nm,1.0s,mb5.4
FFC **Flin Flon** 75.44 31 eP P 09 23 28.2 -0.3
FFC pmax pmax
comp=Z,46nm,1.0s,mb5.4
CDAG **Cicekdag** 75.47 309 iP P 09 23 27.8 -1.2
ELDT **Eldivan** 75.54 310 iP P 09 23 29.8 +0.4
KWP **Kalwaria** 75.71 322 eP P 09 23 30.6 +0.5
ANTO **Ankara** 76.30 310 eP P 09 23 33.1 -0.6
comp=Z,54nm,1.4s,mb5.3
ANTO **Ankara** 76.30 310 eP P 09 23 33.1 -0.6
ANTO pmax pmax
comp=Z,53nm,1.4s,mb5.3
ANTO **Ankara** 76.30 310 P P 09 23 34.9 +1.2
SNR=9.2
ANTO **Ankara** 76.30 310 P P 09 23 34.9 +1.2
SNR=9.2
PAHR **Pah Rah Range** 76.31 50 eP P 09 23 34.5 +0.7
comp=Z,128nm,1.3s,mb5.7
SGKT **Sivrigoynuk** 76.32 311 iP P 09 23 34.6 +0.8
KOLS **Kolonicke sedl** 76.39 322 eP P 09 23 32.8 -1.2
KOLS e 09 23 43.7
KOLS **Kolonicke sedl** 76.39 322 eP P 09 23 32.8 -1.2
KOLS epP pP 09 23 43.6 +4.6
EGMT **Eagleton** 76.47 39 eP P 09 23 34.7 +0.2
comp=Z,94nm,1.1s,mb5.6
STHS **Stebnicka Huta** 76.57 323 eP P 09 23 35.2 +0.2
comp=Z,11nm,1.1s,mb4.7
STHS e pP 09 23 39.1 -0.9
STHS **Stebnicka Huta** 76.57 323 eP P 09 23 35.2 +0.2
STHS e pP 09 23 39.1 -0.9
STHS pmax pmax
comp=Z,11nm,1.1s,mb4.7
UZH **Uzhgorod** 76.58 322 eP P 09 23 34.6 -0.5
UZH MLR MLR
comp=Z,2μm,16.0s,MS5.5
CMB **Columbia Colle** 76.69 52 eP P 09 23 36.6 +0.7
comp=Z,53nm,1.1s,mb5.4
CMB **Columbia Colle** 76.69 52 eP P 09 23 36.6 +0.7
CMB pmax pmax
comp=Z,53nm,1.1s,mb5.4
OJC **Ojcow** 76.71 324 eP P 09 23 35.9 +0.1
DLMT **Dillon** 76.72 43 eP P 09 23 36.7 +0.7
comp=Z,204nm,1.0s,mb6.0
CRVS **Cervenica-Dubn** 76.81 322 eP P 09 23 36.5 +0.1
HLID **Hailey** 76.86 45 eP P 09 23 38.1 +1.3
comp=Z,44nm,1.1s,mb5.3
HENT **Hendek** 76.87 311 iP P 09 23 32.1 -4.7
MCMT **McKenzie Canyo** 76.92 43 eP P 09 23 37.5 +0.4
NIE **Niedzica** 77.01 323 eP P 09 23 38.1 +0.6
BOZ **Bozeman (W)** 77.05 42 eP P 09 23 38.7 +0.8
comp=Z,90nm,1.3s,mb5.5
BOZ **Bozeman (W)** 77.05 42 eP P 09 23 38.7 +0.9
BOZ pmax pmax
comp=Z,90nm,1.3s,mb5.5
KECS **Kecovo** 77.57 322 eP P 09 23 38.6 -2.1
comp=Z,2.6nm,0.9s,mb4.2
KECS **Kecovo** 77.57 322 eP P 09 23 38.6 -2.1
KECS pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
QLMT **Earthquake Lak** 77.69 43 eP P 09 23 42.5 +1.1
ESKT **Eskisehir** 77.70 310 iP P 09 23 40.9 -0.7
OKC **Ostrava-Krasne** 77.74 324 eP P 09 23 41.4 -0.2
OKC epP pP 09 23 45.7 -0.9
OKC **Ostrava-Krasne** 77.74 324 eP P 09 23 41.4 -0.2
OKC epP pP 09 23 45.7 -0.9
OKC AMS AMS 10 02 10.0
comp=Z,1μm,15.3s
NVAR **Mina Array Bea** 77.75 51 P P 09 23 43.2 +1.3
NVAR **Mina Array Bea** 77.75 51 P P 09 23 43.2 +1.3
comp=Z,29nm,1.0s,mb5.1,baz=300,slow=3.6,SNR=117
KSP **Ksiaz** 77.88 326 eP P 09 23 42.4 0.0
KSP **Ksiaz** 77.88 326 eP P 09 23 42.6 +0.3
KSP e*PP pP 09 23 46.2 -1.1
KSP MLR MLR
comp=Z,2μm,16.7s,MS5.5
GCMT **Greycliff** 77.99 41 eP P 09 23 43.9 +0.9
YMR **Madison River** 78.05 42 eP P 09 23 44.9 +1.5
comp=Z,88nm,1.3s,mb5.5
MORC **Moravsky Berou** 78.07 325 eP P 09 23 43.4 0.0
comp=Z,15nm,1.0s,mb4.9
MORC **Moravsky Berou** 78.07 325 eP P 09 23 43.4 0.0
MORC pmax pmax
comp=Z,15nm,1.0s,mb4.9
BSEG **Bad Segeberg** 78.10 331 eP P 09 23 43.5 0.0
BSEG pmax pmax
comp=Z,53nm,1.6s,mb5.2
BSEG **Bad Segeberg** 78.10 331 eP P 09 23 43.5 0.0
comp=Z,53nm,1.6s,mb5.2
DPC **Dobruska-Polom** 78.22 326 eP P 09 23 44.8 +0.6
DPC ePP PP 09 26 45.9 +5.6
DPC AMS AMS 10 01 50.0
comp=Z,1μm,14.5s
PTRM **Twissleman Ran** 78.24 54 eP P 09 23 45.8 +1.2
PSZ **Piszkesteto** 78.24 322 eP P 09 23 44.7 +0.3
comp=Z,25nm,1.2s,mb5.0
PSZ **Piszkesteto** 78.24 322 eP P 09 23 44.7 +0.3
PSZ pmax pmax
comp=Z,25nm,1.2s,mb5.0
UPC **Upice** 78.24 326 eP P 09 23 44.5 +0.1
UPC epP pP 09 23 48.7 -0.7
MTUM **Tungsten Hills** 78.25 52 eP P 09 23 45.8 +1.1
YFT **Old Faithful** 78.26 43 eP P 09 23 46.4 +1.8
VYHS **Vyhne** 78.36 323 eP P 09 23 45.4 +0.4
comp=Z,11nm,1.3s,mb4.6
VYHS e pP 09 23 49.9 -0.1
VYHS ePP PP 09 26 22.9 -19
VYHS **Vyhne** 78.36 323 eP P 09 23 45.4 +0.4
VYHS e pP 09 23 49.9 -0.1
VYHS pmax pmax
comp=Z,11nm,1.3s,mb4.6
LKWY **Lake** 78.42 42 eP P 09 23 48.2 +2.8
comp=Z,48nm,1.1s,mb5.3
LKWY **Lake** 78.42 42 eP P 09 23 48.2 +2.7
LKWY pmax pmax
comp=Z,48nm,1.1s,mb5.3
KOLL **Kolacno** 78.50 323 eP P 09 23 45.6 -0.3
KOLL epP pP 09 23 49.8 -1.0
IMW **Indian Meadow** 78.57 43 eP P 09 23 48.2 +1.9
comp=Z,66nm,1.0s,mb5.5
DCID1 **Drake Creek** 78.63 43 eP P 09 23 48.2 +1.6
RLMT **Red Lodge** 78.65 41 P P 09 23 47.2 +0.5
comp=Z,142nm,1.7s,mb5.6
MOOW **Moose Ponds** 78.77 43 eP P 09 23 49.0 +1.6
comp=Z,66nm,1.3s,mb5.4
TPAW **Teton Pass** 78.83 43 eP P 09 23 49.4 +1.7
comp=Z,50nm,1.0s,mb5.4
PVCC **Panska Ves** 78.87 327 eP P 09 23 48.2 +0.4
DGMT **Dagmar** 78.89 36 eP P 09 23 48.0 0.0
comp=Z,14nm,0.6s,mb5.1
BRG **Berggiesshubel** 78.89 327 eP P 09 23 47.6 -0.3
BRG pmax pmax
comp=Z,14nm,1.3s,mb4.7
BRG MLR MLR
comp=N,1μm,12.5s,MS5.4
BRG MLR MLR
comp=E,540nm,12.3s,MS5.4
BRG MLR MLR
comp=Z,1μm,12.5s,MS5.4
BRG **Berggiesshubel** 78.89 327 eP P 09 23 47.7 -0.2
comp=Z,23nm,1.3s,mb5.0
BRG **Berggiesshubel** 78.89 327 eP P 09 23 47.6 -0.3
comp=Z,23nm,1.3s,mb5.0
BRG
comp=N,2μm,12.5s
BRG
comp=E,902nm,12.3s
BRG
comp=Z,2μm,12.5s
HVU **Hansel Valley** 78.93 46 eP P 09 23 49.2 +0.9
comp=Z,24nm,0.8s,mb5.2
HVU **Hansel Valley** 78.93 46 eP P 09 23 49.2 +0.9
HVU pmax pmax
comp=Z,24nm,0.8s,mb5.2
LOHW **Long Hollow** 78.94 43 eP P 09 23 49.5 +1.1
comp=Z,62nm,1.4s,mb5.3
ISP **Isparta** 78.95 309 eP P 09 23 48.4 -0.1
comp=Z,22nm,0.9s,mb5.1
ISP **Isparta** 78.95 309 eP P 09 23 48.4 -0.1
ISP pmax pmax
comp=Z,22nm,0.9s,mb5.1
SNOW **Snow King Moun** 78.95 43 eP P 09 23 49.8 +1.4
comp=Z,52nm,1.0s,mb5.4
REDW **Red Top Meadow** 78.97 43 eP P 09 23 49.0 +0.5
comp=Z,79nm,1.3s,mb5.5
CLL **Collm** 78.97 328⇑ iP P 09 23 47.8 -0.6
comp=Z,35nm,1.2s,mb5.2
CLL e pP 09 23 52.0 -1.4
CLL eS S 09 33 43.0 -3.3
CLL LR LR
comp=Z,1μm,15.9s,MS5.3
CLL **Collm** 78.97 328⇑ iP P 09 23 47.8 -0.6
CLL e pP 09 23 52.0 -1.4
CLL eS S 09 33 43.0 -3.3
CLL pmax pmax
comp=Z,35nm,1.2s,mb5.2
CLL MLR MLR
comp=Z,1μm,15.9s,MS5.3
CLL **Collm** 78.97 328⇑ iP P 09 23 47.8 -0.6
comp=Z,35nm,1.2s,mb5.2
CLL L 09 05 00.0
comp=Z,500nm,18.5s
CLL epP pP 09 23 52.0 -1.4
CLL ePP PP 09 26 47.0 +0.4
comp=Z,14nm,0.9s
CLL eS S 09 33 43.0 -3.3
CLL eSS SS 09 38 48.0 -2.5
CLL eSSS 09 42 36.0
CLL **Collm** 78.97 328 eP P 09 23 47.8 -0.6
comp=Z,35nm,1.2s,mb5.2
LAO **LASA Array** 79.14 39 eP P 09 23 49.8 +0.3
comp=Z,182nm,1.8s,mb5.7
SART **Tekirdag** 79.14 313 iP P 09 23 49.1 -0.4
MODS **Modra-Piesok** 79.18 324 eP P 09 23 50.6 +1.0
MODS e 09 26 49.2
MODS **Modra-Piesok** 79.18 324 eP P 09 23 50.6 +1.0
MODS epP PP 09 26 58.9 +10
AHID **Auburn Hatcher** 79.22 44 eP P 09 23 50.6 +0.7
comp=Z,11nm,0.6s,mb5.0
BTOK **Tokmak** 79.24 312 iP P 09 23 49.2 -0.9
NRDL **Niedersach Rie** 79.27 330 eP P 09 23 49.8 -0.2
comp=Z,86nm,2.1s,mb5.3
PRU **Pruhonice** 79.27 326 eP P 09 23 50.1 +0.1
PRU e 09 26 48.5
PRU MLR MLR
comp=Z,1μm,16.0s,MS5.3
PRU **Pruhonice** 79.27 326 eP P 09 23 50.1 +0.1
PRU ePP PP 09 26 48.5 -0.6
PRU ex x 09 26 58.9
PRU AMS AMS 10 02 20.0
comp=Z,1μm,16.0s
BGU **Big Grassy Mou** 79.33 46 eP P 09 23 51.5 +1.0
TREC **Trest** 79.35 325 eP P 09 23 50.5 0.0
TREC epP pP 09 23 55.0 -0.5
TREC ePP PP 09 26 46.7 -3.1
TREC AMS AMS 10 02 20.0
comp=Z,2μm,13.4s
ZST **Bratislava** 79.39 324 eP P 09 23 48.0 -2.7
comp=Z,34nm,1.7s,mb5.0
ZST e pP 09 23 51.8 -3.9
ZST e 09 26 58.8
ZST LR LR
comp=Z,1μm,16.0s,MS5.2
ZST **Bratislava** 79.39 324 eP P 09 23 48.0 -2.7
ZST e pP 09 23 51.8 -3.9
ZST pmax pmax
comp=Z,34nm,1.7s,mb5.0
ZST MLR MLR
comp=Z,1μm,16.0s,MS5.2
ZST **Bratislava** 79.39 324 eP P 09 23 48.0 -2.7
ZST epP pP 09 23 51.8 -3.9
ZST ePP PP 09 26 49.5 -0.7
ZST e 09 26 58.8
SPUT **South Promonto** 79.42 46 eP P 09 23 51.8 +0.8
TRCR **Troy Canyon** 79.47 50 eP P 09 23 52.3 +0.9
CLZ **Clausthal** 79.66 329 eP P 09 23 51.8 -0.3
CLZ pmax pmax
comp=Z,55nm,1.5s,mb5.3
CLZ **Clausthal** 79.66 329 eP P 09 23 51.8 -0.3
comp=Z,55nm,1.5s,mb5.3
HWUT **Hardware Ranch** 79.72 45 eP P 09 23 53.7 +1.0
comp=Z,82nm,1.2s,mb5.5
TANN **Tannenbergstha** 79.86 328 eP P 09 23 52.4 -0.9
comp=Z,66nm,2.1s,mb5.2
RZN **Rozhen** 79.90 315 eP P 09 23 52.0 -1.6
DUG **Dugway** 79.93 47 eP P 09 23 55.0 +1.1
comp=Z,56nm,1.1s,mb5.4
DUG **Dugway** 79.93 47 eP P 09 23 55.0 +1.2
DUG pmax pmax
comp=Z,56nm,1.1s,mb5.4
TPNV **Topopah Spring** 79.95 51 eP P 09 23 54.8 +0.9
comp=Z,76nm,1.2s,mb5.5
TPNV **Topopah Spring** 79.95 51 eP P 09 23 54.8 +0.8
TPNV pmax pmax
comp=Z,76nm,1.2s,mb5.5
NKC **Novy Kostel** 80.00 327 eP P 09 23 53.0 -1.0
NKC ePP PP 09 26 51.2 -4.0
NKC ex x 09 27 00.3
NOQ **North Oquirrh** 80.03 46 eP P 09 23 55.6 +1.2
comp=Z,85nm,1.1s,mb5.6
MOX **Moxa** 80.05 328 eP P 09 23 54.2 -0.1
comp=Z,67nm,2.0s,mb5.2
MOX
comp=Z,300nm,20.0s
MOX **Moxa** 80.05 328 eP P 09 23 54.2 -0.1
MOX pmax pmax
comp=Z,67nm,2.0s,mb5.2
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.6
MOX **Moxa** 80.05 328 eP P 09 23 53.2 -1.1
comp=Z,80nm,2.1s,mb5.3
PDAR **Pinedale Array** 80.07 43 P P 09 23 55.0 +0.5

comp=Z,28nm,0.8s,mb5.2,baz=286,slow=1.9,SNR=191
PDAR LR LR 10 02 22.5

comp=Z,116nm,18.1s,MS4.3,baz=318,slow=38
VTS Vitosha 80.14 317 *e*P **P 09 23 55.0 +0.1**
CONA Conrad Observa 80.16 324⇑*i*pP pP 09 23 55.8 -4.2
comp=Z,25nm,1.3s,SNR=9.2
CTU Camp Tracy 80.22 46 *e*P **P 09 23 56.4 +1.0**
comp=Z,32nm,1.1s,mb5.2
KHC Kasperske Hory 80.33 326 *e*P **P 09 23 55.7 -0.1**
KHC *e**PP pP 09 24 00.3 -0.5
KHC *e* 09 27 01.2
KHC MLR MLR
comp=Z,2μm,12.9s,MS5.6
KHC Kasperske Hory 80.33 326 *e*P **P 09 23 55.7 -0.1**
KHC *e*pP pP 09 24 00.3 -0.5
KHC *e*x x 09 26 52.0
KHC *e*PP PP 09 27 01.2 +3.3
KHC AMS AMS 10 04 00.0
comp=Z,2μm,12.9s
MANZ Manzenberg 80.33 327 *e*P **P 09 23 55.7 -0.1**
JUJ Jordanelle 80.45 46 *e*P **P 09 23 57.4 +0.8**
ROTZ Rotzenmuhle 80.46 327 *e*P **P 09 23 56.3 -0.2**
comp=Z,80nm,1.7s,mb5.4
GEC2 GERESS Array S 80.48 326 *e*P **P 09 23 56.2 -0.4**
GEC2 pmax pmax
comp=Z,16nm,1.3s,mb4.8
GEC2 GERESS Array S 80.48 326 *e*P **P 09 23 56.2 -0.4**
comp=Z,16nm,1.3s,mb4.8
GERES GERESS Array B 80.48 326 P **P 09 23 56.5 -0.1**
comp=Z,4.7nm,0.8s,mb4.5,baz=51,slow=5.3,SNR=16
GERES LR LR 10 00 16.0
comp=Z,364nm,20.1s,MS4.7,baz=266,slow=36
NLU North Lily Min 80.52 47 *e*P **P 09 23 57.9 +0.9**
NLU *e* pP 09 24 02.4 +0.4
MMB Musomiste 80.52 316 *e*P **P 09 23 57.0 0.0**
WET Wettzell 80.63 326 *e*P **P 09 23 57.1 -0.3**
WET pmax pmax
comp=Z,22nm,1.2s,mb5.0
WET Wettzell 80.63 326 *e*P **P 09 23 57.1 -0.3**
comp=Z,22nm,1.2s,mb5.0
DAU Daniels Canyon 80.69 46 *e*P **P 09 23 58.9 +0.9**
DAU *e* pP 09 24 03.9 +1.0
KKB Krupnik 80.69 316 *e*P **P 09 23 57.0 -0.9**
MPU Maple Canyon 80.73 46 *e*P **P 09 23 59.0 +0.9**
comp=Z,65nm,1.2s,mb5.4
GRA1 Grafenberg Arr 80.94 328 *e*P **P 09 23 59.3 +0.3**
comp=Z,77nm,1.3s,mb5.5
GRA1 *e*pP pP 09 24 03.7 -0.3
GRF Grafenberg Arr 80.94 328 *e*P **P 09 23 59.3 +0.3**
GRF *e**PP pP 09 24 03.7 -0.3
GRF pmax pmax
comp=Z,77nm,1.3s,mb5.5
GRF Grafenberg Arr 80.94 328 *e*P **P 09 23 59.3 +0.3**
GRF *e**PP pP 09 24 03.7 -0.3
GRF pmax pmax
comp=Z,77nm,1.3s,mb5.5
GRF Grafenberg Arr 80.94 328 *e*P **P 09 23 59.3 +0.3**
comp=Z,77nm,1.3s,mb5.5
GRF *e*pP pP 09 24 03.7 -0.3
GRFO Grafenberg 80.94 328 *e*P **P 09 23 59.1 +0.1**
comp=Z,214nm,1.9s,mb5.8
GRFO Grafenberg 80.94 328 *e*P **P 09 23 59.1 +0.1**
GRFO pmax pmax
comp=Z,214nm,1.9s,mb5.8
MOA Molln 80.96 325⇑*i*P **P 09 23 58.9 -0.3**
comp=Z,14nm,1.4s,mb4.7
ULM Lac du Bonnet 81.26 31 P **P 09 24 00.1 -0.6**
comp=Z,33nm,0.9s,mb5.3,baz=321,slow=7.2,SNR=76
ULM LR LR 10 01 51.9
comp=Z,192nm,19.3s,MS4.5,baz=347,slow=37
CCUT Cedar City 81.33 49 *e*P **P 09 24 02.5 +1.1**
CCUT *e*pP pP 09 24 07.0 +0.6
MSU Marysvale 81.41 48 *e*P **P 09 24 03.5 +1.7**
MSU *e* pP 09 24 07.9 +1.1
TMUT Trail Mountain 81.45 47 *e*pP pP 09 24 07.6 +0.6
TNS Taunus Mts 81.69 329 *e*P **P 09 24 02.4 -0.6**
TNS pmax pmax
comp=Z,23nm,1.3s,mb5.0
TNS Taunus Mts 81.69 329 *e*P **P 09 24 02.4 -0.6**
comp=Z,23nm,1.3s,mb5.0
PFO Pinyon Flat Ob 81.93 54 *e*P **P 09 24 05.0 +0.4**
comp=Z,47nm,1.1s,mb5.3
PFO *e*pP pP 09 24 09.7 +0.1
PFO Pinyon Flat Ob 81.93 54 *e*P **P 09 24 05.0 +0.4**
PFO *e**PP pP 09 24 09.7 +0.1
PFO pmax pmax
comp=Z,47nm,1.1s,mb5.3
SRU San Rafael 81.97 46 *e*P **P 09 24 05.5 +0.8**
comp=Z,36nm,1.1s,mb5.2
SRU *e* pP 09 24 10.3 +0.5
SRU San Rafael 81.97 46 *e*P **P 09 24 05.6 +0.8**
SRU *e* pP 09 24 10.3 +0.5
SRU pmax pmax
comp=Z,36nm,1.1s,mb5.2
TOD Tromm 82.02 329 *e*P **P 09 24 04.4 -0.4**
FUR Furstenfeldbru 82.06 327 *e*P **P 09 24 05.1 +0.1**
FUR pmax pmax
comp=Z,44nm,1.1s,mb5.3
FUR Furstenfeldbru 82.06 327 *e*P **P 09 24 05.1 +0.1**
comp=Z,44nm,1.1s,mb5.3
RWWY Rawlins 82.08 43 *e*P **P 09 24 05.6 +0.4**
comp=Z,55nm,1.0s,mb5.4
RWWY *e* pP 09 24 10.3 0.0
ABH Alteburg 82.31 330 *e*P **P 09 24 05.9 -0.4**
BEBN Eben Emael 82.33 331 P **P 09 24 06.1 -0.3**
MEM Membach 82.35 331 P **P 09 24 06.3 -0.2**
comp=Z,16nm,1.3s,mb4.8
STU Stuttgart 82.50 328 *e*P **P 09 24 07.1 -0.2**
comp=Z,35nm,1.2s,mb5.2
RUP Ruppelstein 82.65 330 *e*P **P 09 24 07.6 -0.5**
AGMN Agassiz Refuge 82.77 32 *e*P **P 09 24 07.5 -1.2**
comp=Z,19nm,1.1s,mb5.0
BCLA Clavier 82.77 331 P **P 09 24 08.8 0.0**
comp=Z,15nm,2.1s,mb4.7
RETA Reutte 82.81 326 *i* P **P 09 24 09.0 +0.1**
comp=Z,32nm,1.2s,mb5.2,SNR=9.5
LANF Langenberg 82.91 329 *e*P **P 09 24 08.9 -0.6**
FETA Feichten 83.17 326⇑*i*P **P 09 24 10.8 -0.1**
comp=Z,14nm,1.0s,mb5.0
SPAK Spaichingen-Ko 83.19 328 *e*P **P 09 24 10.5 -0.4**
BFO Black Forest 83.20 328 *e*P **P 09 24 10.7 -0.3**
BFO pmax pmax
comp=Z,51nm,1.2s,mb5.4
BFO Black Forest 83.20 328 *e*P **P 09 24 10.7 -0.3**
comp=Z,51nm,1.2s,mb5.4
GIVF Givet 83.21 331 *e*P **P 09 24 10.3 -0.7**
PHWY Pilot Hill 83.30 42 *e*P **P 09 24 12.4 +0.8**
PHWY *e* pP 09 24 16.8 +0.2
DOU Dourbes 83.31 331 P **P 09 24 11.3 -0.1**
comp=Z,14nm,1.8s,mb4.7
PV10 Paradox Valley 83.33 46 *e*P **P 09 24 13.1 +1.3**
PV10 *e* pP 09 24 17.9 +1.0
DAVA Damuels 83.34 327⇑*i*P **P 09 24 11.7 0.0**
comp=Z,32nm,1.0s,mb5.3,SNR=6.4
BAIF Baives 83.48 331⇑*i*P **P 09 24 11.6 -0.8**
CDF Champ du Feu 83.58 329⇑*i*P **P 09 24 12.6 -0.3**
comp=Z,49nm,1.0s,mb5.3
CDF Champ du Feu 83.58 329⇑*i*P **P 09 24 12.6 -0.3**
comp=Z,24nm,1.0s,mb5.3
CDF Champ du Feu 83.58 329⇑*i*P **P 09 24 12.6 -0.3**
CDF pmax pmax
comp=Z,25nm,1.0s,mb5.3
FELD Feldberg im Sc 83.69 328 *e*P **P 09 24 12.4 -1.1**
PV01 Paradox Valley 83.76 46 *e*P **P 09 24 14.6 +0.5**
ECH Echery 83.78 329 *e*P **P 09 24 13.1 -0.8**
WUAZ Wupatki 83.87 50 *e*P **P 09 24 15.8 +1.1**
comp=Z,62nm,1.1s,mb5.7
URZ Urewera 83.88 149 P **P 09 24 13.5 -0.8**
comp=Z,6.1nm,0.8s,mb4.8,baz=276,slow=5.7,SNR=4.6
SMCO Snowmass 83.95 45 *e*P **P 09 24 16.0 +1.0**
comp=Z,45nm,1.2s,mb5.5
SMCO *e* pP 09 24 20.6 +0.6
MOF Molkenrain 84.08 329 *e*P **P 09 24 15.0 -0.5**
HINF Hinteralfeld 84.22 329⇑*i*P **P 09 24 15.4 -0.8**
comp=Z,52nm,1.4s,mb5.2
HINF Hinteralfeld 84.22 329⇑*i*P **P 09 24 15.4 -0.8**
comp=Z,26nm,1.4s,mb5.2
HINF Hinteralfeld 84.22 329⇑*i*P **P 09 24 15.4 -0.8**
HINF pmax pmax
comp=Z,26nm,1.4s,mb5.2
BBS Basel-Blauen 84.22 328 *e*P **P 09 24 15.7 -0.5**
THEF They Montfort 84.25 329 *e*P **P 09 24 15.7 -0.6**
ISCO Idaho Springs 84.27 43 *e*P **P 09 24 17.5 +0.9**
comp=Z,42nm,1.4s,mb5.4
ISCO *e* pP 09 24 21.7 +0.1
ISCO Idaho Springs 84.27 43 *e*P **P 09 24 17.5 +0.9**
ISCO *e* pP 09 24 21.7 +0.1
ISCO pmax pmax
comp=Z,42nm,1.4s,mb5.4
HAU Haudompre 84.28 329⇑*i*P **P 09 24 15.7 -0.8**
comp=Z,51nm,1.3s,mb5.2
HAU *e*MLR MLR
comp=Z,334nm,22.2s,MS4.4
HAU Haudompre 84.28 329⇑*i*P **P 09 24 15.7 -0.8**
comp=Z,25nm,1.3s,mb5.2
HAU LR LR
comp=Z,330nm,22.3s,MS4.7
HAU Haudompre 84.28 329⇑*i*P **P 09 24 15.7 -0.8**
HAU pmax pmax
comp=Z,25nm,1.3s,mb5.2
HAU MLR MLR
comp=Z,330nm,22.3s,MS4.7
MEZF Maizieres J'vi 84.41 330⇑*i*P **P 09 24 16.9 -0.2**
comp=Z,213nm,1.7s,mb5.7
MEZF Maizieres J'vi 84.41 330⇑*i*P **P 09 24 16.9 -0.2**
comp=Z,213nm,1.7s,mb6.0
MVCO Mesa Verde 84.43 47 *e*P **P 09 24 18.4 +0.9**
comp=Z,75nm,1.3s,mb5.7
EYMN Ely 84.85 30 *e*P **P 09 24 18.8 -0.5**
comp=Z,77nm,1.2s,mb5.7
CABF La Chapelle 85.50 328 *e*P **P 09 24 21.9 -0.7**
comp=Z,91nm,1.6s,mb5.3
CABF La Chapelle 85.50 328 *e*P **P 09 24 21.9 -0.7**
comp=Z,46nm,1.6s,mb5.3
CABF La Chapelle 85.50 328 *e*P **P 09 24 21.9 -0.7**
CABF pmax pmax
comp=Z,46nm,1.6s,mb5.4
SDCO Great Sand Dun 85.78 45 *e*P **P 09 24 24.9 +0.7**
comp=Z,18nm,1.0s,mb5.2
LOR Lormes 85.88 330⇑*i*P **P 09 24 23.6 -0.9**
comp=Z,41nm,1.1s,mb5.3
LOR *e*MLR MLR
comp=Z,521nm,20.8s,MS4.6
LOR Lormes 85.88 330⇑*i*P **P 09 24 23.6 -0.9**
comp=Z,20nm,1.1s,mb5.3
LOR LR LR
comp=Z,520nm,20.8s,MS4.9
LOR Lormes 85.88 330⇑*i*P **P 09 24 23.6 -0.9**
LOR pmax pmax
comp=Z,21nm,1.1s,mb5.3
LOR MLR MLR
comp=Z,520nm,20.8s,MS4.9
ECSD EROS,Sioux Fal 85.94 36 *e*P **P 09 24 24.3 -0.6**
comp=Z,28nm,1.0s,mb5.5
SCHQ Schefferville 86.03 13 P **P 09 24 24.9 -0.2**
comp=Z,28nm,0.9s,mb5.5,baz=340,slow=5.5,SNR=34
SCHQ LR LR 10 06 15.4
comp=Z,242nm,18.2s,MS4.6,baz=337,slow=38
LPL La Plagne 86.09 327 *e*P **P 09 24 25.3 -0.3**
LPG La Plagne 86.10 327 *e*P **P 09 24 25.4 -0.2**
comp=Z,25nm,1.0s,mb5.1
LPG La Plagne 86.10 327 *e*P **P 09 24 25.4 -0.2**
comp=Z,13nm,1.0s,mb5.1
LPG La Plagne 86.10 327 *e*P **P 09 24 25.4 -0.2**
LPG pmax pmax
comp=Z,13nm,1.0s,mb5.1
SSF Saint Saulge 86.19 330⇑*i*P **P 09 24 25.2 -0.9**
comp=Z,23nm,0.9s,mb5.1
SSF Saint Saulge 86.19 330⇑*i*P **P 09 24 25.2 -0.9**
comp=Z,12nm,0.9s,mb5.1
SSF Saint Saulge 86.19 330⇑*i*P **P 09 24 25.2 -0.9**
SSF pmax pmax
comp=Z,12nm,0.9s,mb5.1
FLN La Foliniere 86.29 333⇑*i*P **P 09 24 25.4 -1.1**
comp=Z,67nm,1.3s,mb5.4
FLN *e*MLR MLR
comp=Z,506nm,19.8s,MS4.6
FLN La Foliniere 86.29 333⇑*i*P **P 09 24 25.4 -1.1**
comp=Z,34nm,1.3s,mb5.4
FLN LR LR
comp=Z,510nm,19.8s,MS4.9
FLN La Foliniere 86.29 333⇑*i*P **P 09 24 25.4 -1.1**
FLN pmax pmax
comp=Z,34nm,1.3s,mb5.4
FLN MLR MLR
comp=Z,510nm,19.8s,MS4.9
LDF La Druitiere 86.30 333⇑*i*P **P 09 24 25.5 -1.1**
HYF Humbligny 86.36 331 *e*P **P 09 24 26.6 -0.3**
TUC Tucson 86.38 52 *e*P **P 09 24 27.8 +0.5**
comp=Z,34nm,1.6s,mb5.3
TUC *e* pP 09 24 32.9 +0.5
TUC Tucson 86.38 52 *e*P **P 09 24 27.8 +0.5**
TUC *e* pP 09 24 32.9 +0.6
TUC pmax pmax
comp=Z,34nm,1.6s,mb5.3
SMF Signal de Mont 86.39 330⇑*i*P **P 09 24 26.2 -0.9**
comp=Z,67nm,1.4s,mb5.4
SMF Signal de Mont 86.39 330⇑*i*P **P 09 24 26.2 -0.9**
comp=Z,33nm,1.4s,mb5.4
SMF Signal de Mont 86.39 330⇑*i*P **P 09 24 26.2 -0.9**
SMF pmax pmax
comp=Z,33nm,1.4s,mb5.4
AVF Avril sur Loir 86.47 330⇑*i*P **P 09 24 26.7 -0.7**
comp=Z,60nm,1.0s,mb5.5
AVF Avril sur Loir 86.47 330⇑*i*P **P 09 24 26.7 -0.7**
comp=Z,30nm,1.0s,mb5.5
AVF Avril sur Loir 86.47 330⇑*i*P **P 09 24 26.7 -0.7**
AVF pmax pmax
comp=Z,30nm,1.0s,mb5.5
MBDF Montbardon 86.70 327 *e*P **P 09 24 27.6 -1.0**
comp=Z,26nm,1.1s,mb5.1
MBDF Montbardon 86.70 327 *e*P **P 09 24 27.6 -1.0**
comp=Z,13nm,1.1s,mb5.1
MBDF Montbardon 86.70 327 *e*P **P 09 24 27.6 -1.0**
MBDF pmax pmax
comp=Z,13nm,1.1s,mb5.1
GRR Gorron 86.74 333⇑*i*P **P 09 24 28.1 -0.6**
BGF Bois d'Agland 86.86 330⇑*i*P **P 09 24 28.7 -0.7**
comp=Z,80nm,1.5s,mb5.4
BGF Bois d'Agland 86.86 330⇑*i*P **P 09 24 28.7 -0.7**
comp=Z,40nm,1.5s,mb5.4
BGF Bois d'Agland 86.86 330⇑*i*P **P 09 24 28.7 -0.7**
BGF pmax pmax
comp=Z,40nm,1.5s,mb5.4
LAZ Ladron 87.17 48 *e*P **P 09 24 32.0 +0.9**
LAZ *e* pP 09 24 37.1 +0.9
ANMO Albuquerque 87.19 47 *e*P **P 09 24 32.2 +1.0**
comp=Z,33nm,1.4s,mb5.4
ANMO *e* pP 09 24 37.1 +0.9
ANMO Albuquerque 87.19 47 *e*P **P 09 24 32.2 +1.0**
ANMO *e* pP 09 24 37.1 +0.9
ANMO pmax pmax
comp=Z,33nm,1.4s
COWI Conover 87.29 30 *e*P **P 09 24 31.0 -0.5**
comp=Z,19nm,1.0s,mb5.3
COWI *e* pP 09 24 35.5 -1.0
TCF Toulx Ste Croi 87.33 330 *e*P **P 09 24 31.3 -0.4**
comp=Z,78nm,1.6s,mb5.4
TCF Toulx Ste Croi 87.33 330 *e*P **P 09 24 31.3 -0.4**
comp=Z,39nm,1.6s,mb5.4
TCF Toulx Ste Croi 87.33 330 *e*P **P 09 24 31.3 -0.4**
TCF pmax pmax
comp=Z,39nm,1.6s,mb5.4
SGMF Saint Gilles 87.45 334 *e*P **P 09 24 31.6 -0.6**
VIVF Saint-Julien-l 87.50 328⇑*i*P **P 09 24 31.7 -0.8**
comp=Z,31nm,1.1s,mb5.2
VIVF Saint-Julien-l 87.50 328⇑*i*P **P 09 24 31.7 -0.8**
comp=Z,15nm,1.1s,mb5.2
VIVF Saint-Julien-l 87.50 328⇑*i*P **P 09 24 31.7 -0.8**
VIVF pmax pmax
comp=Z,15nm,1.1s,mb5.1
LPM Los Pinos Moun 87.53 48 *e*P **P 09 24 32.9 0.0**
ROSF Rostrenen 87.63 335⇑*i*P **P 09 24 32.8 -0.3**
comp=Z,36nm,1.0s,mb5.3
ROSF Rostrenen 87.63 335⇑*i*P **P 09 24 32.8 -0.3**
comp=Z,18nm,1.0s,mb5.3
ROSF Rostrenen 87.63 335⇑*i*P **P 09 24 32.8 -0.3**
ROSF pmax pmax
comp=Z,18nm,1.0s,mb5.3
BNM Barren Site 87.65 48 *e*P **P 09 24 34.2 +0.7**
MFF Saint Martin d 87.98 332⇑*i*P **P 09 24 34.5 -0.3**
comp=Z,57nm,1.3s,mb5.3
MFF Saint Martin d 87.98 332⇑*i*P **P 09 24 34.5 -0.3**
comp=Z,29nm,1.3s,mb5.3
MFF Saint Martin d 87.98 332⇑*i*P **P 09 24 34.5 -0.3**
MFF pmax pmax
comp=Z,29nm,1.3s,mb5.3
PPT Papeete 88.09 114 *e*S S 09 35 09.2 -10
comp=Z,240nm,26.5s
PPT Papeete 88.09 114 *e*LR LR 09 52 26.9
comp=Z,1μm,32.5s
PPT Papeete 88.09 114 LR LR 09 59 07.4

comp=Z,211nm,18.6s,MS4.6,baz=135,slow=32
CBKS Cedar Bluff 88.12 41 *e*P **P 09 24 35.5 0.0**
comp=Z,36nm,1.2s,mb5.5
CBKS Cedar Bluff 88.12 41 *e*P **P 09 24 35.6 0.0**
CBKS pmax pmax
comp=Z,36nm,1.2s,mb5.5
RJF Les Rejaudoux 88.42 330 *e*P **P 09 24 36.9 0.0**
RJF *e*MLR MLR
comp=Z,666nm,22.0s,MS4.7
RJF Les Rejaudoux 88.42 330 *e*P **P 09 24 36.9 0.0**
RJF MLR MLR
comp=Z,670nm,22.0s,MS5.0
LASF Ste Croix 88.47 328⇑*i*P **P 09 24 36.6 -0.5**
comp=Z,136nm,1.8s,mb5.6
CAF Calviac 88.51 330 *e*P **P 09 24 35.8 -1.5**
LFF La Frestale 89.03 330 *e*P **P 09 24 39.9 +0.1**
JFWS Jewell Farm 89.43 33 *e*P **P 09 24 41.2 -0.5**
comp=Z,20nm,1.2s,mb5.3
JFWS Jewell Farm 89.43 33 *e*P **P 09 24 41.2 -0.5**
JFWS pmax pmax
comp=Z,20nm,1.2s,mb5.3
KSU1 Kansas State U 89.49 39 *e*P **P 09 24 41.5 -0.5**
comp=Z,31nm,0.8s,mb5.7
KSU1 *e*pP pP 09 24 46.4 -0.7
MTLF Montolieu 89.75 329 *e*P **P 09 24 42.8 -0.4**
TAOE Nuku Hiva Isla 89.84 101 *e*LR LR 09 53 21.9
comp=Z,1μm,33.3s
MNTX Cornudas Mount 90.11 49 P **P 09 24 45.2 +0.1**
comp=Z,43nm,1.9s,mb5.5
MNTX *e*pP pP 09 24 50.2 0.0
EPF Esparros 90.78 330⇑*i*P **P 09 24 47.2 -0.8**
comp=Z,30nm,1.4s,mb5.1
EPF Esparros 90.78 330⇑*i*P **P 09 24 47.2 -0.8**
comp=Z,15nm,1.4s,mb5.1
EPF Esparros 90.78 330⇑*i*P **P 09 24 47.2 -0.8**
EPF pmax pmax
comp=Z,15nm,1.4s,mb5.1
ETSF Etsaut 91.25 330 *e*P **P 09 24 50.3 +0.1**
SJPF Ste Jean 91.33 331 *e*P **P 09 24 49.8 -0.7**
WMOK Wichita Mounta 91.68 43 *e*P **P 09 24 52.3 0.0**
comp=Z,31nm,1.4s,mb5.4
WMOK *e*pP pP 09 24 56.7 -0.7
WMOK Wichita Mounta 91.68 43 *e*P **P 09 24 52.3 0.0**
WMOK *e**PP pP 09 24 56.7 -0.7
WMOK pmax pmax
comp=Z,31nm,1.4s,mb5.5
HDIL Hopedale 91.77 33 *e*P **P 09 24 52.7 +0.1**
comp=Z,36nm,1.1s,mb5.6
HDIL *e*pP pP 09 24 57.2 -0.5
TBI Tubuai 91.88 118 *e*LR LR 09 54 01.4
comp=Z,582nm,35.0s
KEST Kesra 92.50 320 LR LR 10 07 36.5
comp=Z,100nm,19.4s,MS4.3,baz=352,slow=36
AAM Ann Arbor 92.62 29 *e*P **P 09 24 56.8 +0.3**
comp=Z,19nm,1.1s,mb5.4
AAM Ann Arbor 92.62 29 *e*P **P 09 24 56.8 +0.3**
AAM pmax pmax
comp=Z,19nm,1.1s,mb5.4
LTX Lajitas 92.83 50 *e*pP pP 09 24 58.1 -4.7
comp=Z,48nm,1.3s
LTX *e*pP pP 09 25 02.9 +0.1
LTX Lajitas 92.83 50 *e*P **P 09 24 58.1 +0.3**
LTX *e**PP pP 09 25 02.9 +0.1
LTX pmax pmax
comp=Z,48nm,1.3s,mb5.8
LONY Lake Ozonia 93.67 22 *e*P **P 09 25 01.3 0.0**
comp=Z,20nm,1.2s,mb5.4
FRNY Flat Rock 93.77 21 *e*P **P 09 25 01.7 -0.1**
comp=Z,12nm,1.2s,mb5.2
ERPA Erie 94.14 27 *e*P **P 09 25 03.9 +0.4**
comp=Z,65nm,1.4s,mb5.9
JCT Junction City 94.28 46 *e*P **P 09 25 04.1 -0.3**
comp=Z,28nm,1.3s,mb5.5
JCT *e*pP pP 09 25 09.1 -0.4
JCT Junction City 94.28 46 *e*P **P 09 25 04.1 -0.3**
JCT *e**PP pP 09 25 09.1 -0.4
JCT pmax pmax
comp=Z,28nm,1.3s,mb5.5
NCB Newcomb 94.37 22 *e*P **P 09 25 04.9 +0.4**
comp=Z,35nm,1.3s,mb5.6
NCB *e*pP pP 09 25 09.4 -0.2
ALLY Alegheny Colle 94.50 27 *e*P **P 09 25 05.7 +0.5**
comp=Z,21nm,1.1s,mb5.5
MIAR Mount Ida 94.56 40 *e*P **P 09 25 05.5 -0.1**
comp=Z,18nm,0.8s,mb5.5
MIAR *e*pP pP 09 25 10.2 -0.4
MIAR Mount Ida 94.56 40 *e*P **P 09 25 05.5 -0.1**
MIAR *e**PP pP 09 25 10.3 -0.4
MIAR pmax pmax
comp=Z,18nm,0.8s,mb5.5
ACCN Adirondack Com 95.07 22 *e*P **P 09 25 08.1 +0.4**
comp=Z,28nm,1.3s,mb5.5
ACCN *e*pP pP 09 25 12.5 -0.3
ESDC Sonseca Array 95.34 331 LR LR 10 13 35.9
comp=Z,314nm,18.4s,MS4.8,baz=70,slow=39
WVT Waverly 96.06 35 *e*P **P 09 25 12.2 -0.2**
comp=Z,4.8nm,0.8s,mb5.0
WVT *e*pP pP 09 25 16.8 -0.7
WVT Waverly 96.06 35 *e*P **P 09 25 12.2 -0.2**
WVT *e**PP pP 09 25 16.8 -0.7
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb5.0
SSPA Standing Stone 96.19 26 *e*P **P 09 25 13.1 +0.1**
comp=Z,24nm,1.5s,mb5.4
SSPA *e*pP pP 09 25 17.9 -0.1
PLAL Pickwick Lake 96.89 36 *e*P **P 09 25 15.5 -0.7**
comp=Z,5.0nm,0.9s,mb4.9
KMBO Kilima Mbogo 98.27 275 P **P 09 25 22.9 +0.2**
KMBO LR LR 10 16 12.5
KMBO Kilima Mbogo 98.27 275 *i* P **P 09 25 24.3 +1.6**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
KMBO Kilima Mbogo 98.27 275 P **P 09 25 22.9 +0.2**
comp=Z,0.8nm,0.5s,mb4.5,baz=53,slow=12,SNR=4.3
KMBO LR LR 10 16 12.5
comp=Z,141nm,18.6s,MS4.5,baz=92,slow=39
RKT Rikitea 102.30 110 *e*LR LR 09 59 06.1
comp=Z,413nm,30.8s
TORD Torodi Ar. Bea 114.44 311 PKP PKiKP 09 30 23.6 -1.7
comp=Z,1.8nm,1.0s,baz=11,slow=1.7,SNR=5.7
TORD PKKPbc PKKPbc 09 41 08.2 +5.2
comp=Z,1.1nm,0.8s,baz=231,slow=3.8,SNR=5.1
VNDA Vanda 115.58 174 PKP PKPdf 09 30 26.0 +0.4
VNDA Vanda 115.58 174 PKP PKPdf 09 30 26.0 +0.4
comp=Z,1.0nm,0.9s,baz=323,slow=5.1,SNR=2.9
LBTB Lobatse 121.01 261 PKKPbc PKKPbc 09 40 42.0 +2.4
comp=Z,3.6nm,0.8s,baz=245,slow=5.0,SNR=5.4
BOSA Boshof 123.00 257 PKP PKPdf 09 30 40.9 -0.4
comp=Z,4.3nm,0.9s,baz=45,slow=1.4,SNR=3.3
DBIC Dimbokro 123.47 312 PKP PKPdf 09 30 42.0 -0.7
comp=Z,5.0nm,1.1s,baz=45,slow=2.9,SNR=3.4
SDV Santo Domingo 127.37 35 PKP PKPdf 09 30 50.1 -0.1
comp=Z,43nm,0.9s,baz=354,slow=2.8,SNR=26
PCRV Puerto La Cruz 128.69 27 PKP PKPdf 09 30 52.1 -0.6
comp=Z,10nm,0.8s,baz=300,slow=2.8,SNR=3.5
ROSC El Rosal 129.03 42 PKP PKPdf 09 30 54.3 +1.0
comp=Z,11nm,0.7s,baz=288,slow=3.2,SNR=9.9
SNAA Sanae 139.86 199 *i* PKHKP 09 31 03.8
SNAA pmax pmax
comp=Z,3.0nm,1.1s
SNAA Sanae 139.86 199 PKhKP 09 31 03.8
comp=Z,2.6nm,1.1s,baz=124,slow=3.6,SNR=3.1
VNA2 Neumayer--Watz 141.47 198 *e*PKPdf PKPdf 09 31 05.9 -8.8
baz=122,slow=1.0
VNA2 *e* 09 31 08.9
VNA2 *e* 09 31 13.9
VNA2 *e* 09 31 15.8
VNA2 *e* 09 31 20.7
VNA2 *e* 09 31 23.9
VNA2 *e* 09 31 29.6
VNA2 *e* 09 31 39.6
VNA2 *e* 09 31 42.2
VNA3 Neumayer Olymp 141.80 197 *e*PKPdf PKPdf 09 31 06.5 -8.8
VNA3 *e* 09 31 09.8
VNA3 *e* 09 31 15.0
VNA3 *e* 09 31 17.3
VNA3 *e* 09 31 22.1
VNA3 *e* 09 31 25.0
VNA3 *e* 09 31 30.4
VNA3 *e* 09 31 40.0
VNA3 *e* 09 31 42.8
ARE Arequipa 147.55 58 *e*P PKPdf 09 31 30.0 +3.1
LPAZ La Paz 149.63 53 PKP2 PKPab 09 31 35.8 -4.2
LPAZ pmax pmax
comp=Z,8.0nm,1.0s

LPAZ	**La Paz**	**149.63**	**53**	PKPbc	PKPbc	09 31 35.8	+0.9		
	comp=Z,7.9nm,1.0s,baz=346,slow=4.0,SNR=13								
PLCA	**Paso Flores**	**158.52**	**108**	PKP2	PKPab	09 32 16.3	-0.8		
PLCA				pmax	pmax				
	comp=Z,6.0nm,1.0s								
PLCA	**Paso Flores**	**158.52**	**108**	PKPab	PKPab	09 32 16.3	-0.8		
	comp=Z,5.7nm,1.0s,baz=235,slow=3.3,SNR=5.8								

JMA 25 09:13:37.7±0.1, 3729N×13674E, h7km±1km, M3.9, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.37**	**175**	P	Pg	09 13 45.2	+0.4
JJH				S	Sg	09 13 50.5	+0.9
JSZ	**Suzu**	**0.52**	**72**	P	Pg	09 13 47.9	+0.1
JSZ				eS	Sg	09 13 55.1	+0.5
JTT	**Ttatey**	**0.83**	**145**	S	Sg	09 14 05.2	+0.7
JKG	**Kaga**	**1.06**	**198**	P	Pg	09 13 57.7	-0.4
JKG				S	Sg	09 14 12.2	+0.3

MAN 25 09:16:47, 1187N×12541E, h29km, mb4.5, ML3.3, MS3.2, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.27**	**175**	*eP*	Pb	09 16 56.0	+2.1
BESP				*eS*	Sb	09 17 02.5	+4.0
PLP	**Palo**	**0.82**	**211**	*eP*	Pn	09 17 02.5	0.0
PLP				*eS*	Sb	09 17 11.4	-1.9
CNP	**Catarman**	**0.97**	**311**	*eP*	Pn	09 17 05.2	+0.5
CNP				*eS*	Sn	09 17 19.2	+1.6
OCLP	**Ormoc**	**1.13**	**224**	*eP*	Pn	09 17 07.8	+1.0
MSLP	**Maasin**	**1.81**	**198**	*eP*	Pn	09 17 18.5	+2.4
MSLP				*eS*	Sn	09 17 43.3	+5.2
PVCP	**Virac**	**2.11**	**325**↑	*eP*	Pn	09 17 22.9	+2.5
PVCP				*eS*	Sn	09 17 53.9	+8.2
PVCP	**Virac**	**2.11**	**325**	*eP*	Pn	09 17 21.1	+0.7
PVCP				*eS*	Sn	09 17 54.2	+8.5
RCP	**Roxas**	**2.63**	**264**	*eP*	Pn	09 17 28.9	+1.4
GUIM	**Jordan**	**3.03**	**246**	*eP*	Pn	09 17 34.1	+1.1

*NEIC **25** 09:23:08.6±1.1, 3508N×13700E, h10km, MG4.2(JMA), Error ellipse: s-maj=25.3km s-min=13.4km az=133.0*
NEIC Recorded [3 JMA] in Ishikawa and [1 JMA] in Gifu and Toyama Prefectures.
*ISCJB **25** 09:23:17.6±0.9, 3726N±004×13693E±005, h9km±7km, mb2.9/2, Error ellipse: s-maj=7.9km s-min=5.9km az=42.0*
*JMA **25** 09:23:17.0, 3730N×13685E, h12km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs45.00000°, δ23.00000°, λ,90.00000°. NP2:φs225.00000°, δ67.00000°, λ,90.00000°. Principal axes: T Plg68.0000°, Azm135.0000°; N Plg0.0000°, Azm45.0000°; P Plg22.0000°, Azm315.0000°;*
JMA Felt III J1.
*IDC **25** 09:23:17.8±1.3, 3724N×13696E, h0km, mb3.3/2, mb1 3.3/3, mb1mx3.2/19, mbtmp3.3/3, ML3.2/1 Error ellipse: s-maj=28.1km s-min=12.3km az=32.0*

ISC 25 09:23:18.6±0.8, 3722N±004×13697E±005, h11km±6km, n10, σ1§22/15, mb2.9/2, 1C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**207**	⇓P	**Pg**	**09 23 24.6**	**-0.7**
JJH				S	**Sg**	**09 23 30.3**	**+0.6**
JSZ	**Suzu**	**0.39**	**54**	⇓P	**Pg**	**09 23 25.4**	**-0.9**
JSZ				S	**Sg**	**09 23 31.7**	**+0.2**
JTT	**Ttatey**	**0.68**	**154**	⇓P	**Pg**	**09 23 31.9**	**+0.1**
JTT				S	**Sg**	**09 23 43.4**	**+2.6**
JKG	**Kaga**	**1.07**	**209**	⇑P	**Pb**	**09 23 36.9**	**-2.3**
JKG				S	**Sb**	**09 23 52.4**	**-0.8**
MAJO	**Matsushiro**	**1.20**	**124**	*e*Pn	**Pn**	**09 23 40.4**	**-1.0**
MAT	**Matsushiro**	**1.20**	**124**	P	**Pn**	**09 23 40.1**	**-1.2**
MAT				*eS*	**Sb**	**09 23 58.0**	**+1.1**
MJAR	**Matsushiro Arr**	**1.21**	**124**	Pg	**Pg**	**09 23 41.3**	**-0.5**
	18nm,0.3s,baz=304,slow=15,SNR=28						
MJAR				Lg		09 23 59.1	
	78nm,0.3s,baz=306,slow=27,SNR=25						
KSRS	**Korea Array**	**7.21**	**275**	Pn	**Pn**	**09 25 05.7**	**+1.8**
	0.4nm,0.3s,baz=94,slow=14,SNR=5.5						
SONM	**Songino Array**	**24.75**	**305**	P	**P**	**09 28 42.1**	**+2.1**
	0.6nm,0.6s,mb3.3,baz=114,slow=9.6,SNR=5.6						
MKAR	**Makanchi Array**	**41.00**	**301**	P	**P**	**09 31 01.1**	**-0.3**
	0.1nm,0.7s,mb2.6,baz=98,slow=8.4,SNR=2.4						

*ISCJB **25** 09:27:58.7±0.7, 550S±009×1516E±0.1, h33km, mb4.5/15, Error ellipse: s-maj=20.4km s-min=11.3km az=25.5*
*IDC **25** 09:28:00.6±2.7, 550S×15160E, h37km±20km, mb4.3/12, mb1 4.4/12, mb1mx4.4/16, mbtmp4.3/12, Error ellipse: s-maj=24.5km s-min=12.2km az=124.0*
*NEIC **25** 09:28:00.1±1.3, 545S×15166E, h35km, mb4.3/3, Error ellipse: s-maj=33.1km s-min=19.2km az=103.0*

ISC 25 09:28:02.2±3.4, 554S±009×1516E±01, h51km±30km, n37, σ0§78/28, mb4.5/15, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**15.38**	**199**	*eP*	**Pn**	**09 31 41.4**	**+5.4**
	4.8nm,0.6s						
CTA	**Charters Tower**	**15.38**	**199**	Pn	**Pn**	**09 31 41.3**	**+5.3**
	0.3nm,0.3s,baz=26,slow=12,SNR=8.8						
KAKA	**Kakadu**	**20.24**	**248**	⇑*i*P	**P**	**09 32 33.6**	**+0.2**
	15nm,0.3s						
WB2	**Warramunga Arr**	**22.08**	**228**	*e*P	**P**	**09 32 53.0**	**-0.2**
WB2				*e*S	**S**	**09 36 53.9**	**0.0**
WRA	**Warramunga Arr**	**22.09**	**228**	P	**P**	**09 32 53.7**	**+0.4**
	14nm,0.5s,mb4.6,baz=52,slow=10.0,SNR=166						
WRA				S	**S**	**09 36 54.0**	**-0.1**
	7.1nm,1.2s,baz=54,slow=18,SNR=7.3						
WRA				ScP	ScP	09 40 25.0	+2.0
	1.4nm,0.9s,baz=44,slow=2.9,SNR=9.1						
ASAR	**Alice Springs**	**24.82**	**222**	P	**P**	**09 33 20.4**	**+0.5**
	15nm,0.8s,mb4.6,baz=59,slow=8.2,SNR=93						
ASAR				S	**S**	**09 37 52.0**	**+13**
	1.6nm,1.1s,baz=34,slow=18,SNR=5.5						
ASAR				ScP	ScP	09 40 32.9	+2.6
	0.4nm,0.5s,baz=34,slow=2.7,SNR=5.2						
STKA	**Stephens Creek**	**27.83**	**199**	*e*P	**P**	**09 33 46.6**	**-0.3**
	4.8nm,0.9s,mb4.1						
STKA	**Stephens Creek**	**27.83**	**199**	P	**P**	**09 33 45.6**	**-1.4**
	2.1nm,0.7s,mb3.9,baz=12,slow=11,SNR=5.4						
BATI	**Kupang**	**28.08**	**259**	P	**P**	**09 33 50.3**	**+0.9**
	20nm,0.4s,mb5.1,baz=350,slow=8.9,SNR=2.9						
FITZ	**Fitzroy Crossi**	**28.29**	**242**	*e*P	**P**	**09 33 51.1**	**-0.1**
	22nm,0.3s,mb5.3						
FITZ	**Fitzroy Crossi**	**28.29**	**242**	P	**P**	**09 33 51.3**	**+0.1**
	25nm,0.7s,mb5.0,baz=74,slow=8.3,SNR=37						
FORT	**Forrest**	**33.48**	**219**	*e*P	**P**	**09 34 36.5**	**-0.3**
	19nm,0.8s,mb5.1						
KLBR	**Kellerberrin**	**40.95**	**227**	*e*P	**P**	**09 35 37.3**	**-2.9**
	57um,18.5s						
MUN	**Mundaring**	**42.28**	**227**	*e*P	**P**	**09 35 55.7**	**+4.7**
KSRS	**Korea Array**	**48.15**	**335**	P	**P**	**09 36 36.8**	**-0.6**
	0.9nm,0.7s,mb3.9,baz=144,slow=7.2,SNR=3.1						
SONM	**Songino Array**	**66.34**	**329**	P	**P**	**09 38 44.9**	**-0.7**
	2.5nm,0.6s,mb4.5,baz=137,slow=6.0,SNR=13						
TAPN	**Taplejung**	**69.80**	**302**	*e*P	**P**	**09 39 07.7**	**-0.1**
ODAN	**Odare**	**69.93**	**301**	*e*P	**P**	**09 39 09.8**	**+1.3**
	6.2nm,0.4s,mb4.8						
JIRN	**Jiri**	**71.18**	**302**	*e*P	**P**	**09 39 16.7**	**+0.5**
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**09 39 21.6**	**+0.6**
	0.9nm,0.7s,mb3.8,baz=330,slow=6.6,SNR=7.9						
GKN	**Gorkha**	**72.60**	**301**	*e*P	**P**	**09 39 23.9**	**-0.8**
	7.9nm,0.5s,mb4.9						
MKAR	**Makanchi Array**	**80.12**	**319**	P	**P**	**09 40 07.0**	**0.0**
	1.4nm,0.5s,mb4.2,baz=99,slow=7.4,SNR=19						
INK	**Inuvik**	**89.56**	**21**	P	**P**	**09 40 53.0**	**-0.9**
	0.9nm,0.6s,mb4.3,baz=254,slow=6.8,SNR=10						
NVAR	**Mina Array Bea**	**93.45**	**52**	P	**P**	**09 41 13.8**	**+1.2**
	4.4nm,0.8s,mb4.9,baz=254,slow=4.2,SNR=27						
YKA	**Yellowknife Ar**	**96.62**	**29**	P	**P**	**09 41 26.5**	**+0.1**
	0.2nm,0.4s,mb3.9,baz=275,slow=4.8,SNR=8.2						
PDAR	**Pinedale Array**	**100.20**	**48**	P	Pdif	09 41 43.0	+0.2
	1.8nm,0.8s,baz=246,slow=1.8,SNR=16						
ARCES	**ARCESS Array B**	**107.23**	**343**	PKiKP	PKiKP	09 46 21.6	-0.8
	6.7nm,1.0s,baz=48,slow=1.3,SNR=5.6						
FINES	**FINESS Array B**	**111.24**	**335**	Pdiff	Pdif	09 42 30.9	-1.0
	1.4nm,1.1s,baz=69,slow=4.6,SNR=3.1						
FINES				PKiKP	PKiKP	09 46 29.3	-0.8
	0.7nm,0.6s,baz=33,slow=4.5,SNR=4.7						
AKASG	**Malin Array Be**	**114.42**	**324**	PKP	PKiKP	09 46 35.7	-0.8
	0.5nm,0.3s,baz=61,slow=2.0,SNR=5.7						
NB2	**NORSAR Subarra**	**117.21**	**340**	PKPdf	PKPdf	09 46 40.6	-1.0
	comp=Z,0.8nm,0.6s,baz=45,slow=1.9						
NOA	**NORSAR Array B**	**117.21**	**340**	PKP	PKPdf	09 46 40.3	-1.2
	comp=Z,0.9nm,0.6s,baz=48,slow=1.9,SNR=8.2						
GERES	**GERESS Array B**	**124.07**	**328**	PKP	PKPdf	09 46 55.2	+0.1
	comp=Z,2.6nm,0.4s,baz=79,slow=2.5,SNR=19						
KEST	**Kesra**	**134.15**	**316**	PKP	PKPdf	09 47 14.2	-0.5
	comp=Z,1.0nm,0.7s,baz=0.9,slow=1.0,SNR=3.1						
LPAZ	**La Paz**	**135.07**	**120**	PKP	PKPdf	09 47 18.0	+1.0
	comp=Z,0.8nm,0.6s,baz=297,slow=2.3,SNR=3.5						
SIV	**San Ignacio**	**141.19**	**124**	PKP	PKPdf	09 47 28.6	+0.4
	comp=Z,0.6nm,0.5s,baz=207,slow=4.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**149.42**	**286**	PKPbc	PKPbc	09 47 46.5	-0.3
	comp=Z,5.6nm,0.4s,baz=98,slow=2.3,SNR=104						
DBIC	**Dimbokro**	**156.60**	**274**	PKPab	PKPab	09 48 21.5	-0.5
	comp=Z,2.2nm,0.5s,baz=65,slow=6.7,SNR=8.2						

IDC 25 09:32:39.1±1.3, 2010S×6642E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.7/21, mbtmp4.0/5, Error ellipse: s-maj=42.1km s-min=28.2km az=67.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**47.55**	**182**	P	P	09 41 16.0	0.0
	1.9nm,0.6s,baz=8.1,slow=7.1,SNR=4.7						
ASAR	**Alice Springs**	**62.20**	**107**	P	P	09 43 02.8	-0.2
	1.8nm,0.7s,baz=264,slow=5.8,SNR=21						
WRA	**Warramunga Arr**	**63.37**	**103**	P	P	09 43 10.9	+0.2
	2.7nm,0.8s,baz=260,slow=6.0,SNR=18						
MKAR	**Makanchi Array**	**68.11**	**12**	P	P	09 43 41.2	+0.6
	0.5nm,0.7s,baz=193,slow=5.3,SNR=3.7						
AKASG	**Malin Array Be**	**77.73**	**337**	P	P	09 44 37.4	-0.3
	0.2nm,0.2s,baz=135,slow=4.5,SNR=4.0						

*ISCJB **25** 09:35:31.9±0.7, 2899N±006×10264E±009, h10km, mb3.7/6, Error ellipse: s-maj=11.4km s-min=7.7km az=19.2*
*IDC **25** 09:35:31.7±1.0, 2912N×10244E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=32.1km s-min=24.7km az=63.0*
*BJI **25** 09:35:36.5, 2928N×10257E, h12km, ML3.3*

ISC 25 09:35:33.8±0.7, 2905N±005×10258E±008, h10km, n10, σ1§09/14, mb3.7/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.12**	**29**	P	**Pn**	**09 36 11.5**	**+2.2**
CD2				PG	**Pg**	**09 36 14.5**	**0.0**
CD2				S	**Sn**	**09 36 37.3**	**+1.6**
CD2				SG	**Sg**	**09 36 40.3**	**-1.6**
CD2				Smax			
	comp=N,2μm,0.5s						
CD2				Smax			
	comp=E,1μm,0.6s						
GYA	**Guiyang**	**4.44**	**125**	PG	**Pg**	**09 36 58.0**	**-0.9**
GYA				S	**Sn**	**09 37 41.0**	**+8.0**
GYA				Smax			
	comp=N,50nm,0.5s						
GYA				Smax			
	comp=E,60nm,0.6s						
KOLN	**Koldanda**	**16.75**	**270**	*e*P	**Pn**	**09 39 29.2**	**+0.6**
	comp=E,6.3nm,0.5s						
KSRS	**Korea Array**	**22.74**	**62**	P	**P**	**09 40 36.1**	**+0.1**
	comp=E,1.2nm,0.7s,mb3.5,baz=251,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**23.76**	**324**	P	**P**	**09 40 45.2**	**-1.1**
	comp=E,0.5nm,0.5s,mb3.2,baz=127,slow=12,SNR=4.3						
WRA	**Warramunga Arr**	**57.55**	**144**	P	**P**	**09 45 24.0**	**+0.4**
	comp=E,0.6nm,0.5s,mb3.9,baz=335,slow=7.6,SNR=16						
WB2	**Warramunga Arr**	**57.55**	**144**	*e*P	**P**	**09 45 24.3**	**+0.6**
ASAR	**Alice Springs**	**60.46**	**147**	P	**P**	**09 45 44.5**	**+0.7**
	comp=E,0.3nm,0.6s,mb3.5,baz=327,slow=6.9,SNR=6.5						
INK	**Inuvik**	**74.52**	**19**	P	**P**	**09 47 10.9**	**-1.3**
	comp=E,0.5nm,0.8s,mb3.5,baz=321,slow=4.9,SNR=4.0						
MATP	**Matopo**	**86.69**	**245**	P	**P**	**09 48 17.1**	**-1.0**
	comp=E,1.1nm,0.4s,mb4.4,baz=65,slow=4.6,SNR=7.2						

*ISCJB **25** 09:41:05.2±1.2, 3725N±006×13663E±007, h9km±9km, mb3.3/4, Error ellipse: s-maj=10.4km s-min=8.4km az=32.7*
*JMA **25** 09:41:05.4±0.2, 3723N×13661E, h1km±2km, M3.6*
JMA Felt II J1.
*IDC **25** 09:41:05.6±1.3, 3718N×13657E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/19, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=41.0km s-min=12.9km az=27.0*
*NEIC **25** 09:41:05.9±3.4, 3723N×13668E, h5km±26km, MG3.6(JMA), Error ellipse: s-maj=48.5km s-min=16.2km az=224.0*

ISC 25 09:41:06.4±0.9, 3724N±005×13669E±007, h8km±6km, n13, σ0§61/15, mb3.3/4, 1C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**167**	P	**Pg**	**09 41 11.9**	**-0.7**
JJH				S	**Sg**	**09 41 17.9**	**+1.1**
JSZ	**Suzu**	**0.58**	**68**	⇓P	**Pg**	**09 41 17.9**	**+0.4**
JHG	**Hegura jima**	**0.64**	**17**	⇑P	**Pg**	**09 41 18.7**	**0.0**
JTT	**Ttatey**	**0.81**	**140**	P	**Pg**	**09 41 22.3**	**+0.3**
JKG	**Kaga**	**1.00**	**197**	P	**Pg**	**09 41 24.8**	**-0.8**
MAJO	**Matsushiro**	**1.40**	**119**	*e*Pn	**Pn**	**09 41 32.2**	**-0.1**
MAT	**Matsushiro**	**1.40**	**119**	P	**Pn**	**09 41 31.9**	**-0.3**
MAT				*eS*	**Sb**	**09 41 50.8**	**0.0**
MJAR	**Matsushiro Arr**	**1.40**	**119**	Pg	**Pg**	**09 41 32.8**	**-0.4**
	23nm,0.3s,baz=292,slow=17,SNR=35						
MJAR				Lg		09 41 53.5	
	21nm,0.3s,baz=292,slow=29,SNR=13						
KSRS	**Korea Array**	**6.99**	**274**	Pn	**Pn**	**09 42 49.6**	**+0.5**
	0.3nm,0.3s,baz=91,slow=14,SNR=3.3						
SONM	**Songino Array**	**24.56**	**305**	P	**P**	**09 46 27.0**	**+0.5**
	0.5nm,0.6s,mb3.3,baz=114,slow=9.1,SNR=3.6						
MKAR	**Makanchi Array**	**40.80**	**301**	P	**P**	**09 48 47.7**	**-0.5**
	0.1nm,0.6s,mb2.7,baz=79,slow=8.1,SNR=2.3						
WRA	**Warramunga Arr**	**56.91**	**183**	P	**P**	**09 50 50.9**	**-1.0**
	0.5nm,0.6s,mb3.7,baz=358,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**60.63**	**183**	P	**P**	**09 51 18.9**	**+1.1**
	0.5nm,0.8s,mb3.7,baz=18,slow=9.3,SNR=6.3						

CASC 25 09:43:35.6±1.8, 1107N×8704W, h0km±8km, MD3.9, ML3.0, 6C-5D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SSNN	**San Juan del S**	**1.19**	**79**↑	*e*P	Pg	09 43 57.9	-0.5
COPN	**Copaltepe**	**1.19**	**22**	*e*S	Sg	09 44 17.1	+3.2
TICN	**Ticuantepe**	**1.25**	**39**	*e*P	Pg	09 43 59.4	-0.1
APON	**Apoyo**	**1.27**	**48**‖	*e*P	Pg	09 43 59.6	-0.5
XAVN	**Gruta Xavier**	**1.28**	**33**‖	*i*P	Pg	09 43 59.9	-0.3
TISN	**Laguna Tiscapa**	**1.31**	**35**‖	*e*P	Pg	09 44 00.3	-0.4
MGAN	**Managua**	**1.33**	**36**‖	*e*P	Pg	09 44 00.4	-0.6
MGAN				*i*		09 44 26.9	
	comp=N,239nm,0.4s						
APYN	**Apoyeque**	**1.34**	**30**⇓	*e*P	Pg	09 44 00.7	-0.7
APYN				*e*S	Sg	09 44 19.3	+0.5
MOMJ	**Momotombo**	**1.42**	**20**↑	*e*P	Pn	09 44 01.6	-1.1
CONN	**Concepcion**	**1.47**	**70**	*e*P	Pn	09 44 01.8	-1.6
TEL3	**Telica 3**	**1.51**	**7**‖	*e*P	Pn	09 44 03.1	-0.8
HUEN		**1.52**	**34**‖	*e*P	Pn	09 44 03.1	-1.0
PRS1	**Puriscal**	**2.89**	**112**	*e*P	Pn	09 44 24.2	+1.3
LAJ	**Bijagual**	**3.11**	**112**‖	*e*P	Pn	09 44 21.4	-4.5
LCR2	**La Lucha 2**	**3.26**	**113**	*e*P	Pn	09 44 28.2	+0.1
URSC	**Urasca**	**3.43**	**111**↑	*e*P	Pn	09 44 32.0	+1.6
BAR1		**4.09**	**116**	*e*P	Pn	09 44 38.5	-1.0

JMA 25 10:02:33.8, 3719N×13665E, h11km±1km, M3.5, 1C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.28**	**158**	⇓P	Pg	10 02 39.7	+0.1
JJH				S	Sg	10 02 43.5	+0.1
JSZ	**Suzu**	**0.62**	**65**	P	Pg	10 02 45.8	-0.1
JSZ				S	Sg	10 02 54.3	+0.2
JHG	**Hegura jima**	**0.69**	**18**	⇓P	Pg	10 02 47.0	-0.2
JTT	**Ttatey**	**0.80**	**137**	⇓P	Pg	10 02 49.1	-0.2
JTT				S	Sg	10 03 00.4	+0.7
JKG	**Kaga**	**0.95**	**196**	⇑P	Pg	10 02 51.4	-0.6
JKG				S	Sg	10 03 04.3	-0.1
MAT	**Matsushiro**	**1.41**	**117**	P	Pn	10 02 59.1	-0.2
MAT				S	Sn	10 03 16.8	-1.0

JMA 25 10:04:37.1, 3732N×13684E, h13km, M3.5, 2C-1D Broadband fault plane solution: P waves. NP1: φs84.00000°, δ47.00000°, λ178.00000°. NP2: φs175.00000°, δ89.00000°, λ43.00000°. Principal axes: T Plg30.0000°, Azm49.0000°; N Plg47.0000°, Azm177.0000°; P Plg28.0000°, Azm301.0000°; Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.40**	**187**	⇑P	Pg	10 04 45.1	+0.1
JJH				S	Sg	10 04 51.0	+0.7
JSZ	**Suzu**	**0.44**	**73**	⇑P	Pg	10 04 45.6	-0.1
JSZ				S	Sg	10 04 51.9	+0.3
JHG	**Hegura jima**	**0.53**	**7**	P	Pg	10 04 47.4	-0.1
JHG				S	Sg	10 04 54.7	+0.1
JTT	**Ttatey**	**0.82**	**151**	⇓P	Pg	10 04 52.5	-0.4
JTT				S	Sg	10 05 03.8	+0.2
JKG	**Kaga**	**1.12**	**202**	P	Pb	10 04 57.4	-0.9
JKG				S	Sb	10 05 12.7	0.0
MAT	**Matsushiro**	**1.34**	**125**	P	Pn	10 05 00.2	-1.3
MAT				S	Sb	10 05 18.6	-0.6

*IDC **25** 10:16:08.2±2.0, 4426N×14669E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/17, mbtmp3.6/4 Error ellipse: s-maj=81.1km s-min=29.4km az=79.0*
*ISCJB **25** 10:16:21.8±1.1, 4405N±010×1463E±01, h118km±8km, mb3.4/4, Error ellipse: s-maj=16.9km s-min=16.2km az=165.4*
*JMA **25** 10:16:23.9±0.2, 4403N×14626E, h104km±2km, M2.9*

ISC 25 10:16:22.9±1.1, 4406N±010×1463E±01, h112km±7km, n13, σ0§78/20, mb3.4/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.79**	**208**	P	**Pn**	**10 16 42.3**	**+0.2**
NEM2				*e*S	**Sn**	**10 16 55.6**	**-1.0**
JRA	**Rausu**	**0.83**	**262**	P	**Pn**	**10 16 42.7**	**+0.2**
JRA				*e*S	**Sn**	**10 16 56.9**	**-0.4**
JNK	**Nakash**	**1.21**	**248**	P	**Pn**	**10 16 46.7**	**+0.3**
JAK	**Akkeshi**	**1.55**	**227**	P	**Pn**	**10 16 50.6**	**+0.2**
JAK				*e*S	**Sn**	**10 17 10.1**	**-1.2**
JTKR	**Abashiri--Toko**	**1.69**	**268**	P	**Pn**	**10 16 52.6**	**+0.5**
JTKR				*e*S	**Sn**	**10 17 13.7**	**-0.7**
JAR	**Ashorobuto**	**1.96**	**248**	P	**Pn**	**10 16 56.4**	**+1.0**
JAR				*e*S	**Sn**	**10 17 21.3**	**+1.1**
JOB	**Onbets**	**2.10**	**238**	P	**Pn**	**10 16 58.2**	**+1.0**
JOB				*e*S	**Sn**	**10 17 23.2**	**-0.3**
JKK2	**Kamakawa 2**	**2.54**	**267**	P	**Pn**	**10 17 03.8**	**+1.0**
JCH	**Churui**	**2.56**	**237**	P	**Pn**	**10 17 03.6**	**+0.5**
JCH				*e*S	**Sn**	**10 17 32.9**	**-1.0**
MKAR	**Makanchi Array**	**43.87**	**297**	P	**P**	**10 24 17.6**	**-0.3**
	0.3nm,0.8s,mb3.1,baz=81,slow=7.4,SNR=2.8						
FINES	**FINESS Array B**	**64.31**	**333**	P	**P**	**10 26 44.9**	**-1.0**
	2.9nm,1.2s,mb4.0,baz=43,slow=6.3,SNR=3.9						
WRA	**Warramunga Arr**	**64.61**	**192**	P	**P**	**10 26 49.2**	**+0.8**
	0.2nm,0.8s,mb3.0,baz=7.9,slow=6.6,SNR=3.4						
NOA	**NORSAR Array B**	**69.08**	**338**	P	**P**	**10 27 15.1**	**-1.1**
	0.4nm,0.4s,mb3.6,baz=32,slow=6.4,SNR=3.2						

MAN 25 10:21:11, 920N×12664E, h8km, mb4.7, ML3.6, MS3.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.05**	**195**⇓	*i*P	Pg	10 21 31.1	0.0
BIPH				*i* S	Sg	10 21 40.3	-4.4
MSLP	**Maasin**	**1.99**	**298**	*e*P	Pn	10 21 46.6	+1.7
MSLP				*e*S	Sn	10 22 15.8	+5.8
BUKP	**Musuan**	**2.04**	**230**	*e*P	Pn	10 21 47.9	+2.2
BUKP				*e*S	Sn	10 22 16.7	+5.3
CGP	**Cagayan de Oro**	**2.06**	**249**↑	*e*P	Pn	10 21 46.7	+0.8
CGP				*i* S	Sn	10 22 13.9	+2.0
PLP	**Palo**	**2.55**	**320**	*e*P	Pn	10 21 53.1	+0.5
PLP				*e*S	Sn	10 22 26.8	+2.9
TBP	**Tagbilaran**	**2.79**	**280**	*e*P	Pn	10 21 57.5	+1.6
TBP				*e*S	Sn	10 22 31.2	+1.5

IDC 25 10:21:33.1±3.6, 2057S×16946E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/14, mbtmp4.0/5, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=100.5km s-min=44.7km az=140.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.18**	**241**	*e*P	Pn	10 22 24.1	-0.4
DZM				*e*S	Sn	10 22 56.7	-6.4
DZM	**Mont Dzumac**	**3.18**	**241**	Pn	Pn	10 22 24.1	-0.4
	3.3nm,0.3s,baz=62,slow=19,SNR=

AFI Afiamalu 19.18 73 *e*P **Pn** **10 41 33.7 -0.9**
AFI pmax pmax
comp=Z,95nm,0.8s
MRZ Mangatainoka R 20.68 167 PN **P** **10 41 49.7 +0.1**
KIW Kapiti Island 20.73 168 PN **P** **10 41 50.6 +0.4**
SNZO South Karori 21.13 169 *e*P **P** **10 41 54.5 +0.1**
comp=Z,56nm,0.8s,mb4.9
THZ Tophouse 21.30 173 PN **P** **10 41 57.3 +1.0**
CTA Charters Tower 21.68 267 *e*P **P** **10 42 02.1 +1.5**
comp=Z,19nm,0.8s,mb4.6
CTA Charters Tower 21.68 267 *e*P **P** **10 42 02.1 +1.5**
CTA pmax pmax
comp=Z,19nm,0.8s
CTA Charters Tower 21.68 267 P **P** **10 42 02.2 +1.6**
comp=Z,26nm,0.8s,mb4.7,baz=92,slow=14,SNR=13
CTA LR LR 10 49 46.6
comp=Z,973nm,20.8s,MS4.2,baz=90,slow=35
CTAO Charters Tower 21.68 267 *e*P **P** **10 42 01.8 +1.2**
comp=Z,30nm,0.8s,mb4.8
CTAO Charters Tower 21.68 267 *e*P **P** **10 42 01.8 +1.2**
CTAO pmax pmax
comp=Z,30nm,0.8s,mb4.8
KHZ Kahutara 22.03 172 PN **P** **10 42 04.1 +0.1**
LTZ Lake Taylor 22.24 174 PN **P** **10 42 08.1 +1.8**
CNB Canberra Magne 22.89 226 *e*P **P** **10 42 14.8 +1.5**
comp=Z,102nm,1.2s,mb5.1
RPZ Rata Peaks 23.09 177 P **P** **10 42 15.9 +0.6**
comp=Z,14nm,0.6s,mb4.6,baz=16,slow=6.9,SNR=12
RPZ LR LR 10 50 25.8
comp=Z,2µm,19.6s,MS4.5,baz=127,slow=34
STKA Stephens Creek 27.25 240 *e*P **P** **10 42 55.6 +2.0**
comp=Z,18nm,0.9s,mb4.6
STKA Stephens Creek 27.25 240 P **P** **10 42 54.7 +1.1**
comp=Z,9.5nm,0.8s,mb4.4,baz=84,slow=8.7,SNR=9.9
STKA PcP PcP 10 46 11.7 -1.3
comp=Z,12nm,0.8s,baz=347,slow=0.7,SNR=6.6
STKA LR LR 10 53 34.2
comp=Z,901nm,18.6s,MS4.4,baz=88,slow=36
RAR Rarotonga 28.81 97 LR LR 10 52 10.5
comp=Z,454nm,18.5s,MS4.1,baz=261,slow=31
WB2 Warramunga Arr 32.82 265 *e*P **P** **10 43 41.2 -1.9**
WB2 *e*PCP PcP 10 46 27.1 -0.6
WRA Warramunga Arr 32.83 265 P **P** **10 43 41.6 -1.6**
WRA PcP PcP 10 46 27.2 -0.5
WRA S **S** **10 48 59.0 +0.5**
WRA ScP ScP 10 50 08.5 -0.7
WRA Warramunga Arr 32.83 265 P **P** **10 43 41.6 -1.6**
WRA 10 46 27.2
WRA S **S** **10 48 59.0 +0.6**
WRA Warramunga Arr 32.83 265 P **P** **10 43 41.6 -1.6**
comp=Z,2.2nm,0.5s,mb4.4,baz=94,slow=8.4,SNR=59
WRA PcP PcP 10 46 27.2 -0.5
comp=Z,5.9nm,0.9s,baz=94,slow=2.8,SNR=7.7
WRA S **S** **10 48 59.0 +0.5**
comp=Z,1.4nm,1.0s,baz=101,slow=15,SNR=3.3
WRA ScP ScP 10 50 08.5 -0.7
comp=Z,1.0nm,0.8s,baz=98,slow=3.2,SNR=4.6
WRA PKiKP PKiKP 10 53 51.3 -3.1
comp=Z,0.5nm,0.8s,baz=117,slow=1.8,SNR=6.9
WRA LR LR 10 57 12.2
comp=Z,886nm,18.5s,MS4.5,baz=100,slow=36
ASAR Alice Springs 32.95 258 P **P** **10 43 43.5 -0.6**
ASAR PcP PcP 10 46 27.2 -0.8
ASAR ScP ScP 10 50 09.4 -0.1
ASAR Alice Springs 32.95 258 P **P** **10 43 43.6 -0.5**
ASAR 10 46 27.2
ASAR Alice Springs 32.95 258 P **P** **10 43 43.5 -0.6**
comp=Z,9.5nm,0.7s,mb4.9,baz=84,slow=9.0,SNR=126
ASAR PcP PcP 10 46 27.2 -0.8
comp=Z,8.5nm,0.8s,baz=104,slow=3.1,SNR=13
ASAR ScP ScP 10 50 09.4 -0.1
comp=Z,0.9nm,0.8s,baz=99,slow=4.1,SNR=4.9
ASAR PKiKP PKiKP 10 53 51.9 -2.6
comp=Z,0.4nm,0.7s,baz=107,slow=1.3,SNR=6.2
KAKA Kakadu 36.18 277 *e*P **P** **10 44 11.2 -1.0**
comp=Z,25nm,1.2s,mb5.0
TBI Tubuai 38.18 102 *e*LQ 10 53 14.9
comp=Z,790nm,32.0s
TBI *e*LR LR 10 55 04.7
comp=Z,572nm,26.5s
FORT Forrest 38.40 246 *e*P **P** **10 44 30.5 -0.3**
comp=Z,25nm,0.8s,mb5.0
PPT Papeete 38.84 93 *e*S **S** **10 50 33.6 +3.1**
comp=Z,142nm,25.8s
PPT *e*LQ 10 53 41.9
comp=Z,806nm,28.5s
PPT *e*LR LR 10 55 17.5
comp=Z,759nm,25.2s,baz=254
PMOR Pomariorio Ree 40.98 89 *e*P **P** **10 44 53.5 +1.0**
comp=Z,25nm,1.2s,mb4.7
VAH Vaihoa 41.17 90 *e*P **P** **10 44 54.2 +0.1**
comp=Z,19nm,0.9s,mb4.7
FITZ Fitzroy Crossi 41.25 266 *e*P **P** **10 44 54.5 -0.2**
comp=Z,25nm,0.6s,mb5.0
BATI Kupang 45.13 276 LR LR 11 04 17.8
comp=Z,679nm,20.6s,MS4.6,baz=137,slow=36
MBWA Marble Bar 46.23 260 *e*P **P** **10 45 34.1 -0.6**
comp=Z,39nm,1.0s,mb5.3
MBWA *e*pP pP 10 45 43.0 -2.1
KLBR Kellerberrin 47.25 246 *e*P **P** **10 45 41.2 -1.4**
comp=Z,53nm,0.7s,mb5.6
NWAO Narrogin (SRO) 47.71 244 *e*P **P** **10 45 44.9 -1.3**
comp=Z,30nm,0.8s,mb5.4
NWAO Narrogin (SRO) 47.71 244 *e*P **P** **10 45 44.9 -1.3**
NWAO pmax pmax
comp=Z,30nm,0.8s
TAOE Nuku Hiva Isla 50.01 84 *e*S **S** **10 53 14.2 +1.3**
comp=Z,385nm,30.6s
TAOE *e*LR LR 11 00 26.1
comp=Z,1µm,27.7s
RKT Rikitea 51.45 104 *e*LR LR 11 01 13.0
comp=Z,352nm,25.8s
CBIJ Chichi jima 54.24 330 P **P** **10 46 34.8 -0.5**
comp=Z,162nm,0.9s,mb6.0,baz=264,slow=14,SNR=5.6
VNDA Vanda 57.07 182 P **P** **10 46 54.5 -0.4**
comp=Z,3.1nm,0.8s,mb4.4,baz=8.1,slow=7.5,SNR=16
SBA Scott Base 57.30 181 *e*P **P** **10 46 56.9 +0.4**
comp=Z,63nm,0.9s,mb5.7
SBA *e*pP pP 10 47 10.3 +3.2
SBA Scott Base 57.30 181 *e*P **P** **10 46 56.9 +0.4**
SBA *e**PP pP 10 47 10.3 +3.2
SBA pmax pmax
comp=Z,63nm,0.9s,mb5.7
KKM Kota Kinabalu 58.53 291 *e*P **P** **10 47 06.5 +0.4**
KKM *e*pP pP 10 47 15.6 -1.0
JHJ Hachijo jima 2 60.44 332 LR LR 11 10 48.7
comp=Z,188nm,18.2s,MS4.3,baz=47,slow=33
JOW Kunigami 61.73 318 P **P** **10 47 26.6 -1.1**
comp=Z,44nm,1.0s,mb5.5,baz=144,slow=10,SNR=3.8
KSM Kuching 61.81 283 *e*P **P** **10 47 28.6 +0.1**
MJAR Matsushiro Arr 64.02 332 P **P** **10 47 42.5 -0.3**
comp=Z,23nm,0.7s,mb5.3,baz=168,slow=7.9,SNR=47
MAJO Matsushiro 64.02 332 *e*P **P** **10 47 42.8 0.0**
comp=Z,54nm,1.1s,mb5.5
MAJO Matsushiro 64.02 332 *e*P **P** **10 47 42.8 +0.1**
MAJO pmax pmax
comp=Z,54nm,1.1s,mb5.5
MAT Matsushiro 64.02 332 P **P** **10 47 42.6 -0.1**
YHNB Yeheng 64.84 312 *e*P **P** **10 47 48.3 -0.2**
JNU Nakatsue 64.85 325 P **P** **10 47 48.2 0.0**
comp=Z,32nm,0.8s,mb5.4,baz=80,slow=4.3,SNR=18
JNU LR LR 11 11 00.8
comp=Z,155nm,19.1s,MS4.2,baz=130,slow=31
TATO Taipei 64.96 312 *e*P **P** **10 47 48.1 -1.0**
comp=Z,108nm,1.4s,mb5.7
ASAJ Asahikawa 68.92 340 P **P** **10 48 14.5 +0.6**
comp=Z,56nm,0.9s,mb5.5,baz=232,slow=11,SNR=19
QSPA South Pole Qui 69.45 180 *e*P **P** **10 48 16.8 0.0**
QSPA *e*pP pP 10 48 29.8 +2.2
KSRS Korea Array 69.70 326 P **P** **10 48 19.1 +0.2**
comp=Z,4.4nm,0.8s,mb4.5,baz=141,slow=6.6,SNR=16
KSRS LR LR 11 17 21.4
comp=Z,80nm,18.0s,MS4.0,baz=324,slow=34
QIZ Qiongzhong 70.37 300 P **P** **10 48 24.5 +1.1**
QIZ S S 10 57 32.8 -1.0
QIZ AMB AMB
comp=Z,14nm,1.4s,mb4.7
QIZ AMB AMB
comp=Z,92nm,11.0s
INCN Inchon 70.41 325 *e*P **P** **10 48 23.7 +0.4**
comp=Z,79nm,1.2s,mb5.5
NJ2 Nanjing 71.28 316 *e*P **P** **10 48 29.3 +0.6**
NJ2 AP pP 10 48 39.3 -0.2
NJ2 XP sP 10 48 42.5 -1.0
NJ2 PP PP 10 51 09.5 +2.2
NJ2 S S 10 57 42.0 -1.9
NJ2 XS sS 10 57 57.0 -4.7
NJ2 AMB AMB
comp=Z,240nm,1.1s,mb6.0
NJ2 AMB AMB
comp=Z,300nm,5.9s
NJ2 LR LR
comp=N,150nm,20.0s,MS4.3
NJ2 LR LR
comp=E,60nm,22.6s,MS4.3
NJ2 LR LR
comp=Z,160nm,18.8s,MS4.3
YSS Yuzh-Sakhalins 71.41 341 *e*P **P** **10 48 30.1 +1.0**
comp=Z,49nm,0.8s,mb5.5
YSS Yuzh-Sakhalins 71.41 341⇑ *i*P **P** **10 48 31.2 +2.1**
YSS pmax pmax
comp=Z,70nm,1.0s,mb5.5
KULM Kulim 72.16 283 *e*P **P** **10 48 34.0 -0.4**
KULM *e*pP pP 10 48 43.8 -1.4
WHN Wuhan 73.36 312⇓ P **P** **10 48 41.5 +0.4**
DL2 Dalian 74.18 323 P **P** **10 48 46.5 +0.7**
DL2 AMB AMB
comp=Z,30nm,0.9s,mb5.2
MDJ Mudanjiang 74.38 332 P **P** **10 48 47.8 +1.0**
MDJ AP pP 10 48 57.0 -0.6
MDJ XP sP 10 49 00.8 -0.8
MDJ AMB AMB
comp=Z,39nm,0.9s,mb5.3
MDJ AMB AMB
comp=Z,159nm,4.2s
SNY Shenyang 75.19 326⇑ P **P** **10 48 51.5 0.0**
SNY AMB AMB
comp=Z,15nm,0.5s,mb5.2
HABR Khabarovsk 75.30 337⇑ *e*P **P** **10 48 51.3 -0.7**
HABR *e**PP pP 10 49 01.6 -1.3
HABR *e* pP 10 49 03.8 +0.9
HABR *e* 10 51 40.1
HABR *e*S S 10 58 30.0 +1.1
HABR *e* 10 59 01.6
HABR *e*SS SS 11 03 26.9 +7.0
HABR pmax pmax
comp=Z,60nm,0.9s,mb5.5
CN2 Changchun 75.69 329 *e*P **P** **10 48 54.5 +0.2**
CN2 *e*AP pP 10 49 04.0 -1.2
CN2 AMB AMB
comp=Z,60nm,0.8s,mb5.6
CN2 AMB AMB
comp=Z,60nm,4.0s
CN2 LR LR
comp=N,410nm,17.0s,MS4.9
CN2 LR LR
comp=E,290nm,17.0s,MS4.9
CN2 LR LR
comp=Z,370nm,18.0s,MS4.7
GYA Guiyang 76.70 305 P **P** **10 49 01.8 +1.3**
GYA AP pP 10 49 12.3 +0.9
GYA PCP PcP 10 49 14.3 +2.5
GYA XP sP 10 49 16.0 +0.6
GYA PP PP 10 51 57.3 +3.7
GYA PPP 10 53 45.8
GYA S S 10 58 46.8 +1.6
GYA XS sS 10 59 02.5 -0.7
GYA SKS 10 59 07.8
GYA SCS ScS 10 59 13.3 -1.2
GYA PS 10 59 29.5
GYA SS SS 11 03 45.5 +3.6
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.1
GYA AMB AMB
comp=Z,150nm,3.0s
GYA LR LR
comp=N,550nm,20.2s,MS5.0
GYA LR LR
comp=E,440nm,19.4s,MS5.0
GYA LR LR
comp=Z,580nm,20.5s,MS4.9
KLR Kul'dur 77.16 336 *e*P **P** **10 49 00.0 -2.6**
KLR pmax pmax
comp=E,42nm,1.8s
KLR pmax pmax
comp=Z,100nm,1.8s,mb5.4
MAW Mawson 77.22 202 P **P** **10 49 02.5 -0.2**
comp=Z,22nm,0.8s,mb5.1,baz=110,slow=8.7,SNR=16
MAW LR LR 11 18 22.6
comp=Z,250nm,18.1s,MS4.6,baz=77,slow=32
BJI Beijing 78.08 321 P **P** **10 49 08.5 +0.6**
BJI AP pP 10 49 18.0 -0.8
BJI XP sP 10 49 21.8 -1.0
BJI S S 10 59 01.0 +1.5
BJI SS SS 11 04 02.5 +0.4
BJI AMB AMB
comp=Z,15nm,0.7s,mb5.0
BJI LR LR
comp=N,104nm,5.2s
BJI LR LR
comp=E,183nm,5.4s
KMI Kunming 79.10 302⇑ P **P** **10 49 15.5 +1.6**
KMI AP pP 10 49 25.5 +0.7
KMI PP PP 10 52 17.3 +3.6
KMI S S 10 59 12.0 +0.9
KMI SS SS 11 04 21.8 +3.7
KMI AMB AMB
comp=Z,32nm,0.8s,mb5.3
KMI AMB AMB
comp=Z,97nm,3.1s
KMI LR LR
comp=N,112nm,17.2s,MS4.4
KMI LR LR
comp=E,95nm,15.5s,MS4.4
KMI LR LR
comp=Z,77nm,17.2s,MS4.1
XAN Xi'an 79.12 313 P **P** **10 49 14.3 +0.5**
XAN AP pP 10 49 25.0 +0.3
XAN AMB AMB
comp=Z,22nm,0.8s,mb5.1
CHTO Chiang Mai 79.33 295 *e*P **P** **10 49 16.6 +1.3**
comp=Z,15nm,0.8s,mb5.0
CHTO Chiang Mai 79.33 295 *e*P **P** **10 49 16.6 +1.3**
CHTO pmax pmax
comp=Z,15nm,0.8s,mb5.0
CD2 Chengdu 81.17 308 *e*P **P** **10 49 25.8 +0.9**
CD2 AP pP 10 49 36.0 +0.1
CD2 XP sP 10 49 40.5 +0.6
CD2 PP PP 10 52 34.0 +3.2
CD2 S S 10 59 33.0 +0.4
CD2 XS sS 10 59 50.5 -0.2
CD2 SS SS 11 04 52.8 +4.0
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,30nm,6.8s
CD2 LR LR
comp=N,130nm,15.6s
CD2 LR LR
comp=Z,150nm,16.8s,MS4.4
CHGN Chignik 81.30 17 *e*P **P** **10 49 24.1 -0.9**
HHC Hu-ho-hao-te 81.34 320 *e*P **P** **10 49 26.5 +0.9**
HHC AP pP 10 49 36.3 -0.2
HHC XP sP 10 49 39.5 -1.0
HHC PP PP 10 52 34.8 +2.8
HHC S S 10 59 34.8 +0.8
HHC SKS 10 59 38.5
HHC XS sS 10 59 51.8 -0.3
HHC PS 11 00 27.5
HHC SS SS 11 04 55.5 +4.5
HHC AMB AMB
comp=Z,21nm,0.7s,mb5.2
HHC AMB AMB
comp=Z,86nm,3.7s
HHC LR LR
comp=N,69nm,15.5s,MS4.5
HHC LR LR
comp=E,142nm,14.3s,MS4.5
HHC LR LR
comp=Z,111nm,15.5s,MS4.3
HIA Hailar 82.35 330 *e*P **P** **10 49 30.7 0.0**
comp=Z,8.3nm,0.9s,mb4.7
HIA Hailar 82.35 330 *e*P **P** **10 49 30.7 0.0**
HIA pmax pmax
comp=Z,8.0nm,0.9s
SYO Syowa Base 83.66 196⇓ *e*P **P** **10 49 35.0 -2.3**
SYO Syowa Base 83.66 196⇓ *e*PcP PcP 10 49 40.1 -1.4
SYO Syowa Base 83.66 196⇓ *e*pP pP 10 49 45.4 -2.9
LZH Lanzhou 83.73 312 *e*P **P** **10 49 39.8 +1.6**
LZH AP pP 10 49 49.0 -0.2
LZH XP sP 10 49 53.0 -0.2
LZH PP PP 10 52 55.5 +3.7
LZH SKS 10 59 56.5
LZH *e*S S 10 59 59.8 +1.1
LZH XS sS 11 00 16.0 -0.9
LZH AMB AMB
comp=Z,40nm,1.3s,mb5.4
LZH AMB AMB
comp=Z,112nm,4.0s
LZH LR LR
comp=N,398nm,14.9s
LZH LR LR
comp=Z,730nm,16.0s,MS5.2
KDAK Kodiak Island 84.27 19 *e*P **P** **10 49 39.5 -0.8**
SEY Seymchan 84.33 352⇑ *e*P **P** **10 49 39.6 -1.0**
GAMB Gambell 85.40 8 *e*P **P** **10 49 45.9 -0.1**
comp=Z,11nm,0.8s,mb5.0
NRGR Nerungri 85.62 337 *i*P **P** **10 49 48.1 +0.9**
NRGR S S 11 00 21.1 +4.5
NRGR smax
comp=N,36nm,0.5s
CLNS Chul'man 85.70 337 *c i*P **P** **10 49 48.5 +0.9**
CLNS *e**PP pP 10 50 05.8 +7.2
CLNS *e*S S 11 00 06.3 -11
CLNS *e**SS sS 11 01 09.0 +34
CLNS pmax pmax
comp=Z,100nm,0.9s,mb6.0
CLNS pmax pmax
comp=N,46nm,1.0s
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS pmax pmax
comp=N,5.0nm,0.6s
CLNS pmax pmax
comp=Z,9.0nm,0.6s,mb5.2
CLNS smax
comp=E,119nm,13.3s
CLNS smax
comp=N,47nm,11.6s
IMP Imphal 86.09 298 *ex* x 10 49 51.0
SVW2 Sparrevohn 86.17 16 *e*P **P** **10 49 49.3 -0.5**
SVW2 *e*pP pP 10 49 59.3 -1.5
KCPM Cahto Peak 86.59 45 *e*P **P** **10 49 52.8 +0.4**
KIPM Iron Peak 86.72 45 *e*P **P** **10 49 53.3 +0.2**
KHMM Horse Mountain 87.09 44 *e*P **P** **10 49 54.8 0.0**
CIT Chita 87.13 329 *e*P **P** **10 49 55.0 +0.3**
SLKM Skilak Lake 87.20 19 *e*P **P** **10 49 54.8 -0.1**
MAIT Maitri 87.53 187 *e*P **P** **10 49 53.7 -2.8**
TTA Tatalina 87.62 15 *e*P **P** **10 49 57.4 +0.6**
comp=N,11nm,1.3s,mb4.9
TTA Tatalina 87.62 15 *e*P **P** **10 49 57.4 +0.6**
TTA pmax pmax
comp=Z,11nm,1.3s,mb4.9
TNA Tin City 87.63 9 *e*P **P** **10 49 56.4 -0.5**
comp=Z,21µm,1.2s
SNAA Sanae 87.81 182 *e*P **P** **10 49 56.7 -1.2**
SNAA *e* 10 49 58.7
SNAA *e* 10 50 02.2
SNAA *e* pP 10 50 06.2 -2.7
SNAA *e* pP 10 50 09.6 +0.7
SNAA *e* 10 50 13.4
SNAA Sanae 87.81 182⇑ *e*P **P** **10 49 56.3 -1.6**
CMB Columbia Colle 87.97 48 *e*P **P** **10 49 59.3 +0.2**
comp=Z,6.1nm,0.8s,mb4.9
CMB Columbia Colle 87.97 48 *e*P **P** **10 49 59.3 +0.2**
CMB pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ULN Ulaanbaatar 88.03 323 *e*P **P** **10 49 59.4 +0.3**
comp=Z,23nm,1.0s,mb5.4
ULN Ulaanbaatar 88.03 323 *e*P **P** **10 49 59.4 +0.2**
ULN pmax pmax
comp=Z,23nm,1.0s,mb5.4
GTA Gaotai 88.16 313 *e*P **P** **10 50 01.0 +1.0**
GTA AP pP 10 50 10.3 -0.7
GTA XP sP 10 50 14.5 -0.5
GTA PP PP 10 53 32.8 +5.3
GTA PPP 10 55 32.0
GTA SKS 11 00 25.0
GTA S S 11 00 44.0 +2.2
GTA XS sS 11 01 02.0 +1.9
GTA PS 11 01 56.0
GTA AMB AMB
comp=Z,10.0nm,0.8s,mb5.1
GTA AMB AMB
comp=Z,124nm,4.9s
GTA LR LR
comp=N,80nm,16.7s,MS4.5
GTA LR LR
comp=E,116nm,17.5s,MS4.5
GTA LR LR
comp=Z,97nm,16.3s,MS4.3
YBH Yreka Blue Hor 88.19 44 *e*P **P** **10 50 00.8 +0.8**
comp=Z,7.8nm,0.8s,mb5.0
YBH Yreka Blue Hor 88.19 44 *e*P **P** **10 50 00.8 +0.7**
YBH pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 88.21 342 *e*P **P** **10 49 59.3 -0.4**
comp=Z,27nm,0.8s,mb5.5
YAK Yakutsk 88.21 342 *e*P **P** **10 49 59.5 -0.1**
YAK pmax pmax
comp=Z,40nm,1.0s,mb5.6
YAK pmax pmax
comp=N,13nm,1.6s
YAK pmax pmax
comp=E,10.0nm,1.7s
PMR Palmer 88.38 18 *e*P **P** **10 50 01.0 +0.5**
comp=E,8.3nm,0.8s,mb5.0
PMR Palmer 88.38 18 *e*P **P** **10 50 01.0 +0.5**
PMR pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
SONM Songino Array 88.39 323 P **P** **10 50 01.0 +0.1**
comp=Z,13nm,0.9s,mb5.2,baz=134,slow=5.4,SNR=14
VNA3 Neumayer Olymp 88.39 180 *e*P **P** **10 49 59.5 -1.1**
VNA3 *e* 10 50 04.8
VNA3 *e* pP 10 50 09.8 -1.9
VNA3 *e* pP 10 50 12.5 +0.8
VNA3 *e* 10 50 17.0
BILL Bilibino 88.42 359 *e*P **P** **10 50 00.2 -0.3**
comp=Z,8.9nm,0.8s,mb5.0
BILL Bilibino 88.42 359⇓ *e*P **P** **10 50 00.2 -0.3**
BILL pmax pmax
comp=Z,16nm,1.1s,mb5.2
LBCM Butte Creek Ri 88.65 45 P **P** **10 50 02.5 +0.3**
VNA2 Neumayer--Watz 88.69 181 *e*P **P** **10 50 01.1 -0.9**
baz=182,slow=5.2
VNA2 *e* 10 50 02.6
VNA2 *e* 10 50 05.9
VNA2 *e* pP 10 50 11.5 -1.6
VNA2 *e* pP 10 50 14.1 +1.0
VNA2 *e* 10 50 18.2
PFO Pinyon Flat Ob 88.83 53 *e*P **P** **10 50 03.3 +0.1**
WAKR Walker 88.85 48 *e*P **P** **10 50 03.2 -0.1**
MTUM Tungsten Hills 88.94 49 *e*P **P** **10 50 04.1 +0.4**
VNA1 Neumayer--Stat 88.97 181 *e*P **P** **10 50 02.9 -0.5**
VNA1 *e* 10 50 04.3
VNA1 *e* 10 50 08.3
VNA1 *e* pP 10 50 12.8 -1.6
VNA1 *e* pP 10 50 15.1 +0.7
VNA1 *e* 10 50 19.6
PAHR Pah Rah Range 89.44 47 *e*P **P** **10 50 06.1 +0.1**
NVAR Mina Array Bea 89.61 48 P **P** **10 50 07.6 +0.7**
NVAR P'P' 11 15 50.4
NVAR Mina Array Bea 89.61 48 P **P** **10 50 07.6 +0.7**
comp=Z,6.2nm,0.8s,mb5.0,baz=213,slow=6.1,SNR=65
NVAR PKPPKP 11 15 50.4
comp=Z,0.3nm,0.6s,baz=68,slow=4.1,SNR=4.1
MOD Modoc 89.85 45 *e*P **P** **10 50 08.0 +0.1**
comp=Z,7.9nm,0.8s,mb5.1
LSA Lhasa 90.35 302 P **P** **10 50 10.5 0.0**
TPNV Topopah Spring 90.42 50 *e*P **P** **10 50 10.6 -0.1**
comp=Z,13nm,0.8s,mb5.3
TPNV Topopah Spring 90.42 50 *e*P **P** **10 50 10.6 -0.1**
TPNV pmax pmax
comp=Z,13nm,0.8s,mb5.3
BOD Bodaibo 90.61 334⇓ *i*P **P** **10 50 10.1 -0.9**
BOD pmax pmax
comp=Z,23nm,1.2s,mb5.4
OSD Olympics--Swo 90.63 38 P **P** **10 50 12.5 +1.2**
VIPM Ingram Point 90.88 42 P **P** **10 50 13.3 +0.7**
WRAK Wrangell Islan 90.98 28 *e*P **P** **10 50 12.3 -0.4**
comp=Z,19nm,0.8s,mb5.5
GNW Green Mountain 91.02 39 *e*P **P** **10 50 13.5 +0.3**
WVOR Wild Horse Val 91.19 45 *e*P **P** **10 50 14.2 +0.1**
comp=Z,7.7nm,0.9s,mb5.0

WVOR Wild Horse Val 91.19 45 *eP* **P 10 50 14.2 +0.1**
WVOR pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
COLA College 91.31 17 *eP* **P 10 50 12.2 -1.9**
comp=Z,6.4nm,0.8s,mb5.0
COLA College 91.31 17 *eP* **P 10 50 12.2 -1.9**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb5.0
ZAK Zakamensk 91.47 324⇑*iP* **P 10 50 15.3 +0.1**
ZAK pmax pmax
comp=Z,9.0nm,1.2s,mb5.0
SKAG Skagway 91.63 25 *eP* **P 10 50 15.4 -0.4**
comp=Z,17nm,0.9s,mb5.4
IRK Irkutsk 91.92 326 *eP* **P 10 50 15.9 -1.3**
IRK pmax pmax
comp=Z,19nm,0.7s,mb5.5
TLY Talaya 91.95 325 *eP* **P 10 50 17.5 +0.1**
comp=Z,6.0nm,0.6s,mb5.1
TLY Talaya 91.95 325 *eP* **P 10 50 17.2 -0.2**
TLY pmax pmax
comp=Z,11nm,0.8s,mb5.2
TUC Tucson 92.65 57 *eP* **P 10 50 21.6 +0.5**
comp=Z,5.8nm,0.9s,mb5.0
TUC Tucson 92.65 57 *eP* **P 10 50 21.6 +0.5**
TUC pmax pmax
comp=Z,6.0nm,0.9s,mb5.0
EGAK Eagle 93.17 19 *eP* **P 10 50 21.8 -1.0**
comp=Z,8.3nm,0.7s,mb5.3
DLBC Dease Lake 93.19 27 *eP* **P 10 50 22.6 -0.4**
DAWY Dawson 93.23 20 *eP* **P 10 50 22.1 -0.9**
MOY Mondy 93.37 325 *eP* **P 10 50 24.2 +0.3**
MOY pmax pmax
comp=Z,22nm,2.2s,mb5.2
WUAZ Wupatki 93.43 53 *eP* **P 10 50 25.1 +0.4**
comp=Z,6.1nm,0.9s,mb5.0
HLID Hailey 94.47 45 *eP* **P 10 50 28.9 -0.3**
comp=Z,22nm,2.5s,mb5.2
HVU Hansel Valley 94.86 47 *eP* **P 10 50 31.2 +0.2**
SRU San Rafael 95.42 50 P **P 10 50 33.8 0.0**
comp=Z,2.1nm,0.9s,mb4.6
SRU San Rafael 95.42 50 P **P 10 50 33.8 +0.1**
SRU pmax pmax
comp=Z,2.0nm,0.9s,mb4.5
TIXI Tiksi 96.10 348 *eP* **P 10 50 34.7 -1.4**
comp=Z,2.3nm,0.7s,mb4.7
TIXI Tiksi 96.10 348 *eP* **P 10 50 34.6 -1.4**
TIXI pmax pmax
comp=Z,5.0nm,1.6s,mb4.7
PV10 Paradox Valley 96.23 51 *eP* **P 10 50 35.9 -1.5**
PV01 Paradox Valley 96.49 52 *eP* **P 10 50 39.7 +1.1**
ANMO Albuquerque 96.97 55 *eP* **P 10 50 40.5 -0.3**
comp=Z,0.6nm,0.6s,mb4.2
ANMO Albuquerque 96.97 55 *eP* **P 10 50 40.6 -0.2**
ANMO pmax pmax
comp=Z,1.0nm,0.6s
ANMO Albuquerque 96.97 55 LR LR 11 24 55.8
comp=Z,568nm,21.5s,MS5.0,baz=193,slow=30
TXAR Lajitas Array 97.30 62 P **P 10 50 42.9 +0.4**
comp=Z,1.5nm,0.9s,mb4.4,baz=235,slow=4.4,SNR=13
PLCA Paso Flores 97.43 138 P **P 10 50 42.5 -0.4**
comp=Z,1.0nm,0.7s,mb4.4,baz=198,slow=6.1,SNR=4.5
PDAR Pinedale Array 97.45 47 P **P 10 50 42.0 -0.7**
comp=Z,0.7nm,0.8s,mb4.1,baz=263,slow=5.9,SNR=5.5
PDAR PKiKP PKiKP 10 55 15.6 -1.9
comp=Z,0.4nm,0.8s,baz=187,slow=2.4,SNR=2.4
PDAR PKKPbc PKKPbc 11 07 19.5 -2.0
comp=Z,1.0nm,0.9s,baz=119,slow=5.2,SNR=7.7
PDAR LR LR 11 28 00.6
comp=Z,75nm,20.8s,MS4.2,baz=250,slow=31
INK Inuvik 97.80 18 *eP* **P 10 50 41.8 -1.9**
comp=Z,302nm,1.3s
INK Inuvik 97.80 18 *eP* **P 10 50 41.8 -1.9**
INK pmax pmax
comp=Z,302nm,1.3s
SMCO Snowmass 98.03 51 *eP* **P 10 50 46.3 +0.8**
comp=Z,1.8nm,0.6s,mb4.8
WMQ Urumqi 98.24 314⇑P **P 10 50 46.3 0.0**
WMQ AP pP 10 50 56.8 -0.6
WMQ XP sP 10 51 00.8 -0.6
WMQ PP PP 10 54 48.5 +2.0
WMQ SKS 11 01 20.3
WMQ S S 11 02 07.5 -4.0
WMQ AMB AMB
comp=Z,7.0nm,1.2s,mb5.1
WMQ AMB AMB
comp=Z,109nm,4.0s
WMQ LR LR
comp=N,36nm,20.4s,MS4.1
WMQ LR LR
comp=E,65nm,23.8s,MS4.1
WMQ LR LR
comp=Z,74nm,27.9s,MS4.0
YKA Yellowknife Ar 101.82 27 P Pdif 10 51 00.9 -1.4
YKA Yellowknife Ar 101.82 27 P Pdif 10 51 00.9 -1.4
comp=Z,0.5nm,0.5s,baz=254,slow=4.6,SNR=13
YKA PKiKP PKiKP 10 55 22.9 -1.8
comp=Z,0.5nm,0.6s,baz=256,slow=1.4,SNR=8.4
YKA PKKPbc PKKPbc 11 07 05.2 -4.5
comp=Z,0.2nm,0.6s,baz=59,slow=3.3,SNR=4.5
MKAR Makanchi Array 102.80 315 P Pdif 10 51 06.2 -0.4
MKAR 10 55 17.9
MKAR Makanchi Array 102.80 315 Pdiff Pdif 10 51 06.2 -0.4
comp=Z,0.9nm,0.6s,baz=106,slow=6.1,SNR=6.1
MKAR PP PP 10 55 17.9 -3.1
comp=Z,0.5nm,0.8s,baz=80,slow=10,SNR=3.8
MKAR PKKPbc PKKPbc 11 07 03.4 -2.9
comp=Z,0.7nm,0.8s,baz=285,slow=3.9,SNR=5.4
ZALV Zalesovo Beam 103.28 323 Pdif Pdif 10 51 07.3 -1.4
ZALV PP PP 10 55 21.5 -2.8
ZALV Zalesovo Beam 103.28 323 Pdiff Pdif 10 51 07.3 -1.4
comp=Z,1.1nm,0.7s,baz=118,slow=4.4,SNR=5.9
ZALV PP PP 10 55 21.5 -2.8
comp=Z,1.0nm,0.9s,baz=87,slow=10,SNR=3.8
ZAL Zalesovo 103.29 323 P Pdif 10 51 07.3 -1.5
ZAL 10 55 21.5
ULM Lac du Bonnet 108.55 42 PKiKP PKiKP 10 55 34.7 -2.8
comp=Z,1.8nm,0.5s,baz=346,slow=1.7,SNR=6.9
FCC Fort Churchill 110.75 34 *e*PKPdf PKiKP 10 55 38.6 -2.8
JFWS Jewell Farm 111.18 51 *e*PKPdf PKiKP 10 55 40.0 -2.8
RES Resolute Bay 111.23 16 *e*PKPdf PKiKP 10 55 39.4 -2.5
TKL Tuckaleechee C 115.10 59 PKP PKiKP 10 55 48.6 -1.8
comp=Z,5.7nm,0.9s,baz=163,slow=1.8,SNR=9.3
ROSC El Rosal 116.29 95 PKP PKPdf 10 55 52.4 -1.0
comp=Z,3.8nm,0.4s,baz=109,slow=1.9,SNR=2.9
BLA Blacksburg 117.97 58 *e*PKPdf PKPdf 10 55 54.0 -1.9
ARU Arti 118.41 324 *e*PKPdf PKPdf 10 55 54.9 -1.3
ARU Arti 118.41 324 *e*PKIKP PKPdf 10 55 54.9 -1.2
SADO Sadowa 119.34 49 PKP PKPdf 10 55 56.0 -2.3
SADO Sadowa 119.34 49 PKP PKPdf 10 55 56.0 -2.3
baz=321,slow=1.0
BOSA Boshof 120.04 217 PKP PKPdf 10 55 59.9 -0.4
comp=Z,2.7nm,0.6s,baz=178,slow=4.1,SNR=8.9
SDV Santo Domingo 121.09 92 PKP PKPdf 10 56 01.2 -1.4
SDV Santo Domingo 121.09 92 PKP PKPdf 10 56 01.2 -1.4
comp=Z,14nm,0.8s,baz=257,slow=2.3,SNR=15
PRGR Permogore 123.78 331 *e*PKIKP PKPdf 10 56 03.8 -2.5
APA Apatity 125.56 341⇓*i*PKIKP PKPdf 10 56 07.5 -2.1
APA pmax pmax
comp=Z,25nm,1.2s
SCHQ Schefferville 125.93 36 PKP PKPdf 10 56 08.8 -1.8
comp=Z,6.1nm,0.8s,baz=260,slow=0.5,SNR=14
ARCES ARCESS Array B 126.42 345 PKP PKPdf 10 56 09.1 -2.1
comp=Z,14nm,0.7s,baz=92,slow=1.4,SNR=57
PCRV Puerto La Cruz 127.11 93 PKP PKPdf 10 56 12.4 -1.7
comp=Z,13nm,1.0s,baz=20,slow=5.7,SNR=3.5
SJG San Juan 127.77 83 *e*PKPdf PKPdf 10 56 13.1 -2.2
SJG San Juan 127.77 83 PKP PKPdf 10 56 13.4 -1.8
comp=Z,58nm,0.7s,baz=58,slow=3.9,SNR=22
LSZ Lusaka 127.80 230 *e*PKPdf PKPdf 10 56 14.9 -0.5
CPD Cerro la Pandu 127.97 83 *e*PKPdf PKPdf 10 56 13.7 -1.9
MTP Monte Pirata 128.32 83 *e*PKPdf PKPdf 10 56 14.3 -2.0
KMBO Kilima Mbogo 128.41 251 PKP PKPdf 10 56 16.4 -0.3
comp=Z,2.5nm,0.7s,baz=53,slow=3.0,SNR=5.9
JOF Joensuu 129.05 337 *ep* PKPdf 10 56 15.0 -1.4
OBN Obninsk 130.70 326⇓*i*PKIKP PKPdf 10 56 19.9 +0.2
OBN pmax pmax
comp=Z,8.0nm,1.5s
KAF Kangasniemi 131.37 338 *ep* PKPdf 10 56 18.9 -1.9
FINES FINESS Array B 131.89 337 PKP PKPdf 10 56 20.8 -1.0
FINES SKPbc SKPbc 10 59 43.4 -1.8
FINES FINESS Array B 131.89 337 PKhKP 10 56 10.6
comp=Z,1.7nm,0.7s,baz=46,slow=5.5,SNR=5.3
FINES PKP PKPdf 10 56 20.8 -1.0
comp=Z,2.6nm,0.5s,baz=86,slow=1.9,SNR=17
FINES SKPbc SKPbc 10 59 43.4 -1.8
comp=Z,4.3nm,0.8s,baz=83,slow=6.0,SNR=11

AKASG Malin Array Be 136.67 324 PKP PKPdf 10 56 29.2 -1.9
AKASG SKPbc SKPbc 10 59 60.0 -1.1
AKASG Malin Array Be 136.67 324 PKhKP 10 56 18.4
comp=Z,0.6nm,0.4s,baz=82,slow=6.6,SNR=4.8
AKASG PKP PKPdf 10 56 29.2 -1.9
comp=Z,2.2nm,0.7s,baz=58,slow=1.6,SNR=8.8
AKASG SKPbc SKPbc 10 59 60.0 -1.1
comp=Z,0.2nm,0.3s,baz=48,slow=3.1,SNR=3.9
NB2 NORSAR Subarra136.79 345 PKPdf PKPdf 10 56 19.1 -12
comp=Z,2.3nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B136.79 345 PKP PKPdf 10 56 30.2 -0.7
NOA NORSAR Array B136.79 345 PKhKP 10 56 21.5
comp=Z,1.3nm,0.6s,baz=261,slow=3.0,SNR=8.6
NOA PKP PKPdf 10 56 30.2 -0.7
comp=Z,4.3nm,0.7s,baz=33,slow=2.0,SNR=17
MLR Muntele Rosu 141.07 318 PKhKP 10 56 34.7
comp=Z,1.8nm,0.6s,baz=162,slow=8.8,SNR=3.2
KOLS Kolonicke sedl 141.42 325 *e*PKP PKPdf 10 56 35.5 -4.3
UZH Uzhgorod 141.58 325 *e*PKHKP 10 56 22.0
STHS Stebnicka Huta 141.68 326 *e*PKP PKPdf 10 56 36.7 -3.6
STHS Stebnicka Huta 141.68 326 *e*PKP PKPdf 10 56 36.6 -3.7
CRVS Cervenica-Dubn 141.87 325 *e*PKP PKPdf 10 56 35.9 -4.7
MVH1 Achvaich 142.43 354⇑*e*P PKPdf 10 56 37.1 -4.2
KECS Kecovo 142.64 325 *e*PKP PKPdf 10 56 38.9 -3.1
MCD Coleburn Disti 142.68 353⇑*iP* PKPdf 10 56 36.1 -5.6
MDO Dochfour 142.93 354⇑*eP* PKPdf 10 56 37.1 -5.1
OKC Ostrava-Krasne 142.97 329 *e*PKP PKPdf 10 56 38.8 -3.7
BSEG Bad Segeberg 143.08 339 *e*PKPbc PKPdf 10 56 38.5 -4.1
KPL Plockton 143.13 356 *e*P PKPdf 10 56 38.0 -4.6
KSP Ksiaz 143.15 331 *e*PKP PKPdf 10 56 39.4 -3.4
KSP Ksiaz 143.15 331 *e*PKIKP PKPdf 10 56 38.6 -4.2
PSZ Piszkesteto 143.30 325 *e*PKPdf PKPdf 10 56 39.6 -3.6
PSZ Piszkesteto 143.30 325⇑*eP* PKPdf 10 56 39.8 -3.4
MORC Moravsky Berou 143.30 329 *e*PKPdf PKPdf 10 56 39.6 -3.5
DPC Dobruska-Polom 143.48 331 *e*PKP PKPdf 10 56 40.7 -2.7
DPC *ex* x 10 56 49.3
VYHS Vyhne 143.50 327 *e*PKP PKPdf 10 56 40.4 -3.1
UPC Upice 143.51 331 *e*PKP PKPdf 10 56 41.1 -3.4
UPC *ex* x 10 56 47.5
RZN Rozhen 143.53 313 *i*P PKPdf 10 56 39.2 -4.6
PGB Panagyurishte 143.54 315 *i*P PKPdf 10 56 40.0 -3.8
KOLL Kolacno 143.66 327 *e*PKP PKPdf 10 56 41.9 -1.9
RCBR Riachuelo 143.85 134 *e*PKPdf PKPdf 10 56 40.6 -4.6
EBH Black Hill 144.02 353⇑*eP* PKPdf 10 56 40.3 -3.9
BUD Budapest 144.03 325⇑*eP* PKPdf 10 56 42.2 -2.3
PVCC Panska Ves 144.13 332 *e*PKP PKPdf 10 56 42.5 -2.1
PVCC *ep* PKP pPKPdf 10 56 52.1 -3.9
BRG Berggiesshubel 144.15 333⇑*i*PKIKP PKPdf 10 56 42.4 -2.2
BRG *i* 10 56 52.1
BRG pmax pmax
comp=Z,61nm,0.8s
BRG pmax pmax
comp=Z,33nm,1.0s
BRG Berggiesshubel 144.15 333 *e*PKPbc PKPdf 10 56 42.3 -2.3
BRG Berggiesshubel 144.15 333⇑*iP* PKPdf 10 56 42.4 -2.1
comp=Z,102nm,0.8s
BRG *i* 10 56 52.1
comp=Z,55nm,1.0s
VTS Vitosha 144.15 315 *i*P PKPdf 10 56 42.7 -2.2
EAB Aberfoyle 144.16 354⇑*eP* PKPdf 10 56 41.5 -3.0
CLL Collm 144.20 335⇑*i*PKIKP PKPdf 10 56 42.2 -2.5
CLL *i* 10 56 51.2
CLL pmax pmax
comp=Z,89nm,0.7s
CLL Collm 144.20 335⇑*i*PKPdf PKPdf 10 56 42.2 -2.5
comp=Z,89nm,0.7s
CLL *i* pPKPdf pPKPdf 10 56 51.2 -4.8
comp=Z,41nm,1.0s
CLL Collm 144.20 335 *e*PKPbc PKPdf 10 56 42.1 -2.6
ESY Stoneypath 144.24 352⇑*eP* PKPdf 10 56 41.5 -3.1
MMB Musomiste 144.25 314 *i*P PKPdf 10 56 42.8 -2.3
EDI Edinburgh 144.30 353 *eP* PKPdf 10 56 41.6 -3.1
EDI AMb AMB 10 56 44.0
comp=Z,58nm,2.3s
NRDL Niedersach Rie 144.35 338 *e*PKPbc PKPdf 10 56 42.6 -2.3
MODS Modra-Piesok 144.37 328 *e*PKP PKPdf 10 56 44.1 -0.9
EAU Auchinoon 144.41 353⇑*eP* PKPdf 10 56 42.5 -2.3
EBL Broad Law 144.43 353⇑*eP* PKPdf 10 56 42.4 -2.5
SRS Serrai 144.54 313 *e*P PKPdf 10 56 43.3 -2.3
PRU Pruhonice 144.54 332 *e*PKP PKPdf 10 56 43.6 -1.7
PRU *ep* PKP pPKPdf 10 56 52.9 -3.8
PGBU Glenifferbraes 144.55 354⇑*eP* PKPdf 10 56 42.6 -2.5
PGBU AMb AMB 10 56 43.9
comp=Z,116nm,0.9s
KKB Krupnik 144.56 314 *i*P PKPdf 10 56 43.9 -1.7
ZST Bratislava 144.57 328 *i*PKP PKPdf 10 56 44.8 -0.6
OUR Ouranopolis 144.59 311 *e*P PKPdf 10 56 43.4 -2.3
XSO Sourhope Farm 144.60 352⇑*eP* PKPdf 10 56 42.6 -2.6
TREC Trest 144.61 330 *e*PKP PKPdf 10 56 43.9 -1.5
TREC *ep* PKP pPKPdf 10 56 53.3 -3.5
CLZ Clausthal 144.79 337 *e*PKPbc PKPdf 10 56 44.6 -1.1
ESK Eskdalemuir 144.90 353⇑*eP* PKPdf 10 56 43.6 -2.1
ESK AMb AMB 10 56 44.5
comp=Z,97nm,0.6s
ESK Eskdalemuir 144.90 353 *e*PKIKP PKPdf 10 56 43.7 -2.0
ECK Cauldkaine Hil 145.02 352⇑*iP* PKPbc 10 56 44.1 -1.2
GMK Mull of Kintyr 145.11 355⇑*iP* PKPbc 10 56 44.8 -0.8
TANN Tannenbergstha 145.11 334 *e*PKPbc PKPbc 10 56 45.3 -0.5
VAY Valandovo 145.15 314 *i*PKP PKPdf 10 56 44.9 -1.8
LAST Lasithi 145.16 302 *eP* PKPbc 10 56 46.5 0.0
XAL Allendale 145.21 351⇑*iP* PKPbc 10 56 45.0 -1.0
STIP Stip 145.24 315 *i*PKP PKPdf 10 56 45.2 -1.6
NKC Novy Kostel 145.25 334 *e*PKP PKPdf 10 56 46.2 -0.3
NKC *ep* PKP pPKPdf 10 56 55.5 -2.4
MOX Moxa 145.27 335 *e*PKP PKPdf 10 56 46.0 -0.5
comp=Z,99nm,1.3s
MOX *e* 10 56 55.4
MOX Moxa 145.27 335 *e*PKIKP PKPdf 10 56 46.0 -0.5
MOX *e* 10 56 55.4
MOX pmax pmax
comp=Z,99nm,1.3s
MOX Moxa 145.27 335 *e*PKPbc PKPbc 10 56 45.8 -0.5
IBBN Ibbenburen 145.29 340 *e*PKPbc PKPbc 10 56 46.0 -0.3
CONA Conrad Observa 145.37 328 *i*PKPdf PKPdf 10 56 46.8 0.0
comp=Z,148nm,1.2s,SNR=42
GCL Cushendall 145.42 355⇑*eP* PKPbc 10 56 45.6 -1.0
GAL1 Galloway 145.50 354⇑*eP* PKPdf 10 56 45.8 -1.0
GAL1 AMb AMB 10 56 47.1
comp=Z,378nm,1.0s
MANZ Manzenberg 145.59 334 *e*PKPbc PKPbc 10 56 46.9 -0.4
IDI Anoyia 145.59 303 PKPbc PKPbc 10 56 47.1 -0.7
comp=Z,22nm,0.6s,baz=127,slow=7.1,SNR=34
KHC Kasperske Hory 145.60 332 *e*PKP PKPdf 10 56 46.4 -0.7
KHC *ep* PKP pPKPdf 10 56 56.9 -1.6
CKE Keswick 145.60 352⇑*iP* PKPdf 10 56 46.4 -0.5
SKO Skopje 145.60 316 *i*PKP PKPdf 10 56 47.8 +0.4
ROTZ Rotzenmuhle 145.71 333 *e*PKPbc PKPbc 10 56 47.4 -0.3
LIT Litokhoron 145.72 312 *eP* PKPdf 10 56 46.7 -0.9
GEC2 GERESS Array S 145.75 331 *e*PKPbc PKPbc 10 56 47.6 -0.3
GERES GERESS Array B 145.75 331 PKPbc PKPbc 10 56 48.0 +0.1
comp=Z,45nm,0.7s,baz=35,slow=4.9,SNR=128
WET Wettzell 145.90 332 *e*PKPbc PKPbc 10 56 47.8 -0.5
ARSA Arzberg 146.00 328⇑*iP* PKPdf 10 56 48.4 +0.6
comp=Z,142nm,2.3s,SNR=9.6
HPK Haverah Park 146.00 350⇑*eP* PKPdf 10 56 47.7 0.0
HPK AMb AMB 10 56 49.8
comp=Z,307nm,1.3s
KRUS Krusevo 146.01 315 *i*PKP PKPdf 10 56 48.8 +0.7
GIM North Isle of 146.05 354⇑*iP* PKPdf 10 56 47.6 -0.1
BIA Bitola 146.12 314 *i*PKP PKPdf 10 56 48.0 -0.4
KOGS Kog 146.16 326 *i*PKPbc PKPbc 10 56 48.7 -0.5
KOGS *ep* PKPab PKPab 10 56 58.1 +8.2
DID Didima 146.18 307 *eP* PKPdf 10 56 47.6 -0.9
GRF Grafenberg Arr 146.18 334 *e*PKP2 PKPab 10 56 50.5 +0.7
GRF Grafenberg Arr 146.18 334 *e*PKP2 PKPab 10 56 49.1 -0.7
GRF Grafenberg Arr 146.18 334 *e*PKPbc PKPbc 10 56 49.1 0.0
GRF *ep* PKPab PKPab 10 56 50.5 +0.7
GRFO Grafenberg 146.18 334 *e*PKPdf PKPdf 10 56 48.9 +0.8
LTK Loutraki 146.19 308 *eP* PKPdf 10 56 47.7 -0.8
MOA Molln 146.20 329 *iP* PKPdf 10 56 49.0 +0.8
comp=Z,217nm,2.8s,SNR=23
GMM Mts of Mourne 146.24 355⇑*eP* PKPdf 10 56 47.9 -0.1
OHR Ohrid 146.43 315 *i*PKP PKPdf 10 56 49.1 +0.2
LHO Holmfirth 146.44 351⇑*iP* PKPdf 10 56 48.7 +0.3
LHO Holmfirth 146.44 351 P PKPdf 10 56 49.5 +1.1
PERS Pernice 146.62 327 *i*PKPbc PKPbc 10 56 49.8 -0.7
DMUB Kingscourt 146.64 356 *eP* PKPdf 10 56 46.1 -2.7
DMUB Kingscourt 146.64 356⇑*iP* PKPdf 10 56 49.6 +0.8
DMUB Kingscourt 146.64 356⇑*iP* PKPdf 10 56 49.6 +0.8
KBI1 Birley Grange 146.67 350⇑*iP* PKPdf 10 56 49.1 +0.3
AEU East Anglia Un 146.75 347⇑*eP* PKPdf 10 56 50.2 +1.3
TNS Taunus Mts 146.81 337 *e*PKP2 PKPab 10 56 52.7 +0.4

TNS Taunus Mts 146.81 337 *e*PKPbc PKPbc 10 56 50.6 -0.4
TNS *e*PKPab PKPab 10 56 52.7 +0.4
VLX Vlachokerasia 146.86 307 *eP* PKPdf 10 56 50.8 +1.2
SELA Sela 146.88 309 *eP* PKPdf 10 56 51.4 +1.7
KWE Weaver Farm 146.95 350⇑*iP* PKPdf 10 56 50.5 +1.2
CWF Charnwood Fore 147.13 350⇑*eP* PKPdf 10 56 50.8 +1.2
CWF AMb AMB 10 56 52.1
comp=Z,82nm,0.8s
KBA Koelnbreinsper 147.19 329 *i*P PKPdf 10 56 51.1 +1.2
comp=Z,33nm,1.1s,SNR=20
TOD Tromm 147.19 336 PKP PKPdf 10 56 51.8 +2.0
DLF Lyons Farm 147.22 355 *eP* PKPdf 10 56 47.3 -2.4
DLF Lyons Farm 147.22 355⇑*iP* PKPdf 10 56 50.9 +1.2
DLF Lyons Farm 147.22 355⇑*iP* PKPdf 10 56 50.9 +1.2
DCN Croghan 147.22 356 *eP* PKPdf 10 56 47.7 -2.0
DCN Croghan 147.22 356⇑*iP* PKPdf 10 56 51.2 +1.5
DCN Croghan 147.22 356⇑*iP* PKPdf 10 56 51.2 +1.5
BEBN Eben Emael 147.25 341 PKPbc PKPbc 10 56 51.8 -0.4
BOJS Bojanci 147.30 325 *i*PKPbc PKPbc 10 56 52.4 -0.1
MEM Membach 147.31 340 PKPbc PKPbc 10 56 51.9 -0.5
LJU Ljubljana 147.32 327 *i*PKPbc PKPbc 10 56 52.1 -0.5
VISS Visnje 147.32 326 *i*PKPbc PKPbc 10 56 52.1 -0.5
FUR Furstenfeldbru 147.33 332 *e*PKP2 PKPab 10 56 54.9 +0.5
FUR Furstenfeldbru 147.33 332 *e*PKPbc PKPbc 10 56 52.3 -0.2
FUR *e*PKPab PKPab 10 56 54.9 +0.5
MYKA Terra Mystica 147.36 328⇑*i*PKPbc PKPbc 10 56 51.4 -1.2
comp=Z,56nm,1.1s
ABH Alteburg 147.42 338 PKP PKPbc 10 56 52.7 0.0
CADS Cadrg 147.59 328 *i*PKPbc PKPbc 10 56 52.0 -1.3
UCC Uccle 147.64 342 PKPbc PKPbc 10 56 52.7 -0.5
BCLA Clavier 147.69 341 PKPbc PKPbc 10 56 53.0 -0.4
STU Stuttgart 147.72 335 *e*PKPbc PKPbc 10 56 53.3 -0.2
STU *e*PKPab PKPab 10 56 56.1 +0.2
RUP Ruppelstein 147.74 338 PKP PKPbc 10 56 53.4 -0.2
ABTA Abfaltersbach 147.82 330⇑*i*PKPbc PKPbc 10 56 52.5 -1.4
comp=Z,27nm,0.9s,SNR=10
WATA Walderalm 147.82 331⇑*iP* PKPbc 10 56 53.3 -0.6
comp=Z,12nm,0.8s,SNR=11
WTTA Wattenberg 147.85 331 *i*P PKPbc 10 56 53.5 -0.5
comp=Z,92nm,1.6s,SNR=14
SNF Seneffe 147.92 342 PKPbc PKPbc 10 56 53.6 -0.4
MOTA Moosalm 148.03 332 *i*P PKPbc 10 56 53.8 -0.7
comp=Z,31nm,0.9s,SNR=29
RETA Reutte 148.07 332 *i*PKPbc PKPbc 10 56 53.9 -0.7
comp=Z,26nm,1.1s,SNR=17
LANF Langenberg 148.08 337 PKP PKPbc 10 56 54.4 -0.1
SQTA Sankt Quirin 148.08 331 *i*P PKPbc 10 56 54.1 -0.4
comp=Z,28nm,0.8s,SNR=36
WLF Walferdange 148.08 339 *e*PKPbc PKPbc 10 56 54.0 -0.4
WLF Walferdange 148.08 339 PKPbc PKPbc 10 56 54.7 +0.2
WLF Walferdange 148.08 339 *e*PKPbc PKPbc 10 56 54.5 0.0
MCH1 Michaelchurch 148.11 351⇑*eP* PKPbc 10 56 53.3 -1.1
MCH1 AMb AMB 10 56 57.9
comp=Z,73nm,0.9s
GIVF Givet 148.12 341⇑*iPKP1* PKPbc 10 56 54.0 -0.6
comp=Z,92nm,0.8s
DOU Dourbes 148.19 341 PKPbc PKPbc 10 56 54.4 -0.4
BAIF Baives 148.34 342⇑*iPKP1* PKPbc 10 56 54.7 -0.5
comp=Z,52nm,0.9s
SWN1 Swindon 148.39 349 *eP* PKPbc 10 56 54.4 -0.8
SWN1 AMb AMB 10 56 56.2
comp=Z,159nm,1.5s
BFO Black Forest 148.41 336 *e*PKPbc PKPbc 10 56 54.6 -0.8
BFO *e*PKPab PKPab 10 56 58.7 0.0
SPAK Spaichingen-Ko 148.42 335 PKP PKPbc 10 56 54.6 -0.8
FETA Feichten 148.44 332 *i*PKPbc PKPbc 10 56 55.3 -0.2
comp=Z,53nm,1.0s,SNR=26
MENF Mencas 148.45 344 PKP PKPbc 10 56 54.7 -0.7
DAVA Damuels 148.61 333⇑*iP* PKPbc 10 56 55.6 -0.4
comp=Z,154nm,2.7s,SNR=12
CDF Champ du Feu 148.74 337⇑*iPKP1* PKPbc 10 56 55.6 -0.6
comp=Z,51nm,0.9s
FELD Feldberg im Sc 148.91 335 PKP PKPbc 10 56 55.7 -1.0
ECH Echery 148.95 337 PKP PKPbc 10 56 55.9 -0.9
HEX Exmoor 149.13 352⇑*eP* PKPbc 10 56 55.8 -1.3
MOF Molkenrain 149.26 336 PKP PKPbc 10 56 56.6 -1.0
HTL Hartland 149.29 352 *eP* PKPbc 10 56 56.6 -0.9
HTL AMb AMB 10 57 02.1
comp=Z,84nm,1.9s
THEF They Montfort 149.37 338 PKP PKPbc 10 56 57.0 -0.8
HINF Hinteralfeld 149.40 337⇑*iPKP1* PKPbc 10 56 57.1 -0.8
HAU Haudompre 149.42 337⇑*iPKP1* PKPbc 10 56 57.3 -0.7
comp=Z,85nm,0.9s
HAU *e*MLR MLR
comp=Z,110nm,20.8s,MS4.3
HAU Haudompre 149.42 337⇑*iPKP2* PKPbc 10 56 57.3 -0.7
HAU MLR MLR
comp=Z,110nm,20.8s,MS4.6
BBS Basel-Blauen 149.44 335 PKP PKPbc 10 56 57.2 -0.8
MEZF Maizieres J'vi 149.45 339⇑*iPKP1* PKPbc 10 56 57.8 -0.2
comp=Z,149nm,1.0s
DYA Yadsworthy 149.77 351⇑*eP* PKPbc 10 56 57.4 -1.3
DYA AMb AMB 10 56 58.3
comp=Z,66nm,1.2s
LOMF Lomont 149.79 336 PKP PKPbc 10 56 58.1 -0.8
CCA1 Carnmenellis 150.18 353⇑*iP* PKPbc 10 56 58.6 -1.1
CRQ2 Rosemanowes 2 150.19 353⇑*iP* PKPbc 10 56 58.7 -1.0
CMA1 Manaccan 150.27 353⇑*iP* PKPbc 10 56 59.0 -0.9
CABF La Chapelle 150.69 336⇑*iPKP1* PKPbc 10 57 00.8 -0.3
comp=Z,63nm,0.6s
FLN La Foliniere 150.75 346⇑*iPKP1* PKPbc 10 57 00.1 -1.1
comp=Z,118nm,0.6s
FLN *e*MLR MLR
comp=Z,139nm,19.5s,MS4.5
FLN La Foliniere 150.75 346⇑*iPKIKP* PKPbc 10 57 00.1 -1.1
FLN MLR MLR
comp=Z,140nm,19.5s,MS4.8
LDF La Druitiere 150.83 346⇑*iPKP1* PKPbc 10 57 00.2 -1.1
comp=Z,54nm,0.6s
LOR Lormes 150.92 339⇑*iPKP1* PKPbc 10 57 00.8 -0.8
comp=Z,75nm,0.8s
LOR *e*MLR MLR
comp=Z,157nm,21.2s,MS4.5
GRR Gorron 151.19 346⇑*iPKP1* PKPbc 10 57 01.2 -1.0
comp=Z,77nm,0.5s
SSF Saint Saulge 151.21 340⇑*iPKP1* PKPbc 10 57 01.5 -0.8
comp=Z,60nm,0.8s
HYF Humbligny 151.30 341⇑*iPKP1* PKPbc 10 57 02.1 -0.4
LPL La Plagne 151.34 334⇑*iPKP1* PKPbc 10 57 02.4 -0.2
comp=Z,61nm,0.9s
LPG La Plagne 151.35 334⇑*iPKP1* PKPbc 10 57 02.5 -0.1
comp=Z,45nm,0.6s
SMF Signal de Mont 151.47 339⇑*iPKP1* PKPbc 10 57 01.9 -1.0
comp=Z,36nm,1.1s
AVF Avril sur Loir 151.50 340 *e*PKP1 PKPbc 10 57 01.9 -1.1
comp=Z,28nm,1.0s
SGMF Saint Gilles 151.66 349⇑*iPKP1* PKPbc 10 57 02.0 -1.3
comp=Z,87nm,0.6s
ROSF Rostrenen 151.71 350⇑*iPKP1* PKPbc 10 57 02.0 -1.4
comp=Z,57nm,0.6s
BNI Bardonecchia 151.74 334 *e*PKPbc PKPbc 10 57 02.7 -0.9
BGF Bois d'Agland 151.87 340⇑*iPKP1* PKPbc 10 57 03.0 -0.8
comp=Z,55nm,0.7s
MBDF Montbardon 151.96 333 *e*PKP1 PKPbc 10 57 03.2 -0.9
comp=Z,30nm,0.8s
QUIF Quistinic 152.10 349⇑*iPKP1* PKPbc 10 57 02.9 -1.4
comp=Z,56nm,0.8s
PLDF La Plantade 152.13 338 PKP PKPdf 10 56 56.9 -0.9
ORIF Oris-en-Rattie 152.18 334⇑*iPKP1* PKPbc 10 57 03.8 -0.8
comp=Z,53nm,0.6s
ORIF *e*MLR MLR
comp=Z,98nm,21.4s,MS4.3
TCF Toulx Ste Croi 152.31 341⇑*iPKP1* PKPbc 10 57 03.9 -0.9
comp=Z,49nm,0.8s
SBF Sospel 152.35 331⇑*iPKP1* PKPbc 10 57 04.7 -0.3
comp=Z,43nm,0.8s
PYM Petit Puy Mans 152.53 339 PKP PKPdf 10 56 57.7 -0.7
MFF Saint Martin d 152.69 344⇑*iPKP1* PKPbc 10 57 04.6 -1.1
comp=Z,35nm,0.7s
VIVF Saint-Julien-l 152.70 336⇑*iPKP1* PKPbc 10 57 05.0 -0.7
comp=Z,29nm,0.8s
LBL Lubilhac 152.90 338 PKP PKPdf 10 56 57.2 -1.7
FRF La Foret Royal 152.94 332⇑*iPKP1* PKPbc 10 57 05.1 -1.2
comp=Z,14nm,0.7s
SMRF Simiane la Rot 153.07 334⇑*iPKP1* PKPbc 10 57 06.1 -0.5
comp=Z,48nm,1.0s
LMR La Mourre 153.19 332⇑*iPKP1* PKPbc 10 57 05.6 -1

	comp=Z,22nm,0.8s						
LFF	**La Frestale**	**153.97**	**341**	*e*PKP1	PKPbc	10 57 07.6	-0.9
	comp=Z,25nm,0.7s						
MTLF	**Montolieu**	**154.91**	**338**	*e*PKP1	PKPbc	10 57 09.6	-1.0
	comp=Z,13nm,0.9s						
KEST	**Kesra**	**156.89**	**315**	PKPab	PKPab	10 57 35.9	+1.2
	comp=Z,1.7nm,0.7s,baz=339,slow=6.3,SNR=4.7						
PBRG	**Bragança**	**158.61**	**352**	*e*PKPab	PKPab	10 57 41.4	-0.4
PVRL	**Vila Real**	**159.25**	**354**	*e*PKPab	PKPab	10 57 44.0	-0.5
MVO	**Moncorvo**	**159.28**	**352**	*e*PKPab	PKPab	10 57 44.8	+0.1
PVIS	**Viseu**	**159.82**	**354**	*e*PKPab	PKPab	10 57 46.4	-0.6
MTE	**Manteigas**	**160.10**	**353**	*e*PKPdf	PKPdf	10 57 08.0	-0.4
MTE	**Manteigas**	**160.10**	**353**	*e*PKPab	PKPab	10 57 48.1	-0.2
ESDC	**Sonseca Array**	**160.16**	**345**	PKP	PKPdf	10 57 07.0	-1.5
	comp=Z,0.2nm,0.4s,baz=331,slow=5.8,SNR=5.8						
ESDC				PKPab	PKPab	10 57 48.1	-0.4
	comp=Z,1.5nm,0.4s,baz=9.2,slow=3.9,SNR=17						
PCBR	**Castelo Branco**	**160.64**	**353**	*e*PKPdf	PKPdf	10 57 08.1	-0.9
PCBR	**Castelo Branco**	**160.64**	**353**	*e*PKPab	PKPab	10 57 50.6	0.0
PESTR	**Estremoz**	**161.62**	**352**	*e*PKPab	PKPab	10 57 54.7	-0.2
PBAR	**Barrancos**	**162.22**	**351**	*e*PKPab	PKPab	10 57 57.2	-0.4
PBEJ	**Beja**	**162.48**	**353**	*e*PKPab	PKPab	10 57 58.9	+0.2
PVAQ	**Vaqueiros**	**163.07**	**352**	*e*PKPab	PKPab	10 58 01.4	+0.1
LIC	**Lamto**	**164.71**	**202**	⇑*i*PKIKP	PKPdf	10 57 09.5	-4.3
	comp=Z,56nm,1.6s						
LIC				*e*MLR	MLR		
	comp=Z,168nm,23.0s						
LIC	**Lamto**	**164.71**	**202**	⇑*i*PKPdf	PKPdf	10 57 09.5	-4.3
LIC				LR	LR		
	comp=Z,80nm,23.0s						
DBIC	**Dimbokro**	**165.06**	**203**	PKP	PKPdf	10 57 13.0	-1.1
DBIC				PKPab	PKPab	10 58 10.4	-0.2
DBIC	**Dimbokro**	**165.06**	**203**	PKP	PKPdf	10 57 13.0	-1.1
	comp=Z,3.7nm,0.8s,baz=135,slow=1.8,SNR=6.3						
DBIC				PKPab	PKPab	10 58 10.4	-0.2
	comp=Z,9.4nm,0.8s,baz=112,slow=4.3,SNR=8.7						
TORD	**Torodi Ar. Bea**	**166.07**	**240**	PKP	PKPdf	10 57 13.7	-1.1
	comp=Z,1.9nm,0.8s,baz=340,slow=1.2,SNR=12						
TORD				PKPab	PKPab	10 58 14.4	-0.9
	comp=Z,1.6nm,0.7s,baz=107,slow=4.3,SNR=5.6						
MDT	**Midelt**	**166.71**	**337**	PKP	PKPdf	10 57 14.0	-0.9
	comp=Z,3.2nm,1.0s,baz=310,slow=2.3,SNR=5.2						
MDT				PKPab	PKPab	10 58 17.8	+0.3
	comp=Z,5.2nm,0.9s,baz=25,slow=1.5,SNR=12						

MAN 25 10:37:33,941N×12531E, h1km, mb4.9, ML3.8, MS3.9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.84**	**328**	*e*P	Pg	10 37 50.2	+1.0
MSLP				*e*S	Sg	10 38 04.1	+3.9
CGP	**Cagayan de Oro**	**1.13**	**213**	⇑*i*P	Pg	10 37 55.1	+0.4
CGP				*i* S	Sg	10 38 12.2	+2.8
TBP	**Tagbilaran**	**1.46**	**281**	*e*P	Pn	10 38 00.2	-0.3
TBP				*e*S	Sg	10 38 20.1	+0.2
BUKP	**Musuan**	**1.54**	**189**	*e*P	Pn	10 38 01.1	-0.6
BUKP				*e*S	Sn	10 38 23.9	+1.6
BIPH	**Bislig**	**1.60**	**140**	⇓*i*P	Pn	10 38 00.5	-2.0
BIPH				*i* S	Sn	10 38 22.1	-1.7
LLP	**Lapu-Lapu**	**1.60**	**304**	*e*P	Pn	10 38 02.3	-0.2
LLP				*e*S	Sn	10 38 24.6	+0.8
PLP	**Palo**	**1.77**	**349**	*e*P	Pn	10 38 04.6	-0.2
PLP				*e*S	Sn	10 38 29.5	+1.5
SNPH	**Sibulan**	**2.05**	**268**	*e*P	Pn	10 38 11.0	+2.4
DCPH	**Dipolog City**	**2.10**	**247**	⇓*i*P	Pn	10 38 09.7	+0.3
DCPH				*e*S	Sn	10 38 38.3	+2.1
BESP	**Borongan**	**2.18**	**3**	*e*P	Pn	10 38 12.2	+1.7
BESP				*e*S	Sn	10 38 41.0	+3.0
PAGZ	**Pagadian**	**2.46**	**231**	*e*P	Pn	10 38 15.4	+1.1
PAGZ				*e*S	Sn	10 38 48.1	+3.1
MATI	**Mati**	**2.62**	**159**	*e*P	Pn	10 38 19.2	+2.7
GUIM	**Jordan**	**2.94**	**294**	*e*P	Pn	10 38 24.6	+3.7
CNP	**Catarman**	**3.14**	**348**	*e*P	Pn	10 38 28.4	+4.7
PVCP	**Virac**	**4.31**	**345**	*e*P	Pn	10 38 45.3	+5.6

*TEH **25** 10:37:48.3, 2658N×5375E, h23km, ML3.5*
*IDC **25** 10:37:58.3±1.2, 2695N×5401E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, MS3.6/1, Ms1 3.6/1, ms1mx2.8/28, Error ellipse: s-maj=30.2km s-min=28.3km az=4.0*
*ISCJB **25** 10:38:04.0±0.7, 2708N±006×5404E±009, h52km±8km, mb3.7/7, Error ellipse: s-maj=16.4km s-min=5.8km az=146.2*
*CSEM **25** 10:38:05.2±0.1, 2723N×5415E, h40km, ML3.8/4, Error ellipse: s-maj=9.6km s-min=1.0km az=66.0*

ISC 25 10:38:05.3±0.7, 2707N±006×5404E±010, h48km±8km, n22, σ0°76/24, mb3.7/7, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBND		**2.25**	**80**	*e*Pn	**Pn**	**10 38 39.2**	**-0.9**
IMOK	**Mook**	**2.29**	**330**	*e*Pn	**Pn**	**10 38 39.3**	**-1.4**
IMOK				*e*Sn	**Sn**	**10 39 09.7**	**+2.0**
IMOK				*e*		10 39 31.1	
	comp=Z,4μm,0.4s						
BANOM	**Banah**	**2.32**	**119**	P	**Pn**	**10 38 40.0**	**-1.0**
	SNR=9.9						
BANOM	**Banah**	**2.32**	**119**	Pn	**Pn**	**10 38 40.0**	**-1.0**
	SNR=9.9						
BANOM				Sn	**Sn**	**10 39 08.7**	**+0.3**
ISRV	**Sarvestan**	**2.45**	**341**	*e*Pn	**Pn**	**10 38 42.9**	**+0.1**
ISRV				*e*		10 39 25.5	
	comp=Z,2μm,0.1s						
NAZ	**Nazwa, Dubai**	**2.53**	**145**	Pn	**Pn**	**10 38 44.5**	**+0.6**
ASUD	**Al Ashush, Dub**	**2.69**	**154**	Pn	**Pn**	**10 38 47.0**	**+0.8**
	SNR=7.3						
ASUD				S	Sn	10 39 39.8	+22
IPAR	**Pars**	**2.90**	**343**	*e*Pn	**Pn**	**10 38 49.0**	**0.0**
HATD	**Hatta, Dubai**	**2.92**	**139**	Pn	**Pn**	**10 38 49.3**	**0.0**
ASHO	**Ashiyiah**	**2.99**	**142**	P	**Pn**	**10 38 50.4**	**+0.2**
	SNR=11						
IMEH	**Mehriz**	**4.34**	**6**	*e*Pn	**Pn**	**10 39 09.7**	**+1.0**
IMEH				*e*		10 40 02.2	
	comp=Z,431nm,0.4s						
ISAD	**Sadrabad**	**4.84**	**356**	*e*Pn	**Pn**	**10 39 15.3**	**-0.3**
ISAD				*e*		10 40 14.6	
	comp=N,544nm,0.2s						
SMDO	**Samad**	**5.40**	**137**	⇑P	**Pn**	**10 39 23.4**	**+0.1**
	SNR=7.6						
IZEF	**Zefreh**	**6.00**	**346**	*e*Pn	**Pn**	**10 39 31.2**	**-0.3**
IZEF				*e*		10 39 35.0	
	comp=Z,123nm,0.1s						
IKLH	**Kalahroud**	**6.58**	**342**	*e*Pn	**Pn**	**10 39 38.1**	**-1.4**
IKLH				*e*		10 39 43.0	
	comp=Z,137nm,0.2s						
MKAR	**Makanchi Array**	**29.71**	**41**	P	**P**	**10 44 07.5**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.2,baz=235,slow=10,SNR=4.6						
ZALV	**Zalesovo Beam**	**35.12**	**32**	P	**P**	**10 44 54.1**	**+0.2**
	comp=Z,0.9nm,0.4s,mb4.0,baz=248,slow=7.8,SNR=7.2						
FINES	**FINESS Array B**	**39.16**	**339**	P	**P**	**10 45 27.7**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.4,baz=136,slow=11,SNR=6.8						
ARCES	**ARCESS Array B**	**45.64**	**346**	P	**P**	**10 46 21.2**	**+0.6**
	comp=Z,2.7nm,0.9s,mb4.2,baz=143,slow=11,SNR=3.9						
TORD	**Torodi Ar. Bea**	**50.73**	**265**	P	**P**	**10 47 00.1**	**-0.6**
	comp=Z,0.8nm,0.8s,mb3.7,baz=74,slow=7.0,SNR=6.8						
WRA	**Warramunga Arr**	**90.69**	**112**	P	**P**	**10 51 03.3**	**0.0**
	comp=Z,0.2nm,0.6s,mb3.6,baz=299,slow=6.8,SNR=2.6						
ASAR	**Alice Springs**	**92.11**	**115**	P	**P**	**10 51 09.5**	**-0.3**
	comp=Z,0.5nm,0.9s,mb3.8,baz=309,slow=4.9,SNR=3.8						

JMA 25 10:47:36.6, 3720N×13671E, h12km±1km, M2.6, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.28**	**168**	P	Pg	10 47 42.5	+0.2
JJH				S	Sg	10 47 46.4	+0.2
JSZ	**Suzu**	**0.58**	**64**	S	Sg	10 47 55.7	+0.2
JHG	**Hegura jima**	**0.67**	**14**	*e*S	Sg	10 47 58.3	-0.1
MAT	**Matsushiro**	**1.37**	**118**	P	Pn	10 48 00.5	-1.0
MAT				*e*S	Sn	10 48 19.6	+0.1

*MDD **25** 10:49:57.9±2.3, 3670N×1248W, h0km, mbLg2.7/5, Error ellipse: s-maj=20.3km s-min=17.9km az=16.0, PRXIMO*
*NEIC **25** 10:49:57.7, 3668N×1247W, h0km, MG3.5(MDD), After MDD.*
*CSEM **25** 10:50:01.2±0.5, 3724N×1253W, h10km, ML2.8/4, Error ellipse: s-maj=9.6km s-min=5.5km az=66.0*

INMG 25 10:49:59.1±1.0, 3649N×1285W, h10km, ML2.0, Error ellipse: s-maj=7.6km s-min=5.8km az=74.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.29**	**78**	*e*Pn	Pn	10 50 44.4	-6.3
PFVI				*e*Sn	Sn	10 51 19.4	-10
PFVI				A		10 51 22.8	
	2.2nm,0.2s						
PFVI	**Vila Bisbo**	**3.29**	**78**	*e*Pn	Pn	10 50 44.4	-6.3
PFVI				*e*Sn	Sn	10 51 19.4	-10
	2.2nm,0.2s						
MORF	**Marmelete**	**3.46**	**75**	*e*Sn	Sn	10 51 23.4	-11
MORF				A		10 51 27.8	
	3.7nm,0.1s						
MORF	**Marmelete**	**3.46**	**75**	P	Pn	10 50 46.7	-6.3
MORF				Sn	Sn	10 51 23.4	-11
	3.7nm,0.1s						
MORF				S	Sn	10 51 23.9	-10
MORF	**Marmelete**	**3.46**	**75**	*e*Sn	Sn	10 51 23.4	-11
	3.7nm,0.1s						
PTEO	**Sao Teotonio**	**3.46**	**71**	*e*Sn	Sn	10 51 22.9	-11
PTEO				A		10 51 28.1	
	2.9nm,0.3s						
PTEO	**Sao Teotonio**	**3.46**	**71**	*e*Sn	Sn	10 51 22.9	-11
	2.9nm,0.3s						
PMAFR	**Mafra**	**3.75**	**48**	*e*Pn	Pn	10 50 50.4	-6.6
PMAFR				*e*Sn	Sn	10 51 30.3	-11
PMAFR				A		10 51 36.3	
	6.3nm,0.4s						
PMAFR	**Mafra**	**3.75**	**48**	*e*Pn	Pn	10 50 50.4	-6.6
PMAFR				*e*Sn	Sn	10 51 30.3	-11
	6.3nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.01**	**78**	*e*Pn	Pn	10 50 55.9	-4.7
PBDV				*e*Sn	Sn	10 51 37.5	-10
PBDV				A		10 51 44.8	
	1.6nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.01**	**78**	*e*Pn	Pn	10 50 55.9	-4.7
PBDV				*e*Sn	Sn	10 51 37.5	-10
	1.6nm,0.3s						
MOE	**Montemor**	**4.11**	**59**	*e*Sn	Sn	10 51 38.5	-12
PVAQ	**Vaqueiros**	**4.21**	**76**	*e*Pn	Pn	10 50 58.0	-5.3
PVAQ				*e*Sn	Sn	10 51 41.7	-11
PVAQ				A		10 51 47.3	
	1.6nm,0.1s						
PVAQ	**Vaqueiros**	**4.21**	**76**	*e*Pn	Pn	10 50 58.0	-5.3
PVAQ				*e*Sn	Sn	10 51 41.7	-11
	1.6nm,0.1s						
PBEJ	**Beja**	**4.26**	**67**	*e*Sn	Sn	10 51 42.1	-12
PBEJ				A		10 51 46.2	
	2.0nm,0.1s						
PBEJ	**Beja**	**4.26**	**67**	Sn	Sn	10 51 42.1	-12
	1.0nm,0.1s						
EVO	**Evora**	**4.35**	**61**	*e*Sn	Sn	10 51 43.9	-12
EVO				A		10 51 47.0	
	4.4nm,0.1s						
EVO	**Evora**	**4.35**	**61**	Sn	Sn	10 51 43.9	-12
	2.2nm,0.1s						
EGRO	**El Granado**	**4.42**	**75**	P	Pn	10 51 00.4	-5.7
	0.3nm,0.1s,SNR=7.5						
EGRO				S	Sn	10 51 45.9	-12
	2.5nm,0.3s,SNR=5.7						
EGRO	**El Granado**	**4.42**	**75**	P	Pn	10 51 00.4	-5.8
	0.3nm,0.1s,SNR=7.5						
EGRO				S	Sn	10 51 45.8	-12
	2.5nm,0.3s,SNR=5.7						
PESTR	**Estremoz**	**4.80**	**59**	*e*Sn	Sn	10 51 54.7	-12
PESTR				A		10 51 55.6	
	1.1nm,0.2s						
PBAR	**Barrancos**	**4.93**	**68**	*e*Pn	Pn	10 51 07.5	-5.6
PBAR				*e*Sn	Sn	10 51 58.2	-12
PBAR				A		10 52 01.6	
	1.8nm,0.2s						
PBAR	**Barrancos**	**4.93**	**68**	Pn	Pn	10 51 07.5	-5.6
PBAR				Sn	Sn	10 51 58.2	-12
	0.9nm,0.2s						
EMIN	**Mina Concepcio**	**5.10**	**74**	P	Pn	10 51 09.2	-6.3
	0.4nm,0.1s,SNR=7.6						
EMIN				S	Sn	10 52 02.3	-12
	1.9nm,0.4s,SNR=5.7						
EMIN	**Mina Concepcio**	**5.10**	**74**	P	Pn	10 51 09.2	-6.3
	0.4nm,0.1s,SNR=7.6						
EMIN				S	Sn	10 52 02.3	-12
	1.9nm,0.4s,SNR=5.7						
EBAD	**Badajoz**	**5.15**	**62**	P	Pn	10 51 09.9	-6.4
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	10 52 03.8	-12
	4.9nm,0.3s,SNR=8.5						
EBAD	**Badajoz**	**5.15**	**62**	P	Pn	10 51 09.9	-6.4
	0.4nm,0.1s,SNR=7.9						
EBAD				S	Sn	10 52 03.8	-12
	4.9nm,0.3s,SNR=8.5						
ESPR	**Espera**	**5.63**	**84**	S	Sn	10 52 14.9	-13
	1.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**5.63**	**84**	S	Sn	10 52 14.9	-13
	1.3nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**6.53**	**33**	P	Pn	10 51 29.5	-5.7
	0.3nm,0.2s,SNR=7.9						
ELOB				S	Sn	10 52 36.1	-14
	1.8nm,0.4s,SNR=7.9						
ELOB	**Lobios**	**6.53**	**33**	P	Pn	10 51 29.5	-5.7
	0.3nm,0.2s,SNR=7.9						
ELOB				S	Sn	10 52 36.1	-14
	1.8nm,0.4s,SNR=7.9						
STS	**Santiago**	**7.19**	**26**	S	Sn	10 52 52.7	-13
	8.0nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**7.22**	**39**	S	Sn	10 52 53.6	-13
	1.7nm,0.3s,SNR=4.0						
ECAL	**Calabor**	**7.22**	**39**	S	Sn	10 52 53.6	-13
	1.7nm,0.3s,SNR=4.0						

*IDC **25** 10:50:47.0±1.7, 1369N×12107E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=213.0km s-min=20.5km az=64.0*
*ISCJB **25** 10:51:00.7±0.5, 1356N±004×12070E±009, h130km±5km, mb3.4/4, Error ellipse: s-maj=14.7km s-min=6.3km az=166.0*
*MAN **25** 10:51:02, 1358N×12070E, h103km, mb4.1, ML2.9, MS2.6*

ISC 25 10:51:01.7±0.5, 1356N±004×12071E±009, h124km±5km, n13, σ0°75/18, mb3.6/4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.48**	**291**	*e*P	**Pn**	**10 51 19.5**	**-0.5**
LUBP				*e*S	**Sn**	**10 51 33.0**	**-0.9**
TGY	**Tagaytay City**	**0.58**	**23**	⇑*e*P	**Pn**	**10 51 24.1**	**+3.4**
BUSP	**Coron**	**1.62**	**198**	*e*P	**Pn**	**10 51 31.1**	**+0.2**
BUSP				*e*S	**Sn**	**10 51 52.9**	**-0.3**
OTRP	**Odiongan**	**1.75**	**133**	*e*P	**Pn**	**10 51 32.5**	**+0.1**
OTRP				*e*S	**Sn**	**10 51 55.4**	**-0.4**
BALP	**Baler**	**2.33**	**21**	*e*P	**Pn**	**10 51 40.2**	**+0.6**
SCZP	**Santa Cruz**	**2.33**	**341**	*e*P	**Pn**	**10 51 39.5**	**-0.2**
SCZP				*e*S	**Sn**	**10 52 08.8**	**0.0**
ENPP	**El Nido**	**2.65**	**208**	*e*P	**Pn**	**10 51 45.0**	**+1.3**
CUYO	**Cuyo Island**	**2.71**	**173**	*e*P	**Pn**	**10 51 45.2**	**+0.8**
BOLP	**Bolinao**	**2.91**	**345**	*e*P	**Pn**	**10 51 47.8**	**+0.8**
BOLP				*e*S	**Sn**	**10 52 21.2**	**-0.7**
WRA	**Warramunga Arr**	**35.89**	**158**	P	**P**	**10 57 48.7**	**-1.3**
	0.5nm,0.4s,mb3.8,baz=339,slow=8.6,SNR=15						
ASAR	**Alice Springs**	**39.18**	**161**	P	**P**	**10 58 17.1**	**-0.6**
	0.4nm,0.5s,mb3.5,baz=334,slow=7.1,SNR=18						
MKAR	**Makanchi Array**	**46.15**	**324**	P	**P**	**10 59 14.0**	**+0.3**
	0.6nm,0.6s,mb3.5,baz=134,slow=8.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**49.19**	**333**	P	**P**	**10 59 37.0**	**0.0**
	0.3nm,0.3s,mb3.7,baz=140,slow=9.1,SNR=2.8						

*CSEM **25** 10:56:23.6, 3645N×2526E, h6km, MD3.6/3, After ATH*

ATH 25 10:56:23.6, 3645N×2527E, h6km, MD3.6/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.22**	**167**	*e*PN	Pn	10 56 45.8	-1.3
VAM	**Vamos**	**1.36**	**220**	*e*PB	Pb	10 56 49.4	0.0
KARP	**Karpathos**	**1.78**	**120**	*e*PN	Pn	10 56 57.7	+2.8
ARG	**Arkhangelos**	**2.32**	**95**	*e*PN	Pn	10 57 04.1	+1.8

*ISCJB **25** 11:24:09.9±0.9, 687N±009×7294W±008, h172km±9km, mb3.2/1, Error ellipse: s-maj=14.6km s-min=11.9km az=148.7*
*FUNV **25** 11:24:10.9, 688N×7309W, h171km, MW3.4*
*IDC **25** 11:24:14.3±5.2, 674N×7487W, h163km±124km, mb2.9/1, mb1 3.3/1, mb1mx2.8/15, mbtmp2.9/1, Error ellipse: s-maj=585.5km s-min=39.8km az=87.0*

ISC 25 11:24:10.8±0.9, 685N±009×7293W±008, h166km±9km, n15, σ0°64/20, mb3.2/1, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.18**	**31**	⇓*i*P	**Pn**	**11 24 39.0**	**+0.3**
CAPV				*e*S	**Sn**	**11 25 00.4**	**+0.4**
ROSC	**El Rosal**	**2.42**	**215**	P	**Pn**	**11 24 51.3**	**-0.5**
	11nm,0.3s,baz=91,slow=23,SNR=23						
ROSC				S	**Sn**	**11 25 18.2**	**-5.3**
	20nm,0.3s,baz=96,slow=18,SNR=12						
SOCV	**Socops**	**2.50**	**55**	*e*P	**Pn**	**11 24 53.7**	**+0.9**
SOCV				*e*S	**Sn**	**11 25 24.6**	**-0.7**
VIGV	**El Vigia**	**2.52**	**38**	⇓*i*P	**Pn**	**11 24 53.3**	**+0.4**
VIGV				*e*S	**Sn**	**11 25 25.2**	**-0.3**
ELOV	**Elorza**	**3.43**	**87**	*e*P	**Pn**	**11 25 05.3**	**+1.1**
ELOV				*e*S	**Sn**	**11 25 45.0**	**-0.8**
VIRV	**Villa del Rosa**	**3.67**	**8**	*e*P	**Pn**	**11 25 05.7**	**-1.5**
VIRV				*e*S	**Sn**	**11 25 46.4**	**-4.8**
QARV	**Quebrada Arrib**	**4.10**	**35**	*e*P	**Pn**	**11 25 13.3**	**+0.5**
SANV	**Sanarito**	**4.27**	**52**	*e*P	**Pn**	**11 25 15.1**	**+0.1**
CURV	**Curarigua**	**4.30**	**43**	*e*P	**Pn**	**11 25 15.7**	**+0.2**
TEPV	**Terepaima**	**4.82**	**50**	*e*P	**Pn**	**11 25 22.5**	**+0.3**
BAUV	**El Baul**	**5.27**	**66**	*e*P	**Pn**	**11 25 27.3**	**-0.8**
TURV	**Turiamo**	**6.18**	**54**	*e*P	**Pn**	**11 25 40.4**	**+0.3**
CAOV	**Caicara del Or**	**6.58**	**85**	*e*P	**Pn**	**11 25 45.2**	**-0.2**
YKA	**Yellowknife Ar**	**63.30**	**340**	P	**P**	**11 34 21.6**	**0.0**
	0.2nm,0.5s,mb3.2,baz=134,slow=6.7,SNR=7.6						
WRA	**Warramunga Arr**	**150.51**	**241**	PKPbc	PKPbc	11 43 43.0	-0.7
	0.4nm,1.1s,baz=104,slow=3.4,SNR=6.9						

*IDC **25** 11:27:16.4±1.2, 2371N×12636E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/18, mbtmp3.6/5, ML3.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/18, Error ellipse: s-maj=49.0km s-min=21.2km az=74.0*
*ISCJB **25** 11:27:19.2±1.1, 2371N±007×12631E±005, h35km±13km, mb3.5/4, Error ellipse: s-maj=12.7km s-min=6.8km az=167.9*
*JMA **25** 11:27:20.9±0.2, 2374N×12618E, h77km, M3.3*

ISC 25 11:27:20.5±2.3, 2375N±006×12628E±004, h33km±19km, n16, σ0°89/24, mb3.5/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.29**	**322**	P	**Pn**	**11 27 43.0**	**+0.8**
JOGS				S	**Sn**	**11 27 59.7**	**+1.4**
JMJ	**Miyako jima 2**	**1.40**	**320**	P	**Pn**	**11 27 44.6**	**+0.9**
JMJ				*e*S	**Sn**	**11 28 02.0**	**+1.0**
JTJ	**Tarama**	**1.70**	**302**	P	**Pn**	**11 27 47.9**	**+0.1**
JTJ				*e*S	**Sn**	**11 28 08.6**	**+0.2**
JIJ	**Ishigaki jima**	**2.05**	**288**	P	**Pn**	**11 27 53.0**	**+0.3**
JIJ				*e*S	**Sn**	**11 28 17.0**	**-0.2**
JKRS	**Kuro-shima**	**2.14**	**284**	P	**Pn**	**11 27 54.1**	**+0.2**
JKRS				*e*S	**Sn**	**11 28 19.0**	**-0.3**
HATJ	**Hateruma jima**	**2.29**	**278**	P	**Pn**	**11 27 55.8**	**-0.2**
HATJ				*e*S	**Sn**	**11 28 21.4**	**-1.7**
IRIF	**Iriomote-Funau**	**2.41**	**285**	P	**Pn**	**11 27 57.6**	**0.0**
IRIF				*e*S	**Sn**	**11 28 25.6**	**-0.4**
JKE	**Kume jima 2**	**2.61**	**10**	P	**Pn**	**11 27 59.5**	**-0.9**
JJT2	**Tamagusuku 2**	**2.73**	**29**	P	**Pn**	**11 28 01.6**	**-0.4**
YOJ	**Yonaguni jima**	**3.07**	**284**	P	**Pn**	**11 28 06.6**	**-0.2**
YOJ				S	**Sn**	**11 28 40.3**	**-2.1**
JOW	**Kunigami**	**3.56**	**30**	Pn	**Pn**	**11 28 12.8**	**-0.6**
	4.3nm,0.3s,baz=177,slow=12,SNR=25						
JOW				Sn	**Sn**	**11 28 52.8**	**-1.6**
	2.0nm,0.3s,baz=102,slow=20,SNR=3.3						
CBIJ	**Chichi jima**	**14.75**	**74**	LR	LR	11 35 54.8	
	comp=Z,165nm,19.2s,baz=106,slow=35						
MKAR	**Makanchi Array**	**41.94**	**314**	P	**P**	**11 35 09.8**	**+1.8**
	0.2nm,0.5s,mb3.0,baz=100,slow=10,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.21**	**325**	P	**P**	**11 35 19.0**	**+0.8**
	0.4nm,0.3s,mb3.6,baz=103,slow=6.3,SNR=3.9						
WRA	**Warramunga Arr**	**44.13**	**169**	P	**P**	**11 35 26.0**	**0.0**
	2.0nm,0.6s,mb4.0,baz=350,slow=8.8,SNR=17						
ASAR	**Alice Springs**	**47.71**	**171**	P	**P**	**11 35 54.7**	**+0.5**
	0.3nm,0.5s,mb3.6,baz=355,slow=14,SNR=8.2						

*ISCJB **25** 11:46:42.7±0.3, 4167N±002×2044E±002, h10km, Error ellipse: s-maj=3.2km s-min=1.8km az=36.3*
*CSEM **25** 11:46:42.7±0.1, 4163N×2045E, h19km, ML2.4, Error ellipse: s-maj=3.5km s-min=1.8km az=35.0*
*SKO **25** 11:46:42.8, 4166N×2046E, h15km, M2.0, ML2.4*
*TIR **25** 11:46:42.6±1.8, 4167N×2042E, h10km±147km, ML2.3*
*THE **25** 11:46:42.8, 4171N×2047E, h8km*
*BEO **25** 11:46:44.5±0.4, 4166N×2044E, h8km±4km, ML2.4/7*
*NEIC **25** 11:46:45.5, 4171N×2030E, h0km, ML2.5(PDG), After PDG.*
*PDG **25** 11:46:45.5±0.2, 4171N×2030E, h0km, ML2.5/9, Error ellipse: s-maj=1.1km s-min=1.2

TTG	**Podgorica**	**1.17**	**311**	⇑	*i* Pg	**Pn**	**11 47 04.4**	**-2.4**
TTG					*e* Sg	**Sg**	**11 47 22.0**	**+0.7**
BEY	**Berane**	**1.28**	**342**		*i* PG	**Pn**	**11 47 07.2**	**-1.1**
BEY					*i* SG	**Sg**	**11 47 25.7**	**+1.0**
BEY	**Berane**	**1.28**	**342**	⇑	*i* Pg	**Pn**	**11 47 07.2**	**-1.1**
BEY					*e* Sg	**Sg**	**11 47 25.7**	**+1.0**
IVA	**Berane**	**1.28**	**342**	⇑	*i* Pg	**Pn**	**11 47 07.2**	**-1.1**
IVA					*e* Sg	**Sg**	**11 47 25.7**	**+1.0**
STIP	**Stip**	**1.30**	**88**		*e* Pg	**Pn**	**11 47 05.9**	**-2.8**
STIP	**Stip**	**1.30**	**88**		*e* Pg	**Pg**	**11 47 07.0**	**-1.8**
STIP					*e* Sg	**Sg**	**11 47 26.2**	**+0.5**
STIP					*e* Sg	**Sg**	**11 47 26.3**	**+0.6**
STIP	**Stip**	**1.30**	**88**		*e* Pg	**Pn**	**11 47 06.7**	**-2.0**
STIP					*i* Sg	**Sg**	**11 47 26.3**	**+0.6**
STIP					*e* Lg		11 47 27.4	
	comp=E,6.9nm,0.3s							
STIP					*e* Lg		11 47 27.5	
	comp=N,14nm,0.4s							
STIP	**Stip**	**1.30**	**88**		*e* Pg	**Pn**	**11 47 06.7**	**-2.0**
STIP					*i* Sg	**Sg**	**11 47 26.2**	**+0.5**
BUM	**Brajici-Budva**	**1.32**	**300**	⇑	*i* Pg	**Pn**	**11 47 07.4**	**-1.5**
BUM					*e* Sg	**Sg**	**11 47 26.4**	**+0.3**
BUM	**Brajici-Budva**	**1.32**	**300**		*i* PG	**Pn**	**11 47 07.4**	**-1.5**
BUM					*i* SG	**Sg**	**11 47 26.4**	**+0.3**
BARS	**Barje**	**1.55**	**41**		*e* Pn	**Pn**	**11 47 11.6**	**-0.4**
BARS					*e* Sg	**Sg**	**11 47 33.0**	**-0.4**
BARS	**Barje**	**1.55**	**41**		Pn	**Pn**	**11 47 11.7**	**-0.3**
BARS					Sg	**Sg**	**11 47 35.3**	**+1.9**
NKY	**Niksic**	**1.57**	**317**	⇑	*i* Pg	**Pg**	**11 47 12.8**	**-1.1**
NKY					*e* Sg	**Sg**	**11 47 35.6**	**+1.3**
NKY	**Niksic**	**1.57**	**317**		*i* PG	**Pg**	**11 47 12.8**	**-1.1**
NKY					*i* SG	**Sg**	**11 47 35.6**	**+1.3**
VAY	**Valandovo**	**1.63**	**101**		*e* Pn	**Pn**	**11 47 12.9**	**-0.3**
VAY					*e* Sg	**Sg**	**11 47 35.7**	**-0.5**
VAY	**Valandovo**	**1.63**	**101**		*i* Pg	**Pg**	**11 47 12.9**	**-2.1**
VAY					*i* Sg	**Sg**	**11 47 35.5**	**-0.7**
VAY					*e* Lg		11 47 36.7	
	comp=E,20nm,0.4s							
VAY	**Valandovo**	**1.63**	**101**		*i* Pg	**Pn**	**11 47 12.9**	**-0.3**
VAY					*i* Sg	**Sg**	**11 47 35.5**	**-0.7**
HCY	**Herceg Novi**	**1.65**	**299**	⇑	*i* Pg	**Pg**	**11 47 14.2**	**-1.1**
HCY					*e* Sg	**Sg**	**11 47 38.1**	**+1.4**
HCY	**Herceg Novi**	**1.65**	**299**		*i* PG	**Pg**	**11 47 14.2**	**-1.1**
HCY					*i* SG	**Sg**	**11 47 38.1**	**+1.4**
SJES	**Sjenica**	**1.65**	**347**		*e* Pn	**Pn**	**11 47 13.3**	**-0.1**
SJES					*e* Sg	**Sg**	**11 47 36.3**	**-0.4**
PLE	**Pljevlja**	**1.84**	**335**	⇑	*i* Pn	**Pn**	**11 47 17.8**	**+1.8**
PLE					*e* Sn	**Sg**	**11 47 43.8**	**+1.0**
BRY	**Bratogost**	**1.88**	**312**		*e* Pn	**Pn**	**11 47 17.8**	**+1.3**
BRY					*e* Sn	**Sg**	**11 47 43.9**	**-0.1**
BRY	**Bratogost**	**1.88**	**312**		*i* PG	**Pn**	**11 47 17.8**	**+1.3**
BRY					*i* SG	**Sg**	**11 47 43.8**	**-0.2**
UPM	**Unac-Piva**	**1.91**	**324**	⇓⇓	*i* Pn	**Pn**	**11 47 19.3**	**+2.2**
UPM					*e* Sn	**Sg**	**11 47 45.5**	**+0.3**
VTS	**Vitosha**	**2.26**	**65**		*e* Sg	**Sg**	**11 47 57.2**	**+1.0**
BBLS	**Bajina Basta -**	**2.33**	**341**		*e* Pn	**Pn**	**11 47 24.9**	**+2.1**
BBLS					*e* Sn	**Sn**	**11 47 52.9**	**+1.0**
DIVS	**Divcibare**	**2.46**	**352**		*e* Pn	**Pn**	**11 47 23.8**	**-0.7**
DIVS					*e* Sn	**Sn**	**11 47 55.0**	**0.0**
DIVS	**Divcibare**	**2.46**	**352**		Pn	**Pn**	**11 47 23.5**	**-1.0**
DIVS					Sg	**Sg**	**11 48 00.9**	**-1.8**

ATH ***25*** *11:48:09.6,3440N×2460E,h88km*
CSEM ***25*** *11:48:10.2,3424N×2470E,h41km,MD3.3/3,After ATH*
ISCJB ***25*** *11:48:14.9±1.6,347N±0.1×2475E±006,h31km±8km,Error ellipse: s-maj=23.6km s-min=7.9km az=178.9*
THE ***25*** *11:48:15.6,3474N×2475E,h19km*
ISC 25 11:48:14.8±1.7,347N±01×2475E±006,h29km±8km,n7, σ0§64/11,Crete

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.33**	**9**		*e* Pg	**Pb**	**11 48 21.8**	**-0.8**
GVD	**Gavdhos**	**0.56**	**285**		*e* Pg	**Pb**	**11 48 26.1**	**-0.1**
GVD					*e* Sg	**Sb**	**11 48 35.2**	**+1.2**
GVD	**Gavdhos**	**0.56**	**285**		*e* P	**Pb**	**11 48 25.7**	**-0.5**
GVD					*e* S	**Sb**	**11 48 37.5**	**+3.5**
LAST	**Lasithi**	**0.76**	**52**		*e* Pg	**Sb**	**11 48 29.2**	**-0.3**
LAST					*e* Sg	**Sb**	**11 48 40.1**	**+0.6**
XRY	**Khrisi**	**0.80**	**76**		*e* P	**Pn**	**11 48 30.2**	**+0.1**
NPS	**Neapolis**	**0.91**	**51**		*e* P	**Pn**	**11 48 32.0**	**+0.4**
KARN	**Karanos**	**0.98**	**316**		*e* Pg	**Pn**	**11 48 31.9**	**-0.7**
KARN					*e* Sg	**Sn**	**11 48 45.6**	**+0.1**

ISCJB ***25*** *11:56:29.7±0.5,3838N±002×2195E±005,h10km±4km, Error ellipse: s-maj=6.0km s-min=4.1km az=10.6*
THE ***25*** *11:56:30.6,3837N×2202E,h3km,ML3.0*
ATH ***25*** *11:56:30.7,3840N×2195E,h26km±1km,MD3.2/8*
NEIC ***25*** *11:56:30.7,3840N×2195E,h26km,MD3.2(ATH),After ATH.*
CSEM ***25*** *11:56:31.0±0.1,3836N×2198E,h8km±1km,ML3.0,Error ellipse: s-maj=3.1km s-min=2.2km az=77.0*
ISC 25 11:56:30.7±0.4,3838N±002×2201E±004,h10km±4km,n18, σ0§92/27,Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SELA	**Sela**	**0.14**	**221**		*e* Pg	**Pg**	**11 56 33.4**	**-0.6**
SELA					*e* Sg	**Sg**	**11 56 35.9**	**-0.3**
RLS	**Riolos of Patr**	**0.54**	**233**		*e* PN	**Pg**	**11 56 41.5**	**+0.3**
RLS					*e* SN	**Sg**	**11 56 49.5**	**+1.2**
EVR	**Evrytania**	**0.56**	**343**		*e* PN	**Pg**	**11 56 41.6**	**+0.1**
EVR					*e* SN	**Sg**	**11 56 49.5**	**+0.7**
AGG	**Agios Georgios**	**0.68**	**21**		*e* Pg	**Pg**	**11 56 43.3**	**-0.6**
AGG					*e* Sg	**Sg**	**11 56 54.6**	**+1.7**
LKR	**Lokris**	**0.82**	**71**		*e* PB	**Pb**	**11 56 46.7**	**-0.3**
LKR					*e* SN	**Sn**	**11 57 00.1**	**-0.3**
LTK	**Loutraki**	**0.83**	**115**		*e* Pg	**Pg**	**11 56 46.4**	**-0.4**
VLX	**Vlachokerasia**	**1.05**	**164**		*e* Pg	**Pg**	**11 56 49.5**	**-1.4**
VLX					*e* Sg	**Sg**	**11 57 05.4**	**+0.8**
VLS	**Valsamata**	**1.14**	**260**		*e* PN	**Pn**	**11 56 51.5**	**-1.2**
THL	**Klokotos Trika**	**1.18**	**0**		*e* PN	**Pn**	**11 56 53.3**	**+0.1**
THL					*e* SN	**Sn**	**11 57 09.0**	**-0.3**
ITM	**Ithomi**	**1.21**	**183**		*e* PN	**Pn**	**11 56 53.0**	**-0.6**
ITM					*e* SN	**Sn**	**11 57 10.8**	**+0.9**
DID	**Didima**	**1.31**	**132**		*e* Pg	**Pg**	**11 56 55.0**	**-0.8**
DID					*e* Sg	**Sg**	**11 57 13.9**	**+1.2**
NAIG	**Nisos Aigina**	**1.32**	**118**		*e* PN	**Pn**	**11 56 55.5**	**+1.3**
XOR	**Xorichti**	**1.34**	**43**		*e* Pg	**Pg**	**11 56 55.7**	**-0.8**
PTL	**Penteli**	**1.50**	**102**		*e* PN	**Pn**	**11 56 59.5**	**+1.9**
AOS	**Alonnisos**	**1.66**	**61**		*e* Pb	**Pb**	**11 57 00.7**	**-0.6**
LIT	**Litokhoron**	**1.75**	**12**		*e* Pb	**Pb**	**11 57 02.1**	**-0.9**
VLI	**Veliai**	**1.82**	**156**		*e* PB	**Pb**	**11 57 02.5**	**-1.5**
FNA	**Florina**	**2.45**	**349**		*e* Pn	**Pn**	**11 57 11.4**	**+0.7**

CSEM ***25*** *12:06:40.7±0.4,3439N×3677E,h2km,Mc1.8,Error ellipse: s-maj=10.0km s-min=5.7km az=132.0*
GRAL ***25*** *12:06:41.8±2.3,3447N×3678E,h0km±487km,MD3.1*
ISCJB ***25*** *12:06:42.3±1.6,3446N±004×367E±0.1,h7km±10km,Error ellipse: s-maj=15.6km s-min=6.4km az=10.9*
NSSC ***25*** *12:06:48.5,3471N×3652E,h11km±6km*
ISC 25 12:06:42.3±1.6,3447N±004×367E±01,h6km±9km,n11, σ1§09/19,10D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FKH	**Fakeheh**	**0.34**	**226**		*e* Pg	**Pg**	**12 06 47.8**	**-1.2**
FKH					*e* Sg	**Sg**	**12 06 53.0**	**-0.6**
BIDA	**Albida**	**0.62**	**330**	⇓⇓	P	**Pg**	**12 06 56.0**	**+1.6**
BIDA				⇓⇓	S	**Sg**	**12 07 02.1**	**-0.4**
BIDA	**Albida**	**0.62**	**330**	⇓⇓	*i* P	**Pg**	**12 06 56.0**	**+1.6**
HWQ	**Hawqa**	**0.66**	**253**		*e* Pg	**Pg**	**12 06 56.1**	**+1.1**
HWQ					*e* Sg	**Sg**	**12 07 03.9**	**+0.4**
BHL	**Bhannes**	**1.04**	**237**		*e* Pg	**Pg**	**12 07 01.6**	**-0.7**
BHL					*e* Sg	**Sg**	**12 07 16.4**	**+0.6**
WRDH	**Warideh**	**1.06**	**347**	⇓⇓	P	**Pg**	**12 07 03.8**	**+1.1**
WRDH				⇓⇓	S	**Sg**	**12 07 15.2**	**-1.2**
WRDH	**Warideh**	**1.06**	**347**	⇓⇓	*i* P	**Pg**	**12 07 03.8**	**+1.1**
SLNF	**Slenfeh**	**1.19**	**341**	⇓⇓	P	**Pg**	**12 07 06.4**	**+1.3**
SLNF				⇓⇓	S	**Sg**	**12 07 19.2**	**-1.3**
SLNF	**Slenfeh**	**1.19**	**341**	⇓⇓	*i* P	**Pg**	**12 07 06.4**	**+1.3**
RCY	**Rachaya**	**1.23**	**217**		*e* Pg	**Pg**	**12 07 04.0**	**-1.9**
RCY					*e* Sg	**Sg**	**12 07 22.6**	**+0.7**
ARNB	**Al Arnab**	**1.51**	**337**	⇑⇑	P	**Pn**	**12 07 11.1**	**+1.2**
ARNB				⇓⇓	S	**Sn**	**12 07 28.9**	**-0.9**

IDC ***25*** *12:32:07.7±0.9,928N×12666E,h0km,mb3.8/7,mb1 3.9/7, mb1mx3.8/18,mbtmp3.7/7,Error ellipse: s-maj=73.9km s-min=17.6km az=74.0*
MAN ***25*** *12:32:08,1332N×122.75E,h9km,mb4.1,ML2.9,MS2.6*
ISCJB ***25*** *12:32:11.7±1.2,921N±004×12684E±008,h43km±12km, mb3.9/8,Error ellipse: s-maj=13.5km s-min=6.8km az=174.8*
ISC 25 12:32:12.7±2.3,919N±004×12686E±006,h34km±18km, n19,σ1§15/27,mb3.9/8,3C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.11**	**206**	⇑	*e* P	**Pn**	**12 32 31.3**	**-0.6**
BIPH					*i* S	**Sn**	**12 32 44.5**	**-1.6**
MSLP	**Maasin**	**2.19**	**296**		*e* P	**Pn**	**12 32 46.6**	**-0.1**
MSLP					*e* S	**Sn**	**12 33 15.7**	**+3.2**
BUKP	**Musuan**	**2.21**	**234**		*e* P	**Pn**	**12 32 48.0**	**+1.0**
BUKP					*e* S	**Sn**	**12 33 16.1**	**+3.0**
CGP	**Cagayan de Oro**	**2.26**	**251**	⇑	*e* P	**Pn**	**12 32 47.1**	**-0.6**
CGP					*i* S	**Sn**	**12 33 13.5**	**-1.0**
PLP	**Palo**	**2.70**	**317**		*e* P	**Pn**	**12 32 53.1**	**-0.6**
PLP					*e* S	**Sn**	**12 33 26.8**	**+1.5**
TBP	**Tagbilaran**	**3.00**	**280**		*e* P	**Pn**	**12 32 57.5**	**-0.3**
LLP	**Lapu-Lapu**	**3.07**	**292**		*e* P	**Pn**	**12 32 58.5**	**-0.3**
LLP					*e* S	**Sn**	**12 33 27.0**	**-7.3**
DCPH	**Dipolog City**	**3.52**	**260**	⇑	*e* P	**Pn**	**12 33 04.8**	**-0.2**
DCPH					*e* S	**Sn**	**12 33 45.4**	**-0.1**
CNP	**Catarman**	**3.94**	**327**		*e* P	**Pn**	**12 33 10.5**	**-0.3**
CNP					*e* S	**Sn**	**12 33 54.4**	**-1.6**
GUIM	**Jordan**	**4.45**	**289**		*e* P	**Pn**	**12 33 19.4**	**+1.6**
PVCP	**Virac**	**5.12**	**329**		*e* P	**Pn**	**12 33 27.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**27.14**	**183**		P	**P**	**12 37 54.0**	**+1.1**
	0.8nm,0.5s,mb3.5,baz=356,slow=14,SNR=3.6							
WRA	**Warramunga Arr**	**29.87**	**166**		P	**P**	**12 38 16.9**	**-0.2**
	0.8nm,1.1s,mb3.4,baz=348,slow=9.4,SNR=5.5							
ASAR	**Alice Springs**	**33.37**	**168**		P	**P**	**12 38 48.3**	**+0.4**
	0.3nm,0.5s,mb3.5,baz=352,slow=6.6,SNR=8.8							
MKAR	**Makanchi Array**	**53.24**	**323**		P	**P**	**12 41 26.6**	**-1.2**
	1.1nm,0.6s,mb4.0,baz=124,slow=7.7,SNR=9.3							
ZALV	**Zalesovo Beam**	**55.85**	**331**		P	**P**	**12 41 44.8**	**-1.9**
	0.3nm,0.4s,mb3.7,baz=133,slow=8.5,SNR=2.5							
ARCES	**ARCESS Array B**	**85.40**	**340**		P	**P**	**12 44 45.8**	**-0.5**
	3.6nm,1.0s,mb4.5,baz=74,slow=6.7,SNR=3.7							
VNDA	**Vanda**	**88.79**	**173**		P	**P**	**12 45 04.9**	**+2.4**
	2.8nm,0.3s,mb5.1,baz=354,slow=1.3,SNR=55							
YKA	**Yellowknife Ar**	**94.50**	**24**		P	**P**	**12 45 30.0**	**+0.7**
	0.2nm,0.7s,mb3.6,baz=304,slow=4.8,SNR=3.9							

NEIC ***25*** *12:47:07.9,1788N×10148W,h20km,MD3.7(MEX),After MEX.*
MEX 25 12:47:08.0±0.9,1787N×10148W,h20km±19km,MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.27**	**176**		*i* P	**Pb**	**12 47 12.6**	**-1.6**
ZIIG					*i* S	**Sb**	**12 47 17.6**	**-0.7**
CAIG	**El Cayaco**	**1.42**	**125**		*i* P	**Pn**	**12 47 28.9**	**-3.8**
CAIG					*i* S	**Sn**	**12 47 46.8**	**-4.0**
MEIG	**Mezcala**	**1.77**	**88**		*i* P	**Pn**	**12 47 35.5**	**-2.0**
MEIG					*i* S	**Sn**	**12 47 54.9**	**-4.6**
ACX	**Acapulco**	**1.80**	**124**		*e* P	**Pn**	**12 47 36.0**	**-1.9**
ACX					*i* S	**Sn**	**12 47 56.5**	**-3.7**
MMIG	**Aquila**	**1.82**	**283**		*i* P	**Pn**	**12 47 35.2**	**-3.0**
MMIG					*i* S	**Sn**	**12 47 57.1**	**-3.5**
SZVM	**Salazar**	**2.46**	**54**		*e* P	**Pn**	**12 47 47.1**	**+0.1**
SZVM					*i* S	**Sn**	**12 48 13.0**	**-3.5**
PTVM	**Pico Tres Padr**	**2.82**	**52**		*i* P	**Pn**	**12 47 48.6**	**-3.4**
PTVM					*i* S	**Sn**	**12 48 29.1**	**+3.6**
PTVM	**Pico Tres Padr**	**2.82**	**52**		*i* P	**Pn**	**12 47 48.6**	**-3.4**
PTVM					*i* S	**Sn**	**12 48 24.9**	**-0.6**
PPM	**Popocatepetl**	**2.96**	**66**		*i* P	**Pn**	**12 47 50.8**	**-3.0**
PPM					*i* S	**Sn**	**12 48 25.4**	**-3.4**
UTMO	**Huajuapan**	**3.50**	**90**		*i* P	**Pn**	**12 47 59.8**	**-1.6**
UTMO					*i* S	**Sn**	**12 48 39.3**	**-3.0**

ISCJB ***25*** *13:14:04.9±0.4,4218N±006×13123E±005,h545km±6km, mb3.9/30,Error ellipse: s-maj=8.7km s-min=5.8km az=178.6*
SKHL ***25*** *13:14:05.9±1.0,4242N×13122E,h545km±8km,mb4.3/1*
MOS ***25*** *13:14:05.1±1.0,4201N×13120E,h565km,mb4.2/11,Error ellipse: s-maj=13.8km s-min=9.6km az=118.5*
IDC ***25*** *13:14:06.3±1.1,4206N×131.16E,h561km±13km,mb3.2/13, mb1 3.4/18,mb1mx3.3/24,mbtmp3.2/18,Error ellipse: s-maj=12.7km s-min=10.2km az=79.0*
NEIC ***25*** *13:14:06.3±0.3,4203N×131.19E,h555km±6km,mb4.1/19, Error ellipse: s-maj=8.4km s-min=5.2km az=186.0*
BJI ***25*** *13:14:06.0,42.13N×131.15E,h574km,mB4.6,mb4.3*
ISC 25 13:14:05.7±0.4,4218N±006×13121E±006,h540km±6km, n90,σ1§06/90,mb3.9/30,1D,Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**2.71**	**335**		P	**P**	**13 15 21.5**	**+3.6**
MDJ					AMB	AMB		
	comp=Z,32nm,0.8s							
MDJ					AMB	AMB		
	comp=Z,71nm,3.8s							
KSRS	**Korea Array**	**5.35**	**209**		P	**P**	**13 15 40.4**	**+2.3**
	comp=Z,6.4nm,0.3s,baz=19,slow=8.9,SNR=243							
INCN	**Inchon**	**5.86**	**218**		*e* Pn	**P**	**13 15 44.4**	**+1.8**
	comp=Z,14nm,0.5s							
MAJO	**Matsushiro**	**7.81**	**134**		*e* Pn	**P**	**13 16 00.4**	**-1.0**
MAT	**Matsushiro**	**7.81**	**134**		P	**P**	**13 16 00.6**	**-0.7**
MJAR	**Matsushiro Arr**	**7.82**	**134**		P	**P**	**13 16 01.2**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=319,slow=9.6,SNR=22							
ASAJ	**Asahikawa**	**8.55**	**73**		P	**P**	**13 16 09.2**	**+0.7**
ASAJ					pmax	pmax		
	comp=Z,4.0nm,0.3s							
ASAJ	**Asahikawa**	**8.55**	**73**		P	**P**	**13 16 09.2**	**+0.6**
	comp=Z,4.3nm,0.3s,baz=256,slow=5.0,SNR=30							
ERM	**Erimo**	**8.89**	**87**		*e* Pn	**P**	**13 16 12.8**	**+0.8**
	comp=Z,51nm,0.6s							
ERM					*e* Sn	**S**	**13 17 52.4**	**-3.4**
ERM	**Erimo**	**8.89**	**87**		*e* P	**P**	**13 16 12.8**	**+0.8**
ERM					*e*		13 17 52.4	
ERM					pmax	pmax		
	comp=Z,51nm,0.6s							
ERM	**Erimo**	**8.89**	**87**		*e* P	**P**	**13 16 12.8**	**+0.8**
ERM					*e* S	**S**	**13 17 52.4**	**-3.3**
JNU	**Nakatsue**	**9.05**	**182**		P	**P**	**13 16 13.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=27,slow=21,SNR=4.2							
HIA	**Hailar**	**10.69**	**315**		*e* Pn	**P**	**13 16 31.8**	**+1.4**
EKMR	**Ekimchan**	**10.96**	**6**		*e* P	**P**	**13 16 31.8**	**-1.3**
EKMR					AMB	AMB	13 16 33.3	
	comp=Z,4.0nm,0.6s							
YASR	**Yasnyy**	**11.32**	**350**		*e* P	**P**	**13 16 34.6**	**-2.3**
YASR					AMB	AMB	13 16 34.9	
	comp=Z,5.0nm,0.5s							
YASR					*e*rx	rx	13 16 38.4	
BJT	**Baijiatuau**	**11.55**	**264**		*e* Pn	**P**	**13 16 39.9**	**+0.4**
ZEA	**Zeya**	**11.86**	**349**		*e* P	**P**	**13 16 39.5**	**-2.9**
ZEA					AMB	AMB	13 16 41.5	
	comp=Z,10.0nm,0.5s							
KROS	**Kirovskiy**	**12.58**	**349**	⇓⇓	*e* P	**P**	**13 16 47.4**	**-2.5**
KROS					AMB	AMB	13 16 48.0	
	comp=Z,4.0nm,0.4s							
BMKR	**Bomnak**	**12.64**	**354**		*e* P	**P**	**13 16 47.7**	**-2.8**
BMKR					AMB	AMB	13 16 48.4	
	comp=Z,6.0nm,0.6s							
HHC	**Hu-ho-hao-te**	**14.78**	**271**		*e* P	**P**	**13 17 10.8**	**-2.1**
HHC					S	**S**	**13 19 41.8**	**-5.3**
HHC					PCP	PcP	13 21 43.8	-0.2
HHC					AMB	AMB		
	comp=Z,10.0nm,0.7s							
HHC					AMB	AMB		
	comp=Z,125nm,5.0s							
CIT	**Chita**	**15.50**	**315**		*e* P	**P**	**13 17 19.9**	**-0.2**
ULN	**Ulaanbaatar**	**17.96**	**297**		*e* P	**P**	**13 17 44.3**	**+0.8**
	comp=Z,11nm,0.6s							
ULN	**Ulaanbaatar**	**17.96**	**297**		*e* P	**P**	**13 17 44.3**	**+0.8**
ULN					pmax	pmax		
	comp=Z,11nm,0.6s							
SONM	**Songino Array**	**18.39**	**296**		P	**P**	**13 17 49.2**	**+1.7**
	comp=Z,1.5nm,0.3s,baz=96,slow=9.4,SNR=20							
ZAK	**Zakamensk**	**20.88**	**303**		*e* P	**P**	**13 18 10.4**	**+0.5**
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.0s							
TLY	**Talaya**	**20.97**	**306**		*e* P	**P**	**13 18 10.9**	**+0.1**
	comp=Z,4.0nm,0.7s							
TLY	**Talaya**	**20.97**	**306**		*e* P	**P**	**13 18 10.9**	**+0.1**
TLY					pmax	pmax		
	comp=Z,4.0nm,0.7s							
LZH	**Lanzhou**	**22.03**	**263**		*e* P	**P**	**13 18 21.0**	**+0.5**
LZH					XP	sP	13 20 46.8	+3.3
LZH					PCP	PcP	13 21 59.5	+2.7
LZH					AMB	AMB		
	comp=Z,15nm,1.0s,mb4.6							
LZH					AMB	AMB		
	comp=Z,63nm,4.0s							
GTA	**Gaotai**	**23.86**	**274**		*e* P	**P**	**13 18 37.5**	**+0.7**
GTA					AP		13 18 41.3	
GTA					AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.3							
CD2	**Chengdu**	**24.65**	**252**		*e* P	**P**	**13 18 44.5**	**+0.6**
CD2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6							
BILL	**Bilibino**	**31.93**	**24**		*e* P	**P**	**13 19 47.9**	**+1.2**
	comp=Z,2.4nm,0.5s,mb4.0							
BILL	**Bilibino**	**31.93**	**24**		*e* P	**P**	**13 19 47.9**	**+1.2**
BILL					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9							
ZALV	**Zalesovo Beam**	**32.58**	**307**		P	**P**	**13 19 52.1**	**-0.3**
	comp=Z,0.7nm,0.3s,mb3.6,baz=88,slow=7.7,SNR=6.5							
ZAL	**Zalesovo**	**32.59**	**307**		P	**P**	**13 19 52.1**	**-0.4**
MK31	**Makanchi Array**	**34.75**	**295**		*e* P	**P**	**13 20 10.7**	**-0.1**
MKAR	**Makanchi Array**	**34.75**	**295**		P	**P**	**13 20 10.6**	**-0.2**
MKAR	**Makanchi Array**	**34.75**	**295**		P	**P**	**13 20 10.6**	**-0.2**
	comp=Z,1.1nm,0.5s,mb3.7,baz=83,slow=11,SNR=26							
KURK	**Kurchatov**	**36.54**	**302**		*e* P	**P**	**13 20 25.2**	**-0.3**
	comp=Z,7.5nm,0.6s,mb4.4							
KURK	**Kurchatov**	**36.54**	**302**		*e* P	**P**	**13 20 25.2**	**-0.3**
KURK					pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4							
TNA	**Tin City**	**40.64**	**34**		*e* P	**P**	**13 20 59.0**	**+0.5**
	comp=Z,3.9nm,0.9s,mb3.9							
AML	**Almayashu**	**41.92**	**290**		P	**P**	**13 21 09.9**	**+0.9**
IMA2	**Indian Mountai**	**46.47**	**33**		*e* P	**P**	**13 21 44.4**	**+0.7**
ARU	**Arti**	**47.20**	**314**		*e* P	**P**	**13 21 48.5**	**-0.9**
	comp=Z,8.6nm,0.6s,mb4.5							
ARU	**Arti**	**47.20**	**314**		*e* P	**P**	**13 21 48.5**	**-0.9**
ARU					pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.5							
KDAK	**Kodiak Island**	**48.72**	**44**		P	**P**	**13 22 00.5**	**-0.1**
KDAK	**Kodiak Island**	**48.72**	**44**		P	**P**	**13 22 00.5**	**-0.1**
	comp=Z,6.5nm,0.6s,mb4.3,baz=178,slow=16,SNR=4.1							
COLA	**College**	**49.09**	**34**		*e* P	**P**	**13 22 04.0**	**+0.7**
	comp=Z,6.5nm,0.6s,mb4.3							
COLA	**College**	**49.09**	**34**		*e* P	**P**	**13 22 04.0**	**+0.7**
COLA					pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.4							
SML	**Sawmill**	**49.67**	**38**		*e* P	**P**	**13 22 08.4**	**+0.8**
EYAK	**Cordova Ski Ar**	**51.24**	**39**		*e* P	**P**	**13 22 19.8**	**+0.6**
MENT	**Mentasta**	**51.39**	**36**		*e* P	**P**	**13 22 20.9**	**+0.8**
EGAK	**Eagle**	**51.86**	**33**		*e* P	**P**	**13 22 24.0**	**+0.4**
	comp=Z,4.7nm,0.6s,mb4.0							
DAWY	**Dawson**	**52.83**	**33**		*e* P	**P**	**13 22 30.7**	**+0.2**
INK	**Inuvik**	**53.44**	**27**		*e* P	**P**	**13 22 35.0**	**+0.2**
INK	**Inuvik**	**53.44**	**27**		P	**P**	**13 22 34.6**	**-0.2**
INK					pmax	pmax		
	comp=Z,4.0nm,0.4s							
INK	**Inuvik**	**53.44**	**27**		P	**P**	**13 22 34.6**	**-0.2**
	comp=Z,3.5nm,0.4s,mb4.0,baz=307,slow=7.2,SNR=80							
ARCES	**ARCESS Array B**	**56.26**	**336**		P	**P**	**13 22 53.1**	**-1.3**
ARCES

comp=Z,373nm,19.9s,baz=240,slow=40
WUAZ Wupatki 6.01 25 *e*Pn **Pn 13 19 09.7 -3.5**
18nm,0.8s
TPNV Topopah Spring 7.02 348 *e*Pn **Pn 13 19 26.2 -1.0**
12nm,0.7s
CCUT Cedar City 7.51 6 *e*Pn **Pn 13 19 32.4 -1.4**
LENM Lemitar 7.52 55 *e*Pn **Pn 13 19 31.7 -2.3**
LENM *e*S **Sb 13 21 26.9 +2.3**
LAZ Ladron 7.53 53 *e*Pn **Pn 13 19 31.5 -2.6**
BNM Barren Site 7.76 56 *e*Pn **Pn 13 19 34.0 -3.4**
BNM *e*S **Sb 13 21 36.5 +4.9**
MNTX Cornudas Mount 7.94 76 *e*Pn **Pn 13 19 38.7 -1.1**
6.4nm,0.7s
MNTX *e*Sn **Sb 13 21 45.6 +8.9**
ANMO Albuquerque 8.30 52 *e*Pn **Pn 13 19 41.1 -3.6**
3.2nm,0.8s
ANMO *e*Sn **Sb 13 21 46.9 -0.1**
ANMO Albuquerque 8.30 52 Pn **Pn 13 19 41.4 -3.3**
0.5nm,0.3s,baz=214,slow=5.4,SNR=8.6
ANMO Lg 13 21 51.2
0.3nm,0.3s,baz=209,slow=17,SNR=3.4
MSU Marysvale 8.62 12 *e*Pn **Pn 13 19 51.1 +2.0**
MVCO Mesa Verde 8.66 33 *e*Pn **Pn 13 19 48.0 -1.7**
12nm,0.8s
NVAR Mina Array Bea 8.93 340 Pn **Pn 13 19 55.1 +1.8**
0.0nm,0.3s,baz=242,slow=18,SNR=2.5
NVAR Pg Pn 13 20 34.1 +41
0.1nm,0.3s,baz=171,slow=18,SNR=4.5
LTX Lajitas 9.39 92 *e*Pn **Pn 13 20 01.7 +2.1**
5.3nm,0.6s
TXAR Lajitas Array 9.39 92 Pn **Pn 13 20 00.3 +0.7**
TXAR Lajitas Array 9.39 92 Pn **Pn 13 20 00.3 +0.7**
0.1nm,0.3s,baz=354,slow=32,SNR=8.1
PV01 Paradox Valley 9.39 30 *e*Pn **Pn 13 19 56.3 -3.3**
PV10 Paradox Valley 9.40 27 *e*Pn **Pn 13 19 58.5 -1.4**
SRU San Rafael 9.57 19 *e*Pn **Pn 13 20 01.2 -0.9**
2.8nm,0.7s
TMUT Trail Mountain 9.57 15 *e*Pn **Pn 13 20 01.4 -0.7**
SDCO Great Sand Dun 10.65 42 Pn **Pn 13 20 17.3 +0.4**
PDAR Pinedale Array 13.26 16 Pn **Pn 13 20 52.5 0.0**
baz=173,slow=8.2,SNR=3.2
MSO Missoula 16.73 1 *e*P **Pn 13 21 40.5 +1.8**
4.4nm,1.3s
CHMT Chamberlain Mo 16.84 3 *e*P **Pn 13 21 41.4 +1.4**
LAO LASA Array 17.77 19 *e*P **Pn 13 21 53.3 +1.6**
4.4nm,0.7s
NEW Newport 18.28 354 P **Pn 13 21 57.1 -0.8**
0.1nm,0.3s,baz=174,slow=10,SNR=3.2
CMIG Matias Romero 22.04 122 LR LR 13 31 42.4
comp=Z,98nm,21.9s,MS3.2,baz=13,slow=38
BBB Bella Bella 24.30 339 LR LR 13 31 24.5
comp=Z,60nm,21.9s,MS3.0,baz=326,slow=34
ULM Lac du Bonnet 24.52 29 P **P 13 23 00.6 -3.1**
5.3nm,1.2s,mb3.9,baz=220,slow=11,SNR=4.4
TKL Tuckaleechee C 26.28 70 LR LR 13 33 35.2
comp=Z,75nm,20.1s,MS3.2,baz=14,slow=37
YKA Yellowknife Ar 32.43 360 P **P 13 24 15.4 +1.2**
0.1nm,0.6s,mb2.8,baz=181,slow=8.3,SNR=2.6
FINES FINESS Array B 83.35 18 P **P 13 30 11.7 +0.5**
0.8nm,0.7s,mb3.8,baz=342,slow=0.6,SNR=4.8
ESDC Sonseca Array 85.23 47 P **P 13 30 23.0 +1.8**
0.5nm,0.6s,mb3.9,baz=308,slow=4.9,SNR=4.5
DZM Mont Dzumac 91.98 246 LR LR 14 03 39.0
comp=Z,114nm,21.4s,MS4.3,baz=67,slow=30

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*ISCJB **25** 13:28:25.1±1.2,3727N±005×13675E±008,h10km±8km, Error ellipse: s-maj=12.5km s-min=6.6km az=32.0*
*JMA **25** 13:28:25.6,3725N×13677E,h10km±1km,M3.5*
JMA Felt II J1.
ISC 25 13:28:25.3±1.2,3726N±005×13675E±009,h14km±7km,n6, σ0s27/10,1C-2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**175**	⇓P		**Pg**	**13 28 32.2**	**0.0**
JJH				S		**Sg**	**13 28 37.0**	**+0.2**
JSZ	**Suzu**	**0.53**	**69**	P		**Pg**	**13 28 35.6**	**0.0**
JSZ				S		**Sg**	**13 28 42.7**	**0.0**
JHG	**Hegura jima**	**0.60**	**13**	P		**Pg**	**13 28 37.3**	**+0.2**
JTT	**Ttatey**	**0.81**	**144**	⇓P		**Pg**	**13 28 40.5**	**-0.4**
JKG	**Kaga**	**1.04**	**199**	⇑P		**Pb**	**13 28 44.6**	**-0.4**
JKG				S		**Sb**	**13 28 58.8**	**+0.3**
MAT	**Matsushiro**	**1.37**	**121**	P		**Pn**	**13 28 49.8**	**-0.2**
MAT				S		**Sn**	**13 29 08.3**	**+0.3**

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*NEIC **25** 13:29:01.6,3628N×1024W,h0km,MN2.9(MDD), After MDD.*
*CSEM **25** 13:29:01.1±0.4,3577N×990W,h10km,ML4.0/7, Error ellipse: s-maj=9.2km s-min=4.5km az=97.0*
*INMG **25** 13:29:03.4±1.0,3611N×1018W,h10km,ML2.6, Error ellipse: s-maj=4.8km s-min=3.1km az=81.0*
*CNRM **25** 13:29:03.6,3582N×1017W,h30km,MD3.3*
MDD 25 13:29:01.1±1.2,3618N×1025W,h0km,mbLg2.9/11,1C, Error ellipse: s-maj=10.9km s-min=6.7km az=62.0, PRXIMO,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.49**	**50**	*i* P		Pn	13 29 28.6	-0.5
PFVI				*e*S		Sg	13 29 47.4	-1.5
PFVI				A			13 29 47.9	
53nm,0.1s								
PFVI	**Vila Bisbo**	**1.49**	**50**	⇑P		Pn	13 29 28.6	-0.5
PFVI				S		Sg	13 29 47.4	-1.5
26nm,0.1s								
MORF	**Marmelete**	**1.71**	**48**	*e*Pn		Pn	13 29 31.8	-0.3
MORF				*e*Sn		Sn	13 29 52.8	-1.8
MORF				A			13 29 54.0	
68nm,0.1s								
MORF	**Marmelete**	**1.71**	**48**	P		Pn	13 29 31.7	-0.4
MORF				Pn		Pn	13 29 31.8	-0.3
MORF				Sn		Sn	13 29 52.8	-1.8
68nm,0.1s								
MORF	**Marmelete**	**1.71**	**48**	*e*Pn		Pn	13 29 31.8	-0.3
MORF				*e*Sn		Sn	13 29 52.8	-1.8
68nm,0.1s								
PTEO	**Sao Teotonio**	**1.83**	**41**	*e*Pn		Pn	13 29 33.6	-0.2
PTEO				*e*Sn		Sn	13 29 56.3	-1.4
PTEO				A			13 29 57.8	
33nm,0.1s								
PTEO	**Sao Teotonio**	**1.83**	**41**	*e*Pn		Pn	13 29 33.6	-0.2
PTEO				*e*Sn		Sn	13 29 56.3	-1.4
33nm,0.1s								
PBDV	**Barranco-do-Ve**	**2.14**	**60**	*e*Pn		Pn	13 29 37.5	-0.6
PBDV				*e*Sn		Sn	13 30 02.8	-2.6
PBDV				A			13 30 04.7	
14nm,0.1s								
PBDV	**Barranco-do-Ve**	**2.14**	**60**	*e*Pn		Pn	13 29 37.5	-0.6
PBDV				*e*Sn		Sn	13 30 02.8	-2.6
14nm,0.1s								
PVAQ	**Vaqueiros**	**2.37**	**58**	*e*Pn		Pn	13 29 40.5	-0.8
PVAQ				*e*Sn		Sn	13 30 08.0	-3.0
PVAQ				A			13 30 09.8	
38nm,0.1s								
PVAQ	**Vaqueiros**	**2.37**	**58**	*e*Pn		Pn	13 29 40.5	-0.8
PVAQ				*e*Sn		Sn	13 30 08.0	-3.0
38nm,0.1s								
EGRO	**El Granado**	**2.60**	**58**	P		Pn	13 29 43.6	-0.7
SNR=37								
EGRO				S		Sn	13 30 13.0	-3.7
2.8nm,0.1s,SNR=6.0								
EGRO	**El Granado**	**2.60**	**58**	P		Pn	13 29 43.6	-0.8
SNR=37								
EGRO				S		Sn	13 30 13.0	-3.6
2.8nm,0.1s,SNR=6.0								
PBEJ	**Beja**	**2.65**	**45**	*e*Pn		Pn	13 29 44.5	-0.6
PBEJ				*e*Sn		Sn	13 30 15.9	-2.0
PBEJ				A			13 30 18.3	
13nm,0.2s								
PBEJ	**Beja**	**2.65**	**45**	*e*Pn		Pn	13 29 44.5	-0.6
PBEJ				*e*Sn		Sn	13 30 15.9	-2.0
13nm,0.2s								
ERIP	**Rio Piedras**	**2.68**	**63**	P		Pn	13 29 44.6	-0.9
7.9nm,0.1s,SNR=7.9								
ERIP				S		Sn	13 30 14.6	-4.1
34nm,0.1s,SNR=7.9								
MOE	**Montemor**	**2.79**	**32**	*e*Sn		Sn	13 30 19.7	-1.6
PMAFR	**Mafra**	**2.87**	**15**	*e*Pn		Pn	13 29 47.6	-0.6
PMAFR				*e*Sn		Sn	13 30 21.4	-2.1
PMAFR				A			13 30 25.5	
41nm,0.1s								
PMAFR	**Mafra**	**2.87**	**15**	*e*Pn		Pn	13 29 47.6	-0.6
PMAFR				*e*Sn		Sn	13 30 21.4	-2.1
41nm,0.1s								
EVO	**Evora**	**2.95**	**37**	*e*Pn		Pn	13 29 48.7	-0.5
EVO				*e*Sn		Sn	13 30 22.8	-2.5
EVO				A			13 30 24.3	
47nm,0.1s								
EVO	**Evora**	**2.95**	**37**	*e*Pn		Pn	13 29 48.7	-0.5
EVO				*e*Sn		Sn	13 30 22.8	-2.5
47nm,0.1s								
PBAR	**Barrancos**	**3.25**	**51**	*e*Pn		Pn	13 29 52.5	-0.8
PBAR				*e*Sn		Sn	13 30 29.8	-2.8
PBAR				A			13 30 32.7	
9.3nm,0.1s								
PBAR	**Barrancos**	**3.25**	**51**	*e*Pn		Pn	13 29 52.5	-0.8
PBAR				*e*Sn		Sn	13 30 29.8	-2.8
9.3nm,0.1s								
ALMR	**Almeirim**	**3.25**	**24**	*e*S		Sn	13 30 29.7	-3.1
ALMR				*e*S		Sn	13 30 29.7	-3.1
ALMR	**Almeirim**	**3.25**	**24**	S		Sn	13 30 29.7	-3.1
ALMR				S		Sn	13 30 29.7	-3.1
EMIN	**Mina Concepcio** 3.1nm,0.1s,SNR=36	**3.27**	**60**	P		Pn	13 29 52.6	-1.1
EMIN				S		Sn	13 30 29.3	-4.0
0.7nm,0.1s								
EMIN	**Mina Concepcio** 3.1nm,0.1s,SNR=36	**3.27**	**60**	P		Pn	13 29 52.6	-1.1
EMIN				S		Sn	13 30 29.3	-4.0
0.7nm,0.1s								
PESTR	**Estremoz**	**3.42**	**37**	*e*Pn		Pn	13 29 54.8	-0.8
PESTR				*e*Sn		Sn	13 30 33.9	-2.9
PESTR				A			13 30 35.7	
14nm,0.3s								
ESPR	**Espera** 7.9nm,0.1s,SNR=43	**3.60**	**78**	P		Pn	13 29 56.5	-1.7
ESPR				S		Sn	13 30 36.7	-4.8
12nm,0.1s,SNR=7.9								
ESPR	**Espera** 7.9nm,0.1s,SNR=43	**3.60**	**78**	P		Pn	13 29 56.5	-1.7
ESPR				S		Sn	13 30 36.7	-4.8
12nm,0.1s,SNR=7.9								
EBAD	**Badajoz** 0.5nm,0.0s,SNR=9.2	**3.64**	**44**	P		Pn	13 29 58.0	-0.6
EBAD				S		Sn	13 30 38.2	-4.1
1.0nm,0.1s,SNR=4.7								
EBAD	**Badajoz** 0.5nm,0.0s,SNR=9.2	**3.64**	**44**	P		Pn	13 29 58.0	-0.7
EBAD				S		Sn	13 30 38.2	-4.1
1.0nm,0.1s,SNR=4.7								
EJIF	**Jimena Fronter** 1.0nm,0.1s,SNR=7.9	**3.87**	**85**	P		Pn	13 30 00.7	-1.2
EJIF				S		Sn	13 30 45.0	-3.0
0.3nm,0.1s,SNR=7.9								
PCBR	**Castelo Branco**	**4.26**	**30**	*e*Sn		Sn	13 30 54.0	-3.6
PCBR				A			13 30 56.4	
6.8nm,0.5s								
PCBR	**Castelo Branco** 3.4nm,0.5s	**4.26**	**30**	Sn		Sn	13 30 54.0	-3.6
EMIJ	**Mijas** 0.2nm,0.1s,SNR=6.0	**4.44**	**83**	P		Pn	13 30 07.2	-2.5
EMIJ				S		Sn	13 30 56.5	-5.5
0.3nm,0.1s								
MTE	**Manteigas**	**4.72**	**26**	*e*Sn		Sn	13 31 06.1	-2.9
TGT	**Taghat**	**4.75**	**115**	*e*P		Pn	13 30 09.0	-5.0
TGT				*e*S		Sn	13 30 59.0	-11
CIA	**Chichaoua**	**4.77**	**165**	*i* P		Pn	13 30 07.5	-6.7
CIA				*i* S		Sn	13 30 55.0	-15
EADA	**Adamuz** 5.0nm,0.2s,SNR=7.9	**4.95**	**65**	P		Pn	13 30 15.2	-1.4
EADA				S		Sn	13 31 08.8	-5.7
0.5nm,0.0s,SNR=7.9								
EADA	**Adamuz** 5.0nm,0.2s,SNR=7.9	**4.95**	**65**	P		Pn	13 30 15.2	-1.4
EADA				S		Sn	13 31 08.8	-5.7
0.5nm,0.0s,SNR=7.9								
MIF	**Mishlifen**	**4.97**	**122**	*e*P		Pn	13 30 12.5	-4.5
MIF				*e*S		Sn	13 31 03.0	-12
ELUQ	**Luque** SNR=7.9	**4.99**	**72**	P		Pn	13 30 15.3	-2.0
ELUQ				S		Sn	13 31 11.6	-4.0
0.7nm,0.1s,SNR=7.9								
ELOJ	**Sierra Loja** 0.2nm,0.1s,SNR=7.9	**5.00**	**77**	P		Pn	13 30 16.1	-1.2
ELOJ				S		Sn	13 31 11.6	-4.1
0.4nm,0.1s,SNR=7.9								
CZD	**Col de Zad**	**5.32**	**125**	*i* P		Pn	13 30 17.0	-4.8
CZD				*i* S		Sn	13 31 11.0	-13
OUK	**Oukaimeden**	**5.34**	**158**	*e*P		Pn	13 30 16.0	-6.1
OUK				*i* S		Sn	13 31 09.0	-15
TZK	**Tazeka**	**5.39**	**111**	*e*P		Pn	13 30 19.0	-3.8
TZK				*i* S		Sn	13 31 14.0	-12
EGUA	**Guajares** 0.3nm,0.1s,SNR=7.9	**5.42**	**81**	P		Pn	13 30 21.8	-1.4
EGUA				S		Sn	13 31 20.8	-5.6
0.1nm,0.1s,SNR=7.9								
PVRL	**Vila Real**	**5.46**	**21**	*e*Sn		Sn	13 31 22.9	-4.3
PVRL				A			13 31 27.9	
9.3nm,0.2s								
PVRL	**Vila Real** 4.7nm,0.2s	**5.46**	**21**	Sn		Sn	13 31 22.9	-4.3
EBAN	**Banos Encina** 1.8nm,0.1s,SNR=8.1	**5.53**	**67**	P		Pn	13 30 22.8	-1.9
EBAN				S		Sn	13 31 21.1	-7.8
2.5nm,0.1s								
EQUE	**Quentar** 0.5nm,0.1s,SNR=5.8	**5.57**	**77**	P		Pn	13 30 24.3	-0.9
EQUE				S		Sn	13 31 23.9	-6.0
0.1nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**5.58**	**26**	*e*Pn		Pn	13 30 24.6	-0.7
MVO				*e*Sn		Sn	13 31 25.5	-4.6
MVO				A			13 31 28.3	
4.2nm,0.1s								
MVO	**Moncorvo**	**5.58**	**26**	Pn		Pn	13 30 24.6	-0.7
MVO				Sn		Sn	13 31 25.5	-4.6
2.1nm,0.1s								
PCAB	**Cabril**	**5.79**	**17**	*e*Sn		Sn	13 31 29.9	-5.4
PCAB				A			13 31 35.6	
4.5nm,0.1s								
PCAB	**Cabril** 2.2nm,0.1s	**5.79**	**17**	Sn		Sn	13 31 29.9	-5.4
ELOB	**Lobios** SNR=7.9	**5.93**	**16**	P		Pn	13 30 28.6	-1.6
ELOB				S		Sn	13 31 33.0	-5.8
1.9nm,0.3s,SNR=6.5								
ELOB	**Lobios** SNR=7.9	**5.93**	**16**	P		Pn	13 30 28.6	-1.5
EQES	**Quesada** 0.1nm,0.0s,SNR=7.9	**5.97**	**72**	P		Pn	13 30 27.9	-2.8
EQES				S		Sn	13 31 34.4	-5.4
0.2nm,0.0s,SNR=7.9								
EQES	**Quesada** 0.1nm,0.0s,SNR=7.9	**5.97**	**72**	P		Pn	13 30 27.9	-2.8
EQES				S		Sn	13 31 34.4	-5.4
0.2nm,0.0s,SNR=7.9								
ESDC	**Sonseca Array**	**6.07**	**53**	P		Pn	13 30 31.3	-0.8
ESDC				S		Sn	13 31 37.1	-5.1
ESDC	**Sonseca Array** 0.5nm,0.2s,baz=232,slow=13,SNR=20	**6.07**	**53**	P		Pn	13 30 31.3	-0.8
ESDC				S		Sn	13 31 37.1	-5.1
2.8nm,0.3s,baz=238,slow=23,SNR=44								
ESDC	**Sonseca Array** 0.5nm,0.2s,SNR=20	**6.07**	**53**	P		Pn	13 30 31.3	-0.8
PBRG	**Braganca** 3.8nm,0.1s	**6.25**	**25**	*e*Sn		Sn	13 31 42.0	-4.5
PBRG				A			13 31 44.5	
PBRG	**Braganca** 1.9nm,0.1s	**6.25**	**25**	Sn		Sn	13 31 42.0	-4.5
ECAL	**Calabor** SNR=7.9	**6.37**	**24**	P		Pn	13 30 34.4	-1.8
ECAL				S		Sn	13 31 43.4	-6.2
0.2nm,0.1s,SNR=6.3								
ECAL	**Calabor** SNR=7.9	**6.37**	**24**	P		Pn	13 30 34.4	-1.8
ZFT	**Errachidia**	**6.41**	**129**	*e*P		Pn	13 30 31.0	-5.7
GUD	**Guadarrama** 0.7nm,0.2s,SNR=7.9	**6.54**	**45**	P		Pn	13 30 37.7	-0.8
GUD				S		Sn	13 31 48.2	-5.6
0.3nm,0.1s,SNR=7.9								
EVIA	**Vianos** 1.0nm,0.1s,SNR=7.9	**6.64**	**66**	P		Pn	13 30 37.6	-2.3
EVIA				S		Sn	13 31 49.5	-6.7
0.5nm,0.1s,SNR=7.9								
EMAZ	**Mazaricos**	**6.83**	**8**	P		Pn	13 30 40.8	-1.8
EMAZ				S		Sn	13 31 52.8	-8.2
EMAZ	**Mazaricos** 1.0nm,0.1s,SNR=7.9	**6.83**	**8**	P		Pn	13 30 40.7	-1.8
EMAZ				S		Sn	13 31 55.7	-5.2
0.1nm,0.1s,SNR=7.9								
ETOB	**Tobarra**	**7.35**	**68**	P		Pn	13 30 47.2	-2.5
ETOB				S		Sn	13 32 05.4	-8.4
ETOB	**Tobarra** 0.4nm,0.1s,SNR=7.9	**7.35**	**68**	P		Pn	13 30 47.2	-2.5
ETOB				S		Sn	13 32 06.6	-7.1
3.0nm,0.2s,SNR=7.9								
ETOB	**Tobarra** 0.4nm,0.1s,SNR=7.9	**7.35**	**68**	P		Pn	13 30 47.2	-2.5
EPON	**Pontenova** 0.2nm,0.1s,SNR=7.9	**7.53**	**18**	S		Sn	13 32 11.1	-7.0
ETOR	**Torete**	**7.92**	**52**	P		Pn	13 30 56.0	-1.5
ETOR				S		Sn	13 32 19.5	-8.3
ETOR	**Torete** 4.2nm,0.2s,SNR=8.1	**7.92**	**52**	P		Pn	13 30 56.0	-1.5
ETOR				S		Sn	13 32 21.8	-6.0
0.8nm,0.0s								
EMOS	**Mosqueruela** SNR=7.9	**8.75**	**59**	P		Pn	13 31 08.1	-0.8
EMOS				S		Sn	13 32 40.5	-7.6
1.3nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela** SNR=7.9	**8.75**	**59**	P		Pn	13 31 08.1	-0.8

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*ISCJB **25** 13:29:34.6±0.3,1095S±006×2405W±005,h10km,mb4.6/59, MS3.8/9, Error ellipse: s-maj=8.7km s-min=6.7km az=148.2*
*IDC **25** 13:29:34.3±0.5,1035×2405W,h0km,mb4.4/20, mb1 4.5/21,mb1mx4.4/27,mbtmp4.4/21,ML4.8/1,MS3.9/5, Ms1 3.9/5,ms1mx3.5/34,Error ellipse: s-maj=15.4km s-min=13.7km az=176.0*
*NEIC **25** 13:29:36.0±0.3,1175×2413W,h10km,mb4.8/42,Error ellipse: s-maj=7.9km s-min=5.5km az=153.0*
*BJI **25** 13:29:36.0,1205×2410W,h10km,mB5.4,Ms5.4,Msz5.2*
ISC 25 13:29:36.4±0.3,111S±006×2411W±005,h10km,n123, σ0s94/108,mb4.6/59,MS3.8/9,1C-2D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo** 25nm,0.6s	**12.67**	**248**	*e*Pn		**Pn**	**13 32 33.1**	**-3.7**
RCBR				*e*Sn		**Sn**	**13 34 42.9**	**-15**
BBTS	**Babate** 3.1nm,0.3s,baz=199,slow=1.2,SNR=12	**17.37**	**25**	P		**Pn**	**13 33 36.5**	**-2.6**
BBTS				LR		LR	13 39 20.4	
comp=Z,558nm,18.3s,baz=208,slow=34								
LIC	**Lamto** 48nm,0.8s	**20.39**	**69**	*e*P		**P**	**13 34 12.5**	**-1.2**
LIC				*e*MLR		MLR		
comp=Z,486nm,20.5s,MS3.5								
LIC	**Lamto** comp=Z,24nm,0.8s	**20.39**	**69**	*e*P		**P**	**13 34 12.5**	**-1.2**
LIC				LR		LR		
comp=Z,240nm,20.5s,MS3.5								
DBIC	**Dimbokro**	**20.71**	**68**	P		**P**	**13 34 15.5**	**-1.7**
comp=Z,22nm,0.8s,baz=235,slow=12,SNR=24								
DBIC				LR		LR	13 40 41.6	
comp=Z,386nm,19.0s,MS3.8,baz=231,slow=32								
TORD	**Torodi Ar. Bea** comp=Z,6.4nm,0.9s,mb4.4,baz=244,slow=9.2,SNR=14	**29.25**	**60**	P		**P**	**13 35 37.5**	**-1.4**
TORD				PcP		PcP	13 38 45.4	-0.7
comp=Z,1.5nm,0.8s,baz=272,slow=2.3,SNR=5.1								
TORD				LR		LR	13 45 45.1	
comp=Z,340nm,18.9s,MS4.0,baz=225,slow=33								
SIV	**San Ignacio**	**39.32**	**246**	P		**P**	**13 37 07.2**	**+1.1**
comp=Z,2.2nm,0.8s,mb3.9,baz=94,slow=10,SNR=11								
ESDC	**Sonseca Array**	**44.58**	**22**	P		**P**	**13 37 49.3**	**+0.5**
comp=Z,5.5nm,0.9s,mb4.4,baz=212,slow=8.8,SNR=15								
TSUM	**Tsumeb**	**44.62**	**116**	P		**P**	**13 37 49.9**	**+0.5**
comp=Z,2.7nm,0.9s,mb4.1,baz=284,slow=9.7,SNR=2.8								
LPAZ	**La Paz**	**45.91**	**248**	P		**P**	**13 38 01.1**	**+1.4**
comp=Z,12nm,0.9s,mb4.8,baz=66,slow=7.4,SNR=35								
SDV	**Santo Domingo** comp=Z,3.1nm,0.6s,mb4.4	**47.40**	**283**	*e*P		**P**	**13 38 12.2**	**+0.8**
SJPF	**Ste Jean** comp=Z,81nm,1.5s,mb5.2	**48.59**	**22**	*e*P		**P**	**13 38 20.9**	**+0.7**
SJPF	**Ste Jean** comp=Z,41nm,1.5s,mb5.2	**48.59**	**22**	*e*P		**P**	**13 38 20.9**	**+0.7**
ETSF	**Etsaut** comp=Z,26nm,1.0s,mb4.9	**48.66**	**23**	*e*P		**P**	**13 38 21.1**	**+0.4**
ETSF	**Etsaut** comp=Z,13nm,1.0s,mb4.9	**48.66**	**23**	*e*P		**P**	**13 38 21.1**	**+0.4**
EPF	**Esparros** comp=Z,17nm,1.0s,mb4.8	**49.13**	**24**	*e*P		**P**	**13 38 24.2**	**-0.1**
EPF	**Esparros** comp=Z,8.6nm,1.0s,mb4.7	**49.13**	**24**	*e*P		**P**	**13 38 24.2**	**-0.1**
MTLF	**Montieu** comp=Z,21nm,1.3s,mb4.7	**50.16**	**25**	*e*P		**P**	**13 38 32.0**	**-0.2**
MTLF	**Montolieu** comp=Z,11nm,1.3s,mb4.7	**50.16**	**25**	*e*P		**P**	**13 38 32.0**	**-0.2**
ROSC	**El Rosal** comp=Z,4.4nm,0.3s,mb4.8,baz=94,slow=21,SNR=6.2	**50.52**	**277**	P		**P**	**13 38 35.0**	**-0.4**
TRQA	**Tornquist** comp=Z,3.7nm,0.6s,mb4.5	**50.59**	**219**	*e*P		**P**	**13 38 35.3**	**-0.3**
CAF	**Calviac** comp=Z,38nm,1.2s,mb4.9	**51.40**	**24**	*e*P		**P**	**13 38 41.9**	**+0.4**
CAF	**Calviac** comp=Z,19nm,1.2s,mb4.9	**51.40**	**24**	*e*P		**P**	**13 38 41.9**	**+0.4**
LASF	**Ste Croix** comp=Z,38nm,1.2s,mb4.9	**51.45**	**26**	*e*P		**P**	**13 38 41.8**	**-0.1**
CFAA	**Coronel Fontan** comp=Z,25nm,21.0s,MS3.2,baz=74,slow=36	**51.51**	**229**	LR		LR	14 00 42.6	
MFF	**Saint Martin d** comp=Z,19nm,1.0s,mb4.7	**51.97**	**21**	*e*P		**P**	**13 38 45.7**	**0.0**
MFF	**Saint Martin d** comp=Z,9.6nm,1.0s,mb4.7	**51.97**	**21**	*e*P		**P**	**13 38 45.7**	**0.0**
LMR	**La Mourre** comp=Z,68nm,1.3s,mb5.1	**52.07**	**28**	*e*P		**P**	**13 38 46.4**	**-0.1**
LMR	**La Mourre** comp=Z,34nm,1.3s,mb5.1	**52.07**	**28**	*e*P		**P**	**13 38 46.4**	**-0.1**
SMRF	**Simiane la Rot**	**52.13**	**27**	*e*P		**P**	**13 38 48.0**	**+1.0**
FRF	**La Foret Royal** comp=Z,20nm,0.9s,mb4.7	**52.31**	**28**	*e*P		**P**	**13 38 48.6**	**+0.3**
FRF	**La Foret Royal** comp=Z,9nm,0.9s,mb4.7	**52.31**	**28**	*e*P		**P**	**13 38 48.6**	**+0.3**
VIVF	**Saint-Julien-l** comp=Z,22nm,1.1s,mb4.7	**52.43**	**26**	*e*P		**P**	**13 38 49.6**	**+0.5**
VIVF	**Saint-Julien-l** comp=Z,11nm,1.1s,mb4.7	**52.43**	**26**	*e*P		**P**	**13 38 49.6**	**+0.5**
SUR	**Sutherland** comp=Z,8.3nm,0.7s,mb4.8	**52.46**	**131**	*e*P		**P**	**13 38 49.9**	**+0.2**
SUR	**Sutherland** comp=Z,11nm,0.8s,mb4.8,baz=236,slow=1.6,SNR=10	**52.46**	**131**	P		**P**	**13 38 49.1**	**-0.6**
ROSF	**Rostrenen**	**52.47**	**17**	*e*P		**P**	**13 38 50.0**	**+0.6**
TCF	**Toulx Ste Croi** comp=Z,52nm,1.6s,mb4.9	**52.58**	**23**	*e*P		**P**	**13 38 50.5**	**+0.2**
TCF	**Toulx Ste Croi** comp=Z,26nm,1.6s,mb4.9	**52.58**	**23**	*e*P		**P**	**13 38 50.5

LOR	**Lormes**	**54.03**	**23**	*eP*		**P**	**13 39 00.9**	**0.0**	
	comp=Z,23nm,1.1s,mb4.7								
LOR				*e*MLR		MLR			
	comp=Z,92nm,22.8s,MS3.5								
LOR	**Lormes**	**54.03**	**23**	*eP*		**P**	**13 39 00.9**	**0.0**	
	comp=Z,11nm,1.1s,mb4.7								
LOR				LR		LR			
	comp=Z,90nm,22.8s,MS3.8								
CABF	**La Chapelle**	**54.42**	**25**	*eP*		**P**	**13 39 04.1**	**+0.3**	
	comp=Z,51nm,1.6s,mb4.9								
CABF	**La Chapelle**	**54.42**	**25**	*eP*		**P**	**13 39 04.1**	**+0.3**	
	comp=Z,25nm,1.6s,mb4.9								
BOSA	**Boshof**	**54.44**	**125**	P		**P**	**13 39 03.0**	**-1.3**	
BOSA	**Boshof**	**54.44**	**125**	P		**P**	**13 39 03.0**	**-1.3**	
	comp=Z,3.1nm,0.5s,mb4.5,baz=310,slow=7.5,SNR=14								
HAU	**Haudompre**	**55.63**	**24**	*eP*		**P**	**13 39 12.8**	**+0.3**	
	comp=Z,28nm,1.0s,mb4.9								
HAU				*e*MLR		MLR			
	comp=Z,144nm,22.1s,MS3.7								
HAU	**Haudompre**	**55.63**	**24**	*eP*		**P**	**13 39 12.8**	**+0.3**	
	comp=Z,14nm,1.0s,mb4.9								
HAU				LR		LR			
	comp=Z,140nm,22.1s,MS4.0								
HINF	**Hinteralfeld**	**55.69**	**25**	*eP*		**P**	**13 39 13.6**	**+0.7**	
CDF	**Champ du Feu**	**56.33**	**25**	*eP*		**P**	**13 39 19.4**	**+1.9**	
BAIF	**Baives**	**56.45**	**22**	*eP*		**P**	**13 39 19.0**	**+0.7**	
	comp=Z,47nm,1.5s,mb5.0								
BAIF	**Baives**	**56.45**	**22**	*eP*		**P**	**13 39 19.0**	**+0.7**	
	comp=Z,24nm,1.5s,mb5.0								
GIVF	**Givet**	**56.72**	**22**	*eP*		**P**	**13 39 19.4**	**-0.8**	
PLCA	**Paso Flores**	**57.58**	**221**	LR		LR	14 04 41.4		
	comp=Z,4.6nm,19.3s,baz=256,slow=36								
GERES	**GERESS Array B**	**59.51**	**28**	P		**P**	**13 39 38.4**	**-1.4**	
	comp=Z,2.4nm,0.8s,mb4.3,baz=251,slow=8.8,SNR=8.2								
KHC	**Kasperske Hory**	**59.65**	**28**	*eP*		**P**	**13 39 43.0**	**+2.2**	
CLL	**Collm**	**60.95**	**26**	*e*pP		pP	13 39 52.0	-0.9	
CLL				*e*S		**S**	**13 47 54.0**	**-14**	
KMBO	**Kilima Mbogo**	**61.35**	**91**	P		**P**	**13 39 53.1**	**0.0**	
	comp=Z,0.4nm,0.3s,mb4.0,baz=232,slow=19,SNR=4.2								
UPC	**Upice**	**61.74**	**28**	*eP*		**P**	**13 40 01.4**	**+6.4**	
DPC	**Dobruska-Polom**	**61.78**	**28**	*eP*		**P**	**13 39 58.0**	**+2.7**	
OKC	**Ostrava-Krasne**	**62.32**	**29**	*eP*		**P**	**13 40 00.9**	**+2.0**	
NB2	**NORSAR Subarra**	**67.65**	**18**	P		**P**	**13 40 33.8**	**+0.4**	
	comp=Z,0.7nm,0.8s,mb3.7,baz=211,slow=6.5								
NOA	**NORSAR Array B**	**67.65**	**18**	P		**P**	**13 40 33.0**	**-0.3**	
	comp=Z,1.4nm,0.8s,mb4.0,baz=214,slow=6.4,SNR=6.0								
SWET	**Sewanee**	**67.94**	**309**	*eP*		**P**	**13 40 36.1**	**+0.4**	
KIEV	**Kiev**	**68.59**	**33**	*eP*		**P**	**13 40 38.4**	**-1.1**	
	comp=Z,18nm,1.1s,mb4.9								
AKASG	**Malin Array Be**	**68.60**	**33**	P		**P**	**13 40 38.3**	**-1.2**	
	comp=Z,5.3nm,0.8s,mb4.5,baz=237,slow=6.8,SNR=18								
MALT	**Malatya**	**69.46**	**48**	*eP*		**P**	**13 40 45.4**	**+0.2**	
	comp=Z,6.9nm,1.0s,mb4.5								
PLAL	**Pickwick Lake**	**69.55**	**308**	*eP*		**P**	**13 40 45.2**	**-0.6**	
	comp=Z,3.7nm,0.8s,mb4.4								
WVT	**Waverly**	**69.69**	**309**	*eP*		**P**	**13 40 45.5**	**-1.2**	
	comp=Z,4.1nm,0.8s,mb4.4								
VNA2	**Neumayer--Watz**	**70.55**	**174**	*eP*		**P**	**13 40 53.4**	**+2.2**	
	baz=337,slow=7.0								
SIUC	**Southern Illin**	**71.21**	**311**	*eP*		**P**	**13 40 54.9**	**-1.0**	
	comp=Z,7.5nm,0.8s,mb4.7								
SNAA	**Sanae**	**71.76**	**173**	P		**P**	**13 40 58.8**	**+0.3**	
	comp=Z,1.8nm,0.8s,mb4.0,baz=21,slow=12,SNR=3.8								
SNAA				LR		LR	14 05 12.8		
	comp=Z,77nm,19.9s,MS4.0,baz=22,slow=30								
FVM	**French Village**	**72.21**	**311**	*eP*		**P**	**13 41 00.8**	**-1.1**	
	comp=Z,4.5nm,0.6s,mb4.6								
FINES	**FINESS Array B**	**73.10**	**23**	P		**P**	**13 41 05.5**	**-1.1**	
	comp=Z,1.7nm,0.7s,mb4.1,baz=204,slow=4.2,SNR=9.4								
WMOK	**Wichita Mounta**	**78.07**	**306**	*eP*		**P**	**13 41 34.4**	**-1.4**	
	comp=Z,1.9nm,0.9s,mb4.0								
ECSD	**EROS,Sioux Fal**	**78.19**	**315**	*eP*		**P**	**13 41 34.9**	**-1.4**	
	comp=Z,6.1nm,0.8s,mb4.6								
AGMN	**Agassiz Refuge**	**78.77**	**320**	*eP*		**P**	**13 41 38.6**	**-0.8**	
	comp=Z,7.2nm,0.9s,mb4.6								
ULM	**Lac du Bonnet**	**79.27**	**322**	P		**P**	**13 41 40.8**	**-1.3**	
	comp=Z,2.8nm,0.9s,mb4.2,baz=72,slow=9.6,SNR=6.5								
FCC	**Fort Churchill**	**80.68**	**330**	*eP*		**P**	**13 41 48.6**	**-0.8**	
	comp=Z,5.6nm,1.1s,mb4.4								
LTX	**Lajitas**	**81.44**	**300**	*eP*		**P**	**13 41 54.2**	**0.0**	
	comp=Z,3.0nm,0.9s,mb4.2								
TXAR	**Lajitas Array**	**81.44**	**300**	P		**P**	**13 41 54.4**	**+0.1**	
	comp=Z,2.4nm,0.8s,mb4.2,baz=116,slow=6.1,SNR=17								
SDCO	**Great Sand Dun**	**83.86**	**308**	*eP*		**P**	**13 42 07.2**	**+0.5**	
	comp=Z,17nm,1.7s,mb4.9								
SDCO				*e*			13 42 19.4		
ANMO	**Albuquerque**	**84.35**	**305**	*eP*		**P**	**13 42 09.5**	**+0.3**	
	comp=Z,11nm,1.7s,mb4.7								
LAZ	**Ladron**	**84.86**	**305**	*eP*		**P**	**13 42 12.3**	**+0.5**	
RES	**Resolute Bay**	**86.05**	**345**	*eP*		**P**	**13 42 16.6**	**-0.3**	
	comp=Z,250nm,1.3s								
PV01	**Paradox Valley**	**86.31**	**308**	*eP*		**P**	**13 42 19.7**	**+0.8**	
PV10	**Paradox Valley**	**86.70**	**308**	*eP*		**P**	**13 42 21.3**	**+0.4**	
RLMT	**Red Lodge**	**87.35**	**315**	*eP*		**P**	**13 42 24.0**	**+0.2**	
	comp=Z,9.8nm,1.5s,mb4.8								
PDAR	**Pinedale Array**	**87.40**	**313**	P		**P**	**13 42 22.3**	**-1.8**	
	comp=Z,0.4nm,0.6s,mb3.8,baz=84,slow=6.1,SNR=4.9								
QLMT	**Earthquake Lak**	**88.87**	**315**	*eP*		**P**	**13 42 31.9**	**+0.8**	
QSPA	**South Pole Qui**	**88.97**	**180**	*eP*		**P**	**13 42 31.1**	**+0.2**	
	comp=Z,9.7nm,1.1s,mb5.0								
YKA	**Yellowknife Ar**	**91.20**	**332**	P		**P**	**13 42 40.6**	**-0.9**	
	comp=Z,2.1nm,0.7s,mb4.5,baz=96,slow=5.1,SNR=49								
SONM	**Songino Array**	**116.86**	**35**	PKP		PKPdf	13 48 19.9	-1.5	
	comp=Z,0.7nm,0.7s,baz=307,slow=2.7,SNR=4.5								
CD2	**Chengdu**	**122.50**	**54**	*e*PKP		PKPdf	13 48 30.3	-2.6	
CD2				XPKP			13 48 40.3		
CD2				PP		PP	13 50 12.0	+2.8	
CD2				PKS			13 52 05.8		
CD2				SKS		SKSdf	13 55 37.3	-8.0	
CD2				SS		SS	14 06 46.5	-4.2	
CD2				PP		PP			
	comp=Z,80nm,8.4s								
KMI	**Kunming**	**123.48**	**60**	PKP		PKPdf	13 48 34.5	-0.4	
HHC	**Hu-ho-hao-te**	**123.72**	**40**	*e*PKP		PKPdf	13 48 35.3	+0.4	
HHC				PP		PP	13 50 22.3	+5.4	
HHC				PKS			13 52 09.5		
HHC				SS		SS	14 07 06.8	+1.7	
HHC				PP		PP			
	comp=Z,99nm,5.1s								
GYA	**Guiyang**	**126.43**	**58**	*e*PKP		PKPdf	13 48 39.5	-1.0	
GYA				PP		PP	13 50 39.3	+3.6	
GYA				PKS			13 52 14.8		
GYA				SKS		SKSdf	13 55 49.0	-3.8	
GYA				SKKS		SKKSac	13 57 30.3	-4.2	
GYA				S		Sdif	13 58 33.8	-3.1	
GYA				PS		PS	14 00 38.5	-1.1	
GYA				PP		PP			
	comp=Z,90nm,7.6s								
GYA				LR		LR			
	comp=N,250nm,20.2s,MS4.9								
GYA				LR		LR			
	comp=E,140nm,21.4s,MS4.9								
GYA				LR		LR			
	comp=Z,280nm,18.5s								
BJI	**Beijing**	**127.07**	**38**	PKP		PKPdf	13 48 39.0	-2.3	
NJ2	**Nanjing**	**133.46**	**45**	*e*PKP		PKPdf	13 48 49.5	-4.2	
STKA	**Stephens Creek**	**144.51**	**159**	||*i*P		PKPdf	13 49 12.0	-1.9
	comp=Z,13nm,0.6s								
STKA	**Stephens Creek**	**144.51**	**159**	PKP		PKPdf	13 49 11.4	-2.4	
	comp=Z,15nm,0.6s,baz=158,slow=1.7,SNR=45								
FITZ	**Fitzroy Crossi**	**144.64**	**124**	↑*i*P		PKPdf	13 49 13.4	-1.0	
	comp=Z,17nm,1.2s								
ASAR	**Alice Springs**	**147.39**	**140**	PKP		PKPdf	13 49 18.1	-0.9	
	comp=Z,17nm,0.5s,baz=208,slow=2.2,SNR=390								
ASAR				PKPbc		PKPbc	13 49 20.7	-0.7	
	comp=Z,17nm,0.5s,baz=207,slow=2.4,SNR=395								
WRA	**Warramunga Arr**	**150.26**	**136**	PKP		PKPdf	13 49 22.4	-1.3	
	comp=Z,12nm,0.9s,baz=240,slow=1.9,SNR=16								
WRA				PKPbc		PKPbc	13 49 27.8	-1.0	
	comp=Z,9.2nm,0.7s,baz=237,slow=2.4,SNR=98								
WB2	**Warramunga Arr**	**150.27**	**136**	||*i*P		PKPbc	13 49 27.9	-1.0
KAKA	**Kakadu**	**152.98**	**121**	*eP*		PKPbc	13 49 34.0	-1.2	
	comp=Z,5.6nm,0.6s								

NIED ***25*** *13:49:00, 3730N×13670E, h5km, Mw3.6 Best double couple: M₀2.51000×10¹⁴ NP1:φ₀208.00000°, δ51.00000°, λ125.00000°. NP2:φ₀340.00000°, δ51.00000°, λ55.00000°.*

ISCJB ***25*** *13:49:25.7±1.1, 3730N×004×13666E×006, h12km±7km, mb3.7/2, Error ellipse: s-maj=7.6km s-min=5.9km az=7.2*

JMA ***25*** *13:49:26.3, 3728N×13670E, h8km±1km, M3.8*

JMA Felt III J1.

IDC ***25*** *13:49:26.4±3.4, 3699N×13669E, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.4/19, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=78.6km s-min=21.8km az=6.0*

ISC 25 13:49:26.5±0.7, 3728N×003×13670E×006, h11km±5km, n10,σ0#61/17, mb3.7/2, 4C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JJH	**Hakui**	**0.36**	**170**	↑P		**Pg**	**13 49 33.5**	**-0.1**
JJH				S		**Sg**	**13 49 38.9**	**+0.5**
JSZ	**Suzu**	**0.55**	**72**	||P		**Pg**	**13 49 37.0**	**-0.3**
JSZ				S		**Sg**	**13 49 45.2**	**+0.6**
JHG	**Hegura jima**	**0.60**	**17**	↑P		**Pg**	**13 49 37.9**	**-0.2**
JHG				S		**Sg**	**13 49 45.8**	**-0.2**
JTT	**Ttatey**	**0.84**	**143**	↑P		**Pg**	**13 49 42.2**	**-0.5**
JTT				*e*S		**Sg**	**13 49 54.0**	**+0.3**
JKG	**Kaga**	**1.04**	**197**	↑P		**Pb**	**13 49 45.8**	**-0.8**
JKG				S		**Sg**	**13 50 00.0**	**-0.1**
MAT	**Matsushiro**	**1.41**	**121**	P		**Pn**	**13 49 51.6**	**-0.5**
MAT				*e*S		**Sn**	**13 50 10.1**	**-0.6**
MJAR	**Matsushiro Arr**	**1.41**	**121**	Pn		**Pn**	**13 49 52.3**	**+0.1**
	19nm,0.3s,baz=314,slow=16,SNR=87							
MJAR				Sn		**Sn**	**13 50 11.7**	**+1.0**
	31nm,0.3s,baz=217,slow=45,SNR=23							
KSRS	**Korea Array**	**7.00**	**274**	Pn		**Pn**	**13 51 10.4**	**+1.6**
	0.4nm,0.3s,baz=89,slow=14,SNR=6.9							
WRA	**Warramunga Arr**	**56.95**	**183**	P		**P**	**13 59 11.1**	**-0.8**
	0.6nm,0.5s,mb3.9,baz=360,slow=7.7,SNR=15							
ASAR	**Alice Springs**	**60.67**	**183**	P		**P**	**13 59 37.8**	**+0.1**
	0.4nm,0.8s,mb3.6,baz=14,slow=12,SNR=6.1							

ISCJB ***25*** *13:50:32.5±0.8, 596S×01×259W±0.3, h10km, mb4.2/10, Error ellipse: s-maj=24.2km s-min=8.5km az=137.9*

IDC ***25*** *13:50:33.2±1.0, 5950S×2602W, h0km, mb4.2/8, mb1 4.4/8, mb1mx4.2/17, mbtmp4.2/8, MS3.8/1, Ms1 3.7/1, ms1mx3.2/26, Error ellipse: s-maj=28.5km s-min=20.4km az=60.0*

NEIC ***25*** *13:50:34.5±0.8, 5949S×2586W, h10km, mb4.5/5, Error ellipse: s-maj=23.4km s-min=11.5km az=48.0*

ISC 25 13:50:34.5±0.8, 596S×01×260W±0.2, h10km, n21, σ1#04/19, mb4.2/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.27**	**154**	*eP*		**Pn**	**13 53 42.6**	**0.0**
VNA1				*e*			13 53 45.9	
VNA1				*e*			13 53 48.7	
VNA1				*e*			13 53 55.2	
VNA1				*e*			13 54 01.4	
VNA1				*e*			13 54 06.8	
VNA3	**Neumayer Olymp**	**13.43**	**157**	*eP*		**Pn**	**13 53 44.1**	**-0.6**
VNA3				*e*			13 53 47.5	
VNA3				*e*			13 53 49.6	
VNA3				*e*			13 53 54.3	
VNA3				*e*			13 53 56.4	
VNA3				*e*			13 54 02.2	
VNA3				*e*			13 54 06.8	
VNA3				*e*			13 55 57.5	
VNA3				*e*			13 56 03.9	
VNA3				*e*			13 56 10.6	
VNA2	**Neumayer--Watz**	**13.66**	**154**	*eP*		**Pn**	**13 53 46.9**	**-1.1**
	baz=318,slow=14							
VNA2				*e*			13 53 50.4	
VNA2				*e*			13 53 51.9	
VNA2				*e*			13 53 56.8	
VNA2				*e*			13 53 58.9	
VNA2				*e*			13 54 04.1	
VNA2				*e*			13 54 09.6	
VNA2				*e*			13 56 04.4	
VNA2				*e*			13 56 11.1	
VNA2				*e*			13 56 18.9	
SNAA	**Sanae**	**15.24**	**152**	*eP*		**Pn**	**13 54 08.6**	**-0.8**
SNAA				*e*			13 54 13.9	
SNAA				*e*			13 54 20.6	
SNAA				*e*			13 54 25.9	
SNAA				*e*			13 54 32.0	
SNAA				*e*			13 56 42.5	
SNAA				*e*			13 56 48.8	
SNAA	**Sanae**	**15.24**	**152**	Pn		**Pn**	**13 54 08.5**	**-0.9**
	2.4nm,0.3s,baz=315,slow=13,SNR=116							
EFI	**East Falkland**	**19.62**	**280**	*eP*		**Pn**	**13 55 02.4**	**-1.7**
	71nm,1.2s							
USHA	**Ushuaia**	**23.18**	**263**	P		**P**	**13 55 41.3**	**+0.3**
	21nm,0.8s,mb4.7,baz=105,slow=7.6,SNR=11							
QSPA	**South Pole Qui**	**30.63**	**180**	*eP*		**P**	**13 56 50.2**	**+2.0**
	6.4nm,0.6s,mb4.6							
QSPA	**South Pole Qui**	**30.63**	**180**	P		**P**	**13 56 49.3**	**+1.1**
	6.1nm,0.6s,mb4.6,baz=208,slow=3.3,SNR=71							
TRQA	**Tornquist**	**31.44**	**297**	*eP*		**P**	**13 56 56.5**	**+0.9**
	4.0nm,0.8s,mb4.3							
PLCA	**Paso Flores**	**33.40**	**284**	P		**P**	**13 57 12.2**	**-0.7**
	2.5nm,0.8s,mb4.2,baz=80,slow=7.0,SNR=5.5							
MAW	**Mawson**	**36.93**	**140**	LR		LR	14 13 03.4	
	comp=Z,122nm,18.7s,baz=68,slow=36							
CFAA	**Coronel Fontan**	**39.65**	**296**	P		**P**	**13 58 05.8**	**-0.4**
	0.4nm,0.7s,mb3.2,baz=157,slow=8.7,SNR=6.7							
SBA	**Scott Base**	**42.57**	**184**	*eP*		**P**	**13 58 33.0**	**+3.3**
	5.5nm,0.9s,mb4.3							
VNDA	**Vanda**	**43.04**	**182**	*eP*		**P**	**13 58 35.2**	**+1.7**
	3.1nm,0.9s,mb4.0							
VNDA	**Vanda**	**43.04**	**182**	P		**P**	**13 58 36.0**	**+2.5**
	2.9nm,0.9s,mb4.0,baz=184,slow=6.8,SNR=11							
LPAZ	**La Paz**	**53.00**	**306**	P		**P**	**13 59 51.4**	**+0.2**
LPAZ	**La Paz**	**53.00**	**306**	P		**P**	**13 59 51.4**	**+0.2**
	1.8nm,0.7s,mb4.1,baz=156,slow=6.4,SNR=7.1							
TORD	**Torodi Ar. Bea**	**75.87**	**28**	P		**P**	**14 02 21.1**	**+0.4**
	1.7nm,0.7s,mb4.1,baz=194,slow=5.7,SNR=10							
ASAR	**Alice Springs**	**95.39**	**162**	P		**P**	**14 03 58.5**	**-0.4**
	0.9nm,0.6s,mb4.3,baz=182,slow=3.9,SNR=20							
RRI2	**Red Ridge**	**123.99**	**299**	*e*PKPdf		PKPdf	14 09 32.2	+0.4

ORF ***25*** *13:57:19.2, 3630N×2347E, h30km, mb5.2, ML6.6*

NAO ***25*** *13:57:44.9, 3694N×2263E, h33km, mb5.4*

TIR ***25*** *13:57:52.0±4.9, 3813N×2050E, h0km±999km*

SFS ***25*** *13:57:54.0, 3850N×2090E, h0km, ML5.6*

HLW ***25*** *13:57:55.7, 3886N×2045E, h40km, Mb5.3*

CRAAG ***25*** *13:57:56.5, 3848N×2041E, Mw5.7*

IDC ***25*** *13:57:56.6±0.3, 3844N×2028E, h0km, mb5.1/29, mb1 5.1/38, mb1mx5.1/39, mbtmp5.0/38, ML4.8/8, MS5.4/31, Ms1 5.4/31, ms1mx5.3/44, Error ellipse: s-maj=8.2km s-min=6.7km az=108.0*

IGIL ***25*** *13:57:56.2, 3850N×2040E, h10km, MS5.3*

ISCJB ***25*** *13:57:57.2±0.3, 3845N×001×20386E×0009, h7km±2km, mb5.3/243, MS5.4/196, Error ellipse: s-maj=1.8km s-min=1.2km az=17.5*

BEO ***25*** *13:57:57.5±0.9, 3839N×2015E, ML5.8/7*

CSEM ***25*** *13:57:57.2±0.2, 3856N×2036E, h5km±1km, mb5.4/99, Ms5.3, Mw5.3, Error ellipse: s-maj=1.3km s-min=0.7km az=14.0*

MOS ***25*** *13:57:57.5±1.4, 3850N×2038E, h9km, mb5.5/74, MS5.3/78, Error ellipse: s-maj=3.1km s-min=1.9km az=102.5*

PDG ***25*** *13:57:57.2±0.6, 3843N×2032E, h8km±2km, MD5.8/10, ML5.6/10, Error ellipse: s-maj=1.4km s-min=1.8km az=0.0*

NIC ***25*** *13:57:57.5±0.7, 3848N×2032E, h10km, MW4.1, Earthquake Greece 25 km NW Neokhoruion.*

BJI ***25*** *13:57:57.2, 3864N×2066E, h6km, mB5.8, mb5.2, Ms5.9, Msz5.5*

GCMT ***25*** *13:57:58.2±0.1, 3836N×2024E, h12km, MW5.7/99, Moment Tensor Solution. s84,c157; s99,c242; Duration: 1#8 Moment tensor: Scale 10¹⁷Nm; Mrr2.01±.05; Mθθ3.23±.05; Mϕϕ-5.24±.05; Mrθ1.35±.14; Mθϕ1.88±.05; Mϕr-0.67±.14; Best double couple: M₀5.01200×10¹⁷ NP1:φ₀30.00000°, δ65.00000°, λ164.00000°. NP2:φ₀127.00000°, δ75.00000°, λ26.00000°. Principal axes: T 4.2710, Plg29.0000°, Azm351.0000°; N 1.4830, Plg60.0000°, Azm155.0000°; P -5.7540, Plg7.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ATH ***25*** *13:57:58.2, 3834N×2042E, h16km±1km, ML5.5*

THE ***25*** *13:57:58.1, 3836N×2034E, h3km, ML5.9*

NEIC ***25*** *13:57:58.2, 3834N×2042E, h15km, mb5.3/202, MS5.5/82, MW5.7, ML5.9(THE), ML5.5(ATH), Moment Tensor Solution. s16 Moment tensor: Scale 10¹⁷Nm; Mrr1.13; Mθθ4.43; Mϕϕ-5.59; Mrθ-0.56; Mϕϕ-0.59; Mrθ-0.13; Best double couple: M₀5.10000×10¹⁷ NP1:φ₀319.00000°, δ83.00000°, λ6.00000°. NP2:φ₀228.00000°, δ85.00000°, λ173.00000°. Principal axes: T 4.5600, Plg9.0000°, Azm183.0000°; N 1.0700, Plg81.0000°, Azm12.0000°; P -5.6300, Plg1.0000°, Azm273.0000°; After ATH.*

NEIC Some buildings slightly damaged [VI] and rockslides occurred on some roads at Argostolion, Kefallinia. Felt at Igoumenitsa and Ioannina. Also felt at Karousades, Corfu and Sami, Kefallinia. Also felt on Ithaki and Poros. Felt [III] at Brindisi, Catania, Lecce and Soverato, Italy.

SZGRF ***25*** *13:57:58.5, 3828N×2037E, h10km, mb5.3, Greece*

PDA ***25*** *13:57:59.6, 3846N×2038E, h10km, mb5.3*

BGS ***25*** *13:58:05.9, 3909N×2043E, h15km, mb5.2, MS5.2*

UPP ***25*** *13:58:28.3, 3955N×2100E, h32km*

ISC 25 13:57:59.7±0.3, 38427N×0010×20385E×0009, h12km±2km, h15km±1.2km: pP-P, n1595, σ1#29/1702, mb5.3/244, MS5.4/196, 82C-46D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.30**	**147**	*e*PB		**Pg**	**13 58 03.1**	**-2.6**
VLS				*e*SB		**Sg**	**13 58 07.7**	**-2.1**
KFL	**Anninata**	**0.45**	**135**	*e*Pg		**Pg**	**13 58 05.6**	**-2.9**
RLS	**Riolos of Patr**	**0.93**	**113**	*e*PN		**Pn**	**13 58 15.0**	**-3.6**
IGT	**Igoumenitsa**	**1.10**	**358**	*e*Pg		**Pg**	**13 58 19.7**	**-1.3**
IGT				*e*Sg		**Sg**	**13 58 37.3**	**+1.9**
EVR	**Evrytania**	**1.22**	**66**	*e*PN		**Pn**	**13 58 21.0**	**-1.6**
EVR				*e*SN		**Sn**	**13 58 38.9**	**-0.1**
JAN	**Janina**	**1.28**	**16**	*e*PN		**Pn**	**13 58 22.9**	**-0.6**
KEK	**Kerkira**	**1.36**	**341**	*e*PN		**Pn**	**13 58 25.4**	**+0.8**
KEK				*e*SN		**Sn**	**13 58 46.1**	**+3.5**
SRN	**Sarande**	**1.48**	**348**	*i* PN		**Pn**	**13 58 27.9**	**+1.7**
SRN				*i* SN		**Sg**	**13 58 51.0**	**+3.6**
MEV	**Metsovon**	**1.51**	**26**	*e*Pg		**Pg**	**13 58 26.9**	**-1.8**
AGG	**Agios Georgios**	**1.63**	**68**	*e*Pb		**Pb**	**13 58 28.1**	**-1.7**
AGG				*e*Sb		**Sb**	**13 58 50.8**	**+0.5**
AGG	**Agios Georgios**	**1.63**	**68**	*e*Pb		**Pb**	**13 58 28.0**	**-1.8**
AGG				S		**Sn**	**13 58 50.8**	**+1.5**
THL	**Klokotos Trika**	**1.70**	**48**	*e*PN		**Pn**	**13 58 29.9**	**+0.6**
THL				*e*SN		**Sn**	**13 58 53.5**	**+2.5**
ITM	**Ithomi**	**1.74**	**135**	*e*PN		**Pn**	**13 58 29.1**	**-0.7**
ITM				*e*SN		**Sn**	**13 58 51.3**	**-0.7**
PYL	**PYLOS**	**1.87**	**144**	*e*Pb		**Pb**	**13 58 30.0**	**-3.8**
TPE	**Tepelena**	**1.89**	**351**	*i* PN		**Pn**	**13 58 35.9**	**-0.1**
TPE				*i* SN		**Sg**	**13 59 02.6**	**+2.1**
VLX	**Vlachokerasia**	**1.90**	**123**	*e*Pb		**Pb**	**13 58 31.3**	**-3.0**
LKR	**Lokris**	**2.06**	**83**	*e*PN		**Pn**	**13 58 35.0**	**+0.8**
LTK	**Loutraki**	**2.07**	**100**	*e*Pn		**Pn**	**13 58 34.2**	**+0.1**
VLO	**Vlora**	**2.15**	**342**	*i* PN		**Pn**	**13 58 38.1**	**+2.7**
KZN	**Kozani**	**2.16**	**29**	*e*PN		**Pn**	**13 58 36.8**	**+1.2**
KBN	**Korca**	**2.22**	**8**	*e*PN		**Pn**	**13 58 34.7**	**-1.6**
KBN				*i* SN		**Sg**	**13 59 13.3**	**+2.3**
LIT	**Litokhoron**	**2.34**	**44**	*e*Pn		**Pn**	**13 58 38.2**	**+0.3**
LIT	**Litokhoron**	**2.34**	**44**	*e*Pn		**Pn**	**13 58 38.2**	**+0.2**
XOR	**Xorichti**	**2.38**	**66**	*e*Pn		**Pn**	**13 58 38.6**	**0.0**
NEO	**Neokhori**	**2.38**	**67**	*e*PN		**Pn**	**13 58 39.2**	**+0.6**
DID	**Didima**	**2.43**	**111**	*e*Pn		**Pn**	**13 58 39.1**	**-0.2**
FNA	**Florina**	**2.48**	**18**	*e*Pn		**Pn**	**13 58 40.7**	**+0.8**
NAIG	**Nisos Aigina**	**2.54**	**104**	*e*PB		**Pn**	**13 58 40.6**	**-0.1**
VLI	**Veliai**	**2.65**	**129**	*e*PN		**Pn**	**13 58 41.6**	**-0.7**
ATH	**Athens Observa**	**2.66**	**99**	*e*PB		**Pn**	**13 58 42.5**	**0.0**
BIA	**Bitola**	**2.69**	**15**	||*e*Pn		**Pn**	**13 58 43.6**	**+0.8**
BIA				*i* Sn		**Sn**	**13 59 19.8**	**+4.5**
OHR	**Ohrid**	**2.70**	**7**	P		**Pn**	**13 58 43.6**	**+0.6**
OHR	**Ohrid**	**2.70**	**7**	↑*i*Pn		**Pn**	**13 58 43.8**	**+0.8**
OHR				*i* Sn		**Sn**	**13 59 19.1**	**+3.5**
KVR	**Kavouri**	**2.73**	**102**	*e*PN		**Pn**	**13 58 43.0**	**-0.4**
PTL	**Penteli**	**2.77**	**97**	*e*PB		**Pn**	**13 58 44.0**	**+0.1

SJES eSn Sn 14 00 08.7 +0.2
URLA Izmir 4.88 89 *i* P Pn 13 59 13.2 +0.2
URLA Izmir 4.88 89 *i* P Pn 13 59 13.1 +0.2
STON Ston 4.89 336 *e*Pn Pn 13 59 11.3 -1.7
STON Ston 4.89 336 P Pn 13 59 12.8 -0.2
UPM Unac-Piva 4.90 347 ⇓*i*Pn Pn 13 59 12.8 -0.4
UPM eSn Sn 14 00 08.5 -1.3
UPM Unac-Piva 4.90 347 P Pn 13 59 12.7 -0.5
PLE Plјevlja 4.96 352 ⇑*i*Pn Pn 13 59 14.1 +0.1
PLE eSn Sn 14 00 09.9 -1.3
PLE Plјevlja 4.96 352 P Pn 13 59 14.3 +0.3
AYVA Ayvalik 5.00 78 *i* P Pn 13 59 16.2 +1.7
SMG Samos 5.14 96 *e*PN Pn 13 59 16.5 0.0
BLCB Balcova 5.23 88 PN Pn 13 59 18.7 +1.0
NPS Neapolis 5.25 125 *e*PN Pn 13 59 18.4 +0.4
KDAG Bornova 5.41 88 *i* P Pn 13 59 21.4 +1.2
GRUS Gruza 5.46 3 ⇓*i*Pn Pn 13 59 20.2 -0.7
GRUS eSn Sn 14 00 22.3 -1.4
BBLS Bajina Basta - 5.49 353 ⇓*i*Pn Pn 13 59 20.9 -0.3
BBLS eSn Sn 14 00 22.7 -1.5
BOLS Boljevac 5.53 12 Pn Pn 13 59 22.3 +0.5
XRY Khrisi 5.55 128 *e*PN Pn 13 59 22.0 -0.1
BODT Bodrum 5.66 102 PN Pn 13 59 25.2 +1.6
DIVS Divcibare 5.67 357 *e*Pn Pn 13 59 22.4 -1.4
DIVS eSn Sn 14 00 26.6 -2.3
DIVS Divcibare 5.67 357 Pn Pn 13 59 22.5 -1.3
RKY Sarkoy-Tekirda 5.71 65 PN Pn 13 59 26.0 +1.6
SART Tekirdag 5.72 65 *i* P Pn 13 59 24.4 0.0
ZKR Zakros 5.73 123 *e*Pn Pn 13 59 24.2 -0.4
ZKR Zakros 5.73 123 *e*Pn Pn 13 59 24.2 -0.4
BDRM Kayabasi 5.76 101 *i* P Pn 13 59 25.6 +0.7
BDRM Kayabasi 5.76 101 P Pn 13 59 25.5 +0.6
AKS Akhisar 5.83 83 PN Pn 13 59 26.2 +0.2
SVIS Svilajnac 5.90 6 ⇓*i*Pn Pn 13 59 25.5 -1.4
SVIS eSn Sn 14 00 32.3 -2.1
SVIS Svilajnac 5.90 6 Pn Pn 13 59 25.5 -1.4
EDRB Edirne 5.95 53 PN Pn 13 59 29.7 +2.1
MLSB Milas 5.96 99 PN Pn 13 59 29.7 +2.0
DAT Datca 5.96 104 PN Pn 13 59 29.9 +2.1
BALB Balikesir 5.96 76 PN Pn 13 59 28.9 +1.1
AYDN Tasoluk 5.96 95 *i* P Pb 13 59 42.6 -1.0
BTOK Tokmak 6.09 75 *i* P Pn 13 59 31.1 +1.4
BTOK Tokmak 6.09 75 *i* P Pn 13 59 31.0 +1.4
KARP Karpathos 6.14 116 *e*PN Pn 13 59 30.5 +0.3
BNT Bandirma 6.15 69 PN Pn 13 59 31.0 +0.7
JMB Yambol 6.21 48 P Pn 13 59 31.8 +0.6
BEO Belgrade 6.39 0 ⇓*i*Pn Pn 13 59 31.6 -2.0
BEO eSn Sn 14 00 42.4 -4.1
BEO Belgrade 6.39 0 Pn Pn 13 59 32.6 -1.0
BEO Belgrade 6.39 0 P Pn 13 59 34.0 +0.4
DJES Djerdap 6.41 14 *e*Pn Pn 13 59 34.1 +0.2
DJES eSn Sn 14 00 46.2 -0.7
ZIMR 6.44 34 P Pn 13 59 36.6 +2.3
KULA Kula-Manisa 6.49 87 PN Pn 13 59 36.1 +1.0
DST Dursunbey 6.53 77 PN Pn 13 59 37.1 +1.6
ARG Arkhangelos 6.55 107 *e*PN Pn 13 59 37.6 +1.7
FGSL Fruska Gora 6.74 357 Pn Pn 13 59 36.6 -1.8
CTT Catalca 6.76 64 Pn Pn 13 59 39.9 +1.1
DENT Denizli 6.85 93 PN Pn 13 59 42.1 +2.1
GEMT Gemlik 7.10 71 PN Pn 13 59 45.4 +1.9
FETY Fethiye 7.14 102 PN Pn 13 59 46.9 +2.9
GDZ Gediz 7.14 82 *i* P Pn 13 59 45.8 +1.9
KHL Karahalli 7.18 88 PN Pn 13 59 46.3 +1.8
ISK Istanbul-Kandi 7.18 66 PN Pn 13 59 45.6 +1.0
GZR Gura Zlata 7.19 14 ⇑P Pn 13 59 44.3 -0.3
GZR Gura Zlata 7.19 14 ⇑*i*P Pn 13 59 44.3 -0.3
BUZS Buzias 7.24 7 ⇑*i*P Pn 13 59 44.5 -0.9
BZS Buzias 7.24 7 P Pn 13 59 44.7 -0.7
YLV Yalova 7.27 70 PN Pn 13 59 47.1 +1.3
BUC1 Bucharest 7.28 34 P Pn 13 59 47.8 +2.0
IZI Iznik 7.29 72 PN Pn 13 59 46.9 +0.8
GOLH Golhisar 7.36 96 *i* P Pn 13 59 49.0 +2.0
NVLJ Novalja 7.40 328 *e*Pn Pn 13 59 47.8 +0.4
ADVT Abdulvahap 7.51 72 PN Pn 13 59 50.1 +1.0
RHK3 Tenkes 7.62 349 ⇑*e*P Pn 13 59 50.1 -0.5
SISC Sisak 7.65 338 *e*Pn Pn 13 59 49.4 -1.5
SISC Sisak 7.65 338 *e*Pn Pn 13 59 49.3 -1.6
KSL Kastellorizon 7.68 104 *e*PN Pn 13 59 53.0 +1.7
ELL Elmali 7.75 100 PN Pn 13 59 55.3 +3.0
PKSM Moragy 7.89 351 ⇓*i*P Pn 13 59 52.0 -2.2
PKSM Moragy 7.89 351 P Pn 13 59 52.9 -1.3
GPA Golpazari 7.91 73 PN Pn 13 59 55.7 +1.2
BORA Eskisehir 7.96 76 *i* P Pn 13 59 57.0 +1.8
ISP Isparta 8.00 91 PN Pn 13 59 57.1 +1.3
ISP Isparta 8.00 91 *e*Pn Pn 13 59 58.4 +2.6
128nm,0.7s
ISP Isparta 8.00 91 *e*P Pn 13 59 58.4 +2.6
ISP pmax pmax
comp=Z,127nm,0.7s
ISP Isparta 8.00 91 ⇑*i*P Pn 14 00 00.3 +4.5
BOJS Bojanci 8.04 333 *e*Pn Pn 13 59 55.9 -0.4
BOJS eSn Sn 14 01 24.0 -3.0
BCK Bucak 8.12 94 PN Pn 13 59 58.5 +1.1
MLR Muntele Rosu 8.18 29 Pn Pn 13 59 59.8 +1.5
comp=Z,1.5nm,0.3s,baz=234,slow=6.2,SNR=78
MLR LR LR 14 03 10.9
comp=Z,24μm,18.8s,baz=31,slow=38
ESKT Eskisehir 8.22 79 PN Pn 13 59 59.7 +0.8
ESKT Eskisehir 8.22 79 *i* P Pn 14 00 01.4 +2.5
ESKT Eskisehir 8.22 79 *i* P Pn 14 00 01.1 +2.2
SEYT Eskypehyr 8.22 79 *i* P Pn 14 00 01.1 +2.2
CRES Cresnjev 8.25 335 *e*Pn Pn 13 59 58.1 -1.0
CRES eSn Sn 14 01 27.2 -5.0
ANTB Antalya 8.29 97 PN Pn 14 00 01.6 +1.9
HARR Harsova 8.43 40 ⇑P Pn 14 00 02.5 +0.8
HARR Harsova 8.43 40 ⇑*i*P Pn 14 00 02.5 +0.8
VISS Visnje 8.44 333 *e*Pn Pn 14 00 01.9 +0.1
HENT Hendek 8.46 70 *i* P Pn 13 59 55.8 -6.2
HENT Hendek 8.46 70 *i* P Pn 14 00 02.2 +0.1
HENT Hendek 8.46 70 *i* P Pn 14 00 02.2 +0.1
DRGR 8.53 11 ⇓P Pn 14 00 03.2 +0.2
DRGR 8.53 11 P Pn 14 00 03.5 +0.5
DRGR 8.53 11 ⇓*i*P Pn 14 00 03.2 +0.2
CEY Cerknica 8.54 331 P Pn 14 00 02.6 +0.6
VSL Villasalto 8.64 281 *e*Pn Pn 14 00 03.2 -1.4
comp=Z,799nm,1.5s
VSL Villasalto 8.64 281 *e*Pn Pn 14 00 03.2 -1.4
comp=Z,799nm,1.5s
PLOR Plostina 8.76 30 ⇑*i*P Pn 14 00 09.2 +3.1
PLOR Plostina 8.76 30 P Pn 14 00 08.7 +2.6
LJU Ljubljana 8.76 332 *e*Pn Pn 14 00 06.0 -0.2
LJU eSn Sn 14 01 42.2 -2.6
LJU Ljubljana 8.76 332 P Pn 14 00 05.8 -0.4
VRI Vrincioaia 8.80 30 ⇑P Pn 14 00 08.4 +1.8
VRI Vrincioaia 8.80 30 ⇑*i*P Pn 14 00 08.4 +1.7
KDZE Karadeniz Ereo 8.98 68 PN Pn 14 00 07.6 +1.4
VOY Vojsko 8.99 330 *e*Pn Pn 14 00 07.9 -1.5
VOY eSn Sn 14 01 47.2 -3.3
KIZT Kizilcal 9.01 84 PN Pn 14 00 10.0 +0.4
PKSG 9.08 351 ⇑*e*P Pn 14 00 10.3 -0.2
PKSG eS Sn 14 01 51.2 -1.4
BUD Budapest 9.11 354 *e* Pn 14 00 11.1 +0.2
OBKA Obir 9.15 334 ⇓*i*Sn Sn 14 01 53.1 -1.3
OBKA Obir 9.15 334 ⇓*i*Pn Pn 14 00 10.6 -1.0
SNR=22
OBKA ⇓*i*Sn Sn 14 01 53.1 -1.3
OBKA Obir 9.15 334 Pn Pn 14 00 10.6 -0.9
comp=Z,22nm,2.0s
OSPF L'Ospedale 9.17 294 *e*P Pn 14 00 12.4 +0.6
DRE Drenchia 9.21 329 ⇓*i*P Pn 14 00 12.0 -0.3
KEST Kesra 9.22 256 Pn Pn 14 00 10.9 -1.6
comp=Z,1.3nm,0.3s,baz=172,slow=1.1,SNR=24
KEST Sn Sn 14 01 55.0 -1.2
comp=Z,1.9nm,0.3s,baz=353,slow=20,SNR=4.6
KEST LR LR 14 04 47.5
comp=Z,8μm,18.7s,baz=19,slow=45
MAIM 9.26 309 P Pn 14 00 12.2 -0.7
SGKT Sivrigoynuk 9.27 73 *i* P Pn 14 00 16.1 +2.9
SGKT Sivrigoynuk 9.27 73 *i* P Pn 14 00 15.5 +2.3
SGKT Sivrigoynuk 9.27 73 *i* P Pn 14 00 15.5 +2.3
COLI Coloredo 9.28 328 ⇓*e*P Pn 14 00 13.0 -0.3
PENC Penc 9.39 355 ⇑*e*P Pn 14 00 14.4 -0.4
KONT Konya--Tatoy 9.44 89 PN Pn 14 00 15.7 +0.2
VLC Villacollemand 9.45 310 *e*Pn Pn 14 00 16.8 +1.2
comp=Z,229nm,0.9s
PSZ Piszkesteto 9.49 358 *e*Pn Pn 14 00 14.4 -1.8
comp=Z,254nm,1.1s
PSZ Piszkesteto 9.49 358 *e* Pn 14 00 15.7 -0.5
PSZ Piszkesteto 9.49 358 ⇓*i*P Pn 14 00 15.3 -0.9
PSZ Piszkesteto 9.49 358 *e*Pn Pn 14 00 14.4 -1.8
comp=Z,254nm,1.1s
PSZ Piszkesteto 9.49 358 P Pn 14 00 15.4 -0.8
LSR Lussari 9.50 330 ⇑*i*P Pn 14 00 16.0 -0.3
ARSA Arzberg 9.51 340 ⇑*i*Sn Sn 14 01 58.6 -4.6
ARSA Arzberg 9.51 340 ⇑*i*Pn Pn 14 00 14.6 -1.8
SNR=38
ARSA ⇑*i*Sn Sn 14 01 58.6 -4.6
ARSA Arzberg 9.51 340 Pn Pn 14 00 14.6 -1.9
comp=Z,38nm,4.0s
MPRI Monte Prat 9.53 327 ⇑*i*P Pn 14 00 16.0 -0.8
VINC Vinca 9.58 310 P Pn 14 00 15.8 -1.7
MYKA Terra Mystica 9.59 331 ⇑*i*Pn Pn 14 00 16.7 -0.8
MYKA ⇑*i*Sn Sn 14 02 04.0 -1.1
BACM 9.71 310 P Pn 14 00 18.5 -0.6
PLRO Paularo 9.71 329 ⇑*e*P Pn 14 00 19.0 -0.2
LOD Lodumlu 9.73 78 PN Pn 14 00 19.6 +0.2
ANTO Ankara 9.75 78 PN Pn 14 00 19.4 -0.3
ANTO Ankara 9.75 78 *e*Pn Pn 14 00 23.1 +3.4
comp=Z,111nm,1.1s
ANTO Ankara 9.75 78 Pn Pn 14 00 24.5 +4.8
SNR=19
ANTO Ankara 9.75 78 ⇓*i*P Pn 14 00 22.9 +3.2
ANTO Ankara 9.75 78 *e*Pn Pn 14 00 23.1 +3.4
comp=Z,111nm,1.1s
TRPA Tarpa 9.82 8 ⇓*i*P Pn 14 00 20.1 -0.6
GRAM 9.83 311 P Pn 14 00 19.4 -1.4
SAFT Safranbolu 9.87 70 PN Pn 14 00 21.9 +0.5
CSMI Casera Mimoias 9.89 327 ⇑*e*P Pn 14 00 21.0 -0.6
CONA Conrad Observa 10.05 342 ⇑*i*Pn Pn 14 00 21.9 -2.0
SNR=24
KECS Kecovo 10.05 0 *e*PN Pn 14 00 23.5 -0.4
KECS eSN Sn 14 02 11.6 -4.9
ZST Bratislava 10.05 347 *e*P Pn 14 00 22.8 -1.1
ZST *e* 14 02 10.6
ZST MLR MLR
comp=Z,20μm,15.3s
ZST Bratislava 10.05 347 *e*PN Pn 14 00 22.8 -1.1
ZST eSN Sn 14 02 10.6 -5.9
ZST Bratislava 10.05 347 *e*P Pn 14 00 22.8 -1.1
comp=Z,20μm,15.3s
KBA Koelnbreinsper 10.07 331 ⇓*i*Sn Sn 14 02 14.3 -2.7
KBA Koelnbreinsper 10.07 331 ⇓*i*Pn Pn 14 00 23.2 -0.9
SNR=72
KBA ⇓*i*Sn Sn 14 02 14.3 -2.7
KBA Koelnbreinsper 10.07 331 Pn Pn 14 00 23.2 -0.9
comp=Z,72nm,2.0s
KBA *i* S Sn 14 02 14.3 -2.7
SC2M Scurtabr 10.10 310 P Pn 14 00 23.9 -0.6
ERMK Ermenek 10.11 96 *i* P Pn 14 00 28.5 +3.8
ERMK Ermenek 10.11 96 *i* P Pn 14 00 31.7 +7.0
VYHS Vyhne 10.13 354 *e*P Pn 14 00 23.4 -1.5
VYHS *e* 14 02 14.2
VYHS MLR MLR
comp=Z,14μm,18.9s
VYHS Vyhne 10.13 354 *e*PN Pn 14 00 23.4 -1.5
VYHS eSN Sn 14 02 14.2 -4.1
VYHS Vyhne 10.13 354 *e*P Pn 14 00 23.4 -1.5
comp=Z,14μm,18.9s
ABTA Abfaltersbach 10.13 328 ⇑*i*Pn Pn 14 00 24.1 -0.9
AKMC Akamas 10.17 106 P Pn 14 00 23.8 -1.7
MODS Modra-Piesok 10.20 348 *e*PN Pn 14 00 25.8 0.0
MODS eSN Sn 14 02 14.5 -5.5
PPCY Paphos 10.24 107 P Pn 14 00 24.6 -1.8
KOLL Kolacno 10.25 353 *e*PN Pn 14 00 25.5 -1.0
KOLL eSN Sn 14 02 15.7 -5.6
UZH Uzhgorod 10.29 7 *e*P Pn 14 00 28.0 +0.8
UZH Uzhgorod 10.29 7 ⇑*i*P Pn 14 00 27.4 +0.2
UZH eS Sn 14 02 24.4 +2.0
UZH MLR MLR
comp=Z,33μm,11.0s
UZH MLR MLR
comp=Z,34μm,12.0s
ELDT Eldivan 10.29 74 *i* P Pn 14 00 29.4 +2.2
ELDT Eldivan 10.29 74 *i* P Pn 14 00 29.8 +2.6
SMOL Smolenice 10.31 349 *e*PN Pn 14 00 28.3 +0.9
SMOL eSN Sn 14 02 18.5 -4.3
ALFC Alevga 10.32 105 P Pn 14 00 25.4 -2.2
comp=Z,10nm,0.5s
MOA Molln 10.42 337 ⇑*i*Sn Sn 14 02 21.4 -4.2
MOA Molln 10.42 337 ⇓*i*Pn Pn 14 00 27.4 -1.5
SNR=109
MOA ⇑*i*Sn Sn 14 02 21.4 -4.2
MOA Molln 10.42 337 Pn Pn 14 00 27.4 -1.5
comp=Z,108nm,7.0s
KAMT Kaman 10.43 81 PN Pn 14 00 29.3 +0.2
BALT Daday 10.45 69 *i* P Pn 14 00 31.9 +2.6
CANT Cankiri 10.46 74 PN Pn 14 00 29.3 -0.1
CMAH Djebel Manchou 10.46 264 P Pn 14 00 31.0 +1.6
CRVS Cervenica-Dubn 10.50 4 *e*PN Pn 14 00 31.4 +1.4
KIS Kishinev 10.57 33 *e*P Pn 14 00 30.0 -0.9
KIS eS Sn 14 02 30.0 +0.8
KIS MLR MLR
comp=Z,25μm,10.0s
KIS MLR MLR
comp=N,58μm,14.0s
KIS MLR MLR
comp=E,32μm,13.0s
KIS MLR MLR
comp=Z,27μm,12.0s
KIS Kishinev 10.57 33 *e*PP 14 00 34.0
KIS eS Sn 14 02 30.0 +0.8
KIS eLi 14 03 00.0
KIS eLQ 14 03 36.0
KIS *i* LR LR 14 04 10.0
comp=Z,58μm,14.0s
KIS Kishinev 10.57 33 *e*P Pn 14 00 30.0 -0.9
KIS eS Sn 14 02 30.0 +0.8
KOLS Kolonicke sedl 10.59 7 *e*PN Pn 14 00 33.0 +1.8
KOLS Kolonicke sedl 10.59 7 *e*P Pn 14 00 33.1 +1.9
JAVC Velka Javorina 10.61 350 P Pn 14 00 30.6 -0.9
SZAC Souni-Zanaja 10.69 106 P Pn 14 00 31.5 -1.2
PCP Pian Castagno 10.78 308 P Pn 14 00 33.7 -0.1
MAMC Mammari 10.79 104 P Pn 14 00 32.9 -1.1
IKL Isikli 10.81 98 *e*PN Pn 14 00 35.5 +1.2
FIN Finale Ligure 10.82 306 P Pn 14 00 36.0 +1.6
TOS Tosya 10.82 75 *e*PN Pn 14 00 35.2 +0.8
RORO 10.87 305 P Pn 14 00 37.0 +2.0
IMI Imperia 10.89 304 P Pn 14 00 37.3 +1.9
WTTA Wattenberg 10.91 327 ⇓*i*Pn Pn 14 00 35.0 -0.7
SNR=97
WTTA ⇑*i*Sn Sn 14 02 37.1 -0.5
CDAG Cicekdag 10.95 79 *i* P Pn 14 00 38.8 +2.6
CDAG Cicekdag 10.95 79 *i* P Pn 14 00 37.2 +1.0
CDAG Cicekdag 10.95 79 *i* P Pn 14 00 37.2 +1.0
CSS Prodhromos 10.95 104 P Pn 14 00 35.2 -1.0
comp=Z,3.7nm,0.6s
NEGI Negi 10.99 304 P Pn 14 00 39.3 +2.6
NIE Niedzica 10.99 360 *e*P Pn 14 00 37.9 +1.2
LFK Lefkose 10.99 103 PN Pn 14 00 38.8 +2.0
WATA Walderalm 10.99 327 *i* Pn Pn 14 00 36.7 -0.1
SNR=111
WATA ⇑*i*Sn Sn 14 02 38.5 -1.1
BZK Bozkurt 11.00 67 *e*PN Pn 14 00 37.5 +0.7
STHS Stebnicka Huta 11.00 3 *e*PN Pn 14 00 38.6 +1.7
STHS eSN Sn 14 02 39.5 -0.3
KMPD K-Podol'skiy 11.05 22 P Pn 14 00 40.0 +2.5
MONE Monesi 11.05 305 P Pn 14 00 40.8 +3.2
CKFL Kef-Lekhel 11.06 264 P Pn 14 00 40.5 +2.8
SQTA Sankt Quirin 11.07 326 ⇑*i*Pn Pn 14 00 38.0 +0.2
SQTA *i* Sn Sn 14 02 40.6 -0.7
SQTA Sankt Quirin 11.07 326 ⇑*i*Pn Pn 14 00 38.0 +0.2
SNR=84
SQTA ⇓*i*Sn Sn 14 02 40.7 -0.7
ROB Roburent 11.08 306 P Pn 14 00 40.1 +2.2
FETA Feichten 11.14 324 *i* Pn Pn 14 00 38.6 -0.1
SNR=33
SAOF Saorge 11.14 304 *e*P Pn 14 00 40.7 +1.9
REVF Revere 11.16 303 *e*P Pn 14 00 40.4 +1.3
SBF Sospel 11.17 303 *e*P Pn 14 00 39.6 +0.4
comp=Z,1μm,1.2s
SBF Sospel 11.17 303 *e*P Pn 14 00 39.6 +0.4
SBF pmax pmax
comp=Z,526nm,1.2s
SBF Sospel 11.17 303 *e*P Pn 14 00 39.6 +0.4
comp=Z,526nm,1.2s
CORM Corum 11.18 77 PN Pn 14 00 38.8 -0.5
NIG Nigde 11.19 87 *e*PN Pn 14 00 40.4 +0.9
MOTA Moosalm 11.21 326 ⇑*i*Pn Pn 14 00 39.7 +0.1
SNR=140
MOTA ⇓*i*Sn Sn 14 02 43.9 -0.9
VRAC Vranov 11.21 347 Pn Pn 14 00 38.0 -1.8
comp=Z,0.1nm,0.3s,baz=178,slow=15,SNR=15
VRAC Vranov 11.21 347 ⇓*i*P Pn 14 00 41.3 +1.5
AUTN L'Aution 11.23 304 *e*P Pn 14 00 42.5 +2.5
LUCF Luceram 11.24 303 *e*P Pn 14 00 41.7 +1.6
CASM Ain Smara 11.27 263 P Pn 14 00 43.0 +2.4
MERS Mersin 11.32 94 *e*PN Pn 14 00 42.6 +1.4
KWP Kalwaria 11.32 8 *e*P Pn 14 00 44.5 +3.3
KWP *e*S Sn 14 02 57.6 +10
KWP LMZ 14 08 24.4
comp=Z,27μm,14.4s
KWP Kalwaria 11.32 8 *e*P Pn 14 00 44.5 +3.2
KWP *e*S Sn 14 02 57.6 +10
AVNT Avonos 11.33 84 *i* P Pn 14 00 44.8 +3.4
AVNT Avonos 11.33 84 *i* P Pn 14 00 44.0 +2.6
AVNT Avonos 11.33 84 *i* P Pn 14 00 44.0 +2.6
ENR Entracque 11.34 305 P Pn 14 00 44.1 +2.7
CTKT Corum 11.34 74 *i* P Pn 14 00 44.8 +3.2
CTKT Corum 11.34 74 *i* P Pn 14 00 44.2 +2.6
CTKT Corum 11.34 74 *i* P Pn 14 00 44.2 +2.7
TOUF Mont Tournerai 11.36 304 *e*P Pn 14 00 41.2 -0.5
MVIF Mont Vial 11.37 303 *e*P Pn 14 00 43.3 +1.4
DAVOX Davos/Dischmat 11.38 321 Pn Pn 14 00 40.9 -1.1
comp=Z,6.3nm,0.3s,baz=136,slow=18,SNR=69
DAVOX Sn Sn 14 02 47.5 -1.5
comp=Z,12nm,0.3s,baz=278,slow=23,SNR=3.3
EREN Erenkoy 11.40 100 *e*PN Pn 14 00 43.9 +1.6
STV Sta Anna Valdi 11.40 305 P Pn 14 00 44.7 +2.3
TREC Trest 11.42 344 *e*P Pn 14 00 41.2 -1.4
TREC AMS AMS 14 05 40.0
comp=Z,27μm,11.9s
TREC Trest 11.42 344 *e*P Pn 14 00 41.2 -1.4
comp=Z,27μm,11.9s
TUE Stuetta 11.44 318 P Pn 14 00 42.5 -0.4
RETA Reutte 11.47 325 ⇑*i*Pn Pn 14 00 43.2 0.0
SNR=13
GEC2 GERESS Array S 11.48 337 *e*P Pn 14 00 40.7 -2.7
GEC2 pmax pmax
comp=Z,78nm,0.9s
GEC2 GERESS Array S 11.48 337 *e*Pn Pn 14 00 40.7 -2.7
comp=Z,78nm,0.9s
GERES GERESS Array B 11.48 337 Pn Pn 14 00 41.5 -1.9
comp=Z,10nm,0.3s,baz=155,slow=14,SNR=73
GERES Sn Sn 14 02 48.5 -3.0
comp=Z,8.9nm,0.3s,baz=153,slow=24,SNR=5.3
GERES ScP ScP 14 10 05.6 -2.2
comp=Z,0.2nm,0.3s,baz=113,slow=2.2,SNR=2.7
GERES GERESS Array B 11.48 337 P Pn 14 00 41.5 -1.9
GERES S Sn 14 02 48.5 -2.9
CALN Calern 11.49 302 *e*P Pn 14 00 45.2 +1.7
OKC Ostrava-Krasne 11.52 353 *e*P Pn 14 00 43.2 -0.7
OKC AMS AMS 14 06 40.0
comp=Z,22μm,11.9s
MORC Moravsky Berou 11.53 351 *e*Pn Pn 14 00 42.9 -1.2
comp=Z,68nm,1.0s
MORC Moravsky Berou 11.53 351 ⇑*i*P Pn 14 00 43.5 -0.5
BOYT Boyabat 11.54 70 *i* P Pn 14 00 46.9 +2.7
BOYT Boyabat 11.54 70 *i* P Pn 14 00 46.6 +2.3
BOYT Boyabat 11.54 70 *i* P Pn 14 00 46.6 +2.3
FRF La Foret Royal 11.58 301 *e*P Pn 14 00 42.9 -1.8
comp=Z,310nm,1.1s
FRF La Foret Royal 11.58 301 *e*P Pn 14 00 42.9 -1.8
FRF pmax pmax
comp=Z,155nm,1.1s
FRF La Foret Royal 11.58 301 *e*P Pn 14 00 42.9 -1.8
comp=Z,155nm,1.1s
LMR La Mourre 11.59 299 *e*P Pn 14 00 43.5 -1.4
comp=Z,391nm,1.4s
LMR La Mourre 11.59 299 *e*P Pn 14 00 43.5 -1.4
LMR pmax pmax
comp=Z,196nm,1.4s
LMR La Mourre 11.59 299 *e*P Pn 14 00 43.5 -1.4
comp=Z,196nm,1.4s
KARA Karaisali 11.66 91 *e*PN Pn 14 00 46.7 +0.8
PZZ Prazzo 11.66 306 P Pn 14 00 48.3 +2.4
DFRA Djebel Bou Aff 11.68 265 P Pn 14 00 49.0 +2.8
LVV L'vov 11.69 12 ⇑*i*P Pn 14 00 49.8 +3.6
LVV *e*S Sn 14 03 04.0 +7.5
LVV MLR MLR
comp=N,6μm,10.0s
LVV MLR MLR
comp=E,5μm,10.0s
LVV MLR MLR
comp=Z,10μm,10.0s
ORX Oropa 11.69 312 P Pn 14 00 44.8 -1.5
DAVA Damuels 11.73 322 ⇓*i*Pn Pn 14 00 47.3 +0.5
DAVA *i* 14 02 52.7
DAVA Damuels 11.73 322 Pn Pn 14 00 47.3 +0.5
comp=Z,18nm,6.0s
RAC Raciborz 11.76 353 *e*P Pn 14 00 46.8 -0.4
RAC *e*PP 14 00 55.4
RAC Raciborz 11.76 353 *e*P Pn 14 00 46.8 -0.4
RAC MLR MLR
comp=E,33μm,21.8s
RAC MLR MLR
comp=Z,21μm,17.7s
RAC MLR MLR
comp=N,36μm,16.4s
TRAV 11.77 311 P Pn 14 00 46.1 -1.2
FUR Furstenfeldbru 11.77 329 *e*P Pn 14 00 46.0 -1.4
FUR *e* 14 02 53.0
FUR pmax pmax
comp=Z,297nm,1.0s
FUR Furstenfeldbru 11.77 329 *e*Pn Pn 14 00 46.0 -1.4
comp=Z,297nm,1.0s
FUR *e*Sn Sn 14 02 53.0 -5.6
KHC Kasperske Hory 11.77 338 *e*P Pn 14 00 45.4 -2.0
KHC *e* 14 01 19.5
KHC *e* 14 01 35.0
KHC *e* 14 02 03.0
KHC Kasperske Hory 11.77 338 *e*P Pn 14 00 45.4 -2.0
KHC *ex* x 14 01 19.5
KHC *ex* x 14 01 35.0
KHC *ex* x 14 02 03.0
KHC AMS AMS 14 06 00.0
comp=Z,42μm,11.5s
OJC Ojcow 11.80 358 *e*P Pn 14 00 46.9 -0.8
OJC *e*S Sn 14 02 53.9 -5.3
DIKM Dikmen 11.85 70 PN Pn 14 00 47.9 -0.5
RSP Reno Superiore 11.87 309 P Pn 14 00 49.7 +0.9
UBR Ueberruh 11.91 324 P Pn 14 00 48.6 -0.6
CMER Merouana 11.91 261 P Pn 14 00 54.0 +4.6
MBDF Montbardon 11.97 306 *e*P Pn 14 00 52.2 +2.0
comp=Z,947nm,1.1s
MBDF Montbardon 11.97 306 *e*P Pn 14 00 52.2 +2.0
MBDF pmax pmax
comp=Z,474nm,1.1s
MBDF Montbardon 11.97 306 *e*P Pn 14 00 52.2 +2.0
comp=Z,474nm,1.1s
WET Wettzell 12.00 336 *e*P Pn 14 00 47.9 -2.6
WET pmax pmax
comp=Z,125nm,1.1s
WET Wettzell 12.00 336 *e*Pn Pn 14 00 47.9 -2.6
comp=Z,125nm,1.1s
KRTS Karatas 12.05 94 *e*PN Pn 14 00 51.6 +0.3
RRL Cesana Torines 12.05 307 P Pn 14 00 54.0 +2.7
LSD Ceresole Reale 12.09 310 P Pn 14 00 51.8 +0.1
CKHR Kef el Ahmar 12.10 263 P Pn 14 00 54.0 +2.1
BNN Bunyan 12.10 83 *e*PN Pn 14 00 51.6 -0.3
SET Setif 12.14 264 P Pn 14 00 56.0 +3.5
SIM Simferopol' 12.15 53 *e*P Pn 14 00 51.0 -1.6
SIM S Sn 14 03 09.0 +1.1
SIM pmax pmax
comp=Z,95nm,0.9s
SIM MLR MLR
comp=Z,13μm,15.9s
SIM Simferopol' 12.15 53 *e*P Pn 14 00 51.0 -1.6
comp=Z,95nm,0.9s
SIM S Sn 14 03 09.0 +1.1
comp=Z,13μm,15.9s
BNI Bardonecchia 12.18 307 *e*Pn Pn 14 00 58.2 +5.2
comp=Z,173nm,1.2s
BNI Bardonecchia 12.18 307 *e*P Pn 14 00 58.2 +5.2
BNI pmax pmax
comp=Z,173nm,1.2s
HNAT Natroun 12.20 133 P Pn 14 00 48.5 -4.8
KOZT Kozan 12.23 90 *e*PN Pn 14 00 54.1 +0.4
CEYT Ceyhan 12.25 92 *e*PN Pn 14 00 55.0 +1.0
DPC Dobruska-Polom 12.27 348 *e*P Pn 14 00 54.0 -0.1
DPC AMS AMS 14 06 30.0
comp=Z,25μm,12.2s
PRU Pruhonice 12.29 342 *e*P Pn 14 00 52.9 -1.5
PRU AMS AMS 14 06 40.0
comp=Z,35μm,12.1s
KVT Kavak 12.34 73 *e*PN Pn 14 00 55.4 +0.2
LPG La Plagne 12.36 309 *e*P Pn 14 00 56.8 +1.4
comp=Z,323nm,0.9s
LPG La Plagne 12.36 309 *e*P Pn 14 00 56.8 +1.4

LPG pmax pmax
comp=Z,161nm,0.9s
LPG La Plagne 12.36 309 *e*P **Pn 14 00 56.8 +1.4**
comp=Z,161nm,0.9s
LPL La Plagne 12.38 309 *e*P **Pn 14 00 57.6 +1.9**
comp=Z,245nm,0.8s
LPL La Plagne 12.38 309 *e*P **Pn 14 00 57.6 +1.9**
LPL pmax pmax
comp=Z,122nm,0.8s
LPL La Plagne 12.38 309 *e*P **Pn 14 00 57.6 +1.9**
comp=Z,122nm,0.8s
FYM Al Fayyum 12.40 131 P **Pn 14 00 51.0 -5.1**
FYM S **Sn 14 03 01.5 -13**
SMRF Simiane la Rot 12.45 301 *e*P **Pn 14 00 58.7 +2.0**
comp=Z,494nm,1.3s
SMRF Simiane la Rot 12.45 301 *e*P **Pn 14 00 58.7 +2.0**
comp=Z,247nm,1.3s
SISB Singen-Schiene 12.45 322 P **Pn 14 00 56.7 0.0**
AYT Al 'Ayyat 12.46 131 P **Pn 14 00 52.4 -4.4**
UPC Upice 12.47 347 *e*P **Pn 14 00 56.6 -0.3**
MAHO Mahon 12.60 282 *i* P **Pn 14 00 58.0 -0.7**
ORIF Oris-en-Rattie 12.63 306 *e*P **Pn 14 01 01.4 +2.3**
comp=Z,517nm,1.2s
ORIF *e*MLR MLR
comp=Z,33µm,22.2s
ORIF Oris-en-Rattie 12.63 306 *e*P **Pn 14 01 01.4 +2.3**
ORIF pmax pmax
comp=Z,259nm,1.2s
ORIF Oris-en-Rattie 12.63 306 *e*P **Pn 14 01 01.4 +2.3**
comp=Z,258nm,1.2s
GUT Gutenstein 12.65 323 P **Pn 14 00 58.6 -0.8**
KOT Kottamia 12.70 128 P **Pn 14 00 53.7 -6.5**
KOT S **Sn 14 03 08.5 -13**
KSP Ksiaz 12.75 348 *e*P **Pn 14 01 01.3 +0.6**
KSP *e*pP 14 01 08.0
KSP LMZ 14 07 33.3
comp=Z,22µm,16.6s
KSP Ksiaz 12.75 348 *e*P **Pn 14 01 01.2 +0.5**
KSP *e*pP 14 01 17.4
KSP *e*S **Sn 14 03 39.0 +17**
COBT Iskenderun 12.75 94 *i* P **Pn 14 00 59.7 -1.2**
COBT Iskenderun 12.75 94 *i* P **Pn 14 00 58.3 -2.6**
HSAF As Saff 12.76 130 P **Pn 14 00 54.4 -6.5**
HTY Hatay 12.76 96 *e*PN **Pn 14 01 02.0 +1.1**
ROTZ Rotzenmuhle 12.76 335 *e*Pn **Pn 14 00 59.0 -1.9**
comp=Z,49nm,1.2s
PVCC Panska Ves 12.79 343 AMS AMS 14 06 30.0
comp=Z,22µm,11.5s
PVCC Panska Ves 12.79 343 P **Pn 14 01 00.2 -1.0**
BUCH Bad Urach 12.82 325 P **Pn 14 01 00.4 -1.2**
SPAK Spaichingen-Ko 12.83 323 *e*P **Pn 14 01 01.8 0.0**
HHAG Hagoal 12.85 128 P **Pn 14 00 57.0 -5.3**
OCF Saint Nazaire 12.86 303 *e*P **Pn 14 01 05.9 +3.6**
OG26 St.-Nazaire-De 12.86 303 *e*P **Pn 14 01 05.9 +3.6**
GLL Jalalah 12.88 130 P **Pn 14 00 56.1 -6.5**
GLL S **Sn 14 03 14.0 -12**
MANZ Manzenberg 12.98 336 *e*Pn **Pn 14 01 02.7 -1.2**
comp=Z,74nm,1.2s
GRA1 Grafenberg Arr 13.04 333 *e*P **Pn 14 01 02.9 -1.7**
comp=Z,19µm,18.5s
GRF Grafenberg Arr 13.04 333 *e*P **Pn 14 01 02.9 -1.7**
GRF pmax pmax
comp=Z,82nm,1.3s
GRF MLR MLR
comp=Z,19µm,18.5s
GRF Grafenberg Arr 13.04 333 *e*Pn **Pn 14 01 02.9 -1.7**
comp=Z,82nm,1.3s
GRF *e*L 14 07 44.2
comp=Z,19µm,18.5s
GRFO Grafenberg 13.04 333 *e*Pn **Pn 14 01 03.3 -1.3**
comp=Z,122nm,0.8s
GRFO Grafenberg 13.04 333 *e*P **Pn 14 01 03.3 -1.3**
GRFO pmax pmax
comp=Z,122nm,0.8s
GRFO Grafenberg 13.04 333 *e*P **Pn 14 01 03.3 -1.3**
comp=Z,122nm,0.8s
BBS Basel-Blauen 13.04 318 *e*P **Pn 14 01 04.4 -0.4**
FELD Feldberg im Sc 13.06 320 *e*P **Pn 14 01 04.0 -0.9**
HFRF Wahat Farafira 13.07 147 P **Pn 14 01 00.3 -4.9**
KMRS Kahramanmaras 13.07 89 *e*PN **Pn 14 01 05.6 +0.4**
NKC Novy Kostel 13.09 337 *e*P **Pn 14 01 05.6 +0.2**
NKC AMS AMS 14 06 50.0
comp=Z,50µm,12.0s
AMAG Maghara 13.11 122 P **Pn 14 00 60.0 -5.7**
STU Stuttgart 13.12 326 *e*P **Pn 14 01 04.3 -1.6**
STU pmax pmax
comp=Z,140nm,0.9s
STU Stuttgart 13.12 326 *e*Pn **Pn 14 01 04.3 -1.6**
comp=Z,140nm,0.9s
BHL Bhannes 13.13 105 *e*P **Pn 14 01 06.2 +0.1**
KIZ Kirchzarten 13.15 320 P **Pn 14 01 04.9 -1.4**
WERN Wernitzgruen 13.16 337 *e*Pn **Pn 14 01 05.4 -0.9**
comp=Z,25nm,0.9s
BFO Black Forest 13.21 322 Pn **Pn 14 01 06.8 -0.2**
comp=Z,557nm,1.2s,SNR=7.7
BFO Black Forest 13.21 322 *e*P **Pn 14 01 06.2 -0.8**
BFO pmax pmax
comp=Z,152nm,1.2s
BFO Black Forest 13.21 322 *e*Pn **Pn 14 01 06.2 -0.8**
comp=Z,152nm,1.2s
HWQ Hawga 13.21 104 *e*P **Pn 14 01 05.4 -1.6**
LBG Lerchenberg 13.23 324 P **Pn 14 01 05.8 -1.4**
GUNZ Gunzen 13.24 337 *e*Pn **Pn 14 01 06.9 -0.5**
comp=Z,32nm,0.9s
TANN Tannenbergstha 13.24 337 *e*Pn **Pn 14 01 07.1 -0.4**
comp=Z,30nm,1.1s
BRG Berggiesshubel 13.26 342 *e*P **Pn 14 01 06.6 -1.0**
comp=Z,17nm,1.2s
BRG *i* 14 01 42.7
BRG S **Sn 14 03 34.0 -0.8**
BRG Berggiesshubel 13.26 342 *e*P **Pn 14 01 06.6 -1.0**
BRG S **Sn 14 03 34.0 -0.8**
BRG pmax pmax
comp=Z,17nm,1.2s
BRG MLR MLR
comp=N,14µm,11.8s
BRG MLR MLR
comp=E,8µm,11.1s
BRG MLR MLR
comp=Z,20µm,10.6s
BRG Berggiesshubel 13.26 342 *e*Pn **Pn 14 01 06.0 -1.6**
comp=Z,83nm,1.6s
BRG Berggiesshubel 13.26 342 *e*P **Pn 14 01 06.6 -1.0**
comp=Z,28nm,1.2s
BRG *i* 14 01 42.7
comp=Z,86nm,1.2s
BRG S **Sn 14 03 34.0 -0.8**
BRG
comp=N,23µm,11.8s
BRG
comp=E,14µm,11.1s
BRG
comp=Z,34µm,10.6s
WERD Werda 13.32 337 *e*Pn **Pn 14 01 08.6 +0.1**
comp=Z,25nm,0.9s
CABF La Chapelle 13.33 312 *e*P **Pn 14 01 07.4 -1.3**
comp=Z,120nm,0.6s
CABF La Chapelle 13.33 312 *e*P **Pn 14 01 07.4 -1.3**
CABF pmax pmax
comp=Z,60nm,0.6s
CABF La Chapelle 13.33 312 *e*P **Pn 14 01 07.4 -1.3**
comp=Z,60nm,0.6s
LOMF Lomont 13.34 316 *e*P **Pn 14 01 09.4 +0.6**
MMAI Mount Meron Ar 13.34 109 Pn **Pn 14 01 05.0 -3.8**
comp=Z,9.0nm,0.3s,baz=327,slow=12,SNR=21
MMAI Sn **Sn 14 03 25.6 -11**
comp=Z,18nm,0.3s,baz=306,slow=24,SNR=7.5
AKET Djebel Ketaf 13.37 265 P **Pn 14 01 13.2 +4.0**
GAZ Gaziantep 13.37 90 *e*PN **Pn 14 01 09.5 +0.2**
VIVF Saint-Julien-l 13.38 304 *e*P **Pn 14 01 09.7 +0.3**
comp=Z,284nm,1.3s
VIVF Saint-Julien-l 13.38 304 *e*P **Pn 14 01 09.7 +0.3**
VIVF pmax pmax
comp=Z,142nm,1.3s
VIVF Saint-Julien-l 13.38 304 *e*P **Pn 14 01 09.7 +0.3**
comp=Z,142nm,1.3s
SIND Sindeldorf 13.39 328 P **Pn 14 01 08.0 -1.4**
SUZ 13.39 126 P **Pn 14 01 04.8 -4.8**
RCY Rachaya 13.44 107 *e*P **Pn 14 01 07.1 -3.1**
FBE Freiberg 13.45 341 *e*Pn **Pn 14 01 10.6 +0.3**
comp=Z,142nm,1.5s
MOF Molkenrain 13.49 319 *e*P **Pn 14 01 09.8 -1.0**
ZAF 13.60 128 P **Pn 14 01 08.4 -4.1**
HINF Hinteralfeld 13.61 318 *e*P **Pn 14 01 10.9 -1.6**
GZT Gaziantep 13.61 89 *i* P **Pn 14 01 14.6 +2.0**
GZT Gaziantep 13.61 89 *i* P **Pn 14 01 14.7 +2.1**
SSB Saint Sauveur 13.64 305 P **Pn 14 01 12.6 -0.3**
LASF Ste Croix 13.65 300 *e*P **Pn 14 01 12.6 -0.4**
comp=Z,345nm,1.4s
LASF Ste Croix 13.65 300 *e*P **Pn 14 01 12.6 -0.4**
comp=Z,173nm,1.4s
ADJB Djebel Djouab 13.68 266 P **Pn 14 01 15.4 +1.8**
ECH Echery 13.71 320 *e*P **Pn 14 01 13.5 -0.3**
MOX Moxa 13.71 336 *e*P **Pn 14 01 12.2 -1.6**
comp=Z,183nm,1.1s
MOX
comp=Z,32µm,19.0s
MOX Moxa 13.71 336 *e*P **Pn 14 01 12.2 -1.6**
MOX pmax pmax
comp=Z,183nm,1.1s
MOX MLR MLR
comp=Z,32µm,19.0s
ETOS Mallorca 13.72 281 P **Pn 14 01 14.3 +0.3**
comp=Z,198nm,1.8s
ETOS Mallorca 13.72 281 P **Pn 14 01 14.3 +0.3**
comp=Z,198nm,1.8s
ZNM 13.74 127 P **Pn 14 01 08.9 -5.4**
ZNM 13.74 127 P **Pn 14 01 08.9 -5.4**
KIEV Kiev 13.77 24 *e*Pn **Pn 14 01 13.5 -1.2**
comp=Z,30nm,0.6s
KIEV *e*Sn **Sn 14 04 05.0 +18**
KIEV Kiev 13.77 24 *e*P **Pn 14 01 13.5 -1.1**
KIEV pmax pmax
comp=Z,30nm,0.6s
KIEV Kiev 13.77 24 *e*P **Pn 14 01 13.5 -1.1**
comp=Z,30nm,0.6s
CDF Champ du Feu 13.78 321 *e*P **Pn 14 01 13.2 -1.6**
AKASG Malin Array Be 13.78 24 Pn **Pn 14 01 12.2 -2.6**
comp=Z,3.1nm,0.3s,baz=211,slow=12,SNR=22
AKASG Sn **Sn 14 04 00.0 +12**
baz=210,slow=21,SNR=6.4
AKASG PcP PcP 14 06 36.8 -1.3
comp=Z,1.8nm,0.3s,baz=235,slow=1.2,SNR=5.0
AKASG LR LR 14 06 55.1
comp=Z,13µm,18.2s,baz=190,slow=39
AKASG ScP ScP 14 10 09.9 -1.4
baz=248,slow=1.9,SNR=5.5
WAR Warsaw 13.82 2 *e*P **Pn 14 01 21.2 +5.9**
WAR *e*pP 14 01 27.7
WAR LMZ 14 07 29.8
comp=Z,18µm,17.8s
WAR Warsaw 13.82 2 *e*P **Pn 14 01 21.2 +5.8**
WAR *e*pP 14 01 27.7
ABA Alger-Bouzarea 13.85 269 P **Pn 14 01 18.3 +2.4**
SWS Schriesheim-Wi 13.87 327 P **Pn 14 01 15.5 -0.6**
CLL Collm 13.89 340 *e*P **Pn 14 01 16.0 -0.3**
comp=Z,23nm,1.1s
CLL *e* 14 01 29.0
CLL Collm 13.89 340 *e*P **Pn 14 01 16.0 -0.3**
CLL pmax pmax
comp=Z,23nm,1.1s
CLL MLR MLR
comp=Z,28µm,10.7s
CLL Collm 13.89 340 *e*P **Pn 14 01 16.0 -0.3**
comp=Z,23nm,1.1s
CLL *e*PP 14 01 28.0
CLL Collm 13.89 340 *e*Pn **Pn 14 01 12.9 -3.4**
CLL *e*Pn **Pn 14 01 15.8 -0.5**
comp=Z,180nm,1.5s
LANF Langenberg 13.91 323 *e*P **Pn 14 01 14.8 -1.8**
EJON La Jonquera 13.92 292 P **Pn 14 01 16.7 0.0**
comp=Z,493nm,3.4s
EJON La Jonquera 13.92 292 P **Pn 14 01 16.7 0.0**
comp=Z,493nm,3.4s
TOD Tromm 13.92 327 P **Pn 14 01 15.7 -1.0**
HAU Haudompre 13.99 318 *e*P **Pn 14 01 16.1 -1.6**
comp=Z,137nm,0.5s
HAU *e*MLR MLR
comp=Z,39µm,19.8s
HAU Haudompre 13.99 318 *e*P **Pn 14 01 16.1 -1.6**
HAU pmax pmax
comp=Z,69nm,0.5s
HAU Haudompre 13.99 318 *e*P **Pn 14 01 16.1 -1.6**
comp=Z,69nm,0.5s
GRSN GIRESUNGRSN 14.00 74 *i* P **Pn 14 01 20.2 +2.3**
GRSN GIRESUNGRSN 14.00 74 *i* P **Pn 14 01 19.6 +1.8**
GRSN GIRESUNGRSN 14.00 74 *i* P **Pn 14 01 19.6 +1.8**
EMHD Djebel Mahouad 14.05 266 P **Pn 14 01 21.7 +3.1**
HNKL Nakhl 14.08 123 P **Pn 14 01 14.1 -4.9**
HNKL S **Sn 14 03 39.3 -16**
MYA Malataya 14.16 85 *e*PN **Pn 14 01 20.2 +0.2**
MALT Malataya 14.16 85 *e*PN **Pn 14 01 19.6 -0.4**
MALT Malataya 14.16 85 *e*Pn **Pn 14 01 24.6 +4.5**
comp=Z,261nm,0.8s
MALT *e*S **Sn 14 04 05.3 +8.2**
MALT Malataya 14.16 85 *e*P **Pn 14 01 24.6 +4.6**
MALT *e*S **Sn 14 04 05.3 +8.2**
MALT pmax pmax
comp=Z,261nm,0.8s
MALT Malataya 14.16 85Î *i*P **Pn 14 01 24.7 +4.7**
MALT Malataya 14.16 85 *e*Pn **Pn 14 01 24.6 +4.6**
comp=Z,261nm,0.8s
ATAB Bozova 14.17 88 *i* P **Pn 14 01 22.3 +2.1**
ATAB Bozova 14.17 88 *i* P **Pn 14 01 20.9 +0.7**
ATAB Bozova 14.17 88 *i* P **Pn 14 01 20.9 +0.7**
ANN Anapa 14.24 58 *e*P **Pn 14 01 19.0 -2.1**
ANN *e*S **Sn 14 03 57.6 -1.4**
ANN pmax pmax
comp=Z,74nm,1.2s
ANN pmax pmax
comp=Z,2µm,7.4s
ANN MLR MLR
comp=N,7µm,14.0s
ANN MLR MLR
comp=E,8µm,14.0s
ANN MLR MLR
comp=Z,10µm,14.0s
ANN Anapa 14.24 58 *e*P **Pn 14 01 19.1 -2.0**
ANN *e*S **Sn 14 03 57.6 -1.4**
COLF Collangettes 14.28 305 *e*P **Pn 14 01 21.0 -0.7**
THEF They Montfort 14.32 318 *e*P **Pn 14 01 20.4 -1.8**
LBL Lubilhac 14.46 304 *e*P **Pn 14 01 25.3 +1.2**
GRB Gharib 14.48 131 P **Pn 14 01 20.4 -4.0**
PLDF La Plantade 14.52 307 *e*P **Pn 14 01 24.5 -0.4**
TNS Taunus Mts 14.54 328 *e*Pn **Pn 14 01 23.3 -1.8**
ELZG Elazig 14.58 84 *i* P **Pn 14 01 31.2 +5.5**
ELZG Elazig 14.58 84 *i* P **Pn 14 01 30.9 +5.2**
URFA Urfa 14.59 88 *e*PN **Pn 14 01 25.3 -0.6**
MTLF Montolieu 14.59 295 *e*P **Pn 14 01 24.7 -1.1**
comp=Z,217nm,1.2s
MTLF Montolieu 14.59 295 *e*P **Pn 14 01 24.7 -1.1**
MTLF pmax pmax
comp=Z,109nm,1.2s
MTLF Montolieu 14.59 295 *e*P **Pn 14 01 24.7 -1.1**
comp=Z,108nm,1.2s
ABH Alteburg 14.67 325 P **Pn 14 01 27.2 +0.2**
SMF Signal de Mont 14.68 309 *e*P **Pn 14 01 25.5 -1.6**
comp=Z,88nm,0.7s
SMF Signal de Mont 14.68 309 *e*P **Pn 14 01 25.5 -1.6**
SMF pmax pmax
comp=Z,44nm,0.7s
SMF Signal de Mont 14.68 309 *e*P **Pn 14 01 25.5 -1.6**
comp=Z,44nm,0.7s
RUP Ruppelstein 14.77 324 *e*P **Pn 14 01 28.9 +0.7**
RUE Ruedersdorf 14.79 344 *e*Pn **Pn 14 01 31.4 +2.8**
comp=Z,504nm,1.4s
PYM Petit Puy Mans 14.82 305 *e*P **Pn 14 01 28.9 0.0**
EMIR Miracle 14.83 290 P **Pn 14 01 28.2 -1.0**
comp=Z,439nm,2.1s
AGO Saint Agoulin 14.86 306 *e*P **Pn 14 01 28.3 -1.2**
EIBI Ibiza 14.88 278 P **Pn 14 01 33.8 +4.0**
comp=Z,2µm,4.1s
EIL Elat 14.89 122 Pn **Pn 14 01 25.4 -4.6**
comp=Z,4.0nm,0.3s,baz=337,slow=13,SNR=25
EIL Sn **Sn 14 04 03.1 -12**
comp=Z,18nm,0.3s,baz=318,slow=17,SNR=9.3
GUMT Gumushane 14.89 76 *e*PN **Pn 14 01 29.9 -0.2**
HDK1 Dakhla 14.94 147 P **Pn 14 01 25.9 -4.8**
FRNF Fournols 14.97 303 *e*P **Pn 14 01 30.7 -0.3**
LOR Lormes 14.98 311 *e*P **Pn 14 01 28.5 -2.6**
comp=Z,65nm,0.5s,baz=124
LOR *e*MLR MLR
comp=Z,14µm,19.8s
LOR Lormes 14.98 311 *e*P **Pn 14 01 28.5 -2.6**
LOR pmax pmax
comp=Z,33nm,0.5s
LOR Lormes 14.98 311 *e*P **Pn 14 01 28.5 -2.6**
comp=Z,33nm,0.5s
MEZF Maizieres J'vi 14.98 317 *e*P **Pn 14 01 31.3 +0.1**
comp=Z,278nm,0.9s,baz=122
MEZF Maizieres J'vi 14.98 317 *e*P **Pn 14 01 31.3 +0.1**
comp=Z,139nm,0.9s
HKAT Jabal Katrina 15.03 127 P **Pn 14 01 27.0 -5.0**
AVF Avril sur Loir 15.05 309 *e*P **Pn 14 01 31.4 -0.7**
comp=Z,76nm,0.8s
AVF Avril sur Loir 15.05 309 *e*P **Pn 14 01 31.4 -0.7**
AVF pmax pmax
comp=Z,38nm,0.8s
AVF Avril sur Loir 15.05 309 *e*P **Pn 14 01 31.4 -0.7**
comp=Z,38nm,0.8s
SSF Saint Saulge 15.08 310 *e*P **Pn 14 01 30.0 -2.6**
comp=Z,140nm,0.9s
SSF Saint Saulge 15.08 310 *e*P **Pn 14 01 30.0 -2.6**
SSF pmax pmax
comp=Z,70nm,0.9s
SSF Saint Saulge 15.08 310 *e*P **Pn 14 01 30.0 -2.6**
comp=Z,70nm,0.9s
EPOB Poblet 15.11 287 P **Pn 14 01 30.7 -2.2**
comp=Z,643nm,2.7s
EPOB Poblet 15.11 287 P **Pn 14 01 30.7 -2.2**
comp=Z,643nm,2.7s
MACK Trabzon 15.13 74 *i* P **Pn 14 01 34.2 +0.9**
MACK Trabzon 15.13 74 *i* P **Pn 14 01 35.1 +1.9**
KTUT Trabzon 15.14 74 *e*PN **Pn 14 01 32.2 -1.1**
CAF Calviac 15.14 301 *e*P **Pn 14 01 34.3 +1.0**
comp=Z,101nm,0.9s
CAF Calviac 15.14 301 *e*P **Pn 14 01 34.3 +1.0**
CAF pmax pmax
comp=Z,51nm,0.9s
CAF Calviac 15.14 301 *e*P **Pn 14 01 34.3 +1.0**
comp=Z,51nm,0.9s
EBNR Beni Rached 15.15 268 P **Pn 14 01 35.0 +1.5**
EZC Erzincan 15.15 79 *e*PN **Pn 14 01 28.7 -4.8**
VERF Verneugheol 15.15 305 *e*P **Pn 14 01 33.7 +0.2**
WLF Walferdange 15.17 322 *e*P **Pn 14 01 37.2 +3.6**
comp=Z,301nm,0.9s
WLF Walferdange 15.17 322 *e*P **Pn 14 01 37.2 +3.6**
WLF pmax pmax
comp=Z,301nm,0.9s
WLF Walferdange 15.17 322 P **Pn 14 01 37.6 +3.9**
comp=Z,254nm,1.6s
BGF Bois d'Agland 15.26 308 *e*P **Pn 14 01 34.2 -0.6**
comp=Z,106nm,0.7s
BGF Bois d'Agland 15.26 308 *e*P **Pn 14 01 34.2 -0.6**
BGF pmax pmax
comp=Z,53nm,0.7s
BGF Bois d'Agland 15.26 308 *e*P **Pn 14 01 34.2 -0.6**
comp=Z,53nm,0.7s
ECHA Ech Chlef 15.31 267 P **Pn 14 01 37.9 +2.3**
MLS Moulis 15.31 293 *e*P **Pn 14 01 36.4 +0.8**
SOC Sochi 15.47 64 *d*/P **Pn 14 01 35.3 -2.3**
SOC *e* 14 04 28.7
SOC pmax pmax
comp=Z,69nm,1.5s
SOC Sochi 15.47 64 *i* P **Pn 14 01 35.3 -2.3**
comp=Z,69nm,1.5s
SOC *e*S **Sn 14 04 28.7 -0.2**
MELF Melles 15.54 293 *e*P **Pn 14 01 42.3 +3.8**
TCF Toulx Ste Croi 15.54 306 *e*P **Pn 14 01 37.5 -1.1**
comp=Z,193nm,1.3s
TCF Toulx Ste Croi 15.54 306 *e*P **Pn 14 01 37.5 -1.1**
TCF pmax pmax
comp=Z,97nm,1.3s
TCF Toulx Ste Croi 15.54 306 *e*P **Pn 14 01 37.5 -1.1**
comp=Z,97nm,1.3s
ETRT Tiaret 15.56 265 P **Pn 14 01 41.9 +3.0**
EANR 'Ain N'Sour 15.57 267 P **Pn 14 01 38.5 -0.5**
RJF Les Rejaudoux 15.63 302 *e*P **Pn 14 01 38.6 -1.1**
comp=Z,484nm,1.8s
RJF *e*MLR MLR
comp=Z,19µm,21.2s
RJF Les Rejaudoux 15.63 302 *e*P **Pn 14 01 38.6 -1.1**
RJF pmax pmax
comp=Z,242nm,1.8s
RJF Les Rejaudoux 15.63 302 *e*P **Pn 14 01 38.6 -1.1**
comp=Z,242nm,1.8s
ERTA Horta de San J 15.64 286 P **Pn 14 01 40.1 +0.2**
comp=Z,579nm,2.2s
ERTA Horta de San J 15.64 286 P **Pn 14 01 40.1 +0.2**
comp=Z,579nm,2.2s
HYF Humbligny 15.70 310 *e*P **Pn 14 01 37.7 -3.0**
SUW Suwalki 15.71 6 *e*P **Pn 14 01 39.4 -1.2**
SUW *e*pP pP 14 01 43.5 -4.5
SUW *e*S **Sn 14 04 44.4 +10**
SUW *e*sS sS 14 04 48.5 -6.2
SUW LMZ 14 10 23.4
comp=Z,15µm,15.8s
SUW Suwalki 15.71 6 *e*P **Pn 14 01 39.4 -1.3**
SUW *e*pP pP 14 01 43.5 -4.5
SUW *e*S **Sn 14 04 44.4 +10**
SUW *e*SS 14 04 48.5
BINT Bingol 15.72 82 *e*PN **Pn 14 01 40.7 -0.2**
HHRG Al Ghardaqah 15.72 131 P **Pn 14 01 35.5 -5.5**
NRDL Niedersach Rie 15.78 336 *e*Pn **Pn 14 01 42.6 +0.9**
comp=Z,167nm,1.3s
RESF Ens 15.83 292 *e*P **Pn 14 01 42.5 +0.1**
EPF Esparros 15.87 293 *e*P **Pn 14 01 42.5 -0.3**
comp=Z,161nm,1.3s
EPF Esparros 15.87 293 *e*P **Pn 14 01 42.5 -0.3**
EPF pmax pmax
comp=Z,81nm,1.3s
EPF Esparros 15.87 293 *e*P **Pn 14 01 42.5 -0.3**
comp=Z,80nm,1.3s
MEM Membach 15.89 325 P **Pn 14 01 43.6 +0.6**
comp=Z,108nm,1.2s
MEM Membach 15.89 325 P **Pn 14 01 43.6 +0.6**
comp=Z,108nm,1.2s
OKGL Djebel Kef Gue 15.90 267 P **Pn 14 01 47.0 +3.6**
EBIE Bielsa 15.96 292 P **Pn 14 01 44.8 +0.9**
comp=Z,2µm,4.0s
EBIE Bielsa 15.96 292 P **Pn 14 01 44.8 +0.8**
comp=Z,2µm,4.0s
OJGS Djebel Guires 15.96 266 P **Pn 14 01 48.0 +3.9**
PZAR Pazar-Rize 16.00 74 *e*PN **Pn 14 01 43.7 -0.9**
LFF La Frestale 16.04 300 *e*P **Pn 14 01 44.5 -0.5**
comp=Z,180nm,1.1s
LFF La Frestale 16.04 300 *e*P **Pn 14 01 44.5 -0.5**
LFF pmax pmax
comp=Z,90nm,1.1s
LFF La Frestale 16.04 300 *e*P **Pn 14 01 44.5 -0.5**
comp=Z,90nm,1.1s
LABF Labassere 16.06 293 *e*P **Pn 14 01 47.2 +1.8**
VIEF Viey 16.07 293 *e*P **Pn 14 01 45.8 +0.3**
BCLA Clavier 16.08 323 P **Pn 14 01 46.5 +1.0**
comp=Z,70nm,1.7s
BCLA Clavier 16.08 323 P **Pn 14 01 46.4 +0.9**
comp=Z,70nm,1.7s
GIVF Givet 16.10 321 *e*P **Pn 14 01 49.1 +3.3**
comp=Z,325nm,0.8s
GIVF Givet 16.10 321 *e*P **Pn 14 01 49.1 +3.3**
comp=Z,162nm,0.8s
GIVF Givet 16.10 321 *e*P **Pn 14 01 49.1 +3.3**
GIVF pmax pmax
comp=Z,162nm,0.8s
EBEN Beniarda 16.13 277 P **Pn 14 01 46.6 +0.4**
comp=Z,1µm,2.0s
EBEN Beniarda 16.13 277 P **Pn 14 01 46.6 +0.4**
comp=Z,1µm,2.0s
MARD Mardin 16.14 88 *i* P **Pn 14 01 46.5 0.0**
MARD Mardin 16.14 88 *i* P **Pn 14 01 45.0 -1.5**
BEBN Eben Emael 16.17 325 P **Pn 14 01 50.3 +3.7**
comp=Z,62nm,2.6s
DOU Dourbes 16.21 321 P **Pn 14 01 50.0 +2.8**
comp=Z,152nm,1.5s
EMOS Mosqueruela 16.24 283 P **Pn 14 01 48.4 +0.8**
comp=Z,711nm,1.7s
EMOS Mosqueruela 16.24 283 P **Pn 14 01 48.4 +0.8**
comp=Z,711nm,1.7s
OJBR Djebel Berber 16.26 266 P **Pn 14 01 49.0 +1.1**
ESAC San Caprasio 16.30 288 P **Pn 14 01 48.8 +0.4**
comp=Z,391nm,1.8s
ESAC San Caprasio 16.30 288 P **Pn 14 01 48.8 +0.5**
comp=Z,391nm,1.8s
EZM Erzurum 16.34 78 *e*PN **Pn 14 01 48.9 0.0**
ERZM Erzurum 16.34 78 *i* P **Pn 14 01 52.5 +3.5**
BAIF Baives 16.38 320 *e*P **Pn 14 01 50.7 +1.4**
comp=Z,221nm,0.8s
BAIF Baives 16.38 320 *e*P **Pn 14 01 50.7 +1.4**
comp=Z,111nm,0.8s
BAIF Baives 16.38 320 *e*P **Pn 14 01 50.7 +1.4**
BAIF pmax pmax
comp=Z,111nm,0.8s
REYF Montagne du Re 16.41 293 *e*P **Pn 14 01 50.4 +0.7**
ETSF Etsaut 16.50 292 *e*P **Pn 14 01 52.7 +1.8**
comp=Z,371nm,1.3s
ETSF Etsaut 16.50 292 *e*P **Pn 14 01 52.7 +1.8**

	comp=Z,185nm,1.3s								
ETSF	**Etsaut**	**16.50**	**292**		*e*P		**Pn**	**14 01 52.7**	**+1.8**
ETSF					pmax		pmax		
	comp=Z,185nm,1.3s								
BCA	**Borcka**	**16.56**	**73**		*e*PN		**Pn**	**14 01 51.7**	**0.0**
BTMT	**Batman**	**16.57**	**84**		*e*PN		**Pn**	**14 01 50.4**	**-1.4**
SNF	**Seneffe**	**16.63**	**322**		P		**Pn**	**14 01 55.8**	**+3.3**
	comp=Z,112nm,1.8s								
ATE	**Arette**	**16.63**	**293**		*e*P		**Pn**	**14 01 52.3**	**-0.3**
ECHE	**Chera**	**16.64**	**281**		P		**Pn**	**14 01 53.7**	**+1.0**
	comp=Z,43nm,0.8s								
ECHE	**Chera**	**16.64**	**281**		P		**Pn**	**14 01 53.7**	**+1.0**
ECHE					pmax		pmax		
	comp=Z,43nm,0.8s								
ECHE	**Chera**	**16.64**	**281**		P		**Pn**	**14 01 53.7**	**+1.0**
	comp=Z,43nm,0.8s								
ODJA	**Bouhanifia**	**16.72**	**266**		P		**Pn**	**14 01 57.0**	**+3.2**
ARTV	**Artvin**	**16.78**	**74**	*i*	P		**Pn**	**14 01 55.5**	**+1.0**
ARTV	**Artvin**	**16.78**	**74**	*i*	P		**Pn**	**14 01 53.7**	**-0.8**
ARTV	**Artvin**	**16.78**	**74**	*i*	P		**Pn**	**14 01 53.7**	**-0.8**
UCC	**Uccle**	**16.78**	**323**		P		**Pn**	**14 01 57.5**	**+3.1**
	comp=Z,230nm,1.9s								
RGN	**Rugen**	**16.83**	**346**		*e*Pn		**Pn**	**14 01 56.4**	**+1.4**
	comp=Z,284nm,1.1s								
MNK	**Minsk**	**16.86**	**15**⇓		*e*P		**Pn**	**14 01 50.0**	**-5.4**
MNK					*e*S		**Sn**	**14 04 54.0**	**-8.5**
MNK					pmax		pmax		
	comp=Z,340nm,1.0s								
MNK					pmax		pmax		
	comp=N,480nm,1.4s								
MNK					MLR		MLR		
	comp=Z,25μm,8.0s								
MNK					MLR		MLR		
	comp=N,22μm,8.0s								
CART	**Cartagena**	**16.88**	**274**		*e*Pn		**Pn**	**14 01 53.8**	**-2.0**
	comp=N,602nm,1.5s								
CART	**Cartagena**	**16.88**	**274**	*i*	P		**Pn**	**14 01 55.1**	**-0.7**
MATF	**Mathat**	**17.00**	**302**		*e*P		**Pn**	**14 01 57.5**	**+0.3**
SJPF	**Ste Jean**	**17.01**	**293**		*e*P		**Pn**	**14 01 55.7**	**-1.7**
	comp=N,189nm,1.0s								
SJPF	**Ste Jean**	**17.01**	**293**		*e*P		**Pn**	**14 01 55.7**	**-1.7**
SJPF					pmax		pmax		
	comp=Z,94nm,1.0s								
SJPF	**Ste Jean**	**17.01**	**293**		*e*P		**Pn**	**14 01 55.7**	**-1.7**
	comp=Z,94nm,1.0s								
EMUR	**La Murta**	**17.02**	**275**		P		**Pn**	**14 01 56.8**	**-0.8**
	comp=Z,1μm,2.1s								
EMUR	**La Murta**	**17.02**	**275**		P		**Pn**	**14 01 56.8**	**-0.8**
	comp=Z,1μm,2.1s								
NE53	**Naroch'**	**17.05**	**13**		*e*P		**Pn**	**14 01 55.0**	**-2.7**
NE53					*e*S		**Sn**	**14 05 01.5**	**-5.5**
OSSF	**Osses**	**17.06**	**293**		*e*P		**Pn**	**14 01 55.5**	**-2.5**
BSD	**Bornholm Skovb**	**17.10**	**349**⇑		*i*P		**Pn**	**14 01 59.4**	**+1.0**
BSD					*i* S		**Sn**	**14 05 13.1**	**+4.8**
BSD					pmax		pmax		
	comp=Z,87nm,1.1s								
BSD					MLR		MLR		
	comp=Z,12μm,18.0s								
BSD	**Bornholm Skovb**	**17.10**	**349**⇑	*i*	P		**Pn**	**14 01 59.4**	**+1.0**
	comp=Z,87nm,1.1s								
BSD				*i*	S		**Sn**	**14 05 13.1**	**+4.8**
BSD									
	comp=Z,12μm,18.0s								
HEDF	**Idfu**	**17.15**	**137**		P		**Pn**	**14 01 55.8**	**-3.5**
ETOB	**Tobarra**	**17.16**	**278**		P		**Pn**	**14 01 59.5**	**+0.2**
	comp=Z,630nm,2.7s								
ETOB	**Tobarra**	**17.16**	**278**		P		**Pn**	**14 01 59.5**	**+0.2**
	comp=Z,630nm,2.7s								
MFF	**Saint Martin d**	**17.17**	**305**		*e*P		**Pn**	**14 01 59.9**	**+0.6**
	comp=Z,464nm,1.2s								
MFF	**Saint Martin d**	**17.17**	**305**		*e*P		**Pn**	**14 01 59.9**	**+0.6**
MFF					pmax		pmax		
	comp=Z,232nm,1.2s								
MFF	**Saint Martin d**	**17.17**	**305**		*e*P		**Pn**	**14 01 59.9**	**+0.6**
	comp=Z,232nm,1.2s								
ELIZ	**Elizondo**	**17.24**	**293**		P		**Pn**	**14 02 03.4**	**+3.1**
	comp=Z,122nm,1.5s								
ELIZ	**Elizondo**	**17.24**	**293**		P		**Pn**	**14 02 03.4**	**+3.1**
ELIZ					pmax		pmax		
	comp=Z,122nm,1.5s								
IIGN	**Ignalina**	**17.38**	**11**		*e*P		**Pn**	**14 02 01.5**	**-0.5**
IIGN	**Ignalina**	**17.38**	**11**		*e*P		**Pn**	**14 02 01.5**	**-0.4**
	SNR=35								
IDID	**Didziasalis**	**17.43**	**12**		*e*P		**Pn**	**14 02 02.0**	**-0.5**
IDID					AMb		AMB	14 02 07.0	
	comp=Z,42nm,1.1s								
IDID	**Didziasalis**	**17.43**	**12**		*e*P		**Pn**	**14 02 02.0**	**-0.5**
	comp=Z,42nm,1.1s,SNR=35								
ETOR	**Torete**	**17.45**	**285**		P		**Pn**	**14 02 04.2**	**+1.3**
	comp=Z,68nm,0.6s								
ETOR	**Torete**	**17.45**	**285**		P		**Pn**	**14 02 04.2**	**+1.3**
ETOR					pmax		pmax		
	comp=Z,68nm,0.6s								
ETOR	**Torete**	**17.45**	**285**		P		**Pn**	**14 02 04.2**	**+1.3**
	comp=Z,68nm,0.6s								
TUTA	**Tutak**	**17.48**	**80**	*i*	P		**Pn**	**14 02 05.4**	**+2.1**
TUTA	**Tutak**	**17.48**	**80**	*i*	P		**Pn**	**14 01 57.0**	**-6.3**
AGRB	**Hanur-Agry**	**17.61**	**79**		*e*PN		**Pn**	**14 02 05.6**	**+0.7**
KARS	**Kars**	**17.65**	**76**		*e*PN		**Pn**	**14 02 05.8**	**+0.4**
KIV	**Kislovodsk**	**17.65**	**65**		Pn		**Pn**	**14 02 06.3**	**+0.9**
	comp=Z,828nm,1.1s,SNR=23								
KIV	**Kislovodsk**	**17.65**	**65**		*e*P		**Pn**	**14 02 05.9**	**+0.6**
	comp=Z,211nm,1.0s								
KIV	**Kislovodsk**	**17.65**	**65**	*d*	iP		**Pn**	**14 02 04.0**	**-1.4**
KIV					*e*S		**Sn**	**14 05 19.8**	**-2.0**
KIV					pmax		pmax		
	comp=Z,168nm,1.0s								
KIV					MLR		MLR		
	comp=Z,5μm,14.0s								
KIV	**Kislovodsk**	**17.65**	**65**		Pn		**Pn**	**14 02 06.3**	**+1.0**
	SNR=49								
KIV	**Kislovodsk**	**17.65**	**65**	*i*	P		**Pn**	**14 02 04.0**	**-1.4**
	comp=Z,5μm,14.0s								
KIV	**Kislovodsk**	**17.65**	**65**		Pn		**Pn**	**14 02 06.3**	**+0.9**
	SNR=49								
KIV					*e*S		**Sn**	**14 05 19.8**	**-2.0**
IZAR	**Zarasai**	**17.77**	**11**		*e*P		**Pn**	**14 02 05.7**	**-1.1**
IZAR					AMb		AMB	14 02 18.1	
	comp=Z,68nm,1.6s								
IZAR	**Zarasai**	**17.77**	**11**		*e*P		**Pn**	**14 02 05.7**	**-1.1**
	comp=Z,68nm,1.6s,SNR=35								
DIGO	**Kars**	**17.87**	**76**	*i*	P		**Pn**	**14 02 08.6**	**+0.5**
DIGO	**Kars**	**17.87**	**76**	*i*	P		**Pn**	**14 02 06.8**	**-1.2**
DIGO	**Kars**	**17.87**	**76**	*i*	P		**Pn**	**14 02 06.8**	**-1.3**
ECRI	**Cripan**	**17.89**	**291**		P		**Pn**	**14 02 09.7**	**+1.4**
	comp=Z,55nm,0.7s								
ECRI	**Cripan**	**17.89**	**291**		P		**Pn**	**14 02 09.7**	**+1.4**
ECRI					pmax		pmax		
	comp=Z,55nm,0.7s								
ECRI	**Cripan**	**17.89**	**291**		P		**Pn**	**14 02 09.7**	**+1.4**
	comp=Z,55nm,0.7s								
EVIA	**Vianos**	**17.91**	**278**		P		**Pn**	**14 02 08.8**	**+0.3**
	comp=Z,50nm,0.7s								
EVIA	**Vianos**	**17.91**	**278**		P		**Pn**	**14 02 08.8**	**+0.2**
EVIA					pmax		pmax		
	comp=Z,50nm,0.7s								
EVIA	**Vianos**	**17.91**	**278**		P		**Pn**	**14 02 08.8**	**+0.2**
	comp=Z,50nm,0.7s								
ENIJ	**Nijar**	**17.93**	**272**		P		**Pn**	**14 02 09.5**	**+0.6**
	comp=Z,73nm,0.8s								
ENIJ	**Nijar**	**17.93**	**272**		P		**Pn**	**14 02 09.5**	**+0.6**
ENIJ					pmax		pmax		
	comp=Z,73nm,0.8s								
ENIJ	**Nijar**	**17.93**	**272**		P		**Pn**	**14 02 09.5**	**+0.6**
	comp=Z,73nm,0.8s								
LDF	**La Druitiere**	**17.96**	**311**		*e*P		**Pn**	**14 02 08.1**	**-1.1**
	comp=Z,66nm,0.7s								
LDF	**La Druitiere**	**17.96**	**311**		*e*P		**Pn**	**14 02 08.1**	**-1.1**
LDF					pmax		pmax		
	comp=Z,33nm,0.7s								
LDF	**La Druitiere**	**17.96**	**311**		*e*P		**Pn**	**14 02 08.1**	**-1.1**
	comp=Z,33nm,0.7s								
VANB	**Van**	**18.00**	**82**		*e*PN		**Pn**	**14 02 11.7**	**+2.0**
ONI	**Oni**	**18.01**	**69**		P		**Pn**	**14 02 09.1**	**-0.7**
ONI					S		**Sn**	**14 05 41.7**	**+11**
TVAN	**Van**	**18.02**	**82**	*i*	P		**Pn**	**14 02 12.2**	**+2.2**
TVAN	**Van**	**18.02**	**82**	*i*	P		**Pn**	**14 02 12.1**	**+2.1**
TVAN	**Van**	**18.02**	**82**	*i*	P		**Pn**	**14 02 12.1**	**+2.1**
COP	**Copenhagen**	**18.07**	**345**		*e*P		**Pn**	**14 02 11.2**	**+0.7**
COP					pmax		pmax		
	comp=Z,76nm,1.1s								
COP					MLR		MLR		
	comp=Z,6μm,16.0s								
COP	**Copenhagen**	**18.07**	**345**	*i*	P		**Pn**	**14 02 11.2**	**+0.7**
	comp=Z,76nm,1.1s								
COP				*i*	S		**Sn**	**14 05 38.7**	**+6.8**
	comp=Z,6μm,16.0s								
COP	**Copenhagen**	**18.07**	**345**	*e*	P		**Pn**	**14 02 11.2**	**+0.7**
	comp=Z,6μm,16.0s								
DYDN	**Diyadin**	**18.15**	**79**	*i*	P		**Pn**	**14 02 11.4**	**-0.1**
DYDN	**Diyadin**	**18.15**	**79**	*i*	P		**Pn**	**14 02 12.3**	**+0.8**
MSL	**Mosul**	**18.17**	**90**	*ex*			x	14 02 12.0	
MSL				*ex*			x	14 02 39.5	
MSL				*ex*			x	14 02 47.5	
MSL				*ex*			x	14 05 37.0	
MSL				*ex*			x	14 06 20.5	
MSL				*ex*			x	14 08 47.0	
MSL				*ex*			x	14 09 48.0	
FLN	**La Foliniere**	**18.25**	**311**		*e*P		**Pn**	**14 02 12.2**	**-0.5**
	comp=Z,48nm,0.5s,baz=116								
FLN					*e*MLR		MLR		
	comp=Z,18μm,20.0s								
FLN	**La Foliniere**	**18.25**	**311**		*e*P		**Pn**	**14 02 12.2**	**-0.5**
FLN					pmax		pmax		
	comp=Z,24nm,0.4s								
FLN	**La Foliniere**	**18.25**	**311**		*e*P		**Pn**	**14 02 12.2**	**-0.5**
	comp=Z,24nm,0.5s								
GRR	**Gorron**	**18.31**	**310**		*e*P		**Pn**	**14 02 14.1**	**+0.6**
	comp=Z,96nm,0.8s								
GRR	**Gorron**	**18.31**	**310**		*e*P		**Pn**	**14 02 14.1**	**+0.6**
GRR					pmax		pmax		
	comp=Z,48nm,0.8s								
GRR	**Gorron**	**18.31**	**310**		*e*P		**Pn**	**14 02 14.1**	**+0.6**
	comp=Z,48nm,0.8s								
VORD	**Divnogorie**	**18.31**	**41**		*e*P		**Pn**	**14 02 12.3**	**-1.2**
VORD					pmax		pmax		
	comp=N,110nm,1.0s								
VORD					pmax		pmax		
	comp=Z,100nm,1.0s								
VORD					pmax		pmax		
	comp=E,150nm,1.1s								
VORD					MLR		MLR		
	comp=Z,24μm,13.0s								
VORD					MLR		MLR		
	comp=N,16μm,12.0s								
VORD					MLR		MLR		
	comp=E,15μm,14.0s								
VORD	**Divnogorie**	**18.31**	**41**		*e*P		**Pn**	**14 02 12.3**	**-1.2**
	comp=E,16μm,12.0s								
CLDR	**Caldiran**	**18.35**	**80**		*e*PN		**Pn**	**14 02 15.4**	**+1.3**
ZEI	**Tsey**	**18.36**	**69**		*e*P		**Pn**	**14 02 14.9**	**+0.8**
ZEI					*e*S		**Sn**	**14 05 38.5**	**-0.4**
CUKT	**Cukurca**	**18.38**	**86**		*e*PN		**Pn**	**14 02 15.9**	**+1.6**
HAKT	**HAKKARI**	**18.40**	**85**	*i*	P		**Pn**	**14 02 14.6**	**-0.1**
HAKT	**HAKKARI**	**18.40**	**85**	*i*	P		**Pn**	**14 02 10.1**	**-4.5**
VRSR	**Storozhevoye**	**18.41**	**40**	*d*	iP		**Pn**	**14 02 12.5**	**-2.1**
VRSR					*e*S		**Sn**	**14 05 31.3**	**-8.7**
VRSR					pmax		pmax		
	comp=Z,20nm,1.2s								
VRSR					pmax		pmax		
	comp=N,20nm,1.0s								
VRSR					pmax		pmax		
	comp=E,30nm,1.0s								
VRSR					smax				
	comp=N,30nm,3.2s								
VRSR					smax				
	comp=Z,40nm,3.3s								
VRSR					smax				
	comp=E,100nm,4.5s								
VRSR					MLR		MLR		
	comp=E,1μm,14.0s								
VRSR					MLR		MLR		
	comp=Z,1μm,14.0s								
VRSR					MLR		MLR		
	comp=N,1μm,16.0s								
VRSR	**Storozhevoye**	**18.41**	**40**	*i*	P		**Pn**	**14 02 12.5**	**-2.1**
	comp=N,30nm,3.2s								
HKR	**Hakkari**	**18.42**	**85**		*e*P		**Pn**	**14 02 16.4**	**+1.5**
EQES	**Quesada**	**18.46**	**275**		P		**Pn**	**14 02 15.0**	**-0.4**
	comp=N,1μm,2.4s								
EQES	**Quesada**	**18.46**	**275**		P		**Pn**	**14 02 15.0**	**-0.4**
	comp=N,1μm,2.4s								
EBER	**Berja**	**18.48**	**272**		P		**Pn**	**14 02 16.5**	**+0.9**
	comp=N,309nm,2.3s								
EBER	**Berja**	**18.48**	**272**		P		**Pn**	**14 02 16.5**	**+0.8**
	comp=N,309nm,2.3s								
ELAN	**Lanestosa**	**18.63**	**292**		P		**Pn**	**14 02 17.1**	**-0.3**
	comp=N,596nm,1.5s								
ELAN	**Lanestosa**	**18.63**	**292**		P		**Pn**	**14 02 17.1**	**-0.3**
	comp=N,596nm,1.5s								
VOR	**Voronezh**	**18.73**	**39**		*e*P		**Pn**	**14 02 17.0**	**-1.5**
VOR					S		**Sn**	**14 05 51.0**	**+3.3**
VOR					pmax		pmax		
	comp=Z,600nm,1.2s								
VOR	**Voronezh**	**18.73**	**39**		*e*P		**Pn**	**14 02 17.0**	**-1.5**
	comp=Z,600nm,1.2s								
TBLG	**Delisi**	**18.91**	**72**		P		**Pn**	**14 02 21.5**	**+0.8**
TBLG					S		**Sn**	**14 06 08.2**	**+16**
ECOG	**Cogollos-Vega**	**18.94**	**274**		P		**Pn**	**14 02 20.7**	**-0.5**
	comp=Z,88nm,0.9s								
ECOG	**Cogollos-Vega**	**18.94**	**274**		P		**Pn**	**14 02 20.7**	**-0.5**
ECOG					pmax		pmax		
	comp=Z,88nm,0.9s								
ECOG	**Cogollos-Vega**	**18.94**	**274**		P		**Pn**	**14 02 20.7**	**-0.5**
	comp=Z,88nm,0.9s								
ESDC	**Sonseca Array**	**18.94**	**281**		P		**Pn**	**14 02 20.0**	**-1.2**
	comp=Z,22nm,0.8s								
ESDC	**Sonseca Array**	**18.94**	**281**		P		**Pn**	**14 02 19.3**	**-1.9**
	comp=Z,3.5nm,0.3s,baz=76,slow=11,SNR=57								
ESDC					LR		LR	14 10 01.5	
	comp=Z,9μm,18.4s,baz=85,slow=38								
ESDC					ScP		ScP	14 10 21.5	-0.2
	comp=Z,0.2nm,0.3s,baz=55,slow=2.9,SNR=4.2								
ESDC	**Sonseca Array**	**18.94**	**281**		P		**Pn**	**14 02 20.0**	**-1.2**
	comp=Z,22nm,0.8s								
MTA	**Mtatsminda**	**18.95**	**72**		P		**Pn**	**14 02 20.8**	**-0.5**
MTA					S		**Sn**	**14 05 50.8**	**-2.4**
EBAN	**Banos Encina**	**18.97**	**277**		P		**Pn**	**14 02 20.0**	**-1.5**
	comp=Z,56nm,0.6s								
EBAN	**Banos Encina**	**18.97**	**277**		P		**Pn**	**14 02 20.0**	**-1.5**
EBAN					pmax		pmax		
	comp=Z,56nm,0.6s								
EBAN	**Banos Encina**	**18.97**	**277**		P		**Pn**	**14 02 20.0**	**-1.5**
	comp=Z,56nm,0.6s								
EGUA	**Guajares**	**19.03**	**273**		P		**Pn**	**14 02 20.9**	**-1.4**
	comp=Z,18nm,1.1s								
EGUA	**Guajares**	**19.03**	**273**		P		**Pn**	**14 02 20.9**	**-1.4**
EGUA					pmax		pmax		
	comp=Z,19nm,1.1s								
EGUA	**Guajares**	**19.03**	**273**		P		**Pn**	**14 02 20.9**	**-1.4**
	comp=Z,18nm,1.1s								
GUD	**Guadarrama**	**19.04**	**284**		P		**Pn**	**14 02 20.9**	**-1.5**
	comp=Z,109nm,0.9s								
GUD	**Guadarrama**	**19.04**	**284**		P		**Pn**	**14 02 20.9**	**-1.5**
GUD					pmax		pmax		
	comp=Z,109nm,0.9s								
GUD	**Guadarrama**	**19.04**	**284**		P		**Pn**	**14 02 20.9**	**-1.5**
	comp=Z,109nm,0.9s								
ERON	**Agron**	**19.18**	**273**		P		**Pn**	**14 02 23.4**	**-0.7**
	comp=Z,13nm,0.9s								
ERON	**Agron**	**19.18**	**273**		P		**Pn**	**14 02 23.4**	**-0.7**
	comp=Z,13nm,0.9s								
PAB	**San Pablo**	**19.25**	**281**		*e*P		**Pn**	**14 02 22.9**	**-2.0**
	comp=Z,120nm,1.0s								
PAB	**San Pablo**	**19.25**	**281**		*e*P		**Pn**	**14 02 22.9**	**-2.0**
PAB					pmax		pmax		
	comp=Z,120nm,1.0s								
PAB	**San Pablo**	**19.25**	**281**		*e*P		**Pn**	**14 02 22.9**	**-2.0**
	comp=Z,120nm,1.0s								
SGMF	**Saint Gilles**	**19.30**	**308**		*e*P		**Pn**	**14 02 25.4**	**0.0**
	comp=Z,205nm,1.2s								
SGMF	**Saint Gilles**	**19.30**	**308**		*e*P		**Pn**	**14 02 25.4**	**0.0**
SGMF					pmax		pmax		
	comp=Z,103nm,1.2s								
SGMF	**Saint Gilles**	**19.30**	**308**		*e*P		**Pn**	**14 02 25.4**	**0.0**
	comp=Z,103nm,1.2s								
DGRG	**David-gareji**	**19.38**	**73**		P		**Pn**	**14 02 26.9**	**+0.4**
DGRG					S		**Sn**	**14 06 14.9**	**+11**
ELOJ	**Sierra Loja**	**19.43**	**274**		P		**Pn**	**14 02 25.0**	**-2.1**
	comp=Z,19nm,0.7s								
ELOJ	**Sierra Loja**	**19.43**	**274**		P		**Pn**	**14 02 25.0**	**-2.0**
ELOJ					pmax		pmax		
	comp=Z,19nm,0.7s								
ELOJ	**Sierra Loja**	**19.43**	**274**		P		**Pn**	**14 02 25.0**	**-2.0**
	comp=Z,19nm,0.7s								
ELUQ	**Luque**	**19.44**	**275**		P		**Pn**	**14 02 24.9**	**-2.3**
	comp=Z,130nm,1.0s								
ELUQ	**Luque**	**19.44**	**275**		P		**Pn**	**14 02 24.9**	**-2.3**
ELUQ					pmax		pmax		
	comp=Z,130nm,1.0s								
ELUQ	**Luque**	**19.44**	**275**		P		**Pn**	**14 02 24.9**	**-2.3**
	comp=Z,130nm,1.0s								
MUD	**Monsted U'grnd**	**19.52**	**341**		*i* P		**Pn**	**14 02 30.3**	**+2.3**
MUD					*i* S		**Sn**	**14 06 08.9**	**+2.1**
MUD					pmax		pmax		
	comp=Z,80nm,1.0s								
MUD					MLR		MLR		
	comp=Z,7μm,16.0s								
MUD	**Monsted U'grnd**	**19.52**	**341**		*i* P		**Pn**	**14 02 30.3**	**+2.3**
	comp=Z,80nm,1.0s								
MUD					*i* S		**Sn**	**14 06 08.9**	**+2.1**
MUD									
	comp=Z,7μm,16.0s								
QUIF	**Quistinic**	**19.56**	**307**		*e*P		**Pn**	**14 02 26.1**	**-2.4**
	comp=Z,130nm,0.9s								
QUIF	**Quistinic**	**19.56**	**307**		*e*P		**Pn**	**14 02 26.1**	**-2.4**
QUIF					pmax		pmax		
	comp=Z,65nm,0.9s								
QUIF	**Quistinic**	**19.56**	**307**		*e*P		**Pn**	**14 02 26.1**	**-2.4**
	comp=Z,65nm,0.9s								
NAX	**Nakhchivan**	**19.57**	**80**		P		**Pn**	**14 02 27.0**	**-1.8**
	SNR=49								
EADA	**Adamuz**	**19.58**	**277**		P		**Pn**	**14 02 26.1**	**-2.8**
	comp=Z,490nm,1.6s								
EADA	**Adamuz**	**19.58**	**277**		P		**Pn**	**14 02 26.1**	**-2.8**
	comp=Z,490nm,1.6s								
VRHR	**Novokhopersk**	**19.61**	**43**		*e*P		**Pn**	**14 02 27.4**	**-1.7**
VRHR					*e*S		**Sn**	**14 06 09.4**	**+0.4**
VRHR					pmax		pmax		
	comp=Z,100nm,0.4s								
VRHR					pmax		pmax		
	comp=N,20nm,0.5s								
VRHR					pmax		pmax		
	comp=E,40nm,0.9s								
VRHR					smax				
	comp=E,210nm,1.3s								
VRHR					smax				
	comp=Z,30nm,0.8s								
VRHR					smax				
	comp=N,380nm,1.7s								
VRHR					MLR		MLR		
	comp=Z,12μm,14.0s								
VRHR					MLR		MLR		
	comp=N,11μm,12.0s								
VRHR					MLR		MLR		
	comp=E,8μm,16.0s								
VRHR	**Novokhopersk**	**19.61**	**43**		*e*P		**Pn**	**14 02 27.4**	**-1.7**
	comp=E,20nm,0.5s								
TOU	**Touzarine**	**19.65**	**267**		*e*P		**Pn**	**14 02 28.0**	**-1.7**
MPAL	**Palemas**	**19.72**	**268**		*e*P		**Pn**	**14 02 28.0**	**-2.6**
EMAL	**Malaga-Limoner**	**19.72**	**273**	*i*	P		**Pn**	**14 02 27.4**	**-3.2**
ROSF	**Rostrenen**	**19.77**	**308**		*e*P		**Pn**	**14 02 28.2**	**-2.9**
	comp=E,107nm,0.8s								
ROSF	**Rostrenen**	**19.77**	**308**		*e*P		**Pn**	**14 02 28.2**	**-2.9**
ROSF					pmax		pmax		
	comp=Z,53nm,0.8s								
ROSF	**Rostrenen**	**19.77**	**308**		*e*P		**Pn**	**14 02 28.2**	**-2.9**
	comp=Z,53nm,0.8s								
SKP1	**Kophill**	**19.92**	**319**		*e*P		**Pn**	**14 02 31.4**	**-1.4**
EARI	**Arriondas**	**19.93**	**292**		P		**Pn**	**14 02 31.1**	**-1.8**
	comp=Z,871nm,2.2s								
EARI	**Arriondas**	**19.93**	**292**		P		**Pn**	**14 02 31.1**	**-1.9**
	comp=Z,871nm,2.2s								
OBN	**Obninsk**	**19.95**	**28**		P		**Pn**	**14 02 30.8**	**-2.4**
	comp=Z,1μm,1.0s,SNR=21								
OBN	**Obninsk**	**19.95**	**28**	*b*	iP		**Pn**	**14 02 29.3**	**-3.9**
OBN					*e*S		**Sn**	**14 06 05.8**	**-11**
OBN					pmax		pmax		
	comp=Z,293nm,1.8s								
OBN					MLR		MLR		
	comp=Z,6μm,13.0s								
OBN	**Obninsk**	**19.95**	**28**		*e*P		**Pn**	**14 02 30.3**	**-2.9**
	comp=Z,148nm,0.8s								
EMIJ	**Mijas**	**20.03**	**272**		P		**P**	**14 02 32.2**	**-0.3**
	comp=Z,372nm,2.3s								
EMIJ	**Mijas**	**20.03**	**272**		P		**P**	**14 02 32.2**	**-0.3**
	comp=Z,372nm,2.3s								
BHD	**Baghdad**	**20.10**	**98**		*ex*		x	14 02 31.0	
BHD					*ex*		x	14 03 03.0	
BHD					*ex*		x	14 03 12.0	
BHD					*ex*		x	14 06 22.0	
BHD					*ex*		x	14 07 04.0	
BHD					*ex*		x	14 07 21.0	
BHD					*ex*		x	14 09 42.0	
BHD					*ex*		x	14 11 17.0	
GANJ	**Ganja**	**20.11**	**75**		P		**P**	**14 02 32.6**	**-0.7**
	SNR=81								
TZK	**Tazeka**	**20.26**	**265**	*i*	P		**P**	**14 02 36.0**	**+1.0**
SWK	**Warminster**	**20.39**	**316**		*e*P		**P**	**14 02 36.9**	**+0.7**
REAL	**Reales**	**20.39**	**272**		*e*P		**P**	**14 02 37.0**	**+0.6**
VSU	**Vasula**	**20.47**	**10**⇓	*i*	P		**P**	**14 02 36.2**	**-0.8**
VSU	**Vasula**	**20.47**	**10**⇓	*i*	P		**P**	**14 02 36.3**	**-0.7**
SSW	**Stow on the Wo**	**20.60**	**318**		*e*P		**P**	**14 02 39.2**

SFS pmax pmax
comp=Z,382nm,1.0s,mb5.7
SFS San Fernando 21.18 273 *i* P **P** **14 02 46.3 +1.4**
MVO Moncorvo 21.21 286 *eP* **P** **14 02 44.0 -1.2**
comp=Z,159nm,1.6s,mb5.1
MVO *eS* **S** **14 06 42.1 +1.4**
MVO *eLR* LR 14 09 29.4
comp=Z,9μm,20.0s
HEX Exmoor 21.21 314⇑ *eP* **P** **14 02 46.3 +1.2**
MCH1 Michaelchurch 21.22 317 *eP* **P** **14 02 45.3 +0.1**
MCH1 AMb AMB 14 02 56.1
comp=Z,163nm,1.3s,mb5.2
EMIN Mina Concepcio 21.28 277 P **P** **14 02 45.9 -0.2**
comp=Z,810nm,1.9s,mb5.7
EMIN Mina Concepcio 21.28 277 P **P** **14 02 45.8 -0.2**
comp=Z,810nm,1.9s,mb5.7
CZD Col de Zad 21.30 263 *i* P **P** **14 02 48.0 +1.7**
RSA Sarsar 21.30 269 *i* P **P** **14 02 46.0 -0.3**
MIF Mishlifen 21.31 264 *i* P **P** **14 02 46.0 -0.4**
EPON Pontenova 21.34 292 P **P** **14 02 45.9 -0.7**
comp=Z,446nm,2.0s,mb5.5
EPON Pontenova 21.34 292 P **P** **14 02 45.9 -0.7**
comp=Z,446nm,2.0s,mb5.5
EBAD Badajoz 21.39 279 P **P** **14 02 45.4 -1.8**
comp=Z,560nm,2.0s,mb5.5
EBAD Badajoz 21.39 279 P **P** **14 02 45.4 -1.8**
comp=Z,560nm,2.0s,mb5.5
HTR Trewern Hill 21.41 317 *eP* **P** **14 02 47.5 +0.3**
HLM1 Long Mynd 21.43 319 *eP* **P** **14 02 47.8 +0.3**
LHO Holmfirth 21.49 322 P **P** **14 02 51.3 +3.2**
PBAR Barrancos 21.50 278 *eP* **P** **14 02 48.6 +0.2**
comp=Z,234nm,1.6s,mb5.3
PBAR *eS* **S** **14 06 46.3 -0.2**
PBAR *eLR* LR 14 09 51.9
comp=Z,6μm,22.0s
HTL Hartland 21.56 314 *eP* **P** **14 02 50.6 +1.7**
HTL AMb AMB 14 02 58.7
comp=Z,233nm,1.6s,mb5.4
HTL *eS* **S** **14 06 45.9 -1.6**
HTL AMS AMS 14 14 54.5
comp=Z,8μm,17.1s,MS5.2
HPK Haverah Park 21.62 323 *eP* **P** **14 02 49.6 +0.1**
HPK AMb AMB 14 03 00.1
comp=Z,199nm,1.8s,mb5.2
HPK *eS* **S** **14 06 44.7 -3.9**
HPK AMS AMS 14 11 50.0
comp=Z,10μm,19.9s,MS5.2
PCBR Castelo Branco 21.63 283 *eP* **P** **14 02 48.1 -1.6**
comp=Z,212nm,1.7s,mb5.3
PCBR *eS* **S** **14 06 49.8 +0.8**
MTE Manteigas 21.64 284 *eP* **P** **14 02 48.5 -1.3**
comp=Z,310nm,1.6s,mb5.5
MTE *eS* **S** **14 06 46.9 -2.2**
MTE *eLR* LR 14 10 12.5
comp=Z,21μm,18.0s
MTE Manteigas 21.64 284 *eP* **P** **14 02 48.2 -1.6**
comp=Z,580nm,1.4s,mb5.8
PVRL Vila Real 21.72 286 *eP* **P** **14 02 50.1 -0.6**
comp=Z,92nm,1.5s,mb5.0
PVRL *eS* **S** **14 06 54.5 +3.7**
PESTR Estremoz 21.82 280 *eP* **P** **14 02 49.6 -2.3**
comp=Z,122nm,1.8s,mb5.0
PESTR *eS* **S** **14 06 48.7 -4.2**
PESTR *eLR* LR 14 10 30.9
comp=Z,9μm,18.0s
SBD1 Bryn Du 21.83 319 *eP* **P** **14 02 53.1 +1.3**
PVIS Viseu 21.88 285 *eP* **P** **14 02 51.5 -1.0**
comp=Z,206nm,2.1s,mb5.2
PVIS *eS* **S** **14 06 58.5 +4.5**
PCAB Cabril 21.95 288 *eP* **P** **14 02 53.9 +0.8**
comp=Z,146nm,0.9s,mb5.4
PCAB *eS* **S** **14 06 58.1 +2.9**
EGRO El Granado 21.96 276 P **P** **14 02 52.2 -1.1**
comp=Z,441nm,2.0s,mb5.5
EGRO El Granado 21.96 276 P **P** **14 02 52.2 -1.1**
comp=Z,441nm,2.0s,mb5.5
ELOB Lobios 21.97 288 P **P** **14 02 53.4 0.0**
comp=Z,271nm,1.6s,mb5.4
ELOB Lobios 21.97 288 P **P** **14 02 53.4 0.0**
comp=Z,271nm,1.6s,mb5.4
SIZA Siyzn 22.04 74 P **P** **14 02 54.4 +0.2**
SNR=25
HFS Hagfors 22.14 351 P **P** **14 02 54.7 -0.3**
comp=Z,84nm,0.7s,mb5.3,baz=152,slow=13,SNR=155
HFS LR LR 14 12 02.2
comp=Z,5μm,21.9s,MS4.9,baz=170,slow=38
HFA0 Hagfors New Ar 22.15 351 P **P** **14 02 54.2 -0.9**
PVAQ Vaqueiros 22.16 276 *eP* **P** **14 02 54.5 -1.0**
comp=Z,81nm,0.8s,mb5.2
PVAQ *eS* **S** **14 06 54.6 -4.9**
PVAQ *eLR* LR 14 10 46.4
comp=Z,5μm,18.0s
PBEJ Beja 22.17 278 *eS* **S** **14 06 58.7 -0.8**
ALIB Ii-Bayraml 22.20 77 P **P** **14 02 56.4 +0.6**
SNR=24
EVO Evora 22.20 279 *eP* **P** **14 02 54.5 -1.4**
comp=Z,354nm,1.2s,mb5.3
EVO *eM* LR MLR
comp=Z,10μm,18.8s,MS5.0
EVO Evora 22.20 279 *eP* **P** **14 02 53.5 -2.4**
comp=Z,332nm,1.4s,mb5.6
EVO *eS* **S** **14 06 56.5 -3.7**
PUL Pulkovo 22.28 13 *i* P **P** **14 02 56.1 -0.4**
EVOP Sao Brissos 22.29 279 *eP* **P** **14 02 54.5 -2.3**
comp=Z,177nm,1.2s,mb5.3
KONO Kongsberg 22.33 346 *eP* **P** **14 02 56.0 -1.0**
KONO Kongsberg 22.33 346 *eP* **P** **14 02 55.4 -1.7**
comp=Z,197nm,1.3s,mb5.4
KONO LR LR
comp=Z,9μm,15.6s,MS5.3
KONO Kongsberg 22.33 346 *eP* **P** **14 02 58.2 +1.2**
KONO AMb AMB 14 03 05.4
comp=Z,242nm,1.7s,mb5.4
KONO *eS* **S** **14 07 02.7 +0.5**
KONO AMS AMS 14 14 15.1
comp=Z,9μm,15.6s,MS5.3
KONO Kongsberg 22.33 346 *eP* **P** **14 02 55.4 -1.6**
KONO pmax pmax
comp=Z,197nm,1.3s,mb5.4
KONO MLR MLR
comp=Z,9μm,15.6s,MS5.3
KONO Kongsberg 22.33 346 *eP* **P** **14 02 55.4 -1.6**
comp=Z,197nm,1.3s,mb5.4
STS Santiago 22.34 291 P **P** **14 02 56.2 -1.2**
comp=Z,39nm,1.1s,mb4.8
STS Santiago 22.34 291 P **P** **14 02 56.2 -1.2**
STS pmax pmax
comp=Z,39nm,1.1s,mb4.8
STS Santiago 22.34 291 P **P** **14 02 56.2 -1.2**
comp=Z,39nm,1.1s,mb4.8
PBDV Barranco-do-Ve 22.36 276 *eP* **P** **14 02 57.3 -0.3**
comp=Z,75nm,1.1s,mb5.0
PBDV *eS* **S** **14 07 00.1 -3.3**
PBDV *eLR* LR 14 09 38.7
comp=Z,5μm,20.0s
EZAM Zamans 22.44 289 P **P** **14 02 57.0 -1.4**
comp=Z,67nm,0.9s,mb5.1
EZAM Zamans 22.44 289 P **P** **14 02 57.0 -1.4**
EZAM pmax pmax
comp=Z,67nm,0.9s,mb5.1
EZAM Zamans 22.44 289 P **P** **14 02 57.0 -1.4**
comp=Z,67nm,0.9s,mb5.1
XAL Allendale 22.45 324 *eP* **P** **14 02 58.9 +0.6**
ALMR Almeirim 22.55 281 *eP* **P** **14 02 56.9 -2.7**
EMAZ Mazaricos 22.66 291 P **P** **14 02 58.7 -2.0**
comp=Z,259nm,2.0s,mb5.3
EMAZ Mazaricos 22.66 291 P **P** **14 02 58.7 -2.0**
comp=Z,259nm,2.0s,mb5.3
GOBA Gobu 22.72 76 P **P** **14 03 02.3 +1.0**
SNR=7.2
TZC Tazercounte 22.77 262 *i* P **P** **14 03 03.0 +1.0**
XSO Sourhope Farm 22.85 326 *eP* **P** **14 03 03.5 +0.9**
MORF Marmelete 22.91 276 *eP* **P** **14 03 03.4 0.0**
comp=Z,68nm,2.0s,mb4.7
MORF *eS* **S** **14 07 13.5 +0.3**
MORF *eLR* LR 14 09 50.4
comp=Z,5μm,20.0s
PTEO Sao Teotonio 22.92 277 *eP* **P** **14 03 01.8 -1.7**
comp=Z,120nm,1.6s,mb5.1
PTEO *eS* **S** **14 07 16.9 +3.5**
KMY Karmoy 22.96 340 *eP* **P** **14 03 04.9 +1.2**
comp=Z,67nm,1.1s,mb5.0
KMY Karmoy 22.96 340 *eP* **P** **14 03 04.9 +1.2**
KMY AMb AMB 14 03 06.9
comp=Z,67nm,1.1s,mb5.0
LIS Lisbon 23.05 280 *eP* **P** **14 03 01.8 -3.1**
LIS *eS* **S** **14 07 12.7 -2.8**
LIS *eS* **S** **14 07 13.0 -2.5**
LIS AMS AMS 14 15 03.8
comp=N,10μm,17.5s
LIS Lisbon 23.05 280 *eP* **P** **14 03 01.8 -3.1**
LIS *eS* **S** **14 07 12.7 -2.8**
ECK Cauldkaine Hil 23.06 324 *eP* **P** **14 03 05.3 +0.5**
AVE Averroes 23.06 266 P **P** **14 03 03.5 -1.5**
PFVI Vila Bisbo 23.09 276 *eP* **P** **14 03 06.8 +1.5**
comp=N,114nm,1.7s,mb5.0
PFVI *eS* **S** **14 07 11.8 -4.3**
PFVI *eLR* LR 14 09 57.0
comp=N,6μm,18.0s
PMAFR Mafra 23.12 281 *eP* **P** **14 03 08.5 +2.9**
comp=N,145nm,1.3s,mb5.2
PMAFR *eS* **S** **14 07 17.0 +0.4**
PMAFR *eLR* LR 14 11 11.7
comp=N,7μm,18.0s
EKA Eskdalemuir Ar 23.16 325 P **P** **14 03 05.6 -0.3**
comp=N,17nm,0.6s,mb4.6,baz=123,slow=7.7,SNR=40
ESK Eskdalemuir 23.18 324 P **P** **14 03 07.4 +1.4**
comp=N,618nm,0.9s,mb6.0,SNR=13
ESK Eskdalemuir 23.18 324 *eP* **P** **14 03 06.4 +0.4**
ESK AMb AMB 14 03 11.4
comp=Z,104nm,1.0s,mb5.2
ESK *eS* **S** **14 07 15.9 -1.3**
ESK AMS AMS 14 14 28.5
comp=Z,5μm,20.3s,MS5.0
ESK Eskdalemuir 23.18 324 *eP* **P** **14 03 05.7 -0.3**
comp=Z,136nm,0.9s,mb5.4
ESK LR LR
comp=Z,7μm,16.6s,MS5.2
ESK Eskdalemuir 23.18 324 *eP* **P** **14 03 05.7 -0.3**
ESK pmax pmax
comp=Z,136nm,0.9s,mb5.4
ESK MLR MLR
comp=Z,7μm,16.6s,MS5.2
ESK Eskdalemuir 23.18 324 *eP* **P** **14 03 05.7 -0.3**
comp=Z,136nm,0.9s,mb5.4
ODD1 Odda 23.22 342 *eP* **P** **14 03 07.0 +0.6**
comp=Z,81nm,1.2s,mb5.0
ODD1 Odda 23.22 342 *eP* **P** **14 03 07.0 +0.6**
ODD1 AMb AMB 14 03 27.9
comp=Z,81nm,1.2s,mb5.0
FINES FINESS Array B 23.31 7 P **P** **14 03 04.5 -2.9**
FINES 14 06 52.9
FINES S **S** **14 07 13.7 -5.6**
FINES FINESS Array B 23.31 7 P **P** **14 03 04.5 -2.9**
comp=Z,32nm,0.6s,mb5.0,baz=177,slow=9.9,SNR=109
FINES PcP PcP 14 06 52.9 -1.2
comp=Z,8.3nm,0.6s,baz=172,slow=2.7,SNR=6.1
FINES S **S** **14 07 13.7 -5.6**
comp=Z,6.4nm,0.7s,baz=141,slow=9.0,SNR=2.9
FINES LR LR 14 12 15.7
comp=Z,3μm,18.7s,MS4.7,baz=21,slow=37
NB2 NORSAR Subarra 23.35 349 P **P** **14 03 06.6 -1.2**
comp=Z,91nm,0.8s,mb5.3,baz=158,slow=9.3
NB2 NORSAR Subarra 23.35 349 P **P** **14 03 06.6 -1.2**
NB2 pmax pmax
comp=Z,91nm,0.8s,mb5.3
NOA NORSAR Array B 23.35 349 P **P** **14 03 07.0 -0.8**
NOA PcP PcP 14 06 52.8 -1.4
NOA S **S** **14 07 18.7 -1.3**
NOA LR LR 14 13 55.9
NOA NORSAR Array B 23.35 349 P **P** **14 03 07.1 -0.7**
NOA 14 06 52.8
NOA S **S** **14 07 18.7 -1.3**
NOA NORSAR Array B 23.35 349 P **P** **14 03 07.0 -0.8**
comp=Z,25nm,0.8s,mb4.7,baz=228,slow=24,SNR=90
NOA PcP PcP 14 06 52.8 -1.4
comp=Z,2.7nm,0.7s,baz=130,slow=3.4,SNR=2.4
NOA S **S** **14 07 18.7 -1.3**
comp=Z,2.9nm,1.0s,baz=165,slow=19,SNR=2.0
NOA LR LR 14 13 55.9
comp=Z,6μm,18.8s,MS5.1,baz=170,slow=41
EBL Broad Law 23.38 326 *eP* **P** **14 03 08.3 +0.1**
EDI Edinburgh 23.54 326⇑ *eP* **P** **14 03 10.1 +0.3**
EDI AMb AMB 14 03 16.4
comp=Z,137nm,1.1s,mb5.3
EDI AMS AMS 14 14 52.0
comp=Z,7μm,18.9s,MS5.1
EDI Edinburgh 23.54 326 P **P** **14 03 10.1 +0.3**
EDI AMb AMB 14 03 16.4
comp=Z,137nm,1.1s,mb5.3
EAU Auchinoon 23.61 325⇑ *eP* **P** **14 03 11.1 +0.7**
GAL1 Galloway 23.62 322 *eP* **P** **14 03 11.3 +0.8**
GAL1 AMb AMB 14 03 21.3
comp=Z,167nm,1.5s,mb5.2
GAL1 AMS AMS 14 13 09.1
comp=Z,10μm,20.6s,MS5.3
DSB Dublin 23.63 318 *eP* **P** **14 03 11.2 +0.6**
comp=Z,165nm,1.2s,mb5.3
DLF Lyons Farm 23.73 318 *eP* **P** **14 03 08.2 -3.4**
MIB Mutribah 23.85 103 *eP* **P** **14 03 10.7 -2.3**
MIB AMb AMB 14 03 19.6
comp=Z,831nm,1.2s,mb6.0
MIB Mutribah 23.85 103 *eP* **P** **14 03 10.7 -2.2**
comp=Z,831nm,1.2s,mb6.0
EGD Espegrend 23.87 341 *eP* **P** **14 03 15.0 +2.1**
comp=Z,267nm,1.9s,mb5.3
EGD Espegrend 23.87 341 *eP* **P** **14 03 15.0 +2.1**
EGD AMb AMB 14 03 20.5
comp=Z,267nm,1.9s,mb5.3
EBH Black Hill 23.88 326 *eP* **P** **14 03 13.8 +0.8**
BER Bergen 23.95 341 *eP* **P** **14 03 15.3 +1.8**
comp=Z,188nm,2.4s,mb5.1
BER LR LR
comp=Z,8μm,17.0s,MS5.2
BER Bergen 23.95 341 *eP* **P** **14 03 15.1 +1.6**
BER *eP* 14 03 15.3
BER AMb AMB 14 03 19.8
comp=Z,202nm,1.9s,mb5.2
BER AMb AMB 14 03 21.2
comp=Z,188nm,2.4s,mb5.1
BER *eS* **S** **14 07 28.9 -0.7**
BER AMS AMS 14 17 27.4
comp=Z,8μm,17.0s,MS5.2
BER Bergen 23.95 341 *eP* **P** **14 03 15.3 +1.8**
BER pmax pmax
comp=Z,188nm,2.4s,mb5.1
BER MLR MLR
comp=Z,8μm,17.0s,MS5.2
KAF Kangasniemi 23.99 7 *ep* **P** **14 03 12.2 -1.7**
comp=Z,34nm,0.5s,mb5.0,baz=188,slow=10
KAF Kangasniemi 23.99 7 *eP* **P** **14 03 12.2 -1.7**
KAF pmax pmax
comp=Z,34nm,0.5s,mb5.0
NAY Al-Naaiem 24.05 104 *eP* **P** **14 03 12.4 -2.3**
NAY AMb AMB 14 03 17.3
comp=Z,175nm,0.8s,mb5.5
NAY Al-Naaiem 24.05 104 *eP* **P** **14 03 12.4 -2.3**
comp=Z,175nm,0.8s,mb5.5
PGBU Glenifferbraes 24.05 324 *eP* **P** **14 03 16.1 +1.5**
PGBU AMb AMB 14 03 25.5
comp=Z,102nm,1.9s,mb4.9
ASK Askoy 24.07 341 *eP* **P** **14 03 15.3 +0.7**
comp=Z,224nm,1.9s,mb5.3
ASK Askoy 24.07 341 *eP* **P** **14 03 15.3 +0.7**
ASK AMb AMB 14 03 22.2
comp=Z,224nm,1.9s,mb5.3
DCN Croghan 24.15 317 *eP* **P** **14 03 13.5 -2.0**
EAB Aberfoyle 24.21 325 *eP* **P** **14 03 16.8 +0.9**
DMUB Kingscourt 24.22 319 *eP* **P** **14 03 12.9 -3.2**
OUK Oukaimeden 24.23 261 *i* P **P** **14 03 17.5 +1.2**
UMR Umm Al-Rimmam 24.26 103 *eP* **P** **14 03 14.8 -1.9**
UMR AMb AMB 14 03 23.3
comp=Z,891nm,1.0s,mb6.2
UMR Umm Al-Rimmam 24.26 103 *eP* **P** **14 03 14.8 -1.9**
comp=Z,891nm,1.0s,mb6.2
GMK Mull of Kintyr 24.31 323 *eP* **P** **14 03 18.7 +1.8**
MME1 Meikle Cairn 24.33 329 *eP* **P** **14 03 17.8 +0.8**
GCL Cushendall 24.42 322 *eP* **P** **14 03 18.4 +0.5**
KBD Kabd 24.42 104 *eP* **P** **14 03 16.6 -1.5**
KBD AMb AMB 14 03 22.3
comp=Z,962nm,0.9s,mb6.2
KBD Kabd 24.42 104 *eP* **P** **14 03 16.6 -1.6**
comp=Z,962nm,0.9s,mb6.2
HYA Hoyanger 24.43 343 *eP* **P** **14 03 19.1 +1.2**
comp=Z,198nm,1.8s,mb5.2
HYA Hoyanger 24.43 343 *eP* **P** **14 03 19.1 +1.2**
HYA AMb AMB 14 03 26.3
comp=Z,198nm,1.8s,mb5.2
RDF Al-Radifah 24.44 105 *eP* **P** **14 03 16.0 -2.3**
RDF AMb AMB 14 03 25.4
comp=Z,485nm,1.2s,mb5.8
RDF Al-Radifah 24.44 105 *eP* **P** **14 03 16.0 -2.3**
comp=Z,485nm,1.2s,mb5.8
MCD Coleburn Disti 24.62 329 *eP* **P** **14 03 20.3 +0.6**
QRN Al-Qurain 24.81 105 *eP* **P** **14 03 20.1 -1.6**
QRN AMb AMB 14 03 26.1
comp=Z,526nm,0.9s,mb6.1
MRKH Merkhyat 24.98 152 *e* **S** **14 07 49.3 +2.4**
MDO Dochfour 24.99 328 *eP* **P** **14 03 24.4 +1.4**
MVH1 Achvaich 25.23 329 *eP* **P** **14 03 25.5 +0.3**
JHA Jbel Lahdid 25.24 264 *eP* **P** **14 03 26.0 +0.4**
VAL Valentia 25.25 312 *eP* **P** **14 03 25.7 +0.3**
VAL *i* S **S** **14 08 02.5 +12**
JOF Joensuu 25.41 12 *ep* **P** **14 03 25.3 -1.5**
comp=Z,31nm,0.4s,mb5.2
MOL Molde 25.41 346 *eP* **P** **14 03 28.3 +1.5**
MOL *eS* **S** **14 07 54.2 +1.1**
MOL AMS AMS 14 16 10.5
comp=Z,7μm,16.7s,MS5.2
JAWL J.Aulia 25.45 152 *e* **S** **14 07 49.3 -5.1**
KPL Plockton 25.48 326 *eP* **P** **14 03 28.3 +0.8**
KPL AMb AMB 14 03 33.7
comp=Z,98nm,1.6s,mb5.1
KPL AMS AMS 14 17 14.5
comp=Z,6μm,16.6s,MS5.2
KPL Plockton 25.48 326 P **P** **14 03 28.3 +0.8**
KPL AMb AMB 14 03 33.7
comp=Z,98nm,1.6s,mb5.1
LRW Lerwick 25.65 335 *eP* **P** **14 03 28.9 -0.2**
LRW AMb AMB 14 03 34.5
comp=Z,99nm,1.9s,mb5.0
RRH Rhenigidale 26.28 327 *eP* **P** **14 03 35.9 +1.2**
RTO Tolsta 26.35 328 *eP* **P** **14 03 36.1 +0.8**
NSS Namsos 26.61 352 *eP* **P** **14 03 35.1 -2.5**
comp=Z,179nm,1.3s,mb5.4
NSS LR LR
comp=Z,9μm,16.9s,MS5.4
NSS Namsos 26.61 352 *eP* **P** **14 03 35.1 -2.5**
NSS AMb AMB 14 03 43.9
comp=Z,179nm,1.3s,mb5.4
NSS *eS* **S** **14 08 12.7 +0.6**
NSS AMS AMS 14 16 17.4
comp=Z,9μm,16.9s,MS5.4
NSS Namsos 26.61 352 *eP* **P** **14 03 35.1 -2.6**
comp=Z,179nm,1.3s,mb5.4,SNR=28
PRGR Permogore 27.98 26⇓ *i* P **P** **14 03 49.4 -0.6**
PRGR *e* 14 04 36.5
PRGR *e* PPP 14 04 44.4
PRGR *eS* **S** **14 08 35.3 +1.6**
PRGR pmax pmax
comp=Z,105nm,0.7s,mb5.6
PRGR Permogore 27.98 26 *i* P **P** **14 03 49.4 -0.6**
comp=Z,105nm,0.7s,mb5.6
AKTK Aktyubinsk 29.12 53 P **P** **14 03 58.5 -1.7**
AKTK S **S** **14 08 50.5 -1.2**
AKTK LR LR 14 16 40.2
AKTK Aktyubinsk 29.12 53 P **P** **14 03 58.6 -1.6**
AKTO Aktyubinsk 29.12 53 P **P** **14 03 58.6 -1.6**
AKTO S **S** **14 08 50.5 -1.2**
AKTO Aktyubinsk 29.12 53 P **P** **14 03 58.5 -1.7**
comp=Z,8.4nm,0.4s,mb4.8,baz=251,slow=6.6,SNR=46
AKTO S **S** **14 08 50.5 -1.2**
comp=Z,15nm,1.2s,baz=54,slow=20,SNR=2.9
AKTO LR LR 14 16 40.2
comp=Z,8μm,21.6s,MS5.3,baz=73,slow=38
VAN Vannovskaya 29.52 79 P **P** **14 04 03.1 -0.8**
VAN S **S** **14 08 54.4 -3.9**
ABKT Ailbek 29.53 79 P **P** **14 04 03.1 -1.0**
comp=Z,897nm,0.6s,mb6.7,SNR=28
APA Apatity 30.09 10⇑ *eP* **P** **14 04 06.6 -2.0**
APA *i* 14 05 08.4
APA *eS* **S** **14 08 58.0 -8.7**
APA pmax pmax
comp=Z,36nm,1.2s,mb5.0
APA Apatity 30.09 10 *eP* **P** **14 04 06.6 -2.0**
comp=Z,36nm,1.2s,mb5.0
TORD Torodi Ar. Bea 30.16 218 P **P** **14 04 08.5 -1.2**
TORD PcP PcP 14 07 10.2 -0.8
TORD S **S** **14 09 03.8 -4.8**
TORD ScP ScP 14 10 51.0 -2.0
TORD Torodi Ar. Bea 30.16 218 P **P** **14 04 08.5 -1.2**
comp=Z,71nm,1.0s,mb5.4,baz=33,slow=9.2,SNR=70
TORD PcP PcP 14 07 10.2 -0.8
comp=Z,7.4nm,0.9s,baz=18,slow=4.5,SNR=3.6
TORD S **S** **14 09 03.8 -4.8**
comp=Z,1.6nm,0.9s,baz=42,slow=18,SNR=3.2
TORD ScP ScP 14 10 51.0 -2.0
comp=Z,5.8nm,1.2s,baz=29,slow=3.3,SNR=3.6
CFTV Fuerteventura 30.30 261 P **P** **14 04 09.7 -1.3**
comp=Z,24nm,0.8s,mb5.0
CFTV Fuerteventura 30.30 261 P **P** **14 04 09.7 -1.2**
comp=Z,24nm,0.8s,mb5.0
LVZ Lovozero 30.57 11 P **P** **14 04 13.8 +0.9**
comp=Z,131nm,1.0s,mb5.7,SNR=5.3
LVZ Lovozero 30.57 11 *i* P **P** **14 04 11.5 -1.4**
LVZ MLR MLR
comp=Z,12μm,22.0s,MS5.5
ARU Arti 30.95 42 *eP* **P** **14 04 14.6 -1.8**
comp=Z,25nm,0.6s,mb5.2
ARU LR LR
comp=Z,7μm,15.9s,MS5.4
ARU Arti 30.95 42 *d* iP **P** **14 04 15.0 -1.3**
ARU *e* 14 05 13.4
ARU 14 07 11.2
ARU *eS* **S** **14 09 18.7 -1.6**
ARU pmax pmax
comp=Z,72nm,1.2s,mb5.4
ARU pmax pmax
comp=Z,216nm,6.6s
ARU MLR MLR
comp=Z,5μm,14.0s,MS5.3
ARU Arti 30.95 42 *i* P **P** **14 04 15.0 -1.3**
comp=Z,216nm,6.6s
TRO Tromso 31.28 359 *eP* **P** **14 04 17.1 -2.0**
comp=Z,79nm,1.5s,mb5.3
TRO LR LR
comp=Z,6μm,17.7s,MS5.3
TRO Tromso 31.28 359 *eP* **P** **14 04 17.1 -2.0**
TRO AMb AMB 14 04 18.9
comp=Z,79nm,1.5s,mb5.3
TRO *eS* **S** **14 09 22.1 -3.1**
TRO AMS AMS 14 19 03.0
comp=Z,6μm,17.7s,MS5.3
TRO Tromso 31.28 359 *eP* **P** **14 04 17.1 -2.0**
TRO pmax pmax
comp=Z,79nm,1.5s,mb5.3
TRO MLR MLR
comp=Z,6μm,17.7s,MS5.3
TRO Tromso 31.28 359 *eP* **P** **14 04 17.1 -2.0**
comp=Z,79nm,1.5s,mb5.3,SNR=27
ARCES ARCESS Array B 31.29 3 P **P** **14 04 18.9 -0.3**
ARCES 14 07 12.1
ARCES ARCESS Array B 31.29 3 P **P** **14 04 18.9 -0.4**
comp=Z,57nm,1.1s,mb5.3,baz=189,slow=11,SNR=55
ARCES PcP PcP 14 07 12.1 -0.9
comp=Z,4.9nm,0.7s,baz=204,slow=1.3,SNR=5.5
ARCES LR LR 14 17 29.8
comp=Z,9μm,20.4s,MS5.4,baz=187,slow=38
SOKR Solikamsk 31.29 36 *c* iP **P** **14 04 17.9 -1.4**
SOKR pmax pmax
comp=Z,70nm,0.9s,mb5.5
SOKR MLR MLR
comp=Z,11μm,22.0s,MS5.5
SOKR Solikamsk 31.29 36 *i* P **P** **14 04 17.9 -1.4**
comp=Z,11μm,22.0s
KEV Kevo 31.59 4 *eP* **P** **14 04 21.1 -0.8**
comp=Z,91nm,1.4s,mb5.4
KEV LR LR
comp=Z,9μm,19.4s,MS5.5
KEV Kevo 31.59 4 *eP* **P** **14 04 21.1 -0.8**
KEV pmax pmax
comp=Z,91nm,1.4s,mb5.4
KEV MLR MLR
comp=Z,9μm,19.4s,MS5.5
EOSO Osorio 31.60 262 P **P** **14 04 22.4 0.0**
comp=Z,184nm,1.8s,mb5.6
EOSO Osorio 31.60 262 P **P** **14 04 22.5 +0.1**
comp=Z,184nm,1.8s,mb5.6
EBAJ Bajamar 32.00 263 P **P** **14 04 25.7 -0.2**
comp=Z,150nm,1.0s,mb5.8
EBAJ Bajamar 32.00 263 P **P** **14 04 25.7 -0.2**
comp=Z,150nm,1.0s,mb5.8
SVE Sverdlovsk 32.16 42⇑ *eP* **P** **14 04 26.4 -0.6**
SVE pmax pmax
comp=Z,100nm,0.8s,mb5.7
SVE MLR MLR
comp=Z,9μm,18.0s,MS5.5

SVE Sverdlovsk 32.16 42 *e*P **P** **14 04 26.4 -0.6**
comp=Z,9μm,18.0s
DESE Dese 32.18 143 *e*P **P** **14 04 29.1 +1.6**
DESE S **S** **14 09 29.7 -11**
CCAN Las Canadas 32.35 263 P **P** **14 04 29.7 +0.6**
comp=Z,30nm,0.8s,mb5.2
CCAN Las Canadas 32.35 263 P **P** **14 04 29.7 +0.7**
comp=Z,30nm,0.8s,mb5.2
ASUD Al Ashush, Dub 32.60 105 P **P** **14 04 30.9 -0.3**
SNR=16
BANOM Banah 32.65 102 P **P** **14 04 30.9 -0.8**
SNR=28
NAZ Nazwa, Dubai 32.66 104 P **P** **14 04 30.5 -1.2**
SNR=30
FAQ Al Faqa, Dubai 32.74 104 P **P** **14 04 31.1 -1.3**
SNR=25
HATD Hatta, Dubai 33.10 104 P **P** **14 04 34.3 -1.3**
SNR=27
HATD Hatta, Dubai 33.10 104 P **P** **14 04 34.3 -1.3**
SNR=27
ASHO Ashiyiah 33.13 104 P **P** **14 04 34.9 -0.9**
SNR=25
ATD Arta Tunnel 33.46 137 P **P** **14 04 39.5 +0.7**
ATD Arta Tunnel 33.46 137 P **P** **14 04 39.5 +0.8**
comp=Z,14nm,0.8s,mb4.9,baz=318,slow=12,SNR=3.5
FURI Furi 33.70 146 *e*P **P** **14 04 46.7 +5.9**
FURI *e*S **S** **14 09 48.5 -15**
HOQ Hoqain 34.69 104 P **P** **14 04 48.1 -1.2**
SNR=20
BSY Bisya 35.07 106 P **P** **14 04 51.8 -1.0**
SNR=29
BSYO Bisya 35.11 106 P **P** **14 04 51.8 -1.3**
SNR=29
BIDO Bidbid 35.34 104 P **P** **14 04 53.6 -1.4**
SNR=11
SMDO Samad 35.54 104 P **P** **14 04 55.1 -1.6**
SNR=73
WHFO Wadi Hawf 35.54 116 P **P** **14 04 56.3 -0.5**
SNR=26
ABTO Aybut 35.59 117 P **P** **14 04 56.6 -0.6**
SNR=41
BORG Borgarnes 35.84 331 PFAKE 14 05 10.0 +11
BORG LR LR
comp=Z,7μm,19.0s,MS5.4
JMIC Jan Mayen 35.89 344 PFAKE 14 05 10.0 +11
JMIC LR LR
comp=Z,4μm,20.6s,MS5.1
JMIC Jan Mayen 35.89 344 *e*S **S** **14 10 36.5 -0.2**
JMIC AMS AMS 14 22 33.1
comp=Z,4μm,20.6s,MS5.1
PDA Ponta Delgada 35.96 284 *i* S **S** **14 10 46.0 +7.6**
PDA *i* P 14 17 19.0
JMDO Jabal Madar 35.97 105 P **P** **14 04 58.9 -1.6**
SNR=66
RBK Rabkut 36.13 116 P **P** **14 05 00.9 -0.9**
SNR=60
BJO1 Bjornoya 36.17 359 PFAKE 14 05 10.0 +8.4
BJO1 LR LR
comp=Z,6μm,17.7s,MS5.4
BJO Bjornoya 36.17 359 AMS AMS 14 20 46.2
comp=Z,6μm,17.7s,MS5.4
WBK Wadi Bani Khal 36.49 104 P **P** **14 05 04.1 -0.8**
SNR=39
SHAO Shalim 36.80 114 P **P** **14 05 07.5 -0.1**
SNR=11
BRVK Borovoye 36.98 50 P **P** **14 05 07.3 -1.4**
comp=Z,391nm,0.8s,mb6.3,SNR=13
BRVK Borovoye 36.98 50 *e*P **P** **14 05 07.1 -1.6**
comp=Z,48nm,0.8s,mb5.4
BRVK *e* 14 06 33.0
BRVK LR LR
comp=Z,8μm,15.9s,MS5.6
BRVK Borovoye 36.98 50 *e*P **P** **14 05 07.1 -1.6**
BRVK *e* 14 06 33.0
BRVK pmax pmax
comp=Z,48nm,0.8s,mb5.4
BRVK MLR MLR
comp=Z,8μm,15.9s,MS5.6
BRVK Borovoye 36.98 50 P **P** **14 05 08.3 -0.4**
SNR=29
QUE Quetta 38.99 88 *e*P **P** **14 05 30.0 +4.0**
QUE *e*S **S** **14 11 44.0 +19**
DBIC Dimbokro 39.00 222 P **P** **14 05 24.9 -1.3**
DBIC LR LR 14 24 09.1
DBIC Dimbokro 39.00 222 P **P** **14 05 24.9 -1.2**
comp=Z,46nm,0.7s,mb5.3,baz=13,slow=10,SNR=40
DBIC LR LR 14 24 09.1
comp=Z,6μm,19.4s,MS5.4,baz=12,slow=40
LIC Lamto 39.47 222 *e*P **P** **14 05 28.0 -2.1**
comp=Z,175nm,0.8s,mb5.6,baz=52
LIC *e*MLR MLR
comp=Z,9μm,20.5s,MS5.3
LIC Lamto 39.47 222 *e*P **P** **14 05 28.0 -2.1**
comp=Z,88nm,0.8s,mb5.5
LIC LR LR
comp=Z,5μm,20.5s,MS5.3
LIC Lamto 39.47 222 *e*P **P** **14 05 28.0 -2.1**
comp=Z,88nm,0.8s,mb5.6
MBAR Mbarara 39.99 164 P **P** **14 05 33.1 -1.3**
SNR=9.3
BBTS Babate 40.23 244 P **P** **14 05 35.1 -1.3**
comp=Z,15nm,0.8s,mb4.8,baz=324,slow=5.7,SNR=2.5
BBTS LR LR 14 24 30.6
comp=Z,15μm,18.4s,MS5.9,baz=48,slow=40
EKS2 Erkin-Say 40.23 66 *e*P **P** **14 05 35.7 -0.5**
comp=Z,101nm,0.7s,mb5.7
EKS2 LR LR
comp=Z,6μm,16.9s,MS5.5
EKS2 Erkin-Say 40.23 66 P **P** **14 05 36.1 -0.1**
SNR=102
EKS2 Erkin-Say 40.23 66 *e*P **P** **14 05 35.7 -0.5**
comp=Z,101nm,0.7s,mb5.7
AML Almayashu 40.29 67 *e*P **P** **14 05 36.2 -0.4**
comp=Z,28nm,0.6s,mb5.2
AML *e* 14 11 36.3
AML LR LR
comp=Z,4μm,17.5s,MS5.4
AML Almayashu 40.29 67 P **P** **14 05 36.6 -0.1**
SNR=37
AML Almayashu 40.29 67 *e*P **P** **14 05 36.2 -0.5**
USP Ospenovka 40.62 65 P **P** **14 05 38.0 -1.4**
SNR=27
AAK Ala-Archa 40.76 66 P **P** **14 05 39.0 -1.5**
comp=Z,467nm,0.7s,mb6.2,SNR=27
AAK Ala-Archa 40.76 66 P **P** **14 05 40.1 -0.5**
SNR=19
KBS Kingsbay 40.76 358 *e*P **P** **14 05 40.0 -0.1**
comp=Z,14nm,0.7s,mb4.7
KBS LR LR
comp=Z,4μm,19.0s,MS5.3
KBS Kingsbay 40.76 358 AMS AMS 14 25 00.7
comp=Z,4μm,19.1s,MS5.2
KBS Kingsbay 40.76 358 *e*P **P** **14 05 40.0 -0.1**
KBS pmax pmax
comp=Z,14nm,0.7s,mb4.7
KBS MLR MLR
comp=Z,4μm,19.0s,MS5.3
KBS Kingsbay 40.76 358 *e*P **P** **14 05 40.0 -0.1**
comp=Z,14nm,0.7s,mb4.7
FRU Bishkek 40.80 66 *i* P **P** **14 05 40.0 -0.9**
FRU *i* pP 14 05 44.5 0.0
FRU *e* 14 07 16.0
FRU *e*S **S** **14 11 54.0 +2.5**
FRU pmax pmax
comp=Z,2μm,4.4s
FRU pmax pmax
comp=Z,150nm,1.1s,mb5.5
FRU MLR MLR
comp=Z,4μm,15.0s,MS5.4
FRU Bishkek 40.80 66 *i* P **P** **14 05 40.0 -0.9**
comp=Z,150nm,1.1s,mb5.5
CHMS Chumysh 40.86 66 P **P** **14 05 40.8 -0.6**
SNR=21
UCH Uchtor 40.86 67 *e*P **P** **14 05 40.8 -0.6**
comp=Z,23nm,0.7s,mb4.9
UCH *e*ScP ScP 14 11 32.9 +1.4
UCH LR LR
comp=Z,6μm,16.1s,MS5.5
UCH Uchtor 40.86 67 P **P** **14 05 41.4 0.0**
SNR=22
UCH Uchtor 40.86 67 *e*P **P** **14 05 40.8 -0.6**
KBK Karagaybulak 41.08 66 P **P** **14 05 42.9 -0.3**
SNR=28
TKM2 Tokmak 2 41.48 66 *e*P **P** **14 05 45.1 -1.4**
comp=Z,15nm,0.6s,mb4.8
TKM2 *e*ScP ScP 14 11 39.8 +5.9
TKM2 LR LR
comp=Z,4μm,19.4s,MS5.3
TKM2 Tokmak 2 41.48 66 P **P** **14 05 45.7 -0.8**
SNR=18
TKM2 Tokmak 2 41.48 66 *e*P **P** **14 05 45.1 -1.4**
ULHL Ulahol 42.10 66 P **P** **14 05 51.2 -0.4**
SNR=26
KURK Kurchatov 42.22 54 *e*P **P** **14 05 50.4 -2.0**
comp=Z,58nm,1.0s,mb5.2
KURK LR LR
comp=Z,7μm,20.9s,MS5.5
KURK Kurchatov 42.22 54 *e*P **P** **14 05 50.4 -2.0**
KURK pmax pmax
comp=Z,58nm,1.0s,mb5.2
KURK MLR MLR
comp=Z,7μm,20.9s,MS5.5
KURK Kurchatov 42.22 54 P **P** **14 05 51.9 -0.4**
SNR=21
KURK Kurchatov 42.22 54 *e*P **P** **14 05 50.4 -2.0**
comp=Z,58nm,1.0s,mb5.2
KMBO Kilima Mbogo 42.32 154 *e*P **P** **14 05 54.3 +0.8**
comp=Z,37nm,1.1s,mb4.9
KMBO LR LR
comp=Z,6μm,20.6s,MS5.5
KMBO Kilima Mbogo 42.32 154 P **P** **14 05 53.7 +0.2**
KMBO pmax pmax
comp=Z,9.0nm,0.5s
KMBO MLR MLR
comp=Z,5μm,20.9s
KMBO Kilima Mbogo 42.32 154 P **P** **14 05 55.4 +1.8**
SNR=26
KMBO Kilima Mbogo 42.32 154 P **P** **14 05 53.7 +0.2**
comp=Z,9.3nm,0.5s,mb4.7,baz=4.4,slow=8.3,SNR=22
KMBO LR LR 14 23 13.2
comp=Z,5μm,20.9s,MS5.3,baz=334,slow=36
KMBO Kilima Mbogo 42.32 154 *e*P **P** **14 05 54.3 +0.8**
comp=Z,37nm,1.1s,mb4.9
KSH Kashi 42.64 70 *e*P **P** **14 05 56.3 +0.3**
KSH AP pP 14 06 01.0 +1.4
KSH *e*XP sP 14 06 03.5 +2.4
KSH *e*PP PP 14 07 38.5 +3.8
KSH *e*PCP PcP 14 07 48.3 +0.4
KSH *e*PPP 14 08 12.3
KSH *e*SCP ScP 14 11 37.3 -1.3
KSH *e*S **S** **14 12 19.3 +0.5**
KSH *e*SCS ScS 14 15 51.8 -5.4
KSH AMB AMB
comp=Z,150nm,0.6s,mb5.9
KSH AMB AMB
comp=Z,3μm,4.7s
KSH LR LR
comp=N,11μm,10.3s,MS6.2
KSH LR LR
comp=E,12μm,10.1s,MS6.2
KSH LR LR
comp=Z,11μm,16.6s
BHJ Bhuj 44.41 95 *e*P **P** **14 06 09.4 -1.0**
NVS Novosibirsk 44.59 47 *i* P **P** **14 06 11.0 -0.4**
NVS *e*S **S** **14 12 45.5 -1.3**
NVS pmax pmax
comp=Z,171nm,1.5s,mb5.7
NVS pmax pmax
comp=N,46nm,1.3s
NVS pmax pmax
comp=E,32nm,0.5s
NVS smax
comp=N,103nm,1.8s
NVS smax
comp=E,50nm,1.8s
THN Thein Dam 44.91 80 *e*P **P** **14 06 12.2 -2.2**
MKAR Makanchi Array 45.26 59 P **P** **14 06 14.6 -2.4**
MKAR PcP PcP 14 07 55.9 -0.8
MKAR LR LR 14 29 02.6
MKAR Makanchi Array 45.26 59 P **P** **14 06 14.6 -2.3**
MKAR 14 07 55.9
MKAR Makanchi Array 45.26 59 P **P** **14 06 14.6 -2.4**
comp=E,43nm,0.6s,mb5.5,baz=278,slow=6.5,SNR=581
MKAR PcP PcP 14 07 55.9 -0.8
comp=E,7.4nm,0.6s,baz=272,slow=4.9,SNR=2.0
MKAR LR LR 14 29 02.6
comp=E,6μm,20.4s,MS5.5,baz=284,slow=41
ZAL Zalesovo 45.59 48 P **P** **14 06 17.5 -2.0**
ZAL S **S** **14 12 56.3 -5.1**
ZALV Zalesovo Beam 45.61 48 P **P** **14 06 17.5 -2.0**
comp=E,84nm,0.4s,mb6.0,baz=276,slow=8.7,SNR=331
ZALV S **S** **14 12 56.3 -5.3**
comp=E,4.8nm,0.9s,baz=270,slow=10,SNR=4.6
ZALV LR LR 14 26 05.9
comp=E,5μm,18.8s,MS5.5,baz=282,slow=37
ZALV Zalesovo Beam 45.61 48 P **P** **14 06 17.5 -2.0**
ZALV S **S** **14 12 56.3 -5.3**
SDNR Sundarnagar 46.27 81 *e*P **P** **14 06 23.0 -2.1**
SDNR *e*x x 14 13 03.0
AJM Ajmer 46.71 88 *e*P **P** **14 06 27.6 -1.0**
AJM *e*x x 14 06 35.4
comp=Z,103nm,1.2s
DDI Dehra Dun 47.62 82 *e*P **P** **14 06 33.6 -2.0**
DDI *e*x x 14 08 29.0
NDI New Delhi 47.69 84 *e*P **P** **14 06 33.0 -3.3**
NDI *e*x x 14 13 25.0
SFJD Kangerlussuaq 47.96 330 *e*P **P** **14 06 39.3 +1.5**
comp=Z,83nm,1.4s,mb5.6
SFJD LR LR
comp=Z,7μm,23.3s,MS5.6
SFJD Kangerlussuaq 47.96 330 *e*P **P** **14 06 36.0 -1.8**
SFJD *i* S **S** **14 13 39.2 +4.2**
SFJD pmax pmax
comp=Z,45nm,1.1s,mb5.4
SFJD MLR MLR
comp=Z,5μm,20.0s,MS5.5
SFJD Kangerlussuaq 47.96 330 *i* P **P** **14 06 36.0 -1.8**
comp=Z,45nm,1.1s,mb5.4
SFJD *i* S **S** **14 13 39.2 +4.2**
SFJD
comp=Z,5μm,20.0s
SFJD Kangerlussuaq 47.96 330 *e*P **P** **14 06 39.3 +1.5**
comp=Z,83nm,1.4s,mb5.6
BOM Bombay 49.26 98 *i* x x 14 06 15.6
BOM *e*x x 14 06 21.1
comp=Z,53nm,1.1s
BOM *i* x x 14 13 42.4
LGTI Lohaghat 49.70 81 *e*P **P** **14 06 47.9 -3.8**
WMQ Urumqi 49.73 61 P **P** **14 06 51.0 -0.7**
WMQ AP pP 14 06 55.5 +0.1
WMQ XP sP 14 06 58.0 +1.1
WMQ PCP PcP 14 08 12.0 -0.7
WMQ PP PP 14 08 46.3 +0.2
WMQ PPP 14 09 41.5
WMQ SCP ScP 14 12 06.0 -2.0
WMQ PCS PcS 14 12 07.8 -1.5
WMQ S **S** **14 13 58.3 -2.2**
WMQ XS sS 14 14 06.0 -0.6
WMQ SCS ScS 14 16 39.3 -3.8
WMQ AMB AMB
comp=Z,45nm,1.2s,mb5.4
WMQ AMB AMB
comp=Z,685nm,4.5s
WMQ LR LR
comp=N,4μm,24.1s,MS5.5
WMQ LR LR
comp=E,5μm,26.6s,MS5.5
WMQ LR LR
comp=Z,3μm,20.6s
POO Poona 50.27 98⇑ *i*P **P** **14 06 55.0 -1.1**
comp=Z,60nm,1.0s,mb5.6
BHPL Bhopal 50.51 90 *e*P **P** **14 06 56.1 -1.9**
ALE Alert 51.20 350 P **P** **14 07 03.0 +0.7**
comp=Z,237nm,0.7s,mb6.2,SNR=8.5
KAD Karad 51.23 99 *e*P **P** **14 07 03.1 -0.3**
KAD *e*x x 14 07 08.1
comp=Z,86nm,1.0s
ALBI Allahabad 52.90 85 *e*P **P** **14 07 12.0 -3.7**
KOLN Koldanda 53.09 82 *e*P **P** **14 07 13.8 -3.3**
comp=Z,68nm,0.6s,mb5.7
GKN Gorkha 53.79 81 *e*P **P** **14 07 19.9 -2.3**
comp=Z,52nm,0.4s,mb5.8
LSZ Lusaka 53.92 171 *e*P **P** **14 07 22.7 -0.4**
comp=Z,42nm,1.0s,mb5.3
LSZ LR LR
comp=Z,7μm,17.7s,MS5.7
LSZ Lusaka 53.92 171 P **P** **14 07 22.6 -0.5**
LSZ pmax pmax
comp=Z,18nm,0.8s,mb5.0
LSZ MLR MLR
comp=Z,5μm,18.1s,MS5.7
LSZ Lusaka 53.92 171 P **P** **14 07 23.3 +0.2**
SNR=23
LSZ Lusaka 53.92 171 P **P** **14 07 22.6 -0.5**
comp=Z,18nm,0.8s,mb5.0,baz=6.5,slow=8.7,SNR=24
LSZ LR LR 14 33 22.4
comp=Z,5μm,18.1s,MS5.7,baz=359,slow=39
MNGI Mangalore 54.33 103 *e*P **P** **14 07 22.4 -3.9**
MNGI *i* x x 14 15 11.8
KKN Kakani 54.39 81 *e*P **P** **14 07 24.3 -2.3**
comp=Z,56nm,0.6s,mb5.7
HYB Hyderabad 54.58 95 *e*P **P** **14 07 26.0 -2.1**
HYB *e*S **S** **14 15 00.0 -7.5**
HYB pmax pmax
comp=Z,100nm,1.0s,mb5.8
HYB Hyderabad 54.58 95 *i* P **P** **14 07 26.0 -2.1**
HYB *e*pP pP 14 07 32.0 +0.2
HYB *e*sP sP 14 07 34.5 +1.2
HYB *e*PP PP 14 09 31.0 +0.6
HYB *e*S **S** **14 15 00.0 -7.5**
HYB *e*ScS ScS 14 17 16.0 -1.6
HYB Hyderabad 54.58 95 *e*P **P** **14 07 26.0 -2.1**
comp=Z,100nm,1.0s,mb5.8
HYB *e*S **S** **14 15 00.0 -7.5**
JIRN Jiri 55.16 80 *e*P **P** **14 07 30.2 -2.0**
comp=Z,58nm,0.6s,mb5.8
MOY Mondy 55.66 48 *e*P **P** **14 07 35.6 +0.1**
MOY pmax pmax
comp=Z,77nm,3.0s
ASCN Ascension 56.33 223 PFAKE 14 07 50.0 +9.4
ASCN LR LR
comp=Z,5μm,20.0s,MS5.6
ODAN Odare 56.48 81 *e*P **P** **14 07 37.6 -4.1**
comp=Z,23nm,0.4s,mb5.6
TAPN Taplejung 56.48 80 *e*P **P** **14 07 39.8 -1.9**
comp=Z,81nm,0.6s,mb5.9
BOK Bokaro 56.86 85 *e*P **P** **14 07 41.5 -3.0**
BOK *e*x x 14 07 51.1
comp=Z,50nm,1.6s
TLY Talaya 57.20 47 P **P** **14 07 47.1 +0.7**
comp=Z,196nm,0.8s,mb6.2,SNR=8.8
TLY Talaya 57.20 47 *e*P **P** **14 07 46.7 +0.3**
comp=Z,62nm,1.3s,mb5.5
TLY LR LR
comp=Z,649nm,11.3s,MS5.0
TLY Talaya 57.20 47 *e*P **P** **14 07 47.1 +0.7**
TLY *e*S **S** **14 15 39.5 -2.1**
TLY *e*SS SS 14 19 28.1 -2.0
TLY pmax pmax
comp=Z,35nm,0.9s,mb5.4
TLY MLR MLR
comp=Z,4μm,16.0s,MS5.6
TLY Talaya 57.20 47 P **P** **14 07 47.6 +1.2**
SNR=17
TLY Talaya 57.20 47 *e*P **P** **14 07 46.7 +0.3**
comp=Z,62nm,1.3s,mb5.5
IRK Irkutsk 57.35 47⇑ *i*P **P** **14 07 46.6 -0.9**
IRK *e* 14 11 15.8
IRK *e* 14 15 45.3
IRK pmax pmax
comp=Z,78nm,1.8s,mb5.4
TSUM Tsumeb 57.38 183 *e*P **P** **14 07 47.1 -0.9**
comp=Z,41nm,1.3s,mb5.3
TSUM LR LR
comp=Z,569nm,26.7s,MS4.5
TSUM Tsumeb 57.38 183 P **P** **14 07 47.1 -0.8**
comp=Z,19nm,1.1s,mb5.0,baz=28,slow=7.0,SNR=13
TSUM LR LR 14 35 50.5
comp=Z,7μm,20.7s,MS5.8,baz=352,slow=40
TSUM Tsumeb 57.38 183 *e*P **P** **14 07 47.1 -0.9**
comp=Z,41nm,1.3s,mb5.3
ZAK Zakamensk 57.48 49⇓ *i*P **P** **14 07 48.5 +0.1**
ZAK pmax pmax
comp=Z,17nm,1.1s,mb5.0
LSA Lhasa 57.98 76 *e*P **P** **14 07 51.0 -1.3**
comp=Z,43nm,0.6s,mb5.7
LSA LR LR
comp=Z,4μm,21.0s,MS5.5
LSA Lhasa 57.98 76 *e*P **P** **14 07 51.0 -1.3**
LSA pmax pmax
comp=Z,43nm,0.6s,mb5.7
LSA MLR MLR
comp=Z,4μm,21.0s,MS5.5
LSA Lhasa 57.98 76 *e*P **P** **14 07 51.0 -1.3**
comp=Z,43nm,0.6s,mb5.7
VIS Vishakhapatnam 58.15 92 *i* P **P** **14 07 52.1 -1.5**
VIS *e*x x 14 07 59.2
comp=Z,150nm,1.5s
VIS *i* x x 14 15 48.6
SCHQ Schefferville 58.21 317 P **P** **14 07 53.2 -0.2**
baz=68,slow=10
SCHQ Schefferville 58.21 317 P **P** **14 07 53.2 -0.2**
TRD Trivandrum 58.74 105 *e*P **P** **14 07 56.1 -1.6**
TRD *e*x x 14 08 04.3
comp=Z,152nm,1.5s
MATP Matopo 59.03 171 P **P** **14 07 58.7 -0.8**
MATP Matopo 59.03 171 P **P** **14 07 58.7 -0.8**
comp=Z,18nm,0.9s,mb5.1,baz=352,slow=7.0,SNR=17
CAL Calcutta 59.43 84 *e*P **P** **14 08 02.7 +0.3**
CAL *e*x x 14 16 04.0
TIXI Tiksi 59.46 20 *e*P **P** **14 08 01.7 -0.2**
comp=Z,37nm,1.1s,mb5.3
TIXI LR LR
comp=Z,5μm,20.0s,MS5.6
TIXI Tiksi 59.46 20*c* *i*P **P** **14 08 02.6 +0.7**
TIXI *e*S **S** **14 16 10.3 -0.2**
TIXI *e* 14 17 53.8
TIXI pmax pmax
comp=Z,46nm,1.3s,mb5.3
RES Resolute Bay 59.50 344 *e*P **P** **14 08 03.0 +0.8**
comp=Z,773nm,1.0s,mb6.7
RES Resolute Bay 59.50 344 *e*P **P** **14 08 03.0 +0.8**
comp=Z,773nm,1.0s,mb6.7
GTA Gaotai 59.80 62 P **P** **14 08 04.0 -0.8**
GTA AP pP 14 08 07.8 -0.8
GTA XP sP 14 08 09.5 -0.5
GTA PCP PcP 14 08 50.5 -0.9
GTA PP PP 14 10 18.5 +2.0
GTA PPP 14 11 43.8
GTA S **S** **14 16 13.8 -2.1**
GTA XS sS 14 16 21.0 -1.1
GTA PS 14 16 29.8
GTA SS SS 14 20 10.3 -1.2
GTA AMB AMB
comp=Z,20nm,0.8s,mb5.2
GTA AMB AMB
comp=Z,483nm,5.7s
GTA LR LR
comp=N,3μm,19.0s,MS5.7
GTA LR LR
comp=E,4μm,19.0s,MS5.7
GTA LR LR
comp=Z,3μm,20.5s,MS5.4
BOD Bodaibo 60.24 38⇑ *i*P **P** **14 08 06.0 -1.5**
BOD *e* 14 16 13.6
BOD pmax pmax
comp=Z,22nm,0.9s,mb5.2
SONM Songino Array 60.38 51 P **P** **14 08 07.9 -0.8**
SONM LR LR 14 36 55.1
SONM Songino Array 60.38 51 P **P** **14 08 07.9 -0.8**
comp=Z,11nm,0.7s,mb5.0,baz=282,slow=8.6,SNR=82
SONM LR LR 14 36 55.1
comp=Z,5μm,19.3s,MS5.7,baz=305,slow=39
SHL Shillong 60.61 79 *e*P **P** **14 08 08.0 -2.5**
SHL *e*x x 14 16 18.3
ULN Ulaanbaatar 60.77 50 *e*P **P** **14 08 09.8 -1.4**
comp=Z,34nm,1.0s,mb5.4
ULN LR LR
comp=Z,3μm,20.0s,MS5.5
ULN Ulaanbaatar 60.77 50 *e*P **P** **14 08 09.8 -1.5**
ULN pmax pmax
comp=Z,35nm,1.0s,mb5.4
ULN MLR MLR
comp=Z,3μm,20.0s,MS5.5
ULN Ulaanbaatar 60.77 50 P **P** **14 08 11.5 +0.2**
SNR=17
ULN Ulaanbaatar 60.77 50 *e*P **P** **14 08 09.8 -1.5**
comp=Z,34nm,1.0s,mb5.4
PALK Pallekele 62.37 103 P **P** **14 08 21.2 -1.4**
comp=Z,275nm,0.8s,mb6.4,SNR=8.7
PALK Pallekele 62.37 103 *e*P **P** **14 08 20.9 -1.7**
comp=Z,158nm,1.5s,mb5.9
PALK LR LR

comp=Z,3μm,21.0s,MS5.4
PALK Pallekele 62.37 103 P **P** **14 08 23.1 +0.6**
SNR=9.9
PALK Pallekele 62.37 103 *e*P **P** **14 08 20.9 -1.7**
comp=Z,158nm,1.5s,mb5.9
IMP Imphal 62.60 79 *e*P **P** **14 08 23.0 -1.0**
CIT Chita 62.62 44 *e*P **P** **14 08 22.8 -0.9**
CIT pmax pmax
comp=Z,85nm,3.2s
LBTB Lobatse 63.29 175 P **P** **14 08 28.0 -0.3**
comp=Z,36nm,0.8s,mb5.6,baz=356,slow=7.6,SNR=40
LBTB LR LR 14 37 25.3
comp=Z,8μm,20.7s,MS5.8,baz=11,slow=37
PKME Peaks-Kenny Pk 63.81 308 PFAKE 14 08 40.0 +8.3
PKME LR LR
comp=Z,3μm,22.0s,MS5.4
LZH Lanzhou 64.19 63 *e*P **P** **14 08 33.5 -0.8**
LZH AP pP 14 08 37.5 -0.6
LZH XP sP 14 08 40.3 +0.8
LZH PP PP 14 10 55.8 +0.6
LZH S **S** **14 17 07.3 -4.1**
LZH XS sS 14 17 13.0 -4.7
LZH SS SS 14 21 17.0 -3.2
LZH AMB AMB
comp=Z,53nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,210nm,4.3s
LZH LR LR
comp=N,3μm,15.8s
LZH LR LR
comp=Z,4μm,17.0s,MS5.7
YAK Yakutsk 64.95 29 *e*P **P** **14 08 37.7 -1.1**
comp=Z,82nm,0.8s,mb5.8
YAK LR LR
comp=Z,513nm,14.7s,MS4.8
YAK Yakutsk 64.95 29 *e*P **P** **14 08 38.3 -0.5**
YAK *e* 14 09 11.1
YAK *e* 14 11 00.0
YAK *e*PPP 14 12 32.3
YAK *e*S **S** **14 17 16.1 -3.9**
YAK *e* 14 18 34.3
YAK *e*SS SS 14 21 35.3 +4.5
YAK pmax pmax
comp=Z,56nm,0.8s,mb5.7
YAK pmax pmax
comp=N,21nm,1.5s
YAK pmax pmax
comp=E,24nm,1.2s
YAK pmax pmax
comp=Z,273nm,6.4s
YAK pmax pmax
comp=N,95nm,3.8s
YAK pmax pmax
comp=E,168nm,4.1s
YAK smax
comp=E,575nm,6.9s
YAK smax
comp=N,820nm,12.1s
YAK MLR MLR
comp=N,6μm,17.0s,MS6.0
YAK MLR MLR
comp=Z,5μm,17.0s,MS5.8
YAK MLR MLR
comp=E,5μm,18.0s,MS6.0
YAK Yakutsk 64.95 29 *e*P **P** **14 08 37.7 -1.1**
comp=E,82nm,0.8s,mb5.8
CLNS Chul'man 65.86 36 *e*P **P** **14 08 44.9 +0.1**
CLNS *e**PP pP 14 08 52.6 +4.0
CLNS *e* 14 09 09.3
CLNS *e* 14 11 06.6
CLNS *e*PPP 14 12 43.7
CLNS pmax pmax
comp=Z,38nm,0.7s,mb5.5
CLNS pmax pmax
comp=N,18nm,0.9s
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=Z,20nm,0.9s,mb5.2
CLNS MLR MLR
comp=E,6μm,16.0s,MS6.0
CLNS MLR MLR
comp=Z,8μm,16.0s,MS6.0
CLNS MLR MLR
comp=N,2μm,14.0s,MS6.0
NRGR Nerungri 65.88 36 *e*P **P** **14 08 45.6 +0.6**
LBNH Lisbon 65.95 308 *e*P **P** **14 08 47.6 +2.0**
comp=N,27nm,1.0s,mb5.2
LBNH LR LR
comp=Z,3μm,19.0s,MS5.5
LBNH Lisbon 65.95 308 *e*P **P** **14 08 47.6 +2.0**
LBNH pmax pmax
comp=Z,27nm,1.0s,mb5.2
LBNH MLR MLR
comp=Z,3μm,19.0s,MS5.5
LBNH Lisbon 65.95 308 *e*P **P** **14 08 47.6 +2.0**
comp=Z,27nm,1.0s,mb5.2
FFD Franklin Falls 66.17 307 *e*P **P** **14 08 50.9 +3.8**
comp=Z,14nm,0.7s,mb5.1
FFD Franklin Falls 66.17 307 *e*P **P** **14 08 50.9 +3.8**
comp=Z,14nm,0.7s,mb5.1
WES Weston 66.53 306 *e*P **P** **14 08 52.0 +2.6**
comp=Z,73nm,1.0s,mb5.7
WES LR LR
comp=Z,2μm,20.0s,MS5.3
WES Weston 66.53 306 *e*P **P** **14 08 52.0 +2.6**
WES pmax pmax
comp=Z,73nm,1.0s,mb5.7
WES MLR MLR
comp=Z,2μm,20.0s,MS5.3
WES Weston 66.53 306 *e*P **P** **14 08 52.0 +2.6**
comp=Z,73nm,1.0s,mb5.7
HRV Harvard--Oak R 66.61 306 PFAKE 14 09 00.0 +10
HRV LR LR
comp=Z,3μm,19.0s,MS5.5
FRNY Flat Rock 66.66 309 *e*P **P** **14 08 50.6 +0.5**
comp=Z,17nm,1.0s,mb5.0
FRNY Flat Rock 66.66 309 *e*P **P** **14 08 50.6 +0.4**
comp=Z,17nm,1.0s,mb5.0
CD2 Chengdu 66.78 68 P **P** **14 08 50.0 -1.2**
CD2 AP pP 14 08 54.5 -0.5
CD2 XP sP 14 08 57.0 +0.6
CD2 PP PP 14 11 18.5 +0.5
CD2 PCS 14 13 22.0
CD2 S S 14 17 39.5 -3.8
CD2 XS sS 14 17 47.5 -2.1
CD2 SCS ScS 14 18 42.8 -5.6
CD2 SS SS 14 21 59.0 -1.8
CD2 AMB AMB
comp=Z,30nm,0.5s,mb5.6
CD2 AMB AMB
comp=Z,510nm,6.0s
CD2 LR LR
comp=N,2μm,20.4s,MS5.5
CD2 LR LR
comp=E,2μm,16.2s,MS5.5
CD2 LR LR
comp=Z,3μm,16.2s,MS5.5
BOSA Boshof 66.84 175 P **P** **14 08 50.9 -0.4**
comp=Z,26nm,0.8s,mb5.3,baz=9.3,slow=6.8,SNR=28
BOSA LR LR 14 39 44.6
comp=Z,8μm,20.3s,MS5.9,baz=0.8,slow=38
HHC Hu-ho-hao-te 66.98 55 *e*P **P** **14 08 51.5 -0.8**
HHC AP pP 14 08 56.0 -0.1
HHC XP sP 14 08 58.0 +0.5
HHC PCP PcP 14 09 19.5 -1.2
HHC PP PP 14 11 19.8 +0.3
HHC PCS 14 13 23.3
HHC S S 14 17 42.0 -3.5
HHC XS sS 14 17 49.0 -2.7
HHC SCS ScS 14 18 43.3 -6.4
HHC SS SS 14 22 03.0 -0.4
HHC AMB AMB
comp=Z,43nm,1.1s,mb5.4
HHC AMB AMB
comp=Z,567nm,5.1s
HHC LR LR
comp=N,3μm,14.3s,MS5.8
HHC LR LR
comp=E,4μm,16.6s,MS5.8
HHC LR LR
comp=Z,757nm,22.6s

BBSR BB Station 67.25 294 *e*P **P** **14 08 57.1 +3.0**
comp=Z,54nm,1.0s,mb5.5
BBSR LR LR
comp=Z,2μm,19.0s,MS5.4
BBSR BB Station 67.25 294 *e*P **P** **14 08 57.1 +3.0**
comp=Z,54nm,1.0s,mb5.5
MSNY Massena 67.34 310 *e*P **P** **14 08 56.9 +2.4**
LONY Lake Ozonia 67.38 310 *e*P **P** **14 08 54.8 0.0**
comp=Z,24nm,1.2s,mb5.1
LONY LR LR
comp=Z,3μm,19.0s,MS5.5
LONY Lake Ozonia 67.38 310 *e*P **P** **14 08 54.8 +0.1**
comp=Z,24nm,1.2s,mb5.1
HIA Hailar 67.42 44 *e*P **P** **14 08 54.9 0.0**
comp=Z,77nm,1.2s,mb5.6
HIA LR LR
comp=Z,4μm,21.0s,MS5.6
HIA Hailar 67.42 44 *e*P **P** **14 08 54.9 0.0**
HIA pmax pmax
comp=Z,77nm,1.2s
HIA MLR MLR
comp=Z,4μm,21.0s
HIA Hailar 67.42 44 *e*P **P** **14 08 54.9 0.0**
comp=Z,77nm,1.2s,mb5.6
ACCN Adirondack Com 67.47 308 *e*P **P** **14 08 57.1 +1.8**
comp=Z,40nm,1.2s,mb5.3
ACCN Adirondack Com 67.47 308 *e*P **P** **14 08 57.1 +1.7**
comp=Z,40nm,1.2s,mb5.3
NCB Newcomb 67.50 309 PFAKE 14 09 10.0 +14
NCB LR LR
comp=Z,3μm,19.0s,MS5.5
RCBR Riachuelo 68.20 243 *e*P **P** **14 09 00.6 +0.3**
comp=Z,28nm,1.1s,mb5.2
RCBR LR LR
comp=Z,1μm,26.0s,MS5.0
RCBR Riachuelo 68.20 243 *e*P **P** **14 09 00.6 +0.3**
comp=Z,28nm,1.1s,mb5.2
XAN Xi'an 68.81 63 P **P** **14 09 02.5 -1.4**
XAN AP pP 14 09 11.8 +4.1
XAN PP PP 14 11 30.5 -5.0
XAN S S 14 18 00.5 -7.0
XAN SS SS 14 22 26.3 -5.6
XAN AMB AMB
comp=Z,23nm,1.1s,mb5.0
XAN AMB AMB
comp=Z,306nm,6.2s
XAN LR LR
comp=N,1μm,18.2s,MS5.5
XAN LR LR
comp=E,2μm,20.5s,MS5.5
XAN LR LR
comp=Z,3μm,18.2s,MS5.5
PAL Palisades 68.90 306 *e*P **P** **14 09 05.9 +1.5**
comp=Z,40nm,1.0s,mb5.3
PAL Palisades 68.90 306 *e*P **P** **14 09 05.9 +1.5**
PAL pmax pmax
comp=Z,40nm,1.0s,mb5.3
PAL Palisades 68.90 306 *e*P **P** **14 09 05.9 +1.5**
comp=Z,40nm,1.0s,mb5.3
FCC Fort Churchill 68.98 329 *e*P **P** **14 09 05.5 +1.0**
comp=Z,33nm,1.1s,mb5.2
FCC Fort Churchill 68.98 329 *e*P **P** **14 09 05.5 +1.0**
FCC pmax pmax
comp=Z,33nm,1.1s,mb5.2
FCC Fort Churchill 68.98 329 *e*P **P** **14 09 05.5 +1.0**
comp=Z,33nm,1.1s,mb5.2
CPNY Central Park 69.05 306 *e*P **P** **14 09 08.3 +3.0**
comp=Z,47nm,1.0s,mb5.4
CPNY Central Park 69.05 306 *e*P **P** **14 09 08.3 +3.0**
comp=Z,47nm,1.0s,mb5.4
KMI Kunming 69.14 74 P **P** **14 09 04.8 -1.3**
KMI AP pP 14 09 08.0 -1.9
KMI XP sP 14 09 10.0 -1.4
KMI PCP PcP 14 09 30.0 0.0
KMI PP PP 14 11 40.0 +1.3
KMI PPP 14 13 21.0
KMI SCP 14 13 33.8
KMI PCS 14 13 35.0
KMI S S 14 18 09.0 -2.7
KMI XS sS 14 18 14.0 -4.0
KMI PS 14 18 36.3
KMI SKS 14 19 01.8
KMI SCS ScS 14 19 03.8 -3.2
KMI SS SS 14 22 36.0 -1.6
KMI SSS 14 25 37.5
KMI AMB AMB
comp=Z,14nm,1.0s,mb4.8
KMI AMB AMB
comp=Z,533nm,5.0s
KMI LR LR
comp=N,2μm,24.8s,MS5.3
KMI LR LR
comp=E,1μm,21.9s,MS5.3
KMI LR LR
comp=Z,2μm,24.3s,MS5.2
TIY Taiyuan 69.22 58 P **P** **14 09 05.5 -0.9**
TIY PPP 14 13 26.5
TIY S S 14 18 11.3 -1.0
TIY AMB AMB
comp=Z,546nm,4.5s
TIY LR LR
comp=N,2μm,14.5s,MS5.7
TIY LR LR
comp=E,2μm,15.3s,MS5.7
TIY LR LR
comp=Z,2μm,13.0s,MS5.5
BINY Binghamton 69.55 308 *e*P **P** **14 09 09.9 +1.5**
comp=Z,33nm,1.0s,mb5.2
BINY LR LR
comp=Z,3μm,21.0s,MS5.4
BINY Binghamton 69.55 308 *e*P **P** **14 09 09.9 +1.5**
comp=Z,33nm,1.0s,mb5.2
CHG Chiang Mai 69.76 82 ⇓P **P** **14 09 08.4 -1.6**
comp=Z,64nm,0.8s,mb5.6
CHTO Chiang Mai 69.76 82 *e*P **P** **14 09 08.0 -2.0**
comp=Z,22nm,0.8s,mb5.1
CHTO LR LR
comp=Z,1μm,21.0s,MS5.2
CHTO Chiang Mai 69.76 82 *e*P **P** **14 09 08.0 -2.0**
CHTO pmax pmax
comp=Z,22nm,0.8s,mb5.1
CHTO MLR MLR
comp=Z,1μm,21.0s,MS5.2
CHTO Chiang Mai 69.76 82 P **P** **14 09 08.8 -1.2**
SNR=16
CHTO Chiang Mai 69.76 82 *e*P **P** **14 09 08.0 -2.0**
comp=Z,22nm,0.8s,mb5.1
BJI Beijing 70.38 54 P **P** **14 09 12.0 -1.5**
BJI AP pP 14 09 15.0 -2.3
BJI PP PP 14 11 46.5 -2.4
BJI S S 14 18 22.8 -3.0
BJI SS SS 14 22 52.3 -3.6
BJI AMB AMB
comp=Z,19nm,0.8s,mb5.1
BJI AMB AMB
comp=Z,445nm,4.9s
BJI LR LR
comp=N,4μm,24.4s,MS5.7
BJI LR LR
comp=E,4μm,25.2s,MS5.7
BJI LR LR
comp=Z,2μm,37.5s
BJT Baijiatuao 70.39 54 *e*P **P** **14 09 11.5 -2.1**
comp=Z,21nm,0.8s,mb5.1
BJT LR LR
comp=Z,428nm,18.3s,MS4.7
BJT Baijiatuao 70.39 54 *e*P **P** **14 09 11.5 -2.1**
BJT pmax pmax
comp=Z,21nm,0.8s
BJT MLR MLR
comp=Z,428nm,18.3s
SUR Sutherland 70.44 180 P **P** **14 09 14.2 +0.5**
comp=Z,273nm,1.5s,mb6.0,SNR=14
SUR Sutherland 70.44 180 *e*P **P** **14 09 13.7 -0.1**
comp=Z,138nm,1.5s,mb5.7
SUR LR LR
comp=Z,491nm,16.7s,MS4.8
SUR Sutherland 70.44 180 P **P** **14 09 14.1 +0.3**
baz=355,slow=0.9
SUR LR LR 14 42 06.2
comp=Z,5μm,18.2s,MS5.8,baz=1.5,slow=38
SUR Sutherland 70.44 180 *e*P **P** **14 09 13.7 0.0**
comp=Z,138nm,1.5s,mb5.7
BILL Bilibino 70.80 13 *e*P **P** **14 09 15.1 -0.5**
comp=Z,22nm,0.7s,mb5.2
BILL LR LR
comp=Z,469nm,27.9s,MS4.6
BILL Bilibino 70.80 13⇑ *i*P **P** **14 09 15.1 -0.5**
BILL *i* *PP pP 14 09 18.4 -1.0
BILL *i* S S 14 18 28.8 -1.0
BILL pmax pmax
comp=Z,57nm,1.2s,mb5.4
BILL MLR MLR
comp=Z,5μm,19.0s,MS5.8
BILL Bilibino 70.80 13 *e*P **P** **14 09 15.1 -0.5**
comp=Z,22nm,0.7s,mb5.2
GYA Guiyang 71.34 71⇑ *i*P **P** **14 09 19.8 +0.2**
GYA AP pP 14 09 23.8 +0.4
GYA XP sP 14 09 25.5 +0.7
GYA PCP PcP 14 09 40.5 +1.2
GYA PP PP 14 11 59.3 +1.7
GYA PPP 14 13 40.5
GYA S S 14 18 34.5 -2.9
GYA XS sS 14 18 39.8 -3.9
GYA PS 14 19 04.5
GYA SKS 14 19 18.0
GYA SCS ScS 14 19 21.5 -2.8
GYA SS SS 14 23 09.8 -1.5
GYA SSS 14 26 16.0
GYA AMB AMB
comp=Z,60nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,9μm,13.0s
GYA LR LR
comp=N,10μm,18.3s,MS6.2
GYA LR LR
comp=E,10μm,21.6s,MS6.2
GYA LR LR
comp=Z,11μm,20.0s,MS6.1
SSPA Standing Stone 71.61 307 *e*P **P** **14 09 22.6 +1.6**
comp=Z,38nm,1.0s,mb5.3
SSPA LR LR
comp=Z,2μm,22.0s,MS5.4
SSPA Standing Stone 71.61 307 *e*P **P** **14 09 22.6 +1.6**
comp=Z,38nm,1.0s,mb5.3
INK Inuvik 71.80 350 *e*P **P** **14 09 21.4 -0.3**
comp=Z,1μm,1.3s,mb6.6
INK Inuvik 71.80 350 *e*P **P** **14 09 21.4 -0.2**
comp=Z,1μm,1.3s,mb6.6
SEY Seymchan 71.94 21⇑ *i*P **P** **14 09 23.7 +1.1**
ERPA Erie 72.04 310 *e*P **P** **14 09 25.0 +1.4**
comp=Z,71nm,0.8s,mb5.7
ERPA LR LR
comp=Z,2μm,19.0s,MS5.3
ERPA Erie 72.04 310 *e*P **P** **14 09 25.0 +1.5**
comp=Z,71nm,0.8s,mb5.7
ALLY Alegheny Colle 72.41 309 *e*P **P** **14 09 27.4 +1.6**
comp=Z,53nm,1.1s,mb5.4
ALLY Alegheny Colle 72.41 309 *e*P **P** **14 09 27.4 +1.6**
comp=Z,53nm,1.1s,mb5.4
CBN Corbin 72.68 305 *e*P **P** **14 09 28.8 +1.4**
comp=Z,79nm,1.0s,mb5.6
CBN LR LR
comp=Z,3μm,19.0s,MS5.6
CBN Corbin 72.68 305 *e*P **P** **14 09 28.8 +1.4**
comp=Z,79nm,1.0s,mb5.6
YKA Yellowknife Ar 73.12 340 P **P** **14 09 29.7 +0.1**
YKA LR LR 14 43 18.6
YKA Yellowknife Ar 73.12 340 *i* P **P** **14 09 30.1 +0.5**
YKA pmax pmax
comp=Z,4.0nm,0.6s
YKA Yellowknife Ar 73.12 340 P **P** **14 09 29.7 +0.1**
comp=Z,3.6nm,0.6s,mb4.5,baz=40,slow=5.6,SNR=47
YKA LR LR 14 43 18.6
comp=Z,3μm,18.9s,MS5.6,baz=120,slow=37
URVA University of 73.16 305 *e*P **P** **14 09 31.6 +1.4**
URVA University of 73.16 305 *e*P **P** **14 09 31.6 +1.3**
TIA Tai'an 73.17 57 *e*P **P** **14 09 28.3 -2.1**
MCWV Mont Chateau 73.40 308 *e*P **P** **14 09 33.6 +2.0**
comp=Z,65nm,0.9s,mb5.6
MCWV LR LR
comp=Z,4μm,22.0s,MS5.6
MCWV Mont Chateau 73.40 308 *e*P **P** **14 09 33.6 +2.0**
comp=Z,65nm,0.9s,mb5.6
KLR Kul'dur 73.75 39 *e*P **P** **14 09 29.8 -3.7**
KLR *e* 14 09 30.0
KLR MLR MLR
comp=N,3μm,12.5s
KLR MLR MLR
comp=Z,13μm,12.5s,MS6.4
CN2 Changchun 73.79 47 *e*P **P** **14 09 33.5 -0.4**
CN2 *e*XP sP 14 09 41.0 +1.8
CN2 *e*S S 14 18 57.3 -7.6
CN2 AMB AMB
comp=Z,60nm,1.0s,mb5.5
CN2 AMB AMB
comp=Z,310nm,3.0s
CN2 LR LR
comp=N,7μm,17.0s,MS6.2
CN2 LR LR
comp=E,7μm,17.0s,MS6.2
CN2 LR LR
comp=Z,6μm,18.0s,MS6.0
MA2 Magadan 74.11 24 *e*P **P** **14 09 35.3 -0.1**
comp=Z,42nm,0.8s,mb5.4
MA2 LR LR
comp=Z,2μm,21.0s,MS5.5
MA2 Magadan 74.11 24*d i*P **P** **14 09 36.1 +0.7**
MA2 *e*S S 14 19 09.0 +1.1
MA2 pmax pmax
comp=Z,50nm,0.8s,mb5.5
MA2 MLR MLR
comp=Z,1μm,15.1s,MS5.2
MA2 Magadan 74.11 24 *e*P **P** **14 09 35.3 -0.1**
comp=Z,42nm,0.8s,mb5.4
AAM Ann Arbor 74.12 312 *e*P **P** **14 09 37.2 +1.4**
comp=Z,16nm,0.7s,mb5.1
AAM LR LR
comp=Z,3μm,22.0s,MS5.5
AAM Ann Arbor 74.12 312 *e*P **P** **14 09 37.2 +1.4**
AAM pmax pmax
comp=Z,16nm,0.7s,mb5.1
AAM MLR MLR
comp=Z,3μm,22.0s,MS5.5
AAM Ann Arbor 74.12 312 *e*P **P** **14 09 37.2 +1.4**
comp=Z,16nm,0.7s,mb5.1
DL2 Dalian 74.48 53 P **P** **14 09 38.3 +0.3**
DL2 S S 14 19 11.0 -1.7
DL2 PS 14 19 48.5
DL2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
DL2 AMB AMB
comp=Z,220nm,5.8s
DL2 LR LR
comp=N,3μm,18.7s,MS5.7
DL2 LR LR
comp=E,3μm,18.0s,MS5.7
DL2 LR LR
comp=Z,2μm,17.0s,MS5.5
WHN Wuhan 74.57 63 ⇓P **P** **14 09 40.8 +2.2**
WHN S S 14 19 06.5 -7.5
WHN LR LR
comp=Z,5μm,18.8s,MS5.8
CNNC Cliffs of the 74.75 303 PFAKE 14 09 50.0 +10
CNNC LR LR
comp=Z,3μm,22.0s,MS5.5
COWI Conover 74.82 317 *e*P **P** **14 09 41.4 +1.5**
comp=Z,28nm,0.8s,mb5.2
COWI LR LR
comp=Z,3μm,22.0s,MS5.6
COWI Conover 74.82 317 *e*P **P** **14 09 41.3 +1.5**
comp=Z,28nm,0.8s,mb5.2
EYMN Ely 74.85 320 *e*P **P** **14 09 40.8 +0.9**
comp=Z,16nm,1.0s,mb4.9
EYMN LR LR
comp=Z,845nm,24.2s,MS5.0
EYMN Ely 74.85 320 *e*P **P** **14 09 40.8 +0.8**
comp=Z,16nm,1.0s,mb4.9
FFC Flin Flon 74.92 330 P **P** **14 09 41.0 +0.8**
comp=Z,76nm,1.4s,mb5.4,SNR=6.0
FFC Flin Flon 74.92 330 *e*P **P** **14 09 41.3 +1.1**
comp=Z,33nm,1.3s,mb5.1
FFC LR LR
comp=Z,1μm,34.8s,MS5.0
FFC Flin Flon 74.92 330 *e*P **P** **14 09 41.3 +1.1**
comp=Z,33nm,1.3s,mb5.1
ACSO Alum Creek Sta 74.98 310 *e*P **P** **14 09 42.3 +1.5**
comp=Z,54nm,1.0s,mb5.4
ACSO LR LR
comp=Z,2μm,20.0s,MS5.5
ACSO Alum Creek Sta 74.98 310 *e*P **P** **14 09 42.3 +1.4**
comp=Z,54nm,1.0s,mb5.4

BLA Blacksburg 75.22 306 *e*P P **14 09 43.0 +0.8**
comp=Z,11nm,0.7s,mb4.9
BLA LR LR
comp=Z,3μm,19.0s,MS5.6
BLA Blacksburg 75.22 306 *e*P P **14 09 43.1 +0.8**
BLA pmax pmax
comp=Z,11nm,0.7s,mb4.9
BLA MLR MLR
comp=Z,3μm,19.0s,MS5.6
BLA Blacksburg 75.22 306 *e*P P **14 09 43.0 +0.7**
comp=Z,11nm,0.7s,mb4.9
ELN Prospectdale 75.42 306 *e*P P **14 09 44.1 +0.7**
ELN Prospectdale 75.42 306 *e*P P **14 09 44.1 +0.6**
ULM Lac du Bonnet 75.44 323 P P **14 09 43.4 0.0**
baz=44,slow=7.2
ULM Lac du Bonnet 75.44 323 P P **14 09 43.3 0.0**
MDJ Mudanjiang 75.60 44 P P **14 09 43.3 -1.1**
MDJ AP pP 14 09 46.5 -1.7
MDJ XP sP 14 09 47.8 -1.8
MDJ PCP PcP 14 09 56.5 -0.7
MDJ PP PP 14 12 31.5 -1.8
MDJ S S 14 19 23.3 -1.8
MDJ XS sS 14 19 29.0 -2.4
MDJ AMB AMB
comp=Z,22nm,1.1s,mb5.0
MDJ AMB AMB
comp=Z,236nm,6.2s
MDJ LR LR
comp=N,7μm,16.2s,MS6.3
MDJ LR LR
comp=E,11μm,16.2s,MS6.3
MDJ LR LR
comp=Z,7μm,14.8s,MS6.1
IMA2 Indian Mountai 75.73 358 *e*P P **14 09 46.1 +1.4**
HABR Khabarovsk 75.89 39⇑ *e*P P **14 09 45.8 -0.1**
HABR *e* 14 09 56.9
HABR *e* 14 12 34.8
HABR *e*S S 14 19 29.7 +1.6
HABR *e* 14 19 57.2
HABR *e*SS SS 14 24 21.6 +2.3
HABR pmax pmax
comp=Z,82nm,1.7s,mb5.4
HABR MLR MLR
comp=Z,2μm,17.5s,MS5.5
EGAK Eagle 76.11 352 *e*P P **14 09 47.0 0.0**
comp=Z,14nm,0.9s,mb4.9
EGAK LR LR
comp=Z,1μm,20.0s,MS5.2
EGAK Eagle 76.11 352 *e*P P **14 09 47.0 +0.1**
comp=Z,13nm,0.9s,mb4.9
TNA Tin City 76.14 4 *e*P P **14 09 47.1 0.0**
comp=Z,31nm,0.8s,mb5.3
TNA LR LR
comp=Z,332nm,15.6s,MS4.8
TNA Tin City 76.14 4 *e*P P **14 09 47.1 0.0**
comp=Z,31nm,0.8s,mb5.3
SJG San Juan 76.33 282 *e*P P **14 09 49.0 +0.1**
comp=Z,20nm,0.7s,mb5.2
SJG LR LR
comp=Z,2μm,22.0s,MS5.4
SJG San Juan 76.33 282 *e*P P **14 09 49.0 +0.1**
SJG pmax pmax
comp=Z,20nm,0.7s
SJG MLR MLR
comp=Z,2μm,22.0s
SJG San Juan 76.33 282 LR LR 14 39 07.1
comp=Z,1μm,21.6s,MS5.1,baz=220,slow=32
SJG San Juan 76.33 282 *e*P P **14 09 49.0 +0.1**
comp=Z,20nm,0.7s,mb5.2
DAWY Dawson 76.60 351 *e*P P **14 09 50.3 +0.6**
DAWY Dawson 76.60 351 *e*P P **14 09 50.3 +0.6**
COLA College 76.62 355 *e*P P **14 09 51.6 +1.8**
comp=Z,9.6nm,0.8s,mb4.8
COLA LR LR
comp=Z,2μm,21.0s,MS5.4
COLA College 76.62 355 *e*P P **14 09 51.6 +1.8**
COLA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
COLA MLR MLR
comp=Z,2μm,21.0s,MS5.4
COLA College 76.62 355 *e*P P **14 09 51.6 +1.8**
comp=Z,9.6nm,0.8s,mb4.8
AGMN Agassiz Refuge 76.78 322 *e*P P **14 09 52.2 +1.2**
comp=Z,6.7nm,0.7s,mb4.7
AGMN LR LR
comp=Z,1μm,22.9s,MS5.1
AGMN Agassiz Refuge 76.78 322 *e*P P **14 09 52.2 +1.2**
comp=Z,6.7nm,0.7s,mb4.7
NJ2 Nanjing 76.78 60 *e*P P **14 09 52.8 +1.5**
NJ2 AP pP 14 09 57.8 +2.6
NJ2 XP sP 14 10 00.8 +4.2
NJ2 S S 14 19 38.0 -0.5
NJ2 XS sS 14 19 46.5 +1.7
NJ2 AMB AMB
comp=Z,20nm,1.0s,mb5.0
NJ2 AMB AMB
comp=Z,470nm,5.3s
NJ2 LR LR
comp=N,5μm,22.2s,MS5.9
NJ2 LR LR
comp=E,3μm,19.6s,MS5.9
NJ2 LR LR
comp=Z,3μm,19.6s,MS5.6
LHS Liberty Hill 77.13 304 *e*P P **14 09 54.4 +1.2**
LHS Liberty Hill 77.13 304 *e*P P **14 09 54.4 +1.2**
JFWS Jewell Farm 77.49 315 *e*P P **14 09 55.0 -0.1**
comp=Z,18nm,0.9s,mb5.0
JFWS LR LR
comp=Z,2μm,21.0s,MS5.4
JFWS Jewell Farm 77.49 315 *e*P P **14 09 55.0 -0.1**
JFWS pmax pmax
comp=Z,18nm,0.9s,mb5.0
JFWS MLR MLR
comp=Z,2μm,21.0s,MS5.4
JFWS Jewell Farm 77.49 315 *e*P P **14 09 55.0 -0.1**
comp=Z,18nm,0.9s,mb5.0
JSC Jenkinsville 77.54 304 *e*P P **14 09 57.1 +1.5**
JSC Jenkinsville 77.54 304 *e*P P **14 09 57.1 +1.6**
NHSC New Hope 77.55 302 *e*P P **14 09 58.3 +2.7**
comp=Z,74nm,1.3s,mb5.5
NHSC LR LR
comp=Z,2μm,19.0s,MS5.4
NHSC New Hope 77.55 302 *e*P P **14 09 58.3 +2.7**
comp=Z,74nm,1.3s,mb5.5
TZTN Tazewell 77.61 307 *e*P P **14 09 57.1 +1.3**
comp=Z,33nm,1.1s,mb5.2
TZTN LR LR
comp=Z,3μm,19.0s,MS5.6
TZTN Tazewell 77.61 307 *e*P P **14 09 57.1 +1.2**
comp=Z,33nm,1.1s,mb5.2
GAMB Gambell 77.69 5 *e*P P **14 09 55.7 -0.1**
comp=Z,41nm,1.3s,mb5.2
GAMB Gambell 77.69 5 *e*P P **14 09 55.7 -0.1**
comp=Z,41nm,1.3s,mb5.2
COW Cow Castle Cre 77.73 303 *e*P P **14 09 59.2 +2.6**
COW Cow Castle Cre 77.73 303 *e*P P **14 09 59.2 +2.6**
BLO Bloomington 77.77 310 *e*P P **14 09 57.9 +1.2**
BLO pmax pmax
comp=Z,58nm,0.9s,mb5.5
BLO Bloomington 77.77 310 *e*P P **14 09 57.9 +1.2**
comp=Z,58nm,0.9s,mb5.5
VLA Vladivostok 77.84 44 *i* P P **14 09 57.5 +0.5**
QIZ Qiongzhong 78.02 75 P P **14 09 57.5 -0.9**
QIZ PP PP 14 12 51.0 -3.4
QIZ S S 14 19 49.0 -3.2
QIZ SS SS 14 24 49.8 -3.3
QIZ AMB AMB
comp=Z,34nm,1.0s,mb5.2
QIZ AMB AMB
comp=Z,340nm,7.7s
QIZ LR LR
comp=E,1μm,17.2s
QIZ LR LR
comp=Z,1μm,18.3s,MS5.3
QIZ Qiongzhong 78.02 75 *e*P P **14 09 57.3 -1.1**
comp=Z,41nm,1.0s,mb5.3
QIZ LR LR
comp=Z,1μm,19.0s,MS5.3
QIZ Qiongzhong 78.02 75 *e*P P **14 09 57.3 -1.1**
comp=Z,41nm,1.0s,mb5.3
GZH Guangzhou 78.23 70 P P **14 09 58.3 -1.2**
GZH S S 14 19 50.8 -3.6
GZH LR LR
comp=N,1μm,30.2s,MS5.2
GZH LR LR
comp=E,1μm,31.5s,MS5.2
GZH LR LR
comp=Z,2μm,19.7s
WCI Wyandotte Cave 78.24 310 *e*P P **14 09 59.9 +0.5**
comp=Z,24nm,0.8s,mb5.2
WCI LR LR
comp=Z,1μm,20.0s,MS5.3
WCI Wyandotte Cave 78.24 310 *e*P P **14 09 59.9 +0.6**
WCI pmax pmax
comp=Z,24nm,0.8s,mb5.2
WCI MLR MLR
comp=Z,1μm,20.0s,MS5.3
WCI Wyandotte Cave 78.24 310 *e*P P **14 09 59.9 +0.6**
comp=Z,24nm,0.8s,mb5.2
INCN Inchon 78.45 51 PFAKE 14 10 10.0 +9.5
INCN LR LR
comp=Z,3μm,20.0s,MS5.6
HDIL Hopedale 78.50 313 *e*P P **14 10 01.9 +1.2**
comp=Z,35nm,0.9s,mb5.3
HDIL LR LR
comp=Z,3μm,19.0s,MS5.6
HDIL Hopedale 78.50 313 *e*P P **14 10 01.9 +1.1**
comp=Z,35nm,0.9s,mb5.3
CPCT Cooper Cave 78.91 306 *e*P P **14 10 04.2 +1.1**
CPCT Cooper Cave 78.91 306 *e*P P **14 10 04.2 +1.1**
SSE Sheshan 78.94 59⇑ P P **14 10 03.0 -0.3**
SSE AP pP 14 10 06.3 -0.9
SSE S S 14 19 56.5 -5.3
SSE SCS ScS 14 20 22.3 -3.0
SSE AMB AMB
comp=Z,35nm,0.7s,mb5.4
SSE AMB AMB
comp=Z,298nm,5.8s
SSE LR LR
comp=N,2μm,23.7s,MS5.6
SSE LR LR
comp=E,3μm,23.7s,MS5.6
SSE LR LR
comp=Z,1μm,24.5s,MS5.2
TTA Tatalina 78.95 358 *e*P P **14 10 04.2 +1.4**
KULM Kulim 79.11 92 *e*P P **14 10 02.8 -1.7**
KULM Kulim 79.11 92 *e*P P **14 10 02.8 -1.7**
USIN University of 79.23 310 *e*P P **14 10 05.7 +0.8**
comp=Z,43nm,0.9s,mb5.4
USIN University of 79.23 310 *e*P P **14 10 05.7 +0.9**
comp=Z,43nm,0.9s,mb5.4
KSRS Korea Array 79.25 51 P P **14 10 03.2 -1.7**
comp=Z,10nm,0.6s,mb5.0,baz=312,slow=4.7,SNR=32
PSI Prapat 79.28 95 P P **14 10 04.0 -1.5**
PSI Prapat 79.28 95 P P **14 10 04.0 -1.5**
comp=Z,25nm,0.9s,mb5.2,baz=255,slow=6.9,SNR=10
GOGA Godfrey 79.52 304 *e*P P **14 10 07.3 +0.9**
comp=Z,24nm,1.0s,mb5.1
GOGA LR LR
comp=Z,3μm,22.0s,MS5.6
GOGA Godfrey 79.52 304 *e*P P **14 10 07.3 +0.8**
GOGA pmax pmax
comp=Z,24nm,1.0s,mb5.1
GOGA MLR MLR
comp=Z,3μm,22.0s,MS5.6
GOGA Godfrey 79.52 304 *e*P P **14 10 07.3 +0.8**
comp=Z,24nm,1.0s,mb5.1
SML Sawmill 79.69 355 *e*P P **14 10 07.2 +0.3**
SML Sawmill 79.69 355 *e*P P **14 10 07.2 +0.3**
SDDR Presa de Saban 79.72 286 *e*P P **14 10 08.6 +0.9**
comp=Z,99nm,1.5s,mb5.5
SDDR LR LR
comp=Z,3μm,20.0s,MS5.6
SDDR Presa de Saban 79.72 286 *e*P P **14 10 08.6 +0.8**
comp=Z,99nm,1.5s,mb5.5
PCRV Puerto La Cruz 79.88 275 LR LR 14 40 14.2
comp=Z,518nm,21.6s,MS4.8,baz=58,slow=32
SWET Sewanee 79.94 307 *e*P P **14 10 08.7 0.0**
SWET Sewanee 79.94 307 *e*P P **14 10 08.7 0.0**
PMR Palmer 79.97 355 *e*P P **14 10 09.8 +1.4**
PMR pmax pmax
comp=Z,32nm,1.0s,mb5.2
PMR Palmer 79.97 355 *e*P P **14 10 09.8 +1.4**
comp=Z,32nm,1.0s,mb5.2
SIUC Southern Illin 80.33 311 *e*P P **14 10 11.6 +0.8**
comp=Z,55nm,1.0s,mb5.4
SIUC Southern Illin 80.33 311 *e*P P **14 10 11.6 +0.8**
comp=Z,55nm,1.0s,mb5.4
EDM Edmonton 80.33 334 *e*P P **14 10 10.6 +0.2**
EDM Edmonton 80.33 334 *e*P P **14 10 10.6 +0.1**
ECSD EROS,Sioux Fal 80.33 319 *e*P P **14 10 11.5 +0.8**
comp=Z,27nm,0.9s,mb5.2
ECSD LR LR
comp=Z,2μm,36.4s,MS5.2
ECSD EROS,Sioux Fal 80.33 319 *e*P P **14 10 11.5 +0.8**
comp=Z,27nm,0.9s,mb5.2
DLBC Dease Lake 80.38 345 *e*P P **14 10 12.8 +2.2**
DLBC Dease Lake 80.38 345 *e*P P **14 10 12.8 +2.2**
SKAG Skagway 80.41 348 *e*P P **14 10 10.6 -0.2**
comp=Z,29nm,1.2s,mb5.1
SKAG Skagway 80.41 348 *e*P P **14 10 10.6 -0.2**
comp=Z,29nm,1.2s,mb5.1
DGMT Dagmar 80.49 326 *e*P P **14 10 14.8 +3.4**
comp=Z,26nm,1.1s,mb5.1
DGMT LR LR
comp=Z,599nm,21.0s,MS4.9
DGMT Dagmar 80.49 326 *e*P P **14 10 14.9 +3.5**
comp=Z,26nm,1.1s,mb5.1
WVT Waverly 80.53 309 *e*P P **14 10 12.2 +0.3**
comp=Z,22nm,0.9s,mb5.1
WVT LR LR
comp=Z,3μm,21.0s,MS5.6
WVT Waverly 80.53 309 *e*P P **14 10 12.2 +0.3**
WVT pmax pmax
comp=Z,22nm,0.9s,mb5.1
WVT MLR MLR
comp=Z,3μm,21.0s,MS5.6
WVT Waverly 80.53 309 *e*P P **14 10 12.2 +0.3**
comp=Z,22nm,0.9s,mb5.1
YSS Yuzh-Sakhalins 80.63 36 *e*P P **14 10 12.2 0.0**
comp=Z,151nm,0.9s,mb5.9
YSS LR LR
comp=Z,187nm,17.2s,MS4.5
YSS Yuzh-Sakhalins 80.63 36α *i*P P **14 10 12.0 -0.2**
YSS *e**SP sP 14 10 17.0 -0.5
YSS *e*S S 14 20 17.0 -2.1
YSS pmax pmax
comp=Z,160nm,0.9s,mb6.0
YSS pmax pmax
comp=Z,600nm,6.0s
YSS smax
comp=N,1μm,6.0s
YSS MLR MLR
comp=Z,5μm,18.0s,MS5.9
YSS MLR MLR
comp=N,5μm,17.0s,MS6.0
YSS MLR MLR
comp=E,4μm,20.0s,MS6.0
YSS Yuzh-Sakhalins 80.63 36 *e*P P **14 10 12.2 0.0**
comp=E,151nm,0.9s,mb5.9
SVW2 Sparrevohn 80.77 358 *e*P P **14 10 13.5 +0.8**
FVM French Village 80.86 312 *e*P P **14 10 14.3 +0.6**
comp=E,45nm,1.0s,mb5.3
FVM French Village 80.86 312 *e*P P **14 10 14.3 +0.7**
FVM pmax pmax
comp=Z,45nm,1.0s,mb5.3
FVM French Village 80.86 312 *e*P P **14 10 14.3 +0.7**
comp=Z,45nm,1.0s,mb5.3
QZH Quanzhou 80.92 65 P P **14 10 14.8 +0.6**
QZH S S 14 20 19.5 -3.4
QZH AMB AMB
comp=Z,710nm,5.8s
QZH LR LR
comp=N,6μm,19.9s
QZH LR LR
comp=E,3μm,14.5s
QZH LR LR
comp=Z,4μm,20.8s,MS5.7
PLAL Pickwick Lake 81.43 308 *e*P P **14 10 17.0 +0.3**
comp=Z,44nm,1.0s,mb5.3
PLAL LR LR
comp=Z,516nm,19.2s,MS4.9
PLAL Pickwick Lake 81.43 308 *e*P P **14 10 17.0 +0.3**
comp=Z,44nm,1.0s,mb5.3
DWPF Disney 81.49 299 PFAKE 14 10 30.0 +13
DWPF LR LR
comp=Z,2μm,20.0s,MS5.5
PET Petropavlovsk 82.00 24 PFAKE 14 10 30.0 +11
PET LR LR
comp=Z,2μm,20.0s,MS5.6
PET Petropavlovsk 82.00 24 *e*P P **14 10 19.2 -0.2**
PET *e* 14 13 30.8
PET *e*S S 14 20 28.6 -4.5
PET *e*SS SS 14 25 52.3 +1.8
PET pmax pmax
comp=Z,100nm,13.9s
PET MLR MLR
comp=Z,3μm,18.0s,MS5.7
LRAL Lakeview Retre 82.03 306 *e*P P **14 10 19.9 0.0**
comp=Z,56nm,0.9s,mb5.5
LRAL LR LR
comp=Z,3μm,20.0s,MS5.6
LRAL Lakeview Retre 82.03 306 *e*P P **14 10 19.9 0.0**
comp=Z,56nm,0.9s,mb5.5
ASAJ Asahikawa 82.66 38 LR LR 14 49 21.6
comp=Z,3μm,18.7s,MS5.7,baz=338,slow=37
SIT Sitka 82.69 347 PFAKE 14 10 30.0 +7.1
SIT LR LR
comp=Z,4μm,21.0s,MS5.7
WRAK Wrangell Islan 82.73 345 PFAKE 14 10 30.0 +6.9
WRAK LR LR
comp=Z,2μm,19.0s,MS5.4
LAO LASA Array 82.73 326 *e*P P **14 10 25.4 +2.0**
comp=Z,65nm,1.3s,mb5.5
LAO LR LR
comp=Z,519nm,21.0s,MS4.9
LAO LASA Array 82.73 326 *e*P P **14 10 25.4 +2.1**
comp=Z,65nm,1.3s,mb5.5
TATO Taipei 82.96 64 PFAKE 14 10 30.0 +5.1
TATO LR LR
comp=Z,2μm,22.0s,MS5.4
YHNB Yeheng 83.07 64 *e*P P **14 10 24.7 -0.8**
YHNB Yeheng 83.07 64 *e*P P **14 10 24.7 -0.8**
EGMT Eagleton 83.17 329 *e*P P **14 10 26.4 +0.9**
comp=Z,44nm,1.0s,mb5.5
EGMT LR LR
comp=Z,355nm,15.8s,MS4.8
EGMT Eagleton 83.17 329 *e*P P **14 10 26.5 +0.9**
comp=Z,44nm,1.0s,mb5.5
BRAL Brewton 83.39 304 PFAKE 14 10 40.0 +13
BRAL LR LR
comp=Z,2μm,22.0s,MS5.5
NACB Ninganchiao 83.54 64 *e*P P **14 10 26.6 -1.3**
NACB Ninganchiao 83.54 64 *e*P P **14 10 26.6 -1.3**
KSU1 Kansas State U 83.61 316 *e*P P **14 10 29.5 +1.5**
comp=Z,60nm,0.9s,mb5.7
KSU1 LR LR
comp=Z,2μm,19.0s,MS5.5
KSU1 Kansas State U 83.61 316 *e*P P **14 10 29.5 +1.5**
comp=Z,60nm,0.9s,mb5.7
JNU Nakatsue 83.92 52 P P **14 10 28.4 -1.4**
comp=Z,26nm,1.1s,mb5.3,baz=50,slow=9.6,SNR=5.2
JNU LR LR 14 48 59.2
comp=Z,3μm,21.9s,MS5.7,baz=125,slow=36
WALA Waterton Lakes 83.95 332 *e*P P **14 10 30.1 +0.6**
comp=Z,22nm,1.0s,mb5.2
WALA Waterton Lakes 83.95 332 *e*P P **14 10 30.1 +0.5**
comp=Z,22nm,1.0s,mb5.2
KDAK Kodiak Island 83.97 356 PFAKE 14 10 40.0 +11
KDAK LR LR
comp=Z,722nm,20.0s,MS5.0
UALR University of 84.17 310 *e*P P **14 10 32.1 +1.1**
comp=Z,29nm,0.9s,mb5.4
UALR University of 84.17 310 *e*P P **14 10 32.1 +1.2**
comp=Z,29nm,0.9s,mb5.4
ERM Erimo 84.50 39 *e*P P **14 10 33.0 +0.5**
comp=Z,71nm,0.8s,mb5.8
ERM LR LR
comp=Z,194nm,17.7s,MS4.5
ERM Erimo 84.50 39 *e*P P **14 10 33.0 +0.5**
ERM pmax pmax
comp=Z,71nm,0.8s,mb5.8
ERM MLR MLR
comp=Z,194nm,17.7s,MS4.5
ERM Erimo 84.50 39 *e*P P **14 10 33.0 +0.5**
comp=Z,71nm,0.8s,mb5.8
GCMT Greycliff 84.92 327 *e*P P **14 10 36.2 +1.7**
GCMT Greycliff 84.92 327 *e*P P **14 10 36.2 +1.7**
MIAR Mount Ida 85.06 311 *e*P P **14 10 36.6 +1.1**
comp=Z,48nm,0.9s,mb5.6
MIAR LR LR
comp=Z,3μm,22.0s,MS5.6
MIAR Mount Ida 85.06 311 *e*P P **14 10 36.6 +1.1**
MIAR pmax pmax
comp=Z,49nm,0.9s,mb5.6
MIAR MLR MLR
comp=Z,3μm,22.0s,MS5.6
RLMT Red Lodge 85.28 327 *e*P P **14 10 38.5 +2.2**
comp=Z,32nm,1.3s,mb5.3
RLMT LR LR
comp=Z,695nm,23.1s,MS5.0
RLMT Red Lodge 85.28 327 *e*P P **14 10 38.5 +2.2**
comp=Z,32nm,1.3s,mb5.3
SDV Santo Domingo 85.34 278 *e*P P **14 10 37.3 +0.1**
comp=Z,35nm,0.9s,mb5.5
SDV LR LR
comp=Z,266nm,19.0s,MS4.7
SDV Santo Domingo 85.34 278 *e*P P **14 10 37.3 +0.1**
comp=Z,35nm,0.9s,mb5.5
CHMT Chamberlain Mo 85.47 330 *e*P P **14 10 36.8 -0.4**
CHMT Chamberlain Mo 85.47 330 *e*P P **14 10 36.8 -0.4**
CBKS Cedar Bluff 85.50 317 *e*P P **14 10 39.0 +1.4**
comp=Z,66nm,1.1s,mb5.8
CBKS LR LR
comp=Z,489nm,29.0s,MS4.7
CBKS Cedar Bluff 85.50 317 *e*P P **14 10 39.0 +1.4**
comp=Z,66nm,1.1s,mb5.8
NEW Newport 85.79 333 *e*P P **14 10 40.1 +1.3**
comp=Z,21nm,1.1s,mb5.3
NEW LR LR
comp=Z,598nm,19.7s,MS5.0
NEW Newport 85.79 333 *e*P P **14 10 40.1 +1.3**
NEW pmax pmax
comp=Z,21nm,1.1s
NEW MLR MLR
comp=Z,598nm,19.7s
NEW Newport 85.79 333 *e*P P **14 10 40.1 +1.3**
comp=Z,21nm,1.1s,mb5.3
MSO Missoula 85.81 330 *e*P P **14 10 39.8 +0.9**
comp=Z,13nm,1.2s,mb5.0
MSO LR LR
comp=Z,447nm,28.8s,MS4.7
MSO Missoula 85.81 330 *e*P P **14 10 39.8 +0.9**
comp=Z,13nm,1.2s,mb5.0
BOZ Bozeman (W) 85.85 328 PFAKE 14 10 50.0 +11
BOZ LR LR
comp=Z,3μm,21.0s,MS5.7
MAJO Matsushiro 85.89 46 *e*P P **14 10 38.4 -1.1**
comp=Z,31nm,0.9s,mb5.5
MAJO LR LR
comp=Z,517nm,23.5s,MS4.8
MAJO Matsushiro 85.89 46 *e*P P **14 10 38.4 -1.1**
MAJO pmax pmax
comp=Z,31nm,0.9s,mb5.5
MAJO MLR MLR
comp=Z,517nm,23.5s,MS4.8
MAT Matsushiro 85.89 46 P P **14 10 38.0 -1.5**
MAT S S 14 21 15.0 +2.2
MJAR Matsushiro Arr 85.89 46 P P **14 10 38.3 -1.2**
comp=Z,20nm,0.8s,mb5.4,baz=317,slow=4.6,SNR=44
KSI Kapahiang 86.15 98 *e*P P **14 10 40.0 -1.1**
LKWY Lake 86.21 327 *e*P P **14 10 44.6 +3.6**
comp=Z,15nm,1.0s,mb5.2
LKWY LR LR
comp=Z,3μm,23.8s,MS5.6
LKWY Lake 86.21 327 *e*P P **14 10 44.6 +3.6**
LKWY pmax pmax
comp=Z,15nm,1.0s,mb5.2
LKWY MLR MLR
comp=Z,3μm,23.8s,MS5.6
YMR Madison River 86.37 328 *e*P P **14 10 44.4 +2.7**
comp=Z,34nm,1.1s,mb5.5
YMR LR LR
comp=Z,886nm,21.1s,MS5.1
YMR Madison River 86.37 328 *e*P P **14 10 44.4 +2.7**
comp=Z,34nm,1.1s,mb5.5
SMY Shemya 86.39 16 PFAKE 14 10 50.0 +8.3
SMY LR LR
comp=Z,2μm,22.0s,MS5.5
JOW Kunigami 86.43 58 P P **14 10 41.9 -0.5**
comp=Z,27nm,0.8s,mb5.5,baz=293,slow=12,SNR=10
JOW Kunigami 86.43 58 P P **14 10 41.8 -0.6**
QLMT Earthquake Lak 86.43 328 *e*P P **14 10 44.6 +2.6**
QLMT Earthquake Lak 86.43 328 *e*P P **14 10 44.6 +2.5**
DLMT Dillon 86.48 329 *e*P P **14 10 44.3 +2.0**
comp=Z,26nm,1.1s,mb5.4
DLMT Dillon 86.48 329 *e*P P **14 10 44.3 +2.0**
comp=Z,26nm,1.1s,mb5.4
YFT Old Faithful 86.49 327 *e*P P **14 10 46.4 +4.0**

YFT Old Faithful 86.49 327 eP P 14 10 46.4 +4.1
FLWY Flagg Ranch 86.73 327 eP P 14 10 45.7 +2.2
comp=Z,148nm,1.9s,mb5.9
FLWY Flagg Ranch 86.73 327 eP P 14 10 45.7 +2.2
comp=Z,148nm,1.9s,mb5.9
IMW Indian Meadow 86.98 327 eP P 14 10 47.3 +2.5
comp=Z,18nm,1.1s,mb5.2
MOOW Moose Ponds 87.02 327 eP P 14 10 46.6 +1.7
comp=Z,17nm,0.9s,mb4.9
MOOW Moose Ponds 87.02 327 eP P 14 10 46.6 +1.7
comp=Z,7.1nm,0.9s,mb4.9
MCMT McKenzie Canyo 87.02 329 eP P 14 10 46.7 +1.8
MCMT McKenzie Canyo 87.02 329 eP P 14 10 46.7 +1.8
LOHW Long Hollow 87.06 327 eP P 14 10 47.0 +1.8
comp=Z,14nm,1.3s,mb5.0
LOHW Long Hollow 87.06 327 eP P 14 10 47.0 +1.8
comp=Z,14nm,1.3s,mb5.0
OD2 Odessa Site #2 87.09 334 P P 14 10 47.0 +1.8
OD2 Odessa Site #2 87.09 334 P P 14 10 47.0 +1.8
SNOW Snow King Moun 87.25 327 eP P 14 10 47.5 +1.4
comp=Z,11nm,1.1s,mb5.0
WTV Waterville 87.25 334 P P 14 10 47.5 +1.5
WTV Waterville 87.25 334 P P 14 10 47.5 +1.5
BW06 Boulder Array 87.28 326 eP P 14 10 46.6 +0.3
BW06 LR LR
comp=Z,573nm,21.1s,MS5.0
BW06 Boulder Array 87.28 326 eP P 14 10 46.6 +0.3
comp=Z,7.7nm,1.0s,mb4.9
PDAR Pinedale Array 87.28 326 P P 14 10 46.8 +0.5
comp=Z,2.1nm,0.7s,mb4.5,baz=50,slow=5.6,SNR=11
PDAR LR LR 14 52 04.1
comp=Z,4μm,18.9s,MS5.8,baz=44,slow=37
TPAW Teton Pass 87.31 327 eP P 14 10 47.6 +1.3
comp=Z,10nm,0.8s,mb5.1
TPAW Teton Pass 87.31 327 eP P 14 10 47.7 +1.3
comp=Z,10nm,0.8s,mb5.1
DCID1 Drake Creek 87.33 327 eP P 14 10 47.9 +1.5
DCID1 Drake Creek 87.33 327 eP P 14 10 47.9 +1.4
REDW Red Top Meadow 87.37 327 eP P 14 10 48.2 +1.6
comp=Z,13nm,1.1s,mb5.1
REDW Red Top Meadow 87.37 327 eP P 14 10 48.2 +1.5
comp=Z,13nm,1.1s,mb5.1
NATX Nacogdoches 87.65 309 eP P 14 10 51.9 +3.7
comp=Z,61nm,1.7s,mb5.5
NATX LR LR
comp=Z,455nm,22.0s,MS4.8
NATX Nacogdoches 87.65 309 eP P 14 10 51.9 +3.6
comp=Z,61nm,1.7s,mb5.5
ISCO Idaho Springs 87.77 321 eP P 14 10 50.2 +1.6
comp=Z,7.1nm,0.8s,mb5.0
ISCO LR LR
comp=Z,3μm,26.9s,MS5.5
ISCO Idaho Springs 87.77 321 eP P 14 10 50.2 +1.5
ISCO pmax pmax
comp=Z,7.0nm,0.8s,mb4.9
ISCO MLR MLR
comp=Z,3μm,26.9s,MS5.5
ISCO Idaho Springs 87.77 321 eP P 14 10 50.2 +1.5
comp=Z,7.1nm,0.8s,mb5.0
WMOK Wichita Mounta 87.95 314 eP P 14 10 51.1 +1.5
comp=Z,29nm,1.0s,mb5.5
WMOK LR LR
comp=Z,492nm,21.1s,MS4.9
WMOK Wichita Mounta 87.95 314 eP P 14 10 51.1 +1.5
WMOK pmax pmax
comp=Z,29nm,1.0s,mb5.5
WMOK MLR MLR
comp=Z,492nm,21.1s,MS4.9
WMOK Wichita Mounta 87.95 314 eP P 14 10 51.1 +1.5
comp=Z,29nm,1.0s,mb5.5
AHID Auburn Hatcher 87.96 326 PFAKE 14 11 00.0 +10
AHID LR LR
comp=Z,3μm,19.0s,MS5.7
GBL Gable Mountain 88.03 334 P P 14 10 51.7 +1.9
GBL Gable Mountain 88.03 334 P P 14 10 51.7 +1.9
EBG Ellensburg 88.15 334 P P 14 10 52.0 +1.7
EBG Ellensburg 88.15 334 P P 14 10 52.0 +1.7
HAWA Hanford 88.24 334 eP P 14 10 52.1 +1.4
comp=Z,12nm,0.8s,mb5.2
HAWA LR LR
comp=Z,2μm,19.0s,MS5.6
HAWA Hanford 88.24 334 eP P 14 10 52.1 +1.4
comp=Z,12nm,0.8s,mb5.2
HLID Hailey 88.70 329 eP P 14 10 54.0 +1.0
comp=Z,4.7nm,1.1s,mb4.7
HLID LR LR
comp=Z,1μm,16.9s,MS5.3
HLID Hailey 88.70 329 eP P 14 10 54.0 +1.0
comp=Z,4.7nm,1.1s,mb4.7
BMO Blue Mountains 88.75 331 eP P 14 10 53.2 +0.1
comp=Z,7.2nm,0.8s,mb5.0
BMO Blue Mountains 88.75 331 eP P 14 10 53.2 0.0
comp=Z,7.2nm,0.8s,mb5.0
ADK Adak 88.84 10 PFAKE 14 11 00.0 +6.5
ADK LR LR
comp=Z,1μm,24.4s,MS5.3
SMCO Snowmass 88.91 322 eP P 14 10 55.5 +1.4
comp=Z,6.8nm,0.9s,mb5.0
SMCO Snowmass 88.91 322 eP P 14 10 55.5 +1.4
comp=Z,6.8nm,0.9s,mb5.0
KSM Kuching 89.03 89 eP P 14 10 54.4 -0.6
KSM Kuching 89.03 89 eP P 14 10 54.4 -0.6
HWUT Hardware Ranch 89.10 326 eP P 14 10 56.2 +1.2
comp=Z,26nm,1.0s,mb5.5
HWUT LR LR
comp=Z,547nm,22.0s,MS4.9
HWUT Hardware Ranch 89.10 326 eP P 14 10 56.2 +1.3
comp=Z,26nm,1.0s,mb5.5
SDCO Great Sand Dun 89.30 320 eP P 14 10 57.1 +1.2
comp=Z,17nm,1.1s,mb5.3
SDCO LR LR
comp=Z,5μm,35.3s,MS5.7
SDCO Great Sand Dun 89.30 320 eP P 14 10 57.1 +1.2
comp=Z,17nm,1.1s,mb5.3
HKT Hockley 89.64 309 eP P 14 10 59.0 +1.4
comp=Z,20nm,1.1s,mb5.4
HKT LR LR
comp=Z,2μm,30.7s,MS5.4
HKT Hockley 89.64 309 eP P 14 10 59.0 +1.3
comp=Z,20nm,1.1s,mb5.4
JLU Jordanelle 89.87 325 eP P 14 10 59.5 +1.0
JLU Jordanelle 89.87 325 eP P 14 10 59.5 +1.0
CTU Camp Tracy 89.93 326 eP P 14 10 59.8 +1.0
comp=Z,30nm,1.3s,mb5.5
CTU Camp Tracy 89.93 326 eP P 14 10 59.8 +1.0
comp=Z,30nm,1.3s,mb5.5
BGU Big Grassy Mou 90.30 327 eP P 14 11 01.8 +1.3
BGU Big Grassy Mou 90.30 327 eP P 14 11 01.8 +1.3
MPU Maple Canyon 90.42 325 eP P 14 11 01.3 +0.2
comp=Z,34nm,1.6s,mb5.4
MPU LR LR
comp=Z,2μm,24.9s,MS5.5
MPU Maple Canyon 90.42 325 eP P 14 11 01.3 +0.2
comp=Z,34nm,1.6s,mb5.4
PV01 Paradox Valley 90.50 322 eP P 14 11 02.3 +0.7
PV01 Paradox Valley 90.50 322 eP P 14 11 02.3 +0.8
PV10 Paradox Valley 90.54 323 eP P 14 11 03.6 +1.9
PV10 Paradox Valley 90.54 323 eP P 14 11 03.6 +1.9
SRU San Rafael 90.65 324 eP P 14 11 03.0 +0.8
comp=Z,11nm,0.8s,mb5.2
SRU San Rafael 90.65 324 eP P 14 11 03.0 +0.8
SRU pmax pmax
comp=Z,11nm,0.8s,mb5.2
SRU San Rafael 90.65 324 eP P 14 11 03.0 +0.8
comp=Z,11nm,0.8s,mb5.2
NLU North Lily Min 90.67 325 eP P 14 11 02.6 +0.4
NLU North Lily Min 90.67 325 eP P 14 11 02.6 +0.3
ROSC El Rosal 90.70 277 P P 14 11 03.1 +0.3
comp=Z,3.6nm,0.4s,mb5.0,baz=86,slow=23,SNR=2.6
ROSC LR LR 14 48 25.5
comp=Z,560nm,21.8s,MS5.0,baz=17,slow=33
DUG Dugway 90.80 326 eP P 14 11 04.0 +1.2
comp=Z,10nm,0.8s,mb5.2
DUG LR LR
comp=Z,2μm,23.6s,MS5.5
DUG Dugway 90.80 326 eP P 14 11 04.1 +1.2
DUG pmax pmax
comp=Z,10.0nm,0.8s,mb5.2
DUG MLR MLR
comp=Z,2μm,23.6s,MS5.5
DUG Dugway 90.80 326 eP P 14 11 04.1 +1.2
comp=Z,10nm,0.8s,mb5.2
TMUT Trail Mountain 90.81 325 eP P 14 11 03.0 0.0
COR Corvallis 91.10 335 PFAKE 14 11 10.0 +5.8
COR LR LR
comp=Z,1μm,40.5s,MS5.1

MVCO Mesa Verde 91.20 322 eP P 14 11 06.5 +1.7
comp=Z,8.2nm,0.9s,mb5.1
MVCO LR LR
comp=Z,3μm,38.2s,MS5.4
MVCO Mesa Verde 91.20 322 eP P 14 11 06.5 +1.7
comp=Z,8.2nm,0.9s,mb5.1
WVOR Wild Horse Val 91.31 331 eP P 14 11 06.2 +1.0
comp=Z,11nm,1.0s,mb5.2
WVOR LR LR
comp=Z,2μm,30.4s,MS5.5
WVOR Wild Horse Val 91.31 331 eP P 14 11 06.2 +1.0
comp=Z,11nm,1.0s,mb5.2
TEIG Tepich 91.33 297 PFAKE 14 11 20.0 +14
TEIG LR LR
comp=Z,620nm,20.0s,MS5.0
JCT Junction City 91.64 312 eP P 14 11 08.2 +1.2
comp=Z,14nm,0.9s,mb5.3
JCT LR LR
comp=Z,2μm,33.8s,MS5.4
MSU Marysvale 91.89 325 eP P 14 11 09.9 +1.9
MSU Marysvale 91.89 325 eP P 14 11 09.9 +1.9
ANMO Albuquerque 91.94 319 PFAKE 14 11 20.0 +12
ANMO LR LR
comp=Z,1μm,34.6s,MS5.1
MOD Modoc 92.40 332 PFAKE 14 11 20.0 +10
MOD LR LR
comp=Z,207nm,17.7s,MS4.6
LPM Los Pinos Moun 92.53 319 eP P 14 11 12.4 +1.4
LPM Los Pinos Moun 92.53 319 eP P 14 11 12.4 +1.4
BNM Barren Site 92.65 318 eP P 14 11 13.3 +1.7
BNM Barren Site 92.65 318 eP P 14 11 13.3 +1.7
LENM Lemitar 92.82 319 eP P 14 11 13.1 +0.7
LENM Lemitar 92.82 319 eP P 14 11 13.1 +0.7
YBH Yreka Blue Hor 93.42 333 PFAKE 14 11 20.0 +5.0
YBH LR LR
comp=Z,2μm,19.0s,MS5.5
MNTX Cornudas Mount 93.88 316 eP P 14 11 17.4 +0.2
comp=Z,8.7nm,0.9s,mb5.2
MNTX Cornudas Mount 93.88 316 eP P 14 11 17.4 +0.1
comp=Z,8.7nm,0.9s,mb5.2
WUAZ Wupatki 93.94 322 eP P 14 11 19.4 +1.9
comp=Z,4.3nm,0.6s,mb5.1
WUAZ LR LR
comp=Z,3μm,20.0s,MS5.7
WUAZ Wupatki 93.94 322 eP P 14 11 19.4 +1.9
comp=Z,4.2nm,0.6s,mb5.0
WDC Whiskeytown Da 94.37 333 PFAKE 14 11 30.0 +11
WDC LR LR
comp=Z,3μm,21.0s,MS5.7
NVAR Mina Array Bea 94.60 329 P P 14 11 20.8 +0.4
comp=Z,1.3nm,0.8s,mb4.4,baz=49,slow=5.6,SNR=8.7
NVAR PKKPbc PKKPbc 14 28 18.1 +0.6
comp=Z,0.8nm,0.8s,baz=190,slow=3.7,SNR=4.2
TGUH Tegucigalpa,Un 94.69 292 PFAKE 14 11 30.0 +8.8
TGUH LR LR
comp=Z,2μm,22.0s,MS5.5
LTX Lajitas 94.72 313 eP P 14 11 23.1 +1.9
comp=Z,11nm,1.0s,mb5.2
LTX LR LR
comp=Z,2μm,21.0s,MS5.6
LTX Lajitas 94.72 313 eP P 14 11 23.1 +1.9
LTX pmax pmax
comp=Z,11nm,1.0s,mb5.2
LTX MLR MLR
comp=Z,2μm,21.0s,MS5.6
LTX Lajitas 94.72 313 eP P 14 11 23.1 +1.9
comp=Z,11nm,1.0s,mb5.2
TPNV Topopah Spring 94.99 326 PFAKE 14 11 30.0 +7.7
TPNV LR LR
comp=Z,3μm,20.0s,MS5.7
JTS JuntasAbangare 95.43 288 P P 14 11 23.9 -0.7
comp=Z,1μm,0.3s,SNR=38
JTS JuntasAbangare 95.43 288 PFAKE 14 11 30.0 +5.4
JTS LR LR
comp=Z,2μm,34.1s,MS5.3
JTS JuntasAbangare 95.43 288 P P 14 11 30.0 +5.4
CMB Columbia Colle 95.78 330 PFAKE 14 11 40.0 +14
CMB LR LR
comp=Z,1μm,33.3s,MS5.1
HOPS Hopland 95.96 332 PFAKE 14 11 40.0 +13
HOPS LR LR
comp=Z,1μm,33.0s,MS5.1
TUC Tucson 96.23 320 eP P 14 11 29.5 +1.5
comp=Z,5.6nm,1.1s,mb4.9
TUC LR LR
comp=Z,2μm,25.3s,MS5.5
TUC Tucson 96.23 320 eP P 14 11 29.5 +1.5
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.9
TUC MLR MLR
comp=Z,2μm,25.3s,MS5.5
TUC Tucson 96.23 320 eP P 14 11 29.5 +1.5
comp=Z,5.6nm,1.1s,mb4.9
MCCM Marconi Confer 96.64 332 PFAKE 14 11 40.0 +10
MCCM LR LR
comp=Z,139nm,11.8s,MS4.7
SAO San Andreas Ge 97.30 330 PFAKE 14 11 40.0 +7.2
SAO LR LR
comp=Z,2μm,19.0s,MS5.6
PFO Pinyon Flat Ob 97.88 325 PFAKE 14 11 50.0 +15
PFO LR LR
comp=Z,739nm,25.8s,MS5.1
PFO Pinyon Flat Ob 97.88 325 LR LR 15 01 59.6
comp=Z,2μm,18.1s,MS5.7,baz=231,slow=39
LPAZ La Paz 98.80 256 LR LR 14 58 00.7
comp=Z,1μm,20.3s,MS5.3,baz=59,slow=36
NNA Nana 102.97 265 PFAKE 14 12 10.0 +12
NNA LR LR
comp=Z,1μm,45.2s,MS5.1
GUMO Guam 106.73 57 PFAKE 14 16 30.0 +4.5
GUMO LR LR
comp=Z,1μm,58.1s,MS5.1
TRQA Tornquist 107.31 235 PFAKE 14 16 40.0 +14
TRQA LR LR
comp=Z,2μm,22.0s,MS5.7
LCO Las Campanas 108.16 247 PFAKE 14 16 40.0 +12
LCO LR LR
comp=Z,2μm,48.5s,MS5.3
MBWA Marble Bar 109.95 102 PFAKE 14 16 40.0 +8.7
MBWA LR LR
comp=Z,434nm,23.1s,MS5.0
NWAO Narrogin (SRO) 114.43 113 PFAKE 14 16 50.0 +11
NWAO LR LR
comp=Z,441nm,28.6s,MS4.9
KAKA Kakadu 115.03 87 eP PKiKP 14 16 38.3 -2.8
comp=Z,4.4nm,0.5s
WRA Warramunga Arr 120.65 92 PKP PKPdf 14 16 49.8 -2.0
comp=Z,1.9nm,0.5s,baz=313,slow=1.5,SNR=77
WRA PKKPbc PKKPbc 14 26 58.0 +2.5
comp=Z,1.2nm,0.9s,baz=120,slow=3.7,SNR=7.4
WB2 Warramunga Arr 120.66 92⇑iP PKPdf 14 16 49.9 -1.9
FORT Forrest 121.36 106 eP PKPdf 14 16 51.3 -1.5
comp=Z,16nm,1.0s
ASAR Alice Springs 122.31 96 PKP PKPdf 14 16 53.2 -1.6
comp=Z,1.9nm,0.4s,baz=308,slow=1.7,SNR=82
ASAR PKKPbc PKKPbc 14 26 48.0 -1.2
comp=Z,0.3nm,0.6s,baz=116,slow=4.2,SNR=5.0
ASAR Alice Springs 122.31 96 PKIKP PKPdf 14 16 53.2 -1.7
CTA Charters Tower 130.08 85 eP PKPdf 14 17 08.7 -1.1
comp=Z,4.0nm,0.6s
CTA Charters Tower 130.08 85 PKIKP PKPdf 14 17 09.1 -0.7
CTA pmax pmax
comp=Z,4.0nm,0.8s
CTA Charters Tower 130.08 85 PKP PKPdf 14 17 09.1 -0.8
comp=Z,3.7nm,0.8s,baz=225,slow=5.7,SNR=2.9
CTAO Charters Tower 130.08 85 ePKPdf PKPdf 14 17 09.6 -0.2
CTAO LR LR
comp=Z,743nm,20.0s,MS5.4
CTAO Charters Tower 130.08 85 ePKIKP PKPdf 14 17 09.6 -0.2
STKA Stephens Creek 132.19 101 eP PKPdf 14 17 09.2 -4.3
comp=Z,2.7nm,0.6s
STKA Stephens Creek 132.19 101 PKP PKPdf 14 17 12.2 -1.3
comp=Z,4.6nm,0.9s,baz=296,slow=1.2,SNR=4.6
HNR Honiara 133.68 62 PFAKE 14 17 30.0 +13
HNR LR LR
comp=Z,327nm,10.1s,MS5.3
SBA Scott Base 138.02 170 PFAKE 14 17 30.0 +6.9
SBA LR LR
comp=Z,1μm,20.0s,MS5.7
TAU Tasmania Unive 140.05 114 PFAKE 14 17 40.0 +12
TAU LR LR
comp=Z,1μm,22.0s,MS5.5
TAOE Nuku Hiva Isla 145.74 324 eSS SS 14 40 06.1 +14
comp=Z,2μm,33.0s
TAOE Nuku Hiva Isla 145.74 324 eLR LR 15 05 34.9
comp=Z,5μm,24.2s

RKT Rikitea 154.01 299 eSS SS 14 41 25.9 +0.3
comp=Z,575nm,26.5s
PPT Papeete 157.44 334 eSS SS 14 42 06.8 +6.0
comp=Z,832nm,28.0s
PPT Papeete 157.44 334 eLR LR 15 11 00.9
comp=Z,2μm,22.2s
TBI Tubuai 162.65 327 eSS SS 14 43 03.9 +7.9
comp=Z,798nm,33.0s
TBI Tubuai 162.65 327 eLR LR 15 13 30.2
comp=Z,2μm,24.5s

IDC 25 13:59:52.3±3.1,2090S×16903E,h0km,mb4.0/5, mb1 4.1/6,mb1mx4.0/16,mbtmp4.0/6,ML3.4/1,MS3.4/2, Ms1 3.4/2,ms1mx2.7/23,Error ellipse: s-maj=100.4km s-min=36.7km az=145.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.68	244	eP	Pn	14 00 36.8	+0.1
DZM				eS	Sn	14 01 07.2	-2.6
DZM	Mont Dzumac	2.68	244	Pn	Pn	14 00 36.8	+0.1
	6.7nm,0.3s,baz=73,slow=18,SNR=79						
URZ	Urewera	18.66	160	LR	LR	14 09 50.1	
	comp=Z,160nm,21.8s,baz=42,slow=32						
CTA	Charters Tower	21.35	268	P	P	14 04 42.6	+1.3
	4.6nm,0.9s,baz=80,slow=11,SNR=4.3						
CTA				LR	LR	14 10 28.3	
	comp=Z,74nm,19.3s,baz=84,slow=30						
STKA	Stephens Creek	26.83	240	P	P	14 05 34.3	-0.2
	2.3nm,0.8s,baz=86,slow=13,SNR=3.2						
WRA	Warramunga Arr	32.49	265	P	P	14 06 23.9	-0.9
	0.9nm,0.8s,baz=98,slow=7.5,SNR=8.6						
ASAR	Alice Springs	32.57	259	P	P	14 06 25.2	-0.3
	1.5nm,0.7s,baz=79,slow=9.5,SNR=26						
FITZ	Fitzroy Crossi	40.91	266	P	P	14 07 37.3	+0.7
	3.2nm,0.8s,baz=100,slow=12,SNR=5.4						
EKA	Eskdalemuir Ar	145.12	352	PKPbc	PKPbc	14 19 30.2	-0.7
	1.7nm,0.6s,baz=1.1,slow=2.4,SNR=7.2						

NEIC 25 14:02:00.8, 1604N×97.16W, h16km, MD3.8(MEX), After MEX.

MEX 25 14:02:00.8±0.6,1604N×9716W,h16km±5km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	1.00	291	iP	Pn	14 02 16.9	-2.8
PNIG				iS	Sb	14 02 28.1	-4.5
HUIG	Huatulco	1.04	105	iP	Pb	14 02 16.9	-3.6
HUIG				iS	Sb	14 02 29.8	-4.1
VHO	Vista Hermosa	1.11	21	iP	Pb	14 02 18.0	-3.6
VHO				iS	Sb	14 02 31.5	-4.2
OXX	Oaxaca	1.12	22	iP	Pb	14 02 18.0	-3.8
OXX				iS	Sb	14 02 32.0	-4.1
UTMO	Huajuapan	1.89	341	eP	Pn	14 02 29.2	-3.2
UTMO				iS	Sn	14 02 51.5	-4.4
TPIG	Tehuac#an	2.38	355	iP	Pn	14 02 35.6	-3.6
TPIG				iS	Sn	14 03 03.9	-4.1
CMIG	Matias Romero	2.42	64	iP	Pn	14 02 36.5	-3.1
CMIG				iS	Sn	14 03 04.3	-4.7
ACX	Acapulco	2.77	288	eS	Sn	14 03 10.0	-7.8
MEIG	Mezcala	3.01	309	iS	Sn	14 03 20.5	-3.2
PPM	Popocatepetl	3.32	335	iP	Pn	14 02 49.4	-2.8
PPM				iS	Sn	14 03 28.7	-2.7

IDC 25 14:15:56.3±1.5,3835N×2053E,h0km,mb3.8/6, mb1 3.8/10,mb1mx3.6/22,mbtmp3.7/10,ML3.7/4,MS4.6/1, Ms1 4.6/1,ms1mx3.5/44,Error ellipse: s-maj=28.8km s-min=21.7km az=14.0
ISCJB 25 14:15:58.5±0.6,3837N±002×2034E±004,h14km±4km, mb3.7/6,Error ellipse: s-maj=5.2km s-min=3.5km az=146.5
THE 25 14:15:58.9,3835N×2043E,h3km,ML4.2
ATH 25 14:15:59.3,3834N×2049E,h12km±1km,MD3.9/12
NEIC 25 14:15:59.3,3834N×2049E,h12km,ML3.9(ATH), ML3.8(PDG),After ATH.
CSEM 25 14:16:00.5±0.1,3832N×2051E,h10km,MD3.9,Error ellipse: s-maj=2.3km s-min=1.1km az=55.0
PDG 25 14:16:01.6±0.4,3864N×2038E,h11km±12km,ML3.8/10, Error ellipse: s-maj=12.5km s-min=4.0km az=90.0
NAO 25 14:16:01.8,3835N×2018E,h33km,mb3.0

ISC 25 14:15:59.4±0.7,3838N±002×2039E±004,h9km±4km,n78, σ1§40/95,mb3.7/6,7C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.26	141	ePG	Pg	14 16 03.7	-0.8
VLS				eSG	Sg	14 16 07.1	-0.9
KFL	Anninata	0.41	130	ePg	Pg	14 16 06.0	-1.5
RLS	Riolos of Patr	0.91	110	ePB	Pb	14 16 14.9	-2.4
IGT	Igoumenitsa	1.16	358	ePg	Pg	14 16 20.2	-1.4
SELA	Sela	1.19	94	ePg	Pg	14 16 19.2	-3.0
EVR	Evrytania	1.24	64	ePN	Pn	14 16 21.2	-1.7
EVR				eSG	Sg	14 16 38.1	-1.1
JAN	Janina	1.33	16	ePB	Pb	14 16 24.7	+0.2
KEK	Kerkira	1.41	341	ePB	Pb	14 16 27.0	+1.1
MEV	Metsovon	1.55	25	ePg	Pg	14 16 28.0	-1.2
AGG	Agios Georgios	1.65	66	ePb	Pb	14 16 28.6	-1.4
AGG				eSb	Sg	14 16 55.1	+2.5
ITM	Ithomi	1.71	134	ePB	Pb	14 16 29.9	-1.1
PYL	PYLOS	1.83	144	ePb	Pb	14 16 30.3	-2.7
LTK	Loutraki	2.06	99	ePn	Pn	14 16 34.0	-0.2
LTK	Loutraki	2.06	99	ePn	Pn	14 16 34.0	-0.2
LKR	Lokris	2.07	82	ePN	Pn	14 16 35.4	+1.1
KZN	Kozani	2.21	29	P	Pn	14 16 39.0	+2.8
LIT	Litokhoron	2.37	43	ePn	Pn	14 16 39.4	+0.9
LIT	Litokhoron	2.37	43	ePn	Pn	14 16 39.3	+0.8
NEO	Neokhori	2.40	66	ePN	Pn	14 16 39.4	+0.5
DID	Didima	2.42	110	ePn	Pn	14 16 39.1	0.0
FNA	Florina	2.52	17	ePn	Pn	14 16 41.2	+0.7
NAIG	Nisos Aigina	2.53	103	ePN	Pn	14 16 41.0	+0.4
VLI	Veliai	2.62	128	ePN	Pn	14 16 43.8	+2.0
ATH	Athens Observa	2.66	98	ePN	Pn	14 16 43.1	+0.7
KVR	Kavouri	2.73	101	ePB	Pn	14 16 43.0	-0.3
BIA	Bitola	2.74	15	ePn	Pn	14 16 44.8	+1.4
OHR	Ohrid	2.75	7	ePn	Pn	14 16 44.9	+1.2
OHR				eSn	Sn	14 17 19.4	+2.4
PTL	Penteli	2.76	96	ePB	Pn	14 16 45.0	+1.2
AOS	Alonnisos	2.84	73	ePn	Pn	14 16 44.6	-0.3
TIP	Timpagrande	2.94	287	P	Pn	14 16 49.8	+3.5
KYTH	Kithira	2.97	134	ePb	Pb	14 16 49.5	-3.0
KYTH	Kithira	2.97	134	ePB	Pn	14 16 48.0	+1.3
PAIG	Paliouri	2.99	58	ePn	Pn	14 16 46.5	-0.5
TIR	Tirane	2.99	352	P	Pn	14 16 48.2	+1.2
HORT	Hortiatis	3.06	43	ePn	Pn	14 16 48.3	+0.4
KRUS	Krusevo	3.06	12	ePn	Pn	14 16 48.9	+1.0
PLG	Polygyros	3.10	49	ePn	Pn	14 16 49.0	+0.5
PE1	Pezze di Greco	3.33	318	ePn	Pn	14 16 53.4	+1.7
SOH	Sokhos	3.35	42	ePn	Pn	14 16 52.1	+0.2
VAY	Valandovo	3.39	29	ePn	Pn	14 16 53.8	+1.4
KNT	Kendrikon	3.39	34	ePn	Pn	14 16 52.6	+0.2
STIP	Stip	3.59	22	ePn	Pn	14 16 55.7	+0.5
STIP	Stip	3.59	22	ePn	Pn	14 16 55.6	+0.4
ULC	Ulcinj	3.69	347⇑	iPn	Pn	14 16 57.0	+0.5
ULC				eSn	Sn	14 17 38.3	-1.8
SG1	Sgolgore (BA)	3.77	312	ePn	Pn	14 16 59.3	+1.6
KKB	Krupnik	4.05	30	ePn	Pn	14 17 02.0	+0.4
BUM	Brajici-Budva	4.08	344⇑	iPn	Pn	14 17 03.2	+1.3
BUM				eSn	Sn	14 17 48.4	-1.4
MMB	Musomiste	4.11	38	iP	Pn	14 17 04.0	+1.7
PDG	Podgorica	4.14	348⇑	iPn	Pn	14 17 03.0	+0.3
PDG				eSn	Sn	14 17 49.2	-2.0
TTG	Podgorica	4.14	348⇑	iPn	Pn	14 17 03.0	+0.3
TTG				eSn	Sn	14 17 49.2	-2.0
CDT	Castel del Mon	4.16	312	ePn	Pn	14 17 04.4	+1.3
PVY	Plav	4.22	356	ePn	Pn	14 17 05.1	+1.2
PVY				eSn	Sn	14 17 51.7	-1.7
HCY	Herceg Novi	4.31	341	ePn	Pn	14 17 05.4	+0.3
HCY				eSn	Sn	14 17 53.1	-2.4
BEY	Berane	4.50	355⇑	iPn	Pn	14 17 08.1	+0.3
BEY				eSn	Sn	14 17 58.3	-2.0
IVA	Berane	4.50	355⇑	iPn	Pn	14 17 08.1	+0.3
IVA				eSn	Sn	14 17 58.3	-2.0
NKY	Niksic	4.55	347⇑	iPn	Pn	14 17 09.2	+0.7
NKY				eSn	Sn	14 17 59.6	-1.9
RZN	Rozhen	4.69	44	eP	Pn	14 17 13.1	+2.8
VTS	Vitosha	4.73	26	eP	Pn	14 17 13.3	+2.5

BRY	**Bratogost**	**4.73**	**343**	*e*Pn		**Pn**	**14 17 11.0**	**+0.1**
BRY				*e*Sn		**Sn**	**14 18 03.4**	**-2.4**
IDI	**Anoyia**	**4.75**	**129**	Pn		**Pn**	**14 17 11.2**	**+0.1**
	0.6nm,0.3s,baz=318,slow=14,SNR=3.7							
IDI				Sn		**Sn**	**14 18 05.7**	**-0.6**
	2.9nm,0.3s,baz=4.1,slow=23,SNR=9.1							
VAE	**Valguarnera**	**4.81**	**261**	Pn		**Pn**	**14 17 12.9**	**+1.0**
	1.3nm,0.3s,baz=74,slow=7.4,SNR=2.1							
VAE				Sn		**Sn**	**14 18 06.9**	**-0.8**
	2.5nm,0.3s,baz=29,slow=1.1,SNR=2.8							
UPM	**Unac-Piva**	**4.95**	**347**	*e*Pn		**Pn**	**14 17 15.3**	**+1.4**
UPM				*e*Sn		**Sn**	**14 18 09.6**	**-1.6**
PLE	**Pljevlja**	**5.00**	**352**	*e*Pn		**Pn**	**14 17 15.7**	**+1.1**
PLE				*e*Sn		**Sn**	**14 18 10.3**	**-2.3**
LAST	**Lasithi**	**5.20**	**127**	P		**Pn**	**14 17 19.2**	**+1.9**
MLR	**Muntele Rosu**	**8.23**	**28**	Pn		**Pn**	**14 18 01.3**	**+2.4**
	0.2nm,0.3s,baz=294,slow=21,SNR=4.0							
MLR				LR		LR	14 21 00.6	
	comp=Z,3µm,18.6s,baz=149,slow=37							
MLR	**Muntele Rosu**	**8.23**	**28**	Pn		**Pn**	**14 18 01.2**	**+2.4**
DAVOX	**Davos/Dischmat**	**11.41**	**321**	Pn		**Pn**	**14 18 43.2**	**+0.7**
	0.3nm,0.3s,baz=229,slow=20,SNR=3.3							
GERES	**GERESS Array B**	**11.53**	**337**	Pn		**Pn**	**14 18 43.6**	**-0.4**
	0.1nm,0.3s,baz=180,slow=9.3,SNR=3.7							
ESDC	**Sonseca Array**	**18.95**	**282**	P		**Pn**	**14 20 19.1**	**-2.2**
	0.2nm,0.3s,baz=77,slow=11,SNR=8.0							
HFS	**Hagfors**	**22.19**	**351**	P		**P**	**14 20 54.7**	**-0.9**
	1.4nm,0.5s,mb3.6,baz=164,slow=7.5,SNR=9.4							
FINES	**FINESS Array B**	**23.36**	**7**	P		**P**	**14 21 05.4**	**-2.6**
	0.6nm,0.5s,mb3.3,baz=182,slow=10.0,SNR=5.1							
NB2	**NORSAR Subarra**	**23.40**	**349**	P		**P**	**14 21 08.5**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.2,baz=162,slow=11							
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**14 21 07.6**	**-0.9**
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**14 21 07.6**	**-0.8**
	comp=Z,1.7nm,0.8s,mb3.5,baz=160,slow=9.8,SNR=9.0							
ARCES	**ARCESS Array B**	**31.34**	**3**	P		**P**	**14 22 19.2**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.9,baz=184,slow=11,SNR=3.4							
MKAR	**Makanchi Array**	**45.29**	**59**	P		**P**	**14 24 14.4**	**-2.9**
	comp=Z,0.4nm,0.4s,mb3.6,baz=271,slow=7.5,SNR=12							
ZALV	**Zalesovo Beam**	**55.64**	**48**	P		**P**	**14 24 17.7**	**-2.2**
	comp=Z,3.5nm,0.7s,mb4.4,baz=282,slow=8.6,SNR=6.3							
ASAR	**Alice Springs**	**122.30**	**96**	PKP	PKPdf		14 34 53.2	-1.8
	comp=Z,0.8nm,1.1s,baz=304,slow=1.5,SNR=6.9							

ISCJB ***25*** *14:24:51.0±1.7,24S±07×237W±03,h10km,mb3.8/4, Error ellipse: s-maj=101.8km s-min=14.8km az=158.1*
NEIC ***25*** *14:24:55.3±0.8,094S×2427W,h10km,mb4.2/1,Error ellipse: s-maj=55.6km s-min=13.2km az=153.0*
IDC ***25*** *14:24:58.6±1.4, 170S×2306W,h0km,mb3.8/3,mb1 3.8/3, mb1mx3.6/16,mbtmp3.7/3,Error ellipse: s-maj=56.5km s-min=43.1km az=108.0*

ISC 25 14:24:53.7±1.6,22S±06×237W±03,h10km,n10,σ1§29/9, mb3.7/4,South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**12.65**	**253**	*e*Pn	**Pn**	**14 27 53.9**	**0.0**
RCBR				*e*Sn	**Sn**	**14 30 02.0**	**-13**
DBIC	**Dimbokro**	**20.82**	**65**	*e*P	**P**	**14 29 36.7**	**+1.1**
	11nm,0.9s						
DBIC	**Dimbokro**	**20.82**	**65**	P	**P**	**14 29 36.9**	**+1.3**
	0.1nm,0.3s,baz=229,slow=14,SNR=9.0						
TOA0	**Torodi Ar. Sit**	**29.50**	**58**	*e*P	**P**	**14 30 58.2**	**-0.2**
TORD	**Torodi Ar. Bea**	**29.50**	**58**	P	**P**	**14 30 57.4**	**-1.0**
	0.9nm,0.6s,mb3.6,baz=239,slow=10,SNR=6.1						
AKASG	**Malin Array Be**	**69.33**	**33**	P	**P**	**14 35 59.4**	**-2.0**
	1.3nm,0.7s,mb4.0,baz=240,slow=6.2,SNR=4.0						
FINES	**FINESS Array B**	**73.98**	**22**	P	**P**	**14 36 31.2**	**+2.0**
	0.9nm,0.9s,mb3.7,baz=5.7,slow=5.7,SNR=1.9						
YKA	**Yellowknife Ar**	**92.37**	**332**	P	**P**	**14 38 10.3**	**+6.1**
	0.2nm,0.7s,mb3.6,baz=92,slow=5.3,SNR=4.2						
ASAR	**Alice Springs**	**146.29**	**141**	PKPbc	PKPbc	14 44 41.2	+5.7
	0.8nm,0.7s,baz=208,slow=2.4,SNR=9.9						
WRA	**Warramunga Arr**	**149.20**	**137**	PKPbc	PKPbc	14 44 49.4	+5.9
	0.6nm,0.8s,baz=241,slow=1.7,SNR=4.1						

IDC 25 14:25:03.8±42.0,1565S×16425W,h0km,mb4.1/3, mb1 4.3/3,mb1mx3.8/13,mbtmp4.1/3,Error ellipse: s-maj=887.4km s-min=194.8km az=82.0,Cook Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**51.62**	**242**	P	P	14 34 12.7	+0.3
	2.4nm,0.8s,baz=76,slow=8.3,SNR=2.8						
WRA	**Warramunga Ar**	**58.36**	**256**	P	P	14 35 01.1	-0.1
	0.8nm,0.3s,baz=98,slow=6.3,SNR=57						
ASAR	**Alice Springs**	**58.41**	**252**	P	P	14 35 01.4	-0.1
	1.5nm,0.7s,baz=88,slow=7.9,SNR=54						

ISCJB ***25*** *14:31:19.7±1.2,3836N±004×2034E±010,h10km,Error ellipse: s-maj=11.4km s-min=5.5km az=162.3*
CSEM ***25*** *14:31:20.3±0.3,3837N×2041E,h2km,MD4.0,Error ellipse: s-maj=6.9km s-min=3.3km az=68.0*
ATH ***25*** *14:31:20.1,3839N×2045E,h13km±1km,MD4.0/9*
NEIC ***25*** *14:31:20.1,3839N×2046E,h13km,MD4.0(ATH),After ATH.*

ISC 25 14:31:20.4±1.2,3836N±004×2035E±010,h10km,n15, σ1§20/20,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.26**	**134**	*e*PG	**Pg**	**14 31 25.3**	**-0.4**
VLS				*e*SG	**Sg**	**14 31 29.4**	**+0.1**
RLS	**Riolos of Patr**	**0.93**	**109**	*e*PB	**Pb**	**14 31 36.5**	**-2.1**
EVR	**Evrytania**	**1.27**	**64**	*e*PB	**Pb**	**14 31 42.4**	**-2.0**
JAN	**Janina**	**1.35**	**17**	*e*PB	**Pb**	**14 31 45.0**	**-0.8**
KEK	**Kerkira**	**1.42**	**342**	*e*PG	**Pg**	**14 31 46.5**	**-1.1**
ITM	**Ithomi**	**1.72**	**133**	*e*PG	**Pg**	**14 31 51.2**	**-2.1**
THL	**Klokotos Trika**	**1.77**	**47**	*e*PG	**Pn**	**14 31 51.8**	**+0.8**
THL				*e*SB	**Sb**	**14 32 14.3**	**-0.8**
LKR	**Lokris**	**2.10**	**81**	*e*PN	**Pn**	**14 31 56.4**	**+0.8**
KZN	**Kozani**	**2.23**	**29**	*e*PN	**Pn**	**14 31 58.9**	**+1.5**
KZN				*e*SN	**Sn**	**14 32 26.5**	**+1.4**
NEO	**Neokhori**	**2.43**	**66**	*e*PN	**Pn**	**14 32 00.9**	**+0.7**
VLI	**Veliai**	**2.63**	**128**	*e*PG	**Pn**	**14 32 06.3**	**+3.4**
ATH	**Athens Observa**	**2.68**	**97**	*e*PB	**Pn**	**14 32 04.1**	**+0.5**
ATH				*e*SN	**Sn**	**14 32 36.7**	**+0.6**
PLG	**Polygyros**	**3.13**	**49**	*e*PN	**Pn**	**14 32 09.7**	**-0.1**
PLG				*e*SN	**Sn**	**14 32 46.2**	**-1.0**
APE	**Apeiranthos**	**4.30**	**106**	*e*PN	**Pn**	**14 32 27.8**	**+1.9**
PRK	**Paraskevi**	**4.71**	**77**	*e*PN	**Pn**	**14 32 32.1**	**+0.6**

TIR ***25*** *14:32:45.4±2.4,4161N×2063E,h34km±40km,ML2.9*
SKO ***25*** *14:32:46.0,4169N×2035E,h15km,M2.3,ML2.7*
ISCJB ***25*** *14:32:47.7±0.3,4170N±002×2047E±002,h1km,Error ellipse: s-maj=3.2km s-min=2.1km az=38.8*
CSEM ***25*** *14:32:47.6±0.1,4169N×2048E,h5km,ML3.3,Error ellipse: s-maj=1.8km s-min=1.2km az=39.0*
THE ***25*** *14:32:47.8,4170N×2048E,h3km,ML3.3*
PDG ***25*** *14:32:49.7±0.5,4172N×2036E,h1km±11km,ML2.9/10, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
NEIC ***25*** *14:32:49.7,4172N×2036E,h1km,ML2.9(PDG),After PDG.*
BEO ***25*** *14:32:49.8±1.5,4170N×2044E,h14km±6km,ML2.8/4*

ISC 25 14:32:48.6±0.4,4168N±002×2047E±003,h3km±4km,n50, σ1§16/94,13C-9D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.56**	**234**	*e*Pg	**Pg**	**14 32 59.0**	**-0.4**
TIR				*e*Sg	**Sg**	**14 33 07.3**	**+0.8**
TIR	**Tirane**	**0.56**	**234**	*i* Pg	**Pg**	**14 32 59.2**	**-0.1**
TIR				*i* Sg	**Sg**	**14 33 08.8**	**+2.2**
TIR	**Tirane**	**0.56**	**234**	*e*Pg	**Pg**	**14 32 59.0**	**-0.3**
TIR				*i* Sg	**Sg**	**14 33 08.8**	**+2.2**
PUK	**Puka**	**0.57**	**311**	*i* PN	**Pg**	**14 32 57.8**	**-1.6**
PUK				*i* SN	**Sg**	**14 33 06.0**	**-0.8**
PUK	**Puka**	**0.57**	**311**	*i* Pn	**Pg**	**14 32 57.8**	**-1.6**
OHR	**Ohrid**	**0.62**	**156**	*e*Pg	**Pg**	**14 32 59.5**	**-0.9**
OHR				*e*Sg	**Sg**	**14 33 09.4**	**+1.1**
OHR	**Ohrid**	**0.62**	**156⇑**	*e*Pg	**Pg**	**14 32 59.4**	**-1.0**
OHR				*i* Sg	**Sg**	**14 33 09.5**	**+1.2**
OHR				*e*Lg		14 33 09.8	
	comp=E,349nm,0.7s						
OHR				*e*Lg		14 33 10.4	
	comp=N,286nm,0.3s						
OHR	**Ohrid**	**0.62**	**156**	*e*Pg	**Pg**	**14 32 59.5**	**-0.9**
OHR				*i* Sg	**Sg**	**14 33 09.5**	**+1.1**
KRUS	**Krusevo**	**0.66**	**117⇑**	*e*Pg	**Pg**	**14 33 01.1**	**-0.1**
SKO	**Skopje**	**0.78**	**67**	*e*Pg	**Pg**	**14 33 03.5**	**0.0**
SKO				*e*Sg	**Sg**	**14 33 15.7**	**+2.0**
SKO	**Skopje**	**0.78**	**67⇓**	*e*Pg	**Pg**	**14 33 03.5**	**-0.1**
SKO				*i* Sg	**Sg**	**14 33 15.1**	**+1.3**
SKO				*e*Lg		14 33 15.8	
	comp=E,123nm,0.4s						
SKO				*e*Lg		14 33 16.1	
	comp=N,181nm,0.4s						
SKO	**Skopje**	**0.78**	**67⇓**	*e*Pg	**Pg**	**14 33 03.4**	**-0.2**
SKO				*i* Sg	**Sg**	**14 33 15.0**	**+1.3**
BIA	**Bitola**	**0.92**	**135**	*e*Pg	**Pg**	**14 33 05.2**	**-0.9**
BIA				*e*Sg	**Sg**	**14 33 19.1**	**+1.0**
BIA	**Bitola**	**0.92**	**135**	*i* Pg	**Pg**	**14 33 05.1**	**-1.1**
BIA				*i* Sg	**Sg**	**14 33 19.8**	**+1.7**
BIA				*e*Lg		14 33 20.5	
	comp=N,77nm,0.2s						
BIA				*e*Lg		14 33 21.5	
	comp=E,87nm,0.3s						
BIA	**Bitola**	**0.92**	**135**	*i* Pg	**Pg**	**14 33 05.1**	**-1.1**
BIA				*i* Sg	**Sg**	**14 33 19.8**	**+1.7**
ULC	**Ulcinj**	**0.96**	**288⇑**	*i* Pg	**Pg**	**14 33 05.4**	**-1.5**
ULC				*e*Sg	**Sg**	**14 33 20.0**	**+0.7**
ULC	**Ulcinj**	**0.96**	**288**	*i* PG	**Pg**	**14 33 05.5**	**-1.4**
ULC				*i* SG	**Sg**	**14 33 20.0**	**+0.7**
PVY	**Plav**	**0.99**	**338⇑**	*i* PG	**Pg**	**14 33 06.1**	**-1.5**
PVY				*e*Sg	**Sg**	**14 33 21.3**	**+0.9**
PVY	**Plav**	**0.99**	**338**	*i* PG	**Pg**	**14 33 06.1**	**-1.5**
PVY				*i* SG	**Sg**	**14 33 21.3**	**+0.9**
FNA	**Florina**	**1.12**	**142**	*e*Pg	**Pg**	**14 33 09.1**	**-1.0**
PDG	**Podgorica**	**1.17**	**310**	*i* PG	**Pg**	**14 33 09.1**	**-2.0**
PDG				*i* SG	**Sg**	**14 33 27.2**	**+0.9**
PDG	**Podgorica**	**1.17**	**310⇓**	*i* Pg	**Pg**	**14 33 09.1**	**-2.0**
PDG				*e*Sg	**Sg**	**14 33 27.2**	**+0.9**
TTG	**Podgorica**	**1.17**	**310⇓**	*i* Pg	**Pg**	**14 33 09.1**	**-2.0**
TTG				*e*Sg	**Sg**	**14 33 27.2**	**+0.9**
BEY	**Berane**	**1.27**	**341**	*i* PG	**Pg**	**14 33 11.5**	**-1.4**
BEY				*i* SG	**Sg**	**14 33 31.0**	**+1.7**
BEY	**Berane**	**1.27**	**341⇑**	*i* Pg	**Pg**	**14 33 11.5**	**-1.4**
BEY				*e*Sg	**Sg**	**14 33 31.0**	**+1.7**
IVA	**Berane**	**1.27**	**341⇑**	*i* Pg	**Pg**	**14 33 11.5**	**-1.4**
IVA				*e*Sg	**Sg**	**14 33 31.0**	**+1.7**
STIP	**Stip**	**1.29**	**89**	*i* Pg	**Pg**	**14 33 11.4**	**-1.8**
STIP				*i* Sg	**Sg**	**14 33 32.2**	**+2.3**
STIP				*e*Lg		14 33 32.7	
	comp=N,60nm,0.7s						
STIP				*e*Lg		14 33 33.3	
	comp=E,58nm,0.8s						
STIP	**Stip**	**1.29**	**89**	*i* Pg	**Pg**	**14 33 11.4**	**-1.8**
STIP				*i* Sg	**Sg**	**14 33 32.1**	**+2.2**
BUM	**Brajici-Budva**	**1.33**	**299⇓**	*i* Pg	**Pg**	**14 33 11.9**	**-2.1**
BUM				*e*Sg	**Sg**	**14 33 32.5**	**+1.3**
BUM	**Brajici-Budva**	**1.33**	**299**	*i* PG	**Pg**	**14 33 11.9**	**-2.1**
BUM				*i* SG	**Sg**	**14 33 32.5**	**+1.3**
BARS	**Barje**	**1.52**	**41⇑**	*i* Pn	**Pn**	**14 33 16.7**	**0.0**
BARS				*e*Sg	**Sg**	**14 33 38.3**	**+0.8**
BARS	**Barje**	**1.52**	**41**	Pn	**Pn**	**14 33 16.7**	**0.0**
BARS				Sg	**Sg**	**14 33 38.1**	**+0.6**
NKY	**Niksic**	**1.58**	**317⇑**	*i* Pg	**Pg**	**14 33 17.6**	**-1.2**
NKY				*e*Sg	**Sg**	**14 33 41.1**	**+1.9**
NKY	**Niksic**	**1.58**	**317**	*i* PG	**Pg**	**14 33 17.6**	**-1.2**
NKY				*i* SG	**Sg**	**14 33 41.1**	**+1.9**
VAY	**Valandovo**	**1.62**	**102**	*e*Pg	**Pn**	**14 33 17.4**	**-0.6**
VAY	**Valandovo**	**1.62**	**102⇓**	*e*Pg	**Pn**	**14 33 17.8**	**-0.2**
VAY				*i* Sg	**Sg**	**14 33 40.2**	**-0.3**
VAY				*e*Lg		14 33 40.4	
	comp=N,67nm,0.7s						
VAY				*e*Lg		14 33 41.1	
	comp=E,35nm,0.5s						
VAY	**Valandovo**	**1.62**	**102⇓**	*e*Pg	**Pn**	**14 33 17.8**	**-0.2**
VAY				*i* Sg	**Sg**	**14 33 40.2**	**-0.3**
SJES	**Sjenica**	**1.64**	**346**	*e*Pn	**Pn**	**14 33 18.1**	**-0.2**
SJES				*e*Sg	**Sg**	**14 33 41.0**	**-0.2**
HCY	**Herceg Novi**	**1.66**	**298⇑**	*i* Pg	**Pn**	**14 33 17.7**	**-0.9**
HCY				*e*Sg	**Sg**	**14 33 43.7**	**+1.8**
HCY	**Herceg Novi**	**1.66**	**298**	*i* PG	**Pn**	**14 33 17.7**	**-0.9**
HCY				*i* SG	**Sg**	**14 33 43.7**	**+1.8**
PLE	**Pljevlja**	**1.83**	**335⇓**	*i* Pn	**Pn**	**14 33 22.5**	**+1.5**
PLE				*e*Sn	**Sg**	**14 33 48.2**	**+0.7**
BRY	**Bratogost**	**1.88**	**311⇑**	*i* Pn	**Pn**	**14 33 22.5**	**+0.8**
BRY				*e*Sn	**Sg**	**14 33 48.8**	**-0.2**
BRY	**Bratogost**	**1.88**	**311**	*i* PG	**Pn**	**14 33 22.5**	**+0.8**
BRY				*i* SG	**Sg**	**14 33 48.8**	**-0.2**
UPM	**Unac-Piva**	**1.91**	**323⇑**	*i* Pn	**Pn**	**14 33 23.7**	**+1.6**
UPM				*e*Sn	**Sg**	**14 33 50.7**	**+0.6**
GRUS	**Gruza**	**2.22**	**5**	*e*Pn	**Pn**	**14 33 25.4**	**-0.9**
GRUS				*e*Sg	**Sg**	**14 33 58.3**	**-1.3**
VTS	**Vitosha**	**2.23**	**65⇓**	*i* P	**Pn**	**14 33 27.4**	**+0.9**
BBLS	**Bajina Basta -**	**2.33**	**341⇑**	*i* Pn	**Pn**	**14 33 27.3**	**-0.5**
BBLS				*e*Sg	**Sg**	**14 34 03.1**	**-0.2**
BOLS	**Boljevac**	**2.42**	**26**	Pn	**Pn**	**14 33 29.8**	**+0.8**
DIVS	**Divcibare**	**2.45**	**352⇑**	*i* Pn	**Pn**	**14 33 28.7**	**-0.7**
DIVS				*e*Sn	**Sn**	**14 33 58.7**	**-1.1**
DIVS	**Divcibare**	**2.45**	**352**	Pn	**Pn**	**14 33 28.8**	**-0.6**
DIVS				Sn	**Sn**	**14 33 58.7**	**-1.1**

NEIC ***25*** *14:40:13.6,3823N×2039E,h10km,MD3.5(ATH),After ATH.*
CSEM ***25*** *14:40:13.6,3823N×2039E,h10km,MD3.5/5,After ATH*

ATH 25 14:40:13.6,3823N×2039E,h11km±2km,MD3.5/5,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**108**	*e*PG	Pg	14 40 17.2	-0.1
VLS				*e*SG	Sg	14 40 20.6	+0.8
RLS	**Riolos of Patr**	**0.87**	**101**	*e*PG	Pg	14 40 29.5	-0.8
RLS				*e*SB	Sb	14 40 42.1	-0.1
EVR	**Evrytania**	**1.31**	**58**	*e*PB	Pb	14 40 38.4	+0.3
ITM	**Ithomi**	**1.61**	**130**	*e*PB	Pb	14 40 44.4	+1.1
THL	**Klokotos Trika**	**1.84**	**43**	*e*PN	Pn	14 40 47.1	+2.0
VLI	**Veliai**	**2.53**	**126**	*e*PN	Pn	14 40 57.2	+2.7

NAO ***25*** *14:46:36.6±1.9,6780N×2030E,ML2.0*
BER ***25*** *14:46:38.9±3.7,6786N×2013E,h0km,ML1.8, ML2.0(NAO),Suspected explosion*

HEL 25 14:46:37.8±0.2,6789N×2028E,h0km,ML1.5, ML1.8(BER),ML2.0(NAO),Suspected explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIF	**Kilpisjarvi**	**1.14**	**10**	*e*PB	Pb	14 46 59.3	-1.0
	baz=183						
KIF				*e*SB	Sb	14 47 14.8	-0.8
KIF				MSG		14 47 14.8	
	comp=Z,8.4nm,0.2s						
HEF	**Hetta**	**1.37**	**66**	*e*P	Pg	14 47 02.3	-1.7
HEF				*e*SB	Sb	14 47 20.4	-1.8
KTK1	**Kautokeino**	**1.57**	**43**	*e*P	Pn	14 47 07.5	+0.6
KTK1				*e*SN	Sn	14 47 30.9	+3.0
KTK1				AML	AML	14 47 33.4	
	comp=Z,16nm,0.3s						
TRO	**Tromso**	**1.82**	**345**	*e*P	Pn	14 47 08.6	-1.7
TRO				*e*SN	Sn	14 47 34.2	+0.1
TRO				AML	AML	14 47 35.2	
	comp=Z,11nm,0.4s						
SGF	**Sodankyl**	**2.43**	**98**	*e*PB	Pb	14 47 19.7	-2.5
SGF				*e*SG	Sg	14 47 52.7	-3.0
SGF				MSG		14 47 52.7	
	comp=Z,1.5nm,0.2s						
ARA0	**ARCESS Array S**	**2.52**	**47**	Pn	Pn	14 47 19.8	-0.2
	baz=234,slow=14						
ARA0				Sn	Sn	14 47 52.8	+1.4
	baz=227,slow=28						
ARA0	**ARCESS Array S**	**2.52**	**47**	*e*P	Pn	14 47 19.8	-0.2
ARA0				*e*SB	Sb	14 47 52.8	-2.7
MOR8	**Moi Rana**	**2.87**	**236**	*e*SG	Sg	14 47 59.9	-10
MOR8				AML	AML	14 48 01.2	
	comp=Z,14nm,0.3s						
STOK	**Stokkvaagen**	**3.24**	**245**	*e*SG	Sg	14 48 19.6	-2.1
OUL	**Oulu**	**3.60**	**139**	*e*PG	Pg	14 47 41.3	-5.5
	baz=329						
OUL				*e*SG	Sg	14 48 29.9	-3.5
OUL				MSG		14 48 29.9	
	comp=Z,0.5nm,0.2s						
MSF	**Maaselka**	**3.98**	**116**	MSG		14 48 40.8	
	comp=Z,1.0nm,0.4s						
KU6	**Riekki**	**4.21**	**112**	*e*P	Pn	14 47 43.5	+0.4
	baz=293						
NSS	**Namsos**	**4.76**	**229**	*e*SG	Sg	14 49 04.0	-6.6
FIA0	**FINESS Array S**	**6.93**	**156**	Pn	Pn	14 48 19.4	-1.0
	baz=352,slow=10						
FIA0				Sn	Sn	14 49 34.4	-5.4
	baz=343,slow=28						
FIA0				Lg		14 50 09.7	
	baz=341,slow=28						
FIA0	**FINESS Array S**	**6.93**	**156**	*e*P	Pn	14 48 19.4	-1.0
FIA0				*e*S	Sn	14 49 34.4	-5.4
FIA0				*e*SG	Sg	14 50 09.7	-10
NB2	**NORSAR Subarra**	**7.90**	**214**	Lg		14 50 42.4	
NB2	**NORSAR Subarra**	**7.90**	**214**	*e*SG	Sg	14 50 42.4	-8.9
HFS	**Hagfors**	**8.30**	**203**	Lg		14 50 55.6	
	baz=12,slow=28						
HFS	**Hagfors**	**8.30**	**203**	*e*SG	Sg	14 50 55.6	-8.3
HFS	**Hagfors**	**8.30**	**203**	Lg		14 50 55.6	
	baz=12,slow=28						

ISCJB ***25*** *14:52:49.3±0.9,2879S±005×6757W±009,h135km±15km, mb4.1/2,Error ellipse: s-maj=13.4km s-min=8.5km az=164.8*
GUC ***25*** *14:52:49.4±0.8,2875S×6763W,h150km,ML4.5*
IDC ***25*** *14:52:50.8±1.8,2889S×6743W,h133km±17km,mb4.0/2, mb1 3.4/5,mb1mx3.3/16,mbtmp3.4/5, Error ellipse: s-maj=45.3km s-min=18.6km az=109.0*
NEIC ***25*** *14:52:50.4±0.6,2883S×6754W,h133km±8km,mb3.6/1, Error ellipse: s-maj=11.4km s-min=8.0km az=91.0*

ISC 25 14:52:50.3±0.9,2877S±006×6755W±009,h129km±15km, n25,σ0§81/29,mb4.1/2,2C,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**2.78**	**264**	*e*Pn	**Pn**	**14 53 34.5**	**+0.5**
LCO				*e*Sn	**Sn**	**14 54 07.5**	**0.0**
VACH	**Vallenar**	**2.83**	**273**	*i* P	**Pn**	**14 53 34.1**	**-0.5**
VACH				*i* S	**Sn**	**14 54 08.5**	**-0.3**
VACH	**Vallenar**	**2.83**	**273**	*i* P	**Pn**	**14 53 34.1**	**-0.5**
VACH				*i* S	**Sn**	**14 54 08.5**	**-0.3**
VACH				AML	AML	14 54 13.8	
	comp=N,2µm,0.2s						
CFAA	**Coronel Fontan**	**2.88**	**192**	P	**Pn**	**14 53 35.5**	**+0.2**
	comp=N,1.2nm,0.3s,baz=5.8,slow=12,SNR=288						
CFAA				S	**Sn**	**14 54 09.5**	**-0.6**
	comp=N,8.5nm,0.3s,baz=263,slow=16,SNR=31						
TLL	**Tololo Astrono**	**3.16**	**243⇑**	*i* P	**Pn**	**14 53 39.8**	**+0.8**
TLL				*i* S	**Sn**	**14 54 17.8**	**+1.3**
TLL	**Tololo Astrono**	**3.16**	**243⇑**	*i* P	**Pn**	**14 53 39.8**	**+0.8**
TLL				*i* S	**Sn**	**14 54 17.8**	**+1.3**
TLL				AML	AML	14 54 20.9	
	comp=E,564nm,0.8s						
LSCH	**La Serena**	**3.42**	**250**	*e*P	**Pn**	**14 53 41.9**	**-0.4**
LSCH				*i* S	**Sn**	**14 54 21.5**	**-1.1**
OVCH	**Ovalle**	**3.67**	**239**	*i* S	**Sn**	**14 54 27.4**	**-1.0**
CMCH	**Combarbala**	**3.83**	**231**	*e*P	**Pn**	**14 53 47.2**	**-0.5**
CMCH				*i* S	**Sn**	**14 54 31.8**	**-0.5**
FCH	**Farellones**	**5.11**	**207**	*e*P	**Pn**	**14 54 06.1**	**+1.2**
FCH				*i* S	**Sn**	**14 54 49.4**	**+1.3**
PEL	**Peldehue**	**5.12**	**211**	*i* S	**Sn**	**14 55 03.2**	**+0.1**
LMEL	**Las Melosas**	**5.54**	**204**	*e*P	**Pn**	**14 54 10.8**	**+0.2**
TRQA	**Tornquist**	**10.36**	**155**	*e*Pn	**Pn**	**14 55 14.3**	**-1.0**
LPAZ	**La Paz**	**12.44**	**357**	Pn	**Pn**	**14 55 46.0**	**+3.0**
	comp=E,1.8nm,0.9s						
LPAZ	**La Paz**	**12.44**	**357**	P	**Pn**	**14 55 46.0**	**+3.1**
	comp=E,0.1nm,0.3s,baz=60,slow=22,SNR=2.3						
SIV	**San Ignacio**	**14.05**	**27**	P	**Pn**	**14 56 03.1**	**-0.7**
	comp=E,0.2nm,0.3s,baz=204,slow=10.0,SNR=5.7						
DBIC	**Dimbokro**	**69.83**	**70**	P	**P**	**15 03 47.1**	**-0.2**
	comp=E,1.0nm,0.3s,mb4.0,baz=186,slow=21,SNR=5.1						
TOA0	**Torodi Ar. Sit**	**78.76**	**68**	*e*P	**P**	**15 04 39.0**	**0.0**
TORD	**Torodi Ar. Bea**	**78.76**	**68**	P	**P**	**15 04 38.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**78.76**	**68**	P	**P**	**15 04 38.9**	**-0.1**
	comp=E,3.9nm,0.7s,mb4.1,baz=271,slow=5.5,SNR=

KRUS	Krusevo	3.09	13	ePn	Pn	14 55 10.2	+0.7
KRUS	Krusevo	3.09	13	ePn	Pn	14 55 10.1	+0.6
HORT	Hortiatis	3.11	43	ePn	Pn	14 55 09.3	-0.4
PLG	Polygyros	3.15	49	ePn	Pn	14 55 10.0	-0.4
PLG	Polygyros	3.15	49	ePN	Pn	14 55 11.4	+1.1
PE1	Pezze di Greco	3.31	318	ePn	Pn	14 55 13.3	+0.8
PHP	Peshkopia	3.33	2	ePn	Pn	14 55 15.1	+2.4
PHP				*i* Sn	Sn	14 55 53.4	+0.9
SOH	Sokhos	3.40	43	ePn	Pn	14 55 13.4	-0.4
SOH				eSn	Sn	14 55 54.2	-0.2
VAY	Valandovo	3.43	30	ePn	Pn	14 55 17.3	+3.1
VAY	Valandovo	3.43	30	ePn	Pn	14 55 17.2	+3.1
KNT	Kendrikon	3.44	35	ePn	Pn	14 55 14.2	0.0
OUR	Ouranopolis	3.46	54	ePn	Pn	14 55 14.4	-0.1
OUR	Ouranopolis	3.46	54	ePn	Pn	14 55 14.4	-0.2
STIP	Stip	3.63	23	ePn	Pn	14 55 16.5	-0.4
STIP	Stip	3.63	23	ePn	Pn	14 55 16.8	-0.1
ULC	Ulcinj	3.69	348	⇑*i*Pn	Pn	14 55 17.7	0.0
ULC				eSn	Sn	14 56 02.2	+0.6
PUK	Puka	3.69	355	ePN	Pn	14 55 18.4	+0.6
PUK				*i* SN	Sn	14 56 03.2	+1.5
SKO	Skopje	3.71	13	ePn	Pb	14 55 27.6	+1.6
SG1	Sgolgore (BA)	3.75	313	ePn	Pn	14 55 19.1	+0.6
NVR	Nevrokopi	4.05	41	ePN	Pn	14 55 24.1	+1.5
BUM	Brajici-Budva	4.08	345	⇑*i*Pn	Pn	14 55 23.2	+0.1
BUM				eSn	Sn	14 56 11.0	-0.3
LIA	Limnos Island	4.09	66	ePN	Pn	14 55 25.8	+2.6
KKB	Krupnik	4.10	30	*i* P	Pn	14 55 23.7	+0.4
PDG	Podgorica	4.15	349	⇑*i*Pn	Pn	14 55 24.5	+0.5
PDG				eSn	Sn	14 56 13.0	+0.2
TTG	Podgorica	4.15	349	⇑*i*Pn	Pn	14 55 24.5	+0.5
TTG				eSn	Sn	14 56 13.0	+0.2
MMB	Musomiste	4.16	38	*i* P	Pn	14 55 24.9	+0.8
PVY	Plav	4.24	357	⇑*i*Pn	Pn	14 55 26.0	+0.7
PVY				eSn	Sn	14 56 14.6	-0.5
VAM	Vamos	4.29	132	ePN	Pn	14 55 26.5	+0.6
HCY	Herceg Novi	4.31	342	⇑*i*Pn	Pn	14 55 26.7	+0.4
HCY				eSn	Sn	14 56 17.4	+0.5
APE	Apeiranthos	4.33	106	ePN	Pn	14 55 28.6	+2.1
CHOS	Chios island	4.51	88	ePn	Pn	14 55 29.0	0.0
BEY	Berane	4.52	356	⇑*i*Pn	Pn	14 55 30.1	+1.0
IVA	Berane	4.52	356	⇑*i*Pn	Pn	14 55 30.1	+1.0
IVA				eSn	Sn	14 56 22.1	+0.1
NKY	Niksic	4.56	348	⇑*i*Pn	Pn	14 55 30.5	+0.8
NKY				eSn	Sn	14 56 22.4	-0.6
BARS	Barje	4.60	14	⇑*i*Pn	Pn	14 55 30.2	-0.1
BARS				eSn	Sn	14 56 22.7	-1.4
BARS	Barje	4.60	14	Pn	Pn	14 55 30.0	-0.2
GVD	Gavdhos	4.64	138	ePN	Pn	14 55 32.0	+1.2
BOZC	Bozcaada	4.70	70	*i* P	Pn	14 55 31.5	+0.1
BRY	Bratogost	4.73	344	⇑*i*Pn	Pn	14 55 32.7	+0.7
BRY				eSn	Sn	14 56 27.4	+0.1
RZN	Rozhen	4.74	44	*i* P	Pn	14 55 33.8	+1.7
VAE	Valguarnera	4.75	261	Pn	Pn	14 55 37.5	+5.2
	3.0nm,0.3s,baz=286,slow=15,SNR=4.0						
VAE				Sn	Sn	14 56 29.0	+1.3
	5.8nm,0.3s,baz=142,slow=13,SNR=3.9						
VTS	Vitosha	4.77	27	*i* P	Pn	14 55 33.8	+1.3
VTS	Vitosha	4.77	27	P	Pn	14 55 35.4	+2.9
IDI	Anoyia	4.78	128	Pn	Pn	14 55 33.1	+0.4
	0.4nm,0.3s,baz=322,slow=17,SNR=3.6						
IDI				Sn	Sn	14 56 31.2	+2.7
	4.8nm,0.3s,baz=313,slow=23,SNR=8.0						
IDI				LR	LR	14 56 48.9	
	comp=Z,111nm,21.3s,baz=143,slow=32						
SJES	Sjenica	4.91	357	ePn	Pn	14 55 35.4	+0.9
SJES				eSn	Sn	14 56 30.7	-1.0
URLA	Izmir	4.94	88	eP	Pn	14 55 35.3	+0.4
UPM	Unac-Piva	4.96	348	⇑*i*Pn	Pn	14 55 36.0	+0.9
UPM				eSn	Sn	14 56 32.2	-0.5
PLE	Pljevlja	5.02	352	⇑*i*Pn	Pn	14 55 36.8	+0.9
PLE				eSn	Sn	14 56 33.4	-0.8
SMG	Samos	5.19	95	ePN	Pn	14 55 40.2	+1.9
SMG	Samos	5.19	95	ePn	Pn	14 55 38.0	-0.3
LAST	Lasithi	5.23	126	ePn	Pn	14 55 39.8	+0.9
KDAG	Bornova	5.46	87	eP	Pn	14 55 41.1	-0.9
GRUS	Gruza	5.53	3	⇑*i*Pn	Pn	14 55 42.4	-0.6
GRUS				eSn	Sn	14 56 43.7	-3.3
BBLS	Bajina Basta -	5.55	353	ePn	Pn	14 55 44.5	+1.3
BBLS				eSn	Sn	14 56 45.7	-1.6
DIVS	Divcibare	5.74	358	⇑*i*Pn	Pn	14 55 46.5	+0.6
DIVS				eSn	Sn	14 56 48.9	-3.2
KARP	Karpathos	6.16	115	ePN	Pn	14 55 53.7	+2.1
FGSL	Fruska Gora	6.80	357	ePn	Pn	14 56 01.0	+0.5
GOLH	Golhisar	7.41	96	eP	Pn	14 56 15.0	+6.3
BOJS	Bojanci	8.07	334	ePn	Pn	14 56 17.8	-0.1
BOJS				eSn	Sn	14 57 45.4	-4.1
MLR	Muntele Rosu	8.27	29	Pn	Pn	14 56 23.3	+2.7
	0.3nm,0.3s,baz=244,slow=8.1,SNR=10						
CRES	Cresnjev	8.29	336	ePn	Pn	14 56 20.0	-0.9
CRES				eSn	Sn	14 57 49.5	-5.3
CEY	Cerknica	8.57	331	ePn	Sn	14 56 24.6	-0.2
CEY				eSn	Sn	14 57 58.4	-3.4
CEY	Cerknica	8.57	331	ePn	Pn	14 56 24.5	-0.3
CEY				eSn	Sn	14 57 58.4	-3.4
KEST	Kesra	9.15	257	Pn	Pn	14 56 39.1	+6.4
	0.2nm,0.3s,baz=38,slow=7.8,SNR=4.0						
KEST				Sn	Sn	14 58 14.8	-1.2
	0.1nm,0.3s,baz=23,slow=23,SNR=3.4						
OBKA	Obir	9.19	334	⇓*i*Pn	Pn	14 56 32.9	-0.3
OBKA				⇑*i*		14 58 09.0	
OBKA	Obir	9.19	334	⇓*i*Pn	Pn	14 56 32.9	-0.3
OBKA				⇑*i*Sn	Sn	14 58 14.7	-2.2
KECS	Kecovo	10.12	1	ePN	Pn	14 56 42.3	-3.6
KECS				eSN	Sn	14 58 34.0	-5.8
ABA	Abfaltersbach	10.16	328	⇓*i*Pn	Pn	14 56 47.3	+0.8
VYHS	Vyhne	10.19	354	ePN	Pn	14 56 42.8	-4.1
VYHS				eSN	Sn	14 58 34.6	-6.8
MODS	Modra-Piesok	10.25	349	eSN	Sn	14 58 40.1	-2.9
DAVOX	Davos/Dischmat	11.39	321	Pn	Pn	14 57 03.8	+0.4
	0.2nm,0.3s,baz=136,slow=21,SNR=2.8						
DAVOX				Sn	Sn	14 59 07.7	-3.2
GERES	GERESS Array B	11.52	338	P	Pn	14 57 04.0	-1.1
GERES						14 59 08.6	
GERES	GERESS Array B	11.52	338	Pn	Pn	14 57 04.0	-1.1
	0.5nm,0.3s,baz=158,slow=14,SNR=8.6						
GERES				Sn	Sn	14 59 08.6	-5.4
	0.3nm,0.3s,baz=137,slow=28,SNR=2.9						
GERES				LR	LR	15 02 05.3	
	comp=Z,534nm,18.0s,baz=263,slow=41						
OKC	Ostrava-Krasne	11.58	353	eP	Pn	14 57 06.9	+1.0
KHC	Kasperske Hory	11.81	338	eP	Pn	14 57 09.2	+0.1
KHC				ex	x	14 57 50.5	
KHC				eS	Sn	14 59 14.5	-6.7
MBDF	Montbardon	11.97	306	eP	Pn	14 57 10.4	-0.8
	38nm,1.2s						
MBDF	Montbardon	11.97	306	eP	Pn	14 57 10.4	-0.8
	19nm,1.3s						
MBDF	Montbardon	11.97	306	eP	Pn	14 57 10.4	-0.8
MBDF				pmax	pmax		
	comp=Z,19nm,1.3s						
PRU	Pruhonice	12.34	342	eP	Pn	14 57 16.7	+0.5
UPC	Upice	12.53	347	eP	Pn	14 57 17.2	-1.6
ORIF	Oris-en-Rattie	12.62	306	eP	Pn	14 57 22.7	+2.5
	comp=Z,42nm,1.2s						
ORIF	Oris-en-Rattie	12.62	306	eP	Pn	14 57 22.7	+2.5
ORIF				pmax	pmax		
	comp=Z,21nm,1.3s						
ORIF	Oris-en-Rattie	12.62	306	eP	Pn	14 57 22.7	+2.5
	comp=Z,21nm,1.3s						
CABF	La Chapelle	13.34	313	eP	Pn	14 57 29.2	-0.7
MMAI	Mount Meron Ar	13.37	109	Pn	Pn	14 57 29.5	-0.9
	comp=Z,0.7nm,0.3s,baz=312,slow=9.5,SNR=2.8						
HINF	Hinteralfeld	13.62	318	eP	Pn	14 57 31.9	-1.9
	comp=Z,3.6nm,0.4s						
HINF	Hinteralfeld	13.62	318	eP	Pn	14 57 31.9	-1.9
	comp=Z,1.8nm,0.4s						
HINF	Hinteralfeld	13.62	318	eP	Pn	14 57 31.9	-1.9
HINF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CDF	Champ du Feu	13.80	321	eP	Pn	14 57 34.4	-1.8
AKASG	Malin Array Be	13.87	24	Pn	Pn	14 57 35.1	-2.0
	comp=Z,0.3nm,0.3s,baz=209,slow=12,SNR=2.9						
CLL	Collm	13.94	341	e(PPP)		14 57 54.0	
HAU	Haudompre	14.01	318	eP	Pn	14 57 37.4	-1.7
MALT	Malatya	14.22	85	eP	Pn	14 57 49.1	+7.0
	comp=Z,6.9nm,0.8s						
MALT	Malatya	14.22	85	eP	Pn	14 57 49.1	+7.1
MALT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SMF	Signal de Mont	14.69	310	eP	Pn	14 57 46.4	-1.9
EIL	Elat	14.90	121	Pn	Pn	14 57 50.9	-0.4
	comp=Z,0.2nm,0.3s,baz=17,slow=14,SNR=2.5						
SSF	Saint Saulge	15.09	311	eP	Pn	14 57 51.0	-2.8
BGF	Bois d'Agland	15.25	308	eP	Pn	14 57 55.0	-1.0
	comp=Z,25nm,1.1s						
BGF	Bois d'Agland	15.25	308	eP	Pn	14 57 55.0	-1.0
BGF				pmax	pmax		
	comp=Z,13nm,1.1s						
BGF	Bois d'Agland	15.25	308	eP	Pn	14 57 55.0	-1.0
	comp=Z,13nm,1.1s						
GIVF	Givet	16.12	322	eP	Pn	14 58 10.7	+3.5
BAIF	Baives	16.40	321	eP	Pn	14 58 11.9	+1.2
	comp=Z,16nm,1.0s						
BAIF	Baives	16.40	321	eP	Pn	14 58 11.9	+1.2
BAIF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BAIF	Baives	16.40	321	eP	Pn	14 58 11.9	+1.2
	comp=Z,7.9nm,1.0s						
MFF	Saint Martin d	17.16	305	eP	Pn	14 58 21.8	+1.4
KIV	Kislovodsk	17.73	65	P	Pn	14 58 29.3	+1.8
KIV	Kislovodsk	17.73	65	eP	Pn	14 58 28.7	+1.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV	Kislovodsk	17.73	65	eP	Pn	14 58 28.7	+1.2
	comp=Z,7.0nm,1.1s						
ZEI	Tsey	18.43	69	eP	Pn	14 58 39.6	+3.4
ESDC	Sonseca Array	18.90	282	P	Pn	14 58 41.6	-0.4
	comp=Z,0.2nm,0.3s,baz=76,slow=11,SNR=11						
OBN	Obninsk	20.04	28	P	P	14 58 56.2	+2.5
OBN	Obninsk	20.04	28	P	P	14 58 56.0	+2.3
OBN				*e*		14 59 23.6	
OBN				pmax	pmax		
	comp=Z,19nm,1.6s						
OBN	Obninsk	20.04	28	P	P	14 58 56.0	+2.3
	comp=Z,19nm,1.6s						
VSU	Vasula	20.55	10	P	P	14 58 59.5	+0.3
MDT	Midelt	20.98	262	eP	P	14 59 05.7	+1.6
	comp=Z,5.0nm,1.0s,baz=61,slow=7.7,SNR=6.8						
HFS	Hagfors	22.20	351	P	P	14 59 16.6	-0.3
HFS	Hagfors	22.20	351	P	P	14 59 16.6	-0.3
	comp=Z,3.2nm,0.6s,mb3.9,baz=162,slow=10.0,SNR=14						
EKA	Eskdalemuir Ar	23.19	325	P	P	14 59 27.4	-0.1
	comp=Z,2.7nm,0.8s,mb3.7,baz=126,slow=13,SNR=4.9						
FINES	FINESS Array B	23.39	7	P	P	14 59 27.4	-2.1
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	FINESS Array B	23.39	7	P	P	14 59 27.4	-2.1
	comp=Z,1.7nm,0.4s,mb3.8,baz=171,slow=10,SNR=17						
FINES	FINESS Array B	23.39	7	P	P	14 59 29.7	+0.2
NB2	NORSAR Subarra	23.41	349	P	P	14 59 28.2	-1.5
	comp=Z,2.9nm,1.1s,mb3.6,baz=162,slow=11						
NB2	NORSAR Subarra	23.41	349	P	P	14 59 28.2	-1.5
NB2				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
NOA	NORSAR Array B	23.41	349	P	P	14 59 29.2	-0.6
NOA	NORSAR Array B	23.41	349	P	P	14 59 29.2	-0.5
	comp=Z,2.6nm,0.9s,mb3.7,baz=161,slow=9.6,SNR=8.5						
KAF	Kangasniemi	24.07	7	*ep*	P	14 59 31.2	-4.7
JOF	Joensuu	25.49	12	*ep*	P	14 59 46.8	-2.0
PRGR	Permogore	28.07	26	eP	P	15 00 15.8	+3.7
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.6						
AKTK	Aktyubinsk	29.20	53	P	P	15 00 21.4	-0.9
AKTK	Aktyubinsk	29.20	53	P	P	15 00 21.5	-0.8
AKTO	Aktyubinsk	29.20	53	P	P	15 00 21.4	-0.9
	comp=Z,0.8nm,0.5s,mb3.8,baz=259,slow=2.3,SNR=3.7						
TORD	Torodi Ar. Bea	30.07	218	P	P	15 00 30.1	-0.2
	comp=Z,1.1nm,0.8s,mb3.6,baz=30,slow=9.1,SNR=7.9						
ARCES	ARCESS Array B	31.36	4	P	P	15 00 38.5	-2.6
	comp=Z,5.7nm,1.1s,mb4.3,baz=189,slow=11,SNR=3.4						
BRVK	Borovoye	37.07	50	eP	P	15 01 30.9	+0.1
	comp=Z,6.4nm,1.0s,mb4.4						
BRVK	Borovoye	37.07	50	eP	P	15 01 30.9	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
BRVK	Borovoye	37.07	50	eP	P	15 01 30.9	+0.1
	comp=Z,6.4nm,1.0s,mb4.4						
LIC	Lamto	39.38	222	eP	P	15 01 49.9	-0.8
	comp=Z,13nm,0.9s,mb4.3						
LIC	Lamto	39.38	222	eP	P	15 01 49.9	-0.8
	comp=Z,6.5nm,0.9s,mb4.4						
EKS2	Erkin-Say	40.31	66	eP	P	15 01 58.7	+0.5
	comp=Z,3.7nm,0.8s,mb4.2						
EKS2	Erkin-Say	40.31	66	eP	P	15 01 58.7	+0.5
	comp=Z,3.7nm,0.8s,mb4.2						
KURK	Kurchatov	42.30	53	P	P	15 02 14.4	0.0
NVS	Novosibirsk	44.67	47	eP	P	15 02 33.5	0.0
NVS				pmax	pmax		
	comp=Z,17nm,1.8s,mb4.6						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.9s						
NVS	Novosibirsk	44.67	47	eP	P	15 02 33.5	0.0
	comp=E,17nm,1.8s,mb4.6						
MKAR	Makanchi Array	45.35	58	P	P	15 02 36.2	-2.8
MKAR	Makanchi Array	45.35	58	P	P	15 02 36.3	-2.7
MKAR						15 04 16.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MKAR	Makanchi Array	45.35	58	P	P	15 02 36.3	-2.6
	comp=Z,1.1nm,0.4s,mb4.0,baz=277,slow=7.1,SNR=19						
MKAR				PcP	PcP	15 04 16.9	-1.6
	comp=Z,1.2nm,1.0s,baz=285,slow=2.8,SNR=2.2						
ZAL	Zalesovo	45.68	48	P	P	15 02 39.2	-2.3
ZALV	Zalesovo Beam	45.69	48	P	P	15 02 39.1	-2.5
	comp=Z,3.3nm,0.4s,mb4.6,baz=276,slow=7.8,SNR=17						
TLY	Talaya	57.29	47	eP	P	15 04 09.1	+0.7
TLY				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
TLY	Talaya	57.29	47	eP	P	15 04 09.1	+0.7
	comp=Z,5.0nm,1.3s,mb4.4						
ZAK	Zakamensk	57.56	49	eP	P	15 04 08.2	-2.2
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
SCHQ	Schefferville	58.22	317	P	P	15 04 14.8	-0.1
	baz=45,slow=7.1						
SONM	Songino Array	60.47	51	P	P	15 04 28.6	-2.0
	comp=Z,2.3nm,1.1s,mb4.1,baz=271,slow=8.6,SNR=8.6						
YKA	Yellowknife Ar	73.17	340	P	P	15 05 48.4	-2.9
	comp=Z,0.2nm,0.3s,mb3.5,baz=75,slow=20,SNR=6.2						
IMA2	Indian Mountai	75.80	357	eP	P	15 06 06.6	+0.1
IMA2	Indian Mountai	75.80	357	eP	P	15 06 06.6	+0.1
KSRS	Korea Array	79.34	51	P	P	15 06 26.1	-0.7
	comp=Z,1.6nm,0.8s,mb4.0,baz=304,slow=4.4,SNR=5.0						
WRA	Warramunga Arr	120.71	92	PKP	PKPdf	15 13 10.3	-3.0
	comp=Z,0.2nm,0.5s,baz=315,slow=1.4,SNR=6.4						
ASAR	Alice Springs	122.35	96	PKP	PKPdf	15 13 14.8	-1.7
	comp=Z,0.4nm,0.8s,baz=304,slow=1.7,SNR=5.9						

***IDC 25** 15:03:07.7±8.7,**518S**×**14624E**,**h0**km,**mb4.0**/3,**mb1 4.3**/4,*
mb1mx3.8**/14,**mbtmp4.1**/4,**1D**,**Error ellipse:
s-maj=130.9km s-min=70.5km az=26.0**,**Eastern New
Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.55	240	eP	Pn	15 06 57.1	+8.7
	10.0nm,0.5s						
WB2	Warramunga Arr	18.69	217	⇓*i*P	Pn	15 07 28.5	+0.6
WRA	Warramunga Arr	18.69	217	P	Pn	15 07 28.6	+0.6
	1.6nm,0.3s,baz=41,slow=11,SNR=100						
ASAR	Alice Springs	21.89	212	P	P	15 08 00.7	-1.8
	4.1nm,0.6s,baz=48,slow=8.2,SNR=124						
FITZ	Fitzroy Crossi	23.88	236	eP	P	15 08 23.5	+0.3
	6.5nm,0.4s						
FITZ	Fitzroy Crossi	23.88	236	P	P	15 08 23.3	+0.1
	6.8nm,0.6s,baz=61,slow=9.3,SNR=19						
STKA	Stephens Creek	26.91	189	P	P	15 08 51.6	+1.0
	1.4nm,0.9s,baz=32,slow=12,SNR=3.8						

*IDC **25** 15:10:53.2±1.5,2062S×16904E,h0km,mb4.1/7,*
mb1 4.3/8,mb1mx4.1/16,mbtmp4.1/8,ML3.8/1,MS4.2/1,
Ms1 4.2/1,ms1mx3.3/27,Error ellipse: s-maj=70.5km
s-min=21.1km az=151.0
*ISCJB **25** 15:10:56.8±6.4,206S±02×1688E±02,h28km±45km,*
mb4.0/7,Error ellipse: s-maj=34.8km s-min=17.0km
az=144.4
*NEIC **25** 15:10:58.4±1.1,2082S×16909E,h35km,mb4.1/3,Error*
ellipse: s-maj=51.1km s-min=14.1km az=153.0
ISC 25 15:10:57.7±6.7,**206S**±02×**1688E**±02,**h21**km±47km,**n30,**
σ0§82/18,mb4.0/7,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.65	237	eP	Pn	15 11 38.3	-0.9
DZM				eS	Sn	15 12 10.3	-0.5
DZM	Mont Dzumac	2.65	237	Pn	Pn	15 11 38.6	-0.6
	15nm,0.3s,baz=59,slow=16,SNR=323						
DZM				Sn	Sn	15 12 09.9	-0.9
	124nm,0.3s,baz=162,slow=23,SNR=15						
CTA	Charters Tower	21.18	267	eP	P	15 15 45.6	+3.8
	5.3nm,1.0s,mb3.8						
CTA	Charters Tower	21.18	267	P	P	15 15 43.7	+1.9
	5.8nm,1.0s,mb3.9,baz=89,slow=15,SNR=3.2						
CTA				LR	LR	15 21 44.1	
	comp=Z,776nm,21.9s,baz=305,slow=30						
CTAO	Charters Tower	21.18	267	Pn	P	15 15 45.2	+3.4
STKA	Stephens Creek	26.80	240	eP	P	15 16 37.7	+1.3
	3.1nm,0.8s,mb3.9						
STKA	Stephens Creek	26.80	240	P	P	15 16 37.7	+1.2
	3.8nm,0.8s,mb4.0,baz=63,slow=11,SNR=6.1						
WB2	Warramunga Arr	32.32	265	eP	P	15 17 25.4	-0.1
WRA	Warramunga Arr	32.33	265	P	P	15 17 25.1	-0.5
	1.1nm,0.9s,mb3.7,baz=92,slow=8.4,SNR=14						
WRA				PcP	PcP	15 20 12.3	-1.1
	0.2nm,0.6s,baz=84,slow=2.6,SNR=4.5						
ASAR	Alice Springs	32.45	258	P	P	15 17 26.9	+0.3
	6.0nm,0.8s,mb4.5,baz=81,slow=9.0,SNR=51						
FITZ	Fitzroy Crossi	40.74	266	eP	P	15 18 37.5	+0.1
	5.8nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	40.74	266	P	P	15 18 37.9	+0.5
	3.6nm,0.9s,mb4.0,baz=131,slow=7.9,SNR=5.4						
SBA	Scott Base	57.28	181	eP	P	15 20 35.4	-7.9
QSPA	South Pole Qui	69.44	180	eP	P	15 22 04.3	+0.6
SONM	Songino Array	88.09	323	P	P	15 23 46.1	-0.4
	1.2nm,0.9s,mb4.1,baz=131,slow=5.6,SNR=4.4						
NVAR	Mina Array Bea	90.00	49	P	P	15 23 54.6	-1.1
	0.7nm,0.7s,mb4.1,baz=236,slow=10,SNR=7.1						
ARCES	ARCESS Array B	126.30	345	PKP	PKPdf	15 29 57.5	-0.6
	3.5nm,0.9s,baz=349,slow=3.7,SNR=5.3						
CLL	Collm	144.00	334	ePKPdf	PKPdf	15 30 30.0	-1.4
EKA	Eskdalemuir Ar	144.82	352	P	PKPdf	15 30 29.6	-3.2
	1.3nm,0.7s,baz=352,slow=2.6,SNR=4.9						
KHC	Kasperske Hory	145.37	331	ePKP	PKPdf	15 30 33.8	0.0
KHC				epPKP	pPKPdf	15 30 45.5	+4.5
GERES	GERESS Array B	145.51	331	PKPbc	PKPbc	15 30 33.0	-1.2
	1.6nm,0.7s,baz=48,slow=2.0,SNR=7.7						
GRA1	Grafenberg Arr	145.97	334	ePKP	PKPdf	15 30 35.2	+0.3
GRF	Grafenberg Arr	145.97	334	ePKP	PKPdf	15 30 35.2	+0.3
GIVF	Givet	147.97	340	ePKP1	PKPbc	15 30 39.8	-1.5
DAVOX	Davos/Dischmat	148.78	332	PKPbc	PKPbc	15 30 43.0	-0.5
	1.8nm,0.6s,baz=342,slow=6.4,SNR=4.8						
HAU	Haudompre	149.24	337	ePKP1	PKPbc	15 30 43.0	-1.6
LOR	Lormes	150.75	339	ePKP1	PKPbc	15 30 46.7	-1.6
SSF	Saint Saulge	151.05	339	ePKP1	PKPbc	15 30 47.5	-1.5
	4.0nm,0.7s						
LPG	La Plagne	151.13	333	ePKP1	PKPbc	15 30 48.7	-0.6
	4.4nm,0.6s						
ORIF	Oris-en-Rattie	151.97	334	ePKP1	PKPbc	15 30 49.6	-1.6

*IDC **25** 15:16:33.4±0.8,3834N×2041E,h0km,mb4.0/12,*
mb1 4.0/19,mb1mx3.9/29,mbtmp3.9/19,ML3.8/7,MS3.5/3,
Ms1 3.5/3,ms1mx3.0/44,Error ellipse: s-maj=15.9km
s-min=13.4km az=158.0
*MOS **25** 15:16:33.9±1.1,3834N×2029E,h12km,mb4.2/5,Error*
ellipse: s-maj=6.9km s-min=4.1km az=82.6
*ISCJB **25** 15:16:34.2±0.5,3838N±002×2030E±003,h13km±3km,*
mb4.0/13,MS3.5/1,Error ellipse: s-maj=4.1km
s-min=2.5km az=143.4
*PDG **25** 15:16:35.3±0.4,3836N×2034E,h20km±1km,ML4.0/10,*
Error ellipse: s-maj=1.7km s-min=2.2km az=0.0
*CSEM **25** 15:16:35.3±0.1,3834N×2046E,h2km,MD4.1,Error*
ellipse: s-maj=2.0km s-min=1.3km az=45.0
*NEIC **25** 15:16:35.0,3834N×2048E,h4km,mb3.9/2,MD4.1(ATH),*
ML4.6(THE),ML4.0(PDG),After ATH.
*BEO **25** 15:16:35.5±1.1,3843N×2065E,ML4.1/4*
*THE **25** 15:16:35.3,3836N×2046E,h3

CDT	**Castel del Mon**	**4.14**	**312**	*e*Pn		**Pn**	**15 17 39.5**	**+0.8**
PVY	**Plav**	**4.21**	**356**	⇑*i*Pn		**Pn**	**15 17 40.4**	**+0.6**
PVY				*e*Sn		**Sn**	**15 18 30.0**	**+0.7**
HCY	**Herceg Novi**	**4.30**	**341**	⇑*i*Pn		**Pn**	**15 17 41.0**	**+0.1**
HCY				*e*Sn		**Sn**	**15 18 30.7**	**-0.6**
APE	**Apeiranthos**	**4.31**	**106**	P		**Pn**	**15 17 42.1**	**+1.0**
CHOS	**Chios island**	**4.48**	**88**	*e*Pn		**Pn**	**15 17 43.6**	**+0.2**
BEY	**Berane**	**4.49**	**356**	*e*Pn		**Pn**	**15 17 44.9**	**+1.3**
IVA	**Berane**	**4.49**	**356**	*e*Pn		**Pn**	**15 17 44.9**	**+1.3**
IVA				*e*Sn		**Sn**	**15 18 36.1**	**-0.1**
NKY	**Niksic**	**4.54**	**347**	⇑*i*Pn		**Pn**	**15 17 45.3**	**+1.1**
NKY				*e*Sn		**Sn**	**15 18 36.6**	**-0.7**
BARS	**Barje**	**4.57**	**14**	⇓*i*Pn		**Pn**	**15 17 44.4**	**-0.2**
BARS				*e*Sn		**Sn**	**15 18 36.0**	**-2.0**
BARS	**Barje**	**4.57**	**14**	Pn		**Pn**	**15 17 44.4**	**-0.2**
GVD	**Gavdhos**	**4.64**	**139**	*e*PN		**Pn**	**15 17 47.0**	**+1.3**
BOZC	**Bozcaada**	**4.67**	**70**	*i*P		**Pn**	**15 17 45.8**	**-0.2**
BRY	**Bratogost**	**4.71**	**344**	⇑*i*Pn		**Pn**	**15 17 46.8**	**+0.2**
BRY				*e*Sn		**Sn**	**15 18 40.8**	**-0.8**
IDI	**Anoyia**	**4.78**	**129**	Pn		**Pn**	**15 17 47.7**	**+0.2**
	0.6nm,0.3s,baz=314,slow=16,SNR=6.3							
IDI				Sn		**Sn**	**15 18 43.7**	**+0.6**
	7.3nm,0.3s,baz=12,slow=22,SNR=7.6							
VAE	**Valguarnera**	**4.78**	**261**	Pn		**Pn**	**15 17 49.3**	**+1.7**
	1.0nm,0.3s,baz=301,slow=18,SNR=2.2							
VAE				Sn		**Sn**	**15 18 44.9**	**+1.6**
	3.0nm,0.3s,baz=88,slow=9.2,SNR=4.3							
RDO	**Rodhopi**	**4.86**	**54**	⇑*i*PN		**Pn**	**15 17 49.4**	**+0.8**
RDO	**Rodhopi**	**4.86**	**54**	⇑*i*Pn		**Pn**	**15 17 48.6**	**0.0**
SJES	**Sjenica**	**4.89**	**356**	*e*Pn		**Pn**	**15 17 50.1**	**+1.1**
SJES				*e*Sn		**Sn**	**15 18 44.9**	**-1.0**
URLA	**Izmir**	**4.91**	**88**	*e*P		**Pn**	**15 17 49.5**	**+0.2**
UPM	**Unac-Piva**	**4.93**	**348**	⇑*i*Pn		**Pn**	**15 17 50.6**	**+0.9**
UPM				*e*Sn		**Sn**	**15 18 46.8**	**-0.2**
PLE	**Pljevlja**	**4.99**	**352**	⇑*i*Pn		**Pn**	**15 17 51.9**	**+1.5**
PLE				*e*Sn		**Sn**	**15 18 48.3**	**-0.1**
KDAG	**Bornova**	**5.43**	**88**	*e*P		**Pn**	**15 17 59.7**	**+3.2**
GRUS	**Gruza**	**5.50**	**3**	*e*Pn		**Pn**	**15 17 58.0**	**+0.5**
GRUS				*e*Sn		**Sn**	**15 18 58.7**	**-2.4**
BBLS	**Bajina Basta -**	**5.52**	**353**	*e*Pn		**Pn**	**15 17 59.4**	**+1.7**
BBLS				*e*Sn		**Sn**	**15 19 01.1**	**-0.4**
DIVS	**Divcibare**	**5.71**	**357**	⇓*i*Pn		**Pn**	**15 17 59.3**	**-1.1**
DIVS				*e*Sn		**Sn**	**15 19 04.1**	**-2.1**
BTOK	**Tokmak**	**6.13**	**75**	*i*P		**Pn**	**15 18 09.1**	**+3.0**
KARP	**Karpathos**	**6.14**	**115**	*e*PN		**Pn**	**15 18 08.6**	**+2.3**
FGSL	**Fruska Gora**	**6.78**	**357**	⇓*i*Pn		**Pn**	**15 18 13.5**	**-1.5**
LTBQ	**Tobruq**	**6.96**	**154**	*i*P		**Pn**	**15 18 16.4**	**-1.1**
	SNR=102							
LTBQ				*e*S		**Sn**	**15 19 28.2**	**-8.8**
	47nm,0.6s,SNR=102							
GZR	**Gura Zlata**	**7.23**	**14**	⇑*i*P		**Pn**	**15 18 23.5**	**+2.3**
BZS	**Buzias**	**7.29**	**7**	⇓*i*P		**Pn**	**15 18 23.0**	**+1.1**
GOLH	**Golhisar**	**7.38**	**96**	*e*P		**Pn**	**15 18 29.1**	**+5.8**
LJBD	**Adjabya**	**7.46**	**181**	*i*P		**Pn**	**15 18 21.6**	**-2.7**
	SNR=101							
PKSM	**Moragy**	**7.92**	**351**	⇑*i*P		**Pn**	**15 18 28.7**	**-2.0**
ISP	**Isparta**	**8.03**	**91**	*e*Pn		**Pn**	**15 18 36.7**	**+4.6**
ISP	**Isparta**	**8.03**	**91**	*i*P		**Pn**	**15 18 36.2**	**+4.0**
BOJS	**Bojanci**	**8.06**	**334**	*e*Pn		**Pn**	**15 18 31.8**	**-0.8**
BOJS				*e*Sn		**Sn**	**15 20 01.0**	**-3.0**
MLR	**Muntele Rosu**	**8.23**	**29**	Pn		**Pn**	**15 18 36.2**	**+1.3**
MLR				LR		LR	15 21 45.6	
MLR	**Muntele Rosu**	**8.23**	**29**	Pn		**Pn**	**15 18 36.2**	**+1.3**
	0.1nm,0.3s,baz=227,slow=8.8,SNR=4.6							
MLR				LR		LR	15 21 45.6	
	comp=Z,274nm,18.1s,baz=39,slow=38							
ESKT	**Eskisehir**	**8.26**	**79**	*e*P		**Pn**	**15 18 38.1**	**+2.8**
CRES	**Cresnjev**	**8.27**	**336**	*e*Pn		**Pn**	**15 18 34.4**	**-1.1**
CRES				*e*Sn		**Sn**	**15 20 04.9**	**-4.4**
CEY	**Cerknica**	**8.56**	**331**	*e*Pn		**Pn**	**15 18 39.2**	**-0.2**
CEY				*e*Sn		**Sn**	**15 20 14.3**	**-2.1**
VRI	**Vrincioaia**	**8.85**	**30**	⇑*i*Pn		**Pn**	**15 18 48.7**	**+5.4**
OBKA	**Obir**	**9.18**	**334**	⇑*i*Pn		**Pn**	**15 18 46.7**	**-1.2**
OBKA				⇓*i*Sn		**Sn**	**15 20 28.9**	**-2.5**
KEST	**Kesra**	**9.19**	**257**	Pn		**Pn**	**15 18 50.3**	**+2.3**
	0.1nm,0.3s,baz=350,slow=16,SNR=3.6							
PSZ	**Piszkesteto**	**9.53**	**358**	⇓*i*P		**Pn**	**15 18 51.9**	**-0.9**
ANTO	**Ankara**	**9.78**	**77**	⇓*i*P		**Pn**	**15 18 48.9**	**-7.3**
VYHS	**Vyhne**	**10.16**	**354**	*e*PN		**Pn**	**15 18 57.2**	**-4.2**
VYHS				*e*SN		**Sn**	**15 20 50.4**	**-5.2**
MODS	**Modra-Piesok**	**10.23**	**348**	*e*PN		**Pn**	**15 19 03.1**	**+0.8**
MODS				*e*SN		**Sn**	**15 20 49.9**	**-7.3**
MOA	**Molln**	**10.45**	**337**	⇓*i*Pn		**Pn**	**15 19 03.8**	**-1.4**
MOA				⇓*i*Sn		**Sn**	**15 20 59.5**	**-3.0**
DAVOX	**Davos/Dischmat**	**11.39**	**321**	Pn		**Pn**	**15 19 18.6**	**+0.4**
	0.6nm,0.3s,baz=120,slow=23,SNR=6.8							
DAVOX				Sn		**Sn**	**15 21 24.5**	**-1.2**
	0.4nm,0.3s,baz=322,slow=17,SNR=3.2							
GERES	**GERESS Array B**	**11.51**	**337**	P		**Pn**	**15 19 17.4**	**-2.3**
GERES							15 21 27.0	
GERES	**GERESS Array B**	**11.51**	**337**	Pn		**Pn**	**15 19 17.4**	**-2.4**
	0.5nm,0.3s,baz=172,slow=12,SNR=11							
GERES				Sn		**Sn**	**15 21 27.0**	**-1.5**
	0.3nm,0.3s,baz=154,slow=23,SNR=3.1							
GERES				LR		LR	15 24 09.6	
	comp=Z,337nm,20.1s,baz=256,slow=40							
KHC	**Kasperske Hory**	**11.80**	**338**	*e*P		**Pn**	**15 19 21.8**	**-1.9**
KHC				*ex*		x	15 19 25.5	
MBDF	**Montbardon**	**11.98**	**306**	*e*P		**Pn**	**15 19 28.7**	**+2.5**
	24nm,1.1s							
MBDF	**Montbardon**	**11.98**	**306**	*e*P		**Pn**	**15 19 28.7**	**+2.5**
MBDF				pmax		pmax		
	comp=Z,12nm,1.1s							
MBDF	**Montbardon**	**11.98**	**306**	*e*P		**Pn**	**15 19 28.7**	**+2.5**
	comp=Z,12nm,1.1s							
PRU	**Pruhonice**	**12.32**	**342**	*e*P		**Pn**	**15 19 29.4**	**-1.5**
	comp=Z,8.5nm,1.1s							
LPG	**La Plagne**	**12.36**	**309**	*e*P		**Pn**	**15 19 33.5**	**+2.1**
MMAI	**Mount Meron Ar**	**13.35**	**109**	Pn		**Pn**	**15 19 43.2**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=300,slow=14,SNR=3.2							
HINF	**Hinteralfeld**	**13.62**	**318**	*e*P		**Pn**	**15 19 47.5**	**-1.2**
	comp=Z,4.3nm,0.5s							
HINF	**Hinteralfeld**	**13.62**	**318**	*e*P		**Pn**	**15 19 47.5**	**-1.2**
HINF				pmax		pmax		
	comp=Z,2.0nm,0.5s							
HINF	**Hinteralfeld**	**13.62**	**318**	*e*P		**Pn**	**15 19 47.5**	**-1.2**
	comp=Z,2.2nm,0.5s							
AKASG	**Malin Array Be**	**13.83**	**24**	Pn		**Pn**	**15 19 51.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=5.6							
CLL	**Collm**	**13.92**	**341**	*e*PP			15 20 01.0	
CLL				⇓*i*sPP			15 20 03.9	
	comp=Z,20nm,1.6s							
HAU	**Haudompre**	**14.01**	**318**	*e*P		**Pn**	**15 19 52.4**	**-1.5**
	comp=Z,8.1nm,0.6s							
HAU	**Haudompre**	**14.01**	**318**	*e*P		**Pn**	**15 19 52.4**	**-1.5**
	comp=Z,4.1nm,0.6s							
HAU	**Haudompre**	**14.01**	**318**	*e*P		**Pn**	**15 19 52.4**	**-1.5**
HAU				pmax		pmax		
	comp=Z,4.0nm,0.6s							
MALT	**Malatya**	**14.19**	**85**	*e*Pn		**Pn**	**15 20 02.0**	**+5.5**
	comp=Z,5.5nm,0.6s							
MALT	**Malatya**	**14.19**	**85**	*e*P		**Pn**	**15 20 02.0**	**+5.5**
MALT				pmax		pmax		
	comp=Z,5.0nm,0.6s							
MALT	**Malatya**	**14.19**	**85**	*e*Pn		**Pn**	**15 20 02.0**	**+5.5**
	comp=Z,5.5nm,0.6s							
MEZF	**Maizieres J'vi**	**14.99**	**317**	*e*P		**Pn**	**15 20 08.0**	**+0.6**
SSF	**Saint Saulge**	**15.09**	**310**	*e*P		**Pn**	**15 20 06.0**	**-2.7**
BAIF	**Baives**	**16.39**	**321**	*e*P		**Pn**	**15 20 27.3**	**+1.7**
	comp=Z,10.0nm,0.7s							
BAIF	**Baives**	**16.39**	**321**	*e*P		**Pn**	**15 20 27.3**	**+1.7**
BAIF				pmax		pmax		
	comp=Z,5.0nm,0.7s							
BAIF	**Baives**	**16.39**	**321**	*e*P		**Pn**	**15 20 27.3**	**+1.7**
	comp=Z,5.0nm,0.7s							
KIV	**Kislovodsk**	**17.69**	**65**	*e*P		**Pn**	**15 20 43.3**	**+1.4**
KIV				pmax		pmax		
	comp=Z,9.0nm,1.2s							
GOF	**Gofitskoye**	**18.17**	**61**	*e*P		**Pn**	**15 20 47.9**	**+0.1**
ZEI	**Tsey**	**18.40**	**69**	*e*P		**Pn**	**15 20 53.4**	**+2.8**
ESDC	**Sonseca Array**	**18.92**	**282**	P		**Pn**	**15 20 56.1**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=78,slow=12,SNR=11							
OBN	**Obninsk**	**20.00**	**28**	P		**P**	**15 21 04.0**	**-4.1**
OBN				*e*			15 21 13.3	
OBN				S		**S**	**15 24 51.0**	**-2.1**
OBN				MLR		MLR		
	comp=Z,200nm,19.0s,MS3.5							
VSU	**Vasula**	**20.51**	**10**	*c i*P		**P**	**15 21 13.9**	**+0.2**
MDT	**Midelt**	**21.02**	**262**	P		**P**	**15 21 20.0**	**+0.7**
	comp=Z,3.7nm,1.0s,mb3.6,baz=121,slow=6.4,SNR=4.7							
HFS	**Hagfors**	**22.17**	**351**	P		**P**	**15 21 32.9**	**+1.4**
HFS	**Hagfors**	**22.17**	**351**	P		**P**	**15 21 32.9**	**+1.4**
	comp=Z,4.8nm,0.5s,mb4.2,baz=151,slow=9.2,SNR=44							

EKA	**Eskdalemuir Ar**	**23.18**	**325**	P		**P**	**15 21 41.6**	**-0.6**
	comp=Z,1.9nm,0.7s,mb3.6,baz=126,slow=8.9,SNR=6.0							
FINES	**FINESS Array B**	**23.36**	**7**	*i* P		**P**	**15 21 42.9**	**-1.1**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.4s							
FINES	**FINESS Array B**	**23.36**	**7**	P		**P**	**15 21 42.9**	**-1.1**
	comp=Z,2.0nm,0.4s,mb3.9,baz=171,slow=10.0,SNR=32							
NOA	**NORSAR Array B**	**23.39**	**349**	P		**P**	**15 21 43.8**	**-0.5**
	comp=Z,1.1nm,0.5s,mb3.5,baz=157,slow=10,SNR=15							
NOA				LR		LR	15 31 08.3	
	comp=Z,86nm,21.8s,baz=25,slow=37							
KAF	**Kangasniemi**	**24.04**	**7**	*e*p		**P**	**15 21 50.4**	**-0.1**
	comp=Z,2.7nm,0.5s,mb3.9							
KAF	**Kangasniemi**	**24.04**	**7**	*e*P		**P**	**15 21 50.4**	**-0.1**
KAF				pmax		pmax		
	comp=Z,3.0nm,0.5s,mb4.0							
JOF	**Joensuu**	**25.45**	**12**	*e*p		**P**	**15 22 02.0**	**-1.4**
PRGR	**Permogore**	**28.03**	**26**	*e*P		**P**	**15 22 25.6**	**-1.0**
AKTK	**Aktyubinsk**	**29.16**	**53**	P		**P**	**15 22 35.8**	**-1.0**
AKTO	**Aktyubinsk**	**29.16**	**53**	P		**P**	**15 22 35.8**	**-1.0**
	comp=Z,1.2nm,0.6s,mb3.8,baz=234,slow=8.6,SNR=4.0							
TORD	**Torodi Ar. Bea**	**30.11**	**218**	P		**P**	**15 22 43.8**	**-1.6**
	comp=Z,1.6nm,1.0s,mb3.7,baz=37,slow=8.4,SNR=7.7							
ARCES	**ARCESS Array B**	**31.33**	**3**	P		**P**	**15 22 55.4**	**-0.4**
	comp=Z,3.6nm,0.9s,mb4.2,baz=189,slow=12,SNR=5.3							
BRVK	**Borovoye**	**37.02**	**50**	*e*P		**P**	**15 23 44.9**	**-0.4**
LIC	**Lamto**	**39.42**	**222**	*e*P		**P**	**15 24 04.7**	**-1.2**
NVS	**Novosibirsk**	**44.63**	**47**	*i* P		**P**	**15 24 47.9**	**-0.1**
MKAR	**Makanchi Array**	**45.31**	**59**	P		**P**	**15 24 51.2**	**-2.3**
MKAR	**Makanchi Array**	**45.31**	**59**	P		**P**	**15 24 51.3**	**-2.2**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.4s							
MKAR	**Makanchi Array**	**45.31**	**59**	P		**P**	**15 24 51.3**	**-2.2**
	comp=Z,2.5nm,0.4s,mb4.3,baz=280,slow=6.8,SNR=90							
ZALV	**Zalesovo Beam**	**45.65**	**48**	P		**P**	**15 24 54.2**	**-1.9**
	comp=Z,7.4nm,0.5s,mb4.9,baz=275,slow=8.2,SNR=37							
SCHQ	**Schefferville**	**58.22**	**317**	P		**P**	**15 26 29.5**	**-0.3**
	baz=56,slow=5.1							
SONM	**Songino Array**	**60.43**	**51**	P		**P**	**15 26 45.8**	**+0.6**
	comp=Z,1.0nm,0.9s,mb3.8,baz=266,slow=4.5,SNR=3.6							
BILL	**Bilibino**	**70.84**	**13**	P		**P**	**15 27 54.0**	**+1.9**
BILL				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb4.2							
YKA	**Yellowknife Ar**	**73.15**	**340**	P		**P**	**15 28 04.8**	**-1.2**
YKA	**Yellowknife Ar**	**73.15**	**340**	*i* P		**P**	**15 28 09.0**	**+3.0**
YKA	**Yellowknife Ar**	**73.15**	**340**	P		**P**	**15 28 04.8**	**-1.2**
	comp=Z,0.2nm,0.3s,mb3.5,baz=5.6,slow=26,SNR=4.8							
WRA	**Warramunga Arr**	**120.68**	**92**	PKP		PKPdf	15 35 28.1	0.0
	comp=Z,0.2nm,0.5s,baz=320,slow=2.1,SNR=6.9							
ASAR	**Alice Springs**	**122.33**	**96**	PKP		PKPdf	15 35 30.6	-0.7
	comp=Z,0.2nm,0.6s,baz=298,slow=1.6,SNR=7.6							

*ISCJB **25** 15:21:42.5±1.0,3724N±004×13663E±006,h6km±7km, mb3.6/1, Error ellipse: s-maj=8.0km s-min=6.9km az=34.7*
*JMA **25** 15:21:43.1,3722N×13665E,h6km±1km,M3.6*
JMA Felt II J1.
*IDC **25** 15:21:43.7±1.9,3674N×13660E,h0km,mb3.7/1, mb1 3.7/2,mb1mx3.2/20,mbtmp3.4/2,ML2.8/1,Error ellipse: s-maj=30.9km s-min=21.7km az=173.0*

ISC 25 15:21:43.3±0.9,3722N±004×13664E±006,h9km±6km,n9, σ0§88/15,mb3.6/1,2C-1D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**159**	⇑P	**Pg**	**15 21 49.5**	**0.0**
JJH				S	**Sg**	**15 21 54.1**	**+0.3**
JSZ	**Suzu**	**0.62**	**68**	⇓P	**Pg**	**15 21 54.8**	**-0.4**
JSZ				S	**Sg**	**15 22 03.3**	**0.0**
JHG	**Hegura jima**	**0.66**	**19**	P	**Pg**	**15 21 56.1**	**+0.1**
JTT	**Ttatey**	**0.83**	**138**	P	**Pg**	**15 21 59.0**	**-0.2**
JTT				S	**Sg**	**15 22 10.7**	**+0.7**
JKG	**Kaga**	**0.98**	**195**	⇑P	**Pg**	**15 22 01.7**	**-0.3**
JKG				S	**Sg**	**15 22 14.4**	**-0.3**
MAT	**Matsushiro**	**1.43**	**118**	P	**Pn**	**15 22 08.5**	**-0.8**
MAT				S	**Sn**	**15 22 27.4**	**-0.8**
MJAR	**Matsushiro Arr**	**1.43**	**118**	Pn	**Pn**	**15 22 09.4**	**+0.1**
	14nm,0.3s,baz=289,slow=17,SNR=61						
MJAR				Sn	**Sn**	**15 22 30.1**	**+1.8**
	28nm,0.3s,baz=279,slow=28,SNR=20						
KSRS	**Korea Array**	**6.95**	**275**	Pn	**Pn**	**15 23 27.5**	**+2.2**
	0.2nm,0.3s,baz=92,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**56.90**	**183**	P	**P**	**15 31 27.1**	**-1.5**
	0.5nm,0.7s,mb3.6,baz=359,slow=7.6,SNR=7.5						

IDC 25 15:29:59.7±8.9,2032S×16821E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.6/14,mbtmp3.6/4,ML3.3/1,MS3.0/1, Ms1 3.0/1,ms1mx2.7/27,Error ellipse: s-maj=167.7km s-min=46.4km az=106.0,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.40**	**223**	*e*P	Pn	15 30 36.9	-3.2
DZM				*e*S	Sn	15 31 08.0	-2.3
DZM	**Mont Dzumac**	**2.40**	**223**	Pn	Pn	15 30 38.5	-1.7
	7.1nm,0.3s,baz=55,slow=20,SNR=82						
DZM				Sn	Sn	15 31 12.5	+2.2
	14nm,0.3s,baz=277,slow=23,SNR=8.9						
DZM				LR	LR	15 31 32.8	
	comp=Z,291nm,19.0s,baz=316,slow=39						
STKA	**Stephens Creek**	**26.45**	**239**	P	P	15 35 39.5	+1.1
	1.9nm,0.9s,baz=82,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**31.77**	**265**	P	P	15 36 25.8	0.0
	0.3nm,0.7s,baz=90,slow=8.5,SNR=5.2						
ASAR	**Alice Springs**	**31.94**	**258**	P	P	15 36 27.2	-0.1
	0.7nm,0.7s,baz=93,slow=9.5,SNR=13						

*ISCJB **25** 15:39:55.8±1.4,3829N±006×203E±0.1,h10km,Error ellipse: s-maj=13.7km s-min=5.5km az=150.7*
*ATH **25** 15:39:55.8,38.14N×2034E,h14km±11km,MD3.6/3*
*NEIC **25** 15:39:55.8,38.14N×2034E,h14km,MD3.6(ATH),After ATH.*
*CSEM **25** 15:39:56.4±0.4,3828N×2035E,h2km,ML3.6,Error ellipse: s-maj=9.7km s-min=3.5km az=65.0*
*THE **25** 15:39:56.6,3833N×2040E,h3km,ML3.6*

ISC 25 15:39:55.8±1.5,3824N±006×203E±01,h10km,n11, σ0§93/14,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.24**	**106**	*e*PG	**Pg**	**15 40 00.5**	**-0.1**
VLS				*e*SG	**Sg**	**15 40 04.0**	**+0.1**
KFL	**Anninata**	**0.41**	**109**	*e*Pg	**Pg**	**15 40 03.4**	**-0.3**
RLS	**Riolos of Patr**	**0.94**	**101**	*e*PB	**Pb**	**15 40 13.2**	**-0.9**
SELA	**Sela**	**1.25**	**88**	*e*Pg	**Pg**	**15 40 18.1**	**-1.8**
SELA				*e*Sg	**Sg**	**15 40 36.0**	**-0.2**
IGT	**Igoumenitsa**	**1.29**	**1**	*e*Pg	**Pg**	**15 40 19.3**	**-1.2**
IGT				*e*Sg	**Sg**	**15 40 36.8**	**-0.4**
EVR	**Evrytania**	**1.36**	**60**	*e*PB	**Pb**	**15 40 22.8**	**+1.5**
PYL	**PYLOS**	**1.77**	**139**	*e*Pb	**Pb**	**15 40 28.3**	**+0.1**
AGG	**Agios Georgios**	**1.77**	**63**	*e*Pb	**Pn**	**15 40 27.1**	**+0.7**
THL	**Klokotos Trika**	**1.88**	**45**	*e*PN	**Pn**	**15 40 30.0**	**+2.1**
LTK	**Loutraki**	**2.11**	**95**	*e*Pn	**Pn**	**15 40 31.5**	**+0.4**
LIT	**Litokhoron**	**2.52**	**42**	*e*Pn	**Pn**	**15 40 37.0**	**+0.3**

*IDC **25** 15:57:00.2±7.0,1375S×167.12E,h177km±39km,mb4.1/6, mb1 4.2/6,mb1mx3.7/17,mbtmp4.1/6,Error ellipse: s-maj=79.8km s-min=40.8km az=105.0*
*ISCJB **25** 15:57:02.4±1.6,136S±02×1669E±02,h200km,mb4.2/7, Error ellipse: s-maj=31.1km s-min=24.1km az=39.7*
*NEIC **25** 15:57:03.5±1.3,1346S×16687E,h200km,mb4.3/5,Error ellipse: s-maj=26.0km s-min=20.9km az=201.0*

ISC 25 15:57:04.0±1.6,136S±02×1669E±02,h200km,n14, σ0§94/14,mb4.2/7,1C,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIDS	**Eidsvold**	**18.95**	**229**	*e*P	**P**	**16 01 10.9**	**+0.8**
	3.2nm,0.5s						
CTA	**Charters Tower**	**20.77**	**249**	⇑*i*P	**P**	**16 01 30.3**	**+0.6**
	4.5nm,0.6s						
CTA	**Charters Tower**	**20.77**	**249**	P	**P**	**16 01 29.9**	**+0.2**
	5.6nm,0.5s,baz=79,slow=13,SNR=10						
CTAO	**Charters Tower**	**20.77**	**249**	*e*P	**P**	**16 01 30.0**	**+0.3**
STKA	**Stephens Creek**	**29.48**	**228**	*e*P	**P**	**16 02 48.8**	**-0.6**
	4.7nm,0.3s,mb4.6						
STKA	**Stephens Creek**	**29.48**	**228**	*e*P	**P**	**16 02 49.4**	**-0.1**
	6.4nm,0.4s,mb4.6						

STKA	**Stephens Creek**	**29.48**	**228**	P		**P**	**16 02 48.5**	**-0.9**
	7.3nm,0.5s,mb4.6,baz=47,slow=8.5,SNR=61							
WRA	**Warramunga Arr**	**31.76**	**254**	P		**P**	**16 03 08.2**	**-1.4**
	2.3nm,0.5s,mb4.0,baz=86,slow=9.3,SNR=20							
ASAR	**Alice Springs**	**32.76**	**247**	P		**P**	**16 03 17.1**	**-1.1**
	7.3nm,0.5s,mb4.5,baz=74,slow=9.8,SNR=177							
ASAR				ScP		ScP	16 09 25.4	+1.5
	0.8nm,0.9s,baz=88,slow=2.7,SNR=5.1							
KAKA	**Kakadu**	**33.53**	**267**	*e*P		**P**	**16 03 25.3**	**+0.2**
	7.5nm,0.6s,mb4.4							
BATI	**Kupang**	**42.38**	**270**	P		**P**	**16 04 40.8**	**+1.7**
	15nm,0.6s,mb4.6,baz=139,slow=3.7,SNR=4.8							
VNDA	**Vanda**	**64.02**	**181**	P		**P**	**16 07 15.1**	**-0.6**
	0.8nm,0.4s,mb3.7							
SBA	**Scott Base**	**64.30**	**180**	*e*P		**P**	**16 07 18.5**	**+1.0**
MKAR	**Makanchi Array**	**96.10**	**317**	P		**P**	**16 10 08.5**	**-0.3**
	0.3nm,0.6s,mb3.7,baz=88,slow=5.9,SNR=7.2							

MAN 25 16:26:16,802N×12501E,h36km,mb4.1,ML2.9,MS2.6, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**0.15**	**158**	*e*P	Pn	16 26 24.4	+1.9
BUKP				*e*S	Sn	16 26 29.9	+3.0
CGP	**Cagayan de Oro**	**0.53**	**325**	⇑*i*P	Pn	16 26 29.4	+2.3
CGP				*i* S	Sn	16 26 37.6	+2.8
PAGZ	**Pagadian**	**1.62**	**264**	*e*P	Pn	16 26 42.8	+0.7
PAGZ				*e*S	Sn	16 27 03.4	+1.7

GUC 25 16:28:54.7±0.3,4534S×7307W,h6km±1km,ML4.1, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COYC	**Coyhaique**	**0.73**	**109**	*e*P	Pg	16 29 08.0	-0.8
COYC				*i* S	Sg	16 29 17.8	-0.5

*THE **25** 16:32:28.6,3828N×2039E,h14km,ML3.4*
*ISCJB **25** 16:32:29.2±0.7,3838N±003×2061E±006,h2km,Error ellipse: s-maj=7.3km s-min=4.3km az=170.9*
*CSEM **25** 16:32:29.9±0.3,3837N×2059E,h2km,MD3.6,Error ellipse: s-maj=6.6km s-min=3.4km az=93.0*
*ATH **25** 16:32:29.8,3834N×2060E,h9km±9km,MD3.6/3*
*NEIC **25** 16:32:29.9,3835N×2061E,h5km,MD3.6(ATH), ML3.4(THE),After ATH.*

ISC 25 16:32:29.6±0.7,3837N±004×2059E±008,h7km±9km,n13, σ0§89/17,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**181**	*e*PG	**Pg**	**16 32 33.1**	**-0.3**
VLS				*e*SG	**Sg**	**16 32 36.9**	**+0.9**
KFL	**Anninata**	**0.30**	**149**	*e*Pg	**Pg**	**16 32 36.2**	**+0.5**
RLS	**Riolos of Patr**	**0.75**	**114**	*e*PB	**Pb**	**16 32 44.2**	**-0.8**
RLS	

HABR	**Khabarovsk**	**19.42**	**258**	*e*P		**Pn**	**16 37 29.7**	**-2.9**
HABR				*e*			16 41 02.7	
TTA	**Tatalina**	**20.73**	**56**	*e*P		**P**	**16 37 45.9**	**+0.6**
	comp=N,3.3nm,0.8s							
TTA				*e*			16 37 54.7	
TTA	**Tatalina**	**20.73**	**56**	*e*P		**P**	**16 37 45.9**	**+0.6**
TTA				*e*			16 37 54.7	
TTA					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KLR	**Kul'dur**	**20.80**	**263**	*e*P		**P**	**16 37 48.1**	**+1.9**
TIXI	**Tiksi**	**21.16**	**329**	*e*P		**P**	**16 37 47.1**	**-2.8**
TIXI					pmax	pmax		
	comp=Z,15nm,1.0s							
TIXI					MLR	MLR		
	comp=Z,171nm,14.0s							
IMA2	**Indian Mountai**	**21.88**	**47**	*e*P		**P**	**16 37 57.7**	**0.0**
MJAR	**Matsushiro Arr**	**26.58**	**232**	P		**P**	**16 38 42.9**	**0.0**
	comp=Z,3.8nm,0.7s,mb4.0,baz=31,slow=8.2,SNR=12							
MJAR					pP	pP	16 38 51.7	-0.4
	comp=Z,5.3nm,0.8s,baz=30,slow=7.9,SNR=10							
BOD	**Bodaibo**	**26.79**	**294**	*e*P		**P**	**16 38 44.9**	**+0.3**
BOD					pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.6							
KSRS	**Korea Array**	**30.78**	**247**	P		**P**	**16 39 18.8**	**-1.5**
	comp=Z,1.0nm,0.8s,mb3.7,baz=37,slow=11,SNR=3.7							
TLY	**Talaya**	**34.87**	**288**	P		**P**	**16 39 55.6**	**-0.2**
YKA	**Yellowknife Ar**	**39.01**	**47**	P		**P**	**16 40 31.5**	**+0.7**
	comp=Z,0.3nm,0.6s,mb3.2,baz=300,slow=8.2,SNR=5.5							
CD2	**Chengdu**	**48.72**	**265**	*e*P		**P**	**16 41 50.3**	**+1.1**
MKAR	**Makanchi Array**	**48.87**	**295**	P		**P**	**16 41 49.0**	**-1.1**
MKAR	**Makanchi Array**	**48.87**	**295**	P		**P**	**16 41 49.0**	**-1.2**
	comp=Z,0.2nm,0.8s,mb3.4,baz=54,slow=5.7,SNR=5.8							
NVAR	**Mina Array Bea**	**52.40**	**75**	P		**P**	**16 42 16.8**	**0.0**
	comp=Z,0.1nm,0.3s,mb3.2,baz=300,slow=7.2,SNR=3.2							
ARU	**Arti**	**52.51**	**318**	P		**P**	**16 42 26.4**	**+9.0**
PDAR	**Pinedale Array**	**53.80**	**66**	P		**P**	**16 42 27.6**	**+0.6**
	comp=Z,0.5nm,0.8s,mb3.5,baz=343,slow=3.6,SNR=3.9							
PDAR					pP	pP	16 42 36.2	-0.6
	comp=Z,0.7nm,0.7s,baz=327,slow=3.6,SNR=5.0							
EKS2	**Erkin-Say**	**56.06**	**297**	*e*P		**P**	**16 42 43.7**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.1							
EKS2				*e*		pP	16 42 52.4	-0.7
NB2	**NORSAR Subarra**	**60.88**	**345**	P		pP	16 43 24.7	-1.8
	comp=Z,0.7nm,0.6s,baz=17,slow=6.9							
NOA	**NORSAR Array B**	**60.88**	**345**	P		**P**	**16 43 16.0**	**-0.7**
NOA					pP	pP	16 43 25.0	-1.5
NOA	**NORSAR Array B**	**60.88**	**345**	P		**P**	**16 43 16.0**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.7,baz=14,slow=8.1,SNR=2.4							
NOA					pP	pP	16 43 25.0	-1.5
	comp=Z,1.9nm,0.9s,baz=18,slow=6.8,SNR=6.4							
WRA	**Warramunga Arr**	**80.24**	**208**	P		**P**	**16 45 16.1**	**+1.0**
WRA	**Warramunga Arr**	**80.24**	**208**	P		**P**	**16 45 14.7**	**-0.4**
WRA				*PP		pP	16 45 24.5	-0.6
WRA					pmax	pmax		
	comp=N,1.0nm,0.8s							
WRA	**Warramunga Arr**	**80.24**	**208**	P		**P**	**16 45 14.7**	**-0.4**
	comp=N,0.2nm,0.5s,mb3.3,baz=20,slow=6.0,SNR=8.4							
WRA					pP	pP	16 45 24.5	-0.7
	comp=N,0.6nm,0.8s,baz=16,slow=5.7,SNR=4.6							
ASAR	**Alice Springs**	**83.91**	**208**	P		**P**	**16 45 34.6**	**+0.4**
ASAR	**Alice Springs**	**83.91**	**208**	P		**P**	**16 45 34.3**	**+0.1**
ASAR					pmax	pmax		
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**83.91**	**208**	P		**P**	**16 45 34.3**	**+0.1**
	comp=Z,1.2nm,0.9s,mb4.0,baz=12,slow=5.3,SNR=10							

*IDC **25** 16:33:51.5±3.2,2062S×16902E, h0km, mb4.0/6, mb1 4.1/7, mb1mx4.0/15, mbtmp4.0/7, ML3.6/1, MS3.6/3, Ms1 3.6/3, ms1mx2.9/20, Error ellipse: s-maj=88.5km s-min=23.8km az=133.0*

*NEIC **25** 16:33:55.7±1.3,2084S×16920E, h35km, mb4.0/1, Error ellipse: s-maj=46.8km s-min=17.1km az=148.0*

ISC 25 16:33:55.8±2.4, 208S±03×1692E±03, h35km, n25, σ1§07/12, mb3.9/6, MS3.5/2, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.83**	**243**	*e*P	**Pn**	**16 34 37.1**	**-1.5**
DZM				*e*S	**Sn**	**16 35 10.6**	**-0.8**
DZM	**Mont Dzumac**	**2.83**	**243**	Pn	**Pn**	**16 34 37.2**	**-1.3**
	9.4nm,0.3s,baz=64,slow=18,SNR=79						
DZM				Sn	**Sn**	**16 35 12.9**	**+1.4**
	70nm,0.3s,baz=150,slow=19,SNR=12						
URZ	**Urewera**	**18.72**	**160**	LR	LR	16 44 09.1	
	comp=Z,171nm,20.6s,baz=343,slow=33						
CTA	**Charters Tower**	**21.47**	**268**	P	**P**	**16 38 42.2**	**+0.7**
	2.8nm,0.8s,mb3.6,baz=100,slow=15,SNR=2.4						
CTA				LR	LR	16 46 29.7	
	comp=Z,148nm,18.7s,MS3.4,baz=47,slow=36						
CTAO	**Charters Tower**	**21.47**	**268**	*e*Pn	**P**	**16 38 44.0**	**+2.5**
	5.4nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**26.98**	**240**	P	**P**	**16 39 35.7**	**+1.3**
STKA				LR	LR	16 50 45.9	
STKA	**Stephens Creek**	**26.98**	**240**	P	**P**	**16 39 35.3**	**+0.9**
	4.6nm,1.1s,mb3.9,baz=95,slow=14,SNR=4.1						
STKA				LR	LR	16 50 45.9	
	comp=Z,129nm,19.1s,MS3.5,baz=31,slow=38						
WRA	**Warramunga Arr**	**32.62**	**265**	P	**P**	**16 40 23.3**	**-1.2**
	0.4nm,0.5s,mb3.6,baz=90,slow=8.5,SNR=14						
ASAR	**Alice Springs**	**32.71**	**258**	P	**P**	**16 40 25.1**	**-0.1**
	2.0nm,0.8s,mb4.1,baz=82,slow=9.0,SNR=27						
PPT	**Papeete**	**39.03**	**93**	*e*LR	LR	16 52 05.8	
	98nm,25.0s						
MJAR	**Matsushiro Arr**	**64.08**	**333**	P	**P**	**16 44 25.7**	**-0.6**
	1.5nm,0.8s,mb4.1,baz=162,slow=7.3,SNR=7.6						
SONM	**Songino Array**	**88.41**	**323**	P	**P**	**16 46 44.7**	**+0.6**
	1.0nm,0.8s,mb4.1,baz=126,slow=3.8,SNR=5.5						
BRG	**Berggiesshubel**	**144.22**	**333**	*e*P	PKPdf	16 53 25.9	-1.9
	6.5nm,1.0s						
CLL	**Collm**	**144.28**	**334**	*e*PKPdf	PKPdf	16 53 26.0	-1.9
CLL				*ep*PKPdf	pPKPdf	16 53 35.0	-4.4
KHC	**Kasperske Hory**	**145.66**	**331**	*e*PKP	PKPdf	16 53 30.5	+0.1
KHC				*ep*PKP	pPKPdf	16 53 39.5	-2.3
GERES	**GERESS Array B**	**145.81**	**331**	PKPbc	PKPbc	16 53 31.3	+0.1
	2.8nm,0.8s,baz=48,slow=4.0,SNR=16						
GRA1	**Grafenberg Arr**	**146.25**	**334**	*e*PKP	PKPdf	16 53 32.6	+1.2
GRF	**Grafenberg Arr**	**146.25**	**334**	*e*PKP	PKPdf	16 53 32.6	+1.2
BAIF	**Baives**	**148.45**	**341**	*e*PKP1	PKPbc	16 53 37.5	-1.1
CDF	**Champ du Feu**	**148.83**	**336**	*e*PKP1	PKPbc	16 53 37.7	-1.9
	16nm,0.9s						
FLN	**La Foliniere**	**150.88**	**346**	*e*PKP1	PKPbc	16 53 42.4	-2.2
LOR	**Lormes**	**151.02**	**339**	*e*PKP1	PKPbc	16 53 43.0	-1.9
SSF	**Saint Saulge**	**151.31**	**339**	*e*PKP1	PKPbc	16 53 43.8	-1.8
	3.9nm,0.8s						
LPG	**La Plagne**	**151.42**	**334**	*e*PKP1	PKPbc	16 53 44.7	-1.2
	12nm,0.9s						
AVF	**Avril sur Loir**	**151.60**	**339**	*e*PKP1	PKPbc	16 53 44.0	-2.3
	16nm,1.1s						

*CSEM **25** 16:55:55.5±0.1, 40.19N×2782E, h8km, MD2.7, Error ellipse: s-maj=1.7km s-min=1.3km az=110.0*

*ISK **25** 16:55:55.4, 40.18N×2779E, h10km, MD2.7*

*ISCJB **25** 16:55:56.0±0.5, 4021N±002×2779E±004, h4km±5km, Error ellipse: s-maj=4.8km s-min=4.0km az=13.7*

*DDA **25** 16:55:57.0, 4020N×2779E, h1km±1km, Md2.9*

ISC 25 16:55:56.4±0.4, 4021N±003×2779E±004, h9km±4km, n19, σ0§59/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDC	**Edincik**	**0.14**	**23**	*i* PG	**Pg**	**16 55 59.8**	**+0.2**
EDC				*i* SG	**Sg**	**16 56 02.5**	**+0.8**
BNT	**Bandirma**	**0.17**	**35**	*i* PG	**Pg**	**16 55 59.9**	**-0.1**
BNT				*i* SG	**Sg**	**16 56 03.3**	**+0.8**
MRMT	**Marmara Adasi**	**0.42**	**339**	*e*PG	**Pg**	**16 56 03.9**	**-0.6**
KCT	**Karacabey**	**0.44**	**83**	*e*PG	**Pg**	**16 56 04.4**	**-0.5**
KCT				*e*SG	**Sg**	**16 56 10.8**	**+0.2**
BTOK	**Tokmak**	**0.49**	**158**	*i* P	**Pg**	**16 56 05.6**	**-0.2**
BTOK				*i* S	**Sg**	**16 56 12.3**	**+0.1**
BALB	**Balikesir**	**0.58**	**173**	*e*PG	**Pg**	**16 56 06.8**	**-0.7**
BALB				*e*SG	**Sg**	**16 56 14.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**0.67**	**316**	*e*PG	**Pg**	**16 56 09.2**	**0.0**
SART	**Tekirdag**	**0.67**	**316**	*i* P	**Pg**	**16 56 09.8**	**+0.6**
MFT	**Murefte**	**0.69**	**326**	*e*PG	**Pg**	**16 56 09.1**	**-0.6**
CTT	**Catalca**	**1.05**	**27**	*e*PN	**Pn**	**16 56 17.0**	**-0.3**
GEMT	**Gemlik**	**1.09**	**78**	*e*PN	**Pn**	**16 56 17.1**	**-0.7**
AYVA	**Ayvalik**	**1.24**	**224**	*i* P	**Pn**	**16 56 19.4**	**-0.5**
AYVA				*i* S	**Sb**	**16 56 36.6**	**+0.6**
YLV	**Yalova**	**1.26**	**73**	*e*PN	**Pn**	**16 56 19.9**	**-0.2**
ISK	**Istanbul-Kandi**	**1.29**	**48**	*e*PN	**Pn**	**16 56 20.4**	**-0.1**
IZI	**Iznik**	**1.29**	**84**	*e*PN	**Pn**	**16 56 20.0**	**-0.6**
AKHS	**Akhisar**	**1.33**	**179**	*i* P	**Pn**	**16 56 21.3**	**+0.1**
AKHS				*i* S	**Sb**	**16 56 39.1**	**+0.5**
BOZC	**Bozcaada**	**1.39**	**255**	*i* P	**Pn**	**16 56 21.8**	**-0.1**
BOZC				*i* S	**Sb**	**16 56 40.5**	**+0.3**
HRT	**Hereke**	**1.56**	**66**	*e*PN	**Pn**	**16 56 23.9**	**-0.3**
GDZ	**Gediz**	**1.72**	**130**	*i* P	**Pn**	**16 56 27.4**	**+1.0**
GDZ				*i* S	**Sn**	**16 56 51.8**	**+3.2**

*ISCJB **25** 17:05:10.6±0.9, 3837N±003×2026E±006, h2km±5km, mb3.5/5, Error ellipse: s-maj=8.3km s-min=3.7km az=151.2*

*ATH **25** 17:05:11.6, 3830N×2025E, h8km±2km, MD3.6/5*

*NEIC **25** 17:05:11.7, 3830N×2025E, h8km, mb3.6/1, MD3.6(ATH), After ATH.*

*CSEM **25** 17:05:12.0±0.3, 3832N×2024E, h20km, MD3.6, Error ellipse: s-maj=7.2km s-min=3.2km az=49.0*

*THE **25** 17:05:13.4, 3839N×2044E, h3km, ML3.8*

*IDC **25** 17:05:13.1±3.2, 3875N×2068E, h0km, mb3.4/5, mb1 3.4/7, mb1mx3.3/21, mbtmp3.4/7, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=71.2km s-min=19.7km az=49.0*

*NAO **25** 17:05:43.5, 4182N×2253E, h33km, mb3.3*

ISC 25 17:05:12.1±0.8, 3837N±003×2031E±005, h3km±5km, n37, σ1§14/47, mb3.5/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.29**	**131**	*e*PG	**Pg**	**17 05 18.0**	**+0.3**
VLS				*e*SG	**Sg**	**17 05 22.3**	**+0.9**
KFL	**Anninata**	**0.46**	**125**	*e*Pg	**Pg**	**17 05 20.9**	**0.0**
KFL				*e*Sg	**Sg**	**17 05 26.7**	**0.0**
RLS	**Riolos of Patr**	**0.96**	**109**	*e*PG	**Pg**	**17 05 30.1**	**-0.4**
RLS				*e*SB	**Sb**	**17 05 44.0**	**-0.5**
IGT	**Igoumenitsa**	**1.16**	**1**	*e*Pg	**Pg**	**17 05 34.4**	**0.0**
IGT				*e*Sg	**Sg**	**17 05 51.6**	**+2.2**
SELA	**Sela**	**1.25**	**94**	*e*Pg	**Pg**	**17 05 34.6**	**-1.4**
SELA				*e*Sg	**Sg**	**17 05 51.9**	**-0.2**
EVR	**Evrytania**	**1.29**	**65**	*e*PN	**Pn**	**17 05 36.5**	**-0.6**
JAN	**Janina**	**1.35**	**18**	*e*PB	**Pb**	**17 05 39.1**	**+1.0**
KEK	**Kerkira**	**1.40**	**344**	*e*PG	**Pg**	**17 05 38.8**	**-0.2**
MEV	**Metsovon**	**1.58**	**26**	*e*Pg	**Pg**	**17 05 41.3**	**-1.2**
MEV				*e*Sg	**Sg**	**17 06 02.7**	**-0.3**
AGG	**Agios Georgios**	**1.71**	**67**	*e*Pg	**Pn**	**17 05 42.4**	**-0.4**
AGG				*e*Sg	**Sg**	**17 06 05.0**	**-2.0**
ITM	**Ithomi**	**1.75**	**132**	*e*PN	**Pn**	**17 05 44.3**	**+1.0**
THL	**Klokotos Trika**	**1.78**	**47**	*e*PN	**Pn**	**17 05 45.4**	**+1.6**
THL				*e*SN	**Sg**	**17 06 11.3**	**+1.9**
LTK	**Loutraki**	**2.12**	**99**	*e*Pn	**Pn**	**17 05 48.6**	**+0.2**
KZN	**Kozani**	**2.24**	**30**	*e*PN	**Pb**	**17 05 53.0**	**-0.2**
DID	**Didima**	**2.47**	**110**	*e*Pn	**Pn**	**17 05 53.5**	**+0.3**
DID	**Didima**	**2.47**	**110**	*e*Pn	**Pn**	**17 05 53.5**	**+0.3**
FNA	**Florina**	**2.55**	**18**	*e*Pn	**Pn**	**17 05 55.1**	**+0.7**
BIA	**Bitola**	**2.76**	**16**	*e*Pn	**Pb**	**17 06 01.0**	**-1.1**
BIA	**Bitola**	**2.76**	**16**	*e*Pn	**Pb**	**17 06 00.9**	**-1.2**
OHR	**Ohrid**	**2.76**	**8**	*e*Pn	**Pn**	**17 05 57.9**	**+0.6**
OHR				*e*Sn	**Sn**	**17 06 31.9**	**+0.7**
TIP	**Timpagrande**	**2.89**	**287**	P	**Pn**	**17 06 02.3**	**+3.2**
KRUS	**Krusevo**	**3.08**	**13**	*e*Pn	**Pn**	**17 06 03.0**	**+1.4**
KRUS				*e*Sn	**Sn**	**17 06 40.1**	**+1.1**
VAY	**Valandovo**	**3.42**	**30**	*e*Pn	**Pg**	**17 06 18.1**	**+0.4**
STIP	**Stip**	**3.62**	**23**	*e*Pn	**Pn**	**17 06 09.5**	**+0.5**
IDI	**Anoyia**	**4.79**	**129**	Pn	**Pn**	**17 06 27.2**	**+2.0**
	0.1nm,0.3s,baz=360,slow=19,SNR=2.2						
IDI				Sn	**Sn**	**17 07 21.9**	**+0.7**
	0.9nm,0.3s,baz=319,slow=23,SNR=7.9						
DIVS	**Divcibare**	**5.73**	**358**	Pn	**Pn**	**17 06 36.7**	**-1.3**
BOJS	**Bojanci**	**8.06**	**334**	*e*Pn	**Pn**	**17 07 10.1**	**0.0**
CRES	**Cresnjev**	**8.28**	**336**	*e*Pn	**Pn**	**17 07 12.2**	**-0.8**
DAVOX	**Davos/Dischmat**	**11.38**	**321**	LR	LR	17 12 01.9	
	comp=Z,118nm,21.4s,baz=256,slow=36						
GERES	**GERESS Array B**	**11.51**	**338**	Pn	**Pn**	**17 07 55.3**	**-1.9**
	0.2nm,0.3s,baz=144,slow=14,SNR=4.3						
HFS	**Hagfors**	**22.19**	**351**	P	**P**	**17 10 08.1**	**-1.0**
	1.7nm,0.6s,mb3.6,baz=161,slow=9.2,SNR=4.0						
FINES	**FINESS Array B**	**23.38**	**7**	P	**P**	**17 10 18.4**	**-3.3**
	0.7nm,0.7s,mb3.2,baz=178,slow=7.0,SNR=3.5						
NB2	**NORSAR Subarra**	**23.40**	**349**	P	**P**	**17 10 17.7**	**-4.3**
	comp=Z,2.0nm,1.1s,mb3.5,baz=155,slow=11						
NOA	**NORSAR Array B**	**23.40**	**349**	P	**P**	**17 10 21.6**	**-0.4**
	comp=Z,0.5nm,0.7s,mb3.1,baz=166,slow=11,SNR=4.1						
NOA	**NORSAR Array B**	**23.40**	**349**	P	**P**	**17 10 21.5**	**-0.5**
MKAR	**Makanchi Array**	**45.34**	**59**	P	**P**	**17 13 29.1**	**-2.2**
	comp=Z,0.3nm,0.5s,mb3.4,baz=278,slow=7.0,SNR=8.2						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**17 13 31.5**	**-2.5**
	comp=Z,0.8nm,0.4s,mb4.0,baz=275,slow=8.9,SNR=5.0						

*ISCJB **25** 17:07:48.5±1.3, 3836N×005×2032E±009, h10km±6km, Error ellipse: s-maj=12.6km s-min=6.0km az=150.7*

*CSEM **25** 17:07:48.5±0.3, 3834N×2028E, h2km, MD3.4, Error ellipse: s-maj=7.4km s-min=2.9km az=59.0*

*THE **25** 17:07:49.5, 3839N×2035E, h5km, ML3.6*

*ATH **25** 17:07:49.8, 3825N×2036E, h16km±3km, MD3.4/4*

*NEIC **25** 17:07:49.7, 3825N×2035E, h16km, MD3.4(ATH), After ATH.*

ISC 25 17:07:49.8±1.1, 3836N±005×2037E±008, h12km±6km, n13, σ1§17/18, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.25**	**137**	*e*PB	**Pg**	**17 07 54.5**	**-0.5**
KFL	**Anninata**	**0.41**	**128**	*e*Pg	**Pg**	**17 07 58.2**	**+0.2**
KFL				*e*Sg	**Sg**	**17 08 04.4**	**+0.9**
RLS	**Riolos of Patr**	**0.91**	**109**	*e*PN	**Pn**	**17 08 06.9**	**-1.6**
RLS				*e*SN	**Sn**	**17 08 20.3**	**-1.3**
IGT	**Igoumenitsa**	**1.17**	**358**	*e*Pg	**Pg**	**17 08 10.7**	**-1.6**
IGT				*e*Sg	**Sg**	**17 08 27.6**	**0.0**
SELA	**Sela**	**1.20**	**94**	*e*Pg	**Pg**	**17 08 12.0**	**-0.9**
SELA				*e*Sg	**Sg**	**17 08 29.9**	**+1.5**
EVR	**Evrytania**	**1.25**	**63**	*e*PN	**Pn**	**17 08 14.0**	**+0.8**
JAN	**Janina**	**1.35**	**16**	*e*PN	**Pn**	**17 08 17.1**	**+2.6**
KEK	**Kerkira**	**1.42**	**342**	*e*PN	**Pn**	**17 08 18.5**	**+3.0**
AGG	**Agios Georgios**	**1.67**	**66**	*e*Pb	**Pb**	**17 08 18.7**	**-1.8**
AGG				*e*Sb	**Sb**	**17 08 41.6**	**+0.2**
ITM	**Ithomi**	**1.70**	**133**	*e*PN	**Pn**	**17 08 19.9**	**+0.5**
LTK	**Loutraki**	**2.07**	**99**	*e*Pn	**Pn**	**17 08 24.2**	**-0.2**
DID	**Didima**	**2.42**	**110**	*e*Pn	**Pn**	**17 08 29.9**	**+0.6**
FNA	**Florina**	**2.54**	**17**	*e*Pn	**Pn**	**17 08 30.8**	**-0.1**

*ATH **25** 17:14:00.0, 3820N×2025E, h10km±1km, MD3.5/7*

*NEIC **25** 17:14:00.0, 3820N×2026E, h10km, MD3.5(ATH), After ATH.*

*ISCJB **25** 17:14:01.7±0.8, 3834N±004×2039E±008, h10km, Error ellipse: s-maj=9.7km s-min=4.4km az=150.1*

*CSEM **25** 17:14:02.0±0.1, 3831N×2036E, h2km, MD3.5, Error ellipse: s-maj=4.3km s-min=2.0km az=50.0*

*THE **25** 17:14:02.6, 3837N×2050E, h1km, ML3.5*

ISC 25 17:14:02.6±0.8, 3834N±004×2043E±007, h10km, n18, σ1§08/21, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.21**	**143**	*i* PG	**Pg**	**17 14 06.0**	**-1.0**
VLS				*e*SG	**Sg**	**17 14 09.3**	**-0.6**
KFL	**Anninata**	**0.37**	**129**	*e*Pg	**Pg**	**17 14 08.9**	**-1.0**
RLS	**Riolos of Patr**	**0.86**	**109**	*e*PG	**Pg**	**17 14 18.1**	**-1.2**
RLS				*e*SB	**Sb**	**17 14 32.1**	**+0.7**
SELA	**Sela**	**1.15**	**93**	*e*Pg	**Pg**	**17 14 23.1**	**-1.7**
IGT	**Igoumenitsa**	**1.19**	**356**	*e*Pg	**Pg**	**17 14 24.4**	**-1.1**
IGT				*e*Sg	**Sg**	**17 14 41.0**	**0.0**
EVR	**Evrytania**	**1.22**	**62**	*e*PG	**Pg**	**17 14 26.3**	**+0.2**
JAN	**Janina**	**1.35**	**14**	*e*PB	**Pb**	**17 14 28.7**	**+0.7**
KEK	**Kerkira**	**1.45**	**340**	*e*PG	**Pg**	**17 14 28.9**	**-1.6**
AGG	**Agios Georgios**	**1.64**	**65**	*e*Pg	**Pn**	**17 14 30.3**	**-1.1**
ITM	**Ithomi**	**1.66**	**134**	*e*PB	**Pn**	**17 14 32.1**	**+0.3**
THL	**Klokotos Trika**	**1.74**	**45**	*e*PN	**Pb**	**17 14 35.0**	**+0.4**
LTK	**Loutraki**	**2.02**	**98**	*e*Pb	**Pn**	**17 14 36.9**	**+0.1**
NEO	**Neokhori**	**2.38**	**65**	*e*PN	**Pn**	**17 14 44.5**	**+2.8**
VLI	**Veliai**	**2.57**	**128**	*e*PB	**Pn**	**17 14 44.0**	**-0.3**
PTL	**Penteli**	**2.72**	**95**	*e*PN	**Pn**	**17 14 47.5**	**+1.1**
TIP	**Timpagrande**	**2.99**	**287**	P	**Pn**	**17 14 51.2**	**+1.2**
VAM	**Vamos**	**4.21**	**133**	P	**Pn**	**17 15 08.4**	**+1.6**
SMG	**Samos**	**5.10**	**95**	P	**Pn**	**17 15 20.6**	**+1.6**

JMA 25 17:14:42.3±0.1, 3722N×13661E, h3km±2km, M1.5, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**155**	P	**Pg**	**17 14 49.0**	**+0.5**
JJH				S	**Sg**	**17 14 54.1**	**+1.4**
JKG	**Kaga**	**0.97**	**193**	P	**Pg**	**17 15 01.0**	**+0.2**

*NIED **25** 17:14:00, 37.10N×136.70E, h8km, Mw3.9 Best double couple: M0 7.47000×10^14 NP1:φs=350.00000°, δ29.00000°, λ68.00000°. NP2:φs=195.00000°, δ63.00000°, λ102.00000°.*

*ISCJB **25** 17:14:53.8±0.8, 37.16N±003×1366 9E±004, h11km±5km, mb3.7/13, Error ellipse: s-maj=6.0km s-min=4.8km az=160.8*

*JMA **25** 17:14:54.2, 37.16N×136.67E, h12km, M4.2 Broadband fault plane solution: P waves. NP1:φs=4.00000°, δ26.00000°, λ75.00000°. NP2:φs=200.00000°, δ65.00000°, λ97.00000°. Principal axes: T Plg69.0000°, Azm125.0000°; N Plg7.0000°, Azm17.0000°; P Plg20.0000°, Azm285.0000°;*

JMA Felt III J1.

*NEIC **25** 17:14:54.4±1.6, 3692N×13669E, h15km±10km, mb4.0/2 Error ellipse: s-maj=11.2km s-min=8.6km az=195.0*

NEIC Recorded [3 JMA] in Ishikawa and [1 JMA] in Fukui and Toyama Prefectures.

*IDC **25** 17:14:56.0±2.4, 3696N×13676E, h26km±17km, mb3.6/10, mb1 3.8/12, mb1mx3.7/21, mbtmp3.6/12, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.5/21, Error ellipse: s-maj=18.3km s-min=15.7km az=37.0*

*MOS **25** 17:14:57.0±0.9, 3701N×13683E, h50km, mb4.0/3, Error ellipse: s-maj=26.6km s-min=12.2km az=128.0*

ISC 25 17:14:54.7±0.5, 3713N±003×13673E±004, h13km±3km, n33, σ1§04/40, mb3.7/13, 2C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.21**	**169**	P	**Pg**	**17 14 59.5**	**+0.3**
JJH				S	**Sg**	**17 15 03.3**	**+1.0**
JSZ	**Suzu**	**0.60**	**58**	||P	**Pg**	**17 15 06.0**	**-0.3**
JSZ				S	**Sg**	**17 15 14.4**	**+0.2**
JTT	**Ttatey**	**0.71**	**137**	||P	**Pg**	**17 15 08.8**	**+0.3**
JTT				S	**Sg**	**17 15 19.7**	**+1.8**
JHG	**Hegura jima**	**0.73**	**12**	||P	**Pg**	**17 15 08.0**	**-0.9**
JHG				S	**Sg**	**17 15 17.8**	**-0.7**
JKG	**Kaga**	**0.91**	**201**	↑↑P	**Pg**	**17 15 11.3**	**-1.0**
JKG				S	**Sg**	**17 15 23.9**	**-0.2**
JGN	**Niukaw**	**1.02**	**152**	↑↑P	**Pb**	**17 15 13.6**	**-0.6**
JGN				S	**Sb**	**17 15 27.9**	**+0.4**
MAJO	**Matsushiro**	**1.32**	**116**	*e*Pn	**Pn**	**17 15 17.7**	**-1.1**
MAT	**Matsushiro**	**1.32**	**116**	P	**Pn**	**17 15 18.1**	**-0.7**
MAT				S	**Sb**	**17 15 37.1**	**+0.9**
MJAR	**Matsushiro Arr**	**1.32**	**116**	Pg	**Pg**	**17 15 19.1**	**-1.0**
	28nm,0.3s,baz=293,slow=16,SNR=265						
MJAR				Lg		17 15 37.6	
	57nm,0.3s,baz=281,slow=27,SNR=16						
JNU	**Nakatsue**	**6.24**	**232**	Pn	**Pn**	**17 16 23.3**	**-3.2**
	0.7nm,0.3s,baz=41,slow=5.5,SNR=5.9						
KSRS	**Korea Array**	**7.03**	**275**	Pn	**Pn**	**17 16 37.5**	**+0.2**
	0.5nm,0.3s,baz=90,slow=14,SNR=13						
KSRS				LR	LR	17 19 12.5	
	comp=Z,132nm,19.3s,baz=338,slow=36						
KLR	**Kul'dur**	**12.62**	**345**	*e*P	**Pn**	**17 17 57.8**	**+4.0**
KLR				MLR	MLR		
	comp=Z,1μm,12.5s						
ULN	**Ulaanbaatar**	**24.23**	**306**	*e*P	**P**	**17 20 11.4**	**+0.4**
	comp=Z,4.5nm,1.0s,mb3.9						
ULN	**Ulaanbaatar**	**24.23**	**306**	*e*P	**P**	**17 20 11.4**	**+0.4**
ULN				pmax	pmax		
	comp=Z,4.0n

JACH	**Jahuel**	**0.96**	**210**	*e*P	Pn	17 25 03.1	+0.4
CMCH	**Combarbala**	**1.07**	**309**	⇓*i*P	Pn	17 25 04.1	+0.2
CMCH				*i* S	Sn	17 25 22.8	+0.9
CMCH	**Combarbala**	**1.07**	**309**	⇓*i*P	Pn	17 25 04.1	+0.2
CMCH				*i* S	Sn	17 25 22.8	+0.9
CMCH				AML	AML	17 25 24.4	
	comp=E,5μm,1.0s						
CHNG	**Los Chungos**	**1.26**	**268**	⇑*i*P	Pn	17 24 50.0	-16
CHNG				*i* S	Sn	17 25 09.7	-15
PACH	**Papudo**	**1.38**	**240**	*e*P	Pn	17 25 07.3	+0.3
PACH				*i* S	Sn	17 25 27.7	+0.2
ROCH	**El Roble**	**1.39**	**217**	*e*P	Pn	17 25 08.0	+0.9
ROCH				*i* S	Sn	17 25 29.2	+1.4
PEL	**Peldehue**	**1.40**	**203**	*e*P	Pn	17 25 07.7	+0.5
PEL				*i* S	Sn	17 25 28.4	+0.4
PEL				AML	AML	17 25 29.3	
	comp=N,1μm,0.3s						
FCH	**Farellones**	**1.49**	**189**	⇑*i*P	Pn	17 25 09.2	+1.0
FCH				*i* S	Sn	17 25 30.9	+1.3
FCH				AML	AML	17 25 32.0	
	comp=E,746nm,0.4s						
CLCH	**Cerro Calan**	**1.60**	**196**	⇑*i*P	Pn	17 25 10.8	+1.4
CLCH				*i* S	Sn	17 25 33.7	+1.8
CLCH	**Cerro Calan**	**1.60**	**196**	⇑*i*P	Pn	17 25 10.8	+1.4
CLCH				*i* S	Sn	17 25 33.7	+1.8
CLCH				AML	AML	17 25 35.6	
	comp=E,1μm,0.6s						
OVCH	**Ovalle**	**1.60**	**321**	⇑*i*P	Pn	17 25 10.1	+0.7
OVCH				*i* S	Sn	17 25 32.2	+0.3
ANTU	**Antumapu**	**1.79**	**197**	*e*P	Pn	17 25 12.1	+0.5
ANTU				*i* S	Sn	17 25 36.4	+0.6
ANTU	**Antumapu**	**1.79**	**197**	*e*P	Pn	17 25 12.1	+0.5
ANTU				*i* S	Sn	17 25 36.4	+0.6
ANTU				AML	AML	17 25 39.3	
	comp=N,699nm,0.3s						
TLL	**Tololo Astrono**	**1.81**	**338**	⇑*i*P	Pn	17 25 12.9	+1.0
TLL				*i* S	Sn	17 25 37.6	+1.3
TLL	**Tololo Astrono**	**1.81**	**338**	⇑*i*P	Pn	17 25 12.9	+1.0
TLL				*i* S	Sn	17 25 37.6	+1.3
TLL				AML	AML	17 25 42.1	
	comp=E,449nm,0.4s						
PCH	**Pirque**	**1.81**	**193**	*e*P	Pn	17 25 12.8	+0.9
PCH				*i* S	Sn	17 25 37.0	+0.7
TACH	**Talagante**	**1.95**	**203**	⇓*i*P	Pn	17 25 14.1	+0.5
TACH				*i* S	Sn	17 25 39.9	+0.6
LMEL	**Las Melosas**	**2.00**	**184**	*e*P	Pn	17 25 14.8	+0.7
LMEL				*i* S	Sn	17 25 41.2	+1.0
LMEL	**Las Melosas**	**2.00**	**184**	*e*P	Pn	17 25 14.8	+0.7
LMEL				*i* S	Sn	17 25 41.2	+1.0
LMEL				AML	AML	17 25 45.9	
	comp=N,336nm,0.2s						
CHCH	**Chadas Angostu**	**2.14**	**194**	*e*P	Pn	17 25 16.1	+0.2
CHCH				*i* S	Sn	17 25 44.1	+0.7
LSCH	**La Serena**	**2.21**	**331**	⇓*i*P	Pn	17 25 17.1	+0.4
LSCH				*i* S	Sn	17 25 44.8	0.0
CACH	**El Canelo**	**2.31**	**192**	*e*P	Pn	17 25 19.0	+1.1
CACH				*i* S	Sn	17 25 49.0	+2.0
LNV	**Longovilo**	**2.40**	**209**	*e*P	Pn	17 25 18.9	-0.1
CICH	**Cipreses**	**2.48**	**188**	*e*P	Pn	17 25 20.9	+0.7
CICH				*i* S	Sn	17 25 51.8	+0.8
SFDO	**San Fernando**	**2.88**	**196**	*e*P	Pn	17 25 25.2	0.0
LCO	**Las Campanas**	**2.89**	**348**	*e*Pn	Pn	17 25 25.9	+0.5
LCO				*e*Sn	Sn	17 26 00.0	-0.3
VACH	**Vallenar**	**3.33**	**349**	*e*P	Pn	17 25 31.5	+0.4

JMA 25 17:25:12.7±0.1, 3728N×13678E, h10km±1km, M2.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.35**	**180**	P	Pg	17 25 19.8	+0.1
JJH				S	Sg	17 25 25.0	+0.6
JSZ	**Suzu**	**0.49**	**70**	S	Sg	17 25 29.1	+0.2

*NEIC **25** 17:25:36.8, 3661S×17708E, h253km, MG3.8(WEL), After WEL.*
WEL 25 17:25:38.0±0.4, 3672S×17710E, h255km±4km, ML3.8/17, Error ellipse: s-maj=7.0km s-min=6.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.28**	**132**	PN	Pn	17 26 15.1	0.0
MXZ				SN	S	17 26 43.9	-0.5
URZ	**Urewera**	**1.54**	**180**	*e*P	Pn	17 26 17.0	+0.1
URZ	**Urewera**	**1.54**	**180**	PN	Pn	17 26 17.0	+0.1
URZ				SN	S	17 26 47.4	-0.3
PUZ	**Puketiti**	**1.64**	**146**	*e*P	Pn	17 26 18.0	+0.3
PUZ	**Puketiti**	**1.64**	**146**	PN	Pn	17 26 18.0	+0.4
PUZ				SN	S	17 26 47.9	-1.2
MWZ	**Matawai**	**1.65**	**168**	P	Pn	17 26 16.6	-1.2
MWZ				S	S	17 26 49.7	+0.4
MWZ	**Matawai**	**1.65**	**168**	PN	Pn	17 26 18.3	+0.5
MWZ				SN	S	17 26 49.4	+0.2
KNZ	**Kokohu**	**2.34**	**169**	*e*P	Pn	17 26 24.1	+0.2
KNZ	**Kokohu**	**2.34**	**169**	PN	Pn	17 26 24.1	+0.2
BKZ	**Black Stump Fm**	**2.49**	**191**	*e*P	Pn	17 26 25.3	-0.1
BKZ	**Black Stump Fm**	**2.49**	**191**	PN	Pn	17 26 25.3	-0.1
WNVZ	**Wahianoa**	**2.86**	**204**	P	Pn	17 26 29.8	+0.6
WNVZ	**Wahianoa**	**2.86**	**204**	PN	Pn	17 26 29.8	+0.6
MOVZ	**Moawhango**	**2.89**	**201**	P	Pn	17 26 29.5	+0.1
MOVZ	**Moawhango**	**2.89**	**201**	PN	Pn	17 26 29.5	+0.1
PXZ	**Pawanui**	**3.31**	**183**	PN	Pn	17 26 33.7	-0.3
TSZ	**Takapari Road**	**3.45**	**195**	*e*P	Pn	17 26 35.1	-0.5
TSZ	**Takapari Road**	**3.45**	**195**	PN	Pn	17 26 35.1	-0.5
WAZ	**Wanganui**	**3.46**	**208**	PN	Pn	17 26 36.2	+0.5
BFZ	**Birch Farm**	**4.01**	**189**	*e*P	Pn	17 26 41.2	-0.8
BFZ	**Birch Farm**	**4.01**	**189**	PN	Pn	17 26 41.2	-0.8
MRZ	**Mangatainoka R**	**4.11**	**196**	P	Pn	17 26 42.3	-0.9
MRZ				S	S	17 27 33.1	-2.0
MRZ	**Mangatainoka R**	**4.11**	**196**	PN	Pn	17 26 42.3	-0.9
MRZ				SN	S	17 27 32.9	-2.2
TIWZ	**Tintock**	**4.16**	**193**	PN	Pn	17 26 43.0	-0.7
KIW	**Kapiti Island**	**4.48**	**202**	P	Pn	17 26 46.0	-1.5
KIW	**Kapiti Island**	**4.48**	**202**	PN	Pn	17 26 46.0	-1.4
CAW	**Cannon Point**	**4.66**	**199**	P	Pn	17 26 47.9	-1.8
CAW	**Cannon Point**	**4.66**	**199**	PN	Pn	17 26 47.9	-1.7
DUWZ	**D'Urville Isla**	**4.78**	**210**	PN	Pn	17 26 49.7	-1.3
MRW	**Makara Radio**	**4.88**	**202**	P	Pn	17 26 50.8	-1.5
MRW	**Makara Radio**	**4.88**	**202**	PN	Pn	17 26 50.8	-1.5
MSWZ	**Moikau Station**	**4.91**	**197**	P	Pn	17 26 50.7	-1.9
MSWZ	**Moikau Station**	**4.91**	**197**	PN	Pn	17 26 50.7	-1.9
TCW	**Tory Channel**	**5.00**	**205**	P	Pn	17 26 52.1	-1.6
TCW	**Tory Channel**	**5.00**	**205**	PN	Pn	17 26 52.1	-1.7
TUWZ	**Tuamarina**	**5.31**	**207**	PN	Pn	17 26 55.9	-1.6
NNZ	**Nelson**	**5.35**	**212**	*e*P	Pn	17 26 56.0	-2.0
NNZ	**Nelson**	**5.35**	**212**	PN	Pn	17 26 56.0	-2.0
QRZ	**Quartz Range**	**5.44**	**220**	*e*P	Pn	17 26 56.9	-2.2
QRZ	**Quartz Range**	**5.44**	**220**	PN	Pn	17 26 56.9	-2.2
THZ	**Tophouse**	**6.00**	**212**	*e*P	Pn	17 27 04.1	-1.9
THZ	**Tophouse**	**6.00**	**212**	PN	Pn	17 27 04.1	-1.9
KHZ	**Kahutara**	**6.32**	**205**	*e*P	Pn	17 27 08.3	-1.7
KHZ	**Kahutara**	**6.32**	**205**	PN	Pn	17 27 08.3	-1.7
DSZ	**Denniston Nort**	**6.49**	**218**	PN	Pn	17 27 10.4	-1.7
LTZ	**Lake Taylor**	**7.11**	**210**	PN	Pn	17 27 17.5	-2.4

*CSEM **25** 17:25:39.7, 3834N×2039E, h9km, MD3.5/4, After ATH*
ATH 25 17:25:39.7, 3834N×2039E, h9km±2km, MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.23**	**136**	*e*PG	Pg	17 25 44.7	+0.4
VLS				*e*SG	Sg	17 25 48.3	+0.9
RLS	**Riolos of Patr**	**0.89**	**108**	*e*PB	Pb	17 25 56.9	-0.5
EVR	**Evrytania**	**1.25**	**62**	*e*PB	Pb	17 26 03.3	-0.2
THL	**Klokotos Trika**	**1.76**	**46**	*e*PN	Pn	17 26 12.4	+2.0

*NIED **25** 17:25:00, 3720N×13660E, h5km, Mw3.5 Best double couple: M0 1.84000×10^14 NP1:ϕs 224.00000°, δ65.00000°, λ163.00000°. NP2:ϕs 321.00000°, δ75.00000°, λ26.00000°.*
*ISCJB **25** 17:25:52.9±1.5, 3721N±005×13658E±008, h9km±8km, Error ellipse: s-maj=11.4km s-min=7.0km az=23.1*
*JMA **25** 17:25:53.4, 37.18N×13659E, h7km±1km, M3.7*
JMA Felt II J1.
ISC 25 17:25:53.1±1.3, 3720N±005×13657E±008, h11km±8km, n6, σ0 s17/11, 3C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**148**	⇑P	Pg	17 25 59.5	-0.1
JJH				S	Sg	17 26 04.1	+0.2
JSZ	**Suzu**	**0.68**	**68**	⇓P	Pg	17 26 06.0	-0.3
JSZ				S	Sg	17 26 15.1	-0.1
JHG	**Hegura jima**	**0.70**	**23**	⇑P	Pg	17 26 07.1	+0.3
JTT	**Ttatey**	**0.85**	**134**	P	Pg	17 26 09.4	-0.1
JTT				S	Sg	17 26 20.8	+0.1
JKG	**Kaga**	**0.94**	**192**	⇑P	Pg	17 26 11.0	-0.2
JKG				S	Sg	17 26 23.5	0.0
MAT	**Matsushiro**	**1.47**	**116**	P	Pn	17 26 19.5	+0.1
MAT				S	Sn	17 26 38.6	0.0

*MOS **25** 17:27:21.1±1.4, 3814N×2028E, h10km, mb3.7/1, Error ellipse: s-maj=16.2km s-min=9.2km az=69.8*
*ATH **25** 17:27:21.5, 3834N×2024E, h4km±2km, MD3.9/11, ML4.2*
*NEIC **25** 17:27:21.5, 3834N×2024E, h4km, mb3.6/1, ML4.2(ATH), After ATH.*
*NAO **25** 17:27:21.3, 3763N×2114E, h33km, mb3.6*
*ISCJB **25** 17:27:22.4±0.7, 3829N±003×2037E±005, h11km±5km, mb3.5/6, Error ellipse: s-maj=7.5km s-min=4.2km az=141.9*
*IDC **25** 17:27:22.4±1.9, 3837N×2057E, h0km, mb3.6/6, mb1 3.6/9, mb1mx3.5/23, mbtmp3.5/9, ML3.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/30, Error ellipse: s-maj=38.3km s-min=19.1km az=39.0*
*CSEM **25** 17:27:23.5±0.1, 3834N×2031E, h15km, ML4.2, Error ellipse: s-maj=3.2km s-min=1.7km az=46.0*
*THE **25** 17:27:25.0, 3839N×2054E, h4km, ML4.0*
ISC 25 17:27:23.6±0.7, 3830N±003×2046E±004, h6km±5km, n64, σ1 s34/71, mb3.5/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.16**	**141**	*e*PG	Pg	17 27 27.9	+1.0
KFL	**Anninata**	**0.32**	**127**	*e*Pg	Pg	17 27 31.1	+1.2
RLS	**Riolos of Patr**	**0.83**	**107**	*e*PG	Pg	17 27 41.0	+1.4
SELA	**Sela**	**1.13**	**91**	*e*Pg	Pg	17 27 44.7	-0.5
EVR	**Evrytania**	**1.22**	**59**	*e*PB	Pb	17 27 46.3	-0.8
IGT	**Igoumenitsa**	**1.23**	**355**	*e*Pg	Pg	17 27 46.2	-1.0
IGT				*e*Sg	Sg	17 28 03.9	+0.7
IGT	**Igoumenitsa**	**1.23**	**355**	*e*Pg	Pg	17 27 46.2	-1.1
IGT				*e*Sg	Sg	17 28 03.9	+0.6
JAN	**Janina**	**1.39**	**13**	*e*PN	Pn	17 27 48.0	-1.5
KEK	**Kerkira**	**1.50**	**340**	*e*PB	Pb	17 27 48.0	-3.8
ITM	**Ithomi**	**1.61**	**133**	*e*PB	Pb	17 27 54.5	+0.7
AGG	**Agios Georgios**	**1.63**	**63**	*e*Pg	Pg	17 27 51.4	-3.5
VLX	**Vlachokerasia**	**1.78**	**121**	*e*Pb	Pb	17 27 56.3	-0.3
LTK	**Loutraki**	**2.00**	**97**	*e*Pb	Pb	17 27 58.0	-2.2
LKR	**Lokris**	**2.02**	**79**	*e*PG	Pg	17 28 01.5	-0.9
KZN	**Kozani**	**2.25**	**27**	*e*PN	Pn	17 28 02.1	+0.8
NEO	**Neokhori**	**2.38**	**64**	*e*PB	Pb	17 28 05.3	-1.6
LIT	**Litokhoron**	**2.39**	**41**	*e*Pn	Pn	17 28 04.0	+0.7
NAIG	**Nisos Aigina**	**2.45**	**102**	*e*PB	Pb	17 28 07.0	-1.1
FNA	**Florina**	**2.58**	**16**	*e*PN	Pn	17 28 04.5	-1.4
ATH	**Athens Observa**	**2.59**	**96**	*e*PN	Pn	17 28 08.2	+2.2
KVR	**Kavouri**	**2.66**	**99**	*e*PN	Pn	17 28 10.0	+3.1
PTL	**Penteli**	**2.69**	**94**	*e*PN	Pn	17 28 09.2	+1.8
BIA	**Bitola**	**2.79**	**14**	*e*Pn	Pn	17 28 11.8	+3.0
OHR	**Ohrid**	**2.82**	**5**	*e*Pn	Pn	17 28 11.6	+2.4
OHR	**Ohrid**	**2.82**	**5**	*e*Pn	Pn	17 28 11.5	+2.4
KYTH	**Kithira**	**2.88**	**134**	*e*PB	Pb	17 28 13.5	-1.9
TIP	**Timpagrande**	**3.02**	**288**	*e*Pn	Pn	17 28 12.6	+0.6
TIP	**Timpagrande**	**3.02**	**288**	*e*Pn	Pn	17 28 12.6	+0.6
PLG	**Polygyros**	**3.10**	**47**	*e*PN	Pn	17 28 15.5	+2.4
KRUS	**Krusevo**	**3.12**	**11**	*e*Pn	Pn	17 28 16.2	+2.9
KRUS	**Krusevo**	**3.12**	**11**	*e*Pn	Pn	17 28 16.1	+2.8
VAY	**Valandovo**	**3.42**	**28**	*e*Pn	Pn	17 28 18.4	+1.0
VAY				*e*Sn	Sn	17 29 00.5	+2.1
VAY	**Valandovo**	**3.42**	**28**	*e*Pn	Pn	17 28 18.4	+0.9
VAY				*e*Sn	Sn	17 29 00.4	+2.1
STIP	**Stip**	**3.64**	**21**	*e*Pn	Pn	17 28 21.3	+0.9
STIP	**Stip**	**3.64**	**21**	*e*Pn	Pn	17 28 21.2	+0.8
CDT	**Castel del Mon**	**4.26**	**312**	*e*Pn	Pn	17 28 27.6	-1.3
GVD	**Gavdhos**	**4.52**	**139**	Pn	Pn	17 28 30.8	-1.8
GVD	**Gavdhos**	**4.52**	**139**	Pn	Pn	17 28 30.8	-1.8
IDI	**Anoyia**	**4.66**	**129**	Pn	Pn	17 28 35.5	+1.1
	0.3nm,0.3s,baz=315,slow=19,SNR=1.6						
IDI				Sn	Sn	17 29 29.6	+0.8
	1.5nm,0.3s,baz=346,slow=17,SNR=3.7						
IDI				LR	LR	17 30 30.2	
	comp=Z,180nm,18.7s,baz=321,slow=40						
VAE	**Valguarnera**	**4.85**	**262**	Sn	Sn	17 29 34.9	+1.3
	2.1nm,0.3s,baz=119,slow=16,SNR=5.6						
BOJS	**Bojanci**	**8.18**	**333**	*e*Pn	Pn	17 29 22.5	-0.2
MLR	**Muntele Rosu**	**8.26**	**28**	Pn	Pn	17 29 29.1	+5.1
	0.2nm,0.3s,baz=224,slow=7.5,SNR=5.8						
CRES	**Cresnjev**	**8.39**	**335**	*e*Pn	Pn	17 29 24.4	-1.1
CRES				*e*Sn	Sn	17 30 54.4	-6.1
VISS	**Visnje**	**8.58**	**333**	*e*Pn	Pn	17 29 29.0	+0.8
VISS				*e*Sn	Sn	17 30 60.0	-5.3
KECS	**Kecovo**	**10.18**	**0**	*e*P	Pn	17 29 43.3	-6.8
KECS	**Kecovo**	**10.18**	**0**	*e*	Pn	17 29 43.3	-6.8
GERES	**GERESS Array B**	**11.62**	**337**	Pn	Pn	17 30 10.0	+0.2
GERES	**GERESS Array B**	**11.62**	**337**	Pn	Pn	17 30 10.0	+0.2
	0.2nm,0.3s,baz=148,slow=11,SNR=4.4						
ESDC	**Sonseca Array**	**19.02**	**282**	P	Pn	17 31 46.0	-0.8
	0.1nm,0.3s,baz=81,slow=12,SNR=4.1						
HFS	**Hagfors**	**22.27**	**351**	P	P	17 32 20.9	-0.2
	1.5nm,0.6s,mb3.6,baz=160,slow=9.5,SNR=6.7						
FINES	**FINESS Array B**	**23.43**	**7**	P	P	17 32 33.2	-0.1
FINES	**FINESS Array B**	**23.43**	**7**	P	P	17 32 33.2	-0.1
	1.0nm,0.7s,mb3.4,baz=171,slow=9.8,SNR=6.8						
NB2	**NORSAR Subarra**	**23.49**	**349**	P	P	17 32 34.4	+0.5
	comp=Z,1.8nm,0.9s,mb3.5,baz=161,slow=10						
NB2	**NORSAR Subarra**	**23.49**	**349**	P	P	17 32 34.4	+0.5
NB2				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
NOA	**NORSAR Array B**	**23.49**	**349**	P	P	17 32 33.9	0.0
NOA	**NORSAR Array B**	**23.49**	**349**	P	P	17 32 33.9	0.0
	comp=Z,1.0nm,0.9s,mb3.3,baz=161,slow=9.3,SNR=4.3						
AKTK	**Aktyubinsk**	**29.14**	**53**	P	P	17 33 24.2	-1.0
AKTO	**Aktyubinsk**	**29.14**	**53**	P	P	17 33 24.2	-1.0
	comp=Z,0.3nm,0.5s,mb3.3,baz=239,slow=5.9,SNR=3.9						
MK31	**Makanchi Array**	**45.28**	**58**	*e*P	P	17 35 41.0	-0.8
MK31	**Makanchi Array**	**45.28**	**58**	*e*P	P	17 35 41.0	-0.8
MKAR	**Makanchi Array**	**45.28**	**58**	P	P	17 35 39.5	-2.3
	comp=Z,0.3nm,0.4s,mb3.5,baz=277,slow=8.1,SNR=9.7						
ZAL	**Zalesovo**	**45.63**	**48**	P	P	17 35 43.2	-1.3
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	P	17 35 43.2	-1.4
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	P	17 35 43.2	-1.4
	comp=Z,1.6nm,0.5s,mb4.2,baz=275,slow=8.5,SNR=9.8						

*IDC **25** 17:30:54.8±0.8, 3842N×2045E, h0km, mb3.6/9, mb1 3.7/16, mb1mx3.7/27, mbtmp3.6/16, ML3.4/7, MS3.1/4, Ms1 3.1/4, ms1mx2.6/34, Error ellipse: s-maj=16.9km s-min=14.8km az=34.0*
*MOS **25** 17:30:55.7±1.2, 3833N×2039E, h11km, mb3.6/1, Error ellipse: s-maj=14.3km s-min=5.9km az=95.4*
*ISCJB **25** 17:30:55.5±0.5, 3837N±002×2038E±003, h11km±3km, mb3.6/9, MS3.0/2, Error ellipse: s-maj=5.0km s-min=3.1km az=147.4*
*THE **25** 17:30:56.1, 3835N×2043E, h3km, ML4.4*
*PDG **25** 17:30:56.1±0.8, 3833N×2039E, h10km±4km, MD3.8/1, ML3.8/10, Error ellipse: s-maj=3.3km s-min=7.2km az=0.0*
*ATH **25** 17:30:56.3, 3834N×2049E, h9km±2km, MD4.0/12, ML4.2*
*NEIC **25** 17:30:56.4, 3834N×2049E, h9km, mb3.5/1, ML4.2(ATH), ML3.8(PDG), After ATH.*
*CSEM **25** 17:30:57.7±0.1, 3823N×2049E, h12km, ML4.2, Error ellipse: s-maj=2.8km s-min=1.1km az=55.0*
*NAO **25** 17:30:58.7, 3887N×2454E, h33km, mb3.4*
ISC 25 17:30:56.3±0.6, 3838N±002×2043E±003, h5km±4km, n88, σ1 s24/107, mb3.6/9, MS3.0/2, 14C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.23**	**148**	⇑*i*PG	Pg	17 31 00.4	-0.5
VLS				*e*SG	Sg	17 31 03.8	-0.2
KFL	**Anninata**	**0.39**	**134**	*e*Pg	Pg	17 31 03.2	-0.5
RLS	**Riolos of Patr**	**0.87**	**111**	*e*PB	Pb	17 31 12.3	-1.7
SELA	**Sela**	**1.15**	**95**	*e*Pg	Pg	17 31 16.9	-1.5
IGT	**Igoumenitsa**	**1.16**	**356**	*e*Pg	Pg	17 31 18.1	-0.5
IGT				*e*Sg	Sg	17 31 35.5	+2.0
EVR	**Evrytania**	**1.21**	**63**	*e*PN	Pn	17 31 18.1	-1.7
JAN	**Janina**	**1.32**	**14**	*e*PB	Pb	17 31 22.2	+0.6
KEK	**Kerkira**	**1.42**	**340**	*e*PG	Pg	17 31 23.4	-0.2
AGG	**Agios Georgios**	**1.62**	**66**	*e*Pb	Pb	17 31 24.9	-1.7
AGG				*e*Sb	Sb	17 31 48.4	+1.0
ITM	**Ithomi**	**1.68**	**135**	*e*PG	Pg	17 31 26.5	-2.1
THL	**Klokotos Trika**	**1.71**	**46**	*e*PN	Pg	17 31 28.8	-0.3
PYL	**PYLOS**	**1.81**	**144**	*e*Pb	Pn	17 31 27.4	-0.7
LTK	**Loutraki**	**2.03**	**99**	*e*Pn	Pn	17 31 30.7	-0.4
LKR	**Lokris**	**2.03**	**81**	*e*PN	Pn	17 31 32.8	+1.6
KZN	**Kozani**	**2.19**	**28**	*e*PG	Pg	17 31 36.4	-1.9
LIT	**Litokhoron**	**2.35**	**42**	*e*Pn	Pn	17 31 36.1	+0.6
NEO	**Neokhori**	**2.37**	**66**	*e*PB	Pn	17 31 36.5	+0.7
XOR	**Xorichti**	**2.37**	**65**	*e*Pn	Pn	17 31 36.5	+0.6
DID	**Didima**	**2.38**	**111**	*e*Pn	Pn	17 31 36.5	+0.5
NAIG	**Nisos Aigina**	**2.49**	**103**	*e*PN	Pn	17 31 38.5	+1.0
FNA	**Florina**	**2.51**	**17**	*e*Pn	Pn	17 31 38.6	+0.9
VLI	**Veliai**	**2.59**	**129**	*e*PN	Pn	17 31 40.4	+1.6
ATH	**Athens Observa**	**2.62**	**98**	*e*PB	Pn	17 31 39.2	0.0
KVR	**Kavouri**	**2.69**	**101**	*e*PB	Pn	17 31 40.7	+0.5
PTL	**Penteli**	**2.72**	**96**	*e*PB	Pn	17 31 41.0	+0.3
BIA	**Bitola**	**2.73**	**14**	*e*Pn	Pn	17 31 43.1	+2.4
BIA				*e*Sn	Sn	17 32 17.2	+3.1
BIA	**Bitola**	**2.73**	**14**	*e*Pn	Pn	17 31 43.1	+2.4
BIA				*e*Sn	Sn	17 32 17.1	+3.0
OHR	**Ohrid**	**2.75**	**6**	*e*Pn	Pn	17 31 42.9	+1.9
OHR				*e*Sn	Sn	17 32 15.9	+1.4
KYTH	**Kithira**	**2.95**	**134**	*e*PB	Pb	17 31 45.5	-3.8
TIP	**Timpagrande**	**2.98**	**287**	*e*P	Pn	17 31 46.0	+1.8
TIP	**Timpagrande**	**2.98**	**287**	*e*P	Pn	17 31 46.0	+1.8
GRG	**Griva**	**2.99**	**30**	*e*Pn	Pn	17 31 44.6	+0.2
TIR	**Tirane**	**3.00**	**352**	P	Pn	17 31 46.1	+1.6
KRUS	**Krusevo**	**3.05**	**12**	*e*Pn	Pn	17 31 47.6	+2.4
SOH	**Sokhos**	**3.33**	**42**	*e*Pn	Pn	17 31 49.3	+0.4
PE1	**Pezze di Greco**	**3.36**	**317**	*e*Pn	Pn	17 31 49.7	+0.3
VAY	**Valandovo**	**3.37**	**29**	*e*Pn	Pn	17 32 00.9	0.0
STIP	**Stip**	**3.58**	**22**	*e*Pn	Pn	17 31 53.0	+0.6
STIP	**Stip**	**3.58**	**22**	*e*Pn	Pn	17 31 52.9	+0.5
ULC	**Ulcinj**	**3.69**	**346**	⇑*i*PN	Pn	17 31 54.4	+0.4
ULC				*e*Sn	Sn	17 32 36.7	-1.2
SG1	**Sgolgore (BA)**	**3.80**	**311**	*e*Pn	Pn	17 31 55.7	+0.2
KKB	**Krupnik**	**4.04**	**29**	*i* P	Pn	17 32 00.0	+1.3
MMB	**Musomiste**	**4.09**	**37**	*i* P	Pn	17 32 00.2	+0.8
BUM	**Brajici-Budva**	**4.09**	**344**	⇑*i*PN	Pn	17 32 00.4	+0.9
BUM				*e*Sn	Sn	17 32 47.0	-0.7
PDG	**Podgorica**	**4.15**	**348**	⇑*i*Pn	Pn	17 32 00.9	+0.7
PDG				*e*Sn	Sn	17 32 47.6	-1.4
TTG	**Podgorica**	**4.15**	**348**	⇑*i*Pn	Pn	17 32 00.9	+0.7
TTG				*e*Sn	Sn	17 32 47.6	-1.4
CDT	**Castel del Mon**	**4.19**	**311**	*e*Pn	Pn	17 32 01.3	+0.4
PVY	**Plav**	**4.23**	**355**	⇑*i*Pn	Pn	17 32 01.9	+0.5
PVY				*e*Sn	Sn	17 32 49.4	-1.7
VAM	**Vamos**	**4.23**	**133**	P	Pn	17 32 03.1	+1.7
HCY	**Herceg Novi**	**4.33**	**341**	⇑*i*Pn	Pn	17 32 04.3	+1.6
HCY				*e*Sn	Sn	17 32 52.6	-0.9
BEY	**Berane**	**4.51**	**355**	⇑*i*Pn	Pn	17 32 06.3	+1.1
BEY				*e*Sn	Sn	17 32 56.0	-2.0
IVA	**Berane**	**4.51**	**355**	⇑*i*Pn	Pn	17 32 06.3	+1.1
IVA				*e*Sn	Sn	17 32 56.0	-2.0
NKY	**Niksic**	**4.56**	**347**	⇑*i*Pn	Pn	17 32 07.8	+1.8
NKY				*e*Sn	Sn	17 32 57.8	-1.5
RZN	**Rozhen**	**4.66**	**43**	*i* P	P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.09**	**146**	*e*P	Pb	17 43 45.5	+1.3
OCLP				*e*S	Sb	17 43 50.2	+2.4
PLP	**Palo**	**0.41**	**84**	*i* P	Pb	17 43 48.4	+0.3
PLP				*e*S	Sb	17 43 55.0	+0.7
BESP	**Borongan**	**0.98**	**61**	*e*P	Pn	17 43 57.1	+0.3
BESP				*e*S	Sn	17 44 10.2	+0.5
CNP	**Catarman**	**1.38**	**4**	*e*P	Pn	17 44 02.3	+0.1
CNP				*e*S	Sn	17 44 19.8	+0.2

*CSEM **25** 17:43:47.6±0.6, 3805N×2014E, h2km, ML3.5, Error ellipse: s-maj=11.5km s-min=5.8km az=45.0*
*THE **25** 17:43:50.0, 3808N×2021E, h14km, ML3.5*
*ATH **25** 17:43:51.9, 3818N×2042E, h21km, MD3.5/4*
ISC 25 17:43:47.9±2.0, 3810N±007×201E±01, h11km±9km, n12, σ1§27/18, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.36**	**78**⇑	*i*PB	**Pg**	**17 43 56.6**	**+1.5**
VLS				*e*SB	**Sg**	**17 44 00.0**	**+0.1**
KFL	**Anninata**	**0.51**	**89**	*e*Pg	**Pg**	**17 43 59.3**	**+1.5**
KFL				*e*Sg	**Sg**	**17 44 05.7**	**+1.1**
RLS	**Riolos of Patr**	**1.04**	**92**	*e*PN	**Pn**	**17 44 08.0**	**-0.5**
SELA	**Sela**	**1.39**	**82**	*e*Pg	**Pg**	**17 44 13.2**	**-1.4**
SELA				*e*Sg	**Sg**	**17 44 31.5**	**-1.1**
IGT	**Igoumenitsa**	**1.44**	**6**	*e*Pg	**Pg**	**17 44 14.7**	**-0.9**
IGT				*e*Sg	**Sg**	**17 44 34.0**	**-0.2**
IGT	**Igoumenitsa**	**1.44**	**6**	*e*Pg	**Pg**	**17 44 14.6**	**-0.9**
IGT				*e*Sg	**Sg**	**17 44 34.0**	**-0.2**
EVR	**Evrytania**	**1.54**	**58**	*e*PN	**Pn**	**17 44 16.8**	**+1.5**
MEV	**Metsovon**	**1.88**	**26**	*e*Pb	**Pb**	**17 44 21.0**	**-1.3**
MEV				*e*Sb	**Sb**	**17 44 45.8**	**-0.1**
VLX	**Vlachokerasia**	**1.92**	**112**	*e*Pb	**Pb**	**17 44 20.9**	**-2.0**
AGG	**Agios Georgios**	**1.94**	**61**	*e*Pb	**Pb**	**17 44 21.9**	**-1.5**
THL	**Klokotos Trika**	**2.07**	**44**	*e*PN	**Pn**	**17 44 24.7**	**+2.1**
FNA	**Florina**	**2.84**	**19**	*e*Pn	**Pn**	**17 44 34.7**	**+1.5**

*NEIC **25** 17:51:43.0, 3246N×115.13W, h6km, ML3.9(ECX), ML3.6(PAS), After ECX.*
NEIC Felt in the Calexico, California area.
ECX 25 17:51:43.0±0.5, 3246N×115.13W, h6km, MD3.7, ML3.9, 2C-7D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COA	**Coachella**	**0.40**	**1**⇓	*e*P	Pg	17 51 50.8	0.0
YMD	**Yuma Desert**	**0.51**	**79**⇓	*e*P	Pg	17 51 51.8	-0.9
SGL	**Mount Signal**	**0.53**	**291**⇓	*e*P	Pg	17 51 52.3	-1.0
GLA	**Glamis**	**0.64**	**24**⇓	*e*P	Pg	17 51 54.3	-1.1
YUH	**Yuha Desert**	**0.69**	**286**⇓	*e*P	Pg	17 51 54.3	-2.0
YUH	**Yuha Desert**	**0.69**	**286**⇓	*e*P	Pg	17 51 54.8	-1.5
RMX	**La Rumorosa**	**0.81**	**280**⇓	*e*P	Pg	17 51 56.9	-1.6
RMX				*e*S	Sg	17 52 08.4	-0.6
RDX	**Rancho Dowling**	**0.87**	**233**⇑	*e*P	Pg	17 51 58.0	-1.7
RDX				*e*S	Sg	17 52 10.1	-0.9
RDX				⇓*e*		17 52 11.4	
	comp=E,2µm,0.3s						
CBX	**Cerro Bola**	**1.30**	**264**	*e*P	Pn	17 52 05.5	-2.2
CBX				*e*S	Sb	17 52 23.4	-1.5
ENX	**Ensenada**	**1.42**	**246**	*e*P	Pn	17 52 07.6	-1.8
ENX				*e*S	Sb	17 52 26.6	-1.7
PBX	**Punta Banda**	**1.53**	**242**	*e*P	Pn	17 52 09.4	-1.4
PBX				*e*S	Sn	17 52 29.8	-1.2
PFO	**Pinyon Flat Ob**	**1.59**	**316**	*e*Pn	Pn	17 52 07.7	-4.0
TUC	**Tucson**	**3.68**	**91**	*e*Pn	Pn	17 52 37.2	-3.2
TUC				*e*S	Sn	17 53 29.7	+5.5
WUAZ	**Wupatki**	**4.36**	**45**	*e*Pn	Pn	17 52 48.3	-1.5
TPNV	**Topopah Spring**	**4.57**	**349**	*e*Pn	Pn	17 52 54.7	+2.1
TPNV				Pg	Pg	17 53 09.1	-1.4
CCUT	**Cedar City**	**5.28**	**15**	*e*Pn	Pn	17 53 02.1	-0.3
CCUT				*e*Sg	Sg	17 54 30.7	-1.9
ARUT	**Antelope Range**	**5.49**	**14**	*e*Pg	Pg	17 53 21.8	-6.4
MTUM	**Tungsten Hills**	**5.63**	**331**	Pg	Pg	17 53 25.9	-5.0
TRCR	**Troy Canyon**	**5.88**	**357**	*e*Pg	Pg	17 53 32.2	-3.5
MSU	**Marysvale**	**6.50**	**21**	Pg	Pg	17 53 39.5	-7.9
MVCO	**Mesa Verde**	**7.22**	**47**	*e*Pn	Pn	17 53 29.2	+0.1
	comp=E,8.9nm,0.6s						
MVCO				*e*Pg	Pg	17 53 55.0	-6.4
BNM	**Barren Site**	**7.32**	**74**	*e*Pn	Pn	17 53 29.2	-1.1
BNM				*e*Sg	Sg	17 55 37.3	-0.6
SRU	**San Rafael**	**7.62**	**28**	*e*Pg	Pg	17 54 00.8	-8.1
	comp=E,4.6nm,0.6s						
PV10	**Paradox Valley**	**7.72**	**38**	*e*Pn	Pn	17 53 35.9	0.0
PV10				*e*Pg	Pg	17 54 03.0	-7.7
PV01	**Paradox Valley**	**7.80**	**42**	Pn	Pn	17 53 32.7	-4.2
PV01				Sg	Sg	17 55 48.8	-4.4
MNTX	**Cornudas Mount**	**8.31**	**93**	*e*Pn	Pn	17 53 42.0	-2.0
	comp=E,2.1nm,0.6s						

FUNV 25 17:57:06.2, 774N×7325W, h130km, MW3.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.94**	**82**	*e*P	Pn	17 57 28.0	-0.5
CAPV				*e*S	Sn	17 57 44.3	-1.1
VIGV	**El Vigia**	**2.17**	**60**	*e*P	Pn	17 57 41.9	-0.3
VIGV				*e*S	Sn	17 58 07.4	-2.4
SOCV	**Socops**	**2.43**	**77**	*e*P	Pn	17 57 44.4	-1.1
SOCV				*e*S	Sn	17 58 13.9	-1.8
VIRV	**Villa del Rosa**	**2.87**	**17**	*e*P	Pn	17 57 50.6	-0.5
VIRV				*e*S	Sn	17 58 22.6	-3.3
CURV	**Curarigua**	**3.96**	**55**	*e*P	Pn	17 58 03.6	-1.9
CURV				*e*S	Sn	17 58 46.6	-4.8

*ISCJB **25** 18:01:24.8±0.7, 4217N±004×4660E±008, h23km±12km, Error ellipse: s-maj=11.1km s-min=4.5km az=147.8*
*CSEM **25** 18:01:24.7±0.5, 4225N×4680E, h40km±7km, mb3.9, Error ellipse: s-maj=9.2km s-min=3.7km az=45.0*
*MOS **25** 18:01:24.0±2.0, 4224N×4647E, h8km, mb3.9/1, Error ellipse: s-maj=10.5km s-min=9.3km az=84.9*
*TIF **25** 18:01:24.2, 4223N×4644E, h17km±4km*
ISC 25 18:01:23.7±0.5, 4216N±003×4649E±003, h5km±5km, n24, σ1§15/44, 1C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNBR	**Gunib**	**0.42**	**57**⇑	*i*PG	**Pg**	**18 01 31.7**	**-0.2**
GNBR				*i* S	**Sg**	**18 01 40.0**	**+2.6**
GNBR				pmax	pmax		
	comp=Z,89nm,0.2s						
GNBR	**Gunib**	**0.42**	**57**	*i* Pg	**Pg**	**18 01 31.7**	**-0.2**
	comp=Z,89nm,0.2s						
GNBR				*i* Sg	**Sg**	**18 01 40.0**	**+2.6**
ARKR	**Arakani**	**0.58**	**40**⇓	*i*PG	**Pg**	**18 01 33.7**	**-1.3**
ARKR				*i* S	**Sg**	**18 01 43.2**	**+0.6**
ARKR				pmax	pmax		
	comp=Z,76nm,0.2s						
ARKR	**Arakani**	**0.58**	**40**	*i* Pg	**Pg**	**18 01 33.7**	**-1.3**
	comp=Z,76nm,0.2s						
ARKR				*i* Sg	**Sg**	**18 01 43.2**	**+0.6**
KRNR	**Karanay**	**0.74**	**25**	*e*PG	**Pg**	**18 01 35.8**	**-2.1**
KRNR				*i* S	**Sg**	**18 01 46.5**	**-1.0**
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
KRNR	**Karanay**	**0.74**	**25**	*e*Pg	**Pg**	**18 01 35.8**	**-2.1**
	comp=Z,57nm,0.2s						
KRNR				*i* Sg	**Sg**	**18 01 46.5**	**-1.0**
BUJR	**Buynaksk**	**0.81**	**34**	*e*PG	**Pg**	**18 01 40.0**	**+0.7**
BUJR				*i* S	**Sg**	**18 01 52.5**	**+2.7**
BUJR				pmax	pmax		
	comp=Z,54nm,0.2s						
DBC	**Dubki**	**0.90**	**16**⇓	*i*PG	**Pg**	**18 01 39.8**	**-1.2**
DBC				*e*S	**Sg**	**18 01 53.5**	**+0.8**
DBC				pmax	pmax		
	comp=Z,104nm,0.2s						
DBC	**Dubki**	**0.90**	**16**	*i* Pg	**Pg**	**18 01 39.8**	**-1.2**
	comp=Z,104nm,0.2s						
SEKA	**Sheki**	**1.09**	**150**	P	**Pg**	**18 01 43.9**	**-0.6**
	SNR=98						
SEKA				S	**Sg**	**18 01 58.9**	**+0.3**
DGRG	**David-gareji**	**1.09**	**230**	P	**Pg**	**18 01 46.4**	**+1.8**
DGRG				S	**Sg**	**18 02 02.9**	**+4.1**
MAK	**Makhachkala**	**1.10**	**43**	*e*PG	**Pg**	**18 01 49.3**	**+4.4**
MAK				*e*		18 02 02.8	
MAK				smax			
	comp=N,619nm,0.4s						
MAK				smax			
	comp=E,1µm,0.6s						
MTA	**Mtatsminda**	**1.34**	**250**	P	**Pn**	**18 01 49.3**	**+0.2**
MTA				S	**Sb**	**18 02 07.7**	**+0.8**
TBLG	**Delisi**	**1.37**	**253**	P	**Pn**	**18 01 50.3**	**+0.8**
TBLG				S	**Sb**	**18 02 10.0**	**+2.4**
GANJ	**Ganja**	**1.51**	**185**	P	**Pn**	**18 01 49.5**	**-1.9**
	SNR=24						
GANJ				S	**Sn**	**18 02 08.9**	**-2.6**
VLKR	**Vladikavkaz**	**1.60**	**304**	*e*Pg	**Pg**	**18 01 53.6**	**-0.9**
VLKR				*e*Sg	**Sg**	**18 02 15.6**	**+0.3**
LACR	**Lac**	**1.75**	**293**	*i* Pn	**Pn**	**18 01 55.3**	**+0.6**
LACR				*i* Sg	**Sg**	**18 02 18.7**	**-1.3**
BTKR	**Batakoyurt**	**1.88**	**311**	*i* Pn	**Pn**	**18 01 56.7**	**+0.3**
BTKR				*e*Sg	**Sg**	**18 02 21.0**	**-3.0**
ARNR	**Ardon**	**1.93**	**303**	*e*PN	**Pn**	**18 01 57.3**	**+0.2**
ARNR				*i* S	**Sn**	**18 02 22.1**	**+0.4**
BRDA	**Brd**	**1.96**	**164**	P	**Pn**	**18 01 56.9**	**-0.7**
	SNR=3.6						
BRDA				S	**Sn**	**18 02 23.1**	**+0.6**
ZEI	**Tsey**	**2.01**	**289**	*e*Pn	**Pn**	**18 01 58.5**	**+0.3**
TRKR	**Terskaya**	**2.03**	**321**	*e*Pn	**Pn**	**18 01 58.5**	**0.0**
DIGR	**Digorskoe uzhe**	**2.27**	**290**	*i* Pn	**Pn**	**18 02 01.6**	**-0.2**
DIGR				*i* Sn	**Sn**	**18 02 29.5**	**-0.7**
ONI	**Oni**	**2.29**	**282**	P	**Pg**	**18 02 08.0**	**+0.5**
ONI				S	**Sg**	**18 02 37.3**	**0.0**

IDC 25 18:08:33.3±6.7, 1288N×9250E, h41km±10km, mb2.9/3, mb1 3.1/3, mb1mx2.9/21, mbtmp2.9/3, Error ellipse: s-maj=366.2km s-min=21.2km az=60.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.24**	**169**	*e*P	x	18 09 07.9	
PBA				*e*S	x	18 09 23.1	
PBA				*ex*	x	18 09 29.8	
	comp=E,617nm,0.3s						
PBA				*ex*	x	18 09 30.0	
	comp=N,311nm,0.2s						
VIS	**Vishakhapatnam**	**10.07**	**300**	*i* P	Pn	18 10 53.3	-2.2
VIS				*i* S	Sn	18 12 33.6	-14
VIS				*ex*	x	18 12 36.8	
	comp=N,29nm,0.3s						
VIS				*ex*	x	18 12 36.8	
	comp=E,23nm,0.3s						
MKAR	**Makanchi Array**	**34.88**	**348**	P	P	18 15 19.5	-1.1
	comp=E,0.3nm,0.7s,baz=161,slow=8.7,SNR=5.3						
MKAR				pP	pP	18 15 33.4	+1.4
	comp=E,0.4nm,0.8s,baz=171,slow=8.6,SNR=3.4						
WRA	**Warramunga Arr**	**52.53**	**128**	P	P	18 17 42.6	-0.1
	comp=E,0.2nm,0.7s,baz=310,slow=7.9,SNR=2.9						
WRA				pP	pP	18 17 53.6	-1.0
	comp=E,0.3nm,0.4s,baz=303,slow=10.0,SNR=2.8						
ASAR	**Alice Springs**	**54.39**	**132**	P	P	18 17 57.4	+1.0
	comp=E,0.1nm,0.3s,baz=314,slow=7.0,SNR=4.1						
ASAR				pP	pP	18 18 08.2	-0.1
	comp=E,0.2nm,0.5s,baz=310,slow=7.0,SNR=1.7						

IDC 25 18:10:44.2±1.2, 2196N×14334E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/18, mbtmp3.6/4, Error ellipse: s-maj=63.2km s-min=24.5km az=97.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.56**	**193**	P	P	18 18 42.2	+0.3
	0.8nm,0.9s,baz=12,slow=9.3,SNR=4.3						
ASAR	**Alice Springs**	**46.27**	**192**	P	P	18 19 11.2	-0.3
	0.5nm,0.6s,baz=17,slow=10,SNR=16						
ZALV	**Zalesovo Beam**	**54.10**	**322**	P	P	18 20 10.6	-0.1
	1.1nm,0.9s,baz=99,slow=9.2,SNR=4.4						
YKA	**Yellowknife Ar**	**76.16**	**28**	P	P	18 22 33.8	+0.1
	0.2nm,0.7s,baz=290,slow=5.8,SNR=4.1						

*ISCJB **25** 18:20:13.6±0.8, 3839N±003×2048E±007, h5km, Error ellipse: s-maj=8.3km s-min=3.7km az=166.1*
*CSEM **25** 18:20:14.6±0.3, 3838N×2048E, h2km±2km, MD3.5, Error ellipse: s-maj=6.6km s-min=2.3km az=76.0*
*ATH **25** 18:20:14.1, 3834N×2052E, h5km±3km, MD3.5/11*
*NEIC **25** 18:20:14.1, 3834N×2052E, h5km, MD3.5(ATH), After ATH.*
*THE **25** 18:20:17.0, 3840N×2019E, h20km*
ISC 25 18:20:13.9±0.9, 3837N±003×2050E±008, h2km±7km, n20, σ0§93/27, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.21**	**160**⇑	*i*PG	**Pg**	**18 20 17.7**	**-0.1**
VLS				*e*SG	**Sg**	**18 20 21.3**	**+0.8**
RLS	**Riolos of Patr**	**0.82**	**112**	*e*PB	**Pg**	**18 20 29.4**	**-0.2**
EVR	**Evrytania**	**1.16**	**62**	*e*PB	**Pb**	**18 20 36.1**	**-0.5**
IGT	**Igoumenitsa**	**1.17**	**354**	*e*Pg	**Pg**	**18 20 35.9**	**-0.4**
IGT				*e*Sg	**Sg**	**18 20 51.4**	**0.0**
JAN	**Janina**	**1.31**	**12**	*e*PB	**Pb**	**18 20 39.5**	**+0.3**
KEK	**Kerkira**	**1.45**	**338**	*e*PB	**Pb**	**18 20 42.2**	**+0.7**
MEV	**Metsovon**	**1.52**	**22**	*e*Pg	**Pg**	**18 20 43.1**	**0.0**
MEV				*e*Sg	**Sg**	**18 21 02.1**	**-0.6**
AGG	**Agios Georgios**	**1.57**	**65**	*e*Pb	**Pb**	**18 20 45.0**	**+1.3**
AGG				*e*Sb	**Sg**	**18 21 07.6**	**+3.2**
ITM	**Ithomi**	**1.64**	**136**	*e*PB	**Pb**	**18 20 44.3**	**-0.5**
THL	**Klokotos Trika**	**1.68**	**44**	*e*PB	**Pb**	**18 20 46.2**	**+0.8**
KZN	**Kozani**	**2.17**	**27**	*e*PG	**Pg**	**18 20 55.0**	**-0.4**
LIT	**Litokhoron**	**2.32**	**41**	*e*Pn	**Pb**	**18 20 55.2**	**-1.2**
NEO	**Neokhori**	**2.32**	**65**	*e*PN	**Pb**	**18 20 55.6**	**-0.8**
XOR	**Xorichti**	**2.32**	**64**	*e*Pn	**Pb**	**18 20 55.6**	**-0.9**
NAIG	**Nisos Aigina**	**2.44**	**104**	*e*PG	**Pb**	**18 20 58.0**	**-0.4**
VLI	**Veliai**	**2.54**	**130**	*e*PN	**Pb**	**18 20 58.3**	**-1.9**
PTL	**Penteli**	**2.67**	**96**	*e*PB	**Pn**	**18 20 59.2**	**+1.4**
BIA	**Bitola**	**2.72**	**13**	*e*Pn	**Pb**	**18 21 03.1**	**-0.1**
BIA				*e*Sn	**Sn**	**18 21 32.1**	**+0.1**
KRUS	**Krusevo**	**3.05**	**11**	*e*Pn	**Pb**	**18 21 05.5**	**+2.4**
KRUS				*e*Sn	**Sn**	**18 21 39.5**	**-0.6**
KRUS	**Krusevo**	**3.05**	**11**	*e*Pn	**Pn**	**18 21 05.5**	**+2.4**
KRUS				*e*Sn	**Sn**	**18 21 39.4**	**-0.7**

*ISCJB **25** 18:21:17.6±1.2, 3726N±005×13672E±009, h10km±8km, Error ellipse: s-maj=12.0km s-min=7.8km az=17.0*
*JMA **25** 18:21:18.3, 3723N×13674E, h11km±1km, M3.6*
JMA Felt II J1.
ISC 25 18:21:17.8±1.2, 3725N±005×13671E±009, h15km±7km, n6, σ0§25/10, 4D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.33**	**170**	⇓P	**Pg**	**18 21 24.8**	**+0.2**
JJH				S	**Sg**	**18 21 29.0**	**-0.2**
JSZ	**Suzu**	**0.56**	**69**	P	**Pg**	**18 21 28.7**	**0.0**
JHG	**Hegura jima**	**0.62**	**16**	⇓P	**Pg**	**18 21 30.1**	**+0.2**
JTT	**Ttatey**	**0.82**	**142**	⇓P	**Pg**	**18 21 33.2**	**-0.4**
JTT				eS	**Sg**	**18 21 44.7**	**+0.3**
JKG	**Kaga**	**1.02**	**197**	⇓P	**Pb**	**18 21 37.0**	**-0.2**
JKG				S	**Sb**	**18 21 50.6**	**+0.2**
MAT	**Matsushiro**	**1.39**	**120**	P	**Pn**	**18 21 42.4**	**-0.3**
MAT				S	**Sn**	**18 22 01.0**	**+0.1**

*IDC **25** 18:27:04.6±1.7, 870N×9335E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.4/21, mbtmp3.5/6, MS3.0/1, Ms1 3.0/1, ms1mx2.6/34, Error ellipse: s-maj=72.7km s-min=26.3km az=60.0*
*ISCJB **25** 18:27:09.0±3.6, 89N±02×939E±03, h40km±31km, mb3.6/7, Error ellipse: s-maj=56.5km s-min=13.1km az=139.7*
*NEIC **25** 18:27:09.4±1.0, 878N×9360E, h30km, mb4.3/1, Error ellipse: s-maj=34.8km s-min=10.1km az=50.0*
ISC 25 18:27:11.8±2.9, 89N±02×939E±03, h46km±25km, n16, σ0§88/16, mb3.6/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**7.56**	**118**	Pn	Pn	**18 29 00.5**	**+0.9**
KULM				*e*Sn	**Sn**	**18 30 22.4**	**-1.7**
ODAN	**Odare**	**18.93**	**342**	*e*P	**Pn**	**18 31 30.7**	**+0.8**
	15nm,0.7s						
TAPN	**Taplejung**	**19.29**	**343**	*e*P	**Pn**	**18 31 33.5**	**-0.8**
	21nm,0.6s						
JIRN	**Jiri**	**20.06**	**340**	*e*P	**P**	**18 31 41.6**	**+0.3**
	31nm,1.0s						
KKN	**Kakani**	**20.51**	**338**	*e*P	**P**	**18 31 45.9**	**-0.2**
	11nm,0.6s						
LSA	**Lhasa**	**20.88**	**353**	*e*P	**P**	**18 31 50.3**	**+0.2**
	7.4nm,0.6s						
GKN	**Gorkha**	**20.95**	**336**	*e*P	**P**	**18 31 50.7**	**-0.1**
	40nm,0.6s						
KOLN	**Koldanda**	**21.17**	**334**	*e*P	**P**	**18 31 53.2**	**-0.1**
	21nm,0.7s,mb4.6						
AML	**Almayashu**	**37.61**	**335**	*e*P	**P**	**18 34 22.1**	**0.0**
	742nm,1.9s						
MKAR	**Makanchi Array**	**39.07**	**347**	P	P	**18 34 33.6**	**-0.6**
	0.6nm,0.6s,mb3.5,baz=177,slow=7.3,SNR=9.1						
SONM	**Songino Array**	**40.24**	**13**	P	P	**18 34 45.4**	**+1.4**
	0.2nm,0.5s,mb3.1,baz=207,slow=9.2,SNR=3.7						
KSRS	**Korea Array**	**41.86**	**42**	LR	LR	18 52 30.7	
	comp=Z,20nm,18.7s,baz=136,slow=36						
ZALV	**Zalesovo Beam**	**45.54**	**352**	P	P	**18 35 26.9**	**+0.1**
	0.8nm,0.4s,mb4.0,baz=169,slow=7.5,SNR=6.9						
ASAR	**Alice Springs**	**50.72**	**130**	P	P	**18 36 08.9**	**+1.7**
	0.4nm,0.9s,mb3.3,baz=306,slow=7.9,SNR=4.8						
FINES	**FINESS Array B**	**71.73**	**332**	P	P	**18 38 27.9**	**-1.0**
	0.4nm,0.7s,mb3.5,baz=107,slow=6.6,SNR=5.0						
NOA	**NORSAR Array B**	**78.76**	**331**	P	P	**18 39 08.1**	**-1.2**
	0.4nm,0.8s,mb3.4,baz=92,slow=5.7,SNR=3.4						

IDC 25 18:36:21.3±47.0, 2290S×17608W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.9/15, mbtmp4.2/3, 1D, Error ellipse: s-maj=881.3km s-min=158.9km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.10**	**267**	*e*P	P	18 43 19.8	+3.3
	3.3nm,0.3s						
STKA	**Stephens Creek**	**38.43**	**247**	*e*P	P	18 43 43.9	-0.9
	0.5nm,0.3s						
STKA	**Stephens Creek**	**38.43**	**247**	P	P	18 43 43.7	-1.1
	0.8nm,0.4s,baz=82,slow=10,SNR=5.4						
ASAR	**Alice Springs**	**45.76**	**259**	P	P	18 44 44.8	0.0
	0.9nm,0.3s,baz=93,slow=7.1,SNR=76						
WB2	**Warramunga Arr**	**46.07**	**264**⇓	*i*P	P	18 44 47.8	+0.5
WRA	**Warramunga Arr**	**46.08**	**264**	P	P	18 44 48.1	+0.7
	2.5nm,0.3s,baz=101,slow=8.2,SNR=70						

*NEIC **25** 18:43:37.8, 3186S×6945W, h8km, ML3.3(GUC), After GUC.*
GUC 25 18:43:37.8±1.0, 3186S×6945W, h8km±11km, MD4.1, ML3.3, 2C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.49**	**297**⇑	*i*P	Pn	18 44 04.1	-0.7
CMCH				*i* S	Sn	18 44 24.3	-0.2
CMCH	**Combarbala**	**1.49**	**297**⇑	*i*P	Pn	18 44 04.1	-0.7
CMCH				*i* S	Sn	18 44 24.3	-0.2
CMCH				AML	AML	18 44 25.7	
	comp=N,2µm,0.5s						
FCH	**Farellones**	**1.63**	**206**	*e*P	Pn	18 44 06.8	0.0
FCH				*i* S	Sn	18 44 28.7	+0.8
FCH				AML	AML	18 44 30.4	
	comp=E,256nm,0.4s						
PEL	**Peldehue**	**1.66**	**219**⇓	*i*P	Pn	18 44 07.0	-0.1
PEL				*i* S	Sn	18 44 29.0	+0.4
PEL				AML	AML	18 44 32.2	
	comp=E,545nm,0.3s						
CHNG	**Los Chungos**	**1.75**	**269**	*e*P	Pn	18 43 51.0	-17
CHNG				*i* S	Sn	18 44 13.5	-17
OVCH	**Ovalle**	**1.95**	**309**	P	Pn	18 44 10.6	-0.6
OVCH				S	Sn	18 44 37.9	+2.0
OVCH	**Ovalle**	**1.95**	**309**⇓	*e*P	Pn	18 44 10.6	-0.6
OVCH				*i* S	Sn	18 44 37.9	+2.0
OVCH				AML	AML	18 44 41.4	
	comp=N,472nm,0.7s						
PCH	**Pirque**	**1.98**	**207**⇓	*i*P	Pn	18 44 12.0	+0.5
PCH				*i* S	Sn	18 44 38.0	+1.5
TLL	**Tololo Astrono**	**2.05**	**325**⇓	*i*P	Pn	18 44 13.1	+0.6
TLL				*i* S	Sn	18 44 40.7	+2.5
TLL	**Tololo Astrono**	**2.05**	**325**⇓	*i*P	Pn	18 44 13.1	+0.6
TLL				*i* S	Sn	18 44 40.7	+2.5
TLL				AML	AML	18 44 44.4	
	comp=E,265nm,0.4s						
TACH	**Talagante**	**2.19**	**215**	*i* P	Pn	18 44 13.4	-1.0
CHCH	**Chadas Angostu**	**2.31**	**206**	*i* P	Pn	18 44 16.0	-0.1
CACH	**El Canelo**	**2.46**	**203**	*i* P	Pn	18 44 17.8	-0.3

IDC 25 18:50:36.1±2.9, 581S×14931E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/14, mbtmp3.6/4, Error ellipse: s-maj=65.7km s-min=44.7km az=101.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**20.22**	**225**	*e*P	P	18 55 12.8	0.0
WRA	**Warramunga Arr**	**20.23**	**225**	P	P	18 55 13.4	+0.5
	0.5nm,0.4s,baz=49,slow=10,SNR=15						
ASAR	**Alice Springs**	**23.13**	**218**	P	P	18 55 43.6	-0.5
	0.6nm,0.6s,baz=56,slow=9.1,SNR=21						
FITZ	**Fitzroy Crossi**	**26.14**	**240**	P	P	18 56 12.0	-0.2
	0.7nm,0.4s,baz=52,slow=13,SNR=5.0						
STKA	**Stephens Creek**	**26.92**	**195**	P	P	18 56 19.0	-0.1
	3.1nm,1.2s,baz=0.0,slow=10,SNR=2.6						
TORD	**Torodi Ar. Bea**	**147.26**	**285**	PKPbc	PKPbc	19 10 22.4	-0.2
	0.2nm,0.6s,baz=88,slow=3.0,SNR=5.5						

*IDC **25** 18:56:12.0±1.2, 3845N×2027E, h0km, mb3.6/5, mb1 3.5/8, mb1mx3.4/22, mbtmp3.4/8, ML3.2/3, Error ellipse: s-maj=25.0km s-min=19.3km az=94.0*
*ISCJB **25** 18:56:14.1±0.9, 3

BGS ***25*** *18:57:07.8, 3657N×2065E, h15km, mb4.6*
BEO ***25*** *18:57:18.9±1.0, 3831N×2019E, ML4.8/6*
IDC ***25*** *18:57:19.5±0.5, 3837N×2038E, h0km, mb4.3/19, mb1 4.4/29, mb1mx4.3/33, mbtmp4.2/29, ML4.4/9, MS4.0/8, Ms1 4.0/8, ms1mx3.7/35, Error ellipse: s-maj=11.7km s-min=10.4km az=105.0*
ISCJB ***25*** *18:57:19.4±0.4, 3837N±001×2027E±002, h9km±2km, mb4.5/80, MS4.1/19, Error ellipse: s-maj=2.4km s-min=1.8km az=31.8*
ATH ***25*** *18:57:19.3, 3822N×2030E, h8km±1km, MD4.6/12, ML4.6*
CSEM ***25*** *18:57:19.2±0.1, 3822N×2029E, h2km, mb4.5/8, Ms3.8, Error ellipse: s-maj=2.3km s-min=1.3km az=23.0*
NEIC ***25*** *18:57:19.3, 3822N×2030E, h8km, mb4.3/58, ML4.6(ATH), ML4.5(PDG), After ATH.*
MOS ***25*** *18:57:20.0±1.2, 3839N×2027E, h13km, mb4.8/24, MS4.2/18, Error ellipse: s-maj=3.9km s-min=2.3km az=99.2*
PDG ***25*** *18:57:20.0±0.5, 3829N×2025E, h18km±1km, MD4.6/5, ML4.5/10, Error ellipse: s-maj=1.8km s-min=2.2km az=0.0*
NAO ***25*** *18:57:21.2, 3826N×2182E, h33km, mb4.6*
THE ***25*** *18:57:21.1, 3834N×2043E, h3km, ML5.1*
SZGRF ***25*** *18:57:22.6, 3821N×2024E, h10km, mb4.1, Greece*
BJI ***25*** *18:57:22.7, 3899N×2042E, h10km, mB4.8, mb4.7, Ms4.8, Msz4.4*
ORF ***25*** *18:58:22.6, 4205N×1752E, h30km, mb3.5, ML6.2*
ISC 25 18:57:21.1±0.4, 3834N±001×2030E±002, h7km±2km, h13km±9km: pP-P, n537, σ1ᵍ25/625, mb4.5/80, MS4.1/19, 41C-26D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**125**	*e*PG	**Pg**	**18 57 24.8**	**-1.7**
VLS				*e*SG	**Sg**	**18 57 28.5**	**-1.7**
KFI	**Anninata**	**0.45**	**120**	*e*Pg	**Pg**	**18 57 27.6**	**-2.1**
RLS	**Riolos of Patr**	**0.96**	**106**	*e*PG	**Pg**	**18 57 36.8**	**-2.7**
RLS				*e*SB	**Sb**	**18 57 50.3**	**-2.5**
IGT	**Igoumenitsa**	**1.20**	**1**	*e*Pg	**Pg**	**18 57 43.3**	**-0.7**
IGT				*e*Sg	**Sg**	**18 58 01.0**	**+1.5**
SELA	**Sela**	**1.25**	**92**	*e*Pg	**Pg**	**18 57 42.2**	**-3.0**
EVR	**Evrytania**	**1.32**	**63**	*e*Pg	**Pg**	**18 57 44.8**	**-1.5**
EVR				P		18 57 48.9	
EVR				*e*Sb	**Sb**	**18 58 04.0**	**+0.9**
JAN	**Janina**	**1.39**	**18**	*e*PG	**Pg**	**18 57 47.0**	**-0.7**
JAN				*e*SB	**Sb**	**18 58 07.6**	**+2.4**
KEK	**Kerkira**	**1.43**	**344**	*e*PB	**Pb**	**18 57 48.3**	**+0.3**
SRN	**Sarande**	**1.56**	**352**	*i* PN	**Pn**	**18 57 51.0**	**+1.9**
SRN				*i* SN	**Sn**	**18 58 11.7**	**+2.1**
AGG	**Agios Georgios**	**1.73**	**66**	*e*Pb	**Pn**	**18 57 50.5**	**-1.0**
AGG				*e*Sb	**Sb**	**18 58 12.9**	**-2.1**
AGG	**Agios Georgios**	**1.73**	**66**	*e*Pb	**Pn**	**18 57 50.5**	**-1.0**
AGG				*e*Sb	**Sb**	**18 58 12.9**	**-2.1**
ITM	**Ithomi**	**1.73**	**131**	*e*PG	**Pn**	**18 57 50.2**	**-1.3**
THL	**Klokotos Trika**	**1.81**	**47**	*e*PG	**Pg**	**18 57 54.7**	**-1.2**
PYL	**PYLOS**	**1.84**	**141**	*e*Pb	**Pb**	**18 57 52.5**	**-2.5**
LTK	**Loutraki**	**2.12**	**98**	*e*PN	**Pn**	**18 57 55.7**	**-1.2**
LKR	**Lokris**	**2.14**	**81**	*e*PN	**Pn**	**18 57 57.3**	**+0.2**
KZN	**Kozani**	**2.27**	**30**	*e*PN	**Pn**	**18 58 01.2**	**+2.2**
KBN	**Korca**	**2.32**	**9**	*i* PN	**Pg**	**18 58 06.4**	**+1.0**
KBN				*i* SN	**Sg**	**18 58 35.3**	**-0.2**
LIT	**Litokhoron**	**2.45**	**43**	*e*Pn	**Pn**	**18 58 01.0**	**-0.4**
DID	**Didima**	**2.47**	**109**	*e*Pn	**Pn**	**18 58 01.2**	**-0.4**
NEO	**Neokhori**	**2.48**	**66**	*e*PB	**Pn**	**18 58 02.3**	**+0.5**
XOR	**Xorichti**	**2.48**	**65**	*e*Pn	**Pn**	**18 58 01.2**	**-0.6**
NAIG	**Nisos Aigina**	**2.58**	**102**	*e*PN	**Pn**	**18 58 03.8**	**+0.6**
ATH	**Athens Observa**	**2.72**	**97**	*e*PB	**Pn**	**18 58 04.7**	**-0.4**
KVR	**Kavouri**	**2.79**	**99**	*e*PB	**Pn**	**18 58 06.0**	**0.0**
BIA	**Bitola**	**2.79**	**16**	*e*Pn	**Pn**	**18 58 06.0**	**-0.1**
BIA	**Bitola**	**2.79**	**16**	*i* Pn	**Pn**	**18 58 07.9**	**+1.8**
OHR	**Ohrid**	**2.80**	**8**	*i* Pn	**Pn**	**18 58 07.4**	**+1.2**
OHR				*i* Sn	**Sn**	**18 58 41.6**	**+1.5**
OHR	**Ohrid**	**2.80**	**8**	*e*Pn	**Pn**	**18 58 05.9**	**-0.3**
PTL	**Penteli**	**2.82**	**95**	*e*PN	**Pn**	**18 58 06.5**	**0.0**
TIR	**Tirane**	**3.03**	**354**	*i* PN	**Pn**	**18 58 10.4**	**+1.1**
TIR				*i* SN	**Sn**	**18 58 49.9**	**+4.2**
TIR	**Tirane**	**3.03**	**354**	*e*Pn	**Pn**	**18 58 10.2**	**+0.9**
PAIG	**Paliouri**	**3.07**	**58**	*e*Pn	**Pn**	**18 58 09.3**	**-0.6**
GRG	**Griva**	**3.08**	**31**	*e*Pn	**Pn**	**18 58 10.3**	**+0.2**
THE	**Thessaloniki**	**3.08**	**41**	*e*Pn	**Pn**	**18 58 09.7**	**-0.4**
THE	**Thessaloniki**	**3.08**	**41**	*e*Pn	**Pn**	**18 58 09.6**	**-0.5**
KRUS	**Krusevo**	**3.12**	**13**	*i* Pn	**Pn**	**18 58 12.8**	**+2.3**
KRUS				*i* Sn	**Sn**	**18 58 48.6**	**+0.6**
KRUS	**Krusevo**	**3.12**	**13**	*i* Pn	**Pn**	**18 58 12.8**	**+2.3**
KRUS				*i* Sn	**Sn**	**18 58 48.5**	**+0.5**
HORT	**Hortiatis**	**3.13**	**43**	*e*Pn	**Pn**	**18 58 10.8**	**+0.1**
PLG	**Polygyros**	**3.18**	**49**	*e*Pn	**Pn**	**18 58 10.8**	**-0.6**
PEF	**Pezze di Greco**	**3.32**	**319**	*e*SG	**Pn**	**18 58 14.3**	**+1.0**
SOH	**Sokhos**	**3.43**	**43**	*e*Pn	**Pn**	**18 58 15.5**	**-0.3**
VAY	**Valandovo**	**3.46**	**30**	*e*Pn	**Pn**	**18 58 15.2**	**0.0**
VAY	**Valandovo**	**3.46**	**30**	*i* Pn	**Pn**	**18 58 15.9**	**+0.7**
KNT	**Kendrikon**	**3.46**	**35**	*e*Pn	**Pn**	**18 58 15.3**	**+0.1**
OUR	**Ouranopolis**	**3.48**	**54**	*e*Pn	**Pn**	**18 58 15.2**	**-0.4**
STIP	**Stip**	**3.65**	**23**	*e*Pn	**Pn**	**18 58 18.7**	**+0.8**
STIP	**Stip**	**3.65**	**23**	*i* Pn	**Pn**	**18 58 19.3**	**+1.4**
ULC	**Ulcinj**	**3.71**	**348**	⇑*i*Pn	**Pn**	**18 58 18.3**	**-0.4**
ULC				*e*Sn	**Sn**	**18 59 02.5**	**-0.1**
PUK	**Puka**	**3.72**	**355**	*i* PN	**Pn**	**18 58 20.4**	**+1.6**
PUK				*i* SN	**Sn**	**18 59 01.1**	**-1.6**
SKO	**Skopje**	**3.74**	**13**	*i* Pn	**Pn**	**18 58 21.2**	**+2.2**
SKO				*i* Sn	**Sn**	**18 59 03.0**	**-0.2**
SG1	**Sgolgore (BA)**	**3.75**	**313**	*e*Pn	**Pn**	**18 58 21.2**	**+1.9**
BUM	**Brajici-Budva**	**4.10**	**345**	⇑*i*Pn	**Pn**	**18 58 23.8**	**-0.3**
BUM				*e*Sn	**Sn**	**18 59 11.0**	**-1.3**
LIA	**Limnos Island**	**4.11**	**66**	P	**Pn**	**18 58 29.2**	**+5.7**
KKB	**Krupnik**	**4.12**	**30**	*i* P	**Pn**	**18 58 25.6**	**+1.2**
CDT	**Castel del Mon**	**4.14**	**313**	*e*Pn	**Pn**	**18 58 26.3**	**+1.7**
PDG	**Podgorica**	**4.17**	**349**	⇑*i*Pn	**Pn**	**18 58 24.0**	**-0.9**
TTG	**Podgorica**	**4.17**	**349**	⇑*i*Pn	**Pn**	**18 58 24.0**	**-0.9**
TTG				*e*Sn	**Sn**	**18 59 13.3**	**-0.5**
MMB	**Musomiste**	**4.18**	**38**	*i* P	**Pn**	**18 58 26.5**	**+1.3**
PVY	**Plav**	**4.26**	**357**	⇑*i*Pn	**Pn**	**18 58 26.2**	**-0.1**
PVY				*e*Sn	**Sn**	**18 59 16.1**	**-0.1**
VAM	**Vamos**	**4.28**	**132**	*e*PN	**Pn**	**18 58 27.0**	**+0.5**
HCY	**Herceg Novi**	**4.33**	**342**	⇑*i*Pn	**Pn**	**18 58 26.7**	**-0.5**
HCY				*e*Sn	**Sn**	**18 59 17.0**	**-0.9**
APE	**Apeiranthos**	**4.34**	**105**	*e*PN	**Pn**	**18 58 28.8**	**+1.5**
CHOS	**Chios island**	**4.52**	**88**	*e*Pn	**Pn**	**18 58 29.6**	**-0.2**
CHOS	**Chios island**	**4.52**	**88**	*e*Pn	**Pn**	**18 58 29.6**	**-0.3**
BEY	**Berane**	**4.54**	**356**	⇑*i*Pn	**Pn**	**18 58 29.9**	**-0.2**
IVA	**Berane**	**4.54**	**356**	⇑*i*Pn	**Pn**	**18 58 29.9**	**-0.2**
IVA				*e*Sn	**Sn**	**18 59 22.7**	**-0.4**
NKY	**Niksic**	**4.58**	**348**	⇑*i*Pn	**Pn**	**18 58 30.7**	**+0.1**
NKY				*e*Sn	**Sn**	**18 59 23.6**	**-0.5**
BARS	**Barje**	**4.63**	**14**	⇑*i*Pn	**Pn**	**18 58 31.6**	**+0.3**
BARS				*e*Sn	**Sn**	**18 59 23.5**	**-1.7**
BARS	**Barje**	**4.63**	**14**	Pn	**Pn**	**18 58 31.9**	**+0.6**
GVD	**Gavdhos**	**4.63**	**138**	*e*PN	**Pn**	**18 58 31.5**	**+0.1**
BOZC	**Bozcaada**	**4.72**	**70**	*e*P	**Pn**	**18 58 33.6**	**+1.0**
VAE	**Valguarnera**	**4.73**	**261**	Pn	**Pn**	**18 58 33.3**	**+0.5**
	3.9nm,0.3s,baz=267,slow=11,SNR=9.3						
VAE				Sn	**Sn**	**18 59 28.9**	**+1.1**
	14nm,0.3s,baz=93,slow=9.6,SNR=4.0						
BRY	**Bratogost**	**4.75**	**344**	⇑*i*Pn	**Pn**	**18 58 32.2**	**-0.8**
BRY				*e*Sn	**Sn**	**18 59 27.6**	**-0.7**
PRK	**Paraskevi**	**4.75**	**77**	*e*PN	**Pn**	**18 58 34.4**	**+1.4**
RZN	**Rozhen**	**4.76**	**44**	*i* P	**Pn**	**18 58 35.0**	**+1.8**
IDI	**Anoyia**	**4.78**	**128**	Pn	**Pn**	**18 58 33.2**	**-0.2**
	4.6nm,0.3s,baz=332,slow=13,SNR=9.8						
IDI				Sn	**Sn**	**18 59 27.9**	**-1.0**
	15nm,0.3s,baz=5.1,slow=24,SNR=6.4						
VTS	**Vitosha**	**4.79**	**27**	*e*Pn	**Pn**	**18 58 34.4**	**+0.8**
VTS	**Vitosha**	**4.79**	**27**	*i* P	**Pn**	**18 58 25.4**	**-8.2**
VTS	**Vitosha**	**4.79**	**27**	⇓*i*P	**Sn**	**18 59 31.7**	**+2.4**
SJES	**Sjenica**	**4.94**	**357**	*e*Pn	**Pn**	**18 58 34.8**	**-0.7**
SJES				*e*Sn	**Sn**	**18 59 31.9**	**-0.9**
STON	**Ston**	**4.94**	**337**	*e*Pn	**Pn**	**18 58 34.5**	**-1.2**
STON				Sn	**Sn**	**18 59 30.1**	**-2.9**
STON	**Ston**	**4.94**	**337**	*e*Pn	**Pn**	**18 58 34.4**	**-1.2**
STON				Sn	**Sn**	**18 59 30.1**	**-2.9**
URLA	**Izmir**	**4.95**	**88**	⇑*i*P	**Pn**	**18 58 36.0**	**+0.3**
UPM	**Unac-Piva**	**4.97**	**348**	*e*Pn	**Pn**	**18 58 35.5**	**+0.6**
UPM				*e*Sn	**Sn**	**18 59 33.2**	**-0.6**
PLE	**Pljevlja**	**5.04**	**352**	⇑*i*Pn	**Pn**	**18 58 35.9**	**-1.0**
PLE				*e*Sn	**Sn**	**18 59 35.0**	**-0.3**
AYVA	**Ayvalik**	**5.08**	**77**	⇑*e*P	**Pn**	**18 58 39.5**	**+1.9**
ALN	**Alexandroupoli**	**5.12**	**58**	*e*Pn	**Pn**	**18 58 37.9**	**-0.2**
PGB	**Panagyurishte**	**5.14**	**34**	*i* P	**Pn**	**18 58 39.7**	**+1.4**
SMG	**Samos**	**5.20**	**95**	*e*PN	**Pn**	**18 58 38.5**	**-0.7**
NPS	**Neapolis**	**5.25**	**124**	*e*PN	**Pn**	**18 58 40.5**	**+0.6**
KDAG	**Bornova**	**5.48**	**87**	*e*P	**Pn**	**18 58 45.2**	**+2.2**
XRY	**Khrisi**	**5.55**	**127**	*e*PN	**Pn**	**18 58 45.7**	**+1.8**
GRUS	**Gruza**	**5.56**	**3**	*e*Pn	**Pn**	**18 58 43.0**	**-1.0**
GRUS				*e*Sn	**Sn**	**18 59 46.2**	**-1.9**
BBLS	**Bajina Basta -**	**5.57**	**353**	⇑*i*Pn	**Pn**	**18 58 41.7**	**-2.5**
BBLS				*e*Sn	**Sn**	**18 59 46.0**	**-2.4**
ZKR	**Zakros**	**5.74**	**122**	*e*Pn	**Pn**	**18 58 46.6**	**+0.1**
DIVS	**Divcibare**	**5.76**	**358**	⇑*i*Pn	**Pn**	**18 58 43.0**	**-3.9**
DIVS				*e*Sn	**Sn**	**18 59 49.6**	**-3.6**
BDRM	**Kayabasi**	**5.81**	**100**	*e*P	**Pn**	**18 58 48.4**	**+0.9**
SART	**Tekirdag**	**5.82**	**64**	*i* P	**Pn**	**18 58 47.9**	**+0.3**
AKHS	**Akhisar**	**5.91**	**82**	⇓*i*P	**Pn**	**18 58 54.5**	**+5.5**
SVIS	**Svilajnac**	**6.00**	**6**	*e*Pn	**Pn**	**18 58 48.6**	**-1.5**
SVIS				*e*Sn	**Sn**	**18 59 54.9**	**-4.0**
SVIS	**Svilajnac**	**6.00**	**6**	Pn	**Pn**	**18 58 48.7**	**-1.4**
AYDN	**Tasoluk**	**6.03**	**94**	⇑*i*P	**Pb**	**18 59 09.5**	**+3.2**
BTOK	**Tokmak**	**6.18**	**74**	*i* P	**Pn**	**18 58 55.1**	**+2.4**
PVL	**Pavlikeni**	**6.19**	**36**	*i* P	**Pn**	**18 58 51.8**	**-1.0**
BEO	**Belgrade**	**6.48**	**1**	*e*Pn	**Pn**	**18 58 55.3**	**-1.4**
BEO				*e*Sn	**Sn**	**19 00 06.7**	**-4.2**
BEO	**Belgrade**	**6.48**	**1**	Pn	**Pn**	**18 58 55.8**	**-0.9**
SZH	**Strazhica**	**6.52**	**39**	*i* P	**Pn**	**18 58 57.9**	**+0.6**
FGSL	**Fruska Gora**	**6.83**	**357**	*e*Pn	**Pn**	**18 58 59.8**	**-1.7**
FGSL	**Fruska Gora**	**6.83**	**357**	Pn	**Pn**	**18 58 59.8**	**-1.7**
LTBQ	**Tobruq**	**6.93**	**154**	*i* P	**Pn**	**18 59 01.8**	**-1.2**
	SNR=46						
LTBQ				*e*S	**Sn**	**19 00 10.6**	**-11**
	183nm,0.6s,SNR=46						
GDZ	**Gediz**	**7.22**	**81**	⇓*i*P	**Pn**	**18 59 09.8**	**+2.9**
GZR	**Gura Zlata**	**7.29**	**14**	P	**Pn**	**18 59 08.4**	**+0.6**
GZR	**Gura Zlata**	**7.29**	**14**	⇓*i*P	**Pn**	**18 59 08.2**	**+0.4**
GZR	**Gura Zlata**	**7.29**	**14**	P	**Pn**	**18 59 08.5**	**+0.7**
BZS	**Buzias**	**7.34**	**7**	⇑P	**Pn**	**18 59 09.5**	**+0.9**
BZS	**Buzias**	**7.34**	**7**	⇑*i*P	**Pn**	**18 59 09.5**	**+1.0**
LMSR	**Misrath**	**7.40**	**217**	*i* P	**Pn**	**18 59 08.9**	**-0.5**
	SNR=46						
LMSR				*e*S	**Sn**	**19 00 22.3**	**-11**
	SNR=46						
LJBD	**Adjabya**	**7.41**	**181**	*i* P	**Pn**	**18 59 06.7**	**-2.8**
	SNR=46						
GOLH	**Golhisar**	**7.42**	**96**	⇑*e*P	**Pn**	**18 59 14.2**	**+4.6**
NVLJ	**Novalja**	**7.44**	**329**	*e*Pn	**Pn**	**18 59 09.7**	**-0.2**
NVLJ				Sn	**Sn**	**19 00 31.7**	**-2.7**
RHK3	**Tenkes**	**7.70**	**349**	*e*P	**Pn**	**18 59 12.5**	**-0.9**
PKSM	**Moragy**	**7.97**	**352**	P	**Pn**	**18 59 18.4**	**+1.2**
PKSM	**Moragy**	**7.97**	**352**	⇓*i*P	**Pn**	**18 59 16.6**	**-0.5**
PKSM	**Moragy**	**7.97**	**352**	P	**Pn**	**18 59 18.4**	**+1.3**
BORA	**Eskisehir**	**8.04**	**76**	⇑*i*P	**Pn**	**18 59 19.3**	**+1.1**
ISP	**Isparta**	**8.07**	**90**	Pn	**Pn**	**18 59 20.6**	**+2.1**
	12nm,0.6s						
ISP	**Isparta**	**8.07**	**90**	P	**Pn**	**18 59 20.6**	**+2.1**
ISP				pmax	pmax		
	comp=Z,12nm,0.6s						
BOJS	**Bojanci**	**8.09**	**334**	*e*Pn	**Pn**	**18 59 18.9**	**+0.2**
BOJS				*e*Sn	**Sn**	**19 00 47.7**	**-2.7**
MLR	**Muntele Rosu**	**8.29**	**29**	Pn	**Pn**	**18 59 23.8**	**+2.2**
	comp=Z,1.9nm,0.3s,baz=264,slow=9.8,SNR=29						
CRES	**Cresnjev**	**8.30**	**336**	*e*Pn	**Pn**	**18 59 21.0**	**-0.8**
CRES				*e*Sn	**Sn**	**19 00 51.4**	**-4.3**
ESKT	**Eskisehir**	**8.31**	**79**	*i* P	**Pn**	**18 59 23.7**	**+1.9**
SEYT	**Eskypehyr**	**8.31**	**79**	*i* P	**Pn**	**18 59 23.7**	**+1.9**
VISS	**Visnje**	**8.49**	**333**	*e*Pn	**Pn**	**18 59 24.4**	**+0.1**
VISS				*e*Sn	**Sn**	**19 00 55.8**	**-4.5**
HENT	**Hendek**	**8.55**	**70**	*i* P	**Pn**	**18 59 26.7**	**+1.5**
DRGR		**8.64**	**11**	⇓P	**Pn**	**18 59 28.0**	**+1.7**
DRGR		**8.64**	**11**	⇓*i*P	**Pn**	**18 59 28.0**	**+1.7**
LJU	**Ljubljana**	**8.81**	**333**	*e*Pn	**Pn**	**18 59 28.5**	**-0.2**
LJU				*e*Sn	**Sn**	**19 01 08.5**	**+0.3**
PLOR	**Plostina**	**8.87**	**30**	P	**Pn**	**18 59 32.1**	**+2.6**
VRI	**Vrincioaia**	**8.91**	**30**	P	**Pn**	**18 59 32.8**	**+2.8**
VRI	**Vrincioaia**	**8.91**	**30**	⇓*i*P	**Pn**	**18 59 32.7**	**+2.6**
VRI	**Vrincioaia**	**8.91**	**30**	P	**Pn**	**18 59 32.8**	**+2.7**
VOY	**Vojsko**	**9.04**	**330**	*e*Pn	**Pn**	**18 59 30.9**	**-0.9**
VOY				*e*		18 59 31.4	
VOY				*e*Sn	**Sn**	**19 01 11.4**	**-2.3**
KEST	**Kesra**	**9.14**	**257**	Pn	**Pn**	**18 59 33.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=204,slow=14,SNR=7.6						
PKSG		**9.16**	**352**	*e*P	**Pn**	**18 59 34.9**	**+1.4**
BUD	**Budapest**	**9.19**	**355**	⇓*e*	**Pn**	**18 59 33.7**	**-0.2**
OBKA	**Obir**	**9.21**	**334**	⇓*i*Pn	**Pn**	**18 59 33.9**	**-0.2**
	SNR=9.4						
OBKA				⇑*i*Sn	**Sn**	**19 01 13.4**	**-4.5**
SGKT	**Sivrigoynuk**	**9.37**	**73**	*i* P	**Pn**	**18 59 37.9**	**+1.5**
PENC	**Penc**	**9.48**	**356**	*e*S	**Sn**	**19 01 24.4**	**-0.2**
ARSA	**Arzberg**	**9.57**	**340**	*i* Pn	**Pn**	**18 59 38.0**	**-1.1**
	SNR=10						
ARSA				⇓*i*Sn	**Sn**	**19 01 21.4**	**-5.5**
PSZ	**Piszkesteto**	**9.58**	**358**	*e*Pn	**Pn**	**18 59 38.6**	**-0.7**
	comp=Z,21nm,0.8s						
PSZ	**Piszkesteto**	**9.58**	**358**	*e*P	**Pn**	**18 59 38.6**	**-0.7**
PSZ				pmax	pmax		
	comp=Z,21nm,0.8s						
PSZ	**Piszkesteto**	**9.58**	**358**	⇓*e*	**Pn**	**18 59 39.4**	**+0.1**
PSZ	**Piszkesteto**	**9.58**	**358**	⇓*i*P	**Pn**	**18 59 39.3**	**0.0**
PSZ	**Piszkesteto**	**9.58**	**358**	*e*Pn	**Pn**	**18 59 38.6**	**-0.7**
	comp=Z,21nm,0.8s						
KBA	**Koelnbreinsper**	**10.12**	**332**	⇓*i*Pn	**Pn**	**18 59 46.6**	**0.0**
	SNR=9.9						
KBA				⇑*i*Sn	**Sn**	**19 01 35.7**	**-4.6**
ZST	**Bratislava**	**10.13**	**348**	*e*Pn	**Pn**	**18 59 47.2**	**+0.5**
ZST				*e*Sn	**Sn**	**19 01 32.6**	**-7.8**
ZST	**Bratislava**	**10.13**	**348**	*e*P	**Pn**	**18 59 47.2**	**+0.5**
ZST				*e*		19 01 32.6	
ZST				MLR	MLR		
	comp=Z,2μm,16.9s						
ZST	**Bratislava**	**10.13**	**348**	*e*PN	**Pn**	**18 59 47.2**	**+0.5**
ZST				*e*SN	**Sn**	**19 01 32.5**	**-7.9**
ZST	**Bratislava**	**10.13**	**348**	*e*P	**Pn**	**18 59 47.2**	**+0.5**
	comp=Z,2μm,16.9s						
KECS	**Kecovo**	**10.14**	**1**	*e*PN	**Pn**	**18 59 46.5**	**-0.5**
KECS				*e*SN	**Sn**	**19 01 34.3**	**-6.6**
VYHS	**Vyhne**	**10.21**	**355**	*e*PN	**Pn**	**18 59 46.4**	**-1.4**
VYHS				*e*SN	**Sn**	**19 01 37.5**	**-5.0**
MODS	**Modra-Piesok**	**10.27**	**349**	*e*PN	**Pn**	**18 59 50.5**	**+1.8**
MODS				*e*SN	**Sn**	**19 01 36.4**	**-7.6**
KOLL	**Kolacno**	**10.33**	**353**	*e*PN	**Pn**	**18 59 47.9**	**-1.6**
KOLL				*e*SN	**Sn**	**19 01 39.3**	**-6.2**
ELDT	**Eldivan**	**10.38**	**74**	*i* P	**Pn**	**18 59 50.3**	**+0.1**
SMOL	**Smolenice**	**10.38**	**349**	*e*PN	**Pn**	**18 59 50.0**	**-0.2**
SMOL				*e*SN	**Sn**	**19 01 40.0**	**-6.8**
UZH	**Uzhgorod**	**10.39**	**7**	*e*P	**Pn**	**18 59 51.4**	**+1.1**
UZH				*e*S	**Sn**	**19 01 48.4**	**+1.4**
UZH				MLR	MLR		
	comp=Z,2μm,11.0s						
MOA	**Molln**	**10.48**	**337**	⇓*i*Sn	**Sn**	**19 01 43.9**	**-5.2**
MOA	**Molln**	**10.48**	**337**	*i* Pn	**Pn**	**18 59 50.9**	**-0.6**
MOA				*i* Sn	**Sn**	**19 01 43.9**	**-5.2**
MOA	**Molln**	**10.48**	**337**	*i* Pn	**Pn**	**18 59 50.9**	**-0.6**
	SNR=24						
MOA				⇓*i*Sn	**Sn**	**19 01 46.8**	**-2.3**
CRVS	**Cervenica-Dubn**	**10.60**	**4**	*e*PN	**Pn**	**18 59 53.2**	**+0.1**
KOLS	**Kolonicke sedl**	**10.69**	**7**	*e*PN	**Pn**	**18 59 53.7**	**-0.7**
WTTA	**Wattenberg**	**10.95**	**327**	⇓*i*Sn	**Sn**	**19 01 55.8**	**-4.9**
WTTA	**Wattenberg**	**10.95**	**327**	*i* Pn	**Pn**	**18 59 58.2**	**+0.2**
WTTA				*i* Sn	**Sn**	**19 01 55.8**	**-4.9**
WTTA	**Wattenberg**	**10.95**	**327**	*i* Pn	**Pn**	**18 59 58.2**	**+0.2**
	SNR=17						
WTTA				⇑*i*Sn	**Sn**	**19 02 00.3**	**-0.4**
CSS	**Prodhromos**	**11.00**	**104**	*e*Pn	**Pn**	**19 00 01.8**	**+3.1**
	comp=Z,37nm,1.2s						
CSS	**Prodhromos**	**11.00**	**104**	*e*Pn	**Pn**	**19 00 01.8**	**+3.1**
WATA	**Walderalm**	**11.03**	**327**	⇑*i*Sn	**Sn**	**19 01 59.1**	**-3.6**
WATA	**Walderalm**	**11.03**	**327**	⇓*i*Pn	**Pn**	**18 59 59.7**	**+0.6**
WATA				*i* Sn	**Sn**	**19 01 59.1**	**-3.6**
WATA	**Walderalm**	**11.03**	**327**	⇓*i*Pn	**Pn**	**18 59 59.7**	**+0.6**
	SNR=31						
WATA				⇓*i*Sn	**Sn**	**19 02 03.0**	**+0.3**
STHS	**Stebnicka Huta**	**11.10**	**3**	*e*PN	**Pn**	**19 00 00.2**	**+0.2**
SQTA	**Sankt Quirin**	**11.10**	**326**	⇑*i*Sn	**Sn**	**19 02 00.9**	**-3.5**
SQTA	**Sankt Quirin**	**11.10**	**326**	⇓*i*Pn	**Pn**	**19 00 00.3**	**+0.2**
SQTA				*i* Sn	**Sn**	**19 02 00.9**	**-3.5**
SQTA	**Sankt Quirin**	**11.10**	**326**	⇓*i*Pn	**Pn**	**19 00 00.3**	**+0.2**
	SNR=14						
SQTA				⇑*i*Sn	**Sn**	**19 02 05.2**	**+0.8**
SBF	**Sospel**	**11.16**	**304**	*e*P	**Pn**	**19 00 01.8**	**+0.9**
	comp=Z,91nm,1.1s						
SBF	**Sospel**	**11.16**	**304**	*e*P	**Pn**	**19 00 01.8**	**+0.9**
SBF				pmax	pmax		
	comp=Z,45nm,1.1s						
SBF	**Sospel**	**11.16**	**304**	*e*P	**Pn**	**19 00 01.8**	**+0.9**
	comp=Z,45nm,1.1s						
MOTA	**Moosalm**	**11.24**	**326**	⇑*i*Sn	**Sn**	**19 02 04.1**	**-3.8**
MOTA	**Moosalm**	**11.24**	**326**	⇑*i*Pn	**Pn**	**19 00 02.7**	**+0.7**
MOTA				*i* Sn	**Sn**	**19 02 04.1**	**-3.7**
MOTA	**Moosalm**	**11.24**	**326**	⇑*i*Pn	**Pn**	**19 00 02.7**	**+0.7**
	SNR=30						
MOTA				⇑*i*Sn	**Sn**	**19 02 07.9**	**+0.1**
VRAC	**Vranov**	**11.29**	**348**	Pn	**Pn**	**19 00 02.5**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=186,slow=21,SNR=4.5						
DAVOX	**Davos/Dischmat**	**11.40**	**321**	Pn	**Pn**	**19 00 04.9**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=97,slow=17,SNR=14						
DAVOX				Sn	**Sn**	**19 02 12.1**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=317,slow=18,SNR=5.2						
DAVOX				LR	LR	19 04 56.6	
	comp=Z,876nm,20.0s,baz=120,slow=40						
TREC	**Trest**	**11.49**	**344**	*e*P	**Pn**	**19 00 06.3**	**+0.9**
RETA	**Reutte**	**11.50**	**326**	⇑*i*Pn	**Pn**	**19 00 06.3**	**+0.7**
	SNR=5.7						
GEC2	**GERESS Array S**	**11.54**	**338**	*e*Pn	**Pn**	**19 00 04.3**	**-1.7**
GEC2				*e*Sn	**Sn**	**19 02 11.0**	**-4.0**
GERES	**GERESS Array B**	**11.54**	**338**	P	**Pn**	**19 00 04.5**	**-1.5**
GERES						19 02 09.7	
GERES	**GERESS Array B**	**11.54**	**338**	Pn	**Pn**	**19 00 04.5**	**-1.5**

MOX	**Moxa**	**13.77**	**336**	*e*P		**Pn**	**19 00 36.5**	**+0.1**
MOX					pmax	pmax		
	comp=Z,33nm,1.6s							
MOX					MLR	MLR		
	comp=Z,2µm,15.0s							
MOX	**Moxa**	**13.77**	**336**	*e*Pn		**Pn**	**19 00 36.0**	**-0.4**
CDF	**Champ du Feu**	**13.81**	**321**	*e*P		**Pn**	**19 00 34.7**	**-2.3**
KIEV	**Kiev**	**13.88**	**24**	*e*Pn		**Pn**	**19 00 38.0**	**0.0**
	comp=Z,6.1nm,0.8s							
KIEV	**Kiev**	**13.88**	**24**	*e*P		**Pn**	**19 00 38.0**	**0.0**
KIEV					pmax	pmax		
	comp=Z,6.0nm,0.8s							
KIEV	**Kiev**	**13.88**	**24**	*e*P		**Pn**	**19 00 38.0**	**0.0**
	comp=Z,6.0nm,0.8s							
AKASG	**Malin Array Be**	**13.89**	**24**	Pn		**Pn**	**19 00 36.4**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=211,slow=12,SNR=16							
AKASG					PcP	PcP	19 05 59.4	-0.9
	comp=Z,0.2nm,0.3s,baz=224,slow=1.1,SNR=4.1							
CLL	**Collm**	**13.96**	**341**	*e*P		**Pn**	**19 00 37.0**	**-2.0**
CLL					MLR	MLR		
	comp=Z,1µm,14.7s							
CLL	**Collm**	**13.96**	**341**	*e*P		**Pn**	**19 00 41.0**	**+2.0**
CLL				*i* PP			19 00 48.8	
	comp=Z,44nm,1.7s							
CLL	**Collm**	**13.96**	**341**	P		**Pn**	**19 00 37.0**	**-2.0**
HAU	**Haudompre**	**14.02**	**318**	*e*P		**Pn**	**19 00 38.5**	**-1.4**
	comp=Z,18nm,0.7s							
HAU					*e*MLR	MLR		
	comp=Z,1µm,21.0s							
HAU	**Haudompre**	**14.02**	**318**	*e*P		**Pn**	**19 00 38.5**	**-1.4**
HAU					pmax	pmax		
	comp=Z,9.0nm,0.6s							
HAU	**Haudompre**	**14.02**	**318**	*e*P		**Pn**	**19 00 38.5**	**-1.4**
	comp=Z,9.1nm,0.7s							
GRSN	**GIRESUNGRSN**	**14.09**	**74**	*i* P		**Pn**	**19 00 38.3**	**-2.6**
MALT	**Malatya**	**14.24**	**84**	P		**Pn**	**19 00 52.4**	**+9.4**
MALT	**Malatya**	**14.24**	**84**⇑	*i* P		**Pn**	**19 00 52.0**	**+9.1**
ANN	**Anapa**	**14.35**	**58**	*e*P		**Pn**	**19 00 47.3**	**+2.9**
ANN				*e*S		**Sn**	**19 03 31.9**	**+8.2**
ANN					pmax	pmax		
	comp=Z,67nm,1.0s							
MTLF	**Montolieu**	**14.57**	**296**	*e*P		**Pn**	**19 00 47.5**	**+0.1**
TNS	**Taunus Mts**	**14.58**	**328**	*e*Pn		**Pn**	**19 00 47.3**	**-0.2**
ELZG	**Elazig**	**14.65**	**84**	*i* P		**Pn**	**19 00 54.4**	**+5.8**
SMF	**Signal de Mont**	**14.69**	**310**	*e*P		**Pn**	**19 00 47.6**	**-1.5**
	comp=Z,14nm,0.8s							
SMF	**Signal de Mont**	**14.69**	**310**	*e*P		**Pn**	**19 00 47.6**	**-1.5**
SMF					pmax	pmax		
	comp=Z,7.0nm,0.8s							
SMF	**Signal de Mont**	**14.69**	**310**	*e*P		**Pn**	**19 00 47.6**	**-1.5**
	comp=Z,7.2nm,0.8s							
RUE	**Ruedersdorf**	**14.86**	**344**	P		**Pn**	**19 00 54.3**	**+3.0**
	comp=Z,85nm,1.3s							
EIL	**Elat**	**14.90**	**121**	Pn		**Pn**	**19 00 50.6**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=340,slow=18,SNR=7.0							
LOR	**Lormes**	**14.99**	**312**	*e*P		**Pn**	**19 00 50.9**	**-2.2**
	comp=Z,9.4nm,0.7s							
LOR					*e*MLR	MLR		
	comp=Z,362nm,19.0s							
LOR	**Lormes**	**14.99**	**312**	*e*P		**Pn**	**19 00 50.9**	**-2.2**
LOR					pmax	pmax		
	comp=Z,5.0nm,0.7s							
LOR	**Lormes**	**14.99**	**312**	*e*P		**Pn**	**19 00 50.9**	**-2.2**
	comp=Z,4.7nm,0.7s							
MEZF	**Maizieres J'vi**	**15.01**	**318**	*e*P		**Pn**	**19 00 53.4**	**0.0**
	comp=Z,68nm,0.9s							
MEZF	**Maizieres J'vi**	**15.01**	**318**	*e*P		**Pn**	**19 00 53.4**	**0.0**
	comp=Z,34nm,0.9s							
AVF	**Avril sur Loir**	**15.05**	**310**	*e*P		**Pn**	**19 00 53.1**	**-0.9**
	comp=Z,13nm,0.9s							
AVF	**Avril sur Loir**	**15.05**	**310**	*e*P		**Pn**	**19 00 53.1**	**-0.9**
AVF					pmax	pmax		
	comp=Z,6.0nm,0.9s							
AVF	**Avril sur Loir**	**15.05**	**310**	*e*P		**Pn**	**19 00 53.1**	**-0.9**
	comp=Z,6.3nm,0.9s							
SSF	**Saint Saulge**	**15.09**	**311**	*e*P		**Pn**	**19 00 51.8**	**-2.7**
	comp=Z,35nm,1.2s							
SSF	**Saint Saulge**	**15.09**	**311**	*e*P		**Pn**	**19 00 51.8**	**-2.7**
SSF					pmax	pmax		
	comp=Z,18nm,1.2s							
SSF	**Saint Saulge**	**15.09**	**311**	*e*P		**Pn**	**19 00 51.8**	**-2.7**
	comp=Z,18nm,1.2s							
CAF	**Calviac**	**15.13**	**302**	*e*P		**Pn**	**19 00 56.6**	**+1.6**
	comp=Z,13nm,0.7s							
CAF	**Calviac**	**15.13**	**302**	*e*P		**Pn**	**19 00 56.6**	**+1.6**
CAF					pmax	pmax		
	comp=Z,6.0nm,0.7s							
CAF	**Calviac**	**15.13**	**302**	*e*P		**Pn**	**19 00 56.6**	**+1.6**
	comp=Z,6.3nm,0.7s							
CLZ	**Clausthal**	**15.20**	**336**	*e*Pn		**Pn**	**19 01 01.7**	**+5.9**
WLF	**Walferdange**	**15.20**	**323**	P		**Pn**	**19 01 01.3**	**+5.4**
	comp=Z,142nm,1.5s							
WLF	**Walferdange**	**15.20**	**323**	P		**Pn**	**19 01 01.3**	**+5.4**
WLF					pmax	pmax		
	comp=Z,142nm,1.5s							
WLF	**Walferdange**	**15.20**	**323**	P		**Pn**	**19 01 05.0**	**+9.1**
	comp=Z,77nm,1.8s							
BGF	**Bois d'Agland**	**15.26**	**308**	*e*P		**Pn**	**19 00 56.5**	**-0.2**
TCF	**Toulx Ste Croi**	**15.54**	**307**	*e*P		**Pn**	**19 00 59.9**	**-0.5**
	comp=Z,48nm,1.4s							
TCF	**Toulx Ste Croi**	**15.54**	**307**	*e*P		**Pn**	**19 00 59.9**	**-0.5**
TCF					pmax	pmax		
	comp=Z,24nm,1.4s							
TCF	**Toulx Ste Croi**	**15.54**	**307**	*e*P		**Pn**	**19 00 59.9**	**-0.5**
	comp=Z,24nm,1.4s							
SOC	**Sochi**	**15.57**	**64**	*e*P		**Pn**	**19 00 59.2**	**-1.6**
SOC				*e*			19 03 56.6	
SOC					pmax	pmax		
	comp=Z,11nm,0.7s							
SOC					MLR	MLR		
	comp=Z,210nm,9.0s							
SOC	**Sochi**	**15.57**	**64**	*e*P		**Pn**	**19 00 59.2**	**-1.6**
	comp=Z,11nm,0.7s							
RJF	**Les Rejaudoux**	**15.62**	**302**	*e*P		**Pn**	**19 01 00.6**	**-0.9**
	comp=Z,9.3nm,0.8s							
RJF					*e*MLR	MLR		
	comp=Z,865nm,18.8s							
RJF	**Les Rejaudoux**	**15.62**	**302**	*e*P		**Pn**	**19 01 00.6**	**-0.9**
RJF					pmax	pmax		
	comp=Z,5.0nm,0.8s							
RJF	**Les Rejaudoux**	**15.62**	**302**	*e*P		**Pn**	**19 01 00.6**	**-0.9**
	comp=Z,4.7nm,0.8s							
NRDL	**Niedersach Rie**	**15.84**	**337**	*e*Pn		**Pn**	**19 01 09.9**	**+5.6**
EPF	**Esparros**	**15.84**	**294**	*e*P		**Pn**	**19 01 04.1**	**-0.3**
MEM	**Membach**	**15.92**	**325**	P		**Pn**	**19 01 13.1**	**+7.7**
	comp=Z,13nm,1.1s							
EBIE	**Bielsa**	**15.93**	**292**	P		**Pn**	**19 01 09.7**	**+4.2**
	comp=Z,2.9nm,0.5s							
LFF	**La Frestale**	**16.02**	**301**	*e*P		**Pn**	**19 01 06.3**	**-0.4**
EBEN	**Beniarda**	**16.07**	**278**	P		**Pn**	**19 01 12.6**	**+5.3**
	comp=Z,16nm,1.2s							
BCLA	**Clavier**	**16.11**	**323**	P		**Pn**	**19 01 15.1**	**+7.2**
	comp=Z,13nm,1.8s							
GIVF	**Givet**	**16.13**	**322**	*e*P		**Pn**	**19 01 11.2**	**+3.2**
	comp=Z,102nm,1.0s							
GIVF	**Givet**	**16.13**	**322**	*e*P		**Pn**	**19 01 11.2**	**+3.2**
	comp=Z,51nm,1.0s							
GIVF	**Givet**	**16.13**	**322**	*e*P		**Pn**	**19 01 11.2**	**+3.2**
GIVF					pmax	pmax		
	comp=Z,51nm,1.0s							
EMOS	**Mosqueruela**	**16.20**	**284**	P		**Pn**	**19 01 14.1**	**+5.2**
	comp=Z,5.0nm,0.5s							
DOU	**Dourbes**	**16.24**	**321**	P		**Pn**	**19 01 13.5**	**+4.1**
	comp=Z,19nm,1.2s							
BAIF	**Baives**	**16.41**	**321**	*e*P		**Pn**	**19 01 12.9**	**+1.3**
	comp=Z,66nm,1.0s							
BAIF	**Baives**	**16.41**	**321**	*e*P		**Pn**	**19 01 12.9**	**+1.3**
BAIF					pmax	pmax		
	comp=Z,33nm,1.0s							
BAIF	**Baives**	**16.41**	**321**	*e*P		**Pn**	**19 01 12.9**	**+1.3**
	comp=Z,33nm,1.0s							
ERZM	**Erzurum**	**16.42**	**78**	*i* P		**Pn**	**19 01 15.1**	**+3.2**
ETSF	**Etsaut**	**16.47**	**293**	*e*P		**Pn**	**19 01 15.0**	**+2.5**
	comp=Z,9.9nm,0.8s							
ETSF	**Etsaut**	**16.47**	**293**	*e*P		**Pn**	**19 01 15.0**	**+2.5**
	comp=Z,4.9nm,0.8s							
ETSF	**Etsaut**	**16.47**	**293**	*e*P		**Pn**	**19 01 15.0**	**+2.5**
ETSF					pmax	pmax		
	comp=Z,5.0nm,0.8s							
IBBN	**Ibbenburen**	**16.49**	**332**	*e*Pn		**Pn**	**19 01 18.4**	**+5.8**
ECHE	**Chera**	**16.59**	**281**	P		**Pn**	**19 01 17.9**	**+3.9**
	comp=Z,13nm,0.8s							
ECHE	**Chera**	**16.59**	**281**	P		**Pn**	**19 01 17.9**	**+3.9**
ECHE					pmax	pmax		
	comp=Z,13nm,0.8s							
SNF	**Seneffe**	**16.66**	**322**	P		**Pn**	**19 01 21.7**	**+6.9**
	comp=Z,34nm,1.8s							
UCC	**Uccle**	**16.81**	**323**	P		**Pn**	**19 01 23.5**	**+6.8**
	comp=Z,28nm,1.3s							
EMUR	**La Murta**	**16.96**	**275**	P		**Pn**	**19 01 21.0**	**+2.2**
	comp=Z,4.0nm,0.7s							
EMUR	**La Murta**	**16.96**	**275**	P		**Pn**	**19 01 21.0**	**+2.3**
	comp=Z,4.0nm,0.7s							
SJPF	**Ste Jean**	**16.99**	**293**	*e*P		**Pn**	**19 01 18.4**	**-0.6**
BSEG	**Bad Segeberg**	**17.04**	**340**	*e*Pn		**Pn**	**19 01 19.5**	**0.0**
MFF	**Saint Martin d**	**17.16**	**305**	*e*P		**Pn**	**19 01 22.2**	**+1.0**
	comp=Z,71nm,1.4s							
MFF	**Saint Martin d**	**17.16**	**305**	*e*P		**Pn**	**19 01 22.2**	**+1.0**
MFF					pmax	pmax		
	comp=Z,35nm,1.4s							
MFF	**Saint Martin d**	**17.16**	**305**	*e*P		**Pn**	**19 01 22.2**	**+1.0**
	comp=Z,35nm,1.4s							
ETOR	**Torete**	**17.41**	**285**	P		**Pn**	**19 01 26.9**	**+2.7**
	comp=Z,12nm,0.4s							
ETOR	**Torete**	**17.41**	**285**	P		**Pn**	**19 01 26.9**	**+2.7**
ETOR					pmax	pmax		
	comp=Z,12nm,0.4s							
TUTA	**Tutak**	**17.56**	**79**	*i* P		**Pn**	**19 01 28.3**	**+2.1**
KIV	**Kislovodsk**	**17.75**	**64**	*e*P		**Pn**	**19 01 29.7**	**+1.2**
	comp=Z,42nm,1.1s							
KIV	**Kislovodsk**	**17.75**	**64**	*e*P		**Pn**	**19 01 29.0**	**+0.5**
KIV				*e*S		**Sn**	**19 04 49.6**	**+3.2**
KIV					pmax	pmax		
	comp=Z,41nm,1.2s							
KIV	**Kislovodsk**	**17.75**	**64**	*e*P		**Pn**	**19 01 29.0**	**+0.5**
	comp=Z,41nm,1.2s							
ECRI	**Cripan**	**17.86**	**291**	P		**Pn**	**19 01 32.1**	**+2.3**
	comp=Z,8.4nm,0.5s							
ECRI	**Cripan**	**17.86**	**291**	P		**Pn**	**19 01 32.1**	**+2.3**
ECRI					pmax	pmax		
	comp=Z,8.0nm,0.5s							
LDF	**La Druitiere**	**17.97**	**311**	*e*P		**Pn**	**19 01 30.4**	**-0.8**
TVAN	**Van**	**18.10**	**82**	*i* P		**Pn**	**19 01 33.2**	**+0.3**
ONI	**Oni**	**18.11**	**69**	P		**Pn**	**19 01 34.3**	**+1.4**
ONI				S		Sn	19 05 18.6	+24
GOF	**Gofitskoye**	**18.23**	**61**	*e*P		**Pn**	**19 01 38.8**	**+4.5**
GOF					pmax	pmax		
	comp=Z,20nm,0.6s							
MSL	**Mosul**	**18.24**	**89**	*ex*		x	19 01 25.5	
MSL				*ex*		x	19 05 04.0	
MSL				*ex*		x	19 09 22.5	
FLN	**La Foliniere**	**18.26**	**311**	*e*P		**Pn**	**19 01 34.1**	**-0.6**
FLN				*e*MLR		MLR		
	comp=Z,529nm,20.0s							
GRR	**Gorron**	**18.32**	**310**	*e*P		**Pn**	**19 01 36.5**	**+1.1**
	comp=Z,49nm,1.3s							
GRR	**Gorron**	**18.32**	**310**	*e*P		**Pn**	**19 01 36.5**	**+1.1**
GRR					pmax	pmax		
	comp=Z,25nm,1.3s							
GRR	**Gorron**	**18.32**	**310**	*e*P		**Pn**	**19 01 36.5**	**+1.1**
	comp=Z,25nm,1.3s							
VORD	**Divnogorie**	**18.43**	**41**	*e*P		**Pn**	**19 01 36.9**	**+0.2**
VORD					pmax	pmax		
	comp=Z,10.0nm,1.1s							
VORD					pmax	pmax		
	comp=N,10.0nm,0.7s							
VORD					pmax	pmax		
	comp=E,20nm,1.0s							
VORD					MLR	MLR		
	comp=Z,1µm,12.0s							
VORD					MLR	MLR		
	comp=N,910nm,11.0s							
VORD					MLR	MLR		
	comp=E,1µm,14.0s							
VORD	**Divnogorie**	**18.43**	**41**	*e*P		**Pn**	**19 01 36.9**	**+0.2**
	comp=E,910nm,11.0s							
ZEI	**Tsey**	**18.45**	**69**	*e*P		**Pn**	**19 01 38.2**	**+1.1**
ZEI				*e*S		**Sn**	**19 05 09.0**	**+5.6**
HAKT	**HAKKARI**	**18.47**	**85**	*i* P		**Pn**	**19 01 33.0**	**-4.5**
VRSR	**Storozhevoye**	**18.52**	**40**	*e*P		**Pn**	**19 01 36.7**	**-1.2**
VRSR				*e*S		**Sn**	**19 04 58.7**	**-6.2**
VRSR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
VRSR					pmax	pmax		
	comp=N,1.0nm,0.6s							
VRSR					pmax	pmax		
	comp=E,2.0nm,0.7s							
VRSR					smax			
	comp=N,3.0nm,1.5s							
VRSR					smax			
	comp=Z,2.0nm,2.6s							
VRSR					smax			
	comp=E,2.0nm,1.5s							
VRSR					MLR	MLR		
	comp=Z,90nm,15.0s							
VRSR					MLR	MLR		
	comp=N,50nm,17.0s							
VRSR					MLR	MLR		
	comp=E,110nm,14.0s							
VRSR	**Storozhevoye**	**18.52**	**40**	*e*P		**Pn**	**19 01 36.7**	**-1.2**
	comp=E,1.0nm,0.6s							
ELAN	**Lanestosa**	**18.60**	**293**	P		**Pn**	**19 01 40.6**	**+1.6**
	comp=E,8.6nm,0.7s							
ESDC	**Sonseca Array**	**18.89**	**282**	P		**Pn**	**19 01 42.7**	**+0.2**
	comp=E,3.0nm,0.5s							
ESDC	**Sonseca Array**	**18.89**	**282**	P		**Pn**	**19 01 42.5**	**0.0**
	comp=E,1.0nm,0.3s,baz=77,slow=11,SNR=28							
ESDC					LR	LR	19 10 01.4	
	comp=E,167nm,18.6s,baz=50,slow=40							
ESDC	**Sonseca Array**	**18.89**	**282**	P		**Pn**	**19 01 42.7**	**+0.2**
	comp=E,3.0nm,0.5s							
EBAN	**Banos Encina**	**18.91**	**277**	P		**Pn**	**19 01 43.7**	**+1.0**
EBAN					pmax	pmax		
	comp=Z,7.0nm,0.4s							
EBAN	**Banos Encina**	**18.91**	**277**	P		**Pn**	**19 01 43.7**	**+1.0**
	comp=Z,6.7nm,0.4s							
GUD	**Guadarrama**	**19.00**	**285**	P		**Pn**	**19 01 44.2**	**+0.4**
	comp=Z,6.3nm,0.6s							
GUD	**Guadarrama**	**19.00**	**285**	P		**Pn**	**19 01 44.2**	**+0.4**
GUD					pmax	pmax		
	comp=Z,6.0nm,0.6s							
GUD	**Guadarrama**	**19.00**	**285**	P		**Pn**	**19 01 44.2**	**+0.4**
	comp=Z,6.3nm,0.6s							
TBLG	**Delisi**	**19.00**	**72**	P		**Pn**	**19 01 44.4**	**+0.6**
TBLG				S		**Sn**	**19 05 36.5**	**+20**
MTA	**Mtatsminda**	**19.04**	**72**	P		**Pn**	**19 01 45.2**	**+0.9**
MTA				S		**Sn**	**19 05 31.2**	**+14**
PAB	**San Pablo**	**19.20**	**281**	*e*P		**Pn**	**19 01 45.1**	**-1.1**
	comp=Z,24nm,1.4s							
PAB	**San Pablo**	**19.20**	**281**	*e*P		**Pn**	**19 01 45.1**	**-1.1**
PAB					pmax	pmax		
	comp=Z,24nm,1.4s							
PAB	**San Pablo**	**19.20**	**281**	*e*P		**Pn**	**19 01 45.1**	**-1.1**
	comp=Z,24nm,1.4s							
SGMF	**Saint Gilles**	**19.30**	**308**	*e*P		**Pn**	**19 01 47.7**	**+0.4**
ELUQ	**Luque**	**19.38**	**275**	P		**Pn**	**19 01 48.0**	**-0.3**
	comp=Z,6.3nm,0.5s							
ELUQ	**Luque**	**19.38**	**275**	P		**Pn**	**19 01 48.0**	**-0.4**
ELUQ					pmax	pmax		
	comp=Z,6.0nm,0.5s							
ELUQ	**Luque**	**19.38**	**275**	P		**Pn**	**19 01 48.0**	**-0.4**
	comp=Z,6.3nm,0.5s							
DGRG	**David-gareji**	**19.47**	**73**	P		**Pn**	**19 01 50.0**	**+0.5**
DGRG				S		**Sn**	**19 05 45.2**	**+17**
EADA	**Adamuz**	**19.53**	**277**	P		**Pn**	**19 01 49.0**	**-1.2**
	comp=Z,11nm,0.7s							
EADA	**Adamuz**	**19.53**	**277**	P		**Pn**	**19 01 49.0**	**-1.1**
	comp=Z,11nm,0.7s							
QUIF	**Quistinic**	**19.56**	**307**	*e*P		**Pn**	**19 01 48.2**	**-2.2**
VRHR	**Novokhopersk**	**19.72**	**43**	*e*P		**Pn**	**19 01 52.4**	**+0.1**
VRHR					pmax	pmax		
	comp=Z,10.0nm,0.5s							
VRHR					pmax	pmax		
	comp=N,3.0nm,0.6s							
VRHR					pmax	pmax		
	comp=E,10.0nm,0.6s							
ROSF	**Rostrenen**	**19.77**	**308**	*e*P		**Pn**	**19 01 51.1**	**-1.9**
	comp=E,22nm,0.8s							
ROSF	**Rostrenen**	**19.77**	**308**	*e*P		**Pn**	**19 01 51.1**	**-1.9**
ROSF					pmax	pmax		
	comp=Z,11nm,0.8s							
ROSF	**Rostrenen**	**19.77**	**308**	*e*P		**Pn**	**19 01 51.1**	**-1.9**
	comp=Z,11nm,0.8s							
EARI	**Arriondas**	**19.90**	**293**	P		**Pn**	**19 01 53.1**	**-1.4**
	comp=Z,5.2nm,0.7s							
EARI	**Arriondas**	**19.90**	**293**	P		**Pn**	**19 01 53.1**	**-1.4**
	comp=Z,5.2nm,0.7s							
OBN	**Obninsk**	**20.07**	**28**	*e*P		**P**	**19 01 54.3**	**-0.3**
	comp=Z,19nm,0.4s							
OBN	**Obninsk**	**20.07**	**28**⇓	*e*P		**P**	**19 01 54.3**	**-0.3**
OBN				*e*			19 01 57.9	
OBN				S		**S**	**19 05 39.0**	**-1.1**
OBN					pmax	pmax		
	comp=Z,32nm,1.0s							
OBN					MLR	MLR		
	comp=Z,300nm,15.0s,MS3.8							
OBN	**Obninsk**	**20.07**	**28**	*e*P		**P**	**19 01 54.3**	**-0.3**
	comp=Z,19nm,0.4s							
SWN1	**Swindon**	**20.35**	**317**	*e*P		**P**	**19 02 00.3**	**+2.5**
SWN1					AMb	AMB	19 02 08.2	
	comp=Z,44nm,1.3s							
VSU	**Vasula**	**20.57**	**10**⇑	*i* P		**P**	**19 02 00.6**	**+0.5**
ESPR	**Espera**	**20.76**	**274**	P		**P**	**19 02 04.5**	**+2.2**
	comp=Z,4.5nm,0.5s							
CWF	**Charnwood Fore**	**20.78**	**321**	*e*P		**P**	**19 02 04.6**	**+2.2**
CWF					AMb	AMB	19 02 10.6	
	comp=Z,52nm,1.6s							
MOS	**Moscow**	**20.93**	**28**	*e*P		**P**	**19 02 02.4**	**-1.6**
MOS				*e*			19 02 21.5	
MOS				*e*S		**S**	**19 05 59.8**	**+2.5**
MOS					pmax	pmax		
	comp=Z,44nm,0.7s							
MOS					MLR	MLR		
	comp=Z,800nm,11.0s,MS4.3							
ECAL	**Calabor**	**20.95**	**288**	P		**P**	**19 02 04.5**	**+0.2**
	comp=Z,8.1nm,0.9s							
PBRG	**Braganca**	**20.95**	**288**	*e*P		**P**	**19 02 04.5**	**+0.2**
MDT	**Midelt**	**20.97**	**262**	P		**P**	**19 02 05.8**	**+1.2**
	comp=Z,5.8nm,0.8s,baz=67,slow=9.5,SNR=6.0							
MDT					LR	LR	19 11 22.9	
	comp=Z,317nm,20.0s,MS3.7,baz=63,slow=40							
DYA	**Yadsworthy**	**21.02**	**313**	*e*P		**P**	**19 02 06.1**	**+1.1**
MAK	**Makhachkala**	**21.11**	**69**	*e*P		**P**	**19 02 11.0**	**+4.9**
MAK				*e*S		**S**	**19 06 09.6**	**+8.5**
MAK					pmax	pmax		
	comp=Z,2µm,1.0s							
MVO	**Moncorvo**	**21.17**	**286**	*e*P		**P**	**19 02 06.1**	**-0.6**
	comp=Z,30nm,1.8s,mb4.3							
MVO				*e*S		**S**	**19 05 56.3**	**-6.0**
MVO				*e*LR		LR	19 09 21.6	
MVO	**Moncorvo**	**21.17**	**286**	*e*P		**P**	**19 02 06.1**	**-0.6**
	comp=Z,30nm,1.8s,mb4.3							
MVO				*e*S		**S**	**19 05 56.3**	**-6.0**
KBI1	**Birley Grange**	**21.19**	**322**	*e*P		**P**	**19 02 09.1**	**+2.3**
KWE	**Weaver Farm**	**21.20**	**321**	*e*P		**P**	**19 02 09.4**	**+2.4**
EMIN	**Mina Concepcio**	**21.23**	**277**	P		**P**	**19 02 07.4**	**+0.1**
	comp=Z,9.6nm,0.7s,mb4.2							
MCH1	**Michaelchurch**	**21.24**	**318**	*e*P		**P**	**19 02 09.6**	**+2.2**
MCH1					AMb	AMB	19 02 12.0	
	comp=Z,35nm,1.6s,mb4.4							
EPON	**Pontenova**	**21.31**	**292**	P		**P**	**19 02 08.3**	**+0.1**
	comp=Z,8.0nm,0.9s,mb4.0							
EBAD	**Badajoz**	**21.34**	**280**	P		**P**	**19 02 07.9**	**-0.7**
	comp=Z,4.2nm,0.5s,mb4.0							
HTR	**Trewern Hill**	**21.43**	**318**	*e*P		**P**	**19 02 11.2**	**+1.8**
PBAR	**Barrancos**	**21.45**	**278**	*e*P		**P**	**19 02 09.3**	**-0.4**
	comp=Z,40nm,1.3s,mb4.6							
PBAR				*e*S		**S**	**19 06 06.2**	**-1.5**
PBAR				*e*LR		LR	19 09 23.1	
PBAR	**Barrancos**	**21.45**	**278**	*e*P		**P**	**19 02 09.3**	**-0.4**
	comp=Z,40nm,1.3s,mb4.6							
PBAR				*e*S		**S**	**19 06 06.2**	**-1.5**
HLM1	**Long Mynd**	**21.45**	**319**	*e*P		**P**	**19 02 11.3**	**+1.7**
PCBR	**Castelo Branco**	**21.58**	**283**	*e*P		**P**	**19 02 11.1**	**-0.1**
	comp=Z,32nm,1.4s,mb4.6							
MTE	**Manteigas**	**21.59**	**284**	*e*P		**P**	**19 02 11.6**	**+0.3**
	comp=Z,52nm,1.8s,mb4.7							
MTE				*e*S		**S**	**19 06 03.8**	**-6.8**
MTE				*e*LR		LR	19 09 37.0	
	comp=Z,444nm,18.0s							
MTE	**Manteigas**	**21.59**	**284**	*e*P		**P**	**19 02 10.2**	**-1.0**
	comp=Z,21nm,1.1s,mb4.5							
MTE	**Manteigas**	**21.59**	**284**	*e*P		**P**	**19 02 11.6**	**+0.3**
	comp=Z,52nm,1.8s,mb4.7							
MTE				*e*S		**S**	**19 06 03.8**	**-6.8**
HPK	**Haverah Park**	**21.65**	**323**	*e*P		**P**	**19 02 15.1**	**+3.3**
HPK					AMb	AMB	19 02 21.0	
	comp=Z,7.7nm,2.0s,mb3.8							
PVRL	**Vila Real**	**21.68**	**287**	*e*P		**P**	**19 02 12.7**	**+0.4**
	comp=Z,12nm,1.5s,mb4.1							
PESTR	**Estremoz**	**21.77**	**280**	*e*P		**P**	**19 02 12.9**	**-0.3**
	comp=Z,19nm,0.8s,mb4.6							
PESTR				*e*LR		LR	19 09 49.7	
	comp=Z,124nm,18.0s							
PVIS	**Viseu**	**21.84**	**285**	*e*P		**P**	**19 02 13.7**	**-0.2**
	comp=Z,28nm,0.7s,mb4.8							
SBD1	**Bryn Du**	**21.85**	**319**	*e*P		**P**	**19 02 15.1**	**+1.1**
EGRO	**El Granado**	**21.90**	**277**	P		**P**	**19 02 15.5**	**+0.9**
	comp=Z,4.0nm,0.7s,mb4.0							
ELOB	**Lobios**	**21.94**	**288**	P		**P**	**19 02 15.2**	**+0.2**
	comp=Z,2.6nm,0.6s,mb3.8							

	comp=Z,12nm,1.5s,mb4.5								
ARCES	**ARCESS Array B**	**31.39**	**4**	P		**P**	**19 03 42.2**	**+0.2**	
	comp=Z,4.1nm,0.9s,mb4.2,baz=191,slow=12,SNR=14								
ARCES				LR		LR	19 17 30.6		
	comp=Z,496nm,21.0s,MS4.2,baz=185,slow=39								
SOKR	**Solikamsk**	**31.41**	**36**	*e*P		**P**	**19 03 44.6**	**+2.3**	
SOKR				pmax		pmax			
	comp=Z,20nm,1.0s,mb4.9								
SOKR				MLR		MLR			
	comp=Z,340nm,16.0s,MS4.1								
SVE	**Sverdlovsk**	**32.27**	**42**⇓	*e*P		**P**	**19 03 49.1**	**-0.9**	
SVE				pmax		pmax			
	comp=Z,12nm,0.8s,mb4.8								
BRVK	**Borovoye**	**37.09**	**50**	*e*P		**P**	**19 04 31.5**	**-0.2**	
	comp=Z,5.6nm,0.8s,mb4.5								
BRVK	**Borovoye**	**37.09**	**50**	*e*P		**P**	**19 04 31.5**	**-0.1**	
BRVK				pmax		pmax			
	comp=Z,6.0nm,0.8s,mb4.5								
KK31	**Karatay Array**	**37.89**	**66**	*i* P		**P**	**19 04 38.9**	**+0.3**	
KK31				pmax		pmax			
	comp=Z,6.0nm,0.4s,mb4.7								
DBIC	**Dimbokro**	**38.89**	**222**	P		**P**	**19 04 47.5**	**+0.2**	
	comp=Z,2.7nm,0.5s,mb4.2,baz=343,slow=10.0,SNR=7.3								
LIC	**Lamto**	**39.36**	**222**	*e*P		**P**	**19 04 50.1**	**-1.0**	
	comp=Z,11nm,0.7s,mb4.4								
LIC				*e*MLR		MLR			
	comp=Z,346nm,22.2s,MS3.8								
LIC	**Lamto**	**39.36**	**222**	*e*P		**P**	**19 04 50.1**	**-1.0**	
	comp=Z,5.5nm,0.7s,mb4.4								
LIC				LR		LR			
	comp=Z,170nm,22.3s,MS3.8								
EKS2	**Erkin-Say**	**40.33**	**66**	*e*P		**P**	**19 04 59.0**	**0.0**	
	comp=Z,9.2nm,0.7s,mb4.6								
AML	**Almayashu**	**40.39**	**67**	*e*P		**P**	**19 04 59.9**	**+0.5**	
	comp=Z,3.1nm,0.6s,mb4.2								
FRU	**Bishkek**	**40.90**	**66**	*e*P		**P**	**19 05 04.0**	**+0.3**	
UCH	**Uchtor**	**40.96**	**67**	*e*P		**P**	**19 05 03.8**	**-0.4**	
	comp=Z,2.2nm,0.7s,mb3.9								
KMBO	**Kilima Mbogo**	**42.27**	**154**	P		**P**	**19 05 16.9**	**+1.8**	
	comp=Z,2.8nm,0.3s,mb4.4								
KMBO	**Kilima Mbogo**	**42.27**	**154**	P		**P**	**19 05 16.3**	**+1.2**	
KMBO				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KMBO	**Kilima Mbogo**	**42.27**	**154**	P		**P**	**19 05 16.3**	**+1.2**	
	comp=Z,0.7nm,0.4s,mb3.6,baz=19,slow=10,SNR=4.3								
KURK	**Kurchatov**	**42.32**	**53**	*e*P		**P**	**19 05 13.2**	**-2.0**	
	comp=Z,4.0nm,0.8s,mb4.1								
KURK	**Kurchatov**	**42.32**	**53**	*e*P		**P**	**19 05 13.2**	**-2.0**	
KURK				pmax		pmax			
	comp=Z,4.0nm,0.8s,mb4.1								
NVS	**Novosibirsk**	**44.70**	**47**	*i* P		**P**	**19 05 34.0**	**-0.3**	
NVS				pmax		pmax			
	comp=N,7.0nm,1.0s								
NVS				pmax		pmax			
	comp=Z,19nm,1.0s,mb4.9								
NVS				pmax		pmax			
	comp=E,11nm,1.2s								
MK31	**Makanchi Array**	**45.37**	**58**	*i* P		**P**	**19 05 37.7**	**-2.1**	
MK31				pmax		pmax			
	comp=Z,4.0nm,0.5s,mb4.5								
MKAR	**Makanchi Array**	**45.37**	**58**	P		**P**	**19 05 37.7**	**-2.0**	
MKAR				LR		LR	19 28 32.6		
MKAR	**Makanchi Array**	**45.37**	**58**	P		**P**	**19 05 37.7**	**-2.0**	
	comp=Z,2.5nm,0.5s,mb4.3,baz=277,slow=7.0,SNR=28								
MKAR				LR		LR	19 28 32.6		
	comp=Z,187nm,19.1s,MS4.0,baz=86,slow=41								
ZAL	**Zalesovo**	**45.71**	**48**	P		**P**	**19 05 40.6**	**-1.7**	
ZALV	**Zalesovo Beam**	**45.72**	**48**	P		**P**	**19 05 40.6**	**-1.8**	
	comp=Z,14nm,0.7s,mb5.0,baz=277,slow=8.6,SNR=54								
WMQ	**Urumqi**	**49.84**	**61**	⇑P		**P**	**19 06 15.3**	**+0.8**	
WMQ				AP		pP	19 06 19.8	+2.9	
WMQ				XP		sP	19 06 22.3	+4.5	
WMQ				PCP		PcP	19 07 36.3	+1.2	
WMQ				PP		PP	19 08 10.5	+1.5	
WMQ				PPP			19 09 05.5		
WMQ				AMB		AMB			
	comp=Z,6.0nm,1.5s,mb4.4								
WMQ				AMB		AMB			
	comp=Z,58nm,4.4s								
WMQ				LR		LR			
	comp=N,169nm,25.2s,MS4.1								
WMQ				LR		LR			
	comp=E,139nm,25.2s,MS4.1								
WMQ				LR		LR			
	comp=Z,96nm,22.0s,MS3.8								
KOLN	**Koldanda**	**53.17**	**81**	*e*P		**P**	**19 06 37.5**	**-2.2**	
	comp=Z,26nm,1.3s,mb5.0								
GKN	**Gorkha**	**53.87**	**81**	*e*P		**P**	**19 06 43.7**	**-1.1**	
	comp=Z,8.1nm,0.6s,mb4.8								
KKN	**Kakani**	**54.47**	**81**	*e*P		**P**	**19 06 47.1**	**-2.1**	
	comp=Z,6.1nm,0.7s,mb4.7								
JIRN	**Jiri**	**55.24**	**80**	*e*P		**P**	**19 06 53.5**	**-1.3**	
ODAN	**Odare**	**56.56**	**80**	*e*P		**P**	**19 06 58.8**	**-5.5**	
TAPN	**Taplejung**	**56.57**	**80**	*e*P		**P**	**19 07 01.6**	**-2.7**	
TLY	**Talaya**	**57.31**	**47**	*e*P		**P**	**19 07 07.2**	**-2.0**	
	comp=Z,8.3nm,1.1s,mb4.7								
TLY	**Talaya**	**57.31**	**47**	*e*P		**P**	**19 07 09.0**	**-0.2**	
TLY				pmax		pmax			
	comp=Z,9.0nm,1.3s,mb4.6								
TLY				MLR		MLR			
	comp=Z,199nm,15.0s,MS4.3								
IRK	**Irkutsk**	**57.46**	**46**	*e*P		**P**	**19 07 09.8**	**-0.5**	
IRK				pmax		pmax			
	comp=Z,15nm,0.8s,mb5.1								
ZAK	**Zakamensk**	**57.59**	**49**	*e*P		**P**	**19 07 10.4**	**-0.8**	
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.1s,mb4.1								
LSA	**Lhasa**	**58.07**	**76**	P		**P**	**19 07 14.6**	**-0.3**	
	comp=Z,3.5nm,0.6s,mb4.6								
LSA	**Lhasa**	**58.07**	**76**	P		**P**	**19 07 14.6**	**-0.3**	
LSA				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.6								
SCHQ	**Schefferville**	**58.23**	**317**	P		**P**	**19 07 15.6**	**0.0**	
	baz=72,slow=6.0								
TIXI	**Tiksi**	**59.56**	**20**	P		**P**	**19 07 25.2**	**+0.5**	
	comp=Z,2.8nm,0.8s,mb4.3								
TIXI	**Tiksi**	**59.56**	**20**	*e*P		**P**	**19 07 24.7**	**0.0**	
TIXI				pmax		pmax			
	comp=Z,9.0nm,1.6s,mb4.5								
TIXI				MLR		MLR			
	comp=Z,497nm,16.0s,MS4.7								
GTA	**Gaotai**	**59.90**	**62**	*e*P		**P**	**19 07 27.8**	**+0.3**	
GTA				AP		pP	19 07 31.3	+1.4	
GTA				PP		PP	19 09 42.5	+3.1	
GTA				PPP			19 11 09.5		
GTA				S		**S**	**19 15 38.8**	**-0.9**	
GTA				XS		sS	19 15 47.0	+3.4	
GTA				SS		SS	19 19 37.5	+2.0	
GTA				AMB		AMB			
	comp=Z,4.0nm,1.3s,mb4.3								
GTA				LR		LR			
	comp=N,170nm,17.1s,MS4.4								
GTA				LR		LR			
	comp=E,145nm,16.7s,MS4.4								
GTA				LR		LR			
	comp=Z,133nm,17.5s,MS4.1								
BOD	**Bodaibo**	**60.36**	**38**	*e*P		**P**	**19 07 24.9**	**-5.4**	
BOD				pmax		pmax			
	comp=Z,3.0nm,1.0s,mb4.3								
SONM	**Songino Array**	**60.49**	**51**	P		**P**	**19 07 30.0**	**-1.4**	
	comp=Z,3.0nm,1.0s,mb4.3,baz=281,slow=7.7,SNR=15								
LZH	**Lanzhou**	**64.29**	**63**	*e*P		**P**	**19 07 58.5**	**+1.5**	
LZH				AP		pP	19 08 03.0	+3.6	
LZH				XP		sP	19 08 05.5	+5.2	
LZH				AMB		AMB			
	comp=Z,15nm,1.0s,mb5.0								
LZH				AMB		AMB			
	comp=Z,70nm,4.6s								
YAK	**Yakutsk**	**65.06**	**29**⇑	*e*P		**P**	**19 08 01.7**	**+0.1**	
YAK				pmax		pmax			
	comp=Z,9.0nm,0.7s,mb4.9								
BOSA	**Boshof**	**66.76**	**175**	P		**P**	**19 08 12.6**	**-0.2**	
	comp=Z,2.0nm,0.7s,mb4.3,baz=1.9,slow=13,SNR=4.4								
CD2	**Chengdu**	**66.88**	**68**	*e*P		**P**	**19 08 14.3**	**+0.5**	
CD2				XP		sP	19 08 21.5	+4.3	
CD2				PP		PP	19 10 43.3	+2.5	
CD2				S		S	19 17 04.8	-2.1	
CD2				XS		sS	19 17 12.5	+1.6	
CD2				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb4.8								
CD2				AMB		AMB			
	comp=Z,20nm,5.8s								
CD2				LR		LR			
	comp=N,150nm,14.2s								
CD2				LR		LR			
	comp=Z,130nm,16.2s,MS4.2								
HHC	**Hu-ho-hao-te**	**67.09**	**55**	*e*P		**P**	**19 08 16.0**	**+1.0**	
HHC				AP		pP	19 08 20.3	+2.9	
HHC				XP		sP	19 08 24.0	+5.6	
HHC				PP		PP	19 10 44.8	+2.4	
HHC				S		S	19 17 06.5	-2.7	
HHC				XS		sS	19 17 14.0	+0.8	
HHC				SS		SS	19 21 26.5	-1.0	
HHC				AMB		AMB			
	comp=Z,15nm,0.8s,mb5.1								
HHC				AMB		AMB			
	comp=Z,93nm,4.2s								
HHC				LR		LR			
	comp=N,161nm,13.1s,MS4.7								
HHC				LR		LR			
	comp=E,273nm,13.1s,MS4.7								
HHC				LR		LR			
	comp=Z,163nm,13.1s,MS4.4								
KMI	**Kunming**	**69.23**	**74**	P		**P**	**19 08 29.3**	**+0.6**	
KMI				AMB		AMB			
	comp=Z,4.0nm,0.7s,mb4.5								
BJI	**Beijing**	**70.49**	**54**	P		**P**	**19 08 35.5**	**-0.7**	
BJI				AP		pP	19 08 38.8	+0.1	
BJI				XP		sP	19 08 40.0	+0.4	
BJI				S		S	19 17 48.0	-1.6	
BJI				SS		SS	19 22 20.3	+0.4	
BJI				AMB		AMB			
	comp=Z,6.0nm,0.7s,mb4.6								
BJI				LR		LR			
	comp=N,267nm,12.3s								
BJI				LR		LR			
	comp=E,320nm,6.7s								
BILL	**Bilibino**	**70.90**	**13**	P		**P**	**19 08 40.0**	**+1.8**	
BILL				*e*		pP	19 08 42.7	+2.0	
BILL				pmax		pmax			
	comp=Z,8.0nm,1.4s,mb4.5								
BILL				MLR		MLR			
	comp=Z,100nm,17.0s,MS4.1								
GYA	**Guiyang**	**71.43**	**71**	P		**P**	**19 08 43.5**	**+1.3**	
GYA				AP		pP	19 08 47.0	+2.4	
GYA				PCP		PcP	19 09 03.8	+2.0	
GYA				PP		PP	19 11 23.5	+3.2	
GYA				S		S	19 18 00.8	-0.1	
GYA				PS			19 18 30.3		
GYA				SKS			19 18 42.3		
GYA				SCS		ScS	19 18 44.8	-2.8	
GYA				AMB		AMB			
	comp=Z,10.0nm,1.0s,mb4.7								
GYA				AMB		AMB			
	comp=Z,70nm,8.0s								
GYA				LR		LR			
	comp=N,370nm,19.3s,MS4.8								
GYA				LR		LR			
	comp=E,350nm,20.6s,MS4.8								
GYA				LR		LR			
	comp=Z,270nm,21.0s,MS4.5								
SEY	**Seymchan**	**72.05**	**21**⇑	*e*P		**P**	**19 08 46.5**	**+1.3**	
YKA	**Yellowknife Ar**	**73.18**	**340**	P		**P**	**19 08 52.0**	**0.0**	
YKA	**Yellowknife Ar**	**73.18**	**340**⇑	*e*P		**P**	**19 08 53.4**	**+1.4**	
YKA	**Yellowknife Ar**	**73.18**	**340**	P		**P**	**19 08 52.0**	**0.0**	
	comp=Z,1.3nm,0.8s,mb3.9,baz=34,slow=5.5,SNR=16								
KLR	**Kul'dur**	**73.86**	**39**	*e*P		**P**	**19 08 53.1**	**-3.1**	
CN2	**Changchun**	**73.91**	**47**	*e*P		**P**	**19 08 57.8**	**+1.2**	
CN2				*e*S		S	19 18 26.0	-2.6	
CN2				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.8								
CN2				LR		LR			
	comp=N,440nm,18.0s,MS4.9								
CN2				LR		LR			
	comp=E,310nm,18.0s,MS4.9								
CN2				LR		LR			
	comp=Z,410nm,18.0s,MS4.8								
ULM	**Lac du Bonnet**	**75.47**	**323**	P		**P**	**19 09 05.7**	**+0.2**	
ULM	**Lac du Bonnet**	**75.47**	**323**	P		**P**	**19 09 05.7**	**+0.2**	
	baz=53,slow=4.8								
HABR	**Khabarovsk**	**76.00**	**39**	*e*P		**P**	**19 09 06.5**	**-2.1**	
HABR				*e*			19 09 18.8		
HABR				*e*			19 11 56.2		
HABR				*e*S		S	19 18 50.9	-0.9	
HABR				*e*			19 19 21.0		
HABR				*e*SS		SS	19 23 44.2	+0.8	
DAWY	**Dawson**	**76.68**	**351**	*e*P		**P**	**19 09 12.5**	**+0.3**	
NJ2	**Nanjing**	**76.89**	**60**	*e*P		**P**	**19 09 15.5**	**+1.6**	
NJ2				AMB		AMB			
	comp=Z,20nm,0.5s,mb5.3								
KSRS	**Korea Array**	**79.36**	**51**	P		**P**	**19 09 26.6**	**-0.9**	
	comp=Z,1.4nm,0.7s,mb4.0,baz=301,slow=4.6,SNR=4.8								
ECSD	**EROS,Sioux Fal**	**80.36**	**319**	*e*P		**P**	**19 09 33.6**	**+0.8**	
	comp=Z,4.5nm,0.8s,mb4.5								
YSS	**Yuzh-Sakhalins**	**80.74**	**36**	*e*P		**P**	**19 09 35.9**	**+1.1**	
	comp=Z,22nm,1.0s,mb5.0								
YSS	**Yuzh-Sakhalins**	**80.74**	**36**⇓	*i* P		**P**	**19 09 35.6**	**+0.8**	
YSS				pmax		pmax			
	comp=Z,32nm,1.2s,mb5.1								
ASAJ	**Asahikawa**	**82.77**	**38**	P		**P**	**19 09 46.6**	**+1.0**	
ASAJ				pmax		pmax			
	comp=Z,6.0nm,0.8s								
ASAJ	**Asahikawa**	**82.77**	**38**	P		**P**	**19 09 46.6**	**+1.0**	
	comp=Z,5.6nm,0.8s,mb4.7,baz=288,slow=31,SNR=4.3								
MIAR	**Mount Ida**	**85.07**	**311**	*e*P		**P**	**19 09 58.6**	**+1.1**	
	comp=Z,5.0nm,0.9s,mb4.6								
MIAR	**Mount Ida**	**85.07**	**311**	*e*P		**P**	**19 09 58.6**	**+1.1**	
MIAR				pmax		pmax			
	comp=Z,5.0nm,0.9s,mb4.6								
PDAR	**Pinedale Array**	**87.32**	**326**	P		**P**	**19 10 07.0**	**-1.4**	
	comp=Z,0.4nm,0.7s,mb3.7,baz=46,slow=6.4,SNR=4.3								
WMOK	**Wichita Mounta**	**87.96**	**314**	P		**P**	**19 10 14.3**	**+2.6**	
	comp=Z,2.8nm,0.8s,mb4.5								
WMOK	**Wichita Mounta**	**87.96**	**314**	P		**P**	**19 10 14.3**	**+2.6**	
WMOK				pmax		pmax			
	comp=Z,3.0nm,0.8s,mb4.6								
PV01	**Paradox Valley**	**90.53**	**322**	*e*P		**P**	**19 10 23.0**	**-0.8**	
SRU	**San Rafael**	**90.68**	**324**	*e*P		**P**	**19 10 24.0**	**-0.4**	
	comp=Z,1.3nm,0.7s,mb4.4								
SRU	**San Rafael**	**90.68**	**324**	*e*P		**P**	**19 10 24.0**	**-0.4**	
SRU				pmax		pmax			
	comp=Z,1.0nm,0.7s,mb4.2								
DUG	**Dugway**	**90.84**	**326**	P		**P**	**19 10 24.7**	**-0.4**	
	comp=Z,3.3nm,0.9s,mb4.7								
DUG	**Dugway**	**90.84**	**326**	P		**P**	**19 10 24.7**	**-0.4**	
DUG				pmax		pmax			
	comp=Z,3.0nm,0.9s,mb4.6								
NVAR	**Mina Array Bea**	**94.65**	**329**	P		**P**	**19 10 44.0**	**+1.3**	
	comp=Z,0.2nm,0.5s,mb3.8,baz=54,slow=4.7,SNR=3.3								
WRA	**Warramunga Arr**	**120.72**	**92**	PKP		PKPdf	19 16 12.4	-1.6	
	comp=Z,0.4nm,0.5s,baz=311,slow=2.3,SNR=9.6								
ASAR	**Alice Springs**	**122.36**	**96**	PKP		PKPdf	19 16 15.8	-1.2	
	comp=Z,0.5nm,0.5s,baz=307,slow=1.5,SNR=13								

NIED ***25*** *19:03:00,37.40N×136.70E,h5km,Mw3.6 Best double couple: M0 2.72000×10^14 NP1:φs 207.00000°, δ38.00000°, λ102.00000°. NP2:φs 13.00000°, δ53.00000°, λ81.00000°.*

ISCJB ***25*** *19:03:23.9±0.7, 37.36N±0.03×136.72E±0.05, h11km±5km, mb3.4/5, Error ellipse: s-maj=7.0km s-min=5.7km az=160.6*

IDC ***25*** *19:03:23.8±1.0, 37.26N×136.71E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/21, mbtmp3.4/7, ML3.0/2, Error ellipse: s-maj=32.1km s-min=12.3km az=33.0*

JMA ***25*** *19:03:24.4, 37.37N×136.72E, h9km±1km, M3.5*

JMA Felt I J1.

NEIC ***25*** *19:03:24.9±0.7, 37.31N×136.85E, h10km, MG3.5(JMA), Error ellipse: s-maj=17.3km s-min=8.2km az=211.0*

ISC 25 19:03:25.1±0.7,3735N±0.03×13678E±0.05,h9km±5km,n15,s0f74/20,mb3.4/5,1C-2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.43**	**180**	⇑P		**Pg**	**19 03 33.3**	**-0.1**
JJH				S		**Sg**	**19 03 39.6**	**+0.6**
JSZ	**Suzu**	**0.47**	**78**	⇓P		**Pg**	**19 03 34.4**	**+0.1**
JSZ				S		**Sg**	**19 03 41.6**	**+1.1**
JHG	**Hegura jima**	**0.51**	**12**	P		**Pg**	**19 03 34.2**	**-0.8**
JHG				S		**Sg**	**19 03 41.6**	**0.0**
JTT	**Ttatey**	**0.87**	**149**	⇓P		**Pg**	**19 03 41.4**	**-0.3**
MAJO	**Matsushiro**	**1.40**	**125**	*e*Pn		**Pn**	**19 03 49.7**	**-1.0**
MAJO				*e*Sn		**Sn**	**19 04 10.1**	**+0.8**
MAT	**Matsushiro**	**1.40**	**125**	P		**Pn**	**19 03 50.2**	**-0.5**
MAT				S		**Sb**	**19 04 09.8**	**+0.6**
MJAR	**Matsushiro Arr**	**1.40**	**125**	Pg		**Pg**	**19 03 50.9**	**-1.0**
MJAR				Lg			19 04 10.2		
MJAR	**Matsushiro Arr**	**1.40**	**125**	Pg		**Pg**	**19 03 50.9**	**-1.0**
	16nm,0.3s,baz=323,slow=16,SNR=59							
MJAR				Lg			19 04 10.2		
	35nm,0.3s,baz=298,slow=29,SNR=24							
JNU	**Nakatsue**	**6.41**	**231**	Pn		**Pn**	**19 05 00.3**	**+0.6**
	0.3nm,0.3s,baz=41,slow=20,SNR=3.2							
KSRS	**Korea Array**	**7.05**	**274**	Pn		**Pn**	**19 05 09.2**	**+0.8**
	0.2nm,0.3s,baz=89,slow=14,SNR=2.8							
SONM	**Songino Array**	**24.55**	**305**	P		**P**	**19 08 45.7**	**+0.8**
	0.8nm,0.7s,mb3.4,baz=108,slow=9.8,SNR=3.2							
MKAR	**Makanchi Array**	**40.80**	**301**	P		**P**	**19 11 07.2**	**+0.6**
	0.2nm,0.6s,mb2.9,baz=82,slow=10,SNR=3.2							
WRA	**Warramunga Arr**	**57.03**	**183**	P		**P**	**19 13 09.9**	**-1.4**
	0.7nm,1.0s,mb3.6,baz=358,slow=8.3,SNR=5.4							
ASAR	**Alice Springs**	**60.75**	**183**	P		**P**	**19 13 36.0**	**-1.0**
	0.4nm,0.9s,mb3.6,baz=356,slow=6.5,SNR=3.4							
AKASG	**Malin Array Be**	**71.74**	**320**	P		**P**	**19 14 47.4**	**0.0**
	0.1nm,0.2s,mb3.3,baz=52,slow=6.9,SNR=3.1							

IDC ***25*** *19:21:10.7±0.4, 2802S×17664W, h0km, mb4.8/19, mb1 5.0/19, mb1mx4.9/20, mbtmp4.8/19, MS4.8/20, Ms1 4.8/20, ms1mx4.6/28, Error ellipse: s-maj=16.8km s-min=13.4km az=175.0*

MOS ***25*** *19:21:15.3±1.4, 2790S×17673W, h33km, mb5.4/18, MS5.0/13, Error ellipse: s-maj=13.4km s-min=10.1km az=55.7*

ISCJB ***25*** *19:21:15.9±0.2, 2856S±0.04×17669W±0.06, h53km, mb5.2/57, MS4.8/38, Error ellipse: s-maj=8.1km s-min=4.3km az=35.4*

BJI ***25*** *19:21:17.9, 2803S×17590W, h74km, mB5.5, mb5.2, Ms5.2, Msz4.8*

GCMT ***25*** *19:21:18.6±0.2, 2798S×17598W, h19km, MW5.2/76, Moment Tensor Solution. s46,c73; s76,c116; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 4.84±.19; Mθθ -0.12±.14; Mφφ -4.72±.14; Mrθ 2.09±.32; Mrφ -1.86±.10; Mθφ 5.57±.36; Best double couple: Mo 7.84200×10^16 NP1:φs 198.00000°, δ20.00000°, λ88.00000°. NP2: φs 20.00000°, δ70.00000°, λ91.00000°. Principal axes: T 7.5730, Plg65.0000°, Azm291.0000°; N 0.5330, Plg1.0000°, Azm200.0000°; P -8.1110, Plg25.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***25*** *19:21:18.6±1.4, 2799S×17679W, h55km±12km, mb5.2/26, MS5.0/4 Error ellipse: s-maj=10.9km s-min=6.2km az=164.0*

ISC 25 19:21:18.0±0.2,2843S±005×17669W±005,h55km, h55km±1.8km:pP-P,n247,σ1§17/123,mb5.2/57,MS4.8/38, 13C-13D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.35**	**232**	*e*P		**Pn**	**19 21 45.0**	**+4.4**
PUZ	**Puketiti**	**10.51**	**202**	SN		**Sn**	**19 25 40.1**	**-1.8**
URZ	**Urewera**	**11.09**	**206**	Pn		**Pn**	**19 23 50.0**	**-3.7**
	0.6nm,0.3s,baz=256,slow=4.2,SNR=5.1							
URZ				Sn		**Sn**	**19 25 56.2**	**0.0**
	5.5nm,0.3s,baz=184,slow=20,SNR=14							
URZ	**Urewera**	**11.09**	**206**	SN		**Sn**	**19 25 57.1**	**+0.9**
BFZ	**Birch Farm**	**13.53**	**204**	SN		**Sn**	**19 26 51.4**	**-4.4**
MRZ	**Mangatainoka R**	**13.76**	**205**	SN		**Sn**	**19 26 56.0**	**-5.3**
THZ	**Tophouse**	**15.78**	**210**	PN		**Pn**	**19 24 55.8**	**-0.8**
THZ				SN		**Sn**	**19 27 43.7**	**-6.6**
KHZ	**Kahutara**	**16.05**	**207**	PN		**Pn**	**19 24 55.7**	**-4.3**
KHZ				SN		**Sn**	**19 27 46.7**	**-10**
DZM	**Mont Dzumac**	**16.51**	**289**	LR	LR	19 30 12.4		
	comp=Z,4μm,20.3s,baz=120,slow=33							
LTZ	**Lake Taylor**	**16.88**	**209**	SN		**Sn**	**19 28 05.6**	**-11**
RAR	**Rarotonga**	**16.95**	**69**	Pn		**Pn**	**19 24 58.9**	**-13**
	2.3nm,0.3s,baz=228,slow=14,SNR=5.6							
RAR				Sn		Sn	19 27 46.6	-32
	0.9nm,0.3s,baz=48,slow=19,SNR=3.6							
RAR				LR		LR	19 30 43.5	
	comp=Z,2μm,18.6s,baz=257,slow=34							
RPZ	**Rata Peaks**	**18.16**	**210**	P		**Pn**	**19 25 24.9**	**-1.1**
	2.1nm,0.3s,baz=355,slow=3.2,SNR=8.6							
RPZ				S		**S**	**19 28 38.5**	**-12**
	1.5nm,0.3s,baz=45,slow=20,SNR=6.6							
TBI	**Tubuai**	**24.99**	**85**	*e*LR		LR	19 32 29.7	
	2μm,30.0s,baz=249							
PAE	**Paea**	**27.09**	**73**	*e*P		**P**	**19 26 54.8**	**-0.9**
	148nm,1.2s,mb5.4							
PAE	**Paea**	**27.09**	**73**	*e*P		**P**	**19 26 54.8**	**-0.9**
PAE				pmax		pmax		
	comp=Z,148nm,1.2s,mb5.4							
PPT	**Papeete**	**27.14**	**72**	*e*P		**P**	**19 26 55.7**	**-0.5**
	comp=Z,72nm,1.5s,mb5.0							
PPT				*e*LR		LR	19 33 27.4	
	comp=Z,1μm,22.2s,baz=234							
PPT	**Papeete**	**27.14**	**72**	LR		LR	19 36 19.2	
	comp=Z,1μm,18.1s,MS4.5,baz=251,slow=34							
TVO	**Taravao**	**27.31**	**73**	*e*P		**P**	**19 26 57.1**	**-0.6**
	comp=Z,75nm,1.0s,mb5.2							
TVO	**Taravao**	**27.31**	**73**	*e*P		**P**	**19 26 57.1**	**-0.6**
TVO				pmax		pmax		
	comp=Z,75nm,1.0s,mb5.2							
HNR	**Honiara**	**28.97**	**306**	LR		LR	19 37 09.9	
	comp=Z,1μm,19.2s,MS4.5,baz=175,slow=33							
CTA	**Charters Tower**	**34.68**	**275**	*e*P		**P**	**19 28 00.

PMSA	**Palmer Station**	**73.59**	**156**	LR	LR	20 01 13.0			
	comp=Z,438nm,18.8s,MS4.8,baz=314,slow=32								
MAW	**Mawson**	**74.55**	**200**	P	**P**	**19 32 54.0**	**+3.4**		
	comp=Z,9.4nm,0.9s,mb4.7,baz=83,slow=7.5,SNR=5.2								
MAW				LR	LR	20 06 19.4			
	comp=Z,1µm,18.2s,MS5.2,baz=325,slow=36								
KSM	**Kuching**	**75.80**	**280**	*e*P	**P**	**19 32 58.5**	**-0.1**		
MJAR	**Matsushiro Arr**	**77.29**	**324**	P	**P**	**19 33 06.0**	**-0.5**		
	comp=Z,16nm,0.9s,mb4.9,baz=162,slow=5.3,SNR=25								
MJAR				LR	LR	20 02 45.4			
	comp=Z,290nm,19.1s,MS4.6,baz=160,slow=32								
MAJO	**Matsushiro**	**77.29**	**324**	*e*P	**P**	**19 33 05.7**	**-0.8**		
	comp=Z,67nm,1.5s,mb5.3								
MAJO	**Matsushiro**	**77.29**	**324**	*e*P	**P**	**19 33 05.7**	**-0.8**		
MAJO				pmax	pmax				
	comp=Z,67nm,1.5s,mb5.3								
MAT	**Matsushiro**	**77.29**	**324**	P	**P**	**19 33 05.4**	**-1.1**		
MAT				S	S	19 42 56.0	+3.8		
JNU	**Nakatsue**	**78.86**	**317**	P	**P**	**19 33 14.8**	**-0.5**		
	comp=Z,39nm,1.2s,mb5.2,baz=88,slow=5.4,SNR=7.0								
SYO	**Syowa Base**	**79.28**	**193**⇓	*e*P	**P**	**19 33 17.8**	**+0.7**		
SNAA	**Sanae**	**80.09**	**178**	*e*P	**P**	**19 33 23.4**	**+2.0**		
SNAA				*e*		19 33 29.4			
SNAA				*e*	pP	19 33 38.1	+1.1		
SNAA				*e*		19 33 44.8			
SNAA				*e*		19 33 56.8			
SNAA				*e*		22 09 54.6			
SNAA				*e*		22 09 56.7			
SNAA				*e*		22 10 01.7			
SNAA				*e*		22 10 05.1			
SNAA				*e*		22 10 08.0			
SNAA				*e*		22 10 14.9			
SNAA	**Sanae**	**80.09**	**178**	*i* P	**P**	**19 33 24.1**	**+2.7**		
VNA3	**Neumayer Olymp**	**80.19**	**176**	*e*P	**P**	**19 33 24.4**	**+2.4**		
VNA3				*e*		19 33 30.2			
VNA3				*e*	pP	19 33 38.5	+1.0		
VNA3				*e*		19 33 44.9			
VNA3				*e*		19 34 00.4			
VNA3				*e*		22 09 57.9			
VNA3				*e*		22 09 59.8			
VNA3				*e*		22 10 03.4			
VNA3				*e*		22 10 06.4			
VNA3				*e*		22 10 10.7			
VNA3				*e*		22 10 13.2			
VNA3				*e*		22 10 20.4			
VNA3				*e*		22 10 23.4			
VNA2	**Neumayer--Watz**	**80.64**	**176**	*e*P	**P**	**19 33 27.6**	**+3.2**		
	baz=168,slow=5.0								
VNA2				*e*		19 33 33.8			
VNA2				*e*	pP	19 33 42.2	+2.2		
VNA2				*e*		19 33 48.6			
VNA2				*e*		19 34 04.2			
VNA2				*e*		22 09 58.9			
VNA2				*e*		22 10 01.0			
VNA2				*e*		22 10 05.4			
VNA2				*e*		22 10 08.6			
VNA2				*e*		22 10 12.3			
VNA2				*e*		22 10 14.5			
VNA2				*e*		22 10 20.8			
VNA2				*e*		22 10 24.9			
ASAJ	**Asahikawa**	**81.23**	**332**	P	**P**	**19 33 27.2**	**-0.6**		
	comp=Z,17nm,0.9s,mb5.0,baz=264,slow=8.1,SNR=7.1								
QZH	**Quanzhou**	**81.78**	**304**	P	**P**	**19 33 31.5**	**+0.3**		
QZH				LR	LR				
	comp=Z,510nm,18.7s,MS4.9								
PLCA	**Paso Flores**	**83.01**	**133**	P	**P**	**19 33 39.0**	**+1.6**		
	comp=Z,28nm,1.1s,mb5.2,baz=236,slow=5.5,SNR=10								
PLCA				LR	LR	20 03 41.8			
	comp=Z,417nm,19.1s,MS4.8,baz=90,slow=31								
YSS	**Yuzh-Sakhalins**	**83.48**	**333**	*e*P	**P**	**19 33 39.3**	**-0.2**		
	comp=Z,31nm,0.9s,mb5.3								
YSS	**Yuzh-Sakhalins**	**83.48**	**333**⇑	*e*P	**P**	**19 33 39.2**	**-0.3**		
YSS				*e*	pP	19 33 52.0	-3.1		
YSS				pmax	pmax				
	comp=Z,50nm,1.0s,mb5.5								
YSS				MLR	MLR				
	comp=Z,500nm,20.0s,MS4.9								
NSHM	**Saint Helena R**	**83.60**	**40**	P	**P**	**19 33 40.5**	**+0.3**		
KSRS	**Korea Array**	**83.60**	**319**	P	**P**	**19 33 40.1**	**-0.2**		
	comp=Z,10nm,0.9s,mb4.9,baz=143,slow=5.6,SNR=27								
KSRS				LR	LR	20 10 18.6			
	comp=Z,238nm,18.5s,MS4.6,baz=120,slow=35								
PFO	**Pinyon Flat Ob**	**84.03**	**47**	P	**P**	**19 33 41.6**	**-1.0**		
	comp=Z,6.3nm,1.1s,mb4.7,baz=285,slow=1.3,SNR=7.7								
CMB	**Columbia Colle**	**84.53**	**41**	*e*P	**P**	**19 33 44.0**	**-1.0**		
	comp=Z,19nm,1.4s,mb5.0								
CMB	**Columbia Colle**	**84.53**	**41**	*e*P	**P**	**19 33 44.0**	**-1.0**		
CMB				pmax	pmax				
	comp=Z,19nm,1.4s,mb5.0								
WDC	**Whiskeytown Da**	**85.07**	**38**	*e*P	**P**	**19 33 46.9**	**-0.8**		
	comp=Z,20nm,1.3s,mb5.1								
WDC	**Whiskeytown Da**	**85.07**	**38**	*e*P	**P**	**19 33 46.9**	**-0.8**		
WDC				pmax	pmax				
	comp=Z,20nm,1.3s,mb5.1								
MTUM	**Tungsten Hills**	**85.15**	**43**	*e*P	**P**	**19 33 47.8**	**-0.4**		
QIZ	**Qiongzhong**	**85.20**	**294**	P	**P**	**19 33 47.8**	**-1.0**		
QIZ				S	S	19 44 07.5	-7.4		
QIZ				AMB	AMB				
	comp=Z,145nm,8.7s								
QIZ				LR	LR				
	comp=E,158nm,17.1s								
QIZ				LR	LR				
	comp=Z,158nm,16.9s,MS4.5								
NJ2	**Nanjing**	**85.84**	**310**	*e*P	**P**	**19 33 52.5**	**+0.7**		
NJ2				AP	pP	19 34 09.3	+1.8		
NJ2				XP	sP	19 34 16.5	+3.0		
NJ2				PP	PP	19 37 12.5	+0.2		
NJ2				S	S	19 44 19.0	-1.8		
NJ2				AMB	AMB				
	comp=Z,40nm,1.0s,mb5.6								
NJ2				AMB	AMB				
	comp=Z,310nm,6.5s								
NJ2				LR	LR				
	comp=N,440nm,21.1s,MS5.0								
NJ2				LR	LR				
	comp=E,350nm,18.0s,MS5.0								
NJ2				LR	LR				
	comp=Z,340nm,17.9s,MS4.8								
NVAR	**Mina Array Bea**	**86.02**	**42**	P	**P**	**19 33 51.5**	**-1.0**		
	comp=Z,3.1nm,0.9s,mb4.5,baz=208,slow=6.3,SNR=16								
TPNV	**Topopah Spring**	**86.30**	**44**	*e*P	**P**	**19 33 53.6**	**-0.2**		
	comp=Z,26nm,1.4s,mb5.3								
TPNV	**Topopah Spring**	**86.30**	**44**	*e*P	**P**	**19 33 53.6**	**-0.3**		
TPNV				pmax	pmax				
	comp=Z,25nm,1.4s,mb5.2								
PSI	**Prapat**	**86.38**	**275**	LR	LR	20 14 12.5			
	comp=Z,437nm,19.9s,MS4.9,baz=129,slow=37								
TUC	**Tucson**	**86.99**	**51**	*e*P	**P**	**19 33 57.5**	**+0.1**		
	comp=Z,19nm,1.2s,mb5.2								
TUC	**Tucson**	**86.99**	**51**	*e*P	**P**	**19 33 57.5**	**+0.1**		
TUC				pmax	pmax				
	comp=Z,19nm,1.2s,mb5.2								
MDJ	**Mudanjiang**	**87.66**	**325**	P	**P**	**19 34 00.8**	**+0.5**		
MDJ				PP	PP	19 37 25.0	-1.7		
MDJ				S	S	19 44 37.5	-0.3		
MDJ				AMB	AMB				
	comp=Z,16nm,1.1s,mb5.2								
MDJ				AMB	AMB				
	comp=Z,113nm,4.0s								
MDJ				LR	LR				
	comp=N,143nm,20.0s,MS4.4								
MDJ				LR	LR				
	comp=E,48nm,24.6s,MS4.4								
MDJ				LR	LR				
	comp=Z,201nm,20.0s,MS4.5								
HABR	**Khabarovsk**	**87.89**	**330**⇑	*e*P	**P**	**19 33 58.1**	**-3.2**		
HABR				S	S	19 44 22.6	-17		
HABR				*e*		19 44 45.4			
HABR				*e*SS	SS	19 50 27.1	-1.9		
HABR				pmax	pmax				
	comp=Z,39nm,1.2s,mb5.5								
WHN	**Wuhan**	**88.09**	**306**	⇓P	**P**	**19 34 04.0**	**+1.3**		
DL2	**Dalian**	**88.29**	**317**	⇑P	**P**	**19 34 04.5**	**+1.1**		
DL2				AP	pP	19 34 20.5	+1.3		
DL2				*e*S	S	19 44 43.5	-0.5		
DL2				AMB	AMB				
	comp=Z,20nm,0.8s,mb5.4								
DL2				AMB	AMB				
	comp=Z,130nm,5.9s								
DL2				LR	LR				
	comp=N,220nm,16.7s,MS4.8								
DL2				LR	LR				
	comp=E,150nm,15.2s,MS4.8								
DL2				LR	LR				
	comp=Z,150nm,15.8s,MS4.5								
WUAZ	**Wupatki**	**88.50**	**48**	*e*P	**P**	**19 34 04.5**	**0.0**		
	comp=Z,24nm,1.4s,mb5.3								
SNY	**Shenyang**	**89.01**	**320**	⇓P	**P**	**19 34 07.3**	**+0.5**		
SNY				AMB	AMB				
	comp=Z,22nm,2.3s,mb5.1								
CN2	**Changchun**	**89.27**	**322**	*e*P	**P**	**19 34 08.0**	**+0.1**		
CN2				*e*S	S	19 44 49.8	-3.2		
CN2				AMB	AMB				
	comp=Z,20nm,1.2s,mb5.3								
CN2				AMB	AMB				
	comp=Z,310nm,5.0s								
CN2				LR	LR				
	comp=N,570nm,20.0s,MS5.1								
CN2				LR	LR				
	comp=E,430nm,20.0s,MS5.1								
CN2				LR	LR				
	comp=Z,530nm,21.0s,MS4.9								
TIA	**Tai'an**	**89.48**	**312**	⇑P	**P**	**19 34 09.8**	**+0.7**		
TIA				AMB	AMB				
	comp=Z,65nm,1.3s,mb5.8								
MSU	**Marysvale**	**89.79**	**45**	*e*P	**P**	**19 34 11.0**	**+0.5**		
KLR	**Kul'dur**	**89.92**	**329**	*e*P	**P**	**19 34 08.2**	**-2.6**		
KLR				pmax	pmax				
	comp=Z,54µm,2.0s								
LTX	**Lajitas**	**90.36**	**57**	P	**P**	**19 34 16.4**	**+3.0**		
	comp=Z,16nm,1.2s,mb5.2								
LTX	**Lajitas**	**90.36**	**57**	P	**P**	**19 34 16.4**	**+3.0**		
LTX				pmax	pmax				
	comp=Z,16nm,1.2s,mb5.2								
TXAR	**Lajitas Array**	**90.36**	**57**	P	**P**	**19 34 13.0**	**-0.4**		
	comp=Z,6.4nm,1.1s,mb4.9,baz=218,slow=5.7,SNR=4.1								
MNTX	**Cornudas Mount**	**90.40**	**54**	*e*P	**P**	**19 34 12.0**	**-1.5**		
	comp=Z,12nm,1.3s,mb5.0								
LENM	**Lemitar**	**90.66**	**51**	*e*P	**P**	**19 34 18.0**	**+3.3**		
LAZ	**Ladron**	**90.68**	**51**	*e*P	**P**	**19 34 15.8**	**+1.0**		
BGU	**Big Grassy Mou**	**90.74**	**43**	*e*P	**P**	**19 34 16.9**	**+2.0**		
TMUT	**Trail Mountain**	**90.87**	**45**	*e*P	**P**	**19 34 15.6**	**+0.2**		
BNM	**Barren Site**	**90.89**	**51**	*e*P	**P**	**19 34 17.6**	**+1.9**		
LPM	**Los Pinos Moun**	**90.98**	**51**	*e*P	**P**	**19 34 16.4**	**+0.2**		
CMIG	**Matias Romero**	**91.05**	**71**	P	**P**	**19 34 17.1**	**+0.2**		
	comp=Z,12nm,1.1s,mb5.1,baz=283,slow=5.9,SNR=6.1								
SRU	**San Rafael**	**91.18**	**45**	*e*P	**P**	**19 34 17.1**	**+0.1**		
	comp=Z,15nm,1.5s,mb5.1								
SRU	**San Rafael**	**91.18**	**45**	*e*P	**P**	**19 34 17.1**	**+0.1**		
SRU				pmax	pmax				
	comp=Z,15nm,1.5s,mb5.1								
SLKM	**Skilak Lake**	**91.23**	**13**	*e*P	**P**	**19 34 15.2**	**-1.4**		
HVU	**Hansel Valley**	**91.42**	**42**	*e*P	**P**	**19 34 18.8**	**+0.8**		
	comp=Z,34nm,1.5s,mb5.5								
HVU	**Hansel Valley**	**91.42**	**42**	*e*P	**P**	**19 34 18.8**	**+0.8**		
HVU				pmax	pmax				
	comp=Z,34nm,1.5s,mb5.5								
ANMO	**Albuquerque**	**91.45**	**51**	*e*P	**P**	**19 34 18.0**	**-0.3**		
	comp=Z,18nm,1.4s,mb5.2								
ANMO	**Albuquerque**	**91.45**	**51**	*e*P	**P**	**19 34 18.0**	**-0.3**		
ANMO				pmax	pmax				
	comp=Z,18nm,1.4s								
GYA	**Guiyang**	**91.57**	**299**⇑	*i* P	**P**	**19 34 20.0**	**+0.9**		
GYA				AP	pP	19 34 36.8	+1.9		
GYA				PP	PP	19 38 01.3	+3.1		
GYA				SKS		19 44 46.3			
GYA				S	S	19 45 12.0	-3.0		
GYA				PS	PS	19 46 31.5	+0.3		
GYA				SS	SS	19 51 21.8	-1.3		
GYA				SSS		19 54 58.5			
GYA				AMB	AMB				
	comp=Z,20nm,1.0s,mb5.4								
GYA				AMB	AMB				
	comp=Z,130nm,8.4s								
GYA				LR	LR				
	comp=N,670nm,21.3s,MS5.2								
GYA				LR	LR				
	comp=E,650nm,20.6s,MS5.2								
GYA				LR	LR				
	comp=Z,570nm,22.0s,MS5.0								
PV01	**Paradox Valley**	**91.86**	**47**	*e*P	**P**	**19 34 19.5**	**-0.6**		
BJI	**Beijing**	**92.33**	**315**	P	**P**	**19 34 23.0**	**+0.8**		
BJI				AMB	AMB				
	comp=Z,17nm,1.1s,mb5.3								
BJI				AMB	AMB				
	comp=Z,176nm,4.1s								
BJI				LR	LR				
	comp=N,183nm,14.1s,MS5.0								
BJI				LR	LR				
	comp=E,246nm,10.6s,MS5.0								
BJI				LR	LR				
	comp=Z,146nm,21.6s								
TTA	**Tatalina**	**92.53**	**9**	*e*P	**P**	**19 34 21.1**	**-1.5**		
	comp=Z,5.9nm,0.1s,mb6.0								
TTA	**Tatalina**	**92.53**	**9**	*e*P	**P**	**19 34 21.1**	**-1.5**		
TTA				pmax	pmax				
	comp=Z,6.0nm,0.1s,mb6.0								
MCMT	**McKenzie Canyo**	**93.23**	**40**	*e*P	**P**	**19 34 26.1**	**-0.2**		
MOOW	**Moose Ponds**	**93.79**	**42**	P	**P**	**19 34 28.2**	**-0.7**		
	comp=Z,20nm,1.8s,mb5.2								
XAN	**Xi'an**	**93.84**	**307**	P	**P**	**19 34 30.3**	**+0.9**		
XAN				AMB	AMB				
	comp=Z,7.0nm,2.4s,mb4.7								
PDAR	**Pinedale Array**	**93.92**	**43**	P	**P**	**19 34 28.6**	**-0.9**		
	comp=Z,1.1nm,0.8s,mb4.3,baz=240,slow=2.9,SNR=8.2								
PDAR				PP	PP	19 38 14.4	-1.9		
	comp=Z,1.2nm,1.1s,baz=232,slow=7.3,SNR=5.1								
PDAR				LR	LR	20 13 23.9			
	comp=Z,603nm,18.1s,MS5.1,baz=264,slow=34								
KMI	**Kunming**	**93.96**	**296**	P	**P**	**19 34 31.3**	**+1.2**		
KMI				PP	PP	19 38 19.5	+2.5		
KMI				PPP		19 40 22.8			
KMI				SKS		19 44 57.5			
KMI				S	S	19 45 33.0	-3.2		
KMI				PS	PS	19 46 58.5	+0.8		
KMI				SS	SS	19 51 55.8	-1.6		
KMI				SSS		19 55 36.3			
KMI				AMB	AMB				
	comp=Z,10.0nm,1.3s,mb5.1								
KMI				AMB	AMB				
	comp=Z,129nm,5.1s								
KMI				LR	LR				
	comp=N,226nm,15.4s,MS4.8								
KMI				LR	LR				
	comp=E,196nm,17.5s,MS4.8								
KMI				LR	LR				
	comp=Z,248nm,16.4s,MS4.8								
CHTO	**Chiang Mai**	**94.00**	**289**	*e*P	**P**	**19 34 31.2**	**+0.7**		
	comp=Z,7.2nm,1.1s,mb5.0								
CHTO	**Chiang Mai**	**94.00**	**289**	*e*P	**P**	**19 34 31.2**	**+0.7**		
CHTO				pmax	pmax				
	comp=Z,7.0nm,1.1s,mb5.0								
SEY	**Seymchan**	**94.33**	**346**⇑	*e*P	**P**	**19 34 29.7**	**-1.2**		
COLA	**College**	**95.67**	**12**	*e*P	**P**	**19 34 34.4**	**-2.5**		
	comp=Z,6.8nm,0.9s,mb5.1								
COLA	**College**	**95.67**	**12**	*e*P	**P**	**19 34 34.4**	**-2.6**		
COLA				pmax	pmax				
	comp=Z,7.0nm,0.9s,mb5.1								
HHC	**Hu-ho-hao-te**	**95.69**	**314**	*e*P	**P**	**19 34 39.3**	**+1.6**		
HHC				AP	pP	19 34 56.8	+3.3		
HHC				XP	sP	19 35 02.8	+3.3		
HHC				PP	PP	19 38 34.0	+3.8		
HHC				SKS		19 45 08.8			
HHC				S	S	19 44 45.5	-6.1		
HHC				PS	PS	19 47 18.3	+2.0		
HHC				AMB	AMB				
	comp=Z,20nm,0.9s,mb5.5								
HHC				AMB	AMB				
	comp=Z,101nm,5.3s								
HHC				LR	LR				
	comp=N,199nm,15.5s,MS5.1								
HHC				LR	LR				
	comp=E,391nm,14.3s,MS5.1								
HHC				LR	LR				
	comp=Z,179nm,20.2s								
CD2	**Chengdu**	**96.01**	**302**	*e*P	**P**	**19 34 41.0**	**+1.6**		
CD2				AP	pP	19 34 56.5	+1.3		
CD2				PP	PP	19 38 35.5	+2.6		
CD2				SKS		19 45 12.0			
CD2				S	S	19 45 52.0	-1.8		
CD2				PS	PS	19 47 22.3	+2.2		
CD2				SS	SS	19 52 26.3	-0.1		
CD2				AMB	AMB				
	comp=Z,20nm,1.0s,mb5.5								
CD2				AMB	AMB				
	comp=Z,60nm,8.8s								
CD2				LR	LR				
	comp=N,310nm,18.0s,MS5.0								
CD2				LR	LR				
	comp=E,340nm,18.0s,MS5.0								
CD2				LR	LR				
	comp=Z,190nm,15.6s,MS4.7								
BILL	**Bilibino**	**97.01**	**354**	⇑P	**P**	**19 34 42.0**	**-1.0**		
BILL				*e*		19 34 49.9			
BILL				pmax	pmax				
	comp=Z,11nm,2.4s,mb4.9								
BILL				MLR	MLR				
	comp=Z,200nm,16.0s,MS4.7								
LPAZ	**La Paz**	**97.89**	**113**	P	**P**	**19 34 49.6**	**+1.4**		
	comp=Z,2.4nm,1.1s,mb4.7,baz=235,slow=2.8,SNR=6.2								
LPAZ				LR	LR	20 14 10.1			
	comp=Z,143nm,18.3s,MS4.5,baz=289,slow=32								
LZH	**Lanzhou**	**98.47**	**306**	*e*P	**P**	**19 34 53.5**	**+3.2**		
LZH				AP	pP	19 35 08.0	+1.8		
LZH				XP	sP	19 35 18.0	+5.8		
LZH				PP	PP	19 38 55.5	+3.9		
LZH				*e*SKS		19 45 25.0			
LZH				*e*S	S	19 46 11.0	-3.6		
LZH				SS	SS	19 52 59.0	-1.9		
LZH				AMB	AMB				
	comp=Z,13nm,1.0s,mb5.4								
LZH				AMB	AMB				
	comp=Z,86nm,5.0s								
LZH				LR	LR				
	comp=E,396nm,16.6s								
LZH				LR	LR				
	comp=Z,623nm,17.3s,MS5.2								
SONM	**Songino Array**	**102.45**	**318**	P	Pdif	19 35 05.4	-2.7		
	comp=Z,0.4nm,0.9s,baz=103,slow=6.2,SNR=2.6								
GTA	**Gaotai**	**102.83**	**308**	P	Pdif	19 35 10.5	+0.8		
GTA				PP	PP	19 39 27.3	+2.7		
GTA				PPP		19 41 40.0			
GTA				SKS		19 45 44.8			
GTA				S	Sdif	19 46 49.0	-2.0		
GTA				PS	PS	19 48 33.3	+0.1		
GTA				SS	SS	19 54 03.0	+1.5		
GTA				LR	LR				
	comp=N,162nm,19.0s,MS4.7								
GTA				LR	LR				
	comp=E,127nm,18.3s,MS4.7								
GTA				LR	LR				
	comp=Z,225nm,19.0s,MS4.7								
YKA	**Yellowknife Ar**	**103.18**	**25**	P	Pdif	19 35 09.2	-2.0		
	comp=Z,0.1nm,0.4s,baz=232,slow=3.0,SNR=3.1								
YKA				PKKPbc	PKKPbc	19 51 06.0	-2.1		
	comp=Z,0.3nm,0.8s,baz=41,slow=3.7,SNR=5.0								
TLY	**Talaya**	**105.79**	**320**	*e*P	Pdif	19 35 28.1	+5.2		
TLY				pmax	pmax				
	comp=Z,2.0nm,0.8s								
TLY				MLR	MLR				
	comp=Z,186nm,21.0s,MS4.6								
WMQ	**Urumqi**	**112.90**	**309**	*e*PKP	PKiKP	19 39 46.5	-2.1		
WMQ				XPKP		19 40 11.0			
WMQ				PP	PP				
	comp=Z,215nm,4.6s								
WMQ				LR	LR				
	comp=N,140nm,20.8s,MS4.7								
WMQ				LR	LR				
	comp=E,132nm,23.3s,MS4.7								
WMQ				LR	LR				
	comp=Z,146nm,24.1s,MS4.5								
ZALV	**Zalesovo Beam**	**117.31**	**319**	PKP	PKPdf	19 39 56.1	-0.7		
	comp=Z,2.7nm,0.8s,baz=192,slow=0.9,SNR=15								
ZAL	**Zalesovo**	**117.32**	**319**	PKIKP	PKPdf	19 39 56.1	-0.6		
MKAR	**Makanchi Array**	**117.37**	**311**	PKP	PKPdf	19 39 56.2	-0.9		
MKAR				PKKPbc	PKKPbc	19 50 22.9	+1.7		
MKAR	**Makanchi Array**	**117.37**	**311**	PKP	PKPdf	19 39 56.2	-0.9		
	comp=Z,4.7nm,0.9s,baz=72,slow=2.9,SNR=36								
MKAR				PKKPbc	PKKPbc	19 50 22.9	+1.7		
	comp=Z,0.7nm,0.9s,baz=296,slow=1.4,SNR=4.8								
NVS	**Novosibirsk**	**118.38**	**320**	*i* PKIKP	PKPdf	19 39 57.9	-0.9		
KURK	**Kurchatov**	**120.50**	**314**	*e*PKPdf	PKPdf	19 40 02.2	-0.7		
UCH	**Uchtor**	**121.86**	**304**	*e*PKPdf	PKPdf	19 40 06.6	+0.7		
AML	**Almayashu**	**122.44**	**304**	*e*PKPdf	PKPdf	19 40 07.5	+0.5		
EKS2	**Erkin-Say**	**122.47**	**305**	*e*PKPdf	PKPdf	19 40 07.1	+0.1		
MATP	**Matopo**	**125.67**	**209**	PKP	PKPdf	19 40 15.4	+1.5		
	comp=Z,5.2nm,1.0s,baz=185,slow=6.9,SNR=7.4								
BRVK	**Borovoye**	**125.84**	**317**	*e*PKPdf	PKPdf	19 40 12.4	-0.7		
LSZ	**Lusaka**	**130.33**	**212**	PKP	PKPdf	19 40 25.1	+2.2		
	comp=Z,1.9nm,0.8s,baz=130,slow=3.5,SNR=4.8								
ARU	**Arti**	**132.27**	**322**	*e*PKPdf	PKPdf	19 40 25.3	+0.1		
ARU	**Arti**	**132.27**	**322**	*i* PKIKP	PKPdf	19 40 24.6	-0.7		
ARU						19 42 45.8			
ARU				SS	SS	20 00 23.1	+0.5		
ARU				MLR	MLR				
	comp=Z,292nm,20.0s,MS5.0								
PRGR	**Permogore**	**136.64**	**332**	*e*PKIKP	PKPdf	19 40 31.6	-1.7		
ARCES	**ARCESS Array B**	**136.90**	**349**	PKP	PKPdf	19 40 35.0	+1.5		
	comp=Z,2.4nm,0.6s,baz=197,slow=1.3,SNR=9.0								
JOF	**Joensuu**	**140.98**	**340**	*e*pkp	PKPdf	19 40 42.8	+1.6		
KAF	**Kangasniemi**	**143.05**	**342**	*e*pkp	PKPdf	19 40 41.4	-3.5		
MOS	**Moscow**	**143.32**	**328**	*e*PKIKP	PKPdf	19 40 47.9	+2.3		
FINES	**FINESS Array B**	**143.66**	**342**	PKhKP		19 40 42.6			
	comp=Z,5.4nm,1.0s,baz=28,slow=4.5,SNR=11								
OBN	**Obninsk**	**144.17**	**327**⇓	*i* PKIKP	PKPdf	19 40 45.1	-2.0		
OBN				*e*		19 40 54.5			
OBN				*e*		19 40 58.5			
OBN				pmax	pmax				
	comp=Z,52nm,2.0s								
ZEI	**Tsey**	**144.38**	**305**	*e*PKIKP	PKPdf	19 40 47.7	-0.2		
GOF	**Gofitskoye**	**144.51**	**309**⇓	*i* PKIKP	PKPdf	19 40 50.4	+2.4		
GOF				pmax	pmax				
	comp=Z,60nm,1.0s								
ONI	**Oni**	**144.74**	**304**	P	PKPdf	19 40 48.1	-0.4		
VRSR	**Storozhevoye**	**144.78**	**320**	*e*PKIKP	PKPdf	19 40

	comp=Z,57nm,1.3s							
KIS	**Kishinev**	**152.79**	**320**	*e*PKP	PKPbc	19 41 06.0	-2.5	
ANTO	**Ankara**	**153.18**	**303**	*e*PKPbc	PKPbc	19 41 10.1	+0.5	
ANTO	**Ankara**	**153.18**	**303**	⇑*i*P	PKPbc	19 41 11.0	+1.4	
LVV	**L'vov**	**153.43**	**329**	*e*PKIKP	PKPbc	19 41 09.6	-0.2	
KWP	**Kalwaria**	**154.15**	**330**	*e*PKP	PKPbc	19 41 12.0	+0.6	
KWP	**Kalwaria**	**154.15**	**330**	⇓*i*P	PKPbc	19 41 12.0	+0.6	
PLOR	**Plostina**	**154.67**	**320**	⇓*i*P	PKPab	19 41 28.5	+0.9	
KOLS	**Kolonicke sedl**	**154.86**	**330**	*e*PKP	PKPdf	19 41 04.9	+0.7	
KOLS				*e*		19 41 12.9		
KOLS	**Kolonicke sedl**	**154.86**	**330**	*e*PKP	PKPdf	19 41 04.8	+0.6	
KOLS				*e*		19 41 12.9		
OJC	**Ojcow**	**154.88**	**335**	*e*PKP	PKPdf	19 41 04.4	+0.2	
STHS	**Stebnicka Huta**	**154.94**	**332**	*e*PKP	PKPbc	19 41 14.1	+1.0	
STHS				*e*		19 41 29.2		
STHS	**Stebnicka Huta**	**154.94**	**332**	*e*PKP	PKPbc	19 41 14.1	+1.0	
STHS				*e*		19 41 29.1		
UZH	**Uzhgorod**	**155.07**	**329**	*e*PKIKP	PKPdf	19 41 13.4	+8.9	
UZH				*e*		19 41 21.2		
UZH				*i*		19 41 27.8		
NIE	**Niedzica**	**155.32**	**333**	*e*PKP	PKPdf	19 41 06.1	+1.3	
KSP	**Ksiaz**	**155.55**	**340**	*e*PKP	PKPdf	19 41 09.3	+4.2	
KSP	**Ksiaz**	**155.55**	**340**	*e*PKP	PKPdf	19 41 15.2	+10	
OKC	**Ostrava-Krasne**	**155.80**	**336**	*e*PKP	PKPab	19 41 31.9	-0.4	
OKC				*e*		19 41 43.0		
OKC	**Ostrava-Krasne**	**155.80**	**336**	*e*PKPab	PKPab	19 41 31.9	-0.4	
OKC				*ep*PKP	pPKPab	19 41 43.0	-5.2	
OKC				AMS	AMS	20 59 50.0		
	comp=Z,300nm,6.4s							
UPC	**Upice**	**155.93**	**340**	*e*PKPab	PKPab	19 41 32.8	0.0	
UPC				*ex*	x	19 41 41.9		
DPC	**Dobruska-Polom**	**155.98**	**339**	*e*PKPab	PKPab	19 41 31.7	-1.3	
DPC				*ep*PKP	pPKPab	19 41 44.7	-4.2	
DPC				AMS	AMS	21 00 20.0		
	comp=Z,200nm,18.6s							
KECS	**Kecovo**	**155.98**	**331**	*e*PKP	PKPab	19 41 28.2	-4.9	
KECS				*e*		19 41 43.1		
CLL	**Collm**	**156.01**	**345**	*e*PKIKP	PKPdf	19 41 10.0	+4.3	
CLL				*e*		19 41 32.0		
CLL				pmax	pmax			
	comp=Z,3.0nm,1.1s							
CLL				pmax	pmax			
	comp=Z,12nm,1.0s							
CLL	**Collm**	**156.01**	**345**	*e*PKPdf	PKPdf	19 41 05.0	-0.7	
CLL				*i* PKPdif		19 41 15.7		
	comp=Z,8.0nm,1.0s							
CLL				*i* PKPab	PKPab	19 41 32.0	-1.1	
	comp=Z,12nm,1.0s							
CLL				LmV		20 51 00.0		
	comp=Z,200nm,20.5s							
BRG	**Berggiesshubel**	**156.18**	**343**	*e*PKP	PKPdf	19 41 06.2	+0.3	
BRG				*e*		19 41 16.0		
BRG				LR	LR			
	comp=Z,220nm,19.3s,MS5.0							
BRG	**Berggiesshubel**	**156.18**	**343**	*e*PKIKP	PKPdf	19 41 06.2	+0.3	
BRG				*e*		19 41 16.0		
BRG				pmax	pmax			
	comp=Z,7.0nm,1.4s							
BRG				pmax	pmax			
	comp=Z,6.0nm,1.3s							
BRG				MLR	MLR			
	comp=N,94nm,19.5s							
BRG				MLR	MLR			
	comp=E,55nm,14.1s							
BRG				MLR	MLR			
	comp=Z,224nm,19.3s,MS5.0							
BRG	**Berggiesshubel**	**156.18**	**343**	*e*PKP	PKPdf	19 41 06.2	+0.3	
	comp=Z,11nm,1.4s							
BRG				*e*		19 41 16.0		
	comp=Z,9.5nm,1.3s							
BRG								
	comp=N,157nm,19.5s							
BRG								
	comp=E,92nm,14.1s							
BRG								
	comp=Z,374nm,19.3s							
DRGR		**156.19**	**326**	⇑P	PKPdf	19 41 15.8	+10	
DRGR		**156.19**	**326**	⇑*i*P	PKPdf	19 41 15.8	+10	
PVCC	**Panska Ves**	**156.33**	**342**	*e*PKPab	PKPab	19 41 34.3	-0.2	
PVCC				*ep*PKP	pPKPab	19 41 45.0	-5.4	
PVCC				AMS	AMS	20 58 10.0		
	comp=Z,400nm,21.0s							
SZH	**Strazhica**	**156.53**	**315**	*e*P	PKPab	19 41 36.4	+0.7	
VYHS	**Vyhne**	**156.65**	**333**	*e*PKP	PKPab	19 41 35.1	-0.8	
VYHS				*e*		19 41 42.1		
PSZ	**Piszkesteto**	**156.67**	**331**	*e*PKPab	PKPab	19 41 35.7	-0.4	
PSZ	**Piszkesteto**	**156.67**	**331**	⇓*i*P	PKPab	19 41 36.9	+0.9	
KOLL	**Kolacno**	**156.75**	**334**	*e*PKP	PKPdf	19 41 08.8	+2.1	
KOLL				*e*		19 41 35.8		
VRAC	**Vranov**	**156.79**	**338**	⇓P	PKPab	19 41 37.0	+0.5	
VRAC	**Vranov**	**156.79**	**338**	⇓*i*P	PKPab	19 41 37.0	+0.5	
PRU	**Pruhonice**	**156.83**	**341**	*e*PKPab	PKPab	19 41 35.9	-0.7	
PRU				*ep*PKP	pPKPab	19 41 47.9	-4.6	
PRU				AMS	AMS	20 59 40.0		
	comp=Z,400nm,17.1s							
MOX	**Moxa**	**156.93**	**346**	*e*PKP	PKPdf	19 41 07.7	+0.8	
MOX								
	comp=Z,200nm,18.0s							
NKC	**Novy Kostel**	**157.14**	**345**	*e*PKP	PKPab	19 41 37.6	-0.4	
NKC				*e*		19 41 48.9		
NKC	**Novy Kostel**	**157.14**	**345**	*e*PKPab	PKPab	19 41 37.6	-0.4	
NKC				*ep*PKP	pPKPab	19 41 48.9	-5.0	
NKC				AMS	AMS	20 59 20.0		
	comp=Z,400nm,20.5s							
TREC	**Trest**	**157.16**	**339**	*e*PKPab	PKPab	19 41 37.5	-0.6	
TREC				*ep*PKP	pPKPab	19 41 49.1	-4.9	
TREC				AMS	AMS	21 00 00.0		
	comp=Z,500nm,17.9s							
SMOL	**Smolenice**	**157.17**	**335**	*e*PKP	PKPab	19 41 38.5	+0.3	
SMOL				*e*		19 41 49.9		
MODS	**Modra-Piesok**	**157.34**	**335**	*e*PKP	PKPdf	19 41 11.7	+4.2	
MODS				*e*		19 41 39.1		
MODS				*e*		19 41 50.9		
BZS	**Buzias**	**157.55**	**325**	⇓P	PKPdf	19 41 06.3	-1.5	
BZS	**Buzias**	**157.55**	**325**	⇓*i*P	PKPdf	19 41 06.3	-1.6	
ZST	**Bratislava**	**157.55**	**335**	*e*PKP	PKPab	19 41 40.2	+0.3	
ZST				*e*		19 41 50.5		
KHC	**Kasperske Hory**	**157.87**	**342**	*e*PKPab	PKPab	19 41 40.8	-0.4	
KHC				*ep*PKP	pPKPab	19 41 54.9	-2.2	
KHC				AMS	AMS	21 00 30.0		
	comp=Z,400nm,16.5s							
GERES	**GERESS Array B**	**158.09**	**341**	PKP	PKPdf	19 41 08.4	-0.1	
	comp=Z,0.3nm,0.4s,baz=140,slow=8.4,SNR=3.4							
GERES				PKPab	PKPab	19 41 40.7	-1.4	
	comp=Z,1.3nm,0.8s,baz=28,slow=6.0,SNR=5.1							
RZN	**Rozhen**	**158.12**	**313**	*e*P	PKPab	19 41 42.0	-0.6	
BAIF	**Baives**	**158.39**	**358**	*e*PKP2	PKPab	19 41 40.2	-3.1	
	comp=Z,21nm,1.2s							
PKSM	**Moragy**	**158.53**	**330**	⇑P	PKPdf	19 41 07.6	-1.4	
PKSM	**Moragy**	**158.53**	**330**	⇑*i*P	PKPdf	19 41 07.6	-1.4	
VTS	**Vitosha**	**158.57**	**317**	*e*P	PKPab	19 41 45.5	+1.0	
VTS	**Vitosha**	**158.57**	**317**	⇓*i*P	PKPab	19 41 45.9	+1.4	
MMB	**Musomiste**	**158.80**	**314**	*e*P	PKPab	19 41 46.1	+0.6	
FLN	**La Foliniere**	**159.49**	**7**	*e*PKP2	PKPab	19 41 46.4	-1.8	
	comp=Z,52nm,1.2s							
LDF	**La Druitiere**	**159.69**	**7**	*e*PKP2	PKPab	19 41 47.0	-2.1	
	comp=Z,57nm,1.5s							
QUIF	**Quistinic**	**159.90**	**13**	*e*PKP2	PKPab	19 41 48.2	-1.8	
MEZF	**Maizieres J'vi**	**159.91**	**357**	*e*PKP2	PKPab	19 41 46.9	-3.1	
SSF	**Saint Saulge**	**161.40**	**360**	*e*PKP2	PKPab	19 41 53.9	-2.6	
	comp=Z,24nm,1.4s							
MFF	**Saint Martin d**	**161.66**	**8**	*e*PKP2	PKPab	19 41 54.1	-3.6	
	comp=Z,24nm,1.2s							
AVF	**Avril sur Loir**	**161.67**	**360**	*e*PKP2	PKPab	19 41 54.9	-2.8	
SMF	**Signal de Mont**	**161.81**	**359**	*e*PKP2	PKPab	19 41 54.7	-3.6	
	comp=Z,22nm,1.2s							
LPG	**La Plagne**	**162.74**	**352**	*e*PKP2	PKPab	19 41 59.4	-3.1	
	comp=Z,17nm,1.1s							
TORD	**Torodi Ar. Bea**	**164.72**	**174**	PKP	PKPdf	19 41 16.6	+0.2	
	comp=Z,3.1nm,1.0s,baz=314,slow=0.9,SNR=8.4							
TORD				PKPab	PKPab	19 42 13.9	+2.0	
	comp=Z,10nm,0.9s,baz=190,slow=3.4,SNR=19							
ESDC	**Sonseca Array**	**167.27**	**26**	PKP	PKPdf	19 41 18.2	+0.5	
	comp=Z,0.2nm,0.4s,baz=13,slow=3.3,SNR=6.1							

IDC 25 19:27:52.4±4.6, 1809N×14673E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.6/16, mbtmp3.6/5, Error ellipse: s-maj=185.6km s-min=24.2km az=78.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.70**	**198**	P	P	19 35 26.3	-0.4
	0.2nm,0.4s,baz=21,slow=8.3,SNR=9.9						
ASAR	**Alice Springs**	**43.35**	**197**	P	P	19 35 56.1	-0.3
	0.2nm,0.3s,baz=25,slow=7.5,SNR=4.8						
STKA	**Stephens Creek**	**49.92**	**186**	P	P	19 36 48.5	+0.6
	1.9nm,0.8s,baz=7.3,slow=8.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**59.09**	**323**	P	P	19 37 54.1	-0.3
	0.5nm,0.4s,baz=103,slow=6.2,SNR=4.0						
MKAR	**Makanchi Array**	**59.59**	**314**	P	P	19 37 58.4	+0.4
	0.2nm,0.4s,baz=69,slow=8.2,SNR=5.1						

*ISCJB **25** 19:34:07.6±0.2, 44.12N±001×696E±002, h12km±2km, Error ellipse: s-maj=2.5km s-min=2.1km az=44.2*
*GEN **25** 19:34:08.1, 44.10N×696E, h9km, ML2.0*
*STR **25** 19:34:08.7±0.2, 44.13N×701E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **25** 19:34:08.5±0.1, 44.14N×702E, h5km, ML2.6/9, Error ellipse: s-maj=1.3km s-min=0.8km az=51.0*
*ROM **25** 19:34:08.9±0.3, 44.16N×703E, h10km, Md2.6/9, Ml1.8/3, Error ellipse: s-maj=4.9km s-min=2.2km az=133.0*
*NEIC **25** 19:34:08.7, 44.13N×701E, h5km, ML2.6(LDG), ML2.5(STR), After STR.*
*LDG **25** 19:34:08.9±0.1, 44.09N×699E, h2km, Md2.8/3, Ml2.6/8, Error ellipse: s-maj=1.6km s-min=1.2km az=54.0*

ISC 25 19:34:08.3±0.2, 4412N±001×698E±002, h13km±2km, n69, σ0§70/126, 1C-1D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOUF	**Mont Tournerai**	**0.22**	**118**	Pg	**Pg**	**19 34 12.8**	**-0.2**
MVIF	**Mont Vial**	**0.25**	**150**	Pg	**Pg**	**19 34 13.5**	**-0.1**
MVIF				Sg	**Sg**	**19 34 17.7**	**+0.5**
STV	**Sta Anna Valdi**	**0.28**	**62**	⇓*i*Pg	**Pg**	**19 34 14.1**	**0.0**
STV				Sg	**Sg**	**19 34 18.3**	**+0.3**
	57nm,0.4s						
ENR	**Entracque**	**0.34**	**71**	P	**Pg**	**19 34 15.2**	**+0.1**
AUTN	**L'Aution**	**0.34**	**110**	Pg	**Pg**	**19 34 14.8**	**-0.4**
AUTN				Sg	**Sg**	**19 34 20.5**	**+0.6**
LUCF	**Luceram**	**0.35**	**130**	Pg	**Pg**	**19 34 15.3**	**0.0**
LUCF				Sg	**Sg**	**19 34 20.7**	**+0.8**
CALN	**Calern**	**0.37**	**190**	Pg	**Pg**	**19 34 15.7**	**0.0**
CALN				Sg	**Sg**	**19 34 21.6**	**+0.9**
SURF	**Saint Ours**	**0.38**	**342**	Pg	**Pg**	**19 34 15.7**	**-0.3**
SURF				Sg	**Sg**	**19 34 21.3**	**+0.1**
PZZ	**Prazzo**	**0.40**	**13**	⇑*i*Pg	**Pg**	**19 34 16.3**	**+0.1**
SBF	**Sospel**	**0.41**	**127**	*e*Pg	**Pg**	**19 34 16.6**	**+0.1**
SBF				*e*Sg	**Sg**	**19 34 22.7**	**+0.6**
	135nm,0.4s,SNR=1.0						
SBF	**Sospel**	**0.41**	**127**	*e*Pg	**Pg**	**19 34 16.6**	**+0.1**
SBF				*e*Sg	**Sg**	**19 34 22.7**	**+0.6**
	68nm,0.4s,SNR=1.0						
DOI	**San Damiano**	**0.43**	**26**	Pg	**Pg**	**19 34 17.0**	**+0.1**
	49nm,0.2s						
SAOF	**Saorge**	**0.43**	**107**	Pg	**Pg**	**19 34 16.9**	**0.0**
SAOF				Sg	**Sg**	**19 34 23.0**	**+0.3**
REVF	**Revere**	**0.47**	**143**	Pg	**Pg**	**19 34 17.8**	**+0.3**
REVF				Sg	**Sg**	**19 34 25.4**	**+1.6**
MONE	**Monesi**	**0.56**	**93**	P	**Pg**	**19 34 19.0**	**-0.2**
MONE				S	**Sg**	**19 34 26.6**	**0.0**
NEGI	**Negi**	**0.59**	**117**	P	**Pg**	**19 34 19.5**	**-0.2**
NEGI				S	**Sg**	**19 34 27.3**	**-0.2**
FRF	**La Foret Royal**	**0.60**	**204**	*e*Pg	**Pg**	**19 34 19.7**	**-0.4**
FRF				*e*Sg	**Sg**	**19 34 26.5**	**-1.6**
	80nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**0.60**	**204**	*e*Pg	**Pg**	**19 34 19.7**	**-0.4**
FRF				*e*Sg	**Sg**	**19 34 26.5**	**-1.6**
	40nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**0.63**	**346**	*e*Pg	**Pg**	**19 34 19.8**	**-0.8**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**19 34 28.9**	**0.0**
	37nm,0.2s,SNR=1.0						
MBDF	**Montbardon**	**0.63**	**346**	*e*Pg	**Pg**	**19 34 19.8**	**-0.8**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**19 34 28.9**	**0.0**
	18nm,0.2s,SNR=1.0						
ROB	**Roburent**	**0.67**	**74**	P	**Pg**	**19 34 21.1**	**-0.1**
ROB				S	**Sg**	**19 34 30.0**	**0.0**
IMI	**Imperia**	**0.69**	**107**	Pg	**Pg**	**19 34 21.6**	**0.0**
IMI				S	**Sg**	**19 34 30.5**	**-0.2**
RORO		**0.78**	**90**	P	**Pg**	**19 34 23.2**	**-0.2**
RORO				S	**Sg**	**19 34 33.3**	**-0.4**
RRL	**Cesana Torines**	**0.82**	**350**	P	**Pg**	**19 34 23.8**	**-0.3**
RRL				S	**Sg**	**19 34 34.5**	**-0.3**
LMR	**La Mourre**	**0.85**	**204**	*e*Pn	**Pn**	**19 34 25.4**	**-0.6**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**19 34 35.2**	**-0.7**
	49nm,0.2s,SNR=1.0						
LMR				*e*Sn	**Sn**	**19 34 38.2**	**-0.1**
	SNR=1.0						
LMR	**La Mourre**	**0.85**	**204**	*e*Pg	**Pg**	**19 34 24.2**	**-0.6**
LMR				*e*Pn	**Pn**	**19 34 25.4**	**-0.6**
LMR				*e*Sg	**Sg**	**19 34 35.2**	**-0.7**
LMR				*e*Sn	**Sn**	**19 34 38.2**	**-0.1**
LMR	**La Mourre**	**0.85**	**204**	*e*Pn	**Pn**	**19 34 25.4**	**-0.6**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**19 34 35.2**	**-0.7**
	25nm,0.2s,SNR=1.0						
LMR				*e*Sn	**Sn**	**19 34 38.2**	**-0.1**
	SNR=1.0						
FIN	**Finale Ligure**	**0.89**	**84**	Pg	**Pg**	**19 34 25.2**	**-0.3**
FIN				S	**Sg**	**19 34 36.0**	**-1.1**
BNI	**Bardonecchia**	**0.96**	**347**	Pg	**Pg**	**19 34 26.7**	**-0.1**
QLNO	**Quiliano**	**1.00**	**78**	Pg	**Pg**	**19 34 27.5**	**-0.1**
SMRF	**Simiane la Rot**	**1.02**	**263**	*e*Pg	**Pg**	**19 34 28.2**	**+0.2**
SMRF				*e*Sn	**Sn**	**19 34 42.9**	**+0.4**
	63nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.02**	**263**	*e*Pg	**Pg**	**19 34 28.2**	**+0.2**
SMRF				*e*Sn	**Sn**	**19 34 42.9**	**+0.4**
	32nm,0.3s,SNR=1.0						
RSP	**Reno Superiore**	**1.05**	**11**	Pg	**Pg**	**19 34 27.4**	**-1.2**
	46nm,0.6s						
RSP				S	**Sb**	**19 34 40.7**	**-1.4**
ORIF	**Oris-en-Rattie**	**1.12**	**316**	*e*Pn	**Pn**	**19 34 28.9**	**-0.8**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**19 34 44.8**	**+0.2**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**19 34 45.9**	**+0.9**
	24nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.12**	**316**	*e*Pn	**Pn**	**19 34 28.9**	**-0.8**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**19 34 44.8**	**+0.2**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**19 34 45.9**	**+0.9**
	12nm,0.3s,SNR=1.0						
PCP	**Pian Castagno**	**1.20**	**69**	Pg	**Pg**	**19 34 30.9**	**-0.5**
PCP				S	**Sb**	**19 34 45.3**	**-1.0**
OCF	**Saint Nazaire**	**1.29**	**292**	Pn	**Pn**	**19 34 34.1**	**+2.1**
OG26	**St.-Nazaire-De**	**1.29**	**292**	Pn	**Pn**	**19 34 34.1**	**+2.1**
LSD	**Ceresole Reale**	**1.35**	**5**	P	**Pn**	**19 34 33.2**	**+0.4**
LSD				S	**Sb**	**19 34 50.3**	**-0.2**
LPG	**La Plagne**	**1.39**	**353**	*e*Pg	**Pg**	**19 34 35.4**	**+0.4**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**19 34 54.2**	**+1.1**
	9.3nm,0.3s						
LPG	**La Plagne**	**1.39**	**353**	*e*Pn	**Pn**	**19 34 34.0**	**+0.6**
LPG				*e*Pg	**Pg**	**19 34 35.4**	**+0.4**
LPG				*e*Sg	**Sg**	**19 34 54.2**	**+1.1**
LPG	**La Plagne**	**1.39**	**353**	*e*Pg	**Pg**	**19 34 35.4**	**+0.4**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**19 34 54.2**	**+1.1**
	4.7nm,0.3s						
LPL	**La Plagne**	**1.41**	**353**	*e*Pg	**Pg**	**19 34 36.0**	**+0.6**
LPL				*e*Sg	**Sg**	**19 34 54.4**	**+0.6**
	7.1nm,0.3s						
LPL	**La Plagne**	**1.41**	**353**	*e*Pn	**Pn**	**19 34 34.4**	**+0.7**
LPL				*e*Pg	**Pg**	**19 34 36.0**	**+0.6**
LPL				*e*Sg	**Sg**	**19 34 54.4**	**+0.6**
LPL	**La Plagne**	**1.41**	**353**	*e*Pg	**Pg**	**19 34 36.0**	**+0.6**
LPL				*e*Sg	**Sg**	**19 34 54.4**	**+0.6**
	3.5nm,0.3s						
TRAV		**1.50**	**21**	P	**Pn**	**19 34 33.8**	**-1.1**
TRAV				S	**Sn**	**19 34 51.6**	**-2.7**
VIVF	**Saint-Julien-l**	**1.81**	**295**	*e*Pn	**Pn**	**19 34 39.8**	**+0.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**19 35 02.3**	**+0.4**
	7.2nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.81**	**295**	*e*Pn	**Pn**	**19 34 39.8**	**+0.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**19 35 02.3**	**+0.4**
	3.6nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.25**	**270**	*e*Pn	**Pn**	**19 34 45.4**	**+0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**19 35 12.0**	**-0.8**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**19 35 20.2**	**-0.4**
	4.4nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**2.25**	**270**	*e*Pn	**Pn**	**19 34 45.4**	**+0.2**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**19 35 12.0**	**-0.8**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**19 35 20.2**	**-0.4**
	2.2nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**2.57**	**346**	*e*Pg	**Pg**	**19 34 57.3**	**-0.3**
	SNR=1.0						
CABF	**La Chapelle**	**2.57**	**346**	*e*Pn	**Pn**	**19 34 50.6**	**+1.0**
CABF				*e*Pg	**Pg**	**19 34 57.3**	**-0.3**
CABF	**La Chapelle**	**2.57**	**346**	*e*Pg	**Pg**	**19 34 57.3**	**-0.3**
	SNR=1.0						
SMF	**Signal de Mont**	**3.36**	**320**	*e*Pn	**Pn**	**19 35 01.5**	**+1.1**
	SNR=1.0						
MTLF	**Montolieu**	**3.54**	**259**	*e*Pn	**Pn**	**19 35 02.9**	**0.0**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**19 35 42.9**	**-1.7**
	2.6nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**3.54**	**259**	*e*Pn	**Pn**	**19 35 02.9**	**0.0**
	SNR=1.0						
MTLF				*e*Sn	**Sn**	**19 35 42.9**	**-1.7**
	1.3nm,0.3s,SNR=1.0						
CAF	**Calviac**	**3.61**	**285**	*e*Pn	**Pn**	**19 35 04.8**	**+0.9**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**19 36 02.5**	**-1.6**
	0.8nm,0.3s						
CAF	**Calviac**	**3.61**	**285**	*e*Pn	**Pn**	**19 35 04.8**	**+0.9**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**19 36 02.5**	**-1.6**
	0.4nm,0.3s						
AVF	**Avril sur Loir**	**3.70**	**318**	*e*Pn	**Pn**	**19 35 05.4**	**+0.3**
	SNR=1.0						
HINF	**Hinteralfeld**	**3.70**	**359**	*e*Pn	**Pn**	**19 35 05.9**	**+0.7**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.80**	**311**	*e*Pn	**Pn**	**19 35 06.8**	**+0.3**
SSF	**Saint Saulge**	**3.82**	**322**	*e*Pn	**Pn**	**19 35 07.0**	**+0.2**
LOR	**Lormes**	**3.84**	**326**	*e*Pn	**Pn**	**19 35 07.8**	**+0.8**
	SNR=1.0						
HAU	**Haudompre**	**3.92**	**354**	*e*Pn	**Pn**	**19 35 09.1**	**+1.0**
	SNR=1.0						
RJF	**Les Rejaudoux**	**4.07**	**289**	*e*Pn	**Pn**	**19 35 10.7**	**+0.5**
CDF	**Champ du Feu**	**4.30**	**3**	*e*Pn	**Pn**	**19 35 13.7**	**+0.3**
LFF	**La Frestale**	**4.54**	**283**	*e*Pn	**Pn**	**19 35 16.5**	**-0.1**
MEZF	**Maizieres J'vi**	**4.59**	**344**	*e*Pn	**Pn**	**19 35 16.7**	**-0.6**
	SNR=1.0						
EPF	**Esparros**	**4.95**	**260**	*e*Pn	**Pn**	**19 35 22.0**	**-0.2**

MAN 25 19:36:44, 586N×12646E, h145km, mb4.8, ML3.8, MS3.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.10**	**349**	*e*P	Pn	19 37 09.9	+0.7
MATI				*e*S	Sn	19 37 29.7	+1.3
GSPH	**General Santos**	**1.52**	**279**	⇑*e*P	Pn	19 37 11.9	-1.4
GSPH				*e*S	Sn	19 37 32.7	-3.1
DMPH	**Davao City--Mi**	**1.54**	**322**	*e*P	Pn	19 37 11.2	-2.4
DMPH				*i* S	Sn	19 37 35.7	-0.6
BUKP	**Musuan**	**2.44**	**325**	*e*P	Pn	19 37 25.3	+1.1
BUKP				*e*S	Sn	19 37 56.4	+1.3

*IDC **25** 19:37:49.7±2.4, 4.46S×104.80E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/19, mbtmp3.8/7, ML4.7/1, Error ellipse: s-maj=104.8km s-min=18.7km az=53.0*
*ISCJB **25** 19:37:53.0±0.8, 4.25S±02.2×105.10E±009, h33km, mb3.6/6, Error ellipse: s-maj=28.5km s-min=9.2km az=20.9*

ISC 25 19:37:55.3±0.8, 43S±02×10504E±010, h35km, n8, σ1§09/9, mb3.6/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSI	**Kapahiang**	**2.52**	**284**	*e*P	**Pn**	**19 38 29.0**	**-4.8**
KSI				*e*S	**Sn**	**19 39 03.0**	**-0.3**
BATI	**Kupang**	**19.38**	**109**	P	**Pn**	**19 42 18.1**	**-1.6**
	2.5nm,0.3s,baz=180,slow=1.0,SNR=6.7						
WRA	**Warramunga Arr**	**32.51**	**121**	P	**P**	**19 44 22.8**	**-0.2**
	0.2nm,0.6s,mb3.2,baz=294,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**33.86**	**127**	P	**P**	**19 44 34.9**	**+0.1**
	0.2nm,0.4s,mb3.4,baz=302,slow=7.8,SNR=9.1						
STKA	**Stephens Creek**	**43.90**	**133**	P	**P**	**19 46 00.2**	**+1.5**
	1.6nm,0.9s,mb3.

YHNB	Yeheng	32.40	347	*e*P		P	20 16 21.5	+0.1
MKAR	Makanchi Array	67.66	327	P		P	20 20 48.9	+0.6
	0.3nm,0.4s,mb3.7,baz=124,slow=6.9,SNR=7.8							
SBA	Scott Base	73.39	172	P		P	20 21 24.5	+1.7
BRVK	Borovoye	77.59	328	*e*P		P	20 21 48.0	+0.8
	1.1nm,0.6s,mb4.0							

ISCJB ***25*** *20:12:31.2±0.8, 49S±0.1×104 8W±0.1, h10km, mb4.4/29, MS4.1/10, Error ellipse: s-maj=19.3km s-min=9.8km az=136.3*

IDC ***25*** *20:12:31.2±1.4, 47.7S×104 94W, h0km, mb3.8/10, mb1 4.1/10, mb1mx4.0/15, mbtmp3.8/10, MS4.1/10, Ms1 4.1/10, ms1mx3.8/25, Error ellipse: s-maj=45.5km s-min=19.6km az=53.0*

NEIC ***25*** *20:12:33.1±0.6, 49.3S×104 85W, h10km, mb4.7/22, Error ellipse: s-maj=15.5km s-min=8.0km az=51.0*

ISC 25 20:12:33.3±0.8, 49S±01×1048W±0.1, h10km, n96, σ0§93/79, mb4.4/29, MS4.1/10, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	24.90	53	*e*P	P	20 17 56.0	-0.7
	13nm,0.9s,mb4.5						
ATAH	Atahualpa	26.36	96	LR	LR	20 26 01.4	
	comp=Z,756nm,21.8s,MS4.2,baz=296,slow=31						
OTAV	Otavalo	26.83	80	*e*P	P	20 18 20.5	+6.3
NNA	Nana	28.53	106	LR	LR	20 26 43.4	
	comp=Z,630nm,20.1s,MS4.2,baz=325,slow=30						
LPIG	La Paz	29.35	350	LR	LR	20 27 08.2	
	comp=Z,375nm,18.2s,MS4.0,baz=223,slow=30						
TEIG	Tepich	29.82	33	P	P	20 18 40.7	-0.1
LTX	Lajitas	34.08	2	P	P	20 19 18.0	0.0
RKT	Rikitea	34.26	235	*e*T		20 55 20.9	
	2.6nm,0.3s						
TAOE	Nuku Hiva Isla	35.28	262	*e*LR	LR	20 28 36.2	
	1µm,25.4s						
MNTX	Cornudas Mount	36.43	359	*e*P	P	20 19 37.7	-0.5
	12nm,1.3s,mb4.7						
SDV	Santo Domingo	36.74	68	*e*P	P	20 19 43.9	+2.7
	7.8nm,1.1s,mb4.5						
SDV				LR	LR	20 32 24.9	
SDV	Santo Domingo	36.74	68	P	P	20 19 42.7	+1.5
	1.0nm,0.3s,mb4.1,baz=280,slow=17,SNR=3.9						
SDV				LR	LR	20 32 24.9	
	comp=Z,133nm,19.3s,MS3.7,baz=291,slow=32						
LPAZ	La Paz	37.71	110	*e*P	P	20 19 49.8	+0.3
	6.6nm,1.5s,mb4.1						
LPAZ	La Paz	37.71	110	LR	LR	20 33 07.3	
	comp=Z,184nm,18.1s,MS3.9,baz=44,slow=33						
BNM	Barren Site	38.90	358	*e*P	P	20 20 00.1	+1.0
LENM	Lemitar	38.94	357	*e*P	P	20 20 00.7	+1.2
ANMO	Albuquerque	39.70	358	*e*P	P	20 20 06.0	+0.2
	19nm,1.9s,mb4.5						
ANMO	Albuquerque	39.70	358	P	P	20 20 05.3	-0.4
	1.7nm,0.8s,mb3.8,baz=187,slow=7.2,SNR=5.1						
WMOK	Wichita Mounta	39.86	8	*e*P	P	20 20 06.7	-0.5
	12nm,1.6s,mb4.4						
MIAR	Mount Ida	40.67	14	*e*P	P	20 20 14.2	+0.3
WUAZ	Wupatki	40.70	352	*e*P	P	20 20 15.3	+1.2
	20nm,1.4s,mb4.6						
MVCO	Mesa Verde	42.06	356	*e*P	P	20 20 25.9	+0.7
SDCO	Great Sand Dun	42.46	359	*e*P	P	20 20 29.0	+0.5
	5.6nm,1.0s,mb4.2						
PLAL	Pickwick Lake	42.71	20	*e*P	P	20 20 30.9	+0.3
PV01	Paradox Valley	42.98	356	*e*P	P	20 20 32.6	-0.1
TPNV	Topopah Spring	43.01	347	*e*P	P	20 20 35.4	+2.4
	14nm,1.5s,mb4.5						
PV10	Paradox Valley	43.26	355	*e*P	P	20 20 34.7	-0.3
PV10				*e*		20 20 41.0	
CFAA	Coronel Fontan	43.35	132	P	P	20 20 38.5	+2.6
	0.1nm,0.3s,mb3.0,baz=329,slow=9.3,SNR=5.0						
SWET	Sewanee	43.70	23	*e*P	P	20 20 38.2	-0.5
CBKS	Cedar Bluff	43.77	6	*e*P	P	20 20 38.3	-0.8
	8.4nm,0.6s,mb4.7						
WVT	Waverly	43.84	20	*e*P	P	20 20 39.3	-0.4
SMCO	Snowmass	43.93	358	*e*P	P	20 20 40.6	+0.3
MTUM	Tungsten Hills	43.97	344	*e*P	P	20 20 42.1	+1.4
SRU	San Rafael	44.13	354	*e*P	P	20 20 42.5	+0.5
SIV	San Ignacio	44.30	108	P	P	20 20 42.7	-1.1
	0.2nm,0.3s,mb3.3,baz=298,slow=17,SNR=2.7						
KSU1	Kansas State U	44.46	9	*e*P	P	20 20 44.6	0.0
	19nm,0.6s,mb4.9						
CPCT	Cooper Cave	44.46	24	*e*P	P	20 20 46.1	+1.4
SJG	San Juan	44.48	58	P	P	20 20 45.8	+0.7
ISCO	Idaho Springs	44.51	359	*e*P	P	20 20 45.5	+0.5
FVM	French Village	44.74	16	*e*P	P	20 20 46.9	0.0
	11nm,1.0s,mb4.6						
FVM				PcP	PcP	20 22 29.8	+0.7
SIUC	Southern Illin	44.84	18	*e*P	P	20 20 48.1	+0.4
	41nm,1.8s,mb5.0						
NVAR	Mina Array Bea	44.92	345	P	P	20 20 48.5	+0.2
	0.3nm,0.6s,mb3.3,baz=200,slow=12,SNR=4.2						
TKL	Tuckaleechee C	44.95	24	P	P	20 20 46.6	-1.9
	4.5nm,1.0s,mb4.3,baz=216,slow=5.3,SNR=4.7						
CMB	Columbia Colle	45.13	343	*e*P	P	20 20 50.7	+0.7
MPU	Maple Canyon	45.16	353	*e*P	P	20 20 50.8	+0.6
WAKR	Walker	45.29	344	*e*P	P	20 20 52.5	+1.2
DUG	Dugway	45.50	351	*e*P	P	20 20 54.0	+1.2
	18nm,1.4s,mb4.7						
DAU	Daniels Canyon	45.50	353	*e*P	P	20 20 53.0	+0.1
PPT	Papeete	45.53	250	*e*LR	LR	20 33 36.7	
	264nm,27.0s						
PPT	Papeete	45.53	250	LR	LR	20 34 18.7	
	comp=Z,207nm,18.6s,MS4.1,baz=85,slow=29						
USIN	University of	45.56	19	*e*P	P	20 20 54.2	+0.9
	19nm,1.0s,mb5.0						
TZTN	Tazewell	45.80	24	*e*P	P	20 20 56.5	+1.2
	21nm,1.2s,mb4.9						
PHWY	Pilot Hill	46.01	359	*e*P	P	20 20 54.8	-2.1
HWUT	Hardware Ranch	46.72	353	*e*P	P	20 21 02.6	+0.1
	25nm,1.6s,mb4.9						
TBI	Tubuai	46.75	242	*e*LR	LR	20 34 06.0	
	186nm,33.2s						
TBI	Tubuai	46.75	242	*e*T		21 10 59.2	
	2.9nm,0.3s						
PLCA	Paso Flores	47.06	144	LR	LR	20 36 24.4	
	comp=Z,272nm,20.6s,MS4.2,baz=114,slow=30						
HDIL	Hopedale	47.45	16	*e*P	P	20 21 04.9	-3.3
BW06	Boulder Array	47.66	355	*e*P	P	20 21 09.3	-0.6
	11nm,1.4s,mb4.7						
BW06				*e*PcP	PcP	20 22 51.2	+12
PDAR	Pinedale Array	47.66	355	P	P	20 21 09.2	-0.7
	1.2nm,0.9s,mb3.9,baz=176,slow=6.3,SNR=10						
REDW	Red Top Meadow	48.38	354	*e*PcP	PcP	20 22 47.8	+6.0
MOOW	Moose Ponds	48.75	354	*e*P	P	20 21 17.7	-0.5
IMW	Indian Meadow	48.91	354	*e*P	P	20 21 19.3	-0.1
	24nm,1.5s,mb5.0						
ECSD	EROS,Sioux Fal	49.00	8	*e*P	P	20 21 19.3	-0.8
HLID	Hailey	49.04	351	*e*P	P	20 21 21.2	+0.8
ACSO	Alum Creek Sta	49.22	22	*e*P	P	20 21 21.1	-0.8
RLMT	Red Lodge	49.98	356	*e*P	P	20 21 27.0	-0.6
MCMT	McKenzie Canyo	50.05	353	*e*P	P	20 21 28.5	+0.4
TRQA	Tornquist	51.01	136	P	P	20 21 35.0	-0.6
HOOD	Mount Hood Mea	52.24	345	*e*PcP	PcP	20 23 02.7	+6.7
DGMT	Dagmar	53.18	1	*e*P	P	20 21 51.4	-0.1
NEW	Newport	54.06	350	*e*P	P	20 21 56.8	-1.1
	4.9nm,1.1s,mb4.3						
NEW	Newport	54.06	350	P	P	20 21 55.8	-2.1
	1.8nm,0.7s,mb4.1,baz=133,slow=8.1,SNR=2.6						
WALA	Waterton Lakes	54.35	353	*e*P	P	20 21 60.0	0.0
	5.5nm,1.0s,mb4.4						
SADO	Sadowa	54.57	22	P	P	20 22 00.6	-1.1
SADO	Sadowa	54.57	22	P	P	20 22 00.6	-1.1
	baz=225,slow=7.7						
ULM	Lac du Bonnet	55.50	7	P	P	20 22 06.5	-1.8
ULM	Lac du Bonnet	55.50	7	P	P	20 22 06.5	-1.8
	baz=211,slow=8.6						
RAR	Rarotonga	55.63	248	LR	LR	20 38 47.0	
	comp=Z,710nm,19.7s,MS4.8,baz=89,slow=28						
ACCN	Adirondack Com	55.72	27	*e*P	P	20 22 11.0	+1.0
EDM	Edmonton	58.38	354	*e*P	P	20 22 28.1	-0.5
FCC	Fort Churchill	64.07	6	*e*P	P	20 23 06.6	-0.5
	28nm,1.8s,mb5.0						
DLBC	Dease Lake	66.32	346	*e*P	P	20 23 22.0	+0.2
DLBC				*e*PcP	PcP	20 23 51.8	+0.1
YKA	Yellowknife Ar	67.65	355	P	P	20 23 28.2	-2.0
YKA	Yellowknife Ar	67.65	355	P	P	20 23 28.2	-1.9
	1.1nm,0.8s,mb4.0,baz=163,slow=6.3,SNR=17						
YKW3	Yellowknife Ar	67.72	355	*e*P	P	20 23 30.8	+0.2
DAWY	Dawson	73.50	345	*e*P	P	20 24 05.5	-0.3
EGAK	Eagle	74.53	345	*e*P	P	20 24 11.6	-0.3
INK	Inuvik	75.78	349	*e*P	P	20 24 18.5	-0.4
INK	Inuvik	75.78	349	P	P	20 24 15.8	-3.2
	2.5nm,0.8s,mb4.2,baz=159,slow=5.8,SNR=12						
INK				LR	LR	20 54 50.6	
	comp=Z,80nm,19.0s,MS4.0,baz=54,slow=34						
COLA	College	76.48	343	*e*P	P	20 24 22.6	-0.4
IMA2	Indian Mountai	79.08	342	*e*P	P	20 24 36.7	-0.8
RES	Resolute Bay	79.71	3	*e*P	P	20 24 40.2	-0.7
SNAA	Sanae	89.11	162	LR	LR	20 57 30.2	
	comp=Z,52nm,20.1s,MS4.0,baz=21,slow=30						
SONM	Songino Array	129.58	333	PKP			
	0.3nm,0.9s,baz=74,slow=0.7,SNR=3.4				PKPdf	20 31 42.9	+0.2
MKAR	Makanchi Array	137.84	353	PKP			
	0.4nm,0.9s,baz=11,slow=2.9,SNR=3.4				PKPdf	20 31 56.7	-1.5

GUC 25 20:19:08.6±0.4, 3462S×7229W, h28km±3km, MD3.5, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNV	Longovilo	0.98	48	*e*P	Pn	20 19 26.0	-0.5
LNV				*i* S	Sn	20 19 39.4	-0.1
CACH	El Canelo	1.49	71	*i* S	Sn	20 19 54.3	+2.4
CHCH	Chadas Angostu	1.52	64	*e*P	Pn	20 19 34.9	+1.0
CHCH				*i* S	Sn	20 19 54.7	+2.0
LMEL	Las Melosas	1.89	67	*e*P	Pn	20 19 40.7	+1.7
LMEL				*i* S	Sn	20 20 05.2	+3.3

CSEM ***25*** *20:25:41.6±1.7, 38.13N×2005E, h8km, MD3.1, Error ellipse: s-maj=37.6km s-min=13.9km az=59.0*

THE ***25*** *20:25:44.7, 38.26N×2004E, h11km, ML2.9*

ATH ***25*** *20:25:45.8, 38.27N×2039E, h24km, MD3.1/3*

ISC 25 20:25:42.5±2.7, 3821N±008×201E±02, h13km±10km, n6, σ0§82/8, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.40	94	*i*P	Pg	20 25 51.4	+0.9
VLS				*e*SB	Sg	20 25 55.5	-0.4
RLS	Riolos of Patr	1.10	97	*e*PN	Pn	20 26 02.7	-0.9
IGT	Igoumenitsa	1.34	8	*e*Pg	Pg	20 26 08.0	-0.2
IGT				*e*Sg	Sg	20 26 25.4	-0.3
EVR	Evrytania	1.53	62	*e*PN	Pn	20 26 10.1	+0.7
MEV	Metsovon	1.81	29	*e*Sb	Sb	20 26 38.4	+0.3
MEV	Metsovon	1.81	29	*e*Sb	Sb	20 26 38.3	+0.2

IDC 25 20:30:12.2±6.7, 310S×14125E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/12, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=251.2km s-min=30.2km az=90.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	12.94	222	*e*P	Pn	20 33 13.7	-3.8
	3.1nm,0.2s						
KAKA				*e*S	Sn	20 35 15.3	-27
WB2	Warramunga Arr	18.05	201	*e*P	Pn	20 34 25.4	+0.8
WRA	Warramunga Arr	18.05	201	P	Pn	20 34 24.3	-0.4
	0.2nm,0.3s,baz=21,slow=13,SNR=8.5						
WRA				S	Sn	20 37 26.0	-21
	0.2nm,0.3s,baz=16,slow=22,SNR=5.6						
ASAR	Alice Springs	21.65	199	P	P	20 35 04.8	+0.5
	0.9nm,0.7s,baz=30,slow=9.8,SNR=9.8						
MKAR	Makanchi Array	71.66	322	P	P	20 41 35.9	+0.1
	0.1nm,0.5s,baz=104,slow=6.1,SNR=2.8						

KRSC 25 20:33:14.1±1.5, 5018N×15720E, h5km±5km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIPR	Malaya Ipel'ka	2.12	353	*e*P	Pn	20 33 49.6	-0.5
RUS	Russkaya	2.40	20	*e*P	Pn	20 33 55.3	+1.3
RUS				*i* S	Sn	20 34 25.1	+1.3
GRL	Gorelyy	2.44	13	*e*P	Pn	20 33 56.6	+2.1
GRL				*i* S	Sn	20 34 27.8	+3.1
AVH	Avacha	3.23	17	*e*P	Pn	20 34 07.8	+2.4
NLC	Nalytchevo	3.28	23	*e*P	Pn	20 34 06.6	+0.5
NLC				*i* S	Sn	20 34 44.8	-0.6
SPN	Mys Shipunski	3.41	30	*e*P	Pn	20 34 09.6	+1.7
SPN				*i* S	Sn	20 34 50.4	+1.8
GNL	Ganaly	3.55	7	*e*P	Pn	20 34 10.4	+0.6
MKZ	Mys Kozlova	5.19	31	*e*P	Pn	20 34 32.7	+0.4
KBTR	Krutoberegovo	6.92	27	*e*P	Pn	20 34 56.3	+0.3

IDC 25 20:48:01.7±4.4, 4873S×12603E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.7/3, MS3.7/7, Ms1 3.7/7, ms1mx3.5/22, Error ellipse: s-maj=118.1km s-min=75.5km az=114.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	Narrogin (SRO)	17.11	334	LR	LR	20 57 18.7	
	comp=Z,189nm,18.4s,baz=161,slow=33						
STKA	Stephens Creek	20.53	41	P	P	20 52 40.6	-0.9
	2.2nm,0.8s,baz=180,slow=9.1,SNR=3.2						
STKA				LR	LR	20 58 37.0	
	comp=Z,124nm,21.8s,baz=20,slow=31						
ASAR	Alice Springs	25.78	17	P	P	20 53 34.5	+0.4
	3.0nm,0.8s,baz=192,slow=8.8,SNR=20						
WRA	Warramunga Arr	29.49	16	P	P	20 54 07.7	+0.3
	0.6nm,0.9s,baz=194,slow=8.1,SNR=5.0						
WRA				LR	LR	21 05 13.8	
	comp=Z,167nm,18.6s,baz=255,slow=35						
FITZ	Fitzroy Crossi	30.55	359	LR	LR	21 05 39.9	
	comp=Z,113nm,18.4s,baz=343,slow=35						
VNDA	Vanda	31.98	166	LR	LR	21 06 36.9	
	comp=Z,138nm,19.2s,baz=353,slow=35						
CTA	Charters Tower	32.88	37	LR	LR	21 07 11.6	
	comp=Z,132nm,18.1s,baz=201,slow=35						
PSI	Prapat	56.47	327	LR	LR	21 19 36.1	
	comp=Z,65nm,18.4s,baz=31,slow=34						
YKA	Yellowknife Ar	144.54	44	PKP	PKPdf	21 07 38.0	-0.7
	0.2nm,0.3s,baz=275,slow=3.5,SNR=4.4						

CASC 25 20:52:21.8±2.0, 929N×8535W, h23km±8km, MD3.8, ML3.4, 7C-3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCR	Jicaral	0.61	22	*i*P	Pb	20 52 33.7	-0.1
VCR	Vista de Mar	0.88	341	*e*P	Pb	20 52 37.0	-1.5
CGA2	Cerro Gallo 2	1.13	50	*e*P	Pn	20 52 41.8	-0.5
CGA2				*e*S	Sb	20 52 59.1	+2.1
PRS1	Puriscal	1.23	56	*i*P	Pn	20 52 41.6	-2.0
LAJ	Bijagual	1.34	64	*i*P	Pn	20 52 37.2	-7.8
FORC	Fortuna	1.35	29	*i* P	Pn	20 52 45.5	+0.1
LCR2	La Lucha 2	1.40	71	*i*P	Pn	20 52 44.9	-1.0
LIM1	Limonal	1.41	4	*i* P	Pn	20 52 45.8	-0.3
LIM1				*i* S	Sn	20 53 04.5	+0.6
BUS	Buena Vista	1.59	80	*e*P	Pn	20 52 48.4	-0.1
URSC	Urasca	1.64	70	*i*P	Pn	20 52 49.0	-0.2
BAR1		2.01	91	*i*P	Pn	20 52 53.5	-0.8
SSNN	San Juan del S	2.05	346	*e*P	Pn	20 52 56.0	+1.1
MADN	Villa Maderas	2.12	355	*i*P	Pn	20 52 56.2	+0.4
CONN	Concepcion	2.28	353	*i*P	Pn	20 52 58.8	+0.7
CNI	Changuinola	2.79	87	*e*P	Pn	20 53 06.0	+0.9
TICN	Ticuantepe	2.87	342	*e*P	Pn	20 53 07.6	+1.5
TICN				*e*S	Sn	20 53 42.1	+2.2
MGAN	Managua	2.98	343	*e*S	Sn	20 53 42.9	+0.2
MGAN				*i*		20 53 45.3	
	comp=N,179nm,0.6s						
COPN	Copaltepe	3.13	337	*i*P	Pn	20 53 10.5	+0.8
COPN				*e*S	Sn	20 53 46.3	-0.1
MOMJ	Momotombo	3.32	339	*i*P	Pn	20 53 12.7	+0.4
MOMJ				*e*S	Sn	20 53 50.6	-0.4
TEL3	Telica 3	3.58	336	*e*S	Sn	20 53 58.7	+1.1
AZU	Azuero	5.23	106	*e*P	Pn	20 53 40.8	+2.1

IDC ***25*** *20:52:35.3±2.7, 2807N×5575E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/20, mbtmp3.6/5, Error ellipse: s-maj=78.1km s-min=27.8km az=150.0*

CSEM ***25*** *20:52:38.3±0.2, 2804N×5578E, h35km, ML4.1, Error ellipse: s-maj=6.7km s-min=4.0km az=135.0*

ISCJB ***25*** *20:52:39.3±1.9, 2806N±009×557E±02, h42km±17km, mb3.5/5, Error ellipse: s-maj=28.2km s-min=8.2km az=27.8*

NEIC ***25*** *20:52:43.0, 2846N×5606E, h13km, MN3.2(TEH), After TEH.*

ISC 25 20:52:41.2±1.7, 2808N±009×558E±02, h41km±16km, n17, σ0§58/20, mb3.5/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPAR	Pars	2.96	307	Pn	Pn	20 53 31.0	+5.3
IPAR				Sn	Sn	20 54 04.8	+4.8
IMEH	Mehriz	3.45	343	Pn	Pn	20 53 33.1	+0.7
IBAF	Bafgh	3.50	357	Pn	Pn	20 53 32.9	-0.2
IBAF				Sn	Sn	20 54 09.2	-4.2
ICHK	Chekchek	4.32	344	Pn	Pn	20 53 44.3	0.0
IZEF	Zefreh	5.64	329	Pn	Pn	20 54 02.5	0.0
BTHS		5.98	229	P	Pn	20 54 07.2	0.0
BTHS		5.98	229	P	Pn	20 54 07.2	+0.1
BTHS				S	Sn	20 55 14.3	-0.1
IKLH	Kalahroud	6.35	326	Pn	Pn	20 54 11.5	-0.7
KFJS		6.91	273	P	Pn	20 54 20.0	0.0
HRDDS		7.67	229	P	Pn	20 54 31.6	+1.3
LYLS		9.79	234	P	Pn	20 54 58.2	-1.3
MKAR	Makanchi Array	27.94	41	P	P	20 58 27.3	-0.2
MKAR	Makanchi Array	27.94	41	P	P	20 58 27.3	-0.2
	0.3nm,0.7s,mb3.0,baz=226,slow=8.7,SNR=5.1						
ZALV	Zalesovo Beam	33.46	31	P	P	20 59 16.5	+0.4
	0.5nm,0.5s,mb3.7,baz=242,slow=8.0,SNR=3.4						
FINES	FINESS Array B	38.79	338	P	P	21 00 01.3	-0.2
	1.0nm,0.9s,mb3.5,baz=146,slow=8.4,SNR=3.2						
TORD	Torodi Ar. Bea	52.35	265	P	P	21 01 49.3	0.0
	0.7nm,0.7s,mb3.7,baz=63,slow=7.6,SNR=9.7						
YKA	Yellowknife Ar	89.42	356	P	P	21 05 33.4	+0.1
	0.1nm,0.3s,mb3.6,baz=8.8,slow=4.8,SNR=4.1						

IDC 25 20:54:07.8±1.6, 416S×12384E, h0km, mb3.6/2, mb1 3.9/4, mb1mx3.6/17, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=97.1km s-min=23.8km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Kupang	6.01	182	Pn	Pn	20 55 38.6	+0.5
	3.4nm,0.3s,baz=320,slow=6.0,SNR=6.5						
WRA	Warramunga Arr	18.73	148	P	Pn	20 58 26.7	-1.9
	0.2nm,0.3s,baz=318,slow=13,SNR=22						
ASAR	Alice Springs	21.70	154	P	P	20 59 01.6	+1.1
	1.8nm,0.8s,baz=327,slow=10.0,SNR=14						
MKAR	Makanchi Array	62.58	329	P	P	21 04 33.6	0.0
	0.3nm,0.6s,baz=135,slow=7.2,SNR=7.0						

MOS 25 21:10:56.4±1.2, 4339N×4504E, h13km, mb3.8/1, 6C-3D, Error ellipse: s-maj=12.9km s-min=9.6km az=45.9, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNJR	Sundja	0.36	208	*e*PG	Pg	21 11 05.3	+1.7
BTKR	Batakoyurt	0.36	268	*i*PG	Pg	21 11 05.8	+2.1
TRKR	Terskaya	0.40	326	*i*PG	Pg	21 11 04.1	-0.4
TRKR				*e*S	Sg	21 11 15.0	+5.1
VLKR	Vladikavkaz	0.43	218	*e*PG	Pg	21 11 06.6	+1.7
VLKR				*e*S	Sg	21 11 18.5	+7.8
KMSR	Komsomolskaya	0.55	269	*e*PG	Pg	21 11 08.6	+1.5
ARNR	Ardon	0.59	251	*i*PG	Pg	21 11 09.4	+1.5
PRTR	Priterechnaya	0.66	304	*i*PG	Pg	21 11 08.9	-0.4
PRTR				*i* S	Sg	21 11 23.3	+5.3
KORR	Kora	0.77	247	*i*PG	Pg	21 11 12.3	+0.9
KORR				*i* S	Sg	21 11 29.3	+7.8
LACR	Lac	0.78	224	*i*PG	Pg	21 11 11.6	0.0
LACR				*i* S	Sg	21 11 28.1	+6.3
ZEI	Tsey	1.04	234	*i*PG	Pg	21 11 15.1	-1.3
ZEI				*i* S	Sb	21 11 34.1	+4.4
DIGR	Digorskoe uzhe	1.18	246	*i*PG	Pg	21 11 17.3	-1.7
DIGR				*i* S	Sb	21 11 37.8	+4.2
GOF	Gofitskoye	2.21	320	*e*PN	Pn	21 11 36.6	+3.9
GOF				*e*S	Sn	21 12 03.2	+3.4
GOF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GOF				smax			
	comp=N,20nm,0.8s						
GOF				smax			
	comp=E,20nm,0.8s						

IDC ***25*** *21:17:05.6±0.7, 4685N×15585E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.9/22, mbtmp3.8/13, ML3.1/1, MS3.5/2, Ms1 3.5/2, ms1mx2.9/43, Error ellipse: s-maj=22.1km s-min=16.4km az=156.0*

NEIC ***25*** *21:17:07.3±0.4, 4691N×15582E, h10km, mb4.4/3, Error ellipse: s-maj=10.3km s-min=8.7km az=108.0*

ISCJB ***25*** *21:17:08.8±0.5, 4696N±007×1558E±0.1, h33km, mb4.0/17, Error ellipse: s-maj=12.3km s-min=8.9km az=32.4*

MOS ***25*** *21:17:09.1±1.5, 4697N×15556E, h33km, mb4.6/5, Error ellipse: s-maj=16.2km s-min=9.5km az=88.5*

ISC 25 21:17:11.1±0.5, 4695N±007×1557E±01, h35km, n35, σ1§00/33, mb4.0/17, 1C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.74	4	*e*PN	Pn	21 18 05.5	-0.7
KUR	Kuril'sk	5.73	255	PN	Pn	21 18 31.6	-1.9
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=E,40nm,0.5s						
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
PET	Petropavlovsk	6.36	16	Pn	Pn	21 18 41.6	-0.6
ASA

comp=Z,1.0nm,0.8s,mb3.8,baz=19,slow=5.9,SNR=10
MBWA Marble Bar 75.17 215 P **P** **21 28 49.9 +0.2**
TXAR Lajitas Array 75.82 62 P **P** **21 28 53.5 -0.1**
comp=Z,2.6nm,0.7s,mb4.2,baz=302,slow=4.5,SNR=23
DAVOX Davos/Dischmat 81.97 337 LR LR 22 09 10.9
comp=Z,64nm,18.6s,baz=83,slow=38
PLCA Paso Flores 146.44 97 PKPbc PKPbc 21 36 47.8 -0.1
comp=Z,2.4nm,0.8s,baz=267,slow=3.0,SNR=5.2

MOS ***25*** *21:40:48.4±1.4, 5327N×10785E, h17km, mb4.3/1, Error ellipse: s-maj=20.5km s-min=11.3km az=52.1*

BYKL 25 21:40:48.6±0.2, 5326N×10782E, h15km±4km, 8C-1D, FELT I=II MSK at Khuzhir, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OGRR	**Ongureny**	**0.41**	**341**	⇑*i*Pg			Pg	21 40 57.1	+0.3
OGRR				*e*				21 41 02.6	
OGRR					pmax	pmax			
	comp=Z,152nm,0.1s								
OGRR					smax				
	comp=E,1μm,0.5s								
OGRR	**Ongureny**	**0.41**	**341**	⇑*i*Pg			Pg	21 40 57.1	+0.3
OGRR				*e*Sg			Sg	21 41 02.8	+0.5
OGRR					Pmax				
	comp=E,168nm,0.1s								
OGRR					Smax				
	comp=E,1μm,0.2s								
KELR	**Kotokel**	**0.53**	**162**	⇑*i*Pg			Pg	21 40 58.9	0.0
KELR				*e*Sg			Sg	21 41 05.9	-0.1
KELR					Pmax				
	comp=E,1μm,0.1s								
KELR					Smax				
	comp=E,6μm,0.6s								
MXMB	**Maximikha**	**0.56**	**89**	⇑*i*Pg			Pg	21 40 58.9	-0.6
MXMB				*e*Sg			Sg	21 41 06.7	-0.2
MXMB					Pmax				
	comp=E,249nm,0.2s								
MXMB					Smax				
	comp=E,4μm,0.5s								
TRG	**Tyrgan**	**1.02**	**241**	⇑*i*PG			Pg	21 41 07.0	-1.3
TRG				*e*				21 41 20.6	
TRG					pmax	pmax			
	comp=Z,121nm,0.2s								
TRG					smax				
	comp=N,980nm,0.2s								
TRG	**Tyrgan**	**1.02**	**241**	⇑*i*Pg			Pg	21 41 07.0	-1.3
TRG				*e*Sg			Sg	21 41 20.3	-1.3
TRG				*e*Sb			Sb	21 41 24.5	+3.4
TRG					Pmax				
	comp=N,121nm,0.1s								
TRG					max				
	comp=N,979nm,0.2s								
SYVR	**Suvo**	**1.36**	**72**	*e*PG			Pg	21 41 13.2	-1.6
SYVR				*e*				21 41 31.5	
SYVR					pmax	pmax			
	comp=Z,73nm,0.3s								
SYVR					smax				
	comp=E,496nm,0.3s								
SYVR	**Suvo**	**1.36**	**72**	⇑*i*Pg			Pg	21 41 13.2	-1.6
SYVR				*e*Sg			Sg	21 41 31.5	-1.0
SYVR					Pmax				
	comp=E,64nm,0.2s								
SYVR					Smax				
	comp=E,475nm,0.3s								
FFNB	**Fofonovo**	**1.38**	**208**	*e*Pg			Pg	21 41 13.9	-1.1
FFNB				*e*Sg			Sg	21 41 32.8	-0.1
FFNB					Pmax				
	comp=E,241nm,0.1s								
FFNB					Smax				
	comp=E,2μm,0.2s								
KAB	**Kabansk**	**1.41**	**211**	*e*PN			Pn	21 41 15.4	+1.8
KAB				*e*				21 41 35.0	
KAB					pmax	pmax			
	comp=Z,180nm,0.5s								
KAB					smax				
	comp=E,1μm,0.6s								
HRMR	**Khuramsha**	**1.72**	**198**	*e*Pg			Pg	21 41 19.7	-1.9
HRMR				*e*Sg			Sg	21 41 41.8	-2.1
HRMR				*e*Sb			Sb	21 41 42.9	+1.7
HRMR					Pmax				
	comp=E,160nm,0.2s								
HRMR					max				
	comp=E,2μm,0.2s								
LSTR	**Listvyanka**	**2.30**	**234**	*e*			Pn	21 41 26.9	+1.1
LSTR				⇑*i*Pg			Pg	21 41 30.1	-2.5
LSTR				*e*				21 41 54.8	
LSTR				*e*Sg			Sg	21 42 00.8	-1.5
LSTR					Pmax				
	comp=E,12nm,0.1s								
LSTR					Smax				
	comp=E,137nm,0.8s								
IRK	**Irkutsk**	**2.38**	**246**	*e*PN			Pn	21 41 30.6	+3.5
IRK				*e*				21 42 01.2	
IRK					pmax	pmax			
	comp=Z,96nm,0.2s								
IRK					smax				
	comp=N,703nm,0.4s								
YLYR	**Ulyunkhan**	**2.55**	**49**	*e*PN			Pn	21 41 30.2	+0.9
YLYR				*e*				21 41 33.6	
YLYR				*e*				21 42 06.6	
YLYR					pmax	pmax			
	comp=Z,14nm,0.2s								
YLYR					smax				
	comp=N,122nm,0.6s								
YLYR	**Ulyunkhan**	**2.55**	**49**	⇓*i*Pn			Pn	21 41 30.2	+0.9
YLYR				*e*Pg			Pg	21 41 34.0	-3.4
YLYR				*e*Sg			Sg	21 42 07.2	-3.3
YLYR					Pmax				
	comp=N,11nm,0.2s								
YLYR					Smax				
	comp=N,121nm,0.5s								
NIZ	**Nizh Angarsk**	**2.71**	**21**	*e*Pn			Pn	21 41 33.5	+1.9
NIZ				*e*Pg			Pg	21 41 36.8	-3.8
NIZ				*e*				21 42 07.0	
NIZ				*e*Sg			Sg	21 42 11.0	-4.7
NIZ					Pmax				
	comp=N,19nm,0.2s								
NIZ					Smax				
	comp=N,130nm,0.6s								
TLY	**Talaya**	**3.00**	**240**	*e*PN			Pn	21 41 36.2	+0.6
TLY				*e*				21 41 41.7	
TLY				*e*				21 42 20.2	
TLY					pmax	pmax			
	comp=Z,13nm,0.2s								
TLY					smax				
	comp=E,114nm,0.6s								
TLY	**Talaya**	**3.00**	**240**	*e*Pn			Pn	21 41 36.7	+1.1
TLY				*e*Pg			Pg	21 41 42.2	-3.9
TLY				*e*Sg			Sg	21 42 20.4	-4.6
TLY					Pmax				
	comp=E,17nm,0.4s								
TLY					Smax				
	comp=E,114nm,0.7s								
KMO	**Kumora**	**3.29**	**35**	*e*PN			Pn	21 41 39.2	-0.3
KMO				*e*				21 41 46.0	
KMO				*e*S			Sn	21 42 17.8	-0.4
KMO				*e*				21 42 27.8	
KMO					pmax	pmax			
	comp=Z,13nm,0.3s								
KMO					smax				
	comp=E,81nm,0.8s								
KMO	**Kumora**	**3.29**	**35**	*e*Pn			Pn	21 41 40.6	+1.1
KMO				*e*Pg			Pg	21 41 47.0	-4.5
KMO				*e*Sg			Sg	21 42 30.5	-3.6
KMO					Pmax				
	comp=E,18nm,0.3s								
KMO					Smax				
	comp=E,90nm,1.1s								
ARS	**Arshan**	**3.55**	**250**	*e*PN			Pn	21 41 52.4	+9.3
ARS	**Arshan**	**3.55**	**250**	*e*Pn			Pn	21 41 45.3	+2.2
ARS				*e*Pg			Pg	21 41 52.2	-4.4
ARS				*e*				21 42 28.6	
ARS				*e*Sg			Sg	21 42 37.5	-5.2
ARS					Pmax				
	comp=E,29nm,0.4s								
ARS					Smax				
	comp=E,312nm,0.8s								
CIT	**Chita**	**3.71**	**107**	*e*PN			Pn	21 41 53.4	+8.2
CIT				*e*				21 42 43.8	
CIT					pmax	pmax			
	comp=Z,24nm,0.4s								
CIT					smax				
	comp=N,162nm,0.8s								
CIT	**Chita**	**3.71**	**107**	*e*			Pn	21 41 45.1	-0.1
CIT				*e*Pg			Pg	21 41 55.1	-4.4
CIT				*e*Sg			Sg	21 42 43.1	-4.4
CIT					Pmax				
	comp=N,24nm,0.2s								
CIT					Smax				
	comp=N,161nm,1.0s								
UKT	**Uakit**	**4.06**	**54**	*e*Pn			Pn	21 41 51.4	+1.3
UKT				*e*Pg			Pg	21 42 01.9	-4.5
UKT				*e*Sg			Sg	21 42 55.3	-3.7
UKT					Pmax				
	comp=N,5.0nm,0.5s								
UKT					Smax				
	comp=N,40nm,0.5s								
SVKR	**Severomuysk**	**4.39**	**47**	*e*Pg			Pg	21 42 08.0	-4.6
SVKR				*e*Sg			Sg	21 43 05.5	-3.9
SVKR					Pmax				
	comp=N,11nm,0.3s								
SVKR					Smax				
	comp=N,119nm,0.8s								
KPC	**Khapcheranga**	**4.56**	**140**	*e*Pn			Pn	21 41 56.3	-0.7
KPC				*e*Pg			Pg	21 42 09.6	-6.3
KPC				*e*Sg			Sg	21 43 07.9	-7.0
KPC					Pmax				
	comp=N,10.0nm,0.7s								
KPC					Smax				
	comp=N,75nm,0.8s								
ORL	**Orlik**	**4.90**	**265**	*e*PN			Pn	21 42 04.5	+2.8
ORL				*e*S			Sn	21 43 21.8	+24
ORL					smax				
	comp=N,125nm,1.6s								
ORL	**Orlik**	**4.90**	**265**	*e*			Pn	21 42 05.1	+3.4
ORL				*e*				21 42 59.5	
ORL				*e*Sg			Sg	21 43 18.3	-7.6
ORL					Smax				
	comp=N,124nm,1.5s								
BOD	**Bodaibo**	**5.76**	**35**	*e*			Pn	21 42 44.8	+31
BOD				*e*Sg			Sg	21 43 46.2	-7.1
BOD					Smax				
	comp=N,25nm,1.9s								
TDJR	**Todzha**	**7.16**	**268**	*e*			Pn	21 42 35.0	+2.4
TDJR				*e*Pg			Pn	21 42 56.3	+24
TDJR				*e*Sg			Sn	21 44 28.4	+35
TUP	**Tupik**	**7.28**	**76**	*e*PN			Pn	21 42 34.1	-0.1
TUP				*e*				21 42 57.8	
TUP				*e*				21 44 32.6	
TUP					pmax	pmax			
	comp=Z,3.0nm,0.4s								
TUP					smax				
	comp=N,66nm,1.1s								

IDC 25 21:47:20.1±5.7, 756S×12873E, h252km±58km, mb3.0/3, mb1 3.3/6, mb1mx3.2/14, mbtmp3.2/6, Error ellipse: s-maj=63.4km s-min=20.5km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.65**	**242**	P			Pn	21 48 43.5	-0.5
	2.8nm,0.3s,baz=45,slow=5.7,SNR=5.1								
BATI				S			S	21 49 52.7	+1.7
	4.1nm,0.3s,baz=96,slow=10,SNR=2.8								
FITZ	**Fitzroy Crossi**	**10.90**	**196**	P			Pn	21 49 49.0	-1.0
	0.5nm,0.3s,baz=33,slow=13,SNR=15								
FITZ				S			S	21 51 50.5	-1.6
	1.1nm,0.3s,baz=86,slow=20,SNR=6.7								
WRA	**Warramunga Arr**	**13.46**	**157**	P			Pn	21 50 15.9	-5.7
	0.6nm,0.3s,baz=335,slow=12,SNR=29								
WRA				S			S	21 52 41.6	-9.3
	1.6nm,0.3s,baz=332,slow=22,SNR=9.7								
ASAR	**Alice Springs**	**16.77**	**163**	P			P	21 51 00.8	+1.5
	1.5nm,0.3s,baz=344,slow=11,SNR=102								
ASAR				S			S	21 54 02.8	+1.4
	0.5nm,0.3s,baz=320,slow=15,SNR=5.7								
SONM	**Songino Array**	**58.58**	**343**	P			P	21 56 50.9	+0.3
	0.3nm,0.5s,baz=155,slow=6.7,SNR=3.9								
MKAR	**Makanchi Array**	**68.01**	**328**	P			P	21 57 52.5	+0.2
	0.2nm,0.3s,baz=120,slow=7.6,SNR=8.7								
ZALV	**Zalesovo Beam**	**71.53**	**334**	P			P	21 58 13.0	-0.5
	0.4nm,0.5s,baz=134,slow=6.2,SNR=2.8								

BJI ***25*** *21:57:02.7, 21055N×16966E, h12km, mB5.4, mb4.9, Ms6.6, Msz5.3*

IDC ***25*** *21:57:03.1±0.6, 2100S×16904E, h0km, mb4.7/14, mb1 4.8/16, mb1mx4.7/20, mbtmp4.6/16, ML3.8/2, MS4.7/9, Ms1 4.7/9, ms1mx4.4/22, Error ellipse: s-maj=12.9km s-min=11.8km az=10.0*

ISCJB ***25*** *21:57:03.2±0.2, 2102S±005×16905E±004, h7km, mb5.0/63, MS5.1/165, Error ellipse: s-maj=7.4km s-min=4.4km az=156.8*

NEIC ***25*** *21:57:04.5±3.2, 2096S×16905E, h7km±19km, mb5.2/26, MS5.1/142, Error ellipse: s-maj=8.9km s-min=6.3km az=173.0*

GCMT ***25*** *21:57:04.5±0.2, 2109S×16896E, h15km, MW5.3/86, Moment Tensor Solution. s69,c98; s86,c148; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mr0.91±.02; Mθθ-0.07±.02; Mφφ-0.83±.02; Mrθ0.24±.03; Mθφ0.35±.01; Mφr-0.71±.04; Best double couple: M0 1.20100×10^17 NP1:φs337.00000°, δ26.00000°, λ87.00000°. NP2: φs161.00000°, δ64.00000°, λ91.00000°. Principal axes: T 1.1680, Plg71.0000°, Azm74.0000°; N 0.0660, Plg1.0000°, Azm340.0000°; P -1.2340, Plg19.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***25*** *21:57:07.9±1.3, 2095S×16894E, h33km, mb5.5/21, MS5.0/18 Error ellipse: s-maj=10.8km s-min=9.4km az=125.2*

SZGRF ***25*** *21:57:07.3, 2149S×16956E, h35km, Southeast of Loyalty Islands*

ISC 25 21:57:04.3±2.1, 2098S±004×16904E±004, h4km±12km, h34km±.7km: pP-P, n342, σ1s10/148, mb5.0/63, MS5.1/165, 10C-6D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.65**	**245**	*e*P			**Pn**	**21 57 45.9**	**-2.0**
DZM				*e*S			**Sn**	**21 58 19.0**	**-1.4**
DZM	**Mont Dzumac**	**2.65**	**245**	Pn			**Pn**	**21 57 45.8**	**-2.0**
	16nm,0.3s,baz=84,slow=15,SNR=173								
DZM				Sn			**Sn**	**21 58 20.8**	**+0.3**
	127nm,0.3s,baz=173,slow=21,SNR=10								
RAO	**Raoul Island**	**14.39**	**127**	Pn			**Pn**	**22 00 31.1**	**+2.2**
HNR	**Honiara**	**14.44**	**321**	Pn			**Pn**	**22 00 29.2**	**-0.5**
EIDS	**Eidsvold**	**17.07**	**252**	*e*Pn			**Pn**	**22 01 05.8**	**+1.8**
	64nm,1.5s								
EIDS				Sn			**Sn**	**22 04 12.5**	**-1.9**
ARMA	**Armidale**	**18.27**	**236**	*e*P			**Pn**	**22 01 20.1**	**+1.3**
URZ	**Urewera**	**18.58**	**160**	P			**Pn**	**22 01 19.5**	**-3.0**
	0.4nm,0.3s,baz=3.9,slow=5.7,SNR=8.5								
URZ				S			**Sn**	**22 04 52.4**	**+1.7**
	0.2nm,0.3s,baz=74,slow=19,SNR=1.8								
URZ					LR	LR		22 07 41.3	
	comp=Z,3μm,18.4s,baz=27,slow=34								
AFI	**Afiamalu**	**19.60**	**72**	*e*P			**Pn**	**22 01 32.4**	**-2.7**
	136nm,1.3s								
AFI	**Afiamalu**	**19.60**	**72**	*e*P			**Pn**	**22 01 32.4**	**-2.7**
AFI					pmax	pmax			
	comp=Z,136nm,1.3s								
SNZO	**South Karori**	**20.83**	**168**	PFAKE				22 02 00.0	+13
SNZO					LR	LR			
	comp=Z,2μm,20.0s,MS4.5								
CTA	**Charters Tower**	**21.35**	**268**	*e*P			**P**	**22 01 54.5**	**+1.7**
	comp=Z,58nm,1.0s,mb4.9								
CTA				*e*S			**S**	**22 05 54.9**	**+4.3**
CTA	**Charters Tower**	**21.35**	**268**	*e*P			**P**	**22 01 54.5**	**+1.7**
CTA				*e*S			**S**	**22 05 54.9**	**+4.3**
CTA					pmax	pmax			
	comp=Z,58nm,1.0s								
CTA	**Charters Tower**	**21.35**	**268**	P			**P**	**22 01 54.0**	**+1.2**
	comp=Z,57nm,0.9s,mb4.9,baz=88,slow=12,SNR=34								
CTA				S			**S**	**22 05 54.1**	**+3.6**
	comp=Z,3.1nm,0.6s,baz=45,slow=20,SNR=2.1								
CTAO	**Charters Tower**	**21.35**	**268**	*e*P			**P**	**22 01 54.6**	**+1.8**
CTAO					LR	LR			
	comp=Z,3μm,19.0s,MS4.7								
CNB	**Canberra Magne**	**22.41**	**226**	*e*P			**P**	**22 02 06.0**	**+2.0**
	comp=Z,102nm,1.1s,mb5.2								
RPZ	**Rata Peaks**	**22.73**	**176**	P			**P**	**22 02 07.3**	**0.0**
	comp=Z,13nm,1.0s,mb4.3,baz=349,slow=5.2,SNR=3.0								
STKA	**Stephens Creek**	**26.79**	**240**	*e*P			**P**	**22 02 45.1**	**-0.5**
	comp=Z,24nm,1.5s,mb4.5								
STKA	**Stephens Creek**	**26.79**	**240**	P			**P**	**22 02 44.8**	**-0.8**
	comp=Z,22nm,1.0s,mb4.6,baz=78,slow=7.7,SNR=19								
STKA					LR	LR		22 12 37.6	
	comp=Z,3μm,20.0s,MS4.9,baz=102,slow=35								
TAU	**Tasmania Unive**	**28.44**	**215**	*e*P			**P**	**22 03 00.7**	**+0.5**
	comp=Z,34nm,1.1s,mb4.9								
TAU					LR	LR			
	comp=Z,3μm,20.0s,MS4.8								
TAU	**Tasmania Unive**	**28.44**	**215**	*e*P			**P**	**22 03 00.7**	**+0.5**
TAU					pmax	pmax			
	comp=Z,33nm,1.1s,mb4.9								
TAU					MLR	MLR			
	comp=Z,3μm,20.0s,MS4.8								
RAR	**Rarotonga**	**29.08**	**96**	PFAKE				22 03 20.0	+14
RAR					LR	LR			
	comp=Z,1.0nm,22.0s								
RAR	**Rarotonga**	**29.08**	**96**	LR			LR	22 12 03.3	
	comp=Z,1μm,19.4s,MS4.5,baz=261,slow=31								
WB2	**Warramunga Arr**	**32.48**	**266**	⇓*i*P			**P**	**22 03 34.6**	**-1.6**
WB2				*e*				22 03 47.9	
WB2				*e*S			**S**	**22 08 50.5**	**-1.4**
WRA	**Warramunga Arr**	**32.49**	**266**	P			**P**	**22 03 34.5**	**-1.8**
	comp=Z,13nm,0.9s,mb4.8,baz=97,slow=8.9,SNR=50								
WRA					LR	LR		22 17 14.6	
	comp=Z,3μm,19.1s,MS4.9,baz=95,slow=37								
ASAR	**Alice Springs**	**32.56**	**259**	P			**P**	**22 03 36.0**	**-1.0**
	comp=Z,24nm,0.9s,mb5.2,baz=83,slow=9.0,SNR=135								
ASAR				S			**S**	**22 08 51.4**	**-1.8**
	comp=Z,1.7nm,1.0s,baz=83,slow=17,SNR=4.7								
KAKA	**Kakadu**	**35.91**	**277**	⇓*i*P			**P**	**22 04 05.2**	**-0.8**
	comp=Z,27nm,1.1s,mb5.1								
FORT	**Forrest**	**37.96**	**247**	*e*P			**P**	**22 04 22.5**	**-0.8**
	comp=Z,25nm,1.5s,mb4.7								
TBI	**Tubuai**	**38.42**	**101**	*e*LQ				22 13 24.9	
	comp=Z,3μm,27.5s								
TBI				*e*LR			LR	22 14 58.8	
	comp=Z,1μm,28.0s,baz=264								
PPT	**Papeete**	**39.14**	**92**	*e*LQ				22 13 42.7	
	comp=Z,4μm,27.8s								
PPT				*e*LR			LR	22 15 20.7	
	comp=Z,2μm,26.2s,baz=259								
PPT	**Papeete**	**39.14**	**92**	LR			LR	22 16 40.3	
	comp=Z,745nm,20.9s,MS4.5,baz=30,slow=30								
FITZ	**Fitzroy Crossi**	**40.91**	**266**	⇓*i*P			**P**	**22 04 47.8**	**-0.3**
	comp=Z,63nm,0.9s,mb5.2								
PMOR	**Pomariorio Ree**	**41.30**	**89**	*e*P			**P**	**22 04 50.2**	**-1.2**
	comp=Z,24nm,1.2s,mb4.7								
VAH	**Vaihoa**	**41.49**	**89**	*e*P			**P**	**22 04 51.4**	**-1.5**
	comp=Z,25nm,1.1s,mb4.8								
GUMO	**Guam**	**41.76**	**323**	PFAKE				22 05 10.0	+15
GUMO					LR	LR			
	comp=Z,1μm,20.0s,MS4.8								
BATI	**Kupang**	**44.85**	**277**	P			**P**	**22 05 20.7**	**+0.5**
	comp=Z,10nm,0.5s,mb4.9,baz=10,slow=4.2,SNR=2.6								
MBWA	**Marble Bar**	**45.85**	**260**	*e*P			**P**	**22 05 27.8**	**-0.2**
MBWA					LR	LR			
	comp=Z,1μm,21.0s,MS4.9								
KLBR	**Kellerberrin**	**46.81**	**246**	*e*P			**P**	**22 05 33.0**	**-2.5**
	comp=Z,51nm,1.0s,mb5.4								
NWAO	**Narrogin (SRO)**	**47.27**	**244**	*e*P			**P**	**22 05 37.9**	**-1.1**
NWAO					LR	LR			
	comp=Z,3μm,21.0s,MS5.2								
NWAO	**Narrogin (SRO)**	**47.27**	**244**	P			**P**	**22 05 36.9**	**-2.1**
	comp=Z,20nm,0.9s,mb5.1,baz=82,slow=7.4,SNR=8.0								
MUN	**Mundaring**	**48.13**	**245**	*e*P			**P**	**22 05 44.6**	**-1.1**
TAOE	**Nuku Hiva Isla**	**50.36**	**84**	*e*LR			LR	22 20 33.6	
	comp=Z,4μm,27.0s								
RKT	**Rikitea**	**51.67**	**103**	*e*S			**S**	**22 13 37.8**	**+2.8**
	comp=Z,889nm,26.8s								
RKT				*e*LQ				22 19 04.4	
	comp=Z,588nm,25.0s								
VNDA	**Vanda**	**56.69**	**182**	LR			LR	22 27 20.7	
	comp=Z,257nm,20.9s,MS4.3,baz=21,slow=32								
SBA	**Scott Base**	**56.93**	**181**	*e*P			**P**	**22 06 51.2**	**+1.0**
	comp=Z,78nm,1.7s,mb5.5								
SBA	**Scott Base**	**56.93**	**181**	*e*P			**P**	**22 06 51.2**	**+1.0**
SBA					pmax	pmax			
	comp=Z,78nm,1.7s,mb5.5								
KKM	**Kota Kinabalu**	**58.37**	**291**	*e*P			**P**	**22 07 01.6**	**+0.3**
CASY	**Casey**	**58.46**	**204**	*e*P			**P**	**22 07 01.5**	**+0.3**
	comp=Z,144nm,1.6s,mb5.8								
KSM	**Kuching**	**61.59**	**284**	*e*P			**P**	**22 07 22.9**	**-0.5**
MJAR	**Matsushiro Arr**	**64.20**	**333**	P			**P**	**22 07 39.1**	**-1.2**
	comp=Z,2.6nm,1.1s,mb4.2,baz=146,slow=7.5,SNR=4.0								
MAJO	**Matsushiro**	**64.20**	**333**	P			**P**	**22 07 39.5**	**-0.9**
TATO	**Taipei**	**64.98**	**312**	P			**P**	**22 07 45.2**	**-0.4**
TATO					LR	LR			
	comp=Z,2μm,20.0s,MS5.4								
QZH	**Quanzhou**	**66.99**	**310**	*e*P			**P**	**22 08 00.8**	**+2.2**
QZH					S	S		22 16 55.0	+2.0
QZH					LR	LR			
	comp=Z,4μm,16.2s,MS5.7								
ERM	**Erimo**	**67.10**	**339**	PFAKE				22 08 10.0	+11
ERM					LR	LR			
	comp=Z,1μm,19.0s,MS5.1								
QSPA	**South Pole Qui**	**69.08**	**180**	*e*P			**P**	**22 08 10.9**	**-0.1**
	comp=Z,18nm,1.1s,mb4.9								
SSE	**Sheshan**	**69.20**	**317**	*e*P			**P**	**22 08 13.0**	**+0.5**
SSE					AP	pP		22 08 25.0	+11
SSE					XP	sP		22 08 29.8	+16
SSE					PCP	PcP		22 08 36.0	-0.3
SSE					S	S		22 17 17.8	-1.5
SSE					XS	sS		22 17 38.3	+17
SSE					SCS	ScS		22 18 11.0	-3.4
SSE					AMB	AMB			
	comp=Z,40nm,0.7s,mb5.5								
SSE					AMB	AMB			
	comp=Z,104nm,5.0s								
SSE					LR	LR			
	comp=N,2μm,12.9s,MS5.7								
SSE					LR	LR			
	comp=E,2μm,12.9s,MS5.7								
SSE					LR	LR			
	comp=Z,1μm,12.2s,MS5.4								
KSRS	**Korea Array**	**69.83**	**326**	P			**P**	**22 08 16.6**	**+0.5**
	comp=Z,3.5nm,1.0s,mb4.2,baz=244,slow=24,SNR=3.3								
QIZ	**Qiongzhong**	**70.28**	**300**	P			**P**	**22 08 24.3**	**+5.0**
QIZ					S	S		22 17 36.3	+3.9
QIZ					XS	sS		22 17 50.8	+17
QIZ					AMB	AMB			
	comp=Z,136nm,8.3s								
QIZ					LR	LR			
	comp=N,3μm,14.6s,MS5.7								
QIZ					LR	LR			
	comp=E,1μm,13.8s,MS5.7								
QIZ					LR	LR			
	comp=Z,2μm,15.6s,MS5.5								
QIZ	**Qiongzhong**	**70.28**	**300**	PFAKE				22 08 30.0	+11
QIZ					LR	LR			
	comp=Z,1μm,20.0s,MS5.1								
INCN	**Inchon**	**70.53**	**325**	PFAKE				22 08 30.0	+10
INCN					LR	LR			
	comp=Z,388nm,19.0s,MS4.7								
NJ2	**Nanjing**	**71.33**	**316**	*e*P			**P**	**22 08 26.0**	**+0.6**
NJ2					AP	pP		22 08 36.5	+10
NJ2					XP	sP		22 08 39.3	+12
NJ2					PP	PP		22 11 06.0	+2.1
NJ2					S	S		22 17

DL2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
DL2 AMB AMB
comp=Z,150nm,4.9s
DL2 LR LR
comp=N,290nm,14.6s,MS4.9
DL2 LR LR
comp=E,320nm,15.4s,MS4.9
DL2 LR LR
comp=Z,310nm,15.0s,MS4.7
MDJ Mudanjiang 74.56 332 P **P** **22 08 45.8 +1.5**
MDJ AP pP 22 08 55.3 +10
MDJ XP sP 22 08 59.0 +13
MDJ PP PP 22 11 32.8 +1.5
MDJ S S 22 18 20.8 +0.4
MDJ XS sS 22 18 36.5 +14
MDJ AMB AMB
comp=Z,8.0nm,0.9s,mb4.7
MDJ AMB AMB
comp=Z,182nm,4.6s
MDJ LR LR
comp=N,521nm,10.0s
MDJ LR LR
comp=E,871nm,9.2s
MDJ LR LR
comp=Z,830nm,8.5s
MDJ Mudanjiang 74.56 332 PFAKE 22 09 00.0 +16
MDJ LR LR
comp=Z,529nm,19.0s,MS4.8
HABR Khabarovsk 75.53 337 *eP* **P** **22 08 49.4 -0.4**
HABR *e* 22 09 01.4
HABR *eSP* 22 09 04.0
HABR S S 22 18 29.9 -1.1
HABR *e* 22 19 00.1
HABR *eSS* SS 22 23 20.5 -1.8
CN2 Changchun 75.84 329 *eP* **P** **22 08 52.8 +1.1**
CN2 *eS* S 22 18 36.5 +1.8
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.7
CN2 AMB AMB
comp=Z,250nm,8.0s
CN2 LR LR
comp=N,1μm,14.0s,MS5.7
CN2 LR LR
comp=E,2μm,14.0s,MS5.7
CN2 LR LR
comp=Z,2μm,15.0s,MS5.5
GYA Guiyang 76.66 305⇓ *iP* **P** **22 08 58.3 +1.5**
GYA AP pP 22 09 09.5 +12
GYA PCP PcP 22 09 13.5 +5.3
GYA PP PP 22 11 52.8 +3.4
GYA PPP 22 13 40.8
GYA S S 22 18 42.0 -2.4
GYA XS sS 22 18 59.5 +13
GYA SKS 22 19 02.5
GYA SCS ScS 22 19 09.3 -4.8
GYA AMB AMB
comp=Z,60nm,1.0s,mb5.5
GYA LR LR
comp=Z,10μm,21.0s,MS6.1
MAW Mawson 76.76 202 LR LR 22 38 25.1
comp=Z,550nm,18.8s,MS4.9,baz=314,slow=32
KLR Kul'dur 77.37 336 *eP* **P** **22 09 00.0 -0.3**
UNV Unalaska Valle 77.45 15 PFAKE 22 09 10.0 +9.4
UNV LR LR
comp=Z,3μm,22.0s,MS5.5
BJT Baijiatuau 78.16 321 *eP* **P** **22 09 04.9 +0.1**
comp=Z,20nm,1.2s,mb4.9
BJT LR LR
comp=Z,809nm,19.0s,MS5.1
BJT Baijiatuau 78.16 321 *eP* **P** **22 09 04.9 0.0**
BJT pmax pmax
comp=Z,20nm,1.2s
BJT MLR MLR
comp=Z,809nm,19.0s
BJI Beijing 78.17 321 P **P** **22 09 06.0 +1.1**
BJI AP pP 22 09 15.8 +10
BJI XP sP 22 09 19.5 +13
BJI PP PP 22 12 01.0 -0.8
BJI S S 22 18 59.8 -0.4
BJI AMB AMB
comp=Z,13nm,1.1s,mb4.8
BJI AMB AMB
comp=Z,182nm,3.0s
BJI LR LR
comp=Z,2μm,29.9s,MS5.4
KMI Kunming 79.03 302 P **P** **22 09 12.3 +2.3**
KMI PCP PcP 22 09 20.0 +1.4
KMI AP pP 22 09 22.5 +11
KMI XP sP 22 09 26.5 +15
KMI PP PP 22 12 12.5 +3.2
KMI PPP 22 14 02.8
KMI S S 22 19 14.0 +3.9
KMI SKS 22 19 20.5
KMI XS sS 22 19 26.5 +14
KMI PS 22 20 00.3
KMI AMB AMB
comp=Z,15nm,1.6s,mb4.7
KMI AMB AMB
comp=Z,101nm,3.1s
KMI LR LR
comp=N,1μm,16.4s,MS5.7
KMI LR LR
comp=E,2μm,14.0s,MS5.7
KMI LR LR
comp=Z,2μm,12.2s,MS5.7
XAN Xi'an 79.14 313 P **P** **22 09 12.3 +1.8**
XAN AMB AMB
comp=Z,11nm,1.4s,mb4.6
CHTO Chiang Mai 79.20 295 *eP* **P** **22 09 12.2 +1.1**
CHTO LR LR
comp=Z,849nm,20.0s,MS5.1
CD2 Chengdu 81.14 308 *eP* **P** **22 09 22.8 +1.5**
CD2 AP pP 22 09 33.3 +11
CD2 XP sP 22 09 37.5 +15
CD2 PP PP 22 12 30.5 +3.7
CD2 S S 22 19 28.0 -4.1
CD2 XS sS 22 19 45.5 +11
CD2 PS 22 20 20.0
CD2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.6
CD2 AMB AMB
comp=Z,40nm,8.4s
CD2 LR LR
comp=N,1μm,12.0s,MS5.7
CD2 LR LR
comp=E,2μm,10.8s,MS5.7
CD2 LR LR
comp=Z,1μm,10.8s,MS5.6
HHC Hu-ho-hao-te 81.42 320 *eP* **P** **22 09 26.0 +3.5**
HHC AP pP 22 09 36.0 +12
HHC PP PP 22 12 34.5 +5.7
HHC S S 22 19 33.8 -0.7
HHC SKS 22 19 38.5
HHC XS sS 22 19 49.5 +13
HHC PS 22 20 26.5
HHC AMB AMB
comp=Z,16nm,0.8s,mb5.0
HHC AMB AMB
comp=Z,150nm,5.9s
HHC LR LR
comp=N,548nm,12.0s,MS5.4
HHC LR LR
comp=E,881nm,13.1s,MS5.4
HHC LR LR
comp=Z,527nm,14.3s,MS5.0
MA2 Magadan 81.65 351 PFAKE 22 09 30.0 +6.7
MA2 LR LR
comp=Z,497nm,20.0s,MS4.9
HIA Hailar 82.52 330 *eP* **P** **22 09 27.7 -0.4**
HIA LR LR
comp=Z,490nm,20.0s,MS4.9
LZH Lanzhou 83.75 312 *eP* **P** **22 09 38.0 +3.2**
LZH AP pP 22 09 47.8 +12
LZH PP PP 22 12 53.0 +4.9
LZH *eSKS* 22 19 56.0
LZH *eS* S 22 19 59.0 +0.4
LZH XS sS 22 20 13.5 +13
LZH AMB AMB
comp=Z,56nm,1.5s,mb5.5
LZH AMB AMB
comp=Z,230nm,4.3s
LZH LR LR
comp=N,875nm,16.7s
LZH LR LR
comp=Z,2μm,18.0s,MS5.5
SEY Seymchan 84.66 352⇑ *eP* **P** **22 09 37.9 -0.9**
KDAK Kodiak Island 84.73 20 PFAKE 22 09 50.0 +11
KDAK LR LR
comp=Z,238nm,19.0s,MS4.6
GAMB Gambell 85.81 8 *eP* **P** **22 09 44.8 +0.3**
NRGR Nerungri 85.84 337 *eP* **P** **22 09 45.9 +1.0**
NRGR S S 22 20 08.6 -10
NRGR smax
comp=N,47nm,0.7s
CLNS Chul'man 85.92 337 *eP* **P** **22 09 52.1 +6.9**
CLNS pmax pmax
comp=Z,17nm,1.0s,mb5.2
CLNS pmax pmax
comp=N,11nm,1.1s
CLNS pmax pmax
comp=E,9.0nm,1.2s
MCCM Marconi Confer 86.79 47 PFAKE 22 10 00.0 +10
MCCM LR LR
comp=Z,731nm,19.0s,MS5.1
HOPS Hopland 87.08 46 PFAKE 22 10 00.0 +8.6
HOPS LR LR
comp=Z,631nm,21.0s,MS5.0
SAO San Andreas Ge 87.11 49 PFAKE 22 10 00.0 +8.4
SAO LR LR
comp=Z,643nm,21.0s,MS5.0
CIT Chita 87.29 329 *eP* **P** **22 10 01.8 +10**
SNAA Sanae 87.42 183⇑ *eP* **P** **22 09 51.9 -0.7**
SHL Shillong 88.00 298 *eP* **P** **22 09 57.5 +1.4**
TNA Tin City 88.05 9 PFAKE 22 10 10.0 +15
TNA LR LR
comp=Z,406nm,19.0s,MS4.9
ULN Ulaanbaatar 88.14 324 *eP* **P** **22 09 57.4 +1.1**
comp=Z,77nm,1.8s,mb5.6
ULN LR LR
comp=Z,493nm,19.0s,MS4.9
ULN Ulaanbaatar 88.14 324 *eP* **P** **22 09 57.4 +1.1**
ULN pmax pmax
comp=Z,77nm,1.8s,mb5.6
ULN MLR MLR
comp=Z,493nm,19.0s,MS4.9
GTA Gaotai 88.18 314 *eP* **P** **22 09 59.0 +2.3**
GTA AP pP 22 10 09.5 +12
GTA PP PP 22 13 31.3 +7.3
GTA PPP 22 15 33.8
GTA SKS 22 20 23.5
GTA S S 22 20 43.0 +1.1
GTA XS sS 22 21 00.0 +16
GTA PS 22 21 54.8
GTA AMB AMB
comp=Z,6.0nm,1.3s,mb4.7
GTA AMB AMB
comp=Z,84nm,6.5s
GTA LR LR
comp=N,265nm,16.7s,MS4.9
GTA LR LR
comp=E,304nm,17.5s,MS4.9
GTA LR LR
comp=Z,262nm,16.3s,MS4.7
WDC Whiskeytown Da 88.22 45 *eP* **P** **22 09 56.5 -0.3**
comp=Z,50nm,1.6s,mb5.5
WDC *e* 22 10 06.4
WDC LR LR
comp=Z,577nm,19.0s,MS5.0
WDC Whiskeytown Da 88.22 45 *eP* **P** **22 09 56.5 -0.3**
WDC *e* 22 10 06.4
WDC pmax pmax
comp=Z,50nm,1.6s,mb5.5
WDC MLR MLR
comp=Z,577nm,19.0s,MS5.0
OHCM Honcut 88.32 47 *eP* **P** **22 09 57.3 0.0**
OHCM *e* 22 10 05.8
CMB Columbia Colle 88.45 48 *eP* **P** **22 09 57.5 -0.6**
comp=Z,19nm,1.5s,mb5.1
CMB *e* 22 10 07.4
CMB LR LR
comp=Z,550nm,20.0s,MS5.0
CMB Columbia Colle 88.45 48 *eP* **P** **22 09 57.5 -0.5**
CMB *e* 22 10 07.4
CMB pmax pmax
comp=Z,19nm,1.5s,mb5.1
CMB MLR MLR
comp=Z,550nm,20.0s,MS5.0
YAK Yakutsk 88.47 343 *eP* **P** **22 09 57.4 -0.1**
comp=Z,65nm,1.5s,mb5.6
YAK LR LR
comp=Z,756nm,19.0s,MS5.1
YAK Yakutsk 88.47 343 *eP* **P** **22 09 57.4 -0.1**
YAK pmax pmax
comp=Z,65nm,1.5s,mb5.6
YAK MLR MLR
comp=Z,756nm,19.0s,MS5.1
SONM Songino Array 88.49 323 P **P** **22 09 58.4 +0.5**
comp=Z,1.3nm,0.8s,mb4.2,baz=144,slow=3.9,SNR=12
YBH Yreka Blue Hor 88.68 44 *eP* **P** **22 09 59.3 +0.4**
comp=Z,42nm,1.7s,mb5.5
YBH *ep*P pP 22 10 08.9 +8.8
YBH LR LR
comp=Z,500nm,21.0s,MS4.9
YBH Yreka Blue Hor 88.68 44 *eP* **P** **22 09 59.3 +0.3**
YBH *e**PP pP 22 10 08.9 +8.8
YBH pmax pmax
comp=Z,42nm,1.7s
YBH MLR MLR
comp=Z,500nm,21.0s
BILL Bilibino 88.78 359⇓ *iP* **P** **22 09 57.8 -1.0**
BILL LR LR
comp=Z,1μm,19.0s,MS5.3
BILL Bilibino 88.78 359 *αeP* **P** **22 09 58.1 -0.7**
BILL *PP pP 22 10 08.4 +8.4
BILL *e* 22 10 14.0
BILL *e* 22 20 47.1
BILL *eSS* SS 22 26 34.0 -4.7
BILL pmax pmax
comp=Z,46nm,1.8s,mb5.5
PMR Palmer 88.83 19 PFAKE 22 10 10.0 +11
PMR LR LR
comp=Z,715nm,21.0s,MS5.1
PFO Pinyon Flat Ob 89.30 54 *eP* **P** **22 10 01.9 -0.2**
PFO *ep*P pP 22 10 11.4 +8.1
PFO LR LR
comp=Z,926nm,19.0s,MS5.2
WAKR Walker 89.33 48 *eP* **P** **22 10 02.0 -0.1**
MTUM Tungsten Hills 89.42 49 *eP* **P** **22 10 02.5 0.0**
DAC Darwin (Calif) 89.63 51 *eP* **P** **22 10 03.5 -0.1**
comp=Z,36nm,1.5s,mb5.5
DAC LR LR
comp=Z,473nm,20.0s,MS4.9
DAC Darwin (Calif) 89.63 51 *eP* **P** **22 10 03.5 -0.1**
DAC pmax pmax
comp=Z,36nm,1.5s,mb5.5
DAC MLR MLR
comp=Z,473nm,20.0s,MS4.9
COR Corvallis 89.73 41 *eP* **P** **22 10 07.0 +3.1**
PAHR Pah Rah Range 89.93 47 *eP* **P** **22 10 05.2 +0.3**
comp=Z,27nm,1.3s,mb5.4
NVAR Mina Array Bea 90.09 49 P **P** **22 10 04.9 -0.8**
comp=Z,3.9nm,0.9s,mb4.7,baz=212,slow=5.8,SNR=22
LSA Lhasa 90.28 302 P **P** **22 10 05.5 -1.3**
LSA Lhasa 90.28 302 *eP* **P** **22 10 07.6 +0.8**
comp=Z,6.0nm,1.0s,mb4.9
LSA LR LR
comp=Z,1μm,19.0s,MS5.4
LSA Lhasa 90.28 302 *eP* **P** **22 10 07.6 +0.8**
LSA pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
LSA MLR MLR
comp=Z,1μm,19.0s,MS5.4
MOD Modoc 90.33 45 PFAKE 22 10 20.0 +13
MOD LR LR
comp=Z,415nm,19.0s,MS4.9
LPIG La Paz 90.34 64 LR LR 22 43 09.0
comp=Z,592nm,18.2s,MS5.1,baz=72,slow=31
SIT Sitka 90.57 27 PFAKE 22 10 20.0 +13
SIT LR LR
comp=Z,1μm,19.0s,MS5.3
TPH Tonopah 90.69 49 *eP* **P** **22 10 08.8 +0.3**
TPH LR LR
comp=Z,492nm,19.0s,MS5.0
NLWA Neilton Lookou 90.81 39 PFAKE 22 10 20.0 +11
NLWA LR LR
comp=Z,466nm,19.0s,MS4.9
BOD Bodaibo 90.81 334 *eP* **P** **22 10 03.4 -5.1**
BOD *e* 22 20 52.6
BOD pmax pmax
comp=Z,10.0nm,1.4s,mb5.0
TPNV Topopah Spring 90.90 51 *eP* **P** **22 10 09.5 0.0**
comp=Z,28nm,1.3s,mb5.4
TPNV LR LR
comp=Z,522nm,20.0s,MS5.0
TPNV Topopah Spring 90.90 51 *eP* **P** **22 10 09.5 0.0**
TPNV pmax pmax
comp=Z,28nm,1.3s,mb5.4
TPNV MLR MLR
comp=Z,522nm,20.0s,MS5.0
PALK Pallekele 91.02 277 PFAKE 22 10 20.0 +9.4
PALK LR LR
comp=Z,376nm,20.0s,MS4.8
IMA2 Indian Mountai 91.24 14 *eP* **P** **22 10 09.7 -0.6**
WRAK Wrangell Islan 91.46 28 PFAKE 22 10 20.0 +8.4
WRAK LR LR
comp=Z,625nm,19.0s,MS5.1
ZAK Zakamensk 91.59 324 *eP* **P** **22 10 12.6 +0.3**
ZAK pmax pmax
comp=Z,10.0nm,1.5s,mb4.9
WVOR Wild Horse Val 91.68 45 *eP* **P** **22 10 12.5 -0.5**
comp=Z,10nm,0.9s,mb5.2
WVOR *e* 22 10 22.6
WVOR LR LR
comp=Z,435nm,20.0s,MS4.9
WVOR Wild Horse Val 91.68 45 *eP* **P** **22 10 12.5 -0.5**
WVOR *e* 22 10 22.6
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb5.2
WVOR MLR MLR
comp=Z,435nm,20.0s,MS4.9
BMN Battle Mountai 91.73 47 PFAKE 22 10 20.0 +6.7
BMN LR LR
comp=Z,465nm,21.0s,MS4.9
COLA College 91.75 17 P **P** **22 10 10.9 -1.9**
COLA LR LR
comp=Z,413nm,20.0s,MS4.9
TLY Talaya 92.08 325 *eP* **P** **22 10 15.5 +0.9**
TLY LR LR
comp=Z,272nm,20.0s,MS4.7
TLY Talaya 92.08 325 *eP* **P** **22 10 14.4 -0.2**
TLY *eS* S 22 21 04.4 -13
TLY pmax pmax
comp=Z,26nm,2.1s,mb5.2
TAPN Taplejung 92.14 298 *eP* **P** **22 10 16.2 +0.7**
comp=Z,48nm,1.5s,mb5.6
ODAN Odare 92.22 298 *eP* **P** **22 10 16.5 +0.7**
comp=Z,23nm,1.1s,mb5.4
HAWA Hanford 92.92 41 *eP* **P** **22 10 18.4 -0.2**
comp=Z,47nm,1.9s,mb5.6
HAWA LR LR
comp=Z,572nm,20.0s,MS5.0
TUC Tucson 93.12 57 *eP* **P** **22 10 20.0 +0.2**
TUC LR LR
comp=Z,518nm,19.0s,MS5.0
ELK Elko 93.23 48 PFAKE 22 10 30.0 +10
ELK LR LR
comp=Z,48nm,22.0s,MS3.9
CCUT Cedar City 93.24 51 *eP* **P** **22 10 19.9 -0.4**
CCUT *e* 22 10 30.4
MOY Mondy 93.49 325 *eP* **P** **22 10 34.7 +14**
JIRN Jiri 93.51 298 *eP* **P** **22 10 21.8 0.0**
comp=Z,20nm,1.2s,mb5.4
BMO Blue Mountains 93.62 43 PFAKE 22 10 30.0 +8.1
BMO LR LR
comp=Z,447nm,20.0s,MS4.9
EGAK Eagle 93.62 19 *eP* **P** **22 10 20.8 -0.6**
EGAK LR LR
comp=Z,582nm,20.0s,MS5.0
DLBC Dease Lake 93.67 27 *eP* **P** **22 10 21.9 +0.2**
DAWY Dawson 93.69 20 *eP* **P** **22 10 20.5 -1.2**
DAWY *ep*P pP 22 10 30.8 +7.9
WUAZ Wupatki 93.91 54 *eP* **P** **22 10 23.7 +0.3**
WUAZ LR LR
comp=Z,410nm,20.0s,MS4.9
KKN Kakani 94.30 298 *eP* **P** **22 10 25.8 +0.4**
comp=Z,32nm,1.4s,mb5.5
MVU Marysvale 94.45 51 PFAKE 22 10 40.0 +14
MVU LR LR
comp=Z,540nm,20.0s,MS5.0
DUG Dugway 94.69 49 PFAKE 22 10 40.0 +13
DUG LR LR
comp=Z,577nm,20.0s,MS5.0
DUG Dugway 94.69 49 P **P** **22 10 33.2 +6.3**
GKN Gorkha 94.91 298 *eP* **P** **22 10 28.5 +0.3**
comp=Z,5.1nm,0.5s,mb5.2
HLID Hailey 94.96 45 PFAKE 22 10 40.0 +12
HLID LR LR
comp=Z,462nm,21.0s,MS4.9
NEW Newport 95.22 40 *eP* **P** **22 10 28.2 -0.9**
NEW LR LR
comp=Z,481nm,20.0s,MS5.0
MPU Maple Canyon 95.46 49 PFAKE 22 10 40.0 +10
MPU LR LR
comp=Z,859nm,21.0s,MS5.2
HWUT Hardware Ranch 96.12 48 PFAKE 22 10 40.0 +6.6
HWUT LR LR
comp=Z,466nm,19.0s,MS5.0
TIXI Tiksi 96.40 348⇑ *eP* **P** **22 10 32.8 -1.2**
TIXI LR LR
comp=Z,369nm,21.0s,MS4.8
TIXI Tiksi 96.40 348⇑ *eP* **P** **22 10 32.7 -1.3**
TIXI pmax pmax
comp=Z,6.0nm,1.4s,mb4.8
MSO Missoula 96.59 42 PFAKE 22 10 50.0 +15
MSO LR LR
comp=Z,352nm,19.0s,MS4.9
MVCO Mesa Verde 96.69 53 PFAKE 22 10 50.0 +14
MVCO LR LR
comp=Z,385nm,20.0s,MS4.9
PV10 Paradox Valley 96.71 52 P **P** **22 10 36.4 +0.3**
AHID Auburn Hatcher 96.88 47 PFAKE 22 10 50.0 +13
AHID LR LR
comp=Z,383nm,20.0s,MS4.9
PV01 Paradox Valley 96.97 52 P **P** **22 10 37.3 0.0**
MNTX Cornudas Mount 97.17 59 PFAKE 22 10 50.0 +12
MNTX LR LR
comp=Z,490nm,19.0s,MS5.0
PLCA Paso Flores 97.36 139 LR LR 22 42 52.0
comp=Z,143nm,20.4s,MS4.5,baz=28,slow=28
ANMO Albuquerque 97.44 56 *eP* **P** **22 10 38.9 -0.7**
ANMO LR LR
comp=Z,456nm,19.0s,MS5.0
BOZ Bozeman (W) 97.61 44 PFAKE 22 10 50.0 +10
BOZ LR LR
comp=Z,523nm,20.0s,MS5.0
YMR Madison River 97.68 45 PFAKE 22 10 50.0 +10
YMR LR LR
comp=Z,998nm,22.0s,MS5.3
LTX Lajitas 97.76 62 PFAKE 22 10 50.0 +8.9
LTX LR LR
comp=Z,540nm,19.0s,MS5.1
TXAR Lajitas Array 97.76 62 P **P** **22 10 40.7 -0.4**
comp=Z,1.2nm,0.9s,mb4.4,baz=266,slow=3.5,SNR=8.7
BW06 Boulder Array 97.93 47 PFAKE 22 10 50.0 +8.4
BW06 LR LR
comp=Z,335nm,20.0s,MS4.8
PDAR Pinedale Array 97.93 47 P **P** **22 10 40.1 -1.5**
comp=Z,0.5nm,0.9s,mb4.0,baz=225,slow=3.8,SNR=4.1
LKWY Lake 98.01 45 PFAKE 22 10 50.0 +8.1
LKWY LR LR
comp=Z,401nm,19.0s,MS4.9
INK Inuvik 98.25 18 *eP* **P** **22 10 41.0 -1.3**
INK Inuvik 98.25 18 *eP* **P** **22 10 41.5 -0.9**
INK Inuvik 98.25 18 P **P** **22 10 40.5 -1.9**
comp=Z,1.3nm,0.5s,mb4.7,baz=242,slow=3.3,SNR=7.0
WMQ Urumqi 98.27 314 *eP* **P** **22 10 43.5 +0.5**
WMQ AP pP 22 10 54.0 +10
WMQ XP sP 22 10 58.0 +13
WMQ PP PP 22 14 46.0 +3.0
WMQ SKS 22 21 17.5
WMQ S S 22 22 06.0 -5.6
WMQ AMB AMB
comp=Z,5.0nm,1.3s,mb4.9
WMQ AMB AMB
comp=Z,28nm,3.5s
WMQ LR LR
comp=N,214nm,16.8s
WMQ LR LR
comp=E,130nm,24.4s
WMQ LR LR
comp=Z,153nm,19.0s,MS4.5
RLMT Red Lodge 98.97 45 PFAKE 22 11 00.0 +14
RLMT LR LR
comp=Z,479nm,20.0s,MS5.0

SDCO	**Great Sand Dun**	**99.11**	**53**	*e*P		**P**		**22 10 46.1**	**-0.9**	
SDCO				LR		LR				
	comp=Z,504nm,19.0s,MS5.0									
RWWY	**Rawlins**	**99.19**	**49**	*e*P		**P**		**22 10 52.6**	**+5.4**	
EGMT	**Eagleton**	**99.67**	**42**	PFAKE				22 11 00.0	+11	
EGMT				LR		LR				
	comp=Z,577nm,19.0s,MS5.1									
ISCO	**Idaho Springs**	**99.71**	**51**	PFAKE				22 11 00.0	+11	
ISCO				LR		LR				
	comp=Z,365nm,19.0s,MS4.9									
AMTX	**Amarillo**	**101.13**	**57**	PFAKE				22 11 10.0	+14	
AMTX				LR		LR				
	comp=Z,426nm,20.0s,MS5.0									
JCT	**Junction City**	**101.30**	**62**	PFAKE				22 11 10.0	+13	
JCT				LR		LR				
	comp=Z,364nm,20.0s,MS4.9									
LAO	**LASA Array**	**101.49**	**44**	PFAKE				22 11 10.0	+13	
LAO				LR		LR				
	comp=Z,590nm,19.0s,MS5.1									
KVTX	**Kingsville**	**102.02**	**65**	PFAKE				22 11 10.0	+10	
KVTX				LR		LR				
	comp=Z,529nm,19.0s,MS5.1									
YKA	**Yellowknife Ar**	**102.30**	**28**	P		Pdif		22 10 56.7	-4.2	
YKA	**Yellowknife Ar**	**102.30**	**28**	P		Pdif		22 10 56.7	-4.2	
	comp=Z,0.6nm,1.1s,baz=257,slow=4.1,SNR=3.8									
MKAR	**Makanchi Array**	**102.84**	**315**	PP		PP		22 15 18.1	+0.5	
	comp=Z,0.8nm,1.0s,baz=101,slow=6.4,SNR=3.8									
DGMT	**Dagmar**	**103.33**	**43**	PFAKE				22 11 20.0	+14	
DGMT				LR		LR				
	comp=Z,519nm,19.0s,MS5.1									
WMOK	**Wichita Mounta**	**103.37**	**58**	PFAKE				22 11 20.0	+14	
WMOK				LR		LR				
	comp=Z,491nm,20.0s,MS5.0									
CBKS	**Cedar Bluff**	**103.76**	**54**	PFAKE				22 11 20.0	+13	
CBKS				LR		LR				
	comp=Z,305nm,19.0s,MS4.8									
HKT	**Hockley**	**104.44**	**63**	PFAKE				22 11 20.0	+9.5	
HKT				LR		LR				
	comp=Z,536nm,20.0s,MS5.1									
NATX	**Nacogdoches**	**105.89**	**62**	PFAKE				22 15 40.0	+10	
NATX				LR		LR				
	comp=Z,624nm,20.0s,MS5.2									
KSU1	**Kansas State U**	**106.19**	**54**	PFAKE				22 15 40.0	+10	
KSU1				LR		LR				
	comp=Z,526nm,19.0s,MS5.1									
KURK	**Kurchatov**	**106.21**	**319**	PFAKE				22 15 40.0	+10	
KURK				LR		LR				
	comp=Z,607nm,19.0s,MS5.2									
FFC	**Flin Flon**	**106.28**	**37**	PFAKE				22 15 40.0	+10	
FFC				LR		LR				
	comp=Z,398nm,21.0s,MS4.9									
TKM2	**Tokmak 2**	**106.42**	**310**	PFAKE				22 15 40.0	+9.5	
TKM2				LR		LR				
	comp=Z,1μm,19.0s,MS5.5									
UCH	**Uchtor**	**107.04**	**309**	PFAKE				22 15 40.0	+8.3	
UCH				LR		LR				
	comp=Z,622nm,21.0s,MS5.1									
ECSD	**EROS,Sioux Fal**	**107.25**	**49**	PFAKE				22 15 40.0	+8.0	
ECSD				LR		LR				
	comp=Z,476nm,20.0s,MS5.0									
MIAR	**Mount Ida**	**107.47**	**59**	PFAKE				22 15 40.0	+7.3	
MIAR				LR		LR				
	comp=Z,526nm,20.0s,MS5.1									
TGUH	**Tegucigalpa,Un**	**107.49**	**81**	PFAKE				22 15 40.0	+6.7	
TGUH				LR		LR				
	comp=Z,228nm,19.0s,MS4.8									
AML	**Almayashu**	**107.62**	**309**	PFAKE				22 15 40.0	+7.2	
AML				LR		LR				
	comp=Z,1μm,20.0s,MS5.5									
EKS2	**Erkin-Say**	**107.67**	**310**	PFAKE				22 15 40.0	+7.1	
EKS2				LR		LR				
	comp=Z,1μm,22.0s,MS5.4									
TEIG	**Tepich**	**108.37**	**75**	PFAKE				22 15 50.0	+15	
TEIG				LR		LR				
	comp=Z,365nm,19.0s,MS5.0									
AGMN	**Agassiz Refuge**	**108.69**	**45**	PFAKE				22 15 50.0	+15	
AGMN				LR		LR				
	comp=Z,536nm,20.0s,MS5.1									
EYMN	**Ely**	**111.52**	**45**	PFAKE				22 15 50.0	+10	
EYMN				LR		LR				
	comp=Z,476nm,19.0s,MS5.1									
JFWS	**Jewell Farm**	**111.66**	**51**	PFAKE				22 15 50.0	+10	
JFWS				LR		LR				
	comp=Z,435nm,20.0s,MS5.0									
RES	**Resolute Bay**	**111.68**	**17**	*e*PKiKP		PKiKP		22 15 39.1	-0.4	
BRVK	**Borovoye**	**111.69**	**320**	PFAKE				22 15 50.0	+10	
BRVK				LR		LR				
	comp=Z,555nm,21.0s,MS5.1									
PLAL	**Pickwick Lake**	**111.98**	**60**	PFAKE				22 15 50.0	+8.8	
PLAL				LR		LR				
	comp=Z,399nm,20.0s,MS5.0									
HDIL	**Hopedale**	**112.00**	**54**	PFAKE				22 15 50.0	+8.9	
HDIL				LR		LR				
	comp=Z,625nm,19.0s,MS5.2									
BRAL	**Brewton**	**112.05**	**64**	PFAKE				22 15 50.0	+8.5	
BRAL				LR		LR				
	comp=Z,615nm,19.0s,MS5.2									
WVT	**Waverly**	**112.39**	**59**	PFAKE				22 15 50.0	+8.0	
WVT				LR		LR				
	comp=Z,339nm,20.0s,MS4.9									
LRAL	**Lakeview Retre**	**112.50**	**62**	PFAKE				22 15 50.0	+7.7	
LRAL				LR		LR				
	comp=Z,483nm,20.0s,MS5.1									
COWI	**Conover**	**112.89**	**48**	PFAKE				22 15 50.0	+7.4	
COWI				LR		LR				
	comp=Z,440nm,20.0s,MS5.0									
WCI	**Wyandotte Cave**	**113.94**	**56**	PFAKE				22 16 00.0	+15	
WCI				LR		LR				
	comp=Z,481nm,19.0s,MS5.1									
GOGA	**Godfrey**	**115.47**	**62**	PFAKE				22 16 00.0	+12	
GOGA				LR		LR				
	comp=Z,442nm,19.0s,MS5.1									
TZTN	**Tazewell**	**115.87**	**59**	PFAKE				22 16 00.0	+11	
TZTN				LR		LR				
	comp=Z,436nm,19.0s,MS5.1									
GLMI	**Grayling**	**115.93**	**49**	PFAKE				22 16 00.0	+12	
GLMI				LR		LR				
	comp=Z,598nm,20.0s,MS5.2									
AAM	**Ann Arbor**	**116.42**	**52**	PFAKE				22 16 00.0	+11	
AAM				LR		LR				
	comp=Z,625nm,19.0s,MS5.2									
ACSO	**Alum Creek Sta**	**116.74**	**55**	PFAKE				22 16 00.0	+10	
ACSO				LR		LR				
	comp=Z,514nm,19.0s,MS5.2									
NHSC	**New Hope**	**118.16**	**63**	PFAKE				22 16 00.0	+6.9	
NHSC				LR		LR				
	comp=Z,409nm,20.0s,MS5.0									
BLA	**Blacksburg**	**118.44**	**58**	PFAKE				22 16 00.0	+6.5	
BLA				LR		LR				
	comp=Z,447nm,19.0s,MS5.1									
ARU	**Arti**	**118.53**	**324**	PFAKE				22 16 00.0	+6.9	
ARU				LR		LR				
	comp=Z,396nm,19.0s,MS5.1									
MCWV	**Mont Chateau**	**119.09**	**55**	PFAKE				22 16 10.0	+15	
MCWV				LR		LR				
	comp=Z,659nm,19.0s,MS5.3									
ERPA	**Erie**	**119.13**	**53**	PFAKE				22 16 10.0	+15	
ERPA				LR		LR				
	comp=Z,448nm,19.0s,MS5.1									
CNNC	**Cliffs of the**	**120.28**	**61**	PFAKE				22 16 10.0	+13	
CNNC				LR		LR				
	comp=Z,643nm,21.0s,MS5.2									
SSPA	**Standing Stone**	**120.64**	**54**	PFAKE				22 16 10.0	+12	
SSPA				LR		LR				
	comp=Z,714nm,20.0s,MS5.3									
CBN	**Corbin**	**120.92**	**57**	PFAKE				22 16 10.0	+12	
CBN				LR		LR				
	comp=Z,535nm,20.0s,MS5.2									
KBS	**Kingsbay**	**121.04**	**355**	PFAKE				22 16 10.0	+13	
KBS				LR		LR				
	comp=Z,290nm,19.0s,MS4.9									
SDV	**Santo Domingo**	**121.40**	**92**	PFAKE				22 16 10.0	+10	
SDV				LR		LR				
	comp=Z,81nm,19.0s,MS4.4									
LBTB	**Lobatse**	**122.09**	**220**	PFAKE				22 16 10.0	+9.0	
LBTB				LR		LR				
	comp=Z,308nm,20.0s,MS5.0									
BINY	**Binghamton**	**122.10**	**53**	PFAKE				22 16 10.0	+10	
BINY				LR		LR				
	comp=Z,466nm,19.0s,MS5.2									
LONY	**Lake Ozonia**	**123.07**	**50**	PFAKE				22 16 10.0	+7.8	
LONY				LR		LR				
	comp=Z,630nm,19.0s,MS5.3									
NCB	**Newcomb**	**123.36**	**51**	PFAKE				22 16 10.0	+7.2	
NCB				LR		LR				
	comp=Z,693nm,20.0s,MS5.3									
SDDR	**Presa de Saban**	**123.57**	**81**	PFAKE				22 16 10.0	+6.1	
SDDR				LR		LR				
	comp=Z,367nm,22.0s,MS5.0									
LBNH	**Lisbon**	**125.00**	**50**	PFAKE				22 16 20.0	+14	
LBNH				LR		LR				
	comp=Z,738nm,19.0s,MS5.4									
LVZ	**Lovozero**	**125.23**	**341**	PFAKE				22 16 20.0	+14	
LVZ				LR		LR				
	comp=Z,526nm,19.0s,MS5.2									
HRV	**Harvard--Oak R**	**125.38**	**52**	PFAKE				22 16 20.0	+13	
HRV				LR		LR				
	comp=Z,498nm,20.0s,MS5.2									
WES	**Weston**	**125.56**	**52**	PFAKE				22 16 20.0	+13	
WES				LR		LR				
	comp=Z,2μm,22.0s,MS5.7									
KEV	**Kevo**	**126.17**	**345**	PFAKE				22 16 20.0	+13	
KEV				LR		LR				
	comp=Z,1μm,19.0s,MS5.5									
ARCES	**ARCESS Array B**	**126.69**	**345**	PKP		PKPdf		22 16 07.3	-1.1	
	comp=Z,8.8nm,1.1s,baz=64,slow=4.2,SNR=3.0									
PKME	**Peaks-Kenny Pk**	**126.77**	**49**	PFAKE				22 16 20.0	+11	
PKME				LR		LR				
	comp=Z,622nm,20.0s,MS5.3									
LSZ	**Lusaka**	**127.31**	**230**	PFAKE				22 16 20.0	+8.8	
LSZ				LR		LR				
	comp=Z,418nm,20.0s,MS5.1									
SFJD	**Kangerlussuaq**	**127.60**	**18**	PFAKE				22 16 20.0	+10	
SFJD				LR		LR				
	comp=Z,500nm,21.0s,MS5.2									
KMBO	**Kilima Mbogo**	**128.00**	**251**	PFAKE				22 16 20.0	+7.4	
KMBO				LR		LR				
	comp=Z,382nm,19.0s,MS5.1									
SJG	**San Juan**	**128.13**	**83**	*e*PKPdf		PKPdf		22 16 11.7	-0.9	
SJG				LR		LR				
	comp=Z,173nm,20.0s,MS4.7									
KIV	**Kislovodsk**	**130.26**	**310**	PKPdf		PKPdf		22 16 16.2	+0.2	
KIV				LR		LR				
	comp=Z,661nm,20.0s,MS5.3									
KIV	**Kislovodsk**	**130.26**	**310**	*e*PKIKP		PKPdf		22 16 15.9	-0.1	
KIV				pmax		pmax				
	comp=Z,5.0nm,1.1s									
OBN	**Obninsk**	**130.83**	**326**	PFAKE				22 16 30.0	+13	
OBN				LR		LR				
	comp=Z,1μm,20.0s,MS5.5									
TSUM	**Tsumeb**	**131.25**	**217**	PFAKE				22 16 30.0	+11	
TSUM				LR		LR				
	comp=Z,420nm,19.0s,MS5.2									
ANN	**Anapa**	**133.77**	**313**	*i* PKIKP		PKPdf		22 16 25.7	+3.1	
ANN				pmax		pmax				
	comp=Z,100nm,1.3s									
KIEV	**Kiev**	**136.79**	**323**	PFAKE				22 16 40.0	+12	
KIEV				LR		LR				
	comp=Z,702nm,19.0s,MS5.4									
ANTO	**Ankara**	**138.31**	**307**	PFAKE				22 16 40.0	+8.8	
ANTO				LR		LR				
	comp=Z,361nm,20.0s,MS5.1									
KONO	**Kongsberg**	**138.68**	**344**	PFAKE				22 16 40.0	+8.8	
KONO				LR		LR				
	comp=Z,442nm,19.0s,MS5.2									
STHS	**Stebnicka Huta**	**141.81**	**326**	*e*PKP		PKPdf		22 16 36.7	-0.5	
STHS				*e*				22 02 25.8		
OKC	**Ostrava-Krasne**	**143.12**	**328**	*e*PKP		PKPdf		22 16 44.1	+4.6	
PSZ	**Piszkesteto**	**143.42**	**325**	*e*PKPdf		PKPdf		22 16 38.1	-2.0	
PSZ	**Piszkesteto**	**143.42**	**325**	*e*P		PKPdf		22 16 44.8	+4.7	
RZN	**Rozhen**	**143.55**	**313**	*i* P		PKPdf		22 16 38.8	-1.8	
VYHS	**Vyhne**	**143.63**	**326**	*e*PKP		PKPdf		22 16 38.7	-1.8	
VYHS				*e*				22 16 52.4		
DPC	**Dobruska-Polom**	**143.65**	**330**	*e*PKP		PKPdf		22 16 38.0	-2.5	
DPC				*e*pPKP		pPKPdf		22 16 49.5	+7.8	
UPC	**Upice**	**143.68**	**331**	*e*PKP		PKPdf		22 16 38.1	-2.4	
KOLL	**Kolacno**	**143.80**	**327**	*e*PKP		PKPdf		22 16 42.1	+1.3	
KOLL				*e*				22 16 54.5		
RCBR	**Riachuelo**	**143.82**	**135**	PFAKE				22 16 50.0	+8.1	
RCBR				LR		LR				
	comp=Z,349nm,20.0s,MS5.1									
VTS	**Vitosha**	**144.19**	**315**	*i* P		PKPdf		22 16 42.0	+0.3	
MMB	**Musomiste**	**144.27**	**313**	*i* P		PKPdf		22 16 39.8	-2.0	
PVCC	**Panska Ves**	**144.31**	**332**	*e*PKP		PKPdf		22 16 39.8	-1.8	
BRG	**Berggiesshubel**	**144.33**	**333**	*i* PKP		PKPdf		22 16 39.3	-2.4	
BRG				*i*				22 16 56.2		
BRG				LR		LR				
	comp=Z,470nm,12.8s,MS5.5									
BRG	**Berggiesshubel**	**144.33**	**333**	*i* PKIKP		PKPdf		22 16 39.3	-2.3	
BRG				pmax		pmax				
	comp=Z,8.0nm,1.2s									
BRG				pmax		pmax				
	comp=Z,23nm,1.4s									
BRG				MLR		MLR				
	comp=N,705nm,12.7s,MS5.8									
BRG				MLR		MLR				
	comp=E,655nm,12.9s,MS5.8									
BRG				MLR		MLR				
	comp=Z,469nm,12.8s,MS5.5									
BRG	**Berggiesshubel**	**144.33**	**333**	*e*PKPbc		PKPdf		22 16 39.6	-2.0	
BRG	**Berggiesshubel**	**144.33**	**333**	*i* PKP		PKPdf		22 16 39.3	-2.4	
	comp=Z,13nm,1.2s									
BRG				*i*				22 16 56.2		
	comp=Z,38nm,1.4s									
BRG										
	comp=N,1μm,12.7s									
BRG										
	comp=E,1μm,12.9s									
BRG										
	comp=Z,783nm,12.8s									
SMOL	**Smolenice**	**144.34**	**327**	*e*PKP		PKPdf		22 16 41.3	-0.4	
SMOL				*e*				22 16 56.6		
CLL	**Collm**	**144.40**	**334**	*e*PKPdf		PKPdf		22 16 39.0	-2.7	
	comp=Z,12nm,1.3s									
CLL				*i* PKPdf		PKPdf		22 16 42.8	+1.1	
CLL				*ex*		x		22 16 54.0		
CLL				*i* x		x		22 17 08.5		
	comp=Z,55nm,1.6s									
MODS	**Modra-Piesok**	**144.51**	**327**	*e*PKP		PKPdf		22 16 41.5	-0.5	
MODS				*e*				22 16 55.7		
FBE	**Freiberg**	**144.55**	**333**	*e*PKPbc		PKPdf		22 16 40.3	-1.7	
NRDL	**Niedersach Rie**	**144.57**	**338**	*e*PKPbc		PKPdf		22 16 40.0	-2.0	
KKB	**Krupnik**	**144.59**	**314**	*i* P		PKPdf		22 16 41.3	-1.1	
ZST	**Bratislava**	**144.71**	**327**	*e*PKP		PKPdf		22 16 41.7	-0.7	
ZST				*e*				22 16 56.6		
PRU	**Pruhonice**	**144.72**	**331**	*e*PKP		PKPdf		22 16 40.5	-1.8	
TREC	**Trest**	**144.77**	**330**	*e*PKP		PKPdf		22 16 44.6	+2.2	
CLZ	**Clausthal**	**145.01**	**337**	*e*PKPbc		PKPbc		22 16 42.0	-0.1	
EKA	**Eskdalemuir Ar**	**145.20**	**352**	PKPbc		PKPbc		22 16 41.5	-1.1	
	comp=Z,6.7nm,0.9s,baz=345,slow=2.1,SNR=13									
ESK	**Eskdalemuir**	**145.22**	**352**	PFAKE				22 16 50.0	+7.3	
ESK				LR		LR				
	comp=Z,519nm,19.0s,MS5.3									
TANN	**Tannenbergstha**	**145.30**	**333**	*e*PKPbc		PKPbc		22 16 43.0	-0.1	
WERD	**Werda**	**145.34**	**334**	*e*PKPbc		PKPbc		22 16 43.2	0.0	
GUNZ	**Gunzen**	**145.40**	**334**	*e*PKPbc		PKPbc		22 16 43.6	+0.2	
WERN	**Wernitzgruen**	**145.44**	**333**	*e*PKPbc		PKPbc		22 16 43.6	+0.1	
NKC	**Novy Kostel**	**145.45**	**333**	*e*PKP		PKPdf		22 16 43.8	+0.2	
NKC				*ex*		x		22 17 00.1		
MOX	**Moxa**	**145.47**	**334**	*e*PKP		PKPdf		22 16 43.3	-0.3	
	comp=Z,74nm,1.9s									
MOX	**Moxa**	**145.47**	**334**	*e*PKIKP		PKPdf		22 16 43.3	-0.3	
MOX				pmax		pmax				
	comp=Z,74nm,1.9s									
MOX	**Moxa**	**145.47**	**334**	*e*PKPbc		PKPbc		22 16 43.1	-0.5	
CONA	**Conrad Observa**	**145.52**	**328**	*j* PKPbc		pPKPbc		22 16 44.5	-0.6	
	comp=Z,76nm,1.5s									
IDI	**Anoyia**	**145.52**	**302**	PKPbc		PKPbc		22 16 43.9	-0.4	
	comp=Z,27nm,1.1s,baz=133,slow=3.7,SNR=8.2									
IBBN	**Ibbenburen**	**145.53**	**340**	*e*PKPbc		PKPbc		22 16 43.6	-0.1	
KHC	**Kasperske Hory**	**145.77**	**331**	*i* PKP2		PKPab		22 16 43.6	-1.4	
KHC	**Kasperske Hory**	**145.77**	**331**	*e*PKP		PKPdf		22 16 44.2	0.0	
KHC				*e*pPKP		pPKPdf		22 16 59.7	+14	
ROTZ	**Rotzenmuhle**	**145.90**	**333**	*e*PKPbc		PKPbc		22 16 44.5	-0.5	
GEC2	**GERESS Array S**	**145.92**	**331**	*e*PKPbc		PKPbc		22 16 44.8	-0.3	
GERES	**GERESS Array B**	**145.92**	**331**	PKPbc		PKPbc		22 16 45.2	+0.1	
	comp=Z,8.1nm,1.2s,baz=35,slow=3.3,SNR=19									
WET	**Wettzell**	**146.07**	**332**	*e*PKPbc		PKPbc		22 16 44.6	-0.9	
GRA1	**Grafenberg Arr**	**146.37**	**334**	*e*PKPbc		PKPbc		22 16 45.9	-0.5	
GRF	**Grafenberg Arr**	**146.37**	**334**	*e*PKPbc		PKPbc		22 16 45.9	-0.5	
GRFO	**Grafenberg**	**146.37**	**334**	PFAKE				22 17 00.0	+15	
GRFO				LR		LR				
	comp=Z,518nm,20.0s,MS5.3									
WTTA	**Wattenberg**	**148.02**	**330**	*i* P		PKPdf		22 16 50.7	+2.7	
	comp=Z,22nm,1.2s									
WLF	**Walferdange**	**148.31**	**339**	*e*PKPbc		PKPbc		22 16 51.8	0.0	
WLF	**Walferdange**	**148.31**	**339**	PKPbc		PKPbc		22 16 52.1	+0.3	
GIVF	**Givet**	**148.37**	**340**	*e*PKP1		PKPbc		22 16 48.8	-3.1	
BAIF	**Baives**	**148.59**	**341**	*e*PKP1		PKPbc		22 16 49.5	-3.0	
	comp=Z,48nm,1.3s									
BFO	**Black Forest**	**148.62**	**335**	*e*PKPbc		PKPbc		22 16 52.2	-0.4	
BFO				LR		LR				
	comp=Z,519nm,19.0s,MS5.3									
DAVA	**Damuels**	**148.79**	**332**	*i* P		PKPdf		22 16 52.3	+3.1	
	comp=Z,36nm,1.6s									
CDF	**Champ du Feu**	**148.96**	**336**	*e*PKP1		PKPbc		22 16 50.4	-3.1	
	comp=Z,113nm,1.6s									
DAVOX	**Davos/Dischmat**	**149.18**	**331**	PKPbc		PKPbc		22 16 53.1	-1.0	
	baz=58,slow=4.3									
HINF	**Hinteralfeld**	**149.61**	**336**	*e*PKP1		PKPbc		22 16 51.8	-3.3	
HAU	**Haudompre**	**149.64**	**337**	*e*PKP1		PKPbc		22 16 52.0	-3.2	
	comp=Z,95nm,1.5s									
MEZF	**Maizieres J'vi**	**149.68**	**339**	*e*PKP1		PKPbc		22 16 52.6	-2.7	
	comp=Z,112nm,1.5s									
CABF	**La Chapelle**	**150.90**	**335**	*e*PKP1		PKPbc		22 16 55.5	-2.8	
	comp=Z,67nm,1.4s									
FLN	**La Foliniere**	**151.04**	**346**	*e*PKP1		PKPbc		22 16 54.7	-3.8	
LOR	**Lormes**	**151.15**	**339**	*e*PKP1		PKPbc		22 16 55.6	-3.3	
	comp=Z,109nm,1.6s									
SSF	**Saint Saulge**	**151.45**	**339**	*e*PKP1		PKPbc		22 16 56.3	-3.3	
	comp=Z,108nm,1.7s									
GRR	**Gorron**	**151.47**	**346**	*e*PKP1		PKPbc		22 16 56.0	-3.6	
LPL	**La Plagne**	**151.53**	**333**	*e*PKP1		PKPbc		22 16 56.9	-2.9	
LPG	**La Plagne**	**151.54**	**333**	*e*PKP1		PKPbc		22 16 57.2	-2.6	
	comp=Z,81nm,1.6s									
SMF	**Signal de Mont**	**151.70**	**338**	*e*PKP1		PKPbc		22 16 56.6	-3.5	
	comp=Z,192nm,1.8s									
AVF	**Avril sur Loir**	**151.74**	**339**	*e*PKP1		PKPbc		22 16 56.7	-3.5	
	comp=Z,60nm,1.4s									
ROSF	**Rostrenen**	**152.02**	**349**	*e*PKP1		PKPbc		22 16 57.5	-3.3	
	comp=Z,142nm,1.6s									
BGF	**Bois d'Agland**	**152.11**	**339**	*e*PKP1		PKPbc		22 16 58.2	-2.9	
	comp=Z,99nm,1.7s									
TCF	**Toulx Ste Croi**	**152.56**	**340**	*e*PKP1		PKPbc		22 16 58.6	-3.5	
	comp=Z,59nm,1.5s									
ESDC	**Sonseca Array**	**160.43**	**344**	PKPab		PKPab		22 17 45.7	-0.6	
	comp=Z,0.1nm,0.2s,baz=36,slow=2.9,SNR=4.4									
ESLA	**Sonseca Array**	**160.43**	**344**	PFAKE				22 17 20.0	+14	
ESLA				LR		LR				
	comp=Z,2μm,19.0s									
PAB	**San Pablo**	**160.65**	**344**	PFAKE				22 17 20.0	+14	
PAB				LR		LR				
	comp=Z,463nm,19.0s									
TORD	**Torodi Ar. Bea**	**165.61**	**239**	PKP		PKPdf		22 17 08.7	-2.6	
	comp=Z,0.9nm,1.1s,baz=261,slow=2.0,SNR=4.2									
TORD				PKPab		PKPab		22 18 08.2	-1.7	
	comp=Z,2.0nm,1.2s,baz=138,slow=1.1,SNR=2.6									

*ISCJB **25** 21:57:43.0±0.7, 3885N±004×437E±0.1, h19km±14km, Error ellipse: s-maj=14.3km s-min=5.7km az=20.5*
*ISK **25** 21:57:42.5, 3888N×4365E, h10km, MD2.7*
*DDA **25** 21:57:43.1, 3884N×4372E, h18km±1km, Md2.8*

ISC 25 21:57:43.2±0.6, 3888N±004×4363E±009, h16km±7km, n9, σ0°92/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CLDR	**Calciran**	**0.34**	**41**	*i* PG		**Pg**	**21 57 49.3**	**-1.0**
CLDR				*i* SG		**Sg**	**21 57 55.5**	**+0.4**
VAN	**Van**	**0.34**	**213**	PG		**Pg**	**21 57 50.2**	**-0.1**
TVAN	**Van**	**0.40**	**206**	*i* P		**Pg**	**21 57 50.6**	**-0.6**
TVAN				*i* S		**Sg**	**21 57 56.9**	**+0.2**
VANT	**Van**	**0.48**	**203**	PG		**Pg**	**21 57 53.6**	**+0.9**
DYDN	**Diyadin**	**0.66**	**4**	*i* P		**Pg**	**21 57 56.0**	**-0.1**
DYDN				*i* S		**Sg**	**21 58 05.9**	**+1.0**
TUTA	**Tutak**	**0.82**	**309**	*i* P		**Pb**	**21 57 59.0**	**-0.1**
TUTA				*i* S		**Sb**	**21 58 14.5**	**+4.6**
AGRB	**Hanur-Agry**	**0.85**	**325**	*e*PG		**Pg**	**21 57 59.3**	**-0.4**
HAKT	**HAKKARI**	**1.33**	**177**	*i* P		**Pn**	**21 58 05.4**	**-1.7**
HAKT				*i* S		**Sn**	**21 58 27.4**	**+3.0**

CRES	Cresnjev	8.31	336	*e*Pn		Pn	22 00 45.5	-1.5
CRES				*e*Sn		Sn	22 02 14.3	-6.8
VISS	Visnje	8.50	333	*e*Pn		Pn	22 00 49.5	-0.2
VISS				*e*Sn		Sn	22 02 20.2	-5.6
GERES	GERESS Array B	11.54	338	Pn		Pn	22 01 30.4	-0.9
	0.1nm,0.3s,baz=156,slow=13,SNR=3.9							
FINES	FINESS Array B	23.40	7	P		P	22 03 52.5	-3.1
	0.3nm,0.6s,mb2.9,baz=171,slow=9.8,SNR=2.0							
MKAR	Makanchi Array	45.34	58	P		P	22 07 01.0	-3.9
	0.1nm,0.4s,mb3.0,baz=271,slow=7.0,SNR=4.4							
ZALV	Zalesovo Beam	45.69	48	P		P	22 07 04.8	-2.7
	1.4nm,0.6s,mb4.0,baz=269,slow=8.3,SNR=6.0							

ISCJB ***25*** *22:01:18.9±0.2,3840N×002×2026E×002,h10km, mb3.9/17,Error ellipse: s-maj=2.9km s-min=2.0km az=145.4*

IDC ***25*** *22:01:18.1±0.6,3849N×2043E,h0km,mb3.9/15, mb1 3.9/23,mb1mx3.8/29,mbtmp3.8/23,ML3.8/7,MS3.2/1, Ms1 3.2/1,ms1mx2.4/34,Error ellipse: s-maj=13.2km s-min=12.0km az=133.0*

CSEM ***25*** *22:01:19.8±0.1,3826N×2035E,h5km,ML4.2,Error ellipse: s-maj=3.4km s-min=1.3km az=33.0*

NEIC ***25*** *22:01:20.4,3835N×2044E,h15km,mb3.8/4,ML4.2(ATH), After ATH.*

ATH ***25*** *22:01:20.2,3834N×2041E,h15km±1km,MD4.0/10,ML4.2*

PDG ***25*** *22:01:21.3±0.5,3852N×2037E,h14km±2km,ML4.1/10, Error ellipse: s-maj=1.8km s-min=2.1km az=0.0*

THE ***25*** *22:01:21.7,3842N×2048E,h2km,ML4.3*

BEO ***25*** *22:01:21.0±1.0,3852N×2072E,ML4.0/5*

NAO ***25*** *22:01:24.1,3863N×2124E,h33km,mb3.6*

ISC 25 22:01:20.5±0.2,3839N±002×2031E±002,h10km,n194, σ1**9**28/254**,mb3.9**/17**,19C-12D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.31	134	⇑*i*PB	Pg	22 01 25.6	-1.0
VLS				*e*SB	Sg	22 01 29.4	-1.4
RLS	Riolos of Patr	0.97	110	*e*PN	Pn	22 01 36.8	-3.4
IGT	Igoumenitsa	1.14	1	*e*Pg	Pg	22 01 42.1	-0.2
IGT				*e*Sg	Sg	22 01 59.1	+2.0
EVR	Evrytania	1.29	66	*e*PN	Pn	22 01 42.9	-1.6
JAN	Janina	1.33	18	*e*PN	Pn	22 01 45.9	+0.8
JAN				*e*SN	Sg	22 02 04.7	+1.4
KEK	Kerkira	1.38	343	*e*Pn	Pn	22 01 46.8	+1.1
KEK				P	Pg	22 01 51.1	+4.2
KEK				*e*Sn	Sg	22 02 07.7	+3.0
KEK	Kerkira	1.38	343	P	Pg	22 01 51.1	+4.2
SRN	Sarande	1.50	351	*i* PN	Pg	22 01 50.9	+1.6
SRN				*i* SN	Sg	22 02 10.3	+1.5
MEV	Metsovon	1.56	27	*e*Pg	Pg	22 01 49.6	-0.9
AGG	Agios Georgios	1.70	68	*e*Pg	Pn	22 01 50.0	-0.2
AGG				*e*Sg	Sn	22 02 12.0	0.0
ITM	Ithomi	1.77	133	*e*PN	Pn	22 01 51.4	+0.3
THL	Klokotos Trika	1.77	48	*e*PN	Pn	22 01 52.2	+1.1
TPE	Tepelena	1.91	353	*e*PN	Pg	22 01 59.4	+2.3
TPE				*i* SN	Sg	22 02 23.4	+1.5
LKR	Lokris	2.13	82	*e*PN	Pn	22 01 56.3	+0.3
KZN	Kozani	2.22	30	*e*PN	Pn	22 01 59.0	+1.7
KBN	Korca	2.26	9	*e*PN	Pb	22 02 00.9	-0.4
KBN				*i* SN	Sb	22 02 29.1	-0.2
LIT	Litokhoron	2.40	44	*e*Pn	Pn	22 02 00.5	+0.6
LIT	Litokhoron	2.40	44	*e*Pn	Pn	22 02 00.4	+0.6
NEO	Neokhori	2.45	67	*e*PB	Pn	22 02 00.9	+0.4
XOR	Xorichti	2.45	66	*e*PN	Pn	22 02 00.6	+1.1
NAIG	Nisos Aigina	2.59	103	*e*PN	Pn	22 02 02.5	+0.1
VLI	Veliai	2.68	128	*e*Pb	Pn	22 02 04.8	+1.2
VLI				P	Pb	22 02 09.4	+0.9
ATH	Athens Observa	2.72	98	*e*PN	Pn	22 02 04.1	-0.1
BIA	Bitola	2.74	16	*e*Pn	Pn	22 02 05.7	+1.3
BIA	Bitola	2.74	16	*i* Pn	Pn	22 02 05.7	+1.3
BIA				*i* Sn	Sn	22 02 40.0	+2.5
BIA	Bitola	2.74	16	*e*Pn	Pn	22 02 05.7	+1.3
BIA				*i* Sn	Sn	22 02 40.0	+2.5
OHR	Ohrid	2.74	8	*e*Pn	Pn	22 02 05.8	+1.3
OHR	Ohrid	2.74	8	*i* Pn	Pn	22 02 05.7	+1.2
OHR				*i* Sn	Sn	22 02 39.6	+2.0
OHR	Ohrid	2.74	8	*e*Pn	Pn	22 02 05.8	+1.3
OHR				*i* Sn	Sn	22 02 39.5	+1.9
PTL	Penteli	2.82	96	*e*PN	Pn	22 02 05.8	+0.2
TIP	Timpagrande	2.88	287	*e*Pn	Pn	22 02 08.3	+1.9
TIP				*e*Sn	Sn	22 02 41.2	+0.1
TIP	Timpagrande	2.88	287	*e*Pn	Pn	22 02 08.3	+1.9
TIP				*e*Sn	Sn	22 02 41.2	+0.1
AOS	Alonnisos	2.90	73	*e*Pn	Pn	22 02 06.8	+0.2
TIR	Tirane	2.97	354	P	Pn	22 02 08.5	+0.9
TIR	Tirane	2.97	354	*e*Pn	Pn	22 02 09.0	+1.4
TIR	Tirane	2.97	354	*e*PN	Pn	22 02 08.9	+1.3
TIR				*i* SN	Sn	22 02 45.0	+1.7
TIR	Tirane	2.97	354	*e*Pn	Pn	22 02 09.0	+1.4
TIR				*i* Sn	Sn	22 02 45.0	+1.7
KYTH	Kithira	3.03	133	*e*PN	Pn	22 02 09.0	+0.6
THE	Thessaloniki	3.04	42	*e*Pn	Pn	22 02 09.1	+0.6
KRUS	Krusevo	3.06	13	*i* Pn	Pn	22 02 10.4	+1.6
KRUS				*i* Sn	Sn	22 02 44.8	-0.6
KRUS	Krusevo	3.06	13	*i* Pn	Pn	22 02 10.3	+1.5
KRUS				*i* Sn	Sn	22 02 44.8	-0.7
HORT	Hortiatis	3.08	44	*e*Pn	Pn	22 02 09.2	0.0
PLG	Polygyros	3.13	50	*e*PN	Pn	22 02 09.6	-0.3
PEZ	Pezze di Greco	3.28	318	*e*Pn	Pn	22 02 12.6	+0.7
SOH	Sokhos	3.38	43	*e*Pn	Pn	22 02 14.0	+0.7
SOH				*e*Sn	Sn	22 02 53.2	-0.2
VAY	Valandovo	3.40	30	*e*Pn	Pn	22 02 13.6	0.0
VAY	Valandovo	3.40	30	*i* Pn	Pn	22 02 14.1	+0.5
KNT	Kendrikon	3.41	35	*e*Pn	Pn	22 02 13.8	+0.1
OUR	Ouranopolis	3.44	55	*e*Pn	Pn	22 02 14.2	0.0
STIP	Stip	3.60	23	*e*Pn	Pn	22 02 16.8	+0.6
STIP	Stip	3.60	23	*i* Pn	Pn	22 02 16.9	+0.7
ULC	Ulcinj	3.66	348	⇑*i*Pn	Pn	22 02 16.9	-0.1
ULC				*e*Sn	Sn	22 02 59.2	-1.0
ULC	Ulcinj	3.66	348	P	Pn	22 02 16.9	-0.1
ULC				S	Sn	22 02 59.2	-1.0
PUK	Puka	3.66	355	*e*PN	Pn	22 02 17.6	+0.5
PUK				*i* SN	Sn	22 03 01.0	+0.7
SKO	Skopje	3.68	13	*i* Pn	Pn	22 02 19.0	+1.7
SDA	Shkodra	3.71	351	*i* Sg	Sn	22 03 02.3	+0.9
SG1	Sgolgore (BA)	3.72	312	*e*Pn	Pn	22 02 19.0	+1.1
NVR	Nevrokopi	4.02	42	*e*PN	Pn	22 02 23.9	+1.8
BUM	Brajici-Budva	4.05	345	⇑*i*Pn	Pn	22 02 22.2	-0.2
BUM				*e*Sn	Sn	22 03 09.0	-0.9
BUM	Brajici-Budva	4.05	345	P	Pn	22 02 22.2	-0.2
BUM				S	Sn	22 03 09.0	-0.8
LIA	Limnos Island	4.08	67	P	Pb	22 02 29.2	-3.1
PDG	Podgorica	4.11	349	⇑*i*Pn	Pn	22 02 23.2	-0.1
PDG				*e*Sn	Sn	22 03 10.3	-1.1
TTG	Podgorica	4.11	349	⇑*i*Pn	Pn	22 02 23.2	-0.1
TTG				*e*Sn	Sn	22 03 10.3	-1.1
KARN	Karanos	4.16	135	*e*Pn	Pn	22 02 25.6	+1.7
KARN	Karanos	4.16	135	*e*Pn	Pn	22 02 25.6	+1.6
PVY	Plav	4.20	357	⇑*i*Pn	Pn	22 02 25.3	+0.7
PVY				*e*Sn	Sn	22 03 13.4	-0.3
PVY	Plav	4.20	357	P	Pn	22 02 25.4	+0.8
PVY				S	Sn	22 03 13.4	-0.3
HCY	Herceg Novi	4.28	342	⇑*i*Pn	Pn	22 02 25.9	+0.3
HCY				*e*Sn	Sn	22 03 14.4	-1.1
HCY	Herceg Novi	4.28	342	P	Pn	22 02 26.0	+0.4
HCY				S	Sn	22 03 14.4	-1.1
VAM	Vamos	4.32	133	*e*PN	Pn	22 02 27.5	+1.4
APE	Apeiranthos	4.35	106	*e*Pn	Pn	22 02 25.6	-1.0
APE	Apeiranthos	4.35	106	⇑*i*P	Pn	22 02 30.2	+3.6
APE	Apeiranthos	4.35	106	*e*Pn	Pn	22 02 25.5	-1.1
BEY	Berane	4.48	356	*e*Pn	Pn	22 02 29.2	+0.8
BEY				*e*Sn	Sn	22 03 19.6	-1.0
IVA	Berane	4.48	356	*e*Pn	Pn	22 02 29.2	+0.8
IVA				*e*Sn	Sn	22 03 19.6	-1.0
CHOS	Chios island	4.52	88	*e*Pn	Pn	22 02 29.0	+0.1
NKY	Niksic	4.53	348	⇑*i*Pn	Pn	22 02 29.0	0.0
NKY				*e*Sn	Sn	22 03 20.4	-1.2
NKY	Niksic	4.53	348	P	Pn	22 02 29.1	+0.1
NKY				S	Sn	22 03 20.4	-1.2
BARS	Barje	4.57	14	⇓*i*Pn	Pn	22 02 29.7	+0.1
BARS				*e*Sn	Sn	22 03 18.3	-4.4
BARS	Barje	4.57	14	Pn	Pn	22 02 29.8	+0.2
BARS				Sn	Sn	22 03 21.9	-0.8
BRY	Bratogost	4.70	344	⇑*i*Pn	Pn	22 02 31.5	+0.1
BRY				*e*Sn	Sn	22 03 24.7	-1.2
BRY	Bratogost	4.70	344	P	Pn	22 02 31.5	+0.1
BRY				S	Sn	22 03 24.7	-1.2
VTS	Vitosha	4.74	27	⇑P	Pn	22 02 35.3	+3.3
VTS	Vitosha	4.74	27	⇑*i*P	Pn	22 02 35.3	+3.4
VAE	Valguarnera	4.75	261	Pn	Pn	22 02 33.5	+1.4
	1.7nm,0.3s,baz=112,slow=19,SNR=7.0						
VAE				Sn	Sn	22 03 29.8	+2.6
	15nm,0.3s,baz=132,slow=18,SNR=4.2						
IDI	Anoyia	4.81	129	Pn	Pn	22 02 32.9	0.0
	0.3nm,0.3s,baz=324,slow=17,SNR=5.6						
IDI				Sn	Sn	22 03 26.8	-1.8
	10nm,0.3s,baz=260,slow=20,SNR=8.5						
RDO	Rodhopi	4.88	54	P	Pn	22 02 34.7	+0.9
SJES	Sjenica	4.88	357	*e*Pn	Pn	22 02 34.2	+0.4
SJES				*e*Sn	Sn	22 03 29.0	-1.3
STON	Ston	4.89	337	*e*Pn	Pn	22 02 35.2	+1.1
STON				Sn	Sn	22 03 27.5	-3.1
STON	Ston	4.89	337	*e*Pn	Pn	22 02 35.1	+1.1
STON				Sn	Sn	22 03 27.5	-3.2
UPM	Unac-Piva	4.92	348	⇑*i*Pn	Pn	22 02 35.1	+0.7
UPM				*e*Sn	Sn	22 03 30.4	-0.9
UPM	Unac-Piva	4.92	348	P	Pn	22 02 35.1	+0.7
UPM				S	Sn	22 03 30.4	-1.0
URLA	Izmir	4.94	88	*i* P	Pn	22 02 35.1	+0.4
PLE	Pljevlja	4.98	352	⇑*i*Pn	Pn	22 02 35.2	0.0
PLE				*e*Sn	Sn	22 03 31.9	-0.9
PLE	Pljevlja	4.98	352	P	Pn	22 02 35.2	0.0
PLE				S	Sn	22 03 31.9	-0.9
ALN	Alexandroupoli	5.08	59	*e*Pn	Pn	22 02 37.0	+0.3
SMG	Samos	5.20	96	P	Pn	22 02 38.4	+0.1
LAST	Lasithi	5.26	126	*e*Pn	Pn	22 02 40.5	+1.5
KDAG	Bornova	5.47	88	*i* P	Pn	22 02 42.1	+0.1
GRUS	Gruza	5.50	3	*e*Pn	Pn	22 02 41.5	-0.8
GRUS				*e*Sn	Sn	22 03 44.5	-1.1
BBLS	Bajina Basta -	5.51	353	*e*Pn	Pn	22 02 43.0	+0.5
BBLS				*e*Sn	Sn	22 03 44.7	-1.2
DIVS	Divcibare	5.70	358	⇓*i*Pn	Pn	22 02 44.5	-0.7
DIVS				*e*Sn	Sn	22 03 48.0	-2.7
SVIS	Svilajnac	5.94	6	*e*Pn	Pn	22 02 46.8	-1.6
SVIS				*e*Sn	Sn	22 03 52.1	-4.3
ARG	Arkhangelos	6.60	107	P	Pn	22 03 04.6	+7.1
FGSL	Fruska Gora	6.77	357	⇑*i*Pn	Pn	22 02 58.7	-1.1
FGSL				*e*Sn	Sn	22 04 11.5	-5.4
GDZ	Gediz	7.20	82	*i* P	Pn	22 03 07.8	+2.0
GZR	Gura Zlata	7.23	14	⇑P	Pn	22 03 06.5	+0.4
GZR	Gura Zlata	7.23	14	⇑*i*P	Pn	22 03 06.5	+0.4
BZS	Buzias	7.28	7	⇓P	Pn	22 03 06.5	-0.3
BZS	Buzias	7.28	7	⇓*i*P	Pn	22 03 06.5	-0.3
NVLJ	Novalja	7.39	328	*e*Pn	Pn	22 03 08.2	-0.1
NVLJ				Sn	Sn	22 04 28.6	-3.6
GOLH	Golhisar	7.42	96	*i* P	Pn	22 03 13.6	+4.9
PKSM	Moragy	7.91	352	⇑P	Pn	22 03 14.1	-1.4
PKSM	Moragy	7.91	352	⇑*i*P	Pn	22 03 14.1	-1.3
MLR	Muntele Rosu	8.24	29	Pn	Pn	22 03 23.1	+3.2
	0.4nm,0.3s,baz=259,slow=7.0,SNR=5.7						
ESKT	Eskisehir	8.29	79	*i* P	Pn	22 03 23.4	+2.7
SEYT	Eskypehyr	8.29	79	*i* P	Pn	22 03 23.4	+2.7
PLOR	Plostina	8.81	30	⇓*i*P	Pn	22 03 35.3	+7.5
KEST	Kesra	9.15	256	Pn	Pn	22 03 33.5	+0.9
	0.2nm,0.3s,baz=44,slow=5.1,SNR=11						
KEST				Sn	Sn	22 05 13.4	-2.2
	0.1nm,0.3s,baz=27,slow=22,SNR=4.8						
OBKA	Obir	9.15	334	⇓*i*Pn	Pn	22 03 32.4	-0.1
OBKA				⇓*i*Sn	Sn	22 05 11.5	-4.0
KECS	Kecovo	10.09	1	*e*SN	Sn	22 05 32.2	-6.2
KECS				*e*		22 02 37.7	
VYHS	Vyhne	10.15	354	*e*SN	Sn	22 05 34.6	-5.4
MODS	Modra-Piesok	10.21	349	*e*SN	Sn	22 05 33.7	-7.8
KOLL	Kolacno	10.27	353	*e*SN	Sn	22 05 36.3	-6.7
MOA	Molln	10.43	337	⇓*i*Pn	Pn	22 03 49.5	-0.5
	SNR=8.8						
MOA				⇓*i*Sn	Sn	22 05 42.9	-3.9
WTTA	Wattenberg	10.91	327	⇓*i*Pn	Pn	22 03 57.2	+0.7
WTTA				⇓*i*Sn	Sn	22 05 55.6	-2.9
DAVOX	Davos/Dischmat	11.36	321	Pn	Pn	22 04 04.5	+1.8
	baz=307,slow=20						
DAVOX				Sn	Sn	22 06 04.4	-5.3
	0.4nm,0.3s,baz=322,slow=16,SNR=2.7						
TREC	Trest	11.44	344	*e*P	Pn	22 04 05.9	+2.2
GERES	GERESS Array B	11.48	338	Pn	Pn	22 04 01.9	-2.5
GERES				Sn	Sn	22 06 05.1	-7.6
GERES	GERESS Array B	11.48	338	Pn	Pn	22 04 01.9	-2.5
	0.3nm,0.3s,baz=162,slow=14,SNR=7.8						
GERES				Sn	Sn	22 06 05.1	-7.6
	0.3nm,0.3s,baz=160,slow=24,SNR=3.6						
FRF	La Foret Royal	11.54	301	*e*P	Pn	22 04 03.3	-1.9
	36nm,1.2s						
FRF	La Foret Royal	11.54	301	*e*P	Pn	22 04 03.3	-1.9
	18nm,1.2s						
OKC	Ostrava-Krasne	11.54	353	*e*P	Pn	22 04 02.1	-3.1
KHC	Kasperske Hory	11.78	338	*e*P	Pn	22 04 11.0	+2.6
KHC				*ex*	x	22 06 10.0	
MBDF	Montbardon	11.94	306	*e*P	Pn	22 04 13.5	+2.8
PRU	Pruhonice	12.30	342	*e*P	Pn	22 04 06.4	-9.2
LPG	La Plagne	12.33	309	*e*P	Pn	22 04 18.4	+2.4
LPL	La Plagne	12.35	310	*e*P	Pn	22 04 18.6	+2.4
ORIF	Oris-en-Rattie	12.60	306	*e*P	Pn	22 04 22.8	+3.2
	12nm,0.9s						
ORIF	Oris-en-Rattie	12.60	306	*e*P	Pn	22 04 22.8	+3.2
	5.9nm,0.9s						
CABF	La Chapelle	13.31	313	*e*P	Pn	22 04 28.9	-0.4
MMAI	Mount Meron Ar	13.39	109	Pn	Pn	22 04 28.5	-2.0
	1.0nm,0.3s,baz=327,slow=12,SNR=7.4						
HINF	Hinteralfeld	13.59	318	*e*P	Pn	22 04 32.5	-0.7
	4.7nm,0.5s						
HINF	Hinteralfeld	13.59	318	*e*P	Pn	22 04 32.5	-0.7
	2.3nm,0.5s						
CDF	Champ du Feu	13.76	321	*e*P	Pn	22 04 35.2	-0.3
	2.7nm,0.3s						
CDF	Champ du Feu	13.76	321	*e*P	Pn	22 04 35.2	-0.3
	1.4nm,0.3s						
AKASG	Malin Array Be	13.84	24	Pn	Pn	22 04 33.5	-3.0
	0.2nm,0.3s,baz=211,slow=12,SNR=4.0						
HAU	Haudompre	13.98	318	*e*P	Pn	22 04 37.7	-0.7
	4.4nm,0.3s						
HAU	Haudompre	13.98	318	*e*P	Pn	22 04 37.7	-0.7
	2.2nm,0.3s						
MALT	Malatya	14.22	85	Pn	Pn	22 04 42.8	+0.9
	4.3nm,0.8s						
MALT	Malatya	14.22	85	⇓*i*P	Pn	22 04 47.9	+6.0
SMF	Signal de Mont	14.66	309	*e*P	Pn	22 04 47.3	-0.4
EIL	Elat	14.92	121	Pn	Pn	22 04 51.7	+0.2
	0.3nm,0.3s,baz=351,slow=4.9,SNR=3.5						
LOR	Lormes	14.95	312	*e*P	Pn	22 04 50.3	-1.4
SSF	Saint Saulge	15.06	310	*e*P	Pn	22 04 51.8	-1.4
BAIF	Baives	16.36	321	*e*P	Pn	22 05 12.7	+2.6
	7.7nm,0.7s						
BAIF	Baives	16.36	321	*e*P	Pn	22 05 12.7	+2.6
	3.8nm,0.7s						
ESDC	Sonseca Array	18.89	281	P	Pn	22 05 41.8	+0.3
	0.2nm,0.3s,baz=76,slow=12,SNR=5.5						
MDT	Midelt	20.98	262	P	P	22 06 04.8	+1.0
	1.3nm,0.9s,baz=27,slow=14,SNR=2.8						
MDT				LR	LR	22 13 35.5	
	comp=Z,61nm,20.3s,baz=260,slow=35						
HFS	Hagfors	22.16	351	P	P	22 06 14.7	-1.5
	2.3nm,0.5s,mb3.8,baz=175,slow=7.2,SNR=18						
EKA	Eskdalemuir Ar	23.16	325	P	P	22 06 25.6	-1.2
	1.1nm,0.7s,mb3.4,baz=126,slow=9.4,SNR=5.2						
EKA	Eskdalemuir Ar	23.16	325	P	P	22 06 25.6	-1.2
NAO01	NORSAR Array S	23.24	348	*e*P	P	22 06 26.6	-1.0
NAO01	NORSAR Array S	23.24	348	*e*P	P	22 06 26.6	-1.0
FINES	FINESS Array B	23.35	7	P	P	22 06 26.4	-2.4
	1.8nm,0.5s,mb3.8,baz=169,slow=9.8,SNR=16						
FINES				PcP	PcP	22 10 14.5	-0.7
	0.5nm,0.6s,baz=103,slow=2.0,SNR=4.7						
NB2	NORSAR Subarra	23.37	349	P	P	22 06 27.9	-1.1
	comp=Z,2.1nm,0.8s,mb3.6,baz=160,slow=10						
NOA	NORSAR Array B	23.37	349	P	P	22 06 27.9	-1.1
	comp=Z,2.0nm,0.8s,mb3.6,baz=159,slow=9.8,SNR=7.5						
KAF	Kangasniemi	24.03	7	*ep*	P	22 06 33.5	-1.8
	comp=Z,1.2nm,0.4s,mb3.7						
JOF	Joensuu	25.45	12	*ep*	P	22 06 46.0	-2.2
AKTK	Aktyubinsk	29.19	53	P	P	22 07 20.1	-1.8
AKTK	Aktyubinsk	29.19	53	P	P	22 07 20.0	-1.8
AKTO	Aktyubinsk	29.19	53	P	P	22 07 20.1	-1.8
	comp=Z,0.4nm,0.3s,mb3.6,baz=258,slow=9.3,SNR=3.6						
TORD	Torodi Ar. Bea	30.09	218	P	P	22 07 29.9	-0.2
TORD	Torodi Ar. Bea	30.09	218	P	P	22 07 29.9	-0.2
	comp=Z,0.8nm,0.7s,mb3.6,baz=32,slow=8.3,SNR=10						
ARCES	ARCESS Array B	31.33	4	P	P	22 07 39.2	-1.3
	comp=Z,1.7nm,0.7s,mb4.0,baz=193,slow=10.0,SNR=6.6						
ARCES				PcP	PcP	22 10 33.4	-0.8
	comp=Z,7.0nm,1.1s,baz=202,slow=1.0,SNR=5.2						
ARCES	ARCESS Array B	31.33	4	P	P	22 07 39.2	-1.3
DBIC	Dimbokro	38.94	222	P	P	22 08 46.8	+0.2
	comp=Z,2.3nm,0.6s,mb4.1,baz=21,slow=11,SNR=5.5						
EKS2	Erkin-Say	40.30	66	*e*P	P	22 08 56.3	-1.5
	comp=Z,2.1nm,0.7s,mb4.0						
EKS2	Erkin-Say	40.30	66	*e*P	P	22 08 56.3	-1.5
	comp=Z,2.1nm,0.7s,mb4.0						
MKAR	Makanchi Array	45.33	59	P	P	22 09 36.0	-2.5
	comp=Z,1.3nm,0.6s,mb4.0,baz=280,slow=6.9,SNR=21						
ZALV	Zalesovo Beam	45.67	48	P	P	22 09 39.1	-2.0
	comp=Z,4.5nm,0.4s,mb4.8,baz=275,slow=8.3,SNR=23						
KOLN	Koldanda	53.16	82	*e*P	P	22 10 35.9	-2.7
SCHQ	Schefferville	58.19	317	P	P	22 11 14.2	-0.1
	baz=51,slow=4.9						
SCHQ	Schefferville	58.19	317	P	P	22 11 14.2	-0.1
SONM	Songino Array	60.45	51	P	P	22 11 28.5	-1.6
	comp=Z,0.8nm,0.8s,mb3.8,baz=274,slow=7.7,SNR=2.2						
BOSA	Boshof	66.82	175	P	P	22 12 11.6	-0.6
	comp=Z,1.6nm,0.7s,mb4.2,baz=163,slow=18,SNR=3.6						
FCC	Fort Churchill	68.98	329	*e*P	P	22 12 25.7	+0.2
	comp=Z,16nm,1.5s,mb4.7						
FCC	Fort Churchill	68.98	329	*e*P	P	22 12 25.7	+0.2
	comp=Z,16nm,1.5s,mb4.7						
YKA	Yellowknife Ar	73.13	340	P	P	22 12 50.4	-0.2
YKA	Yellowknife Ar	73.13	340	P	P	22 12 50.4	-0.2
	comp=Z,0.3nm,0.7s,mb3.4,baz=34,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	73.13	340	P	P	22 12 50.4	-0.3
MJAR	Matsushiro Arr	85.96	46	P	P	22 13 59.6	-1.3
	comp=Z,1.2nm,0.7s,mb4.2,baz=284,slow=4.9,SNR=3.0						
WRA	Warramunga Arr	120.71	92	PKP	PKPdf	22 20 11.2	-1.7
	comp=Z,0.2nm,0.3s,baz=316,slow=1.4,SNR=9.9						
ASAR	Alice Springs	122.36	96	PKP	PKPdf	22 20 14.6	-1.4
	comp=Z,0.3nm,0.4s,baz=319,slow=1.4,SNR=4.2						

NEIC ***25*** *22:01:41.9,3357S×7203W,h42km,MD3.7(GUC),After GUC.*

GUC 25 22:01:41.9±0.6,3357S×7203W,h42km±2km,MD3.7, ML2.3,2C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCCH	Las Cruces	0.40	77	⇑*i*P	Pn	22 01 51.3	-0.1
LCCH				*i* S	Sn	22 01 58.4	+0.3
LNV	Longovilo	0.64	127	⇓*i*P	Pn	22 01 54.9	+0.2
LNV				*i* S	Sn	22 02 04.7	+0.9
TACH	Talagante	0.92	96	⇓*i*P	Pn	22 01 58.9	+0.6
TACH				*i* S	Sn	22 02 11.8	+1.5
CHCH	Chadas Angostu	1.20	108	*i* P	Pn	22 02 03.4	+1.2
CHCH				*i* S	Sn	22 02 19.6	+2.2
PCH	Pirque	1.27	93	*e*P	Pn	22 02 03.7	+0.6
PCH				*i* S	Sn	22 02 21.1	+2.2
CACH	El Canelo	1.31	115	*e*P	Pn	22 02 05.6	+1.9
FCH	Farellones	1.47	81	*e*P	Pn	22 02 07.8	+1.9
FCH				*i* S	Sn	22 02 27.5	+3.5
FCH				AML	AML	22 02 29.6	
	comp=E,68nm,0.3s						
CICH	Cipreses	1.53	120	⇑*e*P	Pn	22 02 07.8	+1.0
CICH				*i* S	Sn	22 02 27.6	+2.1
LMEL	Las Melosas	1.55	101

ERM	**Erimo**	**7.07**	**44**	⇑	*e*P		**Pn**	**22 18 24.5**	**+2.3**
INCN	**Inchon**	**7.88**	**275**		*e*Pn		**Pn**	**22 18 32.7**	**-0.6**
INCN					*e*Sn		**Sn**	**22 20 15.4**	**+13**
ASAJ	**Asahikawa**	**8.36**	**32**		P		**Pn**	**22 18 42.7**	**+2.8**
ASAJ	comp=Z,5.0nm,0.3s				pmax	pmax			
ASAJ	comp=Z,3μm,18.3s				MLR	MLR			
ASAJ	**Asahikawa**	**8.36**	**32**		Pn		**Pn**	**22 18 42.6**	**+2.8**
ASAJ	comp=Z,5.4nm,0.3s,baz=219,slow=18,SNR=22				LR	LR		22 21 58.6	
MDJ	comp=Z,3μm,18.2s,baz=184,slow=38 **Mudanjiang**	**9.12**	**327**		P		**Pn**	**22 18 49.3**	**-1.0**
MDJ					S		**Sn**	**22 20 33.8**	**+0.5**
MDJ	comp=Z,31nm,0.6s				AMB	AMB			
MDJ	comp=Z,293nm,5.8s				AMB	AMB			
MDJ	comp=N,11μm,12.6s				LR	LR			
MDJ	comp=E,13μm,10.3s				LR	LR			
MDJ	comp=Z,5μm,11.5s				LR	LR			
YUK	**Yuzh-Kuril'sk**	**9.89**	**43**		P		**Pn**	**22 19 00.5**	**-0.4**
YUK					*e*S		**Sn**	**22 20 57.4**	**+5.1**
YUK	comp=N,270nm,0.5s				pmax	pmax			
YUK	comp=Z,270nm,0.5s				pmax	pmax			
YUK	comp=E,610nm,0.8s				pmax	pmax			
YUK	comp=Z,2μm,1.0s				pmax	pmax			
YUK	comp=N,730nm,0.9s				smax				
YUK	comp=E,360nm,0.9s				smax				
YUK	comp=N,4μm,15.0s				MLR	MLR			
YUK	comp=Z,6μm,15.0s				MLR	MLR			
YUK	comp=E,6μm,16.0s				MLR	MLR			
CN2	**Changchun**	**10.73**	**312**		*e*P		**Pn**	**22 19 15.0**	**+2.6**
CN2					*e*S		**Sn**	**22 21 20.3**	**+7.5**
CN2	comp=Z,30nm,0.8s				AMB	AMB			
CN2	comp=Z,580nm,3.0s				AMB	AMB			
CN2	comp=N,9μm,15.0s				LR	LR			
CN2	comp=E,7μm,15.0s				LR	LR			
CN2	comp=Z,5μm,15.0s				LR	LR			
YSS	**Yuzh-Sakhalins**	**10.85**	**23**		*e*Pn		**Pn**	**22 19 16.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**10.85**	**23**	⇓	*i*P		**Pn**	**22 19 16.0**	**+2.1**
YSS					*e*S		**Sn**	**22 21 17.0**	**+1.4**
YSS	comp=N,160nm,1.0s				pmax	pmax			
YSS	comp=Z,180nm,1.0s				pmax	pmax			
YSS	comp=Z,3μm,17.0s				MLR	MLR			
YSS	comp=N,2μm,19.0s				MLR	MLR			
YSS	comp=E,2μm,16.0s				MLR	MLR			
SNY	**Shenyang**	**11.04**	**299**	⇓	P		**Pn**	**22 19 19.5**	**+3.0**
SNY	comp=Z,34nm,2.0s				AMB	AMB			
SNY	comp=Z,416nm,6.5s				AMB	AMB			
SNY	comp=N,8μm,10.5s				LR	LR			
SNY	comp=E,5μm,12.0s				LR	LR			
SNY	comp=Z,6μm,16.1s				LR	LR			
CBIJ	**Chichi jima**	**11.10**	**153**		LR		LR	22 23 38.1	
	comp=Z,2μm,18.1s,baz=356,slow=38								
HABR	**Khabarovsk**	**11.38**	**355**		*e*P		**Pn**	**22 19 24.7**	**+3.5**
HABR					*e*			22 21 34.8	
DL2	**Dalian**	**11.87**	**283**	⇑	*i*P		**Pn**	**22 19 34.8**	**+6.8**
DL2					S		**Sn**	**22 21 50.5**	**+10**
DL2					SS			22 22 03.5	
DL2					LG1			22 22 54.3	
DL2					LG2			22 23 31.8	
DL2	comp=Z,10.0nm,0.8s				AMB	AMB			
DL2	comp=Z,250nm,8.2s				AMB	AMB			
DL2	comp=N,4μm,11.1s				LR	LR			
DL2	comp=E,3μm,14.1s				LR	LR			
DL2	comp=Z,3μm,15.2s				LR	LR			
KLR	**Kul'dur**	**12.57**	**346**	⇓	*e*P		**Pn**	**22 19 37.8**	**+0.3**
KLR					*e*			22 22 00.0	
KLR	comp=N,1μm,4.5s				pmax	pmax			
KLR	comp=E,600nm,4.5s				pmax	pmax			
KLR	comp=Z,1μm,4.5s				pmax	pmax			
KLR	comp=N,130nm,1.8s				pmax	pmax			
KLR	comp=E,130nm,1.8s				pmax	pmax			
KLR	comp=Z,300nm,1.8s				MLR	MLR			
KLR	comp=N,5μm,12.5s				MLR	MLR			
KLR	comp=Z,21μm,12.5s				MLR	MLR			
UGL	**Uglegorsk**	**12.60**	**17**		*e*P		**Pn**	**22 19 40.0**	**+2.2**
UGL					*e*			22 22 07.0	
UGL	comp=Z,190nm,1.0s				pmax	pmax			
UGL	comp=Z,1μm,2.0s				pmax	pmax			
UGL	comp=N,4μm,15.0s				MLR	MLR			
UGL	comp=E,2μm,15.0s				MLR	MLR			
UGL	comp=Z,3μm,15.0s				MLR	MLR			
NJ2	**Nanjing**	**15.40**	**256**		*e*P		**Pn**	**22 20 16.8**	**+0.8**
NJ2					PP			22 20 28.5	
NJ2					S		**Sn**	**22 23 07.5**	**+0.6**
NJ2	comp=Z,80nm,0.8s				AMB	AMB			
NJ2	comp=Z,590nm,3.9s				AMB	AMB			
NJ2	comp=N,6μm,13.4s				LR	LR			
NJ2	comp=E,5μm,17.7s				LR	LR			
NJ2	comp=Z,5μm,17.7s				LR	LR			
TIA	**Tai'an**	**15.59**	**272**		*e*P		**Pn**	**22 20 20.8**	**+2.4**
TIA					S		**Sn**	**22 23 23.8**	**+12**
TIA	comp=N,4μm,13.0s				LR	LR			
TIA	comp=E,2μm,13.0s				LR	LR			
BJI	**Beijing**	**16.16**	**287**		P		**Pn**	**22 20 26.0**	**+0.1**
BJI					AP		pP	22 20 32.3	+1.7
BJI					S		**Sn**	**22 23 22.5**	**-2.9**
BJI					XS		sS	22 23 41.5	+0.3
BJI	comp=Z,49nm,1.6s				AMB	AMB			
BJI	comp=Z,911nm,3.3s				AMB	AMB			
BJI	comp=N,3μm,11.0s				LR	LR			
BJI	comp=E,3μm,12.9s				LR	LR			
BJI	comp=Z,2μm,29.4s				LR	LR			
BJT	**Baijiatuau**	**16.17**	**286**		*e*Pn		**Pn**	**22 20 26.6**	**+0.7**
BJT	comp=Z,78nm,0.9s				*e*PcP		PcP	22 25 11.7	-9.5
BJT	**Baijiatuau**	**16.17**	**286**		*e*P		**Pn**	**22 20 26.6**	**+0.7**
BJT	comp=Z,78nm,0.9s				pmax	pmax			
HIA	**Hailar**	**17.17**	**320**		*e*Pn		**Pn**	**22 20 39.1**	**+0.5**
HIA	comp=Z,48nm,0.8s				*e*S		**Sn**	**22 24 01.7**	**+12**
HIA	**Hailar**	**17.17**	**320**		*e*P		**Pn**	**22 20 39.1**	**+0.5**
HIA	comp=Z,48nm,0.8s				pmax	pmax			
TATO	**Taipei**	**17.66**	**231**		P		**Pn**	**22 20 46.4**	**+1.6**
YHNB	**Yeheng**	**17.95**	**230**		*e*Pn		**Pn**	**22 20 51.0**	**+2.6**
WHN	**Wuhan**	**19.53**	**257**	⇑	P		**Pn**	**22 21 09.3**	**+1.7**
WHN					S		**Sn**	**22 24 50.5**	**+3.5**
WHN	comp=Z,832nm,12.2s				AMB	AMB			
WHN	comp=Z,9μm,17.1s				LR	LR			
QZH	**Quanzhou**	**19.55**	**237**		P		**Pn**	**22 21 10.8**	**+3.0**
QZH					S		**Sn**	**22 24 48.8**	**+1.3**
QZH	comp=N,3μm,12.0s				LR	LR			
QZH	comp=E,6μm,15.2s				LR	LR			
QZH	comp=Z,5μm,14.7s				LR	LR			
HHC	**Hu-ho-hao-te**	**19.72**	**289**		*e*P		**Pn**	**22 21 09.5**	**-0.3**
HHC					PP			22 21 27.3	
HHC					S		**Sn**	**22 24 44.5**	**-7.1**
HHC					PCP		PcP	22 25 28.8	+1.8
HHC					PCS		PcS	22 29 04.5	+0.3
HHC	comp=Z,36nm,0.9s				AMB	AMB			
HHC	comp=Z,692nm,4.5s				AMB	AMB			
HHC	comp=N,2μm,11.3s				LR	LR			
HHC	comp=E,3μm,11.3s				LR	LR			
HHC	comp=Z,2μm,10.1s				LR	LR			
BTO	**Baotou**	**20.89**	**288**		*i* P		**P**	**22 21 26.0**	**+5.0**
BTO					S		**S**	**22 25 19.0**	**+4.8**
BTO	comp=N,1μm,12.3s,MS4.6				LR	LR			
BTO	comp=E,941nm,14.2s,MS4.6				LR	LR			
NRGR	**Nerungri**	**21.07**	**342**		*e*P		**P**	**22 21 25.5**	**+2.7**
NRGR					S		**S**	**22 25 18.4**	**+0.9**
NRGR	comp=N,20nm,0.5s				smax				
CLNS	**Chul'man**	**21.18**	**342**		*e*P		**P**	**22 21 25.5**	**+1.4**
CLNS					*e*			22 21 37.8	
CLNS					*e*PPP			22 21 49.6	
CLNS					*e*S		**S**	**22 25 12.5**	**-7.3**
CLNS					*e*			22 25 33.9	
CLNS					*e*SS			22 25 45.6	
CLNS	comp=Z,22nm,0.9s,mb4.5				pmax	pmax			
CLNS	comp=N,23nm,1.3s				pmax	pmax			
CLNS	comp=E,7.0nm,0.7s				pmax	pmax			
CLNS	comp=Z,22nm,0.8s,mb4.5				pmax	pmax			
CLNS	comp=N,30nm,1.0s				pmax	pmax			
CLNS	comp=E,14nm,1.0s				smax				
CLNS	comp=E,687nm,12.2s				smax				
CLNS	comp=Z,215nm,11.2s				smax				
CLNS	comp=N,241nm,10.9s				MLR	MLR			
CLNS	comp=N,600nm,11.0s,MS4.6				MLR	MLR			
CLNS	comp=E,1μm,11.0s,MS4.6				MLR	MLR			
CLNS	comp=Z,600nm,11.0s,MS4.2				MLR	MLR			
CIT	**Chita**	**21.98**	**320**		*e*P		**P**	**22 21 32.0**	**-0.7**
CIT					*e*			22 21 55.4	
CIT	comp=Z,172nm,2.9s,mb5.0				pmax	pmax			
PET	**Petropavlovsk**	**22.15**	**37**		*e*P		**P**	**22 21 34.7**	**+0.2**
PET					*e*			22 21 48.9	
PET	**Petropavlovsk**	**22.15**	**37**		*e*P		**P**	**22 21 34.5**	**0.0**
PET					*e*S		**S**	**22 25 28.5**	**-10**
PET	comp=Z,27nm,0.8s,mb4.7				pmax	pmax			
PET	comp=Z,200nm,13.4s				pmax	pmax			
PET	comp=E,700nm,14.1s				smax				
PET	comp=Z,2μm,20.0s,MS4.6				MLR	MLR			
XAN	**Xi'an**	**22.62**	**270**		P		**P**	**22 21 40.5**	**+0.8**
XAN					AP			22 21 48.3	
XAN					S		**S**	**22 25 45.5**	**-2.8**
XAN	comp=Z,13nm,1.0s,mb4.3				AMB	AMB			
XAN	comp=Z,267nm,8.9s				AMB	AMB			
XAN	comp=N,3μm,14.7s,MS4.9				LR	LR			
XAN	comp=E,2μm,16.9s,MS4.9				LR	LR			
XAN	comp=Z,2μm,14.4s,MS4.7				LR	LR			
ENH	**Enshi**	**23.45**	**261**		*e*P		**P**	**22 21 48.1**	**-0.5**
	comp=Z,0.5nm,0.4s								
ULN	**Ulaanbaatar**	**24.08**	**306**		*e*P		**P**	**22 21 53.7**	**-0.5**
	comp=Z,28nm,0.9s,mb4.7								
ULN	**Ulaanbaatar**	**24.08**	**306**		*e*P		**P**	**22 21 53.7**	**-0.5**
ULN	comp=Z,28nm,0.9s,mb4.7				pmax	pmax			
MA2	**Magadan**	**24.26**	**18**	*c*	*i*P		**P**	**22 21 55.0**	**-0.8**
MA2	comp=Z,63nm,0.7s,mb5.2				pmax	pmax			
GZH	**Guangzhou**	**24.37**	**241**		P		**P**	**22 21 53.8**	**-3.2**
GZH					S		**S**	**22 26 10.5**	**-6.5**
GZH	comp=N,5μm,16.9s,MS5.2				LR	LR			
GZH	comp=E,5μm,17.3s,MS5.2				LR	LR			
GZH	comp=Z,6μm,13.0s,MS5.3				LR	LR			
SONM	**Songino Array**	**24.50**	**305**		P		**P**	**22 21 58.1**	**0.0**
SONM								22 25 37.6	
SONM	**Songino Array**	**24.50**	**305**		P		**P**	**22 21 58.1**	**+0.1**
	comp=Z,28nm,1.0s,mb4.8,baz=111,slow=8.8,SNR=55								
SONM					PcP		PcP	22 25 37.6	+1.2
	comp=Z,0.7nm,0.6s,baz=117,slow=3.1,SNR=4.3								
SONM					LR		LR	22 31 46.6	
	comp=Z,3μm,18.8s,MS4.8,baz=107,slow=37								
GUMO	**Guam**	**24.61**	**160**		P		**P**	**22 21 59.3**	**0.0**
YAK	**Yakutsk**	**25.28**	**352**		*e*P		**P**	**22 22 03.2**	**-1.8**
YAK	**Yakutsk**	**25.28**	**352**		*e*P		**P**	**22 22 04.4**	**-0.6**
YAK					*e*			22 22 42.4	
YAK					*e*PPP			22 22 52.5	
YAK					*e*S		**S**	**22 26 35.3**	**+4.3**
YAK					*e*			22 33 02.2	
YAK	comp=Z,61nm,0.9s,mb5.1				pmax	pmax			
YAK	comp=N,82nm,1.6s				pmax	pmax			
YAK	comp=E,33nm,1.6s				pmax	pmax			
YAK	comp=Z,121nm,2.2s,mb5.0				pmax	pmax			
YAK	comp=N,114nm,1.7s				pmax	pmax			
YAK	comp=E,114nm,2.7s				smax				
YAK	comp=N,1μm,7.4s				smax				
YAK	comp=E,830nm,8.5s				MLR	MLR			
YAK	comp=Z,4μm,16.0s,MS5.0				MLR	MLR			
YAK	comp=N,2μm,10.0s				MLR	MLR			
YAK	comp=E,2μm,10.0s				*e*P		**P**	**22 22 04.6**	**-2.0**
BOD	**Bodaibo**	**25.46**	**332**		pmax	pmax			
BOD	comp=Z,12nm,1.7s,mb4.2								
LZH	**Lanzhou**	**26.18**	**278**		*e*P		**P**	**22 22 13.5**	**+0.1**
LZH					PP			22 22 54.3	
LZH					S		**S**	**22 26 41.5**	**-4.2**
LZH	comp=Z,130nm,1.2s,mb5.3				AMB	AMB			
LZH	comp=Z,450nm,4.4s				AMB	AMB			
LZH	comp=E,5μm,14.6s				LR	LR			
LZH	comp=Z,6μm,16.8s,MS5.2				LR	LR			
ZAK	**Zakamensk**	**27.16**	**310**		*e*P		**P**	**22 22 21.7**	**-0.4**
ZAK	comp=Z,16nm,1.1s,mb4.5				pmax	pmax			
IRK	**Irkutsk**	**27.17**	**314**	⇓	*i*P		**P**	**22 22 24.9**	**+2.7**
IRK	comp=Z,58nm,1.5s,mb4.9				pmax	pmax			
TLY	**Talaya**	**27.34**	**313**		P		**P**	**22 22 24.3**	**+0.6**
	comp=Z,263nm,0.9s,mb5.8,SNR=7.8								
TLY	**Talaya**	**27.34**	**313**		*e*P		**P**	**22 22 24.1**	**+0.4**
TLY	**Talaya**	**27.34**	**313**		*e*P		**P**	**22 22 23.8**	**+0.1**
TLY					*e*			22 23 30.4	
TLY	comp=Z,57nm,1.0s,mb5.1				pmax	pmax			
TLY	comp=Z,1μm,14.0s,MS4.7				MLR	MLR			
TLY	**Talaya** SNR=28	**27.34**	**313**		P		**P**	**22 22 24.4**	**+0.7**
TLY	**Talaya** SNR=28	**27.34**	**313**		P		**P**	**22 22 24.4**	**+0.7**
GYA	**Guiyang**	**27.41**	**256**	⇑	*i*P		**P**	**22 22 25.3**	**+0.7**
GYA					PP			22 23 12.3	
GYA					S		**S**	**22 27 03.0**	**-2.3**
GYA	comp=Z,20nm,0.8s,mb4.7				AMB	AMB			
GYA	comp=Z,140nm,4.9s				AMB	AMB			
GYA	comp=N,870nm,17.3s,MS4.5				LR	LR			
GYA	comp=E,650nm,16.6s,MS4.5				LR	LR			
GYA	comp=Z,870nm,17.0s,MS4.4				LR	LR			
SEY	**Seymchan**	**27.60**	**16**	⇑	*e*P		**P**	**22 22 25.1**	**-0.8**
CD2	**Chengdu**	**27.76**	**267**		*e*P		**P**	**22 22 28.5**	**+0.8**
CD2					PP			22 23 16.8	
CD2					S		**S**	**22 27 08.0**	**-2.8**
CD2	comp=Z,40nm,1.2s,mb4.9				AMB	AMB			
CD2	comp=Z,130nm,7.2s				AMB	AMB			
CD2	comp=N,5μm,13.2s,MS5.4				LR	LR			
CD2	comp=E,5μm,13.2s,MS5.4				LR	LR			
CD2	comp=Z,3μm,12.0s,MS5.2				LR	LR			
GTA	**Gaotai**	**28.78**	**286**		P		**P**	**22 22 36.0**	**-0.7**
GTA					PP		PP	22 23 31.0	-10
GTA					PPP			22 23 43.8	
GTA					S		**S**	**22 27 26.3**	**-0.3**
GTA					SS		SS	22 28 56.8	-31
GTA	comp=Z,5.0nm,1.2s,mb4.1				AMB	AMB			
GTA	comp=Z,231nm,4.9s				AMB	AMB			
GTA	comp=N,2μm,19.0s,MS4.8				LR	LR			
GTA	comp=E,2μm,18.6s,MS4.8				LR	LR			
GTA	comp=Z,2μm,18.2s,MS4.7				LR	LR			
MOY	**Mondy**	**28.91**	**312**		*e*P		**P**	**22 22 35.6**	**-2.1**
MOY	comp=Z,29nm,2.8s,mb4.5				pmax	pmax			
QIZ	**Qiongzhong**	**29.50**	**240**		P		**P**	**22 22 40.3**	**-2.9**
QIZ					S		**S**	**22 27 35.5**	**-2.7**
QIZ	comp=Z,122nm,7.7s				AMB	AMB			
KMI	**Kunming**	**31.13**	**257**	⇑	P		**P**	**22 22 58.5**	**+0.8**
KMI					PP		PP	22 24 00.8	-7.0
KMI					PPP			22 24 16.5	
KMI					PCP		PcP	22 25 54.8	+1.9
KMI					S		**S**	**22 28 00.3**	**-3.5**
KMI					PCS		PcS	22 29 37.5	+0.3
KMI					SSS			22 30 08.0	
KMI	comp=Z,35nm,1.0s,mb5.1				AMB	AMB			
KMI	comp=Z,104nm,3.1s				AMB	AMB			
KMI	comp=N,2μm,14.0s,MS5.1				LR	LR			
KMI	comp=E,2μm,15.5s,MS5.1				LR	LR			
KMI	comp=Z,2μm,13.0s,MS5.0				LR	LR			
TIXI	**Tiksi**	**34.81**	**356**		*e*P		**P**	**22 23 27.6**	**-1.7**
TIXI	**Tiksi**	**34.81**	**356**	⇑	*i*P		**P**	**22 23 27.8**	**-1.5**
TIXI					*e*S		**S**	**22 28 58.1**	**-1.9**
TIXI	comp=Z,57nm,0.9s,mb5.5				pmax	pmax			
TIXI	comp=Z,1μm,12.0s,MS4.9				MLR	MLR			
KDM	**Kudat**	**35.02**	**216**	⇑	P		**P**	**22 23 34.6**	**+3.0**
BILL	**Bilibino**	**35.12**	**19**		*e*P		**P**	**22 23 31.2**	**-0.8**
	comp=Z,13nm,0.4s,mb5.2								
BILL	**Bilibino**	**35.12**	**19**	⇑	*e*P		**P**	**22 23 31.2**	**-0.8**
BILL					*e*			22 23 35.3	
BILL					*e*			22 23 43.1	
BILL					*e*			22 31 17.3	
BILL	comp=Z,32nm,1.1s,mb5.2				pmax	pmax			
BILL	comp=Z,900nm,15.0s,MS4.6				MLR	MLR			
KKM	**Kota Kinabalu**	**36.07**	**216**	⇑	P		**P**	**22 23 42.9**	**+2.1**
KKTK	**Khon Kaen**	**36.25**	**244**		P		**P**	**22 23 43.0**	**+0.8**
TSM	**Tawau**	**36.89**	**212**	⇑	P		**P**	**22 23 49.2**	**+1.5**
WMQ	**Urumqi**	**37.28**	**296**		P		**P**	**22 23 50.5**	**-0.3**
WMQ					PP		PP	22 25 17.8	+2.2
WMQ					PPP			22 25 38.0	
WMQ					PCP		PcP	22 26 10.8	+0.6
WMQ					S		**S**	**22 29 36.8**	**-1.7**
WMQ	comp=Z,16nm,1.0s,mb4.8				AMB	AMB			
WMQ	comp=Z,282nm,3.8s				AMB	AMB			
WMQ	comp=N,1μm,17.7s,MS4.8				LR	LR			
WMQ	comp=E,659nm,21.3s,MS4.8				LR	LR			
WMQ	comp=Z,742nm,20.9s,MS4.5				LR	LR			
CHG	**Chiang Mai**	**37.56**	**251**	⇓	P		**P**	**22 23 54.3**	**+0.9**
	comp=Z,38nm,0.9s,mb5.1								
CHTO	**Chiang Mai**	**37.56**	**251**		*e*P		**P**	**22 23 53.9**	**+0.5**
CHTO	**Chiang Mai** SNR=10	**37.56**	**251**		P		**P**	**22 23 54.5**	**+1.1**
CHTO	**Chiang Mai** SNR=10	**37.56**	**251**		P		**P**	**22 23 54.5**	**+1.1**
LSA	**Lhasa**	**38.29**	**272**		P		**P**	**22 24 01.0**	**+1.5**
LSA	**Lhasa**	**38.29**	**272**		*e*P		**P**	**22 24 00.4**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.1								
LSA	**Lhasa**	**38.29**	**272**		*e*P		**P**	**22 24 00.4**	**+0.9**
LSA	comp=Z,4.0nm,0.8s,mb4.2				pmax	pmax			
ZALV	**Zalesovo Beam**	**38.95**	**312**		P		**P**	**22 24 03.0**	**-1.7**
ZALV					PcP		PcP	22 26 13.8	-1.3
ZALV					LR		LR	22 39 14.4	
ZALV	**Zalesovo Beam**	**38.95**	**312**		P		**P**	**22 24 03.0**	**-1.7**
	comp=Z,3.4nm,0.6s,mb4.2,baz=102,slow=6.4,SNR=23								
ZALV					PcP		PcP	22 26 13.8	-1.3
	comp=Z,4.2nm,0.7s,baz=103,slow=2.2,SNR=7.9								
ZALV					LR		LR	22 39 14.4	
	comp=Z,274nm,18.5s,MS4.1,baz=276,slow=35								
ZAL	**Zalesovo**	**38.96**	**312**		P		**P**	**22 24 03.0**	**-1.8**
ZAL								22 26 13.8	
SHL	**Shillong**	**39.49**	**266**		*e*P		**P**	**22 24 11.0**	**+1.4**
NVS	**Novosibirsk**	**39.94**	**314**		*i* P		**P**	**22 24 11.0**	**-1.9**
BTM	**Bintulu**	**40.05**	**218**	⇓	P		**P**	**22 24 15.3**	**+1.0**
MKAR	**Makanchi Array**	**40.73**	**301**		P		**P**	**22 24 18.4**	**-1.2**
MKAR					PcP		PcP	22 26 19.8	-1.2
MKAR					LR		LR	22 41 39.4	
MKAR	**Makanchi Array**	**40.73**	**301**		P		**P**	**22 24 18.4**	**-1.2**
MKAR								22 26 19.8	
MKAR	**Makanchi Array**	**40.73**	**301**		P		**P**	**22 24 18.4**	**-1.2**

comp=Z,4.3nm,0.6s,mb4.3,baz=89,slow=10.0,SNR=40
MKAR PcP PcP 22 26 19.8 -1.2
comp=Z,0.8nm,0.7s,baz=80,slow=3.2,SNR=3.1
MKAR LR LR 22 41 39.4
comp=Z,2µm,18.1s,MS5.0,baz=87,slow=37
SBUM Sibu 41.13 219 ⇓P **P 22 24 24.4 +1.2**
SBUM Sibu 41.13 219 ⇑P **P 22 24 24.9 +1.7**
TAPN Taplejung 42.02 271 *eP* **P 22 24 29.9 -0.6**
comp=Z,13nm,0.8s,mb4.6
ODAN Odare 42.49 271 *eP* **P 22 24 34.8 +0.5**
comp=Z,21nm,0.8s,mb4.8
TNA Tin City 42.72 30 *eP* **P 22 24 36.0 +0.3**
KURK Kurchatov 42.77 308 P **P 22 24 34.4 -1.9**
comp=Z,217nm,0.8s,mb5.9,SNR=25
KURK Kurchatov 42.77 308 *eP* **P 22 24 34.2 -2.1**
comp=Z,30nm,0.8s,mb5.1
KURK Kurchatov 42.77 308 *eP* **P 22 24 34.2 -2.1**
KURK pmax pmax
comp=Z,30nm,0.8s,mb5.1
KURK Kurchatov 42.77 308 P **P 22 24 34.9 -1.4**
SNR=11
KURK Kurchatov 42.77 308 P **P 22 24 34.9 -1.4**
SNR=11
KSM Kuching 42.94 220 *eP* **P 22 24 38.3 +0.3**
KSM Kuching 42.94 220 ⇑P **P 22 24 39.0 +1.1**
JIRN Jiri 43.10 272 *eP* **P 22 24 39.1 -0.2**
comp=Z,32nm,0.7s,mb5.1
KKN Kakani 43.77 273 *eP* **P 22 24 43.9 -0.8**
comp=Z,38nm,0.9s,mb5.1
KTGM Kuala Trenggan 43.95 232 ⇑P **P 22 24 47.5 +1.3**
GKN Gorkha 44.19 274 *eP* **P 22 24 47.0 -1.0**
comp=Z,99nm,1.2s,mb5.4
KOLN Koldanda 45.12 274 *eP* **P 22 24 54.7 -0.8**
comp=Z,79nm,1.4s,mb5.3
KULM Kulim 45.58 235 ⇑P **P 22 25 00.6 +1.4**
KULM Kulim 45.58 235 ⇓P **P 22 25 00.7 +1.6**
IPM Ipoh 45.94 234 ⇓P **P 22 25 04.2 +2.2**
TKM2 Tokmak 2 46.11 297 *eP* **P 22 25 02.7 -0.4**
comp=Z,20nm,1.2s,mb4.9
TKM2 ePcP PcP 22 26 39.8 +0.6
TKM2 Tokmak 2 46.11 297 *eP* **P 22 25 02.7 -0.4**
TKM2 *e* 22 26 39.8
TKM2 pmax pmax
comp=Z,20nm,1.2s,mb4.9
TKM2 Tokmak 2 46.11 297 P **P 22 25 05.8 +2.7**
SNR=8.8
MYKOM Kota Tinggi 46.28 228 ⇓P **P 22 25 06.2 +1.5**
KBK Karagaybulak 46.64 297 P **P 22 25 09.7 +2.4**
SNR=10
USP Ospenovka 46.80 298 P **P 22 25 07.6 -0.9**
SNR=6.4
FRU Bishkek 46.83 297 *eP* **P 22 25 08.0 -0.8**
FRU *e* 22 25 21.5
FRU MLR MLR
comp=Z,2µm,18.0s,MS5.0
AAK Ala-Archa 46.97 297 P **P 22 25 08.2 -1.7**
comp=Z,44nm,0.9s,mb5.4,SNR=5.1
UCH Uchtor 47.06 296 *eP* **P 22 25 11.0 +0.4**
comp=Z,25nm,1.6s,mb4.9
UCH ePcP PcP 22 26 44.2 +1.7
UCH Uchtor 47.06 296 P **P 22 25 13.3 +2.7**
SNR=5.5
EKS2 Erkin-Say 47.47 297 *eP* **P 22 25 13.9 +0.2**
comp=Z,3.1nm,0.8s,mb4.3
EKS2 ePcP PcP 22 26 44.2 +0.2
EKS2 Erkin-Say 47.47 297 P **P 22 25 14.2 +0.4**
SNR=5.1
TTA Tatalina 47.58 35 *eP* **P 22 25 15.0 +0.7**
BRVK Borovoye 47.65 312 P **P 22 25 13.2 -1.8**
comp=Z,63nm,0.9s,mb5.7,SNR=7.2
BRVK Borovoye 47.65 312 *eP* **P 22 25 16.1 +1.1**
AML Almayashu 47.68 296 *eP* **P 22 25 15.3 -0.1**
comp=Z,21nm,0.8s,mb5.2
AML Almayashu 47.68 296 P **P 22 25 18.3 +2.9**
SNR=20
SVW2 Sparrevohn 47.82 37 *eP* **P 22 25 16.2 +0.1**
IMA2 Indian Mountai 48.59 31 *eP* **P 22 25 22.3 +0.2**
KDAK Kodiak Island 49.63 42 P **P 22 25 29.1 -1.1**
comp=Z,20nm,0.7s,mb5.3,baz=272,slow=3.0,SNR=17
KAKA Kakadu 49.73 185 P **P 22 25 28.1 -3.2**
PMR Palmer 50.88 36 *eP* **P 22 25 38.8 -0.7**
comp=Z,17nm,0.9s,mb5.0
PMR Palmer 50.88 36 *eP* **P 22 25 38.8 -0.7**
PMR pmax pmax
comp=Z,17nm,0.9s,mb5.0
COLA College 51.08 32 *eP* **P 22 25 41.4 +0.4**
comp=Z,18nm,0.9s,mb5.0
COLA College 51.08 32 *eP* **P 22 25 41.4 +0.4**
COLA pmax pmax
comp=Z,18nm,0.9s,mb5.0
SML Sawmill 51.23 36 *eP* **P 22 25 42.2 0.0**
HNR Honiara 51.28 150 LR LR 22 44 37.9
comp=Z,423nm,18.9s,MS4.5,baz=356,slow=33
SVE Sverdlovsk 52.46 318 ⇓*eP* **P 22 25 52.9 +1.5**
SVE *eS* **S 22 33 16.6 -1.3**
SVE pmax pmax
comp=Z,11nm,0.7s,mb4.9
SVE MLR MLR
comp=Z,842nm,13.0s,MS5.0
EYAK Cordova Ski Ar 52.66 37 *eP* **P 22 25 52.9 0.0**
comp=Z,21nm,1.0s,mb5.0
EYAK ePcP PcP 22 27 02.5 -0.3
MENT Mentasta 53.16 34 *eP* **P 22 25 57.2 +0.6**
ARU Arti 53.66 318 P **P 22 25 59.6 -0.7**
comp=Z,105nm,0.7s,mb5.9,SNR=5.2
ARU Arti 53.66 318 *eP* **P 22 25 58.1 -2.2**
comp=Z,13nm,0.8s,mb4.9
ARU Arti 53.66 318 *c iP* **P 22 25 58.5 -1.8**
ARU 22 27 01.5
ARU *e* 22 27 58.4
ARU PPP 22 29 04.4
ARU S **S 22 33 31.5 -2.8**
ARU *e*SS SS 22 37 13.2 -1.1
ARU pmax pmax
comp=Z,14nm,0.8s,mb4.9
ARU MLR MLR
comp=Z,700nm,15.0s,MS4.8
EGAK Eagle 53.92 32 *eP* **P 22 26 01.8 -0.3**
HYB Hyderabad 54.30 265 *eP* **P 22 26 05.0 -0.5**
comp=Z,50nm,1.0s,mb5.4
HYB Hyderabad 54.30 265 *eP* **P 22 26 05.0 -0.5**
HYB pmax pmax
comp=Z,50nm,1.0s,mb5.4
HYB Hyderabad 54.30 265 *i* P **P 22 26 05.0 -0.5**
DAWY Dawson 54.83 32 *eP* **P 22 26 09.2 +0.5**
AKTK Aktyubinsk 55.66 311 P **P 22 26 14.1 -0.9**
AKTO Aktyubinsk 55.66 311 P **P 22 26 14.1 -0.9**
comp=Z,3.4nm,0.7s,mb4.5,baz=77,slow=13,SNR=11
FITZ Fitzroy Crossi 55.89 193 *eP* **P 22 26 17.2 +0.4**
comp=Z,12nm,0.8s,mb5.0
INK Inuvik 56.07 27 *eP* **P 22 26 17.3 -0.3**
WB2 Warramunga Arr 56.81 182 *eP* **P 22 26 21.9 -1.4**
WRA Warramunga Arr 56.81 182 P **P 22 26 20.4 -2.9**
comp=Z,6.7nm,0.5s,mb4.9,baz=357,slow=7.6,SNR=44
CTA Charters Tower 57.65 169 *eP* **P 22 26 28.2 -1.1**
comp=Z,9.7nm,1.1s,mb4.8
CTA Charters Tower 57.65 169 *eP* **P 22 26 28.2 -1.1**
CTA pmax pmax
comp=Z,10.0nm,1.1s
CTAO Charters Tower 57.65 169 *eP* **P 22 26 28.1 -1.1**
CTAO ePcP PcP 22 27 17.1 -5.2
SKAG Skagway 58.00 37 *eP* **P 22 26 32.6 +1.3**
comp=Z,20nm,1.2s,mb5.0
PRGR Permogore 58.52 326 *eP* **P 22 26 32.8 -2.1**
PRGR pmax pmax
comp=Z,14nm,0.9s,mb5.0
PALK Pallekele 58.59 254 *eP* **P 22 26 35.3 -0.8**
PALK ePcP PcP 22 27 25.7 -0.7
MBWA Marble Bar 60.10 198 *eP* **P 22 26 45.5 -0.8**
ALE Alert 60.22 3 P **P 22 26 46.3 -0.2**
comp=Z,114nm,0.8s,mb6.0,SNR=11
ASAR Alice Springs 60.53 183 P **P 22 26 48.2 -1.0**
comp=Z,3.7nm,0.8s,mb4.6,baz=8.1,slow=5.7,SNR=29
DLBC Dease Lake 60.93 37 *eP* **P 22 26 52.9 +1.3**
APA Apatity 60.95 335 ⇑*iP* **P 22 26 52.0 +0.4**
APA *i* 22 27 06.6
APA pmax pmax
comp=Z,11nm,0.7s,mb5.1
ARCES ARCESS Array B 62.48 338 P **P 22 27 00.7 -1.3**
ARCES LR LR 22 56 07.8
ARCES ARCESS Array B 62.48 338 P **P 22 27 00.7 -1.3**
comp=Z,4.5nm,0.7s,mb4.7,baz=54,slow=7.7,SNR=10
ARCES LR LR 22 56 07.8
comp=Z,492nm,18.8s,MS4.7,baz=67,slow=38
RES Resolute Bay 63.44 13 *eP* **P 22 27 06.8 -1.5**

JOF Joensuu 63.99 331 *ep* **P 22 27 09.5 -2.5**
DAG Danmarks Havn 65.29 354 ⇑*iP* **P 22 27 19.5 -0.8**
DAG pmax pmax
comp=Z,8.0nm,0.3s,mb5.2
DAG Danmarks Havn 65.29 354 ⇑*iP* **P 22 27 19.5 -0.8**
comp=Z,7.8nm,0.3s,mb5.2
DZM Mont Dzumac 65.30 149 LR LR 22 55 05.5
comp=Z,447nm,18.1s,MS4.7,baz=267,slow=35
YKW3 Yellowknife Ar 65.61 29 *eP* **P 22 27 21.3 -1.2**
OBN Obninsk 65.62 322 ⇓*eP* **P 22 27 21.7 -1.1**
OBN *e* 22 27 32.2
OBN pmax pmax
comp=Z,8.0nm,1.3s,mb4.6
OBN MLR MLR
comp=Z,800nm,15.0s,MS5.0
YKA Yellowknife Ar 65.65 29 P **P 22 27 21.8 -1.0**
YKA Yellowknife Ar 65.65 29 P **P 22 27 21.8 -1.0**
comp=Z,15nm,1.1s,mb5.0,baz=306,slow=6.6,SNR=91
VRSR Storozhevoye 66.22 317 *eP* **P 22 27 27.2 +0.5**
VRSR pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
VRSR pmax pmax
comp=N,5.0nm,0.9s
VRSR pmax pmax
comp=E,4.0nm,0.8s
KAF Kangasniemi 66.37 331 *ep* **P 22 27 25.2 -2.3**
comp=E,9.7nm,0.6s,mb5.0,baz=52,slow=6.0
KAF Kangasniemi 66.37 331 *eP* **P**
KAF 22 27 25.2 -2.3
pmax pmax
comp=Z,10.0nm,0.6s,mb5.0
FIA1 FINESS Array S 66.85 331 *eP* **P 22 27 29.5 -1.0**
FIA1 ePP PP 22 29 58.6 +1.4
FINES FINESS Array B 66.85 331 P **P 22 27 29.1 -1.4**
comp=Z,8.5nm,0.6s,mb5.0,baz=96,slow=6.1,SNR=28
GOF Gofitskoye 67.06 310 *eP* **P 22 27 35.9 +3.7**
GOF pmax pmax
comp=Z,20nm,0.8s,mb5.2
WBK Wadi Bani Khal 67.10 282 ⇓P **P 22 27 32.1 -0.6**
SNR=6.1
WBK Wadi Bani Khal 67.10 282 ⇓P **P 22 27 32.1 -0.6**
SNR=6.1
SMDO Samad 67.58 283 ⇑P **P 22 27 35.6 -0.3**
SNR=7.6
SMDO Samad 67.58 283 ⇑P **P 22 27 35.6 -0.3**
SNR=7.6
ZEI Tsey 67.67 307 *eP* **P 22 27 35.9 -0.2**
ZEI *i* 22 27 44.3
ZEI *e* 22 30 06.8
ZEI pmax pmax
comp=Z,7.0nm,1.0s,mb4.7
KIV Kislovodsk 67.83 309 P **P 22 27 36.3 -0.8**
comp=Z,108nm,1.2s,mb5.8,SNR=6.0
KIV Kislovodsk 67.83 309 *eP* **P 22 27 36.7 -0.4**
KIV Kislovodsk 67.83 309 *eP* **P 22 27 36.2 -0.9**
KIV pmax pmax
comp=Z,23nm,1.2s,mb5.1
KIV MLR MLR
comp=Z,789nm,18.0s,MS5.0
KIV Kislovodsk 67.83 309 P **P 22 27 37.1 0.0**
SNR=6.1
KIV Kislovodsk 67.83 309 P **P 22 27 37.1 0.0**
SNR=6.1
JMDO Jabal Madar 67.91 282 ⇑P **P 22 27 38.2 +0.3**
SNR=6.5
JMDO Jabal Madar 67.91 282 ⇑P **P 22 27 38.2 +0.3**
SNR=6.5
ASHO Ashiyiah 68.27 285 P **P 22 27 40.4 +0.2**
SNR=5.3
ASHO Ashiyiah 68.27 285 P **P 22 27 40.4 +0.2**
SNR=5.3
BSY Bisya 68.41 283 P **P 22 27 41.3 +0.3**
SNR=10
BSY Bisya 68.41 283 P **P 22 27 41.3 +0.3**
SNR=10
STKA Stephens Creek 68.82 175 *eP* **P 22 27 43.3 +0.1**
comp=Z,6.0nm,0.8s,mb4.6
STKA Stephens Creek 68.82 175 P **P 22 27 42.6 -0.6**
comp=Z,7.3nm,0.8s,mb4.7,baz=351,slow=9.2,SNR=9.9
STKA LR LR 23 00 08.1
comp=Z,345nm,19.2s,MS4.6,baz=124,slow=38
NLWA Neilton Lookou 69.49 46 *eP* **P 22 27 48.7 +1.3**
GNW Green Mountain 69.99 45 *eP* **P 22 27 52.3 +1.8**
JCW Jim Creek 70.15 44 P **P 22 27 52.0 +0.6**
MNK Minsk 70.18 324 *eP* **P 22 27 51.0 -0.5**
ANN Anapa 70.59 312 *eP* **P 22 27 53.8 -0.3**
ANN MLR MLR
comp=Z,462nm,14.0s,MS4.9
ANN MLR MLR
comp=N,655nm,14.0s,MS5.1
ANN MLR MLR
comp=E,350nm,14.0s,MS5.1
FMW Mount Fremont 71.00 45 P **P 22 27 57.3 +0.7**
RCM Mount Rainier- 71.02 45 P **P 22 27 58.0 +1.3**
LON Longmire 71.02 45 *eP* **P 22 27 57.7 +1.0**
NLW Nelson Butte 71.09 44 P **P 22 27 57.6 +0.4**
EDM Edmonton 71.65 36 *eP* **P 22 28 00.5 +0.1**
AKASG Malin Array Be 71.77 320 P **P 22 27 59.6 -1.5**
comp=E,8.4nm,0.7s,mb4.8,baz=50,slow=6.2,SNR=25
AKASG LR LR 22 58 57.0
comp=E,337nm,20.3s,MS4.6,baz=60,slow=35
KIEV Kiev 71.78 320 *eP* **P 22 27 59.4 -1.9**
comp=E,15nm,0.8s,mb5.0
KIEV Kiev 71.78 320 *eP* **P 22 27 59.4 -1.8**
KIEV pmax pmax
comp=Z,15nm,0.8s,mb5.0
HOOD Mount Hood Mea 71.92 47 *eP* **P 22 28 04.0 +1.8**
NWAO Narrogin (SRO) 71.99 197 P **P 22 28 02.6 +0.1**
HBO Huckleberry Mo 72.36 48 P **P 22 28 05.8 +0.9**
HAWA Hanford 72.51 45 *eP* **P 22 28 06.3 +0.5**
comp=Z,14nm,0.9s,mb4.9
NB2 NORSAR Subarra 72.52 335 P **P 22 28 03.8 -1.7**
comp=Z,15nm,1.4s,mb4.7,baz=42,slow=6.2
NB2 NORSAR Subarra 72.52 335 P **P 22 28 03.8 -1.7**
NB2 pmax pmax
comp=Z,15nm,1.4s,mb4.7
NOA NORSAR Array B 72.52 335 P **P 22 28 04.2 -1.3**
comp=Z,2.9nm,0.7s,mb4.3,baz=42,slow=6.0,SNR=14
BBOR Butler Butte 72.69 49 P **P 22 28 08.2 +1.4**
NEW Newport 72.73 42 *eP* **P 22 28 07.2 +0.2**
comp=Z,16nm,1.0s,mb4.9
NEW Newport 72.73 42 *eP* **P 22 28 07.2 +0.2**
NEW pmax pmax
comp=Z,16nm,1.0s
VIPM Ingram Point 72.98 47 P **P 22 28 09.2 +0.6**
YBH Yreka Blue Hor 73.33 50 *eP* **P 22 28 11.9 +1.2**
comp=Z,20nm,1.0s,mb5.0
YBH Yreka Blue Hor 73.33 50 *eP* **P 22 28 11.9 +1.2**
YBH pmax pmax
comp=Z,20nm,1.0s
MALT Malatya 73.58 306 *eP* **P 22 28 14.1 +2.0**
MALT Malatya 73.58 306 ⇓*iP* **P 22 28 15.0 +2.8**
RBK Rabkut 73.64 280 ⇑P **P 22 28 11.6 -1.2**
SNR=5.9
RBK Rabkut 73.64 280 ⇑P **P 22 28 11.6 -1.2**
SNR=5.9
WHFO Wadi Hawf 73.74 280 ⇑P **P 22 28 11.3 -2.1**
SNR=5.6
WHFO Wadi Hawf 73.74 280 ⇑P **P 22 28 11.3 -2.1**
SNR=5.6
WALA Waterton Lakes 73.94 40 *eP* **P 22 28 14.7 +0.6**
WDC Whiskeytown Da 74.10 51 *eP* **P 22 28 15.8 +0.5**
comp=Z,26nm,1.1s,mb5.1
WDC Whiskeytown Da 74.10 51 *eP* **P 22 28 15.8 +0.6**
WDC pmax pmax
comp=Z,26nm,1.1s,mb5.1
BSMT Bassoo Peak 74.23 42 *eP* **P 22 28 17.0 +1.1**
ABTO Aybut 74.43 280 ⇑P **P 22 28 15.8 -1.7**
SNR=5.1
ABTO Aybut 74.43 280 ⇑P **P 22 28 15.8 -1.7**
SNR=5.1
GZT Gaziantep 74.68 305 *i* P **P 22 28 17.4 -1.2**
BMO Blue Mountains 74.69 45 *eP* **P 22 28 18.7 +0.2**
comp=Z,14nm,0.9s,mb4.9
BALT Daday 74.88 311 *i* P **P 22 28 22.4 +2.7**
LVV L'vov 74.93 322 *eP* **P 22 28 21.3 +1.5**
LVV *eS* S 22 37 52.9 -4.7
LVV MLR MLR
comp=Z,500nm,18.0s,MS4.9
MSO Missoula 75.32 42 *eP* **P 22 28 22.4 +0.2**
OHCM Honcut 75.49 52 *eP* **P 22 28 23.3 0.0**
FCC Fort Churchill 75.60 25 *eP* **P 22 28 22.6 -0.9**
FFC Flin Flon 75.68 31 P **P 22 28 23.6 -0.5**
comp=Z,140nm,0.9s,mb5.9,SNR=15
FFC Flin Flon 75.68 31 *eP* **P 22 28 23.1 -0.9**
comp=Z,21nm,0.9s,mb5.1
FFC Flin Flon 75.68 31 *eP* **P 22 28 23.1 -1.0**

FFC pmax pmax
comp=Z,21nm,0.9s,mb5.1
KWP Kalwaria 75.70 322 ⇑P **P 22 28 26.8 +2.5**
KWP Kalwaria 75.70 322 ⇑*iP* **P 22 28 26.8 +2.5**
VRI Vrincioaia 76.05 317 ⇑P **P 22 28 27.6 +1.2**
VRI Vrincioaia 76.05 317 ⇑*iP* **P 22 28 27.6 +1.2**
ANTO Ankara 76.23 310 ⇓P **P 22 28 29.0 +1.5**
ANTO Ankara 76.23 310 ⇓*iP* **P 22 28 29.0 +1.5**
KOLS Kolonicke sedl 76.38 322 *eP* **P 22 28 30.0 +1.8**
HRY Holter Researc 76.51 41 P **P 22 28 29.7 +0.7**
STHS Stebnicka Huta 76.56 323 *eP* **P 22 28 30.0 +0.8**
comp=Z,5.2nm,0.8s,mb4.5
STHS Stebnicka Huta 76.56 323 *eP* **P 22 28 30.0 +0.8**
STHS pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
PAHR Pah Rah Range 76.57 50 *eP* **P 22 28 30.1 +0.7**
comp=Z,24nm,1.1s,mb5.0
OJC Ojcow 76.71 324 *eP* **P 22 28 29.6 -0.4**
EGMT Eagleton 76.72 39 *eP* **P 22 28 30.2 +0.1**
comp=Z,14nm,1.0s,mb4.9
LRM Limekiln Ridge 76.75 42 *eP* **P 22 28 30.9 +0.5**
CRVS Cervenica-Dubn 76.80 322 *eP* **P 22 28 31.2 +0.7**
CMB Columbia Colle 76.95 52 *eP* **P 22 28 31.9 +0.3**
comp=Z,17nm,1.1s,mb4.9
CMB ePcP PcP 22 28 42.2 -0.5
CMB Columbia Colle 76.95 52 *eP* **P 22 28 31.9 +0.3**
CMB *e* 22 28 42.2
CMB pmax pmax
comp=Z,17nm,1.1s,mb4.9
DLMT Dillon 76.97 43 *eP* **P 22 28 31.5 -0.1**
NIE Niedzica 77.01 323 *eP* **P 22 28 31.5 -0.2**
HLID Hailey 77.12 45 *eP* **P 22 28 33.3 +0.8**
WAKR Walker 77.26 51 *eP* **P 22 28 34.3 +1.0**
BOZ Bozeman (W) 77.31 42 *eP* **P 22 28 34.1 +0.6**
comp=Z,12nm,1.2s,mb4.7
BOZ Bozeman (W) 77.31 42 *eP* **P 22 28 34.1 +0.6**
BOZ pmax pmax
comp=Z,12nm,1.2s,mb4.7
BMN Battle Mountai 77.44 49 *eP* **P 22 28 38.6 +4.3**
comp=Z,16nm,1.0s,mb4.9
BMN Battle Mountai 77.44 49 *eP* **P 22 28 38.6 +4.3**
BMN pmax pmax
comp=Z,16nm,1.0s,mb4.9
KECS Kecovo 77.56 322 *eP* **P 22 28 34.4 -0.4**
OKC Ostrava-Krasne 77.74 324 *eP* **P 22 28 37.5 +1.7**
OKC AMS AMS 23 05 00.0
comp=Z,900nm,14.1s
NVAR Mina Array Bea 78.01 51 P **P 22 28 38.2 +0.6**
NVAR Mina Array Bea 78.01 51 P **P 22 28 38.2 +0.6**
comp=Z,6.5nm,0.7s,mb4.7,baz=303,slow=3.6,SNR=26
MORC Moravsky Berou 78.07 325 *eP* **P 22 28 36.8 -0.9**
MORC Moravsky Berou 78.07 325 ⇑*iP* **P 22 28 37.5 -0.1**
DPC Dobruska-Polom 78.22 326 *eP* **P 22 28 38.3 -0.2**
DPC AMS AMS 23 03 10.0
comp=Z,700nm,13.7s
PSZ Piszkesteto 78.23 322 *eP* **P 22 28 38.8 +0.2**
comp=Z,17nm,1.4s,mb4.8
PSZ Piszkesteto 78.23 322 *eP* **P 22 28 38.8 +0.2**
PSZ pmax pmax
comp=Z,17nm,1.4s,mb4.8
PSZ Piszkesteto 78.23 322 ⇓*iP* **P 22 28 36.9 -1.7**
UPC Upice 78.25 326 *eP* **P 22 28 40.7 +2.1**
VYHS Vyhne 78.35 323 *eP* **P 22 28 40.2 +1.0**
comp=Z,12nm,1.9s,mb4.5
VYHS Vyhne 78.35 323 *eP* **P 22 28 40.2 +1.0**
VYHS pmax pmax
comp=Z,12nm,1.9s,mb4.5
KOLL Kolacno 78.50 323 *eP* **P 22 28 44.0 +4.0**
MTUM Tungsten Hills 78.51 52 *eP* **P 22 28 41.3 +1.0**
LKWY Lake 78.67 42 *eP* **P 22 28 45.8 +4.7**
GDZ Gediz 78.74 311 *i* P **P 22 28 40.7 -0.8**
IMW Indian Meadow 78.82 43 *eP* **P 22 28 43.5 +1.5**
comp=Z,13nm,0.8s,mb4.9
FLWY Flagg Ranch 78.83 43 *eP* **P 22 28 43.9 +1.9**
comp=Z,39nm,1.4s,mb5.1
PVCC Panska Ves 78.88 326 *eP* **P 22 28 42.2 +0.1**
PVCC AMS AMS 23 03 40.0
comp=Z,800nm,17.5s
DCID1 Drake Creek 78.89 43 *eP* **P 22 28 43.8 +1.5**
TPH Tonopah 78.90 51 *eP* **P 22 28 43.7 +1.2**
comp=Z,25nm,0.8s,mb5.2
TPH Tonopah 78.90 51 *eP* **P 22 28 43.7 +1.2**
TPH pmax pmax
comp=Z,25nm,0.8s,mb5.2
BRG Berggiesshubel 78.90 327 *eP* **P 22 28 44.4 +2.2**
BRG pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
BRG Berggiesshubel 78.90 327 *eP* **P 22 28 44.4 +2.1**
comp=Z,3.8nm,0.7s,mb4.4
RLMT Red Lodge 78.91 41 *eP* **P 22 28 46.5 +4.2**
BZS Buzias 78.92 320 ⇑P **P 22 28 42.1 -0.4**
BZS Buzias 78.92 320 ⇑*iP* **P 22 28 42.1 -0.4**
CLL Collm 78.99 328 *eP* **P 22 28 42.0 -0.7**
comp=Z,11nm,0.8s,mb4.8
CLL *e*S S 22 38 40.0 -1.8
CLL Collm 78.99 328 *eP* **P 22 28 42.0 -0.7**
CLL *e*S S 22 38 40.0 -1.8
CLL pmax pmax
comp=Z,11nm,0.8s,mb4.8
CLL Collm 78.99 328 *i* P **P 22 28 41.7 -1.0**
comp=Z,5.0nm,0.7s,mb4.5
CLL *i* x x 22 28 44.4
comp=Z,11nm,0.8s
CLL *e*S S 22 38 40.0 -1.8
CLL LmH 23 01 00.0
comp=N,800nm,19.1s
CLL LmH 23 01 00.0
comp=E,700nm,20.1s
SMOL Smolenice 79.01 324 *eP* **P 22 28 44.5 +1.7**
MOOW Moose Ponds 79.03 43 *eP* **P 22 28 44.1 +1.1**
TPAW Teton Pass 79.09 43 *eP* **P 22 28 44.6 +1.2**
comp=E,16nm,1.1s,mb4.9
MODS Modra-Piesok 79.18 324 *eP* **P 22 28 43.8 0.0**
HVU Hansel Valley 79.19 45 *eP* **P 22 28 45.0 +1.1**
LOHW Long Hollow 79.19 43 *eP* **P 22 28 45.4 +1.4**
REDW Red Top Meadow 79.22 43 *eP* **P 22 28 45.4 +1.3**
PRU Pruhonice 79.28 326 *eP* **P 22 28 43.4 -0.9**
PRU AMS AMS 23 03 50.0
comp=Z,800nm,17.5s
TREC Trest 79.35 325 *eP* **P 22 28 44.5 -0.2**
TREC AMS AMS 23 03 40.0
comp=Z,700nm,14.4s
ZST Bratislava 79.39 324 *eP* **P 22 28 46.5 +1.6**
ZST LR LR
comp=Z,700nm,16.9s,MS5.1
TRCR Troy Canyon 79.73 49 *eP* **P 22 28 47.8 +0.8**
DAC Darwin (Calif) 79.79 52 *eP* **P 22 28 47.6 +0.2**
GOLH Golhisar 79.85 309 *i* P **P 22 28 47.1 -0.6**
HWUT Hardware Ranch 79.98 45 *eP* **P 22 28 49.5 +1.2**
NKC Novy Kostel 80.02 327 *eP* **P 22 28 48.2 -0.1**
NKC AMS AMS 23 07 20.0
comp=Z,900nm,15.2s
MOX Moxa 80.07 328 *eP* **P 22 28 48.9 +0.3**
comp=Z,14nm,1.7s,mb4.6
MOX
comp=Z,600nm,18.0s
MOX Moxa 80.07 328 *eP* **P 22 28 48.9 +0.3**
MOX pmax pmax
comp=Z,14nm,1.7s,mb4.6
MOX MLR MLR
comp=Z,600nm,18.0s,MS5.0
VTS Vitosha 80.10 316 ⇓P **P 22 28 50.4 +1.5**
VTS Vitosha 80.10 316 ⇓*iP* **P 22 28 50.4 +1.5**
DUG Dugway 80.19 47 *eP* **P 22 28 50.3 +0.8**
TPNV Topopah Spring 80.21 51 *eP* **P 22 28 50.2 +0.6**
comp=Z,20nm,0.8s,mb5.1
TPNV Topopah Spring 80.21 51 *eP* **P 22 28 50.2 +0.6**
TPNV pmax pmax
comp=Z,20nm,0.8s,mb5.1
TAU Tasmania Unive 80.28 172 *eP* **P 22 28 48.9 -0.6**
BW06 Boulder Array 80.33 43 *eP* **P 22 28 50.2 0.0**
PDAR Pinedale Array 80.33 43 P **P 22 28 50.0 -0.1**
comp=Z,8.6nm,0.8s,mb4.7,baz=288,slow=1.8,SNR=49
KHC Kasperske Hory 80.33 326 *eP* **P 22 28 49.5 -0.5**
KHC *ep*P pP 22 28 51.5 -0.3
KHC *ex* x 22 29 06.0
KHC AMS AMS 23 07 50.0
comp=Z,1µm,11.5s
CTU Camp Tracy 80.48 46 *eP* **P 22 28 52.4 +1.4**
GERES GERESS Array B 80.49 326 P **P 22 28 49.5 -1.3**
comp=Z,1.4nm,0.7s,mb4.0,baz=42,slow=6.2,SNR=9.9
GERES LR LR 23 05 26.1
comp=Z,322nm,19.9s,MS4.7,baz=47,slow=36
KDAG Bornova 80.51 311 *i* P **P 22 28 50.0 -1.2**

JLU	Jordanelle	80.71	46	eP		P		22 28 57.2	+5.0
NLU	North Lily Min	80.78	46	eP		P		22 28 54.3	+1.7
DAU	Daniels Canyon	80.95	46	eP		P		22 28 55.0	+1.5
GRA1	Grafenberg Arr	80.95	328	eP		P		22 28 53.0	-0.3
	comp=Z,9.0nm,1.0s,mb4.7								
GRF	Grafenberg Arr	80.95	328	eP		P		22 28 53.0	-0.3
GRF					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7								
GRF	Grafenberg Arr	80.95	328	eP		P		22 28 53.0	-0.3
GRF					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7								
GRF	Grafenberg Arr	80.95	328	eP		P		22 28 53.0	-0.3
	comp=Z,9.0nm,1.0s,mb4.7								
SKO	Skopje	81.49	317	i P		P		22 28 57.5	+1.2
ULM	Lac du Bonnet	81.50	31	P		P		22 28 54.8	-1.5
	comp=Z,15nm,1.1s,mb4.8,baz=315,slow=8.6,SNR=10								
CCUT	Cedar City	81.59	49	eP		P		22 28 57.4	+0.4
CCUT				ePP		PP		22 32 01.3	-1.5
MSU	Marysvale	81.67	48	eP		P		22 28 58.6	+1.3
KRUS	Krusevo	82.00	317	i P		P		22 28 59.1	0.0
PFO	Pinyon Flat Ob	82.19	54	P		P		22 29 00.9	+0.7
	comp=Z,100nm,0.9s,mb5.8,SNR=7.3								
PFO	Pinyon Flat Ob	82.19	54	eP		P		22 28 59.8	-0.4
	comp=Z,18nm,1.0s,mb5.0								
PFO	Pinyon Flat Ob	82.19	54	P		P		22 29 00.0	-0.2
PFO					pmax	pmax			
	comp=Z,16nm,1.0s,mb4.9								
PFO	Pinyon Flat Ob	82.19	54	P		P		22 29 00.0	-0.2
	comp=Z,16nm,1.0s,mb4.9,baz=334,slow=3.1,SNR=9.8								
SRU	San Rafael	82.23	46	eP		P		22 29 01.1	+0.8
APE	Apeiranthos	82.42	311	⇓P		P		22 28 58.2	-3.1
APE	Apeiranthos	82.42	311	⇓iP		P		22 28 58.2	-3.1
AGMN	Agassiz Refuge	83.01	32	eP		P		22 29 06.6	+2.4
BFO	Black Forest	83.22	328	eP		P		22 29 04.1	-1.2
	comp=Z,6.5nm,0.8s,mb4.7								
BFO	Black Forest	83.22	328	eP		P		22 29 04.1	-1.2
BFO					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.7								
GIVF	Givet	83.24	331	eP		P		22 29 03.4	-2.0
RAR	Rarotonga	83.46	123	LR		LR		22 57 49.4	
	comp=Z,380nm,20.8s,MS4.8,baz=292,slow=30								
PHWY	Pilot Hill	83.55	42	eP		P		22 29 11.2	+4.0
PV10	Paradox Valley	83.59	46	eP		P		22 29 07.7	+0.4
CDF	Champ du Feu	83.60	329	eP		P		22 29 05.7	-1.5
	comp=Z,12nm,0.9s,mb4.7								
CDF	Champ du Feu	83.60	329	eP		P		22 29 05.7	-1.5
	comp=Z,5.8nm,0.9s,mb4.7								
CDF	Champ du Feu	83.60	329	eP		P		22 29 05.7	-1.5
CDF					pmax	pmax			
	comp=Z,6.0nm,0.9s,mb4.7								
PV01	Paradox Valley	84.02	46	eP		P		22 29 09.6	0.0
PV01				ePcP		PcP		22 29 13.5	-0.1
WUAZ	Wupatki	84.13	49	eP		P		22 29 11.1	+0.9
SMCO	Snowmass	84.21	44	eP		P		22 29 11.2	+0.6
	comp=Z,7.6nm,0.9s,mb4.8								
HAU	Haudompre	84.30	329	eP		P		22 29 08.9	-1.9
HAU				eMLR		MLR			
	comp=Z,640nm,17.8s,MS4.8								
HAU	Haudompre	84.30	329	eP		P		22 29 08.9	-1.9
HAU				MLR		MLR			
	comp=Z,640nm,17.8s,MS5.0								
MEZF	Maizieres J'vi	84.43	330	eP		P		22 29 10.1	-1.4
ISCO	Idaho Springs	84.52	43	eP		P		22 29 13.1	+1.0
MVCO	Mesa Verde	84.69	47	eP		P		22 29 13.7	+0.7
EYMN	Ely	85.09	30	eP		P		22 29 14.0	-0.8
	comp=Z,14nm,0.9s,mb5.1								
LOR	Lormes	85.90	330	eP		P		22 29 16.9	-2.0
	comp=Z,27nm,1.3s,mb5.0								
LOR				eMLR		MLR			
	comp=Z,597nm,19.2s,MS4.7								
LOR	Lormes	85.90	330	eP		P		22 29 16.9	-2.0
	comp=Z,14nm,1.3s,mb5.0								
LOR				LR		LR			
	comp=Z,600nm,19.3s,MS5.0								
LOR	Lormes	85.90	330	eP		P		22 29 16.9	-2.0
LOR					pmax	pmax			
	comp=Z,14nm,1.3s,mb5.0								
LOR					MLR	MLR			
	comp=Z,600nm,19.3s,MS5.0								
SDCO	Great Sand Dun	86.03	45	eP		P		22 29 20.1	+0.4
	comp=Z,31nm,1.9s,mb5.2								
SDCO				e				22 29 41.7	
LPL	La Plagne	86.10	327	eP		P		22 29 18.5	-1.4
	comp=Z,20nm,1.0s,mb5.0								
LPL	La Plagne	86.10	327	eP		P		22 29 18.5	-1.4
	comp=Z,10nm,1.0s,mb5.0								
LPL	La Plagne	86.10	327	eP		P		22 29 18.5	-1.4
LPL					pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.0								
LPG	La Plagne	86.11	327	eP		P		22 29 18.7	-1.2
	comp=Z,20nm,1.1s,mb5.0								
LPG	La Plagne	86.11	327	eP		P		22 29 18.7	-1.2
	comp=Z,9.9nm,1.1s,mb5.0								
LPG	La Plagne	86.11	327	eP		P		22 29 18.7	-1.2
LPG					pmax	pmax			
	comp=Z,10.0nm,1.1s,mb5.0								
ECSD	EROS,Sioux Fal	86.19	36	eP		P		22 29 19.5	-0.8
SSF	Saint Saulge	86.21	330	eP		P		22 29 18.5	-1.9
SCHQ	Schefferville	86.23	13	P		P		22 29 19.5	-0.8
	comp=Z,4.4nm,0.9s,mb4.7,baz=324,slow=8.7,SNR=9.1								
LDF	La Druitiere	86.34	333	eP		P		22 29 18.8	-2.2
	comp=Z,12nm,0.8s,mb4.9								
LDF	La Druitiere	86.34	333	eP		P		22 29 18.8	-2.2
	comp=Z,6.2nm,0.8s,mb4.9								
LDF	La Druitiere	86.34	333	eP		P		22 29 18.8	-2.2
LDF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.9								
RPZ	Rata Peaks	86.37	156	LR		LR		23 01 53.7	
	comp=Z,413nm,20.7s,MS4.8,baz=249,slow=32								
AVF	Avril sur Loir	86.49	330	eP		P		22 29 19.9	-1.9
	comp=Z,13nm,0.8s,mb4.9								
AVF	Avril sur Loir	86.49	330	eP		P		22 29 19.9	-1.9
	comp=Z,6.4nm,0.8s,mb4.9								
AVF	Avril sur Loir	86.49	330	eP		P		22 29 19.9	-1.9
AVF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.9								
GRR	Gorron	86.78	333	eP		P		22 29 21.4	-1.8
ORIF	Oris-en-Rattie	86.94	327	eP		P		22 29 22.8	-1.2
	comp=Z,12nm,1.0s,mb4.8								
ORIF				eMLR		MLR			
	comp=Z,649nm,18.2s,MS4.8								
ORIF	Oris-en-Rattie	86.94	327	eP		P		22 29 22.8	-1.2
	comp=Z,6.0nm,1.0s,mb4.8								
ORIF	Oris-en-Rattie	86.94	327	eP		P		22 29 22.8	-1.2
ORIF					pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.8								
TCF	Toulx Ste Croi	87.36	330	eP		P		22 29 24.4	-1.6
ANMO	Albuquerque	87.45	47	P		P		22 29 27.1	+0.4
	comp=Z,4.3nm,1.1s,mb4.6								
ANMO				e				22 29 45.5	
ANMO	Albuquerque	87.45	47	P		P		22 29 27.1	+0.4
ANMO					pmax	pmax			
	comp=Z,4.0nm,1.1s								
VIVF	Saint-Julien-l	87.51	328	eP		P		22 29 24.7	-2.1
BNM	Barren Site	87.91	48	P		P		22 29 28.3	-0.6
PPT	Papeete	88.23	114	eLR		LR		22 57 07.3	
	comp=Z,1μm,32.8s								
PPT	Papeete	88.23	114	LR		LR		23 01 41.4	
	comp=Z,240nm,19.7s,MS4.6,baz=308,slow=31								
TAOE	Nuku Hiva Isla	90.02	101	eLR		LR		22 57 49.4	
	comp=Z,2μm,31.4s								
WMOK	Wichita Mounta	91.93	43	P		P		22 29 47.0	-0.7
TBI	Tubuai	91.99	118	eLR		LR		22 58 48.0	
	comp=Z,601nm,30.0s								
LTX	Lajitas	93.10	49	eP		P		22 29 53.7	+0.5
	comp=Z,13nm,1.4s,mb5.2								
LTX	Lajitas	93.10	49	eP		P		22 29 53.7	+0.5
LTX					pmax	pmax			
	comp=Z,13nm,1.4s,mb5.2								
TXAR	Lajitas Array	93.10	49	P		P		22 29 52.9	-0.3
TXAR	Lajitas Array	93.10	49	P		P		22 29 52.9	-0.3
	comp=Z,4.7nm,0.9s,mb4.9,baz=287,slow=2.5,SNR=18								
JCT	Junction City	94.55	46	P		P		22 29 57.9	-1.9
MIAR	Mount Ida	94.81	39	eP		P		22 30 00.5	-0.5
	comp=Z,6.8nm,1.0s,mb5.0								
MIAR	Mount Ida	94.81	39	eP		P		22 30 00.5	-0.5
MIAR					pmax	pmax			
	comp=Z,7.0nm,1.0s,mb5.0								
ESDC	Sonseca Array	95.36	330	P		P		22 30 02.1	-1.3
	comp=Z,0.1nm,0.3s,mb3.7,baz=17,slow=3.5,SNR=2.6								
RKT	Rikitea	102.45	110	eLR		LR		23 03 37.9	
	comp=Z,572nm,27.5s								
TORD	Torodi Ar. Bea	114.38	311	PKP		PKiKP		22 35 16.7	-2.8
	comp=Z,0.5nm,0.9s,baz=22,slow=1.5,SNR=3.8								
SBA	Scott Base	116.19	173	PKPdf		PKPdf		22 35 20.5	-0.5
QSPA	South Pole Qui	126.88	180	ePKPdf		PKPdf		22 35 41.5	0.0
SDV	Santo Domingo	127.62	35	PKP		PKPdf		22 35 43.8	-1.2
	comp=Z,8.7nm,0.7s,baz=20,slow=1.3,SNR=3.3								
ARE	Arequipa	147.81	58	eP		PKPbc		22 36 28.0	+3.5
LPAZ	La Paz	149.90	53	PKPbc		PKPbc		22 36 29.5	-0.3
	comp=Z,4.4nm,0.8s,baz=333,slow=4.7,SNR=11								
SIV	San Ignacio	153.80	41	PKP		PKPdf		22 36 27.7	-3.2
	comp=Z,2.0nm,0.9s,baz=58,slow=4.3,SNR=7.2								
SIV				PKPbc		PKPbc		22 36 38.3	-0.4
	comp=Z,5.1nm,1.0s,baz=272,slow=1.9,SNR=7.1								

GUC 25 22:20:08.2±0.6, 3417S×7007W, h13km±5km, MD3.5, ML2.1, 7C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CICH	Cipreses	0.33	243	⇑iP		Pg	22 20 14.7	-0.2
CICH				i S		Sg	22 20 19.9	+0.5
LMEL	Las Melosas	0.34	340	⇑iP		Pg	22 20 14.9	-0.3
LMEL				i S		Sg	22 20 20.5	+0.7
LMEL					AML	AML	22 20 20.8	
	comp=N,522nm,0.3s							
CACH	El Canelo	0.45	277	⇑iP		Pg	22 20 16.7	-0.4
CACH				i S		Sg	22 20 22.9	-0.1
CHCH	Chadas Angostu	0.54	296	⇑iP		Pg	22 20 18.8	-0.1
CHCH				i S		Sg	22 20 26.2	+0.2
PCH	Pirque	0.66	326	eP		Pg	22 20 20.9	-0.2
PCH				i S		Sg	22 20 30.5	+0.6
ANTU	Antumapu	0.76	322	i S		Sg	22 20 33.3	+0.3
ANTU					AML	AML	22 20 34.1	
	comp=E,122nm,0.2s							
FCH	Farellones	0.86	347	⇑iP		Pg	22 20 24.6	-0.3
FCH				i S		Sg	22 20 37.2	+1.0
FCH					AML	AML	22 20 39.0	
	comp=E,93nm,0.3s							
TACH	Talagante	0.89	305	⇑iP		Pg	22 20 24.9	-0.5
TACH				i S		Sg	22 20 37.0	0.0
SFDO	San Fernando	0.90	240	i P		Pg	22 20 25.0	-0.6
SFDO				i S		Sg	22 20 37.8	+0.4
LNV	Longovilo	1.14	281	⇑iP		Pb	22 20 28.8	-0.8
LNV				i S		Sb	22 20 44.3	0.0
PEL	Peldehue	1.15	333	eP		Pb	22 20 29.5	-0.4
PEL				i S		Sb	22 20 45.6	+1.0
PEL					AML	AML	22 20 48.7	
	comp=E,149nm,0.5s							
LCCH	Las Cruces	1.43	299	i S		Sn	22 20 53.8	+1.3

ISCJB 25 22:22:08.4±1.5, 3718N±004×13649E±008, h8km±9km, Error ellipse: s-maj=10.9km s-min=6.5km az=11.8
JMA 25 22:22:08.8±0.1, 37.17N×13651E, h7km±1km, M3.6
JMA Felt II J1.

ISC 25 22:22:08.7±1.2, 3717N±004×13648E±008, h12km±8km, n6, σ0.34/12, 1C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.34	136	P		Pg	22 22 15.5	-0.1
JJH				S		Sg	22 22 20.2	-0.1
JSZ	Suzu	0.75	68	⇑P		Pg	22 22 22.6	-0.7
JSZ				eS		Sg	22 22 33.8	+0.6
JHG	Hegura jima	0.76	27	P		Pg	22 22 23.2	-0.2
JHG				eS		Sg	22 22 33.7	+0.3
JTT	Ttatey	0.89	129	⇓P		Pg	22 22 25.5	-0.3
JTT				eS		Sg	22 22 37.5	+0.1
JKG	Kaga	0.90	188	⇓P		Pg	22 22 26.2	+0.1
JKG				eS		Sg	22 22 38.2	+0.3
MAT	Matsushiro	1.52	114	P		Pn	22 22 36.0	+0.3
MAT				S		Sn	22 22 55.3	-0.1

IDC 25 22:32:46.5±1.2, 473S×144.07E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.9/14, mbtmp3.9/7, ML4.1/1, Error ellipse: s-maj=44.9km s-min=20.0km az=94.0
NEIC 25 22:32:51.4±0.5, 4.75S×144.22E, h35km, mb4.4/2, Error ellipse: s-maj=15.4km s-min=8.1km az=103.0
ISCJB 25 22:32:54.9±6.1, 4.9S±0.1×144.0E±0.2, h78km±50km, mb4.2/14, Error ellipse: s-maj=42.8km s-min=16.8km az=157.8

ISC 25 22:32:54.8±5.3, 4.8S±0.1×144.1E±0.2, h62km±44km, n27, σ0.56/23, mb4.4/14, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	13.92	235	eP		Pn	22 36 09.1	0.0
	23nm,0.6s							
WB2	Warramunga Arr	17.76	211	eP		Pn	22 36 58.0	+0.1
WRA	Warramunga Arr	17.77	212	P		Pn	22 36 57.9	0.0
	0.7nm,0.3s,baz=33,slow=13,SNR=22							
ASAR	Alice Springs	21.14	207	P		P	22 37 34.0	-0.7
	1.0nm,0.6s,mb3.4,baz=34,slow=7.4,SNR=19							
FITZ	Fitzroy Crossi	22.35	232	eP		P	22 37 47.8	+0.1
	3.7nm,0.4s,mb4.2							
FITZ	Fitzroy Crossi	22.35	232	P		P	22 37 46.2	-1.4
	2.3nm,0.5s,mb3.9,baz=28,slow=23,SNR=12							
STKA	Stephens Creek	27.00	185	P		P	22 38 31.9	+1.0
	1.2nm,0.4s,mb3.8,baz=355,slow=15,SNR=3.6							
KKM	Kota Kinabalu	29.87	291	P		P	22 38 57.4	+0.7
LSA	Lhasa	61.24	308	P		P	22 43 03.4	-0.3
SONM	Songino Array	62.02	332	P		P	22 43 09.4	+0.8
	0.2nm,0.5s,mb3.5,baz=153,slow=5.2,SNR=3.5							
TAPN	Taplejung	63.11	304	eP		P	22 43 16.8	+0.5
	3.4nm,0.5s,mb4.8							
ODAN	Odare	63.20	303	eP		P	22 43 17.0	+0.1
	11nm,1.0s,mb5.0							
JIRN	Jiri	64.48	304	eP		P	22 43 25.8	+0.5
	6.6nm,0.7s,mb4.8							
KKN	Kakani	65.28	303	eP		P	22 43 30.8	+0.3
	11nm,0.7s,mb5.0							
CASY	Casey	65.63	194	P		P	22 43 32.3	+0.3
GKN	Gorkha	65.89	303	eP		P	22 43 34.6	+0.2
	9.4nm,0.6s,mb5.0							
KOLN	Koldanda	66.67	303	eP		P	22 43 39.5	0.0
	6.4nm,0.7s,mb4.8							
MKAR	Makanchi Array	74.78	321	P		P	22 44 28.1	-0.2
	0.9nm,0.6s,mb3.9,baz=96,slow=8.4,SNR=22							
ZALV	Zalesovo Beam	76.51	328	P		P	22 44 37.1	-0.9
	1.4nm,0.5s,mb4.2,baz=114,slow=5.5,SNR=9.2							
KURK	Kurchatov	78.57	324	P		P	22 44 48.8	-0.8
PMR	Palmer	83.44	26	eP		P	22 45 15.3	0.0
BRVK	Borovoye	84.21	324	eP		P	22 45 18.5	-0.9
	3.0nm,0.8s,mb4.5							
QSPA	South Pole Qui	85.12	180	eP		P	22 45 23.4	-0.2
	4.0nm,0.5s,mb4.8							
TORD	Torodi Ar. Bea	142.00	285	PKP		PKPdf	22 52 13.1	-7.8
TORD				PKP		PKPdf	22 52 20.5	-0.3
TORD	Torodi Ar. Bea	142.00	285	PKhKP			22 52 13.1	
	0.2nm,0.5s,baz=78,slow=3.2,SNR=4.4							
TORD				PKP		PKPdf	22 52 20.5	-0.3
	0.8nm,0.9s,baz=64,slow=2.9,SNR=5.1							
SIV	San Ignacio	147.61	130	PKPbc		PKPbc	22 52 33.3	+0.1
	1.5nm,0.5s,baz=238,slow=3.0,SNR=11							
DBIC	Dimbokro	149.06	275	PKPbc		PKPbc	22 52 36.0	-1.1
	1.1nm,0.5s,baz=294,slow=6.2,SNR=4.1							

NIED 25 22:49:00, 3720N×136.50E, h5km, Mw3.6 Best double couple: M0 2.89000×10^14 NP1:φ=137.00000°, δ=49.00000°, λ=-12.00000°. NP2:φ=234.00000°, δ=81.00000°, λ=-138.00000°.
ISCJB 25 22:49:21.0±1.4, 37.19N±004×136.49E±008, h7km±8km, Error ellipse: s-maj=10.8km s-min=6.3km az=8.8
JMA 25 22:49:21.5±0.1, 37.16N×136.52E, h5km±2km, M3.5
JMA Felt I J1.

ISC 25 22:49:21.4±1.2, 3718N±004×13649E±008, h9km±8km, n6, σ0.28/12, 1C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	Hakui	0.35	137	⇓P		Pg	22 49 28.1	-0.1
JJH				S		Sg	22 49 32.9	+0.1
JSZ	Suzu	0.75	69	⇓P		Pg	22 49 35.4	-0.5
JSZ				S		Sg	22 49 45.6	0.0
JHG	Hegura jima	0.75	27	⇑P		Pg	22 49 35.9	0.0
JHG				S		Sg	22 49 46.2	+0.5
JTT	Ttatey	0.89	130	P		Pg	22 49 38.0	-0.5
JTT				S		Sg	22 49 50.4	+0.4
JKG	Kaga	0.91	188	⇓P		Pg	22 49 39.0	+0.1
JKG				eS		Sg	22 49 50.9	+0.2
MAT	Matsushiro	1.52	114	P		Pn	22 49 48.6	-0.2
MAT				S		Sn	22 50 08.9	+0.2

IDC 25 22:55:01.1±1.8, 1284S×16755E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.9/14, mbtmp4.0/5, Error ellipse: s-maj=78.9km s-min=28.1km az=133.0
NEIC 25 22:55:02.3±0.6, 1278S×16757E, h10km, mb4.6/3, Error ellipse: s-maj=16.3km s-min=12.3km az=150.0
ISCJB 25 22:55:05.0±1.0, 128S±0.1×1674E±0.1, h33km, mb4.3/10, Error ellipse: s-maj=20.8km s-min=19.3km az=152.0

ISC 25 22:55:06.6±1.0, 128S±01×1675E±01, h35km, n20, σ0.82/14, mb4.3/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	8.09	293	Pn		Pn	22 57 00.8	-0.9
STKA	Stephens Creek	30.44	227	P		P	23 01 16.3	+0.3
	1.8nm,0.4s,mb4.2,baz=82,slow=9.1,SNR=7.2							
WB2	Warramunga Arr	32.53	253	eP		P	23 01 34.7	+0.2
WRA	Warramunga Arr	32.54	253	P		P	23 01 33.5	-1.1
	0.7nm,0.5s,mb3.9,baz=82,slow=9.1,SNR=4.9							
ASAR	Alice Springs	33.59	246	P		P	23 01 43.8	0.0
	1.9nm,0.6s,mb4.2,baz=74,slow=9.5,SNR=34							
KAKA	Kakadu	34.15	266	eP		P	23 01 49.9	+1.2
	1.5nm,0.3s,mb4.4							
FORT	Forrest	40.49	237	eP		P	23 02 42.4	+0.1
	17nm,0.8s,mb4.8							
MBWA	Marble Bar	46.28	253	P		P	23 03 29.3	+0.2
KLBR	Kellerberrin	49.25	239	eP		P	23 03 51.4	-0.6
	44nm,1.5s,mb5.3							
NWAO	Narrogin (SRO)	49.94	238	eP		P	23 03 56.8	-0.5
	9.0nm,1.1s,mb4.7							
QSPA	South Pole Qui	77.25	180	eP		P	23 06 57.2	+0.5
	2.4nm,0.5s,mb4.4							
SONM	Songino Array	81.04	323	P		P	23 07 19.4	+1.5
	0.4nm,0.9s,mb3.3,baz=125,slow=3.3,SNR=4.2							
MKAR	Makanchi Array	95.92	317	P		P	23 08 30.6	+0.7
	1.2nm,0.7s,mb3.7,baz=111,slow=5.8,SNR=5.7							
PHWY	Pilot Hill	96.13	49	eP		P	23 08 29.4	-1.6
BRVK	Borovoye	104.40	322	ePdif		Pdif	23 09 07.7	0.0
ARCES	ARCESS Array B	118.41	346	PKP		PKPdf	23 13 49.9	0.0
	1.9nm,0.5s,baz=71,slow=1.8,SNR=30							
FINES	FINESS Array B	123.98	339	PKP		PKPdf	23 13 59.7	-1.1
FINES	FINESS Array B	123.98	339	PKP		PKPdf	23 13 59.7	-1.1
	0.4nm,0.6s,baz=30,slow=3.4,SNR=6.3							
NOA	NORSAR Array B	128.78	345	PKP		PKPdf	23 14 10.5	+0.6
	0.4nm,0.6s,baz=83,slow=1.9,SNR=2.7							
KEST	Kesra	149.80	323	PKPbc		PKPbc	23 14 54.0	+0.6
	0.8nm,0.8s,baz=99,slow=15,SNR=5.1							

ISCJB 25 23:03:37.0±1.9, 103S±0.1×1616E±0.2, h88km±15km, mb3.7/5, Error ellipse: s-maj=29.4km s-min=11.9km az=151.0
IDC 25 23:03:38.2±5.6, 1029S×16154E, h83km±38km, mb3.6/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.6/5, MS3.6/1, Ms1 3.5/1, ms1mx2.9/15, Error ellipse: s-maj=48.2km s-min=29.0km az=122.0

ISC 25 23:03:37.4±1.8, 102S±01×1617E±01, h77km±14km, n9, σ0.79/10, mb3.7/5, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.85	295	P		Pn	23 04 07.3	+0.1
	89nm,0.3s,baz=91,slow=1.3,SNR=12							
HNR				S		Sn	23 04 29.6	-0.3
	344nm,0.3s,baz=255,slow=19,SNR=7.7							
DZM	Mont Dzumac	12.64	159	eP		Pn	23 06 39.9	+5.7
DZM				eS		Sn	23 08 52.8	-0.3
CTA	Charters Tower	17.78	235	P		Pn	23 07 41.8	+2.0
	0.4nm,0.3s,baz=56,slow=9.5,SNR=4.2							
WRA	Warramunga Arr	28.04	247	P		P	23 09 20.9	-0.7
	0.7nm,0.5s,mb3.5,baz=78,slow=9.0,SNR=3.9							
STKA	Stephens Creek	28.43	218	LR		LR	23 20 00.6	
	comp=Z,102nm,18.9s,baz=236,slow=35							
FITZ	Fitzroy Crossi	35.73	253	P		P	23 10 28.0	-0.9
	0.6nm,0.4s,mb3.9,baz=53,slow=15,SNR=3.0							
SONM	Songino Array	75.66	325	P		P	23 15 14.7	+0.5
	1.5nm,0.7s,mb3.9,baz=141,slow=5.4,SNR=14							
MKAR	Makanchi Array	90.19	318	P		P	23 16 28.7	-0.5
	0.1nm,0.4s,mb3.3,baz=91,slow=5.0,SNR=6.0							
YKA	Yellowknife Ar	96.11	28	P		P	23 16 56.5	+0.4
	0.2nm,0.4s,mb3.9,baz=264,slow=4.8,SNR=7.2							

IDC 25 23:13:38.4±4.1, 608S×15037E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.2/13, mbtmp3.3/2, Error ellipse: s-maj=173.9km s-min=47.6km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.80	227	P		P	23 18 21.2	-0.2
	1.2nm,0.5s,baz=53,slow=11,SNR=8.0							
ASAR	Alice Springs	23.59	220	P		P	23 18 51.0	-0.2
	0.4nm,0.7s,baz=56,slow=8.5,SNR=3.6							
TORD	Torodi Ar. Bea

0.1nm,0.3s,baz=75,slow=11,SNR=5.2
FINES FINESS Array B 23.43 7 P **P 23 51 10.6 -2.6**
FINES FINESS Array B 23.43 7 P **P 23 51 10.6 -2.6**
0.7nm,0.6s,mb3.3,baz=169,slow=11,SNR=6.8
NB2 NORSAR Subarra 23.48 349 P **P 23 51 13.1 -0.5**
comp=Z,1.2nm,0.9s,mb3.3,baz=161,slow=11
NOA NORSAR Array B 23.48 349 P **P 23 51 10.3 -3.3**
comp=Z,0.3nm,0.6s,mb2.9,baz=169,slow=13,SNR=3.2
TORD Torodi Ar. Bea 30.07 219 P **P 23 52 12.8 -0.7**
comp=Z,0.5nm,0.8s,mb3.3,baz=34,slow=9.5,SNR=2.3
MKAR Makanchi Array 45.32 58 P **P 23 54 19.2 -2.7**
MKAR Makanchi Array 45.32 58 P **P 23 54 19.2 -2.7**
comp=Z,0.5nm,0.5s,mb3.6,baz=276,slow=7.3,SNR=9.6
ZALV Zalesovo Beam 45.68 48 P **P 23 54 23.4 -1.2**
comp=Z,1.1nm,0.4s,mb4.1,baz=274,slow=7.9,SNR=9.2

NNC 25 23:46:14.3±13.0, 3679N×7043E, h91km±326km, mb3.3, mpv3.7, 1C-3D, Error ellipse: s-maj=109.0km s-min=86.9km az=176.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.31**	**1**	⇓P	Pn	23 47 46.0	+1.4
	4.1nm,0.5s,baz=175,slow=13,SNR=82						
KK31				⇓S	Sn	23 48 55.8	+0.7
	6.7nm,0.5s,baz=185,slow=22						
TKM2	**Tokmak 2**	**7.30**	**31**	⇑P	Pn	23 47 56.9	-1.1
	2.3nm,0.6s						
TKM2				⇓S	Sn	23 49 20.1	+0.9
	3.1nm,0.8s						
AB31	**Akbulak array**	**14.61**	**332**	P	Pn	23 49 36.5	+0.3
	0.7nm,0.6s,baz=151,slow=11,SNR=14						

IDC 25 23:47:21.1±3.4, 4579N×15340E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.6/21, mbtmp3.6/8, Error ellipse: s-maj=104.4km s-min=26.1km az=6.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**43.34**	**307**	P	P	23 55 25.0	+0.5
	0.4nm,0.6s,baz=52,slow=9.5,SNR=2.4						
MKAR	**Makanchi Array**	**47.56**	**298**	P	P	23 55 57.3	-0.8
	0.3nm,0.5s,baz=67,slow=7.7,SNR=4.4						
YKA	**Yellowknife Ar**	**51.58**	**36**	P	P	23 56 27.9	-0.5
	0.5nm,0.8s,baz=295,slow=6.9,SNR=4.6						
NVAR	**Mina Array Bea**	**62.71**	**62**	P	P	23 57 48.2	+0.6
	0.5nm,0.6s,baz=304,slow=6.4,SNR=4.1						
FINES	**FINESS Array B**	**65.00**	**335**	P	P	23 58 01.8	-0.5
	0.6nm,0.5s,baz=39,slow=7.1,SNR=9.3						
NOA	**NORSAR Array B**	**69.20**	**341**	P	P	23 58 30.1	+1.0
	0.4nm,0.7s,baz=25,slow=6.2,SNR=2.8						
AKASG	**Malin Array Be**	**72.46**	**327**	P	P	23 58 49.5	+0.5
	0.4nm,0.4s,baz=33,slow=6.2,SNR=2.4						
TXAR	**Lajitas Array**	**77.80**	**61**	P	P	23 59 20.3	+0.1
	0.4nm,0.7s,baz=312,slow=4.3,SNR=4.9						

WEL 26 00:07:12.9±0.3, 3892S×17541E, h211km±2km, ML3.6/10, Error ellipse: s-maj=4.0km s-min=2.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOVZ	**Moawhango**	**0.55**	**151**	SN	S	00 08 03.1	-0.7
BKZ	**Black Stump Fm**	**0.88**	**107**	PN	Pn	00 07 43.0	0.0
BKZ				SN	S	00 08 06.5	+0.1
WAZ	**Wanganui**	**0.90**	**201**	PN	Pn	00 07 43.1	-0.1
WAZ				*e*SN	S	00 08 05.9	-0.9
MRZ	**Mangatainoka R**	**1.74**	**176**	PN	Pn	00 07 49.7	0.0
MRZ				SN	S	00 08 18.5	-0.1
BFZ	**Birch Farm**	**1.87**	**160**	PN	Pn	00 07 51.0	+0.1
BFZ				SN	S	00 08 20.1	-0.7
KIW	**Kapiti Island**	**1.98**	**191**	PN	Pn	00 07 51.2	-0.8
CAW	**Cannon Point**	**2.20**	**187**	PN	Pn	00 07 53.5	-0.7
DUWZ	**D'Urville Isla**	**2.20**	**211**	PN	Pn	00 07 52.7	-1.6
MTW	**Mount Morrison**	**2.24**	**178**	PN	Pn	00 07 53.9	-0.6
MRW	**Makara Radio**	**2.37**	**193**	PN	Pn	00 07 54.9	-1.1
TCW	**Tory Channel**	**2.45**	**200**	PN	Pn	00 07 55.7	-1.2
TUWZ	**Tuamarina**	**2.75**	**204**	PN	Pn	00 07 58.7	-1.5
NNZ	**Nelson**	**2.77**	**214**	PN	Pn	00 07 58.0	-2.4
QRZ	**Quartz Range**	**2.92**	**228**	PN	Pn	00 07 58.4	-3.8
THZ	**Tophouse**	**3.42**	**213**	PN	Pn	00 08 04.9	-3.1
KHZ	**Kahutara**	**3.77**	**202**	PN	Pn	00 08 10.3	-1.9
LTZ	**Lake Taylor**	**4.53**	**211**	PN	Pn	00 08 18.2	-3.4
MQZ	**McQueen's Vall**	**5.21**	**203**	*e*PN	Pn	00 08 26.3	-3.8

*ISCJB **26** 00:10:39.8±0.8, 3834N×2036E×007, h10km, Error ellipse: s-maj=8.3km s-min=3.3km az=157.8*
*CSEM **26** 00:10:39.6±0.2, 3830N×2035E, h0km±1km, ML3.9, Error ellipse: s-maj=4.0km s-min=1.8km az=63.0*
*ATH **26** 00:10:39.4, 3836N×2050E, h5km, MD3.6/8, ML3.9*
*NEIC **26** 00:10:39.5, 3836N×2050E, h5km, ML3.9(ATH), ML3.8(THE), After ATH.*
*THE **26** 00:10:40.6, 3836N×2043E, h3km, ML3.8*
ISC 26 00:10:40.4±0.8, 3832N±003×2037E±007, h10km, n35, σ1§20/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.22**	**130**	*e*PG	**Pg**	**00 10 43.4**	**-1.5**
VLS				*e*SG	**Sg**	**00 10 47.0**	**-1.0**
KFL	**Anninata**	**0.39**	**122**	*e*Pg	**Pg**	**00 10 46.1**	**-1.9**
RLS	**Riolos of Patr**	**0.90**	**106**	*e*PG	**Pg**	**00 10 55.0**	**-2.7**
SELA	**Sela**	**1.20**	**92**	*e*Pg	**Pg**	**00 11 00.3**	**-3.1**
SELA				*e*Sg	**Sg**	**00 11 18.9**	**0.0**
IGT	**Igoumenitsa**	**1.21**	**359**	*e*Pg	**Pg**	**00 11 01.2**	**-2.5**
IGT				*e*Sg	**Sg**	**00 11 19.9**	**+0.5**
EVR	**Evrytania**	**1.27**	**62**	*e*PN	**Pn**	**00 11 01.1**	**-3.1**
JAN	**Janina**	**1.39**	**15**	*e*PB	**Pb**	**00 11 05.3**	**-1.1**
KEK	**Kerkira**	**1.46**	**342**	*e*PG	**Pg**	**00 11 06.8**	**-1.6**
MEV	**Metsovon**	**1.61**	**24**	*e*Pg	**Pn**	**00 11 08.5**	**-0.3**
MEV				*e*Sg	**Sg**	**00 11 31.5**	**-0.6**
ITM	**Ithomi**	**1.68**	**132**	*e*PB	**Pb**	**00 11 11.3**	**0.0**
AGG	**Agios Georgios**	**1.69**	**65**	*e*Pb	**Pn**	**00 11 09.0**	**-0.8**
AGG				*e*Sb	**Sb**	**00 11 32.6**	**-0.1**
THL	**Klokotos Trika**	**1.79**	**45**	*e*PB	**Pn**	**00 11 11.6**	**+0.4**
PYL	**PYLOS**	**1.79**	**142**	*e*Pn	**Pn**	**00 11 11.6**	**+0.3**
PYL				*e*Sb	**Sb**	**00 11 37.7**	**+2.0**
VLX	**Vlachokerasia**	**1.85**	**120**	*e*Pb	**Pb**	**00 11 14.0**	**-0.2**
LTK	**Loutraki**	**2.07**	**97**	*e*Pn	**Pn**	**00 11 15.7**	**+0.7**
LKR	**Lokris**	**2.09**	**80**	*e*PN	**Pn**	**00 11 16.4**	**+1.0**
DID	**Didima**	**2.41**	**109**	*e*Pn	**Pn**	**00 11 20.1**	**+0.3**
DID	**Didima**	**2.41**	**109**	*e*Pn	**Pn**	**00 11 20.0**	**+0.2**
LIT	**Litokhoron**	**2.42**	**42**	*e*Pn	**Pn**	**00 11 21.7**	**+1.7**
XOR	**Xorichti**	**2.44**	**64**	*e*Pn	**Pn**	**00 11 20.6**	**+0.4**
NAIG	**Nisos Aigina**	**2.52**	**102**	*e*PN	**Pn**	**00 11 23.5**	**+2.1**
FNA	**Florina**	**2.58**	**17**	*e*Pn	**Pn**	**00 11 22.4**	**+0.3**
VLI	**Veliai**	**2.59**	**127**	*e*PG	**Pb**	**00 11 25.6**	**-1.3**
ATH	**Athens Observa**	**2.66**	**96**	*e*PN	**Pn**	**00 11 24.6**	**+1.4**
PTL	**Penteli**	**2.77**	**95**	*e*PN	**Pn**	**00 11 25.5**	**+0.8**
BIA	**Bitola**	**2.79**	**15**	*e*Pn	**Pn**	**00 11 25.2**	**+0.1**
BIA	**Bitola**	**2.79**	**15**	*e*Pn	**Pn**	**00 11 25.1**	**0.0**
OHR	**Ohrid**	**2.81**	**7**	*e*Pn	**Pg**	**00 11 34.2**	**0.0**
OHR				*e*Sn	**Sn**	**00 11 59.9**	**+0.7**
AOS	**Alonnisos**	**2.87**	**72**	*e*Pn	**Pn**	**00 11 25.9**	**-0.2**
GRG	**Griva**	**3.06**	**30**	*e*Pn	**Pn**	**00 11 29.5**	**+0.7**
KRUS	**Krusevo**	**3.12**	**12**	*e*Pn	**Pn**	**00 11 30.6**	**+1.1**
SOH	**Sokhos**	**3.40**	**42**	*e*Pn	**Pn**	**00 11 34.8**	**+1.4**
VAY	**Valandovo**	**3.44**	**29**	*e*Pn	**Pb**	**00 11 40.5**	**-0.8**
VAY				*e*Sn	**Sn**	**00 12 19.8**	**+5.0**
STIP	**Stip**	**3.65**	**22**	*e*Pn	**Pn**	**00 11 42.5**	**+5.7**
CHOS	**Chios island**	**4.47**	**87**	*e*Pn	**Pn**	**00 11 50.6**	**+2.5**

IDC 26 00:35:26.8±3.4, 1720S×6907W, h183km±15km, mb3.6/6, mb1 3.7/8, mb1mx3.4/19, mbtmp3.6/8, Error ellipse: s-maj=66.0km s-min=15.4km az=16.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.27**	**45**	P	Pn	00 35 57.7	+0.7
	34nm,0.3s,baz=226,slow=8.2,SNR=760						
LPAZ				S	Sn	00 36 21.7	+1.5
	5.4nm,0.3s,baz=322,slow=19,SNR=9.6						
SIV	**San Ignacio**	**7.76**	**82**	P	Pn	00 37 15.6	-1.3
	2.1nm,0.3s,baz=280,slow=10,SNR=38						
SIV				S	Sn	00 38 43.3	-0.9
	0.8nm,0.3s,baz=327,slow=18,SNR=7.0						

NNA	**Nana**		**9.13**	**304**	P	Pn	00 37 34.8 -0.2
	0.9nm,0.3s,baz=98,slow=12,SNR=2.2						
DBIC	**Dimbokro**		**67.72**	**75**	P	P	00 46 05.3 +0.3
	6.4nm,0.6s,baz=231,slow=6.5,SNR=14						
PDAR	**Pinedale Array**		**70.34**	**329**	P	P	00 46 20.8 +0.4
	0.2nm,0.5s,baz=120,slow=5.4,SNR=3.2						
ULM	**Lac du Bonnet**		**71.19**	**342**	P	P	00 46 24.8 -0.6
	1.0nm,0.4s,baz=180,slow=7.1,SNR=4.1						
TORD	**Torodi Ar. Bea**		**76.09**	**71**	P	P	00 46 54.8 0.0
	4.8nm,0.7s,baz=257,slow=5.4,SNR=100						
ESDC	**Sonseca Array**		**82.89**	**45**	P	P	00 47 32.0 +1.0
	0.1nm,0.5s,baz=52,slow=30,SNR=2.8						
YKA	**Yellowknife Ar**		**87.10**	**341**	P	P	00 47 51.4 +0.1
	0.6nm,0.4s,baz=133,slow=4.9,SNR=15						

*CSEM **26** 00:36:02.5±0.5, 3828N×2034E, h2km, ML3.1, Error ellipse: s-maj=11.2km s-min=3.7km az=61.0*
*ATH **26** 00:36:02.9, 3830N×2047E, h7km, MD3.4/4*
*NEIC **26** 00:36:02.9, 3830N×2047E, h7km, MD3.4(ATH), ML3.1(THE), After ATH.*
*THE **26** 00:36:04.3, 3838N×2042E, h3km, ML3.1*
ISC 26 00:36:01.2±1.6, 3828N±005×2028E±010, h3km±8km, n13, σ0§93/21, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**112**	*e*PG	**Pg**	**00 36 06.2**	**0.0**
VLS				*e*SG	**Sg**	**00 36 09.3**	**-0.3**
RLS	**Riolos of Patr**	**0.96**	**103**	*e*PB	**Pb**	**00 36 18.7**	**-1.7**
IGT	**Igoumenitsa**	**1.25**	**2**	*e*Pg	**Pg**	**00 36 25.8**	**+0.5**
IGT				*e*Sg	**Sg**	**00 36 42.7**	**+1.2**
SELA	**Sela**	**1.27**	**90**	*e*Pg	**Pg**	**00 36 24.2**	**-1.2**
SELA				*e*Sg	**Sg**	**00 36 42.5**	**+0.6**
SELA	**Sela**	**1.27**	**90**	*e*Pg	**Pg**	**00 36 24.2**	**-1.3**
SELA				*e*Sg	**Sg**	**00 36 42.5**	**+0.6**
EVR	**Evrytania**	**1.35**	**61**	*e*PN	**Pn**	**00 36 25.0**	**-2.0**
MEV	**Metsovon**	**1.68**	**26**	*e*Pg	**Pg**	**00 36 32.1**	**-0.5**
MEV				*e*Sg	**Sg**	**00 36 54.2**	**-0.9**
MEV	**Metsovon**	**1.68**	**26**	*e*Pg	**Pg**	**00 36 32.8**	**-0.5**
MEV				*e*Sg	**Sg**	**00 36 54.2**	**-0.9**
AGG	**Agios Georgios**	**1.77**	**64**	*e*Pb	**Pn**	**00 36 33.1**	**+0.4**
AGG				*e*Sb	**Sb**	**00 36 57.1**	**+0.3**
THL	**Klokotos Trika**	**1.86**	**46**	*e*PN	**Pb**	**00 36 36.1**	**+0.2**
VLX	**Vlachokerasia**	**1.89**	**118**	*e*Pb	**Pb**	**00 36 36.6**	**+0.3**
VLX				*e*Sb	**Sg**	**00 37 03.2**	**+1.3**
LTK	**Loutraki**	**2.13**	**96**	*e*Pn	**Pn**	**00 36 38.8**	**+1.1**
XOR	**Xorichti**	**2.52**	**64**	*e*Pn	**Pn**	**00 36 43.5**	**+0.5**

*ISCJB **26** 00:40:31.1±0.5, 696N±006×7306W±007, h162km±6km, mb3.4/7, Error ellipse: s-maj=14.4km s-min=6.4km az=40.0*
*IDC **26** 00:40:31.5±0.7, 671N×7286W, h169km±8km, mb3.2/8, mb1 3.5/10, mb1mx3.3/22, mbtmp3.3/10, MS2.9/1, Ms1 3.0/1, ms1mx2.2/12, Error ellipse: s-maj=22.0km s-min=7.8km az=135.0*
*NEIC **26** 00:40:31.6±1.0, 663N×7287W, h179km±19km, mb3.8/1, Error ellipse: s-maj=43.3km s-min=12.7km az=132.0*
*FUNV **26** 00:40:33.1, 691N×7309W, h158km, MW4.0*
ISC 26 00:40:32.2±0.5, 694N±006×7303W±007, h157km±6km, n25, σ1§02/32, mb3.4/7, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.16**	**38**	*i* P	**Pn**	**00 41 00.2**	**+1.2**
CAPV				*e*S	**Sn**	**00 41 19.9**	**+0.3**
ROSC	**El Rosal**	**2.44**	**212**	P	**Pn**	**00 41 13.1**	**+0.1**
	45nm,0.3s,baz=94,slow=19,SNR=184						
ROSC				S	**Sn**	**00 41 44.0**	**-0.5**
	125nm,0.3s,baz=73,slow=20,SNR=13						
VIGV	**El Vigia**	**2.51**	**41**	*i* P	**Pn**	**00 41 14.8**	**+1.0**
VIGV				*e*S	**Sn**	**00 41 44.8**	**-1.0**
SOCV	**Socops**	**2.54**	**58**	*e*P	**Pn**	**00 41 15.1**	**+1.0**
SOCV				*e*S	**Sn**	**00 41 46.3**	**-0.2**
SDV	**Santo Domingo**	**3.06**	**51**	P	**Pn**	**00 41 21.7**	**+1.1**
	67nm,0.3s,baz=230,slow=4.9,SNR=683						
SDV				S	**Sn**	**00 41 59.4**	**+1.2**
	28nm,0.3s,baz=270,slow=21,SNR=13						
ELOV	**Elorza**	**3.52**	**89**	*e*P	**Pn**	**00 41 26.6**	**+0.1**
VIRV	**Villa del Rosa**	**3.59**	**10**	*i* P	**Pn**	**00 41 26.8**	**-0.6**
VIRV				*e*S	**Sn**	**00 42 08.3**	**-2.0**
SANV	**Sanarito**	**4.29**	**53**	*e*P	**Pn**	**00 41 36.7**	**+0.2**
SANV				*e*S	**Sn**	**00 42 23.9**	**-2.7**
CURV	**Curarigua**	**4.30**	**45**	*e*P	**Pn**	**00 41 36.9**	**+0.2**
DABV	**Dabajuro**	**4.61**	**31**	*e*P	**Pn**	**00 41 41.2**	**+0.6**
DABV				*e*S	**Sn**	**00 42 30.3**	**-3.6**
TEPV	**Terepaima**	**4.84**	**51**	*e*P	**Pn**	**00 41 44.1**	**+0.4**
SIQV	**Siquisique**	**4.87**	**41**	*i* P	**Pn**	**00 41 44.1**	**+0.1**
JACV	**Jacura**	**5.85**	**45**	*e*P	**Pn**	**00 41 57.0**	**0.0**
TURV	**Turiamo**	**6.20**	**55**	*e*P	**Pn**	**00 42 00.8**	**-0.9**
OTAV	**Otavalo**	**8.58**	**219**	*e*Pn	**Pn**	**00 42 30.3**	**-3.0**
	2.5nm,0.6s						
TEIG	**Tepich**	**19.82**	**313**	P	**P**	**00 44 52.3**	**+1.5**
TEIG	**Tepich**	**19.82**	**313**	P	**P**	**00 44 52.3**	**+1.5**
	6.0nm,0.6s,baz=151,slow=13,SNR=4.3						
LPAZ	**La Paz**	**23.59**	**168**	LR	LR	00 55 29.6	
	comp=Z,30nm,20.2s,baz=83,slow=38						
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**00 47 22.5**	**+0.4**
	0.3nm,0.4s,mb3.2,baz=121,slow=8.7,SNR=4.3						
ULM	**Lac du Bonnet**	**47.20**	**340**	P	**P**	**00 48 48.8**	**-0.2**
	0.9nm,0.4s,mb3.7,baz=174,slow=9.2,SNR=3.2						
SCHQ	**Schefferville**	**48.01**	**5**	P	**P**	**00 48 56.0**	**+0.9**
	0.8nm,0.6s,mb3.5,baz=181,slow=9.5,SNR=5.7						
PDAR	**Pinedale Array**	**48.03**	**324**	P	**P**	**00 48 54.8**	**-0.7**
	0.2nm,0.5s,mb3.0,baz=96,slow=8.4,SNR=2.6						
YKA	**Yellowknife Ar**	**63.18**	**340**	P	**P**	**00 50 43.2**	**0.0**
	0.6nm,0.5s,mb3.7,baz=131,slow=6.7,SNR=16						
INK	**Inuvik**	**72.94**	**340**	P	**P**	**00 51 44.2**	**+0.2**
	0.8nm,0.8s,mb3.5,baz=124,slow=3.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**73.63**	**78**	P	**P**	**00 51 45.9**	**-3.2**
	0.3nm,0.9s,mb3.0,baz=289,slow=4.4,SNR=3.5						

*ISK **26** 01:10:56.5, 3547N×2625E, h34km, MD3.9, ML3.7*
*HLW **26** 01:10:57.8, 3591N×2661E, h33km, Mb3.7*
*THE **26** 01:10:58.9, 3562N×2672E, h1km, ML4.1*
*ISCJB **26** 01:10:59.9±0.5, 3556N±002×2669E±002, h28km±5km, mb3.4/5, Error ellipse: s-maj=4.0km s-min=3.2km az=166.9*
*ATH **26** 01:10:59.5, 3565N×2665E, h28km±2km, MD3.9/18, ML4.2*
*NEIC **26** 01:10:59.5, 3565N×2665E, h28km, ML4.2(ATH), ML4.1(THE), After ATH.*
*CSEM **26** 01:11:00.3±0.1, 3554N×2672E, h35km, ML4.2, Error ellipse: s-maj=1.8km s-min=1.5km az=175.0*
*IDC **26** 01:11:03.2±1.1, 3547N×2674E, h46km±16km, mb3.3/5, mb1 3.5/10, mb1mx3.4/24, mbtmp3.4/10, ML3.7/5, Error ellipse: s-maj=20.6km s-min=8.5km az=3.0*
ISC 26 01:10:59.8±0.6, 3561N±002×2665E±002, h12km±4km, n84, σ1§16/103, mb3.4/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.42**	**98**	*e*PB	**Pg**	**01 11 08.8**	**+0.7**
ZKR	**Zakros**	**0.61**	**216**	*e*Pg	**Pg**	**01 11 11.1**	**-0.5**
ZKR				*e*Sg	**Sg**	**01 11 20.9**	**+1.2**
NPS	**Neapolis**	**0.92**	**248**	*e*PN	**Pn**	**01 11 17.5**	**-0.9**
LAST	**Lasithi**	**1.06**	**245**	*e*Pg	**Pg**	**01 11 19.7**	**-0.5**
LAST				*e*Sg	**Sg**	**01 11 35.4**	**+1.4**
NISR	**Nisiros**	**1.07**	**21**	*e*PN	**Pn**	**01 11 19.7**	**-0.9**
XRY	**Khrisi**	**1.07**	**227**	*e*PN	**Pn**	**01 11 20.0**	**-0.6**
THR1	**Thera Island**	**1.23**	**308**	*e*Pg	**Pg**	**01 11 21.9**	**-1.6**
ARG	**Arkhangelos**	**1.34**	**63**	*e*PN	**Pn**	**01 11 24.5**	**+0.3**
ARG				*e*SN	**Sn**	**01 11 41.7**	**-0.2**
DAT	**Datca**	**1.34**	**33**	PN	**Pn**	**01 11 23.4**	**-0.9**
DAT				SN	**Sn**	**01 11 44.7**	**+2.6**
IDI	**Anoyia**	**1.48**	**258**	P	**Pn**	**01 11 26.7**	**+0.6**
	92nm,0.3s,baz=75,slow=16,SNR=185						
IDI				S	**Sn**	**01 11 46.9**	**+1.6**
	236nm,0.3s,baz=150,slow=20,SNR=20						
IDI	**Anoyia**	**1.48**	**258**	P	**Pn**	**01 11 26.7**	**+0.6**
IDI				S	**Sn**	**01 11 46.8**	**+1.5**
BODT	**Bodrum**	**1.54**	**20**	PN	**Pn**	**01 11 26.4**	**-0.7**
BODT				SN	**Sn**	**01 11 46.9**	**-0.1**
BDRM	**Kayabasi**	**1.59**	**23**	*i* P	**Pn**	**01 11 26.3**	**-1.4**
SIVA	**Sivas**	**1.62**	**249**	*e*Pb	**Pb**	**01 11 27.9**	**-1.6**
SIVA				*e*Sb	**Sb**	**01 11 51.6**	**+1.6**
APE	**Apeiranthos**	**1.72**	**328**	*e*Pb	**Pb**	**01 11 28.7**	**-2.5**
APE				*e*Sb	**Sb**	**01 11 49.3**	**-3.5**
APE	**Apeiranthos**	**1.72**	**328**	*e*Pb	**Pb**	**01 11 28.8**	**-2.4**

MLSB	**Milas**		**1.91**	**28**	*e*PN	**Pn**	**01 11 31.9 -0.2**
VAM	**Vamos**		**2.01**	**265**	*e*PN	**Pn**	**01 11 32.6 -0.9**
SMG	**Samos**		**2.10**	**4**	*e*PN	**Pn**	**01 11 34.0 -0.7**
FETY	**Fethiye**		**2.22**	**62**	*e*PN	**Pn**	**01 11 36.2 -0.1**
GVD	**Gavdhos**		**2.24**	**251**	*e*Pn	**Pn**	**01 11 36.2 -0.4**
GVD	**Gavdhos**		**2.24**	**251**	*e*Pn	**Pn**	**01 11 36.2 -0.4**
GVD					*e*Sn	**Sn**	**01 12 06.1 +2.0**
GVD	**Gavdhos**		**2.24**	**251**	*e*Pb	**Pb**	**01 11 39.0 -1.1**
GVD					*e*Sn	**Sn**	**01 12 06.1 +2.0**
KARN	**Karanos**		**2.24**	**266**	*e*Pn	**Pn**	**01 11 35.9 -0.8**
KSL	**Kastellorizon**		**2.44**	**76**	*e*PN	**Pn**	**01 11 40.0 +0.6**
URLA	**Izmir**		**2.75**	**359**	*i* P	**Pn**	**01 11 42.1 -1.5**
BLCB	**Balcova**		**2.79**	**6**	*e*PN	**Pn**	**01 11 42.6 -1.6**
BLCB	**Balcova**		**2.79**	**6**	*e*Pn	**Pn**	**01 11 43.2 -1.0**
CHOS	**Chios island**		**2.81**	**350**	*e*Pn	**Pn**	**01 11 43.8 -0.7**
CHOS					*e*Sn	**Sn**	**01 12 18.8 +0.5**
KDAG	**Bornova**		**2.83**	**10**	*i* P	**Pn**	**01 11 43.1 -1.7**
GOLH	**Golhisar**		**2.85**	**54**	*i* P	**Pn**	**01 11 47.2 +2.1**
ELL	**Elmali**		**2.87**	**66**	*e*PN	**Pn**	**01 11 46.8 +1.6**
DENT	**Denizli**		**2.87**	**41**	*e*PN	**Pn**	**01 11 46.4 +1.1**
KYTH	**Kithira**		**3.01**	**284**	*e*PN	**Pn**	**01 11 47.5 +0.3**
VLI	**Veliai**		**3.21**	**291**	*e*PN	**Pn**	**01 11 49.9 0.0**
MANT	**Manisa**		**3.25**	**27**	*i* P	**Pn**	**01 11 52.6 +2.0**
MANT	**Manisa**		**3.25**	**27**	*i* P	**Pn**	**01 11 52.6 +2.0**
MANT					*i* S	**Sn**	**01 12 30.5 +1.3**
PTL	**Penteli**		**3.31**	**318**	*e*PN	**Pn**	**01 11 51.0 -0.3**
KULA	**Kula-Manisa**		**3.31**	**28**	*e*PN	**Pn**	**01 11 51.6 +0.2**
NAIG	**Nisos Aigina**		**3.33**	**311**	*e*PN	**Pn**	**01 11 51.5 -0.1**
ATH	**Athens Observa**		**3.34**	**316**	*e*PN	**Pn**	**01 11 52.0 +0.3**
DID	**Didima**		**3.34**	**306**	*e*Pn	**Pn**	**01 11 52.2 +0.4**
AKHS	**Akhisar**		**3.39**	**15**	*i* P	**Pn**	**01 11 51.3 -1.2**
AKS	**Akhisar**		**3.39**	**15**	*e*PN	**Pn**	**01 11 52.2 -0.3**
PRK	**Paraskevi**		**3.64**	**355**	*e*PN	**Pn**	**01 11 56.0 +0.1**
BCK	**Bucak**		**3.67**	**59**	*e*PN	**Pn**	**01 11 58.1 +1.8**
ISP	**Isparta**		**3.82**	**53**	*e*PN	**Pn**	**01 11 59.0 +0.7**
ISP	**Isparta**		**3.82**	**53**	*e*Pn	**Pn**	**01 11 56.5 -1.8**
LTK	**Loutraki**		**3.82**	**310**	*e*Pn	**Pn**	**01 11 59.5 +1.3**
LTK	**Loutraki**		**3.82**	**310**	*e*Pn	**Pn**	**01 11 59.5 +1.2**
VLX	**Vlachokerasia**		**3.87**	**298**	*e*PN	**Pn**	**01 11 58.4 -0.6**
ITM	**Ithomi**		**4.12**	**294**	*e*PN	**Pn**	**01 12 04.1 +1.6**
GDZ	**Gediz**		**4.14**	**32**	*i* P	**Pn**	**01 11 59.3 -3.5**
GDZ	**Gediz**		**4.14**	**32**	*i* P	**Pn**	**01 11 59.3 -3.4**
GDZ					*i* S	**Sn**	**01 12 48.2 -2.8**
LKR	**Lokris**		**4.21**	**317**	*e*PN	**Pn**	**01 12 04.6 +0.9**
EZN	**Ezine**		**4.22**	**357**	*e*PN	**Pn**	**01 12 02.9 -0.9**
SHUT	**Suhut-Afyon**		**4.28**	**46**	*e*PN	**Pn**	**01 12 06.4 +1.7**
DST	**Dursunbey**		**4.29**	**21**	*e*PN	**Pn**	**01 12 05.3 +0.6**
XOR	**Xorichti**		**4.65**	**325**	*e*Pn	**Pn**	**01 12 10.1 +0.3**
LEF	**Lefka**		**5.12**	**94**	*e*PN	**Pn**	**01 12 17.9 +1.7**
KONT	**Konya--Tatoy**		**5.14**	**61**	*e*PN	**Pn**	**01 12 17.8 +1.3**
ERMK	**Ermenek**		**5.17**	**77**	*i* P	**Pn**	**01 12 20.5 +3.6**
ERMK	**Ermenek**		**5.17**	**77**	*e*S	**Sn**	**01 13 17.0 +0.6**
KIZT	**Kizilcal**		**5.29**	**50**	*e*PN	**Pn**	**01 12 20.1 +1.5**
VLS	**Valsamata**		**5.50**	**300**	P	**Pn**	**01 12 20.7 -0.7**
CSS	**Prodhromos**		**5.50**	**95**	*e*PN	**Pn**	**01 12 23.1 +1.7**
CSS	**Prodhromos**		**5.50**	**95**	*e*Pn	**Pn**	**01 12 20.1 -1.3**
	14nm,0.8s						
CSS					*e*Sn	**Sn**	**01 13 19.1 -5.4**
CSS	**Prodhromos**	

ASAJ LR LR 01 26 44.8
comp=Z,115nm,20.9s,baz=346,slow=33
HABR Khabarovsk 13.08 286 *e*PN **Pn 01 25 04.5 -0.5**
HABR *e* 01 27 29.7
MJAR Matsushiro Arr 15.46 236 P **Pn 01 25 38.5 +1.3**
comp=Z,0.5nm,0.3s,baz=35,slow=8.9,SNR=6.8
MDJ Mudanjiang 17.28 273 *e*P **Pn 01 25 59.4 -0.9**
comp=Z,5.1nm,0.4s
KSRS Korea Array 21.38 255 P **P 01 26 46.0 -0.6**
comp=Z,1.6nm,0.7s,mb3.5,baz=60,slow=8.3,SNR=5.6
KSRS LR LR 01 33 56.3
comp=Z,16nm,21.8s,MS2.4,baz=60,slow=33
SNY Shenyang 22.33 269 ⇑P **P 01 26 55.3 -1.4**
SNY AMB AMB
comp=Z,7.0nm,0.7s,mb4.2
BILL Bilibino 22.57 12 *e*P **P 01 26 51.6 -7.4**
comp=Z,32nm,1.3s,mb4.6
BILL Bilibino 22.57 12⇓ *e*P **P 01 27 00.1 +1.1**
BILL pmax pmax
comp=Z,21nm,1.1s,mb4.5
GAMB Gambell 25.69 35 *e*P **P 01 27 25.7 -3.1**
BOD Bodaibo 26.74 310 *e*P **P 01 27 36.4 -2.0**
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb3.9
TNA Tin City 27.92 33 *e*P **P 01 27 46.0 -2.9**
comp=Z,2.7nm,0.8s,mb3.9
NJ2 Nanjing 30.58 255 *e*P **P 01 28 12.3 -0.5**
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.1
ULN Ulaanbaatar 31.67 290⇑ *e*P **P 01 28 21.9 -0.3**
SONM Songino Array 32.11 290 P **P 01 28 25.7 -0.3**
comp=Z,0.5nm,0.5s,mb3.6,baz=69,slow=9.7,SNR=5.0
SONM LR LR 01 41 43.6
comp=Z,46nm,19.6s,MS3.2,baz=356,slow=37
TLY Talaya 32.96 298 *e*P **P 01 28 32.7 -0.8**
TLY pmax pmax
comp=Z,3.0nm,1.0s,mb4.2
TLY MLR MLR
comp=Z,70nm,13.0s,MS3.5
ZAK Zakamensk 33.45 296 *e*P **P 01 28 36.0 -1.8**
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
IMA2 Indian Mountai 33.67 36 *e*P **P 01 28 37.0 -2.5**
SML Sawmill 35.73 43 *e*P **P 01 28 56.1 -1.3**
COLA College 35.97 38 *e*P **P 01 28 57.3 -2.1**
comp=Z,4.6nm,0.8s,mb4.5
COLA College 35.97 38 *e*P **P 01 28 57.3 -2.0**
COLA pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
LZH Lanzhou 38.60 273 *e*P **P 01 29 22.5 +0.5**
LZH AP pP 01 29 27.5 -0.7
LZH XP sP 01 29 30.0 -0.7
LZH AMB AMB
comp=Z,21nm,1.4s,mb4.7
LZH AMB AMB
comp=Z,87nm,4.4s
EGAK Eagle 38.83 38 *e*P **P 01 29 21.5 -2.1**
comp=Z,5.7nm,0.8s,mb4.3
GTA Gaotai 39.72 280 *e*P **P 01 29 32.5 +1.2**
GTA AP pP 01 29 37.3 -0.2
GTA XP sP 01 29 40.8 +0.8
GTA AMB AMB
comp=Z,7.0nm,1.2s,mb4.3
INK Inuvik 41.56 32 P **P 01 29 48.0 +1.8**
comp=Z,1.7nm,0.7s,mb3.8,baz=268,slow=7.5,SNR=8.4
DLBC Dease Lake 45.33 46 P **P 01 30 18.7 +2.1**
baz=274,slow=13
MK31 Makanchi Array 47.72 298 *e*P **P 01 30 35.2 -0.4**
MK31 *e*pP pP 01 30 46.5 +4.6
MKAR Makanchi Array 47.72 298 P **P 01 30 35.9 +0.3**
MKAR Makanchi Array 47.72 298 P **P 01 30 35.1 -0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR MLR MLR
comp=Z,43nm,21.5s
MKAR Makanchi Array 47.72 298 P **P 01 30 35.1 -0.4**
comp=Z,3.5nm,0.8s,mb4.5,baz=68,slow=8.2,SNR=20
MKAR LR LR 01 53 16.2
comp=Z,43nm,21.5s,MS3.4,baz=179,slow=39
KURK Kurchatov 48.13 304 *e*P **P 01 30 37.8 -0.9**
comp=Z,8.2nm,0.7s,mb4.9
KURK *e*pP pP 01 30 49.4 +4.4
KURK Kurchatov 48.13 304 *e*P **P 01 30 37.8 -0.9**
KURK *e**PP pP 01 30 49.4 +4.4
KURK pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
YKA Yellowknife Ar 50.77 37 *i* P **P 01 30 59.5 +0.8**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 50.77 37 P **P 01 30 59.5 +0.9**
comp=Z,0.9nm,0.6s,mb3.9,baz=296,slow=7.1,SNR=11
RES Resolute Bay 50.93 19 *e*P **P 01 30 56.8 -3.0**
comp=Z,121nm,0.8s
RES *e*pP pP 01 31 07.0 +1.0
RES Resolute Bay 50.93 19 *e*P **P 01 30 56.8 -2.9**
RES *e**PP pP 01 31 07.0 +0.9
RES pmax pmax
comp=Z,121nm,0.8s
BRVK Borovoye 51.65 310 P **P 01 31 05.3 -0.1**
TAPN Taplejung 54.82 274 *e*P **P 01 31 29.3 +0.2**
comp=Z,11nm,0.9s,mb4.9
EKS2 Erkin-Say 55.04 297 *e*P **P 01 31 31.5 +1.1**
comp=Z,4.4nm,0.9s,mb4.5
EKS2 *e*pP pP 01 31 42.4 +5.6
JIRN Jiri 55.67 275 *e*P **P 01 31 35.7 +0.5**
comp=Z,12nm,0.7s,mb5.1
ARU Arti 55.73 318 *e*P **P 01 31 33.7 -1.5**
comp=Z,7.1nm,0.6s,mb4.9
ARU Arti 55.73 318⇓ *i*P **P 01 31 35.3 +0.1**
ARU pmax pmax
comp=Z,8.0nm,0.6s,mb4.9
EDM Edmonton 56.04 46 *e*P **P 01 31 36.9 -0.5**
KKN Kakani 56.22 276 *e*P **P 01 31 39.8 +0.7**
comp=Z,13nm,0.7s,mb5.1
GKN Gorkha 56.53 277 *e*P **P 01 31 41.5 +0.2**
comp=Z,16nm,0.6s,mb5.2
KOLN Koldanda 57.39 277 *e*P **P 01 31 47.7 +0.3**
comp=Z,17nm,0.8s,mb5.1
PRGR Permogore 58.03 328 *e*P **P 01 31 51.6 +0.2**
PRGR pmax pmax
comp=Z,13nm,0.8s,mb5.0
ARCES ARCESS Array B 58.40 341 P **P 01 31 55.0 +1.1**
comp=Z,6.2nm,0.9s,mb4.6,baz=20,slow=6.5,SNR=12
ARCES LR LR 01 58 49.9
comp=Z,31nm,19.5s,MS3.4,baz=305,slow=38
AKTK Aktyubinsk 59.47 312 P **P 01 32 01.6 -0.1**
AKTO Aktyubinsk 59.47 312 P **P 01 32 01.6 -0.1**
comp=Z,2.3nm,0.7s,mb4.3,baz=54,slow=9.0,SNR=7.4
JOF Joensuu 61.94 334 *e*p **P 01 32 16.8 -1.5**
comp=Z,3.4nm,0.5s,mb4.7
JOF Joensuu 61.94 334 *e*P **P 01 32 16.8 -1.5**
JOF pmax pmax
comp=Z,3.0nm,0.5s,mb4.7
NVAR Mina Array Bea 61.97 63 P **P 01 32 18.9 +0.1**
comp=Z,1.0nm,0.8s,mb4.0,baz=290,slow=4.9,SNR=8.6
TPAW Teton Pass 63.13 54 *e*P **P 01 32 27.9 +1.3**
comp=Z,6.7nm,1.2s,mb4.7
KAF Kangasniemi 64.04 336 *e*p **P 01 32 31.2 -1.0**
comp=Z,2.6nm,0.5s,mb4.5,baz=35,slow=6.2
KAF Kangasniemi 64.04 336 *e*P **P 01 32 31.2 -1.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
PDAR Pinedale Array 64.38 54 P **P 01 32 34.9 +0.1**
comp=Z,1.3nm,0.8s,mb4.0,baz=281,slow=2.3,SNR=11
FINES FINESS Array B 64.64 335 *i* P **P 01 32 37.0 +0.8**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 64.64 335 P **P 01 32 36.2 +0.1**
comp=Z,2.8nm,0.6s,mb4.5,baz=39,slow=7.5,SNR=18
OBN Obninsk 65.98 326⇓ *e*P **P 01 32 45.8 +0.9**
OBN *e* 01 33 12.0
OBN *e*SS SS 01 45 42.3 -3.1
OBN pmax pmax
comp=Z,15nm,1.6s,mb4.8
PV10 Paradox Valley 67.56 58 *e*P **P 01 32 55.8 +0.5**
WRA Warramunga Arr 68.43 200 P **P 01 32 56.7 -4.1**
comp=Z,3.9nm,0.9s,mb4.3,baz=17,slow=6.5,SNR=13
NB2 NORSAR Subarra 68.77 342 P **P 01 33 02.5 0.0**
comp=Z,1.0nm,0.5s,mb4.0,baz=28,slow=6.5
NB2 NORSAR Subarra 68.77 342 P **P 01 33 02.5 0.0**
NB2 pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
NOA NORSAR Array B 68.77 342 P **P 01 33 02.9 +0.4**
comp=Z,1.4nm,0.6s,mb4.0,baz=27,slow=6.4,SNR=12
HFS Hagfors 69.01 340 P **P 01 33 04.9 +0.9**
comp=Z,3.0nm,0.5s,mb4.5,baz=90,slow=8.6,SNR=18

ANMO Albuquerque 71.41 59⇑ *e*P **P 01 33 18.9 -0.2**
ASAR Alice Springs 72.12 199 P **P 01 33 20.7 -2.6**
comp=Z,2.3nm,0.8s,mb4.2,baz=12,slow=5.1,SNR=15
AKASG Malin Array Be 72.21 327 P **P 01 33 23.4 -0.3**
AKASG Malin Array Be 72.21 327 *i* P **P 01 33 26.2 +2.5**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 72.21 327 P **P 01 33 23.4 -0.3**
comp=Z,1.6nm,0.5s,mb4.2,baz=33,slow=6.0,SNR=9.2
ANN Anapa 73.40 318 *e*P **P 01 33 33.7 +2.9**
KWP Kalwaria 75.47 330 *e*P **P 01 33 41.2 -1.6**
EKA Eskdalemuir Ar 76.83 347 P **P 01 33 52.8 +2.4**
comp=Z,1.4nm,0.5s,mb4.1,baz=23,slow=4.7,SNR=9.3
TXAR Lajitas Array 77.04 61 P **P 01 33 51.5 -0.6**
comp=Z,2.8nm,0.8s,mb4.3,baz=302,slow=4.1,SNR=25
CLL Collm 77.06 336 *e*P **P 01 33 51.0 -0.8**
CLL pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
CLL Collm 77.06 336 *e*P **P 01 33 51.0 -0.8**
comp=Z,3.0nm,0.8s,mb4.3
CLL Collm 77.06 336 *e*P **P 01 33 51.0 -0.8**
CLL *i* sP sP 01 33 56.8 -3.9
CLL *i* PcP PcP 01 34 03.0 +0.4
BRG Berggiesshubel 77.18 335 P **P 01 33 53.3 +0.8**
BRG pmax pmax
comp=Z,1.0nm,0.8s,mb3.8
BRG Berggiesshubel 77.18 335 *e*(P) **P 01 33 53.2 +0.8**
comp=Z,2.2nm,0.8s,mb4.2
MLR Muntele Rosu 77.74 326 P **P 01 33 57.0 +1.3**
comp=Z,2.4nm,0.6s,mb4.3,baz=166,slow=2.3,SNR=8.1
MALT Malatya 77.89 314 *e*P **P 01 33 58.1 +1.4**
comp=Z,3.7nm,1.0s,mb4.3
MALT *e*pP pP 01 34 09.1 +5.8
MALT Malatya 77.89 314 *e*P **P 01 33 58.1 +1.4**
MALT *e**PP pP 01 34 09.1 +5.8
MALT pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
KHC Kasperske Hory 78.84 335 *e*P **P 01 34 02.5 +0.8**
GERES GERESS Array B 79.06 335 P **P 01 34 01.0 -1.9**
comp=Z,0.7nm,0.6s,mb3.8,baz=28,slow=6.0,SNR=5.5
GIVF Givet 80.25 341 *e*P **P 01 34 10.2 +0.8**
BAIF Baives 80.44 341 *e*P **P 01 34 10.9 +0.5**
CDF Champ du Feu 81.23 338 *e*P **P 01 34 15.4 +0.8**
comp=Z,4.7nm,0.8s,mb4.2
CDF Champ du Feu 81.23 338 *e*P **P 01 34 15.4 +0.8**
comp=Z,2.3nm,0.8s,mb4.2
CDF Champ du Feu 81.23 338 *e*P **P 01 34 15.4 +0.8**
CDF pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
MEZF Maizieres J'vi 81.70 340 *e*P **P 01 34 17.4 +0.3**
comp=Z,6.9nm,0.6s,mb4.5
MEZF Maizieres J'vi 81.70 340 *e*P **P 01 34 17.4 +0.3**
comp=Z,6.9nm,0.6s,mb4.8
HAU Haudompre 81.84 339 *e*P **P 01 34 18.0 +0.1**
FLN La Foliniere 82.66 343 *e*P **P 01 34 22.3 +0.2**
LDF La Druitiere 82.75 343 *e*P **P 01 34 23.1 +0.5**
GRR Gorron 83.09 344 *e*P **P 01 34 24.9 +0.5**
LOR Lormes 83.13 340 *e*P **P 01 34 24.8 +0.2**
comp=Z,7.6nm,0.9s,mb4.4
LOR Lormes 83.13 340 *e*P **P 01 34 24.8 +0.2**
comp=Z,3.8nm,0.9s,mb4.4
LOR Lormes 83.13 340 *e*P **P 01 34 24.8 +0.2**
LOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
CABF La Chapelle 83.20 338 *e*P **P 01 34 25.2 +0.2**
comp=Z,12nm,1.1s,mb4.5
CABF La Chapelle 83.20 338 *e*P **P 01 34 25.2 +0.2**
comp=Z,5.9nm,1.1s,mb4.5
CABF La Chapelle 83.20 338 *e*P **P 01 34 25.2 +0.2**
CABF pmax pmax
comp=Z,6.0nm,1.1s,mb4.5
SSF Saint Saulge 83.41 340 *e*P **P 01 34 26.5 +0.4**
comp=Z,6.9nm,0.9s,mb4.4
SSF Saint Saulge 83.41 340 *e*P **P 01 34 26.5 +0.4**
comp=Z,3.5nm,0.9s,mb4.4
SSF Saint Saulge 83.41 340 *e*P **P 01 34 26.5 +0.4**
SSF pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
SGMF Saint Gilles 83.54 345 *e*P **P 01 34 27.0 +0.3**
comp=Z,49nm,1.4s,mb5.2
SGMF Saint Gilles 83.54 345 *e*P **P 01 34 27.0 +0.3**
comp=Z,24nm,1.4s,mb5.1
SGMF Saint Gilles 83.54 345 *e*P **P 01 34 27.0 +0.3**
SGMF pmax pmax
comp=Z,24nm,1.4s,mb5.1
ROSF Rostrenen 83.59 345 *e*P **P 01 34 27.2 +0.2**
comp=Z,50nm,1.2s,mb5.2
ROSF Rostrenen 83.59 345 *e*P **P 01 34 27.2 +0.2**
comp=Z,25nm,1.2s,mb5.2
ROSF Rostrenen 83.59 345 *e*P **P 01 34 27.2 +0.2**
ROSF pmax pmax
comp=Z,25nm,1.2s,mb5.2
AVF Avril sur Loir 83.70 340 *e*P **P 01 34 27.4 -0.2**
comp=Z,16nm,1.2s,mb4.7
AVF Avril sur Loir 83.70 340 *e*P **P 01 34 27.4 -0.2**
comp=Z,7.8nm,1.2s,mb4.7
AVF Avril sur Loir 83.70 340 *e*P **P 01 34 27.4 -0.2**
AVF pmax pmax
comp=Z,8.0nm,1.2s,mb4.7
SMF Signal de Mont 83.72 340 *e*P **P 01 34 28.0 +0.3**
comp=Z,23nm,1.2s,mb4.9
SMF Signal de Mont 83.72 340 *e*P **P 01 34 28.0 +0.3**
comp=Z,11nm,1.2s,mb4.9
SMF Signal de Mont 83.72 340 *e*P **P 01 34 28.0 +0.3**
SMF pmax pmax
comp=Z,11nm,1.2s,mb4.9
QUIF Quistinic 83.98 345 *e*P **P 01 34 29.4 +0.4**
comp=Z,40nm,1.2s,mb5.1
QUIF Quistinic 83.98 345 *e*P **P 01 34 29.4 +0.4**
comp=Z,20nm,1.2s,mb5.1
QUIF Quistinic 83.98 345 *e*P **P 01 34 29.4 +0.4**
QUIF pmax pmax
comp=Z,20nm,1.2s,mb5.1
LPL La Plagne 84.05 338 *e*P **P 01 34 30.1 +0.7**
comp=Z,19nm,1.3s,mb4.8
LPL La Plagne 84.05 338 *e*P **P 01 34 30.1 +0.7**
comp=Z,9.4nm,1.3s,mb4.8
LPL La Plagne 84.05 338 *e*P **P 01 34 30.1 +0.7**
LPL pmax pmax
comp=Z,9.0nm,1.3s,mb4.7
LPG La Plagne 84.06 338 *e*P **P 01 34 29.8 +0.4**
comp=Z,20nm,1.2s,mb4.8
LPG La Plagne 84.06 338 *e*P **P 01 34 29.8 +0.4**
comp=Z,10nm,1.2s,mb4.8
LPG La Plagne 84.06 338 *e*P **P 01 34 29.8 +0.4**
LPG pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
TCF Toulx Ste Croi 84.44 341 *e*P **P 01 34 31.3 0.0**
comp=Z,14nm,1.1s,mb4.7
TCF Toulx Ste Croi 84.44 341 *e*P **P 01 34 31.3 0.0**
comp=Z,6.8nm,1.1s,mb4.7
TCF Toulx Ste Croi 84.44 341 *e*P **P 01 34 31.3 0.0**
TCF pmax pmax
comp=Z,7.0nm,1.1s,mb4.7
MFF Saint Martin d 84.65 343 *e*P **P 01 34 32.7 +0.3**
MBDF Montbardon 84.77 337 *e*P **P 01 34 33.4 +0.3**
comp=Z,7.2nm,0.8s,mb4.6
MBDF Montbardon 84.77 337 *e*P **P 01 34 33.4 +0.3**
comp=Z,3.6nm,0.8s,mb4.5
MBDF Montbardon 84.77 337 *e*P **P 01 34 33.4 +0.3**
MBDF pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
ORIF Oris-en-Rattie 84.83 338 *e*P **P 01 34 33.5 +0.2**
comp=Z,12nm,0.9s,mb4.7
ORIF Oris-en-Rattie 84.83 338 *e*P **P 01 34 33.5 +0.2**
comp=Z,6.1nm,0.9s,mb4.7
ORIF Oris-en-Rattie 84.83 338 *e*P **P 01 34 33.5 +0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
VIVF Saint-Julien-l 85.20 339 *e*P **P 01 34 34.6 -0.6**
comp=Z,25nm,1.5s,mb4.8
VIVF Saint-Julien-l 85.20 339 *e*P **P 01 34 34.6 -0.6**
comp=Z,13nm,1.5s,mb4.8
VIVF Saint-Julien-l 85.20 339 *e*P **P 01 34 34.6 -0.6**
VIVF pmax pmax
comp=Z,13nm,1.5s,mb4.8
SBF Sospel 85.39 337 *e*P **P 01 34 36.1 -0.1**
comp=Z,18nm,0.7s,mb5.0
SBF Sospel 85.39 337 *e*P **P 01 34 36.1 -0.1**
comp=Z,9.3nm,0.7s,mb5.0
SBF Sospel 85.39 337 *e*P **P 01 34 36.1 -0.1**
SBF pmax pmax
comp=Z,9.0nm,0.7s,mb5.0
CAF Calviac 85.76 341 *e*P **P 01 34 37.7 -0.3**
comp=Z,12nm,1.2s,mb4.7
CAF Calviac 85.76 341 *e*P **P 01 34 37.7 -0.3**
comp=Z,6.3nm,1.2s,mb4.7
CAF Calviac 85.76 341 *e*P **P 01 34 37.7 -0.3**
CAF pmax pmax
comp=Z,6.0nm,1.2s,mb4.7
SMRF Simiane la Rot 85.79 338 *e*P **P 01 34 38.0 -0.1**
comp=Z,19nm,1.2s,mb4.9
SMRF Simiane la Rot 85.79 338 *e*P **P 01 34 38.0 -0.1**
comp=Z,19nm,1.2s,mb5.2
FRF La Foret Royal 85.89 337 *e*P **P 01 34 38.6 0.0**
LFF La Frestale 86.05 341 *e*P **P 01 34 39.3 -0.1**
LASF Ste Croix 86.13 339 *e*P **P 01 34 39.2 -0.6**
comp=Z,25nm,1.4s,mb5.0
LMR La Mourre 86.14 337 *e*P **P 01 34 39.8 -0.1**
comp=Z,32nm,1.2s,mb5.1
LMR La Mourre 86.14 337 *e*P **P 01 34 39.8 -0.1**
comp=Z,16nm,1.2s,mb5.1
LMR La Mourre 86.14 337 *e*P **P 01 34 39.8 -0.1**
LMR pmax pmax
comp=Z,16nm,1.2s,mb5.1
MTLF Montolieu 87.22 340 *e*P **P 01 34 45.0 -0.2**
EPF Esparros 87.95 341 *e*P **P 01 34 48.8 +0.1**
SJPF Ste Jean 88.21 342 *e*P **P 01 34 50.1 +0.2**
ETSF Etsaut 88.27 342 *e*P **P 01 34 50.4 +0.2**
TORD Torodi Ar. Bea 115.74 330 PKP PKPdf 01 40 39.6 -2.1
comp=Z,0.2nm,0.6s,baz=6.1,slow=2.0,SNR=3.6
PLCA Paso Flores 147.48 96 PKPbc PKPbc 01 41 41.1 -1.4
comp=Z,3.1nm,0.7s,baz=270,slow=3.4,SNR=8.3

*ISCJB **26** 01:23:07.6±0.6, 3901N±005×2807E±005, h6km±12km, Error ellipse: s-maj=7.9km s-min=5.7km az=16.7*
*CSEM **26** 01:23:07.2±0.1, 3899N×2807E, h12km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.2km az=144.0*
*ISK **26** 01:23:07.3, 3898N×2806E, h10km, MD2.9*
*DDA **26** 01:23:08.8, 3899N×2806E, h7km±2km, Md2.7*
ISC 26 01:23:08.0±0.6, 3901N±005×2806E±005, h10km±11km, n9, σ0$34/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.23**	**236**	*i* P	**Pg**	**01 23 12.6**	**-0.2**
AKHS				*i* S	**Sg**	**01 23 16.5**	**+0.4**
AKS	**Akhisar**	**0.24**	**236**	*i* PG	**Pg**	**01 23 12.6**	**-0.2**
AKS				*i* SG	**Sg**	**01 23 15.5**	**-0.6**
BALB	**Balikesir**	**0.64**	**347**	*e*PG	**Pg**	**01 23 21.2**	**+0.7**
MANT	**Manisa**	**0.65**	**143**	*i* P	**Pg**	**01 23 20.3**	**-0.2**
MANT				*i* S	**Sg**	**01 23 29.3**	**+0.4**
KULA	**Kula-Manisa**	**0.68**	**137**	*e*PG	**Pg**	**01 23 21.2**	**+0.1**
KULA				*e*SG	**Sg**	**01 23 29.9**	**-0.1**
DST	**Dursunbey**	**0.74**	**36**	*e*PG	**Pg**	**01 23 21.8**	**-0.4**
BLCB	**Balcova**	**1.01**	**232**	*e*PG	**Pg**	**01 23 27.4**	**-0.1**
BLCB				*e*SG	**Sg**	**01 23 41.0**	**+0.3**
GDZ	**Gediz**	**1.11**	**86**	*i* P	**Pb**	**01 23 29.2**	**+0.1**
GDZ				*i* S	**Sb**	**01 23 43.6**	**0.0**
KCT	**Karacabey**	**1.27**	**10**	*e*PN	**Pn**	**01 23 31.5**	**-0.3**

WEL 26 02:19:12.6±0.1, 3781S×17674E, h5km, ML3.5/11, 5C, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.15**	**257**	⇑PG	Pg	02 19 15.9	+0.4
OPRZ				SG	Sg	02 19 18.5	+0.9
MARZ	**Manawahe**	**0.18**	**196**	⇑PG	Pg	02 19 16.7	+0.5
MARZ				SG	Sg	02 19 19.6	+1.1
EDRZ	**Edgecumbe**	**0.29**	**180**	PG	Pg	02 19 18.8	+0.5
LIRZ	**Lichensteins R**	**0.34**	**236**	PG	Pg	02 19 19.9	+0.8
LIRZ				SG	Sg	02 19 24.8	+1.3
TGRZ	**Tauranga**	**0.39**	**282**	⇑PG	Pg	02 19 20.5	+0.5
MKRZ	**Makatiti**	**0.39**	**213**	PG	Pg	02 19 21.1	+1.0
KARZ	**Kaharoa**	**0.44**	**242**	PG	Pg	02 19 21.7	+0.6
TAZ	**Tarawera**	**0.46**	**203**	PG	Pg	02 19 22.5	+1.1
WIZ	**White Island**	**0.46**	**52**	PG	Pg	02 19 21.8	+0.5
URZ	**Urewera**	**0.53**	**147**	⇑PG	Pg	02 19 22.8	0.0
URZ				SG	Sg	02 19 30.8	+1.0
UTU	**Utuhina**	**0.56**	**230**	PG	Pg	02 19 24.4	+1.0
MYRZ	**Mayor Island**	**0.66**	**323**	P*	Pb	02 19 25.8	-0.8
HRRZ	**Handcock Road**	**0.68**	**212**	P*	Pb	02 19 26.3	-0.5
PATZ	**Paeroa**	**0.68**	**214**	P*	Pb	02 19 26.7	-0.2
MWZ	**Matawai**	**0.81**	**130**	⇑P*	Pb	02 19 28.0	-1.2
TOZ	**Tahuroa Road**	**0.98**	**274**	P*	Pb	02 19 30.9	-1.1
PUZ	**Puketiti**	**1.23**	**103**	P*	Pb	02 19 35.8	-0.4
MXZ	**Matakaoa Point**	**1.27**	**79**	*e*P*	Pb	02 19 36.8	-0.1
KUZ	**Kuaotunu**	**1.34**	**322**	P*	Pb	02 19 36.5	-1.7
BKZ	**Black Stump Fm**	**1.36**	**188**	P*	Pb	02 19 36.2	-2.3
KNZ	**Kokohu**	**1.41**	**149**	PN	Pn	02 19 38.6	-0.3
HIZ	**Hauiti**	**1.64**	**244**	PN	Pn	02 19 40.2	-1.9
WNVZ	**Wahianoa**	**1.76**	**210**	*e*P*	Pb	02 19 44.3	-1.0

*ORF **26** 02:18:57.3, 3630N×2347E, h30km, mb4.2, ML5.5*
*BGS **26** 02:19:23.2, 3639N×2014E, h15km, mb4.6*
*CSEM **26** 02:19:33.0±0.0, 3831N×2017E, h2km, mb4.5/26, Ms3.5, Error ellipse: s-maj=1.3km s-min=0.9km az=20.0*
*MOS **26** 02:19:33.9±1.2, 3832N×2024E, h14km, mb4.7/20, MS3.9/19, Error ellipse: s-maj=3.8km s-min=2.2km az=99.7*
*IDC **26** 02:19:33.7±0.6, 3835N×2037E, h0km, mb4.3/18, mb1 4.4/26, mb1mx4.4/30, mbtmp4.3/26, ML4.0/8, MS3.9/17, Ms1 3.9/17, ms1mx3.7/41, Error ellipse: s-maj=11.7km s-min=10.4km az=65.0*
*ISCJB **26** 02:19:33.9±0.4, 3834N±001×2026E±001, h10km±2km, mb4.5/64, MS3.8/17, Error ellipse: s-maj=2.4km s-min=1.7km az=31.5*
*HLW **26** 02:19:33.2, 3884N×2111E, h33km, Mb4.5*
*NEIC **26** 02:19:34.1, 3825N×2037E, h12km, mb4.2/43, ML4.3(ATH), After ATH.*
*BJI **26** 02:19:34.0, 3832N×2018E, h19km, mB5.1, mb4.7, Ms5.2, Msz4.8*
*THE **26** 02:19:34.5, 3827N×2033E, h3km, ML5.1*
*ATH **26** 02:19:34.1, 3825N×2037E, h12km±1km, MD4.6/21, ML4.6*
*BEO **26** 02:19:35.9±0.9, 3841N×1986E, ML4.8/5*
*PDG **26** 02:19:36.5±0.4, 3832N×2017E, h28km±2km, MD4.6/6, ML4.5/10, Error ellipse: s-maj=1.4km s-min=1.5km az=0.0*
*SZGRF **26** 02:19:38.2, 3825N×2010E, h10km, mb3.8, Greece*
ISC 26 02:19:35.8±0.4, 3833N±001×2031E±001, h10km±3km, n572, σ1$31/648, mb4.5/64, MS3.8/17, 41C-20D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.27**	**124**	*e*PG	**Pg**	**02 19 38.6**	**-2.6**
VLS				*e*SG	**Sg**	**02 19 42.2**	**-2.7**
KFL	**Anninata**	**0.44**	**120**	*e*Pg	**Pg**	**02 19 41.7**	**-2.7**
RLS	**Riolos of Patr**	**0.95**	**106**	*e*PB	**Pb**	**02 19 50.9**	**-3.5**
IGT	**Igoumenitsa**	**1.21**	**1**	*e*Pg	**Pg**	**02 19 57.4**	**-1.6**
SELA	**Sela**	**1.25**	**92**	*e*Pg	**Pg**	**02 19 56.0**	**-3.8**
SELA				*e*Sg	**Sg**	**02 20 15.4**	**-0.7**
SELA	**Sela**	**1.25**	**92**	*e*Pg	**Pg**	**02 19 56.0**	**-3.8**
SELA				*e*Sg	**Sg**	**02 20 15.4**	**-0.6**
EVR	**Evrytania**	**1.32**	**63**	*e*PN	**Pn**	**02 19 57.9**	**-2.4**
JAN	**Janina**	**1.40**	**18**	*e*PB	**Pb**	**02 20 01.7**	**-0.3**
JAN				*e*SB	**Sb**	**02 20 21.4**	**+1.6**
KEK	**Kerkira**	**1.44**	**344**	*e*PG	**Pg**	**02 20 02.4**	**-1.1**
SRN	**Sarande**	**1.57**	**351**	*i* PN	**Pn**	**02 20 05.1**	**+1.3**
SRN				*i* SN	**Sn**	**02 20 26.8**	**+2.6**
MEV	**Metsovon**	**1.62**	**26**	*e*Pb	**Pb**	**02 20 04.8**	**-1.1**
ITM	**Ithomi**	**1.72**	**131**	*e*PG	**Pn**	**02 20 04.3**	**-1.5**
ITM				*e*SB	**Sb**	**02 20 27.3**	**-1.9**
AGG	**Agios Georgios**	**1.73**	**66**	*e*Pb	**Pn**	**02 20 05.5**	**-0.5**
AGG				*e*Sb	**Sb**	**02 20 29.7**	**+0.2**
THL	**Klokotos Trika**	**1.82**	**47**	*e*PN	**Pn**	**02 20 07.2**	**0.0**
VLX	**Vlachokerasia**	**1.90**	**120**	*e*Pb	**Pb**	**02 20 08.6**	**-2.0**
VLX				*e*Sb	**Sb**	**02 20 33.4**	**-0.9**
TPE	**Tepelena**	**1.98**	**353**	*e*PN	**Pn**	**02 20 11.7**	**+2.3**
TPE				*i* SN	**Sg**	**02 20 40.9**	**+1.4**
LTK	**Loutraki**	**2.12**	**97**	*e*Pn	**Pn**	**02 20 10.8**	**-0.6**
LKR	**Lokris**	**2.14**	**80**	*e*PN	**Pn**	**02 20 11.9**	**+0.3**
KZN	**Kozani**	**2.28**	**29**	*e*PN	**Pn**	**02 20 14.8**	**+1.3**
KBN	**Korca**	**2.32**	**9**	*i* PN	**Pn**	**02 20 17.2**	**+3.1**
KBN				*i* SN	**Sg**	**02 20 50.2**	**-0.3**
LIT	**Litokhoron**	**2.45**	**43**	*e*Pn	**Pn**	**02 20 16.5**	**+0.6**
DID	**Didima**	**2.46**	**109**	*e*Pn	**Pn**	**02 20 15.0**	**-1.0**
DID				*e*Sn	**Sn**	**02 20 46.5**	**+0.5**
NEO	**Neokhori**	**2.48**	**66**	*e*PN	**Pn**	**02 20 16.8**	**+0.5**
XOR	**Xorichti**	**2.48**	**64**	*e*Pn	**Pn**	**02 20 16.4**	**+0.1**
NAIG	**Nisos Aigina**	**2.58**	**102**	*e*PN	**Pn**	**02 20 17.0**	**-0.6**

FNA	**Florina**	**2.59**	**18**	*e*Pn	**Pn**	**02 20 18.0 +0.2**	**BZS**	**Buzias**	**7.35**	**7**	P	**Pn**	**02 21 24.7 +1.5**	**GERES**	**GERESS Array B**	**11.55 338**	P	**Pn**	**02 22 19.2 -1.4**
VLI	**Veliai**	**2.64**	**127**	*e*PN	**Pn**	**02 20 18.6 +0.2**	**BZS**	**Buzias**	**7.35**	**7**⇑	*i*P	**Pn**	**02 21 22.7 -0.5**	GERES					02 24 26.0
ATH	**Athens Observa**	**2.71**	**96**	*e*PB	**Pn**	**02 20 18.8 -0.7**	**BZS**	**Buzias**	**7.35**	**7**	P	**Pn**	**02 21 24.7 +1.5**	**GERES**	**GERESS Array B**	**11.55 338**	Pn	**Pn**	**02 22 19.2 -1.5**
BIA	**Bitola**	**2.80**	**16**	*i* Pn	**Pn**	**02 20 21.8 +1.1**	**CING**	**Cingoli**	**7.38**	**315**	Pn	**Pn**	**02 21 19.4 -4.2**		comp=Z,0.7nm,0.3s,baz=158,slow=12,SNR=44				
BIA				*i* Sn	**Sn**	**02 20 55.0 +0.5**	**GOLH**	**Golhisar**	**7.41**	**96**	*i* P	**Pn**	**02 21 28.9 +4.9**	GERES			Sn	**Sn**	**02 24 26.0 -3.6**
BIA	**Bitola**	**2.80**	**16**	*e*Pn	**Pn**	**02 20 21.5 +0.8**	**NVLJ**	**Novalja**	**7.45**	**329**	*e*Pn	**Pn**	**02 21 24.5 0.0**		comp=Z,0.5nm,0.3s,baz=157,slow=22,SNR=3.5				
BIA				*i* Sn	**Sn**	**02 20 55.0 +0.5**	NVLJ				Sn	**Sn**	**02 22 43.9 -5.2**	GERES			LR	LR	02 27 21.9
OHR	**Ohrid**	**2.81**	**8**	*e*Pn	**Pn**	**02 20 21.4 +0.6**	**NVLJ**	**Novalja**	**7.45**	**329**	*e*Pn	**Pn**	**02 21 24.5 0.0**		comp=Z,381nm,21.8s,baz=143,slow=41				
OHR				*e*Sn	**Sn**	**02 20 57.4 +2.7**	NVLJ				Sn	**Sn**	**02 22 43.8 -5.2**	**FRF**	**La Foret Royal**	**11.57 301**	*e*P	**Pn**	**02 22 16.7 -4.3**
OHR	**Ohrid**	**2.81**	**8**	*i* Pn	**Pn**	**02 20 22.2 +1.4**	**SISC**	**Sisak**	**7.72**	**339**	*e*Pn	**Pn**	**02 21 26.5 -1.7**		comp=Z,75nm,1.4s				
OHR				*i* Sn	**Sn**	**02 20 58.6 +3.9**	**PKSM**	**Moragy**	**7.98**	**352**	P	**Pn**	**02 21 30.9 -0.8**	**FRF**	**La Foret Royal**	**11.57 301**	*e*P	**Pn**	**02 22 16.7 -4.3**
PTL	**Penteli**	**2.82**	**95**	*e*PN	**Pn**	**02 20 20.3 -0.6**	**PKSM**	**Moragy**	**7.98**	**352**⇓	*i*P	**Pn**	**02 21 30.4 -1.3**		comp=Z,38nm,1.4s				
TIP	**Timpagrande**	**2.90**	**288**	P	**Pn**	**02 20 23.3 +1.2**	**ISP**	**Isparta**	**8.06**	**90**	*e*Pn	**Pn**	**02 21 32.3 -0.7**	**FRF**	**La Foret Royal**	**11.57 301**	*e*P	**Pn**	**02 22 16.7 -4.3**
AOS	**Alonnisos**	**2.92**	**72**	*e*Pn	**Pn**	**02 20 21.9 -0.4**		8.9nm,0.7s						FRF			pmax	pmax	
KYTH	**Kithira**	**2.98**	**132**	*e*PB	**Pn**	**02 20 23.5 +0.3**	**ISP**	**Isparta**	**8.06**	**90**	*e*P	**Pn**	**02 21 32.3 -0.7**		comp=Z,38nm,1.4s				
TIR	**Tirane**	**3.04**	**354**	*i* PN	**Pn**	**02 20 25.1 +1.2**	ISP				pmax	pmax		**DOI**	**San Damiano**	**11.58 306**	P	**Pn**	**02 22 24.3 +3.2**
TIR				*i* SN	**Sn**	**02 21 04.2 +3.9**		comp=Z,9.0nm,0.7s						**LMR**	**La Mourre**	**11.58 300**	*e*P	**Pn**	**02 22 17.8 -3.4**
TIR	**Tirane**	**3.04**	**354**	*e*Pn	**Pn**	**02 20 24.8 +0.9**	**BOJS**	**Bojanci**	**8.10**	**334**	*i* Pn	**Pn**	**02 21 33.4 0.0**	**OKC**	**Ostrava-Krasne**	**11.61 353**	*e*P	**Pn**	**02 22 21.1 -0.4**
PAIG	**Paliouri**	**3.07**	**58**	*e*Pn	**Pn**	**02 20 23.7 -0.8**	BOJS				*i* Sn	**Sn**	**02 23 03.3 -1.7**	OKC			AMS	AMS	02 27 30.0
GRG	**Griva**	**3.08**	**31**	*e*Pn	**Pn**	**02 20 24.4 -0.1**	**MLR**	**Muntele Rosu**	**8.30**	**29**	P	**Pn**	**02 21 39.6 +3.4**		comp=Z,800nm,14.9s				
THE	**Thessaloniki**	**3.09**	**41**	*e*Pn	**Pn**	**02 20 24.7 +0.1**	MLR						02 23 21.9	**OKC**	**Ostrava-Krasne**	**11.61 353**	*e*P	**Pn**	**02 22 21.1 -0.4**
KRUS	**Krusevo**	**3.12**	**13**	*i* Pn	**Pn**	**02 20 26.2 +1.1**	**MLR**	**Muntele Rosu**	**8.30**	**29**	Pn	**Pn**	**02 21 39.6 +3.4**		comp=Z,800nm,14.9s				
KRUS				*i* Sn	**Sn**	**02 21 01.1 -1.4**		comp=Z,1.2nm,0.3s,baz=255,slow=4.7,SNR=38						**MORC**	**Moravsky Berou**	**11.62 351**	P	**Pn**	**02 22 22.2 +0.6**
HORT	**Hortiatis**	**3.13**	**43**	*e*Pn	**Pn**	**02 20 24.9 -0.4**	MLR				Sn	**Sn**		**MORC**	**Moravsky Berou**	**11.62 351**⇑	*i*P	**Pn**	**02 22 22.0 +0.4**
PLG	**Polygyros**	**3.18**	**49**	*e*Pn	**Pn**	**02 20 25.9 0.0**		comp=Z,0.3nm,0.3s,baz=282,slow=20,SNR=2.2					02 23 21.9 +12	**MORC**	**Moravsky Berou**	**11.62 351**	P	**Pn**	**02 22 22.2 +0.6**
PLG				*e*Sn	**Sn**	**02 21 04.3 +0.4**	MLR				LR			**ORO**	**Oropa**	**11.71 312**	P	**Pn**	**02 22 23.9 +1.0**
PLG	**Polygyros**	**3.18**	**49**	*e*PN	**Pn**	**02 20 26.0 +0.1**		comp=Z,342nm,20.8s,baz=200,slow=37					02 24 37.9	**FUR**	**Furstenfeldbru**	**11.82 329**	*e*Pn	**Pn**	**02 22 23.5 -0.9**
PE1	**Pezze di Greco**	**3.33**	**319**	*e*Pn	**Pn**	**02 20 28.4 +0.4**	**MLR**	**Muntele Rosu**	**8.30**	**29**	Pn	**Pn**	**02 21 39.5 +3.3**	FUR			*e*Sn	**Sn**	**02 24 30.7 -5.7**
SOH	**Sokhos**	**3.43**	**42**	*e*Pn	**Pn**	**02 20 29.8 +0.5**	**ESKT**	**Eskisehir**	**8.30**	**78**	*e*P	**Pn**	**02 21 38.2 +1.9**	**KHC**	**Kasperske Hory**	**11.84 338**	*e*P	**Pn**	**02 22 22.6 -2.0**
VAY	**Valandovo**	**3.46**	**30**	*e*Pn	**Pn**	**02 20 29.4 -0.4**	**SEYT**	**Eskypehyr**	**8.30**	**78**	*e*P	**Pn**	**02 21 38.2 +1.9**	KHC			*e*		02 22 24.5
VAY	**Valandovo**	**3.46**	**30**	*i* Pn	**Pn**	**02 20 30.6 +0.8**	**HARR**	**Harsova**	**8.55**	**40**⇑	P	**Pn**	**02 21 41.5 +1.9**	KHC			*e*		02 22 38.5
ORI	**Oriolo Calabro**	**3.46**	**301**	P	**Pn**	**02 20 31.7 +1.9**	**HARR**	**Harsova**	**8.55**	**40**⇑	*i*P	**Pn**	**02 21 41.5 +1.9**	**KHC**	**Kasperske Hory**	**11.84 338**	*e*P	**Pn**	**02 22 22.6 -2.0**
KNT	**Kendrikon**	**3.47**	**34**	*e*Pn	**Pn**	**02 20 28.7 -1.1**	**DRGR**		**8.64**	**11**	P	**Pn**	**02 21 42.7 +1.8**	KHC			x	x	02 22 24.5
OUR	**Ouranopolis**	**3.48**	**54**	*e*Pn	**Pn**	**02 20 30.2 +0.1**	**DRGR**		**8.64**	**11**⇓	*i*P	**Pn**	**02 21 42.6 +1.7**	KHC			*ex*	x	02 22 38.5
STIP	**Stip**	**3.66**	**23**	*e*Pn	**Pn**	**02 20 32.7 +0.2**	**DRGR**		**8.64**	**11**	P	**Pn**	**02 21 42.7 +1.8**	KHC			AMS	AMS	02 27 50.0
STIP	**Stip**	**3.66**	**23**	*i* Pn	**Pn**	**02 20 32.7 +0.2**	**LJU**	**Ljubljana**	**8.82**	**333**	*i* Pn	**Pn**	**02 21 43.0 -0.3**		comp=Z,2µm,11.6s				
ULC	**Ulcinj**	**3.72**	**348**⇑	*i*Pn	**Pn**	**02 20 32.7 -0.6**	LJU				*i* Sn	**Sn**	**02 23 19.3 -3.5**	**MBDF**	**Montbardon**	**11.98 307**	*e*P	**Pn**	**02 22 27.8 +1.2**
ULC				*e*Sn	**Sn**	**02 21 16.2 -1.0**	**JAVS**	**Javornik**	**8.87**	**330**	*i* Pn	**Pn**	**02 21 43.4 -0.6**		comp=Z,109nm,1.1s				
PUK	**Puka**	**3.73**	**355**	*i* Pn	**Pn**	**02 20 33.5 +0.1**	JAVS				*i* Sn	**Sn**	**02 23 18.6 -5.3**	**MBDF**	**Montbardon**	**11.98 307**	*e*P	**Pn**	**02 22 27.8 +1.2**
SKO	**Skopje**	**3.74**	**13**	*e*Pn	**Pn**	**02 20 35.5 +1.9**	**PLOR**	**Plostina**	**8.87**	**30**⇑	*i*P	**Pn**	**02 21 46.9 +2.9**	MBDF			pmax	pmax	
SKO	**Skopje**	**3.74**	**13**	*i* Pn	**Pn**	**02 20 35.5 +1.9**	**PLOR**	**Plostina**	**8.87**	**30**	P	**Pn**	**02 21 47.0 +3.0**		comp=Z,55nm,1.1s				
SG1	**Sgolgore (BA)**	**3.76**	**313**	*e*Pn	**Pn**	**02 20 34.4 +0.5**	**VRI**	**Vrincioaia**	**8.92**	**30**	P	**Pn**	**02 21 47.8 +3.1**	**MBDF**	**Montbardon**	**11.98 307**	*e*P	**Pn**	**02 22 27.8 +1.2**
SRS	**Serrai**	**3.77**	**41**	*e*Pn	**Pn**	**02 20 33.6 -0.3**	**VRI**	**Vrincioaia**	**8.92**	**30**⇑	*i*P	**Pn**	**02 21 47.7 +3.1**		comp=Z,55nm,1.1s				
NVR	**Nevrokopi**	**4.08**	**41**	*e*PN	**Pn**	**02 20 39.5 +1.3**	**VRI**	**Vrincioaia**	**8.92**	**30**	P	**Pn**	**02 21 47.8 +3.2**	**WET**	**Wettzell**	**12.07 336**	*e*Pn	**Pn**	**02 22 26.7 -1.0**
LIA	**Limnos Island**	**4.11**	**66**	P	**Pn**	**02 20 43.5 +4.9**	**VOY**	**Vojsko**	**9.05**	**330**	*e*Pn	**Pn**	**02 21 45.7 -0.8**	**DPC**	**Dobruska-Polom**	**12.35 348**	*e*P	**Pn**	**02 22 31.7 +0.1**
KARN	**Karanos**	**4.11**	**134**	*e*Pn	**Pn**	**02 20 37.8 -0.9**	VOY				*e*Sn	**Sn**	**02 23 26.5 -1.8**	DPC			AMS	AMS	02 28 10.0
KARN				*e*Sn	**Sn**	**02 21 26.2 -0.6**	**KEST**	**Kesra**	**9.14**	**257**	Pn	**Pn**	**02 21 47.7 0.0**		comp=Z,2µm,13.8s				
BUM	**Brajici-Budva**	**4.11**	**345**⇑	*i*Pn	**Pn**	**02 20 38.2 -0.5**		comp=Z,0.2nm,0.3s,baz=76,slow=8.0,SNR=14						**DPC**	**Dobruska-Polom**	**12.35 348**	*e*P	**Pn**	**02 22 31.7 +0.1**
BUM				*e*Sn	**Sn**	**02 21 25.5 -1.4**	KEST				Sn	**Sn**	**02 23 29.4 -1.2**		comp=Z,2µm,13.8s				
KKB	**Krupnik**	**4.13**	**30**	*i* P	**Pn**	**02 20 40.6 +1.7**		comp=Z,0.1nm,0.3s,baz=20,slow=17,SNR=3.1						**PRU**	**Pruhonice**	**12.37 342**	*e*P	**Pn**	**02 22 30.6 -1.2**
CDT	**Castel del Mon**	**4.15**	**313**	*e*Pn	**Pn**	**02 20 40.2 +0.9**	**PERS**	**Pernice**	**9.14**	**337**	*i* Pn	**Pn**	**02 21 46.4 -1.3**	PRU			AMS	AMS	02 28 00.0
AGST	**Augusta-Monte**	**4.16**	**257**	Pn	**Pn**	**02 20 36.7 -2.7**	PERS				*i* Sn	**Sn**	**02 23 25.9 -4.7**		comp=Z,1µm,9.3s				
PDG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**02 20 39.4 -0.2**	**OBKA**	**Obir**	**9.22**	**334**⇑	*i*Pn	**Pn**	**02 21 48.0 -0.8**	**LPG**	**La Plagne**	**12.37 310**	*e*P	**Pn**	**02 22 33.5 +1.6**
PDG				*e*Sn	**Sn**	**02 21 26.7 -1.7**		SNR=26							comp=Z,32nm,0.9s				
TTG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**02 20 39.4 -0.2**	OBKA				⇑ *i*Sn	**Sn**	**02 23 26.7 -5.7**	**LPG**	**La Plagne**	**12.37 310**	*e*P	**Pn**	**02 22 33.5 +1.6**
TTG				*e*Sn	**Sn**	**02 21 26.7 -1.7**	**SGKT**	**Sivrigoynuk**	**9.36**	**72**	*e*P	**Pn**	**02 21 53.7 +2.9**	LPG			pmax	pmax	
MMB	**Musomiste**	**4.19**	**38**	*i* P	**Pn**	**02 20 40.7 +1.0**	**GSCL**	**Gusciola**	**9.46**	**313**	Pn	**Pn**	**02 21 56.6 +4.4**		comp=Z,16nm,0.9s				
VAM	**Vamos**	**4.27**	**132**	*e*PN	**Pn**	**02 20 40.1 -0.8**	**ARSA**	**Arzberg**	**9.59**	**340**⇓	*i*Pn	**Pn**	**02 21 52.3 -1.5**	**LPG**	**La Plagne**	**12.37 310**	*e*P	**Pn**	**02 22 33.5 +1.6**
PVY	**Plav**	**4.27**	**357**	*e*Pn	**Pn**	**02 20 41.6 +0.7**	ARSA	SNR=8.6							comp=Z,16nm,0.9s				
PVY				*e*Sn	**Sn**	**02 21 29.3 -1.5**					⇓ *i*Sn	**Sn**	**02 23 34.7 -6.8**	**LPL**	**La Plagne**	**12.39 310**	*e*P	**Pn**	**02 22 33.5 +1.3**
SSY	**Sortino**	**4.31**	**256**	Pn	**Pn**	**02 20 39.0 -2.5**	**PSZ**	**Piszkesteto**	**9.59**	**358**	P	**Pn**	**02 21 54.1 +0.2**		comp=Z,23nm,0.8s				
APE	**Apeiranthos**	**4.33**	**105**	*e*Pn	**Pn**	**02 20 40.4 -1.3**	**PSZ**	**Piszkesteto**	**9.59**	**358**⇓	*e*	**Pn**	**02 21 53.9 0.0**	**LPL**	**La Plagne**	**12.39 310**	*e*P	**Pn**	**02 22 33.5 +1.3**
APE	**Apeiranthos**	**4.33**	**105**	*e*P	**Pn**	**02 20 40.2 -1.5**	**PSZ**	**Piszkesteto**	**9.59**	**358**⇓	*i*P	**Pn**	**02 21 53.9 0.0**	LPL			pmax	pmax	
APE	**Apeiranthos**	**4.33**	**105**⇑	*i*P	**Pn**	**02 20 40.4 -1.3**	**PSZ**	**Piszkesteto**	**9.59**	**358**	P	**Pn**	**02 21 54.1 +0.2**		comp=Z,12nm,0.8s				
APE	**Apeiranthos**	**4.33**	**105**	*e*Pn	**Pn**	**02 20 41.0 -0.7**	**ERBM**	**Eremo**	**9.61**	**312**	Pn	**Pn**	**02 21 59.2 +5.1**	**LPL**	**La Plagne**	**12.39 310**	*e*P	**Pn**	**02 22 33.5 +1.3**
HCY	**Herceg Novi**	**4.34**	**342**⇑	*i*Pn	**Pn**	**02 20 41.1 -0.8**	**LSHF**	**Shwairf**	**9.71**	**213**	*i* P	**Pn**	**02 21 55.8 +0.2**		comp=Z,12nm,0.8s				
HCY				*e*Sn	**Sn**	**02 21 36.7 -1.0**		SNR=22						**SMRF**	**Simiane la Rot**	**12.45 302**	*e*P	**Pn**	**02 22 34.6 +1.6**
MRLC	**Muro Lucano**	**4.45**	**305**	Pn	**Pn**	**02 20 39.9 -3.4**	**TRPA**	**Targa**	**9.93**	**9**	*i* P	**Pn**	**02 21 59.8 +1.2**		comp=Z,52nm,1.3s				
CHOS	**Chios island**	**4.52**	**87**	*e*Pn	**Pn**	**02 20 44.1 -0.2**	**FVI**	**Forni Avoltri**	**9.96**	**329**	Pn	**Pn**	**02 22 00.0 +1.1**	**SMRF**	**Simiane la Rot**	**12.45 302**	*e*P	**Pn**	**02 22 34.6 +1.6**
THR1	**Thera Island**	**4.55**	**114**	*e*Pn	**Pn**	**02 20 45.0 +0.4**	**CTI**	**Castel Tesino**	**10.03**	**323**	Pn	**Pn**	**02 21 59.2 -0.8**		comp=Z,26nm,1.3s				
BEY	**Berane**	**4.55**	**356**⇑	*i*Pn	**Pn**	**02 20 45.2 +0.5**	**KBA**	**Koelnbreinsper**	**10.13**	**332**⇑	*i*Pn	**Pn**	**02 22 00.6 -0.7**	**UPC**	**Upice**	**12.56 347**	*e*P	**Pn**	**02 22 36.0 +1.6**
BEY				*e*Sn	**Sn**	**02 21 36.7 -1.0**		SNR=9.2						**ORIF**	**Oris-en-Rattie**	**12.64 306**	*e*P	**Pn**	**02 22 37.3 +1.8**
IVA	**Berane**	**4.55**	**356**⇑	*i*Pn	**Pn**	**02 20 45.2 +0.5**	KBA				⇓ *i*Sn	**Sn**	**02 23 49.6 -5.3**		comp=Z,82nm,1.3s				
IVA				*e*Sn	**Sn**	**02 21 36.7 -1.0**	**ZST**	**Bratislava**	**10.14**	**348**	*e*SN	**Sn**	**02 23 51.0 -4.0**	ORIF			*e*MLR	MLR	
NKY	**Niksic**	**4.59**	**348**	*e*Pn	**Pn**	**02 20 45.3 0.0**	**KECS**	**Kecovo**	**10.15**	**1**	*e*PN	**Pn**	**02 21 57.7 -3.9**		comp=Z,831nm,21.5s				
NKY				*e*Sn	**Sn**	**02 21 37.1 -1.6**	KECS				*e*SN	**Sn**	**02 23 49.4 -6.0**	**ORIF**	**Oris-en-Rattie**	**12.64 306**	*e*P	**Pn**	**02 22 37.3 +1.8**
HMDC	**Modica**	**4.59**	**254**	Pn	**Pn**	**02 20 43.5 -1.8**	**ABTA**	**Abfaltersbach**	**10.19**	**328**⇑	*i*Pn	**Pn**	**02 22 01.5 -0.6**	ORIF			pmax	pmax	
GVD	**Gavdhos**	**4.62**	**138**	*e*Pn	**Pn**	**02 20 44.1 -1.6**		SNR=13							comp=Z,41nm,1.3s				
GVD	**Gavdhos**	**4.62**	**138**	*e*Pn	**Pn**	**02 20 45.0 -0.7**	**VYHS**	**Vyhne**	**10.22**	**354**	*e*PN	**Pn**	**02 22 01.3 -1.2**	**ORIF**	**Oris-en-Rattie**	**12.64 306**	*e*P	**Pn**	**02 22 37.3 +1.8**
BARS	**Barje**	**4.63**	**14**⇓	*i*Pn	**Pn**	**02 20 45.4 -0.5**	VYHS				*e*SN	**Sn**	**02 23 52.2 -4.9**		comp=Z,41nm,1.3s				
BARS				*e*Sn	**Sn**	**02 21 40.2 +0.5**	**MODS**	**Modra-Piesok**	**10.28**	**349**	*e*Pn	**Pn**	**02 22 03.5 +0.2**	**KOT**	**Kottamia**	**12.69 128**	P	**Pn**	**02 22 31.2 -5.2**
BARS	**Barje**	**4.63**	**14**	Pn	**Pn**	**02 20 45.4 -0.5**	MODS				*e*		02 22 11.5	**ROTZ**	**Rotzenmuhle**	**12.82 336**	*e*Pn	**Pn**	**02 22 37.9 -0.2**
BOZC	**Bozcaada**	**4.72**	**70**	*e*P	**Pn**	**02 20 46.8 -0.3**	MODS				*e*Sn	**Sn**	**02 23 56.8 -1.8**	**GLL**	**Jalalah**	**12.86 129**	P	**Pn**	**02 22 33.4 -5.4**
VAE	**Valguarnera**	**4.74**	**262**	Pn	**Pn**	**02 20 48.6 +1.3**	**MODS**	**Modra-Piesok**	**10.28**	**349**	*e*PN	**Pn**	**02 22 03.5 +0.2**	**PVCC**	**Panska Ves**	**12.86 343**	AMS	AMS	02 28 00.0
	2.5nm,0.3s,baz=42,slow=9.7,SNR=9.3						MODS				*e*		02 22 11.5		comp=Z,900nm,10.4s				
VAE				Sn	**Sn**	**02 21 45.7 +3.4**	**MODS**	**Modra-Piesok**	**10.28**	**349**	*e*PN	**Pn**	**02 22 03.5 +0.2**	**SPAK**	**Spaichingen-Ko**	**12.87 323**	*e*P	**Pn**	**02 22 41.4 +2.7**
	8.7nm,0.3s,baz=51,slow=21,SNR=4.9						MODS				*e*		02 22 11.5	**BBS**	**Basel-Blauen**	**13.08 318**	*e*P	**Pn**	**02 22 45.5 +3.9**
PRK	**Paraskevi**	**4.75**	**77**	*e*PN	**Pn**	**02 20 48.8 +1.3**	**KOLL**	**Kolacno**	**10.34**	**353**	*e*PN	**Pn**	**02 22 03.3 -0.8**	**FELD**	**Feldberg im Sc**	**13.10 321**	*e*P	**Pn**	**02 22 45.3 +3.5**
MS1	**Monte Sant'Ang**	**4.75**	**317**	*e*Pn	**Pn**	**02 20 50.5 +3.0**	KOLL				*e*SN	**Sn**	**02 23 57.5 -2.5**	**GRA1**	**Grafenberg Arr**	**13.10 333**	*e*P	**Pn**	**02 22 41.5 -0.3**
BRY	**Bratogost**	**4.76**	**344**⇑	*i*Pn	**Pn**	**02 20 46.8 -0.8**	**SMOL**	**Smolenice**	**10.39**	**349**	*e*PN	**Pn**	**02 22 05.4 +0.5**		comp=Z,600nm,18.3s				
BRY				*e*Sn	**Sn**	**02 21 40.9 -2.0**	**UZH**	**Uzhgorod**	**10.40**	**7**⇑	*i*P	**Pn**	**02 22 05.0 0.0**	**GRF**	**Grafenberg Arr**	**13.10 333**	*e*Pn	**Pn**	**02 22 41.5 -0.3**
IDI	**Anoyia**	**4.77**	**128**	Pn	**Pn**	**02 20 48.1 +0.4**	UZH				*e*S	**Sn**	**02 24 02.0 +0.5**	GRF			*e*L		02 29 29.0
	3.6nm,0.3s,baz=349,slow=13,SNR=27						UZH				MLR	MLR			comp=Z,610nm,18.3s				
IDI				Sn	**Sn**	**02 21 44.0 +1.0**		comp=N,1µm,10.0s						**GRFO**	**Grafenberg**	**13.10 333**	*e*Pn	**Pn**	**02 22 36.0 -5.8**
	13nm,0.3s,baz=174,slow=20,SNR=4.9						UZH				MLR	MLR		GRFO			pmax	pmax	
IDI				Lg		02 22 06.6		comp=Z,1µm,10.0s							comp=Z,34nm,1.0s				
	8.1nm,0.3s,baz=307,slow=20,SNR=3.6						**UZH**	**Uzhgorod**	**10.40**	**7**	*i* P	**Pn**	**02 22 05.0 0.0**	**GRFO**	**Grafenberg**	**13.10 333**	*e*Pn	**Pn**	**02 22 36.0 -5.8**
IDI				LR	LR	02 23 09.3	UZH				*e*S	**Sn**	**02 24 02.0 +0.5**		comp=Z,34nm,1.0s				
	comp=Z,1µm,19.0s,baz=321,slow=46						**MOA**	**Molln**	**10.49**	**337**⇓	*i*Pn	**Pn**	**02 22 05.1 -1.1**	**AMAG**	**Maghara**	**13.11 122**	P	**Pn**	**02 22 36.7 -5.4**
IDI	**Anoyia**	**4.77**	**128**	Pn	**Pn**	**02 20 48.1 +0.4**		SNR=39						**NKC**	**Novy Kostel**	**13.16 337**	*e*P	**Pn**	**02 22 44.2 +1.6**
IDI				Sn	**Sn**	**02 21 44.0 +1.0**	MOA				⇓ *i*Sn	**Sn**	**02 23 56.3 -7.4**	NKC			AMS	AMS	02 28 40.0
RZN	**Rozhen**	**4.77**	**44**	*i* P	**Pn**	**02 20 49.2 +1.5**	**APPI**	**Appiano**	**10.55**	**323**	Pn	**Pn**	**02 22 07.2 +0.2**		comp=Z,2µm,13.9s				
VTS	**Vitosha**	**4.80**	**27**	*e*Pn	**Pn**	**02 20 49.2 +1.0**	**MABI**	**Malga Bissina**	**10.60**	**320**	Pn	**Pn**	**02 22 09.8 +2.2**	**NKC**	**Novy Kostel**	**13.16 337**	*e*P	**Pn**	**02 22 44.2 +1.6**
VTS	**Vitosha**	**4.80**	**27**⇓	*i*P	**Pn**	**02 20 50.7 +2.5**	**CRVS**	**Cervenica-Dubn**	**10.61**	**4**	*e*PN	**Pn**	**02 22 07.9 +0.1**		comp=Z,2µm,13.9s				
VTS	**Vitosha**	**4.80**	**27**	*i* P	**Pn**	**02 20 50.4 +2.2**	**KIS**	**Kishinev**	**10.69**	**33**	*e*P	**Pn**	**02 22 08.0 -0.9**	**STU**	**Stuttgart**	**13.17 326**	*e*Pn	**Pn**	**02 22 42.7 -0.2**
RAFF	**Raffo Rosso**	**4.84**	**259**	Pn	**Pn**	**02 20 47.1 -1.6**	KIS				MLR	MLR		**WERN**	**Wernitzgruen**	**13.23 337**	*e*Pn	**Pn**	**02 22 45.3 +1.7**
SIVA	**Sivas**	**4.90**	**131**	*e*Pn	**Pn**	**02 20 49.4 -0.2**		comp=Z,600nm,8.0s						**BFO**	**Black Forest**	**13.25 323**	*e*Pn	**Pn**	**02 22 44.5 +0.6**
RDO	**Rodhopi**	**4.92**	**53**	*e*PN	**Pn**	**02 20 50.0 +0.2**	KIS				MLR	MLR		**GUNZ**	**Gunzen**	**13.31 337**	*e*Pn	**Pn**	**02 22 47.5 +2.8**
SJES	**Sjenica**	**4.95**	**357**	*e*Pn	**Pn**	**02 20 51.1 +1.0**		comp=Z,500nm,9.0s						**BRG**	**Berggiesshubel**	**13.33 342**	*e*P	**Pn**	**02 22 44.3 -0.7**
SJES				*e*Sn	**Sn**	**02 21 43.4 -4.0**	**KIS**	**Kishinev**	**10.69**	**33**	*e*P	**Pn**	**02 22 08.0 -0.9**		comp=Z,4.1nm,0.9s				
STON	**Ston**	**4.96**	**337**	*e*Pn	**Pn**	**02 20 47.8 -2.5**	KIS				*e*LR	LR	02 26 05.0	BRG			*e*		02 22 51.8
STON				Sn	**Sn**	**02 21 42.5 -5.1**		comp=Z,500nm,9.0s						BRG			*e*		02 24 00.1
UPM	**Unac-Piva**	**4.99**	**348**⇑	*i*Pn	**Pn**	**02 20 50.9 +0.2**	KIS				*e*LQ		02 26 30.0	BRG			*e*		02 26 40.9
UPM				*e*Sn	**Sn**	**02 21 46.4 -2.0**	**KOLS**	**Kolonicke sedl**	**10.70**	**7**	*e*PN	**Pn**	**02 22 10.2 +1.2**	**BRG**	**Berggiesshubel**	**13.33 342**	*e*P	**Pn**	**02 22 44.3 -0.7**
PLE	**Pljevlja**	**5.05**	**352**⇑	*i*Pn	**Pn**	**02 20 52.3 +0.8**	**BRMO**	**Bormio**	**10.96**	**321**	Pn	**Pn**	**02 22 13.8 +1.2**	BRG			pmax	pmax	
PLE				*e*Sn	**Sn**	**02 21 48.4 -1.5**	**WTTA**	**Wattenberg**	**10.96**	**327**⇓	*i*Pn	**Pn**	**02 22 11.6 -1.1**		comp=Z,4.0nm,0.9s				
PLD	**Plovdiv**	**5.06**	**40**	*e*Pn	**Pn**	**02 20 53.3 +1.6**		SNR=17						BRG			pmax	pmax	
PLD	**Plovdiv**	**5.06**	**40**	*i* P	**Pg**	**02 21 09.0 -3.7**	**CSS**	**Prodhromos**	**10.99**	**104**	*e*Pn	**Pn**	**02 22 07.7 -5.4**		comp=Z,4.0nm,1.0s				
AYVA	**Ayvalik**	**5.08**	**77**	*i* P	**Pn**	**02 20 54.2 +2.2**		comp=Z,16nm,0.8s						BRG			pmax	pmax	
AYVA	**Ayvalik**	**5.08**	**77**	*i* P	**Pn**	**02 20 54.2 +2.2**	**WATA**	**Walderalm**	**11.04**	**327**⇑	*i*Pn	**Pn**	**02 22 14.0 +0.2**		comp=Z,1.1nm,1.1s				
ALN	**Alexandroupoli**	**5.12**	**58**	*e*Pn	**Pn**	**02 20 52.5 -0.1**		SNR=24						BRG			pmax	pmax	
PGB	**Panagyurishte**	**5.14**	**34**	*i* P	**Pn**	**02 20 54.0 +1.1**	WATA				⇑ *i*Sn	**Sn**	**02 24 12.4 -4.9**		comp=Z,9.0nm,1.5s				
SMG	**Samos**	**5.19**	**95**	*e*PN	**Pn**	**02 20 53.5 -0.1**	**NIE**	**Niedzica**	**11.09**	**0**	*e*P	**Pn**	**02 22 15.8 +1.4**	BRG			MLR	MLR	
LAST	**Lasithi**	**5.22**	**126**	*e*Pn	**Pn**	**02 20 52.7 -1.2**	**STHS**	**Stebnicka Huta**	**11.11**	**3**	*e*PN	**Pn**	**02 22 12.5 -2.1**		comp=N,540nm,12.2s				
NPS	**Neapolis**	**5.24**	**124**	*e*PN	**Pn**	**02 20 55.0 +0.8**	STHS				*e*		02 22 16.3	BRG			MLR	MLR	
BLB	**Balcova**	**5.29**	**87**	*e*Pn	**Pn**	**02 20 54.9 0.0**	**SQTA**	**Sankt Quirin**	**11.12**	**326**⇑	*i*Pn	**Pn**	**02 22 14.3 -0.4**		comp=E,837nm,11.8s				
KDAG	**Bornova**	**5.47**	**87**	*e*P	**Pn**	**02 20 55.9 +0.5**		SNR=10						BRG			MLR	MLR	
KDAG	**Bornova**	**5.47**	**87**	*i* P	**Pn**	**02 20 57.8 +0.4**	**SBF**	**Sospel**	**11.17**	**304**	*e*P	**Pn**	**02 22 14.8 -0.7**		comp=Z,760nm,9.6s				
XRY	**Khrisi**	**5.54**	**127**	*e*PN	**Pn**	**02 20 59.0 +0.7**		comp

LASF Ste Croix 13.64 300 *e*P Pn 02 22 48.7 -0.6
comp=Z,67nm,1.5s
LASF Ste Croix 13.64 300 *e*P Pn 02 22 48.7 -0.6
comp=Z,34nm,1.5s
ECH Echery 13.74 320 *e*P Pn 02 22 53.5 +2.8
MOX Moxa 13.78 336 *e*P Pn 02 22 50.4 -0.7
comp=Z,30nm,0.9s
MOX
comp=Z,1µm,15.0s
MOX Moxa 13.78 336 *e*P Pn 02 22 50.4 -0.7
MOX pmax pmax
comp=Z,30nm,0.9s
MOX MLR MLR
comp=Z,1µm,15.0s
MOX Moxa 13.78 336 *e*Pn Pn 02 22 49.6 -1.5
CDF Champ du Feu 13.82 321 *e*P Pn 02 22 49.2 -2.4
comp=Z,28nm,0.8s
CDF Champ du Feu 13.82 321 *e*P Pn 02 22 49.2 -2.4
comp=Z,14nm,0.8s
CDF Champ du Feu 13.82 321 *e*P Pn 02 22 49.2 -2.4
CDF pmax pmax
comp=Z,14nm,0.8s
KIEV Kiev 13.89 24 *e*Pn Pn 02 22 52.0 -0.5
comp=Z,7.8nm,0.9s
KIEV Kiev 13.89 24 *e*P Pn 02 22 52.0 -0.6
KIEV pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 13.89 24 *e*P Pn 02 22 52.0 -0.6
comp=Z,8.0nm,0.9s
AKASG Malin Array Be 13.90 24 *i*P Pn 02 22 52.5 -0.2
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 13.90 24 Pn Pn 02 22 52.5 -0.2
comp=Z,0.6nm,0.3s,baz=212,slow=12,SNR=11
AKASG Malin Array Be 13.90 24 *i*P Pn 02 22 52.5 -0.2
comp=Z,3.0nm,0.6s
LANF Langenberg 13.96 324 *e*P Pn 02 22 55.9 +2.4
CLL Collm 13.97 341 *e*P Pn 02 22 56.0 +2.3
CLL pmax pmax
comp=Z,18nm,1.0s
CLL MLR MLR
comp=Z,800nm,15.1s
CLL Collm 13.97 341 *es*P Pn 02 22 56.0 +2.3
comp=Z,18nm,1.0s
CLL *i* sPP 02 23 04.1
CLL LmH 02 27 00.0
comp=N,500nm,18.8s
CLL LmH 02 27 00.0
comp=E,1µm,19.9s
HAU Haudompre 14.03 318 *e*P Pn 02 22 52.6 -1.9
HAU *e*MLR MLR
comp=Z,653nm,21.2s
HNKL Nakhl 14.07 122 P Pn 02 22 48.5 -6.8
MALT Malatya 14.23 84 ⇑P Pn 02 22 58.9 +1.6
MALT Malatya 14.23 84 ⇑*i*P Pn 02 22 58.9 +1.5
ANN Anapa 14.35 58 *e*P Pn 02 23 03.2 +4.3
ANN *e*S Sn 02 25 40.3 +2.2
ANN pmax pmax
comp=Z,275nm,2.4s
LBL Lubilhac 14.46 304 *e*P Pn 02 23 05.7 +5.2
PLDF La Plantade 14.53 307 *e*P Pn 02 23 07.1 +5.8
MTLF Montolieu 14.57 296 *e*P Pn 02 23 00.6 -1.4
comp=Z,25nm,1.0s
MTLF Montolieu 14.57 296 *e*P Pn 02 23 00.6 -1.4
MTLF pmax pmax
comp=Z,13nm,1.0s
MTLF Montolieu 14.57 296 *e*P Pn 02 23 00.6 -1.4
comp=Z,13nm,1.0s
TNS Taunus Mts 14.59 328 *e*Pn Pn 02 23 02.3 +0.1
SMF Signal de Mont 14.70 310 *e*P Pn 02 23 01.1 -2.6
comp=Z,14nm,0.8s
SMF Signal de Mont 14.70 310 *e*P Pn 02 23 01.1 -2.6
comp=Z,7.1nm,0.8s
SMF Signal de Mont 14.70 310 *e*P Pn 02 23 01.1 -2.6
SMF pmax pmax
comp=Z,7.0nm,0.8s
PYM Petit Puy Mans 14.82 306 *e*P Pn 02 23 07.9 +2.5
RUE Ruedersdorf 14.87 344 *e*Pn Pn 02 23 11.0 +5.0
comp=Z,114nm,1.3s
EIL Elat 14.89 121 Pn Pn 02 23 00.9 -5.4
comp=Z,0.7nm,0.3s,baz=354,slow=20,SNR=7.9
LOR Lormes 15.00 312 *e*P Pn 02 23 05.1 -2.6
comp=Z,14nm,0.8s
LOR *e*MLR MLR
comp=Z,367nm,22.9s
LOR Lormes 15.00 312 *e*P Pn 02 23 05.1 -2.6
comp=Z,7.1nm,0.8s
LOR Lormes 15.00 312 *e*P Pn 02 23 05.1 -2.6
LOR pmax pmax
comp=Z,7.0nm,0.8s
MEZF Maizieres J'vi 15.02 318 *e*P Pn 02 23 08.1 +0.1
comp=Z,115nm,1.2s
MEZF Maizieres J'vi 15.02 318 *e*P Pn 02 23 08.1 +0.1
comp=Z,58nm,1.2s
HKAT Jabal Katrina 15.02 127 P Pn 02 23 02.8 -5.5
AVF Avril sur Loir 15.06 310 *e*P Pn 02 23 06.4 -2.2
comp=Z,18nm,1.0s
AVF Avril sur Loir 15.06 310 *e*P Pn 02 23 06.4 -2.2
AVF pmax pmax
comp=Z,9.0nm,1.0s
AVF Avril sur Loir 15.06 310 *e*P Pn 02 23 06.4 -2.2
comp=Z,8.9nm,1.0s
SSF Saint Saulge 15.10 311 *e*P Pn 02 23 05.8 -3.3
comp=Z,24nm,1.0s
SSF Saint Saulge 15.10 311 *e*P Pn 02 23 05.8 -3.3
comp=Z,12nm,1.0s
SSF Saint Saulge 15.10 311 *e*P Pn 02 23 05.8 -3.3
SSF pmax pmax
comp=Z,12nm,1.0s
CAF Calviac 15.14 302 *e*P Pn 02 23 09.8 +0.2
comp=Z,32nm,1.1s
CAF Calviac 15.14 302 *e*P Pn 02 23 09.8 +0.2
CAF pmax pmax
comp=Z,16nm,1.1s
CAF Calviac 15.14 302 *e*P Pn 02 23 09.8 +0.2
comp=Z,16nm,1.1s
WLF Walferdange 15.21 323 *e*Pn Pn 02 23 13.1 +2.6
comp=Z,127nm,1.1s
WLF Walferdange 15.21 323 *e*P Pn 02 23 13.1 +2.6
WLF pmax pmax
comp=Z,127nm,1.1s
WLF Walferdange 15.21 323 P Pn 02 23 13.3 +2.8
comp=Z,86nm,1.4s
WLF Walferdange 15.21 323 *e*P Pn 02 23 13.1 +2.6
comp=Z,127nm,1.1s
BGF Bois d'Agland 15.27 308 *e*P Pn 02 23 10.2 -1.1
TCF Toulx Ste Croi 15.55 307 *e*P Pn 02 23 13.0 -2.0
comp=Z,45nm,1.4s
TCF Toulx Ste Croi 15.55 307 *e*P Pn 02 23 13.0 -2.0
TCF pmax pmax
comp=Z,23nm,1.4s
TCF Toulx Ste Croi 15.55 307 *e*P Pn 02 23 13.0 -2.0
comp=Z,23nm,1.4s
SOC Sochi 15.57 64 *e*P Pn 02 23 19.8 +4.5
SOC pmax pmax
comp=Z,68nm,1.3s
SOC MLR MLR
comp=Z,217nm,11.0s
SUW Suwalki 15.81 6 *e*P Pn 02 23 17.6 -0.8
SUW *e* 02 23 21.8
SUW LMZ 02 29 21.7
comp=Z,400nm,20.2s
SUW Suwalki 15.81 6 *e*P Pn 02 23 17.6 -0.8
SUW *e* 02 23 21.8
SUW Suwalki 15.81 6 *e*P Pn 02 23 17.6 -0.8
comp=Z,400nm,20.2s
NRDL Niedersach Rie 15.85 337 *e*Pn Pn 02 23 22.4 +3.5
EPF Esparros 15.85 294 *e*P Pn 02 23 18.7 -0.3
comp=Z,31nm,1.4s
EPF Esparros 15.85 294 *e*P Pn 02 23 18.7 -0.3
EPF pmax pmax
comp=Z,16nm,1.4s
EPF Esparros 15.85 294 *e*P Pn 02 23 18.7 -0.3
comp=Z,16nm,1.4s
MEM Membach 15.93 325 P Pn 02 23 22.0 +2.1
comp=Z,29nm,1.0s
EBIE Bielsa 15.94 292 P Pn 02 23 26.0 +5.9
comp=Z,4.9nm,0.8s
LFF La Frestale 16.03 301 *e*P Pn 02 23 20.5 -0.8
comp=Z,36nm,1.1s
LFF La Frestale 16.03 301 *e*P Pn 02 23 20.5 -0.8
LFF pmax pmax
comp=Z,18nm,1.1s
LFF La Frestale 16.03 301 *e*P Pn 02 23 20.5 -0.8
comp=Z,18nm,1.1s
HGN Heimansgroeve 16.07 325⇑ *e*P Pn 02 23 29.4 +7.6
comp=Z,45nm,0.9s
BCLA Clavier 16.12 323 P Pn 02 23 26.6 +4.1
comp=Z,26nm,2.0s
GIVF Givet 16.14 322 *e*P Pn 02 23 25.7 +3.0
comp=Z,168nm,1.1s
GIVF Givet 16.14 322 *e*P Pn 02 23 25.7 +3.0
comp=Z,84nm,1.1s
GIVF Givet 16.14 322 *e*P Pn 02 23 25.7 +3.0
GIVF pmax pmax
comp=Z,84nm,1.1s
BEBN Eben Emael 16.21 325 P Pn 02 23 31.0 +7.5
comp=Z,9.6nm,1.4s
DOU Dourbes 16.25 321 P Pn 02 23 27.1 +3.1
comp=Z,36nm,1.4s
BAIF Baives 16.42 321 *e*P Pn 02 23 26.7 +0.5
comp=Z,108nm,1.3s
BAIF Baives 16.42 321 *e*P Pn 02 23 26.7 +0.5
BAIF pmax pmax
comp=Z,54nm,1.3s
BAIF Baives 16.42 321 *e*P Pn 02 23 26.7 +0.5
comp=Z,54nm,1.3s
ETSF Etsaut 16.48 293 *e*P Pn 02 23 28.6 +1.6
comp=Z,16nm,0.9s
ETSF Etsaut 16.48 293 *e*P Pn 02 23 28.6 +1.6
ETSF pmax pmax
comp=Z,8.0nm,0.9s
ETSF Etsaut 16.48 293 *e*P Pn 02 23 28.6 +1.6
comp=Z,7.8nm,0.9s
ECHE Chera 16.60 281 P Pn 02 23 33.4 +4.8
comp=Z,7.9nm,0.9s
ECHE Chera 16.60 281 P Pn 02 23 33.4 +4.9
ECHE pmax pmax
comp=Z,8.0nm,0.9s
WTSB Winterswijk 16.60 330⇑ *e*P Pn 02 23 34.6 +6.1
comp=Z,54nm,1.1s
SNF Seneffe 16.67 322 P Pn 02 23 32.3 +3.0
comp=Z,32nm,1.8s
UCC Uccle 16.82 323 P Pn 02 23 36.0 +4.6
comp=Z,52nm,1.1s
EMUR La Murta 16.97 275 P Pn 02 23 35.6 +2.3
comp=Z,12nm,1.1s
MNK Minsk 16.97 15 *e*P Pn 02 23 28.0 -5.2
MNK *e* 02 26 44.0
SJPF Ste Jean 17.00 293 *e*P Pn 02 23 31.5 -2.1
comp=Z,30nm,1.2s
SJPF Ste Jean 17.00 293 *e*P Pn 02 23 31.5 -2.1
SJPF pmax pmax
comp=Z,15nm,1.2s
SJPF Ste Jean 17.00 293 *e*P Pn 02 23 31.5 -2.1
comp=Z,15nm,1.2s
BSEG Bad Segeberg 17.05 340 *e*Pn Pn 02 23 37.1 +3.0
MFF Saint Martin d 17.17 305 *e*P Pn 02 23 35.5 -0.3
comp=Z,63nm,1.2s
MFF Saint Martin d 17.17 305 *e*P Pn 02 23 35.5 -0.3
MFF pmax pmax
comp=Z,32nm,1.2s
MFF Saint Martin d 17.17 305 *e*P Pn 02 23 35.5 -0.3
comp=Z,32nm,1.2s
ETOR Torete 17.41 285 P Pn 02 23 41.0 +2.2
comp=Z,5.7nm,0.4s
ETOR Torete 17.41 285 P Pn 02 23 41.0 +2.2
ETOR pmax pmax
comp=Z,6.0nm,0.4s
ETOR Torete 17.41 285 P Pn 02 23 41.0 +2.2
comp=Z,5.7nm,0.4s
KIV Kislovodsk 17.75 64 *e*Pn Pn 02 23 41.5 -1.4
comp=Z,35nm,1.1s
KIV Kislovodsk 17.75 64 *e*P Pn 02 23 42.8 -0.1
KIV *e*S Sn 02 27 01.3 +0.6
KIV pmax pmax
comp=Z,31nm,1.2s
KIV Kislovodsk 17.75 64⇑ *i*P Pn 02 23 43.5 +0.6
KIV Kislovodsk 17.75 64 *e*P Pn 02 23 42.8 -0.1
comp=Z,31nm,1.2s
EVIA Vianos 17.86 278 P Pn 02 23 45.7 +1.4
comp=Z,3.5nm,0.6s
EVIA Vianos 17.86 278 P Pn 02 23 45.7 +1.4
EVIA pmax pmax
comp=Z,4.0nm,0.6s
EVIA Vianos 17.86 278 P Pn 02 23 45.7 +1.4
comp=Z,3.5nm,0.6s
ECRI Cripan 17.87 291 P Pn 02 23 47.2 +2.8
comp=Z,4.4nm,0.5s
ECRI Cripan 17.87 291 P Pn 02 23 47.2 +2.8
ECRI pmax pmax
comp=Z,4.0nm,0.5s
LDF La Druitiere 17.98 311 *e*P Pn 02 23 44.1 -1.7
FLN La Foliniere 18.27 311 *e*P Pn 02 23 48.4 -0.9
FLN *e*MLR MLR
comp=Z,321nm,19.7s
GRR Gorron 18.33 310 *e*P Pn 02 23 50.2 +0.2
ZEI Tsey 18.45 69 *e*P Pn 02 23 53.1 +1.5
VRSR Storozhevoye 18.52 40 *e*P Pn 02 23 51.2 -1.2
VRSR pmax pmax
comp=Z,1.0nm,0.7s
VRSR pmax pmax
comp=N,2.0nm,1.0s
VRSR pmax pmax
comp=E,2.0nm,1.0s
VRSR MLR MLR
comp=Z,70nm,15.0s
VRSR MLR MLR
comp=N,160nm,44.0s
VRSR MLR MLR
comp=E,110nm,16.0s
VRSR Storozhevoye 18.52 40 *e*P Pn 02 23 51.2 -1.2
comp=E,160nm,44.0s
ELAN Lanestosa 18.61 293 P Pn 02 23 55.3 +1.8
comp=E,14nm,1.1s
ELAN Lanestosa 18.61 293 P Pn 02 23 55.3 +1.8
comp=E,14nm,1.1s
ESDC Sonseca Array 18.90 282 P Pn 02 23 56.5 -0.5
comp=E,2.6nm,0.6s
ESDC Sonseca Array 18.90 282 P Pn 02 23 56.6 -0.5
comp=E,0.5nm,0.3s,baz=77,slow=11,SNR=20
ESDC Sonseca Array 18.90 282 P Pn 02 23 56.5 -0.6
comp=E,2.6nm,0.6s
EBAN Banos Encina 18.92 277 P Pn 02 23 57.6 +0.4
comp=E,4.1nm,0.9s
EBAN Banos Encina 18.92 277 P Pn 02 23 57.6 +0.3
EBAN pmax pmax
comp=Z,4.0nm,0.9s
EBAN Banos Encina 18.92 277 P Pn 02 23 57.6 +0.3
comp=Z,4.1nm,0.9s
GUD Guadarrama 19.01 285 P Pn 02 23 58.9 +0.5
comp=Z,5.5nm,0.6s
GUD Guadarrama 19.01 285 P Pn 02 23 58.9 +0.5
GUD pmax pmax
comp=Z,6.0nm,0.6s
GUD Guadarrama 19.01 285 P Pn 02 23 58.8 +0.4
comp=Z,5.5nm,0.6s
PAB San Pablo 19.21 281 *e*P Pn 02 23 57.2 -3.6
comp=Z,38nm,1.7s
PAB San Pablo 19.21 281 *e*P Pn 02 23 57.2 -3.6
PAB pmax pmax
comp=Z,38nm,1.7s
EADA Adamuz 19.53 277 P Pn 02 24 03.2 -1.5
EADA Adamuz 19.53 277 P Pn 02 24 03.2 -1.5
MUD Monsted U'grnd 19.59 341 *i*P Pn 02 24 06.3 +1.1
MUD *i* 02 27 39.8
MUD pmax pmax
comp=Z,12nm,0.7s
MUD MLR MLR
comp=Z,240nm,16.0s
MUD Monsted U'grnd 19.59 341 *i*P Pn 02 24 06.3 +1.1
comp=Z,12nm,0.7s
MUD *i* 02 27 39.8
MUD
comp=Z,240nm,16.0s
MUD Monsted U'grnd 19.59 341 *i*P Pn 02 24 06.3 +1.1
comp=Z,12nm,0.7s
MUD *i* S Sn 02 27 39.8 -5.2
comp=Z,240nm,16.0s
VRHR Novokhopersk 19.72 43 *e*P Pn 02 24 07.1 +0.3
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=N,10.0nm,1.0s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR Novokhopersk 19.72 43 *e*P Pn 02 24 07.1 +0.3
comp=E,10.0nm,1.0s
ROSF Rostrenen 19.79 308 *e*P Pn 02 24 04.5 -3.1
OBN Obninsk 20.07 28 *e*P P 02 24 07.1 -2.0
comp=E,17nm,0.7s
OBN Obninsk 20.07 28⇑ *i*P P 02 24 08.8 -0.3
OBN *e* 02 24 24.9
OBN pmax pmax
comp=Z,22nm,0.9s
OBN MLR MLR
comp=Z,100nm,13.0s,MS3.4
OBN Obninsk 20.07 28 *i*P P 02 24 08.8 -0.3
comp=Z,22nm,0.9s
VSU Vasula 20.58 10 *i*P P 02 24 14.3 -0.3
ESPR Espera 20.76 274 P P 02 24 17.2 +0.4
comp=Z,1.4nm,0.3s
ESPR Espera 20.76 274 P P 02 24 17.2 +0.4
comp=Z,1.4nm,0.3s
CWF Charnwood Fore 20.79 321⇑ *e*P P 02 24 19.3 +2.3
CWF AMb AMB 02 24 22.4
comp=Z,63nm,1.3s
MOS Moscow 20.94 28 *e*P P 02 24 18.0 -0.5
MOS *e* 02 24 38.2
MOS *e*S S 02 28 15.7 +4.0
MOS pmax pmax
comp=Z,39nm,0.8s
MOS Moscow 20.94 28 *e*P P 02 24 18.0 -0.5
comp=Z,39nm,0.8s
ECAL Calabor 20.96 288 P P 02 24 21.0 +2.2
comp=Z,14nm,1.2s
ECAL Calabor 20.96 288 P P 02 24 21.0 +2.1
comp=Z,14nm,1.2s
PBRG Braganca 20.96 288 *e*P P 02 24 21.6 +2.7
comp=Z,26nm,1.6s
HGH Gray Hill 20.97 317 *e*P P 02 24 19.5 +0.6
MDT Midelt 20.98 262 P P 02 24 19.2 +0.1
comp=Z,4.4nm,0.9s,baz=41,slow=5.6,SNR=6.1
MDT LR LR 02 33 36.6
comp=Z,232nm,19.7s,MS3.6,baz=259,slow=40
MAK Makhachkala 21.11 69 *e*P P 02 24 21.1 +0.6
MAK *e*PPP 02 24 46.6
MAK *e*S S 02 28 21.3 +6.0
MAK *e*SSS 02 29 00.3
MAK pmax pmax
comp=Z,238nm,1.7s,mb5.2
MAK Makhachkala 21.11 69 *e*P P 02 24 21.1 +0.6
comp=Z,238nm,1.7s,mb5.2
MAK Makhachkala 21.11 69 *e*PcP S 02 28 21.3 +6.0
MVO Moncorvo 21.18 286 *e*P P 02 24 21.4 +0.1
comp=Z,23nm,1.3s,mb4.3
MVO *e*S S 02 28 33.9 +17
EMIN Mina Concepcio 21.23 277 P P 02 24 21.6 -0.2
comp=Z,6.5nm,0.9s,mb4.0
EMIN Mina Concepcio 21.23 277 P P 02 24 21.6 -0.3
comp=Z,6.5nm,0.9s,mb4.0
HEX Exmoor 21.24 315⇑ *e*P P 02 24 22.9 +1.2
HEX Exmoor 21.24 315⇑ *e*P P 02 24 22.9 +1.1
comp=Z,21nm,1.4s,mb4.3
MCH1 Michaelchurch 21.25 318 *e*P P 02 24 22.9 +1.0
MCH1 AMb AMB 02 24 25.8
comp=Z,21nm,1.4s,mb4.3
EBAD Badajoz 21.35 280 P P 02 24 22.5 -0.6
comp=Z,4.4nm,0.7s,mb3.9
EBAD Badajoz 21.35 280 P P 02 24 22.5 -0.6
comp=Z,4.4nm,0.7s,mb3.9
HTR Trewern Hill 21.44 318 *e*P P 02 24 25.6 +1.6
PBAR Barrancos 21.45 278 *e*P P 02 24 26.0 +1.8
comp=Z,29nm,1.3s,mb4.4
HLM1 Long Mynd 21.46 319 *e*P P 02 24 25.5 +1.3
HLM1 Long Mynd 21.46 319 *e*P P 02 24 25.5 +1.3
comp=Z,6.4nm,1.3s,mb3.8
PCBR Castelo Branco 21.59 283 *e*P P 02 24 25.2 -0.5
comp=Z,34nm,1.2s,mb4.7
MTE Manteigas 21.60 284 *e*P P 02 24 24.4 -1.4
comp=Z,57nm,1.5s,mb4.8
MTE *e*S S 02 28 28.4 +3.4
HPK Haverah Park 21.66 323 *e*P P 02 24 28.9 +2.6
HPK AMb AMB 02 24 32.3
comp=Z,6.4nm,1.3s,mb3.9
PVRL Vila Real 21.69 287 *e*P P 02 24 28.2 +1.4
comp=Z,18nm,1.3s,mb4.3
PESTR Estremoz 21.78 280 *e*P P 02 24 26.8 -1.0
comp=Z,15nm,1.1s,mb4.3
PESTR *e*S S 02 28 19.0 -10
PVIS Viseu 21.85 285 *e*P P 02 24 27.8 -0.7
comp=Z,41nm,1.7s,mb4.6
SBD1 Bryn Du 21.86 319 *e*P P 02 24 31.1 +2.6
PCAB Cabril 21.92 288 *e*P P 02 24 28.8 -0.4
comp=Z,39nm,1.4s,mb4.6
PVAQ Vaqueiros 22.11 276 *e*P P 02 24 31.9 +0.6
comp=Z,27nm,1.3s,mb4.5
EVO Evora 22.16 279 *e*P P 02 24 30.5 -1.3
comp=Z,25nm,1.9s,mb4.3
HFS Hagfors 22.23 351 P P 02 24 31.4 -0.9
comp=Z,19nm,0.6s,mb4.7,baz=163,slow=11,SNR=34
HFS LR LR 02 33 36.7
comp=Z,277nm,21.3s,MS3.6,baz=76,slow=38
KONO Kongsberg 22.41 346 *e*P P 02 24 34.3 0.0
comp=Z,14nm,1.0s,mb4.3
KONO Kongsberg 22.41 346 *e*P P 02 24 34.3 0.0
KONO pmax pmax
comp=Z,14nm,1.0s,mb4.3
KONO Kongsberg 22.41 346 *e*P P 02 24 34.3 0.0
comp=Z,14nm,1.0s,mb4.3
EKA Eskdalemuir Ar 23.21 325 P P 02 24 44.0 +1.3
comp=Z,22nm,0.9s,mb4.6,baz=129,slow=9.7,SNR=42
ESK Eskdalemuir 23.22 325⇑ *e*P P 02 24 43.1 +0.2
ESK AMb AMB 02 24 44.3
comp=Z,46nm,1.3s,mb4.7
ESK Eskdalemuir 23.22 325 *e*P P 02 24 43.2 +0.4
comp=Z,28nm,1.0s,mb4.7
ESK Eskdalemuir 23.22 325 *e*P P 02 24 43.3 +0.4
ESK pmax pmax
comp=Z,28nm,1.0s,mb4.7
ESK Eskdalemuir 23.22 325 *e*P P 02 24 43.2 +0.3
comp=Z,28nm,1.0s,mb4.7
FINES FINESS Array B 23.42 7 *i*P P 02 24 43.9 -1.0
FINES pmax pmax
comp=Z,15nm,0.8s
FINES FINESS Array B 23.42 7 P P 02 24 43.9 -1.1
comp=Z,15nm,0.8s,mb4.5,baz=170,slow=10,SNR=30
FINES FINESS Array B 23.42 7 *i*P P 02 24 43.9 -1.0
comp=Z,15nm,0.8s,mb4.5
NB2 NORSAR Subarra 23.44 349 P P 02 24 44.3 -0.8
comp=Z,22nm,0.9s,mb4.6,baz=160,slow=10
NB2 NORSAR Subarra 23.44 349 P P 02 24 44.3 -0.8
NB2 pmax pmax
comp=Z,22nm,0.9s,mb4.6
NOA NORSAR Array B 23.44 349 P P 02 24 44.6 -0.5
comp=Z,14nm,0.8s,mb4.4,baz=160,slow=9.7,SNR=60
NOA LR LR 02 34 44.8
comp=Z,227nm,20.3s,MS3.6,baz=180,slow=39
EDI Edinburgh 23.59 326⇑ *e*P P 02 24 48.1 +1.5
EDI AMb AMB 02 24 50.0
comp=Z,64nm,1.3s,mb4.9
DLF Lyons Farm 23.77 318 *e*P P 02 24 54.0 +5.7
MIB Mutribah 23.89 103 *e*P P 02 24 45.2 -4.5
MIB AMb AMB 02 24 51.0
comp=Z,172nm,1.1s,mb5.4
NAY Al-Naaiem 24.08 104 *e*P P 02 24 46.3 -5.1
NAY AMb AMB 02 24 52.9
comp=Z,46nm,0.8s,mb5.0
KAF Kangasniemi 24.10 7 *e*p P 02 24 48.9 -2.4
comp=Z,19nm,0.7s,mb4.6,baz=188,slow=9.3
KAF Kangasniemi 24.10 7 *e*P P 02 24 48.9 -2.4
KAF pmax pmax
comp=Z,19nm,0.7s,mb4.6
DCN Croghan 24.18 317 *e*P P 02 24 53.0 +0.9
UMR Umm Al-Rimmam 24.30 103 *e*P P 02 24 49.0 -4.5
UMR AMb AMB 02 24 55.8
comp=Z,122nm,0.8s,mb5.4
RDF Al-Radifah 24.47 104 *e*P P 02 24 51.1 -3.9
RDF AMb AMB 02 25 00.1
comp=Z,80nm,1.1s,mb5.0
JOF Joensuu 25.52 12 *e*p P 02 25 02.2 -2.0
comp=Z,20nm,0.8s,mb4.7
JOF Joensuu 25.52 12 *e*P P 02 25 02.2 -2.0
JOF pmax pmax
comp=Z,20nm,0.8s,mb4.7
PRGR Permogore 28.10 26⇓ *i*P P 02 25 27.1 -0.3
PRGR *e*S S 02 30 12.7 +0.6
AKTK Aktyubinsk 29.23 53 P P 02 25 36.6 -1.0
AKTK LR LR 02 39 59.8
AKTO Aktyubinsk 29.23 53 P P 02 25 36.6 -1.0
comp=Z,1.3nm,0.4s,mb4.0,baz=264,slow=5.1,SNR=7.8
AKTO LR LR 02 39 59.8
comp=Z,140nm,20.0s,MS3.6,baz=55,slow=42
TORD Torodi Ar. Bea 30.04 218 P P 02 25 44.4 -0.7
comp=Z,2.6nm,0.7s,mb4.0,baz=26,slow=9.6,SNR=35
TORD LR LR 02 39 31.9
comp=Z,149nm,18.4s,MS3.7,baz=30,slow=40
ARU Arti 31.06 42 *e*P P 02 25 51.7 -2.1
ARU Arti 31.06 42 *c i*P P 02 25 53.7 0.0

ARU 02 26 50.9
ARU *e* 02 28 46.4
ARU *eS* **S** **02 30 59.5 +0.8**
ARU SS SS 02 32 37.1 -34
ARU pmax pmax
comp=Z,8.0nm,1.2s,mb4.4
ARU MLR MLR
comp=Z,172nm,16.0s,MS3.8
ARU Arti 31.06 42 *i* P **P** **02 25 53.7 0.0**
comp=Z,8.0nm,1.2s,mb4.4
ARU Arti 31.06 42 *e*PcP PcP 02 28 46.4 -2.7
ARCES ARCESS Array B 31.39 4 P **P** **02 25 56.5 -0.1**
comp=Z,4.6nm,0.8s,mb4.3,baz=193,slow=10.0,SNR=12
ARCES LR LR 02 39 34.0
comp=Z,220nm,18.6s,MS3.9,baz=184,slow=38
BRVK Borovoye 37.09 50 *eP* **P** **02 26 45.3 -0.8**
comp=Z,7.7nm,0.9s,mb4.5
BRVK Borovoye 37.09 50 *eP* **P** **02 26 45.3 -0.8**
BRVK pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
BRVK Borovoye 37.09 50 *eP* **P** **02 26 45.3 -0.8**
comp=Z,7.7nm,0.9s,mb4.5
DBIC Dimbokro 38.89 222 P **P** **02 27 00.6 -1.0**
DBIC LR LR 02 44 08.0
DBIC Dimbokro 38.89 222 P **P** **02 27 00.6 -1.0**
comp=Z,1.3nm,0.4s,mb4.0,baz=343,slow=17,SNR=6.5
DBIC LR LR 02 44 08.0
comp=Z,247nm,18.6s,MS4.1,baz=15,slow=38
LIC Lamto 39.35 222 *eP* **P** **02 27 04.7 -0.8**
LIC *e*MLR MLR
comp=Z,236nm,22.2s,MS3.7
LIC Lamto 39.35 222 *eP* **P** **02 27 04.7 -0.8**
LIC LR LR
comp=Z,120nm,22.3s,MS3.7
EKS2 Erkin-Say 40.33 66 *eP* **P** **02 27 12.1 -1.3**
comp=Z,12nm,1.1s,mb4.5
EKS2 Erkin-Say 40.33 66 *eP* **P** **02 27 12.1 -1.3**
comp=Z,12nm,1.1s,mb4.5
FRU Bishkek 40.90 66 *eP* **P** **02 27 19.5 +1.4**
FRU pmax pmax
comp=Z,32nm,1.5s,mb4.7
FRU Bishkek 40.90 66 *eP* **P** **02 27 19.5 +1.4**
comp=Z,32nm,1.5s,mb4.7
UCH Uchtor 40.96 67 *eP* **P** **02 27 18.6 0.0**
comp=Z,5.3nm,1.1s,mb4.1
UCH Uchtor 40.96 67 *eP* **P** **02 27 18.6 0.0**
comp=Z,5.3nm,1.1s,mb4.1
KMBO Kilima Mbogo 42.26 154 LR LR 02 48 02.0
comp=Z,118nm,18.9s,MS3.8,baz=94,slow=40
KURK Kurchatov 42.32 53 *eP* **P** **02 27 26.5 -3.1**
comp=Z,7.4nm,1.1s,mb4.2
KURK Kurchatov 42.32 53 *eP* **P** **02 27 26.5 -3.1**
KURK pmax pmax
comp=Z,7.0nm,1.1s,mb4.2
NVS Novosibirsk 44.70 47 *i* P **P** **02 27 48.9 +0.2**
NVS *i* S **S** **02 34 25.9 +0.9**
NVS pmax pmax
comp=Z,12nm,1.0s,mb4.7
NVS pmax pmax
comp=N,4.0nm,0.8s
NVS pmax pmax
comp=E,6.0nm,0.9s
NVS Novosibirsk 44.70 47 *i* P **P** **02 27 48.9 +0.2**
comp=E,4.0nm,0.8s,mb4.3
MKAR Makanchi Array 45.37 58 P **P** **02 27 51.8 -2.3**
comp=E,3.3nm,0.5s,mb4.4,baz=282,slow=7.3,SNR=39
MKAR LR LR 02 50 47.5
comp=E,118nm,19.8s,MS3.8,baz=96,slow=41
ZAL Zalesovo 45.71 48 P **P** **02 27 54.7 -2.1**
ZALV Zalesovo Beam 45.72 48 P **P** **02 27 54.7 -2.1**
comp=E,14nm,0.7s,mb5.0,baz=276,slow=8.2,SNR=27
ZALV LR LR 02 49 25.6
comp=E,144nm,19.3s,MS3.9,baz=280,slow=39
HYB Hyderabad 54.63 95 *eP* **P** **02 29 04.0 -0.9**
HYB Hyderabad 54.63 95 *i* P **P** **02 29 04.0 -0.9**
TLY Talaya 57.31 47 *eP* **P** **02 29 24.9 +1.3**
TLY *e* 02 39 06.6
TLY pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
TLY MLR MLR
comp=Z,142nm,17.0s,MS4.1
ZAK Zakamensk 57.59 49 *eP* **P** **02 29 26.0 +0.4**
ZAK pmax pmax
comp=Z,2.0nm,0.9s,mb4.2
SCHQ Schefferville 58.24 317 P **P** **02 29 29.6 -0.5**
comp=Z,5.4nm,0.8s,mb4.7,baz=75,slow=6.5,SNR=14
TIXI Tiksi 59.57 20 *eP* **P** **02 29 40.5 +1.4**
TIXI pmax pmax
comp=Z,8.0nm,1.6s,mb4.5
TIXI MLR MLR
comp=Z,225nm,15.0s,MS4.4
GTA Gaotai 59.90 62 *eP* **P** **02 29 41.0 -0.9**
GTA AP pP 02 29 45.8 +0.7
GTA XP sP 02 29 48.0 +1.7
GTA AMB AMB
comp=Z,3.0nm,0.7s,mb4.4
BOD Bodaibo 60.36 38 *eP* **P** **02 29 42.9 -1.8**
BOD pmax pmax
comp=Z,4.0nm,1.8s,mb4.2
SONM Songino Array 60.49 51 P **P** **02 29 44.6 -1.2**
comp=Z,4.5nm,1.1s,mb4.4,baz=280,slow=8.7,SNR=17
ULN Ulaanbaatar 60.88 50⇑ *eP* **P** **02 29 47.2 -1.2**
LZH Lanzhou 64.29 63 *eP* **P** **02 30 13.5 +2.1**
LZH AP pP 02 30 17.5 +2.9
LZH XP sP 02 30 20.5 +4.7
LZH AMB AMB
comp=Z,17nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,67nm,4.1s
BOSA Boshof 66.75 175 P **P** **02 30 27.5 +0.3**
comp=Z,2.7nm,0.9s,mb4.2,baz=331,slow=13,SNR=2.8
BOSA LR LR 03 01 17.7
comp=Z,161nm,19.2s,MS4.2,baz=200,slow=38
HIA Hailar 67.53 44 *eP* **P** **02 30 31.8 -0.3**
comp=Z,8.4nm,1.0s,mb4.7
HIA Hailar 67.53 44 *eP* **P** **02 30 31.8 -0.3**
HIA pmax pmax
comp=Z,8.0nm,1.0s
BILL Bilibino 70.91 13 *i* P **P** **02 30 53.5 +0.8**
BILL pmax pmax
comp=Z,13nm,1.6s,mb4.6
SEY Seymchan 72.06 21⇑ *eP* **P** **02 31 00.5 +0.8**
YKA Yellowknife Ar 73.19 340 *i* P **P** **02 31 08.1 +1.7**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 73.19 340 P **P** **02 31 06.3 -0.1**
comp=Z,0.5nm,0.7s,mb3.6,baz=36,slow=5.4,SNR=11
KLR Kul'dur 73.87 39 *eP* **P** **02 31 03.2 -7.4**
CN2 Changchun 73.91 47 *eP* **P** **02 31 12.0 +1.0**
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
ULM Lac du Bonnet 75.48 323 P **P** **02 31 20.4 +0.4**
comp=Z,5.1nm,0.9s,mb4.4,baz=45,slow=7.8,SNR=8.7
IMA2 Indian Mountai 75.83 357 *eP* **P** **02 31 22.0 +0.3**
DAWY Dawson 76.69 351 *eP* **P** **02 31 26.0 -0.6**
NJ2 Nanjing 76.89 60 *eP* **P** **02 31 28.3 0.0**
KSRS Korea Array 79.37 51 P **P** **02 31 42.2 +0.2**
comp=Z,3.1nm,0.8s,mb4.3,baz=318,slow=4.7,SNR=7.6
KSRS LR LR 03 12 30.5
comp=Z,64nm,18.1s,MS4.0,baz=295,slow=40
ECSD EROS,Sioux Fal 80.37 319 *eP* **P** **02 31 47.6 +0.3**
comp=Z,3.4nm,0.8s,mb4.3
YSS Yuzh-Sakhalins 80.75 36⇑ *eP* **P** **02 31 54.8 +5.5**
EGMT Eagleton 83.23 329 *eP* **P** **02 32 03.9 +1.6**
comp=Z,30nm,1.5s,mb5.1
SDV Santo Domingo 85.30 278 LR LR 03 05 26.0
comp=Z,3μm,19.1s,baz=223,slow=32
CHMT Chamberlain Mo 85.52 330 *eP* **P** **02 32 14.3 +0.4**
MJAR Matsushiro Arr 86.00 46 P **P** **02 32 10.7 -5.9**
comp=Z,1.3nm,0.4s,mb4.6,baz=299,slow=11,SNR=5.2
PDAR Pinedale Array 87.33 326 P **P** **02 32 23.1 +0.1**
comp=Z,0.3nm,0.6s,mb3.7,baz=74,slow=5.4,SNR=4.2
WMOK Wichita Mounta 87.97 314 *eP* **P** **02 32 28.8 +2.6**
comp=Z,6.3nm,1.1s,mb4.8
WMOK Wichita Mounta 87.97 314 *eP* **P** **02 32 28.8 +2.7**
WMOK pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
HWUT Hardware Ranch 89.15 326 *eP* **P** **02 32 32.3 +0.7**
comp=Z,23nm,1.8s,mb5.2
PV10 Paradox Valley 90.58 323 *eP* **P** **02 32 38.4 +0.1**
WRA Warramunga Arr 120.71 92 PKP PKPdf 02 38 26.3 -2.0
comp=Z,0.2nm,0.6s,baz=318,slow=2.1,SNR=4.0
ASAR Alice Springs 122.36 96 PKP PKPdf 02 38 29.9 -1.5
comp=Z,0.2nm,0.5s,baz=320,slow=1.5,SNR=4.4

ISCJB ***26*** *02:41:05.0±0.5, 51.17N±003×590E±003, h10km, Error ellipse: s-maj=3.9km s-min=2.9km az=155.2*
UCC ***26*** *02:41:06.3±0.4, 51.17N×595E, h20km±1km, ML1.5*
CSEM ***26*** *02:41:06.5±0.1, 51.18N×595E, h8km, ML2.4/10, Error ellipse: s-maj=1.3km s-min=1.0km az=143.0*
BNS ***26*** *02:41:07.4±0.7, 51.14N×598E, h11km±2km, ML1.5*
LDG ***26*** *02:41:07.0±0.1, 51.15N×597E, h10km, Md2.5/1, Ml2.3/8, Error ellipse: s-maj=1.7km s-min=1.0km az=170.0*

ISC 26 02:41:05.7±0.5, 5116N±002×590E±003, h10km, n46, σ1§14/80, 8C-1D, The Netherlands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RODG	**Roetgen-Dahlhe**	**0.18**	**94**⇑	*e*Pg		**Pg**		**02 41 10.4**	**+0.9**
RODG				*e*Sg		**Sg**		**02 41 12.6**	**+0.5**
	129nm,0.2s								
BEBN	**Eben Emael**	**0.39**	**201**	⇑P		**Pg**		**02 41 14.5**	**+1.2**
BEBN				S		**Sg**		**02 41 20.4**	**+2.0**
	comp=N,11nm,0.4s								
BEBN	**Eben Emael**	**0.39**	**201**	P		**Pg**		**02 41 14.4**	**+1.1**
HGN	**Heimansgroeve**	**0.40**	**177**⇑	*i*Pg		**Pg**		**02 41 14.3**	**+0.9**
HGN	comp=N,4.7nm,0.1s			*i* Sg		**Sg**		**02 41 19.9**	**+1.2**
DREG	**Dreilaegerbach**	**0.54**	**157**	*e*Pg		**Pg**		**02 41 17.1**	**+1.0**
DREG				*e*Sg		**Sg**		**02 41 24.3**	**+1.1**
	comp=N,19nm,0.2s								
MEM	**Membach**	**0.55**	**173**	⇓P		**Pg**		**02 41 17.3**	**+0.9**
MEM				S		**Sg**		**02 41 24.7**	**+1.0**
	comp=N,9.6nm,0.3s								
MEM	**Membach**	**0.55**	**173**	P		**Pg**		**02 41 17.2**	**+0.8**
KLL	**Kalltalsperre**	**0.58**	**153**	*e*Pg		**Pg**		**02 41 17.7**	**+0.9**
KLL				*e*Sg		**Sg**		**02 41 25.2**	**+0.9**
	comp=N,44nm,0.1s								
STB	**Steinbach**	**0.82**	**133**	*e*Pg		**Pg**		**02 41 22.3**	**+0.8**
STB				*e*Sg		**Sg**		**02 41 32.5**	**+0.2**
	comp=N,12nm,0.1s								
BCLA	**Clavier**	**0.83**	**207**	⇑P		**Pg**		**02 41 22.6**	**+1.0**
BCLA				S		**Sg**		**02 41 35.7**	**+3.2**
	comp=E,12nm,0.1s								
BCLA	**Clavier**	**0.83**	**207**	P		**Pg**		**02 41 22.6**	**+1.0**
BCLA				S		**Sg**		**02 41 35.6**	**+3.2**
	comp=E,12nm,0.1s								
HOBG	**Hohbusch**	**0.92**	**100**⇑	*i*Pg		**Pg**		**02 41 23.6**	**+0.2**
HOBG				*e*Sg		**Sg**		**02 41 35.3**	**-0.2**
	comp=E,30nm,0.3s								
HOBG	**Hohbusch**	**0.92**	**100**	Pg		**Pg**		**02 41 23.6**	**+0.2**
HOBG				Sg		**Sg**		**02 41 35.3**	**-0.2**
	comp=E,30nm,0.3s								
WTSB	**Winterswijk**	**0.99**	**34**⇑	*i*Pg		**Pg**		**02 41 24.4**	**-0.3**
	comp=E,7.6nm,0.4s								
WTSB				*i* Sg		**Sg**		**02 41 37.0**	**-0.5**
WTSB				*i* Sg		**Sg**		**02 41 37.0**	**-0.5**
WTSB	**Winterswijk**	**0.99**	**34**⇑	*i*Pg		**Pg**		**02 41 24.4**	**-0.2**
	comp=E,7.6nm,0.4s,baz=220								
UCC	**Uccle**	**1.04**	**250**	⇑P		**Pg**		**02 41 25.9**	**+0.3**
UCC				S		**Sg**		**02 41 39.7**	**+0.6**
UCC	**Uccle**	**1.04**	**250**	P		**Pg**		**02 41 25.9**	**+0.3**
UCC				S		**Sg**		**02 41 39.6**	**+0.6**
GIVF	**Givet**	**1.26**	**213**	*e*Pn		**Pn**		**02 41 29.3**	**0.0**
GIVF	**Givet**	**1.26**	**213**	*e*Pg		**Pg**		**02 41 31.1**	**+1.3**
GIVF				*e*Sn		**Sn**		**02 41 45.2**	**-1.0**
GIVF				*e*Sg		**Sg**		**02 41 47.7**	**+1.6**
	comp=E,7.0nm,0.2s								
GIVF	**Givet**	**1.26**	**213**	*e*Pg		**Pg**		**02 41 31.1**	**+1.3**
GIVF				*e*Sn		**Sn**		**02 41 45.2**	**-1.0**
GIVF				*e*Sg		**Sg**		**02 41 47.7**	**+1.6**
	comp=E,3.5nm,0.2s								
BGG	**Burgeitz**	**1.32**	**136**	*e*Pg		**Pn**		**02 41 29.0**	**-1.2**
BGG				*e*Sg		**Sn**		**02 41 45.6**	**-2.2**
WLF	**Walferdange**	**1.50**	**174**	*e*Sg		**Sg**		**02 41 53.3**	**-0.7**
	SNR=4.6								
BAIF	**Baives**	**1.54**	**225**	*e*Pn		**Pn**		**02 41 33.3**	**+0.2**
BAIF	**Baives**	**1.54**	**225**	*e*Pg		**Pg**		**02 41 36.6**	**+1.4**
BAIF				*e*Sn		**Sn**		**02 41 52.4**	**-0.7**
	comp=E,2.1nm,0.3s								
BAIF	**Baives**	**1.54**	**225**	*e*Pg		**Pg**		**02 41 36.6**	**+1.4**
BAIF				*e*Sn		**Sn**		**02 41 52.4**	**-0.7**
	comp=E,1.0nm,0.3s								
TNS	**Taunus Mts**	**1.87**	**119**	*e*Sg		**Sb**		**02 42 03.4**	**0.0**
	SNR=2.2								
CDF	**Champ du Feu**	**2.89**	**161**	*e*Pn		**Pn**		**02 41 51.0**	**-0.7**
CDF	**Champ du Feu**	**2.89**	**161**	*e*P		**Pn**		**02 41 54.2**	**+2.5**
CDF	**Champ du Feu**	**2.89**	**161**	*e*Pg		**Pg**		**02 42 00.3**	**-0.7**
CDF				*e*Sn		**Sn**		**02 42 23.1**	**-3.4**
CDF				*e*Sg		**Sg**		**02 42 37.9**	**-0.6**
	comp=E,0.7nm,0.2s								
CDF	**Champ du Feu**	**2.89**	**161**	*e*P		**Pn**		**02 41 54.2**	**+2.5**
CDF	**Champ du Feu**	**2.89**	**161**	*e*Pg		**Pg**		**02 42 00.3**	**-0.7**
CDF				*e*Sn		**Sn**		**02 42 23.1**	**-3.4**
CDF				*e*Sg		**Sg**		**02 42 37.9**	**-0.6**
	comp=E,0.3nm,0.2s								
SFTF	**Sexfontaines**	**3.01**	**191**	*e*Sn		**Sn**		**02 42 27.1**	**-2.3**
	baz=19								
SFTF				*e*Sg		**Sg**		**02 42 41.7**	**-0.5**
	comp=E,2.5nm,0.2s								
SFTF	**Sexfontaines**	**3.01**	**191**	*e*Sn		**Sn**		**02 42 27.1**	**-2.3**
SFTF				*e*Sg		**Sg**		**02 42 41.7**	**-0.5**
	comp=E,1.2nm,0.2s								
HAU	**Haudompre**	**3.17**	**174**	*e*Sg		**Sg**		**02 42 46.0**	**-1.4**
	comp=E,2.6nm,0.3s								
HAU	**Haudompre**	**3.17**	**174**	*e*Sg		**Sg**		**02 42 46.0**	**-1.4**
	comp=E,1.3nm,0.3s								
HINF	**Hinteralfeld**	**3.40**	**169**	*e*Sg		**Sg**		**02 42 53.4**	**-1.5**
	comp=E,0.9nm,0.3s								
HINF	**Hinteralfeld**	**3.40**	**169**	*e*Sg		**Sg**		**02 42 53.4**	**-1.5**
	comp=E,0.4nm,0.3s								
LOR	**Lormes**	**4.12**	**200**	*e*Pn		**Pn**		**02 42 08.1**	**-0.5**
	baz=23								
LOR				*e*Sn		**Sn**		**02 42 53.6**	**-3.1**
	baz=22								
LOR				*e*Sg		**Sg**		**02 43 16.7**	**-1.1**
	comp=E,1.5nm,0.3s,baz=21								
LOR	**Lormes**	**4.12**	**200**	*e*Pn		**Pn**		**02 42 08.1**	**-0.5**
LOR				*e*Sn		**Sn**		**02 42 53.6**	**-3.1**
LOR				*e*Sg		**Sg**		**02 43 16.7**	**-1.1**
	comp=E,0.8nm,0.3s								
SSF	**Saint Saulge**	**4.39**	**202**	*e*Pn		**Pn**		**02 42 11.9**	**-0.4**
SSF				*e*Sn		**Sn**		**02 43 00.1**	**-3.4**
LDF	**La Druitiere**	**4.66**	**239**	*e*Pn		**Pn**		**02 42 16.1**	**+0.1**
LDF				*e*Sn		**Sn**		**02 43 06.8**	**-3.3**
AVF	**Avril sur Loir**	**4.68**	**202**	*e*Pn		**Pn**		**02 42 15.6**	**-0.7**
SMF	**Signal de Mont**	**4.71**	**197**	*e*Pn		**Pn**		**02 42 16.1**	**-0.7**
BGF	**Bois d'Agland**	**5.02**	**205**	*e*Pn		**Pn**		**02 42 20.5**	**-0.5**
GRR	**Gorron**	**5.18**	**240**	*e*Sn		**Sn**		**02 43 19.5**	**-3.4**
	comp=E,1.3nm,0.2s								
GRR	**Gorron**	**5.18**	**240**	*e*Sn		**Sn**		**02 43 19.5**	**-3.4**
	comp=E,0.6nm,0.2s								

ISCJB ***26*** *02:42:31.7±0.8, 4178N±004×2292E±005, h10km, Error ellipse: s-maj=6.2km s-min=5.0km az=0.1*
CSEM ***26*** *02:42:31.6±0.1, 4182N×2289E, h17km±1km, ML3.2, Error ellipse: s-maj=2.3km s-min=2.1km az=150.0*
SOF ***26*** *02:42:31.0, 4184N×2293E, h20km, MD2.6*
SKO ***26*** *02:42:32.0, 4179N×2290E, h15km, M0.6, ML1.1*
THE ***26*** *02:42:32.4, 4177N×2291E, h3km, ML3.2*

ISC 26 02:42:32.2±0.9, 4180N±005×2291E±005, h10km, n12, σ0§37/20, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.14**	**61**	*i* Pg		**Pg**		**02 42 36.0**	**+0.5**
VAY	**Valandovo**	**0.54**	**209**	*e*Pg		**Pg**		**02 42 43.2**	**+0.5**
VAY				*i* Sg		**Sg**		**02 42 49.9**	**+0.1**
VAY				*e*Lg				02 42 50.1	
	comp=E,4.5nm,0.2s								
VAY				*e*Lg				02 42 51.0	
	comp=N,4.4nm,0.2s								
VAY	**Valandovo**	**0.54**	**209**	*e*Pg		**Pg**		**02 42 43.0**	**+0.3**
STIP	**Stip**	**0.55**	**260**	*e*Pg		**Pg**		**02 42 42.2**	**-0.7**
STIP				*e*Sg		**Sg**		**02 42 50.4**	**+0.1**
STIP	**Stip**	**0.55**	**260**	*i* Pg		**Pg**		**02 42 42.6**	**-0.3**
STIP				*i* Sg		**Sg**		**02 42 50.5**	**+0.3**
STIP				*e*Lg				02 42 50.6	
	comp=N,15nm,0.3s								
STIP				*e*Lg				02 42 50.8	
	comp=E,5.7nm,0.2s								
STIP	**Stip**	**0.55**	**260**	*e*Pg		**Pg**		**02 42 42.2**	**-0.7**
STIP				*e*Sg		**Sg**		**02 42 50.3**	**+0.1**
KNT	**Kendrikon**	**0.63**	**181**	*e*Pg		**Pg**		**02 42 44.4**	**0.0**
KNT				*e*Sg		**Sg**		**02 42 52.8**	**+0.1**
MMB	**Musomiste**	**0.64**	**108**	*i* Pg		**Pg**		**02 42 45.1**	**+0.5**
SRS	**Serrai**	**0.85**	**143**	*e*Pg		**Pg**		**02 42 48.0**	**-0.5**
SRS				*e*Sg		**Sg**		**02 42 59.7**	**+0.1**
SRS	**Serrai**	**0.85**	**143**	*e*Pg		**Pg**		**02 42 48.0**	**-0.5**
SRS				*e*Sg		**Sg**		**02 42 59.7**	**+0.1**
SOH	**Sokhos**	**1.03**	**161**	*e*Pg		**Pg**		**02 42 51.7**	**-0.3**
SOH				*e*Sg		**Sg**		**02 43 05.3**	**0.0**
RZN	**Rozhen**	**1.35**	**94**	*i* Pg		**Pg**		**02 42 57.6**	**-0.6**

IDC ***26*** *02:46:54.0±0.5, 1728S×7235W, h0km, mb4.7/16, mb1 4.8/17, mb1mx4.7/19, mbtmp4.7/17, ML3.4/1, MS4.8/19, Ms1 4.8/19, ms1mx4.6/25, Error ellipse: s-maj=24.6km s-min=13.7km az=79.0*
LDG ***26*** *02:46:55.8±0.5, 1700S×7237W, h10km, Mb5.3/32, Ms5.0/10, Error ellipse: s-maj=30.0km s-min=11.5km az=39.0*
ISCJB ***26*** *02:46:57.9±0.2, 1725S±005×7251W±003, h27km, mb5.1/140, MS5.0/32, Error ellipse: s-maj=7.0km s-min=4.0km az=26.3*
MOS ***26*** *02:46:58.4±1.2, 1726S×7274W, h33km, mb5.4/55, MS5.0/10, Error ellipse: s-maj=8.9km s-min=6.2km az=81.1*
NEIC ***26*** *02:46:58.6±0.4, 1738S×7261W, h27km±2km, mb5.2/109, MS5.0/8, ML4.8(LIM), Error ellipse: s-maj=6.8km s-min=4.6km az=223.0*
NEIC Felt [II] at Punta de Bombon.
GCMT ***26*** *02:46:58.6±0.2, 1760S×7292W, h15km, MW5.4/63, Moment Tensor Solution. s53,c78; s63,c98; Duration: 1s2 Moment tensor: Scale 10^{17}Nm; M_r0.60±.02; $M_{\theta\theta}$-0.12±.01; $M_{\phi\phi}$-0.48±.02; $M_{r\theta}$0.71±.05; $M_{\theta\phi}$0.33±.01; $M_{\phi r}$-1.42±.06; Best double couple: $M_0$1.71000×10^{17} NP1:ϕs324.00000°,δ11.00000°,λ81.00000°. NP2: ϕs153.00000°,δ79.00000°,λ92.00000°. Principal axes: T 1.6730, Plg56.0000°, Azm65.0000°; N 0.0730, Plg2.0000°, Azm333.0000°; P -1.7460, Plg34.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
BJI ***26*** *02:47:00.6, 1740S×7260W, h26km, mB5.4, Ms5.3, Msz5.1*
SZGRF ***26*** *02:47:05.3, 1633S×7163W, h33km, mb5.4, MS5.0, Southern Peru*

ISC 26 02:46:57.6±1.7, 1734S±004×7245W±003, h15km±10km, n691, σ1§01/601, mb5.1/140, MS5.0/32, 101C-121D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**1.26**	**47**⇑	*i*P		**Pg**		**02 47 24.2**	**+2.3**
ARE				*i* S		**Sg**		**02 47 44.8**	**+6.5**
LPAZ	**La Paz**	**4.26**	**76**	Pn		**Pb**		**02 48 08.7**	**-3.5**
	8.7nm,0.3s,baz=253,slow=11,SNR=151								
LPAZ					LR	LR		02 49 31.8	
	comp=Z,4μm,18.5s,baz=87,slow=38								
NNA	**Nana**	**6.81**	**321**	Pn		**Pn**		**02 48 35.0**	**-2.0**
	456nm,0.5s,SNR=6.4								
NNA	**Nana**	**6.81**	**321**	*e*Pn		**Pn**		**02 48 35.0**	**-2.0**
NNA				*e*Sn		**Sn**		**02 49 48.0**	**-6.4**
NNA				Sn		**Sn**		**02 49 49.3**	**-5.1**
NNA	**Nana**	**6.81**	**321**	Pn		**Pn**		**02 48 41.7**	**+4.6**
	8.3nm,0.3s,baz=183,slow=15,SNR=11								
NNA					Sn	**Sn**		**02 49 49.3**	**-5.1**
	29nm,0.3s,baz=90,slow=20,SNR=3.2								
NNA					LR	LR		02 51 08.0	
	comp=Z,4μm,19.1s,baz=161,slow=37								
SIV	**San Ignacio**	**10.98**	**85**	Pn		**Pn**		**02 49 35.8**	**+1.5**
	0.2nm,0.3s,baz=264,slow=8.4,SNR=3.3								
ATAH	**Atahualpa**	**11.80**	**330**	Pn		**Pn**		**02 49 50.2**	**+4.7**
	1.0nm,0.3s,baz=148,slow=16,SNR=13								
ATAH					Sn	**Sn**		**02 52 07.0**	**+10**
	0.6nm,0.3s,baz=156,slow=20,SNR=2.4								
ATAH					LR	LR		02 54 28.1	
	comp=Z,2μm,20.0s,baz=137,slow=39								
CFAA	**Coronel Fontan**	**14.71**	**166**	Pn		**Pn**		**02 50 23.8**	**-1.3**
CFAA					Sn	**Sn**		**02 53 21.2**	**+13**
CFAA					LR	LR		02 55 45.7	
CFAA	**Coronel Fontan**	**14.71**	**166**	Pn		**Pn**		**02 50 23.8**	**-1.3**
	0.2nm,0.3s,baz=350,slow=12,SNR=20								
CFAA					Sn	**Sn**		**02 53 21.2**	**+13**
	0.0nm,0.3s,baz=138,slow=9.7,SNR=4.0								
CFAA					LR	LR		02 55 45.7	
	comp=Z,304nm,18.8s,baz=341,slow=36								
OTAV	**Otavalo**	**18.44**	**341**	*e*Pn		**Pn**		**02 51 17.0**	**+4.2**
LPA	**La Plata**	**21.77**	**146**	*de*P		**P**		**02 51 53.0**	**+4.2**
LPA				*e*pP				02 52 03.0	
LPA				*e*PCP		PcP		02 55 44.0	-5.1
LPA				*e*S		**S**		**02 55 53.0**	**+3.7**
ROSC	**El Rosal**	**22.13**	**355**	P		**P**		**02 51 53.8**	**+1.0**
	8.7nm,0.5s,mb4.5,baz=87,slow=18,SNR=12								
ROSC					S	**S**		**02 56 06.7**	**+10**
	1.2nm,0.4s,baz=107,slow=19,SNR=1.7								
TRQA	**Tornquist**	**22.59**	**158**	*e*P		**P**		**02 51 56.4**	**-1.2**
	71nm,1.2s,mb5.0								
PLCA	**Paso Flores**	**23.37**	**176**	*e*P		**P**		**02 52 04.1**	**-1.7**
	192nm,1.3s,mb5.4								
PLCA	**Paso Flores**	**23.37**	**176**	*e*P		**P**		**02 52 04.1**	**-1.7**
PLCA					pmax	pmax			
	comp=Z,192nm,1.3s								
PLCA	**Paso Flores**	**23.37**	**176**	P		**P**		**02 52 04.3**	**-1.4**
	comp=Z,31nm,1.1s,mb4.7,baz=344,slow=11,SNR=34								
SDV	**Santo Domingo**	**26.12**	**4**	*e*P		**P**		**02 52 30.8**	**-0.3**
	comp=Z,42nm,0.9s,mb5.0								
SDV	**Santo Domingo**	**26.12**	**4**	P		**P**		**02 52 29.8**	**-1.3**
	comp=Z,6.9nm,0.4s,mb4.5,baz=237,slow=7.1,SNR=17								
PCRV	**Puerto La Cruz**	**28.41**	**16**	P		**P**		**02 52 49.9**	**-1.8**
	comp=Z,18nm,1.1s,mb4.6,baz=228,slow=15,SNR=3.7								
PCRV					LR	LR		03 05 24.5	
	comp=Z,7μm,20.7s,MS5.2,baz=11,slow=39								
GRGR	**Grenville**	**31.16**	**21**	*e*P		**P**		**02 53 16.1**	**0.0**
SJG	**San Juan**	**35.77**	**10**	*e*P		**P**		**02 53 54.5**	**-1.7**
	comp=Z,55nm,1.2s,mb5.4								
SJG	**San Juan**	**35.77**	**10**	*e*P		**P**		**02 53 54.5**	**-1.7**
SJG					pmax	pmax			
	comp=Z,55nm,1.2s								
MTP	**Monte Pirata**	**35.86**	**11**	*e*P		**P**		**02 53 55.2**	**-1.8**
CBYP	**Canovanas**	**35.97**	**11**	*e*P		**P**		**02 53 55.8**	**-2.2**
SDDR	**Presa de Saban**	**36.11**	**2**	*e*P		**P**		**02 54 01.0**	**+1.9**
RCBR	**Riachuelo**	**37.50**	**77**	*e*P		**P**		**02 54 11.9**	**+0.7**
USHA	**Ushuaia**	**37.55**	**176**	P		**P**		**02 54 10.5**	**-0.6**
	comp=Z,16nm,1.1s,mb4.7,baz=284,sl

MIAR pmax pmax
comp=Z,28nm,1.1s,mb5.2
CBN Corbin 55.44 355 *e*P **P 02 56 30.5 -1.0**
PARMO Parma 56.14 343 *e*P **P 02 56 34.0 -2.6**
SDMD Soldier's Deli 56.60 356 *e*P **P 02 56 39.8 0.0**
WCI Wyandotte Cave 56.78 347 *e*P **P 02 56 38.8 -2.3**
USIN University of 56.84 346 *e*P **P 02 56 39.6 -1.9**
SIUC Southern Illin 56.99 344 *e*P **P 02 56 40.6 -1.9**
MCWV Mont Chateau 57.12 353 *e*P **P 02 56 43.2 -0.3**
comp=Z,28nm,1.0s,mb5.2
MVL Millersville 57.15 356 *e*P **P 02 56 46.0 +2.3**
WMOK Wichita Mounta 57.52 334 *e*P **P 02 56 44.3 -2.1**
FVM French Village 57.56 343 *e*P **P 02 56 44.8 -1.9**
comp=Z,19nm,0.6s,mb5.3
FVM French Village 57.56 343 *e*P **P 02 56 44.8 -1.9**
FVM pmax pmax
comp=Z,19nm,0.6s,mb5.3
BLO Bloomington 57.73 347 *e*P **P 02 56 48.1 +0.2**
comp=Z,18nm,0.8s,mb5.2
BLO Bloomington 57.73 347 *e*P **P 02 56 48.1 +0.3**
BLO pmax pmax
comp=Z,18nm,0.8s,mb5.2
SSPA Standing Stone 57.90 355 *e*P **P 02 56 48.5 -0.5**
GDL2 Guadalupe Moun 57.98 328 *e*P **P 02 56 48.8 -0.9**
MNTX Cornudas Mount 58.10 327 *e*P **P 02 56 48.4 -2.2**
comp=Z,17nm,1.0s,mb5.0
ACSO Alum Creek Sta 58.10 351 *e*P **P 02 56 48.8 -1.6**
comp=Z,34nm,0.9s,mb5.4
RKT Rikitea 58.58 253 *e*S **S 03 05 02.2 +4.1**
comp=Z,1µm,25.5s
RKT *e*LR LR 03 14 19.3
comp=Z,2µm,22.8s
ALLY Alegheny Colle 59.12 353 *e*P **P 02 56 56.5 -1.0**
comp=Z,23nm,0.7s,mb5.3
BINY Binghamton 59.33 357 *e*P **P 02 56 59.0 +0.1**
WES Weston 59.43 1 *e*pP pP 02 57 05.7 +1.5
HRV Harvard--Oak R 59.55 1 *e*P **P 02 56 59.1 -1.3**
ERPA Erie 59.56 353 *e*P **P 02 56 59.2 -1.3**
HDIL Hopedale 59.69 345 *e*P **P 02 56 59.0 -2.4**
319A Douglas 59.97 324 ⇓P **P 02 57 03.2 -0.4**
baz=60
318A Bisbee 60.42 323 ⇑P **P 02 57 06.6 -0.1**
baz=60
ACCN Adirondack Com 60.43 359 *e*P **P 02 57 08.7 +2.2**
BNM Barren Site 60.67 328 *e*P **P 02 57 07.4 -0.9**
LPM Los Pinos Moun 60.80 328 *e*P **P 02 57 08.6 -0.6**
218A Dragoon 60.85 324 ⇓P **P 02 57 09.5 -0.1**
baz=61
LENM Lemitar 60.86 327 *e*P **P 02 57 08.2 -1.3**
LAZ Ladron 61.13 327 *e*P **P 02 57 10.6 -0.8**
217A Green Valley 61.15 323 ⇓P **P 02 57 11.5 -0.1**
baz=61
ANMO Albuquerque 61.22 328 *e*P **P 02 57 11.1 -0.9**
comp=Z,23nm,1.3s,mb5.1
ANMO Albuquerque 61.22 328 *e*P **P 02 57 11.1 -0.9**
ANMO pmax pmax
comp=Z,23nm,1.3s
CBKS Cedar Bluff 61.43 336 *e*P **P 02 57 12.2 -1.2**
TUC Tucson 61.52 323 *e*P **P 02 57 13.0 -1.1**
216A Three Points, 61.68 323 ⇓P **P 02 57 14.8 -0.4**
baz=62
FRNY Flat Rock 61.88 359 *e*P **P 02 57 15.9 -0.3**
MSNY Massena 62.07 358 *e*P **P 02 57 16.6 -0.9**
JFWS Jewell Farm 62.15 345 *e*pP pP 02 57 25.1 +2.3
116A Eloy 62.23 323 ⇓P **P 02 57 18.2 -0.7**
baz=62
PKME Peaks-Kenny Pk 62.37 3 *e*P **P 02 57 18.5 -1.0**
comp=Z,29nm,1.0s,mb5.4
115A Sonoran Desert 62.64 323 ⇑P **P 02 57 21.6 0.0**
baz=63
SDCO Great Sand Dun 62.99 331 *e*P **P 02 57 22.9 -0.9**
Z14A Wintersburg 63.53 323 ⇓P **P 02 57 28.5 +1.0**
baz=64
X15A Humboldt 63.94 324 ⇑P **P 02 57 30.2 0.0**
baz=64
Y14A Wickenburg 63.98 323 ⇓P **P 02 57 30.5 0.0**
baz=64
MVCO Mesa Verde 64.01 328 *e*P **P 02 57 29.7 -0.9**
MVCO Mesa Verde 64.01 328 ⇑P **P 02 57 30.1 -0.5**
baz=64
WUAZ Wupatki 64.22 325 *e*P **P 02 57 31.9 -0.1**
comp=Z,30nm,1.2s,mb5.2
WUAZ Wupatki 64.22 325 ⇑P **P 02 57 31.1 -0.9**
baz=64
X14A Yava 64.30 324 ⇓P **P 02 57 31.9 -0.6**
baz=64
Y13A Salome 64.37 322 ⇓P **P 02 57 33.3 +0.3**
baz=64
GLA Glamis 64.42 321 ⇓P **P 02 57 33.7 +0.3**
baz=64
W15A Williams 64.46 324 ⇓P **P 02 57 35.0 +1.3**
baz=64
ECSD EROS,Sioux Fal 64.68 341 *e*P **P 02 57 33.3 -1.5**
ISCO Idaho Springs 64.72 332 *e*P **P 02 57 34.2 -1.0**
comp=Z,12nm,1.0s,mb4.9
ISCO Idaho Springs 64.72 332 *e*P **P 02 57 34.2 -1.0**
ISCO pmax pmax
comp=Z,12nm,1.0s,mb4.9
Y12C Blythe 64.73 322 ⇓P **P 02 57 36.3 +1.0**
baz=65
PV01 Paradox Valley 64.77 329 *e*P **P 02 57 34.5 -1.1**
SMCO Snowmass 64.83 331 *e*P **P 02 57 35.8 -0.1**
comp=Z,23nm,1.1s,mb5.1
PDMCI Parker Dam,Lak 64.89 323 ⇑P **P 02 57 38.1 +1.6**
baz=65
COWI Conover 64.92 347 *e*P **P 02 57 34.5 -1.8**
comp=Z,14nm,1.0s,mb5.0
DVTC Desert V Tower 64.92 320 ⇓P **P 02 57 36.6 -0.1**
baz=65
X13A Yucca 64.92 323 ⇓P **P 02 57 36.6 0.0**
baz=65
SWSC Sam W. Stewart 64.93 320 ⇓P **P 02 57 37.6 +0.9**
baz=65
W14A Seligman 64.94 324 ⇓P **P 02 57 36.8 0.0**
baz=65
VNA3 Neumayer Olymp 65.06 162 *e*P **P 02 57 36.8 -0.3**
VNA3 *e* pP 02 57 42.6 +0.8
VNA3 *e* 02 57 46.0
VNA3 *e* 02 57 48.5
VNA3 *e* 02 57 51.8
VNA3 *e* 02 57 55.3
VNA3 *e* 02 57 58.3
VNA3 *e* 02 58 03.9
VNA3 *e* 02 58 10.1
VNA3 *e* 02 58 15.2
VNA3 *e* 02 58 19.7
VNA3 *e* 02 58 27.3
PV10 Paradox Valley 65.19 329 *e*P **P 02 57 36.8 -1.5**
BC3 Big Chuckw Mtn 65.22 321 ⇑P **P 02 57 38.9 +0.3**
baz=65
MONP Monument Peak 65.28 320 ⇓P **P 02 57 39.6 +0.6**
baz=65
W13A Hualapai Mount 65.32 323 ⇑P **P 02 57 39.2 0.0**
baz=65
IRM Iron Mountain 65.39 322 ⇓P **P 02 57 40.3 +0.6**
baz=65
VNA2 Neumayer--Watz 65.66 161 *e*P **P 02 57 37.4 -3.5**
VNA2 *e* 02 57 44.4
VNA2 *e* 02 57 46.5
VNA2 *e* 02 57 49.9
VNA2 *e* 02 57 52.7
VNA2 *e* 02 57 56.5
VNA2 *e* 02 57 59.0
VNA2 *e* 02 58 05.2
VNA2 *e* 02 58 10.6
VNA2 *e* 02 58 16.0
VNA2 *e* 02 58 21.0
VNA2 *e* 02 58 28.2
BELC Belle Mtn. 65.78 321 ⇑P **P 02 57 42.8 +0.6**
baz=66
PFO Pinyon Flat Ob 65.79 321 *e*P **P 02 57 41.3 -0.9**
comp=Z,21nm,1.2s,mb5.0
PFO Pinyon Flat Ob 65.79 321 *e*P **P 02 57 41.3 -1.0**
PFO pmax pmax
comp=Z,21nm,1.2s,mb5.0
PFO Pinyon Flat Ob 65.79 321 ⇑P **P 02 57 42.2 0.0**
baz=66
PHWY Pilot Hill 65.88 333 *e*P **P 02 57 42.1 -0.6**
U14A Mt Trumbull 65.88 325 ⇑P **P 02 57 42.8 +0.1**
baz=66
T15A Red Dirt Ranch 65.88 326 ⇓P **P 02 57 42.6 -0.2**
baz=66
GMRC Granite Mounta 66.12 322 ⇑P **P 02 57 44.7 +0.3**
baz=66
TAOE Nuku Hiva Isla 66.21 268 *e*S S 03 06 38.3 +3.9
comp=Z,3µm,26.3s
TAOE Nuku Hiva Isla 66.21 268 *e*LR LR 03 17 36.9
comp=Z,2µm,26.6s,baz=97
T14A Hurricane 66.29 325 ⇑P **P 02 57 46.2 +0.7**
baz=66
U13A Pakoon Wash 66.31 324 ⇑P **P 02 57 46.6 +1.0**
baz=66
V12A Nelson 66.32 323 ⇑P **P 02 57 45.0 -0.6**
baz=66
SRU San Rafael 66.49 328 *e*P **P 02 57 46.1 -0.5**
HEC Hector,Ludlow 66.55 322 ⇑P **P 02 57 47.8 +0.7**
baz=66
U12A Valley of Fire 66.64 324 ⇓P **P 02 57 48.4 +0.7**
baz=67
T13A Saint George 66.71 325 ⇓P **P 02 57 48.9 +0.7**
baz=67
V11A Goodsprings 66.73 323 ⇓P **P 02 57 48.3 0.0**
baz=67
TUQ Turquoise Mtn. 66.73 322 ⇑P **P 02 57 48.6 +0.3**
baz=67
CCUT Cedar City 66.80 326 *e*P **P 02 57 48.4 -0.3**
S14A Cedar City 66.85 326 ⇓P **P 02 57 49.7 +0.8**
baz=67
MSU Marysvale 66.88 327 *e*P **P 02 57 48.9 -0.3**
BFSC Mount Baldy St 66.95 320 ⇓P **P 02 57 50.3 +0.6**
baz=67
TMUT Trail Mountain 66.98 328 *e*P **P 02 57 52.5 +2.7**
ARUT Antelope Range 67.02 326 *e*P **P 02 57 49.9 -0.2**
S13A Holt Ranch, En 67.09 325 ⇓P **P 02 57 50.6 +0.1**
baz=67
GSC Goldstone 67.16 322 ⇓P **P 02 57 52.3 +1.3**
baz=67
EYMN Ely 67.19 346 *e*P **P 02 57 49.3 -1.6**
comp=Z,29nm,1.0s,mb5.3
SNAA Sanae 67.28 161 *e*P **P 02 57 50.1 -1.2**
SNAA *e* 02 57 56.7
SNAA *e* 02 57 59.1
SNAA *e* 02 58 01.7
SNAA *e* 02 58 04.4
SNAA *e* 02 58 07.8
SNAA *e* 02 58 09.9
SNAA *e* 02 58 12.5
SNAA *e* 02 58 18.3
SNAA *e* 02 58 22.8
SNAA *e* 02 58 29.2
SNAA Sanae 67.28 161 *e*P **P 02 57 50.3 -1.0**
EDW2 Edwards Air Fo 67.58 321 ⇓P **P 02 57 54.3 +0.7**
baz=68
T11A Corn Creek, Al 67.60 324 ⇓P **P 02 57 54.8 +1.1**
baz=68
U10A Ash Meadows, A 67.65 323 ⇑P **P 02 57 54.8 +0.7**
baz=68
MPU Maple Canyon 67.74 328 *e*pP pP 02 58 04.6 +5.3
DAU Daniels Canyon 67.85 329 *e*P **P 02 57 55.3 +0.1**
NLU North Lily Min 67.91 328 *e*P **P 02 57 56.2 +0.6**
TPNV Topopah Spring 67.98 323 *e*P **P 02 57 56.3 +0.2**
comp=Z,20nm,1.1s,mb5.1
TPNV Topopah Spring 67.98 323 *e*P **P 02 57 56.3 +0.2**
TPNV pmax pmax
comp=Z,20nm,1.1s,mb5.1
TPNV Topopah Spring 67.98 323 ⇓P **P 02 57 56.5 +0.4**
baz=68
FURC Furnace Creek, 68.00 323 ⇑P **P 02 57 56.3 0.0**
baz=68
R12A Pony Springs, 68.04 325 ⇑P **P 02 57 57.3 +0.8**
baz=68
MPMC Manual Prospec 68.08 322 ⇓P **P 02 57 56.5 -0.3**
baz=68
JLU Jordanelle 68.09 329 *e*P **P 02 57 56.7 -0.1**
Q13A Wheeler Ranch, 68.18 326 ⇓P **P 02 57 57.2 -0.2**
baz=68
S11A Rachel 68.18 324 ⇑P **P 02 57 58.1 +0.7**
baz=68
DAC Darwin (Calif) 68.29 322 *e*P **P 02 57 58.3 +0.2**
CTU Camp Tracy 68.31 329 *e*pP pP 02 58 04.3 +1.4
ISA Isabella 68.40 321 ⇑P **P 02 57 58.8 0.0**
baz=68
NOQ North Oquirrh 68.46 329 *e*P **P 02 57 58.9 -0.2**
comp=Z,12nm,0.8s,mb5.0
DUG Dugway 68.47 328 *e*P **P 02 57 58.6 -0.5**
DUG Dugway 68.47 328 ⇓P **P 02 57 59.3 +0.2**
baz=68
P13A Bates Ranch, G 68.54 326 ⇓P **P 02 57 59.5 -0.2**
baz=68
R11A Troy Canyon, C 68.59 325 ⇑P **P 02 58 00.7 +0.8**
baz=69
TRCR Troy Canyon 68.59 325 *e*P **P 02 57 59.4 -0.6**
AGMN Agassiz Refuge 68.60 343 *e*P **P 02 57 58.5 -1.3**
GRAC Grapevine Rang 68.66 323 ⇓P **P 02 58 00.4 0.0**
baz=69
Q12A Willow Creek R 68.68 326 ⇓P **P 02 58 00.6 +0.1**
baz=69
CWC Cottonwood Cre 68.69 322 ⇓P **P 02 58 01.0 +0.4**
baz=69
PKM Peak Mountain 68.71 320 ⇑P **P 02 58 01.1 +0.2**
baz=69
N15A Stansbury Isla 68.84 328 ⇑P **P 02 58 01.0 -0.5**
baz=69
S10A Tonopah Range, 68.86 324 ⇓P **P 02 58 01.0 -0.6**
baz=69
BW06 Boulder Array 68.87 332 *e*P **P 02 58 00.5 -1.1**
comp=Z,30nm,2.0s,mb4.9
PDAR Pinedale Array 68.87 332 P **P 02 58 00.3 -1.3**
comp=Z,1.2nm,1.0s,mb3.8,baz=131,slow=6.1,SNR=8.3
PDAR LR LR 03 30 55.3
comp=Z,374nm,18.5s,MS4.7,baz=142,slow=38
HWUT Hardware Ranch 68.91 330 *e*P **P 02 58 00.7 -1.2**
comp=Z,22nm,1.0s,mb5.0
R10A Warm Springs 68.95 324 ⇑P **P 02 58 02.3 +0.1**
baz=69
Q11A Duckwater 68.98 325 ⇑P **P 02 58 02.5 +0.1**
baz=69
O13A Hicks Ranch, I 69.02 327 ⇑P **P 02 58 02.8 +0.2**
baz=69
P12A McGill 69.03 326 ⇑P **P 02 58 02.8 +0.1**
baz=69
S09A Goldfield 69.07 323 ⇓P **P 02 58 03.4 +0.4**
baz=69
SPUT South Promonto 69.12 329 *e*P **P 02 58 01.1 -2.1**
BGU Big Grassy Mou 69.12 328 *e*P **P 02 58 02.1 -1.1**
N14A Grayback Hills 69.15 328 ⇑P **P 02 58 02.9 -0.5**
baz=69
M15A Larsen Ranch, 69.23 329 ⇑P **P 02 58 03.5 -0.4**
baz=69
RCTC Rector, Farmer 69.30 321 ⇓P **P 02 58 04.4 0.0**
baz=69
TPH Tonopah 69.32 324 *e*pP pP 02 58 14.1 +4.8
R09A Tonopah 69.34 324 ⇓P **P 02 58 05.4 +0.7**
baz=69
Q10A Clear Creek Ra 69.38 325 ⇑P **P 02 58 05.6 +0.8**
baz=69
HELL Mitchell Peak, 69.41 321 ⇑P **P 02 58 05.1 0.0**
baz=69
S08C White Mtn Res 69.47 323 ⇓P **P 02 58 05.1 -0.3**
baz=70
O12A Currie 69.52 327 ⇑P **P 02 58 05.5 -0.2**
baz=70
MTUM Tungsten Hills 69.59 322 *e*P **P 02 58 09.3 +3.1**
HVU Hansel Valley 69.63 329 *e*P **P 02 58 05.6 -0.7**
N13A Wendover, West 69.67 327 ⇓P **P 02 58 07.1 +0.5**
baz=70
M14A Sheep Mountain 69.71 328 ⇑P **P 02 58 06.4 -0.4**
baz=70
PKD Parkfield 69.84 320 ⇓P **P 02 58 07.8 0.0**
baz=70
O11A Cowboy Ranch, 69.90 326 ⇓P **P 02 58 08.5 +0.5**
baz=70
REDW Red Top Meadow 69.92 331 *e*P **P 02 58 08.8 +0.7**
comp=Z,14nm,1.0s,mb4.9
SNOW Snow King Moun 69.96 331 *e*P **P 02 58 11.4 +3.1**
comp=Z,17nm,1.1s,mb4.9
P10A Eureka 69.98 325 ⇑P **P 02 58 09.0 +0.5**
baz=70
LOHW Long Hollow 70.00 331 *e*P **P 02 58 08.0 -0.6**
KCC Kaiser Creek 70.02 322 ⇑P **P 02 58 09.2 +0.4**
baz=70
M13A Montello 70.02 328 ⇑P **P 02 58 09.3 +0.5**
baz=70
T06C Millerton Lake 70.04 321 ⇑P **P 02 58 10.3 +1.3**
baz=70
TPAW Teton Pass 70.07 331 *e*P **P 02 58 08.7 -0.3**
comp=Z,16nm,1.2s,mb4.8
N12A Clover Valley, 70.10 327 ⇑P **P 02 58 11.4 +2.1**
baz=70
MOOW Moose Ponds 70.17 331 *e*P **P 02 58 08.5 -1.1**
NVAR Mina Array Bea 70.18 323 P **P 02 58 09.6 -0.2**
comp=Z,3.8nm,1.0s,mb4.3,baz=136,slow=7.2,SNR=9.0
DCID1 Drake Creek 70.26 331 *e*pP pP 02 58 17.4 +2.5
Q08A Gabbs 70.26 324 ⇓P **P 02 58 10.4 +0.1**
baz=70
U04C Hernandez Rese 70.27 320 ⇓P **P 02 58 12.3 +2.0**
baz=70
R07C Lee Vining 70.37 323 ⇓P **P 02 58 12.0 +1.0**
baz=70
IMW Indian Meadow 70.38 331 *e*P **P 02 58 10.3 -0.6**
comp=Z,34nm,1.5s,mb5.1
ULM Lac du Bonnet 70.39 344 P **P 02 58 08.3 -2.5**
comp=Z,7.5nm,0.8s,mb4.7,baz=153,slow=7.4,SNR=13
ULM LR LR 03 32 14.0
comp=Z,737nm,18.1s,MS5.0,baz=320,slow=39
K14A Jones Ranch, D 70.41 329 ⇑P **P 02 58 12.3 +1.2**
baz=70
FLWY Flagg Ranch 70.41 332 *e*P **P 02 58 11.1 0.0**
comp=Z,32nm,1.0s,mb5.2
M12A Wells 70.44 327 ⇑P **P 02 58 12.5 +1.2**
baz=70
L13A Double Diamond 70.44 328 ⇓P **P 02 58 12.2 +0.9**
baz=70
O10A Cortez Mining, 70.47 326 ⇓P **P 02 58 12.3 +0.8**
baz=70
LIC Lamto 70.56 77 *e*P **P 02 58 11.3 -1.4**
comp=Z,13nm,0.5s,mb4.8
LIC *e*MLR MLR
comp=Z,4µm,18.8s,MS5.4
LIC Lamto 70.56 77 *e*P **P 02 58 11.3 -1.4**
comp=Z,6.4nm,0.5s,mb4.8
LIC LR LR
comp=Z,2µm,18.8s,MS5.4
RLMT Red Lodge 70.60 333 *e*P **P 02 58 11.7 -0.5**
S05C Merced 70.64 321 ⇓P **P 02 58 13.9 +1.3**
baz=71
LKWY Lake 70.66 332 *e*pP pP 02 58 24.1 +6.8
HAST UC Hastings Re 70.75 320 ⇑P **P 02 58 15.0 +1.6**
baz=71
O09A Fish Creek Ran 70.76 325 ⇑P **P 02 58 15.7 +2.4**
baz=71
WAKR Walker 70.88 323 *e*P **P 02 58 14.4 +0.4**
DBIC Dimbokro 70.88 76 P **P 02 58 11.5 -3.2**
comp=Z,15nm,0.7s,mb5.0,baz=236,slow=5.5,SNR=30
DBIC LR LR 03 28 21.9
comp=Z,3µm,18.2s,MS5.5,baz=223,slow=35
R06C Coleville 70.90 323 ⇑P **P 02 58 14.6 +0.4**
baz=71
M11A Holland Ranch, 70.91 327 ⇓P **P 02 58 14.7 +0.5**
baz=71
K13A Stover Farm, H 70.93 329 ⇑P **P 02 58 14.8 +0.6**
baz=71
L12A House Creek Ra 71.03 328 ⇑P **P 02 58 15.4 +0.5**
baz=71
CMB Columbia Colle 71.12 322 *e*P **P 02 58 13.6 -2.0**
comp=Z,15nm,1.3s,mb4.8
CMB Columbia Colle 71.12 322 *e*P **P 02 58 13.6 -2.0**
CMB pmax pmax
comp=Z,15nm,1.3s,mb4.8
CMB Columbia Colle 71.12 322 ⇓P **P 02 58 16.6 +1.0**
baz=71
K12A Draper Farm, C 71.33 328 ⇓P **P 02 58 16.9 +0.2**
baz=71
M10A I.L. Ranch, Tu 71.37 327 ⇑P **P 02 58 17.4 +0.5**
baz=71
DGMT Dagmar 71.37 338 *e*P **P 02 58 16.3 -0.5**
comp=Z,28nm,1.0s,mb5.1
R05C Kirkwood Meado 71.38 322 ⇓P **P 02 58 17.8 +0.7**
baz=71
J13A Cove Ranch, Pi 71.53 329 ⇑P **P 02 58 18.8 +0.9**
baz=72
WCN Washoe City 71.60 323 ⇓P **P 02 58 19.1 +0.7**
baz=72
PAHR Pah Rah Range 71.66 324 *e*P **P 02 58 19.1 +0.3**
N08A GE Springer Mi 71.70 325 ⇑P **P 02 58 19.8 +0.8**
baz=72
TBI Tubuai 71.70 251 *e*S S 03 07 40.9 +1.6
comp=Z,1µm,24.0s
TBI Tubuai 71.70 251 *e*LR LR 03 20 29.6
comp=Z,972nm,27.0s
L10A Juniper Basin 71.73 327 ⇓P **P 02 58 18.6 -0.5**
baz=72
VAH Vaihoa 71.75 259 *e*P **P 02 58 23.2 +3.3**
comp=Z,66nm,1.1s,mb5.5
HLID Hailey 71.77 329 *e*P **P 02 58 19.0 -0.3**
HLID Hailey 71.77 329 P **P 02 58 19.2 -0.1**
baz=72,SNR=22
M09A Marrel Ranch, 71.78 326 ⇓P **P 02 58 19.3 -0.2**
baz=72
LAVA Lava Cap Winer 71.81 322 ⇑P **P 02 58 19.7 +0.1**
baz=72
MAIT Maitri 71.85 160 *e*P **P 02 58 17.1 -2.4**
J12A Stokes Ranch, 71.88 329 ⇓P **P 02 58 19.9 -0.1**
baz=72
I13A Wildhorse Cree 71.89 330 ⇑P **P 02 58 20.3 +0.3**
baz=72
P06A Stead Airport, 71.94 323 ⇑P **P 02 58 21.8 +1.4**
baz=72
K11A Parker Ranch, 72.00 328 ⇓P **P 02 58 20.6 -0.1**
baz=72
SCHQ Schefferville 72.04 3 P **P 02 58 18.4 -2.2**
SCHQ LR LR 03 32 18.3
SCHQ Schefferville 72.04 3 P **P 02 58 18.4 -2.2**
comp=Z,6.2nm,1.0s,mb4.5,baz=194,slow=9.7,SNR=11
SCHQ LR LR 03 32 18.3
comp=Z,418nm,18.8s,MS4.7,baz=32,slow=38
BOZ Bozeman (W) 72.05 332 *e*P **P 02 58 19.5 -1.5**
BOZ *e*pP pP 02 58 29.9 +4.2
PMOR Pomariorio Ree 72.06 259 *e*P **P 02 58 25.2 +3.5**
comp=Z,66nm,1.2s,mb5.5
G15A Dillon 72.06 331 ⇓P **P 02 58 21.0 0.0**
baz=72
P05C Yuba Gap, Truc 72.09 323 ⇓P **P 02 58 22.1 +0.7**
baz=72
N07B Gerlach 72.16 325 ⇑P **P 02 58 21.5 -0.2**
baz=72
Q04C Lincoln 72.24 322 ⇓P **P 02 58 23.3 +1.0**
baz=72
DLMT Dillon 72.26 331 *e*P **P 02 58 22.2 0.0**
M08A Happy Creek Ra 72.30 325 ⇓P **P 02 58 23.3 +0.8**
baz=72
BEKR Beckwourth 72.32 323 ⇓P **P 02 58 22.8 +0.1**
baz=72
MFID Camas Ranch 72.36 328 ⇓P **P 02 58 23.4 +0.6**
baz=72
K10A MacKenzie Ranc 72.43 327 ⇑P **P 02 58 23.2 -0.1**
baz=72
H13A Challis 72.44 330 ⇑P **P 02 58 23.6 +0.3**
baz=72
Q03C Winters 72.48 321 ⇓P **P 02 58 24.4 +0.7**
baz=72
LRM Limekiln Ridge 72.55 332 *e*P **P 02 58 24.5 +0.6**
CVS Carmenet Viney 72.56 321 ⇑P **P 02 58 24.2 0.0**
baz=73
G14A Jackson 72.57 331 ⇓P **P 02 58 24.0 0.0**
baz=73
F15A Butte 72.58 332 ⇑P **P 02 58 23.1 -1.0**
baz=73
N06A Buffalo Meadow 72.62 324 P **P 02 58 24.1 -0.4**
baz=73,SNR=15
OHCM Honcut 72.62 322 *e*P **P 02 58 25.9 +1.4**
M07A Soldier Meadow 72.69 325 ⇓P **P 02 58 26.3 +1.4**
baz=73
MCCM Marconi Confer 72.69 320 ⇑P **P 02 58 25.3 +0.4**
baz=73
H12A Diamond D Ranc 72.71 330 P **P 02 58 24.7 -0.2**
baz=73,SNR=5.6
NSHM Saint Helena R 72.77 321 *e*P **P 02 58 24.3 -1.1**
ORV Oroville 72.78 322 P **P 02 58 25.5 +0.1**
baz=73,SNR=15
L08A Fields 72.79 326 ⇓P **P 02 58 25.3 -0.2**
baz=73
G13A Cobalt 72.82 330 P **P 02 58 25.2 -0.4**
baz=73,SNR=14
K09A Rome 72.82 327 P **P 02 58 24.9 -0.7**
baz=73,SNR=12
QSPA South Pole Qui 72.83 180 *e*P **P 02 58 24.9 -0.3**
comp=Z,212nm,1.3s,mb5.9
J10A Berg Farm, Mel 72.84 328 ⇓P **P 02 58 26.0 +0.2**
baz=73
MNRC McLaughlin Nat 72.90 321 ⇓P **P 02 58 27.2 +1.0**
baz=73
F14A Wisdom 72.96 331 ⇓P **P 02 58 27.0 +0.6**
baz=73
PPT Papeete 73.03 256 *e*S S 03 07 57.1 +2.4
comp=Z,1µm,24.2s
PPT Papeete 73.03 256 *e*LR LR 03 20 56.2
comp=Z,623nm,22.5s,baz=112
PPT Papeete 73.03 256 LR LR 03 22 08.8
comp=Z,445nm,18.9s,MS4.8,baz=360,slow=29

O04C **Chester** 73.04 323 ⇑P P 02 58 27.1 +0.1
baz=73
E15A **Deer Lodge** 73.09 332 ⇓P P 02 58 27.2 0.0
baz=73
EGMT **Eagleton** 73.11 335 *e*P P 02 58 26.4 -0.8
comp=Z,19nm,1.3s,mb4.9
EGMT **Eagleton** 73.11 335 ⇑P P 02 58 27.3 +0.1
baz=73
WVOR **Wild Horse Val** 73.12 326 *e*P P 02 58 27.3 -0.1
comp=Z,7.6nm,1.1s,mb4.5
WVOR *e* 02 58 35.6
WVOR Wild Horse Val 73.12 326 *e*P P 02 58 27.3 -0.1
WVOR *e* 02 58 35.6
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
L07A **Adell** 73.21 325 ⇓P P 02 58 28.4 +0.5
baz=73
J09A **Fry Pan Ranch,** 73.29 327 ⇓P P 02 58 29.6 +1.2
baz=73
H11A **Donnelly** 73.39 329 ⇑P P 02 58 28.5 -0.4
baz=73
E14A **Clinton** 73.47 332 ⇓P P 02 58 29.7 +0.3
baz=74
D15A **Lincoln** 73.51 333 ⇓P P 02 58 29.3 -0.3
baz=74
GASB **Alder Springs** 73.56 322 ⇓P P 02 58 30.5 +0.4
baz=74
K07A **Rock Creek Ran** 73.62 326 ⇓P P 02 58 30.9 +0.5
baz=74
MOD **Modoc** 73.66 325 *e*P P 02 58 30.6 0.0
MOD **Modoc** 73.66 325 ⇓P P 02 58 30.4 -0.2
baz=74
H10A **Noah's Angus R** 73.67 329 ⇓P P 02 58 29.5 -1.1
baz=74
J08A **Circle Bar Ran** 73.67 327 ⇓P P 02 58 31.2 +0.5
baz=74
CHMT **Chamberlain Mo** 73.74 332 *e*P P 02 58 35.0 +4.0
M05C **Lookout** 73.76 324 ⇑P P 02 58 31.7 +0.4
baz=74
F12A **Elk City** 73.79 330 P P 02 58 31.1 -0.1
baz=74,SNR=9.0
E13A **Victor** 73.81 331 P P 02 58 31.6 +0.2
baz=74,SNR=11
P01C **Double 8 Ranch** 73.81 321 ⇓P P 02 58 32.9 +1.4
baz=74
O02C **Red Bluff** 73.94 322 ⇑P P 02 58 33.0 +0.7
baz=74
D14A **Greenough** 73.98 332 ⇑P P 02 58 31.7 -0.7
baz=74
MSO **Missoula** 73.98 332 *e*P P 02 58 33.1 +0.7
G11A **Walters Elk Ra** 74.02 330 P P 02 58 32.1 -0.5
baz=74,SNR=16
L05A **Lakeview** 74.05 325 ⇓P P 02 58 32.7 -0.2
baz=74
WDC **Whiskeytown Da** 74.05 323 *e*P P 02 58 32.7 -0.2
comp=Z,6.4nm,1.0s,mb4.5
WDC **Whiskeytown Da** 74.05 323 *e*P P 02 58 32.7 -0.2
WDC pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WDC **Whiskeytown Da** 74.05 323 ⇑P P 02 58 32.4 -0.6
baz=74
I08A **Drewsey** 74.11 327 ⇑P P 02 58 33.7 +0.5
baz=74
J07A **Hines** 74.13 326 ⇓P P 02 58 33.8 +0.5
baz=74
BMO **Blue Mountains** 74.13 329 *e*P P 02 58 32.8 -0.5
comp=Z,18nm,1.0s,mb5.0
H09A **Durkee** 74.18 328 ⇓P P 02 58 34.5 +0.9
baz=74
K06A **Valley Falls** 74.24 325 P P 02 58 34.4 +0.4
baz=74,SNR=12
M03C **McCloud** 74.26 323 ⇓P P 02 58 34.6 +0.4
baz=74
F11A **Grangeville** 74.32 330 P P 02 58 33.9 -0.5
baz=74,SNR=12
G10A **Bishop Farm, J** 74.36 329 P P 02 58 34.5 -0.1
baz=74,SNR=17
D13A **Huson** 74.42 332 P P 02 58 35.0 +0.1
baz=74,SNR=9.7
M04C **Macdoel** 74.43 324 ⇑P P 02 58 34.6 -0.5
baz=74
J06A **Christmas Vall** 74.49 326 P P 02 58 35.5 +0.1
baz=74,SNR=14
K05A **Summer Lake** 74.54 325 ⇓P P 02 58 35.2 -0.5
baz=74
LHEM **Herd Peak** 74.55 324 P P 02 58 35.3 -0.5
H08A **Prairie City** 74.59 328 P P 02 58 36.3 +0.3
baz=75,SNR=11
C14A **Swan Lake** 74.61 332 ⇑P P 02 58 36.0 0.0
baz=75
N02C **Big Bar** 74.65 322 ⇓P P 02 58 35.5 -0.9
baz=75
E11A **Bogner Ranch,** 74.69 330 ⇓P P 02 58 35.1 -1.3
baz=75
I07A **Izee** 74.72 327 P P 02 58 36.9 +0.2
baz=75,SNR=5.7
M02C **Callahan** 74.76 323 ⇑P P 02 58 37.1 +0.1
baz=75
D12A **Red Ives Fores** 74.80 331 ⇓P P 02 58 37.1 0.0
baz=75
YBH **Yreka Blue Hor** 74.89 323 *e*P P 02 58 41.3 +3.5
YBH **Yreka Blue Hor** 74.89 323 ⇓P P 02 58 37.9 +0.1
baz=75
F10A **Beach Ranch, E** 74.90 329 ⇑P P 02 58 38.3 +0.6
baz=75
C13A **Hot Springs** 74.91 332 ⇓P P 02 58 37.7 0.0
baz=75
KHMM **Horse Mountain** 74.93 322 *ep*P pP 02 58 45.5 +2.7
I06A **Prineville** 74.99 326 P P 02 58 38.9 +0.6
baz=75,SNR=12
F09A **S2 Ranch, Elgi** 75.04 329 ⇓P P 02 58 38.8 +0.3
baz=75
J05A **Fort Rock** 75.10 325 ⇓P P 02 58 38.8 -0.2
baz=75
H07A **Lands Inn, Kim** 75.10 327 ⇓P P 02 58 39.5 +0.5
baz=75
BSMT **Bassoo Peak** 75.13 332 *e*P P 02 58 39.4 +0.3
E10A **Myers Farm, Un** 75.21 330 ⇑P P 02 58 39.1 -0.4
baz=75
G08A **Pilot Rock** 75.27 328 ⇓P P 02 58 40.1 +0.2
baz=75
B13A **Whitefish** 75.38 333 ⇓P P 02 58 40.8 +0.3
baz=75
F08A **Pendleton** 75.53 328 ⇓P P 02 58 41.6 +0.2
baz=76
J04A **Umpqua Nationa** 75.55 325 ⇑P P 02 58 42.0 +0.5
baz=76
H06A **Lindquist Farm** 75.60 327 P P 02 58 41.9 +0.1
baz=76,SNR=11
G07A **Ruggs Ranch, H** 75.62 328 ⇓P P 02 58 42.4 +0.6
baz=76
WALA **Waterton Lakes** 75.66 333 *e*P P 02 58 41.8 -0.3
L02A **Cave Junction** 75.68 323 ⇓P P 02 58 42.4 +0.1
baz=76
D10A **Wagner Farm, O** 75.70 330 ⇓P P 02 58 42.3 0.0
baz=76
I05A **Bend** 75.70 326 ⇑P P 02 58 42.9 +0.5
baz=76
E09A **Wood Farm, Sta** 75.73 329 ⇑P P 02 58 42.4 -0.1
baz=76
A13A **Flathead Natio** 75.78 333 ⇓P P 02 58 43.1 +0.3
baz=76
B12A **Libby** 75.95 332 ⇑P P 02 58 44.0 +0.3
baz=76
K02A **Glendale** 76.00 324 ⇓P P 02 58 44.9 +0.8
baz=76
FFC **Flin Flon** 76.06 343 *e*P P 02 58 42.9 -1.4
I04A **Tendick Farm,** 76.07 325 ⇑P P 02 58 45.7 +1.1
baz=76
G06A **Carlson Farm,** 76.09 327 ⇑P P 02 58 45.1 +0.5
baz=76
D09A **Jones Farm, Ri** 76.20 330 ⇓P P 02 58 45.1 -0.1
baz=76
B11A **Sandpoint** 76.28 332 ⇑P P 02 58 46.2 +0.6
baz=76
A12A **Yaak River Ran** 76.32 332 ⇓P P 02 58 47.5 +1.6
baz=76
HAWA **Hanford** 76.33 329 *e*P P 02 58 45.8 -0.1
comp=Z,33nm,1.1s,mb5.2
BROR **Big Rock Looko** 76.41 326 P P 02 58 45.7 -0.8
J02A **Umpqua** 76.44 324 ⇑P P 02 58 47.7 +1.1
baz=76
G05A **Wamic** 76.45 327 ⇓P P 02 58 47.8 +1.2
baz=76
D08A **Wollman Farm,** 76.49 329 ⇑P P 02 58 47.4 +0.6
baz=76
NEW **Newport** 76.50 331 *e*P P 02 58 51.7 +4.8
NEW **Newport** 76.50 331 P P 02 58 51.2 +4.4
comp=Z,5.4nm,1.1s,mb4.4,baz=145,slow=6.4,SNR=4.4
F06A **Goldendale** 76.53 327 ⇑P P 02 58 47.6 +0.5
baz=76
H04A **Detroit Lake** 76.54 326 ⇓P P 02 58 48.3 +1.2
baz=76
OD2 **Odessa Site #2** 76.62 330 P P 02 58 47.6 +0.1
A11A **Hall Mountain,** 76.66 332 ⇑P P 02 58 49.0 +1.3
baz=77
I03A **Eugene** 76.67 325 ⇑P P 02 58 49.3 +1.5
baz=77
HOOD **Mount Hood Mea** 76.68 327 *ep*P pP 02 58 59.6 +6.9
G04A **Mulino** 77.04 326 ⇑P P 02 58 51.1 +1.2
baz=77
B09A **Rice** 77.09 331 ⇑P P 02 58 50.1 0.0
baz=77
D07A **Quincy** 77.10 329 ⇓P P 02 58 50.5 +0.3
baz=77
H03A **Soap Creek Ran** 77.13 325 ⇓P P 02 58 51.3 +0.8
baz=77
E06A **Yakima** 77.16 328 ⇑P P 02 58 51.5 +0.9
baz=77
WTV **Waterville** 77.44 329 P P 02 58 52.0 -0.1
C07A **Waterville** 77.49 329 ⇓P P 02 58 52.0 -0.4
baz=78
F04A **Amboy** 77.49 327 ⇓P P 02 58 52.4 -0.1
baz=78
D06A **Cle Elum** 77.53 329 ⇓P P 02 58 53.6 +0.9
baz=78
B08A **Colville Reser** 77.60 330 ⇑P P 02 58 53.0 0.0
baz=78
A09A **Danville** 77.69 331 ⇑P P 02 58 53.5 0.0
baz=78
LON **Longmire** 77.72 328 *ep*P pP 02 59 02.5 +3.9
FCC **Fort Churchill** 77.88 349 *e*P P 02 58 53.0 -1.3
comp=Z,9.1nm,0.9s,mb4.7
FCC Fort Churchill 77.88 349 *e*P P 02 58 53.0 -1.4
FCC pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
A08A **Turner Farm, O** 77.99 331 ⇓P P 02 58 55.2 0.0
baz=78
B07A **Winthrop** 78.05 330 ⇑P P 02 58 55.8 +0.3
baz=78
D05A **Enumclaw** 78.11 328 ⇓P P 02 58 55.1 -0.7
baz=78
E03A **Lebam** 78.49 327 ⇓P P 02 58 58.2 +0.2
baz=78
A07A **Ashnola River,** 78.58 330 ⇓P P 02 58 59.4 +0.9
baz=79
EDM **Edmonton** 78.61 336 *e*P P 02 58 56.9 -1.7
B06A **Marblemount** 78.75 329 ⇑P P 02 59 00.3 +0.9
baz=79
JCW **Jim Creek** 78.75 329 P P 02 58 58.6 -0.8
GNW **Green Mountain** 78.78 328 *e*P P 02 59 04.3 +4.7
B05A **Bryant** 78.88 329 ⇑P P 02 59 00.4 +0.2
baz=79
NLWA **Neilton Lookou** 79.20 327 *e*P P 02 59 07.3 +5.4
NLWA **Neilton Lookou** 79.20 327 ⇓P P 02 59 03.1 +1.2
baz=79
TOA0 **Torodi Ar. Sit** 79.20 73⇑ *e*P P 02 59 01.9 -0.8
TORD **Torodi Ar. Bea** 79.20 73 P P 02 59 02.0 -0.7
comp=Z,15nm,0.7s,mb5.0,baz=254,slow=5.3,SNR=315
TORD LR LR 03 32 51.9
comp=Z,2µm,19.9s,MS5.5,baz=245,slow=35
SBA **Scott Base** 79.29 191 *e*P P 02 59 07.3 +5.3
A05A **Maple Falls** 79.37 329 ⇓P P 02 59 04.0 +1.2
baz=79
B04A **Port Angeles** 79.45 328 ⇑P P 02 59 05.7 +2.5
baz=79
A04A **Legoe Bay, Lum** 79.49 329 ⇑P P 02 59 06.0 +2.5
baz=80
PGC **Sidney** 79.81 328 *e*P P 02 59 09.9 +4.7
VNDA **Vanda** 80.34 190 P P 02 59 07.8 0.0
comp=Z,2.6nm,1.0s,mb4.1,baz=130,slow=6.0,SNR=6.4
VNDA LR LR 03 28 47.1
comp=Z,607nm,18.2s,MS5.0,baz=129,slow=31
PFVI **Vila Bisbo** 80.73 47 *e*S S 03 09 28.1 +10
PFVI **Vila Bisbo** 80.73 47 *e*LR LR 03 29 49.3
comp=Z,1µm,22.4s
MORF **Marmelete** 80.93 46 *e*P P 02 59 12.9 +1.4
comp=Z,85nm,1.6s,mb5.4
MORF **Marmelete** 80.93 46 *e*S S 03 09 35.3 +15
MORF **Marmelete** 80.93 46 *e*LR LR 03 29 37.9
comp=Z,1µm,26.7s
PTEO **Sao Teotonio** 81.00 46 *e*P P 02 59 13.1 +1.2
comp=Z,128nm,1.5s,mb5.6
PMAFR **Mafra** 81.33 45 *e*S S 03 09 37.4 +13
PMAFR **Mafra** 81.33 45 *e*LR LR 03 29 32.3
comp=Z,997nm,24.8s
PBDV **Barranco-do-Ve** 81.40 47 *e*S S 03 09 32.2 +7.3
PBDV **Barranco-do-Ve** 81.40 47 *e*LR LR 03 29 26.0
comp=Z,1µm,20.8s
SYO **Syowa Base** 81.54 160⇑ *e*P P 02 59 11.8 -2.5
SYO **Syowa Base** 81.54 160⇑ *ep*CP PCP 02 59 18.4 -1.8
PVAQ **Vaqueiros** 81.63 47 *e*P P 02 59 16.8 +1.6
comp=Z,17nm,1.5s,mb4.8
PVAQ **Vaqueiros** 81.63 47 *e*S S 03 09 37.3 +10
PVAQ **Vaqueiros** 81.63 47 *e*LR LR 03 29 31.3
comp=Z,1µm,18.2s
PBEJ **Beja** 81.83 46 *e*P P 02 59 17.6 +1.3
comp=Z,20nm,1.9s,mb4.7
EGRO **El Granado** 81.86 47 P P 02 59 18.1 +1.7
comp=Z,10.0nm,0.7s,mb4.8
EVO **Evora** 81.98 46⇑ *i*P P 02 59 17.7 +0.7
comp=Z,42nm,1.0s,mb5.0
EVO *e*MLR MLR
comp=Z,2µm,20.5s,MS5.1
EVO Evora 81.98 46 *e*P P 02 59 17.8 +0.8
comp=Z,25nm,1.7s,mb4.9
PESTR **Estremoz** 82.43 45 *e*P P 02 59 20.4 +1.0
comp=Z,30nm,1.7s,mb4.9
PESTR **Estremoz** 82.43 45 *e*S S 03 09 39.2 +3.8
PESTR **Estremoz** 82.43 45 *e*LR LR 03 30 10.6
comp=Z,913nm,18.2s
PBAR **Barrancos** 82.47 46 *e*P P 02 59 20.9 +1.3
comp=Z,30nm,1.6s,mb5.0
PBAR **Barrancos** 82.47 46 *e*LR LR 03 30 22.0
comp=Z,1µm,16.2s
EMIN **Mina Concepcio** 82.53 47 P P 02 59 21.2 +1.2
comp=Z,7.7nm,0.7s,mb4.8
ESPR **Espera** 82.68 48 P P 02 59 22.2 +1.4
comp=Z,12nm,1.0s,mb4.9
EJIF **Jimena Fronter** 82.76 48 P P 02 59 23.2 +2.0
comp=Z,6.7nm,0.8s,mb4.7
EJIF Jimena Fronter 82.76 48 P P 02 59 23.2 +2.0
EJIF pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
EBAD **Badajoz** 82.77 46 P P 02 59 22.1 +0.9
comp=Z,5.4nm,0.6s,mb4.8
PCBR **Castelo Branco** 82.98 45 *e*P P 02 59 22.8 +0.6
comp=Z,19nm,1.5s,mb4.9
PVIS **Viseu** 83.14 44 *e*P P 02 59 23.7 +0.7
comp=Z,40nm,1.5s,mb5.2
MTE **Manteigas** 83.21 44 *e*P P 02 59 24.0 +0.6
comp=Z,52nm,1.8s,mb5.3
MTE **Manteigas** 83.21 44 *e*S S 03 09 49.7 +6.4
MTE **Manteigas** 83.21 44 *e*LR LR 03 30 26.0
comp=Z,1µm,20.8s
MTE Manteigas 83.21 44 *e*P P 02 59 23.8 +0.4
comp=Z,27nm,1.0s,mb5.2
MTE *e* 02 59 33.3
EMIJ **Mijas** 83.31 49 P P 02 59 25.8 +1.8
comp=Z,13nm,0.8s,mb5.0
PVRL **Vila Real** 83.53 43 *e*P P 02 59 25.9 +0.9
comp=Z,38nm,1.6s,mb5.3
PCAB **Cabril** 83.54 43 *e*P P 02 59 25.4 +0.3
comp=Z,59nm,2.0s,mb5.4
EMAZ **Mazaricos** 83.56 41 P P 02 59 26.2 +1.0
comp=Z,16nm,1.0s,mb5.1
SUR **Sutherland** 83.57 122 *e*P P 02 59 27.3 +1.7
ELOB **Lobios** 83.60 43 P P 02 59 26.3 +1.0
comp=Z,12nm,0.9s,mb5.0
STS **Santiago** 83.80 42 P P 02 59 27.4 +1.1
comp=Z,6.1nm,0.7s,mb4.8
STS Santiago 83.80 42 P P 02 59 27.4 +1.0
STS pmax pmax
comp=Z,6.0nm,0.7s,mb4.8
MVO **Moncorvo** 83.93 44 *e*P P 02 59 28.0 +0.9
comp=Z,46nm,1.6s,mb5.3
MVO **Moncorvo** 83.93 44 *e*S S 03 09 51.8 +1.3
MVO **Moncorvo** 83.93 44 *e*LR LR 03 30 43.6
comp=Z,829nm,22.9s
ELOJ **Sierra Loja** 84.02 48 P P 02 59 28.7 +1.1
comp=Z,28nm,1.1s,mb5.3
ELOJ Sierra Loja 84.02 48 P P 02 59 28.7 +1.1
ELOJ pmax pmax
comp=Z,28nm,1.1s,mb5.3
ELUQ **Luque** 84.12 48 P P 02 59 30.1 +1.9
comp=Z,23nm,0.8s,mb5.4
ELUQ Luque 84.12 48 P P 02 59 30.1 +1.9
ELUQ pmax pmax
comp=Z,23nm,0.8s,mb5.4
EADA **Adamuz** 84.18 47 P P 02 59 27.8 -0.6
comp=Z,24nm,1.9s,mb5.0
ERON **Agron** 84.21 49 P P 02 59 29.7 +1.1
comp=Z,7.3nm,0.8s,mb4.9
PBRG **Braganca** 84.43 43 *e*P P 02 59 30.3 +0.7
comp=Z,44nm,1.5s,mb5.4
TSUM **Tsumeb** 84.47 108 *e*P P 02 59 30.4 0.0
ECAL **Calabor** 84.50 43 P P 02 59 30.9 +0.9
comp=Z,25nm,1.2s,mb5.2
ECOG **Cogollos-Vega** 84.50 48 P P 02 59 31.4 +1.4
comp=Z,20nm,1.3s,mb5.1
ECOG Cogollos-Vega 84.50 48 P P 02 59 31.4 +1.3
ECOG pmax pmax
comp=Z,20nm,1.3s,mb5.1
EBAN **Banos Encina** 84.74 48 P P 02 59 32.7 +1.4
comp=Z,11nm,0.7s,mb5.1
EBAN Banos Encina 84.74 48 P P 02 59 32.7 +1.4
EBAN pmax pmax
comp=Z,11nm,0.7s,mb5.1
EPON **Pontenova** 84.91 42 P P 02 59 33.3 +1.3
comp=Z,18nm,1.2s,mb5.1
PAB **San Pablo** 84.97 46 *e*P P 02 59 32.7 +0.3
comp=Z,46nm,1.1s,mb5.5
PAB San Pablo 84.97 46 *e*P P 02 59 32.7 +0.3
PAB pmax pmax
comp=Z,46nm,1.1s,mb5.5
EQES **Quesada** 85.08 48 P P 02 59 33.7 +0.7
comp=Z,13nm,0.8s,mb5.1
ESDC **Sonseca Array** 85.29 46 P P 02 59 35.0 +0.9
comp=Z,9.4nm,0.8s,mb5.0,baz=252,slow=5.0,SNR=57
ESDC LR LR 03 35 31.5
comp=Z,969nm,19.3s,MS5.2,baz=240,slow=34
ENIJ **Nijar** 85.34 49 P P 02 59 34.8 +0.5
comp=Z,14nm,0.8s,mb5.2
ENIJ Nijar 85.34 49 P P 02 59 34.8 +0.5
ENIJ pmax pmax
comp=Z,14nm,0.8s,mb5.1
GUD **Guadarrama** 85.60 45 P P 02 59 36.5 +1.0
comp=Z,6.7nm,1.0s,mb4.8
GUD Guadarrama 85.60 45 P P 02 59 36.5 +1.0
GUD pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
SFJD **Kangerlussuaq 85.63 8** P P 02 59 37.2 +2.2
comp=Z,12nm,1.1s,mb5.0,baz=130,slow=7.9,SNR=2.3
EVIA **Vianos** 85.85 48 P P 02 59 38.4 +1.6
comp=Z,15nm,0.9s,mb5.2
EVIA Vianos 85.85 48 P P 02 59 38.4 +1.6
EVIA pmax pmax
comp=Z,15nm,0.9s,mb5.2
YKA **Yellowknife Ar** 86.19 342 P P 02 59 35.8 -2.1
YKA LR LR 03 42 11.0
YKA Yellowknife Ar 86.19 342 P P 02 59 35.8 -2.1
comp=Z,1.0nm,1.0s,mb4.0,baz=297,slow=16,SNR=3.9
YKA LR LR 03 42 11.0
comp=Z,295nm,18.3s,MS4.7,baz=110,slow=38
YKW3 **Yellowknife Ar** 86.25 342 *e*P P 02 59 36.1 -2.1
ETOB **Tobarra** 86.53 48 P P 02 59 41.3 +1.1
comp=Z,11nm,0.8s,mb5.1
ETOR **Torete** 87.11 46 P P 02 59 43.8 +0.9
comp=Z,5.9nm,0.8s,mb4.9
ETOR Torete 87.11 46 P P 02 59 43.8 +0.8
ETOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ELAN **Lanestosa** 87.25 43 P P 02 59 44.8 +1.2
comp=Z,10nm,1.0s,mb5.0
ECHE **Chera** 87.34 47 P P 02 59 45.5 +1.5
comp=Z,5.5nm,0.8s,mb4.8
ECHE Chera 87.34 47 P P 02 59 45.6 +1.5
ECHE pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
ECRI **Cripan** 87.58 44 P P 02 59 46.7 +1.5
comp=Z,12nm,1.4s,mb4.9
ECRI Cripan 87.58 44 P P 02 59 46.7 +1.5
ECRI pmax pmax
comp=Z,12nm,1.4s,mb4.9
BOSA **Boshof** 88.36 119 P P 02 59 47.3 -2.1
comp=Z,13nm,1.1s,mb5.1,baz=247,slow=4.2,SNR=6.9
BOSA LR LR 03 37 46.9
comp=Z,612nm,18.0s,MS5.1,baz=252,slow=35
SJPF **Ste Jean** 88.65 44 *e*P P 02 59 50.7 +0.4
comp=Z,71nm,1.3s,mb5.5
SJPF **Ste Jean** 88.65 44 *e*P P 02 59 50.7 +0.4
comp=Z,36nm,1.3s,mb5.5
SJPF Ste Jean 88.65 44 *e*P P 02 59 50.7 +0.4
SJPF pmax pmax
comp=Z,36nm,1.3s,mb5.5
ERTA **Horta de San J** 88.81 46 P P 02 59 52.2 +1.1
comp=Z,14nm,1.2s,mb5.2
DLBC **Dease Lake** 89.00 334 *e*P P 02 59 51.5 0.0
DLBC **Dease Lake** 89.00 334 P P 02 59 51.2 -0.3
baz=162,slow=5.7
ETSF **Etsaut** 89.01 44 *e*P P 02 59 51.4 -0.5
comp=Z,19nm,1.0s,mb5.1
ETSF **Etsaut** 89.01 44 *e*P P 02 59 51.4 -0.5
comp=Z,9.6nm,1.0s,mb5.1
ETSF Etsaut 89.01 44 *e*P P 02 59 51.4 -0.5
ETSF pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
MAW **Mawson** 89.24 164 P P 02 59 51.0 -1.7
MAW LR LR 03 42 07.3
MAW Mawson 89.24 164 P P 02 59 51.0 -1.7
comp=Z,9.3nm,1.0s,mb5.1,baz=228,slow=2.9,SNR=5.8
MAW LR LR 03 42 07.3
comp=Z,405nm,18.8s,MS4.9,baz=333,slow=37
EBIE **Bielsa** 89.39 45 P P 02 59 54.7 +0.9
comp=Z,14nm,1.5s,mb5.1
EPOB **Poblet** 89.48 46 P P 02 59 55.1 +0.9
comp=Z,21nm,1.3s,mb5.3
QUIF **Quistinic** 89.53 39 *e*P P 02 59 53.3 -1.0
ROSF **Rostrenen** 89.66 39 *e*P P 02 59 54.2 -0.6
comp=Z,100nm,1.5s,mb5.6
ROSF **Rostrenen** 89.66 39 *e*P P 02 59 54.2 -0.6
comp=Z,50nm,1.5s,mb5.6
ROSF Rostrenen 89.66 39 *e*P P 02 59 54.2 -0.6
ROSF pmax pmax
comp=Z,50nm,1.5s,mb5.6
EPF **Esparros** 89.66 44 *e*P P 02 59 54.1 -0.9
comp=Z,55nm,1.4s,mb5.4
EPF **Esparros** 89.66 44 *e*P P 02 59 54.1 -0.9
comp=Z,28nm,1.4s,mb5.4
EPF Esparros 89.66 44 *e*P P 02 59 54.1 -0.9
EPF pmax pmax
comp=Z,28nm,1.4s,mb5.4
SGMF **Saint Gilles** 90.05 39 *e*P P 02 59 55.8 -0.9
comp=Z,172nm,1.9s,mb5.8
SGMF **Saint Gilles** 90.05 39 *e*P P 02 59 55.8 -0.9
comp=Z,86nm,1.9s,mb5.8
SGMF Saint Gilles 90.05 39 *e*P P 02 59 55.8 -0.9
SGMF pmax pmax
comp=Z,86nm,1.9s,mb5.8
MLS **Moulis** 90.14 45 *e*P P 02 59 57.5 +0.3
BORG **Borgarnes** 90.59 20 P P 02 59 58.0 -0.8
comp=Z,28nm,1.0s,mb5.5,baz=152,slow=3.6,SNR=3.6
LFF **La Frestale** 90.70 43 *e*P P 02 59 59.5 -0.3
comp=Z,52nm,1.1s,mb5.5
LFF **La Frestale** 90.70 43 *e*P P 02 59 59.5 -0.3
comp=Z,26nm,1.1s,mb5.5
LFF La Frestale 90.70 43 *e*P P 02 59 59.5 -0.3
LFF pmax pmax
comp=Z,26nm,1.1s,mb5.5
CARF **Carcanieres** 90.73 45 *e*P P 03 00 00.3 +0.3
MFF **Saint Martin d** 90.82 41 *e*P P 02 59 59.8 -0.5
comp=Z,43nm,1.1s,mb5.4
MFF **Saint Martin d** 90.82 41 *e*P P 02 59 59.8 -0.5
comp=Z,22nm,1.1s,mb5.4
MFF Saint Martin d 90.82 41 *e*P P 02 59 59.8 -0.5
MFF pmax pmax
comp=Z,22nm,1.1s,mb5.4
FILF **Fillols** 90.97 46 *e*P P 03 00 01.2 +0.1
MTLF **Montolieu** 91.05 45 *e*P P 03 00 01.1 -0.3
comp=Z,34nm,1.2s,mb5.3
MTLF **Montolieu** 91.05 45 *e*P P 03 00 01.1 -0.3
comp=Z,17nm,1.2s,mb5.2
MTLF Montolieu 91.05 45 *e*P P 03 00 01.1 -0.3
MTLF pmax pmax
comp=Z,17nm,1.2s,mb5.2
GRR **Gorron** 91.13 39 *e*P P 03 00 00.8 -0.9
comp=Z,106nm,1.6s,mb5.6
GRR **Gorron** 91.13 39 *e*P P 03 00 00.8 -0.9
comp=Z,53nm,1.6s,mb5.6
GRR Gorron 91.13 39 *e*P P 03 00 00.8 -0.9
GRR pmax pmax
comp=Z,53nm,1.6s,mb5.6

EJON	**La Jonquera**	**91.16**	**46**	P		**P**	**03 00 03.0**	**+1.0**
	comp=Z,11nm,1.4s,mb5.0								
RJF	**Les Rejaudoux**	**91.35**	**43**	*e*P		**P**	**03 00 02.2**	**-0.6**
	comp=Z,31nm,1.1s,mb5.2								
RJF				*e*MLR		MLR			
	comp=Z,723nm,20.5s,MS4.8								
RJF	**Les Rejaudoux**	**91.35**	**43**	*e*P		**P**	**03 00 02.2**	**-0.6**
	comp=Z,15nm,1.1s,mb5.2								
RJF				LR		LR			
	comp=Z,720nm,20.5s,MS5.1								
RJF	**Les Rejaudoux**	**91.35**	**43**	*e*P		**P**	**03 00 02.2**	**-0.6**
RJF				pmax		pmax			
	comp=Z,15nm,1.1s,mb5.2								
RJF				MLR		MLR			
	comp=Z,720nm,20.5s,MS5.1								
FLN	**La Foliniere**	**91.51**	**39**	*e*P		**P**	**03 00 02.8**	**-0.7**
	comp=Z,63nm,1.4s,mb5.5								
FLN				*e*MLR		MLR			
	comp=Z,893nm,19.8s,MS4.9								
FLN	**La Foliniere**	**91.51**	**39**	*e*P		**P**	**03 00 02.8**	**-0.7**
	comp=Z,32nm,1.4s,mb5.5								
FLN				LR		LR			
	comp=Z,890nm,19.8s,MS5.2								
FLN	**La Foliniere**	**91.51**	**39**	*e*P		**P**	**03 00 02.8**	**-0.7**
FLN				pmax		pmax			
	comp=Z,32nm,1.4s,mb5.5								
FLN				MLR		MLR			
	comp=Z,890nm,19.8s,MS5.2								
CAF	**Calviac**	**91.56**	**43**	*e*P		**P**	**03 00 03.6**	**-0.2**
	comp=Z,31nm,1.1s,mb5.2								
CAF	**Calviac**	**91.56**	**43**	*e*P		**P**	**03 00 03.6**	**-0.2**
	comp=Z,16nm,1.1s,mb5.2								
CAF	**Calviac**	**91.56**	**43**	*e*P		**P**	**03 00 03.6**	**-0.2**
CAF				pmax		pmax			
	comp=Z,16nm,1.1s,mb5.3								
LDF	**La Druitiere**	**91.66**	**39**	*e*P		**P**	**03 00 03.5**	**-0.7**
	comp=Z,46nm,1.2s,mb5.4								
LDF	**La Druitiere**	**91.66**	**39**	*e*P		**P**	**03 00 03.5**	**-0.7**
	comp=Z,23nm,1.2s,mb5.4								
LDF	**La Druitiere**	**91.66**	**39**	*e*P		**P**	**03 00 03.5**	**-0.7**
LDF				pmax		pmax			
	comp=Z,23nm,1.2s,mb5.4								
TCF	**Toulx Ste Croi**	**92.18**	**42**	*e*P		**P**	**03 00 06.0**	**-0.7**
	comp=Z,27nm,1.2s,mb5.1								
TCF	**Toulx Ste Croi**	**92.18**	**42**	*e*P		**P**	**03 00 06.0**	**-0.7**
	comp=Z,13nm,1.2s,mb5.1								
TCF	**Toulx Ste Croi**	**92.18**	**42**	*e*P		**P**	**03 00 06.0**	**-0.7**
TCF				pmax		pmax			
	comp=Z,13nm,1.2s,mb5.1								
LASF	**Ste Croix**	**92.42**	**44**	*e*P		**P**	**03 00 06.3**	**-1.5**
	comp=Z,49nm,1.4s,mb5.3								
BGF	**Bois d'Agland**	**92.69**	**42**	*e*P		**P**	**03 00 07.1**	**-1.9**
	comp=Z,41nm,1.3s,mb5.4								
BGF	**Bois d'Agland**	**92.69**	**42**	*e*P		**P**	**03 00 07.1**	**-1.9**
	comp=Z,20nm,1.3s,mb5.4								
BGF	**Bois d'Agland**	**92.69**	**42**	*e*P		**P**	**03 00 07.1**	**-1.9**
BGF				pmax		pmax			
	comp=Z,20nm,1.3s,mb5.4								
AVF	**Avril sur Loir**	**93.11**	**42**	*e*P		**P**	**03 00 08.8**	**-2.1**
VIVF	**Saint-Julien-l**	**93.25**	**44**	*e*P		**P**	**03 00 12.0**	**+0.4**
	comp=Z,42nm,1.6s,mb5.3								
VIVF	**Saint-Julien-l**	**93.25**	**44**	*e*P		**P**	**03 00 12.0**	**+0.4**
	comp=Z,21nm,1.6s,mb5.3								
VIVF	**Saint-Julien-l**	**93.25**	**44**	*e*P		**P**	**03 00 12.0**	**+0.4**
VIVF				pmax		pmax			
	comp=Z,21nm,1.6s,mb5.3								
SSF	**Saint Saulge**	**93.30**	**42**	*e*P		**P**	**03 00 10.7**	**-1.1**
	comp=Z,22nm,1.4s,mb5.1								
SSF	**Saint Saulge**	**93.30**	**42**	*e*P		**P**	**03 00 10.7**	**-1.1**
	comp=Z,11nm,1.4s,mb5.1								
SSF	**Saint Saulge**	**93.30**	**42**	*e*P		**P**	**03 00 10.7**	**-1.1**
SSF				pmax		pmax			
	comp=Z,11nm,1.4s,mb5.1								
SMF	**Signal de Mont**	**93.36**	**42**	*e*P		**P**	**03 00 10.3**	**-1.8**
	comp=Z,46nm,1.5s,mb5.4								
SMF	**Signal de Mont**	**93.36**	**42**	*e*P		**P**	**03 00 10.3**	**-1.8**
	comp=Z,23nm,1.5s,mb5.4								
SMF	**Signal de Mont**	**93.36**	**42**	*e*P		**P**	**03 00 10.3**	**-1.8**
SMF				pmax		pmax			
	comp=Z,23nm,1.5s,mb5.4								
KEST	**Kesra**	**93.51**	**54**	LR		LR	03 46 12.1		
	comp=Z,290nm,18.1s,MS4.8,baz=199,slow=38								
LOR	**Lormes**	**93.60**	**42**	*e*P		**P**	**03 00 12.4**	**-0.8**
	comp=Z,16nm,1.1s,mb5.1								
LOR				*e*MLR		MLR			
	comp=Z,543nm,19.0s,MS4.7								
LOR	**Lormes**	**93.60**	**42**	*e*P		**P**	**03 00 12.4**	**-0.8**
	comp=Z,8.2nm,1.1s,mb5.1								
LOR				LR		LR			
	comp=Z,540nm,19.0s,MS5.0								
LOR	**Lormes**	**93.60**	**42**	*e*P		**P**	**03 00 12.4**	**-0.8**
LOR				pmax		pmax			
	comp=Z,8.0nm,1.1s,mb5.1								
LOR				MLR		MLR			
	comp=Z,540nm,19.0s,MS5.0								
ORIF	**Oris-en-Rattie**	**94.08**	**44**	*e*P		**P**	**03 00 15.9**	**+0.5**
	comp=Z,25nm,1.0s,mb5.3								
ORIF				*e*MLR		MLR			
	comp=Z,1µm,22.5s,MS5.0								
ORIF	**Oris-en-Rattie**	**94.08**	**44**	*e*P		**P**	**03 00 15.9**	**+0.5**
	comp=Z,12nm,1.0s,mb5.3								
ORIF	**Oris-en-Rattie**	**94.08**	**44**	*e*P		**P**	**03 00 15.9**	**+0.5**
ORIF				pmax		pmax			
	comp=Z,13nm,1.0s,mb5.3								
FRF	**La Foret Royal**	**94.13**	**46**	*e*P		**P**	**03 00 15.8**	**+0.1**
MBDF	**Montbardon**	**94.61**	**45**	*e*P		**P**	**03 00 18.2**	**+0.3**
	comp=Z,21nm,1.2s,mb5.2								
MBDF	**Montbardon**	**94.61**	**45**	*e*P		**P**	**03 00 18.2**	**+0.3**
	comp=Z,10nm,1.2s,mb5.1								
MBDF	**Montbardon**	**94.61**	**45**	*e*P		**P**	**03 00 18.2**	**+0.3**
MBDF				pmax		pmax			
	comp=Z,11nm,1.2s,mb5.2								
SBF	**Sospel**	**94.77**	**46**	*e*P		**P**	**03 00 17.0**	**-1.6**
	comp=Z,22nm,0.9s,mb5.3								
SBF	**Sospel**	**94.77**	**46**	*e*P		**P**	**03 00 17.0**	**-1.6**
	comp=Z,11nm,0.9s,mb5.3								
SBF	**Sospel**	**94.77**	**46**	*e*P		**P**	**03 00 17.0**	**-1.6**
SBF				pmax		pmax			
	comp=Z,11nm,0.9s,mb5.3								
CABF	**La Chapelle**	**94.80**	**43**	*e*P		**P**	**03 00 16.9**	**-1.8**
	comp=Z,51nm,1.6s,mb5.4								
CABF	**La Chapelle**	**94.80**	**43**	*e*P		**P**	**03 00 16.9**	**-1.8**
	comp=Z,26nm,1.6s,mb5.4								
CABF	**La Chapelle**	**94.80**	**43**	*e*P		**P**	**03 00 16.9**	**-1.8**
CABF				pmax		pmax			
	comp=Z,26nm,1.6s,mb5.4								
BAIF	**Baives**	**94.84**	**39**	*e*P		**P**	**03 00 16.9**	**-1.9**
LPL	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.8**
	comp=Z,23nm,1.1s,mb5.2								
LPL	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.8**
	comp=Z,11nm,1.1s,mb5.2								
LPL	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.8**
LPL				pmax		pmax			
	comp=Z,11nm,1.1s,mb5.2								
LPG	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.9**
	comp=Z,34nm,1.2s,mb5.3								
LPG	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.9**
	comp=Z,17nm,1.2s,mb5.3								
LPG	**La Plagne**	**94.85**	**44**	*e*P		**P**	**03 00 18.1**	**-0.9**
LPG				pmax		pmax			
	comp=Z,17nm,1.2s,mb5.3								
GIVF	**Givet**	**95.22**	**39**	*e*P		**P**	**03 00 19.0**	**-1.5**
HAU	**Haudompre**	**95.44**	**41**	*e*P		**P**	**03 00 20.8**	**-0.8**
HAU				*e*MLR		MLR			
	comp=Z,542nm,19.5s,MS4.7								
HAU	**Haudompre**	**95.44**	**41**	*e*P		**P**	**03 00 20.8**	**-0.8**
HAU				MLR		MLR			
	comp=Z,540nm,19.5s,MS5.0								
HINF	**Hinteralfeld**	**95.70**	**42**	*e*P		**P**	**03 00 21.4**	**-1.4**
DAWY	**Dawson**	**95.83**	**336**	*e*P		**P**	**03 00 26.3**	**+3.3**
INK	**Inuvik**	**95.92**	**341**	*e*P		**P**	**03 00 27.3**	**+4.0**
INK	**Inuvik**	**95.92**	**341**	P		**P**	**03 00 24.4**	**+1.0**
	comp=Z,2.4nm,1.0s,mb4.6,baz=79,slow=3.5,SNR=3.0								
RPZ	**Rata Peaks**	**96.03**	**221**	LR		LR	03 34 28.0		
	comp=Z,427nm,20.8s,MS4.9,baz=42,slow=30								
CDF	**Champ du Feu**	**96.16**	**41**	*e*P		**P**	**03 00 23.0**	**-1.9**
EGAK	**Eagle**	**96.84**	**336**	*e*P		**P**	**03 00 25.5**	**-2.0**
GRA1	**Grafenberg Arr**	**99.02**	**41**	*e*P		**P**	**03 00 37.9**	**+0.2**
	comp=Z,9.0nm,1.3s,mb5.1								
GRA1				LR		LR			
	comp=Z,500nm,19.7s,MS5.0								
GRF	**Grafenberg Arr**	**99.02**	**41**	*e*P		**P**	**03 00 37.9**	**+0.2**
GRF				pmax		pmax			
	comp=Z,9.0nm,1.3s,mb5.1								
GRF				MLR		MLR			
	comp=Z,500nm,19.7s,MS5.0								
GRF	**Grafenberg Arr**	**99.02**	**41**	*e*P		**P**	**03 00 37.9**	**+0.2**
	comp=Z,9.0nm,1.3s,mb5.1								
GRF				*e*L			03 42 58.3		
	comp=Z,527nm,19.7s								
COLA	**College**	**99.50**	**335**	*e*P		**P**	**03 00 38.0**	**-1.5**
	comp=Z,4.7nm,1.0s,mb4.9								
COLA	**College**	**99.50**	**335**	*e*P		**P**	**03 00 38.0**	**-1.5**
COLA				pmax		pmax			
	comp=Z,5.0nm,1.0s,mb4.9								
GERES	**GERESS Array B**	**100.37**	**42**	P		Pdif	03 00 42.8	-1.0	
	comp=Z,0.5nm,0.7s,baz=151,slow=3.0,SNR=4.0								
CLL	**Collm**	**100.54**	**40**	*e*Pdif		Pdif	03 00 44.0	-0.6	
CLL				*e*PP		PP	03 04 52.0	+0.4	
CLL				*e*SKSac		SKSac	03 11 28.0	+5.1	
CLL				*e*Sdif		Sdif	03 12 23.0	+2.1	
CLL				*e*PS		PS	03 13 56.0	+3.7	
CLL				*e*PPS			03 14 40.0		
CLL				*e*SS		SS	03 19 06.0	-11	
CLL				LmH			03 43 00.0		
	comp=N,300nm,18.4s								
CLL				LmH			03 43 00.0		
	comp=E,500nm,19.9s								
CLL				LmV			03 48 00.0		
	comp=Z,700nm,18.1s								
BRG	**Berggiesshubel**	**101.01**	**40**	*e*P		Pdif	03 00 46.9	+0.3	
	comp=Z,6.2nm,1.7s								
BRG				*e*			03 11 12.0		
BRG				*e*			03 14 01.0		
BRG				LR		LR			
	comp=Z,490nm,20.0s,MS5.0								
BRG	**Berggiesshubel**	**101.01**	**40**	*e*P		Pdif	03 00 46.9	+0.2	
BRG				*e*			03 14 01.0		
BRG				pmax		pmax			
	comp=Z,6.0nm,1.7s								
BRG				MLR		MLR			
	comp=N,219nm,17.9s								
BRG				MLR		MLR			
	comp=E,327nm,29.7s								
BRG				MLR		MLR			
	comp=Z,492nm,20.0s,MS5.0								
BRG	**Berggiesshubel**	**101.01**	**40**	*e*P		Pdif	03 00 46.9	+0.3	
	comp=Z,10nm,1.7s								
BRG				*e*			03 11 12.0		
BRG				*e*			03 14 01.0		
BRG									
	comp=N,366nm,17.9s								
BRG									
	comp=E,546nm,29.7s								
BRG									
	comp=Z,822nm,20.0s								
AKASG	**Malin Array Be**	**110.58**	**42**	PKiKP		PKiKP	03 05 28.5	-1.0	
	comp=Z,0.1nm,0.3s,baz=266,slow=3.4,SNR=3.6								
OBN	**Obninsk**	**114.91**	**37**	*e*PKIKP		PKiKP	03 05 36.2	-1.4	
OBN				*e**SP			03 05 46.5		
OBN				pmax		pmax			
	comp=Z,6.0nm,1.6s								
OBN				MLR		MLR			
	comp=Z,800nm,20.0s,MS5.3								
MALT	**Malatya**	**116.78**	**55**	*e*PKPdf		PKPdf	03 05 41.9	+0.1	
MALT				*e*pPKPdf		pPKPdf	03 05 51.5	+4.8	
BILL	**Bilibino**	**117.45**	**339**	*e*PKIKP		PKPdf	03 05 40.0	-2.1	
BILL				*e*			03 05 51.7		
BILL				*e*			03 06 51.5		
BILL				pmax		pmax			
	comp=Z,2.0nm,1.5s								
BILL				MLR		MLR			
	comp=Z,300nm,20.0s,MS4.9								
KIV	**Kislovodsk**	**119.86**	**49**	*e*P		Pdif	03 02 08.5	-1.9	
KIV				*i*			03 05 47.1		
KIV				*e*			03 07 08.9		
KIV				*e*PS		PS	03 17 01.2	+0.1	
KIV				*e*SS		SS	03 23 33.9	-2.6	
KIV				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KIV				MLR		MLR			
	comp=Z,206nm,21.0s,MS4.7								
STKA	**Stephens Creek**	**121.18**	**214**	PKP		PKPdf	03 05 49.0	-1.5	
	comp=Z,1.7nm,0.9s,baz=175,slow=12,SNR=2.7								
SEY	**Seymchan**	**124.98**	**337**	*i* PKIKP		PKPdf	03 05 56.0	-0.7	
ARU	**Arti**	**126.47**	**31**	*e*PKPdf		PKPdf	03 06 00.0	+0.2	
ARU				*ep*PKPdf		pPKPdf	03 06 09.1	+4.3	
ARU	**Arti**	**126.47**	**31**	⇑*i* PKIKP		PKPdf	03 05 59.8	0.0	
ARU				MLR		MLR			
	comp=Z,600nm,17.0s,MS5.3								
AKTK	**Aktyubinsk**	**128.61**	**39**	PKP		PKPdf	03 06 04.2	+0.1	
AKTO	**Aktyubinsk**	**128.61**	**39**	PKP		PKPdf	03 06 04.2	+0.1	
	comp=Z,2.7nm,0.9s,baz=311,slow=2.6,SNR=7.4								
ASAR	**Alice Springs**	**131.80**	**213**	PKP		PKPdf	03 06 09.4	-1.6	
	comp=Z,1.7nm,0.9s,baz=159,slow=2.0,SNR=7.7								
WB2	**Warramunga Arr**	**134.56**	**217**	*e*P		PKPdf	03 06 14.0	-2.3	
WRA	**Warramunga Arr**	**134.57**	**217**	PKP		PKPdf	03 06 13.4	-2.9	
	comp=Z,1.1nm,0.7s,baz=142,slow=1.8,SNR=13								
NVS	**Novosibirsk**	**138.16**	**21**	*i* PKIKP		PKPdf	03 06 21.4	-0.5	
NVS				pmax		pmax			
	comp=Z,13nm,1.2s								
ZALV	**Zalesovo Beam**	**139.43**	**21**	PKP		PKPdf	03 06 24.1	-0.1	
	comp=Z,15nm,1.0s,baz=318,slow=2.0,SNR=27								
ZAL	**Zalesovo**	**139.43**	**21**	*i* PKIKP		PKPdf	03 06 24.1	-0.1	
KURK	**Kurchatov**	**139.47**	**28**	*e*PKPdf		PKPdf	03 06 24.6	+0.3	
KURK				*ep*PKPdf		pPKPdf	03 06 34.0	+4.6	
FITZ	**Fitzroy Crossi**	**140.54**	**208**	PKP		PKPdf	03 06 24.9	-2.5	
	comp=Z,4.0nm,1.0s,baz=171,slow=4.8,SNR=4.8								
KLR	**Kul'dur**	**142.63**	**334**	*e*PKIKP		PKPdf	03 06 32.6	+2.5	
MKAR	**Makanchi Array**	**143.97**	**30**	PKP		PKPdf	03 06 30.3	-2.3	
	comp=Z,7.0nm,1.0s,baz=324,slow=3.6,SNR=37								
BHJ	**Bhuj**	**144.04**	**74**	*e*P		PKPdf	03 06 32.8	-0.6	
	comp=Z,56nm,1.1s								
CIT	**Chita**	**145.07**	**354**	*e*PKIKP		PKPdf	03 06 32.8	-1.5	
CIT				*e*			03 06 38.8		
CIT				*e*			03 06 44.3		
IRK	**Irkutsk**	**145.07**	**4**⇑	*i* PKIKP		PKPdf	03 06 32.9	-1.4	
IRK				pmax		pmax			
	comp=Z,78nm,1.3s								
MOY	**Mondy**	**145.35**	**7**	*e*PKIKP		PKPdf	03 06 35.1	+0.3	
MOY				pmax		pmax			
	comp=Z,70nm,1.4s								
TLY	**Talaya**	**145.59**	**4**	*e*PKPdf		PKPdf	03 06 35.3	+0.1	
TLY	**Talaya**	**145.59**	**4**	*e*PKP2		PKPab	03 06 35.5	-0.1	
TLY				*e*SS		SS	03 28 43.6	-3.0	
TLY				pmax		pmax			
	comp=Z,55nm,1.1s								
HIA	**Hailar**	**146.65**	**345**	*e*PKPdf		PKPdf	03 06 37.3	+0.2	
HIA	**Hailar**	**146.65**	**345**	*i* PKP2		PKPab	03 06 37.4	-2.3	
ZAK	**Zakamensk**	**146.86**	**5**	*e*PKP2		PKPab	03 06 38.2	-2.3	
ZAK				*e*			03 09 58.0		
ZAK				pmax		pmax			
	comp=Z,21nm,1.1s								
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.4s								
MDJ	**Mudanjiang**	**147.10**	**330**	PKP		PKPdf	03 06 38.5	+0.5	
MDJ				XPKP			03 06 47.5		
MDJ				PP		PP			
	comp=Z,155nm,5.0s								
MDJ				LR		LR			
	comp=N,121nm,34.3s,MS4.7								
MDJ				LR		LR			
	comp=E,152nm,29.4s,MS4.7								
MDJ				LR		LR			
	comp=Z,213nm,22.9s								
MDJ	**Mudanjiang**	**147.10**	**330**	*e*PKPdf		PKPdf	03 06 38.2	+0.2	
THN	**Thein Dam**	**147.59**	**56**	*ex*		PKPbc	03 06 41.6	-0.3	
POO	**Poona**	**147.94**	**83**	*e*P		PKPdf	03 06 39.5	-0.6	
KAD	**Karad**	**148.16**	**85**	*e*P		PKPdf	03 06 39.1	-1.5	
AJM	**Ajmer**	**148.22**	**68**	*e*P		PKPdf	03 06 40.6	+0.2	
WMQ	**Urumqi**	**148.72**	**28**	PKP		PKPdf	03 06 38.3	-2.4	
WMQ				APKP			03 06 48.3		
WMQ				XPKP			03 06 52.0		
WMQ				PP		PP	03 10 15.3	+1.5	
WMQ				PP		PP			
	comp=Z,103nm,7.0s								
WMQ				LR		LR			
	comp=N,209nm,20.8s,MS5.1								
WMQ				LR		LR			
	comp=E,237nm,23.8s,MS5.1								
WMQ				LR		LR			
	comp=Z,262nm,20.0s,MS5.0								
TRD	**Trivandrum**	**148.96**	**103**	*e*P		PKPdf	03 06 39.8	-2.2	
ULN	**Ulaanbaatar**	**149.55**	**1**	*e*PKPdf		PKPdf	03 06 42.8	+0.9	
ULN				*e*PKPbc		PKPbc	03 06 46.5	+0.1	
SONM	**Songino Array**	**149.57**	**2**	PKPbc		PKPbc	03 06 46.3	-0.2	
	comp=Z,7.4nm,0.9s,baz=293,slow=0.8,SNR=29								
CN2	**Changchun**	**149.59**	**334**	*e*PKP		PKPdf	03 06 40.8	-1.3	
DDI	**Dehra Dun**	**150.18**	**59**	*e*P		PKPdf	03 06 41.0	-2.5	
BHPL	**Bhopal**	**151.17**	**73**	*e*P		PKPdf	03 06 44.4	-0.8	
SNY	**Shenyang**	**151.99**	**334**	⇑PKP		PKPdf	03 06 51.3	+5.4	
HYB	**Hyderabad**	**152.33**	**85**	*e*P		PKPdf	03 06 50.5	+3.4	
HYB	**Hyderabad**	**152.33**	**85**	*i* PKP		PKPdf	03 06 50.5	+3.4	
HYB				*e*			03 07 02.5		
HYB				*e*			03 07 13.0		
KSRS	**Korea Array**	**153.12**	**322**	PKPbc		PKPbc	03 06 54.4	-0.7	
	comp=Z,19nm,1.2s,baz=15,slow=0.9,SNR=8.6								
KSRS				PKPab		PKPab	03 07 05.0	-1.5	
	comp=Z,19nm,1.1s,baz=26,slow=1.2,SNR=8.6								
BLSP	**Bilaspur**	**155.61**	**75**	*e*P		PKPdf	03 06 48.0	-3.6	
HHC	**Hu-ho-hao-te**	**156.31**	**352**	*e*PKP		PKPdf	03 06 56.8	+4.8	
HHC				APKP			03 07 06.8		
HHC				PKP2		PKPab	03 07 26.5	+6.6	
HHC				PKS			03 10 28.8		
HHC				PP		PP	03 11 04.5	+8.0	
HHC				SKS		SKSdf	03 13 57.0	-0.9	
HHC				SKKS		SKKSac	03 17 47.0	+0.3	
HHC				PP		PP			
	comp=Z,131nm,9.2s								
HHC				LR		LR			
	comp=N,211nm,17.8s,MS5.3								
HHC				LR		LR			
	comp=E,320nm,13.1s,MS5.3								
HHC				LR		LR			
	comp=Z,232nm,20.2s								
GTA	**Gaotai**	**157.00**	**15**	PKP		PKPdf	03 06 56.8	+3.9	
GTA				PP		PP			
	comp=Z,115nm,7.6s								
GTA				LR		LR			
	comp=N,247nm,20.5s,MS5.2								
GTA				LR		LR			
	comp=E,231nm,21.3s,MS5.2								
GTA				LR		LR			
	comp=Z,439nm,20.2s,MS5.3								
BOK	**Bokaro**	**158.73**	**69**	*e*P		PKPdf	03 06 51.9	-3.7	
LZH	**Lanzhou**	**161.04**	**9**	*e*PKP		PKPdf	03 06 58.5	+0.7	
LZH				APKP			03 07 09.3		
LZH				XPKP			03 07 13.3		
LZH				PP		PP			
	comp=Z,148nm,9.6s								
LZH				LR		LR			
	comp=E,216nm,18.2s								
LZH				LR		LR			
	comp=Z,304nm,20.5s								
NJ2	**Nanjing**	**162.13**	**327**	*e*PKP		PKPdf	03 06 57.3	-1.7	
SHL	**Shillong**	**163.28**	**58**	*e*P		PKPdf	03 07 00.1	-0.2	
SHL				*ex*		x	03 13 40.0		
CD2	**Chengdu**	**166.05**	**14**	*e*PKP		PKPdf	03 07 00.8	-1.8	
CD2				APKP			03 07 11.3		
CD2				XPKP			03 07 15.5		
CD2				PKP2		PKPab	03 08 02.3	-0.4	
CD2				PP		PP	03 11 50.8	+2.0	
CD2				SKS		SKSdf	03 13 59.5	-7.0	
CD2				SKKS		SKKSac	03 18 32.5	-4.8	
CD2				PP		PP			
	comp=Z,120nm,10.8s								
CD2				LR		LR			
	comp=N,180nm,24.6s								
CD2				LR		LR			
	comp=E,150nm,22.2s								
CD2				LR		LR			
	comp=Z,210nm,18.8s								
GYA	**Guiyang**	**170.89**	**5**	*i* PKP		PKPdf	03 07 04.3	-1.6	
GYA				APKP			03 07 14.8		
GYA				XPKP			03 07 18.3		
GYA				PKP2		PKPab	03 08 24.5	+0.4	
GYA				PP		PP	03 12 15.5	+2.3	
GYA				SKS		SKSdf	03 14 03.5	-5.7	
GYA				SKKS		SKKSac	03 18 58.0	-3.1	
GYA				SS		SS	03 33 12.5	-3.1	
GYA				PP		PP			
	comp=Z,120nm,8.4s								
GYA				LR		LR			
	comp=N,210nm,20.4s								
GYA				LR		LR			
	comp=E,190nm,21.8s								
GYA				LR		LR			
	comp=Z,230nm,22.4s								
KMI	**Kunming**	**171.05**	**29**	PKP		PKPdf	03 07 03.0	-3.1	
KMI				APKP			03 07 14.5		
KMI				XPKP			03 07 17.5		
KMI				PKP2		PKPab	03 08 25.5	+0.5	
KMI				LR		LR			
	comp=N,221nm,19.8s								
KMI				LR		LR			
	comp=E,292nm,20.7s								
KMI				LR		LR			
	comp=Z,280nm,25.0s								

ISCJB ***26*** *02:58:13.8±1.0, 37.24N±004×13668E±007, h8km±8km, Error ellipse: s-maj=10.2km s-min=6.0km az=16.7*
JMA ***26*** *02:58:14.7, 37.22N×13.673E, h14km±1km, M3.6*
JMA Felt I J1.

ISC 26 02:58:14.2±1.0, 3723N±003×13668E±008, h9km±8km, n6, nº61/12, 4C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**165**	⇑P		**Pg**	**02 58 20.9**	**

KMI				XP	sP	03 09 07.8	-2.0	
KMI				AMB	AMB			
	comp=Z,33nm,1.3s,mb4.7							
KMI				AMB	AMB			
	comp=Z,209nm,5.1s							
KMI				LR	LR			
	comp=N,831nm,15.3s,MS4.4							
KMI				LR	LR			
	comp=E,357nm,13.5s,MS4.4							
KMI				LR	LR			
	comp=Z,852nm,14.4s,MS4.4							
HYB	**Hyderabad**	**24.67**	**313**	*e*P	pP	03 09 02.5	-3.5	
HYB	**Hyderabad**	**24.67**	**313**	*i* P	pP	03 09 02.5	-3.5	
ODAN	**Odare**	**27.48**	**340**	*e*P	**P**	**03 09 22.3**	**+1.3**	
	comp=Z,54nm,0.7s,mb5.2							
TAPN	**Taplejung**	**27.83**	**341**	*e*P	**P**	**03 09 25.4**	**+1.3**	
	comp=Z,135nm,0.9s,mb5.6							
JIRN	**Jiri**	**28.63**	**339**	*e*P	**P**	**03 09 32.7**	**+1.5**	
	comp=Z,56nm,0.8s,mb5.4							
KKN	**Kakani**	**29.08**	**338**	*e*P	**P**	**03 09 36.3**	**+1.1**	
	comp=Z,42nm,0.7s,mb5.3							
LSA	**Lhasa**	**29.20**	**349**	P	**P**	**03 09 37.5**	**+1.3**	
LSA				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.7							
LSA	**Lhasa**	**29.20**	**349**	*e*P	**P**	**03 09 36.4**	**+0.2**	
	comp=Z,11nm,0.6s,mb4.8							
LSA	**Lhasa**	**29.20**	**349**	*e*P	**P**	**03 09 36.4**	**+0.2**	
LSA				pmax	pmax			
	comp=Z,11nm,0.6s,mb4.8							
GKN	**Gorkha**	**29.52**	**337**	*e*P	**P**	**03 09 40.1**	**+1.0**	
	comp=Z,40nm,0.7s,mb5.3							
KOLN	**Koldanda**	**29.74**	**335**	*e*P	**P**	**03 09 42.3**	**+1.2**	
	comp=Z,70nm,0.7s,mb5.5							
FITZ	**Fitzroy Crossi**	**33.68**	**126**	P	**P**	**03 10 15.4**	**-0.4**	
	comp=Z,2.8nm,0.6s,mb4.3,baz=286,slow=5.7,SNR=9.6							
XAN	**Xi'an**	**34.67**	**17**	P	**P**	**03 10 23.8**	**-0.4**	
XAN				AMB	AMB			
	comp=Z,16nm,0.6s,mb5.1							
LZH	**Lanzhou**	**35.49**	**9**	*e*P	**P**	**03 10 30.5**	**-0.7**	
LZH				AP	pP	03 10 38.0	-3.8	
LZH				XP	sP	03 10 42.3	-4.0	
LZH				AMB	AMB			
	comp=Z,20nm,1.4s,mb4.8							
LZH				AMB	AMB			
	comp=Z,83nm,4.1s							
NJ2	**Nanjing**	**37.02**	**31**	*e*P	**P**	**03 10 42.5**	**-1.9**	
NJ2				AP	pP	03 10 52.5	-2.5	
NJ2				XP	sP	03 10 55.0	-4.5	
NJ2				PP	PP	03 12 10.5	+1.2	
NJ2				S	**S**	**03 16 27.0**	**-0.7**	
NJ2				XS	sS	03 16 43.5	-1.7	
NJ2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.8							
NJ2				AMB	AMB			
	comp=Z,130nm,3.9s							
NJ2				LR	LR			
	comp=N,390nm,13.3s,MS4.5							
NJ2				LR	LR			
	comp=E,390nm,14.9s,MS4.5							
NJ2				LR	LR			
	comp=Z,390nm,14.9s,MS4.3							
GTA	**Gaotai**	**38.35**	**3**	*e*P	**P**	**03 10 56.5**	**+1.0**	
GTA				AP	pP	03 11 07.0	+0.8	
GTA				XP	sP	03 11 10.8	+0.2	
GTA				AMB	AMB			
	comp=Z,13nm,0.8s,mb4.7							
GTA				AMB	AMB			
	comp=Z,121nm,7.6s							
GTA				LR	LR			
	comp=N,210nm,14.8s,MS4.2							
GTA				LR	LR			
	comp=E,194nm,14.8s,MS4.2							
GTA				LR	LR			
	comp=Z,198nm,16.4s,MS4.0							
NWAO	**Narrogin (SRO)**	**38.58**	**153**	*e*P	**P**	**03 10 58.7**	**+1.2**	
	comp=Z,12nm,0.8s,mb4.7							
NWAO				LR	LR	03 24 46.7		
NWAO	**Narrogin (SRO)**	**38.58**	**153**	P	**P**	**03 10 58.0**	**+0.5**	
	comp=Z,10nm,0.7s,mb4.7,baz=297,slow=8.0,SNR=4.9							
NWAO				LR	LR	03 24 46.7		
	comp=Z,118nm,20.9s,MS3.7,baz=20,slow=33							
WRA	**Warramunga Arr**	**41.80**	**122**	P	**P**	**03 11 24.7**	**+0.3**	
WRA				pmax	pmax			
	comp=Z,3.0nm,0.4s							
WRA	**Warramunga Arr**	**41.80**	**122**	P	**P**	**03 11 24.7**	**+0.3**	
	comp=Z,3.2nm,0.4s,mb4.3,baz=302,slow=9.0,SNR=61							
WB2	**Warramunga Arr**	**41.81**	**122**	*e*P	**P**	**03 11 24.6**	**+0.1**	
BJT	**Baijiatuau**	**42.51**	**22**	*e*P	**P**	**03 11 30.8**	**+0.9**	
	comp=Z,26nm,0.8s,mb5.0							
BJT	**Baijiatuau**	**42.51**	**22**	*e*P	**P**	**03 11 30.8**	**+0.9**	
BJT				pmax	pmax			
	comp=Z,25nm,0.8s							
BJI	**Beijing**	**42.53**	**22**	P	**P**	**03 11 31.5**	**+1.4**	
BJI				AMB	AMB			
	comp=Z,31nm,0.7s,mb5.2							
ASAR	**Alice Springs**	**43.15**	**127**	P	**P**	**03 11 36.0**	**+0.7**	
	comp=Z,8.3nm,0.7s,mb4.6,baz=297,slow=8.0,SNR=85							
UCH	**Uchtor**	**45.93**	**336**	*e*P	**P**	**03 11 58.2**	**+1.0**	
	comp=Z,10.0nm,0.8s,mb4.8							
UCH				*es*P	sP	03 12 12.5	0.0	
KSRS	**Korea Array**	**45.99**	**34**	P	**P**	**03 11 58.7**	**+0.8**	
KSRS				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
KSRS	**Korea Array**	**45.99**	**34**	P	**P**	**03 11 58.6**	**+0.8**	
	comp=Z,4.0nm,0.7s,mb4.5,baz=218,slow=9.4,SNR=12							
TKM2	**Tokmak 2**	**46.10**	**338**	*e*P	**P**	**03 11 58.7**	**+0.1**	
	comp=Z,13nm,1.1s,mb4.8							
TKM2				*ep*P	pP	03 12 08.1	-1.4	
TKM2				*es*P	sP	03 12 13.4	-0.4	
TKM2	**Tokmak 2**	**46.10**	**338**	*e*P	**P**	**03 11 58.7**	**+0.1**	
TKM2				*e**PP	pP	03 12 08.1	-1.3	
TKM2				*e**SP	sP	03 12 13.4	-0.4	
TKM2				pmax	pmax			
	comp=Z,13nm,1.1s,mb4.8							
AML	**Almayashu**	**46.18**	**336**	*e*P	**P**	**03 11 59.5**	**+0.2**	
	comp=Z,12nm,0.6s,mb5.0							
AML				*es*P	sP	03 12 14.0	-0.5	
FRU	**Bishkek**	**46.40**	**337**	*e*P	pP	03 12 08.0	-3.8	
EKS2	**Erkin-Say**	**46.59**	**336**	*e*P	**P**	**03 12 03.1**	**+0.6**	
	comp=Z,9.9nm,0.7s,mb4.8							
EKS2				*es*P	sP	03 12 17.1	-0.6	
SONM	**Songino Array**	**47.37**	**8**	P	**P**	**03 12 09.4**	**+0.9**	
	comp=Z,6.6nm,0.8s,mb4.6,baz=191,slow=9.0,SNR=26							
SONM				PcP	PcP	03 13 39.2	+0.5	
	comp=Z,2.2nm,0.7s,baz=190,slow=3.8,SNR=4.3							
ULN	**Ulaanbaatar**	**47.49**	**9**	*e*P	**P**	**03 12 09.7**	**+0.3**	
	comp=Z,7.2nm,0.8s,mb4.7							
ULN				*ep*P	pP	03 12 19.0	-1.2	
ULN	**Ulaanbaatar**	**47.49**	**9**	*e*P	**P**	**03 12 09.7**	**+0.3**	
ULN				*e**PP	pP	03 12 19.0	-1.3	
ULN				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.6							
MK31	**Makanchi Array**	**47.52**	**346**	P	**P**	**03 12 09.9**	**+0.3**	
MKAR	**Makanchi Array**	**47.52**	**346**	P	**P**	**03 12 10.1**	**+0.5**	
	comp=Z,8.3nm,0.6s,mb5.0,baz=158,slow=7.8,SNR=68							
KK31	**Karatay Array**	**48.34**	**334**	P	**P**	**03 12 15.9**	**-0.1**	
ZAK	**Zakamensk**	**49.52**	**5**	*e*P	**P**	**03 12 25.0**	**+0.1**	
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.0s,mb4.1							
TLY	**Talaya**	**50.84**	**5**	*e*P	**P**	**03 12 35.6**	**+0.7**	
	comp=Z,3.6nm,0.7s,mb4.4							
TLY				*ep*P	pP	03 12 44.3	-1.6	
TLY	**Talaya**	**50.84**	**5**	*e*P	**P**	**03 12 35.6**	**+0.7**	
TLY				*e**PP	pP	03 12 44.3	-1.6	
TLY				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
MJAR	**Matsushiro Arr**	**51.80**	**42**	P	**P**	**03 12 43.4**	**+1.0**	
	comp=Z,0.5nm,0.4s,mb3.8,baz=239,slow=6.0,SNR=4.0							
HIA	**Hailar**	**51.84**	**19**	*e*P	**P**	**03 12 42.2**	**-0.3**	
	comp=Z,7.0nm,0.6s,mb4.8							
HIA	**Hailar**	**51.84**	**19**	*d*P	**P**	**03 12 43.4**	**+0.9**	
KURK	**Kurchatov**	**52.07**	**345**	P	**P**	**03 12 45.0**	**+0.8**	
CTA	**Charters Tower**	**52.28**	**116**	P	**P**	**03 12 45.1**	**-1.2**	
	comp=Z,4.0nm,0.7s,mb4.5,baz=270,slow=8.1,SNR=3.2							
OPO	**Ambohidratompo**	**52.93**	**246**	P	**P**	**03 12 50.9**	**-0.2**	
	comp=Z,4.2nm,0.8s,mb4.4,baz=84,slow=8.0,SNR=5.5							
STKA	**Stephens Creek**	**53.10**	**132**	*e*P	**P**	**03 12 53.3**	**+1.2**	
	comp=Z,9.9nm,0.7s,mb4.8							
STKA	**Stephens Creek**	**53.10**	**132**	P	**P**	**03 12 53.5**	**+1.3**	
	comp=Z,12nm,0.7s,mb5.0,baz=302,slow=7.7,SNR=22							
ZAL	**Zalesovo**	**53.82**	**351**	P	**P**	**03 12 57.5**	**+0.5**	
ZALV	**Zalesovo Beam**	**53.83**	**351**	P	**P**	**03 12 57.5**	**+0.4**	
	comp=Z,24nm,0.5s,mb5.4,baz=179,slow=7.0,SNR=58							
NVS	**Novosibirsk**	**54.95**	**350**	*i* P	**P**	**03 13 04.9**	**-0.3**	
NAY	**Al-Naaiem**	**55.34**	**305**	*e*P	**P**	**03 13 05.8**	**-2.8**	
MIB	**Mutribah**	**55.46**	**306**	*e*P	**P**	**03 13 08.8**	**-0.6**	
KLR	**Kul'dur**	**56.43**	**26**	*e*P	**P**	**03 13 14.0**	**-1.9**	
BRVK	**Borovoye**	**56.59**	**341**	*e*P	**P**	**03 13 16.7**	**-0.3**	
	comp=Z,6.1nm,0.7s,mb4.7							
BRVK	**Borovoye**	**56.59**	**341**	*e*P	**P**	**03 13 16.7**	**-0.3**	
BRVK				pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.7							
BOD	**Bodaibo**	**58.24**	**10**	⇑*i*P	**P**	**03 13 29.4**	**+0.9**	
BOD				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.5							
AKTK	**Aktyubinsk**	**59.51**	**332**	P	**P**	**03 13 36.0**	**-1.5**	
AKTO	**Aktyubinsk**	**59.51**	**332**	P	**P**	**03 13 36.1**	**-1.4**	
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.2							
AKTO	**Aktyubinsk**	**59.51**	**332**	P	**P**	**03 13 36.0**	**-1.5**	
	comp=Z,1.8nm,0.8s,mb4.1,baz=144,slow=4.9,SNR=6.8							
KMBO	**Kilima Mbogo**	**60.10**	**268**	P	**P**	**03 13 43.1**	**+0.8**	
KMBO	**Kilima Mbogo**	**60.10**	**268**	⇑*e*P	**P**	**03 13 43.2**	**+0.9**	
KMBO	**Kilima Mbogo**	**60.10**	**268**	P	**P**	**03 13 41.7**	**-0.6**	
	comp=Z,1.1nm,0.7s,mb4.0,baz=48,slow=13,SNR=4.9							
ZEI	**Tsey**	**63.27**	**319**	*e*P	**P**	**03 14 03.1**	**0.0**	
ZEI				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.8							
ARU	**Arti**	**63.47**	**337**	*e*P	**P**	**03 14 04.8**	**+0.7**	
KIV	**Kislovodsk**	**64.58**	**319**	P	**P**	**03 14 11.7**	**0.0**	
KIV	**Kislovodsk**	**64.58**	**319**	*e*P	**P**	**03 14 11.8**	**+0.1**	
KIV				pmax	pmax			
	comp=Z,8.0nm,1.1s,mb4.7							
PRGR	**Permogore**	**71.92**	**337**	*e*P	**P**	**03 14 54.8**	**-2.5**	
MAW	**Mawson**	**72.49**	**193**	P	**P**	**03 15 01.4**	**+0.8**	
	comp=Z,5.2nm,0.6s,mb4.6,baz=41,slow=4.2,SNR=5.6							
OBN	**Obninsk**	**72.90**	**328**	⇑*e*P	**P**	**03 15 02.1**	**-1.2**	
OBN				*es*	S	03 24 26.6	-0.4	
OBN				pmax	pmax			
	comp=Z,36nm,2.5s,mb4.9							
TIXI	**Tiksi**	**73.42**	**10**	*e*P	**P**	**03 15 05.4**	**-0.7**	
	comp=Z,3.4nm,0.6s,mb4.5							
TIXI	**Tiksi**	**73.42**	**10**	*e*P	**P**	**03 15 05.5**	**-0.5**	
TIXI				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.5							
BOSA	**Boshof**	**74.75**	**240**	P	**P**	**03 15 13.2**	**-1.5**	
	comp=Z,1.9nm,0.6s,mb4.2,baz=51,slow=14,SNR=6.8							
AKASG	**Malin Array Be**	**75.53**	**322**	P	**P**	**03 15 18.0**	**-0.7**	
AKASG	**Malin Array Be**	**75.53**	**322**	P	**P**	**03 15 18.1**	**-0.6**	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.6s							
AKASG				MLR	MLR			
	comp=Z,291nm,21.6s							
AKASG	**Malin Array Be**	**75.53**	**322**	P	**P**	**03 15 18.1**	**-0.7**	
	comp=Z,2.4nm,0.6s,mb4.3,baz=91,slow=5.0,SNR=19							
AKASG				LR	LR	03 49 22.3		
	comp=Z,291nm,21.6s,MS4.5,baz=295,slow=36							
JOF	**Joensuu**	**78.43**	**335**	*e*p	**P**	**03 15 32.5**	**-2.3**	
RPZ	**Rata Peaks**	**78.94**	**135**	P	**P**	**03 15 37.8**	**-0.2**	
	comp=Z,5.5nm,0.6s,mb4.7,baz=262,slow=6.0,SNR=3.9							
KOLS	**Kolonicke sedl**	**79.49**	**320**	*e*P	**P**	**03 15 41.4**	**+0.5**	
CRVS	**Cervenica-Dubn**	**80.01**	**319**	*e*P	**P**	**03 15 44.8**	**+1.1**	
STHS	**Stebnicka Huta**	**80.24**	**320**	*e*P	**P**	**03 15 46.3**	**+1.4**	
	comp=Z,3.2nm,0.8s,mb4.3							
STHS				*e*		03 15 52.4		
STHS				*e*PP	PP	03 18 35.2	-13	
STHS	**Stebnicka Huta**	**80.24**	**320**	*e*P	**P**	**03 15 46.3**	**+1.4**	
STHS				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.3							
FINES	**FINESS Array B**	**80.28**	**333**	P	**P**	**03 15 44.9**	**0.0**	
FINES	**FINESS Array B**	**80.28**	**333**	P	**P**	**03 15 44.9**	**0.0**	
	comp=Z,1.7nm,0.6s,mb4.2,baz=97,slow=7.7,SNR=8.7							
KAF	**Kangasniemi**	**80.36**	**333**	*e*p	**P**	**03 15 43.8**	**-1.5**	
	comp=Z,4.8nm,0.6s,mb4.6							
KAF	**Kangasniemi**	**80.36**	**333**	*e*P	**P**	**03 15 43.8**	**-1.5**	
KAF				pmax	pmax			
	comp=Z,5.0nm,0.6s,mb4.6							
KECS	**Kecovo**	**80.58**	**319**	*e*P	**P**	**03 15 45.7**	**-1.1**	
KECS				*e*PCP	PcP	03 15 52.7	-0.9	
BILL	**Bilibino**	**81.36**	**21**	*e*P	**P**	**03 15 50.6**	**+0.1**	
BILL				*e*	pP	03 16 04.0	+1.9	
BILL				pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.8							
BILL				MLR	MLR			
	comp=Z,100nm,22.0s,MS4.1							
VYHS	**Vyhne**	**81.66**	**319**	*e*P	**P**	**03 15 53.0**	**+0.4**	
MODS	**Modra-Piesok**	**82.68**	**319**	*e*P	**P**	**03 15 57.1**	**-0.8**	
ZST	**Bratislava**	**82.77**	**318**	*e*P	**P**	**03 15 59.1**	**+0.7**	
	comp=Z,6.8nm,0.7s,mb4.8							
ZST				*e*		03 16 05.7		
ZST				LR	LR			
	comp=Z,500nm,20.3s,MS4.9							
ZST	**Bratislava**	**82.77**	**318**	*e*P	**P**	**03 15 59.1**	**+0.7**	
ZST				pmax	pmax			
	comp=Z,7.0nm,0.7s,mb4.8							
ZST				MLR	MLR			
	comp=Z,500nm,20.3s,MS4.9							
ZST	**Bratislava**	**82.77**	**318**	*e*P	**P**	**03 15 59.1**	**+0.7**	
ZST				*e*PCP	PcP	03 16 05.7	+2.5	
ARCES	**ARCESS Array B**	**82.82**	**340**	P	**P**	**03 15 58.5**	**+0.3**	
	comp=Z,2.1nm,0.7s,mb4.3,baz=83,slow=3.9,SNR=8.3							
GERES	**GERESS Array B**	**85.08**	**319**	P	**P**	**03 16 11.4**	**+1.3**	
	comp=Z,2.8nm,1.0s,mb4.3,baz=102,slow=5.6,SNR=8.9							
KHC	**Kasperske Hory**	**85.19**	**319**	*e*P	pP	03 16 17.5	-4.7	
KHC	**Kasperske Hory**	**85.19**	**319**	*ep*P	pP	03 16 17.5	-4.7	
VNDA	**Vanda**	**85.55**	**169**	P	**P**	**03 16 10.9**	**-1.0**	
	comp=Z,1.4nm,0.9s,mb4.2,baz=298,slow=6.4,SNR=4.7							
CLL	**Collm**	**85.71**	**321**	*e*PcP	PcP	03 16 16.0	0.0	
CLL				*es*P	sP	03 16 25.0	-4.0	
CLL				*ex*	x	03 16 33.0		
HFS	**Hagfors**	**86.00**	**330**	P	**P**	**03 16 14.8**	**+0.4**	
	comp=Z,1.5nm,0.5s,mb4.5,baz=124,slow=7.9,SNR=8.5							
NB2	**NORSAR Subarra**	**87.29**	**331**	P	**P**	**03 16 20.5**	**-0.2**	
	comp=Z,2.7nm,0.8s,mb4.5,baz=96,slow=4.8							
NB2	**NORSAR Subarra**	**87.29**	**331**	P	**P**	**03 16 20.5**	**-0.2**	
NB2				pmax	pmax			
	comp=Z,3.0nm,0.8s,mb4.6							
NOA	**NORSAR Array B**	**87.29**	**331**	P	**P**	**03 16 20.7**	**0.0**	
	comp=Z,1.5nm,0.7s,mb4.4,baz=94,slow=4.9,SNR=9.0							
KEST	**Kesra**	**87.81**	**306**	P	**P**	**03 16 24.9**	**+1.0**	
	comp=Z,1.3nm,1.0s,mb4.1,baz=295,slow=16,SNR=4.5							
LPG	**La Plagne**	**89.73**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
	comp=Z,9.9nm,1.0s,mb4.8							
LPG	**La Plagne**	**89.73**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
	comp=Z,4.9nm,1.0s,mb4.8							
LPG	**La Plagne**	**89.73**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
LPG				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.8							
LPL	**La Plagne**	**89.75**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
	comp=Z,11nm,1.0s,mb4.8							
LPL	**La Plagne**	**89.75**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
	comp=Z,5.7nm,1.0s,mb4.9							
LPL	**La Plagne**	**89.75**	**315**	*e*P	**P**	**03 16 32.0**	**-0.7**	
LPL				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.9							
BAIF	**Baives**	**91.29**	**320**	*e*P	**P**	**03 16 39.3**	**-0.5**	
LOR	**Lormes**	**91.67**	**317**	*e*P	**P**	**03 16 40.7**	**-0.9**	
SMF	**Signal de Mont**	**91.72**	**317**	*e*P	**P**	**03 16 40.7**	**-1.2**	
	comp=Z,13nm,1.0s,mb4.9							
SMF	**Signal de Mont**	**91.72**	**317**	*e*P	**P**	**03 16 40.7**	**-1.2**	
	comp=Z,6.4nm,1.0s,mb4.9							
SMF	**Signal de Mont**	**91.72**	**317**	*e*P	**P**	**03 16 40.7**	**-1.2**	
SMF				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.9							
AVF	**Avril sur Loir**	**92.04**	**317**	*e*P	**P**	**03 16 42.6**	**-0.8**	
	comp=Z,11nm,1.1s,mb4.8							
AVF	**Avril sur Loir**	**92.04**	**317**	*e*P	**P**	**03 16 42.6**	**-0.8**	
	comp=Z,5.5nm,1.1s,mb4.8							
AVF	**Avril sur Loir**	**92.04**	**317**	*e*P	**P**	**03 16 42.6**	**-0.8**	
AVF				pmax	pmax			
	comp=Z,6.0nm,1.1s,mb4.8							
EKA	**Eskdalemuir Ar**	**95.19**	**326**	P	**P**	**03 16 57.5**	**-0.1**	
	comp=Z,1.6nm,1.1s,mb4.4,baz=98,slow=4.1,SNR=4.0							
TORD	**Torodi Ar. Bea**	**95.27**	**283**	P	**P**	**03 16 58.5**	**-0.3**	
	comp=Z,1.3nm,1.1s,mb4.3,baz=90,slow=2.9,SNR=4.6							
CFAA	**Coronel Fontan**	**146.58**	**203**	PKPbc	PKPbc	03 23 16.3	0.0	
	comp=Z,0.7nm,0.5s,baz=156,slow=3.4,SNR=23							

NEIC ***26*** *03:04:05.0, 3830N×2036E, h17km, MD3.5(ATH), After ATH.*
CSEM ***26*** *03:04:05.0, 3830N×2036E, h17km, MD3.5/4, After ATH*

ATH 26 03:04:05.0, 3830N×2036E, h17km±3km, MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.22**	**124**	*e*PB	Pg	03 04 10.1	0.0
VLS				*e*SB	Sg	03 04 14.1	+0.5
RLS	**Riolos of Patr**	**0.91**	**105**	*e*PN	Pn	03 04 22.1	-0.8
RLS				*e*SN	Sn	03 04 36.0	+0.4
EVR	**Evrytania**	**1.29**	**61**	*e*PB	Pb	03 04 28.5	-0.3
JAN	**Janina**	**1.41**	**16**	*e*PN	Pn	03 04 32.2	+2.4
KEK	**Kerkira**	**1.48**	**343**	*e*PN	Pn	03 04 32.8	+2.0
ITM	**Ithomi**	**1.67**	**132**	*e*PN	Pn	03 04 36.5	+3.0
THL	**Klokotos Trika**	**1.81**	**45**	*e*PB	Pb	03 04 36.9	-0.7

JMA 26 03:04:23.5±0.1, 3725N×13673E, h4km±1km, M1.6, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**173**	P	Pg	03 04 30.2	+0.4
JSZ	**Suzu**	**0.54**	**68**	P	Pg	03 04 34.0	+0.1

NIED ***26*** *03:05:00, 3720N×13670E, h5km, Mw3.7 Best double couple: M0=4.70000×10^14 NP1:φs=212.00000°, δ25.00000°, λ116.00000°. NP2:φs=4.00000°, δ67.00000°, λ78.00000°.*
ISCJB ***26*** *03:05:54.0±1.0, 3726N±004×13665E±008, h6km±8km, Error ellipse: s-maj=10.3km s-min=6.2km az=16.5*
JMA ***26*** *03:05:54.4, 3724N×13668E, h7km±1km, M3.6*
JMA Felt III J1.

ISC 26 03:05:54.5±1.0, 3725N±003×13665E±008, h7km±9km, n6, σ0°49/12, 2C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**162**	⇓P	**Pg**	**03 06 01.1**	**0.0**
JJH				S	**Sg**	**03 06 06.1**	**+0.4**
JSZ	**Suzu**	**0.60**	**71**	P	**Pg**	**03 06 05.6**	**-0.4**
JSZ				S	**Sg**	**03 06 13.8**	**0.0**
JHG	**Hegura jima**	**0.63**	**20**	⇑P	**Pg**	**03 06 06.6**	**-0.1**
JHG				S	**Sg**	**03 06 15.6**	**+0.7**
JTT	**Ttatey**	**0.84**	**140**	P	**Pg**	**03 06 10.1**	**-0.6**
JTT				S	**Sg**	**03 06 21.8**	**+0.1**
JKG	**Kaga**	**1.01**	**195**	⇑P	**Pg**	**03 06 13.6**	**-0.2**
JKG				S	**Sg**	**03 06 27.2**	**+0.3**
MAT	**Matsushiro**	**1.43**	**119**	P	**Pn**	**03 06 19.9**	**-1.0**
MAT				S	**Sn**	**03 06 40.7**	**+0.8**

IDC ***26*** *03:09:18.6±0.7, 1737S×7265W, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.2/16, mbtmp4.1/11, ML3.3/3, MS3.8/1, Ms1 3.9/1, ms1mx3.0/19, Error ellipse: s-maj=26.5km s-min=18.5km az=63.0*
ISCJB ***26*** *03:09:21.4±1.4, 1745S±007×7292W±008, h33km±13km, mb4.0/9, Error ellipse: s-maj=13.8km s-min=11.1km az=139.1*
NEIC ***26*** *03:09:23.6±0.8, 1745S×7276W, h35km, mb3.6/1, Error ellipse: s-maj=14.9km s-min=11.0km az=65.0*

ISC 26 03:09:23.0±2.8, 1744S±006×7284W±007, h32km±22km, n24, σ1°20/21, mb4.0/9, 1C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**1.62**	**53**	⇑*i*P	**Pn**	**03 09 49.0**	**-0.4**
ARE				*i* S	**Sn**	**03 10 09.7**	**+0.5**
LPAZ	**La Paz**	**4.66**	**76**	Pn	**Pn**	**03 10 32.4**	**+1.3**
LPAZ				LR	LR	03 12 31.9	
LPAZ	**La Paz**	**4.66**	**76**	Pn	**Pn**	**03 10 32.4**	**+1.3**
	0.6nm,0.3s,baz=254,slow=11,SNR=19						
LPAZ				LR	LR	03 12 31.9	
	comp=Z,1μm,19.7s,baz=282,slow=43						
NNA	**Nana**	**6.66**	**324**	Pn	**Pn**	**03 10 58.7**	**-0.1**
NNA				Sn	**Sn**	**03 12 11.3**	**-2.3**
NNA				Lg		03 12 35.0	
NNA	**Nana**	**6.66**	**324**	Pn	**Pn**	**03 10 58.7**	**-0.1**
	0.9nm,0.3s,baz=244,slow=20,SNR=2.7						
NNA				Sn	**Sn**	**03 12 11.3**	**-2.3**
	2.0nm,0.3s,baz=331,slow=14,SNR=2.8						
NNA				Lg		03 12 35.0	
	14nm,0.3s,baz=22,slow=23,SNR=8.2						
SIV	**San Ignacio**	**11.37**	**84**	Pn	**Pn**	**03 12 01.1**	**-2.2**
	0.3nm,0.3s,baz=262,slow=14,SNR=17						
CFAA	**Coronel Fontan**	**14.71

KFL					*e*Sg	**Sg**	03 18 40.4	**+0.7**
RLS	**Riolos of Patr**	**0.86**	**101**		*e*PN	**Pn**	03 18 44.7	**-1.7**
RLS					*e*SN	**Sn**	03 18 56.7	**-2.1**
SELA	**Sela**	**1.18**	**87**		*e*Pg	**Pg**	03 18 50.0	**-1.3**
SELA					*e*Sg	**Sg**	03 19 07.2	**+0.5**
EVR	**Evrytania**	**1.31**	**58**		*e*PN	**Pn**	03 18 51.4	**-1.2**
IGT	**Igoumenitsa**	**1.31**	**358**		*e*Pg	**Pg**	03 18 52.4	**-1.4**
IGT					*e*Sg	**Sg**	03 19 11.2	**+0.4**
KEK	**Kerkira**	**1.56**	**343**		*e*PN	**Pn**	03 18 57.2	**+1.1**
ITM	**Ithomi**	**1.60**	**130**		*e*PN	**Pn**	03 18 58.2	**+1.6**
MEV	**Metsovon**	**1.69**	**22**	P		**Pg**	03 19 02.2	**+1.2**
MEV				S		**Sg**	03 19 23.6	**+0.6**
MEV	**Metsovon**	**1.69**	**22**	*e*Pg		**Pg**	03 18 59.9	**-1.1**
MEV	**Metsovon**	**1.69**	**22**	P		**Pg**	03 19 02.2	**+1.1**
MEV				S		**Sg**	03 19 23.6	**+0.6**
PYL	**PYLOS**	**1.70**	**141**	*e*Pb		**Pb**	03 18 59.4	**-0.3**
AGG	**Agios Georgios**	**1.71**	**62**	*e*Pb		**Pb**	03 18 59.3	**-0.7**
AGG				*e*Sb		**Sb**	03 19 21.7	**+0.4**
THL	**Klokotos Trika**	**1.84**	**43**	*e*PN		**Pn**	03 18 59.8	**-0.1**
LTK	**Loutraki**	**2.04**	**95**	*e*Pn		**Pn**	03 19 02.5	**-0.1**
LTK				*e*Sn		**Sn**	03 19 28.6	**+0.7**
DID	**Didima**	**2.36**	**107**	*e*Pn		**Pn**	03 19 09.6	**+2.6**
DID				*e*Sn		**Sn**	03 19 39.6	**+3.8**

MAN 26 03:25:17,1020N×12610E,h49km,mb4.5,ML3.3,MS3.2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**1.22**	**267**	*e*P	Pn	03 25 38.3	+0.6
MSLP				*e*S	Sn	03 25 55.5	+2.4
PLP	**Palo**	**1.46**	**311**	*e*P	Pn	03 25 41.8	+0.9
PLP				*e*S	Sn	03 26 01.7	+2.8
TBP	**Tagbilaran**	**2.26**	**257**	*e*P	Pn	03 25 53.5	+1.6
BUKP	**Musuan**	**2.52**	**204**	*e*P	Pn	03 25 57.4	+1.9
BUKP				*e*S	Sn	03 26 28.6	+3.5
CNP	**Catarman**	**2.69**	**329**	*e*P	Pn	03 26 00.2	+2.3
CNP				*e*S	Sn	03 26 33.0	+3.8

*CSEM **26** 03:28:29.3,3836N×2063E,h18km,MD3.5/3,After ATH*

ATH 26 03:28:29.3,3835N×2063E,h18km±2km,MD3.5/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**190**	*e*PB	Pg	03 28 34.3	+0.4
VLS				*e*SB	Sg	03 28 38.0	+1.1
EVR	**Evrytania**	**1.08**	**58**	*e*PN	Pn	03 28 49.6	+0.1
EVR				*e*SN	Sn	03 29 05.2	+1.1
KEK	**Kerkira**	**1.51**	**335**	*e*PN	Pn	03 28 57.5	+2.1
THL	**Klokotos Trika**	**1.62**	**41**	*e*PN	Pn	03 28 58.9	+1.9

*IDC **26** 03:30:12.5±0.8,1737S×7266W,h0km,mb4.2/8, mb1 4.2/10,mb1mx4.1/16,mbtmp4.2/10,ML3.5/3,MS3.8/5, Ms1 3.8/5,ms1mx3.4/19,Error ellipse: s-maj=27.1km s-min=18.3km az=61.0*

*ISCJB **26** 03:30:14.4±3.0,1751S±007×7290W±007,h30km±22km, mb4.2/10,MS4.2/3,Error ellipse: s-maj=12.7km s-min=10.8km az=23.2*

*NEIC **26** 03:30:17.4±0.5,1745S×7273W,h35km,mb4.4/4,Error ellipse: s-maj=11.2km s-min=9.3km az=52.0*

ISC 26 03:30:15.8±2.9,1746S±006×7282W±006,h23km±22km, n28,σ1§08/23,mb4.2/10,MS4.2/3,1C,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**1.62**	**52**	*i*P	**Pn**	03 30 43.0	**+0.2**
ARE				*i* S	**Sn**	03 31 03.5	**+0.5**
LPAZ	**La Paz**	**4.64**	**76**	Pn	**Pn**	03 31 26.0	**+1.6**
	2.3nm,0.3s,baz=256,slow=10.0,SNR=79						
LPAZ				LR	LR	03 32 28.7	
	comp=Z,236nm,21.7s,baz=328,slow=30						
NNA	**Nana**	**6.69**	**324**	*e*Pn	**Pn**	03 31 53.5	**+0.9**
NNA				Sn	**Sn**	03 33 06.0	**-2.2**
NNA				*e*Sn	**Sn**	03 33 07.9	**-0.3**
NNA				Lg		03 33 29.1	
NNA	**Nana**	**6.69**	**324**	Pn	**Pn**	03 31 53.5	**+0.8**
	1.0nm,0.3s,baz=172,slow=13,SNR=3.1						
NNA				Sn	**Sn**	03 33 06.0	**-2.2**
	1.4nm,0.3s,baz=60,slow=24,SNR=2.9						
NNA				Lg		03 33 29.1	
	7.5nm,0.3s,baz=215,slow=21,SNR=2.6						
SIV	**San Ignacio**	**11.35**	**84**	Pn	**Pn**	03 32 54.8	**-1.8**
	0.9nm,0.3s,baz=265,slow=12,SNR=30						
ATAH	**Atahualpa**	**11.73**	**332**	LR	LR	03 37 29.0	
	comp=Z,330nm,21.1s,baz=48,slow=38						
CFAA	**Coronel Fontan**	**14.68**	**164**	Pn	**Pn**	03 33 40.8	**-1.2**
	0.0nm,0.3s,baz=342,slow=13,SNR=6.0						
ROSC	**El Rosal**	**22.23**	**356**	P	**P**	03 35 10.8	**-0.1**
	1.8nm,0.4s,mb3.8,baz=259,slow=14,SNR=4.4						
PLCA	**Paso Flores**	**23.27**	**176**	*e*P	**P**	03 35 23.5	**+1.7**
	12nm,1.0s,mb4.3						
PLCA	**Paso Flores**	**23.27**	**176**	P	**P**	03 35 23.6	**+1.8**
	3.2nm,0.6s,mb4.0,baz=346,slow=11,SNR=11						
SDV	**Santo Domingo**	**26.27**	**5**	*e*P	**P**	03 35 49.3	**-0.2**
	6.4nm,0.8s,mb4.2						
SDV	**Santo Domingo**	**26.27**	**5**	P	**P**	03 35 49.8	**+0.3**
	5.9nm,0.9s,mb4.1,baz=265,slow=2.9,SNR=11						
PCRV	**Puerto La Cruz**	**28.63**	**17**	LR	LR	03 48 42.1	
	comp=Z,352nm,19.3s,MS4.0,baz=1.7,slow=39						
RCBR	**Riachuelo**	**37.88**	**77**	*e*P	**P**	03 37 30.6	**-0.7**
	19nm,1.1s,mb4.7						
SDCO	**Great Sand Dun**	**62.93**	**331**	*e*P	**P**	03 40 41.6	**+1.3**
	3.6nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**68.81**	**332**	P	**P**	03 41 18.1	**+0.1**
	0.1nm,0.3s,mb3.2,baz=138,slow=7.3,SNR=3.1						
ULM	**Lac du Bonnet**	**70.42**	**345**	P	**P**	03 41 27.2	**-0.6**
	baz=156,slow=5.3						
DBIC	**Dimbokro**	**71.26**	**76**	P	**P**	03 41 32.5	**-1.2**
	4.0nm,0.6s,mb4.5,baz=223,slow=5.9,SNR=12						
DBIC				LR	LR	04 10 18.1	
	comp=Z,115nm,18.6s,MS4.2,baz=167,slow=34						
TORD	**Torodi Ar. Bea**	**79.58**	**73**	P	**P**	03 42 20.6	**-1.0**
	4.7nm,0.7s,mb4.5,baz=251,slow=5.4,SNR=86						
TORD				LR	LR	04 15 59.8	
	comp=Z,139nm,18.4s,MS4.3,baz=10.0,slow=35						
ESDC	**Sonseca Array**	**85.64**	**46**	P	**P**	03 42 53.9	**+1.3**
	2.0nm,0.7s,mb4.5,baz=256,slow=5.1,SNR=15						
YKA	**Yellowknife Ar**	**86.20**	**342**	P	**P**	03 42 55.4	**+0.6**
	0.5nm,0.5s,mb4.0,baz=137,slow=4.8,SNR=12						
WRA	**Warramunga Arr**	**134.25**	**217**	PKP	PKPdf	03 49 33.4	+0.9
	0.4nm,0.8s,baz=140,slow=2.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**139.67**	**20**	PKP	PKPdf	03 49 42.6	+1.2
	1.2nm,0.3s,baz=276,slow=2.8,SNR=3.5						
MK31	**Makanchi Array**	**144.25**	**30**	*e*PKPdf	PKPdf	03 49 48.3	-1.6
MKAR	**Makanchi Array**	**144.25**	**30**	PKP	PKPdf	03 49 48.6	-1.2
	0.7nm,0.6s,baz=334,slow=4.5,SNR=7.6						
MJAR	**Matsushiro Arr**	**146.67**	**311**	PKPbc	PKPbc	03 49 56.9	+1.0
	3.4nm,0.8s,baz=63,slow=1.3,SNR=8.9						
SONM	**Songino Array**	**149.70**	**1**	PKPbc	PKPbc	03 50 04.1	+0.5
	1.4nm,0.7s,baz=328,slow=1.6,SNR=12						
KSRS	**Korea Array**	**152.99**	**322**	PKPab	PKPab	03 50 21.9	-0.9
	0.4nm,0.3s,baz=297,slow=0.8,SNR=4.3						

*IDC **26** 03:37:18.1±1.8,687S×12942E,h0km,mb3.9/2,mb1 4.1/4, mb1mx3.8/13,mbtmp3.9/4,ML3.9/1,Error ellipse: s-maj=132.7km s-min=26.6km az=65.0*

*NEIC **26** 03:37:24.6±1.0,756S×12803E,h35km,Error ellipse: s-maj=81.3km s-min=13.1km az=60.0*

ISC 26 03:37:28.7±3.8,73S±04×1292E±07,h86km±42km,n6, σ1§69/8,mb3.6/2,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.30**	**150**	*e*Pn	**Pn**	03 39 00.9	**+1.9**
	50nm,0.6s						
KAKA				*e*Sn	**Sn**	03 40 08.3	**-1.3**
WRA	**Warramunga Arr**	**13.57**	**159**	Pn	**Pn**	03 40 36.1	**-1.5**
	1.0nm,0.3s,baz=342,slow=13,SNR=45						
WRA				Sn	**Sn**	03 42 56.4	**-10**
	0.9nm,0.3s,baz=334,slow=22,SNR=13						
ASAR	**Alice Springs**	**16.94**	**165**	P	**Pn**	03 41 20.9	**+0.5**
	0.4nm,0.3s,baz=346,slow=11,SNR=21						
STKA	**Stephens Creek**	**27.10**	**156**	P	**P**	03 43 05.0	**+1.5**
	2.2nm,1.0s,mb3.7,baz=321,slow=13,SNR=2.5						
MK31	**Makanchi Array**	**67.99**	**327**	*e*P	**P**	03 48 18.2	**-0.4**
MKAR	**Makanchi Array**	**67.99**	**327**	P	**P**	03 48 18.1	**-0.6**
	0.4nm,0.5s,mb3.5,baz=121,slow=7.9,SNR=4.5						

*ISCJB **26** 03:44:02.9±0.3,4486N±001×729E±002,h8km±2km,Error ellipse: s-maj=3.1km s-min=2.0km az=161.7*

*ROM **26** 03:44:03.7±0.2,4485N×722E,h10km±2km,Md2.5/10, Ml2.0/6,Error ellipse: s-maj=3.7km s-min=3.2km az=177.0*

*CSEM **26** 03:44:03.6±0.1,4484N×732E,h10km,ML2.7/8,Error ellipse: s-maj=1.9km s-min=1.5km az=78.0*

*NEIC **26** 03:44:03.7,4485N×722E,h10km,ML2.5(LDG), ML2.3(STR),ML2.0(ROM),After ROM.*

*GEN **26** 03:44:04.0,4485N×727E,h7km,ML2.0*

*STR **26** 03:44:04.6±0.9,4481N×734E,h5km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*LDG **26** 03:44:04.4±0.1,4482N×739E,h2km,Md2.9/1,Ml2.5/14, Error ellipse: s-maj=3.3km s-min=1.7km az=84.0*

ISC 26 03:44:03.7±0.3,4485N±001×733E±002,h9km±2km,n77, σ0§84/140,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSP	**Reno Superiore**	**0.31**	**350**	Pg	**Pg**	03 44 10.2	**+0.4**
RSP				Sg	**Sg**	03 44 13.9	**0.0**
	251nm,0.1s						
DOI	**San Damiano**	**0.35**	**190**	Pg	**Pg**	03 44 11.3	**+0.7**
DOI				Sg	**Sg**	03 44 16.0	**+0.8**
	135nm,0.3s						
PZZ	**Prazzo**	**0.38**	**206**	Pg	**Pg**	03 44 11.5	**+0.3**
MBDF	**Montbardon**	**0.42**	**253**	*e*Pg	**Pg**	03 44 11.6	**-0.2**
MBDF				*e*Sg	**Sg**	03 44 16.7	**-0.7**
	90nm,0.2s						
MBDF	**Montbardon**	**0.42**	**253**	*e*Pg	**Pg**	03 44 11.6	**-0.2**
MBDF				*e*Sg	**Sg**	03 44 16.7	**-0.7**
	45nm,0.2s						
MONC	**Moncucco Torin**	**0.48**	**62**	Pg	**Pg**	03 44 15.3	**+2.3**
	142nm,0.5s						
BNI	**Bardonecchia**	**0.51**	**294**	*e*Pg	**Pg**	03 44 12.8	**-0.7**
BNI				Pg	**Pg**	03 44 13.1	**-0.4**
BNI				*e*Sg	**Sg**	03 44 19.4	**-0.8**
BNI	**Bardonecchia**	**0.51**	**294**	Pg	**Pg**	03 44 13.1	**-0.4**
	43nm,0.8s						
SURF	**Saint Ours**	**0.52**	**225**	Pg	**Pg**	03 44 14.4	**+0.6**
SURF				Sg	**Sg**	03 44 20.6	**-0.1**
STV	**Sta Anna Valdi**	**0.61**	**181**	Pg	**Pg**	03 44 15.3	**-0.1**
STV				Sg	**Sg**	03 44 23.6	**+0.3**
	25nm,0.3s						
LSD	**Ceresole Reale**	**0.62**	**348**	P	**Pg**	03 44 15.9	**+0.2**
ROB	**Roburent**	**0.68**	**145**	P	**Pg**	03 44 17.6	**+0.9**
TRAV		**0.72**	**24**	P	**Pg**	03 44 17.6	**-0.1**
LPG	**La Plagne**	**0.77**	**328**	*e*Pg	**Pg**	03 44 17.9	**-0.6**
	SNR=1.0						
LPG				*e*Sg	**Sg**	03 44 27.3	**-1.2**
	62nm,0.2s						
LPG	**La Plagne**	**0.77**	**328**	*e*Pg	**Pg**	03 44 17.9	**-0.6**
	SNR=1.0						
LPG				*e*Sg	**Sg**	03 44 27.3	**-1.2**
	31nm,0.2s						
LPL	**La Plagne**	**0.79**	**328**	*e*Pg	**Pg**	03 44 18.4	**-0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	03 44 27.7	**-1.5**
	44nm,0.3s						
LPL	**La Plagne**	**0.79**	**328**	*e*Pg	**Pg**	03 44 18.4	**-0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	03 44 27.7	**-1.5**
	22nm,0.3s						
MONE	**Monesi**	**0.83**	**158**	P	**Pg**	03 44 19.6	**0.0**
TOUF	**Mont Tournerai**	**0.84**	**184**	Pg	**Pg**	03 44 19.9	**+0.1**
SAOF	**Saorge**	**0.88**	**169**	Pg	**Pg**	03 44 20.1	**-0.5**
SAOF				Sg	**Sg**	03 44 32.3	**+0.3**
QLNO	**Quiliano**	**0.90**	**126**	Pn	**Pn**	03 44 22.2	**-0.2**
FIN	**Finale Ligure**	**0.90**	**135**	Pn	**Pn**	03 44 21.8	**-0.7**
FIN				S	**Sg**	03 44 33.1	**+0.6**
ORO	**Oropa**	**0.90**	**30**	Pn	**Pn**	03 44 20.3	**-2.3**
	18nm,0.2s						
RORO		**0.91**	**144**	P	**Pg**	03 44 21.5	**+0.4**
RORO				S	**Sg**	03 44 33.3	**+0.5**
PCP	**Pian Castagno**	**0.92**	**109**	Pn	**Pn**	03 44 22.5	**-0.3**
PCP				Sn	**Sn**	03 44 36.4	**+0.3**
	59nm,0.6s						
MRGE	**Morge**	**0.94**	**348**	Pn	**Pn**	03 44 21.7	**-1.4**
	50nm,0.5s						
LUCF	**Luceram**	**0.96**	**179**	Pg	**Pg**	03 44 21.3	**-0.8**
LUCF				Sg	**Sg**	03 44 33.6	**-0.9**
MVIF	**Mont Vial**	**0.96**	**188**	Pg	**Pg**	03 44 21.9	**-0.3**
MVIF				Sg	**Sg**	03 44 36.0	**+1.3**
SBF	**Sospel**	**0.99**	**176**	*e*Pg	**Pg**	03 44 22.0	**-0.7**
	SNR=1.0						
SBF				*e*Sn	**Sn**	03 44 36.5	**-1.3**
	28nm,0.3s,SNR=1.0						
SBF	**Sospel**	**0.99**	**176**	*e*Pg	**Pg**	03 44 22.0	**-0.7**
	SNR=1.0						
SBF				*e*Sn	**Sn**	03 44 36.5	**-1.3**
	14nm,0.3s,SNR=1.0						
IMI	**Imperia**	**1.02**	**157**	Pn	**Pn**	03 44 23.2	**-1.0**
ORIF	**Oris-en-Rattie**	**1.03**	**274**	*e*Pg	**Pg**	03 44 23.0	**-0.6**
ORIF				*e*Sg	**Sg**	03 44 38.8	**+1.8**
	24nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.03**	**274**	*e*Pg	**Pg**	03 44 23.0	**-0.6**
ORIF				*e*Sg	**Sg**	03 44 38.8	**+1.8**
	12nm,0.2s						
NEGI	**Negi**	**1.04**	**165**	P	**Pg**	03 44 22.8	**-0.8**
CALN	**Calern**	**1.14**	**196**	Pg	**Pg**	03 44 26.3	**+0.7**
DIX	**Grande Dixence**	**1.23**	**2**	Pg	**Pg**	03 44 26.2	**-1.1**
EMV	**Vieux Emosson**	**1.25**	**346**	Pn	**Pn**	03 44 27.6	**+0.2**
FRF	**La Foret Royal**	**1.38**	**201**	*e*Pg	**Pg**	03 44 29.9	**-0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	03 44 47.3	**-0.8**
	14nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**1.38**	**201**	*e*Pn	**Pn**	03 44 28.8	**-0.3**
FRF				*e*Pg	**Pg**	03 44 29.9	**-0.3**
FRF				*e*Sg	**Sg**	03 44 47.3	**-0.8**
FRF	**La Foret Royal**	**1.38**	**201**	*e*Pg	**Pg**	03 44 29.9	**-0.3**
	SNR=1.0						
FRF				*e*Sg	**Sg**	03 44 47.3	**-0.8**
	7.0nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.53**	**236**	*e*Pg	**Pg**	03 44 33.4	**+0.3**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	03 44 51.2	**-0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	03 44 53.4	**+0.4**
	10nm,0.3s						
SMRF	**Simiane la Rot**	**1.53**	**236**	*e*Pg	**Pg**	03 44 33.4	**+0.3**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	03 44 51.2	**-0.1**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	03 44 53.4	**+0.4**
	5.2nm,0.3s						
LMR	**La Mourre**	**1.63**	**202**	*e*Pg	**Pg**	03 44 33.3	**-1.6**
	SNR=1.0						
LMR				*e*Sn	**Sn**	03 44 52.2	**-1.4**
	SNR=1.0						
LMR				*e*Sg	**Sg**	03 44 55.3	**-0.7**
	13nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.63**	**202**	*e*Pg	**Pg**	03 44 33.3	**-1.6**
	SNR=1.0						
LMR				*e*Sn	**Sn**	03 44 52.2	**-1.4**
	SNR=1.0						
LMR				*e*Sg	**Sg**	03 44 55.3	**-0.7**
	6.3nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.89**	**271**	*e*Pg	**Pg**	03 44 39.7	**-0.2**
VIVF				*e*Sn	**Sn**	03 44 59.6	**-0.5**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	03 45 05.4	**+0.9**
	7.1nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.89**	**271**	*e*Pn	**Pn**	03 44 36.8	**+0.6**
VIVF				*e*Pg	**Pg**	03 44 39.7	**-0.2**
VIVF				*e*Sn	**Sn**	03 44 59.6	**-0.5**
VIVF				*e*Sg	**Sg**	03 45 05.4	**+0.9**
VIVF	**Saint-Julien-l**	**1.89**	**271**	*e*Pg	**Pg**	03 44 39.7	**-0.2**
VIVF				*e*Sn	**Sn**	03 44 59.6	**-0.5**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	03 45 05.4	**+0.9**
	3.5nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**1.96**	**334**	*e*Pg	**Pg**	03 44 41.9	**+0.6**
CABF				*e*Sg	**Sg**	03 45 06.1	**-0.7**
	14nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**1.96**	**334**	*e*Pn	**Pn**	03 44 38.4	**+1.2**
CABF				*e*Pg	**Pg**	03 44 41.9	**+0.6**
CABF				*e*Sg	**Sg**	03 45 06.1	**-0.7**
CABF	**La Chapelle**	**1.96**	**334**	*e*Pg	**Pg**	03 44 41.9	**+0.6**
CABF				*e*Sg	**Sg**	03 45 06.1	**-0.7**
	6.8nm,0.6s,SNR=1.0						
LASF	**Ste Croix**	**2.61**	**254**	*e*Pg	**Pg**	03 44 53.5	**-0.1**
LASF				*e*Sg	**Sg**	03 45 27.7	**+0.3**
	1.0nm,0.2s						
LASF	**Ste Croix**	**2.61**	**254**	*e*Pn	**Pn**	03 44 46.3	**+0.3**
LASF				*e*Pg	**Pg**	03 44 53.5	**-0.1**
LASF				*e*Sg	**Sg**	03 45 27.7	**+0.3**
	0.5nm,0.2s						
HINF	**Hinteralfeld**	**2.99**	**354**	*e*Pg	**Pg**	03 45 00.1	**-0.8**
HINF				*e*Sg	**Sg**	03 45 39.5	**0.0**
	3.7nm,0.4s						
HINF	**Hinteralfeld**	**2.99**	**354**	*e*Pn	**Pn**	03 44 51.3	**+0.1**
HINF				*e*Pg	**Pg**	03 45 00.1	**-0.8**
HINF				*e*Sg	**Sg**	03 45 39.5	**0.0**
HINF	**Hinteralfeld**	**2.99**	**354**	*e*Pg	**Pg**	03 45 00.1	**-0.8**
HINF				*e*Sg	**Sg**	03 45 39.5	**0.0**
	1.9nm,0.4s						
SMF	**Signal de Mont**	**3.03**	**308**	*e*Pg	**Pg**	03 45 00.7	**-1.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	03 45 28.2	**-0.1**
	8.4nm,0.6s,SNR=1.0						
SMF	**Signal de Mont**	**3.03**	**308**	*e*Pn	**Pn**	03 44 52.6	**+0.8**
SMF				*e*Pg	**Pg**	03 45 00.7	**-1.1**
SMF				*e*Sn	**Sn**	03 45 28.2	**-0.1**
SMF	**Signal de Mont**	**3.03**	**308**	*e*Pg	**Pg**	03 45 00.7	**-1.1**
	SNR=1.0						
SMF				*e*Sn	**Sn**	03 45 28.2	**-0.1**
	4.2nm,0.6s,SNR=1.0						
HAU	**Haudompre**	**3.23**	**348**	*e*Pn	**Pn**	03 44 54.7	**+0.2**
	SNR=1.0						
AVF	**Avril sur Loir**	**3.39**	**306**	*e*Pn	**Pn**	03 44 57.6	**+0.8**
	SNR=1.0						
AVF				*e*Sg	**Sg**	03 45 52.9	**+0.3**
	2.5nm,0.3s						
AVF	**Avril sur Loir**	**3.39**	**306**	*e*Pn	**Pn**	03 44 57.6	**+0.8**
	SNR=1.0						
AVF				*e*Sg	**Sg**	03 45 52.9	**+0.3**
	1.2nm,0.3s						
LOR	**Lormes**	**3.42**	**316**	*e*Pn	**Pn**	03 44 58.8	**+1.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	03 45 37.3	**-0.5**
	1.9nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.42**	**316**	*e*Pn	**Pn**	03 44 58.8	**+1.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	03 45 37.3	**-0.5**
	0.9nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.47**	**311**	*e*Pn	**Pn**	03 44 58.6	**+0.8**
	SNR=1.0						
CDF	**Champ du Feu**	**3.56**	**359**	*e*Pn	**Pn**	03 44 58.6	**-0.5**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.58**	**300**	*e*Pn	**Pn**	03 45 00.0	**+0.7**
	SNR=1.0						
BGF				*e*Sn	**Sn**	03 45 41.1	**-0.6**
	4.3nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.58**	**300**	*e*Pn	**Pn**	03 45 00.0	**+0.7**
	SNR=1.0						
BGF				*e*Sn	**Sn**	03 45 41.1	**-0.6**
	2.2nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**3.71**	**336**	*e*Pn	**Pn**	03 45 01.5	**+0.4**
CAF	**Calviac**	**3.75**	**273**	*e*Pn	**Pn**	03 45 02.6	**+1.0**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.87**	**294**	*e*Pn	**Pn**	03 45 04.7	**+1.3**
	SNR=1.0						
MTLF	**Montolieu**	**3.98**	**250**	*e*Sn	**Sn**	03 45 49.9	**-1.8**
	1.6nm,0.7s,SNR=1.0						
MTLF	**Montolieu**	**3.98**	**250**	*e*Sn	**Sn**	03 45 49.9	**-1.8**
	0.8nm,0.7s,SNR=1.0						
HYF	**Humbligny**	**4.07**	**308**	*e*Pn	**Pn**	03 45 07.7	**+1.7**
RJF	**Les Rejaudoux**	**4.14**	**278**	*e*Pn	**Pn**	03 45 08.6	**+1.5**
	SNR=1.0						
MFF	**Saint Martin d**	**5.52**	**291**	*e*Pn	**Pn**	03 45 26.8	**+0.8**
	SNR=1.0						
GRR	**Gorron**	**6.66**	**305**	*e*Pn	**Pn**	03 45 42.8	**+1.2**
	SNR=1.0						

*CSEM **26** 03:58:31.7,3956N×2054E,h34km,MD3.6/5,After ATH*

*NEIC **26** 03:58:31.7,3956N×2054E,h34km,MD3.6(ATH),After ATH.*

ATH 26 03:58:31.4,3948N×2057E,h25km±2km,MD3.6/5, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.64**	**292**	*e*PN	Pn	03 58 44.1	-0.8
EVR	**Evrytania**	**1.11**	**120**	*e*PN	Pn	03 58 52.2	+0.8
EVR				*e*SN	Sn	03 59 08.7	+2.8
EVR	**Evrytania**	**1.11**	**120**	*e*Pn	Pn	03 58 54.0	+2.6
THL	**Klokotos Trika**	**1.12**	**85**	*e*PN	Pn	03 58 53.0	+1.5
VLS	**Valsamata**	**1.30**	**179**	*e*PN	Pn	03 58 57.2	+3.2
RLS	**Riolos of Patr**	**1.58**	**153**	*e*PN	Pn	03 59 00.1	+2.3
ITM	**Ithomi**	**2.53**	**155**	*e*PN	Pn	03 59 13.3	+2.4

**I

BIA *e*Sn **Sn** **04 15 02.0 +0.1**
BIA **Bitola** 2.78 15 *e*Pn **Pb** **04 14 32.8 0.0**
BIA **Bitola** 2.78 15 *e*Pn **Pb** **04 14 32.7 -0.1**
BIA *e*Sn **Sn** **04 15 01.6 -0.3**
OHR **Ohrid** 2.79 7 *e*Pn **Pn** **04 14 27.2 -0.8**
OHR *i* Sn **Sn** **04 15 01.7 -0.5**
OHR **Ohrid** 2.79 7 *e*Pn **Pn** **04 14 27.1 -0.9**
OHR *i* Sn **Sn** **04 15 01.7 -0.5**
AOS **Alonnisos** 2.89 72 *e*Pn **Pn** **04 14 29.2 0.0**
TIP **Timpagrande** 2.93 288 P **Pn** **04 14 33.3 +3.5**
TIR **Tirane** 3.03 353 P **Pn** **04 14 32.8 +1.6**
GRG **Griva** 3.06 31 *e*Pn **Pn** **04 14 32.5 +0.8**
KRUS **Krusevo** 3.11 13 *e*Pn **Pn** **04 14 34.2 +1.9**
KRUS *i* Sn **Sn** **04 15 08.0 -1.9**
KRUS **Krusevo** 3.11 13 *e*Pn **Pn** **04 14 34.1 +1.8**
KRUS *i* Sn **Sn** **04 15 08.0 -1.9**
PLG **Polygyros** 3.15 49 *e*PN **Pn** **04 14 34.3 +1.4**
VAY **Valandovo** 3.44 29 *e*Pn **Pn** **04 14 39.8 +3.0**
KNT **Kendrikon** 3.44 34 *e*Pn **Pn** **04 14 37.5 +0.6**
OUR **Ouranopolis** 3.46 54 *e*Pn **Pn** **04 14 36.2 -0.9**
BARS **Barje** 4.62 14 Pn **Pn** **04 14 52.5 -0.6**
DIVS **Divcibare** 5.76 357 Pn **Pn** **04 15 07.9 -0.9**
BOJS **Bojanci** 8.10 334 *i* Pn **Pn** **04 15 40.0 -0.8**
BOJS *i* Sn **Sn** **04 17 07.6 -5.3**
BOJS **Bojanci** 8.10 334 *i* Pn **Pn** **04 15 40.0 -0.9**
VISS **Visnje** 8.51 333 *i* Pn **Pn** **04 15 45.9 -0.6**
VISS *i* Sn **Sn** **04 17 17.2 -5.7**
JAVS **Javornik** 8.87 330 *i* Pn **Pn** **04 15 50.6 -0.9**
JAVS *i* Sn **Sn** **04 17 26.7 -5.2**
NB2 **NORSAR Subarra** 23.43 349 P **P** **04 18 50.8 -1.8**
comp=Z,1.5nm,1.1s,mb3.3,baz=162,slow=11

MOS ***26*** *04:21:01.6±0.8, 1392N×144.69E, h121km, mb4.5/8, Error ellipse: s-maj=20.6km s-min=9.6km az=100.4*
ISCJB ***26*** *04:21:02.2±0.5, 1387N±004×14477E±004, h123km±4km, mb4.4/40, Error ellipse: s-maj=6.9km s-min=6.1km az=30.8*
NEIC ***26*** *04:21:03.4±0.8, 1391N×144.85E, h124km±7km, mb4.7/12, Error ellipse: s-maj=11.5km s-min=7.1km az=91.0*
NEIC Felt [III] at Yigo. Also felt at Agana, Barrigada, Santa Rita and Tamuning, Guam. Also felt on Saipan.
IDC ***26*** *04:21:03.2±0.8, 1391N×144.82E, h123km±6km, mb4.1/18, mb1 4.3/20, mb1mx4.2/25, mbtmp4.2/20, MS3.7/6, Ms1 3.7/6, ms1mx3.3/30, Error ellipse: s-maj=19.8km s-min=8.4km az=92.0*
BJI ***26*** *04:21:05.5, 1435N×144.40E, h103km, mB5.0, mb4.7*
ISC 26 04:21:03.2±0.5, 1390N±004×14483E±004, h120km±4km, h120km±2.0km; pP-P, n258, σ0=59/264, mb4.4/40, 83C-89D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.31**	**172**	*e*Pn		**Pn**	**04 21 20.3**	**+0.1**
GUMO				*e*Sn		**Sn**	**04 21 32.0**	**-1.0**
CBIJ	**Chichi jima**	**13.36**	**350**	P		**Pn**	**04 24 08.1**	**-0.1**
	9.1nm,0.3s,baz=285,slow=22,SNR=3.6							
CBIJ				LR		LR	04 28 03.2	
	comp=Z,89nm,18.2s,baz=194,slow=32							
JHJ	**Hachijo jima 2**	**19.68**	**347**	P		**P**	**04 25 20.8**	**-2.2**
	9.7nm,0.3s,baz=81,slow=23,SNR=2.2							
JOW	**Kunigami**	**20.13**	**312**	P		**P**	**04 25 30.6**	**+2.7**
	43nm,0.8s,baz=133,slow=13,SNR=9.8							
JNU	**Nakatsue**	**22.97**	**329**	P		**P**	**04 25 58.4**	**+0.9**
	11nm,0.8s,mb4.3,baz=90,slow=3.0,SNR=7.1							
MJAR	**Matsushiro Arr**	**23.32**	**346**	P		**P**	**04 25 58.7**	**-1.9**
MJAR				*PP			04 26 24.9	
MJAR	**Matsushiro Arr**	**23.32**	**346**	P		**P**	**04 25 58.7**	**-1.8**
	4.8nm,0.5s,mb4.1,baz=228,slow=7.4,SNR=15							
MJAR				pP			04 26 24.9	
	3.9nm,0.8s,baz=174,slow=9.7,SNR=2.5							
MJAR				ScP		ScP	04 33 09.7	-1.8
	0.5nm,0.3s,baz=151,slow=2.8,SNR=4.1							
MJAR				LR		LR	04 34 10.6	
	comp=Z,157nm,19.4s,baz=240,slow=34							
MAJO	**Matsushiro**	**23.32**	**346**	*e*P		**P**	**04 25 59.7**	**-0.9**
	18nm,0.9s,mb4.4							
MAJO	**Matsushiro**	**23.32**	**346**	*e*P		**P**	**04 25 59.7**	**-0.9**
MAJO				pmax		pmax		
	comp=Z,18nm,0.9s,mb4.4							
MAT	**Matsushiro**	**23.32**	**346**	P		**P**	**04 25 59.6**	**-1.0**
MAT				*e*S		**S**	**04 30 05.0**	**+0.9**
HNR	**Honiara**	**27.61**	**146**	LR		LR	04 35 54.1	
	comp=Z,101nm,19.3s,baz=360,slow=32							
KSRS	**Korea Array**	**27.88**	**330**	P		**P**	**04 26 41.6**	**-0.1**
KSRS				*PP		pP	04 27 07.8	0.0
KSRS				pmax		pmax		
	comp=Z,3.0nm,0.7s,mb3.9							
KSRS				pmax		pmax		
	comp=Z,2.0nm,0.7s,mb3.8							
KSRS				MLR		MLR		
	comp=Z,200nm,19.0s							
KSRS	**Korea Array**	**27.88**	**330**	P		**P**	**04 26 41.5**	**-0.2**
	comp=Z,3.1nm,0.7s,mb4.0,baz=147,slow=8.7,SNR=8.3							
KSRS				pP		pP	04 27 07.8	0.0
	comp=Z,2.0nm,0.7s,baz=145,slow=9.6,SNR=1.9							
KSRS				LR		LR	04 36 28.3	
	comp=Z,200nm,19.0s,baz=293,slow=33							
KAKA	**Kakadu**	**29.14**	**205**	⇓*i*P		**P**	**04 26 52.6**	**-0.6**
	comp=Z,11nm,0.6s,mb4.7							
NJ2	**Nanjing**	**29.84**	**312**	*e*P		**P**	**04 26 59.5**	**+0.3**
NJ2				AP		pP	04 27 27.3	+1.9
NJ2				PP		PP	04 28 03.5	-5.4
NJ2				S		**S**	**04 31 46.0**	**-1.4**
NJ2				AMB		AMB		
	comp=Z,20nm,1.0s,mb4.7							
NJ2				AMB		AMB		
	comp=Z,120nm,6.1s							
NJ2				LR		LR		
	comp=N,430nm,15.9s							
NJ2				LR		LR		
	comp=E,360nm,22.0s							
NJ2				LR		LR		
	comp=Z,360nm,22.0s							
MDJ	**Mudanjiang**	**33.26**	**340**	P		**P**	**04 27 30.0**	**+1.0**
MDJ				AMB		AMB		
	comp=Z,4.0nm,0.8s,mb4.3							
MDJ				AMB		AMB		
	comp=Z,43nm,3.5s							
MDJ				LR		LR		
	comp=N,90nm,32.3s							
MDJ				LR		LR		
	comp=E,97nm,30.9s							
MDJ				LR		LR		
	comp=Z,181nm,25.6s							
CTA	**Charters Tower**	**33.80**	**178**	⇓*i*P		**P**	**04 27 34.5**	**+0.6**
	comp=Z,7.7nm,0.4s,mb4.9							
CTA	**Charters Tower**	**33.80**	**178**	⇓*i*P		**P**	**04 27 34.5**	**+0.6**
CTA				pmax		pmax		
	comp=Z,8.0nm,0.4s							
CTA	**Charters Tower**	**33.80**	**178**	P		**P**	**04 27 34.4**	**+0.5**
	comp=Z,8.7nm,0.4s,mb4.9,baz=356,slow=8.4,SNR=13							
CTA				LR		LR	04 39 46.8	
	comp=Z,136nm,18.4s,baz=126,slow=33							
CTAO	**Charters Tower**	**33.80**	**178**	*e*P		**P**	**04 27 34.6**	**+0.7**
QIZ	**Qiongzhong**	**33.90**	**283**	P		**P**	**04 27 34.8**	**-0.1**
	comp=Z,1.7nm,0.3s,mb4.3							
CN2	**Changchun**	**34.12**	**335**	*e*P		**P**	**04 27 38.3**	**+1.9**
CN2				*e*XP		sP	04 28 19.0	+2.3
CN2				*e*S		**S**	**04 32 54.5**	**+0.9**
CN2				AMB		AMB		
	comp=Z,10.0nm,0.5s,mb4.9							
CN2				AMB		AMB		
	comp=Z,200nm,3.0s							
WB2	**Warramunga Arr**	**35.17**	**197**	⇓*i*P		**P**	**04 27 45.5**	**-0.2**
WB2				*e*S		**S**	**04 33 07.9**	**-2.3**
WRA	**Warramunga Arr**	**35.17**	**197**	P		**P**	**04 27 45.6**	**-0.2**
WRA				S		**S**	**04 33 07.5**	**-2.7**
WRA	**Warramunga Arr**	**35.17**	**197**	P		**P**	**04 27 45.6**	**-0.1**
	comp=Z,16nm,0.6s,mb5.0,baz=15,slow=9.1,SNR=122							
WRA				S		**S**	**04 33 07.5**	**-2.8**
	comp=Z,1.3nm,0.9s,baz=18,slow=16,SNR=6.5							
WRA				ScP		ScP	04 33 48.1	-1.2
	comp=Z,3.9nm,1.1s,baz=18,slow=4.1,SNR=10.0							
FITZ	**Fitzroy Crossi**	**37.00**	**211**	*e*P		**P**	**04 28 01.7**	**+0.3**
	comp=Z,4.1nm,0.3s,mb4.8							
FITZ	**Fitzroy Crossi**	**37.00**	**211**	P		**P**	**04 28 01.8**	**+0.5**
	comp=Z,2.4nm,0.3s,mb4.7,baz=35,slow=12,SNR=16							
GYA	**Guiyang**	**37.79**	**295**	P		**P**	**04 28 08.5**	**+0.4**
GYA				AP		pP	04 28 36.3	+1.4
GYA				XP		sP	04 28 50.5	+1.9
GYA				PP		PP	04 29 40.5	+3.7
GYA				PCP		PcP	04 30 23.8	+1.4
GYA				S		**S**	**04 33 49.8**	**-0.4**
GYA				SCP		ScP	04 33 59.0	0.0
GYA				SCS		ScS	04 38 06.5	-1.9
GYA				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
GYA				AMB		AMB		
	comp=Z,70nm,4.6s							
XAN	**Xi'an**	**38.17**	**308**	P		**P**	**04 28 12.5**	**+1.3**
XAN				AMB		AMB		
	comp=Z,4.0nm,0.6s,mb4.4							
ASAR	**Alice Springs**	**38.83**	**196**	P		**P**	**04 28 16.6**	**-0.1**
	comp=Z,4.0nm,0.4s,mb4.6,baz=19,slow=12,SNR=79							
ASAR				pP		pP	04 28 43.0	-0.6
	comp=Z,1.7nm,0.5s,baz=20,slow=13,SNR=2.7							
ASAR				PcP		PcP	04 30 25.0	-0.6
	comp=Z,1.8nm,0.8s,baz=20,slow=4.9,SNR=4.4							
ASAR				ScP		ScP	04 34 01.3	-1.6
	comp=Z,0.9nm,0.7s,baz=13,slow=2.7,SNR=6.0							
HHC	**Hu-ho-hao-te**	**39.51**	**319**	*e*P		**P**	**04 28 18.3**	**-3.9**
HHC				AP		pP	04 28 43.5	-5.7
HHC				XP		sP	04 28 56.3	-6.6
HHC				PP		PP	04 29 54.3	-1.0
HHC				S		**S**	**04 34 12.5**	**-3.2**
HHC				XS		sS	04 34 56.3	-6.2
HHC				SS		SS	04 37 03.5	-12
HHC				AMB		AMB		
	comp=Z,15nm,0.6s,mb5.0							
HHC				AMB		AMB		
	comp=Z,291nm,5.3s							
HIA	**Hailar**	**40.85**	**335**	P		**P**	**04 28 33.1**	**0.0**
	comp=Z,2.4nm,0.4s,mb4.4							
HIA	**Hailar**	**40.85**	**335**	P		**P**	**04 28 33.1**	**0.0**
HIA				pmax		pmax		
	comp=Z,2.0nm,0.4s							
KMI	**Kunming**	**41.05**	**292**	P		**P**	**04 28 35.3**	**+0.1**
KMI				AMB		AMB		
	comp=Z,120nm,3.1s							
CD2	**Chengdu**	**41.30**	**301**	*e*P		**P**	**04 28 37.3**	**+0.2**
CD2				AP		pP	04 29 02.3	-2.0
CD2				XP		sP	04 29 17.3	-0.6
CD2				PP		PP	04 30 17.3	+2.5
CD2				S		**S**	**04 34 41.0**	**-1.5**
CD2				SS		SS	04 37 43.8	-7.0
CD2				AMB		AMB		
	comp=Z,10.0nm,0.8s,mb4.7							
DZM	**Mont Dzumac**	**41.56**	**149**	*e*P		**P**	**04 28 40.7**	**+1.4**
LZH	**Lanzhou**	**42.80**	**309**	⇓P		**P**	**04 28 51.0**	**+1.8**
LZH				AP		pP	04 29 18.8	+2.3
LZH				PP		PP	04 30 33.3	+2.5
LZH				AMB		AMB		
	comp=Z,22nm,1.3s,mb4.7							
LZH				AMB		AMB		
	comp=Z,129nm,6.2s							
LZH				LR		LR		
	comp=N,301nm,14.6s							
LZH				LR		LR		
	comp=Z,395nm,18.4s							
ARMA	**Armidale**	**44.54**	**172**	⇓*i*P		**P**	**04 29 03.7**	**+0.6**
STKA	**Stephens Creek**	**45.61**	**184**	⇓*i*P		**P**	**04 29 11.3**	**-0.3**
	comp=Z,12nm,0.4s,mb5.0							
STKA	**Stephens Creek**	**45.61**	**184**	P		**P**	**04 29 11.6**	**0.0**
	comp=Z,16nm,0.5s,mb5.0,baz=0.3,slow=7.7,SNR=47							
SONM	**Songino Array**	**46.46**	**325**	P		**P**	**04 29 19.0**	**+1.0**
SONM				*PP		pP	04 29 46.0	+0.3
SONM	**Songino Array**	**46.46**	**325**	P		**P**	**04 29 19.0**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.6,baz=137,slow=8.6,SNR=8.2							
SONM				pP		pP	04 29 46.0	+0.3
	comp=Z,1.7nm,0.7s,baz=131,slow=6.5,SNR=4.6							
SONM				ScP		ScP	04 34 31.4	-1.9
	comp=Z,0.9nm,0.7s,baz=146,slow=3.0,SNR=4.6							
GTA	**Gaotai**	**46.94**	**311**	*e*P		**P**	**04 29 24.0**	**+2.0**
GTA				XP		sP	04 30 04.3	+1.1
GTA				AMB		AMB		
	comp=Z,4.0nm,1.1s,mb4.1							
FORT	**Forrest**	**47.25**	**200**	*e*P		**P**	**04 29 24.0**	**-0.4**
	comp=Z,24nm,0.5s,mb5.2							
ZAK	**Zakamensk**	**49.56**	**326**	*e*P		**P**	**04 29 42.1**	**+0.2**
ZAK				*e*		pP	04 30 09.1	-0.8
ZAK				pmax		pmax		
	comp=Z,1.0nm,1.1s,mb3.7							
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.2s,mb4.1							
BOD	**Bodaibo**	**49.62**	**339**	*e*P		**P**	**04 29 40.7**	**-1.5**
BOD				pmax		pmax		
	comp=Z,3.0nm,1.7s,mb4.0							
BILL	**Bilibino**	**55.87**	**10**	*e*P		**P**	**04 30 28.5**	**+0.5**
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s,mb4.1							
WMQ	**Urumqi**	**56.90**	**313**	P		**P**	**04 30 37.0**	**+1.3**
WMQ				AP		pP	04 31 07.0	+2.6
WMQ				XP		sP	04 31 20.0	+2.4
WMQ				PCP		PcP	04 31 31.3	+1.4
WMQ				PP		PP	04 32 46.5	+3.1
WMQ				S		**S**	**04 38 18.5**	**-1.7**
WMQ				AMB		AMB		
	comp=Z,13nm,0.6s,mb5.1							
WMQ				AMB		AMB		
	comp=Z,123nm,4.2s							
WMQ				LR		LR		
	comp=N,15nm,19.3s							
WMQ				LR		LR		
	comp=E,31nm,22.5s							
WMQ				LR		LR		
	comp=Z,41nm,20.9s							
MKAR	**Makanchi Array**	**61.24**	**316**	P		**P**	**04 31 05.7**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.3,baz=91,slow=8.6,SNR=16							
MKAR				pP		pP	04 31 34.0	-0.7
	comp=Z,1.9nm,0.7s,baz=99,slow=7.7,SNR=2.7							
SVW2	**Sparrevohn**	**63.43**	**28**	P		**P**	**04 31 20.3**	**+0.4**
KDAK	**Kodiak Island**	**63.83**	**32**	P		**P**	**04 31 22.4**	**-0.3**
	comp=Z,2.2nm,0.3s,mb4.5,baz=136,slow=20,SNR=13							
KURK	**Kurchatov**	**64.32**	**320**	*e*P		**P**	**04 31 26.1**	**+0.1**
	comp=Z,7.0nm,0.7s,mb4.6							
KURK	**Kurchatov**	**64.32**	**320**	*e*P		**P**	**04 31 26.1**	**+0.1**
KURK				pmax		pmax		
	comp=Z,7.0nm,0.7s,mb4.6							
BRVK	**Borovoye**	**69.73**	**322**	*e*P		**P**	**04 32 05.5**	**+5.4**
AKTK	**Aktyubinsk**	**77.41**	**319**	P		**P**	**04 32 45.4**	**+0.3**
AKTO	**Aktyubinsk**	**77.41**	**319**	P		**P**	**04 32 45.4**	**+0.3**
	comp=Z,0.4nm,0.3s,mb3.6,baz=114,slow=5.4,SNR=1.8							
J02A	**Umpqua**	**81.75**	**47**	⇑P		**P**	**04 33 09.0**	**+0.2**
	baz=82							
H04A	**Detroit Lake**	**82.47**	**46**	⇑P		**P**	**04 33 12.0**	**-0.4**
	baz=82							
I04A	**Tendick Farm,**	**82.49**	**47**	⇓P		**P**	**04 33 12.2**	**-0.4**
	baz=82							
YKA	**Yellowknife Ar**	**82.61**	**27**	P		**P**	**04 33 11.4**	**-1.4**
	comp=Z,1.2nm,0.6s,mb3.9,baz=289,slow=5.2,SNR=18							
M02C	**Callahan**	**82.67**	**49**	⇓P		**P**	**04 33 13.7**	**+0.1**
	baz=83							
YBH	**Yreka Blue Hor**	**82.70**	**49**	*e*P		**P**	**04 33 14.8**	**+1.1**
	comp=Z,6.0nm,0.8s,mb4.5							
YBH	**Yreka Blue Hor**	**82.70**	**49**	*e*P		**P**	**04 33 14.8**	**+1.0**
YBH				pmax		pmax		
	comp=Z,6.0nm,0.8s							
YBH	**Yreka Blue Hor**	**82.70**	**49**	⇑P		**P**	**04 33 14.0**	**+0.2**
	baz=83							
P01C	**Double 8 Ranch**	**82.71**	**51**	⇑P		**P**	**04 33 13.9**	**0.0**
	baz=83							
A07A	**Ashnola River,**	**82.74**	**41**	⇑P		**P**	**04 33 13.8**	**0.0**
	baz=83							
J04A	**Umpqua Nationa**	**82.82**	**47**	⇑P		**P**	**04 33 14.4**	**+0.1**
	baz=83							
G05A	**Wamic**	**82.95**	**45**	⇑P		**P**	**04 33 15.0**	**0.0**
	baz=83							
O02C	**Red Bluff**	**82.97**	**50**	⇓P		**P**	**04 33 15.5**	**+0.3**
	baz=83							
WDC	**Whiskeytown Da**	**83.07**	**50**	⇑P		**P**	**04 33 15.5**	**-0.2**
	baz=83							
H05A	**Madras**	**83.14**	**46**	⇑P		**P**	**04 33 15.9**	**-0.1**
	baz=83							
K04A	**Chilquin**	**83.23**	**48**	⇓P		**P**	**04 33 16.3**	**-0.2**
	baz=83							
M03C	**McCloud**	**83.23**	**49**	⇑P		**P**	**04 33 16.2**	**-0.3**
	baz=83							
M04C	**Macdoel**	**83.33**	**49**	⇓P		**P**	**04 33 17.2**	**+0.2**
	baz=83							
D07A	**Quincy**	**83.43**	**43**	⇓P		**P**	**04 33 17.0**	**-0.4**
	baz=83							
J05A	**Fort Rock**	**83.44**	**47**	⇑P		**P**	**04 33 17.4**	**-0.1**
	baz=83,SNR=8.1							
A08A	**Turner Farm, O**	**83.48**	**41**	⇑P		**P**	**04 33 17.6**	**0.0**
	baz=83							
MNRC	**McLaughlin Nat**	**83.51**	**52**	⇓P		**P**	**04 33 18.3**	**+0.3**
	baz=83							
B08A	**Colville Reser**	**83.58**	**42**	⇑P		**P**	**04 33 17.5**	**-0.6**
	baz=84							
O03C	**Acorn Hollow,**	**83.58**	**51**	⇓P		**P**	**04 33 18.1**	**-0.2**
	baz=84							
CVS	**Carmenet Viney**	**83.61**	**52**	⇑P		**P**	**04 33 18.1**	**-0.4**
	baz=84							
H06A	**Lindquist Farm**	**83.74**	**46**	⇑P		**P**	**04 33 18.4**	**-0.6**
	baz=84							
K05A	**Summer Lake**	**83.81**	**48**	⇓P		**P**	**04 33 19.4**	**0.0**
	baz=84							
A09A	**Danville**	**83.91**	**41**	⇑P		**P**	**04 33 19.7**	**-0.1**
	baz=84							
M05C	**Lookout**	**83.93**	**49**	⇓P		**P**	**04 33 20.1**	**0.0**
	baz=84							
I06A	**Prineville**	**84.01**	**46**	⇑P		**P**	**04 33 20.0**	**-0.4**
	baz=84							
ORV	**Oroville**	**84.08**	**51**	⇑P		**P**	**04 33 20.2**	**-0.6**
	baz=84							
G07A	**Ruggs Ranch, H**	**84.08**	**45**	⇓P		**P**	**04 33 20.1**	**-0.6**
	baz=84							
O04C	**Chester**	**84.21**	**50**	⇑P		**P**	**04 33 21.5**	**0.0**
	baz=84							
J06A	**Christmas Vall**	**84.22**	**47**	⇓P		**P**	**04 33 21.0**	**-0.4**
	baz=84							
K06A	**Valley Falls**	**84.25**	**47**	⇑P		**P**	**04 33 21.5**	**-0.2**
	baz=84							
WENL	**Wente Brothers**	**84.31**	**53**	⇓P		**P**	**04 33 22.2**	**+0.1**
	baz=84							
B09A	**Rice**	**84.33**	**42**	⇓P		**P**	**04 33 21.6**	**-0.3**
	baz=84							
MOD	**Modoc**	**84.42**	**48**	⇑P		**P**	**04 33 22.2**	**-0.4**
	baz=84							
M06C	**Likely Place G**	**84.46**	**49**	⇓P		**P**	**04 33 23.0**	**+0.2**
	baz=84							
F08A	**Pendleton**	**84.56**	**44**	⇑P		**P**	**04 33 23.2**	**+0.1**
	baz=84							
G08A	**Pilot Rock**	**84.56**	**45**	⇓P		**P**	**04 33 23.1**	**0.0**
	baz=84							
S04C	**Ingram Canyon,**	**84.67**	**53**	⇓P		**P**	**04 33 24.0**	**+0.1**
	baz=85							
HAST	**UC Hastings Re**	**84.75**	**54**	⇓P		**P**	**04 33 24.1**	**-0.3**
	baz=85							
J07A	**Hines**	**84.78**	**47**	⇑P		**P**	**04 33 24.3**	**0.0**
	baz=85,SNR=5.5							
R04C	**Big Horse Ranc**	**84.80**	**52**	⇑P		**P**	**04 33 24.6**	**+0.1**
	baz=85							
P05C	**Yuba Gap, Truc**	**84.81**	**51**	⇓P		**P**	**04 33 24.5**	**0.0**
	baz=85							
PACP	**Pacheco Peak**	**84.82**	**53**	⇑P		**P**	**04 33 24.8**	**+0.1**
	baz=85							
LAVA	**Lava Cap Winer**	**84.83**	**52**	⇓P		**P**	**04 33 24.7**	**0.0**
	baz=85,SNR=7.3							
BEKR	**Beckwourth**	**84.86**	**50**	P		**P**	**04 33 24.8**	**0.0**
	baz=85,SNR=16							
H08A	**Prairie City**	**84.95**	**46**	⇓P		**P**	**04 33 24.9**	**-0.3**
	baz=85							
K07A	**Rock Creek Ran**	**84.99**	**47**	P		**P**	**04 33 25.5**	**+0.1**
	baz=85,SNR=6.1							
N06A	**Buffalo Meadow**	**85.04**	**49**	⇑P		**P**	**04 33 25.4**	**-0.2**
	baz=85,SNR=7.8							
L07A	**Adell**	**85.09**	**48**	⇓P		**P**	**04 33 25.8**	**-0.1**
	baz=85,SNR=8.3							
O06A	**Flanigan**	**85.19**	**50**	P		**P**	**04 33 26.6**	**+0.2**
	baz=85,SNR=8.1							
CMB	**Columbia Colle**	**85.27**	**52**	*e*P		**P**	**04 33 26.2**	**-0.7**
	comp=Z,4.1nm,1.1s,mb4.3							
CMB	**Columbia Colle**	**85.27**	**52**	*e*P		**P**	**04 33 26.2**	**-0.7**
CMB					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3							
CMB	**Columbia Colle**	**85.27**	**52**	⇓P		**P**	**04 33 26.8**	**-0.1**
	baz=85							
R05C	**Kirkwood Meado**	**85.35**	**51**	⇑P		**P**	**04 33 27.2**	**-0.1**
	baz=85							
U04C	**Hernandez Rese**	**85.36**	**54**	⇑P		**P**	**04 33 27.4**	**0.0**
	baz=85							
M07A	**Soldier Meadow**	**85.37**	**49**	⇓P		**P**	**04 33 27.4**	**+0.2**
	baz=85,SNR=5.4							
J08A	**Circle Bar Ran**	**85.38**	**47**	⇑P		**P**	**04 33 27.2**	**-0.1**
	baz=85							
B11A	**Sandpoint**	**85.47**	**41**	⇑P		**P**	**04 33 27.8**	**+0.1**
	baz=85							
E10A	**Myers Farm, Un**	**85.51**	**43**	⇑P		**P**	**04 33 27.5**	**-0.3**
	baz=85							
K08A	**Mann Creek Ran**	**85.53**	**47**	⇓P		**P**	**04 33 28.2**	**+0.2**
	baz=85							
F10A	**Beach Ranch, E**	**85.56**	**44**	⇑P		**P**	**04 33 28.3**	**+0.1**
	baz=85							
PKD	**Parkfield**	**85.65**	**54**	⇑P		**P**	**04 33 28.8**	**0.0**
	baz=86							
N07B	**Gerlach**	**85.67**	**49**	P		**P**	**04 33 29.2**	**+0.4**
	baz=86,SNR=11							
L08A	**Fields**	**85.77**	**48**	⇓P		**P**	**04 33 29.0**	**-0.2**
	baz=86,SNR=5.4							
BMO	**Blue Mountains**	**85.81**	**45**	*e*P		**P**	**04 33 29.0**	**-0.3**
G10A	**Bishop Farm, J**	**85.81**	**44**	⇓P		**P**	**04 33 28.9**	**-0.5**
	baz=86							
R06C	**Coleville**	**85.87**	**51**	⇓P		**P**	**04 33 29.9**	**0.0**
	baz=86							
J09A	**Fry Pan Ranch,**	**85.89**	**46**	⇓P		**P**	**04 33 29.9**	**+0.1**
	baz=86							
U05C	**Westside ANR,**	**85.89**	**54**	⇑P		**P**	**04 33 30.4**	**+0.4**
	baz=86							
EDM	**Edmonton**	**85.93**	**36**	*e*P		**P**	**04 33 28.9**	**-0.8**
M08A	**Happy Creek Ra**	**85.93**	**48**	⇓P		**P**	**04 33 29.8**	**-0.2**
	baz=86							
T06C	**Millerton Lake**	**86.05**	**53**	P		**P**	**04 33 30.6**	**-0.2**
	baz=86,SNR=6.1							
K09A	**Rome**	**86

M10A	**I.L. Ranch, Tu** baz=87	**87.24**	**48**	⇓P		**P**	**04 33 36.3**	**-0.2**
K11A	**Parker Ranch,** baz=87	**87.26**	**47**	⇑P		**P**	**04 33 36.6**	**+0.1**
F13A	**Darby** baz=87	**87.56**	**43**	⇓P		**P**	**04 33 37.8**	**0.0**
H12A	**Diamond D Ranc** baz=87	**87.57**	**45**	⇑P		**P**	**04 33 37.8**	**-0.2**
R09A	**Tonopah** baz=88,SNR=7.4	**87.75**	**51**	⇑P		**P**	**04 33 39.2**	**+0.2**
S09A	**Goldfield** baz=88,SNR=9.0	**87.77**	**52**	P		**P**	**04 33 39.5**	**+0.5**
J12A	**Stokes Ranch,** baz=88	**87.78**	**46**	⇓P		**P**	**04 33 38.9**	**-0.1**
M11A	**Holland Ranch,** baz=88	**87.81**	**48**	⇑P		**P**	**04 33 39.8**	**+0.6**
P10A	**Eureka** baz=88	**87.83**	**50**	⇓P		**P**	**04 33 39.1**	**-0.1**
G13A	**Cobalt** baz=88,SNR=8.0	**87.83**	**44**	P		**P**	**04 33 38.7**	**-0.5**
EDW2	**Edwards Air Fo** baz=88	**87.94**	**55**	⇓P		**P**	**04 33 39.7**	**-0.2**
H13A	**Challis** baz=88	**87.97**	**45**	⇓P		**P**	**04 33 40.0**	**+0.1**
CIS	**Catalina Islan** baz=88	**88.00**	**56**	⇑P		**P**	**04 33 39.2**	**-1.1**
JOF	**Joensuu**	**88.00**	**335**	*ep*		**P**	**04 33 37.6**	**-2.0**
LRMC	**Laurel Mountai** baz=88	**88.02**	**54**	⇑P		**P**	**04 33 40.4**	**+0.1**
MPMC	**Manual Prospec** baz=88,SNR=8.4	**88.02**	**53**	⇓P		**P**	**04 33 40.0**	**-0.2**
Q10A	**Clear Creek Ra** baz=88	**88.09**	**51**	⇓P		**P**	**04 33 40.6**	**0.0**
K12A	**Draper Farm, C** baz=88	**88.09**	**47**	⇓P		**P**	**04 33 40.5**	**0.0**
L12A	**House Creek Ra** baz=88	**88.16**	**47**	⇑P		**P**	**04 33 41.0**	**+0.2**
HLID	**Hailey**	**88.16**	**46**	*eP*		**P**	**04 33 40.8**	**+0.1**
HLID	**Hailey** baz=88,SNR=6.7	**88.16**	**46**	P		**P**	**04 33 41.0**	**+0.2**
S10A	**Tonopah Range,** baz=88	**88.20**	**51**	⇓P		**P**	**04 33 41.4**	**+0.3**
I13A	**Wildhorse Cree** baz=88	**88.26**	**45**	⇑P		**P**	**04 33 41.4**	**+0.1**
O11A	**Cowboy Ranch,** baz=88	**88.28**	**49**	⇓P		**P**	**04 33 41.3**	**-0.1**
G14A	**Jackson** baz=88	**88.31**	**44**	⇑P		**P**	**04 33 41.6**	**+0.2**
R10A	**Warm Springs** baz=88	**88.32**	**51**	⇓P		**P**	**04 33 42.0**	**+0.4**
P11A	**Circle Ranch,** baz=88	**88.37**	**50**	⇑P		**P**	**04 33 42.2**	**+0.3**
J13A	**Cove Ranch, Pi** baz=88	**88.38**	**46**	⇓P		**P**	**04 33 42.0**	**+0.2**
FURC	**Furnace Creek,** baz=88	**88.39**	**53**	⇑P		**P**	**04 33 42.0**	**0.0**
M12A	**Wells** baz=88	**88.44**	**48**	⇓P		**P**	**04 33 42.3**	**+0.2**
E15A	**Deer Lodge** baz=88	**88.48**	**42**	⇓P		**P**	**04 33 42.3**	**0.0**
N12A	**Clover Valley,** baz=88	**88.52**	**48**	⇓P		**P**	**04 33 42.6**	**+0.1**
Q11A	**Duckwater** baz=88	**88.65**	**50**	⇑P		**P**	**04 33 43.0**	**-0.2**
K13A	**Stover Farm, H** baz=88	**88.67**	**46**	⇓P		**P**	**04 33 43.7**	**+0.5**
TPNV	**Topopah Spring** comp=Z,5.4nm,0.6s,mb4.8	**88.73**	**52**	*eP*		**P**	**04 33 44.1**	**+0.5**
TPNV	**Topopah Spring** comp=Z,5.0nm,0.6s,mb4.7	**88.73**	**52**	*eP*	pmax	**P** pmax	**04 33 44.1**	**+0.5**
TPNV	**Topopah Spring** baz=89	**88.73**	**52**	⇓P		**P**	**04 33 44.0**	**+0.3**
GSC	**Goldstone** baz=89	**88.76**	**54**	⇓P		**P**	**04 33 44.1**	**+0.3**
F15A	**Butte** baz=89	**88.76**	**43**	⇑P		**P**	**04 33 43.9**	**+0.3**
U10A	**Ash Meadows, A** baz=89	**88.82**	**53**	⇑P		**P**	**04 33 44.4**	**+0.3**
R11A	**Troy Canyon, C** baz=89	**88.84**	**51**	⇓P		**P**	**04 33 44.4**	**+0.3**
O12A	**Currie** baz=89	**88.91**	**49**	⇓P		**P**	**04 33 44.6**	**+0.2**
MURC	**Murrieta** baz=89	**88.91**	**56**	⇓P		**P**	**04 33 44.5**	**0.0**
S11A	**Rachel** baz=89	**88.92**	**52**	⇑P		**P**	**04 33 44.8**	**+0.3**
G15A	**Dillon** baz=89	**88.98**	**44**	⇓P		**P**	**04 33 44.6**	**0.0**
M13A	**Montello** baz=89,SNR=5.9	**89.00**	**48**	P		**P**	**04 33 45.1**	**+0.4**
109C	**Camp Elliot, M** baz=89	**89.18**	**56**	⇓P		**P**	**04 33 45.8**	**-0.1**
HEC	**Hector,Ludlow** baz=89	**89.27**	**54**	⇑P		**P**	**04 33 46.2**	**0.0**
BOZ	**Bozeman (W)** baz=89	**89.40**	**43**	⇑P		**P**	**04 33 46.9**	**+0.3**
T11A	**Corn Creek, Al** baz=89	**89.44**	**52**	⇓P		**P**	**04 33 47.0**	**+0.1**
PFO	**Pinyon Flat Ob**	**89.51**	**56**	*eP*		**P**	**04 33 46.9**	**-0.4**
PFO	**Pinyon Flat Ob** baz=89	**89.51**	**56**	⇓P		**P**	**04 33 46.8**	**-0.5**
M14A	**Sheep Mountain** baz=89	**89.54**	**47**	⇑P		**P**	**04 33 47.4**	**+0.1**
R12A	**Pony Springs,** baz=90	**89.58**	**51**	⇓P		**P**	**04 33 47.7**	**+0.1**
S12A	**Delamar Landin** baz=90	**89.61**	**51**	⇑P		**P**	**04 33 48.1**	**+0.4**
V11A	**Goodsprings** baz=90	**89.68**	**53**	⇑P		**P**	**04 33 48.3**	**+0.2**
P13A	**Bates Ranch, G** baz=90	**89.68**	**49**	⇑P		**P**	**04 33 48.5**	**+0.5**
MONP	**Monument Peak** baz=90,SNR=5.3	**89.74**	**56**	⇑P		**P**	**04 33 48.6**	**+0.1**
BELC	**Belle Mtn.** baz=90,SNR=5.4	**89.76**	**55**	⇑P		**P**	**04 33 48.4**	**-0.1**
GMRC	**Granite Mounta** baz=90,SNR=5.9	**89.81**	**54**	⇑P		**P**	**04 33 48.8**	**+0.1**
V12A	**Nelson** baz=90,SNR=5.6	**90.17**	**53**	⇑P		**P**	**04 33 50.4**	**+0.1**
M15A	**Larsen Ranch,** baz=90	**90.19**	**47**	⇓P		**P**	**04 33 50.4**	**0.0**
SWSC	**Sam W. Stewart** baz=90	**90.23**	**56**	⇓P		**P**	**04 33 50.8**	**+0.1**
W12A	**Cal Nev Ari** baz=90	**90.28**	**54**	⇓P		**P**	**04 33 51.2**	**+0.3**
BC3	**Big Chuckw Mtn** baz=90	**90.30**	**55**	⇑P		**P**	**04 33 51.2**	**+0.2**
N15A	**Stansbury Isla** baz=90	**90.33**	**48**	⇓P		**P**	**04 33 51.2**	**+0.2**
DUG	**Dugway**	**90.34**	**48**	*eP*		**P**	**04 33 51.9**	**+0.8**
DUG	**Dugway** baz=90	**90.34**	**48**	⇑P		**P**	**04 33 51.0**	**0.0**
S13A	**Holt Ranch, En** baz=90	**90.37**	**51**	⇑P		**P**	**04 33 51.3**	**0.0**
IRM	**Iron Mountain** baz=90	**90.39**	**55**	⇑P		**P**	**04 33 51.7**	**+0.2**
U13A	**Pakoon Wash** baz=90	**90.64**	**52**	⇓P		**P**	**04 33 53.2**	**+0.6**
FINES	**FINESS Array B** comp=Z,1.0nm,0.7s,mb4.1,baz=90,slow=3.8,SNR=5.0	**90.87**	**335**	P		**P**	**04 33 50.7**	**-2.3**
GLA	**Glamis** baz=91	**90.97**	**56**	⇓P		**P**	**04 33 54.3**	**+0.1**
Y12C	**Blythe** baz=91	**91.01**	**55**	⇓P		**P**	**04 33 54.6**	**+0.3**
W13A	**Hualapai Mount** baz=91	**91.11**	**54**	⇑P		**P**	**04 33 54.8**	**+0.1**
PDMCI	**Parker Dam,Lak** baz=91	**91.15**	**54**	⇓P		**P**	**04 33 55.1**	**+0.2**
U14A	**Mt Trumbull** baz=91	**91.25**	**52**	⇑P		**P**	**04 33 55.6**	**+0.2**
X13A	**Yucca** baz=91	**91.30**	**54**	⇑P		**P**	**04 33 55.8**	**+0.1**
Y13A	**Salome** baz=91	**91.54**	**55**	⇑P		**P**	**04 33 57.1**	**+0.3**
W14A	**Seligman** baz=92	**91.70**	**53**	⇑P		**P**	**04 33 57.8**	**+0.4**
VNDA	**Vanda** comp=Z,3.2nm,0.9s,mb4.6,baz=332,slow=5.7,SNR=11	**91.77**	**176**	P		**P**	**04 33 57.1**	**+0.3**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.6s,mb4.0,baz=130,slow=0.9,SNR=6.6	**91.78**	**45**	P		**P**	**04 33 56.4**	**-1.3**
X14A	**Yava** baz=92	**92.08**	**54**	⇓P		**P**	**04 33 59.6**	**+0.3**
Y14A	**Wickenburg** baz=92,SNR=5.0	**92.16**	**54**	⇑P		**P**	**04 33 60.0**	**+0.3**
SRU	**San Rafael**	**92.36**	**49**	*eP*		**P**	**04 34 00.4**	**0.0**
X15A	**Humboldt** baz=92	**92.59**	**54**	⇑P		**P**	**04 34 02.3**	**+0.7**
WUAZ	**Wupatki** baz=93	**92.92**	**52**	⇑P		**P**	**04 34 03.9**	**+0.8**
115A	**Sonoran Desert** baz=93	**93.16**	**55**	⇑P		**P**	**04 34 04.8**	**+0.5**
216A	**Three Points,** baz=94	**94.00**	**56**	⇑P		**P**	**04 34 08.7**	**+0.5**
217A	**Green Valley** baz=94	**94.59**	**56**	⇓P		**P**	**04 34 11.4**	**+0.5**
318A	**Bisbee** baz=95	**95.37**	**56**	⇓P		**P**	**04 34 14.8**	**+0.4**
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.6s,baz=29,slow=1.1,SNR=21	**134.66**	**305**	PKP	PKPdf		04 40 07.0	-1.6
PLCA	**Paso Flores** comp=Z,1.3nm,0.9s,baz=302,slow=17,SNR=3.1	**139.19**	**138**	PKhKP			04 40 08.6	
PLCA	comp=Z,1.6nm,0.6s,baz=246,slow=5.7,SNR=5.4			PKP	PKPdf		04 40 16.9	+0.7
DBIC	**Dimbokro** comp=Z,4.1nm,0.6s,baz=312,slow=0.8,SNR=7.3	**143.63**	**302**	PKhKP			04 40 22.1	
DBIC	comp=Z,4.1nm,0.6s,baz=48,slow=3.3,SNR=8.4			PKP	PKPdf		04 40 26.4	+1.3
LPAZ	**La Paz** comp=Z,2.0nm,0.8s,baz=238,slow=2.1,SNR=7.6	**148.11**	**99**	PKPbc	PKPbc		04 40 37.4	+1.6

*ISCJB **26** 04:29:51.4±1.3,2648N±0.10×12637E±0.05,h13km±8km, mb3.5/5,Error ellipse: s-maj=16.2km s-min=6.9km az=8.1*
*IDC **26** 04:29:51.1±1.1,2659N×12645E,h0km,mb3.7/5, mb1 3.8/5,mb1mx3.6/20,mbtmp3.7/5,MS3.5/1,Ms1 3.5/1, ms1mx2.8/31,Error ellipse: s-maj=29.7km s-min=19.5km az=24.0*
*JMA **26** 04:29:52.5,2648N×12641E,h18km±1km,M3.0*
*NEIC **26** 04:29:56.1±0.8,2662N×12652E,h35km,MG3.0(JMA), Error ellipse: s-maj=23.3km s-min=13.9km az=208.0*

ISC 26 04:29:52.9±1.2,2649N±0.08×12644E±0.05,h14km±6km, n13,σ0§59/19,mb3.5/5,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.35**	**117**	P	**Pg**	**04 30 00.0**	**0.0**
JKE				*eS*	**Sg**	**04 30 05.3**	**+0.5**
JAGN	**Aguni-jima**	**0.73**	**82**	P	**Pg**	**04 30 06.7**	**-0.4**
JAGN				*eS*	**Sg**	**04 30 16.9**	**+0.2**
NAH1	**Naha**	**1.16**	**104**	*eS*	**Sb**	**04 30 29.0**	**-0.6**
JJT2	**Tamagusuku 2**	**1.23**	**106**	P	**Pn**	**04 30 15.0**	**-0.6**
JJT2				*eS*	**Sb**	**04 30 30.9**	**-0.7**
JIH	**Iheya**	**1.47**	**68**	P	**Pn**	**04 30 19.0**	**0.0**
JIH				*eS*	**Sn**	**04 30 38.4**	**+0.3**
JOW	**Kunigami**	**1.68**	**78**	P	**Pn**	**04 30 21.7**	**-0.2**
JOW				*eS*	**Sn**	**04 30 43.4**	**+0.2**
JOW	**Kunigami** 20nm,0.3s,baz=246,slow=12,SNR=49	**1.68**	**78**	Pn	**Pn**	**04 30 21.6**	**-0.2**
JOW	18nm,0.3s,baz=143,slow=27,SNR=7.4			Sn	**Sn**	**04 30 45.2**	**+2.0**
SONM	**Songino Array** 0.9nm,0.9s,mb3.3,baz=133,slow=10,SNR=4.6	**26.48**	**329**	P	**P**	**04 35 30.0**	**+0.3**
MKAR	**Makanchi Array** 0.5nm,0.7s,mb3.3,baz=99,slow=9.3,SNR=3.0	**40.17**	**312**	P	**P**	**04 37 28.5**	**-0.1**
ZALV	**Zalesovo Beam**	**41.08**	**323**	P	**P**	**04 37 35.3**	**-0.6**
ZALV				LR	LR	04 56 25.7	
ZALV	**Zalesovo Beam** 1.4nm,0.3s,mb4.0,baz=128,slow=9.3,SNR=2.7	**41.08**	**323**	P	**P**	**04 37 35.3**	**-0.6**
ZALV	comp=Z,59nm,20.0s,baz=131,slow=39			LR	LR	04 56 25.7	
WRA	**Warramunga Arr** 0.4nm,1.0s,mb3.3,baz=350,slow=8.5,SNR=3.4	**46.78**	**170**	P	**P**	**04 38 23.3**	**+1.2**
YKA	**Yellowknife Ar** 0.8nm,0.9s,mb3.6,baz=303,slow=5.4,SNR=9.7	**78.97**	**24**	P	**P**	**04 41 55.7**	**-0.2**

IDC 26 04:35:12.7±39.0,1978S×17089E,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.8/13,mbtmp3.9/4,MS4.7/1,Ms1 4.7/1, ms1mx3.1/23,Error ellipse: s-maj=682.5km s-min=112.6km az=79.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.75**	**240**	*eP*	Pn	04 36 15.3	-10
DZM				*eS*	Sn	04 36 48.8	-32
STKA	**Stephens Creek** 1.4nm,0.6s,baz=95,slow=8.3,SNR=4.7	**28.90**	**239**	P	P	04 41 12.7	-0.8
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=91,slow=8.5,SNR=25	**34.34**	**263**	P	P	04 42 01.0	-0.4
ASAR	**Alice Springs** 0.9nm,0.6s,baz=86,slow=9.2,SNR=9.5	**34.52**	**257**	P	P	04 42 02.6	-0.3
FITZ	**Fitzroy Crossi** 1.7nm,1.0s,baz=129,slow=16,SNR=3.6	**42.74**	**264**	P	P	04 43 13.7	+1.7
CBIJ	**Chichi jima** comp=Z,799nm,21.5s,baz=13,slow=31	**54.27**	**328**	LR	LR	05 03 10.3	

*ISCJB **26** 04:43:30.8±0.9,3908N±0.003×4046E±0.005,h7km±6km, Error ellipse: s-maj=7.1km s-min=4.8km az=28.6*
*CSEM **26** 04:43:30.0±0.1,3908N×4043E,h8km,MD3.0,Error ellipse: s-maj=2.1km s-min=1.8km az=100.0*
*DDA **26** 04:43:30.6,3901N×4052E,h7km±7km,Md3.2*
*ISK **26** 04:43:30.1,3907N×4043E,h8km,MD3.0*

ISC 26 04:43:30.9±0.8,3909N±0.003×4045E±0.005,h8km±5km,n13, σ0§64/21,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BINT	**Bingol**	**0.21**	**171**	*i* PG	**Pg**	**04 43 35.1**	**-0.1**
BINT				*i* SG	**Sg**	**04 43 37.3**	**-0.8**
EZC	**Erzincan**	**0.82**	**324**	PG	**Pg**	**04 43 50.9**	**+4.3**
EZM	**Erzurum**	**1.08**	**41**	*e*PN	**Pn**	**04 43 51.6**	**-0.7**
EZM				*e*SN	**Sn**	**04 44 07.0**	**-0.5**
ERZM	**Erzurum**	**1.08**	**41**	*i* P	**Pg**	**04 43 51.8**	**+0.2**
ERZM				*i* S	**Sg**	**04 44 05.7**	**0.0**
DIYA	**Diyarbakir**	**1.19**	**193**	*i* P	**Pb**	**04 43 53.9**	**+0.3**
DIYA				*i* S	**Sg**	**04 44 09.9**	**+0.7**
BTMT	**Batman**	**1.21**	**137**	*e*PN	**Pn**	**04 43 53.6**	**-0.5**
BTMT				*e*SN	**Sn**	**04 44 09.9**	**-0.7**
ELZG	**Elazig**	**1.29**	**243**	*i* P	**Pn**	**04 43 54.4**	**-0.7**
ELZG				*i* S	**Sb**	**04 44 11.8**	**-0.2**
GUMT	**Gumushane**	**1.56**	**332**	*e*PN	**Pn**	**04 43 59.4**	**+0.5**
MYA	**Malataya**	**1.75**	**245**	*e*PN	**Pn**	**04 44 01.4**	**-0.2**
MALT	**Malatya**	**1.76**	**245**	*e*PN	**Pn**	**04 44 01.7**	**+0.1**
MARD	**Mardin**	**1.79**	**171**	*i* P	**Pn**	**04 44 02.6**	**+0.6**
MARD				*i* S	**Sn**	**04 44 25.6**	**+0.7**
TUTA	**Tutak**	**1.86**	**80**	*e*P	**Pn**	**04 44 04.8**	**+1.7**
TUTA				*i* S	**Sn**	**04 44 31.5**	**+4.7**
URFA	**Urfa**	**2.08**	**218**	*e*PN	**Pn**	**04 44 05.6**	**-0.5**

JMA 26 04:47:28.8±0.2,3724N×13662E,h0km±2km,M1.3,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**158**	P	Pg	04 47 35.8	+0.5
JJH				*e*S	Sg	04 47 41.1	+1.4

*NIED **26** 04:47:00,3730N×13670E,h5km,Mw4.1 Best double couple: M0 1.55000×10^15 NP1:φ=12.00000°,δ41.00000°, λ104.00000°. NP2:φ=174.00000°,δ50.00000°,λ78.00000°.*
*IDC **26** 04:47:39.9±0.6,3726N×13665E,h0km,mb4.0/11, mb1 4.1/14,mb1mx4.1/21,mbtmp3.9/14,ML3.5/3,MS3.3/5, Ms1 3.3/5,ms1mx3.1/28,Error ellipse: s-maj=16.5km s-min=11.3km az=35.0*
*JMA **26** 04:47:40.9,3727N×13666E,h4km±1km,M4.4*
JMA Felt III J1.
*ISCJB **26** 04:47:40.0±0.8,3729N±0.003×13662E±0.004,h8km±5km, mb4.2/19,MS3.5/2,Error ellipse: s-maj=5.4km s-min=4.5km az=160.2*
*NEIC **26** 04:47:41.4±0.5,3711N×13659E,h10km,mb4.5/7, MW4.1(NIED),Error ellipse: s-maj=11.3km s-min=10.8km az=56.0*
*MOS **26** 04:47:42.1±0.9,3710N×13645E,h33km,mb4.5/7,Error ellipse: s-maj=14.6km s-min=9.0km az=94.0*

ISC 26 04:47:41.4±0.7,3726N±0.003×13668E±0.004,h6km±4km,n55, σ1§14/62,mb4.2/19,MS3.5/2,3C-2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**166**	⇑P	**Pg**	**04 47 48.2**	**+0.1**
JJH				S	**Sg**	**04 47 53.8**	**+1.2**
JSZ	**Suzu**	**0.58**	**71**	⇓P	**Pg**	**04 47 52.2**	**-0.4**
JSZ				*e*S	**Sg**	**04 48 00.6**	**+0.5**
JHG	**Hegura jima**	**0.62**	**18**	⇓P	**Pg**	**04 47 53.1**	**-0.2**
JTT	**Ttatey**	**0.84**	**141**	⇑P	**Pg**	**04 47 57.4**	**-0.1**
JTT				S	**Sg**	**04 48 09.4**	**+1.0**
JKG	**Kaga**	**1.02**	**196**	⇑P	**Pg**	**04 48 00.5**	**-0.5**
JKG				S	**Sg**	**04 48 14.4**	**+0.2**
MAJO	**Matsushiro**	**1.42**	**120**	*e*Pn	**Pn**	**04 48 06.0**	**-1.7**
MAJO				*e*Sn	**Sn**	**04 48 28.3**	**+1.6**
MAT	**Matsushiro**	**1.42**	**120**	P	**Pn**	**04 48 06.2**	**-1.5**
MAT				S	**Sb**	**04 48 26.0**	**-0.6**
MJAR	**Matsushiro Arr** 98nm,0.3s,baz=300,slow=14,SNR=183	**1.42**	**120**	Pg	**Pg**	**04 48 07.4**	**-1.2**
MJAR				Lg		04 48 26.9	
JNU	**Nakatsue** 1.2nm,0.3s,baz=41,slow=18,SNR=6.4	**6.29**	**231**	Pn	**Pn**	**04 49 15.4**	**+0.8**
JNU	comp=Z,64nm,19.6s,baz=30,slow=30			LR	LR	04 50 46.8	
ERM	**Erimo** 26nm,0.8s	**6.90**	**44**	Pn	**Pn**	**04 49 28.8**	**+5.9**
ERM	**Erimo** comp=Z,26nm,0.8s	**6.90**	**44**	P	**Pn**	**04 49 28.8**	**+5.9**
ERM				pmax	pmax		
KSRS	**Korea Array** comp=Z,0.5nm,0.3s,baz=84,slow=14,SNR=3.5	**6.97**	**274**	Pn	**Pn**	**04 49 24.3**	**+0.3**
KSRS				Sn	**Sn**	**04 50 45.0**	**+1.3**
KSRS	comp=Z,1.1nm,0.3s,baz=88,slow=23,SNR=4.9			LR	LR	04 51 54.2	
ASAJ	**Asahikawa** comp=Z,364nm,19.6s,baz=259,slow=36	**8.19**	**31**	P	**Pn**	**04 49 39.7**	**-1.0**
ASAJ	comp=Z,1.0nm,0.3s			pmax	pmax		
ASAJ	comp=Z,103nm,18.9s			MLR	MLR		
ASAJ	**Asahikawa** comp=Z,0.7nm,0.3s,baz=237,slow=17,SNR=2.7	**8.19**	**31**	Pn	**Pn**	**04 49 39.7**	**-1.0**
ASAJ	comp=Z,103nm,18.9s,baz=75,slow=36			LR	LR	04 52 36.4	
YSS	**Yuzh-Sakhalins** comp=Z,14nm,0.4s	**10.68**	**23**	*e*Pn	**Pn**	**04 50 18.4**	**+3.6**
YSS	**Yuzh-Sakhalins** comp=Z,14nm,0.4s	**10.68**	**23**	*e*P	**Pn**	**04 50 18.4**	**+3.6**
YSS				pmax	pmax		
KLR	**Kul'dur**	**12.49**	**345**	*e*P	**Pn**	**04 50 41.9**	**+2.4**
MA2	**Magadan** comp=Z,5.2nm,0.4s,mb4.3	**24.11**	**18**	*e*P	**P**	**04 52 57.4**	**-0.1**
MA2	**Magadan** comp=Z,5.0nm,0.4s,mb4.3	**24.11**	**18**	*e*P	**P**	**04 52 57.4**	**-0.1**
MA2				pmax	pmax		
SONM	**Songino Array** comp=Z,1.9nm,0.9s,mb3.6,baz=109,slow=9.5,SNR=11	**24.54**	**305**	P	**P**	**04 53 02.1**	**+0.6**
SONM				LR	LR	05 03 00.9	
GUMO	**Guam** comp=Z,214nm,1.1s	**24.68**	**161**	*e*P	**P**	**04 52 59.9**	**-3.1**
GUMO	**Guam** comp=Z,214nm,1.1s	**24.68**	**161**	*e*P	**P**	**04 52 59.9**	**-3.2**
GUMO				pmax	pmax		
ZAK	**Zakamensk** comp=Z,2.0nm,1.4s,mb3.5	**27.18**	**310**	*e*P	**P**	**04 53 24.1**	**-1.3**
ZAK				pmax	pmax		
TIXI	**Tiksi** comp=Z,4.8nm,0.8s,mb4.5	**34.70**	**356**	*e*P	**P**	**04 54 30.0**	**-1.4**
TIXI	**Tiksi** comp=Z,4.0nm,0.7s,mb4.5	**34.70**	**356**	*e*P	**P**	**04 54 31.0**	**-0.4**
TIXI				pmax	pmax		
BILL	**Bilibino**	**34.96**	**19**	*e*P	**P**	**04 54 34.0**	**+0.2**
BILL	comp=Z,3.0nm,0.9s,mb4.2			pmax	pmax		
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,baz=91,slow=12,SNR=3.3	**40.78**	**301**	P	**P**	**04 55 22.1**	**-1.0**
MKAR	comp=Z,74nm,18.0s,MS3.6,baz=358,slow=37			LR	LR	05 12 44.6	
TNA	**Tin City**	**42.55**	**30**	*e*P	**P**	**04 55 38.7**	**+1.3**
KURK	**Kurchatov** comp=Z,2.1nm,0.8s,mb3.9	**42.80**	**307**	*e*P	**P**	**04 55 38.0**	**-1.7**
KURK	**Kurchatov** comp=Z,2.0nm,0.8s,mb3.9	**42.80**	**307**	*e*P	**P**	**04 55 38.0**	**-1.6**
KURK				pmax	pmax		
INK	**Inuvik**	**55.90**	**27**	*e*P	**P**	**04 57 20.2**	**+0.7**
WRA	**Warramunga Arr** comp=Z,3.0nm,0.6s,mb4.5,baz=1.0,slow=7.5,SNR=14	**56.94**	**183**	P	**P**	**04 57 26.4**	**-0.9**
ASAR	**Alice Springs** comp=Z,2.1nm,0.8s,mb4.3,baz=6.4,slow=6.7,SNR=8.6	**60.66**	**183**	P	**P**	**04 57 52.2**	**-0.9**
RES	**Resolute Bay**	**63.30**	**13**	*e*P	**P**	**04 58 10.3**	**-0.1**
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.7s	**65.48**	**29**	P	**P**	**04 58 23.7**	**-1.1**
YKA				pmax	pmax		
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.7s,mb3.7,baz=304,slow=6.7,SNR=13	**65.48**	**29**	P	**P**	**04 58 23.7**	**-1.1**
OBN	**Obninsk**	**65.61**	**322**	*e*P	**P**	**04 58 29.2**	**+3.4**
OBN	comp=Z,5.0nm,0.6s,mb4.7			pmax	pmax		
FINES	**FINESS Array B** comp=Z,1.2nm,0.8s,mb4.0,baz=32,slow=7.6,SNR=3.8	**66.81**	**331**	P	**P**	**04 58 32.1**	**-1.3**
STKA	**Stephens Creek** comp=Z,2.8nm,0.9s,mb4.2,baz=345,slow=13,SNR=4.5	**68.93**	**176**	P	**P**	**04 58 46.4**	**-0.6**
AKASG	**Malin Array Be** comp=Z,2.2nm,0.9s,mb4.1,baz=47,slow=6.1,SNR=7.5	**71.75**	**320**	P	**P**	**04 59 02.6**	**-1.6**
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.6s,mb3.8,baz=41,slow=6.2	**72.46**	**335**	P	**P**	**04 59 07.1**	**-1.2**
NB2	**NORSAR Subarra** comp=Z,1.0nm,0.6s,mb3.9	**72.46**	**335**	P	**P**	**04 59 07.1**	**-1.2**
NB2				pmax	pmax		
NOA	**NORSAR Array B** comp=Z,0.9nm,0.8s,mb3.8,baz=43,slow=6.0,SNR=4.7	**72.46**	**335**	P	**P**	**04 59 08.9**	**+0.7**
NEW	**Newport** comp=Z,6.4nm,1.2s,mb4.4	**72.56**	**42**	*e*P	**P**	**04 59 10.5**	**+1.4**
NEW	**Newport** comp=Z,6.0nm,1.2s	**72.56**	**42**	*e*P	**P**	**04 59 10.5**	**+1.4**
NEW				pmax	pmax		
BMO	**Blue Mountains**	**74.51**	**45**	*e*P	**P**	**04 59 21.9**	**+1.3**
FFC	**Flin Flon**	**75.51**	**31**	*e*P	**P**	**04 59 26.2**	**0.0**
PAHR	**Pah Rah Range** comp=Z,12nm,1.2s,mb4.7	**76.39**	**50**	*e*P	**P**	**04 59 32.4**	**+0.9**
LRM	**Limekiln Ridge**	**76.58**	**42**	*e*P	**P**	**04 59 34.4**	**+1.9**
DLMT	**Dillon** comp=Z,10nm,1.0s,mb4.7	**76.80**	**43**	*e*P	**P**	**04 59 34.5**	**+0.8**
BOZ	**Bozeman (W)**	**77.13**	**42**	*e*P	**P**	**04 59 33.2**	**-2.4**
NVAR	**Mina Array Bea** comp=Z,0.9nm,0.7s,mb3.8,baz=307,slow=3.7,SNR=8.6	**77.83**	**51**	P	**P**	**04 59 40.4**	**+0.7**
PDAR	**Pinedale Array** comp=Z,1.5nm,0.9s,mb3.9,baz=286,slow=1.8,SNR=10	**80.15**	**43**	P	**P**	**04 59 53.0**	**+0.7**
ULM	**Lac du Bonnet** baz=325,slow=8.5	**81.33**	**31**	P	**P**	**04 59 58.1**	**-0.3**
PV10	**Paradox Valley**	**83.41**	**46**	*e*P	**P**	**05 00 11.1**	**+1.6**

*NEIC **26** 04:52:57.2±2.7,7375S×12879E,h129km±25km,mb4.8/1, Error ellipse: s-maj=28.8km s-min=21.4km az=216.0*
*IDC **26** 04:53:02.0±6.2,7475S×12885E,h178km±64km,mb3.3/3, mb1 3.4/6,mb1mx3.3/15,mbtmp3.4/6,Error ellipse: s-maj=60.3km s-min=19.9km az=42.0*
*ISCJB **26** 04:53:02.4±3.2,7850S±0.03×12903E±0.009,h

STKA	**Stephens Creek**	**26.93**	**156**	P	**P**	**04 58 27.9**	**+0.5**
STKA	**Stephens Creek**	**26.93**	**156**	P	**P**	**04 58 27.9**	**+0.5**
	0.9nm,0.5s,mb3.7,baz=335,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**05 03 41.9**	**-2.1**
MKAR	**Makanchi Array**	**68.13**	**327**	P	**P**	**05 03 41.9**	**-2.1**
	0.5nm,0.5s,mb3.5,baz=117,slow=7.8,SNR=5.0						

CSEM ***26*** *04:58:25.8±0.1, 3948N×3999E, h2km, MD3.0, Error ellipse: s-maj=2.5km s-min=2.1km az=38.0*
DDA ***26*** *04:58:26.1, 3948N×3991E, h9km±1km, Md3.1*
ISK ***26*** *04:58:26.2, 3947N×3999E, h4km, MD3.0*
ISCJB ***26*** *04:58:27.5±0.6, 3947N±003×3994E±005, h10km, Error ellipse: s-maj=5.5km s-min=4.5km az=35.5*

ISC 26 04:58:27.7±0.6, 3947N±003×3996E±005, h10km, n14, σ1§00/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZC	**Erzincan**	**0.30**	**338**	*i* PG	**Pg**	**04 58 37.8**	**+4.1**
EZC				*i* SG	**Sg**	**04 58 46.2**	**+8.5**
BINT	**Bingol**	**0.72**	**145**	*i* PG	**Pg**	**04 58 40.4**	**-1.3**
BINT				*i* SG	**Sg**	**04 58 50.9**	**-0.2**
GUMT	**Gumushane**	**1.05**	**340**	*i* PG	**Pg**	**04 58 47.2**	**-0.8**
EZM	**Erzurum**	**1.16**	**68**	*i* PN	**Pn**	**04 58 48.9**	**-1.1**
ERZM	**Erzurum**	**1.17**	**68**	*i* P	**Pb**	**04 58 48.9**	**-1.0**
ERZM				*i* S	**Sb**	**04 59 06.1**	**+1.0**
ELZG	**Elazig**	**1.24**	**218**	*i* P	**Pn**	**04 58 49.1**	**-1.9**
ELZG				*i* S	**Sb**	**04 59 06.7**	**-0.4**
DIYA	**Diyarbakir**	**1.55**	**175**	*i* P	**Pn**	**04 58 56.0**	**+0.6**
DIYA				*i* S	**Sn**	**04 59 17.1**	**+1.5**
MYA	**Malataya**	**1.66**	**227**	*e*PN	**Pn**	**04 58 57.5**	**+0.6**
MYA				*e*SN	**Sg**	**04 59 20.4**	**-0.7**
MALT	**Malatya**	**1.67**	**226**	*e*PN	**Pn**	**04 58 57.6**	**+0.6**
MALT	**Malatya**	**1.67**	**226**	*e*P	**Pn**	**04 58 57.5**	**+0.5**
ESPY	**Espiye-Giresun**	**1.72**	**327**	*e*PN	**Pn**	**04 58 58.9**	**+1.1**
BTMT	**Batman**	**1.75**	**137**	*e*PN	**Pn**	**04 58 57.5**	**-0.6**
URFA	**Urfa**	**2.22**	**204**	*e*PN	**Pn**	**04 59 05.0**	**+0.4**
MARD	**Mardin**	**2.25**	**163**	*i* P	**Pn**	**04 59 06.6**	**+1.6**
MARD				*i* S	**Sb**	**04 59 36.3**	**-0.1**

ISCJB ***26*** *05:04:56.3±3.3, 27N±0.1×1287E±02, h241km±34km, mb4.3/13, Error ellipse: s-maj=28.0km s-min=11.8km az=148.5*
IDC ***26*** *05:04:57.0±2.0, 263N×12843E, h230km±20km, mb3.9/10, mb1 4.0/11, mb1mx3.8/20, mbtmp3.9/11, Error ellipse: s-maj=31.9km s-min=10.0km az=76.0*
BJI ***26*** *05:04:59.3, 299N×12858E, h243km, mB4.8, mb4.4*
NEIC ***26*** *05:05:00.3±4.6, 259N×12853E, h269km±49km, mb4.4/3, Error ellipse: s-maj=30.8km s-min=11.0km az=53.0*

ISC 26 05:04:57.8±3.4, 26N±01×1286E±02, h239km±35km, n22, σ0§69/22, mb4.3/13, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**13.68**	**201**	P	**Pn**	**05 08 02.8**	**+0.4**
	9.5nm,0.3s,baz=335,slow=3.3,SNR=5.8						
KAKA	**Kakadu**	**15.69**	**166**	*e*P	**Pn**	**05 08 25.8**	**-1.0**
	7.0nm,0.3s						
KSM	**Kuching**	**18.36**	**267**	*e*P	**P**	**05 08 55.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.80**	**188**	*e*P	**P**	**05 09 20.3**	**-0.8**
	7.6nm,0.5s						
FITZ	**Fitzroy Crossi**	**20.80**	**188**	P	**P**	**05 09 20.7**	**-0.4**
	4.5nm,0.6s,baz=24,slow=9.7,SNR=15						
WRA	**Warramunga Arr**	**23.11**	**166**	P	**P**	**05 09 42.9**	**0.0**
	4.6nm,0.4s,mb4.4,baz=336,slow=11,SNR=83						
WRA				ScP	ScP	05 16 40.8	+1.4
	0.4nm,0.6s,baz=344,slow=3.1,SNR=5.8						
WB2	**Warramunga Arr**	**23.11**	**166**	*e*P	**P**	**05 09 42.5**	**-0.4**
ASAR	**Alice Springs**	**26.63**	**169**	P	**P**	**05 10 14.8**	**+0.2**
	8.7nm,0.5s,mb4.7,baz=354,slow=7.9,SNR=176						
ASAR				ScP	ScP	05 16 50.6	+1.3
	0.7nm,0.8s,baz=336,slow=2.6,SNR=5.0						
CTA	**Charters Tower**	**28.43**	**143**	P	**P**	**05 10 32.4**	**+1.8**
CTA	**Charters Tower**	**28.43**	**143**	P	**P**	**05 10 32.4**	**+1.8**
	2.1nm,0.4s,mb4.1,baz=225,slow=11,SNR=2.1						
KSRS	**Korea Array**	**34.67**	**359**	P	**P**	**05 11 24.7**	**-0.1**
	1.1nm,0.3s,mb3.8,baz=173,slow=8.7,SNR=4.1						
STKA	**Stephens Creek**	**36.45**	**161**	*e*P	**P**	**05 11 40.2**	**+0.2**
	4.3nm,0.5s,mb4.2						
STKA	**Stephens Creek**	**36.45**	**161**	P	**P**	**05 11 40.8**	**+0.8**
	4.8nm,0.4s,mb4.4,baz=337,slow=7.6,SNR=19						
NWAO	**Narrogin (SRO)**	**36.97**	**196**	P	**P**	**05 11 43.9**	**-0.5**
	4.8nm,0.5s,mb4.3,baz=24,slow=8.4,SNR=5.3						
GTA	**Gaotai**	**45.03**	**328**	*e*P	**P**	**05 12 50.5**	**+0.7**
GTA				AMB	AMB		
	comp=Z,7.0nm,0.9s,mb4.0						
TAPN	**Taplejung**	**46.21**	**306**	*e*P	**P**	**05 12 59.6**	**+0.3**
ODAN	**Odare**	**46.27**	**305**	*e*P	**P**	**05 13 00.0**	**+0.3**
	comp=Z,22nm,0.6s,mb4.7						
JIRN	**Jiri**	**47.57**	**306**	*e*P	**P**	**05 13 10.1**	**+0.4**
	comp=Z,23nm,0.5s,mb4.7						
SONM	**Songino Array**	**48.96**	**340**	P	**P**	**05 13 19.5**	**-0.5**
	comp=Z,0.9nm,0.7s,mb3.2,baz=148,slow=7.2,SNR=8.4						
KOLN	**Koldanda**	**49.72**	**305**	*e*P	**P**	**05 13 26.4**	**+0.3**
	comp=Z,29nm,0.6s,mb4.8						
MKAR	**Makanchi Array**	**59.55**	**325**	P	**P**	**05 14 35.9**	**-0.3**
	comp=Z,2.6nm,0.5s,mb4.1,baz=118,slow=8.4,SNR=30						
ARCES	**ARCESS Array B**	**92.14**	**340**	P	**P**	**05 17 38.0**	**-1.6**
	comp=Z,5.6nm,1.0s,mb4.4,baz=80,slow=5.5,SNR=9.8						

NEIC ***26*** *05:11:18.7, 31.16S×69.16W, h144km, MG3.7(GUC), After GUC.*

GUC 26 05:11:18.7±0.8, 3116S×6916W, h144km±23km, ML3.7, 6D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.58**	**269**	⇓*i* P	Pn	05 11 49.2	+0.6
CMCH				*i* S	Sn	05 12 12.5	+0.9
CMCH	**Combarbala**	**1.58**	**269**	⇓*i* P	Pn	05 11 49.2	+0.6
CMCH				*i* S	Sn	05 12 12.5	+0.9
CMCH				AML	AML	05 12 14.1	
	comp=N,2μm,0.7s						
TLL	**Tololo Astrono**	**1.73**	**304**	⇓*e* P	Pn	05 11 51.2	+0.9
TLL				*i* S	Sn	05 12 16.4	+1.8
TLL	**Tololo Astrono**	**1.73**	**304**	⇓*e* P	Pn	05 11 51.2	+0.9
TLL				*i* S	Sn	05 12 16.4	+1.8
TLL				AML	AML	05 12 18.7	
	comp=N,189nm,0.5s						
OVCH	**Ovalle**	**1.84**	**287**	*e*P	Pn	05 11 51.9	+0.3
OVCH				*i* S	Sn	05 12 17.1	+0.4
OVCH	**Ovalle**	**1.84**	**287**	*e*P	Pn	05 11 51.9	+0.3
OVCH				*i* S	Sn	05 12 17.1	+0.4
OVCH				AML	AML	05 12 18.9	
	comp=N,554nm,0.5s						
CHNG	**Los Chungos**	**2.13**	**250**	*e*P	Pn	05 11 41.1	-14
CHNG				*i* S	Sn	05 12 08.2	-15
LSCH	**La Serena**	**2.19**	**304**	*e*P	Pn	05 11 56.3	+0.5
LSCH				*i* S	Sn	05 12 24.2	0.0
FCH	**Farellones**	**2.37**	**204**	*e*P	Pn	05 11 59.3	+1.5
FCH				*i* S	Sn	05 12 29.5	+1.5
FCH				AML	AML	05 12 35.1	
	comp=E,122nm,0.4s						
LCO	**Las Campanas**	**2.53**	**328**	*e*Pn	Pn	05 12 00.9	+1.1
LCO				*e*Sn	Sn	05 12 29.9	-1.6
VACH	**Vallenar**	**2.93**	**331**	⇓*i* P	Pn	05 12 05.5	+0.5
VACH				*i* S	Sn	05 12 40.8	+0.2
VACH	**Vallenar**	**2.93**	**331**	⇓*i* P	Pn	05 12 05.5	+0.5
VACH				*i* S	Sn	05 12 40.8	+0.2
VACH				AML	AML	05 12 42.7	
	comp=N,549nm,0.4s						

IDC 26 05:22:39.3±2.4, 442N×9801E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.7/3, Error ellipse: s-maj=130.7km s-min=30.2km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.13**	**125**	P	P	05 30 41.8	-0.1
	0.3nm,0.4s,baz=301,slow=9.1,SNR=4.5						
MKAR	**Makanchi Array**	**44.36**	**345**	P	P	05 30 51.9	+0.6
	0.3nm,0.4s,baz=159,slow=8.2,SNR=4.8						
ZALV	**Zalesovo Beam**	**50.54**	**350**	P	P	05 31 38.5	-0.9
	1.5nm,0.4s,baz=83,slow=14,SNR=4.0						
LPAZ	**La Paz**	**161.99**	**228**	PKP	PKPdf	05 42 44.3	+0.5
	0.4nm,0.3s,baz=153,slow=2.3,SNR=4.2						

IDC 26 05:28:35.3±16.0, 089N×12675E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.9/18, Error ellipse: s-maj=248.6km s-min=167.9km az=159.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.00**	**161**	P	P	05 33 31.1	-0.1
	1.0nm,0.6s,baz=339,slow=11,SNR=21						
WRA				LR	LR	05 41 03.6	
	comp=Z,54nm,20.5s,baz=185,slow=34						
ASAR	**Alice Springs**	**25.38**	**165**	P	P	05 34 04.9	+0.5
	1.4nm,0.5s,baz=344,slow=11,SNR=19						
STKA	**Stephens Creek**	**35.49**	**158**	P	P	05 35 33.4	-0.4
	0.8nm,0.4s,baz=336,slow=9.1,SNR=4.5						

NEIC ***26*** *05:40:16.5, 1565N×9546W, h25km, MD3.9(MEX), After MEX.*

MEX 26 05:40:16.2±0.9, 1563N×9545W, h27km±24km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.65**	**282**	*i* P	Pb	05 40 27.0	-2.0
HUIG				*i* S	Sb	05 40 34.9	-2.9
CMIG	**Matias Romero**	**1.55**	**20**	*i* P	Pn	05 40 39.5	-2.5
CMIG				*i* S	Sn	05 40 58.2	-3.1
VHO	**Vista Hermosa**	**1.89**	**319**	*i* P	Pn	05 40 45.5	-1.2
VHO				*i* S	Sn	05 41 06.7	-3.0
OXX	**Oaxaca**	**1.89**	**320**	*i* P	Pn	05 40 44.0	-2.7
OXX				*i* S	Sn	05 41 07.5	-2.2
PNIG	**Pinotepa**	**2.69**	**287**	*i* P	Pn	05 40 55.2	-2.4
PNIG				*i* S	Sn	05 41 27.1	-2.1
SCX	**San Cristobal**	**2.92**	**67**	*i* P	Pn	05 40 59.3	-1.6
SCX				*i* S	Sn	05 41 32.0	-3.0
UTMO	**Huajuapan**	**3.14**	**314**	*e*P	Pn	05 41 02.9	-1.0
UTMO				*i* S	Sn	05 41 37.2	-3.4
CCIG	**Comitan**	**3.25**	**78**	*i* P	Pn	05 41 05.9	+0.5
CCIG				*i* S	Sn	05 41 40.7	-2.5
TPIG	**Tehuac#an**	**3.32**	**327**	*i* P	Pn	05 41 02.2	-4.2
TPIG				*i* S	Sn	05 41 43.0	-2.0
PPM	**Popocatepetl**	**4.57**	**319**	*e*P	Pn	05 41 27.5	+3.9
PPM				*i* S	Sn	05 42 18.5	+2.7
PPM	**Popocatepetl**	**4.57**	**319**	*i* P	Pn	05 41 19.8	-3.7
PPM				*i* S	Sn	05 42 13.3	-2.6

NIED ***26*** *05:42:00, 3720N×13650E, h5km, Mw3.3 Best double couple: Mo1.05000×10^14 NP1:φs49.00000°, δ52.00000°, λ137.00000°. NP2:φs169.00000°, δ58.00000°, λ47.00000°.*
ISCJB ***26*** *05:42:54.2±1.5, 3719N±006×13649E±009, h3km±11km, Error ellipse: s-maj=12.2km s-min=8.6km az=23.9*
JMA ***26*** *05:42:54.9±0.1, 3717N×13653E, h3km±1km, M3.5*
JMA Felt I J1.

ISC 26 05:42:54.9±1.4, 3719N±005×13650E±010, h6km±9km, n6, σ0§30/10, 1C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**139**	⇓P	**Pg**	**05 43 01.5**	**0.0**
JJH				S	**Sg**	**05 43 05.8**	**-0.2**
JSZ	**Suzu**	**0.73**	**69**	P	**Pg**	**05 43 08.9**	**-0.1**
JSZ				S	**Sg**	**05 43 19.0**	**+0.5**
JHG	**Hegura jima**	**0.74**	**26**	⇑P	**Pg**	**05 43 09.1**	**0.0**
JTT	**Ttatey**	**0.88**	**131**	P	**Pg**	**05 43 11.5**	**-0.3**
JKG	**Kaga**	**0.92**	**189**	P	**Pg**	**05 43 12.6**	**+0.1**
JKG				S	**Sg**	**05 43 24.8**	**+0.4**
MAT	**Matsushiro**	**1.51**	**115**	P	**Pn**	**05 43 21.9**	**-0.5**
MAT				S	**Sn**	**05 43 42.7**	**+0.3**

NIED ***26*** *05:46:00, 3720N×13650E, h5km, Mw4.5 Best double couple: Mo6.85000×10^15 NP1:φs152.00000°, δ63.00000°, λ22.00000°. NP2:φs52.00000°, δ71.00000°, λ151.00000°.*
IDC ***26*** *05:46:32.8±0.5, 3718N×13643E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.4/20, mbtmp4.3/15, ML3.5/1, MS3.7/10, Ms1 3.7/10, ms1mx3.5/29, Error ellipse: s-maj=16.7km s-min=10.3km az=37.0*
ISCJB ***26*** *05:46:32.9±0.6, 3719N±002×13645E±002, h1km±3km, mb4.6/52, MS3.9/18, Error ellipse: s-maj=3.9km s-min=3.2km az=162.7*
JMA ***26*** *05:46:34.6, 3717N×13655E, h9km±1km, M4.8*
NEIC ***26*** *05:46:35.6±0.3, 3723N×13633E, h10km, mb4.7/28, MW4.5(NIED), Error ellipse: s-maj=7.4km s-min=5.6km az=156.0*
NEIC Recorded [5L JMA] in Ishikawa; [2 JMA] in Fukui, Niigata and Toyama; [1 JMA] in Gifu, Nagano and Shiga Prefectures.
MOS ***26*** *05:46:35.4±1.1, 3714N×13638E, h26km, mb4.8/23, Error ellipse: s-maj=9.2km s-min=6.3km az=96.8*
BJI ***26*** *05:46:35.0, 3709N×13684E, h33km, mB4.8, mb4.6, Ms4.3, Msz4.0*

ISC 26 05:46:34.4±0.6, 3717N±002×13649E±002, h0km±3km, n387, σ0§80/409, mb4.6/52, MS3.9/18, 98C-76D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**136**	⇓P	**Pg**	**05 46 40.8**	**0.0**
JJH				S	**Sg**	**05 46 45.3**	**+0.1**
JSZ	**Suzu**	**0.75**	**68**	⇑P	**Pg**	**05 46 48.0**	**-0.8**
JSZ				S	**Sg**	**05 46 57.8**	**-0.7**
JHG	**Hegura jima**	**0.76**	**27**	⇑P	**Pg**	**05 46 48.8**	**-0.2**
JHG				S	**Sg**	**05 46 59.3**	**+0.4**
JTT	**Ttatey**	**0.88**	**129**	⇓P	**Pg**	**05 46 50.6**	**-0.7**
JTT				S	**Sg**	**05 47 02.2**	**-0.4**
JKG	**Kaga**	**0.90**	**188**	⇑P	**Pg**	**05 46 51.6**	**0.0**
JKG				S	**Sg**	**05 47 04.5**	**+1.2**
MAJO	**Matsushiro**	**1.51**	**114**	*e*Pn	**Pn**	**05 47 00.5**	**-2.2**
MAT	**Matsushiro**	**1.51**	**114**	P	**Pn**	**05 47 00.5**	**-2.2**
MAT				S	**Sb**	**05 47 20.4**	**-2.6**
MJAR	**Matsushiro Arr**	**1.51**	**114**	Pg	**Pg**	**05 47 01.9**	**-1.5**
MJAR				Lg		05 47 23.0	
MJAR	**Matsushiro Arr**	**1.51**	**114**	Pg	**Pg**	**05 47 01.9**	**-1.5**
	389nm,0.3s,baz=294,slow=16,SNR=691						
MJAR				Lg		05 47 23.0	
	598nm,0.3s,baz=85,slow=25,SNR=14						
JHJ	**Hachijo jima 2**	**4.86**	**145**	Pn	**Pn**	**05 47 48.8**	**+0.1**
	5.4nm,0.3s,baz=245,slow=22,SNR=2.5						
JHJ				LR	LR	05 49 40.5	
	comp=Z,806nm,18.5s,baz=103,slow=38						
JNU	**Nakatsue**	**6.12**	**230**	Pn	**Pn**	**05 48 07.8**	**+1.7**
JNU				LR	LR	05 50 07.0	
JNU	**Nakatsue**	**6.12**	**230**	Pn	**Pn**	**05 48 07.8**	**+1.7**
	2.3nm,0.3s,baz=42,slow=18,SNR=21						
JNU				LR	LR	05 50 07.0	
	comp=Z,131nm,20.1s,baz=229,slow=35						
KSRS	**Korea Array**	**6.83**	**275**	Pn	**Pn**	**05 48 16.6**	**+0.8**
	1.7nm,0.3s,baz=92,slow=14,SNR=14						
KSRS				Sn	**Sn**	**05 49 32.6**	**-1.7**
	1.4nm,0.3s,baz=90,slow=25,SNR=6.4						
KSRS				LR	LR	05 50 44.8	
	comp=Z,860nm,19.9s,baz=158,slow=37						
ERM	**Erimo**	**7.07**	**45**	*e*Pn	**Pn**	**05 48 21.2**	**+2.2**
	100nm,0.9s						
ERM	**Erimo**	**7.07**	**45**	*e*P	**Pn**	**05 48 21.3**	**+2.3**
ERM				pmax	pmax		
	comp=Z,99nm,0.9s						
ASAJ	**Asahikawa**	**8.35**	**32**	P	**Pn**	**05 48 38.5**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,493nm,19.7s						
ASAJ	**Asahikawa**	**8.35**	**32**	Pn	**Pn**	**05 48 38.5**	**+1.9**
	comp=Z,3.3nm,0.3s,baz=227,slow=21,SNR=8.6						
ASAJ				LR	LR	05 51 46.8	
	comp=Z,493nm,19.7s,baz=350,slow=38						
MDJ	**Mudanjiang**	**9.09**	**327**	P	**Pn**	**05 48 46.8**	**+0.1**
MDJ				S	**Sn**	**05 50 32.8**	**+3.1**
MDJ				SCP	ScP	05 58 39.8	-3.1
MDJ				PCS	PcS	05 58 41.3	-1.6
MDJ				AMB	AMB		
	comp=Z,5.0nm,0.5s						
MDJ				AMB	AMB		
	comp=Z,117nm,4.7s						
MDJ				LR	LR		
	comp=N,2μm,12.8s						
MDJ				LR	LR		
	comp=E,2μm,12.8s						
MDJ				LR	LR		
	comp=Z,580nm,12.1s						
MDJ	**Mudanjiang**	**9.09**	**327**	*e*Pn	**Pn**	**05 48 46.3**	**-0.5**
	comp=Z,7.9nm,0.4s						
MDJ				*e*Sn	**Sn**	**05 50 27.1**	**-2.6**
CN2	**Changchun**	**10.70**	**312**	*e*P	**Pn**	**05 49 10.8**	**+2.0**
CN2				*e*S	**Sn**	**05 51 10.5**	**+1.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1μm,14.0s						
CN2				LR	LR		
	comp=E,890nm,14.0s						
YSS	**Yuzh-Sakhalins**	**10.83**	**23**	*e*Pn	**Pn**	**05 49 13.1**	**+2.6**
YSS	**Yuzh-Sakhalins**	**10.83**	**23**	⇑*i* P	**Pn**	**05 49 13.0**	**+2.5**
YSS				pmax	pmax		
	comp=Z,90nm,1.0s						
YSS				MLR	MLR		
	comp=Z,600nm,12.0s						
YSS				MLR	MLR		
	comp=E,600nm,15.0s						
CBIJ	**Chichi jima**	**11.14**	**153**	LR	LR	05 53 34.3	
	comp=E,349nm,18.5s,baz=24,slow=38						
HABR	**Khabarovsk**	**11.35**	**355**	*e*P	**Pn**	**05 49 22.2**	**+4.5**
HABR				*e*S	**Sn**	**05 51 33.5**	**+8.4**
DL2	**Dalian**	**11.85**	**283**	P	**Pn**	**05 49 32.8**	**+8.2**
DL2				S	**Sn**	**05 51 50.0**	**+13**
DL2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
DL2				AMB	AMB		
	comp=Z,110nm,4.7s						
DL2				LR	LR		
	comp=N,550nm,12.4s						
DL2				LR	LR		
	comp=E,320nm,15.4s						
DL2				LR	LR		
	comp=Z,400nm,16.3s						
KLR	**Kul'dur**	**12.54**	**346**	*e*P	**Pn**	**05 49 34.2**	**+0.2**
KLR				pmax	pmax		
	comp=N,30nm,1.6s						
KLR				pmax	pmax		
	comp=E,45nm,1.6s						
KLR				pmax	pmax		
	comp=Z,74nm,1.6s						
KLR				MLR	MLR		
	comp=N,800nm,12.5s						
KLR				MLR	MLR		
	comp=Z,4μm,12.5s						
SSE	**Sheshan**	**14.04**	**249**	P	**Pn**	**05 49 54.5**	**-0.1**
SSE				S	**Sn**	**05 52 31.0**	**-0.1**
SSE				AMB	AMB		
	comp=Z,38nm,0.7s						
SSE				AMB	AMB		
	comp=Z,84nm,4.6s						
SSE				LR	LR		
	comp=N,910nm,16.7s						
SSE				LR	LR		
	comp=E,381nm,16.7s						
SSE				LR	LR		
	comp=Z,376nm,11.8s						
NJ2	**Nanjing**	**15.39**	**256**	*e*P	**Pn**	**05 50 14.0**	**+1.2**
NJ2				PP		05 50 24.5	
NJ2				S	**Sn**	**05 53 05.0**	**+1.1**
NJ2				AMB	AMB		
	comp=Z,160nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,170nm,5.2s						
NJ2				LR	LR		
	comp=N,980nm,15.8s						
NJ2				LR	LR		
	comp=E,640nm,18.2s						
NJ2				LR	LR		
	comp=Z,640nm,18.2s						
BJI	**Beijing**	**16.14**	**286**	P	**Pn**	**05 50 24.0**	**+1.5**
BJI				S	**Sn**	**05 53 28.0**	**+5.9**
BJI				AMB	AMB		
	comp=Z,9.0nm,1.0s						
BJI				AMB	AMB		
	comp=Z,185nm,3.5s						
BJI				LR	LR		
	comp=N,422nm,9.2s						
BJI				LR	LR		
	comp=E,327nm,11.5s						
BJI				LR	LR		
	comp=Z,239nm,17.6s						
BJT	**Baijiatuan**	**16.14**	**286**	*e*Pn	**Pn**	**05 50 21.4**	**-1.2**
	comp=Z,8.0nm,0.4s						
BJT	**Baijiatuan**	**16.14**	**286**	*e*P	**Pn**	**05 50 21.4**	**-1.2**
BJT				pmax	pmax		
	comp=Z,8.0nm,0.4s						
HIA	**Hailar**	**17.14**	**320**	*e*Pn	**Pn**	**05 50 34.0**	**-1.1**
	comp=Z,34nm,1.2s						
HIA	**Hailar**	**17.14**	**320**	*e*P	**Pn**	**05 50 34.1**	**-1.0**
HIA				pmax	pmax		
	comp=Z,34nm,1.2s						
HHC	**Hu-ho-hao-te**	**19.70**	**288**	*e*P	**Pn**	**05 51 12.8**	**+6.3**
HHC				AP	pP	05 51 16.8	+12
HHC				XP	sP	05 51 18.3	+13
HHC				PP		05 51 31.0	
HHC				S	**Sn**	**05 54 46.0**	**-2.2**
HHC				SS		05 55 12.8	
HHC				AMB	AMB		
	comp=Z,15nm,0.9s						
HHC				AMB	AMB		
	comp=Z,112nm,4.5s						
HHC				LR	LR		
	comp=N,394nm,10.1s						
HHC				LR	LR		
	comp=E,254nm,5.9s						
HHC				LR	LR		
	comp=Z,259nm,15.5s						
CIT	**Chita**	**21.94**	**320**	*e*P	**P**	**05 51 29.6**	**+0.3**
MA2	**Magadan**	**24.24**	**18**	*e*P	**P**	**05 51 51.7**	**-0.9**
MA2	**Magadan**	**24.24**	**18**	⇑*e*P	**P**	**05 51 51.9**	**-0.7**
MA2				pmax	pmax		
	comp=Z,69nm,1.5s,mb5.0						
MA2				MLR	MLR		
	comp=Z,200nm,28.0s,MS3.5						
SONM	**Songino Array**	**24.47**	**305**	P	**P**	**05 51 55.0**	**+0.1**
	comp=Z,4.4nm,0.6s,mb4.2,baz=105,slow=8.9,SNR=21						
SONM				LR	LR	06 01 43.1	
	comp=Z,403nm,18.8s,MS3.9,baz=103,slow=37						
YAK	**Yakutsk**	**25.25**	**352**	*e*P	**P**	**05 51 59.9**	**-1.9**
	comp=Z,31nm,0.7s,mb5.1						
YAK	**Yakutsk**	**25.25**	**352**	*e*P	**P**	**05 52 00.3**	**-1.5**
YAK				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=N,38nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.8s						
BOD	**Bodaibo**	**25.42**	**332**	*e*P	**P**	**05 52 00.8**	**-2.6**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
LZH	**Lanzhou**	**26.16**	**278**	*e*P	**P**	**05 52 11.8**	**+1.5**
LZH				AP		05 52 16.0	
LZH				*e*PP		05 52 52.8	
LZH				*e*S	**S**	**05 56 39.5**	**-3.5**
LZH				*e*SS		05 57 46.5	
LZH				AMB

GYA S **S** 05 57 01.3 -1.4
GYA SS 05 58 16.8
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,80nm,4.8s
GYA LR LR
comp=N,410nm,18.4s,MS4.2
GYA LR LR
comp=E,490nm,18.8s,MS4.2
GYA LR LR
comp=Z,330nm,17.4s,MS4.0
SEY Seymchan 27.58 16⇑ *e*P **P** **05 52 22.2 -0.6**
CD2 Chengdu 27.74 267 *e*P **P** **05 52 24.8 +0.2**
CD2 PP 05 53 13.8
CD2 S **S** **05 57 05.3 -2.8**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
CD2 AMB AMB
comp=Z,30nm,5.4s
CD2 LR LR
comp=N,700nm,14.4s,MS4.6
CD2 LR LR
comp=E,850nm,14.4s,MS4.6
CD2 LR LR
comp=Z,370nm,14.6s,MS4.1
GTA Gaotai 28.75 286 *e*P **P** **05 52 34.5 +0.9**
GTA PP PP 05 53 29.0 -9.2
GTA S **S** **05 57 24.3 +0.5**
GTA SS SS 05 58 49.5 -36
GTA AMB AMB
comp=Z,4.0nm,0.7s,mb4.4
GTA AMB AMB
comp=Z,54nm,4.9s
GTA LR LR
comp=N,186nm,11.4s,MS4.2
GTA LR LR
comp=E,277nm,13.3s,MS4.2
GTA LR LR
comp=Z,279nm,11.8s,MS4.1
QIZ Qiongzhong 29.50 240 P **P** **05 52 41.3 +1.0**
QIZ S **S** **05 57 36.3 +0.5**
QIZ LR LR
comp=N,292nm,15.9s
QIZ LR LR
comp=Z,293nm,14.2s,MS4.0
KMI Kunming 31.12 257 P **P** **05 52 55.8 +1.1**
KMI S **S** **05 58 00.0 -1.2**
KMI SS SS 05 59 46.5 -27
KMI AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
KMI AMB AMB
comp=Z,32nm,3.1s
KMI LR LR
comp=N,310nm,14.8s,MS4.3
KMI LR LR
comp=E,322nm,14.8s,MS4.3
KMI LR LR
comp=Z,229nm,16.5s,MS3.9
TIXI Tiksi 34.78 356 *e*P **P** **05 53 24.4 -1.7**
TIXI Tiksi 34.78 356⇑ *e*P **P** **05 53 24.5 -1.6**
TIXI pmax pmax
comp=Z,28nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,100nm,17.0s,MS3.6
BILL Bilibino 35.10 19 P **P** **05 53 28.6 -0.3**
comp=Z,27nm,1.1s,mb5.1
BILL Bilibino 35.10 19⇓ *e*P **P** **05 53 28.5 -0.4**
BILL pmax pmax
comp=Z,28nm,1.4s,mb5.0
BILL MLR MLR
comp=Z,100nm,14.0s,MS3.7
WMQ Urumqi 37.25 296⇑ *i*P **P** **05 53 48.5 +0.8**
WMQ AP 05 53 53.0
WMQ PP PP 05 55 15.0 +2.7
WMQ PCP PcP 05 56 10.0 +2.7
WMQ S **S** **05 59 33.0 -2.7**
WMQ AMB AMB
comp=Z,6.0nm,0.7s,mb4.4
WMQ AMB AMB
comp=Z,89nm,7.2s
WMQ LR LR
comp=N,174nm,20.0s,MS3.9
WMQ LR LR
comp=E,51nm,21.0s,MS3.9
WMQ LR LR
comp=Z,84nm,22.0s,MS3.5
CHTO Chiang Mai 37.56 251 *e*P **P** **05 53 52.2 +1.7**
LSA Lhasa 38.27 272 *e*P **P** **05 53 56.8 +0.4**
comp=Z,4.4nm,0.4s,mb4.5
LSA Lhasa 38.27 272 *e*P **P** **05 53 56.8 +0.4**
LSA pmax pmax
comp=Z,4.0nm,0.4s,mb4.5
ZALV Zalesovo Beam 38.92 312 P **P** **05 53 59.3 -2.2**
ZALV PcP PcP 05 56 09.0 -3.2
ZALV LR LR 06 09 12.7
ZALV Zalesovo Beam 38.92 312 P **P** **05 53 59.3 -2.2**
comp=Z,1.1nm,0.4s,mb3.8,baz=80,slow=8.9,SNR=2.9
ZALV PcP PcP 05 56 09.0 -3.2
comp=Z,1.7nm,0.8s,baz=127,slow=2.5,SNR=3.5
ZALV LR LR 06 09 12.7
comp=Z,38nm,19.8s,MS3.2,baz=87,slow=35
ZAL Zalesovo 38.93 312 P **P** **05 53 59.3 -2.3**
ZAL 05 56 09.0
MK31 Makanchi Array 40.70 301 *e*P **P** **05 54 15.1 -1.4**
MKAR Makanchi Array 40.70 301 P **P** **05 54 13.9 -2.5**
MKAR PcP PcP 05 56 15.6 -2.4
MKAR LR LR 06 11 36.0
MKAR Makanchi Array 40.70 301 *i*P **P** **05 54 15.6 -0.9**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 40.70 301 P **P** **05 54 13.9 -2.6**
comp=Z,0.7nm,0.6s,mb3.6,baz=86,slow=9.0,SNR=12
MKAR PcP PcP 05 56 15.6 -2.4
comp=Z,0.8nm,0.8s,baz=85,slow=3.3,SNR=3.2
MKAR LR LR 06 11 36.0
comp=Z,223nm,18.0s,MS4.1,baz=1.9,slow=37
TNA Tin City 42.70 30 *e*P **P** **05 54 32.8 +0.1**
KURK Kurchatov 42.74 308 *e*P **P** **05 54 31.0 -2.2**
SVW2 Sparrevohn 47.81 37 *e*P **P** **05 55 13.3 +0.1**
IMA2 Indian Mountai 48.58 31 *e*P **P** **05 55 18.9 -0.2**
KDAK Kodiak Island 49.62 42 P **P** **05 55 24.4 -2.8**
comp=Z,5.7nm,0.5s,mb4.8,baz=226,slow=2.4,SNR=17
PMR Palmer 50.86 36 *e*P **P** **05 55 35.8 -0.7**
comp=Z,8.2nm,0.9s,mb4.7
PMR Palmer 50.86 36 *e*P **P** **05 55 35.8 -0.7**
PMR pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
COLA College 51.06 32 *e*P **P** **05 55 36.9 -1.1**
comp=Z,6.0nm,0.9s,mb4.5
COLA College 51.06 32 *e*P **P** **05 55 36.9 -1.1**
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
SML Sawmill 51.21 36 *e*P **P** **05 55 39.0 -0.2**
ARU Arti 53.63 318 *c i*P **P** **05 55 55.4 -1.8**
ARU *e* 05 56 59.6
ARU 05 57 52.9
ARU PPP 05 59 02.3
ARU S **S** **06 03 29.5 -2.0**
ARU SS SS 06 07 07.7 -3.7
ARU pmax pmax
comp=Z,9.0nm,1.7s,mb4.5
EGAK Eagle 53.91 32 *e*P **P** **05 55 58.6 -0.5**
FITZ Fitzroy Crossi 55.91 192 *e*P **P** **05 56 14.8 +0.7**
comp=Z,4.7nm,0.8s,mb4.6
INK Inuvik 56.05 27 *e*P **P** **05 56 14.0 -0.5**
WB2 Warramunga Arr 56.84 182 *e*P **P** **05 56 19.9 -0.7**
WB2 Warramunga Arr 56.84 182 *e*P **P** **05 56 18.6 -2.1**
WRA Warramunga Arr 56.84 182 P **P** **05 56 18.7 -2.0**
WRA LR LR 06 19 15.6
WRA Warramunga Arr 56.84 182 *i*P **P** **05 56 18.7 -1.9**
WRA pmax pmax
comp=Z,3.0nm,0.6s
WRA Warramunga Arr 56.84 182 P **P** **05 56 18.7 -2.0**
comp=Z,2.8nm,0.6s,mb4.5,baz=359,slow=7.7,SNR=53
WRA LR LR 06 19 15.6
comp=Z,81nm,20.1s,MS3.8,baz=325,slow=34
ASAR Alice Springs 60.55 183 P **P** **05 56 45.0 -1.5**
comp=Z,1.5nm,0.6s,mb4.3,baz=12,slow=15,SNR=20
RES Resolute Bay 63.42 13 *e*P **P** **05 57 03.8 -1.4**
JOF Joensuu 63.95 331 *e*p **P** **05 57 04.0 -4.9**
OBN Obninsk 65.59 322 *e*P **P** **05 57 18.2 -1.5**
OBN *e* 05 57 49.2
OBN pmax pmax
comp=Z,5.0nm,1.1s,mb4.7
OBN MLR MLR
comp=Z,100nm,17.0s,MS4.1
YKW3 Yellowknife Ar 65.59 29 *e*P **P** **05 57 18.9 -0.7**
YKA Yellowknife Ar 65.63 29 *i*P **P** **05 57 18.7 -1.1**
YKA pmax pmax
comp=Z,3.0nm,0.7s
YKA Yellowknife Ar 65.63 29 P **P** **05 57 18.8 -1.0**
comp=Z,3.1nm,0.7s,mb4.6,baz=305,slow=6.8,SNR=74
KAF Kangasniemi 66.34 331 *e*p **P** **05 57 21.3 -3.1**
baz=53,slow=6.0
FINES FINESS Array B 66.82 331 *i*P **P** **05 57 26.2 -1.3**
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 66.82 331 P **P** **05 57 26.1 -1.3**
comp=Z,3.1nm,0.8s,mb4.6,baz=74,slow=6.9,SNR=11
KIV Kislovodsk 67.80 309 *e*P **P** **05 57 28.0 -6.0**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,94nm,18.0s,MS4.1
STKA Stephens Creek 68.85 175 *e*P **P** **05 57 41.3 +0.8**
comp=Z,4.1nm,0.8s,mb4.7
STKA Stephens Creek 68.85 175 P **P** **05 57 40.2 -0.3**
comp=Z,4.3nm,0.7s,mb4.8,baz=349,slow=5.7,SNR=12
PGC Sidney 69.04 44 *e*P **P** **05 57 41.5 -0.2**
B04A Port Angeles 69.33 45⇓P **P** **05 57 43.6 +0.1**
baz=69
A04A Legoe Bay, Lum 69.42 44⇑P **P** **05 57 43.8 -0.2**
baz=69
NLWA Neilton Lookou 69.48 46 *e*P **P** **05 57 45.5 +1.1**
NLWA Neilton Lookou 69.48 46 P **P** **05 57 45.6 +1.2**
baz=69,SNR=6.5
A05A Maple Falls 69.61 44⇓P **P** **05 57 45.3 +0.1**
baz=69
D03A Wishkah Elem. 69.69 46⇑P **P** **05 57 46.5 +0.8**
baz=70
C04A Brinnon 69.82 45⇑P **P** **05 57 46.4 -0.1**
baz=70
GNW Green Mountain 69.98 45 *e*P **P** **05 57 48.4 +0.9**
B05A Bryant 70.01 44 P **P** **05 57 47.9 +0.3**
baz=70,SNR=6.1
E03A Lebam 70.12 46⇑P **P** **05 57 48.5 +0.1**
baz=70
JCW Jim Creek 70.14 44 P **P** **05 57 48.6 +0.2**
B06A Marblemount 70.20 44⇑P **P** **05 57 49.0 +0.1**
baz=70
A07A Ashnola River, 70.51 43 P **P** **05 57 50.7 0.0**
baz=70,SNR=5.7
E04A Onalaska 70.58 46⇓P **P** **05 57 51.6 +0.4**
baz=70
D05A Enumclaw 70.66 45⇓P **P** **05 57 51.8 +0.1**
baz=70
B07A Winthrop 70.99 43 P **P** **05 57 53.5 -0.1**
baz=71,SNR=5.3
FMW Mount Fremont 70.99 45 P **P** **05 57 53.9 +0.2**
F04A Amboy 71.12 46⇑P **P** **05 57 54.3 -0.2**
baz=71
E05A Randle 71.15 46⇓P **P** **05 57 54.7 +0.1**
baz=71
A08A Turner Farm, O 71.16 42⇓P **P** **05 57 53.5 -1.2**
baz=71
D06A Cle Elum 71.31 45⇑P **P** **05 57 55.1 -0.6**
baz=71
H03A Soap Creek Ran 71.31 48⇑P **P** **05 57 55.8 +0.1**
baz=71
C07A Waterville 71.46 44⇑P **P** **05 57 56.0 -0.6**
baz=71
B08A Colville Reser 71.47 43 P **P** **05 57 56.7 +0.1**
baz=71,SNR=7.5
G04A Mulino 71.49 47⇓P **P** **05 57 56.9 +0.1**
baz=71
A09A Danville 71.52 42 P **P** **05 57 57.2 +0.3**
baz=71,SNR=6.8
E06A Yakima 71.60 45⇓P **P** **05 57 57.7 +0.3**
baz=71,SNR=5.3
EDM Edmonton 71.63 36 *e*P **P** **05 57 57.9 +0.4**
F05A White Salmon 71.70 46⇓P **P** **05 57 58.8 +0.7**
baz=72
I03A Eugene 71.71 48⇑P **P** **05 57 57.6 -0.6**
baz=72
AKASG Malin Array Be 71.73 320 *i*P **P** **05 57 56.7 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 71.73 320 P **P** **05 57 55.3 -2.8**
comp=Z,2.3nm,0.7s,mb4.4,baz=49,slow=6.2,SNR=13
D07A Quincy 71.79 44⇓P **P** **05 57 57.7 -0.9**
baz=72
J02A Umpqua 71.88 49⇓P **P** **05 57 59.5 +0.4**
baz=72
H04A Detroit Lake 71.96 47⇓P **P** **05 57 59.4 -0.2**
baz=72,SNR=7.6
C08A Higginbotham F 71.96 43⇑P **P** **05 57 58.7 -0.9**
baz=72
B09A Rice 72.08 42 P **P** **05 58 00.5 +0.3**
baz=72,SNR=7.2
G05A Wanic 72.15 47⇓P **P** **05 58 00.9 +0.2**
baz=72
F06A Goldendale 72.16 46⇑P **P** **05 58 00.6 -0.1**
baz=72
J03A Ideyld Park 72.24 49⇓P **P** **05 58 01.8 +0.5**
baz=72
K02A Glendale 72.26 50⇓P **P** **05 58 01.6 +0.2**
baz=72
I04A Tendick Farm, 72.33 48 P **P** **05 58 02.4 +0.6**
baz=72,SNR=11
C09A Chrisman Ranch 72.38 43⇑P **P** **05 58 01.8 -0.3**
baz=72
D08A Wollman Farm, 72.46 44⇓P **P** **05 58 01.8 -0.7**
baz=72
NB2 NORSAR Subarra 72.48 335 P **P** **05 58 00.4 -2.0**
comp=Z,1.9nm,0.7s,mb4.3,baz=41,slow=6.2
NB2 NORSAR Subarra 72.48 335 P **P** **05 58 00.4 -2.0**
NB2 pmax pmax
comp=Z,2.0nm,0.7s,mb4.4
NOA NORSAR Array B 72.48 335 P **P** **05 58 00.8 -1.6**
comp=Z,1.6nm,0.8s,mb4.2,baz=42,slow=6.0,SNR=6.0
CROR Criterion Ridg 72.49 47 P **P** **05 58 03.2 +0.4**
HAWA Hanford 72.50 45 *e*P **P** **05 58 02.3 -0.5**
comp=Z,7.9nm,0.9s,mb4.8
L02A Cave Junction 72.54 50⇑P **P** **05 58 03.0 -0.1**
baz=72
G06A Carlson Farm, 72.55 46 P **P** **05 58 03.7 +0.6**
baz=72,SNR=5.3
F07A Phinny Hill Vi 72.57 45⇓P **P** **05 58 02.4 -0.9**
baz=72
BBOR Butler Butte 72.69 49 P **P** **05 58 04.7 +0.7**
E08A Dider Farm, El 72.71 44⇑P **P** **05 58 03.8 -0.3**
baz=72
A11A Hall Mountain, 72.71 41⇑P **P** **05 58 04.5 +0.4**
baz=72
NEW Newport 72.72 42 *e*P **P** **05 58 04.1 0.0**
comp=Z,11nm,1.3s,mb4.8
NEW Newport 72.72 42 *e*P **P** **05 58 04.1 0.0**
NEW pmax pmax
comp=Z,11nm,1.3s
I05A Bend 72.80 47⇓P **P** **05 58 04.8 +0.2**
baz=73
J04A Umpqua Nationa 72.83 49 P **P** **05 58 05.7 +0.8**
baz=73,SNR=7.0
VIPM Ingram Point 72.98 47 P **P** **05 58 06.2 +0.5**
H06A Lindquist Farm 73.01 47⇓P **P** **05 58 05.6 -0.3**
baz=73
G07A Ruggs Ranch, H 73.08 46 P **P** **05 58 06.7 +0.4**
baz=73,SNR=5.1
E09A Wood Farm, Sta 73.21 44 P **P** **05 58 07.0 0.0**
baz=73,SNR=5.5
F08A Pendleton 73.28 45 P **P** **05 58 07.8 +0.3**
baz=73,SNR=7.1
J05A Fort Rock 73.32 48 P **P** **05 58 08.5 +0.8**
baz=73,SNR=13
YBH Yreka Blue Hor 73.33 50 *e*P **P** **05 58 08.8 +1.0**
comp=Z,6.4nm,1.0s,mb4.7
YBH Yreka Blue Hor 73.33 50 *e*P **P** **05 58 08.8 +1.0**
YBH pmax pmax
comp=Z,6.0nm,1.0s
YBH Yreka Blue Hor 73.33 50 P **P** **05 58 08.9 +1.1**
baz=73,SNR=6.2
D10A Wagner Farm, O 73.36 43⇑P **P** **05 58 07.5 -0.4**
baz=73
K04A Chilquin 73.42 49⇑P **P** **05 58 08.9 +0.6**
baz=73
M02C Callahan 73.44 50⇑P **P** **05 58 09.2 +0.7**
baz=73
G08A Pilot Rock 73.48 45⇑P **P** **05 58 08.6 0.0**
baz=73
H07A Lands Inn, Kim 73.54 46⇓P **P** **05 58 09.4 +0.4**
baz=73
I06A Prineville 73.55 47⇓P **P** **05 58 09.3 +0.3**
baz=73
E10A Myers Farm, Un 73.80 44⇑P **P** **05 58 10.3 -0.1**
baz=74
M04C Macdoel 73.83 50 P **P** **05 58 11.3 +0.5**
baz=74,SNR=14
K05A Summer Lake 73.85 48⇑P **P** **05 58 11.5 +0.6**
baz=74,SNR=9.8
I07A Izee 73.88 47 P **P** **05 58 11.3 +0.3**
baz=74,SNR=5.1
M03C McCloud 73.95 50 P **P** **05 58 12.3 +0.8**
baz=74,SNR=6.3
J06A Christmas Vall 73.99 48 P **P** **05 58 11.8 +0.1**
baz=74,SNR=7.0
F10A Beach Ranch, E 74.04 44⇑P **P** **05 58 11.6 -0.3**
baz=74
B13A Whitefish 74.06 41 P **P** **05 58 12.3 +0.3**
baz=74,SNR=5.7
WDC Whiskeytown Da 74.10 51 P **P** **05 58 11.8 -0.5**
baz=74,SNR=6.9
H08A Prairie City 74.10 46 P **P** **05 58 12.5 +0.3**
baz=74,SNR=7.3
O02C Red Bluff 74.17 51⇓P **P** **05 58 12.8 0.0**
baz=74
K06A Valley Falls 74.19 48⇓P **P** **05 58 13.3 +0.4**
baz=74,SNR=8.1
L05A Lakeview 74.29 49⇓P **P** **05 58 13.7 +0.3**
baz=74,SNR=6.0
E11A Bogner Ranch, 74.37 43⇓P **P** **05 58 12.8 -1.0**
baz=74
J07A Hines 74.41 47⇓P **P** **05 58 14.4 +0.3**
baz=74,SNR=13
D12A Red Ives Fores 74.41 42⇑P **P** **05 58 13.6 -0.4**
baz=74
C13A Hot Springs 74.44 42 P **P** **05 58 14.4 +0.2**
baz=74,SNR=9.1
M05C Lookout 74.50 50⇓P **P** **05 58 15.0 +0.3**
baz=74
G10A Bishop Farm, J 74.51 45 P **P** **05 58 15.0 +0.3**
baz=74,SNR=7.4
I08A Drewsey 74.52 46⇓P **P** **05 58 15.0 +0.3**
baz=74
GASB Alder Springs 74.52 52⇑P **P** **05 58 15.3 +0.4**
baz=74
H09A Durkee 74.59 45⇑P **P** **05 58 15.4 +0.3**
baz=74
HATC Hat Creek Radi 74.63 50⇑P **P** **05 58 15.9 +0.4**
baz=74
BMO Blue Mountains 74.68 45 *e*P **P** **05 58 15.9 +0.3**
comp=Z,7.8nm,1.0s,mb4.7
LBCM Butte Creek Ri 74.68 50 P **P** **05 58 15.8 +0.1**
F11A Grangeville 74.69 44 P **P** **05 58 15.7 0.0**
baz=74,SNR=11
C14A Swan Lake 74.82 41⇑P **P** **05 58 16.5 +0.1**
baz=75
K07A Rock Creek Ran 74.85 48⇑P **P** **05 58 16.7 0.0**
baz=75,SNR=8.5
D13A Huson 74.86 42⇓P **P** **05 58 15.8 -0.9**
baz=75,SNR=5.8
J08A Circle Bar Ran 74.91 47 P **P** **05 58 17.3 +0.4**
baz=75,SNR=9.1
G11A Walters Elk Ra 74.92 44 P **P** **05 58 16.6 -0.5**
baz=75,SNR=16
I09A Lost Marbles R 74.96 46⇓P **P** **05 58 17.1 -0.2**
baz=75
M06C Likely Place G 75.00 50⇓P **P** **05 58 17.6 0.0**
baz=75
MNRC McLaughlin Nat 75.15 52⇑P **P** **05 58 18.6 +0.2**
baz=75
O04C Chester 75.15 51 P **P** **05 58 18.9 +0.5**
baz=75,SNR=11
H10A Noah's Angus R 75.15 45 P **P** **05 58 18.4 0.0**
baz=75,SNR=6.4
L07A Adell 75.20 48⇑P **P** **05 58 19.3 +0.6**
baz=75
F12A Elk City 75.27 43 P **P** **05 58 19.0 0.0**
baz=75,SNR=16
K08A Mann Creek Ran 75.28 47 P **P** **05 58 19.9 +0.8**
baz=75,SNR=6.4
MSO Missoula 75.31 42 *e*P **P** **05 58 19.0 -0.3**
comp=Z,10nm,1.5s,mb4.6
J09A Fry Pan Ranch, 75.33 47 P **P** **05 58 20.1 +0.7**
baz=75,SNR=10.0
ORV Oroville 75.34 51 P **P** **05 58 18.9 -0.6**
baz=75,SNR=5.8
WVOR Wild Horse Val 75.37 48 *e*P **P** **05 58 18.6 -1.1**
comp=Z,11nm,1.5s,mb4.7
WVOR Wild Horse Val 75.37 48 *e*P **P** **05 58 18.6 -1.1**
WVOR pmax pmax
comp=Z,11nm,1.5s,mb4.7
D14A Greenough 75.38 42 P **P** **05 58 19.1 -0.5**
baz=75,SNR=8.2
E13A Victor 75.42 42⇓P **P** **05 58 19.3 -0.6**
baz=75
I10A Payette 75.43 45⇑P **P** **05 58 20.1 +0.1**
baz=75
CVS Carmenet Viney 75.45 53⇑P **P** **05 58 20.1 -0.1**
baz=75
OHCM Honcut 75.48 52 *e*P **P** **05 58 20.2 -0.2**
H11A Donnelly 75.50 45 P **P** **05 58 20.1 -0.3**
baz=75,SNR=5.3
Q03C Winters 75.56 52⇑P **P** **05 58 20.9 0.0**
baz=75
CHMT Chamberlain Mo 75.62 42 *e*P **P** **05 58 20.8 -0.3**
FFC Flin Flon 75.66 31 *e*P **P** **05 58 20.1 -1.1**
comp=Z,13nm,1.1s,mb5.0
FFC Flin Flon 75.66 31 *e*P **P** **05 58 20.1 -1.0**
FFC pmax pmax
comp=Z,13nm,1.1s,mb5.0
N06A Buffalo Meadow 75.66 50 P **P** **05 58 21.9 +0.5**
baz=76,SNR=9.3
M07A Soldier Meadow 75.68 49 P **P** **05 58 22.5 +1.0**
baz=76,SNR=7.5
L08A Fields 75.69 48 P **P** **05 58 22.4 +0.8**
baz=76,SNR=6.1
K09A Rome 75.74 47 P **P** **05 58 22.3 +0.5**
baz=76,SNR=6.2
E14A Clinton 75.81 42⇑P **P** **05 58 21.4 -0.7**
baz=76
BEKR Beckwourth 75.87 51 P **P** **05 58 22.6 +0.1**
baz=76,SNR=11
O06A Flanigan 76.02 50 P **P** **05 58 23.8 +0.3**
baz=76,SNR=7.7
P05C Yuba Gap, Truc 76.05 51⇓P **P** **05 58 23.2 -0.4**
baz=76
M08A Happy Creek Ra 76.12 48⇑P **P** **05 58 24.1 +0.1**
baz=76
L09A Wilkinson Ranc 76.19 48⇑P **P** **05 58 24.5 +0.1**
baz=76
K10A MacKenzie Ranc 76.19 47⇑P **P** **05 58 24.2 -0.2**
baz=76
H12A Diamond D Ranc 76.24 44 P **P** **05 58 24.7 +0.1**
baz=76,SNR=9.8
G13A Cobalt 76.24 44⇓P **P** **05 58 23.4 -1.2**
baz=76
E15A Deer Lodge 76.26 42 P **P** **05 58 24.5 -0.2**
baz=76,SNR=6.8
F14A Wisdom 76.26 43⇑P **P** **05 58 24.2 -0.5**
baz=76
LAVA Lava Cap Winer 76.29 52 P **P** **05 58 25.1 0.0**
baz=76,SNR=5.7
MFID Camas Ranch 76.40 46⇓P **P** **05 58 25.7 +0.1**
baz=76
R04C Big Horse Ranc 76.47 52⇑P **P** **05 58 26.0 0.0**
baz=76
PAHR Pah Rah Range 76.56 50 *e*P **P** **05 58 26.9 +0.4**
comp=Z,7.6nm,1.1s,mb4.7
H13A Challis 76.56 44⇑P **P** **05 58 26.4 0.0**
baz=76
WCN Washoe City 76.58 51⇓P **P** **05 58 26.9 +0.3**
baz=76
N08A GE Springer Mi 76.67 49 P **P** **05 58 27.4 +0.2**
baz=76,SNR=5.5
K11A Parker Ranch, 76.68 46⇑P **P** **05 58 27.1 0.0**
baz=76
F15A Butte 76.71 42⇑P **P** **05 58 27.1 -0.2**
baz=76
R05C Kirkwood Meado 76.74 51⇑P **P** **05 58 27.8 +0.3**
baz=77
LRM Limekiln Ridge 76.75 42 *e*P **P** **05 58 27.8 +0.4**
L10A Juniper Basin 76.86 47⇓P **P** **05 58 28.4 +0.3**
baz=77
CMB Columbia Colle 76.95 52 *e*P **P** **05 58 28.0 -0.7**
comp=Z,11nm,1.4s,mb4.8
CMB Columbia Colle 76.95 52 *e*P **P** **05 58 28.0 -0.7**
CMB pmax pmax
comp=Z,11nm,1.4s,mb4.8
CMB Columbia Colle 76.95 52 P **P** **05 58 29.0 +0.2**

	baz=77,SNR=6.9							
DLMT	**Dillon**	**76.96**	**43**	*e*P		**P**	**05 58 29.1**	**+0.4**
PACP	**Pacheco Peak**	**76.99**	**53**	⇑P		**P**	**05 58 28.9**	**-0.1**
	baz=77							
N09A	**Rock Creek Ran**	**76.99**	**48**	⇑P		**P**	**05 58 29.2**	**+0.3**
	baz=77							
I13A	**Wildhorse Cree**	**77.05**	**44**	⇑P		**P**	**05 58 29.5**	**+0.3**
	baz=77							
HLID	**Hailey**	**77.11**	**45**	*e*P		**P**	**05 58 29.7**	**+0.2**
HLID	**Hailey**	**77.11**	**45**	P		**P**	**05 58 29.9**	**+0.4**
	baz=77,SNR=5.3							
G15A	**Dillon**	**77.15**	**43**	P		**P**	**05 58 29.6**	**-0.1**
	baz=77,SNR=13							
M10A	**I.L. Ranch, Tu**	**77.16**	**47**	⇑P		**P**	**05 58 30.4**	**+0.6**
	baz=77							
R06C	**Coleville**	**77.24**	**51**	⇑P		**P**	**05 58 30.7**	**+0.3**
	baz=77							
J13A	**Cove Ranch, Pi**	**77.35**	**45**	⇓P		**P**	**05 58 31.1**	**+0.3**
	baz=77							
K12A	**Draper Farm, C**	**77.42**	**46**	⇑P		**P**	**05 58 31.5**	**+0.3**
	baz=77							
O09A	**Fish Creek Ran**	**77.61**	**49**	⇑P		**P**	**05 58 33.1**	**+0.7**
	baz=77							
M11A	**Holland Ranch,**	**77.66**	**47**	⇑P		**P**	**05 58 33.5**	**+0.8**
	baz=78							
L12A	**House Creek Ra**	**77.66**	**46**	⇑P		**P**	**05 58 33.5**	**+0.8**
	baz=78							
R07C	**Lee Vining**	**77.75**	**51**	⇓P		**P**	**05 58 33.1**	**-0.2**
	baz=78							
K13A	**Stover Farm, H**	**77.87**	**45**	⇓P		**P**	**05 58 34.4**	**+0.5**
	baz=78							
O10A	**Cortez Mining,**	**77.95**	**48**	⇓P		**P**	**05 58 34.6**	**+0.3**
	baz=78							
Q08A	**Gabbs**	**77.97**	**50**	P		**P**	**05 58 35.0**	**+0.5**
	baz=78,SNR=5.2							
T06C	**Millerton Lake**	**78.00**	**53**	⇓P		**P**	**05 58 34.3**	**-0.3**
	baz=78							
NVAR	**Mina Array Bea**	**78.01**	**51**	P		**P**	**05 58 35.2**	**+0.5**
	comp=Z,2.8nm,0.8s,mb4.4,baz=304,slow=3.7,SNR=23							
KCC	**Kaiser Creek**	**78.05**	**52**	⇓P		**P**	**05 58 35.1**	**+0.1**
	baz=78							
N11A	**Elko Archery C**	**78.08**	**48**	⇑P		**P**	**05 58 35.4**	**+0.4**
	baz=78							
M12A	**Wells**	**78.18**	**47**	⇑P		**P**	**05 58 35.8**	**+0.3**
	baz=78,SNR=5.4							
R08A	**Mina**	**78.18**	**51**	⇓P		**P**	**05 58 35.9**	**+0.3**
	baz=78							
L13A	**Double Diamond**	**78.31**	**46**	⇓P		**P**	**05 58 37.1**	**+0.8**
	baz=78							
P10A	**Eureka**	**78.39**	**49**	⇓P		**P**	**05 58 37.2**	**+0.4**
	baz=78							
K14A	**Jones Ranch, D**	**78.45**	**45**	⇓P		**P**	**05 58 37.9**	**+0.8**
	baz=78							
N12A	**Clover Valley,**	**78.46**	**47**	⇑P		**P**	**05 58 38.0**	**+0.8**
	baz=78							
O11A	**Cowboy Ranch,**	**78.55**	**48**	⇑P		**P**	**05 58 38.2**	**+0.5**
	baz=78							
HELL	**Mitchell Peak,**	**78.63**	**53**	⇓P		**P**	**05 58 37.6**	**-0.6**
	baz=78							
M13A	**Montello**	**78.65**	**46**	⇓P		**P**	**05 58 38.6**	**+0.4**
	baz=78							
S08C	**White Mtn Res**	**78.66**	**51**	⇓P		**P**	**05 58 38.9**	**+0.6**
	baz=78							
LKWY	**Lake**	**78.66**	**42**	*e*P		**P**	**05 58 40.5**	**+2.3**
IMW	**Indian Meadow**	**78.81**	**43**	*e*P		**P**	**05 58 40.0**	**+1.0**
	comp=Z,6.0nm,0.8s,mb4.7							
FLWY	**Flagg Ranch**	**78.82**	**43**	*e*P		**P**	**05 58 41.0**	**+2.0**
DCID1	**Drake Creek**	**78.88**	**43**	*e*P		**P**	**05 58 40.7**	**+1.3**
R09A	**Tonopah**	**78.89**	**50**	P		**P**	**05 58 39.6**	**+0.1**
	baz=79,SNR=6.6							
RLMT	**Red Lodge**	**78.89**	**41**	*e*P		**P**	**05 58 39.6**	**+0.1**
Q10A	**Clear Creek Ra**	**78.93**	**50**	⇓P		**P**	**05 58 40.0**	**+0.3**
	baz=79							
N13A	**Wendover, West**	**78.95**	**47**	⇑P		**P**	**05 58 40.2**	**+0.4**
	baz=79							
CLL	**Collm**	**78.95**	**328**	*e*P		**P**	**05 58 37.0**	**-2.6**
O12A	**Currie**	**79.01**	**48**	⇑P		**P**	**05 58 40.4**	**+0.2**
	baz=79,SNR=6.1							
MOOW	**Moose Ponds**	**79.02**	**43**	*e*P		**P**	**05 58 41.1**	**+1.0**
M14A	**Sheep Mountain**	**79.03**	**46**	⇑P		**P**	**05 58 40.5**	**+0.2**
	baz=79							
TPAW	**Teton Pass**	**79.08**	**43**	*e*P		**P**	**05 58 41.6**	**+1.1**
S09A	**Goldfield**	**79.11**	**51**	⇑P		**P**	**05 58 41.0**	**+0.3**
	baz=79							
SNOW	**Snow King Moun**	**79.20**	**43**	*e*P		**P**	**05 58 41.7**	**+0.5**
	comp=Z,6.0nm,0.8s,mb4.7							
REDW	**Red Top Meadow**	**79.22**	**43**	*e*P		**P**	**05 58 42.0**	**+0.7**
	comp=Z,9.2nm,1.1s,mb4.7							
Q11A	**Duckwater**	**79.37**	**49**	⇓P		**P**	**05 58 42.1**	**0.0**
	baz=79							
S10A	**Tonopah Range,**	**79.38**	**50**	⇑P		**P**	**05 58 42.2**	**0.0**
	baz=79							
P12A	**McGill**	**79.42**	**48**	⇑P		**P**	**05 58 42.1**	**-0.3**
	baz=79							
GRAC	**Grapevine Rang**	**79.47**	**51**	P		**P**	**05 58 43.3**	**+0.6**
	baz=79,SNR=5.3							
N14A	**Grayback Hills**	**79.54**	**46**	⇓P		**P**	**05 58 43.0**	**-0.1**
	baz=79							
O13A	**Hicks Ranch, I**	**79.54**	**47**	⇑P		**P**	**05 58 43.0**	**0.0**
	baz=79							
M15A	**Larsen Ranch,**	**79.57**	**45**	⇑P		**P**	**05 58 42.9**	**-0.3**
	baz=79							
R11A	**Troy Canyon, C**	**79.72**	**49**	⇑P		**P**	**05 58 43.8**	**-0.3**
	baz=80							
Q12A	**Willow Creek R**	**79.74**	**49**	⇑P		**P**	**05 58 44.0**	**-0.2**
	baz=80							
DAC	**Darwin (Calif)**	**79.78**	**52**	*e*P		**P**	**05 58 44.4**	**0.0**
N15A	**Stansbury Isla**	**79.90**	**46**	⇑P		**P**	**05 58 45.4**	**+0.4**
	baz=80							
P13A	**Bates Ranch, G**	**79.96**	**48**	⇓P		**P**	**05 58 45.0**	**-0.3**
	baz=80							
HWUT	**Hardware Ranch**	**79.98**	**45**	*e*P		**P**	**05 58 46.0**	**+0.6**
	comp=Z,8.3nm,1.1s,mb4.6							
MPMC	**Manual Prospec**	**79.98**	**52**	⇑P		**P**	**05 58 45.4**	**-0.2**
	baz=80							
S11A	**Rachel**	**80.07**	**50**	⇓P		**P**	**05 58 46.4**	**+0.4**
	baz=80							
FURC	**Furnace Creek,**	**80.12**	**52**	⇓P		**P**	**05 58 46.0**	**-0.3**
	baz=80							
DUG	**Dugway**	**80.19**	**47**	*e*P		**P**	**05 58 47.0**	**+0.4**
DUG	**Dugway**	**80.19**	**47**	P		**P**	**05 58 47.1**	**+0.5**
	baz=80,SNR=5.7							
TPNV	**Topopah Spring**	**80.20**	**51**	*e*P		**P**	**05 58 46.6**	**-0.1**
	comp=Z,5.5nm,0.9s,mb4.5							
TPNV	**Topopah Spring**	**80.20**	**51**	*e*P		**P**	**05 58 46.6**	**-0.1**
TPNV					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5							
TPNV	**Topopah Spring**	**80.20**	**51**	P		**P**	**05 58 46.8**	**+0.1**
	baz=80,SNR=8.4							
LRMC	**Laurel Mountai**	**80.22**	**53**	⇑P		**P**	**05 58 46.4**	**-0.4**
	baz=80							
Q13A	**Wheeler Ranch,**	**80.28**	**48**	⇓P		**P**	**05 58 47.2**	**+0.1**
	baz=80							
KHC	**Kasperske Hory**	**80.30**	**326**⇑	*e*P		**P**	**05 58 46.6**	**-0.4**
KHC	**Kasperske Hory**	**80.30**	**326**	*e*P		**P**	**05 58 45.5**	**-1.5**
BW06	**Boulder Array**	**80.32**	**43**	*e*P		**P**	**05 58 47.1**	**-0.2**
	comp=Z,5.0nm,0.9s,mb4.4							
PDAR	**Pinedale Array**	**80.32**	**43**	P		**P**	**05 58 46.5**	**-0.7**
	comp=Z,3.9nm,0.8s,mb4.4,baz=290,slow=1.8,SNR=38							
R12A	**Pony Springs,**	**80.33**	**49**	⇑P		**P**	**05 58 47.0**	**-0.3**
	baz=80							
EDW2	**Edwards Air Fo**	**80.40**	**53**	⇑P		**P**	**05 58 47.5**	**-0.3**
	baz=80							
GERES	**GERESS Array B**	**80.45**	**326**	P		**P**	**05 58 46.5**	**-1.3**
	comp=Z,0.3nm,0.3s,mb3.6,baz=27,slow=3.6,SNR=4.3							
GERES					LR	LR	06 35 58.7	
	comp=Z,74nm,18.6s,MS4.1,baz=72,slow=37							
U10A	**Ash Meadows, A**	**80.49**	**51**	⇑P		**P**	**05 58 48.4**	**+0.1**
	baz=80							
T11A	**Corn Creek, Al**	**80.65**	**50**	⇓P		**P**	**05 58 49.7**	**+0.5**
	baz=80							
GSC	**Goldstone**	**80.89**	**53**	⇑P		**P**	**05 58 50.3**	**-0.2**
	baz=81							
MPU	**Maple Canyon**	**80.99**	**46**	*e*P		**P**	**05 58 51.3**	**+0.4**
S13A	**Holt Ranch, En**	**81.26**	**49**	⇑P		**P**	**05 58 52.3**	**-0.1**
	baz=81							
TUQ	**Turquoise Mtn.**	**81.37**	**52**	⇓P		**P**	**05 58 53.2**	**+0.2**
	baz=81							
BBRC	**Big Bear Sol-O**	**81.48**	**53**	⇑P		**P**	**05 58 53.3**	**-0.3**
	baz=81							
ULM	**Lac du Bonnet**	**81.48**	**31**	P		**P**	**05 58 51.9**	**-1.5**
	baz=319,slow=7.6							
HEC	**Hector,Ludlow**	**81.49**	**53**	⇓P		**P**	**05 58 53.5**	**-0.2**
	baz=81							
S14A	**Cedar City**	**81.56**	**49**	⇑P		**P**	**05 58 53.9**	**-0.1**
	baz=81							
T13A	**Saint George**	**81.60**	**50**	⇑P		**P**	**05 58 54.8**	**+0.7**
	baz=81							
MSU	**Marysvale**	**81.66**	**48**	*e*P		**P**	**05 58 55.5**	**+1.0**
V12A	**Nelson**	**81.85**	**51**	⇑P		**P**	**05 58 55.5**	**-0.1**
	baz=82							
GMRC	**Granite Mounta**	**81.95**	**52**	⇓P		**P**	**05 58 56.0**	**-0.1**
	baz=82							
U13A	**Pakoon Wash**	**81.95**	**50**	⇓P		**P**	**05 58 56.3**	**+0.2**
	baz=82							
T14A	**Hurricane**	**82.07**	**49**	⇓P		**P**	**05 58 56.7**	**+0.1**
	baz=82							
PFO	**Pinyon Flat Ob**	**82.19**	**54**	*e*P		**P**	**05 58 57.0**	**-0.3**
	comp=Z,7.5nm,1.0s,mb4.8							
PFO	**Pinyon Flat Ob**	**82.19**	**54**	*e*P		**P**	**05 58 57.0**	**-0.4**
PFO					pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8							
PFO	**Pinyon Flat Ob**	**82.19**	**54**	P		**P**	**05 58 57.1**	**-0.2**
	baz=82,SNR=5.8							
SRU	**San Rafael**	**82.23**	**46**	*e*P		**P**	**05 58 57.7**	**+0.3**
BELC	**Belle Mtn.**	**82.23**	**53**	⇑P		**P**	**05 58 56.7**	**-0.9**
	baz=82							
U14A	**Mt Trumbull**	**82.43**	**50**	⇓P		**P**	**05 58 58.6**	**+0.1**
	baz=82							
T15A	**Red Dirt Ranch**	**82.52**	**49**	⇑P		**P**	**05 58 59.0**	**-0.1**
	baz=82							
MONP	**Monument Peak**	**82.67**	**54**	⇓P		**P**	**05 58 58.5**	**-1.4**
	baz=82							
IRM	**Iron Mountain**	**82.67**	**53**	⇓P		**P**	**05 58 59.5**	**-0.3**
	baz=82							
BC3	**Big Chuckw Mtn**	**82.80**	**53**	⇓P		**P**	**05 59 00.1**	**-0.5**
	baz=83							
W13A	**Hualapai Mount**	**82.86**	**51**	⇑P		**P**	**05 59 01.0**	**+0.2**
	baz=83							
SWSC	**Sam W. Stewart**	**83.04**	**54**	⇓P		**P**	**05 59 01.2**	**-0.6**
	baz=83							
PDMCI	**Parker Dam,Lak**	**83.22**	**52**	⇑P		**P**	**05 59 02.2**	**-0.5**
	baz=83							
X13A	**Yucca**	**83.22**	**51**	P		**P**	**05 59 02.9**	**+0.1**
	baz=83,SNR=5.8							
W14A	**Seligman**	**83.28**	**51**	⇓P		**P**	**05 59 03.4**	**+0.4**
	baz=83							
Y12C	**Blythe**	**83.33**	**52**	⇓P		**P**	**05 59 03.4**	**+0.1**
	baz=83							
PV10	**Paradox Valley**	**83.58**	**46**	*e*P		**P**	**05 59 04.7**	**+0.3**
GLA	**Glamis**	**83.59**	**53**	⇓P		**P**	**05 59 04.1**	**-0.5**
	baz=83							
Y13A	**Salome**	**83.73**	**52**	⇑P		**P**	**05 59 05.1**	**-0.2**
	baz=84							
W15A	**Williams**	**83.81**	**50**	P		**P**	**05 59 06.7**	**+1.0**
	baz=84,SNR=5.7							
X14A	**Yava**	**83.89**	**51**	P		**P**	**05 59 06.9**	**+0.8**
	baz=84,SNR=7.1							
PV01	**Paradox Valley**	**84.01**	**46**	*e*P		**P**	**05 59 06.8**	**+0.1**
WUAZ	**Wupatki**	**84.12**	**49**	*e*P		**P**	**05 59 08.0**	**+0.6**
	comp=Z,8.4nm,1.1s,mb4.9							
WUAZ	**Wupatki**	**84.12**	**49**	⇓P		**P**	**05 59 07.8**	**+0.5**
	baz=84							
Y14A	**Wickenburg**	**84.17**	**52**	P		**P**	**05 59 07.4**	**-0.1**
	baz=84,SNR=6.2							
SMCO	**Snowmass**	**84.20**	**44**	*e*P		**P**	**05 59 08.1**	**+0.5**
	comp=Z,3.8nm,1.0s,mb4.6							
X15A	**Humboldt**	**84.28**	**51**	P		**P**	**05 59 08.9**	**+0.7**
	baz=84,SNR=11							
MVCO	**Mesa Verde**	**84.69**	**47**	*e*P		**P**	**05 59 10.7**	**+0.5**
MVCO	**Mesa Verde**	**84.69**	**47**	⇑P		**P**	**05 59 10.2**	**0.0**
	baz=84							
115A	**Sonoran Desert**	**85.47**	**52**	⇓P		**P**	**05 59 14.1**	**-0.1**
	baz=85							
SCHQ	**Schefferville**	**86.20**	**13**	P		**P**	**05 59 16.5**	**-0.8**
SCHQ	**Schefferville**	**86.20**	**13**	P		**P**	**05 59 16.5**	**-0.8**
	baz=356,slow=7.5							
217A	**Green Valley**	**86.98**	**52**	⇑P		**P**	**05 59 21.5**	**-0.1**
	baz=87							
ANMO	**Albuquerque**	**87.44**	**47**	*e*P		**P**	**05 59 23.8**	**0.0**
318A	**Bisbee**	**87.72**	**52**	⇑P		**P**	**05 59 25.4**	**+0.2**
	baz=88							
LPAZ	**La Paz**	**149.89**	**53**	PKPbc		PKPbc	06 06 23.7	-3.3
	comp=Z,2.9nm,1.0s,baz=296,slow=3.0,SNR=6.4							

NIC ***26*** *05:54:11.6±0.4,34.49N×33.44E,h11km,ML3.3,MW3.2*
ISK ***26*** *05:54:11.0,34.36N×33.27E,h23km,MD3.2*
NEIC ***26*** *05:54:11.6,34.49N×33.44E,h11km,ML3.3(NIC),After NIC.*
HLW ***26*** *05:54:11.5,34.87N×33.29E,h33km,Mb3.2*
CSEM ***26*** *05:54:13.6±0.1,34.61N×33.24E,h60km,Mw3.2,Error ellipse: s-maj=3.3km s-min=2.3km az=105.0*
ISCJB ***26*** *05:54:13.7±0.8,34.50N±004×33.39E±005,h20km±11km, Error ellipse: s-maj=8.4km s-min=5.4km az=37.4*

ISC 26 05:54:14.3±0.7,3455N±003×3339E±004,h17km±5km,n24, σ1°9°09/35,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSS	**Prodhromos**	**0.42**	**354**	P	**Pg**	**05 54 21.2**	**-1.6**
	16nm,0.3s						
CSS				S	**Sg**	**05 54 28.5**	**-0.1**
SZAC	**Souni-Zanaja**	**0.46**	**297**	P	**Pg**	**05 54 22.5**	**-1.1**
	32nm,0.2s						
SZAC				S	**Sg**	**05 54 29.1**	**-0.8**
MAMC	**Mammari**	**0.64**	**348**	P	**Pg**	**05 54 28.8**	**+1.9**
LEF	**Lefka**	**0.70**	**325**	PG	**Pg**	**05 54 27.7**	**-0.4**
LEF				SG	**Sg**	**05 54 39.8**	**+2.4**
PHNC	**Paralimni**	**0.70**	**49**	P	**Pg**	**05 54 29.6**	**+1.5**
	7.4nm,0.3s						
PHNC				S	**Sg**	**05 54 42.9**	**+5.5**
LFK	**Lefkose**	**0.74**	**9**	PG	**Pg**	**05 54 28.4**	**-0.4**
ALFC	**Alevga**	**0.89**	**314**	P	**Pb**	**05 54 29.6**	**-1.7**
	18nm,0.3s						
ALFC				S	**Sb**	**05 54 43.8**	**+1.0**
PPCY	**Paphos**	**0.92**	**292**	P	**Pb**	**05 54 30.3**	**-1.5**
PPCY				S	**Sb**	**05 54 43.6**	**-0.2**
AKMC	**Akamas**	**0.99**	**299**	P	**Pb**	**05 54 34.1**	**+1.1**
EREN	**Erenkoy**	**1.18**	**33**	PN	**Pn**	**05 54 35.8**	**-0.2**
IKL	**Isikli**	**1.71**	**8**	PN	**Pn**	**05 54 43.3**	**0.0**
ERMK	**Ermenek**	**2.13**	**350**	*i* P	**Pn**	**05 54 50.9**	**+1.9**
HWQ	**Hawqa**	**2.13**	**96**	*e*Pg	**Pg**	**05 55 03.0**	**+7.7**
HWQ				*e*Sg	**Sn**	**05 55 15.6**	**+0.4**
RCY	**Rachaya**	**2.28**	**117**	*e*Pg	**Pg**	**05 55 03.7**	**+5.6**
RCY				*e*Sg	**Sn**	**05 55 18.9**	**0.0**
MERS	**Mersin**	**2.50**	**21**	PN	**Pn**	**05 54 54.4**	**+0.3**
YAYL	**Yayladag**	**2.68**	**56**	*i* P	**Pn**	**05 54 54.5**	**-2.1**
YAYL	**Yayladag**	**2.68**	**56**	*i* P	**Pn**	**05 54 54.5**	**-2.1**
YAYL				*i* S	**Sn**	**05 55 28.1**	**-0.5**
COBT	**Iskenderun**	**3.06**	**49**	*i* P	**Pn**	**05 55 02.8**	**+0.9**
COBT	**Iskenderun**	**3.06**	**49**	*i* P	**Pn**	**05 55 02.8**	**+0.9**
COBT				*i* S	**Sn**	**05 55 35.4**	**-2.7**
AMAG	**Maghara**	**3.89**	**182**	P	**Pn**	**05 55 13.3**	**0.0**
AMAG				S	**Sn**	**05 55 58.8**	**+0.2**
HNKL	**Nakhl**	**4.63**	**174**	P	**Pn**	**05 55 23.8**	**+0.3**
SUZ		**4.71**	**186**	P	**Pn**	**05 55 25.2**	**+0.6**
KOT	**Kottamia**	**4.79**	**196**	P	**Pn**	**05 55 25.6**	**0.0**
GLL	**Jalalah**	**5.15**	**196**	P	**Pn**	**05 55 30.6**	**-0.1**

ISCJB ***26*** *06:15:22.4±1.1,38.24N±005×29.29E±007,h4km±7km, Error ellipse: s-maj=11.1km s-min=6.3km az=143.2*
CSEM ***26*** *06:15:22.1±0.2,38.30N×29.23E,h2km,MD3.6,Error ellipse: s-maj=5.7km s-min=2.5km az=67.0*
THE ***26*** *06:15:24.1,38.32N×29.35E,h3km,ML3.6*
ATH ***26*** *06:15:25.7,38.31N×29.58E,h12km±4km,MD3.6/5*
NEIC ***26*** *06:15:25.8,38.32N×29.58E,h10km,MD3.6(ATH), ML3.6(THE),After ATH.*

ISC 26 06:15:23.2±1.1,3820N±005×2029E±008,h12km±6km,n19, σ0°996/25,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.23**	**95**	*e*PG	**Pg**	**06 15 28.7**	**+0.5**
VLS				*e*SG	**Sg**	**06 15 32.4**	**+0.9**
KFL	**Anninata**	**0.40**	**103**	*e*Pg	**Pg**	**06 15 31.3**	**+0.2**
RLS	**Riolos of Patr**	**0.94**	**98**	*e*PB	**Pb**	**06 15 40.6**	**-0.8**
SELA	**Sela**	**1.26**	**86**	*e*Pg	**Pg**	**06 15 45.5**	**-2.0**
SELA				*e*Sg	**Sg**	**06 16 04.2**	**+0.2**
EVR	**Evrytania**	**1.39**	**58**	*e*PG	**Pn**	**06 15 46.9**	**-1.5**
KEK	**Kerkira**	**1.56**	**346**	*e*PB	**Pg**	**06 15 54.4**	**+1.2**
ITM	**Ithomi**	**1.65**	**128**	*e*PG	**Pg**	**06 15 54.3**	**-0.6**
PYL	**PYLOS**	**1.74**	**138**	*e*Pb	**Pb**	**06 15 54.9**	**-0.2**
MEV	**Metsovon**	**1.74**	**24**	*e*Pg	**Pn**	**06 15 53.4**	**+0.1**
AGG	**Agios Georgios**	**1.79**	**62**	*e*Pb	**Pb**	**06 15 55.1**	**-0.9**
AGG				*e*Sb	**Sb**	**06 16 18.4**	**0.0**
VLX	**Vlachokerasia**	**1.85**	**116**	*e*Pb	**Pb**	**06 15 57.6**	**+0.7**
VLX				*e*Sb	**Sg**	**06 16 24.1**	**+1.5**
VLX	**Vlachokerasia**	**1.85**	**116**	*e*Pb	**Pb**	**06 15 57.6**	**+0.7**
VLX				*e*Sb	**Sg**	**06 16 24.1**	**+1.4**
THL	**Klokotos Trika**	**1.91**	**44**	*e*PB	**Pb**	**06 15 57.8**	**-0.3**
LTK	**Loutraki**	**2.12**	**94**	*e*Pn	**Pn**	**06 15 58.9**	**+0.5**
LKR	**Lokris**	**2.17**	**77**	*e*PN	**Pn**	**06 15 59.8**	**+0.6**
VLI	**Veliai**	**2.57**	**124**	*e*PN	**Pn**	**06 16 08.0**	**+3.3**
VLI	**Veliai**	**2.57**	**124**	*e*Pg	**Pg**	**06 16 10.9**	**-1.6**
OHR	**Ohrid**	**2.94**	**7**	*e*Pn	**Pg**	**06 16 18.5**	**-1.0**
OHR				*e*Sn	**Sn**	**06 16 45.4**	**+0.6**
KRUS	**Krusevo**	**3.25**	**13**	*e*Pn	**Pn**	**06 16 14.8**	**+0.8**

IDC ***26*** *06:35:41.7±0.8,2201N×143.18E,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.9/17,mbtmp3.8/8,MS3.9/1,Ms1 3.9/1, ms1mx3.0/24,Error ellipse: s-maj=33.2km s-min=18.7km az=95.0*
ISCJB ***26*** *06:35:45.0±0.7,219N±0.1×1432E±02,h33km,mb3.8/8, Error ellipse: s-maj=27.6km s-min=15.2km az=174.4*
NEIC ***26*** *06:35:46.9±0.5,2199N×143.15E,h35km,Error ellipse: s-maj=22.0km s-min=11.8km az=92.0*

ISC 26 06:35:47.1±0.7,2200N±01×1432E±02,h35km,n11, σ0°72/10,mb3.8/8,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.32**	**323**	P	**P**	**06 40 23.3**	**+3.2**
	1.6nm,0.6s,baz=141,slow=8.1,SNR=5.4						
SONM	**Songino Array**	**39.16**	**320**	P	**P**	**06 43 10.7**	**-0.6**
	0.7nm,0.5s,mb3.7,baz=124,slow=6.3,SNR=6.6						
WRA	**Warramunga Arr**	**42.54**	**192**	P	**P**	**06 43 39.5**	**+0.1**
	0.7nm,0.6s,mb3.6,baz=14,slow=8.7,SNR=16						
ASAR	**Alice Springs**	**46.25**	**192**	P	**P**	**06 44 09.3**	**+0.3**
	0.5nm,0.6s,mb3.6,baz=16,slow=9.8,SNR=12						
STKA	**Stephens Creek**	**53.55**	**182**	P	**P**	**06 45 04.1**	**-0.3**
	0.7nm,0.3s,mb4.1,baz=102,slow=17,SNR=3.0						
MKAR	**Makanchi Array**	**54.54**	**313**	P	**P**	**06 45 11.1**	**-0.5**
	0.5nm,0.6s,mb3.7,baz=85,slow=10,SNR=3.2						
INK	**Inuvik**	**67.32**	**24**	P	**P**	**06 46 37.7**	**-0.3**
INK	**Inuvik**	**67.32**	**24**	P	**P**	**06 46 37.7**	**-0.3**
	1.5nm,1.1s,mb3.9,baz=289,slow=3.3,SNR=3.7						
YKA	**Yellowknife Ar**	**76.21**	**28**	P	**P**	**06 47 31.4**	**-0.1**
	0.5nm,0.5s,mb3.7,baz=294,slow=6.0,SNR=11						
YKA				LR	LR	07 19 57.7	
	comp=Z,66nm,18.4s,baz=205,slow=35						
NVAR	**Mina Array Bea**	**82.96**	**52**	P	**P**	**06 48 09.2**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=261,slow=3.7,SNR=6.8						
LPAZ	**La Paz**	**149.89**	**85**	PKPbc	PKPbc	06 55 35.6	+1.3
	1.2nm,0.6s,baz=258,slow=5.7,SNR=5.0						

ISCJB ***26*** *06:36:18.4±0.6,684N±006×7297W±006,h172km±6km, mb3.2/4,Error ellipse: s-maj=12.0km s-min=6.8km az=42.8*
FUNV ***26*** *06:36:18.5,675N×73.13W,h171km,MW3.6*
IDC ***26*** *06:36:19.1±4.0,673N×7295W,h166km±31km,mb3.0/4, mb1 3.4/5,mb1mx3.1/19,mbtmp3.1/5,Error ellipse: s-maj=68.9km s-min=30.2km az=87.0*
NEIC ***26*** *06:36:19.2±0.8,667N×7284W,h177km±10km,mb4.3/1, Error ellipse: s-maj=29.2km s-min=13.5km az=132.0*

ISC 26 06:36:19.4±0.6,682N±006×7296W±006,h166km±6km,n24, σ0°89/31,mb3.2/4,10C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.21**	**32**⇑	*i*P	**Pn**	**06 36 48.1**	**+0.6**
CAPV				*e*S	**Sn**	**06 37 09.8**	**+0.6**
ROSC	**El Rosal**	**2.39**	**215**	P	**Pn**	**06 37 00.1**	**+0.1**
	23nm,0.3s,baz=304,slow=2.1,SNR=194						
ROSC				S	**Sn**	**06 37 30.7**	**-0.7**
	15nm,0.3s,baz=90,slow=16,SNR=9.6						
SOCV	**Socops**	**2.54**	**55**⇑	*i*P	**Pn**	**06 37 02.9**	**+1.1**
SOCV				*e*S	**Sn**	**06 37 34.7**	**+0.2**
VIGV	**El Vigia**	**2.55**	**38**⇑	*i*P	**Pn**	**06 37 02.5**	**+0.6**
VIGV				*e*S	**Sn**	**06 37 34.7**	**-0.2**
SDV	**Santo Domingo**	**3.08**	**48**	*e*P	**Pn**	**06 37 09.5**	**+1.1**
SDV				*e*S	**Sn**	**06 37 48.6**	**+2.1**
ELOV	**Elorza**	**3.45**	**87**⇑	*i*P	**Pn**	**06 37 14.2**	**+1.1**
ELOV				*e*S	**Sn**	**06 37 53.5**	**-1.3**
VIRV	**Villa del Rosa**	**3.69**	**8**	*e*P	**Pn**	**06 37 14.9**	**-1.3**
VIRV				*e*S	**Sn**	**06 37 57.3**	**-3.2**
QARV	**Quebrada Arrib**	**4.13**	**35**⇑	*i

SSE AMB AMB
comp=Z,42nm,0.7s,mb4.9
SSE AMB AMB
comp=Z,136nm,6.3s
SSE LR LR
comp=N,186nm,19.4s
SSE LR LR
comp=E,224nm,19.5s
SSE LR LR
comp=Z,329nm,16.4s
ASAJ Asahikawa 22.07 359 P **P** 06 41 27.9 -0.5
comp=Z,9.4nm,0.8s,mb4.2,baz=82,slow=9.7,SNR=4.1
ASAJ LR LR 06 48 19.3
comp=Z,126nm,21.2s,baz=54,slow=32
QZH Quanzhou 22.60 282 P **P** 06 41 35.0 +0.8
QZH S **S** 06 45 37.0 +0.7
QZH AMB AMB
comp=Z,550nm,1.9s,mb5.6
QZH AMB AMB
comp=Z,820nm,5.5s
QZH LR LR
comp=Z,1μm,23.6s
DL2 Dalian 24.90 317 ⇑P **P** 06 41 55.8 +0.2
DL2 PP 06 42 36.5
DL2 AMB AMB
comp=Z,30nm,1.1s,mb4.6
DL2 AMB AMB
comp=Z,200nm,3.6s
YSS Yuzh-Sakhalins 24.91 360 *e*P **P** 06 41 59.3 +3.7
comp=Z,18nm,0.9s,mb4.5
YSS Yuzh-Sakhalins 24.91 360 *i* P **P** 06 41 55.1 -0.4
YSS pmax pmax
comp=Z,49nm,1.8s,mb4.6
MDJ Mudanjiang 25.14 337 P **P** 06 41 57.5 -0.2
MDJ S **S** 06 46 24.0 +7.2
MDJ AMB AMB
comp=Z,11nm,2.1s,mb3.9
MDJ AMB AMB
comp=Z,98nm,4.1s
MDJ LR LR
comp=E,154nm,19.9s
SNY Shenyang 25.66 325 ⇑P **P** 06 42 00.5 -1.9
SNY AMB AMB
comp=Z,13nm,0.9s,mb4.4
SNY AMB AMB
comp=Z,240nm,4.1s
CN2 Changchun 26.18 330 *e*P **P** 06 42 10.5 +3.4
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.5
CN2 AMB AMB
comp=Z,200nm,3.0s
TIA Tai'an 26.60 308 *e*P **P** 06 42 10.0 -1.0
HABR Khabarovsk 27.19 348 *e*P **P** 06 42 13.5 -2.6
HABR *e**PP pP 06 42 22.9 -11
HABR *e*S **S** 06 46 50.9 +1.9
HABR *e* 06 47 07.6
HABR *e*SS 06 48 00.7
HABR *e* 06 53 02.2
KLR Kul'dur 28.62 344 *e*P **P** 06 42 24.9 -4.0
KLR pmax pmax
comp=Z,37nm,1.6s,mb4.8
BJI Beijing 29.05 314 P **P** 06 42 32.5 -0.3
BJI AMB AMB
comp=Z,11nm,1.2s,mb4.4
BJI LR LR
comp=Z,190nm,31.4s
QIZ Qiongzhong 31.19 271 P **P** 06 42 51.5 -0.4
QIZ AMB AMB
comp=Z,7.0nm,1.1s,mb4.3
HHC Hu-ho-hao-te 32.53 313 *e*P **P** 06 43 06.8 +3.3
HHC AMB AMB
comp=Z,16nm,0.5s,mb5.1
HHC AMB AMB
comp=Z,168nm,3.8s
HIA Hailar 32.89 332 *i* P **P** 06 43 06.5 0.0
PET Petropavlovsk 33.22 17 *i* P **P** 06 43 10.2 +0.9
GYA Guiyang 33.39 285 P **P** 06 43 13.3 +2.1
GYA AMB AMB
comp=Z,20nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,120nm,4.9s
GYA LR LR
comp=N,510nm,18.4s
GYA LR LR
comp=E,490nm,19.8s
GYA LR LR
comp=Z,530nm,20.4s
HNR Honiara 35.36 150 LR LR 06 56 28.0
comp=Z,175nm,20.1s,baz=0.2,slow=34
CD2 Chengdu 36.12 293 *e*P **P** 06 43 36.3 +1.7
CD2 AMB AMB
comp=Z,20nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,40nm,5.4s
CD2 LR LR
comp=N,470nm,16.8s
CD2 LR LR
comp=E,810nm,19.2s
CD2 LR LR
comp=Z,800nm,18.0s
LZH Lanzhou 36.77 301 P **P** 06 43 38.0 -2.1
LZH AMB AMB
comp=Z,32nm,1.4s,mb5.1
LZH AMB AMB
comp=Z,145nm,6.7s
KMI Kunming 36.97 283 P **P** 06 43 43.5 +1.6
KMI AMB AMB
comp=Z,8.0nm,1.1s,mb4.6
KMI AMB AMB
comp=Z,186nm,5.1s
CIT Chita 37.63 330 *e*P **P** 06 43 47.8 +0.7
CIT *e* 06 45 16.8
MA2 Magadan 37.96 6 *e*P **P** 06 43 46.8 -2.9
comp=Z,22nm,1.3s,mb4.8
MA2 Magadan 37.96 6 *e*P **P** 06 43 46.8 -3.0
MA2 pmax pmax
comp=Z,22nm,1.3s,mb4.8
ULN Ulaanbaatar 38.65 321 *e*P **P** 06 43 54.8 -0.9
comp=Z,46nm,1.7s,mb5.0
ULN Ulaanbaatar 38.65 321 *e*P **P** 06 43 54.8 -1.0
ULN pmax pmax
comp=Z,46nm,1.7s,mb5.0
SONM Songino Array 39.03 320 P **P** 06 43 58.1 -0.8
comp=Z,5.2nm,0.6s,mb4.5,baz=131,slow=6.2,SNR=26
GTA Gaotai 40.59 305 *e*P **P** 06 44 13.8 +1.8
GTA PP PP 06 45 52.3 +5.4
GTA AMB AMB
comp=Z,13nm,1.5s,mb4.5
GTA AMB AMB
comp=Z,125nm,5.7s
GTA LR LR
comp=N,212nm,14.8s
GTA LR LR
comp=E,218nm,14.4s
GTA LR LR
comp=Z,237nm,15.2s
YAK Yakutsk 41.06 350 *e*P **P** 06 44 14.2 -1.3
YAK pmax pmax
comp=Z,13nm,0.9s,mb4.8
YAK pmax pmax
comp=N,17nm,1.6s
YAK pmax pmax
comp=E,7.0nm,1.5s
YAK pmax pmax
comp=Z,39nm,1.3s,mb5.1
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,24nm,1.3s
SEY Seymchan 41.41 6 *i* P **P** 06 44 18.2 -0.2
BOD Bodaibo 41.52 337 *e*P **P** 06 44 16.9 -2.4
BOD pmax pmax
comp=Z,9.0nm,1.4s,mb4.3
CTA Charters Tower 41.94 175 *e*P **P** 06 44 23.2 +0.1
comp=Z,9.1nm,0.8s,mb4.6
CTA Charters Tower 41.94 175 *e*P **P** 06 44 23.2 +0.1
CTA pmax pmax
comp=Z,9.0nm,0.8s
CTA Charters Tower 41.94 175 P **P** 06 44 23.7 +0.6
comp=Z,13nm,0.8s,mb4.7,baz=359,slow=7.4,SNR=5.8
CTAO Charters Tower 41.94 175 *e*P **P** 06 44 23.4 +0.3
comp=Z,30nm,1.3s,mb4.9
CTAO Charters Tower 41.94 175 *e*P **P** 06 44 23.4 +0.3
CTAO pmax pmax
comp=Z,30nm,1.3s,mb4.9
WB2 Warramunga Arr 42.53 192 ⇑*i*P **P** 06 44 26.8 -1.1
comp=Z,7.1nm,0.6s,mb4.6,baz=13,slow=8.6,SNR=62
FITZ Fitzroy Crossi 43.33 204 *e*P **P** 06 44 32.4 -2.0
comp=Z,9.3nm,0.6s,mb4.7
FITZ Fitzroy Crossi 43.33 204 P **P** 06 44 32.6 -1.8
comp=Z,4.8nm,0.6s,mb4.4,baz=18,slow=6.9,SNR=14
ASAR Alice Springs 46.24 192 P **P** 06 44 56.4 -1.1
comp=Z,5.9nm,0.6s,mb4.5,baz=15,slow=9.5,SNR=36
BILL Bilibino 48.27 11 *e*P **P** 06 45 12.1 -0.7
comp=Z,5.6nm,0.6s,mb4.6
BILL Bilibino 48.27 11 *i* P **P** 06 45 12.4 -0.3
BILL pmax pmax
comp=Z,7.0nm,0.7s,mb4.6
TAPN Taplejung 50.22 288 *e*P **P** 06 45 29.7 +1.4
comp=Z,20nm,0.8s,mb5.1
WMQ Urumqi 50.29 309 P **P** 06 45 28.5 0.0
WMQ AP pP 06 45 40.0 -8.1
WMQ XP sP 06 45 44.0 -13
WMQ PCP PcP 06 46 48.5 +2.1
WMQ PP PP 06 47 26.5 +2.0
WMQ AMB AMB
comp=Z,23nm,0.9s,mb5.1
WMQ AMB AMB
comp=Z,284nm,3.0s
WMQ LR LR
comp=N,77nm,20.6s
WMQ LR LR
comp=E,267nm,24.6s
WMQ LR LR
comp=Z,128nm,22.0s
TIXI Tiksi 50.35 354 *i* P **P** 06 45 29.2 +0.6
TIXI pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
ODAN Odare 50.56 287 *e*P **P** 06 45 31.6 +0.7
comp=Z,28nm,0.9s,mb5.3
JIRN Jiri 51.52 288 *e*P **P** 06 45 38.8 +0.7
comp=Z,38nm,0.7s,mb5.5
STKA Stephens Creek 53.57 182 *e*P **P** 06 45 52.0 -1.0
comp=Z,5.2nm,0.6s,mb4.7
STKA Stephens Creek 53.57 182 P **P** 06 45 52.4 -0.6
comp=Z,6.6nm,0.6s,mb4.8,baz=349,slow=7.9,SNR=19
TNA Tin City 53.73 23 *e*P **P** 06 45 54.0 +0.3
KOLN Koldanda 53.79 289 *e*P **P** 06 45 55.2 +0.4
comp=Z,18nm,0.8s,mb5.2
ZAA0 Zalesovo Array 53.90 322 *e*P **P** 06 45 53.8 -1.3
ZALV Zalesovo Beam 53.90 322 P **P** 06 45 53.8 -1.3
comp=Z,6.2nm,0.7s,mb4.8,baz=108,slow=7.3,SNR=9.0
ZAL Zalesovo 53.91 322 P **P** 06 45 53.8 -1.4
MKAR Makanchi Array 54.40 313 P **P** 06 45 58.4 -0.5
MKAR PcP PcP 06 47 01.2 -0.5
MKAR Makanchi Array 54.40 313 *i* P **P** 06 45 59.0 +0.1
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 54.40 313 P **P** 06 45 58.4 -0.5
comp=Z,3.4nm,0.6s,mb4.5,baz=92,slow=7.5,SNR=16
MKAR PcP PcP 06 47 01.2 -0.5
comp=Z,2.0nm,0.6s,baz=69,slow=5.7,SNR=5.0
KURK Kurchatov 57.17 317 *e*P **P** 06 46 18.3 -0.4
comp=Z,18nm,1.0s,mb5.1
KURK Kurchatov 57.17 317 *e*P **P** 06 46 18.3 -0.3
KURK pmax pmax
comp=Z,18nm,1.0s,mb5.1
TTA Tatalina 57.51 28 *e*P **P** 06 46 22.5 +1.7
KDAK Kodiak Island 58.05 35 P **P** 06 46 23.6 -1.1
comp=Z,3.4nm,0.6s,mb4.6,baz=153,slow=21,SNR=5.1
TKM2 Tokmak 2 59.06 308 *e*P **P** 06 46 32.3 +0.4
IMA2 Indian Mountai 59.33 25 *e*P **P** 06 46 34.9 +1.4
FRU Bishkek 59.78 308 *e*P **P** 06 46 38.5 +1.5
FRU *i* 06 46 43.5
FRU pmax pmax
comp=Z,68nm,2.2s,mb5.3
EKS2 Erkin-Say 60.41 308 *e*P **P** 06 46 42.8 +1.5
AML Almayashu 60.50 307 *e*P **P** 06 46 42.2 +0.3
SML Sawmill 60.78 30 *e*P **P** 06 46 42.2 -1.2
BRVK Borovoye 62.42 319 *e*P **P** 06 46 54.1 -0.5
DAWY Dawson 65.03 28 *e*P **P** 06 47 11.2 -0.4
INK Inuvik 67.36 24 *e*P **P** 06 47 25.3 -1.1
INK Inuvik 67.36 24 P **P** 06 47 25.1 -1.3
comp=Z,2.4nm,0.8s,mb4.1,baz=308,slow=6.0,SNR=17
ARU Arti 68.95 324 *e*P **P** 06 47 36.3 -0.3
ARU Arti 68.95 324 *c i*P **P** 06 47 36.6 0.0
ARU *e* 06 48 02.2
ARU *e* 06 50 06.5
ARU PPP 06 51 47.6
ARU S S 06 56 39.3 +4.5
ARU SS SS 07 01 01.3 +0.2
ARU pmax pmax
comp=Z,25nm,1.7s,mb4.8
DLBC Dease Lake 69.96 34 *e*P **P** 06 47 43.3 +0.6
AKTK Aktyubinsk 70.26 317 P **P** 06 47 44.4 -0.4
AKTO Aktyubinsk 70.26 317 P **P** 06 47 44.4 -0.4
comp=Z,2.2nm,0.6s,mb4.1,baz=69,slow=10,SNR=5.7
YKW3 Yellowknife Ar 76.24 28 *e*P **P** 06 48 18.7 -1.0
YKA Yellowknife Ar 76.27 28 P **P** 06 48 18.8 -1.0
YKA Yellowknife Ar 76.27 28 P **P** 06 48 18.8 -1.0
comp=Z,2.8nm,0.5s,mb4.2,baz=292,slow=5.9,SNR=48
GNW Green Mountain 76.80 44 *e*P **P** 06 48 25.0 +1.9
RES Resolute Bay 76.83 13 *e*P **P** 06 48 22.1 -0.7
RES *e*P 06 48 22.3
B05A Bryant 77.04 43 ⇑P **P** 06 48 24.8 +0.3
baz=77
J02A Umpqua 77.61 48 ⇓P **P** 06 48 28.1 +0.3
baz=78
I03A Eugene 77.62 48 ⇓P **P** 06 48 28.2 +0.3
baz=78
K02A Glendale 77.86 49 ⇑P **P** 06 48 29.2 0.0
baz=78
A07A Ashnola River, 77.86 42 ⇓P **P** 06 48 29.1 +0.1
baz=78
L02A Cave Junction 77.97 49 ⇓P **P** 06 48 30.5 +0.6
baz=78
J03A Ideyld Park 78.03 48 ⇑P **P** 06 48 30.4 +0.3
baz=78
H04A Detroit Lake 78.13 47 ⇑P **P** 06 48 30.8 +0.1
baz=78
D06A Cle Elum 78.19 44 ⇓P **P** 06 48 31.0 0.0
baz=78
B07A Winthrop 78.22 42 ⇓P **P** 06 48 31.1 0.0
baz=78
F05A White Salmon 78.22 45 ⇓P **P** 06 48 31.0 -0.2
baz=78
I04A Tendick Farm, 78.27 47 ⇑P **P** 06 48 31.4 0.0
baz=78
E06A Yakima 78.32 45 ⇑P **P** 06 48 31.5 -0.2
baz=78
C07A Waterville 78.52 43 ⇓P **P** 06 48 32.3 -0.4
baz=78
A08A Turner Farm, O 78.58 42 ⇓P **P** 06 48 33.2 +0.1
baz=78
ARCES ARCESS Array B 78.61 341 P **P** 06 48 32.2 -0.5
comp=Z,7.0nm,0.6s,mb4.7,baz=74,slow=9.0,SNR=19
N02C Big Bar 78.62 51 P **P** 06 48 33.5 +0.1
baz=78,SNR=6.8
J04A Umpqua Nationa 78.66 48 ⇑P **P** 06 48 34.2 +0.6
baz=79
YBH Yreka Blue Hor 78.74 50 *e*P **P** 06 48 34.7 +0.6
YBH Yreka Blue Hor 78.74 50 ⇑P **P** 06 48 34.5 +0.4
baz=79,SNR=6.1
B08A Colville Reser 78.75 42 P **P** 06 48 33.9 -0.1
baz=79,SNR=7.2
M02C Callahan 78.75 50 ⇑P **P** 06 48 34.5 +0.3
baz=79
H05A Madras 78.79 46 ⇑P **P** 06 48 34.5 +0.2
baz=79
A09A Danville 79.00 42 P **P** 06 48 35.5 +0.2
baz=79,SNR=6.5
P01C Double 8 Ranch 79.04 52 ⇓P **P** 06 48 35.7 -0.1
baz=79
C08A Higginbotham F 79.13 43 P **P** 06 48 35.5 -0.5
baz=79,SNR=6.3
O02C Red Bluff 79.20 51 ⇑P **P** 06 48 37.0 +0.4
baz=79,SNR=5.7
WDC Whiskeytown Da 79.25 51 *e*P **P** 06 48 36.9 0.0
comp=Z,2.9nm,0.7s,mb4.2
WDC Whiskeytown Da 79.25 51 *e*P **P** 06 48 36.9 0.0
WDC pmax pmax
comp=Z,3.0nm,0.7s,mb4.2
WDC Whiskeytown Da 79.25 51 ⇑P **P** 06 48 36.6 -0.3
baz=79
J05A Fort Rock 79.25 48 ⇑P **P** 06 48 37.1 +0.3
baz=79,SNR=12
HAWA Hanford 79.31 44 *e*P **P** 06 48 37.1 0.0
comp=Z,31nm,1.9s,mb4.8
M03C McCloud 79.31 50 P **P** 06 48 37.8 +0.6
baz=79,SNR=5.9
M04C Macdoel 79.34 49 ⇓P **P** 06 48 37.5 +0.1
baz=79,SNR=6.9
H06A Lindquist Farm 79.36 46 ⇓P **P** 06 48 37.4 0.0
baz=79
B09A Rice 79.47 42 ⇓P **P** 06 48 37.7 -0.2
baz=79
D08A Wollman Farm, 79.47 44 ⇑P **P** 06 48 37.7 -0.2
baz=79
G07A Ruggs Ranch, H 79.62 45 ⇓P **P** 06 48 38.5 -0.3
baz=80
K05A Summer Lake 79.67 48 ⇑P **P** 06 48 39.1 -0.1
baz=80
I06A Prineville 79.72 47 ⇓P **P** 06 48 39.4 0.0
baz=80
O03C Acorn Hollow, 79.81 51 ⇑P **P** 06 48 39.6 -0.3
baz=80
D09A Jones Farm, Ri 79.86 43 ⇑P **P** 06 48 40.0 0.0
baz=80
MNRC McLaughlin Nat 79.89 52 ⇑P **P** 06 48 40.6 +0.1
baz=80
H07A Lands Inn, Kim 79.92 46 ⇓P **P** 06 48 40.5 0.0
baz=80
HATC Hat Creek Radi 79.94 50 ⇓P **P** 06 48 40.5 -0.1
baz=80
L05A Lakeview 79.95 49 ⇑P **P** 06 48 40.7 0.0
baz=80
M05C Lookout 79.97 50 ⇓P **P** 06 48 40.8 0.0
baz=80
JOF Joensuu 79.99 334 *ep* **P** 06 48 38.1 -2.4
comp=Z,7.9nm,0.7s,mb4.7
JOF Joensuu 79.99 334 *e*P **P** 06 48 38.1 -2.4
JOF pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
J06A Christmas Vall 80.00 47 ⇑P **P** 06 48 40.7 -0.2
baz=80
CVS Carmenet Viney 80.06 53 ⇑P **P** 06 48 41.2 -0.1
baz=80
G08A Pilot Rock 80.08 45 ⇑P **P** 06 48 41.2 -0.1
baz=80
K06A Valley Falls 80.09 48 ⇑P **P** 06 48 41.1 -0.3
baz=80
I07A Izee 80.15 46 ⇓P **P** 06 48 41.5 -0.2
baz=80
E09A Wood Farm, Sta 80.16 44 ⇑P **P** 06 48 41.7 0.0
baz=80
C10A Spiker Farm, 80.21 42 ⇓P **P** 06 48 41.7 -0.2
baz=80
SUTB Sutter Butte 80.25 52 P **P** 06 48 41.8 -0.5
baz=80
ORV Oroville 80.35 51 ⇓P **P** 06 48 42.6 -0.2
baz=80
MOS Moscow 80.36 326 *e*P **P** 06 48 45.5 +2.9
A11A Hall Mountain, 80.37 41 ⇑P **P** 06 48 42.9 +0.1
baz=80
O04C Chester 80.38 50 P **P** 06 48 43.5 +0.5
baz=80,SNR=9.8
OHCM Honcut 80.44 52 *e*P **P** 06 48 42.9 -0.4
OHCM *e*PcP PcP 06 48 49.4 -0.7
EDM Edmonton 80.44 36 *e*P **P** 06 48 43.4 +0.3
EDM *e*PcP PcP 06 48 49.2 -0.7
M06C Likely Place G 80.50 49 ⇑P **P** 06 48 43.8 +0.2
baz=80
J07A Hines 80.53 47 P **P** 06 48 44.3 +0.5
baz=80,SNR=6.0
H08A Prairie City 80.55 46 ⇑P **P** 06 48 43.8 0.0
baz=80
O05C Quincy 80.62 51 ⇓P **P** 06 48 44.2 -0.2
baz=80
K07A Rock Creek Ran 80.82 48 P **P** 06 48 45.5 +0.2
baz=81,SNR=11
E10A Myers Farm, Un 80.84 44 ⇑P **P** 06 48 44.9 -0.4
baz=81
I08A Drewsey 80.84 46 ⇓P **P** 06 48 45.4 0.0
baz=81
F10A Beach Ranch, E 80.95 44 ⇓P **P** 06 48 46.1 +0.2
baz=81
L07A Adell 81.00 48 ⇓P **P** 06 48 46.2 -0.1
baz=81,SNR=12
BEKR Beckwourth 81.06 51 P **P** 06 48 46.6 0.0
baz=81,SNR=17
P05C Yuba Gap, Truc 81.08 51 ⇑P **P** 06 48 46.7 -0.1
baz=81
J08A Circle Bar Ran 81.11 47 P **P** 06 48 47.1 +0.3
baz=81,SNR=8.4
N06A Buffalo Meadow 81.12 50 ⇑P **P** 06 48 47.0 +0.1
baz=81
H09A Durkee 81.16 45 ⇓P **P** 06 48 46.9 -0.1
baz=81
OBN Obninsk 81.17 326 *i* P **P** 06 48 47.4 +0.5
OBN *e* 06 48 58.1
OBN *e* 06 51 53.1
OBN pmax pmax
comp=Z,7.0nm,1.4s,mb4.3
LAVA Lava Cap Winer 81.18 52 P **P** 06 48 47.2 -0.1
baz=81,SNR=8.0
R04C Big Horse Ranc 81.22 52 ⇓P **P** 06 48 47.0 -0.6
baz=81
G10A Bishop Farm, J 81.28 45 P **P** 06 48 47.7 0.0
baz=81,SNR=18
BMO Blue Mountains 81.33 45 *e*P **P** 06 48 47.8 -0.1
comp=Z,26nm,1.7s,mb4.8
BMO *e*PcP PcP 06 48 54.3 +0.4
BMO Blue Mountains 81.33 45 *e*P **P** 06 48 47.8 -0.2
BMO *e* 06 48 54.3
BMO pmax pmax
comp=Z,25nm,1.7s,mb4.8
K08A Mann Creek Ran 81.33 47 ⇓P **P** 06 48 47.7 -0.3
baz=81
O06A Flanigan 81.33 50 P **P** 06 48 48.3 +0.2
baz=81,SNR=8.3
WVOR Wild Horse Val 81.34 48 *e*P **P** 06 48 48.1 0.0
comp=Z,7.7nm,1.1s,mb4.5
WVOR *e*PcP PcP 06 48 54.3 +0.3
WVOR Wild Horse Val 81.34 48 *e*P **P** 06 48 48.1 0.0
WVOR *e* 06 48 54.3
WVOR pmax pmax
comp=Z,8.0nm,1.1s,mb4.5
M07A Soldier Meadow 81.35 49 ⇑P **P** 06 48 48.1 -0.1
baz=81
I09A Lost Marbles R 81.37 46 ⇓P **P** 06 48 48.2 0.0
baz=81
PACP Pacheco Peak 81.40 54 ⇑P **P** 06 48 48.6 +0.1
baz=81
HAST UC Hastings Re 81.42 54 ⇓P **P** 06 48 48.2 -0.4
baz=81
E11A Bogner Ranch, 81.46 43 P **P** 06 48 48.3 -0.3
baz=81,SNR=9.2
J09A Fry Pan Ranch, 81.60 47 P **P** 06 48 49.5 +0.1
baz=82,SNR=8.6
L08A Fields 81.63 48 ⇑P **P** 06 48 49.3 -0.3
baz=82,SNR=10
F11A Grangeville 81.68 44 ⇓P **P** 06 48 49.6 -0.1
baz=82,SNR=11
R05C Kirkwood Meado 81.69 52 ⇓P **P** 06 48 49.9 -0.1
baz=82
CMB Columbia Colle 81.70 52 *e*P **P** 06 48 49.9 -0.1
CMB *e*PcP PcP 06 48 56.5 +0.8
CMB Columbia Colle 81.70 52 P **P** 06 48 50.1 0.0
baz=82,SNR=15
N07B Gerlach 81.72 49 ⇑P **P** 06 48 49.8 -0.3
baz=82,SNR=5.6
D12A Red Ives Fores 81.73 43 ⇑P **P** 06 48 49.9 -0.1
baz=82
B13A Whitefish 81.75 41 ⇓P **P** 06 48 49.8 -0.3
baz=82
BSMT Bassoo Peak 81.77 42 *e*P **P** 06 48 51.1 +0.9
G11A Walters Elk Ra 81.80 44 P **P** 06 48 49.9 -0.6
baz=82,SNR=9.9
H10A Noah's Angus R 81.80 45 P **P** 06 48 49.8 -0.7
baz=82,SNR=8.6
WALA Waterton Lakes 81.81 40 *e*P **P** 06 48 51.5 +1.1
WALA *e*PcP PcP 06 48 57.4 +1.4
K09A Rome 81.86 47 ⇑P **P** 06 48 50.7 -0.1
baz=82
I10A Payette 81.95 46 ⇓P **P** 06 48 51.2 -0.1
baz=82
C13A Hot Springs 81.97 42 ⇑P **P** 06 48 51.0 -0.2
baz=82
S05C Merced 81.99 53 ⇓P **P** 06 48 51.4 -0.2
baz=82
U04C Hernandez Rese 82.01 54 ⇓P **P** 06 48 51.9 +0.1
baz=82
KIV Kislovodsk 82.12 314 *e*P **P** 06 48 52.5 +0.3
KIV pmax pmax
comp=Z,14nm,1.0s,mb4.8
KIV MLR MLR
comp=Z,76nm,18.0s
L09A Wilkinson Ranc 82.16 48 ⇑P **P** 06 48 52.5 +0.1

baz=82
R06C Coleville 82.21 52 ⇓P P 06 48 52.7 -0.1
baz=82
WAKR Walker 82.22 52 eP P 06 48 53.5 +0.7
H11A Donnelly 82.23 45 P P 06 48 52.3 -0.5
baz=82,SNR=12
D13A Huson 82.28 42 ⇓P P 06 48 52.6 -0.3
baz=82
N08A GE Springer Mi 82.30 49 ⇓P P 06 48 53.1 0.0
baz=82
F12A Elk City 82.31 44 ⇓P P 06 48 52.9 -0.2
baz=82
PKD Parkfield 82.34 54 ⇑P P 06 48 53.6 +0.1
baz=82
KAF Kangasniemi 82.40 335 ep P 06 48 50.1 -3.1
comp=Z,1.4nm,0.4s,mb4.1
KAF Kangasniemi 82.40 335 eP P 06 48 50.1 -3.1
KAF pmax pmax
comp=Z,1.0nm,0.4s,mb4.0
K10A MacKenzie Ranc 82.41 47 ⇓P P 06 48 53.6 -0.1
baz=82
C14A Swan Lake 82.44 41 ⇑P P 06 48 53.3 -0.4
baz=82
Q07A Schurz 82.52 51 ⇓P P 06 48 54.1 -0.3
baz=82
U05C Westside ANR, 82.52 54 ⇓P P 06 48 54.2 -0.2
baz=82
T06C Millerton Lake 82.58 53 P P 06 48 54.5 -0.2
baz=82,SNR=7.5
R07C Lee Vining 82.66 52 ⇓P P 06 48 55.0 -0.1
baz=83
N09A Rock Creek Ran 82.70 49 ⇓P P 06 48 54.7 -0.5
baz=83
E13A Victor 82.71 43 ⇓P P 06 48 55.0 -0.2
baz=83
FINES FINESS Array B 82.86 334 P P 06 48 53.7 -1.9
FINES FINESS Array B 82.86 334 P P 06 48 53.7 -1.9
comp=Z,1.8nm,0.5s,mb4.2,baz=71,slow=6.5,SNR=6.2
MFID Camas Ranch 82.86 46 ⇓P P 06 48 55.6 -0.4
baz=83
L10A Juniper Basin 82.96 48 ⇑P P 06 48 56.6 0.0
baz=83
K11A Parker Ranch, 82.98 47 ⇓P P 06 48 56.4 -0.2
baz=83
H12A Diamond D Ranc 83.05 45 ⇑P P 06 48 57.0 0.0
baz=83
NVAR Mina Array Bea 83.08 51 P P 06 48 57.1 -0.1
comp=Z,5.0nm,0.7s,mb4.5,baz=268,slow=7.5,SNR=40
CHMT Chamberlain Mo 83.10 42 eP P 06 48 58.1 +0.9
Q08A Gabbs 83.18 51 ⇓P P 06 48 57.7 -0.1
baz=83
O09A Fish Creek Ran 83.20 50 ⇓P P 06 48 57.5 -0.4
baz=83
HELL Mitchell Peak, 83.21 53 ⇓P P 06 48 57.6 -0.4
baz=83
G13A Cobalt 83.23 44 P P 06 48 57.5 -0.4
baz=83,SNR=12
R08A Mina 83.25 51 ⇑P P 06 48 58.0 -0.1
baz=83,SNR=5.3
MTUM Tungsten Hills 83.30 53 eP P 06 48 58.4 +0.1
J12A Stokes Ranch, 83.42 46 ⇑P P 06 48 58.5 -0.3
baz=83
H13A Challis 83.44 45 ⇓P P 06 48 59.0 0.0
baz=83
F14A Wisdom 83.49 43 ⇑P P 06 48 59.3 +0.1
baz=83
S08C White Mtn Res 83.53 52 P P 06 49 00.2 +0.7
baz=83,SNR=7.9
O10A Cortez Mining, 83.64 49 ⇓P P 06 48 59.9 -0.2
baz=84
G14A Jackson 83.67 44 ⇑P P 06 49 00.3 +0.2
baz=84
E15A Deer Lodge 83.69 42 P P 06 49 00.1 -0.1
baz=84,SNR=14
HLID Hailey 83.75 46 ⇑P P 06 49 00.4 -0.2
baz=84,SNR=6.2
I13A Wildhorse Cree 83.80 45 ⇑P P 06 49 01.0 +0.2
baz=84
K12A Draper Farm, C 83.80 47 ⇑P P 06 49 01.1 +0.2
baz=84
L12A House Creek Ra 83.92 47 ⇑P P 06 49 01.4 -0.1
baz=84
P10A Eureka 83.93 50 ⇓P P 06 49 01.5 -0.1
baz=84
F15A Butte 84.03 43 P P 06 49 02.0 0.0
baz=84,SNR=9.9
R09A Tonopah 84.04 51 ⇓P P 06 49 01.9 -0.3
baz=84,SNR=8.6
LRM Limekiln Ridge 84.07 43 eP P 06 49 02.4 +0.3
S09A Goldfield 84.13 52 ⇓P P 06 49 02.4 -0.3
baz=84,SNR=10
MCMT McKenzie Canyo 84.24 44 eP P 06 49 03.0 0.0
M12A Wells 84.29 48 ⇓P P 06 49 03.3 -0.1
baz=84,SNR=9.3
O11A Cowboy Ranch, 84.30 49 ⇓P P 06 49 03.6 +0.1
baz=84
GRAC Grapevine Rang 84.31 52 ⇓P P 06 49 03.5 -0.1
baz=84
G15A Dillon 84.33 43 ⇑P P 06 49 03.5 0.0
baz=84
K13A Stover Farm, H 84.34 46 ⇓P P 06 49 03.8 +0.2
baz=84
P11A Circle Ranch, 84.46 50 ⇑P P 06 49 04.0 -0.3
baz=84,SNR=5.2
S10A Tonopah Range, 84.51 51 ⇓P P 06 49 04.4 -0.2
baz=84
R10A Warm Springs 84.58 51 ⇑P P 06 49 05.0 +0.1
baz=84,SNR=5.8
MPMC Manual Prospec 84.59 53 ⇑P P 06 49 04.5 -0.5
baz=84,SNR=9.8
LRMC Laurel Mountai 84.67 54 ⇑P P 06 49 04.8 -0.6
baz=85
L13A Double Diamond 84.67 47 ⇓P P 06 49 05.6 +0.3
baz=85
EDW2 Edwards Air Fo 84.68 55 ⇓P P 06 49 05.3 -0.1
baz=85
EGMT Eagleton 84.75 40 ⇑P P 06 49 05.5 0.0
baz=85
M13A Montello 84.83 47 ⇓P P 06 49 06.0 -0.1
baz=85
O12A Currie 84.88 49 ⇓P P 06 49 06.4 0.0
baz=85
FURC Furnace Creek, 84.90 53 ⇑P P 06 49 06.5 0.0
baz=85
K14A Jones Ranch, D 85.00 46 ⇑P P 06 49 07.2 +0.3
baz=85
R11A Troy Canyon, C 85.07 51 ⇑P P 06 49 07.3 0.0
baz=85
TRCR Troy Canyon 85.07 51 eP P 06 49 08.1 +0.7
P12A McGill 85.09 49 ⇓P P 06 49 07.4 -0.1
baz=85
QLMT Earthquake Lak 85.15 43 eP P 06 49 08.9 +1.3
TPNV Topopah Spring 85.16 52 eP P 06 49 08.4 +0.5
comp=Z,14nm,1.0s,mb4.8
TPNV Topopah Spring 85.16 52 eP P 06 49 08.4 +0.6
TPNV pmax pmax
comp=Z,14nm,1.0s,mb4.8
TPNV Topopah Spring 85.16 52 ⇑P P 06 49 07.7 -0.1
baz=85,SNR=13
S11A Rachel 85.24 51 ⇓P P 06 49 07.8 -0.4
baz=85
M14A Sheep Mountain 85.32 47 ⇓P P 06 49 09.0 +0.4
baz=85
Q12A Willow Creek R 85.33 50 ⇑P P 06 49 09.0 +0.3
baz=85
GSC Goldstone 85.40 54 ⇑P P 06 49 08.9 -0.2
baz=85
O13A Hicks Ranch, I 85.47 49 ⇓P P 06 49 08.7 -0.6
baz=85
YMR Madison River 85.52 43 eP P 06 49 10.5 +1.0
comp=Z,17nm,1.0s,mb4.9
SHOC Shoshone 85.55 53 ⇑P P 06 49 09.7 -0.1
baz=86
FFC Flin Flon 85.66 32 eP P 06 49 09.7 -0.3
comp=Z,20nm,0.9s,mb5.0
FFC Flin Flon 85.66 32 eP P 06 49 09.7 -0.2
FFC pmax pmax
comp=Z,19nm,0.9s,mb5.0
YFT Old Faithful 85.70 44 eP P 06 49 13.2 +2.9
N14A Grayback Hills 85.71 48 ⇑P P 06 49 09.9 -0.6
baz=86
P13A Bates Ranch, G 85.73 49 ⇓P P 06 49 10.6 0.0
baz=86
R12A Pony Springs, 85.78 50 ⇑P P 06 49 10.6 -0.3
baz=86
BGU Big Grassy Mou 85.79 48 eP P 06 49 10.9 +0.1
T11A Corn Creek, Al 85.79 52 ⇑P P 06 49 10.8 -0.1
baz=86
DCID1 Drake Creek 85.85 45 eP P 06 49 15.8 +4.7
S12A Delamar Landin 85.91 51 ⇓P P 06 49 11.6 +0.1
baz=86
LKWY Lake 85.92 43 eP P 06 49 13.3 +1.8
comp=Z,9.1nm,1.0s,mb4.7
LKWY Lake 85.92 43 eP P 06 49 13.3 +1.8
LKWY pmax pmax
comp=Z,9.0nm,1.0s,mb4.7
Q13A Wheeler Ranch, 85.94 50 ⇓P P 06 49 11.5 -0.1
baz=86
FLWY Flagg Ranch 85.95 44 eP P 06 49 12.6 +1.0
comp=Z,27nm,1.3s,mb5.0
HEC Hector,Ludlow 85.95 54 ⇑P P 06 49 11.5 -0.3
baz=86
M15A Larsen Ranch, 85.95 47 ⇓P P 06 49 11.8 +0.1
baz=86
SPUT South Promonto 86.02 47 eP P 06 49 12.4 +0.4
TPAW Teton Pass 86.05 45 eP P 06 49 13.1 +0.9
comp=Z,52nm,2.1s,mb5.1
MOOW Moose Ponds 86.07 44 eP P 06 49 12.7 +0.5
N15A Stansbury Isla 86.15 47 ⇑P P 06 49 12.9 +0.2
baz=86
REDW Red Top Meadow 86.17 45 eP P 06 49 13.6 +0.9
comp=Z,41nm,1.9s,mb5.0
V11A Goodsprings 86.21 53 ⇑P P 06 49 13.0 -0.1
baz=86
LOHW Long Hollow 86.22 44 eP P 06 49 13.2 +0.3
comp=Z,13nm,1.4s,mb4.7
DUG Dugway 86.25 48 eP P 06 49 13.2 0.0
DUG Dugway 86.25 48 ⇑P P 06 49 13.0 -0.1
baz=86
PFO Pinyon Flat Ob 86.35 55 ⇓P P 06 49 13.4 -0.4
baz=86
RLMT Red Lodge 86.39 43 eP P 06 49 14.2 +0.4
GMRC Granite Mounta 86.47 54 ⇓P P 06 49 14.4 0.0
baz=86
HWUT Hardware Ranch 86.48 46 eP P 06 49 14.4 +0.1
BELC Belle Mtn. 86.54 55 ⇓P P 06 49 14.6 -0.1
baz=86
S13A Holt Ranch, En 86.63 51 ⇑P P 06 49 15.3 +0.2
baz=86
MONP Monument Peak 86.66 56 ⇑P P 06 49 15.3 0.0
baz=87
V12A Nelson 86.69 53 ⇑P P 06 49 15.3 -0.1
baz=87,SNR=7.5
CTU Camp Tracy 86.76 47 eP P 06 49 15.6 -0.1
T13A Saint George 86.83 51 ⇑P P 06 49 16.0 -0.1
baz=87
FCC Fort Churchill 86.84 26 eP P 06 49 14.6 -1.1
NLU North Lily Min 86.86 48 eP P 06 49 16.6 +0.4
CCUT Cedar City 87.00 51 eP P 06 49 17.2 +0.4
JLU Jordanelle 87.01 47 eP P 06 49 17.1 +0.3
U13A Pakoon Wash 87.05 52 ⇑P P 06 49 17.2 +0.1
baz=87
S14A Cedar City 87.05 50 ⇑P P 06 49 17.5 +0.3
baz=87
BC3 Big Chuckw Mtn 87.09 55 ⇓P P 06 49 17.3 -0.1
baz=87
IRM Iron Mountain 87.11 54 ⇑P P 06 49 17.7 +0.1
baz=87
MPU Maple Canyon 87.14 48 eP P 06 49 17.9 +0.3
AKASG Malin Array Be 87.19 324 P P 06 49 15.2 -2.3
comp=Z,0.6nm,0.6s,mb3.7,baz=52,slow=5.2,SNR=5.3
DAU Daniels Canyon 87.22 47 eP P 06 49 18.4 +0.4
BW06 Boulder Array 87.29 45 eP P 06 49 18.5 +0.3
PDAR Pinedale Array 87.29 45 P P 06 49 17.9 -0.3
comp=Z,1.4nm,0.7s,mb4.0,baz=255,slow=2.6,SNR=13
T14A Hurricane 87.41 51 ⇓P P 06 49 19.3 +0.4
baz=87
U14A Mt Trumbull 87.62 52 ⇑P P 06 49 20.2 +0.3
baz=88
W13A Hualapai Mount 87.66 53 ⇑P P 06 49 20.0 -0.2
baz=88
Y12C Blythe 87.75 55 ⇓P P 06 49 20.8 +0.2
baz=88
PDMCI Parker Dam,Lak 87.81 54 ⇓P P 06 49 20.9 +0.1
baz=88
GLA Glamis 87.82 55 ⇓P P 06 49 20.9 0.0
baz=88
X13A Yucca 87.92 54 ⇓P P 06 49 21.3 -0.1
baz=88
T15A Red Dirt Ranch 87.94 51 ⇓P P 06 49 21.2 -0.2
baz=88
W14A Seligman 88.21 53 ⇓P P 06 49 22.4 -0.3
baz=88,SNR=10.0
Y13A Salome 88.25 54 ⇑P P 06 49 23.1 +0.2
baz=88
SRU San Rafael 88.31 48 eP P 06 49 22.9 -0.2
NOA NORSAR Array B 88.63 339 P P 06 49 22.2 -1.9
comp=Z,0.4nm,0.8s,baz=51,slow=4.2,SNR=3.4
X14A Yava 88.67 53 P P 06 49 25.4 +0.4
baz=89,SNR=6.9
Y14A Wickenburg 88.82 54 P P 06 49 25.9 +0.3
baz=89,SNR=8.5
W15A Williams 88.83 52 ⇑P P 06 49 26.0 +0.4
baz=89
Z14A Wintersburg 89.11 54 ⇑P P 06 49 27.3 +0.3
baz=89
X15A Humboldt 89.15 53 ⇑P P 06 49 27.6 +0.4
baz=89,SNR=9.7
WUAZ Wupatki 89.33 52 eP P 06 49 28.6 +0.6
comp=Z,9.0nm,1.1s,mb4.7
WUAZ Wupatki 89.33 52 ⇑P P 06 49 28.6 +0.6
baz=89
PV10 Paradox Valley 89.68 48 eP P 06 49 29.9 +0.3
115A Sonoran Desert 89.94 55 ⇑P P 06 49 31.6 +0.6
baz=90
PV01 Paradox Valley 90.12 48 eP P 06 49 31.8 +0.1
116A Eloy 90.40 55 ⇓P P 06 49 33.5 +0.4
baz=90
SMCO Snowmass 90.72 47 eP P 06 49 34.9 +0.5
comp=Z,11nm,0.9s,mb5.0
TUC Tucson 91.21 54 eP P 06 49 36.5 -0.3
comp=Z,13nm,1.5s,mb4.8
TUC Tucson 91.21 54 eP P 06 49 36.5 -0.3
TUC pmax pmax
comp=Z,13nm,1.5s,mb4.8
ISCO Idaho Springs 91.32 46 eP P 06 49 37.7 +0.5
217A Green Valley 91.43 55 ⇓P P 06 49 38.3 +0.5
baz=91
218A Dragoon 91.92 54 ⇓P P 06 49 40.5 +0.4
baz=92
318A Bisbee 92.20 55 ⇑P P 06 49 41.7 +0.3
baz=92
SDCO Great Sand Dun 92.43 48 eP P 06 49 43.2 +0.8
ANMO Albuquerque 93.14 50 eP P 06 49 48.0 +2.2
comp=Z,3.3nm,1.1s,mb4.6
ANMO Albuquerque 93.14 50 eP P 06 49 48.0 +2.3
ANMO pmax pmax
comp=Z,3.0nm,1.1s
EIL Elat 93.86 304 LR LR 07 36 03.3
comp=Z,41nm,21.0s,baz=285,slow=38
CLL Collm 94.87 331 eP P 06 49 52.0 -1.3
BFO Black Forest 99.12 331 eP P 06 50 05.9 -6.6
comp=Z,23nm,0.6s
TORD Torodi Ar. Bea 128.45 309 PKP PKPdf 06 55 38.9 +0.2
comp=Z,0.4nm,0.6s,baz=18,slow=2.9,SNR=3.8
PLCA Paso Flores 146.05 131 PKPbc PKPbc 06 56 10.7 -0.4
comp=Z,2.4nm,0.8s,baz=226,slow=6.6,SNR=7.3
LPAZ La Paz 150.06 85 PKPbc PKPbc 06 56 22.6 +0.2
comp=Z,7.2nm,0.6s,baz=306,slow=2.6,SNR=30

TEH ***26*** *06:35:33.0, 29.27N×58.33E, h9km, ML5.0*
BGS ***26*** *06:36:26.5, 26.20N×59.79E, h10km, mb5.0*
ISCJB ***26*** *06:36:48.3±0.1, 29.07N±0.02×58.32E±0.02, h10km, mb4.9/154, MS3.9/40, Error ellipse: s-maj=2.6km s-min=2.1km az=9.1*
BJI ***26*** *06:36:48.1, 29.04N×57.78E, h37km, mB5.0, mb4.9, Ms4.6, Ms2.4.3*
CSEM ***26*** *06:36:49.1±0.0, 29.10N×58.30E, h16km, mb4.9/97, Ms4.2, Error ellipse: s-maj=1.6km s-min=1.4km az=18.0*
NEIC ***26*** *06:36:49.5, 28.98N×58.34E, h14km, mb4.8/76, MS4.7/1, ML5.0(THR), After THR.*
THR ***26*** *06:36:50.0±0.4, 29.17N×58.45E, h14km±3km, ML5.0*
MOS ***26*** *06:36:51.2±0.8, 29.03N×58.26E, h33km, mb5.0/64, Error ellipse: s-maj=7.0km s-min=3.8km az=124.0*
SZGRF ***26*** *06:36:52.4, 28.64N×58.01E, h33km, mb4.7, Southern Iran*
IDC ***26*** *06:36:58.0±4.6, 29.18N×58.39E, h75km±42km, mb4.5/29, mb1 4.6/29, mb1mx4.6/31, mbtmp4.5/29, MS3.8/16, Ms1 3.8/16, ms1mx3.6/45, Error ellipse: s-maj=13.3km s-min=10.5km az=150.0*
ISC 26 06:36:50.1±0.1**, 2905N**±0.02×**5832E**±0.02**, h10**km**,**

(h28km±2.4km**:pP-P), n561,**σ1§**23/577, mb4.9**/154**,**
MS3.9/40**, 97C-9D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBR	Kerman	1.65	305	ePg	Pg	06 37 20.8	-0.9
KRBR				eSg	Sg	06 37 43.8	+0.7
KRBR				e		09 14 33.3	
KRBR	Kerman	1.65	305	ePg	Pg	06 37 20.8	-0.9
KRBR				eSg	Sg	06 37 43.6	+0.5
KRBR				AML	AML	06 37 52.7	
	comp=N,28μm,0.5s						
KRBR	Kerman	1.65	305	ePg	Pg	06 37 20.8	-0.9
	SNR=90						
KRBR				eSg	Sg	06 37 43.6	+0.5
	comp=N,28μm,0.5s,SNR=90						
ZHSF	Zahedan	2.22	75	ePn	Pn	06 37 27.9	+1.0
ZHSF	Zahedan	2.22	75	ePg	Pn	06 37 27.8	+0.9
ZHSF				eSg	Sn	06 37 55.3	+0.9
IKOO		3.42	10	ePn	Pn	06 37 43.7	+0.3
IBAF	Bafgh	3.48	318	ePn	Pn	06 37 46.1	+1.9
IBAF				e		06 38 50.8	
	comp=Z,54μm,0.5s						
BANOM	Banah	3.59	210	P	Pb	06 37 50.0	-3.7
	SNR=64						
BANOM				⇓S	Sb	06 38 36.8	-0.5
ITEG		3.86	5	ePn	Pn	06 37 49.9	+0.4
ITEG				eSg	Sg	06 38 48.3	-5.7
IDAH		3.92	20	ePn	Pn	06 37 51.5	+1.2
IMEH	Mehriz	3.97	307	ePn	Pn	06 37 53.5	+2.5
IMEH				e		06 39 04.4	
	comp=Z,33μm,0.2s						
IMON		4.29	15	ePn	Pn	06 37 56.4	+1.0
ISRV	Sarvestan	4.56	275	ePn	Pn	06 38 04.1	+5.0
ISRV				eSn	Sn	06 38 55.2	+3.0
ISRV				e		06 39 52.2	
	comp=Z,21μm,0.5s						
HATD	Hatta, Dubai	4.63	205	P	Pn	06 38 02.8	+2.7
	SNR=40						
HATD	Hatta, Dubai	4.63	205	P	Pn	06 38 02.3	+2.2
ICHK	Chekchek	4.64	314	ePn	Pg	06 38 13.0	-6.0
ICHK				eSg	Sg	06 39 15.7	-3.4
ICHK				e		06 39 21.9	
	comp=Z,23μm,0.2s						
IPAR	Pars	4.66	281	ePn	Pn	06 38 04.6	+4.0
IPAR				e		06 39 43.0	
	comp=Z,14μm,0.4s						
ASHO	Ashiyiah	4.79	205	P	Pn	06 38 07.6	+5.3
	SNR=76						
ASHO				⇑S	Sn	06 39 05.4	+7.5
IMOK	Mook	4.91	271	ePn	Pn	06 37 54.5	-9.4
IMOK				e		06 39 50.2	
	comp=Z,10μm,0.4s						
ISAD	Sadrabad	4.92	307	eSg	Sg	06 39 24.3	-3.6
SHI	Shiraz	5.10	278	ePn	Pn	06 38 11.3	+4.7
SHI				e		06 38 45.3	
	comp=Z,4μm,0.3s						
BIDO	Bidbid	5.50	182	P	Pn	06 38 13.3	+1.2
	SNR=31						
HOQ	Hoqain	5.51	190	P	Pn	06 38 13.7	+1.4
	SNR=46						
SMDO	Samad	5.97	182	⇑P	Pn	06 38 20.6	+2.1
	SNR=35						
NASN	Na'in	6.03	310	ePn	Pn	06 38 21.9	+2.5
NASN				AML	AML	06 40 08.7	
	comp=N,307nm,0.5s						
IGAR	Garneh	6.16	303	ePn	Pn	06 38 27.0	+5.9
IGAR				e		06 40 44.0	
	comp=Z,4μm,0.3s						
BSY	Bisya	6.35	189	P	Pn	06 38 27.3	+3.5
	SNR=64						
BSYO	Bisya	6.36	189	P	Pn	06 38 27.3	+3.4
	SNR=64						
IZEF	Zefreh	6.42	308	ePn	Pn	06 38 27.3	+2.7
IZEF				e		06 40 37.6	
	comp=Z,3μm,0.3s						
WBK	Wadi Bani Khal	6.43	175	⇑P	Pn	06 38 26.1	+1.2
	SNR=25						
JMDO	Jabal Madar	6.65	182	P	Pn	06 38 30.1	+2.3
	SNR=67						
IKLH	Kalahroud	7.17	308	ePn	Pn	06 38 37.7	+2.7
IKLH				e		06 41 02.0	
	comp=Z,3μm,0.4s						
ISFB	Sefidab	7.41	317	ePn	Pn	06 38 40.3	+2.1
ISFB				e		06 41 27.0	
	comp=Z,3μm,0.5s						
IPAY	Payeh	7.41	4	ePn	Pn	06 38 40.0	+1.8
IPAY				e		06 38 46.8	
	comp=Z,4μm,0.2s						
IANJ	Anjiloo	7.41	331	ePg	Pn	06 38 38.8	+0.6
IANJ				eSn	Sn	06 39 58.0	-4.4
IANJ				e		06 41 22.9	
	comp=Z,3μm,0.4s						
IANJ	Anjiloo	7.41	331	eSn	Sn	06 39 58.0	-4.4
IMYA	Miamay	7.43	11	ePn	Pn	06 38 39.9	+1.4
IMYA				e		06 41 08.8	
	comp=Z,4μm,0.5s						
IAKL	Akhlamad	7.52	2	ePn	Pn	06 38 41.0	+1.2
IAKL				e		06 38 48.0	
	comp=Z,4μm,0.3s						
IKRD	Kardeh	7.71	1	ePn	Pn	06 38 44.8	+2.5
IKRD				e		06 41 39.0	
	comp=Z,4μm,0.6s						
ILAS	Lasjerd	7.78	326	ePn	Pn	06 38 45.0	+1.7
ILAS				e		06 41 23.7	
	comp=Z,4μm,0.4s						
ISHM	Shahmirzad	7.97	329	ePn	Pn	06 38 47.2	+1.3
ISHM				e		06 41 23.0	
	comp=E,7μm,0.3s						
ISHM				e		06 41 23.0	
	comp=Z,5μm,0.4s						
ISFR	Esferayen	7.98	358	ePn	Pn	06 38 47.4	+1.3
ISFR				e		06 41 21.8	
	comp=Z,4μm,0.6s						
SLWS		8.05	240	P	Pn	06 38 49.2	+2.1
IGLO	Galoogah	8.30	332	ePn	Pn	06 38 52.6	+2.1
IGLO				e		06 41 37.0	
	comp=Z,7μm,0.4s						
BTHS		8.34	235	P	Pn	06 38 52.5	+1.5
IEMG	Emamqoli	8.35	2	ePn	Pn	06 38 52.3	+1.2
IEMG				e		06 41 36.0	
	comp=Z,2μm,0.5s						
IDMV	Damavand	8.41	322	ePn	Pn	06 38 53.3	+1.4
IDMV				e		06 42 02.3	
	comp=Z,5μm,0.7s						
DAMV	Damavand	8.48	322	ePn	Pn	06 38 55.3	+2.4
DAMV	Damavand	8.48	322	ePn	Pn	06 38 55.0	+2.0
ISHV	Shirvan	8.48	357	ePn	Pn	06 38 54.2	+1.2
ISHV				e		06 41 56.6	
	comp=Z,4μm,0.5s						
SHGR	Shooshtar-Gavs	8.75	293	ePn	Pn	06 38 59.4	+2.7
IPRN	Paran-Amol	8.81	326	ePn	Pn	06 38 58.3	+0.8
IPRN				e		06 42 03.2	
	comp=Z,5μm,0.7s						
ASAO	Ashtian	8.94	310	ePn	Pn	06 39 01.7	+2.5
QRN	Al-Qurain	9.12	271	eP	Pn	06 39 03.2	+1.5
QRN				eS	Sn	06 40 43.3	-1.2
QRN				AML	AML	06 40 44.3	
	comp=Z,119nm,0.5s						
CHTH	Charan	9.15	320	ePn	Pn	06 39 05.0	+2.9
CHTH	Charan	9.15	320	ePn	Pn	06 39 04.3	+2.2
KFJS		9.16	267	P	Pn	06 39 04.2	+1.9
UMR	Umm Al-Rimmam	9.27	276	eP	Pn	06 39 05.8	+2.0
UMR				eS	Sn	06 40 46.9	-1.3
UMR				AML	AML	06 40 51.1	
	comp=Z,235nm,0.5s						
THKV	Tehran--Karaj	9.29	319	ePn	Pn	06 39 06.3	+2.2
KBD	Kabd	9.29	273	eP	Pn	06 39 05.6	+1.5
KBD				eS	Sn	06 40 47.3	-1.5
KBD				AML	AML	06 40 50.3	
	comp=Z,299nm,0.5s						
RDF	Al-Radifah	9.43	272	eP	Pn	06 39 07.6	+1.6
RDF				eS	Sn	06 40 50.5	-1.7
RDF				AML	AML	06 40 54.3	
	comp=Z,202nm,0.6s						
IRAZ	Razeghan	9.52	314	ePn	Pn	06 39 09.1	+1.9
IRAZ				e		06 42 33.0	
	comp=Z,1μm,0.6s						
MIB	Mutribah	9.60	277	eP	Pn	06 39 09.8	+1.4
MIB				eS	Sn	06 40 55.6	-0.7
MIB				AML	AML	06 40 59.1	
	comp=Z,95nm,0.7s						
NAY	Al-Naaiem	9.69	274	eP	Pn	06 39 11.0	+1.5
NAY				AML	AML	06 41 00.0	
	comp=Z,75nm,0.6s						

SNGE Sanandaj 11.08 306 *e*Pn **Pn 06 39 31.3 +2.7**
BHJ Bhuj 11.70 117 *e*P **Pn 06 39 37.6 +0.5**
BHJ AMb AMB 06 39 47.5
comp=Z,29nm,0.2s
WHFO Wadi Hawf 11.83 202 P **Pn 06 39 40.8 +1.9**
SNR=30
RBK Rabkut 12.09 199 P **Pn 06 39 44.8 +2.3**
SNR=16
ASYS 12.41 266 P **Pn 06 39 44.9 -2.0**
ABTO Aybut 12.52 203 P **Pn 06 39 49.0 +0.7**
SNR=38
BHD Baghdad 12.66 293 *ex* x 06 39 49.0
BHD *ex* x 06 42 13.0
GRMI Germi 13.02 321 *e*Pn **Pn 06 39 57.2 +2.1**
ISHB Shabestar 14.02 314 *e*Pn **Pn 06 40 09.7 +1.0**
ISHB *e* 06 40 28.1
comp=Z,229nm,0.3s
IMRD Marand 14.23 316 *e*Pn **Pn 06 40 12.4 +0.8**
IMRD *e* 06 40 23.1
comp=Z,615nm,0.4s
AJM Ajmer 14.68 96 *e*P **Pn 06 40 17.7 -0.1**
AJM AMb AMB 06 40 26.5
comp=Z,22nm,0.9s
MSL Mosul 14.71 303 *ex* x 06 40 20.5
MSL *ex* x 06 43 11.0
CUKT Cukurca 14.78 307 *e*P **Pn 06 40 20.9 +1.8**
HAKT HAKKARI 14.86 309⇑*i*P **Pn 06 40 22.8 +2.5**
TVAN Van 15.58 311 *e*P **Pn 06 40 34.2 +4.5**
CLDR Caldiran 15.59 314 *e*P **Pn 06 40 34.8 +4.9**
SIRT Sirnak 15.72 307 *e*P **Pn 06 40 32.2 +0.7**
MAK Makhachkala 16.39 331 *e*P **Pn 06 40 45.0 +4.8**
MAK *e*S **Sn 06 43 45.4 +3.3**
MAK pmax pmax
comp=Z,190nm,1.6s
MAK MLR MLR
comp=Z,302nm,12.0s
AGRB Hanur-Agry 16.43 314 *e*P **Pn 06 40 42.5 +1.8**
NDI New Delhi 16.56 87 *e*P **Pn 06 40 40.0 -2.5**
DIGO Kars 16.69 317 *i*P **Pn 06 40 49.0 +5.0**
BTMT Batman 16.70 307 *e*P **Pn 06 40 47.1 +2.9**
MARD Mardin 16.82 304 *e*P **Pn 06 40 46.3 +0.6**
KK31 Karatay Array 17.12 32 *i*P **Pn 06 40 51.0 +1.6**
KK31 pmax pmax
comp=Z,28nm,1.0s
KK31 Karatay Array 17.12 32 *i*P **Pn 06 40 51.0 +1.6**
comp=Z,28nm,1.0s
DDI Dehra Dun 17.20 81 *ex* x 06 40 49.5
POO Poona 17.63 123 *e*P **Pn 06 41 00.3 +4.3**
POO AMb AMB 06 41 18.3
comp=Z,22nm,0.7s
ERZM Erzurum 17.65 312 *i*P **Pn 06 41 01.1 +5.0**
EZM Erzurum 17.66 312 *e*P **Pn 06 40 60.0 +3.9**
ZEI Tsey 17.96 324 *e*P **Pn 06 41 03.9 +4.0**
ARTV Artvin 18.03 317 *i*P **Pn 06 41 04.8 +4.0**
AML Almayashu 18.04 40 *e*P **Pn 06 41 00.9 0.0**
comp=Z,29nm,0.9s
AML Almayashu 18.04 40 P **Pn 06 41 01.0 +0.1**
SNR=14
AML Almayashu 18.04 40 *e*P **Pn 06 41 00.9 +0.1**
comp=Z,29nm,0.9s
BHPL Bhopal 18.09 104 *e*P **Pn 06 41 01.7 +0.1**
BHPL *ex* x 06 41 05.8
comp=Z,43nm,1.1s
URFA Urfa 18.31 302 *e*P **Pn 06 41 05.5 +1.3**
EKS2 Erkin-Say 18.44 38 *e*P **Pn 06 41 06.8 +1.1**
comp=Z,60nm,1.0s
EKS2 Erkin-Say 18.44 38 P **Pn 06 41 07.0 +1.3**
SNR=18
EKS2 Erkin-Say 18.44 38 *e*P **Pn 06 41 06.8 +1.1**
comp=Z,60nm,1.0s
UCH Uchtor 18.57 41 *e*P **Pn 06 41 07.4 +0.2**
comp=Z,30nm,1.1s
UCH Uchtor 18.57 41 P **Pn 06 41 05.8 -1.4**
SNR=14
UCH Uchtor 18.57 41 *e*P **Pn 06 41 07.4 +0.1**
comp=Z,30nm,1.1s
EZC Erzincan 18.59 310 *e*P **Pn 06 41 11.6 +4.0**
ELZG Elazig 18.60 305 *i*P **Pn 06 41 12.3 +4.6**
KAD Karad 18.66 125 *e*P **Pn 06 41 10.1 +1.5**
comp=Z,27nm,1.3s
KAD *ex* x 06 41 13.6
comp=Z,20nm,1.1s
MALT Malatya 18.93 304 *e*P **Pn 06 41 12.3 +0.6**
MALT Malatya 18.93 304 *e*P **Pn 06 41 12.4 +0.7**
MALT Malatya 18.93 304⇑*i*P **Pn 06 41 15.7 +4.0**
MALT Malatya 18.93 304 *e*P **Pn 06 41 12.4 +0.7**
MYA Malatya 18.94 304 *e*P **Pn 06 41 12.9 +1.1**
HAJJ Hajjah 18.99 229⇑*e*P **Pn 06 41 11.0 -1.6**
HAJJ *i*S **Sn 06 44 43.8 -1.5**
FRU Bishkek 19.02 39 *e*P **Pn 06 41 13.5 +0.8**
FRU pmax pmax
comp=Z,170nm,2.2s
FRU Bishkek 19.02 39 *e*P **Pn 06 41 13.5 +0.8**
comp=Z,170nm,2.2s
LGTI Lohaghat 19.14 83 *e*P **Pn 06 41 11.0 -3.3**
GUMT Gumushane 19.17 311 *e*P **Pn 06 41 16.1 +1.5**
GZT Gaziantep 19.22 301 *i*P **Pn 06 41 17.0 +1.8**
USP Ospenovka 19.24 38 P **Pn 06 41 16.4 +1.0**
SNR=7.1
DHBB Dhamar BB 19.33 225 *e*P **Pn 06 41 15.0 -1.7**
DHBB *i*S **Sn 06 44 52.4 -1.1**
LBOS 19.36 221 *e*P **Pn 06 41 15.4 -1.7**
LBOS AMb AMB 06 41 17.1
comp=Z,210nm,1.7s
LBOS *i*S **Sn 06 44 52.7 -1.6**
GAZ Gaziantep 19.42 300 *e*P **Pn 06 41 18.1 +0.5**
KIV Kislovodsk 19.43 324 *e*P **Pn 06 41 19.6 +2.0**
KIV Kislovodsk 19.43 324 *e*P **Pn 06 41 19.3 +1.7**
KIV *e*S **Sn 06 44 57.4 +1.9**
KIV pmax pmax
comp=Z,53nm,0.8s
KIV Kislovodsk 19.43 324 P **Pn 06 41 19.4 +1.7**
SNR=17
KIV Kislovodsk 19.43 324⇑*i*P **Pn 06 41 19.3 +1.7**
KIV Kislovodsk 19.43 324 *e*P **Pn 06 41 19.3 +1.7**
comp=Z,53nm,0.8s
TKM2 Tokmak 2 19.62 41 *e*P **Pn 06 41 19.5 -0.5**
comp=Z,19nm,0.9s
TKM2 Tokmak 2 19.62 41 *i*P **Pn 06 41 19.5 -0.5**
TKM2 pmax pmax
comp=Z,13nm,0.7s
TKM2 Tokmak 2 19.62 41 P **Pn 06 41 19.8 -0.3**
SNR=12
TKM2 Tokmak 2 19.62 41 *i*P **Pn 06 41 19.5 -0.5**
comp=Z,13nm,0.7s
KMRS Kahramanmaras 19.77 301 *e*P **Pn 06 41 21.1 -0.7**
ESPY Espiye-Giresun 19.90 312 *e*P **Pn 06 41 23.1 -0.2**
COBT Iskenderun 19.96 298 *i*P **Pn 06 41 25.1 +1.0**
MMAI Mount Meron Ar 20.02 287 P **P 06 41 26.1 +3.0**
comp=Z,4.8nm,0.6s,baz=91,slow=15,SNR=7.7
MMAI LR LR 06 50 59.0
comp=Z,308nm,18.4s,MS3.7,baz=115,slow=42
EIL Elat 20.37 277 P **P 06 41 28.6 +1.6**
EIL LR LR 06 50 44.8
EIL Elat 20.37 277 P **P 06 41 28.6 +1.6**
comp=Z,48nm,0.8s,baz=58,slow=4.8,SNR=26
EIL LR LR 06 50 44.8
comp=Z,299nm,20.2s,MS3.6,baz=105,slow=40
EIL Elat 20.37 277 P **P 06 41 28.5 +1.6**
KOZT Kozan 20.57 300 *e*P **P 06 41 31.3 +2.3**
SOC Sochi 20.79 319 *e*P **P 06 41 32.2 +0.9**
SOC *e**SP sP 06 41 41.9 +6.4
SOC *e*S **S 06 45 13.2 -10**
SOC *e*SS 06 45 38.7
SOC pmax pmax
comp=Z,77nm,1.2s
SOC MLR MLR
comp=Z,339nm,13.0s,MS3.9
SOC Sochi 20.79 319 *e*P **P 06 41 32.2 +0.9**
comp=Z,77nm,1.2s
SOC Sochi 20.79 319 *e*PcP PcP 06 45 38.7 -1.5
comp=Z,339nm,13.0s
BNN Bunyan 21.01 304 *e*P **P 06 41 33.9 +0.2**
AKTK Aktyubinsk 21.36 359 P **P 06 41 37.5 0.0**
AKTK LR LR 06 51 10.1
AKTK Aktyubinsk 21.36 359 P **P 06 41 37.5 +0.1**
AKTO Aktyubinsk 21.36 359 P **P 06 41 37.5 0.0**
comp=Z,16nm,0.6s,mb4.5,baz=176,slow=10,SNR=45
AKTO LR LR 06 51 10.1
comp=Z,270nm,21.1s,MS3.6,baz=172,slow=40
MERS Mersin 21.40 298 *e*P **P 06 41 38.9 +1.0**
YOZ Yozgat 21.68 305 *e*P **P 06 41 39.8 -1.1**
AVNT Avonos 21.71 303 *i*P **P 06 41 42.5 +1.2**
LFK Lefkose 21.86 293 *e*P **P 06 41 42.8 -0.1**

HYB Hyderabad 21.86 118 *e*P **P 06 41 44.5 +1.4**
HYB pmax pmax
comp=Z,40nm,1.0s,mb4.8
HYB Hyderabad 21.86 118⇑*i*P **P 06 41 44.5 +1.4**
comp=Z,40nm,1.0s,mb4.8
HYB Hyderabad 21.86 118 *e*P **P 06 41 44.5 +1.4**
comp=Z,40nm,1.0s,mb4.8
IKL Isikli 21.91 295 *e*P **P 06 41 45.0 +1.6**
KOLN Koldanda 22.27 87 *e*P **P 06 41 47.9 +0.6**
comp=Z,138nm,1.1s,mb5.3
CDAG Cicekdag 22.35 304 *i*P **P 06 41 49.8 +1.7**
CTKT Corum 22.43 307 *i*P **P 06 41 51.1 +2.2**
BLSP Bilaspur 22.53 102 *e*P **P 06 41 50.9 +0.7**
BLSP *ex* x 06 41 57.1
comp=Z,48nm,1.1s
ATD Arta Tunnel 22.63 223 LR LR 06 52 03.5
comp=Z,218nm,19.0s,MS3.6,baz=35,slow=40
KAMT Kaman 22.74 303 *e*P **P 06 41 49.1 -3.2**
ANN Anapa 22.84 319 *e*P **P 06 41 54.2 +1.0**
ANN *e*S **S 06 46 01.0 -1.7**
ANN pmax pmax
comp=Z,82nm,1.2s,mb5.0
ANN Anapa 22.84 319 *e*P **P 06 41 54.2 +1.0**
comp=Z,82nm,1.2s,mb5.0
TOS Tosya 23.13 308 *e*P **P 06 41 56.4 0.0**
GKN Gorkha 23.14 86 *e*P **P 06 41 57.2 +0.6**
comp=Z,183nm,1.1s,mb5.4
ELDT Eldivan 23.34 306 *i*P **P 06 41 59.5 +0.9**
KKN Kakani 23.73 86 *e*P **P 06 42 02.8 +0.2**
comp=Z,104nm,0.7s,mb5.4
BALT Dadav 23.77 308 *i*P **P 06 42 03.5 +0.7**
KIZT Kizilcal 23.95 301 *e*P **P 06 42 03.7 -0.8**
SGKT Sivrigoynuk 24.35 305⇑*i*P **P 06 42 08.3 +0.3**
JIRN Jiri 24.55 86 *e*P **P 06 42 10.8 +0.8**
comp=Z,164nm,0.7s,mb5.7
ISP Isparta 24.74 298 *e*P **P 06 42 12.2 +0.5**
comp=Z,34nm,0.6s,mb5.1
ISP Isparta 24.74 298 *e*P **P 06 42 12.2 +0.6**
ISP pmax pmax
comp=Z,34nm,0.6s,mb5.0
ISP Isparta 24.74 298⇑*i*P **P 06 42 11.9 +0.3**
SHUT Suhut-Afyon 24.87 300 *e*P **P 06 42 12.0 -0.8**
ESKT Eskisehir 24.90 302 *e*P **P 06 42 12.3 -0.7**
ESKT Eskisehir 24.90 302⇑*i*P **P 06 42 13.1 0.0**
SEYT Eskypehyr 24.90 302 *i*P **P 06 42 13.1 0.0**
ELL Elmali 25.00 295 *e*P **P 06 42 13.6 -0.5**
BOK Bokaro 25.21 96 *e*P **P 06 42 17.1 +1.0**
BOK *ex* x 06 42 22.3
comp=Z,39nm,0.9s
HENT Hendek 25.26 305⇑*i*P **P 06 42 16.3 0.0**
VRHR Novokhopersk 25.34 335 *e*P **P 06 42 17.1 +0.1**
VRHR pmax pmax
comp=Z,40nm,0.5s,mb5.2
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.8s
VRHR Novokhopersk 25.34 335 *e*P **P 06 42 17.1 +0.1**
comp=E,30nm,0.7s,mb4.9
GOLH Golhisar 25.36 296 *i*P **P 06 42 18.1 +0.8**
GULT Gulveren 25.41 304 *e*P **P 06 42 17.3 -0.4**
VIS Vishakhapatnam 25.52 111 *e*P **P 06 42 20.5 +1.6**
VIS *ex* x 06 42 21.9
comp=Z,23nm,0.9s
BRVK Borovoye 25.56 17 *e*P **P 06 42 18.9 0.0**
BRVK Borovoye 25.56 17 P **P 06 42 19.3 +0.4**
SNR=12
BRVK Borovoye 25.56 17 *e*P **P 06 42 18.9 0.0**
FETY Fethiye 25.63 295 *e*P **P 06 42 16.5 -3.3**
ODAN Odare 25.75 88 *e*P **P 06 42 21.0 +0.1**
comp=Z,113nm,1.1s,mb5.3
MK31 Makanchi Array 25.75 40 *i*P **P 06 42 20.6 -0.2**
MK31 pmax pmax
comp=Z,19nm,0.8s,mb4.7
MK31 Makanchi Array 25.75 40 *i*P **P 06 42 20.6 -0.2**
comp=Z,19nm,0.8s,mb4.7
MKAR Makanchi Array 25.75 40 *i*P **P 06 42 20.6 -0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 25.75 40 P **P 06 42 20.6 -0.2**
comp=Z,6.0nm,0.7s,mb4.2,baz=230,slow=8.4,SNR=56
MKAR PcP PcP 06 45 49.2 -1.3
comp=Z,1.5nm,0.7s,baz=234,slow=2.9,SNR=5.0
GDZ Gediz 25.81 300 *i*P **P 06 42 21.1 -0.2**
TAPN Taplejung 25.93 87 *e*P **P 06 42 22.7 +0.1**
comp=Z,59nm,0.9s,mb5.1
VRSR Storozhevoye 26.39 332*c i*P **P 06 42 25.8 -0.6**
VRSR *e**PP pP 06 42 32.5 +3.0
VRSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.0
VRSR pmax pmax
comp=N,9.0nm,0.8s
VRSR pmax pmax
comp=E,9.0nm,1.0s
VRSR Storozhevoye 26.39 332 *i*P **P 06 42 25.8 -0.6**
comp=E,9.0nm,0.8s,mb4.3
KURK Kurchatov 26.50 30 *e*P **P 06 42 27.8 +0.3**
KURK Kurchatov 26.50 30 P **P 06 42 28.4 +0.9**
SNR=7.6
KURK Kurchatov 26.50 30 *e*P **P 06 42 27.8 +0.3**
KDAG Bornova 27.36 298⇓*i*P **P 06 42 35.9 +0.5**
ARU Arti 27.37 0*d i*P **P 06 42 39.1 +3.9**
ARU 06 43 20.1
ARU PPP 06 43 33.6
ARU SS 06 48 35.8
ARU pmax pmax
comp=Z,13nm,1.7s,mb4.2
ARU MLR MLR
comp=Z,268nm,17.0s,MS3.9
WMQ Urumqi 27.68 50 P **P 06 42 38.8 +0.6**
WMQ AP pP 06 42 48.3 +7.1
WMQ XP sP 06 42 52.3 +10
WMQ PP 06 43 27.3
WMQ AMB AMB
comp=Z,22nm,1.1s,mb4.7
WMQ LR LR
comp=N,77nm,20.6s,MS3.8
WMQ LR LR
comp=E,267nm,24.6s,MS3.8
WMQ LR LR
comp=Z,128nm,22.0s,MS3.5
SVE Sverdlovsk 27.82 3⇓*e*P **P 06 42 36.2 -3.0**
SVE *i* 06 45 55.4
SVE *e*S **S 06 47 27.3 +5.3**
SVE pmax pmax
comp=Z,13nm,0.9s,mb4.6
SVE MLR MLR
comp=Z,394nm,15.0s,MS4.1
SVE Sverdlovsk 27.82 3 *i* PcP PcP 06 45 55.4 +0.2
APE Apeiranthos 28.52 295⇑P **P 06 42 45.9 +0.2**
APE Apeiranthos 28.52 295⇑*i*P **P 06 42 45.9 +0.2**
IDI Anoyia 28.88 291 P **P 06 42 48.8 -0.2**
comp=Z,12nm,0.7s,mb4.7,baz=99,slow=7.8,SNR=13
GVD Gavdhos 29.52 290 *e*P **P 06 42 54.5 -0.2**
GVD Gavdhos 29.52 290 *e*P **P 06 42 54.5 -0.2**
VRI Vrincioaia 29.92 313⇑P **P 06 42 58.5 +0.4**
VRI Vrincioaia 29.92 313⇑*i*P **P 06 42 58.5 +0.4**
PLOR Plostina 29.97 313⇑*i*P **P 06 42 59.3 +0.8**
MLR Muntele Rosu 30.29 312 P **P 06 43 03.0 +1.7**
MLR pmax pmax
comp=Z,17nm,0.7s
MLR MLR
comp=Z,88nm,21.3s
MLR Muntele Rosu 30.29 312 P **P 06 43 03.0 +1.6**
comp=Z,17nm,0.7s,mb4.9,baz=83,slow=1.5,SNR=24
MLR LR LR 06 55 18.9
comp=Z,88nm,21.3s,MS3.4,baz=107,slow=36
MLR Muntele Rosu 30.29 312⇓*i*P **P 06 43 02.7 +1.4**
OBN Obninsk 30.39 335 *e*P **P 06 43 02.8 +0.7**
OBN *e* 06 43 10.2
OBN *e* 06 45 59.4
OBN pmax pmax
comp=Z,78nm,1.4s,mb5.2
OBN MLR MLR
comp=Z,100nm,15.0s,MS3.6
OBN Obninsk 30.39 335 *e*P **P 06 43 02.8 +0.7**
comp=Z,78nm,1.4s,mb5.2
OBN Obninsk 30.39 335 *e*PcP PcP 06 45 59.4 -2.3
MOS Moscow 30.50 337 *e*P **P 06 43 03.3 +0.2**
MOS *e* 06 43 18.9
MOS pmax pmax
comp=Z,57nm,1.1s,mb5.3
MOS Moscow 30.50 337 *e*P **P 06 43 03.3 +0.2**
comp=Z,57nm,1.1s,mb5.3
AKASG Malin Array Be 30.76 323 P **P 06 43 05.3 -0.1**
comp=Z,38nm,0.8s,mb5.3,baz=126,slow=8.2,SNR=102
AKASG PcP PcP 06 46 01.3 -1.5
comp=Z,1.7nm,0.7s,baz=98,slow=2.5,SNR=5.9
AKASG Malin Array Be 30.76 323 P **P 06 43 05.3 -0.1**
AKASG Malin Array Be 30.76 323 PcP PcP 06 46 01.3 -1.5
AKBB Malin Array Si 30.76 323 *e*P **P 06 43 05.3 -0.1**
AKBB Malin Array Si 30.76 323 *e*P **P 06 43 05.3 -0.1**
KIEV Kiev 30.76 323 *e*P **P 06 43 05.4 -0.1**
comp=Z,57nm,0.8s,mb5.5
KIEV Kiev 30.76 323 *e*P **P 06 43 05.4 -0.1**
KIEV pmax pmax
comp=Z,57nm,0.8s,mb5.5
KIEV Kiev 30.76 323 *e*P **P 06 43 05.4 -0.1**
comp=Z,57nm,0.8s,mb5.5
VTS Vitosha 31.28 305⇑P **P 06 43 10.3 +0.2**
VTS Vitosha 31.28 305⇑*i*P **P 06 43 10.3 +0.2**
NVS Novosibirsk 31.42 28 *i*P **P 06 43 10.6 -0.6**
NVS pmax pmax
comp=Z,26nm,1.1s,mb5.0
NVS pmax pmax
comp=N,25nm,1.6s
NVS pmax pmax
comp=E,8.0nm,1.0s
NVS Novosibirsk 31.42 28 *i*P **P 06 43 10.6 -0.6**
comp=E,25nm,1.6s,mb4.8
ZAL Zalesovo 31.47 30 P **P 06 43 11.2 -0.4**
ZAA0 Zalesovo Array 31.48 30 *e*P **P 06 43 11.4 -0.4**
ZAA0 Zalesovo Array 31.48 30 *e*P **P 06 43 11.4 -0.4**
ZALV Zalesovo Beam 31.48 30 P **P 06 43 11.2 -0.6**
comp=E,10nm,0.7s,mb4.8,baz=242,slow=9.3,SNR=34
ZALV LR LR 06 57 40.3
comp=E,126nm,18.4s,MS3.6,baz=232,slow=40
DRGR 32.85 312⇑P **P 06 43 24.1 +0.2**
DRGR 32.85 312⇑*i*P **P 06 43 24.1 +0.2**
BZS Buzias 33.20 310⇑*i*P **P 06 43 25.8 -1.1**
LVV L'vov 33.22 318 *e*P **P 06 43 26.5 -0.5**
LVV *e*S **S 06 48 44.9 -1.9**
UZH Uzhgorod 33.78 315 *e*P **P 06 43 31.6 -0.3**
UZH *i* 06 43 36.6
KOLS Kolonicke sedl 33.90 316 *e*P **P 06 43 34.1 +1.1**
KOLS *e*pP pP 06 43 38.6 +2.5
KWP Kalwaria 33.92 317 *e*P **P 06 43 33.5 +0.4**
CRVS Cervenica-Dubn 34.39 316 *e*P **P 06 43 37.1 -0.1**
CRVS *e*pP pP 06 43 39.9 -0.4
STHS Stebnicka Huta 34.71 316 *e*P **P 06 43 40.0 0.0**
comp=E,4.4nm,0.9s,mb4.4
STHS *e* 06 43 53.9
STHS Stebnicka Huta 34.71 316 *e*P **P 06 43 40.0 0.0**
STHS *e* 06 43 53.9
STHS pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
KECS Kecovo 34.84 314 *e*P **P 06 43 41.1 -0.1**
comp=Z,7.6nm,1.1s,mb4.5
KECS Kecovo 34.84 314 *e*P **P 06 43 41.1 -0.1**
KECS pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
PSZ Piszkesteto 35.03 313 *e*P **P 06 43 42.8 0.0**
comp=Z,14nm,0.8s,mb5.0
PSZ Piszkesteto 35.03 313 *e*P **P 06 43 42.8 0.0**
PSZ pmax pmax
comp=Z,14nm,0.8s,mb4.9
PSZ Piszkesteto 35.03 313⇑*i*P **P 06 43 42.6 -0.2**
PSZ Piszkesteto 35.03 313 *e*P **P 06 43 42.8 0.0**
comp=Z,14nm,0.8s,mb4.9
PKSM Moragy 35.36 310⇑P **P 06 43 45.2 -0.5**
PKSM Moragy 35.36 310⇑*i*P **P 06 43 45.2 -0.4**
GTA Gaotai 35.56 62 *e*P **P 06 43 48.5 +1.0**
GTA AP pP 06 43 57.8 +7.2
GTA XP sP 06 44 03.5 +12
GTA AMB AMB
comp=Z,18nm,0.9s,mb5.0
GTA AMB AMB
comp=Z,97nm,5.7s
GTA LR LR
comp=N,123nm,13.3s,MS4.1
GTA LR LR
comp=E,204nm,13.3s,MS4.1
GTA LR LR
comp=Z,241nm,16.7s,MS4.0
TIP Timpagrande 35.59 298 *e*P **P 06 43 47.6 -0.2**
TIP Timpagrande 35.59 298 *e*P **P 06 43 47.6 -0.2**
SUW Suwalki 35.66 324 *e*P **P 06 43 48.5 +0.4**
OJC Ojcow 35.88 317 *e*P **P 06 43 50.2 +0.1**
VYHS Vyhne 35.88 314 *i*P **P 06 43 50.0 -0.1**
VYHS pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
VYHS Vyhne 35.88 314 *i*P **P 06 43 50.0 -0.1**
comp=Z,8.6nm,0.7s,mb4.8
KMBO Kilima Mbogo 36.15 218 *e*P **P 06 43 55.4 +2.7**
comp=Z,8.3nm,0.8s,mb4.7
KMBO Kilima Mbogo 36.15 218 P **P 06 43 55.4 +2.7**
comp=Z,8.7nm,0.8s,mb4.7,baz=25,slow=11,SNR=16
KMBO LR LR 07 00 59.4
comp=Z,127nm,18.4s,MS3.7,baz=86,slow=40
KMBO Kilima Mbogo 36.15 218 *e*P **P 06 43 55.4 +2.7**
comp=Z,8.3nm,0.8s,mb4.7
VSU Vasula 36.59 332*c i*P **P 06 43 55.6 -0.4**
VSU Vasula 36.59 332 *i*P **P 06 43 55.6 -0.4**
OKC Ostrava-Krasne 36.74 316 *e*P **P 06 43 57.3 -0.2**
MODS Modra-Piesok 36.84 313 *e*P **P 06 43 58.2 -0.1**
MODS pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
MODS Modra-Piesok 36.84 313 *e*P **P 06 43 58.2 -0.1**
comp=Z,6.1nm,0.7s,mb4.5
MORC Moravsky Berou 37.10 315 *e*P **P 06 44 00.0 -0.4**
comp=Z,12nm,1.0s,mb4.7
MORC Moravsky Berou 37.10 315 *e*P **P 06 44 00.0 -0.5**
MORC pmax pmax
comp=Z,12nm,1.0s,mb4.7
MORC Moravsky Berou 37.10 315⇑*i*P **P 06 44 00.0 -0.5**
MORC Moravsky Berou 37.10 315 *e*P **P 06 43 59.9 -0.6**
BOJS Bojanci 37.51 308 *e*P **P 06 44 03.5 -0.6**
VRAC Vranov 37.54 314 *e*P **P 06 44 04.0 -0.2**
ARSA Arzberg 37.69 311 *i*P **P 06 44 05.4 -0.2**
comp=Z,17nm,0.7s,mb4.9,SNR=7.1
PERS Pernice 37.83 310 *i*P **P 06 44 06.0 -0.7**
VISS Visnje 37.85 308 *i*P **P 06 44 06.3 -0.6**
VISS *e* 06 44 18.2
DPC Dobruska-Polom 38.02 316 *e*P **P 06 44 07.2 -1.1**
JOF Joensuu 38.14 340 *ep* **P 06 44 07.6 -1.5**
comp=Z,19nm,0.8s,mb4.9
JOF Joensuu 38.14 340 *e*P **P 06 44 07.6 -1.5**
JOF pmax pmax
comp=Z,19nm,0.8s,mb4.9
KSP Ksiaz 38.20 317 *e*P **P 06 44 10.0 +0.2**
KSP Ksiaz 38.20 317 *e*P **P 06 44 09.4 -0.3**
KSP *e*pP pP 06 44 14.3 +1.5
TREC Trest 38.23 314 *e*P **P 06 44 09.8 -0.3**
UPC Upice 38.26 316 *e*P **P 06 44 10.4 +0.1**
CHTO Chiang Mai 38.34 96 *e*P **P 06 44 11.6 +0.3**
CHTO Chiang Mai 38.34 96 *e*P **P 06 44 11.6 +0.2**
JAVS Javornik 38.40 308 *e*P **P 06 44 07.1 -4.4**
JAVS *e* 06 44 17.4
MOA Molln 38.66 311⇑*i*P **P 06 44 13.2 -0.5**
comp=Z,20nm,0.7s,mb5.0,SNR=15
LZH Lanzhou 38.73 68⇑P **P 06 44 14.5 +0.1**
LZH AP pP 06 44 24.3 +6.8
LZH XP sP 06 44 28.3 +10
LZH PP PP 06 45 47.0 +4.0
LZH AMB AMB
comp=Z,32nm,1.3s,mb4.9
LZH AMB AMB
comp=Z,167nm,5.4s
LZH LR LR
comp=N,653nm,13.4s
LZH LR LR
comp=Z,1μm,17.8s,MS4.7
FINES FINESS Array B 38.79 336 P **P 06 44 14.3 -0.3**
FINES FINESS Array B 38.79 336 *i*P **P 06 44 14.3 -0.3**
FINES pmax pmax
comp=Z,9.0nm,0.7s
FINES FINESS Array B 38.79 336 P **P 06 44 14.3 -0.3**
comp=Z,8.6nm,0.7s,mb4.6,baz=120,slow=11,SNR=38
FINES FINESS Array B 38.79 336 *i*P **P 06 44 14.3 -0.3**
comp=Z,9.0nm,0.7s,mb4.6
MOY Mondy 38.85 42 *e*P **P 06 44 16.5 +1.3**
MOY pmax pmax
comp=Z,30nm,1.5s,mb4.8
MOY Mondy 38.85 42 *e*P **P 06 44 16.5 +1.3**
comp=Z,30nm,1.5s,mb4.8
PRU Pruhonice 39.01 315 *e*P **P 06 44 13.1 -3.5**
comp=Z,3.0nm,0.4s,mb4.4
KBA Koelnbreinsper 39.11 310⇑*i*P **P 06 44 17.0 -0.5**
KAF Kangasniemi 39.16 337 *ep* **P 06 44 16.9 -0.8**

comp=Z,5.2nm,0.6s,mb4.4
KAF Kangasniemi 39.16 337 *e*P **P 06 44 16.9 -0.8**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
CD2 Chengdu 39.20 76⇓ *i*P **P 06 44 18.5 0.0**
CD2 AP pP 06 44 28.3 +6.7
CD2 XP sP 06 44 32.3 +9.5
CD2 PP PP 06 45 52.3 +4.0
CD2 AMB AMB
comp=Z,30nm,0.8s,mb5.1
CD2 AMB AMB
comp=Z,60nm,5.8s
CD2 LR LR
comp=N,240nm,15.6s
CD2 LR LR
comp=Z,240nm,13.2s,MS4.2
GEC2 GERESS Array S 39.25 313 *e*P **P 06 44 17.7 -1.0**
GEC2 pmax pmax
comp=Z,19nm,0.8s,mb4.9
GEC2 GERESS Array S 39.25 313 *e*P **P 06 44 17.7 -1.0**
comp=Z,19nm,0.8s,mb4.9
GERES GERESS Array B 39.25 313 P **P 06 44 18.1 -0.5**
comp=Z,9.4nm,0.7s,mb4.7,baz=108,slow=8.6,SNR=65
GERES LR LR 07 02 45.7
comp=Z,88nm,18.8s,MS3.6,baz=89,slow=40
KHC Kasperske Hory 39.40 313 *e*P **P 06 44 19.1 -0.8**
KHC *e* 06 44 24.0
KHC Kasperske Hory 39.40 313 *e*P **P 06 44 19.1 -0.8**
KHC pP pP 06 44 24.0 +1.0
KMI Kunming 39.57 85 P **P 06 44 22.5 +0.9**
KMI AP pP 06 44 31.5 +6.8
KMI AMB AMB
comp=Z,76nm,0.9s,mb5.4
KMI LR LR
comp=N,259nm,18.2s,MS4.2
KMI LR LR
comp=E,168nm,14.5s,MS4.2
KMI LR LR
comp=Z,165nm,16.7s,MS4.0
BRG Berggiesshubel 39.62 316 *e*P **P 06 44 21.1 -0.6**
BRG pmax pmax
comp=Z,4.0nm,1.0s,mb4.1
BRG Berggiesshubel 39.62 316 *e*P **P 06 44 20.4 -1.3**
comp=Z,7.0nm,1.0s,mb4.3
BRG Berggiesshubel 39.62 316 *e*P **P 06 44 21.1 -0.6**
comp=Z,7.0nm,1.0s,mb4.3
WET Wettzell 39.85 313 *e*P **P 06 44 22.5 -1.1**
WTTA Wattenberg 40.29 310⇑ *i*P **P 06 44 26.2 -1.1**
comp=Z,22nm,0.6s,mb5.1
WTTA Wattenberg 40.29 310⇑ *i*P **P 06 44 26.2 -1.1**
WTTA pmax pmax
comp=Z,22nm,0.6s,mb5.1
CLL Collm 40.31 316 *i* P **P 06 44 27.4 -0.1**
CLL pmax pmax
comp=Z,25nm,1.3s,mb4.8
CLL Collm 40.31 316 *i* P **P 06 44 27.4 -0.1**
comp=Z,25nm,1.3s,mb4.8
CLL *es*P sP 06 44 32.0 +0.2
CLL Collm 40.31 316 *e*P **P 06 44 26.8 -0.7**
comp=Z,25nm,1.3s,mb4.8
TANN Tannenbergstha 40.41 315 *e*P **P 06 44 27.0 -1.3**
ROTZ Rotzenmuhle 40.42 314 *e*P **P 06 44 27.7 -0.6**
comp=Z,8.0nm,1.0s,mb4.4
TLY Talaya 40.42 43 *e*P **P 06 44 27.8 -0.6**
TLY Talaya 40.42 43 *e*P **P 06 44 26.7 -1.7**
TLY *e* 06 46 04.5
TLY pmax pmax
comp=Z,47nm,1.8s,mb4.9
TLY MLR MLR
comp=Z,286nm,22.0s,MS4.1
TLY Talaya 40.42 43 P **P 06 44 27.5 -0.8**
SNR=13
TLY Talaya 40.42 43 *e*P **P 06 44 26.7 -1.7**
comp=Z,47nm,1.8s,mb4.9
BSD Bornholm Skovb 40.46 323⇑ *i*P **P 06 44 27.6 -1.0**
BSD pmax pmax
comp=Z,130nm,0.9s,mb5.7
BSD Bornholm Skovb 40.46 323⇑ *i*P **P 06 44 27.6 -1.0**
comp=Z,129nm,0.9s,mb5.7
BSD *i* 06 44 32.5
SQTA Sankt Quirin 40.57 310⇑ *i*P **P 06 44 28.2 -1.4**
comp=Z,7.8nm,0.7s,mb4.5,SNR=8.5
SQTA Sankt Quirin 40.57 310⇑ *i*P **P 06 44 28.2 -1.4**
SQTA pmax pmax
comp=Z,8.0nm,0.7s,mb4.5
FETA Feichten 40.86 309 *i* P **P 06 44 30.8 -1.2**
comp=Z,26nm,1.0s,mb4.8,SNR=14
GRA1 Grafenberg Arr 41.03 314 *e*P **P 06 44 32.9 -0.4**
comp=Z,21nm,1.1s,mb4.7
GRF Grafenberg Arr 41.03 314 *e*P **P 06 44 32.9 -0.4**
GRF pmax pmax
comp=Z,21nm,1.1s,mb4.7
GRF Grafenberg Arr 41.03 314 *e*P **P 06 44 32.9 -0.4**
GRF pmax pmax
comp=Z,21nm,1.1s,mb4.7
GRF Grafenberg Arr 41.03 314 *e*P **P 06 44 32.9 -0.4**
comp=Z,21nm,1.1s,mb4.7
SONM Songino Array 41.32 49 P **P 06 44 35.3 -0.5**
comp=Z,6.0nm,0.9s,mb4.2,baz=259,slow=8.2,SNR=12
APA Apatity 41.34 346⇑ *i*P **P 06 44 35.2 -0.5**
APA pmax pmax
comp=Z,26nm,1.0s,mb4.8
APA MLR MLR
comp=Z,1μm,14.0s,MS4.8
APA Apatity 41.34 346 *i* P **P 06 44 35.2 -0.5**
comp=Z,1μm,14.0s
LVZ Lovozero 41.36 347 *i* P **P 06 44 39.1 +3.3**
DAVOX Davos/Dischmat 41.40 309 LR LR 07 03 46.1
comp=Z,99nm,21.7s,MS3.6,baz=68,slow=39
DAVA Damuels 41.47 310 *i* P **P 06 44 35.4 -1.6**
comp=Z,24nm,0.6s,mb5.0,SNR=10
KEST Kesra 41.54 292 P **P 06 44 39.4 +1.6**
comp=Z,4.1nm,0.9s,mb4.0,baz=278,slow=0.8,SNR=10
ULN Ulaanbaatar 41.76 49 *e*P **P 06 44 40.1 +0.7**
ULN Ulaanbaatar 41.76 49 *e*P **P 06 44 40.1 +0.7**
CLZ Clausthal 42.04 317 *e*P **P 06 44 41.8 +0.2**
CLZ pmax pmax
comp=Z,13nm,0.8s,mb4.6
CLZ Clausthal 42.04 317 *e*P **P 06 44 41.8 +0.2**
comp=Z,13nm,0.8s,mb4.6
NRDL Niedersach Rie 42.36 317 *e*P **P 06 44 43.7 -0.5**
comp=Z,12nm,1.2s,mb4.4
GYA Guiyang 42.63 81⇑ *i*P **P 06 44 47.5 +0.7**
GYA AP pP 06 44 56.8 +6.9
GYA XP sP 06 45 00.0 +8.8
GYA PP PP 06 46 28.5 +2.9
GYA PCP PcP 06 46 40.3 +1.4
GYA AMB AMB
comp=Z,20nm,0.9s,mb4.8
GYA AMB AMB
comp=Z,120nm,5.4s
GYA LR LR
comp=N,560nm,18.6s,MS4.6
GYA LR LR
comp=E,480nm,19.6s,MS4.6
GYA LR LR
comp=Z,560nm,20.0s,MS4.5
SBF Sospel 42.85 304 *e*P **P 06 44 46.6 -1.8**
comp=Z,52nm,0.9s,mb5.0
SBF Sospel 42.85 304 *e*P **P 06 44 46.6 -1.8**
SBF pmax pmax
comp=Z,26nm,0.9s,mb5.0
SBF Sospel 42.85 304 *e*P **P 06 44 46.6 -1.8**
comp=Z,26nm,0.9s,mb5.0
TNS Taunus Mts 42.89 314 *e*P **P 06 44 48.3 -0.3**
TNS pmax pmax
comp=Z,15nm,1.2s,mb4.6
TNS Taunus Mts 42.89 314 *e*P **P 06 44 48.3 -0.3**
comp=Z,15nm,1.2s,mb4.6
XAN Xi'an 43.06 70 P **P 06 44 49.8 -0.4**
XAN AMB AMB
comp=Z,24nm,0.9s,mb4.9
XAN AMB AMB
comp=Z,77nm,7.8s
XAN LR LR
comp=N,93nm,13.9s,MS4.2
XAN LR LR
comp=E,231nm,18.4s,MS4.2
XAN LR LR
comp=Z,273nm,16.0s,MS4.2
HFS Hagfors 43.11 329 LR LR 07 05 30.4
comp=Z,76nm,18.9s,MS3.6,baz=256,slow=40
CDF Champ du Feu 43.37 311 *e*P **P 06 44 50.1 -2.3**
comp=Z,6.3nm,0.6s,mb4.2
CDF Champ du Feu 43.37 311 *e*P **P 06 44 50.1 -2.3**
CDF pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
CDF Champ du Feu 43.37 311 *e*P **P 06 44 50.1 -2.3**
comp=Z,3.2nm,0.6s,mb4.2
MBDF Montbardon 43.37 306⇑ *i*P **P 06 44 50.6 -2.0**
comp=Z,12nm,0.5s,mb4.6
MBDF Montbardon 43.37 306⇑ *i*P **P 06 44 50.6 -2.0**
MBDF pmax pmax
comp=Z,6.0nm,0.5s,mb4.6
MBDF Montbardon 43.37 306⇑ *i*P **P 06 44 50.6 -2.0**
comp=Z,6.2nm,0.5s,mb4.6
BTO Baotou 43.42 60 *e*P **P 06 44 50.5 -2.5**
LPG La Plagne 43.43 307 *e*P **P 06 44 51.3 -1.7**
comp=Z,26nm,0.8s,mb4.7
LPG La Plagne 43.43 307 *e*P **P 06 44 51.3 -1.7**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.7
LPG La Plagne 43.43 307 *e*P **P 06 44 51.3 -1.7**
comp=Z,13nm,0.8s,mb4.7
LPL La Plagne 43.45 307⇑ *i*P **P 06 44 51.4 -1.8**
comp=Z,18nm,0.7s,mb4.6
LPL La Plagne 43.45 307⇑ *i*P **P 06 44 51.4 -1.8**
LPL pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
LPL La Plagne 43.45 307⇑ *i*P **P 06 44 51.4 -1.8**
comp=Z,8.9nm,0.7s,mb4.6
BNI Bardonecchia 43.46 306 *e*P **P 06 44 51.7 -1.5**
comp=Z,14nm,0.7s,mb4.8
BNI Bardonecchia 43.46 306 *e*P **P 06 44 51.7 -1.5**
BNI pmax pmax
comp=Z,14nm,0.7s,mb4.8
BNI Bardonecchia 43.46 306 *e*P **P 06 44 51.7 -1.5**
comp=Z,14nm,0.7s,mb4.8
HAU Haudompre 43.93 310 *e*P **P 06 44 54.8 -2.2**
comp=Z,9.4nm,0.6s,mb4.4
HAU *e*MLR MLR
comp=Z,91nm,17.8s,MS3.4
HAU Haudompre 43.93 310 *e*P **P 06 44 54.8 -2.2**
comp=Z,4.7nm,0.6s,mb4.4
HAU LR LR
comp=Z,90nm,17.8s,MS3.7
HAU Haudompre 43.93 310 *e*P **P 06 44 54.8 -2.2**
HAU pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
HAU MLR MLR
comp=Z,90nm,17.8s,MS3.7
MUD Monsted U'grnd 43.97 323⇑ *i*P **P 06 44 57.9 +0.7**
MUD *i* 06 45 03.2
MUD pmax pmax
comp=Z,34nm,0.9s,mb5.1
MUD Monsted U'grnd 43.97 323⇑ *i*P **P 06 44 57.9 +0.7**
comp=Z,34nm,0.9s,mb5.1
MUD *i* 06 45 03.2
CABF La Chapelle 43.98 308⇑ *i*P **P 06 44 56.0 -1.4**
comp=Z,9.8nm,0.5s,mb4.5
CABF La Chapelle 43.98 308⇑ *i*P **P 06 44 56.0 -1.4**
CABF pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
CABF La Chapelle 43.98 308⇑ *i*P **P 06 44 56.0 -1.4**
comp=Z,4.9nm,0.5s,mb4.5
ORIF Oris-en-Rattie 44.02 306 *e*P **P 06 44 54.7 -3.0**
ORIF *e*MLR MLR
comp=Z,144nm,20.2s,MS3.6
HHC Hu-ho-hao-te 44.59 60 *e*P **P 06 45 03.5 +1.1**
HHC AP pP 06 45 13.3 +7.8
HHC XP sP 06 45 17.3 +11
HHC PP PP 06 46 48.3 +2.0
HHC S **S 06 51 36.8 -1.4**
HHC XS sS 06 51 52.5 +9.1
HHC SS SS 06 54 48.0 -10
HHC AMB AMB
comp=Z,22nm,1.2s,mb4.9
HHC AMB AMB
comp=Z,85nm,4.5s
HHC LR LR
comp=N,209nm,13.1s
HHC LR LR
comp=E,513nm,21.4s
HHC LR LR
comp=Z,237nm,13.1s,MS4.3
NB2 NORSAR Subarra 44.60 329 P **P 06 45 01.3 -0.9**
comp=Z,11nm,0.5s,mb4.8,baz=113,slow=7.9
NB2 NORSAR Subarra 44.60 329 P **P 06 45 01.3 -0.9**
NB2 pmax pmax
comp=Z,11nm,0.7s,mb4.8
NOA NORSAR Array B 44.60 329 P **P 06 45 01.3 -0.8**
comp=Z,14nm,0.8s,mb4.8,baz=115,slow=7.9,SNR=46
NAO01 NORSAR Array S 44.67 329 *e*P **P 06 45 02.2 -0.5**
comp=Z,9.7nm,0.7s,mb4.7
NAO01 NORSAR Array S 44.67 329 *e*P **P 06 45 02.2 -0.5**
comp=Z,9.7nm,0.7s,mb4.7
ARCES ARCESS Array B 44.69 344 P **P 06 45 02.3 -0.5**
comp=Z,7.9nm,0.8s,mb4.6,baz=137,slow=6.9,SNR=14
ARCES LR LR 07 06 21.4
comp=Z,116nm,18.3s,MS3.8,baz=286,slow=40
KONO Kongsberg 44.81 327 *e*P **P 06 45 03.5 -0.4**
KONO *e*P 06 45 03.5
MEZF Maizieres J'vi 44.85 311 *e*P **P 06 45 02.8 -1.5**
comp=Z,10nm,0.5s,mb4.7
MEZF Maizieres J'vi 44.85 311 *e*P **P 06 45 02.8 -1.5**
comp=Z,5.2nm,0.5s,mb4.7
VIVF Saint-Julien-l 44.87 306⇑ *i*P **P 06 45 02.4 -2.2**
comp=Z,14nm,0.8s,mb4.5
VIVF Saint-Julien-l 44.87 306⇑ *i*P **P 06 45 02.4 -2.2**
comp=Z,6.9nm,0.8s,mb4.5
GIVF Givet 45.17 313⇑ *i*P **P 06 45 06.6 -0.3**
comp=Z,28nm,0.7s,mb4.9
GIVF Givet 45.17 313⇑ *i*P **P 06 45 06.6 -0.3**
GIVF pmax pmax
comp=Z,14nm,0.7s,mb4.9
GIVF Givet 45.17 313⇑ *i*P **P 06 45 06.6 -0.3**
comp=Z,14nm,0.7s,mb4.9
LASF Ste Croix 45.44 305⇑ *i*P **P 06 45 07.3 -1.8**
comp=Z,14nm,0.7s,mb4.6
LASF Ste Croix 45.44 305⇑ *i*P **P 06 45 07.3 -1.8**
comp=Z,6.9nm,0.7s,mb4.6
SMF Signal de Mont 45.52 308⇑ *i*P **P 06 45 08.0 -1.7**
comp=Z,30nm,0.7s,mb5.0
SMF Signal de Mont 45.52 308⇑ *i*P **P 06 45 08.0 -1.7**
comp=Z,15nm,0.7s,mb5.0
LOR Lormes 45.55 309⇑ *i*P **P 06 45 07.9 -2.0**
comp=Z,12nm,0.6s,mb4.7
LOR *e*MLR MLR
comp=Z,108nm,17.0s,MS3.5
LOR Lormes 45.55 309⇑ *i*P **P 06 45 07.9 -2.0**
comp=Z,5.8nm,0.6s,mb4.7
LOR LR LR
comp=Z,110nm,17.0s,MS3.9
LOR Lormes 45.55 309⇑ *i*P **P 06 45 07.9 -2.0**
LOR pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
LOR MLR MLR
comp=Z,110nm,17.0s,MS3.9
BAIF Baives 45.56 313 *e*P **P 06 45 09.9 -0.1**
comp=Z,32nm,0.9s,mb4.9
BAIF Baives 45.56 313 *e*P **P 06 45 09.9 -0.1**
BAIF pmax pmax
comp=Z,16nm,0.9s,mb5.0
BAIF Baives 45.56 313 *e*P **P 06 45 09.9 -0.1**
comp=Z,16nm,0.9s,mb4.9
SSF Saint Saulge 45.78 309⇑ *i*P **P 06 45 10.0 -1.7**
comp=Z,22nm,0.6s,mb5.0
SSF Saint Saulge 45.78 309⇑ *i*P **P 06 45 10.0 -1.7**
comp=Z,11nm,0.6s,mb5.0
AVF Avril sur Loir 45.87 308⇑ *i*P **P 06 45 10.4 -2.1**
comp=Z,9.7nm,0.7s,mb4.6
AVF Avril sur Loir 45.87 308⇑ *i*P **P 06 45 10.4 -2.1**
comp=Z,4.8nm,0.7s,mb4.6
BGF Bois d'Agland 46.21 308 *e*P **P 06 45 13.3 -1.8**
KULM Kulim 46.46 112 *e*P **P 06 45 19.5 +1.9**
KULM Kulim 46.46 112 *e*P **P 06 45 19.5 +2.0**
MTLF Montolieu 46.64 304⇑ *i*P **P 06 45 17.2 -1.4**
comp=Z,23nm,0.8s,mb4.8
MTLF Montolieu 46.64 304⇑ *i*P **P 06 45 17.2 -1.4**
MTLF pmax pmax
comp=Z,11nm,0.8s,mb4.8
MTLF Montolieu 46.64 304⇑ *i*P **P 06 45 17.2 -1.4**
comp=Z,11nm,0.8s,mb4.8
TCF Toulx Ste Croi 46.64 308⇑ *i*P **P 06 45 17.0 -1.5**
comp=Z,10nm,0.7s,mb4.5
TCF Toulx Ste Croi 46.64 308⇑ *i*P **P 06 45 17.0 -1.5**
TCF pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
TCF Toulx Ste Croi 46.64 308⇑ *i*P **P 06 45 17.0 -1.5**
comp=Z,5.2nm,0.7s,mb4.5
CAF Calviac 46.73 306⇑ *i*P **P 06 45 17.8 -1.4**
comp=Z,14nm,0.6s,mb4.8
CAF Calviac 46.73 306⇑ *i*P **P 06 45 17.8 -1.4**
CAF pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CAF Calviac 46.73 306⇑ *i*P **P 06 45 17.8 -1.4**
comp=Z,7.2nm,0.6s,mb4.8
RJF Les Rejaudoux 47.11 306⇑ *i*P **P 06 45 21.0 -1.3**
comp=Z,18nm,0.7s,mb4.8
RJF *e*MLR MLR
comp=Z,119nm,22.2s,MS3.5
RJF Les Rejaudoux 47.11 306⇑ *i*P **P 06 45 21.0 -1.3**
comp=Z,8.8nm,0.7s,mb4.8
RJF LR LR
comp=Z,120nm,22.3s,MS3.8
RJF Les Rejaudoux 47.11 306⇑ *i*P **P 06 45 21.0 -1.3**
RJF pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
RJF MLR MLR
comp=Z,120nm,22.3s,MS3.8
LFF La Frestale 47.67 306⇑ *i*P **P 06 45 25.2 -1.4**
comp=Z,30nm,0.6s,mb5.2
LFF La Frestale 47.67 306⇑ *i*P **P 06 45 25.2 -1.4**
LFF pmax pmax
comp=Z,15nm,0.6s,mb5.2
LFF La Frestale 47.67 306⇑ *i*P **P 06 45 25.2 -1.4**
comp=Z,15nm,0.6s,mb5.2
BOD Bodaibo 47.77 37 *e*P **P 06 45 26.2 -0.9**
BOD pmax pmax
comp=Z,34nm,1.1s,mb5.3
BOD Bodaibo 47.77 37 *e*P **P 06 45 26.2 -0.9**
comp=Z,34nm,1.1s,mb5.3
QIZ Qiongzhong 47.78 90 P **P 06 45 27.0 -0.8**
QIZ *e*S **S 06 52 20.8 -3.8**
QIZ AMB AMB
comp=Z,19nm,1.1s,mb5.0
QIZ AMB AMB
comp=Z,104nm,5.5s
BJT Baijiatuao 48.15 61 *e*P **P 06 45 30.6 +0.2**
BJT Baijiatuao 48.15 61 *e*P **P 06 45 30.6 +0.2**
BJI Beijing 48.15 61 P **P 06 45 30.5 +0.1**
BJI S **S 06 52 25.5 -3.9**
BJI AMB AMB
comp=Z,20nm,0.8s,mb5.2
BJI LR LR
comp=N,243nm,12.9s,MS4.5
BJI LR LR
comp=E,167nm,12.9s,MS4.5
BJI LR LR
comp=Z,146nm,17.4s,MS4.0
LDF La Druitiere 48.28 311⇑ *i*P **P 06 45 29.1 -2.2**
comp=Z,29nm,0.7s,mb5.0
LDF La Druitiere 48.28 311⇑ *i*P **P 06 45 29.1 -2.2**
comp=Z,11nm,0.7s,mb5.0
FLN La Foliniere 48.53 311⇑ *i*P **P 06 45 31.2 -2.0**
comp=Z,22nm,0.8s,mb5.0
FLN *e*MLR MLR
comp=Z,122nm,17.5s,MS3.6
FLN La Foliniere 48.53 311⇑ *i*P **P 06 45 31.2 -2.0**
comp=Z,11nm,0.8s,mb5.0
OPO Ombohidratompo 48.54 194 P **P 06 45 36.3 +2.8**
comp=Z,5.0nm,0.9s,mb4.6,baz=17,slow=7.0,SNR=7.1
ETSF Etsaut 48.69 303 *e*P **P 06 45 33.1 -1.4**
comp=Z,19nm,0.9s,mb4.8
ETSF Etsaut 48.69 303 *e*P **P 06 45 33.1 -1.4**
ETSF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
ETSF Etsaut 48.69 303 *e*P **P 06 45 33.1 -1.4**
comp=Z,9.6nm,0.9s,mb4.8
GRR Gorron 48.77 310⇑ *i*P **P 06 45 33.3 -1.7**
comp=Z,23nm,0.8s,mb4.9
GRR Gorron 48.77 310⇑ *i*P **P 06 45 33.3 -1.7**
GRR pmax pmax
comp=Z,11nm,0.8s,mb4.9
GRR Gorron 48.77 310⇑ *i*P **P 06 45 33.3 -1.7**
comp=Z,11nm,0.8s,mb4.9
TIA Tai'an 49.39 66 *e*P **P 06 45 39.8 -0.2**
TIA AMB AMB
comp=Z,41nm,1.1s,mb5.4
SGMF Saint Gilles 49.90 310⇑ *i*P **P 06 45 42.0 -1.7**
comp=Z,10nm,0.6s,mb4.8
SGMF Saint Gilles 49.90 310⇑ *i*P **P 06 45 42.0 -1.7**
SGMF pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
SGMF Saint Gilles 49.90 310⇑ *i*P **P 06 45 42.0 -1.7**
comp=Z,5.1nm,0.6s,mb4.8
HGH Gray Hill 50.12 315 *e*P **P 06 45 43.6 -1.7**
HGH Gray Hill 50.12 315 *e*P **P 06 45 43.6 -1.6**
comp=Z,58nm,1.1s,mb5.5
LRW Lerwick 50.16 326 *e*P **P 06 45 45.1 -0.4**
LRW AMb AMB 06 45 45.5
comp=Z,58nm,1.1s,mb5.5
MCH1 Michaelchurch 50.25 315 *e*P **P 06 45 44.8 -1.5**
MCH1 AMb AMB 06 45 49.0
comp=Z,16nm,2.2s,mb4.7
HIA Hailar 50.26 48 *e*P **P 06 45 46.7 +0.3**
comp=Z,5.5nm,0.7s,mb4.7
HIA Hailar 50.26 48 *e*P **P 06 45 46.7 +0.3**
HIA pmax pmax
comp=Z,6.0nm,0.7s
HIA Hailar 50.26 48 *e*P **P 06 45 46.7 +0.3**
comp=Z,6.0nm,0.7s,mb4.7
QUIF Quistinic 50.31 310 *e*P **P 06 45 44.8 -2.0**
comp=Z,7.5nm,0.5s,mb4.7
QUIF Quistinic 50.31 310 *e*P **P 06 45 44.8 -2.0**
QUIF pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
QUIF Quistinic 50.31 310 *e*P **P 06 45 44.8 -2.0**
comp=Z,3.8nm,0.5s,mb4.7
ROSF Rostrenen 50.38 310 *e*P **P 06 45 45.6 -1.7**
SBD1 Bryn Du 50.45 316 *e*P **P 06 45 46.6 -1.2**
SBD1 Bryn Du 50.45 316 *e*P **P 06 45 46.6 -1.2**
comp=Z,43nm,1.6s,mb5.2
ESK Eskdalemuir 50.58 319 *e*P **P 06 45 46.8 -1.9**
ESK AMb AMB 06 45 51.0
comp=Z,43nm,1.8s,mb5.1
EVIA Vianos 50.60 298 P **P 06 45 49.5 +0.3**
EVIA pmax pmax
comp=Z,12nm,0.7s,mb4.9
EVIA Vianos 50.60 298 P **P 06 45 49.5 +0.3**
comp=Z,12nm,0.7s,mb4.9
EDI Edinburgh 50.63 320 *e*P **P 06 45 48.1 -0.9**
EDI AMb AMB 06 45 50.2
comp=Z,43nm,1.6s,mb5.1
MME1 Meikle Cairn 50.65 322 *e*P **P 06 45 48.3 -0.9**
MME1 Meikle Cairn 50.65 322 *e*P **P 06 45 48.3 -0.9**
comp=Z,46nm,1.6s,mb5.2
DYA Yadsworthy 50.80 313 *e*P **P 06 45 48.4 -2.0**
DYA AMb AMB 06 45 49.3
comp=Z,46nm,1.6s,mb5.2
EQES Quesada 51.17 297 P **P 06 45 52.6 -0.9**
comp=Z,13nm,0.9s,mb4.8
EQES Quesada 51.17 297 P **P 06 45 52.6 -0.9**
comp=Z,13nm,0.9s,mb4.8
EBER Berja 51.18 296 P **P 06 45 52.4 -1.2**
comp=Z,40nm,1.0s,mb5.3
EBER Berja 51.18 296 P **P 06 45 52.3 -1.3**
comp=Z,40nm,1.0s,mb5.3
ESDC Sonseca Array 51.58 299 P **P 06 45 55.5 -1.0**
comp=Z,1.0nm,0.6s,mb4.0,baz=75,slow=7.6,SNR=6.7
ESDC LR LR 07 09 47.3
comp=Z,46nm,18.8s,MS3.5,baz=145,slow=38
NJ2 Nanjing 51.62 71 *e*P **P 06 45 58.5 +1.6**
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.0
ECOG Cogollos-Vega 51.65 296 P **P 06 45 55.6 -1.4**
comp=Z,3.6nm,0.7s,mb4.4
ECOG Cogollos-Vega 51.65 296 P **P 06 45 55.6 -1.5**
ECOG pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
ECOG Cogollos-Vega 51.65 296 P **P 06 45 55.6 -1.5**
comp=Z,4.0nm,0.7s,mb4.5
EBAN Banos Encina 51.67 297 P **P 06 45 56.3 -0.9**
comp=Z,29nm,1.0s,mb5.2
EBAN Banos Encina 51.67 297 P **P 06 45 56.3 -0.9**
EBAN pmax pmax
comp=Z,29nm,1.0s,mb5.2
EBAN Banos Encina 51.67 297 P **P 06 45 56.3 -0.9**
comp=Z,29nm,1.0s,mb5.2
ERON Agron 51.88 296 P **P 06 45 57.8 -1.0**
comp=Z,15nm,1.2s,mb4.8
ERON Agron 51.88 296 P **P 06 45 57.8 -1.0**
comp=Z,15nm,1.2s,mb4.8
EADA Adamuz 52.29 298 P **P 06 46 00.0 -1.8**
comp=Z,14nm,1.0s,mb4.8
EMIJ Mijas 52.73 296 P **P 06 46 01.1 -4.0**
comp=Z,14nm,0.6s,mb5.1
TZK Tazeka 52.77 292 *e*P **P 06 46 07.0 +1.6**
EJIF Jimena Fronter 53.30 296 P **P 06 46 07.9 -1.5**
comp=Z,5.5nm,0.7s,mb4.6

EJIF	**Jimena Fronter**	**53.30**	**296**	P	**P**	**06 46 07.9**	**-1.4**
EJIF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
EJIF	**Jimena Fronter**	**53.30**	**296**	P	**P**	**06 46 07.9**	**-1.4**
	comp=Z,6.0nm,0.7s,mb4.6						
ZFT	**Errachidia**	**53.39**	**290**	*i* P	**P**	**06 46 10.5**	**+0.5**
SNY	**Shenyang**	**53.50**	**58**	⇑P	**P**	**06 46 09.8**	**-0.9**
SNY				AMB	AMB		
	comp=Z,12nm,0.9s,mb4.8						
ESPR	**Espera**	**53.53**	**296**	P	**P**	**06 46 05.6**	**-5.4**
	comp=Z,8.3nm,0.7s,mb4.8						
CZD	**Col de Zad**	**53.71**	**291**	*i* P	**P**	**06 46 13.0**	**+0.6**
EMIN	**Mina Concepcio**	**53.99**	**297**	P	**P**	**06 46 13.9**	**-0.4**
	comp=Z,5.1nm,0.6s,mb4.6						
EMIN	**Mina Concepcio**	**53.99**	**297**	P	**P**	**06 46 13.9**	**-0.4**
	comp=Z,5.1nm,0.6s,mb4.6						
CN2	**Changchun**	**54.58**	**55**	*e*P	**P**	**06 46 18.3**	**-0.3**
CN2				*e*AP	pP	06 46 28.0	+6.2
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,15.0s,MS4.6						
TORD	**Torodi Ar. Bea**	**54.66**	**266**	P	**P**	**06 46 19.0**	**-0.5**
TORD				LR	LR	07 12 17.8	
TORD	**Torodi Ar. Bea**	**54.66**	**266**	P	**P**	**06 46 19.0**	**-0.5**
	comp=Z,37nm,0.6s,mb5.6,baz=61,slow=6.4,SNR=177						
TORD				LR	LR	07 12 17.8	
	comp=Z,204nm,19.3s,MS4.2,baz=60,slow=39						
EVO	**Evora**	**54.88**	**299**	*e*P	**P**	**06 46 20.9**	**+0.1**
	comp=Z,8.6nm,0.5s,mb4.7						
EVO				*e*MLR	MLR		
	comp=Z,78nm,17.1s,MS3.5						
EVOP	**Sao Brissos**	**54.96**	**299**	*e*P	**P**	**06 46 20.9**	**-0.5**
	comp=Z,4.3nm,0.5s,mb4.7						
YAK	**Yakutsk**	**56.09**	**33**⇓	*e*P	**P**	**06 46 27.8**	**-1.3**
YAK				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.3						
YAK	**Yakutsk**	**56.09**	**33**	*e*P	**P**	**06 46 27.8**	**-1.3**
	comp=Z,36nm,1.1s,mb5.3						
KSM	**Kuching**	**56.54**	**109**	*e*P	**P**	**06 46 32.6**	**-0.4**
KSM	**Kuching**	**56.54**	**109**	*e*P	**P**	**06 46 32.6**	**-0.4**
TIXI	**Tiksi**	**56.60**	**21**	*e*P	**P**	**06 46 33.5**	**+0.9**
	comp=Z,13nm,1.0s,mb4.9						
TIXI	**Tiksi**	**56.60**	**21**	*i* P	**P**	**06 46 31.9**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
TIXI	**Tiksi**	**56.60**	**21**	*i* P	**P**	**06 46 31.9**	**-0.7**
	comp=Z,9.0nm,0.8s,mb4.8						
MDJ	**Mudanjiang**	**57.40**	**53**	P	**P**	**06 46 37.3**	**-1.4**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,96nm,5.7s						
KSRS	**Korea Array**	**57.63**	**62**	P	**P**	**06 46 39.4**	**-1.1**
	comp=Z,15nm,0.8s,mb5.1,baz=276,slow=7.1,SNR=35						
KSRS				LR	LR	07 14 26.9	
	comp=Z,109nm,19.4s,MS4.0,baz=134,slow=39						
KLR	**Kul'dur**	**58.10**	**48**	*e*P	**P**	**06 46 39.7**	**-3.9**
KLR				pmax	pmax		
	comp=E,25nm,1.2s						
KLR				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
BORG	**Borgarnes**	**59.75**	**331**	LR	LR	07 13 46.4	
	comp=Z,199nm,18.3s,MS4.3,baz=40,slow=37						
TSUM	**Tsumeb**	**62.02**	**224**	*e*P	**P**	**06 47 11.2**	**+0.4**
	comp=Z,9.1nm,1.1s,mb4.8						
TSUM	**Tsumeb**	**62.02**	**224**	*e*P	**P**	**06 47 11.1**	**+0.3**
	comp=Z,9.1nm,1.1s,mb4.8						
DBIC	**Dimbokro**	**63.37**	**263**	P	**P**	**06 47 20.1**	**+0.1**
	comp=Z,13nm,0.7s,mb5.1,baz=39,slow=8.3,SNR=19						
LIC	**Lamto**	**63.73**	**262**⇑	*i* P	**P**	**06 47 22.1**	**-0.3**
	comp=Z,38nm,0.8s,mb5.2						
LIC				*e*MLR	MLR		
	comp=Z,146nm,17.6s,MS3.9						
LIC	**Lamto**	**63.73**	**262**⇑	*i* P	**P**	**06 47 22.1**	**-0.3**
	comp=Z,19nm,0.8s,mb5.2						
LIC				LR	LR		
	comp=Z,70nm,17.5s,MS3.9						
LIC	**Lamto**	**63.73**	**262**⇑	*i* P	**P**	**06 47 22.1**	**-0.3**
	comp=Z,19nm,0.8s,mb5.2						
BOSA	**Boshof**	**65.47**	**212**	P	**P**	**06 47 34.3**	**+0.9**
	comp=Z,8.2nm,0.8s,mb4.8,baz=22,slow=6.6,SNR=12						
BOSA				LR	LR	07 18 34.7	
	comp=Z,68nm,18.5s,MS3.9,baz=254,slow=38						
MJAR	**Matsushiro Arr**	**65.79**	**60**	P	**P**	**06 47 34.2**	**-1.3**
	comp=Z,11nm,1.1s,mb4.8,baz=291,slow=9.2,SNR=16						
YSS	**Yuzh-Sakhalins**	**65.80**	**48**	*e*P	**P**	**06 47 34.6**	**-0.8**
	comp=Z,13nm,0.6s,mb5.2						
YSS	**Yuzh-Sakhalins**	**65.80**	**48**⇓	*e*P	**P**	**06 47 34.8**	**-0.6**
YSS				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.6						
YSS	**Yuzh-Sakhalins**	**65.80**	**48**	*e*P	**P**	**06 47 34.6**	**-0.8**
	comp=Z,13nm,0.6s,mb5.2						
SEY	**Seymchan**	**66.35**	**30**⇑	*e*P	**P**	**06 47 38.4**	**-0.3**
MA2	**Magadan**	**66.63**	**34**	*e*P	**P**	**06 47 40.1**	**-0.3**
MA2	**Magadan**	**66.63**	**34**⇓	*e*P	**P**	**06 47 40.0**	**-0.5**
MA2				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
MA2	**Magadan**	**66.63**	**34**	*e*P	**P**	**06 47 40.0**	**-0.5**
	comp=Z,22nm,0.9s,mb5.2						
BILL	**Bilibino**	**69.76**	**22**	*e*P	**P**	**06 47 60.0**	**0.0**
	comp=Z,27nm,1.4s,mb5.0						
BILL	**Bilibino**	**69.76**	**22**⇑	*e*P	**P**	**06 47 59.7**	**-0.3**
BILL				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
BILL	**Bilibino**	**69.76**	**22**	*e*P	**P**	**06 47 59.7**	**-0.3**
	comp=Z,18nm,1.0s,mb5.0						
BATI	**Kupang**	**74.07**	**112**	P	**P**	**06 48 26.2**	**-0.4**
	comp=Z,45nm,0.6s,mb5.6,baz=329,slow=5.9,SNR=2.8						
TNA	**Tin City**	**79.21**	**18**	*e*P	**P**	**06 48 54.4**	**-0.5**
	comp=Z,6.7nm,0.8s,mb4.6						
TNA	**Tin City**	**79.21**	**18**	*e*P	**P**	**06 48 54.4**	**-0.5**
	comp=Z,6.7nm,0.8s,mb4.6						
GAMB	**Gambell**	**79.47**	**20**	*e*P	**P**	**06 48 56.0**	**-0.4**
	comp=Z,5.1nm,0.8s,mb4.5						
GAMB	**Gambell**	**79.47**	**20**	*e*P	**P**	**06 48 56.0**	**-0.4**
	comp=Z,5.1nm,0.8s,mb4.5						
FITZ	**Fitzroy Crossi**	**80.10**	**117**	*e*P	**P**	**06 49 00.0**	**-0.5**
	comp=Z,12nm,0.8s,mb4.9						
FITZ				*e*		06 49 05.1	
FITZ	**Fitzroy Crossi**	**80.10**	**117**	P	**P**	**06 48 60.0**	**-0.5**
	comp=Z,7.3nm,0.8s,mb4.7,baz=282,slow=5.6,SNR=11						
IMA2	**Indian Mountai**	**82.06**	**13**	*e*P	**P**	**06 49 08.7**	**-1.5**
INK	**Inuvik**	**82.55**	**4**	*e*P	**P**	**06 49 12.3**	**-0.4**
	comp=Z,334nm,1.0s,mb6.3						
INK	**Inuvik**	**82.55**	**4**	P	**P**	**06 49 12.0**	**-0.7**
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
INK	**Inuvik**	**82.55**	**4**	P	**P**	**06 49 12.0**	**-0.7**
	comp=Z,8.1nm,1.0s,mb4.7,baz=12,slow=8.7,SNR=9.9						
KAKA	**Kakadu**	**82.64**	**109**	*e*P	**P**	**06 49 13.0**	**-1.1**
	comp=Z,25nm,0.7s,mb5.3						
COLA	**College**	**84.19**	**11**	*e*P	**P**	**06 49 20.8**	**-0.4**
	comp=Z,15nm,1.1s,mb5.0						
COLA	**College**	**84.19**	**11**	*e*P	**P**	**06 49 20.8**	**-0.5**
COLA				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.0						
COLA	**College**	**84.19**	**11**	*e*P	**P**	**06 49 20.8**	**-0.5**
	comp=Z,15nm,1.1s,mb5.0						
EGAK	**Eagle**	**85.26**	**8**	*e*P	**P**	**06 49 26.1**	**-0.5**
	comp=Z,23nm,1.0s,mb5.2						
SVW2	**Sparrevohn**	**86.04**	**16**	*e*P	**P**	**06 49 30.8**	**+0.2**
SVW2	**Sparrevohn**	**86.04**	**16**	*e*P	**P**	**06 49 30.8**	**+0.2**
DAWY	**Dawson**	**86.16**	**8**	*e*P	**P**	**06 49 30.6**	**-0.6**
DAWY	**Dawson**	**86.16**	**8**	*e*P	**P**	**06 49 30.6**	**-0.5**
SML	**Sawmill**	**86.94**	**12**	*e*P	**P**	**06 49 34.6**	**-0.4**
SML	**Sawmill**	**86.94**	**12**	*e*P	**P**	**06 49 34.6**	**-0.4**
PMR	**Palmer**	**86.99**	**13**	*e*P	**P**	**06 49 34.1**	**-1.1**
	comp=Z,34nm,1.0s,mb5.5						
PMR				LR	LR		
	comp=Z,300nm,21.0s,MS4.7						
PMR	**Palmer**	**86.99**	**13**	*e*P	**P**	**06 49 34.1**	**-1.1**
PMR				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.5						
PMR				MLR	MLR		
	comp=Z,300nm,21.0s,MS4.7						
SLKM	**Skilak Lake**	**87.76**	**14**	*e*P	**P**	**06 49 38.3**	**-0.7**
SLKM	**Skilak Lake**	**87.76**	**14**	*e*P	**P**	**06 49 38.3**	**-0.7**
WRA	**Warramunga Arr**	**87.98**	**114**	P	**P**	**06 49 39.6**	**-1.1**
	comp=Z,6.8nm,0.8s,mb5.0,baz=316,slow=4.0,SNR=51						
WB2	**Warramunga Arr**	**87.99**	**114**	*e*P	**P**	**06 49 39.6**	**-1.1**
YKA	**Yellowknife Ar**	**88.61**	**357**	P	**P**	**06 49 42.5**	**-0.5**
YKA	**Yellowknife Ar**	**88.61**	**357**	P	**P**	**06 49 42.5**	**-0.5**
	comp=Z,6.4nm,0.7s,mb5.1,baz=0.1,slow=5.2,SNR=79						
FORT	**Forrest**	**89.14**	**126**	*e*P	**P**	**06 49 45.6**	**-0.3**
	comp=Z,19nm,0.7s,mb5.5						
FORT				*e*	pP	06 49 50.6	+1.3
ASAR	**Alice Springs**	**89.59**	**117**	P	**P**	**06 49 47.5**	**-0.8**
	comp=Z,3.6nm,0.8s,mb4.8,baz=300,slow=4.5,SNR=22						
KDAK	**Kodiak Island**	**89.69**	**16**	P	**P**	**06 49 47.8**	**-0.4**
	comp=Z,26nm,0.8s,mb5.6,baz=7.4,slow=4.0,SNR=12						

BJI ***26*** *06:40:59.4,21.27N×143.92E,h25km,mB5.0,mb4.7,Ms4.5, Msz4.1*
ISCJB ***26*** *06:41:06.8±2.3,21.96N±0.07×142.97E±0.06,h13km±13km, mb4.5/34,MS4.1/5,Error ellipse: s-maj=12.0km s-min=9.5km az=12.3*
NEIC ***26*** *06:41:11.3±0.3,21.98N×142.97E,h35km,mb4.7/15,Error ellipse: s-maj=8.4km s-min=8.0km az=59.0*
IDC ***26*** *06:41:21.5±7.6,21.96N×142.93E,h130km±69km,mb3.8/14, mb1 4.0/14,mb1mx3.9/19,mbtmp3.8/14,Error ellipse: s-maj=29.7km s-min=12.0km az=80.0*
ISC 26 06:41:12.0±2.0,2197N±0.07×14301E±0.06,h39km±18km, n58,σ0§84/60,mb4.5/34,MS4.1/5,1C,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YHNB	**Yeheng**	**20.05**	**282**	*e*P	**P**	**06 45 37.9**	**-4.0**
KSRS	**Korea Array**	**20.20**	**323**	P	**P**	**06 45 47.4**	**+3.9**
	5.8nm,1.0s,baz=133,slow=12,SNR=14						
NJ2	**Nanjing**	**23.70**	**300**	*e*P	**P**	**06 46 21.5**	**+1.1**
NJ2				AP		06 46 25.0	
NJ2				PP		06 46 55.5	
NJ2				S	**S**	**06 50 31.5**	**-1.2**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,730nm,5.0s						
NJ2				LR	LR		
	comp=N,320nm,24.2s,MS3.9						
NJ2				LR	LR		
	comp=E,340nm,21.0s,MS3.9						
NJ2				LR	LR		
	comp=Z,360nm,23.3s,MS3.8						
CN2	**Changchun**	**26.19**	**330**	*e*P	**P**	**06 46 44.8**	**+1.9**
GYA	**Guiyang**	**33.37**	**285**⇑	*i* P	**P**	**06 47 46.5**	**-0.3**
GYA				PP	PP	06 48 58.0	-4.7
GYA				S	**S**	**06 53 06.3**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,360nm,17.6s,MS4.3						
GYA				LR	LR		
	comp=E,480nm,18.6s,MS4.3						
GYA				LR	LR		
	comp=Z,460nm,18.0s,MS4.2						
CD2	**Chengdu**	**36.10**	**293**	*e*P	**P**	**06 48 08.8**	**-1.6**
CD2				S	**S**	**06 53 46.3**	**-1.0**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
CD2				AMB	AMB		
	comp=Z,40nm,5.2s						
CD2				LR	LR		
	comp=N,210nm,13.4s						
CD2				LR	LR		
	comp=Z,160nm,12.6s,MS4.0						
LZH	**Lanzhou**	**36.77**	**301**	*e*P	**P**	**06 48 15.5**	**-0.4**
LZH				PP	PP	06 49 40.5	+0.4
LZH				AMB	AMB		
	comp=Z,18nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,57nm,5.8s						
LZH				LR	LR		
	comp=N,498nm,13.5s						
LZH				LR	LR		
	comp=Z,813nm,17.4s,MS4.6						
KMI	**Kunming**	**36.95**	**283**	P	**P**	**06 48 17.5**	**-0.2**
KMI				AMB	AMB		
	comp=Z,15nm,0.5s,mb5.1						
ULN	**Ulaanbaatar**	**38.65**	**321**	*e*P	**P**	**06 48 32.1**	**+0.4**
SONM	**Songino Array**	**39.02**	**320**	P	**P**	**06 48 34.6**	**-0.2**
	comp=Z,1.9nm,0.6s,mb4.0,baz=133,slow=7.4,SNR=10						
CTA	**Charters Tower**	**41.92**	**175**	P	**P**	**06 48 59.7**	**+0.7**
CTA	**Charters Tower**	**41.92**	**175**	P	**P**	**06 48 59.7**	**+0.7**
	comp=Z,7.7nm,0.9s,mb4.3,baz=309,slow=7.7,SNR=4.7						
TLY	**Talaya**	**42.45**	**324**	*e*P	**P**	**06 49 03.1**	**+0.1**
	comp=Z,5.5nm,1.1s,mb4.1						
WB2	**Warramunga Arr**	**42.51**	**192**	*e*P	**P**	**06 49 03.5**	**-0.3**
WRA	**Warramunga Arr**	**42.51**	**192**	P	**P**	**06 49 03.5**	**-0.3**
	comp=Z,2.2nm,0.6s,mb4.1,baz=13,slow=8.7,SNR=23						
ASAR	**Alice Springs**	**46.22**	**192**	P	**P**	**06 49 33.5**	**+0.1**
	comp=Z,1.2nm,0.6s,mb4.0,baz=14,slow=8.7,SNR=14						
BILL	**Bilibino**	**48.29**	**11**	P	**P**	**06 49 48.8**	**-0.2**
WMQ	**Urumqi**	**50.28**	**309**	P	**P**	**06 50 04.8**	**+0.2**
WMQ				AP	pP	06 50 09.3	-6.6
WMQ				PP	PP	06 52 01.0	+0.8
WMQ				S	**S**	**06 57 15.8**	**+1.3**
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,99nm,4.5s						
WMQ				LR	LR		
	comp=N,49nm,17.0s,MS3.9						
WMQ				LR	LR		
	comp=E,98nm,19.0s,MS3.9						
WMQ				LR	LR		
	comp=Z,54nm,18.0s,MS3.6						
STKA	**Stephens Creek**	**53.56**	**181**	P	**P**	**06 50 28.6**	**-0.5**
	comp=Z,2.2nm,0.6s,mb4.2,baz=352,slow=13,SNR=6.1						
ZAA0	**Zalesovo Array**	**53.90**	**322**	*e*P	**P**	**06 50 30.6**	**-0.7**
ZALV	**Zalesovo Beam**	**53.90**	**322**	P	**P**	**06 50 30.6**	**-0.7**
	comp=Z,3.6nm,0.7s,mb4.4,baz=101,slow=7.7,SNR=9.8						
MKAR	**Makanchi Array**	**54.39**	**313**	P	**P**	**06 50 35.3**	**+0.2**
	comp=Z,1.4nm,0.7s,mb4.0,baz=89,slow=9.5,SNR=8.7						
KURK	**Kurchatov**	**57.16**	**317**	*e*P	**P**	**06 50 54.1**	**-0.8**
	comp=Z,4.6nm,0.8s,mb4.6						
TKM2	**Tokmak 2**	**59.05**	**308**	*e*P	**P**	**06 51 09.3**	**+1.1**
	comp=Z,4.9nm,1.1s,mb4.5						
UCH	**Uchtor**	**59.88**	**307**	*e*P	**P**	**06 51 15.7**	**+1.7**
	comp=Z,4.9nm,1.0s,mb4.5						
PMR	**Palmer**	**60.40**	**31**	*e*P	**P**	**06 51 15.5**	**-1.6**
	comp=Z,7.5nm,1.0s,mb4.7						
AML	**Almayashu**	**60.49**	**307**	*e*P	**P**	**06 51 19.8**	**+1.6**
	comp=Z,5.9nm,1.0s,mb4.6						
BRVK	**Borovoye**	**62.42**	**319**	*e*P	**P**	**06 51 30.9**	**-0.1**
	comp=Z,12nm,1.1s,mb4.9						
INK	**Inuvik**	**67.39**	**24**	*e*P	**P**	**06 52 02.1**	**-0.9**
INK	**Inuvik**	**67.39**	**24**	P	**P**	**06 52 01.8**	**-1.2**
	comp=Z,2.9nm,1.0s,mb4.3,baz=173,slow=3.2,SNR=3.8						
YKA	**Yellowknife Ar**	**76.29**	**28**	P	**P**	**06 52 55.4**	**-1.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=292,slow=5.7,SNR=13						
RES	**Resolute Bay**	**76.85**	**13**	*e*P	**P**	**06 52 58.8**	**-0.7**
ARCES	**ARCESS Array B**	**78.61**	**341**	P	**P**	**06 53 08.7**	**-0.7**
	comp=Z,6.6nm,1.0s,mb4.5,baz=12,slow=7.6,SNR=6.9						
NEW	**Newport**	**80.19**	**42**	*e*P	**P**	**06 53 18.2**	**-0.2**
	comp=Z,3.4nm,0.8s,mb4.3						
BMO	**Blue Mountains**	**81.35**	**45**	*e*P	**P**	**06 53 24.6**	**-0.1**
CMB	**Columbia Colle**	**81.73**	**52**	*e*P	**P**	**06 53 26.7**	**-0.1**
BSMT	**Bassoo Peak**	**81.79**	**42**	*e*P	**P**	**06 53 27.8**	**+0.8**
NVAR	**Mina Array Bea**	**83.10**	**51**	P	**P**	**06 53 34.2**	**+0.2**
NVAR	**Mina Array Bea**	**83.10**	**51**	P	**P**	**06 53 34.2**	**+0.2**
	comp=Z,2.8nm,0.8s,mb4.4,baz=263,slow=3.6,SNR=20						
HLID	**Hailey**	**83.77**	**46**	*e*P	**P**	**06 53 37.4**	**+0.1**
TPNV	**Topopah Spring**	**85.18**	**52**	*e*P	**P**	**06 53 44.5**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.5						
FFC	**Flin Flon**	**85.68**	**32**	*e*P	**P**	**06 53 46.1**	**-0.6**
	comp=Z,8.5nm,0.8s,mb5.0						
IMW	**Indian Meadow**	**85.90**	**44**	*e*P	**P**	**06 53 48.9**	**+0.8**
	comp=Z,4.4nm,0.8s,mb4.7						
LKWY	**Lake**	**85.95**	**43**	*e*P	**P**	**06 53 50.5**	**+2.2**
DUG	**Dugway**	**86.28**	**48**	*e*P	**P**	**06 53 50.0**	**0.0**
	comp=Z,4.4nm,0.7s,mb4.8						
RLMT	**Red Lodge**	**86.41**	**43**	*e*P	**P**	**06 53 51.3**	**+0.8**
HWUT	**Hardware Ranch**	**86.51**	**46**	*e*P	**P**	**06 53 51.1**	**0.0**
	comp=Z,6.6nm,0.9s,mb4.8						
CTU	**Camp Tracy**	**86.79**	**47**	*e*P	**P**	**06 53 52.5**	**0.0**
JLU	**Jordanelle**	**87.03**	**47**	*e*P	**P**	**06 53 53.8**	**+0.1**
AKASG	**Malin Array Be**	**87.19**	**324**	P	**P**	**06 53 52.1**	**-2.1**
	comp=Z,0.1nm,0.3s,mb3.6,baz=46,slow=5.7,SNR=3.3						
PDAR	**Pinedale Array**	**87.32**	**45**	P	**P**	**06 53 54.6**	**-0.3**
	comp=Z,0.7nm,0.8s,mb3.9,baz=298,slow=3.2,SNR=4.8						
SRU	**San Rafael**	**88.34**	**48**	*e*P	**P**	**06 53 59.6**	**-0.3**
	comp=Z,2.0nm,0.6s,mb4.5						
PV10	**Paradox Valley**	**89.71**	**48**	*e*P	**P**	**06 54 06.7**	**+0.3**
SMCO	**Snowmass**	**90.74**	**47**	*e*P	**P**	**06 54 11.6**	**+0.4**
	comp=Z,3.6nm,0.8s,mb4.8						
ISCO	**Idaho Springs**	**91.35**	**46**	*e*P	**P**	**06 54 14.5**	**+0.5**
SDCO	**Great Sand Dun**	**92.46**	**48**	*e*P	**P**	**06 54 19.3**	**+0.2**
PLCA	**Paso Flores**	**146.06**	**131**	PKPbc	PKPbc	07 00 47.0	-0.9
	comp=Z,1.2nm,0.8s,baz=244,slow=9.1,SNR=3.2						
LPAZ	**La Paz**	**150.08**	**85**	PKPbc	PKPbc	07 00 59.1	-0.2
	comp=Z,3.6nm,0.7s,baz=308,slow=1.8,SNR=12						

NIC ***26*** *06:41:28.8±0.3,34.49N×33.47E,h10km,ML3.1,MW3.0*
CSEM ***26*** *06:41:43.8,35.48N×32.95E,h14km,MD3.0,After ISK*
ISK ***26*** *06:41:43.8,35.48N×32.95E,h14km,MD3.0*
ISC 26 06:41:28.5±2.7,343N±01×3325E±009,h15km±12km,n8, σ0§77/13,1C,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SZAC	**Souni-Zanaja**	**0.56**	**327**	⇑P	**Pg**	**06 41 39.8**	**+0.2**
SZAC				S	**Sg**	**06 41 47.3**	**+0.2**
CSS	**Prodhromos**	**0.68**	**6**	P	**Pg**	**06 41 38.5**	**-3.4**
	8.3nm,0.4s						
CSS				S	**Sg**	**06 41 46.2**	**-4.7**
LEF	**Lefka**	**0.89**	**341**	PG	**Pg**	**06 41 52.3**	**+6.6**
LEF				SG	**Sg**	**06 41 57.2**	**-0.2**
PHNC	**Paralimni**	**0.97**	**42**	P	**Pb**	**06 41 47.2**	**+0.2**
LFK	**Lefkose**	**1.02**	**13**	PG	**Pg**	**06 41 54.1**	**+5.8**
LFK				SG	**Sg**	**06 42 02.2**	**+0.5**
ALFC	**Alevga**	**1.02**	**329**	P	**Pb**	**06 41 47.2**	**-0.8**
	12nm,0.2s						
ALFC				S	**Sb**	**06 42 01.1**	**-0.2**
AKMC	**Akamas**	**1.06**	**315**	P	**Pb**	**06 41 49.5**	**+0.9**
IKL	**Isikli**	**1.98**	**10**	*e*PG	**Pg**	**06 42 02.4**	**-4.2**

IDC 26 06:52:12.7±11.0,1774S×17821W,h591km±161km, mb3.0/5,mb1 3.3/5,mb1mx3.1/13,mbtmp3.0/5,Error ellipse: s-maj=157.1km s-min=41.8km az=160.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.88**	**241**	P	P	06 58 48.6	-0.1
	0.5nm,0.3s,baz=62,slow=7.1,SNR=4.0						
WRA	**Warramunga Arr**	**44.85**	**259**	P	P	06 59 35.6	-0.2
	1.4nm,0.4s,baz=97,slow=6.9,SNR=84						
ASAR	**Alice Springs**	**45.02**	**254**	P	P	06 59 37.0	0.0
	2.6nm,0.6s,baz=92,slow=7.8,SNR=36						
NVAR	**Mina Array Bea**	**79.17**	**44**	P	P	07 03 17.9	+0.6
	0.3nm,0.7s,baz=220,slow=8.2,SNR=4.5						
PDAR	**Pinedale Array**	**87.10**	**43**	P	P	07 03 56.5	-0.1
	0.4nm,0.7s,baz=219,slow=3.8,SNR=3.8						
GERES	**GERESS Array B**	**147.50**	**345**	PKPbc	PKPbc	07 10 50.8	-0.3
	0.8nm,0.8s,baz=355,slow=7.9,SNR=3.8						

KISR ***26*** *06:55:30.4±0.8,3189N×5097E,h34km±167km,ML3.3*
ISCJB ***26*** *06:55:33.7±0.7,3193N±006×506E±0.1,h10km,Error ellipse: s-maj=14.6km s-min=4.6km az=34.7*
CSEM ***26*** *06:55:33.8±0.1,3190N×5071E,h20km,ML3.1,Error ellipse: s-maj=5.0km s-min=2.0km az=120.0*
THR ***26*** *06:55:34.4±0.8,3200N×5070E,h14km±12km,ML3.1*
ISC 26 06:55:35.0±0.7,3198N±005×5061E±009,h10km,n18, σ1§07/29,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.54**	**275**	*e*Pg	**Pg**	**06 56 03.8**	**-0.8**
SHGR				AML	AML	06 56 40.3	
	comp=E,288nm,0.5s						
SHGR				AML	AML	06 56 43.9	
	comp=N,264nm,0.7s						
NASN	**Na'in**	**2.03**	**66**	*e*Pn	**Pn**	**06 56 09.1**	**0.0**
GHVR	**GHOM**	**2.56**	**13**	*e*Pn	**Pn**	**06 56 17.2**	**+0.8**
ASAO	**Ashtian**	**2.60**	**349**	*e*Pn	**Pn**	**06 56 18.6**	**+1.5**
ASAO				*e*Sg	**Sg**	**06 56 55.8**	**-2.9**
ASAO				AML	AML	06 57 06.5	
	comp=N,81nm,0.7s						
ASAO				AML	AML	06 57 08.2	
	comp=E,93nm,0.8s						
ASAO	**Ashtian**	**2.60**	**349**	*e*Pn	**Pn**	**06 56 18.6**	**+1.5**

THL	**Klokotos Trika**	**1.78**	**48**	*e*PN		**Pb**	**06 58 09.6**	**+0.1**
THL				*e*SN		**Sb**	**06 58 32.7**	**+0.8**
PYL	**PYLOS**	**1.86**	**142**	*e*Pb		**Pb**	**06 58 08.4**	**-2.4**
PYL				*e*Sb		**Sb**	**06 58 35.0**	**+0.9**
VLX	**Vlachokerasia**	**1.92**	**121**	*e*Pb		**Pb**	**06 58 09.9**	**-1.8**
VLX				*e*Sb		**Sb**	**06 58 36.4**	**+0.7**
LTK	**Loutraki**	**2.12**	**99**	*e*Pn		**Pn**	**06 58 12.6**	**+0.4**
LTK				*e*Sn		**Sn**	**06 58 41.2**	**+2.6**
LKR	**Lokris**	**2.13**	**82**	*e*PN		**Pn**	**06 58 11.9**	**-0.4**
LIT	**Litokhoron**	**2.42**	**44**	*e*Pn		**Pn**	**06 58 17.7**	**+1.5**
XOR	**Xorichti**	**2.46**	**65**	*e*Pn		**Pn**	**06 58 16.5**	**-0.3**
DID	**Didima**	**2.47**	**110**	*e*Pn		**Pn**	**06 58 16.9**	**-0.1**
DID				*e*Sn		**Sn**	**06 58 49.9**	**+2.8**
FNA	**Florina**	**2.55**	**19**	*e*Pn		**Pn**	**06 58 18.0**	**0.0**
FNA				*e*Sn		**Sn**	**06 58 49.5**	**+0.4**
VLI	**Veliai**	**2.66**	**128**	*e*PN		**Pn**	**06 58 21.0**	**+1.4**
BIA	**Bitola**	**2.76**	**16**	*e*Pn		**Pn**	**06 58 20.7**	**-0.3**
BIA	**Bitola**	**2.76**	**16**	*e*Pn		**Pn**	**06 58 20.6**	**-0.4**
OHR	**Ohrid**	**2.76**	**8**	*e*Pn		**Pn**	**06 58 21.4**	**+0.3**
OHR	**Ohrid**	**2.76**	**8**	*e*Pg		**Pn**	**06 58 21.6**	**+0.6**
OHR	**Ohrid**	**2.76**	**8**	*e*Pn		**Pn**	**06 58 21.5**	**+0.5**
TIP	**Timpagrande**	**2.89**	**287**	*e*Pn		**Pn**	**06 58 24.6**	**+1.7**
AOS	**Alonnisos**	**2.90**	**73**	*e*Pn		**Pn**	**06 58 24.6**	**+1.6**
AOS	**Alonnisos**	**2.90**	**73**	*e*Pn		**Pn**	**06 58 24.5**	**+1.6**
TIR	**Tirane**	**2.99**	**354**	*e*Pg		**Pn**	**06 58 25.9**	**+1.7**
GRG	**Griva**	**3.04**	**31**	*e*Pn		**Pn**	**06 58 25.2**	**+0.3**
KRUS	**Krusevo**	**3.08**	**13**	*e*Pn		**Pn**	**06 58 25.8**	**+0.4**
SOH	**Sokhos**	**3.39**	**43**	*e*Pn		**Pn**	**06 58 31.2**	**+1.5**
VAY	**Valandovo**	**3.42**	**30**	*e*Pn		**Pb**	**06 58 37.6**	**+0.2**
MRLC	**Muro Lucano**	**4.42**	**304**	*e*P		**Pn**	**06 58 44.1**	**+0.2**
SGO	**Sicignano**	**4.45**	**301**	*e*P		**Pn**	**06 58 47.3**	**+3.1**
BARS	**Barje**	**4.59**	**14**	*e*Pn		**Pn**	**06 58 45.2**	**-0.9**
BARS				*e*Sn		**Sn**	**06 59 37.1**	**-2.4**
CSSN	**Cassano Irpino**	**4.78**	**303**	*e*P		**Pn**	**06 58 51.7**	**+2.9**
IDI	**Anoyia**	**4.79**	**129**	Pn		**Pn**	**06 58 50.3**	**+1.4**
	0.2nm,0.3s,baz=300,slow=10,SNR=2.2							
FG5	**Orsara di Pugl**	**4.85**	**308**	*e*P		**Pn**	**06 58 51.9**	**+2.2**
RGNG	**Rignano Grg**	**4.90**	**314**	*e*P		**Pn**	**06 58 51.4**	**+1.0**
FG2	**Serracapriola**	**5.23**	**313**	*e*P		**Pn**	**06 58 56.2**	**+1.3**
BBLS	**Bajina Basta -**	**5.53**	**353**	*e*Pn		**Pn**	**06 59 00.9**	**+1.8**
BBLS				*e*Sn		**Sn**	**07 00 02.0**	**-0.7**
DIVS	**Divcibare**	**5.73**	**358**	*e*Pn		**Pn**	**06 59 00.1**	**-1.6**
DIVS				*e*Sn		**Sn**	**07 00 04.1**	**-3.4**
NRCA	**Norcia**	**7.06**	**311**	*e*P		**Pn**	**06 59 22.2**	**+2.1**
BOJS	**Bojanci**	**8.06**	**334**	*i* Pn		**Pn**	**06 59 33.2**	**-0.5**
BOJS				*i* Sn		**Sn**	**07 01 01.6**	**-3.3**
MLR	**Muntele Rosu**	**8.26**	**29**	Pn		**Pn**	**06 59 41.5**	**+5.0**
	0.1nm,0.3s,baz=152,slow=20,SNR=2.3							
CRES	**Cresnjev**	**8.28**	**336**	*e*Pn		**Pn**	**06 59 35.3**	**-1.4**
VISS	**Visnje**	**8.47**	**333**	*i* Pn		**Pn**	**06 59 39.6**	**+0.3**
VISS				*i* Sn		**Sn**	**07 01 10.6**	**-4.3**
CEY	**Cerknica**	**8.56**	**331**	*e*Pn		**Pn**	**06 59 39.8**	**-0.9**
JAVS	**Javornik**	**8.83**	**330**	*i* Pn		**Pn**	**06 59 43.7**	**-0.6**
JAVS				*i* Sn		**Sn**	**07 01 17.7**	**-6.2**
PTCC	**Patocco-Chiusa**	**9.53**	**330**	*e*P		**Pn**	**06 59 53.2**	**-0.8**
GERES	**GERESS Array B**	**11.51**	**338**	Pn		**Pn**	**07 00 20.1**	**-0.8**
	0.2nm,0.3s,baz=148,slow=14,SNR=3.8							
HFS	**Hagfors**	**22.18**	**351**	P		**P**	**07 02 31.9**	**-0.8**
	1.1nm,0.6s,mb3.5,baz=152,slow=13,SNR=4.9							
FINES	**FINESS Array B**	**23.38**	**7**	P		**P**	**07 02 46.3**	**+1.0**
	0.5nm,0.4s,mb3.3,baz=168,slow=9.8,SNR=6.4							
NB2	**NORSAR Subarra**	**23.40**	**349**	P		**P**	**07 02 43.6**	**-1.9**
	comp=Z,0.2nm,0.4s,mb2.9,baz=162,slow=11							
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**07 02 44.4**	**-1.1**
NOA	**NORSAR Array B**	**23.40**	**349**	P		**P**	**07 02 44.4**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.2,baz=161,slow=9.8,SNR=3.8							
MKAR	**Makanchi Array**	**45.34**	**59**	P		**P**	**07 05 54.3**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.5,baz=273,slow=8.0,SNR=5.9							
ZALV	**Zalesovo Beam**	**45.69**	**48**	P		**P**	**07 05 56.8**	**-0.7**
	comp=Z,1.3nm,0.3s,mb4.3,baz=283,slow=7.4,SNR=4.2							

SGS ***26*** *07:04:30.2, 3209N×4897E, h6km*
KISR ***26*** *07:04:31.1±1.0, 3156N×4835E, h34km±27km, ML3.3*
CSEM ***26*** *07:04:32.7±0.1, 3174N×4897E, h2km, ML3.7, Error ellipse: s-maj=2.4km s-min=1.3km az=107.0*
THR ***26*** *07:04:32.7±0.9, 3167N×4885E, h8km, ML3.7*
ISCJB ***26*** *07:04:34.5±0.3, 3175N±003×4893E±005, h10km, Error ellipse: s-maj=6.0km s-min=2.8km az=25.6*
TEH ***26*** *07:04:37.4, 3214N×4907E, h7km, ML3.7*

ISC 26 07:04:35.5±0.3, 3176N±003×4889E±005, h10km, n30, σ1§05/44, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.36**	**348**	*e*Pg		**Pg**	**Pg**	**07 04 41.4**	**-1.2**
SHGR				*e*Sg		**Sg**	**Sg**	**07 04 47.7**	**+0.3**
IPIR	**Pirpir**	**1.93**	**61**	*e*Pn		**Pn**	**Pn**	**07 05 08.0**	**-0.4**
IPIR				*e*				07 05 40.5	
	comp=Z,6μm,0.3s								
MIB	**Mutribah**	**2.36**	**215**	*e*P		**Pn**	**Pn**	**07 05 14.3**	**-0.1**
UMR	**Umm Al-Rimmam**	**2.42**	**205**	*e*P		**Pn**	**Pn**	**07 05 15.7**	**+0.5**
UMR				*e*S		**Sb**	**Sb**	**07 05 49.6**	**+0.5**
UMR					AML	AML	AML	07 05 55.4	
	comp=Z,121nm,0.3s								
UMR	**Umm Al-Rimmam**	**2.42**	**205**	*e*P		**Pn**	**Pn**	**07 05 15.7**	**+0.5**
UMR				*e*S		**Sb**	**Sb**	**07 05 49.6**	**+0.5**
	comp=Z,121nm,0.3s								
IKOM	**Komasi**	**2.67**	**335**	*e*Pn		**Pn**	**Pn**	**07 05 19.3**	**+0.6**
IKLH	**Kalahroud**	**2.75**	**55**	*e*Pn		**Pn**	**Pn**	**07 05 18.8**	**-0.9**
IKLH				*e*Sg		**Sn**	**Sn**	**07 05 54.3**	**+1.3**
IKLH				*e*		**Sg**	**Sg**	**07 06 05.8**	**+1.8**
	comp=Z,2μm,0.2s								
KBD	**Kabd**	**2.77**	**202**	*e*P		**Pn**	**Pn**	**07 05 19.1**	**-1.0**
KBD				*e*S		**Sn**	**Sn**	**07 05 56.5**	**+2.9**
KBD					AML	AML	AML	07 06 00.1	
	comp=Z,97nm,0.2s								
KBD	**Kabd**	**2.77**	**202**	*e*P		**Pn**	**Pn**	**07 05 19.1**	**-0.9**
KBD				*e*S		**Sn**	**Sn**	**07 05 56.5**	**+2.9**
RST	**Umm Al-Ruwaisa**	**2.78**	**216**	*e*P		**Pn**	**Pn**	**07 05 19.5**	**-0.7**
RST				*e*S		**Sn**	**Sn**	**07 05 54.5**	**+0.8**
IGAR	**Garneh**	**2.85**	**79**	*e*Pn		**Pn**	**Pn**	**07 05 20.4**	**-0.7**
IGAR				*e*				07 06 00.8	
	comp=Z,2μm,0.1s								
NAY	**Al-Naaiem**	**2.88**	**210**	*e*P		**Pn**	**Pn**	**07 05 20.4**	**-1.0**
NAY				*e*S		**Sn**	**Sn**	**07 05 56.9**	**+0.8**
NAY					AML	AML	AML	07 05 57.9	
	comp=Z,27nm,0.4s								
NAY	**Al-Naaiem**	**2.88**	**210**	*e*P		**Pn**	**Pn**	**07 05 20.5**	**-1.0**
NAY				*e*S		**Sn**	**Sn**	**07 05 56.9**	**+0.8**
ASAO	**Ashtian**	**2.94**	**19**	*e*Pn		**Pn**	**Pn**	**07 05 23.3**	**+1.0**
ASAO					AML	AML	AML	07 06 14.5	
	comp=E,229nm,0.6s								
ASAO					AML	AML	AML	07 06 19.9	
	comp=N,276nm,0.7s								
RDF	**Al-Radifah**	**3.05**	**203**	*e*P		**Pn**	**Pn**	**07 05 23.2**	**-0.7**
RDF				*e*S		**Sn**	**Sn**	**07 06 01.7**	**+1.3**
RDF					AML	AML	AML	07 06 06.6	
	comp=Z,68nm,0.3s								
RDF	**Al-Radifah**	**3.05**	**203**	*e*P		**Pn**	**Pn**	**07 05 23.2**	**-0.7**
RDF				*e*S		**Sn**	**Sn**	**07 06 01.7**	**+1.3**
QRN	**Al-Qurain**	**3.12**	**196**	*e*P		**Pn**	**Pn**	**07 05 24.1**	**-0.7**
QRN				*e*S		**Sn**	**Sn**	**07 06 03.8**	**+1.7**
QRN					AML	AML	AML	07 06 04.6	
	comp=Z,63nm,0.2s								
IZEF	**Zefreh**	**3.12**	**68**	*e*Pn		**Pn**	**Pn**	**07 05 25.0**	**+0.2**
IZEF				*e*				07 06 13.3	
	comp=Z,934nm,0.2s								
IGHG	**Ghaleghazi**	**3.22**	**323**	*e*Pn		**Pn**	**Pn**	**07 05 26.6**	**+0.4**
IGHG				*e*				07 06 35.5	
	comp=Z,6μm,0.3s								
IVIS	**Veys**	**3.25**	**329**	*e*Pn		**Pn**	**Pn**	**07 05 26.6**	**+0.1**
IVIS				*e*				07 06 25.3	
	comp=Z,2μm,0.2s								
GHVR	**GHOM**	**3.38**	**36**	*e*Pn		**Pn**	**Pn**	**07 05 29.2**	**+0.8**
SNGE	**Sanandaj**	**3.57**	**339**	*e*Pn		**Pn**	**Pn**	**07 05 31.6**	**+0.7**
KFJS		**3.65**	**193**	P		**Pn**	**Pn**	**07 05 31.7**	**-0.4**
KFJS		**3.65**	**193**	P		**Pn**	**Pn**	**07 05 31.7**	**-0.4**
KFJS				S		**Sn**	**Sn**	**07 06 15.1**	**-0.2**
IRAZ	**Razeghan**	**3.74**	**13**	*e*		**Pn**	**Pn**	**07 05 38.8**	**+5.5**
	comp=Z,3μm,0.2s								
ISFB	**Sefidab**	**3.82**	**46**	*e*Pn		**Pn**	**Pn**	**07 05 32.5**	**-1.9**
THKV	**Tehran--Karaj**	**4.46**	**21**	*e*Pn		**Pn**	**Pn**	**07 05 43.4**	**+0.2**
THKV					AML	AML	AML	07 07 14.2	
	comp=N,47nm,0.9s								
THKV					AML	AML	AML	07 07 19.2	
	comp=E,54nm,0.7s								
IDMV	**Damavand**	**4.62**	**34**	*e*Pn		**Pn**	**Pn**	**07 05 44.4**	**-1.0**
IDMV				*e*				07 07 09.2	
	comp=Z,559nm,0.3s								
ASYS		**5.80**	**224**	P		**Pn**	**Pn**	**07 05 59.2**	**-2.5**
BOQSS		**5.88**	**176**	P		**Pn**	**Pn**	**07 06 00.8**	**-2.0**

THE ***26*** *07:08:19.9, 3799N×2020E, h11km, ML3.7*
CSEM ***26*** *07:08:21.1±0.4, 3816N×2022E, h2km, MD3.6, Error ellipse: s-maj=7.5km s-min=2.7km az=39.0*
ISCJB ***26*** *07:08:22.3±1.1, 3832N±004×2033E±007, h2km±6km, Error ellipse: s-maj=10.5km s-min=5.1km az=149.0*
ATH ***26*** *07:08:23.5, 3830N×2043E, h12km±3km, MD3.6/5*
NEIC ***26*** *07:08:23.5, 3830N×2043E, h12km, MD3.6(ATH), ML3.7(THE), After ATH.*

ISC 26 07:08:22.4±1.1, 3830N±005×2032E±007, h5km±6km, n17, σ1§40/28, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.24**	**119**	*e*PG		**Pg**	**Pg**	**07 08 26.9**	**-0.2**
VLS				*e*SG		**Sg**	**Sg**	**07 08 31.0**	**+0.7**
KFL	**Anninata**	**0.41**	**117**	*e*Pg		**Pg**	**Pg**	**07 08 29.9**	**-0.5**
KFL				*e*Sg		**Sg**	**Sg**	**07 08 36.0**	**+0.2**
RLS	**Riolos of Patr**	**0.94**	**104**	*e*PB		**Pb**	**Pb**	**07 08 39.1**	**-2.0**
RLS				*e*SB		**Sb**	**Sb**	**07 08 52.5**	**-1.3**
IGT	**Igoumenitsa**	**1.23**	**0**	*e*Pg		**Pg**	**Pg**	**07 08 46.7**	**+0.7**
SELA	**Sela**	**1.24**	**91**	*e*Pg		**Pg**	**Pg**	**07 08 43.5**	**-2.6**
SELA				*e*Sg		**Sg**	**Sg**	**07 09 02.8**	**+0.6**
EVR	**Evrytania**	**1.32**	**62**	*e*PB		**Pb**	**Pb**	**07 08 47.3**	**-0.3**
KEK	**Kerkira**	**1.47**	**344**	*e*PB		**Pb**	**Pb**	**07 08 51.8**	**+1.6**
MEV	**Metsovon**	**1.65**	**25**	P		**Pn**	**Pn**	**07 08 51.7**	**-0.3**
MEV				S		**Sg**	**Sg**	**07 09 17.7**	**+2.4**
MEV	**Metsovon**	**1.65**	**25**	*e*Pb		**Pn**	**Pn**	**07 08 51.7**	**-0.3**
MEV	**Metsovon**	**1.65**	**25**	*e*Pb		**Pb**	**Pb**	**07 08 51.7**	**-1.5**
MEV				S		**Sg**	**Sg**	**07 09 17.7**	**+2.4**
ITM	**Ithomi**	**1.69**	**131**	*e*PB		**Pb**	**Pb**	**07 08 55.0**	**+1.0**
AGG	**Agios Georgios**	**1.73**	**65**	*e*Pb		**Pb**	**Pb**	**07 08 52.8**	**-1.9**
AGG				*e*Sb		**Sb**	**Sb**	**07 09 18.3**	**+1.6**
AGG	**Agios Georgios**	**1.73**	**65**	*e*Pb		**Pb**	**Pb**	**07 08 52.8**	**-1.9**
AGG				*e*Sb		**Sb**	**Sb**	**07 09 18.3**	**+1.6**
AGG				S		**Sn**	**Sn**	**07 09 19.2**	**+3.6**
THL	**Klokotos Trika**	**1.83**	**46**	*e*PN		**Pn**	**Pn**	**07 08 55.6**	**+1.1**
VLI	**Veliai**	**2.61**	**126**	*e*PN		**Pn**	**Pn**	**07 09 07.7**	**+2.5**
OHR	**Ohrid**	**2.83**	**7**	*e*Pn		**Pg**	**Pg**	**07 09 15.2**	**-1.5**
OHR				*e*Sn		**Sn**	**Sn**	**07 09 41.6**	**-1.3**
KRUS	**Krusevo**	**3.15**	**13**	*i* Pn		**Pn**	**Pn**	**07 09 15.8**	**+3.2**
KRUS				*e*Sn		**Sn**	**Sn**	**07 09 49.9**	**-0.7**

IDC 26 07:11:53.4±2.4, 2183N×14392E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=195.8km s-min=26.2km az=114.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.56**	**193**	P		P		07 19 51.6	+0.5
	0.5nm,0.5s,baz=22,slow=9.1,SNR=4.8								
ASAR	**Alice Springs**	**46.26**	**193**	P		P		07 20 20.0	-0.7
	0.2nm,0.5s,baz=16,slow=13,SNR=7.4								
YKA	**Yellowknife Ar**	**76.02**	**28**	P		P		07 23 41.2	-1.0
	0.2nm,0.4s,baz=295,slow=5.6,SNR=3.8								
NVAR	**Mina Array Bea**	**82.53**	**52**	P		P		07 24 19.6	+1.3
	0.2nm,0.5s,baz=287,slow=4.5,SNR=3.4								

IDC 26 07:12:49.2±54.0, 1981S×17823W, h0km, mb4.3/3, mb1 4.4/3, mb1mx3.9/13, mbtmp4.3/3, Error ellipse: s-maj=986.4km s-min=152.9km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.90**	**243**	P		P		07 20 08.3	+0.1
	2.9nm,0.8s,baz=102,slow=7.1,SNR=6.1								
ASAR	**Alice Springs**	**44.47**	**256**	P		P		07 21 02.4	0.0
	4.9nm,0.8s,baz=98,slow=7.8,SNR=39								
WRA	**Warramunga Arr**	**44.48**	**261**	P		P		07 21 02.4	-0.2
	0.9nm,0.3s,baz=97,slow=7.6,SNR=18								

ISCJB ***26*** *07:14:46.1±0.6, 155N±0.1×4650W±008, h10km, mb4.2/13, MS3.9/8, Error ellipse: s-maj=15.7km s-min=11.7km az=171.4*
IDC ***26*** *07:14:46.1±0.8, 1551N×4654W, h0km, mb4.1/8, mb1 4.2/10, mb1mx4.0/23, mbtmp4.2/10, ML5.4/2, MS3.9/8, Ms1 4.0/8, ms1mx3.6/26, Error ellipse: s-maj=24.3km s-min=17.0km az=171.0*
NEIC ***26*** *07:14:47.8±0.5, 1547N×4650W, h10km, mb4.6/5, Error ellipse: s-maj=13.9km s-min=10.1km az=177.0*

ISC 26 07:14:48.1±0.6, 155N±01×4650W±009, h10km, n32, σ0§83/26, mb4.2/13, MS3.9/8, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCRV	**Puerto La Cruz**	**18.44**	**256**	P		**Pn**		**07 19 04.5**	**+0.5**
	1.1nm,0.3s,baz=12,slow=1.8,SNR=6.6								
SJG	**San Juan**	**19.00**	**281**	*e*P		**Pn**		**07 19 10.2**	**-0.6**
SJG	**San Juan**	**19.00**	**281**	P		**Pn**		**07 19 09.7**	**-1.0**
	2.0nm,0.3s,baz=101,slow=6.8,SNR=9.0								
SDV	**Santo Domingo**	**24.46**	**257**	*e*P		**P**		**07 20 06.5**	**-0.9**
SDV	**Santo Domingo**	**24.46**	**257**	P		**P**		**07 20 07.1**	**-0.4**
	29nm,0.8s,mb4.7,baz=92,slow=6.0,SNR=61								
BBTS	**Babate**	**28.94**	**88**	LR		LR		07 29 19.8	
	comp=Z,217nm,19.2s,MS3.8,baz=58,slow=30								
SIV	**San Ignacio**	**34.40**	**205**	P		**P**		**07 21 35.3**	**-0.4**
	1.0nm,0.7s,mb3.9,baz=77,slow=9.9,SNR=5.8								
OTAV	**Otavalo**	**34.99**	**247**	*e*P		**P**		**07 21 41.4**	**+0.5**
	8.6nm,1.2s,mb4.6								
LPAZ	**La Paz**	**38.09**	**215**	LR		LR		07 37 33.1	
	comp=Z,228nm,19.3s,MS4.0,baz=58,slow=36								
ATAH	**Atahualpa**	**38.68**	**237**	P		**P**		**07 22 12.8**	**+0.4**
	4.3nm,0.6s,mb4.3,baz=88,slow=9.4,SNR=4.8								
DBIC	**Dimbokro**	**41.72**	**97**	P		**P**		**07 22 37.6**	**0.0**
	1.9nm,0.6s,mb3.9,baz=272,slow=12,SNR=3.1								
DBIC					LR	LR		07 36 21.4	
	comp=Z,95nm,20.1s,MS3.7,baz=267,slow=31								
ESDC	**Sonseca Array**	**44.21**	**48**	LR		LR		07 37 15.4	
	comp=Z,215nm,20.4s,MS4.0,baz=240,slow=30								
TORD	**Torodi Ar. Bea**	**46.68**	**86**	P		**P**		**07 23 17.3**	**-0.1**
	2.0nm,0.9s,mb4.0,baz=281,slow=7.8,SNR=7.6								
TORD					LR	LR		07 40 15.3	
	comp=Z,118nm,18.2s,MS3.9,baz=245,slow=33								
ULM	**Lac du Bonnet**	**52.69**	**322**	P		**P**		**07 24 01.8**	**-0.9**
	comp=Z,110,slow=9.6								
KEST	**Kesra**	**53.53**	**57**	LR		LR		07 44 01.9	
	comp=Z,82nm,22.0s,MS3.7,baz=214,slow=33								
MNTX	**Cornudas Mount**	**55.72**	**298**	*e*P		**P**		**07 24 24.9**	**-0.2**
	4.9nm,1.0s,mb4.5								
SDCO	**Great Sand Dun**	**56.28**	**305**	*e*P		**P**		**07 24 30.1**	**+1.1**
	4.1nm,1.2s,mb4.3								
ISCO	**Idaho Springs**	**56.62**	**308**	*e*P		**P**		**07 24 31.4**	**0.0**
FFC	**Flin Flon**	**57.81**	**326**	*e*P		**P**		**07 24 42.6**	**+3.0**
PDAR	**Pinedale Array**	**59.94**	**311**	P		**P**		**07 24 53.5**	**-1.0**
	0.4nm,0.6s,mb3.6,baz=123,slow=11,SNR=5.0								
PLCA	**Paso Flores**	**60.19**	**201**	LR		LR		07 50 42.8	
	comp=Z,175nm,20.6s,MS4.2,baz=12,slow=36								
TUC	**Tucson**	**60.32**	**299**	*e*P		**P**		**07 24 57.4**	**0.0**
FLWY	**Flagg Ranch**	**60.92**	**312**	*e*P		**P**		**07 25 02.0**	**+0.7**
DAU	**Daniels Canyon**	**60.99**	**308**	*e*P		**P**		**07 24 59.0**	**-2.8**
IMW	**Indian Meadow**	**61.07**	**312**	*e*P		**P**		**07 25 03.0**	**+0.7**
	6.1nm,0.9s,mb4.7								
NOA	**NORSAR Array B**	**61.18**	**28**	LR		LR		07 47 41.5	
	comp=Z,98nm,18.4s,MS4.0,baz=355,slow=32								
HWUT	**Hardware Ranch**	**61.31**	**309**	*e*P		**P**		**07 25 04.2**	**+0.3**
	10nm,1.4s,mb4.8								
HLID	**Hailey**	**63.55**	**311**	*e*P		**P**		**07 25 19.5**	**+0.6**
NEW	**Newport**	**65.75**	**316**	*e*P		**P**		**07 25 33.5**	**+0.4**
YKA	**Yellowknife Ar**	**66.33**	**332**	P		**P**		**07 25 35.8**	**-0.8**
YKA	**Yellowknife Ar**	**66.33**	**332**	P		**P**		**07 25 35.8**	**-0.8**
	0.8nm,0.7s,mb3.9,baz=104,slow=7.0,SNR=15								
AKASG	**Malin Array Be**	**69.17**	**41**	P		**P**		**07 25 54.7**	**-0.1**
	0.2nm,0.2s,mb3.6,baz=270,slow=7.1,SNR=5.0								

NEIC ***26*** *07:15:30.1±0.5, 2202N×143.14E, h10km, Error ellipse: s-maj=19.8km s-min=11.7km az=84.0*
ISCJB ***26*** *07:15:39.6±0.6, 2190N±0.10×1429E±0.02, h100km, mb3.9/11, Error ellipse: s-maj=23.5km s-min=13.8km az=172.1*
IDC ***26*** *07:15:41.6±0.8, 2196N×14298E, h103km±7km, mb3.6/12, mb1 3.8/12, mb1mx3.7/18, mbtmp3.6/12, MS3.1/2, Ms1 3.1/2, ms1mx2.8/27, Error ellipse: s-maj=22.3km s-min=13.1km az=93.0*

ISC 26 07:15:41.3±0.6, 2191N±010×1430E±02, h100km, (h104km±2.3km:pP-P), n18, σ0§88/15, mb3.9/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.16**	**345**	LR		LR	LR	07 24 22.4	
	comp=Z,95nm,18.7s,baz=235,slow=34								
JNU	**Nakatsue**	**15.48**	**319**	LR		LR	LR	07 23 50.2	
	comp=Z,52nm,21.5s,baz=109,slow=32								
KSRS	**Korea Array**	**20.24**	**323**	P		**P**	**P**	**07 20 10.2**	**+1.8**
	1.9nm,0.6s,baz=145,slow=7.8,SNR=5.0								
SONM	**Songino Array**	**39.06**	**320**	P		**P**	**P**	**07 22 57.7**	**-0.7**
	0.8nm,0.7s,mb3.7,baz=129,slow=7.3,SNR=5.6								
WRA	**Warramunga Arr**	**42.45**	**192**	P		**P**	**P**	**07 23 26.5**	**+0.1**
	1.0nm,0.6s,mb3.7,baz=14,slow=8.6,SNR=20								
WRA						pP	pP	07 23 51.6	+1.9
	1.8nm,1.1s,baz=9.9,slow=8.6,SNR=2.9								
ASAR	**Alice Springs**	**46.16**	**192**	P		**P**	**P**	**07 23 56.2**	**+0.3**
	0.9nm,0.6s,mb3.6,baz=13,slow=8.4,SNR=19								
STKA	**Stephens Creek**	**53.50**	**181**	P		**P**	**P**	**07 24 51.4**	**-0.1**
	0.9nm,0.5s,mb4.1,baz=354,slow=9.4,SNR=4.0								
ZALV	**Zalesovo Beam**	**53.94**	**322**	P		**P**	**P**	**07 24 52.9**	**-1.5**
	1.4nm,0.5s,mb4.2,baz=116,slow=15,SNR=3.1								
MKAR	**Makanchi Array**	**54.43**	**313**	P		**P**	**P**	**07 24 58.2**	**+0.1**
MKAR	**Makanchi Array**	**54.43**	**313**	P		**P**	**P**	**07 24 58.2**	**+0.1**
	0.5nm,0.5s,mb3.8,baz=95,slow=9.9,SNR=4.6								
INK	**Inuvik**	**67.44**	**24**	*e*P		**P**	**P**	**07 26 27.2**	**+1.4**
	220nm,1.2s,mb5.9								
INK	**Inuvik**	**67.44**	**24**	P		**P**	**P**	**07 26 26.9**	**+1.1**
	1.6nm,0.7s,mb4.0,baz=284,slow=10,SNR=13								
YKA	**Yellowknife Ar**	**76.35**	**28**	P		**P**	**P**	**07 27 18.2**	**-0.9**
YKA					pP	pP	pP	07 27 44.4	-0.4
YKA	**Yellowknife Ar**	**76.35**	**28**	P		**P**	**P**	**07 27 18.2**	**-0.9**
	0.5nm,0.6s,mb3.4,baz=294,slow=5.8,SNR=6.2								
YKA					pP	pP	pP	07 27 44.4	-0.4
	0.6nm,0.6s,baz=292,slow=5.7,SNR=4.5								
ARCES	**ARCESS Array B**	**78.67**	**341**	P		**P**	**P**	**07 27 31.8**	**-0.2**
	5.0nm,0.9s,mb4.3,baz=14,slow=5.4,SNR=4.1								
NVAR	**Mina Array Bea**	**83.15**	**51**	P		**P**	**P**	**07 27 57.1**	**+0.8**
	1.2nm,0.7s,mb3.8,baz=264,slow=4.0,SNR=12								
NVAR					pP	pP	pP	07 28 23.2	+0.8
	0.9nm,0.7s,

comp=Z,8μm,21.0s,MS5.1
QZH Quanzhou 22.58 282⇑ *i* P **P 07 33 02.3 +4.7**
QZH S **S 07 37 08.0 +5.6**
QZH AMB AMB
comp=Z,350nm,1.3s,mb5.6
QZH AMB AMB
comp=Z,5μm,7.1s
QZH LR LR
comp=N,3μm,11.3s
QZH LR LR
comp=E,9μm,19.5s
QZH LR LR
comp=Z,12μm,24.4s
NJ2 Nanjing 23.66 300 *e* P **P 07 33 10.0 +1.5**
NJ2 AMB AMB
comp=Z,40nm,1.0s,mb4.8
NJ2 AMB AMB
comp=Z,870nm,4.7s
NJ2 LR LR
comp=N,4μm,18.0s
NJ2 LR LR
comp=E,5μm,27.3s
NJ2 LR LR
comp=Z,5μm,27.7s
DL2 Dalian 24.84 317 *i* P **P 07 33 18.3 -0.8**
DL2 S **S 07 37 40.8 +2.0**
DL2 AMB AMB
comp=Z,40nm,0.8s,mb5.0
DL2 AMB AMB
comp=Z,430nm,4.4s
DL2 LR LR
comp=N,1μm,15.0s,MS4.6
DL2 LR LR
comp=E,1μm,15.3s,MS4.6
DL2 LR LR
comp=Z,1μm,19.8s,MS4.3
YSS Yuzh-Sakhalins 24.85 360 *e* P **P 07 33 20.8 +1.7**
comp=Z,159nm,1.4s,mb5.4
YSS LR LR
comp=Z,2μm,20.0s,MS4.7
YSS Yuzh-Sakhalins 24.85 360 *ce* P **P 07 33 17.0 -2.0**
YSS *e* PPP 07 34 00.0
YSS *e* S **S 07 37 37.0 -1.7**
YSS *e* SS 07 38 35.0
YSS pmax pmax
comp=Z,40nm,1.0s,mb4.9
YSS pmax pmax
comp=Z,1μm,5.0s
YSS MLR MLR
comp=Z,1μm,13.0s,MS4.7
YSS MLR MLR
comp=E,1μm,14.0s
MDJ Mudanjiang 25.08 337 P **P 07 33 21.0 -0.2**
MDJ S **S 07 37 39.0 -3.4**
MDJ AMB AMB
comp=Z,16nm,1.6s,mb4.3
MDJ AMB AMB
comp=Z,423nm,5.5s
MDJ LR LR
comp=N,2μm,16.7s,MS4.9
MDJ LR LR
comp=E,2μm,15.5s,MS4.9
MDJ LR LR
comp=Z,3μm,17.5s,MS4.8
MDJ Mudanjiang 25.08 337 *e* P **P 07 33 20.7 -0.5**
comp=Z,23nm,1.1s,mb4.6
MDJ LR LR
comp=Z,2μm,19.0s,MS4.6
SNY Shenyang 25.60 325⇓ P **P 07 33 25.0 -1.0**
SNY S **S 07 37 51.3 +0.5**
SNY AMB AMB
comp=Z,47nm,1.5s,mb4.8
SNY AMB AMB
comp=Z,943nm,5.1s
SNY LR LR
comp=N,2μm,14.1s,MS5.0
SNY LR LR
comp=E,3μm,18.0s,MS5.0
SNY LR LR
comp=Z,3μm,22.8s,MS4.8
CN2 Changchun 26.12 330 *e* P **P 07 33 32.0 +1.3**
CN2 *e* S **S 07 37 52.8 -6.2**
CN2 AMB AMB
comp=Z,20nm,1.2s,mb4.5
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,17.0s,MS4.9
CN2 LR LR
comp=E,1μm,17.0s,MS4.9
CN2 LR LR
comp=Z,3μm,19.0s,MS4.8
TIA Tai'an 26.55 308 P **P 07 33 35.0 +0.3**
TIA AMB AMB
comp=Z,45nm,0.9s,mb5.0
TIA AMB AMB
comp=Z,888nm,6.0s
TIA LR LR
comp=N,1μm,14.0s
TIA LR LR
comp=E,841nm,8.0s
HKC Hong Kong Obse 26.69 276 *e* P **P 07 33 39.0 +2.9**
HKC Hong Kong Obse 26.69 276⇓ *i* P **P 07 33 40.0 +3.9**
WHN Wuhan 27.00 294 *e* P **P 07 33 43.8 +5.1**
WHN S **S 07 38 11.8 -1.3**
WHN LR LR
comp=Z,3μm,13.0s,MS5.1
HABR Khabarovsk 27.12 348⇓ *e* P **P 07 33 39.5 -0.1**
HABR *e* PP pP 07 33 48.8 -2.9
HABR *e* 07 36 57.0
HABR *e* S **S 07 38 15.8 +1.1**
HABR *e* 07 38 33.9
HABR *e* 07 44 28.2
HABR pmax pmax
comp=Z,187nm,1.5s,mb5.4
GZH Guangzhou 27.40 278 P **P 07 33 41.8 -0.6**
GZH S **S 07 38 20.8 +1.2**
GZH LR LR
comp=N,2μm,16.7s,MS4.8
GZH LR LR
comp=E,2μm,18.2s,MS4.8
GZH LR LR
comp=Z,4μm,30.8s
KLR Kul'dur 28.56 344 *e* P **P 07 33 49.5 -2.9**
KLR *e* 07 34 47.5
KLR pmax pmax
comp=E,68nm,1.6s
KLR pmax pmax
comp=Z,150nm,1.6s,mb5.5
KLR MLR MLR
comp=N,2μm,13.0s,MS5.0
KLR MLR MLR
comp=E,2μm,13.0s,MS5.0
KLR MLR MLR
comp=Z,7μm,13.0s,MS5.4
BJT Baijiatuau 28.99 314 P **P 07 33 56.4 +0.1**
BJT LR LR
comp=Z,2μm,20.0s,MS4.8
BJI Beijing 28.99 314 P **P 07 33 55.8 -0.6**
BJI AMB AMB
comp=Z,17nm,1.7s,mb4.5
BJI AMB AMB
comp=Z,499nm,6.0s
BJI LR LR
comp=N,1μm,17.3s,MS4.8
BJI LR LR
comp=E,2μm,18.0s,MS4.8
BJI LR LR
comp=Z,2μm,24.9s
TIY Taiyuan 30.60 308 *e* P **P 07 34 11.5 +0.9**
TIY S **S 07 39 17.0 +7.4**
TIY LR LR
comp=N,630nm,10.3s,MS4.9
TIY LR LR
comp=E,1μm,11.7s,MS4.9
TIY LR LR
comp=Z,2μm,13.7s,MS4.8
QIZ Qiongzhong 31.18 271 P **P 07 34 16.5 +0.6**
QIZ AMB AMB
comp=Z,13nm,1.7s,mb4.5
QIZ AMB AMB
comp=Z,360nm,7.2s
QIZ LR LR
comp=E,2μm,22.1s
QIZ LR LR
comp=Z,3μm,22.3s,MS4.9
QIZ Qiongzhong 31.18 271 PFAKE 07 34 30.0 +14
QIZ LR LR
comp=Z,3μm,22.0s,MS4.9
XAN Xi'an 32.23 299 P **P 07 34 22.5 -2.6**
XAN S **S 07 39 42.0 +6.9**
XAN AMB AMB
comp=Z,3.0nm,0.7s,mb4.2
XAN AMB AMB
comp=Z,378nm,12.5s
XAN LR LR
comp=N,1μm,19.5s,MS4.8
XAN LR LR
comp=E,2μm,22.8s,MS4.8
XAN LR LR
comp=Z,2μm,14.5s
HHC Hu-ho-hao-te 32.48 313 *e* P **P 07 34 27.8 +0.6**
HHC AP pP 07 34 35.8 -3.5
HHC XP sP 07 34 40.8 -4.0
HHC AMB AMB
comp=Z,23nm,1.3s,mb4.8
HHC AMB AMB
comp=Z,423nm,5.3s
HHC LR LR
comp=N,891nm,13.0s,MS4.9
HHC LR LR
comp=E,2μm,14.5s,MS4.9
HHC LR LR
comp=Z,1μm,19.0s,MS4.7
HIA Hailar 32.83 331 *i* P **P 07 34 29.9 -0.2**
HIA *e* P 07 34 30.2
HIA LR LR
comp=Z,2μm,19.0s,MS4.8
HIA Hailar 32.83 331 *d* P **P 07 34 29.8 -0.3**
PET Petropavlovsk 33.16 17 *i* P **P 07 34 34.0 +1.0**
PET Petropavlovsk 33.16 17 *e* P **P 07 34 34.8 +1.8**
PET *e* S **S 07 39 53.5 +4.3**
PET pmax pmax
comp=Z,20nm,0.8s,mb5.1
PET pmax pmax
comp=Z,100nm,13.9s
PET smax
comp=N,300nm,14.9s
PET MLR MLR
comp=Z,1μm,18.0s,MS4.7
GYA Guiyang 33.36 285⇓ *i* P **P 07 34 36.5 +1.4**
GYA PP PP 07 35 52.3 +1.2
GYA PCP PcP 07 37 16.5 +0.4
GYA PCS PcS 07 41 01.3 -0.6
GYA AMB AMB
comp=Z,20nm,1.0s,mb5.0
GYA AMB AMB
comp=Z,130nm,5.2s
GYA LR LR
comp=N,760nm,18.6s,MS4.5
GYA LR LR
comp=E,580nm,19.6s,MS4.5
GYA LR LR
comp=Z,560nm,17.0s,MS4.3
BTO Baotou 33.45 311 *e* P **P 07 34 34.8 -0.8**
BTO LR LR
comp=N,507nm,13.9s,MS4.5
BTO LR LR
comp=E,459nm,16.9s,MS4.5
HNR Honiara 35.42 150 PFAKE 07 35 00.0 +7.1
HNR LR LR
comp=Z,2μm,20.0s,MS4.9
HNR Honiara 35.42 150 LR LR 07 48 03.4
comp=Z,2μm,19.4s,MS4.9,baz=357,slow=34
KAKA Kakadu 36.07 198 *e* P **P 07 34 56.9 -1.5**
comp=Z,11nm,0.9s,mb4.8
KAKA *e* P 07 34 56.9
CD2 Chengdu 36.08 293 *e* P **P 07 34 59.5 +1.0**
CD2 PP PP 07 36 25.5 +4.4
CD2 PCP PcP 07 37 23.8 -0.1
CD2 AMB AMB
comp=Z,20nm,1.4s,mb4.8
CD2 LR LR
comp=N,4μm,14.4s,MS5.5
CD2 LR LR
comp=E,5μm,19.2s,MS5.5
CD2 LR LR
comp=Z,5μm,19.2s,MS5.3
LZH Lanzhou 36.73 301⇓ P **P 07 35 04.5 +0.5**
LZH PP PP 07 36 33.5 +5.3
LZH AMB AMB
comp=Z,69nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,237nm,5.7s
LZH LR LR
comp=N,793nm,13.3s
LZH LR LR
comp=Z,1μm,17.6s,MS4.7
KMI Kunming 36.95 283 P **P 07 35 07.3 +1.4**
KMI PP PP 07 36 35.3 +4.6
KMI PCP PcP 07 37 28.8 +2.2
KMI AMB AMB
comp=Z,24nm,1.5s,mb4.8
KMI AMB AMB
comp=Z,468nm,5.6s
KMI LR LR
comp=N,823nm,10.3s
KMI LR LR
comp=E,1μm,21.7s
KMI LR LR
comp=Z,2μm,20.7s
NRGR Nerungri 37.10 343 *e* P **P 07 35 07.8 +1.0**
CLNS Chul'man 37.21 344 *e* P **P 07 35 06.6 -1.1**
CLNS Chul'man 37.21 344 *e* P **P 07 35 05.5 -2.2**
CLNS *e* PPP 07 36 30.9
CLNS *e* 07 37 30.5
CLNS *e* S **S 07 40 40.8 -10**
CLNS pmax pmax
comp=Z,60nm,1.4s,mb5.2
CLNS pmax pmax
comp=N,54nm,1.5s
CLNS pmax pmax
comp=E,14nm,1.1s
CLNS pmax pmax
comp=Z,14nm,1.1s,mb4.7
CLNS pmax pmax
comp=N,21nm,1.0s
CLNS pmax pmax
comp=E,13nm,1.0s
CLNS smax
comp=N,274nm,11.2s
CLNS smax
comp=Z,74nm,10.7s
CLNS smax
comp=E,110nm,10.8s
CLNS MLR MLR
comp=Z,1μm,14.0s,MS4.9
CLNS MLR MLR
comp=N,700nm,12.0s,MS5.0
CLNS MLR MLR
comp=E,1μm,13.0s,MS5.0
BATI Kupang 37.26 213 LR LR 07 48 07.8
comp=E,2μm,20.9s,MS4.8,baz=39,slow=32
CIT Chita 37.57 330 *e* P **P 07 35 10.8 0.0**
CIT *e* 07 37 27.5
CIT pmax pmax
comp=Z,93nm,2.7s,mb5.0
MA2 Magadan 37.90 6 *e* P **P 07 35 14.6 +1.1**
comp=Z,152nm,2.0s,mb5.4
MA2 LR LR
comp=Z,1μm,20.0s,MS4.8
MA2 Magadan 37.90 6⇑ *e* P **P 07 35 14.2 +0.7**
MA2 pmax pmax
comp=Z,81nm,2.4s,mb5.0
ULN Ulaanbaatar 38.59 321 *e* P **P 07 35 20.0 +0.4**
comp=Z,159nm,1.6s,mb5.5
ULN LR LR
comp=Z,2μm,19.0s,MS4.9
ULN Ulaanbaatar 38.59 321 *i* P **P 07 35 20.0 +0.5**
ULN Ulaanbaatar 38.59 321 P **P 07 35 20.4 +0.8**
SNR=51
SMY Shemya 38.79 30 PFAKE 07 35 30.0 +8.9
SMY LR LR
comp=Z,3μm,22.0s,MS5.1
SONM Songino Array 38.97 320 P **P 07 35 23.0 +0.4**
comp=Z,11nm,0.7s,mb4.7,baz=129,slow=9.0,SNR=83
SONM LR LR 07 51 21.0
comp=Z,2μm,19.2s,MS5.0,baz=119,slow=36
GTA Gaotai 40.54 305⇓ P **P 07 35 36.5 +0.6**
GTA AP pP 07 35 40.3 -8.0
GTA XP sP 07 35 43.5 -10
GTA PP PP 07 37 13.0 +3.2
GTA S **S 07 41 42.8 +0.9**
GTA AMB AMB
comp=Z,32nm,1.7s,mb4.7
GTA AMB AMB
comp=Z,556nm,4.6s
GTA LR LR
comp=N,2μm,16.0s,MS5.1
GTA LR LR
comp=E,2μm,18.3s,MS5.1
GTA LR LR
comp=Z,2μm,26.2s
NST Nakhon Sawan 40.97 269 P **P 07 35 42.0 +2.3**
YAK Yakutsk 41.00 350⇑ *e* P **P 07 35 39.1 -0.2**
YAK *e* P 07 35 39.2
YAK LR LR
comp=Z,2μm,21.0s,MS4.9
YAK Yakutsk 41.00 350 *e* P **P 07 35 38.6 -0.7**
YAK *e* *PP pP 07 35 46.5 -5.2
YAK *e* 07 37 15.1
YAK *e* 07 37 34.3
YAK *e* PPP 07 37 47.7
YAK *e* S **S 07 41 54.8 +6.8**
YAK *e* SSS 07 45 25.9
YAK pmax pmax
comp=Z,54nm,1.0s,mb5.1
YAK pmax pmax
comp=N,41nm,1.5s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,162nm,6.4s
YAK smax
comp=Z,341nm,10.3s
YAK smax
comp=N,327nm,8.6s
YAK smax
comp=E,218nm,14.1s
YAK MLR MLR
comp=Z,2μm,23.0s,MS5.0
YAK MLR MLR
comp=N,1μm,18.0s
CHG Chiang Mai 41.32 274⇓ P **P 07 35 43.6 +1.0**
comp=N,24nm,1.0s,mb4.8
CHTO Chiang Mai 41.32 274 *e* P **P 07 35 43.9 +1.3**
CHTO LR LR
comp=Z,2μm,20.0s,MS5.1
CHTO Chiang Mai 41.32 274 P **P 07 35 44.0 +1.5**
SNR=20
SEY Seymchan 41.35 6 *e* P **P 07 35 42.8 +0.6**
SEY Seymchan 41.35 6 *e* P **P 07 35 42.7 +0.5**
BOD Bodaibo 41.45 337 *e* P **P 07 35 42.3 -0.8**
BOD pmax pmax
comp=Z,28nm,1.3s,mb4.7
BDT Bhumibol Dam 41.62 271 P **P 07 35 46.0 +1.0**
ZAK Zakamensk 41.97 322⇑ *i* P **P 07 35 47.7 +0.3**
ZAK pmax pmax
comp=Z,63nm,1.2s,mb5.1
CTA Charters Tower 42.00 175 *e* P **P 07 35 48.0 +0.1**
comp=Z,28nm,1.2s,mb4.8
CTA Charters Tower 42.00 175 P **P 07 35 48.0 +0.1**
comp=Z,44nm,1.1s,mb5.0,baz=347,slow=8.8,SNR=17
CTA LR LR 07 52 05.0
comp=Z,1μm,20.5s,MS4.7,baz=351,slow=34
CTAO Charters Tower 42.00 175 *e* P **P 07 35 48.0 +0.1**
comp=Z,93nm,1.3s,mb5.2
CTAO LR LR
comp=Z,1μm,20.0s,MS4.7
CTAO Charters Tower 42.00 175 *e* P **P 07 35 48.0 +0.1**
CTAO pmax pmax
comp=Z,93nm,1.3s,mb5.2
CTAO MLR MLR
comp=Z,1μm,20.0s,MS4.7
IRK Irkutsk 42.33 325⇓ *i* P **P 07 35 50.6 +0.3**
IRK pmax pmax
comp=Z,206nm,1.8s,mb5.5
TLY Talaya 42.39 324 *e* P **P 07 35 51.7 +0.9**
TLY LR LR
comp=Z,2μm,20.0s,MS5.0
TLY Talaya 42.39 324 *d* P **P 07 35 50.5 -0.3**
TLY *e* 07 37 35.9
TLY *e* S **S 07 42 14.6 +5.7**
TLY pmax pmax
comp=Z,86nm,1.4s,mb5.2
TLY MLR MLR
comp=Z,2μm,21.0s,MS5.0
TLY Talaya 42.39 324 P **P 07 35 51.9 +1.1**
SNR=46
WB2 Warramunga Arr 42.59 192⇓ *i* P **P 07 35 51.7 -1.0**
WRA Warramunga Arr 42.59 192 *i* P **P 07 35 51.7 -1.0**
WRA pmax pmax
comp=Z,19nm,0.8s
WRA Warramunga Arr 42.59 192 P **P 07 35 51.8 -0.9**
comp=Z,19nm,0.8s,mb4.9,baz=14,slow=8.8,SNR=45
WRA LR LR 07 52 11.2
comp=Z,1μm,20.0s,MS4.8,baz=5.0,slow=34
ADK Adak 42.99 36 PFAKE 07 36 10.0 +14
ADK LR LR
comp=Z,4μm,22.0s,MS5.3
FITZ Fitzroy Crossi 43.38 204 *e* P **P 07 35 58.2 -0.9**
comp=Z,19nm,0.6s,mb5.0
FITZ Fitzroy Crossi 43.38 204 P **P 07 35 58.6 -0.5**
comp=Z,10nm,0.7s,mb4.7,baz=21,slow=9.2,SNR=21
FITZ LR LR 07 53 06.6
comp=Z,663nm,20.3s,MS4.5,baz=28,slow=35
MOY Mondy 43.84 323 *e* P **P 07 36 02.8 +0.2**
MOY *e* 07 42 34.9
MOY pmax pmax
comp=Z,180nm,2.1s,mb5.4
ASAR Alice Springs 46.30 192 P **P 07 36 21.7 -0.6**
comp=Z,8.3nm,0.6s,mb4.8,baz=11,slow=7.0,SNR=71
SHL Shillong 46.68 285 *e* P **P 07 36 26.5 +1.0**
SHL *e* S **S 07 43 12.0 0.0**
FUNA Funafuti 46.71 127 PFAKE 07 36 40.0 +14
FUNA LR LR
comp=Z,9μm,20.0s,MS5.7
LSA Lhasa 46.97 291 P **P 07 36 29.8 +2.1**
LSA AP pP 07 36 38.8 -1.5
LSA XP sP 07 36 41.8 -3.8
LSA PCP PcP 07 37 56.0 -3.6
LSA PP PP 07 38 22.0 +3.5
LSA SCP ScP 07 41 48.5 -1.2
LSA PCS PcS 07 41 52.5 -2.2
LSA S **S 07 43 23.8 +7.9**
LSA SCS ScS 07 46 20.0 +1.5
LSA AMB AMB
comp=Z,10.0nm,1.1s,mb4.7
LSA LR LR
comp=E,2μm,20.9s
LSA LR LR
comp=Z,2μm,20.9s,MS5.1
LSA Lhasa 46.97 291 *e* P **P 07 36 30.2 +2.5**
comp=Z,33nm,1.1s,mb5.2
LSA LR LR
comp=Z,3μm,21.0s,MS5.2
LSA Lhasa 46.97 291 *e* P **P 07 36 30.2 +2.5**
LSA pmax pmax
comp=Z,33nm,1.1s,mb5.2
LSA MLR MLR
comp=Z,3μm,21.0s,MS5.2
BILL Bilibino 48.21 11 *i* P **P 07 36 36.0 -0.7**
BILL *e* P 07 36 37.2
BILL LR LR
comp=Z,1μm,21.0s,MS4.8
BILL Bilibino 48.21 11 *d* P **P 07 36 36.9 +0.2**
MBWA Marble Bar 48.59 209 *e* P **P 07 36 40.0 -0.1**
MBWA LR LR
comp=Z,976nm,22.0s,MS4.8
UNV Unalaska Valle 49.42 37 PFAKE 07 37 00.0 +14
UNV LR LR
comp=Z,8μm,22.0s,MS5.7
DZM Mont Dzumac 49.45 151 LR LR 07 55 09.1
comp=Z,2μm,21.2s,MS5.1,baz=6.8,slow=33
TAPN Taplejung 50.19 288 *e* P **P 07 36 53.3 +0.8**
comp=Z,118nm,1.2s,mb5.8
WMQ Urumqi 50.24 309⇓ *i* P **P 07 36 54.0 +1.4**
WMQ AP pP 07 36 58.5 -6.8
WMQ XP sP 07 37 01.0 -10
WMQ PCP PcP 07 38 13.5 +2.4
WMQ PP PP 07 38 50.3 +2.2
WMQ SCP ScP 07 42 07.0 +3.7
WMQ S **S 07 44 05.0 +3.4**
WMQ SCS ScS 07 46 41.5 +1.6
WMQ SS SS 07 47 35.0 -0.3
WMQ AMB AMB
comp=Z,83nm,1.4s,mb5.6

WMQ AMB AMB
comp=Z,97nm,8.3s
WMQ LR LR
comp=N,1µm,29.1s
WMQ LR LR
comp=E,717nm,20.5s
WMQ LR LR
comp=Z,1µm,29.1s,MS4.8
TIXI Tiksi 50.28 354 *e*P **P 07 36 51.8 -0.7**
TIXI LR LR
comp=Z,524nm,20.0s,MS4.5
TIXI Tiksi 50.28 354 *e*P **P 07 36 51.5 -1.0**
TIXI pmax pmax
comp=Z,28nm,1.1s,mb5.2
TIXI MLR MLR
comp=Z,636nm,15.0s,MS4.8
ODAN Odare 50.53 287 *e*P **P 07 36 55.8 +0.7**
comp=Z,113nm,1.2s,mb5.7
GAMB Gambell 51.36 24 *e*P **P 07 37 01.7 +1.0**
comp=Z,49nm,1.5s,mb5.2
JIRN Jiri 51.49 288 *e*P **P 07 37 03.3 +1.0**
comp=Z,104nm,1.0s,mb5.7
KKN Kakani 52.27 289 *e*P **P 07 37 08.8 +0.7**
comp=Z,46nm,0.9s,mb5.4
GKN Gorkha 52.81 289 *e*P **P 07 37 12.9 +0.8**
comp=Z,261nm,1.6s,mb5.9
ARMA Armidale 52.82 171 *e*P **P 07 37 12.1 +0.2**
STKA Stephens Creek 53.64 182 *e*P **P 07 37 17.1 -0.8**
comp=Z,13nm,1.6s,mb4.6
STKA Stephens Creek 53.64 182 P **P 07 37 17.4 -0.5**
comp=Z,9.2nm,0.6s,mb4.9,baz=350,slow=7.5,SNR=44
STKA LR LR 07 58 23.3
comp=Z,957nm,21.6s,MS4.8,baz=6.3,slow=34
TNA Tin City 53.68 23 *e*P **P 07 37 18.9 +1.1**
TNA LR LR
comp=Z,458nm,20.0s,MS4.5
KOLN Koldanda 53.75 289 *e*P **P 07 37 19.9 +0.9**
comp=Z,92nm,1.2s,mb5.6
ZALV Zalesovo Beam 53.84 322 P **P 07 37 18.8 -0.4**
ZALV LR LR 08 00 47.0
ZALV Zalesovo Beam 53.84 322 P **P 07 37 18.8 -0.4**
comp=Z,34nm,0.9s,mb5.3,baz=100,slow=6.8,SNR=81
ZALV LR LR 08 00 47.0
comp=Z,952nm,19.2s,MS4.9,baz=95,slow=36
ZAL Zalesovo 53.85 322 P **P 07 37 18.8 -0.4**
MK31 Makanchi Array 54.34 312 *i* P **P 07 37 23.2 +0.2**
MK31 pmax pmax
comp=Z,124nm,1.7s,mb5.6
MKAR Makanchi Array 54.34 312 P **P 07 37 23.4 +0.3**
comp=Z,9.2nm,0.8s,mb4.8,baz=92,slow=8.8,SNR=70
MKAR LR LR 08 01 05.7
comp=Z,977nm,20.3s,MS4.9,baz=102,slow=37
FORT Forrest 54.45 196 *e*P **P 07 37 23.6 -0.3**
comp=Z,26nm,0.8s,mb5.2
NVS Novosibirsk 54.93 322 *i* P **P 07 37 26.7 -0.4**
NVS pmax pmax
comp=N,26nm,1.5s
NVS pmax pmax
comp=E,77nm,1.5s
NVS pmax pmax
comp=Z,89nm,1.5s,mb5.6
KURK Kurchatov 57.11 317 PFAKE 07 37 50.0 +7.2
KURK LR LR
comp=Z,2µm,19.0s,MS5.2
KURK Kurchatov 57.11 317 *d i* P **P 07 37 42.2 -0.6**
KURK pmax pmax
comp=Z,39nm,1.1s,mb5.3
KURK Kurchatov 57.11 317 P **P 07 37 43.0 +0.2**
SNR=34
POHA Pohakuloa 57.11 80 PFAKE 07 38 00.0 +17
POHA LR LR
comp=Z,3µm,20.0s,MS5.3
KDAK Kodiak Island 58.00 35 P **P 07 37 48.7 -0.2**
KDAK LR LR 07 59 20.7
KDAK Kodiak Island 58.00 35 P **P 07 37 48.7 -0.2**
comp=Z,10nm,0.8s,mb4.9,baz=222,slow=8.4,SNR=12
KDAK LR LR 07 59 20.7
comp=Z,3µm,21.8s,MS5.4,baz=250,slow=32
DDI Dehra Dun 58.20 293 *ex* **P 07 37 50.0 -0.7**
ULHL Ulahol 58.56 307 P **P 07 37 54.9 +1.8**
SNR=6.2
KSH Kashi 58.91 304 *e*P **P 07 37 58.0 +2.5**
KSH *e*AP pP 07 38 08.0 -0.5
KSH *e*PCP PcP 07 38 45.5 +1.0
KSH *e*PP PP 07 40 11.0 +5.0
KSH *e*SCP ScP 07 42 42.0 +0.6
KSH *e*PCS PcS 07 42 45.5 -0.7
KSH *e*S **S 07 46 01.8 +3.5**
KSH *e*XS sS 07 46 19.5 -0.4
KSH *e*PS 07 46 22.3
KSH *e*SCS ScS 07 47 41.8 0.0
KSH AMB AMB
comp=Z,2µm,4.2s
KSH LR LR
comp=Z,2µm,11.8s,MS5.5
TKM2 Tokmak 2 59.01 308 *i* P **P 07 37 57.4 +1.2**
TKM2 *e*P 07 37 57.6
TKM2 LR LR
comp=Z,931nm,19.0s,MS4.9
TKM2 Tokmak 2 59.01 308 P **P 07 37 57.6 +1.5**
SNR=30
NDI New Delhi 59.18 291 *ex* x 07 37 52.0
IMA2 Indian Mountai 59.28 25 *e*P **P 07 37 58.3 +0.7**
KZA Kyzart 59.30 307 P **P 07 38 00.5 +2.3**
SNR=36
KBK Karagaybulak 59.49 307 P **P 07 38 00.6 +1.0**
SNR=16
CHMS Chumysh 59.62 308 P **P 07 38 01.7 +1.3**
SNR=14
USP Ospenovka 59.79 308 P **P 07 38 02.3 +0.7**
SNR=27
AAK Ala-Archa 59.83 307 P **P 07 38 03.3 +1.5**
SNR=13
UCH Uchtor 59.84 307 *e*P **P 07 38 03.7 +1.8**
comp=Z,105nm,1.2s,mb5.7
UCH LR LR
comp=Z,1µm,20.0s,MS5.0
UCH Uchtor 59.84 307 P **P 07 38 03.9 +2.0**
SNR=74
NWAO Narrogin (SRO) 59.96 205 PFAKE 07 38 10.0 +7.3
NWAO LR LR
comp=Z,485nm,21.0s,MS4.6
PMR Palmer 60.33 31 *e*P **P 07 38 04.3 -0.6**
PMR LR LR
comp=Z,2µm,21.0s,MS5.2
EKS2 Erkin-Say 60.36 307 *e*P **P 07 38 06.5 +1.1**
comp=Z,40nm,1.2s,mb5.3
EKS2 LR LR
comp=Z,690nm,19.0s,MS4.8
EKS2 Erkin-Say 60.36 307 P **P 07 38 06.3 +0.8**
SNR=19
AML Almayashu 60.45 307 *e*P **P 07 38 07.7 +1.6**
comp=Z,48nm,1.0s,mb5.5
AML LR LR
comp=Z,1µm,19.0s,MS5.1
AML Almayashu 60.45 307 P **P 07 38 07.7 +1.5**
SNR=40
HYB Hyderabad 60.47 278 *e*P **P 07 38 07.5 +0.9**
HYB *e*S **S 07 46 24.0 +5.0**
HYB Hyderabad 60.47 278 *i* P **P 07 38 07.5 +0.9**
HYB *e*S **S 07 46 24.0 +5.0**
SML Sawmill 60.73 30 P **P 07 38 02.6 -5.1**
COLA College 61.41 27 *e*P **P 07 38 13.3 +1.1**
COLA *i*P 07 38 14.8
COLA LR LR
comp=Z,1µm,22.0s,MS5.0
PALK Pallekele 61.67 266 PFAKE 07 38 30.0 +15
PALK LR LR
comp=Z,593nm,20.0s,MS4.7
EYAK Cordova Ski Ar 61.84 32 *e*P **P 07 38 15.1 -0.1**
comp=Z,57nm,1.6s,mb5.5
BRVK Borovoye 62.37 319 P **P 07 38 18.2 -0.7**
comp=Z,382nm,0.9s,SNR=40
BRVK Borovoye 62.37 319 PFAKE 07 38 30.0 +11
BRVK LR LR
comp=Z,1µm,22.0s,MS5.0
BRVK Borovoye 62.37 319 P **P 07 38 19.2 +0.4**
SNR=46
KK31 Karatay Array 62.72 308 *i* P **P 07 38 21.5 +0.1**
KK31 pmax pmax
comp=Z,66nm,1.0s,mb5.7
EGAK Eagle 64.24 27 PFAKE 07 38 40.0 +9.0
EGAK LR LR
comp=Z,659nm,21.0s,MS4.8
TAU Tasmania Unive 64.75 177 *e*P **P 07 38 34.9 +0.3**
SIT Sitka 67.28 36 PFAKE 07 39 00.0 +9.2
SIT LR LR
comp=Z,1µm,21.0s,MS5.0
INK Inuvik 67.31 24 *e*P **P 07 38 50.9 +0.1**
INK Inuvik 67.31 24 P **P 07 38 50.5 -0.2**
comp=Z,12nm,1.1s,mb4.8,baz=267,slow=7.1,SNR=17
SVE Sverdlovsk 67.70 324 ⇓ *e*P **P 07 38 53.9 +0.5**
SVE pmax pmax
comp=Z,68nm,1.3s,mb5.5
SVE MLR MLR
comp=Z,1µm,19.0s,MS5.1
URZ Urewera 68.00 152 LR LR 08 04 25.5
comp=Z,602nm,20.4s,MS4.8,baz=356,slow=32
ARU Arti 68.89 324 PFAKE 07 39 10.0 +9.1
ARU LR LR
comp=Z,888nm,20.0s,MS5.0
ARU Arti 68.89 324 *d i* P **P 07 39 00.1 -0.8**
ARU *e* 07 39 22.7
ARU *e* 07 41 29.5
ARU *e*S S 07 48 02.6 +1.0
ARU *e*SS SS 07 52 30.9 +3.9
ARU pmax pmax
comp=Z,113nm,1.7s,mb5.5
WRAK Wrangell Islan 68.99 36 PFAKE 07 39 10.0 +8.5
WRAK LR LR
comp=Z,754nm,21.0s,MS4.9
AB31 Akbulak array 69.19 316 ⇑ *e*P **P 07 39 02.2 -0.7**
SOKR Solikamsk 69.37 327 *d i* P **P 07 39 03.2 -0.6**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
SOKR MLR MLR
comp=Z,1µm,21.0s,MS5.2
VIB Van Inlet 69.37 40 T 08 55 16.9
SNR=9.6
DIB Dawson Inlet, 69.42 40 T 08 55 15.5
SNR=18
AKTO Aktyubinsk 70.20 317 LR LR 08 12 17.0
comp=Z,876nm,19.1s,MS5.0,baz=216,slow=38
RPZ Rata Peaks 70.32 159 P **P 07 39 10.6 +0.9**
comp=Z,5.7nm,0.5s,mb4.7,baz=111,slow=6.6,SNR=5.4
RPZ LR LR 08 04 57.9
comp=Z,648nm,20.1s,MS4.9,baz=344,slow=32
RAR Rarotonga 70.46 124 LR LR 08 03 27.7
comp=Z,827nm,20.9s,MS5.0,baz=283,slow=30
PRGR Permogore 74.28 331 ⇓ *i*P **P 07 39 32.6 -0.6**
PRGR *e*S S 07 49 08.7 +5.2
PRGR pmax pmax
comp=Z,28nm,0.7s,mb5.3
ALE Alert 74.94 3 P **P 07 39 36.2 -0.5**
comp=Z,85nm,1.5s,mb5.5,SNR=9.2
C03A Quillayute Air 75.52 44 ⇓P **P 07 39 40.1 -0.6**
baz=76
NLWA Neilton Lookou 76.14 44 PFAKE 07 40 00.0 +16
NLWA LR LR
comp=Z,2µm,22.0s,MS5.4
NLWA Neilton Lookou 76.14 44 ⇓P **P 07 39 42.6 -1.6**
baz=76
B04A Port Angeles 76.17 44 ⇓P **P 07 39 43.8 -0.6**
baz=76
YKA Yellowknife Ar 76.22 28 P **P 07 39 43.9 -0.4**
YKA LR LR 08 11 14.0
YKA Yellowknife Ar 76.22 28 ⇑ *e*P **P 07 39 43.9 -0.4**
YKA Yellowknife Ar 76.22 28 P **P 07 39 43.9 -0.4**
comp=Z,4.2nm,0.7s,mb4.5,baz=293,slow=5.8,SNR=68
YKA LR LR 08 11 14.0
comp=Z,858nm,21.2s,MS5.0,baz=285,slow=34
D03A Wishkah Elem. 76.28 45 ⇓P **P 07 39 46.5 +1.5**
baz=76
LVZ Lovozero 76.42 338 *i* P **P 07 39 44.6 -0.8**
LVZ LR LR
comp=Z,631nm,19.0s,MS5.0
LVZ Lovozero 76.42 338 *i* P **P 07 39 44.5 -0.9**
LVZ pmax pmax
comp=Z,48nm,1.5s,mb5.2
A04A Legoe Bay, Lum 76.48 43 ⇓P **P 07 39 47.2 +1.1**
baz=76
E03A Lebam 76.59 45 ⇓P **P 07 39 47.5 +0.8**
baz=76
C04A Brinnon 76.62 44 ⇓P **P 07 39 47.3 +0.4**
baz=77
RES Resolute Bay 76.77 13 *e*P **P 07 39 47.0 -0.3**
A05A Maple Falls 76.78 42 ⇑P **P 07 39 48.2 +0.5**
baz=77
F03A Seaside 76.78 46 ⇓P **P 07 39 46.9 -0.9**
baz=77
PPT Papeete 76.82 115 *e*LR LR 08 03 36.4
comp=Z,4µm,25.8s,baz=298
PPT Papeete 76.82 115 LR LR 08 06 12.9
comp=Z,1µm,21.3s,MS5.1,baz=309,slow=30
H02A Toledo 76.88 47 ⇓P **P 07 39 47.5 -1.0**
baz=77
D04A Dobbs Creek Ra 76.91 44 ⇑P **P 07 39 49.0 +0.4**
baz=77
APA Apatity 76.99 338 ⇑ *i*P **P 07 39 48.0 -0.6**
APA *i* 07 39 54.6
APA pmax pmax
comp=Z,81nm,1.4s,mb5.5
APA MLR MLR
comp=Z,1µm,17.0s,MS5.2
B05A Bryant 77.00 43 ⇑P **P 07 39 48.5 -0.6**
baz=77
PMOR Pomariorio Ree 77.06 112 *e*P **P 07 39 50.5 +0.7**
comp=Z,81nm,1.4s,mb5.5
A06A Chilliwack 77.13 42 ⇓P **P 07 39 49.5 -0.2**
baz=77
K01A Sixes 77.13 49 ⇑P **P 07 39 50.2 +0.4**
baz=77
E04A Onalaska 77.13 45 ⇓P **P 07 39 49.6 -0.2**
baz=77
JCW Jim Creek 77.13 43 P **P 07 39 50.6 +0.8**
G03A Yamhill 77.16 46 ⇓P **P 07 39 49.4 -0.6**
baz=77
TVO Taravao 77.19 115 *e*P **P 07 39 51.8 +1.2**
comp=Z,92nm,1.3s,mb5.5
TVO Taravao 77.19 115 *e*P **P 07 39 51.8 +1.2**
TVO pmax pmax
comp=Z,92nm,1.3s,mb5.5
I02A Mapleton 77.20 48 ⇑P **P 07 39 51.7 +1.4**
baz=77
B06A Marblemount 77.31 43 ⇓P **P 07 39 50.5 -0.2**
baz=77
H03A Soap Creek Ran 77.36 47 ⇓P **P 07 39 50.5 -0.6**
baz=77
COR Corvallis 77.38 47 PFAKE 07 40 00.0 +8.8
COR LR LR
comp=Z,1µm,21.0s,MS5.3
D05A Enumclaw 77.42 44 ⇓P **P 07 39 52.2 +0.8**
baz=77
C05A Tolt Reservoir 77.45 44 ⇑P **P 07 39 50.3 -1.2**
baz=77
F04A Amboy 77.54 45 ⇓P **P 07 39 50.5 -1.6**
baz=78
J02A Umpqua 77.58 48 ⇓P **P 07 39 52.4 0.0**
baz=78
I03A Eugene 77.59 48 ⇓P **P 07 39 52.5 +0.1**
baz=78
LON Longmire 77.67 45 *e*P **P 07 39 54.2 +1.4**
M01C Crescent City 77.67 50 ⇑P **P 07 39 53.7 +0.7**
baz=78
FMW Mount Fremont 77.70 44 P **P 07 39 53.9 +0.9**
G04A Mulino 77.73 46 ⇑P **P 07 39 53.3 +0.1**
baz=78
HOQ Hoqain 77.75 291 P **P 07 39 54.2 +0.5**
SNR=11
E05A Randle 77.77 45 ⇑P **P 07 39 53.8 +0.4**
baz=78
A07A Ashnola River, 77.82 42 P **P 07 39 54.2 +0.6**
baz=78,SNR=7.4
K02A Glendale 77.83 49 ⇓P **P 07 39 54.5 +0.7**
baz=78
BANOM Banah 77.87 293 P **P 07 39 55.5 +1.2**
SNR=7.2
C06A Tall Timber Ra 77.88 43 ⇓P **P 07 39 52.7 -1.2**
baz=78
L02A Cave Junction 77.94 49 ⇓P **P 07 39 53.8 -0.6**
baz=78
KEV Kevo 77.98 341 PFAKE 07 40 10.0 +16
KEV LR LR
comp=Z,1µm,19.0s,MS5.2
J03A Ideyld Park 78.00 48 ⇑P **P 07 39 54.1 -0.6**
baz=78
JCC Jacoby Creek 78.07 51 ⇑P **P 07 39 54.8 -0.3**
baz=78
H04A Detroit Lake 78.10 47 P **P 07 39 55.9 +0.6**
baz=78,SNR=11
BSY Bisya 78.11 290 P **P 07 39 56.1 +0.4**
SNR=8.6
D06A Cle Elum 78.15 44 ⇓P **P 07 39 55.2 -0.2**
baz=78
B07A Winthrop 78.19 42 P **P 07 39 56.5 +0.9**
baz=78,SNR=5.3
F05A White Salmon 78.19 45 ⇑P **P 07 39 54.4 -1.3**
baz=78
I04A Tendick Farm, 78.24 48 P **P 07 39 56.9 +0.9**
baz=78,SNR=7.9
E06A Yakima 78.28 45 ⇓P **P 07 39 56.0 -0.2**
baz=78,SNR=5.9
TBM Table Mountain 78.32 44 P **P 07 39 56.9 +0.5**
HATD Hatta, Dubai 78.36 292 P **P 07 39 57.7 +0.6**
SNR=14
VFP Flag Point 78.37 46 P **P 07 39 57.7 +1.0**
EBG Ellensburg 78.43 44 P **P 07 39 58.0 +1.0**
O01C Eel River Cons 78.44 51 ⇑P **P 07 39 56.6 -0.7**
baz=78
ASHO Ashiyiah 78.47 292 P **P 07 39 58.5 +0.8**
SNR=13
C07A Waterville 78.48 43 ⇑P **P 07 39 56.7 -0.6**
baz=78
G05A Wamic 78.50 46 ⇓P **P 07 39 56.5 -0.9**
baz=78
ARCES ARCESS Array B 78.54 341 P **P 07 39 57.0 -0.2**
comp=Z,20nm,0.9s,mb5.0,baz=67,slow=7.6,SNR=31
ARCES LR LR 08 18 52.1
comp=Z,693nm,20.3s,MS5.0,baz=68,slow=39
A08A Turner Farm, O 78.55 42 P **P 07 39 58.1 +0.5**
baz=78,SNR=6.8
WTV Waterville 78.55 43 P **P 07 39 58.0 +0.4**
N02C Big Bar 78.59 51 ⇓P **P 07 39 56.7 -1.3**
baz=78,SNR=9.2
J04A Umpqua Nationa 78.63 48 ⇓P **P 07 39 58.2 0.0**
baz=79,SNR=6.3
F06A Goldendale 78.67 45 ⇓P **P 07 39 57.8 -0.6**
baz=79
YBH Yreka Blue Hor 78.71 50 PFAKE 07 40 10.0 +11
YBH LR LR
comp=Z,1µm,22.0s,MS5.2
YBH Yreka Blue Hor 78.71 50 *e*P **P 07 39 59.7 +1.0**
YBH Yreka Blue Hor 78.71 50 ⇓P **P 07 39 58.0 -0.7**
baz=79,SNR=12
D07A Quincy 78.71 44 ⇑P **P 07 39 59.0 +0.4**
baz=79
B08A Colville Reser 78.71 42 P **P 07 39 59.0 +0.4**
baz=79,SNR=9.8
M02C Callahan 78.72 50 ⇑P **P 07 39 58.1 -0.7**
baz=79,SNR=6.6
H05A Madras 78.76 46 ⇓P **P 07 39 59.3 +0.4**
baz=79
KCPM Cahto Peak 78.76 52 *e*P **P 07 40 00.5 +1.5**
I05A Bend 78.89 47 ⇑P **P 07 39 59.4 -0.3**
baz=79
G06A Carlson Farm, 78.95 46 ⇑P **P 07 39 59.7 -0.3**
baz=79,SNR=5.7
A09A Danville 78.96 42 ⇑P **P 07 39 59.7 -0.2**
baz=79,SNR=5.7
P01C Double 8 Ranch 79.01 52 ⇓P **P 07 40 00.0 -0.3**
baz=79
C08A Higginbotham F 79.10 43 P **P 07 40 00.9 +0.3**
baz=79,SNR=7.9
K04A Chilquin 79.10 48 ⇓P **P 07 40 00.8 0.0**
baz=79,SNR=5.8
MAK Makhachkala 79.16 312 *e*P **P 07 39 59.3 -1.8**
MAK *e* pP 07 40 07.9 -6.7
MAK *e* 07 43 07.6
MAK *e*S S 07 50 03.1 +5.6
MAK *e* 07 50 17.5
MAK pmax pmax
comp=Z,130nm,1.8s,mb5.6
O02C Red Bluff 79.17 51 ⇑P **P 07 40 00.9 -0.3**
baz=79,SNR=10
F07A Phinny Hill Vi 79.19 45 ⇑P **P 07 40 01.6 +0.4**
baz=79
J05A Fort Rock 79.22 48 ⇓P **P 07 40 01.5 0.0**
baz=79,SNR=21
WDC Whiskeytown Da 79.22 51 *e*P **P 07 40 02.4 +0.9**
comp=Z,28nm,1.4s,mb5.0
WDC LR LR
comp=Z,2µm,22.0s,MS5.4
WDC Whiskeytown Da 79.22 51 *e*P **P 07 40 02.4 +0.9**
WDC pmax pmax
comp=Z,28nm,1.4s,mb5.0
WDC MLR MLR
comp=Z,2µm,22.0s,MS5.4
WDC Whiskeytown Da 79.22 51 P **P 07 40 02.2 +0.8**
baz=79,SNR=10.0
GBL Gable Mountain 79.25 44 P **P 07 40 02.0 +0.5**
HAWA Hanford 79.27 44 PFAKE 07 40 10.0 +8.3
HAWA LR LR
comp=Z,1µm,20.0s,MS5.3
M03C McCloud 79.28 50 ⇑P **P 07 40 01.5 -0.3**
baz=79,SNR=8.8
M04C Macdoel 79.31 49 ⇓P **P 07 40 01.3 -0.7**
baz=79,SNR=13
H06A Lindquist Farm 79.33 46 P **P 07 40 02.4 +0.4**
baz=79,SNR=9.2
HOPS Hopland 79.36 52 PFAKE 07 40 10.0 +7.7
HOPS LR LR
comp=Z,2µm,21.0s,MS5.4
GASB Alder Springs 79.40 52 ⇓P **P 07 40 01.2 -1.3**
baz=79,SNR=9.1
B09A Rice 79.43 42 P **P 07 40 03.1 +0.6**
baz=79,SNR=6.8
D08A Wollman Farm, 79.43 44 P **P 07 40 03.0 +0.5**
baz=79,SNR=5.8
E08A Dider Farm, El 79.55 44 ⇑P **P 07 40 03.2 +0.1**
baz=80
C09A Chrisman Ranch 79.58 43 ⇓P **P 07 40 03.4 +0.1**
baz=80
G07A Ruggs Ranch, H 79.58 45 ⇑P **P 07 40 02.4 -0.9**
baz=80,SNR=5.9
A10A Northport 79.59 41 ⇓P **P 07 40 03.1 -0.2**
baz=80
K05A Summer Lake 79.64 48 P **P 07 40 05.0 +1.2**
baz=80,SNR=14
I06A Prineville 79.69 47 P **P 07 40 04.8 +0.8**
baz=80,SNR=13
TBI Tubuai 79.69 120 *e*SS SS 07 55 09.5 -3.9
comp=Z,222nm,26.8s
TBI *e*LR LR 08 04 47.8
comp=Z,1µm,32.5s,baz=299
LTIM Timbered Crate 79.76 50 P **P 07 40 05.4 +0.9**
O03C Acorn Hollow, 79.78 51 P **P 07 40 05.0 +0.5**
baz=80,SNR=5.7
MCCM Marconi Confer 79.79 53 PFAKE 07 40 20.0 +15
MCCM LR LR
comp=Z,2µm,21.0s,MS5.5
MCCM Marconi Confer 79.79 53 ⇓P **P 07 40 03.6 -1.0**
baz=80
D09A Jones Farm, Ri 79.82 43 ⇑P **P 07 40 04.0 -0.6**
baz=80,SNR=5.1
FARB Farallon Islan 79.86 54 ⇑P **P 07 40 04.7 -0.4**
baz=80
MNRC McLaughlin Nat 79.86 52 ⇑P **P 07 40 04.7 -0.3**
baz=80,SNR=6.0
NSHM Saint Helena R 79.87 53 *e*P **P 07 40 05.8 +0.8**
H07A Lands Inn, Kim 79.89 46 ⇓P **P 07 40 05.5 +0.4**
baz=80
HATC Hat Creek Radi 79.91 50 P **P 07 40 05.9 +0.7**
baz=80,SNR=6.4
L05A Lakeview 79.92 49 ⇑P **P 07 40 05.0 -0.3**
baz=80,SNR=10
JOF Joensuu 79.93 334 *ep* **P 07 40 03.5 -1.4**
comp=Z,12nm,0.6s,mb5.0
JOF Joensuu 79.93 334 *e*P **P 07 40 03.5 -1.4**
JOF pmax pmax
comp=Z,12nm,0.6s,mb5.0
M05C Lookout 79.94 50 ⇓P **P 07 40 04.7 -0.7**
baz=80,SNR=11
J06A Christmas Vall 79.97 47 P **P 07 40 06.0 +0.5**
baz=80,SNR=9.1
VRHR Novokhopersk 79.97 321 *e*P **P 07 40 04.8 -0.6**
VRHR pmax pmax
comp=N,7.0nm,0.4s
VRHR pmax pmax
comp=Z,10.0nm,0.4s,mb5.1
VRHR pmax pmax
comp=E,3.0nm,0.3s
CVS Carmenet Viney 80.04 53 ⇑P **P 07 40 04.3 -1.7**
baz=80,SNR=6.0
G08A Pilot Rock 80.04 45 P **P 07 40 06.3 +0.4**
baz=80,SNR=11
K06A Valley Falls 80.06 48 ⇑P **P 07 40 05.4 -0.6**
baz=80,SNR=7.6
I07A Izee 80.11 46 ⇑P **P 07 40 06.7 +0.4**
baz=80
NEW Newport 80.12 42 PFAKE 07 40 20.0 +14

NEW LR LR
comp=Z,2µm,22.0s,MS5.3
NEW Newport 80.12 42 *e*P **P 07 40 06.6 +0.4**
E09A Wood Farm, Sta 80.13 44 P **P 07 40 06.9 +0.6**
baz=80,SNR=7.3
C10A Spilker Farm, 80.17 42 ⇑P **P 07 40 06.6 +0.1**
baz=80
SUTB Sutter Butte 80.22 52 ⇑P **P 07 40 06.6 -0.3**
baz=80
MOS Moscow 80.30 326 *e*P **P 07 40 04.7 -2.3**
MOS Moscow 80.30 326 *e*P **P 07 40 04.6 -2.4**
MOS *e* 07 43 06.6
MOS pmax pmax
comp=Z,63nm,0.8s,mb5.6
ORV Oroville 80.32 51 P **P 07 40 07.5 0.0**
baz=80,SNR=12
A11A Hall Mountain, 80.33 41 ⇑P **P 07 40 07.1 -0.2**
baz=80,SNR=5.8
MOD Modoc 80.34 49 PFAKE 07 40 20.0 +12
MOD LR LR
comp=Z,1µm,22.0s,MS5.2
MOD Modoc 80.34 49 P **P 07 40 08.0 +0.4**
baz=80,SNR=5.7
O04C Chester 80.35 50 ⇓P **P 07 40 06.9 -0.7**
baz=80,SNR=31
EDM Edmonton 80.40 36 *e*P **P 07 40 08.3 +0.7**
M06C Likely Place G 80.47 49 ⇑P **P 07 40 07.6 -0.7**
baz=80,SNR=9.7
D10A Wagner Farm, O 80.48 43 ⇑P **P 07 40 06.9 -1.3**
baz=80
ELFS Eagle Lake Fie 80.50 50 ⇑P **P 07 40 08.4 0.0**
baz=80
J07A Hines 80.50 47 P **P 07 40 09.4 +1.0**
baz=80,SNR=9.6
H08A Prairie City 80.51 46 P **P 07 40 09.1 +0.7**
baz=80,SNR=8.9
JRSC Jasper Ridge 80.53 54 ⇓P **P 07 40 07.9 -0.7**
baz=80
B11A Sandpoint 80.53 42 ⇑P **P 07 40 08.5 +0.1**
baz=80
F09A S2 Ranch, Elgi 80.58 45 P **P 07 40 10.1 +1.3**
baz=80,SNR=13
O05C Quincy 80.59 51 P **P 07 40 09.4 +0.5**
baz=81,SNR=9.5
Q04C Lincoln 80.66 52 ⇑P **P 07 40 09.0 -0.3**
baz=81
BNLO Ben Lomond (Sa 80.67 54 ⇓P **P 07 40 09.4 0.0**
baz=81
DAG Danmarks Havn 80.77 356 ⇑*i*P **P 07 40 08.0 -1.2**
DAG pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
DAG Danmarks Havn 80.77 356 ⇑*i*P **P 07 40 08.0 -1.2**
comp=Z,5.5nm,0.7s,mb4.6
A12A Yaak River Ran 80.77 41 ⇓P **P 07 40 09.5 -0.2**
baz=81
K07A Rock Creek Ran 80.79 48 P **P 07 40 10.2 +0.3**
baz=81,SNR=16
E10A Myers Farm, Un 80.80 44 P **P 07 40 10.4 +0.5**
baz=81,SNR=5.7
I08A Drewsey 80.80 46 ⇑P **P 07 40 10.0 +0.1**
baz=81
F10A Beach Ranch, E 80.92 44 P **P 07 40 10.8 +0.2**
baz=81,SNR=7.2
L07A Adell 80.97 48 P **P 07 40 12.0 +1.1**
baz=81,SNR=20
B12A Libby 80.99 41 ⇑P **P 07 40 10.7 -0.2**
baz=81
BEKR Beckwourth 81.03 51 P **P 07 40 11.7 +0.4**
baz=81,SNR=28
P05C Yuba Gap, Truc 81.05 51 P **P 07 40 11.6 +0.2**
baz=81,SNR=11
J08A Circle Bar Ran 81.07 47 P **P 07 40 12.1 +0.7**
baz=81,SNR=14
N06A Buffalo Meadow 81.09 50 P **P 07 40 12.1 +0.5**
baz=81,SNR=16
OBN Obninsk 81.11 326 ⇑*e*P **P 07 40 11.2 -0.2**
OBN pmax pmax
comp=Z,87nm,1.3s,mb5.5
OBN MLR MLR
comp=Z,1µm,18.0s,MS5.3
VOR Voronezh 81.11 322 P **P 07 40 11.0 -0.5**
VOR pmax pmax
comp=Z,200nm,1.8s,mb5.8
H09A Durkee 81.13 45 P **P 07 40 12.8 +1.2**
baz=81,SNR=5.6
LAVA Lava Cap Winer 81.15 52 P **P 07 40 12.3 +0.3**
baz=81,SNR=9.7
S04C Ingram Canyon, 81.17 53 P **P 07 40 12.9 +0.9**
baz=81,SNR=5.6
DGRG David-gareji 81.18 311 P **P 07 40 09.8 -2.3**
R04C Big Horse Ranc 81.19 52 ⇓P **P 07 40 11.8 -0.3**
baz=81
G10A Bishop Farm, J 81.25 45 P **P 07 40 12.7 +0.4**
baz=81,SNR=17
BMO Blue Mountains 81.29 45 PFAKE 07 40 20.0 +7.4
BMO LR LR
comp=Z,644nm,20.0s,MS5.0
BMO Blue Mountains 81.29 45 *e*P **P 07 40 12.9 +0.3**
BMO pmax pmax
comp=Z,43nm,1.6s,mb5.1
K08A Mann Creek Ran 81.30 47 P **P 07 40 13.3 +0.6**
baz=81,SNR=11
O06A Flanigan 81.30 50 P **P 07 40 13.2 +0.5**
baz=81,SNR=18
WVOR Wild Horse Val 81.30 48 *e*P **P 07 40 13.4 +0.7**
comp=Z,24nm,1.3s,mb5.0
WVOR LR LR
comp=Z,1µm,20.0s,MS5.3
WVOR Wild Horse Val 81.30 48 *e*P **P 07 40 13.4 +0.7**
WVOR pmax pmax
comp=Z,24nm,1.3s,mb5.0
WVOR MLR MLR
comp=Z,1µm,20.0s,MS5.3
M07A Soldier Meadow 81.32 49 ⇑P **P 07 40 11.8 -1.0**
baz=81
VRSR Storozhevoye 81.33 322 *d*/P **P 07 40 12.2 -0.4**
VRSR pmax pmax
comp=N,6.0nm,1.2s
VRSR pmax pmax
comp=Z,10.0nm,1.2s,mb4.6
VRSR pmax pmax
comp=E,10.0nm,1.1s
VRSR MLR MLR
comp=Z,180nm,18.0s,MS4.5
VRSR MLR MLR
comp=N,70nm,20.0s,MS4.5
VRSR MLR MLR
comp=E,170nm,19.0s,MS4.5
I09A Lost Marbles R 81.34 46 ⇓P **P 07 40 13.2 +0.4**
baz=81
SAO San Andreas Ge 81.34 54 PFAKE 07 40 20.0 +7.0
SAO LR LR
comp=Z,2µm,21.0s,MS5.4
PACP Pacheco Peak 81.38 54 ⇑P **P 07 40 12.5 -0.7**
baz=81,SNR=6.6
HAST UC Hastings Re 81.40 54 ⇑P **P 07 40 12.9 -0.4**
baz=81,SNR=5.6
E11A Bogner Ranch, 81.43 43 P **P 07 40 13.2 -0.1**
baz=81,SNR=10
P06A Stead Airport, 81.43 51 ⇓P **P 07 40 13.7 +0.3**
baz=81
MTA Mtatsminda 81.49 311 P **P 07 40 07.1 -6.6**
A13A Flathead Natio 81.52 41 ⇓P **P 07 40 13.5 -0.2**
baz=81
J09A Fry Pan Ranch, 81.56 47 ⇓P **P 07 40 13.7 -0.3**
baz=82,SNR=16
L08A Fields 81.59 48 ⇑P **P 07 40 14.6 +0.4**
baz=82
F11A Grangeville 81.64 44 P **P 07 40 14.2 -0.1**
baz=82,SNR=6.8
R05C Kirkwood Meado 81.66 52 P **P 07 40 15.1 +0.5**
baz=82,SNR=5.3
WCN Washoe City 81.67 51 P **P 07 40 15.5 +0.8**
baz=82,SNR=6.2
CMB Columbia Colle 81.67 52 *e*P **P 07 40 14.2 -0.5**
comp=Z,13nm,0.7s,mb5.0
CMB LR LR
comp=Z,2µm,20.0s,MS5.4
CMB Columbia Colle 81.67 52 *e*P **P 07 40 14.2 -0.5**
CMB pmax pmax
comp=Z,13nm,0.7s,mb5.0
CMB MLR MLR
comp=Z,2µm,20.0s,MS5.4
CMB Columbia Colle 81.67 52 P **P 07 40 14.8 +0.1**
baz=82,SNR=23
N07B Gerlach 81.68 49 P **P 07 40 15.4 +0.7**
baz=82,SNR=14

D12A Red Ives Fores 81.69 43 ⇓P **P 07 40 13.4 -1.3**
baz=82
ZEI Tsey 81.70 313 *e*P **P 07 40 14.6 -0.2**
B13A Whitefish 81.72 41 P **P 07 40 15.5 +0.8**
baz=82,SNR=15
G11A Walters Elk Ra 81.76 44 ⇓P **P 07 40 13.4 -1.6**
baz=82,SNR=15
H10A Noah's Angus R 81.76 45 P **P 07 40 15.1 0.0**
baz=82,SNR=12
V03C Hunter Liggett 81.77 55 ⇑P **P 07 40 15.2 0.0**
baz=82
K09A Rome 81.83 47 P **P 07 40 15.8 +0.4**
baz=82,SNR=18
M08A Happy Creek Ra 81.85 49 P **P 07 40 16.7 +1.1**
baz=82,SNR=5.3
T05C Eagle Field, D 81.87 54 ⇓P **P 07 40 16.1 +0.3**
baz=82
I10A Payette 81.92 46 P **P 07 40 16.5 +0.6**
baz=82,SNR=6.2
C13A Hot Springs 81.93 42 P **P 07 40 16.4 +0.6**
baz=82,SNR=18
S05C Merced 81.97 53 P **P 07 40 16.7 +0.4**
baz=82,SNR=9.2
U04C Hernandez Rese 81.98 54 ⇓P **P 07 40 16.7 +0.3**
baz=82,SNR=7.9
KIV Kislovodsk 82.07 314 PFAKE 07 40 30.0 +13
KIV LR LR
comp=Z,674nm,20.0s,MS5.0
KIV Kislovodsk 82.07 314 *d*/P **P 07 40 17.1 +0.4**
KIV *e*S S 07 50 29.7 +1.9
KIV *e*SS SS 07 55 48.8 +1.7
KIV pmax pmax
comp=Z,55nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,299nm,5.0s
KIV MLR MLR
comp=Z,597nm,19.0s,MS5.0
KIV Kislovodsk 82.07 314 P **P 07 40 17.5 +0.8**
SNR=21
ONI Oni 82.08 313 P **P 07 40 17.4 +0.6**
L09A Wilkinson Ranc 82.13 48 P **P 07 40 17.7 +0.7**
baz=82,SNR=9.0
R06C Coleville 82.18 52 ⇓P **P 07 40 17.4 0.0**
baz=82,SNR=11
V04C Ramage Ranch, 82.18 55 ⇓P **P 07 40 17.8 +0.3**
baz=82
J10A Berg Farm, Mel 82.20 46 ⇓P **P 07 40 16.4 -1.0**
baz=82
H11A Donnelly 82.20 45 P **P 07 40 17.1 -0.2**
baz=82,SNR=12
P07A Fallon 82.20 51 ⇓P **P 07 40 17.5 0.0**
baz=82
D13A Huson 82.24 42 ⇑P **P 07 40 17.2 -0.2**
baz=82
F12A Elk City 82.27 44 P **P 07 40 18.1 +0.4**
baz=82,SNR=6.1
N08A GE Springer Mi 82.27 49 P **P 07 40 18.3 +0.5**
baz=82,SNR=11
PKD Parkfield 82.32 54 ⇓P **P 07 40 18.1 0.0**
baz=82,SNR=5.2
KAF Kangasniemi 82.34 335 *ep* **P 07 40 16.2 -1.5**
comp=Z,3.0nm,0.4s,mb4.6,baz=53,slow=4.8
KAF Kangasniemi 82.34 335 *eP* **P 07 40 16.2 -1.5**
KAF pmax pmax
comp=Z,3.0nm,0.4s,mb4.6
K10A MacKenzie Ranc 82.38 47 ⇑P **P 07 40 18.7 +0.4**
baz=82
C14A Swan Lake 82.40 41 ⇑P **P 07 40 18.1 -0.2**
baz=82
U05C Westside ANR, 82.49 54 ⇓P **P 07 40 18.7 -0.4**
baz=82,SNR=5.7
M09A Marrel Ranch, 82.51 48 ⇓P **P 07 40 19.4 +0.4**
baz=82
RBK Rabkut 82.53 286 P **P 07 40 19.6 0.0**
SNR=12
T06C Millerton Lake 82.55 53 P **P 07 40 19.6 +0.2**
baz=82,SNR=30
R07C Lee Vining 82.64 52 P **P 07 40 20.8 +1.1**
baz=83,SNR=12
MSO Missoula 82.67 42 PFAKE 07 40 30.0 +10
MSO LR LR
comp=Z,1µm,22.0s,MS5.2
N09A Rock Creek Ran 82.67 49 ⇓P **P 07 40 20.3 +0.4**
baz=83,SNR=6.7
KCC Kaiser Creek 82.72 53 ⇓P **P 07 40 18.9 -1.4**
baz=83,SNR=5.9
WHFO Wadi Hawf 82.77 286 P **P 07 40 21.5 +0.7**
SNR=6.8
FINES FINESS Array B 82.80 334 *i*P **P 07 40 18.8 -1.3**
FINES pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 82.80 334 P **P 07 40 18.9 -1.2**
comp=Z,4.6nm,0.6s,mb4.7,baz=70,slow=4.8,SNR=20
V05C Boulder Hill, 82.83 54 ⇑P **P 07 40 20.8 0.0**
baz=83
MFID Camas Ranch 82.83 46 ⇑P **P 07 40 20.0 -0.6**
baz=83
D14A Greenough 82.84 42 ⇓P **P 07 40 20.0 -0.6**
baz=83
L10A Juniper Basin 82.92 48 ⇓P **P 07 40 21.2 0.0**
baz=83
K11A Parker Ranch, 82.95 47 ⇑P **P 07 40 21.3 0.0**
baz=83
MLAC Mammoth Lakes 82.96 52 ⇑P **P 07 40 21.8 +0.3**
baz=83
SMMC Simmler 82.96 55 ⇑P **P 07 40 21.5 0.0**
baz=83
DIGO Kars 82.97 311 *i*P **P 07 40 22.0 +0.5**
H12A Diamond D Ranc 83.02 45 P **P 07 40 21.9 +0.2**
baz=83,SNR=8.3
NVAR Mina Array Bea 83.05 51 P **P 07 40 22.8 +0.9**
comp=Z,6.4nm,0.7s,mb4.8,baz=272,slow=4.0,SNR=63
BMN Battle Mountai 83.05 49 PFAKE 07 40 30.0 +8.1
BMN LR LR
comp=Z,1µm,22.0s,MS5.2
DYDN Diyadin 83.08 310 *i*P **P 07 40 23.5 +1.5**
M10A I.L. Ranch, Tu 83.10 48 ⇓P **P 07 40 21.8 -0.3**
baz=83,SNR=6.2
E14A Clinton 83.12 43 ⇑P **P 07 40 20.5 -1.6**
baz=83
Q08A Gabbs 83.15 51 P **P 07 40 22.9 +0.5**
baz=83,SNR=9.8
RCTC Rector, Farmer 83.16 54 ⇓P **P 07 40 22.2 -0.4**
baz=83
O09A Fish Creek Ran 83.17 50 P **P 07 40 23.3 +0.8**
baz=83,SNR=7.4
HELL Mitchell Peak, 83.18 53 P **P 07 40 22.5 -0.1**
baz=83,SNR=12
G13A Cobalt 83.20 44 P **P 07 40 22.5 -0.1**
baz=83,SNR=18
R08A Mina 83.22 51 ⇑P **P 07 40 21.8 -1.0**
baz=83
PKM Peak Mountain 83.26 55 ⇑P **P 07 40 23.0 0.0**
baz=83,SNR=5.7
J12A Stokes Ranch, 83.39 46 ⇓P **P 07 40 23.9 +0.4**
baz=83
ABTO Aybut 83.40 286 P **P 07 40 23.7 -0.3**
SNR=16
H13A Challis 83.40 45 ⇓P **P 07 40 23.3 -0.3**
baz=83
N10A Dunphy 83.44 49 ⇑P **P 07 40 24.2 +0.4**
baz=83
P09A Austin 83.45 50 ⇓P **P 07 40 23.3 -0.7**
baz=83
F14A Wisdom 83.45 43 ⇑P **P 07 40 23.9 +0.1**
baz=83
D15A Lincoln 83.47 42 ⇑P **P 07 40 23.9 +0.1**
baz=83
S08C White Mtn Res 83.50 52 P **P 07 40 25.2 +1.0**
baz=84,SNR=14
SBC Santa Barbara 83.51 56 ⇑P **P 07 40 24.6 +0.3**
baz=84
O10A Cortez Mining, 83.61 49 ⇑P **P 07 40 24.8 0.0**
baz=84
TIN Tinemaha 83.63 53 ⇓P **P 07 40 24.9 0.0**
baz=84
G14A Jackson 83.63 44 ⇓P **P 07 40 24.1 -0.6**
baz=84
M11A Holland Ranch, 83.65 48 ⇑P **P 07 40 24.6 -0.3**
baz=84,SNR=5.5
E15A Deer Lodge 83.65 42 P **P 07 40 25.2 +0.3**
baz=84,SNR=16
ARTV Artvin 83.67 312 *i*P **P 07 40 25.7 +0.6**
Q09A Carvers 83.70 51 ⇑P **P 07 40 25.2 0.0**
baz=84
HLID Hailey 83.71 46 PFAKE 07 40 40.0 +15
HLID LR LR
comp=Z,786nm,21.0s,MS5.1

HLID Hailey 83.71 46 P **P 07 40 25.8 +0.6**
baz=84,SNR=12
BSC Santa Cruz Isl 83.74 56 ⇓P **P 07 40 25.5 -0.1**
baz=84
I13A Wildhorse Cree 83.76 45 ⇑P **P 07 40 25.5 0.0**
baz=84
TUTA Tutak 83.76 310 ⇓*i*P **P 07 40 25.9 +0.4**
K12A Draper Farm, C 83.77 47 ⇑P **P 07 40 25.5 0.0**
baz=84
HAKT HAKKARI 83.84 308 *i*P **P 07 40 23.2 -2.8**
L12A House Creek Ra 83.89 47 ⇓P **P 07 40 26.5 +0.4**
baz=84
P10A Eureka 83.90 50 ⇑P **P 07 40 25.9 -0.3**
baz=84
ARVC Arvin 83.92 55 ⇓P **P 07 40 25.4 -1.1**
baz=84
KBD Kabd 83.93 299 *eP* **P 07 40 26.3 -0.3**
KBD AMb AMB 07 40 29.5
comp=Z,400nm,1.5s,mb6.3
N11A Elko Archery C 83.93 48 ⇑P **P 07 40 26.4 0.0**
baz=84
J13A Cove Ranch, Pi 83.94 46 ⇑P **P 07 40 26.7 +0.4**
baz=84
TPH Tonopah 83.97 51 *e*P **P 07 40 27.5 +0.8**
TPH LR LR
comp=Z,2µm,22.0s,MS5.4
CWC Cottonwood Cre 83.98 53 ⇑P **P 07 40 26.3 -0.4**
baz=84
ISA Isabella 83.98 54 ⇑P **P 07 40 25.7 -1.0**
baz=84,SNR=5.4
MIB Mutribah 83.98 300 *eP* **P 07 40 26.4 -0.5**
MIB AMb AMB 07 40 28.0
comp=Z,82nm,0.6s,mb6.1
F15A Butte 84.00 43 P **P 07 40 27.0 +0.4**
baz=84,SNR=17
R09A Tonopah 84.01 51 P **P 07 40 27.3 +0.4**
baz=84,SNR=20
S09A Goldfield 84.11 52 P **P 07 40 27.7 +0.4**
baz=84,SNR=16
BLG Laguna Peak 84.13 56 ⇑P **P 07 40 26.5 -1.1**
baz=84
RDF Al-Radifah 84.14 299 *eP* **P 07 40 26.3 -1.4**
RDF AMb AMB 07 40 30.4
comp=Z,154nm,1.6s,mb5.9
SOC Sochi 84.18 315 *eP* **P 07 40 17.5 -10**
SOC *i* 07 45 40.3
SOC *e*S S 07 50 43.6 -5.7
SOC *e*SSS 07 59 41.5
SOC MLR MLR
comp=Z,834nm,17.0s,MS5.2
OSI Osito Adit 84.20 55 ⇑P **P 07 40 27.5 -0.4**
baz=84
MCMT McKenzie Canyo 84.20 44 *e*P **P 07 40 28.3 +0.7**
M12A Wells 84.26 48 P **P 07 40 28.9 +0.9**
baz=84,SNR=21
Q10A Clear Creek Ra 84.27 51 ⇑P **P 07 40 27.4 -0.7**
baz=84
O11A Cowboy Ranch, 84.27 49 P **P 07 40 28.7 +0.6**
baz=84,SNR=6.3
NAY Al-Naaiem 84.27 299 *eP* **P 07 40 27.7 -0.7**
NAY AMb AMB 07 40 29.5
comp=Z,107nm,1.1s,mb5.9
GRAC Grapevine Rang 84.28 52 ⇑P **P 07 40 28.9 +0.7**
baz=84
G15A Dillon 84.29 43 P **P 07 40 28.4 +0.3**
baz=84,SNR=15
K13A Stover Farm, H 84.31 46 ⇑P **P 07 40 29.0 +0.7**
baz=84
RST Umm Al-Ruwaisa 84.37 299 *eP* **P 07 40 27.8 -1.0**
RST AMb AMB 07 40 29.8
comp=Z,151nm,1.1s,mb6.0
DAC Darwin (Calif) 84.40 53 PFAKE 07 40 40.0 +11
DAC LR LR
comp=Z,2µm,20.0s,MS5.5
DAC Darwin (Calif) 84.40 53 *e*P **P 07 40 29.5 +0.6**
N12A Clover Valley, 84.40 48 P **P 07 40 29.6 +0.8**
baz=84,SNR=9.2
P11A Circle Ranch, 84.43 50 P **P 07 40 29.6 +0.7**
baz=84,SNR=7.7
S10A Tonopah Range, 84.48 51 ⇑P **P 07 40 29.6 +0.3**
baz=84
R10A Warm Springs 84.55 51 ⇓P **P 07 40 29.9 +0.3**
baz=84,SNR=7.3
MPMC Manual Prospec 84.56 53 ⇑P **P 07 40 29.3 -0.4**
baz=84,SNR=25
ERZM Erzurum 84.58 311 *i*P **P 07 40 30.5 +0.8**
DECC Green Verdugo 84.64 55 ⇑P **P 07 40 29.0 -1.1**
baz=85
L13A Double Diamond 84.64 47 ⇑P **P 07 40 30.3 +0.4**
baz=85
LRMC Laurel Mountai 84.64 54 ⇓P **P 07 40 30.1 0.0**
baz=85
EDW2 Edwards Air Fo 84.65 55 P **P 07 40 30.9 +0.8**
baz=85,SNR=10
EGMT Eagleton 84.71 40 *eP* **P 07 40 29.0 -1.2**
comp=Z,52nm,1.2s,mb5.5
EGMT LR LR
comp=Z,935nm,22.0s,MS5.1
EGMT Eagleton 84.71 40 ⇓P **P 07 40 29.6 -0.6**
baz=85
Q11A Duckwater 84.79 50 P **P 07 40 31.1 +0.4**
baz=85,SNR=14
M13A Montello 84.79 47 P **P 07 40 31.4 +0.7**
baz=85,SNR=16
O12A Currie 84.85 49 P **P 07 40 31.4 +0.3**
baz=85,SNR=18
FURC Furnace Creek, 84.87 53 P **P 07 40 31.7 +0.4**
baz=85,SNR=16
FMP Fort Macarthur 84.88 56 ⇑P **P 07 40 30.2 -1.1**
baz=85
CIS Catalina Islan 84.91 56 ⇑P **P 07 40 31.4 -0.1**
baz=85
K14A Jones Ranch, D 84.96 46 ⇓P **P 07 40 29.9 -1.7**
baz=85
N13A Wendover, West 84.98 48 ⇑P **P 07 40 30.7 -1.0**
baz=85
R11A Troy Canyon, C 85.04 51 ⇑P **P 07 40 32.4 +0.3**
baz=85
TRCR Troy Canyon 85.04 51 *e*P **P 07 40 33.0 +1.0**
P12A McGill 85.06 49 ⇓P **P 07 40 32.5 +0.3**
baz=85,SNR=9.3
TPNV Topopah Spring 85.13 52 PFAKE 07 40 40.0 +7.5
TPNV LR LR
comp=Z,1µm,20.0s,MS5.4
TPNV Topopah Spring 85.13 52 *e*P **P 07 40 32.8 +0.3**
TPNV pmax pmax
comp=Z,75nm,1.7s,mb5.5
TPNV Topopah Spring 85.13 52 P **P 07 40 32.9 +0.4**
baz=85,SNR=26
ANN Anapa 85.14 317 *eP* **P 07 40 29.5 -2.9**
ANN pmax pmax
comp=Z,95nm,1.6s,mb5.7
S11A Rachel 85.21 51 ⇑P **P 07 40 32.2 -0.7**
baz=85
U10A Ash Meadows, A 85.28 53 ⇑P **P 07 40 33.3 0.0**
baz=85,SNR=11
M14A Sheep Mountain 85.29 47 ⇓P **P 07 40 32.6 -0.7**
baz=85
Q12A Willow Creek R 85.30 50 ⇑P **P 07 40 33.0 -0.3**
baz=85,SNR=12
GSC Goldstone 85.38 54 P **P 07 40 34.6 +0.8**
baz=85,SNR=14
RRX Edison Barstow 85.40 54 ⇑P **P 07 40 33.5 -0.4**
baz=85
O13A Hicks Ranch, I 85.44 49 ⇓P **P 07 40 34.0 0.0**
baz=85
YMR Madison River 85.48 43 *eP* **P 07 40 35.6 +1.5**
comp=Z,104nm,1.5s,mb5.7
YMR LR LR
comp=Z,2µm,22.0s,MS5.5
SHOC Shoshone 85.53 53 ⇑P **P 07 40 34.2 -0.4**
baz=86,SNR=9.5
HVU Hansel Valley 85.56 47 *eP* **P 07 40 35.8 +1.2**
FFC Flin Flon 85.61 32 P **P 07 40 34.8 +0.3**
comp=Z,282nm,1.1s,mb6.4,SNR=37
FFC Flin Flon 85.61 32 PFAKE 07 40 50.0 +15
FFC LR LR
comp=Z,695nm,20.0s,MS5.0
FFC Flin Flon 85.61 32 *eP* **P 07 40 34.2 -0.3**
N14A Grayback Hills 85.68 48 ⇑P **P 07 40 34.5 -0.7**
baz=86
P13A Bates Ranch, G 85.70 49 ⇑P **P 07 40 34.3 -1.0**
baz=86
BBRC Big Bear Sol-O 85.70 55 ⇑P **P 07 40 34.4 -1.1**
baz=86
R12A Pony Springs, 85.75 50 ⇓P **P 07 40 35.6 0.0**
baz=86

BGU **Big Grassy Mou** 85.75 48 *e*P P 07 40 35.8 +0.2
MURC **Murrieta** 85.76 56 ⇓P P 07 40 35.0 -0.7
baz=86
T11A **Corn Creek, Al** 85.76 52 ⇓P P 07 40 35.6 0.0
baz=86
GCMT **Greycliff** 85.79 42 *e*P P 07 40 36.6 +1.0
MNK **Minsk** 85.82 328 *e*P P 07 40 33.0 -2.6
S12A **Delamar Landin** 85.88 51 ⇓P P 07 40 36.5 +0.3
baz=86
LKWY **Lake** 85.89 43 PFAKE 07 40 50.0 +14
LKWY LR LR
comp=Z,2μm,21.0s,MS5.4
LKWY **Lake** 85.89 43 *e*P P 07 40 38.7 +2.6
LKWY pmax pmax
comp=Z,59nm,1.6s,mb5.6
Q13A **Wheeler Ranch,** 85.90 50 ⇑P P 07 40 35.8 -0.5
baz=86
M15A **Larsen Ranch,** 85.92 47 ⇓P P 07 40 36.4 0.0
baz=86
HEC **Hector,Ludlow** 85.92 54 ⇓P P 07 40 36.1 -0.4
baz=86
U11A **Corn Creek** 85.98 52 ⇑P P 07 40 36.2 -0.5
baz=86
TUQ **Turquoise Mtn.** 85.98 53 ⇑P P 07 40 36.7 0.0
baz=86
MARD **Mardin** 86.07 309 *i* P P 07 40 36.8 -0.4
109C **Camp Elliot, M** 86.11 56 ⇑P P 07 40 36.8 -0.7
baz=86
N15A **Stansbury Isla** 86.12 47 ⇑P P 07 40 37.0 -0.3
baz=86
V11A **Goodsprings** 86.18 53 ⇓P P 07 40 37.4 -0.4
baz=86,SNR=5.7
DUG **Dugway** 86.22 48 PFAKE 07 40 50.0 +12
DUG LR LR
comp=Z,880nm,20.0s,MS5.2
DUG **Dugway** 86.22 48 *e*P P 07 40 38.3 +0.4
DUG **Dugway** 86.22 48 ⇑P P 07 40 38.2 +0.3
baz=86,SNR=42
AHID **Auburn Hatcher** 86.24 45 PFAKE 07 40 50.0 +12
AHID LR LR
comp=Z,674nm,21.0s,MS5.0
PFO **Pinyon Flat Ob** 86.32 55 P P 07 40 38.6 +0.1
comp=Z,106nm,1.3s,mb5.9,SNR=9.4
PFO **Pinyon Flat Ob** 86.32 55 PFAKE 07 40 50.0 +11
PFO LR LR
comp=Z,938nm,20.0s,MS5.2
PFO **Pinyon Flat Ob** 86.32 55 *e*P P 07 40 37.9 -0.6
PFO pmax pmax
comp=Z,37nm,1.3s,mb5.5
PFO **Pinyon Flat Ob** 86.32 55 P P 07 40 38.7 +0.2
baz=86,SNR=12
T12A **Moapa** 86.34 52 ⇑P P 07 40 39.2 +0.7
baz=86
RLMT **Red Lodge** 86.35 43 PFAKE 07 40 50.0 +12
RLMT LR LR
comp=Z,1μm,22.0s,MS5.3
GMRC **Granite Mounta** 86.45 54 P P 07 40 39.5 +0.4
baz=86,SNR=17
HWUT **Hardware Ranch** 86.45 46 PFAKE 07 40 50.0 +11
HWUT LR LR
comp=Z,2μm,22.0s,MS5.4
BELC **Belle Mtn.** 86.51 55 P P 07 40 39.8 +0.4
baz=86,SNR=14
U12A **Valley of Fire** 86.59 52 ⇑P P 07 40 39.7 0.0
baz=86
S13A **Holt Ranch, En** 86.60 51 ⇑P P 07 40 40.1 +0.3
baz=86
MONP **Monument Peak** 86.64 56 ⇑P P 07 40 39.3 -0.7
baz=87,SNR=9.0
V12A **Nelson** 86.66 53 P P 07 40 40.5 +0.4
baz=87,SNR=22
FCC **Fort Churchill** 86.79 26 *e*P P 07 40 40.0 -0.3
T13A **Saint George** 86.80 51 ⇑P P 07 40 40.8 0.0
baz=87
W12A **Cal Nev Ari** 86.82 53 ⇑P P 07 40 39.9 -1.1
baz=87
R14A **James Farms, M** 86.89 50 ⇑P P 07 40 40.5 -0.7
baz=87
CCUT **Cedar City** 86.97 51 *e*P P 07 40 42.4 +0.8
DVTC **Desert V Tower** 86.98 56 ⇑P P 07 40 41.7 0.0
baz=87
S14A **Cedar City** 87.02 50 ⇑P P 07 40 41.1 -0.7
baz=87
U13A **Pakoon Wash** 87.02 52 ⇑P P 07 40 40.1 -1.7
baz=87
BC3 **Big Chuckw Mtn** 87.07 55 ⇓P P 07 40 41.8 -0.4
baz=87,SNR=15
IRM **Iron Mountain** 87.09 54 ⇑P P 07 40 41.5 -0.7
baz=87,SNR=17
SWSC **Sam W. Stewart** 87.10 56 ⇑P P 07 40 41.2 -1.1
baz=87,SNR=8.3
MPU **Maple Canyon** 87.11 48 PFAKE 07 40 50.0 +7.8
MPU LR LR
comp=Z,513nm,21.0s,MS4.9
AKASG **Malin Array Be** 87.13 324 *i* P P 07 40 40.7 -1.4
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG **Malin Array Be** 87.13 324 P P 07 40 39.9 -2.2
comp=Z,5.6nm,0.8s,mb4.8,baz=46,slow=4.8,SNR=23
AKASG LR LR 08 23 21.5
comp=Z,1μm,18.3s,MS5.3,baz=65,slow=38
AKBB **Malin Array Si** 87.13 324 *e*P P 07 40 40.6 -1.5
KIEV **Kiev** 87.14 324 *e*P P 07 40 40.6 -1.5
comp=Z,12nm,0.9s,mb5.1
KIEV LR LR
comp=Z,1μm,20.0s,MS5.3
KIEV **Kiev** 87.14 324 *e*P P 07 40 40.6 -1.5
KIEV pmax pmax
comp=Z,12nm,0.9s,mb5.1
KIEV MLR MLR
comp=Z,1μm,20.0s,MS5.3
DAU **Daniels Canyon** 87.19 47 *e*P P 07 40 43.6 +1.0
NEE2 **Needles Airpor** 87.23 54 ⇑P P 07 40 42.5 -0.4
baz=87
BW06 **Boulder Array** 87.25 45 PFAKE 07 40 50.0 +7.1
BW06 LR LR
comp=Z,2μm,22.0s,MS5.4
PDAR **Pinedale Array** 87.25 45 P P 07 40 42.5 -0.4
comp=Z,2.4nm,0.8s,mb4.5,baz=272,slow=4.0,SNR=15
PDAR LR LR 08 12 36.4
comp=Z,1μm,21.8s,MS5.3,baz=326,slow=31
MALT **Malatya** 87.33 310 *e*P P 07 40 43.5 +0.2
MALT pmax pmax
comp=Z,27nm,1.3s,mb5.3
MVU **Marysvale** 87.38 49 PFAKE 07 41 00.0 +16
MVU LR LR
comp=Z,1μm,21.0s,MS5.4
T14A **Hurricane** 87.38 51 ⇓P P 07 40 43.6 0.0
baz=87
MSU **Marysvale** 87.40 49 *e*P P 07 40 44.5 +0.9
LAO **LASA Array** 87.46 40 PFAKE 07 41 00.0 +16
LAO LR LR
comp=Z,1μm,22.0s,MS5.3
U14A **Mt Trumbull** 87.59 52 ⇓P P 07 40 43.2 -1.4
baz=88
W13A **Hualapai Mount** 87.64 53 ⇓P P 07 40 45.2 +0.3
baz=88,SNR=15
Y12C **Blythe** 87.73 55 ⇑P P 07 40 45.0 -0.4
baz=88,SNR=7.5
DGMT **Dagmar** 87.74 38 PFAKE 07 41 00.0 +15
DGMT LR LR
comp=Z,643nm,21.0s,MS5.0
PDMCI **Parker Dam,Lak** 87.79 54 ⇓P P 07 40 45.9 +0.3
baz=88,SNR=9.2
GLA **Glamis** 87.79 55 P P 07 40 46.2 +0.6
baz=88,SNR=16
X13A **Yucca** 87.89 54 P P 07 40 46.5 +0.4
baz=88,SNR=22
T15A **Red Dirt Ranch** 87.91 51 ⇑P P 07 40 45.1 -1.0
baz=88
W14A **Seligman** 88.18 53 ⇑P P 07 40 45.0 -2.4
baz=88,SNR=24
Y13A **Salome** 88.23 54 ⇓P P 07 40 47.7 0.0
baz=88,SNR=12
SRU **San Rafael** 88.28 48 *e*P P 07 40 48.4 +0.6
SUW **Suwalki** 88.34 329 *e*P P 07 40 47.0 -0.8
GZT **Gaziantep** 88.36 310 *i* P P 07 40 48.1 -0.1
NB2 **NORSAR Subarra** 88.56 339 P P 07 40 46.2 -2.5
comp=Z,35nm,1.7s,mb5.4,baz=46,slow=5.1
NB2 **NORSAR Subarra** 88.56 339 P P 07 40 46.2 -2.5
NB2 pmax pmax
comp=Z,35nm,1.7s,mb5.4
NOA **NORSAR Array B** 88.56 339 P P 07 40 46.7 -2.0
comp=Z,4.4nm,1.0s,mb4.7,baz=42,slow=5.1,SNR=6.5
NOA LR LR 08 23 28.1
comp=Z,366nm,19.7s,MS4.8,baz=70,slow=38
X14A **Yava** 88.65 53 ⇓P P 07 40 50.3 +0.6
baz=89,SNR=16
CTKT **Corum** 88.78 314 *i* P P 07 40 49.7 -0.5
Y14A **Wickenburg** 88.79 54 ⇑P P 07 40 50.3 0.0
baz=89,SNR=27
W15A **Williams** 88.80 52 ⇓P P 07 40 51.0 +0.6
baz=89,SNR=11
Z14A **Wintersburg** 89.09 54 ⇓P P 07 40 51.7 -0.1
baz=89
X15A **Humboldt** 89.12 53 P P 07 40 52.8 +0.9
baz=89,SNR=21
WUAZ **Wupatki** 89.30 52 PFAKE 07 41 00.0 +7.3
WUAZ LR LR
comp=Z,1μm,22.0s,MS5.3
WUAZ **Wupatki** 89.30 52 ⇓P P 07 40 53.0 +0.3
baz=89,SNR=11
KIS **Kishinev** 89.32 321 *e*P P 07 40 51.0 -1.6
KIS MLR MLR
comp=Z,600nm,17.0s,MS5.1
KIS MLR MLR
comp=Z,1μm,16.0s
CDAG **Cicekdag** 89.54 313 *i* P P 07 40 52.7 -1.1
AVNT **Avonos** 89.61 312 ⇓*i*P P 07 40 53.2 -0.9
PV10 **Paradox Valley** 89.65 48 *e*P P 07 40 54.8 +0.5
ELDT **Eldivan** 89.76 314 *i* P P 07 40 53.7 -1.0
115A **Sonoran Desert** 89.92 55 ⇑P P 07 40 55.9 +0.3
baz=90,SNR=8.8
PV01 **Paradox Valley** 90.09 48 *e*P P 07 40 56.7 +0.3
KONO **Kongsberg** 90.13 338 PFAKE 07 41 10.0 +14
KONO LR LR
comp=Z,708nm,20.0s,MS5.1
116A **Eloy** 90.38 55 P P 07 40 58.5 +0.7
baz=90,SNR=6.3
ANTO **Ankara** 90.49 314 PFAKE 07 41 10.0 +12
ANTO LR LR
comp=Z,427nm,22.0s,MS4.8
MVCO **Mesa Verde** 90.58 49 PFAKE 07 41 10.0 +11
MVCO LR LR
comp=Z,2μm,21.0s,MS5.5
MVCO **Mesa Verde** 90.58 49 P P 07 40 59.1 +0.4
baz=90,SNR=9.3
SFJD **Kangerlussuaq** 90.64 5 PFAKE 07 41 10.0 +12
SFJD LR LR
comp=Z,703nm,21.0s,MS5.1
216A **Three Points,** 90.81 55 ⇑P P 07 40 59.1 -0.8
baz=91
TUC **Tucson** 91.18 54 PFAKE 07 41 10.0 +8.4
TUC LR LR
comp=Z,969nm,22.0s,MS5.2
TUC **Tucson** 91.18 54 *e*P P 07 41 01.7 +0.1
KWP **Kalwaria** 91.19 326 *e*P P 07 41 00.3 -1.0
KWP **Kalwaria** 91.19 326 *e*P P 07 41 00.3 -0.9
KWP *e*P 07 41 00.7
ULM **Lac du Bonnet** 91.23 33 P P 07 41 00.8 -0.6
ULM **Lac du Bonnet** 91.23 33 P P 07 41 00.8 -0.6
baz=320,slow=5.8
ISCO **Idaho Springs** 91.29 46 PFAKE 07 41 10.0 +8.1
ISCO LR LR
comp=Z,668nm,22.0s,MS5.0
ISCO **Idaho Springs** 91.29 46 *e*P P 07 41 02.8 +0.9
ISCO pmax pmax
comp=Z,21nm,1.2s,mb5.3
217A **Green Valley** 91.40 55 ⇓P P 07 41 03.2 +0.6
baz=91
RKT **Rikitea** 91.55 114 *e*LR LR 08 10 31.0
comp=Z,2μm,32.0s,baz=294
KOLS **Kolonicke sedl** 91.84 325 *e*P P 07 41 03.2 -1.0
218A **Dragoon** 91.89 54 ⇑P P 07 41 04.8 -0.1
baz=92
STHS **Stebnicka Huta** 92.08 326 *e*P P 07 41 05.2 -0.2
comp=Z,7.3nm,1.3s,mb4.8
STHS **Stebnicka Huta** 92.08 326 *e*P P 07 41 05.2 -0.2
318A **Bisbee** 92.18 55 ⇑P P 07 41 06.1 -0.1
baz=92
CRVS **Cervenica-Dubn** 92.29 326 *e*P P 07 41 05.8 -0.5
OJC **Ojcow** 92.32 327 *e*P P 07 41 04.9 -1.5
SDCO **Great Sand Dun** 92.40 48 PFAKE 07 41 20.0 +13
SDCO LR LR
comp=Z,744nm,20.0s,MS5.1
AGMN **Agassiz Refuge** 92.43 35 PFAKE 07 41 20.0 +13
AGMN LR LR
comp=Z,813nm,21.0s,MS5.2
NIE **Niedzica** 92.56 327 *e*P P 07 41 07.0 -0.6
319A **Douglas** 92.75 55 ⇓P P 07 41 09.0 +0.2
baz=93
LAZ **Ladron** 92.89 51 *e*P P 07 41 10.5 +1.1
KECS **Kecovo** 93.05 326 *e*P P 07 41 08.4 -1.5
comp=Z,9.4nm,1.6s,mb5.0
ANMO **Albuquerque** 93.11 50 PFAKE 07 41 20.0 +10
ANMO LR LR
comp=Z,1μm,22.0s,MS5.2
ANMO **Albuquerque** 93.11 50 *e*P P 07 41 11.3 +0.9
ANMO pmax pmax
comp=Z,31nm,1.6s
OKC **Ostrava-Krasne** 93.38 328 *e*P P 07 41 09.6 -1.7
OKC AMS AMS 08 25 20.0
comp=Z,700nm,19.6s
BNM **Barren Site** 93.39 51 *e*P P 07 41 12.5 +0.8
KSP **Ksiaz** 93.62 329 *e*P P 07 41 11.1 -1.3
KSP **Ksiaz** 93.62 329 *e*P P 07 41 10.9 -1.5
KSP *e* 07 44 55.3
KSP MLR MLR
comp=Z,1μm,25.3s,MS5.2
PSZ **Piszkesteto** 93.72 326 *e*P P 07 41 12.4 -0.5
PSZ pmax pmax
comp=Z,30nm,1.5s,mb5.5
MORC **Moravsky Berou** 93.72 328 *e*P P 07 41 12.1 -0.8
VYHS **Vyhne** 93.90 327 *e*P P 07 41 13.1 -0.6
comp=Z,12nm,1.4s,mb5.1
VYHS *e*PP PP 07 44 56.4 -2.8
DPC **Dobruska-Polom** 93.93 329 *e*P P 07 41 12.8 -1.0
DPC *e*PP PP 07 44 59.9 +0.5
DPC AMS AMS 08 27 20.0
comp=Z,1μm,17.4s
UPC **Upice** 93.97 329 *e*P P 07 41 12.9 -1.1
UPC *e*PP PP 07 45 00.1 +0.4
PVCC **Panska Ves** 94.64 330 *e*P P 07 41 15.7 -1.4
PVCC *e*PP PP 07 45 05.2 +0.4
BRG **Berggiesshubel** 94.69 330 *e*P P 07 41 16.3 -1.0
BRG *e* 07 45 03.7
BRG pmax pmax
comp=Z,11nm,1.4s,mb5.1
BRG pmax pmax
comp=Z,14nm,1.6s,mb5.1
BRG **Berggiesshubel** 94.69 330 *e*P P 07 41 16.3 -1.0
comp=Z,19nm,1.4s,mb5.3
BRG *e* 07 45 03.7
comp=Z,24nm,1.6s
ECSD **EROS,Sioux Fal** 94.75 39 PFAKE 07 41 30.0 +12
ECSD LR LR
comp=Z,1μm,22.0s,MS5.3
MODS **Modra-Piesok** 94.77 327 *e*P P 07 41 17.4 -0.3
CLL **Collm** 94.81 331 *e*P P 07 41 17.0 -0.9
CLL pmax pmax
comp=Z,27nm,1.7s,mb5.4
CLL MLR MLR
comp=Z,700nm,19.2s,MS5.1
CLL **Collm** 94.81 331 *e*P P 07 41 17.0 -0.9
comp=Z,27nm,1.7s,mb5.4
CLL *es*P sP 07 41 25.0 -12
CLL *e*PP PP 07 45 07.0 +0.8
CLL *e*PS PS 07 53 54.0 +4.5
CLL *e*SS SS 07 59 00.0 +8.4
CLL LmV 08 26 00.0
comp=Z,700nm,19.2s
EYMN **Ely** 94.92 33 PFAKE 07 41 30.0 +12
EYMN LR LR
comp=Z,703nm,20.0s,MS5.1
PRU **Pruhonice** 95.02 330 *e*P P 07 41 16.8 -2.0
PRU *e*PP PP 07 45 07.0 -0.8
PRU AMS AMS 08 24 30.0
comp=Z,800nm,24.1s
TREC **Trest** 95.04 329 *e*P P 07 41 17.6 -1.4
TREC *e*PP PP 07 45 06.6 -1.4
MNTX **Cornudas Mount** 95.51 53 PFAKE 07 41 30.0 +8.5
MNTX LR LR
comp=Z,481nm,21.0s,MS5.0
CBKS **Cedar Bluff** 95.67 44 PFAKE 07 41 30.0 +7.9
CBKS LR LR
comp=Z,1μm,20.0s,MS5.4
NKC **Novy Kostel** 95.82 331 *e*P P 07 41 18.9 -3.6
NKC *e*PP PP 07 45 13.3 -0.7
NKC **Novy Kostel** 95.82 331 *e*P P 07 41 18.9 -3.6
NKC *e*PP PP 07 45 13.3 -0.7
NKC AMS AMS 08 26 50.0
comp=Z,900nm,20.4s
MOX **Moxa** 95.90 331 *e*PDIFF P 07 41 22.0 -0.8
MOX
comp=Z,800nm,20.0s
KHC **Kasperske Hory** 96.07 329 *e*P P 07 41 22.4 -1.2
KHC *e*PP PP 07 45 16.0 +0.1
KHC AMS AMS 08 28 40.0
comp=Z,900nm,16.2s
GERES **GERESS Array B** 96.20 329 P P 07 41 22.5 -1.8
comp=Z,0.3nm,0.4s,mb4.0,baz=64,slow=3.1,SNR=5.5
GERES LR LR 08 27 37.6
comp=Z,692nm,20.9s,MS5.1,baz=55,slow=37
PTCN **Pitcairn Islan** 96.41 114 PFAKE 07 41 40.0 +14
PTCN LR LR
comp=Z,3μm,20.0s,MS5.8
AMTX **Amarillo** 96.52 48 PFAKE 07 41 40.0 +14
AMTX LR LR
comp=Z,1μm,20.0s,MS5.5
GRA1 **Grafenberg Arr** 96.76 331 *e*Pdif P 07 41 26.2 -0.6
GRA1 *e*PP PP 07 45 22.3 +1.0
GRA1 LR LR
comp=Z,700nm,19.7s,MS5.2
GRF **Grafenberg Arr** 96.76 331 *e*P P 07 41 26.2 -0.6
GRF *e* 07 45 22.3
GRF **Grafenberg Arr** 96.76 331 *e*P P 07 41 26.2 -0.6
GRF *e* 07 45 22.3
GRF **Grafenberg Arr** 96.76 331 *e*P P 07 41 26.2 -0.6
GRF *e*PP PP 07 45 22.3 +1.0
GRF *e*L 08 28 30.5
comp=Z,726nm,19.7s
GRFO **Grafenberg** 96.76 331 PFAKE 07 41 40.0 +13
GRFO LR LR
comp=Z,745nm,19.0s,MS5.2
COWI **Conover** 97.36 34 PFAKE 07 41 40.0 +10
COWI LR LR
comp=Z,724nm,22.0s,MS5.1
KSU1 **Kansas State U** 97.50 43 PFAKE 07 41 40.0 +10
KSU1 LR LR
comp=Z,914nm,21.0s,MS5.2
ESK **Eskdalemuir** 97.73 341 PFAKE 07 41 40.0 +9.0
ESK LR LR
comp=Z,569nm,20.0s,MS5.1
LTX **Lajitas** 97.97 54 *e*P P 07 41 33.3 +0.6
WMOK **Wichita Mounta** 98.59 47 *e*P P 07 41 35.0 -0.4
comp=Z,12nm,1.6s,mb5.2
WMOK LR LR
comp=Z,2μm,22.0s,MS5.6
WMOK **Wichita Mounta** 98.59 47 *e*P P 07 41 35.0 -0.3
WMOK pmax pmax
comp=Z,12nm,1.6s,mb5.2
WMOK MLR MLR
comp=Z,2μm,22.0s,MS5.6
JFWS **Jewell Farm** 98.89 37 PFAKE 07 41 50.0 +14
JFWS LR LR
comp=Z,1μm,22.0s,MS5.3
BFO **Black Forest** 99.06 331 PFAKE 07 41 50.0 +13
BFO LR LR
comp=Z,571nm,19.0s,MS5.1
JCT **Junction City** 100.22 51 PFAKE 07 41 50.0 +7.8
JCT LR LR
comp=Z,445nm,20.0s,MS5.0
GLMI **Grayling** 100.53 32 PFAKE 07 42 00.0 +16
GLMI LR LR
comp=Z,534nm,21.0s,MS5.0
HDIL **Hopedale** 100.98 38 PFAKE 07 42 00.0 +14
HDIL LR LR
comp=Z,882nm,21.0s,MS5.2
MIAR **Mount Ida** 102.18 45 PFAKE 07 42 00.0 +9.1
MIAR LR LR
comp=Z,2μm,21.0s,MS5.7
AAM **Ann Arbor** 102.83 34 PFAKE 07 42 10.0 +16
AAM LR LR
comp=Z,486nm,20.0s,MS5.0
NATX **Nacogdoches** 103.12 48 PFAKE 07 42 10.0 +15
NATX LR LR
comp=Z,2μm,22.0s,MS5.6
KVTX **Kingsville** 103.23 53 PFAKE 07 42 10.0 +14
KVTX LR LR
comp=Z,841nm,19.0s,MS5.3
HKT **Hockley** 103.36 50 PFAKE 07 42 10.0 +14
HKT LR LR
comp=Z,1μm,21.0s,MS5.4
WCI **Wyandotte Cave** 104.26 38 PFAKE 07 42 10.0 +10
WCI LR LR
comp=Z,1μm,22.0s,MS5.4
ACSO **Alum Creek Sta** 104.67 35 PFAKE 07 42 10.0 +8.0
ACSO LR LR
comp=Z,662nm,22.0s,MS5.1
WVT **Waverly** 104.78 40 PFAKE 07 42 10.0 +7.5
WVT LR LR
comp=Z,635nm,20.0s,MS5.2
ERPA **Erie** 104.80 32 PFAKE 07 42 10.0 +7.4
ERPA LR LR
comp=Z,741nm,20.0s,MS5.2
KMBO **Kilima Mbogo** 105.03 275 PFAKE 07 42 20.0 +16
KMBO LR LR
comp=Z,331nm,21.0s,MS4.8
LONY **Lake Ozonia** 105.29 27 PFAKE 07 46 30.0 +11
LONY LR LR
comp=Z,764nm,20.0s,MS5.2
PLAL **Pickwick Lake** 105.39 42 PFAKE 07 46 30.0 +11
PLAL LR LR
comp=Z,583nm,21.0s,MS5.1
NCB **Newcomb** 105.97 27 PFAKE 07 46 30.0 +10
NCB LR LR
comp=Z,947nm,22.0s,MS5.3
BINY **Binghamton** 106.61 29 PFAKE 07 46 30.0 +8.7
BINY LR LR
comp=Z,856nm,19.0s,MS5.3
LBNH **Lisbon** 106.69 25 PFAKE 07 46 30.0 +8.6
LBNH LR LR
comp=Z,976nm,22.0s,MS5.3
MCWV **Mont Chateau** 106.72 33 PFAKE 07 46 30.0 +8.4
MCWV LR LR
comp=Z,826nm,22.0s,MS5.2
PKME **Peaks-Kenny Pk** 106.83 23 PFAKE 07 46 30.0 +8.4
PKME LR LR
comp=Z,1μm,22.0s,MS5.3
SSPA **Standing Stone** 106.95 31 PFAKE 07 46 30.0 +8.0
SSPA LR LR
comp=Z,795nm,21.0s,MS5.2
TZTN **Tazewell** 107.00 38 PFAKE 07 46 30.0 +7.8
TZTN LR LR
comp=Z,2μm,22.0s,MS5.5
LRAL **Lakeview Retre** 107.36 42 PFAKE 07 46 30.0 +7.0
LRAL LR LR
comp=Z,1μm,22.0s,MS5.5
BLA **Blacksburg** 108.25 35 PFAKE 07 46 40.0 +15
BLA LR LR
comp=Z,846nm,22.0s,MS5.3
HRV **Harvard--Oak R** 108.28 26 PFAKE 07 46 40.0 +16
HRV LR LR
comp=Z,865nm,22.0s,MS5.3
WES **Weston** 108.47 26 PFAKE 07 46 40.0 +15
WES LR LR
comp=Z,481nm,19.0s,MS5.1
BRAL **Brewton** 108.66 44 PFAKE 07 46 40.0 +15
BRAL LR LR
comp=Z,2μm,21.0s,MS5.6
CBN **Corbin** 109.08 33 PFAKE 07 46 40.0 +14
CBN LR LR
comp=Z,760nm,21.0s,MS5.2
GOGA **Godfrey** 109.25 40 PFAKE 07 46 40.0 +13
GOGA LR LR
comp=Z,903nm,22.0s,MS5.3
CNNC **Cliffs of the** 111.07 35 PFAKE 07 46 40.0 +10
CNNC LR LR
comp=Z,688nm,20.0s,MS5.2
NHSC **New Hope** 111.39 38 PFAKE 07 46 40.0 +9.4
NHSC LR LR
comp=Z,1μm,22.0s,MS5.5
PAB **San Pablo** 111.56 333 PFAKE 07 46 40.0 +9.3
PAB LR LR
comp=Z,483nm,19.0s,MS5.1
DWPF **Disney** 114.21 43 PFAKE 07 46 50.0 +14
DWPF LR LR
comp=Z,1μm,22.0s,MS5.5
TEIG **Tepich** 114.62 54 PFAKE 07 46 50.0 +13
TEIG LR LR
comp=Z,585nm,22.0s,MS5.1
LSZ **Lusaka** 118.27 264 PFAKE 07 47 00.0 +16
LSZ LR LR
comp=Z,708nm,21.0s,MS5.3
TGUH **Tegucigalpa,Un** 119.02 59 PFAKE 07 47 00.0 +14
TGUH LR LR
comp=Z,649nm,21.0s,MS5.2

SDDR	**Presa de Saban**	**127.19**	**42**	PFAKE		07 47 10.0	+8.8	
SDDR				LR	LR			
	comp=Z,687nm,22.0s,MS5.3							
SUR	**Sutherland**	**128.12**	**246**	PFAKE		07 47 10.0	+7.5	
SUR				LR	LR			
	comp=Z,910nm,22.0s,MS5.4							
TORD	**Torodi Ar. Bea**	**128.40**	**309**	PKP	PKPdf	07 47 02.0	-1.5	
	comp=Z,1.9nm,1.0s,baz=92,slow=1.0,SNR=7.7							
TSUM	**Tsumeb**	**129.07**	**263**	PFAKE		07 47 20.0	+15	
TSUM				LR	LR			
	comp=Z,618nm,20.0s,MS5.3							
SJG	**San Juan**	**130.93**	**38**	PFAKE		07 47 20.0	+12	
SJG				LR	LR			
	comp=Z,436nm,21.0s,MS5.1							
OTAV	**Otavalo**	**133.92**	**67**	PFAKE		07 47 30.0	+16	
OTAV				LR	LR			
	comp=Z,585nm,21.0s,MS5.3							
SDV	**Santo Domingo**	**134.90**	**51**	*e*PKPdf	PKPdf	07 47 15.5	-0.4	
SDV				LR	LR			
	comp=Z,190nm,22.0s,MS4.8							
NNA	**Nana**	**140.70**	**82**	PFAKE		07 47 40.0	+13	
NNA				LR	LR			
	comp=Z,532nm,20.0s,MS5.3							
PLCA	**Paso Flores**	**146.10**	**131**	PKPbc	PKPbc	07 47 36.1	-0.2	
	comp=Z,4.3nm,0.7s,baz=245,slow=3.1,SNR=9.2							
ARE	**Arequipa**	**147.00**	**86**	*e*P	PKPdf	07 47 40.0	+2.5	
LCO	**Las Campanas**	**148.87**	**110**	*e*PKPdf	PKPdf	07 47 39.7	-0.5	
LCO				*e*PKPbc	PKPbc	07 47 44.4	+0.2	
LCO				*e*PKPab	PKPab	07 47 48.4	+0.1	
LCO				LR	LR			
	comp=Z,915nm,19.0s,MS5.6							
LPAZ	**La Paz**	**150.06**	**84**	PKP	PKPdf	07 47 43.4	+1.0	
LPAZ				PKPbc	PKPbc	07 47 48.5	+1.0	
LPAZ				LR	LR			
	comp=Z,535nm,21.0s,MS5.3							
LPAZ	**La Paz**	**150.06**	**84**	PKP	PKPdf	07 47 43.4	+1.0	
	comp=Z,18nm,0.9s,baz=334,slow=3.6,SNR=10							
LPAZ				PKPbc	PKPbc	07 47 48.5	+1.0	
	comp=Z,15nm,0.6s,baz=317,slow=2.7,SNR=21							
TRQA	**Tornquist**	**153.24**	**132**	PFAKE		07 48 00.0	+13	
TRQA				LR	LR			
	comp=Z,457nm,19.0s,MS5.3							
RCBR	**Riachuelo**	**163.84**	**356**	PFAKE		07 48 10.0	+10	
RCBR				LR	LR			
	comp=Z,662nm,22.0s							

IDC 26 07:31:55.4±1.1, 2167N×14275E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.8/17, mbtmp4.0/4, Error ellipse: s-maj=69.8km s-min=27.0km az=100.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.16**	**192**	P	P	07 39 50.3	+0.5
	0.9nm,0.6s,baz=12,slow=8.7,SNR=4.9						
ASAR	**Alice Springs**	**45.88**	**191**	P	P	07 40 19.0	-0.6
	0.4nm,0.6s,baz=15,slow=9.8,SNR=5.1						
ARCES	**ARCESS Array B**	**78.82**	**341**	P	P	07 43 59.9	+0.2
	3.1nm,1.0s,baz=89,slow=7.3,SNR=2.8						
NVAR	**Mina Array Bea**	**83.48**	**51**	P	P	07 44 25.5	+0.3
	1.0nm,0.8s,baz=268,slow=4.5,SNR=4.6						

IDC 26 07:33:09.2±1.1, 2209N×14331E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.7/6, Error ellipse: s-maj=40.7km s-min=23.3km az=91.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.27**	**322**	P	P	07 37 48.4	+2.1
	3.0nm,0.8s,baz=136,slow=8.8,SNR=4.5						
SONM	**Songino Array**	**39.11**	**320**	P	P	07 40 37.0	-1.1
	1.4nm,1.0s,baz=133,slow=8.9,SNR=3.7						
WRA	**Warramunga Ar**	**42.68**	**192**	P	P	07 41 08.4	+0.6
	0.9nm,0.7s,baz=14,slow=8.6,SNR=5.3						
ASAR	**Alice Springs**	**46.39**	**192**	P	P	07 41 36.9	-0.6
	0.3nm,0.5s,baz=18,slow=11,SNR=5.0						
YKA	**Yellowknife Ar**	**76.06**	**28**	P	P	07 44 58.1	-0.2
	0.3nm,0.5s,baz=293,slow=5.8,SNR=4.0						
NVAR	**Mina Array Bea**	**82.81**	**52**	P	P	07 45 36.4	+0.8
	0.8nm,0.7s,baz=274,slow=4.3,SNR=3.9						

IDC 26 07:38:55.0±7.7, 2222N×14303E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/16, mbtmp3.6/3, Error ellipse: s-maj=334.8km s-min=28.9km az=78.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.75**	**192**	P	P	07 46 53.8	-0.5
	0.4nm,0.6s,baz=13,slow=8.7,SNR=9.0						
ASAR	**Alice Springs**	**46.46**	**192**	P	P	07 47 24.3	+0.4
	0.4nm,0.6s,baz=17,slow=13,SNR=7.4						
ZALV	**Zalesovo Beam**	**53.72**	**321**	P	P	07 48 18.6	-0.1
	0.5nm,0.3s,baz=122,slow=7.4,SNR=3.8						

*NEIC **26** 07:40:43.4±0.2, 22.07N×143.11E, h10km, mb5.4/56, MS5.0/2, Error ellipse: s-maj=5.1km s-min=4.7km az=168.0*

*BJI **26** 07:40:43.4, 22.10N×143.10E, h10km, mB5.4, mb4.8, Ms4.9, Msz4.7*

*GCMT **26** 07:40:43.4±0.2, 21.97N×143.09E, h13km, MW5.3/99, Moment Tensor Solution. s33,c42; s99,c164; Duration: 1ŝ0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.97±.04; $M_{\theta\theta}$0.15±.02; $M_{\phi\phi}$0.82±.03; $M_{r\theta}$-0.32±.06; $M_{r\phi}$-0.29±.01; $M_{\theta\phi}$0.08±.05; Best double couple: $M_0$1.00600×10^{17} NP1:ϕs352.0000°, δ41.00000°, λ-69.00000°. NP2: ϕs146.00000°, δ52.00000°, λ-107.00000°. Principal axes: T 0.9550, Plg6.0000°, Azm248.0000°; N 0.1020, Plg13.0000°, Azm156.0000°; P -1.0570, Plg75.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **26** 07:40:45.8±1.1, 22.19N×143.01E, h33km, mb5.5/41 Error ellipse: s-maj=10.0km s-min=5.4km az=104.6*

*ISCJB **26** 07:40:47.9±0.9, 22.11N±004×143.05E±003, h53km±7km, mb5.2/111, MS4.6/20, Error ellipse: s-maj=6.0km s-min=3.9km az=8.0*

*IDC **26** 07:40:50.3±2.5, 22.12N×143.06E, h69km±22km, mb4.4/19, mb1 4.5/21, mb1mx4.4/23, mbtmp4.4/21, MS4.5/11, Ms1 4.5/11, ms1mx4.3/29, Error ellipse: s-maj=19.5km s-min=10.1km az=91.0*

ISC 26 07:40:50.8±0.8, 2210N±004×14309E±003, h65km±6km, h27km±3.9km; pP-P, n578, c0ŝ75/572, mb5.1/111, 128C-107D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.04**	**351**	P	**Pn**	**07 42 03.5**	**-0.5**
	45nm,0.3s,baz=289,slow=20,SNR=14						
CBIJ				S	**Sn**	**07 43 00.6**	**-0.3**
	71nm,0.3s,baz=278,slow=21,SNR=4.6						
CBIJ				LR	LR	07 43 09.0	
	comp=Z,699nm,19.6s,baz=121,slow=28						
GUMO	**Guam**	**8.63**	**168**	*e*P	**Pn**	**07 42 53.6**	**+0.6**
JHJ	**Hachijo jima 2**	**11.36**	**346**	LR	LR	07 47 30.4	
	comp=Z,2μm,19.9s,baz=104,slow=35						
JOW	**Kunigami**	**14.29**	**292**	LR	LR	07 48 35.3	
	comp=Z,4μm,20.6s,baz=47,slow=33						
MJAR	**Matsushiro Arr**	**15.01**	**345**	P	**Pn**	**07 44 16.1**	**-3.0**
	0.9nm,0.3s,baz=149,slow=9.6,SNR=4.3						
MAJO	**Matsushiro**	**15.01**	**345**	P	**Pn**	**07 44 22.7**	**+3.6**
JNU	**Nakatsue**	**15.40**	**318**	P	**Pn**	**07 44 26.4**	**+2.1**
	0.4nm,0.3s,baz=68,slow=14,SNR=7.4						
JNU				LR	LR	07 49 05.2	
	comp=Z,2μm,21.7s,baz=126,slow=32						
NACB	**Ninganchiao**	**19.88**	**280**	*e*P	**Pn**	**07 45 17.9**	**-1.1**
YHNB	**Yeheng**	**20.10**	**282**	*e*P	**P**	**07 45 18.8**	**-0.4**
KSRS	**Korea Array**	**20.14**	**323**	P	**P**	**07 45 19.3**	**-0.3**
	8.3nm,0.6s,baz=136,slow=12,SNR=17						
KSRS				LR	LR	07 52 13.7	
	comp=Z,2μm,18.6s,baz=138,slow=34						
INCN	**Inchon**	**20.91**	**321**	*e*P	**P**	**07 45 27.8**	**-0.1**
	20nm,0.6s						
ASAJ	**Asahikawa**	**21.96**	**359**	P	**P**	**07 45 38.8**	**-0.3**
	13nm,0.9s,mb4.3,baz=176,slow=19,SNR=2.7						
ASAJ				LR	LR	07 53 10.2	
	comp=Z,724nm,20.5s,baz=338,slow=34						
QZH	**Quanzhou**	**22.64**	**282**	P	**P**	**07 45 48.3**	**+1.9**
QZH				S	**S**	**07 49 58.5**	**+8.6**
QZH				AMB	AMB		
	comp=Z,210nm,1.2s,mb5.3						
QZH				LR	LR		
	comp=N,2μm,9.7s						
QZH				LR	LR		
	comp=E,1μm,11.7s						
QZH				LR	LR		
	comp=Z,5μm,24.0s						
NJ2	**Nanjing**	**23.70**	**300**	*e*P	**P**	**07 45 57.0**	**+0.2**
NJ2				PP		07 46 34.0	
NJ2				S	**S**	**07 50 02.0**	**-5.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,1μm,7.0s						
NJ2				LR	LR		
	comp=N,2μm,14.2s						
NJ2				LR	LR		
	comp=E,2μm,14.8s						
NJ2				LR	LR		
	comp=Z,2μm,14.9s						
YSS	**Yuzh-Sakhalins**	**24.80**	**359**	*e*P	**P**	**07 46 07.3**	**+0.8**
	comp=Z,26nm,0.8s,mb4.7						
YSS	**Yuzh-Sakhalins**	**24.80**	**359**	*e*P	**P**	**07 46 06.2**	**-0.4**
YSS				*e*		07 46 15.0	
YSS				*e*		07 46 39.0	
DL2	**Dalian**	**24.86**	**317**	P	**P**	**07 46 09.0**	**+1.8**
DL2				S	**S**	**07 50 29.0**	**+3.5**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
DL2				AMB	AMB		
	comp=Z,200nm,4.9s						
DL2				LR	LR		
	comp=N,630nm,15.7s						
DL2				LR	LR		
	comp=E,500nm,13.3s						
DL2				LR	LR		
	comp=Z,800nm,12.5s						
MDJ	**Mudanjiang**	**25.06**	**337**	P	**P**	**07 46 09.8**	**+0.8**
MDJ				PCP	PcP	07 49 42.5	+0.4
MDJ				S	**S**	**07 50 30.5**	**+1.9**
MDJ				AMB	AMB		
	comp=Z,12nm,1.5s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,955nm,10.2s						
MDJ				LR	LR		
	comp=E,590nm,18.2s						
MDJ				LR	LR		
	comp=Z,698nm,18.2s						
MDJ	**Mudanjiang**	**25.06**	**337**	*e*P	**P**	**07 46 09.8**	**+0.9**
	comp=Z,32nm,1.3s,mb4.6						
SNY	**Shenyang**	**25.60**	**325**	⇓P	**P**	**07 46 13.5**	**-0.4**
SNY				AMB	AMB		
	comp=Z,27nm,1.5s,mb4.5						
SNY				AMB	AMB		
	comp=Z,1μm,12.0s						
SNY				LR	LR		
	comp=N,779nm,25.7s						
SNY				LR	LR		
	comp=E,2μm,11.6s						
SNY				LR	LR		
	comp=Z,1μm,20.6s						
CN2	**Changchun**	**26.12**	**330**	*e*P	**P**	**07 46 20.5**	**+1.9**
CN2				*e*S	**S**	**07 50 44.8**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
TIA	**Tai'an**	**26.58**	**308**	*e*P	**P**	**07 46 21.8**	**-1.0**
TIA				AMB	AMB		
	comp=Z,53nm,0.7s,mb5.2						
WHN	**Wuhan**	**27.04**	**294**	*e*P	**P**	**07 46 32.5**	**+5.4**
HABR	**Khabarovsk**	**27.09**	**348**	*e*P	**P**	**07 46 25.9**	**-1.4**
HABR				*e*PP	pP	07 46 35.4	-7.6
HABR				S	**S**	**07 51 03.0**	**+2.4**
HABR				*e*		07 51 19.7	
HABR				*e*SS		07 52 12.9	
HABR				*e*		07 57 15.0	
KLR	**Kul'dur**	**28.53**	**344**	*e*P	**P**	**07 46 35.0**	**-5.1**
KLR				pmax	pmax		
	comp=E,38nm,1.4s						
KLR				pmax	pmax		
	comp=Z,86nm,1.4s,mb5.2						
BJT	**Baijiatuan**	**29.00**	**314**	*e*P	**P**	**07 46 44.5**	**0.0**
BJI	**Beijing**	**29.01**	**314**	P	**P**	**07 46 44.5**	**0.0**
BJI				S	**S**	**07 51 30.0**	**-1.0**
BJI				AMB	AMB		
	comp=Z,13nm,1.7s,mb4.3						
BJI				LR	LR		
	comp=N,1μm,13.7s						
BJI				LR	LR		
	comp=E,656nm,14.3s						
BJI				LR	LR		
	comp=Z,869nm,24.9s						
QIZ	**Qiongzhong**	**31.25**	**271**	P	**P**	**07 47 03.0**	**-1.5**
QIZ				*e*S	**S**	**07 52 02.5**	**-4.0**
QIZ				AMB	AMB		
	comp=Z,16nm,2.0s,mb4.4						
QIZ				AMB	AMB		
	comp=Z,1μm,11.8s						
HIA	**Hailar**	**32.82**	**331**	*e*P	**P**	**07 47 18.4**	**+0.4**
	comp=Z,13nm,0.8s,mb4.8						
HIA	**Hailar**	**32.82**	**331**	*e*P	**P**	**07 47 18.4**	**+0.5**
HIA				pmax	pmax		
	comp=Z,13nm,0.8s						
GYA	**Guiyang**	**33.42**	**285**	⇑*i*P	**P**	**07 47 24.0**	**+0.6**
GYA				PP	PP	07 48 38.3	-1.8
GYA				PCP	PcP	07 50 04.8	+1.1
GYA				S	**S**	**07 52 38.5**	**-1.7**
GYA				PCS	PcS	07 53 49.5	0.0
GYA				SS	SS	07 54 45.3	-21
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,160nm,5.8s						
GYA				LR	LR		
	comp=N,2μm,20.6s						
GYA				LR	LR		
	comp=E,3μm,18.6s						
GYA				LR	LR		
	comp=Z,1μm,18.0s						
BTO	**Baotou**	**33.47**	**311**	*e*P	**P**	**07 47 24.3**	**+0.6**
HNR	**Honiara**	**35.43**	**150**	LR	LR	08 01 24.7	
	comp=Z,1μm,18.5s,baz=0.6,slow=35						
CD2	**Chengdu**	**36.13**	**292**	*e*P	**P**	**07 47 47.0**	**+0.2**
CD2				PP	PP	07 49 10.8	+0.9
CD2				S	**S**	**07 53 19.5**	**-2.3**
CD2				SS	SS	07 55 45.8	-16
CD2				AMB	AMB		
	comp=Z,20nm,1.7s,mb4.8						
CD2				LR	LR		
	comp=N,2μm,10.8s						
CD2				LR	LR		
	comp=E,3μm,18.0s						
CD2				LR	LR		
	comp=Z,3μm,16.8s						
KAKA	**Kakadu**	**36.14**	**198**	*e*P	**P**	**07 47 45.3**	**-1.6**
	comp=Z,18nm,0.9s,mb5.0						
LZH	**Lanzhou**	**36.77**	**301**	⇑P	**P**	**07 47 54.0**	**+1.9**
LZH				PP	PP	07 49 21.0	+4.1
LZH				S	**S**	**07 53 31.5**	**+0.1**
LZH				SS	SS	07 56 03.3	-11
LZH				AMB	AMB		
	comp=Z,69nm,1.4s,mb5.4						
LZH				AMB	AMB		
	comp=Z,248nm,5.6s						
LZH				LR	LR		
	comp=N,2μm,13.4s						
LZH				LR	LR		
	comp=Z,3μm,17.5s						
KMI	**Kunming**	**37.00**	**283**	P	**P**	**07 47 55.0**	**+0.7**
KMI				AMB	AMB		
	comp=Z,17nm,1.6s,mb4.7						
KMI				LR	LR		
	comp=Z,789nm,32.9s						
CLNS	**Chul'man**	**37.19**	**344**	*e*P	**P**	**07 47 53.6**	**-1.8**
CLNS				pmax	pmax		
	comp=N,59nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.5						
CLNS				pmax	pmax		
	comp=E,29nm,1.2s						
CIT	**Chita**	**37.56**	**330**	*e*P	**P**	**07 47 56.6**	**-2.1**
CIT				*e*		07 50 14.2	
MA2	**Magadan**	**37.84**	**6**	*e*P	**P**	**07 48 02.4**	**+1.5**
	comp=E,59nm,1.4s,mb5.2						
MA2	**Magadan**	**37.84**	**6**	*i* P	**P**	**07 48 02.0**	**+1.1**
ULN	**Ulaanbaatar**	**38.60**	**321**	*e*P	**P**	**07 48 06.4**	**-1.1**
	comp=E,147nm,1.6s,mb5.6						
ULN				pmax	pmax		
	comp=Z,147nm,1.6s,mb5.6						
ULN	**Ulaanbaatar**	**38.60**	**321**	P	**P**	**07 48 07.2**	**-0.2**
	SNR=29						
ULN	**Ulaanbaatar**	**38.60**	**321**	P	**P**	**07 48 07.2**	**-0.2**
	SNR=29						
SONM	**Songino Array**	**38.98**	**320**	P	**P**	**07 48 09.6**	**-1.0**
	comp=Z,14nm,0.9s,mb4.8,baz=132,slow=6.2,SNR=47						
SONM				LR	LR	08 04 08.2	
	comp=Z,914nm,18.4s,baz=121,slow=36						
GTA	**Gaotai**	**40.57**	**305**	⇑P	**P**	**07 48 25.5**	**+1.5**
GTA				PP	PP	07 50 03.8	+5.4
GTA				S	**S**	**07 54 29.8**	**+1.1**
GTA				SS	SS	07 57 26.5	-4.2
GTA				AMB	AMB		
	comp=Z,16nm,1.5s,mb4.6						
GTA				AMB	AMB		
	comp=Z,569nm,5.7s						
GTA				LR	LR		
	comp=N,570nm,15.6s						
GTA				LR	LR		
	comp=E,798nm,16.7s						
GTA				LR	LR		
	comp=Z,903nm,13.3s						
YAK	**Yakutsk**	**40.96**	**350**	*e*P	**P**	**07 48 27.0**	**+0.2**
	comp=Z,79nm,1.1s,mb5.5						
YAK	**Yakutsk**	**40.96**	**350**	*e*P	**P**	**07 48 25.2**	**-1.6**
YAK				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,40nm,1.5s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
NST	**Nakhon Sawan**	**41.04**	**269**	P	**P**	**07 48 29.0**	**+0.9**
SEY	**Seymchan**	**41.30**	**6**	*i* P	**P**	**07 48 30.6**	**+1.0**
CHG	**Chiang Mai**	**41.39**	**274**	⇓P	**P**	**07 48 32.3**	**+1.4**
	comp=E,16nm,0.8s,mb4.9						
CHTO	**Chiang Mai**	**41.39**	**274**	*e*P	**P**	**07 48 32.3**	**+1.4**
	comp=E,63nm,1.7s,mb5.2						
CHTO	**Chiang Mai**	**41.39**	**274**	*e*P	**P**	**07 48 32.3**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,63nm,1.7s,mb5.2						
CHTO	**Chiang Mai**	**41.39**	**274**	⇓P	**P**	**07 48 32.7**	**+1.7**
	SNR=11						
CHTO	**Chiang Mai**	**41.39**	**274**	⇓P	**P**	**07 48 32.7**	**+1.7**
	SNR=11						
BOD	**Bodaibo**	**41.44**	**337**	*e*P	**P**	**07 48 28.5**	**-2.3**
BOD				pmax	pmax		
	comp=Z,30nm,1.4s,mb4.9						
BDT	**Bhumibol Dam**	**41.69**	**271**	P	**P**	**07 48 35.0**	**+1.6**
ZAK	**Zakamensk**	**41.98**	**322**	⇓*i* P	**P**	**07 48 34.3**	**-1.0**
ZAK				*e*		07 50 37.7	
ZAK				*e*		07 54 52.9	
ZAK				*e*		07 58 36.5	
ZAK				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.1						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.1						
CTA	**Charters Tower**	**42.04**	**176**	*e*P	**P**	**07 48 36.7**	**+0.6**
	comp=Z,18nm,0.9s,mb4.8						
CTA	**Charters Tower**	**42.04**	**176**	*e*P	**P**	**07 48 36.7**	**+0.6**
CTA				pmax	pmax		
	comp=Z,18nm,0.9s						
CTA	**Charters Tower**	**42.04**	**176**	P	**P**	**07 48 35.6**	**-0.5**
	comp=Z,22nm,0.9s,mb4.9,baz=348,slow=8.0,SNR=15						
CTAO	**Charters Tower**	**42.04**	**176**	*e*P	**P**	**07 48 36.7**	**+0.6**
	comp=Z,68nm,1.3s,mb5.2						
CTAO	**Charters Tower**	**42.04**	**176**	*e*P	**P**	**07 48 36.7**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.2						
IRK	**Irkutsk**	**42.33**	**325**	*e*P	**P**	**07 48 37.2**	**-1.0**
IRK				pmax	pmax		
	comp=Z,153nm,1.5s,mb5.5						
TLY	**Talaya**	**42.39**	**324**	P	**P**	**07 48 38.1**	**-0.5**
	comp=Z,252nm,1.6s,mb5.7,SNR=12						
TLY	**Talaya**	**42.39**	**324**	*e*P	**P**	**07 48 38.3**	**-0.4**
TLY	**Talaya**	**42.39**	**324**	*d* iP	**P**	**07 48 37.7**	**-0.9**
TLY				pmax	pmax		
	comp=Z,31nm,1.6s,mb4.8						
TLY	**Talaya**	**42.39**	**324**	P	**P**	**07 48 38.2**	**-0.4**
	SNR=43						
TLY	**Talaya**	**42.39**	**324**	P	**P**	**07 48 38.2**	**-0.4**
	SNR=43						
WB2	**Warramunga Arr**	**42.65**	**192**	*e*P	**P**	**07 48 39.6**	**-1.4**
WRA	**Warramunga Arr**	**42.65**	**192**	P	**P**	**07 48 39.3**	**-1.7**
	comp=Z,22nm,1.0s,mb4.8,baz=15,slow=8.1,SNR=24						
WRA				LR	LR	08 04 25.5	
	comp=Z,522nm,20.9s,baz=25,slow=33						
FITZ	**Fitzroy Crossi**	**43.45**	**205**	*e*P	**P**	**07 48 45.8**	**-1.7**
	comp=Z,15nm,0.9s,mb4.7						
FITZ	**Fitzroy Crossi**	**43.45**	**205**	P	**P**	**07 48 46.3**	**-1.2**
	comp=Z,7.9nm,0.8s,mb4.5,baz=36,slow=11,SNR=10						
MOY	**Mondy**	**43.85**	**323**	*e*P	**P**	**07 48 52.1**	**+1.7**
MOY				pmax	pmax		
	comp=Z,138nm,1.9s,mb5.4						
ASAR	**Alice Springs**	**46.36**	**192**	P	**P**	**07 49 10.6**	**0.0**
	comp=Z,5.2nm,0.7s,mb4.4,baz=16,slow=12,SNR=49						
LSA	**Lhasa**	**47.02**	**291**	P	**P**	**07 49 17.5**	**+1.7**
LSA	**Lhasa**	**47.02**	**291**	*e*P	**P**	**07 49 15.7**	**-0.1**
BILL	**Bilibino**	**48.15**	**11**	*e*P	**P**	**07 49 23.2**	**-0.8**
	comp=Z,52nm,1.5s,mb5.1						
BILL	**Bilibino**	**48.15**	**11**	⇑*e*P	**P**	**07 49 24.6**	**+0.6**
BILL				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
MBWA	**Marble Bar**	**48.66**	**210**	*e*P	**P**	**07 49 28.9**	**+0.4**
TAPN	**Taplejung**	**50.24**	**288**	*e*P	**P**	**07 49 41.1**	**+0.5**
	comp=Z,68nm,1.1s,mb5.5						
TIXI	**Tiksi**	**50.24**	**354**	*e*P	**P**	**07 49 39.0**	**-0.9**
TIXI	**Tiksi**	**50.24**	**354**	⇑*e*P	**P**	**07 49 38.4**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,13nm,1.5s,mb4.6						
WMQ	**Urumqi**	**50.26**	**309**	P	**P**	**07 49 39.3**	**-1.2**
WMQ				PCP	PcP	07 50 57.8	-0.8
WMQ				PP	PP	07 51 36.8	+0.5
WMQ				SCP	ScP	07 54 53.5	+4.5
WMQ				S	**S**	**07 56 44.8**	**-3.4**
WMQ				AMB	AMB		
	comp=Z,57nm,1.5s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,661nm,5.8s						
WMQ				LR	LR		
	comp=N,310nm,21.4s						
WMQ				LR	LR		
	comp=E,538nm,26.4s						
WMQ				LR	LR		
	comp=Z,543nm,25.6s						
ODAN	**Odare**	**50.58**	**287**	*e*P	**P**	**07 49 43.6**	**+0.4**
	comp=Z,121nm,1.2s,mb5.8						
JIRN	**Jiri**	**51.54**	**288**	*e*P	**P**	**07 49 50.4**	**0.0**
	comp=Z,51nm,0.6s,mb5.7						
KKN	**Kakani**	**52.33**	**289**	*e*P	**P**	**07 49 56.6**	**+0.4**
	comp=Z,6.4nm,0.2s,mb5.3						
GKN	**Gorkha**	**52.86**	**289**	*e*P	**P**	**07 50 00.6**	**+0.4**
	comp=Z,54nm,0.9s,mb5.6						
TNA	**Tin City**	**53.61**	**23**	*e*P	**P**	**07 50 04.9**	**-0.1**
	comp=Z,78nm,1.8s,mb5.4						
STKA	**Stephens Creek**	**53.69**	**182**	*e*P	**P**	**07 50 05.0**	**-1.0**
	comp=Z,7.4nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**53.69**	**182**	P	**P**	**07 50 05.0**	**-1.0**
	comp=Z,8.3nm,0.7s,mb4.9,baz=351,slow=8.1,SNR=16						
KOLN	**Koldanda**	**53.80**	**289**	*e*P	**P**	**07 50 07.3**	**+0.2**
	comp=Z,28nm,0.8s,mb5.4						
ZALV

NVS pmax pmax
comp=Z,68nm,1.5s,mb5.5
NVS pmax pmax
comp=N,24nm,1.4s
NVS pmax pmax
comp=E,65nm,1.4s
SVW2 Sparrevohn 57.11 31 *eP* **P 07 50 31.2 +1.0**
KURK Kurchatov 57.13 317 P **P 07 50 29.2 -1.4**
comp=E,226nm,1.0s,mb6.2,SNR=7.5
KURK Kurchatov 57.13 317 *eP* **P 07 50 29.4 -1.2**
comp=E,35nm,0.9s,mb5.4
KURK Kurchatov 57.13 317 *eP* **P 07 50 29.4 -1.2**
KURK pmax pmax
comp=Z,35nm,0.9s,mb5.4
KURK Kurchatov 57.13 317 P **P 07 50 29.7 -0.9**
SNR=26
KURK Kurchatov 57.13 317 P **P 07 50 29.7 -0.9**
SNR=26
TTA Tatalina 57.39 28 *eP* **P 07 50 33.1 +0.9**
KDAK Kodiak Island 57.92 35 P **P 07 50 35.5 -0.5**
KDAK Kodiak Island 57.92 35 P **P 07 50 35.5 -0.5**
comp=Z,5.8nm,0.8s,mb4.7,baz=313,slow=9.9,SNR=11
DDI Dehra Dun 58.24 293 *ex* **P 07 50 40.0 +1.2**
TKM2 Tokmak 2 59.03 308 *eP* **P 07 50 44.0 0.0**
comp=Z,18nm,0.6s,mb5.3
TKM2 Tokmak 2 59.03 308 *eP* **P 07 50 44.0 0.0**
TKM2 pmax pmax
comp=Z,18nm,0.6s,mb5.3
IMA2 Indian Mountai 59.21 25 *eP* **P 07 50 45.0 +0.2**
FRU Bishkek 59.76 308 *eP* **P 07 50 50.5 +1.5**
FRU pmax pmax
comp=Z,64nm,1.8s,mb5.3
UCH Uchtor 59.87 307 *eP* **P 07 50 50.5 +0.7**
comp=Z,99nm,1.6s,mb5.6
PMR Palmer 60.25 31 *eP* **P 07 50 51.2 -0.9**
comp=Z,43nm,1.4s,mb5.3
PMR LR LR
comp=Z,800nm,21.0s
PMR Palmer 60.25 31 *eP* **P 07 50 51.2 -0.9**
PMR pmax pmax
comp=Z,43nm,1.4s,mb5.3
PMR MLR MLR
comp=Z,800nm,21.0s
EKS2 Erkin-Say 60.38 307 *eP* **P 07 50 53.9 +0.6**
comp=Z,16nm,1.3s,mb4.9
AML Almayashu 60.48 307 *eP* **P 07 50 54.5 +0.5**
comp=Z,29nm,1.1s,mb5.2
SML Sawmill 60.66 30 *eP* **P 07 50 54.4 -0.4**
COLA College 61.33 27 *eP* **P 07 50 58.2 -1.2**
comp=Z,16nm,1.3s,mb4.9
COLA College 61.33 27 *eP* **P 07 50 58.2 -1.1**
COLA pmax pmax
comp=Z,16nm,1.3s,mb4.9
BRVK Borovoye 62.38 319 P **P 07 51 05.6 -1.0**
comp=Z,320nm,1.3s,mb6.2,SNR=8.9
BRVK Borovoye 62.38 319 *eP* **P 07 51 05.3 -1.3**
BRVK Borovoye 62.38 319 P **P 07 51 06.1 -0.5**
SNR=32
BRVK Borovoye 62.38 319 P **P 07 51 06.1 -0.5**
SNR=32
EGAK Eagle 64.17 27 *eP* **P 07 51 18.3 +0.1**
INK Inuvik 67.24 24 *eP* **P 07 51 37.0 -0.9**
INK Inuvik 67.24 24 P **P 07 51 36.6 -1.3**
comp=Z,7.6nm,0.9s,mb4.5,baz=272,slow=7.4,SNR=23
SVE Sverdlovsk 67.70 324 *eP* **P 07 51 41.7 +0.6**
SVE pmax pmax
comp=Z,80nm,1.3s,mb5.4
ARU Arti 68.89 324 P **P 07 51 48.3 -0.2**
comp=Z,354nm,1.5s,mb6.0,SNR=6.3
ARU Arti 68.89 324 *eP* **P 07 51 48.2 -0.3**
ARU Arti 68.89 324⇑ *eP* **P 07 51 48.3 -0.2**
ARU pmax pmax
comp=Z,14nm,0.8s,mb4.8
VIB Van Inlet 69.29 40 T 09 08 00.8
SNR=4.5
DIB Dawson Inlet, 69.33 40 T 09 08 01.3
SNR=4.6
DLBC Dease Lake 69.84 34 *eP* **P 07 51 56.9 +2.6**
ABKT Ailbek 72.95 305 P **P 07 52 15.2 +1.7**
comp=Z,126nm,1.1s,mb5.7,SNR=5.4
PRGR Permogore 74.27 331⇓ *iP* **P 07 52 20.5 -0.2**
PRGR *e* 07 55 14.6
NLWA Neilton Lookou 76.05 44⇑ P **P 07 52 32.0 +0.7**
baz=76
YKW3 Yellowknife Ar 76.11 28 *eP* **P 07 52 30.5 -0.8**
YKA Yellowknife Ar 76.14 28 P **P 07 52 30.2 -1.2**
comp=Z,3.5nm,0.6s,mb4.3,baz=293,slow=5.8,SNR=36
C04A Brinnon 76.53 44⇑ P **P 07 52 35.1 +1.1**
baz=76
GNW Green Mountain 76.68 44 *eP* **P 07 52 35.2 +0.5**
A05A Maple Falls 76.70 42⇑ P **P 07 52 34.3 -0.6**
baz=77
F03A Seaside 76.70 46⇑ P **P 07 52 35.7 +0.7**
baz=77
RES Resolute Bay 76.71 13 *eP* **P 07 52 33.6 -0.8**
PPT Papeete 76.78 115 *e*LR LR 08 16 07.5
comp=Z,2µm,25.5s,baz=299
PPT Papeete 76.78 115 LR LR 08 18 35.6
comp=Z,585nm,20.8s,baz=306,slow=30
B05A Bryant 76.92 43⇑ P **P 07 52 36.5 +0.4**
baz=77
APA Apatity 76.97 338⇓ *iP* **P 07 52 35.0 -1.0**
APA *i* 07 52 44.4
APA pmax pmax
comp=Z,20nm,0.8s,mb4.9
APA MLR MLR
comp=Z,700nm,1.7s
PMOR Pomariorio Ree 77.01 112 *eP* **P 07 52 42.6 +5.5**
comp=Z,68nm,1.5s,mb5.2
E04A Onalaska 77.05 45⇓ P **P 07 52 38.0 +1.1**
baz=77
G03A Yamhill 77.08 46⇑ P **P 07 52 38.5 +1.4**
baz=77
H03A Soap Creek Ran 77.27 47⇓ P **P 07 52 38.5 +0.4**
baz=77
D05A Enumclaw 77.33 44⇑ P **P 07 52 39.5 +1.1**
baz=77
F04A Amboy 77.46 45⇑ P **P 07 52 40.2 +1.0**
baz=77
J02A Umpqua 77.49 48⇓ P **P 07 52 39.5 0.0**
baz=77
I03A Eugene 77.50 48⇑ P **P 07 52 39.9 +0.4**
baz=77
LON Longmire 77.59 45 *eP* **P 07 52 40.0 +0.1**
G04A Mulino 77.65 46⇑ P **P 07 52 40.0 -0.3**
baz=78
A07A Ashnola River, 77.74 42⇑ P **P 07 52 40.4 -0.3**
baz=78,SNR=5.4
K02A Glendale 77.74 49⇓ P **P 07 52 40.5 -0.3**
baz=78
HOQ Hoqain 77.80 291 P **P 07 52 43.4 +1.9**
SNR=7.2
HOQ Hoqain 77.80 291 P **P 07 52 43.4 +1.9**
SNR=7.2
L02A Cave Junction 77.86 49⇓ P **P 07 52 42.2 +0.7**
baz=78
J03A Ideyld Park 77.91 48⇑ P **P 07 52 42.1 +0.3**
baz=78
H04A Detroit Lake 78.02 47⇑ P **P 07 52 42.7 +0.3**
baz=78
D06A Cle Elum 78.07 44⇓ P **P 07 52 42.3 -0.3**
baz=78
NLW Nelson Butte 78.10 43 P **P 07 52 43.9 +1.2**
B07A Winthrop 78.10 42⇑ P **P 07 52 42.8 0.0**
baz=78
F05A White Salmon 78.11 45⇓ P **P 07 52 42.8 0.0**
baz=78
I04A Tendick Farm, 78.16 48⇑ P **P 07 52 42.8 -0.3**
baz=78
KHMM Horse Mountain 78.18 51 *eP* **P 07 52 44.0 +0.7**
E06A Yakima 78.20 45⇑ P **P 07 52 43.3 0.0**
baz=78
O01C Eel River Cons 78.36 51⇓ P **P 07 52 45.0 +0.7**
baz=78
C07A Waterville 78.40 43⇑ P **P 07 52 44.8 +0.4**
baz=78
HATD Hatta, Dubai 78.41 292 P **P 07 52 46.4 +1.5**
SNR=8.0
HATD Hatta, Dubai 78.41 292 P **P 07 52 46.4 +1.5**
SNR=8.0
G05A Wamic 78.41 46⇓ P **P 07 52 45.2 +0.7**
baz=78
A08A Turner Farm, O 78.46 42⇑ P **P 07 52 45.1 +0.4**
baz=78
N02C Big Bar 78.50 51 P **P 07 52 45.7 +0.6**
baz=78,SNR=6.3
ARCES ARCESS Array B 78.52 341 P **P 07 52 43.3 -1.3**
comp=Z,9.4nm,0.6s,mb4.8,baz=57,slow=8.8,SNR=26
ASHO Ashiyiah 78.52 292 P **P 07 52 47.2 +1.6**
SNR=9.1
ASHO Ashiyiah 78.52 292 P **P 07 52 47.2 +1.6**
SNR=9.1
J04A Umpqua Nationa 78.55 48⇑ P **P 07 52 44.9 -0.4**
baz=78
F06A Goldendale 78.59 45⇑ P **P 07 52 46.2 +0.7**
baz=78
YBH Yreka Blue Hor 78.63 50 *eP* **P 07 52 46.2 +0.5**
comp=Z,77nm,1.9s,mb5.2
YBH Yreka Blue Hor 78.63 50 *eP* **P 07 52 46.2 +0.4**
YBH pmax pmax
comp=Z,77nm,1.9s
YBH Yreka Blue Hor 78.63 50 P **P 07 52 46.3 +0.5**
baz=78,SNR=5.1
D07A Quincy 78.63 44⇑ P **P 07 52 45.7 0.0**
baz=78
B08A Colville Reser 78.63 42⇓ P **P 07 52 45.3 -0.3**
baz=78,SNR=11
M02C Callahan 78.64 50⇑ P **P 07 52 46.1 +0.3**
baz=79
H05A Madras 78.67 46⇑ P **P 07 52 45.3 -0.7**
baz=79
KCPM Cahto Peak 78.68 52 *eP* **P 07 52 46.7 +0.7**
I05A Bend 78.81 47⇑ P **P 07 52 46.4 -0.4**
baz=79
G06A Carlson Farm, 78.87 46⇑ P **P 07 52 47.0 0.0**
baz=79
A09A Danville 78.88 42 P **P 07 52 47.2 +0.3**
baz=79,SNR=7.1
P01C Double 8 Ranch 78.93 52⇑ P **P 07 52 47.1 -0.4**
baz=79
C08A Higginbotham F 79.01 43⇑ P **P 07 52 47.4 -0.3**
baz=79
K04A Chilquin 79.02 48⇑ P **P 07 52 47.9 0.0**
baz=79
O02C Red Bluff 79.09 51⇑ P **P 07 52 48.6 +0.3**
baz=79,SNR=8.2
F07A Phinny Hill Vi 79.11 45⇓ P **P 07 52 49.0 +0.7**
baz=79
VIPM Ingram Point 79.13 46 P **P 07 52 48.6 +0.1**
J05A Fort Rock 79.13 48 P **P 07 52 49.1 +0.7**
baz=79,SNR=12
WDC Whiskeytown Da 79.13 51 *eP* **P 07 52 49.8 +1.3**
comp=Z,42nm,1.4s,mb5.1
WDC Whiskeytown Da 79.13 51 *eP* **P 07 52 49.8 +1.2**
WDC pmax pmax
comp=Z,42nm,1.4s,mb5.1
WDC Whiskeytown Da 79.13 51⇓ P **P 07 52 48.2 -0.4**
baz=79
HAWA Hanford 79.19 44 *eP* **P 07 52 48.8 +0.1**
comp=Z,113nm,2.5s,mb5.3
M03C McCloud 79.20 50 P **P 07 52 49.2 +0.4**
baz=79,SNR=5.7
M04C Macdoel 79.22 49⇑ P **P 07 52 48.7 -0.4**
baz=79
H06A Lindquist Farm 79.24 46⇓ P **P 07 52 49.4 +0.3**
baz=79
HOPS Hopland 79.28 52⇑ P **P 07 52 49.0 -0.4**
baz=79
GASB Alder Springs 79.32 52⇑ P **P 07 52 49.9 +0.3**
baz=79
B09A Rice 79.35 42⇓ P **P 07 52 49.9 +0.3**
baz=79
D08A Wollman Farm, 79.35 44⇑ P **P 07 52 49.3 -0.4**
baz=79
OD2 Odessa Site #2 79.36 43 P **P 07 52 51.3 +1.6**
E08A Dider Farm, El 79.46 44⇑ P **P 07 52 49.2 -1.0**
baz=79
C09A Chrisman Ranch 79.49 43⇓ P **P 07 52 49.7 -0.7**
baz=79
G07A Ruggs Ranch, H 79.50 45⇑ P **P 07 52 51.1 +0.7**
baz=79
K05A Summer Lake 79.56 48⇓ P **P 07 52 51.5 +0.6**
baz=80
I06A Prineville 79.60 47⇓ P **P 07 52 50.7 -0.4**
baz=80,SNR=8.6
TBI Tubuai 79.66 120 *e*LR LR 08 17 33.9
comp=Z,537nm,32.5s,baz=308
O03C Acorn Hollow, 79.70 51⇑ P **P 07 52 51.9 +0.3**
baz=80
D09A Jones Farm, Ri 79.74 43⇓ P **P 07 52 52.4 +0.7**
baz=80
MNRC McLaughlin Nat 79.78 52⇑ P **P 07 52 52.7 +0.6**
baz=80
NSHM Saint Helena R 79.78 53 *eP* **P 07 52 52.0 -0.2**
H07A Lands Inn, Kim 79.81 46⇓ P **P 07 52 52.4 +0.3**
baz=80
HATC Hat Creek Radi 79.82 50⇓ P **P 07 52 51.6 -0.7**
baz=80
L05A Lakeview 79.84 49⇑ P **P 07 52 52.3 -0.1**
baz=80,SNR=7.3
M05C Lookout 79.86 50⇑ P **P 07 52 52.1 -0.4**
baz=80
J06A Christmas Vall 79.88 47⇑ P **P 07 52 52.5 0.0**
baz=80,SNR=5.6
LBCM Butte Creek Ri 79.89 50 P **P 07 52 52.6 -0.1**
JOF Joensuu 79.92 334 *ep* **P 07 52 51.3 -1.1**
comp=Z,15nm,0.7s,mb4.9
JOF Joensuu 79.92 334 *eP* **P 07 52 51.3 -1.1**
JOF pmax pmax
comp=Z,15nm,0.7s,mb4.9
CVS Carmenet Viney 79.95 53⇑ P **P 07 52 52.6 -0.4**
baz=80
G08A Pilot Rock 79.96 45 P **P 07 52 53.0 +0.1**
baz=80,SNR=9.7
K06A Valley Falls 79.98 48⇓ P **P 07 52 53.0 -0.1**
baz=80
VRHR Novokhopersk 79.98 321 *eP* **P 07 52 53.8 +0.9**
VRHR pmax pmax
comp=Z,20nm,0.8s,mb5.0
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,0.5s
I07A Izee 80.03 47⇓ P **P 07 52 53.0 -0.4**
baz=80
NEW Newport 80.04 42 *eP* **P 07 52 53.2 -0.2**
E09A Wood Farm, Sta 80.04 44⇓ P **P 07 52 53.3 0.0**
baz=80
Q03C Winters 80.18 52⇑ P **P 07 52 54.5 +0.3**
baz=80
ORV Oroville 80.23 51⇑ P **P 07 52 55.2 +0.6**
baz=80
A11A Hall Mountain, 80.25 41⇑ P **P 07 52 55.4 +1.0**
baz=80
MOD Modoc 80.26 49 *eP* **P 07 52 54.7 +0.1**
MOD Modoc 80.26 49⇓ P **P 07 52 53.9 -0.7**
baz=80
O04C Chester 80.26 51 P **P 07 52 55.1 +0.5**
baz=80,SNR=26
MOS Moscow 80.30 326 *eP* **P 07 52 52.3 -2.2**
MOS *e* 07 53 00.7
MOS *e* 07 55 55.5
MOS pmax pmax
comp=Z,42nm,0.6s,mb5.5
OHCM Honcut 80.32 52 *eP* **P 07 52 54.7 -0.3**
M06C Likely Place G 80.38 50⇓ P **P 07 52 55.3 -0.1**
baz=80
D10A Wagner Farm, O 80.40 43⇑ P **P 07 52 55.2 0.0**
baz=80
J07A Hines 80.42 47 P **P 07 52 55.9 +0.5**
baz=80,SNR=8.0
H08A Prairie City 80.43 46⇑ P **P 07 52 55.4 -0.1**
baz=80
B11A Sandpoint 80.44 42⇑ P **P 07 52 55.1 -0.4**
baz=80
K07A Rock Creek Ran 80.71 48 P **P 07 52 57.0 0.0**
baz=81,SNR=13
E10A Myers Farm, Un 80.72 44⇓ P **P 07 52 56.6 -0.4**
baz=81
I08A Drewsey 80.72 46⇓ P **P 07 52 57.7 +0.6**
baz=81
WENL Wente Brothers 80.72 53⇑ P **P 07 52 57.1 -0.1**
baz=81
DAG Danmarks Havn 80.73 356⇑ *iP* **P 07 52 56.5 0.0**
DAG pmax pmax
comp=Z,3.0nm,0.6s,mb4.3
DAG Danmarks Havn 80.73 356⇑ *iP* **P 07 52 56.5 0.0**
comp=Z,3.3nm,0.6s,mb4.3
F10A Beach Ranch, E 80.83 44⇓ P **P 07 52 57.9 +0.3**
baz=81,SNR=5.4
L07A Adell 80.89 48 P **P 07 52 58.2 +0.2**
baz=81,SNR=14
B12A Libby 80.91 41⇓ P **P 07 52 57.6 -0.4**
baz=81
BEKR Beckwourth 80.95 51 P **P 07 52 58.3 0.0**
baz=81,SNR=33
P05C Yuba Gap, Truc 80.97 51 P **P 07 52 58.6 +0.2**
baz=81,SNR=5.1
J08A Circle Bar Ran 80.99 47 P **P 07 52 58.5 0.0**
baz=81,SNR=12
N06A Buffalo Meadow 81.00 50⇑ P **P 07 52 58.2 -0.4**
baz=81,SNR=10
H09A Durkee 81.04 45⇑ P **P 07 52 58.7 -0.1**
baz=81
LAVA Lava Cap Winer 81.07 52 P **P 07 52 58.9 -0.1**
baz=81,SNR=12
S04C Ingram Canyon, 81.08 53⇓ P **P 07 52 59.4 +0.2**
baz=81
R04C Big Horse Ranc 81.10 52⇑ P **P 07 52 59.5 +0.2**
baz=81
OBN Obninsk 81.11 326 *i* P **P 07 52 59.9 +1.0**
OBN *e* 07 53 07.2
OBN *e* 07 56 02.4
OBN pmax pmax
comp=Z,22nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,500nm,17.0s
G10A Bishop Farm, J 81.16 45 P **P 07 52 59.0 -0.3**
baz=81,SNR=13
BMO Blue Mountains 81.21 45 *eP* **P 07 52 59.3 -0.3**
K08A Mann Creek Ran 81.21 48 P **P 07 52 59.9 +0.2**
baz=81,SNR=10
O06A Flanigan 81.22 50 P **P 07 52 59.7 -0.1**
baz=81,SNR=16
WVOR Wild Horse Val 81.22 48 *eP* **P 07 52 59.6 -0.1**
comp=Z,32nm,1.3s,mb5.0
WVOR Wild Horse Val 81.22 48 *eP* **P 07 52 59.6 -0.2**
WVOR pmax pmax
comp=Z,32nm,1.3s,mb5.0
M07A Soldier Meadow 81.23 49⇓ P **P 07 53 00.1 +0.2**
baz=81
I09A Lost Marbles R 81.25 46⇓ P **P 07 52 59.5 -0.4**
baz=81
PACP Pacheco Peak 81.29 54⇓ P **P 07 53 00.1 -0.1**
baz=81
HAST UC Hastings Re 81.31 54⇑ P **P 07 53 00.6 +0.2**
baz=81
VRSR Storozhevoye 81.34 322 *eP* **P 07 52 59.2 -1.0**
VRSR pmax pmax
comp=N,2.0nm,0.9s
VRSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
VRSR pmax pmax
comp=E,6.0nm,1.0s
E11A Bogner Ranch, 81.34 44 P **P 07 52 60.0 -0.4**
baz=81,SNR=5.7
P06A Stead Airport, 81.34 51⇑ P **P 07 53 00.0 -0.4**
baz=81
VORD Divnogorie 81.38 322 *eP* **P 07 52 59.0 -1.4**
VORD *e**PP pP 07 53 07.8 -11
VORD pmax pmax
comp=Z,20nm,1.1s,mb4.9
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.8s
J09A Fry Pan Ranch, 81.48 47 P **P 07 53 01.0 -0.1**
baz=81,SNR=12
L08A Fields 81.51 48 P **P 07 53 01.7 +0.4**
baz=81,SNR=13
F11A Grangeville 81.56 44⇑ P **P 07 53 01.1 -0.4**
baz=82,SNR=9.2
R05C Kirkwood Meado 81.57 52⇓ P **P 07 53 01.9 +0.2**
baz=82
WCN Washoe City 81.58 51⇓ P **P 07 53 01.6 -0.1**
baz=82
CMB Columbia Colle 81.59 52 *eP* **P 07 53 01.7 -0.1**
comp=E,69nm,1.5s,mb5.3
CMB Columbia Colle 81.59 52 *eP* **P 07 53 01.7 -0.1**
CMB pmax pmax
comp=Z,69nm,1.5s,mb5.3
CMB Columbia Colle 81.59 52 P **P 07 53 01.5 -0.3**
baz=82,SNR=30
N07B Gerlach 81.60 49 P **P 07 53 02.1 +0.3**
baz=82,SNR=9.7
D12A Red Ives Fores 81.61 43⇓ P **P 07 53 02.0 +0.3**
baz=82
B13A Whitefish 81.63 41⇓ P **P 07 53 01.1 -0.7**
baz=82
BSMT Bassoo Peak 81.65 42 *eP* **P 07 53 02.4 +0.5**
G11A Walters Elk Ra 81.68 44 P **P 07 53 01.5 -0.6**
baz=82,SNR=14
H10A Noah's Angus R 81.68 45 P **P 07 53 01.5 -0.6**
baz=82,SNR=15
WALA Waterton Lakes 81.69 40 *eP* **P 07 53 02.6 +0.5**
PAHR Pah Rah Range 81.70 51 *eP* **P 07 53 02.3 -0.1**
comp=Z,81nm,1.9s,mb5.2
ZEI Tsey 81.72 313 *eP* **P 07 53 03.4 +1.0**
ZEI *i* 07 53 11.1
ZEI pmax pmax
comp=Z,13nm,0.9s,mb4.8
K09A Rome 81.74 47⇓ P **P 07 53 02.4 -0.1**
baz=82
M08A Happy Creek Ra 81.77 49⇓ P **P 07 53 02.9 +0.2**
baz=82
T05C Eagle Field, D 81.79 54⇑ P **P 07 53 03.1 +0.2**
baz=82
I10A Payette 81.83 46⇑ P **P 07 53 03.2 +0.2**
baz=82
C13A Hot Springs 81.85 42 P **P 07 53 03.1 +0.1**
baz=82,SNR=15
S05C Merced 81.88 53⇓ P **P 07 53 03.6 +0.2**
baz=82
U04C Hernandez Rese 81.90 54⇓ P **P 07 53 03.7 +0.2**
baz=82
L09A Wilkinson Ranc 82.04 48 P **P 07 53 04.5 +0.4**
baz=82,SNR=9.1
KIV Kislovodsk 82.08 314 P **P 07 53 05.4 +1.1**
comp=Z,158nm,0.7s,mb6.0,SNR=6.6
KIV Kislovodsk 82.08 314 *eP* **P 07 53 03.4 -0.9**
comp=Z,94nm,1.4s,mb5.4
KIV Kislovodsk 82.08 314⇓ *eP* **P 07 53 05.3 +1.0**
KIV pmax pmax
comp=Z,72nm,1.9s,mb5.2
KIV Kislovodsk 82.08 314 P **P 07 53 05.9 +1.6**
SNR=14
KIV Kislovodsk 82.08 314 P **P 07 53 05.9 +1.6**
SNR=14
R06C Coleville 82.09 52⇑ P **P 07 53 03.6 -0.8**
baz=82,SNR=12
WAKR Walker 82.11 52 *eP* **P 07 53 05.0 +0.5**
H11A Donnelly 82.11 45 P **P 07 53 03.5 -0.9**
baz=82,SNR=14
D13A Huson 82.16 42⇓ P **P 07 53 04.2 -0.4**
baz=82
N08A GE Springer Mi 82.19 49⇑ P **P 07 53 04.8 -0.1**
baz=82
F12A Elk City 82.19 44⇑ P **P 07 53 04.4 -0.4**
baz=82,SNR=8.4
PKD Parkfield 82.23 54⇓ P **P 07 53 05.4 +0.2**
baz=82
K10A MacKenzie Ranc 82.30 47⇓ P **P 07 53 06.3 +0.9**
baz=82
C14A Swan Lake 82.32 42⇑ P **P 07 53 06.0 +0.6**
baz=82
KAF Kangasniemi 82.32 335 *ep* **P 07 53 02.1 -3.1**
baz=53,slow=4.9
Q07A Schurz 82.41 51⇑ P **P 07 53 05.3 -0.8**
baz=82
U05C Westside ANR, 82.41 54⇑ P **P 07 53 06.3 +0.2**
baz=82
M09A Marrel Ranch, 82.42 48⇓ P **P 07 53 05.3 -0.8**
baz=82
T06C Millerton Lake 82.47 53 P **P 07 53 06.2 -0.2**
baz=82,SNR=21
R07C Lee Vining 82.55 52 P **P 07 53 07.4 +0.6**
baz=82,SNR=18
MSO Missoula 82.59 42 *eP* **P 07 53 07.1 +0.2**
N09A Rock Creek Ran 82.59 49⇓ P **P 07 53 05.8 -1.1**
baz=82
RBK Rabkut 82.59 286 P **P 07 53 09.1 +1.7**
SNR=6.1
RBK Rabkut 82.59 286 P **P 07 53 09.1 +1.7**
SNR=6.1
E13A Victor 82.59 43⇑ P **P 07 53 06.1 -0.8**
baz=82
PTRM Twisselman Ran 82.59 55 *eP* **P 07 53 07.4 +0.3**
KCC Kaiser Creek 82.64 53⇓ P **P 07 53 07.2 -0.1**
baz=83
V05C Boulder Hill, 82.75 54⇑ P **P 07 53 07.4 -0.5**
baz=83
MFID Camas Ranch 82.75 46⇑ P **P 07 53 06.3 -1.5**
baz=83

D14A	Greenough	82.75	42	⇓P		P	07 53 06.2	-1.5
	baz=83							
FINES	FINESS Array B	82.79	334	P		P	07 53 06.0	-1.6
FINES	FINESS Array B	82.79	334	⇑eP		P	07 53 07.1	-0.5
FINES	FINESS Array B	82.79	334	P		P	07 53 06.0	-1.6
	comp=Z,2.8nm,0.5s,mb4.3,baz=72,slow=4.6,SNR=16							
L10A	Juniper Basin	82.84	48	⇑P		P	07 53 08.5	+0.2
	baz=83							
K11A	Parker Ranch,	82.87	47	⇓P		P	07 53 07.9	-0.5
	baz=83							
MLAC	Mammoth Lakes	82.88	52	⇓P		P	07 53 08.7	+0.2
	baz=83							
SMMC	Simmler	82.88	55	⇓P		P	07 53 08.8	+0.2
	baz=83							
H12A	Diamond D Ranc	82.93	45	⇑P		P	07 53 08.2	-0.5
	baz=83,SNR=7.9							
NVAR	Mina Array Bea	82.96	51	P		P	07 53 09.2	+0.2
	comp=Z,8.9nm,0.8s,mb4.7,baz=281,slow=3.7,SNR=32							
BMN	Battle Mountai	82.96	49	eP		P	07 53 09.5	+0.5
	comp=Z,90nm,2.2s,mb5.2							
BMN	Battle Mountai	82.96	49	eP		P	07 53 09.5	+0.6
BMN					pmax	pmax		
	comp=Z,91nm,2.2s,mb5.2							
CHMT	Chamberlain Mo	82.98	42	eP		P	07 53 10.1	+1.2
M10A	I.L. Ranch, Tu	83.01	48	⇓P		P	07 53 08.7	-0.5
	baz=83							
E14A	Clinton	83.04	43	⇑P		P	07 53 09.1	-0.1
	baz=83							
Q08A	Gabbs	83.07	51	⇑P		P	07 53 09.4	-0.1
	baz=83							
RCTC	Rector, Farmer	83.08	54	⇓P		P	07 53 09.1	-0.5
	baz=83							
O09A	Fish Creek Ran	83.09	50	P		P	07 53 10.0	+0.4
	baz=83,SNR=6.2							
HELL	Mitchell Peak,	83.10	53	⇓P		P	07 53 08.9	-0.8
	baz=83,SNR=6.6							
G13A	Cobalt	83.12	44	P		P	07 53 08.9	-0.7
	baz=83,SNR=17							
R08A	Mina	83.14	52	⇓P		P	07 53 09.7	-0.2
	baz=83,SNR=6.6							
PKM	Peak Mountain	83.17	55	⇓P		P	07 53 09.7	-0.5
	baz=83							
MTUM	Tungsten Hills	83.18	53	eP		P	07 53 10.7	+0.5
J12A	Stokes Ranch,	83.30	46	⇑P		P	07 53 10.1	-0.5
	baz=83							
H13A	Challis	83.32	45	⇓P		P	07 53 10.2	-0.5
	baz=83							
F14A	Wisdom	83.37	43	⇓P		P	07 53 11.1	+0.2
	baz=83							
D15A	Lincoln	83.38	42	⇓P		P	07 53 09.8	-1.1
	baz=83							
S08C	White Mtn Res	83.42	52	P		P	07 53 11.9	+0.6
	baz=83,SNR=13							
SBC	Santa Barbara	83.42	56	⇓P		P	07 53 11.6	+0.2
	baz=83							
ABTO	Aybut	83.45	286	⇓P		P	07 53 10.9	-1.0
	SNR=7.1							
ABTO	Aybut	83.45	286	⇓P		P	07 53 10.9	-1.0
	SNR=7.1							
O10A	Cortez Mining,	83.53	49	⇑P		P	07 53 10.3	-1.5
	baz=83							
G14A	Jackson	83.55	44	⇑P		P	07 53 11.7	-0.1
	baz=83							
M11A	Holland Ranch,	83.56	48	⇑P		P	07 53 12.2	+0.2
	baz=84							
E15A	Deer Lodge	83.57	42	P		P	07 53 11.8	-0.1
	baz=84,SNR=12							
Q09A	Carvers	83.62	51	⇓P		P	07 53 11.1	-1.2
	baz=84							
HLID	Hailey	83.63	46	eP		P	07 53 12.6	+0.3
	comp=Z,72nm,2.3s,mb5.1							
HLID	Hailey	83.63	46	P		P	07 53 12.0	-0.3
	baz=84,SNR=6.3							
BSC	Santa Cruz Isl	83.65	56	⇓P		P	07 53 12.2	-0.4
	baz=84							
I13A	Wildhorse Cree	83.68	45	⇓P		P	07 53 12.7	+0.2
	baz=84							
K12A	Draper Farm, C	83.68	47	⇓P		P	07 53 12.8	+0.2
	baz=84							
L12A	House Creek Ra	83.81	47	⇓P		P	07 53 13.1	-0.2
	baz=84							
P10A	Eureka	83.82	50	⇑P		P	07 53 13.5	+0.2
	baz=84							
ARVC	Arvin	83.83	55	⇓P		P	07 53 13.7	+0.2
	baz=84							
N11A	Elko Archery C	83.85	48	⇓P		P	07 53 14.0	+0.5
	baz=84							
J13A	Cove Ranch, Pi	83.86	46	⇓P		P	07 53 13.3	-0.2
	baz=84							
TPH	Tonopah	83.88	51	eP		P	07 53 14.1	+0.4
CWC	Cottonwood Cre	83.89	53	⇑P		P	07 53 12.6	-1.2
	baz=84							
ISA	Isabella	83.90	54	⇑P		P	07 53 13.3	-0.5
	baz=84							
F15A	Butte	83.91	43	P		P	07 53 13.8	+0.1
	baz=84,SNR=7.7							
R09A	Tonopah	83.93	51	P		P	07 53 13.8	-0.2
	baz=84,SNR=16							
LRM	Limekiln Ridge	83.95	43	eP		P	07 53 14.2	+0.3
SNCC	San Nicolas Is	84.02	57	⇓P		P	07 53 14.0	-0.5
	baz=84							
S09A	Goldfield	84.02	52	P		P	07 53 14.3	-0.1
	baz=84,SNR=20							
DLMT	Dillon	84.05	43	eP		P	07 53 15.8	+1.4
	comp=Z,67nm,1.7s,mb5.2							
OSI	Osito Adit	84.11	55	⇑P		P	07 53 13.7	-1.2
	baz=84							
MCMT	McKenzie Canyo	84.12	44	P		P	07 53 15.3	+0.6
M12A	Wells	84.17	48	P		P	07 53 15.2	+0.1
	baz=84,SNR=19							
Q10A	Clear Creek Ra	84.18	51	⇑P		P	07 53 14.7	-0.5
	baz=84							
O11A	Cowboy Ranch,	84.18	49	⇑P		P	07 53 15.3	+0.2
	baz=84							
GRAC	Grapevine Rang	84.20	53	⇓P		P	07 53 15.2	-0.2
	baz=84							
G15A	Dillon	84.21	44	P		P	07 53 15.8	+0.6
	baz=84,SNR=8.8							
K13A	Stover Farm, H	84.23	46	⇑P		P	07 53 15.2	-0.2
	baz=84							
DAC	Darwin (Calif)	84.32	53	eP		P	07 53 15.8	-0.1
	comp=Z,63nm,1.8s,mb5.1							
DAC	Darwin (Calif)	84.32	53	eP		P	07 53 15.8	-0.2
DAC					pmax	pmax		
	comp=Z,63nm,1.8s,mb5.1							
N12A	Clover Valley,	84.32	48	⇑P		P	07 53 15.3	-0.5
	baz=84							
P11A	Circle Ranch,	84.35	50	⇓P		P	07 53 15.5	-0.5
	baz=84,SNR=5.7							
S10A	Tonopah Range,	84.40	51	⇑P		P	07 53 15.1	-1.2
	baz=84							
R10A	Warm Springs	84.47	51	⇑P		P	07 53 15.8	-0.9
	baz=84,SNR=5.9							
MPMC	Manual Prospec	84.48	53	P		P	07 53 17.0	+0.2
	baz=84,SNR=22							
DECC	Green Verdugo	84.55	55	⇓P		P	07 53 18.0	+0.8
	baz=84							
L13A	Double Diamond	84.56	47	⇓P		P	07 53 17.5	+0.5
	baz=84							
LRMC	Laurel Mountai	84.56	54	⇓P		P	07 53 17.0	-0.2
	baz=84							
EDW2	Edwards Air Fo	84.57	55	⇑P		P	07 53 17.7	+0.5
	baz=84							
EGMT	Eagleton	84.63	40	eP		P	07 53 17.6	+0.4
	comp=Z,39nm,1.0s,mb5.3							
EGMT	Eagleton	84.63	40	⇑P		P	07 53 16.8	-0.5
	baz=84							
Q11A	Duckwater	84.70	50	P		P	07 53 17.9	0.0
	baz=85,SNR=7.5							
M13A	Montello	84.71	48	P		P	07 53 17.6	-0.3
	baz=85,SNR=18							
O12A	Currie	84.76	49	P		P	07 53 18.2	+0.1
	baz=85,SNR=13							
FURC	Furnace Creek,	84.78	53	P		P	07 53 18.4	+0.1
	baz=85,SNR=14							
MSL	Mosul	84.82	307	ex		x	07 53 18.5	
CIS	Catalina Islan	84.82	56	⇑P		P	07 53 18.0	-0.6
	baz=85							
K14A	Jones Ranch, D	84.88	46	⇑P		P	07 53 18.5	-0.2
	baz=85							
N13A	Wendover, West	84.89	48	⇑P		P	07 53 18.6	-0.2
	baz=85							
R11A	Troy Canyon, C	84.96	51	⇓P		P	07 53 18.6	-0.5
	baz=85							
TRCR	Troy Canyon	84.96	51	eP		P	07 53 19.3	+0.2
P12A	McGill	84.98	49	⇑P		P	07 53 19.4	+0.1
	baz=85							
QLMT	Earthquake Lak	85.03	44	eP		P	07 53 19.5	+0.2
BHD	Baghdad	85.04	304	ex		x	07 53 18.0	
TPNV	Topopah Spring	85.04	52	eP		P	07 53 19.4	-0.2
	comp=Z,120nm,1.9s,mb5.5							
TPNV	Topopah Spring	85.04	52	eP		P	07 53 19.4	-0.2
TPNV					pmax	pmax		
	comp=Z,120nm,1.9s,mb5.5							
TPNV	Topopah Spring	85.04	52	⇓P		P	07 53 19.0	-0.5
	baz=85							
BFSC	Mount Baldy St	85.07	55	⇓P		P	07 53 19.9	+0.1
	baz=85							
S11A	Rachel	85.13	51	⇑P		P	07 53 19.4	-0.5
	baz=85							
U10A	Ash Meadows, A	85.20	53	⇑P		P	07 53 19.8	-0.6
	baz=85,SNR=10.0							
M14A	Sheep Mountain	85.21	47	⇑P		P	07 53 20.5	+0.1
	baz=85							
Q12A	Willow Creek R	85.21	50	⇓P		P	07 53 19.8	-0.5
	baz=85,SNR=10.0							
GSC	Goldstone	85.29	54	P		P	07 53 20.8	-0.1
	baz=85,SNR=10							
RRX	Edison Barstow	85.31	54	⇑P		P	07 53 19.4	-1.6
	baz=85							
O13A	Hicks Ranch, I	85.35	49	⇓P		P	07 53 20.2	-0.9
	baz=85							
YMR	Madison River	85.40	43	eP		P	07 53 22.3	+1.1
	comp=Z,37nm,1.0s,mb5.3							
SHOC	Shoshone	85.44	53	⇑P		P	07 53 21.1	-0.5
	baz=85							
HVU	Hansel Valley	85.48	47	eP		P	07 53 22.0	+0.4
FFC	Flin Flon	85.53	32	P		P	07 53 21.0	-0.7
	comp=Z,231nm,1.5s,mb5.9,SNR=20							
FFC	Flin Flon	85.53	32	eP		P	07 53 21.3	-0.4
YFT	Old Faithful	85.58	44	eP		P	07 53 22.6	+0.5
N14A	Grayback Hills	85.59	48	⇑P		P	07 53 22.1	-0.2
	baz=86							
P13A	Bates Ranch, G	85.61	49	⇓P		P	07 53 22.5	+0.1
	baz=86							
R12A	Pony Springs,	85.67	50	⇓P		P	07 53 22.1	-0.6
	baz=86							
BGU	Big Grassy Mou	85.67	48	eP		P	07 53 22.6	-0.1
MURC	Murrieta	85.67	56	⇓P		P	07 53 22.2	-0.5
	baz=86							
T11A	Corn Creek, Al	85.67	52	⇑P		P	07 53 22.5	-0.2
	baz=86							
GCMT	Greycliff	85.71	42	eP		P	07 53 24.3	+1.6
DCID1	Drake Creek	85.73	45	eP		P	07 53 24.0	+1.1
IMW	Indian Meadow	85.76	44	eP		P	07 53 23.8	+0.8
	comp=Z,93nm,1.8s,mb5.4							
S12A	Delamar Landin	85.79	51	⇑P		P	07 53 23.1	-0.2
	baz=86							
LKWY	Lake	85.80	43	eP		P	07 53 25.3	+2.1
Q13A	Wheeler Ranch,	85.82	50	⇑P		P	07 53 23.2	-0.2
	baz=86							
M15A	Larsen Ranch,	85.83	47	⇓P		P	07 53 23.2	-0.2
	baz=86							
HEC	Hector,Ludlow	85.84	54	⇓P		P	07 53 22.7	-0.9
	baz=86							
U11A	Corn Creek	85.89	52	⇑P		P	07 53 23.9	+0.1
	baz=86							
TUQ	Turquoise Mtn.	85.90	53	⇑P		P	07 53 23.6	-0.2
	baz=86							
SPUT	South Promonto	85.90	47	eP		P	07 53 24.0	+0.3
TPAW	Teton Pass	85.93	45	eP		P	07 53 24.5	+0.7
	comp=Z,64nm,1.8s,mb5.2							
MOOW	Moose Ponds	85.95	44	eP		P	07 53 24.3	+0.3
109C	Camp Elliot, M	86.03	56	⇑P		P	07 53 25.0	+0.4
	baz=86							
N15A	Stansbury Isla	86.03	47	⇑P		P	07 53 24.6	+0.1
	baz=86							
REDW	Red Top Meadow	86.06	45	eP		P	07 53 25.1	+0.7
	comp=Z,79nm,1.8s,mb5.3							
SNOW	Snow King Moun	86.07	45	eP		P	07 53 25.0	+0.4
	comp=Z,41nm,1.6s,mb5.1							
V11A	Goodsprings	86.10	53	⇓P		P	07 53 25.0	+0.1
	baz=86,SNR=7.7							
LOHW	Long Hollow	86.10	44	eP		P	07 53 25.0	+0.3
	comp=Z,42nm,1.6s,mb5.1							
DUG	Dugway	86.13	48	eP		P	07 53 24.8	-0.2
	comp=Z,74nm,1.4s,mb5.4							
DUG	Dugway	86.13	48	eP		P	07 53 24.8	-0.1
DUG					pmax	pmax		
	comp=Z,74nm,1.4s,mb5.4							
DUG	Dugway	86.13	48	⇑P		P	07 53 24.0	-0.9
	baz=86,SNR=22							
PFO	Pinyon Flat Ob	86.24	55	eP		P	07 53 25.2	-0.4
	comp=Z,55nm,1.5s,mb5.3							
PFO	Pinyon Flat Ob	86.24	55	eP		P	07 53 25.2	-0.4
PFO					pmax	pmax		
	comp=Z,55nm,1.5s,mb5.3							
PFO	Pinyon Flat Ob	86.24	55	P		P	07 53 25.4	-0.2
	baz=86,SNR=8.1							
RLMT	Red Lodge	86.27	43	eP		P	07 53 26.2	+0.7
GMRC	Granite Mounta	86.36	54	P		P	07 53 26.0	-0.2
	baz=86,SNR=17							
HWUT	Hardware Ranch	86.37	46	eP		P	07 53 26.2	+0.1
NOQ	North Oquirrh	86.41	47	eP		P	07 53 26.5	+0.2
BELC	Belle Mtn.	86.43	55	⇑P		P	07 53 26.9	+0.4
	baz=86							
U12A	Valley of Fire	86.51	52	⇑P		P	07 53 27.6	+0.8
	baz=86							
S13A	Holt Ranch, En	86.52	51	⇓P		P	07 53 26.6	-0.2
	baz=86							
MONP	Monument Peak	86.56	56	P		P	07 53 27.5	+0.3
	baz=86,SNR=9.4							
V12A	Nelson	86.57	53	P		P	07 53 27.4	+0.3
	baz=86,SNR=13							
CTU	Camp Tracy	86.65	47	eP		P	07 53 27.4	0.0
FCC	Fort Churchill	86.72	26	eP		P	07 53 27.5	+0.1
T13A	Saint George	86.72	51	⇓P		P	07 53 28.3	+0.4
	baz=87							
W12A	Cal Nev Ari	86.74	53	⇓P		P	07 53 29.1	+1.1
	baz=87							
NLU	North Lily Min	86.75	48	eP		P	07 53 28.0	+0.1
R14A	James Farms, M	86.81	50	⇓P		P	07 53 29.4	+1.1
	baz=87							
CCUT	Cedar City	86.89	51	eP		P	07 53 29.0	+0.3
JLU	Jordanelle	86.89	47	eP		P	07 53 28.8	+0.1
U13A	Pakoon Wash	86.93	52	⇑P		P	07 53 29.4	+0.4
	baz=87							
S14A	Cedar City	86.94	50	⇓P		P	07 53 28.7	-0.3
	baz=87							
BC3	Big Chuckw Mtn	86.98	55	P		P	07 53 29.2	0.0
	baz=87,SNR=11							
IRM	Iron Mountain	87.00	54	P		P	07 53 29.3	0.0
	baz=87,SNR=7.4							
SWSC	Sam W. Stewart	87.01	56	⇑P		P	07 53 28.8	-0.6
	baz=87							
MPU	Maple Canyon	87.03	48	eP		P	07 53 29.3	0.0
AKASG	Malin Array Be	87.13	324	P		P	07 53 28.1	-1.5
	comp=Z,1.1nm,0.5s,mb4.1,baz=47,slow=4.7,SNR=15							
AKBB	Malin Array Si	87.13	324	eP		P	07 53 29.0	-0.6
KIEV	Kiev	87.15	324	eP		P	07 53 28.9	-0.7
	comp=Z,18nm,1.1s,mb4.9							
KIEV	Kiev	87.15	324	eP		P	07 53 29.0	-0.7
KIEV					pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9							
BW06	Boulder Array	87.17	45	eP		P	07 53 29.4	-0.6
PDAR	Pinedale Array	87.17	45	P		P	07 53 28.7	-1.3
	comp=Z,1.5nm,0.8s,mb4.0,baz=270,slow=1.5,SNR=12							
PDAR					LR	LR	08 25 00.2	
	comp=Z,614nm,21.6s,baz=342,slow=30							
T14A	Hurricane	87.30	51	⇓P		P	07 53 30.4	-0.3
	baz=87							
MSU	Marysvale	87.31	49	eP		P	07 53 31.2	+0.5
MALT	Malatya	87.35	310	eP		P	07 53 30.5	-0.4
LAO	LASA Array	87.38	40	eP		P	07 53 31.0	+0.1
U14A	Mt Trumbull	87.50	52	⇑P		P	07 53 31.8	+0.1
	baz=87							
W13A	Hualapai Mount	87.55	53	⇑P		P	07 53 31.3	-0.6
	baz=88,SNR=7.6							
TMUT	Trail Mountain	87.64	48	eP		P	07 53 32.4	+0.1
Y12C	Blythe	87.64	55	⇑P		P	07 53 31.8	-0.6
	baz=88							
DGMT	Dagmar	87.66	38	eP		P	07 53 32.4	+0.2
	comp=Z,85nm,1.8s,mb5.5							
PDMCI	Parker Dam,Lak	87.70	54	⇑P		P	07 53 32.4	-0.3
	baz=88							
GLA	Glamis	87.71	55	P		P	07 53 32.6	-0.2
	baz=88,SNR=15							
X13A	Yucca	87.81	54	P		P	07 53 33.1	-0.1
	baz=88,SNR=13							
T15A	Red Dirt Ranch	87.82	51	⇓P		P	07 53 32.9	-0.3
	baz=88							
W14A	Seligman	88.10	53	P		P	07 53 34.8	+0.2
	baz=88,SNR=25							
Y13A	Salome	88.14	54	P		P	07 53 34.9	+0.1
	baz=88,SNR=11							
SRU	San Rafael	88.20	48	eP		P	07 53 34.9	-0.1
NOA	NORSAR Array B	88.54	339	P		P	07 53 34.9	-1.2
	comp=Z,0.7nm,0.9s,baz=51,slow=4.2,SNR=7.0							
X14A	Yava	88.56	53	⇑P		P	07 53 37.1	+0.4
	baz=88,SNR=17							
Y14A	Wickenburg	88.71	54	P		P	07 53 37.3	-0.1
	baz=89,SNR=22							
W15A	Williams	88.71	52	⇑P		P	07 53 38.2	+0.7
	baz=89							
Z14A	Wintersburg	89.00	54	⇓P		P	07 53 38.5	-0.3
	baz=89							
X15A	Humboldt	89.04	53	P		P	07 53 39.8	+0.8
	baz=89,SNR=19							
WUAZ	Wupatki	89.22	52	eP		P	07 53 40.3	+0.5
	comp=Z,60nm,1.5s,mb5.4							
WUAZ	Wupatki	89.22	52	⇑P		P	07 53 39.5	-0.3
	baz=89,SNR=5.8							
PV10	Paradox Valley	89.57	48	eP		P	07 53 41.5	+0.1
115A	Sonoran Desert	89.83	55	⇑P		P	07 53 42.1	-0.7
	baz=90,SNR=5.2							
PV01	Paradox Valley	90.01	48	eP		P	07 53 43.2	-0.3
116A	Eloy	90.29	55	⇑P		P	07 53 44.9	0.0
	baz=90							
MVCO	Mesa Verde	90.49	49	⇓P		P	07 53 44.4	-1.4
	baz=90							
PHWY	Pilot Hill	90.55	45	eP		P	07 53 46.0	0.0
SMCO	Snowmass	90.60	47	eP		P	07 53 46.6	+0.4
	comp=Z,18nm,0.8s,mb5.3							
216A	Three Points,	90.73	55	⇑P		P	07 53 47.6	+0.7
	baz=91							
TUC	Tucson	91.10	54	eP		P	07 53 49.1	+0.4
ISCO	Idaho Springs	91.20	46	eP		P	07 53 49.5	+0.5
217A	Green Valley	91.32	55	⇓P		P	07 53 49.3	-0.4
	baz=91							
RKT	Rikitea	91.50	114	eLR		LR	08 23 03.0	
	comp=Z,1μm,34.8s,baz=297							
218A	Dragoon	91.81	54	⇑P		P	07 53 51.9	0.0
	baz=92							
KOLS	Kolonicke sedl	91.84	325	epP		P	07 54 00.0	+8.3
STHS	Stebnicka Huta	92.08	326	epP		pP	07 54 01.2	-10
318A	Bisbee	92.09	55	⇑P		P	07 53 53.2	0.0
	baz=92							
CRVS	Cervenica-Dubn	92.29	326	eP		P	07 53 54.5	+0.7
SDCO	Great Sand Dun	92.31	48	eP		P	07 53 54.4	+0.2
OJC	Ojcow	92.32	327	eP		P	07 53 53.5	-0.4
AGMN	Agassiz Refuge	92.35	35	eP		P	07 53 53.1	-1.0
NIE	Niedzica	92.56	327	eP		P	07 54 03.4	+8.4
319A	Douglas	92.66	55	⇓P		P	07 53 56.2	+0.3
	baz=93							
LAZ	Ladron	92.81	51	eP		P	07 53 57.1	+0.6
ANMO	Albuquerque	93.03	50	eP		P	07 53 57.7	+0.2
	comp=Z,29nm,1.7s,mb5.3							
ANMO	Albuquerque	93.03	50	eP		P	07 53 57.7	+0.2
ANMO					pmax	pmax		
	comp=Z,29nm,1.7s							
BNM	Barren Site	93.30	51	eP		P	07 54 02.7	+3.9
KSP	Ksiaz	93.61	329	eP		P	07 54 00.1	+0.3
KSP				epP		pP	07 54 07.3	-11
VYHS	Vyhne	93.90	327	eP		P	07 54 01.8	+0.6
	comp=Z,14nm,1.4s,mb5.1							
VYHS				e			07 54 09.3	
VYHS	Vyhne	93.90	327	eP		P	07 54 01.8	+0.6
VYHS				e			07 54 09.3	
VYHS					pmax	pmax		
	comp=Z,14nm,1.4s,mb5.1							
ECSD	EROS,Sioux Fal	94.67	39	eP		P	07 54 03.8	-1.1
BRG	Berggiesshubel	94.68	330	eP		P	07 54 12.1	+7.3
	comp=Z,10nm,1.5s,mb5.0							
BRG				e			07 58 01.4	
BRG					LR	LR		
	comp=Z,330nm,24.5s							
BRG	Berggiesshubel	94.68	330	eP		P	07 54 12.1	+7.3
	comp=Z,17nm,1.5s,mb5.2							
BRG				e			07 58 01.4	
	comp=Z,41nm,2.0s							
BRG								
	comp=N,439nm,20.2s							
BRG								
	comp=E,518nm,17.0s							
BRG								
	comp=Z,558nm,24.5s							
MODS	Modra-Piesok	94.77	327	epP		pP	07 54 13.1	-10
CLL	Collm	94.80	331	eP		P	07 54 07.0	+1.7
CLL					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb5.0							
CLL	Collm	94.80	331	eP		P	07 54 07.0	+1.7
	comp=Z,4.0nm,0.6s,mb5.0							
CLL				esP		sP	07 54 12.0	-19
CLL				ePP		PP	07 57 57.0	+3.1
MNTX	Cornudas Mount	95.42	53	eP		P	07 54 10.4	+1.9
MOX	Moxa	95.89	331	ePDIFF		P	07 54 18.1	+7.8
MOX								
	comp=Z,600nm,19.0s							
GRA1	Grafenberg Arr	96.75	331	ePdif		P	07 54 22.3	+8.1
	comp=Z,12nm,1.3s,mb5.2							
GRA1				ePP		PP	07 58 11.2	+2.2
GRF	Grafenberg Arr	96.75	331	eP		P	07 54 22.3	+8.1
	comp=Z,12nm,1.3s,mb5.2							
GRF				ePP		PP	07 58 11.2	+2.2
KSU1	Kansas State U	97.42	43	eP		P	07 54 17.3	-0.2
	comp=Z,14nm,1.0s,mb5.4							
LTX	Lajitas	97.89	54	eP		P	07 54 21.9	+2.1
TORD	Torodi Ar. Bea	128.43	309	PKP		PKPdf	07 59 50.8	-0.3
	comp=Z,0.6nm,0.8s,baz=20,slow=2.6,SNR=5.1							
SDV	Santo Domingo	134.81	51	ePKPdf		PKPdf	08 00 04.0	+0.8
PLCA	Paso Flores	146.08	131	PKPbc		PKPbc	08 00 23.3	-0.2
	comp=Z,6.7nm,0.9s,baz=213,slow=4.2,SNR=12							
ARE	Arequipa	146.93	86	eP		PKPbc	08 00 31.0	+4.3
LCO	Las Campanas	148.82	110	ePKPdf		PKPdf	08 00 26.8	-0.7
LCO				ePKPbc		PKPbc	08 00 31.1	-0.4
LCO				ePKPab		PKPab	08 00 34.8	-0.7
LPAZ	La Paz	149.99

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.12**	**248**	*eP*	Pn	07 52 31.3	+1.1
WRA	**Warramunga Arr**	**32.03**	**266**	P	P	07 58 21.6	-0.3
	0.7nm,0.7s,baz=101,slow=7.6,SNR=8.7						
ASAR	**Alice Springs**	**32.07**	**259**	P	P	07 58 22.6	+0.3
	5.2nm,0.7s,baz=81,slow=9.0,SNR=72						
SONM	**Songino Array**	**88.48**	**323**	P	P	08 04 47.5	-0.1
	0.7nm,0.8s,baz=144,slow=4.6,SNR=5.4						
GERES	**GERESS Array B**	**145.97**	**330**	PKPbc	PKPbc	08 11 34.6	-0.3
	1.7nm,0.6s,baz=40,slow=3.8,SNR=9.9						

KRSC 26 08:02:20.4±0.8, 5303N×16267E, h32km±32km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.60**	**273**	*eP*	Pn	08 02 48.0	+1.6
SPN				*i* S	Sn	08 03 07.8	+1.9
MKZ	**Mys Kozlova**	**1.63**	**340**	*eP*	Pn	08 02 47.8	+1.0
MKZ				*i* S	Sn	08 03 08.0	+1.4
NLC	**Nalytchevo**	**2.01**	**275**	*eP*	Pn	08 02 53.7	+1.7
NLC				*i* S	Sn	08 03 18.3	+2.3
AVH	**Avacha**	**2.38**	**277**	*eP*	Pn	08 02 59.8	+2.7
PET	**Petropavlovsk**	**2.43**	**271**	*eP*	Pn	08 02 59.9	+2.2
PET				*i* S	Sn	08 03 28.5	+2.2
RUS	**Russkaya**	**2.60**	**258**	*eP*	Pn	08 03 01.9	+1.8
RUS				*i* S	Sn	08 03 32.4	+1.9
TUMR	**Tumrok**	**2.70**	**328**	*eP*	Pn	08 03 05.4	+3.9
TUMR				*i* S	Sn	08 03 38.5	+5.4
GNL	**Ganaly**	**2.91**	**285**	*eP*	Pn	08 03 07.5	+3.1
KBTR	**Krutoberegovo**	**3.19**	**1**	*eP*	Pn	08 03 09.1	+0.9
KBTR				*i* S	Sn	08 03 45.6	+0.6
KLY	**Klyuchi**	**3.49**	**341**	*eP*	Pn	08 03 13.9	+1.5

*ISCJB **26** 08:06:15.7±0.8, 3193S×010×13824E×006, h10km, Error ellipse: s-maj=14.4km s-min=7.2km az=169.4*
*IDC **26** 08:06:19.4±6.5, 3169S×13843E, h0km, mb1 2.9/3, mb1mx2.9/13, mbtmp2.6/3, ML2.3/3, Error ellipse: s-maj=115.1km s-min=19.0km az=25.0*

ISC 26 08:06:17.0±0.8, 321S±01×13826E±006, h10km, n5, σ1§15/9, Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOO	**Buckleboo**	**2.01**	**247**	*eP*	**Pn**	**08 06 51.1**	**+0.1**
BBOO				*eS*	**Sn**	**08 07 16.1**	**-0.1**
	4.3nm,0.2s						
STKA	**Stephens Creek**	**2.84**	**87**	*eP*	**Pn**	**08 07 06.6**	**+4.3**
STKA				*eS*	**Sn**	**08 07 37.8**	**+1.2**
	1.4nm,0.3s						
STKA	**Stephens Creek**	**2.84**	**87**	Pn	**Pn**	**08 07 02.8**	**+0.4**
	0.1nm,0.3s,baz=270,slow=13,SNR=3.0						
STKA				Pg	**Pg**	**08 07 09.8**	**-1.6**
	0.6nm,0.3s,baz=264,slow=15,SNR=13						
STKA				Sn	**Sn**	**08 07 37.6**	**+1.0**
	0.7nm,0.3s,baz=288,slow=9.2,SNR=5.3						
STKA				Lg		08 07 45.8	
	0.9nm,0.3s,baz=208,slow=17,SNR=4.1						
ASAR	**Alice Springs**	**9.20**	**334**	Pn	**Pn**	**08 08 31.3**	**+1.6**
	0.1nm,0.3s,baz=151,slow=14,SNR=5.3						
WRA	**Warramunga Arr**	**12.56**	**343**	Pn	**Pn**	**08 09 14.3**	**-1.5**
	0.0nm,0.3s,baz=160,slow=12,SNR=5.2						

*ISCJB **26** 08:30:11.2±0.8, 27N×04×1256E×09, h10km, mb4.1/9, Error ellipse: s-maj=142.5km s-min=10.7km az=157.2*
*NEIC **26** 08:30:12.8±0.6, 268N×12572E, h10km, Error ellipse: s-maj=116.0km s-min=10.0km az=67.0*
*IDC **26** 08:30:17.7±4.1, 265N×12571E, h47km±38km, mb3.9/8, mb1 3.9/8, mb1mx3.8/16, mbtmp3.8/8, Error ellipse: s-maj=165.7km s-min=12.8km az=67.0*

ISC 26 08:30:16.1±5.2, 27N±04×1257E±09, h32km±36km, n11, σ0§67/12, mb4.1/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.00**	**160**	P	**P**	**08 35 27.6**	**-0.5**
	1.8nm,0.4s,mb3.8,baz=338,slow=10,SNR=42						
WRA				S	**S**	**08 39 42.8**	**-0.3**
	0.8nm,0.9s,baz=346,slow=17,SNR=4.5						
WB2	**Warramunga Arr**	**24.00**	**160**	*eP*	**P**	**08 35 27.7**	**-0.4**
ASAR	**Alice Springs**	**27.35**	**163**	P	**P**	**08 35 59.0**	**+0.6**
	0.4nm,0.5s,mb3.2,baz=349,slow=7.5,SNR=11						
STKA	**Stephens Creek**	**27.51**	**158**	P	**P**	**08 37 27.4**	**+0.3**
	1.2nm,0.7s,mb3.8,baz=306,slow=11,SNR=4.7						
SONM	**Songino Array**	**48.00**	**343**	P	**P**	**08 38 51.4**	**-0.6**
	0.4nm,0.5s,mb3.7,baz=161,slow=5.9,SNR=4.6						
MKAR	**Makanchi Array**	**57.87**	**326**	P	**P**	**08 40 05.1**	**+0.3**
MKAR				PcP	PcP	08 40 56.0	-1.0
MKAR	**Makanchi Array**	**57.87**	**326**	P	**P**	**08 40 05.1**	**+0.3**
	2.1nm,0.5s,mb4.4,baz=122,slow=8.4,SNR=32						
MKAR				PcP	PcP	08 40 56.0	-1.0
	0.7nm,0.4s,baz=124,slow=4.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**61.09**	**334**	P	**P**	**08 40 26.0**	**-0.9**
	1.4nm,0.3s,mb4.5,baz=130,slow=5.8,SNR=2.4						
KURK	**Kurchatov**	**62.11**	**328**	*eP*	**P**	**08 40 33.9**	**+0.1**
	5.1nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**91.10**	**340**	P	**P**	**08 43 18.9**	**+1.6**
	6.4nm,1.1s,mb4.8,baz=85,slow=5.6,SNR=7.3						
AKASG	**Malin Array Be**	**92.08**	**321**	P	**P**	**08 43 21.8**	**-0.3**
	0.5nm,0.4s,mb4.2,baz=79,slow=3.7,SNR=4.3						

IDC 26 08:35:25.6±2.3, 093N×12768E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=171.7km s-min=27.4km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.74**	**163**	P	P	08 40 17.2	-1.6
	1.6nm,0.8s,baz=342,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**25.18**	**166**	P	P	08 40 54.0	+1.1
	1.4nm,0.6s,baz=341,slow=9.9,SNR=15						
MKAR	**Makanchi Array**	**60.39**	**326**	P	P	08 45 36.6	0.0
	0.5nm,0.7s,baz=117,slow=7.5,SNR=3.8						

IDC 26 08:49:43.5±8.9, 1641S×16882W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.9/14, mbtmp4.2/4, MS3.7/1, Ms1 3.7/1, ms1mx2.8/22, Error ellipse: s-maj=265.2km s-min=67.2km az=121.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**42.73**	**258**	LR	LR	09 13 26.0	
	comp=Z,82nm,19.3s,baz=54,slow=33						
STKA	**Stephens Creek**	**47.39**	**242**	P	P	08 58 19.9	+0.2
	1.4nm,0.3s,baz=83,slow=8.7,SNR=10.0						
WRA	**Warramunga Arr**	**53.91**	**257**	P	P	08 59 08.7	-0.4
	0.4nm,0.3s,baz=98,slow=6.6,SNR=12						
ASAR	**Alice Springs**	**53.99**	**252**	P	P	08 59 09.9	+0.2
	4.5nm,0.5s,baz=90,slow=8.5,SNR=73						
SONM	**Songino Array**	**98.55**	**317**	P	P	09 03 23.9	-0.1
	0.1nm,0.3s,baz=90,slow=2.9,SNR=3.5						

MEX 26 08:53:04.2±1.0, 1691N×9429W, h138km±20km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.60**	**288**	*i* P	Pn	08 53 23.8	-0.9
CMIG				*i* S	Sn	08 53 37.8	-2.3
HUIG	**Huatulco**	**2.08**	**237**	*i* P	Pn	08 53 37.7	-1.9
HUIG				*i* S	Sn	08 54 05.5	-1.2
VHO	**Vista Hermosa**	**2.34**	**274**	*i* P	Pn	08 53 42.7	-0.1
VHO				*i* S	Sn	08 54 10.4	-2.0

*NIED **26** 09:02:00, 3730N×13660E, h5km, Mw4.2 Best double couple: M0 1.93000×10^15 NP1:φs=240.00000°, δ55.00000°, λ167.00000°. NP2:φs=338.00000°, δ79.00000°, λ35.00000°.*
*IDC **26** 09:02:52.0±0.7, 3721N×13677E, h0km, mb4.0/9, mb1 4.2/12, mb1mx4.0/21, mbtmp4.0/12, ML3.9/3, MS3.5/5, Ms1 3.5/5, ms1mx3.2/30, Error ellipse: s-maj=17.1km s-min=15.1km az=51.0*
*JMA **26** 09:02:52.5, 3728N×13670E, h6km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs=68.00000°, δ49.00000°, λ170.00000°. NP2: φs=164.00000°, δ83.00000°, λ42.00000°. Principal axes: T*

2007 MAR

Plg34.0000°, Azm35.0000°; N Plg48.0000°, Azm173.0000°; P Plg22.0000°, Azm289.0000°;
JMA Felt IV J1.
*ISCJB **26** 09:02:52.2±0.7, 3730N±003×13669E±004, h10km±5km, mb4.0/12, MS3.5/3 Error ellipse: s-maj=5.5km s-min=4.7km az=163.4*
*NEIC **26** 09:02:52.5, 3728N×13670E, h6km, mb4.2/2, After JMA.*
NEIC Recorded [4 JMA] in Ishikawa and [1 JMA] in Fukui, Gifu, Niigata and Toyama Prefectures.
*MOS **26** 09:02:54.7±0.8, 3724N×13676E, h33km, mb4.5/3, Error ellipse: s-maj=18.8km s-min=10.7km az=99.2*

ISC 26 09:02:53.4±0.7, 3726N±003×13675E±004, h7km±4km, n34, σ0§90/38, mb4.0/12, MS3.5/3, 4C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.33**	**175**	⇑P	**Pg**	**09 02 59.8**	**-0.2**
JJH				S	**Sg**	**09 03 05.3**	**+0.9**
JSZ	**Suzu**	**0.53**	**69**	⇑P	**Pg**	**09 03 03.1**	**-0.5**
JSZ				S	**Sg**	**09 03 10.9**	**+0.4**
JHG	**Hegura jima**	**0.60**	**13**	⇑P	**Pg**	**09 03 04.1**	**-1.0**
JTT	**Ttatey**	**0.81**	**144**	⇓P	**Pg**	**09 03 08.5**	**-0.4**
JTT				S	**Sg**	**09 03 20.3**	**+1.0**
JKG	**Kaga**	**1.03**	**199**	⇑P	**Pg**	**09 03 12.2**	**-1.1**
JKG				S	**Sg**	**09 03 26.8**	**+0.1**
MAJO	**Matsushiro**	**1.37**	**121**	*e*Pn	**Pn**	**09 03 18.0**	**-1.0**
MAT	**Matsushiro**	**1.37**	**121**	P	**Pn**	**09 03 18.0**	**-0.9**
MAT				S	**Sb**	**09 03 38.0**	**+0.9**
MJAR	**Matsushiro Arr**	**1.37**	**121**	P	**Pn**	**09 03 18.0**	**-1.0**
MJAR						09 03 37.7	
MJAR	**Matsushiro Arr**	**1.37**	**121**	Pn	**Pn**	**09 03 18.0**	**-0.9**
	67nm,0.3s,baz=315,slow=17,SNR=195						
MJAR				Sn	**Sn**	**09 03 37.7**	**+0.3**
	128nm,0.3s,baz=146,slow=42,SNR=17						
MJAR				LR		09 04 00.9	
	comp=Z,2μm,18.3s,baz=315,slow=50						
JHJ	**Hachijo jima 2**	**4.82**	**148**	LR	LR	09 05 29.1	
	comp=Z,234nm,20.9s,baz=106,slow=33						
JNU	**Nakatsue**	**6.33**	**231**	Pn	**Pn**	**09 04 27.9**	**+0.8**
	4.1nm,0.3s,baz=60,slow=11,SNR=34						
KSRS	**Korea Array**	**7.03**	**274**	Pn	**Pn**	**09 04 37.3**	**+0.6**
	1.1nm,0.3s,baz=90,slow=13,SNR=9.7						
KSRS				Sn	**Sn**	**09 05 57.5**	**+0.7**
	1.3nm,0.3s,baz=32,slow=7.5,SNR=7.4						
KSRS				LR	LR	09 07 05.9	
	comp=Z,459nm,18.9s,baz=166,slow=36						
ASAJ	**Asahikawa**	**8.16**	**31**	P	**Pn**	**09 04 53.0**	**+0.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.16**	**31**	Pn	**Pn**	**09 04 53.0**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=238,slow=14,SNR=7.8						
YSS	**Yuzh-Sakhalins**	**10.66**	**23**	*eP*	**Pn**	**09 05 29.0**	**+2.5**
KLR	**Kul'dur**	**12.50**	**345**	*eP*	**Pn**	**09 05 53.5**	**+1.9**
SONM	**Songino Array**	**24.58**	**305**	P	**P**	**09 08 14.7**	**+0.8**
	comp=Z,3.3nm,1.0s,mb3.8,baz=113,slow=8.3,SNR=4.2						
SONM				LR	LR	09 18 13.0	
	comp=Z,244nm,19.2s,MS3.7,baz=108,slow=37						
TIXI	**Tiksi**	**34.70**	**356**	*eP*	**P**	**09 09 42.0**	**-1.4**
	comp=Z,3.9nm,0.9s,mb4.3						
TIXI	**Tiksi**	**34.70**	**356**	*eP*	**P**	**09 09 41.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BILL	**Bilibino**	**34.95**	**19**	*eP*	**P**	**09 09 45.5**	**0.0**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
ZALV	**Zalesovo Beam**	**39.01**	**312**	LR	LR	09 26 32.4	
	comp=Z,29nm,20.2s,MS3.1,baz=88,slow=36						
MKAR	**Makanchi Array**	**40.83**	**301**	LR	LR	09 28 04.8	
	comp=Z,130nm,18.3s,MS3.8,baz=265,slow=37						
KURK	**Kurchatov**	**42.85**	**307**	*eP*	**P**	**09 10 50.6**	**-1.3**
	comp=Z,4.0nm,1.1s,mb4.1						
KURK	**Kurchatov**	**42.85**	**307**	*eP*	**P**	**09 10 50.6**	**-1.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
WRA	**Warramunga Arr**	**56.94**	**183**	P	**P**	**09 12 38.2**	**-1.1**
	comp=Z,1.7nm,0.4s,mb4.4,baz=359,slow=7.8,SNR=55						
ASAR	**Alice Springs**	**60.66**	**183**	P	**P**	**09 13 04.5**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.3,baz=14,slow=12,SNR=28						
RES	**Resolute Bay**	**63.28**	**13**	*eP*	**P**	**09 13 21.8**	**-0.4**
	comp=Z,115nm,0.8s						
YKA	**Yellowknife Ar**	**65.45**	**29**	P	**P**	**09 13 36.0**	**-0.6**
YKA	**Yellowknife Ar**	**65.45**	**29**	P	**P**	**09 13 36.0**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.7,baz=307,slow=6.8,SNR=16						
FINES	**FINESS Array B**	**66.84**	**331**	P	**P**	**09 13 45.6**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=65,slow=9.0,SNR=4.1						
STKA	**Stephens Creek**	**68.93**	**176**	P	**P**	**09 13 58.7**	**-0.1**
	comp=Z,1.8nm,0.9s,mb4.0,baz=0.0,slow=3.0,SNR=3.9						
AKASG	**Malin Array Be**	**71.79**	**320**	P	**P**	**09 14 15.4**	**-0.9**
	comp=Z,0.5nm,0.5s,mb3.7,baz=47,slow=5.9,SNR=8.1						
NVAR	**Mina Array Bea**	**77.79**	**51**	P	**P**	**09 14 52.5**	**+1.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=290,slow=5.7,SNR=8.6						
PDAR	**Pinedale Array**	**80.11**	**43**	P	**P**	**09 15 04.5**	**+0.5**
	comp=Z,0.9nm,0.7s,mb3.8,baz=298,slow=1.5,SNR=10.0						

*NNC **26** 09:14:23.9±3.2, 3821N×7016E, h52km±131km, mb4.3, mpv4.5, Error ellipse: s-maj=31.5km s-min=16.6km az=173.0*
*IDC **26** 09:14:26.9±1.3, 3875N×7064E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.7/23, mbtmp3.8/10, ML3.8/3, Error ellipse: s-maj=24.5km s-min=16.3km az=18.0*
*MOS **26** 09:14:30.5±1.2, 3890N×7053E, h33km, mb4.5/1, Error ellipse: s-maj=21.1km s-min=12.4km az=84.3*
*NEIC **26** 09:14:32.4±1.2, 3884N×7050E, h35km, mb3.4/1, Error ellipse: s-maj=21.5km s-min=12.0km az=171.0*
*ISCJB **26** 09:14:38.9±1.7, 395N±01×7057E±009, h86km±13km, mb3.7/8, Error ellipse: s-maj=18.7km s-min=9.2km az=23.9*

ISC 26 09:14:38.9±1.8, 394N±01×7044E±008, h72km±13km, n35, σ1§21/45, mb3.7/8, 3C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.67**	**41**	*e*Pn	**Pn**	**09 15 33.6**	**+0.4**
AML				*e*Sn	**Sn**	**09 16 13.7**	**-1.5**
AML	**Almayashu**	**3.67**	**41**	P	**Pn**	**09 15 33.6**	**+0.5**
	SNR=90						
KK31	**Karatay Array**	**3.68**	**1**	⇓P	**Pn**	**09 15 34.9**	**+1.6**
	20nm,0.4s,baz=180,slow=13						
KK31				⇓S	**Sn**	**09 16 31.9**	**+16**
	104nm,0.5s,baz=191,slow=28						
EKS2	**Erkin-Say**	**4.11**	**37**	*e*Pn	**Pn**	**09 15 39.8**	**+0.6**
EKS2				*e*Sn	**Sn**	**09 16 26.6**	**+0.7**
EKS2	**Erkin-Say**	**4.11**	**37**	P	**Pn**	**09 15 40.1**	**+1.0**
	SNR=45						
UCH	**Uchtor**	**4.17**	**46**	*e*Pn	**Pn**	**09 15 40.5**	**+0.5**
UCH				*e*Sn	**Sn**	**09 16 33.2**	**+5.7**
UCH	**Uchtor**	**4.17**	**46**	P	**Pn**	**09 15 40.6**	**+0.6**
	SNR=110						
AAK	**Ala-Archa**	**4.44**	**42**	P	**Pn**	**09 15 44.9**	**+1.2**
	SNR=64						
KZA	**Kyzart**	**4.52**	**52**	P	**Pn**	**09 15 44.9**	**+0.2**
	SNR=103						
KBK	**Karagaybulak**	**4.70**	**45**	P	**Pn**	**09 15 48.6**	**+1.4**
	SNR=74						
CHMS	**Chumysh**	**4.83**	**41**	P	**Pn**	**09 15 49.6**	**+0.6**
	SNR=35						
USP	**Ospenovka**	**4.91**	**37**	P	**Pn**	**09 15 50.6**	**+0.5**
	SNR=48						
ULHL	**Ulahol**	**5.23**	**55**	P	**Pn**	**09 15 53.4**	**-1.0**
	SNR=8.5						
TKM2	**Tokmak 2**	**5.23**	**46**	⇑P	**Pn**	**09 15 54.2**	**-0.3**
	26nm,0.5s						
TKM2				⇓S	**Sn**	**09 17 04.1**	**+11**
	41nm,0.8s						
TKM2	**Tokmak 2**	**5.23**	**46**	*e*Pn	**Pn**	**09 15 54.4**	**-0.1**
	44nm,0.5s						
TKM2				*e*Sn	**Sn**	**09 16 47.9**	**-5.6**
TKM2	**Tokmak 2**	**5.23**	**46**	*e*PN	**Pn**	**09 15 54.4**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,43nm,0.5s						
TKM2	**Tokmak 2**	**5.23**	**46**	P	**Pn**	**09 15 54.9**	**+0.4**
	SNR=16						
MK31	**Makanchi Array**	**11.36**	**46**	P	**Pn**	**09 17 16.7**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=226,slow=9.2,SNR=19						
MKAR	**Makanchi Array**	**11.36**	**46**	Pn	**Pn**	**09 17 16.7**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=228,slow=13,SNR=17						
MKAR				Lg		09 20 37.6	
	comp=Z,0.1nm,0.3s,baz=233,slow=19,SNR=2.8						
AB31	**Akbulak array**	**12.37**	**326**	P	**Pn**	**09 17 29.1**	**-2.7**
	comp=Z,8.7nm,0.6s,baz=160,slow=9.5,SNR=144						
AB31				⇓S	**Sn**	**09 19 46.0**	**-1.7**
	comp=Z,15nm,0.8s,baz=158,slow=26,SNR=12						
AKTK	**Aktyubinsk**	**14.08**	**326**	Pn	**Pn**	**09 17 54.1**	**-0.6**
AKTK				Sn	**Sn**	**09 20 30.0**	**+0.7**
AKTO	**Aktyubinsk**	**14.08**	**326**	⇑P	**Pn**	**09 17 54.4**	**-0.3**
	comp=Z,0.9nm,0.6s						
AKTO				⇑S	**Sn**	**09 20 28.0**	**-1.3**
	comp=Z,1.2nm,0.7s						
AKTO	**Aktyubinsk**	**14.08**	**326**	Pn	**Pn**	**09 17 54.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=138,slow=16,SNR=9.7						
AKTO				Sn	**Sn**	**09 20 30.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=160,slow=22,SNR=6.9						
ZAL	**Zalesovo**	**17.50**	**29**	P	**Pn**	**09 18 36.9**	**-0.9**
ZALV	**Zalesovo Beam**	**17.51**	**29**	P	**Pn**	**09 18 36.9**	**-1.1**
	comp=Z,0.8nm,0.3s,baz=225,slow=12,SNR=14						
SONM	**Songino Array**	**27.15**	**60**	P	**P**	**09 20 14.3**	**-0.8**
	comp=Z,0.2nm,0.4s,mb3.0,baz=263,slow=8.8,SNR=2.1						
FINES	**FINESS Array B**	**34.84**	**324**	P	**P**	**09 21 25.3**	**+2.7**
	comp=Z,1.5nm,0.9s,mb3.8,baz=116,slow=8.7,SNR=3.9						
ARCES	**ARCESS Array B**	**38.29**	**336**	P	**P**	**09 21 53.9**	**+2.0**
	comp=Z,6.0nm,1.1s,mb4.3,baz=96,slow=7.4,SNR=2.8						
HFS	**Hagfors**	**40.53**	**320**	P	**P**	**09 22 12.6**	**+2.0**
	comp=Z,1.8nm,0.5s,mb4.2,baz=102,slow=11,SNR=12						
NB2	**NORSAR Subarra**	**41.81**	**321**	P	**P**	**09 22 22.6**	**+1.5**
	comp=Z,0.4nm,0.5s,mb3.4,baz=107,slow=8.6						
NOA	**NORSAR Array B**	**41.81**	**321**	P	**P**	**09 22 23.0**	**+1.9**
NOA	**NORSAR Array B**	**41.81**	**321**	P	**P**	**09 22 23.0**	**+1.9**
	comp=Z,0.4nm,0.5s,mb3.4,baz=94,slow=7.9,SNR=4.4						
TIXI	**Tiksi**	**43.25**	**23**	*eP*	**P**	**09 22 32.1**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
YKA	**Yellowknife Ar**	**78.36**	**2**	P	**P**	**09 26 31.1**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.3,baz=351,slow=5.7,SNR=6.3						
WRA	**Warramunga Arr**	**83.90**	**122**	P	**P**	**09 26 56.3**	**-4.6**
	comp=Z,0.3nm,0.5s,mb3.4,baz=322,slow=4.9,SNR=8.8						

*ISCJB **26** 09:26:31.0±1.3, 3721N±006×13665E±008, h9km±10km, Error ellipse: s-maj=12.1km s-min=8.2km az=38.4*
*JMA **26** 09:26:31.4, 37.19N×136.66E, h10km, M3.6*
JMA Felt II J1.

ISC 26 09:26:31.1±1.2, 3720N±005×13664E±008, h13km±8km, n6, σ0§27/10, 3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.30**	**157**	⇓P	**Pg**	**09 26 37.4**	**+0.1**
JSZ	**Suzu**	**0.63**	**67**	P	**Pg**	**09 26 43.4**	**0.0**
JSZ				S	**Sg**	**09 26 51.6**	**-0.1**
JHG	**Hegura jima**	**0.68**	**19**	⇓P	**Pg**	**09 26 44.8**	**+0.4**
JTT	**Ttatey**	**0.82**	**137**	P	**Pg**	**09 26 46.6**	**-0.4**
JTT				S	**Sg**	**09 26 57.9**	**+0.2**
JKG	**Kaga**	**0.96**	**195**	⇓P	**Pb**	**09 26 49.3**	**-0.2**
JKG				S	**Sb**	**09 27 02.2**	**+0.2**
MAT	**Matsushiro**	**1.42**	**117**	P	**Pn**	**09 26 56.1**	**-0.5**
MAT				S	**Sn**	**09 27 15.4**	**+0.3**

*NEIC **26** 09:27:46.6±1.1, 7203N×0.13W, h10km, Error ellipse: s-maj=23.9km s-min=15.2km az=50.0*

IDC 26 09:27:45.3±1.4, 7201N×028W, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.4/20, mbtmp3.6/6, ML3.1/3, MS3.3/6, Ms1 3.3/6, ms1mx3.0/28, Error ellipse: s-maj=36.1km s-min=21.9km az=47.0, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARCES	**ARCESS Array B**	**8.82**	**94**	Pn	Pn	09 29 53.4	-0.4
	0.2nm,0.3s,baz=302,slow=11,SNR=9.8						
NOA	**NORSAR Array B**	**11.90**	**152**	Pn	Pn	09 30 35.3	-0.6
	0.2nm,0.3s,baz=334,slow=13,SNR=2.9						
NOA				LR	LR	09 35 07.8	
	comp=Z,106nm,18.6s,baz=220,slow=37						
HFS	**Hagfors**	**13.15**	**148**	Pn	Pn	09 30 52.6	-0.3
	0.1nm,0.3s,baz=343,slow=14,SNR=4.8						
HFS				LR	LR	09 35 26.0	
	comp=Z,176nm,18.2s,baz=249,slow=35						
FINES	**FINESS Array B**	**14.68**	**123**	LR	LR	09 36 12.3	
	comp=Z,106nm,21.7s,baz=258,slow=34						
VRAC	**Vranov**	**24.05**	**152**	LR	LR	09 42 43.5	
	comp=Z,62nm,19.8s,baz=170,slow=37						
GERES	**GERESS Array B**	**24.11**	**157**	P	P	09 33 04.0	+1.8
	0.6nm,0.6s,baz=5.2,slow=12,SNR=3.1						
GERES				LR	LR	09 41 39.7	
	comp=Z,87nm,20.1s,baz=277,slow=35						
MLR	**Muntele Rosu**	**29.35**	**141**	LR	LR	09 44 10.0	
	comp=Z,70nm,21.0s,baz=31,slow=34						
YKA	**Yellowknife Ar**	**38.52**	**317**	P	P	09 35 08.3	-0.3
	0.7nm,1.0s,baz=32,slow=8.9,SNR=6.3						
TORD	**Torodi Ar. Bea**	**58.85**	**178**	P	P	09 37 45.2	-0.1
	1.0nm,0.7s,baz=348,slow=6.2,SNR=5.4						

*NEIC **26** 09:35:37.0±0.2, 2211N×14305E, h10km, mb4.7/13, Error ellipse: s-maj=8.1km s-min=7.4km az=70.0*
*ISCJB **26** 09:35:38.8±5.1, 2210N±007×14296E±01.1, h32km±35km, mb4.4/27, MS3.0/2, Error ellipse: s-maj=15.7km s-min=12.5km az=179.8*
*MOS **26** 09:35:38.8±0.9, 2215N×14293E, h33km, mb4.6/8, Error ellipse: s-maj=19.7km s-min=10.6km az=106.4*
*IDC **26** 09:35:41.9±3.7, 2213N×14298E, h47km±35km, mb3.9/11, mb1 4.1/12, mb1mx4.0/16, mbtmp3.9/12, ML4.0/1

comp=Z,5.0nm,0.8s,mb4.5,baz=24,slow=7.1,SNR=5.7
BMO Blue Mountains 81.27 45 *eP* **P 09 47 52.9 -0.6**
CMB Columbia Colle 81.66 52 *eP* **P 09 47 55.7 -0.1**
comp=Z,3.2nm,0.7s,mb4.4
CMB Columbia Colle 81.66 52 *eP* **P 09 47 55.7 0.0**
CMB pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
FINES FINESS Array B 82.72 334 P **P 09 47 59.9 -0.9**
comp=Z,1.1nm,0.8s,mb4.8,baz=28,slow=14,SNR=3.8
NVAR Mina Array Bea 83.04 51 P **P 09 48 03.2 +0.3**
NVAR Mina Array Bea 83.04 51 P **P 09 48 03.2 +0.3**
comp=Z,2.6nm,0.7s,mb4.3,baz=263,slow=8.7,SNR=23
QLMT Earthquake Lak 85.09 43 *eP* **P 09 48 13.8 +0.5**
TPNV Topopah Spring 85.12 52 *eP* **P 09 48 13.3 -0.2**
comp=Z,3.5nm,0.8s,mb4.5
TPNV Topopah Spring 85.12 52 *eP* **P 09 48 13.4 -0.1**
TPNV pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
YMR Madison River 85.46 43 *eP* **P 09 48 16.1 +1.1**
comp=Z,4.3nm,0.8s,mb4.6
FFC Flin Flon 85.57 32 *eP* **P 09 48 14.9 -0.5**
comp=Z,8.0nm,0.9s,mb5.0
FFC Flin Flon 85.57 32 *eP* **P 09 48 14.9 -0.5**
FFC pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
IMW Indian Meadow 85.82 44 *eP* **P 09 48 17.7 +0.8**
comp=Z,4.1nm,0.8s,mb4.7
FLWY Flagg Ranch 85.89 44 *eP* **P 09 48 18.4 +1.1**
comp=Z,5.6nm,0.8s,mb4.8
DUG Dugway 86.20 48 *eP* **P 09 48 18.9 +0.1**
comp=Z,4.4nm,0.7s,mb4.8
DUG Dugway 86.20 48 *eP* **P 09 48 18.9 0.0**
DUG pmax pmax
comp=Z,4.0nm,0.7s,mb4.8
RLMT Red Lodge 86.32 43 *eP* **P 09 48 20.2 +0.9**
comp=Z,4.8nm,0.6s,mb4.9
HWUT Hardware Ranch 86.43 46 *eP* **P 09 48 20.0 0.0**
comp=Z,4.3nm,0.8s,mb4.7
JLU Jordanelle 86.96 47 *eP* **P 09 48 22.8 +0.2**
DAU Daniels Canyon 87.18 47 *eP* **P 09 48 23.8 +0.2**
PDAR Pinedale Array 87.23 45 P **P 09 48 23.6 -0.2**
comp=Z,0.6nm,0.8s,mb3.9,baz=255,slow=4.5,SNR=6.0
SRU San Rafael 88.27 48 *eP* **P 09 48 28.6 -0.2**
PV10 Paradox Valley 89.64 48 *eP* **P 09 48 35.4 +0.1**
SMCO Snowmass 90.67 47 *eP* **P 09 48 40.6 +0.6**
comp=Z,3.6nm,0.8s,mb4.8
SDCO Great Sand Dun 92.38 48 *eP* **P 09 48 48.2 +0.1**
comp=Z,38nm,2.8s,mb5.2
LPAZ La Paz 150.10 84 PKPbc PKPbc 09 55 28.4 -0.3
LPAZ PKPab PKPab 09 55 35.4 +0.8
LPAZ La Paz 150.10 84 PKPbc PKPbc 09 55 28.4 -0.3
comp=Z,3.5nm,0.7s,baz=290,slow=2.3,SNR=14
LPAZ PKPab PKPab 09 55 35.4 +0.8
comp=Z,2.4nm,0.6s,baz=193,slow=11,SNR=8.1

NIED ***26*** *09:35:00,3720N×13660E,h5km,Mw3.5 Best double couple: M₀2.07000×10¹⁴ NP1:φs166.00000°,δ35.00000°, λ58.00000°. NP2:φs24.00000°,δ61.00000°,λ110.00000°.*
ISCJB ***26*** *09:35:53.6±1.0,37.18N±003×13655E±006,h8km±6km, mb3.2/2, Error ellipse: s-maj=8.3km s-min=5.7km az=0.3*
JMA ***26*** *09:35:53.8±0.1,37.16N×13656E,h8km±1km,M3.6*
JMA Felt II J1.
IDC ***26*** *09:35:53.3±1.7,3720N×13674E,h0km, mb3.2/2, mb1 3.4/2, mb1mx3.2/18, mbtmp3.2/2, Error ellipse: s-maj=43.8km s-min=20.0km az=35.0*
ISC 26 09:35:54.3±0.8,3717N±003×13657E±006,h8km±5km,n9, σ0s74/16,mb3.2/2,4D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JJH	**Hakui**	**0.30**	**145**	⇓P		**Pg**	**09 35 59.9**	**-0.2**
JJH				S		**Sg**	**09 36 04.5**	**+0.4**
JSZ	**Suzu**	**0.69**	**66**	⇓P		**Pg**	**09 36 07.0**	**-0.7**
JSZ				S		**Sg**	**09 36 16.7**	**0.0**
JHG	**Hegura jima**	**0.73**	**22**	⇓P		**Pg**	**09 36 08.0**	**-0.5**
JHG				S		**Sg**	**09 36 19.0**	**+0.9**
JTT	**Ttatey**	**0.83**	**132**	⇓P		**Pg**	**09 36 09.7**	**-0.6**
JTT				S		**Sg**	**09 36 22.4**	**+1.3**
JKG	**Kaga**	**0.91**	**192**	P		**Pg**	**09 36 11.0**	**-0.8**
JKG				*e*S		**Sg**	**09 36 23.9**	**+0.3**
MAT	**Matsushiro**	**1.45**	**115**	P		**Pn**	**09 36 20.1**	**-0.7**
MAT				S		**Sn**	**09 36 40.4**	**+0.3**
MJAR	**Matsushiro Arr**	**1.46**	**115**	Pn		**Pn**	**09 36 20.1**	**-0.7**
	18nm,0.3s,baz=297,slow=16,SNR=180							
MJAR				Sn		**Sn**	**09 36 40.2**	**+0.1**
	20nm,0.3s,baz=302,slow=32,SNR=15							
SONM	**Songino Array**	**24.52**	**305**	P		**P**	**09 41 15.7**	**+1.7**
	0.3nm,0.5s,mb3.1,baz=121,slow=11,SNR=3.4							
YKA	**Yellowknife Ar**	**65.60**	**29**	P		**P**	**09 46 37.6**	**-0.6**
	0.2nm,0.7s,mb3.2,baz=306,slow=6.8,SNR=5.1							

ISCJB ***26*** *09:43:27.2±3.3,82S±02×1189E±02,h9km±21km,mb3.7/4, Error ellipse: s-maj=45.3km s-min=12.5km az=141.7*
IDC ***26*** *09:43:29.4±1.4,780S×11950E,h0km,mb3.8/4,mb1 4.0/6, mb1mx3.9/17,mbtmp3.9/6,ML4.1/2,MS3.7/2,Ms1 3.7/2, ms1mx3.0/25,Error ellipse: s-maj=72.8km s-min=12.1km az=51.0*
NEIC ***26*** *09:43:29.7±1.2,8.14S×11890E,h10km,mb4.3/1,Error ellipse: s-maj=73.1km s-min=11.4km az=57.0*
ISC 26 09:43:36.0±1.6,81S±02×1193E±03,h57km±17km,n12, σ1s04/17,mb3.8/3,2D,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WSI	**Waingapu**	**1.85**	**148**	⇓*e*P		**Pn**	**09 44 06.5**	**+1.0**
WSI				*e*S		**Sn**	**09 44 14.0**	**-14**
BATI	**Kupang**	**4.80**	**116**	Pn		**Pn**	**09 44 45.2**	**-0.6**
	4.2nm,0.3s,baz=335,slow=7.6,SNR=2.4							
BATI				Pg		**Pn**	**09 44 56.2**	**+10**
	8.6nm,0.3s,baz=291,slow=10,SNR=4.2							
BATI				Lg			09 45 57.6	
	2.9nm,0.3s,baz=23,slow=20,SNR=2.4							
BATI				LR		LR	09 47 19.1	
	comp=Z,205nm,19.8s,baz=75,slow=48							
FITZ	**Fitzroy Crossi**	**11.71**	**149**	*e*P		**Pn**	**09 46 19.5**	**-0.9**
	7.6nm,0.4s							
FITZ				*e*S		**Sn**	**09 48 27.4**	**-2.3**
FITZ	**Fitzroy Crossi**	**11.71**	**149**	Pn		**Pn**	**09 46 19.1**	**-1.3**
	1.1nm,0.3s,baz=335,slow=8.5,SNR=17							
FITZ				Sn		**Sn**	**09 48 29.9**	**+0.3**
	0.7nm,0.3s,baz=179,slow=19,SNR=4.4							
WRA	**Warramunga Arr**	**18.74**	**131**	P		**Pn**	**09 47 51.2**	**0.0**
	0.5nm,0.3s,baz=303,slow=12,SNR=20							
WRA				S		**S**	**09 51 20.2**	**-0.5**
	0.1nm,0.3s,baz=301,slow=25,SNR=4.9							
WB2	**Warramunga Ar**	**18.75**	**131**	⇓*i*P		**Pn**	**09 47 51.6**	**+0.2**
ASAR	**Alice Springs**	**20.88**	**140**	P		**P**	**09 48 14.9**	**+1.3**
	1.9nm,0.5s,baz=316,slow=10,SNR=31							
ASAR				S		**S**	**09 52 13.1**	**+10**
	0.9nm,0.8s,baz=306,slow=21,SNR=5.2							
STKA	**Stephens Creek**	**31.47**	**142**	*e*P		**P**	**09 49 53.4**	**+1.0**
	3.3nm,0.9s,mb4.2							
STKA	**Stephens Creek**	**31.47**	**142**	P		**P**	**09 49 53.8**	**+1.4**
	1.2nm,0.3s,mb4.2,baz=328,slow=9.1,SNR=14							
SONM	**Songino Array**	**56.84**	**350**	P		**P**	**09 53 15.3**	**+0.6**
	0.4nm,0.8s,mb3.5,baz=163,slow=7.7,SNR=4.5							
URZ	**Urewera**	**59.91**	**130**	LR		LR	10 17 59.9	
	comp=Z,211nm,20.0s,baz=260,slow=34							
MKAR	**Makanchi Array**	**63.79**	**333**	P		**P**	**09 54 00.3**	**-1.8**
	0.3nm,0.4s,mb3.6,baz=152,slow=6.5,SNR=4.3							

GRAL ***26*** *09:45:09.8±1.6,3444N×3683E,h0km±436km,MD3.0*
CSEM ***26*** *09:45:10.6±0.2,3443N×3670E,h8km,Mc1.4,Error ellipse: s-maj=6.0km s-min=3.7km az=110.0*
ISCJB ***26*** *09:45:11.2±0.8,3440N±004×3669E±006,h9km±8km, Error ellipse: s-maj=9.9km s-min=5.2km az=149.8*
NSSC ***26*** *09:45:11.5,3446N×3668E,h6km±1km*
ISC 26 09:45:11.8±0.6,3441N±003×3667E±004,h13km±6km,n17, σ0s83/30,12D,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HAWK	**Haweek**	**0.25**	**297**	⇑P		**Pg**	**09 45 16.3**	**-0.7**
HAWK				⇑S		**Sg**	**09 45 20.9**	**+0.3**
HAWK	**Haweek**	**0.25**	**297**	⇑*i*P		**Pg**	**09 45 16.3**	**-0.7**
FKH	**Fakeheh**	**0.28**	**232**	*e*Pg		**Pg**	**09 45 16.2**	**-1.4**
FKH				*e*Sg		**Sg**	**09 45 22.2**	**+0.6**
ROOS	**tl_alroos**	**0.56**	**115**	⇓P		**Pg**	**09 45 23.1**	**+0.2**
ROOS				⇓S		**Sg**	**09 45 31.4**	**+1.1**
ROOS	**tl_alroos**	**0.56**	**115**	⇓*i*P		**Pg**	**09 45 23.1**	**+0.2**
HWQ	**Hawqa**	**0.61**	**258**	*e*Pg		**Pg**	**09 45 23.4**	**-0.4**
HWQ				*e*Sg		**Sg**	**09 45 33.5**	**+1.6**
BIDA	**Albida**	**0.67**	**335**	⇓P		**Pg**	**09 45 24.3**	**-0.6**
BIDA				⇑S		**Sg**	**09 45 34.1**	**+0.5**
BIDA	**Albida**	**0.67**	**335**	⇓*i*P		**Pg**	**09 45 24.3**	**-0.5**
BHL	**Bhannes**	**0.98**	**239**	*e*Pg		**Pg**	**09 45 30.9**	**+0.1**
WRDH	**Warideh**	**1.12**	**349**	⇓P		**Pb**	**09 45 31.8**	**-1.2**
WRDH				⇓S		**Sb**	**09 45 47.2**	**-0.3**
WRDH	**Warideh**	**1.12**	**349**	⇓*i*P		**Pb**	**09 45 31.8**	**-1.2**
WRDH				⇓*i*S		**Sb**	**09 45 47.2**	**-0.2**
RCY	**Rachaya**	**1.16**	**218**	*e*Pg		**Pg**	**09 45 32.5**	**-1.7**
RCY				*e*Sg		**Sg**	**09 45 50.0**	**+0.7**
SLNF	**Slenfeh**	**1.24**	**343**	⇑P		**Pn**	**09 45 33.8**	**-1.0**
SLNF				⇑S		**Sb**	**09 45 51.6**	**+0.7**
SLNF	**Slenfeh**	**1.24**	**343**	⇑*i*P		**Pn**	**09 45 33.8**	**-1.0**
SLNF				⇑*i*S		**Sb**	**09 45 51.6**	**+0.7**
ARNB	**Al Arnab**	**1.56**	**339**	⇑P		**Pn**	**09 45 38.9**	**-0.3**
ARNB				⇓S		**Sn**	**09 45 59.8**	**+0.6**
BTCH	**Batrach**	**1.63**	**354**	⇓P		**Pn**	**09 45 40.3**	**+0.1**
BTCH				⇑S		**Sn**	**09 46 02.1**	**+0.9**
BTCH	**Batrach**	**1.63**	**354**	⇓*i*P		**Pn**	**09 45 40.3**	**+0.1**
BTCH				⇑*i*S		**Sn**	**09 46 02.1**	**+1.0**

IDC ***26*** *10:02:15.2±0.4,1040N×9319E,h0km,mb4.4/19, mb1 4.5/19,mb1mx4.4/24,mbtmp4.4/19,MS3.7/6, Ms1 3.7/6,ms1mx3.4/36,Error ellipse: s-maj=19.2km s-min=11.9km az=60.0*
MOS ***26*** *10:02:18.7±0.7,1037N×9317E,h38km,mb4.8/12,Error ellipse: s-maj=17.3km s-min=8.0km az=123.3*
ISCJB ***26*** *10:02:19.5±1.0,1024N±005×9309E±005,h46km±9km, mb4.4/40,MS3.8/7,Error ellipse: s-maj=9.4km s-min=6.0km az=41.7*
NEIC ***26*** *10:02:22.4±0.2,1033N×9308E,mb4.6/17,Error ellipse: s-maj=9.4km s-min=6.0km az=48.0*
BJI ***26*** *10:02:24.9,1089N×9317E,h33km,mB5.1,mb4.5,Ms4.4, Msz3.9*
ISC 26 10:02:21.9±0.8,1026N±005×9303E±005,h51km±7km, h55km±3.0km:pP-P,n117,σ0s89/114,mb4.4/40,MS3.8/7,1D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBA	**Port Blair**	**1.42**	**348**	*e*P		**Pn**	**10 02 51.5**	**+6.2**
PBA				*e*S		**Sn**	**10 03 10.8**	**+8.0**
NST	**Nakhon Sawan**	**8.76**	**51**	P		**Pn**	**10 04 27.0**	**+1.0**
KULM	**Kulim**	**9.02**	**123**	*e*Pn		**Pn**	**10 04 30.0**	**+0.5**
KULM				*e*Sn		**Sn**	**10 06 08.1**	**-1.6**
CHG	**Chiang Mai**	**10.25**	**33**	PG		**Pn**	**10 04 49.4**	**+3.1**
CHTO	**Chiang Mai**	**10.25**	**33**	*e*Pn		**Pn**	**10 04 48.7**	**+2.4**
	15nm,1.1s							
CHTO	**Chiang Mai**	**10.25**	**33**	*e*P		**Pn**	**10 04 48.7**	**+2.4**
CHTO				pmax	pmax			
	comp=Z,15nm,1.1s							
VIS	**Vishakhapatnam**	**11.98**	**309**	*e*P		**Pn**	**10 05 08.8**	**-1.2**
VIS				*e*S		**Sn**	**10 07 09.9**	**-12**
MDRS	**Chennai**	**12.83**	**284**	*e*P		**Pn**	**10 05 19.9**	**-1.8**
SHL	**Shillong**	**15.26**	**356**	*e*P		**Pn**	**10 05 57.5**	**+3.4**
SHL				*ex*		x	10 08 32.0	
HYB	**Hyderabad**	**15.75**	**298**	*e*P		**Pn**	**10 05 59.5**	**-1.0**
HYB	**Hyderabad**	**15.75**	**298**	*i* P		**Pn**	**10 05 59.5**	**-1.0**
HYB				*e*			10 08 43.5	
HYB				*e*S		**S**	**10 08 57.0**	**-10**
BLSP	**Bilaspur**	**15.76**	**320**	*e*P		**Pn**	**10 06 00.9**	**+0.3**
BLSP				*ex*		x	10 08 45.5	
ODAN	**Odare**	**17.35**	**343**	*e*P		**Pn**	**10 06 20.4**	**-0.1**
	comp=Z,23nm,0.4s							
TAPN	**Taplejung**	**17.73**	**344**	*e*P		**Pn**	**10 06 25.2**	**+0.1**
	comp=Z,34nm,0.6s							
JIRN	**Jiri**	**18.47**	**341**	*e*P		**Pn**	**10 06 34.4**	**+0.2**
	comp=Z,23nm,0.6s							
KKN	**Kakani**	**18.90**	**338**	*e*P		**Pn**	**10 06 39.1**	**-0.3**
GKN	**Gorkha**	**19.34**	**337**	*e*P		**Pn**	**10 06 44.2**	**-0.4**
LSA	**Lhasa**	**19.42**	**355**	P		**Pn**	**10 06 44.5**	**-1.1**
KOLN	**Koldanda**	**19.55**	**334**	*e*P		**Pn**	**10 06 46.7**	**-0.4**
	comp=Z,19nm,0.6s							
KAD	**Karad**	**19.59**	**293**	*e*P		**Pn**	**10 06 47.8**	**+0.1**
KAD				*ex*		x	10 06 49.7	
	comp=Z,18nm,0.3s							
CD2	**Chengdu**	**22.84**	**24**	*e*P		**P**	**10 07 21.8**	**+1.1**
CD2				AP			10 07 35.0	
CD2				S		**S**	**10 11 23.5**	**-3.1**
CD2				AMB	AMB			
	comp=Z,10.0nm,0.6s,mb4.4							
GTA	**Gaotai**	**29.65**	**11**	*e*P		**P**	**10 08 22.8**	**+0.2**
GTA				AP	pP		10 08 33.0	-2.7
GTA				XP	sP		10 08 37.3	-4.4
GTA				AMB	AMB			
	comp=Z,2.0nm,0.7s,mb4.0							
HHC	**Hu-ho-hao-te**	**34.59**	**25**	*e*P		**P**	**10 09 06.3**	**+0.4**
HHC				AP	pP		10 09 21.5	+2.4
HHC				PP	PP		10 10 23.0	-2.1
HHC				S	S		**10 14 30.5**	**-1.1**
HHC				AMB	AMB			
	comp=Z,15nm,0.6s,mb5.1							
HHC				AMB	AMB			
	comp=Z,121nm,5.6s							
HHC				LR	LR			
	comp=N,140nm,16.1s,MS4.2							
HHC				LR	LR			
	comp=E,295nm,14.3s,MS4.2							
HHC				LR	LR			
	comp=Z,94nm,15.5s,MS3.6							
TKM2	**Tokmak 2**	**35.92**	**338**	*e*P		**P**	**10 09 18.5**	**+1.2**
	comp=Z,2.9nm,0.7s,mb4.3							
TKM2				*e*		pP	10 09 32.4	+1.9
TKM2	**Tokmak 2**	**35.92**	**338**	*e*P		**P**	**10 09 18.5**	**+1.2**
TKM2				*e*		pP	10 09 32.4	+1.9
TKM2				pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3							
AML	**Almayashu**	**35.99**	**335**	*e*P		**P**	**10 09 19.3**	**+1.4**
	comp=Z,8.7nm,0.8s,mb4.7							
EKS2	**Erkin-Say**	**36.40**	**336**	*e*P		**P**	**10 09 22.6**	**+1.2**
	comp=Z,2.8nm,0.8s,mb4.2							
EKS2				*e*		pP	10 09 37.8	+3.2
MKAR	**Makanchi Array**	**37.54**	**348**	P		**P**	**10 09 30.6**	**-0.4**
MKAR							10 11 48.6	
MKAR	**Makanchi Array**	**37.54**	**348**	P		**P**	**10 09 30.6**	**-0.4**
	comp=Z,2.5nm,0.7s,mb4.0,baz=169,slow=7.7,SNR=13							
MKAR				PcP	PcP		10 11 48.6	+0.4
	comp=Z,0.9nm,0.6s,baz=166,slow=2.6,SNR=3.7							
MKAR				LR	LR		10 27 00.2	
	comp=Z,58nm,18.2s,MS3.4,baz=168,slow=40							
SONM	**Songino Array**	**39.11**	**14**	P		**P**	**10 09 44.2**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.8,baz=202,slow=11,SNR=9.1							
SONM				PcP	PcP		10 11 54.1	+1.0
	comp=Z,2.4nm,0.7s,baz=196,slow=3.6,SNR=9.8							
ZAK	**Zakamensk**	**40.89**	**10**	*e*P		**P**	**10 10 02.1**	**+3.2**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.7s,mb3.5							
ZAK				pmax	pmax			
	comp=Z,1.0nm,1.6s							
KSRS	**Korea Array**	**41.44**	**43**	LR		LR	10 28 31.9	
	comp=Z,38nm,19.6s,MS3.3,baz=144,slow=38							
FITZ	**Fitzroy Crossi**	**42.78**	**131**	P		**P**	**10 10 13.9**	**-0.9**
	comp=Z,0.9nm,0.4s,mb3.8,baz=336,slow=12							
FITZ				PcP	PcP		10 12 06.9	+1.3
	comp=Z,0.8nm,0.4s,baz=326,slow=15,SNR=3.8							
ZAL	**Zalesovo**	**44.06**	**353**	P		**P**	**10 10 23.8**	**-0.8**
ZALV	**Zalesovo Beam**	**44.07**	**353**	P		**P**	**10 10 23.8**	**-0.9**
ZALV	**Zalesovo Beam**	**44.07**	**353**	P		**P**	**10 10 23.8**	**-0.9**
	comp=Z,1.6nm,0.4s,mb4.1,baz=176,slow=9.7,SNR=6.0							
MJAR	**Matsushiro Arr**	**48.42**	**50**	P		**P**	**10 10 57.4**	**-1.8**
	comp=Z,0.6nm,0.7s,mb3.8,baz=270,slow=8.2,SNR=2.4							
NWAO	**Narrogin (SRO)**	**48.75**	**153**	P		**P**	**10 11 01.2**	**-0.5**
	baz=63,slow=4.5							
NWAO				LR	LR		10 29 55.4	
	comp=Z,123nm,19.5s,MS3.9,baz=206,slow=34							
AKTK	**Aktyubinsk**	**49.34**	**331**	P		**P**	**10 11 06.6**	**+0.6**
AKTO	**Aktyubinsk**	**49.34**	**331**	P		**P**	**10 11 06.6**	**+0.6**
AKTO				pmax	pmax			
	comp=Z,2.0nm,0.5s,mb4.4							
AKTO	**Aktyubinsk**	**49.34**	**331**	P		**P**	**10 11 06.6**	**+0.6**
	comp=Z,2.4nm,0.5s,mb4.5,baz=109,slow=8.8,SNR=11							
BOD	**Bodaibo**	**50.11**	**14**	*e*P		**P**	**10 11 11.3**	**-0.4**
BOD				pmax	pmax			
	comp=Z,2.0nm,1.1s,mb4.1							
WRA	**Warramunga Arr**	**50.54**	**126**	P		**P**	**10 11 15.5**	**-0.1**
	comp=Z,8.2nm,0.5s,mb4.9,baz=306,slow=8.4,SNR=62							
WRA				PcP	PcP		10 12 33.4	+0.5
	comp=Z,1.1nm,0.5s,baz=313,slow=2.8,SNR=6.1							
WB2	**Warramunga Arr**	**50.55**	**126**	*e*P		**P**	**10 11 15.5**	**-0.1**
ASAR	**Alice Springs**	**52.28**	**131**	P		**P**	**10 11 28.4**	**-0.1**
	comp=Z,13nm,0.6s,mb5.0,baz=304,slow=6.7,SNR=295							
OPO	**Ambohidratompo**	**53.53**	**238**	P		**P**	**10 11 40.7**	**+2.9**
	comp=Z,1.6nm,0.8s,mb4.0,baz=56,slow=12,SNR=5.7							
STKA	**Stephens Creek**	**62.54**	**134**	⇓*i*P		**P**	**10 12 41.1**	**+0.5**
	comp=Z,11nm,0.8s,mb5.0							
STKA	**Stephens Creek**	**62.54**	**134**	*e*P		**P**	**10 12 41.3**	**+0.6**
	comp=Z,12nm,0.7s,mb5.1							
STKA	**Stephens Creek**	**62.54**	**134**	P		**P**	**10 12 41.4**	**+0.8**
	comp=Z,12nm,0.6s,mb5.2,baz=315,slow=5.7,SNR=42							
OBN	**Obninsk**	**62.79**	**327**	*e*P		**P**	**10 12 42.6**	**+0.6**
OBN				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.7							
TIXI	**Tiksi**	**65.13**	**12**	*e*P		**P**	**10 12 56.1**	**-0.9**
	comp=Z,9.5nm,0.7s,mb4.9							
TIXI				*e*		pP	10 13 10.5	-0.8
TIXI	**Tiksi**	**65.13**	**12**	*e*P		**P**	**10 12 55.9**	**-1.1**
TIXI				pmax	pmax			
	comp=Z,10.0nm,0.9s,mb4.8							
AKASG	**Malin Array Be**	**65.62**	**321**	P		**P**	**10 12 59.8**	**-0.8**
	comp=Z,1.1nm,0.5s,mb4.2,baz=86,slow=5.6,SNR=5.9							
FINES	**FINESS Array B**	**70.11**	**332**	P		**P**	**10 13 28.2**	**-0.4**
	comp=Z,0.8nm,0.6s,mb3.8,baz=120,slow=11,SNR=4.0							
ARCES	**ARCESS Array B**	**72.67**	**340**	P		**P**	**10 13 44.2**	**+0.3**
ARCES				LR		LR	10 48 08.4	
ARCES	**ARCESS Array B**	**72.67**	**340**	P		**P**	**10 13 44.2**	**+0.3**
	comp=Z,6.8nm,0.9s,mb4.6,baz=93,slow=6.6,SNR=8.0							
ARCES				LR		LR	10 48 08.4	
	comp=Z,129nm,20.5s,MS4.2,baz=204,slow=38							
GERES	**GERESS Array B**	**75.33**	**318**	P		**P**	**10 14 00.4**	**+0.5**
	comp=Z,3.0nm,0.6s,mb4.4,baz=94,slow=6.7,SNR=11							
BOSA	**Boshof**	**75.94**	**237**	P		**P**	**10 14 06.2**	**+2.5**
	comp=Z,13nm,0.8s,mb4.9,baz=99,slow=4.5,SNR=17							
NB2	**NORSAR Subarra**	**77.13**	**330**	P		**P**	**10 14 09.1**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.8,baz=90,slow=5.9							
NB2	**NORSAR Subarra**	**77.13**	**330**	P		**P**	**10 14 09.1**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.8							
NB2	**NORSAR Subarra**	**77.13**	**330**	P		**P**	**10 14 09.1**	**-0.7**
NB2				pmax	pmax			
	comp=Z,1.0nm,0.6s,mb3.9							
NOA	**NORSAR Array B**	**77.13**	**330**	P		**P**	**10 14 09.1**	**-0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=93,slow=5.6,SNR=5.0							
NOA				LR		LR	10 49 41.0	
	comp=Z,42nm,18.1s,MS3.8,baz=295,slow=37							
CDF	**Champ du Feu**	**79.60**	**318**	*e*P		**P**	**10 14 23.8**	**+0.1**
SBF	**Sospel**	**79.81**	**313**	*e*P		**P**	**10 14 25.2**	**+0.2**
	comp=Z,54nm,1.0s,mb5.1							
SBF	**Sospel**	**79.81**	**313**	*e*P		**P**	**10 14 25.2**	**+0.2**
	comp=Z,27nm,1.0s,mb5.1							
SBF	**Sospel**	**79.81**	**313**	*e*P		**P**	**10 14 25.2**	**+0.2**
SBF				pmax	pmax			
	comp=Z,27nm,1.0s,mb5.1							
TSUM	**Tsumeb**	**79.87**	**248**	LR		LR	10 46 32.0	
	comp=Z,41nm,18.1s,MS3.8,baz=148,slow=33							
HINF	**Hinteralfeld**	**79.93**	**317**	*e*P		**P**	**10 14 25.3**	**-0.2**
LPG	**La Plagne**	**80.17**	**315**	*e*P		**P**	**10 14 27.4**	**+0.5**
	comp=Z,16nm,0.8s,mb4.7							
LPG	**La Plagne**	**80.17**	**315**	*e*P		**P**	**10 14 27.4**	**+0.5**
	comp=Z,8.1nm,0.8s,mb4.7							
LPG	**La Plagne**	**80.17**	**315**	*e*P		**P**	**10 14 27.4**	**+0.5**
LPG				pmax	pmax			
	comp=Z,8.0nm,0.8s,mb4.7							
LPL	**La Plagne**	**80.19**	**315**	*e*P		**P**	**10 14 27.5**	**+0.5**
	comp=Z,19nm,0.6s,mb4.9							
LPL	**La Plagne**	**80.19**	**315**	*e*P		**P**	**10 14 27.5**	**+0.5**
	comp=Z,9.6nm,0.6s,mb4.9							
LPL	**La Plagne**	**80.19**	**315**	*e*P		**P**	**10 14 27.5**	**+0.5**
LPL				pmax	pmax			
	comp=Z,10.0nm,0.6s,mb4.9							
MBDF	**Montbardon**	**80.22**	**314**	*e*P		**P**	**10 14 27.2**	**0.0**
	comp=Z,14nm,0.9s,mb4.6							
MBDF	**Montbardon**	**80.22**	**314**	*e*P		**P**	**10 14 27.2**	**0.0**
	comp=Z,7.3nm,0.9s,mb4.6							
MBDF	**Montbardon**	**80.22**	**314**	*e*P		**P**	**10 14 27.2**	**0.0**
MBDF				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.6							
HAU	**Haudompre**	**80.25**	**317**	*e*P		**P**	**10 14 27.0**	**-0.3**
	comp=Z,7.6nm,0.5s,mb4.5							
HAU	**Haudompre**	**80.25**	**317**	*e*P		**P**	**10 14 27.0**	**-0.3**
	comp=Z,3.8nm,0.5s,mb4.6							
HAU	**Haudompre**	**80.25**	**317**	*e*P		**P**	**10 14 27.0**	**-0.

s-min=40.7km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.10**	**286**	LR	LR	10 18 36.1	
	comp=Z,39nm,19.4s,baz=69,slow=29						
CTA	**Charters Tower**	**34.47**	**274**	LR	LR	10 30 09.4	
	comp=Z,140nm,18.9s,baz=326,slow=34						
STKA	**Stephens Creek**	**36.22**	**253**	LR	LR	10 30 46.8	
	comp=Z,92nm,18.4s,baz=21,slow=33						
ASAR	**Alice Springs**	**44.37**	**263**	P	P	10 18 57.5	+0.4
	1.2nm,0.6s,baz=94,slow=6.9,SNR=28						
WRA	**Warramunga Arr**	**45.09**	**269**	P	P	10 19 02.6	-0.4
	0.9nm,0.5s,baz=109,slow=7.9,SNR=17						
TEIG	**Tepich**	**97.87**	**71**	LR	LR	11 04 21.8	
	comp=Z,48nm,18.0s,baz=94,slow=33						
MKAR	**Makanchi Array**	**116.66**	**311**	PKP	PKPdf	10 29 29.4	-1.2
	0.3nm,0.3s,baz=92,slow=3.3,SNR=3.5						
NB2	**NORSAR Subarra**	**146.01**	**353**	PKP	PKPdf	10 30 25.9	+0.8
	comp=Z,1.1nm,0.7s,baz=8.7,slow=2.9						
NOA	**NORSAR Array B**	**146.01**	**353**	PKPbc	PKPbc	10 30 26.0	+0.2
	comp=Z,2.5nm,0.9s,baz=13,slow=4.3,SNR=7.5						
AKASG	**Malin Array Be**	**149.52**	**327**	PKPbc	PKPbc	10 30 35.0	-0.6
	comp=Z,0.9nm,0.5s,baz=50,slow=2.1,SNR=4.8						

IDC 26 10:33:26.9±8.8, 1741S×17898W, h514km±96km, mb3.1/6, mb1 3.4/6, mb1mx3.2/14, mbtmp3.1/6, Error ellipse: s-maj=35.1km s-min=29.5km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.40**	**240**	P	P	10 40 04.8	+0.8
	2.6nm,0.7s,baz=90,slow=9.1,SNR=4.1						
WRA	**Warramunga Arr**	**44.19**	**259**	P	P	10 40 49.4	-0.8
	0.6nm,0.6s,baz=95,slow=7.7,SNR=18						
ASAR	**Alice Springs**	**44.41**	**254**	P	P	10 40 51.9	+0.2
	5.6nm,0.6s,baz=89,slow=8.0,SNR=154						
QSPA	**South Pole Qui**	**72.64**	**180**	P	P	10 44 01.8	+0.3
	1.0nm,0.7s,baz=215,slow=1.2,SNR=11						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	P	10 44 40.3	+0.6
	0.4nm,0.7s,baz=224,slow=8.5,SNR=4.4						
PDAR	**Pinedale Array**	**87.36**	**44**	P	P	10 45 18.9	-0.1
	0.4nm,0.5s,baz=243,slow=3.7,SNR=5.0						
GERES	**GERESS Array B**	**146.99**	**345**	PKPbc	PKPbc	10 52 11.3	-0.2
	0.3nm,0.3s,baz=49,slow=4.5,SNR=2.1						
DAVOX	**Davos/Dischmat**	**149.81**	**348**	PKPbc	PKPbc	10 52 18.6	0.0
	2.7nm,0.5s,baz=164,slow=18,SNR=4.1						

*IDC **26** 10:38:42.0±0.5, 830S×15692E, h0km, mb4.8/14, mb1 4.9/16, mb1mx4.9/17, mbtmp4.7/16, ML4.2/2, MS4.6/16, Ms1 4.6/16, ms1mx4.5/20, Error ellipse: s-maj=18.5km s-min=14.7km az=88.0*

*GCMT **26** 10:38:43.8±0.1, 856S×15720E, h12km, MW5.3/106, Moment Tensor Solution. s81,c134; s106,c181; Duration: 1ꝉ1 Moment tensor: Scale 10^{17}Nm; M_{rr}1.08±.01; $M_{\theta\theta}$-0.44±.01; $M_{\phi\phi}$-0.63±.02; $M_{r\theta}$0.44±.04; $M_{\theta\phi}$0.61±.01; $M_{\phi r}$-0.24±.04; Best double couple: M_o1.22700×10^{17} NP1:ϕs329.00000°, δ34.00000°, λ105.00000°. NP2:ϕs131.00000°, δ57.00000°, λ80.00000°. Principal axes: T 1.2020, Plg76.0000°, Azm11.0000°; N 0.0550, Plg8.0000°, Azm136.0000°; P -1.2530, Plg11.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **26** 10:38:43.8±0.2, 828S×15699E, h10km, mb5.3/49 Error ellipse: s-maj=6.7km s-min=5.1km az=119.0*

*BJI **26** 10:38:44.8, 775S×15724E, h17km, mB5.4, mb5.0, Ms4.9, Msz4.5*

*MOS **26** 10:38:45.9±1.1, 831S×15692E, h33km, mb5.5/33, MS4.5/5, Error ellipse: s-maj=10.3km s-min=7.9km az=93.0*

*ISCJB **26** 10:38:46.4±0.1, 835S±003×15695E±002, h33km, mb5.2/88, MS4.6/37, Error ellipse: s-maj=5.0km s-min=3.5km az=178.9*

ISC 26 10:38:44.7±1.2, 832S±004×15701E±003, h11km±7km, h28km±3.8km:pP-P, n403, σ0ꝉ93/398, mb5.2/88, MS4.6/37, 84C-88D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.11**	**111**	*e*Pn	**Pn**	**10 39 35.4**	**+1.7**
HNR				*e*S	**Sn**	**10 40 21.6**	**+11**
HNR	**Honiara**	**3.11**	**111**	Pn	**Pn**	**10 39 35.6**	**+2.0**
	384nm,0.3s,baz=266,slow=4.9,SNR=20						
HNR				Sn	**Sn**	**10 40 13.2**	**+2.4**
	389nm,0.3s,baz=90,slow=20,SNR=3.4						
CTA	**Charters Tower**	**15.65**	**221**	*e*P	**Pn**	**10 42 23.0**	**-2.3**
	34nm,0.9s						
CTA				*e*S	**Sn**	**10 45 29.1**	**+10**
CTA	**Charters Tower**	**15.65**	**221**	*e*P	**Pn**	**10 42 23.0**	**-2.3**
CTA				pmax	pmax		
	comp=Z,34nm,0.9s						
CTA	**Charters Tower**	**15.65**	**221**	Pn	**Pn**	**10 42 23.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=53,slow=19,SNR=2.9						
CTAO	**Charters Tower**	**15.65**	**221**	*e*P	**Pn**	**10 42 30.7**	**+5.3**
	comp=Z,314nm,1.7s						
CTAO	**Charters Tower**	**15.65**	**221**	*e*P	**Pn**	**10 42 30.7**	**+5.4**
CTAO				pmax	pmax		
	comp=Z,314nm,1.7s						
DZM	**Mont Dzumac**	**16.41**	**147**	LR	LR	10 47 18.2	
	comp=Z,2μm,18.7s,baz=353,slow=31						
EIDS	**Eidsvold**	**17.87**	**198**	*e*P	**Pn**	**10 42 51.6**	**-1.7**
	comp=Z,135nm,1.9s						
ARMA	**Armidale**	**22.55**	**192**	*e*P	**P**	**10 43 45.3**	**+0.5**
ARMA				*i* S	**S**	**10 47 53.2**	**+0.8**
KAKA	**Kakadu**	**24.54**	**258**	*e*P	**P**	**10 44 04.8**	**+0.3**
	comp=Z,228nm,1.5s,mb5.5						
WB2	**Warramunga Arr**	**24.78**	**240**	*e*P	**P**	**10 44 06.0**	**-0.7**
WB2				*e*PCP	PcP	10 47 42.8	-0.6
WB2				*i* S	**S**	**10 48 26.6**	**-2.6**
WB2				*e*PCS	PcS	10 51 23.6	-0.1
WRA	**Warramunga Arr**	**24.79**	**240**	P	**P**	**10 44 05.6**	**-1.2**
WRA				PcP	PcP	10 47 42.7	-0.8
WRA				LR	LR	10 53 10.1	
WRA	**Warramunga Arr**	**24.79**	**240**	P	**P**	**10 44 05.6**	**-1.2**
WRA						10 47 42.7	
WRA	**Warramunga Arr**	**24.79**	**240**	P	**P**	**10 44 05.6**	**-1.2**
	comp=Z,40nm,1.0s,mb4.9,baz=64,slow=9.3,SNR=69						
WRA				PcP	PcP	10 47 42.7	-0.8
	comp=Z,6.9nm,1.0s,baz=67,slow=2.6,SNR=10						
WRA				LR	LR	10 53 10.1	
	comp=Z,3μm,21.3s,MS4.8,baz=60,slow=35						
RIV	**Riverview**	**25.95**	**191**	*e*P	**P**	**10 44 19.5**	**+2.3**
ASAR	**Alice Springs**	**26.88**	**233**	P	**P**	**10 44 23.9**	**-1.7**
	comp=Z,7.7nm,0.9s,mb4.2,baz=63,slow=8.9,SNR=38						
ASAR				PcP	PcP	10 47 47.5	-0.6
	comp=Z,1.9nm,0.9s,baz=77,slow=3.1,SNR=4.2						
STKA	**Stephens Creek**	**27.47**	**209**	*e*P	**P**	**10 44 30.8**	**-0.1**
	comp=Z,32nm,0.7s,mb5.0						
STKA				*e*PCP	PcP	10 47 49.8	+0.4
STKA				*e*S	**S**	**10 48 55.7**	**-16**
STKA	**Stephens Creek**	**27.47**	**209**	P	**P**	**10 44 30.0**	**-0.9**
	comp=Z,29nm,0.7s,mb4.9,baz=28,slow=10,SNR=36						
STKA				PcP	PcP	10 47 50.0	+0.6
	comp=Z,12nm,0.9s,baz=22,slow=2.9,SNR=3.3						
STKA				LR	LR	10 55 16.6	
	comp=Z,2μm,18.8s,MS4.7,baz=30,slow=36						
CNB	**Canberra Magne**	**27.76**	**194**	*e*P	**P**	**10 44 36.0**	**+2.5**
	comp=Z,65nm,1.3s,mb5.2						
FITZ	**Fitzroy Crossi**	**32.00**	**249**	*e*P	**P**	**10 45 10.0**	**-1.2**
	comp=Z,15nm,0.6s,mb5.0						
FITZ				*e*S	**S**	**10 50 17.3**	**-5.6**
FITZ	**Fitzroy Crossi**	**32.00**	**249**	LR	LR	10 57 55.7	
	comp=Z,2μm,20.2s,MS4.7,baz=32,slow=36						
BATI	**Kupang**	**32.95**	**264**	LR	LR	11 00 11.6	
	comp=Z,2μm,18.4s,MS4.8,baz=115,slow=39						
URZ	**Urewera**	**34.89**	**152**	P	**P**	**10 45 38.6**	**+2.4**
	comp=Z,10nm,1.0s,mb4.7,baz=316,slow=8.3,SNR=3.2						
URZ				LR	LR	10 57 37.1	
	comp=Z,1μm,19.3s,MS4.6,baz=31,slow=32						
FORT	**Forrest**	**35.06**	**226**	*e*P	**P**	**10 45 36.3**	**-1.5**
	comp=Z,71nm,1.1s,mb5.5						
TAU	**Tasmania Unive**	**35.49**	**192**	*e*P	**P**	**10 45 40.6**	**-0.6**
	comp=Z,141nm,1.4s,mb5.7						
TAU	**Tasmania Unive**	**35.49**	**192**	*e*P	**P**	**10 45 40.6**	**-0.6**
TAU				pmax	pmax		
	comp=Z,141nm,1.4s,mb5.7						
SNZO	**South Karori**	**36.41**	**157**	*e*P	**P**	**10 45 48.1**	**-1.1**
	comp=Z,49nm,1.0s,mb5.4						
RPZ	**Rata Peaks**	**37.33**	**163**	P	**P**	**10 45 56.6**	**-0.4**
	comp=Z,7.9nm,0.7s,mb4.6,baz=352,slow=7.1,SNR=3.3						
RPZ				LR	LR	10 58 38.2	
	comp=Z,1μm,18.3s,MS4.7,baz=135,slow=32						
MBWA	**Marble Bar**	**38.13**	**246**	*e*P	**P**	**10 46 04.4**	**+0.3**
	comp=Z,59nm,1.2s,mb5.2						
MYLDM	**Lahad Datu**	**40.68**	**288**	⇑P	**P**	**10 46 28.2**	**+2.7**
TSM	**Tawau**	**40.99**	**286**	⇑P	**P**	**10 46 30.7**	**+2.6**
SDKM	**Sandakan**	**42.05**	**288**	⇑P	**P**	**10 46 38.3**	**+1.6**
KDM	**Kudat**	**42.82**	**290**	⇓P	**P**	**10 46 44.0**	**+1.0**
KKM	**Kota Kinabalu**	**43.11**	**288**	⇑P	**P**	**10 46 46.9**	**+1.5**
KLBR	**Kellerberrin**	**43.20**	**232**	*e*P	**P**	**10 46 44.9**	**-1.0**
	comp=Z,43nm,0.8s,mb5.2						
RAR	**Rarotonga**	**43.56**	**112**	LR	LR	11 01 01.4	
	comp=Z,401nm,20.7s,MS4.3,baz=101,slow=31						
NWAO	**Narrogin (SRO)**	**44.15**	**231**	*e*P	**P**	**10 46 53.2**	**-0.3**
	comp=Z,261nm,1.9s,mb5.6						
NWAO	**Narrogin (SRO)**	**44.15**	**231**	*e*P	**P**	**10 46 53.2**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,261nm,1.9s						
BTM	**Bintulu**	**45.27**	**283**	⇓P	**P**	**10 47 05.9**	**+3.2**
SBUM	**Sibu**	**45.92**	**282**	⇓P	**P**	**10 47 09.2**	**+1.3**
KSM	**Kuching**	**47.56**	**280**	*e*P	**P**	**10 47 21.1**	**+0.3**
KSM	**Kuching**	**47.56**	**280**	⇓P	**P**	**10 47 21.5**	**+0.8**
MJAR	**Matsushiro Arr**	**47.99**	**340**	P	**P**	**10 47 22.6**	**-1.1**
	comp=Z,3.3nm,0.8s,mb4.4,baz=166,slow=8.3,SNR=7.6						
MJAR				LR	LR	11 04 37.4	
	comp=Z,382nm,19.9s,MS4.4,baz=180,slow=32						
QZH	**Quanzhou**	**49.94**	**313**	⇑*i*P	**P**	**10 47 41.3**	**+2.5**
QZH				S	**S**	**10 54 51.0**	**+1.7**
QZH				AMB	AMB		
	comp=Z,570nm,10.7s						
QZH				LR	LR		
	comp=Z,680nm,15.5s,MS4.8						
SSE	**Sheshan**	**52.09**	**320**	P	**P**	**10 47 55.5**	**+0.6**
SSE				XP	sP	10 47 59.8	0.0
SSE				S	**S**	**10 55 19.0**	**+0.1**
SSE				XS	sS	10 55 25.3	+0.5
SSE				AMB	AMB		
	comp=Z,34nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,179nm,5.7s						
SSE				LR	LR		
	comp=N,123nm,17.3s,MS4.3						
SSE				LR	LR		
	comp=E,189nm,17.3s,MS4.3						
SSE				LR	LR		
	comp=Z,211nm,13.4s,MS4.3						
PPT	**Papeete**	**52.72**	**106**	*e*S	**S**	**10 55 22.6**	**-5.4**
	comp=Z,390nm,28.8s						
PPT				*e*LQ		11 01 07.5	
	comp=Z,1μm,26.5s						
PPT				*e*LR	LR	11 03 09.0	
	comp=Z,2μm,30.5s,baz=279						
PPT	**Papeete**	**52.72**	**106**	LR	LR	11 06 48.5	
	comp=Z,262nm,19.6s,MS4.3,baz=293,slow=32						
TVO	**Taravao**	**53.04**	**106**	*e*P	**P**	**10 48 01.4**	**-0.8**
	comp=Z,90nm,1.1s,mb5.6						
TVO	**Taravao**	**53.04**	**106**	*e*P	**P**	**10 48 01.4**	**-0.8**
TVO				pmax	pmax		
	comp=Z,91nm,1.1s,mb5.6						
KSRS	**Korea Array**	**53.05**	**331**	P	**P**	**10 48 00.7**	**-1.2**
	comp=Z,7.0nm,0.9s,mb4.6,baz=146,slow=7.5,SNR=16						
KSRS				LR	LR	11 09 04.7	
	comp=Z,334nm,19.0s,MS4.4,baz=312,slow=34						
TBI	**Tubuai**	**53.33**	**113**	*e*LQ		11 01 16.8	
	comp=Z,3μm,29.5s						
TBI				*e*LR	LR	11 03 33.0	
	comp=Z,1μm,33.5s						
INCN	**Inchon**	**53.70**	**330**	*e*P	**P**	**10 48 06.4**	**-0.2**
	comp=Z,96nm,1.2s,mb5.6						
QIZ	**Qiongzhong**	**53.85**	**301**	P	**P**	**10 48 08.3**	**+0.2**
QIZ				S	**S**	**10 55 41.0**	**-2.3**
QIZ				SS	SS	10 59 25.3	+0.7
QIZ				AMB	AMB		
	comp=Z,13nm,1.3s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,286nm,8.8s						
QIZ				LR	LR		
	comp=E,288nm,17.7s						
QIZ				LR	LR		
	comp=Z,368nm,18.6s,MS4.5						
MYKOM	**Kota Tinggi**	**53.94**	**278**	⇓P	**P**	**10 48 10.1**	**+1.2**
NJ2	**Nanjing**	**54.20**	**320**	*e*P	**P**	**10 48 11.8**	**+1.3**
NJ2				AP	pP	10 48 23.0	+8.9
NJ2				PP	PP	10 50 15.3	+2.9
NJ2				S	**S**	**10 55 46.0**	**-1.7**
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,400nm,5.1s						
NJ2				LR	LR		
	comp=N,300nm,15.6s,MS4.6						
NJ2				LR	LR		
	comp=E,250nm,14.2s,MS4.6						
NJ2				LR	LR		
	comp=Z,250nm,14.4s,MS4.4						
PMOR	**Pomariorio Ree**	**54.26**	**102**	*e*P	**P**	**10 48 10.3**	**-0.9**
	comp=Z,118nm,1.4s,mb5.6						
KGM	**Kluang**	**54.50**	**278**	⇑P	**P**	**10 48 14.0**	**+0.9**
VAH	**Vaihoa**	**54.52**	**103**	*e*P	**P**	**10 48 11.7**	**-1.4**
	comp=Z,50nm,1.2s,mb5.4						
KTGM	**Kuala Trenggan**	**55.41**	**282**	⇑P	**P**	**10 48 19.9**	**+0.3**
FRIM	**Kepong**	**56.41**	**279**	⇓P	**P**	**10 48 28.1**	**+1.4**
DL2	**Dalian**	**57.34**	**328**	P	**P**	**10 48 33.8**	**+1.0**
DL2				S	**S**	**10 56 33.0**	**+3.7**
DL2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
DL2				AMB	AMB		
	comp=Z,110nm,4.4s						
DL2				LR	LR		
	comp=N,250nm,11.8s,MS4.6						
DL2				LR	LR		
	comp=E,230nm,15.7s,MS4.6						
DL2				LR	LR		
	comp=Z,250nm,16.9s,MS4.4						
KULM	**Kulim**	**57.81**	**282**	*e*P	**P**	**10 48 36.8**	**+0.2**
KULM	**Kulim**	**57.81**	**282**	⇑P	**P**	**10 48 36.8**	**+0.2**
TIA	**Tai'an**	**58.02**	**322**	*e*P	**P**	**10 48 37.0**	**-0.7**
MDJ	**Mudanjiang**	**58.21**	**337**	P	**P**	**10 48 38.5**	**-0.3**
MDJ				AP	pP	10 48 51.0	+8.5
MDJ				SCP	ScP	10 53 26.3	-4.3
MDJ				PCS	PcS	10 53 31.0	-0.5
MDJ				S	**S**	**10 56 39.3**	**-1.2**
MDJ				SS	SS	11 00 30.0	-2.6
MDJ				AMB	AMB		
	comp=Z,21nm,1.4s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,218nm,7.3s						
MDJ				LR	LR		
	comp=N,172nm,22.9s,MS4.3						
MDJ				LR	LR		
	comp=E,181nm,21.3s,MS4.3						
MDJ				LR	LR		
	comp=Z,163nm,27.4s						
SNY	**Shenyang**	**58.55**	**331**	⇑P	**P**	**10 48 40.8**	**-0.5**
SNY				S	**S**	**10 56 46.5**	**+1.5**
SNY				AMB	AMB		
	comp=Z,12nm,1.3s,mb4.8						
SNY				AMB	AMB		
	comp=Z,342nm,9.3s						
SNY				LR	LR		
	comp=E,347nm,15.9s						
SNY				LR	LR		
	comp=Z,297nm,18.8s,MS4.4						
HABR	**Khabarovsk**	**59.77**	**343**	*e*P	**P**	**10 48 48.4**	**-1.2**
HABR				*e**PP	pP	10 48 58.5	+5.3
HABR				*e*SP		10 49 02.6	
HABR				*e*		10 51 03.2	
HABR				*e*S	**S**	**10 57 01.3**	**+0.8**
HABR				*e*		10 57 18.5	
HABR				*e*		10 58 37.2	
HABR				*e*SS	SS	11 01 00.4	+3.5
HABR				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.4						
GYA	**Guiyang**	**59.84**	**307**	⇑*i*P	**P**	**10 48 53.0**	**+2.5**
GYA				AP	pP	10 48 57.8	+3.7
GYA				XP	sP	10 49 01.3	+5.8
GYA				PCP	PcP	10 49 38.5	+1.4
GYA				PP	PP	10 51 07.5	+4.8
GYA				SCP	ScP	10 53 38.5	+0.3
GYA				S	**S**	**10 57 04.0**	**+1.7**
GYA				SCS	ScS	10 58 40.0	-1.4
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GYA				AMB	AMB		
	comp=Z,130nm,6.4s						
GYA				LR	LR		
	comp=N,660nm,21.6s,MS5.0						
GYA				LR	LR		
	comp=E,880nm,20.6s,MS5.0						
GYA				LR	LR		
	comp=Z,760nm,19.0s,MS4.8						
PET	**Petropavlovsk**	**61.12**	**1**	*e*P	**P**	**10 49 05.3**	**+6.6**
PET				*e*S	**S**	**10 57 22.2**	**+4.5**
PET				pmax	pmax		
	comp=Z,100nm,8.3s						
BJT	**Baijiatuau**	**61.13**	**325**	*e*P	**P**	**10 48 59.5**	**+0.5**
	comp=Z,19nm,0.8s,mb5.3						
BJT	**Baijiatuau**	**61.13**	**325**	*e*P	**P**	**10 48 59.5**	**+0.5**
BJT				pmax	pmax		
	comp=Z,19nm,0.8s						
BJI	**Beijing**	**61.14**	**325**	P	**P**	**10 48 58.8**	**-0.3**
BJI				S	**S**	**10 57 19.0**	**+0.6**
BJI				AMB	AMB		
	comp=Z,17nm,1.4s,mb5.0						
BJI				AMB	AMB		
	comp=Z,389nm,7.0s						
BJI				LR	LR		
	comp=N,358nm,15.7s,MS4.7						
BJI				LR	LR		
	comp=E,268nm,15.7s,MS4.7						
BJI				LR	LR		
	comp=Z,271nm,31.8s						
NST	**Nakhon Sawan**	**61.16**	**293**	P	**P**	**10 49 00.0**	**+0.3**
KLR	**Kul'dur**	**61.44**	**341**	*e*P	**P**	**10 48 57.7**	**-3.2**
KLR				*e*		10 49 04.5	
KLR				*e*S	**S**	**10 57 23.0**	**+1.2**
TIY	**Taiyuan**	**61.87**	**321**	P	**P**	**10 49 02.5**	**-1.6**
TIY				S	**S**	**10 57 32.3**	**+4.5**
TIY				LR	LR		
	comp=N,219nm,5.3s						
TIY				LR	LR		
	comp=E,208nm,7.8s						
TIY				LR	LR		
	comp=Z,365nm,15.0s,MS4.7						
XAN	**Xi'an**	**62.04**	**316**	P	**P**	**10 49 04.3**	**-1.0**
XAN				PP	PP	10 51 22.5	+0.4
XAN				S	**S**	**10 57 29.5**	**-0.6**
XAN				AMB	AMB		
	comp=Z,9.0nm,0.7s,mb5.0						
XAN				AMB	AMB		
	comp=Z,168nm,9.2s						
XAN				LR	LR		
	comp=E,295nm,18.9s						
XAN				LR	LR		
	comp=Z,389nm,20.8s,MS4.5						
TAOE	**Nuku Hiva Isla**	**62.07**	**96**	*e*S	**S**	**10 57 26.4**	**-4.9**
	comp=Z,633nm,27.4s						
TAOE				*e*SS	SS	11 01 32.9	-1.3
	comp=Z,606nm,30.8s						
TAOE				*e*LQ		11 04 50.9	
	comp=Z,1μm,26.7s						
TAOE				*e*LR	LR	11 07 33.5	
	comp=Z,2μm,26.9s,baz=272						
KMI	**Kunming**	**62.41**	**304**	P	**P**	**10 49 09.3**	**+1.3**
KMI				AP	pP	10 49 12.5	+0.9
KMI				PCP	PcP	10 49 48.0	+0.5
KMI				S	**S**	**10 57 35.3**	**+0.3**
KMI				SKS		10 58 58.0	
KMI				SS	SS	11 01 40.8	+1.7
KMI				AMB	AMB		
	comp=Z,18nm,1.0s,mb5.2						
KMI				AMB	AMB		
	comp=Z,348nm,6.6s						
KMI				LR	LR		
	comp=N,160nm,19.3s,MS4.5						
KMI				LR	LR		
	comp=E,303nm,21.1s,MS4.5						
KMI				LR	LR		
	comp=Z,357nm,20.2s,MS4.5						
CHG	**Chiang Mai**	**63.27**	**296**	⇑P	**P**	**10 49 14.1**	**+0.3**
	comp=Z,18nm,1.1s,mb5.1						
CHTO	**Chiang Mai**	**63.27**	**296**	*e*P	**P**	**10 49 14.3**	**+0.5**
	comp=Z,31nm,1.4s,mb5.2						
CHTO	**Chiang Mai**	**63.27**	**296**	*e*P	**P**	**10 49 14.3**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
CD2	**Chengdu**	**64.19**	**310**	*e*P	**P**	**10 49 20.5**	**+0.8**
CD2				AP	pP	10 49 28.3	+5.0
CD2				PP	PP	10 51 44.0	+3.0
CD2				PCS		10 53 57.5	
CD2				S	**S**	**10 57 57.0**	**-0.1**
CD2				XS	sS	10 58 08.8	+5.7
CD2				SCS	ScS	10 59 10.5	-3.5
CD2				SS	SS	11 02 08.5	+1.7
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
CD2				AMB	AMB		
	comp=Z,320nm,8.6s						
CD2				LR	LR		
	comp=N,310nm,15.6s,MS5.0						
CD2				LR	LR		
	comp=E,760nm,19.2s,MS5.0						
CD2				LR	LR		
	comp=Z,380nm,21.6s,MS4.5						
HHC	**Hu-ho-hao-te**	**64.34**	**323**	*e*P	**P**	**10 49 19.3**	**-1.2**
HHC				AP	pP	10 49 26.8	+2.7
HHC				XP	sP	10 49 30.5	+5.0
HHC				PCP	PcP	10 49 53.8	-1.2
HHC				PP	PP	10 51 42.3	+0.1
HHC				PCS		10 53 55.5	
HHC				S	**S**	**10 57 55.5**	**-3.1**
HHC				XS	sS	10 58 08.3	+3.7
HHC				SS	SS	11 02 04.3	-4.5
HHC				AMB	AMB		
	comp=Z,26nm,0.7s,mb5.4						
HHC				AMB	AMB		
	comp=Z,310nm,5.8s						
HHC				LR	LR		
	comp=N,295nm,15.5s,MS4.8						
HHC				LR	LR		
	comp=E,324nm,13.1s,MS4.8						
HHC				LR	LR		
	comp=Z,281nm,13.1s,MS4.6						
BTO	**Baotou**	**65.12**	**322**	*e*P	**P**	**10 49 24.8**	**-0.7**
HIA	**Hailar**	**65.97**	**334**	*e*P	**P**	**10 49 31.1**	**+0.2**
	comp=Z,23nm,1.0s,mb5.2						
HIA	**Hailar**	**65.97**	**334**	*e*P	**P**	**10 49 31.1**	**+0.3**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
RKT	**Rikitea**	**66.60**	**112**	*e*LR	LR	11 09 47.0	
	comp=Z,923nm,30.2s						
LZH	**Lanzhou**	**66.66**	**315**	⇓P	**P**	**10 49 37.5**	**+1.9**
LZH				PP	PP	10 52 06.5	+3.9
LZH				S	S	10 58 15.0	-12
LZH				SS	SS	11 02 45.3	+0.3
LZH				AMB	AMB		
	comp=Z,35nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,177nm,7.6s						
LZH				LR	LR		
	comp=N,875nm,15.0s						
LZH				LR	LR		
	comp=Z,2μm,18.3s,MS5.3						
MA2	**Magadan**	**67.86**	**357**	*i* P	**P**	**10 49 41.9**	**-0.8**
MA2				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.1						

GTA S S 10 59 20.8 +1.4
GTA XS sS 10 59 29.8 +4.3
GTA AMB AMB
comp=Z,14nm,1.4s,mb4.7
GTA AMB AMB
comp=Z,427nm,6.8s
GTA LR LR
comp=N,180nm,18.2s,MS4.6
GTA LR LR
comp=E,212nm,17.1s,MS4.6
GTA LR LR
comp=Z,269nm,19.4s,MS4.5
SEY Seymchan 71.13 358⇓ *e*P **P 10 50 02.4 -0.4**
ULN Ulaanbaatar 71.19 327 *e*P **P 10 50 03.7 +0.2**
comp=Z,49nm,1.3s,mb5.3
ULN Ulaanbaatar 71.19 327 *e*P **P 10 50 03.7 +0.2**
ULN pmax pmax
comp=Z,49nm,1.3s,mb5.3
SONM Songino Array 71.53 327 P **P 10 50 05.1 -0.4**
comp=Z,7.3nm,0.9s,mb4.6,baz=146,slow=3.1,SNR=42
YAK Yakutsk 73.28 347 *e*P **P 10 50 15.5 -0.2**
comp=Z,43nm,0.8s,mb5.4
YAK Yakutsk 73.28 347⇓ *e*P **P 10 50 16.2 +0.5**
YAK pmax pmax
comp=Z,59nm,0.9s,mb5.5
YAK MLR MLR
comp=Z,200nm,17.0s,MS4.5
LSA Lhasa 73.66 304 *e*P **P 10 50 20.2 +1.5**
comp=Z,45nm,1.5s,mb5.2
LSA Lhasa 73.66 304 *e*P **P 10 50 20.2 +1.5**
LSA pmax pmax
comp=Z,45nm,1.5s,mb5.2
BOD Bodaibo 74.58 338 *e*P **P 10 50 21.1 -2.3**
BOD pmax pmax
comp=Z,17nm,1.5s,mb4.8
ZAK Zakamensk 74.67 328⇓ *i*P **P 10 50 23.8 -0.3**
ZAK pmax pmax
comp=Z,13nm,1.6s,mb4.6
TLY Talaya 75.22 329 P **P 10 50 28.9 +1.7**
comp=Z,83nm,1.0s,mb5.6,SNR=5.4
TLY Talaya 75.22 329 *e*P **P 10 50 26.9 -0.3**
comp=Z,13nm,0.9s,mb4.9
TLY Talaya 75.22 329⇑ *i*P **P 10 50 27.1 -0.1**
TLY *e*S S 11 00 08.0 +2.0
TLY pmax pmax
comp=Z,16nm,1.0s,mb4.9
TLY MLR MLR
comp=Z,187nm,20.0s,MS4.4
IRK Irkutsk 75.22 330⇑ *i*P **P 10 50 26.5 -0.8**
IRK pmax pmax
comp=Z,50nm,0.7s,mb5.5
GAMB Gambell 75.71 14 *e*P **P 10 50 28.8 -1.0**
comp=Z,31nm,1.4s,mb5.0
TAPN Taplejung 75.79 301 *e*P **P 10 50 31.6 +0.5**
comp=Z,118nm,1.3s,mb5.7
ODAN Odare 75.92 300 *e*P **P 10 50 33.1 +1.3**
comp=Z,60nm,1.0s,mb5.5
BILL Bilibino 76.46 4 *e*P **P 10 50 32.9 -1.0**
comp=Z,51nm,1.3s,mb5.3
BILL Bilibino 76.46 4⇑ *e*P **P 10 50 33.2 -0.8**
BILL pmax pmax
comp=Z,48nm,1.6s,mb5.2
MOY Mondy 76.58 328 *e*P **P 10 50 35.6 +0.6**
MOY pmax pmax
comp=Z,54nm,3.2s
JIRN Jiri 77.17 301 *e*P **P 10 50 38.9 0.0**
comp=Z,144nm,1.7s,mb5.6
VIS Vishakhapatnam 77.20 290 *e*P **P 10 50 40.8 +1.6**
VIS ⇑*ex* x 10 50 46.4
comp=Z,52nm,1.9s
KDAK Kodiak Island 77.50 25 LR LR 11 20 34.1
comp=Z,368nm,18.8s,MS4.7,baz=153,slow=32
KKN Kakani 77.98 301 *e*P **P 10 50 43.8 +0.4**
comp=Z,52nm,1.1s,mb5.4
TNA Tin City 78.10 14 *e*P **P 10 50 42.6 -0.7**
comp=Z,70nm,2.1s,mb5.2
SVW2 Sparrevohn 78.48 21 *e*P **P 10 50 46.2 +0.8**
GKN Gorkha 78.59 301 *e*P **P 10 50 46.3 -0.5**
comp=Z,159nm,1.3s,mb5.8
KOLN Koldanda 79.41 300 *e*P **P 10 50 50.8 -0.5**
comp=Z,279nm,1.8s,mb5.9
TTA Tatalina 79.57 20 *e*P **P 10 50 51.8 +0.4**
SLKM Skilak Lake 80.14 24 *e*P **P 10 50 53.5 -1.0**
WMQ Urumqi 81.15 317⇑ *i*P **P 10 51 00.5 +0.2**
WMQ PP PP 10 54 08.5 +2.8
WMQ S S 11 01 05.8 -4.4
WMQ SKS 11 01 11.0
WMQ AMB AMB
comp=Z,32nm,1.4s,mb5.1
WMQ AMB AMB
comp=Z,575nm,4.9s
WMQ LR LR
comp=N,185nm,19.7s
WMQ LR LR
comp=E,118nm,26.8s
WMQ LR LR
comp=Z,136nm,21.0s,MS4.3
PMR Palmer 81.21 23 *e*P **P 10 50 58.7 -1.5**
comp=Z,32nm,1.2s,mb5.1
PMR LR LR
comp=Z,500nm,21.0s,MS4.8
PMR Palmer 81.21 23 *e*P **P 10 50 58.7 -1.5**
PMR pmax pmax
comp=Z,33nm,1.2s,mb5.1
PMR MLR MLR
comp=Z,500nm,21.0s,MS4.8
HYB Hyderabad 81.58 289 *e*P **P 10 51 02.5 -0.7**
HYB Hyderabad 81.58 289 *i*P **P 10 51 02.5 -0.7**
SML Sawmill 81.65 23 *e*P **P 10 51 00.8 -1.7**
QSPA South Pole Qui 81.66 180 *e*P **P 10 51 02.1 -0.4**
comp=Z,13nm,0.7s,mb5.0
TIXI Tiksi 81.95 351 *e*P **P 10 51 03.4 -0.5**
comp=Z,10nm,1.2s,mb4.6
TIXI Tiksi 81.95 351 *e*P **P 10 51 03.0 -1.0**
TIXI pmax pmax
comp=Z,24nm,1.4s,mb4.9
IMA2 Indian Mountai 82.42 18 *e*P **P 10 51 05.6 -0.9**
LGTI Lohaghat 82.68 301 *e*P **P 10 51 08.0 -0.7**
COLA College 83.60 21 *e*P **P 10 51 09.7 -2.9**
comp=Z,21nm,0.9s,mb5.3
COLA College 83.60 21 *e*P **P 10 51 09.7 -2.9**
COLA pmax pmax
comp=Z,21nm,0.9s,mb5.3
BHPL Bhopal 83.79 294 *e*P **P 10 51 13.6 -0.9**
BHPL ⇑*ex* x 10 51 20.3
comp=Z,51nm,1.2s
MAW Mawson 83.95 203 *e*P **P 10 51 12.8 -1.7**
comp=Z,24nm,1.0s,mb5.3
MAW Mawson 83.95 203 *e*P **P 10 51 12.8 -1.7**
MAW pmax pmax
comp=Z,24nm,1.0s
MAW Mawson 83.95 203 P **P 10 51 13.0 -1.5**
comp=Z,30nm,1.1s,mb5.3,baz=78,slow=8.3,SNR=9.3
MAW LR LR 11 21 17.8
comp=Z,448nm,21.7s,MS4.8,baz=75,slow=30
MENT Mentasta 84.06 23 *e*P **P 10 51 14.2 -0.9**
DDI Dehra Dun 84.73 302 *i*P **P 10 51 18.9 -0.3**
NDI New Delhi 85.10 300 *e*P **P 10 51 19.0 -2.1**
KAD Karad 85.67 288 *e*P **P 10 51 24.2 0.0**
KAD *ex* x 10 51 29.5
comp=Z,60nm,1.0s
MKAR Makanchi Array 85.71 318 *i*P **P 10 51 22.8 -0.9**
MKAR pmax pmax
comp=Z,14nm,0.8s
MKAR Makanchi Array 85.71 318 P **P 10 51 22.9 -0.9**
comp=Z,14nm,0.8s,mb5.2,baz=96,slow=6.1,SNR=74
EGAK Eagle 85.97 22 *e*P **P 10 51 23.8 -0.8**
comp=Z,18nm,1.1s,mb5.2
DAWY Dawson 86.31 23 *e*P **P 10 51 26.7 +0.4**
ZALV Zalesovo Beam 86.39 326 P **P 10 51 24.5 -2.4**
comp=Z,4.8nm,0.7s,mb4.8,baz=105,slow=6.1,SNR=26
ZAL Zalesovo 86.40 326 P **P 10 51 24.5 -2.4**
THN Thein Dam 87.14 303 *e*P **P 10 51 30.6 -0.5**
MCCM Marconi Confer 87.39 51 ⇓P **P 10 51 33.4 +1.2**
baz=88
NVS Novosibirsk 87.55 326 *e*P **P 10 51 29.5 -3.1**
NVS pmax pmax
comp=Z,33nm,1.6s,mb5.3
NVS pmax pmax
comp=N,12nm,1.7s
NVS pmax pmax
comp=E,19nm,1.6s
GASB Alder Springs 87.84 50 ⇓P **P 10 51 34.5 +0.2**
baz=88
O02C Red Bluff 87.90 49 ⇓P **P 10 51 35.9 +1.3**
baz=88

M02C Callahan 88.12 48 ⇓P **P 10 51 37.2 +1.6**
baz=88
V03C Hunter Liggett 88.23 53 ⇑P **P 10 51 37.0 +0.8**
baz=88
YBH Yreka Blue Hor 88.30 48 ⇑P **P 10 51 37.4 +1.0**
baz=88
KSH Kashi 88.39 310 *e*P **P 10 51 38.5 +1.6**
KSH *e*AP pP 10 51 48.5 +7.8
KSH *e*XP sP 10 51 53.5 +11
KSH eSKS 11 02 04.0
KSH *e*S S 11 02 22.5 +0.1
PACP Pacheco Peak 88.39 52 ⇑P **P 10 51 37.8 +0.8**
baz=88
S04C Ingram Canyon, 88.46 52 ⇓P **P 10 51 37.4 +0.1**
baz=88
M03C McCloud 88.63 48 ⇓P **P 10 51 38.3 +0.3**
baz=89
U04C Hernandez Rese 88.66 53 ⇓P **P 10 51 37.7 -0.6**
baz=89
ORV Oroville 88.74 50 ⇑P **P 10 51 38.1 -0.5**
baz=89
PKD Parkfield 88.77 54 ⇑P **P 10 51 38.5 -0.3**
baz=89
PTRM Twissleman Ran 88.98 54 *e*P **P 10 51 40.1 +0.3**
KURK Kurchatov 89.10 321 P **P 10 51 39.6 -0.4**
comp=E,79nm,1.2s,mb5.9,SNR=7.2
KURK Kurchatov 89.10 321 *e*P **P 10 51 38.4 -1.6**
comp=E,29nm,1.4s,mb5.4
KURK Kurchatov 89.10 321 *e*P **P 10 51 38.4 -1.6**
KURK pmax pmax
comp=Z,29nm,1.4s,mb5.4
PKM Peak Mountain 89.15 55 ⇑P **P 10 51 40.3 -0.3**
baz=89
LAVA Lava Cap Winer 89.16 51 ⇓P **P 10 51 39.7 -0.9**
baz=89
S05C Merced 89.21 52 ⇓P **P 10 51 40.9 +0.1**
baz=89
O04C Chester 89.21 49 ⇓P **P 10 51 41.0 +0.2**
baz=89
CMB Columbia Colle 89.29 52 *e*P **P 10 51 39.2 -2.0**
comp=Z,22nm,1.8s,mb5.2
CMB Columbia Colle 89.29 52 *e*P **P 10 51 39.2 -2.0**
CMB pmax pmax
comp=Z,22nm,1.8s,mb5.2
CMB Columbia Colle 89.29 52 ⇓P **P 10 51 40.7 -0.5**
baz=89
H04A Detroit Lake 89.31 45 ⇓P **P 10 51 40.8 -0.3**
baz=89
E04A Onalaska 89.36 43 ⇓P **P 10 51 40.4 -0.9**
baz=89
P05C Yuba Gap, Truc 89.37 50 ⇑P **P 10 51 41.7 +0.2**
baz=89
TKM2 Tokmak 2 89.37 313 *e*P **P 10 51 40.2 -1.2**
comp=Z,13nm,0.9s,mb5.2
TKM2 Tokmak 2 89.37 313 *e*P **P 10 51 40.2 -1.2**
TKM2 pmax pmax
comp=Z,13nm,0.9s,mb5.3
TKM2 Tokmak 2 89.37 313 P **P 10 51 40.7 -0.7**
SNR=8.7
F04A Amboy 89.42 44 ⇓P **P 10 51 41.0 -0.6**
baz=90
KZA Kyzart 89.45 313 P **P 10 51 43.6 +1.8**
SNR=20
T06C Millerton Lake 89.63 53 P **P 10 51 42.6 -0.2**
baz=90,SNR=5.5
R05C Kirkwood Meado 89.66 51 ⇓P **P 10 51 43.1 +0.1**
baz=90
BEKR Bewourth 89.67 50 ⇑P **P 10 51 43.1 +0.2**
baz=90
J05A Fort Rock 89.69 46 P **P 10 51 43.5 +0.5**
baz=90,SNR=6.5
L05A Lakeview 89.74 48 ⇓P **P 10 51 42.4 -0.8**
baz=90
K05A Summer Lake 89.83 47 ⇑P **P 10 51 44.2 +0.6**
baz=90
M06C Likely Place G 89.83 48 ⇑P **P 10 51 42.5 -1.1**
baz=90
D05A Enumclaw 89.98 42 ⇑P **P 10 51 44.6 +0.4**
baz=90
CHMS Chumysh 89.99 313 P **P 10 51 45.3 +0.9**
SNR=6.0
ARVC Arvin 89.99 55 ⇓P **P 10 51 44.6 0.0**
baz=90
KCC Kaiser Creek 89.99 52 ⇑P **P 10 51 44.3 -0.2**
baz=90
UCH Uctor 90.02 313 *e*P **P 10 51 45.2 +0.7**
comp=Z,40nm,1.4s,mb5.5
UCH Uchtor 90.02 313 P **P 10 51 46.0 +1.5**
SNR=15
WCN Washoe City 90.02 50 ⇓P **P 10 51 44.0 -0.5**
baz=90
CIS Catalina Islan 90.04 56 ⇑P **P 10 51 43.7 -1.1**
baz=90
MOD Modoc 90.10 48 ⇓P **P 10 51 44.8 -0.1**
baz=90
AAK Ala-Archa 90.11 313 P **P 10 51 43.3 -1.6**
comp=Z,65nm,0.8s,mb6.0,SNR=7.3
AAK Ala-Archa 90.11 313 P **P 10 51 46.3 +1.4**
SNR=7.6
R06C Coleville 90.11 51 ⇓P **P 10 51 43.8 -1.2**
baz=90
HELL Mitchell Peak, 90.11 53 P **P 10 51 46.1 +1.0**
baz=90,SNR=11
WAKR Walker 90.11 51 *e*P **P 10 51 46.1 +1.0**
N06A Buffalo Meadow 90.22 49 ⇑P **P 10 51 45.4 -0.1**
baz=90
USP Ospenovka 90.22 314 P **P 10 51 45.8 +0.3**
SNR=10
INK Inuvik 90.26 20 *e*P **P 10 51 44.6 -0.4**
comp=Z,42nm,0.5s,mb6.0
INK Inuvik 90.26 20 *e*P **P 10 51 44.6 -0.4**
INK pmax pmax
comp=Z,42nm,0.5s
K06A Valley Falls 90.31 47 ⇓P **P 10 51 45.1 -0.7**
baz=90
R07C Lee Vining 90.34 52 ⇓P **P 10 51 45.9 -0.2**
baz=90
ISA Isabella 90.37 54 P **P 10 51 46.8 +0.5**
baz=90,SNR=6.6
PAHR Pah Rah Range 90.37 50 *e*P **P 10 51 44.8 -1.5**
comp=Z,48nm,1.8s,mb5.5
J06A Christmas Vall 90.46 46 ⇓P **P 10 51 46.5 -0.1**
baz=90
E06A Yakima 90.52 43 ⇓P **P 10 51 46.5 -0.3**
baz=91
I06A Prineville 90.55 46 ⇑P **P 10 51 47.2 +0.3**
baz=91
MTUM Tungsten Hills 90.59 52 *e*P **P 10 51 47.5 +0.2**
AML Almayashu 90.59 312 P **P 10 51 47.3 +0.1**
SNR=15
H06A Lindquist Farm 90.61 45 ⇓P **P 10 51 47.2 0.0**
baz=91
EDW2 Edwards Air Fo 90.63 55 P **P 10 51 47.8 +0.3**
baz=91,SNR=11
EKS2 Erkin-Say 90.63 313 *e*P **P 10 51 46.9 -0.5**
comp=Z,18nm,1.3s,mb5.2
EKS2 Erkin-Say 90.63 313 P **P 10 51 46.8 -0.5**
SNR=9.9
BFSC Mount Baldy St 90.79 56 P **P 10 51 48.9 +0.6**
baz=91,SNR=7.3
TIN Tinemaha 90.81 53 ⇓P **P 10 51 48.7 +0.4**
baz=91
L07A Adell 90.82 48 ⇑P **P 10 51 47.5 -0.8**
baz=91,SNR=6.1
M07A Soldier Meadow 90.83 48 ⇑P **P 10 51 48.5 +0.2**
baz=91
S08C White Mtn Res 90.92 52 P **P 10 51 49.4 +0.6**
baz=91,SNR=8.8
LRMC Laurel Mountai 90.97 54 P **P 10 51 50.8 +1.7**
baz=91,SNR=13
NVAR Mina Array Bea 90.98 51 P **P 10 51 49.5 +0.4**
NVAR Mina Array Bea 90.98 51 P **P 10 51 49.5 +0.4**
comp=Z,3.3nm,0.9s,mb4.7,baz=234,slow=3.7,SNR=23
K07A Rock Creek Ran 91.01 47 P **P 10 51 49.6 +0.5**
baz=91,SNR=5.7
109C Camp Elliot, M 91.03 57 ⇓P **P 10 51 49.4 -0.1**
baz=91
MURC Murrieta 91.07 56 ⇓P **P 10 51 49.2 -0.4**
baz=91
I07A Izee 91.08 46 P **P 10 51 49.5 +0.1**
baz=91,SNR=6.4
J07A Hines 91.09 46 ⇑P **P 10 51 49.4 -0.1**
baz=91
R08A Mina 91.12 52 ⇓P **P 10 51 50.2 +0.4**
baz=91,SNR=6.5
H07A Lands Inn, Kim 91.13 45 ⇑P **P 10 51 47.9 -1.7**
baz=91
G07A Ruggs Ranch, H 91.18 45 ⇑P **P 10 51 49.1 -0.7**
baz=91
DAC Darwin (Calif) 91.18 54 *e*P **P 10 51 49.7 -0.4**
comp=Z,15nm,1.0s,mb5.3
DAC Darwin (Calif) 91.18 54 *e*P **P 10 51 49.7 -0.4**
DAC pmax pmax
comp=Z,15nm,1.0s,mb5.3
MPMC Manual Prospec 91.23 54 P **P 10 51 51.9 +1.6**
baz=91,SNR=12
D07A Quincy 91.33 43 ⇑P **P 10 51 49.8 -0.6**
baz=91
Q08A Gabbs 91.34 51 P **P 10 51 51.4 +0.7**
baz=91,SNR=7.7
C07A Waterville 91.36 42 ⇑P **P 10 51 49.7 -0.9**
baz=91
BBRC Big Bear Sol-O 91.40 56 ⇓P **P 10 51 51.8 +0.6**
baz=92
A07A Ashmola River, 91.41 41 ⇑P **P 10 51 51.2 +0.5**
baz=92
WVOR Wild Horse Val 91.41 47 *e*P **P 10 51 51.0 0.0**
comp=Z,22nm,1.4s,mb5.3
WVOR Wild Horse Val 91.41 47 *e*P **P 10 51 51.0 0.0**
WVOR pmax pmax
comp=Z,22nm,1.4s,mb5.3
M08A Happy Creek Ra 91.43 48 P **P 10 51 51.9 +0.8**
baz=92,SNR=5.4
B07A Winthrop 91.47 41 ⇑P **P 10 51 50.8 -0.2**
baz=92
GRAC Grapevine Rang 91.47 53 ⇓P **P 10 51 51.5 +0.1**
baz=92,SNR=5.9
N08A GE Springer Mi 91.50 49 ⇑P **P 10 51 51.6 +0.2**
baz=92
L08A Fields 91.58 48 P **P 10 51 52.5 +0.7**
baz=92,SNR=9.1
MONP Monument Peak 91.60 57 P **P 10 51 54.0 +1.9**
baz=92,SNR=5.7
GSC Goldstone 91.66 55 ⇓P **P 10 51 51.6 -0.7**
baz=92
G08A Pilot Rock 91.68 45 ⇑P **P 10 51 51.4 -0.7**
baz=92
PFO Pinyon Flat Ob 91.68 56 *e*P **P 10 51 50.6 -1.8**
comp=Z,2.4nm,0.7s,mb4.6
PFO Pinyon Flat Ob 91.68 56 *e*P **P 10 51 50.6 -1.9**
PFO pmax pmax
comp=Z,2.0nm,0.7s,mb4.6
PFO Pinyon Flat Ob 91.68 56 ⇑P **P 10 51 52.7 +0.3**
baz=92
J08A Circle Bar Ran 91.69 47 ⇑P **P 10 51 51.8 -0.4**
baz=92
S09A Goldfield 91.70 52 P **P 10 51 53.9 +1.4**
baz=92,SNR=18
I08A Drewsey 91.71 46 ⇑P **P 10 51 52.6 +0.3**
baz=92
H08A Prairie City 91.75 45 ⇓P **P 10 51 52.1 -0.4**
baz=92
TPH Tonopah 91.76 52 *e*P **P 10 51 53.0 +0.3**
comp=Z,3.3nm,0.4s,mb5.0
TPH Tonopah 91.76 52 *e*P **P 10 51 53.0 +0.3**
TPH pmax pmax
comp=Z,3.0nm,0.4s,mb5.0
FURC Furnace Creek, 91.79 54 P **P 10 51 52.5 -0.4**
baz=92,SNR=22
R09A Tonopah 91.90 52 P **P 10 51 53.9 +0.5**
baz=92,SNR=11
B08A Colville Reser 91.96 42 ⇓P **P 10 51 52.4 -0.9**
baz=92
HEC Hector,Ludlow 91.97 55 P **P 10 51 54.2 +0.5**
baz=92,SNR=9.4
N09A Rock Creek Ran 91.97 49 ⇑P **P 10 51 53.8 +0.2**
baz=92
D08A Wollman Farm, 92.01 43 ⇑P **P 10 51 52.6 -1.0**
baz=92
L09A Wilkinson Ranc 92.05 48 ⇓P **P 10 51 54.2 +0.2**
baz=92,SNR=6.2
P09A Austin 92.06 50 ⇓P **P 10 51 53.8 -0.2**
baz=92
A08A Turner Farm, O 92.11 41 ⇑P **P 10 51 54.1 +0.1**
baz=92
O09A Fish Creek Ran 92.11 50 P **P 10 51 55.2 +1.0**
baz=92,SNR=5.8
BELC Belle Mtn. 92.12 56 ⇑P **P 10 51 55.4 +0.9**
baz=92,SNR=13
M09A Marrel Ranch, 92.12 49 ⇑P **P 10 51 54.8 +0.5**
baz=92,SNR=6.5
K09A Rome 92.12 47 ⇓P **P 10 51 53.5 -0.8**
baz=92,SNR=5.1
SWSC Sam W. Stewart 92.13 57 ⇓P **P 10 51 54.8 +0.2**
baz=92
SHOC Shoshone 92.17 54 ⇓P **P 10 51 55.0 +0.3**
baz=92,SNR=8.7
J09A Fry Pan Ranch, 92.20 47 P **P 10 51 55.6 +1.0**
baz=92,SNR=11
U10A Ash Meadows, A 92.21 54 ⇑P **P 10 51 55.2 +0.3**
baz=92
S10A Tonopah Range, 92.23 52 ⇓P **P 10 51 54.6 -0.3**
baz=92
TPNV Topopah Spring 92.35 53 *e*P **P 10 51 55.2 -0.3**
comp=Z,16nm,1.0s,mb5.3
TPNV Topopah Spring 92.35 53 *e*P **P 10 51 55.2 -0.3**
TPNV pmax pmax
comp=Z,15nm,1.0s,mb5.3
TPNV Topopah Spring 92.35 53 ⇓P **P 10 51 55.8 +0.4**
baz=92,SNR=16
TUQ Turquoise Mtn. 92.39 55 ⇓P **P 10 51 56.0 +0.3**
baz=92
E09A Wood Farm, Sta 92.44 44 ⇑P **P 10 51 55.3 -0.3**
baz=92
H09A Durkee 92.48 45 ⇓P **P 10 51 54.8 -1.1**
baz=92
GMRC Granite Mounta 92.51 55 P **P 10 51 56.0 -0.2**
baz=93,SNR=9.5
R10A Warm Springs 92.51 52 ⇓P **P 10 51 57.2 +1.1**
baz=93
Q10A Clear Creek Ra 92.51 51 ⇑P **P 10 51 56.2 +0.1**
baz=93
BC3 Big Chuckw Mtn 92.52 57 P **P 10 51 58.0 +1.7**
baz=93,SNR=7.2
O10A Cortez Mining, 92.66 50 ⇑P **P 10 51 57.6 +0.8**
baz=93
N10A Dunphy 92.71 49 ⇑P **P 10 51 57.9 +0.8**
baz=93
K10A MacKenzie Ranc 92.75 47 ⇓P **P 10 51 56.7 -0.5**
baz=93
BMO Blue Mountains 92.76 45 *e*P **P 10 51 56.2 -1.0**
comp=Z,1.7nm,0.3s,mb5.0
BMO Blue Mountains 92.76 45 *e*P **P 10 51 56.2 -1.0**
BMO pmax pmax
comp=Z,2.0nm,0.3s,mb5.0
M10A I.L. Ranch, Tu 92.81 49 ⇓P **P 10 51 58.0 +0.5**
baz=93
IRM Iron Mountain 92.84 56 P **P 10 51 58.0 +0.2**
baz=93,SNR=17
V11A Goodsprings 92.84 54 ⇑P **P 10 51 58.1 +0.3**
baz=93
S11A Rachel 92.85 53 ⇓P **P 10 51 58.1 +0.4**
baz=93
J10A Berg Farm, Mel 92.93 47 ⇓P **P 10 51 57.8 -0.1**
baz=93
L10A Juniper Basin 92.94 48 ⇑P **P 10 51 57.9 -0.2**
baz=93
GLA Glamis 92.95 57 P **P 10 51 59.5 +1.2**
baz=93,SNR=6.1
F10A Beach Ranch, E 92.99 44 P **P 10 51 57.6 -0.5**
baz=93,SNR=5.3
R11A Troy Canyon, C 93.08 52 ⇑P **P 10 51 58.8 0.0**
baz=93
TRCR Troy Canyon 93.08 52 *e*P **P 10 51 59.5 +0.7**
Q11A Duckwater 93.09 51 ⇓P **P 10 51 59.6 +0.7**
baz=93,SNR=11
H10A Noah's Angus R 93.11 46 ⇑P **P 10 51 58.0 -0.8**
baz=93
P11A Circle Ranch, 93.12 51 ⇓P **P 10 51 59.4 +0.4**
baz=93
D10A Wagner Farm, O 93.12 43 ⇓P **P 10 51 58.1 -0.7**
baz=93
T11A Corn Creek, Al 93.21 53 ⇓P **P 10 51 59.4 0.0**
baz=93
O11A Cowboy Ranch, 93.27 50 ⇑P **P 10 51 59.4 -0.2**
baz=93,SNR=5.9
V12A Nelson 93.30 55 ⇓P **P 10 51 59.5 -0.4**
baz=93,SNR=5.2
Y12C Blythe 93.30 57 ⇓P **P 10 52 00.8 +0.9**
baz=93
M11A Holland Ranch, 93.35 49 ⇑P **P 10 52 00.1 +0.1**
baz=93
K11A Parker Ranch, 93.36 47 ⇑P **P 10 51 59.8 -0.2**
baz=93
S12A Delamar Landin 93.55 53 ⇑P **P 10 52 02.0 +1.0**
baz=94

G11A	**Walters Elk Ra**	**93.57**	**45**	⇑P		**P**	**10 51 59.8**	**-1.1**
	baz=94								
MFID	**Camas Ranch**	**93.60**	**47**	⇑P		**P**	**10 51 59.9**	**-1.2**
	baz=94								
U12A	**Valley of Fire**	**93.64**	**54**	⇑P		**P**	**10 52 02.1**	**+0.6**
	baz=94								
H11A	**Donnelly**	**93.65**	**46**	⇑P		**P**	**10 52 00.8**	**-0.4**
	baz=94								
PDMCI	**Parker Dam,Lak**	**93.69**	**56**	⇓P		**P**	**10 52 01.9**	**+0.2**
	baz=94								
E11A	**Bogner Ranch,**	**93.74**	**44**	⇓P		**P**	**10 52 00.6**	**-1.1**
	baz=94								
P12A	**McGill**	**93.75**	**51**	P		**P**	**10 52 03.0**	**+1.2**
	baz=94,SNR=7.5								
Q12A	**Willow Creek R**	**93.76**	**51**	⇓P		**P**	**10 52 01.6**	**-0.3**
	baz=94								
R12A	**Pony Springs,**	**93.83**	**52**	⇓P		**P**	**10 52 03.0**	**+0.7**
	baz=94								
N12A	**Clover Valley,**	**93.84**	**49**	P		**P**	**10 52 03.1**	**+0.9**
	baz=94,SNR=8.3								
B11A	**Sandpoint**	**93.93**	**42**	⇑P		**P**	**10 52 03.8**	**+1.4**
	baz=94								
X13A	**Yucca**	**93.98**	**56**	⇓P		**P**	**10 52 03.6**	**+0.6**
	baz=94								
O12A	**Currie**	**93.98**	**50**	P		**P**	**10 52 03.7**	**+0.8**
	baz=94,SNR=7.5								
W13A	**Hualapai Mount**	**94.00**	**55**	⇓P		**P**	**10 52 03.3**	**+0.3**
	baz=94								
A11A	**Hall Mountain,**	**94.00**	**41**	⇓P		**P**	**10 52 02.5**	**-0.3**
	baz=94								
M12A	**Wells**	**94.00**	**49**	⇑P		**P**	**10 52 03.1**	**+0.1**
	baz=94								
L12A	**House Creek Ra**	**94.02**	**48**	⇓P		**P**	**10 52 03.9**	**+0.8**
	baz=94								
J12A	**Stokes Ranch,**	**94.11**	**47**	⇑P		**P**	**10 52 03.9**	**+0.5**
	baz=94								
K12A	**Draper Farm, C**	**94.17**	**48**	⇓P		**P**	**10 52 03.9**	**+0.1**
	baz=94								
T13A	**Saint George**	**94.22**	**53**	⇑P		**P**	**10 52 04.0**	**0.0**
	baz=94								
S13A	**Holt Ranch, En**	**94.33**	**53**	⇓P		**P**	**10 52 05.2**	**+0.7**
	baz=94								
Q13A	**Wheeler Ranch,**	**94.37**	**51**	⇑P		**P**	**10 52 05.8**	**+1.0**
	baz=94								
D12A	**Red Ives Fores**	**94.42**	**43**	⇓P		**P**	**10 52 04.0**	**-0.7**
	baz=94								
P13A	**Bates Ranch, G**	**94.44**	**51**	⇑P		**P**	**10 52 05.4**	**+0.4**
	baz=94								
O13A	**Hicks Ranch, I**	**94.54**	**50**	⇓P		**P**	**10 52 05.2**	**-0.3**
	baz=95								
M13A	**Montello**	**94.56**	**49**	P		**P**	**10 52 06.3**	**+0.8**
	baz=95,SNR=8.5								
Y14A	**Wickenburg**	**94.57**	**57**	⇓P		**P**	**10 52 06.0**	**+0.2**
	baz=95								
BRVK	**Borovoye**	**94.62**	**323**	*e*P		**P**	**10 52 04.4**	**-1.1**
	comp=Z,11nm,1.1s,mb5.2								
BRVK	**Borovoye**	**94.62**	**323**	*e*P		**P**	**10 52 04.4**	**-1.1**
BRVK					pmax	pmax			
	comp=Z,11nm,1.1s,mb5.2								
HLID	**Hailey**	**94.64**	**47**	*e*P		**P**	**10 52 04.9**	**-0.9**
	comp=Z,7.9nm,1.3s,mb5.0								
HLID	**Hailey**	**94.64**	**47**	⇓P		**P**	**10 52 05.7**	**-0.2**
	baz=95								
W14A	**Seligman**	**94.66**	**55**	⇑P		**P**	**10 52 07.4**	**+1.2**
	baz=95								
CCUT	**Cedar City**	**94.72**	**53**	*e*P		**P**	**10 52 06.1**	**-0.3**
U14A	**Mt Trumbull**	**94.73**	**54**	⇓P		**P**	**10 52 07.7**	**+1.3**
	baz=95								
X14A	**Yava**	**94.73**	**56**	⇓P		**P**	**10 52 07.0**	**+0.5**
	baz=95								
K13A	**Stover Farm, H**	**94.77**	**48**	⇑P		**P**	**10 52 06.9**	**+0.5**
	baz=95								
J13A	**Cove Ranch, Pi**	**94.79**	**47**	⇓P		**P**	**10 52 05.0**	**-1.5**
	baz=95								
L13A	**Double Diamond**	**94.81**	**48**	⇓P		**P**	**10 52 07.1**	**+0.4**
	baz=95								
H13A	**Challis**	**94.88**	**46**	⇓P		**P**	**10 52 06.4**	**-0.5**
	baz=95								
T14A	**Hurricane**	**94.88**	**53**	⇓P		**P**	**10 52 07.4**	**+0.3**
	baz=95								
I13A	**Wildhorse Cree**	**94.90**	**46**	⇑P		**P**	**10 52 06.5**	**-0.5**
	baz=95								
G13A	**Cobalt**	**94.95**	**45**	⇑P		**P**	**10 52 06.4**	**-0.8**
	baz=95								
E13A	**Victor**	**95.14**	**44**	⇑P		**P**	**10 52 07.6**	**-0.4**
	baz=95								
B13A	**Whitefish**	**95.17**	**42**	⇑P		**P**	**10 52 07.4**	**-0.7**
	baz=95								
M14A	**Sheep Mountain**	**95.18**	**49**	⇑P		**P**	**10 52 08.1**	**-0.3**
	baz=95								
N14A	**Grayback Hills**	**95.23**	**50**	⇓P		**P**	**10 52 08.0**	**-0.6**
	baz=95								
X15A	**Humboldt**	**95.27**	**56**	⇓P		**P**	**10 52 09.1**	**+0.2**
	baz=95								
K14A	**Jones Ranch, D**	**95.42**	**48**	⇑P		**P**	**10 52 09.6**	**+0.1**
	baz=96								
T15A	**Red Dirt Ranch**	**95.43**	**54**	⇑P		**P**	**10 52 09.9**	**+0.3**
	baz=96								
MSU	**Marysvale**	**95.75**	**52**	*e*P		**P**	**10 52 11.5**	**+0.4**
217A	**Green Valley**	**96.16**	**59**	⇓P		**P**	**10 52 12.8**	**-0.3**
	baz=96								
G15A	**Dillon**	**96.19**	**45**	⇓P		**P**	**10 52 12.3**	**-0.5**
	baz=96								
EDM	**Edmonton**	**96.38**	**37**	*e*P		**P**	**10 52 11.9**	**-1.6**
YKA	**Yellowknife Ar**	**96.57**	**28**	P		**P**	**10 52 12.8**	**-1.3**
YKA					PKKPbc	PKKPbc	11 08 56.8	-3.9
YKA					LR	LR	11 37 09.6	
YKA	**Yellowknife Ar**	**96.57**	**28**	P		**P**	**10 52 12.8**	**-1.3**
	comp=Z,3.4nm,0.9s,mb4.8,baz=264,slow=4.6,SNR=39								
YKA					PKKPbc	PKKPbc	11 08 56.8	-3.9
	comp=Z,0.8nm,1.0s,baz=83,slow=3.0,SNR=7.2								
YKA					LR	LR	11 37 09.6	
	comp=Z,224nm,18.4s,MS4.7,baz=240,slow=36								
YKW3	**Yellowknife Ar**	**96.57**	**28**	*e*P		**P**	**10 52 12.7**	**-1.5**
BOZ	**Bozeman (W)**	**96.83**	**45**	⇑P		**P**	**10 52 15.2**	**-0.6**
	baz=97								
319A	**Douglas**	**97.43**	**59**	⇑P		**P**	**10 52 17.8**	**-1.0**
	baz=98								
PDAR	**Pinedale Array**	**98.10**	**48**	P		**P**	**10 52 20.3**	**-1.3**
	comp=Z,1.2nm,0.8s,mb4.5,baz=270,slow=3.0,SNR=8.3								
PDAR					LR	LR	11 30 20.0		
	comp=Z,254nm,20.8s,MS4.7,baz=249,slow=32								
OBN	**Obninsk**	**113.94**	**327**	*e*PKIKP		PKiKP	10 57 18.2	-5.4
OBN				*e*			10 58 17.1		
OBN					pmax	pmax			
	comp=Z,3.0nm,0.7s								
OBN					MLR	MLR			
	comp=Z,200nm,18.0s,MS4.8								
PLCA	**Paso Flores**	**114.46**	**142**		PKKPab	PKKPab	11 08 10.2	-1.4
	comp=Z,1.2nm,0.6s,baz=197,slow=23,SNR=3.1								
AKASG	**Malin Array Be**	**119.77**	**325**	PKP		PKPdf	10 57 33.8	-1.2
	comp=Z,2.0nm,0.7s,baz=63,slow=2.3,SNR=5.0								
NB2	**NORSAR Subarra**	**121.60**	**341**	PKPdf		PKPdf	10 57 37.7	-0.4
	comp=Z,4.4nm,1.2s,baz=37,slow=1.8								
NOA	**NORSAR Array B**	**121.60**	**341**	PKP		PKPdf	10 57 37.1	-1.0
	comp=Z,1.4nm,0.9s,baz=41,slow=1.7,SNR=3.9								
BRG	**Berggiesshubel**	**127.77**	**331**	*e*PKIKP		PKPdf	10 57 51.1	+0.8
BRG					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BRG	**Berggiesshubel**	**127.77**	**331**	*e*PKP		PKPdf	10 57 51.1	+0.9
	comp=Z,4.3nm,0.9s								
CLL	**Collm**	**127.92**	**332**	*e*PKPdf		PKPdf	10 57 50.0	-0.5
	comp=Z,11nm,1.5s								
CLL				*e*(sPKPdf)			10 57 55.0		
CLL				*e*PP		PP	11 00 00.0	+7.6
CLL				LmV			11 56 00.0		
	comp=Z,200nm,19.3s								
LPAZ	**La Paz**	**129.07**	**119**	PKP		PKPdf	10 57 52.7	-1.1
LPAZ	**La Paz**	**129.07**	**119**	PKP		PKPdf	10 57 52.7	-1.1
	comp=Z,10nm,1.2s,baz=298,slow=3.0,SNR=15								
KHC	**Kasperske Hory**	**129.09**	**330**	*e*PKP		PKPdf	10 57 52.5	-0.3
GERES	**GERESS Array B**	**129.21**	**329**	PKP		PKPdf	10 57 51.3	-1.7
	comp=Z,0.5nm,0.4s,baz=179,slow=5.3,SNR=3.9								
DAVOX	**Davos/Dischmat**	**132.50**	**330**	PKP		PKPdf	10 57 58.5	-0.9
	comp=Z,3.2nm,0.9s,baz=32,slow=16,SNR=3.0								
SDV	**Santo Domingo**	**132.92**	**86**	*e*PKPdf		PKPdf	10 57 59.9	-1.2
SDV	**Santo Domingo**	**132.92**	**86**	PKP		PKPdf	10 57 58.6	-2.6
	comp=Z,3.2nm,0.9s,baz=354,slow=3.8,SNR=6.2								
SIV	**San Ignacio**	**135.22**	**123**	PKP		PKPdf	10 58 03.9	-1.5
	comp=Z,1.2nm,0.7s,baz=230,slow=2.9,SNR=6.2								
ESDC	**Sonseca Array**	**144.44**	**334**	PKP		PKPdf	10 58 19.2	-2.3
	comp=Z,0.2nm,0.3s,baz=37,slow=2.3,SNR=5.8								
EANR	**'Ain N'Sour**	**144.79**	**325**	P		PKPdf	10 58 22.0	-0.2
ETRT	**Tiaret**	**145.07**	**324**	P		PKPbc	10 58 22.0	-0.1
MDT	**Midelt**	**150.27**	**328**	PKPbc		PKPbc	10 58 37.0	+0.5
	comp=Z,8.4nm,1.1s,baz=7.2,slow=4.4,SNR=7.5								
TORD	**Torodi Ar. Bea**	**155.28**	**283**	PKPbc		PKPdf	10 58 45.9	+6.7
	comp=Z,2.5nm,0.9s,baz=104,slow=1.8,SNR=6.0								
TORD					PKPab	PKPab	10 59 03.2	-1.0	
	comp=Z,2.0nm,0.8s,baz=81,slow=2.5,SNR=4.9								

IDC 26 10:45:46.9±1.3, 833S×15691E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/15, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=29.7km s-min=25.6km az=7.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.20**	**110**	Pn	Pn	10 46 37.4	-1.0
	16nm,0.3s,baz=288,slow=3.2,SNR=3.0						
HNR				Sn	Sn	10 47 18.5	+1.2
	32nm,0.3s,baz=270,slow=20,SNR=4.4						
WRA	**Warramunga Arr**	**24.70**	**240**	P	P	10 51 09.5	-0.4
	1.1nm,0.8s,baz=66,slow=9.6,SNR=4.5						
ASAR	**Alice Springs**	**26.79**	**233**	P	P	10 51 27.8	-1.0
	0.4nm,0.9s,baz=66,slow=9.5,SNR=2.8						
STKA	**Stephens Creek**	**27.41**	**209**	P	P	10 51 36.0	+1.7
	1.6nm,0.5s,baz=46,slow=13,SNR=6.5						
SONM	**Songino Array**	**71.48**	**327**	P	P	10 57 10.3	+1.0
	0.3nm,0.5s,baz=132,slow=7.9,SNR=3.8						
MKAR	**Makanchi Array**	**85.65**	**318**	P	P	10 58 27.2	-0.3
	0.7nm,0.6s,baz=96,slow=6.8,SNR=4.4						

*ISCJB **26** 10:46:09.9±1.4, 3738N±006×2072E±008, h8km, Error ellipse: s-maj=11.4km s-min=5.1km az=143.1*
*THE **26** 10:46:10.7, 3737N×2068E, h8km, ML3.3*
*CSEM **26** 10:46:11.7±0.5, 3742N×2076E, h2km, MD3.5, Error ellipse: s-maj=10.8km s-min=4.1km az=54.0*
*ATH **26** 10:46:12.7, 3746N×2083E, h12km±5km, MD3.5/4*
*NEIC **26** 10:46:13.3, 3749N×2088E, h14km, MD3.5(ATH), After ATH.*

ISC 26 10:46:10.4±1.5, 3738N±006×2069E±009, h9km±10km, n9, σ0°91/14, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.73**	**6**	*e*Pg	**Pg**	**10 46 24.7**	**+0.1**
VLS	**Valsamata**	**0.80**	**354**	*e*PG	**Pg**	**10 46 26.7**	**+0.9**
VLS				*e*SB	**Sb**	**10 46 38.8**	**+1.4**
RLS	**Riolos of Patr**	**0.91**	**42**	*e*PB	**Pb**	**10 46 27.0**	**-1.4**
PYL	**PYLOS**	**0.97**	**120**	*e*Pg	**Pg**	**10 46 28.7**	**-0.3**
PYL				*e*Sg	**Sg**	**10 46 43.1**	**+1.5**
ITM	**Ithomi**	**1.00**	**101**	*e*PG	**Pg**	**10 46 29.9**	**+0.2**
ITM				*e*SB	**Sb**	**10 46 43.1**	**-0.2**
SELA	**Sela**	**1.31**	**46**	*e*Pg	**Pg**	**10 46 34.0**	**-1.5**
SELA				*e*Sg	**Sg**	**10 46 53.1**	**+0.7**
VLX	**Vlachokerasia**	**1.34**	**90**	*e*Pg	**Pg**	**10 46 35.8**	**-0.3**
VLX				*e*Sg	**Sg**	**10 46 54.1**	**+0.5**
EVR	**Evrytania**	**1.77**	**29**	*e*PG	**Pg**	**10 46 43.1**	**-1.2**
VLI	**Veliai**	**1.91**	**109**	*e*PG	**Pg**	**10 46 46.6**	**-0.5**

*NEIC **26** 10:52:56.5, 3818N×2035E, h10km, MD3.6(ATH), After ATH.*
*CSEM **26** 10:52:56.5, 3818N×2035E, h10km, MD3.6/4, After ATH*

ATH 26 10:52:56.8, 3821N×2037E, h9km±1km, MD3.6/4, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**101**	⇑*i*PG	Pg	10 53 00.8	+0.3
VLS				*e*SG	Sg	10 53 04.0	+1.0
RLS	**Riolos of Patr**	**0.88**	**100**	*e*PB	Pb	10 53 13.7	-0.5
EVR	**Evrytania**	**1.33**	**58**	*e*PN	Pn	10 53 21.0	-0.5
EVR	**Evrytania**	**1.33**	**58**	*e*Pb	Pb	10 53 23.9	+2.0
KEK	**Kerkira**	**1.57**	**344**	*e*PB	Pb	10 53 26.3	+0.4
ITM	**Ithomi**	**1.61**	**129**	*e*PG	Pg	10 53 26.8	-0.8
THL	**Klokotos Trika**	**1.86**	**43**	*e*PN	Pn	10 53 31.0	+2.1

IDC 26 10:56:06.9±7.3, 776S×15688E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/15, mbtmp3.8/4, ML4.3/1, Error ellipse: s-maj=156.5km s-min=27.3km az=8.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.45**	**119**	Pn	Pn	10 57 01.9	0.0
	28nm,0.3s,baz=246,slow=1.5,SNR=3.1						
HNR				Sn	Sn	10 57 44.8	+1.2
	24nm,0.3s,baz=270,slow=19,SNR=3.9						
WRA	**Warramunga Arr**	**24.97**	**239**	P	P	11 01 33.2	+0.8
	0.8nm,0.6s,baz=66,slow=10,SNR=7.8						
ASAR	**Alice Springs**	**27.12**	**232**	P	P	11 01 51.0	-0.8
	0.5nm,1.0s,baz=55,slow=10,SNR=4.7						
STKA	**Stephens Creek**	**27.90**	**209**	P	P	11 01 58.7	0.0
	2.5nm,0.9s,baz=43,slow=14,SNR=5.0						

IDC 26 10:58:08.9±1.4, 853S×15679E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/14, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=37.0km s-min=25.3km az=3.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.25**	**106**	Pn	Pn	10 59 00.7	-0.4
	19nm,0.3s,baz=257,slow=4.1,SNR=3.0						
HNR				Sn	Sn	10 59 41.4	+0.8
	28nm,0.3s,baz=90,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**24.50**	**240**	P	P	11 03 31.6	+1.5
	2.0nm,0.9s,baz=66,slow=9.7,SNR=6.6						
ASAR	**Alice Springs**	**26.57**	**233**	P	P	11 03 47.7	-1.2
	0.6nm,0.9s,baz=61,slow=9.6,SNR=4.1						
STKA	**Stephens Creek**	**27.18**	**209**	P	P	11 03 57.8	+3.5
	2.3nm,0.7s,baz=42,slow=15,SNR=4.9						
SONM	**Songino Array**	**71.58**	**327**	P	P	11 09 32.2	+0.2
	0.6nm,0.7s,baz=123,slow=5.3,SNR=2.6						

*HLW **26** 10:58:41.3, 3708N×2658E, h33km, Mb4.3*
*ISCJB **26** 10:58:45.8±0.3, 3676N±003×2669E±004, h175km±4km, mb3.8/4, Error ellipse: s-maj=5.7km s-min=4.6km az=138.6*
*IDC **26** 10:58:45.6±1.2, 3689N×2659E, h148km±16km, mb3.6/4, mb1 3.4/9, mb1mx3.2/23, mbtmp3.5/9, Error ellipse: s-maj=21.1km s-min=16.7km az=140.0*
*CSEM **26** 10:58:45.8±0.1, 3677N×2665E, h181km±1km, ML3.8, Error ellipse: s-maj=2.1km s-min=1.4km az=61.0*
*ATH **26** 10:58:46.8, 3676N×2659E, h169km±2km*
*NEIC **26** 10:58:46.2, 3678N×2660E, h176km, MG3.8(THE), After ATH.*
*THE **26** 10:58:49.3, 3678N×2665E, h170km, ML3.8*

ISC 26 10:58:46.9±0.3, 3677N±003×2666E±004, h169km±4km, n46, σ0°87/63, mb3.8/4, 2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.95**	**9**	⇓*i*P	**Pn**	**10 59 13.6**	**+0.5**
SMG				*e*S	**Sn**	**10 59 33.5**	**+0.2**
APE	**Apeiranthos**	**0.95**	**289**	*e*Pg	**Pn**	**10 59 13.3**	**+0.2**
APE				*e*Sg	**Sn**	**10 59 32.7**	**-0.5**
APE	**Apeiranthos**	**0.95**	**289**	*e*P	**Pn**	**10 59 13.9**	**+0.8**
APE				*e*Sg	**Sn**	**10 59 32.7**	**-0.5**
KARP	**Karpathos**	**1.29**	**161**	*e*P	**Pn**	**10 59 16.8**	**+0.8**
KARP				*e*S	**Sn**	**10 59 38.3**	**0.0**
ARG	**Arkhangelos**	**1.31**	**115**	*e*P	**Pn**	**10 59 17.4**	**+1.3**
BLCB	**Balcova**	**1.64**	**11**	*e*Pb	**Pn**	**10 59 19.7**	**+0.3**
BLCB				*e*Sb	**Sn**	**10 59 43.5**	**-0.9**
ZKR	**Zakros**	**1.69**	**192**	*e*Pb	**Pn**	**10 59 20.5**	**+0.6**
ZKR				*e*Sb	**Sn**	**10 59 45.2**	**-0.1**
NPS	**Neapolis**	**1.73**	**210**	⇓*i*P	**Pn**	**10 59 20.7**	**+0.4**
LAST	**Lasithi**	**1.87**	**211**	*e*Pb	**Pn**	**10 59 21.9**	**0.0**
LAST				*e*Sb	**Sn**	**10 59 48.1**	**-0.6**
XRY	**Khrisi**	**2.05**	**203**	*e*P	**Pn**	**10 59 24.0**	**+0.2**
IDI	**Anoyia**	**2.06**	**225**	P	**Pn**	**10 59 24.0**	**+0.1**
	31nm,0.3s,baz=4.4,slow=6.5,SNR=492						
IDI				S	**Sn**	**10 59 49.8**	**-2.6**
	19nm,0.3s,baz=303,slow=10,SNR=9.0						
SIVA	**Sivas**	**2.30**	**221**	*e*Pn	**Pn**	**10 59 27.5**	**+0.8**
SIVA				*e*Sn	**Sn**	**10 59 58.1**	**+0.7**
VAM	**Vamos**	**2.41**	**236**	*e*P	**Pn**	**10 59 28.3**	**+0.4**
KARN	**Karanos**	**2.60**	**239**	*e*Pn	**Pn**	**10 59 30.5**	**+0.2**
KARN				*e*Sn	**Sn**	**11 00 01.8**	**-2.0**
DID	**Didima**	**2.83**	**286**	*e*Pn	**Pn**	**10 59 33.5**	**+0.5**
GVD	**Gavdhos**	**2.84**	**228**	*e*Pn	**Pn**	**10 59 34.0**	**+0.9**
GVD				*e*Sn	**Sn**	**11 00 08.7**	**-0.2**
GVD	**Gavdhos**	**2.84**	**228**	*e*P	**Pn**	**10 59 33.5**	**+0.4**
GVD	**Gavdhos**	**2.84**	**228**	*e*Pn	**Pn**	**10 59 34.0**	**+0.9**
GVD				*e*Sn	**Sn**	**11 00 08.7**	**-0.2**
KYTH	**Kithira**	**2.96**	**262**	*e*P	**Pn**	**10 59 34.5**	**0.0**
VLI	**Veliai**	**2.99**	**270**	*e*P	**Pn**	**10 59 35.3**	**+0.4**
LTK	**Loutraki**	**3.19**	**294**	*e*Pn	**Pn**	**10 59 38.1**	**+0.8**
VLX	**Vlachokerasia**	**3.47**	**281**	*e*Pn	**Pn**	**10 59 41.1**	**+0.2**
VLX				*e*Sn	**Sn**	**11 00 20.1**	**-2.8**
ITM	**Ithomi**	**3.81**	**278**	*e*P	**Pn**	**10 59 46.3**	**+1.1**
PYL	**PYLOS**	**3.94**	**273**	*e*Pn	**Pn**	**10 59 46.4**	**-0.5**
SELA	**Sela**	**4.07**	**293**	*e*Pn	**Pn**	**10 59 49.2**	**+0.6**
SWA1		**7.53**	**186**	P	**Pn**	**11 00 33.5**	**-0.5**
HNAT	**Natroun**	**7.85**	**154**	P	**Pn**	**11 00 38.2**	**-0.1**
KOT	**Kottamia**	**8.08**	**146**	P	**Pn**	**11 00 41.2**	**0.0**
KOT				S	**Sn**	**11 02 08.6**	**-3.0**
MMAI	**Mount Meron Ar**	**8.10**	**115**	P	**Pn**	**11 00 41.1**	**-0.4**
	7.2nm,0.3s,baz=324,slow=12,SNR=19						
MMAI				S	**Sn**	**11 02 08.6**	**-3.6**
	8.8nm,0.3s,baz=313,slow=26,SNR=11						
HHAG	**Hagoal**	**8.18**	**145**	P	**Pn**	**11 00 42.7**	**+0.1**
AMAG	**Maghara**	**8.19**	**136**	P	**Pn**	**11 00 41.9**	**-0.9**
HSAF	**As Saff**	**8.23**	**149**	P	**Pn**	**11 00 43.1**	**-0.2**
GLL	**Jalalah**	**8.33**	**148**	P	**Pn**	**11 00 44.5**	**0.0**
SUZ		**8.63**	**141**	P	**Pn**	**11 00 48.5**	**0.0**
EIL	**Elat**	**9.92**	**133**	P	**Pn**	**11 01 06.5**	**+1.1**
EIL				S	**Sn**	**11 02 51.2**	**-4.5**
EIL	**Elat**	**9.92**	**133**	P	**Pn**	**11 01 06.5**	**+1.1**
	0.6nm,0.3s,baz=158,slow=19,SNR=5.0						
EIL				S	**Sn**	**11 02 51.2**	**-4.5**
	2.6nm,0.3s,baz=317,slow=12,SNR=9.2						
HDK1	**Dakhla**	**11.44**	**167**	P	**Pn**	**11 01 28.1**	**+2.7**
KEST	**Kesra**	**14.01**	**271**	P	**Pn**	**11 01 57.4**	**-0.7**
	0.2nm,0.3s,baz=89,slow=2.2,SNR=2.7						
AKASG	**Malin Array Be**	**14.05**	**7**	P	**Pn**	**11 01 57.8**	**-0.6**
	1.2nm,0.3s,baz=196,slow=11,SNR=7.9						
MIB	**Mutribah**	**18.62**	**106**	*e*P	**P**	**11 02 51.4**	**-0.1**
MIB				AMb	AMB	11 04 27.0	
	comp=Z,122nm,0.6s						
MIB	**Mutribah**	**18.62**	**106**	*e*P	**P**	**11 02 51.4**	**-0.1**
	comp=Z,122nm,0.6s						
FINES	**FINESS Array B**	**24.70**	**359**	P	**P**	**11 03 51.7**	**-0.2**
FINES	**FINESS Array B**	**24.70**	**359**	P	**P**	**11 03 51.7**	**-0.2**
	comp=Z,1.2nm,0.6s,mb3.6,baz=158,slow=12,SNR=5.2						
HFS	**Hagfors**	**24.82**	**344**	P	**P**	**11 03 52.7**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.5,baz=144,slow=10,SNR=7.8						
TORD	**Torodi Ar. Bea**	**32.45**	**230**	P	**P**	**11 05 02.4**	**+1.2**
	comp=Z,1.8nm,0.6s,mb4.0,baz=35,slow=8.7,SNR=24						
ARCES	**ARCESS Array B**	**32.83**	**359**	P	**P**	**11 05 02.6**	**-1.3**
	comp=Z,3.9nm,0.9s,mb4.1,baz=175,slow=6.1,SNR=5.1						

*TEH **26** 11:00:17.1, 2844N×5749E, h5km, ML4.2*
*ISCJB **26** 11:00:44.9±0.4, 2838N±002×5728E±004, h55km±5km, mb4.3/39, MS3.5/4, Error ellipse: s-maj=5.5km s-min=4.1km az=6.3*
*MOS **26** 11:00:44.3±1.4, 2815N×5797E, h33km, mb4.8/10, Error ellipse: s-maj=13.1km s-min=10.8km az=104.4*
*NEIC **26** 11:00:45.3, 2865N×5749E, h14km, mb4.6/17, ML3.5(THR), MN4.2(TEH), After THR.*
*THR **26** 11:00:45.3±0.4, 2864N×5748E, h14km±7km, ML3.5*
*CSEM **26** 11:00:47.9±0.1, 2877N×5760E, h20km, mb4.6/9, Error ellipse: s-maj=4.8km s-min=2.9km az=23.0*
*IDC **26** 11:00:48.9±5.7, 2850N×5727E, h75km±52km, mb3.8/20, mb1 3.9/22, mb1mx3.9/26, mbtmp3.8/22, ML4.2/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/34, Error ellipse: s-maj=17.1km s-min=12.9km az=155.0*

ISC 26 11:00:46.6±0.3, 2839N±002×5728E±004, h54km±4km, n147, σ1°18/161, mb4.3/39, MS3.5/4, 1C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**1.66**	**344**	Pg	**Pn**	**11 01 12.0**	**-1.2**
KRBR				Sg	**Sn**	**11 01 32.0**	**-1.4**
KRBR	**Kerman**	**1.66**	**344**	*e*Pg	**Pn**	**11 01 12.6**	**-0.6**
KRBR				*e*Sg	**Sn**	**11 01 32.7**	**-0.7**
BANOM	**Banah**	**2.60**	**200**	P	**Pn**	**11 01 26.2**	**0.0**
	SNR=126						
BANOM				⇑S	**Sn**	**11 01 59.4**	**+2.7**
BANOM	**Banah**	**2.60**	**200

comp=Z,344nm,0.3s
KBD Kabd 8.45 278 *e*P **Pn 11 02 46.2 -0.2**
KBD *e*S **Sn 11 04 16.1 -4.2**
comp=Z,344nm,0.3s
UMR Umm Al-Rimmam 8.46 280 *e*P **Pn 11 02 45.8 -0.7**
UMR *e*S **Sn 11 04 16.5 -4.0**
UMR AMb AMB 11 04 17.9
comp=Z,104nm,0.4s
UMR Umm Al-Rimmam 8.46 280 *e*P **Pn 11 02 45.8 -0.7**
comp=Z,104nm,0.4s
UMR *e*S **Sn 11 04 16.5 -4.0**
RDF Al-Radifah 8.57 276 *e*P **Pn 11 02 47.6 -0.3**
RDF *e*S **Sn 11 04 18.5 -4.7**
RDF AMb AMB 11 04 22.4
comp=Z,167nm,0.5s
RDF Al-Radifah 8.57 276 *e*P **Pn 11 02 47.6 -0.3**
comp=Z,167nm,0.5s
RDF *e*S **Sn 11 04 18.5 -4.7**
MIB Mutribah 8.81 282 *e*S **Sn 11 04 25.5 -3.7**
MIB Mutribah 8.81 282 *e*S **Sn 11 04 25.5 -3.7**
NAY Al-Naaiem 8.85 278 *e*P **Pn 11 02 51.2 -0.6**
NAY *e*S **Sn 11 04 25.7 -4.4**
NAY AMb AMB 11 04 27.5
comp=Z,47nm,0.6s
NAY Al-Naaiem 8.85 278 *e*P **Pn 11 02 51.2 -0.6**
comp=Z,47nm,0.6s
NAY *e*S **Sn 11 04 25.7 -4.4**
LYLS 11.07 237 P **Pn 11 03 18.0 -4.1**
ASYS 11.48 269 P **Pn 11 03 24.5 -3.3**
MALT Malatya 18.57 307 *e*P **Pn 11 05 01.6 +1.8**
comp=Z,21nm,1.0s
MALT Malatya 18.57 307 *e*P **Pn 11 05 01.6 +1.8**
MALT pmax pmax
comp=Z,21nm,1.0s
AML Almayashu 19.13 40 *e*P **Pn 11 05 06.0 -0.4**
comp=Z,116nm,0.6s
AML Almayashu 19.13 40 *e*P **Pn 11 05 06.0 -0.4**
comp=Z,116nm,0.6s
MMAI Mount Meron Ar 19.36 289 P **Pn 11 05 09.6 +0.3**
comp=Z,0.7nm,0.3s,baz=82,slow=12,SNR=3.0
EKS2 Erkin-Say 19.52 39 *e*P **Pn 11 05 10.3 -0.7**
comp=Z,11nm,1.1s
EKS2 Erkin-Say 19.52 39 *e*P **Pn 11 05 10.4 -0.7**
comp=Z,11nm,1.1s
EIL Elat 19.57 279 P **Pn 11 05 10.8 -0.9**
EIL LR LR 11 14 23.7
EIL Elat 19.57 279 P **Pn 11 05 10.8 -0.9**
comp=Z,0.7nm,0.3s,baz=69,slow=4.7,SNR=5.7
EIL LR LR 11 14 23.7
comp=Z,112nm,18.0s,baz=291,slow=42
UCH Uchtor 19.66 41 *e*P **Pn 11 05 10.7 -2.0**
comp=Z,3.0nm,0.8s
TKM2 Tokmak 2 20.71 41 *e*P **P 11 05 22.5 +0.2**
TKM2 pmax pmax
comp=Z,5.0nm,0.8s
TKM2 Tokmak 2 20.71 41 *e*P **P 11 05 22.5 +0.2**
comp=Z,5.0nm,0.8s
ATD Arta Tunnel 21.53 222 LR LR 11 15 00.9
comp=Z,62nm,20.6s,MS3.0,baz=69,slow=39
AKTK Aktyubinsk 22.03 1 P **P 11 05 37.1 +0.9**
AKTK LR LR 11 15 34.7
AKTK Aktyubinsk 22.03 1 P **P 11 05 37.2 +0.9**
AKTO Aktyubinsk 22.03 1 P **P 11 05 37.1 +0.9**
comp=Z,6.0nm,0.8s,mb4.1,baz=177,slow=9.1,SNR=13
AKTO LR LR 11 15 34.7
comp=Z,59nm,21.2s,MS3.0,baz=10,slow=40
GKN Gorkha 24.10 84 *e*P **P 11 05 58.2 +1.1**
comp=Z,9.1nm,0.3s,mb4.7
KKN Kakani 24.69 85 *e*P **P 11 06 03.2 +0.7**
comp=Z,36nm,0.5s,mb5.2
JIRN Jiri 25.50 85 *e*P **P 11 06 10.4 +0.4**
comp=Z,17nm,0.4s,mb4.9
MKAR Makanchi Array 26.84 40 P **P 11 06 20.9 -0.9**
MKAR Makanchi Array 26.84 40 P **P 11 06 20.9 -0.9**
comp=Z,0.5nm,0.4s,mb3.4,baz=267,slow=8.2,SNR=8.5
TAPN Taplejung 26.89 85 *e*P **P 11 06 22.9 +0.5**
comp=Z,5.4nm,0.4s,mb4.4
IDI Anoyia 28.28 292 P **P 11 06 34.6 -0.3**
comp=Z,1.6nm,0.3s,mb4.1,baz=100,slow=2.6,SNR=4.6
AKASG Malin Array Be 30.75 324 P **P 11 06 55.5 -1.0**
comp=Z,0.4nm,0.4s,mb3.6,baz=130,slow=8.2,SNR=4.4
NVS Novosibirsk 32.43 28 *e*P **P 11 07 10.6 -0.6**
ZAL Zalesovo 32.49 31 P **P 11 07 11.7 -0.1**
ZALV Zalesovo Beam 32.51 31 P **P 11 07 11.7 -0.2**
comp=Z,2.8nm,0.3s,mb4.6,baz=241,slow=9.3,SNR=19
KMBO Kilima Mbogo 35.07 217 P **P 11 07 36.3 +1.7**
comp=Z,0.5nm,0.4s,mb3.8,baz=45,slow=19,SNR=3.7
TIP Timpagrande 35.10 299 *e*P **P 11 07 35.5 +0.8**
comp=Z,5.1nm,0.6s,mb4.6
TIP Timpagrande 35.10 299 *e*P **P 11 07 35.5 +0.9**
comp=Z,5.1nm,0.6s,mb4.6
FINES FINESS Array B 39.02 337 P **P 11 08 07.2 -0.4**
comp=Z,1.2nm,0.5s,mb3.9,baz=140,slow=12,SNR=7.8
GERES GERESS Array B 39.04 314 P **P 11 08 07.3 -0.6**
comp=Z,0.8nm,0.5s,mb3.7,baz=116,slow=9.0,SNR=3.2
ZAK Zakamensk 40.96 45 *e*P **P 11 08 25.4 +1.6**
ZAK *e* 11 10 07.6
ZAK pmax pmax
comp=Z,2.0nm,1.9s,mb3.4
ZAK pmax pmax
comp=Z,2.0nm,1.8s,mb3.5
ZAK Zakamensk 40.96 45 *e*P **P 11 08 25.4 +1.6**
comp=Z,2.0nm,1.9s,mb3.4
SONM Songino Array 42.43 49 P **P 11 08 35.2 -0.7**
comp=Z,1.8nm,0.9s,mb3.7,baz=255,slow=8.4,SNR=11
SBF Sospel 42.48 305 *e*P **P 11 08 43.4 +7.1**
comp=Z,30nm,0.8s,mb4.7
SBF Sospel 42.48 305 *e*P **P 11 08 43.4 +7.1**
SBF pmax pmax
comp=Z,15nm,0.8s,mb4.7
SBF Sospel 42.48 305 *e*P **P 11 08 43.4 +7.1**
comp=Z,15nm,0.8s,mb4.7
HFS Hagfors 43.21 330 P **P 11 08 42.0 0.0**
comp=Z,0.9nm,0.5s,mb3.8,baz=120,slow=9.0,SNR=6.6
CABF La Chapelle 43.68 309 *e*P **P 11 08 53.0 +7.0**
comp=Z,21nm,1.1s,mb4.5
CABF La Chapelle 43.68 309 *e*P **P 11 08 53.0 +7.0**
CABF pmax pmax
comp=Z,11nm,1.1s,mb4.5
CABF La Chapelle 43.68 309 *e*P **P 11 08 53.0 +7.0**
comp=Z,11nm,1.1s,mb4.5
VIVF Saint-Julien-l 44.52 306 *e*P **P 11 09 00.3 +7.6**
comp=Z,10nm,0.8s,mb4.4
VIVF Saint-Julien-l 44.52 306 *e*P **P 11 09 00.3 +7.6**
VIVF pmax pmax
comp=Z,5.0nm,0.8s,mb4.4
VIVF Saint-Julien-l 44.52 306 *e*P **P 11 09 00.3 +7.6**
comp=Z,5.2nm,0.8s,mb4.4
NOA NORSAR Array B 44.71 330 P **P 11 08 53.2 -0.8**
NOA NORSAR Array B 44.71 330 P **P 11 08 53.2 -0.8**
comp=Z,0.5nm,0.7s,mb3.5,baz=116,slow=7.8,SNR=3.4
LASF Ste Croix 45.07 305 *e*P **P 11 09 05.0 +7.9**
comp=Z,9.8nm,0.8s,mb4.4
LASF Ste Croix 45.07 305 *e*P **P 11 09 05.0 +7.9**
comp=Z,4.9nm,0.8s,mb4.4
ARCES ARCESS Array B 45.08 345 P **P 11 08 56.9 +0.1**
ARCES ARCESS Array B 45.08 345 P **P 11 08 56.9 +0.1**
comp=Z,2.6nm,0.8s,mb4.1,baz=125,slow=7.6,SNR=9.6
SMF Signal de Mont 45.22 309 *e*P **P 11 09 05.2 +6.9**
comp=Z,14nm,0.8s,mb4.5
SMF Signal de Mont 45.22 309 *e*P **P 11 09 05.2 +6.9**
SMF pmax pmax
comp=Z,7.0nm,0.8s,mb4.5
SMF Signal de Mont 45.22 309 *e*P **P 11 09 05.2 +6.9**
comp=Z,7.1nm,0.8s,mb4.5
LOR Lormes 45.26 310 *e*P **P 11 09 06.0 +7.4**
comp=Z,7.1nm,0.8s,mb4.3
LOR Lormes 45.26 310 *e*P **P 11 09 06.0 +7.4**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
LOR Lormes 45.26 310 *e*P **P 11 09 06.0 +7.4**
comp=Z,3.5nm,0.8s,mb4.3
SSF Saint Saulge 45.48 309 *e*P **P 11 09 07.3 +7.0**
AVF Avril sur Loir 45.57 309 *e*P **P 11 09 07.6 +6.6**
MTLF Montolieu 46.25 304 *e*P **P 11 09 14.1 +7.7**
comp=Z,12nm,0.8s,mb4.6
MTLF Montolieu 46.25 304 *e*P **P 11 09 14.1 +7.7**
MTLF pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MTLF Montolieu 46.25 304 *e*P **P 11 09 14.1 +7.7**
comp=Z,6.0nm,0.8s,mb4.6
TCF Toulx Ste Croi 46.33 308 *e*P **P 11 09 14.2 +7.2**
CAF Calviac 46.38 306 *e*P **P 11 09 14.1 +6.7**
comp=Z,11nm,0.8s,mb4.5
CAF Calviac 46.38 306 *e*P **P 11 09 14.1 +6.7**
CAF pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
CAF Calviac 46.38 306 *e*P **P 11 09 14.1 +6.7**
comp=Z,5.3nm,0.8s,mb4.5
LFF La Frestale 47.32 306 *e*P **P 11 09 22.3 +7.5**
comp=Z,24nm,0.8s,mb4.9
LFF La Frestale 47.32 306 *e*P **P 11 09 22.3 +7.5**
LFF pmax pmax
comp=Z,12nm,0.8s,mb4.9
LFF La Frestale 47.32 306 *e*P **P 11 09 22.3 +7.5**
comp=Z,12nm,0.8s,mb4.9
ETSF Etsaut 48.29 304 *e*P **P 11 09 32.6 +10**
comp=Z,16nm,1.0s,mb4.7
ETSF Etsaut 48.29 304 *e*P **P 11 09 32.6 +10**
comp=Z,8.1nm,1.0s,mb4.7
SJPF Ste Jean 48.77 304 *e*P **P 11 09 33.7 +7.7**
comp=Z,5.8nm,0.5s,mb4.5
SJPF Ste Jean 48.77 304 *e*P **P 11 09 33.7 +7.7**
SJPF pmax pmax
comp=Z,3.0nm,0.5s,mb4.6
SJPF Ste Jean 48.77 304 *e*P **P 11 09 33.7 +7.7**
comp=Z,2.9nm,0.5s,mb4.5
BOD Bodaibo 48.83 36 *e*P **P 11 09 25.7 -0.5**
BOD pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
BOD Bodaibo 48.83 36 *e*P **P 11 09 25.7 -0.5**
comp=Z,6.0nm,1.0s,mb4.6
ESDC Sonseca Array 51.11 300 P **P 11 09 42.2 -1.6**
ESDC Sonseca Array 51.11 300 P **P 11 09 42.2 -1.6**
comp=Z,0.4nm,0.3s,mb3.8,baz=90,slow=7.3,SNR=5.8
TORD Torodi Ar. Bea 53.70 266 P **P 11 10 02.8 -0.5**
comp=Z,4.0nm,0.6s,mb4.5,baz=61,slow=7.0,SNR=23
TORD LR LR 11 35 19.6
comp=Z,66nm,19.2s,MS3.7,baz=85,slow=39
KSRS Korea Array 58.75 61 P **P 11 10 37.6 -1.4**
comp=Z,4.2nm,0.5s,mb4.7,baz=278,slow=7.1,SNR=24
KSRS LR LR 11 40 27.9
comp=Z,154nm,18.8s,MS4.2,baz=80,slow=40
BOSA Boshof 64.44 211 P **P 11 11 18.1 +0.8**
comp=Z,7.9nm,1.0s,mb4.7,baz=30,slow=6.5,SNR=7.7
FITZ Fitzroy Crossi 80.62 116 *e*P **P 11 12 54.7 +0.9**
comp=Z,9.7nm,0.7s,mb4.8
FITZ Fitzroy Crossi 80.62 116 *e*P **P 11 12 54.6 +0.9**
comp=Z,10nm,0.7s,mb4.9
FITZ Fitzroy Crossi 80.62 116 P **P 11 12 54.8 +1.1**
comp=Z,5.1nm,0.7s,mb4.6,baz=244,slow=4.7,SNR=12
FITZ Fitzroy Crossi 80.62 116 *e*P **P 11 12 54.6 +0.8**
comp=Z,10nm,0.7s,mb4.9
KAKA Kakadu 83.29 108 *e*P **P 11 13 08.3 +0.4**
comp=Z,4.9nm,0.6s,mb4.7
KAKA Kakadu 83.29 108 *e*P **P 11 13 07.8 -0.1**
comp=Z,9.2nm,0.6s,mb5.0
SCHQ Schefferville 84.27 331 P **P 11 13 11.8 -0.5**
baz=67,slow=7.7
WRA Warramunga Arr 88.55 113 P **P 11 13 34.1 +0.3**
comp=Z,1.4nm,0.9s,mb4.3,baz=314,slow=4.1,SNR=17
WB2 Warramunga Arr 88.56 113 *e*P **P 11 13 34.0 +0.2**
YKA Yellowknife Ar 89.21 356 P **P 11 13 36.2 0.0**
YKA Yellowknife Ar 89.21 356 P **P 11 13 36.2 0.0**
comp=Z,0.8nm,0.6s,mb4.2,baz=0.2,slow=5.0,SNR=28
ASAR Alice Springs 90.11 117 P **P 11 13 41.8 +0.8**
comp=Z,2.2nm,0.7s,mb4.6,baz=306,slow=4.9,SNR=47

NEIC 26 11:13:09.8, 1961N×6564W, h56km, MD3.9(RSPR), **After RSPR., Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
CBYP	**Canovanas**	**1.35**	**189**	*e*P		Pn	11 13 31.0	-1.3
CBYP				*e*S		Sn	11 13 47.8	-1.4
MTP	**Monte Pirata**	**1.51**	**177**	*e*Pn		Pn	11 13 32.7	-1.8
MTP				*e*S		Sn	11 13 53.1	0.0
SJG	**San Juan**	**1.57**	**198**	*e*Pn		Pn	11 13 33.4	-1.9
CPD	**Cerro la Pandu**	**1.59**	**190**	*e*Pn		Pn	11 13 33.9	-1.6
AOPR	**Arecibo Observ**	**1.64**	**220**	*e*P		Pn	11 13 36.0	-0.3
CELP	**Cerrillos**	**1.77**	**210**	*e*P		Pn	11 13 37.4	-0.6
SDDR	**Presa de Saban** 17nm,0.6s	**5.37**	**264**	*e*Pn		Pn	11 14 28.1	+0.7
SDDR				*e*Sn		Sn	11 15 28.0	0.0

*MOS **26** 11:17:02.8±1.3, 671N×126.14E, h33km, mb5.2/35, Error ellipse: s-maj=12.8km s-min=6.1km az=105.4*
*BJI **26** 11:17:05.1, 650N×12635E, h60km, mB5.1, mb5.0, Ms4.4, Msz4.1*
*ISCJB **26** 11:17:05.7±0.4, 667N±002×12629E±003, h57km±3km, mb5.0/95, MS4.3/31, Error ellipse: s-maj=5.3km s-min=3.8km az=169.8*
*MAN **26** 11:17:06, 672N×12621E, h38km, mb5.7, ML4.7, MS5.2*
MAN INTENSITY II - DAVAO CITY; MATI, DAVAO, ORIENTAL.
*IDC **26** 11:17:06.3±1.5, 668N×12586E, h50km±13km, mb4.6/23, mb1 4.6/23,mb1mx4.6/24,mbtmp4.6/23,ML5.7/1, MS4.2/17, Ms1 4.2/17,ms1mx4.0/40,Error ellipse: s-maj=23.2km s-min=9.3km az=79.0*
*GCMT **26** 11:17:08.6±0.3, 673N×12633E, h63km±3km, MW4.9/64, Moment Tensor Solution. s27,c35; s64,c92; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.82±.17; Mθθ2.35±.11; Mϕϕ-1.53±.16; Mrθ0.54±.07; Mrϕ0.50±.11; Mθϕ2.11±.09; Best double couple: Mo2.99100×10^16^ NP1:ϕs119.00000°,δ48.00000°,λ-19.00000°. NP2: ϕs222.00000°,δ76.00000°,λ-136.00000°. Principal axes: T 2.6690, Plg17.0000°, Azm344.0000°; N 0.6480, Plg45.0000°, Azm236.0000°; P -3.3130, Plg40.0000°, Azm90.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **26** 11:17:08.6±0.9, 670N×126.18E, h71km±8km, mb5.1/40 Error ellipse: s-maj=7.9km s-min=4.6km az=75.0*
NEIC Felt [II PIVS] at Davao and Mati; [I PIVS] at General Santos.

ISC 26 11:17:07.3±0.4, 669N±002×12628E±003, h55km±3km, h60km±2.0km:pP-P, n258, σ1s22/258, mb5.0/94, MS4.3/31, 20C-17D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
MATI	**Mati**	**0.26**	**354**	*e*P		**Pn**	**11 17 15.1**	**-1.5**
MATI				*e*S		**Sn**	**11 17 21.8**	**-1.4**
DAV	**Davao City (W)**	**0.80**	**299**	*e*Pn		**Pn**	**11 17 21.4**	**-1.1**
DMPH	**Davao City--Mi**	**0.86**	**297**	*i*P		**Pn**	**11 17 22.0**	**-1.4**
DMPH				*i*S		**Sn**	**11 17 33.7**	**-1.5**
GSPH	**General Santos**	**1.46**	**246**	*i*P		**Pn**	**11 17 27.2**	**-4.1**
GSPH				*e*S		**Sn**	**11 17 43.4**	**-5.8**
BIPH	**Bislig**	**1.49**	**3**	*i*P		**Pn**	**11 17 32.3**	**+0.6**
BIPH				*e*S		**Sn**	**11 17 51.1**	**+1.0**
BUKP	**Musuan**	**1.69**	**314**	*e*P		**Pn**	**11 17 32.9**	**-1.6**
BUKP				*e*S		**Sn**	**11 17 53.9**	**-1.2**
CTBH	**Cotabato--PC H**	**2.09**	**285**	*i*P		**Pn**	**11 17 37.8**	**-2.1**
CTBH				*i*S		**Sn**	**11 17 59.9**	**-4.9**
CGP	**Cagayan de Oro**	**2.36**	**318**	*i*P		**Pn**	**11 17 43.5**	**-0.1**
CGP				*i*S		**Sn**	**11 18 08.9**	**-2.5**
PAGZ	**Pagadian**	**3.10**	**292**	*e*P		**Pn**	**11 17 52.2**	**-1.5**
DCPH	**Dipolog City**	**3.46**	**303**	*e*P		**Pn**	**11 17 58.1**	**-0.6**
MSLP	**Maasin**	**3.70**	**338**	*e*P		**Pn**	**11 18 01.0**	**-1.0**
TBP	**Tagbilaran**	**3.83**	**321**	*e*P		**Pn**	**11 18 02.4**	**-1.3**
SNPH	**Sibulan**	**4.01**	**311**	*e*P		**Pn**	**11 18 06.0**	**-0.2**
LLP	**Lapu-Lapu**	**4.27**	**328**	*e*P		**Pn**	**11 18 09.8**	**-0.1**
LLP				*e*S		**Sn**	**11 18 54.1**	**-4.4**
PLP	**Palo**	**4.63**	**344**	*e*P		**Pn**	**11 18 15.0**	**+0.2**
PLP				*e*S		**Sn**	**11 19 10.7**	**+3.5**
GUIM	**Jordan**	**5.35**	**317**	*e*P		**Pn**	**11 18 25.7**	**+1.1**
RCP	**Roxas**	**5.97**	**324**	*i*eP		**Pn**	**11 18 33.6**	**+0.5**
CNP	**Catarman**	**6.00**	**345**	*e*P		**Pn**	**11 18 34.8**	**+1.2**
CUYO	**Cuyo Island**	**6.65**	**309**	*e*P		**Pn**	**11 18 41.9**	**-0.5**
PVCP	**Virac**	**7.18**	**343**	*e*P		**Pn**	**11 18 51.8**	**+2.1**
MYLDM	**Lahad Datu**	**7.89**	**259**	*i*P		**Pn**	**11 19 01.6**	**+2.3**
BATP	**Bataraza**	**8.66**	**285**	*e*P		**Pn**	**11 19 11.7**	**+1.7**
TSM	**Tawau**	**8.70**	**255**	*i*P		**Pn**	**11 19 12.2**	**+1.6**
SDKM	**Sandakan**	**9.10**	**264**	*i*P		**Pn**	**11 19 18.8**	**+2.8**
KDM	**Kudat**	**9.39**	**272**	*i*P		**Pn**	**11 19 23.0**	**+3.0**
KKM	**Kota Kinabalu**	**10.03**	**267**	*e*Pn		**Pn**	**11 19 30.3**	**+1.6**
KKM	**Kota Kinabalu**	**10.03**	**267**	*i*P		**Pn**	**11 19 32.4**	**+3.7**
BALP	**Baler**	**10.11**	**333**	*e*P		**Pn**	**11 19 31.5**	**+1.7**
PCPH	**Palayan**	**10.18**	**330**	*i*eP		**Pn**	**11 19 37.5**	**+6.7**
BOLP	**Bolinao**	**11.48**	**328**	*e*P		**Pn**	**11 19 49.7**	**+1.2**
KAPI	**Kappang** 421nm,0.8s,SNR=5.2	**13.33**	**209**	Pn		**Pn**	**11 20 15.4**	**+1.6**
BTM	**Bintulu**	**13.60**	**256**	*i*P		**Pn**	**11 20 17.7**	**+0.2**
SBUM	**Sibu**	**14.63**	**254**	*i*P		**Pn**	**11 20 33.1**	**+1.9**
KSM	**Kuching**	**16.75**	**253**	*e*Pn		**Pn**	**11 20 59.3**	**+1.0**
KSM	**Kuching**	**16.75**	**253**	*i*P		**Pn**	**11 21 01.0**	**+2.7**
BATI	**Kupang** 24nm,0.3s,baz=359,slow=1.1,SNR=26	**16.98**	**189**	P		**Pn**	**11 21 01.5**	**+0.3**
BATI				S		**S**	**11 24 14.8**	**-1.9**
BATI	1.0nm,0.3s,baz=168,slow=20,SNR=1.8			LR		LR	11 27 35.1	
YHNB	**Yeheng**	**18.49**	**346**	*e*P		**Pn**	**11 21 19.2**	**-0.3**
GUMO	**Guam** 230nm,0.9s	**19.53**	**68**	*e*P		**Pn**	**11 21 31.8**	**-0.3**
GUMO	**Guam**	**19.53**	**68**	*e*P		**Pn**	**11 21 31.8**	**-0.3**
GUMO				pmax		pmax		
	comp=Z,230nm,0.9s							
QZH	**Quanzhou**	**19.59**	**339**	P		**Pn**	**11 21 33.0**	**+0.3**
QZH				S		**S**	**11 25 09.0**	**-0.2**
QZH				AMB		AMB		
	comp=Z,70nm,0.9s							
QZH				LR		LR		
	comp=N,2μm,23.0s							
QZH				LR		LR		
	comp=E,280nm,11.2s							
QZH				LR		LR		
	comp=Z,2μm,19.8s							
JOW	**Kunigami** comp=Z,27nm,0.5s,baz=202,slow=9.3,SNR=13	**20.12**	**5**	P		**P**	**11 21 37.2**	**+0.5**
QIZ	**Qiongzhong**	**20.16**	**309**	P		**P**	**11 21 38.5**	**+1.3**
QIZ				XP		sP	11 21 58.0	+1.5
QIZ				S		**S**	**11 25 20.8**	**+0.2**
QIZ				XS		sS	11 25 41.8	+1.2
QIZ				AMB		AMB		
	comp=Z,34nm,1.1s							
QIZ				AMB		AMB		
	comp=Z,179nm,6.3s							
QIZ				LR		LR		
	comp=E,482nm,20.4s							
QIZ				LR		LR		
	comp=Z,815nm,20.5s,MS4.1							
QIZ	**Qiongzhong** comp=Z,31nm,0.8s	**20.16**	**309**	*e*P		**P**	**11 21 38.3**	**+1.1**
KAKA	**Kakadu** comp=Z,152nm,0.6s	**20.22**	**162**	*i*P		**P**	**11 21 38.3**	**+0.5**
GZH	**Guangzhou**	**20.52**	**324**	P		**P**	**11 21 45.0**	**+3.9**
GZH				S		**S**	**11 25 33.0**	**+5.3**
GZH				LR		LR		
	comp=N,294nm,20.6s,MS4.0							
GZH				LR		LR		
	comp=E,528nm,20.6s,MS4.0							
GZH				LR		LR		
	comp=Z,712nm,28.1s							
MYKOM	**Kota Tinggi**	**22.89**	**259**	↑P		**P**	**11 22 07.8**	**+1.3**
KTGM	**Kuala Trenggan**	**23.06**	**268**	↑P		**P**	**11 22 09.0**	**+0.7**
KGM	**Kluang**	**23.36**	**260**	*i*P		**P**	**11 22 11.0**	**-0.2**
FITZ	**Fitzroy Crossi** comp=Z,62nm,0.6s,mb5.3	**24.64**	**181**	*e*P		**P**	**11 22 21.6**	**-1.2**
FITZ	**Fitzroy Crossi** comp=Z,22nm,0.5s,mb5.0,baz=14,slow=9.4,SNR=43	**24.64**	**181**	P		**P**	**11 22 22.4**	**-0.4**
SSE	**Sheshan**	**24.75**	**350**	P		**P**	**11 22 24.8**	**+1.1**
SSE				AP			11 22 40.0	
SSE				XP		sP	11 22 46.5	+2.5
SSE				S		**S**	**11 26 40.5**	**-1.6**
SSE				XS		sS	11 27 06.5	+1.1
SSE				AMB		AMB		
	comp=Z,53nm,0.8s,mb5.1							
SSE				LR		LR		
	comp=N,109nm,15.8s							
SSE				LR		LR		
	comp=E,147nm,15.8s							
SSE				LR		LR		
	comp=Z,222nm,15.8s							
FRIM	**Kepong**	**24.80**	**263**	↑P		**P**	**11 22 24.9**	**+0.5**
CBIJ	**Chichi jima**	**25.31**	**35**	P		**P**	**11 22 26.7**	**-2.1**
	comp=Z,116nm,0.7s,mb5.5,baz=280,slow=17,SNR=7.0							
SNG	**Songkhla** comp=Z,110nm,0.9s,mb5.4	**25.48**	**273**	P		**P**	**11 22 30.5**	**-0.1**
KULM	**Kulim**	**25.53**	**268**	*e*P		**P**	**11 22 30.9**	**-0.1**
KULM	**Kulim**	**25.53**	**268**	*i*P		**P**	**11 22 31.8**	**+0.8**
NJ2	**Nanjing**	**26.17**	**346**	*e*P		**P**	**11 22 38.5**	**+1.9**
NJ2				AP		pP	11 22 52.5	+2.1
NJ2				XP		sP	11 23 01.5	+4.6
NJ2				PP			11 23 21.8	
NJ2				S		**S**	**11 27 03.5**	**-1.1**
NJ2				XS		sS	11 27 30.0	+1.8
NJ2				AMB		AMB		
	comp=Z,20nm,0.7s,mb4.8							
NJ2				AMB		AMB		
	comp=Z,140nm,10.0s							
NJ2				LR		LR		
	comp=N,250nm,23.5s,MS3.9							
NJ2				LR		LR		
	comp=E,380nm,26.3s,MS3.9							
NJ2				LR		LR		
	comp=Z,380nm,26.3s							
WHN	**Wuhan**	**26.24**	**336**	P		**P**	**11 22 39.8**	**+2.5**
JNU	**Nakatsue** comp=Z,9.4nm,1.0s,mb4.3,baz=135,slow=9.9,SNR=5.3	**26.65**	**9**	P		**P**	**11 22 40.7**	**-0.2**
GYA	**Guiyang**	**27.13**	**319**	*i*P		**P**	**11 22 46.5**	**+1.2**
GYA				AP		pP	11 23 01.8	+2.7
GYA				XP		sP	11 23 09.5	+3.8
GYA				PP			11 23 34.5	
GYA				PCP		PcP	11 26 07.0	+2.0
GYA				S		**S**	**11 27 18.5**	**-1.4**
GYA				XS		sS	11 27 45.0	+1.6
GYA				SS			11 28 36.5	
GYA				SCP		ScP	11 29 40.3	-0.6
GYA				SCS		ScS	11 33 30.3	-1.9
GYA				AMB		AMB		
	comp=Z,20nm,0.8s,mb4.7							
GYA				AMB		AMB		
	comp=Z,130nm,4.6s							
GYA				LR		LR		
	comp=N,640nm,16.9s,MS4.6							
GYA				LR		LR		
	comp=E,1μm,17.2s,MS4.6							
GYA				LR		LR		
	comp=Z,1μm,17.5s,MS4.6							
NST	**Nakhon Sawan** comp=Z,108nm,0.5s,mb5.6	**27.14**	**291**	P		**P**	**11 22 45.0**	**-0.5**
WRA	**Warramunga Arr**	**27.62**	**163**	P		**P**	**11 22 49.2**	**-0.5**
WRA							11 26 05.8	
WRA				S		**S**	**11 27 23.3**	**-4.4**
WRA	**Warramunga Arr** comp=Z,7.2nm,0.7s,mb4.4,baz=333,slow=11,SNR=56	**27.62**	**163**	P		**P**	**11 22 49.2**	**-0.6**
WRA				PcP		PcP	11 26 05.8	-0.4
	comp=Z,11nm,0.7s,baz=341,slow=2.8,SNR=9.8							
WRA				S		**S**	**11 27 23.3**	**-4.4**
	comp=Z,1.0nm,0.8s,baz=338,slow=14,SNR=2.2							
WRA				ScP		ScP	11 29 42.8	+0.3
	comp=Z,5.2nm,0.8s,baz=340,slow=3.3,SNR=11							
WB2	**Warramunga Arr**	**27.63**	**163**	*e*P		**P**	**11 22 49.0**	**-0.8**
WB2				*e*			11 29 41.4	
MBWA	**Marble Bar** comp=Z,237nm,2.1s,mb5.5	**28.41**	**193**	*e*P		**P**	**11 22 55.0**	**-1.7**
CHRT	**Chiangrai** comp=Z,171nm,1.1s,mb5.7	**28.87**	**300**	*i*P		**P**	**11 23 01.5**	**+0.6**
KMI	**Kunming**	**29.04**	**312**	P		**P**	**11 23 03.5**	**+1.2**
KMI				AP		pP	11 23 14.5	-1.7
KMI				PP		PP	11 23 57.0	-12
KMI				PCP		PcP	11 26 13.8	+4.1
KMI				S		**S**	**11 27 48.5**	**-1.5**
KMI				PCS		PcS	11 29 55.0	+2.4
KMI				AMB		AMB		
	comp=Z,41nm,0.8s,mb5.2							
KMI				LR		LR		
	comp=N,312nm,15.6s,MS4.2							
KMI				LR		LR		
	comp=E,393nm,17.8s,MS4.2							
KMI				LR		LR		
	comp=Z,701nm,19.6s,MS4.3							
JHJ	**Hachijo jima 2** comp=Z,160nm,18.6s,baz=93,slow=35	**29.14**	**24**	LR		LR	11 34 08.5	
CHG	**Chiang Mai** comp=Z,22nm,0.7s,mb5.0	**29.21**	**297**	*i*P		**P**	**11 23 04.1**	**+0.2**
CHTO	**Chiang Mai** comp=Z,14nm,0.6s,mb4.9	**29.21**	**297**	*e*P		**P**	**11 23 03.9**	**0.0**
CHTO	**Chiang

ASAR PcP PcP 11 26 15.2 +0.2
comp=Z,14nm,0.7s,baz=344,slow=2.2,SNR=16
ASAR ScP ScP 11 29 53.3 -0.1
comp=Z,2.4nm,0.9s,baz=346,slow=4.4,SNR=5.0
XAN Xi'an 31.60 332 P **P 11 23 25.3 +0.4**
XAN AMB AMB
comp=Z,132nm,0.8s,mb5.8
XAN AMB AMB
comp=Z,83nm,12.5s
XAN LR LR
comp=N,211nm,21.8s,MS4.2
XAN LR LR
comp=E,581nm,24.4s,MS4.2
XAN LR LR
comp=Z,272nm,24.4s
MJAR Matsushiro Arr 31.65 18 P **P 11 23 23.7 -1.6**
MJAR ScP ScP 11 29 57.7 +2.6
MJAR LR LR 11 35 57.0
MJAR Matsushiro Arr 31.65 18 P **P 11 23 23.7 -1.6**
comp=Z,2.0nm,0.8s,mb4.0,baz=194,slow=10.0,SNR=5.4
MJAR ScP ScP 11 29 57.7 +2.6
comp=Z,5.7nm,1.0s,baz=210,slow=4.0,SNR=10
MJAR LR LR 11 35 57.0
comp=Z,174nm,18.5s,baz=210,slow=36
CD2 Chengdu 32.03 322 *e*P **P 11 23 29.5 +0.8**
CD2 AP pP 11 23 44.3 +1.6
CD2 XP sP 11 23 51.5 +2.3
CD2 PP PP 11 24 37.5 -4.5
CD2 PCP PcP 11 26 18.3 +0.8
CD2 S **S 11 28 35.5 -1.3**
CD2 XS sS 11 29 01.0 +0.5
CD2 PCS PcS 11 30 01.8 -0.5
CD2 SS SS 11 30 31.0 -25
CD2 AMB AMB
comp=Z,100nm,1.0s,mb5.6
CD2 AMB AMB
comp=Z,230nm,8.4s
CD2 LR LR
comp=N,640nm,21.6s,MS4.5
CD2 LR LR
comp=E,880nm,20.4s,MS4.5
CD2 LR LR
comp=Z,420nm,18.0s,MS4.2
DL2 Dalian 32.35 353 P **P 11 23 34.8 +3.4**
DL2 XP sP 11 23 56.8 +4.9
DL2 *e*S **S 11 28 46.5 +5.0**
DL2 AMB AMB
comp=Z,20nm,0.8s,mb5.0
DL2 AMB AMB
comp=Z,110nm,5.8s
DL2 LR LR
comp=N,220nm,14.9s,MS4.1
DL2 LR LR
comp=E,220nm,14.6s,MS4.1
DL2 LR LR
comp=Z,200nm,16.3s,MS3.9
CTA Charters Tower 33.07 144 *e*P **P 11 23 39.1 +1.2**
comp=Z,17nm,1.1s,mb4.9
CTA Charters Tower 33.07 144 P **P 11 23 39.7 +1.8**
CTA pmax pmax
comp=Z,18nm,1.0s
CTA pmax pmax
comp=N,7.0nm,0.8s
CTA MLR MLR
comp=Z,422nm,21.4s
CTA Charters Tower 33.07 144 P **P 11 23 39.7 +1.8**
comp=Z,18nm,1.0s,mb5.0,baz=332,slow=13,SNR=10
CTA ScP ScP 11 30 01.3 +1.1
comp=Z,7.1nm,0.8s,baz=328,slow=7.0,SNR=4.9
CTA LR LR 11 37 58.6
comp=Z,422nm,21.4s,MS4.1,baz=317,slow=38
CTAO Charters Tower 33.07 144 *e*P **P 11 23 39.3 +1.4**
comp=Z,44nm,1.2s,mb5.3
CTAO Charters Tower 33.07 144 *e*P **P 11 23 39.3 +1.4**
CTAO pmax pmax
comp=Z,44nm,1.2s,mb5.3
BJT Baijiatuau 34.41 346 *e*P **P 11 23 49.9 +0.6**
comp=Z,59nm,0.9s,mb5.5
BJT Baijiatuau 34.41 346 *e*P **P 11 23 49.9 +0.6**
BJT pmax pmax
comp=Z,59nm,0.9s
BJI Beijing 34.43 346 P **P 11 23 49.8 +0.4**
BJI XP sP 11 24 12.3 +2.3
BJI PP PP 11 25 09.0 +0.7
BJI S **S 11 29 15.0 +1.3**
BJI XS sS 11 29 41.3 +3.9
BJI AMB AMB
comp=Z,68nm,0.9s,mb5.6
BJI LR LR
comp=N,191nm,16.7s,MS4.1
BJI LR LR
comp=E,239nm,17.4s,MS4.1
BJI LR LR
comp=Z,291nm,22.3s,MS4.0
SNY Shenyang 35.08 356 ⇑P **P 11 23 55.8 +0.8**
SNY S **S 11 29 14.3 -9.3**
SNY AMB AMB
comp=Z,31nm,1.3s,mb5.1
SNY AMB AMB
comp=Z,202nm,4.6s
SNY LR LR
comp=N,273nm,16.4s
SNY LR LR
comp=Z,234nm,17.6s,MS4.0
LZH Lanzhou 35.76 328 ⇓P **P 11 24 04.5 +3.5**
LZH AP pP 11 24 20.0 +4.9
LZH XP sP 11 24 27.3 +5.7
LZH PP PP 11 25 27.3 +4.2
LZH *e*S **S 11 29 36.8 +2.5**
LZH XS sS 11 30 02.5 +4.4
LZH SCP ScP 11 30 11.3 +1.7
LZH PCS PcS 11 30 17.5 +2.2
LZH SS SS 11 32 00.5 -11
LZH SCS ScS 11 34 14.5 -0.2
LZH AMB AMB
comp=Z,51nm,1.3s,mb5.3
LZH AMB AMB
comp=Z,173nm,5.2s
LZH LR LR
comp=N,1μm,13.3s
LZH LR LR
comp=Z,2μm,17.2s,MS5.0
HHC Hu-ho-hao-te 36.47 341 *e*P **P 11 24 09.5 +2.5**
HHC AP pP 11 24 24.8 +3.7
HHC XP sP 11 24 31.5 +3.9
HHC PP PP 11 25 35.3 +4.4
HHC PCP PcP 11 26 29.8 -0.2
HHC S **S 11 29 46.3 +1.3**
HHC XS sS 11 30 12.3 +3.4
HHC SS SS 11 32 15.8 -10
HHC SCS ScS 11 34 17.5 -0.9
HHC AMB AMB
comp=Z,57nm,0.7s,mb5.6
HHC AMB AMB
comp=Z,212nm,4.9s
HHC LR LR
comp=N,183nm,15.5s,MS4.3
HHC LR LR
comp=E,371nm,16.7s,MS4.3
HHC LR LR
comp=Z,211nm,22.6s
BTO Baotou 36.77 339 *e*P **P 11 24 09.5 -0.1**
CN2 Changchun 36.97 359 *e*P **P 11 24 14.5 +3.3**
CN2 *e*XP sP 11 24 36.0 +4.2
CN2 *e*S **S 11 29 56.5 +3.9**
CN2 AMB AMB
comp=Z,20nm,1.2s,mb4.8
CN2 AMB AMB
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,280nm,14.0s,MS4.3
CN2 LR LR
comp=E,210nm,14.0s,MS4.3
CN2 LR LR
comp=Z,400nm,16.0s,MS4.3
FORT Forrest 37.29 177 ⇓*i*P **P 11 24 14.1 +0.1**
comp=Z,145nm,0.5s,mb6.1
SHL Shillong 37.83 304 *e*P **P 11 24 19.5 +0.8**
comp=Z,14nm,0.6s,mb4.9
SHL *e*S **S 11 30 03.0 -3.1**
MDJ Mudanjiang 37.89 4 P **P 11 24 20.0 +1.0**
MDJ AP pP 11 24 35.3 +2.2
MDJ PP PP 11 25 48.3 +1.9
MDJ PCP PcP 11 26 35.0 +0.8
MDJ S **S 11 30 10.5 +4.0**
MDJ SCP ScP 11 30 16.5 -0.8
MDJ PCS PcS 11 30 23.3 +0.4
MDJ SCS ScS 11 34 26.0 -0.2
MDJ AMB AMB
comp=Z,111nm,1.0s,mb4.5
MDJ AMB AMB
comp=Z,53nm,5.6s
MDJ LR LR
comp=E,123nm,37.0s
MDJ LR LR
comp=Z,126nm,27.1s
KLBR Kellerberrin 38.92 192 ⇓*i*P **P 11 24 26.9 -0.9**
comp=Z,32nm,0.6s,mb5.2
MUN Mundaring 39.63 193 ⇑*i*P **P 11 24 33.3 -0.4**
ASAJ Asahikawa 39.93 18 P **P 11 24 36.4 +0.4**
ASAJ pmax pmax
comp=Z,4.0nm,0.4s
ASAJ MLR MLR
comp=Z,161nm,18.1s
ASAJ Asahikawa 39.93 18 P **P 11 24 36.4 +0.4**
comp=Z,4.2nm,0.4s,mb4.5,baz=70,slow=28,SNR=8.1
ASAJ LR LR 11 41 50.4
comp=Z,161nm,18.1s,MS3.9,baz=108,slow=37
EIDS Eidsvold 39.96 144 *e*P **P 11 24 36.6 0.0**
comp=Z,16nm,0.8s,mb4.8
LSA Lhasa 40.20 309 P **P 11 24 41.0 +2.5**
LSA S **S 11 30 50.5 +8.8**
LSA AMB AMB
comp=Z,20nm,0.7s,mb5.0
LSA LR LR
comp=Z,220nm,17.4s,MS4.1
LSA Lhasa 40.20 309 *e*P **P 11 24 41.0 +2.5**
comp=Z,18nm,0.6s,mb5.0
LSA Lhasa 40.20 309 *e*P **P 11 24 41.0 +2.5**
LSA pmax pmax
comp=Z,18nm,0.6s,mb5.0
NWAO Narrogin (SRO) 40.32 192 *e*P **P 11 24 38.9 -0.5**
comp=Z,103nm,1.3s,mb5.4
NWAO Narrogin (SRO) 40.32 192 P **P 11 24 39.1 -0.3**
NWAO pmax pmax
comp=Z,49nm,0.6s
NWAO Narrogin (SRO) 40.32 192 P **P 11 24 39.1 -0.3**
comp=Z,49nm,0.6s,mb5.4,baz=25,slow=8.3,SNR=48
GTA Gaotai 40.36 328 *e*P **P 11 24 42.0 +2.3**
GTA AP pP 11 24 58.0 +4.0
GTA XP sP 11 25 04.5 +4.1
GTA PP PP 11 26 19.0 +5.5
GTA SCP ScP 11 30 29.5 +2.5
GTA PCS PcS 11 30 33.3 +0.7
GTA S **S 11 30 44.0 +0.2**
GTA XS sS 11 31 09.3 +1.4
GTA SS SS 11 33 36.8 -7.7
GTA AMB AMB
comp=Z,34nm,1.2s,mb5.0
GTA AMB AMB
comp=Z,160nm,4.9s
GTA LR LR
comp=N,338nm,19.0s,MS4.3
GTA LR LR
comp=E,273nm,22.0s,MS4.3
GTA LR LR
comp=Z,525nm,27.0s,MS4.2
STKA Stephens Creek 41.04 160 ⇓*i*P **P 11 24 45.8 +0.5**
comp=Z,77nm,0.8s,mb5.4
STKA *e* 11 30 31.0
STKA Stephens Creek 41.04 160 P **P 11 24 45.8 +0.5**
comp=Z,95nm,0.8s,mb5.5,baz=335,slow=7.8,SNR=124
STKA PP PP 11 26 23.0 +2.1
comp=Z,22nm,0.8s,baz=329,slow=9.8,SNR=3.0
STKA ScP ScP 11 30 30.2 +0.5
comp=Z,5.6nm,0.9s,baz=347,slow=4.7,SNR=4.2
TAPN Taplejung 41.96 304 *e*P **P 11 24 53.3 +0.3**
comp=Z,43nm,0.6s,mb5.2
ODAN Odare 42.05 303 *e*P **P 11 24 54.0 +0.3**
comp=Z,68nm,0.7s,mb5.4
HABR Khabarovsk 42.30 9 P **P 11 24 54.4 -1.0**
HABR *e*S **S 11 31 16.4 +4.1**
HABR *e* 11 31 33.1
HABR *e* 11 34 54.4
KLR Kul'dur 42.65 5 *e*P **P 11 24 55.8 -2.4**
HIA Hailar 42.79 354 *e*P **P 11 24 59.5 +0.2**
comp=Z,11nm,0.8s,mb4.6
HIA Hailar 42.79 354 *e*P **P 11 24 59.6 +0.2**
HIA pmax pmax
comp=Z,11nm,0.8s
ADE Adelaide 43.06 165 *e*P **P 11 25 03.1 +1.4**
JIRN Jiri 43.33 304 *e*P **P 11 25 04.5 +0.4**
comp=Z,92nm,0.6s,mb5.7
KKN Kakani 44.13 303 *e*P **P 11 25 11.1 +0.5**
comp=Z,56nm,0.8s,mb5.3
ARMA Armidale 44.18 148 *e*P **P 11 25 11.9 +1.1**
ULN Ulaanbaatar 44.19 341 *e*P **P 11 25 11.7 +1.0**
comp=Z,16nm,0.8s,mb4.8
ULN *e*ScP ScP 11 30 42.9 +0.8
ULN Ulaanbaatar 44.19 341 *e*P **P 11 25 11.7 +1.0**
ULN pmax pmax
comp=Z,16nm,0.8s,mb4.8
SONM Songino Array 44.37 341 P **P 11 25 11.9 -0.3**
SONM 11 26 54.3
SONM Songino Array 44.37 341 P **P 11 25 11.9 -0.3**
comp=Z,8.2nm,0.7s,mb4.6,baz=158,slow=8.2,SNR=44
SONM PcP PcP 11 26 54.3 -1.0
comp=Z,2.6nm,0.6s,baz=162,slow=3.5,SNR=3.7
SONM ScP ScP 11 30 42.0 -0.8
comp=Z,1.0nm,0.8s,baz=162,slow=3.9,SNR=4.8
SONM LR LR 11 47 35.5
comp=Z,165nm,18.3s,MS4.0,baz=156,slow=41
GKN Gorkha 44.74 303 *e*P **P 11 25 14.8 -0.6**
comp=Z,27nm,0.6s,mb5.3
PALK Pallekele 45.23 274 *e*P **P 11 25 18.6 -0.9**
comp=Z,4.2nm,0.7s,mb4.4
KOLN Koldanda 45.52 303 *e*P **P 11 25 21.4 -0.2**
comp=Z,76nm,0.6s,mb5.8
CIT Chita 46.40 349 *e*P **P 11 25 29.4 +1.3**
CNB Canberra Magne 47.10 154 ⇓*i*P **P 11 25 35.1 +1.3**
comp=Z,29nm,0.9s,mb5.2
ZAK Zakamensk 47.61 340 *e*P **P 11 25 37.2 -0.4**
ZAK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
ZAK pmax pmax
comp=Z,3.0nm,1.0s,mb4.3
HYB Hyderabad 47.76 287 *e*P **P 11 25 39.5 +0.2**
HYB Hyderabad 47.76 287 *i*P **P 11 25 39.5 +0.2**
HYB *e* pP 11 25 55.0 +1.1
TLY Talaya 48.60 341 P **P 11 25 46.9 +1.7**
comp=Z,103nm,0.7s,mb6.0,SNR=6.5
TLY Talaya 48.60 341 *e*P **P 11 25 45.7 +0.5**
comp=Z,6.8nm,0.5s,mb4.9
TLY Talaya 48.60 341 *e*P **P 11 25 46.3 +1.1**
TLY pmax pmax
comp=Z,13nm,0.8s,mb5.0
MOY Mondy 49.47 340 *e*P **P 11 25 53.7 +1.8**
MOY pmax pmax
comp=Z,28nm,1.7s,mb5.0
CLNS Chul'man 50.03 359 *e*P **P 11 26 01.4 +5.4**
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=Z,14nm,0.9s,mb5.0
CLNS pmax pmax
comp=E,4.0nm,0.6s
WMQ Urumqi 50.07 324 *e*P **P 11 25 59.8 +3.2**
WMQ AP pP 11 26 15.3 +4.0
WMQ XP sP 11 26 22.3 +4.7
WMQ PCP PcP 11 27 19.3 +3.6
WMQ PP PP 11 27 56.3 +4.2
WMQ S **S 11 33 04.8 +0.9**
WMQ XS sS 11 33 31.8 +3.2
WMQ SCS ScS 11 35 42.3 -0.7
WMQ AMB AMB
comp=Z,17nm,0.8s,mb5.1
WMQ AMB AMB
comp=Z,241nm,5.9s
WMQ LR LR
comp=N,300nm,26.8s,MS4.3
WMQ LR LR
comp=E,323nm,25.6s,MS4.3
WMQ LR LR
comp=Z,385nm,24.9s,MS4.3
BOD Bodaibo 51.89 352 *e*P **P 11 26 10.3 +0.3**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
TAU Tasmania Unive 52.94 161 *e*P **P 11 26 19.3 +1.4**
comp=Z,34nm,1.0s,mb5.2
TAU Tasmania Unive 52.94 161 *e*P **P 11 26 19.3 +1.4**
TAU pmax pmax
comp=Z,34nm,1.0s,mb5.2
MK31 Makanchi Array 54.90 324 *i*P **P 11 26 31.2 -1.1**
MK31 pmax pmax
comp=Z,17nm,0.6s,mb5.2
MKAR Makanchi Array 54.90 324 *i*P **P 11 26 31.2 -1.1**
MKAR pmax pmax
comp=Z,19nm,0.6s
MKAR Makanchi Array 54.90 324 P **P 11 26 31.1 -1.2**
comp=Z,19nm,0.6s,mb5.3,baz=121,slow=8.6,SNR=86
MKAR ScP ScP 11 31 27.6 -0.3
comp=Z,1.6nm,0.8s,baz=113,slow=5.4,SNR=5.9
MKAR LR LR 11 51 03.3
comp=Z,297nm,20.2s,MS4.3,baz=135,slow=37
YAK Yakutsk 55.28 2 *e*P **P 11 26 35.6 +0.9**
comp=Z,59nm,0.8s,mb5.7
YAK Yakutsk 55.28 2 *e*P **P 11 26 37.3 +2.5**
YAK pmax pmax
comp=Z,39nm,0.8s,mb5.5
YAK pmax pmax
comp=N,5.0nm,0.7s
KZA Kyzart 57.16 316 P **P 11 26 49.7 +1.1**
SNR=5.9
TKM2 Tokmak 2 57.27 317 *e*P **P 11 26 48.7 -0.6**
comp=N,9.2nm,0.9s,mb4.8
TKM2 Tokmak 2 57.27 317 *e*P **P 11 26 48.7 -0.5**
TKM2 pmax pmax
comp=Z,9.0nm,0.9s,mb4.8
UCH Uchtor 57.73 316 *e*P **P 11 26 52.5 0.0**
comp=Z,19nm,0.9s,mb5.1
UCH Uchtor 57.73 316 P **P 11 26 52.6 +0.1**
SNR=11
ZALV Zalesovo Beam 57.77 332 P **P 11 26 50.9 -1.7**
ZALV LR LR 11 53 14.5
ZALV ⇑*e* 11 56 46.6
ZALV Zalesovo Beam 57.77 332 P **P 11 26 50.9 -1.7**
comp=Z,6.5nm,0.7s,mb4.8,baz=118,slow=6.2,SNR=32
ZALV LR LR 11 53 14.5
comp=Z,151nm,19.7s,MS4.1,baz=327,slow=38
ZALV PKP2bc 11 56 46.6
comp=Z,1.8nm,0.8s,baz=318,slow=2.0,SNR=6.9
ZAL Zalesovo 57.77 332 P **P 11 26 50.9 -1.7**
USP Ospenovka 58.14 317 P **P 11 26 54.6 -0.7**
SNR=8.8
AML Almayashu 58.25 316 *e*P **P 11 26 55.5 -0.6**
comp=Z,12nm,0.8s,mb5.0
AML Almayashu 58.25 316 P **P 11 26 55.5 -0.7**
SNR=8.6
EKS2 Erkin-Say 58.39 317 *e*P **P 11 26 56.6 -0.6**
comp=Z,10nm,0.8s,mb4.9
EKS2 Erkin-Say 58.39 317 P **P 11 26 57.0 -0.2**
SNR=7.9
KURK Kurchatov 59.03 327 P **P 11 27 00.0 -1.4**
comp=Z,279nm,0.7s,SNR=9.3
KURK Kurchatov 59.03 327 *e*P **P 11 26 59.9 -1.5**
comp=Z,28nm,0.6s,mb5.5
KURK Kurchatov 59.03 327 *e*P **P 11 26 59.9 -1.5**
KURK pmax pmax
comp=Z,28nm,0.6s,mb5.5
NVS Novosibirsk 59.05 333 *e*P **P 11 27 00.2 -1.3**
NVS *e*S **S 11 34 56.6 -7.6**
NVS pmax pmax
comp=Z,20nm,1.0s,mb5.1
NVS pmax pmax
comp=N,9.0nm,1.2s
NVS pmax pmax
comp=E,9.0nm,1.2s
NVS smax
comp=E,33nm,2.9s
NVS smax
comp=N,10.0nm,2.1s
BRVK Borovoye 64.69 326 P **P 11 27 38.6 -0.8**
comp=N,223nm,0.7s,mb6.3,SNR=7.7
BRVK Borovoye 64.69 326 *e*P **P 11 27 38.5 -1.0**
comp=N,33nm,0.8s,mb5.4
BRVK Borovoye 64.69 326 *e*P **P 11 27 38.5 -0.9**
BRVK pmax pmax
comp=Z,33nm,0.8s,mb5.4
TIXI Tiksi 64.91 1 *e*P **P 11 27 40.1 -0.4**
comp=Z,5.9nm,0.4s,mb5.0
TIXI Tiksi 64.91 1 *i*P **P 11 27 41.0 +0.5**
TIXI pmax pmax
comp=Z,7.0nm,0.8s,mb4.7
SNZO South Karori 65.13 142 *e*P **P 11 27 43.2 +0.7**
comp=Z,117nm,1.4s,mb5.7
BILL Bilibino 66.83 15 *e*P **P 11 27 53.3 +0.4**
comp=Z,5.1nm,0.8s,mb4.6
BILL Bilibino 66.83 15 *i*P **P 11 27 54.2 +1.3**
BILL pmax pmax
comp=Z,1.0nm,0.4s,mb4.2
AKTK Aktyubinsk 71.09 321 P **P 11 28 18.0 -1.7**
AKTO Aktyubinsk 71.09 321 P **P 11 28 18.0 -1.7**
comp=Z,4.9nm,0.6s,mb4.6,baz=98,slow=9.5,SNR=15
SVE Sverdlovsk 71.23 328 *e*P **P 11 28 21.7 +1.3**
SVE pmax pmax
comp=Z,44nm,0.7s,mb5.5
GAMB Gambell 71.90 24 *e*P **P 11 28 24.5 +0.2**
comp=Z,1.9nm,0.6s,mb4.2
ARU Arti 72.22 327 P **P 11 28 27.0 +0.6**
comp=Z,264nm,0.7s,mb6.3,SNR=5.2
ARU Arti 72.22 327 *e*P **P 11 28 24.8 -1.5**
comp=Z,18nm,0.4s,mb5.3
ARU Arti 72.22 327*c* *i*P **P 11 28 25.0 -1.4**
ARU *e* pP 11 28 42.3 +0.5
ARU *e*PPP 11 32 46.9
ARU S S 11 37 46.3 +1.5
ARU *e*SS SS 11 42 24.1 +0.9
ARU pmax pmax
comp=Z,31nm,0.7s,mb5.3
CASY Casey 73.68 187 *e*P **P 11 28 34.6 -0.1**
SOKR Solikamsk 73.94 330 *e*P **P 11 28 37.9 +1.5**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.0
RAR Rarotonga 77.60 113 LR LR 11 57 47.9
comp=Z,199nm,18.1s,MS4.5,baz=251,slow=31
TTA Tatalina 78.48 27 *e*P **P 11 29 04.0 +1.8**
KDAK Kodiak Island 79.65 33 P **P 11 29 08.0 -0.7**
comp=Z,109nm,0.6s,mb6.0,SNR=10
KDAK Kodiak Island 79.65 33 *e*P **P 11 29 08.7 0.0**
comp=Z,39nm,1.3s,mb5.2
PRGR Permogore 79.71 331 *e*P **P 11 29 07.1 -1.8**
IMA2 Indian Mountai 79.88 24 *e*P **P 11 29 10.0 +0.3**
ZEI Tsey 79.91 312 *e*P **P 11 29 07.9 -2.5**
SLKM Skilak Lake 81.01 30 *e*P **P 11 29 16.0 0.0**
PMR Palmer 81.58 29 *e*P **P 11 29 17.6 -1.3**
comp=Z,8.7nm,0.7s,mb4.8
PMR Palmer 81.58 29 *e*P **P 11 29 17.6 -1.3**
PMR pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
OPO Ambohidratompo 81.86 250 P **P 11 29 18.1 -3.1**
comp=Z,1.3nm,0.5s,mb4.1,baz=333,slow=1.8,SNR=3.3
SML Sawmill 81.97 29 *e*P **P 11 29 20.9 -0.1**
COLA College 82.23 25 *e*P **P 11 29 21.5 -0.8**
comp=Z,4.3nm,0.7s,mb4.5
COLA *e*pP pP 11 29 38.7 +0.8
COLA College 82.23 25 *e*P **P 11 29 21.5 -0.8**
COLA *e**PP pP 11 29 38.7 +0.7
COLA pmax pmax
comp=Z,4.0nm,0.7s,mb4.5
VRSR Storozhevoye 83.02 321 *e*P **P 11 29 27.4 +0.8**
VRSR pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
VRSR pmax pmax
comp=N,1.0nm,0.7s
VRSR pmax pmax
comp=E,3.0nm,1.0s
MOS Moscow 83.77 325 *e*P pP 11 29 43.3 -2.9
MOS *e* 11 29 58.8
OBN Obninsk 84.40 325 *i*P **P 11 29 33.3 -0.4**
OBN *e* 11 29 42.3
OBN *e* pP 11 29 45.7 -3.7
OBN pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
OBN MLR MLR
comp=Z,200nm,22.0s,MS4.5
ANN Anapa 84.53 314 *e*P **P 11 29 34.9 +0.4**
ANN pmax pmax
comp=Z,61nm,1.0s,mb5.7
APA Apatity 84.97 337 *i* **P 11 29 36.5 +0.2**
EGAK Eagle 85.09 25 *e*P **P 11 29 37.2 +0.3**
comp=Z,12nm,0.9s,mb5.0
DAWY Dawson 85.93 26 *e*P **P 11 29 41.1 0.0**
MAW Mawson 86.36 200 P **P 11 29 42.2 -0.9**
MAW LR LR 12 02 05.0
MAW Mawson 86.36 200 P **P 11 29 42.2 -0.9**
comp=Z,7.4nm,0.8s,mb5.0,baz=69,slow=4.6,SNR=13
MAW LR LR 12 02 05.0

	comp=Z,122nm,20.3s,MS4.3,baz=243,slow=31								
JOF	**Joensuu**	**86.36**	**333**	*ep*		**P**		**11 29 40.7**	**-2.6**
	comp=Z,12nm,0.5s,mb5.4								
JOF	**Joensuu**	**86.36**	**333**	*eP*		**P**		**11 29 40.7**	**-2.6**
JOF				pmax	pmax				
	comp=Z,12nm,0.5s,mb5.4								
VNDA	**Vanda**	**86.40**	**173**	P		**P**		**11 29 43.0**	**-0.1**
	comp=Z,6.2nm,0.7s,mb5.0,baz=313,slow=5.8,SNR=24								
VNDA				LR	LR			12 04 48.9	
	comp=Z,118nm,18.4s,MS4.3,baz=326,slow=33								
PPT	**Papeete**	**86.44**	**108**	*eLR*	LR			11 56 43.7	
	comp=Z,239nm,25.8s								
PPT	**Papeete**	**86.44**	**108**	LR	LR			12 03 49.8	
	comp=Z,147nm,18.4s,MS4.4,baz=316,slow=32								
SBA	**Scott Base**	**87.31**	**172**	*eP*		**P**		**11 29 47.5**	**-0.1**
	comp=Z,3.9nm,0.2s,mb5.3								
SBA	**Scott Base**	**87.31**	**172**	*eP*		**P**		**11 29 47.5**	**0.0**
SBA				pmax	pmax				
	comp=Z,4.0nm,0.2s,mb5.3								
ARCES	**ARCESS Array B**	**87.54**	**340**	P		**P**		**11 29 47.9**	**-0.9**
	comp=Z,5.3nm,0.7s,mb4.9,baz=79,slow=4.7,SNR=11								
ARCES				PKKPbc	PKKPbc			11 47 37.2	-3.1
	comp=Z,4.0nm,0.9s,baz=247,slow=4.7,SNR=10								
INK	**Inuvik**	**87.59**	**21**	*eP*		**P**		**11 29 46.4**	**-2.7**
	comp=Z,215nm,0.8s								
INK	**Inuvik**	**87.59**	**21**	*eP*		**P**		**11 29 46.4**	**-2.7**
INK				pmax	pmax				
	comp=Z,215nm,0.8s								
KAF	**Kangasniemi**	**88.79**	**332**	*ep*		**P**		**11 29 52.6**	**-2.3**
	comp=Z,5.0nm,0.7s,mb5.0,baz=75,slow=4.2								
KAF	**Kangasniemi**	**88.79**	**332**	*eP*		**P**		**11 29 52.6**	**-2.3**
KAF				pmax	pmax				
	comp=Z,5.0nm,0.7s,mb5.0								
FINES	**FINESS Array B**	**89.03**	**332**	*i P*		**P**		**11 29 54.7**	**-1.4**
FINES				pmax	pmax				
	comp=Z,3.0nm,0.6s								
FINES	**FINESS Array B**	**89.03**	**332**	P		**P**		**11 29 54.0**	**-2.0**
	comp=Z,2.5nm,0.6s,mb4.8,baz=77,slow=5.3,SNR=16								
KMBO	**Kilima Mbogo**	**89.17**	**269**	P		**P**		**11 29 55.5**	**-2.2**
	comp=Z,1.8nm,0.9s,mb4.4,baz=202,slow=23,SNR=3.9								
KMBO				LR	LR			12 08 34.5	
	comp=Z,85nm,19.0s,MS4.2,baz=100,slow=35								
AKASG	**Malin Array Be**	**89.33**	**321**	*i P*		**P**		**11 29 58.0**	**+0.3**
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
AKASG	**Malin Array Be**	**89.33**	**321**	P		**P**		**11 29 53.8**	**-3.9**
	comp=Z,2.4nm,0.7s,mb4.7,baz=66,slow=4.1,SNR=5.6								
MLR	**Muntele Rosu**	**92.47**	**316**	LR	LR			12 15 24.5	
	comp=Z,212nm,19.9s,MS4.6,baz=87,slow=38								
DAG	**Danmarks Havn**	**94.28**	**352**	*i P*		**P**		**11 30 19.1**	**-1.1**
	comp=Z,13nm,1.1s,mb5.3								
TAOE	**Nuku Hiva Isla**	**94.52**	**98**	*eLR*	LR			12 00 31.5	
	comp=Z,797nm,26.8s								
RES	**Resolute Bay**	**95.00**	**10**	*eP*		**P**		**11 30 23.0**	**-0.5**
	comp=Z,137nm,0.9s								
RES	**Resolute Bay**	**95.00**	**10**	*eP*		**P**		**11 30 23.0**	**-0.5**
RES				pmax	pmax				
	comp=Z,137nm,0.9s								
SYO	**Syowa Base**	**95.01**	**201**	*eP*		**P**		**11 30 21.6**	**-1.9**
SYO	**Syowa Base**	**95.01**	**201**	*ePcP*	PcP			11 30 23.4	-0.4
HFS	**Hagfors**	**95.21**	**332**	LR	LR			12 15 55.0	
	comp=Z,196nm,20.1s,MS4.6,baz=69,slow=37								
NB2	**NORSAR Subarra**	**95.96**	**334**	P		**P**		**11 30 25.3**	**-2.8**
	comp=Z,3.2nm,0.8s,mb4.8,baz=65,slow=4.6								
NB2	**NORSAR Subarra**	**95.96**	**334**	P		**P**		**11 30 25.3**	**-2.8**
NB2				pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.8								
NOA	**NORSAR Array B**	**95.96**	**334**	P		**P**		**11 30 25.5**	**-2.6**
	comp=Z,1.9nm,0.7s,mb4.6,baz=65,slow=4.6,SNR=12								
NOA				LR	LR			12 16 41.3	
	comp=Z,219nm,20.7s,MS4.6,baz=35,slow=37								
QSPA	**South Pole Qui**	**96.57**	**180**	*eP*		**P**		**11 30 30.1**	**-0.3**
	comp=Z,15nm,1.3s,mb5.3								
YKA	**Yellowknife Ar**	**97.00**	**24**	*i P*		**P**		**11 30 32.4**	**-0.4**
YKA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
YKA	**Yellowknife Ar**	**97.00**	**24**	P		**P**		**11 30 32.4**	**-0.4**
	comp=Z,3.1nm,0.9s,mb4.7,baz=301,slow=4.7,SNR=40								
YKA				PKiKP	PKiKP			11 35 08.9	+0.4
	comp=Z,0.5nm,0.6s,baz=302,slow=1.7,SNR=9.2								
YKA				PKKPbc	PKKPbc			11 47 11.6	-4.2
	comp=Z,0.8nm,0.6s,baz=120,slow=2.7,SNR=17								
VRAC	**Vranov**	**97.56**	**322**	LR	LR			12 15 50.3	
	comp=Z,112nm,18.4s,MS4.4,baz=220,slow=36								
GERES	**GERESS Array B**	**99.50**	**322**	P	Pdif			11 30 42.1	-2.1
	comp=Z,0.3nm,0.3s,baz=60,slow=6.7,SNR=2.2								
NVAR	**Mina Array Bea**	**105.26**	**47**	Pdif	Pdif			11 31 10.0	+0.3
NVAR	**Mina Array Bea**	**105.26**	**47**	Pdiff	Pdif			11 31 10.0	+0.3
	comp=Z,0.9nm,0.8s,baz=287,slow=3.3,SNR=6.7								
PDAR	**Pinedale Array**	**109.42**	**40**	PKKPbc	PKKPbc			11 46 35.0	-3.4
	comp=Z,0.4nm,0.7s,baz=130,slow=6.4,SNR=4.4								
PDAR				PKKPab	PKKPab			11 46 47.0	-3.4
	comp=Z,0.7nm,0.7s,baz=113,slow=5.2,SNR=6.1								
PV10	**Paradox Valley**	**111.88**	**44**	*ePKPdf*	PKiKP			11 35 37.4	+0.9
PV01	**Paradox Valley**	**112.32**	**44**	*ePKPdf*	PKiKP			11 35 38.4	+1.0
SCHQ	**Schefferville**	**117.73**	**9**	PKP	PKPdf			11 35 47.5	+0.2
	baz=355,slow=1.6								
WMOK	**Wichita Mounta**	**120.81**	**43**	*ePKPdf*	PKPdf			11 35 53.2	-0.6
TORD	**Torodi Ar. Bea**	**121.54**	**290**	PKP	PKPdf			11 35 54.0	-1.7
	comp=Z,7.0nm,0.7s,baz=38,slow=2.1,SNR=33								
TORD				PKKPbc	PKKPbc			11 45 56.5	+0.9
	comp=Z,1.7nm,0.8s,baz=265,slow=3.2,SNR=7.3								
MIAR	**Mount Ida**	**124.34**	**40**	*ePKPdf*	PKPdf			11 36 01.1	+0.5
ACSO	**Alum Creek Sta**	**126.08**	**28**	*ePKPdf*	PKPdf			11 36 04.3	+0.6
WVT	**Waverly**	**126.72**	**35**	*ePKPdf*	PKPdf			11 36 04.5	-0.6
PLAL	**Pickwick Lake**	**127.39**	**36**	*ePKPdf*	PKPdf			11 36 05.4	-1.0
DBIC	**Dimbokro**	**129.48**	**284**	PKP	PKPdf			11 36 10.2	-0.8
	comp=Z,5.7nm,0.8s,baz=49,slow=6.4,SNR=6.6								
PLCA	**Paso Flores**	**142.97**	**159**	PKiKP				11 36 31.6	
	comp=Z,7.8nm,0.7s,baz=204,slow=3.6,SNR=8.1								
TRQA	**Tornquist**	**147.88**	**168**	*ePKPbc*	PKPbc			11 36 46.7	+0.1
BCIP	**Isla Barro Col**	**149.57**	**59**	*ePKPbc*	PKPbc			11 36 51.7	0.0
LCO	**Las Campanas**	**152.61**	**146**	*ePKPbc*	PKPbc			11 36 59.0	+0.7
CPD	**Cerro la Pandu**	**152.64**	**26**	*ePKPbc*	PKPbc			11 36 58.7	0.0
CPD				*ePKPab*	PKPab			11 37 08.4	-0.8
OTAV	**Otavalo**	**154.38**	**75**	*ePKPdf*	PKPdf			11 36 56.9	+2.5
OTAV				*ePKPbc*	PKPbc			11 37 04.3	+1.7
OTAV				*ePKPab*	PKPab			11 37 18.8	+1.9
ROSC	**El Rosal**	**156.44**	**61**	PKP	PKPdf			11 36 57.2	+0.1
	comp=Z,6.1nm,0.6s,baz=90,slow=23,SNR=4.5								
SDV	**Santo Domingo**	**157.12**	**49**	*ePKPdf*	PKPdf			11 36 58.0	+0.1
LPAZ	**La Paz**	**157.39**	**125**	PKP	PKPdf			11 37 06.2	+1.8
	comp=Z,4.4nm,0.9s,baz=195,slow=1.9,SNR=13								
LPAZ				PKPab	PKPab			11 37 56.8	+2.8
	comp=Z,8.3nm,0.8s,baz=231,slow=4.3,SNR=16								

MAN 26 11:23:12.1, 1385N×12032E, h84km, mb4.2, ML3.0, MS2.7, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.14**	**212**	*eP*	Pn	11 23 25.7	+1.6
LUBP				*eS*	Sn	11 23 34.7	+1.8
TGY	**Tagaytay City**	**0.65**	**67**	*i P*	Pn	11 23 31.8	+4.3
TGY				*i S*	Sn	11 23 43.7	+4.8
POLP	**Polilio Island**	**1.79**	**61**	*eP*	Pn	11 23 42.7	+1.5
POLP				*eS*	Sn	11 24 04.0	+0.5
BUSP	**Coron**	**1.84**	**184**	*eP*	Pn	11 23 43.0	+1.0
BUSP				*eS*	Sn	11 24 05.6	+0.8
PCPH	**Palayan**	**1.85**	**24**	*eP*	Pn	11 23 41.7	-0.4
PCPH				*i S*	Sn	11 24 03.4	-1.6
SCZP	**Santa Cruz**	**1.95**	**348**	*eP*	Pn	11 23 43.9	+0.5
OTRP	**Odiongan**	**2.22**	**132**	*eP*	Pn	11 23 47.7	+0.8
BALP	**Baler**	**2.23**	**33**	*eP*	Pn	11 23 48.3	+1.1
BALP				*eS*	Sn	11 24 15.8	+1.8
BOLP	**Bolinao**	**2.54**	**351**	*eP*	Pn	11 23 51.9	+0.6
ENPP	**El Nido**	**2.77**	**199**	*eP*	Pn	11 23 56.2	+1.8
CUYO	**Cuyo Island**	**3.06**	**167**	*eP*	Pn	11 23 58.6	+0.3

*IDC **26** 11:42:31.4±1.4, 1613N×12137E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/19, mbtmp3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.7/17, Error ellipse: s-maj=148.6km s-min=20.4km az=67.0*

*ISCJB **26** 11:42:34.5±0.6, 1657N±003×12221E±005, h33km, mb3.2/4, Error ellipse: s-maj=8.1km s-min=3.9km az=153.7*

*MAN **26** 11:42:34, 1659N×12220E, h31km, mb4.4, ML3.2, MS3.1*

ISC 26 11:42:34.6±1.2, 1655N±004×12215E±006, h22km±10km, n17, σ0°80/25, mb3.2/4, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.50**	**321**	*eP*	**Pb**	**11 42 45.4**	**+0.6**
BALP	**Baler**	**0.98**	**215**	*eP*	**Pb**	**11 42 51.6**	**-1.3**
PCPH	**Palayan**	**1.42**	**226**	*ePcP*	**Pn**	**11 42 58.6**	**-0.5**
PCPH				*i S*	**Sn**	**11 43 17.3**	**+0.3**
BCPH	**Baguio City Da**	**1.52**	**264**	*i P*	**Pn**	**11 43 00.4**	**0.0**
BCPH				*i S*	**Sn**	**11 43 18.8**	**-0.7**
APYP	**Conner**	**1.56**	**326**	*eP*	**Pn**	**11 43 00.6**	**-0.5**
APYP				*eS*	**Sn**	**11 43 19.9**	**-0.9**
ABRA	**Dolores**	**1.76**	**309**	*eP*	**Pn**	**11 43 03.2**	**-0.5**
ABRA				*eS*	**Sn**	**11 43 25.0**	**-0.5**
POLP	**Polilio Island**	**1.83**	**186**	*eP*	**Pn**	**11 43 04.7**	**0.0**
POLP				*eS*	**Sn**	**11 43 28.2**	**+1.0**
SCZP	**Santa Cruz**	**2.29**	**251**	*eP*	**Pn**	**11 43 12.6**	**+1.5**
PIP	**Pasuquin**	**2.29**	**321**	*i P*	**Pn**	**11 43 11.6**	**+0.5**
PIP				*eS*	**Sn**	**11 43 40.1**	**+1.5**
GQP	**Guinayangan**	**2.65**	**174**	*eP*	**Pn**	**11 43 16.9**	**+0.9**
GQP				*i S*	**Sn**	**11 43 47.6**	**+0.2**
PVCP	**Virac**	**3.52**	**146**	*eP*	**Pn**	**11 43 28.3**	**+0.3**
PVCP				*eS*	**Sn**	**11 44 09.1**	**+0.1**
PVCP	**Virac**	**3.52**	**146**	*eP*	**Pn**	**11 43 28.4**	**+0.4**
PVCP				*eS*	**Sn**	**11 44 08.6**	**-0.4**
JOW	**Kunigami**	**11.70**	**28**	LR	LR	11 50 24.3	
	comp=Z,79nm,20.0s,baz=209,slow=38						
SONM	**Songino Array**	**33.78**	**341**	P	**P**	**11 49 15.5**	**+0.7**
	0.2nm,0.4s,mb3.4,baz=171,slow=7.6,SNR=2.2						
WRA	**Warramunga Arr**	**38.19**	**161**	P	**P**	**11 49 51.0**	**-1.8**
	0.4nm,0.4s,mb3.5,baz=334,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**41.59**	**164**	P	**P**	**11 50 20.4**	**-0.6**
	0.2nm,0.5s,mb3.0,baz=359,slow=8.1,SNR=9.9						
MKAR	**Makanchi Array**	**44.64**	**321**	P	**P**	**11 50 45.3**	**-0.1**
	0.1nm,0.5s,mb2.9,baz=111,slow=7.9,SNR=2.7						

*IDC **26** 11:50:34.9±4.2, 922N×126.15E, h48km±40km, mb4.0/20, mb1 4.1/21, mb1mx4.1/23, mbtmp4.1/21, ML4.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/28, Error ellipse: s-maj=29.7km s-min=10.8km az=85.0*

*MAN **26** 11:50:35, 918N×126.35E, h32km, mb5.3, ML4.3, MS4.5*

*ISCJB **26** 11:50:36.3±0.6, 921N±002×126.32E±005, h77km±5km, mb4.3/34, Error ellipse: s-maj=8.8km s-min=4.0km az=174.7*

*NEIC **26** 11:50:40.0±1.1, 9.17N×126.27E, h100km±11km, mb4.4/10, Error ellipse: s-maj=14.9km s-min=6.3km az=76.0*

*BJI **26** 11:50:39.6, 945N×126.34E, h83km, mB4.9, mb4.7, Ms4.1, Msz3.9*

ISC 26 11:50:38.0±0.5, 921N±002×12627E±005, h78km±4km, n72, σ1°14/86, mb4.3/34, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.02**	**175**	*i P*	**Pn**	**11 50 52.7**	**-4.4**
BIPH				*i S*	**Sn**	**11 51 05.3**	**-6.2**
MSLP	**Maasin**	**1.67**	**304**	*eP*	**Pn**	**11 51 05.1**	**-0.3**
CGP	**Cagayan de Oro**	**1.73**	**244**	*i P*	**Pn**	**11 51 03.8**	**-2.4**
CGP				*i S*	**Sn**	**11 51 26.5**	**-1.2**
BUKP	**Musuan**	**1.78**	**222**	*eP*	**Pn**	**11 51 05.9**	**-1.0**
DAV	**Davao City (W)**	**2.23**	**198**	*ePn*	**Pn**	**11 51 14.2**	**+1.3**
DAV				*eSn*	**Sn**	**11 51 41.2**	**+1.6**
MATI	**Mati**	**2.25**	**180**	*eP*	**Pn**	**11 51 11.7**	**-1.5**
MATI				*eS*	**Sn**	**11 51 41.7**	**+1.7**
PLP	**Palo**	**2.32**	**327**	*eP*	**Pn**	**11 51 13.2**	**-1.0**
PLP				*eS*	**Sn**	**11 51 42.2**	**+0.4**
TBP	**Tagbilaran**	**2.43**	**282**	*eP*	**Pn**	**11 51 14.8**	**-0.7**
TBP				*eS*	**Sn**	**11 51 33.5**	**-11**
OCLP	**Ormoc**	**2.46**	**318**	*eP*	**Pn**	**11 51 16.5**	**+0.6**
BESP	**Borongan**	**2.52**	**341**	*eP*	**Pn**	**11 51 15.2**	**-1.5**
BESP				*eS*	**Sn**	**11 51 46.8**	**+0.4**
LLP	**Lapu-Lapu**	**2.53**	**296**	*eP*	**Pn**	**11 51 17.4**	**+0.5**
LLP				*eS*	**Sn**	**11 51 41.5**	**-5.2**
CTBH	**Cotabato--PC H**	**2.81**	**226**	*i P*	**Pn**	**11 51 19.7**	**-1.0**
CTBH				*i S*	**Sn**	**11 51 55.2**	**+1.5**
DCPH	**Dipolog City**	**2.95**	**258**	*eP*	**Pn**	**11 51 22.0**	**-0.6**
DCPH				*eS*	**Sn**	**11 51 57.2**	**+0.2**
SNPH	**Sibulan**	**3.00**	**273**	*eP*	**Pn**	**11 51 24.0**	**+0.7**
PAGZ	**Pagadian**	**3.16**	**245**	*eP*	**Pn**	**11 51 25.3**	**-0.2**
CNP	**Catarman**	**3.64**	**334**	*eP*	**Pn**	**11 51 30.1**	**-1.9**
CNP				*eS*	**Sn**	**11 52 15.2**	**+1.4**
GUIM	**Jordan**	**3.89**	**292**	*eP*	**Pn**	**11 51 35.2**	**-0.2**
RCP	**Roxas**	**4.18**	**304**	*eP*	**Pn**	**11 51 40.3**	**+1.0**
PVCP	**Virac**	**4.83**	**335**	*eP*	**Pn**	**11 51 46.5**	**-1.7**
PVCP	**Virac**	**4.83**	**335**	*eP*	**Pn**	**11 51 46.6**	**-1.6**
PVCP				*eS*	**Sn**	**11 52 43.5**	**+0.7**
OTRP	**Odiongan**	**5.22**	**307**	*eP*	**Pn**	**11 51 54.8**	**+1.3**
CUYO	**Cuyo Island**	**5.42**	**288**	*eP*	**Pn**	**11 51 57.4**	**+1.0**
POLP	**Polilio Island**	**6.93**	**323**	*eP*	**Pn**	**11 52 16.2**	**-0.7**
BALP	**Baler**	**7.95**	**325**	*eP*	**Pn**	**11 52 27.6**	**-3.2**
BALP				*eS*	**Sn**	**11 53 53.6**	**-5.6**
KKM	**Kota Kinabalu**	**10.45**	**253**	*ePn*	**Pn**	**11 53 07.7**	**+2.6**
YHNB	**Yeheng**	**16.07**	**344**	*eP*	**Pn**	**11 54 21.9**	**+2.6**
JOW	**Kunigami**	**17.63**	**6**	P	**Pn**	**11 54 40.4**	**+1.9**
	0.9nm,0.3s,baz=158,slow=14,SNR=3.8						
QIZ	**Qiongzhong**	**18.67**	**303**	P	**Pn**	**11 54 51.3**	**+0.2**
QIZ				XP	sP	11 55 22.3	+7.0
QIZ				S	**S**	**11 58 17.5**	**-1.1**
QIZ				AMB	AMB		
	comp=Z,11nm,1.5s						
QIZ				AMB	AMB		
	comp=Z,35nm,3.1s						
BATI	**Kupang**	**19.46**	**188**	P	**Pn**	**11 54 59.2**	**-1.3**
	comp=Z,3.6nm,0.3s,baz=20,slow=4.2,SNR=5.5						
KAKA	**Kakadu**	**22.62**	**164**	*eP*	**P**	**11 55 31.9**	**-0.6**
	comp=Z,7.6nm,0.6s,mb4.2						
NJ2	**Nanjing**	**23.75**	**344**	*eP*	**P**	**11 55 44.5**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
JNU	**Nakatsue**	**24.17**	**9**	P	**P**	**11 55 46.5**	**-0.5**
	comp=Z,4.7nm,0.7s,mb3.9,baz=56,slow=4.7,SNR=4.3						
FITZ	**Fitzroy Crossi**	**27.14**	**181**	P	**P**	**11 56 14.0**	**0.0**
	comp=Z,7.9nm,1.2s,mb4.1,baz=14,slow=17,SNR=5.0						
KMI	**Kunming**	**27.42**	**308**	P	**P**	**11 56 20.8**	**+4.3**
KMI				AMB	AMB		
	comp=Z,6.0nm,1.0s,mb4.1						
KSRS	**Korea Array**	**28.16**	**3**	P	**P**	**11 56 22.9**	**-0.1**
	comp=Z,3.5nm,0.4s,mb4.2,baz=185,slow=9.7,SNR=15						
MJAR	**Matsushiro Arr**	**29.29**	**20**	P	**P**	**11 56 31.6**	**-1.4**
	comp=Z,1.3nm,0.9s,mb3.5,baz=195,slow=10,SNR=6.2						
WRA	**Warramunga Arr**	**30.04**	**165**	P	**P**	**11 56 39.0**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.5,baz=344,slow=7.9,SNR=27						
WB2	**Warramunga Arr**	**30.04**	**165**	*eP*	**P**	**11 56 39.5**	**-0.2**
CD2	**Chengdu**	**30.10**	**319**	*eP*	**P**	**11 56 43.0**	**+2.8**
CD2				AP	pP	11 57 05.5	+7.1
CD2				PP	PP	11 57 45.3	-4.2
CD2				S	**S**	**12 01 34.3**	**+0.9**
CD2				SS	SS	12 03 19.3	-25
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				AMB	AMB		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,130nm,15.6s						
CD2				LR	LR		
	comp=Z,180nm,14.4s						
ASAR	**Alice Springs**	**33.51**	**167**	P	**P**	**11 57 09.9**	**-0.2**
	comp=Z,1.0nm,0.4s,mb4.0,baz=350,slow=7.3,SNR=45						
ASAR				PcP	PcP	11 59 49.2	-0.3
	comp=Z,0.5nm,0.7s,baz=297,slow=1.8,SNR=5.1						
HHC	**Hu-ho-hao-te**	**34.11**	**340**	*eP*	**P**	**11 57 19.0**	**+3.8**
HHC				AP	pP	11 57 40.5	+7.0
HHC				PP	PP	11 58 36.5	+2.7
HHC				S	**S**	**12 02 39.3**	**+3.8**
HHC				SCS	ScS	12 07 29.3	-2.1
HHC				AMB	AMB		
	comp=Z,13nm,0.7s,mb4.9						
HHC				AMB	AMB		
	comp=Z,61nm,4.4s						
HHC				LR	LR		
	comp=N,139nm,14.3s						
HHC				LR	LR		
	comp=E,445nm,17.8s						
HHC				LR	LR		
	comp=Z,65nm,10.7s						
ASAJ	**Asahikawa**	**37.56**	**19**	P	**P**	**11 57 46.4**	**+1.7**
	comp=Z,3.3nm,0.4s,mb4.5,baz=208,slow=16,SNR=9.2						
ASAJ				LR	LR	12 13 51.5	
	comp=Z,55nm,18.3s,baz=258,slow=37						
FORT	**Forrest**	**39.80**	**178**	*eP*	**P**	**11 58 03.6**	**+0.1**
	comp=Z,18nm,0.6s,mb5.1						
ULN	**Ulaanbaatar**	**41.82**	**341**	*eP*	**P**	**11 58 19.5**	**-0.4**
	comp=Z,1.2nm,0.5s,mb3.9						
SONM	**Songino Array**	**42.01**	**340**	P	**P**	**11 58 21.2**	**-0.3**
	comp=Z,0.4nm,0.6s,mb3.3,baz=160,slow=8.5,SNR=5.2						
SONM				PcP	PcP	12 00 15.7	+0.4
	comp=Z,0.3nm,0.5s,baz=156,slow=4.7,SNR=3.4						
STKA	**Stephens Creek**	**43.40**	**161**	*eP*	**P**	**11 58 32.8**	**-0.2**
	comp=Z,1.0nm,0.3s,mb4.0						
STKA	**Stephens Creek**	**43.40**	**161**	*eP*	**P**	**11 58 32.9**	**0.0**
	comp=Z,2.8nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**43.40**	**161**	P	**P**	**11 58 32.8**	**-0.1**
	comp=Z,2.6nm,0.6s,mb4.1,baz=343,slow=7.3,SNR=5.3						
MK31	**Makanchi Array**	**52.87**	**323**	*eP*	**P**	**11 59 45.3**	**-0.5**
MK31				*ePcP*	PcP	12 00 54.2	+0.2
MKAR	**Makanchi Array**	**52.87**	**323**	P	**P**	**11 59 46.0**	**+0.2**
	comp=Z,5.1nm,0.6s,mb4.7,baz=123,slow=8.2,SNR=55						
MKAR				PcP	PcP	12 00 54.4	+0.4
	comp=Z,1.3nm,0.6s,baz=116,slow=4.4,SNR=8.3						
ZALV	**Zalesovo Beam**	**55.55**	**332**	P	**P**	**12 00 04.1**	**-1.0**
	comp=Z,1.5nm,0.3s,mb4.4,baz=128,slow=7.1,SNR=9.5						
UCH	**Uchtor**	**55.92**	**315**	*eP*	**P**	**12 00 08.8**	**+0.8**
	comp=Z,4.6nm,0.8s,mb4.6						
AML	**Almayashu**	**56.46**	**315**	*eP*	**P**	**12 00 12.2**	**+0.3**
	comp=Z,2.7nm,0.7s,mb4.4						
EKS2	**Erkin-Say**	**56.58**	**315**	*eP*	**P**	**12 00 12.8**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.3						
KURK	**Kurchatov**	**56.94**	**326**	*eP*	**P**	**12 00 14.2**	**-0.8**
	comp=Z,8.2nm,0.8s,mb4.8						
BRVK	**Borovoye**	**62.61**	**326**	*eP*	**P**	**12 00 53.1**	**-0.8**
	comp=Z,4.9nm,0.8s,mb4.5						
ARU	**Arti**	**70.11**	**327**	*eP*	**P**	**12 01 40.5**	**-1.3**
	comp=Z,5.9nm,0.5s,mb4.7						
DAWY	**Dawson**	**83.69**	**26**	*eP*	**P**	**12 02 59.5**	**+1.6**
JOF	**Joensuu**	**84.13**	**333**	*ep*	**P**	**12 02 57.8**	**-2.4**
	comp=Z,5.5nm,0.7s,mb4.5						
ARCES	**ARCESS Array B**	**85.18**	**340**	P	**P**	**12 03 05.2**	**-0.1**
	comp=Z,9.1nm,0.6s,mb4.9,baz=81,slow=6.6,SNR=38						
INK	**Inuvik**	**85.27**	**22**	P	**P**	**12 03 07.0**	**+1.1**
	comp=Z,2.0nm,0.8s,mb4.1,baz=267,slow=4.7,SNR=15						
KAF	**Kangasniemi**	**86.56**	**332**	*ep*	**P**	**12 03 11.2**	**-1.1**
FINES	**FINESS Array B**	**86.82**	**332**	P	**P**	**12 03 13.2**	**-0.4**
	comp=Z,1.7nm,0.6s,mb4.2,baz=72,slow=3.5,SNR=10						
AKASG	**Malin Array Be**	**87.38**	**321**	P	**P**	**12 03 15.6**	**-1.0**
	comp=Z,0.8nm,0.4s,mb4.0,baz=66,slow=4.8,SNR=5.5						
MAW	**Mawson**	**88.71**	**200**	P	**P**	**12 03 23.8**	**+1.5**
	comp=Z,1.5nm,0.8s,mb4.1,baz=110,slow=12,SNR=3.8						
VNDA	**Vanda**	**88.88**	**173**	P	**P**	**12 03 23.9**	**+0.9**
	comp=Z,1.7nm,0.7s,mb4.2,baz=357,slow=6.2,SNR=6.9						
KMBO	**Kilima Mbogo**	**89.21**	**269**	P	**P**	**12 03 26.6**	**+0.6**
	comp=Z,0.4nm,0.3s,mb3.9,baz=47,slow=20,SNR=3.5						
RES	**Resolute Bay**	**92.53**	**10**	*eP*	**P**	**12 03 41.1**	**+0.9**
	comp=Z,57nm,0.7s						
NOA	**NORSAR Array B**	**93.70**	**334**	P	**P**	**12 03 44.1**	**-1.7**
	comp=Z,1.2nm,0.9s,mb4.2,baz=69,slow=4.5,SNR=2.8						
YKA

	baz=31						
L05A	Lakeview	31.23	94	⇓P	P	12 06 12.1	+1.4
	baz=31						
O02C	Red Bluff	31.25	98	⇓P	P	12 06 11.6	+0.7
	baz=31						
P01C	Double 8 Ranch	31.38	100	⇑P	P	12 06 13.6	+1.5
	baz=31						
M05C	Lookout	31.47	95	⇑P	P	12 06 13.6	+0.8
	baz=31						
I08A	Drewsey	31.48	89	⇓P	P	12 06 13.3	+0.4
	baz=31						
WALA	Waterton Lakes	31.54	77	*e*P	P	12 06 14.3	+0.9
	1.2nm,0.6s,mb3.9						
MOD	Modoc	31.64	94	⇓P	P	12 06 14.9	+0.6
	baz=31						
K07A	Rock Creek Ran	31.79	91	⇑P	P	12 06 16.1	+0.5
	baz=32						
HOPS	Hopland	31.85	100	⇓P	P	12 06 16.3	+0.1
	baz=32						
J08A	Circle Bar Ran	31.86	90	P	P	12 06 16.3	+0.1
	baz=32,SNR=6.8						
M06C	Likely Place G	31.96	95	⇓P	P	12 06 17.9	+0.7
	baz=32						
L07A	Adell	32.14	93	⇓P	P	12 06 19.5	+0.8
	baz=32						
O04C	Chester	32.16	97	⇓P	P	12 06 19.8	+1.0
	baz=32						
H10A	Noah's Angus R	32.18	87	⇓P	P	12 06 18.8	-0.3
	baz=32						
K08A	Mann Creek Ran	32.22	91	P	P	12 06 19.8	+0.4
	baz=32,SNR=7.9						
J09A	Fry Pan Ranch,	32.29	89	⇓P	P	12 06 20.3	+0.3
	baz=32						
WVOR	Wild Horse Val	32.30	91	*e*P	P	12 06 19.6	-0.6
	5.3nm,1.0s,mb4.3						
WVOR				*e*	pP	12 06 31.9	-3.1
F12A	Elk City	32.43	84	⇑P	P	12 06 21.5	+0.3
	baz=32						
O05C	Quincy	32.48	97	⇓P	P	12 06 22.2	+0.4
	baz=32						
MCCM	Marconi Confer	32.53	101	⇑P	P	12 06 21.6	-0.6
	baz=32						
H11A	Donnelly	32.55	86	⇑P	P	12 06 22.7	+0.4
	baz=32						
M07A	Soldier Meadow	32.62	93	⇓P	P	12 06 23.5	+0.6
	baz=32						
L08A	Fields	32.62	92	P	P	12 06 23.4	+0.4
	baz=32,SNR=8.0						
N06A	Buffalo Meadow	32.63	95	P	P	12 06 24.3	+1.3
	baz=32,SNR=7.5						
K09A	Rome	32.69	90	⇓P	P	12 06 23.6	+0.1
	baz=32						
O06A	Flanigan	33.00	96	P	P	12 06 26.8	+0.5
	baz=33,SNR=5.8						
M08A	Happy Creek Ra	33.05	93	⇑P	P	12 06 27.1	+0.4
	baz=33						
N07B	Gerlach	33.12	94	P	P	12 06 27.8	+0.5
	baz=33,SNR=9.2						
L09A	Wilkinson Ranc	33.13	91	⇓P	P	12 06 27.5	+0.1
	baz=33						
K10A	MacKenzie Ranc	33.15	89	⇑P	P	12 06 27.7	+0.1
	baz=33						
H12A	Diamond D Ranc	33.33	85	⇑P	P	12 06 29.5	+0.5
	baz=33						
LAVA	Lava Cap Winer	33.37	99	⇑P	P	12 06 29.3	-0.2
	baz=33						
F14A	Wisdom	33.51	82	⇑P	P	12 06 30.5	-0.1
	baz=33						
N08A	GE Springer Mi	33.61	93	⇓P	P	12 06 31.7	+0.1
	baz=33						
M09A	Marrel Ranch,	33.62	92	⇓P	P	12 06 32.1	+0.4
	baz=33						
K11A	Parker Ranch,	33.65	89	⇑P	P	12 06 32.2	+0.3
	baz=33						
R05C	Kirkwood Meado	33.80	98	⇓P	P	12 06 32.7	-0.5
	baz=34						
L10A	Juniper Basin	33.80	90	⇑P	P	12 06 33.2	0.0
	baz=34						
J12A	Stokes Ranch,	33.93	87	⇑P	P	12 06 34.8	+0.5
	baz=34						
N09A	Rock Creek Ran	33.93	93	⇑P	P	12 06 34.6	+0.3
	baz=34						
RES	Resolute Bay	33.94	27	*e*P	P	12 06 32.8	-1.2
RES				*e*		12 06 41.4	
CMB	Columbia Colle	34.06	99	*e*P	P	12 06 35.0	-0.5
	0.7nm,0.7s,mb3.7						
M10A	I.L. Ranch, Tu	34.10	91	⇑P	P	12 06 36.1	+0.3
	baz=34						
I13A	Wildhorse Cree	34.12	86	⇑P	P	12 06 36.3	+0.3
	baz=34						
HLID	Hailey	34.15	86	⇓P	P	12 06 36.6	+0.4
	baz=34						
R06C	Coleville	34.28	98	⇓P	P	12 06 37.6	+0.2
	baz=34						
P08A	Dixie Valley	34.33	95	⇓P	P	12 06 38.6	+0.8
	baz=34						
J13A	Cove Ranch, Pi	34.39	86	⇑P	P	12 06 38.3	0.0
	baz=34						
HAST	UC Hastings Re	34.50	102	⇓P	P	12 06 38.8	-0.5
	baz=34						
O09A	Fish Creek Ran	34.56	93	P	P	12 06 40.1	+0.3
	baz=34,SNR=6.2						
M11A	Holland Ranch,	34.60	90	⇑P	P	12 06 40.6	+0.5
	baz=34						
L12A	House Creek Ra	34.63	89	⇓P	P	12 06 40.7	+0.3
	baz=34						
R07C	Lee Vining	34.81	98	⇑P	P	12 06 42.1	+0.1
	baz=35						
K13A	Stover Farm, H	34.88	87	⇓P	P	12 06 42.9	+0.4
	baz=35						
O10A	Cortez Mining,	34.89	93	⇓P	P	12 06 42.7	+0.1
	baz=35						
Q08A	Gabbs	34.96	96	P	P	12 06 43.3	+0.1
	baz=35,SNR=11						
P09A	Austin	34.98	94	⇓P	P	12 06 43.9	+0.5
	baz=35						
N11A	Elko Archery C	35.01	91	⇑P	P	12 06 44.1	+0.4
	baz=35						
NVAR	Mina Array Bea	35.02	97	P	P	12 06 43.7	0.0
	3.5nm,0.9s,mb4.3,baz=305,slow=7.1,SNR=23						
NVAR				PcP	PcP	12 09 14.1	-0.5
	0.7nm,0.7s,baz=288,slow=1.3,SNR=4.2						
ASAJ	Asahikawa	35.11	276	P	P	12 06 44.7	+0.2
	8.7nm,1.0s,mb4.7,baz=52,slow=19,SNR=3.6						
M12A	Wells	35.13	90	⇓P	P	12 06 44.8	+0.1
	baz=35						
T06C	Millerton Lake	35.15	100	⇓P	P	12 06 44.6	-0.2
	baz=35						
KCC	Kaiser Creek	35.16	99	⇓P	P	12 06 45.1	0.0
	baz=35						
L13A	Double Diamond	35.30	88	⇓P	P	12 06 46.2	+0.1
	baz=35						
P10A	Eureka	35.34	94	⇓P	P	12 06 46.4	-0.1
	baz=35						
N12A	Clover Valley,	35.41	91	P	P	12 06 47.3	+0.2
	baz=35,SNR=7.7						
Q09A	Carvers	35.42	95	⇑P	P	12 06 47.6	+0.4
	baz=35						
V04C	Ramage Ranch,	35.42	103	P	P	12 06 47.0	-0.2
	baz=35						
O11A	Cowboy Ranch,	35.49	92	⇓P	P	12 06 48.0	+0.2
	baz=35						
M13A	Montello	35.61	89	⇑P	P	12 06 49.1	+0.3
	baz=35						
S08C	White Mtn Res	35.72	98	P	P	12 06 50.6	+0.8
	baz=36,SNR=6.0						
HELL	Mitchell Peak,	35.77	100	P	P	12 06 50.2	0.0
	baz=36,SNR=5.9						
R09A	Tonopah	35.88	96	⇑P	P	12 06 51.1	0.0
	baz=36						
Q10A	Clear Creek Ra	35.89	95	⇑P	P	12 06 51.6	+0.4
	baz=36						
TPH	Tonopah	35.89	96	*e*P	P	12 06 50.7	-0.6
	6.0nm,0.8s,mb4.6						
O12A	Currie	35.95	91	P	P	12 06 51.7	0.0
	baz=36,SNR=10						
TIN	Tinemaha	35.98	98	⇑P	P	12 06 52.3	+0.2
	baz=36						
M14A	Sheep Mountain	36.01	88	⇑P	P	12 06 53.0	+0.8
	baz=36						
S09A	Goldfield	36.13	97	P	P	12 06 53.5	+0.2
	baz=36,SNR=5.5						
R10A	Warm Springs	36.30	95	P	P	12 06 54.8	+0.1
	baz=36,SNR=6.2						
Q11A	Duckwater	36.32	94	P	P	12 06 55.0	+0.1
	baz=36,SNR=9.8						
P12A	McGill	36.35	92	P	P	12 06 55.2	0.0
	baz=36,SNR=9.0						
S10A	Tonopah Range,	36.37	96	⇑P	P	12 06 55.2	-0.1
	baz=36						
O13A	Hicks Ranch, I	36.49	91	⇓P	P	12 06 56.9	+0.6
	baz=36						
CWC	Cottonwood Cre	36.49	99	⇑P	P	12 06 56.4	+0.1
	baz=36						
GRAC	Grapevine Rang	36.53	98	⇓P	P	12 06 57.0	+0.3
	baz=36						
PKM	Peak Mountain	36.55	103	⇑P	P	12 06 57.1	+0.2
	baz=36						
Q12A	Willow Creek R	36.68	93	P	P	12 06 58.2	+0.2
	baz=36,SNR=6.1						
R11A	Troy Canyon, C	36.68	94	⇓P	P	12 06 57.9	-0.1
	baz=36						
ISA	Isabella	36.80	100	⇑P	P	12 06 59.1	+0.1
	baz=37						
DAC	Darwin (Calif)	36.89	99	*e*P	P	12 06 59.1	-0.7
	4.6nm,0.9s,mb4.3						
P13A	Bates Ranch, G	36.90	92	⇑P	P	12 06 59.9	+0.1
	baz=37						
S11A	Rachel	37.05	95	⇓P	P	12 07 01.0	-0.1
	baz=37						
MPMC	Manual Prospec	37.10	99	P	P	12 07 01.6	+0.1
	baz=37,SNR=8.1						
DUG	Dugway	37.14	90	*e*P	P	12 07 01.4	-0.4
	1.7nm,0.9s,mb3.9						
DUG	Dugway	37.14	90	P	P	12 07 02.0	+0.1
	baz=37,SNR=5.3						
FURC	Furnace Creek,	37.19	98	P	P	12 07 02.5	+0.2
	baz=37,SNR=7.3						
Q13A	Wheeler Ranch,	37.22	92	⇑P	P	12 07 02.5	0.0
	baz=37						
TPNV	Topopah Spring	37.22	97	*e*P	P	12 07 02.1	-0.4
	12nm,0.9s,mb4.7						
TPNV				*e*		12 07 09.0	
TPNV	Topopah Spring	37.22	97	P	P	12 07 02.7	+0.1
	baz=37,SNR=15						
R12A	Pony Springs,	37.27	94	⇑P	P	12 07 02.9	-0.1
	baz=37						
LRMC	Laurel Mountai	37.38	100	⇑P	P	12 07 03.9	-0.1
	baz=37						
PDAR	Pinedale Array	37.49	84	P	P	12 07 04.8	0.0
	0.4nm,0.7s,mb3.4,baz=279,slow=2.7,SNR=4.1						
U10A	Ash Meadows, A	37.53	97	⇓P	P	12 07 05.2	0.0
	baz=37						
S12A	Delamar Landin	37.61	95	⇑P	P	12 07 06.4	+0.5
	baz=37						
EDW2	Edwards Air Fo	37.63	101	⇓P	P	12 07 06.2	+0.2
	baz=37						
T11A	Corn Creek, Al	37.63	95	⇑P	P	12 07 05.9	-0.1
	baz=37						
FCC	Fort Churchill	37.94	53	*e*P	P	12 07 07.3	-1.1
	6.0nm,0.7s,mb4.4						
FCC				*e*	pP	12 07 18.7	-4.8
GSC	Goldstone	38.02	99	P	P	12 07 09.3	-0.1
	baz=38,SNR=8.7						
S13A	Holt Ranch, En	38.21	94	⇑P	P	12 07 11.1	+0.1
	baz=38						
R14A	James Farms, M	38.24	92	⇑P	P	12 07 10.7	-0.4
	baz=38						
BFSC	Mount Baldy St	38.27	101	⇑P	P	12 07 11.5	0.0
	baz=38						
TUQ	Turquoise Mtn.	38.45	98	⇓P	P	12 07 13.1	+0.2
	baz=38						
V11A	Goodsprings	38.46	97	⇓P	P	12 07 13.2	+0.2
	baz=38						
S14A	Cedar City	38.50	93	⇑P	P	12 07 13.2	-0.2
	baz=38						
T13A	Saint George	38.56	95	⇓P	P	12 07 14.0	+0.2
	baz=38						
U12A	Valley of Fire	38.58	96	⇑P	P	12 07 14.0	0.0
	baz=38						
HEC	Hector,Ludlow	38.63	99	⇑P	P	12 07 14.4	-0.1
	baz=38						
BBRC	Big Bear Sol-O	38.69	100	⇑P	P	12 07 14.9	-0.1
	baz=38						
V12A	Nelson	38.88	97	P	P	12 07 16.8	+0.2
	baz=39,SNR=7.6						
U13A	Pakoon Wash	38.93	95	⇓P	P	12 07 17.2	+0.3
	baz=39						
MURC	Murrieta	38.99	101	⇑P	P	12 07 17.6	+0.1
	baz=39						
T14A	Hurricane	39.02	94	⇑P	P	12 07 17.7	0.0
	baz=39						
GMRC	Granite Mounta	39.06	99	P	P	12 07 17.8	-0.3
	baz=39,SNR=9.6						
U14A	Mt Trumbull	39.40	95	⇓P	P	12 07 21.1	+0.3
	baz=39						
BELC	Belle Mtn.	39.41	100	P	P	12 07 20.5	-0.5
	baz=39,SNR=6.0						
PFO	Pinyon Flat Ob	39.42	101	P	P	12 07 20.5	-0.6
	4.9nm,1.0s,mb4.2,baz=327,slow=5.4,SNR=6.2						
PFO	Pinyon Flat Ob	39.42	101	⇑P	P	12 07 20.6	-0.5
	baz=39						
T15A	Red Dirt Ranch	39.46	93	⇓P	P	12 07 21.2	-0.2
	baz=39						
109C	Camp Elliot, M	39.56	102	⇓P	P	12 07 22.0	-0.3
	baz=39						
IRM	Iron Mountain	39.80	99	P	P	12 07 24.0	-0.2
	baz=40,SNR=9.6						
W13A	Hualapai Mount	39.88	97	P	P	12 07 24.6	-0.2
	baz=40,SNR=8.4						
MONP	Monument Peak	39.96	102	⇑P	P	12 07 25.4	-0.2
	baz=40						
BC3	Big Chuckw Mtn	39.97	100	⇓P	P	12 07 24.5	-1.2
	baz=40						
X13A	Yucca	40.27	97	⇓P	P	12 07 27.5	-0.6
	baz=40						
W14A	Seligman	40.28	96	P	P	12 07 28.2	+0.1
	baz=40,SNR=5.4						
SWSC	Sam W. Stewart	40.28	101	⇓P	P	12 07 27.4	-0.8
	baz=40						
PDMCI	Parker Dam,Lak	40.29	98	⇓P	P	12 07 27.6	-0.6
	baz=40						
Y12C	Blythe	40.45	99	⇑P	P	12 07 29.3	-0.3
	baz=40						
PV10	Paradox Valley	40.55	89	*e*P	P	12 07 29.9	-0.4
PV10				*e*		12 07 39.0	
GLA	Glamis	40.77	100	P	P	12 07 32.0	-0.3
	baz=41,SNR=6.9						
W15A	Williams	40.78	95	⇓P	P	12 07 32.8	+0.5
	baz=41						
Y13A	Salome	40.81	98	⇓P	P	12 07 32.4	-0.3
	baz=41						
X14A	Yava	40.91	97	P	P	12 07 33.5	+0.1
	baz=41,SNR=9.0						
PV01	Paradox Valley	40.99	89	*e*P	P	12 07 32.8	-1.2
WUAZ	Wupatki	41.08	94	*e*P	P	12 07 34.3	-0.4
	7.1nm,0.8s,mb4.3						
WUAZ	Wupatki	41.08	94	P	P	12 07 34.9	+0.2
	baz=41,SNR=7.1						
ULM	Lac du Bonnet	41.09	66	P	P	12 07 33.5	-1.2
ULM	Lac du Bonnet	41.09	66	P	P	12 07 33.5	-1.2
	baz=300,slow=8.1						
Y14A	Wickenburg	41.21	97	P	P	12 07 35.4	-0.5
	baz=41,SNR=7.2						
X15A	Humboldt	41.28	96	P	P	12 07 36.5	+0.1
	baz=41,SNR=5.8						
MVCO	Mesa Verde	41.64	90	⇓P	P	12 07 38.9	-0.5
	baz=41						
MDJ	Mudanjiang	42.40	285	P	P	12 07 45.5	+0.1
MDJ				AP	pP	12 07 54.0	-6.7
MDJ				AMB	AMB		
	comp=Z,6.0nm,1.3s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,89nm,4.3s						
115A	Sonoran Desert	42.55	98	⇓P	P	12 07 46.5	-0.3
	baz=42						
116A	Eloy	42.95	98	⇓P	P	12 07 50.1	0.0
	baz=43						
216A	Three Points,	43.50	98	⇓P	P	12 07 53.8	-0.7
	baz=43						
217A	Green Valley	44.04	98	⇓P	P	12 07 58.6	-0.2
	baz=44						
218A	Dragoon	44.35	97	⇑P	P	12 08 01.5	+0.1
	baz=44						
LAZ	Ladron	44.36	92	*e*P	P	12 08 00.9	-0.5
318A	Bisbee	44.77	97	⇓P	P	12 08 04.5	-0.1
	baz=45						
BNM	Barren Site	44.84	92	*e*P	P	12 08 04.7	-0.4
MNTX	Cornudas Mount	47.31	93	*e*P	P	12 08 24.1	-0.5
	comp=Z,6.0nm,0.8s,mb4.6						
KSRS	Korea Array	47.94	279	P	P	12 08 30.2	+0.8
	comp=Z,1.2nm,0.6s,mb4.1,baz=56,slow=7.7,SNR=3.4						
WMOK	Wichita Mounta	49.09	85	*e*P	P	12 08 36.9	-1.4
	comp=Z,2.2nm,0.7s,mb4.3						
WMOK				*e*	pP	12 08 49.5	-4.4
JNU	Nakatsue	49.18	272	P	P	12 08 38.4	-0.6
	comp=Z,4.7nm,0.8s,mb4.6,baz=37,slow=5.1,SNR=2.6						
LTX	Lajitas	50.04	94	*e*P	P	12 08 45.0	-0.6
	comp=Z,10nm,0.8s,mb4.9						
ULN	Ulaanbaatar	52.56	302	*e*P	P	12 09 04.2	0.0
	comp=Z,2.0nm,0.6s,mb4.2						
SONM	Songino Array	52.92	302	P	P	12 09 07.1	+0.3
	comp=Z,1.1nm,0.7s,mb3.9,baz=40,slow=8.1,SNR=8.7						
SONM				PcP	PcP	12 10 15.1	+0.1
	comp=Z,1.2nm,0.8s,baz=89,slow=2.9,SNR=4.2						
HHC	Hu-ho-hao-te	54.95	293	*e*P	P	12 09 19.5	-2.2
HHC				AP	pP	12 09 32.3	-5.3
HHC				XP	sP	12 09 37.5	-6.9
HHC				PP	PP	12 11 23.3	-1.6
HHC				S	S	12 16 55.0	-3.8
HHC				SS	SS	12 20 38.8	-3.6
HHC				AMB	AMB		
	comp=Z,11nm,0.8s,mb4.9						
HHC				AMB	AMB		
	comp=Z,104nm,5.0s						
ARCES	ARCESS Array B	56.81	356	P	P	12 09 34.1	-0.5
	comp=Z,2.6nm,0.7s,mb4.4,baz=13,slow=7.7,SNR=7.5						
ZALV	Zalesovo Beam	58.22	319	P	P	12 09 45.4	+0.7
	comp=Z,0.5nm,0.4s,mb3.9,baz=44,slow=5.8,SNR=3.8						
ZALV				PcP	PcP	12 10 35.8	+0.4
	comp=Z,1.4nm,0.5s,baz=35,slow=4.6,SNR=5.7						
ZALV				LR	LR	12 36 28.1	
	comp=Z,51nm,19.1s,baz=52,slow=38						
LZH	Lanzhou	62.58	294	*e*P	P	12 10 15.3	+0.6
LZH				AP	pP	12 10 28.3	-2.6
LZH				XP	sP	12 10 33.5	-4.1
LZH				PP	PP	12 12 34.8	+2.3
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,112nm,4.8s						
LZH				LR	LR		
	comp=N,236nm,16.5s						
LZH				LR	LR		
	comp=Z,398nm,18.7s						
ARU	Arti	64.59	335	*e*P	P	12 10 28.0	+0.4
	comp=Z,4.2nm,0.4s,mb4.8						
WMQ	Urumqi	64.79	310	P	P	12 10 31.0	+1.8
WMQ				AP	pP	12 10 44.0	-1.4
WMQ				XP	sP	12 10 49.0	-3.2
MK31	Makanchi Array	64.80	316	*e*P	P	12 10 28.9	-0.2
MKAR	Makanchi Array	64.80	316	P	P	12 10 28.9	-0.3
	comp=Z,0.3nm,0.3s,mb3.8,baz=45,slow=7.0,SNR=6.0						
MKAR				LR	LR	12 40 02.8	
	comp=Z,70nm,18.8s,baz=12,slow=37						
FINES	FINESS Array B	64.84	354	P	P	12 10 28.8	-0.4
	comp=Z,1.5nm,0.6s,mb4.2,baz=27,slow=7.9,SNR=6.5						
FINES				LR	LR	12 37 42.3	
	comp=Z,63nm,18.9s,baz=179,slow=35						
NB2	NORSAR Subarra	65.53	2	PKP	P	12 10 35.6	+2.0
	comp=Z,0.3nm,0.5s,mb3.6,baz=4.9,slow=4.1						
NOA	NORSAR Array B	65.53	2	P	P	12 10 33.1	-0.5
	comp=Z,0.6nm,0.6s,mb3.8,baz=0.4,slow=6.2,SNR=4.0						
HFS	Hagfors	66.47	1	P	P	12 10 39.3	-0.4
	comp=Z,2.6nm,0.4s,mb4.6,baz=35,slow=3.6,SNR=16						
CD2	Chengdu	66.51	290	*e*P	P	12 10 42.3	+1.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
GYA	Guiyang	68.26	285	P	P	12 10 52.5	+0.9
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
AKTK	Aktyubinsk	70.13	332	P	P	12 11 02.4	-0.3
AKTO	Aktyubinsk	70.13	332	P	P	12 11 02.4	-0.3
	comp=Z,5.0nm,0.7s,mb4.5,baz=32,slow=5.5,SNR=15						
EKA	Eskdalemuir Ar	70.25	11	P	P	12 11 02.6	-0.7
	comp=Z,1.5nm,0.6s,mb4.1,baz=341,slow=4.5,SNR=8.1						
KMI	Kunming	71.53	287	P	P	12 11 12.5	+0.9
KMI				AP	pP	12 11 23.0	-5.1
KMI				XP	sP	12 11 27.5	-7.3
KMI				PP	PP	12 13 53.8	+3.2
KMI				S	S	12 20 27.0	+1.2
KMI				AMB	AMB		
	comp=Z,8.0nm,0.5s,mb4.9						
KMI				AMB	AMB		
	comp=Z,71nm,5.4s						
KMI				LR	LR		
	comp=N,93nm,23.1s						
KMI				LR	LR		
	comp=E,77nm,22.5s						
KMI				LR	LR		
	comp=Z,86nm,19.6s						
PPT	Papeete	72.22	165	LR	LR	12 37 07.6	
	comp=Z,37nm,21.4s,baz=323,slow=31						
AKASG	Malin Array Be	75.27	351	P	P	12 11 32.3	-0.8
	comp=Z,2.8nm,0.6s,mb4.4,baz=11,slow=5.7,SNR=11						
LDF	La Druitiere	77.22	10	*e*P	P	12 11 46.5	+2.2
	comp=Z,7.2nm,0.6s,mb4.5						
LDF	La Druitiere	77.22	10	*e*P	P	12 11 46.5	+2.2
	comp=Z,3.6nm,0.6s,mb4.5						
TAPN	Taplejung	77.93	300	*e*P	P	12 11 48.3	-0.3
JIRN	Jiri	78.46	301	*e*P	P	12 11 50.9	-0.6
	comp=Z,14nm,0.6s,mb5.1						
GKN	Gorkha	78.96	302	*e*P	P	12 11 53.7	-0.6
	comp=Z,18nm,0.7s,mb5.1						
SSF	Saint Saulge	79.09	8	*e*P	P	12 11 54.9	+0.2
	comp=Z,7.0nm,0.6s,mb4.5						
SSF	Saint Saulge	79.09	8	*e*P	P	12 11 54.9	+0.2
	comp=Z,3.5nm,0.6s,mb4.5						
AVF	Avril sur Loir	79.34	8	*e*P	P	12 11 56.1	0.0
	comp=Z,3.8nm,0.6s,mb4.2						
AVF	Avril sur Loir	79.34	8	*e*P	P	12 11 56.1	0.0
	comp=Z,1.9nm,0.6s,mb4.2						
SMF	Signal de Mont	79.53	8	*e*P	P	12 11 57.2	+0.1
	comp=Z,5.6nm,0.5s,mb4.4						
SMF	Signal de Mont	79.53	8	*e*P	P	12 11 57.2	+0.1
	comp=Z,2.8nm,0.5s,mb4.5						
KOLN	Koldanda	79.67	303	*e*P	P	12 11 57.3	-0.9
	comp=Z,15nm,0.8s,mb5.0						
SBF	Sospel	82.55	6	*e*P	P	12 12 12.9	-0.3
	comp=Z,19nm,0.7s,mb5.0						
SBF	Sospel	82.55	6	*e*P	P	12 12 12.9	-0.3
	comp=Z,9.6nm,0.7s,mb4.9						
MTLF	Montolieu	82.66	9	*e*P	P	12 12 14.1	+0.3
ETSF	Etsaut	82.80	12	*e*P	P	12 12 15.8	+1.3
WRA	Warramunga Arr	90.02	235	P	P	12 12 48.0	-2.0
	comp=Z,0.4nm,0.8s,mb3.8,baz=31,slow=5.5,SNR=4.5						
FITZ	Fitzroy Crossi	92.91	243	P	P	12 13 01.2	-2.3
	comp=Z,3.1nm,0.9s,mb4.7,baz=281,slow=2.3,SNR=4.7						
ASAR	Alice Springs	93.39	234	P	P	12 13 03.4	-2.2
	comp=Z,0.8nm,0.9s,mb4.2,baz=28,slow=3.9,SNR=6.8						
NWAO	Narrogin (SRO)	109.31	241	*e*PKP	PKiKP	12 18 18.4	-1.6
QSPA	South Pole Qui	143.51	180	*e*PKPdf	PKPdf	12 19 18.7	-4.3
MATP	Matopo	145.21	338	PKPbc	PKPbc	12 19 27.8	+0.3
MATP	Matopo	145.21	338	PKPbc	PKPbc	12 19 27.8	+0.3
	comp=Z,7.6nm,0.6s,baz=356,slow=3.6,SNR=14						
TSUM	Tsumeb	145.48	356	*e*PKPdf	PKPdf	12 19 28.5	+0.3
MAW	Mawson	153.67	220	PKPbc	PKPbc	12 19 46.0	-1.6
	comp=Z,3.6nm,0.8s,baz=32,slow=6.5,SNR=4.7						
VNA3	Neumayer Olymp	159.32	157	*e*PKPdf	PKPdf	12 19 46.6	-0.4
VNA3				*e*		12 20 29.4	
VNA3				*e*		12 20 35.3	
VNA3				*e*		12 20 37.5	
VNA2	Neumayer--Watz	160.06	158	*e*PKPdf	PKPdf	12 19 48.3	+0.5
	baz=211,slow=5.5						
VNA2				*e*		12 20 25.9	
VNA2				*e*		12 20 32.2	
VNA2				*e*		12 20 39.4	
VNA2				*e*		12 20 41.2	
SNAA	Sanae	160.36	163	*e*PKPdf	PKPab	12 20 26.2	-3.2

NIED ***26*** *12:04:00, 37.20N×136.60E, h5^{km}, Mw3.8 Best double couple: $M_0$4.75000×10^{14} NP1:ϕ_s218.00000°, δ20.00000°, λ117.00000°. NP2:ϕ_s9.00000°, δ73.00000°, λ81.00000°.*

ISCJB ***26*** *12:04:48.1±1.0, 37.22N±0.03×136.59E±0.06, h9^{km}±6^{km}, mb3.6/4, Error ellipse: s-maj=8.3km s-min=5.5km az=8.1*

JMA ***26*** *12:04:48.6, 37.20N×136.61E, h7^{km}±1^{km}, M3.6*

JMA Felt II J1.

IDC ***26*** *12:04:48.1±1.2, 37.17N×136.70E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.5/19, mbtmp3.6/4, Error ellipse: s-maj=31.1km s-min=20.7km az=39.0*

ISC 26 12:04:48.9±0.8**, 37.20N**±0.03×**136.62E**±0.06**, h6**^{km}±5^{km}**, n11, σ0^{s}68**/17**, mb3.6**/4**, 3D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	Hakui	0.30	155	⇓P	Pg	12 04 54.9	+0.1
JJH				*e*S	Sg	12 04 59.6	+0.9
JSZ	Suzu	0.64	67	⇓P	Pg	12 05 01.0	-0.2

JSZ					*e*S		**Sg**	**12 05 09.8**	**+0.2**
JHG	**Hegura jima**	**0.69**	**20**	P			**Pg**	**12 05 02.1**	**-0.1**
JHG					*e*S		**Sg**	**12 05 11.3**	**+0.1**
JTT	**Ttatey**	**0.82**	**136**	⇓P			**Pg**	**12 05 04.5**	**-0.2**
JKG	**Kaga**	**0.95**	**194**	P			**Pg**	**12 05 06.5**	**-0.6**
JKG					*e*S		**Sg**	**12 05 19.3**	**-0.1**
MAT	**Matsushiro**	**1.43**	**117**	P			**Pn**	**12 05 13.9**	**-1.4**
MAT					S		**Sb**	**12 05 34.6**	**+0.3**
MJAR	**Matsushiro Arr**	**1.43**	**117**	Pn			**Pn**	**12 05 15.0**	**-0.4**
	29nm,0.3s,baz=289,slow=17,SNR=221								
MJAR					Sn		**Sn**	**12 05 34.6**	**+0.1**
	15nm,0.3s,baz=46,slow=47,SNR=8.0								
SONM	**Songino Array**	**24.54**	**305**	P			**P**	**12 10 09.8**	**+0.7**
	0.8nm,0.6s,mb3.4,baz=110,slow=8.1,SNR=4.3								
INK	**Inuvik**	**55.97**	**27**	P			**P**	**12 14 27.8**	**+0.2**
	0.6nm,0.8s,mb3.7,baz=267,slow=5.7,SNR=4.1								
WRA	**Warramunga Arr**	**56.87**	**183**	P			**P**	**12 14 33.3**	**-1.1**
	0.6nm,1.0s,mb3.6,baz=358,slow=7.0,SNR=3.8								
ASAR	**Alice Springs**	**60.59**	**183**	P			**P**	**12 15 01.9**	**+1.6**
	0.8nm,1.0s,mb3.8,baz=360,slow=5.2,SNR=4.8								

ISCJB ***26*** *12:15:16.2±0.7, 6380N±005×105E±0.1, h0km, Error ellipse: s-maj=10.4km s-min=4.2km az=36.3*

IDC ***26*** *12:15:16.7±1.6, 6408N×1000E, h0km, mb1 2.9/4, mb1mx2.8/19, mbtmp2.8/4, ML2.5/4, Error ellipse: s-maj=18.0km s-min=7.6km az=103.0*

BER ***26*** *12:15:18.6±3.2, 6392N×1032E, h0km, ML1.7, Suspected explosion*

ISC 26 12:15:16.2±0.9**, 6398N**±006×**101E**±01**, h0**km**, n8,** σ1§**63**/17**, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NSS	**Namsos**	**0.98**	**55**	*e*P		**Pg**	**12 15 33.3**	**-1.6**
NSS				*e*S		**Sg**	**12 15 47.7**	**+0.1**
NSS				AML		AML	12 15 48.2	
	comp=Z,20nm,0.2s							
MOL	**Molde**	**1.83**	**221**	*e*P		**Pn**	**12 15 48.4**	**-0.4**
MOL				*e*S		**Sn**	**12 16 12.2**	**-0.5**
MOL				AML		AML	12 16 13.5	
	comp=Z,14nm,0.3s							
DOMB	**Dombas**	**2.00**	**195**	*e*P		**Pn**	**12 15 52.2**	**+1.0**
DOMB				*e*Sg		**Sg**	**12 16 19.1**	**-1.3**
DOMB				AML		AML	12 16 20.0	
	comp=Z,13nm,0.1s							
MOR8	**Moi Rana**	**2.86**	**38**	*e*P		**Pn**	**12 16 06.1**	**+3.1**
MOR8				*e*S		**Sn**	**12 16 42.3**	**+4.2**
MOR8				AML		AML	12 16 51.0	
	comp=Z,6.4nm,0.3s							
NOA	**NORSAR Array B**	**2.99**	**170**	Pn		**Pn**	**12 16 06.7**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=39,slow=22,SNR=2.7							
NOA				Pg		**Pg**	**12 16 11.2**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=350,slow=17,SNR=3.7							
NOA				Sn		**Sn**	**12 16 43.9**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=247,slow=19,SNR=4.8							
NOA				Lg			12 16 53.7	
	comp=Z,1.6nm,0.3s,baz=331,slow=18,SNR=5.3							
HFS	**Hagfors**	**4.21**	**155**	Pn		**Pn**	**12 16 23.9**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=348,slow=11,SNR=9.0							
HFS				Pg		**Pg**	**12 16 32.5**	**-4.2**
	comp=Z,0.3nm,0.3s,baz=341,slow=12,SNR=6.2							
HFS				Lg			12 17 30.4	
	comp=Z,0.9nm,0.3s,baz=351,slow=27,SNR=9.2							
FINES	**FINESS Array B**	**7.75**	**102**	Pn		**Pn**	**12 17 11.4**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=302,slow=13,SNR=2.8							
FINES				Sn		**Sn**	**12 18 37.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=325,slow=21,SNR=3.7							
FINES				Lg			12 19 22.8	
	comp=Z,0.2nm,0.3s,baz=300,slow=25,SNR=4.1							
ARCES	**ARCESS Array B**	**8.23**	**41**	Pn		**Pn**	**12 17 14.6**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=232,slow=14,SNR=9.7							
ARCES				Sn		**Sn**	**12 18 45.0**	**-5.1**
	comp=Z,0.1nm,0.3s,baz=230,slow=22,SNR=2.9							

NIED ***26*** *12:30:00, 37.20N×13660E, h5km, Mw3.6 Best double couple: M0 2.47000×10^14 NP1:φs 83.00000°, δ 33.00000°, λ 145.00000°. NP2:φs 203.00000°, δ 72.00000°, λ 62.00000°.*

ISCJB ***26*** *12:30:25.9±0.9, 37.19N±004×13668E±005, h2km±7km, mb3.6/2, Error ellipse: s-maj=7.6km s-min=6.5km az=145.9*

NEIC ***26*** *12:30:26.3, 37.19N×13665E, h10km, MG3.9(JMA), After JMA.*

NEIC Recorded [3 JMA] in Ishikawa Prefecture.

JMA ***26*** *12:30:26.2, 37.19N×13665E, h10km, M3.9 Broadband fault plane solution: P waves. NP1:φs 59.00000°, δ 26.00000°, λ 90.00000°. NP2:φs 239.00000°, δ 64.00000°, λ 90.00000°. Principal axes: T Plg71.0000°, Azm149.0000°; N Plg0.0000°, Azm59.0000°; P Plg19.0000°, Azm329.0000°;*

JMA Felt III J1.

IDC ***26*** *12:30:26.9±1.4, 3676N×13665E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, ML2.8/1 Error ellipse: s-maj=45.1km s-min=18.3km az=15.0*

ISC 26 12:30:25.8±1.0**, 3720N**±004×**13664E**±006**, h9**km±6km**, n12,** σ0§**83**/19**, mb3.6/2, 1C-4D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JJH	**Hakui**	**0.30**	**158**	⇓P		**Pg**	**12 30 32.1**	**+0.3**
JJH				*e*S		**Sg**	**12 30 36.4**	**+0.6**
JSZ	**Suzu**	**0.63**	**67**	⇑P		**Pg**	**12 30 38.2**	**+0.2**
JHG	**Hegura jima**	**0.68**	**19**	⇓P		**Pg**	**12 30 39.4**	**+0.4**
JTT	**Ttatey**	**0.82**	**137**	⇓P		**Pg**	**12 30 41.4**	**-0.2**
JTT				*e*S		**Sg**	**12 30 52.7**	**+0.5**
JKG	**Kaga**	**0.96**	**195**	⇓P		**Pg**	**12 30 44.0**	**-0.2**
JKG				*e*S		**Sg**	**12 30 56.5**	**-0.2**
MAJO	**Matsushiro**	**1.42**	**117**	*e*Pn		**Pn**	**12 30 50.7**	**-1.0**
MAJO				*e*Sg		**Sg**	**12 31 10.2**	**-1.3**
MAT	**Matsushiro**	**1.42**	**117**	P		**Pn**	**12 30 50.7**	**-1.1**
MAT				S		**Sb**	**12 31 10.8**	**+0.2**
MJAR	**Matsushiro Arr**	**1.42**	**117**	Pn		**Pn**	**12 30 51.8**	**0.0**
MJAR				Sn		**Sn**	**12 31 13.3**	**+2.7**
MJAR	**Matsushiro Arr**	**1.42**	**117**	Pn		**Pn**	**12 30 51.8**	**0.0**
	13nm,0.3s,baz=299,slow=16,SNR=98							
MJAR				Sn		**Sn**	**12 31 13.3**	**+2.7**
	20nm,0.3s,baz=343,slow=30,SNR=18							
KSRS	**Korea Array**	**6.95**	**275**	Pn		**Pn**	**12 32 11.8**	**+4.1**
	0.2nm,0.3s,baz=75,slow=14,SNR=3.1							
SONM	**Songino Array**	**24.55**	**305**	P		**P**	**12 35 50.6**	**+5.0**
	1.0nm,0.6s,mb3.5,baz=96,slow=7.1,SNR=6.7							
WRA	**Warramunga Arr**	**56.88**	**183**	P		**P**	**12 40 10.3**	**-0.6**
	0.8nm,1.0s,mb3.7,baz=357,slow=7.6,SNR=5.8							

JMA 26 12:41:57.4, 3724N×13672E, h9km±1km**, M2.1, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JJH	**Hakui**	**0.32**	**171**	P		Pg	12 42 03.8	+0.1
JJH				*e*S		Sg	12 42 08.3	+0.4
JSZ	**Suzu**	**0.55**	**68**	P		Pg	12 42 07.9	-0.2
JSZ				*e*S		Sg	12 42 15.7	+0.3
JTT	**Ttatey**	**0.80**	**142**	P		Pg	12 42 12.9	+0.1

NIED ***26*** *12:42:00, 37.30N×13670E, h5km, Mw3.7 Best double couple: M0 4.08000×10^14 NP1:φs 247.00000°, δ 50.00000°, λ -179.00000°. NP2:φs 156.00000°, δ 89.00000°, λ -40.00000°.*

ISCJB ***26*** *12:42:54.3±0.8, 3728N±004×13671E±005, h10km±6km, mb3.3/3, Error ellipse: s-maj=7.2km s-min=6.5km az=32.1*

JMA ***26*** *12:42:54.6, 3726N×13670E, h7km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs 78.00000°, δ 80.00000°, λ -174.00000°. NP2: φs 347.00000°, δ 84.00000°, λ -10.00000°. Principal axes: T Plg3.0000°, Azm33.0000°; N Plg79.0000°, Azm138.0000°; P Plg11.0000°, Azm302.0000°;*

JMA Felt III J1.

IDC ***26*** *12:42:54.9±1.7, 3710N×13680E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/19, mbtmp3.3/4, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/13 Error ellipse: s-maj=48.8km s-min=18.7km az=24.0*

ISC 26 12:42:55.4±0.8**, 3725N**±004×**13675E**±005**, h7**km±5km**, n11,** σ0§**82**/17**, mb3.3/3, 4C-1D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JJH	**Hakui**	**0.33**	**176**	⇑P		**Pg**	**12 43 01.6**	**-0.1**
JJH				*e*S		**Sg**	**12 43 06.4**	**+0.4**
JSZ	**Suzu**	**0.52**	**68**	⇑P		**Pg**	**12 43 05.3**	**-0.2**
JSZ				*e*S		**Sg**	**12 43 12.9**	**+0.6**
JHG	**Hegura jima**	**0.61**	**12**	⇑P		**Pg**	**12 43 06.4**	**-0.7**
JTT	**Ttatey**	**0.80**	**144**	⇓P		**Pg**	**12 43 10.4**	**-0.2**
JTT				*e*S		**Sg**	**12 43 22.2**	**+1.2**
JKG	**Kaga**	**1.03**	**199**	⇑P		**Pg**	**12 43 14.0**	**-1.1**
JKG				*e*S		**Sg**	**12 43 28.4**	**-0.1**
MAT	**Matsushiro**	**1.36**	**121**	P		**Pn**	**12 43 19.8**	**-0.9**
MAT				S		**Sb**	**12 43 39.4**	**+0.7**
MJAR	**Matsushiro Arr**	**1.36**	**121**	Pn		**Pn**	**12 43 20.4**	**-0.4**
	28nm,0.3s,baz=315,slow=17,SNR=123							
MJAR				Sn		**Sn**	**12 43 38.1**	**-0.9**
	17nm,0.3s,baz=308,slow=16,SNR=9.9							
KSRS	**Korea Array**	**7.04**	**274**	Pn		**Pn**	**12 44 39.2**	**+0.5**
	0.5nm,0.3s,baz=88,slow=14,SNR=6.5							
KSRS				LR		LR	12 47 07.8	
	comp=Z,45nm,20.2s,baz=115,slow=36							
SONM	**Songino Array**	**24.59**	**305**	P		**P**	**12 48 17.9**	**+2.1**
	0.2nm,0.4s,mb3.0,baz=108,slow=8.7,SNR=3.6							
WRA	**Warramunga Arr**	**56.93**	**183**	P		**P**	**12 52 40.2**	**-0.9**
	0.2nm,0.5s,mb3.5,baz=359,slow=7.5,SNR=8.5							
ASAR	**Alice Springs**	**60.65**	**183**	P		**P**	**12 53 07.6**	**+0.7**
	0.2nm,0.7s,mb3.4,baz=12,slow=14,SNR=5.2							

NEIC 26 12:45:25.5±2.3**, 4326N×12700W, h10**km**, mb3.8**/2**, Error ellipse: s-maj=26.3km s-min=7.3km az=68.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RNO	**Roman Nose**	**2.45**	**73**	P		Pn	12 46 04.5	-1.0
DBO	**Dodson Butte**	**2.75**	**92**	P		Pn	12 46 08.5	-1.1
HSO	**Harness Mounta**	**2.86**	**83**	P		Pn	12 46 10.2	-0.9
EUO	**Eugene**	**2.95**	**74**	P		Pn	12 46 11.9	-0.5
COR	**Corvallis**	**2.98**	**62**	*e*Pn		Pn	12 46 12.5	-0.3
COR				*e*Sn		Sn	12 46 48.1	-0.4
BBOR	**Butler Butte**	**3.18**	**95**	P		Pn	12 46 15.3	-0.3
BROR	**Big Rock Looko**	**3.44**	**71**	P		Pn	12 46 19.2	0.0
HBO	**Huckleberry Mo**	**3.45**	**79**	P		Pn	12 46 19.6	+0.4
YBH	**Yreka Blue Hor**	**3.52**	**114**	*e*Pn		Pn	12 46 21.1	+0.9
IRO	**Indian Ridge**	**3.52**	**76**	P		Pn	12 46 20.1	-0.1
FRIS	**Frissel Point**	**3.67**	**73**	P		Pn	12 46 22.6	+0.3
NLO	**Nicolai Mounta**	**3.79**	**41**	P		Pn	12 46 24.1	+0.1
HUOR	**Husband**	**3.83**	**75**	P		Pn	12 46 25.0	+0.5
WIFE	**Three Sisters-**	**3.84**	**76**	P		Pn	12 46 25.4	+0.8
GT2	**Goat Mountain**	**3.89**	**59**	P		Pn	12 46 26.3	+1.0
RVW	**Rose Valley**	**4.19**	**45**	P		Pn	12 46 29.7	+0.3
TDH	**Tom, Dick, Har**	**4.25**	**60**	P		Pn	12 46 31.0	+0.7
ON2	**Olympics--Nort**	**4.28**	**31**	P		Pn	12 46 30.6	0.0
VBEM	**Beaver Butte**	**4.29**	**63**	P		Pn	12 46 31.9	+1.2
HOOD	**Mount Hood Mea**	**4.36**	**60**	*e*Pn		Pn	12 46 31.2	-0.5
FL2	**Flat Top 2**	**4.43**	**47**	P		Pn	12 46 33.7	+1.1
VFP	**Flag Point**	**4.47**	**61**	P		Pn	12 46 34.0	+0.7
ESD	**East Dome**	**4.53**	**48**	P		Pn	12 46 35.4	+1.3
NLWA	**Neilton Lookou**	**4.69**	**27**	*e*Pn		Pn	12 46 35.7	-0.5
NLWA				*e*Sn		Sn	12 47 27.5	-3.1
VIPM	**Ingram Point**	**4.78**	**73**	P		Pn	12 46 37.7	+0.3
GLK	**Glacier Lake**	**5.06**	**47**	P		Pn	12 46 42.5	+1.2
LON	**Longmire**	**5.07**	**45**	*e*Pn		Pn	12 46 40.2	-1.3
GL2	**New Goldendale**	**5.17**	**56**	P		Pn	12 46 43.8	+0.9
GNW	**Green Mountain**	**5.21**	**33**	*e*Pn		Pn	12 46 41.6	-1.8
FMW	**Mount Fremont**	**5.26**	**44**	P		Pn	12 46 45.2	+1.1
EBG	**Ellensburg**	**5.83**	**49**	P		Pn	12 46 53.3	+1.3
PGC	**Sidney**	**5.93**	**23**	*e*Pn		Pn	12 46 52.7	-0.6
PGC				*e*Sn		Sn	12 47 58.0	-3.2
HAWA	**Hanford**	**6.16**	**57**	*e*Pn		Pn	12 46 55.7	-0.8
WVOR	**Wild Horse Val**	**6.20**	**95**	*e*Pn		Pn	12 46 56.3	-0.7
BMO	**Blue Mountains**	**7.16**	**74**	*e*Pn		Pn	12 47 10.3	+0.1
CMB	**Columbia Colle**	**7.24**	**134**	*e*Pn		Pn	12 47 16.4	+5.1
NEW	**Newport**	**8.52**	**51**	*e*Pn		Pn	12 47 28.8	0.0
SDCO	**Great Sand Dun**	**17.23**	**101**	*e*P		Pn	12 49 25.9	-0.3
	3.7nm,1.1s							
WMOK	**Wichita Mounta**	**23.44**	**102**	*e*P		P	12 50 36.7	+1.8
	7.3nm,1.3s							

CSEM ***26*** *12:49:28.7±0.9, 4007N×3563E, h20km, MD2.4, Error ellipse: s-maj=19.1km s-min=9.5km az=79.0*

ISK ***26*** *12:49:28.8, 4005N×3560E, h5km, MD2.9*

DDA ***26*** *12:49:33.6, 3999N×3502E, h7km±4km, Md2.4*

ISC 26 12:49:29.8±1.9**, 4012N**±005×**356E**±01**, h11**km±6km**, n7,** σ1§**21**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YOZ	**Yozgat**	**0.54**	**207**	*i* Pg		**Pg**	**12 49 39.0**	**-1.3**
YOZ				*i* Sg		**Sg**	**12 49 46.7**	**-0.7**
CORM	**Corum**	**0.77**	**274**	*e*Pg		**Pg**	**12 49 44.8**	**+0.1**
CORM				*e*Sg		**Sg**	**12 49 56.0**	**+1.2**
CTKT	**Corum**	**0.82**	**308**	*i* P		**Pg**	**12 49 46.7**	**+1.2**
CTKT				*i* S		**Sg**	**12 49 56.2**	**+0.1**
CDAG	**Cicekdag**	**1.09**	**243**	*i* P		**Pg**	**12 49 49.3**	**-1.4**
CDAG				*i* S		**Sb**	**12 50 04.8**	**-0.1**
AVNT	**Avonos**	**1.47**	**204**	*i* P		**Pn**	**12 49 57.2**	**+1.0**
AVNT				*i* S		**Sn**	**12 50 17.7**	**+2.3**
KAMT	**Kaman**	**1.66**	**244**	*e*PN		**Pn**	**12 49 59.8**	**+1.0**
ELDT	**Eldivan**	**1.73**	**283**	*e*P		**Pn**	**12 49 57.5**	**-2.2**
ELDT				*i* S		**Sn**	**12 50 20.5**	**-1.3**

ISCJB ***26*** *13:02:09.2±1.6, 292S±0.1×1789W±0.2, h277km±22km, mb3.6/5, Error ellipse: s-maj=31.5km s-min=13.0km az=19.8*

IDC ***26*** *13:02:11.0±3.1, 2914S×17884W, h287km±30km, mb3.3/4, mb1 3.6/5, mb1mx3.4/14, mbtmp3.4/5, Error ellipse: s-maj=36.3km s-min=22.2km az=161.0*

ISC 26 13:02:14.1±1.3**, 2947S**±009×**1788W**±0.2**, h322**km±17km**, n34,** σ1§**19**/36**, mb3.5/5, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PUZ	**Puketiti**	**8.92**	**195**	*e*PN		**Pn**	**13 04 18.8**	**0.0**
PUZ				*e*SN		**S**	**13 06 01.5**	**+0.9**
MWZ	**Matawai**	**9.35**	**198**	*e*PN		**Pn**	**13 04 24.1**	**0.0**
MWZ				*e*SN		**S**	**13 06 12.2**	**+2.0**
URZ	**Urewera**	**9.39**	**200**	P		**Pn**	**13 04 25.1**	**+0.5**
	1.6nm,0.3s,baz=37,slow=18,SNR=52							
URZ				S		**S**	**13 06 15.2**	**+4.0**
	9.3nm,0.3s,baz=355,slow=23,SNR=11							
URZ	**Urewera**	**9.39**	**200**	*e*PN		**Pn**	**13 04 23.9**	**-0.7**
URZ				*e*SN		**S**	**13 06 14.0**	**+2.7**
KNZ	**Kokohu**	**9.96**	**196**	PN		**Pn**	**13 04 33.0**	**+1.6**
BKZ	**Black Stump Fm**	**10.42**	**201**	*e*PN		**Pn**	**13 04 36.7**	**-0.3**
BKZ				*e*SN		**S**	**13 06 36.2**	**-3.0**
FWVZ	**Far West T-bar**	**10.81**	**204**	*e*PN		**Pn**	**13 04 45.5**	**+3.7**
WNVZ	**Wahianoa**	**10.86**	**204**	*e*PN		**Pn**	**13 04 45.6**	**+3.2**
PXZ	**Pawanui**	**11.12**	**197**	*e*SN		**S**	**13 06 47.9**	**-5.6**
TSZ	**Takapari Road**	**11.40**	**201**	*e*PN		**Pn**	**13 04 46.4**	**-2.4**
TSZ				*e*SN		**S**	**13 06 53.9**	**-5.3**
BFZ	**Birch Farm**	**11.89**	**199**	*e*PN		**Pn**	**13 04 55.3**	**+0.6**
BFZ				*e*SN		**S**	**13 07 06.7**	**-0.6**
MRZ	**Mangatainoka R**	**12.07**	**201**	*e*PN		**Pn**	**13 04 54.6**	**-2.3**
MRZ				*e*SN		**S**	**13 07 07.3**	**-3.9**
MTW	**Mount Morrison**	**12.54**	**200**	*e*PN		**Pn**	**13 05 01.6**	**-1.1**
CAW	**Cannon Point**	**12.63**	**202**	*e*PN		**Pn**	**13 05 03.6**	**-0.1**
TCW	**Tory Channel**	**12.99**	**204**	*e*PN		**Pn**	**13 05 08.0**	**0.0**
TUWZ	**Tuamarina**	**13.30**	**204**	*e*PN		**Pn**	**13 05 10.8**	**-0.9**
NNZ	**Nelson**	**13.33**	**206**	*e*PN		**Pn**	**13 05 11.6**	**-0.4**
QRZ	**Quartz Range**	**13.35**	**210**	*e*PN		**Pn**	**13 05 12.8**	**+0.6**
THZ	**Tophouse**	**13.98**	**206**	*e*PN		**Pn**	**13 05 18.7**	**-1.0**
THZ				*e*SN		**S**	**13 07 52.1**	**+0.2**
KHZ	**Kahutara**	**14.31**	**203**	*e*PN		**Pn**	**13 05 23.4**	**-0.2**
STKA	**Stephens Creek**	**34.01**	**256**	*e*P		**P**	**13 08 31.0**	**+2.5**
	1.8nm,0.9s,mb3.3							
STKA	**Stephens Creek**	**34.01**	**256**	P		**P**	**13 08 29.9**	**+1.3**
	1.3nm,0.6s,mb3.3,baz=82,slow=21,SNR=4.0							
ASAR	**Alice Springs**	**42.46**	**266**	P		**P**	**13 09 38.6**	**+0.1**
	0.7nm,0.6s,mb3.0,baz=100,slow=6.7,SNR=30							
ASAR				ScP		ScP	13 14 49.0	+4.6
	0.4nm,0.7s,baz=119,slow=4.5,SNR=5.9							
WB2	**Warramunga Arr**	**43.35**	**272**	*e*P		**P**	**13 09 44.7**	**-1.0**
WRA	**Warramunga Arr**	**43.36**	**272**	P		**P**	**13 09 45.1**	**-0.6**
	0.4nm,0.3s,mb3.0,baz=109,slow=6.3,SNR=24							
FORT	**Forrest**	**45.60**	**254**	*e*P		**P**	**13 10 04.1**	**+0.9**
	12nm,1.0s,mb4.0							

NVAR	**Mina Array Bea**	**88.04**	**43**	P			**P**	**13 14 29.2**	**+0.9**
	1.4nm,0.7s,mb3.9,baz=223,slow=8.1,SNR=11								
MKAR	**Makanchi Array**	**116.63**	**311**	PKP			PKPdf	13 20 19.3	-0.5
	0.2nm,0.5s,baz=215,slow=1.3,SNR=5.3								
ARCES	**ARCESS Array B**	**137.54**	**348**	PKP			PKPdf	13 21 00.8	+1.9
	5.9nm,0.9s,baz=29,slow=2.8,SNR=4.6								
KAF	**Kangasniemi**	**143.44**	**340**	*e*pkp			PKPdf	13 21 04.9	-4.8
FINES	**FINESS Array B**	**144.03**	**340**	PKP			PKPdf	13 21 08.4	-2.3
	4.0nm,0.4s,baz=65,slow=3.8,SNR=46								
NB2	**NORSAR Subarra**	**147.73**	**351**	PKP			PKPdf	13 21 19.7	+2.6
	comp=Z,1.7nm,0.6s,baz=12,slow=2.9								
NOA	**NORSAR Array B**	**147.75**	**351**	PKPbc			PKPbc	13 21 19.8	-0.5
	comp=Z,2.4nm,0.7s,baz=16,slow=4.2,SNR=11								
AKASG	**Malin Array Be**	**150.14**	**323**	PKPbc			PKPbc	13 21 26.5	-0.2
	comp=Z,2.8nm,0.4s,baz=45,slow=2.8,SNR=15								

IDC ***26*** *13:15:42.0±6.3, 2054S×16884E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.9/14, mbtmp4.1/4, ML3.9/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/28, Error ellipse: s-maj=134.6km s-min=53.8km az=122.0*

ISC 26 13:15:41.9±6.8**, 208S**±02×**1691E**±01**, h12**km±43km**, n12,** σ0§**66**/12**, mb4.1/4, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**2.82**	**242**	*e*P		**Pn**	**13 16 26.6**	**-0.2**
DZM				*e*S		**Sn**	**13 17 00.2**	**-0.6**
DZM	**Mont Dzumac**	**2.82**	**242**	Pn		**Pn**	**13 16 26.5**	**-0.3**
	21nm,0.3s,baz=72,slow=18,SNR=197							
DZM				Sn		**Sn**	**13 17 01.1**	**+0.3**
	27nm,0.3s,baz=85,slow=22,SNR=4.6							
URZ	**Urewera**	**18.77**	**160**	LR		LR	13 26 18.5	
	comp=Z,135nm,19.5s,baz=28,slow=33							
STKA	**Stephens Creek**	**26.97**	**240**	*e*P		**P**	**13 21 25.1**	**+1.5**
	1.6nm,0.6s,mb3.7							
STKA	**Stephens Creek**	**26.97**	**240**	P		**P**	**13 21 24.9**	**+1.3**
	2.0nm,0.6s,mb3.8,baz=82,slow=11,SNR=7.5							
WB2	**Warramunga Arr**	**32.57**	**265**	*e*P		**P**	**13 22 12.8**	**-0.6**
WRA	**Warramunga Arr**	**32.58**	**265**	P		**P**	**13 22 12.8**	**-0.7**
	1.2nm,0.6s,mb4.0,baz=96,slow=8.4,SNR=20							
ASAR	**Alice Springs**	**32.68**	**258**	P		**P**	**13 22 14.3**	**0.0**
	1.2nm,0.4s,mb4.1,baz=88,slow=9.1,SNR=38							
FITZ	**Fitzroy Crossi**	**41.00**	**266**	*e*P		**P**	**13 23 26.1**	**+0.9**
	6.1nm,0.6s,mb4.4							
NWAO	**Narrogin (SRO)**	**47.44**	**244**	LR		LR	13 43 55.1	
	comp=Z,104nm,19.3s,baz=140,slow=36							
VNA3	**Neumayer Olymp**	**88.25**	**180**	*e*		**P**	**13 28 32.5**	**-0.3**
VNA3				*e*			13 28 41.2	
VNA3				*e*			13 28 46.6	
VNA3				*e*			13 28 49.8	
VNA2	**Neumayer--Watz**	**88.54**	**181**	*e*		**P**	**13 28 34.0**	**-0.2**
	baz=190,slow=4.4							
VNA2				*e*			13 28 42.8	
VNA2				*e*			13 28 48.6	
VNA2				*e*			13 28 51.4	

NIED ***26*** *13:43:00, 4630N×15230E, h47km, Mw4.1 Best double couple: M0 1.46000×10^15 NP1:φs 130.00000°, δ 31.00000°, λ -22.00000°. NP2:φs 239.00000°, δ 79.00000°, λ -119.00000°.*

BJI ***26*** *13:43:43.8, 4629N×15248E, h19km, mB4.9, mb4.7, Ms4.3, Ms2.4 0*

NEIC ***26*** *13:43:47.8±0.6, 4612N×15228E, h10km, mb4.6/15, Error ellipse: s-maj=14.0km s-min=9.9km az=164.0*

MOS ***26*** *13:43:52.6±1.2, 4628N×15241E, h54km, mb4.6/15, Error ellipse: s-maj=13.0km s-min=7.5km az=85.5*

ISCJB ***26*** *13:43:53.1±0.9, 4638N±007×15232E±008, h54km±7km, mb4.4/42, MS3.7/7, Error ellipse: s-maj=14.1km s-min=5.1km az=146.4*

IDC ***26*** *13:43:58.0±4.0, 4629N×15230E, h85km±36km, mb3.6/18, mb1 3.8/19, mb1mx3.8/26, mbtmp3.6/19, MS3.3/2, Ms1 3.3/2, ms1mx2.8/29, Error ellipse: s-maj=19.2km s-min=16.7km az=133.0*

ISC 26 13:43:55.2±0.8**, 4635N**±007×**15237E**±008**, h59**km±6km**, h8**km±4.8km**: pP-P, n93,** σ1§**21**/100**, mb4.4**/42**, MS3.7**/7**, 4C-1D, Kuril Islands**

comp=E,225nm,15.5s,MS3.9
HHC LR LR
comp=Z,74nm,13.1s,MS3.5
SONM Songino Array 30.98 290 P **P 13 50 07.7 +1.1**
comp=Z,0.2nm,0.5s,baz=90,slow=9.5,SNR=2.7
SONM LR LR 14 02 48.5
comp=Z,45nm,18.6s,MS3.2,baz=235,slow=36
SML Sawmill 36.61 43 *e*P **P 13 50 56.0 +0.7**
COLA College 36.77 38 *e*P **P 13 50 57.5 +1.0**
comp=Z,8.5nm,1.5s,mb4.3
COLA College 36.77 38 *e*P **P 13 50 57.5 +1.0**
COLA pmax pmax
comp=Z,9.0nm,1.5s,mb4.4
LZH Lanzhou 37.38 272 *e*P **P 13 50 57.0 -5.1**
LZH AP pP 13 51 01.5 -16
LZH XP sP 13 51 04.3 -20
LZH *e*PP PP 13 52 24.3 -3.9
LZH AMB AMB
comp=Z,16nm,1.3s,mb4.7
LZH AMB AMB
comp=Z,77nm,5.2s
LZH LR LR
comp=N,412nm,13.6s
LZH LR LR
comp=Z,573nm,17.4s,MS4.4
CD2 Chengdu 40.33 265 *e*P **P 13 51 22.8 -4.0**
CD2 AP pP 13 51 27.3 -15
CD2 XP sP 13 51 30.3 -18
CD2 PP PP 13 52 59.5 -0.9
CD2 S **S 13 57 29.0 -1.3**
CD2 SS SS 14 00 21.0 -10
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.7
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=N,150nm,14.2s
CD2 LR LR
comp=Z,120nm,16.2s,MS3.8
GYA Guiyang 41.12 257 P **P 13 51 30.5 -2.9**
GYA AP pP 13 51 34.8 -14
GYA XP sP 13 51 37.5 -18
GYA PP PP 13 53 08.0 -1.1
GYA PCP PcP 13 53 31.3 -0.5
GYA SCP ScP 13 57 19.8 +3.5
GYA S **S 13 57 41.3 -0.8**
GYA SS SS 14 00 36.5 -10
GYA SCS ScS 14 01 33.0 +0.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
GYA AMB AMB
comp=Z,70nm,5.2s
GYA LR LR
comp=N,360nm,19.6s,MS4.4
GYA LR LR
comp=E,380nm,18.9s,MS4.4
GYA LR LR
comp=Z,260nm,20.0s,MS4.1
INK Inuvik 42.27 32 *e*P **P 13 51 42.8 +0.6**
comp=Z,64nm,0.6s,mb5.4
INK Inuvik 42.27 32 P **P 13 51 43.3 +1.1**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 42.27 32 P **P 13 51 43.2 +1.1**
comp=Z,2.3nm,0.7s,mb3.9,baz=290,slow=4.8,SNR=11
ZALV Zalesovo Beam 42.43 306 P **P 13 51 42.3 -1.4**
comp=Z,0.7nm,0.4s,mb3.6,baz=66,slow=6.9,SNR=6.2
ZALV LR LR 14 10 04.9
comp=Z,44nm,19.9s,MS3.3,baz=67,slow=37
ZAL Zalesovo 42.44 306 P **P 13 51 42.3 -1.5**
WMQ Urumqi 44.59 291 P **P 13 51 57.5 -3.7**
WMQ AP pP 13 52 02.0 -14
WMQ XP sP 13 52 04.5 -19
WMQ AMB AMB
comp=Z,7.0nm,0.6s,mb4.7
WMQ AMB AMB
comp=Z,122nm,5.0s
WMQ LR LR
comp=N,83nm,25.2s
WMQ LR LR
comp=E,24nm,19.5s
WMQ LR LR
comp=Z,32nm,16.4s
KMI Kunming 44.66 259 P **P 13 51 59.3 -2.7**
KMI AP pP 13 52 02.5 -15
KMI XP sP 13 52 04.0 -20
KMI AMB AMB
comp=Z,3.0nm,0.9s,mb4.1
MKAR Makanchi Array 46.67 297 P **P 13 52 17.2 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 46.67 297 P **P 13 52 17.2 -0.3**
comp=Z,0.8nm,0.4s,mb4.0,baz=63,slow=6.4,SNR=32
MKAR PcP PcP 13 53 50.9 +0.5
comp=Z,0.3nm,0.6s,baz=54,slow=3.7,SNR=4.0
KURK Kurchatov 47.16 304 *e*P **P 13 52 19.8 -1.5**
comp=Z,0.9nm,0.4s,mb4.0
KURK Kurchatov 47.16 304 *e*P **P 13 52 19.8 -1.5**
KURK pmax pmax
comp=Z,1.0nm,0.4s,mb4.1
BRVK Borovoye 50.76 309 *e*P **P 13 52 45.3 -3.5**
comp=Z,2.4nm,0.5s,mb4.4
BRVK Borovoye 50.76 309 *e*P **P 13 52 45.3 -3.5**
BRVK pmax pmax
comp=Z,2.0nm,0.5s,mb4.3
RES Resolute Bay 51.38 18 *e*P **P 13 52 53.2 0.0**
comp=Z,22nm,0.6s,mb5.3
RES Resolute Bay 51.38 18 *e*P **P 13 52 53.2 0.0**
RES pmax pmax
comp=Z,22nm,0.6s,mb5.3
YKA Yellowknife Ar 51.55 36 P **P 13 52 55.0 +0.4**
YKA Yellowknife Ar 51.55 36 P **P 13 52 55.1 +0.5**
comp=Z,0.4nm,0.6s,mb3.5,baz=298,slow=7.3,SNR=6.9
TAPN Taplejung 53.61 273 *e*P **P 13 53 12.0 +1.7**
comp=Z,3.4nm,0.5s,mb4.6
ODAN Odare 54.13 273 *e*P **P 13 53 18.6 +4.4**
comp=Z,4.2nm,0.4s,mb4.7
JIRN Jiri 54.46 274 *e*P **P 13 53 17.6 +1.0**
comp=Z,16nm,0.6s,mb5.1
ARU Arti 54.96 317 *e*P **P 13 53 18.5 -1.2**
comp=Z,2.6nm,0.6s,mb4.4
ARU Arti 54.96 317 *e*P **P 13 53 18.5 -1.2**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
KKN Kakani 55.01 275 *e*P **P 13 53 21.8 +1.3**
comp=Z,7.6nm,0.6s,mb4.9
GKN Gorkha 55.32 276 *e*P **P 13 53 23.7 +1.0**
comp=Z,14nm,0.6s,mb5.2
KOLN Koldanda 56.18 276 *e*P **P 13 53 30.5 +1.6**
comp=Z,8.7nm,0.6s,mb5.0
KEBM Edson Butte 56.75 61 *e*P **P 13 53 34.5 +1.7**
ARCES ARCESS Array B 58.06 341 P **P 13 53 42.2 +0.6**
comp=Z,3.8nm,0.9s,mb4.4,baz=34,slow=8.7,SNR=3.8
NVAR Mina Array Bea 63.08 62 P **P 13 54 16.7 +0.5**
comp=Z,0.2nm,0.5s,mb3.5,baz=307,slow=7.5,SNR=2.1
FINES FINESS Array B 64.18 335 P **P 13 54 22.5 -0.6**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 64.18 335 P **P 13 54 22.6 -0.5**
comp=Z,1.1nm,0.6s,mb4.1,baz=39,slow=6.9,SNR=6.7
WRA Warramunga Arr 67.97 198 P **P 13 54 46.1 -1.6**
comp=Z,0.2nm,0.5s,mb3.4,baz=16,slow=6.7,SNR=4.0
NB2 NORSAR Subarra 68.44 341 P **P 13 54 50.5 +0.2**
comp=Z,3.1nm,0.6s,mb4.5,baz=28,slow=6.2
NB2 NORSAR Subarra 68.44 341 P **P 13 54 50.5 +0.2**
NB2 pmax pmax
comp=Z,3.0nm,0.6s,mb4.5
NOA NORSAR Array B 68.44 341 P **P 13 54 50.7 +0.4**
comp=Z,2.3nm,0.5s,mb4.5,baz=28,slow=6.4,SNR=16
HFS Hagfors 68.65 339 P **P 13 54 51.6 0.0**
comp=Z,3.3nm,0.5s,mb4.6,baz=57,slow=5.3,SNR=8.6
AKASG Malin Array Be 71.59 326 P **P 13 55 09.2 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 71.59 326 P **P 13 55 09.2 -0.6**
comp=Z,1.2nm,0.4s,mb4.2,baz=33,slow=6.2,SNR=8.1
ASAR Alice Springs 71.67 198 P **P 13 55 10.3 -0.1**
comp=Z,0.2nm,0.4s,mb3.4,baz=12,slow=6.2,SNR=8.5
TUC Tucson 71.72 62 *e*P **P 13 55 08.8 -2.1**
comp=Z,3.6nm,0.6s,mb4.5
TUC Tucson 71.72 62 *e*P **P 13 55 08.8 -2.1**
TUC pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
SOC Sochi 72.44 315 *e*P **P 13 55 09.6 -5.4**
SOC *e**PP pP 13 55 22.0 -9.3
SOC pmax pmax
comp=Z,105nm,1.3s
UPC Upice 76.41 333 *e*P **P 13 55 37.2 -0.7**
DPC Dobruska-Polom 76.45 333 *e*P **P 13 55 39.2 +1.1**
EKA Eskdalemuir Ar 76.60 346 P **P 13 55 39.5 +0.5**
comp=Z,1.2nm,0.4s,mb4.2,baz=15,slow=4.9,SNR=9.6
CLL Collm 76.61 335⇑*i*P **P 13 55 39.3 +0.3**
comp=Z,7.0nm,0.7s,mb4.7
CLL Collm 76.61 335⇑*i*P **P 13 55 39.3 +0.3**
CLL pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
CLL Collm 76.61 335⇑*i*P **P 13 55 39.3 +0.3**
comp=Z,7.0nm,0.7s,mb4.7
MLR Muntele Rosu 77.09 324 P **P 13 55 44.0 +2.2**
comp=Z,4.3nm,0.6s,mb4.5,baz=349,slow=5.2,SNR=5.4
PRU Pruhonice 77.32 334 *e*P **P 13 55 44.1 +1.1**
TXAR Lajitas Array 78.14 60 P **P 13 55 48.7 +0.7**
TXAR Lajitas Array 78.14 60 P **P 13 55 48.7 +0.7**
comp=Z,0.6nm,0.5s,mb3.8,baz=295,slow=3.8,SNR=10
KHC Kasperske Hory 78.37 334 *e*P **P 13 55 49.9 +1.0**
KHC e pP 13 56 06.5 +1.1
KHC Kasperske Hory 78.37 334 *e*P **P 13 55 49.9 +1.0**
KHC x x 13 56 06.5
GERES GERESS Array B 78.59 334 P **P 13 55 50.8 +0.7**
comp=Z,0.8nm,0.3s,mb4.1,baz=34,slow=10.0,SNR=6.4
SSPA Standing Stone 82.48 36 *e*P **P 13 56 09.0 -2.1**
comp=Z,35nm,1.2s,mb5.2
LOR Lormes 82.77 339 *e*P **P 13 56 12.6 +0.1**
comp=Z,12nm,0.8s,mb4.7
LOR Lormes 82.77 339 *e*P **P 13 56 12.6 +0.1**
comp=Z,5.8nm,0.8s,mb4.7
LOR Lormes 82.77 339 *e*P **P 13 56 12.6 +0.1**
LOR pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
SSF Saint Saulge 83.05 339 *e*P **P 13 56 13.6 -0.3**
AVF Avril sur Loir 83.34 339 *e*P **P 13 56 15.6 +0.2**
comp=Z,3.3nm,0.6s,mb4.2
AVF Avril sur Loir 83.34 339 *e*P **P 13 56 15.6 +0.2**
comp=Z,1.6nm,0.6s,mb4.2
AVF Avril sur Loir 83.34 339 *e*P **P 13 56 15.6 +0.2**
AVF pmax pmax
comp=Z,2.0nm,0.6s,mb4.3
LPG La Plagne 83.65 336 *e*P **P 13 56 16.4 -0.6**
MBDF Montbardon 84.35 336 *e*P **P 13 56 20.8 +0.2**
comp=Z,8.4nm,0.7s,mb4.7
MBDF Montbardon 84.35 336 *e*P **P 13 56 20.8 +0.2**
comp=Z,4.2nm,0.7s,mb4.7
MBDF Montbardon 84.35 336 *e*P **P 13 56 20.8 +0.2**
MBDF pmax pmax
comp=Z,4.0nm,0.7s,mb4.7

IDC 26 13:47:29.1±2.1, 838S×11489E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.4/16, mbtmp3.4/4, MS2.9/1, Ms1 2.9/1, ms1mx2.6/13, Error ellipse: s-maj=129.4km s-min=25.6km az=50.0, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.24**	**134**	LR	LR	13 56 03.5	
	comp=Z,50nm,19.3s,baz=293,slow=36						
WRA	**Warramunga Arr**	**22.06**	**123**	P	P	13 52 24.9	-0.8
	0.3nm,0.3s,baz=299,slow=12,SNR=14						
WB2	**Warramunga Arr**	**22.07**	**123**	*e*P	P	13 52 27.4	+1.6
ASAR	**Alice Springs**	**23.72**	**132**	P	P	13 52 43.1	0.0
	0.4nm,0.4s,baz=306,slow=8.9,SNR=28						
STKA	**Stephens Creek**	**34.10**	**137**	P	P	13 54 15.9	+0.4
	0.5nm,0.3s,baz=326,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**62.13**	**335**	P	P	13 57 52.3	+0.3
	0.1nm,0.5s,baz=154,slow=8.0,SNR=3.5						

*IDC **26** 13:51:32.8±2.8, 2177S×16882E, h36km±6km, mb3.9/4, mb1 4.1/5, mb1mx3.8/15, mbtmp3.9/5, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/19, Error ellipse: s-maj=111.8km s-min=24.9km az=155.0*
*SZGRF **26** 13:51:32.7, 2161S×16930E, h33km, Southeast of Loyalty Islands*
ISC 26 13:51:32.1±5.1, 218S±07×1689E±03, h41km±33km, h38km±1.8km: pP-P, n20, σ0s67/8, mb4.1/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.33**	**263**	*e*P	**Pn**	**13 52 07.6**	**-0.4**
DZM				*e*S	**Sn**	**13 52 35.8**	**+0.3**
DZM	**Mont Dzumac**	**2.33**	**263**	Pn	**Pn**	**13 52 08.3**	**+0.3**
	14nm,0.3s,baz=61,slow=17,SNR=192						
DZM				Sn	**Sn**	**13 52 35.4**	**-0.1**
	99nm,0.3s,baz=83,slow=23,SNR=12						
CTA	**Charters Tower**	**21.26**	**270**	LR	LR	14 03 01.7	
	comp=Z,58nm,21.2s,baz=231,slow=33						
ASAR	**Alice Springs**	**32.32**	**260**	P	P	**13 57 58.3**	**+0.7**
	4.6nm,0.6s,mb4.5,baz=77,slow=8.4,SNR=103						
ASAR				pP	pP	13 58 08.2	-0.5
	2.5nm,0.6s,baz=84,slow=8.8,SNR=11						
WRA	**Warramunga Arr**	**32.35**	**267**	P	P	**13 57 57.1**	**-0.7**
	0.6nm,0.6s,mb3.6,baz=101,slow=7.6,SNR=9.0						
WRA				pP	pP	13 58 06.8	-2.2
	0.9nm,0.9s,baz=104,slow=7.2,SNR=4.5						
FITZ	**Fitzroy Crossi**	**40.77**	**267**	P	P	**13 59 09.3**	**-0.4**
	3.5nm,0.8s,mb4.0,baz=137,slow=11,SNR=5.7						
FITZ				pP	pP	13 59 20.5	-0.5
	4.4nm,0.6s,baz=143,slow=9.6,SNR=6.4						
SONM	**Songino Array**	**89.08**	**323**	P	P	**14 04 23.1**	**+0.2**
	0.9nm,0.8s,mb4.1,baz=132,slow=3.4,SNR=7.7						
BRG	**Berggiesshubel**	**145.01**	**332**	*e*PKPbc	PKPbc	14 11 05.2	+1.1
BRG	**Berggiesshubel**	**145.01**	**332**	*e*(P)	PKPbc	14 11 05.1	+1.0
	5.0nm,0.8s						
FBE	**Freiberg**	**145.22**	**333**	*e*PKPbc	PKPbc	14 11 06.1	+1.3
TANN	**Tannenbergstha**	**145.98**	**333**	*e*PKPbc	PKPbc	14 11 08.4	+1.2
WERD	**Werda**	**146.02**	**333**	*e*PKPbc	PKPbc	14 11 08.6	+1.3
GUNZ	**Gunzen**	**146.07**	**333**	*e*PKPbc	PKPbc	14 11 08.4	+0.9
WERN	**Wernitzgruen**	**146.11**	**333**	*e*PKPbc	PKPbc	14 11 08.9	+1.3
MOX	**Moxa**	**146.16**	**334**	*e*PKP	PKPdf	14 11 09.3	+2.6
MOX	**Moxa**	**146.16**	**334**	*e*PKPbc	PKPbc	14 11 09.1	+1.4
GEC2	**GERESS Array S**	**146.57**	**330**	*e*PKPbc	PKPbc	14 11 10.2	+1.2
GERES	**GERESS Array B**	**146.57**	**330**	PKPbc	PKPbc	14 11 10.6	+1.5
	3.4nm,0.7s,baz=45,slow=4.0,SNR=12						
GERES				pPKPbc	pPKPbc	14 11 21.2	-0.5
	2.0nm,0.7s,baz=48,slow=2.0,SNR=4.9						
ROTZ	**Rotzenmuhle**	**146.57**	**332**	*e*PKPbc	PKPbc	14 11 10.7	+1.7
WET	**Wettzell**	**146.74**	**331**	*e*PKPbc	PKPbc	14 11 10.9	+1.4

*NAO **26** 13:55:13.8, 3784N×1788E, h33km, mb3.5*
*IDC **26** 13:55:24.2±0.9, 3943N×1703E, h0km, mb3.6/9, mb1 3.7/14, mb1mx3.7/27, mbtmp3.7/14, ML3.8/5, MS3.0/4, Ms1 3.0/4, ms1mx2.5/32, Error ellipse: s-maj=17.1km s-min=11.4km az=110.0*
*NEIC **26** 13:55:25.0, 3926N×1704E, h10km, ML4.1(ROM), ML3.9(PDG), After ROM.*
*CSEM **26** 13:55:25.9±0.1, 3916N×1703E, h12km, ML4.5, Error ellipse: s-maj=1.7km s-min=1.1km az=143.0*
*PDG **26** 13:55:25.1±0.6, 3929N×1701E, h13km±1km, ML3.9/10, Error ellipse: s-maj=0.9km s-min=1.6km az=0.0*
*ISCJB **26** 13:55:25.7±0.3, 3927N±002×1704E±002, h23km±4km, mb3.6/7, MS3.1/2, Error ellipse: s-maj=2.9km s-min=2.5km az=139.2*
*ROM **26** 13:55:26.4±0.1, 3928N×1696E, h23km±2km, Ml4.0/40, Error ellipse: s-maj=2.8km s-min=2.2km az=132.0*
*THE **26** 13:55:27.9, 3938N×1704E, h20km, ML4.5*
*BEO **26** 13:55:28.9±1.2, 3965N×1695E, ML4.2/4*
ISC 26 13:55:25.5±0.4, 3928N±001×1702E±002, h9km±3km, n152, σ1s13/187, mb3.6/7, MS3.1/2, 18C-9D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIP	**Timpagrande**	**0.23**	**243**	Pg	**Pg**	**13 55 31.4**	**+1.3**
TIP				Sg	**Sg**	**13 55 35.3**	**+2.0**
	8μm,0.3s						
SERS	**Sersale**	**0.36**	**227**⇑	*e*Pg	**Pg**	**13 55 33.5**	**+1.0**
SERS				Sg	**Sg**	**13 55 39.1**	**+1.9**
	13μm,0.6s						
CARO	**Carolei**	**0.63**	**268**	Pg	**Pg**	**13 55 37.1**	**-0.4**
CARO				Sg	**Sg**	**13 55 47.3**	**+1.6**
	13μm,0.9s						
TDS	**Terranova Siba**	**0.65**	**305**⇓	*i*Pg	**Pg**	**13 55 37.0**	**-1.0**
GRI	**Girifalco**	**0.66**	**226**	Pg	**Pg**	**13 55 38.2**	**+0.1**
GRI				Sg	**Sg**	**13 55 49.8**	**+3.1**
	8μm,0.5s						
ORI	**Oriolo Calabro**	**0.90**	**331**	Pg	**Pg**	**13 55 41.7**	**-1.0**
	8μm,0.5s						
PLAC	**Placanica**	**0.95**	**209**	Pg	**Pg**	**13 55 43.9**	**+0.2**
	4μm,1.3s						
JOPP	**Joppolo**	**1.11**	**233**	Pg	**Pg**	**13 55 46.2**	**-0.7**
	3μm,0.7s						
CRAC	**Craco**	**1.17**	**337**	Pg	**Pg**	**13 55 48.2**	**+0.2**
	20μm,1.5s						
SCHR	**S. Chirico Rap**	**1.17**	**322**	Pg	**Pg**	**13 55 49.3**	**+1.3**
SIRI	**Monte Sirino -**	**1.27**	**316**	Pg	**Pg**	**13 55 50.2**	**+0.4**
	4μm,1.1s						
LCI	**Lecce**	**1.34**	**38**	Pg	**Pg**	**13 55 49.4**	**-1.9**
	1μm,0.9s						
SCTE	**Santa Cesarea**	**1.36**	**54**	Pg	**Pg**	**13 55 50.3**	**-1.4**
	4μm,0.8s						
MTSN	**Montesano sull**	**1.39**	**315**	Pg	**Pg**	**13 55 51.5**	**-0.6**
	3μm,0.8s						
MIGL	**Miglionico**	**1.39**	**341**	Pg	**Pg**	**13 55 50.6**	**-1.6**
	15μm,1.2s						
MCEL	**Monticello**	**1.40**	**318**	Pg	**Pg**	**13 55 51.8**	**-0.6**
	8μm,1.8s						
MGR	**Morigerati**	**1.42**	**307**	Pg	**Pg**	**13 55 51.2**	**-1.5**
	4μm,1.0s						
SOI	**Samo**	**1.43**	**212**	Pg	**Pg**	**13 55 51.8**	**-1.0**
SCLL	**Scilla**	**1.45**	**225**	Pg	**Pn**	**13 55 51.4**	**-0.5**
	451nm,0.6s						
BULG	**Bulgheria - Ca**	**1.50**	**303**	Pg	**Pn**	**13 55 52.0**	**-0.6**
NOCI	**Noci**	**1.50**	**1**	Pg	**Pn**	**13 55 51.7**	**-1.0**
	2μm,0.5s						
MPAZ	**Palizzi**	**1.55**	**211**	Pg	**Pn**	**13 55 53.2**	**-0.1**
	2μm,0.7s						
MSRU	**Castanea**	**1.56**	**230**	Pg	**Pn**	**13 55 52.5**	**-0.9**
	3μm,0.9s						
SG1	**Sgolgore (BA)**	**1.58**	**350**	*e*Pn	**Pn**	**13 55 53.4**	**-0.3**
MTTG	**Motta San Giov**	**1.65**	**220**	Pg	**Pn**	**13 55 54.9**	**+0.3**
	9μm,1.6s						
AMUR	**Altamura**	**1.65**	**349**	Pg	**Pn**	**13 55 54.2**	**-0.5**
	2μm,0.7s						
CMPR	**Campora**	**1.68**	**308**	Pg	**Pn**	**13 55 54.4**	**-0.7**
	745nm,0.6s						
CDRU	**Civita di Ruta**	**1.79**	**313**	Pg	**Pn**	**13 55 55.9**	**-0.7**
	1μm,1.1s						
LLI	**Lipari**	**1.82**	**243**	Pg	**Pn**	**13 55 56.7**	**-0.3**
	8μm,0.6s						
VPL	**Vulcano Piano**	**1.83**	**241**	Pg	**Pn**	**13 55 56.3**	**-0.8**
	3μm,0.7s						
SGO	**Sicignano**	**1.84**	**315**	Pg	**Pn**	**13 55 57.4**	**+0.2**
PALZ	**Palazzo San Ge**	**1.85**	**334**	Pg	**Pn**	**13 55 57.7**	**+0.3**
	6μm,1.1s						
SLNA	**Salina**	**1.85**	**248**	Pg	**Pn**	**13 55 57.0**	**-0.5**
	358nm,0.3s						
MRLC	**Muro Lucano**	**1.89**	**322**	Pg	**Pb**	**13 55 58.9**	**-1.2**
	2μm,1.7s						
MMME	**Mongiuffi-Meli**	**1.93**	**226**	Pg	**Pn**	**13 55 58.4**	**-0.1**
	1μm,1.0s						
VULT	**Monte Vulture**	**1.99**	**328**	Pg	**Pn**	**13 55 58.8**	**-0.5**
IFIL	**Filicudi I Eol**	**2.05**	**250**	Pg	**Pn**	**13 55 59.2**	**-0.9**
	4μm,0.8s						
MCRV	**Calabrutti - M**	**2.07**	**317**	Pg	**Pn**	**13 56 01.2**	**+0.8**
	649nm,0.9s						
SNAL	**S. Angelo Dei**	**2.15**	**320**	Pn	**Pn**	**13 56 02.8**	**+1.2**
KEK	**Kerkira**	**2.19**	**78**	*e*P	**Pn**	**13 56 01.8**	**-0.3**
KEK	**Kerkira**	**2.19**	**78**	Pg	**Pn**	**13 56 02.3**	**+0.2**
	1μm,1.0s						
CAFE	**Carife**	**2.22**	**322**	Pn	**Pn**	**13 56 03.6**	**+1.1**
SGTA	**Sant Agata di**	**2.24**	**326**	Pn	**Pn**	**13 56 04.5**	**+1.7**
FG5	**Orsara di Pugl**	**2.41**	**327**	Pn	**Pn**	**13 56 06.2**	**+1.1**
	742nm,1.0s						
MRB1	**Monte Rocchett**	**2.42**	**320**	Pn	**Pn**	**13 56 05.9**	**+0.7**
AGST	**Augusta-Monte**	**2.47**	**216**	Pn	**Pn**	**13 56 03.7**	**-2.2**
	74nm,0.2s						
ECNV	**Catenanuova**	**2.48**	**228**	Pg	**Pn**	**13 56 06.5**	**+0.5**
	3μm,1.4s						
HAGA	**Augusta**	**2.48**	**217**	Pg	**Pn**	**13 56 03.9**	**-2.1**
	374nm,0.9s						
GALF	**Gagliano Caste**	**2.49**	**232**	Pn	**Pn**	**13 56 07.6**	**+1.4**
	2μm,0.8s						
FGMS	**Monte Sant'Ang**	**2.56**	**342**	Pn	**Pn**	**13 56 06.9**	**-0.2**
	387nm,0.6s						
MSAG	**Monte S. Angel**	**2.57**	**341**	Pn	**Pn**	**13 56 07.5**	**+0.2**
IGT	**Igoumenitsa**	**2.58**	**83**	*e*Pn	**Pn**	**13 56 07.1**	**-0.2**
SSY	**Sortino**	**2.62**	**216**	Pn	**Pn**	**13 56 06.1**	**-1.9**
	531nm,0.5s						
SGRT	**San Giovanni R**	**2.66**	**339**	Pn	**Pn**	**13 56 08.7**	**+0.2**
GIB	**Gibilmanna**	**2.68**	**242**	Pn	**Pn**	**13 56 08.1**	**-0.7**
	1μm,1.5s						
CSLB	**Castelbuono**	**2.68**	**241**	Pn	**Pn**	**13 56 08.9**	**0.0**
	56nm,0.3s						
VAE	**Valguarnera**	**2.73**	**230**	Pn	**Pn**	**13 56 11.2**	**+1.7**
	15nm,0.3s,baz=39,slow=0.4,SNR=9.9						
VAE				Pg	**Pg**	**13 56 15.6**	**-2.2**
	15nm,0.3s,baz=87,slow=3.6,SNR=12						
VAE				Lg		13 56 57.9	
	8.3nm,0.3s,baz=84,slow=22,SNR=3.1						
VAE	**Valguarnera**	**2.73**	**230**	Pg	**Pg**	**13 56 15.6**	**-2.2**
PZI	**Palazzolo**	**2.76**	**217**	Pn	**Pn**	**13 56 08.3**	**-1.6**
	9.0nm,0.1s						
HAVL	**Avola**	**2.76**	**213**	Pn	**Pn**	**13 56 07.9**	**-2.0**
	727nm,0.3s						
HVZN	**Vizzini**	**2.78**	**222**	Pn	**Pn**	**13 56 09.1**	**-1.1**
	2μm,1.0s						
PTRJ	**Pietraroja**	**2.82**	**318**	Pn	**Pn**	**13 56 12.1**	**+1.3**
FG2	**Serracapriola**	**2.89**	**331**	Pn	**Pn**	**13 56 12.1**	**+0.4**
	3μm,1.3s						
SGG	**Gregorio Mates**	**2.92**	**317**	Pn	**Pn**	**13 56 13.8**	**+1.7**
	439nm,1.2s						
HMDC	**Modica**	**2.92**	**218**	Pn	**Pn**	**13 56 10.7**	**-1.4**
	254nm,0.5s						
RAFF	**Raffo Rosso**	**2.94**	**226**	Pn	**Pn**	**13 56 11.8**	**-0.5**
	508nm,1.1s						
JAN	**Janina**	**2.98**	**82**	*e*P	**Pn**	**13 56 14.2**	**+1.2**
VLS	**Valsamata**	**3.00**	**110**	*e*P	**Pn**	**13 56 12.4**	**-0.8**
USI	**Ustica**	**3.05**	**260**	Pn	**Pn**	**13 56 13.1**	**-0.8**
	54nm,0.3s						
ULC	**Ulcinj**	**3.17**	**32**⇑	*i*Pn	**Pn**	**13 56 15.8**	**+0.3**
ULC				*e*Sn	**Sn**	**13 56 55.2**	**+1.7**
KFL	**Anninata**	**3.17**	**111**	*e*Pn	**Pn**	**13 56 15.1**	**-0.4**
CORL	**Corleone**	**3.23**	**246**	Pn	**Pn**	**13 56 17.6**	**+1.2**
	343nm,1.2s						
FAVR	**Favara**	**3.32**	**234**	Pn	**Pn**	**13 56 19.5**	**+1.9**
BUM	**Brajici-Budva**	**3.33**	**25**⇑	*i*Pn	**Pn**	**13 56 17.6**	**-0.2**
BUM				*e*Sn	**Sn**	**13 56 59.4**	**+1.9**
HCY	**Herceg Novi**	**3.35**	**19**⇑	*i*Pn	**Pn**	**13 56 17.8**	**-0.3**
HCY				*e*Sn	**Sn**	**13 56 59.3**	**+1.3**
OHR	**Ohrid**	**3.42**	**57**	*e*Pn	**Pn**	**13 56 19.1**	**+0.2**
OHR	**Ohrid**	**3.42**	**57**	*e*Pn	**Pn**	**13 56 29.5**	**-1.5**
PDG	**Podgorica**	**3.57**	**28**⇑	*i*Pn	**Pn**	**13 56 20.2**	**-0.9**
PDG				*e*Sn	**Sn**	**13 57 04.5**	**+1.1**
TTG	**Podgorica**	**3.57**	**28**⇑	*i*Pn	**Pn**	**13 56 20.2**	**-0.9**
TTG				*e*Sn	**Sn**	**13 57 04.5**	**+1.1**
FNA	**Florina**	**3.66**	**64**	*e*Pn	**Pn**	**13 56 22.0**	**-0.3**
FNA				*e*Sn	**Sn**	**13 57 04.3**	**-1.4**
RLS	**Riolos of Patr**	**3.69**	**108**	*e*P	**Pn**	**13 56 25.8**	**+3.2**
BIA	**Bitola**	**3.72**	**61**	*e*Pn	**Pb**	**13 56 31.0**	**-0.4**
EVR	**Evrytania**	**3.74**	**94**	*e*P	**Pn**	**13 56 25.7**	**+2.3**
BRY	**Bratogost**	**3.79**	**17**⇑	*i*Pn	**Pn**	**13 56 24.1**	**0.0**
BRY				*e*Sn	**Sn**	**13 57 09.6**	**+0.8**
KZN	**Kozani**	**3.80**	**73**	*e*P	**Pb**	**13 56 30.2**	**-2.5**
NKY	**Niksic**	**3.83**	**22**⇑	*i*Pn	**Pn**	**13 56 24.2**	**-0.4**
NKY				*e*Sn	**Sn**	**13 57 10.8**	**+1.0**
THL	**Klokotos Trika**	**3.88**	**84**	*e*P	**Pn**	**13 56 26.7**	**+1.5**
PVY	**Plav**	**3.99**	**33**⇑	*i*Pn	**Pn**	**13 56 27.1**	**+0.3**
PVY				*e*Sn	**Sn**	**13 57 14.6**	**+0.8**
AQU	**L'Aquila**	**4.12**	**319**⇓	*i*P	**Pn**	**13 56 48.7**	**+4.3**
AGG	**Agios Georgios**	**4.13**	**92**	*e*Pn	**Pn**	**13 56 30.5**	**+1.7**
AGG				*e*Sn	**Sn**	**13 57 17.9**	**+

KNT	**Kendrikon**	**4.87**	**65**	*e*Pn		**Pn**	**13 56 38.3**	**-0.7**
BBLS	**Bajina Basta -**	**4.92**	**21**	⇓*i*Pn		**Pn**	**13 56 39.7**	**+0.1**
BBLS				*e*Sn		**Sn**	**13 57 32.8**	**-3.8**
BARS	**Barje**	**5.07**	**44**	*e*Pn		**Pn**	**13 56 43.2**	**+1.6**
BARS				*e*Sn		**Sn**	**13 57 38.0**	**-2.2**
BARS	**Barje**	**5.07**	**44**	Pn		**Pn**	**13 56 43.4**	**+1.8**
DID	**Didima**	**5.19**	**108**	*e*Pn		**Pn**	**13 56 43.9**	**+0.6**
DID				*e*Sn		**Sn**	**13 57 42.4**	**-1.0**
DIVS	**Divcibare**	**5.30**	**24**	*e*Pn		**Pn**	**13 56 43.1**	**-1.7**
DIVS	**Divcibare**	**5.30**	**24**	⇓*i*Pn		**Pn**	**13 56 43.5**	**-1.3**
DIVS				*e*Sn		**Sn**	**13 57 41.1**	**-4.9**
AOS	**Alonnisos**	**5.33**	**89**	*e*Pn		**Pn**	**13 56 45.6**	**+0.5**
VLI	**Veliai**	**5.33**	**117**	*e*P		**Pn**	**13 56 46.5**	**+1.3**
GRUS	**Gruza**	**5.37**	**30**	⇓*i*Pn		**Pn**	**13 56 46.1**	**+0.3**
GRUS				*e*Sn		**Sn**	**13 57 42.8**	**-4.9**
KYTH	**Kithira**	**5.63**	**120**	*e*P		**Pn**	**13 56 50.0**	**+0.7**
VTS	**Vitosha**	**5.73**	**53**	⇓*i*P		**Pn**	**13 56 54.1**	**+3.4**
FGSL	**Fruska Gora**	**6.22**	**18**	*e*Pn		**Pn**	**13 56 58.5**	**+1.0**
BOJS	**Bojanci**	**6.35**	**349**	*i*Pn		**Pn**	**13 56 59.7**	**+0.5**
BOJS				*i*Sn		**Sn**	**13 58 09.7**	**-2.3**
VISS	**Visnje**	**6.71**	**347**	*i*Pn		**Pn**	**13 57 03.7**	**-0.5**
VISS				*e*Sn		**Sn**	**13 58 16.8**	**-4.0**
LJU	**Ljubljana**	**7.00**	**346**	*i*Pn		**Pn**	**13 57 08.0**	**-0.2**
LJU				*i*Sn		**Sn**	**13 58 21.2**	**-6.7**
APE	**Apeiranthos**	**7.06**	**106**	*e*P		**Pn**	**13 57 08.6**	**-0.3**
APE	**Apeiranthos**	**7.06**	**106**	⇓*i*P		**Pn**	**13 57 07.9**	**-1.0**
KEST	**Kesra**	**7.06**	**242**	Pn		**Pn**	**13 57 09.9**	**+1.0**
	0.1nm,0.3s,baz=321,slow=5.1,SNR=2.9							
VOY	**Vojsko**	**7.13**	**342**	*e*Pn		**Pn**	**13 57 10.2**	**+0.3**
VOY				*e*Sn		**Sn**	**13 58 23.8**	**-7.2**
BZS	**Buzias**	**7.18**	**27**	⇑*i*P		**Pn**	**13 57 13.1**	**+2.5**
IDI	**Anoyia**	**7.43**	**120**	Pn		**Pn**	**13 57 14.7**	**+0.6**
	4.0nm,0.3s,baz=334,slow=11,SNR=18							
IDI				Sn		**Sn**	**13 58 36.7**	**-1.8**
	3.1nm,0.3s,baz=310,slow=22,SNR=8.6							
GZR	**Gura Zlata**	**7.44**	**33**	⇑*i*P		**Pn**	**13 57 18.8**	**+4.6**
OBKA	**Obir**	**7.45**	**347**	⇑*i*Pn		**Pn**	**13 57 13.7**	**-0.5**
OBKA				⇑*i*Sn		**Sn**	**13 58 28.8**	**-10**
MOA	**Molln**	**8.79**	**348**	⇓*i*Pn		**Pn**	**13 57 32.6**	**-0.1**
MLR	**Muntele Rosu**	**9.05**	**44**	Pn		**Pn**	**13 57 43.8**	**+7.5**
	0.4nm,0.3s,baz=109,slow=10,SNR=3.8							
MLR	**Muntele Rosu**	**9.05**	**44**	⇓*i*P		**Pn**	**13 57 43.8**	**+7.5**
MBDF	**Montbardon**	**9.37**	**309**	*e*P		**Pn**	**13 57 41.5**	**+0.9**
	28nm,1.3s							
VRI	**Vrincioaia**	**9.72**	**44**	⇑*i*P		**Pn**	**13 57 46.2**	**+0.8**
LPG	**La Plagne**	**9.81**	**313**	*e*P		**Pn**	**13 57 47.0**	**+0.3**
	14nm,0.9s							
LPG	**La Plagne**	**9.81**	**313**	*e*P		**Pn**	**13 57 47.0**	**+0.3**
	6.9nm,0.9s							
LPL	**La Plagne**	**9.83**	**313**	*e*P		**Pn**	**13 57 47.0**	**0.0**
GERES	**GERESS Array B**	**9.85**	**347**	Pn		**Pn**	**13 57 46.2**	**-1.1**
GERES				Sn		**Sn**	**13 59 33.4**	**-4.5**
GERES	**GERESS Array B**	**9.85**	**347**	Pn		**Pn**	**13 57 46.2**	**-1.1**
	0.2nm,0.3s,baz=161,slow=13,SNR=10							
GERES				Sn		**Sn**	**13 59 33.4**	**-4.5**
	0.5nm,0.3s,baz=164,slow=22,SNR=4.2							
GERES				LR		LR	14 01 43.2	
	comp=Z,31nm,21.5s,baz=152,slow=39							
VRAC	**Vranov**	**10.03**	**358**	LR		LR	14 01 35.5	
	comp=Z,73nm,21.0s,baz=209,slow=38							
KHC	**Kasperske Hory**	**10.15**	**347**	*e*P		**Pn**	**13 57 47.5**	**-3.8**
KHC				x		x	13 57 53.5	
KHC				x		x	13 58 11.0	
KHC				*ex*		x	13 59 30.5	
ANTO	**Ankara**	**12.19**	**82**	⇑*i*P		**Pn**	**13 58 26.9**	**+7.7**
MMAI	**Mount Meron Ar**	**16.10**	**107**	Pn		**Pn**	**13 59 10.9**	**-1.1**
	2.1nm,0.3s,baz=268,slow=10,SNR=3.5							
EKA	**Eskdalemuir Ar**	**20.97**	**327**	P		**P**	**14 00 07.9**	**-0.8**
	1.0nm,0.7s,baz=120,slow=15,SNR=4.2							
HFS	**Hagfors**	**20.98**	**355**	P		**P**	**14 00 07.0**	**-1.7**
	1.7nm,0.6s,baz=242,slow=9.2,SNR=3.9							
HFS				LR		LR	14 08 15.9	
	comp=Z,92nm,18.8s,MS3.2,baz=17,slow=37							
NB2	**NORSAR Subarra**	**22.08**	**352**	P		**P**	**14 00 20.5**	**0.0**
	comp=Z,1.8nm,0.8s,mb3.5,baz=167,slow=10							
NOA	**NORSAR Array B**	**22.08**	**352**	P		**P**	**14 00 19.8**	**-0.8**
	comp=Z,1.3nm,0.7s,mb3.5,baz=173,slow=12,SNR=5.3							
FINES	**FINESS Array B**	**22.88**	**11**	P		**P**	**14 00 28.2**	**-0.9**
	comp=Z,1.3nm,0.9s,mb3.4,baz=47,slow=8.4,SNR=2.9							
TORD	**Torodi Ar. Bea**	**29.35**	**212**	P		**P**	**14 01 28.6**	**-0.1**
	comp=Z,0.6nm,0.8s,mb3.4,baz=22,slow=8.8,SNR=3.6							
TORD				LR		LR	14 14 53.7	
	comp=Z,46nm,19.9s,MS3.1,baz=270,slow=40							
MKAR	**Makanchi Array**	**47.05**	**58**	P		**P**	**14 03 57.2**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.7,baz=281,slow=6.9,SNR=10							
SCHQ	**Schefferville**	**55.78**	**316**	P		**P**	**14 05 02.7**	**+0.2**
	comp=Z,0.6nm,0.3s,mb4.1,baz=59,slow=5.9,SNR=5.0							
SONM	**Songino Array**	**61.85**	**50**	P		**P**	**14 05 45.3**	**+0.4**
	comp=Z,0.8nm,0.9s,mb3.8,baz=286,slow=6.8,SNR=4.6							
YKA	**Yellowknife Ar**	**71.39**	**339**	P		**P**	**14 06 43.7**	**-1.8**
	comp=Z,0.2nm,0.4s,mb3.4,baz=36,slow=5.4,SNR=5.8							

*ISCJB **26** 14:08:24.9±0.6, 549S±0.1×1292W±0.2, h10km, mb4.2/9, MS3.9/5, Error ellipse: s-maj=20.6km s-min=14.4km az=45.0*

*IDC **26** 14:08:25.6±0.8, 5490S×129.19W, h0km, mb4.0/7, mb1 4.2/7, mb1mx4.1/15, mbtmp4.0/7, MS3.9/5, Ms1 3.9/5, ms1mx3.5/20, Error ellipse: s-maj=33.4km s-min=20.6km az=151.0*

*NEIC **26** 14:08:26.7±0.5, 5489S×129.12W, h10km, mb4.6/2, Error ellipse: s-maj=17.3km s-min=12.9km az=136.0*

ISC 26 14:08:26.8±0.6, 549S±01×1292W±02, h10km, n25, σ1§07/12, mb4.2/9, MS3.9/5, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTCN	**Pitcairn Islan**	**29.77**	**358**	*e*P		**P**		**14 14 32.4**	**-0.9**
SBA	**Scott Base**	**31.67**	**201**	*e*P		**P**		**14 14 47.6**	**-2.0**
RKT	**Rikitea**	**32.01**	**350**	*e*T				14 48 37.1	
	16nm,0.3s								
VNDA	**Vanda**	**32.69**	**202**	P		**P**		**14 15 00.0**	**+1.5**
	1.1nm,0.8s,mb3.8,baz=77,slow=7.8,SNR=5.0								
VNDA				LR		LR		14 26 56.1	
	comp=Z,86nm,18.5s,MS3.5,baz=118,slow=34								
TBI	**Tubuai**	**34.93**	**326**	*e*T				14 52 16.4	
	74nm,0.4s								
QSPA	**South Pole Qui**	**35.30**	**180**	*e*P		**P**		**14 15 21.7**	**+0.5**
	7.4nm,1.1s,mb4.5								
QSPA	**South Pole Qui**	**35.30**	**180**	P		**P**		**14 15 21.5**	**+0.3**
	4.1nm,1.0s,mb4.3,baz=90,slow=4.1,SNR=7.2								
RPZ	**Rata Peaks**	**39.37**	**261**	LR		LR		14 27 15.6	
	comp=Z,1000nm,19.0s,MS4.7,baz=193,slow=29								
PPT	**Papeete**	**40.39**	**329**	*e*LR		LR		14 27 09.3	
	186nm,26.8s								
PPT	**Papeete**	**40.39**	**329**	LR		LR		14 28 47.9	
	comp=Z,141nm,18.9s,MS3.8,baz=105,slow=30								
PLCA	**Paso Flores**	**40.62**	**95**	LR		LR		14 28 07.8	
	comp=Z,94nm,21.5s,MS3.6,baz=185,slow=29								
VAH	**Vaihoa**	**42.06**	**333**	*e*T				15 01 11.5	
	118nm,0.3s								
PMOR	**Pomariorio Ree**	**42.36**	**333**	*e*T				15 01 33.7	
	12nm,0.3s								
TRQA	**Tornquist**	**47.34**	**98**	*e*P		**P**		**14 16 59.5**	**-0.9**
	4.8nm,0.8s,mb4.5								
CFAA	**Coronel Fontan**	**48.31**	**87**	P		**P**		**14 17 07.1**	**-1.0**
	0.2nm,0.4s,mb3.5,baz=218,slow=12,SNR=3.4								
LCO	**Las Campanas**	**48.83**	**83**	*e*P		**P**		**14 17 12.2**	**+0.1**
	17nm,0.9s,mb5.1								
MAW	**Mawson**	**57.51**	**185**	LR		LR		14 44 42.0	
	comp=Z,85nm,18.3s,MS3.9,baz=61,slow=38								
LPAZ	**La Paz**	**60.26**	**75**	P		**P**		**14 18 36.8**	**+1.5**
	4.3nm,0.9s,mb4.5,baz=217,slow=4.6,SNR=12								
ASAR	**Alice Springs**	**74.81**	**251**	P		**P**		**14 20 07.0**	**-0.2**
	1.4nm,0.8s,mb4.0,baz=146,slow=6.1,SNR=18								
WRA	**Warramunga Arr**	**77.56**	**253**	P		**P**		**14 20 23.0**	**+0.1**
	1.3nm,0.7s,mb4.0,baz=142,slow=5.0,SNR=18								
TXAR	**Lajitas Array**	**86.69**	**22**	P		**P**		**14 21 11.5**	**+1.3**
	0.4nm,0.4s,mb4.0,baz=191,slow=2.9,SNR=7.1								
TIXI	**Tiksi**	**144.28**	**328**	*e*PKPdf		PKPdf		14 28 00.7	-0.5
TIXI				*e*				14 28 09.6	
ULN	**Ulaanbaatar**	**145.04**	**282**	*e*PKP		PKPdf		14 28 03.6	+0.5
SONM	**Songino Array**	**145.40**	**282**	PKPbc		PKPbc		14 28 04.7	+0.9
	3.6nm,0.6s,baz=137,slow=3.8,SNR=33								
KEST	**Kesra**	**145.77**	**107**	PKPbc		PKPbc		14 28 05.3	0.0
	3.3nm,0.8s,baz=204,slow=2.7,SNR=8.1								

IDC 26 14:21:12.0±2.1, 4662N×15311E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.6/20, mbtmp3.7/8, ML2.9/1, Error ellipse: s-maj=65.3km s-min=23.7km az=175.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**7.81**	**255**	Pn		Pn	Pn	14 23 08.0	+1.1
	0.2nm,0.3s,baz=30,slow=20,SNR=1.9								
MKAR	**Makanchi Array**	**47.00**	**297**	P		P		14 29 44.0	-0.6
	0.3nm,0.6s,baz=66,slow=7.8,SNR=2.8								
YKA	**Yellowknife Ar**	**51.03**	**37**	P		P		14 30 15.6	+0.4
	0.2nm,0.6s,baz=296,slow=6.7,SNR=4.6								
FINES	**FINESS Array B**	**64.16**	**335**	P		P		14 31 48.0	+0.3
	0.5nm,0.4s,baz=21,slow=6.9,SNR=4.8								
PDAR	**Pinedale Array**	**64.83**	**54**	P		P		14 31 53.0	+0.6
	0.3nm,0.6s,baz=309,slow=4.3,SNR=3.4								
NB2	**NORSAR Subarra**	**68.35**	**341**	P		P		14 32 15.1	+0.5
	comp=Z,2.1nm,0.8s,baz=30,slow=6.5								
NOA	**NORSAR Array B**	**68.35**	**341**	P		P		14 32 14.8	+0.2
	comp=Z,0.6nm,0.7s,baz=27,slow=6.3,SNR=3.7								
AKASG	**Malin Array Be**	**71.65**	**326**	P		P		14 32 35.0	-0.1
	comp=Z,1.0nm,0.5s,baz=33,slow=6.3,SNR=6.4								
TXAR	**Lajitas Array**	**77.56**	**61**	P		P		14 33 09.4	-0.3
	comp=Z,0.5nm,0.5s,baz=309,slow=4.6,SNR=5.7								

IDC 26 14:33:08.9±2.2, 667S×12952E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/14, mbtmp3.4/4, ML3.3/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/20, Error ellipse: s-maj=90.4km s-min=28.0km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.98**	**198**	Pn		Pn	Pn	14 36 01.8	+0.7
	0.1nm,0.3s,baz=50,slow=17,SNR=4.0								
FITZ				Sn		Sn		14 38 02.9	-13
	0.2nm,0.3s,baz=72,slow=19,SNR=3.6								
WRA	**Warramunga Arr**	**14.00**	**161**	Pn		Pn		14 36 28.1	-0.6
	0.1nm,0.3s,baz=342,slow=13,SNR=8.3								
WRA				Sn		Sn		14 38 49.2	-16
	0.2nm,0.3s,baz=331,slow=22,SNR=7.7								
ASAR	**Alice Springs**	**17.42**	**166**	P		Pn		14 37 13.4	-0.1
	0.2nm,0.3s,baz=344,slow=9.6,SNR=30								
ASAR				S		Sn		14 40 14.1	-14
	0.1nm,0.3s,baz=345,slow=25,SNR=4.1								
PSI	**Prapat**	**31.96**	**286**	LR		LR		14 54 17.5	
	comp=Z,85nm,19.9s,baz=286,slow=40								
MKAR	**Makanchi Array**	**67.69**	**327**	P		P		14 44 08.1	+0.1
	0.2nm,0.5s,baz=119,slow=8.3,SNR=6.4								

*IDC **26** 14:34:10.1±1.1, 2839S×17649W, h0km, mb4.0/6, mb1 4.3/8, mb1mx4.1/15, mbtmp4.0/8, ML3.8/2, MS4.2/19, Ms1 4.2/19, ms1mx4.0/27, Error ellipse: s-maj=41.7km s-min=20.8km az=137.0*

*NEIC **26** 14:34:11.5±0.7, 2847S×17647W, h10km, Error ellipse: s-maj=28.1km s-min=13.4km az=123.0*

*ISCJB **26** 14:34:13.6±0.9, 2881S±008×1764W±02, h33km, mb4.0/6, MS4.2/17, Error ellipse: s-maj=21.5km s-min=7.9km az=22.2*

ISC 26 14:34:15.3±0.9, 2867S±008×1765W±02, h35km, n38, σ1§08/18, mb4.0/6, MS4.2/17, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.40**	**245**	Pn		**Pn**	**Pn**	**14 34 38.2**	**-0.2**
PUZ	**Puketiti**	**10.37**	**204**	*e*Sn		**Sn**	**Sn**	**14 38 42.4**	**+6.1**
MWZ	**Matawai**	**10.87**	**206**	*e*PN		**Pn**	**Pn**	**14 36 48.0**	**-0.3**
MWZ				*e*SN		**Sn**	**Sn**	**14 38 53.3**	**+4.6**
URZ	**Urewera**	**10.97**	**208**	Pn		**Pn**	**Pn**	**14 36 49.3**	**-0.4**
	0.4nm,0.3s,baz=56,slow=18,SNR=4.8								
URZ				Sn			**Sn**	**14 38 57.2**	**+6.1**
	3.1nm,0.3s,baz=200,slow=21,SNR=9.6								
BFZ	**Birch Farm**	**13.40**	**205**	*e*SN			**Sn**	**14 39 50.7**	**+0.2**
MRZ	**Mangatainoka R**	**13.63**	**207**	*e*SN			**Sn**	**14 39 54.8**	**-1.5**
THZ	**Tophouse**	**15.67**	**211**	*e*PN			**Pn**	**14 37 53.8**	**+0.4**
THZ				*e*SN			**Sn**	**14 40 41.9**	**-4.0**
DZM	**Mont Dzumac**	**16.77**	**289**	LR		LR	LR	14 43 20.4	
	comp=Z,1µm,18.7s,baz=142,slow=33								
RAR	**Rarotonga**	**16.85**	**68**	LR		LR	LR	14 43 24.3	
	comp=Z,458nm,20.1s,baz=269,slow=33								
RPZ	**Rata Peaks**	**18.05**	**210**	P			**Pn**	**14 38 25.5**	**+2.2**
	0.5nm,0.3s,baz=30,slow=8.1,SNR=3.0								
RPZ				S			**S**	**14 41 37.3**	**-11**
	0.4nm,0.3s,baz=162,slow=20,SNR=2.6								
TBI	**Tubuai**	**24.81**	**84**	*e*LR		LR	LR	14 45 29.0	
	625nm,30.0s								
PPT	**Papeete**	**27.02**	**72**	*e*LR		LR	LR	14 46 27.2	
	690nm,29.0s								
PPT	**Papeete**	**27.02**	**72**	LR		LR	LR	14 47 47.3	
	comp=Z,282nm,18.2s,MS3.9,baz=123,slow=30								
HNR	**Honiara**	**29.27**	**306**	LR		LR	LR	14 50 19.1	
	comp=Z,372nm,19.1s,MS4.0,baz=184,slow=33								
CTA	**Charters Tower**	**34.90**	**276**	LR		LR	LR	14 54 13.9	
	comp=Z,1µm,18.2s,MS4.2,baz=86,slow=34								
STKA	**Stephens Creek**	**36.20**	**254**	P		**P**	**P**	**14 41 16.1**	**+1.3**
	2.2nm,0.8s,mb4.2,baz=80,slow=12,SNR=4.2								
STKA				LR		LR	LR	14 55 02.5	
	comp=Z,417nm,19.4s,MS4.2,baz=280,slow=34								
TAOE	**Nuku Hiva Isla**	**39.40**	**67**	*e*LR		LR	LR	14 52 05.0	
	848nm,27.8s								
ASAR	**Alice Springs**	**44.57**	**264**	P		**P**	**P**	**14 42 24.7**	**+0.5**
	4.4nm,1.1s,mb4.2,baz=110,slow=8.0,SNR=15								
WRA	**Warramunga Arr**	**45.41**	**270**	P		**P**	**P**	**14 42 30.6**	**-0.3**
	1.0nm,0.3s,mb4.1,baz=108,slow=6.2,SNR=11								
WRA				LR		LR	LR	15 01 14.6	
	comp=Z,205nm,18.5s,MS4.1,baz=85,slow=36								
VNDA	**Vanda**	**49.95**	**186**	LR		LR	LR	15 00 10.8	
	comp=Z,190nm,19.9s,MS4.1,baz=316,slow=31								
FITZ	**Fitzroy Crossi**	**53.73**	**268**	LR		LR	LR	15 05 59.3	
	comp=Z,360nm,19.1s,MS4.5,baz=283,slow=36								
BATI	**Kupang**	**58.79**	**275**	LR		LR	LR	15 06 13.3	
	comp=Z,236nm,20.2s,MS4.5,baz=119,slow=33								
MAW	**Mawson**	**74.39**	**200**	LR		LR	LR	15 19 27.8	
	comp=Z,174nm,19.0s,MS4.4,baz=243,slow=36								
MJAR	**Matsushiro Arr**	**77.60**	**324**	P		**P**	**P**	**14 46 05.3**	**-2.5**
	1.9nm,0.8s,mb4.1,baz=165,slow=5.1,SNR=4.3								
MJAR				LR		LR	LR	15 15 47.1	
	comp=Z,129nm,18.9s,MS4.3,baz=170,slow=32								
PLCA	**Paso Flores**	**82.70**	**133**	LR		LR	LR	15 16 42.4	
	comp=Z,121nm,20.8s,MS4.2,baz=188,slow=31								
KSRS	**Korea Array**	**83.91**	**319**	LR		LR	LR	15 23 28.0	
	comp=Z,56nm,18.1s,MS4.0,baz=359,slow=35								
NVAR	**Mina Array Bea**	**86.06**	**42**	P		**P**	**P**	**14 46 53.0**	**+0.8**
	0.2nm,0.4s,mb3.7,baz=222,slow=7.9,SNR=3.1								
PSI	**Prapat**	**86.60**	**275**	LR		LR	LR	15 29 22.2	
	comp=Z,208nm,18.3s,MS4.6,baz=152,slow=38								
TXAR	**Lajitas Array**	**90.32**	**57**	LR		LR	LR	15 24 37.3	
	comp=Z,63nm,18.3s,MS4.1,baz=345,slow=34								
CMIG	**Matias Romero**	**90.94**	**71**	LR		LR	LR	15 17 51.3	
	comp=Z,38nm,19.2s,MS3.8,baz=5,slow=29								
PDAR	**Pinedale Array**	**93.96**	**43**	P		**P**	**P**	**14 47 28.8**	**-0.6**
	0.3nm,0.8s,mb3.8,baz=210,slow=5.2,SNR=2.1								
PDAR				LR		LR	LR	15 27 22.4	
	comp=Z,139nm,18.4s,MS4.5,baz=259,slow=34								
LPAZ	**La Paz**	**97.61**	**113**	LR		LR	LR	15 21 10.7	
	comp=Z,58nm,20.4s,MS4.1,baz=311,slow=29								
MKAR	**Makanchi Array**	**117.68**	**310**	PKP			PKPdf	14 52 57.2	-0.3
MKAR	**Makanchi Array**	**117.68**	**310**	PKP			PKPdf	14 52 57.2	-0.3
	0.3nm,0.6s,baz=95,slow=1.7,SNR=4.3								
FINES	**FINESS Array B**	**143.95**	**342**	PKhKP				14 53 43.1	
	1.4nm,0.8s,baz=74,slow=6.2,SNR=5.9								
NOA	**NORSAR Array B**	**147.22**	**353**	PKPbc		PKPbc		14 53 53.1	-1.1
	3.9nm,0.9s,baz=15,slow=4.5,SNR=11								
AKASG	**Malin Array Be**	**150.68**	**326**	PKPbc		PKPbc		14 54 02.8	-0.6
	1.4nm,0.6s,baz=46,slow=2.5,SNR=16								
CLL	**Collm**	**156.29**	**345**	*e*PKPab		PKPab		14 54 33.0	-1.0

*NEIC **26** 14:35:09.5, 1689N×9535W, h109km, MD3.8(MEX), After MEX.*

MEX 26 14:35:09.5±0.6, 1689N×9535W, h108km±8km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.49**	**66**	*i*P		Pn		14 35 25.1	-1.0
CMIG				*i*S		Sn		14 35 36.6	-1.9
OXX	**Oaxaca**	**1.32**	**278**	*e*P		Pn		14 35 38.0	+3.9
OXX				*i*S		Sn		14 35 51.5	-1.3
OXX	**Oaxaca**	**1.32**	**278**	*e*P		Pn		14 35 33.5	-0.6
OXX				*i*S		Sn		14 35 51.5	-1.3
HUIG	**Huatulco**	**1.33**	**213**	*i*P		Pn		14 35 32.7	-1.5
HUIG				*i*S		Sn		14 35 51.6	-1.4
VHO	**Vista Hermosa**	**1.33**	**278**	*i*P		Pn		14 35 32.6	-1.6
VHO				*i*S		Sn		14 35 51.8	-1.2
SCX	**San Cristobal**	**2.61**	**93**	*e*P		Pn		14 35 52.0	+1.7
SCX				*i*S		Sn		14 36 21.0	-0.6
PPM	**Popocatepetl**	**3.79**	**305**	*i*P		Pn		14 36 07.3	+1.3
PPM				*i*S		Sn		14 36 47.8	-2.1

*IDC **26** 14:35:34.0±0.6, 948N×12543E, h0km, mb4.2/17, mb1 4.3/18, mb1mx4.3/22, mbtmp4.2/18, ML4.4/1, MS3.4/8, Ms1 3.4/8, ms1mx3.2/30, Error ellipse: s-maj=36.7km s-min=11.8km az=75.0*

*MOS **26** 14:35:36.8±1.1, 945N×12540E, h33km, mb4.6/11, Error ellipse: s-maj=28.4km s-min=9.6km az=108.1*

*MAN **26** 14:35:38, 943N×12531E, h6km, mb5.2, ML4.1, MS4.3*

*BJI **26** 14:35:38.4, 920N×12526E, h39km, mb4.5*

*NEIC **26** 14:35:40.7±2.4, 952N×12549E, h47km±22km, mb4.6/10, Error ellipse: s-maj=31.0km s-min=9.6km az=67.0*

*ISCJB **26** 14:35:40.1±0.4, 943N±003×12537E±004, h55km±4km, mb4.4/33, MS3.3/8, Error ellipse: s-maj=7.6km s-min=4.1km az=161.7*

ISC 26 14:35:41.3±0.5, 943N±003×12540E±004, h49km±4km, n87, σ1§52/96, mb4.4/33, MS3.3/8, 4C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.88**	**323**	*e*P			**Pn**	**14 35 54.2**	**-3.1**
MSLP				*e*S			**Sn**	**14 36 06.3**	**-2.8**
CGP	**Cagayan de Oro**	**1.19**	**216**	⇑*i*P			**Pn**	**14 35 59.5**	**-2.1**
CGP				*i*S			**Sn**	**14 36 14.9**	**-1.9**
TBP	**Tagbilaran**	**1.54**	**280**	*e*P			**Pn**	**14 36 04.1**	**-2.2**
TBP				*e*S			**Sn**	**14 36 25.0**	**-0.1**
BIPH	**Bislig**	**1.56**	**142**	⇑*i*P			**Pn**	**14 36 03.9**	**-2.9**
BIPH				*i*S			**Sn**	**14 36 27.6**	**+1.7**
BUKP	**Musuan**	**1.58**	**192**	*e*P			**Pn**	**14 36 05.2**	**-1.8**
BUKP				*e*S			**Sn**	**14 36 28.2**	**+2.0**
LLP	**Lapu-Lapu**	**1.66**	**302**	*e*P			**Pn**	**14 36 05.4**	**-2.6**
LLP				*e*S			**Sn**	**14 36 25.4**	**-2.8**
PLP	**Palo**	**1.77**	**347**	*e*P			**Pn**	**14 36 08.6**	**-1.0**
PLP				*e*S			**Sn**	**14 36 34.9**	**+4.0**
OCLP	**Ormoc**	**1.79**	**334**	*e*P			**Pn**	**14 36 08.5**	**-1.2**
OCLP				*e*S			**Sn**	**14 36 34.8**	**+3.5**
SNPH	**Sibulan**	**2.13**	**268**	*e*P			**Pn**	**14 36 15.0**	**+0.5**
BESP	**Borongan**	**2.16**	**1**	*e*P			**Pn**	**14 36 14.8**	**0.0**
BESP				*e*S			**Sn**	**14 36 43.3**	**+3.0**
DMPH	**Davao City--Mi**	**2.34**	**177**	⇓*i*P			**Pn**	**14 36 17.5**	**+0.2**
DAV	**Davao City (W)**	**2.35**	**176**	*e*P			**Pn**	**14 36 18.4**	**+0.9**
DAV	**Davao City (W)**	**2.35**	**176**	⇓*e*P			**Pn**	**14 36 18.5**	**+1.0**
CTBH	**Cotabato--PC H**	**2.47**	**207**	⇓*e*P			**Pn**	**14 36 17.8**	**-1.4**
CTBH				*i*S			**Sn**	**14 36 51.4**	**+3.2**
PAGZ	**Pagadian**	**2.54**	**232**	*e*P			**Pn**	**14 36 19.6**	**-0.4

comp=Z,3.2nm,0.6s,mb4.4
ARU Arti 69.45 327 *e*P **P** 14 46 43.0 **-1.3**
ARU pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
OBN Obninsk 81.67 325 *e*P **P** 14 47 50.6 **-3.7**
OBN *e* 14 51 06.9
OBN pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
JOF Joensuu 83.54 333 *e*p **P** 14 48 02.3 **-1.5**
ARCES ARCESS Array B 84.68 340 P **P** 14 48 08.8 **-0.6**
comp=Z,5.2nm,0.9s,mb4.6,baz=59,slow=4.7,SNR=5.0
KAF Kangasniemi 85.96 332 *e*p **P** 14 48 13.4 **-2.6**
FINES FINESS Array B 86.22 332 *i* P **P** 14 48 16.8 **-0.5**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 86.22 332 P **P** 14 48 16.9 **-0.4**
comp=Z,1.1nm,0.5s,mb4.3,baz=71,slow=4.9,SNR=7.5
AKASG Malin Array Be 86.66 321 P **P** 14 48 19.7 **0.0**
comp=Z,0.3nm,0.4s,mb3.9,baz=65,slow=3.5,SNR=2.9
VNDA Vanda 89.21 173 P **P** 14 48 31.5 **+0.2**
comp=Z,0.9nm,0.7s,mb4.2,baz=323,slow=8.6,SNR=3.4
NB2 NORSAR Subarra 93.12 334 P **P** 14 48 48.2 **-1.6**
comp=Z,0.4nm,0.6s,mb4.0,baz=62,slow=4.6
NOA NORSAR Array B 93.12 334 P **P** 14 48 48.5 **-1.4**
comp=Z,0.4nm,0.7s,mb4.0,baz=63,slow=4.6,SNR=4.0
NOA LR LR 15 34 30.5
comp=Z,41nm,19.4s,MS3.9,baz=180,slow=38
YKA Yellowknife Ar 94.87 24 P **P** 14 48 57.4 **-0.4**
YKA Yellowknife Ar 94.87 24 P **P** 14 48 57.4 **-0.4**
comp=Z,1.3nm,0.8s,mb4.4,baz=309,slow=4.1,SNR=12
TORD Torodi Ar. Bea 119.77 291 PKP PKPdf 14 54 26.5 -0.5
comp=Z,0.8nm,0.8s,baz=65,slow=1.4,SNR=3.4
PLCA Paso Flores 145.77 158 PKPbc PKPbc 14 55 16.7 +1.5
comp=Z,2.2nm,0.8s,baz=248,slow=5.4,SNR=4.3

IDC 26 14:48:49.1±3.0, 281S×13305E, h0km, mb4.0/2, mb1 4.3/4, mb1mx3.8/14, mbtmp4.0/4, ML4.1/2, Error ellipse: s-maj=133.5km s-min=26.6km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**9.86**	**183**	*e*P	Pn	14 51 12.4	+0.2
	7.4nm,0.6s						
BATI	**Kupang**	**11.87**	**231**	Pn	Pn	14 51 46.3	+6.5
	3.4nm,0.3s,baz=128,slow=3.6,SNR=6.3						
FITZ	**Fitzroy Crossi**	**16.84**	**205**	*e*P	Pn	14 52 46.9	+0.4
	7.4nm,1.4s						
FITZ				*e*S	Sn	14 55 47.8	-6.6
FITZ	**Fitzroy Crossi**	**16.84**	**205**	Pn	Pn	14 52 46.0	-0.5
	0.6nm,0.3s,baz=38,slow=14,SNR=9.0						
FITZ				Sn	Sn	14 55 48.3	-6.1
	0.2nm,0.3s,baz=190,slow=17,SNR=5.2						
WRA	**Warramunga Arr**	**17.07**	**176**	P	Pn	14 52 47.7	-1.7
	0.7nm,0.3s,baz=355,slow=12,SNR=42						
WRA				S	Sn	14 55 55.1	-4.9
	0.1nm,0.3s,baz=3.8,slow=23,SNR=3.9						
WB2	**Warramunga Arr**	**17.07**	**176**	*e*P	Pn	14 52 48.3	-1.1
WB2				*e*		14 52 52.7	
ASAR	**Alice Springs**	**20.75**	**178**	P	P	14 53 32.6	+1.1
	15nm,0.7s,baz=5.0,slow=12,SNR=157						
MKAR	**Makanchi Array**	**66.50**	**325**	P	P	14 59 40.8	+0.1
	0.3nm,0.4s,baz=103,slow=8.0,SNR=7.6						

IDC 26 15:00:30.3±7.3, 1819S×16882E, h216km±140km, mb3.1/3, mb1 3.3/4, mb1mx3.1/15, mbtmp3.1/4, MS3.5/1, Ms1 3.5/1, ms1mx2.8/9, Error ellipse: s-maj=275.9km s-min=51.4km az=144.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.46**	**210**	*e*P	Pn	15 01 38.5	+0.2
DZM	**Mont Dzumac**	**4.46**	**210**	P	Pn	15 01 38.3	0.0
	5.9nm,0.3s,baz=58,slow=16,SNR=38						
WRA	**Warramunga Arr**	**32.60**	**261**	P	P	15 06 41.4	-0.4
	0.2nm,0.3s,baz=80,slow=6.1,SNR=7.7						
ASAR	**Alice Springs**	**33.01**	**254**	P	P	15 06 45.6	+0.3
	0.6nm,0.4s,baz=84,slow=8.6,SNR=34						
FITZ	**Fitzroy Crossi**	**40.96**	**263**	LR	LR	15 22 54.4	
	comp=Z,63nm,20.6s,baz=182,slow=33						
SONM	**Songino Array**	**86.14**	**323**	P	P	15 12 47.2	+0.3
	0.6nm,0.7s,baz=136,slow=4.5,SNR=5.1						

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*IDC **26** 15:09:35.6±3.9, 2122S×16897E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.8/14, mbtmp3.8/5, ML3.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=107.4km s-min=34.0km az=139.0*
*ISCJB **26** 15:09:40.4±4.5, 2145S×03×169.1E±02.2, h59km±31km, mb4.0/5, Error ellipse: s-maj=44.3km s-min=33.3km az=18.0.*
*NEIC **26** 15:09:45.0±4.2, 2148S×16873E, h66km±27km, Error ellipse: s-maj=45.0km s-min=30.4km az=57.0*
ISC 26 15:09:42.0±4.6, 2145S±03×1690E±02, h53km±32km, n8, σ1$07/10, mb4.0/5, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.51**	**253**	*e*P	**Pn**	**15 10 19.5**	**-0.9**
DZM				*e*S	**Sn**	**15 10 51.0**	**+1.2**
DZM	**Mont Dzumac**	**2.51**	**253**	Pn	**Pn**	**15 10 19.5**	**-0.9**
	4.3nm,0.3s,baz=54,slow=19,SNR=67						
DZM				LR	LR	15 10 47.6	
	comp=Z,351nm,18.6s,baz=185,slow=29						
DZM				Sn	**Sn**	**15 10 51.6**	**+1.8**
	15nm,0.3s,baz=319,slow=19,SNR=9.2						
STKA	**Stephens Creek**	**26.60**	**241**	P	**P**	**15 15 15.4**	**0.0**
	2.1nm,0.9s,mb3.7,baz=98,slow=7.1,SNR=3.9						
WRA	**Warramunga Arr**	**32.46**	**266**	P	**P**	**15 16 05.9**	**-1.7**
	0.6nm,0.8s,mb3.5,baz=94,slow=8.8,SNR=6.2						
ASAR	**Alice Springs**	**32.49**	**259**	P	**P**	**15 16 07.0**	**-0.7**
	1.7nm,0.7s,mb4.0,baz=84,slow=9.1,SNR=29						
BATI	**Kupang**	**44.90**	**277**	P	**P**	**15 17 51.8**	**0.0**
	19nm,0.7s,mb5.0,baz=14,slow=6.5,SNR=5.6						
SBA	**Scott Base**	**56.54**	**181**	*e*P	**P**	**15 19 19.0**	**+0.5**
SONM	**Songino Array**	**88.81**	**323**	P	**P**	**15 22 31.7**	**+1.7**
	0.4nm,0.8s,mb3.8,baz=122,slow=4.0,SNR=3.8						

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*IDC **26** 15:14:06.4±0.8, 680N×7298W, h160km±13km, mb2.9/1, mb1 3.2/3, mb1mx2.9/20, mbtmp3.0/3, Error ellipse: s-maj=61.9km s-min=8.2km az=131.0*
NEIC 26 15:14:06.8±0.9, 676N×7295W, h168km±12km, Error ellipse: s-maj=59.2km s-min=14.6km az=129.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.33**	**216**	P	Pn	15 14 47.3	+0.4
	7.2nm,0.3s,baz=261,slow=24,SNR=14						
ROSC				S	Sn	15 15 18.2	+0.3
	5.4nm,0.3s,baz=103,slow=19,SNR=5.4						
SDV	**Santo Domingo**	**3.12**	**47**	*e*Pn	Pn	15 14 56.7	+0.2
SDV				S	Sn	15 15 34.2	-0.9
SDV	**Santo Domingo**	**3.12**	**47**	P	Pn	15 14 56.8	+0.3
	5.6nm,0.3s,baz=218,slow=2.1,SNR=34						
SDV				S	Sn	15 15 34.2	-0.9
	8.3nm,0.3s,baz=279,slow=16,SNR=23						
YKA	**Yellowknife Ar**	**63.38**	**340**	P	P	15 24 18.0	0.0
	0.2nm,0.5s,baz=128,slow=7.0,SNR=5.1						
ASAR	**Alice Springs**	**149.21**	**234**	PKPbc	PKPbc	15 33 36.3	0.0
	0.2nm,0.7s,baz=118,slow=3.8,SNR=5.0						
WRA	**Warramunga Arr**	**150.45**	**241**	PKPbc	PKPbc	15 33 39.6	+0.2
	0.2nm,0.4s,baz=107,slow=2.5,SNR=7.1						

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*IDC **26** 15:17:27.5±1.3, 543N×12793E, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/19, mbtmp4.1/8, Error ellipse: s-maj=105.4km s-min=15.6km az=70.0*
*ISCJB **26** 15:17:41.1±1.1, 5.13N±008×1274E±0.1, h121km±8km, mb4.2/15, Error ellipse: s-maj=21.5km s-min=10.4km az=156.9*
*MAN **26** 15:17:43, 551N×12765E, h108km, mb4.8, ML3.7, MS3.7*
*NEIC **26** 15:17:50.4±0.7, 504N×12748E, h200km, mb4.0/3, Error ellipse: s-maj=59.7km s-min=8.6km az=72.0*
ISC 26 15:17:42.0±1.1, 511N±008×1274E±01, h114km±8km, n25, σ0$72/30, mb4.2/15, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.15**	**328**	*e*P	**Pn**	**15 18 16.8**	**-0.3**
MATI				*e*S	**Sn**	**15 18 43.6**	**-0.2**
GSPH	**General Santos**	**2.62**	**292**	*e*P	**Pn**	**15 18 23.1**	**0.0**
GSPH				*e*S	**Sn**	**15 18 54.2**	**-0.5**
DMPH	**Davao City--Mi**	**2.71**	**316**	*i*P	**Pn**	**15 18 27.3**	**+2.9**
BIPH	**Bislig**	**3.22**	**341**	*i*P	**Pn**	**15 18 30.9**	**-0.2**
BIPH				*i* S	**Sn**	**15 19 00.4**	**-8.5**
BUKP	**Musuan**	**3.59**	**320**	*e*P	**Pn**	**15 18 37.4**	**+1.3**
BUKP				*e*S	**Sn**	**15 19 17.5**	**-0.4**
CGP	**Cagayan de Oro**	**4.27**	**321**	*e*P	**Pn**	**15 18 50.6**	**+5.5**
CGP				*e*S	**Sn**	**15 19 33.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**23.13**	**184**	*e*P	**P**	**15 22 38.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**23.13**	**184**	P	**P**	**15 22 38.5**	**+0.1**
	1.5nm,0.6s,mb3.5,baz=23,slow=13,SNR=4.0						
WRA	**Warramunga Arr**	**25.82**	**165**	P	**P**	**15 23 02.2**	**-0.6**
	3.4nm,0.4s,mb4.1,baz=344,slow=10,SNR=26						
ASAR	**Alice Springs**	**29.30**	**168**	P	**P**	**15 23 33.9**	**0.0**
	0.8nm,0.5s,mb3.6,baz=353,slow=7.5,SNR=24						
STKA	**Stephens Creek**	**39.19**	**161**	P	**P**	**15 24 58.9**	**-0.1**
STKA	**Stephens Creek**	**39.19**	**161**	P	**P**	**15 24 58.9**	**-0.1**
	2.0nm,0.6s,mb4.2,baz=332,slow=11,SNR=12						
TAPN	**Taplejung**	**43.76**	**305**	*e*P	**P**	**15 25 37.1**	**+0.6**
	5.5nm,0.5s,mb4.5						
ODAN	**Odare**	**43.83**	**304**	*e*P	**P**	**15 25 37.6**	**+0.5**
	11nm,0.6s,mb4.7						
JIRN	**Jiri**	**45.12**	**304**	*e*P	**P**	**15 25 47.7**	**+0.4**
	8.0nm,0.6s,mb4.6						
ULN	**Ulaanbaatar**	**46.03**	**341**	P	**P**	**15 25 54.7**	**+0.7**
	0.8nm,0.5s,mb3.7						
KOLN	**Koldanda**	**47.30**	**303**	*e*P	**P**	**15 26 04.8**	**+0.4**
	9.3nm,0.5s,mb4.8						
MKAR	**Makanchi Array**	**56.81**	**324**	P	**P**	**15 27 15.1**	**+0.5**
	2.4nm,0.4s,mb4.5,baz=114,slow=8.0,SNR=97						
ZALV	**Zalesovo Beam**	**59.67**	**332**	P	**P**	**15 27 33.4**	**-0.9**
	0.4nm,0.3s,mb3.9,baz=128,slow=5.7,SNR=3.3						
KURK	**Kurchatov**	**60.95**	**327**	*e*P	**P**	**15 27 43.1**	**+0.1**
	2.0nm,0.4s,mb4.5						
BRVK	**Borovoye**	**66.61**	**326**	*e*P	**P**	**15 28 20.1**	**0.0**
	2.1nm,0.5s,mb4.2						
AKTK	**Aktyubinsk**	**73.00**	**321**	P	**P**	**15 28 59.3**	**-0.1**
AKTO	**Aktyubinsk**	**73.00**	**321**	P	**P**	**15 28 59.3**	**-0.1**
	1.1nm,0.5s,mb3.9,baz=100,slow=8.6,SNR=5.6						
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**15 30 23.8**	**-1.8**
ARCES	**ARCESS Array B**	**89.39**	**340**	P	**P**	**15 30 23.8**	**-1.8**
	8.4nm,1.2s,mb4.7,baz=54,slow=6.2,SNR=3.9						

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*ISCJB **26** 15:22:38.4±1.0, 3833N±004×2046E±009, h10km, Error ellipse: s-maj=10.4km s-min=4.5km az=160.3*
*THE **26** 15:22:38.4, 3835N×2043E, h6km, ML2.8*
*ATH **26** 15:22:38.7, 3827N×2046E, h17km±3km, MD3.3/3*
*NEIC **26** 15:22:38.8, 3827N×2046E, h17km, MD3.3(ATH), ML2.8(THE), After ATH.*
*CSEM **26** 15:22:39.8±0.2, 3834N×2055E, h1km±1km, MD3.3, Error ellipse: s-maj=4.6km s-min=2.5km az=81.0*
ISC 26 15:22:39.3±1.0, 3834N±004×2046E±009, h10km, n11, σ1$27/15, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**148**	*e*PB	**Pg**	**15 22 42.7**	**-0.6**
VLS				*e*SB	**Sg**	**15 22 46.2**	**+0.2**
KFL	**Anninata**	**0.34**	**131**	*e*Pg	**Pg**	**15 22 45.2**	**-0.9**
LKD	**Levkas**	**0.40**	**22**	*e*Pg	**Pg**	**15 22 45.3**	**-1.9**
LKD				*e*Sg	**Sg**	**15 22 51.5**	**-1.0**
RLS	**Riolos of Patr**	**0.84**	**109**	*e*PN	**Pg**	**15 22 54.5**	**-1.0**
SELA	**Sela**	**1.13**	**93**	*e*Pg	**Pg**	**15 22 59.2**	**-1.8**
SELA				*e*Sg	**Sg**	**15 23 17.3**	**+1.6**
IGT	**Igoumenitsa**	**1.20**	**355**	*e*Pg	**Pg**	**15 23 00.8**	**-1.5**
IGT				*e*Sg	**Sg**	**15 23 18.5**	**+0.6**
EVR	**Evrytania**	**1.20**	**61**	*e*PN	**Pn**	**15 23 04.4**	**+2.2**
KEK	**Kerkira**	**1.47**	**340**	*e*PN	**Pn**	**15 23 07.6**	**+1.8**
ITM	**Ithomi**	**1.64**	**134**	*e*PN	**Pn**	**15 23 08.9**	**+0.7**
THL	**Klokotos Trika**	**1.72**	**44**	*e*PN	**Pn**	**15 23 10.2**	**+0.8**
PLG	**Polygyros**	**3.08**	**48**	*e*PN	**Pn**	**15 23 29.0**	**+1.0**

IDC 26 15:40:23.1±4.0, 254S×9757E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.6/19, mbtmp3.7/5, Error ellipse: s-maj=167.6km s-min=22.0km az=56.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.85**	**118**	P	P	15 47 58.6	-0.1
	0.4nm,0.9s,baz=305,slow=9.0,SNR=5.5						
ASAR	**Alice Springs**	**40.94**	**124**	P	P	15 48 07.8	+0.2
	0.2nm,0.5s,baz=298,slow=7.8,SNR=6.5						
SONM	**Songino Array**	**50.76**	**8**	P	P	15 49 25.0	+0.2
	0.7nm,0.7s,baz=194,slow=8.4,SNR=6.9						
MKAR	**Makanchi Array**	**50.93**	**347**	P	P	15 49 26.6	+0.4
	1.0nm,0.7s,baz=150,slow=8.3,SNR=14						
ZALV	**Zalesovo Beam**	**57.28**	**351**	P	P	15 50 12.1	-0.2
	1.9nm,0.5s,baz=169,slow=7.5,SNR=12						
TXAR	**Lajitas Array**	**146.57**	**35**	PKPbc	PKPbc	16 00 06.1	-1.1
	0.2nm,0.5s,baz=270,slow=0.6,SNR=5.1						

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*IDC **26** 16:13:12.5±3.0, 3972N×5168E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/22, mbtmp3.8/7, ML4.4/2, Error ellipse: s-maj=50.4km s-min=22.5km az=177.0*
*ISCJB **26** 16:13:19.6±1.0, 4021N±006×5169E±006, h45km±15km, mb3.6/7, Error ellipse: s-maj=10.9km s-min=6.4km az=25.6*
*CSEM **26** 16:13:19.9±0.1, 4023N×5168E, h50km, ML3.7, Error ellipse: s-maj=3.2km s-min=2.7km az=64.0*
*MOS **26** 16:13:20.9±1.4, 4052N×5160E, h33km, mb4.1/2, Error ellipse: s-maj=20.6km s-min=13.5km az=110.3*
*NEIC **26** 16:13:22.2±4.0, 4033N×5177E, h41km, 29km, mb3.6/1, Error ellipse: s-maj=44.9km s-min=10.6km az=191.0*
*THR **26** 16:13:27.4±0.3, 3947N×5097E, h15km, ML3.7*
ISC 26 16:13:21.4±0.7, 4021N±006×5172E±006, h43km±13km, n34, σ1$14/40, mb3.6/7, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GALA	**Gala**	**1.21**	**280**	P	**Pn**	**16 13 47.5**	**+5.7**
NDR	**Nardaran**	**1.37**	**286**	P	**Pn**	**16 13 48.2**	**+4.2**
	SNR=17						
SIZA	**Siyzn**	**2.31**	**293**	P	**Pn**	**16 14 00.4**	**+3.5**
	SNR=28						
GRMI	**Germi**	**3.27**	**246**	*e*Pn	**Pn**	**16 14 09.4**	**-0.7**
GRMI				*e*Sg	**Sn**	**16 14 45.2**	**-2.5**
GRMI				AML	AML	16 14 48.1	
	comp=E,286nm,0.0s						
GRMI	**Germi**	**3.27**	**246**	*e*Pn	**Pn**	**16 14 09.4**	**-0.7**
	SNR=52						
GRMI				*e*Sg	**Sn**	**16 14 45.2**	**-2.6**
	SNR=90						
BRDA	**Brd**	**3.48**	**272**	P	**Pn**	**16 14 14.1**	**+1.2**
	SNR=6.6						
SEKA	**Sheki**	**3.58**	**288**	P	**Pn**	**16 14 15.7**	**+1.4**
	SNR=9.4						
GANJ	**Ganja**	**4.14**	**278**	P	**Pn**	**16 14 22.1**	**+0.1**
	SNR=3.9						
GANJ				S	**Sn**	**16 15 07.5**	**-1.7**
CHTH	**Charan**	**4.32**	**186**	*e*Pn	**Pn**	**16 14 24.4**	**-0.1**
DAMV	**Damavand**	**4.58**	**177**	*e*Pn	**Pn**	**16 14 29.2**	**+1.2**
DAMV				AML	AML	16 15 21.5	
	comp=N,156nm,0.4s						
DAMV				AML	AML	16 15 21.9	
	comp=E,84nm,0.8s						
DGRG	**David-gareji**	**4.97**	**286**	P	**Pn**	**16 14 35.0**	**+1.6**
DGRG				S	**Sn**	**16 15 31.9**	**+2.3**
MTA	**Mtatsminda**	**5.45**	**288**	S	**Sn**	**16 15 41.6**	**+0.2**
TBLG	**Delisi**	**5.50**	**288**	S	**Sn**	**16 15 42.0**	**-0.6**
GHVR	**GHOM**	**5.73**	**184**	*e*Pn	**Pn**	**16 14 44.0**	**+0.2**
ASAO	**Ashtian**	**5.81**	**194**	*e*Pn	**Pn**	**16 14 44.0**	**-1.0**
KIV	**Kislovodsk**	**7.69**	**302**	*e*P	**Pn**	**16 15 07.9**	**-2.8**
AKTK	**Aktyubinsk**	**11.14**	**21**	Pn	**Pn**	**16 15 57.0**	**-0.9**
AKTK				Sn	**Sn**	**16 17 53.3**	**-7.6**
AKTO	**Aktyubinsk**	**11.14**	**21**	Pn	**Pn**	**16 15 57.0**	**-0.9**
	comp=E,1.8nm,0.3s,baz=201,slow=11,SNR=21						
AKTO				Sn	**Sn**	**16 17 53.3**	**-7.7**
	comp=E,2.8nm,0.3s,baz=74,slow=22,SNR=17						
UCH	**Uchtor**	**17.26**	**76**	*e*P	**Pn**	**16 17 19.8**	**+0.7**
UCH	**Uchtor**	**17.26**	**76**	*e*P	**Pn**	**16 17 19.8**	**+0.7**
AKASG	**Malin Array Be**	**18.88**	**311**	P	**Pn**	**16 17 38.1**	**-0.6**
	comp=E,1.6nm,0.3s,baz=101,slow=9.6,SNR=7.2						
KIEV	**Kiev**	**18.88**	**311**	*e*P	**Pn**	**16 17 38.3**	**-0.5**
KIEV	**Kiev**	**18.88**	**311**	*e*P	**Pn**	**16 17 38.3**	**-0.5**
KURK	**Kurchatov**	**21.48**	**52**	*e*P	**P**	**16 18 06.8**	**+0.7**
	comp=E,2.0nm,0.7s,mb3.6						
KURK	**Kurchatov**	**21.48**	**52**	*e*P	**P**	**16 18 06.8**	**+0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
KURK	**Kurchatov**	**21.48**	**52**	*e*P	**P**	**16 18 06.8**	**+0.7**
MKAR	**Makanchi Array**	**23.03**	**63**	P	**P**	**16 18 22.6**	**0.0**
	comp=Z,0.8nm,0.6s,mb3.3,baz=257,slow=10,SNR=14						
JOF	**Joensuu**	**25.81**	**338**	*e*p	**P**	**16 18 48.7**	**+0.6**
	comp=Z,2.7nm,0.4s,mb4.1						
JOF	**Joensuu**	**25.81**	**338**	*e*P	**P**	**16 18 48.7**	**+0.6**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.2						
ZAL	**Zalesovo**	**26.10**	**47**	P	**P**	**16 18 50.3**	**-0.5**
ZALV	**Zalesovo Beam**	**26.12**	**47**	P	**P**	**16 18 50.3**	**-0.7**
	comp=Z,1.1nm,0.5s,mb3.7,baz=265,slow=11,SNR=8.1						
FINES	**FINESS Array B**	**26.40**	**332**	P	**P**	**16 18 53.2**	**-0.3**
	comp=Z,0.5nm,0.2s,mb3.6,baz=128,slow=9.1,SNR=8.7						
HFS	**Hagfors**	**30.84**	**323**	P	**P**	**16 19 34.8**	**+1.9**
	comp=Z,1.1nm,0.8s,mb3.8,baz=113,slow=11,SNR=4.0						
NOA	**NORSAR Array B**	**32.31**	**324**	P	**P**	**16 19 45.2**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.3,baz=112,slow=8.2,SNR=2.4						

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*IDC **26** 16:14:49.0±7.5, 3222S×17965E, h491km±100km, mb2.3/2, mb1 2.8/3, mb1mx2.7/14, mbtmp2.7/3, Error ellipse: s-maj=122.1km s-min=45.1km az=6.0*
ISC 26 16:14:47.0±2.6, 317S±01×1790E±04, h400km, n9, σ0$66/11, mb2.6/2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**6.42**	**185**	*e*PN	**Pn**	**16 16 24.1**	**0.0**
PUZ				*e*SN	**S**	**16 17 39.1**	**-4.3**
URZ	**Urewera**	**6.76**	**193**	P	**Pn**	**16 16 29.1**	**+1.3**
	8.2nm,0.3s,baz=336,slow=4.5,SNR=50						
URZ				S	**S**	**16 17 49.5**	**-0.7**
	4.5nm,0.3s,baz=66,slow=23,SNR=15						
URZ	**Urewera**	**6.76**	**193**	*e*PN	**Pn**	**16 16 27.8**	**-0.1**
MWZ	**Matawai**	**6.76**	**190**	*e*PN	**Pn**	**16 16 28.0**	**+0.2**
MWZ				*e*SN	**S**	**16 17 51.4**	**+1.1**
TSZ	**Takapari Road**	**8.73**	**195**	*e*PN	**Pn**	**16 16 49.3**	**-0.9**
BFZ	**Birch Farm**	**9.27**	**193**	*e*PN	**Pn**	**16 16 56.0**	**-0.4**
ASAR	**Alice Springs**	**40.48**	**270**	P	**P**	**16 21 49.1**	**+0.1**
	0.3nm,1.0s,mb2.6,baz=116,slow=6.4,SNR=4.7						
WRA	**Warramunga Arr**	**41.59**	**275**	P	**P**	**16 21 58.0**	**+0.1**
	0.1nm,0.3s,mb2.6,baz=111,slow=8.0,SNR=6.4						
FINES	**FINESS Array B**	**145.37**	**337**	PKPbc	PKPbc	16 33 31.9	-6.1
	0.7nm,0.5s,baz=50,slow=4.3,SNR=5.2						

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*MOS **26** 16:16:11.3±0.9, 5549N×16448E, h31km, mb4.2/1, Error ellipse: s-maj=33.5km s-min=23.6km az=51.8*
KRSC 26 16:16:11.3±0.4, 5549N×16448E, h31km±31km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.18**	**308**	*e*P	Pn	16 16 31.0	-0.6
KBTR				*e*S	Sn	16 16 44.7	-1.9
MKZ	**Mys Kozlova**	**1.84**	**241**	*e*P	Pn	16 16 41.7	+1.0
MKZ				*e*S	Sn	16 17 03.2	+0.4
SMKR	**Semkarok**	**2.01**	**304**	*e*P	Pn	16 16 44.3	+1.2
SMKR				*e*S	Sn	16 17 08.8	+1.7
BDR	**Baidarnaya**	**2.13**	**302**	*e*P	Pn	16 16 46.4	+1.7
BDR				*e*S	Sn	16 17 12.3	+2.3
ZLN	**Zelenaya**	**2.14**	**286**	*e*P	Pn	16 16 48.1	+3.2
ZLN				*e*S	Sn	16 17 14.7	+4.3
SRKR	**Sorokina**	**2.19**	**304**	*e*P	Pn	16 16 47.0	+1.5
SRKR				*e*S	Sn	16 17 12.8	+1.2
BZMR	**Bezymyannaya**	**2.30**	**283**	*e*P	Pn	16 16 50.6	+3.6
BZMR				*e*S	Sn	16 17 18.9	+4.7
KLY	**Klyuchi**	**2.31**	**293**	*e*P	Pn	16 16 47.7	+0.6
KLY				*e*S	Sn	16 17 14.8	+0.4
KRSR	**Krestovskiy**	**2.32**	**290**	*e*P	Pn	16 16 49.6	+2.3
KRSR				*e*S	Sn	16 17 16.7	+1.9
KIRR	**Kirishev**	**2.39**	**283**	*e*P	Pn	16 16 51.4	+3.2
KIRR				*e*S	Sn	16 17 20.7	+4.4
KMNR	**Kamenistaya**	**2.42**	**278**	*e*P	Pn	16 16 51.9	+3.2
KMNR				*e*S	Sn	16 17 20.9	+3.7
KPT	**Kopyto**	**2.46**	**283**	*e*P	Pn	16 16 51.9	+2.8
KPT				*e*S	Sn	16 17 22.5	+4.5
TUMR	**Tumrok**	**2.48**	**267**	*e*P	Pn	16 16 52.4	+2.9
TUMR				*e*S	Sn	16 17 22.0	+3.3
KOZ	**Kozyrevsk**	**2.66**	**284**	*e*P	Pn	16 16 55.9	+3.9
KOZ				*e*S	Sn	16 17 27.9	+4.7
SRDR	**Sredinnyy**	**2.81**	**289**	*e*P	Pn	16 16 57.0	+3.0
SRDR				*e*S	Sn	16 17 30.4	+3.7
KII	**Karymskiy**	**3.26**	**246**	*e*P	Pn	16 17 02.7	+2.5
KII				*e*S	Sn	16 17 34.9	+1.6
NLC	**Nalytchevo**	**3.80**	**234**	*e*S	Sn	16 17 51.3	+0.1
AVH	**Avacha**	**4.03**	**239**	*e*P	Pn	16 17 14.1	+3.3
AVH				*e*S	Sn	16 17 59.6	+2.7
GNL	**Ganaly**	**4.21**	**247**	*e*P	Pn	16 17 16.5	+3.3
GNL				*e*S	Sn	16 18 03.8	+2.6
PET	**Petropavlovsk**	**4.22**

body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NEIC **26** 16:51:03.0±0.2, 083N×12591E, h10km, mb5.4/54, MS4.9/131 Error ellipse: s-maj=6.7km s-min=4.3km az=70.0*

NEIC Felt [III] at Bitung and Manado, Indonesia.

*IDC **26** 16:51:04.2±2.5, 077N×12590E, h17km±15km, mb5.3/29, mb1 5.3/30, mb1mx5.3/31, mbtmp5.2/30, ML4.7/1, MS4.7/7, Ms1 4.6/7, ms1mx4.3/26, Error ellipse: s-maj=15.6km s-min=7.3km az=73.0*

*MOS **26** 16:51:05.1±1.3, 086N×12583E, h33km, mb5.6/46, MS4.7/26, Error ellipse: s-maj=10.5km s-min=5.5km az=109.6*

ISC 26 16:51:04.4±0.2, 079N±002×12597E±003, h19km, h19km±2.0km: pP-P, n488, σ1§22/381, mb5.4/121, MS4.9/159, 35C-29D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
AAI	**Ambon**	**4.97**	**153**	P			**Pn**	**16 52 20.1**	**+2.0**
	778nm,0.8s								
GSPH	**General Santos**	**5.36**	**349**	*e*P			**Pn**	**16 52 23.7**	**+0.3**
MATI	**Mati**	**6.12**	**3**	*e*P			**Pn**	**16 52 35.7**	**+1.8**
DAV	**Davao City (W)**	**6.25**	**356**	P			**Pn**	**16 52 36.3**	**+0.6**
	810nm,0.6s								
DAV	**Davao City (W)**	**6.25**	**356**	⇓P			**Pn**	**16 52 45.6**	**+10**
	SNR=15								
DMPH	**Davao City--Mi**	**6.27**	**356**	⇑*i*P			**Pn**	**16 52 42.6**	**+6.7**
PCI	**Palu**	**6.36**	**255**	P			**Pn**	**16 52 41.2**	**+4.0**
	666nm,0.7s								
CTBH	**Cotabato--PC H**	**6.62**	**345**	⇓*e*P			**Pn**	**16 52 42.6**	**+1.8**
CTBH				*i* S			**Sn**	**16 53 54.7**	**-1.1**
BUKP	**Musuan**	**7.10**	**353**	*e*P			**Pn**	**16 52 50.2**	**+2.8**
BIPH	**Bislig**	**7.36**	**3**	⇓*e*P			**Pn**	**16 52 52.4**	**+1.5**
BIPH								01 20 00.3	
PAGZ	**Pagadian**	**7.47**	**340**	*e*P			**Pn**	**16 52 53.5**	**+1.0**
CGP	**Cagayan de Oro**	**7.72**	**351**	⇓*e*P			**Pn**	**16 53 08.0**	**+12**
KAPI	**Kappang**	**8.47**	**227**	Pn			**Pn**	**16 53 09.1**	**+2.9**
	4μm,1.3s,SNR=38								
TARAI	**Tarakan**	**8.76**	**287**	P			**Pn**	**16 53 17.7**	**+7.5**
	763nm,1.1s								
TSM	**Tawau**	**8.81**	**293**	⇑P			**Pn**	**16 53 13.0**	**+2.2**
TBP	**Tagbilaran**	**9.09**	**347**	*e*P			**Pn**	**16 53 22.1**	**+7.4**
TLE	**Tual**	**9.29**	**133**	P			**Pn**	**16 53 25.0**	**+7.5**
	9μm,1.1s								
MSLP	**Maasin**	**9.35**	**353**	*e*P			**Pn**	**16 53 22.8**	**+4.5**
LLP	**Lapu-Lapu**	**9.67**	**348**	*e*P			**Pn**	**16 53 22.1**	**-0.6**
SDKM	**Sandakan**	**10.00**	**299**	⇑P			**Pn**	**16 53 30.8**	**+3.6**
OCLP	**Ormoc**	**10.29**	**352**	*e*P			**Pn**	**16 53 38.3**	**+7.2**
GUIM	**Jordan**	**10.34**	**341**	*e*P			**Pn**	**16 53 35.1**	**+3.3**
KDM	**Kudat**	**10.96**	**304**	⇑P			**Pn**	**16 53 45.8**	**+5.5**
KKM	**Kota Kinabalu**	**11.05**	**298**	*e*P			**Pn**	**16 53 45.1**	**+3.6**
KKM	**Kota Kinabalu**	**11.05**	**298**	⇓P			**Pn**	**16 53 45.8**	**+4.2**
CUYO	**Cuyo Island**	**11.14**	**334**	*e*P			**Pn**	**16 53 45.6**	**+2.8**
BATI	**Kupang**	**11.16**	**192**	Pn			**Pn**	**16 53 48.3**	**+5.2**
	12nm,0.3s,baz=13,slow=1.8,SNR=36								
BATP	**Bataraza**	**11.38**	**315**	*e*P			**Pn**	**16 53 47.0**	**+0.9**
CNP	**Catarman**	**11.72**	**354**	*e*P			**Pn**	**16 53 55.6**	**+4.9**
WSI	**Waingapu**	**11.82**	**208**	⇓*e*P			**Pn**	**16 54 02.0**	**+10**
ENPP	**El Nido**	**12.22**	**328**	*e*P			**Pn**	**16 53 59.3**	**+1.7**
BUSP	**Coron**	**12.53**	**333**	*e*P			**Pn**	**16 54 09.8**	**+8.0**
PVCP	**Virac**	**12.85**	**352**	⇓*e*P			**Pn**	**16 54 09.7**	**+3.4**
PVCP	**Virac**	**12.85**	**352**	*e*P			**Pn**	**16 54 09.8**	**+3.5**
BTM	**Bintulu**	**13.10**	**281**	⇑P			**Pn**	**16 54 13.3**	**+3.7**
SBUM	**Sibu**	**13.84**	**277**	⇓P			**Pn**	**16 54 22.9**	**+3.1**
LUBP	**Lubang**	**14.05**	**336**	*e*P			**Pn**	**16 54 29.6**	**+7.0**
KMMI	**Kalianget**	**14.29**	**237**	P			**Pn**	**16 54 33.7**	**+7.9**
	1μm,1.3s								
POLP	**Polillo Island**	**14.41**	**344**	*e*P			**Pn**	**16 54 32.0**	**+4.4**
KAKA	**Kakadu**	**14.87**	**155**	⇑*i*P			**Pn**	**16 54 31.9**	**-1.9**
	277nm,0.8s								
BALP	**Baler**	**15.48**	**344**	*e*P			**Pn**	**16 54 44.7**	**+2.9**
KSM	**Kuching**	**15.67**	**273**	*e*P			**Pn**	**16 54 46.2**	**+1.8**
KSM	**Kuching**	**15.67**	**273**	⇑P			**Pn**	**16 54 46.7**	**+2.4**
SCZP	**Santa Cruz**	**16.05**	**338**	*e*P			**Pn**	**16 54 53.4**	**+4.2**
KRKI	**Karangkates**	**16.14**	**236**	P			**Pn**	**16 54 57.4**	**+7.0**
	1μm,1.0s								
BCPH	**Baguio City Da**	**16.38**	**341**	⇓*i*P			**Pn**	**16 54 55.6**	**+2.2**
CAUP	**Cauayan**	**16.57**	**346**	*e*P			**Pn**	**16 54 57.3**	**+1.5**
BOLP	**Bolinao**	**16.61**	**339**	*e*P			**Pn**	**16 54 56.9**	**+0.6**
ABRA	**Dolores**	**17.54**	**343**	*e*P			**Pn**	**16 55 07.9**	**-0.1**
APYP	**Conner**	**17.59**	**345**	*e*P			**Pn**	**16 55 08.6**	**-0.1**
BJII	**Banjamegara**	**18.12**	**243**	P			**Pn**	**16 55 17.4**	**+2.2**
	562nm,1.7s								
BJII	**Banjamegara**	**18.12**	**243**	⇑*i*P			**Pn**	**16 55 19.2**	**+4.0**
BJII				*i* S			**Sn**	**16 58 32.9**	**-4.2**
TPI	**Tanjungpandan**	**18.65**	**259**	P			**Pn**	**16 55 21.9**	**+0.2**
	86nm,1.1s								
FITZ	**Fitzroy Crossi**	**18.77**	**181**	⇑*i*P			**Pn**	**16 55 22.6**	**-0.5**
	162nm,0.8s								
FITZ				*i* S			**Sn**	**16 58 44.8**	**-8.0**
FITZ	**Fitzroy Crossi**	**18.77**	**181**	P			**Pn**	**16 55 22.9**	**-0.2**
	1.8nm,0.3s,baz=16,slow=11,SNR=71								
FITZ				S			**Sn**	**16 58 51.9**	**-1.0**
	0.2nm,0.3s,baz=180,slow=20,SNR=3.0								
LEM	**Lembang**	**19.81**	**247**	P			**Pn**	**16 55 36.8**	**+1.1**
	351nm,1.1s								
KLI	**Kotabumi**	**21.83**	**255**	P			**P**	**16 56 01.4**	**+5.5**
	226nm,0.9s,mb5.6								
MYKOM	**Kota Tinggi**	**22.14**	**273**	⇑P			**P**	**16 56 01.0**	**+1.7**
WRA	**Warramunga Arr**	**22.18**	**159**	P			**P**	**16 55 59.0**	**-0.5**
	239nm,0.6s,mb5.8,baz=338,slow=11,SNR=648								
WRA				S			**S**	**17 00 01.8**	**-1.4**
	52nm,1.1s,baz=334,slow=21,SNR=7.9								
WB2	**Warramunga Arr**	**22.18**	**159**	⇑*i*P			**P**	**16 55 59.1**	**-0.5**
WB2				*e*S			**S**	**16 59 59.6**	**-3.7**
WB2				*e*SCS			ScS	17 07 17.8	-0.3
GUMO	**Guam**	**22.62**	**55**	*e*P			**P**	**16 56 04.1**	**-0.3**
	98nm,0.6s,mb5.4								
GUMO				LR			LR		
	comp=Z,2μm,22.0s,MS4.5								
GUMO	**Guam**	**22.62**	**55**	*e*P			**P**	**16 56 04.1**	**-0.3**
GUMO				pmax			pmax		
	comp=Z,98nm,0.6s,mb5.4								
GUMO				MLR			MLR		
	comp=Z,2μm,22.0s,MS4.5								
MBWA	**Marble Bar**	**22.65**	**195**	*e*P			**P**	**16 56 04.4**	**-0.1**
	comp=Z,139nm,1.0s,mb5.3								
MBWA				LR			LR		
	comp=Z,1μm,20.0s,MS4.4								
KGM	**Kluang**	**22.68**	**273**	⇑P			**P**	**16 56 06.9**	**+1.9**
XMIS	**Christmas Isla**	**23.11**	**240**	*e*P			**P**	**16 56 09.0**	**-0.4**
KTGM	**Kuala Trenggan**	**23.24**	**282**	⇓P			**P**	**16 56 12.2**	**+1.3**
KSI	**Kapahiang**	**23.78**	**259**	P			**P**	**16 56 17.0**	**+0.8**
	comp=Z,213nm,0.7s,mb5.7								
QIZ	**Qiongzhong**	**24.06**	**320**	P			**P**	**16 56 18.5**	**-0.2**
QIZ				S			**S**	**17 00 33.8**	**-1.5**
QIZ				AMB			AMB		
	comp=Z,53nm,1.0s,mb4.9								
QIZ				AMB			AMB		
	comp=Z,361nm,4.5s								
QIZ				LR			LR		
	comp=N,1μm,16.7s								
QIZ				LR			LR		
	comp=Z,2μm,21.8s								
QIZ	**Qiongzhong**	**24.06**	**320**	*e*P			**P**	**16 56 17.3**	**-1.3**
	comp=Z,55nm,0.8s,mb5.0								
QIZ				LR			LR		
	comp=Z,2μm,19.0s,MS4.5								
YHNB	**Yeheng**	**24.15**	**350**	*e*P			**P**	**16 56 17.5**	**-2.0**
TATO	**Taipei**	**24.43**	**350**	*e*P			**P**	**16 56 23.9**	**+1.9**
	comp=Z,64nm,0.8s,mb5.1								
TATO				LR			LR		
	comp=Z,1μm,21.0s,MS4.3								
FRIM	**Kepong**	**24.45**	**276**	⇓P			**P**	**16 56 23.1**	**+0.7**
QZH	**Quanzhou**	**25.05**	**344**	⇓*i*P			**P**	**16 56 28.5**	**+0.9**
QZH				S			**S**	**17 00 48.0**	**-3.2**
QZH				AMB			AMB		
	comp=Z,120nm,0.8s,mb5.5								
QZH				AMB			AMB		
	comp=Z,1μm,4.5s								
QZH				LR			LR		
	comp=N,3μm,19.0s,MS4.9								
QZH				LR			LR		
	comp=E,2μm,15.0s,MS4.9								
QZH				LR			LR		
	comp=Z,5μm,30.2s								
IPM	**Ipoh**	**25.18**	**279**	⇑P			**P**	**16 56 30.4**	**+1.4**
GZH	**Guangzhou**	**25.33**	**332**	P			**P**	**16 56 32.5**	**+2.2**
GZH				S			**S**	**17 00 58.0**	**+2.3**
GZH				LR			LR		
	comp=N,1μm,23.1s,MS4.5								
GZH				LR			LR		
	comp=E,1μm,23.1s,MS4.5								
GZH				LR			LR		
ASAR	**Alice Springs**	**25.50**	**163**	P			**P**	**16 56 32.2**	**+0.4**
	comp=Z,2μm,20.0s,MS4.6								
ASAR				PcP			PcP	17 00 04.0	+0.6
	comp=Z,125nm,0.7s,mb5.6,baz=334,slow=7.1,SNR=334								
ASAR				S			**S**	**17 00 59.3**	**+0.9**
	comp=Z,8.6nm,0.8s,baz=338,slow=2.7,SNR=4.6								
PPI	**Padang Panjang**	**25.60**	**267**	P			**P**	**16 56 31.4**	**-1.5**
	comp=Z,12nm,0.9s,baz=351,slow=21,SNR=5.8								
KULM	**Kulim**	**25.67**	**281**	*e*P			**P**	**16 56 32.5**	**-1.0**
KULM	**Kulim**	**25.67**	**281**	⇑P			**P**	**16 56 33.7**	**+0.3**
JOW	**Kunigami**	**25.99**	**5**	P			**P**	**16 56 37.0**	**+0.8**
	comp=Z,148nm,0.6s,mb5.7,baz=203,slow=6.8,SNR=23								
SNG	**Songkhla**	**26.06**	**285**	P			**P**	**16 56 29.0**	**-8.0**
PSI	**Prapat**	**27.11**	**275**	P			**P**	**16 56 45.8**	**-0.6**
	comp=Z,63nm,0.8s,mb5.2,baz=94,slow=4.8,SNR=26								
PSI				ScP			ScP	17 03 48.4	+1.4
	comp=Z,6.9nm,0.8s,baz=144,slow=9.7,SNR=5.5								
KKTK	**Khon Kaen**	**27.55**	**305**	P			**P**	**16 56 50.0**	**-0.4**
NNT	**Nongplab**	**28.53**	**295**	P			**P**	**16 57 02.2**	**+3.1**
CTA	**Charters Tower**	**28.73**	**137**	*e*P			**P**	**16 57 01.6**	**+0.7**
	comp=Z,14nm,0.8s,mb4.7								
CTA	**Charters Tower**	**28.73**	**137**	*e*P			**P**	**16 57 01.6**	**+0.7**
CTA				pmax			pmax		
	comp=Z,14nm,0.8s								
CTA	**Charters Tower**	**28.73**	**137**	P			**P**	**16 57 01.6**	**+0.7**
	comp=Z,12nm,0.8s,mb4.7,baz=310,slow=11,SNR=15								
CTA				ScP			ScP	17 03 53.9	+2.1
	comp=Z,21nm,1.0s,baz=0.2,slow=6.7,SNR=3.5								
CTAO	**Charters Tower**	**28.73**	**137**	*e*P			**P**	**16 57 01.5**	**+0.6**
	comp=Z,40nm,1.0s,mb5.1								
CTAO				LR			LR		
	comp=Z,1μm,19.0s,MS4.5								
CTAO	**Charters Tower**	**28.73**	**137**	P			**P**	**16 57 01.8**	**+0.9**
CTAO				pmax			pmax		
	comp=Z,40nm,1.0s,mb5.1								
CBIJ	**Chichi jima**	**30.44**	**29**	LR			LR	17 07 54.3	
	comp=Z,832nm,18.1s,MS4.4,baz=135,slow=33								
SSE	**Sheshan**	**30.48**	**352**	P			**P**	**16 57 18.8**	**+2.6**
SSE				S			**S**	**17 02 19.5**	**+2.8**
SSE				AMB			AMB		
	comp=Z,18nm,0.9s,mb4.8								
SSE				AMB			AMB		
	comp=Z,59nm,3.7s								
SSE				LR			LR		
	comp=N,364nm,18.6s,MS4.6								
SSE				LR			LR		
	comp=E,1μm,18.6s,MS4.6								
SSE				LR			LR		
	comp=Z,1μm,16.8s,MS4.6								
BSI	**Banda Aceh**	**30.97**	**279**	P			**P**	**16 57 20.5**	**-0.4**
	comp=Z,65nm,1.1s,mb5.4								
BDT	**Bhumibol Dam**	**31.17**	**303**	P			**P**	**16 57 22.5**	**0.0**
FORT	**Forrest**	**31.45**	**177**	*e*P			**P**	**16 57 25.2**	**+0.4**
	comp=Z,344nm,0.7s								
GYA	**Guiyang**	**31.57**	**326**	⇑*i*P			**P**	**16 57 28.0**	**+2.1**
GYA				AP			pP	16 57 31.5	-0.2
GYA				XP			sP	16 57 35.8	+1.8
GYA				PP			PP	16 58 32.8	-4.6
GYA				S			**S**	**17 02 36.3**	**+2.5**
GYA				AMB			AMB		
	comp=Z,40nm,0.8s,mb5.3								
GYA				AMB			AMB		
	comp=Z,240nm,5.4s								
GYA				LR			LR		
	comp=N,4μm,17.9s,MS5.2								
GYA				LR			LR		
	comp=E,2μm,18.2s,MS5.2								
GYA				LR			LR		
	comp=Z,1μm,18.5s,MS4.7								
NJ2	**Nanjing**	**31.81**	**348**	*e*P			**P**	**16 57 28.5**	**+0.5**
NJ2				AP			pP	16 57 32.5	-1.2
NJ2				XP			sP	16 57 35.5	-0.6
NJ2				PP			PP	16 58 33.8	-6.3
NJ2				S			**S**	**17 02 36.5**	**-1.0**
NJ2				AMB			AMB		
	comp=Z,320nm,0.8s								
NJ2				AMB			AMB		
	comp=Z,240nm,5.0s								
NJ2				LR			LR		
	comp=N,350nm,13.5s,MS4.5								
NJ2				LR			LR		
	comp=E,640nm,16.5s,MS4.5								
NJ2				LR			LR		
	comp=Z,350nm,14.2s								
CHRT	**Chiangrai**	**31.88**	**308**	⇑P			**P**	**16 57 29.5**	**+0.7**
	comp=Z,182nm,0.9s,mb5.9								
CHG	**Chiang Mai**	**32.00**	**306**	⇓P			**P**	**16 57 29.3**	**-0.5**
	comp=Z,29nm,1.0s,mb5.1								
CHTO	**Chiang Mai**	**32.00**	**306**	*e*P			**P**	**16 57 29.4**	**-0.4**
	comp=Z,24nm,0.9s,mb5.0								
CHTO				LR			LR		
	comp=Z,1μm,19.0s,MS4.5								
CHTO	**Chiang Mai**	**32.00**	**306**	*e*P			**P**	**16 57 29.4**	**-0.4**
CHTO				pmax			pmax		
	comp=Z,24nm,0.9s,mb5.0								
CHTO				MLR			MLR		
	comp=Z,1μm,19.0s,MS4.5								
CHTO	**Chiang Mai**	**32.00**	**306**	P			**P**	**16 57 29.5**	**-0.2**
SNR=16									
CHTO	**Chiang Mai**	**32.00**	**306**	P			**P**	**16 57 29.5**	**-0.2**
SNR=16									
JNU	**Nakatsue**	**32.49**	**8**	P			**P**	**16 57 33.0**	**-0.9**
	comp=Z,87nm,0.9s,mb5.6,baz=170,slow=8.0,SNR=27								
KMI	**Kunming**	**33.00**	**319**	P			**P**	**16 57 39.0**	**+0.5**
KMI				AP			pP	16 57 42.3	-1.9
KMI				PP			PP	16 58 48.5	-4.8
KMI				S			**S**	**17 02 55.3**	**-0.9**
KMI				AMB			AMB		
	comp=Z,43nm,1.4s,mb5.2								
KMI				AMB			AMB		
	comp=Z,223nm,3.4s								
KMI				LR			LR		
	comp=N,931nm,20.6s,MS4.6								
KMI				LR			LR		
	comp=E,947nm,19.8s,MS4.6								
KMI				LR			LR		
	comp=Z,2μm,19.8s,MS4.8								
KLBR	**Kellerberrin**	**33.13**	**193**	*e*P			**P**	**16 57 39.7**	**+0.2**
	comp=Z,90nm,1.1s,mb5.6								
MUN	**Mundaring**	**33.87**	**195**	*e*P			**P**	**16 57 46.3**	**+0.3**
NWAO	**Narrogin (SRO)**	**34.53**	**193**	*e*P			**P**	**16 57 55.1**	**+3.4**
	comp=Z,33nm,0.7s,mb5.4								
NWAO				LR			LR		
	comp=Z,824nm,19.0s,MS4.5								
NWAO	**Narrogin (SRO)**	**34.53**	**193**	*e*P			**P**	**16 57 55.1**	**+3.4**
NWAO				pmax			pmax		
	comp=Z,33nm,0.7s								
NWAO				MLR			MLR		
	comp=Z,824nm,19.0s								
HNR	**Honiara**	**35.32**	**108**	*e*P			**P**	**16 58 00.4**	**+1.6**
	comp=Z,413nm,1.0s								
HNR				LR			LR		
	comp=Z,1μm,21.0s,MS4.6								
HNR	**Honiara**	**35.32**	**108**	*e*P			**P**	**16 58 00.4**	**+1.6**
HNR				pmax			pmax		
	comp=Z,413nm,1.0s								
HNR				MLR			MLR		
	comp=Z,1μm,21.0s,MS4.6								
HNR	**Honiara**	**35.32**	**108**	P			**P**	**16 57 59.7**	**+0.9**
	comp=Z,318nm,0.9s,baz=254,slow=2.3,SNR=6.2								
EIDS	**Eidsvold**	**35.58**	**139**	*e*P			**P**	**16 58 00.4**	**-0.5**
	comp=Z,15nm,0.9s,mb4.9								
STKA	**Stephens Creek**	**35.70**	**157**	*e*P			**P**	**16 58 02.0**	**+0.2**
	comp=Z,97nm,0.8s,mb5.8								
STKA				*e*S			**S**	**17 03 34.1**	**-3.6**
STKA	**Stephens Creek**	**35.70**	**157**	P			**P**	**16 58 02.3**	**+0.5**
	comp=Z,112nm,0.7s,mb5.9,baz=328,slow=8.5,SNR=216								
INCN	**Inchon**	**36.52**	**1**	P			**P**	**16 58 07.8**	**-1.0**
	comp=Z,15nm,0.5s,mb5.1								
INCN				LR			LR		
	comp=Z,569nm,20.0s,MS4.3								
KSRS	**Korea Array**	**36.53**	**3**	P			**P**	**16 58 09.3**	**+0.5**
	comp=Z,14nm,0.8s,mb4.8,baz=181,slow=9.6,SNR=38								
KSRS				PcP			PcP	17 00 33.2	+1.0
	comp=Z,4.6nm,0.7s,baz=185,slow=3.0,SNR=4.6								
XAN	**Xi'an**	**36.73**	**336**	P			**P**	**16 58 08.8**	**-1.8**
XAN				AMB			AMB		
	comp=Z,45nm,1.4s,mb5.1								
XAN				AMB			AMB		
	comp=Z,82nm,6.6s								
XAN				LR			LR		
	comp=N,355nm,21.7s,MS4.6								
XAN				LR			LR		
	comp=E,1μm,25.0s,MS4.6								
XAN				LR			LR		
	comp=Z,906nm,21.7s,MS4.5								
MJAR	**Matsushiro Arr**	**37.34**	**16**	P			**P**	**16 58 15.5**	**-0.2**
	comp=Z,31nm,0.6s,mb5.3,baz=182,slow=8.9,SNR=32								
MJAR				LR			LR	17 11 36.4	
	comp=Z,652nm,20.5s,MS4.4,baz=205,slow=33								
MAJO	**Matsushiro**	**37.34**	**16**	*e*P			**P**	**16 58 14.4**	**-1.4**
	comp=Z,36nm,0.7s,mb5.3								
MAJO				LR			LR		
	comp=Z,799nm,21.0s,MS4.5								
MAJO	**Matsushiro**	**37.34**	**16**	P			**P**	**16 58 14.9**	**-0.8**
MAJO				pmax			pmax		
	comp=Z,36nm,0.7s,mb5.3								
MAT	**Matsushiro**	**37.34**	**16**	P			**P**	**16 58 14.3**	**-1.4**
MAT				S			**S**	**17 03 56.0**	**-6.7**
DL2	**Dalian**	**38.14**	**355**	P			**P**	**16 58 22.8**	**+0.3**
DL2				S			**S**	**17 04 14.5**	**-0.3**
DL2				AMB			AMB		
	comp=Z,80nm,0.8s,mb5.5								
DL2				AMB			AMB		
	comp=Z,190nm,3.7s								
DL2				LR			LR		
	comp=N,320nm,16.0s,MS4.4								
DL2				LR			LR		
	comp=E,270nm,13.0s,MS4.4								
DL2				LR			LR		
	comp=Z,540nm,18.9s								
TIY	**Taiyuan**	**38.80**	**343**	P			**P**	**16 58 32.8**	**+4.7**
TIY				S			**S**	**17 04 18.5**	**-6.3**
TIY				AMB			AMB		
	comp=Z,74nm,0.4s,mb5.8								
TIY				LR			LR		
	comp=N,281nm,9.2s								
TIY				LR			LR		
	comp=E,262nm,9.1s								
TIY				LR			LR		
	comp=Z,1μm,35.0s,MS4.5								
IMP	**Imphal**	**39.09**	**310**	*e*P			**P**	**16 58 29.0**	**-1.7**
ARMA	**Armidale**	**39.49**	**144**	⇓*i*P			**P**	**16 58 34.7**	**+0.8**
BJT	**Baijiatuan**	**40.05**	**348**	*e*P			**P**	**16 58 36.7**	**-1.8**
	comp=Z,54nm,0.6s,mb5.5								
BJT				LR			LR		
	comp=Z,937nm,22.0s,MS4.6								
BJT	**Baijiatuan**	**40.05**	**348**	*e*P			**P**	**16 58 36.7**	**-1.8**
BJT				pmax			pmax		
	comp=Z,54nm,0.6s								
BJT				MLR			MLR		
	comp=Z,937nm,22.0s								
BJI	**Beijing**	**40.07**	**348**	P			**P**	**16 58 36.8**	**-1.8**
BJI				PP			PP	17 00 11.5	+0.5
BJI				SS			SS	17 07 45.5	+3.9
BJI				AMB			AMB		
	comp=Z,35nm,1.0s,mb5.0								
BJI				AMB			AMB		
	comp=Z,171nm,5.3s								
BJI				LR			LR		
	comp=N,736nm,20.6s								
BJI				LR			LR		
	comp=E,474nm,26.0s								
BJI				LR			LR		
	comp=Z,858nm,23.8s,MS4.5								
LZH	**Lanzhou**	**40.69**	**332**	⇓P			**P**	**16 58 43.0**	**-0.8**
LZH				AP			pP	16 58 47.5	-2.1
LZH				XP			sP	16 58 50.3	-1.6
LZH				PP			PP	17 00 20.5	+2.8
LZH				PCP			PcP	17 00 45.0	-0.3
LZH				SCP			ScP	17 04 33.0	-1.1
LZH				PCS			PcS	17 04 35.0	-1.0
LZH				S			**S**	**17 04 53.3**	**+0.2**
LZH				SCS			ScS	17 08 46.8	-1.8
LZH				AMB			AMB		
	comp=Z,108nm,1.2s,mb5.3								
LZH				AMB			AMB		
	comp=Z,385nm,5.4s								
LZH				LR			LR		
	comp=N,3μm,14.3s								
LZH				LR			LR		
	comp=Z,4μm,17.2s,MS5.3								
SHL	**Shillong**	**41.08**	**310**	*i* P			**P**	**16 58 47.0**	**-0.2**
	comp=Z,29nm,0.6s,mb5.1								
SHL				*i* x			x	17 04 40.0	
HHC	**Hu-ho-hao-te**	**41.96**	**344**	*e*P			**P**	**16 58 56.3**	**+2.1**
HHC				AP			pP	16 59 00.5	+0.5
HHC				XP			sP	16 59 03.3	+1.0
HHC				PP			PP	17 00 33.0	+1.5
HHC				S			**S**	**17 05 07.8**	**-4.1**
HHC				SS			SS	17 08 16.5	-2.7
HHC				AMB			AMB		
	comp=Z,22nm,0.7s,mb4.9								
HHC				AMB			AMB		
	comp=Z,103nm,4.4s								
HHC				LR			LR		
	comp=N,571nm,15.5s,MS4.7								
HHC				LR			LR		
	comp=E,528nm,14.3s,MS4.7								
HHC				LR			LR		
	comp=Z,1μm,27.4s								
CNB	**Canberra Magne**	**42.04**	**151**	*e*P			**P**	**16 58 56.1**	**+1.2**
	comp=Z,33nm,1.0s,mb4.9								
CN2	**Changchun**	**42.83**	**359**	*e*P			**P**	**16 59 01.5**	**+0.3**
CN2				*e*XP			sP	16 59 08.5	-0.8
CN2				*e*S			**S**	**17 05 26.0**	**+1.

GTA AMB AMB
comp=Z,19nm,0.9s,mb4.9
GTA AMB AMB
comp=Z,94nm,4.2s
GTA LR LR
comp=N,1µm,20.2s,MS4.9
GTA LR LR
comp=E,802nm,16.0s,MS4.9
GTA LR LR
comp=Z,1µm,20.2s,MS4.9
DZM Mont Dzumac 45.54 122 P **P 16 59 23.5 +0.2**
comp=Z,19nm,1.0s,mb5.0,baz=306,slow=16,SNR=8.3
PALK Pallekele 45.58 279 *e*P **P 16 59 22.0 -1.7**
comp=Z,15nm,0.8s,mb5.0
PALK LR LR
comp=Z,750nm,21.0s,MS4.6
ASAJ Asahikawa 45.61 17 P **P 16 59 22.9 -0.6**
comp=Z,43nm,0.8s,mb5.4,baz=231,slow=12,SNR=15
JIRN Jiri 46.53 309 *e*P **P 16 59 30.3 -0.8**
comp=Z,57nm,0.4s,mb5.9
KKN Kakani 47.31 308 *e*P **P 16 59 35.8 -1.3**
comp=Z,74nm,0.8s,mb5.7
TAU Tasmania Unive 47.55 159 *e*P **P 16 59 39.6 +1.0**
comp=Z,21nm,0.8s,mb5.2
TAU LR LR
comp=Z,583nm,21.0s,MS4.5
TAU Tasmania Unive 47.55 159 *e*P **P 16 59 39.7 +1.0**
TAU pmax pmax
comp=Z,21nm,0.8s,mb5.2
TAU MLR MLR
comp=Z,583nm,21.0s,MS4.5
BLSP Bilaspur 47.63 300 *e*P **P 16 59 39.1 -0.6**
BLSP *ex* x 16 59 43.1
comp=Z,84nm,1.8s
GKN Gorkha 47.91 308 *e*P **P 16 59 40.4 -1.4**
comp=Z,166nm,1.1s,mb6.0
HABR Khabarovsk 48.14 8 *e*P **P 16 59 42.6 -0.6**
HABR *e* 17 01 33.9
HABR *e*S **S 17 06 40.7 -0.4**
HABR *e* 17 09 33.1
YSS Yuzh-Sakhalins 48.26 15 *e*P **P 16 59 45.0 +0.9**
comp=Z,57nm,1.2s,mb5.5
YSS LR LR
comp=Z,845nm,20.0s,MS4.7
YSS Yuzh-Sakhalins 48.26 15 P **P 16 59 46.5 +2.4**
YSS pmax pmax
comp=Z,57nm,1.2s,mb5.5
KLR Kul'dur 48.51 5 *e*P **P 16 59 42.4 -3.6**
KLR *e*S **S 17 06 44.0 -2.3**
KLR pmax pmax
comp=Z,56nm,1.0s,mb5.5
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,1µm,13.0s,MS5.0
HIA Hailar 48.59 355 *e*P **P 16 59 46.3 -0.3**
comp=Z,102nm,1.0s,mb5.8
HIA LR LR
comp=Z,700nm,19.0s,MS4.7
HIA Hailar 48.59 355 *e*P **P 16 59 46.3 -0.3**
HIA pmax pmax
comp=Z,102nm,1.0s
HIA MLR MLR
comp=Z,700nm,19.0s
KOLN Koldanda 48.63 307 *e*P **P 16 59 46.3 -1.0**
comp=Z,224nm,0.7s
ALBI Allahabad 49.08 303 *e*P **P 16 59 48.0 -2.8**
TRD Trivandrum 49.40 280 *e*P **P 16 59 51.7 -1.8**
TRD *ex* x 16 59 57.3
comp=Z,40nm,0.9s
HYB Hyderabad 49.46 292 *e*P **P 16 59 52.0 -1.8**
comp=Z,63nm,0.6s,mb5.8
HYB Hyderabad 49.46 292 *e*P **P 16 59 52.0 -1.8**
HYB pmax pmax
comp=Z,63nm,0.6s,mb5.8
HYB Hyderabad 49.46 292⇓ *i*P **P 16 59 52.0 -1.8**
comp=Z,63nm,0.6s,mb5.8
HYB *e* pP 16 59 58.0 -1.8
HYB *e* 17 00 29.0
HYB *e*S **S 17 06 58.0 -2.6**
ULN Ulaanbaatar 49.68 343 *e*P **P 16 59 53.8 -1.2**
comp=Z,36nm,0.8s,mb5.5
ULN LR LR
comp=Z,568nm,22.0s,MS4.5
ULN Ulaanbaatar 49.68 343 *e*P **P 16 59 53.8 -1.2**
ULN pmax pmax
comp=Z,36nm,0.8s,mb5.5
ULN MLR MLR
comp=Z,568nm,22.0s,MS4.5
ULN Ulaanbaatar 49.68 343 ⇓P **P 16 59 54.8 -0.2**
SNR=15
ULN Ulaanbaatar 49.68 343 ⇓P **P 16 59 54.8 -0.2**
SNR=15
SONM Songino Array 49.85 343 P **P 16 59 55.7 -0.6**
comp=Z,32nm,0.9s,mb5.4,baz=154,slow=8.1,SNR=35
LGTI Lohaghat 52.01 308 *e*P **P 17 00 10.5 -2.4**
BHPL Bhopal 52.10 299 *e*P **P 17 00 12.7 -1.0**
BHPL *ex* x 17 00 17.7
comp=Z,70nm,1.1s
CIT Chita 52.11 350 *e*P **P 17 00 13.8 +0.6**
CIT *e* 17 00 23.2
CIT *e* 17 00 26.5
CIT *e* 17 01 27.4
CIT pmax pmax
comp=Z,235nm,1.8s,mb5.8
ZAK Zakamensk 53.05 342 *e*P **P 17 00 19.3 -0.9**
ZAK *e* 17 01 28.3
ZAK *e* 17 10 06.5
ZAK pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
ZAK pmax pmax
comp=Z,12nm,1.1s,mb4.7
KAD Karad 53.49 291 *e*P **P 17 00 22.7 -1.4**
KAD *ex* x 17 00 26.5
comp=Z,56nm,1.0s
FUNA Funafuti 53.84 101 P **P 17 00 25.2 -1.5**
comp=Z,120nm,1.0s,mb5.8
FUNA LR LR
comp=Z,7µm,19.0s,MS5.7
POO Poona 54.07 292⇑ *i*P **P 17 00 26.0 -2.3**
comp=Z,50nm,1.0s,mb5.4
POO *e*P 17 00 27.1
POO AMb AMB 17 00 31.8
comp=Z,47nm,0.9s,mb5.4
TLY Talaya 54.09 343 P **P 17 00 27.1 -0.7**
comp=Z,249nm,0.7s,SNR=6.1
TLY Talaya 54.09 343 *e*P **P 17 00 27.5 -0.3**
comp=Z,30nm,0.8s,mb5.3
TLY LR LR
comp=Z,440nm,20.0s,MS4.5
TLY Talaya 54.09 343 *e*P **P 17 00 27.9 +0.1**
TLY *e* 17 01 36.3
TLY *e*PPP 17 03 33.3
TLY *e*S **S 17 07 56.3 -7.0**
TLY *e* 17 10 14.4
TLY pmax pmax
comp=Z,30nm,0.8s,mb5.3
TLY Talaya 54.09 343 P **P 17 00 27.9 +0.1**
SNR=15
TLY Talaya 54.09 343 P **P 17 00 27.9 +0.1**
SNR=15
DDI Dehra Dun 54.10 308 *e*P **P 17 00 26.8 -1.5**
IRK Irkutsk 54.41 344⇓ *i*P **P 17 00 32.8 +2.7**
IRK pmax pmax
comp=Z,55nm,1.3s,mb5.3
WMQ Urumqi 54.72 327 P **P 17 00 32.0 -0.5**
WMQ AP pP 17 00 36.5 -2.0
WMQ XP sP 17 00 39.0 -1.8
WMQ PCP PcP 17 01 35.0 -0.1
WMQ PP PP 17 02 36.0 +0.7
WMQ SCP ScP 17 05 31.5 -1.4
WMQ S **S 17 08 09.5 -2.6**
WMQ SCS ScS 17 10 17.5 -3.5
WMQ AMB AMB
comp=Z,90nm,0.8s,mb5.8
WMQ AMB AMB
comp=Z,241nm,3.7s
WMQ LR LR
comp=N,1µm,23.4s,MS4.9
WMQ LR LR
comp=E,779nm,23.4s,MS4.9
WMQ LR LR
comp=Z,736nm,21.7s,MS4.7
MOY Mondy 54.89 341 *e*P **P 17 00 34.1 +0.5**
MOY pmax pmax
comp=Z,52nm,1.1s,mb5.5
SDNR Sundarnagar 55.43 308 *e*P **P 17 00 38.0 +0.1**
AJM Ajmer 55.52 302 *e*P **P 17 00 37.1 -1.6**
AJM AMb AMB 17 00 42.5
comp=Z,48nm,1.1s,mb5.5
NRGR Nerungri 55.71 359 *e*P **P 17 00 42.5 +3.1**
CLNS Chul'man 55.88 359 *e*P **P 17 00 41.0 +0.3**
CLNS *e**PP pP 17 00 46.5 -0.2
CLNS *e* 17 01 41.2
CLNS *e* 17 02 45.5
CLNS *e*S **S 17 08 22.1 -5.1**
CLNS *e*SS SS 17 12 06.5 -6.7
CLNS pmax pmax
comp=Z,81nm,0.8s,mb5.8
CLNS pmax pmax
comp=N,44nm,0.9s
CLNS pmax pmax
comp=E,16nm,0.7s
CLNS pmax pmax
comp=Z,16nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,14nm,0.8s
CLNS pmax pmax
comp=E,14nm,0.8s
CLNS smax
comp=E,455nm,12.5s
CLNS smax
comp=Z,67nm,11.4s
CLNS smax
comp=N,115nm,12.5s
CLNS MLR MLR
comp=Z,300nm,16.0s,MS4.5
CLNS MLR MLR
comp=N,200nm,17.0s,MS4.4
CLNS MLR MLR
comp=E,200nm,16.0s,MS4.4
DLH Dalhousie 56.62 309 *e*P **P 17 00 45.0 -1.5**
THN Thein Dam 56.77 309 *e*P **P 17 00 45.8 -1.7**
BOD Bodaibo 57.65 352 *e*P **P 17 00 52.8 -0.5**
BOD pmax pmax
comp=Z,59nm,0.9s,mb5.6
PET Petropavlovsk 58.72 22⇑ *e*P **P 17 01 02.6 +1.8**
PET pmax pmax
comp=Z,436nm,2.8s,mb6.0
MK31 Makanchi Array 59.55 327 *i*P **P 17 01 05.3 -1.4**
MK31 pmax pmax
comp=Z,48nm,0.5s,mb5.8
MKAR Makanchi Array 59.55 327 *i*P **P 17 01 05.5 -1.2**
MKAR pmax pmax
comp=Z,34nm,0.5s
MKAR Makanchi Array 59.55 327 P **P 17 01 05.5 -1.2**
comp=Z,34nm,0.5s,mb5.6,baz=121,slow=7.3,SNR=146
MKAR LR LR 17 27 30.2
comp=Z,980nm,20.8s,MS4.9,baz=118,slow=37
KSH Kashi 59.61 317 *e*P **P 17 01 08.8 +1.5**
KSH *e*AP pP 17 01 18.8 +5.5
KSH *e*XP sP 17 01 22.5 +6.9
KSH *e*PCP PcP 17 01 55.3 +0.9
KSH *e*PP PP 17 03 22.5 +3.5
KSH *e*SCP ScP 17 05 52.5 -2.1
KSH *e*S **S 17 09 16.0 -0.7**
KSH *e*XS sS 17 09 31.3 +4.6
KSH AMB AMB
comp=Z,266nm,1.1s
KSH AMB AMB
comp=Z,1µm,3.1s
KSH LR LR
comp=N,542nm,4.3s
KSH LR LR
comp=E,497nm,5.1s
KSH LR LR
comp=Z,346nm,3.1s
RPZ Rata Peaks 59.83 144 P **P 17 01 08.9 +0.2**
comp=Z,21nm,0.8s,mb5.2,baz=255,slow=2.0,SNR=8.0
RPZ LR LR 17 28 10.1
comp=Z,752nm,18.9s,MS4.8,baz=311,slow=37
ULHL Ulahol 60.72 319 P **P 17 01 14.6 -0.2**
SNR=22
SNZO South Karori 60.80 140 PFAKE 17 01 30.0 +15
SNZO LR LR
comp=Z,1µm,20.0s,MS5.0
URZ Urewera 60.96 135 P **P 17 01 15.3 -1.2**
comp=Z,20nm,0.6s,mb5.4,baz=7.5,slow=4.4,SNR=11
YAK Yakutsk 61.15 2 *e*P **P 17 01 16.8 -0.5**
comp=Z,118nm,0.8s
YAK LR LR
comp=Z,597nm,20.0s,MS4.7
YAK Yakutsk 61.15 2*d* *i*P **P 17 01 17.0 -0.4**
YAK pmax pmax
comp=Z,32nm,0.5s,mb5.7
KZA Kyzart 61.29 319 P **P 17 01 20.5 +1.8**
SNR=27
TKM2 Tokmak 2 61.46 320 *e*P **P 17 01 18.7 -1.1**
comp=Z,48nm,1.0s,mb5.6
TKM2 LR LR
comp=Z,826nm,21.0s,MS4.9
TKM2 Tokmak 2 61.46 320 *e*P **P 17 01 18.7 -1.1**
TKM2 pmax pmax
comp=Z,48nm,1.0s,mb5.6
TKM2 MLR MLR
comp=Z,826nm,21.0s,MS4.9
TKM2 Tokmak 2 61.46 320 P **P 17 01 19.1 -0.8**
SNR=27
MA2 Magadan 61.72 14 *e*P **P 17 01 22.8 +1.5**
comp=Z,52nm,0.8s,mb5.7
MA2 LR LR
comp=Z,612nm,20.0s,MS4.8
MA2 Magadan 61.72 14 *i*P **P 17 01 23.4 +2.1**
MA2 pmax pmax
comp=Z,14nm,0.7s,mb5.2
MA2 MLR MLR
comp=Z,300nm,27.0s,MS4.3
KBK Karagaybulak 61.76 319 P **P 17 01 23.2 +1.3**
SNR=22
UCH Uchtor 61.84 319 *e*P **P 17 01 21.9 -0.5**
comp=Z,85nm,1.2s,mb5.8
UCH LR LR
comp=Z,794nm,22.0s,MS4.8
UCH Uchtor 61.84 319 P **P 17 01 22.3 -0.1**
SNR=30
AAK Ala-Archa 62.04 319 P **P 17 01 22.3 -1.5**
comp=Z,175nm,1.1s,SNR=9.0
AAK Ala-Archa 62.04 319 P **P 17 01 25.1 +1.3**
SNR=17
FRU Bishkek 62.06 319 *e*P **P 17 01 23.5 -0.3**
AML Almayashu 62.34 318 PFAKE 17 01 40.0 +14
AML LR LR
comp=Z,601nm,20.0s,MS4.8
AML Almayashu 62.34 318 P **P 17 01 27.4 +1.6**
SNR=29
EKS2 Erkin-Say 62.52 319 *e*P **P 17 01 26.1 -0.9**
comp=Z,76nm,1.3s,mb5.7
EKS2 LR LR
comp=Z,613nm,20.0s,MS4.8
EKS2 Erkin-Say 62.52 319 P **P 17 01 26.6 -0.4**
SNR=27
ZALV Zalesovo Beam 62.87 334 P **P 17 01 27.1 -1.9**
comp=Z,14nm,0.7s,mb5.2,baz=118,slow=6.2,SNR=35
ZAL Zalesovo 62.87 334 P **P 17 01 27.2 -1.8**
KURK Kurchatov 63.82 329 P **P 17 01 34.3 -1.1**
comp=Z,957nm,0.5s,SNR=11
KURK Kurchatov 63.82 329 *e*P **P 17 01 33.8 -1.6**
comp=Z,147nm,0.8s
KURK LR LR
comp=Z,385nm,20.0s,MS4.6
KURK Kurchatov 63.82 329 *e*P **P 17 01 33.8 -1.6**
KURK pmax pmax
comp=Z,147nm,0.8s
KURK MLR MLR
comp=Z,385nm,20.0s,MS4.6
KURK Kurchatov 63.82 329 P **P 17 01 34.4 -1.0**
SNR=51
KURK Kurchatov 63.82 329 P **P 17 01 34.4 -1.0**
SNR=51
NVS Novosibirsk 64.15 334 *i*P **P 17 01 34.9 -2.6**
NVS *e*S **S 17 10 07.6 -6.0**
NVS pmax pmax
comp=Z,50nm,1.1s,mb5.5
NVS pmax pmax
comp=N,49nm,1.7s
NVS pmax pmax
comp=E,38nm,1.6s
NVS smax
comp=E,35nm,2.2s
NVS smax
comp=N,16nm,1.8s
KK31 Karatay Array 64.88 318 *i*P **P 17 01 41.3 -1.2**
KK31 pmax pmax
comp=Z,15nm,0.6s,mb5.2
SEY Seymchan 65.05 13⇑ *e*P **P 17 01 45.8 +2.6**
CASY Casey 67.83 187 *e*P **P 17 02 02.1 +1.2**
JMDO Jabal Madar 69.28 294 P **P 17 02 09.8 -1.1**
SNR=7.4
JMDO Jabal Madar 69.28 294 P **P 17 02 09.8 -1.1**
SNR=7.4
BIDO Bidbid 69.42 295 P **P 17 02 11.0 -0.7**
SNR=8.8
BIDO Bidbid 69.42 295 P **P 17 02 11.0 -0.7**
SNR=8.8
BRVK Borovoye 69.44 328 P **P 17 02 10.5 -0.8**
comp=Z,553nm,1.1s,SNR=29
BRVK Borovoye 69.44 328 *e*P **P 17 02 10.0 -1.3**
comp=Z,93nm,0.9s,mb5.7
BRVK LR LR
comp=Z,551nm,22.0s,MS4.8
BRVK Borovoye 69.44 328 *e*P **P 17 02 10.0 -1.3**
BRVK pmax pmax
comp=Z,93nm,0.9s,mb5.7
BRVK MLR MLR
comp=Z,551nm,22.0s,MS4.8
BRVK Borovoye 69.44 328 P **P 17 02 10.4 -0.9**
SNR=37
BRVK Borovoye 69.44 328 P **P 17 02 10.4 -0.9**
SNR=37
BSY Bisya 70.15 294 P **P 17 02 16.3 0.0**
SNR=8.4
BSY Bisya 70.15 294 P **P 17 02 16.3 0.0**
SNR=8.4
TIXI Tiksi 70.78 1 *e*P **P 17 02 18.0 -1.1**
comp=Z,22nm,0.6s,mb5.3
TIXI LR LR
comp=Z,551nm,20.0s,MS4.8
TIXI Tiksi 70.78 1⇑ *e*P **P 17 02 18.6 -0.5**
TIXI pmax pmax
comp=Z,14nm,0.5s,mb5.2
TIXI MLR MLR
comp=Z,400nm,19.0s,MS4.7
ABKT Ailbek 72.15 310 P **P 17 02 27.1 -1.0**
comp=Z,186nm,0.9s,mb6.0,SNR=11
BILL Bilibino 72.57 15 *e*P **P 17 02 29.8 -0.2**
comp=Z,13nm,1.0s,mb4.8
BILL LR LR
comp=Z,384nm,21.0s,MS4.7
BILL Bilibino 72.57 15 *i*P **P 17 02 32.1 +2.1**
BILL pmax pmax
comp=Z,4.0nm,0.6s,mb4.5
ABTO Aybut 73.23 288 P **P 17 02 36.5 +1.5**
SNR=6.2
ABTO Aybut 73.23 288 P **P 17 02 36.5 +1.5**
SNR=6.2
AKTK Aktyubinsk 75.49 322 P **P 17 02 46.2 -1.2**
AKTO Aktyubinsk 75.49 322 *i*P **P 17 02 46.4 -1.0**
AKTO pmax pmax
comp=Z,8.0nm,1.8s,mb4.3
AKTO Aktyubinsk 75.49 322 P **P 17 02 46.2 -1.2**
comp=Z,12nm,0.7s,mb5.0,baz=106,slow=5.1,SNR=40
SVE Sverdlovsk 76.06 329⇓ *e*P **P 17 02 50.1 -0.4**
SVE *e*S S 17 12 27.7 -5.3
SVE pmax pmax
comp=Z,131nm,0.9s,mb5.9
SVE MLR MLR
comp=Z,555nm,24.0s,MS4.8
ARU Arti 77.01 328 P **P 17 02 54.6 -1.3**
comp=Z,556nm,0.7s,SNR=25
ARU Arti 77.01 328 *e*P **P 17 02 53.9 -2.0**
comp=Z,66nm,0.8s,mb5.6
ARU LR LR
comp=Z,523nm,22.0s,MS4.8
ARU Arti 77.01 328*d* *i*P **P 17 02 54.4 -1.5**
ARU *e* 17 03 05.4
ARU *e* 17 05 44.7
ARU *e*PPP 17 07 31.6
ARU *e*S S 17 12 41.1 -2.3
ARU SSS 17 20 54.7
ARU pmax pmax
comp=Z,61nm,0.6s,mb5.7
ARU MLR MLR
comp=Z,438nm,22.0s,MS4.7
GAMB Gambell 77.38 24 *e*P **P 17 02 57.1 -0.8**
comp=Z,16nm,0.8s,mb5.0
SOKR Solikamsk 78.89 331*d* *i*P **P 17 03 05.3 -1.0**
SOKR pmax pmax
comp=Z,70nm,1.0s,mb5.5
SOKR MLR MLR
comp=Z,430nm,18.0s,MS4.8
TNA Tin City 79.58 23 *e*P **P 17 03 10.6 +0.6**
comp=Z,11nm,1.0s,mb4.7
TNA LR LR
comp=Z,171nm,21.0s,MS4.4
SDPT Sand Point 80.04 34 *e*P **P 17 03 12.7 0.0**
comp=Z,162nm,0.6s
SDPT LR LR
comp=Z,500nm,23.0s,MS4.8
VNDA Vanda 80.62 173 P **P 17 03 16.1 +0.7**
comp=Z,37nm,0.8s,mb5.4,baz=314,slow=6.0,SNR=118
MAW Mawson 80.75 200 *e*P **P 17 03 17.8 +1.6**
comp=Z,18nm,0.9s,mb5.0
MAW Mawson 80.75 200 *e*P **P 17 03 17.8 +1.6**
MAW pmax pmax
comp=Z,18nm,0.9s
MAW Mawson 80.75 200 P **P 17 03 16.8 +0.6**
comp=Z,16nm,0.9s,mb5.0,baz=53,slow=7.2,SNR=15
MAW LR LR 17 39 28.4
comp=Z,256nm,18.7s,MS4.6,baz=65,slow=36
DGRG David-gareji 82.42 312 P **P 17 03 26.6 +0.9**
BHD Baghdad 82.53 303 *ex* x 17 03 23.0
MTA Mtatsminda 82.88 312 P **P 17 03 28.5 +0.4**
TBLG Delisi 82.93 312 P **P 17 03 29.1 +0.9**
HAKT HAKKARI 83.38 308 *i*P **P 17 03 30.6 -0.1**
DYDN Diyadin 83.54 310 *e*P **P 17 03 32.0 +0.5**
ZEI Tsey 83.64 313 *e*P **P 17 03 30.9 -1.0**
ZEI pmax pmax
comp=Z,45nm,0.6s,mb5.8
TVAN Van 83.69 309 *i*P **P 17 03 32.8 +0.5**
SVW2 Sparrevohn 83.73 29 *e*P **P 17 03 33.3 +1.3**
MSL Mosul 83.79 306 *ex* x 17 03 28.5
TTA Tatalina 83.85 27 *e*P **P 17 03 33.8 +1.2**
comp=Z,36nm,0.8s,mb5.5
TTA Tatalina 83.85 27 *e*P **P 17 03 33.8 +1.3**
TTA pmax pmax
comp=Z,36nm,0.8s,mb5.5
ONI Oni 83.95 313 P **P 17 03 33.8 +0.3**
TUTA Tutak 84.21 309 *i*P **P 17 03 36.1 +1.2**
KIV Kislovodsk 84.61 314 P **P 17 03 36.1 -0.7**
comp=Z,293nm,0.7s,SNR=5.4
KIV Kislovodsk 84.61 314 P **P 17 03 35.3 -1.6**
comp=Z,32nm,0.7s,mb5.6
KIV LR LR
comp=Z,236nm,20.0s,MS4.6
KIV Kislovodsk 84.61 314*d* *i*P **P 17 03 36.3 -0.5**
KIV *e* 17 13 57.6
KIV pmax pmax
comp=Z,35nm,0.8s,mb5.5
KIV pmax pmax
comp=Z,78nm,4.0s
KIV Kislovodsk 84.61 314⇑P **P 17 03 36.1 -0.8**
SNR=7.9
KIV Kislovodsk 84.61 314⇑P **P 17 03 36.1 -0.8**
SNR=7.9
PRGR Permogore 84.72 332⇑ *i*P **P 17 03 36.7 -0.3**
PRGR *e*S S 17 13 58.7 -4.9
PRGR *e*SSS 17 22 58.2
KDAK Kodiak Island 84.77 32 PFAKE 17 03 50.0 +13
KDAK LR LR
comp=Z,155nm,21.0s,MS4.4
PPT Papeete 84.95 108 *e*LR LR 17 30 19.5
comp=Z,375nm,25.0s
ARTV Artvin 84.99 311 *i*P **P 17 03 38.9 0.0**
TBI Tubuai 85.32 113 *e*LR LR 17 30 32.0
comp=Z,334nm,25.2s
ERZM Erzurum 85.35 310 *i*P **P 17 03 41.2 +0.6**
IMA2 Indian Mountai 85.36 24 *e*P **P 17 03 40.8 +0.7**
BNGL BINGOL 85.47 309 *i*P **P 17 03 42.3 +1.0**
MARD Mardin 85.69 307 *i*P **P 17 03 42.2 -0.2**
SLKM Skilak Lake 86.26 30 *e*P **P 17 03 44.4 -0.2**
PMR Palmer 86.88 28 P **P 17 03 47.0 -0.7**
comp=Z,15nm,0.9s,mb5.2
PMR LR LR
comp=Z,417nm,22.0s,MS4.8
PMR Palmer 86.88 28 P **P 17 03 47.0 -0.7**
PMR pmax pmax
comp=Z,15nm,0.9s,mb5.2
PMR MLR MLR

comp=Z,417nm,22.0s,MS4.8
ELZG Elazig 87.15 308 *i* P **P** **17 03 50.2 +0.6**
SML Sawmill 87.27 28 *e*P **P** **17 03 48.8 -0.8**
VORD Divnogorie 87.29 321 *e*P **P** **17 03 48.5 -1.4**
VORD pmax pmax
comp=Z,100nm,1.7s,mb5.8
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,40nm,1.5s
VRSR Storozhevoye 87.37 321 *e*P **P** **17 03 48.8 -1.5**
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
VRSR pmax pmax
comp=N,1.0nm,0.6s
VRSR pmax pmax
comp=E,10.0nm,0.8s
VOR Voronezh 87.38 322 *e*P **P** **17 03 49.0 -1.3**
MALT Malatya 87.58 308 *e*P **P** **17 03 51.9 +0.3**
comp=E,45nm,1.2s,mb5.6
MALT Malatya 87.58 308 *e*P **P** **17 03 51.9 +0.2**
MALT pmax pmax
comp=Z,45nm,1.2s,mb5.6
MALT Malatya 87.58 308 ⇓ *i*P **P** **17 03 52.0 +0.3**
COLA College 87.66 25 PFAKE 17 04 00.0 +8.6
COLA LR LR
comp=Z,340nm,21.0s,MS4.7
COLA College 87.66 25 *i* P **P** **17 03 53.6 +2.2**
GZT Gaziantep 88.26 307 *i* P **P** **17 03 54.8 -0.1**
MOS Moscow 88.42 326 *e*P **P** **17 03 54.2 -1.0**
MOS *e* 17 07 24.0
MOS pmax pmax
comp=Z,90nm,1.1s,mb5.9
KMBO Kilima Mbogo 88.73 269 *e*P **P** **17 03 58.8 +1.1**
comp=Z,21nm,0.8s,mb5.5
KMBO LR LR
comp=Z,403nm,20.0s,MS4.8
KMBO Kilima Mbogo 88.73 269 *i* P **P** **17 03 54.5 -3.1**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 88.73 269 P **P** **17 03 59.5 +1.9**
SNR=16
KMBO Kilima Mbogo 88.73 269 P **P** **17 03 59.5 +1.9**
SNR=16
KMBO Kilima Mbogo 88.73 269 P **P** **17 03 58.6 +0.9**
comp=Z,24nm,0.8s,mb5.6,baz=66,slow=6.1,SNR=24
OBN Obninsk 89.02 325 *e*P **P** **17 03 59.6 +1.6**
comp=Z,44nm,0.8s,mb5.8
OBN LR LR
comp=Z,377nm,21.0s,MS4.8
OBN Obninsk 89.02 325 ⇑ *e*P **P** **17 03 57.0 -1.0**
OBN *e* 17 04 05.1
OBN *e* 17 14 25.7
OBN *e*SS SS 17 20 33.9 -4.5
OBN pmax pmax
comp=Z,5.0nm,0.4s,mb5.2
OBN MLR MLR
comp=Z,400nm,26.0s,MS4.7
ANDN Andirin 89.23 307 *i* P **P** **17 04 00.6 +1.2**
COBT Iskenderun 89.31 306 *e*P **P** **17 03 59.4 -0.4**
SYO Syowa Base 89.43 201 ⇓ *e*P **P** **17 04 00.5 +0.8**
LVZ Lovozero 89.78 338 PFAKE 17 04 10.0 +8.7
LVZ LR LR
comp=Z,414nm,20.0s,MS4.9
MMAI Mount Meron Ar 90.05 303 P **P** **17 04 03.7 +0.3**
comp=Z,8.2nm,0.7s,mb5.2,baz=80,slow=7.9,SNR=3.4
APA Apatity 90.26 337 ⇑ *i*P **P** **17 04 04.0 +0.4**
APA *i* pP 17 04 11.0 +1.1
APA *i* 17 04 20.7
APA pmax pmax
comp=Z,21nm,1.0s,mb5.4
APA MLR MLR
comp=Z,900nm,17.0s,MS5.3
AVNT Avonos 90.38 309 *i* P **P** **17 04 04.4 -0.4**
CTKT Corum 90.39 310 *i* P **P** **17 04 05.2 +0.4**
EIL Elat 90.50 300 P **P** **17 04 06.7 +1.1**
EIL Elat 90.50 300 P **P** **17 04 06.7 +1.1**
comp=Z,7.1nm,0.6s,mb5.2,baz=42,slow=8.6
EGAK Eagle 90.52 25 *e*P **P** **17 04 04.2 -0.7**
comp=Z,11nm,1.0s,mb5.2
QSPA South Pole Qui 90.71 180 PFAKE 17 04 20.0 +15
QSPA LR LR
comp=Z,1μm,22.0s,MS5.2
QSPA South Pole Qui 90.71 180 P **P** **17 04 06.5 +1.0**
comp=Z,27nm,1.0s,mb5.5,baz=314,slow=2.1,SNR=40
DAWY Dawson 91.33 26 *e*P **P** **17 04 09.1 +0.4**
JOF Joensuu 91.43 333 *e*p **P** **17 04 08.2 -0.9**
comp=Z,11nm,0.8s,mb5.2
JOF Joensuu 91.43 333 *e*P **P** **17 04 08.2 -0.9**
JOF pmax pmax
comp=Z,11nm,0.8s,mb5.2
CSS Prodhromos 91.72 305 *e*P **P** **17 04 11.1 0.0**
comp=Z,29nm,0.8s,mb5.7
ANTO Ankara 91.94 310 PFAKE 17 04 20.0 +8.0
ANTO LR LR
comp=Z,242nm,21.0s,MS4.6
ARCES ARCESS Array B 92.93 340 P **P** **17 04 14.4 -1.5**
comp=Z,13nm,0.8s,mb5.4,baz=85,slow=5.3,SNR=14
INK Inuvik 93.16 21 *e*P **P** **17 04 16.4 -0.6**
comp=Z,561nm,1.0s
AKASG Malin Array Be 93.68 321 *i* P **P** **17 04 18.8 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 93.68 321 P **P** **17 04 17.3 -2.4**
comp=Z,2.0nm,0.5s,mb4.8,baz=69,slow=4.1,SNR=15
AKASG LR LR 17 50 52.0
comp=Z,351nm,20.2s,MS4.8,baz=80,slow=38
KIEV Kiev 93.69 321 PFAKE 17 04 30.0 +10
KIEV LR LR
comp=Z,426nm,21.0s,MS4.9
KIEV Kiev 93.69 321 P **P** **17 04 19.5 -0.3**
KIEV pmax pmax
comp=Z,8.0nm,0.7s,mb5.3
KAF Kangasniemi 93.83 332 *e*p **P** **17 04 18.9 -1.3**
comp=Z,4.6nm,0.5s,mb5.2,baz=77,slow=4.2
KAF Kangasniemi 93.83 332 *e*P **P** **17 04 18.9 -1.3**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb5.2
TAOE Nuku Hiva Isla 93.96 99 *e*LR LR 17 34 31.3
comp=Z,1μm,24.5s
FINES FINESS Array B 94.05 332 *i* P **P** **17 04 20.7 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 94.05 332 P **P** **17 04 19.7 -1.6**
comp=Z,2.5nm,0.6s,mb4.8,baz=98,slow=7.9,SNR=13
SIT Sitka 94.08 33 PFAKE 17 04 30.0 +8.5
SIT LR LR
comp=Z,553nm,19.0s,MS5.0
VRI Vrincioaia 95.88 316 ⇑ P **P** **17 04 30.4 +0.4**
VRI Vrincioaia 95.88 316 ⇑ *i*P **P** **17 04 30.4 +0.4**
MLR Muntele Rosu 96.47 316 ⇑ P **P** **17 04 32.0 -0.7**
MLR Muntele Rosu 96.47 316 P **P** **17 04 31.7 -1.0**
comp=Z,17nm,0.9s,mb5.5,baz=98,slow=3.1,SNR=7.1
MLR Muntele Rosu 96.47 316 ⇑ *i*P **P** **17 04 32.0 -0.7**
LSZ Lusaka 97.72 255 *e*P **P** **17 04 37.6 -1.3**
comp=Z,6.1nm,0.8s,mb5.2
LSZ LR LR
comp=Z,727nm,21.0s,MS5.1
LSZ Lusaka 97.72 255 *e*P **P** **17 04 37.6 -1.3**
LSZ pmax pmax
comp=Z,6.0nm,0.8s,mb5.2
LSZ MLR MLR
comp=Z,727nm,21.0s,MS5.1
KWP Kalwaria 97.98 320 P **P** **17 04 40.3 +0.9**
KWP pmax pmax
comp=Z,15nm,0.9s,mb5.5
KWP Kalwaria 97.98 320 ⇑ *i*P **P** **17 04 39.1 -0.3**
KOLS Kolonicke sedl 98.39 320 *e*P **P** **17 04 42.2 +0.9**
KOLS *e*pP pP 17 04 51.6 +4.0
UZH Uzhgorod 98.43 319 ⇑ *i*P **P** **17 04 41.6 +0.1**
DRGR 98.49 317 ⇓ P **P** **17 04 40.6 -1.2**
DRGR 98.49 317 ⇓ *i*P **P** **17 04 40.6 -1.2**
IDI Anoyia 98.59 306 P **P** **17 04 42.6 +0.1**
comp=Z,4.2nm,0.7s,mb5.1,baz=39,slow=8.1,SNR=5.0
VTS Vitosha 98.85 313 ⇑ *i*P **P** **17 04 43.8 +0.3**
CRVS Cervenica-Dubn 98.92 320 *e*P **P** **17 04 45.3 +1.7**
CRVS *e* 17 04 51.2 +1.3
CRVS Cervenica-Dubn 98.92 320 PDIF **P** **17 04 45.3 +1.7**
CRVS pPDIF pP 17 04 51.2 +1.3
STHS Stebnicka Huta 98.95 320 *e*P **P** **17 04 44.7 +0.9**
comp=Z,5.4nm,1.0s,mb5.0
STHS Stebnicka Huta 98.95 320 *e*P **P** **17 04 44.7 +0.9**
STHS pmax pmax
comp=Z,5.0nm,1.0s,mb5.0
STHS Stebnicka Huta 98.95 320 PDIF **P** **17 04 44.7 +0.9**

BZS Buzias 99.45 316 ⇑ P **P** **17 04 46.1 0.0**
BZS Buzias 99.45 316 ⇑ *i*P **P** **17 04 46.1 0.0**
KECS Kecovo 99.64 319 *e*P Pdif 17 04 46.9 +0.2
comp=Z,6.7nm,1.0s
KECS *e* 17 04 52.4
KECS Kecovo 99.64 319 *e*P Pdif 17 04 46.9 +0.2
KECS pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
KECS Kecovo 99.64 319 PDIF Pdif 17 04 46.9 +0.2
KECS pPDIF 17 04 52.4
BOSA Boshof 99.78 241 P Pdif 17 04 49.6 +2.2
comp=Z,6.3nm,0.9s,baz=112,slow=6.0,SNR=4.5
BOSA LR LR 17 49 14.0
comp=Z,372nm,19.6s,MS4.9,baz=93,slow=35
DAG Danmarks Havn 100.05 352 ⇑ *i*P Pdif 17 04 47.2 -1.3
comp=Z,4.1nm,0.7s
HFS Hagfors 100.25 332 P Pdif 17 04 48.4 -1.0
comp=Z,3.3nm,0.9s,baz=107,slow=2.0,SNR=10
RES Resolute Bay 100.82 10 *e*Pdif Pdif 17 04 51.5 -0.5
comp=Z,203nm,1.0s
RES Resolute Bay 100.82 10 *e*P Pdif 17 04 51.5 -0.4
RES pmax pmax
comp=Z,203nm,1.0s
NB2 NORSAR Subarra101.06 333 P Pdif 17 04 52.4 -0.6
comp=Z,4.8nm,0.9s,baz=71,slow=4.6
NB2 NORSAR Subarra101.06 333 P Pdif 17 04 52.4 -0.6
NB2 pmax pmax
comp=Z,5.0nm,0.9s
NOA NORSAR Array B 101.06 333 P Pdif 17 04 52.7 -0.3
comp=Z,1.8nm,0.8s,baz=69,slow=4.5,SNR=9.2
KONO Kongsberg 102.34 332 PFAKE 17 05 10.0 +11
KONO LR LR
comp=Z,465nm,22.0s,MS5.0
YKA Yellowknife Ar 102.47 24 P Pdif 17 04 58.7 -0.5
YKA PP PP 17 09 12.4 +0.7
YKA Yellowknife Ar 102.47 24 P Pdif 17 04 58.7 -0.5
comp=Z,1.6nm,0.8s,baz=300,slow=4.7,SNR=24
YKA PP PP 17 09 12.4 +0.7
comp=Z,0.9nm,0.9s,baz=294,slow=6.9,SNR=3.2
YKA PKiKP PKiKP 17 09 21.1 +0.7
comp=Z,0.4nm,0.5s,baz=299,slow=1.8,SNR=7.1
YKA PKKPbc PKKPbc 17 21 00.3 -2.0
comp=Z,0.8nm,0.7s,baz=112,slow=2.5,SNR=9.1
NLWA Neilton Lookou 102.95 41 PFAKE 17 05 10.0 +8.6
NLWA LR LR
comp=Z,521nm,21.0s,MS5.0
COR Corvallis 104.08 44 PFAKE 17 05 20.0 +14
COR LR LR
comp=Z,334nm,19.0s,MS4.9
MOX Moxa 104.60 323 *e*(PKP) 17 09 33.9
GRFO Grafenberg 105.16 322 PFAKE 17 09 40.0 +14
GRFO LR LR
comp=Z,375nm,21.0s,MS4.9
YBH Yreka Blue Hor 105.25 46 PFAKE 17 09 40.0 +14
YBH LR LR
comp=Z,375nm,20.0s,MS4.9
WDC Whiskeytown Da 105.67 47 PFAKE 17 09 40.0 +13
WDC LR LR
comp=Z,414nm,20.0s,MS5.0
HOPS Hopland 105.67 49 PFAKE 17 09 40.0 +13
HOPS LR LR
comp=Z,453nm,19.0s,MS5.0
MCCM Marconi Confer 106.03 50 PFAKE 17 09 40.0 +12
MCCM LR LR
comp=Z,345nm,20.0s,MS4.9
HAWA Hanford 106.09 41 PFAKE 17 09 40.0 +12
HAWA LR LR
comp=Z,465nm,20.0s,MS5.0
MOD Modoc 106.93 46 PFAKE 17 09 40.0 +11
MOD LR LR
comp=Z,295nm,19.0s,MS4.9
NEW Newport 106.99 39 PFAKE 17 09 40.0 +11
NEW LR LR
comp=Z,339nm,20.0s,MS4.9
BFO Black Forest 107.42 322 PFAKE 17 09 40.0 +10
BFO LR LR
comp=Z,232nm,20.0s,MS4.7
SAO San Andreas Ge 107.47 51 PFAKE 17 09 40.0 +10
SAO LR LR
comp=Z,352nm,19.0s,MS4.9
TSUM Tsumeb 107.61 250 PFAKE 17 09 40.0 +8.9
TSUM LR LR
comp=Z,472nm,19.0s,MS5.1
WVOR Wild Horse Val 107.95 45 PFAKE 17 09 40.0 +8.8
WVOR LR LR
comp=Z,344nm,20.0s,MS4.9
CMB Columbia Colle 107.95 49 PFAKE 17 09 40.0 +8.7
CMB LR LR
comp=Z,213nm,19.0s,MS4.7
BMO Blue Mountains 108.07 42 PFAKE 17 09 40.0 +8.7
BMO LR LR
comp=Z,291nm,20.0s,MS4.8
NVAR Mina Array Bea 109.42 49 PKiKP PKiKP 17 09 35.2 +1.2
comp=Z,0.6nm,0.6s,baz=274,slow=4.5,SNR=4.0
MSO Missoula 109.53 39 PFAKE 17 09 50.0 +16
MSO LR LR
comp=Z,315nm,20.0s,MS4.9
BMN Battle Mountai 109.60 46 PFAKE 17 09 50.0 +16
BMN LR LR
comp=Z,360nm,21.0s,MS4.9
TPH Tonopah 110.33 49 PFAKE 17 09 50.0 +14
TPH LR LR
comp=Z,247nm,20.0s,MS4.8
HLID Hailey 110.48 42 *e*PKiKP PKiKP 17 09 38.5 +2.7
HLID LR LR
comp=Z,273nm,20.0s,MS4.8
DAC Darwin (Calif) 110.59 51 PFAKE 17 09 50.0 +14
DAC LR LR
comp=Z,317nm,20.0s,MS4.9
TPNV Topopah Spring 111.42 50 PFAKE 17 09 50.0 +12
TPNV LR LR
comp=Z,349nm,20.0s,MS4.9
BOZ Bozeman (W) 111.48 40 PFAKE 17 09 50.0 +12
BOZ LR LR
comp=Z,353nm,21.0s,MS4.9
EGMT Eagleton 111.59 37 PFAKE 17 09 50.0 +12
EGMT LR LR
comp=Z,293nm,19.0s,MS4.9
FFC Flin Flon 112.17 28 PFAKE 17 09 50.0 +11
FFC LR LR
comp=Z,357nm,19.0s,MS5.0
PFO Pinyon Flat Ob 112.26 53 PFAKE 17 09 50.0 +10
PFO LR LR
comp=Z,485nm,19.0s,MS5.1
YMR Madison River 112.31 40 PFAKE 17 09 50.0 +11
YMR LR LR
comp=Z,1μm,19.0s,MS5.5
LKWY Lake 112.72 40 PFAKE 17 09 50.0 +10
LKWY LR LR
comp=Z,597nm,20.0s,MS5.2
DUG Dugway 112.84 45 PFAKE 17 09 50.0 +10
DUG LR LR
comp=Z,293nm,20.0s,MS4.9
AHID Auburn Hatcher 113.02 42 PFAKE 17 09 50.0 +9.3
AHID LR LR
comp=Z,246nm,21.0s,MS4.8
HWUT Hardware Ranch 113.17 43 PFAKE 17 09 50.0 +9.0
HWUT LR LR
comp=Z,306nm,21.0s,MS4.9
RLMT Red Lodge 113.20 39 PFAKE 17 09 50.0 +9.0
RLMT LR LR
comp=Z,413nm,21.0s,MS5.0
MPU Maple Canyon 113.75 45 PFAKE 17 09 50.0 +7.8
MPU LR LR
comp=Z,370nm,21.0s,MS5.0
MVU Marysvale 113.90 47 PFAKE 17 09 50.0 +7.5
MVU LR LR
comp=Z,327nm,20.0s,MS4.9
BW06 Boulder Array 114.05 42 PFAKE 17 09 50.0 +7.3
BW06 LR LR
comp=Z,299nm,20.0s,MS4.9
PDAR Pinedale Array 114.05 42 PKP PKiKP 17 09 44.4 +1.7
comp=Z,0.6nm,0.6s,baz=262,slow=2.2,SNR=5.3
PDAR PKKPbc PKKPbc 17 20 24.1 -1.0
comp=Z,1.3nm,0.7s,baz=117,slow=5.7,SNR=10
LAO LASA Array 114.33 37 PFAKE 17 10 00.0 +17
LAO LR LR
comp=Z,419nm,20.0s,MS5.0
DGMT Dagmar 114.59 34 PFAKE 17 10 00.0 +16
DGMT LR LR
comp=Z,303nm,21.0s,MS4.9
WUAZ Wupatki 115.61 50 PKPdf PKPdf 17 09 47.8 +1.9
WUAZ LR LR
comp=Z,273nm,20.0s,MS4.9
PV01 Paradox Valley 116.68 46 *e*PKPdf PKPdf 17 09 50.3 +2.4

MVCO Mesa Verde 117.11 47 PFAKE 17 10 00.0 +11
MVCO LR LR
comp=Z,410nm,20.0s,MS5.0
TUC Tucson 117.19 53 PFAKE 17 10 00.0 +11
TUC LR LR
comp=Z,269nm,21.0s,MS4.8
ISCO Idaho Springs 118.03 43 PFAKE 17 10 00.0 +10
ISCO LR LR
comp=Z,255nm,21.0s,MS4.8
SDCO Great Sand Dun 119.04 45 *e*PKPdf PKPdf 17 09 54.9 +2.4
SDCO LR LR
comp=Z,358nm,19.0s,MS5.0
AGMN Agassiz Refuge 119.17 31 PFAKE 17 10 00.0 +7.6
AGMN LR LR
comp=Z,332nm,19.0s,MS5.0
PAB San Pablo 119.44 317 PFAKE 17 10 00.0 +6.8
PAB LR LR
comp=Z,242nm,21.0s,MS4.8
ANMO Albuquerque 119.54 48 *e*PKPdf PKPdf 17 09 56.0 +2.5
ANMO LR LR
comp=Z,304nm,22.0s,MS4.9
LPM Los Pinos Moun 119.67 49 PKPdf PKPdf 17 09 54.4 +0.6
EYMN Ely 121.57 29 PFAKE 17 10 10.0 +13
EYMN LR LR
comp=Z,349nm,20.0s,MS5.0
ECSD EROS,Sioux Fal 121.62 35 *e*PKPdf PKPdf 17 09 56.6 -0.6
ECSD LR LR
comp=Z,375nm,22.0s,MS5.0
MNTX Cornudas Mount 121.68 51 *e*PKPdf PKPdf 17 09 58.2 +0.5
MNTX LR LR
comp=Z,262nm,19.0s,MS4.9
CBKS Cedar Bluff 122.48 42 PFAKE 17 10 10.0 +11
CBKS LR LR
comp=Z,267nm,19.0s,MS4.9
MDT Midelt 122.71 311 PKP PKPdf 17 10 00.1 +0.4
comp=Z,2.2nm,0.6s,baz=112,slow=6.0,SNR=7.8
TORD Torodi Ar. Bea 123.06 286 PKP PKPdf 17 10 00.8 +0.1
comp=Z,12nm,0.7s,baz=62,slow=1.7,SNR=24
TORD PKKPbc PKKPbc 17 19 53.6 +1.8
comp=Z,4.2nm,0.7s,baz=278,slow=3.7,SNR=17
AMTX Amarillo 123.09 46 PFAKE 17 10 10.0 +10
AMTX LR LR
comp=Z,1μm,22.0s,MS5.5
SCHQ Schefferville 123.57 9 PKP PKPdf 17 10 00.7 0.0
baz=321,slow=3.1
SCHQ PKKPbc PKKPbc 17 19 48.4 -2.4
baz=90,slow=14
LTX Lajitas 123.97 53 *e*PKPdf PKPdf 17 10 02.6 +0.4
LTX Lajitas 123.97 53 PKIKP PKPdf 17 10 04.0 +1.8
COWI Conover 124.01 29 *e*PKPdf PKPdf 17 10 01.5 -0.2
COWI LR LR
comp=Z,359nm,20.0s,MS5.0
KSU1 Kansas State U 124.36 40 *e*PKPdf PKPdf 17 10 04.0 +1.4
KSU1 LR LR
comp=Z,417nm,20.0s,MS5.1
USHA Ushuaia 124.85 170 PKP PKPdf 17 10 04.3 +1.2
comp=Z,14nm,0.8s,baz=156,slow=1.8,SNR=7.2
WMOK Wichita Mounta 125.25 45 PFAKE 17 10 20.0 +16
WMOK LR LR
comp=Z,323nm,22.0s,MS5.0
JFWS Jewell Farm 125.69 32 *e*PKPdf PKPdf 17 10 04.8 -0.2
JFWS LR LR
comp=Z,304nm,20.0s,MS5.0
JCT Junction City 126.53 50 *e*PKPdf PKPdf 17 10 07.3 +0.2
JCT LR LR
comp=Z,450nm,20.0s,MS5.1
GLMI Grayling 127.08 27 PFAKE 17 10 20.0 +12
GLMI LR LR
comp=Z,558nm,19.0s,MS5.3
HDIL Hopedale 127.82 34 PFAKE 17 10 20.0 +11
HDIL LR LR
comp=Z,369nm,19.0s,MS5.1
FVM French Village 128.88 37 *e*PKPdf PKPdf 17 10 12.7 +1.4
FVM French Village 128.88 37 *e*PKIKP PKPdf 17 10 14.1 +2.8
MIAR Mount Ida 128.96 43 *e*PKPdf PKPdf 17 10 13.7 +2.1
MIAR LR LR
comp=Z,462nm,22.0s,MS5.1
AAM Ann Arbor 129.47 28 PFAKE 17 10 20.0 +7.7
AAM LR LR
comp=Z,423nm,19.0s,MS5.2
NATX Nacogdoches 129.74 46 PFAKE 17 10 20.0 +6.9
NATX LR LR
comp=Z,391nm,21.0s,MS5.1
HKT Hockley 129.80 49 PFAKE 17 10 20.0 +6.7
HKT LR LR
comp=Z,298nm,19.0s,MS5.0
DBIC Dimbokro 130.37 279 PKP PKPdf 17 10 15.4 +0.6
comp=Z,9.3nm,0.8s,baz=99,slow=1.0,SNR=9.9
WCI Wyandotte Cave 131.11 34 PFAKE 17 10 30.0 +14
WCI LR LR
comp=Z,353nm,22.0s,MS5.0
LONY Lake Ozonia 131.23 19 PFAKE 17 10 30.0 +14
LONY LR LR
comp=Z,340nm,21.0s,MS5.0
ERPA Erie 131.28 26 PFAKE 17 10 30.0 +14
ERPA LR LR
comp=Z,471nm,20.0s,MS5.2
ACSO Alum Creek Sta 131.38 30 PFAKE 17 10 30.0 +14
ACSO LR LR
comp=Z,340nm,21.0s,MS5.0
WVT Waverly 131.66 37 PFAKE 17 10 30.0 +13
WVT LR LR
comp=Z,282nm,20.0s,MS5.0
NCB Newcomb 131.92 20 PFAKE 17 10 30.0 +13
NCB LR LR
comp=Z,360nm,21.0s,MS5.0
PKME Peaks-Kenny Pk 132.19 15 PFAKE 17 10 30.0 +13
PKME LR LR
comp=Z,327nm,19.0s,MS5.1
PLAL Pickwick Lake 132.26 38 *e*PKPdf PKPdf 17 10 17.1 -0.7
PLAL LR LR
comp=Z,426nm,22.0s,MS5.1
BINY Binghamton 132.84 22 PFAKE 17 10 30.0 +11
BINY LR LR
comp=Z,433nm,22.0s,MS5.1
MCWV Mont Chateau 133.33 28 PFAKE 17 10 30.0 +10
MCWV LR LR
comp=Z,396nm,20.0s,MS5.1
SSPA Standing Stone 133.40 25 PFAKE 17 10 30.0 +10
SSPA LR LR
comp=Z,283nm,20.0s,MS5.0
TZTN Tazewell 133.84 33 PFAKE 17 10 30.0 +9.3
TZTN LR LR
comp=Z,397nm,19.0s,MS5.2
HRV Harvard--Oak R 134.10 18 PFAKE 17 10 30.0 +9.0
HRV LR LR
comp=Z,258nm,21.0s,MS4.9
LRAL Lakeview Retre 134.21 40 PKPdf PKPdf 17 10 22.2 +0.6
LRAL LR LR
comp=Z,575nm,21.0s,MS5.3
WES Weston 134.28 18 PFAKE 17 10 30.0 +8.6
WES LR LR
comp=Z,620nm,19.0s,MS5.3
BLA Blacksburg 134.98 30 PFAKE 17 10 30.0 +7.1
BLA LR LR
comp=Z,334nm,20.0s,MS5.1
BRAL Brewton 135.46 42 PFAKE 17 10 40.0 +16
BRAL LR LR
comp=Z,344nm,20.0s,MS5.1
CBN Corbin 135.63 27 PFAKE 17 10 40.0 +16
CBN LR LR
comp=Z,357nm,20.0s,MS5.1
GOGA Godfrey 136.13 36 PFAKE 17 10 40.0 +15
GOGA LR LR
comp=Z,380nm,22.0s,MS5.1
PLCA Paso Flores 137.51 161 PKP PKPdf 17 10 17.7 -10
PLCA PKP PKPdf 17 10 29.3 +1.9
PLCA Paso Flores 137.51 161 PKhKP 17 10 17.7
comp=Z,1.7nm,0.8s,baz=222,slow=5.4,SNR=3.9
PLCA PKP PKPdf 17 10 29.3 +1.9
comp=Z,6.3nm,0.9s,baz=351,slow=18,SNR=2.9
CNNC Cliffs of the 137.79 30 PFAKE 17 10 40.0 +12
CNNC LR LR
comp=Z,483nm,21.0s,MS5.2
TEIG Tepich 140.49 56 PFAKE 17 10 50.0 +17
TEIG LR LR
comp=Z,233nm,20.0s,MS4.9
DWPF Disney 141.06 40 PFAKE 17 10 50.0 +16
DWPF LR LR
comp=Z,548nm,20.0s,MS5.3
TGUH Tegucigalpa,Un 143.93 65 PFAKE 17 10 50.0 +10
TGUH LR LR
comp=Z,309nm,20.0s,MS5.1
BBSR BB Station 145.51 16 *e*PKPdf PKPdf 17 10 44.2 +2.2
LCO Las Campanas 147.74 152 *e*PKPdf PKPdf 17 10 47.9 +2.0

SDDR	**Presa de Saban**	**154.05**	**40**	PFAKE			17 11 10.0	+14
SDDR				LR	LR			
	comp=Z,335nm,20.0s,MS5.2							
NNA	**Nana**	**154.78**	**117**	PKPbc	PKPbc		17 11 06.2	+0.7
	comp=Z,20nm,1.0s,baz=255,slow=5.9,SNR=4.1							
NNA				PKPab	PKPab		17 11 22.6	+2.0
	comp=Z,13nm,0.8s,baz=252,slow=4.0,SNR=4.1							
ATAH	**Atahualpa**	**154.93**	**105**	PKP	PKPdf		17 11 00.0	+2.8
	comp=Z,8.7nm,0.9s,baz=289,slow=3.3,SNR=6.6							
ROSC	**El Rosal**	**158.96**	**74**	PKP	PKPdf		17 11 03.9	+1.5
	comp=Z,4.8nm,0.4s,baz=104,slow=15,SNR=3.9							
ROSC				PKPab	PKPab		17 11 40.3	+1.7
	comp=Z,5.7nm,0.5s,baz=275,slow=23,SNR=4.6							
LPAZ	**La Paz**	**159.25**	**139**	PKP	PKPdf		17 11 05.3	+2.7
	comp=Z,6.3nm,1.1s,baz=14,slow=3.7,SNR=16							
LPAZ				PKPab	PKPab		17 11 40.5	+0.9
	comp=Z,5.4nm,0.9s,baz=163,slow=4.2,SNR=5.1							
SDV	**Santo Domingo**	**160.87**	**59**	ePKPdf	PKPdf		17 11 04.2	-0.4
SIV	**San Ignacio**	**163.37**	**156**	PKP	PKPdf		17 11 08.6	+1.6
	comp=Z,5.9nm,0.9s,baz=238,slow=1.9,SNR=23							
SIV				PKPab	PKPab		17 11 59.6	+2.1
	comp=Z,3.1nm,0.6s,baz=234,slow=8.7,SNR=6.4							

NIED ***26*** *16:59:00,37.30N×13670E,h5km,Mw3.7 Best double couple: M₀4.19000×10¹⁴ NP1:φ₀167.00000°,δ35.00000°, λ72.00000°. NP2:φ₀9.00000°,δ57.00000°,λ102.00000°.*
ISCJB ***26*** *16:59:14.7±0.7,3728N±003×13676E±005,h7km±6km, mb3.7/5, Error ellipse: s-maj=6.6km s-min=5.5km az=172.4*
JMA ***26*** *16:59:15.5,3729N×13677E,h9km±1km,M3.9*
JMA Felt III J1.
IDC ***26*** *16:59:15.8±1.1,3697N×13661E,h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6,ML3.0/1, Error ellipse: s-maj=33.8km s-min=13.0km az=22.0*
NEIC ***26*** *16:59:17.4±1.9,3716N×13696E,h18km±14km, MG3.9(JMA), Error ellipse: s-maj=21.3km s-min=15.0km az=221.0*

ISC 26 16:59:15.8±0.7,3726N±003×13681E±005,h5km±5km,n15, σ0§95/20,mb3.7/5,3C-2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**184**	⇑P	**Pg**	**16 59 23.0**	**+0.7**
JJH				S	**Sg**	**16 59 27.3**	**+0.5**
JSZ	**Suzu**	**0.48**	**67**	⇓P	**Pg**	**16 59 25.1**	**+0.1**
JSZ				S	**Sg**	**16 59 32.4**	**+1.2**
JHG	**Hegura jima**	**0.59**	**8**	⇑P	**Pg**	**16 59 26.5**	**-0.6**
JHG				S	**Sg**	**16 59 34.5**	**-0.3**
JTT	**Ttatey**	**0.78**	**147**	⇓P	**Pg**	**16 59 31.2**	**+0.5**
JKG	**Kaga**	**1.06**	**201**	⇑P	**Pg**	**16 59 35.5**	**-0.6**
MAJO	**Matsushiro**	**1.33**	**122**	*e*Pg	**Pg**	**16 59 39.6**	**-1.7**
MAJO				*e*S	**Sb**	**16 59 59.7**	**+1.1**
MAT	**Matsushiro**	**1.33**	**122**	P	**Pn**	**16 59 39.5**	**-1.5**
MAT				S	**Sb**	**16 59 59.1**	**+0.6**
MJAR	**Matsushiro Arr**	**1.33**	**122**	Pg	**Pg**	**16 59 40.7**	**-0.6**
	31nm,0.3s,baz=285,slow=14,SNR=98						
MJAR				Lg		17 00 01.2	
	32nm,0.3s,baz=307,slow=15,SNR=16						
JNU	**Nakatsue**	**6.38**	**231**	Pn	**Pn**	**17 00 51.0**	**+0.6**
	0.8nm,0.3s,baz=214,slow=14,SNR=4.9						
KSRS	**Korea Array**	**7.08**	**274**	Pn	**Pn**	**17 01 00.7**	**+0.6**
	0.3nm,0.3s,baz=90,slow=14,SNR=3.7						
SONM	**Songino Array**	**24.62**	**305**	P	**P**	**17 04 37.9**	**+1.0**
	2.4nm,0.9s,mb3.7,baz=112,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**40.87**	**301**	P	**P**	**17 06 59.8**	**+1.3**
	0.6nm,1.0s,mb3.2,baz=86,slow=7.9,SNR=1.8						
WRA	**Warramunga Arr**	**56.95**	**183**	P	**P**	**17 09 00.2**	**-1.8**
	0.7nm,0.5s,mb4.0,baz=0.4,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**60.66**	**183**	P	**P**	**17 09 26.6**	**-1.2**
	0.6nm,0.8s,mb3.8,baz=358,slow=4.6,SNR=6.1						
STKA	**Stephens Creek**	**68.93**	**176**	P	**P**	**17 10 21.4**	**-0.2**
	0.7nm,0.6s,mb3.8,baz=0.0,slow=9.1,SNR=2.9						

NEIC ***26*** *17:01:01.1,3046S×7196W,h75km,MD3.5(GUC), After GUC.*

GUC 26 17:01:01.1±0.8,3046S×7196W,h75km±13km,MD3.5, ML3.4,4C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	**Ovalle**	**0.67**	**103**	⇑*i*P	Pn	17 01 15.8	-0.2
OVCH				*i* S	Sn	17 01 27.6	+0.5
OVCH	**Ovalle**	**0.67**	**103**	⇑*i*P	Pn	17 01 15.8	-0.2
OVCH				*i* S	Sn	17 01 27.6	+0.5
OVCH				AML	AML	17 01 31.3	
	comp=N,2μm,0.8s						
LSCH	**La Serena**	**0.83**	**48**	*i* P	Pn	17 01 18.1	+0.3
LSCH				*i* S	Sn	17 01 30.9	+0.8
LSCH	**La Serena**	**0.83**	**48**	*i* P	Pn	17 01 18.1	+0.3
LSCH				*i* S	Sn	17 01 30.9	+0.8
LSCH				AML	AML	17 01 34.6	
	comp=E,292nm,0.3s						
TLL	**Tololo Astrono**	**1.04**	**74**	⇓*i*P	Pn	17 01 21.4	+1.1
TLL				*i* S	Sn	17 01 36.4	+1.7
TLL	**Tololo Astrono**	**1.04**	**74**	⇓*i*P	Pn	17 01 21.4	+1.1
TLL				*i* S	Sn	17 01 36.4	+1.7
TLL				AML	AML	17 01 43.8	
	comp=N,868nm,0.6s						
CMCH	**Combarbala**	**1.09**	**131**	⇑*i*P	Pn	17 01 21.4	+0.4
CMCH				*i* S	Sn	17 01 37.0	+1.3
CMCH	**Combarbala**	**1.09**	**131**	⇑*i*P	Pn	17 01 21.4	+0.4
CMCH				*i* S	Sn	17 01 37.0	+1.3
CMCH				AML	AML	17 01 39.1	
	comp=N,30μm,0.6s						
CHNG	**Los Chungos**	**1.47**	**165**	*i* P	Pn	17 01 09.1	-17
CHNG				*i* S	Sn	17 01 28.3	-16
CHNG				AML	AML	17 01 41.2	
	comp=E,308nm,0.7s						
LCO	**Las Campanas**	**1.81**	**37**	*e*Pn	Pn	17 01 31.7	+1.4
LCO				*e*Sn	Sn	17 01 57.3	+4.8
PEL	**Peldehue**	**2.89**	**158**	AML	AML	17 02 37.6	
	comp=E,285nm,0.8s						
FCH	**Farellones**	**3.19**	**154**	AML	AML	17 02 55.3	
	comp=E,65nm,0.6s						

ATH ***26*** *17:01:50.8,3838N×2039E,h16km±3km,MD3.6/4*
NEIC ***26*** *17:01:50.8,3838N×2039E,h16km,MD3.6(ATH), ML3.0(THE),After ATH.*
ISCJB ***26*** *17:01:51.1±1.1,3836N±004×2041E±007,h0km±8km, Error ellipse: s-maj=10.0km s-min=5.5km az=151.8*
CSEM ***26*** *17:01:51.5±0.2,3838N×2034E,h8km,MD3.6,Error ellipse: s-maj=3.5km s-min=1.9km az=72.0*
THE ***26*** *17:01:53.0,3839N×2046E,h3km, ML3.0*

ISC 26 17:01:51.9±1.0,3837N±003×2039E±007,h5km±6km,n16, σ0§82/25,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.25**	**140**	*e*PB	**Pg**	**17 01 56.8**	**+0.1**
VLS				*e*SB	**Sg**	**17 02 00.6**	**+0.6**
LKD	**Levkas**	**0.40**	**31**	*e*Pg	**Pg**	**17 01 59.4**	**-0.2**
LKD				*e*Sg	**Sg**	**17 02 04.6**	**-0.1**
KFL	**Anninata**	**0.41**	**129**	*e*Pg	**Pg**	**17 01 59.5**	**-0.3**
RLS	**Riolos of Patr**	**0.90**	**110**	*e*PN	**Pg**	**17 02 08.1**	**-1.2**
IGT	**Igoumenitsa**	**1.16**	**358**	*e*Pg	**Pg**	**17 02 14.8**	**+0.6**
IGT				*e*Sg	**Sg**	**17 02 31.6**	**+2.2**
IGT	**Igoumenitsa**	**1.16**	**358**	*e*Pg	**Pg**	**17 02 14.9**	**+0.6**
IGT				*e*Sg	**Sg**	**17 02 31.5**	**+2.1**
SELA	**Sela**	**1.19**	**94**	*e*Pg	**Pg**	**17 02 14.4**	**-0.3**
SELA				*e*Sg	**Sg**	**17 02 31.7**	**+1.6**
EVR	**Evrytania**	**1.24**	**63**	*e*PN	**Pn**	**17 02 15.8**	**-0.1**
KEK	**Kerkira**	**1.42**	**341**	*e*PN	**Pn**	**17 02 17.4**	**-1.0**
AGG	**Agios Georgios**	**1.65**	**66**	*e*Pg	**Pg**	**17 02 22.7**	**-0.9**
AGG				*e*Sg	**Sg**	**17 02 43.9**	**-1.2**
ITM	**Ithomi**	**1.70**	**134**	*e*PN	**Pn**	**17 02 22.4**	**+0.1**
THL	**Klokotos Trika**	**1.74**	**46**	*e*PN	**Pn**	**17 02 22.1**	**-0.7**
PYL	**PYLOS**	**1.82**	**143**	*e*Pb	**Pb**	**17 02 25.5**	**-0.3**
VLX	**Vlachokerasia**	**1.86**	**122**	*e*Pb	**Pn**	**17 02 24.6**	**+0.1**
VLX				*e*Sb	**Sb**	**17 02 50.0**	**0.0**
VLX	**Vlachokerasia**	**1.86**	**122**	*e*Pb	**Pn**	**17 02 24.6**	**+0.1**
VLX				*e*Sb	**Sb**	**17 02 50.0**	**-0.1**
DID	**Didima**	**2.41**	**110**	*e*Pn	**Pn**	**17 02 32.5**	**+0.5**
DID				*e*Sn	**Sn**	**17 03 03.0**	**+1.1**

NEIC ***26*** *17:04:00.4±0.4,5158N×1625E,h5km,ML3.3(SZGRF), ML3.0(BRA),Error ellipse: s-maj=4.9km s-min=3.8km az=209.0*
IPEC ***26*** *17:04:00.5±0.3,5154N×1625E,h0km,ML3.0/4, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
IDC ***26*** *17:04:01.9±0.9,5148N×1607E,h0km,mb3.5/1,mb1 3.7/5, mb1mx3.5/17,mbtmp3.5/5,ML3.2/4, Error ellipse: s-maj=20.8km s-min=9.0km az=106.0*
ISCJB ***26*** *17:04:01.4±0.4,5137N±002×1607E±002,h0km,mb3.5/1, Error ellipse: s-maj=3.2km s-min=1.8km az=18.3*
WAR ***26*** *17:04:02.7,5148N×1611E,ML3.2,Mining Induced*
CSEM ***26*** *17:04:02.7±0.1,5145N×1613E,h0km,ML3.7/11, Error ellipse: s-maj=2.0km s-min=1.2km az=11.0*
PRU ***26*** *17:04:02.8,5145N×1608E,h0km*
BGR ***26*** *17:04:03.6±0.5,5137N×1609E,h1km,ML3.3/12, Error ellipse: s-maj=6.7km s-min=2.2km az=11.0*
VIE ***26*** *17:04:03.3±0.5,5130N×1607E,h0km,mb2.8/6,ML3.2/6, Error ellipse: s-maj=3.3km s-min=2.2km az=12.0, Suspected Mining induced.*

ISC 26 17:04:01.6±0.4,5147N±002×1611E±002,h0km,n81, σ0§93/148,mb3.5/1,11C-3D,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**17 04 14.5**	**+0.7**
KSP				*e*Sg	**Sg**	**17 04 23.2**	**+1.1**
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**17 04 14.7**	**+0.8**
KSP	**Ksiaz**	**0.64**	**170**	⇓*i*Pg	**Pg**	**17 04 14.5**	**+0.7**
KSP				*i* Sg	**Sg**	**17 04 23.1**	**+1.0**
KSP				*e*		17 04 26.5	
KSP	**Ksiaz**	**0.64**	**170**	*e*Pg	**Pg**	**17 04 14.2**	**+0.4**
KSP				*e*Sg	**Sg**	**17 04 22.4**	**+0.3**
UPC	**Upice**	**0.97**	**184**	*e*PG	**Pg**	**17 04 20.6**	**+0.5**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**17 04 23.4**	**+0.2**
DPC				*e*Sg	**Sg**	**17 04 38.2**	**+0.3**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**17 04 23.2**	**0.0**
DPC				*e*SG	**Sg**	**17 04 37.9**	**0.0**
	108nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**173**	Pg	**Pg**	**17 04 23.4**	**+0.2**
DPC				*e*Sg	**Sg**	**17 04 37.9**	**0.0**
PVCC	**Panska Ves**	**1.36**	**226**	*e*PG	**Pg**	**17 04 27.6**	**0.0**
PVCC				*e*SG	**Sg**	**17 04 45.4**	**+0.2**
	335nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**226**	*e*Pg	**Pg**	**17 04 27.6**	**0.0**
PVCC				*e*Sg	**Sg**	**17 04 46.6**	**+1.4**
BRG	**Berggiesshubel**	**1.49**	**247**	*e*Pn	**Pn**	**17 04 29.8**	**+0.2**
BRG				*e*Sg	**Sg**	**17 04 50.5**	**+1.0**
BRG	**Berggiesshubel**	**1.49**	**247**	Pn	**Pn**	**17 04 28.9**	**-0.7**
BRG				Sg	**Sg**	**17 04 50.5**	**+1.0**
BRG	**Berggiesshubel**	**1.49**	**247**	PN	**Pn**	**17 04 28.9**	**-0.7**
BRG				PG	**Pg**	**17 04 29.8**	**-0.3**
BRG				SG	**Sg**	**17 04 50.4**	**+0.9**
	195nm,0.4s						
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**17 04 32.3**	**-1.0**
RUE				*e*Sn	**Sn**	**17 04 59.7**	**+3.3**
RUE	**Ruedersdorf**	**1.76**	**306**	*e*Pn	**Pn**	**17 04 32.3**	**-1.0**
RUE				*e*Sn	**Sn**	**17 04 59.7**	**+3.3**
PRA	**Prague**	**1.76**	**218**	PG	**Pg**	**17 04 34.0**	**-1.3**
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	**17 04 33.3**	**-0.4**
PRU				*e*PG	**Pg**	**17 04 35.0**	**-0.9**
PRU				*e*SG	**Sg**	**17 04 58.5**	**-0.6**
	95nm,0.5s						
FBE	**Freiberg**	**1.82**	**253**	*e*Pn	**Pn**	**17 04 34.8**	**+0.7**
FBE				*e*Sg	**Sg**	**17 05 00.6**	**+0.6**
RAC	**Raciborz**	**1.92**	**136**	*e*Pg	**Pg**	**17 04 38.5**	**+0.2**
RAC				*e*Sg	**Sg**	**17 05 05.2**	**+2.0**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**17 04 35.3**	**-0.3**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**17 04 35.0**	**-0.6**
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**17 04 34.9**	**-0.7**
MORC				*e*Sg	**Sg**	**17 05 01.5**	**-1.9**
	70nm,0.5s						
CLL	**Collm**	**1.96**	**266**	*e*Pn	**Pn**	**17 04 35.1**	**-0.8**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**17 04 35.2**	**-0.8**
CLL				*e*Pg	**Pg**	**17 04 39.0**	**0.0**
CLL				*e*Sg	**Sg**	**17 05 06.0**	**+1.6**
CLL	**Collm**	**1.96**	**266**	*i* Pn	**Pn**	**17 04 35.2**	**-0.8**
	comp=Z,10.0nm,0.6s						
CLL				*e*Pg	**Pg**	**17 04 39.0**	**0.0**
CLL				*i* x	x	17 04 42.7	
CLL				*e*Sg	**Sg**	**17 05 06.0**	**+1.6**
	comp=Z,90nm,0.6s						
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*PN	**Pn**	**17 04 36.7**	**-1.1**
OKC				*e*PG	**Pg**	**17 04 40.7**	**-0.9**
OKC				*e*SG	**Sg**	**17 05 07.2**	**-1.4**
	comp=Z,112nm,0.6s						
VRAC	**Vranov**	**2.19**	**172**	⇑P	**Pn**	**17 04 39.7**	**+0.6**
VRAC	**Vranov**	**2.19**	**172**	Pn	**Pn**	**17 04 39.7**	**+0.5**
	comp=Z,7.4nm,0.3s,baz=337,slow=15,SNR=13						
VRAC				Lg		17 05 12.0	
	comp=Z,11nm,0.3s,baz=72,slow=20,SNR=9.2						
VRAC	**Vranov**	**2.19**	**172**	⇑*i*P	**Pn**	**17 04 39.7**	**+0.5**
VRAC	**Vranov**	**2.19**	**172**	*e*Pn	**Pn**	**17 04 39.2**	**0.0**
VRAC	**Vranov**	**2.19**	**172**	⇑P	**Pn**	**17 04 39.7**	**+0.5**
VRAC				*e*Sg	**Sg**	**17 05 11.1**	**-0.7**
	comp=Z,68nm,0.5s						
TREC	**Trest**	**2.22**	**191**	*e*PG	**Pg**	**17 04 43.5**	**-0.5**
KRUC	**Moravsky**	**2.42**	**176**	*e*Pn	**Pn**	**17 04 42.1**	**-0.2**
KRUC				*e*Sg	**Sg**	**17 05 18.5**	**-0.8**
	comp=Z,92nm,0.9s						
TANN	**Tannenbergstha**	**2.54**	**247**	*e*Pn	**Pn**	**17 04 44.3**	**+0.3**
TANN				*e*Sg	**Sg**	**17 05 21.9**	**-1.2**
WERD	**Werda**	**2.62**	**248**	*e*Sg	**Sg**	**17 05 25.0**	**-0.4**
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**17 04 45.5**	**+0.2**
NKC				*e*PG	**Pg**	**17 04 51.9**	**-0.1**
NKC				*e*SG	**Sg**	**17 05 26.8**	**+0.7**
	comp=Z,112nm,0.4s						
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**17 04 50.5**	**-1.9**
OJC				*e*Sg	**Sg**	**17 05 25.9**	**-0.8**
OJC	**Ojcow**	**2.65**	**117**	*e*Sg	**Sg**	**17 05 27.6**	**+0.8**
JAVC	**Velka Javorina**	**2.80**	**158**	*e*Pn	**Pn**	**17 04 48.7**	**+1.1**
JAVC				*e*Sg	**Sg**	**17 05 33.0**	**+1.5**
	comp=Z,86nm,0.9s						
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**17 04 48.1**	**-0.2**
KHC				*e*PG	**Pg**	**17 04 54.4**	**-1.8**
KHC				*e*SN	**Sn**	**17 05 23.0**	**-0.3**
KHC				*e*SG	**Sg**	**17 05 32.2**	**-1.0**
	comp=Z,47nm,0.5s						
MANZ	**Manzenberg**	**2.95**	**241**	*e*Pn	**Pn**	**17 04 50.1**	**+0.5**
MANZ				*e*Sg	**Sg**	**17 05 36.5**	**+0.3**
MOX	**Moxa**	**2.96**	**255**	*e*PN	**Pn**	**17 04 49.4**	**-0.3**
MOX				*e*PG	**Pg**	**17 04 58.1**	**-0.1**
MOX				*e*SG	**Sg**	**17 05 37.7**	**+1.2**
ROTZ	**Rotzenmuhle**	**3.02**	**237**	*e*Pn	**Pn**	**17 04 50.8**	**+0.3**
ROTZ				*e*Sg	**Sg**	**17 05 37.4**	**-1.1**
ROTZ	**Rotzenmuhle**	**3.02**	**237**	Pn	**Pn**	**17 04 50.8**	**+0.3**
ROTZ				Sg	**Sg**	**17 05 37.4**	**-1.0**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**17 04 51.5**	**+0.4**
GEC2	**GERESS Array S**	**3.05**	**211**	*e*Pn	**Pn**	**17 04 51.5**	**+0.5**
GEC2				Sg	**Sg**	**17 05 38.7**	**-0.9**
GERES	**GERESS Array B**	**3.05**	**211**	Pn	**Pn**	**17 04 51.1**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=29,slow=12,SNR=51						
GERES				Pg	**Pg**	**17 04 57.9**	**-2.1**
	comp=Z,6.9nm,0.3s,baz=32,slow=15,SNR=36						
GERES				Sn	**Sn**	**17 05 22.5**	**-5.8**
	comp=Z,4.2nm,0.3s,baz=56,slow=26,SNR=6.1						
GERES				Lg		17 05 35.8	
	comp=Z,7.2nm,0.3s,baz=35,slow=26,SNR=5.6						
GERES	**GERESS Array B**	**3.05**	**211**	Pg	**Pg**	**17 04 57.9**	**-2.2**
SMOL	**Smolenice**	**3.08**	**163**	*e*PG	**Pg**	**17 05 01.8**	**+1.2**
SMOL				*e*SG	**Sg**	**17 05 41.8**	**+1.3**
WET	**Wettzell**	**3.12**	**223**	*e*Pn	**Pn**	**17 04 52.0**	**0.0**
WET	**Wettzell**	**3.12**	**223**	*e*Pn	**Pn**	**17 04 52.0**	**0.0**
MODS	**Modra-Piesok**	**3.19**	**166**	*e*Pg	**Pg**	**17 05 02.1**	**-0.6**
MODS				*e*Sg	**Sg**	**17 05 45.3**	**+1.2**
KOLL	**Kolacno**	**3.25**	**152**	*e*Sg	**Sg**	**17 05 45.7**	**-0.3**
ZST	**Bratislava**	**3.34**	**169**	*e*PG	**Pg**	**17 05 06.1**	**+0.5**
ZST				*e*SG	**Sg**	**17 05 48.6**	**-0.3**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**17 05 05.7**	**-0.7**
NIE				*e*S	**Sg**	**17 05 51.5**	**+1.3**
VYHS	**Vyhne**	**3.46**	**148**	*e*Pn	**Pn**	**17 04 57.4**	**+0.7**
VYHS				*e*Pg	**Pg**	**17 05 07.2**	**-0.7**
VYHS				*e*Sg	**Sg**	**17 05 55.6**	**+2.9**
VYHS	**Vyhne**	**3.46**	**148**	*e*PN	**Pn**	**17 04 57.3**	**+0.6**
VYHS				*e*PG	**Pg**	**17 05 07.2**	**-0.7**
VYHS				*e*SG	**Sg**	**17 05 55.6**	**+2.9**
VYHS	**Vyhne**	**3.46**	**148**	*e*Pg	**Pg**	**17 05 07.2**	**-0.7**
VYHS				*e*Sg	**Sg**	**17 05 55.6**	**+2.9**
CONA	**Conrad Observa**	**3.55**	**183**	⇑*i*Pn	**Pn**	**17 04 58.5**	**+0.6**
	SNR=6.4						
CONA				⇑*i*Sg	**Sg**	**17 05 54.0**	**-1.6**
	comp=Z,40nm,0.5s						
GRA1	**Grafenberg Arr**	**3.59**	**242**	*e*Pn	**Pn**	**17 04 59.0**	**+0.6**
GRA1				*e*Sg	**Sg**	**17 05 56.6**	**-0.3**
GRA1	**Grafenberg Arr**	**3.59**	**242**	Pn	**Pn**	**17 04 59.0**	**+0.6**
GRA1				Sg	**Sg**	**17 05 56.6**	**-0.3**
GRF	**Grafenberg Arr**	**3.59**	**242**	*e*Pn	**Pn**	**17 04 59.0**	**+0.6**
GRF				*e*Sg	**Sg**	**17 05 56.6**	**-0.3**
GRFO	**Grafenberg**	**3.59**	**242**	*e*Pn	**Pn**	**17 04 58.5**	**+0.1**
GRFO				*e*Sg	**Sg**	**17 05 57.4**	**+0.5**
GRFO	**Grafenberg**	**3.59**	**242**	*e*Pn	**Pn**	**17 04 58.5**	**+0.1**
GRFO				*e*Sg	**Sg**	**17 05 57.4**	**+0.5**
MOA	**Molln**	**3.82**	**199**	⇑*i*Pn	**Pn**	**17 05 01.9**	**+0.3**
	SNR=6.7						
MOA				⇑*i*Sg	**Sg**	**17 06 04.1**	**-0.1**
	comp=Z,40nm,0.6s						
MOA	**Molln**	**3.82**	**199**	Pn	**Pn**	**17 05 01.9**	**+0.3**
	comp=Z,6.0nm,7.0s						
MOA				Sg	**Sg**	**17 06 04.1**	**-0.1**
	comp=Z,40nm,0.6s						
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PN	**Pn**	**17 05 04.2**	**+1.9**
STHS				*e*PG	**Pg**	**17 05 15.8**	**+0.1**
STHS				*e*SG	**Sg**	**17 06 10.4**	**+4.5**
HROE	**Hohe Rhon--Fla**	**3.88**	**258**	⇓*i*Pn	**Pn**	**17 05 02.3**	**-0.1**
KECS	**Kecovo**	**4.11**	**135**	*e*SG	**Sg**	**17 06 14.1**	**+0.5**
ARSA	**Arzberg**	**4.24**	**185**	⇑*i*Pn	**Pn**	**17 05 07.8**	**+0.4**
ARSA				⇑*i*Sg	**Sg**	**17 06 18.3**	**+0.5**
	comp=Z,47nm,0.9s						
CRVS	**Cervenica-Dubn**	**4.29**	**125**	*e*PG	**Pg**	**17 05 22.1**	**-1.7**
KWP	**Kalwaria**	**4.59**	**111**	*e*Pg	**Pg**	**17 05 26.3**	**-3.2**
KWP				*e*Sg	**Sg**	**17 06 36.6**	**+7.7**
KWP	**Kalwaria**	**4.59**	**111**	*e*Pg	**Pg**	**17 05 26.3**	**-3.2**
KWP				*e*Sg	**Sg**	**17 06 36.6**	**+7.6**
KBA	**Koelnbreinsper**	**4.76**	**203**	⇑*i*Pn	**Pn**	**17 05 14.4**	**0.0**
KBA				*i* Sg	**Sg**	**17 06 35.0**	**+0.7**
KBA	**Koelnbreinsper**	**4.76**	**203**	⇑*i*Pn	**Pn**	**17 05 14.4**	**0.0**
KBA				⇓*i*Sg	**Sg**	**17 06 35.0**	**+0.7**
	comp=Z,30nm,0.7s						
VISS	**Visnje**	**5.74**	**189**	*i* P	**Pn**	**17 05 28.8**	**+0.9**
BOJS	**Bojanci**	**6.00**	**186**	*e*P	**Pn**	**17 05 32.7**	**+1.1**
FINES	**FINESS Array B**	**11.40**	**25**	Pn	**Pn**	**17 06 41.3**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=206,slow=9.3,SNR=3.7						
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn	**Pn**	**17 06 49.6**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=102,slow=14,SNR=3.2						
ARCES	**ARCESS Array B**	**18.66**	**10**	Pn	**Pn**	**17 08 15.9**	**-5.0**
	comp=Z,0.3nm,0.3s,baz=198,slow=11,SNR=5.9						
YKA	**Yellowknife Ar**	**59.89**	**336**	P	**P**	**17 14 08.4**	**-0.2**
	comp=Z,0.4nm,0.8s,mb3.5,baz=26,slow=6.7,SNR=4.0						

IDC ***26*** *17:04:20.1±0.9,2268N×12075E,h0km,mb3.6/7, mb1 3.9/8,mb1mx3.7/19,mbtmp3.7/8,ML3.6/1, Error ellipse: s-maj=37.9km s-min=18.4km az=74.0*
NEIC ***26*** *17:04:21.7±0.8,2260N×12070E,h10km,MG3.6(JMA), Error ellipse: s-maj=24.2km s-min=13.3km az=97.0*
ISCJB ***26*** *17:04:25.5±1.4,2269N±009×12087E±007,h54km±13km, mb3.6/6,Error ellipse: s-maj=14.3km s-min=10.7km az=1.9*
JMA ***26*** *17:04:25.5±0.2,2267N×12090E,h99km,M3.6*

ISC 26 17:04:26.6±1.5,2271N±009×12083E±008,h46km±15km, n17,σ0§69/24,mb3.6/6,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**1.62**	**25**	*e*Pn	**Pn**	**17 04 50.7**	**-2.0**
NACB				*e*Sn	**Sn**	**17 05 11.0**	**-1.3**
YHNB	**Yeheng**	**2.02**	**14**	*e*Pn	**Pn**	**17 04 59.2**	**+1.1**
TATO	**Taipei**	**2.33**	**15**	*e*Pn	**Pn**	**17 05 03.8**	**+1.3**
YOJ	**Yonaguni jima**	**2.65**	**48**	P	**Pn**	**17 05 07.0**	**+0.2**
YOJ				S	**Sn**	**17 05 38.5**

IGT				*e*Sg	**Sg**	17 16 58.6	+1.1
SELA	**Sela**	**1.27**	**91**	*e*Pg	**Pn**	17 16 40.2	-1.6
SELA				*e*Sg	**Sg**	17 17 00.1	+1.1
SELA	**Sela**	**1.27**	**91**	*e*Pg	**Pn**	17 16 40.2	-1.7
SELA				*e*Sg	**Sg**	17 17 00.1	+1.0
EVR	**Evrytania**	**1.35**	**63**	*e*PB	**Pb**	17 16 44.3	+0.9
KEK	**Kerkira**	**1.45**	**345**	*e*PB	**Pb**	17 16 46.7	+1.5

*ISCJB **26** 17:19:08.0±0.6, 5857N±005×15324W±0.10, h79km±6km, mb3.6/3, Error ellipse: s-maj=8.5km s-min=7.6km az=172.3*

*IDC **26** 17:19:08.8±2.1, 5834N×15333W, h80km±56km, mb3.4/3, mb1 3.8/4, mb1mx3.4/18, mbtmp3.6/4, ML4.0/1, Error ellipse: s-maj=110.5km s-min=24.1km az=174.0*

*NEIC **26** 17:19:10.3, 5853N×15328W, h59km, ML3.8(PMR), ML3.5(AEIC), After AEIC.*

ISC 26 17:19:09.4±0.6, 5855N±005×15326W±010, h72km±6km, n38, σ0°81/41, mb3.6/3, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUL	**Augustine Lava**	**0.84**	**354**	P	**Pn**	**17 19 26.0**	**0.0**
AUL				S	**Sn**	**17 19 37.6**	**-0.8**
KDAK	**Kodiak Island**	**0.84**	**155**	P	**Pn**	**17 19 25.9**	**-0.2**
KDAK				S	**Sn**	**17 19 37.9**	**-0.5**
KDAK	**Kodiak Island**	**0.84**	**155**	P	**Pn**	**17 19 25.8**	**-0.3**
	486nm,0.3s,baz=0.5,slow=7.4,SNR=2776						
KDAK				S	**Sn**	**17 19 37.1**	**-1.3**
	398nm,0.3s,baz=182,slow=21,SNR=62						
SEW	**Seward**	**2.50**	**50**	P	**Pn**	**17 19 47.1**	**-0.6**
SLKM	**Skilak Lake**	**2.50**	**37**	P	**Pn**	**17 19 47.8**	**0.0**
SVW2	**Sparrevohn**	**2.81**	**336**	*e*P	**Pn**	**17 19 51.9**	**-0.1**
FIB	**Fire Island**	**3.05**	**29**	P	**Pn**	**17 19 56.4**	**+1.1**
RC01	**Rabbit Creek A**	**3.11**	**33**	P	**Pn**	**17 19 56.2**	**+0.3**
CHGN	**Chignik**	**3.58**	**233**	*e*P	**Pn**	**17 20 02.8**	**+0.4**
PMR	**Palmer**	**3.69**	**32**	*e*P	**Pn**	**17 20 03.8**	**0.0**
GHO	**Glory Hole Cre**	**3.89**	**32**	P	**Pn**	**17 20 06.3**	**-0.3**
SML	**Sawmill**	**4.09**	**35**	*e*P	**Pn**	**17 20 08.6**	**-0.7**
EYAK	**Cordova Ski Ar**	**4.32**	**59**	P	**Pn**	**17 20 12.0**	**-0.4**
TTA	**Tatalina**	**4.60**	**344**	*e*P	**Pn**	**17 20 16.8**	**+0.5**
RAGM	**Ragged Mountai**	**4.75**	**63**	P	**Pn**	**17 20 18.2**	**-0.1**
KTH	**Kantishna Hill**	**5.15**	**12**	P	**Pn**	**17 20 23.6**	**-0.1**
PAX	**Paxson**	**5.85**	**37**	P	**Pn**	**17 20 33.4**	**+0.1**
MENT	**Mentasta**	**6.42**	**43**	*e*P	**Pn**	**17 20 42.4**	**+1.3**
DOT	**Dot Lake**	**6.78**	**37**	P	**Pn**	**17 20 45.9**	**-0.1**
COLA	**College**	**6.85**	**20**	P	**Pn**	**17 20 46.2**	**-0.7**
IL1	**Eielson Array**	**6.94**	**23**	P	**Pn**	**17 20 47.4**	**-0.8**
BCA3	**Beaver Creek A**	**7.21**	**46**	P	**Pn**	**17 20 51.5**	**-0.4**
PNL	**Peninsula**	**7.23**	**75**	P	**Pn**	**17 20 52.0**	**-0.1**
IMA2	**Indian Mountai**	**7.55**	**359**	*e*P	**Pn**	**17 20 57.0**	**+0.5**
EGAK	**Eagle**	**8.48**	**38**	*e*P	**Pn**	**17 21 08.7**	**-0.5**
	4.7nm,0.4s						
DAWY	**Dawson**	**8.66**	**44**	*e*P	**Pn**	**17 21 12.3**	**+0.7**
SKAG	**Skagway**	**9.30**	**77**	*e*P	**Pn**	**17 21 22.3**	**+1.9**
	15nm,0.7s						
TNA	**Tin City**	**9.82**	**322**	*e*P	**Pn**	**17 21 29.3**	**+1.9**
	21µm,1.2s						
DLBC	**Dease Lake**	**12.14**	**81**	*e*P	**Pn**	**17 22 01.1**	**+2.0**
INK	**Inuvik**	**13.11**	**34**	*e*P	**Pn**	**17 22 11.1**	**-1.0**
	163nm,0.6s						
YKA	**Yellowknife Ar**	**19.22**	**62**	P	**Pn**	**17 23 28.4**	**-0.3**
YKA	**Yellowknife Ar**	**19.22**	**62**	P	**Pn**	**17 23 28.4**	**-0.3**
	0.6nm,0.3s,baz=274,slow=10.0,SNR=159						
SCHQ	**Schefferville**	**44.49**	**55**	P	**P**	**17 27 13.0**	**+0.1**
SCHQ	**Schefferville**	**44.49**	**55**	P	**P**	**17 27 13.0**	**+0.1**
	baz=308,slow=11						
SONM	**Songino Array**	**55.55**	**307**	P	**P**	**17 28 37.2**	**+0.5**
	1.0nm,0.5s,mb4.1,baz=46,slow=5.7,SNR=16						
EKA	**Eskdalemuir Ar**	**63.96**	**18**	P	**P**	**17 29 33.5**	**-0.8**
	1.1nm,0.6s,mb3.9,baz=330,slow=5.3,SNR=6.5						
MKAR	**Makanchi Array**	**65.49**	**321**	P	**P**	**17 29 42.7**	**-1.7**
MKAR	**Makanchi Array**	**65.49**	**321**	P	**P**	**17 29 42.7**	**-1.7**
	0.1nm,0.5s,mb2.9,baz=46,slow=7.0,SNR=3.5						

*IDC **26** 17:20:35.5±0.9, 4739N×15343E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.8/21, mbtmp3.7/10, MS3.6/1, Ms1 3.6/1, ms1mx3.0/31, Error ellipse: s-maj=28.8km s-min=19.4km az=149.0*

*NEIC **26** 17:20:37.2±0.8, 4742N×15348E, h10km, Error ellipse: s-maj=21.9km s-min=15.3km az=162.0*

*ISCJB **26** 17:20:43.6±1.7, 475N±0.1×1536E±02, h70km±14km, mb3.5/10, Error ellipse: s-maj=28.1km s-min=9.7km az=141.6*

*MOS **26** 17:20:44.8±1.2, 4760N×15347E, h81km, mb4.0/4, Error ellipse: s-maj=25.7km s-min=15.6km az=63.0*

ISC 26 17:20:45.7±1.5, 476N±01×1536E±02, h71km±12km, n24, σ0°90/25, mb3.5/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.54**	**27**	*e*PN	**Pn**	**17 21 37.0**	**-1.1**
SKR				*e*S	**Sn**	**17 22 18.5**	**-0.2**
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,110nm,0.5s						
SKR				smax			
	comp=N,110nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
YSS	**Yuzh-Sakhalins**	**7.43**	**269**	*e*Pn	**Pn**	**17 22 32.3**	**+1.1**
YSS	**Yuzh-Sakhalins**	**7.43**	**269**	*i* PN	**Pn**	**17 22 32.7**	**+1.4**
ASAJ	**Asahikawa**	**8.44**	**250**	PN	**Pn**	**17 22 45.1**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,439nm,21.7s						
ASAJ	**Asahikawa**	**8.44**	**250**	Pn	**Pn**	**17 22 45.1**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=35,slow=12,SNR=4.6						
ASAJ				LR	LR	17 25 29.4	
	comp=Z,439nm,21.7s,baz=113,slow=36						
KSRS	**Korea Array**	**21.38**	**251**	P	**P**	**17 25 22.0**	**-5.2**
	comp=Z,0.7nm,0.6s,mb3.1,baz=50,slow=11,SNR=2.8						
KDAK	**Kodiak Island**	**33.33**	**52**	P	**P**	**17 27 15.4**	**-1.0**
	comp=Z,30nm,1.3s,baz=260,slow=11,SNR=5.5						
COLA	**College**	**35.29**	**39**	*i* P	**P**	**17 27 34.7**	**+1.5**
INK	**Inuvik**	**40.79**	**33**	*e*P	**P**	**17 28 20.6**	**+1.3**
INK	**Inuvik**	**40.79**	**33**	P	**P**	**17 28 20.7**	**+1.3**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**40.79**	**33**	P	**P**	**17 28 20.6**	**+1.3**
	comp=Z,1.9nm,0.6s,mb4.1,baz=301,slow=7.0,SNR=11						
MKAR	**Makanchi Array**	**46.89**	**297**	P	**P**	**17 29 07.3**	**-1.2**
	comp=Z,0.1nm,0.4s,mb2.9,baz=77,slow=6.5,SNR=3.9						
YKA	**Yellowknife Ar**	**50.07**	**37**	P	**P**	**17 29 33.7**	**+1.0**
YKA	**Yellowknife Ar**	**50.07**	**37**	P	**P**	**17 29 33.7**	**+1.0**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**50.07**	**37**	P	**P**	**17 29 33.7**	**+1.0**
	comp=Z,0.5nm,0.5s,mb3.7,baz=298,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**63.47**	**335**	P	**P**	**17 31 07.7**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.47**	**335**	P	**P**	**17 31 07.2**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.9,baz=34,slow=6.7,SNR=9.2						
PDAR	**Pinedale Array**	**63.99**	**54**	P	**P**	**17 31 11.4**	**+0.1**
	comp=Z,0.8nm,0.9s,mb3.5,baz=186,slow=2.7,SNR=4.9						
NB2	**NORSAR Subarra**	**67.59**	**341**	P	**P**	**17 31 34.6**	**+0.5**
	comp=Z,0.4nm,0.5s,mb3.5,baz=27,slow=6.9						
NOA	**NORSAR Array B**	**67.59**	**341**	P	**P**	**17 31 33.9**	**-0.2**
	comp=Z,0.8nm,0.7s,mb3.7,baz=27,slow=6.4,SNR=4.9						
AKASG	**Malin Array Be**	**71.08**	**326**	P	**P**	**17 31 55.0**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.08**	**326**	P	**P**	**17 31 55.0**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.8,baz=33,slow=6.2,SNR=5.4						
ASAR	**Alice Springs**	**73.08**	**199**	P	**P**	**17 32 06.8**	**-1.2**
	comp=Z,0.4nm,0.6s,mb3.5,baz=9.3,slow=6.0,SNR=9.5						
TXAR	**Lajitas Array**	**76.79**	**61**	P	**P**	**17 32 29.8**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.4,baz=305,slow=4.3,SNR=6.9						

*IDC **26** 17:24:01.8±1.0, 823S×15684E, h0km, mb4.1/6, mb1 4.2/7, mb1mx4.1/14, mbtmp4.1/7, ML4.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/26, Error ellipse: s-maj=30.9km s-min=23.6km az=124.0*

*NEIC **26** 17:24:03.7±0.8, 809S×15692E, h10km, mb4.1/2, Error ellipse: s-maj=20.0km s-min=16.6km az=157.0*

*ISCJB **26** 17:24:06.4±3.6, 83S±02×1569E±0.1, h44km±38km, mb3.9/8, Error ellipse: s-maj=34.7km s-min=16.7km az=149.1*

ISC 26 17:24:06.4±7.4, 83S±02×15687E±008, h29km±54km, n18, σ0°82/20, mb3.9/8, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.25**	**111**	*e*Pn	**Pn**	**17 24 55.2**	**-0.2**
HNR				*e*Sn	**Sn**	**17 25 33.6**	**+0.4**
HNR				LR	LR	17 25 55.8	
HNR	**Honiara**	**3.25**	**111**	Pn	**Pn**	**17 24 55.5**	**+0.1**
	98nm,0.3s,baz=266,slow=2.8,SNR=20						
HNR				Sn	**Sn**	**17 25 40.1**	**+6.9**
	117nm,0.3s,baz=288,slow=0.9,SNR=11						
HNR				LR	LR	17 25 55.8	
	comp=Z,386nm,18.7s,baz=181,slow=35						
CTA	**Charters Tower**	**15.60**	**220**	Pn	**Pn**	**17 27 48.9**	**+4.6**
	0.3nm,0.3s,baz=42,slow=9.9,SNR=5.9						
CTAO	**Charters Tower**	**15.60**	**220**	*e*P	**Pn**	**17 27 49.2**	**+5.0**
KAKA	**Kakadu**	**24.41**	**258**	*e*P	**P**	**17 29 22.5**	**-0.1**
	6.2nm,0.6s,mb4.2						
KAKA	**Kakadu**	**24.41**	**258**	*e*P	**P**	**17 29 22.8**	**+0.2**
WB2	**Warramunga Arr**	**24.68**	**240**	*e*P	**P**	**17 29 24.7**	**-0.3**
WB2	**Warramunga Arr**	**24.68**	**240**	*e*P	**P**	**17 29 24.9**	**-0.1**
WRA	**Warramunga Arr**	**24.69**	**240**	P	**P**	**17 29 24.8**	**-0.3**
	5.6nm,0.8s,mb4.1,baz=66,slow=10,SNR=46						
WRA				PcP	PcP	17 33 01.7	-0.4
	0.3nm,1.0s,baz=125,slow=41,SNR=3.8						
ASAR	**Alice Springs**	**26.79**	**233**	P	**P**	**17 29 43.0**	**-1.1**
	1.0nm,0.9s,mb3.4,baz=63,slow=10.0,SNR=13						
STKA	**Stephens Creek**	**27.44**	**209**	*e*P	**P**	**17 29 51.3**	**+1.5**
	2.1nm,0.5s,mb3.9						
STKA	**Stephens Creek**	**27.44**	**209**	P	**P**	**17 29 50.8**	**+1.0**
	2.5nm,0.6s,mb4.0,baz=48,slow=14,SNR=16						
ULN	**Ulaanbaatar**	**71.08**	**327**	P	**P**	**17 35 22.6**	**+0.7**
	1.2nm,1.0s,mb3.8						
SONM	**Songino Array**	**71.42**	**327**	P	**P**	**17 35 24.8**	**+0.9**
	0.7nm,0.9s,mb3.6,baz=133,slow=6.1,SNR=4.7						
MKAR	**Makanchi Array**	**85.59**	**318**	P	**P**	**17 36 42.2**	**+0.2**
MKAR	**Makanchi Array**	**85.59**	**318**	P	**P**	**17 36 42.2**	**+0.2**
	1.4nm,0.8s,mb4.2,baz=101,slow=6.2,SNR=7.7						
YKA	**Yellowknife Ar**	**96.60**	**28**	P	**P**	**17 37 31.6**	**-1.7**
YKA	**Yellowknife Ar**	**96.60**	**28**	P	**P**	**17 37 31.6**	**-1.6**
	0.2nm,0.5s,mb3.9,baz=264,slow=4.7,SNR=6.7						

*IDC **26** 17:28:44.8±1.5, 835S×15688E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/14, mbtmp3.8/5, ML4.4/1, Error ellipse: s-maj=36.0km s-min=25.5km az=3.0*

NEIC 26 17:28:46.6±0.7, 838S×15690E, h10km, Error ellipse: s-maj=18.9km s-min=12.7km az=179.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.19**	**109**	*e*Pn	**Pn**	17 29 36.9	+0.1
HNR				Sn	Sn	17 30 17.6	+2.8
HNR	**Honiara**	**3.19**	**109**	Pn	**Pn**	17 29 36.1	-0.6
	46nm,0.3s,baz=311,slow=0.3,SNR=7.6						
HNR				Sn	Sn	17 30 17.6	+2.8
	79nm,0.3s,baz=263,slow=18,SNR=8.7						
WB2	**Warramunga Arr**	**24.66**	**240**	*e*P	P	17 34 08.3	+0.6
WRA	**Warramunga Arr**	**24.68**	**240**	P	P	17 34 08.3	+0.5
	2.1nm,0.8s,baz=66,slow=9.7,SNR=7.5						
ASAR	**Alice Springs**	**26.76**	**233**	P	P	17 34 26.3	-0.4
	0.1nm,0.7s,baz=56,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**27.38**	**209**	P	P	17 34 31.8	-0.3
	3.0nm,1.1s,baz=54,slow=17,SNR=3.8						
MKAR	**Makanchi Array**	**85.68**	**318**	P	P	17 41 25.5	-0.2
	1.1nm,0.6s,baz=97,slow=6.3,SNR=14						

IDC 26 17:30:26.3±21.0, 880S×15589E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/13, mbtmp3.7/3, Error ellipse: s-maj=350.3km s-min=90.4km az=35.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.60**	**240**	P	P	17 35 39.8	+0.5
	1.7nm,0.6s,baz=66,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.71**	**232**	P	P	17 35 57.9	-0.6
	0.2nm,0.5s,baz=59,slow=10,SNR=5.0						
STKA	**Stephens Creek**	**26.53**	**208**	P	P	17 36 05.8	0.0
	1.9nm,0.5s,baz=47,slow=14,SNR=15						

*ISCJB **26** 17:31:54.4±1.8, 15N±02×994E±03, h155km±13km, mb3.5/4, Error ellipse: s-maj=53.9km s-min=24.5km az=151.8*

*IDC **26** 17:31:56.1±1.7, 155N×9951E, h152km±11km, mb3.2/4, mb1 3.3/4, mb1mx3.1/19, mbtmp3.2/4, Error ellipse: s-maj=83.4km s-min=17.1km az=58.0*

*NEIC **26** 17:31:56.2±1.4, 156N×9953E, h155km±14km, Error ellipse: s-maj=37.3km s-min=20.4km az=62.0*

ISC 26 17:31:55.4±1.8, 15N±02×994E±03, h148km±13km, n6, σ0°39/7, mb3.5/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**1.38**	**338**	P	**Pn**	**17 32 24.1**	**+0.5**
	9.8nm,0.3s,baz=154,slow=9.7,SNR=21						
PSI				S	**Sn**	**17 32 44.8**	**-0.4**
	0.5nm,0.3s,baz=294,slow=23,SNR=5.6						
KULM	**Kulim**	**3.94**	**18**	*e*P	**Pn**	**17 32 55.0**	**+0.1**
WRA	**Warramunga Arr**	**40.32**	**124**	P	**P**	**17 39 18.6**	**0.0**
	1.2nm,0.5s,mb3.8,baz=302,slow=9.1,SNR=20						
ASAR	**Alice Springs**	**41.82**	**129**	P	**P**	**17 39 30.6**	**-0.2**
	0.6nm,1.0s,mb3.2,baz=298,slow=7.4,SNR=7.1						
SONM	**Songino Array**	**46.53**	**6**	P	**P**	**17 40 07.9**	**-0.1**
	0.8nm,0.9s,mb3.4,baz=193,slow=8.3,SNR=5.0						
MKAR	**Makanchi Array**	**47.52**	**344**	P	**P**	**17 40 15.7**	**+0.1**
	0.7nm,0.3s,mb3.7,baz=160,slow=8.2,SNR=24						

*IDC **26** 17:37:50.5±1.1, 2853N×14261E, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.8/17, mbtmp3.7/9, ML3.6/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=39.5km s-min=14.4km az=88.0*

*ISCJB **26** 17:37:51.2±3.3, 2858N±005×1427E±02, h16km±23km, mb4.0/12, Error ellipse: s-maj=28.4km s-min=7.1km az=174.6*

*NEIC **26** 17:37:52.3±0.6, 2852N×14263E, h10km, mb4.3/4, Error ellipse: s-maj=23.7km s-min=8.0km az=76.0*

*MOS **26** 17:37:53.8±1.0, 2855N×14250E, h33km, mb4.4/4, Error ellipse: s-maj=37.8km s-min=12.5km az=114.6*

ISC 26 17:37:53.0±3.6, 2852N±005×1426E±02, h14km±23km, n23, σ0°47/25, mb4.0/12, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.47**	**196**	Pn	**Pn**	**17 38 19.6**	**+0.6**
	14nm,0.3s,baz=306,slow=22,SNR=9.2						
CBIJ				Sn	**Sn**	**17 38 37.8**	**-0.3**
	37nm,0.3s,baz=40,slow=20,SNR=7.4						
MJAR	**Matsushiro Arr**	**8.83**	**336**	Pn	**Pn**	**17 39 59.1**	**-1.0**
	1.3nm,0.3s,baz=159,slow=12,SNR=9.1						
MAJO	**Matsushiro**	**8.84**	**336**	*e*P	**Pn**	**17 40 00.5**	**+0.3**
MAT	**Matsushiro**	**8.84**	**336**	P	**Pn**	**17 40 00.2**	**0.0**
MAT				*e*S	**Sn**	**17 41 39.6**	**+0.1**
KSRS	**Korea Array**	**15.22**	**310**	Pn	**Pn**	**17 41 27.5**	**+0.2**
	0.1nm,0.3s,baz=116,slow=10,SNR=2.5						
KSRS				LR	LR	17 46 55.7	
	comp=Z,52nm,20.7s,baz=345,slow=36						
ULN	**Ulaanbaatar**	**33.59**	**315**	*e*P	**P**	**17 44 32.6**	**0.0**
	6.2nm,1.6s,mb4.3						
ULN	**Ulaanbaatar**	**33.59**	**315**	*e*P	**P**	**17 44 32.6**	**0.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.3						
SONM	**Songino Array**	**33.99**	**315**	P	**P**	**17 44 36.1**	**0.0**
SONM	**Songino Array**	**33.99**	**315**	P	**P**	**17 44 36.1**	**0.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=128,slow=8.6,SNR=4.8						
ZAK	**Zakamensk**	**36.83**	**317**	*e*P	**P**	**17 45 00.3**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.1s,mb3.6						
BATI	**Kupang**	**42.64**	**208**	P	**P**	**17 45 48.4**	**-0.7**
	comp=Z,4.0nm,0.4s,mb4.5,baz=315,slow=1.4,SNR=2.8						
WB2	**Warramunga Arr**	**48.84**	**190**	*e*P	**P**	**17 46 38.1**	**+0.1**
WRA	**Warramunga Arr**	**48.84**	**190**	P	**P**	**17 46 37.9**	**-0.1**
	comp=Z,2.1nm,0.6s,mb4.3,baz=9.6,slow=8.6,SNR=25						
MKAR	**Makanchi Array**	**49.90**	**309**	P	**P**	**17 46 45.3**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=93,slow=9.5,SNR=13						
MKAR				PcP	PcP	17 48 03.9	-2.3
	comp=Z,0.2nm,0.7s,baz=85,slow=4.1,SNR=2.3						
KURK	**Kurchatov**	**52.29**	**314**	*e*P	**P**	**17 47 03.9**	**+0.1**
	comp=Z,7.7nm,1.0s,mb4.6						
KURK	**Kurchatov**	**52.29**	**314**	*e*P	**P**	**17 47 03.9**	**+0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ASAR	**Alice Springs**	**52.56**	**190**	P	**P**	**17 47 05.9**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=7.3,slow=6.5,SNR=9.6						
AML	**Almayashu**	**56.46**	**304**	*e*P	**P**	**17 47 35.7**	**+1.4**
	comp=Z,1.6nm,0.4s,mb4.4						
BRVK	**Borovoye**	**57.34**	**317**	*e*P	**P**	**17 47 40.4**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.2						
BRVK	**Borovoye**	**57.34**	**317**	*e*P	**P**	**17 47 40.4**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
YKA	**Yellowknife Ar**	**70.70**	**29**	P	**P**	**17 49 08.2**	**+0.1**
YKA	**Yellowknife Ar**	**70.70**	**29**	P	**P**	**17 49 08.2**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=293,slow=6.0,SNR=4.3						
FINES	**FINESS Array B**	**76.86**	**334**	P	**P**	**17 49 44.3**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=77,slow=6.0,SNR=2.5						

*MOS **26** 18:09:53.7±0.6, 5226N×10667E, h14km, mb4.2/1, Error ellipse: s-maj=20.5km s-min=12.1km az=76.4*

BYKL 26 18:09:54.9±0.2, 5227N×10647E, h24km±3km, 10C-9D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAB	**Kabansk**	**0.25**	**153**	↑*i*PG	Pb	18 10 00.9	-0.1
KAB				*e*		18 10 05.5	
KAB				pmax	pmax		
	comp=Z,506nm,0.2s						
KAB				smax			
	comp=E,5µm,0.3s						
KAB	**Kabansk**	**0.25**	**153**	↑*i*Pg	Pb	18 10 01.0	0.0
KAB				*i* Sg	Sb	18 10 05.5	+0.3
KAB				Pmax			
	comp=E,515nm,0.2s						
KAB				Smax			
	comp=E,5µm,0.3s						
TRG	**Tyrgan**	**0.50**	**351**	↓*i*PG	Pb	18 10 05.0	0.0
TRG				*e*		18 10 12.4	
TRG				pmax	pmax		
	comp=Z,400nm,0.1s						
TRG				smax			
	comp=N,2µm,0.1s						
TRG	**Tyrgan**	**0.50**	**351**	↓*i*Pg	Pb	18 10 05.0	0.0
	comp=N,163nm,0.3s						
TRG				↑*i*Pg	Pb	18 10 05.0	0.0
	comp=N,47nm,0.3s						
TRG				↓*i*Pg	Pb	18 10 05.0	0.0
	comp=N,300nm,0.3s						
TRG				*e*		18 10 08.2	
TRG				*i* Sg	Sb	18 10 12.2	+0.3
TRG				Pmax			
	comp=N,399nm,0.1s						
TRG				Smax			
	comp=N,2µm,0.1s						
ZRHB	**Zarechye**	**0.51**	**55**	↑*i*Pg	Pb	18 10 05.0	-0.1
ZRHB				*e*Sg	Sb	18 10 12.5	+0.4
ZRHB				*e*Sb	Sb	18 10 14.7	+2.6
ZRHB				Pmax			
	comp=N,166nm,0.3s						
ZRHB				max			
	comp=N,6µm,0.6s						
HRMR	**Khuramsha**	**0.71**	**155**	↓*i*Pg	Pb	18 10 08.3	-0.3
HRMR				*e*Sg	Sb	18 10 17.6	-0.3
LSTR	**Listvyanka**	**1.09**	**249**	↑*i*PG	Pn	18 10 15.0	+0.4
LSTR				*e*		18 10 29.4	
LSTR				pmax	pmax		
	comp=Z,94nm,0.3s						
LSTR				smax			
	comp=N,620nm,0.3s						
LSTR	**Listvyanka**	**1.09**	**249**	↓*i*Pg	Pn	18 10 15.0	+0.4
	comp=N,53nm,0.7s						
LSTR				↓*i*Pg	Pn	18 10 15.0	+0.4
	comp=N,85nm,0.7s						
LSTR				↑*i*Pg	Pn	18 10 15.0	+0.4
	comp=N,78nm,0.7s						
LSTR				*i* Sg	Sb	18 10 29.4	+0.7
LSTR				Pmax			
	comp=N,94nm,0.3s						
LSTR				Smax			
	comp=N,618nm,0.3s						
KELR	**Kotokel**	**1.10**	**63**	↓*i*Pg	Pn	18 10 15.1	+0.3
KELR				↓*i*Pb	Pb	18 10 16.0	+0.8
KELR				*e*Sg	Sb	18 10 29.6	+0.5
KELR				max			
	comp=N,677nm,0.2s						
KELR				Smax			
	comp=N,1µm,0.2s						
IRK	**Irkutsk**	**1.35**	**270**	↑*i*PN	Pn	18 10 20.0	+1.8
IRK				*i*		18 10 38.0	
IRK				pmax	pmax		
	comp=Z,825nm,0.3s						
IRK				smax			
	comp=N,2µm,0.2s						
IRK	**Irkutsk**	**1.35**	**270**	↑*i*Pg	Pn	18 10 20.0	+1.8
IRK				*e*Sg	Sn	18 10 37.3	+1.9
IRK				Pmax			
	comp=N,926nm,0.8s						
IRK				Smax			
	comp=N,2µm,0.2s						
OGRR	**Ongureny**	**1.54**	**26**	↓*i*PN	Pn	18 10 21.8	+1.1
OGRR				*e*		18 10 41.8	
OGRR				pmax	pmax		
	comp=Z,29

comp=E,86nm,1.2s
YLYR Ulyunkhan 3.83 45 *e*Pn Pn 18 10 52.8 +0.6
YLYR *e*Pg Pn 18 11 03.2 +11
YLYR *e*Sg Sn 18 11 53.6 +17
YLYR Pmax
comp=E,5.0nm,0.7s
YLYR Smax
comp=E,36nm,0.4s
ORL Orlik 4.09 276 *e*Pn Pn 18 10 58.3 +2.5
ORL *e*Pg Pn 18 11 07.8 +12
ORL *e*Sg Sn 18 12 01.1 +18
ORL Pmax
comp=E,9.0nm,0.4s
ORL Smax
comp=E,47nm,0.7s
CIT Chita 4.37 90 *e*Pg Pn 18 11 12.5 +13
CIT *e*Sg Sn 18 12 09.5 +20
CIT Pmax
comp=E,17nm,0.5s
CIT Smax
comp=E,34nm,0.7s
ULN Ulaanbaatar 4.43 175 *i* PN Pn 18 11 01.8 +1.3
KPC Khapcheranga 4.53 122 *e*Pn Pn 18 11 02.8 +0.9
KPC *e*Pg Pn 18 11 15.7 +14
KPC *e*Sg Sn 18 12 13.7 +20
KPC Pmax
comp=E,6.0nm,0.5s
KPC Smax
comp=E,78nm,1.7s
KMO Kumora 4.57 36 *e*Pg Pn 18 11 17.7 +15
KMO *e*Sg Sn 18 12 16.4 +22
KMO Pmax
comp=E,7.0nm,0.5s
KMO Smax
comp=E,36nm,0.9s
UKT Uakit 5.32 50 *e*PN Pn 18 11 12.2 -0.5
UKT *e* 18 11 28.4
UKT *e* 18 12 39.4
UKT pmax pmax
comp=Z,4.0nm,0.6s
UKT smax
comp=N,34nm,1.0s
UKT Uakit 5.32 50 *e*Sg Sn 18 12 39.5 +26
UKT Smax
comp=N,15nm,0.6s
TDJR Todzha 6.36 275 *e*Pg Pn 18 11 48.5 +22
TDJR *e*Sg Sn 18 13 09.8 +31
BOD Bodaibo 7.04 35 *e*Sg Sn 18 13 33.8 +38
BOD Smax
comp=N,6.0nm,0.7s
AKASG Malin Array Be 45.96 300 *i* P P 18 18 11.0 -4.6
AKASG pmax pmax
comp=Z,1.0nm,0.4s

IDC ***26*** *18:18:32.0±0.9, 5240N×17258E, h0km, mb4.3/13, mb1 4.5/13, mb1mx4.3/21, mbtmp4.3/13, MS3.3/4, Ms1 3.4/4, ms1mx3.0/42, Error ellipse: s-maj=25.9km s-min=16.7km az=168.0*
NEIC ***26*** *18:18:33.8±0.4, 5236N×17255E, h10km, mb4.8/24, ML4.4(AEIC), Error ellipse: s-maj=9.4km s-min=5.3km az=182.0*
MOS ***26*** *18:18:35.6±1.0, 5239N×17257E, h33km, mb4.8/17, Error ellipse: s-maj=14.1km s-min=8.5km az=89.0*
BJI ***26*** *18:18:35.2, 5305N×17189E, h8km, mB4.9, mb4.7, Ms4.5, Msz4.3*
ISCJB ***26*** *18:18:36.8±1.0, 5247N±007×17261E±005, h41km±8km, mb4.6/52, MS3.8/11, Error ellipse: s-maj=11.5km s-min=4.9km az=2.1*
ISC 26 18:18:38.3±1.1, 5248N±007×17263E±005, h36km±9km, h8km±3.4km:pP-P,n154,-0:75/158,mb4.6/52,MS3.8/11, 27C-20D,Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**0.93**	**74**	P	**Pn**	**18 18 52.8**	**-2.0**
SMY				S	**Sn**	**18 19 06.3**	**-0.6**
AMKA	**Amchitka**	**4.27**	**102**	P	**Pn**	**18 19 41.9**	**+1.2**
AMKA				S	**Sn**	**18 20 32.7**	**+3.4**
BILL	**Bilibino**	**15.91**	**351**	*e*P	**Pn**	**18 22 20.8**	**+1.7**
	25nm,1.3s						
BILL	**Bilibino**	**15.91**	**351**	*i* P	**Pn**	**18 22 20.9**	**+1.8**
BILL				MLR	MLR		
	comp=Z,300nm,24.0s						
TNA	**Tin City**	**16.39**	**29**	*e*P	**Pn**	**18 22 26.6**	**+1.4**
	comp=Z,9.4nm,0.8s						
SVW2	**Sparrevohn**	**19.25**	**51**	*e*P	**Pn**	**18 23 00.4**	**0.0**
TTA	**Tatalina**	**19.53**	**45**	*e*P	**Pn**	**18 23 04.1**	**+0.4**
KDAK	**Kodiak Island**	**20.42**	**61**	P	**P**	**18 23 10.6**	**-1.3**
	comp=Z,14nm,0.4s,baz=290,slow=3.8,SNR=31						
ASAJ	**Asahikawa**	**21.54**	**259**	LR	LR	18 30 29.2	
	comp=Z,55nm,19.8s,MS3.0,baz=135,slow=33						
IMA2	**Indian Mountai**	**21.57**	**38**	*e*P	**P**	**18 23 25.0**	**+0.7**
SLKM	**Skilak Lake**	**21.76**	**54**	P	**P**	**18 23 26.8**	**+0.5**
SML	**Sawmill**	**22.80**	**51**	*e*P	**P**	**18 23 36.7**	**-0.7**
COLA	**College**	**23.53**	**43**	*e*P	**P**	**18 23 44.5**	**-0.3**
	comp=Z,23nm,0.6s,mb4.8						
COLA	**College**	**23.53**	**43**	*e*P	**P**	**18 23 44.5**	**-0.3**
COLA				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.8						
YAK	**Yakutsk**	**24.67**	**310**	*e*P	**P**	**18 23 54.4**	**-0.8**
	comp=Z,21nm,0.6s,mb4.8						
YAK	**Yakutsk**	**24.67**	**310**	*e*P	**P**	**18 23 55.1**	**-0.1**
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
MENT	**Mentasta**	**25.05**	**48**	*e*P	**P**	**18 23 59.5**	**+0.9**
KLR	**Kul'dur**	**25.77**	**279**	*e*P	**P**	**18 24 03.0**	**-2.3**
EGAK	**Eagle**	**26.34**	**44**	*e*P	**P**	**18 24 09.1**	**-1.2**
	comp=E,14nm,0.8s,mb4.5						
DAWY	**Dawson**	**27.05**	**46**	*e*P	**P**	**18 24 16.3**	**-0.5**
TIXI	**Tiksi**	**27.09**	**331**	*e*P	**P**	**18 24 18.1**	**+1.1**
	comp=E,4.4nm,0.6s,mb4.2						
TIXI	**Tiksi**	**27.09**	**331**	*i* P	**P**	**18 24 17.9**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.4						
MDJ	**Mudanjiang**	**29.19**	**272**	P	**P**	**18 24 34.5**	**-1.5**
MDJ				AMB	AMB		
	comp=Z,5.0nm,2.4s,mb3.8						
MDJ				AMB	AMB		
	comp=Z,167nm,4.2s						
INK	**Inuvik**	**29.71**	**37**	*e*P	**P**	**18 24 39.9**	**-0.4**
	comp=Z,342nm,1.1s						
INK	**Inuvik**	**29.71**	**37**	P	**P**	**18 24 40.0**	**-0.3**
INK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
INK	**Inuvik**	**29.71**	**37**	P	**P**	**18 24 40.0**	**-0.4**
	comp=Z,4.0nm,0.5s,mb4.4,baz=267,slow=9.0,SNR=20						
BOD	**Bodaibo**	**33.00**	**303**	*e*P	**P**	**18 25 08.4**	**-1.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s,mb4.1						
KSRS	**Korea Array**	**34.41**	**262**	LR	LR	18 37 47.5	
	comp=Z,34nm,19.1s,MS3.1,baz=347,slow=34						
YKA	**Yellowknife Ar**	**38.29**	**46**	P	**P**	**18 25 54.7**	**0.0**
YKA	**Yellowknife Ar**	**38.29**	**46**	P	**P**	**18 25 54.7**	**0.0**
	comp=Z,5.3nm,0.7s,mb4.4,baz=288,slow=8.0,SNR=38						
RES	**Resolute Bay**	**40.92**	**24**	*e*P	**P**	**18 26 16.5**	**+0.1**
	comp=Z,155nm,0.9s,mb5.6						
ULN	**Ulaanbaatar**	**40.96**	**291**	⇓*e*P	**P**	**18 26 18.1**	**+1.0**
A07A	**Ashnola River,**	**41.14**	**67**	P	**P**	**18 26 19.0**	**+0.5**
	baz=41,SNR=6.6						
SONM	**Songino Array**	**41.35**	**291**	P	**P**	**18 26 20.4**	**+0.1**
	comp=Z,1.7nm,0.7s,mb3.8,baz=60,slow=8.1,SNR=15						
SONM				LR	LR	18 45 15.6	
	comp=Z,60nm,18.2s,MS3.5,baz=273,slow=39						
B07A	**Winthrop**	**41.59**	**68**	⇓P	**P**	**18 26 22.3**	**+0.1**
	baz=42						
ZAK	**Zakamensk**	**41.77**	**296**	*e*P	**P**	**18 26 24.0**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.1s						
C07A	**Waterville**	**42.04**	**69**	⇓P	**P**	**18 26 25.0**	**-0.9**
	baz=42						
B08A	**Colville Reser**	**42.09**	**67**	P	**P**	**18 26 26.5**	**+0.2**
	baz=42,SNR=5.2						
E06A	**Yakima**	**42.14**	**71**	⇓P	**P**	**18 26 24.9**	**-1.8**
	baz=42						
A09A	**Danville**	**42.19**	**66**	P	**P**	**18 26 27.6**	**+0.5**
	baz=42,SNR=6.3						
HHC	**Hu-ho-hao-te**	**42.28**	**279**	*e*P	**P**	**18 26 27.0**	**-0.9**
HHC				AP	pP	18 26 31.5	-7.0
HHC				XP	sP	18 26 34.3	-8.5
HHC				PP	PP	18 28 06.3	+0.3
HHC				S	**S**	**18 32 44.8**	**-1.1**
HHC				XS	sS	18 32 52.0	-11
HHC				SS	SS	18 35 47.3	-7.4
HHC				SCS	ScS	18 36 27.8	+1.2
HHC				AMB	AMB		
	comp=Z,13nm,0.8s,mb4.6						
HHC				AMB	AMB		
	comp=Z,85nm,4.4s						
HHC				LR	LR		
	comp=N,131nm,15.5s,MS4.2						
HHC				LR	LR		
	comp=E,191nm,13.1s,MS4.2						
HHC				LR	LR		
	comp=Z,82nm,14.3s,MS3.8						
B09A	**Rice**	**42.73**	**67**	⇑P	**P**	**18 26 31.5**	**+0.1**
	baz=43						
D08A	**Wollman Farm,**	**43.03**	**69**	⇓P	**P**	**18 26 34.0**	**0.0**
	baz=43						
HAWA	**Hanford**	**43.05**	**70**	*e*P	**P**	**18 26 34.2**	**0.0**
	comp=Z,5.1nm,0.6s,mb4.4						
A11A	**Hall Mountain,**	**43.43**	**65**	⇑P	**P**	**18 26 38.2**	**+1.0**
	baz=43						
NJ2	**Nanjing**	**43.55**	**264**	*e*P	**P**	**18 26 41.5**	**+3.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
B11A	**Sandpoint**	**43.71**	**66**	⇓P	**P**	**18 26 39.8**	**+0.3**
	baz=44						
J05A	**Fort Rock**	**43.84**	**75**	⇑P	**P**	**18 26 41.1**	**+0.5**
	baz=44						
D10A	**Wagner Farm, O**	**43.97**	**68**	⇓P	**P**	**18 26 40.6**	**-0.9**
	baz=44						
G08A	**Pilot Rock**	**44.01**	**71**	⇑P	**P**	**18 26 42.0**	**+0.1**
	baz=44						
K05A	**Summer Lake**	**44.38**	**75**	⇑P	**P**	**18 26 45.4**	**+0.6**
	baz=44						
E10A	**Myers Farm, Un**	**44.38**	**68**	⇓P	**P**	**18 26 43.9**	**-0.9**
	baz=44						
I07A	**Izee**	**44.39**	**73**	⇓P	**P**	**18 26 44.9**	**0.0**
	baz=44						
F10A	**Beach Ranch, E**	**44.61**	**69**	⇑P	**P**	**18 26 45.6**	**-1.0**
	baz=44						
WALA	**Waterton Lakes**	**44.73**	**64**	*e*P	**P**	**18 26 47.5**	**0.0**
	comp=Z,13nm,0.7s,mb4.9						
B13A	**Whitefish**	**44.80**	**65**	⇑P	**P**	**18 26 47.9**	**-0.3**
	baz=45						
C13A	**Hot Springs**	**45.14**	**66**	⇑P	**P**	**18 26 50.4**	**-0.4**
	baz=45						
G11A	**Walters Elk Ra**	**45.49**	**69**	⇓P	**P**	**18 26 53.0**	**-0.6**
	baz=45						
D13A	**Huson**	**45.53**	**66**	⇓P	**P**	**18 26 54.1**	**+0.1**
	baz=45						
H10A	**Noah's Angus R**	**45.69**	**70**	⇑P	**P**	**18 26 54.8**	**-0.5**
	baz=46						
F12A	**Elk City**	**45.86**	**68**	P	**P**	**18 26 56.8**	**+0.2**
	baz=46,SNR=7.5						
I10A	**Payette**	**45.96**	**71**	⇑P	**P**	**18 26 58.0**	**+0.6**
	baz=46						
H11A	**Donnelly**	**46.05**	**70**	⇓P	**P**	**18 26 58.0**	**-0.1**
	baz=46						
E13A	**Victor**	**46.06**	**67**	⇑P	**P**	**18 26 58.8**	**+0.7**
	baz=46						
D14A	**Greenough**	**46.07**	**66**	⇓P	**P**	**18 26 58.8**	**+0.6**
	baz=46						
L08A	**Fields**	**46.20**	**74**	⇓P	**P**	**18 26 59.0**	**-0.3**
	baz=46						
M07A	**Soldier Meadow**	**46.21**	**75**	⇑P	**P**	**18 26 59.2**	**-0.1**
	baz=46						
M08A	**Happy Creek Ra**	**46.64**	**75**	⇑P	**P**	**18 27 02.4**	**-0.3**
	baz=46						
D15A	**Lincoln**	**46.65**	**65**	P	**P**	**18 27 02.6**	**-0.1**
	baz=46,SNR=7.3						
H12A	**Diamond D Ranc**	**46.80**	**69**	⇓P	**P**	**18 27 03.5**	**-0.5**
	baz=47						
G13A	**Cobalt**	**46.83**	**68**	P	**P**	**18 27 04.0**	**-0.2**
	baz=47,SNR=8.6						
E15A	**Deer Lodge**	**46.94**	**66**	P	**P**	**18 27 05.0**	**0.0**
	baz=47,SNR=5.5						
H13A	**Challis**	**47.14**	**69**	⇑P	**P**	**18 27 07.1**	**+0.5**
	baz=47						
K11A	**Parker Ranch,**	**47.20**	**72**	⇓P	**P**	**18 27 06.9**	**-0.2**
	baz=47						
F15A	**Butte**	**47.37**	**67**	⇑P	**P**	**18 27 08.1**	**-0.3**
	baz=47						
L10A	**Juniper Basin**	**47.37**	**73**	⇓P	**P**	**18 27 08.7**	**+0.3**
	baz=47						
J12A	**Stokes Ranch,**	**47.45**	**71**	⇑P	**P**	**18 27 08.7**	**-0.3**
	baz=47						
EGMT	**Eagleton**	**47.59**	**63**	⇑P	**P**	**18 27 09.6**	**-0.5**
	baz=48						
I13A	**Wildhorse Cree**	**47.61**	**70**	⇑P	**P**	**18 27 10.1**	**-0.1**
	baz=48						
HLID	**Hailey**	**47.65**	**70**	*e*P	**P**	**18 27 10.0**	**-0.6**
	comp=Z,3.0nm,0.9s,mb4.3						
HLID	**Hailey**	**47.65**	**70**	⇑P	**P**	**18 27 10.1**	**-0.5**
	baz=48						
G15A	**Dillon**	**47.78**	**67**	⇑P	**P**	**18 27 11.2**	**-0.4**
	baz=48						
J13A	**Cove Ranch, Pi**	**47.89**	**70**	⇑P	**P**	**18 27 11.4**	**-1.1**
	baz=48						
BOZ	**Bozeman (W)**	**47.97**	**66**	P	**P**	**18 27 13.2**	**+0.1**
	baz=48,SNR=10						
NVAR	**Mina Array Bea**	**48.60**	**78**	P	**P**	**18 27 18.1**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=317,slow=7.1,SNR=4.9						
FCC	**Fort Churchill**	**48.93**	**44**	*e*P	**P**	**18 27 19.6**	**-0.6**
	comp=Z,9.5nm,1.0s,mb4.8						
FCC	**Fort Churchill**	**48.93**	**44**	*e*P	**P**	**18 27 19.6**	**-0.7**
FCC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
FLWY	**Flagg Ranch**	**49.45**	**67**	*e*P	**P**	**18 27 24.7**	**+0.3**
	comp=Z,5.8nm,0.5s,mb4.9						
Q10A	**Clear Creek Ra**	**49.48**	**76**	⇓P	**P**	**18 27 24.1**	**-0.6**
	baz=49						
NVS	**Novosibirsk**	**49.53**	**311**	*e*P	**P**	**18 27 20.2**	**-4.7**
NVS				pmax	pmax		
	comp=Z,19nm,2.8s,mb4.6						
LZH	**Lanzhou**	**49.97**	**280**	*e*P	**P**	**18 27 27.5**	**-1.0**
LZH				AP	pP	18 27 32.0	-7.2
LZH				XP	sP	18 27 34.5	-9.0
LZH				*e*PP	PP	18 29 23.0	-0.4
LZH				*e*S	**S**	**18 34 29.3**	**-7.1**
LZH				XS	sS	18 34 42.5	-12
LZH				*e*SS	SS	18 38 04.3	-4.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,96nm,6.3s						
LZH				LR	LR		
	comp=N,514nm,15.7s						
LZH				LR	LR		
	comp=Z,826nm,18.4s,MS4.8						
GTA	**Gaotai**	**50.19**	**286**	*e*P	**P**	**18 27 31.3**	**+1.2**
GTA				AP	pP	18 27 34.8	-6.1
GTA				XP	sP	18 27 37.8	-7.3
GTA				AMB	AMB		
	comp=Z,4.0nm,0.8s,mb4.5						
R11A	**Troy Canyon, C**	**50.27**	**76**	⇓P	**P**	**18 27 29.9**	**-0.8**
	baz=50						
LAO	**LASA Array**	**50.31**	**62**	*e*P	**P**	**18 27 31.0**	**+0.1**
	comp=Z,8.4nm,0.7s,mb4.9						
P13A	**Bates Ranch, G**	**50.48**	**74**	⇑P	**P**	**18 27 32.6**	**+0.3**
	baz=50						
PDAR	**Pinedale Array**	**50.92**	**68**	P	**P**	**18 27 35.6**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.4,baz=311,slow=3.4,SNR=18						
TMUT	**Trail Mountain**	**52.22**	**72**	*e*P	**P**	**18 27 45.7**	**+0.3**
SRU	**San Rafael**	**52.75**	**72**	*e*P	**P**	**18 27 49.3**	**0.0**
	comp=Z,3.6nm,0.8s,mb4.3						
SRU	**San Rafael**	**52.75**	**72**	*e*P	**P**	**18 27 49.3**	**+0.1**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CD2	**Chengdu**	**53.57**	**275**	*e*P	**P**	**18 27 54.8**	**-0.6**
CD2				AP	pP	18 27 59.3	-6.9
CD2				XP	sP	18 28 02.0	-8.5
CD2				PP	PP	18 29 56.5	+0.5
CD2				S	**S**	**18 35 24.8**	**-1.2**
CD2				XS	sS	18 35 32.5	-11
CD2				SS	SS	18 39 04.0	-2.3
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,6.8s						
CD2				LR	LR		
	comp=N,270nm,18.4s,MS4.4						
CD2				LR	LR		
	comp=E,120nm,16.2s,MS4.4						
CD2				LR	LR		
PV10	**Paradox Valley**	**54.10**	**72**	*e*P	**P**	**18 28 00.3**	**+1.1**
WMQ	**Urumqi**	**54.20**	**297**	⇑P	**P**	**18 28 00.5**	**+0.7**
WMQ				AP	pP	18 28 05.0	-5.7
WMQ				XP	sP	18 28 07.5	-7.4
WMQ				PCP	PcP	18 29 05.0	+1.1
WMQ				PP	PP	18 30 04.0	+2.6
WMQ				*e*S	**S**	**18 35 35.5**	**+1.3**
WMQ				AMB	AMB		
	comp=Z,6.0nm,0.6s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,24nm,3.3s						
WMQ				LR	LR		
	comp=N,117nm,23.0s,MS4.0						
WMQ				LR	LR		
	comp=E,108nm,21.6s,MS4.0						
WMQ				LR	LR		
	comp=Z,49nm,23.0s,MS3.5						
KURK	**Kurchatov**	**54.31**	**309**	*e*P	**P**	**18 28 00.0**	**-0.5**
	comp=Z,8.3nm,0.8s,mb4.7						
KURK	**Kurchatov**	**54.31**	**309**	*e*P	**P**	**18 28 00.0**	**-0.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
X14A	**Yava**	**54.48**	**78**	⇓P	**P**	**18 28 02.0**	**0.0**
	baz=54						
PV01	**Paradox Valley**	**54.53**	**72**	*e*P	**P**	**18 28 03.0**	**+0.6**
AGMN	**Agassiz Refuge**	**54.68**	**55**	*e*P	**P**	**18 28 03.2**	**0.0**
	comp=Z,9.4nm,0.8s,mb4.9						
GYA	**Guiyang**	**54.98**	**269**	P	**P**	**18 28 06.5**	**+0.8**
GYA				AP	pP	18 28 10.5	-6.0
GYA				XP	sP	18 28 13.5	-7.3
GYA				PCP	PcP	18 29 09.5	+2.4
GYA				PP	PP	18 30 11.3	+2.5
GYA				SCP	ScP	18 33 06.3	+3.7
GYA				S	**S**	**18 35 46.0**	**+0.9**
GYA				SCS	ScS	18 37 52.8	+0.9
GYA				SS	SS	18 39 29.3	+0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,6.4s						
GYA				LR	LR		
	comp=N,340nm,20.4s,MS4.6						
GYA				LR	LR		
	comp=E,380nm,19.8s,MS4.6						
GYA				LR	LR		
	comp=Z,310nm,20.8s,MS4.4						
MKAR	**Makanchi Array**	**55.09**	**303**	⇑*e*P	**P**	**18 28 05.4**	**-0.8**
MKAR	**Makanchi Array**	**55.09**	**303**	P	**P**	**18 28 05.4**	**-0.8**
	comp=Z,0.7nm,0.3s,mb4.1,baz=54,slow=6.5,SNR=38						
ARCES	**ARCESS Array B**	**55.95**	**347**	P	**P**	**18 28 11.0**	**-1.1**
	comp=Z,8.7nm,1.0s,mb4.7,baz=24,slow=7.8,SNR=13						
BRVK	**Borovoye**	**56.51**	**315**	*e*P	**P**	**18 28 15.9**	**-0.4**
SDCO	**Great Sand Dun**	**56.57**	**70**	*e*P	**P**	**18 28 17.7**	**+0.7**
	comp=Z,13nm,1.4s,mb4.8						
217A	**Green Valley**	**57.61**	**79**	⇑P	**P**	**18 28 25.5**	**+1.1**
	baz=58						
ANMO	**Albuquerque**	**57.96**	**73**	⇑*e*P	**P**	**18 28 28.7**	**+1.9**
318A	**Bisbee**	**58.34**	**79**	⇑P	**P**	**18 28 30.2**	**+0.7**
	baz=58						
KMI	**Kunming**	**58.36**	**271**	P	**P**	**18 28 30.0**	**+0.3**
KMI				AP	pP	18 28 34.3	-6.3
KMI				XP	sP	18 28 36.5	-8.3
KMI				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.5						
ARU	**Arti**	**58.72**	**324**	*i* P	**P**	**18 28 31.5**	**-0.3**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
ARU				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
MNTX	**Cornudas Mount**	**60.90**	**75**	*e*P	**P**	**18 28 47.1**	**0.0**
	comp=Z,13nm,1.2s,mb4.9						
JOF	**Joensuu**	**61.00**	**341**	*e*p	**P**	**18 28 46.4**	**-0.9**
	comp=Z,3.3nm,0.5s,mb4.7						
JOF	**Joensuu**	**61.00**	**341**	*e*P	**P**	**18 28 46.4**	**-0.9**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
SCHQ	**Schefferville**	**62.26**	**34**	P	**P**	**18 28 55.5**	**-0.4**
	baz=317,slow=9.4						
WMOK	**Wichita Mounta**	**62.54**	**68**	*e*P	**P**	**18 28 57.9**	**-0.2**
	comp=Z,3.4nm,0.7s,mb4.6						
WMOK	**Wichita Mounta**	**62.54**	**68**	*e*P	**P**	**18 28 57.9**	**-0.2**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
KAF	**Kangasniemi**	**62.69**	**343**	*e*p	**P**	**18 28 57.9**	**-0.8**
	comp=Z,2.9nm,0.4s,mb4.8,baz=20,slow=5.8						
KAF	**Kangasniemi**	**62.69**	**343**	*e*P	**P**	**18 28 57.9**	**-0.8**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.8						
FINES	**FINESS Array B**	**63.35**	**343**	*i* P	**P**	**18 29 03.0**	**-0.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**63.35**	**343**	P	**P**	**18 29 02.4**	**-0.7**
	comp=Z,1.9nm,0.8s,mb4.3,baz=15,slow=7.4,SNR=10						
LTX	**Lajitas**	**63.63**	**76**	*e*P	**P**	**18 29 05.8**	**+0.4**
	comp=Z,17nm,1.2s,mb5.0						
LTX	**Lajitas**	**63.63**	**76**	*e*P	**P**	**18 29 05.8**	**+0.4**
LTX				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
JCT	**Junction City**	**65.06**	**72**	P	**P**	**18 29 15.2**	**+0.4**
	comp=Z,5.0nm,0.6s,mb4.7						
JCT	**Junction City**	**65.06**	**72**	P	**P**	**18 29 15.2**	**+0.4**
JCT				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
TAPN	**Taplejung**	**65.82**	**284**	*e*P	**P**	**18 29 20.1**	**+0.4**
	comp=Z,21nm,1.1s,mb5.1						
NB2	**NORSAR Subarra**	**65.86**	**350**	P	**P**	**18 29 19.0**	**-0.5**
	comp=Z,2.6nm,0.6s,mb4.4,baz=12,slow=6.5						
NB2	**NORSAR Subarra**	**65.86**	**350**	P	**P**	**18 29 19.0**	**-0.5**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NOA	**NORSAR Array B**	**65.86**	**350**	P	**P**	**18 29 19.2**	**-0.3**
NOA				LR	LR	19 00 04.9	
NOA	**NORSAR Array B**	**65.86**	**350**	P	**P**	**18 29 19.2**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.4,baz=12,slow=6.4,SNR=14						
NOA				LR	LR	19 00 04.9	
	comp=Z,30nm,19.3s,MS3.5,baz=35,slow=38						
ODAN	**Odare**	**66.37**	**284**	*e*P	**P**	**18 29 24.0**	**+0.7**
	comp=Z,5.2nm,0.6s,mb4.7						
JIRN	**Jiri**	**66.49**	**285**	*e*P	**P**	**18 29 24.5**	**+0.5**
	comp=Z,11nm,0.6s,mb5.0						
KKN	**Kakani**	**66.93**	**286**	*e*P	**P**	**18 29 26.8**	**0.0**
	comp=Z,8.7nm,0.7s,mb4.9						
GKN	**Gorkha**	**67.14**	**286**	*e*P	**P**	**18 29 28.4**	**+0.2**
	comp=Z,9.9nm,0.9s,mb4.8						
KOLN	**Koldanda**	**67.93**	**287**	*e*P	**P**	**18 29 33.5**	**+0.4**
	comp=Z,8.5nm,0.8s,mb4.8						
SSPA	**Standing Stone**	**69.02**	**50**	*e*P	**P**	**18 29 39.3**	**-0.5**
AKASG	**Malin Array Be**	**72.65**	**337**	P	**P**	**18 30 01.6**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=23,slow=5.8,SNR=4.8						
CLL	**Collm**	**75.17**	**347**	*e*P	**P**	**18 30 17.0**	**+0.6**
DPC	**Dobruska-Polom**	**75.61**	**345**	*e*P	**P**	**18 30 20.2**	**+1.3**
PRU	**Pruhonice**	**76.24**	**346**	*e*P	**P**	**18 30 23.3**	**+0.8**
KHC	**Kasperske Hory**	**77.22**	**346**	*i* P	**P**	**18 30 29.4**	**+1.4**
KHC	**Kasperske Hory**	**77.22**	**346**	*e*P	**P**	**18 30 29.2**	**+1.2**
GERES	**GERESS Array B**	**77.48**	**346**	P	**P**	**18 30 29.6**	**+0.1**
	comp=Z,0.7nm,0.4s,mb3.9,baz=27,slow=7.5,SNR=9.2						
WRA	**Warram

*ATH **26** 18:21:32.7, 3829N×2039E, h10km±2km, MD3.7/4*
*NEIC **26** 18:21:32.8, 3829N×2040E, h9km, MD3.7(ATH), ML3.5(THE), After ATH.*
*CSEM **26** 18:21:33.1±0.4, 3824N×2035E, h5km, MD3.7, Error ellipse: s-maj=8.6km s-min=3.3km az=56.0*
*THE **26** 18:21:33.6, 3829N×2035E, h3km, ML3.5*

ISC 26 18:21:31.4±1.7, 3819N±006×203E±01, h5km±14km, n10, σ0§84/14, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**94**	*e*PG	**Pg**	**18 21 37.4**	**+0.9**
VLS				*e*SG	**Sg**	**18 21 40.3**	**+0.3**
KFL	**Anninata**	**0.43**	**101**	*e*Pg	**Pg**	**18 21 40.5**	**+0.9**
LKD	**Levkas**	**0.60**	**31**	*e*Pg	**Pg**	**18 21 42.6**	**-0.3**
LKD				*e*Sg	**Sg**	**18 21 50.1**	**-0.6**
RLS	**Riolos of Patr**	**0.96**	**98**	*e*PB	**Pb**	**18 21 49.8**	**-0.8**
SELA	**Sela**	**1.29**	**86**	*e*Pg	**Pg**	**18 21 55.2**	**-1.0**
SELA				*e*Sg	**Sg**	**18 22 13.6**	**+0.7**
IGT	**Igoumenitsa**	**1.34**	**3**	*e*Pg	**Pg**	**18 21 56.8**	**-0.3**
IGT				*e*Sg	**Sg**	**18 22 15.6**	**+1.1**
EVR	**Evrytania**	**1.42**	**59**	*e*PG	**Pg**	**18 21 56.6**	**-1.9**
KEK	**Kerkira**	**1.56**	**347**	*e*PB	**Pb**	**18 22 00.8**	**0.0**
ITM	**Ithomi**	**1.67**	**127**	*e*PG	**Pg**	**18 22 03.3**	**-0.1**
THL	**Klokotos Trika**	**1.94**	**45**	*e*PN	**Pn**	**18 22 05.9**	**+0.9**

*IDC **26** 18:21:38.4±3.4, 1485S×17401W, h0km, mb4.3/5, mb1 4.7/5, mb1mx4.2/13, mbtmp4.3/5, Error ellipse: s-maj=235.8km s-min=22.5km az=149.0*
*ISCJB **26** 18:21:44.6±2.1, 1513S±08×1739W±05, h60km±24km, mb4.3/7, Error ellipse: s-maj=154.1km s-min=17.0km az=150.2*
*NEIC **26** 18:21:46.0±1.5, 1519S×17385W, h60km±14km, mb4.3/2, Error ellipse: s-maj=80.7km s-min=11.1km az=150.0*

ISC 26 18:21:45.7±2.1, 1515S±08×1739W±05, h54km±27km, n49, σ0§67/14, mb4.3/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.37**	**62**	*e*Pn	**Pn**	**18 22 22.7**	**+0.5**
AFI				*e*Sn	**Sn**	**18 22 46.1**	**-4.0**
WB2	**Warramunga Arr**	**49.42**	**257**	*e*P	**P**	**18 30 30.7**	**+0.1**
WRA	**Warramunga Arr**	**49.43**	**257**	P	**P**	**18 30 30.3**	**-0.4**
WRA	**Warramunga Arr**	**49.43**	**257**	P	**P**	**18 30 30.3**	**-0.4**
	1.9nm,0.7s,mb4.3,baz=91,slow=7.2,SNR=97						
ASAR	**Alice Springs**	**49.74**	**252**	P	**P**	**18 30 33.0**	**0.0**
	8.7nm,0.6s,mb4.9,baz=89,slow=7.7,SNR=160						
NVAR	**Mina Array Bea**	**74.41**	**42**	P	**P**	**18 33 18.9**	**+0.8**
	3.4nm,0.9s,mb4.3,baz=214,slow=8.8,SNR=13						
HLID	**Hailey**	**79.68**	**40**	*e*P	**P**	**18 33 48.8**	**+1.2**
	2.4nm,1.0s,mb4.1						
COLA	**College**	**82.11**	**11**	*e*P	**P**	**18 34 00.5**	**+0.4**
	3.1nm,0.6s,mb4.4						
BW06	**Boulder Array**	**82.34**	**42**	*e*P	**P**	**18 34 01.2**	**-0.6**
PDAR	**Pinedale Array**	**82.34**	**42**	P	**P**	**18 34 01.8**	**0.0**
	1.3nm,0.8s,mb3.9,baz=228,slow=3.5,SNR=11						
EDM	**Edmonton**	**85.45**	**32**	P	**P**	**18 34 16.6**	**-0.8**
YKA	**Yellowknife Ar**	**89.98**	**24**	P	**P**	**18 34 38.2**	**-0.7**
YKA	**Yellowknife Ar**	**89.98**	**24**	P	**P**	**18 34 38.2**	**-0.7**
	0.6nm,0.7s,mb4.0,baz=243,slow=4.3,SNR=9.0						
ARCES	**ARCESS Array B**	**124.19**	**352**	PKP	PKPdf	18 40 36.9	-0.8
	3.5nm,0.8s,baz=20,slow=4.0,SNR=3.5						
DPC	**Dobruska-Polom**	**143.82**	**349**	*e*PKP	PKPdf	18 41 13.4	-1.4
PRU	**Pruhonice**	**144.48**	**351**	*e*PKP	PKPdf	18 41 15.5	-0.5
KECS	**Kecovo**	**144.61**	**343**	*e*PKP	PKPdf	18 41 15.7	-0.6
TREC	**Trest**	**144.99**	**349**	*e*PKP	PKPdf	18 41 16.8	-0.1
VYHS	**Vyhne**	**145.03**	**345**	*e*PKP	PKPdf	18 41 17.1	+0.1
BAIF	**Baives**	**145.05**	**2**	*e*PKP1	PKPbc	18 41 16.9	+0.5
	24nm,1.1s						
KHC	**Kasperske Hory**	**145.46**	**351**	*e*PKP	PKPdf	18 41 18.2	+0.5
MODS	**Modra-Piesok**	**145.51**	**347**	*e*PKP	PKPdf	18 41 18.7	+0.9
GERES	**GERESS Array B**	**145.72**	**351**	PKPbc	PKPbc	18 41 18.4	-0.2
	1.7nm,0.6s,baz=7.4,slow=3.1,SNR=7.0						
ROSF	**Rostrenen**	**145.92**	**11**	*e*PKP1	PKPbc	18 41 18.4	-0.8
FLN	**La Foliniere**	**145.95**	**8**	*e*PKP1	PKPbc	18 41 19.1	-0.2
	9.8nm,0.7s						
SGMF	**Saint Gilles**	**146.13**	**10**	*e*PKP1	PKPbc	18 41 19.7	-0.2
	28nm,0.8s						
LDF	**La Druitiere**	**146.16**	**7**	*e*PKP1	PKPbc	18 41 19.7	-0.3
	7.3nm,0.7s						
GRR	**Gorron**	**146.27**	**8**	*e*PKP1	PKPbc	18 41 20.4	+0.1
	19nm,0.8s						
QUIF	**Quistinic**	**146.34**	**11**	*e*PKP1	PKPbc	18 41 20.3	-0.2
	39nm,1.1s						
CDF	**Champ du Feu**	**146.72**	**359**	*e*PKP1	PKPbc	18 41 22.0	+0.4
	5.7nm,0.7s						
HAU	**Haudompre**	**147.14**	**360**	*e*PKP1	PKPbc	18 41 23.3	+0.5
	6.0nm,0.6s						
HINF	**Hinteralfeld**	**147.32**	**359**	*e*PKP1	PKPbc	18 41 23.3	0.0
LOR	**Lormes**	**147.82**	**3**	*e*PKP1	PKPbc	18 41 25.0	+0.3
	7.2nm,0.6s						
SSF	**Saint Saulge**	**148.01**	**3**	*e*PKP1	PKPbc	18 41 25.7	+0.5
	35nm,1.3s						
MFF	**Saint Martin d**	**148.12**	**8**	*e*PKP1	PKPbc	18 41 24.7	-0.8
	17nm,1.0s						
AVF	**Avril sur Loir**	**148.27**	**4**	*e*PKP1	PKPbc	18 41 26.0	+0.1
	11nm,0.9s						
SMF	**Signal de Mont**	**148.44**	**3**	*e*PKP1	PKPbc	18 41 26.0	-0.4
	5.3nm,0.7s						
BGF	**Bois d'Agland**	**148.47**	**4**	*e*PKP1	PKPbc	18 41 26.7	+0.3
	12nm,0.8s						
CABF	**La Chapelle**	**148.53**	**360**	*e*PKP1	PKPbc	18 41 27.6	+1.0
	14nm,0.7s						
LPL	**La Plagne**	**149.62**	**359**	*e*PKP1	PKPbc	18 41 29.8	+0.4
	4.4nm,0.6s						
LPG	**La Plagne**	**149.64**	**359**	*e*PKP1	PKPbc	18 41 29.9	+0.5
	8.2nm,0.7s						
LFF	**La Frestale**	**149.87**	**8**	*e*PKP1	PKPbc	18 41 30.2	+0.2
	16nm,0.9s						
VIVF	**Saint-Julien-l**	**150.26**	**2**	*e*PKP1	PKPbc	18 41 31.7	+0.8
MBDF	**Montbardon**	**150.41**	**359**	*e*PKP1	PKPbc	18 41 32.0	+0.7
	7.0nm,0.8s						
LASF	**Ste Croix**	**151.01**	**3**	*e*PKP1	PKPbc	18 41 33.5	+0.8
	19nm,1.0s						
SJPF	**Ste Jean**	**151.34**	**11**	*e*PKP1	PKPbc	18 41 34.9	+1.4
MTLF	**Montolieu**	**151.61**	**6**	*e*PKP1	PKPbc	18 41 34.4	+0.2
ETSF	**Etsaut**	**151.67**	**10**	*e*PKP1	PKPbc	18 41 35.0	+0.7
	8.2nm,0.7s						
EPF	**Esparros**	**151.68**	**9**	*e*PKP1	PKPbc	18 41 34.9	+0.6
	5.8nm,0.7s						

JMA 26 18:24:12.0, 3413N×13511E, h9km±1km, M2.7, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAJ2	**Tsuna**	**0.34**	**327**	P	Pg	18 24 19.1	+0.3
JAJ2				S	Sg	18 24 23.7	+0.3
JWM	**Minabe**	**0.35**	**144**	P	Pg	18 24 19.2	+0.4
JWM				*e*S	Sg	18 24 23.7	+0.3
JWY	**Kouya**	**0.41**	**77**	P	Pg	18 24 19.9	-0.1
JWY				S	Sg	18 24 25.7	+0.3
MAT	**Matsushiro**	**3.49**	**46**	P	Pn	18 25 08.9	+2.4

MEX 26 18:29:41.3±0.5, 1699N×10015W, h15km±999km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.13**	**297**	*i* P	Pg	18 29 44.3	-0.7
CAIG				*i* S	Sg	18 29 46.8	-0.6
ACX	**Acapulco**	**0.25**	**119**	*i* P	Pg	18 29 46.0	-0.8
ACX				*i* S	Sg	18 29 50.0	-0.5
MEIG	**Mezcala**	**1.06**	**28**	*i* P	Pb	18 29 58.3	-3.1
MEIG				*i* S	Sb	18 30 10.5	-4.5

*NSSP **26** 18:46:44.9, 3825N×4458E, h5km, ML3.5*
*ISK **26** 18:46:48.9, 3848N×4438E, h5km, MD3.6*
*CSEM **26** 18:46:50.6±0.1, 3845N×4428E, h8km, ML4.0, Error ellipse: s-maj=2.6km s-min=1.6km az=133.0*
*ISCJB **26** 18:46:51.5±0.4, 3845N±003×4434E±003, h10km, Error ellipse: s-maj=4.4km s-min=3.1km az=38.6*
*DDA **26** 18:46:54.4, 3852N×4411E, h5km±5km, Md3.7, Ml4.0*

ISC 26 18:46:51.8±0.4, 3844N±002×4437E±004, h10km, n37, σ1§31/55, 5D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**0.76**	**277**	*i* P	**Pg**	**18 47 05.1**	**-1.5**
TVAN				*i* S	**Sg**	**18 47 12.2**	**-4.3**
VANT	**Van**	**0.77**	**271**	PG	**Pg**	**18 47 07.1**	**+0.4**
CLDR	**Calderan**	**0.79**	**333**	PG	**Pg**	**18 47 04.1**	**-2.9**
CLDR				SG	**Sg**	**18 47 16.1**	**-1.2**
VANB	**Van**	**0.79**	**282**	PG	**Pg**	**18 47 04.9**	**-2.1**
HKR	**Hakkari**	**0.99**	**210**	PG	**Pg**	**18 47 09.9**	**-1.0**
HAKT	**HAKKARI**	**1.02**	**211**	*i* P	**Pg**	**18 47 09.7**	**-1.8**
HAKT				*i* S	**Sg**	**18 47 27.0**	**+2.2**
NAX	**Nakhchivan**	**1.14**	**50**	P	**Pb**	**18 47 11.5**	**-2.1**
	SNR=76						
NAX				S	**Sb**	**18 47 27.5**	**-1.0**
DYDN	**Diyadin**	**1.23**	**334**	*i* P	**Pn**	**18 47 11.8**	**-3.2**
DYDN				*i* S	**Sb**	**18 47 29.4**	**-1.5**
CUKT	**Cukurca**	**1.33**	**207**	PN	**Pn**	**18 47 16.0**	**-0.5**
TUTA	**Tutak**	**1.55**	**309**	*i* P	**Pn**	**18 47 18.8**	**-0.7**
TUTA				*i* S	**Sn**	**18 47 42.0**	**+2.4**
AGRB	**Hanur-Agry**	**1.56**	**317**	PN	**Pn**	**18 47 18.9**	**-0.7**
VRNZ	**Vardanashen**	**1.61**	**355**	ǁP	**Pn**	**18 47 20.2**	**-0.1**
VRNZ				S	**Sg**	**18 47 45.1**	**+1.4**
PAAR	**P'arak'ar**	**1.71**	**0**	ǁP	**Pn**	**18 47 21.1**	**-0.5**
PAAR				S	**Sg**	**18 47 47.6**	**+0.8**
VNNZ	**Vanand**	**1.72**	**346**	P	**Pn**	**18 47 21.7**	**0.0**
ERE	**Yerevan**	**1.73**	**2**	P	**Pn**	**18 47 19.0**	**-2.9**
ERE				S	**Sn**	**18 47 44.0**	**-0.1**
SIRT	**Sirnak**	**1.79**	**239**	PN	**Pn**	**18 47 23.0**	**+0.2**
ARUZ	**Aruch**	**1.85**	**353**	ǁP	**Pn**	**18 47 23.4**	**-0.2**
GRS	**Goris**	**1.86**	**55**	P	**Pn**	**18 47 24.0**	**+0.3**
GRS				S	**Sn**	**18 47 48.0**	**+0.8**
KAPZ	**Kaputan**	**1.90**	**8**	ǁP	**Pn**	**18 47 23.9**	**-0.3**
KAPZ				S	**Sn**	**18 47 52.4**	**+4.2**
AMBZ	**Amberd**	**1.95**	**357**	ǁP	**Pn**	**18 47 25.3**	**+0.4**
AMBZ				S	**Sn**	**18 47 53.3**	**+3.9**
DIGO	**Kars**	**2.12**	**339**	*i* P	**Pn**	**18 47 30.1**	**+2.8**
DIGO				*i* S	**Sn**	**18 47 59.1**	**+5.4**
BTMT	**Batman**	**2.28**	**265**	ePN	**Pn**	**18 47 31.1**	**+1.6**
MSL	**Mosul**	**2.38**	**206**	*ex*	x	18 47 33.0	
MSL				*ex*	x	18 47 35.5	
MSL				*ex*	x	18 48 04.5	
MSL				*i* x	x	18 48 09.0	
MSL				*i* x	x	18 48 13.0	
KARS	**Kars**	**2.39**	**336**	*e*PN	**Pn**	**18 47 30.7**	**-0.2**
BNGL	**BINGOL**	**2.57**	**282**	*e*P	**Pb**	**18 47 38.8**	**+0.7**
BNGL				*i* S	**Sg**	**18 48 15.0**	**+0.5**
GANJ	**Ganja**	**2.67**	**34**	P	**Pn**	**18 47 35.8**	**+1.0**
	SNR=12						
ERZM	**Erzurum**	**2.76**	**303**	*i* P	**Pb**	**18 47 41.9**	**+0.7**
ERZM				*i* S	**Sn**	**18 48 11.2**	**+1.8**
BRDA	**Brd**	**2.84**	**49**	P	**Pn**	**18 47 40.0**	**+2.9**
	SNR=8.0						
MARD	**Mardin**	**3.06**	**250**	*i* P	**Pn**	**18 47 41.4**	**+1.2**
MARD				*i* S	**Sg**	**18 48 28.1**	**-2.0**
DGRG	**David-gareji**	**3.10**	**14**	P	**Pn**	**18 47 46.7**	**+5.9**
DGRG				S	**Sg**	**18 48 37.5**	**+6.0**
MTA	**Mtatsminda**	**3.27**	**6**	P	**Pn**	**18 47 47.8**	**+4.7**
MTA				S	**Sg**	**18 48 35.8**	**-0.9**
TBLG	**Delisi**	**3.30**	**5**	P	**Pn**	**18 47 48.8**	**+5.3**
TBLG				S	**Sg**	**18 48 38.0**	**+0.2**
SEKA	**Sheki**	**3.52**	**37**	P	**Pn**	**18 47 47.7**	**+1.2**
	SNR=6.4						
GOR	**Gori**	**3.55**	**357**	P	**Pb**	**18 47 54.6**	**0.0**
ONI	**Oni**	**4.20**	**351**	P	**Pn**	**18 47 52.9**	**-2.9**
URFA	**Urfa**	**4.50**	**259**	ePN	**Pn**	**18 48 00.5**	**+0.5**
MALT	**Malatya**	**4.67**	**270**	ePN	**Pn**	**18 48 03.7**	**+1.3**

*NEIC **26** 18:48:26.8, 1684N×9507W, h105km, MD4.0(MEX), After MEX.*

MEX 26 18:48:26.8±1.4, 1684N×9507W, h105km±10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.31**	**36**	*i* P	Pn	18 48 40.4	-1.6
CMIG				*i* S	Sn	18 48 51.7	-1.8
HUIG	**Huatulco**	**1.46**	**223**	*i* P	Pn	18 48 50.3	-2.5
HUIG				*i* S	Sn	18 49 11.7	-0.9
OXX	**Oaxaca**	**1.60**	**279**	*i* P	Pn	18 48 54.0	-0.5
OXX				*i* S	Sn	18 49 15.0	-0.6
VHO	**Vista Hermosa**	**1.61**	**279**	*i* P	Pn	18 48 53.8	-0.9
VHO				*i* S	Sn	18 49 14.6	-1.2
SCX	**San Cristobal**	**2.34**	**92**	*e*P	Pn	18 49 04.0	0.0
TPIG	**Tehuac#an**	**2.69**	**306**	*i* P	Pn	18 49 06.9	-1.7
TPIG				*i* S	Sn	18 49 39.1	-1.6
CCIG	**Comitan**	**2.87**	**101**	*i* P	Pn	18 49 10.9	-0.1
CCIG				*i* S	Sn	18 49 44.4	-0.6
PPM	**Popocatepetl**	**4.04**	**304**	*i* P	Pn	18 49 27.5	+0.8
PPM				*i* S	Sn	18 50 10.5	-2.6

*NSSP **26** 18:54:26.3, 3830N×4455E, h5km, ML3.7*
*ISK **26** 18:54:30.4, 3848N×4436E, h5km, MD4.0*
*CSEM **26** 18:54:31.1±0.1, 3847N×4440E, h5km, mb4.2/8, Error ellipse: s-maj=2.4km s-min=1.7km az=146.0*
*IDC **26** 18:54:32.6±1.7, 3852N×4439E, h0km, mb3.7/6, mb1 3.8/10, mb1mx3.7/21, mbtmp3.7/10, ML3.6/4, MS3.4/7, Ms1 3.4/7, ms1mx3.1/30, Error ellipse: s-maj=34.3km s-min=18.9km az=174.0*
*ISCJB **26** 18:54:32.7±0.3, 3850N±002×4437E±003, h10km, mb3.9/14, MS3.3/7, Error ellipse: s-maj=3.5km s-min=2.4km az=33.7*
*DDA **26** 18:54:33.1, 3845N×4424E, h6km±6km, Md3.8, Ml4.3*
*MOS **26** 18:54:33.9±1.2, 3869N×4432E, h13km, mb4.4/7, Error ellipse: s-maj=13.7km s-min=8.5km az=82.5*
*NEIC **26** 18:54:35.4±5.3, 3865N×4437E, h14km±36km, mb4.2/6, ML4.1(ISK), Error ellipse: s-maj=18.7km s-min=8.4km az=172.0*

ISC 26 18:54:33.8±0.3, 3849N±002×4439E±003, h10km, n103, σ1§23/114, mb3.9/14, MS3.3/7, 2C-8D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Calderan**	**0.76**	**331**	PG	**Pg**	**18 54 45.5**	**-2.9**
CLDR				SG	**Sg**	**18 54 57.3**	**-0.9**
TVAN	**Van**	**0.78**	**274**	*i* P	**Pg**	**18 54 46.4**	**-2.3**
TVAN				*i* S	**Sg**	**18 54 54.0**	**-4.9**
VANT	**Van**	**0.79**	**267**	PG	**Pg**	**18 54 48.3**	**-0.7**
VANB	**Van**	**0.79**	**278**	PG	**Pg**	**18 54 46.1**	**-3.0**
HKR	**Hakkari**	**1.04**	**210**	PG	**Pg**	**18 54 50.4**	**-3.4**
HAKT	**HAKKARI**	**1.07**	**211**	*i* P	**Pg**	**18 54 50.9**	**-3.4**
HAKT				*i* S	**Sg**	**18 55 07.6**	**-0.7**
NAX	**Nakhchivan**	**1.10**	**51**	P	**Pb**	**18 54 52.7**	**-2.2**
	SNR=254						
NAX				S	**Sg**	**18 55 08.9**	**-0.4**
DYDN	**Diyadin**	**1.19**	**333**	*i* P	**Pb**	**18 54 53.0**	**-3.4**
DYDN				*i* S	**Sb**	**18 55 11.9**	**0.0**
CUKT	**Cukurca**	**1.38**	**207**	PN	**Pn**	**18 54 57.6**	**-1.5**
TUTA	**Tutak**	**1.53**	**307**	*i* P	**Pn**	**18 55 00.2**	**-1.0**
TUTA				*i* S	**Sg**	**18 55 32.0**	**+0.8**
AGRB	**Hanur-Agry**	**1.54**	**315**	PN	**Pn**	**18 55 00.5**	**-0.8**
VRNZ	**Vardanashen**	**1.57**	**354**	ǁP	**Pn**	**18 55 01.6**	**-0.1**
PAAR	**P'arak'ar**	**1.66**	**360**	ǁP	**Pn**	**18 55 02.6**	**-0.4**
VNNZ	**Vanand**	**1.68**	**345**	P	**Pn**	**18 55 03.5**	**+0.4**
ERE	**Yerevan**	**1.68**	**2**	ǁP	**Pn**	**18 55 01.0**	**-2.3**
ERE				S	**Sn**	**18 55 26.0**	**+1.1**
ARUZ	**Aruch**	**1.81**	**353**	ǁP	**Pn**	**18 55 04.8**	**-0.2**
ARUZ				S	**Sg**	**18 55 32.1**	**+0.1**
GRS	**Goris**	**1.82**	**56**	ǁP	**Pn**	**18 55 04.0**	**-1.2**
GRS				S	**Sn**	**18 55 29.0**	**+0.7**
SIRT	**Sirnak**	**1.83**	**238**	PN	**Pn**	**18 55 04.3**	**-1.0**
KAPZ	**Kaputan**	**1.85**	**7**	ǁP	**Pn**	**18 55 05.2**	**-0.4**
KAPZ				S	**Sg**	**18 55 32.6**	**-0.7**
AMBZ	**Amberd**	**1.90**	**357**	ǁP	**Pn**	**18 55 06.7**	**+0.4**
DIGO	**Kars**	**2.08**	**338**	*i* P	**Pn**	**18 55 09.8**	**+1.0**
DIGO				*i* S	**Sg**	**18 55 43.8**	**+3.1**
BTMT	**Batman**	**2.30**	**264**	ePN	**Pn**	**18 55 12.9**	**+1.1**
KARS	**Kars**	**2.35**	**335**	ePN	**Pn**	**18 55 11.9**	**-0.5**
MSL	**Mosul**	**2.42**	**206**	*ex*	x	18 55 13.0	
MSL				*ex*	x	18 55 17.5	
MSL				*i* x	x	18 55 47.0	
MSL				*i* x	x	18 55 52.5	
STE	**Stepanavan**	**2.51**	**360**	ǁP	**Pn**	**18 55 15.0**	**+0.3**
STE				S	**Sn**	**18 55 46.0**	**+0.7**
BNGL	**BINGOL**	**2.58**	**281**	*e*P	**Pn**	**18 55 13.1**	**-2.5**
GANJ	**Ganja**	**2.62**	**34**	P	**Pn**	**18 55 17.2**	**+1.0**
	SNR=130						
ERZM	**Erzurum**	**2.75**	**302**	*e*P	**Pn**	**18 55 21.0**	**+3.1**
EZM	**Erzurum**	**2.75**	**302**	*e*PN	**Pn**	**18 55 18.0**	**+0.1**
DGRG	**David-gareji**	**3.06**	**14**	P	**Pb**	**18 55 27.4**	**-0.8**
DGRG				S	**Sg**	**18 56 11.8**	**-0.2**
BINT	**Bingol**	**3.08**	**278**	*e*PN	**Pn**	**18 55 22.5**	**+0.1**
MARD	**Mardin**	**3.09**	**249**	*i* P	**Pn**	**18 55 22.7**	**+0.1**
MARD				*i* S	**Sg**	**18 56 15.1**	**+2.2**
MTA	**Mtatsminda**	**3.22**	**5**	P	**Pn**	**18 55 29.5**	**+5.1**
MTA				S	**Sg**	**18 56 16.9**	**-0.3**
TBLG	**Delisi**	**3.25**	**5**	P	**Pn**	**18 55 29.9**	**+5.1**
TBLG				S	**Sg**	**18 56 17.7**	**-0.5**
SEKA	**Sheki**	**3.47**	**38**	P	**Pn**	**18 55 28.9**	**+1.0**
	SNR=23						
GOR	**Gori**	**3.50**	**357**	P	**Pn**	**18 55 33.7**	**+5.4**
GOR				S	**Sg**	**18 56 26.5**	**+0.2**
EZC	**Erzincan**	**3.78**	**291**	ePN	**Pn**	**18 55 36.1**	**+4.1**
ONI	**Oni**	**4.15**	**350**	P	**Pb**	**18 55 47.9**	**+1.0**
ONI				S	**Sg**	**18 56 49.5**	**+2.4**
ELZG	**Elazig**	**4.24**	**272**	*i* P	**Pn**	**18 55 40.5**	**+2.1**
ZEI	**Tsey**	**4.30**	**355**	ePN	**Pn**	**18 55 43.5**	**+4.3**
ZEI				*e*		18 55 52.8	
ZEI	**Tsey**	**4.30**	**355**	*e*Pg	**Pg**	**18 55 52.8**	**-3.3**
URFA	**Urfa**	**4.52**	**258**	ePN	**Pn**	**18 55 42.9**	**+0.6**
MALT	**Malatya**	**4.69**	**270**	ePN	**Pn**	**18 55 43.9**	**-0.7**
MALT	**Malatya**	**4.69**	**270**	ePn	**Pn**	**18 55 44.3**	**-0.3**
BHD	**Baghdad**	**5.20**	**180**	*ex*	x	18 55 54.0	
BHD				*ex*	x	18 56 54.0	
KIV	**Kislovodsk**	**5.61**	**347**	*e*P	**Pn**	**18 55 55.0**	**-2.3**
KIV				*e*S	**Sn**	**18 56 52.2**	**-10**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,109nm,8.0s						
KIV	**Kislovodsk**	**5.61**	**347**	*e*P	**Pn**	**18 55 55.0**	**-2.3**
	comp=Z,8.0nm,1.1s						
GAZ	**Gaziantep**	**5.83**	**259**	ePN	**Pn**	**18 56 01.5**	**+1.2**
KMRS	**Kahramanmaras**	**6.00**	**263**	ePN	**Pn**	**18 56 02.9**	**+0.3**
MMAI	**Mount Meron Ar**	**9.12**	**236**	Pn	**Pn**	**18 56 47.0**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=75,slow=14,SNR=3.5						
EIL	**Elat**	**11.76**	**224**	LR	LR	19 02 20.0	
	comp=Z,177nm,20.5s,baz=298,slow=40						
VRSR	**Storozhevoye**	**13.25**	**346**	*e*P	**Pn**	**18 57 42.5**	**+0.7**
VRSR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,2.0nm,1.1s						
VRSR	**Storozhevoye**	**13.25**	**346**	*e*P	**Pn**	**18 57 42.5**	**+0.7**
	comp=E,4.0nm,0.9s						
AKTK	**Aktyubinsk**	**15.38**	**35**	P	**Pn**	**18 58 09.7**	**-0.9**
AKTO	**Aktyubinsk**	**15.38**	**35**	Pn	**Pn**	**18 58 09.7**	**-0.9**
	comp=E,0.2nm,0.3s,baz=229,slow=12,SNR=5.5						
IDI	**Anoyia**	**15.93**	**264**	Pn	**Pn**	**18 58 19.8**	**+1.9**
	comp=E,0.2nm,0.3s,baz=28,slow=14,SNR=4.0						
AKASG	**Malin Array Be**	**16.27**	**324**	*i* P	**Pn**	**18 58 22.6**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**16.27**	**324**	Pn	**Pn**	**18 58 21.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=9.5						
AKASG	**Malin Array Be**	**16.27**	**324**	*i* P	**Pn**	**18 58 22.6**	**+0.4**
	comp=Z,2.0nm,0.8s						
OBN	**Obninsk**	**17.46**	**345↑**	*e*P	**Pn**	**18 58 36.0**	**-1.1**
OBN				*e*SS		19 01 55.1	
OBN				pmax	pmax		
	comp=Z,39nm,1.7s						
OBN				MLR	MLR		
	comp=Z,100nm,23.0s						
OBN	**Obninsk**	**17.46**	**345**	*e*P	**Pn**	**18 58 36.0**	**-1.1**
	comp=Z,100nm,23.0s						
ARU	**Arti**	**20.28**	**23**	*e*P	**P**	**18 59 08.4**	**-0.9**
	comp=Z,17nm,1.1s						
ARU	**Arti**	**20.28**	**23**	*i* P	**P**	**18 59 09.4**	**+0.1**
ARU				pmax	pmax		
	comp=Z,13nm,1.1s						
ARU				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.2						
ARU	**Arti**	**20.28**	**23**	*i* P	**P**	**18 59 09.4**	**+0.1**
	comp=Z,100nm,17.0s						
SVE	**Sverdlovsk**	**21.27**	**25**	*e*P	**P**	**18 59 20.3**	**+0.3**
AML	**Almayashu**	**22.59**	**71**	*e*P	**P**	**18 59 36.2**	**+1.9**
	comp=Z,8.5nm,1.0s,mb4.1						
AML	**Almayashu**	**22.59**	**71**	*e*P	**P**	**18 59 36.2**	**+1.9**
	comp=Z,8.5nm,1.0s,mb4.1						
EKS2	**Erkin-Say**	**22.65**	**70**	*e*P	**P**	**18 59 35.7**	**+0.8**
	comp=Z,6.2nm,0.9s,mb4.0						
**EK

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.35**	**242**	P	P	19 02 21.3	+0.1
	2.9nm,1.1s,baz=74,slow=7.4,SNR=2.0						
WRA	**Warramunga Arr**	**43.45**	**260**	P	P	19 03 11.7	-0.2
	0.2nm,0.8s,baz=97,slow=7.5,SNR=6.5						
ASAR	**Alice Springs**	**43.57**	**255**	P	P	19 03 12.7	-0.1
	0.4nm,0.5s,baz=87,slow=8.8,SNR=6.6						

*ISK **26** 19:03:44.8,3846N×4446E,h5km,MD3.1*
*CSEM **26** 19:03:45.5±0.2,3848N×4443E,h2km,MD3.1,Error ellipse: s-maj=4.5km s-min=1.8km az=86.0*
*DDA **26** 19:03:46.2,3847N×4467E,h4km±5km,Md3.0*

ISC 26 19:03:45.7±1.4,3847N±004×447E±01,h10km,n11,
σ1§41/17,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.88**	**320**	PG	**Pg**	**19 04 01.5**	**-1.2**
CLDR				SG	**Sg**	19 04 13.7	**-0.4**
TVAN	**Van**	**0.98**	**274**	*i* P	**Pg**	**19 04 02.3**	**-2.2**
TVAN				*i* S	**Sg**	**19 04 18.1**	**+0.9**
VANT	**Van**	**0.99**	**269**	*e*PG	**Pg**	**19 04 04.5**	**-0.2**
VANB	**Van**	**1.00**	**278**	PG	**Pg**	**19 04 02.2**	**-2.6**
HKR	**Hakkari**	**1.14**	**219**	*e*PG	**Pg**	**19 04 05.2**	**-2.4**
HAKT	**HAKKARI**	**1.18**	**220**	*e*P	**Pb**	**19 04 07.9**	**-0.2**
HAKT				*i* S	**Sb**	**19 04 24.0**	**+0.6**
DYDN	**Diyadin**	**1.31**	**325**	*i* P	**Pn**	**19 04 09.8**	**-0.1**
DYDN				*i* S	**Sb**	**19 04 26.9**	**-0.2**
CUKT	**Cukurca**	**1.47**	**214**	*e*PN	**Pn**	**19 04 13.0**	**+0.8**
TUTA	**Tutak**	**1.71**	**304**	*i* P	**Pn**	**19 04 17.6**	**+2.1**
TUTA				*i* S	**Sn**	**19 04 40.5**	**+3.2**
DIGO	**Kars**	**2.18**	**333**	*e*P	**Pg**	**19 04 27.8**	**+0.4**
DIGO				*i* S	**Sg**	**19 04 59.8**	**+4.1**
MARD	**Mardin**	**3.27**	**251**	*e*P	**Pn**	**19 04 39.9**	**+2.9**

IDC 26 19:04:45.0±18.0,2008S×17669W,h365km±160km,
mb2.9/3,mb1 3.2/4,mb1mx3.0/14,mbtmp3.1/4,Error
ellipse: s-maj=127.3km s-min=36.2km az=28.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.90**	**195**	P	P	19 08 40.7	+0.1
	0.9nm,0.3s,baz=7.1,slow=8.1,SNR=4.7						
STKA	**Stephens Creek**	**39.08**	**244**	P	P	19 11 38.6	+0.2
	0.5nm,0.5s,baz=140,slow=7.0,SNR=5.0						
ASAR	**Alice Springs**	**45.81**	**256**	P	P	19 12 32.4	+0.2
	0.8nm,0.5s,baz=96,slow=7.7,SNR=16						
WRA	**Warramunga Arr**	**45.88**	**261**	P	P	19 12 32.1	-0.6
	0.3nm,0.3s,baz=96,slow=7.5,SNR=36						
BOSA	**Boshof**	**127.16**	**204**	PKP	PKPdf	19 23 06.0	-1.0
	3.6nm,0.9s,baz=156,slow=7.3,SNR=4.0						
AKASG	**Malin Array Be**	**143.22**	**332**	PKP	PKPdf	19 23 36.2	+0.3
	0.8nm,0.4s,baz=39,slow=4.2,SNR=11						

*ISK **26** 19:10:28.4,3849N×4442E,h5km,MD3.0*
*CSEM **26** 19:10:29.3±0.6,3846N×4435E,h2km,MD2.7,Error ellipse: s-maj=16.0km s-min=6.4km az=83.0*
*DDA **26** 19:10:33.3,3842N×4420E,h28km±1km,Md2.7*

ISC 26 19:10:29.0±1.5,3850N±004×446E±01,h10km,n7,
σ1§28/13,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.85**	**319**	PG	**Pg**	**19 10 43.7**	**-1.7**
CLDR				SG	**Sg**	**19 10 56.3**	**-0.2**
TVAN	**Van**	**0.96**	**272**	*i* P	**Pg**	**19 10 44.9**	**-2.5**
TVAN				*i* S	**Sg**	**19 11 00.9**	**+0.9**
VANB	**Van**	**0.98**	**276**	*e*PG	**Pg**	**19 10 44.7**	**-3.1**
HAKT	**HAKKARI**	**1.19**	**218**	*e*P	**Pb**	**19 10 50.2**	**-1.4**
HAKT				*i* S	**Sb**	**19 11 06.7**	**-0.3**
DYDN	**Diyadin**	**1.27**	**325**	*e*P	**Pn**	**19 10 54.1**	**+1.3**
DYDN				*i* S	**Sb**	**19 11 09.6**	**+0.1**
CUKT	**Cukurca**	**1.49**	**213**	*e*PN	**Pn**	**19 10 56.4**	**+0.6**
CUKT				*e*SN	**Sn**	**19 11 16.6**	**+1.4**
TUTA	**Tutak**	**1.68**	**303**	*i* P	**Pn**	**19 10 59.8**	**+1.4**
TUTA				*i* S	**Sg**	**19 11 23.6**	**+0.7**

*ISCJB **26** 19:15:29.7±1.3,3832N±004×204E±0.1,h8km,Error ellipse: s-maj=12.8km s-min=4.5km az=158.0*
*THE **26** 19:15:29.5,3832N×2041E,h5km,ML2.7*
*ATH **26** 19:15:29.8,3828N×2039E,h8km±2km,MD3.3/3*
*NEIC **26** 19:15:29.8,3827N×2038E,h8km,MD3.3(ATH), ML2.7(THE),After ATH.*
*CSEM **26** 19:15:31.0±0.3,3828N×2043E,h2km,MD3.3,Error ellipse: s-maj=7.1km s-min=2.3km az=55.0*

ISC 26 19:15:29.9±1.3,3832N±005×204E±01,h3km±11km,n9,
σ0§66/13,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**137**	*e*PG	**Pg**	**19 15 34.2**	**+0.5**
VLS				*e*SG	**Sg**	**19 15 36.5**	**+0.2**
KFL	**Anninata**	**0.36**	**126**	*e*Pg	**Pg**	**19 15 36.8**	**0.0**
LKD	**Levkas**	**0.43**	**25**	*e*Pg	**Pg**	**19 15 37.4**	**-0.8**
LKD				*e*Sg	**Sg**	**19 15 43.8**	**+0.1**
RLS	**Riolos of Patr**	**0.87**	**107**	*e*PG	**Pg**	**19 15 46.4**	**-0.1**
RLS				*e*SB	**Sb**	**19 15 59.4**	**-0.2**
IGT	**Igoumenitsa**	**1.21**	**357**	*e*Pg	**Pg**	**19 15 51.5**	**-1.7**
IGT				*e*Sg	**Sg**	**19 16 10.3**	**+1.3**
EVR	**Evrytania**	**1.24**	**61**	*e*PB	**Pb**	**19 15 54.0**	**0.0**
KEK	**Kerkira**	**1.47**	**341**	*e*PB	**Pb**	**19 15 58.2**	**+0.2**
ITM	**Ithomi**	**1.65**	**133**	*e*PB	**Pb**	**19 16 00.9**	**-0.1**
THL	**Klokotos Trika**	**1.76**	**45**	*e*PN	**Pb**	**19 16 03.3**	**+0.5**

*ISCJB **26** 19:45:49.8±1.5,189S±02×1777W±02,h572km±23km, mb3.5/8,Error ellipse: s-maj=25.2km s-min=21.7km az=156.1*
*IDC **26** 19:45:49.3±7.4,1896S×17755W,h550km±79km,mb3.0/6, mb1 3.2/6,mb1mx3.1/13,mbtmp3.0/6,Error ellipse: s-maj=38.0km s-min=28.5km az=70.0*
*NEIC **26** 19:45:50.7±1.1,1890S×17764W,h566km±14km,mb4.3/3, Error ellipse: s-maj=19.4km s-min=14.2km az=130.0*

ISC 26 19:45:50.9±1.4,189S±02×1776W±02,h570km±21km,n16,
σ0§60/13,mb3.6/8,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.49**	**49**	*e*Pn	**P**	**19 47 44.3**	**-0.1**
	35nm,0.4s						
STKA	**Stephens Creek**	**38.82**	**242**	P	**P**	**19 52 28.0**	**+0.3**
STKA	**Stephens Creek**	**38.82**	**242**	P	**P**	**19 52 28.0**	**+0.3**
	3.2nm,1.0s,mb3.8,baz=85,slow=17,SNR=5.1						
WRA	**Warramunga Arr**	**45.20**	**260**	P	**P**	**19 53 17.8**	**-0.2**
	0.6nm,0.3s,mb3.5,baz=98,slow=7.8,SNR=44						
WRA				PcP	PcP	19 54 46.3	+0.3
	0.3nm,0.4s,baz=97,slow=5.1,SNR=6.3						
ASAR	**Alice Springs**	**45.26**	**255**	P	**P**	**19 53 18.5**	**+0.1**
	1.2nm,0.6s,mb3.6,baz=86,slow=8.2,SNR=26						
ASAR				PcP	PcP	19 54 46.0	-0.1
	1.0nm,0.7s,baz=106,slow=3.4,SNR=7.8						
SBA	**Scott Base**	**59.47**	**184**	*e*P	**P**	**19 55 00.5**	**+1.5**
	2.8nm,0.8s,mb3.5						
VNDA	**Vanda**	**59.51**	**185**	P	**P**	**19 54 58.6**	**-0.7**
	1.3nm,0.9s,mb3.3,baz=353,slow=6.3,SNR=5.6						
MJAR	**Matsushiro Arr**	**69.16**	**323**	P	**P**	**19 56 00.7**	**-0.2**
	0.4nm,0.6s,mb3.1,baz=158,slow=5.3,SNR=4.0						
QSPA	**South Pole Qui**	**71.14**	**180**	*e*P	**P**	**19 56 12.0**	**+0.1**
	12nm,1.3s,mb4.3						
PDAR	**Pinedale Array**	**87.56**	**43**	P	**P**	**19 57 39.5**	**+0.6**
	0.4nm,0.7s,mb3.3,baz=298,slow=3.2,SNR=3.5						
SNAA	**Sanae**	**89.58**	**178**	*e*	**P**	**19 57 47.1**	**-0.6**
SNAA				*e*		19 57 49.7	
VNA3	**Neumayer Olymp**	**89.69**	**176**	*e*	**P**	**19 57 47.4**	**-0.9**
VNA3				*e*		19 57 50.3	
VNA2	**Neumayer--Watz**	**90.14**	**177**	*e*	**P**	**19 57 50.4**	**+0.1**
	baz=190,slow=6.5						
VNA2				*e*		19 57 53.6	
ARCES	**ARCESS Array B**	**127.44**	**350**	PKP	PKPdf	20 03 51.1	+0.4
	4.6nm,0.8s,baz=5.7,slow=1.2,SNR=5.5						
CLL	**Collm**	**146.61**	**348**	⇓*i* PKPbc	PKPbc	20 04 29.4	+0.5
	comp=Z,4.0nm,0.6s						
GERES	**GERESS Array B**	**148.78**	**346**	PKPbc	PKPbc	20 04 35.0	+0.6
	comp=Z,0.5nm,0.4s,baz=17,slow=1.8,SNR=5.4						

*ATH **26** 19:56:01.5,3814N×2023E,h20km±2km,MD3.6/4*
*NEIC **26** 19:56:01.4,3814N×2023E,h20km,MD3.6(ATH), ML3.1(THE),After ATH.*
*ISCJB **26** 19:56:02.3±1.3,3829N±005×2038E±008,h3km±8km, Error ellipse: s-maj=11.1km s-min=6.0km az=148.7*
*CSEM **26** 19:56:03.9±0.1,3835N×2036E,h2km,MD3.6,Error ellipse: s-maj=3.1km s-min=1.4km az=59.0*
*THE **26** 19:56:04.0,3834N×2043E,h3km,ML3.3*

ISC 26 19:56:03.7±1.1,3832N±004×2039E±008,h13km±4km,n12,
σ1§10/18,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.21**	**132**	*e*PB	**Pg**	**19 56 08.7**	**+0.4**
VLS				*e*SB	**Sg**	**19 56 12.4**	**+1.0**
KFL	**Anninata**	**0.37**	**123**	*e*Pg	**Pg**	**19 56 11.5**	**+0.3**
LKD	**Levkas**	**0.44**	**27**	*e*Pg	**Pg**	**19 56 11.8**	**-0.6**
LKD				*e*Sg	**Sg**	**19 56 17.6**	**-0.7**
RLS	**Riolos of Patr**	**0.88**	**107**	*e*PN	**Pn**	**19 56 20.4**	**-1.3**
RLS				*e*SN	**Sn**	**19 56 34.1**	**-0.3**
SELA	**Sela**	**1.18**	**92**	*e*Pg	**Pg**	**19 56 24.8**	**-1.6**
SELA				*e*Sg	**Sg**	**19 56 42.6**	**+0.9**
IGT	**Igoumenitsa**	**1.22**	**358**	*e*Pg	**Pg**	**19 56 25.9**	**-1.1**
IGT				*e*Sg	**Sg**	**19 56 43.3**	**+0.4**
EVR	**Evrytania**	**1.26**	**61**	*e*PN	**Pn**	**19 56 29.4**	**+2.5**
KEK	**Kerkira**	**1.47**	**342**	*e*PN	**Pn**	**19 56 30.9**	**+1.1**
ITM	**Ithomi**	**1.66**	**133**	*e*PN	**Pn**	**19 56 31.2**	**-1.2**
AGG	**Agios Georgios**	**1.67**	**64**	*e*Pb	**Pb**	**19 56 33.1**	**-1.1**
AGG				*e*Sb	**Sb**	**19 56 55.7**	**+0.5**
THL	**Klokotos Trika**	**1.77**	**45**	*e*PN	**Pn**	**19 56 36.2**	**+2.2**
VLX	**Vlachokerasia**	**1.83**	**120**	*e*Sb	**Sb**	**19 56 59.5**	**-0.3**

*ISCJB **26** 20:04:43.9±0.4,4380N±003×105.19W±005,h0km,mb4.1/3, Error ellipse: s-maj=5.2km s-min=4.6km az=19.0*
*IDC **26** 20:04:44.7±2.7,4369N×10548W,h0km,mb4.0/3, mb1 3.8/6,mb1mx3.5/22,mbtmp3.7/6,ML3.2/3,Error ellipse: s-maj=86.1km s-min=13.1km az=147.0*
*NEIC **26** 20:04:45.9±0.3,4377N×10525W,h0km,ML3.3,Error ellipse: s-maj=4.6km s-min=4.1km az=125.0,Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.

ISC 26 20:04:45.8±0.4,4380N×10524W±005,h0km,n42,
σ1§01/45,mb4.1/3,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.50**	**184**	*e*P	**Pn**	**20 05 27.4**	**-0.3**
PHWY				*e*S	**Sn**	**20 06 00.5**	**+1.7**
RWWY	**Rawlins**	**2.56**	**215**	*e*P	**Pn**	**20 05 28.9**	**+0.4**
LAO	**LASA Array**	**2.98**	**347**	*e*Pn	**Pn**	**20 05 34.7**	**+0.4**
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	**Pn**	**20 05 39.0**	**0.0**
	6.4nm,0.3s,baz=72,slow=16,SNR=110						
PDAR				Sn	**Sn**	**20 06 22.1**	**+3.2**
	9.6nm,0.3s,baz=79,slow=32,SNR=9.6						
BW06	**Boulder Array**	**3.31**	**253**	*e*Pn	**Pn**	**20 05 38.6**	**-0.3**
GCMT	**Greycliff**	**3.73**	**304**	*e*Pn	**Pn**	**20 05 45.5**	**+0.9**
LOHW	**Long Hollow**	**3.89**	**269**	*e*Pn	**Pn**	**20 05 47.5**	**+0.7**
FLWY	**Flagg Ranch**	**3.95**	**276**	*e*Pn	**Pn**	**20 05 47.6**	**0.0**
MOOW	**Moose Ponds**	**3.98**	**271**	*e*Pn	**Pn**	**20 05 49.2**	**+1.1**
ISCO	**Idaho Springs**	**4.00**	**184**	*e*Pn	**Pn**	**20 05 48.5**	**+0.2**
SNOW	**Snow King Moun**	**4.01**	**267**	*e*Pb	**Pb**	**20 05 54.8**	**-2.6**
YFT	**Old Faithful**	**4.08**	**281**	Pn	**Pn**	**20 05 48.9**	**-0.6**
REDW	**Red Top Meadow**	**4.10**	**266**	*e*Pn	**Pn**	**20 05 50.8**	**+1.1**
IMW	**Indian Meadow**	**4.12**	**273**	*e*Pn	**Pn**	**20 05 51.5**	**+1.5**
TPAW	**Teton Pass**	**4.15**	**268**	*e*Pn	**Pn**	**20 05 51.3**	**+0.9**
DCID1	**Drake Creek**	**4.31**	**269**	*e*Pb	**Pb**	**20 06 02.3**	**-0.2**
QLMT	**Earthquake Lak**	**4.56**	**285**	Pn	**Pn**	**20 05 54.9**	**-1.1**
DGMT	**Dagmar**	**4.73**	**8**	*e*Pn	**Pn**	**20 05 59.6**	**+1.2**
SMCO	**Snowmass**	**4.79**	**196**	*e*Pn	**Pn**	**20 05 58.7**	**-0.6**
SMCO				*e*Pb	**Pb**	**20 06 08.9**	**-1.8**
BOZ	**Bozeman (W)**	**4.91**	**294**	*e*Pn	**Pn**	**20 06 00.1**	**-0.8**
HWUT	**Hardware Ranch**	**5.15**	**247**	*e*Pn	**Pn**	**20 06 03.0**	**-1.0**
	13nm,0.4s						
EGMT	**Eagleton**	**5.27**	**325**	*e*Pn	**Pn**	**20 06 05.5**	**-0.3**
	14nm,0.6s						
DLMT	**Dillon**	**5.48**	**289**	*e*Pn	**Pn**	**20 06 11.0**	**+2.4**
	5.2nm,0.7s						
DAU	**Daniels Canyon**	**5.61**	**235**	*e*Pn	**Pn**	**20 06 09.1**	**-1.3**
SPUT	**South Promonto**	**5.87**	**247**	*e*Pn	**Pn**	**20 06 14.0**	**-0.1**
SDCO	**Great Sand Dun**	**6.05**	**182**	*e*Pn	**Pn**	**20 06 16.3**	**-0.2**
	3.1nm,0.6s						
PV10	**Paradox Valley**	**6.12**	**209**	*e*Pn	**Pn**	**20 06 18.1**	**+0.5**
SRU	**San Rafael**	**6.13**	**222**	*e*Pn	**Pn**	**20 06 16.2**	**-1.4**
	9.2nm,0.3s						
ECSD	**EROS,Sioux Fal**	**6.25**	**88**	*e*Pn	**Pn**	**20 06 19.6**	**+0.4**
	5.5nm,0.4s						
NLU	**North Lily Min**	**6.38**	**235**	*e*Pn	**Pn**	**20 06 19.5**	**-1.5**
CHMT	**Chamberlain Mo**	**6.45**	**302**	*e*Pn	**Pn**	**20 06 22.0**	**0.0**
CBKS	**Cedar Bluff**	**6.48**	**138**	*e*Pn	**Pn**	**20 06 22.8**	**+0.5**
	25nm,0.4s						
MSU	**Marysvale**	**7.43**	**227**	*e*Pn	**Pn**	**20 06 35.8**	**+0.3**
AGMN	**Agassiz Refuge**	**7.93**	**52**	*e*Pn	**Pn**	**20 06 42.7**	**+0.5**
	5.3nm,0.5s						
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**20 06 57.4**	**-0.7**
ULM	**Lac du Bonnet**	**9.09**	**41**	Pn	**Pn**	**20 06 57.4**	**-0.7**
	0.5nm,0.3s,baz=230,slow=13,SNR=5.2						
WUAZ	**Wupatki**	**9.52**	**212**	*e*Pn	**Pn**	**20 07 05.5**	**+1.4**
	4.2nm,0.5s						
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**Pn**	**20 09 14.1**	**-1.5**
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**Pn**	**20 09 14.1**	**-1.5**
	0.0nm,0.3s,baz=160,slow=13,SNR=3.9						
ARCES	**ARCESS Array B**	**61.36**	**18**	P	**P**	**20 15 02.4**	**-0.5**
	2.6nm,0.8s,mb4.4,baz=327,slow=7.9,SNR=3.8						
FINES	**FINESS Array B**	**67.97**	**23**	P	**P**	**20 15 46.1**	**0.0**
	1.4nm,1.0s,mb4.2,baz=324,slow=9.4,SNR=3.8						
MKAR	**Makanchi Array**	**89.55**	**355**	P	**P**	**20 17 44.1**	**-0.8**
	0.3nm,0.7s,mb3.6,baz=19,slow=4.5,SNR=5.0						

*ISCJB **26** 20:05:33.8±1.6,3830N±006×204E±0.1,h2km±11km,Error ellipse: s-maj=17.8km s-min=7.4km az=159.0*
*ATH **26** 20:05:33.5,3821N×2032E,h15km±2km,MD3.4/3*
*CSEM **26** 20:05:34.9±0.3,3832N×2040E,h2km,MD3.4,Error ellipse: s-maj=7.5km s-min=2.3km az=68.0*
*THE **26** 20:05:34.8,3834N×2043E,h7km*
*NEIC **26** 20:05:34.5,3831N×2040E,h5km,MD3.4(ATH), ML2.9(THE),After ATH.*

ISC 26 20:05:35.4±1.1,3833N±005×205E±01,h9km±6km,n8,
σ1§02/12,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**153**	*e*PB	**Pg**	**20 05 38.9**	**-0.1**
VLS				*e*SB	**Sg**	**20 05 42.3**	**+0.8**
KFL	**Anninata**	**0.32**	**133**	*e*Pg	**Pg**	**20 05 41.8**	**0.0**
LKD	**Levkas**	**0.40**	**19**	*e*Pg	**Pg**	**20 05 42.2**	**-1.0**
LKD				*e*Sg	**Sg**	**20 05 48.9**	**+0.5**
RLS	**Riolos of Patr**	**0.82**	**109**	*e*PN	**Pn**	**20 05 51.0**	**-2.1**
RLS				*e*SN	**Sn**	**20 06 04.6**	**-0.7**
EVR	**Evrytania**	**1.19**	**60**	*e*PN	**Pn**	**20 05 59.3**	**+1.1**
IGT	**Igoumenitsa**	**1.21**	**354**	*e*Pg	**Pg**	**20 05 57.4**	**-1.1**
IGT				*e*Sg	**Sg**	**20 06 14.1**	**-0.1**
KEK	**Kerkira**	**1.48**	**339**	*e*PN	**Pn**	**20 06 02.8**	**+0.6**
THL	**Klokotos Trika**	**1.71**	**44**	*e*PN	**Pn**	**20 06 07.4**	**+2.0**

*IDC **26** 20:26:12.0±5.8,3825N×7300E,h83km±47km,mb3.4/8, mb1 3.5/11,mb1mx3.4/23,mbtmp3.4/11,ML3.6/3,Error ellipse: s-maj=46.4km s-min=23.3km az=176.0*
*ISCJB **26** 20:26:12.8±0.6,3829N±003×73.14E±009,h117km±9km, mb3.6/8,Error ellipse: s-maj=12.5km s-min=5.0km az=165.9*
*NEIC **26** 20:26:15.6±1.0,3847N×7303E,h111km±8km,mb3.9/3, Error ellipse: s-maj=17.1km s-min=9.5km az=130.0*
*NNC **26** 20:26:21.6±4.2,3902N×7287E,h201km±42km,mb2.3, mpv3.3,Error ellipse: s-maj=45.6km s-min=21.4km az=14.0*

ISC 26 20:26:12.3±0.5,3816N±003×7305E±007,h98km±7km,n47,
σ1§34/59,mb3.6/8,1C-4D,Tajikistan-Xinjiang border
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.00**	**7**	*e*P	**Pn**	**20 27 11.7**	**+0.3**
AML	**Almayashu**	**4.00**	**7**	P	**Pn**	**20 27 11.9**	**+0.6**
	SNR=66						
UCH	**Uchtor**	**4.22**	**15**	*e*P	**Pn**	**20 27 15.0**	**+0.7**
UCH	**Uchtor**	**4.22**	**15**	P	**Pn**	**20 27 15.3**	**+1.0**
	SNR=113						
KZA	**Kyzart**	**4.26**	**23**	P	**Pn**	**20 27 15.6**	**+0.7**
	SNR=22						
EKS2	**Erkin-Say**	**4.53**	**7**	*e*P	**Pn**	**20 27 19.2**	**+0.6**
EKS2				*e*S	**Sn**	**20 28 04.2**	**-5.9**
EKS2	**Erkin-Say**	**4.53**	**7**	P	**Pn**	**20 27 19.4**	**+0.9**
	SNR=54						
AAK	**Ala-Archa**	**4.60**	**13**	P	**Pn**	**20 27 20.8**	**+1.3**
	SNR=17						
KBK	**Karagaybulak**	**4.72**	**17**	P	**Pn**	**20 27 22.1**	**+1.0**
	SNR=13						
ULHL	**Ulahol**	**4.76**	**30**	P	**Pn**	**20 27 22.2**	**+0.6**
	SNR=60						
KBL	**Kabul**	**4.85**	**223**	*e*P	**Pn**	**20 27 29.4**	**+6.5**
	11nm,0.4s						
KBL				*e*S	**Sn**	**20 28 17.0**	**-0.8**
TKM2	**Tokmak 2**	**5.14**	**21**	⇓P	**Pn**	**20 27 27.8**	**+1.0**
	1.8nm,0.5s						
TKM2				⇑S	**Sn**	**20 28 22.8**	**-1.9**
	12nm,0.6s						
TKM2	**Tokmak 2**	**5.14**	**21**	*e*P	**Pn**	**20 27 27.4**	**+0.6**
USP	**Ospenovka**	**5.22**	**12**	P	**Pn**	**20 27 28.4**	**+0.6**
	SNR=12						
KK31	**Karatay Array**	**5.30**	**339**	P	**Pn**	**20 27 28.9**	**-0.1**
	4.3nm,0.4s,baz=141,slow=10,SNR=84						
KK31				⇓S	**Sn**	**20 28 22.9**	**-5.9**
	16nm,0.4s,baz=150,slow=23,SNR=17						
DLH	**Dalhousie**	**6.09**	**156**	*e*P	**Pn**	**20 27 50.0**	**+10**
DLH				*e*S	**Sn**	**20 28 55.0**	**+6.9**
THN	**Thein Dam**	**6.12**	**158**	*e*P	**Pn**	**20 27 45.4**	**+5.3**
THN				*e*S	**Sn**	**20 28 50.5**	**+1.9**
SDNR	**Sundarnagar**	**7.38**	**153**	*e*P	**Pn**	**20 28 01.5**	**+4.1**
SDNR				*e*S	**Sn**	**20 29 19.1**	**-0.4**
JOSI	**Joshimath**	**9.30**	**143**	*e*P	**Pn**	**20 28 26.5**	**+3.1**
JOSI				AMb	AMB	20 28 27.4	
	comp=Z,18nm,0.6s						
JOSI				*e*S	**Sn**	**20 30 04.0**	**-2.2**
KHET	**Khetri**	**10.32**	**166**	*e*P	**Pn**	**20 28 40.4**	**+3.0**
KHET				AMb	AMB	20 28 53.5	
	comp=Z,2.7nm,0.7s						
KHET				*e*S	**Sn**	**20 30 28.5**	**-2.6**
KUDL	**Kundal**	**10.39**	**163**	*e*S	**Sn**	**20 30 28.1**	**-4.8**
SONA	**Sohna**	**10.44**	**160**	*e*S	**Sn**	**20 30 30.6**	**-3.5**
MKAR	**Makanchi Array**	**10.99**	**35**	P	**Pn**	**20 28 45.7**	**-0.6**
MKAR	**Makanchi Array**	**10.99**	**35**	P	**Pn**	**20 28 45.7**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=222,slow=11,SNR=4.2						
KURK	**Kurchatov**	**13.16**	**16**	*e*P	**Pn**	**20 29 12.0**	**-3.2**
	comp=Z,1.2nm,0.7s						
KOLN	**Koldanda**	**13.62**	**136**	*e*P	**Pn**	**20 29 21.0**	**-0.3**
	comp=Z,2.9nm,0.3s						
KOLN				*e*S	**Sn**	**20 31 46.3**	**-4.8**
GKN	**Gorkha**	**14.02**	**133**	*e*P	**Pn**	**20 29 25.6**	**-0.9**
	comp=Z,6.2nm,0.3s						
KKN	**Kakani**	**14.56**	**132**	*e*P	**Pn**	**20 29 32.0**	**-1.4**
AB31	**Akbulak array**	**14.56**	**324**	P	**Pn**	**20 29 30.4**	**-2.9**
	comp=Z,0.8nm,0.4s,baz=129,slow=14,SNR=15						
AB31				S	**Sn**	**20 31 58.8**	**-15**
	comp=Z,1.1nm,0.5s,baz=146,slow=20,SNR=5.6						
BRVK	**Borovoye**	**15.02**	**354**	*e*P	**Pn**	**20 29 36.8**	**-2.3**
	comp=Z,5.9nm,0.8s						
JIRN	**Jiri**	**15.20**	**130**	*e*P	**Pn**	**20 29 40.9**	**-0.6**
	comp=Z,8.5nm,0.4s						
AKTK	**Aktyubinsk**	**16.28**	**324**	P	**Pn**	**20 29 53.7**	**-1.2**
AKTO	**Aktyubinsk**	**16.28**	**324**	⇓P	**Pn**	**20 29 51.7**	**-3.2**
	comp=Z,0.4nm,0.6s						
AKTO				⇓S	**S**	**20 32 42.6**	**-19**
	comp=Z,0.6nm,1.1s						
AKTO	**Aktyubinsk**	**16.28**	**324**	P	**Pn**	**20 29 53.7**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=123,slow=12,SNR=11						
ZALV	**Zalesovo Beam**	**17.74**	**23**	P	**Pn**	**20 30 10.5**	**-2.1**
ZALV	**Zalesovo Beam**	**17.74**	**23**	P	**Pn**	**20 30 10.5**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=215,slow=11,SNR=33						
SONM	**Songino Array**	**26.06**	**57**	P	**P**	**20 31 38.0**	**+1.7**
	comp=Z,0.3nm,0.7s,mb2.8,baz=250,slow=7.7,SNR=4.8						
AKASG	**Malin Array Be**	**33.23**	**307**	P	**P**	**20 32 40.9**	**+1.2**
	comp=Z,0.5nm,0.3s,mb3.8,baz=80,slow=7.8,SNR=5.2						
JOF	**Joensuu**	**35.28**	**328**	*e*p	**P**	**20 32 57.5**	**+0.2**
FINES	**FINESS Array B**	**37.05**	**324**	P	**P**	**20 33 13.2**	**+0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=115,slow=9.8,SNR=15						
ARCES	**ARCESS Array B**	**40.26**	**336**	P	**P**	**20 33 40.0**	**+1.0**
	comp=Z,1.2nm,0.5s,mb4.0,baz=110,slow=9.9,SNR=11						
HFS	**Hagfors**	**42.80**	**321**	P	**P**	**20 33 59.3**	**-0.6**
	comp=Z,0.8nm,0.4s,mb3.8,baz=98,slow=9.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.05**	**217**	*e*P	Pn	20 51 53.2	+2.0
	8.0nm,0.6s						
WB2	**Warramunga Arr**	**17.57**	**197**	*e*P	Pn	20 53 04.3	-0.4
WRA	**Warramunga Arr**	**17.58**	**197**	P	Pn	20 53 04.0	-0.7
	0.3nm,0.3s,baz=19,slow=13,SNR=14						
ASAR	**Alice Springs**	**21.23**	**195**	P	P	20 53 46.2	+0.4
	0.6nm,0.5s,baz=24,slow=9.7,SNR=11						
MKAR	**Makanchi Array**	**70.82**	**322**	P	P	21 00 16.8	+0.2
	0.1nm,0.3s,baz=101,slow=7.5,SNR=2.7						

NIED ***26*** *20:56:00.4 7.00N×15.290E, h8km, Mw4.0 Best double couple: M0 9.940 00×10^14 NP1: φ=208.0000°, δ=42.0000°, λ=109.0000°. NP2: φ=2.0000°, δ=51.0000°, λ=73.0000°.*

NEIC ***26*** *20:56:51.7±5.9, 4.702N×152.63E, h25km±43km, mb4.4/5, Error ellipse: s-maj=19.7km s-min=16.0km az=135.0*

BJI ***26*** *20:56:51.8, 4654N×152.71E, h31km, mB4.9, mb4.8, Ms4.4, Msz4.2*

ISCJB ***26*** *20:56:54.5±1.0, 4.69N±0.1×152.7E±0.1, h67km±9km, mb4.2/21, Error ellipse: s-maj=21.7km s-min=7.3km az=141.8*

MOS ***26*** *20:56:56.1±1.1, 4.687N×152.63E, h88km, mb4.3/9, Error ellipse: s-maj=16.4km s-min=11.7km az=67.8*

IDC ***26*** *20:56:59.5±3.7, 4.683N×152.78E, h101km±35km, mb3.6/10, mb1 3.9/13, mb1mx3.8/21, mbtmp3.8/13, MS3.1/5, Ms1 3.1/5, ms1mx2.9/29, Error ellipse: s-maj=24.3km s-min=17.3km az=145.0*

ISC 26 20:56:56.1±0.9, 4.686N±0.010×152.7E±0.1, h64km±8km, n62, σ1=31/69, mb4.3/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**4.43**	**29**	*e*PN	**Pn**	**20 58 02.4**	**+1.7**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.60**	**242**	*e*PN	**Pn**	**20 58 15.7**	**-0.9**
YUK				*e*S	**Sn**	**20 59 22.5**	**+3.0**
YUK				smax			
	comp=N,350nm,0.7s						
YUK				smax			
	comp=E,380nm,0.6s						
YUK				smax			
	comp=N,2μm,0.6s						
YUK				smax			
	comp=E,2μm,0.8s						
NEM2	**Nemuro 2**	**6.05**	**237**	P	**Pn**	**20 58 20.6**	**-2.3**
NEM2				*e*S	**Sn**	**20 59 26.9**	**-3.8**
JRA	**Rausu**	**6.10**	**244**	P	**Pn**	**20 58 24.7**	**+1.2**
JNK	**Nakash**	**6.54**	**243**	P	**Pn**	**20 58 29.4**	**-0.1**
JNK				*e*S	**Sn**	**20 59 42.7**	**+0.1**
JTKR	**Abashiri--Toko**	**6.85**	**248**	P	**Pn**	**20 58 34.9**	**+1.2**
JAK	**Akkeshi**	**6.89**	**239**	P	**Pn**	**20 58 32.3**	**-2.0**
JAR	**Ashorobuto**	**7.27**	**244**	P	**Pn**	**20 58 39.6**	**0.0**
JAR				*e*S	**Sn**	**21 00 00.0**	**-0.6**
ASAJ	**Asahikawa**	**7.63**	**253**	PN	**Pn**	**20 58 47.1**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,51nm,20.1s						
ASAJ	**Asahikawa**	**7.63**	**253**	P	**Pn**	**20 58 47.1**	**+2.6**
	comp=Z,3.6nm,0.3s,baz=85,slow=15,SNR=4.8						
ASAJ				LR	LR	21 01 41.8	
	comp=Z,51nm,20.1s,baz=345,slow=37						
JKK2	**Kamakawa 2**	**7.64**	**251**	P	**Pn**	**20 58 46.3**	**+1.7**
JCH	**Churui**	**7.90**	**241**	P	**Pn**	**20 58 46.7**	**-1.5**
JCH				*e*S	**Sn**	**21 00 11.3**	**-4.8**
JFR	**Furan**	**8.08**	**246**	P	**Pn**	**20 58 52.5**	**+1.9**
ERM	**Erimo**	**8.39**	**238**	*e*Pn	**Pn**	**20 58 50.3**	**-4.5**
JBT2	**Biratori 2**	**8.42**	**245**	P	**Pn**	**20 58 55.4**	**+0.1**
JBT2				*e*S	**Sn**	**21 00 28.4**	**-0.4**
JNBK	**Urakawa-nobuka**	**8.46**	**241**	P	**Pn**	**20 58 54.8**	**-1.1**
JKB	**Kayabe**	**9.74**	**244**	P	**Pn**	**20 59 11.3**	**-1.9**
JKB				*e*S	**Sn**	**21 00 54.0**	**-6.9**
JANG	**Nango**	**10.39**	**235**	P	**Pn**	**20 59 17.5**	**-4.7**
JANG				*e*S	**Sn**	**21 01 06.2**	**-11**
MJAR	**Matsushiro Arr**	**14.94**	**232**	P	**Pn**	**21 00 23.8**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=43,slow=8.0,SNR=3.8						
JHJ	**Hachijo jima 2**	**16.90**	**220**	P	**Pn**	**21 00 49.8**	**+1.6**
	comp=Z,7.2nm,0.3s,baz=36,slow=23,SNR=3.8						
YAK	**Yakutsk**	**20.09**	**327**	*i* P	**P**	**21 01 20.2**	**-3.8**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSRS	**Korea Array**	**20.58**	**252**	P	**P**	**21 01 32.7**	**+3.2**
	comp=Z,1.9nm,0.7s,baz=50,slow=11,SNR=7.1						
JNU	**Nakatsue**	**21.55**	**238**	LR	LR	21 09 37.0	
	comp=Z,32nm,20.1s,baz=67,slow=35						
HIA	**Hailar**	**22.08**	**288**	*i* P	**P**	**21 01 42.5**	**-3.0**
BILL	**Bilibino**	**22.35**	**13**	*e*P	**P**	**21 01 47.3**	**-0.8**
BILL				*e*		21 02 07.9	
BILL				*e*S	**S**	**21 05 51.6**	**+2.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.2						
BJT	**Baijiatuan**	**27.23**	**269**	*e*P	**P**	**21 02 32.2**	**-1.6**
	comp=Z,5.2nm,0.6s,mb4.2						
BJT	**Baijiatuan**	**27.23**	**269**	*e*P	**P**	**21 02 32.2**	**-1.6**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NJ2	**Nanjing**	**29.78**	**252**	*e*P	**P**	**21 02 57.5**	**+1.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
SONM	**Songino Array**	**31.05**	**289**	P	**P**	**21 03 09.3**	**+1.7**
	comp=Z,0.6nm,0.9s,mb3.4,baz=64,slow=9.8,SNR=3.4						
SONM				LR	LR	21 16 50.2	
	comp=Z,44nm,18.1s,baz=170,slow=38						
INK	**Inuvik**	**41.70**	**32**	P	**P**	**21 04 38.1**	**+0.1**
	comp=Z,2.3nm,0.7s,mb3.9,baz=290,slow=6.9,SNR=10						
ZALV	**Zalesovo Beam**	**42.34**	**306**	PcP	PcP	21 06 34.3	-1.3
	comp=Z,0.6nm,0.7s,baz=88,slow=3.3,SNR=4.6						
ZALV				LR	LR	21 23 34.3	
	comp=Z,41nm,21.3s,baz=65,slow=38						
MKAR	**Makanchi Array**	**46.66**	**297**	P	**P**	**21 05 17.6**	**-0.3**
MKAR	**Makanchi Array**	**46.66**	**297**	P	**P**	**21 05 17.1**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.6,baz=270,slow=6.6,SNR=7.8						
MKAR				PcP	PcP	21 06 49.8	-0.8
	comp=Z,0.4nm,0.6s,baz=66,slow=1.0,SNR=4.8						
MKAR				LR	LR	21 25 58.8	
	comp=Z,53nm,20.6s,baz=357,slow=37						
KURK	**Kurchatov**	**47.09**	**303**	*i* P	**P**	**21 05 20.9**	**-0.2**
LSA	**Lhasa**	**50.01**	**273**	*e*P	**P**	**21 05 43.0**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.3						
LSA	**Lhasa**	**50.01**	**273**	*e*P	**P**	**21 05 43.0**	**-0.9**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**21 05 50.5**	**-0.3**
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**21 05 50.6**	**-0.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**21 05 50.6**	**-0.2**
	comp=Z,1.1nm,0.7s,mb3.9,baz=297,slow=7.1,SNR=11						
TAPN	**Taplejung**	**53.83**	**273**	*e*P	**P**	**21 06 13.8**	**+1.5**
	comp=Z,2.4nm,0.4s,mb4.5						
ODAN	**Odare**	**54.36**	**273**	*e*P	**P**	**21 06 15.9**	**-0.3**
	comp=Z,9.6nm,1.1s,mb4.7						
JIRN	**Jiri**	**54.68**	**274**	*e*P	**P**	**21 06 19.7**	**+1.2**
	comp=Z,7.6nm,0.5s,mb5.0						
KKN	**Kakani**	**55.22**	**275**	*e*P	**P**	**21 06 24.1**	**+1.7**
	comp=Z,5.4nm,0.7s,mb4.7						
GKN	**Gorkha**	**55.52**	**276**	*e*P	**P**	**21 06 25.5**	**+1.0**
	comp=Z,15nm,0.9s,mb5.0						
KOLN	**Koldanda**	**56.38**	**276**	*e*P	**P**	**21 06 31.9**	**+1.2**
	comp=Z,12nm,0.9s,mb4.9						
KAF	**Kangasniemi**	**63.24**	**335**	*e*p	**P**	**21 07 15.4**	**-1.8**
	comp=Z,1.1nm,0.4s,mb4.3						
KAF	**Kangasniemi**	**63.24**	**335**	*e*P	**P**	**21 07 15.4**	**-1.8**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
FINES	**FINESS Array B**	**63.83**	**335**	P	**P**	**21 07 20.3**	**-0.8**
FINES	**FINESS Array B**	**63.83**	**335**	P	**P**	**21 07 20.4**	**-0.7**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**63.83**	**335**	P	**P**	**21 07 20.4**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.4,baz=38,slow=7.1,SNR=23						
PDAR	**Pinedale Array**	**64.89**	**54**	P	**P**	**21 07 28.1**	**-0.3**
	comp=Z,0.9nm,0.8s,mb3.8,baz=318,slow=2.0,SNR=7.5						
NB2	**NORSAR Subarra**	**68.04**	**341**	P	**P**	**21 07 47.5**	**-0.7**
	comp=Z,3.2nm,0.7s,mb4.5,baz=28,slow=6.2						
NB2	**NORSAR Subarra**	**68.04**	**341**	P	**P**	**21 07 47.5**	**-0.7**
NB2				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
NOA	**NORSAR Array B**	**68.04**	**341**	P	**P**	**21 07 47.9**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.4,baz=28,slow=6.3,SNR=18						
AKASG	**Malin Array Be**	**71.31**	**326**	P	**P**	**21 08 07.7**	**-0.7**
AKASG	**Malin Array Be**	**71.31**	**326**	P	**P**	**21 08 07.8**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	**71.31**	**326**	P	**P**	**21 08 07.8**	**-0.7**
	comp=Z,2.8nm,0.4s,mb4.5,baz=33,slow=6.0,SNR=21						
ASAR	**Alice Springs**	**72.23**	**198**	P	**P**	**21 08 14.6**	**+0.5**
ASAR	**Alice Springs**	**72.23**	**198**	P	**P**	**21 08 13.2**	**-0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**72.23**	**198**	P	**P**	**21 08 13.2**	**-0.9**
	comp=Z,0.6nm,0.7s,mb3.7,baz=13,slow=4.6,SNR=6.7						
CLL	**Collm**	**76.26**	**335**	*e*P	**P**	**21 08 36.0**	**-1.4**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
CLL	**Collm**	**76.26**	**335**	*e*P	**P**	**21 08 36.0**	**-1.4**
	comp=Z,5.0nm,0.4s,mb4.8						

IDC 26 20:59:17.0±1.3, 7.95S×157.02E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/15, mbtmp3.9/5, ML4.2/1, Error ellipse: s-maj=31.2km s-min=25.7km az=42.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.25**	**117**	Pn	Pn	21 00 09.0	-0.2
	23nm,0.3s,baz=284,slow=8.3,SNR=5.7						
HNR				Sn	Sn	21 00 48.4	-0.3
	40nm,0.3s,baz=282,slow=20,SNR=8.0						
WRA	**Warramunga Arr**	**24.99**	**239**	P	P	21 04 41.0	-1.7
	1.4nm,0.7s,baz=65,slow=9.9,SNR=12						
STKA	**Stephens Creek**	**27.80**	**209**	P	P	21 05 09.7	+1.7
	3.1nm,0.7s,baz=32,slow=14,SNR=6.3						
SONM	**Songino Array**	**71.22**	**327**	P	P	21 10 39.5	+1.6
	0.4nm,0.8s,baz=124,slow=7.3,SNR=3.3						
MKAR	**Makanchi Array**	**85.44**	**318**	P	P	21 11 55.5	-1.2
	0.5nm,0.8s,baz=94,slow=6.0,SNR=5.4						

ISCJB ***26*** *21:00:22.6±0.8, 1953S±0.04×6952W±0.04, h93km±6km, mb4.9/132, Error ellipse: s-maj=7.3km s-min=5.0km az=36.4*

LDG ***26*** *21:00:22.5±0.5, 1970S×6979W, h100km, Mb4.9/28, Ms3.9/10, Error ellipse: s-maj=32.6km s-min=10.6km az=39.0*

IDC ***26*** *21:00:25.3±0.4, 1941S×69.17W, h110km±3km, mb4.6/20, mb1 4.6/21, mb1mx4.6/23, mbtmp4.6/21, MS3.9/7, Ms1 3.9/7, ms1mx3.5/25, Error ellipse: s-maj=15.5km s-min=8.2km az=89.0*

MOS ***26*** *21:00:25.5±0.9, 1944S×6970W, h116km, mb5.1/49, Error ellipse: s-maj=11.5km s-min=7.0km az=89.8*

GCMT ***26*** *21:00:25.7±0.4, 1934S×6942W, h133km±3km, MW5.1/59, Moment Tensor Solution. s29,c31; s59,c88; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.40±.15; Mθθ 0.17±.18; Mφφ 3.23±.22; Mrθ-0.02±.12; Mrφ-2.95±.17; Mθφ-2.13±.16; Best double couple: M0 4.81900×10^16 NP1: φ=125.0000°, δ=38.0000°, λ=-127.0000°. NP2: φ=349.0000°, δ=60.0000°, λ=-65.0000°. Principal axes: T 5.4030, Plg12.0000°, Azm61.0000°; N -1.1700, Plg22.0000°, Azm155.0000°; P -4.2350, Plg65.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *21:00:25.7±0.2, 1949S×6962W, mb5.0/109 Error ellipse: s-maj=8.1km s-min=5.7km az=47.0*

NEIC Felt [IV] at Camina and Chiapa; [III] at Huara, Pisagua and Pozo Almonte; [II] at Arica, Camarones and Iquique.

BJI ***26*** *21:00:26.9, 1950S×6960W, h108km, mB5.2*

ISC 26 21:00:23.8±0.8, 1951S±0.004×6943W±0.004, h89km±6km, h110km±1.6km: pP-P, n578, σ0=87/518, mb4.9/132, 107C-81D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.43**	**21**	P	**Pn**	**21 01 17.3**	**+2.1**
LPAZ				S	**Sn**	**21 01 56.3**	**+1.4**
LPAZ	**La Paz**	**3.43**	**21**	P	**Pn**	**21 01 17.2**	**+2.0**
	135nm,0.3s,baz=192,slow=7.8,SNR=1640						
LPAZ				S	**Sn**	**21 01 56.2**	**+1.4**
	27nm,0.3s,baz=259,slow=17,SNR=4.5						
LPAZ				LR	LR	21 02 11.1	
	comp=Z,909nm,18.2s,baz=356,slow=32						
ARE	**Arequipa**	**3.61**	**327**	⇑*i*P	**Pn**	**21 01 18.7**	**+1.1**
ARE				*e*S	**Sn**	**21 01 59.0**	**-0.2**
LCO	**Las Campanas**	**9.53**	**187**	*e*Pn	**Pn**	**21 02 33.2**	**-4.9**
	54nm,0.6s						
NNA	**Nana**	**10.34**	**315**	*e*Pn	**Pn**	**21 02 47.9**	**-1.3**
	33nm,0.6s						
NNA	**Nana**	**10.34**	**315**	P	**Pn**	**21 02 48.4**	**-0.9**
	4.1nm,0.3s,baz=124,slow=11,SNR=5.7						
NNA				S	**Sn**	**21 04 42.5**	**-0.8**
	3.9nm,0.3s,baz=198,slow=19,SNR=3.7						
CFAA	**Coronel Fontan**	**12.09**	**175**	P	**Pn**	**21 03 12.0**	**-1.0**
	0.1nm,0.3s,baz=335,slow=12,SNR=4.9						
ATAH	**Atahualpa**	**15.18**	**324**	P	**Pn**	**21 03 57.5**	**+4.0**
	1.4nm,0.3s,baz=170,slow=8.1,SNR=14						
TRQA	**Tornquist**	**19.59**	**162**	*e*Pn	**Pn**	**21 04 44.9**	**-2.0**
	30nm,0.8s						
PLCA	**Paso Flores**	**21.18**	**182**	P	**P**	**21 05 03.0**	**+1.0**
	57nm,0.9s,mb4.9,baz=360,slow=12,SNR=47						
ROSC	**El Rosal**	**24.69**	**348**	P	**P**	**21 05 38.8**	**+2.1**
	12nm,0.4s,mb4.6,baz=213,slow=9.0,SNR=3.6						
ROSC				LR	LR	21 14 49.3	
	comp=Z,144nm,20.1s,baz=196,slow=35						
SDV	**Santo Domingo**	**28.24**	**357**	P	**P**	**21 06 06.3**	**-2.4**
SDV				LR	LR	21 18 22.2	
SDV	**Santo Domingo**	**28.24**	**357**	P	**P**	**21 06 06.3**	**-2.4**
	8.8nm,0.4s,mb4.7,baz=174,slow=4.6,SNR=24						
SDV				LR	LR	21 18 22.2	
	comp=Z,146nm,20.0s,baz=360,slow=38						
PCRV	**Puerto La Cruz**	**29.87**	**9**	P	**P**	**21 06 21.1**	**-2.0**
PCRV				LR	LR	21 19 03.4	
PCRV	**Puerto La Cruz**	**29.87**	**9**	P	**P**	**21 06 21.1**	**-2.0**
	9.4nm,0.4s,mb4.8,baz=207,slow=4.5,SNR=11						
PCRV				LR	LR	21 19 03.4	
	comp=Z,221nm,21.9s,baz=9.5,slow=38						
GRGR	**Grenville**	**32.36**	**14**	*e*P	**P**	**21 06 41.2**	**-3.8**
USHA	**Ushuaia**	**35.27**	**179**	P	**P**	**21 07 09.2**	**-0.6**
	8.6nm,0.8s,mb4.6,baz=350,slow=12,SNR=3.4						
TEIG	**Tepich**	**43.59**	**334**	P	**P**	**21 08 18.5**	**-0.9**
	12nm,0.5s,mb4.9,baz=177,slow=6.6,SNR=12						
CMIG	**Matias Romero**	**44.14**	**324**	P	**P**	**21 08 23.8**	**0.0**
	15nm,0.7s,mb4.8,baz=116,slow=5.2,SNR=29						
PMSA	**Palmer Station**	**45.38**	**177**	pP	pP	21 08 57.9	+3.5
	31nm,0.9s,baz=106,slow=7.4,SNR=2.4						
COW	**Cow Castle Cre**	**53.68**	**348**	*e*P	**P**	**21 09 34.8**	**-1.7**
GOGA	**Godfrey**	**54.30**	**346**	*e*P	**P**	**21 09 38.4**	**-2.6**
	9.8nm,0.6s,mb5.0						
GOGA	**Godfrey**	**54.30**	**346**	*e*P	**P**	**21 09 38.4**	**-2.6**
GOGA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
LRAL	**Lakeview Retre**	**54.88**	**342**	*e*P	**P**	**21 09 42.3**	**-2.8**
	comp=Z,15nm,1.0s,mb5.0						
NATX	**Nacogdoches**	**56.43**	**334**	*e*P	**P**	**21 09 55.9**	**-0.4**
	comp=Z,48nm,0.6s,mb5.7						
ELN	**Prospectdale**	**57.43**	**349**	*e*P	**P**	**21 10 02.0**	**-1.2**
JCT	**Junction City**	**57.66**	**329**	*e*P	**P**	**21 10 03.5**	**-1.4**
	comp=Z,22nm,0.9s,mb5.2						
JCT	**Junction City**	**57.66**	**329**	*e*P	**P**	**21 10 03.6**	**-1.4**
JCT				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
WVT	**Waverly**	**58.01**	**342**	*e*P	**P**	**21 10 03.6**	**-3.8**
	comp=Z,22nm,0.8s,mb5.2						
WVT	**Waverly**	**58.01**	**342**	*e*P	**P**	**21 10 03.6**	**-3.8**
WVT				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.2						
MIAR	**Mount Ida**	**58.46**	**337**	*e*P	**P**	**21 10 08.7**	**-1.8**
	comp=Z,43nm,1.3s,mb5.3						
MIAR	**Mount Ida**	**58.46**	**337**	*e*P	**P**	**21 10 08.7**	**-1.8**
MIAR				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.3						
SIUC	**Southern Illin**	**59.89**	**342**	*e*P	**P**	**21 10 18.1**	**-2.2**
	comp=Z,88nm,1.3s,mb5.6						
FVM	**French Village**	**60.50**	**341**	*e*P	**P**	**21 10 22.5**	**-2.0**
	comp=Z,30nm,0.4s,mb5.7						
FVM	**French Village**	**60.50**	**341**	*e*P	**P**	**21 10 22.5**	**-2.0**
FVM				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.7						
WMOK	**Wichita Mounta**	**60.74**	**332**	*e*P	**P**	**21 10 23.9**	**-2.3**
	comp=Z,5.3nm,0.6s,mb4.8						
WMOK	**Wichita Mounta**	**60.74**	**332**	*e*P	**P**	**21 10 23.9**	**-2.3**
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
ACSO	**Alum Creek Sta**	**60.76**	**348**	*e*P	**P**	**21 10 23.9**	**-2.3**
	comp=Z,38nm,0.8s,mb5.5						
MNTX	**Cornudas Mount**	**61.49**	**325**	*e*P	**P**	**21 10 29.4**	**-1.9**
	comp=Z,23nm,1.1s,mb5.1						
ALLY	**Alegheny Colle**	**61.65**	**351**	*e*P	**P**	**21 10 30.4**	**-1.8**
	comp=Z,46nm,0.8s,mb5.6						
ERPA	**Erie**	**62.09**	**351**	*e*P	**P**	**21 10 33.2**	**-1.9**
	comp=Z,70nm,0.9s,mb5.7						
VNA3	**Neumayer Olymp**	**62.11**	**162**	*e*P	**P**	**21 10 35.6**	**+0.6**
VNA3				*e*		21 10 38.0	
VNA3				*e*		21 10 46.7	
VNA3				*e*		21 10 52.6	
VNA3				*e*		21 11 03.0	
VNA3				*e*		21 11 14.7	
VNA1	**Neumayer--Stat**	**62.31**	**161**	*e*P	**P**	**21 10 37.0**	**+0.7**
VNA1				*e*		21 10 39.6	
VNA1				*e*		21 10 48.2	
VNA1				*e*	pP	21 10 54.2	-4.5
VNA1				*e*		21 11 04.7	
VNA1				*e*		21 11 15.2	
HDIL	**Hopedale**	**62.55**	**343**	*e*P	**P**	**21 10 35.0**	**-3.2**
	comp=Z,21nm,0.5s,mb5.3						
VNA2	**Neumayer--Watz**	**62.68**	**161**	*e*P	**P**	**21 10 38.6**	**-0.2**
VNA2				*e*		21 10 41.3	
VNA2				*e*		21 10 49.6	
VNA2				*e*	pP	21 10 55.8	-5.4
VNA2				*e*		21 11 06.7	
VNA2				*e*		21 11 18.6	
HNH	**Hanover**	**62.95**	**358**	P	**P**	**21 10 41.3**	**+0.4**
	comp=Z,33nm,0.8s,mb5.3						
319A	**Douglas**	**63.42**	**322**	⇑P	**P**	**21 10 44.3**	**+0.1**
	baz=64						
KSU1	**Kansas State U**	**63.61**	**337**	*e*P	**P**	**21 10 43.3**	**-2.0**
	comp=Z,45nm,0.8s,mb5.3						
318A	**Bisbee**	**63.88**	**322**	⇑P	**P**	**21 10 47.3**	**0.0**
	baz=64						
BNM	**Barren Site**	**64.05**	**326**	*e*P	**P**	**21 10 48.0**	**-0.3**
LPM	**Los Pinos Moun**	**64.17**	**326**	*e*P	**P**	**21 10 48.5**	**-0.6**
218A	**Dragoon**	**64.30**	**322**	⇓P	**P**	**21 10 50.0**	**0.0**
	baz=65						
SNAA	**Sanae**	**64.31**	**161**	*e*P	**P**	**21 10 49.9**	**+0.4**
SNAA				*e*		21 10 51.6	
SNAA				*e*		21 11 00.3	
SNAA				*e*	pP	21 11 07.8	-4.2
SNAA				*e*	pP	21 11 16.2	+4.2
SNAA				*e*		21 11 22.8	
SNAA	**Sanae**	**64.31**	**161**	P	**P**	**21 10 49.6**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.3,baz=297,slow=5.8,SNR=20						
SNAA				pP	pP	21 11 15.5	+3.5
	comp=Z,3.7nm,1.0s,baz=304,slow=8.8,SNR=2.9						
MSNY	**Massena**	**64.38**	**356**	P	**P**	**21 10 48.3**	**-1.9**
LAZ	**Ladron**	**64.51**	**326**	*e*P	**P**	**21 10 51.2**	**-0.1**
ANMO	**Albuquerque**	**64.58**	**327**	*e*P	**P**	**21 10 51.1**	**-0.6**
	comp=Z,2.6nm,0.5s,mb4.3						
ANMO	**Albuquerque**	**64.58**	**327**	*e*P	**P**	**21 10 51.2**	**-0.5**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CBKS	**Cedar Bluff**	**64.60**	**334**	*e*P	**P**	**21 10 50.3**	**-1.5**
	comp=Z,63nm,1.0s,mb5.4						
CBKS	**Cedar Bluff**	**64.60**	**334**	*e*P	**P**	**21 10 50.3**	**-1.5**
CBKS				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.4						
217A	**Green Valley**	**64.61**	**321**	⇓P	**P**	**21 10 51.9**	**-0.1**
	baz=65						
TUC	**Tucson**	**64.98**	**322**	*e*P	**P**	**21 10 54.1**	**-0.2**
	comp=Z,21nm,1.4s,mb4.8						
TUC	**Tucson**	**64.98**	**322**	*e*P	**P**	**21 10 54.2**	**-0.2**
TUC				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.8						
JFWS	**Jewell Farm**	**65.01**	**343**	*e*P	**P**	**21 10 52.0**	**-2.3**
	comp=Z,28nm,0.6s,mb5.3						
JFWS	**Jewell Farm**	**65.01**	**343**	*e*P	**P**	**21 10 52.0**	**-2.3**
JFWS				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.3						
216A	**Three Points,**	**65.15**	**321**	⇑P	**P**	**21 10 55.7**	**+0.2**
	baz=66						
116A	**Eloy**	**65.70**	**321**	⇓P	**P**	**21 10 59.2**	**+0.2**
	baz=66,SNR=8.3						
115A	**Sonoran Desert**	**66.11**	**321**	⇓P	**P**	**21 11 02.0**	**+0.3**
	baz=66,SNR=5.4						
SDCO	**Great Sand Dun**	**66.29**	**329**	*e*P	**P**	**21 11 02.2**	**-0.5**
	comp=Z,36nm,1.0s,mb5.2						
Z14A	**Wintersburg**	**67.00**	**321**	⇓P	**P**	**21 11 07.5**	**+0.2**
	baz=67						
MVCO	**Mesa Verde**	**67.37**	**327**	*e*P	**P**	**21 11 09.3**	**-0.3**
	comp=Z,35nm,1.4s,mb5.0						
MVCO	**Mesa Verde**	**67.37**	**327**	P	**P**	**21 11 09.5**	**-0.1**
	baz=68,SNR=9.1						
X15A	**Humboldt**	**67.39**	**323**	P	**P**	**21 11 10.3**	**+0.6**
	baz=68,SNR=8.8						
Y14A	**Wickenburg**	**67.44**	**322**	P	**P**	**21 11 10.3**	**

U14A **Mt Trumbull** 69.31 323 ⇑P P 21 11 22.5 +0.9
baz=70
W12A **Cal Nev Ari** 69.49 322 ⇑P P 21 11 23.1 +0.2
baz=70
GMRC **Granite Mounta** 69.60 321 ⇓P P 21 11 24.2 +0.7
baz=70,SNR=17
T14A **Hurricane** 69.71 324 ⇓P P 21 11 24.9 +0.7
baz=70
MURC **Murrieta** 69.74 319 ⇓P P 21 11 25.0 +0.6
baz=70
U13A **Pakoon Wash** 69.75 323 ⇑P P 21 11 25.0 +0.6
baz=70
V12A **Nelson** 69.78 322 ⇓P P 21 11 24.8 +0.2
baz=70,SNR=6.2
EYMN **Ely** 70.00 344 eP P 21 11 22.6 -3.1
comp=Z,5.2nm,0.5s,mb4.6
HEC **Hector,Ludlow** 70.03 320 ⇓P P 21 11 27.1 +0.9
baz=70
U12A **Valley of Fire** 70.09 323 P P 21 11 27.2 +0.8
baz=70,SNR=9.8
T13A **Saint George** 70.14 323 ⇓P P 21 11 27.5 +0.7
baz=70
SCI **San Clemente I** 70.18 318 ⇑P P 21 11 27.8 +0.6
baz=71
V11A **Goodsprings** 70.19 322 ⇑P P 21 11 27.6 +0.4
baz=71
TUQ **Turquoise Mtn.** 70.20 321 ⇓P P 21 11 27.8 +0.5
baz=71
CCUT **Cedar City** 70.22 324 eP P 21 11 28.3 +1.0
RWWY **Rawlins** 70.22 331 eP P 21 11 26.9 -0.2
comp=Z,7.0nm,0.6s,mb4.7
S14A **Cedar City** 70.26 324 ⇑P P 21 11 28.2 +0.6
baz=71
MSU **Marysvale** 70.27 326 eP P 21 11 27.9 +0.4
MVU **Marysvale** 70.28 326 eP P 21 11 26.2 -1.5
comp=Z,5.7nm,0.9s,mb4.4
TMUT **Trail Mountain** 70.34 327 eP P 21 11 27.9 -0.1
CIS **Catalina Islan** 70.37 318 ⇑P P 21 11 28.8 +0.5
baz=71
T12A **Moapa** 70.39 323 ⇑P P 21 11 28.8 +0.5
baz=71
ARUT **Antelope Range** 70.43 324 P P 21 11 28.0 -0.6
BFSC **Mount Baldy St** 70.45 319 ⇓P P 21 11 29.2 +0.5
baz=71
S13A **Holt Ranch, En** 70.52 324 ⇑P P 21 11 30.1 +1.0
baz=71
GSC **Goldstone** 70.64 320 ⇓P P 21 11 30.5 +0.6
baz=71
QSPA **South Pole Qui** 70.67 180 P P 21 11 30.5 +1.1
comp=Z,15nm,0.7s,mb4.9,baz=160,slow=5.3
DECC **Green Verdugo** 70.87 319 ⇑P P 21 11 31.9 +0.6
baz=71
T11A **Corn Creek, Al** 71.04 323 ⇓P P 21 11 33.1 +0.8
baz=71
EDW2 **Edwards Air Fo** 71.08 319 P P 21 11 32.8 +0.3
baz=72,SNR=5.8
S12A **Delamar Landin** 71.09 323 ⇓P P 21 11 33.4 +0.8
baz=72
MPU **Maple Canyon** 71.09 327 eP P 21 11 32.5 0.0
comp=Z,22nm,1.0s,mb5.0
U10A **Ash Meadows, A** 71.12 322 ⇑P P 21 11 33.2 +0.5
baz=72
BLG **Laguna Peak** 71.24 318 ⇓P P 21 11 34.0 +0.5
baz=72
NLU **North Lily Min** 71.28 327 eP P 21 11 33.9 +0.3
LRMC **Laurel Mountai** 71.29 320 ⇑P P 21 11 34.3 +0.5
baz=72
TPNV **Topopah Spring** 71.43 322 eP P 21 11 35.6 +0.9
comp=Z,23nm,1.1s,mb4.9
TPNV **Topopah Spring** 71.43 322 eP P 21 11 35.6 +0.9
TPNV pmax pmax
comp=Z,23nm,1.1s,mb4.9
TPNV **Topopah Spring** 71.43 322 ⇑P P 21 11 35.6 +0.9
baz=72
JLU **Jordanelle** 71.44 327 eP P 21 11 34.5 0.0
R12A **Pony Springs,** 71.46 324 ⇓P P 21 11 35.6 +0.8
baz=72
FURC **Furnace Creek,** 71.47 321 ⇑P P 21 11 35.5 +0.7
baz=72
AGMN **Agassiz Refuge** 71.52 342 eP P 21 11 32.7 -2.2
comp=Z,12nm,0.8s,mb4.8
BSC **Santa Cruz Isl** 71.53 318 ⇓P P 21 11 35.4 +0.1
baz=72
MPMC **Manual Prospec** 71.56 321 P P 21 11 35.8 +0.3
baz=72,SNR=11
Q13A **Wheeler Ranch,** 71.58 325 ⇑P P 21 11 36.0 +0.5
baz=72
S11A **Rachel** 71.62 323 ⇑P P 21 11 36.6 +0.9
baz=72
ARVC **Arvin** 71.76 319 ⇑P P 21 11 37.2 +0.6
baz=72
DAC **Darwin (Calif)** 71.77 321 eP P 21 11 36.6 -0.1
comp=Z,12nm,0.8s,mb4.8
DAC **Darwin (Calif)** 71.77 321 eP P 21 11 36.6 -0.1
DAC pmax pmax
comp=Z,12nm,0.8s,mb4.8
NOQ **North Oquirrh** 71.81 327 P P 21 11 35.5 -1.3
DUG **Dugway** 71.84 326 eP P 21 11 36.8 -0.2
comp=Z,35nm,1.2s,mb5.1
DUG **Dugway** 71.84 326 eP P 21 11 36.8 -0.2
DUG pmax pmax
comp=Z,35nm,1.2s,mb5.1
DUG **Dugway** 71.84 326 ⇑P P 21 11 37.2 +0.2
baz=72
ISA **Isabella** 71.89 320 P P 21 11 38.1 +0.7
baz=72,SNR=8.8
P13A **Bates Ranch, G** 71.94 325 ⇑P P 21 11 38.1 +0.5
baz=72
R11A **Troy Canyon, C** 72.02 323 ⇑P P 21 11 39.0 +0.9
baz=72
Q12A **Willow Creek R** 72.09 324 ⇓P P 21 11 38.9 +0.4
baz=72
GRAC **Grapevine Rang** 72.12 321 ⇑P P 21 11 39.3 +0.5
baz=72
PDAR **Pinedale Array** 72.15 330 P P 21 11 37.9 -0.9
comp=Z,4.1nm,0.5s,mb4.5,baz=127,slow=7.6,SNR=36
CWC **Cottonwood Cre** 72.17 321 ⇓P P 21 11 39.8 +0.7
baz=72
N15A **Stansbury Isla** 72.20 327 ⇑P P 21 11 38.9 -0.2
baz=73
PKM **Peak Mountain** 72.22 318 ⇑P P 21 11 40.0 +0.5
baz=73,SNR=13
HWUT **Hardware Ranch** 72.24 328 eP P 21 11 38.6 -0.8
comp=Z,16nm,0.8s,mb4.9
S10A **Tonopah Range,** 72.30 322 ⇑P P 21 11 40.4 +0.5
baz=73
R10A **Warm Springs** 72.39 323 ⇑P P 21 11 41.5 +1.1
baz=73
O13A **Hicks Ranch, I** 72.41 326 ⇓P P 21 11 40.5 +0.1
baz=73
Q11A **Duckwater** 72.41 324 P P 21 11 41.1 +0.7
baz=73,SNR=21
P12A **McGill** 72.44 325 P P 21 11 41.2 +0.6
baz=73,SNR=13
SPUT **South Promonto** 72.47 327 eP P 21 11 40.1 -0.6
N14A **Grayback Hills** 72.51 327 ⇓P P 21 11 40.9 -0.1
baz=73
S09A **Goldfield** 72.53 322 ⇓P P 21 11 41.7 +0.5
baz=73
M15A **Larsen Ranch,** 72.58 327 ⇓P P 21 11 41.0 -0.4
baz=73
TIN **Tinemaha** 72.67 321 ⇑P P 21 11 42.6 +0.5
baz=73
R09A **Tonopah** 72.79 322 ⇓P P 21 11 43.3 +0.6
baz=73
Q10A **Clear Creek Ra** 72.81 323 ⇓P P 21 11 43.5 +0.6
baz=73
HELL **Mitchell Peak,** 72.90 320 P P 21 11 43.7 +0.3
baz=73,SNR=23
V05C **Boulder Hill,** 72.91 319 ⇑P P 21 11 44.1 +0.7
baz=73
O12A **Currie** 72.91 325 P P 21 11 43.9 +0.5
baz=73,SNR=21
S08C **White Mtn Res** 72.93 321 ⇑P P 21 11 44.3 +0.8
baz=73,SNR=10
HVU **Hansel Valley** 72.98 328 eP P 21 11 43.0 -0.8
comp=Z,18nm,1.0s,mb4.9
HVU **Hansel Valley** 72.98 328 eP P 21 11 43.0 -0.8
HVU pmax pmax
comp=Z,18nm,1.0s,mb4.9
N13A **Wendover, West** 73.05 326 ⇓P P 21 11 43.8 -0.3
baz=73
M14A **Sheep Mountain** 73.07 327 ⇑P P 21 11 43.9 -0.3
baz=73
ULM **Lac du Bonnet** 73.28 343 P P 21 11 43.2 -2.1
ULM **Lac du Bonnet** 73.28 343 P P 21 11 43.2 -2.1
comp=Z,12nm,0.5s,mb4.9,baz=150,slow=7.4,SNR=44
LOHW **Long Hollow** 73.29 330 eP P 21 11 45.2 -0.3
comp=Z,8.9nm,0.4s,mb5.0
O11A **Cowboy Ranch,** 73.31 325 ⇑P P 21 11 46.0 +0.2
baz=74,SNR=5.0
PKD **Parkfield** 73.35 319 ⇓P P 21 11 46.3 +0.2
baz=74,SNR=6.3
V04C **Ramage Ranch,** 73.36 318 P P 21 11 46.8 +0.6
baz=74
TPAW **Teton Pass** 73.36 330 eP P 21 11 45.4 -0.6
comp=Z,14nm,0.8s,mb4.8
P10A **Eureka** 73.40 324 ⇑P P 21 11 46.9 +0.6
baz=74
MLAC **Mammoth Lakes** 73.41 321 ⇓P P 21 11 47.2 +0.8
baz=74
MOOW **Moose Ponds** 73.46 330 eP P 21 11 45.9 -0.6
comp=Z,9.9nm,0.9s,mb4.6
N12A **Clover Valley,** 73.49 326 ⇓P P 21 11 46.6 -0.1
baz=74
KCC **Kaiser Creek** 73.50 321 ⇑P P 21 11 46.6 -0.3
baz=74,SNR=5.5
T06C **Millerton Lake** 73.53 320 ⇓P P 21 11 47.6 +0.5
baz=74
NVAR **Mina Array Bea** 73.63 322 P P 21 11 48.2 +0.5
comp=Z,8.7nm,0.9s,mb4.5,baz=136,slow=7.2,SNR=18
IMW **Indian Meadow** 73.66 330 eP P 21 11 47.7 0.0
comp=Z,38nm,1.0s,mb5.1
FLWY **Flagg Ranch** 73.69 330 eP P 21 11 48.1 +0.2
comp=Z,55nm,0.8s,mb5.3
Q08A **Gabbs** 73.71 322 ⇑P P 21 11 48.2 +0.1
baz=74
P09A **Austin** 73.73 323 ⇑P P 21 11 48.4 +0.2
baz=74
K14A **Jones Ranch, D** 73.74 328 ⇑P P 21 11 47.5 -0.7
baz=74
U04C **Hernandez Rese** 73.77 319 ⇑P P 21 11 49.0 +0.5
baz=74,SNR=9.1
LAO **LASA Array** 73.79 335 eP P 21 11 47.7 -0.7
comp=Z,33nm,0.9s,mb5.1
L13A **Double Diamond** 73.80 327 ⇑P P 21 11 48.5 -0.1
baz=74
M12A **Wells** 73.82 326 ⇑P P 21 11 48.4 -0.3
baz=74,SNR=7.8
V03C **Hunter Liggett** 73.83 318 ⇓P P 21 11 49.5 +0.6
baz=74
RLMT **Red Lodge** 73.84 332 eP P 21 11 48.2 -0.5
comp=Z,26nm,0.7s,mb5.1
R07C **Lee Vining** 73.84 321 ⇑P P 21 11 49.8 +0.9
baz=74
O10A **Cortez Mining,** 73.88 324 ⇑P P 21 11 49.6 +0.5
baz=74
LKWY **Lake** 73.92 331 eP P 21 11 44.4 -4.8
comp=Z,28nm,0.8s,mb5.0
LKWY **Lake** 73.92 331 eP P 21 11 44.4 -4.8
LKWY pmax pmax
comp=Z,28nm,0.8s,mb5.0
YFT **Old Faithful** 74.04 330 eP P 21 11 51.0 +1.1
SCHQ **Schefferville** 74.07 2 P P 21 11 47.6 -2.3
comp=Z,5.8nm,0.7s,mb4.4,baz=187,slow=6.4,SNR=16
S05C **Merced** 74.12 320 ⇓P P 21 11 51.0 +0.4
baz=74,SNR=12
HAST **UC Hastings Re** 74.26 319 ⇑P P 21 11 51.8 +0.4
baz=75,SNR=9.4
K13A **Stover Farm, H** 74.28 327 ⇓P P 21 11 51.4 +0.1
baz=75
M11A **Holtville Ranch,** 74.30 326 P P 21 11 52.0 +0.5
baz=75,SNR=10
P08A **Dixie Valley** 74.36 323 ⇓P P 21 11 52.3 +0.5
baz=75
R06C **Coleville** 74.37 321 ⇑P P 21 11 52.9 +1.0
baz=75
L12A **House Creek Ra** 74.40 327 ⇑P P 21 11 52.4 +0.3
baz=75
DGMT **Dagmar** 74.46 337 eP P 21 11 51.6 -0.6
comp=Z,47nm,1.0s,mb5.2
GCMT **Greycliff** 74.53 332 eP P 21 11 52.5 -0.3
QLMT **Earthquake Lak** 74.60 330 eP P 21 11 53.8 +0.7
CMB **Columbia Colle** 74.60 320 ⇓P P 21 11 53.4 +0.1
baz=75
K12A **Draper Farm, C** 74.69 327 ⇓P P 21 11 54.0 +0.3
baz=75
M10A **I.L. Ranch, Tu** 74.76 325 ⇓P P 21 11 54.3 +0.2
baz=75
S04C **Ingram Canyon,** 74.83 320 ⇑P P 21 11 55.1 +0.4
baz=75
R05C **Kinwood Meado** 74.85 321 ⇑P P 21 11 55.6 +0.8
baz=75
J13A **Cove Ranch, Pi** 74.87 328 ⇑P P 21 11 54.9 +0.2
baz=75
R04C **Big Horse Ranc** 75.08 320 ⇑P P 21 11 56.6 +0.6
baz=75
HLID **Hailey** 75.11 328 ⇓P P 21 11 56.5 +0.4
HLID **Hailey** 75.11 328 P P 21 11 56.6 +0.5
baz=76,SNR=31
PAHR **Pah Rah Range** 75.11 322 eP P 21 11 56.7 +0.5
comp=Z,40nm,1.0s,mb5.1
L10A **Juniper Basin** 75.11 326 ⇓P P 21 11 56.5 +0.3
baz=76
BNLO **Ben Lomond (Sa** 75.12 319 ⇑P P 21 11 56.6 +0.2
baz=76
N08A **GE Springer Mi** 75.12 324 ⇑P P 21 11 56.1 -0.2
baz=76,SNR=5.3
M09A **Marrel Ranch,** 75.19 325 ⇓P P 21 11 56.8 +0.2
baz=76,SNR=6.5
I13A **Wildhorse Cree** 75.21 328 ⇑P P 21 11 57.1 +0.4
baz=76
J12A **Stokes Ranch,** 75.23 327 ⇑P P 21 11 56.9 +0.1
baz=76
MCMT **McKenzie Canyo** 75.27 330 eP P 21 11 57.2 +0.2
LAVA **Lava Cap Winer** 75.28 321 ⇑P P 21 11 57.2 0.0
baz=76
BOZ **Bozeman (W)** 75.31 331 eP P 21 11 56.5 -0.7
comp=Z,34nm,1.6s,mb4.8
BOZ **Bozeman (W)** 75.31 331 eP P 21 11 56.5 -0.7
BOZ pmax pmax
comp=Z,34nm,1.6s,mb4.8
BOZ **Bozeman (W)** 75.31 331 ⇑P P 21 11 56.7 -0.5
baz=76
G15A **Dillon** 75.35 330 P P 21 11 57.4 -0.1
baz=76,SNR=13
K11A **Parker Ranch,** 75.37 326 ⇓P P 21 11 57.9 +0.3
baz=76
BDM **Black Diamond** 75.45 320 ⇑P P 21 11 59.0 +0.8
baz=76
DLMT **Dillon** 75.55 330 eP P 21 11 58.2 -0.3
comp=Z,21nm,1.0s,mb4.8
P05C **Yuba Gap, Truc** 75.56 321 ⇑P P 21 11 59.4 +0.6
baz=76
N07B **Gerlach** 75.59 323 ⇑P P 21 11 58.9 -0.1
baz=76
L09A **Wilkinson Ranc** 75.71 325 P P 21 11 59.9 +0.3
baz=76,SNR=7.4
M08A **Happy Creek Ra** 75.71 324 ⇓P P 21 11 59.5 -0.2
baz=76
Q04C **Lincoln** 75.72 321 ⇓P P 21 12 00.0 +0.3
baz=76
MFID **Camas Ranch** 75.72 327 ⇓P P 21 11 59.8 +0.2
baz=76
H13A **Challis** 75.75 329 ⇓P P 21 11 59.9 +0.2
baz=76
BEKR **Beckwourth** 75.78 322 ⇑P P 21 12 00.3 +0.2
baz=76
K10A **MacKenzie Ranc** 75.81 326 ⇑P P 21 12 00.2 0.0
baz=76
F15A **Butte** 75.86 331 P P 21 12 00.3 0.0
baz=76,SNR=15
G14A **Jackson** 75.87 330 P P 21 12 00.7 +0.2
baz=76,SNR=7.8
Q03C **Winters** 75.97 320 ⇓P P 21 12 01.9 +0.7
baz=76
H12A **Diamond D Ranc** 76.04 328 P P 21 12 01.8 +0.4
baz=76,SNR=20
CVS **Carmenet Viney** 76.06 320 ⇑P P 21 12 01.7 +0.1
baz=76
N06A **Buffalo Meadow** 76.06 323 ⇓P P 21 12 01.9 +0.2
baz=76
M07A **Soldier Meadow** 76.11 324 P P 21 12 02.2 +0.3
baz=76,SNR=5.5
G13A **Cobalt** 76.13 329 P P 21 12 02.5 +0.6
baz=76,SNR=42
O05C **Quincy** 76.17 322 ⇑P P 21 12 02.5 +0.3
baz=76
L08A **Fields** 76.20 325 ⇓P P 21 12 02.4 0.0
baz=77
SUTB **Sutter Butte** 76.21 321 ⇑P P 21 12 02.4 -0.1
baz=77
K09A **Rome** 76.21 325 P P 21 12 02.5 +0.1
baz=77,SNR=17
F14A **Wisdom** 76.24 330 P P 21 12 03.1 +0.6
baz=77,SNR=10
ORV **Oroville** 76.25 321 P P 21 12 03.2 +0.5
baz=77,SNR=17
EGMT **Eagleton** 76.31 333 eP P 21 12 01.8 -1.1
comp=Z,46nm,1.1s,mb5.1
EGMT **Eagleton** 76.31 333 ⇓P P 21 12 02.2 -0.7
baz=77
E15A **Deer Lodge** 76.36 331 P P 21 12 03.3 +0.1
baz=77,SNR=17
O04C **Chester** 76.50 322 ⇑P P 21 12 04.1 0.0
baz=77
WVOR **Wild Horse Val** 76.52 325 eP P 21 12 03.6 -0.6
comp=Z,6.3nm,1.1s,mb4.3
WVOR **Wild Horse Val** 76.52 325 eP P 21 12 03.6 -0.6
WVOR pmax pmax
comp=Z,6.0nm,1.1s,mb4.2
K08A **Mann Creek Ran** 76.64 325 ⇓P P 21 12 04.8 -0.1
baz=77
J09A **Fry Pan Ranch,** 76.67 326 ⇓P P 21 12 04.9 -0.1
baz=77
H11A **Donnelly** 76.73 328 ⇓P P 21 12 05.1 -0.2
baz=77
M06C **Likely Place G** 76.73 323 P P 21 12 05.7 +0.3
baz=77,SNR=5.5
E14A **Clinton** 76.75 330 ⇑P P 21 12 05.4 +0.1
baz=77,SNR=13
D15A **Lincoln** 76.77 331 ⇑P P 21 12 05.6 +0.1
baz=77,SNR=20
CHMT **Chamberlain Mo** 77.00 331 eP P 21 12 06.7 -0.1
H10A **Noah's Angus R** 77.02 327 ⇑P P 21 12 06.7 -0.2
baz=77
K07A **Rock Creek Ran** 77.03 325 ⇑P P 21 12 07.1 +0.1
baz=77
J08A **Circle Bar Ran** 77.06 326 ⇑P P 21 12 07.6 +0.3
baz=77
MOD **Modoc** 77.09 324 ⇓P P 21 12 07.1 -0.3
baz=77
E13A **Victor** 77.09 330 P P 21 12 07.6 +0.3
baz=77,SNR=16
I09A **Lost Marbles R** 77.10 326 ⇑P P 21 12 07.4 0.0
baz=78
F12A **Elk City** 77.11 329 P P 21 12 07.3 0.0
baz=78,SNR=16
TORD **Torodi Ar. Bea** 77.16 71 P P 21 12 04.8 -3.6
comp=Z,31nm,0.5s,mb5.3,baz=257,slow=5.0,SNR=138
TORD pP pP 21 12 33.0 +1.5
comp=Z,19nm,0.9s,baz=251,slow=5.1,SNR=3.7
TORD sP sP 21 12 45.2 +4.1
comp=Z,10nm,0.8s,baz=259,slow=5.5,SNR=1.7
TORD LR LR 21 44 36.4
comp=Z,111nm,19.9s,baz=220,slow=34
D14A **Greenough** 77.25 331 P P 21 12 08.1 0.0
baz=78,SNR=6.2
MSO **Missoula** 77.26 330 eP P 21 12 07.9 -0.3
comp=Z,10nm,1.1s,mb4.5
G11A **Walters Elk Ra** 77.35 328 P P 21 12 08.8 0.0
baz=78,SNR=24
L05A **Lakeview** 77.48 323 ⇓P P 21 12 10.3 +0.7
baz=78,SNR=5.8
BMO **Blue Mountains** 77.49 327 eP P 21 12 09.3 -0.3
comp=Z,26nm,1.1s,mb4.9
I08A **Drewsey** 77.49 326 P P 21 12 10.0 +0.4
baz=78,SNR=13
WDC **Whiskeytown Da** 77.52 321 eP P 21 12 07.8 -2.0
comp=Z,4.8nm,0.5s,mb4.5
WDC **Whiskeytown Da** 77.52 321 eP P 21 12 07.8 -2.0
WDC pmax pmax
comp=Z,5.0nm,0.5s,mb4.5
J07A **Hines** 77.52 325 ⇓P P 21 12 10.0 +0.2
baz=78
K06A **Valley Falls** 77.65 324 P P 21 12 11.1 +0.6
baz=78,SNR=5.7
D13A **Huson** 77.70 330 P P 21 12 10.7 +0.1
baz=78,SNR=25
G10A **Bishop Farm, J** 77.70 328 P P 21 12 11.3 +0.6
baz=78,SNR=41
M04C **Macdoel** 77.88 323 P P 21 12 11.8 0.0
baz=78,SNR=5.2
J06A **Christmas Vall** 77.90 325 P P 21 12 12.1 +0.2
baz=78,SNR=7.4
H08A **Prairie City** 77.96 326 ⇑P P 21 12 12.5 +0.3
baz=78,SNR=12
E11A **Bogner Ranch,** 78.00 329 P P 21 12 11.7 -0.7
baz=78,SNR=8.2
G09A **Cove** 78.02 327 P P 21 12 12.9 +0.4
baz=78,SNR=18
I07A **Izee** 78.10 326 ⇑P P 21 12 13.1 +0.1
baz=78,SNR=12
N02C **Big Bar** 78.12 321 ⇓P P 21 12 13.2 0.0
baz=78,SNR=6.5
C13A **Hot Springs** 78.18 331 P P 21 12 13.4 +0.1
baz=78,SNR=17
M02C **Callahan** 78.22 322 ⇓P P 21 12 13.3 -0.4
baz=79
F10A **Beach Ranch, E** 78.23 328 P P 21 12 13.8 +0.1
baz=79,SNR=12
YBH **Yreka Blue Hor** 78.35 322 ⇑P P 21 12 14.3 -0.1
baz=79
F09A **S2 Ranch, Elgi** 78.39 328 ⇑P P 21 12 14.3 -0.2
baz=79,SNR=7.6
I06A **Prineville** 78.39 325 ⇓P P 21 12 15.0 +0.4
baz=79,SNR=5.7
SYO **Syowa Base** 78.53 160 ⇑/P P 21 12 13.0 -2.0
SYO **Syowa Base** 78.53 160 ⇑/PcP PcP 21 12 21.0 -2.8
E10A **Myers Farm, Un** 78.53 329 ⇑P P 21 12 15.1 -0.2
baz=79,SNR=8.4
B13A **Whitefish** 78.64 331 ⇑P P 21 12 15.4 -0.4
baz=79,SNR=9.9
G08A **Pilot Rock** 78.64 327 P P 21 12 16.1 +0.2
baz=79,SNR=9.6
VNDA **Vanda** 78.72 190 P P 21 12 16.9 +0.9
comp=Z,5.5nm,1.0s,mb4.3,baz=133,slow=4.5,SNR=14
WALA **Waterton Lakes** 78.89 332 eP P 21 12 16.4 -0.8
comp=Z,28nm,0.9s,mb5.1
J04A **Umpqua Nationa** 78.97 324 ⇑P P 21 12 17.8 0.0
baz=79
H06A **Lindquist Farm** 78.98 326 ⇑P P 21 12 18.3 +0.5
baz=79,SNR=12
G07A **Ruggs Ranch, H** 78.99 326 P P 21 12 18.1 +0.3
baz=79,SNR=9.7
FFC **Flin Flon** 79.00 341 P P 21 12 16.8 -0.8
comp=Z,60nm,1.0s,mb5.4,SNR=5.2
FFC **Flin Flon** 79.00 341 eP P 21 12 15.9 -1.7
comp=Z,15nm,1.3s,mb4.7
FFC **Flin Flon** 79.00 341 eP P 21 12 15.9 -1.7
FFC pmax pmax
comp=Z,15nm,1.3s,mb4.7
D10A **Wagner Farm, O** 79.01 329 P P 21 12 17.3 -0.6
baz=79,SNR=9.4
E09A **Wood Farm, Sta** 79.06 328 ⇓P P 21 12 17.7 -0.6
baz=79,SNR=6.5
L02A **Cove Junction** 79.13 322 ⇑P P 21 12 18.7 0.0
baz=80
B12A **Libby** 79.22 331 ⇑P P 21 12 19.0 0.0
baz=80,SNR=10
K02A **Glendale** 79.45 323 ⇑P P 21 12 20.5 +0.1
baz=80
G06A **Carlson Farm,** 79.47 326 ⇑P P 21 12 20.8 +0.4
baz=80,SNR=6.4
I04A **Tendick Farm,** 79.50 324 ⇑P P 21 12 20.1 -0.5
baz=80
D09A **Jones Farm, Ri** 79.52 328 ⇓P P 21 12 20.3 -0.4
baz=80,SNR=9.6
B11A **Sandpoint** 79.56 330 ⇓P P 21 12 20.2 -0.7
baz=80,SNR=6.3
A12A **Yaak River Ran** 79.58 331 ⇓P P 21 12 20.8 -0.2
baz=80,SNR=8.9
HAWA **Hanford** 79.68 327 eP P 21 12 21.6 0.0
comp=Z,41nm,1.4s,mb5.1
D08A **Wollman Farm,** 79.82 328 ⇑P P 21 12 22.3 0.0
baz=80
G05A **Wamic** 79.84 326 ⇑P P 21 12 23.0 +0.6
baz=80
J02A **Umpqua** 79.88 323 ⇑P P 21 12 22.8 +0.1
baz=80
A11A **Hall Mountain,** 79.93 331 P P 21 12 22.6 -0.3
baz=80,SNR=15
H04A **Detroit Lake** 79.95 325 ⇓P P 21 12 22.3 -0.7
baz=80,SNR=5.1
I03A **Eugene** 80.09 324 ⇑P P 21 12 23.8 0.0
baz=80
F05A **White Salmon** 80.34 326 ⇓P P 21 12 25.1 -0.1
baz=81
B09A **Rice** 80.39 329 P P 21 12 24.8 -0.5
baz=81,SNR=9.0
MORF **Marmelete** 80.39 45 eP P 21 12 24.8 -0.8
comp=Z,99nm,2.0s,mb5.3
D07A **Quincy** 80.44 328 ⇓P P 21 12 25.8 +0.2
baz=81

E06A Yakima 80.52 327 ⇓P P 21 12 26.3 +0.2
baz=81
H03A Soap Creek Ran 80.55 324 ⇓P P 21 12 26.3 0.0
baz=81
FCC Fort Churchill 80.59 347 *eP* P 21 12 24.3 -1.9
comp=Z,15nm,1.0s,mb4.8
FCC Fort Churchill 80.59 347 *eP* P 21 12 24.3 -1.9
FCC pmax pmax
comp=Z,15nm,1.0s,mb4.8
C07A Waterville 80.82 328 P P 21 12 27.6 -0.1
baz=81,SNR=19
PBDV Barranco-do-Ve 80.84 45 *eP* P 21 12 28.9 +0.9
F04A Amboy 80.88 326 ⇓P P 21 12 27.6 -0.4
baz=81,SNR=6.1
D06A Cle Elum 80.89 327 ⇑P P 21 12 27.9 -0.1
baz=81,SNR=6.6
B08A Colville Reser 80.92 329 P P 21 12 27.5 -0.7
baz=81,SNR=6.3
E05A Randle 80.94 326 ⇑P P 21 12 27.9 -0.5
baz=81
G03A Yamhill 80.95 325 ⇑P P 21 12 28.2 -0.2
baz=81
A09A Danville 80.98 330 P P 21 12 27.9 -0.6
baz=81,SNR=13
PVAQ Vaqueiros 81.07 45 *eP* P 21 12 27.8 -1.4
TSUM Tsumeb 81.08 107 *eP* P 21 12 27.7 -2.1
comp=Z,4.4nm,0.6s,mb4.5
A08A Turner Farm, O 81.30 329 P P 21 12 29.9 -0.3
baz=82,SNR=24
EGRO El Granado 81.30 45 P P 21 12 31.9 +1.5
comp=Z,22nm,1.1s,mb4.9
PBEJ Beja 81.31 45 *eP* P 21 12 29.1 -1.4
comp=Z,27nm,1.6s,mb4.8
B07A Winthrop 81.37 329 ⇓P P 21 12 29.7 -0.9
baz=82,SNR=16
D05A Enumclaw 81.47 327 ⇓P P 21 12 30.2 -0.9
baz=82,SNR=5.7
EVO Evora 81.48 44 *eP* P 21 12 29.1 -2.3
comp=Z,14nm,0.5s,mb4.7
EVO *e*MLR MLR
comp=Z,119nm,22.9s
EVO Evora 81.48 44 *eP* P 21 12 33.5 +2.1
comp=Z,29nm,2.0s,mb4.8
EDM Edmonton 81.76 335 *eP* P 21 12 30.9 -1.6
A07A Ashnola River, 81.90 329 ⇑P P 21 12 33.2 -0.2
baz=82,SNR=21
PBAR Barrancos 81.94 45 *eP* P 21 12 31.9 -1.9
EMIN Mina Concepcio 81.96 45 P P 21 12 35.5 +1.6
comp=Z,35nm,1.2s,mb5.1
ESPR Espera 82.04 46 P P 21 12 35.5 +1.1
comp=Z,22nm,1.7s,mb4.7
B06A Marblemount 82.09 328 ⇑P P 21 12 33.1 -1.2
baz=82,SNR=5.4
EJIF Jimena Fronter 82.09 47 P P 21 12 36.0 +1.4
comp=Z,18nm,1.0s,mb4.8
EJIF Jimena Fronter 82.09 47 P P 21 12 36.0 +1.3
EJIF pmax pmax
comp=Z,18nm,1.0s,mb4.9
B05A Bryant 82.23 328 ⇓P P 21 12 33.9 -1.1
baz=83,SNR=7.8
EBAD Badajoz 82.26 44 P P 21 12 37.8 +2.3
comp=Z,22nm,1.0s,mb5.0
NLWA Neilton Lookou 82.58 326 ⇑P P 21 12 35.9 -1.0
baz=83
EMIJ Mijas 82.63 47 P P 21 12 38.8 +1.4
comp=Z,6.0nm,0.6s,mb4.6
A05A Maple Falls 82.70 328 ⇑P P 21 12 36.7 -0.8
baz=83,SNR=5.8
A04A Legoe Bay, Lum 82.83 328 ⇑P P 21 12 37.6 -0.6
baz=83
PVRL Vila Real 83.17 42 *eP* P 21 12 38.2 -2.0
comp=Z,30nm,1.5s,mb4.9
ELOB Lobios 83.28 41 P P 21 12 42.4 +1.7
comp=Z,22nm,0.8s,mb5.0
ELOJ Sierra Loja 83.36 47 P P 21 12 42.8 +1.6
comp=Z,13nm,0.8s,mb4.8
ELOJ Sierra Loja 83.36 47 P P 21 12 42.8 +1.6
ELOJ pmax pmax
comp=Z,13nm,0.8s,mb4.8
ELUQ Luque 83.49 47 P P 21 12 42.8 +0.9
comp=Z,14nm,0.9s,mb4.8
ELUQ Luque 83.49 47 P P 21 12 42.8 +0.9
ELUQ pmax pmax
comp=Z,14nm,0.9s,mb4.8
ERON Agron 83.53 47 P P 21 12 43.5 +1.4
MVO Moncorvo 83.55 42 *eP* P 21 12 40.4 -1.7
ECOG Cogollos-Vega 83.83 47 P P 21 12 44.8 +1.2
comp=Z,2.2nm,0.3s,mb4.5
ECOG Cogollos-Vega 83.83 47 P P 21 12 44.8 +1.2
ECOG pmax pmax
comp=Z,2.0nm,0.3s,mb4.4
PBRG Braganca 84.08 42 *eP* P 21 12 43.1 -1.7
comp=Z,26nm,1.7s,mb4.8
EQES Quesada 84.43 47 P P 21 12 48.2 +1.6
comp=Z,8.1nm,0.7s,mb4.7
PAB San Pablo 84.44 45 *eP* P 21 12 44.5 -2.2
comp=Z,7.0nm,0.6s,mb4.7
PAB San Pablo 84.44 45 *eP* P 21 12 44.5 -2.2
PAB pmax pmax
comp=Z,7.0nm,0.6s,mb4.7
ENIJ Nijar 84.62 48 P P 21 12 48.5 +0.9
comp=Z,2.1nm,0.6s,mb4.2
ENIJ Nijar 84.62 48 P P 21 12 48.5 +0.9
ENIJ pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
ESDC Sonseca Array 84.76 45 P P 21 12 46.3 -2.0
comp=Z,6.4nm,0.5s,mb4.8
ESDC Sonseca Array 84.76 45 P P 21 12 47.0 -1.3
comp=Z,4.0nm,0.5s,mb4.6,baz=247,slow=5.6,SNR=27
ESDC pP pP 21 13 14.8 +3.0
comp=Z,3.8nm,1.0s,baz=244,slow=5.4,SNR=2.2
ESLA Sonseca Array 84.76 45 *eP* P 21 12 50.8 +2.5
comp=Z,1.5nm,0.8s,mb4.0
BOSA Boshof 84.81 118 P P 21 12 47.1 -1.8
comp=Z,2.5nm,0.7s,mb4.2,baz=261,slow=6.7,SNR=7.0
GUD Guadarrama 85.13 44 P P 21 12 51.7 +1.6
comp=Z,4.6nm,0.4s,mb4.8
GUD Guadarrama 85.13 44 P P 21 12 51.7 +1.6
GUD pmax pmax
comp=Z,5.0nm,0.4s,mb4.8
EVIA Vianos 85.23 46 P P 21 12 51.8 +1.2
comp=Z,11nm,0.8s,mb4.8
EVIA Vianos 85.23 46 P P 21 12 51.8 +1.2
EVIA pmax pmax
comp=Z,11nm,0.8s,mb4.8
EARI Arriondas 85.83 41 P P 21 12 55.8 +2.3
comp=Z,67nm,1.8s,mb5.3
ETOB Tobarra 85.89 47 P P 21 12 54.7 +0.8
comp=Z,110nm,1.8s,mb5.5
MAW Mawson 86.37 164 P P 21 12 54.9 -0.9
comp=Z,6.6nm,0.9s,mb4.6,baz=212,slow=6.0,SNR=6.5
ETOR Torete 86.60 45 P P 21 13 01.6 +4.2
comp=Z,26nm,0.7s,mb5.3
ETOR Torete 86.60 45 P P 21 13 01.6 +4.3
ETOR pmax pmax
comp=Z,26nm,0.7s,mb5.3
ELAN Lanestosa 86.91 42 P P 21 13 03.4 +4.6
comp=Z,31nm,1.0s,mb5.2
SJPF Ste Jean 88.25 43 *eP* P 21 13 05.7 +0.5
comp=Z,15nm,0.6s,mb4.9
SJPF Ste Jean 88.25 43 *eP* P 21 13 05.7 +0.5
comp=Z,7.4nm,0.6s,mb4.9
SJPF Ste Jean 88.25 43 *eP* P 21 13 05.7 +0.5
SJPF pmax pmax
comp=Z,7.0nm,0.6s,mb4.9
ETSF Etsaut 88.58 43 *eP* P 21 13 07.0 +0.2
comp=Z,11nm,0.7s,mb4.7
ETSF Etsaut 88.58 43 *eP* P 21 13 07.0 +0.2
comp=Z,5.6nm,0.7s,mb4.7
ETSF Etsaut 88.58 43 *eP* P 21 13 07.0 +0.2
ETSF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
YKA Yellowknife Ar 89.16 341 P P 21 13 07.7 -1.3
YKA pP pP 21 13 36.9 +4.2
YKA sP sP 21 13 48.3 +6.1
YKA Yellowknife Ar 89.16 341 P P 21 13 07.7 -1.3
comp=Z,47nm,0.7s,mb5.6,baz=133,slow=4.6,SNR=678
YKA pP pP 21 13 36.9 +4.2
comp=Z,17nm,0.8s,baz=135,slow=4.8,SNR=5.1
YKA sP sP 21 13 48.3 +6.1
comp=Z,8.6nm,0.7s,baz=133,slow=4.8,SNR=2.9
EPF Esparros 89.22 43 *eP* P 21 13 10.0 +0.2
comp=Z,7.1nm,0.7s,mb4.5
EPF Esparros 89.22 43 *eP* P 21 13 10.0 +0.2
comp=Z,3.5nm,0.7s,mb4.5
EPF Esparros 89.22 43 *eP* P 21 13 10.0 +0.2
EPF pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
QUIF Quistinic 89.44 38 *eP* P 21 13 10.9 +0.3
comp=Z,103nm,1.6s,mb5.3
QUIF Quistinic 89.44 38 *eP* P 21 13 10.9 +0.3
comp=Z,52nm,1.6s,mb5.3
QUIF Quistinic 89.44 38 *eP* P 21 13 10.9 +0.3
QUIF pmax pmax
comp=Z,52nm,1.6s,mb5.3
ROSF Rostrenen 89.58 38 *eP* P 21 13 12.1 +0.8
SGMF Saint Gilles 89.96 38 *eP* P 21 13 13.2 +0.1
LFF La Frestale 90.36 42 *eP* P 21 13 12.2 -2.9
comp=Z,17nm,0.7s,mb5.0
LFF La Frestale 90.36 42 *eP* P 21 13 12.2 -2.9
comp=Z,8.4nm,0.7s,mb5.0
LFF La Frestale 90.36 42 *eP* P 21 13 12.2 -2.9
LFF pmax pmax
comp=Z,8.0nm,0.7s,mb5.0
MTLF Montolieu 90.59 44 *eP* P 21 13 16.2 +0.1
MFF Saint Martin d 90.59 40 *eP* P 21 13 16.7 +0.6
comp=Z,16nm,0.8s,mb4.9
MFF Saint Martin d 90.59 40 *eP* P 21 13 16.7 +0.6
comp=Z,8.3nm,0.8s,mb4.9
MFF Saint Martin d 90.59 40 *eP* P 21 13 16.7 +0.6
MFF pmax pmax
comp=Z,8.0nm,0.8s,mb4.9
GRR Gorron 91.01 38 *eP* P 21 13 18.4 +0.4
comp=Z,10nm,0.7s,mb4.8
GRR Gorron 91.01 38 *eP* P 21 13 18.4 +0.4
comp=Z,5.2nm,0.7s,mb4.8
GRR Gorron 91.01 38 *eP* P 21 13 18.4 +0.4
GRR pmax pmax
comp=Z,5.0nm,0.7s,mb4.8
RJF Les Rejaudoux 91.02 42 *eP* P 21 13 18.3 +0.2
RJF *e*MLR MLR
comp=Z,78nm,17.0s
RJF Les Rejaudoux 91.02 42 *eP* P 21 13 18.3 +0.2
RJF MLR MLR
comp=Z,80nm,17.0s
CAF Calviac 91.20 42 *eP* P 21 13 17.8 -1.1
comp=Z,5.9nm,0.6s,mb4.6
CAF Calviac 91.20 42 *eP* P 21 13 17.8 -1.1
comp=Z,3.0nm,0.6s,mb4.6
CAF Calviac 91.20 42 *eP* P 21 13 17.8 -1.1
CAF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
FLN La Foliniere 91.41 38 *eP* P 21 13 20.3 +0.5
comp=Z,46nm,1.4s,mb5.1
FLN *e*MLR MLR
comp=Z,64nm,18.5s
FLN La Foliniere 91.41 38 *eP* P 21 13 20.3 +0.5
comp=Z,23nm,1.4s,mb5.1
FLN LR LR
comp=Z,60nm,18.5s
FLN La Foliniere 91.41 38 *eP* P 21 13 20.3 +0.5
FLN pmax pmax
comp=Z,23nm,1.4s,mb5.1
FLN MLR MLR
comp=Z,60nm,18.5s
LDF La Druitiere 91.54 38 *eP* P 21 13 20.9 +0.5
comp=Z,11nm,0.9s,mb4.8
LDF La Druitiere 91.54 38 *eP* P 21 13 20.9 +0.5
comp=Z,5.5nm,0.9s,mb4.8
LDF La Druitiere 91.54 38 *eP* P 21 13 20.9 +0.5
LDF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
TCF Toulx Ste Croi 91.89 41 *eP* P 21 13 22.8 +0.7
comp=Z,12nm,0.8s,mb4.9
TCF Toulx Ste Croi 91.89 41 *eP* P 21 13 22.8 +0.7
comp=Z,5.8nm,0.8s,mb4.9
TCF Toulx Ste Croi 91.89 41 *eP* P 21 13 22.8 +0.7
TCF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
DLBC Dease Lake 92.22 333 *eP* P 21 13 21.9 -1.4
DLBC Dease Lake 92.22 333 P P 21 13 22.7 -0.6
baz=134,slow=2.5
BGF Bois d'Agland 92.41 41 *eP* P 21 13 25.1 +0.6
comp=Z,15nm,0.7s,mb5.0
BGF Bois d'Agland 92.41 41 *eP* P 21 13 25.1 +0.6
comp=Z,7.3nm,0.7s,mb5.0
BGF Bois d'Agland 92.41 41 *eP* P 21 13 25.1 +0.6
BGF pmax pmax
comp=Z,7.0nm,0.7s,mb5.0
KEST Kesra 92.50 53 P P 21 13 24.2 -0.9
comp=Z,1.2nm,0.9s,mb4.1,baz=342,slow=3.2,SNR=3.1
HYF Humbligny 92.59 40 *eP* P 21 13 25.9 +0.6
AVF Avril sur Loir 92.83 41 *eP* P 21 13 26.7 +0.3
comp=Z,12nm,0.9s,mb5.0
AVF Avril sur Loir 92.83 41 *eP* P 21 13 26.7 +0.3
comp=Z,6.3nm,0.9s,mb5.0
AVF Avril sur Loir 92.83 41 *eP* P 21 13 26.7 +0.3
AVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.9
VIVF Saint-Julien-l 92.84 43 *eP* P 21 13 27.2 +0.7
comp=Z,4.6nm,0.8s,mb4.6
VIVF Saint-Julien-l 92.84 43 *eP* P 21 13 27.2 +0.7
comp=Z,2.3nm,0.8s,mb4.6
VIVF Saint-Julien-l 92.84 43 *eP* P 21 13 27.2 +0.7
VIVF pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
SSF Saint Saulge 93.04 41 *eP* P 21 13 28.1 +0.7
comp=Z,10nm,0.7s,mb5.0
SSF Saint Saulge 93.04 41 *eP* P 21 13 28.1 +0.7
comp=Z,5.1nm,0.7s,mb5.0
SSF Saint Saulge 93.04 41 *eP* P 21 13 28.1 +0.7
SSF pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
SMRF Simiane la Rot 93.06 44 *eP* P 21 13 27.9 +0.3
SMF Signal de Mont 93.07 41 *eP* P 21 13 27.9 +0.4
comp=Z,22nm,0.9s,mb5.2
SMF Signal de Mont 93.07 41 *eP* P 21 13 27.9 +0.4
comp=Z,11nm,0.9s,mb5.2
SMF Signal de Mont 93.07 41 *eP* P 21 13 27.9 +0.4
SMF pmax pmax
comp=Z,11nm,0.9s,mb5.2
LOR Lormes 93.34 41 *eP* P 21 13 29.4 +0.6
comp=Z,7.3nm,0.6s,mb4.9
LOR *e*MLR MLR
comp=Z,54nm,17.5s
LOR Lormes 93.34 41 *eP* P 21 13 29.4 +0.6
comp=Z,3.7nm,0.6s,mb4.9
LOR LR LR
comp=Z,50nm,17.5s
LOR Lormes 93.34 41 *eP* P 21 13 29.4 +0.6
LOR pmax pmax
comp=Z,4.0nm,0.6s,mb4.9
LOR MLR MLR
comp=Z,50nm,17.5s
LMR La Mourre 93.42 45 *eP* P 21 13 28.8 -0.5
comp=Z,8.0nm,0.8s,mb4.8
LMR La Mourre 93.42 45 *eP* P 21 13 28.8 -0.5
comp=Z,4.0nm,0.8s,mb4.8
LMR La Mourre 93.42 45 *eP* P 21 13 28.8 -0.5
LMR pmax pmax
comp=Z,4.0nm,0.8s,mb4.8
FRF La Foret Royal 93.61 45 *eP* P 21 13 29.7 -0.4
ORIF Oris-en-Rattie 93.65 44 *eP* P 21 13 30.7 +0.5
comp=Z,6.4nm,0.6s,mb4.8
ORIF *e*MLR MLR
comp=Z,74nm,22.8s
ORIF Oris-en-Rattie 93.65 44 *eP* P 21 13 30.7 +0.5
comp=Z,3.2nm,0.6s,mb4.8
ORIF Oris-en-Rattie 93.65 44 *eP* P 21 13 30.7 +0.5
ORIF pmax pmax
comp=Z,3.0nm,0.6s,mb4.8
MBDF Montbardon 94.15 44 *eP* P 21 13 33.0 +0.4
SBF Sospel 94.25 45 *eP* P 21 13 32.3 -0.8
LPL La Plagne 94.44 43 *eP* P 21 13 34.3 +0.4
comp=Z,4.4nm,0.8s,mb4.6
LPL La Plagne 94.44 43 *eP* P 21 13 34.3 +0.4
comp=Z,2.2nm,0.8s,mb4.5
LPL La Plagne 94.44 43 *eP* P 21 13 34.3 +0.4
LPL pmax pmax
comp=Z,2.0nm,0.8s,mb4.5
LPG La Plagne 94.44 43 *eP* P 21 13 34.7 +0.8
CABF La Chapelle 94.46 42 *eP* P 21 13 34.6 +0.7
comp=Z,4.6nm,0.6s,mb4.7
CABF La Chapelle 94.46 42 *eP* P 21 13 34.6 +0.7
comp=Z,2.3nm,0.6s,mb4.7
CABF La Chapelle 94.46 42 *eP* P 21 13 34.6 +0.7
CABF pmax pmax
comp=Z,2.0nm,0.6s,mb4.6
MEZF Maizieres J'vi 94.59 40 *eP* P 21 13 35.1 +0.6
comp=Z,20nm,0.7s,mb5.3
MEZF Maizieres J'vi 94.59 40 *eP* P 21 13 35.1 +0.6
comp=Z,20nm,0.7s,mb5.7
BAIF Baives 94.73 38 *eP* P 21 13 35.6 +0.5
comp=Z,8.0nm,1.0s,mb4.8
BAIF Baives 94.73 38 *eP* P 21 13 35.6 +0.5
comp=Z,4.0nm,1.0s,mb4.8
BAIF Baives 94.73 38 *eP* P 21 13 35.6 +0.5
BAIF pmax pmax
comp=Z,4.0nm,1.0s,mb4.8
GIVF Givet 95.11 38 *eP* P 21 13 36.5 -0.3
HAU Haudompre 95.18 41 *eP* P 21 13 37.6 +0.4
comp=Z,9.4nm,0.7s,mb5.0
HAU *e*MLR MLR
comp=Z,52nm,20.0s
HAU Haudompre 95.18 41 *eP* P 21 13 37.6 +0.4
comp=Z,4.7nm,0.7s,mb5.0
HAU LR LR
comp=Z,50nm,20.0s
HAU Haudompre 95.18 41 *eP* P 21 13 37.6 +0.4
HAU pmax pmax
comp=Z,5.0nm,0.7s,mb5.0
HAU MLR MLR
comp=Z,50nm,20.0s
HINF Hinteralfeld 95.42 41 *eP* P 21 13 38.6 +0.3
CDF Champ du Feu 95.91 41 *eP* P 21 13 41.0 +0.5
RPZ Rata Peaks 96.22 219 LR LR 21 45 26.5
comp=Z,198nm,19.9s,baz=302,slow=28
INK Inuvik 98.91 340 P P 21 13 51.8 -1.8
comp=Z,2.5nm,0.8s,mb4.8,baz=93,slow=4.1,SNR=10
INK pP pP 21 14 21.1 +3.7
comp=Z,1.7nm,0.9s,baz=127,slow=8.9,SNR=3.2
CLL Collm 100.39 39 *eP* Pdif 21 14 01.0 +0.3
CLL pmax pmax
comp=Z,7.0nm,1.3s
CLL Collm 100.39 39 *e*Pdif Pdif 21 14 01.0 +0.3
comp=Z,7.0nm,1.3s
CLL *e*PP PP 21 18 15.0 +6.7
FINES FINESS Array B 109.55 31 PKKPbc PKKPbc 21 29 48.2 -2.4
comp=Z,0.8nm,0.7s,baz=97,slow=6.3,SNR=6.1
ARCES ARCESS Array B 109.83 22 PKKPbc PKKPbc 21 29 47.3 -2.6
comp=Z,4.8nm,1.0s,baz=79,slow=2.6,SNR=7.6
AKASG Malin Array Be 110.27 42 PKKPbc PKKPbc 21 29 46.1 -1.9
comp=Z,0.1nm,0.3s,baz=74,slow=3.5,SNR=5.0
OBN Obninsk 114.90 38 *e*PKIKP PKiKP 21 18 50.3 -3.7
OBN pmax pmax
comp=Z,4.0nm,1.3s
ANN Anapa 115.33 49 *i* PKIKP PKPdf 21 18 55.4 +0.3
ANN pmax pmax
comp=Z,79nm,1.3s
BILL Bilibino 120.50 339 *e*PKIKP PKPdf 21 19 02.3 -2.1
BILL *e* 21 20 28.9
BILL pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 120.88 211 PKP PKPdf 21 19 05.4 -0.9
comp=Z,2.0nm,0.5s,baz=114,slow=7.5,SNR=8.9
TIXI Tiksi 126.77 353 *i* PKIKP PKPdf 21 19 14.2 -2.1
ARU Arti 126.77 33 *e*PKPdf PKPdf 21 19 15.5 -1.2
ARU Arti 126.77 33 *e*PKIKP PKPdf 21 19 15.5 -1.2
CTA Charters Tower 127.36 224 PKP PKPdf 21 19 18.6 -0.4
comp=Z,4.9nm,0.8s,baz=124,slow=3.6,SNR=3.9
NWAO Narrogin (SRO) 127.47 187 PKP PKPdf 21 19 18.1 -0.9
comp=Z,23nm,1.1s,baz=190,slow=2.5,SNR=3.0
SEY Seymchan 128.09 337 *i* PKIKP PKPdf 21 19 18.2 -0.8
ASAR Alice Springs 131.43 209 PKHKP 21 19 16.1
ASAR 21 19 25.6
ASAR 21 19 55.1
ASAR Alice Springs 131.43 209 PKhKP 21 19 16.1
comp=Z,0.5nm,0.5s,baz=123,slow=2.2,SNR=5.1
ASAR PKP PKPdf 21 19 25.6 -1.1
comp=Z,3.9nm,0.5s,baz=136,slow=1.7,SNR=34
ASAR pPKP pPKPdf 21 19 55.0 +3.6
comp=Z,2.8nm,0.9s,baz=147,slow=1.9,SNR=4.5
ASAR SKPbc SKPbc 21 22 40.6 -3.4
comp=Z,2.7nm,1.0s,baz=156,slow=4.4,SNR=6.3
WB2 Warramunga Arr 134.39 212 *e*PKP 21 19 18.9
WB2 *e*PKP PKPdf 21 19 31.4 -1.0
WRA Warramunga Arr 134.40 212 PKHKP 21 19 14.5
WRA 21 19 31.5
WRA 21 20 01.1
WRA Warramunga Arr 134.40 212 PKhKP 21 19 14.5
comp=Z,0.4nm,0.4s,baz=173,slow=1.2,SNR=12
WRA PKP PKPdf 21 19 31.5 -0.9
comp=Z,5.4nm,0.5s,baz=155,slow=1.7,SNR=44
WRA pPKP pPKPdf 21 20 01.1 +4.0
comp=Z,2.0nm,0.6s,baz=165,slow=1.5,SNR=2.9
WRA SKPbc SKPbc 21 22 51.8 -2.5
comp=Z,1.5nm,0.9s,baz=147,slow=2.5,SNR=4.6
NVS Novosibirsk 139.07 24 *e*PKIKP PKPdf 21 19 38.3 -1.6
NVS pmax pmax
comp=Z,10.0nm,1.1s
FITZ Fitzroy Crossi 139.80 203 PKhKP 21 19 32.6
comp=Z,2.1nm,0.6s,baz=207,slow=1.5,SNR=6.6
FITZ PKP PKPdf 21 19 41.5 -0.9
comp=Z,4.3nm,0.5s,baz=138,slow=4.6,SNR=10
KURK Kurchatov 139.91 31 *i* PKIKP PKPdf 21 19 40.7 -0.8
ZALV Zalesovo Beam 140.35 24 PKP PKPdf 21 19 40.2 -2.0
ZALV SKPbc SKPbc 21 23 06.6 -4.0
ZALV Zalesovo Beam 140.35 24 PKP PKPdf 21 19 40.2 -2.0
comp=Z,5.1nm,0.5s,baz=303,slow=2.6,SNR=18
ZALV SKPbc SKPbc 21 23 06.6 -4.0
comp=Z,3.3nm,0.8s,baz=299,slow=3.1,SNR=6.6
ZAL Zalesovo 140.35 24 PKIKP PKPdf 21 19 40.2 -2.0
KAKA Kakadu 141.41 216 *e*P PKPdf 21 19 36.5 -8.9
comp=Z,1.9nm,0.3s
BOD Bodaibo 141.66 357 *e*PKHKP 21 19 35.7
BOD pmax pmax
comp=Z,5.0nm,0.8s
UCH Uchtor 142.06 45 *e*PKPdf PKPdf 21 19 44.8 -0.9
MKAR Makanchi Array 144.28 34 PKP PKPdf 21 19 45.5 -3.9
comp=Z,0.9nm,0.4s,baz=338,slow=2.8,SNR=23
MKAR SKPbc SKPbc 21 23 16.9 -3.7
comp=Z,0.7nm,0.8s,baz=302,slow=2.3,SNR=3.9
HABR Khabarovsk 145.00 331 *e*PKIKP PKPdf 21 19 48.8 -1.8
KLR Kul'dur 145.82 335 *e*PKIKP PKPdf 21 19 48.4 -3.6
KLR pmax pmax
comp=E,20nm,1.4s
KLR pmax pmax
comp=Z,40nm,1.4s
THN Thein Dam 146.28 61 *ex* x 21 19 51.1
IRK Irkutsk 146.96 7 ⇓ *i* PKP2 PKPab 21 19 54.2 -3.3
IRK pmax pmax
comp=Z,53nm,1.3s
MOY Mondy 147.03 11 *e*PKP2 PKPab 21 19 55.6 -2.2
MOY pmax pmax
comp=Z,22nm,1.2s
TLY Talaya 147.44 8 *e*PKPdf PKPdf 21 19 54.4 -0.3
TLY *e*PKPbc PKPbc 21 19 55.9 -1.4
TLY Talaya 147.44 8 *d* *i* PKP2 PKPab 21 19 55.7 -3.7
BATI Kupang 147.78 205 PKPbc PKPbc 21 19 57.0 -2.4
comp=Z,73nm,1.2s,baz=199,slow=2.8,SNR=5.4
NDI New Delhi 148.30 67 *eP* PKPdf 21 19 57.0 +0.2
ZAK Zakamensk 148.65 9 *e*PKIKP PKPdf 21 19 55.5 -1.2
ZAK *e* 21 20 28.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s
ZAK pmax pmax
comp=Z,8.0nm,1.2s
ZAK pmax pmax
comp=Z,5.0nm,1.2s
DDI Dehra Dun 148.71 63 *ex* x 21 19 58.0
WMQ Urumqi 149.10 33 PKP PKPdf 21 19 56.8 -0.9
WMQ PKP2 PKPab 21 20 06.8 +0.4
WMQ PP PP 21 23 34.8 +1.4
WMQ PP PP
comp=Z,82nm,5.0s
WMQ LR LR
comp=E,111nm,37.2s
WMQ LR LR
comp=Z,132nm,30.1s
HIA Hailar 149.41 348 *e*PKPbc PKPbc 21 20 01.1 -1.4
HYB Hyderabad 149.58 89 *eP* PKPbc 21 20 03.0 -0.8
HYB Hyderabad 149.58 89 *i* PKP PKPbc 21 20 03.0 -0.8
HYB *e*PKPAB PKPab 21 20 08.5 -0.6
HYB *e* 21 20 33.0
HYB *e* 21 20 53.0
MDJ Mudanjiang 150.37 332 PKP PKPdf 21 20 03.0 +3.3
MDJ LR LR
comp=Z,130nm,38.8s
MJAR Matsushiro Arr 150.44 311 PKPbc PKPbc 21 20 04.6 -0.8
MJAR pPKPbc pPKPbc 21 20 34.0 +4.0
MJAR Matsushiro Arr 150.44 311 PKPbc PKPbc 21 20 04.6 -0.8
comp=Z,20nm,0.7s,baz=87,slow=1.5,SNR=71
MJAR pPKPbc pPKPbc 21 20 34.0 +4.0
comp=Z,9.6nm,0.7s,baz=90,slow=1.5,SNR=6.0
MAJO Matsushiro 150.44 311 *e*PKPbc PKPbc 21 20 04.3 -1.1
SONM Songino Array 151.54 6 PKP PKPdf 21 20 00.8 -0.6
comp=Z,3.5nm,0.8s,baz=322,slow=0.9,SNR=25
SONM PKPbc PKPbc 21 20 06.7 -0.9
comp=Z,34nm,0.9s,baz=334,slow=1.4,SNR=204

SONM				pPKPbc	pPKPbc	21 20 36.4	+4.1
	comp=Z,7.4nm,0.8s,baz=290,slow=1.4,SNR=2.8						
ULN	**Ulaanbaatar**	**151.57**	**5**	*e*PKPdf	PKPdf	21 20 00.3	-1.1
ULN				*e*PKPbc	PKPbc	21 20 06.6	-1.1
CN2	**Changchun**	**152.76**	**336**	*e*PKP	PKPdf	21 20 04.0	+0.7
KSRS	**Korea Array**	**156.57**	**323**	PKP	PKPdf	21 20 05.4	-3.4
	comp=Z,2.2nm,1.1s,baz=202,slow=2.7,SNR=4.6						
KSRS				PKPab	PKPab	21 20 37.3	-0.7
	comp=Z,6.2nm,0.9s,baz=47,slow=4.7,SNR=9.1						
GTA	**Gaotai**	**158.10**	**23**	PKP	PKPdf	21 20 10.3	-0.3
GTA				PP	PP	21 24 33.0	+9.3
GTA				PP	PP		
	comp=Z,117nm,5.3s						
GTA				LR	LR		
	comp=N,109nm,13.7s						
GTA				LR	LR		
	comp=E,110nm,16.0s						
GTA				LR	LR		
	comp=Z,84nm,15.6s						
HHC	**Hu-ho-hao-te**	**158.71**	**358**	*e*PKP	PKPdf	21 20 08.5	-2.8
HHC				PKP2	PKPab	21 20 45.3	-1.7
HHC				PKS		21 23 41.3	
HHC				SKS	SKSdf	21 27 08.3	-0.7
HHC				SKKS	SKKSac	21 31 08.8	+0.4
HHC				SS	SS	21 44 18.5	-2.8
HHC				PP	PP		
	comp=Z,71nm,6.5s						
HHC				LR	LR		
	comp=N,197nm,15.5s						
HHC				LR	LR		
	comp=E,144nm,19.0s						
HHC				LR	LR		
	comp=Z,223nm,16.6s						
LZH	**Lanzhou**	**162.45**	**18**	*e*PKP	PKPdf	21 20 14.5	-1.0
LZH				*e*PP	PP	21 24 49.3	+2.2
LZH				SKS	SKSdf	21 27 12.5	0.0
LZH				SKKS	SKKSac	21 31 30.3	+2.3
LZH				*e*SS	SS	21 45 02.8	+1.9
LZH				PP	PP		
	comp=Z,153nm,9.5s						
LZH				LR	LR		
	comp=E,218nm,18.3s						
LZH				LR	LR		
	comp=Z,334nm,20.2s						
NJ2	**Nanjing**	**165.46**	**331**	*e*PKP	PKPdf	21 20 19.3	+0.9
NJ2				PKP2	PKPab	21 21 22.5	+5.6
NJ2				PKS		21 23 49.5	
NJ2				PP	PP		
	comp=Z,190nm,6.5s						
NJ2				LR	LR		
	comp=N,170nm,27.8s						
NJ2				LR	LR		
	comp=E,110nm,25.3s						
NJ2				LR	LR		
	comp=Z,160nm,20.6s						
CD2	**Chengdu**	**167.09**	**27**	*e*PKP	PKPdf	21 20 18.5	-1.2
CD2				PKP2	PKPab	21 21 23.8	-0.3
CD2				PP	PP	21 25 12.5	+1.0
CD2				SKKS	SKKSac	21 31 54.5	+2.9
CD2				SS	SS	21 45 50.5	+1.7
CD2				PP	PP		
	comp=Z,150nm,10.8s						
CD2				LR	LR		
	comp=N,180nm,24.2s						
CD2				LR	LR		
	comp=E,130nm,22.6s						
CD2				LR	LR		
	comp=Z,140nm,18.4s						
KMI	**Kunming**	**170.85**	**51**	PKP	PKPdf	21 20 16.0	-6.3
KMI				SS	SS	21 46 26.8	-1.2
KMI				LR	LR		
	comp=Z,292nm,29.6s						
GYA	**Guiyang**	**172.20**	**27**	PKP	PKPdf	21 20 21.5	-1.4
GYA				PKP2	PKPab	21 21 46.3	-0.5
GYA				PKS		21 23 52.8	
GYA				PP	PP	21 25 38.0	+0.8
GYA				SKKS	SKKSac	21 32 19.0	+2.3
GYA				SS	SS	21 46 40.0	+0.5
GYA				PP	PP		
	comp=Z,140nm,8.4s						
GYA				LR	LR		
	comp=N,440nm,22.4s						
GYA				LR	LR		
	comp=E,380nm,21.8s						
GYA				LR	LR		
	comp=Z,410nm,22.8s						
QIZ	**Qiongzhong**	**179.16**	**124**	PKP	PKPdf	21 20 20.5	-4.3
QIZ				PP	PP		
	comp=Z,17nm,19.2s						
QIZ				LR	LR		
	comp=N,141nm,22.1s						
QIZ				LR	LR		
	comp=Z,190nm,19.3s						

IDC 26 21:00:54.8±3.8, 2040S×16900E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/13, mbtmp3.6/4, ML2.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.8/15, Error ellipse: s-maj=123.3km s-min=33.9km az=135.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.91**	**235**	*e*P	Pn	21 01 43.4	+1.0
DZM				*e*S	Sn	21 02 15.4	-2.6
DZM	**Mont Dzumac**	**2.91**	**235**	Pn	Pn	21 01 42.7	+0.3
	1.1nm,0.3s,baz=95,slow=16,SNR=8.9						
DZM				Sn	Sn	21 02 17.9	-0.1
	9.5nm,0.3s,baz=134,slow=24,SNR=17						
HNR	**Honiara**	**13.97**	**320**	LR	LR	21 08 39.6	
	comp=Z,72nm,19.7s,baz=1.5,slow=33						
STKA	**Stephens Creek**	**27.05**	**239**	P	P	21 06 39.5	+0.6
	2.6nm,1.1s,baz=50,slow=7.9,SNR=3.0						
WRA	**Warramunga Arr**	**32.51**	**265**	P	P	21 07 27.1	-0.4
	0.1nm,0.5s,baz=99,slow=8.5,SNR=4.4						
ASAR	**Alice Springs**	**32.65**	**258**	P	P	21 07 28.9	+0.2
	0.5nm,0.6s,baz=84,slow=8.9,SNR=9.0						
GERES	**GERESS Array B**	**145.40**	**331**	PKPbc	PKPbc	21 20 33.7	-0.8
	1.0nm,0.6s,baz=38,slow=2.4,SNR=8.0						

IDC 26 21:07:31.8±2.2, 076N×12762E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/15, mbtmp3.3/3, Error ellipse: s-maj=171.7km s-min=26.8km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.22**	**160**	*e*P	Pn	21 10 54.2	-0.3
	2.0nm,0.4s						
WRA	**Warramunga Arr**	**21.61**	**163**	P	P	21 12 22.1	-1.4
	0.9nm,0.3s,baz=341,slow=12,SNR=31						
WB2	**Warramunga Arr**	**21.61**	**163**	*e*P	P	21 12 21.7	-1.9
ASAR	**Alice Springs**	**25.04**	**166**	P	P	21 12 59.0	+1.2
	0.4nm,0.3s,baz=344,slow=12,SNR=8.8						
MKAR	**Makanchi Array**	**60.49**	**326**	P	P	21 17 43.5	0.0
	0.1nm,0.3s,baz=120,slow=7.9,SNR=4.4						

*ISCJB **26** 21:15:35.3±0.5, 6188S±007×155.0E±03, h10km, mb4.5/14, MS4.6/16, Error ellipse: s-maj=22.5km s-min=8.6km az=167.1*

*IDC **26** 21:15:35.7±0.5, 6191S×15509E, h0km, mb4.6/13, mb1 4.7/13, mb1mx4.6/15, mbtmp4.6/13, MS4.6/17, Ms1 4.6/17, ms1mx4.5/22, Error ellipse: s-maj=25.0km s-min=13.4km az=81.0*

*GCMT **26** 21:15:35.7±0.2, 6192S×15473E, h12km, MW5.3/77, Moment Tensor Solution. s61,c90; s77,c139; Duration: 1$\hat{s}$1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.13±.02; $M_{\theta\theta}$0.89±.02; $M_{\phi\phi}$-0.76±.02; $M_{r\theta}$-0.15±.05; $M_{\theta\phi}$-0.72±.02; $M_{r\phi}$0.03±.06; Best double couple: $M_0$1.10200×10^{17} NP1:ϕ336.00000°, δ84.00000°, λ3.00000°. NP2: ϕ245.00000°, δ87.00000°, λ174.00000°. Principal axes: T 1.1740, Plg7.0000°, Azm200.0000°; N -0.1440, Plg83.0000°, Azm37.0000°; P -1.0300, Plg2.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **26** 21:15:35.7±7.7, 6191S×155.17E, h2km±46km, mb4.7/8 Error ellipse: s-maj=17.4km s-min=8.6km az=78.0*

ISC 26 21:15:37.1±0.5, 6189S±007×1551E±03, h10km, (h10km±3.3km: pP-P), n87, σ0$\hat{s}$63/32, mb4.5/14, MS4.6/16, 7C-9D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.86**	**175**	Pn	Pn	**21 19 13.2**	**-6.8**
	5.4nm,0.3s,baz=346,slow=13,SNR=141						
VNDA				LR	LR	21 24 51.8	
	comp=Z,5μm,19.2s,baz=358,slow=35						
SBA	**Scott Base**	**16.47**	**171**	*e*P	Pn	**21 19 21.8**	**-5.9**
	43nm,0.8s						
RPZ	**Rata Peaks**	**20.49**	**35**	LR	LR	21 26 56.5	
	comp=Z,3μm,18.5s,MS4.8,baz=182,slow=33						
URZ	**Urewera**	**27.27**	**40**	LR	LR	21 30 56.1	
	comp=Z,807nm,19.1s,MS4.3,baz=212,slow=34						
QSPA	**South Pole Qui**	**28.20**	**180**	*e*P	P	**21 21 29.1**	**-0.1**
QSPA				LR	LR	21 32 45.8	
QSPA	**South Pole Qui**	**28.20**	**180**	P	P	**21 21 29.6**	**+0.4**
	16nm,0.8s,mb4.7,baz=1.7,slow=3.5,SNR=43						
QSPA				LR	LR	21 32 45.8	
	comp=Z,1μm,19.7s,MS4.5,baz=15,slow=37						
STKA	**Stephens Creek**	**31.28**	**337**	*e*P	P	**21 21 57.6**	**+0.8**
	5.9nm,0.9s,mb4.4						
STKA	**Stephens Creek**	**31.28**	**337**	P	P	**21 21 57.0**	**+0.1**
	7.1nm,0.9s,mb4.5,baz=159,slow=11,SNR=7.2						
STKA				LR	LR	21 33 15.6	
	comp=Z,598nm,19.8s,MS4.3,baz=163,slow=34						
MAW	**Mawson**	**36.26**	**220**	*e*P	P	**21 22 40.5**	**+0.8**
	9.4nm,1.0s,mb4.7						
MAW	**Mawson**	**36.26**	**220**	P	P	**21 22 40.0**	**+0.3**
	11nm,1.0s,mb4.8,baz=113,slow=12,SNR=11						
MAW				LR	LR	21 37 33.3	
	comp=Z,3μm,18.8s,MS5.0,baz=117,slow=36						
NWAO	**Narrogin (SRO)**	**37.73**	**302**	LR	LR	21 34 27.6	
	comp=Z,2μm,19.4s,MS4.8,baz=140,slow=30						
DZM	**Mont Dzumac**	**40.55**	**16**	P	P	**21 23 16.3**	**+0.1**
	20nm,1.0s,mb4.7,baz=169,slow=10,SNR=7.2						
DZM				LR	LR	21 36 13.9	
	comp=Z,1μm,18.0s,MS4.8,baz=26,slow=30						
ASAR	**Alice Springs**	**40.85**	**330**	P	P	**21 23 19.0**	**+0.3**
	9.2nm,1.0s,mb4.4,baz=165,slow=8.7,SNR=23						
ASAR				PcP	PcP	21 25 22.8	+3.4
	1.7nm,0.9s,baz=149,slow=4.2,SNR=4.9						
CTA	**Charters Tower**	**42.22**	**348**	*e*P	P	**21 23 29.4**	**-0.6**
	15nm,1.5s,mb4.4						
CTA	**Charters Tower**	**42.22**	**348**	P	P	**21 23 30.8**	**+0.8**
	7.3nm,0.9s,mb4.3,baz=202,slow=11,SNR=5.2						
CTAO	**Charters Tower**	**42.22**	**348**	*e*P	P	**21 23 32.1**	**+2.2**
	32nm,1.4s,mb4.8						
WB2	**Warramunga Arr**	**44.33**	**332**	*e*P	P	**21 23 46.5**	**-0.5**
WRA	**Warramunga Arr**	**44.34**	**331**	P	P	**21 23 46.7**	**-0.4**
	7.1nm,1.0s,mb4.4,baz=161,slow=7.1,SNR=20						
WRA				PcP	PcP	21 25 30.5	-0.5
	2.1nm,1.0s,baz=174,slow=3.0,SNR=3.6						
WRA				LR	LR	21 39 50.6	
	comp=Z,655nm,20.6s,MS4.5,baz=135,slow=33						
SNAA	**Sanae**	**45.85**	**190**	*e*	P	**21 23 58.3**	**-0.3**
SNAA				*e*	pP	21 23 59.9	-1.8
SNAA				*e*	pP	21 24 02.6	+0.9
SNAA				*e*		21 24 05.3	
SNAA				*e*		21 24 16.8	
SNAA	**Sanae**	**45.85**	**190**	P	P	**21 23 58.1**	**-0.5**
	4.0nm,0.9s,mb4.4,baz=146,slow=8.6,SNR=12						
VNA3	**Neumayer Olymp**	**46.73**	**187**	*e*	P	**21 24 05.2**	**-0.3**
VNA3				*e*	pP	21 24 06.9	-1.7
VNA3				*e*	pP	21 24 09.8	+1.2
VNA3				*e*		21 24 12.7	
VNA3				*e*		21 24 19.8	
VNA3				*e*		21 24 23.8	
VNA2	**Neumayer--Watz**	**46.91**	**188**	*e*	P	**21 24 06.5**	**-0.3**
	baz=159,slow=6.3						
VNA2				*e*	pP	21 24 08.4	-1.6
VNA2				*e*	pP	21 24 11.3	+1.3
VNA2				*e*		21 24 14.2	
VNA2				*e*		21 24 20.2	
VNA2				*e*		21 24 25.9	
VNA1	**Neumayer--Stat**	**47.23**	**187**	*e*	P	**21 24 10.1**	**+0.7**
VNA1				*e*	pP	21 24 12.5	0.0
VNA1				*e*		21 24 15.4	
VNA1				*e*		21 24 18.1	
VNA1				*e*		21 24 24.6	
VNA1				*e*		21 24 30.8	
MBWA	**Marble Bar**	**47.43**	**313**	P	P	**21 24 11.3**	**-0.2**
FITZ	**Fitzroy Crossi**	**48.38**	**321**	*e*P	P	**21 24 19.2**	**+0.4**
	13nm,1.0s,mb4.9						
FITZ	**Fitzroy Crossi**	**48.38**	**321**	P	P	**21 24 19.1**	**+0.2**
	7.2nm,1.1s,mb4.6,baz=178,slow=12,SNR=3.8						
FITZ				LR	LR	21 43 30.5	
	comp=Z,668nm,18.5s,MS4.7,baz=342,slow=35						
KAKA	**Kakadu**	**51.75**	**331**	*e*P	P	**21 24 43.9**	**-0.6**
	23nm,1.1s,mb5.0						
TBI	**Tubuai**	**53.55**	**70**	*e*LR	LR	21 40 14.8	
	338nm,30.8s						
TBI	**Tubuai**	**53.55**	**70**	*e*T		22 22 28.3	
	54nm,0.4s						
BATI	**Kupang**	**56.44**	**322**	LR	LR	21 47 18.3	
	comp=Z,579nm,20.2s,MS4.7,baz=203,slow=34						
TVO	**Taravao**	**58.53**	**67**	*e*T		22 28 37.6	
	26nm,0.3s						
PPT	**Papeete**	**58.58**	**67**	*e*LR	LR	21 42 45.9	
	609nm,25.8s						
PPT	**Papeete**	**58.58**	**67**	LR	LR	21 45 40.6	
	comp=Z,296nm,20.2s,MS4.4,baz=254,slow=31						
RKT	**Rikitea**	**60.42**	**84**	*e*T		22 31 04.8	
	20nm,0.3s						
VAH	**Vaihoa**	**61.49**	**68**	*e*T		22 32 14.7	
	223nm,0.3s						
PLCA	**Paso Flores**	**71.28**	**145**	*e*P	P	**21 26 56.3**	**+0.1**
	16nm,1.4s,mb4.8						
PLCA	**Paso Flores**	**71.28**	**145**	P	P	**21 26 56.1**	**-0.1**
	2.5nm,0.7s,mb4.3,baz=207,slow=6.6,SNR=6.2						
TRQA	**Tornquist**	**75.98**	**151**	P	P	**21 27 22.8**	**-1.0**
PSI	**Prapat**	**77.26**	**302**	LR	LR	22 00 18.7	
	comp=Z,244nm,18.2s,MS4.6,baz=139,slow=35						
KULM	**Kulim**	**78.84**	**304**	*e*P	P	**21 27 39.5**	**-0.5**
CFAA	**Coronel Fontan**	**80.48**	**144**	P	P	**21 27 48.1**	**-0.7**
	0.5nm,0.6s,mb3.6,baz=201,slow=3.5,SNR=7.5						
BOSA	**Boshof**	**81.22**	**223**	P	P	**21 27 53.0**	**+0.1**
	8.0nm,0.9s,mb4.6,baz=195,slow=5.2,SNR=7.0						
BOSA				LR	LR	22 00 04.4	
	comp=Z,273nm,18.9s,MS4.6,baz=159,slow=33						
CBIJ	**Chichi jima**	**89.28**	**348**	LR	LR	22 09 02.5	
	comp=Z,142nm,18.6s,MS4.4,baz=117,slow=36						
LPAZ	**La Paz**	**94.93**	**139**	*e*P	P	**21 29 01.1**	**+1.7**
LPAZ	**La Paz**	**94.93**	**139**	P	P	**21 29 00.8**	**+1.4**
	1.2nm,0.5s,mb4.6,baz=214,slow=4.2,SNR=5.4						
JNU	**Nakatsue**	**96.69**	**340**	LR	LR	22 12 31.0	
	comp=Z,172nm,18.9s,MS4.6,baz=14,slow=35						
MJAR	**Matsushiro Arr**	**99.04**	**346**	LR	LR	22 13 00.6	
	comp=Z,90nm,19.6s,MS4.3,baz=240,slow=35						
MKAR	**Makanchi Array**	**122.94**	**309**	PKP	PKPdf	21 34 31.9	-0.3
	0.8nm,0.8s,baz=187,slow=2.0,SNR=7.7						
TORD	**Torodi Ar. Bea**	**127.71**	**213**	PKP	PKPdf	21 34 41.0	-1.4
	0.7nm,0.7s,baz=130,slow=1.3,SNR=4.0						
DIB	**Dawson Inlet,**	**128.13**	**47**	T		23 55 03.3	
	SNR=6.8						
VIB	**Van Inlet**	**128.15**	**47**	T		23 55 10.5	
	SNR=4.9						
PDAR	**Pinedale Array**	**128.92**	**70**	PKP	PKPdf	21 34 45.7	+1.9
	0.9nm,0.9s,baz=188,slow=5.9,SNR=3.3						
INK	**Inuvik**	**139.58**	**33**	PKP	PKPdf	21 35 02.2	-0.7
INK	**Inuvik**	**139.58**	**33**	PKP	PKPdf	21 35 02.2	-0.7
	1.8nm,0.9s,baz=188,slow=7.7,SNR=4.1						
ULM	**Lac du Bonnet**	**140.75**	**74**	PKhKP		21 34 56.9	
	0.9nm,0.6s,baz=180,slow=5.1,SNR=2.4						
YKA	**Yellowknife Ar**	**141.36**	**48**	PKP	PKPdf	21 34 60.0	-6.3
YKA				PKP	PKPdf	21 35 06.8	+0.5
YKA	**Yellowknife Ar**	**141.36**	**48**	PKhKP		21 34 60.0	
	0.6nm,0.8s,baz=232,slow=3.2,SNR=6.8						
YKA				PKP	PKPdf	21 35 06.8	+0.6
	0.8nm,0.7s,baz=234,slow=2.5,SNR=7.4						
VTS	**Vitosha**	**145.84**	**258**	⫴P	PKPdf	21 35 15.4	+0.6
VTS	**Vitosha**	**145.84**	**258**	⫴*i*P	PKPdf	21 35 15.4	+0.6
KEST	**Kesra**	**146.16**	**235**	PKPbc	PKPbc	21 35 17.7	+1.0
	2.4nm,0.9s,baz=281,slow=4.0,SNR=5.1						
VRI	**Vrincioaia**	**146.67**	**265**	⫛P	PKPbc	21 35 18.3	+0.5
VRI	**Vrincioaia**	**146.67**	**265**	⫛*i*P	PKPbc	21 35 18.3	+0.5
MLR	**Muntele Rosu**	**146.76**	**264**	⫴P	PKPdf	21 35 18.2	+2.0
MLR	**Muntele Rosu**	**146.76**	**264**	⫴*i*P	PKPdf	21 35 18.2	+1.9
FCC	**Fort Churchill**	**147.07**	**64**	*e*PKPbc	PKPbc	21 35 17.9	-0.6
GZR	**Gura Zlata**	**148.18**	**261**	⫴P	PKPbc	21 35 25.0	+3.1
GZR	**Gura Zlata**	**148.18**	**261**	⫴*i*P	PKPbc	21 35 25.0	+3.1
BZS	**Buzias**	**148.89**	**260**	⫴P	PKPbc	21 35 23.8	0.0
BZS	**Buzias**	**148.89**	**260**	⫴*i*P	PKPbc	21 35 23.8	0.0
AKASG	**Malin Array Be**	**148.90**	**274**	PKPbc	PKPbc	21 35 23.2	-0.4
	1.6nm,0.7s,baz=104,slow=2.0,SNR=8.3						
DRGR		**149.24**	**263**	⫛P	PKPbc	21 35 24.6	0.0
DRGR		**149.24**	**263**	⫛*i*P	PKPbc	21 35 24.6	0.0
TRPA	**Tarpa**	**150.29**	**265**	⫛*i*P	PKPbc	21 35 28.2	+1.1
PKSM	**Moragy**	**150.71**	**258**	⫴*i*P	PKPbc	21 35 27.9	-0.3
KOLS	**Kolonicke sedl**	**150.98**	**265**	*e*PKP	PKPdf	21 35 24.6	+1.6
KOLS				*e*		21 35 38.5	
KWP	**Kalwaria**	**151.26**	**267**	⫛P	PKPbc	21 35 29.7	+0.4
KWP	**Kalwaria**	**151.26**	**267**	⫛*i*P	PKPbc	21 35 29.7	+0.4
CRVS	**Cervenica-Dubn**	**151.34**	**265**	*e*PKP	PKPbc	21 35 30.4	+0.8
CRVS				*e*		21 35 41.0	
KECS	**Kecovo**	**151.50**	**263**	*e*PKP	PKPbc	21 35 30.5	+0.5
KECS				*e*		21 35 37.5	
STHS	**Stebnicka Huta**	**151.80**	**265**	*e*PKP	PKPbc	21 35 35.2	+4.6
VYHS	**Vyhne**	**152.28**	**261**	*e*PKP	PKPdf	21 35 28.7	+3.7
VYHS				*e*		21 35 43.5	
VYHS				*e*		21 35 49.8	
KOLL	**Kolacno**	**152.55**	**261**	*e*PKP	PKPab	21 35 43.8	+0.9
KOLL				*e*		21 35 50.8	
KOLL				*e*		21 35 54.9	
ESDC	**Sonseca Array**	**154.35**	**220**	PKPbc	PKPbc	21 35 38.8	+2.3
	1.4nm,0.9s,baz=159,slow=1.2,SNR=5.8						
ESDC				PKPab	PKPab	21 35 49.0	-1.8
	1.0nm,0.6s,baz=152,slow=2.4,SNR=5.5						
GERES	**GERESS Array B**	**154.92**	**256**	PKPbc	PKPbc	21 35 38.7	+1.2
	0.5nm,0.7s,baz=129,slow=10,SNR=3.5						
GERES				PKPab	PKPab	21 35 53.8	+0.8
	1.2nm,0.9s,baz=134,slow=5.8,SNR=4.5						
DAVOX	**Davos/Dischmat**	**155.12**	**249**	PKPab	PKPab	21 35 54.9	+1.0
	2.9nm,0.7s,baz=111,slow=8.6,SNR=3.3						
CLL	**Collm**	**156.96**	**260**	*e*PKPab	PKPab	21 36 02.0	+0.4
CLL				*ex*	x	21 36 12.0	
SCHQ	**Schefferville**	**157.25**	**89**	PKPab	PKPab	21 36 03.9	+1.1
	8.4nm,1.3s,baz=180,slow=2.0,SNR=4.5						

*TEH **26** 21:18:45.5, 3125N×5683E, h3km, ML3.7*

*ISCJB **26** 21:19:07.9±0.6, 3121N±005×5682E±004, h10km, Error ellipse: s-maj=7.8km s-min=4.3km az=169.3*

*CSEM **26** 21:19:08.1±0.1, 3122N×5684E, h16km, ML3.7, Error ellipse: s-maj=2.1km s-min=1.4km az=168.0*

*THR **26** 21:19:08.3±0.4, 3121N×5684E, h18km±9km, ML3.3*

ISC 26 21:19:08.9±0.6, 3122N±005×5681E±004, h10km, n16, σ1$\hat{s}$05/23, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**1.13**	**290**	*e*Pg	**Pg**	**21 19 28.9**	**-1.7**
IBAF				*e*Sg	**Sg**	**21 19 43.0**	**-2.3**
IBAF				*e*		21 19 51.2	
	comp=Z,11μm,0.1s						
IBAF	**Bafgh**	**1.13**	**290**	*e*Pg	**Pg**	**21 19 28.9**	**-1.7**
IBAF				*e*Sg	**Sg**	**21 19 43.0**	**-2.3**
KRBR	**Kerman**	**1.23**	**182**	*e*Pg	**Pg**	**21 19 31.2**	**-1.4**
KRBR				AML	AML	21 19 50.3	
	comp=N,660nm,0.6s						
IMEH	**Mehriz**	**1.89**	**276**	*e*Pn	**Pn**	**21 19 42.3**	**+1.0**
IMEH				*e*		21 19 43.9	
	comp=Z,7μm,0.2s						
IKOO		**2.22**	**57**	*e*Pn	**Pn**	**21 19 45.6**	**-0.2**
IKOO				*e*Sn	**Sn**	**21 20 13.4**	**+0.1**
ICHK	**Chekchek**	**2.29**	**297**	*e*Pn	**Pn**	**21 19 47.7**	**+0.9**
ICHK				*e*		21 19 50.6	
	comp=Z,5μm,0.2s						
ICHK				*e*Sn	**Sn**	**21 20 15.7**	**+0.7**
ITEG		**2.35**	**44**	*e*Pn	**Pn**	**21 19 47.8**	**+0.3**
ITEG				*e*Sn	**Sn**	**21 20 16.5**	**+0.1**
IDAH		**3.01**	**59**	*e*Sn	**Sn**	**21 20 31.3**	**-1.4**
IMON		**3.12**	**50**	*e*Pn	**Pn**	**21 19 58.3**	**+0.1**
IPAR	**Pars**	**3.52**	**248**	*e*Pn	**Pn**	**21 20 04.7**	**+0.9**
ISRV	**Sarvestan**	**3.69**	**241**	*e*Pn	**Pn**	**21 20 05.8**	**-0.2**
ISRV				*e*		21 21 24.4	
	comp=Z,1μm,0.3s						
NASN	**Na'in**	**3.75**	**296**	*e*Pn	**Pn**	**21 20 07.9**	**+1.1**
NASN				*e*Sg	**Sg**	**21 21 05.9**	**-3.4**
NASN				AML	AML	21 21 13.5	
	comp=E,36nm,0.1s						
NASN				AML	AML	21 21 15.3	
	comp=N,56nm,0.5s						
NASN	**Na'in**	**3.75**	**296**	*e*Pn	**Pn**	**21 20 07.9**	**+1.1**
	SNR=52						
NASN				*e*Sg	**Sg**	**21 21 05.9**	**-3.5**
	SNR=91						
ZHSF	**Zahedan**	**3.78**	**114**	*e*Pn	**Pn**	**21 20 07.7**	**+0.5**
IZEF	**Zefreh**	**4.16**	**295**	*e*Pn	**Pn**	**21 20 13.9**	**+1.5**
IZEF				*e*		21 20 27.9	
	comp=Z,503nm,0.3s						
ISFB	**Sefidab**	**4.96**	**310**	*e*Pn	**Pn**	**21 20 23.4**	**-0.1**

IDC 26 21:25:20.9±1.4, 831S×15689E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/15, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=42.9km s-min=26.3km az=20.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.22**	**110**	Pn	Pn	21 26 11.9	-0.8
	23nm,0.3s,baz=270,slow=4.7,SNR=6.2						
HNR				Sn	Sn	21 26 54.4	+2.6
	5.6nm,0.3s,baz=280,slow=19,SNR=3.6						
WRA	**Warramunga Arr**	**24.70**	**240**	P	P	21 30 44.2	+0.3
	1.5nm,0.8s,baz=66,slow=9.9,SNR=6.4						
SONM	**Songino Array**	**71.46**	**327**	P	P	21 36 43.4	+0.2
	0.4nm,1.0s,baz=143,slow=5.0,SNR=2.9						
MKAR	**Makanchi Array**	**85.63**	**318**	P	P	21 38 01.5	+0.1
	0.4nm,0.8s,baz=102,slow=4.8,SNR=3.6						

*IDC **26** 21:44:03.3±1.3, 0.90S×12782E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.7/15, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=124.4km s-min=19.9km az=70.0*

*ISCJB **26** 21:44:06.3±1.1, 10S±02×1276E±04, h33km, mb4.3/9, Error ellipse: s-maj=61.3km s-min=13.7km az=152.4*

**ISC 26 21:44:08.3±1.1,

IGT	Igoumenitsa	1.18	355	*e*Pg	Pg	21	44	57.2	-1.2
IGT				*e*Sg	Sg	21	45	13.9	+0.2
EVR	Evrytania	1.20	62	*e*PN	Pn	21	44	59.7	+0.4
JAN	Janina	1.34	13	*e*PN	Pn	21	45	02.4	+1.2
ITM	Ithomi	1.65	135	*e*PN	Pn	21	45	05.0	-0.5
THL	Klokotos Trika	1.72	45	*e*PN	Pn	21	45	07.2	+0.8
LKR	Lokris	2.02	81	*e*PN	Pn	21	45	12.1	+1.6

NIED ***26*** *21:48:00, 37.20N×136.50E, h5km, Mw3.8 Best double couple: M₀5.50000×10¹⁴ NP1:φs136.00000°,δ47.00000°, λ54.00000°. NP2:φs3.00000°,δ53.00000°,λ122.00000°.*

ISCJB ***26*** *21:48:54.4±1.1, 37.19N±004×136.50E±004, h14km±7km, mb3.5/7, Error ellipse: s-maj=7.5km s-min=5.7km az=178.6*

JMA ***26*** *21:48:54.8±0.1, 37.18N×136.55E, h5km±2km, M3.6*

JMA Felt II J1.

IDC ***26*** *21:48:59.7±1.3, 37.13N×136.52E, h47km±17km, mb3.3/7, mb1 3.5/9, mb1mx3.4/22, mbtmp3.3/9, ML3.0/2, MS3.4/3, Ms1 3.4/3, ms1mx3.0/18, Error ellipse: s-maj=25.1km s-min=9.6km az=14.0*

NEIC ***26*** *21:48:59.1±1.4, 37.16N×136.68E, h45km±18km, MG3.6(JMA), Error ellipse: s-maj=21.9km s-min=12.9km az=178.0*

ISC 26 21:48:55.0±0.7, 3718N±003×13655E±005, h9km±5km, n19, σ0°92/26, mb3.5/7, 3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.32**	**144**	⇓P		**Pg**		**21 49 01.3**	**0.0**
JJH				S		**Sg**		**21 49 06.1**	**+0.5**
JSZ	**Suzu**	**0.70**	**68**	⇓P		**Pg**		**21 49 08.1**	**-0.5**
JSZ				S		**Sg**		**21 49 18.2**	**+0.5**
JHG	**Hegura jima**	**0.73**	**24**	P		**Pg**		**21 49 08.8**	**-0.3**
JHG				S		**Sg**		**21 49 18.9**	**+0.3**
JTT	**Ttatey**	**0.85**	**132**	P		**Pg**		**21 49 11.1**	**-0.4**
JKG	**Kaga**	**0.92**	**191**	⇓P		**Pg**		**21 49 12.2**	**-0.5**
MAJO	**Matsushiro**	**1.48**	**115**	*e*P		**Pn**		**21 49 20.9**	**-0.8**
MAT	**Matsushiro**	**1.48**	**115**	P		**Pn**		**21 49 20.7**	**-1.0**
MAT				S		**Sn**		**21 49 40.4**	**-0.7**
MJAR	**Matsushiro Arr**	**1.48**	**115**	P		**Pn**		**21 49 22.4**	**+0.6**
MJAR				S		**Sn**		**21 49 43.2**	**+2.0**
MJAR	**Matsushiro Arr** 11nm,0.3s,baz=291,slow=17,SNR=95	**1.48**	**115**	P		**Pn**		**21 49 22.4**	**+0.6**
MJAR	14nm,0.3s,baz=309,slow=26,SNR=10			S		**Sn**		**21 49 43.2**	**+2.0**
JNU	**Nakatsue** 0.4nm,0.3s,baz=23,slow=10,SNR=4.3	**6.16**	**231**	P		**Pn**		**21 50 29.2**	**+3.0**
JNU				LR		LR		21 52 48.2	
	comp=Z,117nm,19.1s,baz=152,slow=37								
KSRS	**Korea Array** 0.3nm,0.3s,baz=89,slow=15,SNR=3.0	**6.88**	**275**	P		**Pn**		**21 50 39.5**	**+3.5**
KSRS	0.5nm,0.3s,baz=88,slow=25,SNR=5.1			S		**Sn**		**21 51 54.5**	**+0.1**
KSRS				LR		LR		21 52 53.3	
	comp=Z,89nm,18.5s,baz=162,slow=34								
SONM	**Songino Array** 0.2nm,0.3s,mb3.0,baz=108,slow=8.6,SNR=4.2	**24.50**	**305**	P		**P**		**21 54 15.3**	**+1.0**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,mb3.5,baz=111,slow=7.9,SNR=2.7	**38.94**	**312**	P		**P**		**21 56 20.7**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.6s,mb2.9,baz=84,slow=9.3,SNR=3.7	**40.73**	**301**	P		**P**		**21 56 35.7**	**-0.2**
WRA	**Warramunga Arr** 0.6nm,0.6s,mb3.8,baz=357,slow=7.5,SNR=10	**56.85**	**182**	P		**P**		**21 58 39.0**	**-0.9**
YKA	**Yellowknife Ar**	**65.59**	**29**	P		**P**		**21 59 39.3**	**+0.5**
YKA				LR		LR		22 29 35.3	
YKA	**Yellowknife Ar** 0.4nm,0.7s,mb3.6,baz=303,slow=6.7,SNR=7.3	**65.59**	**29**	P		**P**		**21 59 39.3**	**+0.5**
YKA				LR		LR		22 29 35.3	
	comp=Z,199nm,20.8s,baz=175,slow=37								
FINES	**FINESS Array B** 1.1nm,0.9s,mb3.9,baz=113,slow=11,SNR=4.2	**66.83**	**331**	P		**P**		**21 59 46.6**	**-0.1**
AKASG	**Malin Array Be** 0.2nm,0.2s,mb3.6,baz=52,slow=6.6,SNR=4.4	**71.75**	**320**	P		**P**		**22 00 15.6**	**-1.8**

ISCJB ***26*** *21:54:24.3±0.8, 1785S±008×178.67W±006, h547km±9km, mb4.5/50, Error ellipse: s-maj=13.9km s-min=5.3km az=146.0*

IDC ***26*** *21:54:27.2±1.6, 1789S×178.58W, h572km±17km, mb4.0/15, mb1 4.2/16, mb1mx4.2/19, mbtmp4.0/16, Error ellipse: s-maj=14.2km s-min=10.4km az=141.0*

BJI ***26*** *21:54:27.1, 17.99S×177.98W, h605km, mB4.7, mb4.6*

NEIC ***26*** *21:54:29.1±1.4, 1782S×178.72W, h594km±17km, mb4.7/36, Error ellipse: s-maj=9.4km s-min=5.8km az=142.0*

ISC 26 21:54:25.1±0.8, 1785S±008×17862W±006, h544km±8km, n352, σ0°55/314, mb4.5/50, 118C-94D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**60**	*e*P		**P**		**21 56 19.1**	**-0.2**
AFI				*e*S		**S**		**21 57 51.4**	**-1.5**
DZM	**Mont Dzumac**	**14.66**	**251**	*e*P		**P**		**21 57 32.5**	**+1.3**
DZM	**Mont Dzumac** 5.2nm,0.3s,baz=79,slow=14,SNR=64	**14.66**	**251**	P		**P**		**21 57 33.4**	**+2.2**
URZ	**Urewera** 11nm,0.9s,baz=276,slow=0.8,SNR=3.8	**20.68**	**190**	P		**P**		**21 58 23.8**	**-3.7**
EIDS	**Eidsvold** 43nm,1.1s,mb5.0	**29.10**	**250**	*e*P		**P**		**21 59 42.6**	**+0.4**
ARMA	**Armidale**	**29.80**	**240**	*e*P		**P**		**21 59 49.0**	**+0.8**
CTA	**Charters Tower** 35nm,0.7s,mb5.0	**33.26**	**260**	⇓*i*P		**P**		**22 00 18.6**	**+0.7**
CTA	**Charters Tower** 43nm,0.7s,mb5.1,baz=92,slow=10,SNR=42	**33.26**	**260**	P		**P**		**22 00 18.6**	**+0.7**
CTAO	**Charters Tower** 50nm,0.8s,mb5.1	**33.26**	**260**	*e*P		**P**		**22 00 18.2**	**+0.3**
CNB	**Canberra Magne** 69nm,0.6s,mb5.4	**33.31**	**232**	*e*P		**P**		**22 00 19.1**	**+1.0**
STKA	**Stephens Creek** 51nm,0.6s,mb5.2	**38.49**	**241**	⇓*i*P		**P**		**22 01 02.1**	**+1.1**
STKA	**Stephens Creek** 99nm,0.8s,mb5.4,baz=88,slow=9.3,SNR=108	**38.49**	**241**	P		**P**		**22 01 02.1**	**+1.2**
WB2	**Warramunga Arr**	**44.44**	**259**	⇓*i*P		**P**		**22 01 47.7**	**-0.5**
WRA	**Warramunga Arr** 46nm,0.7s,mb5.1,baz=96,slow=6.9,SNR=756	**44.45**	**259**	P		**P**		**22 01 47.7**	**-0.6**
WRA	5.9nm,0.8s,baz=92,slow=3.1,SNR=5.4			PcP		PcP		22 03 19.5	-0.6
ASAR	**Alice Springs** 290nm,0.6s,baz=88,slow=8.4,SNR=3120	**44.62**	**254**	P		**P**		**22 01 49.9**	**+0.3**
ASAR	11nm,0.9s,baz=91,slow=3.8,SNR=5.3			PcP		PcP		22 03 19.9	-0.8
ASAR	2.4nm,1.0s,baz=108,slow=3.6,SNR=6.3			ScP		ScP		22 06 17.9	-3.3
ASAR	2.4nm,0.9s,baz=89,slow=16,SNR=8.7			S		**S**		**22 07 44.0**	**-2.4**
KAKA	**Kakadu** 53nm,0.5s,mb5.3	**47.38**	**269**	⇓*i*P		**P**		**22 02 10.6**	**-0.1**
FORT	**Forrest** 73nm,0.6s,mb5.3	**49.85**	**245**	*e*P		**P**		**22 02 27.8**	**-1.0**
FITZ	**Fitzroy Crossi** 17nm,0.6s,mb4.5	**52.84**	**261**	⇓*i*P		**P**		**22 02 50.7**	**+0.1**
FITZ	**Fitzroy Crossi** 7.5nm,0.5s,mb4.3,baz=128,slow=6.4,SNR=21	**52.84**	**261**	P		**P**		**22 02 50.8**	**+0.2**
MBWA	**Marble Bar** 26nm,0.7s,mb4.6	**57.90**	**256**	*e*P		**P**		**22 03 24.8**	**-0.9**
KLBR	**Kellerberrin** 47nm,0.6s,mb4.9	**58.68**	**244**	*e*P		**P**		**22 03 29.7**	**-1.1**
MUN	**Mundaring**	**59.97**	**243**	*e*P		**P**		**22 03 39.1**	**-0.4**
SBA	**Scott Base** 4.2nm,1.0s,mb3.7	**60.47**	**184**	*e*P		**P**		**22 03 43.2**	**+1.2**
VNDA	**Vanda**	**60.49**	**185**	P		**P**		**22 03 42.2**	**+0.1**
VNDA	**Vanda** 1.7nm,0.6s,mb3.5,baz=350,slow=6.8,SNR=13	**60.49**	**185**	P		**P**		**22 03 42.2**	**+0.1**
MJAR	**Matsushiro Arr** 5.0nm,0.8s,mb4.1,baz=156,slow=6.0,SNR=16	**67.74**	**323**	P		**P**		**22 04 28.7**	**0.0**
QSPA	**South Pole Qui** 15nm,0.8s,mb4.5,baz=5.5,slow=1.2,SNR=55	**72.21**	**180**	P		**P**		**22 04 54.3**	**-0.3**
KSRS	**Korea Array** 0.6nm,0.4s,baz=129,slow=5.7,SNR=3.8	**74.52**	**318**	P		**P**		**22 05 09.5**	**+1.0**
HAST	**UC Hastings Re** baz=76,SNR=13	**76.23**	**44**	⇑P		**P**		**22 05 18.4**	**+0.4**
V03C	**Hunter Liggett** baz=76	**76.24**	**45**	⇑P		**P**		**22 05 18.6**	**+0.6**
BNLO	**Ben Lomond (Sa** baz=76	**76.25**	**43**	⇓P		**P**		**22 05 16.8**	**-1.3**
V04C	**Ramage Ranch,** baz=76	**76.27**	**45**	P		**P**		**22 05 18.7**	**+0.4**
MCCM	**Marconi Confer** baz=76	**76.38**	**42**	⇑P		**P**		**22 05 18.5**	**-0.3**
PKM	**Peak Mountain** baz=77	**76.58**	**46**	⇓P		**P**		**22 05 20.3**	**+0.3**
PKD	**Parkfield**	**76.66**	**45**	⇓P		**P**		**22 05 20.5**	**+0.2**
U04C	**Hernandez Rese** baz=77,SNR=7.2	**76.73**	**45**	⇓P		**P**		**22 05 21.4**	**+0.6**
HOPS	**Hopland** baz=77	**76.76**	**41**	⇑P		**P**		**22 05 19.6**	**-1.2**
PACP	**Pacheco Peak** baz=77	**76.76**	**44**	⇑P		**P**		**22 05 21.1**	**+0.2**
CVS	**Carmenet Viney** baz=77	**76.77**	**42**	⇑P		**P**		**22 05 20.7**	**-0.2**
CIS	**Catalina Islan** baz=77	**76.77**	**48**	⇑P		**P**		**22 05 20.4**	**-0.7**
S04C	**Ingram Canyon,** baz=77,SNR=7.4	**77.02**	**43**	⇑P		**P**		**22 05 22.4**	**+0.2**
MNRC	**McLaughlin Nat** baz=77	**77.09**	**42**	⇑P		**P**		**22 05 22.1**	**-0.6**
S05C	**Merced** baz=78	**77.58**	**44**	⇑P		**P**		**22 05 25.0**	**-0.3**
O02C	**Red Bluff** baz=78	**77.63**	**40**	⇓P		**P**		**22 05 25.9**	**+0.3**
N02C	**Big Bar** baz=78	**77.70**	**40**	⇑P		**P**		**22 05 25.9**	**0.0**
BFSC	**Mount Baldy St** baz=78	**77.73**	**48**	⇓P		**P**		**22 05 26.1**	**-0.2**
T06C	**Millerton Lake** baz=78,SNR=5.8	**77.81**	**45**	⇓P		**P**		**22 05 26.2**	**-0.4**
EDW2	**Edwards Air Fo** baz=78,SNR=9.2	**77.84**	**47**	⇓P		**P**		**22 05 26.8**	**0.0**
ISA	**Isabella** baz=78,SNR=12	**77.92**	**46**	⇑P		**P**		**22 05 27.1**	**0.0**
MONP	**Monument Peak** baz=78,SNR=6.2	**77.93**	**50**	P		**P**		**22 05 28.1**	**+0.8**
CMB	**Columbia Colle** 15nm,1.0s,mb4.3	**77.93**	**43**	*e*P		**P**		**22 05 26.7**	**-0.5**
CMB	**Columbia Colle** baz=78,SNR=10	**77.93**	**43**	⇑P		**P**		**22 05 26.9**	**-0.3**
WDC	**Whiskeytown Da** baz=78	**78.02**	**40**	⇑P		**P**		**22 05 26.9**	**-0.8**
DVTC	**Desert V Tower** baz=78	**78.04**	**50**	⇓P		**P**		**22 05 28.2**	**+0.2**
ORV	**Oroville** baz=78,SNR=7.5	**78.08**	**42**	P		**P**		**22 05 27.9**	**0.0**
KCC	**Kaiser Creek** baz=78,SNR=8.6	**78.24**	**44**	⇑P		**P**		**22 05 28.9**	**0.0**
PFO	**Pinyon Flat Ob**	**78.27**	**49**	P		**P**		**22 05 29.2**	**0.0**
PFO	**Pinyon Flat Ob** 3.6nm,0.8s,mb3.8,baz=272,slow=1.5,SNR=3.7	**78.27**	**49**	P		**P**		**22 05 29.2**	**+0.1**
M02C	**Callahan** baz=78,SNR=6.2	**78.31**	**39**	⇑P		**P**		**22 05 29.8**	**+0.6**
KDAK	**Kodiak Island** 16nm,0.7s,mb4.5,baz=262,slow=4.2,SNR=5.9	**78.39**	**14**	P		**P**		**22 05 29.0**	**-0.2**
SWSC	**Sam W. Stewart** baz=78	**78.40**	**50**	⇓P		**P**		**22 05 30.5**	**+0.6**
P05C	**Yuba Gap, Truc** baz=79	**78.50**	**42**	⇓P		**P**		**22 05 30.5**	**+0.3**
R05C	**Kirkwood Meado** baz=79	**78.51**	**43**	⇓P		**P**		**22 05 30.6**	**+0.3**
YBH	**Yreka Blue Hor** 7.9nm,0.8s,mb4.1	**78.60**	**39**	*e*P		**P**		**22 05 30.8**	**+0.1**
YBH	**Yreka Blue Hor** baz=79,SNR=8.6	**78.60**	**39**	⇑P		**P**		**22 05 31.0**	**+0.3**
M03C	**McCloud** baz=79	**78.69**	**40**	⇑P		**P**		**22 05 31.1**	**-0.1**
K02A	**Glendale** baz=79	**78.76**	**38**	⇑P		**P**		**22 05 30.3**	**-1.2**
O04C	**Chester** baz=79	**78.78**	**41**	⇓P		**P**		**22 05 31.8**	**+0.1**
BELC	**Belle Mtn.** baz=79	**78.79**	**49**	⇓P		**P**		**22 05 31.8**	**-0.1**
MPMC	**Manual Prospec** baz=79,SNR=13	**78.80**	**46**	⇓P		**P**		**22 05 32.1**	**+0.2**
R06C	**Coleville** baz=79,SNR=6.6	**78.81**	**43**	⇓P		**P**		**22 05 32.2**	**+0.3**
HATC	**Hat Creek Radi** baz=79	**78.83**	**41**	⇓P		**P**		**22 05 32.0**	**0.0**
LHEM	**Herd Peak**	**78.84**	**40**	⇑P		**P**		**22 05 32.5**	**+0.5**
DAC	**Darwin (Calif)** 19nm,1.5s,mb4.2	**78.85**	**46**	*e*P		**P**		**22 05 31.9**	**-0.2**
GSC	**Goldstone** baz=79	**78.88**	**47**	⇑P		**P**		**22 05 32.3**	**0.0**
LBCM	**Butte Creek Ri**	**78.91**	**41**	⇑P		**P**		**22 05 32.6**	**+0.2**
HEC	**Hector,Ludlow** baz=79	**78.98**	**48**	⇑P		**P**		**22 05 32.7**	**-0.2**
BC3	**Big Chuckw Mtn** baz=79	**79.01**	**49**	⇑P		**P**		**22 05 33.4**	**+0.3**
LTIM	**Timbered Crate**	**79.02**	**40**	⇑P		**P**		**22 05 33.2**	**+0.3**
WCN	**Washoe City** baz=79	**79.05**	**43**	⇓P		**P**		**22 05 33.1**	**0.0**
S08C	**White Mtn Res** baz=79,SNR=17	**79.10**	**45**	P		**P**		**22 05 34.3**	**+0.8**
M04C	**Macdoel** baz=79	**79.16**	**40**	⇑P		**P**		**22 05 33.6**	**-0.1**
GLA	**Glamis** baz=79,SNR=6.8	**79.17**	**50**	P		**P**		**22 05 34.7**	**+0.7**
LASM	**Arnica Sink**	**79.21**	**40**	P		**P**		**22 05 34.5**	**+0.5**
I02A	**Mapleton** baz=79	**79.31**	**37**	⇑P		**P**		**22 05 34.5**	**0.0**
M05C	**Lookout** baz=80,SNR=5.8	**79.34**	**40**	P		**P**		**22 05 35.0**	**+0.4**
GRAC	**Grapevine Rang** baz=80	**79.38**	**46**	⇑P		**P**		**22 05 34.8**	**-0.2**
GMRC	**Granite Mounta** baz=80	**79.43**	**48**	⇓P		**P**		**22 05 35.3**	**0.0**
J03A	**Ideyld Park** baz=80	**79.43**	**38**	⇓P		**P**		**22 05 34.6**	**-0.5**
IRM	**Iron Mountain** baz=80,SNR=5.1	**79.48**	**49**	⇓P		**P**		**22 05 35.8**	**+0.2**
O06A	**Flanigan** baz=80	**79.48**	**42**	⇓P		**P**		**22 05 35.4**	**0.0**
NVAR	**Mina Array Bea** 8.9nm,0.8s,mb4.2,baz=212,slow=6.5,SNR=20	**79.52**	**44**	P		**P**		**22 05 35.0**	**-0.7**
TUQ	**Turquoise Mtn.** baz=80	**79.57**	**48**	⇑P		**P**		**22 05 36.1**	**+0.1**
M06C	**Likely Place G** baz=80	**79.66**	**41**	⇑P		**P**		**22 05 36.3**	**0.0**
Y12C	**Blythe** baz=80	**79.73**	**50**	⇑P		**P**		**22 05 37.4**	**+0.5**
U10A	**Ash Meadows, A** baz=80	**79.79**	**47**	⇑P		**P**		**22 05 37.2**	**0.0**
N06A	**Buffalo Meadow** baz=80	**79.80**	**41**	⇓P		**P**		**22 05 37.0**	**-0.1**
J04A	**Unpqua Nationa** baz=80,SNR=7.0	**79.85**	**38**	⇑P		**P**		**22 05 37.3**	**+0.1**
L05A	**Lakeview** baz=80	**79.92**	**40**	⇑P		**P**		**22 05 37.2**	**-0.5**
Q08A	**Gabbs** baz=80,SNR=5.7	**79.99**	**44**	P		**P**		**22 05 38.0**	**-0.1**
I04A	**Tendick Farm,** baz=80	**80.00**	**38**	⇑P		**P**		**22 05 37.7**	**-0.3**
H03A	**Soap Creek Ran** baz=80	**80.03**	**37**	⇑P		**P**		**22 05 37.3**	**-0.8**
TPNV	**Topopah Spring** baz=80	**80.12**	**46**	⇓P		**P**		**22 05 39.5**	**+0.6**
V11A	**Goodsprings** baz=80	**80.12**	**47**	⇓P		**P**		**22 05 39.4**	**+0.5**
MOD	**Modoc** baz=80	**80.16**	**40**	⇑P		**P**		**22 05 38.5**	**-0.5**
Y13A	**Salome** baz=80,SNR=6.2	**80.27**	**50**	P		**P**		**22 05 40.7**	**+1.0**
PDMCI	**Parker Dam,Lak** baz=80	**80.28**	**49**	⇑P		**P**		**22 05 39.9**	**+0.2**
P08A	**Dixie Valley** baz=80	**80.34**	**43**	⇑P		**P**		**22 05 40.2**	**+0.3**
N07B	**Gerlach** baz=80	**80.37**	**42**	⇑P		**P**		**22 05 39.9**	**-0.2**
S10A	**Tonopah Range,** baz=80	**80.39**	**45**	⇓P		**P**		**22 05 40.2**	**-0.1**
G03A	**Yamhill** baz=80	**80.42**	**36**	⇑P		**P**		**22 05 40.2**	**0.0**
V12A	**Nelson** baz=81	**80.47**	**48**	⇓P		**P**		**22 05 41.0**	**+0.3**
M07A	**Soldier Meadow** baz=81,SNR=11	**80.58**	**41**	⇓P		**P**		**22 05 41.2**	**+0.1**
H04A	**Detroit Lake** baz=81,SNR=6.5	**80.66**	**37**	⇓P		**P**		**22 05 40.8**	**-0.7**
Z14A	**Wintersburg** baz=81	**80.70**	**51**	⇓P		**P**		**22 05 42.4**	**+0.5**
K06A	**Valley Falls** baz=81,SNR=11	**80.71**	**39**	⇓P		**P**		**22 05 41.9**	**+0.1**
R10A	**Warm Springs** baz=81,SNR=14	**80.78**	**45**	⇓P		**P**		**22 05 42.8**	**+0.5**
SVW2	**Sparrevohn**	**80.81**	**11**	*e*P		**P**		**22 05 40.3**	**-1.6**
S11A	**Rachel** baz=81	**80.82**	**46**	⇓P		**P**		**22 05 42.6**	**+0.1**
L07A	**Adell** baz=81,SNR=9.4	**80.82**	**40**	⇑P		**P**		**22 05 42.8**	**+0.4**
W13A	**Hualapai Mount** baz=81	**80.85**	**49**	⇓P		**P**		**22 05 43.0**	**+0.3**
P09A	**Austin**	**80.88**	**43**	⇓P		**P**		**22 05 42.6**	**-0.2**
N08A	**GE Springer Mi** baz=81,SNR=12	**80.90**	**42**	⇓P		**P**		**22 05 42.9**	**0.0**
115A	**Sonoran Desert** baz=81	**80.92**	**51**	⇑P		**P**		**22 05 43.7**	**+0.7**
Y14A	**Wickenburg** baz=81,SNR=7.0	**80.93**	**50**	P		**P**		**22 05 43.4**	**+0.3**
T11A	**Corn Creek, Al** baz=81	**80.97**	**46**	⇑P		**P**		**22 05 43.5**	**+0.2**
E03A	**Lebam** baz=81	**81.02**	**35**	⇑P		**P**		**22 05 43.1**	**-0.2**
J06A	**Christmas Vall** baz=81,SNR=13	**81.02**	**39**	⇓P		**P**		**22 05 42.9**	**-0.5**
U12A	**Valley of Fire** baz=81	**81.04**	**47**	⇑P		**P**		**22 05 43.6**	**0.0**
T12A	**Moapa** baz=81	**81.07**	**47**	⇑P		**P**		**22 05 44.3**	**+0.6**
M08A	**Happy Creek Ra** baz=81,SNR=9.2	**81.11**	**41**	⇓P		**P**		**22 05 44.2**	**+0.3**
216A	**Three Points,** baz=81	**81.17**	**52**	⇓P		**P**		**22 05 45.3**	**+0.8**
O09A	**Fish Creek Ran** baz=81,SNR=6.1	**81.18**	**43**	⇓P		**P**		**22 05 44.3**	**+0.1**
116A	**Eloy** baz=81	**81.24**	**52**	⇑P		**P**		**22 05 45.2**	**+0.4**
D03A	**Wishkah Elem.** baz=81	**81.25**	**34**	⇓P		**P**		**22 05 44.0**	**-0.5**
K07A	**Rock Creek Ran** baz=81,SNR=17	**81.26**	**40**	⇑P		**P**		**22 05 44.7**	**+0.1**
X14A	**Yava** baz=81,SNR=15	**81.26**	**50**	P		**P**		**22 05 45.4**	**+0.6**
F04A	**Amboy** baz=81	**81.28**	**36**	⇓P		**P**		**22 05 44.1**	**-0.6**
R11A	**Troy Canyon, C** baz=81	**81.29**	**45**	⇓P		**P**		**22 05 45.3**	**+0.4**
BMN	**Battle Mountai** 36nm,1.3s,mb4.6	**81.30**	**43**	*e*P		**P**		**22 05 45.0**	**+0.2**
N09A	**Rock Creek Ran** baz=81	**81.33**	**42**	⇑P		**P**		**22 05 44.9**	**-0.1**
NLWA	**Neilton Lookou**	**81.37**	**34**	P		**P**		**22 05 44.4**	**-0.7**
NLWA	**Neilton Lookou** baz=82	**81.37**	**34**	⇑P		**P**		**22 05 44.7**	**-0.4**
I06A	**Prineville** baz=82,SNR=21	**81.38**	**38**	⇓P		**P**		**22 05 45.5**	**+0.3**
S12A	**Delamar Landin** baz=82	**81.42**	**46**	⇓P		**P**		**22 05 46.1**	**+0.6**
U13A	**Pakoon Wash** baz=82	**81.44**	**47**	⇓P		**P**		**22 05 46.2**	**+0.5**
VIPM	**Ingram Point**	**81.47**	**38**	⇑P		**P**		**22 05 45.7**	**+0.1**
W14A	**Seligman** baz=82,SNR=17	**81.48**	**49**	⇑P		**P**		**22 05 46.5**	**+0.5**
WVOR	**Wild Horse Val** 25nm,1.0s,mb4.6	**81.49**	**40**	*e*P		**P**		**22 05 45.9**	**+0.1**
G05A	**Wamic** baz=82	**81.49**	**37**	⇑P		**P**		**22 05 45.6**	**-0.1**
Q11A	**Duckwater** baz=82,SNR=15	**81.50**	**45**	⇑P		**P**		**22 05 45.8**	**-0.1**
CROR	**Criterion Ridg**	**81.53**	**37**	⇓P		**P**		**22 05 45.5**	**-0.4**
GAMB	**Gambell** 5.9nm,0.5s,mb4.3	**81.53**	**3**	*e*P		**P**		**22 05 45.4**	**-0.2**
L08A	**Fields** baz=82,SNR=7.4	**81.53**	**41**	⇓P		**P**		**22 05 46.1**	**+0.1**
217A	**Green Valley** baz=82	**81.55**	**53**	⇓P		**P**		**22 05 47.4**	**+1.0**
J07A	**Hines** baz=82,SNR=6.8	**81.60**	**39**	⇑P		**P**		**22 05 46.3**	**0.0**
M09A	**Marrel Ranch,** baz=82,SNR=7.9	**81.68**	**42**	⇓P		**P**		**22 05 47.0**	**+0.2**
O10A	**Cortez Mining,** baz=82	**81.69**	**43**	⇑P		**P**		**22 05 47.1**	**+0.2**
OSD	**Olympics--Snow**	**81.72**	**34**	P		**P**		**22 05 47.5**	**+0.7**
K08A	**Mann Creek Ran** baz=82,SNR=23	**81.74**	**40**	⇓P		**P**		**22 05 47.3**	**+0.2**
X15A	**Humboldt** baz=82,SNR=13	**81.75**	**50**	P		**P**		**22 05 48.1**	**+0.8**
H06A	**Lindquist Farm** baz=82,SNR=22	**81.76**	**38**	⇑P		**P**		**22 05 46.7**	**-0.4**
T13A	**Saint George** baz=82	**81.77**	**47**	⇓P		**P**		**22 05 47.7**	**+0.3**
F05A	**White Salmon** baz=82	**81.79**	**36**	⇑P		**P**		**22 05 46.8**	**-0.4**
TUC	**Tucson** 18nm,1.2s,mb4.4	**81.82**	**52**	*e*P		**P**		**22 05 48.4**	**+0.6**
L09A	**Wilkinson Ranc** baz=82,SNR=11	**81.86**	**41**	⇑P		**P**		**22 05 47.9**	**+0.2**
G06A	**Carlson Farm,** baz=82	**81.88**	**37**	⇑P		**P**		**22 05 47.2**	**-0.5**
I07A	**Izee** baz=82,SNR=21	**81.88**	**39**	⇓P		**P**		**22 05 47.9**	**+0.1**
R12A	**Pony Springs,** baz=82	**81.94**	**46**	⇓P		**P**		**22 05 48.5**	**+0.3**
U14A	**Mt Trumbull** baz=82	**81.99**	**48**	⇑P		**P**		**22 05 49.0**	**+0.5**
E05A	**Randle** baz=82	**82.02**	**36**	⇓P		**P**		**22 05 47.8**	**-0.6**
318A	**Bisbee** baz=82	**82.03**	**53**	⇓P		**P**		**22 05 49.7**	**+0.9**
C04A	**Brinnon** baz=82	**82.05**	**34**	⇑P		**P**		**22 05 47.8**	**-0.7**
W15A	**Williams** baz=82	**82.05**	**49**	⇑P		**P**		**22 05 50.1**	**+1.2**
S13A	**Holt Ranch, En** baz=82	**82.08**	**47**	⇑P		**P**		**22 05 49.6**	**+0.6**
J08A	**Circle Bar Ran** baz=82	**82.10**	**40**	⇑P		**P**		**22 05 49.1**	**+0.3**
F06A	**Goldendale** baz=82	**82.10**	**37**	⇑P		**P**		**22 05 48.7**	**-0.1**
Q12A	**Willow Creek R** baz=82,SNR=6.8	**82.15**	**45**	⇓P		**P**		**22 05 49.4**	**+0.2**
O11A	**Cowboy Ranch,** baz=82	**82.16**	**44**	⇑P		**P**		**22 05 49.7**	**+0.5**
K09A	**Rome** baz=82,SNR=31	**82.20**	**41**	P		**P**		**22 05 49.7**	**+0.3**
218A	**Dragoon** baz=82	**82.23**	**53**	⇑P		**P**		**22 05 51.0**	**+1.1**
D05A	**Enumclaw** baz=82	**82.26**	**35**	⇑P		**P**		**22 05 49.4**	**-0.2**
FMW	**Mount Fremont**	**82.29**	**35**	P		**P**		**22 05 50.0**	**+0.3**
M10A	**I.L. Ranch, Tu** baz=82,SNR=15	**82.31**	**42**	⇓P		**P**		**22 05 50.4**	**+0.4**
P12A	**McGill** baz=82	**82.32**	**44**	⇑P		**P**		**22 05 50.1**	**0.0**
I08A	**Drewsey** baz=82	**82.34**	**39**	⇑P		**P**		**22 05 50.1**	**0.0**
E06A	**Yakima** baz=83	**82.44**	**36**

baz=83,SNR=11
HAWA Hanford 83.17 37 *e*P P 22 05 53.7 -0.5
43nm,1.4s,mb4.8
J10A Berg Farm, Mel 83.18 40 ⇑P P 22 05 54.0 -0.3
baz=83
O13A Hicks Ranch, I 83.27 44 ⇑P P 22 05 55.2 +0.4
baz=83
K11A Parker Ranch, 83.29 41 ⇑P P 22 05 55.0 +0.1
baz=83
M12A Wells 83.30 43 ⇑P P 22 05 55.0 +0.1
baz=83,SNR=9.8
H09A Durkee 83.30 39 ⇑P P 22 05 55.0 +0.1
baz=83
D07A Quincy 83.38 36 ⇑P P 22 05 55.0 -0.2
baz=84
N13A Wendover, West 83.48 44 ⇑P P 22 05 56.5 +0.6
baz=84
E08A Dider Farm, El 83.50 37 ⇑P P 22 05 55.7 -0.1
baz=84
I10A Payette 83.51 40 ⇓P P 22 05 56.2 +0.3
baz=84
G09A Cove 83.57 38 ⇓P P 22 05 56.2 0.0
baz=84
BMO Blue Mountains 83.62 39 *e*P P 22 05 55.9 -0.5
2.4nm,0.7s,mb3.8
C07A Waterville 83.62 35 P P 22 05 56.0 -0.4
baz=84,SNR=7.8
PSI Prapat 83.68 275 P P 22 05 56.9 -0.7
18nm,0.8s,mb4.6,baz=20,slow=2.5,SNR=12
EPH Ephrata 83.68 36 P P 22 05 56.6 -0.1
MSU Marysvale 83.70 46 *e*P P 22 05 57.4 +0.4
F09A S2 Ranch, Elgi 83.73 38 ⇑P P 22 05 56.8 -0.2
baz=84
MFID Camas Ranch 83.75 41 ⇑P P 22 05 57.3 +0.1
baz=84
M13A Montello 83.76 43 ⇓P P 22 05 57.8 +0.6
baz=84
H10A Noah's Angus R 83.81 39 P P 22 05 57.1 -0.3
baz=84,SNR=16
MAW Mawson 83.85 200 P P 22 05 56.5 -0.8
5.7nm,0.6s,mb4.3,baz=108,slow=8.3,SNR=15
D08A Wollman Farm, 83.90 36 P P 22 05 57.8 0.0
baz=84,SNR=8.3
K12A Draper Farm, C 83.93 42 ⇑P P 22 05 58.1 0.0
baz=84
G10A Bishop Farm, J 83.97 39 ⇑P P 22 05 58.2 0.0
baz=84
B07A Winthrop 84.03 35 ⇓P P 22 05 58.0 -0.4
baz=84,SNR=7.0
E09A Wood Farm, Sta 84.03 37 ⇑P P 22 05 58.2 -0.3
baz=84
J12A Stokes Ranch, 84.12 41 ⇓P P 22 05 59.1 +0.1
baz=84
A07A Ashnola River, 84.23 34 ⇑P P 22 05 58.8 -0.5
baz=84,SNR=5.2
C08A Higginbotham F 84.24 36 ⇓P P 22 05 59.0 -0.5
baz=84
D09A Jones Farm, Ri 84.25 37 ⇑P P 22 05 59.2 -0.3
baz=84,SNR=9.1
L13A Double Diamond 84.27 43 ⇑P P 22 05 59.9 +0.2
baz=84
F10A Beach Ranch, E 84.27 38 ⇑P P 22 05 59.4 -0.3
baz=84,SNR=12
H11A Donnelly 84.32 40 P P 22 05 59.9 -0.1
baz=84,SNR=12
M14A Sheep Mountain 84.36 43 ⇑P P 22 06 00.1 -0.1
baz=84
B08A Colville Reser 84.40 35 ⇑P P 22 05 59.4 -0.8
baz=84,SNR=10
K13A Stover Farm, H 84.46 42 ⇑P P 22 06 00.8 +0.1
baz=85
G11A Walters Elk Ra 84.53 39 P P 22 06 00.7 -0.2
baz=85,SNR=26
N15A Stansbury Isla 84.61 44 ⇓P P 22 06 02.8 +1.3
baz=85
E10A Myers Farm, Un 84.62 38 ⇓P P 22 06 01.1 -0.3
baz=85
C09A Chrisman Ranch 84.68 36 ⇑P P 22 06 01.0 -0.6
baz=85
HLID Hailey 84.71 41 *e*P P 22 06 01.7 -0.2
8.8nm,0.8s,mb4.3
HLID Hailey 84.71 41 ⇓P P 22 06 02.1 +0.2
baz=85,SNR=10
A08A Turner Farm, O 84.77 35 ⇑P P 22 06 01.6 -0.5
baz=85,SNR=11
J13A Cove Ranch, Pi 84.78 41 ⇑P P 22 06 02.7 +0.5
baz=85
D10A Wagner Farm, O 84.83 37 P P 22 06 01.7 -0.6
baz=85,SNR=7.3
M15A Larsen Ranch, 84.93 44 ⇓P P 22 06 03.0 0.0
baz=85
H12A Diamond D Ranc 84.94 40 P P 22 06 03.0 0.0
baz=85,SNR=18
K14A Jones Ranch, D 84.99 42 ⇓P P 22 06 03.3 +0.1
baz=85
E11A Bogner Ranch, 85.08 38 P P 22 06 02.6 -1.0
baz=85,SNR=6.4
I13A Wildhorse Cree 85.08 41 ⇑P P 22 06 04.0 +0.4
baz=85
B09A Rice 85.09 36 P P 22 06 03.1 -0.5
baz=85,SNR=7.5
SRU San Rafael 85.12 46 *e*P P 22 06 03.6 -0.3
A09A Danville 85.16 35 ⇑P P 22 06 03.5 -0.4
baz=85,SNR=6.5
H13A Challis 85.32 40 ⇓P P 22 06 04.9 +0.1
baz=85
F12A Elk City 85.33 39 P P 22 06 04.5 -0.3
baz=85,SNR=29
LAZ Ladron 85.48 52 *e*P P 22 06 06.4 +0.6
G13A Cobalt 85.60 40 ⇓P P 22 06 05.7 -0.5
baz=86
MNTX Cornudas Mount 85.70 55 *e*P P 22 06 07.0 0.0
A10A Northport 85.73 35 ⇓P P 22 06 06.3 -0.4
baz=86
IMA2 Indian Mountai 85.74 10 *e*P P 22 06 05.2 -1.1
COLA College 85.75 13 *e*P P 22 06 04.4 -2.0
23nm,1.3s,mb4.7
LPM Los Pinos Moun 85.82 52 *e*P P 22 06 07.4 0.0
PV01 Paradox Valley 86.04 48 P P 22 06 08.1 -0.3
XAN Xi'an 86.06 307 P P 22 06 09.3 +0.7
XAN AMB AMB
comp=Z,17nm,1.0s,mb4.6
XAN AMB AMB
comp=Z,59nm,16.9s
B11A Sandpoint 86.09 36 ⇓P P 22 06 07.9 -0.5
baz=86,SNR=6.0
LTX Lajitas 86.13 58 *e*P P 22 06 09.8 +0.7
comp=Z,36nm,1.3s,mb4.8
G14A Jackson 86.15 40 ⇓P P 22 06 08.7 -0.1
baz=86,SNR=5.9
E13A Victor 86.31 39 ⇑P P 22 06 09.5 0.0
baz=86
A11A Hall Mountain, 86.38 36 P P 22 06 09.9 +0.2
baz=86,SNR=5.8
D13A Huson 86.49 38 P P 22 06 09.5 -0.8
baz=87,SNR=5.5
F14A Wisdom 86.49 40 P P 22 06 10.2 -0.2
baz=87,SNR=7.6
B12A Libby 86.55 36 ⇑P P 22 06 10.2 -0.4
baz=87
G15A Dillon 86.71 40 P P 22 06 11.7 +0.3
baz=87,SNR=11
E14A Clinton 86.72 39 P P 22 06 11.1 -0.3
baz=87,SNR=9.9
C13A Hot Springs 86.72 37 ⇑P P 22 06 10.4 -1.0
baz=87
DLMT Dillon 86.74 40 *e*P P 22 06 11.6 0.0
comp=Z,21nm,1.3s,mb4.6
SNOW Snow King Moun 86.99 42 *e*P P 22 06 13.1 +0.4
comp=Z,13nm,0.8s,mb4.6
F15A Butte 87.04 40 ⇑P P 22 06 12.6 -0.3
baz=87,SNR=7.3
D14A Greenough 87.04 38 P P 22 06 12.0 -0.9
baz=87,SNR=7.2
IMW Indian Meadow 87.07 42 *e*P P 22 06 13.3 +0.1
comp=Z,22nm,1.0s,mb4.7
HHC Hu-ho-hao-te 87.08 315 *e*P P 22 06 17.3 +4.0
HHC S S 22 16 09.3 +2.2
HHC SS SS 22 22 10.8 +3.5
HHC AMB AMB
comp=Z,9.0nm,0.6s,mb4.6
HHC AMB AMB
comp=Z,121nm,4.9s
MOOW Moose Ponds 87.13 42 *e*P P 22 06 13.2 -0.2
comp=Z,4.8nm,0.9s,mb4.1
B13A Whitefish 87.14 37 ⇓P P 22 06 12.7 -0.6
baz=87
LOHW Long Hollow 87.15 42 *e*P P 22 06 13.9 +0.4
comp=Z,3.8nm,0.6s,mb4.2
QLMT Earthquake Lak 87.20 41 *e*P P 22 06 14.2 +0.5
E15A Deer Lodge 87.23 39 ⇓P P 22 06 13.1 -0.8
baz=87
FLWY Flagg Ranch 87.31 42 *e*P P 22 06 14.6 +0.3
comp=Z,21nm,1.0s,mb4.7
BW06 Boulder Array 87.44 44 *e*P P 22 06 14.2 -0.7
comp=Z,3.5nm,0.6s,mb4.2
PDAR Pinedale Array 87.44 44 P P 22 06 14.6 -0.4
comp=Z,6.4nm,0.6s,mb4.4,baz=219,slow=3.2,SNR=52
PDAR PP PP 22 09 47.6 -2.4
comp=Z,1.4nm,1.1s,baz=246,slow=7.3,SNR=7.2
BOZ Bozeman (W) 87.47 40 P P 22 06 14.8 -0.1
baz=88,SNR=9.0
D15A Lincoln 87.61 39 ⇓P P 22 06 15.3 -0.3
baz=88,SNR=11
SMCO Snowmass 87.62 48 *e*P P 22 06 15.8 0.0
comp=Z,7.2nm,1.1s,mb4.3
RWWY Rawlins 88.53 45 *e*P P 22 06 19.6 -0.4
comp=Z,15nm,1.2s,mb4.7
RLMT Red Lodge 88.70 42 *e*P P 22 06 20.6 -0.1
comp=Z,11nm,1.1s,mb4.6
CD2 Chengdu 88.87 303 *e*P P 22 06 24.0 +2.2
CD2 PP PP 22 10 05.3 +3.8
CD2 S S 22 16 24.5 +0.5
CD2 SS SS 22 22 36.3 +2.9
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.7
CD2 AMB AMB
comp=Z,20nm,8.4s
SYO Syowa Base 89.17 193 ⇓*i*X 22 06 19.4
JCT Junction City 89.67 58 *e*P P 22 06 24.4 -1.2
comp=Z,4.3nm,0.6s,mb4.5
EGMT Eagleton 89.72 39 ⇓P P 22 06 25.6 +0.2
baz=90
SNAA Sanae 90.67 179 *e* P 22 06 27.8 -1.6
SNAA *e* 22 06 31.0
SNAA *e* 22 06 38.9
VNA3 Neumayer Olymp 90.81 176 *e* P 22 06 28.9 -1.2
VNA3 *e* 22 06 31.8
VNA3 *e* 22 06 37.1
VNA3 *e* 22 06 41.5
VNA2 Neumayer--Watz 91.25 177 *e* P 22 06 30.8 -1.3
baz=211,slow=3.2
VNA2 *e* 22 06 33.8
VNA2 *e* 22 06 39.2
VNA2 *e* 22 06 42.7
VNA1 Neumayer--Stat 91.48 177 *e* P 22 06 33.1 -0.1
VNA1 *e* 22 06 35.9
VNA1 *e* 22 06 41.3
VNA1 *e* 22 06 44.8
SONM Songino Array 93.37 319 P P 22 06 42.9 +0.7
comp=Z,0.3nm,0.5s,mb3.5,baz=128,slow=3.6,SNR=4.9
YKA Yellowknife Ar 94.36 25 P P 22 06 45.4 -0.9
comp=Z,2.6nm,0.8s,mb4.4,baz=244,slow=4.4,SNR=29
YKA PP PP 22 10 42.1 -1.1
comp=Z,1.0nm,1.1s,baz=249,slow=7.2,SNR=5.6
ZALV Zalesovo Beam 108.06 322 PKiKP PKiKP 22 11 49.0 -2.0
comp=Z,0.5nm,0.5s,baz=104,slow=3.6,SNR=3.3
MKAR Makanchi Array 108.95 314 PKPdf PKiKP 22 11 51.0 -1.9
MKAR Makanchi Array 108.95 314 PKiKP PKiKP 22 11 51.0 -1.9
comp=Z,0.6nm,0.5s,baz=209,slow=1.1,SNR=6.6
FINES FINESS Array B 133.07 344 PKP PKPdf 22 12 36.8 -1.8
comp=Z,0.9nm,0.8s,baz=36,slow=1.5,SNR=2.8
FINES SKPbc SKPbc 22 15 13.4 -2.4
comp=Z,1.0nm,0.6s,baz=5.7,slow=5.6,SNR=4.0
NOA NORSAR Array B 136.29 353 SKPbc SKPbc 22 15 22.9 -3.0
comp=Z,0.5nm,0.7s,baz=28,slow=0.2,SNR=3.8
TSUM Tsumeb 139.89 204 PKhKP 22 12 47.6
comp=Z,1.6nm,0.8s,baz=90,slow=1.0,SNR=4.8
KMBO Kilima Mbogo 139.97 246 PKhKP 22 12 46.7
comp=Z,0.7nm,0.5s,baz=105,slow=1.3,SNR=5.6
KMBO PKP PKPdf 22 12 53.2 +0.5
comp=Z,0.7nm,0.7s,baz=34,slow=20,SNR=4.0
AKASG Malin Array Be 140.41 332 PKP PKPdf 22 12 50.2 -2.2
comp=Z,0.2nm,0.3s,baz=49,slow=1.5,SNR=5.3
MALT Malatya 141.82 310 ⇑*i*P PKPdf 22 12 54.2 -1.1
KWP Kalwaria 143.93 336 ⇑*i*P PKPdf 22 12 57.8 -0.9
STHS Stebnicka Huta 144.66 337 *e*PKP PKPdf 22 13 00.2 +0.3
NIE Niedzica 144.99 338 *e*PX PKPdf 22 13 01.3 +0.8
VRI Vrincioaia 145.02 329 ⇓*i*P PKPdf 22 13 01.4 +0.7
ANTO Ankara 145.09 315 PKP PKPdf 22 13 01.4 +0.5
TRPA Tarpa 145.21 335 ⇓*i*P PKPdf 22 13 01.8 +0.9
HARR Harsova 145.21 326 ⇑*i*P PKPdf 22 13 01.9 +0.9
CLL Collm 145.36 347 ⇑*i*PKPbc PKPbc 22 13 01.7 -0.5
comp=Z,7.0nm,0.9s
CLL *i* PKiKP PKiKP 22 13 04.4 -0.9
comp=Z,6.0nm,0.9s
BRG Berggiesshubel 145.56 346 *e*P PKPbc 22 13 03.5 +0.7
comp=Z,6.7nm,1.1s
MLR Muntele Rosu 145.68 329 ⇑*i*P PKPbc 22 13 04.1 +0.8
DRGR 146.19 333 ⇑*i*P PKPdf 22 13 04.5 +1.9
VYHS Vyhne 146.29 339 *e*PKP PKPbc 22 13 04.8 -0.1
VYHS *e* 02 57 10.5
CSS Prodhromos 146.88 307 *e*PKPbc PKPbc 22 13 05.8 -1.2
KHC Kasperske Hory 147.26 345 *e*PKPbc PKPbc 22 13 06.0 -1.5
KHC PKPab PKPab 22 13 11.0 -0.1
GERES GERESS Array B 147.50 345 PKPbc PKPbc 22 13 07.6 -0.6
comp=Z,1.5nm,0.5s,baz=31,slow=3.1,SNR=17
BZS Buzias 147.59 333 ⇓*i*P PKPbc 22 13 07.4 -1.1
GIVF Givet 147.70 356 *e*PKP1 PKPbc 22 13 07.8 -0.8
BAIF Baives 147.78 357 *e*PKP1 PKPbc 22 13 08.1 -0.8
comp=Z,6.1nm,0.6s
FLN La Foliniere 149.12 2 *e*PKP1 PKPbc 22 13 10.9 -1.3
VTS Vitosha 149.13 328 ⇑*i*P PKPbc 22 13 12.2 -0.2
CDF Champ du Feu 149.13 352 *e*PKP1 PKPbc 22 13 11.5 -0.8
comp=Z,4.5nm,0.6s
LDF La Druitiere 149.31 2 *e*PKP1 PKPbc 22 13 11.2 -1.5
GRR Gorron 149.48 3 *e*PKP1 PKPbc 22 13 11.9 -1.2
comp=Z,7.3nm,0.5s
LOR Lormes 150.59 357 *e*PKP1 PKPbc 22 13 14.7 -1.0
comp=Z,6.2nm,0.6s
SSF Saint Saulge 150.81 357 *e*PKP1 PKPbc 22 13 15.3 -0.9
comp=Z,5.4nm,0.6s
CABF La Chapelle 151.05 353 *e*PKP1 PKPbc 22 13 16.4 -0.4
comp=Z,7.1nm,0.8s
MFF Saint Martin d 151.29 2 *e*PKP1 PKPbc 22 13 16.1 -1.2
BGF Bois d'Agland 151.34 358 *e*PKP1 PKPbc 22 13 17.1 -0.3
ESDC Sonseca Array 157.76 11 PKPab PKPab 22 13 54.4 -1.4
comp=Z,0.4nm,0.4s,baz=316,slow=2.1,SNR=4.8
TORD Torodi Ar. Bea 175.32 184 PKPab PKPab 22 15 12.2 -1.6
comp=Z,0.5nm,0.6s,baz=162,slow=2.7,SNR=3.7

NEIC ***26*** *22:02:35.5, 38.21N×20.31E, h2km, MD3.5(ATH), After ATH.*
CSEM ***26*** *22:02:35.5, 38.21N×20.31E, h2km, MD3.5/4, After ATH*
ATH 26 22:02:35.5, 38.21N×20.31E, h3km, MD3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.22**	**98**	*e*PG	Pg	22 02 40.5	+0.7
VLS				*e*SG	Sg	22 02 43.3	+0.6
RLS	**Riolos of Patr**	**0.93**	**99**	*e*PG	Pg	22 02 53.1	-0.1
RLS				*e*SG	Sg	22 03 06.3	+1.1
EVR	**Evrytania**	**1.37**	**59**	*e*PB	Pb	22 03 01.2	-0.6
EVR				*e*SB	Sb	22 03 20.2	+0.5
KEK	**Kerkira**	**1.55**	**345**	*e*PG	Pg	22 03 04.5	-0.8
ITM	**Ithomi**	**1.64**	**128**	*e*PB	Pb	22 03 06.7	+0.3
ITM				*e*SB	Sb	22 03 28.3	+0.8
THL	**Klokotos Trika**	**1.90**	**44**	*e*PN	Pn	22 03 11.5	+2.8
THL				*e*SN	Sn	22 03 36.8	+3.6

IDC 26 22:07:40.6±1.3, 2197N×14317E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.6/20, mbtmp3.5/6, Error ellipse: s-maj=51.2km s-min=21.8km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**39.12**	**320**	P	P	22 15 09.9	+0.2
	0.3nm,0.5s,baz=136,slow=7.7,SNR=5.6						
WRA	**Warramunga Arr**	**42.54**	**192**	P	P	22 15 38.1	0.0
	0.5nm,0.7s,baz=12,slow=8.5,SNR=8.4						
ASAR	**Alice Springs**	**46.24**	**192**	P	P	22 16 07.6	-0.2
	0.3nm,0.5s,baz=17,slow=10.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**53.99**	**322**	P	P	22 17 05.8	-0.4
	0.4nm,0.5s,baz=125,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**54.50**	**313**	P	P	22 17 10.4	+0.3
	0.3nm,0.6s,baz=87,slow=9.0,SNR=5.1						
YKA	**Yellowknife Ar**	**76.22**	**28**	P	P	22 19 30.7	+0.1
	0.1nm,0.3s,baz=293,slow=5.9,SNR=4.2						

ISCJB ***26*** *22:10:03.8±4.0, 575N×1008×1237E±02, h7km±26km, mb3.5/5, Error ellipse: s-maj=28.3km s-min=11.2km az=17.9*
MAN ***26*** *22:10:08, 600N×123.76E, h14km, mb4.7, ML3.6, MS3.6*
IDC ***26*** *22:10:14.7±14.0, 590N×124.15E, h85km±140km, mb3.3/5, mb1 3.5/5, mb1mx3.3/18, mbtmp3.3/5, Error ellipse: s-maj=144.2km s-min=18.4km az=69.0*
ISC 26 22:10:05.5±4.8, 581N±008×1236E±01, h7km±31km, n9, σ1§12/10, mb3.5/5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.34**	**78**	*e*P	Pn	22 10 33.6	+3.0
GSPH				*e*S	Sx	22 10 54.1	
CTBH	**Cotabato--PC H**	**1.53**	**24**	⇑*e*P	Pn	22 10 31.2	-2.1
CTBH				*i* S	Sx	22 10 50.1	
BUKP	**Musuan**	**2.50**	**35**	*e*P	Pn	22 10 46.9	+0.2
BUKP				*e*S	Sn	22 11 17.3	-0.1
CGP	**Cagayan de Oro**	**2.84**	**22**	⇓*e*P	Pn	22 10 51.0	-0.2
WRA	**Warramunga Arr**	**27.67**	**158**	P	P	22 15 53.9	-0.4
	1.7nm,0.6s,mb3.9,baz=337,slow=10,SNR=22						
ASAR	**Alice Springs**	**30.96**	**161**	P	P	22 16 23.4	0.0
	0.3nm,0.5s,mb3.4,baz=349,slow=7.6,SNR=3.5						
SONM	**Songino Array**	**44.40**	**343**	P	P	22 18 17.1	+0.4
	0.1nm,0.6s,mb2.7,baz=163,slow=5.4,SNR=2.3						
MKAR	**Makanchi Array**	**54.11**	**326**	P	P	22 19 32.6	+1.6
	0.2nm,0.6s,mb3.2,baz=117,slow=7.2,SNR=3.6						
VNDA	**Vanda**	**85.87**	**172**	P	P	22 22 44.4	-1.1
	0.5nm,0.5s,mb4.0,baz=333,slow=4.2,SNR=5.8						

ISCJB ***26*** *22:15:30.2±1.7, 383.2N±005×204E±02, h10km, Error ellipse: s-maj=18.8km s-min=5.8km az=166.5*
THE ***26*** *22:15:30.9, 383.3N×203.8E, h3km, ML2.7*
NEIC ***26*** *22:15:30.9, 383.3N×203.8E, h4km, MD3.4(ATH), ML2.7(THE), After THE.*
CSEM ***26*** *22:15:31.2±0.2, 383.0N×203.8E, h2km, MD3.4, Error ellipse: s-maj=6.9km s-min=1.8km az=66.0*
ATH ***26*** *22:15:31.8, 381.9N×203.9E, h11km±7km, MD3.4/4*
ISC 26 22:15:31.9±1.3, 3832N±005×205E±01, h10km, n9, σ1§07/11, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**145**	⇑*i*PG	Pg	22 15 35.1	-0.5
KFL	**Anninata**	**0.33**	**129**	*e*Pg	Pg	22 15 38.1	-0.3
LKD	**Levkas**	**0.42**	**20**	*e*Pg	Pg	22 15 38.6	-1.5
LKD				*e*Sg	Sg	22 15 45.8	+0.2
RLS	**Riolos of Patr**	**0.83**	**108**	*e*PG	Pg	22 15 47.6	-0.3
EVR	**Evrytania**	**1.21**	**60**	*e*PB	Pb	22 15 58.0	+3.1
IGT	**Igoumenitsa**	**1.22**	**355**	*e*Pg	Pg	22 15 53.9	-1.4
IGT				*e*Sg	Sg	22 16 10.9	-0.2
KEK	**Kerkira**	**1.49**	**340**	*e*PB	Pb	22 16 01.6	+2.0
ITM	**Ithomi**	**1.62**	**134**	*e*PB	Pb	22 16 02.3	+0.4
THL	**Klokotos Trika**	**1.74**	**44**	*e*PN	Pg	22 16 05.6	+0.4

NIED ***26*** *22:16:00, 37.10N×136.40E, h5km, Mw3.8 Best double couple: M0 5.30000×10^14 NP1:ϕs 165.00000°, δ45.00000°, λ40.00000°. NP2:ϕs 44.00000°, δ63.00000°, λ127.00000°.*
ISCJB ***26*** *22:16:32.4±0.9, 37.14N±004×136.51E±005, h6km±6km, mb3.8/6, Error ellipse: s-maj=7.8km s-min=5.2km az=34.3*
IDC ***26*** *22:16:32.2±1.1, 37.05N×136.57E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.4/5, ML2.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/22, Error ellipse: s-maj=20.8km s-min=20.1km az=43.0*
JMA ***26*** *22:16:33.4±0.1, 37.11N×136.55E, h7km±1km, M4.1*
JMA Felt II J1.
NEIC ***26*** *22:16:37.2±1.0, 37.05N×136.59E, h36km±14km, mb4.0/2, Error ellipse: s-maj=14.9km s-min=9.5km az=190.0*
NEIC Recorded [2 JMA] in Ishikawa and [1 JMA] in Toyama Prefectures.
ISC 26 22:16:33.6±0.8, 3712N±004×13655E±005, h6km±5km, n21, σ0§75/28, mb3.8/6, 2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.27**	**136**	⇓P	Pg	22 16 38.9	0.0
JJH				S	Sg	22 16 42.4	0.0
JSZ	**Suzu**	**0.73**	**63**	P	Pg	22 16 47.3	-0.3
JSZ				S	Sg	22 16 57.3	+0.2
JHG	**Hegura jima**	**0.79**	**22**	P	Pg	22 16 48.5	-0.2
JTT	**Ttatey**	**0.81**	**129**	⇓P	Pg	22 16 49.0	-0.2
JTT				S	Sg	22 17 00.4	+0.6
JKG	**Kaga**	**0.86**	**192**	P	Pg	22 16 49.8	-0.3
MAJO	**Matsushiro**	**1.45**	**113**	*e*Pn	Pn	22 16 59.8	-0.5
MAJO				*e*Sn	Sn	22 17 18.9	-0.8
MAT	**Matsushiro**	**1.45**	**113**	P	Pn	22 16 59.6	-0.7
MAT				S	Sn	22 17 19.7	0.0
MJAR	**Matsushiro Arr**	**1.45**	**113**	Pn	Pn	22 17 00.4	+0.1
MJAR				Sn	Sn	22 17 21.4	+1.7
MJAR	**Matsushiro Arr**	**1.45**	**113**	Pn	Pn	22 17 00.4	+0.1
	52nm,0.3s,baz=292,slow=17,SNR=358						
MJAR				Sn	Sn	22 17 21.4	+1.7
	83nm,0.3s,baz=294,slow=21,SNR=18						
JNU	**Nakatsue**	**6.12**	**231**	Pn	Pn	22 18 05.5	+1.0
	0.2nm,0.3s,baz=38,slow=19,SNR=2.2						
KSRS	**Korea Array**	**6.88**	**275**	Pn	Pn	22 18 20.6	+5.6
	0.3nm,0.3s,baz=96,slow=14,SNR=4.0						
KSRS				LR	LR	22 20 21.3	
	comp=Z,96nm,21.5s,baz=338,slow=33						
HIA	**Hailar**	**17.20**	**320**	Pn	Pn	22 20 34.4	+0.1
ULN	**Ulaanbaatar**	**24.11**	**306**	P	P	22 21 50.7	+0.8
SONM	**Songino Array**	**24.53**	**305**	P	P	22 21 54.4	+0.7
	0.4nm,0.6s,mb3.1,baz=110,slow=8.8,SNR=4.9						
KURK	**Kurchatov**	**42.80**	**308**	*e*P	P	22 24 31.7	-0.2
	1.1nm,0.5s,mb3.8						
BRVK	**Borovoye**	**47.68**	**312**	*e*P	P	22 25 09.3	-1.3
	1.5nm,0.7s,mb4.1						
AML	**Almayashu**	**47.71**	**297**	P	P	22 25 11.8	+0.8
INK	**Inuvik**	**56.07**	**27**	*e*P	P	22 26 13.1	+0.2
	62nm,0.8s,mb5.7						
INK	**Inuvik**	**56.07**	**27**	P	P	22 26 12.8	-0.2
	1.4nm,0.7s,mb4.1,baz=284,slow=8.3						
WRA	**Warramunga Arr**	**56.79**	**182**	P	P	22 26 16.3	-2.2
	0.3nm,0.7s,mb3.4,baz=359,slow=7.5,SNR=6.0						
YKA	**Yellowknife Ar**	**65.65**	**29**	P	P	22 27 18.2	0.0
	0.1nm,0.3s,mb3.3,baz=296,slow=6.6,SNR=3.7						

ISCJB ***26*** *22:30:21.4±0.9, 1873S±0.10×728W±0.1, h10km, mb3.9/4, MS4.1/3, Error ellipse: s-maj=17.5km s-min=9.8km az=44.1*
IDC ***26*** *22:30:22.1±2.1, 1883S×7272W, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.8/20, mbtmp4.0/6, ML3.8/3, MS3.8/5, Ms1 3.8/5, ms1mx3.3/27, Error ellipse: s-maj=54.7km s-min=30.6km az=21.0*
NEIC ***26*** *22:30:26.8±0.8, 1880S×7267W, h35km, mb4.0/2, Error ellipse: s-maj=16.8km s-min=13.8km az=215.0*
ISC 26 22:30:23.2±5.7, 1878S±010×728W±01, h9km±37km, n14, σ0§81/12, mb3.9/4, MS4.1/3, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.08**	**61**	Pn	Pn	22 31 38.8	-0.7
	0.6nm,0.3s,baz=254,slow=12,SNR=12						
LPAZ				LR	LR	22 33 03.1	
	comp=Z,209nm,18.5s,baz=99,slow=32						
NNA	**Nana**	**7.81**	**329**	Pn	Pn	22 32 17.4	+0.3
NNA				Sn	Sn	22 33 44.5	-1.2
NNA	**Nana**	**7.81**	**329**	Pn	Pn	22 32 17.4	+0.3
	5.2nm,0.3s,baz=148,slow=15,SNR=5.4						
NNA				Sn	Sn	22 33 44.5	-1.2
	1.7nm,0.3s,baz=244,slow=19,SNR=5.4						
SIV	**San Ignacio**	**11.51**	**78**	Pn	Pn	22 33 07.6	-0.2
	0.4nm,0.3s,baz=265,slow=15,SNR=14						
ATAH	**Atahualpa**	**12.93**	**334**	LR	LR	22 38 15.3	
	comp=Z,291nm,18.0s,baz=264,slow=37						
PLCA	**Paso Flores**	**21.96**	**175**	*e*P	P	22 35 16.4	-0.8
	9.6nm,1.4s,mb4.0						
SDV	**Santo Domingo**	**27.57**	**5**	P	P	22 36 11.7	+1.0
	2.0nm,0.6s,mb3.9						
SDV	**Santo Domingo**	**27.57**	**5**	P	P	22 36 12.4	+1.7
	1.1nm,0.5s,mb3.8,baz=177,slow=18,SNR=3.5						
PCRV	**Puerto La Cruz**	**29.88**	**16**	LR	LR	22 48 36.1	
	comp=Z,171nm,19.4s,MS3.7,baz=5.9,slow=37						
WMOK	**Wichita Mounta**	**58.69**	**335**	P	P	22 40 22.1	+1.0
DBIC	**Dimbokro**	**71.53**	**76**	LR	LR	23 11 53.0	
	comp=Z,144nm,18.6s,MS4.3,baz=304,slow=35						

TORD	**Torodi Ar. Bea**	**79.94**	**72**	P		**P**		**22 42 33.5**	**+0.3**
	1.3nm,0.7s,mb3.9,baz=244,slow=5.5,SNR=8.5								
TORD				LR		LR		23 16 59.5	
	comp=Z,127nm,19.5s,MS4.3,baz=280,slow=35								
YKA	**Yellowknife Ar**	**87.46**	**342**	P		**P**		**22 43 10.6**	**0.0**
	0.4nm,0.8s,mb3.7,baz=136,slow=5.0,SNR=6.0								
SONM	**Songino Array**	**151.02**	**1**	PKPbc		PKPbc		22 50 17.5	+1.0
	0.6nm,0.9s,baz=349,slow=2.9,SNR=3.4								

IDC 26 22:33:43.1±3.2, 1828S×7145W, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML2.9/2, Error ellipse: s-maj=108.7km s-min=39.2km az=2.0, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
LPAZ	**La Paz**	**3.74**	**59**	Pn		Pn	22	34 42.6	+0.6
	0.4nm,0.3s,baz=252,slow=9.6,SNR=3.7								
SIV	**San Ignacio**	**10.18**	**79**	Pn		Pn	22	36 10.9	+0.4
	0.1nm,0.3s,baz=258,slow=17,SNR=2.0								
TORD	**Torodi Ar. Bea**	**78.59**	**72**	P		P	22	45 47.1	0.0
	0.4nm,0.7s,baz=254,slow=5.0,SNR=2.2								
YKA	**Yellowknife Ar**	**87.38**	**341**	P		P	22	46 31.7	+0.1
	0.3nm,0.7s,baz=136,slow=5.1,SNR=5.3								

*ISCJB **26** 22:37:04.1±2.1, 940S±005×12495E±004, h15km±15km, mb4.7/42, MS4.1/11, Error ellipse: s-maj=8.5km s-min=7.1km az=21.1*

*IDC **26** 22:37:04.6±0.6, 946S×12491E, h0km, mb4.3/12, mb1 4.5/15, mb1mx4.5/17, mbtmp4.4/15, ML4.9/3, MS4.2/7, Ms1 4.2/7, ms1mx3.8/22, Error ellipse: s-maj=19.4km s-min=12.7km az=86.0*

*NEIC **26** 22:37:06.0±0.5, 9.16S×124.28E, h35km, mb4.8/10, Error ellipse: s-maj=15.7km s-min=9.2km az=61.0*

NEIC Felt [III] at Kepa, Indonesia.

*MOS **26** 22:37:07.7±2.0, 950S×12497E, h33km, mb4.7/12, Error ellipse: s-maj=19.2km s-min=9.7km az=107.3*

*BJI **26** 22:37:11.7, 870S×12375E, h7km, mB5.1, mb4.7, Ms4.1, Msz3.9*

ISC 26 22:37:07.0±2.2, 945S±005×12493E±005, h21km±16km, h24km±1.4km:pP-P,n91,σ1§41/99,mb4.7/42,MS4.1/11, 4C-1D,Timor region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
BATI	**Kupang**	**1.46**	**239**	Pn		Pn	**22**	**37 31.9**	**-0.2**
	1µm,0.3s,baz=29,slow=1.8,SNR=190s								
BATI				Sn		Sn	**22**	**37 50.7**	**+0.2**
	1µm,0.3s,baz=29,slow=19,SNR=13								
WSI	**Waingapu**	**4.57**	**267⇑**	*e*P		Pn	22	38 14.4	-0.6
WSI				*e*S		Sn	22	39 08.5	+0.9
KAKA	**Kakadu**	**8.05**	**114**	*e*P		Pn	22	39 07.8	+5.0
	81nm,0.6s								
KAKA				*e*S		Sn	22	40 37.6	+4.3
FITZ	**Fitzroy Crossi**	**8.62**	**175⇑**	*i*P		Pn	22	39 10.3	-0.4
	62nm,0.4s								
FITZ				*e*S		Sn	22	40 41.2	-6.2
FITZ	**Fitzroy Crossi**	**8.62**	**175**	*e*Pn		Pn	22	39 03.5	-7.2
	88nm,0.7s								
FITZ				*e*S		Sn	22	40 41.2	-6.2
FITZ	**Fitzroy Crossi**	**8.62**	**175**	Pn		Pn	22	39 10.5	-0.2
	12nm,0.3s,baz=8.2,slow=11,SNR=79								
FITZ				Sn		Sn	22	40 41.3	-6.1
	8.7nm,0.3s,baz=76,slow=7.3,SNR=4.8								
FITZ				LR		LR	22	43 10.0	
	comp=Z,996nm,18.6s,baz=352,slow=42								
WRA	**Warramunga Arr**	**13.83**	**140**	P		Pn	22	40 21.0	-1.0
WRA							22	42 50.2	
WRA	**Warramunga Arr**	**13.83**	**140**	Pn		Pn	22	40 21.0	-1.0
	5.3nm,0.3s,baz=310,slow=15,SNR=110								
WRA				Sn		Sn	22	42 50.2	-4.9
	3.7nm,0.3s,baz=312,slow=24,SNR=15								
WRA				LR		LR	22	46 32.7	
	comp=Z,812nm,18.6s,baz=300,slow=41								
WB2	**Warramunga Arr**	**13.84**	**140**	*e*P		Pn	22	40 20.4	-1.7
WB2				*e*S		Sn	22	42 43.5	-12
ASAR	**Alice Springs**	**16.53**	**150**	Pn		Pn	22	40 56.7	-1.0
	3.4nm,0.3s,baz=320,slow=12,SNR=95								
ASAR				Sn		Sn	22	43 55.5	-5.3
	1.4nm,0.3s,baz=317,slow=21,SNR=6.8								
KKM	**Kota Kinabalu**	**17.68**	**330**	*e*Pn		Pn	22	41 03.0	-9.1
FORT	**Forrest**	**21.42**	**173**	*e*P		P	22	41 54.7	+1.0
	72nm,0.7s,mb5.1								
KLBR	**Kellerberrin**	**23.02**	**196**	*e*P		P	22	42 08.6	-2.1
	44nm,1.1s,mb4.8								
CTA	**Charters Tower**	**23.14**	**120**	*e*P		P	22	42 17.9	+5.8
	10nm,0.9s,mb4.2								
CTA	**Charters Tower**	**23.14**	**120**	P		P	22	42 18.0	+5.9
CTA				pmax		pmax			
	comp=Z,10.0nm,0.9s								
CTA				MLR		MLR			
	comp=Z,570nm,19.8s								
CTA	**Charters Tower**	**23.14**	**120**	P		P	22	42 18.0	+5.9
	comp=Z,9.5nm,0.9s,mb4.2,baz=320,slow=8.7,SNR=3.9								
CTA				LR		LR	22	52 08.1	
	comp=Z,570nm,19.8s,MS4.0,baz=114,slow=39								
MUN	**Mundaring**	**23.83**	**199**	*e*P		P	22	42 17.7	-1.1
NWAO	**Narrogin (SRO)**	**24.42**	**196**	P		P	22	42 23.8	-0.4
NWAO	**Narrogin (SRO)**	**24.42**	**196**	P		P	22	42 23.8	-0.4
	comp=Z,12nm,0.7s,mb4.4,baz=16,slow=9.8,SNR=6.2								
STKA	**Stephens Creek**	**27.14**	**148**	*e*P		P	22	42 51.4	+2.5
	comp=Z,10nm,0.6s,mb4.5								
STKA	**Stephens Creek**	**27.14**	**148**	P		P	22	42 49.3	+0.4
	comp=Z,2.6nm,0.8s,mb3.8,baz=316,slow=14,SNR=3.4								
STKA				LR		LR	22	54 51.2	
	comp=Z,703nm,18.0s,MS4.3,baz=90,slow=39								
PSI	**Prapat**	**28.63**	**294**	P		P	22	43 04.1	+1.7
PSI				pmax		pmax			
	comp=Z,4.0nm,0.6s,mb4.3								
PSI	**Prapat**	**28.63**	**294**	P		P	22	43 04.1	+1.7
	comp=Z,4.0nm,0.6s,mb4.3,baz=178,slow=7.6,SNR=3.9								
QIZ	**Qiongzhong**	**31.97**	**332**	P		P	22	43 26.5	-5.3
QIZ				S		S	22	48 40.5	-1.8
QIZ				LR		LR			
	comp=N,146nm,19.5s								
QIZ				LR		LR			
	comp=Z,150nm,20.8s,MS3.7								
QIZ	**Qiongzhong**	**31.97**	**332**	P		P	22	43 25.9	-5.9
YHNB	**Yeheng**	**34.09**	**354**	P		P	22	43 44.0	-6.2
HNR	**Honiara**	**34.53**	**93**	P		P	22	43 57.0	+2.7
CHG	**Chiang Mai**	**38.02**	**318**	P		P	22	44 24.3	+0.3
	comp=Z,12nm,0.8s,mb4.7								
CHTO	**Chiang Mai**	**38.02**	**318**	*e*P		P	22	44 14.9	-9.1
	comp=Z,4.9nm,0.8s,mb4.3								
CHRT	**Chiangrai**	**38.24**	**320**	⇑P		P	22	44 26.5	+0.7
KMI	**Kunming**	**40.60**	**328**	P		P	22	44 40.8	-4.7
KMI				AP		pP	22	44 48.5	-3.5
KMI				XP		sP	22	44 51.5	-3.2
KMI				PP		PP	22	46 16.3	-3.0
KMI				S		S	22	50 48.5	-5.7
KMI				XS		sS	22	51 00.5	-4.4
KMI				AMB		AMB			
	comp=Z,2.0nm,1.3s,mb3.6								
KMI				AMB		AMB			
	comp=Z,42nm,3.8s								
KMI				LR		LR			
	comp=N,100nm,23.4s,MS3.9								
KMI				LR		LR			
	comp=E,129nm,18.5s,MS3.9								
KMI				LR		LR			
	comp=Z,135nm,20.9s,MS3.8								
WHN	**Wuhan**	**41.04**	**346**	*e*P		P	22	44 50.5	+1.5
NJ2	**Nanjing**	**41.68**	**352**	*e*P		P	22	44 51.5	-2.7
CD2	**Chengdu**	**44.98**	**334**	*e*P		P	22	45 17.5	-3.4
CD2				XP		sP	22	45 29.0	-1.1
CD2				PP		PP	22	47 03.5	-2.9
CD2				S		S	22	51 54.0	-4.4
CD2				AMB		AMB			
	comp=Z,20nm,0.9s,mb5.0								
CD2				AMB		AMB			
	comp=Z,120nm,5.1s								
CD2				LR		LR			
	comp=N,130nm,16.8s								
CD2				LR		LR			
	comp=Z,120nm,16.8s,MS3.9								
XAN	**Xi'an**	**45.85**	**341**	P		P	22	45 27.0	-0.7
XAN				AMB		AMB			
	comp=Z,9.0nm,0.8s,mb4.8								
KSRS	**Korea Array**	**46.74**	**3**	P		P	22	45 36.7	+2.0
KSRS				pmax		pmax			
	comp=Z,1.0nm,0.7s,mb3.9								
KSRS	**Korea Array**	**46.74**	**3**	P		P	22	45 36.6	+1.9
	comp=Z,1.3nm,0.7s,mb4.0,baz=184,slow=9.9,SNR=3.9								
SHL	**Shillong**	**47.40**	**318**	*e*P		P	22	45 45.0	+5.0
MJAR	**Matsushiro Arr**	**47.42**	**15**	P		P	22	45 41.3	+1.2
	comp=Z,1.8nm,0.7s,mb4.1,baz=188,slow=8.6,SNR=3.8								
LZH	**Lanzhou**	**49.46**	**337**	*e*P		P	22	45 55.0	-0.8
LZH				AP		pP	22	46 02.5	+0.1
LZH				XP		sP	22	46 06.0	+1.0
LZH				*e*PP		PP	22	47 50.3	+0.1
LZH				*e*S		S	22	53 00.5	-1.6
LZH				AMB		AMB			
	comp=Z,19nm,1.4s,mb4.9								
LZH				AMB		AMB			
	comp=Z,95nm,7.2s								
LZH				LR		LR			
	comp=N,509nm,15.6s								
LZH				LR		LR			
	comp=Z,799nm,18.5s,MS4.8								
BJT	**Baijiatuan**	**49.88**	**351**	*e*P		P	22	45 54.6	-4.3
LSA	**Lhasa**	**50.72**	**321**	P		P	22	46 06.5	+1.0
LSA	**Lhasa**	**50.72**	**321**	*e*P		P	22	45 57.4	-8.1
	comp=Z,11nm,0.6s,mb5.0								
ODAN	**Odare**	**51.28**	**316**	*e*P		P	22	46 08.9	-0.8
	comp=Z,17nm,0.6s,mb5.1								
TAPN	**Taplejung**	**51.37**	**316**	*e*P		P	22	46 09.9	-0.5
	comp=Z,56nm,1.0s,mb5.5								
HHC	**Hu-ho-hao-te**	**51.55**	**347**	*e*P		P	22	46 08.8	-2.6
HHC				AP		pP	22	46 16.0	-2.1
HHC				XP		sP	22	46 19.5	-1.2
HHC				PP		PP	22	48 06.3	-2.8
HHC				S		S	22	53 28.3	-2.6
HHC				XS		sS	22	53 40.5	-1.4
HHC				SS		SS	22	57 01.3	-6.2
HHC				AMB		AMB			
	comp=Z,13nm,0.7s,mb5.0								
HHC				AMB		AMB			
	comp=Z,170nm,4.4s								
HHC				LR		LR			
	comp=N,146nm,14.3s,MS4.4								
HHC				LR		LR			
	comp=E,185nm,14.3s,MS4.4								
HHC				LR		LR			
	comp=Z,96nm,13.1s,MS4.0								
JIRN	**Jiri**	**52.61**	**316**	*e*P		P	22	46 19.1	-0.5
	comp=Z,26nm,0.7s,mb5.3								
KKN	**Kakani**	**53.32**	**315**	*e*P		P	22	46 24.0	-0.9
	comp=Z,27nm,1.0s,mb5.1								
GKN	**Gorkha**	**53.90**	**315**	*e*P		P	22	46 28.2	-0.9
	comp=Z,32nm,0.9s,mb5.3								
GTA	**Gaotai**	**53.92**	**336**	*e*P		P	22	46 30.0	+1.0
GTA				AP		pP	22	46 35.8	0.0
GTA				XP		sP	22	46 40.0	+1.7
GTA				AMB		AMB			
	comp=Z,4.0nm,0.9s,mb4.3								
MDJ	**Mudanjiang**	**53.98**	**4**	P		P	22	46 31.8	+2.4
MDJ				AP		pP	22	46 37.3	+1.2
MDJ				PP		PP	22	48 34.5	+3.5
MDJ				PCS		PcS	22	51 33.3	-0.2
MDJ				AMB		AMB			
	comp=Z,38nm,1.0s,mb5.3								
MDJ				AMB		AMB			
	comp=Z,74nm,5.0s								
MDJ				LR		LR			
	comp=E,69nm,39.0s								
MDJ				LR		LR			
	comp=Z,77nm,24.2s								
KOLN	**Koldanda**	**54.49**	**314**	*e*P		P	22	46 32.6	-0.8
	comp=Z,26nm,0.7s,mb5.3								
ASAJ	**Asahikawa**	**55.67**	**15**	LR		LR	23	10 19.9	
	comp=Z,95nm,20.0s,MS3.9,baz=119,slow=36								
HIA	**Hailar**	**58.64**	**356**	*e*P		P	22	46 58.7	-3.9
	comp=Z,11nm,0.9s,mb4.9								
HIA	**Hailar**	**58.64**	**356**	*e*P		P	22	46 58.7	-3.8
HIA				pmax		pmax			
	comp=Z,11nm,0.9s								
KLR	**Kul'dur**	**58.74**	**5**	*e*P		P	22	47 08.0	+4.8
ULN	**Ulaanbaatar**	**59.23**	**346**	*d* iP		P	22	47 07.0	+0.4
SONM	**Songino Array**	**59.36**	**346**	P		P	22	47 08.6	+1.1
SONM				pmax		pmax			
	comp=Z,2.0nm,0.6s								
SONM	**Songino Array**	**59.36**	**346**	P		P	22	47 08.6	+1.0
	comp=Z,1.5nm,0.6s,mb4.2,baz=160,slow=8.2,SNR=17								
ZAK	**Zakamensk**	**62.50**	**345**	*e*P		P	22	47 28.7	-0.1
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.2s,mb4.1								
ZAK				pmax		pmax			
	comp=Z,2.0nm,1.8s,mb4.0								
WMQ	**Urumqi**	**62.87**	**331**	*e*P		P	22	47 28.5	-3.0
WMQ				AP		pP	22	47 36.5	-1.8
WMQ				XP		sP	22	47 40.5	-0.3
WMQ				PP		PP	22	49 48.0	-2.1
WMQ				AMB		AMB			
	comp=Z,8.0nm,0.9s,mb4.8								
WMQ				AMB		AMB			
	comp=Z,132nm,6.0s								
WMQ				LR		LR			
	comp=N,97nm,25.8s								
WMQ				LR		LR			
	comp=E,94nm,35.6s								
WMQ				LR		LR			
	comp=Z,68nm,30.8s,MS3.6								
MOY	**Mondy**	**64.28**	**344**	*e*P		P	22	47 41.9	+1.3
BOD	**Bodaibo**	**67.63**	**354**	*e*P		P	22	48 02.8	+0.8
BOD				pmax		pmax			
	comp=Z,12nm,0.9s,mb4.9								
MKAR	**Makanchi Array**	**67.66**	**330**	*i* P		P	22	48 02.5	0.0
MKAR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**67.66**	**330**	P		P	22	48 02.6	+0.2
	comp=Z,3.5nm,0.8s,mb4.4,baz=135,slow=7.9,SNR=43								
TKM2	**Tokmak 2**	**68.80**	**323**	P		P	22	48 02.2	-7.5
UCH	**Uchtor**	**69.04**	**322**	*e*P		P	22	48 01.5	-10
VNDA	**Vanda**	**70.68**	**172**	P		P	22	48 22.8	+2.0
VNDA				LR		LR	23	18 23.5	
VNDA	**Vanda**	**70.68**	**172**	P		P	22	48 22.8	+2.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=346,slow=4.6,SNR=7.4								
VNDA				LR		LR	23	18 23.5	
	comp=Z,319nm,18.3s,MS4.6,baz=340,slow=35								
MAW	**Mawson**	**70.86**	**201**	P		P	22	48 23.6	+1.6
	comp=Z,1.7nm,0.7s,mb4.1,baz=1.1,slow=6.8,SNR=4.6								
YAK	**Yakutsk**	**71.36**	**2**	*e*P		P	22	48 32.8	+7.8
YAK				pmax		pmax			
	comp=Z,11nm,0.4s,mb5.1								
ZAL	**Zalesovo**	**71.67**	**336**	P		P	22	48 26.5	-0.6
ZAL				pmax		pmax			
	comp=Z,3.0nm,0.7s								
ZALV	**Zalesovo Beam**	**71.67**	**336**	P		P	22	48 26.4	-0.6
	comp=Z,3.0nm,0.7s,mb4.3,baz=131,slow=4.7,SNR=17								
MA2	**Magadan**	**71.85**	**13**	*e*P		P	22	48 37.1	+9.1
MA2				pmax		pmax			
	comp=Z,30nm,1.0s,mb5.2								
KURK	**Kurchatov**	**72.10**	**331**	*e*P		P	22	48 22.1	-7.6
	comp=Z,7.3nm,0.9s,mb4.6								
KURK	**Kurchatov**	**72.10**	**331⇑**	*e*P		P	22	48 29.9	+0.2
NVS	**Novosibirsk**	**72.96**	**336**	*e*P		P	22	48 32.9	-1.8
NVS				pmax		pmax			
	comp=Z,12nm,1.8s,mb4.5								
SEY	**Seymchan**	**75.20**	**13**	*i* P		P	22	48 55.8	+8.2
QSPA	**South Pole Qui**	**80.54**	**180**	P		P	22	49 19.8	+2.6
	comp=Z,6.8nm,0.8s,mb4.6,baz=293,slow=1.2,SNR=20								
TIXI	**Tiksi**	**80.97**	**1**	*e*P		P	22	49 15.1	-4.4
	comp=Z,17nm,0.9s,mb5.0								
TIXI	**Tiksi**	**80.97**	**1**	*e*P		P	22	49 25.6	+6.1
TIXI				pmax		pmax			
	comp=Z,17nm,1.0s,mb4.9								
BILL	**Bilibino**	**82.68**	**15**	*e*P		P	22	49 36.9	+8.3
BILL				*e*S		S	22	59 52.3	+7.6
BILL				*e*SS		SS	23	05 10.0	+2.8
BILL				pmax		pmax			
	comp=Z,3.0nm,1.4s,mb4.1								
SVE	**Sverdlovsk**	**84.32**	**330**	*e*P		P	22	49 40.1	+2.9
SVE				pmax		pmax			
	comp=Z,10.0nm,1.1s,mb4.9								
KMBO	**Kilima Mbogo**	**87.53**	**269**	*i* P		P	22	49 57.5	+3.4
KMBO				pmax		pmax			
	comp=Z,3.0nm,1.0s								
KMBO	**Kilima Mbogo**	**87.53**	**269**	P		P	22	49 55.9	+1.8
	comp=Z,2.9nm,1.0s,mb4.5,baz=56,slow=9.2,SNR=7.2								
KMBO				LR		LR	23	25 38.6	
	comp=Z,108nm,18.2s,MS4.3,baz=98,slow=33								
OBN	**Obninsk**	**96.74**	**325**	*e*P		P	22	50 38.7	+2.9
OBN				pmax		pmax			
	comp=Z,7.0nm,1.8s,mb4.8								
YKA	**Yellowknife Ar**	**112.13**	**26**	*i* PKIKP		PKiKP	22	55 43.1	+2.5
YKA				pmax		pmax			
	comp=Z,1.0nm,0.7s								
YKA	**Yellowknife Ar**	**112.13**	**26**	PKiKP		PKiKP	22	55 43.1	+2.5
	comp=Z,0.8nm,0.7s,baz=301,slow=1.8,SNR=12								
PDAR	**Pinedale Array**	**122.17**	**45**	PKP		PKPdf	22	56 02.4	+1.9
	comp=Z,0.4nm,0.7s,baz=262,slow=2.7,SNR=2.4								
TORD	**Torodi Ar. Bea**	**124.31**	**279**	PKP		PKPdf	22	56 06.6	+1.3
	comp=Z,2.0nm,0.8s,baz=74,slow=1.2,SNR=6.4								
LPAZ	**La Paz**	**151.34**	**153**	PKPab		PKPab	22	57 07.8	-0.2
	comp=Z,3.3nm,0.8s,baz=190,slow=4.3,SNR=18								

*IDC **26** 22:45:43.7±1.4, 946S×12488E, h0km, mb3.3/2, mb1 3.9/5, mb1mx3.7/14, mbtmp3.7/5, ML4.0/3, Error ellipse: s-maj=28.5km s-min=21.4km az=108.0*

*ISCJB **26** 22:45:46.4±0.7, 965S±006×12499E±005, h33km, mb3.7/4, Error ellipse: s-maj=9.6km s-min=6.3km az=35.8*

*NEIC **26** 22:45:48.8±0.7, 968S×12456E, h35km, mb4.0/2, Error ellipse: s-maj=26.2km s-min=9.9km az=56.0*

ISC 26 22:45:48.8±0.7, 965S±006×12492E±005, h35km, n12, σ1§32/20, mb3.7/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
BATI	**Kupang**	**1.36**	**246**	Pn		Pn	**22**	**46 11.2**	**0.0**
	165nm,0.3s,baz=48,slow=1.5,SNR=272								
BATI				Sn		Sn	**22**	**46 29.3**	**+1.2**
	455nm,0.3s,baz=89,slow=14,SNR=9.5								
KAKA	**Kakadu**	**7.99**	**113**	*e*P		Pn	22	47 47.4	+5.0
	6.3nm,0.4s								
KAKA				*e*S		Sn	22	49 13.7	+2.1
FITZ	**Fitzroy Crossi**	**8.44**	**175**	*e*P		Pn	22	47 49.9	+1.3
	10nm,0.4s								
FITZ				*e*S		Sn	22	49 20.4	-2.3
FITZ	**Fitzroy Crossi**	**8.44**	**175**	*e*Pn		Pn	22	47 49.6	+0.9
FITZ				*e*Sn		Sn	22	49 22.2	-0.5
FITZ	**Fitzroy Crossi**	**8.44**	**175**	Pn		Pn	22	47 50.0	+1.4
	2.0nm,0.3s,baz=0.5,slow=12,SNR=16								
FITZ				Sn		Sn	22	49 20.4	-2.2
	2.1nm,0.3s,baz=60,slow=17,SNR=7.0								
WRA	**Warramunga Arr**	**13.70**	**139**	Pn		Pn	22	49 00.9	+0.3
	0.6nm,0.3s,baz=321,slow=14,SNR=9.6								
WRA				Sn		Sn	22	51 29.4	-2.2
	0.9nm,0.3s,baz=319,slow=25,SNR=8.7								
WB2	**Warramunga Arr**	**13.70**	**139**	*e*P		Pn	22	49 02.1	+1.3
WB2				*e*S		Sn	22	51 25.3	-6.5
ASAR	**Alice Springs**	**16.38**	**149**	Pn		Pn	22	49 37.5	+1.4
	0.4nm,0.3s,baz=318,slow=12,SNR=6.4								
ASAR				Sn		Sn	22	52 33.4	-3.4
	0.3nm,0.3s,baz=324,slow=25,SNR=7.1								
LSA	**Lhasa**	**50.87**	**321**	*e*P		P	22	54 46.0	-0.4
	1.1nm,0.6s,mb4.0								
SONM	**Songino Array**	**59.54**	**346**	P		P	22	55 48.1	-0.6
	0.3nm,0.8s,mb3.4,baz=169,slow=9.3,SNR=2.9								
MKAR	**Makanchi Array**	**67.82**	**330**	P		P	22	56 42.0	-1.3
	0.3nm,0.7s,mb3.4,baz=132,slow=6.7,SNR=4.1								
KURK	**Kurchatov**	**72.26**	**331**	*e*P		P	22	57 09.9	-0.5
	1.5nm,0.9s,mb3.9								

*IDC **26** 22:58:52.5±0.6, 090N×12621E, h0km, mb4.4/16, mb1 4.5/17, mb1mx4.5/20, mbtmp4.4/17, ML4.2/1, MS3.9/7, Ms1 3.9/7, ms1mx3.6/24, Error ellipse: s-maj=27.4km s-min=11.8km az=80.0*

*BJI **26** 22:58:52.3, 094N×126.18E, h7km, mB5.2, mb4.7, Ms4.5, Msz4.0*

*NEIC **26** 22:58:53.2±0.3, 102N×12650E, h10km, mb4.7/20, Error ellipse: s-maj=13.0km s-min=6.6km az=71.0*

*MOS **26** 22:58:55.7±1.7, 093N×126.17E, h33km, mb4.9/19, Error ellipse: s-maj=17.8km s-min=7.3km az=111.0*

*ISCJB **26** 22:58:57.0±1.1, 094N±004×126.30E±006, h48km±10km, mb4.6/56, MS3.9/14, Error ellipse: s-maj=10.9km s-min=6.2km az=165.8*

ISC 26 22:58:59.2±0.9, 092N±004×12631E±006, h51km±8km, h6km±5.3km:pP-P,n109,σ1§21/109,mb4.6/56,MS3.9/14, 2C-1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
AAI	**Ambon**	**4.95**	**158**	P		Pn	**23**	**00 12.4**	**+1.3**
	134nm,0.5s								
CTBH	**Cotabato--PC H**	**6.59**	**342**	*e*P		Pn	23	00 33.6	+0.1
CTBH				*e*S		Sn	23	01 45.3	-2.0
PCI	**Palu**	**6.72**	**254**	P		Pn	23	00 36.6	+1.3
	111nm,1.1s								
BUKP	**Musuan**	**7.02**	**350**	*e*P		Pn	23	00 48.1	+8.6
KKM	**Kota Kinabalu**	**11.28**	**297**	*e*Pn		Pn	23	01 38.0	+0.1
KAKA	**Kakadu**	**14.85**	**156**	*e*Pn		Pn	23	02 22.5	-3.6
	95nm,0.8s								
KSM	**Kuching**	**16.00**	**272**	*e*Pn		Pn	23	02 42.5	+1.5
BJI	**Banjamegara**	**18.48**	**243**	P		Pn	23	03 12.0	+0.3
	54nm,1.7s								
FITZ	**Fitzroy Crossi**	**18.91**	**182**	*e*P		Pn	23	03 14.7	-2.2
	16nm,0.6s								
FITZ	**Fitzroy Crossi**	**18.91**	**182**	P		Pn	23	03 14.1	-2.8

comp=Z,190nm,16.8s,MS4.0
MJAR Matsushiro Arr 37.12 16 P **P** **23 06 04.9 +0.1**
comp=Z,6.0nm,0.9s,mb4.4,baz=189,slow=8.8,SNR=10
MJAR LR LR 23 20 02.1
comp=Z,163nm,21.8s,MS3.8,baz=185,slow=34
MAJO Matsushiro 37.12 16 *e*P **P** **23 06 07.2 +2.3**
comp=Z,6.0nm,0.7s,mb4.5
MAJO Matsushiro 37.12 16 *e*P **P** **23 06 07.2 +2.3**
MAJO pmax pmax
comp=Z,6.0nm,0.7s,mb4.5
MAT Matsushiro 37.12 16 P **P** **23 06 05.4 +0.5**
BJT Baijiatuau 39.99 348 *e*P **P** **23 06 25.8 -3.1**
comp=Z,6.2nm,0.7s,mb4.5
BJT Baijiatuau 39.99 348 *e*P **P** **23 06 25.8 -3.1**
BJT pmax pmax
comp=Z,6.0nm,0.7s
BJI Beijing 40.01 348 P **P** **23 06 30.0 +0.9**
BJI AMB AMB
comp=Z,7.0nm,0.7s,mb4.5
BJI LR LR
comp=Z,123nm,34.6s,MS3.5
LZH Lanzhou 40.73 332 *e*P **P** **23 06 36.5 +1.4**
LZH AP pP 23 06 41.3 -7.3
LZH XP sP 23 06 43.8 -11
LZH *e*PP PP 23 08 14.0 +4.2
LZH *e*S **S** **23 12 47.5 +5.6**
LZH XS sS 23 12 55.5 -9.2
LZH AMB AMB
comp=Z,21nm,1.5s,mb4.5
LZH AMB AMB
comp=Z,89nm,5.7s
LZH LR LR
comp=N,414nm,13.2s
LZH LR LR
comp=Z,832nm,17.5s,MS4.7
SHL Shillong 41.25 309 *e*P **P** **23 06 38.0 -1.6**
HHC Hu-ho-hao-te 41.93 343 *e*P **P** **23 06 46.0 +1.1**
HHC AP pP 23 06 50.3 -8.1
HHC PP PP 23 08 26.8 +4.1
HHC S **S** **23 13 04.0 +4.4**
HHC XS sS 23 13 11.3 -11
HHC SS SS 23 16 06.0 -2.0
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.5
HHC AMB AMB
comp=Z,238nm,4.9s
HHC LR LR
comp=N,192nm,9.5s
HHC LR LR
comp=E,175nm,13.1s
HHC LR LR
comp=Z,149nm,21.4s
MDJ Mudanjiang 43.60 3 P **P** **23 07 00.0 +1.6**
MDJ AP pP 23 07 02.8 -9.2
MDJ XP sP 23 07 04.3 -14
MDJ PP PP 23 08 43.0 +2.3
MDJ AMB AMB
comp=Z,15nm,1.0s,mb4.7
MDJ AMB AMB
comp=Z,181nm,5.3s
MDJ LR LR
comp=N,71nm,27.0s
MDJ LR LR
comp=Z,99nm,23.0s,MS3.7
LSA Lhasa 44.02 314 P **P** **23 07 02.5 +0.6**
LSA Lhasa 44.02 314 *e*P **P** **23 07 02.2 +0.2**
comp=Z,4.1nm,0.6s,mb4.3
LSA Lhasa 44.02 314 *e*P **P** **23 07 02.2 +0.3**
LSA pmax pmax
comp=Z,4.0nm,0.6s,mb4.3
GTA Gaotai 45.30 331 *e*P **P** **23 07 14.5 +2.5**
GTA AMB AMB
comp=Z,6.0nm,0.9s,mb4.4
GTA AMB AMB
comp=Z,59nm,3.8s
GTA LR LR
comp=N,91nm,16.7s,MS4.0
GTA LR LR
comp=E,143nm,17.5s,MS4.0
GTA LR LR
comp=Z,154nm,16.3s,MS4.0
TAPN Taplejung 45.38 309 *e*P **P** **23 07 12.6 -0.3**
comp=Z,5.2nm,0.5s,mb4.6
ODAN Odare 45.40 308 *e*P **P** **23 07 13.0 0.0**
comp=Z,20nm,1.0s,mb4.9
JIRN Jiri 46.72 308 *e*P **P** **23 07 23.0 -0.4**
comp=Z,19nm,0.9s,mb5.0
KKN Kakani 47.49 308 *e*P **P** **23 07 28.4 -1.0**
comp=Z,12nm,0.8s,mb4.8
GKN Gorkha 48.09 308 *e*P **P** **23 07 32.9 -1.2**
KLR Kul'dur 48.35 5 *e*P **P** **23 07 35.7 +0.1**
HIA Hailar 48.49 354 *e*P **P** **23 07 35.3 -1.4**
comp=Z,10nm,0.9s,mb4.8
HIA Hailar 48.49 354 *e*P **P** **23 07 35.3 -1.4**
HIA pmax pmax
comp=Z,10.0nm,0.9s
KOLN Koldanda 48.82 307 *e*P **P** **23 07 38.0 -1.6**
comp=Z,22nm,0.8s,mb5.2
ULN Ulaanbaatar 49.65 343 *e*P **P** **23 07 44.4 -1.2**
comp=Z,3.0nm,0.8s,mb4.4
ULN Ulaanbaatar 49.65 343 *e*P **P** **23 07 44.4 -1.2**
ULN pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
HYB Hyderabad 49.72 292 *e*P **P** **23 07 43.0 -3.7**
HYB Hyderabad 49.72 292 *i*P **P** **23 07 43.0 -3.7**
SONM Songino Array 49.82 343 P **P** **23 07 47.1 +0.2**
comp=Z,3.5nm,0.9s,mb4.4,baz=156,slow=7.1,SNR=18
CIT Chita 52.03 350 *e*P **P** **23 08 06.3 +2.8**
CIT *e* 23 08 13.9
ZAK Zakamensk 53.03 342 *e*P **P** **23 08 11.8 +0.9**
ZAK *e* 23 09 19.6
ZAK pmax pmax
comp=Z,2.0nm,1.3s,mb3.9
ZAK pmax pmax
comp=Z,2.0nm,1.0s,mb4.0
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.9
TLY Talaya 54.06 343 *e*P **P** **23 08 18.8 +0.4**
comp=Z,2.3nm,0.6s,mb4.3
TLY Talaya 54.06 343 *e*P **P** **23 08 18.8 +0.4**
TLY pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
MOY Mondy 54.87 341 *e*P **P** **23 08 28.4 +4.1**
THN Thein Dam 56.95 309 *e*P **P** **23 08 34.2 -5.4**
BOD Bodaibo 57.57 352 *e*P **P** **23 08 44.3 +0.9**
BOD pmax pmax
comp=Z,12nm,1.1s,mb4.8
MKAR Makanchi Array 59.62 326 P **P** **23 08 56.4 -1.5**
MKAR LR LR 23 34 04.2
MKAR Makanchi Array 59.62 326 P **P** **23 08 56.4 -1.5**
comp=Z,1.4nm,0.5s,mb4.2,baz=122,slow=7.5,SNR=27
MKAR LR LR 23 34 04.2
comp=Z,85nm,19.2s,MS3.9,baz=263,slow=35
TKM2 Tokmak 2 61.58 320 *e*P **P** **23 09 10.3 -1.0**
comp=Z,5.8nm,0.9s,mb4.7
TKM2 Tokmak 2 61.58 320 *e*P **P** **23 09 10.3 -1.0**
TKM2 pmax pmax
comp=Z,6.0nm,0.9s,mb4.7
UCH Uchtor 61.96 319 *e*P **P** **23 09 14.0 0.0**
comp=Z,4.6nm,0.8s,mb4.7
AML Almayashu 62.46 318 *e*P **P** **23 09 17.0 -0.3**
comp=Z,11nm,1.1s,mb4.9
EKS2 Erkin-Say 62.65 319 *e*P **P** **23 09 17.8 -0.8**
comp=Z,6.6nm,1.0s,mb4.7
ZALV Zalesovo Beam 62.89 334 P **P** **23 09 18.7 -1.2**
comp=Z,1.9nm,0.6s,mb4.4,baz=115,slow=5.7,SNR=8.4
ZAL Zalesovo 62.90 334 P **P** **23 09 18.7 -1.2**
KURK Kurchatov 63.88 328 *e*P **P** **23 09 25.4 -1.1**
comp=Z,16nm,0.8s,mb5.1
KURK Kurchatov 63.88 328 *e*P **P** **23 09 25.5 -1.0**
KURK pmax pmax
comp=Z,15nm,0.8s,mb5.1
NVS Novosibirsk 64.18 334 *e*P **P** **23 09 26.5 -1.9**
NVS pmax pmax
comp=Z,18nm,1.9s,mb4.8
BRVK Borovoye 69.51 328 *e*P **P** **23 10 01.2 -1.2**
comp=Z,18nm,1.1s,mb4.9
BRVK Borovoye 69.51 328 *e*P **P** **23 10 01.2 -1.1**
BRVK pmax pmax
comp=Z,17nm,1.1s,mb4.9
TIXI Tiksi 70.64 1 *e*P **P** **23 10 06.8 -2.1**
comp=Z,3.9nm,0.4s,mb4.7
TIXI Tiksi 70.64 1 *e*P **P** **23 10 09.9 +1.0**
TIXI pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
BILL Bilibino 72.36 15 *e*P **P** **23 10 28.1 +8.8**
BILL pmax pmax
comp=Z,1.0nm,0.6s,mb3.9
AKTK Aktyubinsk 75.59 322 P **P** **23 10 38.2 -0.4**
AKTO Aktyubinsk 75.59 322 P **P** **23 10 38.2 -0.4**
AKTO pmax pmax
comp=Z,2.0nm,0.6s,mb4.2
AKTO Aktyubinsk 75.59 322 P **P** **23 10 38.2 -0.3**
comp=Z,2.4nm,0.6s,mb4.3,baz=99,slow=8.8,SNR=8.2
SVE Sverdlovsk 76.12 329 *e*P **P** **23 10 41.2 -0.3**
SVE pmax pmax
comp=Z,15nm,0.9s,mb4.9
ARU Arti 77.08 328 *e*P **P** **23 10 45.6 -1.3**
comp=Z,8.2nm,0.8s,mb4.7
ARU Arti 77.08 328 *d i*P **P** **23 10 48.2 +1.4**
ARU *e* 23 10 56.7
ARU 23 13 40.2
ARU S S 23 20 35.1 +3.4
ARU SS SS 23 25 35.6 +5.8
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.6
OPO Ambohidratompo 79.98 251 P **P** **23 11 03.1 -0.5**
comp=Z,2.1nm,0.8s,mb4.1,baz=127,slow=5.1,SNR=2.8
VNDA Vanda 80.71 173 P **P** **23 11 06.2 -0.2**
comp=Z,3.1nm,0.7s,mb4.3,baz=313,slow=6.2,SNR=12
VNDA LR LR 23 47 24.1
comp=Z,225nm,18.9s,MS4.5,baz=348,slow=36
MAW Mawson 80.99 200 LR LR 23 42 10.6
comp=Z,75nm,21.6s,MS4.0,baz=69,slow=32
ZEI Tsey 83.79 313 *e*P **P** **23 11 22.0 -1.2**
PRGR Permogore 84.76 332 *e*P **P** **23 11 28.0 +0.3**
PRGR *e*S S 23 22 00.3 +8.8
PRGR *e* 23 22 38.9
PRGR pmax pmax
comp=Z,14nm,1.1s,mb5.0
KIV Kislovodsk 84.76 314 *e*P **P** **23 11 30.9 +2.8**
KIV Kislovodsk 84.76 314 *e*P **P** **23 11 30.9 +2.8**
IMA2 Indian Mountai 85.10 24 *e*P **P** **23 11 27.6 -1.7**
VRHR Novokhopersk 85.94 321 *e*P **P** **23 11 34.0 +0.2**
VRHR pmax pmax
comp=Z,10.0nm,0.6s,mb5.2
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.9s
MALT Malatya 87.77 308 *e*P **P** **23 11 42.5 -0.5**
comp=E,12nm,1.4s,mb4.9
MALT Malatya 87.77 308 *e*P **P** **23 11 42.5 -0.5**
MALT pmax pmax
comp=Z,12nm,1.4s,mb4.9
KMBO Kilima Mbogo 89.07 269 LR LR 23 48 17.4
comp=Z,76nm,21.2s,MS4.1,baz=98,slow=33
OBN Obninsk 89.10 325 *e*P **P** **23 11 50.7 +1.8**
OBN pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
QSPA South Pole Qui 90.85 180 *e*P **P** **23 11 57.4 +0.8**
comp=Z,2.4nm,0.6s,mb4.7
ARCES ARCESS Array B 92.92 340 P **P** **23 12 07.9 +1.5**
comp=Z,3.4nm,0.8s,mb4.8,baz=46,slow=10,SNR=4.0
AKASG Malin Array Be 93.79 321 P **P** **23 12 12.9 +2.1**
comp=Z,0.1nm,0.2s,mb3.8,baz=70,slow=3.7,SNR=2.9
FINES FINESS Array B 94.09 332 P **P** **23 12 14.1 +2.2**
comp=Z,0.8nm,0.7s,mb4.3,baz=111,slow=4.4,SNR=2.5
BW06 Boulder Array 113.73 42 PKiKP PKiKP 23 17 31.6 -0.8
TORD Torodi Ar. Bea 123.34 286 PKP PKPdf 23 17 53.1 +1.5
comp=Z,1.3nm,0.7s,baz=54,slow=1.8,SNR=6.2
TORD PKKPbc PKKPbc 23 27 43.5 +2.4
comp=Z,0.6nm,0.8s,baz=279,slow=2.5,SNR=3.8

*IDC **26** 23:06:26.8±8.4, 5451N×16170W, h32km±59km, mb3.8/13, mb1 4.0/15, mb1mx3.8/26, mbtmp3.8/15, ML3.7/2, Error ellipse: s-maj=37.4km s-min=20.9km az=163.0*
*ISCJB **26** 23:06:27.2±1.1, 545N±0.1×1615W±0.1, h52km±7km, mb4.0/13, Error ellipse: s-maj=20.0km s-min=5.5km az=146.7*
*NEIC **26** 23:06:27.9±0.9, 5441N×16156W, h47km±5km, ML3.6(AEIC), Error ellipse: s-maj=17.1km s-min=5.3km az=153.0*

ISC 26 23:06:27.6±1.2, 544N±01×1614W±01, h45km±8km, n28, σ1§04/32, mb4.0/13, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SDPT	**Sand Point**	**1.10**	**30**	*e*P	**Pn**	**23 06 46.8**	**+0.2**
SDPT				*e*S	**Sn**	**23 06 57.5**	**-3.1**
FALS	**False Pass**	**1.24**	**293**	P	**Pn**	**23 06 47.1**	**-1.3**
AKUT	**Akutan**	**2.56**	**266**	*e*Pn	**Pn**	**23 07 06.4**	**-0.1**
AKUT				*e*Sn	**Sn**	**23 07 37.4**	**+1.0**
UNV	**Unalaska Valle**	**3.04**	**262**	*e*Pn	**Pn**	**23 07 12.2**	**-0.8**
UNV				*e*Sn	**Sn**	**23 07 48.5**	**+0.4**
KDAK	**Kodiak Island**	**6.00**	**52**	Pn	**Pn**	**23 07 53.4**	**-0.3**
	1.5nm,0.3s,baz=188,slow=9.3,SNR=21						
KDAK				Sn	**Sn**	**23 08 58.3**	**-2.7**
	1.1nm,0.3s,baz=159,slow=23,SNR=7.7						
SVW2	**Sparrevohn**	**7.41**	**23**	*e*Pn	**Pn**	**23 08 14.9**	**+2.0**
SVW2				*e*Sn	**Sn**	**23 09 38.5**	**+2.9**
TTA	**Tatalina**	**9.01**	**16**	*e*Pn	**Pn**	**23 08 35.7**	**+0.8**
	7.2nm,1.0s						
TTA				*e*Sn	**Sn**	**23 10 14.3**	**-0.4**
DAWY	**Dawson**	**14.78**	**40**	*e*Pn	**Pn**	**23 09 54.8**	**+1.5**
INK	**Inuvik**	**19.06**	**32**	P	**Pn**	**23 10 45.8**	**-1.0**
	0.2nm,0.3s,baz=230,slow=11,SNR=7.2						
YKA	**Yellowknife Ar**	**25.28**	**52**	P	**P**	**23 11 50.4**	**+1.2**
YKA				PcP	PcP	23 15 21.3	+0.4
YKA	**Yellowknife Ar**	**25.28**	**52**	P	**P**	**23 11 50.4**	**+1.2**
	0.3nm,0.4s,mb3.1,baz=268,slow=9.1,SNR=13						
YKA				PcP	PcP	23 15 21.3	+0.4
	0.2nm,0.6s,baz=285,slow=1.8,SNR=4.6						
KSRS	**Korea Array**	**49.80**	**281**	P	**P**	**23 15 14.6**	**-0.9**
	2.6nm,0.9s,mb4.2,baz=44,slow=8.1,SNR=5.4						
SONM	**Songino Array**	**54.23**	**304**	P	**P**	**23 15 47.8**	**-0.6**
	2.0nm,0.9s,mb4.0,baz=43,slow=7.8,SNR=14						
SONM				PcP	PcP	23 16 52.3	+0.2
	0.6nm,0.8s,baz=67,slow=3.7,SNR=3.6						
ARCES	**ARCESS Array B**	**56.27**	**357**	P	**P**	**23 16 02.4**	**-0.3**
	7.8nm,0.9s,mb4.7,baz=30,slow=11,SNR=3.0						
ZALV	**Zalesovo Beam**	**59.00**	**327**	P	**P**	**23 16 21.6**	**-0.4**
	0.3nm,0.3s,mb3.8,baz=54,slow=7.3,SNR=2.6						
KAF	**Kangasniemi**	**63.67**	**356**	*e*p	**P**	**23 16 50.0**	**-3.5**
FINES	**FINESS Array B**	**64.35**	**356**	P	**P**	**23 16 57.7**	**-0.3**
	3.1nm,0.9s,mb4.4,baz=359,slow=7.6,SNR=8.3						
NB2	**NORSAR Subarra**	**64.76**	**4**	P	**P**	**23 17 00.6**	**-0.1**
	comp=Z,5.6nm,1.1s,mb4.5,baz=358,slow=6.9						
NOA	**NORSAR Array B**	**64.76**	**4**	P	**P**	**23 17 00.9**	**+0.2**
	comp=Z,2.9nm,1.0s,mb4.3,baz=356,slow=6.6,SNR=6.7						
MKAR	**Makanchi Array**	**65.70**	**317**	P	**P**	**23 17 06.6**	**-0.4**
	comp=Z,0.4nm,0.5s,mb3.7,baz=54,slow=6.2,SNR=6.1						
AKTK	**Aktyubinsk**	**70.44**	**334**	P	**P**	**23 17 36.7**	**+0.1**
AKTO	**Aktyubinsk**	**70.44**	**334**	P	**P**	**23 17 36.7**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.3,baz=48,slow=4.9,SNR=12						
AKASG	**Malin Array Be**	**74.89**	**353**	P	**P**	**23 18 02.8**	**-0.3**
	comp=Z,2.9nm,0.6s,mb4.4,baz=8.9,slow=5.9,SNR=14						
GERES	**GERESS Array B**	**77.05**	**3**	P	**P**	**23 18 15.6**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.6,baz=343,slow=4.2,SNR=4.6						
ESDC	**Sonseca Array**	**84.32**	**17**	P	**P**	**23 18 55.4**	**+1.0**
	comp=Z,1.8nm,0.9s,mb4.2,baz=339,slow=4.7,SNR=5.2						
WRA	**Warramunga Arr**	**92.06**	**238**	P	**P**	**23 19 32.1**	**+0.6**
	comp=Z,0.3nm,0.8s,mb3.7,baz=18,slow=6.0,SNR=2.7						
TSUM	**Tsumeb**	**144.86**	**2**	PKP	PKPdf	23 25 59.1	-0.3
	comp=Z,2.7nm,0.8s,baz=5.1,slow=6.7,SNR=3.6						
MATP	**Matopo**	**145.25**	**344**	PKPbc	PKPbc	23 26 00.2	+0.4
	comp=Z,3.6nm,0.9s,baz=7.6,slow=1.3,SNR=8.1						

IDC 26 23:37:54.7±24.0, 059S×1281W, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/21, mbtmp3.6/4, ML3.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/22, Error ellipse: s-maj=609.6km s-min=65.7km az=166.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**10.72**	**48**	Pn	Pn	23 40 30.7	+1.0
	0.2nm,0.3s,baz=219,slow=14,SNR=5.0						
DBIC				LR	LR	23 43 23.1	
	comp=Z,52nm,20.6s,baz=144,slow=31						
TORD	**Torodi Ar. Bea**	**19.83**	**46**	P	Pn	23 42 26.8	-1.9
	0.2nm,0.3s,baz=231,slow=12,SNR=8.0						
TORD				LR	LR	23 50 06.4	
	comp=Z,70nm,18.0s,baz=130,slow=37						
GERES	**GERESS Array B**	**54.30**	**21**	P	P	23 47 21.9	-0.9
	0.3nm,0.5s,baz=229,slow=6.0,SNR=3.7						
NOA	**NORSAR Array B**	**64.17**	**13**	P	P	23 48 31.6	+0.7
	0.5nm,0.9s,baz=208,slow=6.4,SNR=2.5						

*ATH **26** 23:40:57.4, 38.18N×20.18E, h8km±2km, MD3.3/6*
*NEIC **26** 23:40:57.4, 38.18N×20.17E, h8km, MD3.3(ATH), ML2.8(THE), After ATH*
*ISCJB **26** 23:40:58.6±1.2, 3834N±004×2032E±0.10, h8km, Error ellipse: s-maj=12.1km s-min=4.1km az=156.5*
*THE **26** 23:40:58.7, 3837N×2029E, h1km, ML3.5*
*CSEM **26** 23:40:59.2±0.4, 3835N×2032E, h10km, MD3.3, Error ellipse: s-maj=9.7km s-min=2.7km az=75.0*

ISC 26 23:40:58.7±1.7, 3834N±005×203E±01, h5km±12km, n11, σ0§86/18, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.30**	**123**	*e*PB	**Pg**	**23 41 04.7**	**+0.2**
VLS				*e*SB	**Sg**	**23 41 08.7**	**+0.3**
KFL	**Anninata**	**0.47**	**119**	*e*Pg	**Pg**	**23 41 07.5**	**-0.2**
KFL				*e*Sg	**Sg**	**23 41 14.5**	**+0.8**
LKD	**Levkas**	**0.47**	**39**	*e*Pg	**Pg**	**23 41 07.3**	**-0.5**
LKD				*e*Sg	**Sg**	**23 41 13.4**	**-0.6**
RLS	**Riolos of Patr**	**0.98**	**106**	*e*PB	**Pb**	**23 41 16.8**	**-1.4**
IGT	**Igoumenitsa**	**1.19**	**2**	P	**Pg**	**23 41 20.2**	**-1.4**
IGT				S	**Sg**	**23 41 38.6**	**+1.5**
IGT	**Igoumenitsa**	**1.19**	**2**	*e*Pg	**Pg**	**23 41 20.2**	**-1.4**
IGT				*e*Sg	**Sg**	**23 41 37.7**	**+0.7**
IGT	**Igoumenitsa**	**1.19**	**2**	*e*Pg	**Pg**	**23 41 20.2**	**-1.4**
IGT				*e*Sg	**Sg**	**23 41 37.7**	**+0.7**
IGT				S	**Sg**	**23 41 38.6**	**+1.6**
EVR	**Evrytania**	**1.33**	**64**	*e*PB	**Pb**	**23 41 25.6**	**+1.4**
KEK	**Kerkira**	**1.42**	**345**	*e*PB	**Pb**	**23 41 26.6**	**+0.9**
ITM	**Ithomi**	**1.75**	**131**	*e*PN	**Pn**	**23 41 29.3**	**-0.4**
THL	**Klokotos Trika**	**1.83**	**47**	*e*PN	**Pg**	**23 41 33.5**	**-0.2**

IDC 26 23:42:05.3±3.9, 2026S×16748E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.6/13, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=75.6km s-min=46.7km az=97.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.05**	**208**	*e*P	Pn	23 42 40.7	-0.4
DZM				*e*S	Sn	23 43 13.4	+6.1
DZM	**Mont Dzumac**	**2.05**	**208**	Pn	Pn	23 42 40.8	-0.3
	5.0nm,0.3s,baz=57,slow=18,SNR=38						
DZM				Sn	Sn	23 43 13.3	+6.0
	15nm,0.3s,baz=8.9,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**31.10**	**265**	P	P	23 48 25.2	-0.4
	0.3nm,0.7s,baz=93,slow=8.5,SNR=6.1						
ASAR	**Alice Springs**	**31.29**	**258**	P	P	23 48 27.8	+0.6
	1.0nm,0.6s,baz=8.9,slow=8.9,SNR=9.1						
GERES	**GERESS Array B**	**144.57**	**330**	PKP	PKPdf	00 01 43.4	-0.3
	0.5nm,0.6s,baz=56,slow=5.0,SNR=5.2						

*IDC **26** 23:43:15.1±2.7, 2023S×16880E, h0km, mb4.0/3, mb1 4.2/4, mb1mx4.0/13, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=81.1km s-min=29.0km az=134.0*
*ISCJB **26** 23:43:18.1±1.0, 2022S±009×1687E±0.1, h33km, mb4.2/5, Error ellipse: s-maj=18.4km s-min=9.8km az=36.0*
*NEIC **26** 23:43:21.1±0.8, 2028S×16861E, h35km, mb4.3/2, Error ellipse: s-maj=19.5km s-min=14.7km az=87.0*

ISC 26 23:43:20.3±1.0, 2024S±010×1687E±01, h35km, n15, σ0§89/12, mb4.2/5, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.80**	**229**	*e*P	**Pn**	**23 44 01.7**	**-0.8**
DZM				*e*S	**Sn**	**23 44 34.0**	**-1.1**
DZM	**Mont Dzumac**	**2.80**	**229**	Pn	**Pn**	**23 44 01.7**	**-0.9**
	15nm,0.3s,baz=54,slow=17,SNR=5.1						
DZM				Sn	**Sn**	**23 44 36.7**	**+1.6**
	52nm,0.3s,baz=197,slow=22,SNR=6.0						
HNR	**Honiara**	**13.68**	**320**	*e*Pn	**Pn**	**23 46 30.4**	**-1.4**
URZ	**Urewera**	**19.38**	**160**	LR	LR	23 54 10.8	
	comp=Z,136nm,18.7s,baz=32,slow=33						
TAU	**Tasmania Unive**	**28.88**	**214**	*e*P	**P**	**23 49 15.3**	**-0.4**
	7.1nm,0.8s,mb4.5						
WRA	**Warramunga Arr**	**32.26**	**264**	P	**P**	**23 49 45.9**	**+0.2**
	2.5nm,1.1s,mb4.0,baz=91,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**32.42**	**258**	P	**P**	**23 49 48.1**	**+1.0**
	2.0nm,0.6s,mb4.1,baz=80,slow=8.7,SNR=8.6						
FITZ	**Fitzroy Crossi**	**40.66**	**266**	P	**P**	**23 50 58.0**	**+0.6**
	5.3nm,0.8s,mb4.2						
SBA	**Scott Base**	**57.67**	**180**	P	**P**	**23 53 06.4**	**-0.3**
PMSA	**Palmer Station**	**86.15**	**160**	P	**P**	**23 55 57.1**	**-0.4**
SONM	**Songino Array**	**87.72**	**323**	P	**P**	**23 56 06.6**	**+1.3**
	1.1nm,1.0s,mb4.0,baz=122,slow=3.6,SNR=4.8						
EKA	**Eskdalemuir Ar**	**144.43**	**352**	PKP	PKPdf	00 02 50.6	-1.9
	1.1nm,0.8s,baz=357,slow=3.1,SNR=4.1						
GERES	**GERESS Array B**	**145.13**	**331**	PKPbc	PKPbc	00 02 53.6	+0.2
	0.7nm,0.6s,baz=25,slow=3.5,SNR=6.9						
GRA1	**Grafenberg Arr**	**145.58**	**334**	*e*PKP	PKPdf	00 02 56.9	+2.2
GRF	**Grafenberg Arr**	**145.58**	**334**	*e*PKP	PKPdf	00 02 56.9	+2.2

*IDC **26** 23:43:26.7±2.4, 2034S×16874E, h0km, mb4.3/4, mb1 4.5/5, mb1mx4.2/14, mbtmp4.4/5, ML4.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/15, Error ellipse: s-maj=69.4km s-min=33.9km az=139.0*
*ISCJB **26** 23:43:29.1±0.9, 2045S±02×16879E±009, h33km, mb4.4/6, Error ellipse: s-maj=24.7km s-min=11.7km az=0.2*
*NEIC **26** 23:43:31.6±0.6, 2044S×16876E, h35km, mb4.5/1, Error ellipse: s-maj=19.7km s-min=10.4km az=178.0*

ISC 26 23:43:31.1±0.9, 2045±02×16881E±009, h35km, n12, σ1§04/10, mb4.4/6, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.79**	**232**	Pn	**Pn**	**23 44 11.3**	**-2.0**
	33nm,0.3s,baz=57,slow=17,SNR=7.6						
RAO	**Raoul Island**	**14.94**	**129**	P	**Pn**	**23 46 59.8**	**+0.1**
AFI	**Afiamalu**	**19.62**	**74**	P	**Pn**	**23 47 57.4**	**-0.9**
CTA	**Charters Tower**	**21.17**	**267**	P	**P**	**23 48 12.2**	**-1.3**
	4.5nm,0.7s,mb3.9,baz=91,slow=11,SNR=4.2						
STKA	**Stephens Creek**	**26.91**	**239**	P	**P**	**23 49 09.3**	**+0.3**
	4.9nm,0.7s,mb4.2,baz=58,slow=9.6,SNR=11						
WB2	**Warramunga Arr**	**32.32**	**265**	*e*P	**P**	**23 49 56.8**	**-0.3**
WRA	**Warramunga Arr**	**32.33**	**265**	P	**P**	**23 49 57.7**	**+0.5**
	2.9nm,0.9s,mb4.1,baz=93,slow=9.1,SNR=9.1						
ASAR	**Alice Springs**	**32.48**	**258**	P	**P**	**23 49 59.1**	**+0.7**
	7.4nm,0.6s,mb4.7,baz=86,slow=9.1,SNR=27						
FITZ	**Fitzroy Crossi**	**40.74**	**266**	*e*P	**P**	**23 51 10.6**	**+1.7**
	18nm,0.7s,mb4.8						
VNDA	**Vanda**	**57.30**	**182**	*e*P	**P**	**23 53 16.1**	**+1.1**
	7.4nm,1.5s,mb4.5						
EKA	**Eskdalemuir Ar**	**144.56**	**352**	PKP	PKPdf	00 03 04.8	+1.3
	0.7nm,0.6s,baz=2.9,slow=3.3,SNR=3.5						
GERES	**GERESS Array B**	**145.28**	**331**	PKPbc	PKPbc	00 03 04.8	0.0
	2.1nm,0.7s,baz=40,slow=3.8,SNR=16						

IDC 26 23:46:54.4±3.2, 2065S×16904E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/14, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=88.8km s-min=40.8km az=143.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.81**	**239**	*e*P	Pn	23 47 41.4	+0.8
DZM				*e*S	Sn	23 48 13.6	-1.4
DZM	**Mont Dzumac**	**2.81**	**239**	Pn	Pn	23 47 41.4	+0.9
	7.6nm,0.3s,baz=65,slow=19,SNR=15						
CTA	**Charters Tower**	**21.37**	**267**	P	P	23 51 45.5	+1.9
	5.3nm,0.9s,baz=100,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**32.52**	**265**	P	P	23 53 25.5	-1.7
	0.2nm,0.5s,baz=92,slow=8.4,SNR=9.1						
ASAR	**Alice Springs**	**32.63**	**258**	P	P	23 53 27.9	-0.3
	1.3nm,0.7s,baz=89,slow=8.7,SNR=8.0						
GERES	**GERESS Array B**	**145.64**	**331**	PKPbc	PKPbc	00 06 34.9	0.0
	0.2nm,0.5s,baz=40,slow=5.1,SNR=2.8						

*ISCJB **26** 23:48:44.0±0.6, 3839N±003×3929E±002, h0km±5km, Error ellipse: s-maj=4.8km s-min=3.0km az=170.9*
*CSEM **26** 23:48:43.2±0.1, 3843N×3922E, h2km, MD3.2, Error ellipse: s-maj=2.4km s-

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.26**	**291**	*i* P	**Pg**	**23 48 49.5**	**+0.1**
ELZG				*i* S	**Sg**	**23 48 54.0**	**+1.3**
MALT	**Malatya**	**0.69**	**263**	PG	**Pg**	**23 48 56.1**	**-1.4**
MALT				SG	**Sg**	**23 49 06.4**	**0.0**
MYA	**Malatya**	**0.69**	**264**	PG	**Pg**	**23 48 56.2**	**-1.3**
MYA				SG	**Sg**	**23 49 05.8**	**-0.6**
DIYA	**Diyarbakir**	**0.81**	**126**	*i* P	**Pg**	**23 49 00.3**	**+0.3**
DIYA				*i* S	**Sg**	**23 49 10.5**	**+0.1**
URFA	**Urfa**	**1.03**	**201**	PG	**Pg**	**23 49 03.2**	**-1.0**
URFA				SG	**Sg**	**23 49 19.3**	**+1.8**
BINT	**Bingol**	**1.05**	**63**	PN	**Pn**	**23 49 05.2**	**-1.1**
ATAB	**Bozova**	**1.22**	**220**	*i* P	**Pg**	**23 49 07.9**	**+0.1**
ATAB				*i* S	**Sg**	**23 49 23.9**	**+0.3**
EZC	**Erzincan**	**1.40**	**17**	PN	**Pn**	**23 49 09.7**	**-1.4**
BNGL	**BINGOL**	**1.55**	**69**	*e*P	**Pn**	**23 49 14.3**	**+1.1**
BNGL				*i* S	**Sg**	**23 49 38.7**	**+4.4**
MARD	**Mardin**	**1.60**	**132**	*i* P	**Pn**	**23 49 12.3**	**-1.6**
MARD				*i* S	**Sn**	**23 49 33.1**	**-2.2**
DRBT	**Darb Altahta**	**1.60**	**165**	⇓P	**Pg**	**23 49 22.6**	**+7.5**
DRBT				⇓S	**Sg**	**23 49 45.9**	**+10**
KBSD	**Kabsdagh**	**1.72**	**144**	⇓P	**Pn**	**23 49 14.7**	**-0.8**
KBSD				⇓S	**Sn**	**23 49 33.1**	**-4.9**
KBSD	**Kabsdagh**	**1.72**	**144**	⇓*i*P	**Pn**	**23 49 14.7**	**-0.8**
GZT	**Gaziantep**	**1.72**	**233**	*i* P	**Pn**	**23 49 14.3**	**-1.2**
GZT				*i* S	**Sn**	**23 49 39.9**	**+1.7**
BTMT	**Batman**	**1.74**	**96**	PN	**Pn**	**23 49 15.0**	**-0.8**
GAZ	**Gaziantep**	**2.06**	**234**	*e*PN	**Pn**	**23 49 19.8**	**-0.3**
GUMT	**Gumushane**	**2.06**	**4**	*e*PN	**Pn**	**23 49 19.9**	**-0.3**
SFNV	**Sufian**	**2.09**	**162**	⇓P	**Pn**	**23 49 22.1**	**+1.6**
SFNV				⇓S	**Sn**	**23 49 42.6**	**-4.6**
SFNV	**Sufian**	**2.09**	**162**	⇓*i*P	**Pn**	**23 49 22.1**	**+1.5**
SFNV				⇓*i*S	**Sn**	**23 49 42.6**	**-4.6**
KMRS	**Kahramanmaras**	**2.09**	**245**	*e*PN	**Pn**	**23 49 20.1**	**-0.5**
EZM	**Erzurum**	**2.20**	**46**	*e*PN	**Pn**	**23 49 22.2**	**+0.1**
ERZM	**Erzurum**	**2.20**	**46**	*i* P	**Pn**	**23 49 24.1**	**+2.0**
SLMH	**Al Salmeh**	**2.44**	**207**	⇓P	**Pb**	**23 49 29.6**	**+0.4**
ANDN	**Andirin**	**2.47**	**251**	*i* P	**Pn**	**23 49 24.6**	**-1.2**
ANDN				*i* S	**Sn**	**23 49 59.8**	**+3.1**
ESPY	**Espiye-Giresun**	**2.55**	**350**	*e*PN	**Pn**	**23 49 27.5**	**+0.6**
SIRT	**Sirnak**	**2.65**	**109**	*e*PN	**Pn**	**23 49 28.6**	**+0.3**
BNN	**Bunyan**	**2.73**	**280**	*e*PN	**Pn**	**23 49 29.9**	**+0.4**
JHLN	**Al Jahlan**	**2.81**	**194**	⇑P	**Pn**	**23 49 33.6**	**+3.1**
JHLN	**Al Jahlan**	**2.81**	**194**	⇑*i*P	**Pn**	**23 49 33.6**	**+3.1**
KOZT	**Kozan**	**2.89**	**252**	*e*PN	**Pn**	**23 49 31.8**	**+0.2**
COBT	**Iskenderun**	**3.06**	**233**	*e*P	**Pn**	**23 49 33.1**	**-0.9**
COBT				*i* S	**Sn**	**23 50 11.8**	**+0.5**
BTCH	**Batrach**	**3.27**	**225**	⇑P	**Pb**	**23 49 32.9**	**+0.7**
BTCH				⇑S	**Sb**	**23 50 22.5**	**-1.0**
HAKT	**HAKKARI**	**3.59**	**102**	*i* P	**Pn**	**23 49 40.6**	**-0.6**
HAKT				*i* S	**Sb**	**23 50 32.6**	**-0.1**
CUKT	**Cukurca**	**3.61**	**107**	*e*PN	**Pn**	**23 49 43.3**	**+1.8**
HKR	**Hakkari**	**3.61**	**102**	*e*PN	**Pn**	**23 49 43.2**	**+1.7**
MSL	**Mosul**	**3.69**	**124**	*ex*	x	23 50 06.5	
MSL				*ex*	x	23 50 41.5	

ISCJB ***26*** *23:49:32.4±0.9, 478N×0.1×278W×0.2, h10km, mb3.5/11, MS3.3/5, Error ellipse: s-maj=21.1km s-min=13.0km az=28.0*

IDC ***26*** *23:49:32.3±1.2, 4772N×2779W, h0km, mb3.4/8, mb1 3.6/9, mb1mx3.5/25, mbtmp3.4/9, ML4.7/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/24, Error ellipse: s-maj=36.7km s-min=19.9km az=29.0*

CSEM ***26*** *23:49:33.8, 4776N×2782W, h10km, mb4.1/3, After NEIC*

NEIC ***26*** *23:49:33.8±0.8, 4776N×2782W, h10km, mb4.1/3, Error ellipse: s-maj=20.4km s-min=12.7km az=206.0*

ISC 26 23:49:34.2±0.9, 478N±01×278W±02, h10km, n29, σ0§99/23, mb3.5/11, MS3.3/5, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSB	**Dublin**	**14.66**	**60**	Pn	**Pn**	**23 53 01.6**	**+0.2**
DSB	**Dublin**	**14.66**	**60**	Pn	**Pn**	**23 53 01.6**	**+0.2**
ESDC	**Sonseca Array**	**18.96**	**106**	P	**Pn**	**23 53 56.9**	**+0.8**
	0.5nm,0.3s,baz=300,slow=13,SNR=6.1						
ESDC				LR	LR	23 59 24.1	
	comp=Z,75nm,19.1s,baz=295,slow=31						
CART	**Cartagena**	**22.05**	**108**	P	**P**	**23 54 29.5**	**+0.6**
CART	**Cartagena**	**22.05**	**108**	P	**P**	**23 54 29.5**	**+0.6**
MDT	**Midelt**	**23.01**	**122**	P	**P**	**23 54 38.9**	**-0.1**
	2.5nm,0.7s,mb3.7,baz=268,slow=8.7,SNR=4.5						
MDT				LR	LR	00 02 43.2	
	comp=Z,55nm,18.5s,MS3.0,baz=338,slow=34						
MDT	**Midelt**	**23.01**	**122**	LR	LR	00 02 43.2	
DAVOX	**Davos/Dischmat**	**25.41**	**78**	LR	LR	00 03 31.2	
	comp=Z,86nm,18.4s,MS3.3,baz=64,slow=33						
GERES	**GERESS Array B**	**27.37**	**72**	P	**P**	**23 55 21.2**	**+1.9**
	0.2nm,0.5s,mb2.9,baz=343,slow=3.1,SNR=3.8						
GERES				LR	LR	00 04 53.4	
	comp=Z,84nm,19.2s,MS3.3,baz=86,slow=34						
GERES	**GERESS Array B**	**27.37**	**72**	LR	LR	00 04 53.4	
VSL	**Villasalto**	**27.92**	**93**	*e*P	**P**	**23 55 24.6**	**+0.3**
	6.3nm,1.0s,mb4.2						
VSL	**Villasalto**	**27.92**	**93**	*e*P	**P**	**23 55 24.6**	**+0.4**
	6.3nm,1.0s,mb4.2						
VRAC	**Vranov**	**29.11**	**70**	LR	LR	00 07 16.8	
	comp=Z,64nm,18.6s,MS3.3,baz=240,slow=36						
MORC	**Moravsky Berou**	**29.60**	**69**	*e*P	**P**	**23 55 39.5**	**+0.5**
	0.5nm,0.4s,mb3.6						
MORC	**Moravsky Berou**	**29.60**	**69**	*e*P	**P**	**23 55 39.5**	**+0.4**
	0.5nm,0.4s,mb3.6						
AKASG	**Malin Array Be**	**36.56**	**64**	P	**P**	**23 56 38.3**	**-1.4**
	0.2nm,0.4s,mb3.3,baz=330,slow=5.4,SNR=4.1						
AKASG	**Malin Array Be**	**36.56**	**64**	P	**P**	**23 56 38.3**	**-1.4**
TORD	**Torodi Ar. Bea**	**42.35**	**135**	P	**P**	**23 57 27.3**	**-1.1**
	1.0nm,1.1s,mb3.4,baz=347,slow=6.1,SNR=4.0						
TORD				LR	LR	00 13 21.2	
	comp=Z,69nm,19.8s,MS3.5,baz=280,slow=34						
CSS	**Prodhromos**	**46.47**	**83**	*e*P	**P**	**23 58 00.5**	**-0.7**
CSS	**Prodhromos**	**46.47**	**83**	*e*P	**P**	**23 58 00.5**	**-0.7**
YKA	**Yellowknife Ar**	**47.85**	**321**	P	**P**	**23 58 12.4**	**+0.8**
	0.1nm,0.5s,mb3.1,baz=64,slow=7.7,SNR=3.3						
ARU	**Arti**	**50.39**	**46**	*e*P	**P**	**23 58 28.5**	**-2.6**
	1.5nm,0.6s,mb4.2						
ARU	**Arti**	**50.39**	**46**	*e*P	**P**	**23 58 28.5**	**-2.6**
	1.5nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**55.22**	**297**	P	**P**	**23 59 07.2**	**+0.2**
	0.6nm,1.0s,mb3.6,baz=88,slow=5.0,SNR=3.6						
PDAR	**Pinedale Array**	**55.22**	**297**	P	**P**	**23 59 07.2**	**+0.2**
MKAR	**Makanchi Array**	**67.84**	**44**	P	**P**	**00 00 31.4**	**-0.8**
	0.1nm,0.5s,mb3.1,baz=318,slow=3.9,SNR=2.0						
SONM	**Songino Array**	**76.78**	**30**	P	**P**	**00 01 26.2**	**+0.6**
	0.4nm,0.8s,mb3.4,baz=1.4,slow=5.8,SNR=2.9						
WRA	**Warramunga Arr**	**148.69**	**34**	PKPbc	PKPbc	00 09 20.6	-1.0
	0.5nm,0.9s,baz=330,slow=2.3,SNR=4.7						
ASAR	**Alice Springs**	**151.87**	**38**	PKPbc	PKPbc	00 09 28.4	-0.8
	0.7nm,0.8s,baz=337,slow=1.6,SNR=5.8						

CSEM ***26*** *23:52:32.9±0.1, 3843N×3921E, h8km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.4km az=155.0*

DDA ***26*** *23:52:32.9, 3832N×3926E, h7km±5km, Md2.9*

ISCJB ***26*** *23:52:33.5±0.5, 3841N±004×3926E±003, h8km, Error ellipse: s-maj=5.2km s-min=3.5km az=1.5*

ISK ***26*** *23:52:33.2, 3841N×3921E, h8km, MD2.9*

ISC 26 23:52:33.6±0.7, 3842N±004×3928E±004, h4km±6km, n13, σ0§87/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.24**	**289**	*i* P	**Pg**	**23 52 38.4**	**+0.1**
ELZG				*i* S	**Sg**	**23 52 42.2**	**+0.7**
MYA	**Malatya**	**0.68**	**262**	PG	**Pg**	**23 52 45.5**	**-1.0**
MYA				SG	**Sg**	**23 52 55.3**	**0.0**
MALT	**Malatya**	**0.68**	**261**	PG	**Pg**	**23 52 45.1**	**-1.4**
MALT				SG	**Sg**	**23 52 54.9**	**-0.4**
DIYA	**Diyarbakir**	**0.83**	**126**	*i* P	**Pg**	**23 52 49.3**	**-0.2**
DIYA				*i* S	**Sg**	**23 53 00.8**	**+0.6**
URFA	**Urfa**	**1.04**	**200**	PG	**Pg**	**23 52 53.5**	**0.0**
URFA				SG	**Sg**	**23 53 07.2**	**+0.2**
BINT	**Bingol**	**1.05**	**64**	*e*PN	**Pn**	**23 52 54.8**	**-0.2**
ATAB	**Bozova**	**1.23**	**220**	*i* P	**Pg**	**23 52 57.7**	**+0.6**
ATAB				*i* S	**Sg**	**23 53 13.4**	**+0.4**
EZC	**Erzincan**	**1.39**	**17**	*e*PN	**Pn**	**23 52 58.5**	**-1.2**
BNGL	**BINGOL**	**1.56**	**70**	*e*P	**Pn**	**23 53 03.7**	**+1.8**
BNGL				*i* S	**Sn**	**23 53 27.4**	**+4.8**
MARD	**Mardin**	**1.62**	**132**	*i* P	**Pn**	**23 53 01.9**	**-0.9**
MARD				*i* S	**Sn**	**23 53 23.4**	**-0.8**
GZT	**Gaziantep**	**1.72**	**232**	*i* P	**Pn**	**23 53 05.0**	**+0.8**
GZT				*i* S	**Sn**	**23 53 27.2**	**+0.5**
BTMT	**Batman**	**1.75**	**97**	*e*PN	**Pn**	**23 53 03.5**	**-1.2**
EZM	**Erzurum**	**2.20**	**47**	*e*PN	**Pn**	**23 53 12.6**	**+1.8**

WEL 26 23:52:52.3±0.2, 3971S×17452E, h120km±2km, ML3.6/14, Error ellipse: s-maj=1.0km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.36**	**97**	PN	Pn	23 53 09.6	+0.1
WAZ				SN	Sn	23 53 22.5	+0.2
RAEZ	**Rainy Point**	**0.43**	**347**	PN	Pn	23 53 09.6	-0.2
DFE	**Dawson Falls**	**0.50**	**320**	PN	Pn	23 53 10.0	-0.2
NEZ	**North Egmont**	**0.55**	**323**	PN	Pn	23 53 10.5	0.0
VRZ	**Vera Road**	**0.61**	**18**	PN	Pn	23 53 10.6	-0.4
VRZ				SN	Sn	23 53 23.8	-1.1
PKE	**Pukeiti**	**0.66**	**321**	PN	Pn	23 53 10.9	-0.3
PKE				SN	Sn	23 53 24.6	-1.0
NWEZ	**Newall Road**	**0.67**	**311**	PN	Pn	23 53 11.3	0.0
PKVZ	**Pokaka**	**0.77**	**57**	PN	Pn	23 53 11.9	-0.3
MTVZ	**Mangateitei**	**0.81**	**66**	PN	Pn	23 53 12.2	-0.2
TRVZ	**Turoa**	**0.90**	**63**	PN	Pn	23 53 12.9	-0.3
WNVZ	**Wahianoa**	**0.92**	**66**	PN	Pn	23 53 13.4	-0.1
FWVZ	**Far West T-bar**	**0.92**	**61**	PN	Pn	23 53 13.4	-0.1
WPVZ	**Whakapapa**	**0.94**	**58**	PN	Pn	23 53 13.5	-0.2
TWVZ	**Taurewa**	**0.96**	**48**	PN	Pn	23 53 13.5	-0.4
TUVZ	**Tukino**	**0.98**	**64**	PN	Pn	23 53 14.2	+0.1
NGZ	**Ngauruhoe**	**0.99**	**58**	PN	Pn	23 53 14.1	-0.1
MOVZ	**Moawhango**	**1.00**	**73**	PN	Pn	23 53 13.8	-0.4
WTVZ	**West Tongariro**	**1.02**	**55**	PN	Pn	23 53 14.3	-0.2
OTVZ	**Oturere**	**1.04**	**59**	PN	Pn	23 53 14.7	0.0
TSZ	**Takapari Road**	**1.16**	**108**	PN	Pn	23 53 16.5	+0.6
DUWZ	**D'Urville Isla**	**1.18**	**202**	PN	Pn	23 53 16.2	+0.1
KIW	**Kapiti Island**	**1.19**	**165**	PN	Pn	23 53 16.0	-0.2
HIZ	**Hauiti**	**1.22**	**13**	PN	Pn	23 53 16.5	-0.1
MRZ	**Mangatainoka R**	**1.25**	**140**	PN	Pn	23 53 16.6	-0.2
RATZ	**Rangitukua**	**1.29**	**50**	*e*PN	Pn	23 53 18.0	+0.7
CAW	**Cannon Point**	**1.46**	**163**	PN	Pn	23 53 19.2	+0.1
TIWZ	**Tintock**	**1.49**	**136**	PN	Pn	23 53 19.3	-0.3
TCW	**Tory Channel**	**1.51**	**187**	PN	Pn	23 53 19.7	-0.1
WPHZ	**Waipukurau**	**1.52**	**104**	PN	Pn	23 53 22.2	+2.3
MRW	**Makara Radio**	**1.52**	**175**	PN	Pn	23 53 19.9	0.0
SNZO	**South Karori**	**1.60**	**175**	PN	Pn	23 53 20.6	-0.2
MTW	**Mount Morrison**	**1.63**	**153**	PN	Pn	23 53 21.0	-0.2
BFZ	**Birch Farm**	**1.64**	**127**	PN	Pn	23 53 20.9	-0.4
BHW	**Baring Head**	**1.72**	**171**	PN	Pn	23 53 21.9	-0.3
NNZ	**Nelson**	**1.74**	**210**	PN	Pn	23 53 22.4	0.0
TUWZ	**Tuamarina**	**1.77**	**194**	PN	Pn	23 53 22.4	-0.4
MSWZ	**Moikau Station**	**1.79**	**162**	PN	Pn	23 53 22.9	-0.2
PAWZ	**Paruwai Farm**	**1.81**	**158**	PN	Pn	23 53 23.1	-0.2
QRZ	**Quartz Range**	**1.89**	**233**	PN	Pn	23 53 23.8	-0.4
BSWZ	**Blackbirch Sta**	**2.06**	**193**	PN	Pn	23 53 26.4	-0.1
THZ	**Tophouse**	**2.39**	**210**	PN	Pn	23 53 30.3	-0.3
MWZ	**Matawai**	**2.72**	**61**	*e*PN	Pn	23 53 34.1	-0.8
KHZ	**Kahutara**	**2.80**	**195**	PN	Pn	23 53 35.5	-0.5
DSZ	**Denniston Nort**	**2.90**	**225**	PN	Pn	23 53 36.6	-0.6
LTZ	**Lake Taylor**	**3.50**	**208**	PN	Pn	23 53 43.6	-1.6
MQZ	**McQueen's Vall**	**4.23**	**199**	PN	Pn	23 53 51.8	-3.0

ATH ***27*** *00:06:54.6, 3794N×2033E, h7km, MD3.5/3*

CSEM ***27*** *00:06:56.9±0.8, 3832N×2037E, h10km, ML3.3, Error ellipse: s-maj=21.7km s-min=5.6km az=67.0*

ISCJB ***27*** *00:06:57.2±1.3, 3834N±005×204E±0.1, h10km, Error ellipse: s-maj=14.5km s-min=4.5km az=159.3*

THE ***27*** *00:06:57.6, 3835N×2042E, h4km, ML3.3*

NEIC ***27*** *00:06:58.3, 3838N×2049E, h0km, MD3.5(ATH), ML2.8(THE), After THE.*

ISC 27 00:06:58.2±1.3, 3834N±005×204E±01, h10km, n7, σ1§25/12, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**144**	*e*PG	**Pg**	**00 07 00.7**	**-1.6**
VLS				*e*SB	**Sg**	**00 07 05.8**	**+0.7**
KFL	**Anninata**	**0.36**	**130**	*e*Pg	**Pg**	**00 07 04.8**	**-0.4**
KFL				*e*Sg	**Sg**	**00 07 10.4**	**+0.4**
LKD	**Levkas**	**0.40**	**24**	P	**Pg**	**00 07 05.1**	**-1.0**
LKD				S	**Sg**	**00 07 10.0**	**-1.4**
LKD	**Levkas**	**0.40**	**24**	*e*Pg	**Pg**	**00 07 05.1**	**-1.0**
LKD				*e*Sg	**Sg**	**00 07 11.1**	**-0.3**
IGT	**Igoumenitsa**	**1.20**	**356**	*e*Pg	**Pg**	**00 07 19.6**	**-1.6**
IGT				*e*Sg	**Sg**	**00 07 37.3**	**+0.6**
EVR	**Evrytania**	**1.22**	**61**	*e*PB	**Pg**	**00 07 23.5**	**+2.0**
KEK	**Kerkira**	**1.46**	**340**	*e*PN	**Pg**	**00 07 28.3**	**+2.1**

ISCJB ***27*** *00:09:37.4±2.1, 3831N±006×203E±0.1, h7km±10km, Error ellipse: s-maj=21.2km s-min=6.3km az=154.4*

ATH ***27*** *00:09:37.7, 3804N×2068E, h29km±1km, MD3.5/5*

NEIC ***27*** *00:09:37.7, 3804N×2069E, h28km, MD3.5(ATH), After ATH.*

THE ***27*** *00:09:39.0, 3834N×2042E, h10km, ML3.3*

CSEM ***27*** *00:09:40.7±0.3, 3838N×2067E, h2km, MD3.5, Error ellipse: s-maj=13.3km s-min=5.2km az=87.0*

ISC 27 00:09:38.8±1.8, 3834N±006×204E±02, h16km±9km, n8, σ0§76/12, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.22**	**137**	*e*PB	**Pg**	**00 09 43.8**	**0.0**
VLS				*e*SB	**Sg**	**00 09 47.9**	**+0.7**
KFL	**Anninata**	**0.38**	**126**	*e*Pg	**Pg**	**00 09 46.6**	**0.0**
KFL				*e*Sg	**Sg**	**00 09 51.4**	**-0.4**
LKD	**Levkas**	**0.42**	**28**	*e*Pg	**Pg**	**00 09 46.6**	**-0.8**
LKD				*e*Sg	**Sg**	**00 09 53.3**	**+0.2**
IGT	**Igoumenitsa**	**1.20**	**357**	*e*Pg	**Pg**	**00 10 00.7**	**-1.3**
IGT				*e*Sg	**Sg**	**00 10 18.1**	**+0.5**
EVR	**Evrytania**	**1.25**	**62**	*e*PN	**Pn**	**00 10 01.0**	**-0.6**
JAN	**Janina**	**1.36**	**15**	*e*PB	**Pb**	**00 10 05.5**	**+1.5**
KEK	**Kerkira**	**1.45**	**341**	*e*PN	**Pn**	**00 10 09.0**	**+4.6**
ITM	**Ithomi**	**1.67**	**133**	*e*PN	**Pn**	**00 10 02.0**	**-5.4**

IDC 27 00:20:12.4±2.1, 100N×12644E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/15, mbtmp3.8/3, Error ellipse: s-maj=166.5km s-min=26.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.21**	**160**	P	P	00 25 09.9	-0.7
	3.0nm,0.4s,baz=339,slow=11,SNR=68						
WB2	**Warramunga Arr**	**22.21**	**160**	*e*P	P	00 25 09.8	-0.8
ASAR	**Alice Springs**	**25.57**	**164**	P	P	00 25 44.0	+0.7
	0.9nm,0.4s,baz=337,slow=7.6,SNR=17						
MKAR	**Makanchi Array**	**59.63**	**326**	P	P	00 30 18.3	0.0
	0.1nm,0.3s,baz=124,slow=7.8,SNR=4.2						

ATH ***27*** *00:34:20.4, 3821N×2034E, h7km±1km, MD3.8/7*

NEIC ***27*** *00:34:20.4, 3821N×2033E, h7km, MD3.8(ATH), ML3.7(THE), After ATH.*

ISCJB ***27*** *00:34:21.4±0.4, 3824N±002×2036E±003, h10km, Error ellipse: s-maj=4.3km s-min=2.7km az=135.3*

CSEM ***27*** *00:34:21.7±0.1, 3821N×2035E, h2km, MD3.8, Error ellipse: s-maj=2.8km s-min=1.6km az=46.0*

THE ***27*** *00:34:21.7, 3829N×2037E, h3km, ML3.8*

ISC 27 00:34:22.1±0.4, 3825N±002×2040E±003, h10km, n41, σ1§25/56, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.16**	**115**	*e*PG	**Pg**	**00 34 24.7**	**-1.0**
VLS				*e*SG	**Sg**	**00 34 27.9**	**-0.3**
KFL	**Anninata**	**0.33**	**114**	*e*Pg	**Pg**	**00 34 28.0**	**-0.8**
KFL				*e*Sg	**Sg**	**00 34 32.7**	**-0.6**
LKD	**Levkas**	**0.50**	**23**	*e*Pg	**Pg**	**00 34 30.0**	**-1.9**
LKD				*e*Sg	**Sg**	**00 34 37.4**	**-1.1**
RLS	**Riolos of Patr**	**0.86**	**102**	*e*PG	**Pg**	**00 34 37.1**	**-1.6**
RLS				*e*SB	**Sb**	**00 34 50.5**	**-0.3**
SELA	**Sela**	**1.18**	**88**	*e*Pg	**Pg**	**00 34 43.4**	**-1.3**
SELA				*e*Sg	**Sg**	**00 35 02.5**	**+2.5**
IGT	**Igoumenitsa**	**1.29**	**358**	*e*Pg	**Pg**	**00 34 44.3**	**-1.8**
IGT				*e*Sg	**Sg**	**00 35 03.2**	**-0.3**
IGT	**Igoumenitsa**	**1.29**	**358**	P	**Pn**	**00 34 44.8**	**-1.4**
IGT				*e*Sg	**Sg**	**00 35 03.2**	**-0.3**
EVR	**Evrytania**	**1.29**	**58**	*e*PG	**Pg**	**00 34 45.6**	**-1.3**
EVR				*e*SB	**Sb**	**00 35 04.5**	**+1.4**
JAN	**Janina**	**1.45**	**14**	*e*PB	**Pb**	**00 34 48.4**	**-0.8**
JAN				*e*SB	**Sb**	**00 35 09.1**	**+1.3**
KEK	**Kerkira**	**1.54**	**342**	*e*PB	**Pb**	**00 34 49.8**	**-0.9**
KEK				*e*SB	**Sb**	**00 35 11.0**	**+0.7**
ITM	**Ithomi**	**1.61**	**131**	*e*PB	**Pb**	**00 34 50.8**	**-1.2**
ITM				*e*SB	**Sb**	**00 35 13.9**	**+1.5**
MEV	**Metsovon**	**1.67**	**23**	*e*Pb	**Pb**	**00 34 52.3**	**-0.6**
MEV	**Metsovon**	**1.67**	**23**	P	**Pb**	**00 34 53.4**	**+0.5**
AGG	**Agios Georgios**	**1.70**	**62**	*e*Pb	**Pn**	**00 34 51.7**	**-0.1**
AGG				*e*Sb	**Sb**	**00 35 16.0**	**+1.1**
PYL	**PYLOS**	**1.72**	**141**	*e*Pb	**Pb**	**00 34 52.4**	**-1.4**
VLK	**Vlachokerasia**	**1.79**	**119**	*e*Pb	**Pb**	**00 34 55.1**	**0.0**
THL	**Klokotos Trika**	**1.82**	**43**	*e*PN	**Pb**	**00 34 54.5**	**-1.1**
THL				*e*SN	**Sb**	**00 35 20.6**	**+2.2**
LTK	**Loutraki**	**2.04**	**95**	*e*Pn	**Pn**	**00 34 57.4**	**+0.9**
LKR	**Lokris**	**2.08**	**78**	*e*PN	**Pn**	**00 34 58.2**	**+1.1**
KZN	**Kozani**	**2.32**	**27**	*e*PN	**Pb**	**00 35 03.1**	**-0.9**
KZN				*e*SN	**Sb**	**00 35 32.7**	**+0.1**
DID	**Didima**	**2.36**	**107**	*e*Pn	**Pb**	**00 35 02.5**	**-2.3**
DID				*e*Sn	**Sb**	**00 35 33.9**	**0.0**
VLI	**Veliai**	**2.53**	**126**	*e*PN	**Pn**	**00 35 05.3**	**+2.1**
ATH	**Athens Observa**	**2.63**	**95**	*e*PN	**Pn**	**00 35 06.3**	**+1.7**
FNA	**Florina**	**2.64**	**16**	*e*Pn	**Pn**	**00 35 05.1**	**+0.2**
FNA	**Florina**	**2.64**	**16**	P	**Pn**	**00 35 06.1**	**+1.3**
LCI	**Lecce**	**2.74**	**320**	Pn	**Pn**	**00 35 05.1**	**-1.0**
BIA	**Bitola**	**2.86**	**14**	*e*Pn	**Pn**	**00 35 07.0**	**-0.8**
BIA	**Bitola**	**2.86**	**14**	*e*Pn	**Pb**	**00 35 11.1**	**-2.2**
BIA	**Bitola**	**2.86**	**14**	*e*Pn	**Pb**	**00 35 11.0**	**-2.3**
OHR	**Ohrid**	**2.88**	**6**	*i* Pn	**Pn**	**00 35 08.4**	**+0.4**
OHR	**Ohrid**	**2.88**	**6**	P	**Pn**	**00 35 10.2**	**+2.2**
TIP	**Timpagrande**	**3.00**	**289**	P	**Pn**	**00 35 10.7**	**+1.0**
PLG	**Polygyros**	**3.18**	**47**	*e*PN	**Pn**	**00 35 13.2**	**+1.1**
STIP	**Stip**	**3.71**	**21**	*e*Pn	**Pn**	**00 35 19.9**	**+0.5**
STIP	**Stip**	**3.71**	**21**	*i* Pn	**Pn**	**00 35 21.0**	**+1.5**
VAM	**Vamos**	**4.16**	**132**	*e*PN	**Pn**	**00 35 26.7**	**+1.0**
SLNA	**Salina**	**4.38**	**276**	Pn	**Pn**	**00 35 30.8**	**+2.0**
SGO	**Sicignano**	**4.57**	**302**	Pn	**Pn**	**00 35 34.2**	**+2.9**
FG5	**Orsara di Pugl**	**4.98**	**309**	Pn	**Pn**	**00 35 37.6**	**+0.6**
RGNG	**Rignano Grg**	**5.04**	**314**	Pn	**Pn**	**00 35 37.8**	**+0.1**
SGG	**Gregorio Mates**	**5.60**	**306**	Pn	**Pn**	**00 35 44.1**	**-1.3**

JMA 27 00:42:53.8, 3726N×13669E, h6km±1km, M3.5, 1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.34**	**168**	P	Pg	00 43 00.9	+0.5
JJH				*e*S	Sg	00 43 05.6	+0.7
JSZ	**Suzu**	**0.57**	**70**	⇓P	Pg	00 43 04.8	+0.1
JSZ				*e*S	Sg	00 43 12.7	+0.6
JHG	**Hegura jima**	**0.61**	**17**	P	Pg	00 43 05.6	0.0
JHG				*e*S	Sg	00 43 14.2	+0.5
JTT	**Ttatey**	**0.83**	**142**	P	Pg	00 43 09.8	0.0
JTT				*e*S	Sg	00 43 21.4	+0.8
JKG	**Kaga**	**1.02**	**196**	P	Pg	00 43 13.3	-0.1
JKG				*e*S	Sg	00 43 26.8	+0.1
MAT	**Matsushiro**	**1.41**	**120**	P	Pn	00 43 19.3	-0.7
MAT			

TORD					LR	LR	01 50 18.2		
TORD	**Torodi Ar. Bea**	**90.23**	**66**	P	**P**		**01 14 26.0**	**-0.8**	
	1.7nm,1.0s,mb4.3,baz=197,slow=4.5,SNR=4.5								
TORD					LR	LR	01 50 18.2		
	comp=Z,41nm,19.0s,MS3.9,baz=320,slow=32								
WMOK	**Wichita Mounta**	**94.85**	**335**	*eP*	**P**		**01 14 46.5**	**-1.1**	
	1.5nm,0.7s,mb4.5								
YKA	**Yellowknife Ar**	**124.35**	**336**	PKP	PKPdf		01 20 20.9	-2.8	
YKA	**Yellowknife Ar**	**124.35**	**336**	PKP	PKPdf		01 20 20.9	-2.8	
	0.1nm,0.4s,baz=164,slow=2.0,SNR=4.2								
GERES	**GERESS Array B**	**125.13**	**53**	PKP	PKPdf		01 20 23.8	-1.8	
	0.4nm,0.5s,baz=205,slow=5.9,SNR=4.3								

RSPR 27 01:06:27.3, 1943N×6556W, h93km±9km, MD3.6/11, 9C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CBYP	**Canovanas**	**1.19**	**194**	*eP*	Pn		01 06 48.0	-1.4
CBYP	**Canovanas**	**1.19**	**194**	*eS*	Sn		01 07 05.7	-0.3
STVI	**Saint Thomas**	**1.22**	**152**	*eP*	Pn		01 06 49.4	-0.3
STVI	**Saint Thomas**	**1.22**	**152**	*eS*	Sn		01 07 06.8	+0.2
HUMP	**Col San Antoni**	**1.31**	**192**	*eP*	Pn		01 06 49.7	-1.1
HUMP	**Col San Antoni**	**1.31**	**192**	*eS*	Sn		01 07 07.9	-0.7
MTP	**Monte Pirata**	**1.33**	**180**	*eP*	Pn		01 06 50.6	-0.5
MTP	**Monte Pirata**	**1.33**	**180**	*eS*	Sn		01 07 08.7	-0.3
SJG	**San Juan**	**1.43**	**203**	*eP*	Pn		01 06 51.6	-0.6
SJG				*eS*	Sn		01 07 11.3	+0.1
CPD	**Cerro la Pandu**	**1.43**	**194**	*eP*	Pn		01 06 51.4	-0.9
AOPR	**Arecibo Observ**	**1.56**	**226**	*eP*	Pn		01 06 53.1	-0.8
AOPR	**Arecibo Observ**	**1.56**	**226**	*eS*	Sn		01 07 13.9	-0.3
CELP	**Cerrillos**	**1.66**	**216**	*eP*	Pn		01 06 54.8	-0.4
ICM	**Isla Caja Muer**	**1.78**	**211**	*eP*	Pn		01 06 56.7	-0.1
LSP	**Las Mesas**	**1.91**	**229**	*eP*	Pn		01 06 58.5	+0.1
CRPR	**Cabo Rojo, PR**	**2.04**	**226**	*eP*	Pn		01 06 59.8	-0.3
CRPR	**Cabo Rojo, PR**	**2.04**	**226**	*eS*	Sn		01 07 25.2	0.0

*ISCJB **27** 01:10:48.4±0.4, 4751N±008×2743W±004, h10km, mb4.0/31, MS3.5/22, Error ellipse: s-maj=12.0km s-min=4.2km az=6.2*
*CSEM **27** 01:10:48.9±0.1, 4744N×2742W, h20km, mb4.2/19, Ms3.2, Error ellipse: s-maj=6.4km s-min=1.9km az=10.0*
*IDC **27** 01:10:50.4±0.9, 4778N×2756W, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/25, mbtmp3.8/12, ML4.3/2, MS3.5/19, Ms1 3.5/19, ms1mx3.4/34, Error ellipse: s-maj=32.3km s-min=14.8km az=14.0*
*NEIC **27** 01:10:50.0±0.4, 4745N×2741W, h10km, mb4.1/31, Error ellipse: s-maj=15.2km s-min=4.7km az=4.0*
*SZGRF **27** 01:11:06.7, 4842N×2604W, h33km, mb4.1, MS3.3, Northern Mid-Atlantic Ridge*

ISC 27 01:10:50.2±0.4, 4748N±008×2740W±004, h10km, n144, σ1°20/134, mb4.0/31, MS3.5/22, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DSB	**Dublin**	**14.58**	**59**	Pn	**Pn**		**01 14 18.2**	**+1.8**
DSB	**Dublin**	**14.58**	**59**	Pn	**Pn**		**01 14 18.2**	**+1.9**
MTE	**Manteigas**	**15.93**	**109**	*eP*	**Pn**		**01 14 36.3**	**+2.0**
	8.1nm,0.8s							
MTE	**Manteigas**	**15.93**	**109**	*eP*	**Pn**		**01 14 36.3**	**+2.0**
	8.1nm,0.8s							
ROSF	**Rostrenen**	**16.19**	**78**	*eP*	**Pn**		**01 14 37.1**	**-0.5**
QUIF	**Quistinic**	**16.31**	**80**	*eP*	**Pn**		**01 14 39.0**	**-0.1**
EVOP	**Sao Brissos**	**16.66**	**115**	*eP*	**Pn**		**01 14 45.0**	**+1.3**
	3.2nm,0.7s							
SGMF	**Saint Gilles**	**16.67**	**78**	*eP*	**Pn**		**01 14 43.3**	**-0.4**
EVO	**Evora**	**16.73**	**115**	*eP*	**Pn**		**01 14 45.0**	**+0.5**
	6.5nm,0.7s							
EVO				*e*MLR	MLR			
	comp=Z,186nm,21.2s							
ESK	**Eskdalemuir**	**16.95**	**53**	Pn	**Pn**		**01 14 49.0**	**+1.9**
ESK	**Eskdalemuir**	**16.95**	**53**	Pn	**Pn**		**01 14 49.0**	**+1.8**
EKA	**Eskdalemuir Ar**	**16.98**	**53**	Pn	**Pn**		**01 14 48.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=243,slow=11,SNR=7.4							
EKA	**Eskdalemuir Ar**	**16.98**	**53**	Pn	**Pn**		**01 14 48.5**	**+1.0**
BORG	**Borgarnes**	**17.62**	**9**	*e*Pn	**Pn**		**01 14 53.2**	**-2.3**
BORG	**Borgarnes**	**17.62**	**9**	*e*Pn	**Pn**		**01 14 53.2**	**-2.3**
GRR	**Gorron**	**17.78**	**77**	*eP*	**Pn**		**01 14 57.1**	**-0.5**
FLN	**La Foliniere**	**17.99**	**76**	*eP*	**Pn**		**01 14 59.8**	**-0.3**
FLN				*e*MLR	MLR			
	comp=Z,269nm,19.0s							
LDF	**La Druitiere**	**18.24**	**76**	*eP*	**Pn**		**01 15 02.1**	**-1.2**
	comp=Z,17nm,1.1s							
LDF	**La Druitiere**	**18.24**	**76**	*eP*	**Pn**		**01 15 02.1**	**-1.2**
	comp=Z,8.7nm,1.1s							
MFF	**Saint Martin d**	**18.56**	**83**	*eP*	**Pn**		**01 15 07.1**	**-0.1**
	comp=Z,35nm,1.4s							
MFF	**Saint Martin d**	**18.56**	**83**	*eP*	**Pn**		**01 15 07.1**	**-0.1**
	comp=Z,18nm,1.4s							
ESDC	**Sonseca Array**	**18.64**	**106**	P	**Pn**		**01 15 11.8**	**+3.7**
	comp=Z,1.5nm,0.3s,baz=298,slow=12,SNR=11							
ESDC					LR	LR	01 20 42.4	
	comp=Z,155nm,20.9s,baz=305,slow=31							
SJPF	**Ste Jean**	**18.89**	**94**	*eP*	**Pn**		**01 15 11.6**	**+0.4**
ETSF	**Etsaut**	**19.42**	**94**	*eP*	**Pn**		**01 15 17.4**	**-0.2**
	comp=Z,9.4nm,0.9s							
ETSF	**Etsaut**	**19.42**	**94**	*eP*	**Pn**		**01 15 17.4**	**-0.2**
	comp=Z,4.7nm,0.9s							
LFF	**La Frestale**	**19.60**	**87**	*eP*	**Pn**		**01 15 19.0**	**-0.7**
EPF	**Esparros**	**19.98**	**93**	*eP*	**Pn**		**01 15 23.6**	**-0.6**
TCF	**Toulx Ste Croi**	**20.22**	**82**	*eP*	**P**		**01 15 25.9**	**+0.8**
	comp=Z,23nm,1.2s							
TCF	**Toulx Ste Croi**	**20.22**	**82**	*eP*	**P**		**01 15 25.9**	**+0.8**
	comp=Z,12nm,1.2s							
CAF	**Calviac**	**20.50**	**86**	*eP*	**P**		**01 15 28.9**	**+0.7**
	comp=Z,12nm,1.1s							
CAF	**Calviac**	**20.50**	**86**	*eP*	**P**		**01 15 28.9**	**+0.7**
	comp=Z,6.2nm,1.1s							
BGF	**Bois d'Agland**	**20.58**	**81**	*eP*	**P**		**01 15 29.3**	**+0.2**
	comp=Z,11nm,0.8s							
BGF	**Bois d'Agland**	**20.58**	**81**	*eP*	**P**		**01 15 29.3**	**+0.2**
	comp=Z,5.3nm,0.8s							
AVF	**Avril sur Loir**	**20.87**	**80**	*eP*	**P**		**01 15 32.3**	**+0.1**
	comp=Z,14nm,0.8s							
AVF	**Avril sur Loir**	**20.87**	**80**	*eP*	**P**		**01 15 32.3**	**+0.1**
	comp=Z,7.2nm,0.8s							
BAIF	**Baives**	**20.91**	**71**	*eP*	**P**		**01 15 31.9**	**-0.7**
	comp=Z,11nm,0.9s							
BAIF	**Baives**	**20.91**	**71**	*eP*	**P**		**01 15 31.9**	**-0.7**
	comp=Z,5.4nm,0.9s							
SSF	**Saint Saulge**	**20.91**	**80**	*eP*	**P**		**01 15 33.1**	**+0.5**
	comp=Z,25nm,1.1s							
SSF	**Saint Saulge**	**20.91**	**80**	*eP*	**P**		**01 15 33.1**	**+0.5**
	comp=Z,12nm,1.1s							
LOR	**Lormes**	**21.10**	**79**	*eP*	**P**		**01 15 34.5**	**-0.2**
	comp=Z,13nm,0.9s,mb4.0							
LOR				*e*MLR	MLR			
	comp=Z,144nm,19.5s,MS3.1							
LOR	**Lormes**	**21.10**	**79**	*eP*	**P**		**01 15 34.5**	**-0.2**
	comp=Z,6.3nm,0.9s,mb4.0							
LOR				LR	LR			
	comp=Z,140nm,19.5s,MS3.4							
MTLF	**Montolieu**	**21.13**	**90**	*eP*	**P**		**01 15 35.6**	**+0.5**
SMF	**Signal de Mont**	**21.23**	**81**	*eP*	**P**		**01 15 35.7**	**-0.4**
	comp=Z,25nm,1.0s,mb4.2							
SMF	**Signal de Mont**	**21.23**	**81**	*eP*	**P**		**01 15 35.7**	**-0.4**
	comp=Z,13nm,1.0s,mb4.2							
GIVF	**Givet**	**21.30**	**71**	*eP*	**P**		**01 15 36.0**	**-0.8**
MEZF	**Maizieres J'vi**	**21.66**	**75**	*eP*	**P**		**01 15 40.3**	**-0.3**
	comp=Z,14nm,0.9s,mb4.1							
MEZF	**Maizieres J'vi**	**21.66**	**75**	*eP*	**P**		**01 15 40.3**	**-0.3**
	comp=Z,7.2nm,0.9s,mb4.1							
LASF	**Ste Croix**	**21.98**	**87**	*eP*	**P**		**01 15 43.5**	**-0.7**
	comp=Z,46nm,1.4s,mb4.4							
LASF	**Ste Croix**	**21.98**	**87**	*eP*	**P**		**01 15 43.5**	**-0.7**
	comp=Z,23nm,1.4s,mb4.4							
WLF	**Walferdange**	**22.20**	**72**	P	**P**		**01 15 46.3**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.0							
WLF	**Walferdange**	**22.20**	**72**	P	**P**		**01 15 46.3**	**-0.2**
	comp=Z,4.6nm,0.7s,mb4.0							
VIVF	**Saint-Julien-l**	**22.28**	**85**	*eP*	**P**		**01 15 46.5**	**-0.9**
HAU	**Haudompre**	**22.60**	**76**	*eP*	**P**		**01 15 49.1**	**-1.6**
HAU				*e*MLR	MLR			
	comp=Z,212nm,19.2s,MS3.3							
HAU	**Haudompre**	**22.60**	**76**	*eP*	**P**		**01 15 49.1**	**-1.6**
HAU				LR	LR			
	comp=Z,210nm,19.3s,MS3.6							
MDT	**Midelt**	**22.64**	**122**	LR	LR		01 24 09.2	
	comp=Z,60nm,18.5s,MS3.1,baz=339,slow=35							
CABF	**La Chapelle**	**22.74**	**80**	*eP*	**P**		**01 15 50.9**	**-1.3**
	comp=Z,24nm,1.1s,mb4.3							
CABF	**La Chapelle**	**22.74**	**80**	*eP*	**P**		**01 15 50.9**	**-1.3**
	comp=Z,12nm,1.1s,mb4.3							
HINF	**Hinteralfeld**	**22.97**	**76**	*eP*	**P**		**01 15 52.7**	**-1.9**
	comp=Z,7.2nm,0.7s,mb3.9							
HINF	**Hinteralfeld**	**22.97**	**76**	*eP*	**P**		**01 15 52.7**	**-1.9**
	comp=Z,3.6nm,0.7s,mb3.9							
SFJD	**Kangerlussuaq**	**22.98**	**337**	LR	LR		01 22 46.4	
	comp=Z,129nm,20.1s,MS3.4,baz=165,slow=32							
ORIF	**Oris-en-Rattie**	**23.08**	**84**	*eP*	**P**		**01 15 54.0**	**-1.8**
	comp=Z,7.2nm,1.1s,mb3.7							
ORIF				*e*MLR	MLR			
	comp=Z,140nm,21.8s,MS3.1							
ORIF	**Oris-en-Rattie**	**23.08**	**84**	*eP*	**P**		**01 15 54.0**	**-1.8**
	comp=Z,3.6nm,1.1s,mb3.7							
CDF	**Champ du Feu**	**23.13**	**75**	*eP*	**P**		**01 15 54.5**	**-1.8**
	comp=Z,2.0nm,0.5s,mb3.5							
CDF	**Champ du Feu**	**23.13**	**75**	*eP*	**P**		**01 15 54.5**	**-1.8**
	comp=Z,1.0nm,0.5s,mb3.5							
SMRF	**Simiane la Rot**	**23.18**	**86**	*eP*	**P**		**01 15 55.8**	**-1.1**
	comp=Z,22nm,1.3s,mb4.1							
SMRF	**Simiane la Rot**	**23.18**	**86**	*eP*	**P**		**01 15 55.8**	**-1.1**
	comp=Z,11nm,1.3s,mb4.1							
LPL	**La Plagne**	**23.47**	**82**	*eP*	**P**		**01 15 58.3**	**-1.6**
LPG	**La Plagne**	**23.49**	**82**	*eP*	**P**		**01 15 58.7**	**-1.4**
BNI	**Bardonecchia**	**23.57**	**83**	P	**P**		**01 16 03.3**	**+2.3**
MBDF	**Montbardon**	**23.74**	**84**	*eP*	**P**		**01 16 00.7**	**-1.8**
	comp=Z,6.0nm,0.8s,mb3.8							
MBDF	**Montbardon**	**23.74**	**84**	*eP*	**P**		**01 16 00.7**	**-1.8**
	comp=Z,3.0nm,0.8s,mb3.8							
LMR	**La Mourre**	**24.05**	**87**	*eP*	**P**		**01 16 03.9**	**-1.4**
	comp=Z,18nm,1.2s,mb4.1							
LMR	**La Mourre**	**24.05**	**87**	*eP*	**P**		**01 16 03.9**	**-1.4**
	comp=Z,8.8nm,1.2s,mb4.1							
FRF	**La Foret Royal**	**24.06**	**87**	*eP*	**P**		**01 16 03.8**	**-1.6**
	comp=Z,19nm,1.1s,mb4.2							
FRF	**La Foret Royal**	**24.06**	**87**	*eP*	**P**		**01 16 03.8**	**-1.6**
	comp=Z,9.4nm,1.1s,mb4.2							
SBF	**Sospel**	**24.48**	**86**	*eP*	**P**		**01 16 08.0**	**-1.3**
	comp=Z,16nm,0.7s,mb4.3							
SBF	**Sospel**	**24.48**	**86**	*eP*	**P**		**01 16 08.0**	**-1.3**
	comp=Z,8.2nm,0.7s,mb4.3							
KONO	**Kongsberg**	**24.76**	**47**	P	**P**		**01 16 11.9**	**+0.3**
KONO	**Kongsberg**	**24.76**	**47**	P	**P**		**01 16 11.9**	**+0.3**
DAVOX	**Davos/Dischmat**	**25.22**	**78**	LR	LR		01 24 48.0	
	comp=Z,129nm,20.8s,MS3.4,baz=236,slow=33							
GRA1	**Grafenberg Arr**	**25.46**	**71**	*eP*	**P**		**01 16 20.6**	**+2.5**
	comp=Z,7.0nm,1.2s,mb4.1							
GRA1				LR	LR			
	comp=Z,100nm,21.0s,MS3.3							
GRF	**Grafenberg Arr**	**25.46**	**71**	*eP*	**P**		**01 16 20.6**	**+2.5**
	comp=Z,7.0nm,1.2s,mb4.1							
GRF				*e*L			01 24 48.3	
	comp=Z,114nm,21.0s							
SCHQ	**Schefferville**	**25.52**	**301**	P	**P**		**01 16 18.1**	**-0.5**
SCHQ				LR	LR		01 24 14.7	
SCHQ	**Schefferville**	**25.52**	**301**	P	**P**		**01 16 18.1**	**-0.5**
	comp=Z,3.5nm,0.9s,mb3.9,baz=81,slow=13,SNR=2.4							
SCHQ				LR	LR		01 24 14.7	
	comp=Z,145nm,18.8s,MS3.5,baz=62,slow=32							
NOA	**NORSAR Array B**	**25.86**	**44**	LR	LR		01 24 32.1	
	comp=Z,44nm,19.1s,MS3.0,baz=300,slow=32							
RUE	**Ruedersdorf**	**26.67**	**64**	*eP*	**P**		**01 16 32.5**	**+3.4**
HFS	**Hagfors**	**26.88**	**47**	LR	LR		01 26 12.8	
	comp=Z,47nm,18.3s,MS3.1,baz=251,slow=34							
GERES	**GERESS Array B**	**27.21**	**72**	P	**P**		**01 16 36.6**	**+2.7**
	comp=Z,1.7nm,0.9s,mb3.6,baz=270,slow=9.3,SNR=8.0							
GERES				LR	LR		01 26 11.8	
	comp=Z,163nm,20.6s,MS3.6,baz=32,slow=34							
VSL	**Villasalto**	**27.64**	**93**	P	**P**		**01 16 41.2**	**+3.3**
VRAC	**Vranov**	**28.96**	**70**	LR	LR		01 27 49.6	
	comp=Z,151nm,19.3s,MS3.6,baz=300,slow=35							
MORC	**Moravsky Berou**	**29.46**	**69**	*eP*	**P**		**01 16 54.5**	**+0.5**
MORC	**Moravsky Berou**	**29.46**	**69**	*eP*	**P**		**01 16 54.5**	**+0.6**
KEST	**Kesra**	**29.61**	**100**	P	**P**		**01 16 58.3**	**+2.9**
	comp=Z,1.6nm,0.8s,mb3.8,baz=336,slow=3.7,SNR=5.4							
KEST					LR	LR	01 27 10.6	
	comp=Z,52nm,19.2s,MS3.2,baz=225,slow=33							
HNH	**Hanover**	**31.30**	**280**	*eP*	**P**		**01 17 09.1**	**-1.2**
HNH	**Hanover**	**31.30**	**280**	*eP*	**P**		**01 17 09.1**	**-1.2**
PSZ	**Piszkesteto**	**31.44**	**71**	*eP*	**P**		**01 17 15.1**	**+3.6**
	comp=Z,5.1nm,0.9s,mb4.3							
BRYW	**Bryant College**	**31.53**	**276**	P	**P**		**01 17 12.0**	**-0.3**
BRYW	**Bryant College**	**31.53**	**276**	P	**P**		**01 17 12.0**	**-0.3**
MSNY	**Massena**	**32.52**	**284**	*eP*	**P**		**01 17 19.3**	**-1.7**
MVL	**Millersville**	**35.65**	**276**	P	**P**		**01 17 48.9**	**+0.7**
MVL	**Millersville**	**35.65**	**276**	P	**P**		**01 17 48.9**	**+0.7**
SSPA	**Standing Stone**	**36.38**	**278**	*eP*	**P**		**01 17 55.3**	**+0.9**
SSPA	**Standing Stone**	**36.38**	**278**	*eP*	**P**		**01 17 55.3**	**+0.9**
AKASG	**Malin Array Be**	**36.45**	**63**	P	**P**		**01 17 55.1**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=280,slow=9.0,SNR=4.1							
ERPA	**Erie**	**37.10**	**282**	*eP*	**P**		**01 18 00.6**	**0.0**
	comp=Z,9.0nm,0.3s,mb5.1							
ERPA	**Erie**	**37.10**	**282**	*eP*	**P**		**01 18 00.6**	**0.0**
	comp=Z,9.0nm,0.3s,mb5.1							
TORD	**Torodi Ar. Bea**	**41.97**	**135**	P	**P**		**01 18 45.6**	**+4.2**
	comp=Z,3.4nm,1.0s,mb3.9,baz=317,slow=7.1,SNR=9.3							
TORD					LR	LR	01 34 29.5	
	comp=Z,155nm,19.4s,MS3.9,baz=330,slow=34							
WCI	**Wyandotte Cave**	**43.22**	**280**	P	**P**		**01 18 49.5**	**-1.8**
WCI	**Wyandotte Cave**	**43.22**	**280**	P	**P**		**01 18 49.5**	**-1.8**
ULM	**Lac du Bonnet**	**43.69**	**300**	P	**P**		**01 18 54.3**	**-0.6**
	comp=Z,1.7nm,0.6s,mb3.9,baz=59,slow=10,SNR=4.4							
ULM					LR	LR	01 35 02.6	
	comp=Z,80nm,18.6s,MS3.7,baz=218,slow=33							
DBIC	**Dimbokro**	**45.00**	**147**	LR	LR		01 36 52.2	
	comp=Z,74nm,18.4s,MS3.6,baz=292,slow=34							
MALT	**Malatya**	**47.77**	**76**	*eP*	**P**		**01 19 28.9**	**+1.6**
MALT	**Malatya**	**47.77**	**76**	*eP*	**P**		**01 19 28.9**	**+1.6**
YKA	**Yellowknife Ar**	**48.23**	**322**	P	**P**		**01 19 30.0**	**-0.6**
	comp=Z,0.6nm,0.9s,mb3.6,baz=62,slow=7.7,SNR=4.8							
YKA					LR	LR	01 38 45.9	
	comp=Z,63nm,19.9s,MS3.6,baz=80,slow=35							
YKA	**Yellowknife Ar**	**48.23**	**322**	P	**P**		**01 19 30.0**	**-0.6**
MIAR	**Mount Ida**	**50.14**	**280**	*eP*	**P**		**01 19 44.5**	**-1.1**
	comp=Z,2.5nm,0.9s,mb4.2							
MIAR	**Mount Ida**	**50.14**	**280**	*eP*	**P**		**01 19 44.5**	**-1.1**
	comp=Z,2.5nm,0.9s,mb4.2							
ARU	**Arti**	**50.39**	**46**	*eP*	**P**		**01 19 48.8**	**+1.6**
	comp=Z,5.1nm,1.0s,mb4.5							
ARU	**Arti**	**50.39**	**46**	*eP*	**P**		**01 19 48.8**	**+1.6**
	comp=Z,5.1nm,1.0s,mb4.5							
INK	**Inuvik**	**52.26**	**333**	LR	LR		01 39 18.4	
	comp=Z,70nm,18.6s,MS3.7,baz=90,slow=33							
AKTO	**Aktyubinsk**	**53.16**	**53**	LR	LR		01 40 48.3	
	comp=Z,42nm,19.4s,MS3.5,baz=146,slow=34							
WALA	**Waterton Lakes**	**54.51**	**306**	*eP*	**P**		**01 20 17.9**	**0.0**
	comp=Z,1.8nm,0.6s,mb4.3							
WALA	**Waterton Lakes**	**54.51**	**306**	*eP*	**P**		**01 20 17.9**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.3							
BOZ	**Bozeman (W)**	**55.15**	**302**	*eP*	**P**		**01 20 22.9**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0							
BOZ	**Bozeman (W)**	**55.15**	**302**	*eP*	**P**		**01 20 22.9**	**+0.4**
	comp=Z,1.3nm,0.8s,mb4.0							
PDAR	**Pinedale Array**	**55.58**	**298**	P	**P**		**01 20 25.8**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=60,slow=7.5,SNR=8.4							
PDAR					LR	LR	01 42 46.4	
	comp=Z,61nm,18.5s,MS3.7,baz=337,slow=35							
DLBC	**Dease Lake**	**56.84**	**322**	*eP*	**P**		**01 20 34.5**	**+0.1**
DLBC	**Dease Lake**	**56.84**	**322**	*eP*	**P**		**01 20 34.5**	**0.0**
PV10	**Paradox Valley**	**57.88**	**293**	*eP*	**P**		**01 20 44.5**	**+2.4**
PV10	**Paradox Valley**	**57.88**	**293**	*eP*	**P**		**01 20 44.5**	**+2.5**
BRVK	**Borovoye**	**57.92**	**45**	*eP*	**P**		**01 20 43.2**	**+1.1**
BRVK	**Borovoye**	**57.92**	**45**	*eP*	**P**		**01 20 43.2**	**+1.1**
IMA2	**Indian Mountai**	**59.53**	**338**	*eP*	**P**		**01 20 53.9**	**+0.7**
IMA2	**Indian Mountai**	**59.53**	**338**	*eP*	**P**		**01 20 53.9**	**+0.8**
TXAR	**Lajitas Array**	**60.09**	**282**	P	**P**		**01 20 58.4**	**+0.9**
TXAR	**Lajitas Array**	**60.09**	**282**	P	**P**		**01 20 58.4**	**+0.9**
	baz=67,slow=6.9							
KURK	**Kurchatov**	**63.37**	**43**	*eP*	**P**		**01 21 19.9**	**+0.6**
KURK	**Kurchatov**	**63.37**	**43**	*eP*	**P**		**01 21 19.9**	**+0.6**
ZALV	**Zalesovo Beam**	**63.83**	**38**	LR	LR		01 49 08.4	
	comp=Z,29nm,18.1s,MS3.5,baz=332,slow=36							
MKAR	**Makanchi Array**	**67.86**	**44**	P	**P**		**01 21 49.2**	**+0.9**
	comp=Z,0.2nm,0.4s,mb3.5,baz=332,slow=4.8,SNR=4.4							
MKAR					LR	LR	01 50 17.2	
	comp=Z,45nm,18.1s,MS3.7,baz=172,slow=35							
SONM	**Songino Array**	**76.90**	**30**	P	**P**		**01 22 43.8**	**+1.5**
	comp=Z,0.6nm,0.9s,mb3.5,baz=313,slow=4.9,SNR=6.1							
ULN	**Ulaanbaatar**	**77.09**	**30**	*eP*	**P**		**01 22 44.8**	**+1.4**
ULN	**Ulaanbaatar**	**77.09**	**30**	*eP*	**P**		**01 22 44.8**	**+1.4**
LSZ	**Lusaka**	**79.77**	**126**	*eP*	**P**		**01 23 02.8**	**+4.3**

*ISCJB **27** 01:21:59.8±1.5, 706S±008×12927E±007, h148km±16km, mb3.6/6, Error ellipse: s-maj=15.9km s-min=8.6km az=38.6*
*NEIC **27** 01:22:01.4±1.4, 7.12S×129.14E, h147km±15km, mb4.0/4, Error ellipse: s-maj=16.9km s-min=8.8km az=53.0*
*IDC **27** 01:22:04.2±3.0, 7.15S×12908E, h171km±25km, mb3.5/5, mb1 3.7/8, mb1mx3.5/15, mbtmp3.7/8, Error ellipse: s-maj=29.9km s-min=16.9km az=51.0*

ISC 27 01:22:02.9±1.2, 722S±007×12923E±007, h165km±12km, n23, σ1°05/28, mb3.6/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BATI	**Kupang**	**6.25**	**241**	P	**Pn**		**01 23 34.3**	**+1.3**
	37nm,0.3s,baz=85,slow=2.5,SNR=19							
BATI				S	**Sn**		**01 24 43.5**	**-0.4**
	38nm,0.3s,baz=226,slow=21,SNR=13							
KAKA	**Kakadu**	**6.31**	**150**	*eP*	**Pn**		**01 23 34.3**	**+0.5**
	48nm,0.4s							
KAKA				*e*S	**Sn**		**01 24 43.4**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.37**	**198**	*eP*	**Pn**		**01 24 40.9**	**+0.3**
	1.9nm,0.2s							
FITZ				*e*S	**Sn**		**01 26 39.0**	**-7.6**
FITZ	**Fitzroy Crossi**	**11.37**	**198**	P	**Pn**		**01 24 41.0**	**+0.4**
	0.5nm,0.3s,baz=34,slow=15,SNR=8.5							
FITZ				S	**Sn**		**01 26 40.5**	**-6.1**
	0.8nm,0.3s,baz=51,slow=17,SNR=6.1							
WRA	**Warramunga Arr**	**13.59**	**159**	P	**Pn**		**01 25 08.4**	**-0.6**
	1.0nm,0.3s,baz=335,slow=14,SNR=39							
WRA				S	**Sn**		**01 27 32.1**	**-7.8**
	3.4nm,0.3s,baz=330,slow=22,SNR=14							
WB2	**Warramunga Arr**	**13.59**	**159**	*eP*	**Pn**		**01 25 08.7**	**-0.4**
WB2				*e*S	**Sn**		**01 27 32.4**	**-7.6**
ASAR	**Alice Springs**	**16.96**	**165**	P	**Pn**		**01 25 52.4**	**+1.8**
	1.6nm,0.3s,baz=346,slow=11,SNR=109							
ASAR				S	**S**		**01 28 56.5**	**-1.7**
	0.8nm,0.3s,baz=349,slow=23,SNR=6.2							
ASAR				ScP	ScP		01 33 45.8	-0.5
	0.1nm,0.3s,baz=354,slow=2.9,SNR=3.5							
KKM	**Kota Kinabalu**	**18.50**	**315**	*eP*	**P**		**01 26 05.0**	**-1.6**
CTA	**Charters Tower**	**20.89**	**129**	P	**P**		**01 26 34.6**	**+2.3**
	9.2nm,1.0s,baz=299,slow=13,SNR=2.9							
CTAO	**Charters Tower**	**20.89**	**129**	*eP*	**P**		**01 26 35.0**	**+2.7**
	12nm,0.9s							
STKA	**Stephens Creek**	**27.11**	**156**	P	**P**		**01 27 31.9**	**+1.5**
	2.6nm,0.6s,mb4.1,baz=354,slow=13,SNR=3.

0.3nm,0.5s,mb3.3,baz=116,slow=3.4,SNR=4.6
ARCES ARCESS Array B 124.41 345 PKP PKPdf 01 52 29.1 -1.3
4.7nm,0.9s,baz=38,slow=4.6,SNR=2.7

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*ATH **27** 01:34:33.9, 3822N×2029E, h5km±2km, MD3.7/5*
*ISCJB **27** 01:34:34.4±1.0, 3823N±004×2029E±006, h0km, Error ellipse: s-maj=8.0km s-min=3.7km az=149.2*
*CSEM **27** 01:34:36.1±0.3, 3825N×2032E, h2km, MD3.7, Error ellipse: s-maj=7.0km s-min=3.1km az=55.0*
*THE **27** 01:34:37.0, 3830N×2044E, h3km, ML3.5*
*NEIC **27** 01:34:37.0, 3830N×2044E, h0km, MD3.7(ATH), ML3.5(THE), After THE.*

ISC 27 01:34:34.5±1.2**, 3822N**±004×**2028E**±007**, h1**km±5km**, n16,** σ1℗**13**/28**, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.25**	**99**	*e*PG			**Pg**	**01 34 39.5**	**+0.3**
VLS				*e*SG			**Sg**	**01 34 42.9**	**+0.5**
KFL	**Anninata**	**0.41**	**105**	*e*Pg			**Pg**	**01 34 42.8**	**+0.4**
LKD	**Levkas**	**0.57**	**30**	*e*Pg			**Pg**	**01 34 44.8**	**-0.7**
LKD				*e*Sg			**Sg**	**01 34 52.0**	**-0.8**
RLS	**Riolos of Patr**	**0.95**	**99**	*e*PB			**Pb**	**01 34 52.3**	**-1.4**
RLS				*e*SB			**Sb**	**01 35 05.9**	**-0.9**
SELA	**Sela**	**1.27**	**87**	*e*Pg			**Pn**	**01 34 57.4**	**-2.0**
SELA				*e*Sg			**Sg**	**01 35 16.3**	**+1.0**
IGT	**Igoumenitsa**	**1.31**	**2**	*e*Pg			**Pg**	**01 34 59.3**	**-0.5**
IGT				*e*Sg			**Sg**	**01 35 18.9**	**+2.2**
EVR	**Evrytania**	**1.39**	**59**	*e*PN			**Pn**	**01 34 59.1**	**-1.9**
EVR				*e*SB			**Sb**	**01 35 19.0**	**-0.4**
JAN	**Janina**	**1.50**	**17**	*e*PG			**Pb**	**01 35 02.0**	**-1.2**
JAN				*e*SB			**Sb**	**01 35 23.0**	**+0.2**
KEK	**Kerkira**	**1.54**	**346**	*e*PB			**Pb**	**01 35 03.3**	**-0.6**
ITM	**Ithomi**	**1.67**	**128**	*e*PB			**Pb**	**01 35 05.4**	**-0.6**
AGG	**Agios Georgios**	**1.79**	**63**	*e*Pb			**Pn**	**01 35 06.6**	**0.0**
AGG				*e*Sb			**Sn**	**01 35 28.3**	**-1.7**
VLX	**Vlachokerasia**	**1.86**	**116**	*e*Pb			**Pb**	**01 35 09.5**	**+0.2**
VLX				*e*Sb			**Sb**	**01 35 32.9**	**-0.2**
THL	**Klokotos Trika**	**1.91**	**45**	*e*PN			**Pn**	**01 35 09.8**	**+1.6**
THL				*e*SN			**Sn**	**01 35 36.3**	**+3.5**
LKR	**Lokris**	**2.18**	**78**	*e*PN			**Pn**	**01 35 12.8**	**+0.9**
DID	**Didima**	**2.44**	**106**	*e*Pn			**Pn**	**01 35 17.4**	**+1.9**
DID				*e*Sn			**Sn**	**01 35 47.9**	**+1.9**
FNA	**Florina**	**2.70**	**18**	*e*Pn			**Pn**	**01 35 20.0**	**+0.9**
FNA				*e*Sn			**Sn**	**01 35 52.8**	**+0.5**

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*ATH **27** 01:50:16.7, 3835N×2037E, h4km, MD3.6/3*
*CSEM **27** 01:50:17.1±0.2, 3834N×2035E, h2km, MD3.6, Error ellipse: s-maj=4.4km s-min=1.4km az=70.0*
*THE **27** 01:50:17.8, 3835N×2039E, h3km, ML3.0*
*NEIC **27** 01:50:17.8, 3835N×2039E, h0km, MD3.6(ATH), ML3.0(THE), After THE.*

ISC 27 01:50:15.8±1.5**, 3830N**±005×**2024E**±009**, h2**km±7km**, n12,** σ0℗**97**/19**, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.30**	**113**	*e*PG			**Pg**	**01 50 21.8**	**+0.2**
VLS				*e*SG			**Sg**	**01 50 25.6**	**+0.1**
KFL	**Anninata**	**0.47**	**113**	*e*Pg			**Pg**	**01 50 24.7**	**-0.1**
LKD	**Levkas**	**0.52**	**38**	*e*Pg			**Pg**	**01 50 25.3**	**-0.5**
LKD				*e*Sg			**Sg**	**01 50 31.7**	**-0.9**
RLS	**Riolos of Patr**	**1.00**	**103**	*e*PG			**Pg**	**01 50 34.0**	**-0.9**
IGT	**Igoumenitsa**	**1.24**	**3**	*e*Pg			**Pg**	**01 50 39.4**	**-0.1**
IGT				*e*Sg			**Sg**	**01 50 58.0**	**+2.5**
IGT	**Igoumenitsa**	**1.24**	**3**	*e*Pg			**Pg**	**01 50 39.3**	**-0.2**
IGT				*e*Sg			**Sg**	**01 50 58.0**	**+2.5**
SELA	**Sela**	**1.30**	**90**	*e*Pg			**Pn**	**01 50 39.5**	**-1.5**
SELA				*e*Sg			**Sg**	**01 50 57.9**	**+0.2**
EVR	**Evrytania**	**1.38**	**63**	*e*PB			**Pb**	**01 50 40.4**	**-1.6**
AGG	**Agios Georgios**	**1.79**	**66**	*e*Sb			**Sn**	**01 51 10.5**	**-0.5**
AGG				*e*Sb			**Sg**	**01 51 14.2**	**+0.9**
AGG	**Agios Georgios**	**1.79**	**66**	*e*Sb			**Sg**	**01 51 14.2**	**+0.8**
VLX	**Vlachokerasia**	**1.93**	**118**	*e*Pb			**Pn**	**01 50 03.7**	**+0.7**
DID	**Didima**	**2.50**	**107**	*e*Pn			**Pn**	**01 50 58.6**	**+1.2**
DID				*e*Sn			**Sn**	**01 51 29.5**	**+1.1**

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*THE **27** 01:54:50.0, 3834N×2040E, h3km, ML2.9*
*ISCJB **27** 01:54:50.9±0.9, 3835N±004×2051E±008, h10km, Error ellipse: s-maj=9.2km s-min=4.8km az=165.2*
*ATH **27** 01:54:50.8, 3833N×2051E, h3km, MD3.5/5*
*NEIC **27** 01:54:50.8, 3833N×2051E, h3km, MD3.5(ATH), ML2.9(THE), After ATH.*
*CSEM **27** 01:54:51.0±0.1, 3835N×2053E, h2km, MD3.5, Error ellipse: s-maj=3.9km s-min=1.7km az=69.0*

ISC 27 01:54:50.9±0.9**, 3833N**±004×**2048E**±008**, h10**km**, n12,** σ1℗**02**/16**, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**150**	*e*PG			**Pg**	**01 54 54.3**	**-0.4**
KFL	**Anninata**	**0.33**	**132**	*e*Pg			**Pg**	**01 54 57.0**	**-0.4**
LKD	**Levkas**	**0.40**	**20**	*e*Pg			**Pg**	**01 54 57.5**	**-1.4**
LKD				*e*Sg			**Sg**	**01 55 04.1**	**0.0**
RLS	**Riolos of Patr**	**0.82**	**109**	*e*PB			**Pg**	**01 55 06.5**	**-0.3**
EVR	**Evrytania**	**1.20**	**60**	*e*PB			**Pb**	**01 55 12.1**	**-1.6**
IGT	**Igoumenitsa**	**1.21**	**355**	*e*Pg			**Pg**	**01 55 11.9**	**-2.2**
IGT				*e*Sg			**Sg**	**01 55 29.4**	**-0.4**
JAN	**Janina**	**1.36**	**12**	*e*PN			**Pn**	**01 55 16.7**	**+0.8**
KEK	**Kerkira**	**1.48**	**339**	*e*PN			**Pn**	**01 55 18.5**	**+0.9**
AGG	**Agios Georgios**	**1.61**	**64**	*e*Pb			**Pb**	**01 55 20.4**	**-0.3**
AGG				*e*Sb			**Sg**	**01 55 43.1**	**+0.5**
ITM	**Ithomi**	**1.62**	**134**	*e*PB			**Pb**	**01 55 21.7**	**+0.8**
DID	**Didima**	**2.33**	**110**	*e*Pn			**Pn**	**01 55 29.9**	**+0.6**
FNA	**Florina**	**2.55**	**16**	*e*Pn			**Pn**	**01 55 33.5**	**+1.2**
FNA				*e*Sn			**Sn**	**01 56 05.4**	**+2.0**

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*ISCJB **27** 01:59:24.0±0.7, 2319S±005×6790W±006, h93km±6km, mb4.4/31, Error ellipse: s-maj=8.8km s-min=7.4km az=20.7*
*IDC **27** 01:59:24.7±2.7, 2319S×6802W, h88km±23km, mb4.2/10, mb1 4.2/12, mb1mx4.1/17, mbtmp4.1/12, MS4.4/1, Ms1 4.4/1, ms1mx2.9/24, Error ellipse: s-maj=21.1km s-min=15.7km az=93.0*
*GUC **27** 01:59:27.5±0.6, 2359S×6828W, h159km, ML4.3*
*NEIC **27** 01:59:27.5, 2359S×6828W, h159km, mb4.5/23, After GUC.*
*BJI **27** 01:59:34.5, 2360S×6830W, h158km, mB4.8*

ISC 27 01:59:25.5±0.7**, 2320S**±004×**6793W**±005**, h89**km±6km**, n92,** σ1℗**02**/85**, mb4.4**/31**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**2.09**	**264**	⇓*i*P			**Pn**	**02 00 02.6**	**+3.7**
CEN1				*i* S			**Sn**	**02 00 29.1**	**+4.7**
CEN1					AML	AML	02 00 33.1		
	comp=E,1μm,0.6s								
ANCH	**Antofagasta**	**2.33**	**258**	⇑*i*P			**Pn**	**02 00 03.6**	**+1.6**
ANCH				*i* S			**Sn**	**02 00 31.1**	**+1.2**
CPN1	**Cerro Paranal**	**2.67**	**237**	*e*P			**Pn**	**02 00 07.5**	**+1.0**
CPN1				*i* S			**Sn**	**02 00 37.4**	**-0.8**
CPN1					AML	AML	02 00 43.4		
	comp=N,2μm,0.1s								
CDCH	**Caldera**	**4.67**	**214**	*e*P			**Pn**	**02 00 31.8**	**-1.8**
CDCH				*e*S			**Sn**	**02 01 21.2**	**-5.3**
LCO	**Las Campanas**	**6.30**	**203**	*e*Pn			**Pn**	**02 00 53.2**	**-2.6**
	comp=N,70nm,0.6s								
LCO				*e*Sn			Sn	02 01 42.4	-24
LPAZ	**La Paz**	**6.88**	**358**	P			**Pn**	**02 01 08.3**	**+4.6**
	comp=N,2.8nm,0.3s,baz=184,slow=7.1,SNR=49								
LPAZ					S		**Sn**	**02 02 13.7**	**-6.8**
	comp=N,0.5nm,0.3s,baz=272,slow=5.1,SNR=4.9								
CFAA	**Coronel Fontan**	**8.38**	**182**	P			**Pn**	**02 01 23.4**	**-0.6**
	comp=N,0.2nm,0.3s,baz=347,slow=13,SNR=14								
CFAA					S		**Sn**	**02 02 50.4**	**-6.6**
	comp=N,0.4nm,0.3s,baz=224,slow=19,SNR=7.1								
SIV	**San Ignacio**	**9.65**	**43**	P			**Pn**	**02 01 42.7**	**+1.2**
	comp=N,12nm,0.3s,baz=257,slow=6.7,SNR=124								
SIV					S		**Sn**	**02 03 28.3**	**+0.1**
	comp=N,3.3nm,0.3s,baz=312,slow=23,SNR=4.0								
NNA	**Nana**	**14.01**	**321**	Pn			**Pn**	**02 02 39.1**	**-0.9**
NNA	**Nana**	**14.01**	**321**	P			**Pn**	**02 02 44.6**	**+4.6**
	comp=N,1.1nm,0.3s,baz=180,slow=9.1,SNR=3.1								
TRQA	**Tornquist**	**15.66**	**162**	*e*P			**Pn**	**02 03 03.1**	**+2.1**
	comp=N,6.3nm,0.7s								
PLCA	**Paso Flores**	**17.62**	**187**	P			**Pn**	**02 03 22.8**	**-2.4**
PLCA	**Paso Flores**	**17.62**	**187**	P			**Pn**	**02 03 22.8**	**-2.4**
	comp=N,0.1nm,0.3s,baz=11,slow=16,SNR=3.7								
OTAV	**Otavalo**	**25.44**	**335**	P			**P**	**02 04 42.6**	**-2.5**
EFI	**East Falkland**	**29.43**	**167**	P			**P**	**02 05 24.3**	**+3.9**
USHA	**Ushuaia**	**31.59**	**181**	LR			LR	02 18 43.5	
	comp=N,751nm,20.4s,baz=283,slow=37								
SDV	**Santo Domingo**	**32.00**	**355**	*e*P			**P**	**02 05 38.6**	**-4.7**
	comp=N,1.9nm,0.7s,mb3.9								
SJG	**San Juan**	**41.09**	**3**	P			**P**	**02 06 59.6**	**-1.1**
PMSA	**Palmer Station**	**41.65**	**177**	P			**P**	**02 07 04.8**	**+0.2**
TEIG	**Tepich**	**47.50**	**334**	*e*P			**P**	**02 07 51.2**	**-0.5**
	comp=N,4.0nm,0.4s,mb4.6								
BBSR	**BB Station**	**55.34**	**3**	P			**P**	**02 08 49.6**	**-0.5**
SWET	**Sewanee**	**60.55**	**343**	*e*P			**P**	**02 09 25.5**	**-0.9**
PLAL	**Pickwick Lake**	**60.94**	**341**	*e*P			**P**	**02 09 26.7**	**-2.3**
JCT	**Junction City**	**61.52**	**329**	*e*P			**P**	**02 09 32.8**	**-0.3**
	comp=N,9.9nm,0.7s,mb5.0								
WVT	**Waverly**	**61.93**	**342**	*e*P			**P**	**02 09 34.1**	**-1.6**
	comp=N,7.9nm,0.6s,mb4.9								
LTX	**Lajitas**	**62.53**	**325**	*e*P			**P**	**02 09 39.8**	**-0.1**
	comp=N,1.6nm,0.5s,mb4.2								
TXAR	**Lajitas Array**	**62.53**	**325**	P			**P**	**02 09 38.9**	**-1.0**
TXAR	**Lajitas Array**	**62.53**	**325**	P			**P**	**02 09 38.9**	**-1.0**
	comp=N,1.4nm,0.7s,mb4.0,baz=158,slow=7.8								
WCI	**Wyandotte Cave**	**63.49**	**344**	*e*P			**P**	**02 09 44.4**	**-1.6**
FVM	**French Village**	**64.42**	**340**	*e*P			**P**	**02 09 51.1**	**-1.1**
WMOK	**Wichita Mounta**	**64.63**	**332**	*e*P			**P**	**02 09 52.4**	**-1.2**
	comp=N,1.0nm,0.6s,mb3.8								
ACSO	**Alum Creek Sta**	**64.64**	**347**	*e*P			**P**	**02 09 52.1**	**-1.4**
	comp=N,8.0nm,0.7s,mb4.7								
GDL2	**Guadalupe Moun**	**65.17**	**326**	*e*P			**P**	**02 09 57.5**	**+0.3**
MNTX	**Cornudas Mount**	**65.30**	**325**	*e*P			**P**	**02 09 56.9**	**-1.1**
	comp=N,4.1nm,0.7s,mb4.4								
QSPA	**South Pole Qui**	**67.00**	**180**	*e*P			**P**	**02 10 08.2**	**-0.1**
	comp=N,4.6nm,0.5s,mb4.6								
QSPA					*e*PcP		PcP	02 10 36.8	+0.8
BNM	**Barren Site**	**67.87**	**326**	*e*P			**P**	**02 10 14.6**	**+0.3**
LPM	**Los Pinos Moun**	**68.00**	**326**	*e*P			**P**	**02 10 16.0**	**+0.9**
LAZ	**Ladron**	**68.33**	**326**	*e*P			**P**	**02 10 17.0**	**-0.2**
DBIC	**Dimbokro**	**68.37**	**72**	P			**P**	**02 10 18.0**	**+0.1**
	comp=N,6.5nm,0.4s,mT4.8,baz=220,slow=8.6,SNR=43								
ANMO	**Albuquerque**	**68.41**	**327**	*e*P			**P**	**02 10 18.0**	**+0.3**
	comp=N,8.1nm,0.9s,mb4.5								
CBKS	**Cedar Bluff**	**68.51**	**334**	*e*P			**P**	**02 10 18.3**	**+0.1**
TUC	**Tucson**	**68.72**	**322**	*e*P			**P**	**02 10 20.4**	**+0.7**
JFWS	**Jewell Farm**	**68.92**	**343**	*e*P			**P**	**02 10 19.8**	**-0.9**
SDCO	**Great Sand Dun**	**70.16**	**329**	*e*P			**P**	**02 10 29.4**	**+0.9**
	comp=N,16nm,1.4s,mb4.7								
MVCO	**Mesa Verde**	**71.20**	**327**	*e*P			**P**	**02 10 35.6**	**+0.8**
WUAZ	**Wupatki**	**71.43**	**324**	*e*P			**P**	**02 10 37.5**	**+1.4**
	comp=N,9.6nm,1.0s,mb4.6								
ISCO	**Idaho Springs**	**71.86**	**330**	*e*P			**P**	**02 10 39.6**	**+0.9**
PV01	**Paradox Valley**	**71.96**	**327**	*e*P			**P**	**02 10 40.0**	**+0.7**
SMCO	**Snowmass**	**72.00**	**329**	*e*P			**P**	**02 10 40.6**	**+1.1**
	comp=N,5.9nm,0.8s,mb4.5								
SRU	**San Rafael**	**73.68**	**327**	*e*P			**P**	**02 10 50.2**	**+0.7**
ARUT	**Antelope Range**	**74.22**	**324**	*e*P			**P**	**02 10 54.1**	**+1.5**
SBA	**Scott Base**	**74.33**	**190**	*e*P			**P**	**02 10 53.2**	**+0.5**
SYO	**Syowa Base**	**74.60**	**159**	⇑*e*X			**P**	**02 10 48.6**	**-5.9**
SYO	**Syowa Base**	**74.60**	**159**	⇑*e*pP			PcP	02 11 05.3	-3.1
VNDA	**Vanda**	**75.34**	**190**	P			**P**	**02 10 59.2**	**+0.6**
VNDA	**Vanda**	**75.34**	**190**	P			**P**	**02 10 59.2**	**+0.6**
	comp=N,0.6nm,0.7s,mb3.4,baz=137,slow=2.9,SNR=3.2								
AGMN	**Agassiz Refuge**	**75.45**	**341**	*e*P			**P**	**02 10 58.8**	**-0.6**
DUG	**Dugway**	**75.66**	**326**	*e*P			**P**	**02 11 01.9**	**+1.0**
BW06	**Boulder Array**	**76.03**	**330**	*e*P			**P**	**02 11 03.3**	**+0.4**
	comp=N,4.6nm,0.4s,mb4.6								
PDAR	**Pinedale Array**	**76.03**	**330**	P			**P**	**02 11 02.6**	**-0.2**
	comp=N,0.9nm,0.5s,mb3.7,baz=129,slow=6.7,SNR=6.6								
HWUT	**Hardware Ranch**	**76.09**	**328**	*e*P			**P**	**02 11 03.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**77.08**	**70**	P			**P**	**02 11 09.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**77.08**	**70**	P			**P**	**02 11 09.1**	**-0.4**
	comp=N,16nm,0.6s,mb4.9,baz=256,slow=5.9,SNR=90								
LOHW	**Long Hollow**	**77.16**	**330**	*e*P			**P**	**02 11 09.8**	**+0.6**
	comp=N,3.5nm,0.6s,mb4.3								
ULM	**Lac du Bonnet**	**77.20**	**342**	P			**P**	**02 11 08.5**	**-0.8**
	comp=N,10nm,0.5s,mb4.8,baz=152,slow=7.8,SNR=43								
TPAW	**Teton Pass**	**77.23**	**329**	*e*P			**P**	**02 11 10.5**	**+0.8**
	comp=N,4.6nm,0.8s,mb4.3								
MOOW	**Moose Ponds**	**77.33**	**330**	*e*P			**P**	**02 11 10.4**	**+0.2**
	comp=N,17nm,2.0s,mb4.4								
FLWY	**Flagg Ranch**	**77.57**	**330**	*e*P			**P**	**02 11 12.4**	**+0.9**
	comp=N,9.9nm,1.1s,mb4.5								
SCHQ	**Schefferville**	**77.71**	**1**	P			**P**	**02 11 11.7**	**-0.4**
	comp=N,2.3nm,0.7s,mb4.0,baz=186,slow=3.7,SNR=7.5								
TSUM	**Tsumeb**	**78.69**	**106**	*e*P			**P**	**02 11 19.2**	**+0.8**
	comp=N,3.6nm,0.6s,mb4.4								
HLID	**Hailey**	**78.95**	**328**	*e*P			**P**	**02 11 20.5**	**+1.3**
BMO	**Blue Mountains**	**81.32**	**327**	*e*P			**P**	**02 11 32.2**	**+0.3**
	comp=N,42nm,2.6s,mb4.8								
BOSA	**Boshof**	**81.86**	**118**	P			**P**	**02 11 35.6**	**+0.3**
	comp=N,1.6nm,0.3s,mb4.3,baz=231,slow=21,SNR=16								
MAW	**Mawson**	**82.45**	**163**	P			**P**	**02 11 37.4**	**-0.2**
	comp=N,2.4nm,0.7s,mb4.2,baz=223,slow=4.8,SNR=4.6								
WALA	**Waterton Lakes**	**82.78**	**332**	*e*P			**P**	**02 11 39.5**	**+0.1**
	comp=N,21nm,1.5s,mb4.8								
NEW	**Newport**	**83.66**	**329**	P			**P**	**02 11 44.1**	**+0.1**
FCC	**Fort Churchill**	**84.48**	**347**	*e*P			**P**	**02 11 47.4**	**-0.5**
LSZ	**Lusaka**	**89.55**	**106**	P			**P**	**02 12 15.5**	**+2.0**
YKA	**Yellowknife Ar**	**93.08**	**340**	P			**P**	**02 12 27.9**	**-0.8**
YKA					pP		pP	02 12 52.4	-0.2
YKA					sP		sP	02 13 01.1	-1.0
YKA	**Yellowknife Ar**	**93.08**	**340**	P			**P**	**02 12 27.9**	**-0.8**
	comp=N,2.2nm,0.8s,mb4.6,baz=134,slow=4.5,SNR=49								
YKA					pP		pP	02 12 52.4	-0.2
	comp=N,0.1nm,0.3s,baz=215,slow=33,SNR=2.5								
YKA					sP		sP	02 13 01.1	-1.0
	comp=N,0.2nm,0.3s,baz=209,slow=32,SNR=1.5								
ASAR	**Alice Springs**	**128.81**	**206**	PKP		PKPdf		02 18 21.8	-1.5
	comp=N,0.8nm,0.5s,baz=130,slow=1.7,SNR=10								
WRA	**Warramunga Arr**	**131.93**	**209**	PKP		PKPdf		02 18 28.1	-1.1
	comp=N,1.5nm,0.9s,baz=151,slow=1.6,SNR=24								
ZALV	**Zalesovo Beam**	**143.08**	**27**	PKP		PKPdf		02 18 45.4	-3.2
ZALV	**Zalesovo Beam**	**143.08**	**27**	PKP		PKPdf		02 18 45.4	-3.2
	comp=N,2.7nm,0.6s,baz=267,slow=2.7,SNR=8.3								
MKAR	**Makanchi Array**	**146.44**	**38**	PKPbc		PKPbc		02 18 54.6	-1.6
	comp=N,1.9nm,0.6s,baz=314,slow=2.7,SNR=15								
SONM	**Songino Array**	**155.00**	**9**	PKP		PKPdf		02 19 08.0	+0.2
	comp=N,0.3nm,0.5s,baz=343,slow=0.7,SNR=4.2								
SONM					PKPbc	PKPdf		02 19 15.7	+7.9
	comp=N,0.2nm,0.3s,baz=210,slow=0.5,SNR=4.2								
SONM					PKPab	PKPab		02 19 32.6	+0.3
	comp=N,0.6nm,0.5s,baz=334,slow=5.3,SNR=5.2								
HHC	**Hu-ho-hao-te**	**162.40**	**1**	*e*PKP		PKPdf		02 19 14.5	-2.3
HHC					PKS			02 22 47.0	
HHC					SKKS	SKKSac		02 30 28.5	-0.4
HHC					SS	SS		02 43 58.3	-3.2
HHC					PP	PP			
	comp=Z,83nm,5.0s								
HHC					LR	LR			
	comp=N,166nm,13.1s								
HHC					LR	LR			
	comp=E,194nm,17.8s								
HHC					LR	LR			
	comp=Z,190nm,16.7s								
LZH	**Lanzhou**	**165.31**	**27**	*e*PKP		PKPdf		02 19 21.5	+1.8
LZH					LR	LR			
	comp=N,167nm,18.5s								
LZH					LR	LR			
	comp=Z,203nm,20.3s								
NJ2	**Nanjing**	**169.33**	**327**	*e*PKP		PKPdf		02 19 24.3	+1.6
CD2	**Chengdu**	**169.33**	**42**	*e*PKP		PKPdf		02 19 20.5	-2.2
CD2					PP	PP			
	comp=Z,90nm,10.2s								
CD2					LR	LR			
	comp=N,150nm,24.2s								
CD2					LR	LR			
	comp=Z,130nm,22.4s								
KMI	**Kunming**	**171.27**	**75**	PKP		PKPdf		02 19 22.5	-1.5
KMI					LR	LR			
	comp=N,133nm,20.8s								
KMI					LR	LR			
	comp=E,117nm,23.9s								
KMI					LR	LR			
	comp=Z,121nm,28.1s								
GYA	**Guiyang**	**174.12**	**55**	PKP		PKPdf		02 19 26.0	+0.9
GYA					PKP2	PKPab		02 20 56.3	-0.8
GYA					PKS			02 22 57.3	
GYA					SS	SS		02 45 58.3	-3.3
GYA					PP	PP			
	comp=E,110nm,7.8s								
GYA					LR	LR			
	comp=N,240nm,21.4s								
GYA					LR	LR			
	comp=E,180nm,22.8s								
GYA					LR	LR			
	comp=Z,210nm,20.8s								

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*ISCJB **27** 01:59:28.2±1.5, 50S±0.1×149.1E±0.1, h667km±27km, mb3.7/7, Error ellipse: s-maj=22.7km s-min=16.9km az=29.8*
*IDC **27** 01:59:29.0±2.9, 501S×149.15E, h650km±33km, mb2.9/5, mb1 3.1/6, mb1mx2.9/15, mbtmp2.9/6, Error ellipse: s-maj=31.6km s-min=18.7km az=101.0*
*NEIC **27** 01:59:29.1±1.8, 497S×149.13E, h655km±26km, mb4.1/5, Error ellipse: s-maj=15.8km s-min=14.1km az=213.0*

ISC 27 01:59:29.1±2.2**, 50S**±0.1×**1492E**±0.1**, h659**km±34km**, n17,** σ0℗**46**/16**, mb3.7**/7**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**11.55**	**113**	P			**P**	**02 02 03.6**	**+0.3**
CTA	**Charters Tower**	**15.31**	**191**	P			**P**	**02 02 37.9**	**0.0**
	0.4nm,0.3s,baz=6.6,slow=12,SNR=5.5								
CTAO	**Charters Tower**	**15.31**	**191**	*e*P			**P**	**02 02 37.8**	**-0.1**
	3.2nm,0.4s								
WB2	**Warramunga Arr**	**20.76**	**223**	*e*P			**P**	**02 03 27.5**	**+0.3**
WRA	**Warramunga Arr**	**20.77**	**223**	P			**P**	**02 03 27.6**	**+0.3**
	2.7nm,0.3s,baz=46,slow=9.5,SNR=114								
WRA					S		**S**	**02 06 39.2**	**+0.5**
	0.4nm,0.6s,baz=43,slow=17,SNR=3.5								
WRA					PcP		PcP	02 07 07.4	+0.9
	0.3nm,0.4s,baz=42,slow=1.7,SNR=5.6								
ASAR	**Alice Springs**	**23.74**	**217**	P			**P**	**02 03 53.5**	**0.0**
	1.7nm,0.4s,mb3.8,baz=57,slow=8.7,SNR=19								
FITZ	**Fitzroy Crossi**	**26.48**	**239**	*e*P			**P**	**02 04 17.7**	**0.0**
	2.3nm,0.5s,mb4.0								
FITZ	**Fitzroy Crossi**	**26.48**	**239**	P			**P**	**02 04 17.5**	**-0.1**
	0.9nm,0.4s,mb3.7,baz=59,slow=12,SNR=4.8								
TAU	**Tasmania Unive**	**37.83**	**182**	*e*P			**P**	**02 05 51.4**	**-1.2**
	3.5nm,0.6s,mb4.0								
NACB	**Ninganchiao**	**39.52**	**318**	P			**P**	**02 06 06.1**	**-0.3**
SONM	**Songino Array**	**64.59**	**330**	P			**P**	**02 09 04.7**	**+0.7**
	0.2nm,0.5s,mb2.7,baz=114,slow=3.6,SNR=2.5								
LSA	**Lhasa**	**65.39**	**306**	*e*P			**P**	**02 09 08.8**	**-0.6**
	5.3nm,0.3s,mb4.3								
VNDA	**Vanda**	**72.83**	**177**	P			**P**	**02 09 53.0**	**+0.3**
	1.0nm,0.7s,mb3.4,baz=342,slow=6.4,SNR=8.1								
EKS2	**Erkin-Say**	**82.71**	**314**	P			**P**	**02 10 45.9**	**-0.1**
BRVK	**Borovoye**	**87.30**	**324**	*e*P			**P**	**02 11 08.0**	**+0.1**
	1.5nm,0.4s,mb4.0								
SDCO	**Great Sand Dun**	**105.11**	**52**	*e*Pdif		Pdif		02 12 31.6	+3.2
	6.4nm,1.5s								
TORD	**Torodi Ar. Bea**	**146.93**	**286**	PKPbc		PKPbc		02 18 01.0	+0.3
	1.3nm,0.6s,baz=88,slow=2.7,SNR=11								

KRSC 27 02:08:55.6±0.1**, 5075N**×**15786E, h21**km±20km**, ML3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MIPR	**Malaya Ipel'ka**	**1.68**	**336**	*e*P	

Plg1.0000°, Azm199.0000°; P -4.4530, Plg89.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC ***27*** *02:30:23.7±0.3, 4772N×2754W, h10km, mb4.4/60, MS4.3/7 Error ellipse: s-maj=8.2km s-min=4.0km az=188.0*

SZGRF ***27*** *02:30:33.0, 4809N×2654W, h19km, mb4.7, MS4.3, Northern Mid-Atlantic Ridge*

ISC 27 02:30:23.8±0.3, 4771N±005×2751W±004, h10km, (h18km±.5km:pP-P), n267, σ1§06/244, mb4.3/54, MS4.3/33, 6C-3D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
EMAZ	**Mazaricos**	**13.87**	**103**	P		**Pn**	**02 33 38.9**	**-1.5**
	2.1nm,0.2s							
EMAZ	**Mazaricos**	**13.87**	**103**	P		**Pn**	**02 33 38.9**	**-1.4**
	2.1nm,0.2s							
STS	**Santiago**	**14.18**	**103**	P		**Pn**	**02 33 43.1**	**-1.4**
	0.6nm,0.3s							
STS	**Santiago**	**14.18**	**103**	P		**Pn**	**02 33 43.1**	**-1.4**
STS				pmax		pmax		
	comp=Z,1.0nm,0.3s							
STS	**Santiago**	**14.18**	**103**	P		**Pn**	**02 33 43.1**	**-1.4**
	comp=Z,1.0nm,0.3s							
EZAM	**Zamans**	**14.43**	**106**	P		**Pn**	**02 33 47.4**	**-0.5**
	comp=Z,4.9nm,0.2s							
EZAM	**Zamans**	**14.43**	**106**	P		**Pn**	**02 33 47.4**	**-0.5**
EZAM				pmax		pmax		
	comp=Z,5.0nm,0.2s							
EZAM	**Zamans**	**14.43**	**106**	P		**Pn**	**02 33 47.4**	**-0.5**
	comp=Z,5.0nm,0.2s							
EPON	**Pontenova**	**14.92**	**100**	P		**Pn**	**02 33 54.1**	**-0.5**
	comp=Z,0.9nm,0.4s							
EPON	**Pontenova**	**14.92**	**100**	P		**Pn**	**02 33 54.2**	**-0.4**
	comp=Z,0.9nm,0.4s							
ELOB	**Lobios**	**14.98**	**106**	P		**Pn**	**02 33 55.1**	**-0.3**
	comp=Z,6.0nm,0.3s							
PTO	**Porto**	**15.01**	**109**	*e*P		**Pn**	**02 33 54.5**	**-1.3**
	comp=Z,43nm,1.4s							
PCAB	**Cabril**	**15.08**	**106**	*e*P		**Pn**	**02 33 55.9**	**-0.9**
PVRL	**Vila Real**	**15.50**	**107**	*e*P		**Pn**	**02 34 01.8**	**-0.5**
ECAL	**Calabor**	**15.81**	**104**	P		**Pn**	**02 34 07.8**	**+1.5**
	comp=Z,1.6nm,0.4s							
PMAFR	**Mafra**	**15.86**	**117**	*e*LR		LR	02 37 42.3	
	comp=Z,1μm,20.0s							
PBRG	**Braganca**	**15.87**	**104**	*e*P		**Pn**	**02 34 07.3**	**+0.2**
MVO	**Moncorvo**	**16.00**	**107**	*e*P		**Pn**	**02 34 07.8**	**-1.0**
MVO				eLR		LR	02 37 47.2	
	comp=Z,2μm,18.0s							
MTE	**Manteigas**	**16.08**	**110**	*e*P		**Pn**	**02 34 08.9**	**-0.9**
MTE				*e*LR		LR	02 37 45.4	
	comp=Z,2μm,20.0s							
ROSF	**Rostrenen**	**16.21**	**79**	*e*P		**Pn**	**02 34 10.2**	**-1.3**
	comp=Z,110nm,1.7s							
ROSF	**Rostrenen**	**16.21**	**79**	*e*P		**Pn**	**02 34 10.2**	**-1.3**
ROSF				pmax		pmax		
	comp=Z,55nm,1.7s							
ROSF	**Rostrenen**	**16.21**	**79**	*e*P		**Pn**	**02 34 10.2**	**-1.3**
	comp=Z,55nm,1.7s							
EARI	**Arriondas**	**16.23**	**98**	P		**Pn**	**02 34 12.7**	**+1.0**
	comp=Z,0.3nm,0.2s							
EARI	**Arriondas**	**16.23**	**98**	P		**Pn**	**02 34 12.7**	**+1.0**
	comp=Z,0.3nm,0.2s							
QUIF	**Quistinic**	**16.34**	**80**	*e*P		**Pn**	**02 34 12.8**	**-0.3**
MOE	**Montemor**	**16.70**	**116**	*e*P		**Pn**	**02 34 17.8**	**+0.1**
SGMF	**Saint Gilles**	**16.70**	**79**	*e*P		**Pn**	**02 34 17.0**	**-0.7**
	comp=Z,2nm,1.0s							
SGMF	**Saint Gilles**	**16.70**	**79**	*e*P		**Pn**	**02 34 17.0**	**-0.7**
SGMF				pmax		pmax		
	comp=Z,12nm,1.0s							
SGMF	**Saint Gilles**	**16.70**	**79**	*e*P		**Pn**	**02 34 17.0**	**-0.7**
	comp=Z,12nm,1.0s							
EVOP	**Sao Brissos**	**16.83**	**116**	*e*P		**Pn**	**02 34 18.2**	**-1.2**
	comp=Z,4.3nm,0.5s							
ESK	**Eskdalemuir**	**16.87**	**54**	Pn		**Pn**	**02 34 18.9**	**-0.9**
	comp=Z,5.8nm,0.8s							
ESK	**Eskdalemuir**	**16.87**	**54**	P		**Pn**	**02 34 18.9**	**-0.9**
ESK				pmax		pmax		
	comp=Z,6.0nm,0.8s							
ESK	**Eskdalemuir**	**16.87**	**54**	P		**Pn**	**02 34 18.9**	**-0.9**
	comp=Z,6.0nm,0.8s							
EVO	**Evora**	**16.90**	**116**	*e*P		**Pn**	**02 34 18.2**	**-2.0**
	comp=Z,8.6nm,0.5s							
EVO				*e*MLR		MLR		
	comp=Z,2μm,21.0s							
EVO	**Evora**	**16.90**	**116**	*e*P		**Pn**	**02 34 20.6**	**+0.4**
EKA	**Eskdalemuir Ar**	**16.90**	**54**	Pn		**Pn**	**02 34 22.8**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=253,slow=11,SNR=10							
PESTR	**Estremoz**	**16.95**	**114**	*e*LR		LR	02 38 07.6	
	comp=Z,1μm,20.0s							
MORF	**Marmelete**	**17.32**	**120**	*e*LR		LR	02 38 23.2	
	comp=Z,1μm,18.0s							
PFVI	**Vila Bisbo**	**17.34**	**121**	*e*P		**Pn**	**02 34 25.8**	**+0.1**
PFVI				*e*LR		LR	02 38 24.3	
	comp=Z,2μm,18.0s							
EBAD	**Badajoz**	**17.37**	**114**	P		**Pn**	**02 34 26.7**	**+0.6**
	comp=Z,0.4nm,0.2s							
EBAD	**Badajoz**	**17.37**	**114**	P		**Pn**	**02 34 26.7**	**+0.5**
	comp=Z,0.4nm,0.2s							
BORG	**Borgarnes**	**17.40**	**9**	Pn		**Pn**	**02 34 26.4**	**0.0**
	comp=Z,189nm,1.7s							
BORG	**Borgarnes**	**17.40**	**9**	LR		LR	02 39 10.0	
	comp=Z,399nm,21.8s,baz=227,slow=30							
BORG	**Borgarnes**	**17.40**	**9**	Pn		**Pn**	**02 34 26.4**	**0.0**
	comp=Z,189nm,1.7s							
PBAR	**Barrancos**	**17.72**	**115**	*e*P		**Pn**	**02 34 31.2**	**+0.7**
PBAR				*e*LR		LR	02 38 31.4	
	comp=Z,1μm,20.0s							
PBDV	**Barranco-do-Ve**	**17.79**	**119**	*e*P		**Pn**	**02 34 32.6**	**+1.3**
	comp=Z,83nm,1.7s							
PBDV				*e*LR		LR	02 38 38.4	
	comp=Z,2μm,20.0s							
GRR	**Gorron**	**17.81**	**78**	*e*P		**Pn**	**02 34 30.9**	**-0.6**
	comp=Z,99nm,1.7s							
GRR	**Gorron**	**17.81**	**78**	*e*P		**Pn**	**02 34 30.9**	**-0.6**
GRR				pmax		pmax		
	comp=Z,50nm,1.7s							
GRR	**Gorron**	**17.81**	**78**	*e*P		**Pn**	**02 34 30.9**	**-0.6**
	comp=Z,50nm,1.7s							
PVAQ	**Vaqueiros**	**17.81**	**118**	*e*LR		LR	02 38 48.2	
	comp=Z,1μm,20.0s							
FLN	**La Foliniere**	**18.01**	**77**	*e*P		**Pn**	**02 34 33.9**	**0.0**
	comp=Z,37nm,1.3s							
FLN				*e*MLR		MLR		
	comp=Z,4μm,21.2s							
FLN	**La Foliniere**	**18.01**	**77**	*e*P		**Pn**	**02 34 33.9**	**0.0**
FLN				pmax		pmax		
	comp=Z,19nm,1.3s							
FLN	**La Foliniere**	**18.01**	**77**	*e*P		**Pn**	**02 34 33.9**	**0.0**
	comp=Z,18nm,1.3s							
GUD	**Guadarrama**	**18.14**	**104**	P		**Pn**	**02 34 38.2**	**+2.6**
	comp=Z,1.8nm,0.4s							
GUD	**Guadarrama**	**18.14**	**104**	P		**Pn**	**02 34 38.3**	**+2.6**
GUD				pmax		pmax		
	comp=Z,2.0nm,0.4s							
EMIN	**Mina Concepcio**	**18.20**	**115**	P		**Pn**	**02 34 38.5**	**+2.1**
	comp=Z,0.8nm,0.4s							
LDF	**La Druitiere**	**18.26**	**77**	*e*P		**Pn**	**02 34 36.4**	**-0.7**
	comp=Z,9.1nm,0.8s							
LDF	**La Druitiere**	**18.26**	**77**	*e*P		**Pn**	**02 34 36.4**	**-0.7**
LDF				pmax		pmax		
	comp=Z,5.0nm,0.8s							
LDF	**La Druitiere**	**18.26**	**77**	*e*P		**Pn**	**02 34 36.4**	**-0.7**
	comp=Z,4.6nm,0.8s							
MFF	**Saint Martin d**	**18.61**	**83**	*e*P		**Pn**	**02 34 40.9**	**-0.5**
	comp=Z,18nm,1.1s							
MFF	**Saint Martin d**	**18.61**	**83**	*e*P		**Pn**	**02 34 40.9**	**-0.5**
MFF				pmax		pmax		
	comp=Z,9.0nm,1.1s							
MFF	**Saint Martin d**	**18.61**	**83**	*e*P		**Pn**	**02 34 40.9**	**-0.5**
	comp=Z,8.9nm,1.1s							
ESDC	**Sonseca Array**	**18.78**	**107**	P		**Pn**	**02 34 46.2**	**+2.8**
	comp=Z,2.0nm,0.3s,baz=298,slow=13,SNR=22							
ESDC				LR		LR	02 40 34.4	
	comp=Z,1μm,19.1s,baz=300,slow=32							
ESLA	**Sonseca Array**	**18.78**	**107**	*e*P		**Pn**	**02 34 46.0**	**+2.5**
	comp=Z,0.2nm,0.4s							
SJPF	**Ste Jean**	**18.98**	**94**	*e*P		**Pn**	**02 34 45.7**	**-0.1**
EADA	**Adamuz**	**19.25**	**111**	P		**Pn**	**02 34 51.8**	**+2.6**
	comp=Z,0.6nm,0.3s							
ESPR	**Espera**	**19.28**	**116**	P		**Pn**	**02 34 55.0**	**+5.6**
	comp=Z,0.3nm,0.2s							
ETOR	**Torete**	**19.44**	**101**	P		**Pn**	**02 34 55.0**	**+3.6**
	comp=Z,1.3nm,0.5s							
ETOR	**Torete**	**19.44**	**101**	P		**Pn**	**02 34 55.0**	**+3.6**
ETOR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ETSF	**Etsaut**	**19.51**	**94**	*e*P		**Pn**	**02 34 51.4**	**-0.9**
	comp=Z,22nm,1.1s							
ETSF	**Etsaut**	**19.51**	**94**	*e*P		**Pn**	**02 34 51.4**	**-0.9**
ETSF				pmax		pmax		
	comp=Z,11nm,1.1s							
ETSF	**Etsaut**	**19.51**	**94**	*e*P		**Pn**	**02 34 51.4**	**-0.9**
	comp=Z,11nm,1.1s							
LFF	**La Frestale**	**19.66**	**88**	*e*P		**Pn**	**02 34 53.2**	**-0.8**
	comp=Z,23nm,1.0s							
LFF	**La Frestale**	**19.66**	**88**	*e*P		**Pn**	**02 34 53.2**	**-0.8**
LFF				pmax		pmax		
	comp=Z,12nm,1.0s							
LFF	**La Frestale**	**19.66**	**88**	*e*P		**Pn**	**02 34 53.2**	**-0.8**
	comp=Z,12nm,1.0s							
EPF	**Esparros**	**20.07**	**93**	*e*P		**P**	**02 34 57.9**	**+0.9**
	comp=Z,28nm,1.4s							
EPF	**Esparros**	**20.07**	**93**	*e*P		**P**	**02 34 57.9**	**+0.9**
EPF				pmax		pmax		
	comp=Z,14nm,1.4s							
EPF	**Esparros**	**20.07**	**93**	*e*P		**P**	**02 34 57.9**	**+0.9**
	comp=Z,14nm,1.4s							
RJF	**Les Rejaudoux**	**20.07**	**86**	*e*P		**P**	**02 34 57.5**	**+0.4**
	comp=Z,9.0nm,0.8s							
RJF				*e*MLR		MLR		
	comp=Z,2μm,20.0s,MS4.2							
RJF	**Les Rejaudoux**	**20.07**	**86**	*e*P		**P**	**02 34 57.5**	**+0.4**
	comp=Z,4.5nm,0.8s							
RJF				LR		LR		
	comp=Z,2μm,20.0s,MS4.5							
RJF	**Les Rejaudoux**	**20.07**	**86**	*e*P		**P**	**02 34 57.5**	**+0.4**
RJF				pmax		pmax		
	comp=Z,5.0nm,0.8s							
RJF				MLR		MLR		
	comp=Z,2μm,20.0s,MS4.5							
EMIJ	**Mijas**	**20.13**	**115**	P		**P**	**02 35 00.9**	**+3.1**
	comp=Z,1.6nm,0.5s							
TCF	**Toulx Ste Croi**	**20.27**	**83**	*e*P		**P**	**02 35 00.0**	**+0.8**
	comp=Z,56nm,1.4s							
TCF	**Toulx Ste Croi**	**20.27**	**83**	*e*P		**P**	**02 35 00.0**	**+0.8**
TCF				pmax		pmax		
	comp=Z,28nm,1.4s							
TCF	**Toulx Ste Croi**	**20.27**	**83**	*e*P		**P**	**02 35 00.0**	**+0.8**
	comp=Z,28nm,1.4s							
HYF	**Humbligny**	**20.32**	**80**	*e*P		**P**	**02 35 00.5**	**+0.7**
CAF	**Calviac**	**20.56**	**87**	*e*P		**P**	**02 35 02.7**	**+0.3**
	comp=Z,16nm,1.0s							
CAF	**Calviac**	**20.56**	**87**	*e*P		**P**	**02 35 02.7**	**+0.3**
CAF				pmax		pmax		
	comp=Z,8.0nm,1.0s							
CAF	**Calviac**	**20.56**	**87**	*e*P		**P**	**02 35 02.7**	**+0.3**
	comp=Z,7.8nm,1.0s							
BGF	**Bois d'Agland**	**20.63**	**82**	*e*P		**P**	**02 35 03.2**	**+0.1**
	comp=Z,26nm,0.9s							
BGF	**Bois d'Agland**	**20.63**	**82**	*e*P		**P**	**02 35 03.2**	**+0.1**
BGF				pmax		pmax		
	comp=Z,13nm,0.9s							
BGF	**Bois d'Agland**	**20.63**	**82**	*e*P		**P**	**02 35 03.2**	**+0.1**
	comp=Z,13nm,0.9s							
EMOS	**Mosqueruela**	**20.71**	**101**	P		**P**	**02 35 10.1**	**+6.1**
	comp=Z,1.4nm,0.6s							
AVF	**Avril sur Loir**	**20.91**	**81**	*e*P		**P**	**02 35 06.3**	**+0.2**
	comp=Z,22nm,0.9s							
AVF	**Avril sur Loir**	**20.91**	**81**	*e*P		**P**	**02 35 06.3**	**+0.2**
AVF				pmax		pmax		
	comp=Z,11nm,0.9s							
AVF	**Avril sur Loir**	**20.91**	**81**	*e*P		**P**	**02 35 06.3**	**+0.2**
	comp=Z,11nm,0.9s							
BAIF	**Baives**	**20.91**	**72**	*e*P		**P**	**02 35 05.8**	**-0.3**
	comp=Z,97nm,1.6s							
BAIF	**Baives**	**20.91**	**72**	*e*P		**P**	**02 35 05.8**	**-0.3**
BAIF				pmax		pmax		
	comp=Z,48nm,1.6s							
BAIF	**Baives**	**20.91**	**72**	*e*P		**P**	**02 35 05.8**	**-0.3**
	comp=Z,48nm,1.6s							
SSF	**Saint Saulge**	**20.95**	**80**	*e*P		**P**	**02 35 06.7**	**+0.1**
	comp=Z,89nm,1.4s							
SSF	**Saint Saulge**	**20.95**	**80**	*e*P		**P**	**02 35 06.7**	**+0.1**
SSF				pmax		pmax		
	comp=Z,45nm,1.4s							
SSF	**Saint Saulge**	**20.95**	**80**	*e*P		**P**	**02 35 06.7**	**+0.1**
	comp=Z,45nm,1.4s							
ERTA	**Horta de San J**	**20.96**	**99**	P		**P**	**02 35 11.9**	**+5.2**
	comp=Z,1.0nm,0.5s							
EBER	**Berja**	**21.09**	**112**	P		**P**	**02 35 14.6**	**+6.4**
	comp=Z,1.0nm,0.7s							
LOR	**Lormes**	**21.13**	**80**	*e*P		**P**	**02 35 08.7**	**+0.1**
	comp=Z,52nm,1.3s,mb4.4							
LOR				*e*MLR		MLR		
	comp=Z,1μm,20.5s,MS4.0							
LOR	**Lormes**	**21.13**	**80**	*e*P		**P**	**02 35 08.7**	**+0.1**
	comp=Z,26nm,1.3s,mb4.4							
LOR				LR		LR		
	comp=Z,1μm,20.5s,MS4.3							
LOR	**Lormes**	**21.13**	**80**	*e*P		**P**	**02 35 08.7**	**+0.1**
LOR				pmax		pmax		
	comp=Z,26nm,1.3s,mb4.4							
LOR				MLR		MLR		
	comp=Z,1μm,20.5s,MS4.3							
MTLF	**Montolieu**	**21.21**	**91**	*e*P		**P**	**02 35 09.6**	**+0.1**
	comp=Z,72nm,1.6s,mb4.5							
MTLF	**Montolieu**	**21.21**	**91**	*e*P		**P**	**02 35 09.6**	**+0.1**
MTLF				pmax		pmax		
	comp=Z,36nm,1.6s,mb4.5							
MTLF	**Montolieu**	**21.21**	**91**	*e*P		**P**	**02 35 09.6**	**+0.1**
	comp=Z,36nm,1.6s,mb4.5							
SMF	**Signal de Mont**	**21.27**	**81**	*e*P		**P**	**02 35 10.1**	**+0.1**
	comp=Z,88nm,1.4s,mb4.6							
SMF	**Signal de Mont**	**21.27**	**81**	*e*P		**P**	**02 35 10.1**	**+0.1**
SMF				pmax		pmax		
	comp=Z,44nm,1.4s,mb4.6							
SMF	**Signal de Mont**	**21.27**	**81**	*e*P		**P**	**02 35 10.1**	**+0.1**
	comp=Z,44nm,1.4s,mb4.6							
GIVF	**Givet**	**21.30**	**71**	*e*P		**P**	**02 35 09.9**	**-0.4**
MEZF	**Maizieres J'vi**	**21.68**	**76**	*e*P		**P**	**02 35 14.3**	**-0.1**
LASF	**Ste Croix**	**22.05**	**88**	*e*P		**P**	**02 35 17.9**	**-0.6**
	comp=Z,96nm,1.6s,mb4.7							
LASF	**Ste Croix**	**22.05**	**88**	*e*P		**P**	**02 35 17.9**	**-0.6**
	comp=Z,48nm,1.6s,mb4.7							
VIVF	**Saint-Julien-l**	**22.34**	**85**	*e*P		**P**	**02 35 20.9**	**-0.6**
	comp=Z,13nm,1.1s,mb4.0							
VIVF	**Saint-Julien-l**	**22.34**	**85**	*e*P		**P**	**02 35 20.9**	**-0.6**
VIVF				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.0							
VIVF	**Saint-Julien-l**	**22.34**	**85**	*e*P		**P**	**02 35 20.9**	**-0.6**
	comp=Z,6.5nm,1.1s,mb4.0							
HAU	**Haudompre**	**22.62**	**77**	*e*P		**P**	**02 35 23.8**	**-0.7**
	comp=Z,58nm,1.2s,mb4.6							
HAU				*e*MLR		MLR		
	comp=Z,2μm,20.0s,MS4.3							
HAU	**Haudompre**	**22.62**	**77**	*e*P		**P**	**02 35 23.8**	**-0.7**
	comp=Z,29nm,1.2s,mb4.6							
HAU				LR		LR		
	comp=Z,2μm,20.0s,MS4.6							
HAU	**Haudompre**	**22.62**	**77**	*e*P		**P**	**02 35 23.8**	**-0.7**
HAU				pmax		pmax		
	comp=Z,29nm,1.2s,mb4.6							
HAU				MLR		MLR		
	comp=Z,2μm,20.0s,MS4.6							
SFJD	**Kangerlussuaq**	**22.74**	**336**	LR		LR	02 42 19.6	
	comp=Z,1μm,20.7s,MS4.4,baz=119,slow=32							
CABF	**La Chapelle**	**22.77**	**80**	*e*P		**P**	**02 35 25.7**	**-0.4**
	comp=Z,150nm,1.7s,mb4.9							
CABF	**La Chapelle**	**22.77**	**80**	*e*P		**P**	**02 35 25.7**	**-0.4**
CABF				pmax		pmax		
	comp=Z,75nm,1.7s,mb4.8							
CABF	**La Chapelle**	**22.77**	**80**	*e*P		**P**	**02 35 25.7**	**-0.4**
	comp=Z,75nm,1.7s,mb4.9							
HINF	**Hinteralfeld**	**22.99**	**77**	*e*P		**P**	**02 35 27.0**	**-1.4**
	comp=Z,21nm,1.0s,mb4.2							
HINF	**Hinteralfeld**	**22.99**	**77**	*e*P		**P**	**02 35 27.0**	**-1.4**
HINF				pmax		pmax		
	comp=Z,11nm,1.0s,mb4.2							
HINF	**Hinteralfeld**	**22.99**	**77**	*e*P		**P**	**02 35 27.0**	**-1.4**
	comp=Z,10nm,1.0s,mb4.2							
ORIF	**Oris-en-Rattie**	**23.13**	**84**	*e*P		**P**	**02 35 28.8**	**-1.1**
ORIF				*e*MLR		MLR		
	comp=Z,2μm,21.8s,MS4.1							
CDF	**Champ du Feu**	**23.15**	**75**	*e*P		**P**	**02 35 28.5**	**-1.5**
	comp=Z,56nm,1.5s,mb4.5							
CDF	**Champ du Feu**	**23.15**	**75**	*e*P		**P**	**02 35 28.5**	**-1.5**
CDF				pmax		pmax		
	comp=Z,28nm,1.5s,mb4.5							
CDF	**Champ du Feu**	**23.15**	**75**	*e*P		**P**	**02 35 28.5**	**-1.5**
	comp=Z,28nm,1.5s,mb4.5							
SMRF	**Simiane la Rot**	**23.25**	**87**	*e*P		**P**	**02 35 29.5**	**-1.6**
	comp=Z,21nm,1.1s,mb4.2							
SMRF	**Simiane la Rot**	**23.25**	**87**	*e*P		**P**	**02 35 29.5**	**-1.6**
	comp=Z,10nm,1.1s,mb4.2							
LPL	**La Plagne**	**23.52**	**83**	*e*P		**P**	**02 35 32.3**	**-1.6**
LPG	**La Plagne**	**23.53**	**83**	*e*P		**P**	**02 35 32.7**	**-1.4**
MBDF	**Montbardon**	**23.79**	**84**	*e*P		**P**	**02 35 34.3**	**-2.2**
	comp=Z,7.3nm,0.9s,mb3.8							
MBDF	**Montbardon**	**23.79**	**84**	*e*P		**P**	**02 35 34.3**	**-2.2**
MBDF				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb3.9							
MBDF	**Montbardon**	**23.79**	**84**	*e*P		**P**	**02 35 34.3**	**-2.2**
	comp=Z,3.7nm,0.9s,mb3.8							
LMR	**La Mourre**	**24.11**	**88**	*e*P		**P**	**02 35 38.2**	**-1.3**
FRF	**La Foret Royal**	**24.12**	**87**	*e*P		**P**	**02 35 38.0**	**-1.5**
SBF	**Sospel**	**24.54**	**86**	*e*P		**P**	**02 35 42.1**	**-1.3**
	comp=Z,18nm,0.8s,mb4.4							
SBF	**Sospel**	**24.54**	**86**	*e*P		**P**	**02 35 42.1**	**-1.3**
SBF				pmax		pmax		
	comp=Z,9.0nm,0.8s,mb4.3							
SBF	**Sospel**	**24.54**	**86**	*e*P		**P**	**02 35 42.1**	**-1.3**
	comp=Z,8.8nm,0.8s,mb4.4							
KONO	**Kongsberg**	**24.66**	**47**	P		**P**	**02 35 44.7**	**+0.5**
	comp=Z,12nm,1.2s,mb4.3							
KONO	**Kongsberg**	**24.66**	**47**	P		**P**	**02 35 44.7**	**+0.5**
KONO				pmax		pmax		
	comp=Z,12nm,1.2s,mb4.3							
KONO	**Kongsberg**	**24.66**	**47**	P		**P**	**02 35 44.7**	**+0.5**
	comp=Z,12nm,1.2s,mb4.3							
JMIC	**Jan Mayen**	**25.03**	**15**	LR		LR	02 43 00.3	
	comp=Z,166nm,18.6s,MS3.6,baz=252,slow=30							
DAVA	**Damuels**	**25.11**	**77**	⇑*i*P		**P**	**02 35 51.6**	**+3.1**
	comp=Z,20nm,1.2s,mb4.5							
DAVA	**Damuels**	**25.11**	**77**	⇑*i*pP		pP	02 35 51.6	+0.1
	comp=Z,20nm,1.2s							
DAVOX	**Davos/Dischmat**	**25.24**	**78**	P		**P**	**02 35 52.5**	**+2.8**
	comp=Z,2.9nm,0.8s,mb3.8,baz=286,slow=13,SNR=3.0							
DAVOX				LR		LR	02 44 52.7	
	comp=Z,1μm,19.1s,MS4.4,baz=253,slow=34							
SCHQ	**Schefferville**	**25.34**	**301**	P		**P**	**02 35 50.1**	**-0.4**
	comp=Z,6.7nm,1.0s,mb4.1,baz=104,slow=9.1,SNR=9.9							
SCHQ				LR		LR	02 44 06.4	
	comp=Z,1μm,19.0s,MS4.5,baz=81,slow=33							
GRA1	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
	comp=Z,24nm,1.5s,mb4.5							
GRA1				*e*pP		pP	02 35 57.3	+2.7
GRA1				LR		LR		
	comp=Z,1μm,21.7s,MS4.4							
GRA1	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
	comp=Z,24nm,1.5s,mb4.5							
GRA1				*e*pP		pP	02 35 57.3	+2.7
GRF	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
GRF				*e**PP		pP	02 35 57.3	+2.7
GRF				pmax		pmax		
	comp=Z,24nm,1.5s,mb4.5							
GRF				MLR		MLR		
	comp=Z,1μm,21.7s,MS4.4							
GRF	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
GRF				*e**PP		pP	02 35 57.3	+2.7
GRF				pmax		pmax		
	comp=Z,24nm,1.5s,mb4.5							
GRF				MLR		MLR		
	comp=Z,1μm,21.7s,MS4.4							
GRF	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
	comp=Z,24nm,1.5s,mb4.5							
GRF				*e*pP		pP	02 35 57.3	+2.7
GRF				*e*L			02 44 32.0	
	comp=Z,1μm,21.7s							
GRF	**Grafenberg Arr**	**25.45**	**71**	*e*P		**P**	**02 35 52.5**	**+0.9**
	comp=Z,24nm,1.5s,mb4.5							
GRF				*e*pP		pP	02 35 57.3	+2.7
MOX	**Moxa**	**25.54**	**69**	*e*P		**P**	**02 35 52.7**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.2							
MOX								
	comp=Z,700nm,20.0s							
MOX	**Moxa**	**25.54**	**69**	*e*P		**P**	**02 35 52.7**	**+0.3**
MOX				pmax		pmax		
	comp=Z,6.0nm,0.8s,mb4.2							
MOX				MLR		MLR		
	comp=Z,700nm,20.0s,MS4.2							
FETA	**Feichten**	**25.74**	**77**	⇑*i*pP		pP	02 35 56.9	-0.3
	comp=Z,6.5nm,1.1s							
NB2	**NORSAR Subarra**	**25.75**	**44**	P		**P**	**02 35 54.2**	**0.0**
	comp=Z,7.0nm,1.1s,mb4.1,baz=258,slow=10							
NB2	**NORSAR Subarra**	**25.75**	**44**	P		**P**	**02 35 54.2**	**0.0**
NB2				pmax		pmax		
	comp=Z,7.0nm,1.1s,mb4.1							
NOA	**NOR

comp=Z,761nm,19.5s,MS4.5,baz=290,slow=36
AKASG **Malin Array Be** 36.41 64 P P **02 37 28.1 -0.1**
RES Resolute Bay 38.74 337 *eP* P **02 37 47.5 -0.1**
comp=Z,162nm,1.1s
OBN Obninsk 39.35 55 *eP* P **02 37 53.4 +0.5**
OBN *e* 02 39 29.3
OBN *iS* S **02 43 59.3 +5.5**
OBN pmax pmax
comp=Z,7.0nm,1.4s,mb4.2
OBN MLR MLR
comp=Z,400nm,19.0s,MS4.3
TORD Torodi Ar. Bea 42.19 135 P P **02 38 17.5 +0.8**
comp=Z,3.7nm,0.9s,mb4.0,baz=333,slow=7.3,SNR=11
TORD LR LR 02 54 32.5
comp=Z,1μm,19.1s,MS4.9,baz=325,slow=34
ULM Lac du Bonnet 43.50 300 P P **02 38 26.1 -1.0**
comp=Z,3.5nm,0.9s,mb4.1,baz=60,slow=10,SNR=2.3
ULM LR LR 02 54 54.1
comp=Z,778nm,18.2s,MS4.7,baz=180,slow=34
ULM Lac du Bonnet 43.50 300 P P **02 38 26.0 -1.0**
DBIC Dimbokro 45.24 147 P P **02 38 40.7 -0.6**
comp=Z,10.0nm,1.1s,mb4.6,baz=336,slow=10,SNR=3.8
DBIC LR LR 02 56 23.9
comp=Z,600nm,18.5s,MS4.6,baz=321,slow=34
ECSD EROS,Sioux Fal 46.95 292 *eP* P **02 38 54.6 +0.1**
comp=Z,7.4nm,1.0s,mb4.6
YKA Yellowknife Ar 48.00 321 P P **02 39 01.5 -0.9**
YKA Yellowknife Ar 48.00 321 *iP* P **02 39 01.9 -0.5**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 48.00 321 P P **02 39 01.5 -0.8**
comp=Z,0.6nm,0.8s,mb3.7,baz=64,slow=7.8,SNR=9.4
YKA Yellowknife Ar 48.00 321 *iP* P **02 39 01.9 -0.5**
comp=Z,1.0nm,0.8s,mb3.9
MMAI Mount Meron Ar 48.83 84 LR LR 03 00 40.9
comp=Z,76nm,19.8s,MS3.7,baz=310,slow=37
ARU Arti 50.29 46 *eP* P **02 39 20.6 +0.6**
comp=Z,3.8nm,0.4s,mb4.8
ARU Arti 50.29 46 *d iP* P **02 39 20.0 0.0**
ARU 02 40 34.3
ARU 02 41 13.4
ARU PPP 02 42 12.3
ARU S S **02 46 36.4 +4.2**
ARU SS SS 02 50 09.6 +4.5
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.9
ARU Arti 50.29 46 *iP* P **02 39 20.0 0.0**
comp=Z,15nm,1.2s,mb4.9
ARU Arti 50.29 46 PcP PcP 02 40 34.3 -4.3
EIL Elat 50.58 87 LR LR 03 03 16.6
comp=Z,114nm,19.1s,MS3.9,baz=111,slow=39
AKTO Aktyubinsk 53.08 53 LR LR 03 02 51.2
comp=Z,164nm,19.5s,MS4.1,baz=24,slow=37
SDV Santo Domingo 53.11 238 *eP* P **02 39 40.2 -1.3**
comp=Z,25nm,1.8s,mb4.8
SDV Santo Domingo 53.11 238 *eP* P **02 39 40.2 -1.4**
comp=Z,25nm,1.8s,mb4.8
HRY Holter Researc 54.47 303 *eP* P **02 39 50.2 -0.9**
HRY Holter Researc 54.47 303 *eP* P **02 39 50.2 -0.9**
ISCO Idaho Springs 54.73 293 *eP* P **02 39 53.3 +0.2**
comp=Z,5.2nm,1.2s,mb4.4
ISCO Idaho Springs 54.73 293 *eP* P **02 39 53.3 +0.2**
ISCO pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
ISCO Idaho Springs 54.73 293 *eP* P **02 39 53.3 +0.2**
comp=Z,5.0nm,1.2s,mb4.4
BOZ Bozeman (W) 54.96 302 *eP* P **02 39 54.4 -0.3**
comp=Z,11nm,1.6s,mb4.6
BOZ Bozeman (W) 54.96 302 *eP* P **02 39 54.4 -0.3**
BOZ pmax pmax
comp=Z,11nm,1.6s,mb4.6
BOZ Bozeman (W) 54.96 302 *eP* P **02 39 54.4 -0.3**
comp=Z,11nm,1.6s,mb4.6
PDAR Pinedale Array 55.41 298 P P **02 39 57.2 -0.7**
comp=Z,1.4nm,0.7s,mb4.1,baz=55,slow=6.6,SNR=11
PDAR LR LR 03 02 07.6
comp=Z,519nm,18.6s,MS4.6,baz=63,slow=34
PDAR Pinedale Array 55.41 298 P P **02 39 57.2 -0.8**
SDCO Great Sand Dun 55.88 291 *eP* P **02 40 01.1 -0.3**
comp=Z,9.0nm,1.4s,mb4.6
PV10 Paradox Valley 57.71 293 *eP* P **02 40 15.8 +1.3**
PV10 Paradox Valley 57.71 293 *eP* P **02 40 15.8 +1.3**
MVCO Mesa Verde 58.09 292 *eP* P **02 40 17.9 +0.8**
comp=Z,14nm,1.4s,mb4.8
MVCO Mesa Verde 58.09 292 *eP* P **02 40 18.0 +0.9**
comp=Z,14nm,1.4s,mb4.8
SRU San Rafael 58.18 295 *eP* P **02 40 16.8 -1.0**
comp=Z,1.3nm,0.7s,mb4.1
SRU San Rafael 58.18 295 *eP* P **02 40 16.8 -0.9**
SRU pmax pmax
comp=Z,1.0nm,0.7s,mb4.0
SRU San Rafael 58.18 295 *eP* P **02 40 16.8 -0.9**
comp=Z,1.0nm,0.7s,mb4.0
ROSC El Rosal 58.50 238 LR LR 03 01 13.6
comp=Z,320nm,21.7s,MS4.4,baz=4.0,slow=32
COLA College 58.58 334 *iP* P **02 40 20.9 +0.8**
BNM Barren Site 58.81 288 *eP* P **02 40 22.8 +0.6**
BNM Barren Site 58.81 288 *eP* P **02 40 22.8 +0.6**
DUG Dugway 58.90 297 *eP* P **02 40 22.4 -0.3**
comp=Z,30nm,1.8s,mb5.0
DUG Dugway 58.90 297 *eP* P **02 40 22.4 -0.4**
DUG pmax pmax
comp=Z,30nm,1.8s,mb5.0
DUG Dugway 58.90 297 *eP* P **02 40 22.4 -0.4**
comp=Z,30nm,1.8s,mb5.0
IMA2 Indian Mountai 59.29 337 *eP* P **02 40 25.1 +0.1**
IMA2 Indian Mountai 59.29 337 *eP* P **02 40 25.1 +0.1**
NVS Novosibirsk 62.40 38 *eP* P **02 40 46.5 +0.1**
KURK Kurchatov 63.26 43 *eP* P **02 40 52.0 -0.1**
comp=Z,2.8nm,1.1s,mb4.3
KURK Kurchatov 63.26 43 *eP* P **02 40 52.0 -0.1**
KURK pmax pmax
comp=Z,3.0nm,1.1s,mb4.3
KURK Kurchatov 63.26 43 *eP* P **02 40 52.0 -0.1**
comp=Z,3.0nm,1.1s,mb4.3
NVAR Mina Array Bea 63.31 298 P P **02 40 52.9 +0.2**
comp=Z,1.1nm,0.4s,mb4.4,baz=40,slow=7.4,SNR=4.1
ZAL Zalesovo 63.69 38 P P **02 40 55.9 +1.0**
ZAL pmax pmax
comp=Z,1.0nm,0.3s
ZAL MLR MLR
comp=Z,147nm,18.9s
ZAL Zalesovo 63.69 38 P P **02 40 55.9 +1.0**
comp=Z,147nm,18.9s
ZALV Zalesovo Beam 63.69 38 P P **02 40 55.9 +0.9**
comp=Z,0.8nm,0.3s,mb4.3,baz=308,slow=8.2,SNR=3.7
ZALV LR LR 03 09 29.5
comp=Z,147nm,18.9s,MS4.2,baz=267,slow=37
BILL Bilibino 64.11 354 *eP* P **02 40 55.1 -2.4**
BILL *e* 02 43 16.1
BILL *eS* S **02 49 28.6 -5.1**
BILL pmax pmax
comp=Z,18nm,2.2s,mb4.7
OTAV Otavalo 64.62 239 *eP* P **02 41 02.5 +1.0**
comp=Z,15nm,1.7s,mb4.7
OTAV Otavalo 64.62 239 *eP* P **02 41 02.5 +0.9**
comp=Z,15nm,1.7s,mb4.7
MKAR Makanchi Array 67.75 44 P P **02 41 22.1 +0.9**
comp=Z,0.3nm,0.3s,mb3.8,baz=330,slow=6.3,SNR=5.9
MKAR LR LR 03 10 23.6
comp=Z,198nm,19.5s,MS4.3,baz=355,slow=35
SIV San Ignacio 70.16 214 P P **02 41 37.6 +1.2**
comp=Z,1.7nm,0.8s,mb4.0,baz=40,slow=7.7,SNR=11
LPAZ La Paz 73.34 221 *eP* P **02 41 55.4 -0.2**
comp=Z,3.4nm,1.1s,mb4.2
LPAZ La Paz 73.34 221 *eP* P **02 41 55.4 -0.2**
LPAZ pmax pmax
comp=Z,3.0nm,1.1s
LPAZ La Paz 73.34 221 *eP* P **02 41 55.3 -0.3**
comp=Z,3.4nm,1.1s,mb4.2
KMBO Kilima Mbogo 74.13 110 LR LR 03 16 12.4
comp=Z,295nm,18.6s,MS4.6,baz=144,slow=37
SONM Songino Array 76.73 30 P P **02 42 15.6 +0.6**
comp=Z,1.3nm,1.0s,mb3.8,baz=321,slow=5.5,SNR=8.0
BOSA Boshof 89.55 136 LR LR 03 22 40.5
comp=Z,339nm,18.8s,MS4.8,baz=321,slow=35
TRQA Tornquist 90.76 207 *eP* P **02 43 25.1 -1.4**
comp=Z,20nm,1.5s,mb5.2
TRQA Tornquist 90.76 207 *eP* P **02 43 25.1 -1.4**
comp=Z,20nm,1.5s,mb5.2
PLCA Paso Flores 95.99 211 LR LR 03 27 06.0
comp=Z,413nm,19.1s,MS4.9,baz=354,slow=36
TAOE Nuku Hiva Isla 111.69 281 *eLR* LR 03 22 01.9
comp=Z,1μm,23.0s
PPT Papeete 124.28 282 *eLR* LR 03 27 50.4
comp=Z,237nm,23.2s
TBI Tubuai 128.25 277 *eLR* LR 03 29 40.7
comp=Z,294nm,35.5s
WRA Warramunga Arr 148.62 34 PKPbc PKPbc 02 50 10.5 -0.6
comp=Z,0.6nm,0.5s,baz=330,slow=2.5,SNR=13
VNDA Vanda 149.86 184 PKPbc PKPbc 02 50 13.4 +1.0
comp=Z,0.8nm,0.9s,baz=201,slow=5.3,SNR=3.9
ASAR Alice Springs 151.80 38 PKPbc PKPbc 02 50 18.1 -0.6
comp=Z,1.4nm,0.7s,baz=348,slow=2.0,SNR=15
ASAR Alice Springs 151.80 38 PKPbc PKPbc 02 50 18.0 -0.6

NIED ***27*** *02:33:00,3720N×13660E,h5km,Mw3.7 Best double couple: M0 3.95000×10^14 NP1:φ=223.00000°,δ=4.00000°, λ=105.00000°. NP2:φ=28.00000°,δ=87.00000°,λ=89.00000°.*
ISCJB ***27*** *02:33:24.5±1.0,3725N±004×13664E±006,h8km±6km, mb3.5/2,Error ellipse: s-maj=8.7km s-min=5.9km az=16.7*
IDC ***27*** *02:33:24.2±1.6,3711N×13660E,h0km,mb3.6/2, mb1 3.8/2,mb1mx3.4/20,mbtmp3.6/2,MS2.6/1,Ms1 2.6/1, ms1mx1.8/35,Error ellipse: s-maj=27.7km s-min=15.4km az=22.0*
JMA ***27*** *02:33:25.4,3723N×13668E,h7km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φ=213.00000°,δ=15.00000°,λ=87.00000°. NP2:φ=37.00000°, δ=75.00000°,λ=91.00000°. Principal axes: T Plg=60.0000°, Azm=308.0000°; N Plg=1.0000°, Azm=216.0000°; P Plg=30.0000°, Azm=126.0000°;*
JMA Felt II J1.
NEIC ***27*** *02:33:25.5,3723N×13668E,h7km,MG3.8(JMA),After JMA.*

ISC 27 02:33:25.3±0.8,3723N±004×13667E±006,h9km±6km,n11, σ0§83/15,mb3.5/2,4D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JJH	**Hakui**	**0.32**	**164**	⇓P	**Pg**	**02 33 31.8**	**+0.3**
JJH				*e*S	**Sg**	**02 33 36.4**	**+0.7**
JSZ	**Suzu**	**0.59**	**68**	⇓P	**Pg**	**02 33 36.6**	**-0.2**
JSZ				*e*S	**Sg**	**02 33 44.9**	**+0.3**
JHG	**Hegura jima**	**0.65**	**18**	*e*S	**Sg**	**02 33 46.9**	**+0.5**
JTT	**Ttatey**	**0.82**	**139**	⇓P	**Pg**	**02 33 41.1**	**+0.1**
JKG	**Kaga**	**0.99**	**196**	⇓P	**Pg**	**02 33 44.0**	**-0.3**
JKG				*e*S	**Sg**	**02 33 57.5**	**+0.4**
MAJO	**Matsushiro**	**1.41**	**119**	*e*Pn	**Pn**	**02 33 50.0**	**-1.1**
MAJO				*e*Sn	**Sn**	**02 34 10.8**	**+0.9**
MAT	**Matsushiro**	**1.41**	**119**	P	**Pn**	**02 33 50.0**	**-1.2**
MAT				S	**Sb**	**02 34 10.9**	**+1.0**
MJAR	**Matsushiro Arr**	**1.41**	**119**	Pg	**Pg**	**02 33 50.3**	**-2.1**
	28nm,0.3s,baz=295,slow=15,SNR=120						
MJAR				Lg		02 34 10.8	
	40nm,0.3s,baz=294,slow=27,SNR=17						
KSRS	**Korea Array**	**6.97**	**274**	LR	LR	02 37 41.9	
	comp=Z,45nm,20.6s,baz=100,slow=37						
SONM	**Songino Array**	**24.55**	**305**	P	**P**	**02 38 46.1**	**+0.9**
	0.6nm,0.6s,mb3.3,baz=112,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**56.90**	**183**	P	**P**	**02 43 10.1**	**-0.6**
	1.0nm,1.1s,mb3.8,baz=359,slow=7.5,SNR=7.8						

ISCJB ***27*** *02:52:09.8±0.6, 1044N±002×6267W±002,h9km±4km, Error ellipse: s-maj=4.3km s-min=2.8km az=160.3*
FUNV ***27*** *02:52:10.7, 1046N×6261W,h5km,MW3.4*
TRN ***27*** *02:52:10.8, 1043N×6258W,h3km, MD3.5*
NEIC ***27*** *02:52:10.4, 1042N×6261W,h0km,MD3.5(TRN), MD3.4(CAR),After CAR.*

ISC 27 02:52:10.2±0.5,1043N±003×6265W±002,h6km±3km,n30, σ0§84/52,5C-1D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
GUNV	**Guanoco**	**0.40**	**227**	⇑*i*P	**Pg**	**02 52 18.2**	**+0.4**
GUNV				*e*S	**Sg**	**02 52 24.7**	**+1.6**
GUIV	**Guiria**	**0.47**	**63**	⇑*e*P	**Pg**	**02 52 19.2**	**-0.1**
GUIV				*e*S	**Sg**	**02 52 25.6**	**+0.2**
CRUV	**Carupano**	**0.62**	**293**	⇑*e*P	**Pg**	**02 52 21.3**	**-1.0**
CRUV				*e*S	**Sg**	**02 52 30.1**	**-0.3**
TCE	**Chacachacare**	**0.92**	**73**	*e*P	**Pg**	**02 52 26.9**	**-1.0**
TCE				*e*S	**Sg**	**02 52 40.2**	**+0.3**
ITEV	**Isla Los Testi**	**1.03**	**333**	⇓*i*P	**Pg**	**02 52 29.2**	**-0.8**
ITEV				*e*S	**Sg**	**02 52 43.1**	**-0.3**
TPP	**Pointe-a-Pierr**	**1.19**	**95**	*e*P	**Pg**	**02 52 33.0**	**0.0**
TPP				*e*S	**Sg**	**02 52 48.2**	**-0.1**
TRN	**Trinidad (W)**	**1.25**	**80**	*e*P	**Pb**	**02 52 32.9**	**-1.2**
TRN				*e*S	**Sg**	**02 52 50.6**	**+0.4**
ORIV	**Oritupano**	**1.55**	**209**	⇑*i*P	**Pn**	**02 52 39.7**	**+1.4**
ORIV				*e*S	**Sn**	**02 52 59.9**	**+1.2**
TBH	**Brigand Hill**	**1.56**	**88**	*e*P	**Pn**	**02 52 39.6**	**+1.1**
TBH				*e*S	**Sn**	**02 52 58.8**	**-0.2**
GRGR	**Grenville**	**1.95**	**30**	*e*Pn	**Pn**	**02 52 44.0**	**+0.1**
GRGR				*e*Sn	**Sn**	**02 53 08.5**	**-0.2**
GRW	**Mount Saint Ca**	**1.97**	**29**	*e*P	**Pn**	**02 52 44.5**	**+0.4**
GRW				*e*S	**Sn**	**02 53 10.3**	**+1.1**
PCRV	**Puerto La Cruz**	**1.97**	**263**	*e*P	**Pn**	**02 52 44.9**	**+0.7**
PCRV				*e*S	**Sn**	**02 53 09.6**	**+0.4**
TPR	**Prospect**	**1.99**	**68**	*e*P	**Pn**	**02 52 45.1**	**+0.8**
TPR				*e*S	**Sn**	**02 53 09.1**	**-0.5**
IBAV	**Isla La Blanqu**	**2.34**	**306**	*e*P	**Pn**	**02 52 49.6**	**+0.4**
RIOV	**Rio Grande**	**2.49**	**161**	*e*P	**Pn**	**02 52 51.2**	**0.0**
RIOV				*e*S	**Sn**	**02 53 21.3**	**-0.7**
PRGV	**PARIAGUAN**	**2.58**	**230**	*e*P	**Pn**	**02 52 53.4**	**+1.0**
PRGV				*e*S	**Sn**	**02 53 24.8**	**+0.6**
GURV	**El Guri**	**2.69**	**189**	*e*P	**Pn**	**02 52 54.0**	**-0.1**
GURV				*e*S	**Sn**	**02 53 26.6**	**-0.3**
BIRV	**Birongo**	**3.56**	**271**	*e*P	**Pn**	**02 53 06.8**	**+0.7**
BIRV				*e*S	**Sn**	**02 53 48.1**	**-0.3**
MERV	**Las Mercedes**	**3.78**	**252**	*e*P	**Pn**	**02 53 09.5**	**+0.4**
FUNV	**FUNVISIS**	**4.09**	**271**	*e*P	**Pn**	**02 53 13.9**	**+0.5**
LUEV	**Luepa**	**4.71**	**165**	*e*P	**Pn**	**02 53 20.7**	**-1.1**
LUEV				*e*S	**Sn**	**02 54 13.1**	**-3.8**
CAOV	**Caicara del Or**	**4.76**	**230**	*e*P	**Pn**	**02 53 21.6**	**-1.0**
CAOV				*e*S	**Sn**	**02 54 15.0**	**-3.2**
TURV	**Turiamo**	**5.11**	**271**	⇑*e*P	**Pn**	**02 53 26.7**	**-0.6**
BAUV	**El Baul**	**5.52**	**255**	*e*P	**Pn**	**02 53 32.9**	**0.0**
BAUV				*e*S	**Sn**	**02 54 33.0**	**-3.8**
JACV	**Jacura**	**6.11**	**277**	*e*P	**Pn**	**02 53 40.2**	**-0.8**
PAYV	**Puerto Ayacuch**	**7.03**	**225**	*e*P	**Pn**	**02 53 53.1**	**-0.6**
PAYV				*e*S	**Sn**	**02 55 08.6**	**-5.4**
CURV	**Curarigua**	**7.21**	**267**	*e*P	**Pn**	**02 53 55.5**	**-0.7**
SDV	**Santo Domingo**	**8.02**	**260**	*e*Pn	**Pn**	**02 54 08.0**	**+0.7**
	4.1nm,0.5s						
SDV				*e*Sn	**Sn**	**02 55 34.9**	**-3.5**
MTP	**Monte Pirata**	**8.12**	**340**	Pn	**Pn**	**02 54 10.1**	**+1.4**
SOCV	**Socops**	**8.37**	**256**	*e*P	**Pn**	**02 54 10.9**	**-1.3**

IDC 27 02:52:32.8±11.0,2202N×14296E,h133km±108km, mb3.2/7,mb1 3.4/7,mb1mx3.3/19,mbtmp3.2/7,Error ellipse: s-maj=53.2km s-min=18.8km az=82.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
KSRS	**Korea Array**	**20.13**	**323**	P	P	02 56 57.5	+1.3
	0.7nm,0.3s,baz=129,slow=13,SNR=4.6						
SONM	**Songino Array**	**38.96**	**320**	P	P	02 59 45.5	-0.1
	0.3nm,0.5s,baz=131,slow=6.0,SNR=4.0						
WRA	**Warramunga Arr**	**42.55**	**192**	P	P	03 00 16.2	+0.8
	0.4nm,0.7s,baz=12,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**46.26**	**192**	P	P	03 00 43.5	-1.3
	0.4nm,0.7s,baz=15,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**53.83**	**322**	P	P	03 01 41.2	-0.5
	0.9nm,0.3s,baz=91,slow=7.2,SNR=4.7						
MKAR	**Makanchi Array**	**54.33**	**312**	P	P	03 01 45.4	0.0
	0.4nm,0.7s,baz=90,slow=9.7,SNR=4.1						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	P	03 04 05.9	-0.5
	0.3nm,0.6s,baz=294,slow=6.0,SNR=6.2						
LPAZ	**La Paz**	**150.12**	**84**	PKPbc	PKPbc	03 12 10.1	+1.5
	1.0nm,0.9s,baz=207,slow=4.5,SNR=4.8						

ISCJB ***27*** *02:55:57.9±0.6,5148N±003×16.10E±003,h0km,Error ellipse: s-maj=4.2km s-min=2.5km az=16.5*
IPEC ***27*** *02:55:58.9±0.3,5156N×1616E,h0km,ML2.1/4,Error ellipse: s-maj=1.9km s-min=1.5km az=41.0*
IDC ***27*** *02:56:00.8±1.2,5146N×1606E,h0km,mb1 3.4/4, mb1mx3.2/20,mbtmp3.3/4,ML2.6/4, Error ellipse: s-maj=21.3km s-min=10.1km az=112.0*
WAR ***27*** *02:56:00.9,5149N×1605E,ML2.5,Mining Induced*
PRU ***27*** *02:56:01.4,5145N×1604E,h0km*
VIE ***27*** *02:56:01.7±0.5,5132N×1609E,h0km,mb2.1/2,ML2.6/3, Error ellipse: s-maj=3.3km s-min=2.7km az=177.0, Suspected Mining induced.*
NEIC ***27*** *02:56:01.1±1.4,5141N×1607E,h5km,ML2.5(SZGRF), Error ellipse: s-maj=14.8km s-min=6.2km az=205.0*
CSEM ***27*** *02:56:02.0±0.3,5142N×1602E,h2km,ML3.0/6,Error ellipse: s-maj=5.5km s-min=3.0km az=24.0*

ISC 27 02:55:59.5±0.5,5150N±003×1607E±003,h0km,n42, σ1§00/82,4C-1D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**168**	*e*Pg	**Pg**	**02 56 13.0**	**+0.7**
KSP				*e*Sg	**Sg**	**02 56 21.8**	**+0.9**
KSP	**Ksiaz**	**0.67**	**168**	⇓*i*Pg	**Pg**	**02 56 13.0**	**+0.7**
KSP				*e*Sg	**Sg**	**02 56 21.3**	**+0.4**
KSP	**Ksiaz**	**0.67**	**168**	*e*Pg	**Pg**	**02 56 12.7**	**+0.4**
KSP				*e*Sg	**Sg**	**02 56 21.3**	**+0.4**
UPC	**Upice**	**0.99**	**182**	*e*Pg	**Pg**	**02 56 18.9**	**+0.5**
DPC	**Dobruska-Polom**	**1.16**	**172**	*e*Pg	**Pg**	**02 56 21.7**	**0.0**
DPC				*e*Sg	**Sg**	**02 56 36.8**	**+0.2**
PVCC	**Panska Ves**	**1.35**	**225**	*e*Pg	**Pg**	**02 56 25.5**	**+0.1**
PVCC				*e*Sg	**Sg**	**02 56 44.0**	**+1.0**
	116nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**225**	*e*Pg	**Pg**	**02 56 25.5**	**+0.1**
PVCC				*e*Sg	**Sg**	**02 56 43.9**	**+0.9**
BRG	**Berggiesshubel**	**1.48**	**246**	Pg	**Pg**	**02 56 28.0**	**+0.3**
BRG	**Berggiesshubel**	**1.48**	**246**	PN	**Pn**	**02 56 27.3**	**+0.1**
BRG				PG	**Pg**	**02 56 28.0**	**+0.2**
BRG				SG	**Sg**	**02 56 47.8**	**+1.0**
	49nm,0.7s						
PRU	**Pruhonice**	**1.79**	**213**	*e*Pg	**Pg**	**02 56 32.9**	**-0.9**
PRU				*e*Sg	**Sg**	**02 56 56.9**	**-0.2**
PRU	**Pruhonice**	**1.79**	**213**	*e*PG	**Pg**	**02 56 32.9**	**-0.9**
PRU				*e*SG	**Sg**	**02 56 56.9**	**-0.2**
	20nm,0.4s						
CLL	**Collm**	**1.93**	**266**	*e*Pn	**Pn**	**02 56 35.0**	**+1.5**
CLL				*e*Pg	**Pg**	**02 56 38.0**	**+1.6**
CLL				*e*Sg	**Sg**	**02 57 02.0**	**+0.6**
	comp=Z,17nm,0.5s						
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn	**Pn**	**02 56 33.1**	**-0.8**
MORC				*e*Sn	**Sn**	**02 57 02.6**	**+3.5**
MORC	**Moravsky Berou**	**1.96**	**151**	⇑*i*P	**Pn**	**02 56 34.1**	**+0.2**
MORC	**Moravsky Berou**	**1.96**	**151**	S	**Sn**	**02 57 02.2**	**+3.0**
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn	**Pn**	**02 56 33.8**	**-0.1**
MORC				*e*Sg	**Sg**	**02 57 01.1**	**-1.3**
	comp=Z,14nm,0.3s						
MORC				*e*Sn	**Sn**	**02 57 02.7**	**+3.5**
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*PG	**Pg**	**02 56 39.6**	**-0.5**
OKC				*e*SG	**Sg**	**02 57 06.7**	**-0.9**
VRAC	**Vranov**	**2.22**	**171**	Pn	**Pn**	**02 56 37.9**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=319,slow=19,SNR=6.9						
VRAC				Lg		02 57 10.4	
	comp=Z,2.8nm,0.3s,baz=254,slow=20,SNR=6.3						
VRAC	**Vranov**	**2.22**	**171**	⇑*i*P	**Pn**	**02 56 39.0**	**+1.6**
VRAC	**Vranov**	**2.22**	**171**	S	**Sn**	**02 57 09.7**	**+4.2**
VRAC	**Vranov**	**2.22**	**171**	*e*Pn	**Pn**	**02 56 37.7**	**+0.3**
VRAC				*e*Sg	**Sg**	**02 57 10.0**	**-0.6**
	comp=Z,7.3nm,0.3s						
TREC	**Trest**	**2.23**	**190**	*e*PN	**Pn**	**02 56 38.2**	**+0.5**
TREC				*e*PG	**Pg**	**02 56 41.4**	**-0.9**
KRUC	**Moravsky**	**2.45**	**175**	*e*Pn	**Pn**	**02 56 40.9**	**+0.3**
KRUC				*e*Sg	**Sg**	**02 57 17.4**	**-0.6**
	comp=Z,7.2nm,0.4s						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**02 56 43.5**	**+0.5**
NKC				*e*PG	**Pg**	**02 56 49.6**	**0.0**
NKC				*e*SG	**Sg**	**02 57 24.0**	**+0.4**
	comp=Z,28nm,0.3s						
OJC	**Ojcow**	**2.69**	**117**	*e*Pg	**Pg**	**02 56 50.8**	**-0.2**
OJC				*e*Sg	**Sg**	**02 57 26.1**	**+0.3**
JAVC	**Velka Javorina**	**2.83**	**158**	*e*Pn	**Pn**	**02 56 47.7**	**+1.8**
JAVC				*e*Sg	**Sg**	**02 57 32.3**	**+1.8**
	comp=Z,8.1nm,0.8s						
KHC	**Kasperske Hory**	**2.85**	**215**	*e*Pn	**Pn**	**02 56 46.2**	**0.0**
KHC				*e*Pg	**Pg**	**02 56 51.7**	**-2.5**
KHC				*e*Sn	**Sn**	**02 57 20.1**	**-1.2**
KHC				*e*Sg	**Sg**	**02 57 29.7**	**-1.4**
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	**02 56 46.2**	**0.0**
KHC				*e*PG	**Pg**	**02 56 51.7**	**-2.5**
KHC				*e*SN	**Sn**	**02 57 20.1**	**-1.2**
KHC				*e*SG	**Sg**	**02 57 29.7**	**-1.4**
	comp=Z,11nm,0.9s						
MOX	**Moxa**	**2.94**	**255**	*e*PG	**Pg**	**02 56 55.1**	**-0.6**
MOX				*e*SG	**Sg**	**02 57 33.9**	**+0.2**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn	**Pn**	**02 56 50.2**	**+1.2**
GEC2				*e*Sg	**Sg**	**02 57 36.0**	**-1.7**
GERES	**GERESS Array B**	**3.06**	**211**	Pn	**Pn**	**02 56 49.9**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=32,slow=12,SNR=16						
GERES				Pg	**Pg**	**02 56 56.1**	**-1.9**
	comp=Z,1.8nm,0.3s,baz=30,slow=17,SNR=22						
GERES				Sn	**Sn**	**02 57 26.2**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=22,slow=24,SNR=7.5						
GERES				Lg		02 57 36.0	
	comp=Z,2.3nm,0.3s,baz=20,slow=27,SNR=11						
GERES	**GERESS Array B**	**3.06**	**211**	Pg	**Pg**	**02 56 56.1**	**-2.0**
MODS	**Modra-Piesok**	**3.22**	**165**	*e*PG	**Pg**	**02 57 00.8**	**-0.4**
MODS				*e*SG	**Sg**	**02 57 47.1**	**+4.2**
KOLL	**Kolacno**	**3.29**	**152**	*e*SG	**Sg**	**02 57 45.0**	**0.0**
NIE	**Niedzica**	**3.42**	**126**	*e*P	**Pg**	**02 57 04.3**	**-0.7**
NIE				*e*S	**Sg**	**02 57 48.9**	**-0.3**
BSD	**Bornholm Skovb**	**3.69**	**350**	*i*P	**Pn**	**02 56 56.3**	**-1.4**
BSD				*i*		02 56 56.9	
BSD				*i*S	**Sn**	**02 57 37.1**	**-4.8**
BSD				*i*		02 57 39.1	
MOA	**Molln**	**3.83**	**198**	⇑*i*Pn	**Pn**	**02 57 00.3**	**+0.6**
MOA				⇑*i*Sg	**Sg**	**02 58 02.9**	**+0.4**
	comp=Z,2.9nm,0.3s						
MOA	**Molln**	**3.83**	**198**	Pn	**Pn**	**02 57 00.3**	**+0.6**
MOA				Sg	**Sg**	**02 58 02.9**	**+0.4**
	comp=Z,2.9nm,0.3s						
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*PG	**Pg**	**02 57 14.8**	**+0.5**
STHS				*e*SG	**Sg**	**02 58 07.2**	**+2.3**
STHS	**Stebnicka Huta**	**3.91**	**120**	*e*Pg	**Pg**	**02 57 14.8**	**+0.5**
STHS				*e*Sg	**Sg**	**02 58 07.3**	**+2.4**
FINES	**FINESS Array B**	**11.39**	**25**	Pn	**Pn**	**02 58 40.9**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=213,slow=9.9,SNR=3.2						
**ARCES

CPN1	**Cerro Paranal**	**7.41**	**163**	*e*P		**Pn**	**03 13 10.5**	**-2.9**
CPN1				*i* S		**Sn**	**03 14 29.1**	**-7.2**
CDCH	**Caldera**	**9.68**	**170**	*i* S		**Sn**	**03 15 19.4**	**-13**
SIV	**San Ignacio**	**11.31**	**84**	Pn		**Pn**	**03 14 04.3**	**-2.6**
	5.1nm,0.3s,baz=265,slow=14,SNR=65							
ATAH	**Atahualpa**	**11.80**	**332**	Pn		**Pn**	**03 14 16.0**	**+2.4**
	0.3nm,0.3s,baz=150,slow=8.1,SNR=3.3							
ATAH				Sn		**Sn**	**03 16 32.9**	**+8.7**
	0.5nm,0.3s,baz=292,slow=19,SNR=3.4							
ATAH				LR		LR	03 19 22.3	
	comp=Z,1µm,19.5s,baz=263,slow=41							
CFAA	**Coronel Fontan**	**14.62**	**164**	Pn		**Pn**	**03 14 50.8**	**-1.1**
	0.1nm,0.3s,baz=341,slow=12,SNR=11							
CFAA				Sn		**Sn**	**03 17 25.2**	**-7.5**
	0.0nm,0.3s,baz=171,slow=19,SNR=3.6							
OTAV	**Otavalo**	**18.51**	**342**	*e*Pn		**Pn**	**03 15 41.7**	**+0.3**
	15nm,1.0s							
ROSC	**El Rosal**	**22.28**	**356**	P		**P**	**03 16 21.1**	**-0.8**
	7.8nm,0.9s,mb4.1,baz=100,slow=18,SNR=6.9							
TRQA	**Tornquist**	**22.55**	**157**	*e*P		**P**	**03 16 24.3**	**-0.3**
	48nm,1.3s,mb4.8							
PLCA	**Paso Flores**	**23.22**	**176**	P		**P**	**03 16 31.9**	**+0.3**
	10nm,0.7s,mb4.3,baz=342,slow=10,SNR=32							
PLCA				PcP		PcP	03 20 20.0	+1.2
	1.8nm,0.8s,baz=0.0,slow=1.0,SNR=3.0							
SDV	**Santo Domingo**	**26.32**	**5**	*e*P		**P**	**03 16 57.7**	**-2.6**
	20nm,0.9s,mb4.6							
SDV	**Santo Domingo**	**26.32**	**5**	P		**P**	**03 16 58.5**	**-1.8**
	16nm,1.0s,mb4.5,baz=250,slow=6.9,SNR=14							
PCRV	**Puerto La Cruz**	**28.66**	**17**	P		**P**	**03 17 18.6**	**-2.7**
	13nm,1.0s,mb4.6,baz=108,slow=8.1,SNR=3.5							
PCRV				LR		LR	03 30 02.1	
	comp=Z,2µm,18.6s,MS4.7,baz=10,slow=39							
MTP	**Monte Pirata**	**36.09**	**12**	*e*P		**P**	**03 18 22.7**	**-3.6**
USHA	**Ushuaia**	**37.39**	**176**	P		**P**	**03 18 40.1**	**+3.1**
	9.4nm,0.8s,mb4.7,baz=315,slow=5.7,SNR=2.8							
TEIG	**Tepich**	**40.48**	**337**	LR		LR	03 36 32.1	
	comp=Z,341nm,18.8s,MS4.2,baz=119,slow=37							
CMIG	**Matias Romero**	**40.70**	**326**	P		**P**	**03 19 06.1**	**+1.1**
	1.4nm,0.8s,baz=155,slow=14,SNR=2.4							
NHSC	**New Hope**	**50.83**	**352**	*e*P		**P**	**03 20 24.0**	**-0.8**
	80nm,1.2s,mb5.5							
LRAL	**Lakeview Retre**	**52.07**	**345**	*e*P		**P**	**03 20 32.2**	**-1.9**
	8.3nm,1.0s,mb4.6							
TXAR	**Lajitas Array**	**55.31**	**327**	P		**P**	**03 20 57.1**	**-0.7**
	0.8nm,0.8s,mb3.8,baz=152,slow=10,SNR=3.3							
MIAR	**Mount Ida**	**55.43**	**339**	*e*P		**P**	**03 20 57.6**	**-1.0**
	16nm,1.3s,mb4.9							
MIAR	**Mount Ida**	**55.43**	**339**	*e*P		**P**	**03 20 57.6**	**-1.0**
MIAR				pmax		pmax		
	comp=Z,16nm,1.3s,mb4.9							
WCI	**Wyandotte Cave**	**56.88**	**347**	*e*P		**P**	**03 21 06.8**	**-2.2**
	comp=Z,16nm,0.9s,mb5.0							
WCI	**Wyandotte Cave**	**56.88**	**347**	*e*P		**P**	**03 21 06.8**	**-2.2**
WCI				pmax		pmax		
	comp=Z,16nm,0.9s,mb5.0							
SIUC	**Southern Illin**	**57.07**	**344**	*e*P		**P**	**03 21 09.7**	**-0.6**
	comp=Z,18nm,0.7s,mb5.2							
ACSO	**Alum Creek Sta**	**58.23**	**351**	*e*P		**P**	**03 21 16.0**	**-2.4**
	comp=Z,9.2nm,0.8s,mb4.9							
BNM	**Barren Site**	**60.66**	**328**	*e*P		**P**	**03 21 35.8**	**+0.5**
LAZ	**Ladron**	**61.12**	**328**	*e*P		**P**	**03 21 39.0**	**+0.6**
SDCO	**Great Sand Dun**	**63.00**	**331**	*e*P		**P**	**03 21 51.2**	**+0.2**
	comp=Z,14nm,1.0s,mb5.1							
ISCO	**Idaho Springs**	**64.73**	**332**	*e*P		**P**	**03 22 02.1**	**-0.3**
	comp=Z,11nm,1.4s,mb4.7							
ISCO	**Idaho Springs**	**64.73**	**332**	*e*P		**P**	**03 22 02.1**	**-0.2**
ISCO				pmax		pmax		
	comp=Z,11nm,1.4s,mb4.7							
ECSD	**EROS,Sioux Fal**	**64.75**	**341**	*e*P		**P**	**03 22 01.3**	**-1.1**
	comp=Z,11nm,1.0s,mb4.8							
PV01	**Paradox Valley**	**64.76**	**329**	*e*P		**P**	**03 22 03.4**	**+0.8**
SMCO	**Snowmass**	**64.83**	**331**	*e*P		**P**	**03 22 03.2**	**+0.1**
	comp=Z,6.7nm,1.0s,mb4.6							
VNA3	**Neumayer Olymp**	**65.00**	**161**	*e*		**P**	**03 22 05.7**	**+2.0**
VNA3				*e*			03 22 11.2	
VNA3				*e*		pP	03 22 14.9	+0.5
VNA3				*e*			03 22 19.1	
VNA3				*e*			03 22 27.9	
VNA3				*e*			03 22 33.8	
VNA3				*e*			03 22 38.0	
VNA2	**Neumayer--Watz**	**65.59**	**161**	*e*		**P**	**03 22 08.3**	**+0.7**
	baz=315,slow=7.6							
VNA2				*e*			03 22 13.6	
VNA2				*e*		pP	03 22 17.6	-0.7
VNA2				*e*			03 22 23.0	
VNA2				*e*			03 22 31.1	
VNA2				*e*			03 22 37.2	
VNA2				*e*			03 22 41.2	
TAOE	**Nuku Hiva Isla**	**65.89**	**268**	*e*LR		LR	03 41 59.9	
	comp=Z,1µm,36.9s							
SNAA	**Sanae**	**67.21**	**161**	*e*		**P**	**03 22 19.5**	**+1.6**
SNAA				*e*			03 22 25.1	
SNAA				*e*		pP	03 22 29.8	+1.1
SNAA				*e*			03 22 33.1	
SNAA				*e*			03 22 40.6	
SNAA				*e*			03 22 48.1	
SNAA				*e*			03 22 52.0	
DUG	**Dugway**	**68.45**	**328**	*e*P		**P**	**03 22 26.3**	**+0.2**
	comp=Z,7.7nm,1.0s,mb4.7							
DUG	**Dugway**	**68.45**	**328**	*e*P		**P**	**03 22 26.3**	**+0.2**
DUG				pmax		pmax		
	comp=Z,8.0nm,1.0s,mb4.7							
AGMN	**Agassiz Refuge**	**68.59**	**344**	*e*P		**P**	**03 22 25.9**	**-1.5**
	comp=Z,4.6nm,0.8s,mb4.5							
PDAR	**Pinedale Array**	**68.88**	**332**	P		**P**	**03 22 30.4**	**+1.7**
	comp=Z,1.1nm,1.0s,baz=182,slow=4.0,SNR=5.0							
PDAR				LR		LR	03 54 41.9	
	comp=Z,135nm,18.4s,baz=346,slow=38							
HWUT	**Hardware Ranch**	**68.91**	**330**	*e*P		**P**	**03 22 28.9**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.4							
FLWY	**Flagg Ranch**	**70.42**	**332**	*e*P		**P**	**03 22 38.9**	**+0.7**
	comp=Z,29nm,1.5s,mb5.0							
ULM	**Lac du Bonnet**	**70.48**	**344**	P		**P**	**03 22 37.4**	**-1.0**
ULM				LR		LR	03 54 31.7	
ULM	**Lac du Bonnet**	**70.48**	**344**	P		**P**	**03 22 37.4**	**-1.0**
	comp=Z,3.6nm,1.0s,mb4.3,baz=157,slow=6.0,SNR=6.3							
ULM				LR		LR	03 54 31.7	
	comp=Z,254nm,20.6s,MS4.5,baz=148,slow=37							
LIC	**Lamto**	**70.91**	**77**	*e*P		**P**	**03 22 40.1**	**-1.7**
	comp=Z,43nm,1.2s,mb5.0							
LIC				*e*MLR		MLR		
	comp=Z,1µm,18.5s,MS4.8							
LIC	**Lamto**	**70.91**	**77**	*e*P		**P**	**03 22 40.1**	**-1.7**
	comp=Z,22nm,1.2s,mb5.0							
LIC				LR		LR		
	comp=Z,530nm,18.5s,MS4.8							
DBIC	**Dimbokro**	**71.22**	**76**	*e*P		**P**	**03 22 41.5**	**-2.3**
	comp=Z,30nm,1.3s,mb5.1							
DBIC				LR		LR	03 52 51.1	
DBIC	**Dimbokro**	**71.22**	**76**	*e*P		**P**	**03 22 41.5**	**-2.3**
DBIC				pmax		pmax		
	comp=Z,30nm,1.3s							
DBIC	**Dimbokro**	**71.22**	**76**	P		**P**	**03 22 42.5**	**-1.3**
	comp=Z,15nm,1.0s,mb4.9,baz=243,slow=4.8,SNR=7.1							
DBIC				LR		LR	03 52 51.1	
	comp=Z,789nm,18.3s,MS5.0,baz=221,slow=35							
TBI	**Tubuai**	**71.35**	**251**	*e*LR		LR	03 44 42.9	
	comp=Z,244nm,29.8s							
HLID	**Hailey**	**71.76**	**329**	*e*P		**P**	**03 22 45.9**	**-0.4**
	comp=Z,4.5nm,1.1s,mb4.3							
SCHQ	**Schefferville**	**72.23**	**4**	LR		LR	03 55 09.5	
	comp=Z,152nm,18.1s,MS4.3,baz=236,slow=36							
QSPA	**South Pole Qui**	**72.65**	**180**	*e*P		**P**	**03 22 52.5**	**+1.3**
	comp=Z,106nm,0.6s							
PPT	**Papeete**	**72.69**	**257**	*e*LR		LR	03 45 18.7	
	comp=Z,212nm,22.5s							
PPT	**Papeete**	**72.69**	**257**	LR		LR	03 47 32.6	
	comp=Z,178nm,20.0s,MS4.3,baz=188,slow=30							
EDM	**Edmonton**	**78.65**	**336**	*e*P		**P**	**03 23 24.5**	**-1.2**
TORD	**Torodi Ar. Bea**	**79.55**	**73**	P		**P**	**03 23 30.4**	**-1.1**
	comp=Z,7.4nm,0.9s,mb4.6,baz=256,slow=4.8,SNR=25							
TORD				LR		LR	03 57 21.4	
	comp=Z,566nm,19.5s,MS4.9,baz=0.0,slow=35							
VNDA	**Vanda**	**80.11**	**190**	P		**P**	**03 23 35.6**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=180,slow=3.0,SNR=2.1							
MDT	**Midelt**	**82.09**	**52**	P		**P**	**03 23 42.1**	**-2.6**
	comp=Z,3.7nm,0.7s,mb4.4,baz=248,slow=8.7,SNR=6.6							
MDT				LR		LR	04 00 29.2	
	comp=Z,271nm,18.7s,MS4.6,baz=338,slow=36							
EVO	**Evora**	**82.32**	**46**	*e*P		**P**	**03 23 46.0**	**+0.2**
	comp=Z,37nm,1.3s,mb4.8							
EVO				*e*MLR		MLR		
	comp=Z,375nm,20.2s,MS4.5							
TSUM	**Tsumeb**	**84.71**	**108**	*e*P		**P**	**03 23 58.6**	**0.0**
	comp=Z,18nm,1.1s,mb5.1							
PAB	**San Pablo**	**85.32**	**46**	*e*P		**P**	**03 24 01.5**	**+0.4**
	comp=Z,13nm,1.0s,mb5.0							
PAB	**San Pablo**	**85.32**	**46**	*e*P		**P**	**03 24 01.5**	**+0.4**
PAB				pmax		pmax		
	comp=Z,13nm,1.0s,mb5.0							
ESDC	**Sonseca Array**	**85.64**	**46**	P		**P**	**03 24 03.4**	**+0.6**
	comp=Z,9.6nm,1.1s,mb5.0,baz=250,slow=5.6,SNR=19							
ESLA	**Sonseca Array**	**85.64**	**46**	*e*P		**P**	**03 24 03.5**	**+0.8**
	comp=Z,8.6nm,1.3s,mb4.8							
YKA	**Yellowknife Ar**	**86.26**	**342**	P		**P**	**03 24 04.8**	**-0.5**
	comp=Z,3.3nm,0.8s,mb4.6,baz=136,slow=4.9,SNR=42							
BOSA	**Boshof**	**88.55**	**119**	LR		LR	04 02 25.7	
	comp=Z,222nm,18.3s,MS4.6,baz=38,slow=35							
SJPF	**Ste Jean**	**89.00**	**44**	*e*P		**P**	**03 24 18.9**	**0.0**
MAW	**Mawson**	**89.15**	**164**	*e*P		**P**	**03 24 20.6**	**+1.4**
	comp=Z,6.3nm,0.6s,mb5.1							
MAW	**Mawson**	**89.15**	**164**	*e*P		**P**	**03 24 20.6**	**+1.4**
MAW				pmax		pmax		
	comp=Z,6.0nm,0.6s							
MAW	**Mawson**	**89.15**	**164**	P		**P**	**03 24 20.8**	**+1.6**
	comp=Z,7.9nm,0.7s,mb5.2,baz=224,slow=6.5,SNR=13							
ETSF	**Etsaut**	**89.35**	**44**	*e*P		**P**	**03 24 20.6**	**+0.1**
	comp=Z,22nm,1.3s,mb5.0							
ETSF	**Etsaut**	**89.35**	**44**	*e*P		**P**	**03 24 20.6**	**+0.1**
	comp=Z,11nm,1.3s,mb5.0							
ETSF	**Etsaut**	**89.35**	**44**	*e*P		**P**	**03 24 20.6**	**+0.1**
ETSF				pmax		pmax		
	comp=Z,11nm,1.3s,mb5.0							
QUIF	**Quistinic**	**89.86**	**39**	*e*P		**P**	**03 24 24.3**	**+1.5**
ROSF	**Rostrenen**	**89.99**	**39**	*e*P		**P**	**03 24 24.6**	**+1.2**
	comp=Z,18nm,1.1s,mb5.0							
ROSF	**Rostrenen**	**89.99**	**39**	*e*P		**P**	**03 24 24.6**	**+1.2**
	comp=Z,9.0nm,1.1s,mb5.0							
ROSF	**Rostrenen**	**89.99**	**39**	*e*P		**P**	**03 24 24.6**	**+1.2**
ROSF				pmax		pmax		
	comp=Z,9.0nm,1.1s,mb5.0							
EPF	**Esparros**	**90.01**	**45**	*e*P		**P**	**03 24 24.6**	**+1.0**
	comp=Z,18nm,1.3s,mb4.9							
EPF	**Esparros**	**90.01**	**45**	*e*P		**P**	**03 24 24.6**	**+1.0**
	comp=Z,8.8nm,1.3s,mb4.9							
EPF	**Esparros**	**90.01**	**45**	*e*P		**P**	**03 24 24.6**	**+1.0**
EPF				pmax		pmax		
	comp=Z,9.0nm,1.3s,mb4.9							
SGMF	**Saint Gilles**	**90.38**	**39**	*e*P		**P**	**03 24 25.8**	**+0.6**
BORG	**Borgarnes**	**90.86**	**20**	LR		LR	03 59 49.4	
	comp=Z,194nm,20.1s,MS4.5,baz=186,slow=32							
LFF	**La Frestale**	**91.04**	**43**	*e*P		**P**	**03 24 28.5**	**+0.1**
	comp=Z,35nm,1.2s,mb5.3							
LFF	**La Frestale**	**91.04**	**43**	*e*P		**P**	**03 24 28.5**	**+0.1**
	comp=Z,17nm,1.2s,mb5.3							
LFF	**La Frestale**	**91.04**	**43**	*e*P		**P**	**03 24 28.5**	**+0.1**
LFF				pmax		pmax		
	comp=Z,17nm,1.2s,mb5.2							
MFF	**Saint Martin d**	**91.16**	**41**	*e*P		**P**	**03 24 29.1**	**+0.3**
MTLF	**Montolieu**	**91.39**	**45**	*e*P		**P**	**03 24 29.5**	**-0.5**
	comp=Z,9.4nm,1.0s,mb4.8							
MTLF	**Montolieu**	**91.39**	**45**	*e*P		**P**	**03 24 29.5**	**-0.5**
	comp=Z,4.7nm,1.0s,mb4.8							
MTLF	**Montolieu**	**91.39**	**45**	*e*P		**P**	**03 24 29.5**	**-0.5**
MTLF				pmax		pmax		
	comp=Z,5.0nm,1.0s,mb4.8							
RJF	**Les Rejaudoux**	**91.69**	**43**	*e*P		**P**	**03 24 31.8**	**+0.4**
RJF				*e*MLR		MLR		
	comp=Z,221nm,17.8s,MS4.3							
RJF	**Les Rejaudoux**	**91.69**	**43**	*e*P		**P**	**03 24 31.8**	**+0.4**
RJF				MLR		MLR		
	comp=Z,220nm,17.8s,MS4.7							
CAF	**Calviac**	**91.90**	**43**	*e*P		**P**	**03 24 33.2**	**+0.9**
LDF	**La Druitiere**	**91.99**	**39**	*e*P		**P**	**03 24 33.9**	**+0.2**
TCF	**Toulx Ste Croi**	**92.53**	**42**	*e*P		**P**	**03 24 36.2**	**+1.0**
	comp=Z,16nm,1.3s,mb5.0							
TCF	**Toulx Ste Croi**	**92.53**	**42**	*e*P		**P**	**03 24 36.2**	**+1.0**
	comp=Z,7.6nm,1.3s,mb5.0							
TCF	**Toulx Ste Croi**	**92.53**	**42**	*e*P		**P**	**03 24 36.2**	**+1.0**
TCF				pmax		pmax		
	comp=Z,8.0nm,1.3s,mb5.0							
LASF	**Ste Croix**	**92.77**	**45**	*e*P		**P**	**03 24 37.7**	**+1.3**
	comp=Z,23nm,1.3s,mb5.1							
BGF	**Bois d'Agland**	**93.03**	**42**	*e*P		**P**	**03 24 38.0**	**+0.5**
AVF	**Avril sur Loir**	**93.44**	**42**	*e*P		**P**	**03 24 39.7**	**+0.3**
VIVF	**Saint-Julien-l**	**93.60**	**44**	*e*P		**P**	**03 24 41.6**	**+1.4**
SSF	**Saint Saulge**	**93.64**	**42**	*e*P		**P**	**03 24 40.9**	**+0.6**
SMF	**Signal de Mont**	**93.70**	**42**	*e*P		**P**	**03 24 39.7**	**-0.9**
KEST	**Kesra**	**93.87**	**54**	LR		LR	04 07 38.5	
	comp=Z,66nm,19.0s,MS4.1,baz=198,slow=36							
SMRF	**Simiane la Rot**	**93.89**	**45**	*e*P		**P**	**03 24 40.5**	**-1.0**
	comp=Z,37nm,1.5s,mb5.3							
SMRF	**Simiane la Rot**	**93.89**	**45**	*e*P		**P**	**03 24 40.5**	**-1.0**
	comp=Z,37nm,1.5s,mb5.6							
LOR	**Lormes**	**93.94**	**42**	*e*P		**P**	**03 24 42.2**	**+0.5**
LOR				*e*MLR		MLR		
	comp=Z,164nm,18.8s,MS4.2							
LOR	**Lormes**	**93.94**	**42**	*e*P		**P**	**03 24 42.2**	**+0.5**
LOR				MLR		MLR		
	comp=Z,160nm,18.8s,MS4.5							
LMR	**La Mourre**	**94.30**	**46**	*e*P		**P**	**03 24 43.1**	**-0.4**
	comp=Z,14nm,1.0s,mb5.0							
LMR	**La Mourre**	**94.30**	**46**	*e*P		**P**	**03 24 43.1**	**-0.4**
	comp=Z,7.0nm,1.0s,mb5.0							
LMR	**La Mourre**	**94.30**	**46**	*e*P		**P**	**03 24 43.1**	**-0.4**
LMR				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb5.0							
ORIF	**Oris-en-Rattie**	**94.42**	**44**	*e*P		**P**	**03 24 45.3**	**+1.3**
	comp=Z,12nm,1.1s,mb4.9							
ORIF				*e*MLR		MLR		
	comp=Z,278nm,19.5s,MS4.4							
ORIF	**Oris-en-Rattie**	**94.42**	**44**	*e*P		**P**	**03 24 45.3**	**+1.3**
	comp=Z,5.8nm,1.1s,mb4.9							
ORIF	**Oris-en-Rattie**	**94.42**	**44**	*e*P		**P**	**03 24 45.3**	**+1.3**
ORIF				pmax		pmax		
	comp=Z,6.0nm,1.1s,mb4.9							
FRF	**La Foret Royal**	**94.47**	**46**	*e*P		**P**	**03 24 43.9**	**-0.3**
	comp=Z,27nm,1.3s,mb5.2							
FRF	**La Foret Royal**	**94.47**	**46**	*e*P		**P**	**03 24 43.9**	**-0.3**
	comp=Z,14nm,1.3s,mb5.2							
FRF	**La Foret Royal**	**94.47**	**46**	*e*P		**P**	**03 24 43.9**	**-0.3**
FRF				pmax		pmax		
	comp=Z,14nm,1.3s,mb5.2							
MBDF	**Montbardon**	**94.95**	**45**	*e*P		**P**	**03 24 47.1**	**+0.7**
SBF	**Sospel**	**95.11**	**46**	*e*P		**P**	**03 24 48.1**	**+0.9**
	comp=Z,27nm,0.9s,mb5.4							
SBF	**Sospel**	**95.11**	**46**	*e*P		**P**	**03 24 48.1**	**+0.9**
	comp=Z,14nm,0.9s,mb5.4							
SBF	**Sospel**	**95.11**	**46**	*e*P		**P**	**03 24 48.1**	**+0.9**
SBF				pmax		pmax		
	comp=Z,14nm,0.9s,mb5.4							
CABF	**La Chapelle**	**95.14**	**43**	*e*P		**P**	**03 24 47.5**	**+0.3**
	comp=Z,32nm,1.5s,mb5.2							
CABF	**La Chapelle**	**95.14**	**43**	*e*P		**P**	**03 24 47.5**	**+0.3**
	comp=Z,16nm,1.5s,mb5.2							
CABF	**La Chapelle**	**95.14**	**43**	*e*P		**P**	**03 24 47.5**	**+0.3**
CABF				pmax		pmax		
	comp=Z,16nm,1.5s,mb5.2							
BAIF	**Baives**	**95.17**	**39**	*e*P		**P**	**03 24 47.8**	**+0.5**
LPL	**La Plagne**	**95.19**	**44**	*e*P		**P**	**03 24 47.6**	**+0.1**
	comp=Z,7.4nm,1.0s,mb4.8							
LPL	**La Plagne**	**95.19**	**44**	*e*P		**P**	**03 24 47.6**	**+0.1**
	comp=Z,3.7nm,1.0s,mb4.8							
LPL	**La Plagne**	**95.19**	**44**	*e*P		**P**	**03 24 47.6**	**+0.1**
LPL				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.8							
LPG	**La Plagne**	**95.20**	**44**	*e*P		**P**	**03 24 48.2**	**+0.7**
	comp=Z,8.7nm,0.9s,mb4.9							
LPG	**La Plagne**	**95.20**	**44**	*e*P		**P**	**03 24 48.2**	**+0.7**
	comp=Z,4.3nm,0.9s,mb4.9							
LPG	**La Plagne**	**95.20**	**44**	*e*P		**P**	**03 24 48.2**	**+0.7**
LPG				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.8							
GIVF	**Givet**	**95.56**	**39**	*e*P		**P**	**03 24 49.3**	**+0.3**
CDF	**Champ du Feu**	**96.50**	**41**	*e*P		**P**	**03 24 53.6**	**+0.2**
DAVOX	**Davos/Dischmat**	**97.67**	**43**	LR		LR	04 07 04.4	
	comp=Z,219nm,18.6s,MS4.7,baz=65,slow=34							
VAE	**Valguarnera**	**98.28**	**53**	LR		LR	04 08 15.4	
	comp=Z,100nm,18.5s,MS4.3,baz=192,slow=35							
JMIC	**Jan Mayen**	**98.44**	**17**	LR		LR	04 06 59.2	
	comp=Z,133nm,18.1s,MS4.5,baz=257,slow=34							
AKTK	**Aktyubinsk**	**128.95**	**39**	PKP		PKPdf	03 30 30.8	-0.8
AKTO	**Aktyubinsk**	**128.95**	**39**	PKP		PKPdf	03 30 30.8	-0.8
	comp=Z,1.7nm,0.8s,baz=305,slow=5.1,SNR=6.0							
ASAR	**Alice Springs**	**131.48**	**213**	PKP		PKPdf	03 30 37.6	+0.4
	comp=Z,1.0nm,0.8s,baz=129,slow=3.9,SNR=7.2							
WRA	**Warramunga Ar**	**134.24**	**217**	PKP		PKPdf	03 30 43.0	+0.4
	comp=Z,1.2nm,0.7s,baz=147,slow=1.9,SNR=13							
NVS	**Novosibirsk**	**138.44**	**21**	*e*PKIKP		PKPdf	03 30 49.8	+0.6
NVS				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ZALV	**Zalesovo Beam**	**139.71**	**20**	PKP		PKPdf	03 30 52.3	+0.7
	comp=Z,5.0nm,0.7s,baz=300,slow=2.9,SNR=11							
ZAL	**Zalesovo**	**139.71**	**20**	PKIKP		PKPdf	03 30 52.3	+0.7
KURK	**Kurchatov**	**139.77**	**28**	*e*PKPdf		PKPdf	03 30 51.9	+0.1
EKS2	**Erkin-Say**	**142.12**	**41**	*e*PKPdf		PKPdf	03 30 58.1	+1.8
AML	**Almayashu**	**142.33**	**42**	*e*PKPdf		PKPdf	03 30 57.7	+1.0
UCH	**Uchtor**	**142.81**	**42**	*e*PKPdf		PKPdf	03 30 58.3	+0.8
MKAR	**Makanchi Array**	**144.28**	**30**	PKP		PKPdf	03 30 58.4	-1.5
	comp=Z,5.6nm,1.1s,baz=324,slow=3.3,SNR=24							
MOY	**Mondy**	**145.57**	**7**	*e*PKIKP		PKPdf	03 31 03.8	+1.8
MOY				pmax		pmax		
	comp=Z,28nm,1.4s							
TLY	**Talaya**	**145.79**	**4**	*e*PKPdf		PKPdf	03 31 04.1	+1.7
MJAR	**Matsushiro Arr**	**146.74**	**311**	PKPbc		PKPbc	03 31 06.2	-0.1
	comp=Z,8.8nm,0.9s,baz=68,slow=0.7,SNR=5.6							
ZAK	**Zakamensk**	**147.06**	**5**	*e*PKP2		PKPab	03 31 07.2	-1.0
ZAK				pmax		pmax		
	comp=Z,7.0nm,1.0s							
THN	**Thein Dam**	**147.95**	**56**	*e*P		PKPdf	03 31 07.8	+1.1
POO	**Poona**	**148.27**	**83**	*e*P		PKPbc	03 31 11.0	+0.1
WMQ	**Urumqi**	**149.02**	**28**	*e*PKP		PKPbc	03 31 12.0	-0.1
ULN	**Ulaanbaatar**	**149.73**	**0**	*e*PKPbc		PKPbc	03 31 14.5	+0.7
SONM	**Songino Array**	**149.75**	**1**	PKP		PKPdf	03 31 10.6	+1.6
	comp=Z,5.8nm,1.0s,baz=310,slow=0.6,SNR=5.1							
SONM				PKPbc		PKPbc	03 31 15.0	+1.3
	comp=Z,5.8nm,1.0s,baz=341,slow=0.9,SNR=24							
KSRS	**Korea Array**	**153.06**	**322**	PKPbc		PKPbc	03 31 23.2	+1.4
	comp=Z,3.3nm,1.0s,baz=29,slow=2.9,SNR=4.8							
GTA	**Gaotai**	**157.25**	**15**	*e*PKP		PKPdf	03 31 22.0	+1.9

ATH **27** *03:11:39.5, 3822N×2032E, h5km±3km, MD3.6/5*
NEIC **27** *03:11:39.6, 3823N×2032E, h5km, MD3.6(ATH), After ATH.*
ISCJB **27** *03:11:40.8±0.9, 3829N±003×2041E±006, h3km±4km, Error ellipse: s-maj=8.1km s-min=3.8km az=156.3*
CSEM **27** *03:11:40.9±0.4, 3828N×2036E, h2km, MD3.6, Error ellipse: s-maj=8.1km s-min=3.2km az=62.0*
THE **27** *03:11:42.3, 3831N×2048E, h1km, ML3.6*

ISC 27 03:11:40.9±1.0, 3827N±003×2038E±006, h2km±5km, n21, σ1s01/34, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**120**	*e*PG		**Pg**	**03 11 44.6**	**0.0**
VLS				*e*SG		**Sg**	**03 11 47.5**	**+0.4**
KFL	**Anninata**	**0.36**	**117**	*e*Pg		**Pg**	**03 11 47.7**	**-0.1**
KFL				*e*Sg		**Sg**	**03 11 52.5**	**0.0**
LKD	**Levkas**	**0.48**	**26**	*e*Pg		**Pg**	**03 11 49.7**	**-0.5**
LKD				*e*Sg		**Sg**	**03 11 56.

0.8nm,0.3s,baz=226,slow=9.3,SNR=20
LPAZ LR LR 03 24 51.7
comp=Z,166nm,21.0s,baz=270,slow=39
NNA Nana 6.60 324 *e*Pn **Pn 03 23 42.8 +0.6**
14nm,0.6s
NNA Nana 6.60 324 Pn **Pn 03 23 44.6 +2.4**
2.1nm,0.3s,baz=123,slow=16,SNR=4.5
NNA Sn **Sn 03 24 55.0 -1.2**
5.6nm,0.3s,baz=259,slow=16,SNR=3.5
SIV San Ignacio 11.45 85 Pn **Pn 03 24 43.5 -5.1**
0.2nm,0.3s,baz=299,slow=19,SNR=4.7
ATAH Atahualpa 11.65 332 Sn **Sn 03 27 21.1 +21**
0.3nm,0.3s,baz=282,slow=19,SNR=4.1
CFAA Coronel Fontan 14.74 164 Pn **Pn 03 25 33.0 -0.5**
0.0nm,0.3s,baz=326,slow=7.3,SNR=3.3
PLCA Paso Flores 23.32 175 P **P 03 27 13.0 +0.6**
PLCA Paso Flores 23.32 175 P **P 03 27 13.0 +0.6**
3.1nm,0.9s,mb3.8,baz=354,slow=12,SNR=9.0
TORD Torodi Ar. Bea 79.67 73 P **P 03 34 10.7 -1.1**
1.7nm,0.8s,mb4.0,baz=257,slow=5.0,SNR=10
YKA Yellowknife Ar 86.13 342 P **P 03 34 45.1 +0.9**
0.3nm,0.8s,mb3.6,baz=134,slow=4.8,SNR=6.8
SONM Songino Array 149.67 1 PKPbc PKPbc 03 41 54.8 +1.5
0.3nm,0.5s,baz=346,slow=1.3,SNR=3.9

ISCJB ***27*** *03:28:04.0±0.9, 3726N±004×13673E±007, h9km±8km, Error ellipse: s-maj=10.0km s-min=5.9km az=19.5*
JMA ***27*** *03:28:04.4, 3724N×13675E, h11km±1km, M3.8*
JMA Felt II J1.

ISC 27 03:28:04.2±0.9, 3725N±003×13673E±007, h12km±7km, n6, σ0§39/12, 1C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**172**	⇓P	**Pg**	**03 28 11.0**	**+0.1**
JJH				*e*S	**Sg**	**03 28 15.6**	**+0.3**
JSZ	**Suzu**	**0.55**	**69**	P	**Pg**	**03 28 14.5**	**-0.4**
JSZ				*e*S	**Sg**	**03 28 21.9**	**-0.2**
JHG	**Hegura jima**	**0.62**	**14**	P	**Pg**	**03 28 16.3**	**+0.1**
JHG				*e*S	**Sg**	**03 28 24.9**	**+0.5**
JTT	**Ttatey**	**0.81**	**143**	P	**Pg**	**03 28 19.5**	**-0.3**
JTT				*e*S	**Sg**	**03 28 30.6**	**+0.2**
JKG	**Kaga**	**1.02**	**198**	⇑P	**Pb**	**03 28 23.4**	**-0.4**
JKG				*e*S	**Sb**	**03 28 37.3**	**+0.1**
MAT	**Matsushiro**	**1.38**	**120**	P	**Pn**	**03 28 28.6**	**-0.7**
MAT				S	**Sn**	**03 28 48.1**	**+0.7**

IDC 27 03:36:55.7±13.0, 4475S×3557E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/15, mbtmp3.9/3, ML4.0/1, MS3.3/1, Ms1 3.2/1, ms1mx2.9/23, Error ellipse: s-maj=1395.0km s-min=27.7km az=66.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**18.08**	**330**	P	Pn	03 41 06.3	-1.8
	0.3nm,0.3s,baz=160,slow=13,SNR=8.9						
BOSA				S	Sn	03 44 13.2	-17
	0.2nm,0.3s,baz=63,slow=6.8,SNR=3.3						
BOSA				LR	LR	03 46 41.8	
	comp=Z,99nm,20.1s,baz=300,slow=32						
VNDA	**Vanda**	**53.63**	**167**	P	P	03 46 17.8	-0.3
	1.5nm,0.7s,baz=240,slow=6.0,SNR=8.8						
TORD	**Torodi Ar. Bea**	**65.31**	**323**	P	P	03 47 40.2	+0.7
	0.4nm,0.5s,baz=157,slow=7.8,SNR=3.8						

NEIC ***27*** *03:41:48.5±0.7, 4697N×15570E, h10km, mb3.7/1, Error ellipse: s-maj=21.7km s-min=10.1km az=128.0*
ISCJB ***27*** *03:41:50.0±0.7, 468N±0.1×1557E±0.1, h33km, mb4.0/9, Error ellipse: s-maj=18.5km s-min=9.2km az=139.1*
MOS ***27*** *03:41:50.3±1.7, 4690N×15568E, h33km, mb4.3/7, Error ellipse: s-maj=21.5km s-min=11.7km az=76.2*
IDC ***27*** *03:41:53.9±4.9, 4689N×15575E, h49km±48km, mb3.6/7, mb1 3.9/8, mb1mx3.6/22, mbtmp3.7/8, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/40, Error ellipse: s-maj=36.3km s-min=17.7km az=125.0*

ISC 27 03:41:52.6±0.7, 4694N±009×1556E±01, h35km, n25, σ1§13/27, mb4.0/9, 2C, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.76**	**5**	*e*PN	**Pn**	**03 42 49.5**	**+1.4**
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
PET	**Petropavlovsk**	**6.40**	**17**	*e*Pn	**Pn**	**03 43 20.6**	**-3.6**
PET				*e*Sn	**Sn**	**03 44 34.2**	**-1.8**
ASAJ	**Asahikawa**	**9.57**	**258**	P	**Pn**	**03 44 09.6**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=85,slow=11,SNR=3.1						
ERM	**Erimo**	**10.18**	**246**	Pn	**Pn**	**03 44 15.0**	**-1.1**
	comp=Z,19nm,1.3s						
ERM				*e*Sn	**Sn**	**03 46 07.4**	**-1.6**
ERM	**Erimo**	**10.18**	**246**	PN	**Pn**	**03 44 15.0**	**-1.1**
ERM				pmax	pmax		
	comp=Z,19nm,1.3s						
BILL	**Bilibino**	**21.85**	**11**	*e*P	**P**	**03 46 40.6**	**-1.2**
	comp=Z,1.2nm,0.4s,mb3.7						
BILL	**Bilibino**	**21.85**	**11**	⇑*e*P	**P**	**03 46 41.4**	**-0.3**
BILL				*e*		03 47 07.0	
BILL				pmax	pmax		
	comp=Z,10.0nm,2.1s,mb3.9						
ULN	**Ulaanbaatar**	**32.47**	**290**	*e*P	**P**	**03 48 19.5**	**+0.2**
COLA	**College**	**34.92**	**38**	*e*P	**P**	**03 48 41.5**	**+1.1**
INK	**Inuvik**	**40.56**	**33**	*e*P	**P**	**03 49 28.4**	**+0.3**
	comp=Z,50nm,0.6s,mb5.3						
INK	**Inuvik**	**40.56**	**33**	P	**P**	**03 49 28.6**	**+0.5**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	**Inuvik**	**40.56**	**33**	P	**P**	**03 49 28.6**	**+0.5**
	comp=Z,2.9nm,0.5s,mb4.1,baz=296,slow=6.3,SNR=37						
MKAR	**Makanchi Array**	**48.38**	**298**	P	**P**	**03 50 34.1**	**+3.3**
MKAR	**Makanchi Array**	**48.38**	**298**	P	**P**	**03 50 31.0**	**+0.2**
	comp=Z,0.4nm,0.3s,mb3.9,baz=64,slow=5.6,SNR=3.8						
KURK	**Kurchatov**	**48.69**	**304**	*e*P	**P**	**03 50 34.4**	**+1.3**
YKA	**Yellowknife Ar**	**49.73**	**37**	P	**P**	**03 50 40.7**	**-0.2**
YKA	**Yellowknife Ar**	**49.73**	**37**	P	**P**	**03 50 41.2**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**49.73**	**37**	P	**P**	**03 50 40.7**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=295,slow=7.5,SNR=12						
PDAR	**Pinedale Array**	**63.23**	**55**	P	**P**	**03 52 15.9**	**-1.3**
	comp=Z,0.5nm,0.6s,mb3.9,baz=316,slow=2.5,SNR=15						
FINES	**FINESS Array B**	**64.59**	**336**	P	**P**	**03 52 26.1**	**+0.3**
	comp=Z,1.0nm,0.8s,mb3.9,baz=14,slow=6.2,SNR=2.0						
OBN	**Obninsk**	**66.12**	**327**	⇑*e*P	**P**	**03 52 35.9**	**+0.1**
OBN				*e*		03 54 58.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
WRA	**Warramunga Arr**	**69.28**	**201**	P	**P**	**03 52 54.9**	**-1.1**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**69.28**	**201**	P	**P**	**03 52 56.0**	**0.0**
	comp=Z,1.5nm,0.8s,mb4.0,baz=21,slow=6.8,SNR=11						
ASAR	**Alice Springs**	**72.96**	**201**	P	**P**	**03 53 19.2**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**72.96**	**201**	P	**P**	**03 53 18.1**	**-0.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=17,slow=4.9,SNR=9.3						

ATH ***27*** *03:46:39.8, 3807N×2031E, h15km±1km, MD3.5/3*
CSEM ***27*** *03:46:40.3±0.9, 3831N×2031E, h2km, ML3.1, Error ellipse: s-maj=18.7km s-min=6.6km az=63.0*
THE ***27*** *03:46:41.0, 3836N×2039E, h3km, ML3.1*

ISC 27 03:46:37.0±2.1, 3820N±008×201E±01, h16km±12km, n8, σ0§91/15, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.38**	**93**	*e*PB	**Pg**	**03 46 45.5**	**+0.7**
VLS				*e*SB	**Sg**	**03 46 49.5**	**-0.5**
KFL	**Anninata**	**0.54**	**99**	*e*Pg	**Pg**	**03 46 48.4**	**+0.6**
KFL				*e*Sg	**Sg**	**03 46 54.8**	**-0.2**
KFL	**Anninata**	**0.54**	**99**	*e*Pg	**Pg**	**03 46 48.3**	**+0.6**
KFL				*e*Sg	**Sg**	**03 46 54.8**	**-0.2**
LKD	**Levkas**	**0.66**	**40**	*e*Pg	**Pg**	**03 46 48.4**	**-1.6**
LKD				*e*Sg	**Sg**	**03 46 54.7**	**-4.1**
RLS	**Riolos of Patr**	**1.08**	**97**	*e*PN	**Pn**	**03 46 57.2**	**-0.2**
IGT	**Igoumenitsa**	**1.34**	**7**	*e*Pg	**Pg**	**03 47 02.8**	**-0.1**
IGT				*e*Sg	**Sg**	**03 47 20.6**	**+0.2**
SELA	**Sela**	**1.40**	**86**	*e*Sg	**Sg**	**03 47 19.8**	**-2.5**
SELA				*e*Sg	**Sg**	**03 47 33.9**	**+12**
EVR	**Evrytania**	**1.51**	**61**	*e*PN	**Pg**	**03 47 07.0**	**+0.9**
EVR				*e*SN	**Sg**	**03 47 27.0**	**+1.2**

MOS ***27*** *03:47:21.8±2.1, 4831N×15482E, h33km, mb4.0/8, Error ellipse: s-maj=17.9km s-min=13.3km az=70.5*
ISCJB ***27*** *03:47:24.6±3.1, 484N±0.1×1550E±0.2, h61km±29km, mb3.8/13, Error ellipse: s-maj=21.5km s-min=14.2km az=143.1*
IDC ***27*** *03:47:27.9±4.2, 4836N×15483E, h75km±39km, mb3.5/13, mb1 3.8/14, mb1mx3.7/22, mbtmp3.6/14, ML3.5/1, Error ellipse: s-maj=21.2km s-min=15.0km az=135.0*

ISC 27 03:47:27.3±2.3, 484N±01×1549E±02, h68km±22km, n32, σ0§69/31, mb3.7/13, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**8.32**	**264**	*e*PN	**Pn**	**03 49 18.5**	**-6.6**
ASAJ	**Asahikawa**	**9.53**	**248**	PN	**Pn**	**03 49 42.0**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.53**	**248**	P	**Pn**	**03 49 42.0**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=93,slow=9.9,SNR=3.5						
ERM	**Erimo**	**10.45**	**237**	*e*PN	**Pn**	**03 49 48.2**	**-6.0**
CLNS	**Chul'man**	**19.93**	**306**	*e*P	**Pn**	**03 51 56.1**	**+0.6**
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,15nm,1.0s						
BILL	**Bilibino**	**20.51**	**12**	*e*P	**P**	**03 51 57.6**	**-1.9**
BILL				*e**PP		03 52 08.7	
BILL				*e*		03 52 16.3	
BILL				*e*S	**S**	**03 55 52.6**	**+7.7**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.3s						
KSRS	**Korea Array**	**22.46**	**251**	P	**P**	**03 52 20.1**	**-0.5**
	comp=Z,4.0nm,0.8s,mb3.8,baz=47,slow=9.4,SNR=11						
SONM	**Songino Array**	**31.95**	**288**	P	**P**	**03 53 47.4**	**+1.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=72,slow=9.3,SNR=3.0						
COLA	**College**	**34.09**	**40**	⇑*e*P	**P**	**03 54 04.9**	**+0.1**
INK	**Inuvik**	**39.61**	**34**	P	**P**	**03 54 51.8**	**+0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**39.61**	**34**	P	**P**	**03 54 51.8**	**+0.3**
	comp=Z,1.4nm,0.7s,mb3.9,baz=305,slow=3.8,SNR=9.7						
MKAR	**Makanchi Array**	**47.26**	**297**	P	**P**	**03 55 53.8**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.26**	**297**	P	**P**	**03 55 52.1**	**-1.2**
	comp=Z,0.5nm,0.7s,mb3.4,baz=64,slow=8.5,SNR=4.3						
KURK	**Kurchatov**	**47.46**	**303**	⇑*e*P	**P**	**03 55 53.9**	**-1.0**
YKA	**Yellowknife Ar**	**48.88**	**38**	P	**P**	**03 56 05.9**	**+0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
YKA	**Yellowknife Ar**	**48.88**	**38**	P	**P**	**03 56 05.9**	**+0.3**
	comp=Z,1.1nm,0.8s,mb3.8,baz=298,slow=7.7,SNR=17						
NVAR	**Mina Array Bea**	**60.61**	**64**	P	**P**	**03 57 31.0**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.8,baz=302,slow=8.4,SNR=2.6						
PDAR	**Pinedale Array**	**62.81**	**55**	P	**P**	**03 57 46.1**	**+0.7**
	comp=Z,1.2nm,0.8s,mb3.9,baz=298,slow=2.6,SNR=11						
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**03 57 51.1**	**+4.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**03 57 46.4**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.7,baz=50,slow=12,SNR=2.8						
HFS	**Hagfors**	**67.32**	**340**	P	**P**	**03 58 14.7**	**+0.3**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**67.32**	**340**	P	**P**	**03 58 14.7**	**+0.3**
	comp=Z,0.6nm,0.6s,mb3.6,baz=78,slow=13,SNR=4.3						
WRA	**Warramunga Arr**	**70.48**	**201**	P	**P**	**03 58 33.6**	**-0.8**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**70.48**	**201**	P	**P**	**03 58 33.6**	**-0.8**
	comp=Z,2.3nm,0.8s,mb4.0,baz=17,slow=6.2,SNR=11						
ASAR	**Alice Springs**	**74.17**	**200**	P	**P**	**03 58 56.3**	**0.0**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**74.17**	**200**	P	**P**	**03 58 56.2**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=14,slow=6.0,SNR=8.9						
EKA	**Eskdalemuir Ar**	**75.00**	**347**	P	**P**	**03 59 01.1**	**+0.2**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**75.00**	**347**	P	**P**	**03 59 01.1**	**+0.2**
	comp=Z,0.9nm,0.6s,mb3.7,baz=3.8,slow=4.2,SNR=6.2						
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**03 59 15.5**	**+0.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**03 59 15.5**	**+0.5**
	comp=Z,0.5nm,0.8s,mb3.3,baz=39,slow=5.1,SNR=3.7						
PLCA	**Paso Flores**	**147.14**	**94**	PKP2	PKPab	04 07 01.9	-1.9
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLCA	**Paso Flores**	**147.14**	**94**	PKPbc	PKPbc	04 07 01.9	-0.1
	comp=Z,1.2nm,0.6s,baz=276,slow=1.0,SNR=4.8						

ISCJB ***27*** *03:48:46.4±4.1, 2075S±02×1693E±02, h46km±32km, mb3.9/5, Error ellipse: s-maj=37.2km s-min=30.5km az=137.4*
NEIC ***27*** *03:48:46.9±1.2, 2075S×16940E, h35km, Error ellipse: s-maj=28.1km s-min=20.0km az=130.0*
IDC ***27*** *03:48:47.9±2.2, 2077S×16914E, h33km±6km, mb3.5/4, mb1 3.8/5, mb1mx3.6/13, mbtmp3.6/5, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/18, Error ellipse: s-maj=71.3km s-min=24.8km az=141.0*

ISC 27 03:48:47.3±4.4, 2075±02×1694E±02, h36km±35km, n13, σ0§57/9, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.03**	**243**	*e*P	**Pn**	**03 49 32.8**	**0.0**
DZM				*e*S	**Sn**	**03 50 08.7**	**+0.8**
DZM	**Mont Dzumac**	**3.03**	**243**	Pn	**Pn**	**03 49 32.9**	**+0.1**
	18nm,0.3s,baz=68,slow=18,SNR=176						
DZM				Sn	**Sn**	**03 50 07.2**	**-0.7**
	37nm,0.3s,baz=117,slow=22,SNR=9.8						
DZM				LR	LR	03 50 07.4	
	comp=Z,482nm,18.6s,baz=158,slow=28						
WRA	**Warramunga Arr**	**32.82**	**265**	P	**P**	**03 55 17.0**	**-0.5**
	0.2nm,0.5s,mb3.3,baz=90,slow=8.4,SNR=7.7						
WRA				pP	pP	03 55 26.1	-1.8
	0.7nm,0.5s,baz=92,slow=8.4,SNR=5.7						
ASAR	**Alice Springs**	**32.91**	**258**	P	**P**	**03 55 18.6**	**+0.2**
	0.8nm,0.7s,mb3.8,baz=82,slow=8.4,SNR=6.9						
ASAR				pP	pP	03 55 27.9	-0.9
	1.6nm,0.7s,baz=84,slow=9.0,SNR=9.7						
FITZ	**Fitzroy Crossi**	**41.23**	**266**	pP	pP	03 56 39.2	-0.4
	3.7nm,0.8s,baz=125,slow=11,SNR=4.3						
MJAR	**Matsushiro Arr**	**64.12**	**332**	P	**P**	**03 59 17.3**	**-0.6**
	0.7nm,0.6s,mb3.9,baz=160,slow=6.9,SNR=4.0						
QSPA	**South Pole Qui**	**69.33**	**180**	*e*P	**P**	**03 59 50.4**	**-0.1**
	5.4nm,0.8s,mb4.5						
SONM	**Songino Array**	**88.48**	**323**	P	**P**	**04 01 36.7**	**+1.0**
	0.4nm,0.6s,mb3.8,baz=140,slow=5.7,SNR=4.2						
BRG	**Berggiesshubel**	**144.25**	**333**	*e*P	PKPdf	04 08 16.8	-2.4
	5.5nm,1.0s						
BRG				*e*		04 08 27.5	
	4.7nm,0.9s						
CLL	**Collm**	**144.31**	**334**	*e*PKPdf	PKPdf	04 08 17.0	-2.3
	comp=Z,5.0nm,0.8s						
CLL				*e*pPKPdf	pPKPdf	04 08 27.0	-4.1
EKA	**Eskdalemuir Ar**	**145.00**	**353**	PKPbc	PKPdf	04 08 17.9	-2.5
	comp=Z,1.9nm,0.7s,baz=335,slow=2.5,SNR=6.0						
KHC	**Kasperske Hory**	**145.70**	**331**	*e*PKP	PKPdf	04 08 21.5	-0.3
KHC				pPKP	pPKPdf	04 08 32.0	-1.5
GERES	**GERESS Array B**	**145.85**	**331**	PKPbc	PKPbc	04 08 22.3	-0.3
	comp=Z,1.5nm,0.6s,baz=46,slow=3.9,SNR=11						
GERES				pPKPbc	pPKPbc	04 08 33.1	-1.2
	comp=Z,1.8nm,0.7s,baz=69,slow=4.9,SNR=6.2						

RSPR 27 03:55:56.7, 1936N×6527W, h101km±18km, MD3.6/9, 7C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**1.21**	**207**	⇓*e*P	Pn	03 56 18.8	-0.7
CBYP	**Canovanas**	**1.21**	**207**	*e*S	Sn	03 56 36.8	-0.1
MTP	**Monte Pirata**	**1.28**	**192**	⇓*e*P	Pn	03 56 21.1	+0.7
MTP	**Monte Pirata**	**1.28**	**192**	*e*S	Sn	03 56 37.7	-0.6
HUMP	**Col San Antoni**	**1.33**	**205**	⇓*e*P	Pn	03 56 20.5	-0.4
HUMP	**Col San Antoni**	**1.33**	**205**	*e*S	Sn	03 56 38.4	-0.8
CPD	**Cerro la Pandu**	**1.45**	**205**	⇑*e*P	Pn	03 56 21.9	-0.5
CPD	**Cerro la Pandu**	**1.45**	**205**	*e*S	Sn	03 56 41.9	+0.1
SJG	**San Juan**	**1.49**	**214**	⇑*e*P	Pn	03 56 22.0	-0.9
AOPR	**Arecibo Observ**	**1.73**	**235**	⇑*e*P	Pn	03 56 24.4	-1.5
AOPR	**Arecibo Observ**	**1.73**	**235**	*e*S	Sn	03 56 48.8	+0.8
CELP	**Cerrillos**	**1.78**	**225**	⇑*e*P	Pn	03 56 26.6	+0.1
LSP	**Las Mesas**	**2.08**	**236**	⇑*e*P	Pn	03 56 31.8	+1.5
LSP	**Las Mesas**	**2.08**	**236**	*e*S	Sn	03 56 55.7	-0.5
CRPR	**Cabo Rojo, PR**	**2.20**	**233**	⇑*e*P	Pn	03 56 31.4	-0.5

ISCJB ***27*** *03:57:11.4±0.8, 3833N±003×2045E±006, h3km, Error ellipse: s-maj=6.6km s-min=3.3km az=160.0*
THE ***27*** *03:57:11.6, 3836N×2041E, h3km, ML3.2*
ATH ***27*** *03:57:11.6, 3828N×2046E, h14km±2km, MD3.5/5*
NEIC ***27*** *03:57:11.7, 3830N×2047E, h13km, ML3.5(ATH), After ATH.*
CSEM ***27*** *03:57:12.8±0.4, 3833N×2051E, h2km, MD3.5, Error ellipse: s-maj=9.4km s-min=4.3km az=72.0*

ISC 27 03:57:11.9±0.9, 3832N±003×2043E±006, h6km±6km, n14, σ0§93/23, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**139**	*e*PG	**Pg**	**03 57 15.6**	**0.0**
VLS				*e*SG	**Sg**	**03 57 18.9**	**+0.8**
KFL	**Anninata**	**0.35**	**127**	*e*Pg	**Pg**	**03 57 18.2**	**-0.4**
LKD	**Levkas**	**0.42**	**24**	*e*Pg	**Pg**	**03 57 18.6**	**-1.4**
LKD				*e*Sg	**Sg**	**03 57 24.7**	**-0.9**
RLS	**Riolos of Patr**	**0.85**	**107**	*e*PG	**Pg**	**03 57 26.9**	**-1.4**
RLS				*e*SB	**Sg**	**03 57 39.0**	**-0.3**
SELA	**Sela**	**1.15**	**92**	*e*Sg	**Sg**	**03 57 50.1**	**+1.4**
SELA				*e*Sg	**Sg**	**03 57 51.4**	**+2.6**
EVR	**Evrytania**	**1.23**	**61**	*e*PB	**Pb**	**03 57 34.7**	**-0.8**
EVR				*e*SB	**Sb**	**03 57 51.5**	**-0.1**
JAN	**Janina**	**1.37**	**14**	*e*PB	**Pb**	**03 57 37.8**	**-0.1**
JAN				*e*SB	**Sg**	**03 57 57.7**	**+1.7**
KEK	**Kerkira**	**1.48**	**341**	*e*PB	**Pb**	**03 57 40.0**	**+0.3**
KEK				*e*SB	**Sg**	**03 58 00.7**	**+1.4**
MEV	**Metsovon**	**1.59**	**23**	*e*Pg	**Pg**	**03 57 40.9**	**-1.4**
ITM	**Ithomi**	**1.64**	**133**	*e*PB	**Pn**	**03 57 42.1**	**+0.9**
AGG	**Agios Georgios**	**1.64**	**64**	*e*Pb	**Pn**	**03 57 40.1**	**-1.1**
AGG				*e*Sb	**Sg**	**03 58 05.4**	**+0.8**
PYL	**PYLOS**	**1.76**	**143**	*e*Pb	**Pn**	**03 57 42.8**	**0.0**
PYL				*e*Sb	**Sg**	**03 58 08.4**	**0.0**
VLX	**Vlachokerasia**	**1.81**	**121**	*e*Pb	**Pb**	**03 57 45.3**	**0.0**
LTK	**Loutraki**	**2.02**	**98**	*e*Pn	**Pn**	**03 57 47.1**	**+0.7**

ISCJB ***27*** *04:17:49.7±2.0, 485N±02×1548E±02, h52km±19km, mb3.5/7, Error ellipse: s-maj=35.6km s-min=9.9km az=43.0*
MOS ***27*** *04:17:51.2±1.0, 4846N×15458E, h66km, mb4.0/2, Error ellipse: s-maj=46.0km s-min=18.8km az=59.1*
IDC ***27*** *04:17:52.9±5.4, 4847N×15476E, h68km±51km, mb3.2/7, mb1 3.5/8, mb1mx3.4/21, mbtmp3.3/8, ML3.7/1, Error ellipse: s-maj=42.2km s-min=21.1km az=134.0*

ISC 27 04:17:52.0±1.6, 485N±02×1548E±02, h56km±16km, n15, σ0§96/16, mb3.5/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.36**	**21**	*e*PN	**Pn**	**04 18 29.2**	**+0.9**
SKR				*e*S	**Sn**	**04 18 53.0**	**-3.1**
SKR				pmax	pmax		
	comp=E,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,80nm,0.3s						
SKR				smax			
	comp=N,120nm,0.5s						
SKR				smax			
	comp=E,80nm,0.5s						
SKR				smax			
	comp=Z,80nm,0.5s						
ASAJ	**Asahikawa**	**9.49**	**247**	PN	**Pn**	**04 20 07.0**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.49**	**247**	P	**Pn**	**04 20 07.0**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=73,slow=11,SNR=2.8						
ERM	**Erimo**	**10.43**	**236**	*e*PN	**Pn**	**04 20 17.7**	**-1.0**
KSRS	**Korea Array**	**22.41**	**250**	P	**P**	**04 22 45.2**	**-0.4**
	comp=Z,1.0nm,0.5s,mb3.5,baz=46,slow=9.1,SNR=3.1						
MKAR	**Makanchi Array**	**47.14**	**297**	P	**P**	**04 26 18.4**	**+0.1**
	comp=Z,0.2nm,0.6s,mb3.3,baz=58,slow=5.8,SNR=3.4						
YKA	**Yellowknife Ar**	**48.86**	**38**	*i* P	**P**	**04 26 33.4**	**+2.0**
YKA	**Yellowknife Ar**	**48.86**	**38**	P	**P**	**04 26 30.8**	**-0.5**
	comp=Z,0.1nm,0.6s,mb3.0,baz=298,slow=8.1,SNR=3.8						
PDAR	**Pinedale Array**	**62.83**	**55**	P	**P**	**04 28 11.6**	**0.0**
	comp=Z,0.5nm,0.9s,mb3.6,baz=338,slow=3.9,SNR=3.2						
WRA	**Warramunga Arr**	**70.53**	**200**	P	**P**	**04 28 59.8**	**-0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**70.53**	**200**	P	**P**	**04 28 59.8**	**-0.9**
	comp=Z,0

KEK				*e*SB	**Sg**	04 43 22.8	+2.3		
AGG	**Agios Georgios**	**1.66**	**65**	*e*Pb	**Pb**	04 43 03.4	-1.4		
AGG				*e*Sb	**Sb**	04 43 26.6	+0.5		
ITM	**Ithomi**	**1.66**	**133**	*i*PB	**Pb**	04 43 04.9	+0.1		
ITM				*e*SB	**Sg**	04 43 27.7	+0.8		
ITM	**Ithomi**	**1.66**	**133**	*e*Pb	**Pb**	04 43 04.9	+0.1		
ITM				*e*Sb	**Sg**	04 43 27.7	+0.8		
PYL	**PYLOS**	**1.78**	**143**	*e*Pb	**Pn**	04 43 05.0	-0.3		
PYL				*e*Sb	**Sn**	04 43 28.6	+0.2		
LTK	**Loutraki**	**2.04**	**98**	*e*Pn	**Pn**	04 43 09.7	+0.8		
LKR	**Lokris**	**2.06**	**80**	*e*PG	**Pb**	04 43 11.6	0.0		
KZN	**Kozani**	**2.24**	**28**	*e*PN	**Pb**	04 43 14.5	-0.2		
VLI	**Veliai**	**2.57**	**128**	*e*PN	**Pb**	04 43 19.5	-0.9		

ISCJB ***27*** *04:47:21.7±2.5,294N±0.1×348E±02,h18km±37km, Error ellipse: s-maj=34.4km s-min=17.8km az=146.5*
CSEM ***27*** *04:47:21.6±0.2,2942N×3497E,h20km, ML2.6, Error ellipse: s-maj=5.6km s-min=2.7km az=101.0*
SGS ***27*** *04:47:22.2,2948N×3495E,h15km*

ISC 27 04:47:21.6±2.0,294N±02×348E±02,h19km±13km,n6, σ0§19/8,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLFJ		**0.16**	**61**	*e*P	**Pg**	**04 47 26.3**	**+0.1**
	SNR=162						
HQLS		**0.23**	**124**	S	**Sg**	**04 47 30.9**	**0.0**
HQLS		**0.23**	**124**	P	**Pg**	**04 47 27.1**	**0.0**
HQLS		**0.23**	**124**	P	**Pg**	**04 47 27.1**	**0.0**
HQLS				S	**Sg**	**04 47 30.9**	**0.0**
JLOS		**0.89**	**140**	P	**Pb**	**04 47 38.2**	**-0.3**
JLOS				S	**Sb**	**04 47 50.1**	**+0.1**
RSHS		**1.12**	**182**	P	**Pn**	**04 47 42.4**	**+0.1**

ISCJB ***27*** *05:08:04.9±3.5, 149S±0.1×1672E±02, h108km±29km, mb4.1/9, Error ellipse: s-maj=30.7km s-min=21.0km az=158.6*
IDC ***27*** *05:08:05.2±4.7, 1483S×16729E, h98km±39km, mb4.0/9, mb1 4.2/10, mb1mx4.0/17, mbtmp4.0/10, Error ellipse: s-maj=29.1km s-min=23.9km az=56.0*
NEIC ***27*** *05:08:06.2±2.9, 1486S×16723E, h103km±25km, Error ellipse: s-maj=23.6km s-min=22.2km az=128.0*

ISC 27 05:08:05.8±3.0,149S±01×1673E±02,h105km±24km,n52, σ0§88/17,mb4.1/9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.22**	**186**	*e*P	**Pn**	**05 09 49.4**	**+0.7**
DZM				*e*S	**Sn**	**05 11 07.2**	**-1.9**
DZM	**Mont Dzumac**	**7.22**	**186**	P	**Pn**	**05 09 49.4**	**+0.7**
	23nm,0.3s,baz=344,slow=23,SNR=117						
DZM				S	**Sn**	**05 11 09.5**	**+0.4**
	3.5nm,0.3s,baz=150,slow=20,SNR=2.4						
STKA	**Stephens Creek**	**28.94**	**230**	P	**P**	**05 13 56.5**	**+1.3**
STKA	**Stephens Creek**	**28.94**	**230**	P	**P**	**05 13 56.5**	**+1.3**
	10nm,0.7s,mb4.6,baz=41,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**31.83**	**256**	P	**P**	**05 14 19.9**	**-1.0**
	1.4nm,0.6s,mb3.9,baz=86,slow=9.4,SNR=33						
WRA				PcP	PcP	05 17 09.9	+0.3
	0.2nm,0.8s,baz=22,slow=1.1,SNR=4.9						
ASAR	**Alice Springs**	**32.66**	**249**	P	**P**	**05 14 27.4**	**-0.8**
	2.0nm,0.7s,mb4.0,baz=78,slow=9.3,SNR=21						
VNDA	**Vanda**	**62.73**	**181**	P	**P**	**05 18 19.7**	**+0.5**
	0.8nm,0.7s,mb3.8,baz=9.5,slow=7.2,SNR=3.7						
QSPA	**South Pole Qui**	**75.17**	**180**	P	**P**	**05 19 36.8**	**+0.7**
	5.2nm,0.8s,mb4.3,baz=39,slow=1.8,SNR=18						
SONM	**Songino Array**	**82.62**	**324**	P	**P**	**05 20 18.1**	**+0.8**
	0.5nm,0.4s,mb3.7,baz=153,slow=8.5,SNR=5.8						
VNA3	**Neumayer Olymp**	**94.08**	**181**	*e*	**P**	**05 21 11.4**	**-0.6**
VNA3				*e*		05 21 16.3	
VNA2	**Neumayer--Watz**	**94.35**	**182**	*e*	**P**	**05 21 13.2**	**0.0**
	baz=190,slow=5.8						
VNA2				*e*		05 21 18.1	
MKAR	**Makanchi Array**	**97.33**	**316**	P	**P**	**05 21 28.1**	**+1.0**
	0.4nm,0.4s,mb4.2,baz=101,slow=6.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**97.52**	**324**	P	**P**	**05 21 27.4**	**-0.4**
ZALV	**Zalesovo Beam**	**97.52**	**324**	P	**P**	**05 21 27.4**	**-0.4**
	0.9nm,0.5s,mb4.5,baz=119,slow=4.5,SNR=5.6						
YKA	**Yellowknife Ar**	**97.64**	**27**	P	**P**	**05 21 26.8**	**-1.4**
	0.3nm,0.7s,mb3.9,baz=259,slow=4.4,SNR=4.6						
ARCES	**ARCESS Array B**	**120.39**	**345**	PKP	PKPdf	05 26 43.4	-0.8
	8.7nm,1.1s,baz=75,slow=1.2,SNR=15						
FINES	**FINESS Array B**	**125.86**	**338**	PKP	PKPdf	05 26 55.5	+0.6
	0.3nm,0.5s,baz=48,slow=2.1,SNR=3.5						
CDF	**Champ du Feu**	**142.71**	**338**	*e*PKP1	PKPdf	05 27 25.0	-1.7
DAVOX	**Davos/Dischmat**	**143.01**	**334**	PKP	PKPdf	05 27 26.2	-1.1
	3.1nm,0.7s,baz=207,slow=6.8,SNR=4.0						
CABF	**La Chapelle**	**144.66**	**337**	*e*PKP1	PKPdf	05 27 31.0	+0.8
	7.2nm,0.5s						
FLN	**La Foliniere**	**144.73**	**346**	*e*PKP1	PKPdf	05 27 29.9	-0.3
LDF	**La Druitiere**	**144.80**	**345**	*e*PKP1	PKPdf	05 27 30.2	-0.2
	12nm,0.8s						
LOR	**Lormes**	**144.87**	**340**	*e*PKP1	PKPdf	05 27 31.0	+0.5
SSF	**Saint Saulge**	**145.17**	**340**	*e*PKP1	PKPbc	05 27 32.1	+1.3
	28nm,0.7s						
GRR	**Gorron**	**145.17**	**346**	*e*PKP1	PKPbc	05 27 31.6	+0.8
	19nm,0.7s						
LPL	**La Plagne**	**145.33**	**336**	*e*PKP1	PKPbc	05 27 32.9	+1.5
	19nm,0.7s						
LPG	**La Plagne**	**145.34**	**336**	*e*PKP1	PKPbc	05 27 33.1	+1.7
	18nm,0.6s						
SMF	**Signal de Mont**	**145.43**	**340**	*e*PKP1	PKPbc	05 27 32.6	+0.9
	13nm,0.7s						
AVF	**Avril sur Loir**	**145.46**	**340**	*e*PKP1	PKPbc	05 27 32.7	+0.9
	13nm,1.0s						
SGMF	**Saint Gilles**	**145.66**	**348**	*e*PKP1	PKPbc	05 27 33.2	+0.9
ROSF	**Rostrenen**	**145.73**	**349**	*e*PKP1	PKPbc	05 27 33.8	+1.3
BGF	**Bois d'Agland**	**145.83**	**341**	*e*PKP1	PKPbc	05 27 34.0	+1.1
	17nm,0.5s						
MBDF	**Montbardon**	**145.96**	**335**	*e*PKP1	PKPbc	05 27 34.4	+1.0
	9.4nm,0.6s						
QUIF	**Quistinic**	**146.11**	**348**	*e*PKP1	PKPbc	05 27 34.4	+0.7
ORIF	**Oris-en-Rattie**	**146.16**	**336**	*e*PKP1	PKPbc	05 27 35.3	+1.3
	22nm,0.7s						
TCF	**Toulx Ste Croi**	**146.27**	**341**	*e*PKP1	PKPbc	05 27 35.3	+1.1
	11nm,0.7s						
SBF	**Sospel**	**146.38**	**333**	*e*PKP1	PKPbc	05 27 35.9	+1.3
	48nm,0.8s						
MFF	**Saint Martin d**	**146.66**	**344**	*e*PKP1	PKPbc	05 27 36.4	+1.1
	20nm,0.7s						
VIVF	**Saint-Julien-l**	**146.68**	**337**	*e*PKP1	PKPbc	05 27 36.6	+1.1
FRF	**La Foret Royal**	**146.96**	**334**	*e*PKP1	PKPbc	05 27 37.1	+0.8
SMRF	**Simiane la Rot**	**147.07**	**335**	*e*PKP1	PKPbc	05 27 37.9	+1.3
LMR	**La Mourre**	**147.20**	**334**	*e*PKP1	PKPbc	05 27 37.8	+0.8
	6.8nm,0.6s						
RJF	**Les Rejaudoux**	**147.37**	**341**	*e*PKP1	PKPbc	05 27 38.4	+1.0
	9.1nm,0.6s						
CAF	**Calviac**	**147.53**	**340**	*e*PKP1	PKPbc	05 27 38.9	+1.1
	12nm,1.0s						
LASF	**Ste Croix**	**147.65**	**337**	*e*PKP1	PKPbc	05 27 39.1	+0.9
	11nm,0.8s						
LFF	**La Frestale**	**147.93**	**342**	*e*PKP1	PKPbc	05 27 39.8	+0.9
	14nm,0.6s						
MTLF	**Montolieu**	**148.88**	**339**	*e*PKP1	PKPbc	05 27 42.4	+1.0
	12nm,0.8s						
EPF	**Esparros**	**149.78**	**341**	*e*PKP1	PKPbc	05 27 44.9	+1.2
SJPF	**Ste Jean**	**150.17**	**343**	*e*PKP1	PKPbc	05 27 46.0	+1.4
ETSF	**Etsaut**	**150.18**	**342**	*e*PKP1	PKPbc	05 27 46.0	+1.4
	5.6nm,0.5s						
KEST	**Kesra**	**151.34**	**320**	PKPbc	PKPbc	05 27 48.6	+1.0
	1.7nm,0.8s,baz=247,slow=1.2,SNR=5.9						
TORD	**Torodi Ar. Bea**	**165.94**	**265**	PKP	PKPdf	05 27 58.9	-0.4
	0.5nm,0.7s,baz=252,slow=0.5,SNR=2.6						
TORD				PKPab	PKPab	05 28 59.9	+0.1
	0.8nm,0.8s,baz=107,slow=4.1,SNR=3.3						

NEIC 27 05:08:12.0,6004N×15358W,h170km,MG3.5(AEIC), After AEIC.,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.67**	**174**	P	Pn	05 08 36.0	-0.4
AUL				S	Sn	05 08 54.2	-0.8
SVW2	**Sparrevohn**	**1.45**	**318**	*e*P	Pn	05 08 41.3	-1.2
SLKM	**Skilak Lake**	**1.74**	**73**	P	Pn	05 08 44.3	-1.1
FIB	**Fire Island**	**2.02**	**55**	P	Pn	05 08 48.2	-0.3
FIB				S	Sn	05 09 17.4	+0.7
SEW	**Seward**	**2.07**	**87**	P	Pn	05 08 48.5	-0.6
RC01	**Rabbit Creek A**	**2.17**	**59**	P	Pn	05 08 48.7	-1.5
KDAK	**Kodiak Island**	**2.33**	**167**	P	Pn	05 08 50.2	-1.8
PMR	**Palmer**	**2.67**	**53**	*e*P	Pn	05 08 54.0	-2.1

GHO	**Glory Hole Cre**	**2.86**	**51**	P	Pn	05 08 56.5	-1.8		
SML	**Sawmill**	**3.11**	**53**	*e*Pn	Pn	05 08 58.9	-2.5		
TTA	**Tatalina**	**3.12**	**339**	*e*P	Pn	05 09 00.2	-1.4		
KTH	**Kantishna Hill**	**3.74**	**19**	P	Pn	05 09 09.1	-0.2		
EYAK	**Cordova Ski Ar**	**3.93**	**79**	P	Pn	05 09 11.2	-0.5		
RAGM	**Ragged Mountai**	**4.45**	**82**	P	Pn	05 09 18.1	-0.4		
CHGN	**Chignik**	**4.54**	**216**	*e*P	Pn	05 09 18.4	-1.3		
PAX	**Paxson**	**4.87**	**49**	P	Pn	05 09 23.2	-0.6		
COLA	**College**	**5.53**	**26**	P	Pn	05 09 31.4	-1.1		
MENT	**Mentasta**	**5.54**	**54**	*e*P	Pn	05 09 31.8	-0.9		
IL1	**Eielson Array**	**5.67**	**30**	P	Pn	05 09 33.1	-1.2		
DOT	**Dot Lake**	**5.78**	**47**	P	Pn	05 09 35.0	-0.7		
IM3	**Indian Mountai**	**5.96**	**359**	P	Pn	05 09 37.5	-0.6		
IMA2	**Indian Mountai**	**6.05**	**360**	*e*P	Pn	05 09 39.1	-0.2		
BCA3	**Beaver Creek A**	**6.40**	**57**	P	Pn	05 09 43.2	-0.7		
EGAK	**Eagle**	**7.46**	**45**	P	Pn	05 09 57.1	-0.9		
DAWY	**Dawson**	**7.78**	**53**	*e*Pn	Pn	05 10 02.3	+0.2		
DAWY				*e*Sn	Sn	05 11 26.2	-3.0		

IDC ***27*** *05:13:25.1±1.3,3826N×2052E,h0km,mb3.4/8, mb1 3.6/10,mb1mx3.5/24,mbtmp3.5/10,ML3.2/2,MS2.9/1, Ms1 2.9/1,ms1mx2.1/30,Error ellipse: s-maj=26.6km s-min=22.7km az=98.0*
ATH ***27*** *05:13:27.8,3832N×2049E,h5km±3km, MD3.7/8*
NEIC ***27*** *05:13:27.8,3832N×2049E,h5km,MD3.7(ATH), After ATH.*
ISCJB ***27*** *05:13:27.1±0.5,3831N±002×2039E±004,h10km,mb3.5/8, Error ellipse: s-maj=5.1km s-min=2.9km az=150.2*
THE ***27*** *05:13:28.6,3836N×2045E,h3km,ML4.0*
CSEM ***27*** *05:13:29.4±0.1,3832N×2060E,h2km,MD3.7,Error ellipse: s-maj=3.2km s-min=1.5km az=66.0*

ISC 27 05:13:28.0±0.5,3831N±002×2044E±004,h10km,n43, σ1§46/60,mb3.5/8,1C,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**138**	*i*PG	**Pg**	**05 13 31.2**	**-0.5**
VLS				*e*SG	**Sg**	**05 13 34.6**	**+0.4**
KFL	**Anninata**	**0.34**	**125**	*e*Pg	**Pg**	**05 13 34.1**	**-0.5**
LKD	**Levkas**	**0.43**	**22**	*e*Pg	**Pg**	**05 13 34.6**	**-1.9**
LKD				*e*Sg	**Sg**	**05 13 41.6**	**-0.6**
RLS	**Riolos of Patr**	**0.84**	**107**	*e*PG	**Pg**	**05 13 43.2**	**-1.1**
RLS				*e*SB	**Sb**	**05 13 54.7**	**-1.4**
SELA	**Sela**	**1.14**	**91**	*e*Pg	**Pg**	**05 13 48.1**	**-1.9**
SELA				*e*Sg	**Sg**	**05 14 07.2**	**+2.4**
IGT	**Igoumenitsa**	**1.23**	**356**	*e*Pg	**Pg**	**05 13 50.0**	**-1.6**
IGT				*e*Sg	**Sg**	**05 14 08.3**	**+0.8**
EVR	**Evrytania**	**1.23**	**60**	*e*PB	**Pb**	**05 13 50.5**	**-0.9**
EVR				*e*SB	**Sb**	**05 14 07.9**	**+0.6**
JAN	**Janina**	**1.39**	**13**	*e*PB	**Pb**	**05 13 54.0**	**0.0**
JAN				*e*SB	**Sb**	**05 14 12.0**	**+0.2**
KEK	**Kerkira**	**1.49**	**341**	*e*PB	**Pb**	**05 13 56.5**	**+0.7**
KEK				*e*SB	**Sb**	**05 14 16.3**	**+1.5**
MEV	**Metsovon**	**1.60**	**22**	*e*Pg	**Pg**	**05 13 57.4**	**-1.3**
SRN	**Sarande**	**1.61**	**348**	*e*Pn	**Pn**	**05 14 00.7**	**+4.2**
SRN				*i* Sn	**Sn**	**05 14 19.7**	**+2.4**
ITM	**Ithomi**	**1.63**	**133**	*e*PB	**Pb**	**05 13 58.5**	**+0.4**
ITM				*e*SB	**Sb**	**05 14 21.1**	**+2.5**
AGG	**Agios Georgios**	**1.64**	**64**	*e*Pg	**Pg**	**05 13 57.5**	**-2.0**
AGG				*e*Sg	**Sg**	**05 14 20.0**	**-0.8**
PYL	**PYLOS**	**1.75**	**143**	*e*Pb	**Pb**	**05 13 59.0**	**-1.1**
PYL				*e*Sb	**Sb**	**05 14 25.9**	**+3.8**
VLX	**Vlachokerasia**	**1.79**	**121**	*e*Pb	**Pb**	**05 14 01.5**	**+0.5**
VLX				*e*Sb	**Sb**	**05 14 25.3**	**+1.8**
LKR	**Lokris**	**2.04**	**79**	*e*PG	**Pg**	**05 14 04.4**	**-2.6**
KZN	**Kozani**	**2.25**	**27**	*e*PG	**Pg**	**05 14 09.1**	**-2.0**
DID	**Didima**	**2.35**	**109**	*e*Pn	**Pn**	**05 14 07.9**	**+1.2**
DID				*e*Sn	**Sn**	**05 14 39.3**	**+3.8**
LIT	**Litokhoron**	**2.40**	**41**	*e*Pn	**Pn**	**05 14 08.1**	**+0.8**
VLI	**Veliai**	**2.54**	**128**	*e*PN	**Pn**	**05 14 13.0**	**+3.8**
FNA	**Florina**	**2.58**	**16**	*e*Pn	**Pn**	**05 14 11.3**	**+1.5**
FNA				*e*Sn	**Sn**	**05 14 43.2**	**+2.0**
BIA	**Bitola**	**2.79**	**14**	*e*Pn	**Pn**	**05 14 16.0**	**+3.3**
OHR	**Ohrid**	**2.82**	**5**	*e*Pn	**Pn**	**05 14 13.8**	**+0.8**
OHR	**Ohrid**	**2.82**	**5**	*e*Pn	**Pn**	**05 14 15.5**	**+2.4**
TIP	**Timpagrande**	**3.01**	**288**	*e*Pn	**Pn**	**05 14 15.4**	**-0.3**
TIP	**Timpagrande**	**3.01**	**288**	*e*Pn	**Pn**	**05 14 15.4**	**-0.3**
GRG	**Griva**	**3.05**	**29**	*e*Pn	**Pn**	**05 14 17.3**	**+1.0**
PLG	**Polygyros**	**3.11**	**47**	*e*PB	**Pb**	**05 14 19.4**	**-4.0**
VAY	**Valandovo**	**3.43**	**28**	*e*Pn	**Pn**	**05 14 23.5**	**+2.0**
STIP	**Stip**	**3.64**	**21**	*e*Pn	**Pn**	**05 14 26.0**	**+1.6**
BARS	**Barje**	**4.63**	**13**	Pn	**Pn**	**05 14 38.8**	**+0.8**
BARS				Sn	**Sn**	**05 15 30.8**	**-1.0**
IDI	**Anoyia**	**4.67**	**129**	Pn	**Pn**	**05 14 35.5**	**-3.0**
	0.2nm,0.3s,baz=326,slow=7.3,SNR=1.7						
IDI				Sn	**Sn**	**05 15 35.2**	**+2.5**
	1.1nm,0.3s,baz=186,slow=23,SNR=9.2						
AYDN	**Tasoluk**	**5.91**	**94**	*i* S	**Pn**	**05 14 52.3**	**-3.2**
MLR	**Muntele Rosu**	**8.27**	**28**	Pn	**Pn**	**05 15 29.0**	**+1.1**
	0.2nm,0.3s,baz=243,slow=14,SNR=2.4						
HFS	**Hagfors**	**22.27**	**351**	P	**P**	**05 18 24.4**	**-0.5**
	1.8nm,0.6s,mb3.7,baz=167,slow=13,SNR=4.4						
EKA	**Eskdalemuir Ar**	**23.29**	**325**	P	**P**	**05 18 35.0**	**-0.7**
	1.4nm,0.9s,mb3.4,baz=139,slow=5.2,SNR=4.1						
FINES	**FINESS Array B**	**23.43**	**7**	P	**P**	**05 18 34.8**	**-2.3**
	0.5nm,0.4s,mb3.3,baz=176,slow=10,SNR=5.2						
NB2	**NORSAR Subarra**	**23.48**	**349**	P	**P**	**05 18 37.4**	**-0.3**
	comp=Z,0.5nm,0.5s,mb3.2,baz=154,slow=11						
NOA	**NORSAR Array B**	**23.48**	**349**	P	**P**	**05 18 35.9**	**-1.8**
	comp=Z,0.5nm,0.5s,mb3.2,baz=161,slow=9.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**30.09**	**219**	P	**P**	**05 19 36.3**	**-1.4**
	comp=Z,0.6nm,0.8s,mb3.4,baz=15,slow=7.6,SNR=2.9						
MKAR	**Makanchi Array**	**45.29**	**58**	P	**P**	**05 21 44.9**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.5,baz=278,slow=7.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	**P**	**05 21 46.1**	**-2.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=285,slow=8.0,SNR=5.6						
YKA	**Yellowknife Ar**	**73.25**	**340**	P	**P**	**05 24 59.3**	**+0.3**
	comp=Z,0.1nm,0.3s,mb3.2,baz=45,slow=5.3,SNR=4.0						

ISCJB ***27*** *05:14:05.2±1.5,3836N±005×2693E±009,h10km±15km, Error ellipse: s-maj=11.8km s-min=7.7km az=157.0*
CSEM ***27*** *05:14:05.4±0.3,3832N×2709E,h40km,MD3.1,Error ellipse: s-maj=10.6km s-min=5.1km az=108.0*
ATH ***27*** *05:14:05.8,3832N×2677E,h30km,MD3.3/3*
DDA ***27*** *05:14:13.2,3911N×2744E,h20km±1km,MD3.1*

ISC 27 05:14:05.4±1.0,3838N±004×2695E±008,h14km±10km,n6, σ0§63/9,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.67**	**188**	*e*PN	**Pg**	**05 14 18.7**	**+0.3**
SMG				*e*SN	**Sg**	**05 14 27.3**	**0.0**
AKHS	**Akhisar**	**0.84**	**53**	*i* P	**Pb**	**05 14 20.6**	**-1.2**
AKHS				*i* S	**Sg**	**05 14 32.7**	**-0.1**
AYVA	**Ayvalik**	**0.95**	**348**	*i* P	**Pb**	**05 14 24.5**	**+0.8**
AYVA				*i* S	**Sb**	**05 14 36.5**	**+0.4**
PRK	**Paraskevi**	**1.02**	**329**	*e*PN	**Pn**	**05 14 25.1**	**-0.1**
AYDN	**Tasoluk**	**1.02**	**134**	*i* P	**Pn**	**05 14 38.9**	**+0.7**
APE	**Apeiranthos**	**1.72**	**221**	*e*PN	**Pn**	**05 14 34.0**	**-0.9**

NEIC ***27*** *05:23:34.5,3239S×7147W,h60km,MD3.4(GUC), After GUC.*

GUC 27 05:23:34.5±0.6,3239S×7147W,h60km±2km,MD3.4, ML3.5,3C-6D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PACH	**Papudo**	**0.15**	**169**	*i*P	**Pn**	**05 23 44.1**	**+0.4**
PACH				*i* S	Sn	05 23 51.2	+0.9
PTCH	**Petorca**	**0.48**	**75**	*i*P	**Pn**	**05 23 47.9**	**+1.7**
PTCH				*i* S	Sn	05 23 57.4	+2.8
PTCH	**Petorca**	**0.48**	**75**	*i*P	Pn	05 23 47.9	+1.7
PTCH				*i* S	Sn	05 23 57.4	+2.8
PTCH				AML	AML	05 24 58.3	
	comp=N,5μm,0.1s						
CHNG	**Los Chungos**	**0.50**	**357**	*i*P	Pn	05 23 30.0	-17
CHNG				*i* S	Sn	05 23 38.9	-16
RCDM	**Rinconada Maip**	**1.23**	**153**	*i* P	Pn	05 23 56.0	+0.4
RCDM				*i* S	Sn	05 24 12.4	+1.1
RCDM	**Rinconada Maip**	**1.23**	**153**	*i* P	Pn	05 23 56.0	+0.4
RCDM				*i* S	Sn	05 24 12.4	+1.1
RCDM				AML	AML	05 24 14.7	
	comp=E,2μm,0.1s						
STL	**Santa Lucia**	**1.26**	**146**	*i* P	Pn	05 23 56.2	+0.3
STL				*i* S	Sn	05 24 12.8	+0.9
DSCH	**Colegio Aleman**	**1.26**	**143**	*i*P	Pn	05 23 56.3	+0.3
DSCH				*i* S	Sn	05 24 12.9	+0.8

CMCH	**Combarbala**	**1.27**	**19**	*i* P	Pn	05 23 56.7	+0.6		
CMCH				*i* S	Sn	05 24 13.5	+1.2		
CMCH	**Combarbala**	**1.27**	**19**	*i* P	Pn	05 23 56.7	+0.6		
CMCH				*i* S	Sn	05 24 13.5	+1.2		
CMCH				AML	AML	05 24 16.2			
	comp=E,1μm,0.5s								
TACH	**Talagante**	**1.34**	**161**	*e*P	Pn	05 23 57.5	+0.5		
TACH				*i* S	Sn	05 24 14.8	+0.9		
FSR	**Penalolen**	**1.35**	**144**	*e*P	Pn	05 23 57.8	+0.6		
FSR				*i* S	Sn	05 24 15.4	+1.3		
FSR	**Penalolen**	**1.35**	**144**	*e*P	Pn	05 23 57.8	+0.6		
FSR				*i* S	Sn	05 24 15.4	+1.3		
FSR				AML	AML	05 24 18.2			
	comp=E,767nm,0.2s								
FCH	**Farellones**	**1.37**	**134**	*i* P	Pn	05 23 58.7	+1.3		
FCH				*i* S	Sn	05 24 16.8	+2.2		
ANTU	**Antumapu**	**1.38**	**149**	*i*P	Pn	05 23 58.2	+0.8		
ANTU				*e*S	Sn	05 24 16.1	+1.4		
PCH	**Pirque**	**1.47**	**147**	*i* P	Pn	05 23 59.5	+0.7		
PCH				*i* S	Sn	05 24 18.5	+1.5		
SJCH	**San Jose de Ma**	**1.56**	**143**	*i*P	Pn	05 24 00.5	+0.4		
SJCH				*i* S	Sn	05 24 20.6	+1.3		
SJCH	**San Jose de Ma**	**1.56**	**143**	*i*P	Pn	05 24 00.5	+0.4		
SJCH				*i* S	Sn	05 24 20.6	+1.3		
SJCH				AML	AML	05 24 22.3			
	comp=N,507nm,0.2s								
CHCH	**Chadas Angostu**	**1.69**	**156**	*e*P	Pn	05 24 02.4	+0.6		
CHCH				*i* S	Sn	05 24 23.5	+1.2		
LMEL	**Las Melosas**	**1.81**	**144**	*e*P	Pn	05 24 04.1	+0.8		
LMEL				*e*S	Sn	05 24 26.9	+1.7		
CICH	**Cipreses**	**2.12**	**156**	*e*P	Pn	05 24 08.4	+0.8		
CICH				*e*S	Sn	05 24 34.0	+1.2		
TLL	**Tololo Astrono**	**2.29**	**15**	*i*P	Pn	05 24 10.9	+1.1		
TLL				*i* S	Sn	05 24 38.5	+1.7		

IDC ***27*** *05:41:43.4±3.2,3298S×17849W,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.8/14,mbtmp3.8/3,ML3.7/1, Error ellipse: s-maj=73.1km s-min=36.8km az=114.0*

ISC 27 05:41:47.7±3.3,336S±04×1775W±07,h94km±43km,n9, σ0§36/8,mb3.7/2,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**5.63**	**216**	*e*PN	**Pn**	**05 43 08.6**	**-0.2**
MWZ	**Matawai**	**6.20**	**219**	*e*PN	**Pn**	**05 43 16.8**	**+0.2**
URZ	**Urewera**	**6.37**	**222**	Pn	**Pn**	**05 43 19.0**	**0.0**
	1.8nm,0.3s,baz=292,slow=6.4,SNR=9.0						
URZ				Sn	**Sn**	**05 44 30.2**	**0.0**
	2.3nm,0.3s,baz=298,slow=19,SNR=8.6						
BFZ	**Birch Farm**	**8.64**	**213**	*e*SN	**Sn**	**05 45 25.5**	**+0.1**
TCW	**Tory Channel**	**10.01**	**218**	*e*SN	**Sn**	**05 45 54.4**	**-4.4**
MQZ	**McQueen's Vall**	**12.67**	**214**	*e*SN	Sx	05 46 55.9	
ASAR	**Alice Springs**	**43.44**	**270**	P	**P**	**05 49 41.6**	**+0.2**
	0.4nm,0.5s,mb3.4,baz=111,slow=7.6,SNR=5.8						
WRA	**Warramunga Arr**	**44.72**	**275**	P	**P**	**05 49 51.5**	**-0.2**
	0.8nm,0.3s,mb3.9,baz=115,slow=8.2,SNR=13						
FINES	**FINESS Array B**	**148.29**	**339**	PKPbc	PKPbc	06 01 27.3	+5.2
	0.4nm,0.5s,baz=

0.5nm,0.2s,mb3.5,baz=6.7,slow=7.8,SNR=55
WRA ScP ScP 06 02 52.9 -2.2
0.4nm,0.8s,baz=4.5,slow=4.9,SNR=5.8
ZAA0 Zalesovo Array 48.40 319 *eP* **P 05 58 28.8 -1.2**
ZALV Zalesovo Beam 48.40 319 P **P 05 58 29.2 -0.7**
1.3nm,0.3s,mb3.7,baz=105,slow=7.1,SNR=10
ZALV PcP PcP 05 59 47.4 -0.9
1.0nm,0.3s,baz=143,slow=3.4,SNR=4.3
MKAR Makanchi Array 49.21 310 P **P 05 58 35.8 -0.3**
1.3nm,0.4s,mb3.6,baz=86,slow=10,SNR=18
MKAR PcP PcP 05 59 50.5 -0.9
0.2nm,0.4s,baz=86,slow=2.1,SNR=2.7
ASAR Alice Springs 50.92 188 P **P 05 58 47.0 -2.0**
0.2nm,0.3s,mb2.9,baz=0.8,slow=5.0,SNR=8.0
KDAK Kodiak Island 55.26 37 P **P 05 59 21.0 +1.3**
9.3nm,0.9s,mb4.1,baz=310,slow=7.9,SNR=8.0
INK Inuvik 63.63 24 P **P 06 00 16.8 +1.1**
1.1nm,0.5s,mb3.7,baz=305,slow=5.4,SNR=17
YKA Yellowknife Ar 72.83 28 P **P 06 01 12.6 +0.6**
1.1nm,0.3s,mb3.8,baz=298,slow=5.8,SNR=29
ARCES ARCESS Array B 72.95 341 P **P 06 01 13.0 +0.3**
3.3nm,0.6s,mb4.0,baz=74,slow=7.9,SNR=22
JOF Joensuu 74.31 333 *ep* **P 06 01 19.8 -0.8**
2.8nm,0.4s,mb4.2
KAF Kangasniemi 76.72 334 *ep* **P 06 01 33.0 -1.0**
5.4nm,0.5s,mb4.3,baz=55,slow=5.2
FINES FINESS Array B 77.18 333 P **P 06 01 36.2 -0.4**
FINES FINESS Array B 77.18 333 P **P 06 01 36.2 -0.4**
4.6nm,0.4s,mb4.3,baz=70,slow=5.5,SNR=46
AKASG Malin Array Be 81.62 323 P **P 06 01 59.5 -0.9**
1.4nm,0.4s,mb3.9,baz=53,slow=5.3,SNR=11
NOA NORSAR Array B 82.95 338 P **P 06 02 06.0 -0.9**
3.9nm,0.5s,mb4.2,baz=45,slow=4.9,SNR=15
TXAR Lajitas Array 96.83 52 P **P 06 03 14.6 +1.9**
0.3nm,0.7s,mb3.6,baz=312,slow=3.4,SNR=4.3
TORD Torodi Ar. Bea 123.33 310 PKP PKPdf 06 08 35.2 -1.1
0.5nm,0.6s,baz=52,slow=1.4,SNR=6.0
PLCA Paso Flores 151.14 126 PKPbc PKPbc 06 09 32.2 +0.2
1.5nm,0.7s,baz=252,slow=3.2,SNR=7.2
LPAZ La Paz 151.44 74 PKPbc PKPbc 06 09 35.2 +1.8
1.2nm,0.4s,baz=298,slow=6.0,SNR=9.4

IDC 27 06:14:59.6±3.3, 3009S×13856E, h0km, mb1 3.0/3, mb1mx3.0/13, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=84.3km s-min=16.0km az=45.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**3.16**	**125**	Pn		Pn	06 15 49.9	-0.7
	0.3nm,0.3s,baz=315,slow=16,SNR=3.5							
STKA				Sn		Sn	06 16 31.1	+2.1
	0.9nm,0.3s,baz=3.2,slow=16,SNR=5.1							
STKA				Lg			06 16 40.5	
	1.8nm,0.3s,baz=218,slow=22,SNR=7.6							
ASAR	**Alice Springs**	**7.63**	**326**	Pn		Pn	06 16 51.7	-0.4
	0.0nm,0.3s,baz=147,slow=12,SNR=3.5							
ASAR				Sn		Sn	06 18 22.1	+2.8
	0.0nm,0.3s,baz=150,slow=22,SNR=3.7							
WRA	**Warramunga Arr**	**10.80**	**338**	Pn		Pn	06 17 35.5	-0.1
	0.0nm,0.3s,baz=158,slow=16,SNR=3.7							
WRA				Sn		Sn	06 19 39.8	+2.5
	0.0nm,0.3s,baz=158,slow=24,SNR=4.2							

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*NEIC **27** 06:23:59.5, 1587N×9612W, h32km, MD3.6(MEX), After MEX.*

MEX 27 06:23:59.5±0.7, 1587N×9612W, h32km±13km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**0.10**	**176**	*i* P		Pb	06 24 03.6	-1.6
HUIG				*i* S		Sb	06 24 07.5	-1.5
VHO	**Vista Hermosa**	**1.33**	**334**	*i* P		Pn	06 24 20.3	-1.6
VHO				*i* S		Sn	06 24 36.5	-2.0
OXX	**Oaxaca**	**1.34**	**334**	*e*P		Pn	06 24 21.5	-0.4
OXX				*i* S		Sn	06 24 35.5	-3.1
CMIG	**Matias Romero**	**1.69**	**44**	*i* P		Pn	06 24 24.9	-1.9
CMIG				*i* S		Sn	06 24 45.5	-1.9
PPM	**Popocatepetl**	**3.98**	**323**	*i* S		Sn	06 25 41.9	-2.0

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*NEIC **27** 06:59:37.2, 1590N×9499W, h26km, MD4.4(MEX), After MEX.*

MEX 27 06:59:37.1±1.4, 1589N×9499W, h26km±23km, MD4.4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**1.09**	**264**	*i* P		Pn	06 59 53.7	-3.0
HUIG				*i* S		Sn	07 00 07.2	-3.7
CMIG	**Matias Romero**	**1.20**	**5**	*i* P		Pn	06 59 55.4	-2.9
CMIG				*i* S		Sn	07 00 09.4	-4.3
OXX	**Oaxaca**	**2.05**	**306**	*e*P		Pn	07 00 09.5	-0.4
VHO	**Vista Hermosa**	**2.05**	**305**	*i* P		Pn	07 00 08.4	-1.5
VHO				*i* S		Sn	07 00 33.2	-1.4
SCX	**San Cristobal**	**2.41**	**69**	*e*P		Pn	07 00 14.5	-0.4
SCX				*i* S		Sn	07 00 40.0	-3.6
CCIG	**Comitan**	**2.77**	**81**	*i* P		Pn	07 00 18.0	-1.8
CCIG				*i* S		Sn	07 00 50.1	-2.3
PNIG	**Pinotepa**	**3.06**	**280**	*i* P		Pn	07 00 21.2	-2.6
PNIG				*i* S		Sn	07 00 55.4	-4.3
TPIG	**Tehuac#an**	**3.39**	**318**	*e*P		Pn	07 00 24.7	-3.7
TPIG				*i* P			07 01 28.1	
TPIG				*i* S		Sn	07 01 06.2	-1.6
PPM	**Popocatepetl**	**4.70**	**313**	*e*P		Pn	07 00 49.0	+2.6
PPM	**Popocatepetl**	**4.70**	**313**	*i* P		Pn	07 00 41.9	-4.4
PPM				*e*P			07 00 49.0	
ACX	**Acapulco**	**4.83**	**282**	*i* P		Pn	07 00 45.5	-2.7
MEIG	**Mezcala**	**4.88**	**295**	*i* P		Pn	07 00 48.4	-0.4
MEIG				*i* S		Sn	07 01 39.3	-5.2
CAIG	**El Cayaco**	**5.20**	**284**	*i* P		Pn	07 00 50.6	-2.6
CAIG				*i* S		Sn	07 01 45.9	-6.5
SZVM	**Salazar**	**5.41**	**310**	*e*P		Pn	07 00 57.0	+0.9
SZVM				*i* S		Sn	07 01 57.6	0.0

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*ISK **27** 07:15:20.9, 4074N×3297E, h5km, MD2.8*
*CSEM **27** 07:15:21.4±0.2, 4075N×3293E, h5km, MD2.9, Error ellipse: s-maj=5.5km s-min=4.8km az=48.0*
*ISCJB **27** 07:15:22.2±0.6, 4073N±004×3295E±004, h5km, Error ellipse: s-maj=5.3km s-min=4.1km az=8.0*
*DDA **27** 07:15:23.0, 4077N×3297E, h6km, Md2.9*

ISC 27 07:15:22.6±0.6, 4072N±004×3297E±004, h1km±6km, n11, σ0§81/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ELDT	**Eldivan**	**0.41**	**123**	*i* P		**Pg**	**07 15 30.7**	**+0.2**
ELDT				*i* S		**Sg**	**07 15 35.4**	**-0.5**
CANT	**Cankiri**	**0.51**	**103**	*e*PG		**Pg**	**07 15 32.3**	**0.0**
CANT				*e*SG		**Sg**	**07 15 40.2**	**+1.4**
SAFT	**Safranbolu**	**0.56**	**338**	*e*PG		**Pg**	**07 15 32.9**	**-0.5**
SGKT	**Sivrigoynuk**	**0.71**	**258**	*i* P		**Pg**	**07 15 36.0**	**-0.3**
SGKT				*i* S		**Sg**	**07 15 46.8**	**+1.3**
TOS	**Tosya**	**0.86**	**68**	*e*PG		**Pg**	**07 15 37.6**	**-1.4**
ANTO	**Ankara**	**0.86**	**189**	*e*PG		**Pg**	**07 15 38.5**	**-0.6**
BALT	**Daday**	**0.87**	**21**	*i* P		**Pg**	**07 15 38.9**	**-0.5**
BALT				*i* S		**Sg**	**07 15 51.7**	**+1.1**
CORM	**Corum**	**1.38**	**113**	*e*PN		**Pn**	**07 15 49.3**	**+0.4**
CTKT	**Corum**	**1.39**	**93**	*i* P		**Pn**	**07 15 48.2**	**-0.8**
CTKT				*i* S		**Sg**	**07 16 07.5**	**+0.4**
CDAG	**Cicekdag**	**1.53**	**135**	*i* P		**Pn**	**07 15 51.2**	**+0.2**
CDAG				*i* S		**Sn**	**07 16 11.9**	**+0.3**
BOYT	**Boyabat**	**1.62**	**64**	*i* P		**Pn**	**07 15 50.8**	**-1.5**
BOYT				*i* S		**Sn**	**07 16 14.6**	**+0.8**

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*IDC **27** 07:28:13.8±5.1, 1559N×8813W, h29km±34km, mb4.0/16, mb1 4.3/18, mb1mx4.2/24, mbtmp4.1/18, ML4.5/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/29, Error ellipse: s-maj=22.5km s-min=14.4km az=69.0*
*BJI **27** 07:28:13.3, 1550N×8820W, h40km, mB5.1, Ms5.1, Msz4.8*
*NEIC **27** 07:28:14.4±0.4, 1553N×8821W, h40km, mb4.6/13, Error ellipse: s-maj=7.6km s-min=6.0km az=33.0*
NEIC Felt [III] at San Pedro Sula. Also felt at El Progreso, Omoa and Santa Elena.
*ISCJB **27** 07:28:17.8±0.5, 1594N±003×8823W±004, h59km±7km, mb4.3/23, MS3.9/5, Error ellipse: s-maj=6.1km s-min=4.3km az=151.0*

*CASC **27** 07:28:17.5±2.8, 1565N×8840W, h0km±9km, MD4.4, ML3.6, mb4.6(NEIC)*

ISC 27 07:28:19.4±0.4, 1594N±003×8825W±003, h57km±6km, n104, σ1§01/99, mb4.3/23, MS3.9/5, 4C-3D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MTO2	**Montecristo 2**	**1.87**	**215**	*e*P		x	07 28 43.9	
MTO2				*e*S		x	07 29 04.1	
CAHU	**Cacacuatique**	**2.15**	**179**	*e*P		x	07 28 48.8	
CAHU				*e*S		x	07 29 11.4	
RBDL	**Robledal**	**2.28**	**218**	*e*P		x	07 28 49.7	
LBRS	**Las Brisas**	**2.32**	**199**	*i*P		x	07 28 51.6	
LBRS				*e*S		x	07 29 18.1	
LFU	**La Fuente**	**2.33**	**201**	*e*P		x	07 28 51.9	
SNVI	**San Vicente**	**2.38**	**194**	*e*P		x	07 28 52.6	
BOQS	**Boqueron**	**2.41**	**205**	*e*P		x	07 28 53.3	
BOQS				*e*S		x	07 29 21.7	
RTR	**El Retiro**	**2.44**	**214**	*e*P		x	07 28 54.6	
RTR				*e*S		x	07 29 24.4	
SNJE	**San Jose**	**2.44**	**213**	*e*P		x	07 28 54.6	
SNJE				*e*S		x	07 29 23.7	
SBLS	**San Blas**	**2.47**	**213**	*e*P		x	07 28 55.2	
SBLS				*e*S		x	07 29 24.5	
PCG	**Pacaya**	**2.75**	**236**	*e*P		**Pn**	**07 28 58.6**	**-2.4**
PCG				*e*S		**Sn**	**07 29 31.7**	**-1.3**
FUG	**Fuego 3**	**2.91**	**240**	*e*S		**Sn**	**07 29 37.8**	**+0.8**
TELN	**Telica**	**3.59**	**157**	*e*P		**Pn**	**07 29 10.8**	**-1.7**
TELN				*e*S		**Sn**	**07 29 54.4**	**+0.7**
	comp=Z,258nm,0.4s							
TEL3	**Telica 3**	**3.61**	**158**	*e*P		**Pn**	**07 29 12.1**	**-0.8**
CCIG	**Comitan**	**3.75**	**276**	*i* P		**Pn**	**07 29 09.4**	**-5.4**
CCIG				*i* S		**Sn**	**07 29 55.6**	**-2.2**
MOMJ	**Momotombo**	**3.88**	**154**	*e*P		**Pn**	**07 29 16.8**	**+0.3**
MOMJ				*e*S		**Sn**	**07 30 02.6**	**+1.7**
COPN	**Copaltepe**	**4.07**	**156**	*e*P		**Pn**	**07 29 20.3**	**+1.2**
COPN				*e*S		**Sn**	**07 30 07.1**	**+1.6**
HUEN		**4.11**	**150**	*e*P		**Pn**	**07 29 20.1**	**+0.4**
XAVN	**Gruta Xavier**	**4.20**	**153**	*e*S		**Sn**	**07 30 08.1**	**-0.8**
TISN	**Laguna Tiscapa**	**4.23**	**153**	*e*P		**Pn**	**07 29 22.9**	**+1.5**
MGAN	**Managua**	**4.24**	**152**	*e*P		**Pn**	**07 29 21.0**	**-0.5**
MGAN				*e*S		**Sn**	**07 30 10.7**	**+1.0**
TEIG	**Tepich**	**4.27**	**360**	*e*Pn		**Pn**	**07 29 21.6**	**-0.2**
TEIG	**Tepich**	**4.27**	**360**	Pn		**Pn**	**07 29 20.8**	**-1.1**
	comp=Z,9.3nm,0.3s,baz=182,slow=1.2,SNR=61							
TEIG				Sn		**Sn**	**07 30 11.2**	**+0.8**
	comp=Z,39nm,0.3s,baz=9.7,slow=23,SNR=16							
TEIG				Lg			07 30 39.7	
	comp=Z,38nm,0.3s,baz=105,slow=20,SNR=4.3							
SCX	**San Cristobal**	**4.28**	**281**	*i* P		**Pn**	**07 29 17.5**	**-4.6**
SCX				*i* S		Sn	07 29 46.5	-24
TICN	**Ticuantepe**	**4.35**	**153**	*e*P		**Pn**	**07 29 23.8**	**+0.9**
TICN				*e*S		**Sn**	**07 30 11.2**	**-1.1**
CMIG	**Matias Romero**	**6.47**	**281**	*e*P		**Pn**	**07 29 46.7**	**-5.4**
CMIG				*i* S		**Sn**	**07 30 55.1**	**-9.4**
CMIG	**Matias Romero**	**6.47**	**281**	Pn		**Pn**	**07 29 46.4**	**-5.6**
	comp=Z,0.8nm,0.3s,baz=76,slow=11,SNR=47							
CMIG				Sn		**Sn**	**07 30 55.6**	**-8.8**
	comp=Z,16nm,0.3s,baz=249,slow=22,SNR=22							
CMIG				Lg			07 31 41.1	
	comp=Z,2.9nm,0.3s,baz=45,slow=18,SNR=3.9							
CMIG				LR		LR	07 32 32.1	
	comp=Z,429nm,19.2s,baz=94,slow=39							
OXX	**Oaxaca**	**8.21**	**279**	*e*P		**Pn**	**07 30 10.5**	**-5.4**
VHO	**Vista Hermosa**	**8.22**	**279**	*e*P		**Pn**	**07 30 08.5**	**-7.5**
VHO				*i* S		**Sn**	**07 31 36.4**	**-11**
SOR	**Soroa**	**8.42**	**35**	*e*P		**Pn**	**07 30 20.0**	**+1.2**
	baz=209							
SOR				*e*S		**Sn**	**07 31 51.4**	**-1.1**
	comp=N,1.5nm,0.3s							
SOR				*e*				
	comp=E,1.5nm,0.3s							
MGV	**Manicaragua**	**9.94**	**51**	*e*P		**Pn**	**07 30 33.3**	**-6.3**
	baz=211							
MGV				*e*S		**Sn**	**07 32 22.5**	**-7.2**
	comp=N,0.6nm,0.7s							
MGV				*e*				
	comp=E,0.4nm,0.7s							
UNM	**Universidad Na**	**10.95**	**290**	*i* S		**Pn**	**07 30 58.6**	**+5.2**
ZAIG	**Zacatecas**	**15.12**	**299**	*i* P		**Pn**	**07 31 55.0**	**+5.5**
LRAL	**Lakeview Retre**	**17.06**	**4**	*e*Pn		**Pn**	**07 32 13.3**	**-0.8**
ROSC	**El Rosal**	**17.55**	**127**	P		**Pn**	**07 32 18.6**	**-1.7**
	comp=E,0.1nm,0.3s,baz=51,slow=7.8,SNR=10							
ROSC				LR		LR	07 39 17.1	
	comp=E,97nm,19.7s,baz=178,slow=38							
GOGA	**Godfrey**	**17.93**	**13**	*e*Pn		**Pn**	**07 32 24.6**	**-0.1**
JCT	**Junction City**	**17.93**	**326**	*e*P		**Pn**	**07 32 25.8**	**+1.0**
OTAV	**Otavalo**	**18.35**	**147**	*e*Pn		**Pn**	**07 32 21.7**	**-8.3**
SDV	**Santo Domingo**	**18.57**	**110**	*e*Pn		**Pn**	**07 32 25.3**	**-7.3**
	comp=E,9.2nm,0.9s							
SDV				LR		LR	07 39 52.4	
SDV	**Santo Domingo**	**18.57**	**110**	P		**Pn**	**07 32 30.1**	**-2.5**
	comp=E,0.2nm,0.3s,baz=356,slow=5.5,SNR=6.9							
SDV				LR		LR	07 39 52.4	
	comp=E,59nm,20.8s,baz=9.5,slow=38							
UALR	**University of**	**19.12**	**350**	*e*Pn		**Pn**	**07 32 39.0**	**0.0**
	comp=E,35nm,1.6s							
MIAR	**Mount Ida**	**19.14**	**346**	*e*Pn		**Pn**	**07 32 39.4**	**+0.1**
SWET	**Sewanee**	**19.31**	**6**	*e*P		**Pn**	**07 32 40.1**	**-1.3**
SWET				*e*Pg		**Pn**	**07 32 43.1**	**+1.8**
LTX	**Lajitas**	**19.47**	**316**	*e*P		**Pn**	**07 32 42.5**	**-0.8**
	comp=E,21nm,0.8s							
TXAR	**Lajitas Array**	**19.47**	**316**	P		**Pn**	**07 32 44.0**	**+0.7**
	comp=E,0.6nm,0.3s,baz=141,slow=9.2,SNR=157							
TXAR				S		**S**	**07 36 18.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=113,slow=26,SNR=4.4							
LHS	**Liberty Hill**	**19.64**	**19**	*e*Pn		**Pn**	**07 32 43.5**	**-1.7**
CPCT	**Cooper Cave**	**19.72**	**9**	*e*Pn		**Pn**	**07 32 44.6**	**-1.5**
TKL	**Tuckaleechee C**	**20.04**	**11**	P		**P**	**07 32 49.1**	**+1.3**
	comp=E,14nm,0.9s,baz=190,slow=10,SNR=14							
TZTN	**Tazewell**	**20.95**	**11**	*e*P		**P**	**07 32 57.0**	**-0.6**
	comp=E,17nm,0.9s							
WMOK	**Wichita Mounta**	**20.98**	**335**	*e*P		**P**	**07 32 58.3**	**+0.5**
SIUC	**Southern Illin**	**21.71**	**358**	*e*P		**P**	**07 33 05.6**	**-0.1**
	comp=E,18nm,0.8s,mb4.5							
GDL2	**Guadalupe Moun**	**21.83**	**321**	*e*P		**P**	**07 33 07.3**	**+0.2**
USIN	**University of**	**21.95**	**1**	*e*P		**P**	**07 33 07.9**	**-0.3**
	comp=E,25nm,0.9s,mb4.6							
MNTX	**Cornudas Mount**	**22.13**	**318**	*e*P		**P**	**07 33 10.2**	**0.0**
	comp=E,22nm,1.7s,mb4.3							
LPIG	**La Paz**	**22.24**	**295**	LR		LR	07 42 10.1	
	comp=E,145nm,20.5s,MS3.4,baz=161,slow=37							
WCI	**Wyandotte Cave**	**22.27**	**4**	*e*P		**P**	**07 33 13.2**	**+1.5**
AMTX	**Amarillo**	**22.39**	**330**	*e*P		**P**	**07 33 13.7**	**+0.7**
KSU1	**Kansas State U**	**24.21**	**344**	*e*P		**P**	**07 33 31.8**	**+1.1**
	comp=E,20nm,0.9s,mb4.5							
BNM	**Barren Site**	**24.55**	**321**	*e*P		**P**	**07 33 33.6**	**-0.2**
LPM	**Los Pinos Moun**	**24.66**	**321**	*e*P		**P**	**07 33 36.0**	**+1.2**
ATAH	**Atahualpa**	**24.79**	**156**	P		**P**	**07 33 32.8**	**-3.4**
	comp=E,10nm,0.8s,mb4.4,baz=359,slow=7.9,SNR=5.6							
ATAH				LR		LR	07 41 04.0	
	comp=E,78nm,20.2s,MS3.2,baz=274,slow=31							
ANMO	**Albuquerque**	**25.00**	**323**	P		**P**	**07 33 38.8**	**+0.8**
	comp=E,4.1nm,1.0s,mb3.9,baz=150,slow=10,SNR=14							
ANMO				PcP		PcP	07 37 10.7	-1.2
	comp=E,0.3nm,0.5s,baz=114,slow=9.5,SNR=4.1							
LAZ	**Ladron**	**25.03**	**321**	*e*P		**P**	**07 33 38.2**	**0.0**
TUC	**Tucson**	**26.16**	**313**	*e*P		**P**	**07 33 48.9**	**+0.5**
SDCO	**Great Sand Dun**	**26.53**	**328**	*e*P		**P**	**07 33 53.1**	**+1.4**
MVCO	**Mesa Verde**	**27.76**	**324**	*e*P		**P**	**07 34 04.3**	**+1.5**
SADO	**Sadowa**	**29.75**	**13**	P		**P**	**07 34 20.5**	**+0.1**
SADO	**Sadowa**	**29.75**	**13**	P		**P**	**07 34 20.5**	**+0.1**
	baz=225,slow=8.7							
PDAR	**Pinedale Array**	**32.37**	**330**	P		**P**	**07 34 44.2**	**+0.8**
	comp=E,0.4nm,0.7s,mb3.4,baz=119,slow=12,SNR=4.5							
PDAR				PcP		PcP	07 37 28.1	-2.0
	comp=E,0.3nm,0.5s,baz=140,slow=4.4,SNR=2.7							
AGMN	**Agassiz Refuge**	**32.87**	**351**	*e*P		**P**	**07 34 47.5**	**-0.3**
REDW	**Red Top Meadow**	**33.44**	**329**	*e*P		**P**	**07 34 53.3**	**+0.5**
	comp=E,7.6nm,0.8s,mb4.7							
SNOW	**Snow King Moun**	**33.47**	**330**	*e*P		**P**	**07 34 53.6**	**+0.5**
MOOW	**Moose Ponds**	**33.68**	**330**	*e*P		**P**	**07 34 55.3**	**+0.5**
	comp=E,28nm,2.5s,mb4.7							
NVAR	**Mina Array Bea**	**34.62**	**316**	P		**P**	**07 35 02.1**	**-1.0**
	comp=E,2.0nm,0.7s,mb4.2,baz=118,slow=9.9,SNR=10							
NVAR				PcP		PcP	07 37 35.2	-1.3
	comp=E,1.0nm,0.5s,baz=156,slow=2.5,SNR=5.2							
ULM	**Lac du Bonnet**	**34.78**	**351**	P		**P**	**07 35 03.2**	**-1.0**
	comp=E,2.5nm,0.8s,mb4.2,baz=163,slow=9.8,SNR=7.6							
DGMT	**Dagmar**	**34.99**	**341**	*e*P		**P**	**07 35 06.6**	**+0.5**
HLID	**Hailey**	**35.41**	**326**	*e*P		**P**	**07 35 10.1**	**+0.3**
	comp=E,42nm,2.8s,mb4.9							
LPAZ	**La Paz**	**37.67**	**147**	P		**P**	**07 35 24.0**	**-5.4**
	comp=E,2.3nm,0.9s,mb3.9,baz=325,slow=9.4,SNR=4.7							
LPAZ				LR		LR	07 51 49.0	
	comp=E,50nm,20.1s,MS3.3,baz=29,slow=38							
WALA	**Waterton Lakes**	**39.11**	**333**	*e*P		**P**	**07 35 41.5**	**+0.4**
	comp=E,24nm,1.8s,mb4.6							
EDM	**Edmonton**	**42.11**	**338**	*e*P		**P**	**07 36 06.1**	**+0.4**
SCHQ	**Schefferville**	**42.20**	**18**	P		**P**	**07 36 06.1**	**-0.5**
SCHQ				PcP		PcP	07 37 58.8	-0.9
SCHQ	**Schefferville**	**42.20**	**18**	P		**P**	**07 36 06.1**	**-0.5**
	comp=E,2.7nm,0.9s,mb3.9,baz=235,slow=11,SNR=4.7							
SCHQ				PcP		PcP	07 37 58.8	-0.9
	comp=E,3.4nm,0.7s,baz=232,slow=1.6,SNR=8.1							
YKA	**Yellowknife Ar**	**50.06**	**344**	P		**P**	**07 37 08.6**	**+0.5**
	comp=E,8.2nm,0.7s,mb4.8,baz=141,slow=7.6,SNR=181							
YKA				PcP		PcP	07 38 25.8	-1.4
	comp=E,0.5nm,0.8s,baz=138,slow=4.9,SNR=5.2							
YKW3	**Yellowknife Ar**	**50.12**	**344**	*e*P		**P**	**07 37 09.1**	**+0.5**
DLBC	**Dease Lake**	**52.45**	**334**	*e*P		**P**	**07 37 26.4**	**+0.3**
PLCA	**Paso Flores**	**58.73**	**164**	P		**P**	**07 38 05.4**	**-5.9**
	comp=E,1.7nm,0.7s,mb4.2,baz=354,slow=9.3,SNR=6.8							
RES	**Resolute Bay**	**58.87**	**358**	*e*P		**P**	**07 38 12.0**	**+0.1**
INK	**Inuvik**	**59.67**	**342**	*e*P		**P**	**07 38 18.0**	**+0.6**
EKA	**Eskdalemuir Ar**	**74.28**	**36**	P		**P**	**07 39 49.5**	**-1.0**
	comp=E,1.5nm,0.7s,mb4.0,baz=269,slow=5.0,SNR=3.8							
ESDC	**Sonseca Array**	**75.67**	**52**	P		**P**	**07 39 58.1**	**-0.7**
	comp=E,0.3nm,0.3s,mb3.7,baz=292,slow=4.9,SNR=7.3							
NB2	**NORSAR Subarra**	**80.71**	**29**	P		**P**	**07 40 26.0**	**-0.3**
	comp=Z,1.2nm,0.7s,mb3.9,baz=288,slow=5.6							
NOA	**NORSAR Array B**	**80.71**	**29**	P		**P**	**07 40 25.1**	**-1.2**
	comp=Z,2.3nm,0.8s,mb4.2,baz=287,slow=5.3,SNR=8.3							
HFS	**Hagfors**	**82.15**	**30**	P		**P**	**07 40 32.8**	**-1.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=222,slow=2.0,SNR=5.2							
GERES	**GERESS Array B**	**85.80**	**40**	P		**P**	**07 40 51.4**	**-1.3**
	comp=Z,1.1nm,0.7s,mb4.2,baz=304,slow=1.0,SNR=4.3							
TORD	**Torodi Ar. Bea**	**86.41**	**77**	P		**P**	**07 40 54.0**	**-2.4**
	comp=Z,0.6nm,0.7s,mb4.0,baz=265,slow=6.5,SNR=3.4							
HHC	**Hu-ho-hao-te**	**120.59**	**343**	*e*PKP		PKPdf	07 46 55.8	-9.3
HHC				SKS		SKSdf	07 54 02.8	-10
HHC				LR		LR		
	comp=N,267nm,19.0s,MS5.1							
HHC				LR		LR		
	comp=E,284nm,19.0s,MS5.1							
HHC				LR		LR		
	comp=Z,212nm,19.0s,MS4.8							
NJ2	**Nanjing**	**125.67**	**332**	*e*PKP		PKPdf	07 47 12.3	-2.8
LZH	**Lanzhou**	**127.01**	**348**	*e*PKP		PKPdf	07 47 14.5	-3.0
LZH				XPKP			07 47 29.0	
LZH				LR		LR		
	comp=N,153nm,18.1s							
LZH				LR		LR		
	comp=Z,199nm,20.3s,MS4.8							
CD2	**Chengdu**	**132.01**	**346**	*e*PKP		PKPdf	07 47 23.8	-3.4
CD2				PP		PP	07 49 49.8	+2.5
CD2				SKS		SKSdf	07 54 29.8	-4.3
CD2				SKKS		SKKSac	07 56 36.3	-3.9
CD2				SS		SS	08 07 21.0	+2.0
CD2				PP		PP		
	comp=Z,60nm,8.4s							
STKA	**Stephens Creek**	**132.16**	**241**	PKP		PKPdf	07 47 25.4	-1.9
	comp=Z,1.3nm,0.5s,baz=144,slow=14,SNR=4.3							
KMI	**Kunming**	**137.81**	**345**	PKP		PKPdf	07 47 36.0	-2.2
KMI				XPKP			07 47 46.0	
WRA	**Warramunga Arr**	**139.36**	**258**	PKhKP			07 47 28.2	
	comp=Z,0.8nm,0.8s,baz=86,slow=3.2,SNR=8.5							
WRA				PKP		PKPdf	07 47 39.0	-2.0
	comp=Z,2.8nm,0.7s,baz=88,slow=2.5,SNR=6.7							
ASAR	**Alice Springs**	**139.72**	**252**	PKhKP			07 47 29.4	
	comp=Z,0.4nm,0.8s,baz=97,slow=2.8,SNR=3.8							
ASAR				PKP		PKPdf	07 47 40.1	-1.5
	comp=Z,1.2nm,0.7s,baz=90,slow=2.2,SNR=14							

CABF	La Chapelle	22.80	80	*e*P	P		07 39 44.0	+0.9
	comp=Z,18nm,1.3s,mb4.3							
MDT	Midelt	22.83	122	LR	LR		07 47 58.5	
	comp=Z,66nm,18.6s,MS3.1,baz=342,slow=35							
HINF	Hinteralfeld	23.02	77	*e*P	P		07 39 45.6	+0.2
DAVOX	Davos/Dischmat	25.27	78	LR	LR		07 49 09.7	
	comp=Z,164nm,18.4s,MS3.6,baz=80,slow=34							
SCHQ	Schefferville	25.34	301	LR	LR		07 48 13.7	
	comp=Z,186nm,18.1s,MS3.6,baz=213,slow=32							
GRA1	Grafenberg Arr	25.48	71	*e*P	P		07 40 10.6	+2.0
	comp=Z,8.0nm,1.1s,mb4.2							
GRA1				LR	LR			
	comp=Z,200nm,20.8s,MS3.6							
GRF	Grafenberg Arr	25.48	71	*e*P	P		07 40 10.6	+2.0
	comp=Z,8.0nm,1.1s,mb4.2							
GRF				*e*L			07 48 48.5	
	comp=Z,171nm,20.8s							
NOA	NORSAR Array B	25.79	44	LR	LR		07 49 58.2	
	comp=Z,39nm,18.4s,MS3.0,baz=265,slow=36							
HFS	Hagfors	26.81	47	LR	LR		07 48 50.6	
	comp=Z,73nm,21.3s,MS3.2,baz=247,slow=32							
GERES	GERESS Array B	27.25	72	P	P		07 40 25.0	+0.5
	comp=Z,0.4nm,0.4s,mb3.3,baz=282,slow=6.7,SNR=3.7							
GERES				LR	LR		07 50 42.4	
	comp=Z,210nm,18.9s,MS3.7,baz=81,slow=35							
VRAC	Vranov	28.99	70	LR	LR		07 51 27.6	
	comp=Z,203nm,20.1s,MS3.7,baz=257,slow=35							
KEST	Kesra	29.74	100	P	P		07 40 48.0	+1.1
	comp=Z,1.5nm,1.0s,mb3.7,baz=296,slow=12,SNR=3.7							
KEST				LR	LR		07 51 48.9	
	comp=Z,54nm,18.1s,MS3.2,baz=262,slow=34							
ARCES	ARCESS Array B	33.60	31	LR	LR		07 52 33.4	
	comp=Z,65nm,18.7s,MS3.4,baz=71,slow=32							
AKASG	Malin Array Be	36.45	64	P	P		07 41 45.3	+0.1
	comp=Z,0.2nm,0.3s,mb3.5,baz=282,slow=8.3,SNR=6.8							
TORD	Torodi Ar. Bea	42.18	135	P	P		07 42 33.5	+0.1
	comp=Z,2.7nm,1.1s,mb3.8,baz=341,slow=7.4,SNR=7.0							
TORD				LR	LR		07 58 49.4	
	comp=Z,151nm,19.2s,MS3.9,baz=330,slow=34							
TKL	Tuckaleechee C	42.81	275	LR	LR		08 00 45.1	
	comp=Z,98nm,18.1s,MS3.7,baz=151,slow=37							
ULM	Lac du Bonnet	43.51	300	LR	LR		07 57 50.9	
	comp=Z,74nm,19.0s,MS3.6,baz=26,slow=32							
DBIC	Dimbokro	45.22	147	LR	LR		08 00 50.7	
	comp=Z,62nm,18.1s,MS3.6,baz=331,slow=35							
YKA	Yellowknife Ar	48.02	321	P	P		07 43 17.7	-1.5
	comp=Z,0.8nm,1.0s,mb3.7,baz=67,slow=7.4,SNR=6.9							
PCRV	Puerto La Cruz	48.70	232	LR	LR		08 00 23.1	
	comp=Z,46nm,18.3s,MS3.5,baz=192,slow=32							
INK	Inuvik	52.04	333	*e*P	P		07 43 49.2	-0.5
	comp=Z,317nm,1.6s							
INK	Inuvik	52.04	333	*e*P	P		07 43 49.2	-0.5
	comp=Z,317nm,1.6s							
SDV	Santo Domingo	53.08	238	LR	LR		08 02 09.3	
	comp=Z,54nm,18.9s,MS3.6,baz=50,slow=31							
AKTK	Aktyubinsk	53.12	53	P	P		07 43 58.4	+0.5
AKTK				LR	LR		08 04 36.4	
AKTO	Aktyubinsk	53.12	53	P	P		07 43 58.4	+0.5
	comp=Z,1.3nm,0.9s,mb3.9,baz=296,slow=12,SNR=3.5							
AKTO				LR	LR		08 04 36.4	
	comp=Z,58nm,19.4s,MS3.6,baz=231,slow=34							
PDAR	Pinedale Array	55.40	298	P	P		07 44 12.9	-1.7
	comp=Z,0.9nm,0.8s,mb3.9,baz=54,slow=7.5,SNR=9.1							
PDAR				LR	LR		08 05 16.5	
	comp=Z,72nm,18.4s,MS3.8,baz=251,slow=33							
ANMO	Albuquerque	58.20	288	P	P		07 44 35.5	+0.9
	comp=Z,0.7nm,0.7s,mb3.8,baz=66,slow=11,SNR=4.4							
ANMO				LR	LR		08 08 29.4	
	comp=Z,93nm,18.8s,MS3.9,baz=202,slow=35							
TXAR	Lajitas Array	59.95	282	P	P		07 44 47.5	+0.7
	comp=Z,0.9nm,0.7s,mb3.9,baz=76,slow=7.5,SNR=15							
TXAR				LR	LR		08 08 36.0	
	comp=Z,87nm,18.9s,MS3.9,baz=5.0,slow=34							
MKAR	Makanchi Array	67.79	44	P	P		07 45 39.4	+1.2
MKAR	Makanchi Array	67.79	44	P	P		07 45 39.4	+1.2
	comp=Z,0.8nm,1.0s,mb3.7,baz=310,slow=4.0,SNR=5.5							
KMBO	Kilima Mbogo	74.14	110	LR	LR		08 20 26.8	
	comp=Z,35nm,19.7s,MS3.7,baz=36,slow=37							
SONM	Songino Array	76.78	30	P	P		07 46 32.1	+0.2
	comp=Z,0.7nm,0.8s,mb3.6,baz=328,slow=5.3,SNR=4.8							
WRA	Warramunga Arr	148.67	34	PKPbc	PKPbc		07 54 27.1	-0.8
	comp=Z,1.8nm,1.1s,baz=333,slow=3.2,SNR=5.6							
ASAR	Alice Springs	151.84	38	PKPbc	PKPbc		07 54 34.6	-0.8
	comp=Z,1.0nm,0.8s,baz=306,slow=1.2,SNR=7.7							

*ISCJB **27** 07:44:24.2±0.9, 145N±02ₖ907W±0.1, h197km±9km, mb3.4/3, Error ellipse: s-maj=27.5km s-min=13.1km az=26.6*
*IDC **27** 07:44:24.8±2.6, 1446Nₖ90̸46W, h185km±21km, mb3.2/4, mb1 3.2/7, mb1mx3.0/21, mbtmp3.0/7, Error ellipse: s-maj=34.8km s-min=21.1km az=25.0*
*NEIC **27** 07:44:24.8±1.7, 1446Nₖ90̸46W, h184km±14km, Error ellipse: s-maj=23.0km s-min=15.3km az=197.0*
*CASC **27** 07:44:29.5±1.7, 1477Nₖ9073W, h157km±24km, MD3.7*

ISC 27 07:44:25.4±0.9, 145N±02ₖ907W±0.1, h188km±9km, n18, σ1§23/15, mb3.6/3, 3C-1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PCG	Pacaya	0.14	164	‖ *e*P		Pn	07 44 51.0	+0.7
FUG	Fuego 3	0.20	248	↑‖ *i*P		Pn	07 44 50.7	+0.3
JAT	Jato	0.98	258	‖ *e*P		Pn	07 44 55.1	+1.2
JAT				*e*S		Sn	07 45 14.6	-1.2
RBDL	Robledal	1.02	114	*e*P		x	07 44 58.2	
RTR	El Retiro	1.15	123	*e*P		x	07 44 59.0	
RTR				*e*S		x	07 45 21.8	
SNJE	San Jose	1.20	123	‖ *e*P		x	07 44 59.5	
SNJE				*e*S		x	07 45 22.4	
LFRS	El Faro	1.78	120	*e*P		x	07 45 04.1	
CMIG	Matias Romero	4.81	303	P		Pn	07 45 38.3	+1.2
	1.1nm,0.3s,baz=143,slow=11,SNR=34							
CMIG				S		Sn	07 46 31.4	-2.1
	2.1nm,0.3s,baz=52,slow=20,SNR=13							
TEIG	Tepich	6.11	21	P		Pn	07 45 53.9	0.0
TEIG	Tepich	6.11	21	P		Pn	07 45 53.9	0.0
	1.6nm,0.3s,baz=303,slow=22,SNR=15							
TXAR	Lajitas Array	19.03	323	P		P	07 48 35.5	+2.3
	0.0nm,0.3s,baz=146,slow=9.8,SNR=2.8							
SDV	Santo Domingo	20.37	104	P		P	07 48 45.2	-2.6
	1.0nm,0.4s,baz=278,slow=7.1,SNR=5.5							
SADO	Sadowa	31.69	16	P		P	07 50 31.4	+0.3
	baz=190,slow=12							
ULM	Lac du Bonnet	35.88	354	P		P	07 51 06.1	-1.1
	1.1nm,0.5s,mb3.7,baz=185,slow=9.4,SNR=3.7							
SCHQ	Schefferville	44.28	20	P		P	07 52 16.1	-0.1
	2.2nm,0.3s,mb4.2,baz=230,slow=9.9,SNR=25							
YKA	Yellowknife Ar	50.83	346	P		P	07 53 06.8	+0.4
YKA	Yellowknife Ar	50.83	346	P		P	07 53 06.8	+0.4
	0.1nm,0.5s,mb2.8,baz=142,slow=7.1,SNR=4.1							
WRA	Warramunga Arr	136.79	256	PKP		PKPdf	08 03 27.6	+1.3
	0.5nm,1.1s,baz=8.1,slow=0.8,SNR=4.3							

*IDC **27** 08:03:25.1±0.7, 1545Sₖ17547W, h0km, mb4.4/8, mb1 4.7/8, mb1mx4.5/14, mbtmp4.4/8, MS4.9/4, Ms1 4.9/4, ms1mx4.5/8, Error ellipse: s-maj=40.9km s-min=18.4km az=141.0*
*NEIC **27** 08:03:28.5±0.6, 1567Sₖ17567W, h10km, mb4.7/1, Error ellipse: s-maj=29.2km s-min=19.6km az=137.0*
*ISCJB **27** 08:03:29.8±0.4, 157S±0.1ₖ1756W±0.1, h33km, mb4.7/25, MS4.9/3, Error ellipse: s-maj=20.2km s-min=9.9km az=146.4*
*MOS **27** 08:03:30.0±1.8, 1571Sₖ17556W, h33km, mb5.0/13, Error ellipse: s-maj=28.0km s-min=17.3km az=53.5*
*GCMT **27** 08:03:36.0±0.1, 1553Sₖ175.14W, h12km, MW5.4/100, Moment Tensor Solution. s65,c104; s100,c192; Duration: 1§2 Moment tensor: Scale 10¹⁷Nm; Mrr0.01±.02; Mθθ1.47±.02; Mϕϕ-1.48±.02; Mrθ0.37±.05; Mθϕ0.34±.02; Mϕr-0.20±.06; Best double couple: M₀1.57100×10¹⁷ NP1:ϕs38.00000°, δ75.00000°, λ177.00000°. NP2:ϕs129.00000°, δ87.00000°, λ15.00000°. Principal axes: T 1.5860, Plg13.0000°, Azm354.0000°; N -0.0350, Plg75.0000°, Azm138.0000°; P -1.5550, Plg9.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 27 08:03:31.9±0.4, 156S±01ₖ17560W±010, h35km, n98, σ1§13/58, mb4.7/25, MS4.9/3, 4C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RAO	Raoul Island	13.72	189	LR		LR	08 11 12.8	
	comp=Z,14μm,19.2s,baz=8.3,slow=34							
RAR	Rarotonga	16.00	113	LR		LR	08 11 34.3	
	comp=Z,3μm,21.7s,baz=282,slow=31							
DZM	Mont Dzumac	18.16	247	*e*P		Pn	08 07 45.9	+4.5
PPT	Papeete	25.01	98	*e*LQ			08 13 41.5	
	6μm,26.2s							
PPT				*e*LR		LR	08 14 45.3	
PPT	Papeete	25.01	98	LR		LR	08 15 39.3	
	comp=Z,2μm,22.0s,MS4.6,baz=272,slow=30							
TBI	Tubuai	25.78	111	*e*LQ			08 14 06.6	
	8μm,27.0s							
TBI				*e*LR		LR	08 15 13.0	
	6μm,27.5s							
TAOE	Nuku Hiva Isla	35.25	83	*e*LR		LR	08 19 24.7	
	15μm,27.9s,baz=257							
RKT	Rikitea	38.94	108	*e*LQ			08 19 34.6	
	2μm,25.5s							
RKT				*e*LR		LR	08 21 17.1	
	4μm,26.8s,baz=278							
STKA	Stephens Creek	42.09	240	*e*P		P	08 11 23.2	+2.5
	18nm,1.1s,mb4.6							
STKA	Stephens Creek	42.09	240	P		P	08 11 22.2	+1.6
	16nm,1.1s,mb4.5,baz=39,slow=6.9,SNR=5.5							
WB2	Warramunga Arr	47.72	257	*e*P		P	08 12 05.3	-0.3
WRA	Warramunga Arr	47.73	257	P		P	08 12 04.5	-1.2
WRA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
WRA	Warramunga Arr	47.73	257	P		P	08 12 04.5	-1.2
	comp=Z,9.5nm,0.9s,mb4.8,baz=87,slow=6.6,SNR=32							
ASAR	Alice Springs	48.02	252	P		P	08 12 07.1	-0.9
ASAR				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ASAR	Alice Springs	48.02	252	P		P	08 12 07.0	-0.9
	comp=Z,9.8nm,0.9s,mb4.8,baz=85,slow=8.0,SNR=22							
KAKA	Kakadu	50.37	266	*e*P		P	08 12 26.9	+0.9
	comp=Z,8.8nm,0.6s,mb5.0							
SBA	Scott Base	62.86	184	*e*P		P	08 13 54.3	+0.5
VNDA	Vanda	62.94	185	P		P	08 13 54.2	-0.2
VNDA				pmax		pmax		
	comp=Z,8.0nm,1.0s							
VNDA	Vanda	62.94	185	P		P	08 13 54.1	-0.2
	comp=Z,7.5nm,1.0s,mb4.8,baz=1.9,slow=5.8,SNR=23							
KSM	Kuching	75.10	276	*e*P		P	08 15 09.6	-1.4
WAKR	Walker	75.23	42	*e*P		P	08 15 17.7	+6.5
NVAR	Mina Array Bea	75.93	43	P		P	08 15 12.8	-2.4
	comp=Z,1.5nm,0.9s,mb3.9,baz=243,slow=12,SNR=6.7							
SHPR	Sheep Range	77.03	46	*e*P		P	08 15 26.4	+5.0
TUC	Tucson	78.18	52	*e*P		P	08 15 28.3	+0.3
	comp=Z,3.0nm,0.9s,mb4.2							
TUC	Tucson	78.18	52	*e*P		P	08 15 28.3	+0.3
TUC				pmax		pmax		
	comp=Z,3.0nm,0.9s,mb4.2							
GAMB	Gambell	79.21	2	*e*P		P	08 15 35.7	+2.8
WUAZ	Wupatki	79.22	48	*e*P		P	08 15 32.4	-1.2
	comp=Z,21nm,1.4s,mb4.9							
HAWA	Hanford	79.69	36	*e*P		P	08 15 40.5	+4.7
	comp=Z,31nm,1.6s,mb5.0							
TNA	Tin City	81.15	3	*e*P		P	08 15 44.2	+0.9
	comp=Z,22nm,1.0s,mb5.0							
LAZ	Ladron	81.84	51	*e*P		P	08 15 48.0	+0.4
MNTX	Cornudas Mount	82.07	54	*e*P		P	08 15 49.4	+0.4
NEW	Newport	82.10	35	LR		LR	08 43 45.6	
	comp=Z,559nm,22.0s,MS4.9,baz=237,slow=30							
BNM	Barren Site	82.12	51	*e*P		P	08 15 49.6	+0.5
LPM	Los Pinos Moun	82.18	51	*e*P		P	08 15 49.5	0.0
SEY	Seymchan	82.20	346	*e*P		P	08 15 47.9	-1.0
PV01	Paradox Valley	82.42	47	*e*P		P	08 15 51.2	+0.6
LTX	Lajitas	82.50	57	*e*P		P	08 15 52.0	+0.7
	comp=Z,14nm,1.4s,mb4.8							
LTX	Lajitas	82.50	57	*e*P		P	08 15 52.0	+0.7
LTX				pmax		pmax		
	comp=Z,14nm,1.4s,mb4.8							
TXAR	Lajitas Array	82.50	57	P		P	08 15 49.4	-1.9
	comp=Z,3.9nm,1.1s,mb4.3,baz=235,slow=4.4,SNR=12							
ANMO	Albuquerque	82.58	51	*e*P		P	08 15 50.1	-1.4
	comp=Z,7.8nm,1.2s,mb4.6							
ANMO	Albuquerque	82.58	51	*e*P		P	08 15 50.1	-1.4
ANMO				pmax		pmax		
	comp=Z,8.0nm,1.2s							
COLA	College	83.00	12	*e*P		P	08 15 53.5	+0.6
	comp=Z,37nm,1.4s,mb5.2							
COLA	College	83.00	12	*e*P		P	08 15 53.5	+0.5
COLA				pmax		pmax		
	comp=Z,37nm,1.4s,mb5.2							
GDL2	Guadalupe Moun	83.06	54	*e*P		P	08 15 54.6	+0.5
IMA2	Indian Mountai	83.10	9	*e*P		P	08 15 54.3	+0.8
SNOW	Snow King Moun	83.41	42	*e*P		P	08 15 55.3	-0.4
	comp=Z,20nm,1.2s,mb5.0							
MOOW	Moose Ponds	83.56	41	*e*P		P	08 15 56.2	-0.1
	comp=Z,22nm,1.7s,mb5.0							
LOHW	Long Hollow	83.58	41	*e*P		P	08 15 55.2	-1.3
	comp=Z,29nm,1.8s,mb5.1							
QLMT	Earthquake Lak	83.65	40	*e*P		P	08 15 57.1	+0.3
FLWY	Flagg Ranch	83.75	41	*e*P		P	08 15 58.3	+1.0
	comp=Z,11nm,0.7s,mb5.1							
BW06	Boulder Array	83.86	43	*e*P		P	08 16 00.1	+2.1
PDAR	Pinedale Array	83.86	43	P		P	08 15 55.5	-2.4
	comp=Z,2.2nm,0.9s,mb4.3,baz=198,slow=2.3,SNR=11							
BOZ	Bozeman (W)	83.93	39	*e*P		P	08 15 58.2	0.0
	comp=Z,21nm,1.8s,mb5.0							
BOZ	Bozeman (W)	83.93	39	*e*P		P	08 15 58.2	0.0
BOZ				pmax		pmax		
	comp=Z,21nm,1.8s,mb5.0							
SMCO	Snowmass	84.00	47	*e*P		P	08 15 58.9	+0.1
	comp=Z,9.7nm,1.0s,mb4.9							
DAWY	Dawson	84.18	15	*e*P		P	08 15 59.8	+0.7
EGAK	Eagle	84.34	14	*e*P		P	08 16 00.3	+0.4
SDCO	Great Sand Dun	84.44	48	*e*P		P	08 16 01.8	+0.8
BILL	Bilibino	84.47	353	*e*P		P	08 15 59.1	-1.4
	comp=Z,5.7nm,0.8s,mb4.8							
BILL	Bilibino	84.47	353	↑‖ *e*P		P	08 15 57.9	-2.6
BILL				*e*S		S	08 26 21.4	-2.7
BILL				*e*PS			08 27 44.7	
BILL				pmax		pmax		
	comp=Z,14nm,1.6s,mb4.8							
EDM	Edmonton	86.80	32	*e*P		P	08 16 12.3	0.0
INK	Inuvik	89.01	14	*e*P		P	08 16 22.9	+0.3
YKA	Yellowknife Ar	91.16	24	P		P	08 16 30.6	-2.1
	comp=Z,1.7nm,1.0s,mb4.3,baz=241,slow=4.4,SNR=11							
ECSD	EROS,Sioux Fal	92.92	45	*e*Pdif		P	08 16 42.2	+0.8
SONM	Songino Array	93.61	319	P		P	08 16 47.3	+2.9
	comp=Z,0.4nm,0.5s,mb4.1,baz=107,slow=2.0,SNR=2.6							
TIXI	Tiksi	94.66	345	*e*P		P	08 16 43.4	-5.3
TIXI				pmax		pmax		
	comp=Z,2.0nm,1.3s,mb4.4							
AKASG	Malin Array Be	139.71	336	PKP		PKPdf	08 22 56.3	+0.3
	comp=Z,0.3nm,0.5s,baz=28,slow=2.2,SNR=3.2							
KMBO	Kilima Mbogo	143.52	246	PKIKP		PKPdf	08 23 00.8	-3.2
KMBO				pmax		pmax		
	comp=Z,1.0nm,0.3s							
KMBO	Kilima Mbogo	143.52	246	PKP		PKPdf	08 23 00.8	-3.2
	comp=Z,0.6nm,0.3s,baz=43,slow=18,SNR=4.5							
CLL	Collm	143.75	351	*e*PKiKP		PKiKP	08 23 08.0	+1.4
CRVS	Cervenica-Dubn	144.00	341	*e*P		PKPdf	08 23 12.5	+8.8
CRVS	Cervenica-Dubn	144.00	341	*e*		PKPdf	08 23 12.5	+8.8
KECS	Kecovo	144.67	341	*e*P		PKPdf	08 23 09.9	+5.0
KECS	Kecovo	144.67	341	*e*		PKPdf	08 23 09.9	+5.0
PRU	Pruhonice	144.76	349	*e*PKPab		PKPdf	08 23 02.2	-2.8
VYHS	Vyhne	145.15	343	*e*PKP		PKPdf	08 23 06.7	+1.0
VYHS				*e*			08 24 25.9	
MLR	Muntele Rosu	145.16	333	‖ *i*P		PKPbc	08 23 07.0	+1.6
DRGR		145.39	338	↑‖ *i*P		PKPbc	08 23 05.2	-0.9
GRA1	Grafenberg Arr	145.58	352	*e*PKP		PKPdf	08 23 08.5	+2.1
GRF	Grafenberg Arr	145.58	352	*e*PKP		PKPdf	08 23 08.5	+2.1
GRF				LR		LR		
	comp=Z,600nm,28.4s,MS5.2							
GIVF	Givet	145.62	360	*e*PKP1		PKPbc	08 23 07.5	+0.8
BAIF	Baives	145.66	0	*e*PKP1		PKPbc	08 23 08.0	+1.2
MODS	Modra-Piesok	145.67	345	*e*PKP		PKPdf	08 23 06.9	+0.3
MODS				*e*			08 24 29.2	
KHC	Kasperske Hory	145.76	349	*e*PKPab		PKPab	08 23 07.0	-0.5
KHC				*e*		x	08 23 25.5	
GERES	GERESS Array B	146.01	349	PKPbc		PKPbc	08 23 07.2	-0.7
	comp=Z,0.3nm,0.2s,baz=52,slow=6.4,SNR=4.5							
CONA	Conrad Observa	146.43	346	↑ *i*PKPab		PKPab	08 23 11.2	+1.1
	comp=Z,24nm,1.6s							
FLN	La Foliniere	146.72	6	*e*PKP1		PKPbc	08 23 09.3	-0.7
BZS	Buzias	146.79	338	‖ *i*P		PKPdf	08 23 09.6	+1.0
LDF	La Druitiere	146.92	6	*e*PKP1		PKPbc	08 23 10.0	-0.6
GRR	Gorron	147.05	6	*e*PKP1		PKPbc	08 23 10.8	-0.2
CDF	Champ du Feu	147.22	356	*e*PKP1		PKPbc	08 23 10.6	-0.9
	comp=Z,32nm,1.2s							
KBA	Koelnbreinsper	147.77	349	↑ *i*P		PKPdf	08 23 13.0	+2.8
	comp=Z,7.8nm,1.2s							
LOR	Lormes	148.45	1	*e*PKP1		PKPbc	08 23 15.8	+1.0
AVF	Avril sur Loir	148.92	1	*e*PKP1		PKPbc	08 23 16.7	+0.7
SMF	Signal de Mont	149.07	1	*e*PKP1		PKPbc	08 23 17.1	+0.7
	comp=Z,52nm,1.3s							
CABF	La Chapelle	149.08	358	*e*PKP1		PKPbc	08 23 17.0	+0.5
	comp=Z,97nm,1.5s							
LPL	La Plagne	150.14	357	*e*PKP1		PKPbc	08 23 18.1	-1.0
LPG	La Plagne	150.16	357	*e*PKP1		PKPbc	08 23 18.2	-0.9
	comp=Z,41nm,1.3s							

*IDC **27** 08:04:42.5±0.9, 1557Sₖ17560W, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.2/15, mbtmp4.1/7, MS4.9/1, Ms1 4.8/1, ms1mx3.8/7, Error ellipse: s-maj=47.0km s-min=20.8km az=140.0*
*ISCJB **27** 08:04:45.7±0.9, 157S±03ₖ1756W±02, h33km, mb4.2/7, MS4.8/1, Error ellipse: s-maj=44.4km s-min=19.4km az=142.3*

ISC 27 08:04:47.7±0.9, 156S±03ₖ1756W±02, h35km, n8, σ0§99/8, mb4.2/7, MS4.8/1, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DZM	Mont Dzumac	18.18	246	*e*S		Pn	08 09 01.7	+4.3
STKA	Stephens Creek	42.12	240	P		P	08 12 36.8	0.0
	1.9nm,0.6s,mb3.9,baz=103,slow=14,SNR=3.1							
STKA				LR		LR	08 28 21.5	
	comp=Z,1μm,18.7s,MS4.8,baz=72,slow=34							
WRA	Warramunga Arr	47.74	257	P		P	08 13 22.0	+0.3
	4.1nm,0.9s,mb4.5,baz=96,slow=6.8,SNR=4.0							
ASAR	Alice Springs	48.05	252	P		P	08 13 23.6	-0.4
	5.3nm,0.7s,mb4.7,baz=85,slow=7.8,SNR=5.9							
VNDA	Vanda	63.01	185	P		P	08 15 10.5	-0.1
	3.1nm,1.0s,mb4.4,baz=18,slow=7.2,SNR=2.1							
NVAR	Mina Array Bea	75.88	43	P		P	08 16 33.3	+2.6
	1.5nm,0.8s,mb4.0,baz=236,slow=11,SNR=2.2							
PDAR	Pinedale Array	83.81	43	P		P	08 17 13.2	-0.3
	0.5nm,0.7s,mb3.8,baz=205,slow=4.0,SNR=2.2							
YKA	Yellowknife Ar	91.09	24	P		P	08 17 47.0	-1.2
	0.7nm,1.1s,mb3.9,baz=223,slow=5.1,SNR=2.1							

IDC 27 08:12:10.2±5.0, 2023Sₖ16857E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/13, mbtmp4.0/3, Error ellipse: s-maj=136.3km s-min=40.6km az=133.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.12	264	P		P	08 18 39.1	-0.4
	3.0nm,1.3s,baz=92,slow=8.2,SNR=6.5							
ASAR	Alice Springs	32.29	258	P		P	08 18 41.2	+0.3
	1.6nm,0.8s,baz=86,slow=9.1,SNR=9.1							
MJAR	Matsushiro Ar	63.34	333	P		P	08 22 41.5	+0.4
	2.9nm,0.9s,baz=166,slow=7.8,SNR=5.4							
VNA3	Neumayer Olymp	88.76	181	*e*		P	08 24 59.0	-6.4
VNA3				*e*			08 25 02.5	
VNA3				*e*			08 25 14.7	
VNA3				*e*			08 25 21.5	
VNA2	Neumayer--Watz	89.05	181	*e*		P	08 25 01.8	-5.0
	baz=208,slow=4.7							
VNA2				*e*			08 25 04.3	
VNA2				*e*			08 25 17.4	
VNA2				*e*			08 25 24.4	
GERES	GERESS Array B	145.05	331	PKPbc		PKPbc	08 31 47.6	-1.3
	1.5nm,0.7s,baz=62,slow=3.2,SNR=5.0							

*ISCJB **27** 08:15:56.9±1.0, 3832N±004ₖ2034E±007, h10km, Error ellipse: s-maj=8.7km s-min=4.1km az=155.9*
*CSEM **27** 08:15:57.1±0.4, 3829Nₖ2030E, h2km, MD3.5, Error ellipse: s-maj=8.0km s-min=3.5km az=65.0*
*ATH **27** 08:15:57.0, 3829Nₖ2033E, h10km±1km, MD3.5/8*
*NEIC **27** 08:15:57.0, 3829Nₖ2033E, h10km, MD3.5(ATH), ML3.4(THE), After ATH.*
*THE **27** 08:15:58.5, 3835Nₖ2044E, h3km, ML3.4*

ISC 27 08:15:57.3±1.0, 3833N±004ₖ2034E±007, h10km, n16, σ0§95/26, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res

RLS	**Riolos of Patr**	**0.92**	**97**	*e*PB	Pb	08 42 16.8	-0.7
RLS				*e*SG	Sg	08 42 29.9	+1.1
EVR	**Evrytania**	**1.39**	**57**	*e*PG	Pg	08 42 24.7	-1.1
EVR				*e*SB	Sb	08 42 44.4	+1.0
JAN	**Janina**	**1.53**	**16**	*e*PB	Pb	08 42 28.0	0.0
KEK	**Kerkira**	**1.58**	**346**	*e*PB	Pb	08 42 29.1	+0.3
KEK				*e*SB	Sb	08 42 50.5	+1.4
ITM	**Ithomi**	**1.63**	**127**	*e*PB	Pb	08 42 29.9	+0.3
ITM				*e*SB	Sb	08 42 52.1	+1.8
THL	**Klokotos Trika**	**1.92**	**43**	*e*PN	Pn	08 42 34.1	+1.7
THL				*e*SN	Sn	08 43 00.5	+3.7
LKR	**Lokris**	**2.16**	**77**	*e*PN	Pn	08 42 37.5	+1.7
LKR	**Lokris**	**2.16**	**77**	*e*Pb	Pb	08 42 35.8	-3.0

ISCJB ***27*** *08:53:06.7±0.9, 1452N±010×9197W±007, h31km±10km, Error ellipse: s-maj=18.8km s-min=7.1km az=30.1*
CASC ***27*** *08:53:06.1±3.6, 1455N×9196W, h32km±11km, MD3.7*
MEX ***27*** *08:53:10.0±1.1, 1456N×9192W, h22km±185km, MD4.1*
NEIC ***27*** *08:53:10.0, 1456N×9192W, h22km, MD4.1(MEX), After MEX.*

ISC 27 08:53:07.6±0.9, 146N±01×9191W±008, h26km±13km, n16, σ0°94/12, 3C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.36**	**134**⇓	*e*P	**Pb**	**08 53 16.0**	**+0.4**
JAT				*e*S	**Sb**	**08 53 21.0**	**-0.1**
FUG	**Fuego 3**	**1.04**	**97**⇑	*e*P	**Pn**	**08 53 25.0**	**-1.5**
PCG	**Pacaya**	**1.27**	**98**⇓	*e*P	**Pn**	**08 53 28.7**	**-1.0**
PCG				*e*S	**Sn**	**08 53 47.4**	**+1.5**
CCIG	**Comitan**	**1.72**	**353**	*i* P	**Pn**	**08 53 35.4**	**-0.5**
CCIG				*i* S	**Sn**	**08 53 56.4**	**-0.6**
RBDL	**Robledal**	**2.20**	**102**⇑	*i* P	x	08 53 48.9	
RBDL				*e*S	x	08 54 17.7	
SCX	**San Cristobal**	**2.27**	**342**	*i* P	**Pn**	**08 53 45.0**	**+1.6**
SCX				*i* S	**Sn**	**08 54 11.0**	**+0.5**
RTR	**El Retiro**	**2.29**	**107**⇑	*e*P	x	08 53 49.3	
RTR				*e*S	x	08 54 20.1	
SBLS	**San Blas**	**2.33**	**108**⇓	*e*P	x	08 53 49.8	
SBLS				*e*S	x	08 54 19.6	
SNJE	**San Jose**	**2.34**	**107**	*e*P	x	08 53 49.9	
SNJE				*e*S	x	08 54 19.5	
MTO2	**Montecristo 2**	**2.47**	**94**	*e*P	x	08 53 55.0	
MTO2				*e*S	x	08 54 26.4	
BOQS	**Boqueron**	**2.68**	**108**	*e*P	x	08 53 54.1	
BOQS				*e*S	x	08 54 25.1	
LFRS	**El Faro**	**2.92**	**108**	*e*P	x	08 53 57.9	
LFRS				*e*S	x	08 54 29.5	
LCBS	**La Ceiba**	**2.98**	**107**	*e*P	x	08 53 59.7	
LCBS				*e*S	x	08 54 30.2	
SNVI	**San Vicente**	**3.12**	**107**	*e*P	x	08 54 01.4	
SNVI				*e*S	x	08 54 38.6	
CMIG	**Matias Romero**	**3.81**	**312**	*i* P	**Pn**	**08 54 03.7**	**-0.9**
CMIG				*i* S	**Sn**	**08 54 48.3**	**-0.3**
VHO	**Vista Hermosa**	**5.27**	**299**	*i* P	**Pn**	**08 54 25.8**	**+1.1**

NEIC ***27*** *08:53:23.2±2.1, 3122S×17982W, h333km±20km, mb4.8/2, Error ellipse: s-maj=24.6km s-min=19.2km az=50.0*
ISCJB ***27*** *08:53:26.6±0.9, 3148S±007×1798E±0.1, h365km±9km, mb4.2/7, Error ellipse: s-maj=18.6km s-min=10.3km az=12.3*
IDC ***27*** *08:53:27.2±2.7, 3110S×17993W, h366km±23km, mb3.5/4, mb1 3.6/4, mb1mx3.3/13, mbtmp3.5/4, Error ellipse: s-maj=27.8km s-min=18.3km az=57.0*

ISC 27 08:53:31.6±0.9, 3177S±006×1796E±01, h379km±7km, n55, σ1°31/65, mb4.1/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.87**	**190**	*e*PN	**Pn**	**08 55 03.2**	**+1.4**
MXZ				*e*SN	**S**	**08 56 16.9**	**+1.7**
PUZ	**Puketiti**	**6.38**	**189**	*e*PN	**Pn**	**08 55 03.6**	**-3.9**
PUZ				*e*SN	**S**	**08 56 25.3**	**-0.3**
MWZ	**Matawai**	**6.76**	**194**	*e*PN	**Pn**	**08 55 10.5**	**-1.3**
MWZ				*e*SN	**S**	**08 56 35.0**	**+1.5**
URZ	**Urewera**	**6.78**	**197**	P	**Pn**	**08 55 10.1**	**-1.9**
	2.2nm,0.3s,baz=227,slow=7.5,SNR=29						
URZ				S	**S**	**08 56 34.8**	**+0.9**
	16nm,0.3s,baz=98,slow=22,SNR=19						
URZ	**Urewera**	**6.78**	**197**	*e*PN	**Pn**	**08 55 10.2**	**-1.8**
URZ				*e*SN	**S**	**08 56 35.3**	**+1.4**
KNZ	**Kokohu**	**7.40**	**192**	*e*PN	**Pn**	**08 55 16.7**	**-2.4**
KNZ				*e*SN	**S**	**08 56 48.4**	**+1.6**
BKZ	**Black Stump Fm**	**7.79**	**198**	*e*PN	**Pn**	**08 55 20.8**	**-2.9**
BKZ				*e*SN	**S**	**08 56 56.9**	**+1.6**
TUVZ	**Tukino**	**8.13**	**202**	*e*PN	**Pn**	**08 55 29.8**	**+2.2**
FWVZ	**Far West T-bar**	**8.15**	**203**	P	**Pn**	**08 55 29.4**	**+1.6**
FWVZ	**Far West T-bar**	**8.15**	**203**	*e*PN	**Pn**	**08 55 29.4**	**+1.6**
WNVZ	**Wahianoa**	**8.20**	**202**	P	**Pn**	**08 55 29.9**	**+1.5**
WNVZ	**Wahianoa**	**8.20**	**202**	PN	**Pn**	**08 55 29.9**	**+1.6**
MOVZ	**Moawhango**	**8.23**	**201**	P	**Pn**	**08 55 30.2**	**+1.5**
MTVZ	**Mangateitei**	**8.30**	**203**	*e*PN	**Pn**	**08 55 30.9**	**+1.5**
MTVZ				*e*SN	**S**	**08 57 10.2**	**+4.2**
PXZ	**Pawanui**	**8.53**	**194**	*e*PN	**Pn**	**08 55 30.4**	**-1.7**
PXZ				*e*SN	**S**	**08 57 09.0**	**-1.9**
WAZ	**Wanganui**	**8.79**	**204**	*e*PN	**Pn**	**08 55 37.4**	**+2.2**
BFZ	**Birch Farm**	**9.29**	**196**	P	**Pn**	**08 55 40.6**	**-0.4**
BFZ	**Birch Farm**	**9.29**	**196**	*e*SN	**S**	**08 57 25.4**	**-1.8**
MRZ	**Mangatainoka R**	**9.44**	**199**	*e*P	**Pn**	**08 55 41.7**	**-1.1**
MRZ	**Mangatainoka R**	**9.44**	**199**	*e*PN	**Pn**	**08 55 39.7**	**-3.1**
TIWZ	**Tintock**	**9.47**	**197**	*e*PN	**Pn**	**08 55 42.5**	**-0.6**
TIWZ				*e*SN	**S**	**08 57 29.4**	**-1.6**
KIW	**Kapiti Island**	**9.82**	**201**	P	**Pn**	**08 55 47.1**	**-0.1**
KIW	**Kapiti Island**	**9.82**	**201**	*e*PN	**Pn**	**08 55 45.7**	**-1.8**
MTW	**Mount Morrison**	**9.92**	**198**	P	**Pn**	**08 55 48.3**	**-0.1**
CAW	**Cannon Point**	**10.00**	**200**	P	**Pn**	**08 55 48.2**	**-1.1**
CAW	**Cannon Point**	**10.00**	**200**	*e*PN	**Pn**	**08 55 46.4**	**-3.0**
MRW	**Makara Radio**	**10.22**	**201**	P	**Pn**	**08 55 51.9**	**0.0**
TCW	**Tory Channel**	**10.34**	**203**	P	**Pn**	**08 55 53.3**	**0.0**
NNZ	**Nelson**	**10.66**	**206**	*e*P	**Pn**	**08 55 54.0**	**-3.1**
NNZ	**Nelson**	**10.66**	**206**	*e*PN	**Pn**	**08 55 57.1**	**+0.1**
NNZ				*e*SN	**S**	**08 57 55.5**	**-1.4**
QRZ	**Quartz Range**	**10.67**	**210**	*e*P	**Pn**	**08 55 57.8**	**+0.6**
QRZ	**Quartz Range**	**10.67**	**210**	*e*PN	**Pn**	**08 55 57.0**	**-0.3**
THZ	**Tophouse**	**11.31**	**206**	*e*P	**Pn**	**08 56 03.9**	**-0.8**
THZ	**Tophouse**	**11.31**	**206**	*e*PN	**Pn**	**08 56 03.5**	**-1.2**
THZ				*e*SN	**S**	**08 58 11.2**	**+0.8**
KHZ	**Kahutara**	**11.66**	**203**	*e*P	**Pn**	**08 56 08.6**	**-0.2**
KHZ	**Kahutara**	**11.66**	**203**	*e*PN	**Pn**	**08 56 08.4**	**-0.4**
DSZ	**Denniston Nort**	**11.74**	**210**	*e*PN	**Pn**	**08 56 09.7**	**0.0**
DSZ				*e*SN	**S**	**08 58 18.3**	**-0.7**
MQZ	**McQueen's Vall**	**13.11**	**203**	*e*SN	**S**	**08 58 46.1**	**-0.6**
RPZ	**Rata Peaks**	**13.69**	**207**	P	**P**	**08 56 30.2**	**-0.1**
	0.5nm,0.3s,baz=243,slow=16,SNR=3.7						
RPZ				S	**S**	**08 58 59.5**	**+1.1**
	1.2nm,0.3s,baz=342,slow=14,SNR=8.6						
HNR	**Honiara**	**28.73**	**316**	P	**P**	**08 58 50.5**	**-5.4**
	40nm,0.3s,mb5.1,baz=193,slow=4.1,SNR=6.0						
STKA	**Stephens Creek**	**32.16**	**260**	P	**P**	**08 59 27.9**	**+2.3**
	5.3nm,0.9s,mb3.8,baz=62,slow=5.0,SNR=13						
ASAR	**Alice Springs**	**40.98**	**270**	P	**P**	**09 00 39.0**	**-0.3**
	0.8nm,0.7s,mb3.0,baz=107,slow=7.4,SNR=11						
ASAR				ScP	ScP	09 05 43.8	-0.2
	0.6nm,0.8s,baz=94,slow=3.5,SNR=4.3						
WB2	**Warramunga Arr**	**42.09**	**275**	*e*P	**P**	**09 00 47.5**	**-0.7**
WRA	**Warramunga Arr**	**42.10**	**275**	P	**P**	**09 00 47.6**	**-0.7**
	1.4nm,0.5s,mb3.3,baz=113,slow=7.8,SNR=35						
WRA				ScP	ScP	09 05 47.7	-0.8
	0.9nm,0.9s,baz=104,slow=3.7,SNR=4.2						
FORT	**Forrest**	**43.69**	**257**	*e*P	**P**	**09 01 01.4**	**+0.6**
	12nm,0.6s,mb4.2						
QSPA	**South Pole Qui**	**58.34**	**180**	P	**P**	**09 02 49.6**	**+1.9**
QSPA	**South Pole Qui**	**58.34**	**180**	P	**P**	**09 02 49.6**	**+1.9**
	14nm,0.8s,mb4.3,baz=21,slow=1.3,SNR=57						
SNAA	**Sanae**	**76.83**	**179**	*e*	**P**	**09 04 42.0**	**-0.1**
SNAA				*e*		09 04 43.9	
SNAA				*e*		09 04 46.4	
SNAA				*e*		09 04 50.5	
VNA3	**Neumayer Olymp**	**77.07**	**177**	*e*	**P**	**09 04 43.4**	**0.0**
VNA3				*e*		09 04 45.6	
VNA3				*e*		09 04 48.3	
VNA3				*e*		09 04 53.0	
VNA2	**Neumayer--Watz**	**77.47**	**178**	*e*	**P**	**09 04 46.1**	**+0.5**
	baz=156,slow=5.0						
VNA2				*e*		09 04 47.9	
VNA2				*e*		09 04 50.5	
VNA2				*e*		09 04 54.6	
TNA	**Tin City**	**97.50**	**5**	*e*P	**P**	**09 06 16.1**	**-6.4**
	11nm,0.6s,mb5.2						
FINES	**FINESS Array B**	**145.66**	**338**	PKPbc	PKPbc	09 12 21.3	-4.4
	2.5nm,0.7s,baz=57,slow=5.1,SNR=4.0						
NOA	**NORSAR Array B**	**149.74**	**349**	PKPbc	PKPbc	09 12 31.8	-4.6
	0.4nm,0.4s,baz=18,slow=4.2,SNR=3.4						
AKASG	**Malin Array Be**	**151.05**	**319**	PKPbc	PKPbc	09 12 36.2	-3.5
	2.8nm,0.9s,baz=59,slow=2.2,SNR=8.9						
AKASG				PKPab	PKPab	09 12 45.0	-4.0
	0.1nm,0.3s,baz=45,slow=4.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**161.36**	**186**	PKPab	PKPab	09 13 32.8	-1.4
	0.9nm,0.8s,baz=188,slow=7.9,SNR=3.7						

NEIC ***27*** *08:56:13.0, 3708N×1331W, h0km, ML2.6(LIS), MN3.0(MDD), After MDD.*
MDD ***27*** *08:56:17.2±2.4, 3706N×1338W, h73km±169km, mb3.9/5, Error ellipse: s-maj=26.2km s-min=22.4km az=83.0, PRXIMO SOLUCIN POBRE*
CSEM ***27*** *08:56:20.5±0.6, 3771N×1304W, h10km, ML4.0/3, Error ellipse: s-maj=13.1km s-min=5.9km az=57.0*

INMG 27 08:56:18.1±0.8, 3698N×1351W, h10km, ML2.5, 1D, Error ellipse: s-maj=6.7km s-min=5.0km az=45.0, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.75**	**86**	*e*Pn	Pn	08 57 10.0	-6.0
PFVI				*e*Sn	Sn	08 57 48.9	-11
PFVI				A		08 57 50.9	
	14nm,0.1s						
PFVI	**Vila Bisbo**	**3.75**	**86**	*e*Pn	Pn	08 57 10.0	-6.0
PFVI				*e*Sn	Sn	08 57 48.9	-11
	14nm,0.1s						
PTEO	**Sao Teotonio**	**3.86**	**80**	*e*Pn	Pn	08 57 11.7	-5.8
PTEO				*e*Sn	Sn	08 57 51.5	-11
PTEO				A		08 57 53.3	
	6.8nm,0.1s						
PTEO	**Sao Teotonio**	**3.86**	**80**	*e*Pn	Pn	08 57 11.7	-5.8
PTEO				*e*Sn	Sn	08 57 51.5	-11
	6.8nm,0.1s						
PMAFR	**Mafra**	**3.88**	**58**	*e*Pn	Pn	08 57 12.0	-5.8
PMAFR				*e*Sn	Sn	08 57 52.3	-11
PMAFR				A		08 57 55.0	
	17nm,0.2s						
PMAFR	**Mafra**	**3.88**	**58**	*e*Pn	Pn	08 57 12.0	-5.8
PMAFR				*e*Sn	Sn	08 57 52.3	-11
	17nm,0.2s						
MORF	**Marmelete**	**3.90**	**84**	*e*Pn	Pn	08 57 13.4	-4.6
MORF				*e*Sn	Sn	08 57 52.5	-11
MORF				A		08 57 55.0	
	12nm,0.1s						
MORF	**Marmelete**	**3.90**	**84**	*e*Pn	Pn	08 57 13.4	-4.6
MORF				*e*Sn	Sn	08 57 52.5	-11
	12nm,0.1s						
PBDV	**Barranco-do-Ve**	**4.47**	**85**	*e*Sn	Sn	08 58 06.7	-11
PBDV				A		08 58 12.3	
	7.2nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.47**	**85**	*e*Sn	Sn	08 58 06.7	-11
	7.2nm,0.2s						
PBEJ	**Beja**	**4.61**	**75**	*e*Sn	Sn	08 58 09.6	-12
PBEJ				A		08 58 14.4	
	5.3nm,0.1s						
PBEJ	**Beja**	**4.61**	**75**	*e*Sn	Sn	08 58 09.6	-12
	5.3nm,0.1s						
EVO	**Evora**	**4.62**	**69**	*e*Sn	Sn	08 58 09.4	-12
EVO				A		08 58 11.8	
	11nm,0.1s						
EVO	**Evora**	**4.62**	**69**	*e*Sn	Sn	08 58 09.4	-12
	11nm,0.1s						
PVAQ	**Vaqueiros**	**4.64**	**83**	*e*Pn	Pn	08 57 23.2	-5.1
PVAQ				*e*Sn	Sn	08 58 10.3	-12
PVAQ				A		08 58 15.8	
	13nm,0.1s						
PVAQ	**Vaqueiros**	**4.64**	**83**	*e*Pn	Pn	08 57 23.2	-5.1
PVAQ				*e*Sn	Sn	08 58 10.3	-12
	13nm,0.1s						
EGRO	**El Granado**	**4.84**	**82**	P	Pn	08 57 23.3	-7.6
EGRO				S	Sn	08 58 14.9	-12
EGRO	**El Granado**	**4.84**	**82**	P	Pn	08 57 23.3	-7.7
EGRO				S	Sn	08 58 14.9	-12
	4.0nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**5.05**	**66**	*e*Sn	Sn	08 58 19.9	-12
PESTR				A		08 58 24.2	
	2.6nm,0.3s						
PBAR	**Barrancos**	**5.28**	**75**	*e*Pn	Pn	08 57 31.1	-5.9
PBAR				*e*Sn	Sn	08 58 25.9	-12
PBAR				A		08 58 30.6	
	2.8nm,0.1s						
PBAR	**Barrancos**	**5.28**	**75**	Pn	Pn	08 57 31.1	-5.9
PBAR				Sn	Sn	08 58 25.9	-12
	1.4nm,0.1s						
EBAD	**Badajoz**	**5.44**	**69**	P	Pn	08 57 33.1	-6.1
	1.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	08 58 28.1	-14
	5.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.44**	**69**	P	Pn	08 57 33.1	-6.1
	1.2nm,0.1s,SNR=7.9						
EBAD				S	Sn	08 58 28.1	-14
	5.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.50**	**80**	P	Pn	08 57 33.9	-6.1
EMIN				S	Sn	08 58 30.4	-13
EMIN	**Mina Concepcio**	**5.50**	**80**	P	Pn	08 57 33.9	-6.1
	0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	08 58 30.4	-13
	1.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.50**	**80**	P	Pn	08 57 33.9	-6.2
	0.4nm,0.2s,SNR=7.9						
EMIN				S	Sn	08 58 30.4	-13
	1.1nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**5.53**	**57**	*e*Pn	Pn	08 57 34.7	-5.8
PCBR				*e*Sn	Sn	08 58 32.1	-12
PCBR				A		08 58 35.5	
	1.3nm,0.1s						
PCBR	**Castelo Branco**	**5.53**	**57**	Pn	Pn	08 57 34.7	-5.8
PCBR				Sn	Sn	08 58 32.1	-12
	0.6nm,0.1s						
ESPR	**Espera**	**6.13**	**89**	S	Sn	08 58 47.9	-11
	5.3nm,0.2s,SNR=7.9						
ESPR	**Espera**	**6.13**	**89**	S	Sn	08 58 47.9	-11
	5.3nm,0.2s,SNR=7.9						
ELOB	**Lobios**	**6.45**	**39**	P	Pn	08 57 46.5	-6.5
	0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	08 58 53.3	-13
	1.4nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.45**	**39**	P	Pn	08 57 46.5	-6.6
	0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	08 58 53.3	-13
	1.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.55**	**48**	*e*Pn	Pn	08 57 48.1	-6.3
MVO				*e*Sn	Sn	08 58 56.4	-13
MVO				A		08 58 58.3	
	1.8nm,0.2s						
MVO	**Moncorvo**	**6.55**	**48**	Pn	Pn	08 57 48.1	-6.3
MVO				Sn	Sn	08 58 56.4	-13
	0.9nm,0.2s						
EMAZ	**Mazaricos**	**6.90**	**29**	P	Pn	08 57 53.1	-6.2
	2.8nm,0.1s,SNR=7.9						
EMAZ				S	Sn	08 59 00.4	-17
	1.8nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.90**	**29**	P	Pn	08 57 53.1	-6.2
	2.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.19**	**78**	⇓P	Pn	08 57 56.1	-7.2
	1.3nm,0.1s,SNR=18						
EADA				S	Sn	08 59 12.3	-13
	1.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.19**	**78**	P	Pn	08 57 56.1	-7.2
	1.3nm,0.1s,SNR=18						
EADA				S	Sn	08 59 12.3	-13

WEL 27 09:08:13.4±0.6, 3708S×17656E, h315km±9km, ML3.5/3, Error ellipse: s-maj=21.6km s-min=11.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**1.47**	**149**	PN	Pn	09 08 57.9	+0.2
MWZ				*e*SN	S	09 09 32.4	-0.7
BKZ	**Black Stump Fm**	**2.08**	**181**	PN	Pn	09 09 02.5	+0.5
BKZ				*e*SN	S	09 09 39.7	-1.2
KNZ	**Kokohu**	**2.13**	**156**	*e*PN	Pn	09 09 02.6	+0.2
MRZ	**Mangatainoka R**	**3.66**	**192**	PN	Pn	09 09 16.5	-0.1
MRZ				SN	S	09 10 06.4	-0.9

IDC ***27*** *09:08:28.3±1.1, 3387N×7289E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/23, mbtmp3.6/9, ML3.2/1, Error ellipse: s-maj=35.1km s-min=23.0km az=58.0*
NEIC ***27*** *09:08:29.4±1.1, 3372N×7286E, h10km, Error ellipse: s-maj=22.6km s-min=15.0km az=109.0*
ISCJB ***27*** *09:08:33.9±0.5, 3402N±003×7296E±005, h51km±8km, mb3.6/7, Error ellipse: s-maj=7.2km s-min=4.9km az=155.5*
NDI ***27*** *09:08:38.0±3.7, 3366N×7291E, h10km, ML3.2*
NNC ***27*** *09:08:40.5±2.7, 3472N×7207E, h0km, mb3.6, mpv3.7, Error ellipse: s-maj=28.6km s-min=20.7km az=88.0*

ISC 27 09:08:35.9±0.5, 3398N±003×7288E±005, h51km±7km, n34, σ1°29/49, mb3.6/7, 6C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.46**	**135**⇑	P	**Pn**	**09 08 39.5**	**-7.2**
CEP	**Cherat**	**0.82**	**259**	P	**Pn**	**09 08 48.2**	**-3.0**
THW	**Thamme Wali**	**1.52**	**219**⇑	P	**Pn**	**09 09 00.6**	**0.0**
SARP	**Sargodha**	**2.06**	**185**	P	**Pn**	**09 09 06.8**	**-1.3**
JMU	**Jammu**	**2.11**	**126**	*e*S	**Sn**	**09 09 35.0**	**+1.2**
SBDP	**Sheikh Budin**	**2.42**	**227**	P	**Pn**	**09 09 15.1**	**+2.2**
THN	**Thein Dam**	**2.84**	**122**	*ex*	**Pn**	**09 09 18.1**	**-0.6**
THN				*e*S	**Sn**	**09 09 53.4**	**+1.8**
DLH	**Dalhousie**	**2.96**	**118**	*e*P	**Pn**	**09 09 25.0**	**+4.7**
DLH				*e*S	**Sn**	**09 09 57.0**	**+2.4**
DRP	**Derazinda**	**3.17**	**226**	P	**Pn**	**09 09 23.7**	**+0.5**
DRP				S	**Sn**	**09 10 14.0**	**+14**
SDNR	**Sundarnagar**	**4.25**	**125**	*e*S	**Sn**	**09 10 24.5**	**-1.7**
SMLA	**Simla**	**4.61**	**127**	*ex*	**Pn**	**09 09 42.2**	**-0.7**
SMLA				*e*S	**Sn**	**09 10 34.6**	**-0.5**
KLP	**Kalpa**	**5.14**	**117**	*e*P	**Pn**	**09 09 52.9**	**+2.6**
KLP				*e*S	**Sn**	**09 10 46.3**	**-2.0**
KLP				AML	AML	09 11 16.0	
	comp=E,184nm,0.7s						
KLP				AML	AML	09 11 17.2	
	comp=N,165nm,0.6s						
KHET	**Khetri**	**6.40**	**156**	*e*P	**Pn**	**09 10 07.8**	**+0.2**
KHET				*e*S	**Sn**	**09 11 13.5**	**-5.9**
KHET				AML	AML	09 11 54.5	
	comp=E,13nm,0.2s						
KHET				AML	AML	09 11 54.6	
	comp=N,26nm,0.1s						
NDI	**New Delhi**	**6.46**	**144**	*ex*	x	09 11 30.0	
KUDL	**Kundal**	**6.59**	**151**	*e*P	**Pn**	**09 10 09.5**	**-0.7**
KUDL				*e*S	**Sn**	**09 11 19.1**	**-4.9**
KUDL				AML	AML	09 12 11.7	
	comp=N,11nm,0.7s						
KUDL				AML	AML	09 12 13.8	
	comp=E,9.8nm,0.5s						
JOSI	**Joshimath**	**6.61**	**119**	*e*P	**Pn**	**09 10 12.8**	**+2.4**
JOSI				*e*S	**Sn**	**09 11 19.8**	**-4.6**
JOSI				AML	AML	09 11 29.7	
	comp=E,35nm,0.2s						
JOSI				AML	AML	09 11 32.1	
	comp=N,90nm,0.6s						
SONA	**Sohna**	**6.76**	**147**	*e*P	**Pn**	**09 10 11.8**	**-0.6**
SONA				*e*S	**Sn**	**09 11 22.8**	**-5.2**
SONA				AML	AML	09 12 16.2	
	comp=N,12nm,0.6s						
SONA				AML	AML	09 12 17.2	
	comp=E,26nm,0.5s						
AML	**Almayashu**	**8.16**	**4**	*e*Pn	**Pn**	**09 10 33.4**	**+1.8**
	comp=E,7.0nm,0.5s						
AML				*e*Sn	**Sn**	**09 12 00.6**	**-1.8**
UCH	**Uchtor**	**8.33**	**8**	*e*Pn	**Pn**	**09 10 35.4**	**+1.5**
	comp=E,5.4nm,0.6s						
UCH				*e*Sn	**Sn**	**09 12 08.0**	**+1.4**
EKS2	**Erkin-Say**	**8.69**	**4**	*e*Pn	**Pn**	**09 10 39.4**	**+0.5**
	comp=E,3.4nm,0.6s						
TKM2	**Tokmak 2**	**9.18**	**13**	⇑Pn	**Pn**	**09 10 46.2**	**+0.7**
	comp=E,1.5nm,0.7s						
TKM2				⇑Sn	**Sn**	**09 12 26.2**	**-1.0**
	comp=E,6.6nm,0.6s						
KK31	**Karatay Array**	**9.29**	**349**	⇓Pn	**Pn**	**09 10 46.9**	**-0.1**
	comp=E,2.2nm,0.4s,baz=171,slow=12,SNR=48						
KK31				⇓Sn	**Sn**	**09 12 27.3**	**-2.8**
	comp=E,1.8nm,0.3s,baz=166,slow=20,SNR=12						
MKAR	**Makanchi Array**	**14.65**	**26**	Pn	**Pn**	**09 11 59.1**	**-0.8**
	comp=E,0.1nm,0.3s,baz=219,slow=16,SNR=2.8						
AB31	**Akbulak array**	**18.02**	**332**	⇓Pn	**Pn**	**09 12 42.5**	**+0.1**
	comp=E,0.9nm,0.7s,baz=172,slow=9.9,SNR=13						
AB31				⇑Sn	**Sn**	**09 15 49.7**	**-13**
	comp=E,0.6nm,0.6s						
AKTK	**Aktyubinsk**	**19.72**	**331**	P	**Pn**	**09 13 01.6**	**-1.2**
AKTK				S	**S**	**09 16 42.0**	**+1.6**
AKTO	**Aktyubinsk**	**19.72**	**331**	⇑Pn	**Pn**	**09 13 00.9**	**-1.9**
	comp=E,1.2nm,1.6s						
AKTO	**Aktyubinsk**	**19.72**	**331**	P	**Pn**	**09 13 01.6**	**-1.2**
	comp=E,0.2nm,0.3s,baz=149,slow=5.2,SNR=5.6						
AKTO				S	**S**	**09 16 42.0**	**+1.6**
	comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=3.0						
ZALV	**Zalesovo Beam**	**21.67**	**19**	P	**P**	**09 13 21.1**	**-0.9**
	comp=E,1.4nm,0.4s,mb3.8,baz=204,slow=11,SN

NNZ	**Nelson**	**6.46**	**56**	*e*PN	Pn	09 15 07.0	-0.4

*VIE **27** 09:28:38.9±0.7, 50.51N×14.16E, h0km, mb1.9/2, ML2.5/3, Error ellipse: s-maj=4.7km s-min=2.0km az=26.0 53 km NNW of Praha Suspected Mining explosion.*

ISC 27 09:28:38.6±3.2, 5059N±008×140E±02, h0km, n4, σ0§78/5, 2C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**1.49**	**79**	*e*Pn		**Pn**		**09 29 06.4**	**-0.2**
KSP				*e*Sg		**Sg**		**09 29 26.6**	**+0.1**
MOA	**Molln**	**2.75**	**176**	⇑*i*Sg		**Sg**		**09 30 07.3**	**+0.5**
	comp=Z,5.1nm,0.5s								
CONA	**Conrad Observa**	**2.93**	**154**	⇑*i*Sg		**Sg**		**09 30 11.8**	**-1.0**
	8.6nm,0.5s								
MODS	**Modra-Piesok**	**3.09**	**135**	*e*SG		**Sg**		**09 30 18.2**	**+0.5**

IDC 27 09:45:29.6±1.7, 634N×12663E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/18, mbtmp3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/20, Error ellipse: s-maj=161.0km s-min=22.8km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**16.70**	**190**	LR		LR	LR	09 57 46.3	
	comp=Z,85nm,18.2s,baz=346,slow=44								
WRA	**Warramunga Arr**	**27.20**	**164**	P		P		09 51 15.1	-0.1
	0.3nm,0.6s,baz=345,slow=10,SNR=4.2								
ASAR	**Alice Springs**	**30.66**	**167**	P		P		09 51 46.2	+0.2
	0.5nm,0.8s,baz=338,slow=7.1,SNR=8.5								
SONM	**Songino Array**	**44.81**	**341**	P		P		09 53 45.6	+0.4
	0.2nm,0.3s,baz=152,slow=6.5,SNR=2.3								
MKAR	**Makanchi Array**	**55.38**	**324**	P		P		09 55 05.3	-0.2
	0.4nm,0.3s,baz=124,slow=9.2,SNR=5.8								

*CSEM **27** 10:11:57.6±0.2, 37.15N×3723E, h0km, MD3.1, Error ellipse: s-maj=4.8km s-min=3.5km az=175.0*
*ISCJB **27** 10:11:58.5±0.8, 3713N±007×3726E±005, h10km, Error ellipse: s-maj=10.2km s-min=5.6km az=7.4*
*ISK **27** 10:11:58.1, 3720N×3724E, h5km, MD3.1*

ISC 27 10:11:58.9±0.8, 3714N±007×3725E±005, h10km, n12, σ1§04/17, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.04**	**318**	*i* PG		**Pg**		**10 11 58.3**	**-2.5**
GAZ				*i* SG		**Sg**		**10 11 59.4**	**-2.8**
GZT	**Gaziantep**	**0.33**	**50**	*i* P		**Pg**		**10 12 05.5**	**0.0**
KMRS	**Kahramanmaras**	**0.46**	**323**	PG		**Pg**		**10 12 07.5**	**-0.3**
KMRS				SG		**Sg**		**10 12 14.6**	**+0.7**
ATAB	**Bozova**	**0.90**	**68**	*i* P		**Pg**		**10 12 15.8**	**-0.5**
ATAB	**Bozova**	**0.90**	**68**	*i* P		**Pg**		**10 12 15.8**	**-0.4**
ATAB				*i* S		**Sg**		**10 12 33.5**	**+5.6**
COBT	**Iskenderun**	**1.01**	**232**	*i* P		**Pg**		**10 12 19.2**	**+0.9**
COBT	**Iskenderun**	**1.01**	**232**	*i* P		**Pg**		**10 12 19.2**	**+0.9**
COBT				*i* S		**Sg**		**10 12 36.4**	**+5.0**
KOZT	**Kozan**	**1.18**	**287**	*e*PN		**Pn**		**10 12 21.6**	**+0.1**
URFA	**Urfa**	**1.29**	**76**	*e*PN		**Pn**		**10 12 23.6**	**+0.6**
MALT	**Malatya**	**1.50**	**38**	*e*PN		**Pn**		**10 12 26.5**	**+0.6**
MYA	**Malataya**	**1.51**	**38**	*e*PN		**Pn**		**10 12 27.4**	**+1.4**
MARD	**Mardin**	**2.83**	**85**	*i* P		**Pg**		**10 12 53.2**	**+0.1**
MARD				*i* S		**Sg**		**10 13 29.1**	**-0.6**

IDC 27 10:34:50.8±1.3, 834S×15692E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/15, mbtmp3.9/4, ML4.4/1, Error ellipse: s-maj=48.5km s-min=26.5km az=19.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.18**	**110**	Pn		Pn		10 35 41.9	-0.2
	44nm,0.3s,baz=266,slow=2.9,SNR=13								
HNR				Sn		Sn		10 36 22.9	+2.0
	58nm,0.3s,baz=92,slow=22,SNR=5.6								
WRA	**Warramunga Arr**	**24.71**	**240**	P		P		10 40 14.2	+0.3
	1.2nm,0.6s,baz=65,slow=10,SNR=2.8								
WRA				PcP		PcP		10 43 50.7	-0.6
	0.3nm,0.6s,baz=73,slow=2.3,SNR=1.7								
SONM	**Songino Array**	**71.49**	**327**	P		P		10 46 13.7	+0.4
	0.3nm,0.7s,baz=142,slow=5.4,SNR=2.4								
MKAR	**Makanchi Array**	**85.67**	**318**	P		P		10 47 31.6	0.0
	0.8nm,0.7s,baz=98,slow=4.8,SNR=5.4								

*GRAL **27** 10:45:26.7±1.1, 3451N×3692E, h0km±783km, MD3.0*
*ISCJB **27** 10:45:30.4±1.1, 3441N±004×3668E±009, h5km±11km, Error ellipse: s-maj=12.6km s-min=7.0km az=165.2*
*CSEM **27** 10:45:30.3±0.3, 3444N×3661E, h8km, Mc1.6, Error ellipse: s-maj=10.1km s-min=6.7km az=108.0*
*NSSC **27** 10:45:31.5, 3445N×3658E, h15km±3km*

ISC 27 10:45:31.1±0.9, 3442N±004×3664E±007, h14km±9km, n11, σ1§12/17, 5D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HAWK	**Haweek**	**0.22**	**298**	⇑P		**Pg**		**10 45 35.5**	**-0.6**
HAWK				⇑S		**Sg**		**10 45 39.2**	**-0.3**
HAWK	**Haweek**	**0.22**	**298**	⇑*i*P		**Pg**		**10 45 35.5**	**-0.6**
FKH	**Fakeheh**	**0.27**	**228**	*e*Pg		**Pg**		**10 45 35.1**	**-1.7**
ROOS	**tl_alroos**	**0.59**	**114**	⇑P		**Pg**		**10 45 44.0**	**+1.3**
ROOS	**tl_alroos**	**0.59**	**114**	⇑*i*P		**Pg**		**10 45 44.0**	**+1.3**
HWQ	**Hawqa**	**0.59**	**257**	*e*Pg		**Pg**		**10 45 42.2**	**-0.5**
HWQ				*e*Sg		**Sg**		**10 45 52.6**	**+2.0**
BIDA	**Albida**	**0.65**	**336**	⇑P		**Pg**		**10 45 44.0**	**+0.1**
BIDA				⇓S		**Sg**		**10 45 53.4**	**+0.8**
BIDA	**Albida**	**0.65**	**336**	⇑*i*P		**Pg**		**10 45 44.0**	**+0.1**
WRDH	**Warideh**	**1.11**	**350**	⇓P		**Pb**		**10 45 51.5**	**-0.5**
WRDH				⇓S		**Sb**		**10 46 06.2**	**0.0**
WRDH	**Warideh**	**1.11**	**350**	⇓*i*P		**Pb**		**10 45 51.5**	**-0.5**
WRDH				⇓*i*S		**Sb**		**10 46 06.2**	**-0.1**
RCY	**Rachaya**	**1.15**	**217**	*e*Pg		**Pg**		**10 45 51.4**	**-2.0**
RCY				*e*Sg		**Sg**		**10 46 09.7**	**+1.3**

IDC 27 11:05:38.2±4.3, 1645S×17408W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/14, mbtmp3.9/3, Error ellipse: s-maj=330.5km s-min=34.2km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.97**	**258**	P		P		11 14 26.1	-0.7
	0.4nm,0.6s,baz=95,slow=7.4,SNR=11								
ASAR	**Alice Springs**	**49.17**	**253**	P		P		11 14 28.9	+0.6
	1.9nm,0.4s,baz=89,slow=7.8,SNR=61								
PDAR	**Pinedale Array**	**83.48**	**42**	P		P		11 18 08.2	+0.4
	0.4nm,0.5s,baz=224,slow=3.8,SNR=4.3								

*NEIC **27** 11:08:41.6, 3820N×2038E, h17km, MD3.5(ATH), After ATH.*
*CSEM **27** 11:08:41.6, 3820N×2038E, h17km, MD3.5/7, After ATH*

ATH 27 11:08:41.6, 3820N×2038E, h17km±1km, MD3.5/7, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**98**	*e*PB		Pg		11 08 46.0	+0.1
VLS				*e*SB		Sg		11 08 49.6	+0.7
RLS	**Riolos of Patr**	**0.87**	**99**	*e*PN		Pn		11 08 58.2	-0.8
RLS				*e*SN		Sn		11 09 10.7	-0.6
EVR	**Evrytania**	**1.33**	**57**	*e*PN		Pn		11 09 06.3	+0.9
EVR				*e*SN		Sn		11 09 25.0	+2.4
JAN	**Janina**	**1.50**	**14**	*e*PN		Pn		11 09 10.1	+2.4
KEK	**Kerkira**	**1.58**	**343**	*e*PN		Pn		11 09 10.9	+2.1
ITM	**Ithomi**	**1.59**	**129**	*e*PN		Pn		11 09 11.5	+2.5
THL	**Klokotos Trika**	**1.87**	**43**	*e*PN		Pn		11 09 14.5	+1.8

IDC 27 11:18:27.4±2.6, 595S×10428E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/19, mbtmp3.9/5, ML4.9/1, Error ellipse: s-maj=109.1km s-min=28.9km az=49.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**19.65**	**104**	P		Pn		11 22 58.4	-1.0
	3.3nm,0.3s,baz=286,slow=7.4,SNR=4.5								
WRA	**Warramunga Arr**	**32.35**	**118**	P		P		11 24 57.9	-0.9
	0.2nm,0.3s,baz=286,slow=10.0,SNR=12								
ASAR	**Alice Springs**	**33.50**	**125**	P		P		11 25 09.0	+0.2
	0.7nm,0.6s,baz=299,slow=7.8,SNR=9.7								
STKA	**Stephens Creek**	**43.35**	**131**	P		P		11 26 32.4	+0.8
	2.3nm,0.9s,baz=292,slow=11,SNR=3.6								
MKAR	**Makanchi Array**	**56.02**	**342**	P		P		11 28 07.9	0.0
	0.2nm,0.3s,baz=140,slow=9.6,SNR=2.6								

*IDC **27** 11:19:23.8±0.9, 3085N×78.12E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/24, mbtmp3.8/10, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/28, Error ellipse: s-maj=35.6km s-min=18.5km az=49.0*
*ISCJB **27** 11:19:28.0±0.8, 3099N±005×78.11E±006, h36km±11km, mb3.8/9, Error ellipse: s-maj=9.4km s-min=6.6km az=43.3*
*NDI **27** 11:19:28.0±2.3, 3109N×78.19E, h33km, ML3.6, mb3.9(NEIC)*
*NEIC **27** 11:19:29.3±0.8, 3101N×7821E, h35km, mb3.9/1, Error ellipse: s-maj=21.7km s-min=14.4km az=59.0*

ISC 27 11:19:29.8±0.8, 3095N±005×7815E±006, h38km±11km, n24, σ1§13/32, mb3.8/9, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**0.63**	**187**	*e*P		**Pn**		**11 19 38.9**	**-3.4**
DDI				*e*S		**Sn**		**11 19 48.7**	**-2.5**
JOSI	**Joshimath**	**1.28**	**108**	*e*P		**Pn**		**11 19 50.3**	**-0.8**
JOSI				*e*S		**Sn**		**11 20 06.6**	**-0.5**
JOSI				AML		AML		11 20 13.8	
	comp=N,1μm,0.6s								
JOSI				AML		AML		11 20 14.6	
	comp=E,760nm,0.5s								
KKR	**Kurukshetra**	**1.51**	**230**	*e*P		**Pn**		**11 19 50.0**	**-4.4**
KKR				*e*S		**Sn**		**11 20 10.7**	**-2.2**
PTH	**Pithoragarh**	**2.27**	**127**	*e*P		**Pn**		**11 20 08.1**	**+3.3**
PTH				*e*S		**Sn**		**11 20 35.8**	**+4.2**
NDI	**New Delhi**	**2.40**	**200**	*e*P		**Pn**		**11 20 07.0**	**+0.4**
NDI				*e*S		**Sn**		**11 20 35.0**	**+0.2**
AYAN	**Aya Nagar**	**2.62**	**200**	*e*P		**Pn**		**11 20 10.8**	**+1.2**
AYAN				*e*S		**Sn**		**11 20 41.4**	**+1.3**
SONA	**Sohna**	**2.85**	**199**	*e*P		**Pn**		**11 20 13.5**	**+0.8**
SONA				*e*S		**Sn**		**11 20 47.7**	**+1.9**
KUDL	**Kundal**	**3.15**	**208**	*e*P		**Pn**		**11 20 17.6**	**+0.7**
KUDL				*e*S		**Sn**		**11 20 52.2**	**-1.0**
KHET	**Khetri**	**3.52**	**216**	*e*P		**Pn**		**11 20 22.2**	**+0.2**
AGRA	**Agra**	**3.71**	**183**	*ex*		**Pn**		**11 20 27.9**	**+3.2**
AGRA				*e*S		**Sn**		**11 21 06.1**	**-1.1**
AGRA				AML		AML		11 21 29.2	
	comp=E,245nm,0.5s								
AGRA				AML		AML		11 21 30.5	
	comp=N,147nm,0.2s								
AML	**Almayashu**	**11.71**	**343**	*e*Pn		**Pn**		**11 22 14.2**	**-0.1**
	comp=N,2.9nm,0.6s								
POO	**Poona**	**12.97**	**198**	*ex*		x		11 24 56.0	
MKAR	**Makanchi Array**	**16.14**	**10**	Pn		**Pn**		**11 23 10.3**	**-3.5**
	comp=N,0.2nm,0.3s,baz=178,slow=13,SNR=2.6								
AKTK	**Aktyubinsk**	**24.59**	**328**	P		**P**		**11 24 46.6**	**+0.4**
AKTO	**Aktyubinsk**	**24.59**	**328**	P		**P**		**11 24 46.6**	**+0.4**
	comp=N,2.3nm,0.4s,mb4.0,baz=117,slow=11,SNR=16								
SONM	**Songino Array**	**27.37**	**44**	P		**P**		**11 25 12.1**	**+0.8**
	comp=N,0.2nm,0.5s,mb2.9,baz=234,slow=8.9,SNR=2.5								
FINES	**FINESS Array B**	**45.37**	**328**	P		**P**		**11 27 44.4**	**+0.3**
	comp=N,0.9nm,0.4s,mb4.0,baz=116,slow=10,SNR=12								
ARCES	**ARCESS Array B**	**48.51**	**338**	P		**P**		**11 28 09.1**	**+0.6**
	comp=N,2.0nm,0.6s,mb4.3,baz=107,slow=7.6,SNR=10.0								
NB2	**NORSAR Subarra**	**52.34**	**326**	P		**P**		**11 28 36.9**	**-0.7**
	comp=Z,0.7nm,0.5s,mb3.9,baz=95,slow=7.9								
NOA	**NORSAR Array B**	**52.34**	**326**	P		**P**		**11 28 37.5**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=95,slow=7.2,SNR=3.4								
TORD	**Torodi Ar. Bea**	**71.84**	**275**	P		**P**		**11 30 48.5**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.8,baz=48,slow=5.2,SNR=5.0								
WRA	**Warramunga Arr**	**73.97**	**126**	P		**P**		**11 31 01.2**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=320,slow=6.1,SNR=23								
ASAR	**Alice Springs**	**76.17**	**129**	P		**P**		**11 31 14.1**	**-0.1**
	comp=Z,0.4nm,0.5s,mb3.6,baz=311,slow=6.0,SNR=11								
YKA	**Yellowknife Ar**	**86.32**	**6**	P		**P**		**11 32 06.5**	**-0.9**
	comp=Z,0.3nm,0.7s,mb3.6,baz=339,slow=5.0,SNR=7.2								

*NEIC **27** 11:30:58.1, 38.10N×2025E, h4km, MD3.5(ATH), After ATH.*
*CSEM **27** 11:30:58.1, 38.10N×2025E, h4km, MD3.5/6, After ATH*

ATH 27 11:30:58.0, 3810N×2025E, h4km±1km, MD3.5/6, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**74**	*e*PG		Pg		11 31 04.1	+0.7
VLS				*e*SG		Sg		11 31 08.2	+1.2
RLS	**Riolos of Patr**	**0.96**	**92**	*e*PG		Pg		11 31 15.7	-0.7
RLS				*e*SG		Sg		11 31 29.4	+0.5
EVR	**Evrytania**	**1.47**	**56**	*e*PG		Pg		11 31 25.3	-0.9
EVR				*e*SB		Sb		11 31 45.8	+0.9
ITM	**Ithomi**	**1.62**	**124**	*e*PB		Pb		11 31 28.5	+0.1
KEK	**Kerkira**	**1.65**	**348**	*e*PB		Pb		11 31 28.9	0.0
THL	**Klokotos Trika**	**2.01**	**43**	*e*PN		Pn		11 31 34.8	+2.1

*NIED **27** 11:42:00, 4570N×15060E, h170km, Mw4.4 Best double couple: M₀4.61000×10¹⁵ NP1:φ₀356.00000°, δ19.00000°, λ15.00000°. NP2:φ₀252.00000°, δ85.00000°, λ109.00000°.*
*NEIC **27** 11:42:04.1±0.8, 4658N×15019E, h10km, mb4.3/2, Error ellipse: s-maj=21.6km s-min=18.2km az=133.0*
*SKHL **27** 11:42:20.5±0.6, 4597N×15137E, h90km±57km, mb5.1/5, msh5.9/1*
*MOS **27** 11:42:21.9±1.5, 4659N×15036E, h187km, mb4.0/10, Error ellipse: s-maj=16.5km s-min=10.0km az=71.8*
*ISCJB **27** 11:42:23.8±0.8, 4612N±008×1503E±01, h221km±8km, mb3.8/16, Error ellipse: s-maj=16.1km s-min=8.7km az=141.4*
*IDC **27** 11:42:25.5±2.6, 4662N×15022E, h198km±25km, mb3.5/13, mb1 3.7/15, mb1mx3.6/22, mbtmp3.5/15, Error ellipse: s-maj=18.2km s-min=13.1km az=123.0*
*JMA **27** 11:42:26.2±0.5, 4567N×15056E, h184km, M4.1*

ISC 27 11:42:24.6±0.8, 4615N±009×1503E±01, h210km±8km, n76, σ1§44/97, mb3.8/16, 3C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.93**	**242**	PN		**Pn**		**11 43 00.5**	**-2.6**
KUR				*e*S		**Sn**		**11 43 31.0**	**-2.0**
KUR				pmax		pmax			
	comp=N,220nm,0.5s								
KUR				pmax		pmax			
	comp=E,180nm,0.5s								
KUR				pmax		pmax			
	comp=Z,620nm,0.5s								
KUR				smax					
	comp=N,1μm,0.5s								
KUR				smax					
	comp=E,380nm,0.5s								
KUR	**Kuril'sk**	**1.93**	**242**	*e*P		**Pn**		**11 43 00.5**	**-2.6**
KUR				AMB		AMB		11 43 02.0	
	comp=E,152nm,0.5s								
KUR				AMB		AMB		11 43 02.0	
	comp=E,99nm,0.5s								
KUR				AMB		AMB		11 43 02.0	
	comp=E,616nm,0.5s								
KUR				*e*S		**Sn**		**11 43 31.0**	**-2.0**
KUR				A				11 43 37.2	
	comp=E,1μm,0.5s								
KUR				A				11 43 37.2	
	comp=E,380nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**3.78**	**237**	⇑*i*PN		**Pn**		**11 43 24.6**	**+0.6**
YUK				*e*S		**Sn**		**11 44 12.2**	**+1.6**
YUK				pmax		pmax			
	comp=N,140nm,0.5s								
YUK				pmax		pmax			
	comp=E,370nm,0.5s								
YUK				pmax		pmax			
	comp=Z,830nm,0.5s								
YUK				smax					
	comp=E,420nm,0.5s								
YUK				smax					
	comp=N,420nm,0.5s								
YUK				smax					
	comp=N,1μm,0.8s								
YUK				smax					
	comp=E,1μm,0.4s								
YUK	**Yuzh-Kuril'sk**	**3.78**	**237**	⇑*i*P		**Pn**		**11 43 24.6**	**+0.6**
YUK				AMB		AMB		11 43 25.1	
	comp=E,140nm,0.5s								
YUK				AMB		AMB		11 43 25.1	
	comp=E,370nm,0.5s								
YUK				AMB		AMB		11 43 25.1	
	comp=E,830nm,0.5s								
YUK				*e*S		**Sn**		**11 44 12.2**	**+1.6**
YUK				A				11 44 20.0	
	comp=E,420nm,0.5s								
YUK				A				11 44 20.0	
	comp=E,420nm,0.5s								
YUK				A				11 44 21.0	
	comp=E,1μm,0.4s								
YUK				A				11 44 21.0	
	comp=E,1μm,0.8s								
NEM2	**Nemuro 2**	**4.27**	**231**	P		**Pn**		**11 43 29.3**	**-0.7**
NEM2				*e*S		**Sn**		**11 44 18.9**	**-2.6**
JRA	**Rausu**	**4.27**	**241**	P		**Pn**		**11 43 31.4**	**+1.3**
JNK	**Nakash**	**4.71**	**239**	P		**Pn**		**11 43 36.5**	**+0.9**
JTKR	**Abashiri--Toko**	**5.01**	**246**	P		**Pn**		**11 43 40.9**	**+1.5**
JTKR				*e*S		**Sn**		**11 44 39.9**	**+1.5**
JAK	**Akkeshi**	**5.08**	**234**	P		**Pn**		**11 43 40.1**	**-0.2**
JAK				*e*S		**Sn**		**11 44 38.2**	**-1.9**
YSS	**Yuzh-Sakhalins**	**5.25**	**281**	⇓*e*PN		**Pn**		**11 43 42.1**	**-0.2**
YSS				pmax		pmax			
	comp=Z,40nm,0.9s								
YSS				pmax		pmax			
	comp=E,50nm,1.0s								
YSS	**Yuzh-Sakhalins**	**5.25**	**281**	⇓*e*P		**Pn**		**11 43 42.1**	**-0.2**
YSS				AMB		AMB		11 43 43.1	
	comp=E,40nm,0.9s								
YSS				AMB		AMB		11 43 43.1	
	comp=E,50nm,1.0s								
YSS				*e*S		**Sn**		**11 44 58.3**	**+14**
JMP	**Maruseppu**	**5.35**	**249**	P		**Pn**		**11 43 45.4**	**+1.8**
JAR	**Ashorobuto**	**5.45**	**241**	P		**Pn**		**11 43 46.5**	**+1.6**
JOB	**Onbets**	**5.64**	**237**	P		**Pn**		**11 43 48.0**	**+0.7**
JOB				*e*S		**Sn**		**11 44 51.1**	**-1.7**
ASAJ	**Asahikawa**	**5.80**	**252**	P		**Pn**		**11 43 52.1**	**+2.7**
ASAJ	**Asahikawa**	**5.80**	**252**	PN		**Pn**		**11 43 52.2**	**+2.8**
ASAJ				pmax		pmax			
	comp=Z,10.0nm,0.3s								
ASAJ	**Asahikawa**	**5.80**	**252**	P		**Pn**		**11 43 52.1**	**+2.7**
	comp=Z,10nm,0.3s,baz=72,slow=15,SNR=109								
JKK2	**Kamakawa 2**	**5.80**	**250**	P		**Pn**		**11 43 51.6**	**+2.1**
JKK2				*e*S		**Sn**		**11 45 00.4**	**+3.7**
SKR	**Severo-Kuril's**	**5.97**	**38**	*e*PN		**Pn**		**11 43 42.7**	**-8.8**
SKR				*e*				11 44 45.0	
SKR				pmax		pmax			
	comp=N,60nm,0.5s								
SKR				pmax		pmax			
	comp=Z,80nm,0.5s								
JCH	**Churui**	**6.09**	**237**	P		**Pn**		**11 43 53.2**	**+0.1**
JCH				*e*S		**Sn**		**11 45 00.4**	**-2.9**
JFR	**Furan**	**6.24**	**244**	P		**Pn**		**11 43 57.1**	**+2.0**
JFR				*e*S		**Sn**		**11 45 07.1**	**+0.3**
JAB	**Ashibetsu**	**6.31**	**248**	P		**Pn**		**11 43 58.4**	**+2.5**
JEM	**Erimo**	**6.59**	**234**	P		**Pn**		**11 44 00.6**	**+1.1**
JBT2	**Biratori 2**	**6.59**	**242**	P		**Pn**		**11 44 00.2**	**+0.6**
JBT2				*e*S		**Sn**		**11 45 12.9**	**-2.1**
JNBK	**Urakawa-nobuka**	**6.65**	**237**	P		**Pn**		**11 43 59.5**	**-0.8**
JNBK				*e*S		**Sn**		**11 45 12.1**	**-4.3**
TYV	**Tymovskoe**	**6.92**	**316**	*e*P		**Pn**		**11 44 09.0**	**+5.4**
TYV				AMB		AMB		11 44 10.5	
	comp=Z,22nm,1.0s								
TYV				AMB		AMB		11 44 10.5	
	comp=Z,11nm,0.8s								
JEW	**Eniwo**	**7.13**	**245**	P		**Pn**		**11 44 08.3**	**+1.8**
JNB	**Noboribetsu**	**7.58**	**244**	P		**Pn**		**11 44 13.2**	**+0.8**
JNB				*e*S		**Sn**		**11 45 36.5**	**-1.8**
JKB	**Kayabe**	**7.91**	**241**	P		**Pn**		**11 44 16.1**	**-0.5**
JKB				*e*S		**Sn**		**11 45 41.3**	**-4.7**
JSH	**Shimam**	**8.12**	**248**	P		**Pn**		**11 44 21.2**	**+1.8**
JYM2	**Yakumo 2**	**8.19**	**244**	P		**Pn**		**11 44 20.9**	**+0.7**
JYM2				*e*S		**Sn**		**11 45 50.9**	**-1.7**
JSR	**Shiriuchi**	**8.49**	**241**	P		**Pn**		**11 44 24.1**	**-0.1**
JSR				*e*S		**Sn**		**11 45 54.3**	**-5.5**
JTM	**Tenmabayashi**	**8.58**	**235**	P		**Pn**		**11 44 24.0**	**-1.3**
JTM				*e*S		**Sn**		**11 45 55.5**	**-6.3**
JANG	**Nango**	**8.61**	**231**	P		**Pn**		**11 44 24.4**	**-1.4**
JTH	**Tanohata**	**8.74**	**228**	P		**Pn**		**11 44 25.3**	**-2.2**
JTH				*e*S		**Sn**		**11 45 59.9**	**-5.9**
JOSM	**Okushiri--Mats**	**8.77**	**246**	P		**Pn**		**11 44 27.9**	**+0.1**
OFUJ	**Ofunato**	**9.49**	**225**	P		**Pn**		**11 44 36.4**	**-0.8**
JRG	**Rokugo**	**9.79**	**230**	P		**Pn**		**11 44 41.0**	**+0.1**
JIO	**Ouri**	**10.14**	**224**	P		**Pn**		**11 44 44.7**	**-0.8**
JIO				*e*S		**Sn**		**11 46 33.8**	**-5.2**
JYA	**Atsumi**	**10.86**	**230**	P		**Pn**		**11 44 55.6**	**+0.9**
MJAR	**Matsushiro Arr**	**13.19**	**228**	P		**Pn**		**11 45 27.0**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=31,slow=14,SNR=5.2								
SEY	**Seymchan**	**16.86**	**3**	*e*P		**P**		**11 45 58.5**	**-8.4**
KSRS	**Korea Array**	**18.75**	**250**	P		**P**		**11 46 34.0**	**+6.2**
	comp=Z,0.1nm,0.3s,baz=51,slow=11,SNR=6.4								
HIA	**Hailar**	**20.71**	**290**	*e*P		**P**		**11 46 40.5**	**-8.1**
BILL	**Bilibino**	**23.45**	**15**	⇑*e*P		**P**		**11 47 12.5**	**-2.2**
BILL				pmax		pmax			
	comp=Z,6.0nm,1.4s,mb3.9								
TIXI	**Tiksi**	**27.52**	**346**	*e*P		**P**		**11 47 46.4**	**-4.9**
TIXI				pmax		pmax			
	comp=Z,2.0nm,1.3s,mb3.6								
ZALV	**Zalesovo Beam**	**41.37**	**306**	PcP		PcP		11 51 45.6	+1.9
	comp=Z,0.4nm,0.4s,baz=44,sl

GERES **GERESS Array B** 78.11 332 P **P** 11 53 59.9 -0.1
comp=Z,0.5nm,0.5s,mb3.4,baz=26,slow=4.7,SNR=3.0

ISC 27 12:00:19.2±0.8, 4606N±004×1366E±005, h0km, n8, σ0s74/13, 2C, Austria

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DRE	**Drenchia**	**0.11**	**355**	⇑*i*	Pg		**Pg**	**12 00 20.5**	**-0.9**
VOJS	**Vojsko**	**0.16**	**101**	*i*	Pg		**Pg**	**12 00 21.7**	**-0.5**
VOJS				*i*	Sg		**Sg**	**12 00 24.9**	**+0.6**
VOY	**Vojsko**	**0.17**	**101**	*e*	Rg			12 00 27.2	
CADS	**Cadrg**	**0.17**	**18**	*i*	Pg		**Pg**	**12 00 21.9**	**-0.7**
CADS				*i*	Sg		**Sg**	**12 00 25.5**	**+0.7**
CADS	comp=Z,13nm,0.2s								
COLI	**Coloredo**	**0.21**	**290**	⇑*i*	Pg		**Pg**	**12 00 22.6**	**-0.5**
COLI				*i*	Sg		**Sg**	**12 00 27.1**	**+1.3**
ROBS	**Robic**	**0.21**	**331**	*i*	Pg		**Pg**	**12 00 22.6**	**-0.6**
ROBS				*i*	Sg		**Sg**	**12 00 26.4**	**+0.5**
JAVS	**Javornik**	**0.33**	**121**	*i*	Pg		**Pg**	**12 00 24.9**	**-0.6**
JAVS				*i*	Sg		**Sg**	**12 00 30.8**	**+1.0**
GORS	**Gorjuse**	**0.35**	**43**	*i*	Pg		**Pg**	**12 00 25.0**	**-0.8**
GORS				*i*	Sg		**Sg**	**12 00 31.0**	**+0.6**
GORS	comp=Z,3.0nm,0.1s								

ISCJB ***27*** *12:04:53.4±0.7, 6.14S±007×7180W±0.10, h615km±11km, mb4.0/17, Error ellipse: s-maj=15.6km s-min=8.4km az=155.9*

IDC ***27*** *12:04:53.3±0.9, 6.17S×7182W, h601km±11km, mb3.7/10, mb1 3.7/15, mb1mx3.6/23, mbtmp3.6/15, Error ellipse: s-maj=14.7km s-min=10.0km az=72.0*

NEIC ***27*** *12:04:53.8±0.6, 6.20S×7174W, h607km±8km, mb4.2/6, Error ellipse: s-maj=12.8km s-min=7.5km az=69.0*

ISC 27 12:04:54.2±0.7, 621S±006×7183W±010, h606km±10km, n46, σ0s88/44, mb4.0/17, 1D, Western Brazil

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**6.57**	**263**	P			**P**	**12 06 40.3**	**-0.3**
ATAH	1.5nm,0.3s,baz=136,slow=8.5,SNR=7.5			S			**S**	**12 08 07.8**	**+0.1**
NNA	**Nana**	**7.58**	**220**	P			**P**	**12 06 49.7**	**0.0**
NNA	2.3nm,0.3s,baz=353,slow=22,SNR=14			S			**S**	**12 08 22.9**	**-1.4**
NNA	**Nana**	**7.58**	**220**	P			**P**	**12 06 49.7**	**0.0**
NNA	1.8nm,0.3s,baz=349,slow=4.3,SNR=4.8			S			**S**	**12 08 22.9**	**-1.4**
OTAV	**Otavalo**	**9.20**	**314**	P			**P**	**12 07 06.3**	**+1.0**
OTAV	7.3nm,0.7s			*e*	S		**S**	**12 08 47.3**	**-5.6**
LPAZ	**La Paz**	**10.65**	**160**	P			**P**	**12 07 19.9**	**+0.5**
LPAZ				S			**S**	**12 09 20.2**	**+1.5**
LPAZ	**La Paz**	**10.65**	**160**	P			**P**	**12 07 19.9**	**+0.5**
LPAZ	0.6nm,0.3s,baz=328,slow=7.5,SNR=17			S			**S**	**12 09 20.2**	**+1.5**
SIV	**San Ignacio**	**14.34**	**134**	P			**P**	**12 07 54.6**	**-1.4**
SIV	0.0nm,0.3s,baz=307,slow=4.6,SNR=2.4			S			**S**	**12 10 25.1**	**+0.6**
SDV	**Santo Domingo**	**15.05**	**5**	P			**P**	**12 08 01.9**	**-0.7**
SDV	1.1nm,0.3s,baz=314,slow=11,SNR=25			S			**S**	**12 10 38.6**	**+2.2**
SDV	**Santo Domingo**	**15.05**	**5**	P			**P**	**12 08 01.9**	**-0.7**
SDV	0.3nm,0.3s,baz=60,slow=15,SNR=6.4			S			**S**	**12 10 38.6**	**+2.2**
CFAA	**Coronel Fontan**	**25.48**	**173**	P			**P**	**12 09 35.9**	**-0.3**
CFAA	0.4nm,0.3s,baz=200,slow=5.0,SNR=8.3			ScP			ScP	12 15 28.9	-0.6
CFAA	**Coronel Fontan**	**25.48**	**173**	P			**P**	**12 09 35.9**	**-0.3**
CFAA	0.3nm,0.4s,mb3.2,baz=343,slow=10,SNR=19			ScP			ScP	12 15 28.9	-0.6
PLCA	**Paso Flores**	**34.39**	**178**	P			**P**	**12 10 52.7**	**+0.3**
PLCA	0.1nm,0.3s,baz=184,slow=1.8,SNR=3.9			PcP			PcP	12 13 09.9	-0.3
PLCA				ScP			ScP	12 15 58.2	-0.5
PLCA	**Paso Flores**	**34.39**	**178**	P			**P**	**12 10 52.7**	**+0.3**
PLCA	5.3nm,0.4s,mb4.5,baz=350,slow=9.1,SNR=40			PcP			PcP	12 13 09.9	-0.3
PLCA	1.9nm,0.6s,baz=325,slow=4.7,SNR=7.2			ScP			ScP	12 15 58.2	-0.4
SDCO	**Great Sand Dun**	**53.82**	**327**	*e*	P		**P**	**12 13 22.5**	**+0.9**
PDAR	2.0nm,0.4s,mb3.5,baz=124,slow=9.7,SNR=22 **Pinedale Array**	**59.58**	**328**	P			**P**	**12 14 01.4**	**+0.5**
PDAR	1.2nm,0.9s,baz=127,slow=4.4,SNR=4.3			PcP			PcP	12 14 40.4	+0.1
ULM	**Lac du Bonnet**	**59.97**	**342**	P			**P**	**12 14 01.5**	**-1.8**
ULM	8.6nm,0.7s,mb4.1,baz=155,slow=7.8,SNR=18			PcP			PcP	12 14 40.6	-1.0
SCHQ	5.3nm,0.8s,baz=143,slow=2.7,SNR=5.0 **Schefferville**	**60.97**	**3**	P			**P**	**12 14 08.7**	**-1.0**
SCHQ				PcP			PcP	12 14 44.7	-0.9
SCHQ	**Schefferville**	**60.97**	**3**	P			**P**	**12 14 08.7**	**-1.0**
SCHQ	2.8nm,0.6s,mb3.6,baz=187,slow=8.6,SNR=3.8			PcP			PcP	12 14 44.7	-0.9
NVAR	1.9nm,0.6s,baz=207,slow=8.5,SNR=2.0 **Mina Array Bea**	**61.89**	**320**	P			**P**	**12 14 18.0**	**+1.9**
NVAR	0.9nm,0.7s,mb3.1,baz=134,slow=7.7,SNR=1.8			PcP			PcP	12 14 49.2	-0.5
FCC	1.2nm,0.7s,baz=132,slow=5.2,SNR=4.3 **Fort Churchill**	**67.18**	**348**	*e*	P		**P**	**12 14 48.3**	**-0.6**
LIC	15nm,1.1s,mb4.3 **Lamto**	**67.81**	**81**	*e*	P		**P**	**12 14 52.7**	**-1.0**
LIC	5.3nm,0.5s,mb4.0 **Lamto**	**67.81**	**81**	*e*	P		**P**	**12 14 52.7**	**-1.0**
DBIC	2.7nm,0.5s,mb3.9 **Dimbokro**	**68.05**	**80**	P			**P**	**12 14 54.7**	**-0.4**
VNA3	9.4nm,0.4s,mb4.6,baz=247,slow=6.8,SNR=33 **Neumayer Olymp**	**75.41**	**163**	*e*			**P**	**12 15 37.1**	**+0.5**
VNA3				*e*				12 15 38.6	
VNA3				*e*				12 15 41.6	
VNA3				*e*				12 15 46.6	
TORD	**Torodi Ar. Bea**	**75.50**	**75**	P			**P**	**12 15 37.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**75.50**	**75**	P			**P**	**12 15 37.5**	**-0.8**
YKA	6.8nm,0.6s,mb4.3,baz=289,slow=5.0,SNR=27 **Yellowknife Ar**	**75.90**	**341**	P			**P**	**12 15 39.1**	**-0.3**
VNA2	5.7nm,0.6s,mb4.2,baz=135,slow=6.2,SNR=161 **Neumayer--Watz**	**75.96**	**162**	*e*			**P**	**12 15 40.0**	**+0.3**
VNA2				*e*				12 15 41.2	
VNA2				*e*				12 15 43.0	
VNA2				*e*				12 15 49.6	
ESDC	**Sonseca Array**	**77.25**	**47**	P			**P**	**12 15 47.1**	**-0.1**
SNAA	1.1nm,0.6s,mb3.5,baz=247,slow=6.1,SNR=7.6 **Sanae**	**77.60**	**162**	*e*			**P**	**12 15 48.7**	**+0.2**
SNAA				*e*				12 15 49.7	
SNAA				*e*				12 15 51.2	
SNAA				*e*				12 15 57.1	
QSPA	**South Pole Qui**	**83.89**	**180**	*e*	P		**P**	**12 16 21.3**	**+0.5**
INK	24nm,1.1s,mb4.6 **Inuvik**	**85.67**	**341**	*e*	P		**P**	**12 16 29.3**	**-0.2**
INK	**Inuvik**	**85.67**	**341**	P			**P**	**12 16 29.4**	**-0.1**
COLA	4.8nm,0.7s,mb4.2,baz=93,slow=3.1,SNR=17 **College**	**89.69**	**336**	*e*	P		**P**	**12 16 48.0**	**-0.4**
NOA	4.1nm,0.7s,mb4.4 **NORSAR Array B**	**92.03**	**29**	P			**P**	**12 16 59.5**	**+0.3**
ZALV	1.3nm,0.8s,mb4.0,baz=259,slow=4.6,SNR=3.9 **Zalesovo Beam**	**128.78**	**17**	PKP			PKPdf	12 22 53.0	-0.6
ZALV	**Zalesovo Beam**	**128.78**	**17**	PKP			PKPdf	12 22 53.0	-0.6
STKA	6.3nm,0.6s,baz=327,slow=2.5,SNR=6.9 **Stephens Creek**	**130.50**	**218**	SKPbc			SKPbc	12 25 24.6	-1.2
MKAR	2.6nm,0.7s,baz=0.0,slow=20,SNR=2.5 **Makanchi Array**	**133.85**	**25**	SKPbc			SKPbc	12 25 36.4	-0.2
SONM	1.4nm,0.7s,baz=64,slow=3.4,SNR=2.4 **Songino Array**	**138.50**	**2**	SKPbc			SKPbc	12 25 50.7	+0.3
ASAR	1.3nm,0.7s,baz=317,slow=0.3,SNR=4.8 **Alice Springs**	**141.10**	**219**	PKhKP				12 23 11.1	
ASAR	0.8nm,0.4s,baz=134,slow=3.5,SNR=36			SKPbc			SKPbc	12 25 57.5	-0.7
WB2	8.1nm,0.8s,baz=9.9,slow=5.7,SNR=10 **Warramunga Arr**	**143.41**	**224**	⇓*i*	P		PKPdf	12 23 20.0	-1.6
WRA	**Warramunga Arr**	**143.41**	**224**	PKP			PKPdf	12 23 19.6	-2.0
WRA	11nm,0.8s,baz=130,slow=2.8,SNR=135			SKPbc			SKPbc	12 26 03.6	-0.3
KSRS	2.3nm,0.5s,baz=131,slow=2.7,SNR=6.3 **Korea Array**	**144.07**	**333**	PKP			PKPdf	12 23 21.4	-0.9
JNU	4.3nm,0.7s,baz=10,slow=2.9,SNR=5.8 **Nakatsue**	**145.91**	**325**	PKPbc			PKPbc	12 23 25.8	-1.7
FITZ	6.8nm,0.8s,baz=151,slow=1.6,SNR=5.3 **Fitzroy Crossi**	**150.32**	**215**	*e*	P		PKPbc	12 23 38.8	-0.2
	6.8nm,0.9s								

NIED ***27*** *12:13:00, 48.10N×155.00E, h20km, Mw5.1 Best double couple: M0 5.70000×10^16 NP1:φs3.00000°, δ37.00000°, λ48.00000°. NP2:φs232.00000°, δ64.00000°, λ117.00000°.*

BJI ***27*** *12:13:53.8, 48.44N×154.94E, h30km, mB5.1, mb5.3, Ms4.7, Msz4.6*

SKHL ***27*** *12:13:57.3±2.7, 48.05N×154.74E, h38km±7km, mb6.3/6, mbh5.8/1, Ms4.6/2, msh6.0/3*

BGS ***27*** *12:13:59.2, 48.40N×155.40E, h30km, mb5.5*

GCMT ***27*** *12:13:59.5±0.2, 48.14N×154.75E, h48km, MW5.2/87, Moment Tensor Solution. s76,c128; s87,c159; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr0.78±.02; Mθθ0.08±.01; Mφφ-0.85±.01; Mrθ0.01±.01; Mrφ-0.12±.01; Mθφ0.24±.01; Best double couple: M0 0.85900×10^17 NP1:φs189.00000°, δ37.00000°, λ92.00000°. NP2:φs6.00000°, δ53.00000°, λ88.00000°. Principal axes: T 0.8110, Plg82.0000°, Azm267.0000°; N 0.0980, Plg1.0000°, Azm7.0000°; P -0.9080, Plg8.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***27*** *12:13:59.8±0.9, 48.24N×154.26E, h46km, mb5.7/93, MS4.5/44 Error ellipse: s-maj=7.3km s-min=3.6km az=101.2*

NEIC ***27*** *12:13:59.5±1.4, 48.25N×154.20E, h31km±9km, mb5.5/150, MS4.7/124, Error ellipse: s-maj=3.6km s-min=2.4km az=168.0*

ISCJB ***27*** *12:13:59.5±0.4, 48.24N±002×154.35E±002, h43km±3km, mb5.5/293, MS4.6/165, Error ellipse: s-maj=3.5km s-min=1.8km az=163.1*

IDC ***27*** *12:14:02.0±1.9, 48.31N×154.24E, h54km±16km, mb4.9/29, mb1 5.0/31, mb1mx5.0/33, mbtmp5.0/31, ML4.6/2, MS4.4/22, Ms1 4.4/22, ms1mx4.3/30, Error ellipse: s-maj=13.5km s-min=9.7km az=125.0*

SZGRF ***27*** *12:14:03.4, 48.90N×153.60E, h33km, mb5.6, MS4.6, Kuril Islands, Russia*

ISC 27 12:14:02.4±0.3, 4831N±002×15425E±002, h50km±3km, h25km±4.3km: pP-P, n1320, σ0s78/1286, mb5.5/293, MS4.6/165, 393C-125D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.67**	**27**	*e*	PN		**Pn**	**12 14 42.0**	**-0.8**
SKR				*i*	S		**Sn**	**12 15 13.3**	**-0.5**
SKR	comp=N,260nm,0.5s				pmax	pmax			
SKR	comp=E,290nm,0.5s				pmax	pmax			
SKR	comp=Z,1μm,0.5s				pmax	pmax			
SKR	comp=Z,3μm,2.0s				smax				
SKR	comp=N,18μm,2.0s				smax				
SKR	comp=E,20μm,2.0s				smax				
SKR	comp=N,24nm,1.0s				smax				
SKR	comp=E,4μm,0.5s				MLR	MLR			
SKR	comp=E,19μm,12.0s				MLR	MLR			
SKR	comp=Z,13μm,12.0s **Severo-Kuril's**	**2.67**	**27**	*e*	P		**Pn**	**12 14 42.0**	**-0.8**
SKR					AMB	AMB		12 14 44.7	
SKR	comp=Z,3μm,2.0s				AMB	AMB		12 14 44.7	
SKR	comp=Z,260nm,0.5s				AMB	AMB		12 14 44.7	
SKR	comp=Z,290nm,0.5s				AMB	AMB		12 14 44.7	
SKR	comp=Z,1μm,0.5s			*e*	rx		rx	12 14 49.0	
SKR				*i*	S		**Sn**	**12 15 13.3**	**-0.5**
SKR					A			12 15 20.0	
SKR	comp=Z,18μm,2.0s				A			12 15 20.0	
SKR	comp=Z,20μm,2.0s				A			12 15 20.0	
SKR	comp=Z,18μm,2.0s				A			12 15 20.0	
SKR	comp=Z,20μm,2.0s				A			12 15 20.7	
SKR	comp=Z,4μm,0.5s				A			12 15 20.7	
SKR	comp=Z,3μm,0.5s				A			12 15 20.7	
SKR	comp=Z,24μm,1.0s				AMS	AMS		12 15 42.0	
SKR	comp=Z,18μm,12.0s				AMS	AMS		12 15 42.0	
SKR	comp=Z,19μm,12.0s				AMS	AMS		12 15 42.0	
SKR	comp=Z,13μm,12.0s				AMS	AMS		12 15 42.0	
SKR	comp=Z,12μm,12.0s								
KUR	**Kuril'sk**	**5.36**	**237**	*e*	PN		**Pn**	**12 15 19.5**	**-0.2**
KUR				*i*	S		**Sn**	**12 16 23.0**	**+3.0**
KUR	comp=N,8μm,2.0s				pmax	pmax			
KUR	comp=E,12μm,2.0s				pmax	pmax			
KUR	comp=Z,15μm,2.0s				pmax	pmax			
KUR	comp=N,840nm,0.5s				pmax	pmax			
KUR	comp=E,680nm,0.5s				pmax	pmax			
KUR	comp=Z,3μm,0.5s				smax				
KUR	comp=N,27μm,2.0s				smax				
KUR	comp=E,35μm,2.0s				smax				
KUR	comp=N,9μm,1.0s				smax				
KUR	comp=E,6μm,1.0s				smax				
PET	**Petropavlovsk**	**5.48**	**29**	*e*	Pn		**Pn**	**12 15 16.1**	**-5.3**
PET				*e*	Sn		**Sn**	**12 16 24.7**	**+1.7**
PET	**Petropavlovsk**	**5.48**	**29**	⇓*i*	PN		**Pn**	**12 15 21.2**	**-0.2**
PET	comp=Z,334nm,0.5s				pmax	pmax			
PET	comp=Z,4μm,18.0s				MLR	MLR			
PET	comp=Z,3μm,14.0s				MLR	MLR			
YUK	**Yuzh-Kuril'sk**	**7.22**	**237**	⇓*i*	PN		**Pn**	**12 15 46.4**	**+1.1**
YUK				*i*	S		**Sn**	**12 17 08.5**	**+2.6**
YUK	comp=N,210nm,0.5s				pmax	pmax			
YUK	comp=E,600nm,0.5s				pmax	pmax			
YUK	comp=Z,2μm,0.5s				pmax	pmax			
YUK	comp=Z,8μm,1.5s				pmax	pmax			
YUK	comp=N,5μm,1.0s				pmax	pmax			
YUK	comp=E,3μm,1.0s				smax				
YUK	comp=E,6μm,1.0s				smax				
YUK	comp=N,10μm,1.8s				smax				
YUK	comp=N,5μm,0.7s				smax				
YUK	comp=E,2μm,0.5s				MLR	MLR			
YUK	comp=Z,12μm,18.0s				MLR	MLR			
YUK	comp=N,8μm,20.0s				MLR	MLR			
YUK	comp=E,11μm,16.0s								
YUK	**Yuzh-Kuril'sk**	**7.22**	**237**	⇓*i*	P		**Pn**	**12 15 46.4**	**+1.1**
YUK					AMB	AMB		12 15 47.5	
YUK	comp=E,210nm,0.5s				AMB	AMB		12 15 47.5	
YUK	comp=E,600nm,0.5s								
YUK	comp=E,2μm,0.5s				AMB	AMB		12 15 47.5	
YUK	comp=E,5μm,1.0s				AMB	AMB		12 15 55.4	
YUK	comp=E,3μm,1.0s				AMB	AMB		12 15 55.4	
YUK	comp=E,8μm,1.5s				AMB	AMB		12 15 55.4	
YUK				*i*	S		**Sn**	**12 17 08.5**	**+2.6**
YUK	comp=E,10μm,1.8s				A			12 17 32.4	
YUK	comp=E,6μm,1.0s				A			12 17 32.4	
YUK	comp=E,5μm,0.7s				A			12 17 40.5	
YUK	comp=E,2μm,0.5s				A			12 17 40.5	
YUK	comp=E,12μm,18.0s				AMS	AMS		12 18 28.0	
YUK	comp=E,11μm,16.0s				AMS	AMS		12 18 28.0	
YUK	comp=E,8μm,20.0s				AMS	AMS		12 18 28.0	
JRA	**Rausu**	**7.70**	**239**	P			**Pn**	**12 15 53.4**	**+1.6**
JRA				*e*	S		**Sn**	**12 17 22.4**	**+4.8**
NEM2	**Nemuro 2**	**7.73**	**233**	P			**Pn**	**12 15 50.6**	**-1.6**
NEM2				*e*	S		**Sn**	**12 17 15.0**	**-3.3**
YSS	**Yuzh-Sakhalins**	**7.88**	**264**	P			**Pn**	**12 15 47.4**	**-6.9**
YSS				⇑*e*	P			12 15 54.7	
YSS				*e*	Sn		**Sn**	**12 17 23.9**	**+1.8**
YSS	**Yuzh-Sakhalins**	**7.88**	**264**	⇓*i*	PN		**Pn**	**12 15 58.0**	**+3.7**
YSS				*e*	S		**Sn**	**12 17 25.8**	**+3.8**
YSS	comp=E,900nm,0.9s				pmax	pmax			
YSS	comp=Z,820nm,0.9s				pmax	pmax			
YSS	comp=N,500nm,1.0s				pmax	pmax			
YSS	comp=E,350nm,0.9s				smax				
YSS	comp=N,310nm,1.0s				smax				
YSS	comp=E,3μm,18.0s				MLR	MLR			
YSS	comp=Z,4μm,18.0s				MLR	MLR			
YSS	**Yuzh-Sakhalins**	**7.88**	**264**	⇓*i*	P		**Pn**	**12 15 58.0**	**+3.7**
YSS					AMB	AMB		12 15 59.0	
YSS	comp=Z,500nm,1.0s				AMB	AMB		12 15 59.0	
YSS	comp=Z,820nm,0.9s				AMB	AMB		12 15 59.0	
YSS	comp=Z,900nm,0.9s								
YSS				*e*	S		**Sn**	**12 17 25.8**	**+3.8**
YSS	comp=Z,350nm,0.9s				A			12 17 29.5	
YSS	comp=Z,310nm,1.0s				A			12 17 29.5	
YSS	comp=Z,3μm,18.0s				AMS	AMS		12 18 38.0	
YSS	comp=Z,4μm,18.0s				AMS	AMS		12 18 38.0	
TYV	**Tymovskoe**	**7.95**	**293**	*e*	P		**Pn**	**12 15 57.0**	**+1.8**
TYV					AMB	AMB		12 16 03.0	
TYV	comp=Z,800nm,6.0s				AMB	AMB		12 16 03.0	
TYV	comp=Z,2μm,2.0s				AMB	AMB		12 16 03.0	
TYV	comp=Z,2μm,4.0s				AMB	AMB		12 16 03.5	
TYV	comp=Z,264nm,1.0s				AMB	AMB		12 16 03.5	
TYV	comp=Z,418nm,1.0s				AMB	AMB		12 16 03.5	
TYV	comp=Z,55nm,0.8s			*e*	S		**Sn**	**12 17 30.0**	**+6.3**
TYV					AMS	AMS		12 19 14.0	
TYV	comp=Z,4μm,19.0s				AMS	AMS		12 19 14.0	
TYV	comp=Z,6μm,19.0s				AMS	AMS		12 19 14.0	
TYV	comp=Z,6μm,16.0s								
UGL	**Uglegorsk**	**8.10**	**280**	⇑*i*	PN		**Pn**	**12 16 02.6**	**+5.4**
UGL					S		**Sn**	**12 17 33.0**	**+5.7**
UGL					pmax	pmax			
UGL	comp=E,132nm,0.9s				pmax	pmax			
UGL	comp=Z,1μm,0.9s				pmax	pmax			
UGL	comp=N,93nm,0.7s				smax				
UGL	comp=E,88nm,0.6s				smax				
UGL	comp=N,145nm,0.8s				MLR	MLR			
UGL	comp=N,6μm,16.0s				MLR	MLR			
UGL	comp=E,6μm,16.0s				MLR	MLR			
UGL	comp=Z,6μm,16.0s								
UGL	**Uglegorsk**	**8.10**	**280**	*e*	P		**Pn**	**12 16 02.6**	**+5.4**
UGL				⇑*i*	P			12 16 02.6	
UGL					AMB	AMB		12 16 03.5	
UGL	comp=Z,132nm,0.9s				AMB	AMB		12 16 03.5	
UGL	comp=Z,1066μm,0.9s				AMB	AMB		12 16 03.5	
UGL	comp=Z,93nm,0.7s			*e*	S		**Sn**	**12 17 33.0**	**+5.7**
UGL					A			12 17 37.0	
UGL	comp=Z,145nm,0.8s				A			12 17 37.0	
UGL	comp=Z,88nm,0.6s				AMS	AMS		12 19 09.0	
UGL	comp=Z,6μm,16.0s				AMS	AMS		12 19 09.0	
UGL	comp=Z,6μm,16.0s								
JNK	**Nakash**	**8.15**	**238**	P			**Pn**	**12 15 58.7**	**+0.8**
JTKR	**Abashiri--Toko**	**8.39**	**243**	P			**Pn**	**12 16 03.2**	**+2.0**
JAK	**Akkeshi**	**8.54**	**235**	P			**Pn**	**12 16 02.4**	**-0.9**
JMP	**Maruseppu**	**8.70**	**244**	P			**Pn**	**12 16 08.1**	**+2.7**
JSE	**Soyaes**	**8.70**	**252**	P			**Pn**	**12 16 09.9**	**+4.5**
OKH	**Okha**	**8.86**	**311**	*e*	PN		**Pn**	**12 16 13.6**	**+6.0**
OKH				*e*	S		**Sn**	**12 17 50.9**	**+5.1**
OKH	comp=Z,2μm,6.0s				pmax	pmax			
OKH	comp=Z,4μm,13.0s				MLR	MLR			
OKH	**Okha**	**8.86**	**311**	*e*	P		**Pn**	**12 16 12.8**	**+5.2**
OKH				*e*	P			12 16 13.6	
OKH					AMB	AMB		12 16 14.1	
OKH	comp=Z,400nm,1.0s				AMB	AMB		12 16 14.2	
OKH	comp=Z,2μm,6.0s			*e*	S		**Sn**	**12 17 50.9**	**+5.1**
OKH				*e*	L			12 18 40.0	
OKH					AMS	AMS		12 19 52.2	
OKH	comp=Z,4μm,13.0s				AMS	AMS		12 19 52.2	
JAR	comp=Z,4μm,14.0s **Ashorobuto**	**8.87**	**239**	P			**Pn**	**12 16 09.0**	**+1.2**
JWK2	**Keihoku**	**8.98**	**255**	P			**Pn**	**12 16 15.3**	**+5.9**
JOB	**Onbets**	**9.08**	**237**	P			**Pn**	**12 16 11.0**	**+0.3**
JOB				*e*	S		**Sn**	**12 17 48.5**	**-2.9**
ASAJ	**Asahikawa**	**9.10**	**247**	P			**Pn**	**12 16 14.9**	**+3.9**
ASAJ	**Asahikawa**	**9.10**	**247**	PN			**Pn**	**12 16 15.2**	**+4.2**
ASAJ	comp=Z,26nm,0.3s				pmax	pmax			
ASAJ	comp=Z,5μm,21.4s				MLR	MLR			
ASAJ	**Asahikawa**	**9.10**	**247**	P			**Pn**	**12 16 15.2**	**+4.2**
ASAJ	comp=Z,26nm,0.3s,baz=80,slow=14,SNR=220				LR	LR		12 19 22.0	
JKK2	comp=Z,5μm,21.4s,baz=60,slow=35 **Kamakawa 2**	**9.14**	**245**	P			**Pn**	**12 16 14.3**	**+2.8**
JSS	**Shosan**	**9.42**	**250**	P			**Pn**	**12 16 21.1**	**+5.8**
JCH	**Churui**	**9.53**	**237**	P			**Pn**	**12 16 16.0**	**-0.9**
JFR	**Furan**	**9.64**	**242**	P			**Pn**	**12 16 19.7**	**+1.4**
JAB	**Ashibetsu**	**9.66**	**245**	P			**Pn**	**12 16 21.5**	**+2.9**
JHR	**Hokuryu**	**9.83**	**247**	P			**Pn**	**12 16 24.9**	**+3.9**
JBT2	**Biratori 2**	**10.00**	**241**	P			**Pn**	**12 16 23.9**	**+0.6**
JEM	**Erimo**	**10.04**	**235**	P			**Pn**	**12 16 23.6**	**-0.3**
JNBK	**Urakawa-nobuka**	**10.09**	**238**	P			**Pn**	**12 16 22.6**	**-1.9**
JEW	**Eniwo**	**10.50**	**243**	P			**Pn**	**12 16 31.2**	**+1.1**
JSK	**Shakotan**	**10.81**	**248**	P			**Pn**	**12 16 38.0**	**+3.7**
JNB	**Noboribetsu**	**10.97**	**243**	P			**Pn**	**12 16 36.4**	**-0.1**

JKB Kayabe 11.33 240 P **Pn** **12 16 39.5 -1.9**
JSH Shimam 11.46 246 P **Pn** **12 16 43.9 +0.6**
MA2 Magadan 11.47 351 *e*Pn **Pn** **12 16 38.0 -5.2**
MA2 Magadan 11.47 351 *e*PN **Pn** **12 16 45.2 +2.0**
MA2 *e*S **Sn** **12 18 55.6 +6.0**
MA2 pmax pmax
comp=N,90nm,1.1s
MA2 pmax pmax
comp=Z,100nm,1.1s
MA2 MLR MLR
comp=Z,900nm,19.0s
JYM2 Yakumo 2 11.58 243 P **Pn** **12 16 43.8 -1.0**
JOT Ohata 11.64 238 P **Pn** **12 16 41.8 -3.9**
JSR Shiriuchi 11.91 240 P **Pn** **12 16 47.2 -2.2**
JTM Tenmabayashi 12.03 236 P **Pn** **12 16 47.4 -3.6**
JANG Nango 12.07 234 P **Pn** **12 16 46.8 -4.8**
JANG *e*S **Sn** **12 18 53.3 -11**
JOSM Okushiri--Mats 12.13 245 P **Pn** **12 16 53.1 +0.7**
JTH Tanohata 12.21 231 P **Pn** **12 16 47.7 -5.7**
TEY Ternei 12.55 261 *e*P **Pn** **12 17 01.5 +3.4**
TEY AMB AMB 12 17 03.0
comp=Z,950nm,2.0s
TEY AMB AMB 12 17 04.0
comp=Z,2µm,3.0s
TEY AMS AMS 12 22 23.0
comp=Z,1µm,14.0s
HABR Khabarovsk 12.76 278⇓ *i*PN **Pn** **12 17 06.3 +5.4**
HABR *e* 12 19 33.0
HABR pmax pmax
comp=Z,223nm,1.6s
JOM Ohasama 12.85 231 P **Pn** **12 16 56.7 -5.4**
OFUJ Ofunato 12.95 229 P **Pn** **12 16 58.1 -5.4**
JRG Rokugo 13.25 233 P **Pn** **12 17 02.8 -4.8**
SMY Shemya 13.37 63 *e*P **Pn** **12 17 05.9 -3.3**
comp=Z,2µm,0.5s
JIO Ouri 13.59 228 P **Pn** **12 17 06.5 -5.7**
JMM Marumori 14.32 228 P **Pn** **12 17 16.1 -6.0**
JYA Atsumi 14.32 233 P **Pn** **12 17 17.4 -4.8**
JFK Kawauchi 14.67 227 P **Pn** **12 17 21.5 -5.2**
SEY Seymchan 14.69 357⇑ *e*P **Pn** **12 17 27.9 +1.1**
KLR Kul'dur 14.86 282 *e*P **Pn** **12 17 30.4 +1.3**
KLR pmax pmax
comp=E,300nm,1.4s
KLR pmax pmax
comp=Z,220nm,1.4s
KLR MLR MLR
comp=E,700nm,12.5s
KLR MLR MLR
comp=Z,4µm,12.5s
JFY Yanaizu 15.22 230 P **Pn** **12 17 30.4 -3.5**
JSD Sado 15.51 234 P **Pn** **12 17 35.6 -2.0**
JYT Yasato 15.91 226 P **Pn** **12 17 38.0 -4.7**
MAJO Matsushiro 16.65 231 *e*Pn **Pn** **12 17 49.0 -3.2**
comp=Z,177nm,0.8s
MAJO Matsushiro 16.65 231 *e*P **Pn** **12 17 49.0 -3.1**
MAJO pmax pmax
comp=Z,180nm,0.8s
MJAR Matsushiro Arr 16.65 231 P **Pn** **12 17 49.8 -2.4**
comp=Z,2.1nm,0.3s,baz=30,slow=13,SNR=96
MJAR ScP ScP 12 26 07.9 -1.6
comp=Z,0.2nm,0.3s,baz=61,slow=1.2,SNR=5.6
MAT Matsushiro 16.65 231 P **Pn** **12 17 48.8 -3.3**
MAT S **S** **12 20 54.0 -11**
MAT Matsushiro 16.65 231 P **Pn** **12 17 49.0 -3.1**
JRY Ryogami san 16.71 228 P **Pn** **12 17 50.5 -2.3**
JOD2 Odawara 2 17.21 226 P **Pn** **12 17 56.1 -3.0**
MDJ Mudanjiang 17.36 267 P **Pn** **12 18 00.8 0.0**
MDJ AP pP 12 18 04.8 -8.2
MDJ S **S** **12 21 13.8 -5.6**
MDJ XS sS 12 21 26.5 -11
MDJ SCS ScS 12 29 52.5 +1.9
MDJ AMB AMB
comp=Z,88nm,1.1s
MDJ AMB AMB
comp=Z,558nm,12.7s
MDJ LR LR
comp=N,627nm,22.9s
MDJ LR LR
comp=E,841nm,26.3s
MDJ LR LR
comp=Z,1µm,23.5s
ZEA Zeya 17.77 298 *e*P pP 12 18 16.5 -0.9
ZEA AMB AMB 12 18 21.0
comp=Z,1µm,3.0s
ZEA *e*S **S** **12 21 26.5 -1.0**
ZEA A 12 21 30.0
comp=Z,600nm,7.0s
JGF Kuroka 17.81 231 P **Pn** **12 18 07.9 +1.4**
JSG Sagara 18.13 227 P **Pn** **12 18 12.5 +2.2**
JHJ2 Mitsune 18.67 221 P **Pn** **12 18 16.5 -0.3**
JHJ Hachijo jima 2 18.67 221 P **Pn** **12 18 16.0 -0.9**
comp=Z,9.8nm,0.3s,baz=165,slow=5.3,SNR=20
JIE Ise 19.09 230 P **Pn** **12 18 21.0 -0.9**
JWT Wachi 19.09 234 P **Pn** **12 18 20.3 -1.6**
YAK Yakutsk 19.46 324 *e*P **Pn** **12 18 23.9 -2.3**
comp=Z,191nm,0.9s
YAK Yakutsk 19.46 324 *e*P **Pn** **12 18 26.2 +0.1**
YAK *e*S **S** **12 22 04.4 +2.9**
YAK pmax pmax
comp=E,122nm,1.1s
YAK pmax pmax
comp=Z,167nm,1.1s
YAK pmax pmax
comp=N,86nm,1.2s
YAK pmax pmax
comp=Z,290nm,1.3s
YAK pmax pmax
comp=N,192nm,1.5s
YAK pmax pmax
comp=E,341nm,1.5s
YAK smax
comp=N,123nm,2.0s
YAK smax
comp=Z,79nm,2.5s
YAK MLR MLR
comp=Z,931nm,19.0s
YAK MLR MLR
comp=N,459nm,16.0s
CLNS Chul'man 19.64 307 *e*P **Pn** **12 18 29.4 +1.1**
CLNS *e*S **S** **12 22 06.9 +1.7**
CLNS pmax pmax
comp=Z,253nm,0.8s
CLNS pmax pmax
comp=N,165nm,1.2s
CLNS pmax pmax
comp=E,145nm,1.2s
CLNS smax
comp=N,462nm,10.6s
CLNS smax
comp=Z,684nm,11.6s
CLNS smax
comp=E,203nm,12.0s
CLNS MLR MLR
comp=N,1µm,16.0s
CLNS MLR MLR
comp=E,1µm,16.0s
CLNS MLR MLR
comp=Z,1µm,16.0s
NRGR Nerungri 19.69 306 *i*P **Pn** **12 18 31.7 +2.8**
JAD Aida 20.02 235 P **P** **12 18 31.1 +0.3**
JWZ Kozaga 20.27 230 P **P** **12 18 34.3 +0.7**
CN2 Changchun 20.43 268⇓ P **P** **12 18 33.8 -1.4**
CN2 *e*S **S** **12 22 15.8 -5.2**
CN2 AMB AMB
comp=Z,20nm,1.0s
CN2 AMB AMB
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,500nm,19.0s,MS4.2
CN2 LR LR
comp=E,1µm,19.0s,MS4.2
CN2 LR LR
comp=Z,1µm,21.0s,MS4.2
JHS Saijyo 20.56 237 P **P** **12 18 37.2 +0.5**
BILL Bilibino 20.70 13 *e*P **P** **12 18 35.6 -2.3**
comp=Z,36nm,0.8s
BILL LR LR
comp=Z,1µm,19.0s,MS4.2
BILL Bilibino 20.70 13 *e*P **P** **12 18 35.4 -2.4**
BILL MLR MLR
comp=Z,1µm,19.0s,MS4.2
JMN Monobe 21.09 234 P **P** **12 18 42.7 +0.4**
KSRS Korea Array 22.02 250 P **P** **12 18 52.9 +0.5**
comp=Z,276nm,0.9s,mb5.7,baz=50,slow=9.8,SNR=220
KSRS PcP PcP 12 22 46.9 -1.9
comp=Z,11nm,0.9s,baz=37,slow=1.0,SNR=9.3
KSRS ScP ScP 12 26 21.4 -0.2
comp=Z,2.4nm,1.1s,baz=33,slow=3.0,SNR=4.3
KSRS LR LR 12 27 03.6
comp=Z,2µm,18.5s,MS4.5,baz=52,slow=35
SNY Shenyang 22.51 265⇓ **P** **12 18 57.0 -0.5**
SNY XP sP 12 19 04.3 -11
SNY PP 12 19 25.5
SNY S **S** **12 23 01.5 +0.3**
SNY XS sS 12 23 11.3 -10
SNY SS 12 23 40.8
SNY AMB AMB
comp=Z,83nm,0.8s,mb5.2
SNY AMB AMB
comp=Z,330nm,6.3s
SNY LR LR
comp=N,829nm,19.4s
SNY LR LR
comp=Z,1µm,21.6s,MS4.2
HIA Hailar 22.64 285 *e*P **P** **12 18 58.4 -0.4**
comp=Z,145nm,1.5s,mb5.2
HIA LR LR
comp=Z,2µm,20.0s,MS4.6
HIA Hailar 22.64 285 *e*P **P** **12 18 58.4 -0.4**
HIA pmax pmax
comp=Z,145nm,1.5s
HIA MLR MLR
comp=Z,2µm,20.0s
INCN Inchon 22.82 252 *e*P **P** **12 19 01.0 +0.2**
comp=Z,181nm,0.9s,mb5.5
INCN LR LR
comp=Z,1µm,19.0s,MS4.4
INCN Inchon 22.82 252 P **P** **12 19 02.4 +1.6**
SNR=6.1
INCN Inchon 22.82 252 P **P** **12 19 02.4 +1.6**
SNR=6.1
JTU Tsushima 23.05 242 P **P** **12 19 02.0 -1.2**
CBIJ Chichi jima 23.18 208 P **P** **12 19 04.1 -0.5**
CBIJ Chichi jima 23.18 208 P **P** **12 19 04.2 -0.4**
comp=Z,130nm,0.8s,mb5.4,baz=68,slow=19,SNR=4.8
CBIJ LR LR 12 27 06.1
comp=Z,382nm,20.5s,MS3.8,baz=95,slow=34
JNU Nakatsue 23.20 238 P **P** **12 19 03.6 -1.2**
JNU Nakatsue 23.20 238 P **P** **12 19 04.6 -0.2**
comp=Z,119nm,1.0s,mb5.3,baz=32,slow=15,SNR=28
JNU LR LR 12 29 02.9
comp=Z,562nm,18.8s,MS4.0,baz=33,slow=39
GAMB Gambell 24.11 38 *e*P **P** **12 19 12.4 -0.5**
JSU Suzuyama 24.64 236 P **P** **12 19 18.5 +0.4**
JFU Fukue jima 2 24.75 240 P **P** **12 19 18.5 -0.6**
UNV Unalaska Valle 25.03 62 PFAKE 12 19 30.0 +8.6
UNV LR LR
comp=Z,2µm,20.0s,MS4.7
DL2 Dalian 25.26 260⇓ *i*P **P** **12 19 23.8 +0.2**
DL2 XS sS 12 23 57.8 -10
DL2 AMB AMB
comp=Z,120nm,0.9s,mb5.4
DL2 AMB AMB
comp=Z,100nm,4.9s
DL2 LR LR
comp=N,240nm,23.7s,MS3.9
DL2 LR LR
comp=E,370nm,20.2s,MS3.9
DL2 LR LR
comp=Z,510nm,23.4s,MS4.0
BOD Bodaibo 25.62 307 *e*P **P** **12 19 25.2 -1.5**
BOD *e* pP 12 19 41.3 +1.8
CIT Chita 26.08 294 *e*P **P** **12 19 31.9 +1.0**
CIT *e* pP 12 19 40.3 -3.5
CIT *e* 12 19 51.8
CIT *e* 12 20 17.2
CIT *e* 12 22 56.8
TIXI Tiksi 26.20 342 *e*P **P** **12 19 29.8 -2.0**
comp=Z,17nm,1.0s,mb4.5
TIXI LR LR
comp=Z,854nm,19.0s,MS4.3
TIXI Tiksi 26.20 342 *e*P **P** **12 19 29.7 -2.1**
TIXI *e* 12 20 09.8
TIXI *e* 12 22 54.8
TIXI pmax pmax
comp=Z,38nm,1.1s,mb4.8
TIXI MLR MLR
comp=Z,680nm,15.0s,MS4.3
TNA Tin City 26.31 35 *e*P **P** **12 19 32.8 0.0**
comp=Z,81nm,0.8s,mb5.3
TNA LR LR
comp=Z,519nm,21.0s,MS4.0
BJI Beijing 28.29 267 P **P** **12 19 52.3 +1.5**
BJI AMB AMB
comp=Z,22nm,0.9s,mb4.8
BJI AMB AMB
comp=Z,276nm,4.8s
BJI LR LR
comp=N,434nm,18.1s,MS4.4
BJI LR LR
comp=E,754nm,16.9s,MS4.4
BJI LR LR
comp=Z,731nm,26.9s
BJT Baijiatuau 28.31 267 *e*P **P** **12 19 52.1 +1.1**
comp=Z,21nm,0.8s,mb4.8
BJT LR LR
comp=Z,1µm,20.0s,MS4.4
BJT Baijiatuau 28.31 267 *e*P **P** **12 19 52.1 +1.1**
BJT pmax pmax
comp=Z,21nm,0.8s
BJT MLR MLR
comp=Z,1µm,20.0s
JOW Kunigami 29.48 233 P **P** **12 20 01.6 0.0**
comp=Z,73nm,0.9s,mb5.4,baz=36,slow=2.1,SNR=5.7
JOW LR LR 12 32 12.4
comp=Z,572nm,21.5s,MS4.2,baz=171,slow=37
SSE Sheshan 30.39 248 P **P** **12 20 10.0 +0.4**
SSE S **S** **12 25 08.5 +1.9**
SSE AMB AMB
comp=Z,48nm,0.9s,mb5.2
SSE AMB AMB
comp=Z,95nm,7.0s
SSE LR LR
comp=N,407nm,20.8s,MS4.3
SSE LR LR
comp=E,533nm,20.8s,MS4.3
SSE LR LR
comp=Z,673nm,16.6s,MS4.4
TTA Tatalina 30.75 43 *e*P **P** **12 20 12.2 -0.1**
SVW2 Sparrevohn 30.85 47 *e*P **P** **12 20 12.6 -0.7**
HHC Hu-ho-hao-te 30.98 272 *e*P **P** **12 20 14.5 -0.1**
HHC AP pP 12 20 19.0 -8.6
HHC PP PP 12 21 15.5 -10
HHC S **S** **12 25 16.8 +1.3**
HHC PCS PcS 12 26 54.3 +0.7
HHC AMB AMB
comp=Z,40nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,157nm,5.0s
HHC LR LR
comp=N,465nm,14.3s,MS4.6
HHC LR LR
comp=E,939nm,19.0s,MS4.6
HHC LR LR
comp=Z,897nm,21.4s,MS4.4
NJ2 Nanjing 31.20 252 *e*P **P** **12 20 17.3 +0.6**
NJ2 AP pP 12 20 21.3 -8.4
NJ2 PP PP 12 21 18.3 -9.4
NJ2 S **S** **12 25 21.0 +1.7**
NJ2 AMB AMB
comp=Z,70nm,1.0s,mb5.5
NJ2 AMB AMB
comp=Z,160nm,4.7s
NJ2 LR LR
comp=N,2µm,18.2s,MS4.9
NJ2 LR LR
comp=E,1µm,20.2s,MS4.9
NJ2 LR LR
comp=Z,1µm,20.2s,MS4.6
SONM Songino Array 31.57 287 P **P** **12 20 19.2 -0.5**
SONM PcP PcP 12 23 09.9 -1.2
SONM ScP ScP 12 26 49.1 -0.7
SONM LR LR 12 34 17.6
SONM *e* 12 51 54.5
SONM Songino Array 31.57 287 P **P** **12 20 19.2 -0.5**
SONM 12 23 09.9
SONM Songino Array 31.57 287 P **P** **12 20 19.2 -0.5**
comp=Z,7.4nm,0.8s,mb4.5,baz=58,slow=7.9,SNR=42
SONM PcP PcP 12 23 09.9 -1.2
comp=Z,12nm,0.8s,baz=108,slow=1.8,SNR=17
SONM ScP ScP 12 26 49.1 -0.7
comp=Z,1.9nm,0.9s,baz=61,slow=3.7,SNR=4.4
SONM LR LR 12 34 17.6
comp=Z,2µm,18.5s,MS4.8,baz=64,slow=38
SONM P3KPbc 12 51 54.5
comp=Z,0.4nm,0.8s,baz=230,slow=4.8,SNR=4.6
TIY Taiyuan 31.99 266 P **P** **12 20 21.0 -2.6**
TIY S **S** **12 25 32.0 +0.5**
TIY LR LR
comp=N,411nm,13.7s
TIY LR LR
comp=E,824nm,21.2s
TIY LR LR
comp=Z,1µm,22.7s
IMA2 Indian Mountai 32.09 37 *e*P **P** **12 20 24.0 -0.1**
BTO Baotou 32.12 273 *e*P **P** **12 20 24.0 -0.7**
TLY Talaya 32.17 295 *e*P **P** **12 20 25.4 +0.4**
TLY LR LR
comp=Z,2µm,19.0s,MS4.7
TLY Talaya 32.17 295 *e*P **P** **12 20 27.1 +2.1**
TLY *e* 12 20 48.9
TLY *e* 12 21 49.5
TLY *e* 12 27 27.0
TLY pmax pmax
comp=Z,15nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,1µm,18.0s,MS4.7
TLY Talaya 32.17 295 P **P** **12 20 27.4 +2.4**
SNR=6.3
TLY Talaya 32.17 295 P **P** **12 20 27.4 +2.4**
SNR=6.3
KDAK Kodiak Island 32.53 53 P **P** **12 20 26.3 -1.8**
KDAK PcP PcP 12 23 13.0 -0.5
KDAK LR LR
comp=Z,457nm,22.0s,MS4.1
KDAK Kodiak Island 32.53 53 P **P** **12 20 26.3 -1.8**
comp=Z,17nm,0.8s,mb5.0,baz=338,slow=3.3,SNR=8.4
KDAK PcP PcP 12 23 13.0 -0.6
comp=Z,13nm,0.9s,baz=92,slow=22,SNR=3.6
ZAK Zakamensk 32.74 293 *e*P **P** **12 20 29.2 -0.8**
MOY Mondy 33.77 296 *e*P **P** **12 20 40.9 +2.0**
PMR Palmer 33.95 46 *e*P **P** **12 20 40.9 +0.5**
comp=Z,221nm,2.3s,mb5.7
PMR P 12 20 41.1
PMR LR LR
comp=Z,681nm,19.0s,MS4.4
SML Sawmill 34.31 45 *e*P **P** **12 20 42.3 -1.3**
COLA College 34.44 40 *e*P **P** **12 20 44.8 +0.2**
comp=Z,73nm,0.8s,mb5.7
COLA LR LR
comp=Z,732nm,22.0s,MS4.4
TATO Taipei 34.70 240 PFAKE 12 21 00.0 +13
TATO LR LR
comp=Z,1µm,20.0s,MS4.6
YHNB Yeheng 35.00 239 *e*P **P** **12 20 48.1 -1.7**
WHN Wuhan 35.08 254⇑ P **P** **12 20 50.3 -0.2**
WHN PCP PcP 12 23 21.5 +0.2
WHN S **S** **12 26 16.5 -2.9**
WHN AMB AMB
comp=Z,153nm,0.6s,mb6.1
WHN LR LR
comp=Z,1µm,22.8s,MS4.6
GUMO Guam 35.49 196 PFAKE 12 21 00.0 +5.9
GUMO LR LR
comp=Z,459nm,21.0s,MS4.2
MENT Mentasta 36.36 43 *e*P **P** **12 21 01.4 +0.3**
QZH Quanzhou 36.42 243⇑ *i*P **P** **12 21 03.0 +1.0**
XAN Xi'an 36.43 264 P **P** **12 21 01.5 -0.5**
XAN S **S** **12 26 42.5 +2.5**
XAN AMB AMB
comp=Z,39nm,1.1s,mb5.2
XAN AMB AMB
comp=Z,137nm,17.0s
XAN LR LR
comp=N,257nm,24.6s,MS4.4
XAN LR LR
comp=E,662nm,21.4s,MS4.4
XAN LR LR
comp=Z,867nm,23.1s,MS4.5
EGAK Eagle 37.30 40 *e*P **P** **12 21 08.5 -0.5**
EGAK LR LR
comp=Z,515nm,21.0s,MS4.3
DAWY Dawson 38.15 41 *e*P **P** **12 21 16.7 +0.5**
LZH Lanzhou 38.62 271⇓ P **P** **12 21 21.5 +1.0**
LZH AP pP 12 21 26.0 -7.8
LZH XP sP 12 21 28.5 -11
LZH PP PP 12 22 53.5 +4.0
LZH S **S** **12 27 16.3 +3.1**
LZH PCS PcS 12 27 23.0 +1.8
LZH SS SS 12 29 56.8 -7.8
LZH SCS ScS 12 31 29.8 +3.7
LZH AMB AMB
comp=Z,123nm,1.0s,mb5.6
LZH AMB AMB
comp=Z,383nm,5.2s
LZH LR LR
comp=N,1µm,13.6s
LZH LR LR
comp=Z,2µm,17.5s,MS5.0
GTA Gaotai 39.50 278 *e*P **P** **12 21 28.5 +0.7**
GTA AP pP 12 21 36.0 -5.1
GTA XP sP 12 21 40.3 -6.7
GTA PP PP 12 23 02.8 +3.7
GTA PCP PcP 12 23 35.5 +0.9
GTA S **S** **12 27 29.0 +2.6**
GTA SS SS 12 30 17.5 -4.6
GTA AMB AMB
comp=Z,12nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,104nm,4.6s
GTA LR LR
comp=N,497nm,16.7s,MS4.7
GTA LR LR
comp=E,862nm,17.1s,MS4.7
GTA LR LR
comp=Z,1µm,16.7s,MS4.8
INK Inuvik 39.92 33 *e*P **P** **12 21 31.5 +0.6**
INK Inuvik 39.92 33 P **P** **12 21 31.5 +0.5**
comp=Z,31nm,0.9s,mb5.0,baz=286,slow=7.2,SNR=88
SKAG Skagway 41.03 47 *e*P **P** **12 21 41.8 +1.6**
SIT Sitka 41.77 51 PFAKE 12 22 00.0 +14
SIT LR LR
comp=Z,792nm,19.0s,MS4.6
CD2 Chengdu 41.79 264⇑ *i*P **P** **12 21 46.5 -0.3**
CD2 AP pP 12 21 51.0 -9.1
CD2 PP PP 12 23 26.5 +2.5
CD2 PCP PcP 12 23 43.0 +0.8
CD2 PCS PcS 12 27 33.3 -0.5
CD2 S **S** **12 28 03.3 +2.7**
CD2 SS SS 12 31 04.3 -3.5
CD2 SCS ScS 12 31 47.0 +1.9
CD2 AMB AMB
comp=Z,180nm,0.9s,mb5.7
CD2 AMB AMB
comp=Z,190nm,4.4s
CD2 LR LR
comp=N,520nm,18.0s,MS4.7
CD2 LR LR
comp=E,830nm,19.2s,MS4.7
CD2 LR LR
comp=Z,870nm,19.2s,MS4.7
ZAA0 Zalesovo Array 42.34 305 *e*P **P** **12 21 50.6 -0.3**
ZALV Zalesovo Beam 42.34 305 P **P** **12 21 50.6 -0.4**
comp=Z,6.7nm,0.6s,mb4.5,baz=61,slow=7.2,SNR=26
ZALV PcP PcP 12 23 43.1 -0.4
comp=Z,47nm,0.8s,baz=79,slow=3.2,SNR=34
ZALV LR LR 12 40 18.4
comp=Z,534nm,21.3s,MS4.4,baz=171,slow=37
ZAL Zalesovo 42.35 305 P **P** **12 21 50.6 -0.5**
ZAL 12 23 43.1
GYA Guiyang 42.81 257⇑ *i*P **P** **12 21 55.3 +0.1**
GYA AP pP 12 21 59.8 -8.7
GYA XP sP 12 22 02.8 -12
GYA PP PP 12 23 38.0 +2.9
GYA PCP PcP 12 23 48.3 +2.7
GYA S **S** **12 28 19.5 +3.8**
GYA SS SS 12 31 23.5 -4.5
GYA SCS ScS 12 31 55.3 +3.8
GYA AMB AMB
comp=Z,100nm,1.3s,mb5.4
GYA AMB AMB
comp=Z,160nm,5.2s
GYA LR LR
comp=N,680nm,19.5s,MS4.7
GYA LR LR
comp=E,500nm,18.3s,MS4.7

GYA LR LR
comp=Z,800nm,19.2s,MS4.6
NVS Novosibirsk 42.86 306 *e*P **P 12 21 54.7 -0.5**
NVS pmax pmax
comp=E,21nm,1.6s
NVS pmax pmax
comp=Z,22nm,1.6s,mb4.6
NVS pmax pmax
comp=N,14nm,1.9s
WRAK Wrangell Islan 43.53 51 PFAKE 12 22 10.0 +9.4
WRAK LR LR
comp=Z,540nm,22.0s,MS4.4
DLBC Dease Lake 43.96 47 *e*P **P 12 22 05.5 +1.5**
DLBC *ep*P pP 12 22 17.7 +0.3
WMQ Urumqi 45.09 290 ⇓P **P 12 22 13.5 +0.3**
WMQ AP pP 12 22 18.5 -8.2
WMQ XP sP 12 22 20.8 -12
WMQ PCP PcP 12 23 55.0 +1.9
WMQ PP PP 12 24 00.0 +0.9
WMQ S **S 12 28 51.0 +2.5**
WMQ AMB AMB
comp=Z,23nm,0.7s,mb5.1
WMQ AMB AMB
comp=Z,143nm,4.1s
WMQ LR LR
comp=N,789nm,19.0s
WMQ LR LR
comp=E,323nm,25.6s
WMQ LR LR
comp=Z,807nm,21.7s,MS4.6
QIZ Qiongzhong 46.17 247 P **P 12 22 23.3 +1.3**
QIZ PP PP 12 24 12.0 +1.0
QIZ S **S 12 29 06.5 +1.9**
QIZ AMB AMB
comp=Z,58nm,1.2s,mb5.4
QIZ LR LR
comp=E,417nm,16.4s
QIZ LR LR
comp=Z,600nm,16.2s,MS4.6
QIZ Qiongzhong 46.17 247 *e*P **P 12 22 22.9 +0.8**
comp=Z,77nm,1.2s,mb5.5
QIZ LR LR
comp=Z,462nm,22.0s,MS4.4
KMI Kunming 46.29 259 P **P 12 22 23.0 +0.1**
KMI PP PP 12 24 10.0 -2.1
KMI S **S 12 29 04.5 -1.7**
KMI AMB AMB
comp=Z,64nm,1.2s,mb5.4
KMI AMB AMB
comp=Z,144nm,3.1s
KMI LR LR
comp=N,355nm,19.6s,MS4.4
KMI LR LR
comp=E,235nm,16.9s,MS4.4
KMI LR LR
comp=Z,378nm,20.5s,MS4.3
MK31 Makanchi Array 46.92 297 *i* P **P 12 22 25.0 -2.6**
MK31 Makanchi Array 46.92 297 *i* P **P 12 22 25.9 -1.7**
MK31 pmax pmax
comp=Z,15nm,0.8s,mb5.0
MKAR Makanchi Array 46.92 297 P **P 12 22 26.1 -1.4**
MKAR PcP PcP 12 23 58.9 -0.5
MKAR LR LR 12 43 51.9
MKAR Makanchi Array 46.92 297 *i* P **P 12 22 26.2 -1.4**
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 46.92 297 P **P 12 22 26.1 -1.4**
comp=Z,8.9nm,0.8s,mb4.8,baz=71,slow=8.1,SNR=40
MKAR PcP PcP 12 23 58.9 -0.5
comp=Z,18nm,0.9s,baz=56,slow=4.5,SNR=7.1
MKAR LR LR 12 43 51.9
comp=Z,1μm,18.4s,MS4.9,baz=41,slow=38
KURK Kurchatov 47.15 303⇑ *e*P **P 12 22 28.9 -0.4**
KURK LR LR
comp=Z,1μm,19.0s,MS4.8
KURK Kurchatov 47.15 303 P **P 12 22 28.6 -0.7**
KURK pmax pmax
comp=Z,57nm,0.8s,mb5.5
KURK Kurchatov 47.15 303 P **P 12 22 29.4 +0.1**
SNR=17
KURK Kurchatov 47.15 303 P **P 12 22 29.4 +0.1**
SNR=17
ALE Alert 48.11 6 P **P 12 22 36.0 -0.4**
comp=Z,142nm,0.9s,mb6.0,SNR=18
RES Resolute Bay 49.11 19 *e*P **P 12 22 44.1 0.0**
YKW3 Yellowknife Ar 49.18 38 *e*P **P 12 22 44.8 +0.1**
YKA Yellowknife Ar 49.21 38 P **P 12 22 45.1 +0.1**
YKA 12 24 06.5
YKA pmax pmax
comp=Z,45nm,0.9s
YKA Yellowknife Ar 49.21 38 P **P 12 22 45.1 +0.1**
comp=Z,45nm,0.9s,mb5.5,baz=298,slow=7.4,SNR=350
YKA PcP PcP 12 24 06.5 -0.9
comp=Z,4.1nm,1.0s,baz=307,slow=3.9,SNR=4.3
BVA0 Borovoye Array 50.47 309 *i* P **P 12 22 54.4 -0.3**
BRVK Borovoye 50.51 309 P **P 12 22 54.9 -0.1**
comp=Z,288nm,0.6s,SNR=18
BRVK Borovoye 50.51 309⇑ *e*P **P 12 22 54.3 -0.7**
BRVK LR LR
comp=Z,1μm,19.0s,MS4.9
BRVK Borovoye 50.51 309 P **P 12 22 53.7 -1.3**
BRVK pmax pmax
comp=Z,28nm,0.7s,mb5.3
BRVK Borovoye 50.51 309 P **P 12 22 55.0 0.0**
SNR=7.8
BRVK Borovoye 50.51 309 P **P 12 22 55.0 0.0**
SNR=7.8
LSA Lhasa 50.96 273 P **P 12 22 58.0 -0.8**
LSA AP pP 12 23 04.8 -7.6
LSA XP sP 12 23 09.0 -9.2
LSA PCP PcP 12 24 12.3 -2.1
LSA PP PP 12 24 53.8 -1.6
LSA SCP ScP 12 28 05.8 -0.4
LSA PCS PcS 12 28 10.3 -1.8
LSA S **S 12 30 08.0 -3.9**
LSA XS sS 12 30 27.5 -7.3
LSA SCS ScS 12 32 45.0 +0.1
LSA SS SS 12 33 48.5 +1.5
LSA AMB AMB
comp=Z,30nm,0.8s,mb5.3
LSA LR LR
comp=E,360nm,19.8s
LSA LR LR
comp=Z,570nm,24.2s,MS4.5
LSA Lhasa 50.96 273 PFAKE 12 23 10.0 +11
LSA LR LR
comp=Z,527nm,19.0s,MS4.6
CHRT Chiangrai 51.92 257⇑P **P 12 23 07.0 +1.0**
comp=Z,276nm,0.8s,mb6.2
A04A Legoe Bay, Lum 52.31 56⇑P **P 12 23 08.3 -0.2**
baz=52
IMP Imphal 52.35 266 *e*P **P 12 23 09.0 -0.1**
NLWA Neilton Lookou 52.39 58 ⇓P **P 12 23 08.7 -0.4**
baz=52
VDB Vedder Mountai 52.47 56 P **P 12 23 09.1 -0.6**
A05A Maple Falls 52.50 56⇑P **P 12 23 09.5 -0.4**
baz=52
KKTK Khon Kaen 52.57 251 P **P 12 23 11.6 +0.8**
comp=Z,432nm,0.7s
C04A Brinnon 52.71 57⇑P **P 12 23 11.4 -0.1**
baz=53
B05A Bryant 52.90 56⇑P **P 12 23 12.4 -0.5**
baz=53
SDKM Sandakan 52.92 229⇑P **P 12 23 13.3 -0.1**
TKM2 Tokmak 2 53.01 296 *e*P **P 12 23 13.7 -0.1**
TKM2 *ep*P pP 12 23 30.9 +3.4
TKM2 LR LR
comp=Z,669nm,21.0s,MS4.7
E03A Lebam 53.03 59 ⇓P **P 12 23 13.6 -0.3**
baz=53
KKM Kota Kinabalu 53.07 230 ⇓P **P 12 23 14.7 +0.2**
B06A Marblemount 53.10 56⇑P **P 12 23 13.9 -0.4**
baz=53
SHL Shillong 53.18 268 *i* P **P 12 23 16.0 +0.7**
comp=Z,8.5nm,1.0s,mb4.6
SHL *e*S **S 12 30 43.0 +0.6**
CHG Chiang Mai 53.23 256⇑P **P 12 23 16.3 +0.6**
comp=Z,100nm,0.9s,mb5.7
CHTO Chiang Mai 53.23 256 P **P 12 23 15.2 -0.5**
CHTO LR LR
comp=Z,604nm,19.0s,MS4.7
CHTO Chiang Mai 53.23 256 P **P 12 23 16.4 +0.7**
CHTO pmax pmax
comp=Z,69nm,0.8s,mb5.6
CHTO Chiang Mai 53.23 256 P **P 12 23 16.6 +1.0**
SNR=48
CHTO Chiang Mai 53.23 256 P **P 12 23 16.6 +1.0**
SNR=48
F03A Seaside 53.38 59 ⇓P **P 12 23 16.4 -0.1**
baz=53
A07A Ashnola River, 53.40 55 P **P 12 23 16.4 -0.2**
baz=53,SNR=9.6
C05A Tolt Reservoir 53.44 57⇑P **P 12 23 16.6 -0.3**
baz=53
USP Ospenovka 53.47 297 P **P 12 23 16.6 -0.6**
SNR=16
E04A Onalaska 53.48 58 ⇓P **P 12 23 17.2 0.0**
baz=53
D05A Enumclaw 53.56 57⇑P **P 12 23 17.8 0.0**
baz=53
FRU Bishkek 53.65 296 *e*P **P 12 23 19.0 +0.5**
FRU *e* pP 12 23 33.5 +1.3
KZA Kyzart 53.70 295 P **P 12 23 19.5 +0.6**
SNR=7.6
TSM Tawau 53.75 227⇑P **P 12 23 19.9 +0.4**
AAK Ala-Archa 53.84 296 P **P 12 23 19.9 0.0**
SNR=7.7
B07A Winthrop 53.88 55⇑P **P 12 23 19.9 -0.2**
baz=54,SNR=6.2
RCM Mount Rainier- 53.91 58 P **P 12 23 20.9 +0.6**
TDL Tradedollar La 53.91 58 P **P 12 23 20.6 +0.3**
NLW Nelson Butte 53.98 56 P **P 12 23 20.6 -0.3**
F04A Amboy 54.03 59⇑P **P 12 23 21.0 -0.3**
baz=54
E05A Randle 54.05 58 ⇓P **P 12 23 20.9 -0.4**
baz=54
UCH Uchtor 54.06 295 *e*P **P 12 23 22.6 +1.1**
comp=Z,6.6nm,1.0s,mb4.5
UCH LR LR
comp=Z,974nm,21.0s,MS4.8
A08A Turner Farm, O 54.06 54 P **P 12 23 21.3 -0.1**
baz=54,SNR=12
D06A Ole Elum 54.20 57 ⇓P **P 12 23 21.9 -0.5**
baz=54
EKS2 Erkin-Say 54.25 296 *e*P **P 12 23 22.3 -0.6**
comp=Z,9.4nm,0.8s,mb4.8
EKS2 LR LR
comp=Z,735nm,19.0s,MS4.8
EKS2 Erkin-Say 54.25 296 P **P 12 23 22.1 -0.8**
SNR=10
H03A Soap Creek Ran 54.25 61⇑P **P 12 23 23.0 +0.2**
baz=54
BDT Bhumibol Dam 54.34 255 P **P 12 23 25.0 +1.2**
C07A Waterville 54.35 56 P **P 12 23 23.4 -0.2**
baz=54,SNR=7.0
B08A Colville Reser 54.37 55 P **P 12 23 23.4 -0.2**
baz=54,SNR=12
ARU Arti 54.38 317 *e*P **P 12 23 23.2 -0.4**
ARU LR LR
comp=Z,544nm,21.0s,MS4.6
ARU Arti 54.38 317 *d i*P **P 12 23 22.9 -0.7**
ARU *e* 12 24 26.1
ARU 12 25 28.6
ARU PPP 12 26 36.6
ARU S **S 12 31 01.1 +3.3**
ARU SS SS 12 34 41.2 +1.4
ARU pmax pmax
comp=Z,37nm,1.0s,mb5.3
ARU MLR MLR
comp=Z,402nm,22.0s,MS4.4
WTV Waterville 54.41 56 P **P 12 23 23.5 -0.4**
A09A Danville 54.42 54⇑P **P 12 23 24.0 0.0**
baz=54,SNR=11
E06A Yakima 54.50 58⇑P **P 12 23 24.7 0.0**
baz=54
EBG Ellensburg 54.52 57 P **P 12 23 25.0 +0.2**
AML Almayashu 54.61 296 *e*P **P 12 23 26.9 +1.3**
comp=Z,17nm,1.0s,mb5.0
AML LR LR
comp=Z,872nm,21.0s,MS4.8
EDM Edmonton 54.68 47 *e*P **P 12 23 25.6 -0.3**
D07A Quincy 54.69 56 ⇓P **P 12 23 25.7 -0.3**
baz=54
TAPN Taplejung 54.78 273 *e*P **P 12 23 28.1 +1.1**
comp=Z,79nm,0.9s,mb5.7
EPH Ephrata 54.80 56 P **P 12 23 26.2 -0.6**
J02A Umpqua 54.85 62 ⇓P **P 12 23 27.3 +0.1**
baz=55
C08A Higginbotham F 54.86 55 ⇓P **P 12 23 26.8 -0.4**
baz=55
H04A Detroit Lake 54.89 60 ⇓P **P 12 23 27.4 -0.1**
baz=55
A10A Northport 54.97 54⇑P **P 12 23 28.0 0.0**
baz=55
B09A Rice 54.98 54 ⇓P **P 12 23 28.0 0.0**
baz=55,SNR=5.6
F06A Goldendale 55.06 58 ⇓P **P 12 23 28.7 0.0**
baz=55
G05A Wamic 55.06 59 ⇓P **P 12 23 28.6 -0.1**
baz=55
DAG Danmarks Havn 55.11 358⇑ *i*P **P 12 23 26.9 -1.7**
comp=Z,7.8nm,1.2s,mb4.6
OD2 Odessa Site #2 55.27 56 P **P 12 23 29.8 -0.4**
C09A Chrisman Ranch 55.27 55⇑P **P 12 23 29.7 -0.5**
baz=55
I04A Tendick Farm, 55.28 61⇑P **P 12 23 30.4 0.0**
baz=55
ODAN Odare 55.32 273 *e*P **P 12 23 31.7 +0.9**
comp=Z,25nm,0.5s,mb5.5
D08A Wollman Farm, 55.35 56 ⇓P **P 12 23 30.3 -0.5**
baz=55
WRD Warden 55.37 56 P **P 12 23 29.7 -1.3**
HAWA Hanford 55.40 57 *e*P **P 12 23 31.0 -0.1**
comp=Z,39nm,1.3s,mb5.3
HAWA LR LR
comp=Z,643nm,21.0s,MS4.7
H05A Madras 55.47 60⇑P **P 12 23 31.0 -0.6**
baz=55
F07A Phinny Hill Vi 55.47 58 P **P 12 23 32.0 +0.3**
baz=55,SNR=7.4
L02A Cave Junction 55.55 63⇑P **P 12 23 32.2 -0.1**
baz=55
JIRN Jiri 55.59 274 *e*P **P 12 23 33.5 +0.7**
comp=Z,60nm,0.6s,mb5.8
E08A Dider Farm, El 55.61 57⇑P **P 12 23 32.2 -0.4**
baz=56
A11A Hall Mountain, 55.62 53 P **P 12 23 33.2 +0.5**
baz=56,SNR=7.9
NEW Newport 55.62 54 *e*P **P 12 23 32.3 -0.4**
comp=Z,61nm,1.6s,mb5.4
NEW LR LR
comp=Z,490nm,22.0s,MS4.5
LVZ Lovozero 55.64 337 *e*P **P 12 23 32.6 +0.1**
LVZ LR LR
comp=Z,680nm,21.0s,MS4.7
LVZ Lovozero 55.64 337 *e*P **P 12 23 32.5 0.0**
LVZ pmax pmax
comp=Z,89nm,2.5s,mb5.3
D09A Jones Farm, Ri 55.69 56⇑P **P 12 23 32.9 -0.2**
baz=56
I05A Bend 55.73 60 ⇓P **P 12 23 33.6 0.0**
baz=56
C10A Spilker Farm, 55.79 55⇑P **P 12 23 33.6 -0.2**
baz=56
J04A Umpqua Nationa 55.79 61⇑P **P 12 23 34.0 +0.1**
baz=56
KK31 Karatay Array 55.92 298 *i* P **P 12 23 33.8 -1.1**
KK31 Karatay Array 55.92 298 *i* P **P 12 23 33.7 -1.2**
KKAR Karatay Array 55.92 298 P **P 12 23 33.7 -1.2**
H06A Lindquist Farm 55.93 59⇑P **P 12 23 35.1 +0.2**
baz=56
B11A Sandpoint 55.93 54⇑P **P 12 23 34.9 +0.1**
baz=56,SNR=5.0
G07A Ruggs Ranch, H 55.99 58⇑P **P 12 23 35.3 -0.1**
baz=56
A12A Yaak River Ran 56.02 53⇑P **P 12 23 35.4 -0.1**
baz=56
E09A Wood Farm, Sta 56.10 56 P **P 12 23 35.9 -0.2**
baz=56,SNR=5.2
KKN Kakani 56.11 275 *e*P **P 12 23 37.0 +0.5**
comp=Z,49nm,0.6s,mb5.7
APA Apatity 56.20 337⇓ *i*P **P 12 23 35.0 -1.6**
APA *i* pP 12 23 46.0 -4.4
APA pmax pmax
comp=Z,36nm,1.2s,mb5.3
APA MLR MLR
comp=Z,900nm,19.0s,MS4.9
J05A Fort Rock 56.27 61⇑P **P 12 23 37.6 +0.2**
baz=56,SNR=7.8
YBH Yreka Blue Hor 56.34 63 *e*P **P 12 23 39.1 +1.2**
comp=Z,105nm,2.2s,mb5.5
YBH Yreka Blue Hor 56.34 63⇑P **P 12 23 38.5 +0.6**
baz=56
G08A Pilot Rock 56.38 58 ⇓P **P 12 23 38.4 +0.3**
baz=56,SNR=5.8
K04A Chilquin 56.39 62⇑P **P 12 23 38.8 +0.6**
baz=56
GKN Gorkha 56.40 276 *e*P **P 12 23 39.3 +0.8**
comp=Z,77nm,0.6s,mb5.9
M02C Callahan 56.46 64 ⇓P **P 12 23 39.0 +0.2**
baz=56
PRGR Permogore 56.47 327 *e*P **P 12 23 36.3 -2.2**
PRGR *e* 12 25 41.4
PRGR *e*S **S 12 31 28.4 +2.9**
PRGR *e*SS SS 12 35 16.8 +4.4
I06A Prineville 56.47 60 ⇓P **P 12 23 39.0 +0.2**
baz=56,SNR=7.5
ARCES ARCESS Array B 56.63 341 P **P 12 23 39.1 -0.4**
ARCES P 12 23 42.8
ARCES LR LR 12 51 57.2
ARCES ARCESS Array B 56.63 341 P **P 12 23 39.1 -0.4**
comp=Z,10nm,0.9s,mb4.9,baz=41,slow=6.9,SNR=9.2
ARCES LR LR 12 51 57.2
comp=Z,530nm,20.4s,MS4.6,baz=33,slow=40
E10A Myers Farm, Un 56.69 56 P **P 12 23 40.2 -0.1**
baz=56,SNR=6.8
F09A S2 Ranch, Elgi 56.72 57⇑P **P 12 23 41.0 +0.5**
baz=57
I07A Izee 56.79 59 P **P 12 23 41.7 +0.6**
baz=57,SNR=8.2
K05A Summer Lake 56.81 61⇑P **P 12 23 41.3 +0.1**
baz=57,SNR=6.8
M04C Macdoel 56.83 63 ⇓P **P 12 23 41.8 +0.5**
baz=57
WALA Waterton Lakes 56.86 52 *e*P **P 12 23 41.5 0.0**
WALA *e*P 12 23 41.5
J06A Christmas Vall 56.92 60⇑P **P 12 23 42.4 +0.4**
baz=57,SNR=8.0
F10A Beach Ranch, E 56.94 56 ⇓P **P 12 23 42.4 +0.3**
baz=57
M03C McCloud 56.97 63 ⇓P **P 12 23 42.9 +0.5**
baz=57
B13A Whitefish 56.98 53 P **P 12 23 42.7 +0.4**
baz=57,SNR=30
H08A Prairie City 57.01 58 P **P 12 23 43.0 +0.4**
baz=57,SNR=9.4
BTM Bintulu 57.11 232 ⇓P **P 12 23 43.8 +0.2**
K06A Valley Falls 57.14 61⇑P **P 12 23 43.9 +0.3**
baz=57,SNR=7.0
WDC Whiskeytown Da 57.14 64⇑P **P 12 23 43.7 +0.1**
baz=57
KOLN Koldanda 57.24 276 *e*P **P 12 23 44.8 +0.3**
comp=Z,102nm,0.8s,mb5.9
O02C Red Bluff 57.24 65⇑P **P 12 23 44.8 +0.5**
baz=57
L05A Lakeview 57.26 62⇑P **P 12 23 45.2 +0.8**
baz=57
E11A Bogner Ranch, 57.27 55 P **P 12 23 44.0 -0.4**
baz=57,SNR=7.4
D12A Red Ives Fores 57.31 54⇑P **P 12 23 44.8 0.0**
baz=57
J07A Hines 57.34 60 ⇓P **P 12 23 45.5 +0.5**
baz=57,SNR=5.9
C13A Hot Springs 57.35 53⇑P **P 12 23 45.1 +0.2**
baz=57,SNR=11
PCI Palu 57.39 222 P **P 12 23 43.4 -2.2**
G10A Bishop Farm, J 57.41 57 P **P 12 23 45.7 +0.2**
baz=57,SNR=29
I08A Drewsey 57.43 59⇑P **P 12 23 46.2 +0.5**
baz=57,SNR=19
H09A Durkee 57.49 58 ⇓P **P 12 23 46.4 +0.4**
baz=57,SNR=20
M05C Lookout 57.50 63⇑P **P 12 23 46.3 +0.2**
baz=57
BMO Blue Mountains 57.57 57 *e*P **P 12 23 47.3 +0.7**
BMO LR LR
comp=Z,565nm,21.0s,MS4.7
F11A Grangeville 57.58 56⇑P **P 12 23 46.6 -0.1**
baz=57
GASB Alder Springs 57.61 65 ⇓P **P 12 23 47.6 +0.6**
baz=58
HATC Hat Creek Radi 57.64 63⇑P **P 12 23 47.4 +0.2**
baz=58
MOD Modoc 57.66 62 *e*P **P 12 23 47.9 +0.7**
comp=Z,51nm,1.3s,mb5.4
MOD LR LR
comp=Z,522nm,19.0s,MS4.7
MOD Modoc 57.66 62 P **P 12 23 47.9 +0.6**
baz=58,SNR=6.9
C14A Swan Lake 57.73 53 P **P 12 23 48.0 +0.3**
baz=58,SNR=9.8
D13A Huson 57.77 54 P **P 12 23 47.8 -0.2**
baz=58,SNR=9.1
K07A Rock Creek Ran 57.79 60⇑P **P 12 23 48.7 +0.5**
baz=58,SNR=6.8
G11A Walters Elk Ra 57.82 56 P **P 12 23 48.0 -0.3**
baz=58,SNR=14
J08A Circle Bar Ran 57.83 59 P **P 12 23 49.0 +0.6**
baz=58,SNR=9.5
I09A Lost Marbles R 57.87 58 P **P 12 23 49.2 +0.6**
baz=58,SNR=14
M06C Likely Place G 57.99 62⇑P **P 12 23 49.7 +0.1**
baz=58
AB31 Akbulak array 58.02 310 *i* P **P 12 23 47.9 -1.7**
H10A Noah's Angus R 58.05 57 P **P 12 23 50.1 +0.2**
baz=58,SNR=16
L07A Adell 58.15 61 ⇓P **P 12 23 51.4 +0.7**
baz=58,SNR=5.8
F12A Elk City 58.16 55 P **P 12 23 51.1 +0.4**
baz=58,SNR=18
O04C Chester 58.17 64⇑P **P 12 23 51.4 +0.5**
baz=58,SNR=5.0
SBUM Sibu 58.19 232 ⇓P **P 12 23 52.5 +1.2**
MSO Missoula 58.21 54 *e*P **P 12 23 50.9 -0.1**
comp=Z,50nm,1.4s,mb5.3
MSO LR LR
comp=Z,299nm,21.0s,MS4.4
J09A Fry Pan Ranch, 58.25 59⇑P **P 12 23 52.0 +0.6**
baz=58,SNR=12
D14A Greenough 58.29 53 ⇓P **P 12 23 51.6 +0.1**
baz=58,SNR=27
WVOR Wild Horse Val 58.30 60 PFAKE 12 24 00.0 +8.2
WVOR LR LR
comp=Z,577nm,19.0s,MS4.7
E13A Victor 58.32 54 ⇓P **P 12 23 51.6 -0.2**
baz=58,SNR=11
I10A Payette 58.33 58⇑P **P 12 23 52.7 +0.8**
baz=58,SNR=11
BOK Bokaro 58.39 271 *e*P **P 12 23 53.4 +0.8**
BOK AMb AMB 12 23 57.4
comp=Z,54nm,1.1s,mb5.5
H11A Donnelly 58.39 57 P **P 12 23 52.5 +0.2**
baz=58,SNR=45
ORV Oroville 58.40 65 P **P 12 23 51.9 -0.6**
baz=58,SNR=5.4
SUTB Sutter Butte 58.44 65⇑P **P 12 23 51.8 -1.0**
baz=58
MCCM Marconi Confer 58.45 67 PFAKE 12 24 00.0 +7.2
MCCM LR LR
comp=Z,528nm,20.0s,MS4.7
O05C Quincy 58.50 64⇑P **P 12 23 52.9 -0.3**
baz=58
CHMT Chamberlain Mo 58.53 53 *e*P **P 12 23 53.0 -0.3**
CHMT *e*P 12 23 53.1
OHCM Honcut 58.55 65 *e*P **P 12 23 51.3 -2.2**
OHCM *e*P 12 23 53.3
OHCM *ep*P pP 12 24 05.3 -2.1
L08A Fields 58.63 60⇑P **P 12 23 54.0 0.0**
baz=58,SNR=9.4
N06A Buffalo Meadow 58.65 63⇑P **P 12 23 54.1 -0.1**
baz=58,SNR=9.6
K09A Rome 58.67 60 ⇓P **P 12 23 54.4 +0.1**
baz=58
E14A Clinton 58.71 54 ⇓P **P 12 23 54.5 0.0**
baz=58,SNR=23
J10A Berg Farm, Mel 58.76 58 ⇓P **P 12 23 54.9 -0.1**
baz=59
D15A Lincoln 58.84 53 P **P 12 23 55.6 +0.3**
baz=59,SNR=12
BEKR Beckwourth 58.89 64⇑P **P 12 23 55.7 -0.2**
baz=59,SNR=10
Q04C Lincoln 58.93 65 ⇓P **P 12 23 55.9 -0.3**
baz=59
O06A Flanigan 59.02 63⇑P **P 12 23 56.8 0.0**
baz=59,SNR=5.4
FFC Flin Flon 59.05 41 P **P 12 23 57.5 +0.8**
comp=Z,290nm,0.9s,SNR=23
FFC Flin Flon 59.05 41 *e*P **P 12 23 56.8 +0.1**
comp=Z,46nm,0.9s,mb5.5

FFC LR LR
comp=Z,287nm,20.0s,MS4.4
FFC Flin Flon 59.05 41 *eP* **P 12 23 56.8 +0.1**
FFC pmax pmax
comp=Z,46nm,0.9s,mb5.5
FFC MLR MLR
comp=Z,287nm,20.0s,MS4.4
M08A Happy Creek Ra 59.07 61 ⇑P **P 12 23 57.5 +0.4**
baz=59,SNR=7.9
K10A MacKenzie Ranc 59.11 59 ⇓P **P 12 23 57.7 +0.4**
baz=59
L09A Wilkinson Ranc 59.13 60 ⇓P **P 12 23 57.7 +0.3**
baz=59,SNR=6.6
H12A Diamond D Ranc 59.13 56 ⇓P **P 12 23 57.3 -0.2**
baz=59,SNR=12
G13A Cobalt 59.13 56 P **P 12 23 57.4 -0.1**
baz=59,SNR=40
N07B Gerlach 59.14 62 ⇑P **P 12 23 57.8 +0.2**
baz=59,SNR=6.6
F14A Wisdom 59.15 54 ⇓P **P 12 23 57.7 +0.1**
baz=59,SNR=13
E15A Deer Lodge 59.16 54 P **P 12 23 57.9 +0.2**
baz=59,SNR=17
DDI Dehra Dun 59.22 282 *eP* **P 12 23 56.5 -1.8**
MFID Camas Ranch 59.30 58 ⇓P **P 12 23 58.7 0.0**
baz=59
THN Thein Dam 59.36 286 *eP* **P 12 24 00.0 +0.8**
LAVA Lava Cap Winer 59.37 65 ⇓P **P 12 23 58.8 -0.4**
baz=59,SNR=6.0
H13A Challis 59.46 56 ⇑P **P 12 23 59.8 +0.1**
baz=59
G14A Jackson 59.46 55 P **P 12 23 59.4 -0.4**
baz=59,SNR=6.9
FCC Fort Churchill 59.53 34 *eP* **P 12 23 59.9 -0.2**
FCC Fort Churchill 59.53 34 P **P 12 23 59.9 -0.1**
FCC pmax pmax
comp=Z,71nm,1.0s,mb5.7
R04C Big Horse Ranc 59.56 65 ⇑P **P 12 24 00.8 +0.3**
baz=59
PAHR Pah Rah Range 59.58 63 *eP* **P 12 24 01.0 +0.4**
O07A Toulon 59.59 63 ⇑P **P 12 24 01.1 +0.4**
baz=59,SNR=12
K11A Parker Ranch, 59.59 59 ⇓P **P 12 24 00.9 +0.2**
baz=59
F15A Butte 59.61 54 ⇑P **P 12 24 01.1 +0.3**
baz=59,SNR=29
WCN Washoe City 59.61 64 ⇓P **P 12 24 01.0 +0.1**
baz=60,SNR=5.8
LRM Limekiln Ridge 59.65 54 *eP* **P 12 24 01.3 +0.3**
EGMT Eagleton 59.67 51 PFAKE 12 24 10.0 +8.9
EGMT LR LR
comp=Z,406nm,22.0s,MS4.5
EGMT Eagleton 59.67 51 ⇑P **P 12 24 01.0 -0.1**
baz=60
L10A Juniper Basin 59.78 59 ⇑P **P 12 24 02.3 +0.4**
baz=60
R05C Kirkwood Meado 59.80 65 ⇑P **P 12 24 02.0 -0.1**
baz=60
J12A Stokes Ranch, 59.82 58 ⇑P **P 12 24 02.6 +0.4**
baz=60
DLMT Dillon 59.86 54 *eP* **P 12 24 02.9 +0.5**
I13A Wildhorse Cree 59.94 57 ⇑P **P 12 24 03.4 +0.4**
baz=60
N09A Rock Creek Ran 59.95 61 ⇓P **P 12 24 03.5 +0.3**
baz=60,SNR=9.7
HLID Hailey 60.00 57 *eP* **P 12 24 03.7 +0.2**
comp=Z,46nm,1.4s,mb5.3
HLID LR LR
comp=Z,418nm,19.0s,MS4.6
HLID Hailey 60.00 57 P **P 12 24 03.9 +0.4**
baz=60,SNR=19
KSM Kuching 60.03 233 *eP* **P 12 24 03.2 -0.8**
KSM Kuching 60.03 233 ⇑P **P 12 24 04.8 +0.8**
CMB Columbia Colle 60.04 65 *eP* **P 12 24 03.9 0.0**
comp=Z,20nm,1.4s,mb5.0
CMB LR LR
comp=Z,399nm,20.0s,MS4.5
CMB Columbia Colle 60.04 65 *eP* **P 12 24 03.9 +0.1**
CMB pmax pmax
comp=Z,20nm,1.4s,mb5.0
CMB MLR MLR
comp=Z,399nm,20.0s,MS4.5
CMB Columbia Colle 60.04 65 ⇑P **P 12 24 03.8 0.0**
baz=60,SNR=8.5
G15A Dillon 60.04 55 P **P 12 24 03.6 -0.2**
baz=60,SNR=17
MCMT McKenzie Canyo 60.06 55 *eP* **P 12 24 04.2 +0.3**
OUL Oulu 60.06 337 P **P 12 24 02.0 -1.6**
M10A I.L. Ranch, Tu 60.09 60 ⇑P **P 12 24 04.8 +0.6**
baz=60,SNR=12
PACP Pacheco Peak 60.15 67 ⇓P **P 12 24 04.6 0.0**
baz=60
BOZ Bozeman (W) 60.20 54 *eP* **P 12 24 03.8 -1.0**
comp=Z,42nm,0.9s,mb5.5
BOZ LR LR
comp=Z,263nm,19.0s,MS4.4
BOZ Bozeman (W) 60.20 54 ⇓P **P 12 24 05.2 +0.3**
baz=60,SNR=45
J13A Cove Ranch, Pi 60.24 57 ⇓P **P 12 24 05.6 +0.5**
baz=60
JOF Joensuu 60.27 334 *ep* **P 12 24 02.5 -2.5**
comp=Z,5.3nm,0.3s,mb5.0
JOF Joensuu 60.27 334 *eP* **P 12 24 02.5 -2.5**
JOF pmax pmax
comp=Z,5.0nm,0.3s,mb5.0
R06C Coleville 60.29 64 P **P 12 24 06.1 +0.5**
baz=60,SNR=12
WAKR Walker 60.31 64 *eP* **P 12 24 06.1 +0.4**
K12A Draper Farm, C 60.32 58 ⇓P **P 12 24 05.9 +0.2**
baz=60
HAST UC Hastings Re 60.38 67 ⇑P **P 12 24 06.6 +0.4**
baz=60
L12A House Creek Ra 60.57 59 ⇑P **P 12 24 08.0 +0.6**
baz=60
O09A Fish Creek Ran 60.58 62 P **P 12 24 08.1 +0.6**
baz=60,SNR=12
M11A Holland Ranch, 60.58 60 ⇑P **P 12 24 08.3 +0.8**
baz=60,SNR=17
N10A Dunphy 60.62 61 ⇓P **P 12 24 08.2 +0.4**
baz=60
K13A Stover Farm, H 60.77 58 ⇑P **P 12 24 09.1 +0.4**
baz=61
R07C Lee Vining 60.81 64 ⇑P **P 12 24 09.7 +0.6**
baz=61
V03C Hunter Liggett 60.81 68 ⇑P **P 12 24 09.9 +0.7**
baz=61
QLMT Earthquake Lak 60.83 54 *eP* **P 12 24 09.9 +0.7**
NDI New Delhi 60.85 281 *eP* **P 12 24 09.0 -0.5**
U04C Hernandez Rese 60.87 67 ⇓P **P 12 24 10.4 +0.9**
baz=61
O10A Cortez Mining, 60.91 61 ⇓P **P 12 24 10.2 +0.5**
baz=61,SNR=9.3
KTGM Kuala Trenggan 60.92 242 ⇑P **P 12 24 11.6 +1.5**
SNG Songkhla 60.98 246 P **P 12 24 11.0 +0.5**
Q08A Gabbs 60.98 63 P **P 12 24 10.6 +0.3**
baz=61,SNR=22
P09A Austin 61.01 62 ⇓P **P 12 24 10.7 +0.3**
baz=61,SNR=9.9
N11A Elko Archery C 61.01 60 ⇑P **P 12 24 11.1 +0.7**
baz=61
NVAR Mina Array Bea 61.04 64 P **P 12 24 10.6 -0.1**
NVAR Mina Array Bea 61.04 64 P **P 12 24 10.6 -0.1**
comp=Z,9.4nm,0.8s,mb5.0,baz=300,slow=5.4,SNR=43
KAPI Kappang 61.09 220 P **P 12 24 09.6 -1.6**
M12A Wells 61.10 59 ⇑P **P 12 24 11.6 +0.6**
baz=61,SNR=16
T06C Millerton Lake 61.11 66 ⇓P **P 12 24 10.7 -0.5**
baz=61
KCC Kaiser Creek 61.14 65 P **P 12 24 11.6 +0.2**
baz=61,SNR=5.6
GCMT Greycliff 61.16 53 *eP* **P 12 24 12.2 +0.9**
YMR Madison River 61.19 54 *eP* **P 12 24 12.6 +1.1**
comp=Z,43nm,1.0s,mb5.5
R08A Mina 61.21 64 ⇓P **P 12 24 12.2 +0.4**
baz=61
L13A Double Diamond 61.21 58 ⇑P **P 12 24 12.1 +0.4**
baz=61
MLAC Mammoth Lakes 61.24 65 ⇑P **P 12 24 12.7 +0.7**
baz=61
K14A Jones Ranch, D 61.35 57 ⇓P **P 12 24 13.5 +0.8**
baz=61
P10A Eureka 61.36 62 ⇓P **P 12 24 13.4 +0.6**
baz=61,SNR=5.6
YFT Old Faithful 61.40 54 *eP* **P 12 24 15.4 +2.4**
Q09A Carvers 61.45 63 ⇑P **P 12 24 13.7 +0.3**
baz=61
O11A Cowboy Ranch, 61.50 61 ⇑P **P 12 24 14.1 +0.4**
baz=61,SNR=11
M13A Montello 61.56 59 ⇓P **P 12 24 14.6 +0.5**
baz=61
LKWY Lake 61.56 54 *eP* **P 12 24 16.4 +2.3**
comp=Z,33nm,1.0s,mb5.4
LKWY LR LR
comp=Z,358nm,22.0s,MS4.5
LKWY Lake 61.56 54 *eP* **P 12 24 16.4 +2.3**
LKWY pmax pmax
comp=Z,33nm,1.0s,mb5.4
LKWY MLR MLR
comp=Z,358nm,22.0s,MS4.5
MTUM Tungsten Hills 61.58 65 *eP* **P 12 24 14.9 +0.6**
PTRM Twissleman Ran 61.68 67 *eP* **P 12 24 15.7 +0.6**
IMW Indian Meadow 61.71 55 *eP* **P 12 24 16.7 +1.6**
FLWY Flagg Ranch 61.72 55 *eP* **P 12 24 16.8 +1.7**
comp=Z,39nm,1.0s,mb5.5
S08C White Mtn Res 61.72 64 ⇑P **P 12 24 15.6 +0.4**
baz=62
V05C Boulder Hill, 61.73 67 ⇓P **P 12 24 15.5 +0.1**
baz=62
DCID1 Drake Creek 61.77 55 *eP* **P 12 24 17.2 +1.8**
RLMT Red Lodge 61.81 53 *eP* **P 12 24 16.5 +0.8**
comp=Z,178nm,1.6s,mb6.0
P11A Circle Ranch, 61.82 61 ⇑P **P 12 24 16.2 +0.3**
baz=62
N13A Wendover, West 61.87 59 ⇓P **P 12 24 16.3 +0.1**
baz=62,SNR=9.1
R09A Tonopah 61.90 63 P **P 12 24 16.6 +0.1**
baz=62,SNR=19
MOOW Moose Ponds 61.91 55 *eP* **P 12 24 16.8 +0.3**
comp=Z,46nm,1.3s,mb5.4
Q10A Clear Creek Ra 61.91 62 ⇑P **P 12 24 16.8 +0.3**
baz=62
M14A Sheep Mountain 61.94 58 ⇓P **P 12 24 16.9 +0.3**
baz=62
O12A Currie 61.94 60 P **P 12 24 17.1 +0.4**
baz=62,SNR=26
TPAW Teton Pass 61.97 55 *eP* **P 12 24 18.0 +1.1**
comp=Z,125nm,1.3s,mb5.9
BLSP Bilaspur 62.03 272 *eP* **P 12 24 17.3 -0.2**
BLSP *ex* x 12 24 18.4
comp=Z,57nm,1.1s
SMMC Simmler 62.04 67 ⇓P **P 12 24 17.4 0.0**
baz=62
LOHW Long Hollow 62.08 55 *eP* **P 12 24 18.3 +0.7**
comp=Z,126nm,1.5s,mb5.8
SNOW Snow King Moun 62.09 55 *eP* **P 12 24 19.3 +1.6**
comp=Z,85nm,1.3s,mb5.7
REDW Red Top Meadow 62.11 55 *eP* **P 12 24 18.8 +1.0**
comp=Z,136nm,1.4s,mb5.9
S09A Goldfield 62.14 64 ⇓P **P 12 24 18.0 -0.1**
baz=62,SNR=9.6
DGMT Dagmar 62.18 47 *eP* **P 12 24 18.3 +0.1**
comp=Z,92nm,1.2s,mb5.8
DGMT LR LR
comp=Z,788nm,19.0s,MS4.9
KBL Kabul 62.20 292 *eP* **P 12 24 18.4 -0.1**
comp=Z,26nm,0.9s,mb5.4
R10A Warm Springs 62.32 63 ⇓P **P 12 24 19.2 -0.1**
baz=62,SNR=5.7
Q11A Duckwater 62.34 62 ⇑P **P 12 24 19.3 -0.1**
baz=62,SNR=6.8
KAF Kangasniemi 62.34 335 *ep* **P 12 24 17.5 -1.5**
comp=Z,4.3nm,0.5s,mb4.8,baz=35,slow=6.2
KAF Kangasniemi 62.34 335 *eP* **P 12 24 17.5 -1.5**
KAF pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
LAO LASA Array 62.36 50 PFAKE 12 24 30.0 +11
LAO LR LR
comp=Z,633nm,19.0s,MS4.8
AHID Auburn Hatcher 62.36 56 PFAKE 12 24 30.0 +11
AHID LR LR
comp=Z,319nm,19.0s,MS4.5
P12A McGill 62.37 61 ⇓P **P 12 24 19.6 +0.1**
baz=62,SNR=11
S10A Tonopah Range, 62.39 63 ⇑P **P 12 24 19.8 0.0**
baz=62
PKM Peak Mountain 62.42 68 ⇑P **P 12 24 20.1 +0.1**
baz=62
KULM Kulim 62.44 245 *eP* **P 12 24 20.6 +0.3**
KULM Kulim 62.44 245 ⇑P **P 12 24 21.5 +1.2**
N14A Grayback Hills 62.45 59 ⇓P **P 12 24 20.2 +0.1**
baz=62
M15A Larsen Ranch, 62.47 58 ⇓P **P 12 24 20.5 +0.3**
baz=62
O13A Hicks Ranch, I 62.47 60 ⇓P **P 12 24 20.6 +0.4**
baz=62
GRAC Grapevine Rang 62.53 64 ⇓P **P 12 24 20.9 +0.2**
baz=62,SNR=5.3
Q12A Willow Creek R 62.70 61 ⇑P **P 12 24 22.0 +0.2**
baz=62,SNR=10.0
R11A Troy Canyon, C 62.71 62 ⇓P **P 12 24 21.8 -0.1**
baz=63
ISA Isabella 62.74 66 ⇑P **P 12 24 20.7 -1.4**
baz=63
IPM Ipoh 62.86 244 ⇓P **P 12 24 24.5 +1.5**
HWUT Hardware Ranch 62.87 57 *eP* **P 12 24 23.9 +1.0**
comp=Z,59nm,1.2s,mb5.6
HWUT LR LR
comp=Z,394nm,20.0s,MS4.6
ARVC Arvin 62.88 67 ⇑P **P 12 24 23.1 0.0**
baz=63
P13A Bates Ranch, G 62.90 60 ⇑P **P 12 24 23.1 +0.1**
baz=63
FIA1 FINESS Array S 62.95 335 *eP* **P 12 24 22.4 -0.6**
FINES FINESS Array B 62.95 335 *i* P **P 12 24 21.8 -1.3**
FINES pmax pmax
comp=Z,8.0nm,0.6s
FINES FINESS Array B 62.95 335 P **P 12 24 21.9 -1.2**
comp=Z,8.3nm,0.6s,mb5.0,baz=34,slow=6.9,SNR=40
S11A Rachel 63.08 63 ⇑P **P 12 24 24.2 -0.1**
baz=63
MPMC Manual Prospec 63.08 65 ⇓P **P 12 24 24.1 -0.2**
baz=63,SNR=8.9
DUG Dugway 63.10 59 *eP* **P 12 24 24.5 0.0**
comp=Z,65nm,1.3s,mb5.6
DUG LR LR
comp=Z,418nm,19.0s,MS4.6
DUG Dugway 63.10 59 *eP* **P 12 24 24.5 +0.1**
DUG pmax pmax
comp=Z,65nm,1.3s,mb5.6
DUG MLR MLR
comp=Z,418nm,19.0s,MS4.6
DUG Dugway 63.10 59 P **P 12 24 24.8 +0.4**
baz=63,SNR=17
BSC Santa Cruz Isl 63.13 68 ⇑P **P 12 24 24.0 -0.7**
baz=63
FURC Furnace Creek, 63.19 65 P **P 12 24 25.1 +0.1**
baz=63,SNR=11
NOQ North Oquirrh 63.19 58 *eP* **P 12 24 25.4 +0.4**
comp=Z,24nm,0.9s,mb5.3
BW06 Boulder Array 63.21 55 *eP* **P 12 24 25.2 +0.1**
comp=Z,47nm,1.1s,mb5.5
BW06 LR LR
comp=Z,474nm,21.0s,MS4.6
PDAR Pinedale Array 63.21 55 P **P 12 24 25.2 +0.1**
comp=Z,19nm,0.9s,mb5.2,baz=299,slow=2.0,SNR=100
PDAR LR LR 12 52 32.7
comp=Z,228nm,21.2s,MS4.3,baz=334,slow=37
Q13A Wheeler Ranch, 63.23 61 ⇑P **P 12 24 25.2 -0.1**
baz=63
TPNV Topopah Spring 63.24 64 *eP* **P 12 24 25.6 +0.2**
comp=Z,34nm,1.1s,mb5.4
TPNV LR LR
comp=Z,408nm,21.0s,MS4.6
TPNV Topopah Spring 63.24 64 *eP* **P 12 24 25.6 +0.2**
TPNV pmax pmax
comp=Z,34nm,1.1s,mb5.4
TPNV MLR MLR
comp=Z,408nm,21.0s,MS4.6
TPNV Topopah Spring 63.24 64 ⇓P **P 12 24 25.2 -0.2**
baz=63,SNR=5.4
OSI Osito Adit 63.28 67 ⇓P **P 12 24 25.4 -0.3**
baz=63
R12A Pony Springs, 63.30 62 ⇓P **P 12 24 25.5 -0.2**
baz=63
MYKOM Kota Tinggi 63.36 239 ⇑P **P 12 24 27.6 +1.2**
CTU Camp Tracy 63.38 58 *eP* **P 12 24 26.8 +0.6**
comp=Z,38nm,1.2s,mb5.4
SFJD Kangerlussuaq 63.47 11 P **P 12 24 25.2 -1.3**
SFJD LR LR
comp=Z,430nm,20.0s,MS4.6
SFJD Kangerlussuaq 63.47 11 *i* P **P 12 24 25.6 -0.8**
SFJD pmax pmax
comp=Z,36nm,1.0s,mb5.5
SFJD MLR MLR
comp=Z,320nm,19.0s,MS4.5
SFJD Kangerlussuaq 63.47 11 P **P 12 24 25.2 -1.3**
comp=Z,31nm,0.9s,mb5.5,baz=331,slow=7.8,SNR=9.2
SFJD Kangerlussuaq 63.47 11 *i* P **P 12 24 25.6 -0.8**
comp=Z,36nm,1.0s,mb5.5
SFJD
comp=Z,320nm,19.0s
KGM Kluang 63.48 240 ⇑P **P 12 24 28.7 +1.5**
FRIM Kepong 63.49 242 ⇑P **P 12 24 27.3 0.0**
U10A Ash Meadows, A 63.54 64 ⇑P **P 12 24 27.3 -0.1**
baz=63
EDW2 Edwards Air Fo 63.56 67 ⇑P **P 12 24 27.3 -0.3**
baz=63,SNR=9.6
JLU Jordanelle 63.61 58 *eP* **P 12 24 28.6 +0.8**
S12A Delamar Landin 63.63 62 ⇑P **P 12 24 28.3 +0.3**
baz=64
T11A Corn Creek, Al 63.66 63 ⇑P **P 12 24 28.0 -0.1**
baz=64
NLU North Lily Min 63.68 59 *eP* **P 12 24 28.9 +0.6**
KAKA Kakadu 63.77 204 *eP* **P 12 24 27.8 -1.2**
comp=Z,19nm,0.6s,mb5.3
DAU Daniels Canyon 63.84 58 P **P 12 24 30.4 +1.1**
MPU Maple Canyon 63.89 59 *eP* **P 12 24 30.1 +0.4**
comp=Z,99nm,1.4s,mb5.7
MPU LR LR
comp=Z,729nm,20.0s,MS4.9
SHOC Shoshone 63.92 65 ⇑P **P 12 24 29.4 -0.4**
baz=64
GSC Goldstone 64.00 65 ⇓P **P 12 24 30.0 -0.4**
baz=64,SNR=7.7
AJM Ajmer 64.01 281 *eP* **P 12 24 30.6 0.0**
AJM *ex* x 12 24 33.0
comp=Z,55nm,1.2s
U11A Corn Creek 64.11 64 ⇑P **P 12 24 30.9 -0.2**
baz=64
BFSC Mount Baldy St 64.19 67 ⇑P **P 12 24 31.6 -0.1**
baz=64,SNR=5.0
S13A Holt Ranch, En 64.24 62 ⇓P **P 12 24 32.2 +0.3**
baz=64
R14A James Farms, M 64.25 61 ⇑P **P 12 24 32.1 +0.1**
baz=64
T12A Moapa 64.30 63 ⇓P **P 12 24 32.4 -0.1**
baz=64
VIS Vishakhapatnam 64.33 268 *eP* **P 12 24 33.6 +0.9**
VIS *ex* x 12 24 34.3
comp=Z,66nm,0.8s
BHPL Bhopal 64.40 277 *i* x **P 12 24 32.9 -0.3**
BHPL *eP* 12 24 33.5
BHPL *ex* x 12 24 34.7
comp=Z,122nm,0.8s
MEF Metsahovi 64.43 335 P **P 12 24 31.4 -1.4**
TUQ Turquoise Mtn. 64.44 65 ⇑P **P 12 24 33.4 +0.1**
baz=64
OBN Obninsk 64.45 326⇑ *eP* **P 12 24 30.0 -3.1**
OBN LR LR
comp=Z,479nm,19.0s,MS4.7
OBN Obninsk 64.45 326⇓ *eP* **P 12 24 30.9 -2.2**
OBN *i* 12 25 06.7
OBN *e* 12 26 54.7
OBN *eS* **S 12 33 04.7 -3.0**
OBN pmax pmax
comp=Z,11nm,1.1s,mb4.8
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.5
V11A Goodsprings 64.47 64 ⇑P **P 12 24 33.4 -0.1**
baz=64,SNR=5.9
CCUT Cedar City 64.55 62 *eP* **P 12 24 34.3 +0.3**
T13A Saint George 64.59 62 ⇓P **P 12 24 34.5 +0.3**
baz=64
MSU Marysvale 64.59 60 *eP* **P 12 24 35.2 +0.9**
HEC Hector,Ludlow 64.61 66 ⇑P **P 12 24 34.1 -0.3**
baz=64
U12A Valley of Fire 64.61 63 ⇓P **P 12 24 34.5 +0.1**
baz=64
TMUT Trail Mountain 64.62 59 *eP* **P 12 24 35.1 +0.6**
NGP Nagpur 64.77 274 *eP* **P 12 24 34.5 -1.1**
NGP AMb AMB 12 24 35.5
comp=Z,140nm,1.0s,mb5.9
ULM Lac du Bonnet 64.84 42 P **P 12 24 34.4 -1.2**
ULM LR LR 12 53 29.3
ULM Lac du Bonnet 64.84 42 P **P 12 24 34.4 -1.2**
comp=Z,21nm,0.8s,mb5.2,baz=310,slow=8.4,SNR=61
ULM LR LR 12 53 29.3
comp=Z,325nm,19.7s,MS4.5,baz=300,slow=36
V12A Nelson 64.89 64 ⇑P **P 12 24 36.2 0.0**
baz=65,SNR=7.8
MURC Murrieta 64.90 67 ⇑P **P 12 24 35.7 -0.6**
baz=65,SNR=5.2
U13A Pakoon Wash 64.96 63 ⇓P **P 12 24 37.1 +0.4**
baz=65
TPI Tanjungpandan 65.00 233 P **P 12 24 37.3 +0.2**
T14A Hurricane 65.04 62 ⇑P **P 12 24 37.4 +0.2**
baz=65
GMRC Granite Mounta 65.05 65 P **P 12 24 37.2 -0.1**
baz=65,SNR=9.8
SRU San Rafael 65.14 59 *eP* **P 12 24 37.9 +0.1**
comp=Z,32nm,1.0s,mb5.3
SRU San Rafael 65.14 59 *eP* **P 12 24 37.9 +0.1**
SRU pmax pmax
comp=Z,33nm,1.0s,mb5.3
W12A Cal Nev Ari 65.17 64 ⇓P **P 12 24 37.9 -0.2**
baz=65
VSU Vasula 65.18 333 P **P 12 24 36.5 -1.2**
RWWY Rawlins 65.22 55 *eP* **P 12 24 38.4 +0.1**
comp=Z,14nm,0.9s,mb5.0
PFO Pinyon Flat Ob 65.35 67 *eP* **P 12 24 38.8 -0.5**
comp=Z,26nm,1.4s,mb5.1
PFO LR LR
comp=Z,480nm,20.0s,MS4.7
PFO Pinyon Flat Ob 65.35 67 *eP* **P 12 24 38.8 -0.5**
PFO pmax pmax
comp=Z,26nm,1.4s,mb5.1
PFO MLR MLR
comp=Z,480nm,20.0s,MS4.7
U14A Mt Trumbull 65.42 62 ⇑P **P 12 24 39.9 +0.3**
baz=65
109C Camp Elliot, M 65.44 68 ⇑P **P 12 24 39.4 -0.5**
baz=65
PSI Prapat 65.45 245 LR LR 12 53 08.0
comp=Z,143nm,18.4s,MS4.2,baz=35,slow=36
T15A Red Dirt Ranch 65.48 61 ⇓P **P 12 24 40.2 +0.2**
baz=65
IRM Iron Mountain 65.78 65 ⇓P **P 12 24 41.7 -0.3**
baz=66,SNR=16
W13A Hualapai Mount 65.90 64 P **P 12 24 42.7 -0.1**
baz=66,SNR=6.9
BC3 Big Chuckw Mtn 65.93 66 ⇑P **P 12 24 42.4 -0.6**
baz=66
AGMN Agassiz Refuge 66.26 43 *eP* **P 12 24 44.1 -0.7**
comp=Z,36nm,1.0s,mb5.4
AGMN LR LR
comp=Z,455nm,20.0s,MS4.7
X13A Yucca 66.28 64 ⇑P **P 12 24 45.0 -0.2**
baz=66,SNR=12
PDMCI Parker Dam,Lak 66.29 65 ⇓P **P 12 24 44.8 -0.5**
baz=66,SNR=8.4
W14A Seligman 66.30 63 ⇓P **P 12 24 45.5 +0.2**
baz=66,SNR=22
VRSR Storozhevoye 66.36 322 *eP* **P 12 24 44.9 -0.5**
VRSR pmax pmax
comp=N,6.0nm,0.9s
VRSR pmax pmax
comp=E,4.0nm,0.9s
VRSR MLR MLR
comp=Z,70nm,22.0s,MS3.8
VRSR MLR MLR
comp=E,30nm,18.0s
Y12C Blythe 66.43 65 ⇑P **P 12 24 45.8 -0.4**
baz=66
PV10 Paradox Valley 66.48 58 *eP* **P 12 24 47.4 +0.9**
VORD Divnogorie 66.50 321 *eP* **P 12 24 46.4 0.0**
VORD pmax pmax
comp=Z,30nm,1.0s,mb5.3
VORD pmax pmax
comp=N,40nm,1.1s
VORD pmax pmax
comp=E,30nm,1.2s
GLA Glamis 66.73 66 ⇑P **P 12 24 48.0 -0.1**
baz=67
W15A Williams 66.81 63 ⇑P **P 12 24 49.2 +0.6**
baz=67,SNR=10
Y13A Salome 66.81 65 ⇑P **P 12 24 48.5 -0.1**
baz=67
PV01 Paradox Valley 66.92 58 *eP* **P 12 24 49.7 +0.4**
X14A Yava 66.93 64 P **P 12 24 49.6 +0.3**
baz=67,SNR=16
NB2 NORSAR Subarra 66.99 341 P **P 12 24 47.7 -1.6**

comp=Z,41nm,1.2s,mb5.3,baz=26,slow=6.5
NB2 NORSAR Subarra 66.99 341 P P 12 24 47.7 -1.6
NB2 pmax pmax
comp=Z,41nm,1.2s,mb5.3
NOA NORSAR Array B 66.99 341 P P 12 24 48.2 -1.1
comp=Z,13nm,0.8s,mb5.0,baz=26,slow=6.4,SNR=32
NOA LR LR 12 58 01.8
comp=Z,193nm,20.0s,MS4.3,baz=5.0,slow=39
SMCO Snowmass 67.09 57 *eP* **P 12 24 50.6 +0.3**
comp=Z,42nm,1.2s,mb5.3
WUAZ Wupatki 67.11 62 *eP* **P 12 24 51.2 +0.7**
comp=Z,13nm,0.7s,mb5.1
WUAZ LR LR
comp=Z,404nm,19.0s,MS4.7
WUAZ Wupatki 67.11 62 ⇑P **P 12 24 50.7 +0.2**
baz=67
Y14A Wickenburg 67.22 64 P **P 12 24 51.1 -0.1**
baz=67,SNR=12
BORG Borgarnes 67.23 358 *eP* **P 12 24 52.7 +1.9**
comp=Z,110nm,1.5s,mb5.7
BORG Borgarnes 67.23 358 P **P 12 24 51.5 +0.8**
comp=Z,42nm,0.9s,mb5.5,baz=13,slow=3.7,SNR=6.6
HFA0 Hagfors New Ar 67.25 340 P **P 12 24 50.1 -0.9**
X15A Humboldt 67.30 63 P **P 12 24 52.2 +0.5**
baz=67,SNR=22
ISCO Idaho Springs 67.41 55 *eP* **P 12 24 52.8 +0.5**
comp=Z,55nm,1.3s,mb5.4
ISCO LR LR
comp=Z,383nm,21.0s,MS4.6
MVCO Mesa Verde 67.60 59 *eP* **P 12 24 53.4 -0.2**
comp=Z,40nm,1.1s,mb5.4
MVCO LR LR
comp=Z,322nm,19.0s,MS4.6
MVCO Mesa Verde 67.60 59 P **P 12 24 53.7 +0.1**
baz=67,SNR=12
Z14A Wintersburg 67.66 65 ⇑P **P 12 24 53.5 -0.5**
baz=68
HYB Hyderabad 67.73 271 *eP* **P 12 24 54.5 -0.1**
comp=Z,120nm,1.0s,mb5.9
HYB Hyderabad 67.73 271 *eP* **P 12 24 54.5 -0.1**
HYB pmax pmax
comp=Z,120nm,1.0s,mb5.9
HYB Hyderabad 67.73 271 ⇑ *iP* **P 12 24 54.5 -0.1**
comp=Z,120nm,1.0s,mb5.9
HYB *e* pP 12 25 10.0 +1.2
HYB *eS* S 12 33 48.0 -0.6
CTA Charters Tower 68.46 188 *eP* **P 12 24 57.5 -1.5**
comp=Z,10.0nm,0.6s,mb5.0
CTA Charters Tower 68.46 188 *eP* **P 12 24 57.5 -1.5**
CTA pmax pmax
comp=Z,10.0nm,0.6s
CTA Charters Tower 68.46 188 LR LR 12 51 51.5
comp=Z,172nm,19.3s,MS4.3,baz=48,slow=33
CTAO Charters Tower 68.46 188 P **P 12 24 55.6 -3.4**
CTAO *eP* 12 24 57.8
CTAO Charters Tower 68.46 188 P **P 12 24 57.2 -1.8**
CTAO pmax pmax
comp=Z,16nm,0.9s,mb5.0
EYMN Ely 68.48 41 *eP* **P 12 24 58.2 -0.7**
comp=Z,41nm,1.0s,mb5.4
EYMN LR LR
comp=Z,462nm,21.0s,MS4.7
115A Sonoran Desert 68.55 65 ⇓P **P 12 24 59.7 +0.1**
baz=68,SNR=8.4
KONO Kongsberg 68.60 342⇑ *eP* **P 12 24 59.5 0.0**
KONO Kongsberg 68.60 342 *eP* **P 12 25 00.1 +0.7**
KONO LR LR
comp=Z,517nm,21.0s,MS4.7
KONO Kongsberg 68.60 342 P **P 12 24 59.8 +0.4**
KONO pmax pmax
comp=Z,28nm,1.0s,mb5.2
SDCO Great Sand Dun 68.92 57 *eP* **P 12 25 02.1 +0.2**
comp=Z,53nm,1.5s,mb5.2
SDCO LR LR
comp=Z,353nm,19.0s,MS4.6
116A Eloy 68.96 64 ⇑P **P 12 25 02.0 -0.1**
baz=69,SNR=6.0
ECSD EROS,Sioux Fal 69.25 47 *eP* **P 12 25 02.9 -0.8**
comp=Z,35nm,0.8s,mb5.3
ECSD LR LR
comp=Z,506nm,21.0s,MS4.7
216A Three Points, 69.50 65 ⇑P **P 12 25 05.4 -0.1**
baz=69
BHJ Bhuj 69.50 282 *eP* **P 12 25 06.5 +0.9**
TUC Tucson 69.69 64 P **P 12 25 05.1 -1.6**
TUC LR LR
comp=Z,246nm,20.0s,MS4.5
TUC Tucson 69.69 64 P **P 12 25 06.2 -0.5**
TUC pmax pmax
comp=Z,23nm,1.3s,mb5.0
MDRS Chennai 69.72 267 *eP* **P 12 25 07.7 +0.7**
MDRS AMb AMB 12 25 09.4
comp=Z,51nm,0.3s,mb5.9
217A Green Valley 70.05 65 ⇓P **P 12 25 08.7 -0.2**
baz=70
POO Poona 70.07 276 *eP* **P 12 25 09.8 +0.6**
POO *ex* x 12 25 11.1
comp=Z,161nm,0.9s
WB2 Warramunga Arr 70.24 200⇑ *iP* **P 12 25 08.8 -1.2**
WRA Warramunga Arr 70.24 200 *iP* **P 12 25 08.8 -1.2**
WRA pmax pmax
comp=Z,76nm,0.8s
WRA Warramunga Arr 70.24 200 P **P 12 25 08.9 -1.1**
comp=Z,76nm,0.8s,mb5.7,baz=16,slow=6.6,SNR=242
KIV Kislovodsk 70.25 314 *iP* **P 12 25 10.3 +0.4**
KIV P 12 25 11.7
KIV LR LR
comp=Z,455nm,22.0s,MS4.7
KIV Kislovodsk 70.25 314 *eP* **P 12 25 10.2 +0.3**
KIV pmax pmax
comp=Z,21nm,1.2s,mb4.9
KIV MLR MLR
comp=Z,347nm,18.0s,MS4.7
LAZ Ladron 70.36 60 *eP* **P 12 25 11.2 +0.5**
ANMO Albuquerque 70.36 59 *eP* **P 12 25 10.8 0.0**
comp=Z,16nm,0.6s,mb5.1
ANMO LR LR
comp=Z,359nm,22.0s,MS4.6
ANMO Albuquerque 70.36 59 *eP* **P 12 25 10.8 0.0**
ANMO pmax pmax
comp=Z,16nm,0.6s
ANMO MLR MLR
comp=Z,359nm,22.0s
218A Dragoon 70.37 64 ⇓P **P 12 25 10.9 +0.1**
baz=70
ZEI Tsey 70.56 313 *eP* **P 12 25 12.1 +0.3**
ZEI *i* pP 12 25 22.0 -4.1
ZEI pmax pmax
comp=Z,12nm,1.1s,mb4.7
LENM Lemitar 70.63 60 *eP* **P 12 25 13.2 +0.8**
AKASG Malin Array Be 70.67 327 *iP* **P 12 25 11.3 -1.0**
AKASG pmax pmax
comp=Z,14nm,0.7s
AKASG Malin Array Be 70.67 327 P **P 12 25 10.6 -1.8**
comp=Z,14nm,0.7s,mb5.0,baz=34,slow=6.2,SNR=36
AKASG LR LR 12 58 21.9
comp=Z,351nm,19.8s,MS4.6,baz=355,slow=38
AKBB Malin Array Si 70.67 327 *eP* **P 12 25 11.0 -1.3**
KIEV Kiev 70.68 327 *eP* **P 12 25 11.5 -0.9**
comp=Z,19nm,0.8s,mb5.1
KIEV LR LR
comp=Z,434nm,20.0s,MS4.7
KIEV Kiev 70.68 327 *eP* **P 12 25 11.5 -0.9**
KIEV pmax pmax
comp=Z,19nm,0.8s,mb5.1
KIEV MLR MLR
comp=Z,434nm,20.0s,MS4.7
LPM Los Pinos Moun 70.72 60 *eP* **P 12 25 13.6 +0.6**
318A Bisbee 70.78 64 ⇑P **P 12 25 13.3 0.0**
baz=71
BNM Barren Site 70.84 60 *eP* **P 12 25 13.9 +0.3**
FITZ Fitzroy Crossi 70.89 209⇑ *iP* **P 12 25 13.7 -0.2**
comp=Z,79nm,0.9s,mb5.6
FITZ Fitzroy Crossi 70.89 209 *eP* **P 12 25 13.9 0.0**
FITZ Fitzroy Crossi 70.89 209 LR LR 12 55 54.9
comp=Z,104nm,18.6s,MS4.1,baz=186,slow=36
COWI Conover 70.93 41 *eP* **P 12 25 13.1 -1.0**
comp=Z,41nm,1.3s,mb5.2
COWI LR LR
comp=Z,542nm,21.0s,MS4.8
CBKS Cedar Bluff 71.28 52 *eP* **P 12 25 15.0 -1.3**
comp=Z,35nm,1.2s,mb5.2
CBKS LR LR
comp=Z,332nm,21.0s,MS4.6
SCHQ Schefferville 71.57 24 LR LR 12 57 14.0
comp=Z,191nm,18.7s,MS4.4,baz=224,slow=36
SOC Sochi 71.94 316 *eP* **P 12 25 11.4 -8.7**
SOC *eS* S 12 34 31.8 -5.4
SOC *e* 12 35 12.6
SOC *eSSS* 12 42 25.3
SOC MLR MLR
comp=Z,765nm,20.0s,MS5.0
ANN Anapa 72.03 318 *eP* **P 12 25 26.5 +5.8**
ANN pmax pmax
comp=Z,189nm,8.3s
MLA1 Latheron 72.15 348⇑ *eP* **P 12 25 20.8 -0.4**
KSU1 Kansas State U 72.70 50 *eP* **P 12 25 23.1 -1.6**
comp=Z,8.9nm,0.8s,mb4.8
KSU1 LR LR
comp=Z,484nm,19.0s,MS4.8
MCD Coleburn Disti 72.84 348⇑ *eP* **P 12 25 24.7 -0.5**
JFWS Jewell Farm 72.90 44 PFAKE 12 25 40.0 +14
JFWS LR LR
comp=Z,511nm,20.0s,MS4.8
MME1 Meikle Cairn 73.05 347 *eP* **P 12 25 26.1 -0.4**
AMTX Amarillo 73.11 56 *eP* **P 12 25 27.0 -0.3**
comp=Z,31nm,1.0s,mb5.2
AMTX LR LR
comp=Z,425nm,21.0s,MS4.7
MDO Dochfour 73.13 348⇑ *eP* **P 12 25 26.6 -0.4**
KAC Achnashellach 73.20 349⇑ *eP* **P 12 25 26.4 -1.0**
LVV L'vov 73.26 329 *eP* **P 12 25 26.9 -0.9**
LVV L'vov 73.26 329 *eP* **P 12 25 26.7 -1.1**
LVV MLR MLR
comp=Z,220nm,20.0s,MS4.4
CLDR Caldiran 73.28 310 *eP* **P 12 25 29.1 +0.9**
MNTX Cornudas Mount 73.33 61 *eP* **P 12 25 28.2 -0.4**
comp=Z,44nm,1.5s,mb5.2
MNTX LR LR
comp=Z,179nm,20.0s,MS4.3
EIDS Eidsvold 73.40 183 *eP* **P 12 25 28.5 -0.3**
comp=Z,11nm,0.8s,mb4.8
KPL Plockton 73.40 349 *eP* **P 12 25 28.0 -0.6**
KPL AMb AMB 12 25 30.2
comp=Z,109nm,1.3s,mb5.6
AGRB Hanur-Agry 73.42 311 *eP* **P 12 25 29.3 +0.3**
KSB Sheil Bridge 73.50 349⇑ *eP* **P 12 25 28.8 -0.3**
BSEG Bad Segeberg 73.66 339 *eP* **P 12 25 30.5 +0.4**
BSEG pmax pmax
comp=Z,54nm,1.1s,mb5.4
BSEG Bad Segeberg 73.66 339 *eP* **P 12 25 30.5 +0.4**
comp=Z,54nm,1.1s,mb5.4
PALK Pallekele 73.67 262 *eP* **P 12 25 30.1 -0.7**
comp=Z,46nm,1.3s,mb5.2
PALK LR LR
comp=Z,187nm,22.0s,MS4.3
KAR1 Arisaig 73.83 349⇑ *eP* **P 12 25 30.8 -0.3**
KIS Kishinev 73.86 325 *eP* **P 12 25 25.0 -6.5**
KIS Kishinev 73.86 325 *eP* **P 12 25 30.0 -1.5**
KIS LRM 12 57 44.0
comp=Z,400nm,20.0s
KWP Kalwaria 73.87 330 *eP* **P 12 25 32.3 +0.8**
KWP Kalwaria 73.87 330 *eP* **P 12 25 32.3 +0.9**
KWP Kalwaria 73.87 330 P **P 12 25 32.1 +0.7**
KWP pmax pmax
comp=Z,110nm,1.2s,mb5.7
KWP Kalwaria 73.87 330 ⇓ *iP* **P 12 25 32.0 +0.6**
GLMI Grayling 73.89 39 PFAKE 12 25 40.0 +8.3
GLMI LR LR
comp=Z,599nm,20.0s,MS4.9
ASAR Alice Springs 73.94 199 P **P 12 25 31.9 -0.1**
comp=Z,27nm,0.8s,mb5.2,baz=14,slow=5.2,SNR=188
ERZM Erzurum 73.97 312 ⇓ *iP* **P 12 25 34.8 +2.5**
EZM Erzurum 73.97 312 *eP* **P 12 25 33.5 +1.3**
RUE Ruedersdorf 74.09 336 *eP* **P 12 25 32.6 -0.1**
comp=Z,87nm,1.1s,mb5.6
EBH Black Hill 74.16 347⇑ *eP* **P 12 25 32.3 -0.8**
OJC Ojcow 74.32 332 *eP* **P 12 25 34.5 +0.5**
EAB Aberfoyle 74.34 348⇑ *eP* **P 12 25 33.8 -0.3**
ESY Stoneypath 74.35 347⇑ *eP* **P 12 25 33.8 -0.3**
EDI Edinburgh 74.43 347⇑ *eP* **P 12 25 34.5 0.0**
EDI AMb AMB 12 25 35.4
comp=Z,88nm,2.1s,mb5.3
GUMT Gumushane 74.46 314 *eP* **P 12 25 35.8 +0.7**
ESPY Espiye-Giresun 74.46 315 *eP* **P 12 25 34.4 -0.7**
STHS Stebnicka Huta 74.54 330 *iP* **P 12 25 35.9 +0.5**
comp=Z,48nm,1.5s,mb5.2
STHS Stebnicka Huta 74.54 330 *iP* **P 12 25 35.9 +0.5**
STHS pmax pmax
comp=Z,48nm,1.5s,mb5.2
EAU Auchinoon 74.54 347⇑ *eP* **P 12 25 35.0 -0.3**
EBL Broad Law 74.55 347⇑ *eP* **P 12 25 34.7 -0.6**
KOLS Kolonicke sedl 74.61 329 *eP* **P 12 25 35.9 +0.1**
XSO Sourhope Farm 74.70 346⇑ *eP* **P 12 25 35.4 -0.8**
PGBU Glenifferbraes 74.73 348⇑ *eP* **P 12 25 36.2 -0.1**
PGBU AMb AMB 12 25 38.1
comp=Z,107nm,1.3s,mb5.6
WMOK Wichita Mounta 74.82 55 *eP* **P 12 25 36.6 -0.7**
comp=Z,27nm,1.2s,mb5.1
WMOK LR LR
comp=Z,334nm,22.0s,MS4.6
KSP Ksiaz 74.84 334 *eP* **P 12 25 37.1 0.0**
KSP Ksiaz 74.84 334 *eP* **P 12 25 36.6 -0.5**
KSP *e* pP 12 25 51.1 -0.3
NIE Niedzica 74.85 331 *eP* **P 12 25 37.6 +0.5**
UZH Uzhgorod 74.87 329 *eP* **P 12 25 35.0 -2.3**
UZH Uzhgorod 74.87 329 ⇓ *iP* **P 12 25 36.2 -1.1**
UZH *i* pP 12 25 50.6 -1.0
CRVS Cervenica-Dubn 74.91 330 *eP* **P 12 25 37.7 +0.2**
ESK Eskdalemuir 75.02 347⇑ *eP* **P 12 25 37.5 -0.5**
ESK AMb AMB 12 25 38.9
comp=Z,63nm,1.7s,mb5.3
ESK Eskdalemuir 75.02 347 *eP* **P 12 25 38.1 +0.1**
comp=Z,29nm,0.6s,mb5.4
ESK Eskdalemuir 75.02 347 *eP* **P 12 25 38.1 +0.1**
ESK pmax pmax
comp=Z,29nm,0.7s,mb5.3
NRDL Niedersach Rie 75.03 338 *eP* **P 12 25 37.8 -0.3**
comp=Z,36nm,1.1s,mb5.2
ECK Cauldkaine Hil 75.14 347⇑ *eP* **P 12 25 38.1 -0.6**
OKC Ostrava-Krasne 75.17 332 ⇓ *iP* **P 12 25 39.3 +0.3**
HDIL Hopedale 75.19 45 *eP* **P 12 25 38.8 -0.5**
comp=Z,27nm,1.0s,mb5.1
HDIL LR LR
comp=Z,302nm,20.0s,MS4.6
TRPA Tarpa 75.21 329⇑ *iP* **P 12 25 38.8 -0.5**
UPC Upice 75.22 334 ⇓ *iP* **P 12 25 39.6 +0.3**
UPC *epP* pP 12 25 46.6 -7.0
TRD Trivandrum 75.24 266 *eP* **P 12 25 39.6 -0.3**
TRD AMb AMB 12 25 41.3
comp=Z,53nm,1.0s,mb5.4
DPC Dobruska-Polom 75.27 334 ⇓ *iP* **P 12 25 40.2 +0.7**
DPC *epP* pP 12 25 47.1 -6.8
XAL Allendale 75.30 346⇑ *eP* **P 12 25 39.2 -0.5**
GMK Mull of Kintyr 75.33 348 *eP* **P 12 25 39.4 -0.4**
CLL Collm 75.35 336⇑ *iP* **P 12 25 39.4 -0.6**
comp=Z,79nm,0.9s,mb5.6
CLL Collm 75.35 336⇑ *iP* **P 12 25 39.4 -0.6**
comp=Z,79nm,0.9s,mb5.6
CLL LmV 13 01 00.0
comp=Z,300nm,21.1s
CLL Collm 75.35 336 *eP* **P 12 25 39.7 -0.3**
comp=Z,79nm,0.9s,mb5.6
MORC Moravsky Berou 75.41 333 ⇓P **P 12 25 40.1 -0.3**
MORC Moravsky Berou 75.41 333 ⇓ *iP* **P 12 25 40.1 -0.3**
BRG Berggiesshubel 75.49 335 *iP* **P 12 25 40.7 -0.1**
BRG pmax pmax
comp=Z,24nm,1.1s,mb5.0
BRG Berggiesshubel 75.49 335 *eP* **P 12 25 40.5 -0.3**
comp=Z,40nm,1.1s,mb5.3
BRG Berggiesshubel 75.49 335 *i* P **P 12 25 40.7 0.0**
comp=Z,40nm,1.1s,mb5.3
CLZ Clausthal 75.56 338 *eP* **P 12 25 41.4 +0.2**
CLZ pmax pmax
comp=Z,96nm,1.2s,mb5.6
CLZ Clausthal 75.56 338 *eP* **P 12 25 41.4 +0.2**
comp=Z,96nm,1.2s,mb5.6
KVT Kavak 75.59 317 *eP* **P 12 25 42.0 +0.5**
KECS Kecovo 75.60 330 *iP* **P 12 25 41.6 +0.1**
comp=Z,16nm,1.1s,mb4.9
KECS Kecovo 75.60 330 *iP* **P 12 25 41.6 +0.1**
KECS pmax pmax
comp=Z,16nm,1.1s,mb4.9
FBE Freiberg 75.61 336 *eP* **P 12 25 41.1 -0.4**
comp=Z,64nm,0.9s,mb5.5
VRI Vrincioaia 75.61 325 P **P 12 25 42.5 +0.9**
PVCC Panska Ves 75.62 335 ⇓ *iP* **P 12 25 41.9 +0.4**
CFR Carcaliu 75.64 324 P **P 12 25 45.1 +3.4**
PLOR Plostina 75.65 325 ⇓ *iP* **P 12 25 42.1 +0.3**
GCL Cushendall 75.67 349⇑ *eP* **P 12 25 41.3 -0.4**
GAL1 Galloway 75.68 348⇑ *eP* **P 12 25 41.3 -0.5**
GAL1 AMb AMB 12 25 42.7
comp=Z,108nm,1.3s,mb5.6
MBWA Marble Bar 75.75 213 *eP* **P 12 25 42.1 -0.4**
IBBN Ibbenburen 75.76 340 *eP* **P 12 25 42.1 -0.2**
comp=Z,56nm,1.1s,mb5.4
BOYT Boyabat 75.84 317⇑ *iP* **P 12 25 44.4 +1.5**
BYBT Boyabat 75.86 318 *eP* **P 12 25 44.1 +1.0**
LTX Lajitas 76.06 62 *eP* **P 12 25 44.2 -0.3**
comp=Z,26nm,0.9s,mb5.2
LTX LR LR
comp=Z,298nm,20.0s,MS4.6
LTX Lajitas 76.06 62 *eP* **P 12 25 44.2 -0.2**
LTX pmax pmax
comp=Z,26nm,0.9s,mb5.2
LTX MLR MLR
comp=Z,298nm,20.0s,MS4.6
BANOM Banah 76.08 293 P **P 12 25 45.3 +0.7**
SNR=5.2
BANOM Banah 76.08 293 P **P 12 25 45.3 +0.7**
SNR=5.2
HPK Haverah Park 76.08 346 *eP* **P 12 25 44.0 -0.1**
HPK AMb AMB 12 25 46.0
comp=Z,25nm,1.3s,mb5.0
PRU Pruhonice 76.11 335 ⇓ *eP* **P 12 25 44.4 0.0**
PRU AMS AMS 13 02 00.0
comp=Z,400nm,20.9s
VRAC Vranov 76.11 333 P **P 12 25 45.0 +0.6**
VRAC Vranov 76.11 333 P **P 12 25 44.8 +0.4**
VRAC pmax pmax
comp=Z,51nm,1.0s
VRAC Vranov 76.11 333 P **P 12 25 44.8 +0.4**
comp=Z,51nm,1.0s,mb5.4,baz=31,slow=6.4,SNR=44
VRAC Vranov 76.11 333⇑ *iP* **P 12 25 44.5 +0.1**
HARR Harsova 76.12 324 P **P 12 25 45.1 +0.6**
HARR Harsova 76.12 324⇑ *iP* **P 12 25 44.5 0.0**
VYHS Vyhne 76.13 331 *iP* **P 12 25 44.8 +0.3**
comp=Z,26nm,1.1s,mb5.1
VYHS Vyhne 76.13 331 *i* P **P 12 25 44.8 +0.3**
VYHS pmax pmax
comp=Z,26nm,1.1s,mb5.1
JAVC Velka Javorina 76.18 332 P **P 12 25 46.1 +1.3**
KOLL Kolacno 76.19 332 *eP* **P 12 25 45.0 +0.1**
MLR Muntele Rosu 76.22 325 P **P 12 25 45.8 +0.7**
MLR Muntele Rosu 76.22 325 P **P 12 25 45.4 +0.3**
MLR pmax pmax
comp=Z,51nm,1.0s
MLR Muntele Rosu 76.22 325 P **P 12 25 45.4 +0.3**
comp=Z,51nm,1.0s,mb5.4,baz=343,slow=8.4,SNR=56
MLR Muntele Rosu 76.22 325 ⇓ *iP* **P 12 25 45.3 +0.2**
PSZ Piszkesteto 76.29 330 *eP* **P 12 25 45.5 +0.1**
PSZ Piszkesteto 76.29 330 P **P 12 25 46.0 +0.6**
PSZ pmax pmax
comp=Z,53nm,1.2s,mb5.3
PSZ Piszkesteto 76.29 330⇑ *eP* **P 12 25 45.3 -0.1**
PSZ Piszkesteto 76.29 330 ⇓ *iP* **P 12 25 45.4 0.0**
DRGR 76.30 328 P **P 12 25 45.6 +0.1**
DRGR 76.30 328⇑ *iP* **P 12 25 45.2 -0.3**
WTSB Winterswijk 76.30 340 *eP* **P 12 25 45.2 -0.2**
comp=Z,62nm,1.1s,mb5.4
TANN Tannenbergstha 76.31 336 *eP* **P 12 25 45.3 -0.2**
comp=Z,47nm,1.5s,mb5.2
WERD Werda 76.32 336 *eP* **P 12 25 45.3 -0.2**
comp=Z,48nm,1.1s,mb5.3
MOX Moxa 76.33 337 *eP* **P 12 25 45.6 0.0**
comp=Z,67nm,1.4s,mb5.4
MOX pmax pmax
comp=Z,300nm,20.0s
MOX Moxa 76.33 337 *eP* **P 12 25 45.6 0.0**
MOX pmax pmax
comp=Z,67nm,1.4s,mb5.4
MOX MLR MLR
comp=Z,300nm,20.0s,MS4.6
MOX Moxa 76.33 337 *eP* **P 12 25 45.3 -0.3**
comp=Z,57nm,1.1s,mb5.4
AAM Ann Arbor 76.34 40 PFAKE 12 26 00.0 +14
AAM LR LR
comp=Z,452nm,19.0s,MS4.8
GUNZ Gunzen 76.39 336 *eP* **P 12 25 45.9 0.0**
comp=Z,45nm,1.0s,mb5.3
KRUC Moravsky 76.39 333 P **P 12 25 46.2 +0.2**
BALT Daday 76.42 318⇑ *eP* **P 12 25 46.2 -0.1**
WERN Wernitzgruen 76.45 336 *eP* **P 12 25 46.1 -0.2**
comp=Z,55nm,0.9s,mb5.5
TREC Trest 76.46 334 ⇓ *iP* **P 12 25 46.7 +0.4**
GMM Mts of Mourne 76.46 348⇑ *eP* **P 12 25 45.4 -0.9**
NKC Novy Kostel 76.48 336 ⇓ *iP* **P 12 25 46.7 +0.3**
CTKT Corum 76.53 317⇑ *iP* **P 12 25 47.8 +0.9**
TOS Tosya 76.54 318 *eP* **P 12 25 48.3 +1.3**
UBBA Unterbreizbach 76.59 338 *eP* **P 12 25 46.7 -0.3**
comp=Z,82nm,1.6s,mb5.4
MYA Malataya 76.64 313 *eP* **P 12 25 48.9 +1.3**
MALT Malatya 76.64 313 *eP* **P 12 25 46.7 -0.9**
MALT Malatya 76.64 313 *eP* **P 12 25 49.2 +1.6**
MALT Malatya 76.64 313 ⇓ *iP* **P 12 25 48.8 +1.2**
FVM French Village 76.66 47 *eP* **P 12 25 46.7 -1.0**
comp=Z,26nm,1.3s,mb5.0
FVM French Village 76.66 47 P **P 12 25 46.8 -0.9**
FVM pmax pmax
comp=Z,26nm,1.2s,mb5.0
BIDO Bidbid 76.69 290 P **P 12 25 49.6 +1.5**
SNR=6.2
BIDO Bidbid 76.69 290 P **P 12 25 49.6 +1.5**
SNR=6.2
MODS Modra-Piesok 76.73 332 *iP* **P 12 25 48.6 +0.7**
comp=Z,27nm,1.1s,mb5.1
MODS Modra-Piesok 76.73 332 *i* P **P 12 25 48.6 +0.7**
MODS pmax pmax
comp=Z,27nm,1.1s,mb5.1
KBI1 Birley Grange 76.74 345⇑ *eP* **P 12 25 47.5 -0.4**
MANZ Manzenberg 76.79 336 *eP* **P 12 25 48.0 -0.2**
comp=Z,39nm,1.1s,mb5.2
WBK Wadi Bani Khal 76.83 289 P **P 12 25 50.5 +1.6**
SNR=12
WBK Wadi Bani Khal 76.83 289 P **P 12 25 50.5 +1.6**
SNR=12
PSN Preselentsi 76.86 323 *iP* **P 12 25 48.8 +0.1**
DMUB Kingscourt 76.92 349 *eP* **P 12 25 45.5 -3.4**
ZST Bratislava 76.94 332 *iP* **P 12 25 50.0 +0.9**
comp=Z,61nm,1.2s,mb5.4
ZST LR LR
comp=Z,300nm,19.2s,MS4.6
CORM Corum 76.95 317 *eP* **P 12 25 50.0 +0.7**
BUD Budapest 76.95 331⇑ *eP* **P 12 25 49.4 +0.2**
ROTZ Rotzenmuhle 76.97 336 *eP* **P 12 25 49.2 0.0**
comp=Z,65nm,1.1s,mb5.5
SAFT Safranbolu 76.97 319 *eP* **P 12 25 50.0 +0.6**
HATD Hatta, Dubai 76.98 293 P **P 12 25 50.5 +0.8**
SNR=14
HATD Hatta, Dubai 76.98 293 P **P 12 25 50.5 +0.8**
SNR=14
KWE Weaver Farm 77.02 345⇑ *eP* **P 12 25 49.3 -0.2**
SMDO Samad 77.08 290 P **P 12 25 51.2 +1.0**
SNR=10
SMDO Samad 77.08 290 P **P 12 25 51.2 +1.0**
SNR=10
ASHO Ashiyiah 77.13 293 P **P 12 25 51.4 +0.8**
SNR=10
ASHO Ashiyiah 77.13 293 P **P 12 25 51.4 +0.8**
SNR=10
URFA Urfa 77.14 312 *eP* **P 12 25 51.3 +0.9**
KHC Kasperske Hory 77.16 335 ⇓ *iP* **P 12 25 50.8 +0.5**
KHC *e* 12 25 55.2
KHC Kasperske Hory 77.16 335 ⇓ *iP* **P 12 25 50.8 +0.5**
KHC *epP* pP 12 25 55.2 -10
KHC AMS AMS 12 58 40.0
comp=Z,600nm,33.9s
HOQ Hoqain 77.16 291 P **P 12 25 51.4 +0.7**
SNR=12
HOQ Hoqain 77.16 291 P **P 12 25 51.4 +0.7**
SNR=12
CWF Charnwood Fore 77.20 345⇑ *eP* **P 12 25 50.1 -0.3**
CWF AMb AMB 12 25 52.3
comp=Z,156nm,1.3s,mb5.8
ELDT Eldivan 77.25 318 ⇓ *iP* **P 12 25 51.8 +0.9**
GRA1 Grafenberg Arr 77.30 336 *eP* **P 12 25 51.3 +0.2**
comp=Z,115nm,1.0s,mb5.8
GRA1 LR LR
comp=Z,300nm,20.3s,MS4.6
GRF Grafenberg Arr 77.30 336 *eP* **P 12 25 51.3 +0.2**
GRF pmax pmax
comp=Z,115nm,1.0s,mb5.8
GRF MLR MLR
comp=Z,300nm,20.3s,MS4.6
GRF Grafenberg Arr 77.30 336 *eP* **P 12 25 51.3 +0.2**
GRF pmax pmax

comp=Z,115nm,1.0s,mb5.8
GRF MLR MLR
GRF Grafenberg Arr 77.30 336 *e*P **P 12 25 51.3 +0.2**
comp=Z,115nm,1.0s,mb5.8
GRF *e*L 13 03 19.3
comp=Z,337nm,20.3s
GRFO Grafenberg 77.30 336 P **P 12 25 51.9 +0.8**
GRFO LR LR
comp=Z,390nm,19.0s,MS4.8
WET Wettzell 77.34 335 *e*P **P 12 25 51.6 +0.3**
WET pmax pmax
comp=Z,87nm,1.0s,mb5.6
WET Wettzell 77.34 335 *e*P **P 12 25 51.6 +0.3**
comp=Z,87nm,1.0s,mb5.6
SBD1 Bryn Du 77.36 346⇑ *e*P **P 12 25 50.7 -0.6**
GEC2 GERESS Array S 77.38 335 *e*P **P 12 25 51.3 -0.2**
GEC2 pmax pmax
comp=Z,38nm,0.9s,mb5.3
GEC2 GERESS Array S 77.38 335 *e*P **P 12 25 51.3 -0.2**
comp=Z,38nm,0.9s,mb5.3
GERES GERESS Array B 77.38 335 P **P 12 25 51.1 -0.4**
comp=Z,22nm,0.8s,mb5.1,baz=35,slow=4.9,SNR=69
GERES LR LR 13 06 22.6
comp=Z,328nm,18.3s,MS4.7,baz=55,slow=41
JCT Junction City 77.44 58 *e*P **P 12 25 51.4 -0.8**
comp=Z,64nm,1.5s,mb5.3
JCT LR LR
comp=Z,212nm,22.0s,MS4.4
JCT Junction City 77.44 58 *e*P **P 12 25 51.4 -0.8**
JCT pmax pmax
comp=Z,64nm,1.5s,mb5.3
JCT MLR MLR
comp=Z,212nm,22.0s,MS4.4
BNN Bunyan 77.45 315 *e*P **P 12 25 52.3 +0.2**
DLF Lyons Farm 77.46 348 *e*P **P 12 25 48.4 -3.5**
GZR Gura Zlata 77.48 327 *i*P **P 12 25 52.1 -0.1**
GZR Gura Zlata 77.48 327⇑ *i*P **P 12 25 52.0 -0.1**
DSB Dublin 77.49 348 *e*P **P 12 25 51.7 -0.4**
comp=Z,75nm,0.9s,mb5.6
DCN Croghan 77.51 349 *e*P **P 12 25 48.4 -3.8**
CDAG Cicekdag 77.52 317⇑ *i*P **P 12 25 52.7 +0.2**
TNS Taunus Mts 77.53 338 *e*P **P 12 25 52.4 +0.1**
TNS pmax pmax
comp=Z,65nm,1.0s,mb5.5
TNS Taunus Mts 77.53 338 *e*P **P 12 25 52.4 +0.1**
comp=Z,65nm,1.0s,mb5.5
JMDO Jabal Madar 77.55 290 P **P 12 25 53.4 +0.5**
SNR=27
JMDO Jabal Madar 77.55 290 P **P 12 25 53.4 +0.5**
SNR=27
CONA Conrad Observa 77.56 333⇑ *i*P **P 12 25 53.0 +0.5**
comp=Z,88nm,1.2s,mb5.5,SNR=29
SOP Sopron 77.57 332⇑ *e*P **P 12 25 53.1 +0.5**
PRD Provadia 77.58 323 *i*P **P 12 25 52.9 +0.2**
MSNY Massena 77.61 33 *e*P **P 12 25 51.9 -1.0**
BEBN Eben Emael 77.65 340 P **P 12 25 52.8 -0.2**
comp=Z,36nm,1.2s,mb5.2
HLM1 Long Mynd 77.67 346⇑ *e*P **P 12 25 52.9 -0.1**
BZS Buzias 77.70 328 ⇑P **P 12 25 52.6 -0.7**
BZS Buzias 77.70 328⇑ *i*P **P 12 25 52.6 -0.8**
MIAR Mount Ida 77.75 51 *e*P **P 12 25 53.1 -0.7**
comp=Z,17nm,0.9s,mb5.0
MIAR LR LR
comp=Z,496nm,20.0s,MS4.8
MEM Membach 77.75 340 P **P 12 25 53.5 0.0**
comp=Z,68nm,1.2s,mb5.5
SGKT Sivrigoynuk 77.79 319⇓ *i*P **P 12 25 54.8 +0.8**
GZT Gaziantep 77.82 313⇑ *i*P **P 12 25 54.9 +0.7**
BSY Bisya 77.84 290 P **P 12 25 55.4 +0.9**
SNR=33
BSY Bisya 77.84 290 P **P 12 25 55.4 +0.9**
SNR=33
UCC Uccle 77.94 341 P **P 12 25 54.6 +0.1**
ZIMR 77.99 325 P **P 12 25 54.9 -0.2**
TOD Tromm 78.01 338 *e*P **P 12 25 55.0 0.0**
USIN University of 78.01 45 *e*P **P 12 25 55.6 +0.4**
comp=Z,16nm,0.5s,mb5.2
KMRS Kahramanmaras 78.02 314 *e*P **P 12 25 55.5 +0.2**
KAMT Kaman 78.03 317 *e*P **P 12 25 55.4 +0.1**
LONY Lake Ozonia 78.03 33 *e*P **P 12 25 54.2 -1.0**
comp=Z,13nm,0.8s,mb4.9
LONY LR LR
comp=Z,183nm,19.0s,MS4.4
ANTO Ankara 78.03 318 *e*P **P 12 25 53.6 -1.7**
ANTO Ankara 78.03 318⇑ P **P 12 25 56.0 +0.6**
ANTO LR LR
comp=Z,235nm,19.0s,MS4.5
ANTO Ankara 78.03 318 P **P 12 25 56.1 +0.8**
ANTO pmax pmax
comp=Z,88nm,1.0s,mb5.6
ANTO Ankara 78.03 318 *i*P **P 12 25 56.0 +0.7**
SIND Sindeldorf 78.04 337 P **P 12 25 55.3 +0.1**
ERPA Erie 78.04 38 PFAKE 12 26 10.0 +15
ERPA LR LR
comp=Z,260nm,19.0s,MS4.6
ABH Alteburg 78.06 339 *e*P **P 12 25 55.1 -0.2**
HAE Alders End 78.08 346⇑ *e*P **P 12 25 55.3 -0.1**
BCLA Clavier 78.08 340 P **P 12 25 55.6 +0.2**
comp=Z,55nm,1.3s,mb5.3
SZH Strazhica 78.10 324 *i*P **P 12 25 54.8 -0.8**
MOA Molln 78.11 334⇑ *i*P **P 12 25 55.5 -0.1**
comp=Z,56nm,1.2s,mb5.4,SNR=14
GAZ Gaziantep 78.14 313 *e*P **P 12 25 56.9 +0.9**
SWS Schriesheim-Wi 78.14 338 P **P 12 25 56.8 +1.0**
HTR Trewern Hill 78.16 346⇑ *e*P **P 12 25 55.5 -0.3**
MCH1 Michaelchurch 78.19 346⇑ *e*P **P 12 25 55.5 -0.5**
MCH1 AMb AMB 12 25 58.7
comp=Z,52nm,1.3s,mb5.3
PKSM Moragy 78.20 330 ⇑P **P 12 25 55.1 -1.0**
PKSM Moragy 78.20 330⇑ *i*P **P 12 25 55.2 -0.9**
SNF Seneffe 78.23 341 P **P 12 25 56.5 +0.3**
comp=Z,35nm,1.4s,mb5.1
ANDN Andirin 78.23 314⇑ *i*P **P 12 25 57.0 +0.5**
ARSA Arzberg 78.27 333⇑ *i*P **P 12 25 56.7 +0.2**
comp=Z,75nm,1.4s,mb5.5,SNR=15
TFO1 Folkestone 78.30 343 *e*P **P 12 25 56.9 +0.2**
ACSO Alum Creek Sta 78.32 41 PFAKE 12 26 10.0 +13
ACSO LR LR
comp=Z,420nm,20.0s,MS4.8
RUP Ruppelstein 78.35 339 *e*P **P 12 25 56.7 -0.2**
ARMA Armidale 78.41 182⇑ *i*P **P 12 25 57.3 +0.1**
WCI Wyandotte Cave 78.45 44 *e*P **P 12 25 57.0 -0.6**
comp=Z,33nm,0.8s,mb5.3
WCI LR LR
comp=Z,440nm,19.0s,MS4.8
WCI Wyandotte Cave 78.45 44 *e*P **P 12 25 57.0 -0.7**
WCI pmax pmax
comp=Z,33nm,0.8s,mb5.3
WCI MLR MLR
comp=Z,440nm,19.0s,MS4.8
KTD Kalmit 78.45 338 *e*P **P 12 25 57.1 -0.4**
SWN1 Swindon 78.46 345 *e*P **P 12 25 57.6 +0.1**
SWN1 AMb AMB 12 25 59.0
comp=Z,256nm,1.1s,mb6.1
UMR Umm Al-Rimmam 78.47 302 *e*P **P 12 25 58.5 +0.5**
UMR AMb AMB 12 26 01.2
comp=Z,145nm,0.9s,mb5.9
GIVF Givet 78.49 340⇑ *i*P **P 12 25 57.2 -0.5**
comp=Z,117nm,1.1s,mb5.4
GIVF Givet 78.49 340⇑ *i*P **P 12 25 57.2 -0.5**
comp=Z,59nm,1.1s,mb5.4
GIVF Givet 78.49 340⇑ *i*P **P 12 25 57.2 -0.5**
GIVF pmax pmax
comp=Z,59nm,1.1s,mb5.4
MIB Mutribah 78.50 302 *e*P **P 12 25 57.7 -0.4**
MIB AMb AMB 12 25 59.6
comp=Z,110nm,0.8s,mb5.8
HGH Gray Hill 78.51 346⇑ *e*P **P 12 25 57.3 -0.4**
JMB Yambol 78.52 323 P **P 12 25 58.4 +0.4**
JMB Yambol 78.52 323 *i*P **P 12 25 58.0 0.0**
DOU Dourbes 78.55 341 P **P 12 25 57.9 -0.1**
comp=Z,34nm,1.5s,mb5.0
WOL Wolverton 78.55 345 *e*P **P 12 25 56.9 -1.1**
KOZT Kozan 78.56 314 *e*P **P 12 25 59.0 +0.7**
GULT Gulveren 78.58 320 *e*P **P 12 25 58.2 -0.1**
HDH Heidenheim-Cha 78.58 337 P **P 12 25 58.9 +0.7**
WLF Walferdange 78.60 339 P **P 12 25 58.7 +0.4**
MENF Mencas 78.63 342 *e*P **P 12 25 58.2 -0.2**
BAIF Baives 78.67 341⇑ *i*P **P 12 25 58.4 -0.2**
comp=Z,104nm,1.0s,mb5.4
BAIF Baives 78.67 341⇑ *i*P **P 12 25 58.4 -0.2**
comp=Z,52nm,1.0s,mb5.4
BAIF Baives 78.67 341⇑ *i*P **P 12 25 58.4 -0.2**
BAIF pmax pmax
comp=Z,52nm,1.0s,mb5.4
STU Stuttgart 78.68 337 *e*P **P 12 25 58.8 +0.1**
comp=Z,71nm,1.0s,mb5.5
FUR Furstenfeldbru 78.68 336 *e*P **P 12 25 59.2 +0.5**
FUR pmax pmax
comp=Z,123nm,1.0s,mb5.8
FUR Furstenfeldbru 78.68 336 *e*P **P 12 25 59.2 +0.5**
comp=Z,123nm,1.0s,mb5.8
NCB Newcomb 78.72 33 PFAKE
NCB LR LR 12 26 10.0 +11
comp=Z,381nm,21.0s,MS4.7
KOGS Kog 78.76 332 *e*P **P 12 25 58.8 -0.4**
LANF Langenberg 78.83 338⇑ *e*P **P 12 25 59.4 -0.2**
LBG Lerchenberg 78.88 337 P **P 12 26 00.6 +0.8**
ADVT Abdulvahap 78.91 320 *e*P **P 12 25 59.8 -0.4**
RST Umm Al-Ruwaisa 78.92 302 *e*P **P 12 26 00.2 -0.1**
RST AMb AMB 12 26 01.7
comp=Z,158nm,0.9s,mb5.9
BUCH Bad Urach 78.93 337 P **P 12 26 00.9 +0.8**
PERS Pernice 78.95 333 *i*P **P 12 26 00.2 0.0**
YLV Yalova 78.96 320 *e*P **P 12 25 58.7 -1.7**
QRN Al-Qurain 78.97 301 *e*P **P 12 26 00.2 -0.4**
QRN AMb AMB 12 26 02.4
comp=Z,245nm,1.0s,mb6.1
NAY Al-Naaiem 78.97 302 *e*P **P 12 26 00.7 0.0**
NAY AMb AMB 12 26 02.3
comp=Z,109nm,1.2s,mb5.7
CEYT Ceyhan 78.97 314 *e*P **P 12 26 01.2 +0.6**
EDRB Edirne 78.97 323 *e*P **P 12 25 59.7 -0.8**
SVIS Svilajnac 78.98 328 P **P 12 25 59.2 -1.3**
RDF Al-Radifah 79.04 301 *e*P **P 12 26 00.7 -0.4**
RDF AMb AMB 12 26 03.1
comp=Z,344nm,1.2s,mb6.2
KBA Koelnbreinsper 79.08 334⇓ *i*P **P 12 26 01.6 +0.7**
comp=Z,163nm,1.1s,mb5.9,SNR=48
KBA Koelnbreinsper 79.08 334⇓ *i*P **P 12 26 01.6 +0.6**
KBA pmax pmax
comp=Z,163nm,1.1s,mb5.9
KARA Karaisali 79.10 315 *e*P **P 12 26 01.4 +0.1**
GEMT Gemlik 79.14 320 *e*P **P 12 26 00.8 -0.6**
ZAVS Zavodnje 79.16 333⇑ *i*P **P 12 26 01.1 -0.2**
ESKT Eskisehir 79.18 319 *e*P **P 12 26 01.4 -0.3**
ESKT Eskisehir 79.18 319⇑ *i*P **P 12 26 01.0 -0.7**
HEX Exmoor 79.22 346⇑ *e*P **P 12 26 01.4 -0.2**
OBKA Obir 79.23 333⇑ *i*P **P 12 26 01.2 -0.6**
comp=Z,103nm,2.2s,mb5.4,SNR=5.5
KIZT Kizilcal 79.25 318 *e*P **P 12 26 01.8 -0.2**
BFO Black Forest 79.31 338 *e*P **P 12 26 01.9 -0.3**
comp=Z,86nm,1.2s,mb5.6
BFO LR LR
comp=Z,363nm,21.0s,MS4.7
BFO Black Forest 79.31 338 P **P 12 26 01.7 -0.5**
BFO pmax pmax
comp=Z,77nm,1.1s,mb5.5
LBNH Lisbon 79.31 32 PFAKE 12 26 10.0 +7.7
LBNH LR LR
comp=Z,439nm,20.0s,MS4.8
PKME Peaks-Kenny Pk 79.32 30 PFAKE 12 26 10.0 +7.7
PKME LR LR
comp=Z,607nm,20.0s,MS4.9
NATX Nacogdoches 79.32 54 PFAKE 12 26 10.0 +7.5
NATX LR LR
comp=Z,319nm,21.0s,MS4.6
GUT Gutenstein 79.34 337 P **P 12 26 02.9 +0.5**
WATA Walderalm 79.35 335⇑ *i*P **P 12 26 03.0 +0.5**
comp=Z,102nm,1.1s,mb5.7
WATA Walderalm 79.35 335⇑ *i*P **P 12 26 03.0 +0.6**
WATA pmax pmax
comp=Z,102nm,1.1s,mb5.7
PGB Panagyurishte 79.39 325 *i*P **P 12 26 02.4 -0.4**
MYKA Terra Mystica 79.40 334⇑ *i*P **P 12 26 02.4 -0.3**
comp=Z,98nm,1.2s,mb5.6
WVT Waverly 79.40 47 *e*P **P 12 26 02.1 -0.8**
comp=Z,18nm,1.1s,mb4.9
WVT LR LR
comp=Z,345nm,21.0s,MS4.7
WVT Waverly 79.40 47 *e*P **P 12 26 02.1 -0.8**
WVT pmax pmax
comp=Z,18nm,1.1s,mb4.9
WVT MLR MLR
comp=Z,345nm,21.0s,MS4.7
SPAK Spaichingen-Ko 79.40 337⇑ *e*P **P 12 26 02.7 0.0**
WTTA Wattenberg 79.40 335 *i*P **P 12 26 03.4 +0.7**
comp=Z,207nm,1.1s,mb6.0,SNR=32
WTTA Wattenberg 79.40 335 *i*P **P 12 26 03.4 +0.7**
WTTA pmax pmax
comp=Z,207nm,1.1s,mb6.0
HTL Hartland 79.40 347 *e*P **P 12 26 02.0 -0.6**
HTL AMb AMB 12 26 04.0
comp=Z,60nm,1.0s,mb5.5
RETA Reutte 79.44 336⇑ *i*P **P 12 26 03.4 +0.5**
comp=Z,115nm,1.3s,mb5.6,SNR=16
UBR Ueberruh 79.44 336 P **P 12 26 03.2 +0.3**
MOTA Moosalm 79.47 335⇑ *i*P **P 12 26 03.5 +0.4**
comp=Z,135nm,1.1s,mb5.8,SNR=42
MOTA Moosalm 79.47 335⇑ *i*P **P 12 26 03.5 +0.4**
MOTA pmax pmax
comp=Z,135nm,1.1s,mb5.8
CDF Champ du Feu 79.49 338⇑ *i*P **P 12 26 03.0 -0.2**
comp=Z,217nm,1.1s,mb5.7
CDF Champ du Feu 79.49 338⇑ *i*P **P 12 26 03.0 -0.2**
comp=Z,108nm,1.1s,mb5.7
CDF Champ du Feu 79.49 338⇑ *i*P **P 12 26 03.0 -0.2**
CDF pmax pmax
comp=Z,108nm,1.1s,mb5.7
HTY Hatay 79.49 313 *e*P **P 12 26 03.9 +0.5**
KRTS Karatas 79.50 314 *e*P **P 12 26 04.3 +0.9**
SQTA Sankt Quirin 79.56 335⇑ *i*P **P 12 26 04.1 +0.6**
comp=Z,106nm,1.1s,mb5.7,SNR=22
SQTA Sankt Quirin 79.56 335⇑ *i*P **P 12 26 04.1 +0.5**
SQTA pmax pmax
comp=Z,106nm,1.1s,mb5.7
CRES Cresnjev 79.56 332 P **P 12 26 03.7 +0.1**
PLD Plovdiv 79.57 324 P **P 12 26 03.8 +0.1**
DIVS Divcibare 79.59 328 P **P 12 26 03.1 -0.7**
ABTA Abfaltersbach 79.62 334⇓ *i*P **P 12 26 03.7 -0.2**
comp=Z,72nm,1.4s,mb5.4
LJU Ljubljana 79.66 333 *e*P **P 12 26 03.6 -0.5**
MERS Mersin 79.67 315 *e*P **P 12 26 04.4 0.0**
KDZ Kurdzhali 79.67 324 *i*P **P 12 26 04.1 -0.2**
PTCC Patocco-Chiusa 79.69 334 P **P 12 26 03.5 -0.8**
ECH Echery 79.70 338⇑ *e*P **P 12 26 04.0 -0.3**
VTS Vitosha 79.72 326⇑ *i*P **P 12 26 04.7 +0.1**
VTS Vitosha 79.72 326 *i*P **P 12 26 04.7 +0.1**
CADS Cadrg 79.73 333 *i*P **P 12 26 03.3 -1.2**
SISB Singen-Schiene 79.74 337 P **P 12 26 05.4 +0.9**
KIZ Kirchzarten 79.76 338 P **P 12 26 04.6 0.0**
STEIN Stein am Rhein 79.78 337⇑ *i*P **P 12 26 04.4 -0.3**
comp=Z,291nm,1.3s,mb6.1
SLE Schleitheim 79.79 337⇑ P **P 12 26 04.5 -0.3**
SLE Schleitheim 79.79 337⇑ *i*P **P 12 26 04.8 0.0**
comp=Z,138nm,1.0s,mb5.8
KONT Konya--Tatoy 79.80 317 *e*P **P 12 26 04.5 -0.5**
FELD Feldberg im Sc 79.81 338⇑ *e*P **P 12 26 04.6 -0.3**
GMNA Gemona 79.84 334 P **P 12 26 04.6 -0.5**
DYA Yadsworthy 79.86 346⇑ *e*P **P 12 26 04.7 -0.4**
DYA AMb AMB 12 26 06.3
comp=Z,181nm,1.1s,mb5.9
DAVA Damuels 79.86 336⇑ *i*P **P 12 26 05.6 +0.4**
comp=Z,117nm,1.2s,mb5.7,SNR=21
FETA Feichten 79.88 336⇑ *i*P **P 12 26 05.8 +0.5**
comp=Z,98nm,1.2s,mb5.6,SNR=24
WEIN Weingarten 79.88 337⇑ *i*P **P 12 26 05.3 0.0**
comp=Z,225nm,1.1s,mb6.0
RZN Rozhen 79.92 324 *i*P **P 12 26 05.8 +0.2**
BOJS Bojanci 79.92 332 *e*P **P 12 26 05.0 -0.6**
MEZF Maizieres J'vi 79.94 340⇑ *i*P **P 12 26 05.7 +0.1**
comp=Z,229nm,1.0s,mb5.8
MEZF Maizieres J'vi 79.94 340⇑ *i*P **P 12 26 05.7 +0.1**
comp=Z,229nm,1.0s,mb6.1
FLACH Flaach 79.95 337⇑ *i*P **P 12 26 05.5 -0.2**
comp=Z,139nm,1.1s,mb5.8
LIENZ Kamor/St.Gall 79.96 336⇑ *i*P **P 12 26 05.9 +0.2**
comp=Z,202nm,1.5s,mb5.8
CEY Cerknica 79.96 333 P **P 12 26 05.8 0.0**
THEF They Montfort 79.98 339⇑ *e*P **P 12 26 05.7 -0.1**
WILA Wila 80.00 337⇑ P **P 12 26 06.1 +0.1**
WILA Wila 80.00 337⇑ *i*P **P 12 26 06.0 0.0**
comp=Z,270nm,1.2s,mb6.0
BARS Barje 80.04 327 P **P 12 26 06.0 -0.3**
MOF Molkenrain 80.05 338⇑ *e*P **P 12 26 05.9 -0.3**
ALN Alexandroupoli 80.06 323 *e*P **P 12 26 06.4 0.0**
HKT Hockley 80.07 56 PFAKE 12 26 20.0 +13
HKT LR LR
comp=Z,361nm,21.0s,MS4.7
HAU Haudompre 80.10 339⇑ *i*P **P 12 26 06.1 -0.4**
comp=Z,143nm,1.1s,mb5.5
HAU *e*MLR MLR
comp=Z,382nm,23.0s,MS4.4
HAU Haudompre 80.10 339⇑ *i*P **P 12 26 06.1 -0.4**
comp=Z,72nm,1.1s,mb5.5
HAU LR LR
comp=Z,380nm,23.0s,MS4.7
HAU Haudompre 80.10 339⇑ *i*P **P 12 26 06.1 -0.4**
HAU pmax pmax
comp=Z,72nm,1.1s,mb5.5
HAU MLR MLR
comp=Z,380nm,23.0s,MS4.7
SULZ Cheisacher 80.11 337⇑ *i*P **P 12 26 06.9 +0.4**
SULZ Cheisacher 80.11 337⇑ *i*P **P 12 26 06.5 0.0**
comp=Z,297nm,1.1s,mb6.1
SHUT Suhut-Afyon 80.11 319 *e*P **P 12 26 06.7 0.0**
ZUR Degenried 80.13 337 ⇑P **P 12 26 06.9 +0.2**
ZUR Degenried 80.13 337⇑ *i*P **P 12 26 06.7 0.0**
comp=Z,290nm,1.1s,mb6.1
SSPA Standing Stone 80.14 38 PFAKE 12 26 20.0 +13
SSPA LR LR
comp=Z,286nm,19.0s,MS4.6
MCWV Mont Chateau 80.15 39 PFAKE 12 26 20.0 +13
MCWV LR LR
comp=Z,610nm,21.0s,MS4.9
HINF Hinteralfeld 80.15 338⇑ *i*P **P 12 26 06.2 -0.6**
comp=Z,105nm,1.1s,mb5.4
HINF Hinteralfeld 80.15 338⇑ *i*P **P 12 26 06.2 -0.6**
comp=Z,52nm,1.1s,mb5.4
HINF Hinteralfeld 80.15 338⇑ *i*P **P 12 26 06.2 -0.6**
HINF pmax pmax
comp=Z,53nm,1.1s,mb5.4
PLAL Pickwick Lake 80.19 48 *e*P **P 12 26 06.1 -1.2**
comp=Z,27nm,1.3s,mb5.0
PLAL LR LR
comp=Z,309nm,20.0s,MS4.7
PLONS Plons/SG 80.22 336⇑ *i*P **P 12 26 07.2 +0.1**
comp=Z,172nm,1.1s,mb5.9
APPI Appiano 80.23 335 P **P 12 26 06.4 -0.8**
BBS Basel-Blauen 80.32 338⇑ *e*P **P 12 26 07.6 -0.1**
DAVOX Davos/Dischmat 80.33 336 P **P 12 26 08.3 +0.6**
comp=Z,54nm,0.8s,mb5.5,baz=2.4,slow=3.2,SNR=63
DAVOX Davos/Dischmat 80.33 336⇑ *i*P **P 12 26 08.2 +0.5**
comp=Z,100nm,0.9s,mb5.8
BALB Balikesir 80.36 321 *e*P **P 12 26 08.0 0.0**
FUORN Ofenpass-Fuorn 80.37 336⇑ *i*P **P 12 26 08.5 +0.5**
comp=Z,199nm,1.1s,mb5.9
MMB Musomiste 80.39 325 *i*P **P 12 26 07.9 -0.2**
BALST Balsthal 80.39 338⇑ *i*P **P 12 26 08.3 +0.3**
comp=Z,410nm,1.1s
KKB Krupnik 80.39 325 *i*P **P 12 26 07.9 -0.3**
BOURR Bourrignon 80.45 338⇑ *i*P **P 12 26 08.8 +0.4**
comp=Z,267nm,1.7s,mb5.9
PLE Pljevlja 80.47 328⇑ *i*P **P 12 26 07.6 -1.0**
BRMO Bormio 80.47 336 P **P 12 26 09.3 +0.8**
MUO Muotathal 80.49 337 ⇑P **P 12 26 09.0 +0.4**
MUO Muotathal 80.49 337⇑ *i*P **P 12 26 08.9 +0.3**
comp=Z,241nm,1.2s,mb6.0
LLS Linth-Limmern 80.50 337 ⇑P **P 12 26 08.9 +0.2**
LLS Linth-Limmern 80.50 337⇑ *i*P **P 12 26 09.0 +0.3**
comp=Z,149nm,1.5s,mb5.7
CTI Castel Tesino 80.50 335 P **P 12 26 08.1 -0.6**
IKL Isikli 80.57 315 *e*P **P 12 26 07.7 -1.5**
LOMF Lomont 80.59 338⇑ *e*P **P 12 26 08.9 -0.2**
BERNI Berninapass 80.63 336⇑ *i*P **P 12 26 09.9 +0.6**
comp=Z,134nm,1.4s,mb5.7
STKA Stephens Creek 80.63 191 *e*P **P 12 26 08.4 -0.9**
comp=Z,16nm,1.0s,mb4.9
STKA Stephens Creek 80.63 191 P **P 12 26 08.8 -0.5**
comp=Z,16nm,0.8s,mb5.0,baz=353,slow=7.6,SNR=14
STKA LR LR 12 57 35.9
comp=Z,213nm,20.3s,MS4.5,baz=25,slow=32
BNALP Bannalp 80.63 337⇑ *i*P **P 12 26 09.6 +0.2**
comp=Z,135nm,1.3s,mb5.7
IVA Berane 80.69 328⇑ *i*P **P 12 26 08.3 -1.5**
ISP Isparta 80.71 318 *e*P **P 12 26 08.4 -1.6**
ISP Isparta 80.71 318 ⇑P **P 12 26 09.5 -0.5**
ISP Isparta 80.71 318⇑ *i*P **P 12 26 09.4 -0.6**
VDL Val di Lei 80.72 336⇑ *i*P **P 12 26 10.4 +0.6**
comp=Z,157nm,0.9s,mb5.9
UPM Unac-Piva 80.75 329⇑ *i*P **P 12 26 08.1 -2.0**
TUE Stuetta 80.75 336 P **P 12 26 10.7 +0.7**
HASLI Hasliberg/Brie 80.81 337⇑ *i*P **P 12 26 10.4 +0.1**
comp=Z,233nm,1.6s,mb5.9
MABI Malga Bissina 80.82 335 P **P 12 26 10.2 -0.2**
SRS Serrai 80.84 325 *e*P **P 12 26 10.2 -0.4**
FLN La Foliniere 80.86 343⇑ *i*P **P 12 26 10.2 -0.3**
comp=Z,235nm,1.0s,mb5.8
FLN *e*MLR MLR
comp=Z,257nm,20.0s,MS4.3
FLN La Foliniere 80.86 343⇑ *i*P **P 12 26 10.2 -0.3**
comp=Z,118nm,1.0s,mb5.8
FLN LR LR
comp=Z,260nm,20.0s,MS4.6
FLN La Foliniere 80.86 343⇑ *i*P **P 12 26 10.2 -0.3**
FLN pmax pmax
comp=Z,118nm,1.0s,mb5.8
FLN MLR MLR
comp=Z,260nm,20.0s,MS4.6
FKH Fakeheh 80.87 312 *e*P **P 12 26 11.9 +1.1**
PVY Plav 80.91 328⇑ *i*P **P 12 26 09.0 -1.9**
EREN Erenkoy 80.92 314 *e*P **P 12 26 10.5 -0.6**
FUSIO Fusio 80.95 337⇑ *i*P **P 12 26 11.5 +0.4**
comp=Z,245nm,1.2s,mb6.0
LDF La Druitiere 80.95 343⇑ *i*P **P 12 26 10.6 -0.4**
comp=Z,154nm,1.1s,mb5.6
LDF La Druitiere 80.95 343⇑ *i*P **P 12 26 10.6 -0.4**
comp=Z,77nm,1.1s,mb5.5
LDF La Druitiere 80.95 343⇑ *i*P **P 12 26 10.6 -0.4**
LDF pmax pmax
comp=Z,77nm,1.1s,mb5.5
KULA Kula-Manisa 80.97 320 *e*P **P 12 26 09.9 -1.4**
WIMIS Wimmis 81.03 337⇑ *i*P **P 12 26 11.6 +0.1**
comp=Z,217nm,2.7s,mb5.6
MAGA Magasa 81.04 335 P **P 12 26 11.2 -0.4**
SWET Sewanee 81.05 46 *e*P **P 12 26 10.6 -1.2**
VAY Valandovo 81.06 325 P **P 12 26 10.9 -0.8**
NKY Niksic 81.06 328⇑ *i*P **P 12 26 09.3 -2.4**
BRANT Les Verrieres 81.06 338⇑ *i*P **P 12 26 12.0 +0.3**
comp=Z,218nm,1.2s,mb6.0
KNT Kendrikon 81.07 325 *e*P **P 12 26 11.3 -0.5**
TZTN Tazewell 81.09 44 *e*P **P 12 26 11.7 -0.3**
comp=Z,17nm,1.3s,mb4.8
TZTN LR LR
comp=Z,329nm,21.0s,MS4.7
TORNY Torny/Romont 81.10 338⇑ *i*P **P 12 26 12.1 +0.3**
comp=Z,237nm,1.5s,mb5.9
BRY Bratogost 81.14 329⇑ *i*P **P 12 26 09.5 -2.7**
WES Weston 81.15 32 PFAKE 12 26 20.0 +7.8
WES LR LR
comp=Z,840nm,20.0s,MS5.1
PMOR Pomariorio Ree 81.28 124 *e*T 13 55 22.0
comp=Z,29nm,0.2s
LKBD Leukerbad 81.29 337 ⇑P **P 12 26 13.2 +0.3**
LKBD ⇑P 12 26 13.4
LKBD Leukerbad 81.29 337⇑ *i*P **P 12 26 12.8 -0.1**
comp=Z,190nm,1.1s,mb6.0
GRR Gorron 81.29 344⇑ *i*P **P 12 26 12.7 -0.1**
comp=Z,282nm,1.1s,mb5.8
GRR Gorron 81.29 344⇑ *i*P **P 12 26 12.7 -0.1**
comp=Z,141nm,1.1s,mb5.8
GRR Gorron 81.29 344⇑ *i*P **P 12 26 12.7 -0.1**
GRR pmax pmax
comp=Z,141nm,1.1s,mb5.8
TTG Podgorica 81.31 328⇑ *i*P **P 12 26 10.6 -2.4**
MUGIO Muggio 81.34 336⇑ *i*P **P 12 26 13.1 -0.1**
comp=Z,196nm,0.9s,mb6.0
LOR Lormes 81.38 340⇑ *i*P **P 12 26 13.0 -0.3**
comp=Z,225nm,1.0s,mb5.8
LOR *e*MLR MLR
comp=Z,444nm,22.5s,MS4.5
LOR Lormes 81.38 340⇑ *i*P **P 12 26 13.0 -0.3**
comp=Z,113nm,1.0s,mb5.8
LOR LR LR
comp=Z,440nm,22.5s,MS4.8
LOR Lormes 81.38 340⇑ *i*P **P 12 26 13.0 -0.3**
LOR pmax pmax
comp=Z,113nm,1.0s,mb5.8
LOR MLR MLR
comp=Z,440nm,22.5s,MS4.8
SENIN Lac Senin/Sane 81.39 338⇑ *i*P **P 12 26 13.8 +0.4**
comp=Z,270nm,2.7s,mb5.7
LFK Lefkose 81.42 315 *e*P **P 12 26 12.8 -1.0**
CABF La Chapelle 81.47 338⇑ *i*P **P 12 26 13.9 +0.1**
comp=Z,159nm,1.1s,mb5.6

CABF	La Chapelle	81.47	338	⇑	*i*P		P	12 26 13.9	+0.1
	comp=Z,80nm,1.1s,mb5.6								
CABF	La Chapelle	81.47	338	⇑	*i*P		P	12 26 13.9	+0.1
CABF						pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6								
VAI	Varese	81.47	336		P		P	12 26 13.6	-0.2
HORT	Hortiatis	81.48	325		*e*P		P	12 26 13.2	-0.8
GIMEL	St. Georges /	81.49	338	⇑	*i*P		P	12 26 14.1	+0.2
	comp=Z,84nm,1.1s,mb5.6								
AIGLE	Aigle	81.50	338	⇑	*i*P		P	12 26 14.1	+0.1
	comp=Z,165nm,1.3s,mb5.8								
BHL	Bhannes	81.51	312		*e*P		P	12 26 14.3	0.0
MMK	Mattmark	81.51	337	⇑	P		P	12 26 14.7	+0.6
MMK	Mattmark	81.51	337	⇑	*i*P		P	12 26 14.4	+0.3
	comp=Z,133nm,1.0s,mb5.8								
CPCT	Cooper Cave	81.53	45		*e*P		P	12 26 13.3	-1.1
GRYON	Gryon	81.55	338	⇑	*i*P		P	12 26 14.8	+0.6
	comp=Z,134nm,1.2s,mb5.8								
BUM	Brajici-Budva	81.55	328	⇑	*i*P		P	12 26 12.4	-1.9
HCY	Herceg Novi	81.56	329	⇑	*i*P		P	12 26 12.2	-2.2
DIX	Grande Dixence	81.63	337	⇑	P		P	12 26 15.5	+0.8
DIX	Grande Dixence	81.63	337	⇑	*i*P		P	12 26 15.2	+0.5
	comp=Z,210nm,1.0s,mb6.0								
HYF	Humbligny	81.65	341	⇑	*i*P		P	12 26 14.8	+0.1
SSF	Saint Saulge	81.65	340	⇑	*i*P		P	12 26 14.5	-0.3
	comp=Z,101nm,0.8s,mb5.5								
SSF	Saint Saulge	81.65	340	⇑	*i*P		P	12 26 14.5	-0.3
	comp=Z,50nm,0.8s,mb5.5								
SSF	Saint Saulge	81.65	340	⇑	*i*P		P	12 26 14.5	-0.3
SSF						pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5								
SALAN	Lac Salanfe	81.68	338	⇑	*i*P		P	12 26 15.5	+0.6
	comp=Z,92nm,1.1s,mb5.6								
ULC	Ulcinj	81.72	328	⇑	*i*P		P	12 26 13.2	-2.0
SGMF	Saint Gilles	81.73	345	⇑	*i*P		P	12 26 15.1	-0.1
	comp=Z,241nm,1.1s,mb5.7								
SGMF	Saint Gilles	81.73	345	⇑	*i*P		P	12 26 15.1	-0.1
	comp=Z,121nm,1.1s,mb5.7								
SGMF	Saint Gilles	81.73	345	⇑	*i*P		P	12 26 15.1	-0.1
SGMF						pmax	pmax		
	comp=Z,121nm,1.1s,mb5.7								
EMV	Vieux Emosson	81.77	338	⇑	*i*P		P	12 26 15.9	+0.5
	comp=Z,162nm,1.0s,mb5.9								
CSS	Prodhromos	81.78	315		*e*P		P	12 26 15.3	-0.3
	comp=Z,75nm,0.8s,mb5.7								
ROSF	Rostrenen	81.78	345	⇑	*i*P		P	12 26 15.4	0.0
	comp=Z,364nm,1.1s,mb5.9								
ROSF	Rostrenen	81.78	345	⇑	*i*P		P	12 26 15.4	0.0
	comp=Z,182nm,1.1s,mb5.9								
ROSF	Rostrenen	81.78	345	⇑	*i*P		P	12 26 15.4	0.0
ROSF						pmax	pmax		
	comp=Z,182nm,1.1s,mb5.9								
ELN	Prospectdale	81.78	41		*e*P		P	12 26 14.6	-1.1
LEF	Lefka	81.86	315		*e*P		P	12 26 14.5	-1.6
ELL	Elmali	81.89	318		*e*P		P	12 26 15.9	-0.3
ORO	Oropa	81.90	337		P		P	12 26 16.3	+0.2
OHR	Ohrid	81.91	326		P		P	12 26 15.2	-1.0
SALA	Sala	81.92	311	⇑	P		P	12 26 15.3	-1.2
AVF	Avril sur Loir	81.94	340	⇑	*i*P		P	12 26 16.1	-0.2
	comp=Z,225nm,1.1s,mb5.7								
AVF	Avril sur Loir	81.94	340	⇑	*i*P		P	12 26 16.1	-0.2
	comp=Z,113nm,1.1s,mb5.7								
AVF	Avril sur Loir	81.94	340	⇑	*i*P		P	12 26 16.1	-0.2
AVF						pmax	pmax		
	comp=Z,113nm,1.1s,mb5.7								
BLA	Blacksburg	81.94	41		PFAKE			12 26 30.0	+14
BLA					LR		LR		
	comp=Z,226nm,19.0s,MS4.5								
SMF	Signal de Mont	81.97	340	⇑	*i*P		P	12 26 16.3	-0.1
	comp=Z,328nm,1.2s,mb5.8								
SMF	Signal de Mont	81.97	340	⇑	*i*P		P	12 26 16.3	-0.1
	comp=Z,164nm,1.2s,mb5.8								
SMF	Signal de Mont	81.97	340	⇑	*i*P		P	12 26 16.3	-0.1
SMF						pmax	pmax		
	comp=Z,164nm,1.2s,mb5.8								
FNA	Florina	81.97	326		*e*P		P	12 26 15.8	-0.8
TIR	Tirane	82.04	327		P		P	12 26 17.1	+0.2
LIT	Litokhoron	82.14	325		*e*P		P	12 26 16.5	-1.0
FORT	Forrest	82.16	203	⇑	*i*P		P	12 26 17.1	-0.3
	comp=Z,186nm,0.6s,mb6.2								
QUIF	Quistinic	82.17	345	⇑	*i*P		P	12 26 17.2	-0.3
	comp=Z,165nm,1.2s,mb5.5								
QUIF	Quistinic	82.17	345	⇑	*i*P		P	12 26 17.2	-0.3
	comp=Z,82nm,1.2s,mb5.5								
QUIF	Quistinic	82.17	345	⇑	*i*P		P	12 26 17.2	-0.3
QUIF						pmax	pmax		
	comp=Z,83nm,1.2s,mb5.5								
ZCCA	Zocca	82.25	334		P		P	12 26 19.1	+1.1
BGF	Bois d'Agland	82.27	341	⇑	*i*P		P	12 26 18.0	0.0
	comp=Z,110nm,1.0s,mb5.4								
BGF	Bois d'Agland	82.27	341	⇑	*i*P		P	12 26 18.0	0.0
	comp=Z,55nm,1.0s,mb5.4								
BGF	Bois d'Agland	82.27	341	⇑	*i*P		P	12 26 18.0	0.0
BGF						pmax	pmax		
	comp=Z,55nm,1.0s,mb5.4								
YER	Yerkesik	82.28	319		*e*P		P	12 26 17.7	-0.6
LRAL	Lakeview Retre	82.29	48		*e*P		P	12 26 17.4	-0.9
	comp=Z,12nm,0.8s,mb4.9								
LRAL						LR	LR		
	comp=Z,404nm,19.0s,MS4.8								
BOB	Bobbio (Coli)	82.30	336		P		P	12 26 18.7	+0.5
FSSB	Fossombrone	82.31	333		P		P	12 26 18.5	+0.2
LPL	La Plagne	82.33	338	⇑	*i*P		P	12 26 19.1	+0.8
	comp=Z,224nm,1.0s,mb5.8								
LPL	La Plagne	82.33	338	⇑	*i*P		P	12 26 19.1	+0.8
	comp=Z,112nm,1.0s,mb5.8								
LPL	La Plagne	82.33	338	⇑	*i*P		P	12 26 19.1	+0.8
LPL						pmax	pmax		
	comp=Z,112nm,1.0s,mb5.8								
LPG	La Plagne	82.34	338	⇑	*i*P		P	12 26 19.4	+1.0
	comp=Z,299nm,1.1s,mb5.8								
LPG	La Plagne	82.34	338	⇑	*i*P		P	12 26 19.4	+1.0
	comp=Z,149nm,1.1s,mb5.8								
LPG	La Plagne	82.34	338	⇑	*i*P		P	12 26 19.4	+1.0
LPG						pmax	pmax		
	comp=Z,149nm,1.1s,mb5.8								
ERBM	Eremo	82.35	335		P		P	12 26 19.9	+1.4
FETY	Fethiye	82.35	318		*e*P		P	12 26 17.4	-1.2
GSCL	Gusciola	82.36	335		P		P	12 26 19.6	+1.1
FNVD	Fontana Vidola	82.37	334		P		P	12 26 19.2	+0.6
SFI	Santa Sofia	82.40	334		P		P	12 26 19.9	+1.1
CBN	Corbin	82.41	39		PFAKE			12 26 30.0	+11
CBN					LR		LR		
	comp=Z,382nm,20.0s,MS4.8								
VMG	Vicchio	82.44	334		P		P	12 26 20.4	+1.4
PPT	Papeete	82.47	127		*e*LR		LR	12 52 14.7	
	comp=Z,496nm,22.2s,baz=324								
PPT	Papeete	82.47	127		*e*T			13 56 45.0	
	comp=Z,14nm,0.3s								
PPT	Papeete	82.47	127		LR		LR	12 54 33.1	
	comp=Z,398nm,21.5s,MS4.8,baz=75,slow=30								
RSP	Reno Superiore	82.53	337		P		P	12 26 19.2	-0.2
BDI	Bagni Di Lucca	82.62	334		P		P	12 26 20.0	+0.1
CRE	Caprese Michel	82.63	333		P		P	12 26 20.2	+0.2
SNTG	Esanatoglia	82.66	333		P		P	12 26 20.6	+0.5
TCF	Toulx Ste Croi	82.67	341	⇑	*i*P		P	12 26 20.2	+0.1
	comp=Z,195nm,1.0s,mb5.8								
TCF	Toulx Ste Croi	82.67	341	⇑	*i*P		P	12 26 20.2	+0.1
	comp=Z,97nm,1.0s,mb5.8								
TCF	Toulx Ste Croi	82.67	341	⇑	*i*P		P	12 26 20.2	+0.1
TCF						pmax	pmax		
	comp=Z,97nm,1.0s,mb5.8								
CDCA	Citt' di Caste	82.69	333		P		P	12 26 20.6	+0.3
BDRM	Kayabasi	82.71	320	⇑	*i*P		P	12 26 20.0	-0.5
BNI	Bardonecchia	82.77	337		P		P	12 26 21.5	+0.8
GDM	Grand'Maison	82.77	338	⇑	*e*P		P	12 26 21.4	+0.7
GRN	Grenoble	82.83	338	⇑	*e*P		P	12 26 21.9	+0.9
MFF	Saint Martin d	82.86	343	⇑	*i*P		P	12 26 21.1	0.0
	comp=Z,180nm,1.1s,mb5.7								
MFF	Saint Martin d	82.86	343	⇑	*i*P		P	12 26 21.1	0.0
	comp=Z,90nm,1.1s,mb5.7								
MFF	Saint Martin d	82.86	343	⇑	*i*P		P	12 26 21.1	0.0
MFF						pmax	pmax		
	comp=Z,90nm,1.1s,mb5.7								
NRCA	Norcia	82.99	332		P		P	12 26 20.3	-1.5
MBDF	Montbardon	83.05	337	⇑	*i*P		P	12 26 22.3	+0.2
	comp=Z,108nm,1.0s,mb5.5								
MBDF	Montbardon	83.05	337	⇑	*i*P		P	12 26 22.3	+0.2
	comp=Z,54nm,1.0s,mb5.5								
MBDF	Montbardon	83.05	337	⇑	*i*P		P	12 26 22.3	+0.2
MBDF						pmax	pmax		
	comp=Z,54nm,1.0s,mb5.5								
COLF	Collangettes	83.06	340	⇑	*e*P		P	12 26 22.5	+0.3
ORIF	Oris-en-Rattie	83.10	338	⇑	*i*P		P	12 26 23.0	+0.6
	comp=Z,231nm,1.0s,mb5.8								
ORIF					*e*MLR		MLR		
	comp=Z,336nm,21.8s,MS4.4								
ORIF	Oris-en-Rattie	83.10	338	⇑	*i*P		P	12 26 23.0	+0.6
	comp=Z,115nm,1.0s,mb5.9								
ORIF	Oris-en-Rattie	83.10	338	⇑	*i*P		P	12 26 23.0	+0.6
ORIF						pmax	pmax		
	comp=Z,115nm,1.0s,mb5.9								
DOI	San Damiano	83.14	337		P		P	12 26 24.1	+1.5
SURF	Saint Ours	83.27	337	⇑	*e*P		P	12 26 24.1	+0.8
AQU	L'Aquila	83.33	332	⇑	P		P	12 26 24.4	+0.7
AQU	L'Aquila	83.33	332	⇑	*i*P		P	12 26 24.4	+0.8
GRFL	Gerfalco	83.35	334		P		P	12 26 23.2	-0.5
CNB	Canberra Magne	83.37	184		*e*P		P	12 26 23.4	-0.2
	comp=Z,20nm,1.0s,mb5.1								
VIVF	Saint-Julien-l	83.45	339	⇑	*i*P		P	12 26 24.6	+0.4
	comp=Z,236nm,1.2s,mb5.8								
VIVF	Saint-Julien-l	83.45	339	⇑	*i*P		P	12 26 24.6	+0.4
	comp=Z,118nm,1.2s,mb5.8								
VIVF	Saint-Julien-l	83.45	339	⇑	*i*P		P	12 26 24.6	+0.4
VIVF						pmax	pmax		
	comp=Z,118nm,1.2s,mb5.8								
FIAM	Fiamignano	83.50	332		P		P	12 26 24.7	+0.2
IMI	Imperia	83.52	336		P		P	12 26 24.2	-0.3
MNS	Montasola	83.53	332		P		P	12 26 24.2	-0.4
SAOF	Saorge	83.54	336	⇑	*e*P		P	12 26 24.3	-0.3
AUTN	L'Aution	83.56	337	⇑	*e*P		P	12 26 24.6	-0.2
OCF	Saint Nazaire	83.56	338	⇑	*e*P		P	12 26 25.3	+0.5
OG26	St.-Nazaire-De	83.56	338	⇑	*e*P		P	12 26 25.3	+0.5
WHFO	Wadi Hawf	83.56	290		P		P	12 26 25.2	+0.1
	SNR=32								
WHFO	Wadi Hawf	83.56	290		P		P	12 26 25.2	+0.1
	SNR=32								
TOUF	Mont Tournerai	83.59	337	⇑	*e*P		P	12 26 25.1	+0.2
RBK	Rabkut	83.60	289		P		P	12 26 25.5	+0.1
	SNR=6.8								
RBK	Rabkut	83.60	289		P		P	12 26 25.5	+0.1
	SNR=6.8								
PTQR	Pietraquaria	83.64	332		P		P	12 26 25.2	0.0
LUCF	Luceram	83.68	337	⇑	*e*P		P	12 26 25.3	-0.1
SBF	Sospel	83.68	337	⇑	*i*P		P	12 26 25.0	-0.4
	comp=Z,297nm,1.0s,mb6.1								
SBF	Sospel	83.68	337	⇑	*i*P		P	12 26 25.0	-0.4
	comp=Z,149nm,1.0s,mb6.1								
SBF	Sospel	83.68	337	⇑	*i*P		P	12 26 25.0	-0.4
SBF						pmax	pmax		
	comp=Z,149nm,1.0s,mb6.1								
GOGA	Godfrey	83.69	45		PFAKE			12 26 40.0	+14
GOGA					LR		LR		
	comp=Z,390nm,21.0s,MS4.8								
FG5	Orsara di Pugl	83.70	330		P		P	12 26 25.6	+0.1
VVLD	Villa Vallelon	83.70	332		P		P	12 26 25.1	-0.4
MVIF	Mont Vial	83.73	337	⇑	*e*P		P	12 26 25.6	0.0
RJF	Les Rejaudoux	83.76	341	⇑	*i*P		P	12 26 25.7	0.0
	comp=Z,177nm,1.2s,mb5.8								
RJF					*e*MLR		MLR		
	comp=Z,418nm,21.0s,MS4.5								
RJF	Les Rejaudoux	83.76	341	⇑	*i*P		P	12 26 25.7	0.0
	comp=Z,88nm,1.2s,mb5.8								
RJF					LR		LR		
	comp=Z,420nm,21.0s,MS4.8								
RJF	Les Rejaudoux	83.76	341	⇑	*i*P		P	12 26 25.7	0.0
RJF						pmax	pmax		
	comp=Z,89nm,1.2s,mb5.8								
RJF					MLR		MLR		
	comp=Z,420nm,21.0s,MS4.8								
REVF	Revere	83.81	337	⇑	*e*P		P	12 26 25.9	-0.2
GUAR	Guarcino	83.87	332		P		P	12 26 26.1	-0.3
BRAL	Brewton	83.89	49		PFAKE			12 26 40.0	+13
BRAL					LR		LR		
	comp=Z,309nm,20.0s,MS4.7								
CALN	Calern	83.93	337	⇑	*e*P		P	12 26 26.7	+0.1
STOF	St-Etienne Org	83.95	338		*e*P		P	12 26 26.9	+0.1
CAF	Calviac	84.00	341	⇑	*i*P		P	12 26 27.4	+0.4
	comp=Z,189nm,1.3s,mb5.8								
CAF	Calviac	84.00	341	⇑	*i*P		P	12 26 27.4	+0.4
	comp=Z,94nm,1.3s,mb5.8								
CAF	Calviac	84.00	341	⇑	*i*P		P	12 26 27.4	+0.4
CAF						pmax	pmax		
	comp=Z,94nm,1.3s,mb5.8								
SMRF	Simiane la Rot	84.06	338		*e*P		P	12 26 27.9	+0.6
	comp=Z,206nm,1.2s,mb5.8								
SMRF	Simiane la Rot	84.06	338		*e*P		P	12 26 27.9	+0.6
	comp=Z,206nm,1.2s,mb6.1								
RFI	Roccamonfina	84.10	331		P		P	12 26 28.0	+0.4
VILF	Villemus	84.14	338		*e*P		P	12 26 28.0	+0.3
FRF	La Foret Royal	84.17	337	⇑	*i*P		P	12 26 27.5	-0.4
	comp=Z,187nm,1.2s,mb5.8								
FRF	La Foret Royal	84.17	337	⇑	*i*P		P	12 26 27.5	-0.4
	comp=Z,93nm,1.2s,mb5.8								
FRF	La Foret Royal	84.17	337	⇑	*i*P		P	12 26 27.5	-0.4
FRF						pmax	pmax		
	comp=Z,93nm,1.2s,mb5.8								
LFF	La Frestale	84.27	341		*e*P		P	12 26 28.5	+0.1
	comp=Z,139nm,1.1s,mb5.7								
LFF	La Frestale	84.27	341		*e*P		P	12 26 28.5	+0.1
	comp=Z,70nm,1.1s,mb5.7								
LFF	La Frestale	84.27	341		*e*P		P	12 26 28.5	+0.1
LFF						pmax	pmax		
	comp=Z,70nm,1.1s,mb5.7								
TAVF	Tavernes	84.27	337		*e*P		P	12 26 28.4	0.0
ABTO	Aybut	84.28	290		P		P	12 26 29.0	+0.1
	SNR=14								
ABTO	Aybut	84.28	290		P		P	12 26 29.0	+0.1
	SNR=14								
PRAF	Pradon	84.32	338		*e*P		P	12 26 28.8	+0.2
SGO	Sicignano	84.33	330		P		P	12 26 28.5	-0.2
LASF	Ste Croix	84.39	339	⇑	*i*P		P	12 26 29.5	+0.5
	comp=Z,90nm,1.3s,mb5.5								
LMR	La Mourre	84.42	337		*e*P		P	12 26 29.0	-0.1
	comp=Z,312nm,1.1s,mb6.0								
LMR	La Mourre	84.42	337		*e*P		P	12 26 29.0	-0.1
	comp=Z,156nm,1.1s,mb6.0								
LMR	La Mourre	84.42	337		*e*P		P	12 26 29.0	-0.1
LMR						pmax	pmax		
	comp=Z,156nm,1.1s,mb6.0								
TREF	Trevaresse	84.44	338	⇑	*e*P		P	12 26 29.2	0.0
PUYF	Puyloubier	84.44	338		*e*P		P	12 26 29.2	-0.1
MGR	Morigerati	84.63	329		P		P	12 26 29.6	-0.7
BERF	Bertagne	84.65	338		*e*P		P	12 26 30.3	0.0
GELF	Grande-Etoile	84.65	338		*e*P		P	12 26 30.6	+0.3
CNNC	Cliffs of the	84.70	40		PFAKE			12 26 40.0	+9.3
CNNC					LR		LR		
	comp=Z,374nm,20.0s,MS4.8								
OSPF	L'Ospedale	85.23	334	⇑	*e*P		P	12 26 33.0	-0.3
IDI	Anoyia	85.30	321		P		P	12 26 31.9	-1.9
	comp=Z,21nm,0.7s,mb5.3,baz=37,slow=8.9,SNR=9.7								
MTLF	Montolieu	85.47	340	⇑	*i*P		P	12 26 33.8	-0.6
	comp=Z,29nm,0.9s,mb5.1								
MTLF	Montolieu	85.47	340	⇑	*i*P		P	12 26 33.8	-0.6
	comp=Z,14nm,0.9s,mb5.1								
MTLF	Montolieu	85.47	340	⇑	*i*P		P	12 26 33.8	-0.6
MTLF						pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1								
NHSC	New Hope	85.48	43		PFAKE			12 26 50.0	+15
NHSC					LR		LR		
	comp=Z,394nm,21.0s,MS4.8								
KLBR	Kellerberrin	86.00	211		*e*P		P	12 26 35.4	-1.5
	comp=Z,43nm,0.9s,mb5.7								
MLS	Moulis	86.08	341		*e*P		P	12 26 36.5	-1.0
EPF	Esparros	86.18	341		*e*P		P	12 26 36.6	-1.3
	comp=Z,19nm,0.9s,mb5.0								
EPF	Esparros	86.18	341		*e*P		P	12 26 36.6	-1.3
	comp=Z,9.3nm,0.9s,mb5.0								
EPF	Esparros	86.18	341		*e*P		P	12 26 36.6	-1.3
EPF						pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0								
SOI	Samo	86.30	328		P		P	12 26 38.2	-0.4
DGI	Dorgali Grotta	86.35	334		P		P	12 26 38.7	-0.1
RESF	Ens	86.39	341		*e*P		P	12 26 39.1	+0.1
SJPF	Ste Jean	86.43	342		*e*P		P	12 26 38.5	-0.6
	comp=Z,38nm,1.3s,mb5.2								
SJPF	Ste Jean	86.43	342		*e*P		P	12 26 38.5	-0.6
	comp=Z,19nm,1.3s,mb5.2								
SJPF	Ste Jean	86.43	342		*e*P		P	12 26 38.5	-0.6
SJPF						pmax	pmax		
	comp=Z,19nm,1.3s,mb5.2								
ETSF	Etsaut	86.50	342	⇑	*i*P		P	12 26 38.9	-0.6
	comp=Z,38nm,1.1s,mb5.2								
ETSF	Etsaut	86.50	342	⇑	*i*P		P	12 26 38.9	-0.6
	comp=Z,19nm,1.1s,mb5.2								
ETSF	Etsaut	86.50	342	⇑	*i*P		P	12 26 38.9	-0.6
ETSF						pmax	pmax		
	comp=Z,19nm,1.1s,mb5.2								
MUN	Mundaring	86.88	212		*e*P		P	12 26 39.9	-1.3
TBI	Tubuai	87.30	130		*e*LR		LR	12 54 20.6	
	comp=Z,602nm,26.2s,baz=331								
TBI	Tubuai	87.30	130		*e*T			14 02 48.7	
	comp=Z,21nm,0.3s								
NWAO	Narrogin (SRO)	87.39	210		*e*P		P	12 26 43.3	-0.3
DWPF	Disney	89.05	47		PFAKE			12 27 00.0	+8.0
DWPF					LR		LR		
	comp=Z,487nm,19.0s,MS5.0								
ESDC	Sonseca Array	90.28	343		P		P	12 26 56.0	-1.6
	comp=Z,10.0nm,1.0s,mb5.1,baz=8.6,slow=4.3,SNR=18								
ESDC					LR		LR	13 12 17.1	
	comp=Z,221nm,20.2s,MS4.6,baz=20,slow=39								
ESLA	Sonseca Array	90.28	343		*e*P		P	12 26 56.6	-0.9
	comp=Z,3.4nm,1.1s,mb4.6								
ESLA					LR		LR		
	comp=Z,1μm,19.0s,MS5.4								
PAB	San Pablo	90.48	344		*e*P		P	12 26 57.9	-0.6
	comp=Z,6.4nm,0.9s,mb5.0								
PAB					LR		LR		
	comp=Z,323nm,20.0s,MS4.8								
PAB	San Pablo	90.48	344		*e*P		P	12 26 57.9	-0.6
PAB						pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9								
PAB					MLR		MLR		
	comp=Z,323nm,20.0s,MS4.8								
KEST	Kesra	90.66	332		P		P	12 26 58.7	-0.7
	comp=Z,9.5nm,0.9s,mb5.1,baz=322,slow=1.2,SNR=22								
KEST					LR		LR	13 12 45.4	
	comp=Z,114nm,19.9s,MS4.3,baz=355,slow=39								
TAU	Tasmania Unive	91.05	185		*e*P		P	12 27 01.0	+0.5
SNZO	South Karori	91.06	165		PFAKE			12 27 10.0	+9.3
SNZO					LR		LR		
	comp=Z,414nm,20.0s,MS4.9								
TEIG	Tepich	91.91	56		PFAKE			12 27 20.0	+15
TEIG					LR		LR		
	comp=Z,282nm,21.0s,MS4.7								
TGUH	Tegucigalpa,Un	97.42	59		PFAKE			12 27 40.0	+9.3
TGUH					LR		LR		
	comp=Z,234nm,21.0s,MS4.7								
SDDR	Presa de Saban	101.64	44		PFAKE			12 28 00.0	+11
SDDR					LR		LR		
	comp=Z,261nm,20.0s,MS4.8								
KMBO	Kilima Mbogo	108.51	290		PFAKE			12 32 40.0	+14
KMBO					LR		LR		
	comp=Z,209nm,21.0s,MS4.7								
SDV	Santo Domingo	110.68	48		PFAKE			12 32 40.0	+10
SDV					LR		LR		
	comp=Z,118nm,21.0s,MS4.4								
OTAV	Otavalo	113.67	60		PFAKE			12 32 50.0	+15
OTAV					LR		LR		
	comp=Z,51nm,22.0s,MS4.1								
TORD	Torodi Ar. Bea	114.13	331		PKP		PKiKP	12 32 34.7	-1.5
	comp=Z,4.0nm,0.8s,baz=326,slow=1.5,SNR=12								
TORD					PKKPbc		PKKPbc	12 43 21.2	+6.3
	comp=Z,1.7nm,0.8s,baz=216,slow=4.8,SNR=5.3								
DBIC	Dimbokro	122.25	335		PKP		PKPdf	12 32 50.4	-1.5
DBIC	Dimbokro	122.25	335		PKP		PKPdf	12 32 50.4	-1.4
	comp=Z,13nm,0.8s,baz=0.1,slow=1.4,SNR=24								
LIC	Lamto	122.72	335	⇑	*i*PKIKP		PKPdf	12 32 51.3	-1.5
	comp=Z,34nm,0.9s								
LIC					*e*MLR		MLR		
	comp=Z,158nm,22.2s,MS4.3								
LIC	Lamto	122.72	335	⇑	*i*PKPdf		PKPdf	12 32 51.3	-1.5
LIC					LR		LR		
	comp=Z,80nm,22.3s,MS4.3

JOM			eS	Sg	12 19 09.3	-0.2
JYK	**Kaneyama**	**0.59 211**	⇑P	Pg	12 19 06.5	-0.3
JYK			S	Sg	12 19 14.3	-0.3
JMK	**Ichinoseki**	**0.59 142**	⇓P	Pg	12 19 06.5	-0.4
JMK			S	Sg	12 19 14.2	-0.6
JAH	**Hinai**	**0.77 354**	P	Pg	12 19 10.1	-0.2
JAH			S	Sg	12 19 20.2	-0.3
JOU	**Okura**	**1.05 184**	P	Pb	12 19 15.0	-0.2
JIO	**Ouri**	**1.07 154**	P	Pb	12 19 14.8	-0.7
JIO			S	Sb	12 19 29.2	-0.1

ISCJB ***27*** *12:21:35.7±1.2, 2989N±006×3637E±009, h0km, Error ellipse: s-maj=11.5km s-min=7.4km az=159.9*
SGS ***27*** *12:21:35.1, 3017N×3650E, h16km*
GII ***27*** *12:21:36.2±0.0, 2981N×3633E, h0km*
HLW ***27*** *12:21:36.3, 2986N×3649E, h4km, Mb3.2*
CSEM ***27*** *12:21:37.3±0.2, 2985N×3624E, h1km, ML3.1, Error ellipse: s-maj=4.5km s-min=3.2km az=98.0, Mining explosion.*

ISC 27 12:21:36.0±1.2, 2989N±005×3639E±009, h0km, n17, σ0=81/19, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.18**	**278**	Pg	**Pg**	**12 21 57.8**	**-0.8**
HRFI				Sg	**Sg**	**12 22 14.7**	**+0.7**
EIL	**Elat**	**1.27**	**261**	Pg	**Pg**	**12 21 59.9**	**-0.4**
PRNI	**Paran**	**1.29**	**291**	Pg	**Pg**	**12 21 59.0**	**-1.7**
HQLS		**1.29**	**244**	P	**Pg**	**12 21 59.9**	**-1.0**
JLOS		**1.39**	**215**	P	**Pg**	**12 22 02.7**	**0.0**
JLOS		**1.39**	**215**	P	**Pg**	**12 22 02.7**	**+0.1**
JLOS				S	**Sg**	**12 22 22.2**	**+1.6**
KRMI	**Paran Flat**	**1.46**	**279**	Pn	**Pn**	**12 22 03.1**	**-0.5**
HBST	**Basata**	**1.59**	**246**	P	**Pn**	**12 22 05.6**	**+0.2**
DSI	**Dead Sea**	**1.89**	**333**	Pn	**Pn**	**12 22 11.2**	**+1.7**
HDHB	**Dhahab**	**1.93**	**234**	P	**Pn**	**12 22 09.9**	**-0.2**
KZIT	**Kziot**	**2.00**	**301**	Pn	**Pn**	**12 22 11.7**	**+0.7**
HNKL	**Nakhl**	**2.09**	**272**	P	**Pn**	**12 22 12.5**	**+0.2**
RSHS		**2.11**	**222**	P	**Pn**	**12 22 11.8**	**-0.7**
HKAT	**Jabal Katrina**	**2.50**	**238**	P	**Pn**	**12 22 17.8**	**0.0**
AMAG	**Maghara**	**2.85**	**286**	P	**Pn**	**12 22 23.3**	**+0.5**
SUZ		**3.09**	**270**	P	**Pn**	**12 22 26.3**	**+0.3**
WJHS		**3.14**	**180**	P	**Pn**	**12 22 26.2**	**-0.5**

IDC ***27*** *12:45:29.9±1.8, 586S×13053E, h0km, mb3.9/2, mb1 4.2/5, mb1mx3.8/13, mbtmp4.0/5, ML4.2/3, Error ellipse: s-maj=78.9km s-min=26.2km az=72.0*
NEIC ***27*** *12:45:31.3±1.2, 588S×13062E, h10km, mb4.2/1, Error ellipse: s-maj=32.6km s-min=14.0km az=73.0*
ISCJB ***27*** *12:45:33.7±1.3, 6295S±008×1299E±01, h33km, mb3.8/2, Error ellipse: s-maj=21.4km s-min=11.7km az=169.6*

ISC 27 12:45:35.8±1.3, 621S±009×1299E±01, h35km, n9, σ0=51/15, mb3.8/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.92**	**159**	*e*P	**Pn**	**12 47 19.6**	**+4.9**
	15nm,0.2s						
KAKA				eS	**Sn**	**12 48 32.2**	**0.0**
FITZ	**Fitzroy Crossi**	**12.53**	**199**	*e*P	**Pn**	**12 48 37.4**	**+5.7**
	27nm,1.9s						
FITZ				eS	**Sn**	**12 50 50.1**	**0.0**
FITZ	**Fitzroy Crossi**	**12.53**	**199**	Pn	**Pn**	**12 48 38.8**	**+7.1**
	1.0nm,0.3s,baz=48,slow=9.8,SNR=19						
FITZ				Sn	**Sn**	**12 50 50.0**	**-0.1**
	1.0nm,0.3s,baz=50,slow=9.3,SNR=6.4						
WRA	**Warramunga Arr**	**14.31**	**163**	Pn	**Pn**	**12 48 55.5**	**-0.4**
	1.0nm,0.3s,baz=346,slow=13,SNR=28						
WRA				Sn	**Sn**	**12 51 25.6**	**-7.9**
	1.3nm,0.3s,baz=345,slow=22,SNR=6.7						
WB2	**Warramunga Arr**	**14.31**	**163**	*e*P	**Pn**	**12 48 55.5**	**-0.5**
WB2				eS	**Sn**	**12 51 24.9**	**-8.6**
ASAR	**Alice Springs**	**17.77**	**168**	P	**Pn**	**12 49 41.6**	**+1.2**
	0.8nm,0.3s,baz=344,slow=8.1,SNR=53						
ASAR				S	**S**	**12 52 50.0**	**-14**
	0.3nm,0.3s,baz=360,slow=24,SNR=6.7						
STKA	**Stephens Creek**	**27.77**	**158**	*e*P	**P**	**12 51 21.4**	**+0.1**
	5.5nm,1.3s,mb4.0						
STKA	**Stephens Creek**	**27.77**	**158**	P	**P**	**12 51 21.1**	**-0.2**
	2.4nm,0.9s,mb3.9,baz=334,slow=14,SNR=3.9						
MKAR	**Makanchi Array**	**67.53**	**327**	P	**P**	**12 56 28.3**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=128,slow=6.6,SNR=4.5						

IDC 27 13:16:08.6±1.3, 6230S×15969E, h0km, mb4.1/4, mb1 4.4/5, mb1mx4.2/11, mbtmp4.1/5, ML3.8/1, MS4.0/7, Ms1 4.0/7, ms1mx3.8/18, Error ellipse: s-maj=85.8km s-min=21.8km az=67.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.31**	**178**	Pn	Pn	13 19 44.7	-0.9
	0.4nm,0.3s,baz=352,slow=13,SNR=27						
VNDA				LR	LR	13 25 46.3	
	comp=Z,212nm,18.1s,baz=358,slow=38						
RPZ	**Rata Peaks**	**19.77**	**25**	LR	LR	13 27 08.8	
	comp=Z,501nm,21.8s,baz=154,slow=33						
URZ	**Urewera**	**26.34**	**32**	LR	LR	13 30 44.5	
	comp=Z,482nm,18.3s,baz=212,slow=33						
QSPA	**South Pole Qui**	**27.79**	**180**	P	P	13 21 59.7	+1.1
	3.2nm,1.0s,baz=24,slow=3.0,SNR=5.9						
STKA	**Stephens Creek**	**32.59**	**331**	LR	LR	13 34 49.2	
	comp=Z,192nm,18.6s,baz=190,slow=34						
MAW	**Mawson**	**37.31**	**219**	LR	LR	13 39 05.3	
	comp=Z,346nm,18.1s,baz=323,slow=37						
ASAR	**Alice Springs**	**42.38**	**324**	P	P	13 24 04.8	+0.5
	3.6nm,0.9s,baz=162,slow=8.2,SNR=22						
WRA	**Warramunga Arr**	**45.81**	**326**	P	P	13 24 31.2	-0.7
	1.3nm,1.1s,baz=163,slow=7.1,SNR=5.2						
PLCA	**Paso Flores**	**69.67**	**141**	P	P	13 27 19.4	-0.1
	2.7nm,1.1s,baz=236,slow=3.6,SNR=3.8						
PSI	**Prapat**	**79.33**	**298**	LR	LR	13 57 29.3	
	comp=Z,88nm,18.7s,baz=56,slow=31						
BOSA	**Boshof**	**82.33**	**219**	LR	LR	14 02 31.6	
	comp=Z,156nm,18.6s,baz=224,slow=34						
MKAR	**Makanchi Array**	**124.91**	**305**	PKP	PKPdf	13 35 08.7	-0.5
	0.3nm,0.8s,baz=144,slow=2.7,SNR=2.3						

NEIC ***27*** *13:18:15.0, 3827N×2057E, h8km, MD3.5(ATH), After ATH.*
CSEM ***27*** *13:18:15.0, 3827N×2057E, h8km, MD3.5/7, After ATH*

ATH 27 13:18:15.0, 3827N×2057E, h8km±3km, MD3.5/7, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.09**	**170**	*e*PG	Pg	13 18 17.2	-0.1
VLS				eSG	Sg	13 18 20.1	+1.3
RLS	**Riolos of Patr**	**0.74**	**106**	*e*PB	Pb	13 18 28.3	-1.8
RLS				eSB	Sb	13 18 39.1	-1.2
EVR	**Evrytania**	**1.17**	**56**	*e*PB	Pb	13 18 37.3	-0.1
JAN	**Janina**	**1.40**	**9**	*e*PG	Pg	13 18 40.8	-1.1
ITM	**Ithomi**	**1.53**	**135**	*e*PB	Pb	13 18 44.1	+0.5
ITM				eSB	Sb	13 19 05.1	+2.0
KEK	**Kerkira**	**1.56**	**338**	*e*PB	Pb	13 18 44.4	+0.3
THL	**Klokotos Trika**	**1.71**	**41**	*e*PN	Pn	13 18 47.0	+1.9
THL				eSN	Sn	13 19 10.9	+3.7

IDC 27 13:55:53.4±2.7, 723S×12080E, h417km±22km, mb2.8/4, mb1 2.9/6, mb1mx2.8/17, mbtmp2.8/6, Error ellipse: s-maj=131.2km s-min=18.4km az=61.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**4.09**	**136**	P	P	13 57 07.9	+0.5
	6.3nm,0.3s,baz=276,slow=4.3,SNR=20						
BATI				S	S	13 58 07.0	-0.5
	8.2nm,0.3s,baz=112,slow=23,SNR=11						
WRA	**Warramunga Arr**	**18.23**	**135**	P	P	13 59 39.7	0.0
	0.2nm,0.3s,baz=314,slow=11,SNR=15						
ASAR	**Alice Springs**	**20.62**	**144**	P	P	14 00 02.9	+0.4
	0.8nm,0.5s,baz=314,slow=8.4,SNR=20						
STKA	**Stephens Creek**	**31.26**	**144**	P	P	14 01 37.1	+0.2
	2.6nm,0.9s,baz=326,slow=11,SNR=8.0						
SONM	**Songino Array**	**56.28**	**348**	P	P	14 04 53.1	+0.6
	0.2nm,0.4s,baz=160,slow=9.0,SNR=2.0						
MKAR	**Makanchi Array**	**63.73**	**332**	P	P	14 05 41.8	-0.7
	0.1nm,0.4s,baz=134,slow=6.2,SNR=1.7						

THE ***27*** *13:56:00.9, 3834N×2042E, h3km, ML2.9*
ISCJB ***27*** *13:56:02.1±0.8, 3835N±003×2052E±006, h2km, Error ellipse: s-maj=7.4km s-min=3.7km az=166.1*
ATH ***27*** *13:56:02.0, 3832N×2048E, h5km±4km, MD3.3/6*
NEIC ***27*** *13:56:02.2, 3831N×2048E, h2km, MD3.3(ATH), ML2.9(THE), After ATH.*
CSEM ***27*** *13:56:03.0±0.4, 3831N×2054E, h2km, MD3.3, Error ellipse: s-maj=9.2km s-min=4.7km az=71.0*

ISC 27 13:56:02.3±0.9, 3833N±003×2050E±007, h3km±8km, n10, σ0=82/17, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**156**	*e*PG	**Pg**	**13 56 05.3**	**-0.2**
VLS				eSG	**Sg**	**13 56 08.8**	**+1.1**
KFL	**Anninata**	**0.31**	**134**	*e*Pg	**Pg**	**13 56 08.1**	**-0.2**
LKD	**Levkas**	**0.39**	**17**	*e*Pg	**Pg**	**13 56 08.6**	**-1.3**
LKD				eSg	**Sg**	**13 56 14.8**	**-0.3**
RLS	**Riolos of Patr**	**0.81**	**109**	*e*PG	**Pg**	**13 56 17.6**	**-0.2**
RLS				eSB	**Sb**	**13 56 29.8**	**-0.5**
EVR	**Evrytania**	**1.18**	**60**	*e*PG	**Pg**	**13 56 24.3**	**-0.6**
IGT	**Igoumenitsa**	**1.21**	**354**	*e*Pg	**Pn**	**13 56 22.9**	**-3.2**
IGT				eSg	**Sg**	**13 56 41.4**	**+0.3**
KEK	**Kerkira**	**1.49**	**339**	*e*PB	**Pb**	**13 56 30.6**	**0.0**
KEK				eSB	**Sb**	**13 56 51.2**	**+1.4**
AGG	**Agios Georgios**	**1.59**	**64**	*e*Pb	**Pn**	**13 56 30.6**	**-0.7**
AGG				eSb	**Sb**	**13 56 53.5**	**+0.7**
ITM	**Ithomi**	**1.61**	**135**	*e*PB	**Pb**	**13 56 33.0**	**+0.3**
THL	**Klokotos Trika**	**1.71**	**43**	*e*PN	**Pg**	**13 56 35.0**	**0.0**
THL				eSN	**Sg**	**13 56 58.2**	**+1.1**

IDC 27 14:00:10.5±5.2, 831N×13865E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.9/28, Error ellipse: s-maj=249.1km s-min=23.5km az=79.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**24.71**	**2**	LR	LR	14 12 40.2	
	comp=Z,74nm,19.7s,baz=155,slow=30						
WRA	**Warramunga Arr**	**28.40**	**189**	P	P	14 06 06.3	-0.5
	1.1nm,0.8s,baz=5.6,slow=9.7,SNR=9.3						
CTA	**Charters Tower**	**29.20**	**165**	LR	LR	14 16 55.7	
	comp=Z,75nm,20.2s,baz=235,slow=34						
KSRS	**Korea Array**	**30.60**	**343**	LR	LR	14 16 25.2	
	comp=Z,21nm,19.1s,baz=130,slow=32						
ASAR	**Alice Springs**	**32.12**	**188**	P	P	14 06 40.2	+0.5
	0.5nm,0.6s,baz=16,slow=12,SNR=13						
SONM	**Songino Array**	**47.93**	**331**	P	P	14 08 50.0	-0.6
	0.4nm,0.7s,baz=134,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**61.25**	**319**	P	P	14 10 28.0	+0.5
	0.8nm,0.9s,baz=97,slow=8.5,SNR=6.3						

JMA 27 14:04:14.6, 3718N×13662E, h8km±1km, M3.5, 1C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.29**	**153**	⇓P	Pg	14 04 20.5	+0.3
JJH				S	Sg	14 04 24.6	+0.6
JSZ	**Suzu**	**0.65**	**65**	⇓P	Pg	14 04 26.9	-0.2
JHG	**Hegura jima**	**0.71**	**20**	P	Pg	14 04 28.7	+0.4
JTT	**Ttatey**	**0.81**	**135**	⇓P	Pg	14 04 30.0	-0.2
JTT				S	Sg	14 04 41.6	+0.9
JKG	**Kaga**	**0.93**	**194**	⇑P	Pg	14 04 32.0	-0.5
JKG				S	Sg	14 04 45.1	+0.5
MAT	**Matsushiro**	**1.42**	**116**	P	Pn	14 04 40.0	-0.7
MAT				S	Sn	14 05 00.2	+0.6

ISCJB ***27*** *14:10:04.0±4.2, 40N±01×1256E±02, h197km±44km, mb3.9/10, Error ellipse: s-maj=29.6km s-min=14.0km az=154.7*
IDC ***27*** *14:10:03.5±2.7, 395N×12537E, h174km±26km, mb3.6/8, mb1 3.8/9, mb1mx3.6/20, mbtmp3.7/9, Error ellipse: s-maj=39.9km s-min=11.0km az=76.0*
NEIC ***27*** *14:10:05.9±0.7, 404N×12563E, h200km, mb4.3/5, Error ellipse: s-maj=31.2km s-min=10.3km az=61.0*

ISC 27 14:10:02.8±4.0, 40N±01×1256E±02, h166km±43km, n16, σ0=95/16, mb4.0/10, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**14.26**	**188**	P	**Pn**	**14 13 17.9**	**+0.5**
	4.2nm,0.3s,baz=69,slow=3.0,SNR=8.2						
KAKA	**Kakadu**	**17.95**	**158**	*e*P	**Pn**	**14 14 00.9**	**-1.4**
	35nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.97**	**180**	*e*P	**P**	**14 14 44.0**	**+0.3**
	4.6nm,0.3s,mb4.4						
FITZ	**Fitzroy Crossi**	**21.97**	**180**	P	**P**	**14 14 43.3**	**-0.4**
	3.1nm,0.5s,mb4.0,baz=44,slow=13,SNR=8.4						
KULM	**Kulim**	**24.90**	**274**	*e*P	**P**	**14 15 12.0**	**+1.3**
WRA	**Warramunga Arr**	**25.31**	**160**	P	**P**	**14 15 13.8**	**-0.5**
	3.4nm,0.4s,mb4.2,baz=333,slow=11,SNR=45						
WRA				ScP	ScP	14 22 05.4	-1.4
	0.4nm,0.6s,baz=337,slow=2.8,SNR=7.5						
WB2	**Warramunga Arr**	**25.31**	**160**	⇑*i*P	**P**	**14 15 13.8**	**-0.5**
ASAR	**Alice Springs**	**28.68**	**164**	P	**P**	**14 15 44.2**	**-0.1**
	1.3nm,0.4s,mb4.0,baz=342,slow=7.0,SNR=66						
CTA	**Charters Tower**	**31.39**	**140**	*e*P	**P**	**14 16 10.1**	**+1.8**
	4.6nm,0.9s,mb4.2						
KSRS	**Korea Array**	**33.35**	**3**	P	**P**	**14 16 24.9**	**-0.2**
	0.9nm,0.6s,mb3.7,baz=173,slow=11,SNR=5.9						
STKA	**Stephens Creek**	**38.80**	**158**	*e*P	**P**	**14 17 12.3**	**+0.7**
	2.5nm,0.3s,mb4.3						
STKA	**Stephens Creek**	**38.80**	**158**	P	**P**	**14 17 11.6**	**+0.1**
	3.3nm,0.4s,mb4.4,baz=354,slow=6.3,SNR=17						
ASAJ	**Asahikawa**	**42.66**	**18**	P	**P**	**14 17 44.2**	**+1.2**
	2.8nm,0.6s,mb4.0,baz=215,slow=13,SNR=5.1						
SONM	**Songino Array**	**46.68**	**342**	P	**P**	**14 18 15.0**	**+0.2**
	0.2nm,0.4s,mb3.1,baz=155,slow=8.8,SNR=3.8						
SONM				PcP	PcP	14 19 45.9	+0.2
	1.0nm,0.7s,baz=159,slow=4.2,SNR=9.8						
MKAR	**Makanchi Array**	**56.68**	**326**	P	**P**	**14 19 27.9**	**-1.0**
	0.8nm,0.5s,mb3.8,baz=119,slow=7.9,SNR=16						
MKAR				PcP	PcP	14 20 21.4	-1.7
	0.3nm,0.5s,baz=116,slow=4.5,SNR=5.2						
KURK	**Kurchatov**	**60.90**	**328**	*e*P	**P**	**14 19 56.4**	**-1.5**
	2.3nm,0.5s,mb4.3						

IDC ***27*** *14:15:31.9±1.3, 1527S×17304E, h0km, mb4.6/11, mb1 4.7/11, mb1mx4.6/16, mbtmp4.6/11, MS3.7/9, Ms1 3.7/9, ms1mx3.5/17, Error ellipse: s-maj=47.6km s-min=21.3km az=143.0*
NEIC ***27*** *14:15:34.4±0.8, 1499S×17290E, h10km, mb4.7/6, Error ellipse: s-maj=37.1km s-min=10.3km az=144.0*
BJI ***27*** *14:15:34.3, 1500S×17290E, h10km, mB5.3, mb4.5*
ISCJB ***27*** *14:15:36.9±0.8, 1515S±02×1728E±02, h33km, mb4.6/16, MS3.9/11, Error ellipse: s-maj=33.1km s-min=11.0km az=144.2*

ISC 27 14:15:38.6±0.8, 1515S±02×1728E±02, h35km, n52, σ0=97/24, mb4.6/16, MS3.9/11, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**9.01**	**44**	*e*P	**Pn**	**14 17 40.5**	**-5.7**
	138nm,0.4s						
HNR	**Honiara**	**13.79**	**293**	LR	LR	14 23 48.2	
	comp=Z,87nm,18.3s,baz=185,slow=35						
URZ	**Urewera**	**23.39**	**172**	LR	LR	14 27 47.4	
	comp=Z,341nm,18.6s,MS3.8,baz=38,slow=32						
ARMA	**Armidale**	**24.74**	**228**	*e*P	**P**	**14 20 58.4**	**+1.6**
CTA	**Charters Tower**	**25.81**	**255**	*e*P	**P**	**14 21 07.7**	**+1.0**
	9.4nm,0.9s,mb4.3						
CTA	**Charters Tower**	**25.81**	**255**	P	**P**	**14 21 07.3**	**+0.6**
	14nm,0.9s,mb4.5,baz=83,slow=11,SNR=7.5						
CTA				LR	LR	14 29 04.9	
	comp=Z,62nm,19.8s,MS3.1,baz=240,slow=31						
STKA	**Stephens Creek**	**33.02**	**234**	P	**P**	**14 22 10.2**	**-0.3**
	2.6nm,0.6s,mb4.3,baz=70,slow=12,SNR=4.6						
STKA				PcP	PcP	14 24 52.8	-1.1
	7.7nm,1.1s,baz=58,slow=5.8,SNR=4.3						
STKA				LR	LR	14 35 14.9	
	comp=Z,96nm,19.4s,MS3.5,baz=34,slow=36						
WB2	**Warramunga Arr**	**36.97**	**257**	*e*P	**P**	**14 22 44.0**	**-0.8**
WRA	**Warramunga Arr**	**36.98**	**257**	P	**P**	**14 22 43.3**	**-1.6**
	9.7nm,1.1s,mb4.6,baz=89,slow=9.0,SNR=44						
WRA				PcP	PcP	14 25 04.7	-0.9
	2.0nm,1.1s,baz=86,slow=2.0,SNR=4.7						
ASAR	**Alice Springs**	**37.61**	**251**	P	**P**	**14 22 49.6**	**-0.6**
	18nm,0.7s,mb4.9,baz=80,slow=8.9,SNR=200						
ASAR				PcP	PcP	14 25 06.5	-1.0
	1.9nm,0.9s,baz=101,slow=3.0,SNR=7.7						
FITZ	**Fitzroy Crossi**	**45.24**	**259**	*e*P	**P**	**14 23 53.4**	**+0.5**
	12nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**45.24**	**259**	P	**P**	**14 23 52.5**	**-0.4**
	9.6nm,0.9s,mb4.6,baz=95,slow=7.6,SNR=9.4						
BATI	**Kupang**	**48.16**	**270**	P	**P**	**14 24 16.8**	**+1.0**
	28nm,0.7s,mb5.4,baz=234,slow=1.2,SNR=11						
MJAR	**Matsushiro Arr**	**60.87**	**328**	P	**P**	**14 25 48.4**	**+0.7**
	1.4nm,0.3s,mb4.6,baz=153,slow=14,SNR=6.6						
MJAR				LR	LR	14 47 48.0	
	comp=Z,58nm,18.7s,MS3.8,baz=230,slow=32						
KSRS	**Korea Array**	**67.19**	**322**	LR	LR	14 50 02.5	
	comp=Z,30nm,20.4s,MS3.5,baz=132,slow=31						
PSI	**Prapat**	**75.24**	**277**	P	**P**	**14 27 16.6**	**-1.9**
	6.1nm,0.8s,mb4.6,baz=171,slow=8.4,SNR=4.1						
TTA	**Tatalina**	**81.47**	**14**	*e*P	**P**	**14 27 52.2**	**+0.4**
	9.0nm,1.0s,mb4.7						
MAW	**Mawson**	**83.54**	**201**	LR	LR	14 58 16.3	
	comp=Z,110nm,18.1s,MS4.3,baz=78,slow=31						
IMA2	**Indian Mountai**	**84.69**	**13**	*e*P	**P**	**14 28 08.3**	**0.0**
COLA	**College**	**85.11**	**16**	*e*P	**P**	**14 28 09.6**	**-0.8**
	13nm,0.6s,mb5.2						
SONM	**Songino Array**	**86.05**	**322**	P	**P**	**14 28 16.1**	**+0.6**
	1.4nm,1.0s,mb4.2,baz=122,slow=4.3,SNR=7.8						
SONM				LR	LR	15 03 20.2	
	comp=Z,38nm,18.8s,MS3.8,baz=68,slow=33						
GTA	**Gaotai**	**86.85**	**312**	*e*P	**P**	**14 28 21.3**	**+1.6**
GTA				AP	pP	14 28 29.0	-1.8
GTA				XP	sP	14 28 32.3	-2.5
GTA				AMB	AMB		
	comp=Z,5.0nm,1.2s,mb4.6						
EGAK	**Eagle**	**86.91**	**18**	*e*P	**P**	**14 28 18.4**	**-1.0**
	comp=Z,5.0nm,0.9s,mb4.7						
HLID	**Hailey**	**88.24**	**44**	*e*P	**P**	**14 28 26.7**	**+0.5**
	comp=Z,1.7nm,1.0s,mb4.2						
BNM	**Barren Site**	**90.73**	**55**	*e*P	**P**	**14 28 39.0**	**+0.9**
PDAR	**Pinedale Array**	**91.27**	**46**	P	**P**	**14 28 40.0**	**-0.4**
	comp=Z,0.9nm,1.1s,mb4.0,baz=242,slow=3.2,SNR=4.2						
PDAR				LR	LR	15 05 20.2	
	comp=Z,74nm,18.4s,MS4.2,baz=64,slow=33						
YKA	**Yellowknife Ar**	**95.43**	**26**	P	**P**	**14 28 58.0**	**-1.0**
YKA	**Yellowknife Ar**	**95.43**	**26**	P	**P**	**14 28 58.0**	**-1.0**
	comp=Z,1.6nm,0.8s,mb4.5,baz=256,slow=4.9,SNR=29						
CDF	**Champ du Feu**	**144.70**	**343**	*e*PKP1	PKPdf	14 35 10.5	-1.1
	comp=Z,23nm,0.9s						
MEZF	**Maizieres J'vi**	**145.19**	**346**	*e*PKP1	PKPbc	14 35 12.3	+0.2
HAU	**Haudompre**	**145.32**	**344**	*e*PKP1	PKPbc	14 35 12.5	0.0
	comp=Z,28nm,0.9s						
HAU				*e*MLR	MLR		
	comp=Z,104nm,20.0s,MS4.3						
HINF	**Hinteralfeld**	**145.36**	**343**	*e*PKP1	PKPbc	14 35 12.4	-0.2
	comp=Z,12nm,0.8s						
FLN	**La Foliniere**	**145.97**	**352**	*e*PKP1	PKPbc	14 35 14.2	-0.3
	comp=Z,25nm,0.9s						
FLN				*e*MLR	MLR		
	comp=Z,76nm,20.8s,MS4.2						
LDF	**La Druitiere**	**146.09**	**352**	*e*PKP1	PKPbc	14 35 14.5	-0.4
LOR	**Lormes**	**146.63**	**346**	*e*PKP1	PKPbc	14 35 16.4	-0.1
	comp=Z,11nm,1.0s						
LOR				*e*MLR	MLR		
	comp=Z,87nm,18.5s,MS4.3						
CABF	**La Chapelle**	**146.68**	**343**	*e*PKP1	PKPbc	14 35 17.0	+0.3
	comp=Z,24nm,1.0s						
SGMF	**Saint Gilles**	**146.71**	**354**	*e*PKP1	PKPbc	14 35 16.3	-0.4
	comp=Z,12nm,0.8s						
SSF	**Saint Saulge**	**146.90**	**347**	*e*PKP1	PKPbc	14 35 17.4	+0.1
	comp=Z,27nm,1.2s						
AVF	**Avril sur Loir**	**147.19**	**347**	*e*PKP1	PKPbc	14 35 17.7	-0.4
	comp=Z,12nm,1.1s						
SMF	**Signal de Mont**	**147.22**	**346**	*e*PKP1	PKPbc	14 35 17.9	-0.3
	comp=Z,13nm,0.8s						
LPL	**La Plagne**	**147.48**	**342**	*e*PKP1	PKPbc	14 35 19.5	+0.5
LPG	**La Plagne**	**147.49**	**342**	*e*PKP1	PKPbc	14 35 19.6	+0.6
	comp=Z,14nm,0.9s						
TCF	**Toulx Ste Croi**	**147.92**	**348**	*e*PKP1	PKPbc	14 35 19.9	-0.2
	comp=Z,15nm,1.1s						
MFF	**Saint Martin d**	**148.04**	**351**	*e*PKP1	PKPbc	14 35 20.1	-0.3
MBDF	**Montbardon**	**148.18**	**341**	*e*PKP1	PKPbc	14 35 20.7	-0.2
	comp=Z,9.2nm,0.8s						
SMRF	**Simiane la Rot**	**149.23**	**342**	*e*PKP1	PKPbc	14 35 23.8	+0.2
CAF	**Calviac**	**149.25**	**347**	*e*PKP1	PKPbc	14 35 23.6	0.0
LASF	**Ste Croix**	**149.62**	**344**	*e*PKP1	PKPbc	14 35 24.5	-0.1
	comp=Z,14nm,1.0s						
MTLF	**Montolieu**	**150.72**	**346**	*e*PKP1	PKPbc	14 35 27.0	-0.2
SJPF	**Ste Jean**	**151.61**	**351**	*e*PKP1	PKPbc	14 35 28.4	-0.9
ETSF	**Etsaut**	**151.71**	**350**	*e*PKP1	PKPbc	14 35 29.7	+0.2
	comp=Z,13nm,0.9s						
TORD	**Torodi Ar. Bea**	**171.20**	**258**	PKPab	PKPab	14 37 03.6	-0.5
	comp=Z,1.0nm,

JCZ	**Jackson Bay**	**3.17**	**227**	*e*P	Pn	14 27 47.5	-1.2
JCZ	**Jackson Bay**	**3.17**	**227**	PN	Pn	14 27 47.5	-1.1
TIWZ	**Tintock**	**3.18**	**70**	PN	Pn	14 27 48.7	-0.1
RAEZ	**Rainy Point**	**3.23**	**36**	P	Pn	14 27 50.6	+1.1
RAEZ	**Rainy Point**	**3.23**	**36**	PN	Pn	14 27 50.6	+1.1
ODZ	**Otahua Downs**	**3.25**	**197**	*e*P	Pn	14 27 48.7	-1.0
ODZ	**Otahua Downs**	**3.25**	**197**	PN	Pn	14 27 48.7	-1.0
BFZ	**Birch Farm**	**3.46**	**70**	*e*P	Pn	14 27 52.0	-0.7
BFZ	**Birch Farm**	**3.46**	**70**	PN	Pn	14 27 52.0	-0.7
VRZ	**Vera Road**	**3.53**	**38**	*e*P	Pn	14 27 50.4	-3.2
VRZ	**Vera Road**	**3.53**	**38**	PN	Pn	14 27 50.4	-3.2
WKZ	**Wanaka**	**3.59**	**216**	P	Pn	14 27 53.6	-0.9
WKZ	**Wanaka**	**3.59**	**216**	*e*PN	Pn	14 27 53.0	-1.5
MTVZ	**Mangateitei**	**3.69**	**47**	PN	Pn	14 27 56.3	+0.4
PKVZ	**Pokaka**	**3.69**	**45**	PN	Pn	14 27 57.2	+1.3
WNVZ	**Wahianoa**	**3.81**	**48**	P	Pn	14 27 58.4	+1.0
WNVZ	**Wahianoa**	**3.81**	**48**	PN	Pn	14 27 58.4	+1.0
FWVZ	**Far West T-bar**	**3.83**	**47**	*e*P	Pn	14 28 00.2	+2.4
WPVZ	**Whakapapa**	**3.86**	**46**	P	Pn	14 28 00.5	+2.3
WPHZ	**Waipukurau**	**3.87**	**63**	PN	Pn	14 27 59.6	+1.3
TUVZ	**Tukino**	**3.88**	**48**	P	Pn	14 28 00.3	+1.9
WTVZ	**West Tongariro**	**3.95**	**46**	P	Pn	14 28 01.0	+1.6
WTVZ	**West Tongariro**	**3.95**	**46**	PN	Pn	14 28 01.0	+1.5
MSZ	**Milford Sound**	**4.01**	**226**	*e*P	Pn	14 28 00.2	-0.1
MSZ	**Milford Sound**	**4.01**	**226**	*e*PN	Pn	14 27 59.9	-0.4
HIZ	**Hauiti**	**4.08**	**34**	P	Pn	14 27 59.8	-1.4
HIZ	**Hauiti**	**4.08**	**34**	*e*PN	Pn	14 27 59.8	-1.3
TUZ	**Tuapeka**	**4.35**	**202**	*e*P	Pn	14 28 04.5	-0.4
TUZ	**Tuapeka**	**4.35**	**202**	PN	Pn	14 28 04.5	-0.4
MLZ	**Mavora Lakes**	**4.38**	**218**	*e*P	Pn	14 28 06.0	+0.8
MLZ	**Mavora Lakes**	**4.38**	**218**	*e*PN	Pn	14 28 04.8	-0.4
BKZ	**Black Stump Fm**	**4.43**	**53**	*e*P	Pn	14 28 05.7	-0.2
BKZ	**Black Stump Fm**	**4.43**	**53**	PN	Pn	14 28 05.7	-0.3
KUZ	**Kuaotunu**	**5.95**	**31**	*e*P	Pn	14 28 26.6	-0.3
KUZ	**Kuaotunu**	**5.95**	**31**	*e*PN	Pn	14 28 26.4	-0.5
WCZ	**Waipu Caves**	**6.27**	**18**	*e*P	Pn	14 28 31.3	0.0
WCZ	**Waipu Caves**	**6.27**	**18**	*e*PN	Pn	14 28 31.3	0.0

MAN 27 14:50:52.8, 70.0N × 126.46E, h18km, mb4.7, ML3.6, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.53**	**191**	⇓*i*P	Pg	14 51 03.4	+0.8
BIPH				*i*S	Sg	14 51 12.0	+2.3
BUKP	**Musuan**	**1.61**	**240**	*e*P	Pn	14 51 20.9	+1.4
BUKP				*e*S	Sn	14 51 41.4	+1.6
MATI	**Mati**	**1.76**	**187**	*e*P	Pn	14 51 22.4	+0.8
CGP	**Cagayan de Oro**	**1.77**	**262**	⇑*e*P	Pn	14 51 22.5	+0.8
CGP				*i*S	Sn	14 51 45.3	+1.6
MSLP	**Maasin**	**2.13**	**312**	*e*P	Pn	14 51 27.5	+0.9

*IDC **27** 15:03:35.5±2.1, 6.65N × 72.88W, h161km±45km, mb1 3.4/2, mb1mx2.9/17, mbtmp3.5/2, Error ellipse: s-maj=721.9km s-min=8.4km az=132.0*
*ISCJB **27** 15:03:36.1±1.0, 6.93N±0.06 × 73.06W±0.07, h172km±11km, Error ellipse: s-maj=13.0km s-min=9.3km az=29.0*
*FUNV **27** 15:03:36.7, 6.84N × 73.20W, h173km, MW3.0*

ISC 27 15:03:36.4±1.0, 6.90N±0.06 × 73.09W±0.07, h165km±11km, n16, σ1°9.09/22, 4C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.23**	**39**	⇑*i*P	Pn	**15 04 05.8**	**+1.2**
CAPV				*e*S	Sn	**15 04 27.5**	**+1.3**
ROSC	**El Rosal**	**2.38**	**211**	P	Pn	**15 04 17.0**	**+0.2**
	14nm,0.3s,baz=103,slow=20,SNR=21						
ROSC				S	Sn	**15 04 45.6**	**-2.5**
	8.3nm,0.3s,baz=79,slow=15,SNR=4.3						
VIGV	**El Vigia**	**2.58**	**42**	⇑*i*P	Pn	**15 04 20.2**	**+1.0**
VIGV				*e*S	Sn	**15 04 53.1**	**+0.8**
SDV	**Santo Domingo**	**3.13**	**51**	P	Pn	**15 04 27.0**	**+0.9**
	8.9nm,0.3s,baz=252,slow=3.8,SNR=36						
SDV				S	Sn	**15 05 03.8**	**-0.8**
	12nm,0.3s,baz=249,slow=23,SNR=23						
ELOV	**Elorza**	**3.58**	**88**	*e*P	Pn	**15 04 32.4**	**+0.6**
ELOV				*e*S	Sn	**15 05 13.8**	**-0.9**
VIRV	**Villa del Rosa**	**3.64**	**11**	⇑*i*P	Pn	**15 04 32.5**	**0.0**
VIRV				*e*S	Sn	**15 05 14.8**	**-1.4**
QARV	**Quebrada Arrib**	**4.15**	**38**	⇑*i*P	Pn	**15 04 40.1**	**+1.0**
QARV				*e*S	Sn	**15 05 25.9**	**-2.0**
SANV	**Sanarito**	**4.37**	**53**	*e*P	Pn	**15 04 43.0**	**+1.1**
CURV	**Curarigua**	**4.38**	**45**	*e*P	Pn	**15 04 42.3**	**+0.4**
CURV				*e*S	Sn	**15 05 30.5**	**-2.6**
TEPV	**Terepaima**	**4.91**	**51**	*e*P	Pn	**15 04 49.3**	**+0.4**
SIQV	**Siquisique**	**4.94**	**41**	*e*P	Pn	**15 04 49.7**	**+0.4**
BAUV	**El Baul**	**5.40**	**68**	*e*P	Pn	**15 04 54.6**	**-0.7**
IMOV	**Isla Los Monje**	**5.84**	**22**	*e*P	Pn	**15 05 00.8**	**-0.4**
CAOV	**Caicara del Or**	**6.73**	**86**	*e*P	Pn	**15 05 12.9**	**0.0**
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	PKPbc	15 23 05.0	-1.2
	0.4nm,0.7s,baz=119,slow=3.6,SNR=7.1						
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc	PKPbc	15 23 08.8	-0.5
	0.3nm,0.5s,baz=108,slow=2.6,SNR=12						

*ISCJB **27** 15:04:54.3±1.1, 38.32N±0.09 × 39.24E±0.07, h5km±14km, Error ellipse: s-maj=14.8km s-min=9.2km az=13.9*
*CSEM **27** 15:04:55.3, 38.35N × 39.21E, h11km, MD3.1, After ERD*
*DDA **27** 15:04:55.4, 38.35N × 39.21E, h11km, Md3.1*

ISC 27 15:04:54.7±1.2, 3834N±0.09 × 3925E±0.08, h8km±11km, n6, σ0°56/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.26**	**307**	*i*P	Pg	**15 04 60.0**	**+0.1**
ELZG				*i*S	Sg	**15 05 03.9**	**+0.6**
MALT	**Malatya**	**0.65**	**268**	PG	Pg	**15 05 05.8**	**-1.4**
MYA	**Malataya**	**0.65**	**269**	PG	Pg	**15 05 07.0**	**-0.2**
URFA	**Urfa**	**0.96**	**201**	PG	Pg	**15 05 13.8**	**+0.6**
MARD	**Mardin**	**1.59**	**130**	*i*P	Pn	**15 05 23.4**	**+0.3**
MARD				*i*S	Sn	**15 05 43.5**	**-0.3**
GZT	**Gaziantep**	**1.66**	**234**	*i*P	Pn	**15 05 23.9**	**-0.2**
GZT				*i*S	Sn	**15 05 45.9**	**+0.4**

*NEIC **27** 15:22:30.9, 17.04N × 94.62W, h131km, MD4.3(MEX), After MEX.*

MEX 27 15:22:30.6±1.4, 17.06N × 94.61W, h131km±11km, MD4.3, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.26**	**277**	*i*P	Pn	15 22 47.4	-1.3
CMIG				*i*S	Sn	15 23 00.3	-2.0
SCX	**San Cristobal**	**1.92**	**99**	*i*P	Pn	15 23 03.5	-0.2
SCX				*i*S	Sn	15 23 28.5	-0.5
HUIG	**Huatulco**	**1.92**	**228**	*i*P	Pn	15 23 00.9	-2.8
HUIG				*i*S	Sn	15 23 27.7	-1.3
HUIG	**Huatulco**	**1.92**	**228**	*i*P	Pn	15 23 01.2	-2.5
HUIG				*i*S	Sn	15 23 27.9	-1.1
OXX	**Oaxaca**	**2.02**	**271**	*i*P	Pn	15 23 04.5	-0.3
OXX				*i*S	Sn	15 23 30.5	-0.5
VHO	**Vista Hermosa**	**2.03**	**271**	*i*P	Pn	15 23 04.4	-0.6
VHO				*i*S	Sn	15 23 30.7	-0.5
CCIG	**Comitan**	**2.50**	**108**	*i*P	Pn	15 23 10.8	0.0
CCIG				*i*S	Sn	15 23 39.4	-2.3
TPIG	**Tehuac#an**	**2.95**	**298**	*i*P	Pn	15 23 15.2	-1.3
TPIG				*i*S	Sn	15 23 49.7	-2.3
PPM	**Popocatepetl**	**4.31**	**298**	*i*P	Pn	15 23 35.7	+1.2
PPM				*i*P		15 23 36.0	
PPM				*e*S	Sn	15 24 22.5	-1.6
PLIG	**Platanillo**	**4.84**	**287**	*i*P	Pn	15 23 41.2	-0.4
PLIG				*e*S	Sn	15 24 35.9	-1.0
MEIG	**Mezcala**	**4.85**	**281**	*i*S	Sn	15 24 33.3	-3.8
ACX	**Acapulco**	**5.08**	**269**	*i*P	Pn	15 23 41.5	-3.3
CAIG	**El Cayaco**	**5.41**	**271**	*i*P	Pn	15 23 46.7	-2.5
CAIG				*i*S	Sn	15 24 45.5	-5.0

*NEIC **27** 15:35:43.5, 15.48N × 95.91W, h5km, MD4.2(MEX), After MEX.*

MEX 27 15:35:44.0±0.6, 15.58N × 95.89W, h12km±4km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.28**	**313**	*i*P	Pg	15 35 49.3	-0.5
HUIG				*i*S	Sg	15 35 53.8	+0.1
VHO	**Vista Hermosa**	**1.69**	**332**	*i*P	Pn	15 36 13.2	-0.2
VHO				*i*S	Sn	15 36 32.2	-2.7
VHO				*i*S	Sn	15 36 34.5	-0.4
VHO	**Vista Hermosa**	**1.69**	**332**	*i*P	Pn	15 36 10.2	-3.1
VHO				*i*S	Sn	15 36 29.3	-5.6
OXX	**Oaxaca**	**1.69**	**332**	*e*P	Pn	15 36 14.0	+0.6
OXX				*i*S	Sn	15 36 35.5	+0.5
OXX	**Oaxaca**	**1.69**	**332**	*e*P	Pn	15 36 13.5	+0.1
OXX				*i*S	Sn	15 36 31.5	-3.5
CMIG	**Matias Romero**	**1.79**	**33**	*i*P	Pn	15 36 11.3	-3.4
CMIG				*i*S	Sn	15 36 31.0	-6.4
CMIG				*i*S	Sn	15 36 36.8	-0.6
CMIG	**Matias Romero**	**1.79**	**33**	*i*P	Pn	15 36 11.3	-3.4
CMIG				*i*S	Sn	15 36 31.7	-5.6
PNIG	**Pinotepa**	**2.29**	**291**	*i*P	Pn	15 36 21.2	-0.4
PNIG				*i*S	Sn	15 36 46.1	-3.7
PNIG				*i*S	Sn	15 36 51.2	+1.3
PNIG	**Pinotepa**	**2.29**	**291**	*i*P	Pn	15 36 19.1	-2.6
PNIG				*i*S	Sn	15 36 45.5	-4.3
TPIG	**Tehuac#an**	**3.15**	**334**	*i*S	Sn	15 37 09.5	-1.6
SCX	**San Cristobal**	**3.34**	**69**	*e*P	Pn	15 36 41.0	+5.0
SCX				*i*S	Sn	15 37 15.0	-0.6
SCX	**San Cristobal**	**3.34**	**69**	*e*P	Pn	15 36 33.5	-2.5
SCX				*i*S	Sn	15 37 15.0	-0.6
CCIG	**Comitan**	**3.68**	**79**	*i*P	Pn	15 36 39.5	-1.2
CCIG				*i*S	Sn	15 37 19.4	-4.7
CCIG	**Comitan**	**3.68**	**79**	*i*P	Pn	15 36 39.5	-1.2
CCIG				*i*S	Sn	15 37 21.6	-2.5
MEIG	**Mezcala**	**4.26**	**304**	*i*S	Sn	15 37 33.9	-4.6
PPM	**Popocatepetl**	**4.34**	**323**	*e*P	Pn	15 36 47.0	-2.8
PPM				*i*S	Sn	15 37 45.1	+4.8
PPM	**Popocatepetl**	**4.34**	**323**	*i*S	Sn	15 37 40.1	-0.2
PLIG	**Platanillo**	**4.44**	**310**	*i*S	Sn	15 37 41.0	-1.9
CAIG	**El Cayaco**	**4.45**	**290**	*i*S	Sn	15 37 35.9	-7.0
CAIG	**El Cayaco**	**4.45**	**290**	*i*S	Sn	15 37 43.2	+0.3

*DDA **27** 15:39:11.3, 34.06N × 32.25E, h11km, Md3.7, Ml3.6*
*IDC **27** 15:39:11.1±1.3, 34.55N × 32.15E, h0km, mb3.8/10, mb1 3.9/14, mb1mx3.8/23, mbtmp3.8/14, ML3.9/4, Error ellipse: s-maj=30.0km s-min=18.1km az=30.0*
*ISK **27** 15:39:12.6, 34.39N × 32.16E, h8km, MD4.0*
*CSEM **27** 15:39:14.5±0.0, 34.37N × 32.13E, h30km, Mw3.9, Error ellipse: s-maj=1.4km s-min=0.9km az=68.0*
*HLW **27** 15:39:15.6, 34.42N × 31.98E, h33km, Mb3.8*
*GRAL **27** 15:39:15.8±1.5, 34.38N × 32.24E, h15km±10km, MD3.7*
*NEIC **27** 15:39:15.9±0.9, 34.43N × 32.22E, h37km±8km, mb3.9/1, ML3.7(NIC), Error ellipse: s-maj=11.2km s-min=8.4km az=202.0*
*ISCJB **27** 15:39:15.1±0.3, 34.40N±0.02 × 32.24E±0.03, h51km±5km, mb3.7/10, Error ellipse: s-maj=3.7km s-min=2.7km az=155.4*
*NSSC **27** 15:39:16.6, 34.49N × 32.48E, h8km±17km*
*GII **27** 15:39:16.5±0.8, 34.45N × 32.43E, h17km±10km, ML3.1/4*
*NIC **27** 15:39:17.4±0.2, 34.53N × 32.23E, h25km, mb4.0, ML3.7, MW3.9*

ISC 27 15:39:16.6±0.3, 3443N±0.02 × 3227E±0.02, h44km±5km, n111, σ1°9.07/150, mb3.7/10, 4C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.46**	**8**	⇑P	Pn	**15 39 25.3**	**-1.7**
AKMC	**Akamas**	**0.60**	**5**	⇑P	Pn	**15 39 27.2**	**-1.6**
SZAC	**Souni-Zanaja**	**0.60**	**57**	⇓P	Pn	**15 39 28.3**	**-0.5**
ALFC	**Alevga**	**0.78**	**20**	⇑P	Pn	**15 39 29.9**	**-1.3**
	54nm,0.3s						
ALFC				S	Sn	**15 39 39.5**	**-2.2**
LEF	**Lefka**	**0.86**	**36**	PG	Pn	**15 39 31.3**	**-1.0**
LEF				SG	Sn	**15 39 43.6**	**-0.1**
CSS	**Prodhromos**	**1.02**	**58**	P	Pn	**15 39 34.0**	**-0.5**
	32nm,0.3s						
CSS				S	Sn	**15 39 47.5**	**-0.2**
CSS	**Prodhromos**	**1.02**	**58**	PN	Pn	**15 39 33.8**	**-0.7**
CSS	**Prodhromos**	**1.02**	**58**	P	Pn	**15 39 34.0**	**-0.5**
	32nm,0.3s						
CSS				S	Sn	**15 39 47.5**	**-0.2**
MAMC	**Mammari**	**1.08**	**46**	P	Pn	**15 39 34.9**	**-0.3**
	41nm,0.5s						
MAMC				S	Sn	**15 39 48.5**	**-0.5**
LFK	**Lefkose**	**1.34**	**50**	PN	Pn	**15 39 39.6**	**+0.7**
PHNC	**Paralimni**	**1.56**	**68**	⇑P	Pn	**15 39 42.5**	**+0.6**
PHNC				S	Sn	**15 40 00.9**	**0.0**
EREN	**Erenkoy**	**1.91**	**54**	PN	Pn	**15 39 48.3**	**+1.7**
IKL	**Isikli**	**2.15**	**32**	PN	Pn	**15 39 50.7**	**+0.8**
ERMK	**Ermenek**	**2.27**	**13**	*i*P	Pn	**15 39 53.9**	**+2.3**
ERMK				*i*S	Sn	**15 40 20.7**	**+2.3**
HNTI	**Hanita**	**2.77**	**118**	Pn	Pn	**15 40 30.5**	**0.0**
HNTI				Sn	Sn	**15 40 30.5**	**0.0**
BHL	**Bhannes**	**2.85**	**100**	*e*Pn	Pn	**15 40 00.7**	**+1.1**
BHL				Sn	Sn	**15 40 33.1**	**+0.4**
OFRI	**'Ofer**	**2.90**	**128**	Pn	Pn	**15 40 00.0**	**-0.2**
MMC7	**Mount Meron ar**	**2.96**	**117**	Pn	Pn	**15 40 00.8**	**-0.3**
MMA0	**Mount Meron ar**	**2.97**	**117**	Pn	Pn	**15 40 01.0**	**-0.2**
MMAI	**Mount Meron Ar**	**2.97**	**117**	Pn	Pn	**15 40 01.0**	**-0.1**
	22nm,0.3s,baz=307,slow=12,SNR=109						
MMAI				Sn	Sn	**15 40 35.5**	**0.0**
	31nm,0.3s,baz=318,slow=16,SNR=4.5						
MMB1	**Mount Meron ar**	**2.97**	**117**	Pn	Pn	**15 40 01.0**	**-0.3**
ELL	**Elmali**	**3.01**	**321**	PN	Pn	**15 40 01.7**	**-0.1**
HWQ	**Hawqa**	**3.04**	**92**	*e*Pn	Pn	**15 40 03.1**	**+1.4**
HWQ				Sn	Sn	**15 40 34.1**	**+0.7**
MERS	**Mersin**	**3.05**	**36**	PN	Pn	**15 40 03.7**	**+1.4**
KSDI	**Kefar Szold**	**3.08**	**113**	Pn	Pn	**15 40 02.3**	**-0.4**
KSDI				Sn	Sn	**15 40 37.6**	**-0.6**
RCY	**Rachaya**	**3.10**	**107**	*e*Pn	Pn	**15 40 02.8**	**-0.2**
RCY				Sn	Sn	**15 40 37.2**	**-1.5**
SLTI	**Sal'it**	**3.18**	**132**	Pn	Pn	**15 40 04.4**	**+0.3**
SLTI				Sn	Sn	**15 40 41.5**	**+0.7**
BRBR	**Barbar**	**3.22**	**107**	⇑P	Pn	**15 40 05.1**	**+0.4**
BRBR				⇑S	Sn	**15 40 41.4**	**-0.5**
BRBR	**Barbar**	**3.22**	**107**	⇑*i*P	Pn	**15 40 05.1**	**+0.4**
BRBR				⇑*i*S	Sn	**15 40 41.4**	**-0.5**
KSHT	**Keshet**	**3.29**	**115**	Pn	Pn	**15 40 05.7**	**+0.2**
MMLI	**Mount Malkishu**	**3.30**	**126**	Pn	Pn	**15 40 05.9**	**+0.2**
MMLI	**Mount Malkishu**	**3.30**	**126**	Pn	Pn	**15 40 06.0**	**+0.3**
MMLI	**Mount Malkishu**	**3.30**	**126**	Pn	Pn	**15 40 06.0**	**+0.3**
ARNB	**Al Arnab**	**3.35**	**64**	⇑P	Pn	**15 40 06.5**	**+0.1**
ARNB				⇑S	Sn	**15 40 43.2**	**-2.1**
ARNB	**Al Arnab**	**3.35**	**64**	⇑*i*P	Pn	**15 40 06.6**	**+0.1**
ARNB				⇑*i*S	Sn	**15 40 43.0**	**-2.0**
BIDA	**Albida**	**3.39**	**79**	⇑P	Pn	**15 40 06.5**	**-0.5**
BIDA				⇑S	Sn	**15 40 44.0**	**-1.8**
BIDA	**Albida**	**3.39**	**79**	⇑*i*P	Pn	**15 40 06.5**	**-0.5**
BIDA				⇑*i*S	Sn	**15 40 44.0**	**-1.9**
FETY	**Fethiye**	**3.41**	**311**	PN	Pn	**15 40 06.7**	**-0.5**
QASN	**Qassioun**	**3.45**	**104**	⇑P	Pn	**15 40 08.9**	**+1.2**
QASN				⇑S	Sn	**15 40 46.4**	**-1.0**
QASN	**Qassioun**	**3.45**	**104**	⇑*i*P	Pn	**15 40 08.9**	**+1.1**
QASN				⇑*i*S	Sn	**15 40 46.4**	**-0.9**
GOLH	**Golhisar**	**3.56**	**323**	*i*P	Pn	**15 40 10.7**	**+1.4**
GOLH				*i*S	Sn	**15 40 43.6**	**-6.6**
WRDH	**Warideh**	**3.57**	**71**	⇑P	Pn	**15 40 09.4**	**0.0**
WRDH				⇑S	Sn	**15 40 48.7**	**-1.7**
WRDH	**Warideh**	**3.57**	**71**	⇑*i*P	Pn	**15 40 09.4**	**0.0**
WRDH				⇑*i*S	Sn	**15 40 48.7**	**-1.6**
TOTH	**TOTAH**	**3.62**	**106**	⇑P	Pn	**15 40 11.0**	**+0.9**
TOTH				⇑S	Sn	**15 40 50.7**	**-0.9**
TOTH	**TOTAH**	**3.62**	**106**	⇑*i*P	Pn	**15 40 11.0**	**+0.9**
TOTH				⇑*i*S	Sn	**15 40 50.7**	**-0.9**
KARA	**Karaisali**	**3.62**	**38**	PN	Pn	**15 40 11.7**	**+1.6**
ISP	**Isparta**	**3.69**	**338**	PN	Pn	**15 40 11.5**	**+0.3**
ISP	**Isparta**	**3.69**	**338**	*e*P	Pn	**15 40 12.6**	**+1.4**
BTCH	**Batrach**	**3.79**	**64**	⇑P	Pn	**15 40 13.1**	**+0.6**
BTCH				⇑S	Sn	**15 40 54.2**	**-1.5**
BTCH	**Batrach**	**3.79**	**64**	⇑*i*P	Pn	**15 40 13.1**	**+0.7**
BTCH				⇑*i*S	Sn	**15 40 54.2**	**-1.5**
AMAG	**Maghara**	**3.86**	**168**	P	Pn	**15 40 13.2**	**-0.2**
COBT	**Iskenderun**	**3.87**	**56**	*i*P	Pn	**15 40 14.7**	**+1.2**
COBT				*i*S	Sn	**15 40 57.3**	**-0.4**
DSI	**Dead Sea**	**3.87**	**137**	Pn	Pn	**15 40 13.8**	**+0.2**
DSI	**Dead Sea**	**3.87**	**137**	Pn	Pn	**15 40 13.8**	**+0.2**
YTIR	**Yattir**	**3.88**	**141**	Pn	Pn	**15 40 14.1**	**+0.3**
KZIT	**Kziot**	**3.94**	**152**	Pn	Pn	**15 40 15.7**	**+1.1**
MZDA	**Masada**	**4.05**	**139**	Pn	Pn	**15 40 16.4**	**+0.3**
SALA	**Sala**	**4.10**	**113**	⇑P	Pn	**15 40 18.2**	**+1.5**
SALA				⇑S	Sn	**15 41 01.4**	**-2.1**
SALA	**Sala**	**4.10**	**113**	⇑*i*P	Pn	**15 40 18.2**	**+1.5**
SALA				⇑*i*S	Sn	**15 41 01.4**	**-2.0**
NIG	**Nigde**	**4.13**	**27**	PN	Pn	**15 40 19.5**	**+2.3**
KOZT	**Kozan**	**4.20**	**42**	PN	Pn	**15 40 19.6**	**+1.6**
DENT	**Denizli**	**4.23**	**323**	PN	Pn	**15 40 18.6**	**+0.1**
SHUT	**Suhut-Afyon**	**4.34**	**342**	*e*PN	Pn	**15 40 21.5**	**+1.4**
KIZT	**Kizilcal**	**4.46**	**356**	*e*PN	Pn	**15 40 23.1**	**+1.5**
HHAG	**Hagoal**	**4.46**	**182**	P	Pn	**15 40 20.9**	**-0.9**
KOT	**Kottamia**	**4.50**	**185**	P	Pn	**15 40 21.6**	**-0.7**
ANDN	**Andirin**	**4.56**	**45**	*i*P	Pn	**15 40 23.6**	**+0.5**
ANDN				*e*S	Sn	**15 41 10.9**	**-3.9**
SUZ		**4.60**	**174**	P	Pn	**15 40 23.3**	**-0.3**
PRNI	**Paran**	**4.67**	**150**	Pn	Pn	**15 40 26.2**	**+1.6**
HNKL	**Nakhl**	**4.71**	**162**	P	Pn	**15 40 25.2**	**+0.1**
BDRM	**Kayabasi**	**4.73**	**305**	*i*P	Pn	**15 40 25.7**	**+0.4**
BDRM				*e*S	Sn	**15 41 11.4**	**-7.4**
AYDN	**Tasoluk**	**4.80**	**313**	*i*P	Pn	**15 40 40.1**	**+14**
AYDN				*e*S	Sn	**15 41 20.5**	**-0.2**
HSAF	**As Saff**	**4.83**	**187**	P	Pn	**15 40 25.6**	**-1.2**
GLL	**Jalalah**	**4.86**	**186**	P	Pn	**15 40 26.5**	**-0.7**
HRFI	**Mount Harif**	**4.97**	**151**	Pn	Pn	**15 40 29.0**	**+0.4**
HRFI				Sn	Sn	**15 41 27.2**	**+2.4**
ZNM		**5.06**	**174**	P	Pn	**15 40 30.2**	**+0.2**
ZAF		**5.13**	**177**	P	Pn	**15 40 30.5**	**-0.5**
ESKT	**Eskisehir**	**5.21**	**348**	*e*PN	Pn	**15 40 32.7**	**+0.8**
EIL	**Elat**	**5.26**	**154**	Pn	Pn	**15 40 33.2**	**+0.6**
	2.8nm,0.3s,baz=330,slow=12,SNR=18						
EIL				Sn	Sn	**15 41 33.5**	**+1.5**
	11nm,0.3s,baz=329,slow=17,SNR=7.6						
EIL	**Elat**	**5.26**	**154**	Pn	Pn	**15 40 33.2**	**+0.5**
EIL	**Elat**	**5.26**	**154**	Pn	Pn	**15 40 33.2**	**+0.5**
EIL				Sn	Sn	**15 41 33.5**	**+1.4**
HMAT	**Matruh**	**5.48**	**234**	P	Pn	**15 40 32.1**	**-3.6**
HBST	**Basata**	**5.60**	**157**	P	Pn	**15 40 38.1**	**+0.7**
HDHB	**Dhahab**	**6.03**	**160**	P	Pn	**15 40 43.8**	**+0.6**
HKAT	**Jabal Katrina**	**6.07**	**166**	P	Pn	**15 40 44.3**	**+0.5**
IDI	**Anoyia**	**6.13**	**280**	Pn	Pn	**15 40 42.2**	**-2.4**
	2.4nm,0.3s,baz=88,slow=13,SNR=12						
IDI				Sn	Sn	**15 41 48.4**	**-4.9**
	5.6nm,0.3s,baz=273,slow=21,SNR=7.4						
MALT	**Malatya**	**6.30**	**50**	*e*Pn	Pn	**15 40 44.5**	**-2.4**
SWA1		**7.59**	**229**	P	Pn	**15 41 02.3**	**-2.4**
HFRF	**Wahat Farafira**	**8.01**	**206**	P	Pn	**15 41 08.8**	**-1.7**
HDK1	**Dakhla**	**9.20**	**196**	P	Pn	**15 41 26.4**	**-0.2**
KIEV	**Kiev**	**16.41**	**353**	*e*P	Pn	**15 43 04.8**	**+1.1**
	5.3nm,0.5s						
KIEV	**Kiev**	**16.41**	**353**	*e*P	Pn	**15 43 04.8**	**+1.2**
	5.3nm,0.5s						
AKASG	**Malin Array Be**	**16.42**	**353**	Pn	Pn	**15 43 04.5**	**+0.9**
	2.5nm,0.3s,baz=172,slow=9.4,SNR=29						
AKBB	**Malin Array Si**	**16.42**	**353**	*e*P	Pn	**15 43 04.7**	**+1.0**
AKBB	**Malin Array Si**	**16.42**	**353**	*e*P	Pn	**15 43 04.7**	**+1.0**
GERES	**GERESS Array B**	**19.93**	**322**	P	Pn	**15 43 43.8**	**-2.6**
	0.2nm,0.3s,baz=119,slow=11,SNR=7.8						
KHC	**Kasperske Hory**	**20.17**	**322**	*e*P	P	**15 43 46.6**	**-0.6**
AKTK	**Aktyubinsk**	**24.66**	**42**	P	P	**15 44 32.7**	**-0.3**
AKTO	**Aktyubinsk**	**24.66**	**42**	P	P	**15 44 32.7**	**-0.3**
	1.3nm,0.4s,mb3.8,baz=224,slow=5.3,SNR=7.6						
FINES	**FINESS Array B**	**27.32**	**354**	P	P	**15 44 55.9**	**-1.1**
	1.3nm,0.5s,mb3.7,baz=158,slow=12,SNR=12						
HFS	**Hagfors**	**28.43**	**340**	P	P	**15 45 06.6**	**-0.3**
	0.6nm,0.5s,mb

ATH.
CSEM ***27*** *16:01:41.4±0.2, 3700N×2075E, h7km±2km, MD3.6, Error ellipse: s-maj=6.5km s-min=1.7km az=32.0, After ATH*

ATH 27 16:01:41.4, 3700N×2075E, h7km±1km, MD3.6/6, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	**Ithomi**	**0.96**	**79**	*e*PB	Pb	16 01 59.7	-0.6
ITM				*e*SB	Sb	16 02 12.8	-0.4
VLS	**Valsamata**	**1.18**	**354**	*e*PB	Pb	16 02 04.1	0.0
VLS				*e*SB	Sb	16 02 20.4	+0.7
RLS	**Riolos of Patr**	**1.20**	**28**	*e*PB	Pb	16 02 04.4	-0.1
RLS				*e*SB	Sb	16 02 20.4	+0.2
VLI	**Veliai**	**1.78**	**98**	*e*PG	Pg	16 02 14.6	-0.9
EVR	**Evrytania**	**2.09**	**23**	*e*PG	Pg	16 02 20.0	-1.4
THL	**Klokotos Trika**	**2.75**	**21**	*e*PB	Pn	16 02 27.5	+1.6

FUNV ***27*** *16:03:27.6, 665N×7324W, h167km, MW3.7*
ISCJB ***27*** *16:03:28.4±0.7, 682N±006×7302W±006, h171km±6km, mb3.9/3, Error ellipse: s-maj=11.5km s-min=8.1km az=35.0*
IDC ***27*** *16:03:28.5±0.7, 669N×7294W, h157km±7km, mb3.7/3, mb1 3.7/5, mb1mx3.4/18, mbtmp3.7/5, MS2.7/1, Ms1 2.7/1, ms1mx1.9/28, Error ellipse: s-maj=28.7km s-min=7.7km az=132.0*
NEIC ***27*** *16:03:29.9±0.8, 667N×7294W, h171km±7km, mb4.1/1, Error ellipse: s-maj=28.3km s-min=12.3km az=130.0*

ISC 27 16:03:29.4±0.7, 681N±006×7302W±006, h164km±6km, n30, σ0§83/34, mb3.9/3, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.26**	**34**	⇓*i*P	**Pn**	**16 03 58.7**	**+0.9**
CAPV				*e*S	**Sn**	**16 04 20.2**	**+0.7**
ROSC	**El Rosal**	**2.34**	**214**	*e*Pn	**Pn**	**16 04 10.1**	**+0.8**
ROSC				*e*Sn	**Sn**	**16 04 36.1**	**-4.1**
ROSC	**El Rosal**	**2.34**	**214**	P	**Pn**	**16 04 09.7**	**+0.4**
	79nm,0.3s,baz=41,slow=2.3,SNR=80						
ROSC				S	**Sn**	**16 04 38.2**	**-2.0**
	54nm,0.3s,baz=272,slow=23,SNR=8.0						
SOCV	**Socops**	**2.59**	**56**	⇓*i*P	**Pn**	**16 04 13.4**	**+1.0**
SOCV				*e*S	**Sn**	**16 04 45.9**	**+0.2**
VIGV	**El Vigia**	**2.60**	**39**	*e*P	**Pn**	**16 04 13.1**	**+0.7**
VIGV				*e*S	**Sn**	**16 04 45.9**	**+0.2**
SDV	**Santo Domingo**	**3.13**	**49**	*e*Pn	**Pn**	**16 04 20.1**	**+1.1**
SDV				*e*Sn	**Sn**	**16 04 57.2**	**-0.4**
SDV	**Santo Domingo**	**3.13**	**49**	P	**Pn**	**16 04 20.2**	**+1.2**
	11nm,0.3s,baz=253,slow=5.2,SNR=85						
SDV				S	**Sn**	**16 04 56.7**	**-0.8**
	45nm,0.3s,baz=72,slow=20,SNR=41						
ELOV	**Elorza**	**3.52**	**87**	⇓*i*P	**Pn**	**16 04 24.7**	**+0.9**
ELOV				*e*S	**Sn**	**16 05 06.0**	**-0.2**
VIRV	**Villa del Rosa**	**3.72**	**9**	*e*P	**Pn**	**16 04 25.3**	**-1.1**
VIRV				*e*S	**Sn**	**16 05 09.4**	**-1.4**
QARV	**Quebrada Arrib**	**4.18**	**36**	*e*P	**Pn**	**16 04 32.6**	**+0.2**
QARV				*e*S	**Sn**	**16 05 21.5**	**+0.1**
CURV	**Curarigua**	**4.39**	**43**	*e*P	**Pn**	**16 04 35.3**	**+0.2**
DABV	**Dabajuro**	**4.71**	**30**	*e*P	**Pn**	**16 04 39.5**	**+0.1**
TEPV	**Terepaima**	**4.91**	**50**	*e*P	**Pn**	**16 04 42.5**	**+0.5**
SIQV	**Siquisique**	**4.96**	**40**	*e*P	**Pn**	**16 04 41.8**	**-0.7**
BAUV	**El Baul**	**5.37**	**66**	*e*P	**Pn**	**16 04 46.9**	**-1.0**
IMOV	**Isla Los Monje**	**5.89**	**21**	*e*P	**Pn**	**16 04 54.4**	**-0.5**
TURV	**Turiamo**	**6.27**	**54**	*e*P	**Pn**	**16 04 59.0**	**-0.8**
CAOV	**Caicara del Or**	**6.67**	**85**	*e*P	**Pn**	**16 05 03.6**	**-1.5**
PCRV	**Puerto La Cruz**	**8.94**	**67**	LR	LR	16 08 51.6	
	comp=Z,45nm,20.2s,baz=191,slow=36						
LPAZ	**La Paz**	**23.46**	**168**	pP	pP	16 08 57.6	+2.2
	1.1nm,0.8s,baz=346,slow=8.3,SNR=2.9						
SCHQ	**Schefferville**	**48.14**	**5**	*e*P	**P**	**16 11 54.1**	**+1.4**
	3.3nm,0.6s,mb4.1						
SCHQ	**Schefferville**	**48.14**	**5**	P	**P**	**16 11 53.9**	**+1.2**
	3.9nm,0.8s,mb4.1,baz=195,slow=9.4,SNR=5.1						
YKA	**Yellowknife Ar**	**63.31**	**340**	P	**P**	**16 13 41.0**	**+0.5**
YKA	**Yellowknife Ar**	**63.31**	**340**	P	**P**	**16 13 41.0**	**+0.5**
	0.9nm,0.6s,mb3.8,baz=130,slow=6.8,SNR=22						
DBIC	**Dimbokro**	**67.63**	**86**	P	**P**	**16 14 08.8**	**-0.5**
DBIC	**Dimbokro**	**67.63**	**86**	P	**P**	**16 14 08.8**	**-0.5**
	1.1nm,0.6s,mb3.8,baz=270,slow=3.0,SNR=2.9						
MKAR	**Makanchi Array**	**122.30**	**20**	PKP	PKPdf	16 22 05.2	+0.1
	0.1nm,0.4s,baz=319,slow=2.4,SNR=3.4						
SONM	**Songino Array**	**125.59**	**0**	PKP	PKPdf	16 22 12.2	+0.8
	0.1nm,0.3s,baz=332,slow=1.8,SNR=2.3						
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc	PKPbc	16 22 58.1	-1.3
	0.6nm,0.7s,baz=113,slow=3.6,SNR=7.7						
WRA	**Warramunga Arr**	**150.42**	**241**	PKPbc	PKPbc	16 23 02.2	-0.2
	0.3nm,0.4s,baz=107,slow=2.7,SNR=13						

ISCJB ***27*** *16:12:05.8±1.8, 421N±008×785W±0.1, h42km±17km, mb3.8/8, Error ellipse: s-maj=18.5km s-min=11.6km az=31.3*
NEIC ***27*** *16:12:07.0±1.6, 4.14N×78.58W, h40km±15km, Error ellipse: s-maj=18.3km s-min=12.4km az=96.0*
IDC ***27*** *16:12:10.9±3.2, 420N×78.50W, h73km±29km, mb3.5/8, mb1 3.8/11, mb1mx3.7/21, mbtmp3.7/11, MS2.9/2, Ms1 2.9/2, ms1mx2.6/21, Error ellipse: s-maj=22.9km s-min=16.5km az=73.0*

ISC 27 16:12:08.9±1.9, 420N±008×785W±01, h53km±18km, n19, σ1§07/19, mb3.8/8, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**3.93**	**179**	*e*Pn	**Pn**	**16 13 03.7**	**-3.2**
ROSC	**El Rosal**	**4.23**	**81**	*e*P	**Pn**	**16 13 11.1**	**+0.2**
ROSC				S	**Sn**	**16 14 03.5**	**+4.4**
ROSC				LR	LR	16 15 20.9	
ROSC	**El Rosal**	**4.23**	**81**	P	**Pn**	**16 13 11.5**	**+0.6**
	5.9nm,0.3s,baz=225,slow=2.4,SNR=7.4						
ROSC				S	**Sn**	**16 14 03.5**	**+4.4**
	2.4nm,0.3s,baz=82,slow=22,SNR=5.9						
ROSC				LR	LR	16 15 20.9	
	comp=Z,171nm,18.2s,baz=357,slow=45						
SDV	**Santo Domingo**	**9.12**	**59**	*e*Pn	**Pn**	**16 14 16.6**	**-1.4**
SDV				*e*Sn	**Sn**	**16 15 59.2**	**0.0**
SDV	**Santo Domingo**	**9.12**	**59**	P	**Pn**	**16 14 18.3**	**+0.3**
	3.3nm,0.3s,baz=256,slow=4.7,SNR=12						
SDV				S	**Sn**	**16 15 59.4**	**+0.2**
	1.0nm,0.3s,baz=359,slow=16,SNR=3.8						
NNA	**Nana**	**16.16**	**174**	P	**Pn**	**16 15 55.6**	**+3.0**
	2.0nm,0.3s,baz=352,slow=12,SNR=10						
CMIG	**Matias Romero**	**20.54**	**310**	LR	LR	16 24 54.1	
	comp=Z,34nm,21.8s,baz=198,slow=37						
LPAZ	**La Paz**	**22.80**	**153**	P	**P**	**16 17 08.2**	**+0.9**
	1.9nm,0.7s,mb3.6,baz=330,slow=14,SNR=7.2						
SIV	**San Ignacio**	**26.46**	**140**	P	**P**	**16 17 41.3**	**+0.1**
	1.9nm,0.8s,mb3.6,baz=313,slow=8.7,SNR=5.1						
PLCA	**Paso Flores**	**45.30**	**171**	P	**P**	**16 20 20.8**	**-0.7**
	1.5nm,0.7s,mb3.9,baz=357,slow=12,SNR=4.8						
PDAR	**Pinedale Array**	**47.28**	**329**	P	**P**	**16 20 37.0**	**0.0**
	0.4nm,0.6s,mb3.5,baz=122,slow=11,SNR=4.3						
NVAR	**Mina Array Bea**	**49.69**	**319**	P	**P**	**16 20 57.3**	**+1.6**
	1.3nm,0.7s,mb4.1,baz=126,slow=7.5,SNR=4.0						
YKA	**Yellowknife Ar**	**63.99**	**342**	P	**P**	**16 22 35.7**	**-0.8**
YKA	**Yellowknife Ar**	**63.99**	**342**	P	**P**	**16 22 35.7**	**-0.8**
	0.3nm,0.6s,mb3.5,baz=135,slow=6.0,SNR=6.7						
DBIC	**Dimbokro**	**73.32**	**84**	P	**P**	**16 23 35.0**	**-0.7**
	1.3nm,0.7s,mb4.0,baz=292,slow=7.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**79.54**	**77**	P	**P**	**16 24 10.4**	**-0.4**
	0.8nm,0.6s,mb3.8,baz=280,slow=6.1,SNR=3.0						
SONM	**Songino Array**	**128.01**	**356**	PKP	PKPdf	16 31 10.0	+0.8
	0.1nm,0.5s,baz=306,slow=1.6,SNR=5.2						
ASAR	**Alice Springs**	**143.22**	**235**	PKhKP		16 31 34.1	
	0.5nm,0.6s,baz=117,slow=3.8,SNR=11						
WRA	**Warramunga Arr**	**144.37**	**241**	PKP	PKPdf	16 31 37.8	-2.4
	1.0nm,0.7s,baz=106,slow=3.1,SNR=16						

IDC 27 16:16:38.6±4.6, 541S×15374E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/14, mbtmp3.5/5, Error ellipse: s-maj=154.0km s-min=28.0km az=108.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.77**	**231**	P	P	16 21 52.2	-0.9
	0.4nm,0.5s,baz=54,slow=9.9,SNR=6.4						
ASAR	**Alice Springs**	**26.35**	**224**	P	P	16 22 17.6	+0.9
	0.2nm,0.8s,baz=55,slow=9.4,SNR=6.3						
SONM	**Songino Array**	**67.34**	**328**	P	P	16 27 36.1	+0.6
	0.3nm,0.6s,baz=141,slow=6.7,SNR=3.2						
MKAR	**Makanchi Array**	**81.40**	**319**	P	P	16 28 57.8	+0.3
	0.8nm,0.7s,baz=95,slow=6.9,SNR=10						
ZALV	**Zalesovo Beam**	**82.18**	**326**	P	P	16 29 00.9	-0.4
	0.4nm,0.4s,baz=119,slow=5.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**151.38**	**288**	PKPbc	PKPbc	16 36 35.1	-0.4
	1.4nm,0.6s,baz=54,slow=3.2,SNR=5.9						

IDC 27 16:39:08.9±9.4, 709S×14734E, h69km±78km, mb3.5/2, mb1 3.7/4, mb1mx3.3/14, mbtmp3.5/4, MLS3.7/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/20, Error ellipse: s-maj=69.5km s-min=56.5km az=128.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**12.97**	**185**	P	Pn	16 42 11.9	+1.7
	0.4nm,0.3s,baz=345,slow=14,SNR=4.9						
CTA				LR	LR	16 46 58.0	
	comp=Z,86nm,18.7s,baz=174,slow=36						
WB2	**Warramunga Arr**	**17.94**	**223**	*e*P	Pn	16 43 13.4	-0.4
WRA	**Warramunga Arr**	**17.95**	**223**	P	Pn	16 43 14.0	+0.1
	0.2nm,0.3s,baz=49,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**20.93**	**217**	P	P	16 43 46.6	+0.6
	1.3nm,0.7s,baz=52,slow=8.8,SNR=15						
STKA	**Stephens Creek**	**25.24**	**192**	P	P	16 44 27.7	-0.7
	3.5nm,0.7s,baz=20,slow=12,SNR=6.7						
TORD	**Torodi Ar. Bea**	**145.67**	**283**	PKPbc	PKPbc	16 58 40.1	-0.8
	0.4nm,0.7s,baz=76,slow=3.3,SNR=2.1						

IDC 27 16:47:44.6±1.3, 111N×12320E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/17, mbtmp3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/16, Error ellipse: s-maj=143.9km s-min=21.5km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.60**	**153**	P	P	16 52 57.6	0.0
	0.5nm,0.3s,baz=330,slow=11,SNR=24						
WRA				LR	LR	17 00 45.1	
	comp=Z,56nm,20.0s,baz=195,slow=33						
ASAR	**Alice Springs**	**26.73**	**158**	P	P	16 53 26.2	+0.2
	0.4nm,0.9s,baz=334,slow=7.9,SNR=5.2						
SONM	**Songino Array**	**48.77**	**345**	P	P	16 56 30.9	-0.4
	0.2nm,0.5s,baz=157,slow=7.9,SNR=3.9						
MKAR	**Makanchi Array**	**57.78**	**328**	P	P	16 57 37.9	+0.2
	0.3nm,0.3s,baz=121,slow=8.1,SNR=6.3						

MAN 27 17:03:02, 1675N×11999E, h25km, mb3.8, ML2.5, MS2.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.37**	**191**	*e*P	Pb	17 03 11.5	+1.4
BOLP				*e*S	Sb	17 03 19.8	+4.2
BCPH	**Baguio City Da**	**0.67**	**122**	⇑*i*P	Pb	17 03 15.1	0.0
BCPH				*i* S	Sb	17 03 25.3	+1.2
ABRA	**Dolores**	**1.13**	**37**	*e*P	Pn	17 03 22.1	-0.2
ABRA				*e*S	Sn	17 03 38.0	+0.9
APYP	**Conner**	**1.63**	**47**	*e*P	Pn	17 03 28.9	-0.2
APYP				*e*S	Sn	17 03 49.7	+0.3
CAUP	**Cauayan**	**1.77**	**83**	*e*P	Pn	17 03 32.4	+1.4
BALP	**Baler**	**1.82**	**123**	*e*P	Pn	17 03 32.1	+0.3

NIED ***27*** *17:10:00, 4670N×15300E, h17km, Mw3.8 Best double couple: M≤5.02000×10^14 NP1:φ≈210.00000°, δ42.00000°, λ175.00000°. NP2:φ≈304.00000°, δ87.00000°, λ48.00000°.*
JMA ***27*** *17:10:11.1±0.9, 4666N×15302E, h30km, M4.2*
ISCJB ***27*** *17:10:12.6±0.9, 4679N±007×1527E±0.1, h64km±8km, mb4.0/14, Error ellipse: s-maj=15.7km s-min=7.2km az=135.1*
MOS ***27*** *17:10:14.7±0.7, 4688N×15259E, h87km, mb4.2/4, Error ellipse: s-maj=15.1km s-min=10.7km az=76.6*
IDC ***27*** *17:10:17.6±3.9, 4694N×15259E, h89km±34km, mb3.5/12, mb1 3.6/14, mb1mx3.6/22, mbtmp3.5/14, MS3.1/3, Ms1 3.1/3, ms1mx2.7/21, Error ellipse: s-maj=21.2km s-min=16.4km az=104.0*
NEIC ***27*** *17:10:18.9±1.8, 4698N×15255E, h100km±16km, mb4.4/3, Error ellipse: s-maj=13.5km s-min=10.2km az=114.0*

ISC 27 17:10:14.6±0.8, 4682N±007×1527E±01, h63km±7km, n67, σ1§34/78, mb4.0/14, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.70**	**246**	⇑*i*PN	**Pn**	**17 11 09.7**	**+0.5**
KUR				*i* S	**Sn**	**17 11 55.8**	**+4.3**
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
KUR				smax			
	comp=N,380nm,0.5s						
KUR				smax			
	comp=E,150nm,0.5s						
SKR	**Severo-Kuril's**	**4.49**	**29**	*e*PN	**Pn**	**17 11 20.2**	**+0.2**
SKR				*e*S	**Sn**	**17 12 06.5**	**-4.4**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=E,90nm,0.5s						
SKR				smax			
	comp=N,120nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.54**	**242**	*e*PN	**Pn**	**17 11 35.3**	**+0.9**
YUK				*e*S	**Sn**	**17 12 39.9**	**+3.2**
YUK				smax			
	comp=N,8μm,1.0s						
YUK				smax			
	comp=E,8μm,1.0s						
YUK				smax			
	comp=N,380nm,0.7s						
YUK				smax			
	comp=E,380nm,0.7s						
NEM2	**Nemuro 2**	**5.99**	**237**	P	**Pn**	**17 11 38.6**	**-2.0**
NEM2				*e*S	**Sn**	**17 12 43.8**	**-4.0**
JRA	**Rausu**	**6.04**	**244**	P	**Pn**	**17 11 42.7**	**+1.4**
JNK	**Nakash**	**6.48**	**243**	P	**Pn**	**17 11 47.6**	**+0.4**
JTKR	**Abashiri--Toko**	**6.79**	**248**	P	**Pn**	**17 11 53.0**	**+1.5**
YSS	**Yuzh-Sakhalins**	**6.79**	**275**	*e*P	**Pn**	**17 11 54.0**	**+2.5**
	comp=E,7.1nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.79**	**275**	*e*PN	**Pn**	**17 11 54.0**	**+2.5**
YSS				*e*S	**Sn**	**17 13 12.0**	**+4.6**
JAK	**Akkeshi**	**6.83**	**239**	P	**Pn**	**17 11 50.1**	**-1.9**
JAK				*e*S	**Sn**	**17 13 03.9**	**-4.3**
JMP	**Maruseppu**	**7.13**	**250**	P	**Pn**	**17 11 58.2**	**+2.1**
JAR	**Ashorobuto**	**7.21**	**244**	P	**Pn**	**17 11 57.8**	**+0.5**
JAR				*e*S	**Sn**	**17 13 17.8**	**0.0**
JOB	**Onbets**	**7.39**	**241**	P	**Pn**	**17 11 59.6**	**-0.2**
ASAJ	**Asahikawa**	**7.58**	**253**	PN	**Pn**	**17 12 05.1**	**+2.8**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,57nm,18.2s						
ASAJ	**Asahikawa**	**7.58**	**253**	P	**Pn**	**17 12 05.1**	**+2.8**
	comp=Z,1.5nm,0.3s,baz=71,slow=15,SNR=23						
ASAJ				LR	LR	17 14 50.5	
	comp=Z,56nm,18.1s,baz=161,slow=36						
JKK2	**Kamakawa 2**	**7.58**	**251**	P	**Pn**	**17 12 04.4**	**+2.1**
JWK2	**Keihoku**	**7.64**	**263**	P	**Pn**	**17 12 08.2**	**+5.1**
JCH	**Churui**	**7.84**	**241**	P	**Pn**	**17 12 04.7**	**-1.2**
JCH				*e*S	**Sn**	**17 13 29.1**	**-4.1**
JFR	**Furan**	**8.02**	**247**	P	**Pn**	**17 12 09.2**	**+0.9**
JEM	**Erimo**	**8.33**	**238**	P	**Pn**	**17 12 12.1**	**-0.4**
JBT2	**Biratori 2**	**8.36**	**245**	P	**Pn**	**17 12 12.8**	**-0.2**
JNBK	**Urakawa-nobuka**	**8.41**	**241**	P	**Pn**	**17 12 11.3**	**-2.3**
JNBK				*e*S	**Sn**	**17 13 42.3**	**-4.6**
JEW	**Eniwo**	**8.90**	**248**	P	**Pn**	**17 12 21.3**	**+0.9**
JNB	**Noboribetsu**	**9.36**	**246**	P	**Pn**	**17 12 25.6**	**-1.0**
JNB				*e*S	**Sn**	**17 14 08.0**	**-2.2**
JKB	**Kayabe**	**9.68**	**244**	P	**Pn**	**17 12 28.6**	**-2.4**
JKB				*e*S	**Sn**	**17 14 11.9**	**-6.2**
JYM2	**Yakumo 2**	**9.96**	**246**	P	**Pn**	**17 12 33.9**	**-1.0**
JANG	**Nango**	**10.33**	**235**	P	**Pn**	**17 12 35.6**	**-4.4**
JANG				*e*S	**Sn**	**17 14 23.3**	**-11**
JOSM	**Okushiri--Mats**	**10.55**	**248**	P	**Pn**	**17 12 41.7**	**-1.2**
JRG	**Rokugo**	**11.49**	**234**	P	**Pn**	**17 12 52.6**	**-3.2**
MA2	**Magadan**	**12.83**	**356**	*e*PN	**Pn**	**17 13 14.5**	**+0.7**
MJAR	**Matsushiro Arr**	**14.88**	**232**	P	**Pn**	**17 13 45.2**	**+4.0**
	comp=Z,0.4nm,0.3s,baz=41,slow=8.8,SNR=5.7						
KSRS	**Korea Array**	**20.52**	**252**	P	**P**	**17 14 49.3**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=60,slow=8.9,SNR=7.2						
TIXI	**Tiksi**	**27.31**	**344**	*e*P	**P**	**17 15 52.4**	**-0.5**
SONM	**Songino Array**	**31.02**	**289**	P	**P**	**17 16 25.9**	**-0.1**
SONM	**Songino Array**	**31.02**	**289**	P	**P**	**17 16 25.9**	**-0.1**
	comp=Z,0.1nm,0.3s,mb3.1,baz=60,slow=5.7,SNR=2.8						
IMA2	**Indian Mountai**	**33.93**	**36**	*e*P	**P**	**17 16 51.8**	**+0.6**
INK	**Inuvik**	**41.76**	**32**	*e*P	**P**	**17 17 57.2**	**+0.1**
INK	**Inuvik**	**41.76**	**32**	P	**P**	**17 17 56.6**	**-0.5**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**41.76**	**32**	P	**P**	**17 17 56.6**	**-0.5**
	comp=Z,1.0nm,0.7s,mb3.6,baz=290,slow=4.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**42.32**	**306**	P	**P**	**17 18 00.3**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.4,baz=76,slow=6.5,SNR=3.1						
ZALV				PcP	PcP	17 19 54.3	0.0
	comp=Z,0.4nm,0.4s,baz=44,slow=4.4,SNR=3.0						
ZALV				LR	LR	17 36 49.1	
	comp=Z,28nm,18.6s,baz=103,slow=38						
ZAL	**Zalesovo**	**42.34**	**306**	P	**P**	**17 18 00.3**	**-1.7**
ZAL						17 19 54.3	
MKAR	**Makanchi Array**	**46.63**	**297**	P	**P**	**17 18 35.7**	**-0.6**
MKAR				PcP	PcP	17 20 09.5	+0.3
MKAR				LR	LR	17 39 42.2	
MKAR	**Makanchi Array**	**46.63**	**297**	P	**P**	**17 18 35.7**	**-0.6**
MKAR						17 20 09.5	
MKAR	**Makanchi Array**	**46.63**	**297**	P	**P**	**17 18 35.7**	**-0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=56,slow=6.5,SNR=8.5						
MKAR				PcP	PcP	17 20 09.5	+0.3
	comp=Z,0.2nm,0.5s,baz=75,slow=2.5,SNR=4.2						
MKAR				LR	LR	17 39 42.2	
	comp=Z,33nm,18.6s,baz=214,slow=38						
LSA	**Lhasa**	**49.96**	**273**	*e*P	**P**	**17 19 04.6**	**+2.5**
	comp=Z,2.2nm,0.6s,mb4.4						
LSA	**Lhasa**	**49.96**	**273**	*e*P	**P**	**17 19 04.6**	**+2.4**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
BRVK	**Borovoye**	**50.62**	**309**	*e*P	**P**	**17 19 05.6**	**-1.2**
YKA	**Yellowknife Ar**	**51.05**	**37**	P	**P**	**17 19 10.0**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=295,slow=7.0,SNR=3.9						
YKA				PcP	PcP	17 20 24.5	-0.4
	comp=Z,0.2nm,0.5s,baz=310,slow=3.9,SNR=5.5						
TAPN	**Taplejung**	**53.79**	**273**	*e*P	**P**	**17 19 32.1**	**+1.4**
JIRN	**Jiri**	**54.63**	**274**	*e*P	**P**	**17 19 38.2**	**+1.4**
KKN	**Kakani**	**55.17**	**275**	*e*P	**P**	**17 19 41.7**	**+1.0**
	comp=Z,8.6nm,0.7s,mb4.9						
GKN	**Gorkha**	**55.48**	**276**	*e*P	**P**	**17 19 43.9**	**+1.0**
	comp=Z,9.8nm,0.7s,mb5.0						
KOLN	**Koldanda**	**56.33**	**276**	*e*P	**P**	**17 19 50.1**	**+1.1**
JOF	**Joensuu**	**61.13**	**333**	*e*p	**P**	**17 20 19.6**	**-2.2**
FINES	**FINESS Array B**	**63.84**	**335**	*i* P	**P**	**17 20 39.4**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.84**	**335**	P	**P**	**17 20 39.4**	**-0.5**
	comp=Z,1.4nm,0.4s,mb4.4,baz=39,slow=7.6,SNR=21						
NB2	**NORSAR Subarra**	**68.06**	**341**	P	**P**	**17 21 06.2**	**-0.7**
	comp=Z,1.8nm,0.6s,mb4.3,baz=27,slow=6.2						
NB2	**NORSAR Subarra**	**68.06**	**341**	P	**P**	**17 21 06.2**	**-0.7**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NOA	**NORSAR Array B**	**68.06**	**341**	P	**P**	**17 21 06.7**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.3,baz=27,slow=6.2,SNR=10						
WRA	**Warramunga Arr**	**68.48**	**199**	P	**P**	**17 21 09.3**	**-0.6**
	comp=Z,0.3nm,0.5s,mb3.5,baz=20,slow=6.8,SNR=3.2						
AKASG	**Malin Array Be**	**71.32**	**326**	P	**P**	**17 21 25.9**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.32**	**326**	P	**P**	**17 21 25.9**	**-1.2**
	comp=Z,1.0nm,0.3s,mb4.2,baz=32,slow=6.1,SNR=11						
ASAR	**Alice Springs**	**72.18**	**198**	P	**P**	**17 21 32.9**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**72.18**	**198**	P	**P**	**17 21 32.9**	**+0.4**
	comp=Z,0.5nm,0.6s,mb3.6,baz=7.8,slow=5.5,SNR=12						
TXAR	**Lajitas Array**	**77.73**	**60**	P	**P**	**17 22 04.4**	**-0.3**
	baz=316,slow=3.8						
STKA	**Stephens Creek**	**78.97**	**190**	P	**P**	**17 22 12.7**	**+1.6**
	comp=Z,1.7nm,0.7s,mb4.1,baz=7.7,slow=15,SNR=3.1						
PLCA	**Paso Flores**	**148.52**	**95**	PKPbc	PKPbc	17 29 54.0	+0.4
	comp=Z,0.9nm,0.6s,baz=320,slow=7.9,SNR=3.4						

MAN 27 17:42:55, 922N×12680E, h33km, mb4.5, ML3.4, MS3.3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.11**	**203**	⇑*i*P	Pn	17 43 15.1	+0.8
BIPH				*i* S	Sn	17 43 29.1	+0.5
MSLP	**Maasin**	**2.12**	**296**	*e*P	Pn	17 43 28.8	+0.7
BUKP	**Musuan**	**2.18**	**232**	*e*P

BSI				*e*S	**Sn**	**18 35 30.0 +1.5**
KULM	**Kulim**	**5.55**	**37**	*e*Pn	**Pn**	**18 34 38.1 +0.5**
PALK	**Pallekele**	**17.71**	**292**	Pn	**Pn**	**18 37 21.9 0.0**
KKM	**Kota Kinabalu**	**19.59**	**74**	*e*P	**Pn**	**18 37 45.0 +0.2**
QIZ	**Qiongzhong**	**21.87**	**34**	P	**P**	**18 38 07.0 -1.0**
QIZ				S	**S**	**18 42 10.8 +0.9**
QIZ				AMB	AMB	
	comp=Z,20nm,1.9s,mb4.2					
QIZ				LR	LR	
	comp=E,170nm,15.1s					
QIZ				LR	LR	
	comp=Z,133nm,10.9s,MS3.6					
KMI	**Kunming**	**24.70**	**12**	P	**P**	**18 38 36.8 +0.5**
KMI				AP		18 38 44.0
KMI				LR	LR	
	comp=N,227nm,14.2s,MS3.9					
KMI				LR	LR	
	comp=E,116nm,11.2s,MS3.9					
KMI				LR	LR	
	comp=Z,243nm,13.9s,MS3.9					
ODAN	**Odare**	**27.55**	**341**	*e*P	**P**	**18 39 02.7 +0.6**
TAPN	**Taplejung**	**27.90**	**342**	*e*P	**P**	**18 39 06.3 +1.1**
	comp=Z,51nm,0.9s,mb5.2					
JIRN	**Jiri**	**28.70**	**339**	*e*P	**P**	**18 39 12.5 +0.2**
	comp=Z,21nm,0.8s,mb4.9					
KKN	**Kakani**	**29.15**	**338**	*e*P	**P**	**18 39 16.2 -0.1**
	comp=Z,15nm,0.7s,mb4.8					
LSA	**Lhasa**	**29.28**	**349**	P	**P**	**18 39 17.5 +0.1**
LSA	**Lhasa**	**29.28**	**349**	*e*P	**P**	**18 39 17.2 -0.3**
	comp=Z,4.4nm,0.6s,mb4.4					
GKN	**Gorkha**	**29.59**	**337**	*e*P	**P**	**18 39 20.2 0.0**
	comp=Z,14nm,0.7s,mb4.8					
KOLN	**Koldanda**	**29.80**	**335**	*e*P	**P**	**18 39 22.3 +0.2**
	comp=Z,25nm,0.6s,mb5.1					
CD2	**Chengdu**	**30.52**	**11**	*e*P	**P**	**18 39 30.8 +2.4**
CD2				XP	sP	18 39 44.3 +12
CD2				PP	PP	18 40 32.0 -5.5
CD2				S	**S**	**18 44 30.3 +0.1**
CD2				XS	sS	18 44 42.8 +8.2
CD2				AMB	AMB	
	comp=Z,10.0nm,0.8s,mb4.7					
CD2				AMB	AMB	
	comp=Z,20nm,5.2s					
CD2				LR	LR	
	comp=N,110nm,12.4s					
CD2				LR	LR	
	comp=Z,120nm,13.2s,MS3.7					
XAN	**Xi'an**	**34.77**	**17**	P	**P**	**18 40 06.8 +1.2**
XAN				AMB	AMB	
	comp=Z,7.0nm,0.6s,mb4.8					
LZH	**Lanzhou**	**35.59**	**9**	*e*P	**P**	**18 40 15.3 +2.7**
LZH				AP	pP	18 40 25.8 +10
LZH				XP	sP	18 40 29.8 +13
LZH				PP	PP	18 41 27.8 -5.7
LZH				AMB	AMB	
	comp=Z,20nm,1.2s,mb4.9					
LZH				AMB	AMB	
	comp=Z,101nm,5.4s					
LZH				LR	LR	
	comp=E,216nm,13.7s					
LZH				LR	LR	
	comp=Z,354nm,17.3s,MS4.2					
GTA	**Gaotai**	**38.45**	**3**	*e*P	**P**	**18 40 36.5 -0.4**
GTA				AP	pP	18 40 43.5 +3.9
GTA				XP	sP	18 40 46.5 +5.8
GTA				AMB	AMB	
	comp=Z,4.0nm,0.8s,mb4.2					
WRA	**Warramunga Arr**	**41.79**	**122**	P	**P**	**18 41 05.0 +0.1**
	comp=Z,1.9nm,0.4s,mb4.0,baz=302,slow=9.1,SNR=50					
WB2	**Warramunga Arr**	**41.80**	**122**	*e*P	**P**	**18 41 05.1 +0.1**
HHC	**Hu-ho-hao-te**	**41.87**	**16**	*e*P	**P**	**18 41 05.0 -0.3**
HHC				AP	pP	18 41 14.5 +6.5
HHC				XP	sP	18 41 19.0 +10
HHC				AMB	AMB	
	comp=Z,11nm,0.8s,mb4.5					
HHC				AMB	AMB	
	comp=Z,73nm,4.6s					
HHC				LR	LR	
	comp=N,113nm,14.3s,MS4.1					
HHC				LR	LR	
	comp=E,130nm,14.3s,MS4.1					
HHC				LR	LR	
	comp=Z,128nm,11.9s,MS4.0					
BJT	**Baijiatuao**	**42.61**	**22**	*e*P	**P**	**18 41 12.0 +0.6**
	comp=Z,11nm,0.6s,mb4.8					
ASAR	**Alice Springs**	**43.13**	**127**	P	**P**	**18 41 15.9 +0.1**
	comp=Z,4.3nm,0.6s,mb4.4,baz=297,slow=7.9,SNR=150					
WMQ	**Urumqi**	**43.63**	**350**	P	**P**	**18 41 18.5 -1.0**
WMQ				AP	pP	18 41 27.5 +5.2
WMQ				XP	sP	18 41 32.5 +9.1
WMQ				AMB	AMB	
	comp=Z,4.0nm,0.4s,mb4.5					
WMQ				LR	LR	
	comp=N,54nm,19.6s					
WMQ				LR	LR	
	comp=Z,33nm,17.9s,MS3.3					
UCH	**Uchtor**	**46.00**	**336**	*e*P	**P**	**18 41 38.8 +0.4**
	comp=Z,6.7nm,1.1s,mb4.5					
KSRS	**Korea Array**	**46.09**	**34**	P	**P**	**18 41 38.0 -1.3**
	comp=Z,1.6nm,0.7s,mb4.1,baz=214,slow=9.3,SNR=9.7					
TKM2	**Tokmak 2**	**46.17**	**338**	*e*P	**P**	**18 41 39.3 -0.4**
	comp=Z,1.6nm,0.6s,mb4.1					
AML	**Almayashu**	**46.25**	**336**	*e*P	**P**	**18 41 40.4 0.0**
	comp=Z,4.3nm,0.6s,mb4.6					
EKS2	**Erkin-Say**	**46.66**	**336**	*e*P	**P**	**18 41 43.1 -0.5**
	comp=Z,3.6nm,0.8s,mb4.3					
SONM	**Songino Array**	**47.47**	**8**	P	**P**	**18 41 49.7 -0.1**
	comp=Z,2.0nm,0.6s,mb4.2,baz=192,slow=9.2,SNR=26					
SONM				PcP	PcP	18 43 20.5 +0.4
	comp=Z,0.5nm,0.5s,baz=175,slow=3.5,SNR=5.0					
MKAR	**Makanchi Array**	**47.60**	**346**	P	**P**	**18 41 50.5 -0.4**
MKAR	**Makanchi Array**	**47.60**	**346**	P	**P**	**18 41 50.5 -0.4**
	comp=Z,3.9nm,0.5s,mb4.7,baz=162,slow=8.9,SNR=85					
TLY	**Talaya**	**50.93**	**5**	P	**P**	**18 42 11.0 -5.3**
	comp=Z,3.1nm,0.7s,mb4.3					
HIA	**Hailar**	**51.95**	**19**	P	**P**	**18 42 23.2 -0.7**
	comp=Z,4.5nm,0.8s,mb4.5					
MDJ	**Mudanjiang**	**52.13**	**29**	P	**P**	**18 42 27.0 +1.5**
MDJ				AP	pP	18 42 36.0 +7.7
MDJ				XP	sP	18 42 40.0 +11
MDJ				PCP	PcP	18 43 38.0 +0.7
MDJ				S	**S**	**18 49 46.5 -3.4**
MDJ				SCS	ScS	18 52 11.5 -4.4
MDJ				AMB	AMB	
	comp=Z,3.0nm,0.8s,mb4.3					
MDJ				AMB	AMB	
	comp=Z,73nm,4.8s					
MDJ				LR	LR	
	comp=N,23nm,17.9s,MS3.4					
MDJ				LR	LR	
	comp=E,28nm,20.4s,MS3.4					
MDJ				LR	LR	
	comp=Z,42nm,18.4s,MS3.5					
KURK	**Kurchatov**	**52.15**	**345**	*e*P	**P**	**18 42 24.2 -1.2**
	comp=Z,4.0nm,1.0s,mb4.3					
OPO	**Ambohidratompo**	**52.85**	**246**	P	**P**	**18 42 31.0 -0.2**
	comp=Z,2.3nm,0.9s,mb4.1,baz=46,slow=7.8,SNR=3.1					
STKA	**Stephens Creek**	**53.07**	**132**	*e*P	**P**	**18 42 33.9 +1.3**
	comp=Z,5.1nm,0.7s,mb4.6					
STKA	**Stephens Creek**	**53.07**	**132**	P	**P**	**18 42 32.9 +0.2**
	comp=Z,5.9nm,0.7s,mb4.7,baz=321,slow=9.0,SNR=11					
ZALV	**Zalesovo Beam**	**53.91**	**351**	P	**P**	**18 42 37.8 -0.6**
	comp=Z,12nm,0.5s,mb5.1,baz=175,slow=7.0,SNR=93					
ARU	**Arti**	**63.53**	**337**	*e*P	**P**	**18 43 36.1 -9.3**
	comp=Z,4.1nm,0.7s,mb4.6					
MAW	**Mawson**	**72.39**	**193**	P	**P**	**18 44 41.9 +1.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=315,slow=4.3,SNR=6.7					
TIXI	**Tiksi**	**73.52**	**10**	*e*P	**P**	**18 44 45.7 -1.8**
	comp=Z,1.9nm,0.7s,mb4.1					
FINES	**FINESS Array B**	**80.34**	**333**	P	**P**	**18 45 25.1 -1.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=98,slow=7.9,SNR=4.8					
ARCES	**ARCESS Array B**	**82.89**	**340**	P	**P**	**18 45 38.7 -0.8**
ARCES	**ARCESS Array B**	**82.89**	**340**	P	**P**	**18 45 38.7 -0.8**
	comp=Z,4.9nm,1.0s,mb4.5,baz=64,slow=4.1,SNR=3.5					
NOA	**NORSAR Array B**	**87.35**	**331**	P	**P**	**18 46 01.5 -0.4**
NOA	**NORSAR Array B**	**87.35**	**331**	P	**P**	**18 46 01.5 -0.4**
	comp=Z,0.3nm,0.5s,mb3.8,baz=118,slow=2.9,SNR=3.8					
QSPA	**South Pole Qui**	**90.80**	**180**	*e*P	**P**	**18 46 18.2 +0.4**
	comp=Z,1.9nm,0.5s,mb4.7					
QSPA	**South Pole Qui**	**90.80**	**180**	P	**P**	**18 46 18.7 +0.8**
	comp=Z,1.0nm,0.5s,mb4.4,baz=282,slow=0.4,SNR=15					

*IDC **27** 18:40:27.9±1.1, 3357S×17862W, h0km, mb4.4/5, mb1 4.6/6, mb1mx4.2/15, mbtmp4.4/6, ML4.5/1, MS3.6/1, Ms1 3.5/1, ms1mx2.8/21, Error ellipse: s-maj=32.9km s-min=26.2km az=59.0*

*NEIC **27** 18:40:29.6±0.7, 3359S×17867W, h10km, mb4.6/1, Error ellipse: s-maj=19.4km s-min=15.6km az=102.0*

ISC 27 18:40:36.6±1.3, 3390S±007×1792W±02, h35km, n26, σ0§82/20, mb4.4/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**4.66**	**206**	PN	**Pn**	**18 41 43.5**	**-0.8**
PUZ				*e*SN	**Sn**	**18 42 41.4**	**+4.3**
MWZ	**Matawai**	**5.17**	**210**	*e*PN	**Pn**	**18 41 51.7**	**+0.4**
MWZ				*e*SN	**Sn**	**18 42 56.2**	**+6.5**
URZ	**Urewera**	**5.29**	**214**	Pn	**Pn**	**18 41 54.8**	**+1.8**
	12nm,0.3s,baz=41,slow=4.9,SNR=53						
URZ				Sn	**Sn**	**18 42 59.3**	**+6.6**
	10nm,0.3s,baz=151,slow=22,SNR=10						
URZ	**Urewera**	**5.29**	**214**	*e*PN	**Pn**	**18 41 53.8**	**+0.7**
URZ				*e*SN	**Sn**	**18 42 58.4**	**+5.7**
PXZ	**Pawanui**	**6.89**	**206**	*e*SN	**Sn**	**18 43 32.8**	**+0.6**
BFZ	**Birch Farm**	**7.69**	**207**	*e*PN	**Pn**	**18 42 25.0**	**-1.0**
MRZ	**Mangatainoka R**	**7.94**	**210**	*e*SN	**Sn**	**18 43 58.3**	**+0.4**
TCW	**Tory Channel**	**8.96**	**214**	*e*SN	**Sn**	**18 44 21.9**	**-1.1**
RPZ	**Rata Peaks**	**12.40**	**215**	Sn	**Sn**	**18 45 40.0**	**-7.4**
	0.7nm,0.3s,baz=180,slow=20,SNR=5.1						
STKA	**Stephens Creek**	**32.87**	**262**	LR	LR	18 59 15.5	
	comp=Z,95nm,19.4s,baz=26,slow=34						
CTA	**Charters Tower**	**33.56**	**285**	P	**P**	**18 47 14.3**	**+1.0**
	5.2nm,0.7s,mb4.6,baz=74,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**42.05**	**271**	P	**P**	**18 48 24.8**	**-0.2**
	5.5nm,0.7s,mb4.3,baz=113,slow=7.4,SNR=63						
ASAR				PcP	PcP	18 50 17.0	-2.5
	0.5nm,0.8s,baz=116,slow=4.1,SNR=4.4						
WB2	**Warramunga Arr**	**43.35**	**276**	*e*P	**P**	**18 48 35.2**	**-0.3**
WRA	**Warramunga Arr**	**43.36**	**276**	P	**P**	**18 48 34.8**	**-0.8**
	7.3nm,0.8s,mb4.5,baz=118,slow=7.5,SNR=48						
QSPA	**South Pole Qui**	**56.22**	**180**	*e*P	**P**	**18 50 11.8**	**-0.8**
	5.4nm,0.9s,mb4.6						
QSPA	**South Pole Qui**	**56.22**	**180**	P	**P**	**18 50 12.1**	**-0.4**
	2.0nm,0.9s,mb4.2,baz=44,slow=6.7,SNR=6.7						
MAW	**Mawson**	**68.69**	**201**	P	**P**	**18 51 37.1**	**+1.0**
	6.3nm,1.2s,mb4.4,baz=90,slow=8.1,SNR=4.0						
VNA3	**Neumayer Olymp**	**74.89**	**177**	*e*	pP	18 52 24.8	+0.7
VNA3				*e*		18 52 29.2	
VNA3				*e*		18 52 32.0	
VNA2	**Neumayer--Watz**	**75.31**	**177**	*e*	pP	18 52 24.7	-1.8
	baz=166,slow=1.9						
VNA2				*e*		18 52 29.6	
VNA2				*e*		18 52 32.6	
MKAR	**Makanchi Array**	**119.22**	**309**	PKP	PKPdf	18 59 18.2	-3.3
MKAR	**Makanchi Array**	**119.22**	**309**	PKP	PKPdf	18 59 18.2	-3.3
	0.7nm,0.9s,baz=114,slow=0.7,SNR=5.5						
ZALV	**Zalesovo Beam**	**119.94**	**317**	PKP	PKPdf	18 59 20.0	-2.6
	0.3nm,0.5s,baz=131,slow=4.0,SNR=2.7						
KAF	**Kangasniemi**	**147.46**	**338**	ep	PKPdf	19 00 10.6	-2.7
FINES	**FINESS Array B**	**148.03**	**337**	PKPbc	PKPbc	19 00 13.7	-3.8
	2.5nm,0.5s,baz=45,slow=4.1,SNR=18						
NOA	**NORSAR Array B**	**152.02**	**349**	PKPbc	PKPbc	19 00 23.6	-3.5
	0.9nm,0.8s,baz=15,slow=4.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**159.33**	**182**	PKPab	PKPab	19 01 06.0	-3.0
	0.6nm,0.6s,baz=166,slow=3.4,SNR=2.9						

*ISCJB **27** 18:51:56.3±1.4, 3832N±004×2037E±009, h6km±8km, Error ellipse: s-maj=12.3km s-min=5.9km az=160.2*

*CSEM **27** 18:51:56.4±0.4, 3830N×2032E, h2km, MD3.2, Error ellipse: s-maj=7.9km s-min=2.9km az=62.0*

*ATH **27** 18:51:56.4, 3828N×2036E, h5km±3km, MD3.2/4*

*THE **27** 18:51:57.3, 3833N×2041E, h2km, ML3.0*

*NEIC **27** 18:51:57.3, 3833N×2041E, h2km, MD3.2(ATH), ML3.0(THE), After THE.*

ISC 27 18:51:56.5±1.5, 3829N±005×2035E±010, h12km±7km, n8, σ0§74/14, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.22**	**120**	⇑*i*P	**Pg**	**18 52 01.1**	**0.0**
VLS				*e*SG	**Sg**	**18 52 04.9**	**+0.6**
KFL	**Anninata**	**0.39**	**117**	*e*Pg	**Pg**	**18 52 04.0**	**-0.1**
LKD	**Levkas**	**0.48**	**29**	*e*Pg	**Pg**	**18 52 04.6**	**-1.3**
LKD				*e*Sg	**Sg**	**18 52 11.3**	**-1.1**
RLS	**Riolos of Patr**	**0.91**	**104**	*e*PG	**Pg**	**18 52 13.3**	**-0.7**
RLS				*e*SB	**Sg**	**18 52 26.4**	**+0.5**
IGT	**Igoumenitsa**	**1.24**	**359**	*e*Pg	**Pn**	**18 52 19.2**	**-0.4**
IGT				*e*Sg	**Sg**	**18 52 38.2**	**+1.7**
EVR	**Evrytania**	**1.31**	**61**	*e*PB	**Pb**	**18 52 21.1**	**+0.2**
AGG	**Agios Georgios**	**1.72**	**64**	*e*Pb	**Pn**	**18 52 26.9**	**+0.8**
AGG				*e*Sb	**Sb**	**18 52 49.1**	**-0.3**
THL	**Klokotos Trika**	**1.82**	**45**	*e*PN	**Pg**	**18 52 31.2**	**-0.2**
THL				*e*SN	**Sg**	**18 52 55.6**	**+0.6**

*IDC **27** 19:14:26.8±6.4, 1987S×6936W, h102km±47km, mb3.6/2, mb1 3.8/4, mb1mx3.5/15, mbtmp3.7/4, Error ellipse: s-maj=59.0km s-min=37.4km az=53.0*

NEIC 27 19:14:29.2±1.7, 1968S×6922W, h120km±16km, Error ellipse: s-maj=27.0km s-min=17.0km az=97.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.53**	**17**	P	Pn	19 15 23.3	+0.7
	4.8nm,0.3s,baz=194,slow=8.3,SNR=66						
LPAZ				S	Sn	19 16 07.7	+3.9
	1.0nm,0.3s,baz=208,slow=9.1,SNR=2.1						
SIV	**San Ignacio**	**8.58**	**66**	P	Pn	19 16 30.5	-0.2
	5.0nm,0.3s,baz=264,slow=10,SNR=80						
PLCA	**Paso Flores**	**21.02**	**183**	P	P	19 19 03.5	+0.3
	1.7nm,0.7s,baz=358,slow=10,SNR=6.2						
DBIC	**Dimbokro**	**68.51**	**74**	pP	pP	19 25 40.0	-8.8
	2.3nm,0.9s,baz=221,slow=8.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**77.03**	**71**	P	P	19 26 10.3	+0.8
	0.9nm,0.5s,baz=254,slow=5.7,SNR=5.7						
YKA	**Yellowknife Ar**	**89.38**	**341**	P	P	19 27 11.8	0.0
YKA				pP	pP	19 27 31.9	-11
YKA	**Yellowknife Ar**	**89.38**	**341**	P	P	19 27 11.8	0.0
	0.3nm,0.6s,baz=141,slow=4.4,SNR=7.3						
YKA				pP	pP	19 27 31.9	-11
	0.4nm,0.6s,baz=133,slow=4.7,SNR=7.2						
WRA	**Warramunga Arr**	**134.35**	**212**	PKP	PKPdf	19 33 33.6	-0.3
	0.2nm,0.7s,baz=141,slow=1.5,SNR=4.9						

*THE **27** 19:35:47.2, 3832N×2038E, h3km, ML3.1*

*ISCJB **27** 19:35:48.7±0.7, 3835N±003×2059E±010, h2km, Error ellipse: s-maj=11.3km s-min=4.1km az=170.8*

*ATH **27** 19:35:48.5, 3833N×2052E, h7km, MD3.3/5*

*NEIC **27** 19:35:48.5, 3833N×2052E, h7km, MD3.3(ATH), ML3.1(THE), After ATH.*

*CSEM **27** 19:35:49.3±0.1, 3831N×2057E, h2km, MD3.3, Error ellipse: s-maj=3.7km s-min=1.4km az=69.0*

ISC 27 19:35:48.9±0.7, 3834N±004×206E±01, h7km±8km, n8, σ1§02/12, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.16**	**179**	*e*PG	**Pg**	**19 35 51.8**	**-0.4**
VLS				*e*SG	**Sg**	**19 35 55.4**	**+1.0**
KFL	**Anninata**	**0.28**	**146**	*e*Pg	**Pg**	**19 35 54.3**	**0.0**
LKD	**Levkas**	**0.37**	**8**	*e*Pg	**Pg**	**19 35 55.1**	**-0.9**
LKD				*e*Sg	**Sg**	**19 36 01.9**	**+1.0**
RLS	**Riolos of Patr**	**0.75**	**112**	*e*PB	**Pb**	**19 36 03.9**	**-0.4**
EVR	**Evrytania**	**1.12**	**59**	*e*PN	**Pn**	**19 36 10.1**	**-0.9**
IGT	**Igoumenitsa**	**1.21**	**351**	*e*Pg	**Pg**	**19 36 10.0**	**-2.0**
IGT				*e*Sg	**Sg**	**19 36 28.3**	**+0.6**
KEK	**Kerkira**	**1.50**	**336**	*e*PB	**Pb**	**19 36 16.8**	**-0.3**
KEK				*e*SB	**Sb**	**19 36 36.8**	**+0.4**
THL	**Klokotos Trika**	**1.65**	**42**	*e*PN	**Pn**	**19 36 20.7**	**+2.4**

*IDC **27** 19:39:37.3±1.2, 469N×12615E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.9/17, mbtmp3.9/7, Error ellipse: s-maj=200.0km s-min=16.6km az=68.0*

*ISCJB **27** 19:39:47.6±1.3, 487N±009×1268E±02, h10km±11km, mb3.9/11, Error ellipse: s-maj=27.8km s-min=12.1km az=159.6*

*NEIC **27** 19:39:51.7±1.1, 479N×12664E, h129km±9km, mb4.0/5, Error ellipse: s-maj=19.0km s-min=7.7km az=69.0*

ISC 27 19:39:51.1±1.3, 478N±009×1266E±02, h121km±12km, n20, σ0§78/20, mb3.9/11, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.19**	**350**	*e*P	**Pn**	**19 40 21.5**	**-5.4**
DAV	**Davao City (W)**	**2.50**	**336**	*e*Pn	**Pn**	**19 40 32.0**	**+1.0**
BUKP	**Musuan**	**3.45**	**333**	*e*P	**Pn**	**19 40 39.9**	**-3.5**
PAGZ	**Pagadian**	**4.44**	**314**	*e*P	**Pn**	**19 40 55.6**	**-0.9**
KKM	**Kota Kinabalu**	**10.44**	**277**	*e*Pn	**Pn**	**19 42 08.5**	**-9.0**
POLP	**Polilio Island**	**10.91**	**335**	*e*P	**Pn**	**19 42 25.2**	**+1.4**
KSM	**Kuching**	**16.62**	**259**	*e*Pn	**Pn**	**19 43 37.5**	**+0.5**
WRA	**Warramunga Arr**	**25.71**	**163**	P	**P**	**19 45 09.9**	**-0.3**
	1.8nm,0.4s,mb3.8,baz=340,slow=10,SNR=23						
WB2	**Warramunga Arr**	**25.71**	**163**	*e*P	**P**	**19 45 09.7**	**-0.5**
ASAR	**Alice Springs**	**29.15**	**166**	P	**P**	**19 45 40.9**	**0.0**
	0.2nm,0.5s,mb3.0,baz=348,slow=7.3,SNR=4.6						
STKA	**Stephens Creek**	**39.14**	**160**	*e*P	**P**	**19 47 07.7**	**+0.8**
	2.2nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**39.14**	**160**	P	**P**	**19 47 07.7**	**+0.7**
	3.5nm,0.7s,mb4.3,baz=336,slow=11,SNR=8.7						
SONM	**Songino Array**	**46.28**	**341**	P	**P**	**19 48 04.9**	**+0.5**
	0.3nm,0.3s,mb3.4,baz=170,slow=8.9,SNR=5.9						
MKAR	**Makanchi Array**	**56.64**	**325**	P	**P**	**19 49 21.4**	**-0.2**
	1.4nm,0.6s,mb4.1,baz=120,slow=7.7,SNR=32						
UCH	**Uchtor**	**59.34**	**317**	P	**P**	**19 49 41.0**	**+0.6**
	1.3nm,0.8s,mb4.0						
ZALV	**Zalesovo Beam**	**59.61**	**333**	P	**P**	**19 49 41.2**	**-0.9**
	0.3nm,0.3s,mb3.8,baz=138,slow=6.7,SNR=2.4						
KURK	**Kurchatov**	**60.81**	**327**	P	**P**	**19 49 49.4**	**-0.9**
	2.6nm,0.7s,mb4.4						
BRVK	**Borovoye**	**66.46**	**327**	P	**P**	**19 50 26.8**	**-0.6**
	1.9nm,0.9s,mb3.9						
ARU	**Arti**	**74.00**	**328**	*e*P	**P**	**19 51 13.8**	**+0.5**
	1.4nm,0.5s,mb4.0						
FINES	**FINESS Array B**	**90.86**	**332**	P	**P**	**19 52 41.0**	**+0.3**
	0.6nm,0.5s,mb4.0,baz=59,slow=5.1,SNR=8.2						

*THE **27** 19:40:19.0, 3833N×2040E, h3km, ML2.9*

*NEIC **27** 19:40:19.0, 3833N×2040E, h0km, MD3.4(ATH), ML2.9(THE), After THE.*

*ISCJB **27** 19:40:19.5±1.0, 3834N±004×2045E±008, h0km, Error ellipse: s-maj=9.8km s-min=4.3km az=158.9*

*ATH **27** 19:40:19.8, 3834N×2049E, h11km±4km, MD3.4/5*

*CSEM **27** 19:40:20.7±0.2, 3833N×2054E, h0km±2km, MD3.4, Error ellipse: s-maj=5.0km s-min=2.3km az=65.0*

ISC 27 19:40:19.8±1.0, 3834N±004×2046E±009, h1km±10km, n9, σ1§02/14, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**148**	*e*PG	**Pg**	**19 40 23.5**	**+0.1**
VLS				*e*SG	**Sg**	**19 40 27.5**	**+1.6**
KFL	**Anninata**	**0.34**	**131**	*e*Pg	**Pg**	**19 40 26.4**	**0.0**
LKD	**Levkas**	**0.40**	**22**	*e*Pg	**Pg**	**19 40 26.8**	**-0.6**
LKD				*e*Sg	**Sg**	**19 40 33.0**	**+0.4**
RLS	**Riolos of Patr**	**0.84**	**109**	*e*PB	**Pb**	**19 40 35.4**	**-1.7**
IGT	**Igoumenitsa**	**1.20**	**355**	*e*Pg	**Pg**	**19 40 41.3**	**-1.5**
IGT				*e*Sg	**Sg**	**19 40 59.5**	**+1.2**
EVR	**Evrytania**	**1.20**	**61**	*e*PB	**Pb**	**19 40 42.1**	**-1.3**
KEK	**Kerkira**	**1.47**	**340**	*e*PB	**Pb**	**19 40 47.7**	**-0.2**
KEK				*e*SB	**Sb**	**19 41 07.8**	**+0.8**
AGG	**Agios Georgios**	**1.61**	**64**	*e*Pb	**Pb**	**19 40 49.5**	**-0.9**
AGG				*e*Sb	**Sb**	**19 41 12.5**	**+1.3**
THL	**Klokotos Trika**	**1.72**	**44**	*e*PN	**Pn**	**19 40 51.7**	**+0.8**

MAN 27 19:47:56, 1665N×12024E, h61km, mb3.6, ML2.3, MS1.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.42**	**230**	*e*P	Pn	19 48 09.5	+2.3
BOLP				*e*S	Sn	19 48 20.6	+5.2
BCPH	**Baguio City Da**	**0.42**	**130**	⇑*i*P	Pn	19 48 09.5	+2.2
BCPH				*i* S	Sn	19 48 19.9	+4.4
SCZP	**Santa Cruz**	**0.93**	**200**	*e*P	Pn	19 48 14.6	+1.4
ABRA	**Dolores**	**1.09**	**24**	*e*P	Pn	19 48 16.9	+1.7
CAUP	**Cauayan**	**1.54**	**79**	*e*P	Pn	19 48 23.7	+2.4
BALP	**Baler**	**1.57**	**125**	*e*P	Pn	19 48 23.7	+2.1

*IDC **27** 20:01:20.2±0.7, 990N×12582E, h0km, mb4.0/11, mb1 4.1/11, mb1mx4.0/19, mbtmp4.0/11, MS2.9/3, Ms1 2.9/3, ms1mx2.7/31, Error ellipse: s-maj=60.3km s-min=16.7km az=70.0*

*NEIC **27** 20:01:21.7±0.4, 988N×12578E, h10km, mb4.3/4, Error ellipse: s-maj=27.3km s-min=9.7km az=70.0*

MAN 27 20:01:28, 1005N×12608E, h64km, mb5.1, ML4.0, MS4.2

*ISCJB **27** 20:01:29.5±0.7, 1005N±004×12602E±008, h84km±6km, mb4.0/15, Error ellipse: s-maj=13.3km s-min=6.0km az=165.8*

ISC 27 20:01:30.4±0.7, 1003N±004×12603E±008, h78km±6km, n37, σ1§12/39, mb4.0/15, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**1.15**	**275**	*e*P	**Pn**	**20 01 50.1**	**-1.1**
MSLP				*e*S	**Sn**	**20 02 07.5**	**+0.7**
PLP	**Palo**	**1.53**	**318**	*e*P	**Pn**	**20 01 54.4**	**-1.7**
PLP				*e*S	**Sn**	**20 02 15.3**	**-0.2**
BESP	**Borongan**	**1.67**	**340**	*e*P	**Pn**	**20 01 57.1**	**-0.8**
BESP				*e*S	**Sn**	**20 02 21.2**	**+2.4

IDC ***27*** *20:14:10.4±0.6,2041S×17430W,h0km,mb4.4/16, mb1 4.5/17,mb1mx4.4/23,mbtmp4.4/17,ML4.3/1,MS4.1/16, Ms1 4.1/16,ms1mx3.9/37,Error ellipse: s-maj=22.5km s-min=16.3km az=118.0*

SZGRF ***27*** *20:14:12.3,2194S×17466W,h33km,Tonga Islands*

NEIC ***27*** *20:14:12.4±0.3,2039S×17439W,h10km,mb4.8/9,Error ellipse: s-maj=11.2km s-min=7.3km az=130.0*

BJI ***27*** *20:14:12.2,2006S×174.12W,h8km,mB5.3,mb4.8,Ms4.7, Msz4.6*

ISCJB ***27*** *20:14:14.8±0.4,2053S±008×17442W±0.10,h33km, mb4.7/32,MS4.3/22,Error ellipse: s-maj=14.0km s-min=10.1km az=31.0*

MOS ***27*** *20:14:20.3±1.2,2132S×175.12W,h33km,mb5.0/5,Error ellipse: s-maj=18.8km s-min=17.2km az=164.2*

ISC 27 20:14:16.7±0.4,2051S±008×17438W±010,h35km,n134, σ0s94/53,mb4.7/32,MS4.3/22,9C-9D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.02**	**21**	*e*Pn	**Pn**	**20 15 49.3**	**-7.7**
	70nm,0.6s						
AFI				*e*Sn	Sx	20 16 56.9	
RAR	**Rarotonga**	**13.68**	**96**	Pn	**Pn**	**20 17 15.6**	**-13**
	14nm,0.3s,baz=252,slow=10,SNR=10						
URZ	**Urewera**	**19.16**	**201**	P	**Pn**	**20 18 36.1**	**-2.1**
	0.9nm,0.3s,baz=3.2,slow=18,SNR=3.6						
RPZ	**Rata Peaks**	**26.14**	**204**	P	**P**	**20 19 48.6**	**+1.2**
	7.1nm,0.5s,mb4.4,baz=287,slow=1.9,SNR=7.3						
HNR	**Honiara**	**27.09**	**290**	LR	LR	20 29 07.3	
	comp=Z,384nm,18.6s,MS4.0,baz=183,slow=33						
CTA	**Charters Tower**	**36.86**	**264**	P	**P**	**20 21 21.4**	**-0.5**
CTA				LR	LR	20 34 46.0	
CTA	**Charters Tower**	**36.86**	**264**	P	**P**	**20 21 21.4**	**-0.5**
	6.6nm,0.6s,mb4.6,baz=94,slow=12,SNR=6.7						
CTA				LR	LR	20 34 46.0	
	comp=Z,251nm,20.4s,MS4.0,baz=93,slow=33						
CTAO	**Charters Tower**	**36.86**	**264**	*e*P	**P**	**20 21 21.3**	**-0.6**
	10.0nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**36.86**	**264**	*e*P	**P**	**20 21 21.3**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**40.84**	**245**	P	**P**	**20 21 54.4**	**-0.7**
STKA				LR	LR	20 38 25.7	
STKA	**Stephens Creek**	**40.84**	**245**	P	**P**	**20 21 54.4**	**-0.7**
	comp=Z,4.0nm,0.7s,mb4.2,baz=97,slow=13,SNR=4.6						
STKA				LR	LR	20 38 25.7	
	comp=Z,403nm,18.0s,MS4.3,baz=45,slow=36						
ASAR	**Alice Springs**	**47.81**	**256**	P	**P**	**20 22 50.4**	**-0.6**
	comp=Z,3.4nm,0.7s,mb4.5,baz=99,slow=7.8,SNR=16						
ASAR				PcP	PcP	20 24 18.9	-0.7
	comp=Z,1.9nm,0.8s,baz=107,slow=4.5,SNR=4.2						
WRA	**Warramunga Arr**	**47.95**	**261**	P	**P**	**20 22 51.4**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=97,slow=7.6,SNR=7.8						
WRA				PcP	PcP	20 24 19.6	-0.6
	comp=Z,1.2nm,0.7s,baz=102,slow=3.2,SNR=3.9						
FORT	**Forrest**	**52.40**	**246**	*e*P	**P**	**20 23 26.4**	**+0.7**
	comp=Z,20nm,0.8s,mb5.1						
FITZ	**Fitzroy Crossi**	**56.38**	**261**	LR	LR	20 47 37.9	
	comp=Z,227nm,18.9s,MS4.3,baz=198,slow=36						
VNDA	**Vanda**	**58.23**	**186**	P	**P**	**20 24 08.3**	**+1.3**
	comp=Z,1.7nm,0.9s,mb4.1,baz=360,slow=4.7,SNR=6.8						
VNDA				LR	LR	20 45 14.8	
	comp=Z,175nm,19.9s,MS4.2,baz=356,slow=32						
KLBR	**Kellerberrin**	**61.12**	**245**	*e*P	**P**	**20 24 27.7**	**+0.1**
	comp=Z,34nm,1.2s,mb5.3						
MUN	**Mundaring**	**62.37**	**244**	*e*P	**P**	**20 24 36.8**	**+0.7**
QSPA	**South Pole Qui**	**69.56**	**180**	*e*P	**P**	**20 25 21.8**	**+0.3**
	comp=Z,9.4nm,0.9s,mb4.7						
QSPA	**South Pole Qui**	**69.56**	**180**	P	**P**	**20 25 21.2**	**-0.3**
	comp=Z,5.9nm,0.9s,mb4.5,baz=26,slow=3.1,SNR=11						
MJAR	**Matsushiro Arr**	**72.27**	**322**	P	**P**	**20 25 37.7**	**-0.8**
	comp=Z,4.0nm,0.7s,mb4.4,baz=159,slow=6.2,SNR=5.4						
MAJO	**Matsushiro**	**72.28**	**322**	*e*P	**P**	**20 25 38.8**	**+0.3**
	comp=Z,13nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**72.28**	**322**	*e*P	**P**	**20 25 38.8**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
KKM	**Kota Kinabalu**	**73.05**	**283**	P	**P**	**20 25 42.8**	**-0.9**
JNU	**Nakatsue**	**74.65**	**315**	P	**P**	**20 25 52.3**	**-0.3**
	comp=Z,10nm,1.1s,mb4.7,baz=89,slow=15,SNR=4.5						
JNU				LR	LR	20 55 14.5	
	comp=Z,61nm,18.7s,MS3.9,baz=230,slow=33						
ASAJ	**Asahikawa**	**75.40**	**329**	LR	LR	20 57 26.0	
	comp=Z,160nm,18.5s,MS4.3,baz=179,slow=34						
LPIG	**La Paz**	**76.52**	**58**	LR	LR	20 55 09.5	
	comp=Z,214nm,18.1s,MS4.5,baz=210,slow=32						
KSM	**Kuching**	**76.78**	**277**	*e*P	**P**	**20 26 03.7**	**-1.5**
YSS	**Yuzh-Sakhalins**	**77.47**	**331**	*e*P	PcP	20 26 18.2	-0.3
YSS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.8						
NVAR	**Mina Array Bea**	**78.74**	**42**	P	**P**	**20 26 15.0**	**-0.6**
	comp=Z,1.6nm,0.6s,mb4.1,baz=214,slow=7.0,SNR=5.4						
KSRS	**Korea Array**	**79.17**	**317**	P	**P**	**20 26 19.3**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
KSRS				MLR	MLR		
	comp=Z,82nm,18.7s,MS4.1						
KSRS	**Korea Array**	**79.17**	**317**	P	**P**	**20 26 19.3**	**+1.3**
	comp=Z,3.5nm,0.9s,mb4.3,baz=125,slow=6.4,SNR=10						
KSRS				LR	LR	20 56 36.9	
	comp=Z,82nm,18.7s,MS4.1,baz=298,slow=32						
PMSA	**Palmer Station**	**79.92**	**156**	*e*P	**P**	**20 26 22.5**	**+0.9**
	comp=Z,431nm,1.7s,mb6.1						
HABR	**Khabarovsk**	**82.17**	**329**	*e*P	**P**	**20 26 42.3**	**+8.6**
HABR				*e*		20 29 57.3	
HABR				S	S	20 37 02.5	+16
MDJ	**Mudanjiang**	**82.51**	**323**	P	**P**	**20 26 36.0**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,7.0nm,1.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,89nm,7.3s						
NJ2	**Nanjing**	**82.52**	**308**	*e*P	**P**	**20 26 36.5**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.4						
MAW	**Mawson**	**82.68**	**199**	P	**P**	**20 26 36.0**	**-0.3**
	comp=Z,1.8nm,0.7s,mb4.2,baz=94,slow=8.7,SNR=4.9						
TTA	**Tatalina**	**84.41**	**8**	P	**P**	**20 26 45.0**	**0.0**
	comp=Z,3.5nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**84.79**	**50**	*e*P	**P**	**20 26 47.6**	**+0.1**
	comp=Z,2.5nm,0.8s,mb4.4						
ANMO	**Albuquerque**	**84.79**	**50**	*i* P	**P**	**20 26 47.9**	**+0.4**
ANMO	**Albuquerque**	**84.79**	**50**	P	**P**	**20 26 47.2**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.2,baz=173,slow=4.3,SNR=2.7						
WHN	**Wuhan**	**85.20**	**309**	P	**P**	**20 26 51.5**	**+1.8**
CMIG	**Matias Romero**	**86.47**	**70**	LR	LR	20 55 43.2	
	comp=Z,100nm,21.0s,MS4.2,baz=12,slow=29						
PDAR	**Pinedale Array**	**86.67**	**42**	P	**P**	**20 26 55.5**	**-1.2**
PDAR				LR	LR	21 02 12.3	
PDAR	**Pinedale Array**	**86.67**	**42**	P	**P**	**20 26 55.5**	**-1.2**
	comp=Z,1.8nm,1.0s,mb4.2,baz=228,slow=3.4,SNR=7.1						
PDAR				LR	LR	21 02 12.3	
	comp=Z,111nm,18.4s,MS4.3,baz=61,slow=33						
PLCA	**Paso Flores**	**86.79**	**132**	LR	LR	20 57 05.7	
	comp=Z,125nm,19.0s,MS4.3,baz=68,slow=30						
SDCO	**Great Sand Dun**	**86.82**	**48**	P	**P**	**20 26 57.6**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.5						
KULM	**Kulim**	**87.13**	**277**	*e*P	**P**	**20 26 60.0**	**+0.3**
WALA	**Waterton Lakes**	**87.61**	**35**	P	**P**	**20 27 01.1**	**0.0**
	comp=Z,4.3nm,1.0s,mb4.6						
PSI	**Prapat**	**87.87**	**274**	P	**P**	**20 27 02.4**	**-0.8**
	comp=Z,3.1nm,0.7s,mb4.7,baz=240,slow=10,SNR=5.0						
BJI	**Beijing**	**88.31**	**314**	P	**P**	**20 27 08.0**	**+3.4**
BJI				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.9						
DAWY	**Dawson**	**88.57**	**15**	*e*P	**P**	**20 27 05.1**	**-0.1**
DAWY				*e*	pP	20 27 16.8	+0.4
BILL	**Bilibino**	**89.43**	**353**	*e*P	**P**	**20 27 16.7**	**+7.5**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.5						
HHC	**Hu-ho-hao-te**	**91.81**	**313**	*e*P	**P**	**20 27 21.0**	**+0.1**
HHC				PP	PP	20 31 02.0	+1.5
HHC				S	S	20 38 18.5	-1.0
HHC				SS	SS	20 44 30.5	+2.1
HHC				AMB	AMB		
	comp=Z,6.0nm,1.2s,mb4.8						
HHC				AMB	AMB		
	comp=Z,104nm,3.9s						
HHC				LR	LR		
	comp=N,104nm,14.3s,MS4.5						
HHC				LR	LR		
	comp=E,92nm,17.8s,MS4.5						
HHC				LR	LR		
	comp=Z,101nm,14.3s,MS4.4						
KMI	**Kunming**	**92.39**	**296**	P	**P**	**20 27 26.5**	**+2.5**
KMI				AMB	AMB		
	comp=Z,6.0nm,1.5s,mb4.7						
NNA	**Nana**	**92.78**	**104**	LR	LR	20 58 16.2	
	comp=Z,78nm,21.4s,MS4.1,baz=152,slow=28						
ATAH	**Atahualpa**	**93.15**	**99**	LR	LR	20 59 54.8	
	comp=Z,97nm,20.1s,MS4.2,baz=31,slow=30						
INK	**Inuvik**	**93.42**	**14**	P	**P**	**20 27 26.2**	**-1.6**
	comp=Z,347nm,1.4s						
INK	**Inuvik**	**93.42**	**14**	P	**P**	**20 27 26.2**	**-1.6**
INK				pmax	pmax		
	comp=Z,347nm,1.4s						
INK	**Inuvik**	**93.42**	**14**	P	**P**	**20 27 26.1**	**-1.7**
	comp=Z,1.3nm,0.8s,mb4.4,baz=127,slow=1.7,SNR=4.7						
CD2	**Chengdu**	**93.66**	**302**	*e*P	**P**	**20 27 30.0**	**+0.2**
CD2				XP	sP	20 27 37.3	-7.6
CD2				PP	PP	20 31 18.5	+3.1
CD2				SKS		20 38 02.8	
CD2				S	S	20 38 32.8	-3.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,20nm,8.4s						
CD2				LR	LR		
	comp=E,150nm,18.4s						
CD2				LR	LR		
	comp=Z,140nm,16.8s,MS4.5						
LZH	**Lanzhou**	**95.48**	**306**	*e*P	**P**	**20 27 38.3**	**+0.3**
LZH				AP	pP	20 27 46.0	-3.2
LZH				PP	PP	20 31 31.3	+1.9
LZH				AMB	AMB		
	comp=Z,21nm,1.3s,mb5.4						
LZH				AMB	AMB		
	comp=Z,63nm,7.8s						
LZH				LR	LR		
	comp=N,275nm,15.9s						
LZH				LR	LR		
	comp=Z,392nm,18.6s,MS4.9						
SONM	**Songino Array**	**98.00**	**318**	LR	LR	21 14 36.3	
	comp=Z,63nm,18.2s,MS4.1,baz=111,slow=37						
LPAZ	**La Paz**	**98.91**	**111**	LR	LR	21 08 06.3	
	comp=Z,54nm,18.1s,MS4.1,baz=224,slow=33						
ZALV	**Zalesovo Beam**	**112.62**	**321**	PKiKP	PKiKP	20 32 47.4	-1.6
	comp=Z,0.5nm,0.5s,baz=357,slow=1.5,SNR=3.7						
ZAL	**Zalesovo**	**112.64**	**321**	PKIKP	PKiKP	20 32 47.4	-1.7
MKAR	**Makanchi Array**	**113.67**	**313**	PKiKP	PKiKP	20 32 50.4	-0.9
	comp=Z,0.6nm,0.7s,baz=67,slow=3.2,SNR=6.1						
KURK	**Kurchatov**	**116.30**	**317**	*i* PKIKP	PKPdf	20 32 58.8	+2.6
ARCES	**ARCESS Array B**	**129.50**	**351**	PKP	PKPdf	20 33 18.7	-2.3
	comp=Z,3.9nm,0.9s,baz=58,slow=3.0,SNR=8.4						
FINES	**FINESS Array B**	**136.67**	**346**	PKhKP		20 33 25.5	
	comp=Z,0.7nm,0.8s,baz=22,slow=7.9,SNR=2.2						
FINES				PKP	PKPdf	20 33 33.9	-0.8
	comp=Z,0.6nm,0.5s,baz=80,slow=2.3,SNR=4.9						
OBN	**Obninsk**	**138.32**	**334**	*i* PKIKP	PKPdf	20 33 40.9	+3.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.5						
AKASG	**Malin Array Be**	**144.59**	**334**	PKP	PKPdf	20 33 46.1	-3.2
	comp=Z,2.5nm,0.4s,baz=39,slow=4.3,SNR=32						
KIEV	**Kiev**	**144.60**	**334**	*e*PKPdf	PKPdf	20 33 46.0	-3.3
KIEV				*e*		20 33 57.1	
BSEG	**Bad Segeberg**	**146.44**	**355**	*e*PKPbc	PKPbc	20 33 53.4	-0.3
MALT	**Malatya**	**146.59**	**309**	*e*PKPbc	PKPbc	20 33 55.6	+0.9
MALT	**Malatya**	**146.59**	**309**	*i*P	PKPbc	20 33 55.8	+1.1
KWP	**Kalwaria**	**147.91**	**339**	⇑P	PKPbc	20 33 57.6	-0.4
KWP	**Kalwaria**	**147.91**	**339**	⇑*i*P	PKPbc	20 33 57.6	-0.4
STHS	**Stebnicka Huta**	**148.57**	**340**	*e*PKP	PKPbc	20 34 00.1	+0.4
KOLS	**Kolonicke sedl**	**148.65**	**339**	*e*PKP	PKPbc	20 34 01.0	+1.1
CLL	**Collm**	**148.72**	**351**	*e*PKPbc	PKPbc	20 34 00.0	0.0
	comp=Z,8.0nm,0.7s						
CLL				*ex*	x	20 34 12.0	
CLL	**Collm**	**148.72**	**351**	*e*PKPbc	PKPbc	20 33 59.9	-0.1
UZH	**Uzhgorod**	**148.90**	**338**	⇑*i*PKIKP	PKPbc	20 33 59.8	-0.8
UZH				*i*		20 34 10.4	
CRVS	**Cervenica-Dubn**	**148.95**	**340**	*e*PKP	PKPab	20 34 10.1	+5.3
UPC	**Upice**	**148.95**	**347**	*e*PKPbc	PKPbc	20 34 01.1	+0.4
UPC				*ex*	x	20 34 12.1	
BRG	**Berggiesshubel**	**148.99**	**350**	*e*PKPbc	PKPbc	20 33 59.9	-0.8
BRG	**Berggiesshubel**	**148.99**	**350**	*e*P	PKPbc	20 34 00.6	-0.1
	comp=Z,5.7nm,0.7s						
BRG				*e*		20 34 12.3	
	comp=Z,9.4nm,1.1s						
DPC	**Dobruska-Polom**	**149.04**	**347**	*e*PKPbc	PKPbc	20 34 00.7	-0.2
DPC				*ex*	x	20 34 12.7	
FBE	**Freiberg**	**149.04**	**350**	*e*PKPbc	PKPbc	20 34 00.4	-0.5
PVCC	**Panska Ves**	**149.22**	**349**	*e*PKPbc	PKPbc	20 34 01.7	+0.4
PVCC				*ex*	x	20 34 12.9	
TRPA	**Tarpa**	**149.24**	**338**	⇑*i*P	PKPbc	20 34 00.8	-0.7
HARR	**Harsova**	**149.62**	**328**	⇓P	PKPbc	20 34 01.8	-0.7
HARR	**Harsova**	**149.62**	**328**	⇓*i*P	PKPbc	20 34 01.8	-0.7
KECS	**Kecovo**	**149.63**	**340**	*e*PKP	PKPbc	20 34 02.7	+0.3
KECS				*e*		21 19 22.5	
WERD	**Werda**	**149.66**	**352**	*e*PKPbc	PKPbc	20 34 02.6	+0.2
GUNZ	**Gunzen**	**149.74**	**351**	*e*PKPbc	PKPbc	20 34 03.1	+0.5
PRU	**Pruhonice**	**149.74**	**349**	*e*PKPbc	PKPbc	20 34 01.3	-1.3
PRU				*ex*	x	20 34 13.8	
WERN	**Wernitzgruen**	**149.80**	**351**	*e*PKPbc	PKPbc	20 34 02.3	-0.5
NKC	**Novy Kostel**	**149.85**	**351**	*e*PKPbc	PKPbc	20 34 03.1	+0.2
NKC				*ex*	x	20 34 15.3	
MLR	**Muntele Rosu**	**149.98**	**331**	⇓P	PKPbc	20 34 04.0	+0.7
MLR	**Muntele Rosu**	**149.98**	**331**	⇓*i*P	PKPbc	20 34 04.0	+0.6
VYHS	**Vyhne**	**150.12**	**342**	*e*PKP	PKPbc	20 34 03.5	-0.1
VYHS				*e*		20 34 14.8	
MANZ	**Manzenberg**	**150.13**	**352**	*e*PKPbc	PKPbc	20 34 03.3	-0.3
KOLL	**Kolacno**	**150.16**	**343**	*e*PKP	PKPbc	20 34 03.9	+0.2
KOLL				*e*		20 34 15.5	
DRGR		**150.30**	**336**	⇓P	PKPbc	20 34 03.6	-0.5
DRGR		**150.30**	**336**	⇓*i*P	PKPbc	20 34 03.6	-0.5
ROTZ	**Rotzenmuhle**	**150.34**	**351**	*e*PKPbc	PKPbc	20 34 03.9	-0.2
GIVF	**Givet**	**150.46**	**1**	*e*PKP1	PKPbc	20 34 04.2	-0.2
BAIF	**Baives**	**150.49**	**2**	*e*PKP1	PKPbc	20 34 04.3	-0.1
	comp=Z,8.1nm,0.8s						
GRA1	**Grafenberg Arr**	**150.54**	**353**	*e*PKPbc	PKPbc	20 34 04.9	+0.3
GRF	**Grafenberg Arr**	**150.54**	**353**	*e*PKPbc	PKPbc	20 34 04.9	+0.3
MODS	**Modra-Piesok**	**150.65**	**344**	*e*PKP	PKPbc	20 34 05.5	+0.6
MODS				*e*		20 34 16.6	
KHC	**Kasperske Hory**	**150.74**	**349**	*e*PKPbc	PKPbc	20 34 04.7	-0.4
KHC				*ex*	x	20 34 15.8	
WET	**Wettzell**	**150.84**	**350**	*e*PKPbc	PKPbc	20 34 03.5	-1.8
GEC2	**GERESS Array S**	**150.99**	**349**	*e*PKPbc	PKPbc	20 34 05.4	-0.3
GERES	**GERESS Array B**	**150.99**	**349**	PKPbc	PKPbc	20 34 04.3	-1.3
	comp=Z,2.1nm,0.7s,baz=48,slow=2.0,SNR=10						
FLN	**La Foliniere**	**151.39**	**8**	*e*PKP1	PKPbc	20 34 05.8	-0.8
	comp=Z,11nm,0.7s						
FLN				*e*MLR	MLR		
	comp=Z,86nm,18.0s,MS4.3						
CONA	**Conrad Observa**	**151.42**	**346**	⇑*i*PKiKP	PKiKP	20 34 07.0	-0.2
	comp=Z,4.7nm,0.6s						
LDF	**La Druitiere**	**151.60**	**8**	*e*PKP1	PKPbc	20 34 06.3	-0.8
	comp=Z,3.6nm,0.7s						
GRR	**Gorron**	**151.70**	**9**	*e*PKP1	PKPbc	20 34 06.6	-0.7
	comp=Z,9.5nm,0.7s						
BZS	**Buzias**	**151.70**	**336**	⇓P	PKPbc	20 34 07.1	-0.3
BZS	**Buzias**	**151.70**	**336**	⇓*i*P	PKPbc	20 34 07.1	-0.3
FUR	**Furstenfeldbru**	**152.03**	**352**	*e*PKPbc	PKPbc	20 34 07.8	-0.3
MEZF	**Maizieres J'vi**	**152.07**	**1**	*e*PKP1	PKPbc	20 34 08.0	-0.1
CDF	**Champ du Feu**	**152.13**	**358**	*e*PKP1	PKPbc	20 34 08.1	-0.2
	comp=Z,4.5nm,0.7s						
BFO	**Black Forest**	**152.16**	**356**	*e*PKPbc	PKPbc	20 34 07.8	-0.6
PKSM	**Moragy**	**152.23**	**340**	⇑P	PKPbc	20 34 08.0	-0.6
PKSM	**Moragy**	**152.23**	**340**	⇑*i*P	PKPbc	20 34 08.0	-0.6
HAU	**Haudompre**	**152.56**	**359**	*e*PKP1	PKPbc	20 34 08.9	-0.4
HAU				*e*MLR	MLR		
	comp=Z,91nm,19.5s,MS4.3						
HINF	**Hinteralfeld**	**152.74**	**358**	*e*PKP1	PKPbc	20 34 08.2	-1.5
WTTA	**Wattenberg**	**152.86**	**351**	⇑*i*P	PKPbc	20 34 09.9	-0.1
	comp=Z,6.2nm,0.5s						
SSF	**Saint Saulge**	**153.46**	**3**	*e*PKP1	PKPbc	20 34 10.9	-0.4
	comp=Z,4.6nm,1.0s						
LPL	**La Plagne**	**155.04**	**358**	*e*PKP1	PKPdf	20 34 14.4	+8.5
LPG	**La Plagne**	**155.06**	**358**	*e*PKP1	PKPdf	20 34 15.3	+9.4
	comp=Z,4.0nm,0.8s						

BJI ***27*** *20:15:50.8,700S×12550E,h522km,mB4.6,mb4.3*

ISCJB ***27*** *20:15:53.0±0.5,691S±005×12551E±008,h534km±7km, mb4.2/31,Error ellipse: s-maj=13.5km s-min=5.6km az=149.2*

NEIC ***27*** *20:15:52.9±0.7,699S×12546E,h523km±10km,mb4.3/16, Error ellipse: s-maj=14.6km s-min=6.1km az=49.0*

IDC ***27*** *20:15:54.4±1.2,700S×12548E,h542km±17km,mb3.8/9, mb1 3.8/12,mb1mx3.7/19,mbtmp3.8/12,Error ellipse: s-maj=24.2km s-min=8.6km az=62.0*

ISC 27 20:15:53.5±0.5,702S±005×12553E±008,h530km±6km, n52,σ0s80/54,mb4.2/31,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**3.66**	**210**	P	**P**	**20 17 13.4**	**+2.0**
	158nm,0.3s,baz=127,slow=1.2,SNR=84						
BATI				S	**S**	**20 18 13.8**	**-1.1**
	53nm,0.3s,baz=326,slow=18,SNR=8.8						
AAI	**Ambon**	**4.24**	**39**	P	**P**	**20 17 16.0**	**+0.1**
	95nm,0.8s						
PCI	**Palu**	**8.31**	**317**	P	**P**	**20 17 54.4**	**+0.5**
	204nm,1.1s						
KAKA	**Kakadu**	**8.85**	**130**	*e*P	**P**	**20 17 59.9**	**+0.5**
	50nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.02**	**179**	*e*P	**P**	**20 18 19.7**	**-2.0**
	4.8nm,0.4s						
FITZ				P		20 18 22.7	
FITZ				*e*S	**S**	**20 20 23.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**11.02**	**179**	P	**P**	**20 18 22.7**	**+1.0**
	0.6nm,0.3s,baz=16,slow=11,SNR=7.5						
FITZ				S	**S**	**20 20 23.1**	**-0.6**
	0.2nm,0.3s,baz=10.0,slow=21,SNR=8.7						
WRA	**Warramunga Arr**	**15.43**	**147**	P	**P**	**20 19 07.4**	**-0.3**
	7.3nm,0.3s,baz=332,slow=7.9,SNR=368						
WRA				S	**S**	**20 21 46.3**	**-1.5**
	baz=325,slow=18,SNR=3.4						
WB2	**Warramunga Arr**	**15.44**	**147**	⇑*i*P	**P**	**20 19 07.6**	**-0.2**
WB2				*e*S	**S**	**20 21 47.5**	**-0.3**
KKM	**Kota Kinabalu**	**15.96**	**324**	P	**P**	**20 19 13.0**	**-0.2**
KSM	**Kuching**	**17.37**	**298**	*e*P	**P**	**20 19 26.1**	**-0.6**
TPI	**Tanjungpandan**	**18.30**	**283**	P	**P**	**20 19 36.5**	**+1.3**
	23nm,1.1s						
ASAR	**Alice Springs**	**18.41**	**155**	P	**P**	**20 19 37.3**	**+1.3**
	5.8nm,0.3s,baz=330,slow=8.8,SNR=397						
ASAR				S	**S**	**20 22 37.5**	**+0.3**
	baz=343,slow=23,SNR=9.5						
CTA	**Charters Tower**	**23.93**	**125**	P	**P**	**20 20 26.8**	**+0.8**
	6.7nm,0.9s,mb4.3,baz=304,slow=10,SNR=6.5						
CTAO	**Charters Tower**	**23.93**	**125**	*e*P	**P**	**20 20 26.4**	**+0.5**
	11nm,0.8s,mb4.5						
KULM	**Kulim**	**27.67**	**296**	P	**P**	**20 20 57.5**	**-1.5**
PSI	**Prapat**	**28.29**	**289**	P	**P**	**20 21 03.9**	**-0.5**
	3.4nm,0.7s,mb4.1,baz=50,slow=7.2,SNR=7.6						
STKA	**Stephens Creek**	**28.92**	**151**	*e*P	**P**	**20 21 10.8**	**+1.1**
	14nm,0.9s,mb4.6						
STKA	**Stephens Creek**	**28.92**	**151**	P	**P**	**20 21 10.8**	**+1.1**
	9.6nm,0.4s,mb4.8,baz=329,slow=9.5,SNR=50						
QIZ	**Qiongzhong**	**30.15**	**329**	*e*P	**P**	**20 21 19.9**	**-0.5**
	6.0nm,0.8s,mb4.2						
GYA	**Guiyang**	**37.98**	**332**	P	**P**	**20 22 26.0**	**-0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI	**Kunming**	**38.89**	**326**	P	**P**	**20 22 34.3**	**+0.8**
KMI				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.0						
JNU	**Nakatsue**	**40.24**	**7**	P	**P**	**20 22 42.6**	**-1.6**
	comp=Z,11nm,1.0s,mb4.3,baz=102,slow=7.2,SNR=4.3						
XAN	**Xi'an**	**43.76**	**340**	P	**P**	**20 23 10.8**	**-1.2**
XAN				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.3						
KSRS	**Korea Array**	**44.30**	**3**	P	**P**	**20 23 16.1**	**0.0**
	comp=Z,3.3nm,0.6s,mb4.0,baz=182,slow=9.1,SNR=16						
LZH	**Lanzhou**	**47.47**	**336**	*e*P	**P**	**20 23 41.5**	**+1.2**
LZH				AMB	AMB		
	comp=Z,23nm,1.2s,mb4.6						
LZH				AMB	AMB		
	comp=Z,87nm,4.

MKAR	**Makanchi Array**	**61.02**	**317**	P	P	20 54 34.8	-0.2
	0.5nm,0.9s,baz=113,slow=5.1,SNR=3.6						
YKA	**Yellowknife Ar**	**85.96**	**27**	P	P	20 57 01.2	-0.3
	0.6nm,0.8s,baz=292,slow=5.4,SNR=5.4						

ISCJB ***27*** *20:45:30.7±0.8, 692N±006×7298W±007, h169km±8km, mb3.4/1, Error ellipse: s-maj=11.9km s-min=9.8km az=34.5*
IDC ***27*** *20:45:30.8±1.3, 684N×7294W, h163km±15km, mb3.2/1, mb1 3.5/4, mb1mx3.1/20, mbtmp3.4/4, Error ellipse: s-maj=47.5km s-min=14.4km az=130.0*
FUNV ***27*** *20:45:30.1, 674N×7319W, h160km, MW3.4*

ISC 27 20:45:31.4±0.8, 689N±006×7299W±007, h162km±8km, n21, σ0§77/28, mb3.4/1, 6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.18**	**35**	⇓*i*P	**Pn**	**20 45 59.5**	**+0.7**
CAPV				*e*S	**Sn**	**20 46 20.9**	**+1.0**
ROSC	**El Rosal**	**2.42**	**214**	P	**Pn**	**20 46 11.8**	**-0.3**
	13nm,0.3s,baz=78,slow=8.8,SNR=28						
ROSC				S	**Sn**	**20 46 39.5**	**-4.2**
	17nm,0.3s,baz=100,slow=17,SNR=9.0						
VIGV	**El Vigia**	**2.52**	**40**	⇓*i*P	**Pn**	**20 46 14.0**	**+0.6**
VIGV				*e*S	**Sn**	**20 46 46.4**	**+0.6**
SOCV	**Socops**	**2.53**	**57**	⇓*i*P	**Pn**	**20 46 14.4**	**+0.9**
SOCV				*e*S	**Sn**	**20 46 45.9**	**-0.1**
SDV	**Santo Domingo**	**3.06**	**49**	P	**Pn**	**20 46 21.0**	**+0.9**
	20nm,0.3s,baz=224,slow=2.0,SNR=166						
SDV				S	**Sn**	**20 46 57.2**	**-0.5**
	9.6nm,0.3s,baz=280,slow=16,SNR=11						
ELOV	**Elorza**	**3.48**	**88**	*e*P	**Pn**	**20 46 25.0**	**-0.3**
ELOV				*e*S	**Sn**	**20 47 05.8**	**-1.3**
VIRV	**Villa del Rosa**	**3.64**	**9**	⇓*i*P	**Pn**	**20 46 26.4**	**-0.9**
VIRV				*e*S	**Sn**	**20 47 08.7**	**-2.2**
QARV	**Quebrada Arrib**	**4.10**	**36**	*e*P	**Pn**	**20 46 33.9**	**+0.6**
QARV				*e*S	**Sn**	**20 47 20.6**	**-0.9**
SANV	**Sanarito**	**4.29**	**53**	*e*P	**Pn**	**20 46 35.9**	**+0.2**
CURV	**Curarigua**	**4.31**	**44**	*i*P	**Pn**	**20 46 36.3**	**+0.2**
CURV				*e*S	**Sn**	**20 47 26.4**	**-0.1**
DABV	**Dabajuro**	**4.63**	**30**	*e*P	**Pn**	**20 46 40.6**	**+0.4**
TEPV	**Terepaima**	**4.84**	**51**	⇓*i*P	**Pn**	**20 46 43.3**	**+0.3**
SIQV	**Siquisique**	**4.88**	**40**	⇓*i*P	**Pn**	**20 46 43.4**	**-0.1**
BAUV	**El Baul**	**5.31**	**67**	*e*P	**Pn**	**20 46 48.0**	**-1.1**
TURV	**Turiamo**	**6.20**	**55**	*e*P	**Pn**	**20 47 00.9**	**0.0**
CAOV	**Caicara del Or**	**6.63**	**86**	*e*P	**Pn**	**20 47 06.5**	**-0.1**
BIRV	**Birongo**	**7.54**	**61**	*e*P	**Pn**	**20 47 18.5**	**-0.1**
PCRV	**Puerto La Cruz**	**8.88**	**68**	P	**Pn**	**20 47 37.9**	**+1.4**
	0.8nm,0.3s,baz=350,slow=6.1,SNR=2.4						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**20 55 42.4**	**+0.1**
	0.3nm,0.5s,mb3.4,baz=129,slow=7.1,SNR=7.9						
ASAR	**Alice Springs**	**149.26**	**234**	PKPbc	PKPbc	21 05 00.3	-1.5
	0.2nm,0.5s,baz=112,slow=3.4,SNR=4.7						
WRA	**Warramunga Arr**	**150.48**	**241**	PKPbc	PKPbc	21 05 03.5	-1.4
	0.6nm,1.0s,baz=106,slow=2.8,SNR=12						

IDC ***27*** *21:08:36.9±0.7, 3371S×17867W, h0km, mb4.7/9, mb1 4.8/10, mb1mx4.6/16, mbtmp4.7/10, ML5.3/1, MS4.0/14, Ms1 4.0/14, ms1mx3.9/23, Error ellipse: s-maj=24.5km s-min=19.3km az=39.0*
NEIC ***27*** *21:08:38.5±0.6, 3407S×17883W, h10km, mb5.2/5, Error ellipse: s-maj=17.9km s-min=14.4km az=177.0*
ISCJB ***27*** *21:08:42.3±1.9, 3413S±005×1795W±0.1, h20km±14km, mb4.8/15, MS4.0/14, Error ellipse: s-maj=17.5km s-min=6.5km az=18.1*
MOS ***27*** *21:08:45.0±3.2, 3474S×17953W, h33km, mb5.3/3, Error ellipse: s-maj=27.8km s-min=18.3km az=14.6*

ISC 27 21:08:44.2±1.9, 3403S±005×1794W±01, h23km±14km, h20km±.5km:pP-P, n92, σ1§25/59, mb4.8/15, MS4.0/14, 9C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.98**	**207**	*e*PN	**Pn**	**21 09 45.2**	**+1.5**
MXZ				SN	**Sn**	**21 10 36.1**	**+6.4**
PUZ	**Puketiti**	**4.45**	**204**	*e*PN	**Pn**	**21 09 50.8**	**+0.6**
PUZ				*e*SN	**Sn**	**21 10 46.9**	**+5.6**
MWZ	**Matawai**	**4.95**	**209**	*e*PN	**Pn**	**21 09 58.9**	**+1.7**
MWZ				*e*SN	**Sn**	**21 11 00.7**	**+7.0**
URZ	**Urewera**	**5.07**	**213**	Pn	**Pn**	**21 10 01.8**	**+3.1**
	87nm,0.3s,baz=271,slow=5.1,SNR=88						
URZ				Sn	**Sn**	**21 11 03.9**	**+7.4**
	70nm,0.3s,baz=146,slow=19,SNR=12						
URZ	**Urewera**	**5.07**	**213**	PN	**Pn**	**21 10 01.2**	**+2.5**
URZ				*e*SN	**Sn**	**21 11 02.5**	**+6.1**
BFZ	**Birch Farm**	**7.48**	**206**	*e*PN	**Pn**	**21 10 31.5**	**-0.3**
BFZ				*e*SN	**Sn**	**21 11 55.1**	**-0.8**
TIWZ	**Tintock**	**7.70**	**208**	*e*SN	**Sn**	**21 12 03.2**	**+1.9**
MRZ	**Mangatainoka R**	**7.72**	**210**	*e*SN	**Sn**	**21 12 02.0**	**+0.2**
KIW	**Kapiti Island**	**8.17**	**212**	*e*PN	**Pn**	**21 10 40.3**	**-1.1**
KIW				*e*SN	**Sn**	**21 12 14.1**	**+1.2**
MTW	**Mount Morrison**	**8.17**	**208**	*e*SN	**Sn**	**21 12 12.8**	**-0.2**
MRW	**Makara Radio**	**8.56**	**211**	*e*SN	**Sn**	**21 12 23.4**	**+0.9**
SNZO	**South Karori**	**8.62**	**211**	*e*PN	**Pn**	**21 10 41.6**	**-5.9**
SNZO				*e*S	**Sn**	**21 12 22.9**	**-1.1**
TCW	**Tory Channel**	**8.73**	**213**	*e*PN	**Pn**	**21 10 48.3**	**-0.8**
THZ	**Tophouse**	**9.81**	**216**	*e*SN	**Sn**	**21 12 52.5**	**-0.6**
KHZ	**Kahutara**	**10.03**	**211**	*e*PN	**Pn**	**21 11 05.6**	**-1.3**
KHZ				*e*SN	**Sn**	**21 12 56.6**	**-2.0**
MQZ	**McQueen's Vall**	**11.46**	**210**	SN	**Sn**	**21 13 27.4**	**-6.1**
RPZ	**Rata Peaks**	**12.18**	**215**	Pn	**Pn**	**21 11 33.8**	**-2.4**
	2.1nm,0.3s,baz=32,slow=4.8,SNR=5.8						
RPZ				Sn	**Sn**	**21 13 46.7**	**-4.5**
	2.9nm,0.3s,baz=355,slow=21,SNR=6.6						
AFI	**Afiamalu**	**21.20**	**21**	P	**P**	**21 13 19.1**	**-9.1**
RAR	**Rarotonga**	**21.55**	**59**	LR	LR	21 20 00.8	
	comp=Z,307nm,18.1s,MS3.7,baz=282,slow=33						
TBI	**Tubuai**	**28.27**	**76**	*e*LR	LR	21 21 05.1	
	237nm,31.0s						
PPT	**Papeete**	**31.32**	**66**	*e*LR	LR	21 22 39.3	
	213nm,21.5s,baz=233						
PPT	**Papeete**	**31.32**	**66**	LR	LR	21 24 22.1	
	comp=Z,370nm,18.9s,MS4.1,baz=239,slow=31						
STKA	**Stephens Creek**	**32.65**	**263**	*e*P	**P**	**21 15 17.5**	**+3.0**
	5.7nm,0.9s,mb4.5						
STKA	**Stephens Creek**	**32.65**	**263**	P	**P**	**21 15 16.9**	**+2.4**
	4.3nm,0.8s,mb4.4,baz=117,slow=11,SNR=6.3						
STKA				LR	LR	21 28 38.5	
	comp=Z,851nm,18.5s,MS4.5,baz=284,slow=36						
CTA	**Charters Tower**	**33.40**	**286**	*e*P	**P**	**21 15 23.5**	**+2.4**
	13nm,0.7s,mb5.0						
CTA	**Charters Tower**	**33.40**	**286**	P	**P**	**21 15 23.4**	**+2.3**
	17nm,0.7s,mb5.1,baz=107,slow=10.0,SNR=16						
CTA				LR	LR	21 25 53.1	
	comp=Z,217nm,19.3s,MS3.9,baz=80,slow=30						
CTAO	**Charters Tower**	**33.40**	**286**	*e*P	**P**	**21 15 23.4**	**+2.2**
	22nm,0.8s,mb5.2						
CTAO				*e*		21 15 35.0	
CTAO	**Charters Tower**	**33.40**	**286**	*e*P	**P**	**21 15 23.4**	**+2.3**
CTAO				*e*		21 15 35.0	
CTAO				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
ASAR	**Alice Springs**	**41.85**	**272**	P	**P**	**21 16 33.5**	**+0.9**
	comp=Z,16nm,0.7s,mb4.7,baz=112,slow=7.4,SNR=142						
ASAR				S	**S**	**21 22 50.2**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=112,slow=15,SNR=4.5						
WB2	**Warramunga Arr**	**43.16**	**277**	⇑P	**P**	**21 16 43.2**	**-0.1**
WRA	**Warramunga Arr**	**43.17**	**277**	P	**P**	**21 16 43.8**	**+0.4**
WRA				S	**S**	**21 23 08.5**	**-0.3**
WRA	**Warramunga Arr**	**43.17**	**277**	P	**P**	**21 16 43.8**	**+0.4**
	comp=Z,20nm,0.6s,mb5.0,baz=118,slow=7.6,SNR=176						
WRA				S	**S**	**21 23 08.5**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=121,slow=15,SNR=4.8						
WRA				LR	LR	21 35 07.4	
	comp=Z,173nm,19.1s,MS4.0,baz=115,slow=36						
FORT	**Forrest**	**44.06**	**259**	*e*P	**P**	**21 16 50.5**	**+0.1**
	comp=Z,26nm,0.7s,mb5.1						
KAKA	**Kakadu**	**48.50**	**284**	*e*P	**P**	**21 17 24.3**	**-1.2**
	comp=Z,7.7nm,0.5s,mb5.0						
KAKA	**Kakadu**	**48.50**	**284**	*e*P	**P**	**21 17 23.5**	**-1.9**
	comp=Z,18nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**51.26**	**274**	*e*P	**P**	**21 17 46.4**	**0.0**
	comp=Z,16nm,0.7s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.26**	**274**	P	**P**	**21 17 46.4**	**0.0**
	comp=Z,9.0nm,0.7s,mb4.8,baz=164,slow=10,SNR=13						
NWAO	**Narrogin (SRO)**	**52.07**	**252**	P	**P**	**21 17 51.3**	**-1.0**
	comp=Z,12nm,1.0s,mb4.8,baz=286,slow=5.2,SNR=5.4						
NWAO				LR	LR	21 36 21.8	
	comp=Z,137nm,20.5s,MS4.0,baz=111,slow=32						
KLBR	**Kellerberrin**	**52.11**	**254**	*e*P	**P**	**21 17 51.6**	**-1.1**
	comp=Z,15nm,0.6s,mb5.1						
MUN	**Mundaring**	**53.21**	**253**	⇓*i*P	**P**	**21 18 00.5**	**-0.3**
QSPA	**South Pole Qui**	**56.09**	**180**	*e*P	**P**	**21 18 18.8**	**-2.2**
	comp=Z,16nm,0.9s,mb5.1						
QSPA	**South Pole Qui**	**56.09**	**180**	P	**P**	**21 18 19.7**	**-1.2**
	comp=Z,7.8nm,0.8s,mb4.8,baz=58,slow=2.2,SNR=18						
BATI	**Kupang**	**57.02**	**281**	LR	LR	21 42 19.0	
	comp=Z,151nm,20.5s,MS4.1,baz=143,slow=35						
MAW	**Mawson**	**68.49**	**201**	P	**P**	**21 19 44.7**	**+0.6**
	comp=Z,5.1nm,1.1s,mb4.5,baz=129,slow=14,SNR=4.8						
VNA3	**Neumayer Olymp**	**74.77**	**177**	*e*	**P**	**21 20 23.4**	**+1.5**
VNA3				*e*	pP	21 20 28.9	-0.3
VNA3				*e*		21 20 32.6	
VNA3				*e*		21 20 43.3	
VNA3				*e*		21 20 52.9	
VNA3				*e*		21 21 00.5	
VNA2	**Neumayer--Watz**	**75.19**	**177**	*e*	**P**	**21 20 23.6**	**-0.7**
	baz=183,slow=3.7						
VNA2				*e*	pP	21 20 29.4	-2.3
VNA2				*e*		21 20 33.4	
VNA2				*e*		21 20 44.3	
VNA2				*e*		21 20 54.8	
VNA2				*e*		21 21 02.5	
VNA1	**Neumayer--Stat**	**75.42**	**177**	*e*	**P**	**21 20 27.0**	**+1.3**
VNA1				*e*	pP	21 20 33.1	+0.1
VNA1				*e*		21 20 37.6	
VNA1				*e*		21 20 46.7	
VNA1				*e*		21 20 56.5	
MJAR	**Matsushiro Arr**	**80.57**	**327**	LR	LR	21 51 07.5	
	comp=Z,74nm,19.6s,MS4.0,baz=25,slow=32						
PLCA	**Paso Flores**	**80.91**	**133**	P	**P**	**21 20 51.9**	**-4.7**
	comp=Z,2.2nm,0.9s,mb4.1,baz=216,slow=7.5,SNR=5.5						
PLCA				LR	LR	21 52 04.6	
	comp=Z,62nm,18.6s,MS4.0,baz=182,slow=32						
KSRS	**Korea Array**	**86.35**	**321**	P	**P**	**21 21 22.5**	**-1.8**
	comp=Z,1.4nm,0.7s,mb4.3,baz=146,slow=5.5,SNR=5.9						
KSRS				LR	LR	21 51 42.6	
	comp=Z,41nm,20.8s,MS3.8,baz=118,slow=30						
LPIG	**La Paz**	**87.46**	**59**	LR	LR	21 55 29.4	
	comp=Z,131nm,18.3s,MS4.4,baz=281,slow=32						
YSS	**Yuzh-Sakhalins**	**87.50**	**335**	⇑*e*P	**P**	**21 21 21.7**	**-7.9**
YSS				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.6						
PET	**Petropavlovsk**	**88.77**	**347**	⇑*e*P	**P**	**21 21 45.1**	**+10**
PET				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.5						
CMIG	**Matias Romero**	**95.00**	**73**	LR	LR	21 56 20.2	
	comp=Z,57nm,18.3s,MS4.1,baz=205,slow=30						
BBB	**Bella Bella**	**96.86**	**29**	LR	LR	21 56 20.9	
	comp=Z,81nm,18.9s,MS4.2,baz=0.3,slow=30						
LPAZ	**La Paz**	**97.72**	**115**	LR	LR	21 55 34.2	
	comp=Z,36nm,20.6s,MS3.9,baz=120,slow=29						
BILL	**Bilibino**	**102.33**	**355**	⇑*e*P	Pdif	21 22 44.8	+7.0
BILL				pmax	pmax		
	comp=Z,15nm,2.0s						
YAK	**Yakutsk**	**104.14**	**338**	*e*P	Pdif	21 22 41.5	-4.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MKAR	**Makanchi Array**	**119.14**	**309**	PKP	PKPdf	21 27 27.2	-3.6
MKAR	**Makanchi Array**	**119.14**	**309**	⇑*i*PKIKP	PKPdf	21 27 27.6	-3.2
MKAR	**Makanchi Array**	**119.14**	**309**	PKP	PKPdf	21 27 27.2	-3.6
	comp=Z,0.8nm,0.6s,baz=135,slow=0.8,SNR=13						
ZALV	**Zalesovo Beam**	**119.91**	**317**	PKP	PKPdf	21 27 28.1	-4.0
	comp=Z,2.2nm,0.7s,baz=142,slow=1.8,SNR=8.0						
ZAL	**Zalesovo**	**119.91**	**317**	PKIKP	PKPdf	21 27 28.1	-4.0
KURK	**Kurchatov**	**122.64**	**312**	⇑*i*PKIKP	PKPdf	21 27 34.0	-3.4
ARU	**Arti**	**135.05**	**318**	*i* PKIKP	PKPdf	21 27 59.3	-1.5
ARCES	**ARCESS Array B**	**141.84**	**346**	PKhKP		21 28 05.3	
	comp=Z,2.7nm,0.9s,baz=80,slow=1.4,SNR=7.7						
ZEI	**Tsey**	**145.26**	**298**	*e*PKHKP	PKPdf	21 28 17.6	-2.1
JOF	**Joensuu**	**145.28**	**336**	*e*pkp	PKPdf	21 28 14.3	-4.8
KIV	**Kislovodsk**	**146.12**	**300**	*e*PKIKP	PKPdf	21 28 21.1	-0.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MOS	**Moscow**	**146.54**	**322**	*e*PKHKP		21 28 19.2	
MOS				pmax	pmax		
	comp=Z,72nm,1.4s						
VRSR	**Storozhevoye**	**147.27**	**313**	*e*PKIKP	PKPdf	21 28 22.4	-0.5
VRSR				pmax	pmax		
	comp=N,3.0nm,1.0s						
VRSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,6.0nm,0.9s						
OBN	**Obninsk**	**147.35**	**321**	⇑*i*PKHKP	PKPdf	21 28 22.1	-0.8
OBN				*e*		21 31 56.4	
OBN				pmax	pmax		
	comp=Z,29nm,0.9s						
KAF	**Kangasniemi**	**147.50**	**338**	*e*pkp	PKPdf	21 28 20.8	-2.1
FINES	**FINESS Array B**	**148.07**	**337**	PKPbc	PKPbc	21 28 23.3	-3.8
	comp=Z,19nm,0.8s,baz=80,slow=2.5,SNR=52						
MALT	**Malatya**	**149.29**	**289**	*e*PKPbc	PKPbc	21 28 28.8	-2.2
MALT	**Malatya**	**149.29**	**289**	⇑PKPdf	PKPdf	21 28 29.0	+2.4
VSU	**Vasula**	**149.96**	**332**	*i* PKIKP	PKPbc	21 28 33.8	+1.9
NB2	**NORSAR Subarra**	**152.11**	**349**	PKP	PKPdf	21 28 32.9	+2.7
	comp=Z,5.1nm,0.8s,baz=18,slow=2.6						
NOA	**NORSAR Array B**	**152.11**	**349**	PKPbc	PKPbc	21 28 32.9	-4.0
	comp=Z,3.5nm,0.7s,baz=14,slow=4.1,SNR=23						
DBIC	**Dimbokro**	**152.31**	**168**	PKPbc	PKPbc	21 28 35.5	-3.3
	comp=Z,1.7nm,0.6s,baz=183,slow=4.1,SNR=7.4						
AKASG	**Malin Array Be**	**153.30**	**317**	PKPbc	PKPbc	21 28 36.6	-3.2
	comp=Z,5.9nm,0.8s,baz=64,slow=2.3,SNR=37						
KIEV	**Kiev**	**153.31**	**317**	*e*PKPbc	PKPbc	21 28 37.1	-2.8
KWP	**Kalwaria**	**157.43**	**320**	⇑*i*P	PKPab	21 29 07.3	-2.3
DRGR		**158.96**	**314**	⇓*i*P	PKPab	21 29 14.9	-1.4
TORD	**Torodi Ar. Bea**	**159.18**	**183**	PKP	PKPdf	21 28 39.4	-1.7
TORD				PKPab	PKPab	21 29 15.7	-2.2
TORD	**Torodi Ar. Bea**	**159.18**	**183**	PKP	PKPdf	21 28 39.4	-1.7
	comp=Z,0.8nm,0.7s,baz=197,slow=4.5,SNR=3.3						
TORD				PKPab	PKPab	21 29 15.7	-2.2
	comp=Z,1.6nm,0.9s,baz=188,slow=3.8,SNR=3.9						
CLL	**Collm**	**160.51**	**336**	*e*PKP2	PKPab	21 29 17.0	-5.8
CLL	**Collm**	**160.51**	**336**	*e*PKPab	PKPab	21 29 19.0	-3.8
BRG	**Berggiesshubel**	**160.55**	**334**	*e*PKP2	PKPab	21 29 19.6	-3.4
BRG				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BRG	**Berggiesshubel**	**160.55**	**334**	*e*(P)	PKPab	21 29 19.6	-3.4
	comp=Z,7.2nm,1.3s						
GERES	**GERESS Array B**	**162.27**	**330**	PKP2	PKPab	21 29 26.2	-4.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**162.27**	**330**	PKPab	PKPab	21 29 26.2	-4.3
	comp=Z,0.5nm,0.5s,baz=49,slow=4.1,SNR=4.8						

KRSC 27 21:24:07.1±0.7, 5517N×16221E, h11km±11km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.68**	**204**	*e*P	Pg	21 24 19.8	-0.3
MKZ				*e*S	Sg	21 24 28.8	-0.2
KBTR	**Krutoberegovo**	**1.10**	**18**	*e*P	Pb	21 24 26.9	-1.1
KBTR				*e*S	Sb	21 24 42.1	-0.2
ZLN	**Zelenaya**	**1.17**	**317**	P	Pb	21 24 28.9	-0.3
ZLN				*e*S	Sb	21 24 45.6	+1.3
TUMR	**Tumrok**	**1.19**	**276**	*e*P	Pb	21 24 30.0	+0.4
TUMR				*e*S	Sb	21 24 46.1	+1.2
BZMR	**Bezymyannaya**	**1.24**	**309**	P	Pn	21 24 31.0	+0.6
KMNR	**Kamenistaya**	**1.27**	**298**	*e*P	Pn	21 24 31.7	+1.0
KMNR				*e*S	Sb	21 24 49.4	+2.2
KPT	**Kopyto**	**1.38**	**306**	P	Pn	21 24 33.3	+1.0
KPT				S	Sn	21 24 52.3	+1.8
KRSR	**Krestovskiy**	**1.40**	**319**	P	Pn	21 24 33.4	+0.8
KRSR				S	Sn	21 24 52.4	+1.6
KLY	**Klyuchi**	**1.45**	**323**	P	Pn	21 24 32.4	-0.7
KLY				S	Sn	21 24 50.7	-1.4
SRKR	**Sorokina**	**1.60**	**339**	*e*P	Pn	21 24 35.0	-0.3
SRKR				*e*S	Sn	21 24 55.6	-0.3
SRDR	**Sredinnyy**	**1.82**	**310**	*e*P	Pn	21 24 39.2	+0.9
SRDR				S	Sn	21 25 02.7	+1.4
NLC	**Nalytchevo**	**2.62**	**221**	S	Sn	21 25 20.0	-0.9
AVH	**Avacha**	**2.79**	**228**	*e*P	Pn	21 24 53.8	+2.1
AVH				S	Sn	21 25 27.5	+2.2
GNL	**Ganaly**	**2.90**	**241**	P	Pn	21 24 55.2	+2.1
PET	**Petropavlovsk**	**3.00**	**226**	S	Sn	21 25 30.5	+0.1
RUS	**Russkaya**	**3.51**	**220**	P	Pn	21 25 02.8	+1.3

IDC ***27*** *21:35:52.5±0.8, 3383N×9047E, h0km, mb4.0/12, mb1 4.0/14, mb1mx3.9/24, mbtmp3.9/14, ML2.6/2, MS3.2/2, Ms1 3.2/2, ms1mx2.9/23, Error ellipse: s-maj=28.7km s-min=16.0km az=46.0*

ISCJB ***27*** *21:35:54.1±2.6, 3395N±005×9046E±010, h19km±21km, mb4.0/13, Error ellipse: s-maj=13.7km s-min=9.1km az=179.3*
MOS ***27*** *21:35:56.5±1.4, 3405N×9043E, h33km, mb4.5/3, Error ellipse: s-maj=25.7km s-min=9.5km az=107.7*
NEIC ***27*** *21:35:58.5±0.5, 3401N×9046E, h35km, mb3.7/6, Error ellipse: s-maj=17.5km s-min=9.6km az=67.0*
BJI ***27*** *21:35:58.4, 3408N×9068E, h45km, mB4.3, mb3.9, ML4.0, Ms3.7, Ms2.3.5*

ISC 27 21:35:58.9±1.0, 3395N±006×9047E±010, h39km±12km, n44, σ1§05/46, mb4.0/13, 2C-3D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.28**	**172**	P	**Pn**	**21 37 04.0**	**+2.5**
LSA				S	**Sn**	**21 37 58.3**	**+8.2**
LSA	**Lhasa**	**4.28**	**172**	*e*Pn	**Pn**	**21 37 03.9**	**+2.4**
LSA				*e*Sn	**Sn**	**21 37 59.2**	**+9.1**
TAPN	**Taplejung**	**6.99**	**201**	*e*P	**Pn**	**21 37 39.3**	**+0.5**
	19nm,0.7s						
JIRN	**Jiri**	**7.27**	**212**	*e*P	**Pn**	**21 37 42.6**	**0.0**
	22nm,0.6s						
ODAN	**Odare**	**7.55**	**201**	*e*P	**Pn**	**21 37 45.3**	**-1.1**
	29nm,0.7s						
KKN	**Kakani**	**7.59**	**217**	*e*P	**Pn**	**21 37 45.8**	**-1.1**
GKN	**Gorkha**	**7.76**	**222**	*e*P	**Pn**	**21 37 47.5**	**-1.8**
SHL	**Shillong**	**8.44**	**171**	*e*P	**Pn**	**21 38 00.0**	**+1.3**
KOLN	**Koldanda**	**8.53**	**226**	*e*P	**Pn**	**21 37 54.1**	**-5.8**
MKAR	**Makanchi Array**	**14.25**	**337**	Pn	**Pn**	**21 39 15.4**	**-2.6**
	0.0nm,0.3s,baz=164,slow=10,SNR=4.7						
MKAR				LR	LR	21 45 12.2	
	comp=Z,65nm,21.5s,baz=144,slow=39						
UCH	**Uchtor**	**15.02**	**308**	*e*Pn	**Pn**	**21 39 36.1**	**+7.8**
	5.6nm,0.9s						
AML	**Almayashu**	**15.52**	**307**	Pn	**Pn**	**21 39 38.4**	**+3.7**
	4.4nm,1.2s						
EKS2	**Erkin-Say**	**15.71**	**308**	*e*Pn	**Pn**	**21 39 42.6**	**+5.4**
	3.4nm,0.9s						
SONM	**Songino Array**	**18.32**	**36**	P	**Pn**	**21 40 10.2**	**+0.4**
	0.0nm,0.3s,baz=222,slow=12,SNR=4.2						
KURK	**Kurchatov**	**18.86**	**336**	P	**Pn**	**21 40 15.0**	**-1.3**
	6.9nm,1.2s						
KURK	**Kurchatov**	**18.86**	**336**	P	**Pn**	**21 40 15.0**	**-1.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ZAL	**Zalesovo**	**20.38**	**350**	P	**P**	**21 40 32.4**	**+0.4**
ZALV	**Zalesovo Beam**	**20.39**	**350**	P	**P**	**21 40 32.4**	**+0.3**
ZALV	**Zalesovo Beam**	**20.39**	**350**	P	**P**	**21 40 32.4**	**+0.3**
	comp=Z,5.1nm,0.9s,baz=160,slow=9.3,SNR=15						
NVS	**Novosibirsk**	**21.49**	**349**	*e*P	**P**	**21 40 43.8**	**-0.2**
AKTK	**Aktyubinsk**	**28.84**	**315**	P	**P**	**21 41 52.7**	**-0.6**
AKTK				LR	LR	21 54 59.9	
AKTO	**Aktyubinsk**	**28.84**	**315**	P	**P**	**21 41 52.7**	**-0.6**
	comp=Z,2.5nm,1.1s,mb3.9,baz=109,slow=7.5,SNR=4.5						
KSRS	**Korea Array**	**30.49**	**73**	P	**P**	**21 42 07.1**	**-1.0**
	comp=Z,0.6nm,0.5s,mb3.6,baz=256,slow=10,SNR=4.3						
AKASG	**Malin Array Be**	**46.90**	**310**	P	**P**	**21 44 25.3**	**+0.1**
	comp=Z,1.6nm,0.8s,mb4.0,baz=79,slow=7.2,SNR=8.6						
FINES	**FINESS Array B**	**48.69**	**325**	P	**P**	**21 44 40.0**	**+1.1**
	comp=Z,1.4nm,1.0s,mb4.0,baz=79,slow=9.9,SNR=3.5						
VRI	**Vrincioaia**	**49.11**	**304**	⇓*i*P	**P**	**21 44 46.3**	**+3.9**
MLR	**Muntele Rosu**	**49.71**	**304**	⇑*i*P	**P**	**21 44 48.8**	**+1.8**
KWP	**Kalwaria**	**51.18**	**309**	*e*P	**P**	**21 44 58.6**	**+0.7

JHG **Hegura jima** 0.75 5 ⇑P **Pb** **23 08 26.8 -3.4**
JHG S **Sb** **23 08 35.9 -4.1**
JKG **Kaga** 0.92 206 ⇑P **Pb** **23 08 32.6 -0.5**
JKG *e*S **Sb** **23 08 46.1 +1.2**
JGN **Niukaw** 0.96 156 ⇑P **Pb** **23 08 34.5 +0.7**
JGN *e*S **Sb** **23 08 49.1 +3.0**
MAJO **Matsushiro** 1.23 117 *e*Pn **Pn** **23 08 37.3 -0.7**
MAT **Matsushiro** 1.23 117 P **Pn** **23 08 38.1 +0.1**
MAT S **Sb** **23 08 59.3 +5.3**
MJAR **Matsushiro Arr** 1.23 117 Pg **Pg** **23 08 38.9 -0.9**
264nm,0.3s,baz=301,slow=15,SNR=842
JHJ **Hachijo jima 2** 4.65 148 Pn **Pn** **23 09 30.7 +5.7**
22nm,0.3s,baz=83,slow=9.1,SNR=4.6
JNU **Nakatsue** 6.29 233 Pn **Pn** **23 09 48.4 +0.8**
12nm,0.3s,baz=36,slow=7.6,SNR=118
JNU Lg 23 11 34.6
2.6nm,0.3s,baz=309,slow=32,SNR=4.4
JNU LR LR 23 12 07.1
comp=Z,1μm,19.7s,baz=36,slow=37
VLA **Vladivostok** 7.10 329 *e*P **Pn** **23 09 59.4 +0.7**
VLA pmax pmax
comp=Z,19nm,0.9s
KSRS **Korea Array** 7.12 276 Pn **Pn** **23 09 58.0 -0.9**
comp=Z,10nm,0.3s,baz=88,slow=14,SNR=48
KSRS Sn **Sn** **23 11 13.8 -5.4**
comp=Z,3.3nm,0.3s,baz=89,slow=25,SNR=22
KSRS LR LR 23 12 13.2
comp=Z,537nm,19.8s,baz=138,slow=34
INCN **Inchon** 8.14 276 Pn **Pn** **23 10 10.5 -2.4**
ASAJ **Asahikawa** 8.26 30 P **Pn** **23 10 18.0 +3.5**
ASAJ pmax pmax
comp=Z,5.0nm,0.3s
ASAJ MLR MLR
comp=Z,1μm,18.5s
ASAJ **Asahikawa** 8.26 30 Pn **Pn** **23 10 17.9 +3.4**
comp=Z,4.8nm,0.3s,baz=228,slow=13,SNR=36
ASAJ LR LR 23 13 26.4
comp=Z,1μm,18.4s,baz=340,slow=38
MDJ **Mudanjiang** 9.29 326 P **Pn** **23 10 30.5 +1.8**
MDJ S **Sn** **23 12 15.8 +3.2**
MDJ PCP PcP 23 16 46.5 -1.6
MDJ AMB AMB
comp=Z,27nm,0.6s
MDJ LR LR
comp=N,2μm,12.5s
MDJ LR LR
comp=E,2μm,13.2s
MDJ LR LR
comp=Z,2μm,14.1s
YSS **Yuzh-Sakhalins** 10.78 22 *e*Pn **Pn** **23 10 54.0 +5.0**
YSS **Yuzh-Sakhalins** 10.78 22 *e*P **Pn** **23 10 53.9 +4.9**
YSS *e*S **Sn** **23 12 56.7 +7.7**
YSS pmax pmax
comp=N,160nm,0.7s
YSS pmax pmax
comp=Z,160nm,0.7s
YSS MLR MLR
comp=N,700nm,13.0s
YSS MLR MLR
comp=Z,1μm,13.0s
CN2 **Changchun** 10.95 311 *e*P **Pn** **23 10 52.0 +0.6**
CN2 *e*S **Sn** **23 12 57.3 +4.0**
CN2 AMB AMB
comp=Z,10.0nm,1.0s
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,14.0s
CN2 LR LR
comp=E,1μm,14.0s
CN2 LR LR
comp=Z,900nm,15.0s
CBIJ **Chichi jima** 10.96 154 LR LR 23 14 25.2
comp=Z,466nm,18.3s,baz=151,slow=34
SNY **Shenyang** 11.28 299 ⇑P **Pn** **23 11 00.0 +4.1**
SNY AP 23 11 03.3
SNY XP 23 11 06.3
SNY S **Sn** **23 13 08.3 +6.9**
SNY SS 23 13 22.8
SNY AMB AMB
comp=Z,15nm,1.3s
SNY LR LR
comp=N,2μm,10.9s
SNY LR LR
comp=Z,1μm,13.1s
HABR **Khabarovsk** 11.44 354 P **Pn** **23 10 59.4 +1.4**
HABR 23 13 08.8
DL2 **Dalian** 12.13 283 P **Pn** **23 11 09.0 +1.4**
DL2 S **Sn** **23 13 26.8 +4.5**
DL2 AMB AMB
comp=Z,20nm,0.9s
DL2 AMB AMB
comp=Z,120nm,4.6s
DL2 LR LR
comp=N,500nm,10.5s
DL2 LR LR
comp=E,800nm,12.0s
DL2 LR LR
comp=Z,990nm,12.3s
JOW **Kunigami** 12.55 218 Pn **Pn** **23 11 14.2 +0.9**
comp=Z,2.1nm,0.3s,baz=14,slow=20,SNR=4.1
UGL **Uglegorsk** 12.56 16 *e*P **Pn** **23 11 20.5 +7.1**
UGL pmax pmax
comp=Z,96nm,0.8s
UGL MLR MLR
comp=N,2μm,16.0s
UGL MLR MLR
comp=E,2μm,16.0s
UGL MLR MLR
comp=Z,1μm,16.0s
KLR **Kul'dur** 12.67 345 *e*P **Pn** **23 11 13.8 -1.1**
KLR pmax pmax
comp=E,40nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s
KLR MLR MLR
comp=Z,7μm,12.5s
SSE **Sheshan** 14.28 250 P **Pn** **23 11 36.8 -0.1**
SSE S **Sn** **23 14 15.5 +0.7**
SSE AMB AMB
comp=Z,33nm,0.7s
SSE AMB AMB
comp=Z,43nm,5.7s
SSE LR LR
comp=N,438nm,13.8s
SSE LR LR
comp=E,76nm,13.9s
SSE LR LR
comp=Z,317nm,16.9s
NJ2 **Nanjing** 15.64 257 *e*P **Pn** **23 12 00.5 +5.4**
NJ2 AP pP 23 12 04.0 -0.6
NJ2 XP sP 23 12 07.0 -0.1
NJ2 PP 23 12 12.8
NJ2 S **Sn** **23 14 54.0 +6.1**
NJ2 XS sS 23 14 59.5 -12
NJ2 AMB AMB
comp=Z,160nm,4.4s
NJ2 LR LR
comp=N,2μm,13.4s
NJ2 LR LR
comp=E,1μm,13.3s
NJ2 LR LR
comp=Z,990nm,17.2s
BJI **Beijing** 16.42 287 P **Pn** **23 12 04.8 -0.3**
BJI S **Sn** **23 15 13.5 +6.7**
BJI AMB AMB
comp=Z,31nm,1.4s
BJI LR LR
comp=N,794nm,12.2s
BJI LR LR
comp=E,660nm,12.2s
BJI LR LR
comp=Z,264nm,14.0s
BJT **Baijiatuan** 16.43 287 *e*Pn **Pn** **23 12 05.0 -0.2**
comp=Z,20nm,0.8s
BJT **Baijiatuan** 16.43 287 *e*P **Pn** **23 12 05.0 -0.2**
BJT pmax pmax
comp=Z,20nm,0.8s
HIA **Hailar** 17.36 320 *e*Pn **Pn** **23 12 17.3 +0.4**
comp=Z,39nm,0.9s
HIA **Hailar** 17.36 320 *e*P **Pn** **23 12 17.3 +0.4**
HIA pmax pmax
comp=Z,39nm,0.9s
YHNB **Yeheng** 18.13 231 *e*P **Pn** **23 12 28.7 +2.2**
NACB **Ninganchiao** 18.36 230 P **Pn** **23 12 28.5 -0.8**
TIY **Taiyuan** 19.39 279 P **Pn** **23 12 39.0 -2.7**
TIY S **Sn** **23 16 14.3 -4.3**
TIY LR LR
comp=N,369nm,10.8s
TIY LR LR
comp=E,1μm,13.9s
TIY LR LR
comp=Z,2μm,13.9s
QZH **Quanzhou** 19.74 237 *i* P **Pn** **23 12 48.0 +2.0**
QZH S **Sn** **23 16 27.0 -0.3**
QZH LR LR
comp=N,620nm,12.2s
QZH LR LR
comp=E,1μm,14.4s
QZH LR LR
comp=Z,820nm,14.5s
WHN **Wuhan** 19.77 257 P **Pn** **23 12 46.5 +0.2**
WHN S **Sn** **23 16 29.8 +1.8**
WHN LR LR
comp=Z,2μm,11.5s
HHC **Hu-ho-hao-te** 19.98 289 *e*P **Pn** **23 12 48.0 -0.7**
HHC AP pP 23 12 52.3 -0.1
HHC PP 23 13 07.0
HHC S **Sn** **23 16 25.5 -7.3**
HHC SS 23 16 55.0
HHC PCP PcP 23 17 03.8 +1.0
HHC AMB AMB
comp=Z,18nm,0.9s
HHC AMB AMB
comp=Z,223nm,3.8s
HHC LR LR
comp=N,419nm,11.6s
HHC LR LR
comp=E,784nm,11.6s
HHC LR LR
comp=Z,721nm,12.5s
BTO **Baotou** 21.14 288 *e*P **P** **23 13 00.8 +1.2**
PET **Petropavlovsk** 22.02 37 P **P** **23 13 09.8 +0.9**
PET **Petropavlovsk** 22.02 37 *e*P **P** **23 13 09.7 +0.9**
PET pmax pmax
comp=Z,40nm,1.3s,mb4.7
CIT **Chita** 22.17 320 *e*P **P** **23 13 09.0 -1.5**
CIT *e* 23 13 16.1
CIT *e* 23 13 22.2
CIT *e* 23 13 34.8
CIT pmax pmax
comp=Z,31nm,1.3s,mb4.6
XAN **Xi'an** 22.88 271 P **P** **23 13 16.5 -1.7**
XAN PP 23 13 47.0
XAN S **S** **23 17 23.0 -4.0**
XAN SS 23 18 15.3
XAN AMB AMB
comp=Z,17nm,1.4s,mb4.3
XAN AMB AMB
comp=Z,85nm,10.5s
XAN LR LR
comp=E,520nm,13.4s
XAN LR LR
comp=Z,543nm,13.5s,MS4.2
MA2 **Magadan** 24.22 17 *e*P **P** **23 13 33.2 +2.2**
comp=Z,42nm,1.0s,mb4.8
MA2 **Magadan** 24.22 17 ⇑*e*P **P** **23 13 32.5 +1.5**
MA2 pmax pmax
comp=Z,39nm,1.1s,mb4.8
SONM **Songino Array** 24.73 305 P **P** **23 13 34.4 -1.4**
SONM 23 17 11.5
SONM **Songino Array** 24.73 305 P **P** **23 13 34.4 -1.4**
comp=Z,6.9nm,0.9s,mb4.2,baz=109,slow=10,SNR=25
SONM PcP PcP 23 17 11.5 -0.7
comp=Z,1.0nm,0.5s,baz=108,slow=2.5,SNR=7.4
SONM LR LR 23 23 33.7
comp=Z,496nm,18.5s,MS4.0,baz=297,slow=37
YAK **Yakutsk** 25.35 352 *c i* P **P** **23 13 43.4 +2.2**
YAK *e**PP pP 23 13 52.5 +5.4
YAK *e* 23 14 18.1
YAK *e*S **S** **23 18 10.1 +3.8**
YAK *e* 23 24 31.3
YAK pmax pmax
comp=Z,53nm,1.0s,mb5.0
YAK pmax pmax
comp=N,34nm,1.4s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=N,10.0nm,0.7s
YAK pmax pmax
comp=Z,15nm,0.7s,mb4.6
YAK pmax pmax
comp=E,4.0nm,0.5s
YAK smax
comp=N,165nm,4.5s
YAK smax
comp=E,216nm,4.6s
YAK MLR MLR
comp=Z,705nm,16.0s,MS4.3
YAK MLR MLR
comp=N,654nm,19.0s,MS4.2
YAK MLR MLR
comp=E,226nm,14.0s,MS4.2
BOD **Bodaibo** 25.61 331 *e*P **P** **23 13 43.8 +0.1**
BOD pmax pmax
comp=Z,9.0nm,1.1s,mb4.2
LZH **Lanzhou** 26.44 278 *e*P **P** **23 13 52.8 +1.4**
LZH AP pP 23 13 57.0 -0.2
LZH XP sP 23 14 00.0 +0.4
LZH PP 23 14 36.0
LZH *e*S **S** **23 18 24.0 -0.1**
LZH SS 23 19 32.8
LZH AMB AMB
comp=Z,35nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,201nm,4.7s
LZH LR LR
comp=N,1μm,14.1s
LZH LR LR
comp=Z,2μm,15.8s,MS4.7
IRK **Irkutsk** 27.38 314 *e*P **P** **23 14 04.7 +5.0**
IRK *e* 23 14 18.5
IRK pmax pmax
comp=Z,23nm,0.7s,mb4.8
ZAK **Zakamensk** 27.38 310 *e*P **P** **23 13 59.9 +0.2**
ZAK pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
TLY **Talaya** 27.55 313 *e*P **P** **23 14 02.7 +1.4**
TLY **Talaya** 27.55 313 *e*P **P** **23 14 02.8 +1.6**
TLY *e*S **S** **23 18 45.4 +4.1**
TLY *e*SS 23 19 59.0
TLY pmax pmax
comp=Z,21nm,0.9s,mb4.8
TLY MLR MLR
comp=Z,326nm,13.0s,MS4.1
SEY **Seymchan** 27.56 15 ⇑*e*P **P** **23 14 03.2 +2.0**
GYA **Guiyang** 27.65 256 P **P** **23 14 00.5 -1.9**
GYA PP 23 14 50.8
GYA PCP PcP 23 17 21.5 +2.1
GYA S **S** **23 18 47.3 +3.9**
GYA SS 23 19 59.8
GYA AMB AMB
comp=Z,20nm,1.0s,mb4.7
GYA AMB AMB
comp=Z,140nm,7.5s
GYA LR LR
comp=N,380nm,15.8s,MS4.3
GYA LR LR
comp=E,470nm,15.8s,MS4.3
GYA LR LR
comp=Z,710nm,14.4s,MS4.4
CD2 **Chengdu** 28.02 267 *e*P **P** **23 14 04.5 -1.1**
CD2 PP 23 14 54.5
CD2 S **S** **23 18 46.8 -2.3**
CD2 AMB AMB
comp=Z,20nm,0.7s,mb4.9
CD2 AMB AMB
comp=Z,90nm,7.8s
CD2 LR LR
comp=N,810nm,15.6s,MS4.7
CD2 LR LR
comp=E,1μm,13.2s,MS4.7
CD2 LR LR
comp=Z,750nm,15.6s,MS4.4
GTA **Gaotai** 29.04 286 *e*P **P** **23 14 12.8 -1.8**
GTA PP PP 23 15 06.8 -13
GTA PCP PcP 23 17 22.5 -0.1
GTA S **S** **23 19 01.8 -3.1**
GTA AMB AMB
comp=Z,2.0nm,0.9s,mb3.9
GTA AMB AMB
comp=Z,91nm,4.2s
GTA LR LR
comp=N,557nm,13.7s,MS4.4
GTA LR LR
comp=E,318nm,14.8s,MS4.4
GTA LR LR
comp=Z,455nm,12.5s,MS4.3
MOY **Mondy** 29.12 311 *e*P **P** **23 14 18.6 +3.4**
QIZ **Qiongzhong** 29.70 240 P **P** **23 14 16.5 -4.2**
QIZ S **S** **23 19 16.3 +0.6**
QIZ LR LR
comp=E,325nm,12.8s
QIZ LR LR
comp=Z,557nm,13.9s,MS4.3
KMI **Kunming** 31.38 257 P **P** **23 14 33.5 -1.9**
KMI S **S** **23 19 37.5 -4.4**
KMI AMB AMB
comp=Z,11nm,0.9s,mb4.7
KMI LR LR
comp=N,296nm,13.7s,MS4.4
KMI LR LR
comp=E,449nm,15.0s,MS4.4
KMI LR LR
comp=Z,511nm,14.3s,MS4.3
TIXI **Tiksi** 34.86 356 *e*P **P** **23 15 03.3 -2.1**
comp=Z,28nm,0.9s,mb5.2
TIXI **Tiksi** 34.86 356 *e*P **P** **23 15 03.3 -2.0**
TIXI pmax pmax
comp=Z,31nm,0.9s,mb5.2
TIXI MLR MLR
comp=Z,261nm,11.0s,MS4.2
BILL **Bilibino** 35.07 19 *e*P **P** **23 15 06.4 -0.8**
comp=Z,30nm,1.1s,mb5.1
BILL **Bilibino** 35.07 19 ⇑*e*P **P** **23 15 07.0 -0.2**
BILL *e* 23 16 24.5
BILL *e*S **S** **23 20 42.7 +4.4**
BILL pmax pmax
comp=Z,27nm,1.1s,mb5.1
BILL MLR MLR
comp=Z,300nm,16.0s,MS4.1
WMQ **Urumqi** 37.53 296 P **P** **23 15 30.5 +2.0**
WMQ AP pP 23 15 35.0 +0.6
WMQ XP sP 23 15 37.5 +0.7
WMQ PP PP 23 16 59.0 +4.9
WMQ PCP PcP 23 17 48.5 +2.2
WMQ S **S** **23 21 19.3 +2.8**
WMQ AMB AMB
comp=Z,8.0nm,0.6s,mb4.6
WMQ AMB AMB
comp=Z,95nm,4.4s
WMQ LR LR
comp=N,331nm,16.6s,MS4.2
WMQ LR LR
comp=E,72nm,20.2s,MS4.2
WMQ LR LR
comp=Z,134nm,20.2s,MS3.7
CHTO **Chiang Mai** 37.80 252 *e*P **P** **23 15 29.7 -1.3**
LSA **Lhasa** 38.55 273 *e*P **P** **23 15 41.3 +4.0**
comp=Z,2.0nm,0.6s,mb4.0
LSA **Lhasa** 38.55 273 *e*P **P** **23 15 41.3 +4.0**
LSA pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
ZAA0 **Zalesovo Array** 39.16 312 *e*P **P** **23 15 43.2 +1.1**
ZALV **Zalesovo Beam** 39.16 312 P **P** **23 15 42.1 +0.1**
comp=Z,1.9nm,0.5s,mb4.0,baz=108,slow=5.0,SNR=9.1
ZALV PcP PcP 23 17 48.7 -2.5
comp=Z,4.1nm,0.6s,baz=110,slow=3.0,SNR=11
ZAL **Zalesovo** 39.18 312 P **P** **23 15 42.2 0.0**
ZAL 23 17 48.7
NVS **Novosibirsk** 40.15 314 *e*P **P** **23 15 50.5 +0.2**
NVS pmax pmax
comp=N,2.0nm,1.1s
NVS pmax pmax
comp=E,5.0nm,1.1s
NVS pmax pmax
comp=Z,8.0nm,1.1s,mb4.4
MKAR **Makanchi Array** 40.97 301 P **P** **23 15 57.3 +0.1**
MKAR 23 17 55.2
MKAR **Makanchi Array** 40.97 301 P **P** **23 15 57.2 +0.1**
comp=Z,1.6nm,0.7s,mb3.8,baz=89,slow=10,SNR=6.8
MKAR PcP PcP 23 17 55.1 -2.0
comp=Z,1.2nm,0.7s,baz=81,slow=8.7,SNR=3.7
MKAR LR LR 23 32 03.8
comp=Z,82nm,21.5s,MS3.6,baz=89,slow=35
TNA **Tin City** 42.62 30 *e*P **P** **23 16 14.6 +4.1**
ODAN **Odare** 42.75 271 *e*P **P** **23 16 09.9 -2.1**
comp=Z,19nm,0.9s,mb4.8
KURK **Kurchatov** 43.00 308 *e*P **P** **23 16 10.7 -3.0**
comp=Z,11nm,0.7s,mb4.7
KURK **Kurchatov** 43.00 308 *e*P **P** **23 16 10.7 -3.0**
KURK pmax pmax
comp=Z,11nm,0.7s,mb4.7
KSM **Kuching** 43.08 221 *e*P **P** **23 16 14.7 0.0**
JIRN **Jiri** 43.36 273 *e*P **P** **23 16 14.9 -2.0**
comp=Z,28nm,1.0s,mb5.0
KKN **Kakani** 44.03 273 *e*P **P** **23 16 20.6 -1.7**
comp=Z,28nm,0.8s,mb5.0
GKN **Gorkha** 44.45 274 *e*P **P** **23 16 23.8 -1.9**
comp=Z,65nm,1.2s,mb5.2
KOLN **Koldanda** 45.38 274 *e*P **P** **23 16 33.2 +0.1**
TKM2 **Tokmak 2** 46.36 297 *e*P **P** **23 16 40.0 -0.6**
comp=Z,28nm,0.7s,mb5.3
TKM2 **Tokmak 2** 46.36 297 *e*P **P** **23 16 40.0 -0.6**
TKM2 pmax pmax
comp=Z,29nm,0.7s,mb5.3
UCH **Uchtor** 47.31 297 *e*P **P** **23 16 50.9 +2.8**
comp=Z,3.7nm,1.1s,mb4.2
UCH *e*PcP PcP 23 18 19.0 +0.1
BRVK **Borovoye** 47.86 312 *e*P **P** **23 16 53.5 +1.3**
AML **Almayashu** 47.92 297 *e*P **P** **23 16 54.1 +1.3**
comp=Z,7.0nm,0.6s,mb4.9
AML *e*PcP PcP 23 18 27.4 +6.3
IMA2 **Indian Mountai** 48.49 31 *e*P **P** **23 17 01.1 +4.2**
BATI **Kupang** 48.66 197 P **P** **23 16 57.4 -1.3**
comp=Z,45nm,0.7s,mb5.6,baz=63,slow=2.3,SNR=3.4
KDAK **Kodiak Island** 49.49 42 P **P** **23 17 03.7 -0.9**
KDAK **Kodiak Island** 49.49 42 P **P** **23 17 03.7 -0.9**
comp=Z,7.1nm,0.9s,mb4.7,baz=248,slow=5.4,SNR=3.3
KAKA **Kakadu** 49.72 186 *e*P **P** **23 17 05.7 -1.1**
comp=Z,19nm,0.8s,mb5.2
COLA **College** 50.97 32 *e*P **P** **23 17 16.1 +0.4**
comp=Z,7.0nm,1.0s,mb4.5
COLA *e*PcP PcP 23 18 31.8 +0.1
COLA **College** 50.97 32 *e*P **P** **23 17 16.1 +0.4**
COLA *e* 23 18 31.8
COLA pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
SVE **Sverdlovsk** 52.66 318 ⇑*e*P **P** **23 17 30.5 +2.1**
SVE pmax pmax
comp=Z,12nm,0.9s,mb4.8
SVE MLR MLR
comp=Z,560nm,23.0s,MS4.5
EGAK **Eagle** 53.82 32 *e*P **P** **23 17 37.6 +0.8**
ARU **Arti** 53.86 318 *e*P **P** **23 17 39.0 +1.7**
comp=Z,7.3nm,0.7s,mb4.7
ARU **Arti** 53.86 318 *c i*P **P** **23 17 38.6 +1.3**
ARU *e* 23 18 38.8
ARU *e* 23 19 36.2
ARU PPP 23 20 47.5
ARU S **S** **23 25 15.3 +4.2**
ARU SS SS 23 28 54.4 +2.7
ARU pmax pmax
comp=Z,16nm,1.7s,mb4.7
ARU MLR MLR
comp=Z,245nm,16.0s,MS4.4
HYB **Hyderabad** 54.55 266 *e*P **P** **23 17 41.5 -1.4**
HYB **Hyderabad** 54.55 266 *i* P **P** **23 17 41.5 -1.4**
HYB *e* pP 23 17 47.0 -2.0
FITZ **Fitzroy Crossi** 55.91 193 *e*P **P** **23 17 52.1 -0.4**
comp=Z,21nm,0.9s,mb5.2
FITZ **Fitzroy Crossi** 55.91 193 P **P** **23 17 51.6 -0.9**
comp=Z,11nm,1.0s,mb4.9,baz=21,slow=7.1,SNR=8.5
WB2 **Warramunga Arr** 56.78 183 ⇑*i*P **P** **23 17 58.0 -0.7**
WB2 **Warramunga Arr** 56.78 183 *e*P **P** **23 17 58.0 -0.6**
WRA **Warramunga Arr** 56.78 183 P **P** **23 17 58.0 -0.7**
comp=Z,12nm,0.6s,mb5.2,baz=359,slow=7.6,SNR=305
CTAO **Charters Tower** 57.57 170 P **P** **23 18 03.0 -1.2**
comp=Z,8.1nm,1.0s,mb4.7
CTAO **Charters Tower** 57.57 170 P **P** **23 18 03.0 -1.2**
CTAO pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
PALK **Pallekele** 58.83 254 *e*P **P** **23 18 12.6 -0.7**
comp=Z,6.3nm,0.9s,mb4.7
ASAR **Alice Springs** 60.51 183 P **P** **23 18 24.2 -0.3**
comp=Z,8.6nm,0.8s,mb5.0,baz=12,slow=8.5,SNR=73

ARCES	**ARCES Array B**	**62.61**	**338**	P	**P**		**23 18 39.9**	**+1.6**	
ARCES				pmax	pmax				
	comp=Z,8.0nm,1.0s								
ARCES	**ARCES Array B**	**62.61**	**338**	P	**P**		**23 18 39.9**	**+1.7**	
	comp=Z,8.2nm,1.0s,mb4.8,baz=66,slow=9.4,SNR=7.5								
YKA	**Yellowknife Ar**	**65.55**	**29**	P	**P**		**23 18 56.8**	**-0.9**	
YKA				pmax	pmax				
	comp=Z,3.0nm,0.8s								
YKA	**Yellowknife Ar**	**65.55**	**29**	P	**P**		**23 18 56.8**	**-0.8**	
	comp=Z,3.3nm,0.8s,mb4.4,baz=307,slow=6.7,SNR=18								
OBN	**Obninsk**	**65.81**	**322**	P	**P**		**23 19 00.4**	**+0.9**	
OBN	**Obninsk**	**65.81**	**322**	⇑*eP*	**P**		**23 19 00.2**	**+0.7**	
OBN				*e*			23 21 27.0		
OBN				*i* S	S		23 27 33.4	-12	
OBN				pmax	pmax				
	comp=Z,18nm,1.5s,mb4.9								
OBN				MLR	MLR				
	comp=Z,300nm,16.0s,MS4.6								
FINES	**FINES Array B**	**67.01**	**331**	*i* P	**P**		**23 19 07.9**	**+0.9**	
FINES				pmax	pmax				
	comp=Z,4.0nm,0.7s								
FINES	**FINES Array B**	**67.01**	**331**	P	**P**		**23 19 04.4**	**-2.6**	
	comp=Z,4.1nm,0.7s,mb4.6,baz=72,slow=8.2,SNR=8.7								
ZEI	**Tsey**	**67.90**	**307**	*eP*	**P**		**23 19 14.2**	**+1.2**	
KIV	**Kislovodsk**	**68.06**	**309**	*eP*	**P**		**23 19 13.1**	**-0.9**	
	comp=Z,11nm,0.9s,mb4.9								
KIV				*e*PcP	PcP		23 19 36.9	-3.1	
KIV	**Kislovodsk**	**68.06**	**309**	*eP*	**P**		**23 19 12.9**	**-1.1**	
KIV				pmax	pmax				
	comp=Z,12nm,1.0s,mb4.9								
KIV				MLR	MLR				
	comp=Z,99nm,18.0s,MS4.1								
STKA	**Stephens Creek**	**68.77**	**176**	*eP*	**P**		**23 19 18.5**	**+0.2**	
	comp=Z,8.6nm,0.8s,mb4.7								
STKA	**Stephens Creek**	**68.77**	**176**	P	**P**		**23 19 18.6**	**+0.3**	
	comp=Z,10nm,0.7s,mb4.9,baz=336,slow=8.3,SNR=13								
SOC	**Sochi**	**70.08**	**310**	*eP*	**P**		**23 19 23.5**	**-3.1**	
SOC				*e*			23 22 08.7		
SOC				pmax	pmax				
	comp=Z,39nm,1.4s,mb5.1								
SOC				MLR	MLR				
	comp=Z,115nm,12.0s,MS4.3								
ANN	**Anapa**	**70.80**	**312**	*eP*	**P**		**23 19 28.6**	**-2.3**	
ANN				*e*S	S		23 28 41.6	-3.2	
ANN				pmax	pmax				
	comp=Z,138nm,2.2s,mb5.5								
EDM	**Edmonton**	**71.52**	**37**	P	**P**		**23 19 35.1**	**0.0**	
AKASG	**Malin Array Be**	**71.96**	**320**	*i* P	**P**		**23 19 36.2**	**-1.6**	
AKASG				pmax	pmax				
	comp=Z,5.0nm,0.7s								
AKASG	**Malin Array Be**	**71.96**	**320**	P	**P**		**23 19 35.3**	**-2.4**	
	comp=Z,5.3nm,0.7s,mb4.6,baz=49,slow=6.1,SNR=24								
AKASG				LR	LR		23 53 21.0		
	comp=Z,169nm,18.1s,MS4.3,baz=55,slow=38								
AKBB	**Malin Array Si**	**71.96**	**320**	*eP*	**P**		**23 19 39.5**	**+1.8**	
KIEV	**Kiev**	**71.97**	**320**	*eP*	**P**		**23 19 39.1**	**+1.3**	
	comp=Z,8.7nm,0.8s,mb4.7								
KIEV	**Kiev**	**71.97**	**320**	*eP*	**P**		**23 19 39.1**	**+1.2**	
KIEV				pmax	pmax				
	comp=Z,9.0nm,0.8s,mb4.8								
NB2	**NORSAR Subarra**	**72.66**	**336**	P	**P**		**23 19 39.5**	**-2.3**	
	comp=Z,4.0nm,0.8s,mb4.4,baz=41,slow=6.2								
NB2	**NORSAR Subarra**	**72.66**	**336**	P	**P**		**23 19 39.5**	**-2.3**	
NB2				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4								
NOA	**NORSAR Array B**	**72.66**	**336**	P	**P**		**23 19 39.6**	**-2.2**	
	comp=Z,1.0nm,0.6s,mb3.9,baz=43,slow=5.9,SNR=6.2								
NOA				LR	LR		23 53 16.1		
	comp=Z,77nm,20.0s,MS4.0,baz=15,slow=37								
LVV	**L'vov**	**75.11**	**322**	*eP*	**P**		**23 19 59.0**	**+2.6**	
FCC	**Fort Churchill**	**75.52**	**25**	*eP*	**P**		**23 19 57.5**	**-1.0**	
	comp=Z,26nm,1.2s,mb5.0								
FCC				*e*PP	PP		23 22 49.2	+2.0	
FCC	**Fort Churchill**	**75.52**	**25**	*eP*	**P**		**23 19 57.5**	**-1.0**	
FCC				*e*			23 22 49.2		
FCC				pmax	pmax				
	comp=Z,26nm,1.2s,mb5.0								
FFC	**Flin Flon**	**75.58**	**31**	*eP*	**P**		**23 19 58.2**	**-0.7**	
	comp=Z,9.2nm,0.9s,mb4.7								
FFC	**Flin Flon**	**75.58**	**31**	*eP*	**P**		**23 19 58.2**	**-0.7**	
FFC				pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.7								
CMB	**Columbia Colle**	**76.77**	**52**	*eP*	**P**		**23 20 06.6**	**+0.6**	
	comp=Z,18nm,1.2s,mb4.9								
CMB				*e*	pP		23 20 11.0	-1.3	
CMB	**Columbia Colle**	**76.77**	**52**	*eP*	**P**		**23 20 06.6**	**+0.6**	
CMB				*e*	pP		23 20 11.0	-1.3	
CMB				pmax	pmax				
	comp=Z,18nm,1.2s,mb4.9								
DLMT	**Dillon**	**76.82**	**43**	*eP*	**P**		**23 20 06.5**	**+0.3**	
	comp=Z,30nm,0.9s,mb5.2								
BOZ	**Bozeman (W)**	**77.16**	**42**	*eP*	**P**		**23 20 08.7**	**+0.6**	
	comp=Z,16nm,1.2s,mb4.8								
BOZ				*e*	pP		23 20 13.1	-1.3	
BOZ	**Bozeman (W)**	**77.16**	**42**	*eP*	**P**		**23 20 08.7**	**+0.6**	
BOZ				*e*	pP		23 20 13.1	-1.3	
BOZ				pmax	pmax				
	comp=Z,16nm,1.2s,mb4.8								
QLMT	**Earthquake Lak**	**77.80**	**43**	P	**P**		**23 20 12.3**	**+0.7**	
DPC	**Dobruska-Polom**	**78.40**	**326**	*eP*	**P**		**23 20 17.7**	**+2.8**	
IMW	**Indian Meadow**	**78.67**	**43**	*eP*	**P**		**23 20 17.8**	**+1.2**	
	comp=Z,14nm,1.0s,mb4.9								
IMW				*e*	pP		23 20 22.1	-0.7	
FLWY	**Flagg Ranch**	**78.68**	**43**	*eP*	**P**		**23 20 17.5**	**+1.0**	
	comp=Z,56nm,1.7s,mb5.2								
FLWY				*e*	pP		23 20 22.9	0.0	
BRG	**Berggiesshubel**	**79.07**	**327**	*eP*	**P**		**23 20 17.2**	**-1.4**	
BRG				pmax	pmax				
	comp=Z,1.0nm,0.6s,mb3.9								
BRG	**Berggiesshubel**	**79.07**	**327**	*e*(P)	**P**		**23 20 17.2**	**-1.4**	
	comp=Z,1.5nm,0.6s,mb4.1								
CLL	**Collm**	**79.16**	**328**	⇑*i*P	**P**		**23 20 21.2**	**+2.2**	
	comp=Z,10.0nm,1.3s,mb4.6								
CLL				*e*S	S		23 30 21.0	+3.5	
CLL	**Collm**	**79.16**	**328**	⇑*i*P	**P**		**23 20 21.2**	**+2.2**	
CLL				*e*S	S		23 30 21.0	+3.5	
CLL				pmax	pmax				
	comp=Z,10.0nm,1.3s,mb4.6								
CLL	**Collm**	**79.16**	**328**	*eP*	**P**		**23 20 17.0**	**-2.0**	
CLL				⇑*i*P(2)	pP		23 20 21.2	-4.2	
	comp=Z,10.0nm,1.3s								
CLL				*e*S	S		23 30 21.0	+3.5	
CLL				*e*SS	SS		23 35 36.0	+13	
AHID	**Auburn Hatcher**	**79.33**	**44**	*eP*	**P**		**23 20 21.1**	**+1.0**	
	comp=Z,5.0nm,0.7s,mb4.5								
AHID				*e*	pP		23 20 25.3	-1.2	
PRU	**Pruhonice**	**79.45**	**326**	*eP*	**P**		**23 20 23.9**	**+3.2**	
TREC	**Trest**	**79.53**	**325**	*eP*	**P**		**23 20 24.3**	**+3.2**	
DUG	**Dugway**	**80.03**	**47**	*eP*	**P**		**23 20 24.9**	**+0.9**	
	comp=Z,9.8nm,1.0s,mb4.7								
DUG				*e*PcP	PcP		23 20 31.6	+0.1	
DUG	**Dugway**	**80.03**	**47**	*eP*	**P**		**23 20 24.9**	**+0.9**	
DUG				*e*	pP		23 20 31.6	+1.3	
DUG				pmax	pmax				
	comp=Z,10.0nm,1.0s,mb4.7								
TPNV	**Topopah Spring**	**80.03**	**51**	P	**P**		**23 20 25.2**	**+1.1**	
	comp=Z,13nm,0.9s,mb4.9								
TPNV				*e*PcP	PcP		23 20 31.6	+0.1	
TPNV	**Topopah Spring**	**80.03**	**51**	P	**P**		**23 20 25.2**	**+1.1**	
TPNV				*e*	pP		23 20 31.6	+1.2	
TPNV				pmax	pmax				
	comp=Z,13nm,0.9s,mb4.9								
PDAR	**Pinedale Array**	**80.18**	**43**	P	**P**		**23 20 24.8**	**0.0**	
	comp=Z,5.7nm,0.8s,mb4.6,baz=318,slow=2.0,SNR=23								
PDAR				LR	LR		23 57 10.6		
	comp=Z,63nm,18.2s,MS4.0,baz=61,slow=37								
KHC	**Kasperske Hory**	**80.51**	**326**	*eP*	**P**		**23 20 29.7**	**+3.3**	
KHC	**Kasperske Hory**	**80.51**	**326**	*eP*	**P**		**23 20 24.9**	**-1.5**	
KHC	**Kasperske Hory**	**80.51**	**326**	*eP*	**P**		**23 20 24.5**	**-1.9**	
KHC				*ex*	x		23 20 29.7		
GERES	**GERESS Array B**	**80.66**	**326**	P	**P**		**23 20 25.4**	**-1.9**	
	comp=Z,0.3nm,0.4s,mb3.6,baz=39,slow=8.6,SNR=3.8								
GERES				LR	LR		23 59 43.2		
	comp=Z,150nm,19.9s,MS4.3,baz=65,slow=38								
GRA1	**Grafenberg Arr**	**81.12**	**328**	*eP*	**P**		**23 20 28.4**	**-1.3**	
	comp=Z,7.0nm,1.2s,mb4.5								
GRA1				*e*pP	pP		23 20 33.1	-2.9	
GRA1				*e*			23 20 46.1		
GRF	**Grafenberg Arr**	**81.12**	**328**	*eP*	**P**		**23 20 28.4**	**-1.3**	
GRF				*e*			23 20 46.1		
GRF				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5								
GRF	**Grafenberg Arr**	**81.12**	**328**	*eP*	**P**		**23 20 28.4**	**-1.3**	
GRF				*e*			23 20 46.1		
GRF				pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.5								
GRF	**Grafenberg Arr**	**81.12**	**328**	*e*P	**P**		**23 20 28.4**	**-1.3**	
	comp=Z,7.0nm,1.2s,mb4.5								
GRF				*e*pP	pP		23 20 33.1	-2.9	
GRF				*e*			23 20 46.1		
ULM	**Lac du Bonnet**	**81.40**	**31**	P	**P**		**23 20 29.8**	**-1.4**	
ULM	**Lac du Bonnet**	**81.40**	**31**	P	**P**		**23 20 29.8**	**-1.4**	
	comp=Z,6.1nm,1.1s,mb4.4,baz=320,slow=9.2,SNR=5.6								
PFO	**Pinyon Flat Ob**	**82.00**	**54**	P	**P**		**23 20 34.8**	**+0.1**	
	comp=Z,10nm,0.9s,mb4.8,baz=332,slow=15,SNR=2.0								
SRU	**San Rafael**	**82.07**	**46**	*eP*	**P**		**23 20 35.6**	**+0.7**	
	comp=Z,4.3nm,0.8s,mb4.4								
SRU				*e*	pP		23 20 39.8	-1.5	
SRU	**San Rafael**	**82.07**	**46**	*eP*	**P**		**23 20 35.6**	**+0.7**	
SRU				pmax	pmax				
	comp=Z,4.0nm,0.8s,mb4.4								
CDF	**Champ du Feu**	**83.76**	**329**	*eP*	**P**		**23 20 41.8**	**-1.7**	
SMCO	**Snowmass**	**84.05**	**45**	*eP*	**P**		**23 20 45.6**	**+0.4**	
	comp=Z,6.3nm,1.1s,mb4.7								
SMCO				*e*PcP	PcP		23 20 50.5	+1.4	
ISCO	**Idaho Springs**	**84.37**	**43**	*eP*	**P**		**23 20 47.0**	**+0.2**	
	comp=Z,5.4nm,0.3s,mb5.2								
ISCO	**Idaho Springs**	**84.37**	**43**	*eP*	**P**		**23 20 47.0**	**+0.2**	
ISCO				pmax	pmax				
	comp=Z,5.0nm,0.3s,mb5.1								
LOR	**Lormes**	**86.06**	**330**	*eP*	**P**		**23 20 52.8**	**-2.3**	
	comp=Z,17nm,1.1s,mb4.9								
LOR	**Lormes**	**86.06**	**330**	*eP*	**P**		**23 20 52.8**	**-2.3**	
	comp=Z,8.4nm,1.1s,mb4.9								
LOR	**Lormes**	**86.06**	**330**	*eP*	**P**		**23 20 52.8**	**-2.3**	
LOR				pmax	pmax				
	comp=Z,8.0nm,1.1s,mb4.9								
SCHQ	**Schefferville**	**86.20**	**13**	P	**P**		**23 20 52.4**	**-3.3**	
	comp=Z,5.9nm,1.0s,mb4.8,baz=342,slow=4.2,SNR=6.2								
SSF	**Saint Saulge**	**86.37**	**330**	*eP*	**P**		**23 20 55.4**	**-1.2**	
	comp=Z,11nm,1.1s,mb4.7								
SSF	**Saint Saulge**	**86.37**	**330**	*eP*	**P**		**23 20 55.4**	**-1.2**	
	comp=Z,5.5nm,1.1s,mb4.7								
SSF	**Saint Saulge**	**86.37**	**330**	*eP*	**P**		**23 20 55.4**	**-1.2**	
SSF				pmax	pmax				
	comp=Z,6.0nm,1.1s,mb4.7								
SMF	**Signal de Mont**	**86.58**	**330**	*eP*	**P**		**23 20 55.7**	**-1.9**	
AVF	**Avril sur Loir**	**86.65**	**330**	*eP*	**P**		**23 20 56.0**	**-2.0**	
	comp=Z,9.9nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**86.65**	**330**	*eP*	**P**		**23 20 56.0**	**-2.0**	
	comp=Z,4.9nm,0.8s,mb4.8								
AVF	**Avril sur Loir**	**86.65**	**330**	*eP*	**P**		**23 20 56.0**	**-2.0**	
AVF				pmax	pmax				
	comp=Z,5.0nm,0.8s,mb4.8								
ANMO	**Albuquerque**	**87.28**	**47**	⇑*eP*	**P**		**23 21 02.4**	**+1.1**	
TORD	**Torodi Ar. Bea**	**114.60**	**311**	PKP	PKiKP		23 26 52.7	-2.6	
	comp=Z,0.6nm,0.7s,baz=11,slow=1.9,SNR=2.7								
MAW	**Mawson**	**118.05**	**205**	PKP	PKPdf		23 26 59.0	-1.2	
	comp=Z,2.3nm,0.9s,baz=38,slow=9.1,SNR=3.5								
DBIC	**Dimbokro**	**123.63**	**312**	PKP	PKPdf		23 27 10.8	-1.9	
	comp=Z,1.8nm,0.6s,baz=41,slow=4.0,SNR=7.0								
LPAZ	**La Paz**	**149.71**	**53**	PKPbc	PKPbc		23 28 05.0	+0.4	
	comp=Z,1.0nm,0.6s,baz=22,slow=2.2,SNR=3.3								

*ISCJB **27** 23:13:19.7±2.1, 183S±0.1×1755W±0.1, h154km±25km, mb4.3/10, Error ellipse: s-maj=21.0km s-min=19.2km az=39.0*
*IDC **27** 23:13:20.8±11.0, 1824S×17549W, h154km±94km, mb4.1/10, mb1 4.2/10, mb1mx4.0/17, mbtmp4.1/10, Error ellipse: s-maj=47.8km s-min=19.8km az=48.0*
*NEIC **27** 23:13:21.2±1.4, 1824S×17532W, h166km±15km, mb4.4/4, Error ellipse: s-maj=18.7km s-min=12.2km az=124.0*

ISC 27 23:13:21.0±1.9, 183S±01×1755W±01, h152km±23km, n24, σ0s98/20, mb4.3/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.66**	**40**	*e*Pn	**Pn**	**23 14 41.3**	**-2.0**
AFI				*e*Sn	**Sn**	**23 15 49.2**	**+1.7**
URZ	**Urewera**	**20.89**	**196**	P	**P**	**23 17 51.2**	**0.0**
	11nm,0.5s,baz=333,slow=5.4,SNR=18						
RPZ	**Rata Peaks**	**27.74**	**201**	P	**P**	**23 18 55.4**	**+0.2**
	6.0nm,0.6s,mb4.5,baz=11,slow=5.2,SNR=3.9						
ARMA	**Armidale**	**32.16**	**242**	*eP*	**P**	**23 19 37.4**	**+3.1**
CTA	**Charters Tower**	**36.11**	**261**	*eP*	**P**	**23 20 09.1**	**+0.6**
	5.9nm,1.0s,mb4.2						
CTA	**Charters Tower**	**36.11**	**261**	P	**P**	**23 20 08.4**	**-0.1**
	5.1nm,0.5s,mb4.4,baz=99,slow=12,SNR=7.6						
CTAO	**Charters Tower**	**36.11**	**261**	*eP*	**P**	**23 20 09.2**	**+0.6**
	5.8nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**40.87**	**242**	P	**P**	**23 20 48.8**	**+0.6**
	2.7nm,0.4s,mb4.2,baz=84,slow=8.8,SNR=8.4						
WB2	**Warramunga Arr**	**47.27**	**260**	*eP*	**P**	**23 21 38.6**	**-0.7**
WRA	**Warramunga Arr**	**47.28**	**260**	P	**P**	**23 21 38.2**	**-1.1**
	2.7nm,0.4s,mb4.2,baz=98,slow=7.4,SNR=112						
ASAR	**Alice Springs**	**47.34**	**254**	P	**P**	**23 21 40.0**	**+0.1**
	31nm,0.6s,mb5.1,baz=90,slow=8.6,SNR=301						
FITZ	**Fitzroy Crossi**	**55.69**	**260**	*eP*	**P**	**23 22 41.7**	**-0.2**
	4.6nm,0.3s,mb4.8						
FITZ	**Fitzroy Crossi**	**55.69**	**260**	P	**P**	**23 22 41.9**	**0.0**
	2.4nm,0.3s,mb4.5,baz=112,slow=6.1,SNR=10						
VNDA	**Vanda**	**60.29**	**186**	P	**P**	**23 23 13.7**	**+0.8**
	1.1nm,0.3s,mb4.2,baz=32,slow=4.4,SNR=15						
MJAR	**Matsushiro Arr**	**69.92**	**322**	P	**P**	**23 24 15.9**	**+0.3**
	0.7nm,0.4s,mb3.8,baz=156,slow=5.5,SNR=3.2						
QSPA	**South Pole Qui**	**71.74**	**180**	*eP*	**P**	**23 24 26.5**	**+0.5**
	7.2nm,1.0s,mb4.4						
MAW	**Mawson**	**84.40**	**199**	P	**P**	**23 25 34.8**	**-1.1**
	2.0nm,0.6s,mb4.1,baz=150,slow=5.7,SNR=7.8						
VNA3	**Neumayer Olymp**	**90.13**	**175**	*e*Pdiff	**P**	**23 26 03.9**	**+0.5**
VNA3				*e*		23 26 05.7	
VNA3				*e*		23 26 08.7	
VNA2	**Neumayer--Watz**	**90.61**	**176**	*e*Pdiff	**P**	**23 26 04.4**	**-1.2**
	baz=312,slow=5.5						
VNA2				*e*		23 26 05.8	
VNA2				*e*		23 26 09.2	
MKAR	**Makanchi Array**	**111.41**	**314**	PKiKP	PKiKP	23 31 34.8	-2.1
	0.2nm,0.9s,baz=122,slow=0.4,SNR=4.5						
KURK	**Kurchatov**	**113.98**	**318**	*e*PKiKP	PKiKP	23 31 41.4	-0.3
BRVK	**Borovoye**	**118.97**	**321**	*e*PKPdf	PKPdf	23 31 49.4	-1.9
GERES	**GERESS Array B**	**148.65**	**348**	PKPbc	PKPbc	23 32 48.3	-1.7
	0.4nm,0.5s,baz=338,slow=3.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**174.19**	**152**	PKPab	PKPab	23 34 46.2	+0.6
	0.8nm,1.1s,baz=174,slow=2.9,SNR=2.4						

IGQ 27 23:24:38.1, 077S×7916W, h21km±3km, Mb4.1, Ms3.9, 5C-13D, Error ellipse: s-maj=1.5km s-min=0.7km az=172.5, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VC1	**Cotopaxi 1**	**0.77**	**81**	⇓P	Pb	23 24 54.2	+1.4
JUA2	**San Juan 2**	**0.79**	**45**	⇓P	Pb	23 24 53.9	+0.8
PORT	**Chimborazo Vol**	**0.79**	**150**	⇓P	Pb	23 24 54.0	+0.8
PORT	**Chimborazo Vol**	**0.79**	**150**	⇓S	Sb	23 25 05.5	+2.0
TAMB	**Tambo**	**0.80**	**85**	⇓P	Pb	23 24 54.4	+1.1
TERV	**Terraza Guagua**	**0.81**	**43**	⇓P	Pb	23 24 54.2	+0.6
TERV	**Terraza Guagua**	**0.81**	**43**	⇓S	Sb	23 25 06.1	+1.9
GGP	**Refugio Guagua**	**0.82**	**44**	⇓P	Pb	23 24 54.3	+0.6
PINO	**Pino**	**0.82**	**42**	⇓P	Pb	23 24 54.3	+0.5
YANA	**Yana**	**0.88**	**42**	P	Pb	23 24 55.0	+0.3
IGUA	**Igualata**	**0.89**	**144**	⇑P	Pb	23 24 55.6	+0.7
IGUA	**Igualata**	**0.89**	**144**	⇑S	Sb	23 25 07.7	+1.5
MAG1	**Magdalena**	**0.92**	**319**	⇓P	Pb	23 24 55.4	-0.1
BILB	**Tungurahua vol**	**0.94**	**135**	P	Pb	23 24 56.4	+0.7
BILB	**Tungurahua vol**	**0.94**	**135**	S	Sb	23 25 08.3	+0.5
RUN5	**Runtun**	**0.98**	**131**	⇓P	Pb	23 24 57.3	+0.9
ULBA	**Ulba**	**1.01**	**132**	P	Pb	23 24 57.8	+0.8
ARRY	**Arrayan**	**1.02**	**136**	⇑P	Pb	23 24 57.3	+0.2
ANTI	**Antisana**	**1.05**	**72**	⇓P	Pb	23 24 58.3	+0.7
COTA	**Cotacachi**	**1.37**	**37**	⇓P	Pn	23 25 03.9	+1.8
CAYR	**Refugio Cayamb**	**1.40**	**56**	⇑P	Pn	23 25 05.0	+2.6
CAYA	**Cayambe**	**1.44**	**55**	⇑P	Pn	23 25 05.7	+2.7

*BJI **27** 23:41:39.6, 690S×13070E, h43km, mB5.0, mb4.8, Ms4.5, Ms24.1*
*ISCJB **27** 23:41:40.6±1.8, 691S±006×13059E±007, h46km±17km, mb4.8/30, MS3.6/5, Error ellipse: s-maj=13.8km s-min=7.5km az=138.4*
*NEIC **27** 23:41:41.7±1.1, 686S×13069E, h43km±9km, mb4.5/12, Error ellipse: s-maj=13.5km s-min=5.9km az=64.0*
*IDC **27** 23:41:43.0±3.7, 687S×13038E, h47km±34km, mb4.2/8, mb1 4.3/10, mb1mx4.2/15, mbtmp4.3/10, ML4.8/2, MS3.0/3, Ms1 3.0/3, ms1mx2.9/17, Error ellipse: s-maj=35.0km s-min=15.8km az=63.0*

ISC 27 23:41:42.3±1.4, 688S±007×13063E±007, h44km±14km, n87, σ0s88/65, mb4.8/30, MS3.6/5, 2C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.07**	**163**	⇑*i*P	**Pn**	**23 43 13.1**	**+3.6**
	79nm,0.3s						
KAKA				*e*S	**Sn**	**23 44 18.4**	**+0.8**
BATI	**Kupang**	**7.64**	**244**	P	**Pn**	**23 43 35.1**	**+4.0**
	54nm,0.3s,baz=100,slow=4.7,SNR=20						
BATI				S	**Sn**	**23 44 56.6**	**+0.2**
	28nm,0.3s,baz=342,slow=20,SNR=4.7						
FITZ	**Fitzroy Crossi**	**12.17**	**203**	*eP*	**Pn**	**23 44 32.4**	**-0.7**
	20nm,0.2s						
FITZ				*e*S	**Sn**	**23 46 35.9**	**-12**
FITZ	**Fitzroy Crossi**	**12.17**	**203**	*e*Pn	**Pn**	**23 44 32.4**	**-0.7**
FITZ				*e*Sn	**Sn**	**23 46 36.9**	**-11**
FITZ	**Fitzroy Crossi**	**12.17**	**203**	P	**Pn**	**23 44 31.7**	**-1.4**
	5.4nm,0.3s,baz=28,slow=12,SNR=62						
FITZ				S	**Sn**	**23 46 36.7**	**-11**
	3.4nm,0.3s,baz=133,slow=19,SNR=7.6						
FITZ				LR	LR	23 49 04.1	
	comp=Z,94nm,19.6s,baz=17,slow=36						
WRA	**Warramunga Arr**	**13.48**	**165**	P	**Pn**	**23 44 49.7**	**-1.2**
	3.5nm,0.3s,baz=342,slow=14,SNR=136						
WRA				S	**Sn**	**23 47 11.3**	**-8.1**
	13nm,0.3s,baz=339,slow=22,SNR=14						
WB2	**Warramunga Arr**	**13.48**	**165**	*eP*	**Pn**	**23 44 50.0**	**-1.0**
WB2				*e*S	**Sn**	**23 47 05.9**	**-14**
ASAR	**Alice Springs**	**16.99**	**170**	P	**Pn**	**23 45 36.6**	**-0.2**
	2.5nm,0.3s,baz=339,slow=9.7,SNR=119						
ASAR				S	**S**	**23 48 36.9**	**-16**
	2.4nm,0.3s,baz=354,slow=26,SNR=8.1						
MBWA	**Marble Bar**	**17.68**	**216**	*e*Pn	**Pn**	**23 45 45.1**	**-0.4**
	92nm,1.8s						
KKM	**Kota Kinabalu**	**19.28**	**311**	*eP*	**Pn**	**23 46 05.4**	**+0.6**
CTA	**Charters Tower**	**20.06**	**132**	⇓*i*P	**P**	**23 46 16.0**	**+4.1**
	7.8nm,0.6s						
CTA	**Charters Tower**	**20.06**	**132**	P	**P**	**23 46 15.3**	**+3.4**
	13nm,0.7s,baz=303,slow=11,SNR=19						
CTA				S	**S**	**23 49 50.1**	**-5.0**
	3.1nm,0.7s,baz=58,slow=19,SNR=2.2						
KSM	**Kuching**	**21.91**	**292**	*eP*	**P**	**23 46 33.5**	**+1.5**
STKA	**Stephens Creek**	**26.90**	**159**	*eP*	**P**	**23 47 20.9**	**+1.7**
STKA	**Stephens Creek**	**26.90**	**159**	P	**P**	**23 47 20.6**	**+1.4**
	1.3nm,0.3s,mb3.9,baz=311,slow=6.7,SNR=5.2						
HNR	**Honiara**	**29.13**	**97**	LR	LR	23 58 31.1	
	comp=Z,59nm,20.9s,MS3.2,baz=4.0,slow=34						
NACB	**Ninganchiao**	**32.10**	**344**	P	**P**	**23 48 03.8**	**-1.6**
YHNB	**Yeheng**	**32.63**	**344**	*eP*	**P**	**23 48 10.1**	**0.0**
PSI	**Prapat**	**33.08**	**286**	P	**P**	**23 48 13.5**	**-0.7**
	4.1nm,0.4s,mb4.7,baz=22,slow=17,SNR=7.8						
NJ2	**Nanjing**	**40.31**	**344**	*eP*	**P**	**23 49 16.3**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
CHTO	**Chiang Mai**	**40.34**	**310**	*eP*	**P**	**23 49 15.2**	**-0.7**
	comp=Z,5.8nm,0.6s,mb4.5						
KMI	**Kunming**	**41.81**	**321**	P	**P**	**23 49 29.5**	**+1.5**
KMI				AP	pP	23

KIS	**Kishinev**	**103.05**	**317**	LRM			23 55 16.0	
	comp=Z,200nm,16.0s							
YKA	**Yellowknife Ar**	**107.37**	**26**	PKPdf	PKiKP		00 00 02.9	-0.8
YKA	**Yellowknife Ar**	**107.37**	**26**	PKiKP	PKiKP		00 00 02.9	-0.8
	comp=Z,0.2nm,0.5s,baz=276,slow=2.5,SNR=4.6							
GERES	**GERESS Array B**	**112.73**	**320**	PKiKP	PKiKP		00 00 13.5	-0.7
	comp=Z,1.1nm,0.6s,baz=64,slow=3.1,SNR=8.9							
ARUT	**Antelope Range**	**114.62**	**52**	Pdif	Pdif		23 56 24.3	-3.4
CDF	**Champ du Feu**	**116.90**	**321**	*e*PKIKP	PKPdf		00 00 21.6	-0.6
HINF	**Hinteralfeld**	**117.38**	**321**	*e*PKIKP	PKPdf		00 00 22.0	-1.2
	comp=Z,4.1nm,0.6s							
LPG	**La Plagne**	**118.28**	**318**	*e*PKIKP	PKPdf		00 00 24.7	-0.3
	comp=Z,2.6nm,0.5s							
LPL	**La Plagne**	**118.29**	**318**	*e*PKIKP	PKPdf		00 00 24.5	-0.5
	comp=Z,4.9nm,0.6s							
CABF	**La Chapelle**	**118.31**	**320**	*e*PKIKP	PKPdf		00 00 24.6	-0.4
	comp=Z,6.3nm,0.5s							
MBDF	**Montbardon**	**118.54**	**318**	*e*PKIKP	PKPdf		00 00 25.1	-0.4
	comp=Z,7.2nm,0.7s							
ORIF	**Oris-en-Rattie**	**119.06**	**318**	*e*PKIKP	PKPdf		00 00 25.7	-0.8
	comp=Z,3.0nm,0.5s							
KEST	**Kesra**	**119.25**	**307**	PKP	PKPdf		00 00 26.9	-0.3
	comp=Z,0.4nm,0.6s,baz=68,slow=21,SNR=7.0							
LOR	**Lormes**	**119.46**	**321**	*e*PKIKP	PKPdf		00 00 26.4	-0.8
SMF	**Signal de Mont**	**119.73**	**321**	*e*PKIKP	PKPdf		00 00 27.1	-0.6
SSF	**Saint Saulge**	**119.77**	**321**	*e*PKIKP	PKPdf		00 00 27.2	-0.6
	comp=Z,4.0nm,0.5s							
VIVF	**Saint-Julien-l**	**119.89**	**318**	*e*PKIKP	PKPdf		00 00 28.1	0.0
	comp=Z,3.1nm,0.6s							
AVF	**Avril sur Loir**	**119.97**	**321**	*e*PKIKP	PKPdf		00 00 27.2	-1.0
	comp=Z,1.5nm,0.4s							
BGF	**Bois d'Agland**	**120.39**	**321**	*e*PKIKP	PKPdf		00 00 28.6	-0.4
	comp=Z,5.0nm,0.6s							
TCF	**Toulx Ste Croi**	**120.90**	**321**	*e*PKIKP	PKPdf		00 00 29.5	-0.5
	comp=Z,5.5nm,0.8s							
LDF	**La Druitiere**	**121.28**	**324**	*e*PKIKP	PKPdf		00 00 30.2	-0.5
FLN	**La Foliniere**	**121.41**	**324**	*e*PKIKP	PKPdf		00 00 30.2	-0.7
MTLF	**Montolieu**	**122.10**	**318**	*e*PKIKP	PKPdf		00 00 31.6	-0.8
	comp=Z,3.4nm,0.6s							
MFF	**Saint Martin d**	**122.23**	**322**	*e*PKIKP	PKPdf		00 00 31.9	-0.7
	comp=Z,7.8nm,0.6s							
EPF	**Esparros**	**123.48**	**318**	*e*PKIKP	PKPdf		00 00 34.4	-0.7
TORD	**Torodi Ar. Bea**	**129.40**	**281**	PKP	PKPdf		00 00 46.5	-0.7
	comp=Z,2.1nm,0.6s,baz=88,slow=1.4,SNR=10							
DBIC	**Dimbokro**	**135.81**	**272**	PKP	PKPdf		00 00 59.7	+0.4
	comp=Z,2.0nm,0.5s,baz=360,slow=2.1,SNR=10							
LPAZ	**La Paz**	**150.43**	**141**	PKPbc	PKPbc		00 01 31.9	+1.8
LPAZ	**La Paz**	**150.43**	**141**	PKPbc	PKPbc		00 01 31.9	+1.8
	comp=Z,2.5nm,0.4s,baz=36,slow=2.0,SNR=22							

CSEM ***28*** *00:13:23.7±0.4, 3830N×2030E, h0km±2km, MD3.5, Error ellipse: s-maj=7.8km s-min=2.9km az=61.0*
THE ***28*** *00:13:23.9, 3835N×2031E, h3km, ML3.4*
ISCJB ***28*** *00:13:24.2±0.8, 3836N±003×2039E±006, h10km, Error ellipse: s-maj=7.2km s-min=3.6km az=156.3*
ATH ***28*** *00:13:24.9, 3832N×2045E, h7km±2km, MD3.5/8*
NEIC ***28*** *00:13:24.9, 3832N×2045E, h7km, MD3.5(ATH), After ATH.*

ISC 28 00:13:24.6±0.8, 3833N±003×2038E±006, h10km, n15, σ0§90/23, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.23**	**133**	*e*PG	**Pg**	**00 13 28.6**	**-0.7**
VLS				*e*SG	**Sg**	**00 13 32.2**	**-0.2**
KFL	**Anninata**	**0.39**	**124**	*e*Pg	**Pg**	**00 13 31.3**	**-1.0**
KFL				*e*Sg	**Sg**	**00 13 38.7**	**+1.2**
LKD	**Levkas**	**0.43**	**30**	*e*Pg	**Pg**	**00 13 32.1**	**-0.9**
LKD				*e*Sg	**Sg**	**00 13 39.0**	**+0.3**
RLS	**Riolos of Patr**	**0.90**	**107**	*e*PB	**Pg**	**00 13 40.9**	**-1.0**
IGT	**Igoumenitsa**	**1.20**	**358**	*e*Pg	**Pg**	**00 13 46.6**	**-1.0**
IGT				*e*Sg	**Sg**	**00 14 02.3**	**-0.8**
EVR	**Evrytania**	**1.26**	**62**	*e*PN	**Pn**	**00 13 47.3**	**-1.0**
EVR				*e*SB	**Sg**	**00 14 04.8**	**-0.5**
JAN	**Janina**	**1.37**	**15**	*e*PG	**Pg**	**00 13 50.3**	**-0.6**
JAN				*e*SB	**Sb**	**00 14 09.2**	**+1.3**
KEK	**Kerkira**	**1.45**	**342**	*e*PB	**Pg**	**00 13 52.9**	**+0.5**
SRN	**Sarande**	**1.57**	**349**	*i* Pn	**Pg**	**00 13 54.3**	**-0.4**
SRN				*i* Sn	**Sn**	**00 14 14.2**	**+1.3**
AGG	**Agios Georgios**	**1.68**	**65**	*e*Pb	**Pb**	**00 13 55.4**	**-0.1**
AGG				*e*Sb	**Sg**	**00 14 18.8**	**+0.3**
ITM	**Ithomi**	**1.68**	**133**	*e*PB	**Pb**	**00 13 56.0**	**+0.4**
THL	**Klokotos Trika**	**1.77**	**46**	*e*PN	**Pg**	**00 13 57.7**	**-0.9**
LTK	**Loutraki**	**2.06**	**98**	*e*Pn	**Pn**	**00 14 00.4**	**+1.1**
LKR	**Lokris**	**2.08**	**80**	*e*PN	**Pn**	**00 14 01.6**	**+2.1**
FNA	**Florina**	**2.57**	**17**	*e*Pn	**Pn**	**00 14 07.2**	**+1.0**

NEIC ***28*** *00:21:24.0, 3823N×2031E, h19km, MD3.6(ATH), After ATH.*
CSEM ***28*** *00:21:24.0, 3823N×2031E, h19km, MD3.6/6, After ATH*

ATH 28 00:21:23.9, 3820N×2031E, h21km±2km, MD3.6/6, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.22**	**96**	*e*PB	Pb	00 21 29.7	+0.3
VLS				*e*SB	Sb	00 21 33.8	+0.6
RLS	**Riolos of Patr**	**0.92**	**98**	*e*PN	Pn	00 21 41.2	-0.4
RLS				*e*SN	Sn	00 21 55.0	+0.8
EVR	**Evrytania**	**1.38**	**58**	*e*PN	Pn	00 21 49.9	+2.1
JAN	**Janina**	**1.51**	**16**	*e*PN	Pn	00 21 52.0	+2.2
JAN				*e*SN	Sn	00 22 11.8	+3.0
KEK	**Kerkira**	**1.56**	**345**	*e*PN	Pn	00 21 52.5	+2.1
THL	**Klokotos Trika**	**1.90**	**44**	*e*PN	Pn	00 21 57.1	+2.0

ISCJB ***28*** *00:34:36.9±0.4, 5149N±002×690E±004, h0km, Error ellipse: s-maj=4.1km s-min=2.8km az=30.1*
BUG ***28*** *00:34:38.9, 5150N×662E, h1km, ML1.4*
BGR ***28*** *00:34:39.0±0.6, 5153N×692E, h1km, ML2.1/3, Error ellipse: s-maj=6.7km s-min=3.3km az=116.0*
NEIC ***28*** *00:34:40.0, 5156N×676E, h1km, ML2.9(LDG), After LDG.*
BNS ***28*** *00:34:40.6±0.5, 5153N×683E, h1km, ML2.0*
CSEM ***28*** *00:34:40.2±0.2, 5155N×674E, h1km, ML2.9/9, Error ellipse: s-maj=3.3km s-min=3.2km az=147.0*
LDG ***28*** *00:34:40.0±0.2, 5156N×676E, h1km, Ml2.9/10, Error ellipse: s-maj=3.2km s-min=2.1km az=20.0, Suspected Mining induced.*

ISC 28 00:34:38.3±0.4, 5154N±002×687E±004, h0km, n49, σ1§24/82, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRHE	**Rheinberg**	**0.19**	**264**	Pg	**Pg**	**00 34 43.1**	**+1.2**
BRHE				Sg	**Sg**	**00 34 46.9**	**+2.6**
WTSB	**Winterswijk**	**0.43**	**354**	*e*Pg	**Pg**	**00 34 46.3**	**-0.2**
WTSB				*e*Sg	**Sg**	**00 34 52.9**	**+0.7**
WTSB	**Winterswijk**	**0.43**	**354**	*e*Sg	**Sg**	**00 34 52.9**	**+0.7**
BNS	**Bensberg**	**0.60**	**161**	*e*Pg	**Pg**	**00 34 52.1**	**+2.3**
HOBG	**Hohbusch**	**0.63**	**152**	*e*Pg	**Pg**	**00 34 52.5**	**+2.3**
STB	**Steinbach**	**0.94**	**181**	*e*Pg	**Pg**	**00 34 58.6**	**+2.3**
STB				*e*Sg	**Sg**	**00 35 11.4**	**+2.8**
	51nm,0.3s						
IBBN	**Ibbenburen**	**0.95**	**35**	*e*Pg	**Pg**	**00 34 56.9**	**+0.4**
	SNR=2.2						
IBBN				*e*Sg	**Sg**	**00 35 08.7**	**0.0**
	SNR=2.7						
KLL	**Kalltalsperre**	**0.96**	**202**	*e*Pg	**Pg**	**00 34 58.5**	**+1.9**
DREG	**Dreilaegerbach**	**0.96**	**205**	*e*Pg	**Pg**	**00 34 58.4**	**+1.7**
HGN	**Heimansgroeve**	**0.97**	**218**	*e*Pg	**Pg**	**00 34 58.3**	**+1.4**
HGN				*e*Sg	**Sg**	**00 35 11.9**	**+2.4**
HGN	**Heimansgroeve**	**0.97**	**218**	*e*Pg	**Pg**	**00 34 58.3**	**+1.4**
HGN				*e*Sg	**Sg**	**00 35 11.9**	**+2.4**
BEBN	**Eben Emael**	**1.05**	**226**	P	**Pg**	**00 34 59.7**	**+1.2**
BEBN	**Eben Emael**	**1.05**	**226**	P	**Pg**	**00 34 59.6**	**+1.1**
MEM	**Membach**	**1.08**	**211**	P	**Pg**	**00 34 60.0**	**+1.1**
MEM	**Membach**	**1.08**	**211**	P	**Pg**	**00 34 59.9**	**+1.0**
BGG	**Burgeitz**	**1.36**	**167**	*e*Pg	**Pg**	**00 35 05.2**	**+0.8**
BCLA	**Clavier**	**1.49**	**222**	P	**Pn**	**00 35 05.9**	**-0.4**
BCLA	**Clavier**	**1.49**	**222**	P	**Pn**	**00 35 05.8**	**-0.5**
TNS	**Taunus Mts**	**1.65**	**142**	*e*Pg	**Pg**	**00 35 09.8**	**-0.1**
	SNR=3.3						
TNS				*e*Sg	**Sg**	**00 35 31.1**	**-0.2**
	SNR=4.5						
WLF	**Walferdange**	**1.93**	**194**	*e*Pg	**Pg**	**00 35 16.0**	**+0.8**
	SNR=2.3						
WLF				*e*Sg	**Sg**	**00 35 39.6**	**-0.6**
	SNR=2.9						
GIVF	**Givet**	**1.94**	**223**	*e*Pg	**Pg**	**00 35 15.7**	**+0.4**
GIVF				*e*Sg	**Sg**	**00 35 39.9**	**-0.5**
	34nm,0.4s						
GIVF	**Givet**	**1.94**	**223**	*e*Pn	**Pn**	**00 35 11.7**	**-0.7**
GIVF				*e*Pg	**Pg**	**00 35 15.7**	**+0.4**
GIVF				*e*Sg	**Sg**	**00 35 39.9**	**-0.5**
GIVF	**Givet**	**1.94**	**223**	*e*Pg	**Pg**	**00 35 15.7**	**+0.4**
GIVF				*e*Sg	**Sg**	**00 35 39.9**	**-0.5**
	17nm,0.4s						
DOU	**Dourbes**	**2.04**	**226**	P	**Pn**	**00 35 12.9**	**-0.9**
DOU	**Dourbes**	**2.04**	**226**	P	**Pn**	**00 35 12.8**	**-1.0**
CLZ	**Clausthal**	**2.20**	**81**	*e*Pg	**Pg**	**00 35 19.3**	**-1.2**
	SNR=2.5						
CLZ				*e*Sg	**Sg**	**00 35 48.0**	**-0.9**
	SNR=2.4						
BAIF	**Baives**	**2.25**	**230**	*e*Pg	**Pg**	**00 35 20.5**	**-0.8**
BAIF				*e*Sg	**Sg**	**00 35 49.1**	**-1.2**
	7.4nm,0.3s						
BAIF	**Baives**	**2.25**	**230**	*e*Pn	**Pn**	**00 35 16.0**	**-0.6**
BAIF				*e*Pg	**Pg**	**00 35 20.5**	**-0.8**
BAIF				*e*Sg	**Sg**	**00 35 49.1**	**-1.2**
BAIF	**Baives**	**2.25**	**230**	*e*Pg	**Pg**	**00 35 20.5**	**-0.8**
BAIF				*e*Sg	**Sg**	**00 35 49.1**	**-1.2**
	3.7nm,0.3s						
RFYF	**Reffroy**	**3.05**	**198**	*e*Pn	**Pn**	**00 35 27.1**	**-0.5**
RFYF				*e*Sg	**Sg**	**00 36 15.2**	**-0.9**
	8.1nm,0.3s						
RFYF	**Reffroy**	**3.05**	**198**	*e*Pn	**Pn**	**00 35 27.1**	**-0.5**
RFYF				*e*Sg	**Sg**	**00 36 15.2**	**-0.9**
	4.1nm,0.3s						
MOX	**Moxa**	**3.12**	**105**	*e*Sg	**Sg**	**00 36 16.8**	**-1.8**
	SNR=2.8						
MOX	**Moxa**	**3.12**	**105**	*e*SG	**Sg**	**00 36 18.7**	**+0.2**
CDF	**Champ du Feu**	**3.14**	**175**	*e*Pn	**Pn**	**00 35 29.2**	**+0.3**
CDF				*e*Sg	**Sg**	**00 36 19.5**	**+0.4**
	4.2nm,0.4s						
CDF	**Champ du Feu**	**3.14**	**175**	*e*Pn	**Pn**	**00 35 29.2**	**+0.3**
CDF				*e*Sg	**Sg**	**00 36 19.5**	**+0.4**
	2.1nm,0.4s						
MEZF	**Maizieres J'vi**	**3.26**	**202**	*e*Pn	**Pn**	**00 35 30.6**	**+0.1**
	baz=16						
MEZF				*e*Sg	**Sg**	**00 36 22.3**	**-0.5**
	5.4nm,0.4s						
MEZF	**Maizieres J'vi**	**3.26**	**202**	*e*Pn	**Pn**	**00 35 30.6**	**+0.1**
MEZF				*e*Sg	**Sg**	**00 36 22.3**	**-0.5**
	2.7nm,0.4s						
LOR	**Lormes**	**4.70**	**206**	*e*Pn	**Pn**	**00 35 50.0**	**-0.4**
	baz=25						
LOR				*e*Sn	**Sn**	**00 36 42.1**	**-3.5**
LOR				*e*Sg	**Sg**	**00 37 07.0**	**-2.3**
	4.2nm,0.4s						
LOR	**Lormes**	**4.70**	**206**	*e*Pn	**Pn**	**00 35 50.0**	**-0.4**
LOR				*e*Sn	**Sn**	**00 36 42.1**	**-3.5**
LOR				*e*Sg	**Sg**	**00 37 07.0**	**-2.3**
	2.1nm,0.4s						
SSF	**Saint Saulge**	**4.99**	**207**	*e*Pn	**Pn**	**00 35 53.8**	**-0.6**
SSF				*e*Sg	**Sg**	**00 37 15.8**	**-2.7**
	4.2nm,0.4s						
SSF	**Saint Saulge**	**4.99**	**207**	*e*Pn	**Pn**	**00 35 53.8**	**-0.6**
SSF				*e*Sg	**Sg**	**00 37 15.8**	**-2.7**
	2.1nm,0.4s						
SMF	**Signal de Mont**	**5.28**	**203**	*e*Pn	**Pn**	**00 35 57.9**	**-0.5**
LDF	**La Druitiere**	**5.38**	**240**	*e*Sn	**Sn**	**00 36 57.9**	**-4.4**
FLN	**La Foliniere**	**5.48**	**242**	*e*Pn	**Pn**	**00 36 00.1**	**-1.0**
	baz=60						
FLN				*e*Sn	**Sn**	**00 36 58.7**	**-6.1**
BGF	**Bois d'Agland**	**5.64**	**210**	*e*Pn	**Pn**	**00 36 01.6**	**-1.7**
BGF				*e*Sn	**Sn**	**00 37 02.6**	**-6.1**
	5.9nm,0.4s						
BGF	**Bois d'Agland**	**5.64**	**210**	*e*Pn	**Pn**	**00 36 01.6**	**-1.7**
BGF				*e*Sn	**Sn**	**00 37 02.6**	**-6.1**
	3.0nm,0.4s						
GRR	**Gorron**	**5.90**	**241**	*e*Pn	**Pn**	**00 36 05.0**	**-1.8**
GRR				*e*Sn	**Sn**	**00 37 08.8**	**-6.2**
	3.0nm,0.2s						
GRR	**Gorron**	**5.90**	**241**	*e*Pn	**Pn**	**00 36 05.0**	**-1.8**
GRR				*e*Sn	**Sn**	**00 37 08.8**	**-6.2**
	1.5nm,0.2s						
PPT	**Papeete**	**141.30**	**322**	*e*LR	LR	00 53 37.3	
	77nm,23.0s						

BGS ***28*** *00:39:00.9, 4296N×1493E, h150km, mb4.7*
NIED ***28*** *00:39:00, 4460N×1463E, h190km, Mw5.0 Best double couple: M0 3.01000×10^16 NP1:φs 71.00000°, δ41.00000°, λ136.00000°. NP2:φs 197.00000°, δ63.00000°, λ58.00000°.*
SKHL ***28*** *00:39:17.0±0.2, 4489N×1463 2E, h182km±7km, mb5.9/3, mbh5.7/1, msh5.9/6*
SKHL Felt (II) at Yushno-Kurilsk.
IDC ***28*** *00:39:17.9±0.5, 4494N×1462 0E, h188km±4km, mb4.5/24, mb1 4.6/29, mb1mx4.6/31, mbtmp4.5/29, MS4.0/4, Ms1 4.0/4, ms1mx3.3/34, Error ellipse: s-maj=8.7km s-min=7.1km az=126.0*
MOS ***28*** *00:39:17.3±0.9, 4489N×1461 5E, h192km, mb4.9/92, Error ellipse: s-maj=6.7km s-min=4.2km az=104.7*
MOS Felt (II) at Yuzhno-Kuril'sk.
JMA ***28*** *00:39:18.9±0.3, 4465N×1463 3E, h194km±3km, M5.1*
JMA Felt II J1.
BJI ***28*** *00:39:18.2, 4506N×1460 7E, h196km, mB4.8, mb5.3*
SZGRF ***28*** *00:39:18.0, 4480N×1470 0E, h205km, mb5.0, Kuril Islands, Russia*
ISCJB ***28*** *00:39:18.1±0.1, 4482N±002×1461 7E±002, h201km, mb4.8/253, Error ellipse: s-maj=2.8km s-min=1.5km az=159.4*
GCMT ***28*** *00:39:19.8±0.4, 4490N×1462 8E, h210km±2km, MW5.0/80, Moment Tensor Solution. s28,c34; s80,c115; Duration: 0 Moment tensor: Scale 10^16 Nm; Mw 2.11±.12; Mrr 0.20±.17; Mθθ -2.31±.17; Mφφ 1.23±.10; Mrθ -2.28±.11; Mrφ -1.91±.10; Best double couple: M0 3.90700×10^16 NP1:φs 64.00000°, δ48.00000°, λ147.00000°. NP2: φs 177.00000°, δ66.00000°, λ47.00000°. Principal axes: T 3.9580, Plg50.0000°, Azm40.0000°; N -0.1000, Plg38.0000°, Azm197.0000°; P -3.8570, Plg11.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *00:39:19.8±0.1, 4491N×1461 4E, mb5.0/167 Error ellipse: s-maj=3.9km s-min=2.5km az=160.0*
NEIC Felt [II] at Yuzhno-Kuril'sk, Kunashir. Recorded [2 JMA] in eastern Hokkaido and [1 JMA] in south-central Hokkaido. Also recorded [2 JMA] in Aomori and [1 JMA] in Iwate Prefectures, Honshu.

ISC 28 00:39:19.8±0.1, 4482N±002×14610E±002, h203km, h203km±.8km; pP-P, n980, σ0§80/1003, mb4.8/253, 196C-164D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.80**	**192**	⇑*i*PN	**Pn**	**00 39 46.0**	**-2.6**
YUK				*i* S	**Sn**	**00 40 07.6**	**-3.3**
YUK				pmax	pmax		
	comp=Z,2μm,0.5s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,3μm,0.5s						
YUK				pmax	pmax		
	comp=Z,31μm,1.0s						
YUK				pmax	pmax		
	comp=N,35μm,1.2s						
YUK				pmax	pmax		
	comp=E,25μm,2.0s						
YUK				smax			
	comp=N,44μm,0.5s						
YUK				smax			
	comp=E,26μm,0.6s						
YUK				smax			
	comp=N,175μm,1.5s						
YUK				smax			
	comp=E,130μm,1.5s						
YUK	**Yuzh-Kuril'sk**	**0.80**	**192**	⇑*i*P	**Pn**	**00 39 46.0**	**-2.6**
YUK				AMB	AMB	00 39 46.8	
YUK				AMB	AMB	00 39 46.8	
	comp=E,3μm,0.5s						
YUK				AMB	AMB	00 39 46.8	
	comp=E,20μm,0.5s						
YUK				AMB	AMB	00 39 51.0	
	comp=E,2μm,0.4s						
YUK				AMB	AMB	00 39 51.0	
	comp=E,35μm,1.2s						
YUK				AMB	AMB	00 39 51.0	
	comp=E,25μm,2.0s						
YUK				AMB	AMB	00 39 51.0	
	comp=E,31μm,1.0s						
YUK				A		00 40 08.5	
	comp=E,44μm,0.5s						
YUK				A		00 40 08.5	
	comp=E,26μm,0.6s						
YUK				A		00 40 09.3	
	comp=E,180μm,1.0s						
YUK				A		00 40 09.3	
	comp=E,185μm,1.0s						
JRA	**Rausu**	**1.13**	**219**	⇑P	**Pn**	**00 39 48.9**	**-1.8**
JRA				*e*S	**Sn**	**00 40 12.9**	**-1.7**
KUR	**Kuril'sk**	**1.32**	**71**	*j* ⇑PN	**Pn**	**00 39 47.5**	**-4.6**
KUR				*i* S	**Sn**	**00 40 10.5**	**-6.8**
KUR				pmax	pmax		
	comp=Z,10μm,1.6s						
KUR				pmax	pmax		
	comp=N,320nm,0.8s						
KUR				pmax	pmax		
	comp=E,540nm,0.8s						
KUR				pmax	pmax		
	comp=Z,2μm,0.8s						
KUR				smax			
	comp=N,6μm,1.0s						
KUR				smax			
	comp=E,10μm,1.0s						
KUR				smax			
	comp=N,20μm,2.0s						
KUR				smax			
	comp=E,74μm,2.0s						
KUR	**Kuril'sk**	**1.32**	**71**	⇓*i*P	**Pn**	**00 39 47.5**	**-4.6**
KUR				⇑*i*P		00 39 47.5	
KUR				AMB	AMB	00 39 48.0	
	comp=E,10μm,1.6s						
KUR				*i* S	**Sn**	**00 40 10.5**	**-6.8**
KUR				A		00 40 12.0	
	comp=E,20μm,2.0s						
KUR				A		00 40 12.0	
	comp=E,74μm,2.0s						
KUR				A		00 40 12.0	
	comp=E,6μm,1.0s						
KUR				A		00 40 12.0	
	comp=E,10μm,1.0s						
KUR				A		00 40 12.0	
	comp=E,20μm,2.0s						
KUR				A		00 40 12.0	
	comp=E,50μm,2.0s						
NEM2	**Nemuro 2**	**1.48**	**190**	⇑P	**Pn**	**00 39 50.3**	**-3.2**
NEM2				*e*S	**Sn**	**00 40 14.0**	**-5.7**
JNK	**Nakash**	**1.58**	**219**	⇑P	**Pn**	**00 39 53.1**	**-1.4**
JTKR	**Abashiri--Toko**	**1.79**	**242**	⇑P	**Pn**	**00 39 55.6**	**-0.7**
JTKR				*e*S	**Sn**	**00 40 24.2**	**-0.5**
JAK	**Akkeshi**	**2.09**	**210**	⇑P	**Pn**	**00 39 57.3**	**-2.1**
JAK				*e*S	**Sn**	**00 40 26.3**	**-3.9**
JMP	**Maruseppu**	**2.12**	**248**	⇑P	**Pn**	**00 39 59.4**	**-0.3**
JMP				*e*S	**Sn**	**00 40 31.0**	**+0.2**
JAR	**Ashorobuto**	**2.27**	**229**	⇑P	**Pn**	**00 40 00.8**	**-0.5**
JSE	**Soyaes**	**2.50**	**274**	⇑P	**Pn**	**00 40 04.1**	**+0.3**
JSE				*e*S	**Sn**	**00 40 38.8**	**+0.7**
JOB	**Onbets**	**2.52**	**221**	⇑P	**Pn**	**00 40 03.1**	**-1.0**
JOB				*e*S	**Sn**	**00 40 36.5**	**-2.1**
JKK2	**Kamakawa 2**	**2.58**	**250**	⇑P	**Pn**	**00 40 04.8**	**+0.1**
JKK2				*e*S	**Sn**	**00 40 40.6**	**+0.8**
ASAJ	**Asahikawa**	**2.60**	**256**	⇑P	**Pn**	**00 40 05.5**	**+0.5**
ASAJ	**Asahikawa**	**2.60**	**256**	PN	**Pn**	**00 40 05.1**	**+0.1**
ASAJ				S	**Sn**	**00 40 39.8**	**-0.4**
ASAJ				pmax	pmax		
	comp=Z,346nm,0.3s						
ASAJ				smax			
	comp=N,108nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,20.5s						
ASAJ	**Asahikawa**	**2.60**	**256**	P	**Pn**	**00 40 05.1**	**+0.1**
	comp=Z,346nm,0.3s,baz=81,slow=12,SNR=2424						
ASAJ				S	**Sn**	**00 40 39.8**	**-0.4**
	comp=Z,108nm,0.3s,baz=238,slow=31,SNR=13						
ASAJ				LR	LR	00 41 17.7	
	comp=Z,1μm,20.5s,baz=73,slow=44						
JCH	**Churui**	**2.97**	**223**	⇑P	**Pn**	**00 40 07.6**	**-1.6**
JCH				*e*S	**Sn**	**00 40 44.1**	**-3.6**
JWK2	**Keihoku**	**3.02**	**281**	⇓P	**Pn**	**00 40 10.9**	**+1.2**
JWK2				*e*S	**Sn**	**00 40 51.6**	**+2.9**
JFR	**Furan**	**3.02**	**238**	⇑P	**Pn**	**00 40 09.8**	**0.0**
JFR				*e*S	**Sn**	**00 40 49.0**	**+0.1**
JAB	**Ashibetsu**	**3.08**	**246**	⇑P	**Pn**	**00 40 11.4**	**+0.9**
YSS	**Yuzh-Sakhalins**	**3.16**	**314**	*e*Pn	**Pn**	**00 40 11.1**	**-0.2**
YSS	**Yuzh-Sakhalins**	**3.16**	**314**	*i* PN	**Pn**	**00 40 11.0**	**-0.4**
YSS				*i* S	**Sn**	**00 40 51.0**	**-0.9**
YSS				pmax	pmax		
	comp=N,770nm,1.0s						
YSS				pmax	pmax		
	comp=E,1μm,1.0s						
YSS				pmax	pmax		
	comp=Z,2μm,1.0s						
YSS				smax			
	comp=N,2μm,1.2s						
YSS				smax			
	comp=E,3μm,1.2s						
YSS				smax			
	comp=N,7μm,5.0s						
YSS				smax			
	comp=E,10μm,4.0s						
YSS	**Yuzh-Sakhalins**	**3.16**	**314**	⇓*i*P	**Pn**	**00 40 11.0**	**-0.4**
YSS				⇓*i*P		00 40 11.0	
YSS				AMB	AMB	00 40 12.0	
	comp=E,2μm,1.0s						
YSS				AMB	AMB	00 40 12.0	
	comp=E,770nm,1.0s						
YSS				AMB	AMB	00 40 12.0	
	comp=E,1μm,1.0s						
YSS				*i* S	**Sn**	**00 40 51.0**	**-0.9**
YSS				A		00 40 55.0	
	comp=E,10μm,4.0s						
YSS				A		00 40 55.0	
	comp=E,7μm,5.0s						
YSS				A		00 40 55.0	
	comp=E,2μm,1.2s						
YSS				A		00 40 55.0	
	comp=E,3μm,1.2s						
JHR	**Hokuryu**	**3.32**	**253**	⇑P	**Pn**	**00 40 14.2**	**+0.9**
JYG	**Yagishiri**	**3.36**	**265**	⇑P	**Pn**

comp=E,352nm,1.0s
TYV AMB AMB 00 40 52.0
comp=E,462nm,1.0s
TYV eS Sn **00 42 06.0 -1.0**
TYV A 00 42 08.0
comp=E,295nm,1.4s
TYV A 00 42 08.0
comp=E,164nm,1.4s
TYV A 00 42 20.0
comp=E,1μm,6.0s
TEY Ternei 6.74 275 eP Pn **00 40 55.0 -1.6**
TEY eS Sn **00 42 11.0 -2.4**
TEY A 00 42 13.0
comp=E,3μm,6.0s
JMK Ichinoseki 6.90 213 ⇑P Pn **00 40 55.4 -3.3**
HABR Khabarovsk 8.43 300 ⇓iPN Pn **00 41 19.4 +0.9**
HABR pmax pmax
comp=Z,352nm,1.4s
JFY Yanaizu 8.84 215 P Pn **00 41 21.8 -2.1**
SKR Severo-Kuril's 8.94 45 eP Pn **00 41 21.0 -4.0**
SKR AMB AMB 00 41 23.0
comp=Z,270nm,1.0s
OKH Okha 8.98 348 ePN Pn **00 41 25.8 +0.3**
OKH eS Sn **00 43 08.0 +1.9**
OKH smax
comp=N,2μm,8.0s
OKH Okha 8.98 348 eP Pn **00 41 25.8 +0.3**
OKH AMB AMB 00 41 26.0
comp=N,200nm,1.0s
OKH eS Sn **00 43 08.0 +1.9**
OKH A 00 43 08.4
comp=N,2μm,8.0s
MAJO Matsushiro 10.21 219 ePn Pn **00 41 40.2 -1.4**
MAT Matsushiro 10.21 219 P Pn **00 41 39.9 -1.7**
MAT S Sn **00 43 32.4 -3.3**
MJAR Matsushiro Arr 10.21 219 P Pn **00 41 40.2 -1.4**
MJAR S Sn **00 43 35.8 +0.2**
MJAR ScP ScP 00 50 43.5 +0.8
MJAR Matsushiro Arr 10.21 219 PN Pn **00 41 40.2 -1.4**
MJAR S Sn **00 43 35.8 +0.1**
MJAR Matsushiro Arr 10.21 219 P Pn **00 41 40.2 -1.4**
comp=N,7.5nm,0.3s,baz=24,slow=13,SNR=85
MJAR S Sn **00 43 35.8 +0.2**
comp=N,1.8nm,0.3s,baz=96,slow=12,SNR=5.8
MJAR ScP ScP 00 50 43.5 +0.8
comp=N,0.3nm,0.3s,baz=56,slow=1.2,SNR=5.3
JNG Nsakai 10.37 219 P Pn **00 41 42.5 -1.2**
VLA Vladivostok 10.38 266c iPN Pn **00 41 42.9 -0.9**
KLR Kul'dur 10.74 299⇑iPN Pn **00 41 46.0 -2.3**
KLR pmax pmax
comp=N,46nm,1.8s
KLR pmax pmax
comp=E,600nm,1.8s
KLR pmax pmax
comp=Z,420nm,1.8s
KLR MLR MLR
comp=E,800nm,12.0s
KLR MLR MLR
comp=Z,3μm,12.0s
JIZS Izushimoda 11.51 211 P Pn **00 41 56.7 -1.6**
PET Petropavlovsk 11.63 41 Pn Pn **00 41 58.8 -0.9**
PET Petropavlovsk 11.63 41 ePN Pn **00 42 00.1 +0.5**
PET eS S **00 44 03.4 -5.9**
PET pmax pmax
comp=Z,41nm,0.6s
PET MLR MLR
comp=Z,100nm,17.0s
MDJ Mudanjiang 11.75 275 P Pn **00 42 01.0 -0.3**
MDJ S S **00 44 11.8 -0.5**
MDJ PCP PcP 00 47 30.3 -1.0
MDJ SCP ScP 00 50 45.0 +0.3
MDJ PCS PcS 00 51 05.0 -0.2
MDJ SCS ScS 00 54 21.0 +0.7
MDJ AMB AMB
comp=Z,191nm,0.8s
MDJ AMB AMB
comp=Z,136nm,3.9s
MDJ LR LR
comp=N,487nm,12.4s
MDJ LR LR
comp=E,466nm,11.3s
MDJ LR LR
comp=Z,547nm,11.3s
MDJ Mudanjiang 11.75 275 ePn Pn **00 42 01.1 -0.2**
comp=Z,108nm,0.6s
JHJ Hachijo jima 2 12.67 205 P Pn **00 42 12.4 -0.5**
comp=Z,57nm,0.3s,baz=167,slow=6.5,SNR=9.4
JHJ S S **00 44 25.1 -9.2**
comp=Z,65nm,0.3s,baz=82,slow=23,SNR=11
CN2 Changchun 14.82 273 eP Pn **00 42 38.0 -1.5**
CN2 eXP 00 43 29.8
CN2 eS S **00 45 17.0 -7.0**
CN2 AMB AMB
comp=Z,20nm,0.5s
CN2 AMB AMB
comp=Z,200nm,5.0s
MA2 Magadan 15.05 9 ePn Pn **00 42 39.2 -2.9**
MA2 Magadan 15.05 9⇑eP Pn **00 42 40.0 -2.1**
ZEA Zeya 15.16 313⇓iP Pn **00 42 39.5 -4.0**
ZEA ⇓iP 00 42 39.5
ZEA AMB AMB 00 42 41.0
comp=Z,700nm,2.0s
ZEA AMB AMB 00 42 41.1
comp=Z,160nm,1.2s
ZEA AMB AMB 00 42 41.1
comp=Z,130nm,1.2s
ZEA AMB AMB 00 42 41.1
comp=Z,220nm,1.2s
ZEA eS S **00 45 26.0 -5.4**
ZEA A 00 45 30.0
comp=Z,500nm,6.0s
ZEA A 00 45 30.0
comp=Z,600nm,5.0s
KSRS Korea Array 15.53 248 P Pn **00 42 47.9 -0.3**
comp=Z,2.2nm,0.3s,baz=59,slow=12,SNR=61
KSRS PcP PcP 00 47 36.5 +0.1
comp=Z,0.2nm,0.3s,baz=45,slow=0.6,SNR=11
KSRS ScP ScP 00 50 53.2 +2.1
comp=Z,0.3nm,0.3s,baz=341,slow=0.9,SNR=8.5
INCN Inchon 16.37 250 ePn Pn **00 42 59.9 +1.6**
comp=Z,205nm,1.4s
JNU Nakatsue 16.60 230 P P **00 43 01.9 +1.9**
comp=Z,1.8nm,0.3s,baz=30,slow=10.0,SNR=20
SNY Shenyang 16.65 268 ⇓P P **00 43 01.3 +0.8**
SNY S S **00 45 57.3 -6.6**
SNY AMB AMB
comp=Z,191nm,0.8s
SNY LR LR
comp=N,324nm,10.8s
SNY LR LR
comp=E,434nm,9.9s
SNY LR LR
comp=Z,361nm,10.8s
NRGR Nerungri 17.89 319 eP P **00 43 13.4 -0.5**
NRGR S S **00 46 28.8 +0.3**
NRGR smax
comp=N,368nm,1.2s
CLNS Chul'man 17.91 320 eP P **00 43 12.2 -1.9**
CLNS eS S **00 46 25.3 -3.5**
CLNS pmax pmax
comp=Z,42nm,0.7s
CLNS pmax pmax
comp=N,31nm,0.8s
CLNS pmax pmax
comp=E,26nm,0.9s
CLNS pmax pmax
comp=N,38nm,0.9s
CLNS pmax pmax
comp=Z,36nm,0.9s
CLNS pmax pmax
comp=E,61nm,0.8s
CLNS smax
comp=E,134nm,1.0s
CLNS smax
comp=N,228nm,1.4s
CLNS smax
comp=Z,47nm,1.4s
CLNS MLR MLR
comp=N,100nm,12.0s
CLNS MLR MLR
comp=Z,200nm,12.0s
CLNS MLR MLR
comp=E,100nm,11.0s
CBIJ Chichi jima 17.96 191 S S **00 46 33.7 +3.2**
comp=E,14nm,0.3s,baz=272,slow=22,SNR=2.7
HIA Hailar 18.46 293 eP P **00 43 18.0 -2.2**
comp=E,120nm,0.9s
HIA Hailar 18.46 293 eP P **00 43 18.0 -2.2**
HIA pmax pmax
comp=Z,120nm,0.9s
SEY Seymchan 18.50 9⇑eP P **00 43 17.7 -2.8**
DL2 Dalian 19.12 261 iP P **00 43 28.5 +1.1**
DL2 XP sP 00 44 23.3 -3.2
DL2 S S **00 46 54.3 +1.1**
DL2 AMB AMB
comp=Z,120nm,0.6s
DL2 AMB AMB
comp=Z,140nm,5.2s
YAK Yakutsk 19.72 337 eP P **00 43 30.1 -3.5**
comp=Z,64nm,0.8s
YAK Yakutsk 19.72 337 eP P **00 43 29.5 -4.0**
YAK eS S **00 46 56.7 -7.6**
YAK pmax pmax
comp=Z,48nm,0.8s
YAK pmax pmax
comp=N,37nm,1.1s
YAK pmax pmax
comp=E,28nm,1.7s
YAK smax
comp=E,531nm,1.9s
YAK smax
comp=Z,331nm,2.8s
YAK smax
comp=N,361nm,1.6s
SMY Shemya 19.98 57 eP P **00 43 35.6 -0.8**
BJI Beijing 22.53 268 P P **00 44 02.8 +0.4**
BJI PCP PcP 00 47 49.3 +0.6
BJI S S **00 47 53.0 -1.0**
BJI SCS ScS 00 54 54.0 +1.8
BJI AMB AMB
comp=Z,88nm,0.8s,mb5.3
BJI AMB AMB
comp=Z,307nm,4.0s
BJT Baijiatuan 22.54 268 eP P **00 44 02.8 +0.3**
comp=Z,66nm,0.8s,mb5.2
BJT Baijiatuan 22.54 268 eP P **00 44 02.8 +0.3**
BJT pmax pmax
comp=Z,66nm,0.8s
CIT Chita 22.63 300 eP P **00 43 59.9 -3.2**
CIT e 00 44 42.2
CIT e 00 47 53.8
CIT e 00 47 57.2
CIT pmax pmax
comp=Z,87nm,1.8s,mb5.0
JOW Kunigami 22.96 225 P P **00 44 07.4 +1.0**
comp=Z,16nm,0.4s,mb4.9,baz=23,slow=10,SNR=6.8
TIA Tai'an 23.55 259 eP P **00 44 12.0 +0.3**
BOD Bodaibo 23.64 315⇓eP P **00 44 08.9 -3.4**
BOD e 00 48 04.8
BOD pmax pmax
comp=Z,56nm,0.9s,mb5.2
NJ2 Nanjing 24.73 248 eP P **00 44 24.0 +1.5**
NJ2 AP 00 45 01.0
NJ2 PP 00 45 11.0
NJ2 XP sP 00 45 23.3 -3.1
NJ2 S S **00 48 31.0 +1.8**
NJ2 XS sS 00 49 35.0 -6.6
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.2
NJ2 AMB AMB
comp=Z,160nm,4.7s
NJ2 LR LR
comp=N,3μm,25.3s
NJ2 LR LR
comp=E,1μm,23.9s
NJ2 LR LR
comp=Z,1μm,24.0s
ADK Adak 25.50 61 eP P **00 44 27.9 -1.4**
comp=Z,158nm,1.2s,mb5.5
ADK Adak 25.50 61 eP P **00 44 27.9 -1.3**
ADK pmax pmax
comp=Z,158nm,1.2s,mb5.5
HHC Hu-ho-hao-te 25.52 273 eP P **00 44 30.8 +1.3**
HHC AP pP 00 45 08.0 -2.0
HHC PP 00 45 20.3
HHC XP sP 00 45 35.3 +1.7
HHC S S **00 48 43.3 +1.8**
HHC XS sS 00 49 49.8 -4.4
HHC SS 00 50 03.0
HHC SCP ScP 00 51 17.8 +2.8
HHC PCS PcS 00 51 37.0 +1.2
HHC AMB AMB
comp=Z,234nm,0.9s,mb5.8
HHC AMB AMB
comp=Z,160nm,5.4s
HHC LR LR
comp=N,189nm,11.9s
HHC LR LR
comp=E,314nm,9.5s
HHC LR LR
comp=Z,293nm,10.7s
BILL Bilibino 25.55 18 eP P **00 44 25.0 -4.5**
comp=Z,8.2nm,0.6s,mb4.5
BILL ePcP PcP 00 47 55.2 +0.4
BILL Bilibino 25.55 18 eP P **00 44 25.1 -4.4**
BILL eS S **00 48 36.4 -5.1**
BILL pmax pmax
comp=Z,17nm,1.4s,mb4.5
TIY Taiyuan 26.14 266⇑eP P **00 44 40.0 +4.8**
TIY S S **00 49 00.5 +9.0**
TIY LR LR
comp=N,217nm,3.6s
TIY LR LR
comp=E,148nm,6.2s
TIY LR LR
comp=Z,206nm,16.0s
BTO Baotou 26.70 274 eP P **00 44 41.3 +1.2**
SONM Songino Array 27.37 291 P P **00 44 46.1 +0.1**
comp=Z,40nm,0.8s,mb5.1,baz=79,slow=8.5,SNR=120
SONM ScP ScP 00 51 21.5 +1.1
comp=Z,2.4nm,0.8s,baz=105,slow=1.8,SNR=8.8
TATO Taipei 28.09 233 eP P **00 44 53.6 +1.1**
TIXI Tiksi 28.16 349 eP P **00 44 48.3 -4.4**
TIXI e 00 51 02.7
TIXI pmax pmax
comp=Z,2.0nm,0.5s,mb4.0
IRK Irkutsk 28.35 300⇑iP P **00 44 53.0 -1.6**
IRK e 00 48 08.2
IRK pmax pmax
comp=Z,51nm,1.5s,mb4.9
WHN Wuhan 28.68 251⇑P P **00 44 57.5 -0.2**
TLY Talaya 28.76 299 eP P **00 44 57.1 -1.1**
comp=Z,18nm,1.1s,mb4.6
TLY ePcP PcP 00 48 03.4 +0.7
TLY Talaya 28.76 299 eP P **00 44 57.3 -0.9**
TLY e 00 46 01.8
TLY eS S **00 49 39.5 +7.2**
TLY eSS SS 00 50 52.9 -50
TLY pmax pmax
comp=Z,17nm,1.0s,mb4.6
TLY MLR MLR
comp=Z,162nm,17.0s
TLY Talaya 28.76 299 P P **00 44 57.7 -0.5**
SNR=6.3
TLY Talaya 28.76 299 P P **00 44 57.7 -0.5**
SNR=6.3
ZAK Zakamensk 29.09 296 eP P **00 45 00.5 -0.6**
ZAK e 00 48 04.8
ZAK pmax pmax
comp=Z,13nm,1.1s,mb4.5
ZAK pmax pmax
comp=Z,4.0nm,1.0s,mb4.0
GAMB Gambell 30.28 36 eP P **00 45 09.3 -2.1**
GAMB ePcP PcP 00 48 06.1 -0.3
MOY Mondy 30.41 299 eP P **00 45 11.9 -0.8**
XAN Xi'an 30.43 262 P P **00 45 13.8 +0.7**
XAN AMB AMB
comp=Z,26nm,0.8s,mb4.9
XAN AMB AMB
comp=Z,36nm,4.4s
XAN LR LR
comp=N,91nm,13.4s
XAN LR LR
comp=E,149nm,11.9s
XAN LR LR
comp=Z,153nm,12.7s
TNA Tin City 32.37 34 eP P **00 45 28.1 -1.7**
comp=Z,22nm,0.7s,mb4.8
TNA epP pP 00 46 15.5 +4.3
TNA esP sP 00 46 33.4 -1.3
TNA ePcP PcP 00 48 12.7 +0.6
LZH Lanzhou 33.00 270 ⇓P P **00 45 37.5 +1.9**
LZH AP pP 00 46 19.0 +1.9
LZH XP sP 00 46 39.3 -1.1
LZH PP PP 00 46 55.5 +1.1
LZH PCP PcP 00 48 16.5 +2.1
LZH S S **00 50 40.8 +2.1**
LZH SCP ScP 00 51 42.0 +3.0
LZH XS sS 00 51 50.8 -1.8
LZH PCS PcS 00 52 01.5 +1.5
LZH SS SS 00 52 56.3 -7.4
LZH AMB AMB
comp=Z,63nm,1.2s,mb5.0
LZH AMB AMB
comp=Z,173nm,5.5s
GTA Gaotai 34.39 278⇓iP P **00 45 49.3 +1.8**
GTA AP pP 00 46 31.0 +1.7
GTA XP sP 00 46 50.5 -2.0
GTA PP PP 00 47 12.5 +2.8
GTA PCP PcP 00 48 20.3 +2.1
GTA S S **00 51 02.8 +2.9**
GTA SCP ScP 00 51 46.0 +2.2
GTA XS sS 00 52 13.3 -0.8
GTA SS SS 00 53 28.5 -7.0
GTA SCS ScS 00 55 49.3 +2.4
GTA AMB AMB
comp=Z,66nm,0.7s,mb5.3
GTA AMB AMB
comp=Z,102nm,4.2s
GTA LR LR
comp=N,223nm,11.4s
GTA LR LR
comp=E,214nm,12.6s
GTA LR LR
comp=Z,241nm,11.0s
CD2 Chengdu 35.78 262⇑iP P **00 46 00.5 +1.0**
CD2 AP pP 00 46 40.8 -0.7
CD2 XP sP 00 47 02.5 -2.2
CD2 PP PP 00 47 29.0 +3.8
CD2 S S **00 51 23.0 +1.5**
CD2 XS sS 00 52 33.5 -2.4
CD2 SS SS 00 53 58.0 -8.4
CD2 AMB AMB
comp=Z,150nm,1.0s,mb5.5
CD2 AMB AMB
comp=Z,120nm,4.2s
GYA Guiyang 36.48 253⇓iP P **00 46 06.0 +0.6**
GYA AP pP 00 46 49.8 +2.2
GYA XP sP 00 47 11.5 +0.8
GYA PP PP 00 47 38.3 +5.5
GYA PCP PcP 00 48 26.8 +2.2
GYA S S **00 51 34.5 +2.4**
GYA SCP ScP 00 51 53.8 +2.1
GYA PCS PcS 00 52 14.0 +1.1
GYA XS sS 00 52 47.5 +0.8
GYA SS SS 00 54 14.8 -5.7
GYA SCS ScS 00 55 59.3 +0.5
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.0
GYA AMB AMB
comp=Z,120nm,5.7s
TTA Tatalina 37.09 40 eP P **00 46 09.6 -0.5**
SVW2 Sparrevohn 37.29 43 eP P **00 46 11.3 -0.5**
IMA2 Indian Mountai 38.22 35 eP P **00 46 17.6 -2.0**
KDAK Kodiak Island 39.09 48 eP P **00 46 24.2 -2.7**
comp=Z,77nm,0.7s,mb5.3
KDAK Kodiak Island 39.09 48 P P **00 46 25.4 -1.5**
comp=Z,104nm,0.8s,mb5.4,baz=302,slow=3.5,SNR=27
KDAK PcP PcP 00 48 31.8 -0.4
comp=Z,21nm,0.7s,baz=250,slow=3.8,SNR=5.4
QIZ Qiongzhong 39.59 241 P P **00 46 32.8 +1.3**
QIZ PP PP 00 48 08.3 +1.5
QIZ S S **00 52 19.8 +0.8**
QIZ AMB AMB
comp=Z,48nm,4.3s
ZAA0 Zalesovo Array 39.76 306 eP P **00 46 31.1 -1.3**
ZAA0 epP pP 00 47 14.9 -0.2
ZALV Zalesovo Beam 39.76 306 P P **00 46 31.0 -1.4**
comp=Z,7.3nm,0.4s,mb4.4,baz=78,slow=7.7,SNR=37
ZALV PcP PcP 00 48 34.2 -0.2
comp=Z,14nm,0.6s,baz=83,slow=3.2,SNR=17
ZALV ScP ScP 00 52 04.7 +1.0
comp=Z,10nm,0.9s,baz=73,slow=4.5,SNR=14
ZAL Zalesovo 39.77 306 P P **00 46 31.0 -1.5**
ZAL 00 48 34.2
SLKM Skilak Lake 39.95 44 eP P **00 46 32.7 -1.2**
KMI Kunming 40.03 255 P P **00 46 36.5 +1.4**
KMI AP pP 00 47 17.5 -0.4
KMI XP sP 00 47 40.3 -0.5
KMI PP PP 00 48 15.5 +4.0
KMI S S **00 52 27.5 +2.1**
KMI XS sS 00 53 39.5 -1.4
KMI SS SS 00 55 28.0 -3.2
KMI AMB AMB
comp=Z,63nm,1.0s,mb5.0
KMI AMB AMB
comp=Z,141nm,3.1s
KMI LR LR
comp=N,125nm,14.0s
KMI LR LR
comp=E,146nm,13.4s
KMI LR LR
comp=Z,127nm,15.9s
PMR Palmer 40.36 42 eP P **00 46 36.0 -1.2**
comp=Z,106nm,1.2s,mb5.2
PMR Palmer 40.36 42 eP P **00 46 36.0 -1.2**
PMR pmax pmax
comp=Z,107nm,1.2s,mb5.2
NVS Novosibirsk 40.46 308 eP P **00 46 36.6 -1.6**
NVS e 00 48 33.6
NVS pmax pmax
comp=Z,28nm,1.2s,mb4.6
NVS pmax pmax
comp=N,6.0nm,1.0s
NVS pmax pmax
comp=E,31nm,1.2s
COLA College 40.66 37 eP P **00 46 38.6 -1.1**
comp=E,43nm,0.8s,mb4.9
COLA College 40.66 37c iP P **00 46 38.6 -1.1**
SML Sawmill 40.71 42 eP P **00 46 39.5 -0.7**
SML ePP PP 00 48 15.6 -2.5
SML ePcP PcP 00 48 36.7 -0.6
WMQ Urumqi 41.01 290 P P **00 46 43.5 +0.7**
WMQ AP pP 00 47 25.0 -0.8
WMQ XP sP 00 47 47.5 -1.3
WMQ PP PP 00 48 24.0 +2.4
WMQ PCP PcP 00 48 40.3 +1.7
WMQ SCP ScP 00 52 10.8 +2.0
WMQ PCS PcS 00 52 30.3 +0.5
WMQ S S **00 52 41.0 +1.5**
WMQ XS sS 00 53 53.0 -2.2
WMQ SCS ScS 00 56 25.0 +0.3
WMQ AMB AMB
comp=Z,95nm,2.2s,mb4.8
WMQ LR LR
comp=N,145nm,25.1s
WMQ LR LR
comp=E,34nm,23.5s
WMQ LR LR
comp=Z,88nm,21.2s
MK31 Makanchi Array 43.43 296 iP P **00 47 01.4 -0.9**
MK31 pmax pmax
comp=Z,58nm,1.0s,mb5.0
MKAR Makanchi Array 43.43 296⇑eP P **00 47 02.4 +0.1**
MKAR Makanchi Array 43.43 296 P P **00 47 02.4 +0.1**
comp=Z,22nm,0.8s,mb4.7,baz=74,slow=8.9,SNR=133
MKAR ScP ScP 00 52 19.6 +1.2
comp=Z,4.0nm,0.7s,baz=60,slow=4.2,SNR=10
MKAR S S **00 53 15.3 +0.6**
comp=Z,1.0nm,0.9s,baz=72,slow=20,SNR=4.6
EGAK Eagle 43.52 36 eP P **00 47 01.0 -1.7**
comp=Z,18nm,0.6s,mb4.6
EGAK epP pP 00 47 47.2 +1.0
KURK Kurchatov 44.31 303 eP P **00 47 08.6 -0.6**
comp=Z,26nm,0.7s,mb4.7
KURK epP pP 00 47 51.2 -1.6
KURK ePcP PcP 00 48 50.2 +0.6
KURK eScP ScP 00 52 21.8 -0.2
KURK Kurchatov 44.31 303 eP P **00 47 08.6 -0.6**
KURK e*PP pP 00 47 51.2 -1.6
KURK e 00 48 50.2
KURK pmax pmax
comp=Z,26nm,0.7s,mb4.7
KURK Kurchatov 44.31 303 P P **00 47 08.6 -0.6**
SNR=8.5

KURK **Kurchatov** 44.31 303 P P **00 47 08.6 -0.6**
SNR=8.5
DAWY **Dawson** 44.40 37 eP P **00 47 08.8 -1.0**
DAWY ePcP PcP 00 48 50.0 +0.3
LSA **Lhasa** 45.42 270 P P **00 47 20.8 +2.5**
LSA AMB AMB
comp=Z,30nm,0.7s,mb4.7
LSA **Lhasa** 45.42 270 eP P **00 47 20.4 +2.1**
comp=Z,16nm,0.6s,mb4.5
LSA epP pP 00 48 03.9 +1.9
LSA esP sP 00 48 25.6 +0.8
LSA ePP PP 00 49 13.6 +5.0
LSA **Lhasa** 45.42 270 eP P **00 47 20.4 +2.1**
LSA e*PP pP 00 48 03.9 +1.8
LSA e*SP sP 00 48 25.6 +0.8
LSA e 00 49 13.6
LSA pmax pmax
comp=Z,16nm,0.6s,mb4.5
INK **Inuvik** 45.87 31 eP P **00 47 19.0 -2.2**
comp=Z,439nm,0.8s,mb5.8
INK ePP pP 00 48 04.2 -0.9
INK esP sP 00 48 30.4 +2.5
INK ePcP PcP 00 48 54.8 +0.1
INK **Inuvik** 45.87 31 P P **00 47 19.5 -1.7**
INK 00 48 53.9
INK pmax pmax
comp=Z,12nm,0.7s
INK pmax pmax
comp=Z,10.0nm,0.8s
INK **Inuvik** 45.87 31 P P **00 47 19.5 -1.7**
comp=Z,12nm,0.7s,mb4.4,baz=281,slow=6.1,SNR=36
INK PcP PcP 00 48 53.9 -0.8
comp=Z,10.0nm,0.8s,baz=280,slow=4.3,SNR=5.6
CHTO **Chiang Mai** 46.87 252 eP P **00 47 31.3 +1.6**
comp=Z,33nm,0.7s,mb4.8
CHTO epP pP 00 48 14.3 +0.6
CHTO PcP PcP 00 48 59.4 +0.3
CHTO ePP PP 00 49 22.7 +0.7
CHTO **Chiang Mai** 46.87 252 eP P **00 47 31.3 +1.6**
CHTO e*PP pP 00 48 14.4 +0.7
CHTO 00 48 59.4
CHTO e 00 49 22.7
CHTO pmax pmax
comp=Z,33nm,0.7s,mb4.8
CHTO **Chiang Mai** 46.87 252 P P **00 47 31.6 +1.9**
SNR=14
CHTO **Chiang Mai** 46.87 252 P P **00 47 31.6 +1.9**
SNR=14
SKAG **Skagway** 47.47 43 eP P **00 47 34.5 +0.8**
comp=Z,153nm,2.3s,mb4.9
CHKZ **Chkalovo** 47.87 309 *i* P P **00 47 35.5 -1.4**
CHKZ pmax pmax
comp=Z,26nm,0.7s,mb4.7
BRVK **Borovoye** 48.29 308 eP P **00 47 39.9 -0.2**
comp=Z,18nm,0.8s,mb4.4
BRVK epP pP 00 48 24.3 -0.1
BRVK ePcP PcP 00 49 04.3 +0.7
BRVK **Borovoye** 48.29 308 eP P **00 47 39.9 -0.2**
BRVK e*PP pP 00 48 24.3 -0.1
BRVK e 00 49 04.3
BRVK pmax pmax
comp=Z,18nm,0.8s,mb4.5
BRVK **Borovoye** 48.29 308 P P **00 47 40.4 +0.3**
SNR=5.9
BRVK **Borovoye** 48.29 308 P P **00 47 40.4 +0.3**
SNR=5.9
AGT **Agartala** 48.86 264 *ex* PcP 00 49 06.0 -0.2
TAPN **Taplejung** 49.24 270 eP P **00 47 49.4 +1.6**
comp=Z,54nm,0.5s,mb5.2
ULHL **Ulahol** 49.27 293 P P **00 47 48.8 +1.1**
SNR=66
TKM2 **Tokmak 2** 49.37 294 eP P **00 47 49.4 +0.9**
comp=Z,28nm,0.9s,mb4.6
TKM2 epP pP 00 48 34.2 +1.2
TKM2 ePcP PcP 00 49 06.5 -1.3
TKM2 ePP PP 00 49 44.8 +0.5
TKM2 **Tokmak 2** 49.37 294 eP P **00 47 49.4 +0.9**
TKM2 e*PP pP 00 48 34.2 +1.2
TKM2 e 00 49 06.5
TKM2 e 00 49 44.8
TKM2 pmax pmax
comp=Z,28nm,0.9s,mb4.6
TKM2 **Tokmak 2** 49.37 294 P P **00 47 49.7 +1.2**
SNR=27
ODAN **Odare** 49.77 270 eP P **00 47 53.2 +1.5**
comp=Z,32nm,0.5s,mb4.9
CHMS **Chumysh** 49.88 295 P P **00 47 54.2 +1.8**
SNR=7.7
KBK **Karagaybulak** 49.92 294 P P **00 47 53.8 +1.1**
SNR=34
USP **Ospenovka** 49.92 295 P P **00 47 53.4 +0.8**
SNR=42
KZA **Kyzart** 50.00 293 P P **00 47 55.3 +2.1**
SNR=55
FRU **Bishkek** 50.05 295 eP P **00 47 54.0 +0.4**
FRU pmax pmax
comp=Z,100nm,2.1s,mb4.8
JIRN **Jiri** 50.14 271 eP P **00 47 56.2 +1.7**
comp=Z,161nm,0.6s,mb5.5
AAK **Ala-Archa** 50.22 294 P P **00 47 55.6 +0.7**
SNR=16
DLBC **Dease Lake** 50.40 43 eP P **00 47 56.5 +0.5**
DLBC epP pP 00 48 39.1 -1.5
UCH **Uchtor** 50.40 294 eP P **00 47 57.5 +1.2**
comp=Z,7.5nm,0.8s,mb4.1
UCH pP pP 00 48 41.9 +0.9
UCH esP sP 00 49 04.8 +1.3
UCH PcP PcP 00 49 12.7 +1.1
UCH eScP ScP 00 52 51.4 +3.5
UCH **Uchtor** 50.40 294 P P **00 47 57.6 +1.4**
SNR=8.5
EKS2 **Erkin-Say** 50.67 295 eP P **00 47 58.9 +0.6**
comp=Z,14nm,0.7s,mb4.5
EKS2 epP pP 00 48 44.5 +1.5
EKS2 eScP ScP 00 52 51.7 +2.7
EKS2 **Erkin-Say** 50.67 295 P P **00 47 59.2 +0.9**
SNR=35
KKN **Kakani** 50.71 272 eP P **00 48 00.0 +1.2**
comp=Z,62nm,0.7s,mb5.2
KSH **Kashi** 50.77 290 eP P **00 48 01.0 +1.9**
KSH eAP pP 00 48 43.5 -0.3
KSH eXP sP 00 49 04.8 -1.5
KSH ePCP PcP 00 49 15.5 +2.5
KSH ePPP PP 00 50 01.0 +3.9
KSH eSCP ScP 00 52 51.5 +2.0
KSH ePS 00 53 12.0
KSH S S **00 54 59.8 +1.0**
KSH eXS sS 00 56 15.8 -1.3
KSH eSCS ScS 00 57 28.8 +0.4
KSH eSS SS 00 58 37.5 +2.0
KSH AMB AMB
comp=Z,125nm,0.6s,mb5.5
KSH LR LR
comp=N,619nm,5.4s
KSH LR LR
comp=E,550nm,3.9s
KSH LR LR
comp=Z,694nm,6.8s
AML **Almayashu** 50.98 294 eP P **00 48 01.6 +1.0**
comp=Z,22nm,0.8s,mb4.6
AML epP pP 00 48 46.3 +1.0
AML eScP ScP 00 52 50.3 -0.1
AML **Almayashu** 50.98 294 P P **00 48 02.2 +1.6**
SNR=24
GKN **Gorkha** 51.04 273 eP P **00 48 02.4 +1.2**
comp=Z,97nm,0.5s,mb5.5
SVE **Sverdlovsk** 51.85 316 eP P **00 48 06.0 -0.8**
SVE pmax pmax
comp=Z,31nm,0.9s,mb4.7
KOLN **Koldanda** 51.92 273 eP P **00 48 09.2 +1.5**
comp=Z,111nm,0.8s,mb5.3
SOKR **Solikamsk** 52.48 320 *c iP* P **00 48 11.2 -0.2**
SOKR pmax pmax
comp=Z,30nm,0.9s,mb4.7
KK31 **Karatay Array** 52.55 297 *i* P P **00 48 11.9 -0.3**
KK31 pmax pmax
comp=Z,12nm,0.5s,mb4.6
BOK **Bokaro** 52.72 268 eP P **00 48 14.6 +0.9**
ARU **Arti** 53.05 316 P P **00 48 13.9 -1.7**
comp=Z,28nm,1.0s,mb4.6
ARU epP pP 00 49 00.9 +0.2
ARU **Arti** 53.05 316 *d iP* P **00 48 14.2 -1.4**
ARU e*PP pP 00 49 00.6 -0.1
ARU e 00 49 17.3
ARU S S **00 55 30.2 +0.9**
ARU SS SS 00 59 13.1 +2.4
ARU pmax pmax
comp=Z,47nm,1.7s,mb4.6
LGTI **Lohaghat** 53.30 277 eP P **00 48 17.5 -0.4**
RES **Resolute Bay** 54.16 17 eP P **00 48 20.6 -2.8**
comp=Z,676nm,0.8s,mb6.2
RES epP pP 00 49 08.1 -0.6
RES ePcP PcP 00 49 25.1 -0.1
RES **Resolute Bay** 54.16 17 eP P **00 48 20.6 -2.8**
RES e*PP pP 00 49 08.1 -0.6
RES e 00 49 25.1
RES pmax pmax
comp=Z,675nm,0.8s,mb6.2
DDI **Dehra Dun** 54.34 279 eP P **00 48 25.0 -0.3**
DDI ex x 00 49 11.0
DLH **Dalhousie** 54.52 283 eP P **00 48 26.0 -0.6**
THN **Thein Dam** 54.76 283 eP P **00 48 27.7 -0.6**
YKA **Yellowknife Ar** 55.33 34 P P **00 48 31.2 -0.7**
YKA PcP PcP 00 49 29.1 -0.8
YKA **Yellowknife Ar** 55.33 34 P P **00 48 31.2 -0.7**
comp=Z,36nm,0.9s,mb4.9,baz=302,slow=6.7,SNR=300
YKA PcP PcP 00 49 29.1 -0.8
comp=Z,4.7nm,0.8s,baz=305,slow=4.1,SNR=8.7
HNR **Honiara** 55.43 163 LR LR 01 08 50.6
comp=Z,84nm,19.1s,baz=104,slow=32
NDI **New Delhi** 55.89 278 eP P **00 48 36.0 -0.5**
NDI eS S **00 56 09.0 +1.0**
PRGR **Permogore** 56.26 326 ⇓ *i* P P **00 48 38.9 +0.4**
PRGR e*PP pP 00 49 24.1 -0.1
PRGR e 00 49 33.4
PRGR eS S **00 56 15.3 +3.4**
PRGR pmax pmax
comp=Z,21nm,0.5s,mb4.9
AKTK **Aktyubinsk** 56.27 310 P P **00 48 38.5 -0.3**
AKTO **Aktyubinsk** 56.27 310 *i* P P **00 48 38.0 -0.8**
AKTO **Aktyubinsk** 56.27 310 P P **00 48 38.5 -0.3**
comp=Z,8.4nm,0.7s,mb4.4,baz=66,slow=7.1,SNR=34
BLSP **Bilaspur** 56.45 269 eP P **00 48 40.2 -0.2**
BLSP ex x 00 48 41.7
comp=Z,26nm,0.8s
ARCES **ARCESS Array B** 57.98 339 P P **00 48 48.5 -2.0**
ARCES **ARCESS Array B** 57.98 339 P P **00 48 48.5 -2.0**
comp=Z,2.3nm,0.6s,mb4.0,baz=58,slow=6.5,SNR=11
KBL **Kabul** 58.12 289 eP P **00 48 51.8 -0.3**
comp=Z,34nm,0.8s,mb5.0
KBL epP pP 00 49 38.3 +0.3
DAG **Danmarks Havn** 58.30 356 ⇑ *i* P P **00 48 49.9 -2.7**
comp=Z,2.2nm,0.8s,mb3.8
VIS **Vishakhapatnam** 58.47 264 eP P **00 48 55.0 +0.3**
VIS AMb AMB 00 48 56.1
comp=Z,28nm,0.8s,mb5.0
KAKA **Kakadu** 58.58 196 ⇑ *i* P P **00 48 55.4 +0.1**
comp=Z,25nm,0.6s,mb5.0
B04A **Port Angeles** 58.83 52 ⇑P P **00 48 56.4 -0.3**
baz=58
PSI **Prapat** 58.85 239 P P **00 48 58.7 +1.5**
comp=Z,1.6nm,0.3s,mb4.1,baz=301,slow=18,SNR=3.8
A04A **Lepoe Bay, Lum** 58.90 51 ⇓P P **00 48 56.9 -0.2**
baz=58
NLWA **Neilton Lookou** 58.99 52 ⇑P P **00 48 58.0 +0.2**
baz=59
AJM **Ajmer** 59.04 278 eP P **00 48 59.0 +0.5**
AJM eP 00 48 59.1
A05A **Maple Falls** 59.09 50 ⇑P P **00 48 58.1 -0.3**
baz=59
BHPL **Bhopal** 59.09 273 eP P **00 48 59.2 +0.4**
BHPL ex x 00 49 00.5
comp=Z,47nm,0.8s
MBW **Mount Baker** 59.31 50 P P **00 48 59.9 -0.1**
C04A **Brinnon** 59.31 52 ⇓P P **00 48 59.7 -0.3**
baz=59
A06A **Chilliwack** 59.36 50 ⇓P P **00 48 59.9 -0.4**
baz=59
B05A **Bryant** 59.49 51 ⇓P P **00 49 01.1 -0.1**
baz=59,SNR=10.0
JCW **Jim Creek** 59.62 51 P P **00 49 02.1 0.0**
E03A **Lebam** 59.64 53 ⇓P P **00 49 02.4 +0.2**
baz=59
B06A **Marblemount** 59.69 50 ⇓P P **00 49 02.0 -0.5**
baz=59,SNR=7.5
A07A **Ashnola River,** 59.98 49 ⇑P P **00 49 04.2 -0.3**
baz=60,SNR=20
F03A **Seaside** 59.99 54 ⇑P P **00 49 04.9 +0.3**
baz=60
C05A **Tolt Reservoir** 60.04 51 ⇓P P **00 49 04.8 -0.1**
baz=60,SNR=7.9
E04A **Onaska** 60.09 53 ⇓P P **00 49 05.5 +0.2**
baz=60
D05A **Enumclaw** 60.16 52 ⇑P P **00 49 06.3 +0.5**
baz=60,SNR=5.8
C06A **Tall Timber Ra** 60.35 51 ⇓P P **00 49 07.0 0.0**
baz=60
B07A **Winthrop** 60.46 50 ⇑P P **00 49 07.6 -0.2**
baz=60,SNR=14
G03A **Yamhill** 60.51 54 ⇓P P **00 49 08.1 -0.1**
baz=60
NLW **Nelson Butte** 60.56 50 P P **00 49 08.6 +0.1**
A08A **Turner Farm, O** 60.63 49 P P **00 49 08.9 0.0**
baz=60,SNR=27
F04A **Amboy** 60.64 53 ⇓P P **00 49 09.2 +0.2**
baz=60,SNR=8.4
E05A **Randle** 60.65 52 P P **00 49 09.1 -0.1**
baz=60,SNR=6.3
JOF **Joensuu** 60.79 332 *ep* P **00 49 07.8 -2.0**
comp=Z,7.7nm,0.5s,mb4.6
JOF **Joensuu** 60.79 332 eP P **00 49 07.8 -2.0**
JOF pmax pmax
comp=Z,8.0nm,0.5s,mb4.6
D06A **Cle Elum** 60.80 51 ⇑P P **00 49 10.2 +0.1**
baz=60,SNR=9.1
C07A **Waterville** 60.94 50 ⇓P P **00 49 10.4 -0.6**
baz=61,SNR=8.1
B08A **Colville Reser** 60.95 50 P P **00 49 10.8 -0.3**
baz=61,SNR=26
A09A **Danville** 60.99 49 ⇓P P **00 49 11.2 -0.1**
baz=61,SNR=25
G04A **Mulino** 61.03 54 ⇓P P **00 49 11.8 +0.1**
baz=61
E06A **Yakima** 61.10 52 ⇑P P **00 49 12.5 +0.4**
baz=61,SNR=8.2
EDM **Edmonton** 61.12 42 eP P **00 49 11.8 -0.3**
F05A **White Salmon** 61.22 53 ⇑P P **00 49 13.0 +0.1**
baz=61,SNR=5.1
K01A **Sixes** 61.26 57 ⇓P P **00 49 13.3 +0.1**
baz=61
D07A **Quincy** 61.28 51 ⇑P P **00 49 13.2 -0.1**
baz=61
I03A **Eugene** 61.29 55 ⇓P P **00 49 13.4 -0.1**
baz=61
C08A **Higginbotham F** 61.44 50 P P **00 49 14.2 -0.2**
baz=61,SNR=12
J02A **Umpqua** 61.47 56 ⇑P P **00 49 14.7 +0.1**
baz=61
H04A **Detroit Lake** 61.50 54 ⇓P P **00 49 14.9 0.0**
baz=61,SNR=10
A10A **Northport** 61.53 48 ⇓P P **00 49 14.7 -0.3**
baz=61,SNR=7.0
B09A **Rice** 61.55 49 P P **00 49 14.9 -0.1**
baz=61,SNR=23
F06A **Goldendale** 61.67 53 ⇓P P **00 49 16.2 +0.3**
baz=61,SNR=5.7
G05A **Wamic** 61.67 53 ⇓P P **00 49 15.9 -0.1**
baz=61
E07A **Sunnyside** 61.72 51 ⇑P P **00 49 16.5 +0.2**
baz=61
J03A **Ideyld Park** 61.82 56 ⇓P P **00 49 17.4 +0.4**
baz=62
C09A **Chrisman Ranch** 61.85 50 ⇑P P **00 49 16.8 -0.4**
baz=62,SNR=16
OD2 **Odessa Site #2** 61.86 50 P P **00 49 16.7 -0.5**
K02A **Glendale** 61.87 57 ⇓P P **00 49 17.7 +0.3**
baz=62
I04A **Tendick Farm,** 61.90 55 ⇓P P **00 49 17.6 +0.1**
baz=62,SNR=8.4
D08A **Wollman Farm,** 61.94 51 ⇓P P **00 49 17.5 -0.3**
baz=62,SNR=13
HAWA **Hanford** 62.00 51 eP P **00 49 18.2 0.0**
comp=Z,61nm,1.1s,mb5.2
HAWA ePcP PcP 00 49 56.5 -0.2
CROR **Criterion Ridg** 62.02 53 P P **00 49 18.7 +0.5**
HYB **Hyderabad** 62.06 267 eP P **00 49 20.0 +1.0**
HYB **Hyderabad** 62.06 267 ⇓ *i* P P **00 49 20.0 +1.0**
HYB epP pP 00 50 06.0 +0.5
G06A **Carlson Farm,** 62.07 53 ⇑P P **00 49 18.6 0.0**
baz=62,SNR=6.8
F07A **Phinny Hill Vi** 62.07 52 ⇑P P **00 49 18.8 +0.2**
baz=62,SNR=11
H05A **Madras** 62.08 54 ⇑P P **00 49 18.8 +0.1**
baz=62,SNR=6.5
B10A **Chitwood Farm,** 62.12 49 ⇓P P **00 49 18.7 -0.2**
baz=62
L02A **Cave Junction** 62.16 57 ⇓P P **00 49 19.3 0.0**
baz=62
A11A **Hall Mountain,** 62.18 48 ⇑P P **00 49 19.9 +0.6**
baz=62,SNR=31
NEW **Newport** 62.19 49 eP P **00 49 18.9 -0.5**
comp=Z,67nm,1.0s,mb5.2
NEW PcP PcP 00 49 56.6 -0.8
NEW epP pP 00 50 05.8 -0.1
NEW **Newport** 62.19 49 eP P **00 49 18.9 -0.5**
NEW 00 49 56.6
NEW e*PP pP 00 50 05.8 -0.1
NEW pmax pmax
comp=Z,67nm,1.0s
E08A **Dider Farm, El** 62.20 51 ⇑P P **00 49 19.5 0.0**
baz=62
D09A **Jones Farm, Ri** 62.27 50 P P **00 49 19.8 -0.1**
baz=62,SNR=9.5
I05A **Bend** 62.34 54 ⇑P P **00 49 20.7 +0.2**
baz=62
C10A **Spilker Farm,** 62.36 49 ⇑P P **00 49 20.5 0.0**
baz=62,SNR=7.5
J04A **Umpqua Nationa** 62.40 56 ⇑P P **00 49 21.6 +0.8**
baz=62,SNR=10.0
B11A **Sandpoint** 62.49 48 ⇓P P **00 49 21.5 +0.2**
baz=62,SNR=26
H06A **Lindquist Farm** 62.54 53 ⇓P P **00 49 21.6 -0.1**
baz=62,SNR=6.7
A12A **Yaak River Ran** 62.56 47 ⇑P P **00 49 21.9 +0.1**
baz=62,SNR=6.1
G07A **Ruggs Ranch, H** 62.59 52 ⇑P P **00 49 22.1 -0.1**
baz=62,SNR=11
E09A **Wood Farm, Sta** 62.69 51 ⇓P P **00 49 22.8 0.0**
baz=62,SNR=15
D10A **Wagner Farm, O** 62.84 50 P P **00 49 23.4 -0.3**
baz=62,SNR=34
J05A **Fort Rock** 62.89 55 ⇑P P **00 49 24.8 +0.7**
baz=62,SNR=13
YBH **Yreka Blue Hor** 62.95 57 eP P **00 49 24.8 +0.3**
comp=Z,42nm,1.1s,mb5.0
YBH ePcP PcP 00 50 00.2 -0.5
YBH **Yreka Blue Hor** 62.95 57 eP P **00 49 24.8 +0.3**
YBH e 00 50 00.2
YBH pmax pmax
comp=Z,42nm,1.1s
YBH **Yreka Blue Hor** 62.95 57 ⇓P P **00 49 25.1 +0.6**
baz=63,SNR=11
G08A **Pilot Rock** 62.98 52 ⇓P P **00 49 24.8 +0.1**
baz=63,SNR=14
K04A **Chilquin** 63.00 56 ⇓P P **00 49 25.1 +0.3**
baz=63
KAF **Kangasniemi** 63.02 333 *ep* P **00 49 22.7 -1.9**
comp=Z,4.3nm,0.7s,mb4.2,baz=42,slow=6.3
KAF **Kangasniemi** 63.02 333 eP P **00 49 22.7 -1.9**
KAF pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
H07A **Lands Inn, Kim** 63.06 53 ⇑P P **00 49 25.0 -0.2**
baz=63
M02C **Callahan** 63.07 58 ⇓P P **00 49 25.8 +0.5**
baz=63,SNR=5.2
I06A **Prineville** 63.08 54 ⇑P P **00 49 25.6 +0.2**
baz=63
N02C **Big Bar** 63.14 58 ⇑P P **00 49 26.0 +0.2**
baz=63
A13A **Flathead Natio** 63.21 47 P P **00 49 26.1 0.0**
baz=63,SNR=17
O01C **Eel River Cons** 63.24 59 ⇓P P **00 49 26.4 -0.1**
baz=63
E10A **Myers Farm, Un** 63.28 50 ⇑P P **00 49 26.6 0.0**
baz=63,SNR=30
LHEM **Herd Peak** 63.31 57 P P **00 49 27.5 +0.6**
F09A **S2 Ranch, Elgi** 63.31 51 ⇓P P **00 49 27.1 +0.3**
baz=63
WALA **Waterton Lakes** 63.39 46 eP P **00 49 26.4 -0.8**
comp=Z,50nm,1.0s,mb5.1
WALA ePcP PcP 00 50 02.5 +0.1
WALA epP pP 00 50 14.5 +0.5
I07A **Izee** 63.41 53 P P **00 49 27.9 +0.5**
baz=63,SNR=7.0
K05A **Summer Lake** 63.42 55 ⇓P P **00 49 28.3 +0.7**
baz=63,SNR=15
M04C **Macdoel** 63.44 57 ⇓P P **00 49 28.1 +0.4**
baz=63,SNR=12
B13A **Whitefish** 63.53 47 P P **00 49 28.5 +0.3**
baz=63,SNR=53
F10A **Beach Ranch, E** 63.53 51 ⇓P P **00 49 28.3 +0.1**
baz=63,SNR=21
J06A **Christmas Vall** 63.54 55 ⇓P P **00 49 28.7 +0.3**
baz=63,SNR=11
FINES **FINESS Array B** 63.58 332 *i* P P **00 49 26.8 -1.5**
FINES pmax pmax
comp=Z,8.0nm,0.7s
FINES **FINESS Array B** 63.58 332 P P **00 49 26.9 -1.4**
comp=Z,8.4nm,0.7s,mb4.5,baz=47,slow=7.7,SNR=37
M03C **McCloud** 63.58 57 ⇑P P **00 49 28.9 +0.3**
baz=63
H08A **Prairie City** 63.61 53 ⇓P P **00 49 29.2 +0.4**
baz=63,SNR=18
G09A **Cove** 63.65 52 ⇓P P **00 49 29.2 +0.2**
baz=63
WDC **Whiskeytown Da** 63.75 58 eP P **00 49 29.9 +0.1**
comp=Z,39nm,1.1s,mb5.0
WDC ePcP PcP 00 50 04.0 0.0
WDC epP pP 00 50 16.4 -0.1
WDC **Whiskeytown Da** 63.75 58 eP P **00 49 29.9 +0.1**
WDC e 00 50 04.0
WDC e*PP pP 00 50 16.4 -0.1
WDC pmax pmax
comp=Z,39nm,1.1s,mb5.0
WDC **Whiskeytown Da** 63.75 58 P P **00 49 30.1 +0.4**
baz=63,SNR=12
K06A **Valley Falls** 63.76 55 ⇑P P **00 49 30.2 +0.4**
baz=63,SNR=22
MDRS **Chennai** 63.80 262 *ex* x 00 49 25.8
MDRS AMb AMB 00 49 26.5
comp=Z,58nm,0.3s,mb5.7
O02C **Red Bluff** 63.84 59 ⇑P P **00 49 30.6 +0.2**
baz=64,SNR=7.9
E11A **Bogner Ranch,** 63.85 50 P P **00 49 30.1 -0.2**
baz=64,SNR=37
L05A **Lakeview** 63.87 56 ⇓P P **00 49 31.0 +0.5**
baz=64,SNR=11
D12A **Red Ives Fores** 63.88 49 P P **00 49 30.3 -0.2**
baz=64,SNR=20
C13A **Hot Springs** 63.91 48 P P **00 49 31.0 +0.4**
baz=64,SNR=34
P01C **Double 8 Ranch** 63.94 60 ⇑P P **00 49 31.2 +0.1**
baz=64
J07A **Hines** 63.95 54 ⇓P P **00 49 31.5 +0.5**
baz=64,SNR=12
OBN **Obninsk** 64.01 323 eP P **00 49 31.0 -0.2**
comp=Z,14nm,0.9s,mb4.6
OBN epP pP 00 50 18.0 0.0
OBN **Obninsk** 64.01 323 ⇑ *i* P P **00 49 30.5 -0.7**
OBN e pP 00 50 17.9 -0.1
OBN pmax pmax
comp=Z,17nm,0.9s,mb4.7
I08A **Drewsey** 64.04 53 ⇓P P **00 49 32.1 +0.4**
baz=64,SNR=5.1
H09A **Durkee** 64.09 52 ⇑P P **00 49 32.3 +0.4**
baz=64,SNR=8.9
M05C **Lookout** 64.11 57 P P **00 49 32.5 +0.4**
baz=64,SNR=14
F11A **Grangeville** 64.17 50 P P **00 49 32.4 0.0**
baz=64,SNR=53
GASB **Alder Springs** 64.21 59 ⇑P P **00 49 33.4 +0.6**
baz=64,SNR=11
HATC **Hat Creek Radi** 64.25 57 ⇓P P **00 49 33.3 +0.2**
baz=64,SNR=7.7
MOD **Modoc** 64.27 56 ⇑P P **00 49 33.4 +0.3**
baz=64,SNR=5.2
C14A **Swan Lake** 64.28 47 P P **00 49 33.5 +0.4**
baz=64,SNR=32
D13A **Huson** 64.33 48 ⇓P P **00 49 33.3 -0.2**
baz=64,SNR=59
HOPS **Hopland** 64.39 60 ⇓P P **00 49 34.1 +0.2**
baz=64
K07A **Rock Creek Ran** 64.41 55 ⇓P P **00 49 34.5 +0.5**
baz=64,SNR=28
G11A **Walters Elk Ra** 64.41 51 P P **00 49 33.9 -0.1**
baz=64,SNR=126
O03C **Acorn Hollow,** 64.41 58 ⇓P P **00 49 33.7 -0.4**
baz=64

J08A **Circle Bar Ran** 64.44 54 ⇓P P 00 49 34.4 +0.2
baz=64,SNR=15
I09A **Lost Marbles R** 64.47 53 ⇑P P 00 49 34.5 +0.1
baz=64,SNR=9.1
CTA **Charters Tower** 64.59 180 P P 00 49 34.8 -0.5
comp=Z,4.3nm,0.6s,mb4.3,baz=337,slow=7.4,SNR=5.2
CTAO **Charters Tower** 64.59 180 eP P 00 49 35.4 +0.1
CTAO ePcP PcP 00 50 08.4 +0.9
CTAO epP pP 00 50 22.9 +0.7
M06C **Likely Place G** 64.60 56 P P 00 49 35.8 +0.5
baz=64,SNR=5.5
H10A **Noah's Angus R** 64.65 52 P P 00 49 35.6 +0.1
baz=64,SNR=80
POO **Poona** 64.67 271 eP P 00 49 36.0 -0.1
POO eP 00 49 36.6
POO AMb AMB 00 49 37.3
comp=Z,38nm,0.8s,mb5.1
F12A **Elk City** 64.74 50 P P 00 49 36.4 +0.3
baz=64,SNR=50
L07A **Adell** 64.77 55 ⇑P P 00 49 37.0 +0.6
baz=64,SNR=14
O04C **Chester** 64.78 58 ⇓P P 00 49 36.8 +0.3
baz=64,SNR=17
ELFS **Eagle Lake Fie** 64.81 57 ⇑P P 00 49 36.7 0.0
baz=64
K08A **Mann Creek Ran** 64.82 54 ⇑P P 00 49 36.9 +0.2
baz=64,SNR=7.1
D14A **Greenough** 64.84 48 ⇓P P 00 49 36.6 -0.1
baz=64,SNR=60
MNRC **McLaughlin Nat** 64.85 60 ⇓P P 00 49 37.5 +0.5
baz=64,SNR=7.0
J09A **Fry Pan Ranch,** 64.86 53 ⇑P P 00 49 37.2 +0.3
baz=64,SNR=30
E13A **Victor** 64.89 49 P P 00 49 36.8 -0.3
baz=64,SNR=22
WVOR **Wild Horse Val** 64.92 54 P P 00 49 37.6 +0.2
I10A **Payette** 64.93 52 ⇑P P 00 49 37.8 +0.4
baz=65,SNR=18
H11A **Donnelly** 64.99 51 ⇓P P 00 49 37.2 -0.5
baz=65,SNR=40
ORV **Oroville** 65.01 58 ⇓P P 00 49 37.1 -0.8
baz=65,SNR=22
MCCM **Marconi Confer** 65.03 60 ⇓P P 00 49 38.1 0.0
baz=65
SUTB **Sutter Butte** 65.03 59 P P 00 49 37.2 -0.9
baz=65
O05C **Quincy** 65.11 58 ⇓P P 00 49 38.3 -0.3
baz=65,SNR=9.7
OHCM **Honcut** 65.15 59 eP P 00 49 38.2 -0.6
OHCM ePcP PcP 00 50 09.3 -0.5
OHCM esP sP 00 50 48.1 +0.3
CVS **Carmenet Viney** 65.17 60 ⇑P P 00 49 38.6 -0.4
baz=65
F13A **Darby** 65.22 49 ⇓P P 00 49 38.6 -0.7
baz=65
L08A **Fields** 65.24 55 ⇓P P 00 49 39.6 +0.2
baz=65,SNR=5.2
KAD **Karad** 65.24 270 eP P 00 49 39.0 -0.8
KAD eP 00 49 39.1
KAD AMb AMB 00 49 41.3
comp=Z,46nm,1.1s,mb5.0
M07A **Soldier Meadow** 65.26 56 ⇑P P 00 49 40.3 +0.7
baz=65,SNR=57
Q03C **Winters** 65.27 60 ⇓P P 00 49 40.2 +0.6
baz=65
N06A **Buffalo Meadow** 65.27 57 P P 00 49 39.6 0.0
baz=65,SNR=16
E14A **Clinton** 65.28 49 ⇑P P 00 49 39.2 -0.3
baz=65
K09A **Rome** 65.28 54 ⇓P P 00 49 39.6 0.0
baz=65,SNR=6.5
FFC **Flin Flon** 65.29 36 eP P 00 49 39.0 -0.5
comp=Z,53nm,0.9s,mb5.2
FFC ePcP PcP 00 50 09.6 -0.4
FFC **Flin Flon** 65.29 36 eP P 00 49 39.0 -0.5
FFC e 00 50 09.6
FFC pmax pmax
comp=Z,53nm,0.9s,mb5.2
WB2 **Warramunga Arr** 65.33 192 ⇑i P P 00 49 39.9 -0.2
WRA **Warramunga Arr** 65.33 192 i P P 00 49 40.0 -0.1
WRA pmax pmax
comp=Z,17nm,0.5s
WRA **Warramunga Arr** 65.33 192 P P 00 49 40.0 -0.1
comp=Z,16nm,0.5s,mb5.0,baz=9.1,slow=6.7,SNR=510
WRA PcP PcP 00 50 11.1 +0.6
comp=Z,5.9nm,0.8s,baz=5.2,slow=4.5,SNR=9.4
WRA pP pP 00 50 23.7 -3.5
comp=Z,9.0nm,1.1s,baz=7.9,slow=6.8,SNR=3.7
FITZ **Fitzroy Crossi** 65.34 201 ⇑iP P 00 49 41.1 +0.9
comp=Z,10nm,0.6s,mb4.6
J10A **Berg Farm, Mel** 65.37 53 ⇓P P 00 49 40.0 -0.2
baz=65
D15A **Lincoln** 65.39 48 ⇑P P 00 49 40.0 -0.2
baz=65,SNR=31
VRSR **Storozhevoye** 65.42 319 eP P 00 49 40.2 -0.2
VRSR pmax pmax
comp=Z,6.0nm,0.7s,mb4.3
VRSR pmax pmax
comp=N,8.0nm,0.9s
VRSR pmax pmax
comp=E,6.0nm,0.8s
FCC **Fort Churchill** 65.47 30 eP P 00 49 39.6 -1.0
comp=E,146nm,1.0s,mb5.6
FCC ePcP PcP 00 50 10.6 -0.1
FCC **Fort Churchill** 65.47 30 eP P 00 49 39.6 -1.0
FCC e 00 50 10.6
FCC pmax pmax
comp=Z,147nm,1.0s,mb5.6
BEKR **Beckwourth** 65.50 58 ⇑P P 00 49 41.0 -0.1
baz=65
Q04C **Lincoln** 65.53 59 ⇓P P 00 49 41.2 -0.1
baz=65
O06A **Flanigan** 65.63 57 ⇑P P 00 49 42.0 +0.1
baz=65,SNR=14
M08A **Happy Creek Ra** 65.69 55 ⇑P P 00 49 42.7 +0.5
baz=65,SNR=13
P05C **Yuba Gap, Truc** 65.70 58 ⇑P P 00 49 42.1 -0.3
baz=65,SNR=7.7
K10A **MacKenzie Ranc** 65.72 53 ⇓P P 00 49 42.8 +0.4
baz=65
G13A **Cobalt** 65.72 50 P P 00 49 42.0 -0.4
baz=65,SNR=27
E15A **Deer Lodge** 65.72 48 P P 00 49 42.4 0.0
baz=65,SNR=50
H12A **Diamond D Ranc** 65.72 51 P P 00 49 42.3 -0.2
baz=65,SNR=66
F14A **Wisdom** 65.73 49 P P 00 49 42.3 -0.1
baz=65,SNR=13
L09A **Wilkinson Ranc** 65.74 54 ⇓P P 00 49 43.0 +0.4
baz=65,SNR=18
N07B **Gerlach** 65.76 56 ⇑P P 00 49 42.9 +0.1
baz=65,SNR=9.1
BDM **Black Diamond** 65.78 60 ⇓P P 00 49 43.1 +0.2
baz=66
JRSC **Jasper Ridge** 65.89 61 ⇑P P 00 49 43.9 +0.2
baz=66
P06A **Stead Airport,** 65.90 58 ⇓P P 00 49 43.8 +0.2
baz=66
MFID **Camas Ranch** 65.91 52 ⇑P P 00 49 43.6 0.0
baz=66
HRY **Holter Researc** 65.96 47 eP P 00 49 43.9 0.0
LAVA **Lava Cap Winer** 65.97 59 P P 00 49 44.0 -0.1
baz=66,SNR=19
G14A **Jackson** 66.04 49 P P 00 49 44.0 -0.5
baz=66,SNR=7.5
H13A **Challis** 66.05 50 ⇓P P 00 49 44.2 -0.3
baz=66
WENL **Wente Brothers** 66.06 60 ⇓P P 00 49 44.5 -0.2
baz=66
BNLO **Ben Lomond (Sa** 66.11 61 ⇓P P 00 49 44.6 -0.4
baz=66
R04C **Big Horse Ranc** 66.16 59 ⇓P P 00 49 44.9 -0.4
baz=66
EGMT **Eagleton** 66.18 45 P P 00 49 45.2 -0.1
baz=66,SNR=12
F15A **Butte** 66.18 49 ⇑P P 00 49 45.4 +0.1
baz=66,SNR=87
K11A **Parker Ranch,** 66.20 53 ⇑P P 00 49 45.4 -0.1
baz=66
O07A **Toulon** 66.20 57 P P 00 49 46.2 +0.6
baz=66,SNR=25
WCN **Washoe City** 66.22 58 P P 00 49 46.2 +0.5
baz=66,SNR=12
M09A **Marrel Ranch,** 66.24 55 ⇓P P 00 49 46.1 +0.3
baz=66,SNR=8.0
N08A **GE Springer Mi** 66.25 56 ⇑P P 00 49 46.2 +0.3
baz=66

L10A **Juniper Basin** 66.39 54 ⇑P P 00 49 47.1 +0.4
baz=66
S04C **Ingram Canyon,** 66.39 60 ⇑P P 00 49 46.6 -0.2
baz=66
R05C **Kirkwood Meado** 66.40 58 P P 00 49 47.2 +0.3
baz=66,SNR=10
J12A **Stokes Ranch,** 66.42 52 ⇓P P 00 49 47.0 +0.1
baz=66
DLMT **Dillon** 66.43 49 eP P 00 49 46.8 -0.1
comp=Z,98nm,1.0s,mb5.4
I13A **Wildhorse Cree** 66.54 51 ⇓P P 00 49 48.2 +0.5
baz=66
O08A **Rochester Mine** 66.55 56 ⇓P P 00 49 48.1 +0.3
baz=66
N09A **Rock Creek Ran** 66.56 55 ⇓P P 00 49 48.2 +0.3
baz=66,SNR=11
P07A **Fallon** 66.59 57 ⇓P P 00 49 48.3 +0.2
baz=66
HLID **Hailey** 66.60 51 eP P 00 49 48.0 0.0
comp=Z,33nm,1.0s,mb4.9
HLID ePcP PcP 00 50 16.9 +1.2
HLID epP pP 00 50 34.2 -1.0
HLID **Hailey** 66.60 51 ⇓P P 00 49 48.4 +0.4
baz=66,SNR=41
G15A **Dillon** 66.62 49 P P 00 49 48.2 +0.1
baz=66,SNR=124
CMB **Columbia Colle** 66.64 59 eP P 00 49 48.2 -0.2
comp=Z,70nm,1.2s,mb5.2
CMB ePcP PcP 00 50 16.0 0.0
CMB epP pP 00 50 35.0 -0.6
CMB **Columbia Colle** 66.64 59 eP P 00 49 48.2 -0.2
CMB e 00 50 16.0
CMB e*PP pP 00 50 35.0 -0.6
CMB pmax pmax
comp=Z,70nm,1.2s,mb5.2
CMB **Columbia Colle** 66.64 59 ⇑P P 00 49 48.3 -0.1
baz=66,SNR=25
MCMT **McKenzie Canyo** 66.64 50 eP P 00 49 48.0 -0.3
M10A **I.L. Ranch, Tu** 66.71 54 ⇑P P 00 49 49.3 +0.6
baz=66,SNR=34
PACP **Pacheco Peak** 66.73 61 ⇑P P 00 49 49.0 0.0
baz=66,SNR=7.2
BOZ **Bozeman (W)** 66.76 48 eP P 00 49 49.6 +0.6
comp=Z,55nm,0.7s,mb5.3
BOZ ePcP PcP 00 50 16.9 +0.6
BOZ **Bozeman (W)** 66.76 48 eP P 00 49 49.6 +0.6
BOZ e 00 50 16.9
BOZ pmax pmax
comp=Z,55nm,0.7s,mb5.3
BOZ **Bozeman (W)** 66.76 48 ⇓P P 00 49 49.3 +0.2
baz=66,SNR=118
J13A **Cove Ranch, Pi** 66.84 51 ⇑P P 00 49 49.9 +0.4
baz=66
R06C **Coleville** 66.90 58 P P 00 49 50.6 +0.6
baz=67,SNR=24
K12A **Draper Farm, C** 66.92 52 ⇓P P 00 49 50.2 +0.1
baz=67
HAST **UC Hastings Re** 66.96 61 ⇓P P 00 49 50.3 -0.1
baz=67
P08A **Dixie Valley** 66.97 57 ⇓P P 00 49 51.1 +0.7
baz=67
S05C **Merced** 67.11 60 P P 00 49 51.1 -0.2
baz=67,SNR=16
L12A **House Creek Ra** 67.18 53 ⇑P P 00 49 52.3 +0.6
baz=67
T05C **Eagle Field, D** 67.18 60 ⇓P P 00 49 52.3 +0.5
baz=67
O09A **Fish Creek Ran** 67.19 56 ⇓P P 00 49 52.4 +0.6
baz=67,SNR=13
M11A **Holland Ranch,** 67.20 54 ⇓P P 00 49 52.6 +0.8
baz=67,SNR=20
N10A **Dunphy** 67.24 55 ⇓P P 00 49 52.3 +0.2
baz=67
K13A **Stover Farm, H** 67.38 52 ⇓P P 00 49 53.4 +0.5
baz=67
V03C **Hunter Liggett** 67.39 61 ⇑P P 00 49 53.1 0.0
baz=67
QLMT **Earthquake Lak** 67.41 49 eP P 00 49 53.3 +0.2
QLMT ePcP PcP 00 50 20.4 +1.4
R07C **Lee Vining** 67.42 58 ⇑P P 00 49 53.8 +0.6
baz=67
U04C **Hernandez Rese** 67.45 61 ⇓P P 00 49 53.6 +0.1
baz=67
O10A **Cortez Mining,** 67.52 55 ⇑P P 00 49 54.5 +0.6
baz=67,SNR=6.5
PALK **Pallekele** 67.52 257 eP P 00 49 54.4 +0.1
PALK epP pP 00 50 39.4 -2.1
Q08A **Gabbs** 67.59 57 ⇓P P 00 49 54.4 0.0
baz=67,SNR=31
P09A **Austin** 67.62 56 ⇓P P 00 49 54.7 +0.2
baz=67
N11A **Elko Archery C** 67.62 54 ⇓P P 00 49 55.0 +0.5
baz=67
GCMT **Greycliff** 67.70 47 eP P 00 49 55.1 +0.2
T06C **Millerton Lake** 67.71 60 P P 00 49 54.5 -0.6
baz=67,SNR=9.9
M12A **Wells** 67.71 53 ⇑P P 00 49 55.8 +0.8
baz=67,SNR=31
KCC **Kaiser Creek** 67.74 59 P P 00 49 55.5 +0.2
baz=67,SNR=13
YMR **Madison River** 67.76 49 eP P 00 49 55.9 +0.6
comp=Z,58nm,0.9s,mb5.2
YMR ePcP PcP 00 50 22.1 +1.5
R08A **Mina** 67.82 58 ⇑P P 00 49 56.0 +0.2
baz=68
L13A **Double Diamond** 67.82 52 ⇑P P 00 49 56.4 +0.7
baz=67
MLAC **Mammoth Lakes** 67.84 59 ⇑P P 00 49 56.4 +0.5
baz=68
PKD **Parkfield** 67.87 61 ⇓P P 00 49 56.0 -0.2
baz=68
K14A **Jones Ranch, D** 67.95 52 ⇑P P 00 49 57.3 +0.7
baz=68
YFT **Old Faithful** 67.97 49 eP P 00 49 58.4 +1.8
P10A **Eureka** 67.97 56 ⇓P P 00 49 57.3 +0.6
baz=68,SNR=14
N12A **Clover Valley,** 68.00 54 ⇑P P 00 49 57.5 +0.6
baz=68,SNR=7.5
Q09A **Carvers** 68.06 57 ⇓P P 00 49 57.5 +0.2
baz=68
O11A **Cowboy Ranch,** 68.11 55 P P 00 49 58.2 +0.6
baz=68,SNR=6.5
M13A **Montello** 68.17 53 ⇑P P 00 49 58.3 +0.4
baz=68,SNR=13
MTUM **Tungsten Hills** 68.18 59 eP P 00 49 58.2 +0.1
IMW **Indian Meadow** 68.29 49 eP P 00 49 59.6 +1.0
comp=Z,55nm,0.8s,mb5.2
FLWY **Flagg Ranch** 68.29 49 eP P 00 49 59.7 +1.1
comp=Z,42nm,0.8s,mb5.1
FLWY ePcP PcP 00 50 24.6 +1.9
V05C **Boulder Hill,** 68.32 61 ⇑P P 00 49 59.4 +0.4
baz=68
S08C **White Mtn Res** 68.33 58 P P 00 49 59.7 +0.8
baz=68,SNR=12
NB2 **NORSAR Subarra** 68.33 338 P P 00 49 57.2 -1.4
comp=Z,14nm,0.7s,mb4.7,baz=33,slow=6.2
NB2 **NORSAR Subarra** 68.33 338 P P 00 49 57.2 -1.4
NB2 pmax pmax
comp=Z,14nm,0.7s,mb4.7
NOA **NORSAR Array B** 68.33 338 P P 00 49 57.2 -1.3
comp=Z,16nm,0.7s,mb4.8,baz=33,slow=6.2,SNR=90
NOA pP pP 00 50 42.1 -3.9
comp=Z,3.9nm,0.8s,baz=33,slow=6.4,SNR=1.8
HELL **Mitchell Peak,** 68.34 60 P P 00 49 58.7 -0.3
baz=68,SNR=38
DCID1 **Drake Creek** 68.36 50 eP P 00 49 59.9 +0.9
RLMT **Red Lodge** 68.36 47 eP P 00 49 59.0 0.0
comp=Z,48nm,1.1s,mb5.0
RLMT ePcP PcP 00 50 23.9 +0.9
N13A **Wendover, West** 68.48 53 P P 00 50 00.5 +0.6
baz=68,SNR=13
KIV **Kislovodsk** 68.49 311 eP P 00 50 01.0 +1.2
comp=Z,64nm,0.8s,mb5.3
KIV epP pP 00 50 45.7 -1.5
KIV **Kislovodsk** 68.49 311 eP P 00 50 00.3 +0.5
KIV e*PP pP 00 50 45.3 -2.0
KIV e 00 52 29.9
KIV eS S 00 58 46.4 +1.5
KIV pmax pmax
comp=Z,82nm,1.1s,mb5.3
KIV **Kislovodsk** 68.49 311 P P 00 50 01.4 +1.6
SNR=16
KIV **Kislovodsk** 68.49 311 P P 00 50 01.4 +1.6
SNR=16
KIV **Kislovodsk** 68.49 311 ⇑iP P 00 50 01.6 +1.8
MOOV **Moose Ponds** 68.49 49 eP P 00 50 00.4 +0.6
comp=Z,56nm,0.9s,mb5.2

R09A **Tonopah** 68.51 57 ⇑P P 00 50 00.2 +0.1
baz=68
Q10A **Clear Creek Ra** 68.53 56 ⇓P P 00 50 00.4 +0.2
baz=68
M14A **Sheep Mountain** 68.54 53 ⇓P P 00 50 00.7 +0.5
baz=68
TPAW **Teton Pass** 68.55 50 eP P 00 50 01.3 +1.0
comp=Z,79nm,0.9s,mb5.3
O12A **Currie** 68.55 54 P P 00 50 00.8 +0.5
baz=68,SNR=30
TIN **Tinemaha** 68.58 59 ⇓P P 00 50 00.9 +0.4
baz=68
DGMT **Dagmar** 68.62 42 eP P 00 49 59.9 -0.7
comp=Z,96nm,1.0s,mb5.4
SMMC **Simmler** 68.62 61 ⇓P P 00 50 00.9 +0.1
baz=68
ZEI **Tsey** 68.62 309 eP P 00 50 00.8 +0.1
ZEI i 00 50 20.0
ZEI e pP 00 50 47.8 -0.3
ZEI pmax pmax
comp=Z,22nm,0.9s,mb4.8
LOHW **Long Hollow** 68.66 49 eP P 00 50 01.6 +0.8
comp=Z,33nm,0.8s,mb5.0
SNOW **Snow King Moun** 68.68 50 eP P 00 50 02.7 +1.7
comp=Z,20nm,0.6s,mb4.9
HVU **Hansel Valley** 68.68 52 eP P 00 50 01.5 +0.5
comp=Z,40nm,1.0s,mb5.0
HVU **Hansel Valley** 68.68 52 eP P 00 50 01.5 +0.4
HVU pmax pmax
comp=Z,40nm,1.0s,mb5.0
REDW **Red Top Meadow** 68.69 50 eP P 00 50 01.6 +0.5
comp=Z,55nm,0.8s,mb5.2
S09A **Goldfield** 68.75 58 P P 00 50 01.9 +0.4
baz=68,SNR=8.0
VES **Vestal, Richgr** 68.84 60 P P 00 50 01.8 -0.4
baz=68,SNR=6.9
R10A **Warm Springs** 68.94 57 ⇓P P 00 50 02.8 +0.1
baz=69,SNR=8.1
Q11A **Duckwater** 68.96 56 ⇑P P 00 50 02.8 0.0
baz=69
P12A **McGill** 68.98 55 ⇑P P 00 50 03.0 0.0
baz=69,SNR=15
PKM **Peak Mountain** 69.00 61 ⇑P P 00 50 03.3 +0.2
baz=69
S10A **Tonopah Range,** 69.00 57 ⇑P P 00 50 03.1 -0.1
baz=69
ASAR **Alice Springs** 69.06 192 P P 00 50 04.2 +0.8
comp=Z,5.5nm,0.5s,mb4.4,baz=8.5,slow=6.0,SNR=63
ASAR pP pP 00 50 47.9 -3.1
comp=Z,4.2nm,0.7s,baz=8.1,slow=6.1,SNR=4.0
N14A **Grayback Hills** 69.06 53 ⇓P P 00 50 03.7 +0.2
baz=69
CWC **Cottonwood Cre** 69.07 59 P P 00 50 03.7 +0.1
baz=69,SNR=6.1
M15A **Larsen Ranch,** 69.07 52 ⇓P P 00 50 03.6 +0.1
baz=69
O13A **Hicks Ranch, I** 69.08 54 ⇑P P 00 50 04.1 +0.5
baz=69
BGU **Big Grassy Mou** 69.10 53 eP P 00 50 03.9 +0.2
GRAC **Grapevine Rang** 69.14 58 ⇑P P 00 50 04.3 +0.3
baz=69,SNR=6.9
Q12A **Willow Creek R** 69.31 55 ⇓P P 00 50 05.3 +0.3
baz=69,SNR=18
R11A **Troy Canyon, C** 69.32 56 ⇑P P 00 50 05.2 +0.1
baz=69
ISA **Isabella** 69.33 60 eP P 00 50 03.9 -1.3
comp=Z,26nm,1.1s,mb4.8
ISA ePcP PcP 00 50 26.9 -0.4
ISA **Isabella** 69.33 60 eP P 00 50 03.9 -1.3
ISA e 00 50 26.9
ISA pmax pmax
comp=Z,26nm,1.1s,mb4.8
ISA **Isabella** 69.33 60 P P 00 50 04.4 -0.8
baz=69,SNR=10
N15A **Stansbury Isla** 69.42 53 ⇓P P 00 50 05.8 +0.2
baz=69
ARVC **Arvin** 69.46 61 ⇓P P 00 50 05.3 -0.7
baz=69
HWUT **Hardware Ranch** 69.47 51 eP P 00 50 06.3 +0.3
comp=Z,51nm,1.0s,mb5.1
P13A **Bates Ranch, G** 69.51 55 ⇑P P 00 50 06.3 +0.1
baz=69
MPMC **Manual Prospec** 69.68 59 P P 00 50 07.4 +0.1
baz=69,SNR=31
S11A **Rachel** 69.69 57 ⇓P P 00 50 07.6 +0.3
baz=69
DUG **Dugway** 69.71 53 eP P 00 50 07.5 0.0
comp=Z,67nm,0.9s,mb5.3
DUG **Dugway** 69.71 53 eP P 00 50 07.5 +0.1
DUG pmax pmax
comp=Z,67nm,0.9s,mb5.3
DUG **Dugway** 69.71 53 ⇑P P 00 50 07.8 +0.3
baz=69,SNR=43
BW06 **Boulder Array** 69.79 49 eP P 00 50 07.7 -0.2
comp=Z,65nm,0.9s,mb5.3
PDAR **Pinedale Array** 69.79 49 P P 00 50 07.8 -0.1
comp=Z,42nm,0.7s,mb5.2,baz=279,slow=1.7,SNR=316
FURC **Furnace Creek,** 69.79 58 P P 00 50 08.3 +0.3
baz=70,SNR=25
NOQ **North Oquirrh** 69.80 53 eP P 00 50 08.5 +0.6
comp=Z,40nm,0.8s,mb5.1
Q13A **Wheeler Ranch,** 69.84 55 ⇑P P 00 50 08.6 +0.4
baz=70
TPNV **Topopah Spring** 69.85 58 eP P 00 50 08.5 +0.2
comp=Z,67nm,1.2s,mb5.2
TPNV ePcP PcP 00 50 31.0 +1.5
TPNV e 00 51 06.2
TPNV **Topopah Spring** 69.85 58 eP P 00 50 08.5 +0.2
TPNV e 00 50 31.0
TPNV pmax pmax
comp=Z,67nm,1.2s,mb5.2
TPNV **Topopah Spring** 69.85 58 ⇑P P 00 50 08.4 +0.1
baz=70,SNR=11
CTU **Camp Tracy** 69.98 52 eP P 00 50 09.4 +0.3
comp=Z,44nm,1.1s,mb5.0
U10A **Ash Meadows, A** 70.15 58 ⇓P P 00 50 10.5 +0.3
baz=70,SNR=7.0
JLU **Jordanelle** 70.21 52 eP P 00 50 10.6 +0.2
S12A **Delamar Landin** 70.25 56 ⇓P P 00 50 11.3 +0.6
baz=70
AKASG **Malin Array Be** 70.27 323 P P 00 50 09.9 -0.7
AKASG pP pP 00 50 54.7 -3.6
AKASG **Malin Array Be** 70.27 323 iP P 00 50 09.8 -0.8
AKASG pmax pmax
comp=Z,17nm,0.7s
AKASG **Malin Array Be** 70.27 323 P P 00 50 09.9 -0.7
comp=Z,17nm,0.7s,mb4.8,baz=38,slow=6.2,SNR=42
AKASG pP pP 00 50 54.7 -3.6
comp=Z,7.7nm,0.8s,baz=38,slow=6.4,SNR=2.9
T11A **Corn Creek, Al** 70.27 57 ⇑P P 00 50 11.0 +0.1
baz=70
KIEV **Kiev** 70.28 323 eP P 00 50 10.2 -0.5
comp=Z,15nm,0.7s,mb4.7
KIEV ePcP PcP 00 50 34.5 +3.4
KIEV **Kiev** 70.28 323 eP P 00 50 10.2 -0.5
KIEV e 00 50 34.5
KIEV pmax pmax
comp=Z,15nm,0.7s,mb4.7
NLU **North Lily Min** 70.29 53 eP P 00 50 11.3 +0.3
SOC **Sochi** 70.32 312 eP P 00 50 11.7 +0.6
SOC e 00 50 30.6
SOC e*PP pP 00 50 55.3 -3.4
SOC e 00 52 45.8
SOC ePPP 00 54 32.5
SOC eS S 00 59 07.6 +1.2
SOC e 00 59 54.4
SOC eSS SS 01 03 49.1 +8.9
SOC pmax pmax
comp=Z,20nm,1.1s,mb4.7
DECC **Green Verdugo** 70.35 61 ⇑P P 00 50 11.0 -0.4
baz=70
DAU **Daniels Canyon** 70.45 52 eP P 00 50 12.2 +0.3
MPU **Maple Canyon** 70.50 53 eP P 00 50 12.6 +0.4
comp=Z,64nm,0.8s,mb5.3
SHOC **Shoshone** 70.52 59 ⇓P P 00 50 12.3 -0.2
baz=70,SNR=6.5
GSC **Goldstone** 70.60 59 ⇓P P 00 50 12.6 -0.3
baz=70,SNR=11
ANN **Anapa** 70.66 314 eP P 00 50 14.4 +1.3
ANN pmax pmax
comp=Z,76nm,1.3s,mb5.2
U11A **Corn Creek** 70.72 58 ⇓P P 00 50 14.0 +0.4
baz=70
BFSC **Mount Baldy St** 70.77 61 ⇓P P 00 50 13.6 -0.3
baz=70,SNR=8.8
S13A **Holt Ranch, En** 70.85 56 ⇑P P 00 50 14.6 +0.2
baz=70

R14A James Farms, M 70.86 55 ⇓P **P 00 50 14.6 +0.2**
baz=70
TUQ Turquoise Mtn. 71.05 59 ⇑P **P 00 50 15.6 0.0**
baz=71,SNR=6.8
V11A Goodsprings 71.08 58 P **P 00 50 16.1 +0.3**
baz=71,SNR=11
ULM Lac du Bonnet 71.10 37 P **P 00 50 14.2 -1.4**
comp=Z,31nm,0.7s,mb5.1,baz=323,slow=10,SNR=100
S14A Cedar City 71.14 55 ⇓P **P 00 50 16.1 0.0**
baz=71
CCUT Cedar City 71.16 56 *e*P **P 00 50 16.7 +0.4**
T13A Saint George 71.20 56 ⇓P **P 00 50 17.3 +0.8**
baz=71
HEC Hector,Ludlow 71.20 59 ⇑P **P 00 50 16.5 0.0**
baz=71,SNR=13
MSU Marysvale 71.21 54 *e*P **P 00 50 16.4 -0.1**
BBRC Big Bear Sol-O 71.22 60 ⇑P **P 00 50 16.2 -0.4**
baz=71
U12A Valley of Fire 71.22 57 P **P 00 50 17.1 +0.5**
baz=71,SNR=6.1
TMUT Trail Mountain 71.23 53 *e*P **P 00 50 16.9 +0.3**
V12A Nelson 71.50 58 ⇑P **P 00 50 18.5 +0.2**
baz=71,SNR=9.0
U13A Pakoon Wash 71.57 57 ⇓P **P 00 50 19.3 +0.6**
baz=71
GMRC Granite Mounta 71.64 59 P **P 00 50 19.4 +0.2**
baz=71,SNR=18
T14A Hurricane 71.66 56 ⇓P **P 00 50 19.5 +0.3**
baz=71
SRU San Rafael 71.75 53 *e*P **P 00 50 19.5 -0.2**
comp=Z,66nm,0.9s,mb5.3
SRU San Rafael 71.75 53 *e*P **P 00 50 19.5 -0.2**
SRU pmax pmax
comp=Z,65nm,0.9s,mb5.3
TVAN Van 71.75 306 *i* P **P 00 50 21.5 +1.8**
W12A Cal Nev Ari 71.78 58 ⇓P **P 00 50 19.9 -0.1**
baz=71
RWWY Rawlins 71.80 49 *e*P **P 00 50 19.6 -0.4**
comp=Z,73nm,0.9s,mb5.3
RWWY *e*PcP PcP 00 50 38.1 +0.4
PFO Pinyon Flat Ob 71.94 61 *e*P **P 00 50 20.6 -0.3**
comp=Z,36nm,1.4s,mb4.8
PFO *e*PcP PcP 00 50 39.2 +0.7
PFO *e*PP PP 00 53 02.7 -0.4
PFO Pinyon Flat Ob 71.94 61 *e*P **P 00 50 20.6 -0.3**
PFO *e* 00 50 39.2
PFO *e* 00 53 02.7
PFO pmax pmax
comp=Z,36nm,1.4s,mb4.8
PFO Pinyon Flat Ob 71.94 61 ⇑P **P 00 50 20.6 -0.3**
baz=72,SNR=5.4
BELC Belle Mtn. 71.96 60 ⇑P **P 00 50 20.6 -0.5**
baz=72,SNR=8.8
109C Camp Elliot, M 72.02 61 ⇑P **P 00 50 20.9 -0.5**
baz=72
U14A Mt Trumbull 72.03 56 ⇑P **P 00 50 21.7 +0.3**
baz=72
T15A Red Dirt Ranch 72.10 56 ⇓P **P 00 50 22.4 +0.5**
baz=72
SIM Simferopol' 72.22 316 *d* *i*P **P 00 50 22.6 +0.2**
SIM *e*S S 00 59 29.0 +1.0
SIM pmax pmax
comp=Z,13nm,0.8s,mb4.6
NEE2 Needles Airpor 72.29 59 ⇑P **P 00 50 22.3 -0.7**
baz=72
IRM Iron Mountain 72.37 59 ⇑P **P 00 50 23.4 -0.1**
baz=72,SNR=6.3
MONP Monument Peak 72.44 61 ⇓P **P 00 50 23.9 0.0**
baz=72
W13A Hualapai Mount 72.51 58 ⇑P **P 00 50 24.4 +0.1**
baz=72
BC3 Big Chuckw Mtn 72.53 60 ⇑P **P 00 50 24.0 -0.4**
baz=72,SNR=6.8
AGMN Agassiz Refuge 72.57 38 *e*P **P 00 50 23.1 -1.3**
comp=Z,32nm,0.9s,mb5.0
X13A Yucca 72.88 58 ⇑P **P 00 50 26.5 -0.1**
baz=72,SNR=11
PDMCI Parker Dam,Lak 72.89 59 ⇓P **P 00 50 26.2 -0.3**
baz=72,SNR=8.2
W14A Seligman 72.91 57 ⇑P **P 00 50 27.1 +0.5**
baz=73,SNR=7.3
HATD Hatta, Dubai 72.92 288 P **P 00 50 27.9 +1.1**
SNR=7.8
HATD Hatta, Dubai 72.92 288 P **P 00 50 27.9 +1.1**
SNR=7.8
HOQ Hoqain 72.95 286 P **P 00 50 28.4 +1.3**
SNR=6.9
HOQ Hoqain 72.95 286 P **P 00 50 28.4 +1.3**
SNR=6.9
Y12C Blythe 73.03 59 ⇑P **P 00 50 27.2 -0.2**
baz=73,SNR=5.4
ASHO Ashiyiah 73.06 288 P **P 00 50 29.1 +1.4**
SNR=5.3
ASHO Ashiyiah 73.06 288 P **P 00 50 29.1 +1.4**
SNR=5.3
LVV L'vov 73.11 325 *e*P **P 00 50 29.0 +1.4**
KIS Kishinev 73.21 321 *e*P **P 00 50 26.0 -2.2**
Y13A Salome 73.41 59 ⇓P **P 00 50 29.6 0.0**
baz=73
W15A Williams 73.42 57 ⇑P **P 00 50 30.3 +0.7**
baz=73
X14A Yava 73.53 58 ⇑P **P 00 50 31.2 +0.8**
baz=73,SNR=13
BSY Bisya 73.58 286 P **P 00 50 32.0 +1.3**
SNR=7.3
BSY Bisya 73.58 286 P **P 00 50 32.0 +1.3**
SNR=7.3
SMCO Snowmass 73.69 51 *e*P **P 00 50 31.3 +0.2**
comp=Z,44nm,1.0s,mb5.0
SMCO *e*PcP PcP 00 50 46.5 +0.7
WUAZ Wupatki 73.72 56 *e*P **P 00 50 31.5 +0.1**
comp=Z,104nm,1.5s,mb5.2
WUAZ Wupatki 73.72 56 ⇑P **P 00 50 31.8 +0.5**
baz=73,SNR=11
KWP Kalwaria 73.80 326 *e*P **P 00 50 32.5 +0.9**
KWP Kalwaria 73.80 326 ⇑*i*P **P 00 50 32.4 +0.8**
Y14A Wickenburg 73.83 58 ⇓P **P 00 50 31.9 -0.1**
baz=74,SNR=8.6
X15A Humboldt 73.92 57 ⇓P **P 00 50 33.1 +0.6**
baz=74,SNR=14
ISCO Idaho Springs 73.99 50 *e*P **P 00 50 33.2 +0.4**
comp=Z,59nm,1.4s,mb5.0
ISCO Idaho Springs 73.99 50 *e*P **P 00 50 33.2 +0.3**
ISCO pmax pmax
comp=Z,59nm,1.4s,mb5.0
MARD Mardin 74.09 307 *i* P **P 00 50 33.9 +0.4**
MVCO Mesa Verde 74.21 53 *e*P **P 00 50 34.4 +0.2**
comp=Z,40nm,0.8s,mb5.1
MVCO Mesa Verde 74.21 53 ⇑P **P 00 50 34.3 +0.1**
baz=74,SNR=17
Z14A Wintersburg 74.26 59 ⇑P **P 00 50 34.3 -0.3**
baz=74
OJC Ojcow 74.47 327 *e*P **P 00 50 35.8 +0.4**
OJC e pP 00 51 24.9 +1.2
OJC Ojcow 74.47 327 *e*P **P 00 50 35.8 +0.4**
OJC *e* pP 00 51 24.9 +1.2
KOLS Kolonicke sedl 74.52 325 *e*P **P 00 50 36.1 +0.3**
KOLS Kolonicke sedl 74.52 325 *e*P **P 00 50 36.0 +0.2**
STHS Stebnicka Huta 74.55 326 *i* P **P 00 50 37.3 +1.4**
comp=Z,12nm,0.7s,mb4.7
STHS *e* pP 00 51 26.4 +2.3
STHS Stebnicka Huta 74.55 326 *i* P **P 00 50 37.3 +1.4**
STHS *e* pP 00 51 26.4 +2.3
STHS pmax pmax
comp=Z,13nm,0.7s,mb4.7
BSEG Bad Segeberg 74.64 335 *e*P **P 00 50 36.6 +0.3**
BSEG pmax pmax
comp=Z,13nm,1.0s,mb4.5
BSEG Bad Segeberg 74.64 335 *e*P **P 00 50 36.6 +0.3**
comp=Z,13nm,1.0s,mb4.5
MALT Malatya 74.71 309 *e*P **P 00 50 38.2 +1.1**
comp=Z,3.3nm,0.6s,mb4.1
MALT *e*pP pP 00 51 26.8 +1.5
MALT *e*PP PP 00 53 27.7 +1.3
MALT Malatya 74.71 309 *e*P **P 00 50 38.2 +1.2**
MALT *e**PP pP 00 51 26.8 +1.5
MALT *e* 00 53 27.7
MALT pmax pmax
comp=Z,3.0nm,0.6s,mb4.1
MALT Malatya 74.71 309 ⇑*i*P **P 00 50 38.5 +1.5**
EYMN Ely 74.72 36 *e*P **P 00 50 35.8 -1.1**
comp=Z,48nm,0.8s,mb5.2
EYMN *e*PcP PcP 00 50 50.0 -0.1
RUE Ruedersdorf 74.77 332 *e*P **P 00 50 37.0 -0.1**
comp=Z,14nm,0.7s,mb4.7
CRVS Cervenica-Dubn 74.88 326 *e*P **P 00 50 38.1 +0.3**

NIE Niedzica 74.92 327 *e*P **P 00 50 38.9 +0.9**
NIE e pP 00 51 28.2 +1.9
NIE Niedzica 74.92 327 *e*P **P 00 50 38.9 +0.9**
NIE *e* pP 00 51 28.2 +1.9
VRI Vrincioaia 75.01 321 ⇑*i*P **P 00 50 40.7 +2.1**
ARMA Armidale 75.05 175 *e*P **P 00 50 41.0 +2.2**
TRPA Tarpa 75.05 325 ⇑*i*P **P 00 50 39.8 +1.0**
PLOR Plostina 75.06 321 ⇑*i*P **P 00 50 39.5 +0.6**
115A Sonoran Desert 75.15 59 ⇓P **P 00 50 39.9 +0.2**
baz=75
MDO Dochfour 75.16 344 *e*P **P 00 50 38.5 -0.8**
KSP Ksiaz 75.26 330 *e*P **P 00 50 40.2 +0.2**
KSP *e*pP pP 00 51 28.7 +0.4
UMR Umm Al-Rimmam 75.27 297 *e*P **P 00 50 39.7 -0.6**
UMR AMb AMB 00 50 44.3
comp=Z,56nm,0.6s,mb5.4
MIB Mutribah 75.33 297 *e*P **P 00 50 40.5 -0.3**
MIB AMb AMB 00 50 41.9
comp=Z,44nm,0.6s,mb5.2
OKC Ostrava-Krasne 75.41 328 *e*P **P 00 50 41.4 +0.6**
OKC *e*pP pP 00 51 30.4 +1.3
KPL Plockton 75.50 345 ⇑*e*P **P 00 50 40.9 -0.3**
KPL AMb AMB 00 50 42.4
comp=Z,45nm,1.7s,mb4.8
SDCO Great Sand Dun 75.52 51 *e*P **P 00 50 41.6 0.0**
comp=Z,31nm,1.0s,mb4.9
116A Eloy 75.56 58 ⇑P **P 00 50 42.2 +0.2**
baz=75
KECS Kecovo 75.60 326 *e*P **P 00 50 41.0 -0.9**
comp=Z,4.1nm,0.7s,mb4.2
KECS *e* pP 00 51 31.4 +1.1
KECS Kecovo 75.60 326 *e*P **P 00 50 41.0 -0.9**
KECS *e* pP 00 51 31.4 +1.1
KECS pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
UPC Upice 75.64 330 *e*P **P 00 50 42.7 +0.6**
UPC *e*pP pP 00 51 31.3 +0.8
MLR Muntele Rosu 75.65 321 P **P 00 50 43.0 +0.8**
comp=Z,9.0nm,0.7s,mb4.5,baz=330,slow=20,SNR=28
MLR Muntele Rosu 75.65 321 ⇑*i*P **P 00 50 42.8 +0.5**
DPC Dobruska-Polom 75.66 329 *e*P **P 00 50 41.8 -0.4**
DPC *ex* x 00 50 44.8
DPC *e*pP pP 00 51 32.6 +2.0
ECSD EROS,Sioux Fal 75.68 42 *e*P **P 00 50 41.5 -0.9**
comp=Z,65nm,0.9s,mb5.3
MORC Moravsky Berou 75.68 328 *e*P **P 00 50 43.0 +0.6**
comp=Z,16nm,0.8s,mb4.7
MORC *e*PcP PcP 00 50 54.3 +0.1
MORC *e*pP pP 00 51 32.0 +1.3
MORC *es*P sP 00 51 54.6 +2.2
MORC Moravsky Berou 75.68 328 *e*P **P 00 50 43.0 +0.6**
MORC *e* 00 50 54.3
MORC *e**PP pP 00 51 32.0 +1.3
MORC *e**SP sP 00 51 54.6 +2.3
MORC pmax pmax
comp=Z,16nm,0.8s,mb4.7
MORC Moravsky Berou 75.68 328 ⇑*i*P **P 00 50 43.0 +0.6**
QRN Al-Qurain 75.69 296 *e*P **P 00 50 41.6 -1.2**
QRN AMb AMB 00 50 43.1
comp=Z,140nm,1.4s,mb5.4
NAY Al-Naaiem 75.78 297 *e*P **P 00 50 42.2 -1.1**
NAY AMb AMB 00 50 45.8
comp=Z,42nm,1.3s,mb4.9
RDF Al-Radifah 75.80 297 *e*P **P 00 50 42.5 -0.9**
RDF AMb AMB 00 50 46.0
comp=Z,89nm,1.3s,mb5.2
GZT Gaziantep 75.87 309 *i* P **P 00 50 43.8 +0.2**
KAR1 Arisaig 75.93 345 *e*P **P 00 50 44.4 +0.7**
NRDL Niedersach Rie 75.94 334 *e*P **P 00 50 43.6 -0.2**
comp=Z,8.0nm,0.9s,mb4.3
PSN Preselentsi 76.01 319 *i* P **P 00 50 44.7 +0.4**
CLL Collm 76.02 332 ⇑*i*P **P 00 50 43.6 -0.6**
comp=Z,17nm,0.8s,mb4.7
CLL *e*pP pP 00 51 33.0 +0.4
CLL Collm 76.02 332 ⇑*i*P **P 00 50 43.6 -0.6**
CLL *e**PP pP 00 51 33.0 +0.4
CLL pmax pmax
comp=Z,17nm,0.8s,mb4.7
CLL Collm 76.02 332 ⇑*i*P **P 00 50 43.6 -0.6**
comp=Z,17nm,0.8s,mb4.7
CLL ⇑*i*P(2) 00 50 46.7
comp=Z,24nm,0.6s
CLL *e*pP pP 00 51 33.0 +0.4
CLL Collm 76.02 332 *e*P **P 00 50 43.8 -0.4**
comp=Z,24nm,0.6s,mb5.0
CLL *e*pP pP 00 51 32.7 +0.1
DRGR 76.04 324 ⇓*i*P **P 00 50 44.7 +0.3**
BRG Berggiesshubel 76.06 331 *e*P **P 00 50 45.2 +0.7**
BRG pmax pmax
comp=Z,2.0nm,0.9s,mb3.8
BRG Berggiesshubel 76.06 331 *e*P **P 00 50 44.4 -0.1**
comp=Z,9.0nm,1.1s,mb4.3
BRG Berggiesshubel 76.06 331 *e*P **P 00 50 45.1 +0.7**
comp=Z,37nm,0.9s,mb4.0
EBH Black Hill 76.10 343 *e*P **P 00 50 44.5 -0.1**
216A Three Points, 76.10 59 ⇓P **P 00 50 45.2 +0.1**
baz=76
PVCC Panska Ves 76.14 331 *e*P **P 00 50 45.3 +0.4**
PVCC *e*pP pP 00 51 33.8 +0.5
FBE Freiberg 76.22 331 *e*P **P 00 50 45.7 +0.3**
comp=Z,10.0nm,0.8s,mb4.5
VYHS Vyhne 76.24 327 *i* P **P 00 50 46.2 +0.7**
comp=Z,7.3nm,1.0s,mb4.3
VYHS *e* pP 00 51 35.4 +1.4
VYHS Vyhne 76.24 327 *i* P **P 00 50 46.2 +0.7**
VYHS *e* pP 00 51 35.4 +1.4
VYHS pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
PSZ Piszkesteto 76.29 326 *e*P **P 00 50 46.3 +0.5**
comp=Z,10.0nm,0.8s,mb4.5
PSZ *e*pP pP 00 51 35.7 +1.4
PSZ Piszkesteto 76.29 326 *e*P **P 00 50 46.3 +0.5**
PSZ *e**PP pP 00 51 35.7 +1.4
PSZ pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
PSZ Piszkesteto 76.29 326 ⇓*i*P **P 00 50 46.5 +0.7**
TUC Tucson 76.30 58 P **P 00 50 45.7 -0.4**
comp=Z,5.5nm,0.6s,mb4.4
TUC Tucson 76.30 58 P **P 00 50 45.7 -0.5**
TUC pmax pmax
comp=Z,5.0nm,0.6s,mb4.3
KOLL Kolacno 76.34 327 *e*P **P 00 50 47.0 +0.9**
KOLL *e*pP pP 00 51 36.1 +1.6
CLZ Clausthal 76.42 334 *e*P **P 00 50 46.9 +0.4**
CLZ *e**PP pP 00 51 35.8 +0.9
CLZ pmax pmax
comp=Z,15nm,0.8s,mb4.7
CLZ Clausthal 76.42 334 *e*P **P 00 50 46.9 +0.4**
comp=Z,15nm,0.8s,mb4.7
CLZ *e*pP pP 00 51 35.8 +0.9
VRAC Vranov 76.42 329 ⇑*i*P **P 00 50 47.3 +0.8**
STKA Stephens Creek 76.44 184 *e*P **P 00 50 47.6 +0.9**
comp=Z,4.0nm,0.9s,mb4.0
STKA Stephens Creek 76.44 184 P **P 00 50 47.0 +0.4**
comp=Z,6.9nm,0.8s,mb4.3,baz=37,slow=3.7,SNR=9.8
STKA pP pP 00 51 32.2 -3.0
comp=Z,7.4nm,1.1s,baz=346,slow=12,SNR=2.4
EAU Auchinoon 76.46 343 *e*P **P 00 50 46.9 +0.2**
ANTO Ankara 76.59 313 *e*P **P 00 50 49.0 +1.3**
comp=Z,8.8nm,0.7s,mb4.5
ANTO *e*PcP PcP 00 50 58.0 -0.3
ANTO Ankara 76.59 313 *e*P **P 00 50 49.0 +1.3**
ANTO *e* 00 50 58.0
ANTO pmax pmax
comp=Z,9.0nm,0.7s,mb4.5
PRU Pruhonice 76.60 330 *e*P **P 00 50 47.8 +0.3**
PRU *ex* x 00 50 50.6
PRU *e*pP pP 00 51 37.0 +1.0
217A Green Valley 76.65 58 ⇓P **P 00 50 48.4 +0.2**
baz=76
PGBU Glenifferbraes 76.71 343 *e*P **P 00 50 48.3 +0.2**
PGBU AMb AMB 00 50 48.8
comp=Z,18nm,0.9s,mb4.7
PRD Provadia 76.75 319 *i* P **P 00 50 51.8 +3.3**
SMOL Smolenice 76.76 328 *e*pP pP 00 51 38.7 +1.7
IBBN Ibbenburen 76.82 335 *e*P **P 00 50 48.7 0.0**
comp=Z,24nm,1.0s,mb4.8
TREC Trest 76.84 329 *e*P **P 00 50 49.2 +0.3**
TREC *e**PP pP 00 51 38.9 +1.5
TREC Trest 76.84 329 *e*P **P 00 50 49.2 +0.3**
TREC *e*pP pP 00 51 38.9 +1.5
TREC *e*S S 01 00 19.6 +0.5
SCHQ Schefferville 76.86 19 P **P 00 50 47.8 -1.1**
comp=Z,32nm,0.7s,mb5.0,baz=358,slow=9.5,SNR=73

ESK Eskdalemuir 76.90 343 ⇑*e*P **P 00 50 48.8 -0.3**
ESK AMb AMB 00 50 50.7
comp=Z,17nm,1.0s,mb4.6
MODS Modra-Piesok 76.93 328 *e*P **P 00 50 50.7 +1.3**
MODS *e*pP pP 00 51 39.8 +1.9
ANMO Albuquerque 76.97 54 *e*P **P 00 50 50.4 +0.4**
comp=Z,31nm,0.8s,mb5.0
ANMO Albuquerque 76.97 54 *e*P **P 00 50 50.4 +0.5**
ANMO pmax pmax
comp=Z,31nm,0.8s
LAZ Ladron 76.98 54 *e*P **P 00 50 50.2 +0.3**
LAZ *e*pP pP 00 51 38.9 +0.5
218A Dragoon 76.98 58 ⇑P **P 00 50 50.3 +0.3**
baz=77
WERD Werda 76.98 332 *e*P **P 00 50 49.7 0.0**
comp=Z,10.0nm,1.3s,mb4.3
WERD *e*pP pP 00 51 38.7 +0.5
FORT Forrest 77.01 196 *e*P **P 00 50 50.9 +1.0**
comp=Z,29nm,0.6s,mb5.1
GUNZ Gunzen 77.04 332 *e*P **P 00 50 50.3 +0.3**
comp=Z,8.0nm,0.8s,mb4.4
MOX Moxa 77.04 332 *e*P **P 00 50 50.2 +0.2**
comp=Z,12nm,1.3s,mb4.4
MOX *e* pP 00 51 39.6 +1.1
MOX Moxa 77.04 332 *e*P **P 00 50 50.2 +0.2**
MOX *e* pP 00 51 39.6 +1.1
MOX pmax pmax
comp=Z,12nm,1.3s,mb4.4
MOX Moxa 77.04 332 *e*P **P 00 50 49.9 -0.1**
comp=Z,10.0nm,1.2s,mb4.3
MOX *e*pP pP 00 51 38.9 +0.4
WERN Wernitzgruen 77.09 332 *e*P **P 00 50 50.4 +0.1**
comp=Z,9.0nm,0.7s,mb4.5
GZR Gura Zlata 77.11 323 ⇑*i*P **P 00 50 50.8 +0.3**
NKC Novy Kostel 77.11 332 *e*P **P 00 50 50.6 +0.2**
NKC *ex* x 00 50 53.3
ZST Bratislava 77.15 328 *e*P **P 00 50 51.3 +0.7**
comp=Z,8.7nm,1.2s,mb4.3
ZST *e* pP 00 51 40.8 +1.6
ZST LR LR
comp=Z,100nm,18.9s
ZST Bratislava 77.15 328 *e*P **P 00 50 51.3 +0.7**
ZST *e*pP pP 00 51 40.8 +1.6
COWI Conover 77.16 36 *e*P **P 00 50 49.8 -1.0**
comp=Z,48nm,0.7s,mb5.2
SZH Strazhica 77.38 320 *i* P **P 00 50 52.4 +0.4**
318A Bisbee 77.39 58 ⇓P **P 00 50 52.5 +0.2**
baz=77
UBBA Unterbreizbach 77.42 333 *e*P **P 00 50 51.9 -0.2**
comp=Z,7.0nm,0.9s,mb4.3
BZS Buzias 77.43 324 ⇑*i*P **P 00 50 52.4 +0.1**
MANZ Manzenberg 77.44 332 *e*P **P 00 50 52.2 0.0**
comp=Z,6.0nm,0.9s,mb4.2
BNM Barren Site 77.45 54 *e*P **P 00 50 52.9 +0.3**
ROTZ Rotzenmuhle 77.59 331 *e*P **P 00 50 53.1 0.0**
comp=Z,8.0nm,1.1s,mb4.3
ROTZ *e*pP pP 00 51 42.5 +0.9
GAL1 Galloway 77.64 343 ⇑*e*P **P 00 50 52.8 -0.4**
GAL1 AMb AMB 00 50 56.7
comp=Z,36nm,1.8s,mb4.7
KHC Kasperske Hory 77.66 330 *e*P **P 00 50 53.9 +0.5**
KHC *ex* x 00 50 56.6
KHC *e*pP pP 00 51 42.8 +0.8
JMB Yambol 77.69 319 *i* P **P 00 50 54.2 +0.4**
HPK Haverah Park 77.81 341 ⇑*e*P **P 00 50 54.6 +0.4**
CBKS Cedar Bluff 77.83 47 *e*P **P 00 50 53.2 -1.4**
comp=Z,57nm,0.8s,mb5.2
CBKS Cedar Bluff 77.83 47 P **P 00 50 53.3 -1.3**
CBKS pmax pmax
comp=Z,57nm,0.8s,mb5.2
CONA Conrad Observa 77.84 328 ⇑*i*P **P 00 50 55.4 +1.0**
comp=Z,8.4nm,0.8s,mb4.4
CONA ⇓*i*pP pP 00 51 44.9 +1.8
comp=Z,22nm,1.5s
GEC2 GERESS Array S 77.86 330 *e*P **P 00 50 54.6 +0.1**
GEC2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.3
GEC2 GERESS Array S 77.86 330 *e*P **P 00 50 54.6 +0.1**
comp=Z,8.0nm,0.9s,mb4.3
GERES GERESS Array B 77.86 330 P **P 00 50 54.0 -0.5**
comp=Z,4.3nm,0.7s,mb4.2,baz=36,slow=5.7,SNR=24
GERES pP pP 00 51 39.1 -4.0
comp=Z,1.5nm,0.8s,baz=33,slow=8.0,SNR=1.5
319A Douglas 77.86 58 ⇓P **P 00 50 55.1 +0.2**
baz=78
WET Wettzell 77.89 331 *e*P **P 00 50 55.2 +0.5**
WET *e**PP pP 00 51 44.6 +1.3
WET pmax pmax
comp=Z,17nm,0.9s,mb4.7
WET Wettzell 77.89 331 *e*P **P 00 50 55.2 +0.5**
comp=Z,17nm,0.9s,mb4.7
WET *e*pP pP 00 51 44.6 +1.3
GRA1 Grafenberg Arr 77.99 332 *e*P **P 00 50 55.7 +0.4**
comp=Z,28nm,0.8s,mb4.9
GRA1 *e*pP pP 00 51 45.2 +1.3
GRF Grafenberg Arr 77.99 332 *e*P **P 00 50 55.7 +0.4**
GRF *e**PP pP 00 51 45.2 +1.3
GRF pmax pmax
comp=Z,28nm,0.8s,mb4.9
GRF Grafenberg Arr 77.99 332 *e*P **P 00 50 55.7 +0.4**
GRF *e**PP pP 00 51 45.2 +1.3
GRF pmax pmax
comp=Z,28nm,0.8s,mb4.9
GRF Grafenberg Arr 77.99 332 *e*P **P 00 50 55.7 +0.4**
comp=Z,28nm,0.8s,mb4.9
GRF *e*pP pP 00 51 45.2 +1.3
GRFO Grafenberg 77.99 332 *e*P **P 00 50 55.1 -0.2**
comp=Z,26nm,0.9s,mb4.9
GRFO Grafenberg 77.99 332 *e*P **P 00 50 55.1 -0.2**
GRFO pmax pmax
comp=Z,26nm,0.9s,mb4.9
PKSM Moragy 78.17 326 ⇑*i*P **P 00 50 56.8 +0.5**
TNS Taunus Mts 78.43 334 *e*P **P 00 50 57.5 -0.2**
KBI1 Birley Grange 78.44 341 ⇑*e*P **P 00 50 57.6 -0.1**
MOA Molln 78.49 329 ⇑*i* pP 00 51 49.4 +2.7
comp=Z,7.0nm,1.2s
MOA Molln 78.49 329 ⇑*i*P **P 00 50 58.4 +0.3**
comp=Z,8.0nm,0.9s,mb4.3
MOA ⇑*i*pP pP 00 51 49.4 +2.7
comp=Z,7.0nm,1.2s
BEBN Eben Emael 78.77 336 P **P 00 50 59.6 +0.1**
MEM Membach 78.84 335 P **P 00 51 00.1 +0.2**
comp=Z,12nm,1.2s,mb4.4
MEM AP pP 00 51 48.9 +0.3
CWF Charnwood Fore 78.86 340 ⇑*e*P **P 00 51 00.1 +0.1**
CWF AMb AMB 00 51 00.9
comp=Z,26nm,1.7s,mb4.6
KDZ Kurdzhali 78.88 319 *i* P **P 00 51 00.2 -0.1**
VTS Vitosha 79.15 321 *i* P **P 00 51 01.9 +0.2**
SBD1 Bryn Du 79.16 342 *e*P **P 00 51 01.1 -0.5**
RZN Rozhen 79.17 319 *i* P **P 00 51 02.6 +0.7**
KSU1 Kansas State U 79.20 45 *e*P **P 00 51 00.5 -1.6**
comp=Z,39nm,0.7s,mb5.1
BCLA Clavier 79.21 336 P **P 00 51 01.8 -0.1**
comp=Z,6.8nm,1.4s,mb4.1
BCLA AP pP 00 51 51.0 +0.3
JFWS Jewell Farm 79.23 38 *e*P **P 00 51 00.4 -1.8**
comp=Z,10nm,0.6s,mb4.6
JFWS Jewell Farm 79.23 38 P **P 00 51 00.9 -1.3**
JFWS pmax pmax
comp=Z,10.0nm,0.6s,mb4.6
FUR Furstenfeldbru 79.28 331 *e*P **P 00 51 02.7 +0.4**
FUR *e**PP pP 00 51 52.1 +1.0
FUR pmax pmax
comp=Z,16nm,0.9s,mb4.7
FUR Furstenfeldbru 79.28 331 *e*P **P 00 51 02.7 +0.4**
comp=Z,16nm,0.9s,mb4.7
FUR *e*pP pP 00 51 52.1 +1.0
SNF Seneffe 79.43 336 P **P 00 51 03.0 0.0**
HLM1 Long Mynd 79.43 341 *e*P **P 00 51 02.4 -0.7**
STU Stuttgart 79.46 333 *e*P **P 00 51 03.3 0.0**
comp=Z,19nm,0.9s,mb4.7
KBA Koelnbreinsper 79.48 329 ⇑*i* pP 00 51 52.9 +0.7
comp=Z,27nm,1.2s
KBA Koelnbreinsper 79.48 329 ⇓*i*P **P 00 51 04.1 +0.7**
comp=Z,20nm,0.8s,mb4.8,SNR=14
KBA ⇑*i*pP pP 00 51 52.9 +0.7
comp=Z,27nm,1.2s
KBA Koelnbreinsper 79.48 329 ⇓*i*P **P 00 51 04.1 +0.7**
KBA *i* pP 00 51 52.9 +0.7
KBA pmax pmax
comp=Z,20nm,0.8s,mb4.8
WLF Walferdange 79.63 335 *e*P **P 00 51 04.1 -0.1**
comp=Z,38nm,1.8s,mb4.7
GIVF Givet 79.64 336 *e*P **P 00 51 03.6 -0.6**

MMB Musomiste 79.70 320 *i* P **P 00 51 05.3 +0.6**
DOU Dourbes 79.71 336 P **P 00 51 04.0 -0.6**
DOU AP pP 00 51 53.7 +0.3
KKB Krupnik 79.78 320 *i* P **P 00 51 05.9 +0.8**
HAE Alders End 79.80 341 *e*P **P 00 51 03.9 -1.2**
BAIF Baives 79.85 336 *e*P **P 00 51 04.8 -0.6**
comp=Z,10nm,0.9s,mb4.2
BAIF *e*pP pP 00 51 53.7 -0.5
BAIF Baives 79.85 336 *e*P **P 00 51 04.8 -0.6**
comp=Z,5.1nm,0.9s,mb4.2
BAIF *e*pP pP 00 51 53.7 -0.5
BAIF Baives 79.85 336 *e*P **P 00 51 04.8 -0.6**
BAIF *e**PP pP 00 51 53.7 -0.5
BAIF pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
WATA Walderalm 79.89 330⇑*i* pP 00 51 55.7 +1.3
comp=Z,13nm,1.1s
WATA Walderalm 79.89 330⇑*i*P **P 00 51 06.1 +0.5**
comp=Z,14nm,1.1s,mb4.5
WATA ⇑*i*pP pP 00 51 55.7 +1.3
comp=Z,13nm,1.1s
WATA Walderalm 79.89 330⇑*i*P **P 00 51 06.1 +0.5**
WATA *i* pP 00 51 55.7 +1.2
WATA pmax pmax
comp=Z,15nm,1.1s,mb4.5
WTTA Wattenberg 79.93 330⇓*i* pP 00 51 55.9 +1.2
comp=Z,23nm,1.2s
WTTA Wattenberg 79.93 330⇓*i*P **P 00 51 06.5 +0.6**
comp=Z,12nm,0.7s,mb4.6
WTTA ⇓*i*pP pP 00 51 55.9 +1.2
comp=Z,23nm,1.2s
WTTA Wattenberg 79.93 330⇓*i*P **P 00 51 06.5 +0.7**
WTTA *i* pP 00 51 55.9 +1.2
WTTA pmax pmax
comp=Z,12nm,0.7s,mb4.6
HTR Trewern Hill 79.93 341⇑*e*P **P 00 51 05.5 -0.2**
MNTX Cornudas Mount 79.94 55 *e*P **P 00 51 06.0 -0.3**
comp=Z,26nm,1.0s,mb4.8
MCH1 Michaelchurch 79.95 341 *e*P **P 00 51 05.7 -0.1**
MCH1 AMb AMB 00 51 12.7
comp=Z,21nm,1.7s,mb4.5
RETA Reutte 80.04 331⇓*i*P **P 00 51 06.7 +0.2**
comp=Z,7.4nm,0.9s,mb4.3
GLMI Grayling 80.05 34 *e*P **P 00 51 05.8 -0.7**
comp=Z,144nm,0.9s,mb5.6
MOTA Moosalm 80.05 331⇑*i* pP 00 51 56.4 +1.1
comp=Z,19nm,1.2s
MOTA Moosalm 80.05 331⇓*i*P **P 00 51 06.9 +0.4**
comp=Z,23nm,1.3s,mb4.7
MOTA ⇑*i*pP pP 00 51 56.4 +1.1
comp=Z,19nm,1.2s
MOTA Moosalm 80.05 331⇓*i*P **P 00 51 06.9 +0.4**
MOTA *i* pP 00 51 56.4 +1.1
MOTA pmax pmax
comp=Z,23nm,1.3s,mb4.7
SQTA Sankt Quirin 80.12 331⇓*i* pP 00 51 56.6 +0.9
comp=Z,21nm,1.2s
SQTA Sankt Quirin 80.12 331⇑*i*P **P 00 51 07.2 +0.4**
comp=Z,17nm,1.4s,mb4.5
SQTA ⇓*i*pP pP 00 51 56.6 +0.9
comp=Z,21nm,1.2s
SQTA Sankt Quirin 80.12 331⇑*i*P **P 00 51 07.2 +0.4**
SQTA *i* pP 00 51 56.6 +0.9
SQTA pmax pmax
comp=Z,17nm,1.4s,mb4.5
BFO Black Forest 80.12 333 *e*P **P 00 51 06.8 -0.1**
comp=Z,6.7nm,1.2s,mb4.2
BFO *e*pP pP 00 51 55.6 -0.1
BFO Black Forest 80.12 333 *e*P **P 00 51 06.8 -0.1**
BFO *e**PP pP 00 51 55.7 0.0
BFO pmax pmax
comp=Z,7.0nm,1.2s,mb4.2
BFO Black Forest 80.12 333 *e*P **P 00 51 06.4 -0.5**
comp=Z,7.0nm,0.9s,mb4.3
WOL Wolverton 80.16 340 *e*P **P 00 51 06.6 -0.4**
HGH Gray Hill 80.23 341 *e*P **P 00 51 07.0 -0.3**
GOLH Golhisar 80.24 314 *i* P **P 00 51 07.7 0.0**
KLBR Kellerberrin 80.31 204 *e*P **P 00 51 08.1 +0.2**
comp=Z,80nm,1.8s,mb5.0
CDF Champ du Feu 80.39 334 *e*P **P 00 51 08.0 -0.3**
comp=Z,26nm,1.0s,mb4.5
CDF *e*pP pP 00 51 57.0 -0.2
CDF Champ du Feu 80.39 334 *e*P **P 00 51 08.0 -0.3**
comp=Z,13nm,1.0s,mb4.5
CDF *e*pP pP 00 51 57.0 -0.2
CDF Champ du Feu 80.39 334 *e*P **P 00 51 08.0 -0.3**
CDF *e**PP pP 00 51 57.0 -0.2
CDF pmax pmax
comp=Z,13nm,1.0s,mb4.5
DAVA Damuels 80.52 331⇓*i* pP 00 51 59.0 +1.1
comp=Z,13nm,1.1s
DAVA Damuels 80.52 331⇓*i*P **P 00 51 09.2 +0.3**
comp=Z,9.9nm,0.8s,mb4.5,SNR=5.4
DAVA ⇓*i*pP pP 00 51 59.0 +1.1
comp=Z,13nm,1.1s
ECH Echery 80.60 334 *e*P **P 00 51 09.2 -0.2**
MOF Molkenrain 80.93 333 *e*P **P 00 51 08.5 -2.6**
THEF They Montfort 80.96 334 *e*P **P 00 51 10.9 -0.4**
MEZF Maizieres J'vi 81.00 335 *e*P **P 00 51 11.3 -0.2**
comp=Z,20nm,0.9s,mb4.5
MEZF *e*pP pP 00 52 00.3 -0.2
MEZF Maizieres J'vi 81.00 335 *e*P **P 00 51 11.3 -0.2**
comp=Z,20nm,0.9s,mb4.7
MEZF *e*pP pP 00 52 00.3 -0.2
HAU Haudompre 81.04 334 *e*P **P 00 51 11.1 -0.6**
comp=Z,25nm,1.2s,mb4.4
HAU Haudompre 81.04 334 *e*P **P 00 51 11.1 -0.6**
comp=Z,12nm,1.2s,mb4.4
HAU Haudompre 81.04 334 *e*P **P 00 51 11.1 -0.6**
HAU pmax pmax
comp=Z,12nm,1.2s,mb4.4
HINF Hinteralfeld 81.05 334 *e*P **P 00 51 10.9 -0.9**
comp=Z,8.9nm,0.8s,mb4.1
HINF Hinteralfeld 81.05 334 *e*P **P 00 51 10.9 -0.9**
comp=Z,4.4nm,0.8s,mb4.1
HINF Hinteralfeld 81.05 334 *e*P **P 00 51 10.9 -0.9**
HINF pmax pmax
comp=Z,4.0nm,0.8s,mb4.1
WMOK Wichita Mounta 81.39 49 *e*P **P 00 51 13.2 -0.6**
comp=Z,29nm,1.0s,mb4.9
WMOK *e*PP PP 00 54 20.3 -1.8
WMOK Wichita Mounta 81.39 49 *e*P **P 00 51 13.2 -0.6**
WMOK *e* 00 54 20.3
WMOK pmax pmax
comp=Z,29nm,1.0s,mb4.9
HDIL Hopedale 81.55 39 *e*P **P 00 51 13.8 -0.7**
comp=Z,269nm,1.3s,mb5.7
NWAO Narrogin (SRO) 81.71 204 P **P 00 51 16.1 +0.9**
FLN La Foliniere 82.32 338 *e*P **P 00 51 17.8 -0.6**
comp=Z,21nm,0.8s,mb4.5
FLN *e*pP pP 00 52 07.0 -0.5
FLN La Foliniere 82.32 338 *e*P **P 00 51 17.8 -0.6**
comp=Z,11nm,0.8s,mb4.5
FLN *e*pP pP 00 52 07.0 -0.5
FLN La Foliniere 82.32 338 *e*P **P 00 51 17.8 -0.6**
FLN *e**PP pP 00 52 07.0 -0.5
FLN pmax pmax
comp=Z,11nm,0.8s,mb4.5
CABF La Chapelle 82.36 333 *e*P **P 00 51 18.5 -0.1**
comp=Z,5.7nm,0.7s,mb4.0
CABF La Chapelle 82.36 333 *e*P **P 00 51 18.5 -0.1**
comp=Z,2.8nm,0.7s,mb4.0
CABF La Chapelle 82.36 333 *e*P **P 00 51 18.5 -0.1**
CABF pmax pmax
comp=Z,3.0nm,0.7s,mb4.0
LDF La Druitiere 82.38 338 *e*P **P 00 51 18.1 -0.6**
comp=Z,9.4nm,0.9s,mb4.1
LDF La Druitiere 82.38 338 *e*P **P 00 51 18.1 -0.6**
comp=Z,4.7nm,0.9s,mb4.1
LDF La Druitiere 82.38 338 *e*P **P 00 51 18.1 -0.6**
LDF pmax pmax
comp=Z,5.0nm,0.9s,mb4.1
LOR Lormes 82.46 335 *e*P **P 00 51 18.6 -0.5**
comp=Z,14nm,0.8s,mb4.3
LOR Lormes 82.46 335 *e*P **P 00 51 18.6 -0.5**
comp=Z,7.1nm,0.8s,mb4.3
LOR Lormes 82.46 335 *e*P **P 00 51 18.6 -0.5**
LOR pmax pmax
comp=Z,7.0nm,0.8s,mb4.3
AAM Ann Arbor 82.53 35 *e*P **P 00 51 19.1 -0.5**
comp=Z,75nm,1.1s,mb5.3
AAM Ann Arbor 82.53 35 *e*P **P 00 51 19.1 -0.5**
AAM pmax pmax
comp=Z,75nm,1.1s,mb5.3
LTX Lajitas 82.68 56 *e*P **P 00 51 20.7 +0.1**
comp=Z,44nm,1.0s,mb5.1
LTX *e*pP pP 00 52 09.0 -0.8
LTX *e*sP sP 00 52 27.3 -3.9
LTX Lajitas 82.68 56 *e*P **P 00 51 20.7 +0.1**
LTX *e**PP pP 00 52 09.0 -0.8
LTX *e**SP sP 00 52 27.3 -3.9
LTX pmax pmax
comp=Z,44nm,1.0s,mb5.1
SSF Saint Saulge 82.75 335 *e*P **P 00 51 20.2 -0.5**
comp=Z,8.1nm,0.8s,mb4.2
SSF *e*pP pP 00 52 09.3 -0.5
SSF Saint Saulge 82.75 335 *e*P **P 00 51 20.2 -0.5**
comp=Z,4.1nm,0.8s,mb4.2
SSF *e*pP pP 00 52 09.3 -0.5
SSF Saint Saulge 82.75 335 *e*P **P 00 51 20.2 -0.5**
SSF *e**PP pP 00 52 09.3 -0.5
SSF pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
GRR Gorron 82.76 339 *e*P **P 00 51 20.3 -0.4**
comp=Z,19nm,0.7s,mb4.6
GRR *e*pP pP 00 52 09.6 -0.3
GRR Gorron 82.76 339 *e*P **P 00 51 20.3 -0.4**
comp=Z,9.4nm,0.7s,mb4.6
GRR *e*pP pP 00 52 09.6 -0.3
GRR Gorron 82.76 339 *e*P **P 00 51 20.3 -0.4**
GRR *e**PP pP 00 52 09.6 -0.3
GRR pmax pmax
comp=Z,9.0nm,0.7s,mb4.6
SMF Signal de Mont 83.03 335 *e*P **P 00 51 21.7 -0.4**
comp=Z,32nm,1.1s,mb4.7
SMF Signal de Mont 83.03 335 *e*P **P 00 51 21.7 -0.4**
comp=Z,16nm,1.1s,mb4.7
SMF Signal de Mont 83.03 335 *e*P **P 00 51 21.7 -0.4**
SMF pmax pmax
comp=Z,16nm,1.1s,mb4.7
AVF Avril sur Loir 83.04 335 *e*P **P 00 51 21.8 -0.3**
comp=Z,24nm,1.0s,mb4.6
AVF *e*pP pP 00 52 11.1 -0.3
AVF Avril sur Loir 83.04 335 *e*P **P 00 51 21.8 -0.3**
comp=Z,12nm,1.0s,mb4.6
AVF *e*pP pP 00 52 11.1 -0.3
AVF Avril sur Loir 83.04 335 *e*P **P 00 51 21.8 -0.3**
AVF *e**PP pP 00 52 11.1 -0.3
AVF pmax pmax
comp=Z,12nm,1.0s,mb4.6
LPL La Plagne 83.12 333 *e*P **P 00 51 22.8 +0.2**
comp=Z,14nm,0.8s,mb4.5
LPL *e*pP pP 00 52 12.2 +0.4
LPL La Plagne 83.12 333 *e*P **P 00 51 22.8 +0.2**
comp=Z,7.1nm,0.8s,mb4.5
LPL *e*pP pP 00 52 12.2 +0.4
LPL La Plagne 83.12 333 *e*P **P 00 51 22.8 +0.2**
LPL *e**PP pP 00 52 12.2 +0.4
LPL pmax pmax
comp=Z,7.0nm,0.8s,mb4.4
LPG La Plagne 83.13 333 *e*P **P 00 51 23.1 +0.5**
comp=Z,16nm,0.7s,mb4.5
LPG La Plagne 83.13 333 *e*P **P 00 51 23.1 +0.5**
comp=Z,8.0nm,0.7s,mb4.6
LPG La Plagne 83.13 333 *e*P **P 00 51 23.1 +0.5**
LPG pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
SGMF Saint Gilles 83.32 340 *e*P **P 00 51 23.5 0.0**
comp=Z,49nm,1.2s,mb4.8
SGMF Saint Gilles 83.32 340 *e*P **P 00 51 23.5 0.0**
comp=Z,25nm,1.2s,mb4.8
SGMF Saint Gilles 83.32 340 *e*P **P 00 51 23.5 0.0**
SGMF pmax pmax
comp=Z,25nm,1.2s,mb4.8
BGF Bois d'Agland 83.40 335 *e*P **P 00 51 23.8 -0.2**
comp=Z,9.2nm,0.7s,mb4.3
BGF Bois d'Agland 83.40 335 *e*P **P 00 51 23.8 -0.2**
comp=Z,4.6nm,0.7s,mb4.3
BGF Bois d'Agland 83.40 335 *e*P **P 00 51 23.8 -0.2**
BGF pmax pmax
comp=Z,5.0nm,0.7s,mb4.3
ROSF Rostrenen 83.42 340 *e*P **P 00 51 23.0 -1.1**
comp=Z,93nm,1.3s,mb5.1
ROSF *e*pP pP 00 52 13.4 +0.1
ROSF Rostrenen 83.42 340 *e*P **P 00 51 23.0 -1.1**
comp=Z,46nm,1.3s,mb5.0
ROSF *e*pP pP 00 52 13.4 +0.1
ROSF Rostrenen 83.42 340 *e*P **P 00 51 23.0 -1.1**
ROSF *e**PP pP 00 52 13.4 +0.1
ROSF pmax pmax
comp=Z,47nm,1.3s,mb5.1
QUIF Quistinic 83.78 340 *e*P **P 00 51 25.7 -0.2**
comp=Z,31nm,0.9s,mb4.7
QUIF Quistinic 83.78 340 *e*P **P 00 51 25.7 -0.2**
comp=Z,15nm,0.9s,mb4.7
QUIF Quistinic 83.78 340 *e*P **P 00 51 25.7 -0.2**
QUIF pmax pmax
comp=Z,15nm,0.9s,mb4.7
MBDF Montbardon 83.81 332 *e*P **P 00 51 25.7 -0.4**
comp=Z,9.5nm,0.6s,mb4.4
MBDF Montbardon 83.81 332 *e*P **P 00 51 25.7 -0.4**
comp=Z,4.8nm,0.6s,mb4.4
MBDF Montbardon 83.81 332 *e*P **P 00 51 25.7 -0.4**
MBDF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
TCF Toulx Ste Croi 83.83 336 *e*P **P 00 51 26.1 -0.1**
comp=Z,10.0nm,0.6s,mb4.4
TCF *e*pP pP 00 52 15.3 -0.2
TCF Toulx Ste Croi 83.83 336 *e*P **P 00 51 26.1 -0.1**
comp=Z,5.0nm,0.6s,mb4.4
TCF *e*pP pP 00 52 15.3 -0.2
TCF Toulx Ste Croi 83.83 336 *e*P **P 00 51 26.1 -0.1**
TCF *e**PP pP 00 52 15.3 -0.2
TCF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
LONY Lake Ozonia 83.90 28 *e*P **P 00 51 25.2 -1.3**
comp=Z,23nm,0.9s,mb4.9
LONY *e*pP pP 00 52 13.1 -2.8
LONY *e*sP sP 00 52 31.9 -5.3
ORIF Oris-en-Rattie 83.93 333 *e*P **P 00 51 26.9 +0.2**
comp=Z,11nm,0.6s,mb4.4
ORIF Oris-en-Rattie 83.93 333 *e*P **P 00 51 26.9 +0.2**
comp=Z,5.3nm,0.6s,mb4.5
ORIF Oris-en-Rattie 83.93 333 *e*P **P 00 51 26.9 +0.2**
ORIF pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
FRNY Flat Rock 84.03 27 *e*P **P 00 51 25.7 -1.6**
comp=Z,13nm,0.9s,mb4.7
JCT Junction City 84.05 52 *e*P **P 00 51 27.2 -0.4**
comp=Z,60nm,0.8s,mb5.4
JCT *e*pP pP 00 52 13.3 -3.6
JCT Junction City 84.05 52 *e*P **P 00 51 27.2 -0.4**
JCT *e**PP pP 00 52 13.4 -3.5
JCT pmax pmax
comp=Z,60nm,0.8s,mb5.4
ERPA Erie 84.14 33 *e*P **P 00 51 27.2 -0.6**
comp=Z,27nm,0.6s,mb5.2
MFF Saint Martin d 84.21 337 *e*P **P 00 51 28.1 0.0**
comp=Z,19nm,0.8s,mb4.6
MFF Saint Martin d 84.21 337 *e*P **P 00 51 28.1 0.0**
comp=Z,9.3nm,0.8s,mb4.6
MFF Saint Martin d 84.21 337 *e*P **P 00 51 28.1 0.0**
MFF pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
MIAR Mount Ida 84.27 46 *e*P **P 00 51 28.1 -0.6**
comp=Z,48nm,0.8s,mb5.3
MIAR Mount Ida 84.27 46 P **P 00 51 28.3 -0.3**
MIAR pmax pmax
comp=Z,48nm,0.9s,mb5.2
SBF Sospel 84.34 331 *e*P **P 00 51 28.3 -0.5**
comp=Z,42nm,0.9s,mb4.9
SBF Sospel 84.34 331 *e*P **P 00 51 28.3 -0.5**
comp=Z,21nm,0.9s,mb4.9
SBF Sospel 84.34 331 *e*P **P 00 51 28.3 -0.5**
SBF pmax pmax
comp=Z,21nm,0.9s,mb4.9
VIVF Saint-Julien-l 84.37 334 *e*P **P 00 51 29.0 +0.1**
comp=Z,13nm,0.9s,mb4.3
VIVF Saint-Julien-l 84.37 334 *e*P **P 00 51 29.0 +0.1**
comp=Z,6.4nm,0.9s,mb4.3
VIVF Saint-Julien-l 84.37 334 *e*P **P 00 51 29.0 +0.1**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.3
PARMO Parma 84.47 42 *e*P **P 00 51 29.6 0.0**
NCB Newcomb 84.59 28 *e*P **P 00 51 29.1 -1.0**
comp=Z,56nm,1.1s,mb5.2
WCI Wyandotte Cave 84.79 39 *e*P **P 00 51 30.5 -0.7**
comp=Z,64nm,0.8s,mb5.4
WCI Wyandotte Cave 84.79 39 *e*P **P 00 51 30.5 -0.7**
WCI pmax pmax
comp=Z,64nm,0.8s,mb5.4
GNAR Gosnell 84.90 43 *e*P **P 00 51 32.2 +0.4**
comp=Z,798nm,0.6s
HBAR Harrisburg 84.92 43 *e*P **P 00 51 31.3 -0.5**
RJF Les Rejaudoux 84.93 336 *e*P **P 00 51 31.8 +0.1**
comp=Z,12nm,0.8s,mb4.4
RJF *e*pP pP 00 52 21.1 0.0
RJF Les Rejaudoux 84.93 336 *e*P **P 00 51 31.8 +0.1**
comp=Z,6.1nm,0.8s,mb4.4
RJF *e*pP pP 00 52 21.1 0.0
RJF Les Rejaudoux 84.93 336 *e*P **P 00 51 31.8 +0.1**
RJF *e**PP pP 00 52 21.1 0.0
RJF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
GLAT Glass 85.01 42 *e*P **P 00 51 32.0 -0.3**
LBNH Lisbon 85.10 26 *e*P **P 00 51 32.5 -0.1**
comp=Z,26nm,0.8s,mb5.0
LBNH *e*sP sP 00 52 38.3 -5.1
LBNH Lisbon 85.10 26 *e*P **P 00 51 32.5 -0.1**
LBNH *e**SP sP 00 52 38.3 -5.1
LBNH pmax pmax
comp=Z,26nm,0.8s,mb5.0
CAF Calviac 85.11 335 *e*P **P 00 51 33.3 +0.7**
comp=Z,15nm,0.7s,mb4.5
CAF Calviac 85.11 335 *e*P **P 00 51 33.3 +0.7**
comp=Z,7.7nm,0.7s,mb4.5
CAF Calviac 85.11 335 *e*P **P 00 51 33.3 +0.7**
CAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.6
PPT Papeete 85.22 120 LR LR 01 26 16.2
comp=Z,228nm,18.4s,baz=328,slow=33
ACCN Adirondack Com 85.30 28 *e*P **P 00 51 31.6 -2.0**
comp=Z,32nm,0.9s,mb5.0
LASF Ste Croix 85.33 334 *e*P **P 00 51 34.1 +0.4**
comp=Z,15nm,1.0s,mb4.4
HNH Hanover 85.46 27 *e*P **P 00 51 34.1 -0.3**
comp=Z,31nm,0.9s,mb5.0
HNH *e*pP pP 00 52 19.9 -3.9
LFF La Frestale 85.49 336 *e*P **P 00 51 34.9 +0.4**
comp=Z,29nm,0.9s,mb4.7
LFF *e*pP pP 00 52 24.4 +0.4
LFF La Frestale 85.49 336 *e*P **P 00 51 34.9 +0.4**
comp=Z,14nm,0.9s,mb4.7
LFF *e*pP pP 00 52 24.4 +0.4
LFF La Frestale 85.49 336 *e*P **P 00 51 34.9 +0.4**
LFF *e**PP pP 00 52 24.4 +0.4
LFF pmax pmax
comp=Z,14nm,0.9s,mb4.7
BINY Binghamton 85.55 30 *e*P **P 00 51 33.6 -1.2**
comp=Z,39nm,1.1s,mb5.0
WVT Waverly 85.81 41 *e*P **P 00 51 35.9 -0.3**
comp=Z,40nm,0.8s,mb5.2
WVT Waverly 85.81 41 *e*P **P 00 51 35.9 -0.3**
WVT pmax pmax
comp=Z,40nm,0.8s,mb5.2
FFD Franklin Falls 85.88 27 *e*P **P 00 51 36.1 -0.4**
comp=Z,25nm,0.8s,mb5.0
NATX Nacogdoches 85.88 48 *e*P **P 00 51 37.1 +0.4**
comp=Z,25nm,0.7s,mb5.1
SSPA Standing Stone 86.22 32 *e*P **P 00 51 37.5 -0.7**
comp=Z,23nm,0.9s,mb4.9
MCWV Mont Chateau 86.30 34 *e*P **P 00 51 38.4 -0.2**
comp=Z,94nm,1.3s,mb5.4
MTLF Montolieu 86.50 334 *e*P **P 00 51 40.0 +0.5**
comp=Z,9.3nm,0.9s,mb4.2
MTLF *e*pP pP 00 52 29.6 +0.5
MTLF Montolieu 86.50 334 *e*P **P 00 51 40.0 +0.5**
comp=Z,4.7nm,0.9s,mb4.2
MTLF *e*pP pP 00 52 29.6 +0.5
MTLF Montolieu 86.50 334 *e*P **P 00 51 40.0 +0.5**
MTLF *e**PP pP 00 52 29.6 +0.5
MTLF pmax pmax
comp=Z,5.0nm,0.9s,mb4.2
PLAL Pickwick Lake 86.62 42 *e*P **P 00 51 39.4 -0.9**
comp=Z,70nm,1.4s,mb5.2
URZ Urewera 87.31 156 LR LR 01 26 54.1
comp=Z,98nm,19.1s,baz=214,slow=33
EPF Esparros 87.35 336 *e*P **P 00 51 43.5 -0.1**
comp=Z,11nm,0.8s,mb4.3
EPF Esparros 87.35 336 *e*P **P 00 51 43.5 -0.1**
comp=Z,5.5nm,0.8s,mb4.3
EPF Esparros 87.35 336 *e*P **P 00 51 43.5 -0.1**
EPF pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
TZTN Tazewell 87.40 38 *e*P **P 00 51 43.5 -0.4**
comp=Z,69nm,1.2s,mb5.3
SWET Sewanee 87.44 40 *e*P **P 00 51 43.3 -0.8**
SDMD Soldier's Deli 87.68 32 *e*P **P 00 51 44.5 -0.7**
comp=Z,30nm,0.9s,mb5.1
ETSF Etsaut 87.73 336 *e*P **P 00 51 45.0 -0.4**
comp=Z,8.0nm,0.6s,mb4.5
ETSF *e*pP pP 00 52 36.1 +1.0
ETSF Etsaut 87.73 336 *e*P **P 00 51 45.0 -0.4**
comp=Z,4.0nm,0.6s,mb4.4
ETSF *e*pP pP 00 52 36.1 +1.0
ETSF Etsaut 87.73 336 *e*P **P 00 51 45.0 -0.4**
ETSF *e**PP pP 00 52 36.1 +1.0
ETSF pmax pmax
comp=Z,4.0nm,0.6s,mb4.4
CPCT Cooper Cave 87.88 39 *e*P **P 00 51 45.8 -0.4**
ELN Prospectdale 88.01 36 *e*P **P 00 51 46.1 -0.8**
BLA Blacksburg 88.16 35 *e*P **P 00 51 47.2 -0.3**
comp=Z,70nm,1.0s,mb5.5
BLA Blacksburg 88.16 35 P **P 00 51 47.4 -0.1**
BLA pmax pmax
comp=Z,70nm,1.0s,mb5.5
CBN Corbin 88.52 33 *e*P **P 00 51 49.2 0.0**
comp=Z,85nm,1.1s,mb5.5
LRAL Lakeview Retre 88.73 42 *e*P **P 00 51 48.5 -1.7**
comp=Z,14nm,0.9s,mb4.8
LRAL *e*pP pP 00 52 35.6 -4.5
URVA University of 89.01 33 *e*P **P 00 51 50.9 -0.6**
TBI Tubuai 89.69 124 *e*LR LR 00 51 22.1
comp=Z,151nm,29.8s
GOGA Godfrey 90.06 40 *e*P **P 00 51 56.0 -0.5**
comp=Z,30nm,1.4s,mb4.9
GOGA Godfrey 90.06 40 P **P 00 51 56.2 -0.3**
GOGA pmax pmax
comp=Z,30nm,1.3s,mb5.0
LHS Liberty Hill 90.34 37 P **P 00 51 57.8 +0.1**
RPZ Rata Peaks 90.91 162 P **P 00 52 01.3 +1.5**
RPZ Rata Peaks 90.91 162 P **P 00 52 01.3 +1.5**
comp=Z,12nm,0.8s,mb4.9,baz=26,slow=12,SNR=5.7
ESDC Sonseca Array 91.68 337 P **P 00 52 03.3 -0.5**
comp=Z,0.3nm,0.4s,mb3.5,baz=32,slow=4.2,SNR=5.7
TORD Torodi Ar. Bea 113.89 322 PKiKP PKiKP 00 57 33.4 -1.3
comp=Z,1.3nm,0.5s,baz=19,slow=1.9,SNR=9.5
TORD PKKPbc PKKPbc 01 08 16.6 +1.2
comp=Z,1.3nm,0.5s,baz=220,slow=1.3,SNR=12
SDV Santo Domingo 117.12 42 *e*PKPdf PKPdf 00 57 40.5 -0.5
VNDA Vanda 122.46 176 PKP PKPdf 00 57 49.8 +0.6
comp=Z,3.1nm,0.8s,baz=180,slow=24,SNR=18
DBIC Dimbokro 122.48 325 PKP PKPdf 00 57 50.6 -0.6
comp=Z,7.4nm,0.6s,baz=354,slow=2.7,SNR=34
DBIC PKKPbc PKKPbc 01 07 45.8 +1.0
comp=Z,2.2nm,0.9s,baz=110,slow=7.5,SNR=4.7
LIC Lamto 122.95 325⇑*i*PKiKP PKPdf 00 57 51.1 -1.1
comp=Z,14nm,0.9s
SBA Scott Base 123.06 175 *e*PKPdf PKPdf 00 57 51.2 +0.9
MAW Mawson 128.08 209 PKP PKPdf 00 58 00.1 -0.1
comp=Z,4.0nm,0.6s,baz=84,slow=4.1,SNR=11
NNA Nana 130.90 62 *e*PKPdf PKPdf 00 58 06.5 -0.8
BOSA Boshof 130.96 268 PKP PKPdf 00 58 07.6 +0.7
BOSA SKPbc SKPbc 01 01 12.9 +0.9
BOSA Boshof 130.96 268 PKP PKPdf 00 58 07.6 +0.7
comp=Z,2.6nm,1.0s,baz=90,slow=2.0,SNR=4.2
BOSA SKPbc SKPbc 01 01 12.9 +0.9
comp=Z,11nm,1.1s,baz=40,slow=7.9,SNR=5.4
LPAZ La Paz 139.54 56 PKP PKPdf 00 58 15.3 -8.0
LPAZ PKP PKPdf 00 58 23.2 0.0
LPAZ La Paz 139.54 56 PKhKP 00 58 15.3
comp=Z,1.0nm,0.6s,baz=212,slow=4.6,SNR=5.3
LPAZ PKP PKPdf 00 58 23.2 0.0
comp=Z,2.8nm,0.6s,baz=37,slow=4.8,SNR=10.0
MAIT Maitri 145.86 205 *e*PKPdf PKPdf 00 58 32.1 -0.6
LCO Las Campanas 146.94 74 *e*PKPdf PKPdf 00 58 36.1 +0.2
SNAA Sanae 149.24 199 *e*PKPdf PKPdf 00 58 37.4 -0.9
SNAA *e* 00 58 42.2
SNAA *e* 00 58 48.9
SNAA *e* 00 59 51.1
SNAA *e* 00 59 32.2
SNAA Sanae 149.24 199 PKP PKPdf 00 58 37.2 -1.1
comp=Z,1.7nm,0.9s,baz=223,slow=9.5,SNR=3.0
SNAA PKPbc PKPbc 00 58 42.6 -0.3
comp=Z,4.8nm,0.9s,baz=120,slow=3.9,SNR=9.6
VNA2 Neumayer--Watz 150.79 197 *e*PKPdf PKPdf 00 58 41.2 +0.4
VNA2 *e* 00 58 47.1
VNA2 *e* 00 58 55.4

VNA2				*e*			00 58 58.6	
VNA2				*e*			00 59 36.4	
VNA2				*e*			04 25 05.1	
VNA3	**Neumayer Olymp**	**151.00**	**196**	*e*PKPdf	PKPdf		00 58 40.8	-0.3
VNA3				*e*			00 58 47.3	
VNA3				*e*			00 58 56.2	
VNA3				*e*			00 58 58.8	
VNA3				*e*			00 59 36.1	
VNA3				*e*			04 25 05.3	
VNA1	**Neumayer--Stat**	**151.19**	**197**	*e*PKPdf	PKPdf		00 58 42.0	+0.6
VNA1				*e*			00 58 48.2	
VNA1				*e*			00 58 57.4	
VNA1				*e*			00 58 59.6	
VNA1				*e*			00 59 37.7	
PLCA	**Paso Flores**	**152.94**	**94**	PKP	PKPdf		00 58 44.5	-0.4
PLCA				PKPbc	PKPbc		00 58 52.5	+0.1
PLCA	**Paso Flores**	**152.94**	**94**	PKP	PKPdf		00 58 44.5	-0.4
	comp=Z,4.7nm,0.9s,baz=246,slow=4.5,SNR=8.8							
PLCA				PKPbc	PKPbc		00 58 52.5	+0.1
	comp=Z,29nm,0.6s,baz=262,slow=2.3,SNR=71							

BUC ***28*** *00:59:04.6±1.0, 4564N×2644E, h152km±10km, MD4.5/3, Error ellipse: s-maj=7.5km s-min=6.3km az=331.0*
ISCJB ***28*** *00:59:04.5±0.5, 4562N±003×2652E±004, h146km±4km, Error ellipse: s-maj=4.8km s-min=4.3km az=30.8*
MOS ***28*** *00:59:04.6±0.5, 4564N×2647E, h143km, mb4.0/1, Error ellipse: s-maj=14.5km s-min=10.5km az=102.6*
NEIC ***28*** *00:59:05.8, 4559N×2641E, h140km, MD4.2(BUC), After BUC.*
CSEM ***28*** *00:59:05.0±0.1, 4562N×2640E, h135km±1km, mb4.0, Error ellipse: s-maj=2.6km s-min=2.4km az=79.0*
SOF ***28*** *00:59:06.5, 4531N×2658E, h173km, MD3.0*

ISC 28 00:59:05.1±0.5,4562N±003×2652E±004,h147km±4km, n59,σ0§73/92,22C-13D,Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLOR	**Plostina**	**0.25**	**21**	P		**Pn**	**00 59 25.1**	**0.0**
PLOR				S		Sn	00 59 40.0	-0.3
VRI	**Vrincioaia**	**0.28**	**30**	P		**Pn**	**00 59 25.5**	**+0.4**
VRI	**Vrincioaia**	**0.28**	**30**	↑*i*P		**Pn**	**00 59 25.5**	**+0.3**
VRI				*i* S		Sn	00 59 40.2	-0.3
VRI	**Vrincioaia**	**0.28**	**30**	↑*i*P		**Pn**	**00 59 25.5**	**+0.3**
VRI				S		Sn	00 59 39.6	-0.9
BRD	**Bordesti**	**0.36**	**101**	↑*i*P		**Pn**	**00 59 26.9**	**+1.5**
ODB	**Odobesti**	**0.40**	**68**	↑*i*P		**Pn**	**00 59 26.8**	**+1.2**
ODB				*i* S		Sn	00 59 42.6	+1.4
MLR	**Muntele Rosu**	**0.43**	**252**	P		**Pn**	**00 59 25.8**	**+0.1**
MLR	**Muntele Rosu**	**0.43**	**252**	↓*i*P		**Pn**	**00 59 25.8**	**+0.1**
MLR				*i* S		Sn	00 59 40.1	-1.2
PETR		**0.51**	**78**	↑*i*P		**Pn**	**00 59 27.0**	**+0.9**
PETR				*i* S		Sn	00 59 42.7	+0.7
AAR	**Sfinta Ana**	**0.67**	**320**	↓*i*P		**Pn**	**00 59 32.8**	**+5.8**
AAR				*i* S		Sn	00 59 53.1	+9.3
OZUR		**0.70**	**313**	↑*i*P		**Pn**	**00 59 27.0**	**-0.2**
OZUR				*i* S		Sn	00 59 42.6	-1.5
FULR		**0.74**	**184**	↑*i*P		**Pn**	**00 59 27.9**	**+0.4**
FULR				*i* S		Sn	00 59 45.1	+0.6
GHRR		**0.76**	**54**	↑*i*P		**Pn**	**00 59 28.4**	**+0.8**
GHRR				*i* S		Sn	00 59 45.5	+0.7
PGOR	**Pogoanele**	**0.79**	**155**	↑*i*P		**Pn**	**00 59 28.4**	**+0.6**
PGOR				*i* S		Sn	00 59 46.1	+1.0
TUDR		**0.81**	**92**	↑*i*P		**Pn**	**00 59 28.0**	**+0.1**
TUDR				*i* S		Sn	00 59 45.3	0.0
TESR		**0.89**	**6**	↑*i*P		**Pn**	**00 59 28.6**	**0.0**
TESR				*i* S		Sn	00 59 45.9	-0.8
SULR		**0.96**	**191**	↓*i*P		**Pn**	**00 59 29.5**	**+0.3**
SULR				*i* S		Sn	00 59 47.7	+0.1
VARR		**0.97**	**74**	↑*i*P		**Pn**	**00 59 29.9**	**+0.7**
VARR				*i* S		Sn	00 59 47.6	-0.1
ONCR	**Oncesti**	**0.99**	**31**	↑*i*P		**Pn**	**00 59 29.7**	**+0.3**
ONCR				*i* S		Sn	00 59 47.6	-0.4
AMRR		**1.16**	**150**	↑*i*P		**Pn**	**00 59 31.4**	**+0.4**
AMRR				*i* S		Sn	00 59 50.8	+0.1
BGMR	**Bucharest-Geol**	**1.21**	**195**	↓*i*P		**Pn**	**00 59 32.5**	**+1.0**
BGMR				*i* S		Sn	00 59 52.5	+1.0
CFR	**Carcaliu**	**1.22**	**111**	↓*i*P		**Pn**	**00 59 31.7**	**+0.2**
CFR				*i* S		Sn	00 59 50.8	-0.9
BUC1	**Bucharest**	**1.32**	**196**	P		**Pn**	**00 59 32.6**	**0.0**
BUC1				S		Sn	00 59 52.0	-1.4
BUC1	**Bucharest**	**1.32**	**196**	↓*i*P		**Pn**	**00 59 32.6**	**0.0**
BUC1				*i* S		Sn	00 59 52.5	-1.0
BERR	**Berezeni**	**1.35**	**56**	↑*i*P		**Pn**	**00 59 33.7**	**+0.9**
BERR				*i* S		Sn	00 59 54.2	+0.2
HARR	**Harsova**	**1.36**	**133**	P		**Pn**	**00 59 33.3**	**+0.3**
HARR	**Harsova**	**1.36**	**133**	↑*i*P		**Pn**	**00 59 33.3**	**+0.3**
HARR				*i* S		Sn	00 59 53.2	-1.0
TLCR		**1.67**	**104**	↑*i*P		**Pn**	**00 59 36.2**	**0.0**
TLCR				*i* S		Sn	00 59 59.9	-0.2
CVD	**Cernavoda**	**1.69**	**140**	↓P		**Pn**	**00 59 36.8**	**+0.3**
CVD	**Cernavoda**	**1.69**	**140**	↓*i*P		**Pn**	**00 59 36.8**	**+0.3**
CVD				*i* S		Sn	00 59 59.1	-1.3
IAS	**Iasi**	**1.73**	**24**	P		**Pn**	**00 59 37.4**	**+0.6**
IAS	**Iasi**	**1.73**	**24**	↓P		**Pn**	**00 59 37.3**	**+0.5**
IAS				S		Sn	01 00 00.6	-0.6
IAS	**Iasi**	**1.73**	**24**	↑*i*P		**Pn**	**00 59 37.3**	**+0.5**
IAS				*i* S		Sn	01 00 00.6	-0.6
KIS	**Kishinev**	**2.10**	**48**	↑*i*P		**Pn**	**00 59 40.5**	**-0.7**
KIS					pmax	pmax		
	comp=Z,400nm,0.5s							
KIS					pmax	pmax		
	comp=Z,400nm,0.5s							
KIS	**Kishinev**	**2.10**	**48**	↑*i*P		**Pn**	**00 59 40.5**	**-0.7**
	comp=Z,400nm,0.5s							
KIS				*i* S		**Sn**	**01 00 07.5**	**-1.4**
	comp=Z,2µm,0.5s							
KIS	**Kishinev**	**2.10**	**48**	*i* P		**Pn**	**00 59 40.5**	**-0.7**
	comp=Z,400nm,0.5s							
KIS				*i* S		**Sn**	**01 00 07.2**	**-1.7**
	comp=Z,2µm,0.5s							
ZIMR		**2.13**	**203**	P		**Pn**	**00 59 41.3**	**-0.3**
ZIMR		**2.13**	**203**	↓*i*P		**Pn**	**00 59 41.2**	**-0.4**
ZIMR				*i* S		**Sn**	**01 00 07.4**	**-2.1**
PSN	**Preselentsi**	**2.27**	**148**	*i* P		**Pn**	**00 59 43.9**	**+0.6**
SZH	**Strazhica**	**2.39**	**190**	*i* P		**Pn**	**00 59 44.2**	**-0.5**
GZR	**Gura Zlata**	**2.64**	**266**	P		**Pn**	**00 59 47.5**	**-0.2**
GZR	**Gura Zlata**	**2.64**	**266**	↑*i*P		**Pn**	**00 59 47.7**	**-0.1**
GZR				*i* S		**Sn**	**01 00 20.7**	**0.0**
GZR	**Gura Zlata**	**2.64**	**266**	P		**Pn**	**00 59 47.5**	**-0.3**
DRGR		**2.89**	**295**	P		**Pn**	**00 59 50.3**	**-0.6**
DRGR		**2.89**	**295**	↓*i*P		**Pn**	**00 59 50.3**	**-0.6**
BZS	**Buzias**	**3.44**	**272**	P		**Pn**	**00 59 57.2**	**-0.7**
BZS	**Buzias**	**3.44**	**272**	↓*i*P		**Pn**	**00 59 57.1**	**-0.9**
BZS	**Buzias**	**3.44**	**272**	P		**Pn**	**00 59 57.2**	**-0.8**
PGB	**Panagyurishte**	**3.51**	**210**	*i* P		**Pn**	**00 59 59.3**	**+0.4**
VTS	**Vitosha**	**3.86**	**219**	↓P		**Pn**	**01 00 04.0**	**+0.6**
VTS	**Vitosha**	**3.86**	**219**	↑*i*P		**Pn**	**01 00 04.0**	**+0.6**
VTS				*i* S		**Sn**	**01 00 42.5**	**-6.1**
VTS	**Vitosha**	**3.86**	**219**	*i* P		**Pn**	**01 00 03.7**	**+0.3**
KDZ	**Kurdzhali**	**4.05**	**192**	*i* P		**Pn**	**01 00 05.7**	**-0.2**
RZN	**Rozhen**	**4.14**	**199**	*i* P		**Pn**	**01 00 06.9**	**-0.3**
KOLS	**Kolonicke sedl**	**4.40**	**320**	*e*PN		**Pn**	**01 00 10.7**	**+0.3**
MMB	**Musomiste**	**4.51**	**208**	*i* P		**Pn**	**01 00 12.1**	**+0.1**
CRVS	**Cervenica-Dubn**	**4.76**	**315**	*e*PN		**Pn**	**01 00 15.7**	**+0.6**
KECS	**Kecovo**	**5.02**	**307**	*e*PN		**Pn**	**01 00 18.5**	**-0.1**
KECS				*e*PG		Pn	01 00 40.3	+22
SEV	**Sevastopol'**	**5.17**	**99**	*e*P		**Pn**	**01 00 20.1**	**-0.6**
SEV				*e*S		**Sn**	**01 01 18.5**	**-1.1**
SEV					pmax	pmax		
	comp=Z,2.0nm,0.3s							
SEV					smax			
	comp=N,34nm,0.9s							
SEV					smax			
	comp=E,8.0nm,0.9s							

ISCJB ***28*** *01:02:01.6±0.7, 4556N±004×2065E±004, h11km±7km, Error ellipse: s-maj=6.4km s-min=4.4km az=0.3*
BEO ***28*** *01:02:02.2±0.4, 4557N×2064E, h21km±5km, ML1.9/5*
BUC ***28*** *01:02:03.8±0.1, 4567N×2075E, h21km, MD2.9/1, Error ellipse: s-maj=1.8km s-min=0.5km az=6.0*

ISC 28 01:02:02.3±0.7,4556N±004×2066E±004,h15km±6km,n10, σ0§95/20,1C-4D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BZS	**Buzias**	**0.68**	**85**	↓*i*Pg		**Pg**	**01 02 15.5**	**0.0**
BZS				*e*Sg		**Sg**	**01 02 25.3**	**+0.8**
BZS	**Buzias**	**0.68**	**85**	↓*i*P		**Pg**	**01 02 15.6**	**+0.1**
BZS				*i* S		**Sg**	**01 02 25.7**	**+1.2**
FGSL	**Fruska Gora**	**0.72**	**236**	*e*Pg		**Pg**	**01 02 16.2**	**-0.2**
FGSL				*e*Sg		**Sg**	**01 02 26.3**	**+0.4**
BEO	**Belgrade**	**0.75**	**191**	*e*Pg		**Pg**	**01 02 16.9**	**-0.1**
BEO				*e*Sg		**Sg**	**01 02 27.6**	**+0.7**
SVIS	**Svilajnac**	**1.32**	**162**	*e*Pg		**Pg**	**01 02 26.6**	**-1.2**
SVIS				*e*Sg		**Sg**	**01 02 45.6**	**+0.5**
GZR	**Gura Zlata**	**1.50**	**96**	↓*i*P		**Pn**	**01 02 29.8**	**+1.2**
GZR				*i* S		**Sn**	**01 02 47.4**	**-0.4**
DIVS	**Divcibare**	**1.54**	**198**	*e*Pn		**Pn**	**01 02 27.9**	**-1.2**
DIVS				*e*Sg		**Sg**	**01 02 51.3**	**-0.5**
PKSM	**Moragy**	**1.55**	**296**	*e*Pn		**Pn**	**01 02 28.6**	**-0.8**
PKSM				*e*Sg		**Sg**	**01 02 51.3**	**-1.1**
PKSM	**Moragy**	**1.55**	**296**	↓*i*P		**Pn**	**01 02 31.3**	**+1.9**
PKSM				*i* S		**Sn**	**01 02 51.2**	**+2.0**
DRGR		**1.89**	**48**	↑*i*P		**Pn**	**01 02 34.0**	**+0.1**
DRGR				*i* S		**Sn**	**01 02 56.1**	**-1.3**

ISCJB ***28*** *01:06:20.6±0.8, 09S±0.1×1273E±02, h10km, mb4.0/4, Error ellipse: s-maj=33.4km s-min=10.9km az=155.9*
IDC ***28*** *01:06:21.0±2.1, 083S×12737E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/15, mbtmp3.6/3, Error ellipse: s-maj=169.9km s-min=26.1km az=66.0*
NEIC ***28*** *01:06:22.6±0.5, 087S×12730E, h10km, mb4.3/2, Error ellipse: s-maj=22.0km s-min=7.3km az=66.0*

ISC 28 01:06:22.7±0.8,09S±01×1273E±02,h10km,n10,σ0§34/10, mb4.0/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KKM	**Kota Kinabalu**	**13.03**	**302**	*e*Pn		**Pn**	**01 09 27.8**	**-0.3**
WRA	**Warramunga Arr**	**20.16**	**160**	P		**Pn**	**01 10 56.6**	**-0.7**
	0.6nm,0.3s,baz=339,slow=11,SNR=8.2							
WB2	**Warramunga Arr**	**20.17**	**160**	*e*P		**P**	**01 10 57.6**	**+0.1**
MBWA	**Marble Bar**	**21.48**	**200**	P		**P**	**01 11 11.7**	**+0.1**
ASAR	**Alice Springs**	**23.55**	**165**	P		**P**	**01 11 34.0**	**+0.5**
	1.4nm,0.5s,mb3.7,baz=344,slow=11,SNR=19							
YHNB	**Yeheng**	**26.03**	**348**	P		**P**	**01 11 56.2**	**0.0**
LSA	**Lhasa**	**45.98**	**314**	*e*P		**P**	**01 14 46.7**	**+0.4**
	4.7nm,1.1s,mb4.3							
MKAR	**Makanchi Array**	**61.66**	**326**	P		**P**	**01 16 40.8**	**0.0**
	0.5nm,0.5s,mb4.0,baz=123,slow=8.1,SNR=5.5							
KURK	**Kurchatov**	**65.92**	**328**	*e*P		**P**	**01 17 09.0**	**+0.1**
	1.8nm,0.8s,mb4.2							
KURK				*e*PP		PP	01 19 35.5	+1.5
BRVK	**Borovoye**	**71.55**	**328**	P		**P**	**01 17 43.6**	**-0.3**

MAN 28 01:21:23,1000N×12582E,h131km,mb3.8,ML2.6,MS2.1, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSLP	**Maasin**	**0.95**	**278**	*e*P		Pn	01 21 46.3	+0.7
MSLP				*e*S		Sn	01 22 04.1	+1.4
BESP	**Borongan**	**1.63**	**347**	*e*P		Pn	01 21 53.7	+1.0
BESP				*e*S		Sn	01 22 16.4	+1.0

NIED ***28*** *01:51:00, 3720N×13660E, h5km, Mw4.0 Best double couple: Mo1.29000×1015 NP1:φ156.00000°, δ61.00000°, λ12.00000°. NP2:φ60.00000°, δ80.00000°, λ150.00000°.*
IDC ***28*** *01:51:00.0±0.8, 3719N×13653E, h0km, mb3.7/8 mb1 3.9/9, mb1mx3.8/21, mbtmp3.7/9, ML3.3/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/29, Error ellipse: s-maj=25.8km s-min=11.7km az=31.0*
ISCJB ***28*** *01:51:02.0±0.5, 3718N±003×13654E±004, h22km±4km, mb4.0/13, MS3.3/5, Error ellipse: s-maj=5.1km s-min=4.9km az=1.2*
NEIC ***28*** *01:51:01.9±0.3, 3718N×13662E, h10km, mb4.3/5, Error ellipse: s-maj=6.9km s-min=5.7km az=219.0*
JMA ***28*** *01:51:02.6, 3718N×13661E, h10km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs61.00000°, δ82.00000°, λ173.00000°. NP2: φs153.00000°, δ83.00000°, λ9.00000°. Principal axes: T Plg11.0000°, Azm17.0000°; N Plg79.0000°, Azm192.0000°; P Plg1.0000°, Azm287.0000°;*
JMA Felt III J1.
MOS ***28*** *01:51:03.4±0.7, 3714N×13650E, h34km, mb4.5/5 Error ellipse: s-maj=15.5km s-min=8.6km az=106.5*

ISC 28 01:51:02.5±0.5,3717N±003×13660E±004,h13km±4km, n50,σ0§85/53,mb4.0/13,MS3.3/5,4C-2D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JJH	**Hakui**	**0.28**	**149**	↑P		**Pg**	**01 51 08.6**	**+0.3**
JJH				*e*S		**Sg**	**01 51 12.3**	**+0.1**
JSZ	**Suzu**	**0.67**	**65**	↓P		**Pg**	**01 51 15.1**	**-0.4**
JSZ				*e*S		**Sg**	**01 51 24.4**	**+0.1**
JHG	**Hegura jima**	**0.73**	**20**	↑P		**Pg**	**01 51 16.0**	**-0.6**
JHG				*e*S		**Sg**	**01 51 26.8**	**+0.6**
JTT	**Ttatey**	**0.81**	**133**	↓P		**Pg**	**01 51 18.1**	**-0.1**
JKG	**Kaga**	**0.91**	**194**	↑P		**Pb**	**01 51 19.9**	**-0.2**
JKG				*e*S		**Sg**	**01 51 32.3**	**+0.2**
MAJO	**Matsushiro**	**1.43**	**115**	*e*Pn		**Pn**	**01 51 27.5**	**-0.5**
MAJO				*e*Sn		**Sn**	**01 51 45.9**	**-0.8**
MAT	**Matsushiro**	**1.43**	**115**	P		**Pn**	**01 51 27.5**	**-0.5**
MAT				S		**Sn**	**01 51 47.9**	**+1.3**
MJAR	**Matsushiro Arr**	**1.43**	**115**	Pg		**Pg**	**01 51 28.2**	**-1.7**
	125nm,0.3s,baz=292,slow=16,SNR=509							
MJAR				Lg			01 51 48.5	
	128nm,0.3s,baz=324,slow=27,SNR=14							
JNU	**Nakatsue**	**6.19**	**231**	Pn		**Pn**	**01 52 35.2**	**+1.8**
	1.1nm,0.3s,baz=328,slow=9.1,SNR=5.8							
KSRS	**Korea Array**	**6.92**	**275**	Pn		**Pn**	**01 52 45.6**	**+2.1**
	0.7nm,0.3s,baz=92,slow=13,SNR=8.6							
KSRS				Sn		**Sn**	**01 54 00.2**	**-1.9**
	1.0nm,0.3s,baz=91,slow=25,SNR=5.4							
KSRS				Lg			01 54 31.3	
	0.3nm,0.3s,baz=122,slow=37,SNR=5.4							
KSRS				LR		LR	01 55 12.7	
	comp=Z,79nm,19.2s,baz=152,slow=37							
INCN	**Inchon**	**7.95**	**275**	Pn		**Pn**	**01 52 57.3**	**-0.3**
ASAJ	**Asahikawa**	**8.30**	**31**	Pn		**Pn**	**01 53 01.8**	**-0.6**
	0.4nm,0.3s,baz=288,slow=20,SNR=3.2							
ASAJ				LR		LR	01 56 14.8	
	comp=Z,116nm,21.2s,baz=292,slow=38							
MDJ	**Mudanjiang**	**9.14**	**327**	*e*Pn		**Pn**	**01 53 13.8**	**-0.1**
YSS	**Yuzh-Sakhalins**	**10.79**	**23**	*e*Pn		**Pn**	**01 53 40.5**	**+4.0**
	24nm,0.9s							
YSS	**Yuzh-Sakhalins**	**10.79**	**23**	↑*e*P		**Pn**	**01 53 40.0**	**+3.5**
YSS					pmax	pmax		
	comp=Z,20nm,0.6s							
CBIJ	**Chichi jima**	**11.10**	**153**	LR		LR	01 57 51.7	
	comp=Z,103nm,19.3s,baz=91,slow=37							
KLR	**Kul'dur**	**12.56**	**345**	*e*P		**Pn**	**01 54 02.7**	**+2.0**
KLR					MLR	MLR		
	comp=E,500nm,12.5s							
KLR					MLR	MLR		
	comp=Z,1µm,12.5s							
HIA	**Hailar**	**17.20**	**320**	P		**Pn**	**01 55 02.4**	**+0.3**
NACB	**Ninganchiao**	**18.25**	**229**	Pn		**Pn**	**01 55 15.7**	**+0.3**
MA2	**Magadan**	**24.22**	**18**	*e*P		**P**	**01 56 18.7**	**+0.2**
	comp=Z,8.2nm,0.6s,mb4.3							
MA2	**Magadan**	**24.22**	**18**	*e*P		**P**	**01 56 18.7**	**+0.3**
MA2					pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3							
SONM	**Songino Array**	**24.54**	**305**	P		**P**	**01 56 20.8**	**-0.8**
	comp=Z,1.3nm,0.6s,mb3.6,baz=118,slow=10,SNR=10							
SONM					LR	LR	02 06 10.5	
	comp=Z,71nm,18.3s,MS3.2,baz=200,slow=37							
GUMO	**Guam**	**24.61**	**160**	P		**P**	**01 56 23.8**	**+1.3**
GUMO	**Guam**	**24.61**	**160**	LR		LR	02 05 31.8	
	comp=Z,43nm,18.0s,MS3.0,baz=119,slow=35							
YAK	**Yakutsk**	**25.26**	**352**	*e*P		**P**	**01 56 27.7**	**-0.2**
	comp=Z,17nm,0.4s,mb4.9							
YAK	**Yakutsk**	**25.26**	**352**	*e*P		**P**	**01 56 27.7**	**-0.2**
YAK					pmax	pmax		
	comp=Z,17nm,0.4s,mb4.9							
ZAK	**Zakamensk**	**27.20**	**310**	*e*P		**P**	**01 56 46.0**	**+0.4**
ZAK					pmax	pmax		
	comp=Z,1.0nm,1.4s							
TIXI	**Tiksi**	**34.78**	**356**	*e*P		**P**	**01 57 52.2**	**0.0**
	comp=Z,3.1nm,0.8s,mb4.3							
TIXI	**Tiksi**	**34.78**	**356**	*e*P		**P**	**01 57 52.0**	**-0.2**
TIXI					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7							
BILL	**Bilibino**	**35.07**	**19**	P		**P**	**01 57 55.8**	**+1.1**
BILL	**Bilibino**	**35.07**	**19**	*e*P		**P**	**01 57 55.5**	**+0.8**
BILL					pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4							
ZALV	**Zalesovo Beam**	**38.98**	**312**	P		**P**	**01 58 27.4**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.4,baz=3.8,slow=2.2,SNR=2.0							
ZALV					PcP	PcP	02 00 37.7	-0.5
	comp=Z,0.9nm,0.6s,baz=129,slow=4.2,SNR=4.2							
ZAL	**Zalesovo**	**39.00**	**312**	P		**P**	**01 58 27.4**	**-0.8**
ZAL							02 00 37.7	
MKAR	**Makanchi Array**	**40.78**	**301**	P		**P**	**01 58 43.0**	**-0.1**
MKAR							02 00 44.4	
MKAR	**Makanchi Array**	**40.78**	**301**	P		**P**	**01 58 43.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=99,slow=8.9,SNR=2.5							
MKAR					PcP	PcP	02 00 44.4	+0.3
	comp=Z,0.2nm,0.4s,baz=85,slow=3.0,SNR=3.4							
MKAR					LR	LR	02 15 53.7	
	comp=Z,38nm,19.8s,MS3.3,baz=190,slow=37							
KURK	**Kurchatov**	**42.81**	**308**	*e*P		**P**	**01 58 59.1**	**-0.6**
	comp=Z,3.2nm,1.1s,mb4.0							
KURK	**Kurchatov**	**42.81**	**308**	*e*P		**P**	**01 58 59.1**	**-0.6**
KURK					pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9							
COLA	**College**	**51.02**	**32**	P		**P**	**02 00 03.1**	**-0.5**
INK	**Inuvik**	**56.01**	**27**	*e*P		**P**	**02 00 41.5**	**+1.3**
	comp=Z,97nm,0.7s							
WB2	**Warramunga Arr**	**56.84**	**183**	P		**P**	**02 00 46.4**	**-0.1**
WRA	**Warramunga Arr**	**56.84**	**183**	P		**P**	**02 00 46.1**	**-0.4**
	comp=Z,0.7nm,0.9s,mb3.7,baz=358,slow=7.7,SNR=8.6							
ARCES	**ARCESS Array B**	**62.49**	**338**	LR		LR	02 32 08.3	
	comp=Z,48nm,18.2s,MS3.7,baz=347,slow=40							
RES	**Resolute Bay**	**63.40**	**13**	*e*P		**P**	**02 01 31.2**	**+0.2**
	comp=Z,91nm,0.9s							
YKA	**Yellowknife Ar**	**65.59**	**29**	P		**P**	**02 01 45.4**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=306,slow=6.8,SNR=19							
FINES	**FINESS Array B**	**66.86**	**331**	P		**P**	**02 01 52.5**	**-1.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=36,slow=10.0,SNR=4.6							
AKASG	**Malin Array Be**	**71.79**	**320**	P		**P**	**02 02 23.5**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.7,baz=50,slow=6.4,SNR=5.9							
NOA	**NORSAR Array B**	**72.52**	**335**	LR		LR	02 39 50.6	
	comp=Z,16nm,18.4s,MS3.3,baz=290,slow=40							
FCC	**Fort Churchill**	**75.54**	**25**	*e*P		**P**	**02 02 46.9**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.1							
FCC	**Fort Churchill**	**75.54**	**25**	*e*P		**P**	**02 02 46.9**	**+0.7**
FCC					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1							
PDAR	**Pinedale Array**	**80.26**	**43**	P		**P**	**02 03 12.7**	**-0.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=287,slow=1.6,SNR=12							

MOS ***28*** *02:17:19.5±0.9, 4329N×4429E, h9km, mb3.8/1, Error ellipse: s-maj=9.9km s-min=6.8km az=90.8*
TIF ***28*** *02:17:19.7, 4335N×4430E, h11km±1km*
ISCJB ***28*** *02:17:20.8±0.3, 4331N±002×4426E±003, h9km, Error ellipse: s-maj=2.9km s-min=2.4km az=153.5*

ISC 28 02:17:21.3±0.3,4332N±002×4425E±003,h4km±7km,n21, σ0§97/40,3C-3D,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KMSR	**Komsomolskaya**	**0.06**	**35**	↑*i*PG		**Pg**	**02 17 22.2**	**-0.3**
ARNR	**Ardon**	**0.14**	**170**	↓*i*PG		**Pg**	**02 17 23.3**	**-0.6**
ARNR				*i* S		**Sg**	**02 17 26.6**	**+0.9**
BTKR	**Batakoyurt**	**0.22**	**77**	↓*i*PG		**Pg**	**02 17 24.9**	**-0.6**
BTKR				*i* S		**Sg**	**02 17 28.6**	**+0.2**
KORR	**Kora**	**0.27**	**209**	↓*i*PG		**Pg**	**02 17 25.7**	**-0.8**
KORR				*i* S		**Sg**	**02 17 30.3**	**+0.3**
LSNR	**Lesken**	**0.32**	**261**	*i* PG		**Pg**	**02 17 27.4**	**0.0**
LSNR				*e*S		**Sg**	**02 17 33.0**	**+1.4**
VLKR	**Vladikavkaz**	**0.42**	**131**	*e*PG		**Pg**	**02 17 28.6**	**-0.7**
VLKR				*i* S		**Sg**	**02 17 35.1**	**+0.4**
PRTR	**Priterechnaya**	**0.43**	**3**	*e*PG		**Pg**	**02 17 28.0**	**-1.5**
PRTR				*e*S		**Sg**	**02 17 33.9**	**-1.2**
SNJR	**Sundja**	**0.48**	**122**	*e*PG		**Pg**	**02 17 29.8**	**-0.8**
SNJR				*i* S		**Sg**	**02 17 37.2**	**+0.3**
LACR	**Lac**	**0.50**	**176**	↑*i*PG		**Pg**	**02 17 30.0**	**-0.8**
LACR				*e*

	comp=E,15nm,0.3s								
SONA						AML	AML	02 42 37.5	
	comp=N,8.2nm,0.3s								
AML	**Almayashu**	**7.30**		**1**	*e*Pn	**Pn**		**02 40 21.0**	**+0.7**
	comp=N,3.6nm,0.4s								
AML					*e*Sn	**Sn**		**02 41 40.8**	**-0.9**
UCH	**Uchtor**	**7.43**		**6**	*e*Pn	**Pn**		**02 40 23.4**	**+1.2**
	comp=N,1.9nm,0.5s								
EKS2	**Erkin-Say**	**7.83**		**1**	*e*Pn	**Pn**		**02 40 28.5**	**+0.9**
	comp=N,5.7nm,0.7s								
KK31	**Karatay Array**	**8.60**	**345**		⇓Pn	**Pn**		**02 40 38.0**	**-0.2**
	comp=N,1.9nm,0.4s,baz=157,slow=12,SNR=26								
KK31					⇓Sn	**Sn**		**02 42 11.5**	**-2.2**
	comp=N,1.1nm,0.3s,baz=168,slow=23,SNR=7.6								
KOLN	**Koldanda**	**11.10**	**127**		*e*P	**Pn**		**02 41 10.0**	**-2.4**
	comp=N,4.0nm,0.3s								
GKN	**Gorkha**	**11.65**	**123**		*e*P	**Pn**		**02 41 16.3**	**-3.7**
	comp=N,10.0nm,0.3s								
JIRN	**Jiri**	**12.95**	**120**		*e*P	**Pn**		**02 41 34.0**	**-3.7**
	comp=N,26nm,0.4s								
MKAR	**Makanchi Array**	**13.65**		**26**	Pn	**Pn**		**02 41 47.8**	**+0.6**
	comp=N,0.2nm,0.3s,baz=203,slow=11,SNR=0.8								
TAPN	**Taplejung**	**14.23**	**118**		*e*P	**Pn**		**02 41 50.5**	**-4.5**
	comp=N,9.9nm,0.4s								
AB31	**Akbulak array**	**17.57**	**329**		Pn	**Pn**		**02 42 36.8**	**-0.5**
	baz=130,slow=13,SNR=7.8								
AB31					⇑Sn	**Sn**		**02 45 45.8**	**-6.2**
	comp=N,0.9nm,0.8s								
AKTK	**Aktyubinsk**	**19.28**	**329**		P	**Pn**		**02 42 57.1**	**-0.9**
AKTO	**Aktyubinsk**	**19.28**	**329**		⇑Pn	**Pn**		**02 42 56.9**	**-1.1**
	comp=N,1.1nm,1.8s								
AKTO	**Aktyubinsk**	**19.28**	**329**		P	**Pn**		**02 42 57.1**	**-0.9**
	comp=N,0.2nm,0.3s,baz=125,slow=6.1,SNR=7.0								
ZALV	**Zalesovo Beam**	**20.70**		**19**	P	**P**		**02 43 11.3**	**-0.6**
ZALV	**Zalesovo Beam**	**20.70**		**19**	P	**P**		**02 43 11.3**	**-0.6**
	comp=N,1.9nm,0.4s,baz=213,slow=11,SNR=10								
SONM	**Songino Array**	**27.66**		**52**	P	**P**		**02 44 20.2**	**+1.2**
	comp=N,0.3nm,0.5s,mb3.2,baz=250,slow=7.1,SNR=3.0								
ARCES	**ARCESS Array B**	**43.48**	**338**		P	**P**		**02 46 34.4**	**+0.4**
ARCES	**ARCESS Array B**	**43.48**	**338**		P	**P**		**02 46 34.4**	**+0.4**
	comp=N,2.9nm,0.9s,mb4.0,baz=106,slow=8.6,SNR=3.6								
NOA	**NORSAR Array B**	**46.96**	**324**		P	**P**		**02 47 01.6**	**-0.1**
	comp=N,0.4nm,0.7s,mb3.5,baz=96,slow=7.7,SNR=3.1								
TORD	**Torodi Ar. Bea**	**67.79**	**271**		P	**P**		**02 49 28.3**	**-0.7**
	comp=N,1.3nm,0.7s,mb4.1,baz=43,slow=5.6,SNR=3.8								
WRA	**Warramunga Arr**	**79.34**	**123**		P	**P**		**02 50 36.4**	**-0.3**
	comp=N,0.5nm,0.6s,mb3.6,baz=320,slow=4.7,SNR=16								
ASAR	**Alice Springs**	**81.59**	**126**		P	**P**		**02 50 49.6**	**+0.9**
	comp=N,0.5nm,0.9s,mb3.5,baz=318,slow=5.4,SNR=3.9								
YKA	**Yellowknife Ar**	**82.80**		**4**	P	**P**		**02 50 55.7**	**+1.2**
YKA	**Yellowknife Ar**	**82.80**		**4**	P	**P**		**02 50 55.7**	**+1.2**
	comp=N,0.2nm,0.5s,mb3.4,baz=348,slow=5.3,SNR=6.1								

JMA 28 02:48:42.8,3716N×13653E,h7km±1km,M2.5,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.31**	**139**	P	Pg	02 48 49.2	+0.4
JJH				S	Sg	02 48 53.8	+0.9
JSZ	**Suzu**	**0.72**	**66**	P	Pg	02 48 56.8	+0.1
JSZ				S	Sg	02 49 06.6	+0.4
JHG	**Hegura jima**	**0.75**	**24**	P	Pg	02 48 57.4	+0.1
JHG				S	Sg	02 49 07.7	+0.6
MAT	**Matsushiro**	**1.48**	**114**	P	Pn	02 49 10.1	+0.3
MAT				S	Sn	02 49 29.9	+0.5

*SZGRF **28** 02:57:39.6,2531N×10120E,h33km,mb4.6, Yunnan, China*
*ISCJB **28** 02:57:39.2±1.1,2550N±004×9943E±003,h2km±8km, mb4.3/51,MS3.5/11,Error ellipse: s-maj=7.2km s-min=4.9km az=159.5*
*IDC **28** 02:57:41.0±0.6,2564N×9948E,h0km,mb4.3/21, mb1 4.5/21,mb1mx4.3/30,mbtmp4.3/21,MS3.6/9, Ms1 3.6/9,ms1mx3.4/35,Error ellipse: s-maj=20.8km s-min=13.6km az=51.0*
*BJI **28** 02:57:43.6,2569N×9954E,h19km,mB5.0,mb4.5,ML4.4, Ms4.4,Msz4.0*
*MOS **28** 02:57:44.9±0.8,2556N×9947E,h40km,mb4.6/26,Error ellipse: s-maj=11.6km s-min=6.0km az=110.6*
*NEIC **28** 02:57:47.1±1.0,2556N×9955E,h47km±9km,mb4.4/25, Error ellipse: s-maj=8.7km s-min=5.6km az=66.0*

ISC 28 02:57:44.6±1.5,2553N±004×9944E±004,h24km±11km, n138,σ0§97/139,mb4.3/51,MS3.5/11,1D,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**3.01**	**97**	P	**Pn**	**02 58 32.5**	**+1.6**
KMI				PG	**Pn**	**02 58 39.5**	**+8.6**
KMI				SG	**Sn**	**02 59 19.5**	**+13**
KMI				Smax			
	comp=N,3μm,1.0s						
KMI				Smax			
	comp=E,2μm,0.8s						
GYA	**Guiyang**	**6.57**	**80**	P	**Pn**	**02 59 20.3**	**+0.5**
GYA				S	**Sn**	**03 00 30.0**	**-3.9**
GYA				LR	LR		
	comp=N,6μm,8.3s						
GYA				LR	LR		
	comp=E,2μm,6.0s						
GYA				LR	LR		
	comp=Z,4μm,7.8s						
CD2	**Chengdu**	**6.58**	**34**	*e*P	**Pn**	**02 59 20.0**	**+0.1**
CD2				S	**Sn**	**03 00 37.8**	**+3.6**
CD2				Smax			
	comp=N,200nm,1.6s						
CD2				Smax			
	comp=E,1μm,1.3s						
CD2				LR	LR		
	comp=N,3μm,10.2s						
CD2				LR	LR		
	comp=E,4μm,6.6s						
CD2				LR	LR		
	comp=Z,3μm,9.6s						
CHTO	**Chiang Mai**	**6.70**	**184**	*e*Pn	**Pn**	**02 59 23.0**	**+1.4**
	comp=Z,52nm,0.6s						
CHTO	**Chiang Mai**	**6.70**	**184**	*e*P	**Pn**	**02 59 23.0**	**+1.4**
CHTO				pmax	pmax		
	comp=Z,52nm,0.6s						
SHL	**Shillong**	**6.83**	**272**	*e*P	**Pn**	**02 59 24.0**	**+0.7**
LSA	**Lhasa**	**8.45**	**301**	P	**Pn**	**02 59 49.0**	**+3.4**
LSA	**Lhasa**	**8.45**	**301**	*e*Pn	**Pn**	**02 59 47.4**	**+1.9**
	comp=Z,22nm,0.6s						
LSA	**Lhasa**	**8.45**	**301**	*e*P	**Pn**	**02 59 47.4**	**+1.8**
LSA				pmax	pmax		
	comp=Z,22nm,0.6s						
TAPN	**Taplejung**	**10.67**	**282**	*e*P	**Pn**	**03 00 15.2**	**-0.8**
	comp=Z,71nm,0.9s						
ODAN	**Odare**	**10.90**	**280**	*e*P	**Pn**	**03 00 19.1**	**-0.2**
	comp=Z,75nm,0.9s						
LZH	**Lanzhou**	**11.18**	**19**	⇓P	**Pn**	**03 00 23.5**	**+0.5**
LZH				AP		03 00 26.8	
LZH				XP		03 00 29.8	
LZH				PP		03 00 32.3	
LZH				*e*S	**Sn**	**03 02 31.0**	**+3.7**
LZH				XS		03 02 35.0	
LZH				*e*SS		03 02 43.5	
LZH				AMB	AMB		
	comp=Z,92nm,1.5s						
LZH				AMB	AMB		
	comp=Z,173nm,4.2s						
LZH				LR	LR		
	comp=N,2μm,7.6s						
LZH				LR	LR		
	comp=Z,3μm,10.2s						
QIZ	**Qiongzhong**	**11.60**	**122**	P	**Pn**	**03 00 34.0**	**+5.2**
QIZ				LR	LR		
	comp=N,470nm,11.4s						
QIZ				LR	LR		
	comp=Z,421nm,11.4s						
XAN	**Xi'an**	**11.82**	**42**	P	**Pn**	**03 00 28.3**	**-3.4**
XAN				PP		03 00 37.5	
XAN				S	**Sn**	**03 02 36.8**	**-6.0**
XAN				SS		03 02 51.5	
XAN				AMB	AMB		
	comp=Z,11nm,1.0s						
XAN				LR	LR		
	comp=N,851nm,16.6s						
XAN				LR	LR		
	comp=E,833nm,17.4s						
XAN				LR	LR		
	comp=Z,742nm,13.1s						
JIRN	**Jiri**	**12.05**	**283**	*e*P	**Pn**	**03 00 34.4**	**-0.5**
	comp=Z,85nm,0.9s						
KKN	**Kakani**	**12.86**	**283**	*e*P	**Pn**	**03 00 44.9**	**-1.2**
	comp=Z,120nm,1.0s						
GKN	**Gorkha**	**13.45**	**284**	*e*P	**Pn**	**03 00 52.6**	**-1.5**
	comp=Z,51nm,0.8s						
GTA	**Gaotai**	**13.85**		**1**	*e*P	**Pn**	**03 00 59.0**	**-0.4**
GTA					AP		03 01 08.5	
GTA					XP		03 01 12.5	
GTA					S	**Sn**	**03 03 34.5**	**+2.1**
GTA					XS		03 03 44.8	
GTA					AMB	AMB		
	comp=Z,5.0nm,1.0s							
GTA					AMB	AMB		
	comp=Z,106nm,3.8s							
GTA					LR	LR		
	comp=N,602nm,8.8s							
GTA					LR	LR		
	comp=E,956nm,12.6s							
GTA					LR	LR		
	comp=Z,469nm,9.1s							
WHN	**Wuhan**	**14.08**		**66**	*e*P	**Pn**	**03 01 00.5**	**-2.2**
WHN					*e*S	**Sn**	**03 03 30.5**	**-7.7**
WHN					LR	LR		
	comp=Z,1μm,12.2s							
KOLN	**Koldanda**	**14.34**	**282**		*e*P	**Pn**	**03 01 03.5**	**-2.7**
	comp=Z,17nm,0.7s							
TIY	**Taiyuan**	**16.41**		**39**	P	**Pn**	**03 01 33.5**	**+0.1**
TIY					S	**Sn**	**03 04 39.0**	**+4.1**
TIY					LR	LR		
	comp=N,689nm,11.9s							
TIY					LR	LR		
	comp=E,739nm,10.5s							
TIY					LR	LR		
	comp=Z,558nm,13.5s							
HHC	**Hu-ho-hao-te**	**18.31**		**30**	*e*P	**Pn**	**03 01 56.3**	**-0.8**
HHC					AP	pP	03 02 01.3	-2.2
HHC					XP	sP	03 02 05.0	-1.6
HHC					PP		03 02 11.0	
HHC					AMB	AMB		
	comp=Z,19nm,1.1s							
HHC					AMB	AMB		
	comp=Z,138nm,4.3s							
HHC					LR	LR		
	comp=N,650nm,8.9s							
HHC					LR	LR		
	comp=E,402nm,6.1s							
HHC					LR	LR		
	comp=Z,428nm,9.8s							
BJI	**Beijing**	**20.14**		**40**	P	**P**	**03 02 17.5**	**+0.5**
BJI					AMB	AMB		
	comp=Z,14nm,0.9s							
BJI					LR	LR		
	comp=N,594nm,7.9s							
BJI					LR	LR		
	comp=E,353nm,7.9s							
BJI					LR	LR		
	comp=Z,220nm,33.3s,MS3.3							
KULM	**Kulim**	**20.16**	**177**		*e*P	**P**	**03 02 17.6**	**+0.2**
WMQ	**Urumqi**	**20.61**	**335**		P	**P**	**03 02 22.8**	**+0.7**
HYB	**Hyderabad**	**21.03**	**252**		*e*P	**P**	**03 02 27.5**	**+0.7**
HYB	**Hyderabad**	**21.03**	**252**		*i* P	**P**	**03 02 27.5**	**+0.7**
PSI	**Prapat**	**22.60**	**181**		P	**P**	**03 02 46.7**	**+3.0**
	comp=Z,14nm,0.8s,mb4.4,baz=338,slow=8.9,SNR=18							
PSI					LR	LR	03 11 24.8	
	comp=Z,99nm,18.2s,MS3.3,baz=178,slow=36							
SONM	**Songino Array**	**22.93**		**12**	P	**P**	**03 02 46.0**	**-1.0**
	comp=Z,3.1nm,0.5s,mb4.0,baz=193,slow=9.7,SNR=25							
ULN	**Ulaanbaatar**	**23.09**		**13**	*e*P	**P**	**03 02 48.3**	**-0.3**
	comp=Z,30nm,1.5s,mb4.5							
ULN	**Ulaanbaatar**	**23.09**		**13**	*e*P	**P**	**03 02 48.3**	**-0.3**
ULN					pmax	pmax		
	comp=Z,30nm,1.5s,mb4.5							
ZAK	**Zakamensk**	**24.99**		**6**	*e*P	**P**	**03 03 07.1**	**+0.7**
ZAK					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2							
MKAR	**Makanchi Array**	**25.23**	**332**		P	**P**	**03 03 09.2**	**+0.5**
	comp=Z,16nm,0.7s,mb4.6,baz=142,slow=10,SNR=113							
JOW	**Kunigami**	**25.89**		**81**	LR	LR	03 14 13.6	
	comp=Z,286nm,19.1s,MS3.8,baz=49,slow=38							
TKM2	**Tokmak 2**	**26.12**	**318**		*e*P	**P**	**03 03 18.0**	**+1.3**
	comp=Z,3nm,0.6s,mb3.9							
TKM2	**Tokmak 2**	**26.12**	**318**		*e*P	**P**	**03 03 18.0**	**+1.2**
TKM2					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8							
MOY	**Mondy**	**26.13**		**2**	*e*P	**P**	**03 03 19.0**	**+2.3**
TLY	**Talaya**	**26.31**		**6**	*e*P	**P**	**03 03 20.1**	**+1.7**
TLY					*e*		03 04 07.8	
TLY					pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.0							
TLY					MLR	MLR		
	comp=Z,207nm,12.0s,MS3.9							
UCH	**Uchtor**	**26.43**	**315**		*e*P	**P**	**03 03 22.6**	**+3.1**
	comp=Z,6.5nm,1.1s,mb4.1							
AML	**Almayashu**	**26.90**	**314**		*e*P	**P**	**03 03 25.3**	**+1.5**
	comp=Z,9.0nm,0.9s,mb4.3							
KSRS	**Korea Array**	**26.94**		**57**	P	**P**	**03 03 24.1**	**-0.1**
	comp=Z,1.4nm,0.8s,mb3.5,baz=230,slow=9.4,SNR=5.9							
KSRS					LR	LR	03 13 44.4	
	comp=Z,116nm,20.1s,MS3.4,baz=77,slow=36							
EKS2	**Erkin-Say**	**27.12**	**316**		*e*P	**P**	**03 03 28.6**	**+2.9**
	comp=Z,6.2nm,1.0s,mb4.1							
JNU	**Nakatsue**	**28.36**		**67**	LR	LR	03 14 50.8	
	comp=Z,145nm,18.6s,MS3.6,baz=251,slow=36							
HIA	**Hailar**	**28.49**		**28**	*e*P	**P**	**03 03 37.0**	**-1.0**
	comp=Z,3.7nm,0.5s,mb4.3							
HIA	**Hailar**	**28.49**		**28**	*e*P	**P**	**03 03 37.0**	**-0.9**
HIA					pmax	pmax		
	comp=Z,4.0nm,0.5s							
KURK	**Kurchatov**	**29.81**	**333**		*e*P	**P**	**03 03 50.0**	**+0.4**
	comp=Z,6.6nm,0.8s,mb4.4							
KURK	**Kurchatov**	**29.81**	**333**		*e*P	**P**	**03 03 50.0**	**+0.4**
KURK					pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4							
ZAL	**Zalesovo**	**30.40**	**343**		P	**P**	**03 03 55.2**	**+0.4**
ZAA0	**Zalesovo Array**	**30.41**	**343**		*e*P	**P**	**03 03 54.9**	**+0.1**
ZALV	**Zalesovo Beam**	**30.41**	**343**		P	**P**	**03 03 55.2**	**+0.3**
	comp=Z,12nm,0.5s,mb4.9,baz=154,slow=10,SNR=63							
NVS	**Novosibirsk**	**31.63**	**342**		*e*P	**P**	**03 04 05.2**	**-0.4**
NVS					pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9							
NVS					pmax	pmax		
	comp=N,13nm,0.6s							
NVS					pmax	pmax		
	comp=E,8.0nm,0.6s							
BOD	**Bodaibo**	**33.90**		**14**	*e*P	**P**	**03 04 25.3**	**-0.1**
BOD					pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2							
MJAR	**Matsushiro Arr**	**34.78**		**62**	P	**P**	**03 04 32.7**	**-0.7**
MJAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MJAR	**Matsushiro Arr**	**34.78**		**62**	P	**P**	**03 04 32.7**	**-0.6**
	comp=Z,0.8nm,0.6s,mb3.9,baz=52,slow=22,SNR=3.9							
BRVK	**Borovoye**	**35.12**	**329**		*e*P	**P**	**03 04 36.7**	**+0.6**
	comp=Z,6.4nm,0.9s,mb4.5							
BRVK	**Borovoye**	**35.12**	**329**		*e*P	**P**	**03 04 36.7**	**+0.6**
BRVK					pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5							
ASAJ	**Asahikawa**	**39.47**		**51**	P	**P**	**03 05 12.3**	**-0.8**
ASAJ					pmax	pmax		
	comp=Z,8.0nm,0.8s							
ASAJ					MLR	MLR		
	comp=Z,46nm,19.6s							
ASAJ	**Asahikawa**	**39.47**		**51**	P	**P**	**03 05 12.2**	**-0.8**
	comp=Z,8.2nm,0.8s,mb4.5,baz=252,slow=17,SNR=6.7							
ASAJ					LR	LR	03 20 43.6	
	comp=Z,46nm,19.6s,MS3.3,baz=357,slow=35							
AKTK	**Aktyubinsk**	**40.30**	**319**		P	**P**	**03 05 20.2**	**+0.4**
AKTO	**Aktyubinsk**	**40.30**	**319**		P	**P**	**03 05 20.2**	**+0.4**
	comp=Z,2.1nm,0.7s,mb4.0,baz=109,slow=7.1,SNR=8.6							
ARU	**Arti**	**42.62**	**328**		*e*P	**P**	**03 05 39.1**	**+0.3**
	comp=Z,5.6nm,0.6s,mb4.5							
ARU	**Arti**	**42.62**	**328**		*e*P	**P**	**03 05 37.5**	**-1.3**
GUMO	**Guam**	**44.22**		**97**	LR	LR	03 22 45.1	
	comp=Z,56nm,18.4s,MS3.5,baz=102,slow=34							
TIXI	**Tiksi**	**49.02**		**12**	*e*P	**P**	**03 06 28.4**	**-0.8**
TIXI					pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9							
ATD	**Arta Tunnel**	**55.06**	**266**		LR	LR	03 29 57.2	
	comp=Z,54nm,18.6s,MS3.7,baz=47,slow=35							
MMAI	**Mount Meron Ar**	**55.62**	**294**		LR	LR	03 33 57.2	
	comp=Z,62nm,18.3s,MS3.7,baz=75,slow=39							
WRA	**Warramunga Arr**	**56.51**	**140**		P	**P**	**03 07 25.6**	**+0.5**
	comp=Z,2.1nm,0.5s,mb4.4,baz=330,slow=7.3,SNR=22							
WB2	**Warramunga Arr**	**56.51**	**140**		*e*P	**P**	**03 07 25.0**	**-0.2**
WB2	**Warramunga Arr**	**56.51**	**140**		*e*P	**P**	**03 07 24.5**	**-0.6**
JOF	**Joensuu**	**57.65**	**330**		*ep*	**P**	**03 07 32.3**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.7							
JOF	**Joensuu**	**57.65**	**330**		*e*P	**P**	**03 07 32.3**	**-0.4**
JOF					pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7							
AKASG	**Malin Array Be**	**58.32**	**315**		P	**P**	**03 07 36.6**	**-0.9**
	comp=Z,1.2nm,0.6s,mb4.1,baz=78,slow=6.4,SNR=5.3							
ASAR	**Alice Springs**	**59.20**	**143**		P	**P**	**03 07 44.6**	**+0.6**
	comp=Z,1.4nm,0.9s,mb4.0,baz=323,slow=6.6,SNR=7.7							
KAF	**Kangasniemi**	**59.90**	**329**		*ep*	**P**	**03 07 47.7**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.4,baz=92,slow=6.9							
KAF	**Kangasniemi**	**59.90**	**329**		*e*P	**P**	**03 07 47.7**	**-0.6**
KAF					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
FINES	**FINESS Array B**	**59.99**	**328**		P	**P**	**03 07 48.5**	**-0.4**
	comp=Z,3.9nm,0.6s,mb4.6,baz=96,slow=8.6,SNR=19							
ARCES	**ARCESS Array B**	**60.72**	**337**		P	**P**	**03 07 53.4**	**-0.4**
	comp=Z,6.8nm,0.9s,mb4.8,baz=45,slow=10,SNR=3.9							
MLR	**Muntele Rosu**	**60.98**	**310**		P	**P**	**03 07 56.4**	**+0.4**
	comp=Z,0.9nm,0.5s,mb4.2,baz=192,slow=9.2,SNR=3.2							
KWP	**Kalwaria**	**62.59**	**315**		*e*P	**P**	**03 08 06.8**	**0.0**
	comp=Z,77nm,1.8s,mb5.5							
KWP	**Kalwaria**	**62.59**	**315**		*e*P	**P**	**03 08 06.8**	**+0.1**
KWP					pmax	pmax		
	comp=Z,77nm,1.8s,mb5.5							
GVD	**Gavdhos**	**64.43**	**298**		*e*P	**P**	**03 08 17.2**	**-2.0**
	comp=Z,118nm,1.2s							
MORC	**Moravsky Berou**	**65.87**	**315**		*e*P	**P**	**03 08 28.6**	**+0.3**
	comp=Z,2.8nm,0.8s,mb4.3							
MORC	**Moravsky Berou**	**65.87**	**315**		*e*P	**P**	**03 08 28.6**	**+0.3**
MORC					pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4							
HFS	**Hagfors**	**66.14**	**327**		P	**P**	**03 08 29.2**	**-0.5**
	comp=Z,4.6nm,0.6s,mb4.7,baz=145,slow=5.4,SNR=14							
VRAC	**Vranov**	**66.57**	**315**		P	**P**	**03 08 33.1**	**+0.4**
	comp=Z,5.0nm,0.7s,mb4.7,baz=82,slow=4.9,SNR=5.6							
NB2	**NORSAR Subarra**	**67.17**	**328**		P	**P**	**03 08 35.6**	**-0.8**
	comp=Z,4.2nm,0.7s,mb4.6,baz=79,slow=6.5							
NB2	**NORSAR Subarra**	**67.17**	**328**		P	**P**	**03 08 35.6**	**-0.8**
NB2					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6							
NOA	**NORSAR Array B**	**67.17**	**328**		P	**P**	**03 08 34.9**	**-1.5**
	comp=Z,3.4nm,0.6s,mb4.5,baz=79,slow=6.4,SNR=22							
BRG	**Berggiesshubel**	**67.88**	**317**		*e*P	**P**	**03 08 38.9**	**-2.2**
BRG					pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0							
BRG					pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2							
BRG	**Berggiesshubel**	**67.88**	**317**		*e*P	**P**	**03 08 38.9**	**-2.1**
	comp=Z,1.3nm,0.6s,mb4.1							
BRG					*i*		03 08 41.5	
	comp=Z,3.0nm,0.8s							
GERES	**GERESS Array B**	**68.53**	**315**		P	**P**	**03 08 45.5**	**+0.4**
	comp=Z,1.7nm,0.6s,mb4.2,baz=70,slow=5.8,SNR=16							
GRA1	**Grafenberg Arr**	**69.87**	**316**		*e*P	**P**	**03 08 54.3**	**+0.8**
	comp=Z,7.0nm,1.4s,mb4.4							
GRF	**Grafenberg Arr**	**69.87**	**316**		*e*P	**P**	**03 08 54.3**	**+0.8**
GRF					pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4							
GRF	**Grafenberg Arr**	**69.87**	**316**		*e*P	**P**	**03 08 54.3**	**+0.8**
GRF					pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.4							
GRF	**Grafenberg Arr**	**69.87**	**316**		*e*P	**P**	**03 08 54.3**	**+0.8**
	comp=Z,7.0nm,1.4s,mb4.4							
DAVOX	**Davos/Dischmat**	**71.57**	**314**		P	**P**	**03 09 03.5**	**-0.4**
	comp=Z,2.2nm,0.6s,mb4.3,baz=95,slow=6.5,SNR=6.1							
CDF	**Champ du Feu**	**72.73**	**316**		*e*P	**P**	**03 09 10.5**	**-0.3**
	comp=Z,4.0nm,0.5s,mb4.3							
CDF	**Champ du Feu**	**72.73**	**316**		*e*P	**P**	**03 09 10.5**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.3							
CDF	**Champ du Feu**	**72.73**	**316**		*e*P	**P**	**03 09 10.5**	**-0.3**
CDF					pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3							
WLF	**Walferdange**	**73.02**	**317**		*e*P	**P**	**03 09 12.6**	**+0.1**
	comp=Z,12nm,1.1s,mb4.7							
WLF	**Walferdange**	**73.02**	**317**		*e*P	**P**	**03 09 12.6**	**+0.1**
WLF					pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7							
HAU	**Haudompre**	**73.45**	**316**		*e*P	**P**	**03 09 14.7**	**-0.4**
GIVF	**Givet**	**73.68**	**318**		*e*P	**P**	**03 09 16.5**	**+0.2**
LPG	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
	comp=Z,7.8nm,0.8s,mb4.4							
LPG	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
	comp=Z,3.9nm,0.8s,mb4.4							
LPG	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
LPG					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
LPL	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
	comp=Z,7.2nm,0.7s,mb4.4							
LPL	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.4							
LPL	**La Plagne**	**74.05**	**313**		*e*P	**P**	**03 09 19.0**	**+0.4**
LPL					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5							
BAIF	**Baives**	**74.06**	**318**		*e*P	**P**	**03 09 18.7**	**+0.1**
CABF	**La Chapelle**	**74.10**	**314**		*e*P	**P**	**03 09 18.6**	**-0.3**
ORIF	**Oris-en-Rattie**	**74.83**	**313**		*e*P	**P**	**03 09 23.3**	**+0.2**
	comp=Z,6.8nm,0.9s,mb4.3				

STKA	**Stephens Creek**	**39.16**	**239**	*e*P		**P**	**03 08 26.5**	**-1.0**
	2.9nm,0.6s,mb4.2								
STKA	**Stephens Creek**	**39.16**	**239**	P		**P**	**03 08 26.5**	**-1.0**
	3.8nm,0.5s,mb4.4,baz=83,slow=11,SNR=9.5								
WRA	**Warramunga Arr**	**44.48**	**258**	P		**P**	**03 09 11.3**	**+0.2**
	0.9nm,0.6s,mb3.7,baz=94,slow=8.3,SNR=12								
ASAR	**Alice Springs**	**44.84**	**252**	P		**P**	**03 09 13.8**	**-0.1**
	10nm,0.6s,mb4.8,baz=88,slow=8.2,SNR=144								
PDAR	**Pinedale Array**	**86.26**	**44**	P		**P**	**03 13 41.0**	**0.0**
	0.4nm,0.5s,mb3.9,baz=222,slow=3.4,SNR=4.3								

IDC 28 03:08:28.2±5.4**,6011S**×**15218E, h0**km**,mb3.9**/3**, mb1 4.0**/4**,mb1mx3.9**/12**,mbtmp3.8**/4**,ML3.1**/1**,MS3.9**/7**, Ms1 3.9**/7**,ms1mx3.6**/21**,Error ellipse: s-maj=406.2km s-min=22.2km az=77.0,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**17.79**	**173**	P		Pn	03 12 34.9	-1.8
	0.1nm,0.3s,baz=341,slow=14,SNR=5.3							
VNDA				LR		LR	03 18 34.4	
	comp=Z,198nm,21.1s,baz=345,slow=34							
RPZ	**Rata Peaks**	**20.00**	**43**	LR		LR	03 19 05.6	
	comp=Z,420nm,19.0s,baz=23,slow=32							
URZ	**Urewera**	**26.96**	**47**	LR		LR	03 24 22.6	
	comp=Z,266nm,18.3s,baz=211,slow=35							
QSPA	**South Pole Qui**	**29.99**	**180**	P		P	03 14 38.9	+1.2
	3.3nm,1.0s,baz=19,slow=6.0,SNR=2.5							
QSPA				LR		LR	03 27 13.8	
	comp=Z,190nm,18.8s,baz=8.5,slow=38							
MAW	**Mawson**	**36.70**	**220**	LR		LR	03 30 22.6	
	comp=Z,234nm,18.4s,baz=68,slow=36							
ASAR	**Alice Springs**	**38.60**	**333**	P		P	03 15 53.0	+0.3
	0.5nm,0.6s,baz=162,slow=8.7,SNR=6.4							
CTA	**Charters Tower**	**40.20**	**351**	LR		LR	03 30 36.7	
	comp=Z,179nm,19.5s,baz=49,slow=33							
WRA	**Warramunga Arr**	**42.10**	**335**	P		P	03 16 21.3	-0.5
	0.8nm,0.8s,baz=164,slow=8.2,SNR=22							
BOSA	**Boshof**	**81.50**	**225**	LR		LR	03 56 04.1	
	comp=Z,66nm,18.4s,baz=282,slow=35							

*NNC **28** 03:12:06.5±2.3,3911N×7127E, h0km,mb4.9,mpv4.9, Error ellipse: s-maj=22.9km s-min=13.0km az=18.0*
*IDC **28** 03:12:06.2±0.7,3899N×7154E, h0km,mb4.1/22, mb1 4.2/25,mb1mx4.2/31,mbtmp4.1/25,ML4.0/3,MS3.9/12, Ms1 3.9/12,ms1mx3.7/30,Error ellipse: s-maj=18.0km s-min=11.2km az=2.0*
*BJI **28** 03:12:10.0,3924N×7119E, h29km,mB4.8,mb4.7,ML4.6, Ms4.4,Msz4.2*
*SZGRF **28** 03:12:10.8,3915N×7185E, h33km,mb4.6,Tajikistan*
*MOS **28** 03:12:10.2±1.1,3923N×7166E, h33km,mb5.0/63,Error ellipse: s-maj=8.4km s-min=4.8km az=127.9*
*ISCJB **28** 03:12:12.9±0.4,3914N±002×7163E±003, h60km±4km, mb4.6/120,MS3.9/34,Error ellipse: s-maj=4.0km s-min=3.5km az=156.6*
*NEIC **28** 03:12:14.4±1.1,3922N×7162E, h55km±9km,mb4.8/64, Error ellipse: s-maj=9.8km s-min=6.0km az=185.0*
ISC 28 03:12:15.1±0.3**,3917N**±002×**7166E**±003**,h63**km±3km**, h37**km±7.1km**:pP-P,n401,**σ1**s20/**424**,mb4.6/**120**,33C-19D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.34**	**27**	P		**Pn**	**03 13 05.3**	**+0.6**
	SNR=327							
KSH	**Kashi**	**3.37**	**83**	*e*P		**Pn**	**03 13 05.5**	**+0.4**
KSH				SG		**Sn**	**03 13 58.5**	**+15**
KSH				Smax				
	comp=N,5μm,0.8s							
KSH				Smax				
	comp=E,5μm,1.0s							
UCH	**Uchtor**	**3.75**	**35**	*e*Pn		**Pn**	**03 13 10.9**	**+0.6**
UCH	**Uchtor**	**3.75**	**35**	P		**Pn**	**03 13 11.3**	**+1.0**
	SNR=768							
EKS2	**Erkin-Say**	**3.84**	**24**	*e*Pn		**Pn**	**03 13 12.1**	**+0.5**
EKS2				*e*Sn		**Sn**	**03 13 56.7**	**+1.3**
EKS2	**Erkin-Say**	**3.84**	**24**	P		**Pn**	**03 13 12.1**	**+0.5**
	SNR=110							
KZA	**Kyzart**	**3.99**	**42**	P		**Pn**	**03 13 14.4**	**+0.8**
	SNR=401							
KK31	**Karatay Array**	**4.02**	**348**	Pn		**Pn**	**03 13 12.8**	**-1.2**
	comp=E,34nm,0.3s,baz=165,slow=12,SNR=1689							
KK31				⇓Pg		**Pn**	**03 13 21.2**	**+7.2**
	comp=E,103nm,0.4s,baz=166,slow=14,SNR=5.4							
KK31				⇑Lg		03 14 11.8		
	comp=E,956nm,0.8s,baz=158,slow=27,SNR=4.8							
KK31	**Karatay Array**	**4.02**	**348**	*i* PN		**Pn**	**03 13 12.8**	**-1.3**
KK31				pmax		pmax		
	comp=Z,34nm,0.3s							
AAK	**Ala-Archa**	**4.07**	**31**	P		**Pn**	**03 13 15.9**	**+1.1**
	SNR=373							
KBK	**Karagaybulak**	**4.28**	**35**	P		**Pn**	**03 13 19.8**	**+2.1**
	SNR=31							
FRU	**Bishkek**	**4.29**	**31**	⇑*i*PN		**Pn**	**03 13 19.0**	**+1.3**
FRU				*i*			03 13 39.0	
FRU				*i* S		**Sn**	**03 14 19.0**	**+13**
FRU				*i*			03 14 33.0	
FRU				pmax		pmax		
	comp=Z,2μm,2.0s							
FRU				pmax		pmax		
	comp=Z,4μm,2.0s							
FRU				smax				
	comp=E,2640μm,2.0s							
CHMS	**Chumysh**	**4.48**	**30**	P		**Pn**	**03 13 21.4**	**+1.1**
	SNR=223							
USP	**Ospenovka**	**4.62**	**27**	P		**Pn**	**03 13 22.9**	**+0.6**
	SNR=110							
ULHL	**Ulahol**	**4.64**	**47**	P		**Pn**	**03 13 23.1**	**+0.6**
	SNR=104							
TKM2	**Tokmak 2**	**4.78**	**37**	⇑Pn		**Pn**	**03 13 25.5**	**+1.0**
	comp=E,142nm,0.7s							
TKM2				⇑Lg			03 14 51.5	
	comp=E,690nm,1.5s							
TKM2	**Tokmak 2**	**4.78**	**37**	*e*PN		**Pn**	**03 13 24.9**	**+0.4**
TKM2	**Tokmak 2**	**4.78**	**37**	P		**Pn**	**03 13 25.5**	**+1.0**
	SNR=168							
CEP	**Cherat**	**5.34**	**178**	P		**Pn**	**03 13 33.7**	**+1.5**
CHCP	**Chirah Chowk**	**5.66**	**166**	P		**Pn**	**03 13 38.4**	**+1.9**
KNDC	**Almaty**	**5.69**	**43**	⇑Pn		**Pn**	**03 13 36.6**	**-0.3**
	comp=E,242nm,0.9s							
KNDC				⇓Lg			03 15 14.8	
	comp=E,1μm,1.4s							
AAA	**Alma-Ata**	**5.71**	**43**	*i* PN		**Pn**	**03 13 45.7**	**+8.4**
AAA				*i* S		**Sn**	**03 14 54.8**	**+13**
AAA				pmax		pmax		
	comp=Z,860nm,1.3s							
AAA				smax				
	comp=N,1μm,2.3s							
AAA				MLR		MLR		
	comp=Z,6μm,5.3s							
THW	**Thamme Wali**	**6.37**	**179**	P		**Pn**	**03 13 46.8**	**+0.6**
SBDP	**Sheikh Budin**	**6.89**	**186**	P		**Pn**	**03 13 55.9**	**+2.4**
DLH	**Dalhousie**	**7.49**	**151**	*e*P		**Pn**	**03 14 00.0**	**-1.5**
DLH				*ex*		x	03 15 28.0	
THN	**Thein Dam**	**7.49**	**153**	*e*P		**Pn**	**03 14 00.7**	**-0.9**
THN				*ex*		x	03 15 33.4	
SDNR	**Sundarnagar**	**8.80**	**149**	*e*P		**Pn**	**03 14 18.0**	**-1.5**
SDNR				*ex*		x	03 16 04.4	
KLP	**Kalpa**	**9.33**	**143**	*e*P		**Pn**	**03 14 25.6**	**-1.1**
KLP				AMb		AMB	03 14 37.5	
	comp=Z,34nm,0.9s							
KLP				*ex*		x	03 16 11.7	
DDI	**Dehra Dun**	**10.28**	**147**	*e*P		**Pn**	**03 14 37.8**	**-1.9**
DDI				*ex*		x	03 16 45.0	
VAN	**Vannovskaya**	**10.68**	**268**	P		**Pn**	**03 14 43.1**	**-2.1**
JOSI	**Joshimath**	**10.77**	**141**	*e*P		**Pn**	**03 14 45.4**	**-1.0**
JOSI				*ex*		x	03 16 56.5	
MK31	**Makanchi Array**	**10.89**	**42**	⇑Pn		**Pn**	**03 14 48.3**	**+0.4**
	comp=Z,11nm,0.7s,baz=228,slow=12,SNR=92							
MK31				⇑Lg			03 17 57.6	
	comp=Z,0.2nm,0.3s							
MKAR	**Makanchi Array**	**10.89**	**42**	Pn		**Pn**	**03 14 48.0**	**+0.1**
MKAR				Lg			03 17 57.1	
MKAR	**Makanchi Array**	**10.89**	**42**	*i* P		**Pn**	**03 14 48.0**	**+0.1**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array**	**10.89**	**42**	Pn		**Pn**	**03 14 48.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=236,slow=14,SNR=23							
MKAR				Lg			03 17 57.1	
	comp=Z,0.5nm,0.3s,baz=238,slow=22,SNR=3.7							
NDI	**New Delhi**	**11.43**	**155**	*e*P		**Pn**	**03 14 53.0**	**-2.5**
NDI				*ex*		x	03 17 02.0	
AYAN	**Aya Nagar**	**11.59**	**155**	*e*P		**Pn**	**03 14 55.2**	**-2.4**
AYAN				AMb		AMB	03 14 56.4	
	comp=Z,9.7nm,0.7s							
KHET	**Khetri**	**11.60**	**161**	*e*P		**Pn**	**03 14 54.5**	**-3.2**
KHET				AMb		AMB	03 15 02.7	
	comp=Z,12nm,0.5s							
KHET				*ex*		x	03 17 07.0	
KUDL	**Kundal**	**11.71**	**158**	*e*P		**Pn**	**03 14 56.9**	**-2.4**
KUDL				AMb		AMB	03 15 06.6	
	comp=Z,49nm,1.1s							
KUDL				*ex*		x	03 17 09.1	
SONA	**Sohna**	**11.79**	**156**	*e*P		**Pn**	**03 14 58.5**	**-1.9**
SONA				AMb		AMB	03 15 07.9	
	comp=Z,35nm,0.8s							
SONA				*ex*		x	03 17 11.7	
KURBB	**Kurchatov Arra**	**12.43**	**21**	⇑Pn		**Pn**	**03 15 04.8**	**-4.1**
	comp=Z,4.1nm,1.1s							
KURBB				⇓Lg			03 18 47.7	
	comp=Z,53nm,1.8s							
KURK	**Kurchatov**	**12.54**	**21**	⇑Pn		**Pn**	**03 15 06.1**	**-4.3**
	comp=Z,14nm,1.2s							
KURK				⇑Lg			03 18 50.2	
	comp=Z,123nm,1.3s							
KURK	**Kurchatov**	**12.54**	**21**	*e*P		**Pn**	**03 15 06.7**	**-3.8**
KURK	**Kurchatov**	**12.54**	**21**	⇑Pn		**Pn**	**03 15 07.3**	**-3.2**
	SNR=7.5							
KURK	**Kurchatov**	**12.54**	**21**	⇑P		**Pn**	**03 15 07.3**	**-3.2**
	SNR=7.5							
WMQ	**Urumqi**	**12.89**	**64**	*e*P		**Pn**	**03 15 18.3**	**+3.1**
WMQ				AP			03 15 29.3	
WMQ				S		**Sn**	**03 17 37.0**	**+0.2**
WMQ				SS			03 17 54.8	
WMQ				PCP		PcP	03 20 50.8	+5.6
WMQ				AMB		AMB		
	comp=Z,16nm,1.1s							
WMQ				AMB		AMB		
	comp=Z,131nm,3.5s							
WMQ				LR		LR		
	comp=N,181nm,18.2s							
WMQ				LR		LR		
	comp=E,238nm,21.2s							
WMQ				LR		LR		
	comp=Z,323nm,23.8s							
AJM	**Ajmer**	**12.90**	**168**	*e*P		**Pn**	**03 15 12.4**	**-3.1**
AJM				AMb		AMB	03 15 22.1	
	comp=Z,25nm,0.9s							
AB31	**Akbulak array**	**13.10**	**324**	Pn		**Pn**	**03 15 12.1**	**-6.0**
	comp=Z,17nm,0.6s,baz=130,slow=12,SNR=299							
AB31				⇓Sn		**Sn**	**03 17 34.9**	**-7.1**
	comp=Z,159nm,1.1s,baz=147,slow=20,SNR=7.2							
AB31	**Akbulak array**	**13.10**	**324**	*i* P		**Pn**	**03 15 12.1**	**-6.0**
AB31				pmax		pmax		
	comp=Z,19nm,0.4s							
BVA0	**Borovoye Array**	**13.88**	**357**	⇑Pn		**Pn**	**03 15 24.5**	**-4.0**
	comp=Z,7.2nm,1.2s,baz=166,slow=12,SNR=20							
BVA0				⇑Sn		**Sn**	**03 17 59.2**	**-1.6**
	comp=Z,6.2nm,1.1s							
BVA0				⇓Lg			03 19 30.9	
	comp=Z,36nm,1.9s							
BRVK	**Borovoye**	**13.92**	**357**	*e*Pn		**Pn**	**03 15 25.3**	**-3.7**
BRVK	**Borovoye**	**13.92**	**357**	⇑Pn		**Pn**	**03 15 25.5**	**-3.6**
	SNR=20							
BRVK	**Borovoye**	**13.92**	**357**	⇑P		**Pn**	**03 15 25.5**	**-3.6**
	SNR=20							
CHKZ	**Chkalovo**	**14.52**	**358**	⇓Pn		**Pn**	**03 15 33.0**	**-3.9**
	comp=Z,17nm,1.2s							
CHKZ				⇑Sn		**Sn**	**03 18 14.9**	**-1.5**
	comp=Z,51nm,1.7s							
CHKZ				⇓Lg			03 19 46.1	
	comp=Z,183nm,1.9s							
AKTK	**Aktyubinsk**	**14.82**	**324**	Pn		**Pn**	**03 15 35.1**	**-5.7**
AKTK				Sn		**Sn**	**03 18 20.7**	**-3.0**
AKTK				Lg			03 20 02.6	
AKTK				LR		LR	03 21 54.4	
AKTO	**Aktyubinsk**	**14.82**	**324**	⇑Pn		**Pn**	**03 15 35.5**	**-5.4**
	comp=Z,16nm,0.7s							
AKTO				⇓Sn		**Sn**	**03 18 22.7**	**-1.0**
	comp=Z,21nm,1.2s							
AKTO	**Aktyubinsk**	**14.82**	**324**	P		**Pn**	**03 15 35.1**	**-5.7**
AKTO							03 18 20.7	
AKTO	**Aktyubinsk**	**14.82**	**324**	Pn		**Pn**	**03 15 35.1**	**-5.7**
	comp=Z,0.7nm,0.3s,baz=132,slow=15,SNR=12							
AKTO				Sn		**Sn**	**03 18 20.7**	**-3.0**
	comp=Z,2.3nm,0.3s,baz=192,slow=22,SNR=4.4							
AKTO				Lg			03 20 02.6	
	baz=220,slow=19,SNR=2.3							
AKTO				LR		LR	03 21 54.4	
	comp=Z,1μm,18.6s,baz=323,slow=39							
KOLN	**Koldanda**	**15.11**	**135**	*e*P		**Pn**	**03 15 38.1**	**-6.6**
	comp=Z,56nm,0.9s							
GKN	**Gorkha**	**15.51**	**132**	*e*P		**Pn**	**03 15 44.3**	**-5.6**
	comp=Z,32nm,0.4s							
BHJ	**Bhuj**	**15.96**	**187**	*e*P		**Pn**	**03 15 56.8**	**+1.2**
BHJ				AMb		AMB	03 16 01.7	
	comp=Z,96nm,0.9s							
BHJ				*ex*		x	03 18 56.3	
KKN	**Kakani**	**16.04**	**131**	*e*P		**Pn**	**03 15 51.4**	**-5.2**
BHPL	**Bhopal**	**16.62**	**161**	*e*P		**Pn**	**03 16 04.4**	**+0.4**
BHPL				AMb		AMB	03 16 11.4	
	comp=Z,17nm,0.8s							
JIRN	**Jiri**	**16.68**	**129**	*e*P		**Pn**	**03 15 59.9**	**-4.7**
	comp=Z,35nm,0.5s							
JIRN				*e*S		**S**	**03 19 05.8**	**-11**
ZAL	**Zalesovo**	**17.27**	**27**	P		**Pn**	**03 16 10.3**	**-1.4**
ZALV	**Zalesovo Beam**	**17.28**	**27**	P		**Pn**	**03 16 10.2**	**-1.6**
	comp=Z,1.4nm,0.3s,baz=216,slow=10,SNR=13							
ZALV				LR		LR	03 23 13.4	
	comp=Z,315nm,18.2s,baz=204,slow=38							
NVS	**Novosibirsk**	**17.51**	**23**	*e*P		**Pn**	**03 16 12.6**	**-2.0**
NVS				*e*S		**S**	**03 19 31.6**	**-1.8**
NVS				pmax		pmax		
	comp=N,86nm,1.6s							
NVS				pmax		pmax		
	comp=E,21nm,1.6s							
NVS				pmax		pmax		
	comp=Z,78nm,1.6s							
NVS				smax				
	comp=N,164nm,3.4s							
NVS				smax				
	comp=E,91nm,2.6s							
TAPN	**Taplejung**	**17.84**	**127**	*e*P		**Pn**	**03 16 14.4**	**-4.5**
	comp=E,28nm,0.6s							
ODAN	**Odare**	**17.99**	**128**	*e*P		**Pn**	**03 16 16.7**	**-4.0**
	comp=E,59nm,1.0s							
MAK	**Makhachkala**	**18.58**	**290**	*e*P		**Pn**	**03 16 30.8**	**+3.1**
MAK				pmax		pmax		
	comp=Z,148nm,2.0s							
MAK				MLR		MLR		
	comp=Z,313nm,11.0s							
LSA	**Lhasa**	**18.62**	**115**	P		**Pn**	**03 16 31.3**	**+3.0**
SVE	**Sverdlovsk**	**19.10**	**341**	⇓*e*P		**Pn**	**03 16 40.7**	**+6.9**
SVE				*e*S		**S**	**03 20 02.5**	**-2.9**
SVE				MLR		MLR		
	comp=Z,833nm,13.0s							
BLSP	**Bilaspur**	**19.21**	**149**	*e*P		**Pn**	**03 16 34.9**	**-0.5**
BLSP				AMb		AMB	03 16 42.1	
	comp=Z,32nm,1.0s							
ARU	**Arti**	**19.32**	**338**	*e*P		**Pn**	**03 16 34.2**	**-2.1**
	comp=Z,41nm,0.9s							
ARU	**Arti**	**19.32**	**338**	*e*P		**Pn**	**03 16 33.1**	**-3.3**
ARU				S		**S**	**03 20 08.0**	**-1.8**
ARU				MLR		MLR		
	comp=Z,522nm,18.0s							
HOQ	**Hoqain**	**19.75**	**222**	P		**Pn**	**03 16 46.5**	**+4.7**
	SNR=5.8							
HOQ	**Hoqain**	**19.75**	**222**	P		**Pn**	**03 16 46.5**	**+4.7**
	SNR=5.8							
DGRG	**David-gareji**	**20.15**	**285**	P		**P**	**03 16 50.7**	**+6.8**
JMDO	**Jabal Madar**	**20.36**	**219**	P		**P**	**03 16 53.0**	**+6.7**
	SNR=6.9							
JMDO	**Jabal Madar**	**20.36**	**219**	P		**P**	**03 16 53.0**	**+6.7**
	SNR=6.9							
BSY	**Bisya**	**20.50**	**221**	P		**P**	**03 16 50.1**	**+2.3**
	SNR=17							
MTA	**Mtatsminda**	**20.57**	**286**	P		**P**	**03 16 53.9**	**+5.3**
TBLG	**Delisi**	**20.61**	**286**	P		**P**	**03 16 55.5**	**+6.5**
GOR	**Gori**	**21.08**	**287**	P		**P**	**03 17 01.3**	**+7.4**
ZEI	**Tsey**	**21.22**	**289**	*e*P		**P**	**03 16 55.1**	**-0.4**
ZEI				*e**PP			03 17 03.8	
ZEI				*e*S		**S**	**03 21 01.2**	**+13**
ONI	**Oni**	**21.55**	**288**	P		**P**	**03 17 00.4**	**+1.4**
DYDN	**Diyadin**	**21.60**	**280**	*i* P		**P**	**03 17 08.4**	**+8.9**
DIGO	**Kars**	**21.73**	**282**	*i* P		**P**	**03 17 08.9**	**+8.0**
GTA	**Gaotai**	**21.77**	**80**	*e*P		**P**	**03 17 02.5**	**+1.2**
GTA				PP			03 17 31.5	
GTA						S	**S**	**03 20 54.8**	**-3.6**
GTA						XS	sS	03 21 21.0	+0.1
GTA						SS		03 21 37.0	
GTA						AMB	AMB		
	comp=Z,7.0nm,1.3s,mb3.9								
GTA						AMB	AMB		
	comp=Z,106nm,3.8s								
GTA						LR	LR		
	comp=N,450nm,16.3s								
GTA						LR	LR		
	comp=E,373nm,15.2s								
GTA						LR	LR		
	comp=Z,386nm,13.7s								
HAKT	**HAKKARI**	**21.94**	**275**	*i* P		**P**	**03 17 09.9**	**+6.6**
KIV	**Kislovodsk**	**22.14**	**292**	*e*P		**P**	**03 17 06.2**	**+0.9**
	comp=Z,65nm,0.9s,mb5.1								
KIV	**Kislovodsk**	**22.14**	**292**	*e*P		**P**	**03 17 05.6**	**+0.3**
KIV				*e*S		**S**	**03 21 08.4**	**+2.9**
KIV				pmax		pmax			
	comp=Z,27nm,0.7s,mb4.8								
KIV				MLR		MLR			
	comp=Z,118nm,14.0s								
KIV	**Kislovodsk**	**22.14**	**292**	P		**P**	**03 17 12.7**	**+7.4**
	SNR=14								
SOKR	**Solikamsk**	**22.49**	**340**	*e*P		**P**	**03 17 10.7**	**+1.9**
SOKR				pmax		pmax			
	comp=Z,10.0nm,1.0s,mb4.2								
SOKR				MLR		MLR			
	comp=Z,330nm,12.0s								
HYB	**Hyderabad**	**22.50**	**163**	*e*P		**P**	**03 17 09.0**	**-0.2**
HYB	**Hyderabad**	**22.50**	**163**	*i* P		**P**	**03 17 09.0**	**-0.2**
ARTV	**Artvin**	**22.75**	**285**	*i* P		**P**	**03 17 18.6**	**+6.8**
ERZM	**Erzurum**	**23.32**	**281**	*i* P		**P**	**03 17 20.1**	**+2.6**
VIS	**Vishakhapatnam**	**23.67**	**151**	*ex*		**P**	**03 17 26.8**	**+5.9**
VIS				AMb		AMB	03 17 30.4		
	comp=Z,34nm,1.3s,mb4.6								
MOY	**Mondy**	**23.90**	**49**	*e*P		**P**	**03 17 30.9**	**+8.2**
MOY				pmax		pmax			
	comp=Z,79nm,3.4s								
VRHR	**Novokhopersk**	**24.13**	**309**	*e*P		**P**	**03 17 32.1**	**+7.3**
VRHR				pmax		pmax			
	comp=Z,10.0nm,0.3s,mb4.7								
VRHR				pmax		pmax			
	comp=N,10.0nm,0.5s								
VRHR				pmax		pmax			
	comp=E,20nm,0.7s								
VRHR				MLR		MLR			
	comp=Z,480nm,29.0s								
VRHR				MLR		MLR			
	comp=N,270nm,17.0s								
VRHR				MLR		MLR			
	comp=E,150nm,12.0s								
MARD	**Mardin**	**24.27**	**275**	*i* P		**P**	**03 17 32.2**	**+6.0**
SOC	**Sochi**	**24.28**	**291**	*e*P		**P**	**03 17 29.5**	**+3.3**
SOC				*e**SP		sP	03 17 38.2	-11
SOC				*e*			03 17 55.6	
SOC				*e*SS			03 22 26.4	
SOC				pmax		pmax			
	comp=Z,23nm,1.0s,mb4.6								
SOC				MLR		MLR			
	comp=Z,96nm,11.0s								
ZAK	**Zakamensk**	**24.90**	**53**	*e*P		**P**	**03 17 32.9**	**+1.1**
ZAK				pmax		pmax			
	comp=Z,6.0nm,1.2s,mb4.0								
TLY	**Talaya**	**25.47**	**50**	*e*P		**P**	**03 17 44.9**	**+7.9**
TLY				pmax		pmax			
	comp=Z,15nm,2.1s,mb4.2								
TLY				MLR		MLR			
	comp=Z,130nm,17.0s								
VORD	**Divnogorie**	**25.50**	**308**	*e*P		**P**	**03 17 45.9**	**+8.6**
VORD				pmax		pmax			
	comp=Z,30nm,0.9s,mb4.8								
VORD				pmax		pmax			
	comp=N,30nm,1.5s								
VORD				pmax		pmax			
	comp=E,60nm,0.8s								
VORD				pmax		pmax			
	comp=Z,30nm,1.5s,mb4.6								
VORD				pmax		pmax			
	comp=N,230nm,0.9s								
VORD				pmax		pmax			
	comp=E,100nm,0.8s								
LZH	**Lanzhou**	**25.61**	**87**	*e*P		**P**	**03 17 42.5**	**+4.1**
LZH				PP			03 18 25.5		
LZH				*e*S		**S**	**03 22 00.5**	**-1.4**
LZH				SS			03 23 10.8		
LZH				AMB		AMB			
	comp=Z,38nm,1.0s,mb4.9								
LZH				AMB		AMB			
	comp=Z,113nm,4.6s								
LZH				LR		LR			
	comp=N,567nm,11.9s								
LZH				LR		LR			
	comp=Z,852nm,13.8s								
VRSR	**Storozhevoye**	**25.63**	**309**	*e*P		**P**	**03 17 40.6**	**+2.2**
VRSR				*e**PP		pP	03 17 47.5	-6.2	
VRSR				pmax		pmax			
	comp=Z,2.0nm,1.0s,mb3.6								
VRSR				pmax		pmax			
	comp=N,2.0nm,0.8s								
VRSR				pmax		pmax			
	comp=E,3.0nm,0.6s								
VRSR				MLR		MLR			
	comp=Z,50nm,20.0s								
VRSR				MLR		MLR			
	comp=N,50nm,14.0s								
VRSR				MLR		MLR			
	comp=E,50nm,20.0s								
MALT	**Malatya**	**25.85**	**279**	*e*P		**P**	**03 17 43.3**	**+2.8**
	comp=E,27nm,1.1s,mb4.7								
MALT	**Malatya**	**25.85**	**279**	*e*P		**P**	**03 17 43.3**	**+2.7**
MALT				pmax		pmax			
	comp=Z,27nm,1.1s,mb4.7								
MALT	**Malatya**	**25.85**	**279**	⇓*i*P		**P**	**03 17 44.0**	**+3.4**
ANN	**Anapa**	**25.92**	**294**	*e*P		**P**	**03 17 49.6**	**+8.5**
ANN				pmax		pmax			
	comp=Z,138nm,1.2s,mb5.4								
WHFO	**Wadi Hawf**	**26.27**	**221**	P		**P**	**03 17 52.2**	**+7.7**
	SNR=5.4								
WHFO	**Wadi Hawf**	**26.27**	**221**	P		**P**	**03 17 52.2**	**+7.7**
	SNR=5.4								
SONM	**Songino Array**	**26.46**	**60**	P		**P**	**03 17 47.1**	**+1.1**
	comp=Z,1.3nm,0.6s,mb3.6,baz=263,slow=8.7,SNR=11							

KMI S **S** **03 23 12.0 +6.3**
KMI SS SS 03 24 54.5 -19
KMI AMB AMB
comp=Z,8.0nm,1.1s,mb4.4
KMI AMB AMB
comp=Z,67nm,4.9s
KMI LR LR
comp=N,176nm,13.9s
KMI LR LR
comp=E,171nm,12.0s
KMI LR LR
comp=Z,221nm,12.6s
XAN Xi'an 30.21 88 P **P** **03 18 20.0 +0.5**
XAN AMB AMB
comp=Z,6.0nm,0.7s,mb4.4
XAN AMB AMB
comp=Z,82nm,5.1s
XAN LR LR
comp=N,199nm,13.6s
XAN LR LR
comp=E,295nm,15.4s
XAN LR LR
comp=Z,426nm,16.0s
HHC Hu-ho-hao-te 30.43 74 *e*P **P** **03 18 26.5 +5.1**
HHC PP PP 03 19 26.3 -4.6
HHC S **S** **03 23 18.5 +0.8**
HHC AMB AMB
comp=Z,11nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,136nm,4.4s
HHC LR LR
comp=N,184nm,13.1s
HHC LR LR
comp=E,466nm,16.7s
HHC LR LR
comp=Z,296nm,13.1s
ESKT Eskisehir 31.37 284 *i* P **P** **03 18 37.2 +7.6**
CIT Chita 31.55 52 *e*P **P** **03 18 37.7 +6.6**
AKASG Malin Array Be 31.75 305 P **P** **03 18 33.1 +0.3**
AKASG 03 19 35.6
AKASG Malin Array Be 31.75 305 P **P** **03 18 33.1 +0.3**
comp=Z,0.4nm,0.4s,mb3.6,baz=83,slow=7.6,SNR=5.2
AKASG PP PP 03 19 35.6 -10
comp=Z,2.0nm,0.7s,baz=85,slow=12,SNR=4.5
AKASG LR LR 03 34 20.6
comp=Z,226nm,19.1s,baz=60,slow=42
AKBB Malin Array Si 31.75 305 *e*P **P** **03 18 32.6 -0.3**
KIEV Kiev 31.76 305 *e*P **P** **03 18 32.4 -0.5**
comp=Z,12nm,0.8s,mb4.8
KIEV Kiev 31.76 305 *e*P **P** **03 18 32.4 -0.5**
KIEV pmax pmax
comp=Z,12nm,0.8s,mb4.8
GYA Guiyang 31.84 103 *e*P **P** **03 18 41.0 +7.1**
GYA PP PP 03 19 49.8 +3.1
GYA PCP PcP 03 21 29.5 +6.0
GYA S **S** **03 23 45.3 +5.3**
GYA SCP ScP 03 25 04.3 +3.0
GYA PCS PcS 03 25 13.0 +4.7
GYA SS SS 03 25 42.3 -16
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.7
GYA AMB AMB
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,17.8s
GYA LR LR
comp=E,570nm,18.8s
GYA LR LR
comp=Z,510nm,17.4s
PSN Preselentsi 32.62 292 *i* P **P** **03 18 39.0 -1.6**
BOD Bodaibo 32.98 41 ⇓*e*P **P** **03 18 43.5 0.0**
BOD *e* 03 18 50.4
BOD pmax pmax
comp=Z,12nm,0.9s,mb4.8
BOD pmax pmax
comp=Z,21nm,1.2s,mb4.9
PRD Provadia 33.26 291 *i* P **P** **03 18 54.1 +8.0**
VRI Vrincioaia 33.43 296 ⇑*i*P **P** **03 18 54.5 +6.9**
VRI Vrincioaia 33.43 296 ⇑*i*P **P** **03 18 54.5 +6.9**
PLOR Plostina 33.48 296 ⇑*i*P **P** **03 18 49.1 +1.0**
JOF Joensuu 33.85 328 *e*p **P** **03 18 53.2 +2.2**
JMB Yambol 33.97 290 *i* P **P** **03 18 59.0 +6.7**
MLR Muntele Rosu 34.01 296 P **P** **03 18 53.3 +0.7**
comp=Z,18nm,1.2s,mb4.9,baz=76,slow=8.6,SNR=8.4
MLR LR LR 03 35 26.2
comp=Z,175nm,20.1s,baz=278,slow=41
MLR Muntele Rosu 34.01 296 ⇓*i*P **P** **03 18 56.5 +3.9**
SZH Strazhica 34.30 292 *i* P **P** **03 19 00.5 +5.3**
VSU Vasula 34.46 319 *e*P **P** **03 18 57.8 +1.4**
LVV L'vov 35.05 304 *e*P **P** **03 19 08.8 +7.2**
LVV *e* 03 20 41.8
LVV *e*S **S** **03 24 29.6 +0.4**
LVV MLR MLR
comp=Z,100nm,20.0s
LVV MLR MLR
comp=N,20nm,9.0s
LVV MLR MLR
comp=E,100nm,21.0s
RZN Rozhen 35.48 289 *i* P **P** **03 19 12.4 +7.1**
FINES FINESS Array B 35.59 324 *i* P **P** **03 19 05.5 -0.6**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 35.59 324 P **P** **03 19 05.8 -0.2**
comp=Z,1.1nm,0.4s,mb4.1,baz=116,slow=9.6,SNR=14
FINES PP PP 03 20 18.5 -9.2
comp=Z,3.5nm,0.7s,baz=112,slow=15,SNR=5.1
KAF Kangasniemi 35.70 325 *e*p **P** **03 19 15.5 +8.5**
PGB Panagyurishte 35.71 291 *i* P **P** **03 19 14.2 +6.9**
KWP Kalwaria 35.91 303 *e*P **P** **03 19 09.5 +0.5**
comp=Z,8.3nm,0.6s,mb4.8
KWP Kalwaria 35.91 303 *e*P **P** **03 19 09.5 +0.5**
KWP pmax pmax
comp=Z,8.0nm,0.6s,mb4.8
KWP Kalwaria 35.91 303 ⇑*i*P **P** **03 19 09.9 +0.9**
TRPA Tarpa 36.11 301 ⇑*i*P **P** **03 19 17.8 +7.2**
DRGR 36.11 298 ⇓P **P** **03 19 16.1 +5.5**
DRGR 36.11 298 ⇓*i*P **P** **03 19 16.1 +5.4**
MMB Musomiste 36.22 290 *i* P **P** **03 19 19.1 +7.4**
KOLS Kolonicke sedl 36.23 302 *e*P **P** **03 19 19.6 +7.9**
KOLS *e*PP PP 03 20 30.2 -4.7
GZR Gura Zlata 36.23 296 ⇑P **P** **03 19 20.4 +8.6**
GZR Gura Zlata 36.23 296 ⇑*i*P **P** **03 19 20.4 +8.6**
UZH Uzhgorod 36.24 302 *e*P **P** **03 19 20.4 +8.7**
VTS Vitosha 36.39 291 ⇑P **P** **03 19 15.2 +2.0**
VTS Vitosha 36.39 291 *i* P **P** **03 19 18.8 +5.6**
VTS Vitosha 36.39 291 ⇑*i*P **P** **03 19 15.2 +2.0**
KKB Krupnik 36.63 290 *i* P **P** **03 19 21.4 +6.2**
CRVS Cervenica-Dubn 36.77 302 *e*P **P** **03 19 22.7 +6.4**
CRVS *e*PP PP 03 20 35.6 -5.2
STHS Stebnicka Huta 36.88 303 *e*P **P** **03 19 24.5 +7.3**
comp=Z,3.8nm,0.7s,mb4.3
STHS *e*PP PP 03 20 42.1 +0.1
STHS Stebnicka Huta 36.88 303 *e*P **P** **03 19 24.5 +7.3**
STHS pmax pmax
comp=Z,4.0nm,0.7s,mb4.4
BZS Buzias 37.01 297 ⇑P **P** **03 19 27.8 +9.4**
BZS Buzias 37.01 297 ⇑*i*P **P** **03 19 27.8 +9.4**
IDI Anoyia 37.12 279 P **P** **03 19 17.1 -2.3**
comp=Z,8.5nm,0.8s,mb4.6,baz=331,slow=19,SNR=2.4
IDI LR LR 03 38 40.8
comp=Z,49nm,18.9s,baz=333,slow=43
KECS Kecovo 37.45 302 *e*P **P** **03 19 30.0 +8.0**
comp=Z,1.9nm,0.8s,mb4.0
KECS *e*PP PP 03 20 45.0 -3.3
KECS Kecovo 37.45 302 *e*P **P** **03 19 30.0 +8.0**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.0
KECS Kecovo 37.45 302 *e*P **P** **03 19 29.9 +7.9**
KECS *e*PP PP 03 20 45.0 -3.3
NIE Niedzica 37.48 303 *e*P **P** **03 19 28.6 +6.3**
OJC Ojcow 37.76 304 *e*P **P** **03 19 32.4 +7.7**
OJC *e*PP PP 03 20 58.6 +6.8
PSZ Piszkesteto 37.90 301 *e*P **P** **03 19 28.4 +2.6**
comp=Z,4.4nm,0.9s,mb4.2
PSZ Piszkesteto 37.90 301 *e*P **P** **03 19 28.4 +2.6**
PSZ pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
VYHS Vyhne 38.53 302 *e*P **P** **03 19 37.9 +6.7**
comp=Z,27nm,2.5s,mb4.5
VYHS *e*PP PP 03 21 07.5 +7.3
VYHS Vyhne 38.53 302 *e*P **P** **03 19 37.9 +6.7**
VYHS pmax pmax
comp=Z,27nm,2.5s,mb4.5
NJ2 Nanjing 38.67 86 *e*P **P** **03 19 37.0 +4.5**
NJ2 AMB AMB
comp=Z,60nm,1.0s,mb5.3
KOLL Kolacno 38.81 302 *e*P **P** **03 19 42.5 +9.0**
ARCES ARCESS Array B 38.89 336 P **P** **03 19 33.8 -0.1**
comp=Z,7.1nm,1.0s,mb4.4,baz=99,slow=7.5,SNR=11
PKSM Moragy 38.97 298 ⇓P **P** **03 19 41.4 +6.6**
PKSM Moragy 38.97 298 ⇓*i*P **P** **03 19 41.4 +6.5**
MORC Moravsky Berou 39.25 304 *e*P **P** **03 19 37.0 -0.2**
comp=Z,7.2nm,1.0s,mb4.4
MORC Moravsky Berou 39.25 304 *e*P **P** **03 19 37.0 -0.1**
MORC pmax pmax
comp=Z,7.0nm,1.0s,mb4.3
MORC Moravsky Berou 39.25 304 ⇓*i*P **P** **03 19 45.8 +8.7**
MODS Modra-Piesok 39.58 302 *e*P **P** **03 19 48.6 +8.7**
VRAC Vranov 39.91 303 P **P** **03 19 42.7 0.0**
comp=Z,1.2nm,0.4s,mb4.0,baz=78,slow=20,SNR=1.8
VRAC LR LR 03 37 15.4
comp=Z,150nm,21.0s,baz=81,slow=38
CN2 Changchun 39.97 65 *e*P **P** **03 19 46.5 +3.3**
CN2 *e*S **S** **03 25 43.5 -0.4**
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.8
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,13.0s
CN2 LR LR
comp=E,200nm,13.0s
CN2 LR LR
comp=Z,400nm,21.0s
DPC Dobruska-Polom 39.98 305 *e*P **P** **03 19 49.6 +6.4**
DPC *e*x x 03 21 04.8
UPC Upice 40.16 305 *e*P **P** **03 19 51.3 +6.6**
CONA Conrad Observa 40.58 301 ⇓*i*P **P** **03 19 50.8 +2.6**
comp=Z,23nm,1.5s,mb4.6
TREC Trest 40.63 303 *e*P **P** **03 19 55.7 +7.1**
PVCC Panska Ves 41.07 305 *e*P **P** **03 20 00.9 +8.7**
PRU Pruhonice 41.15 305 *e*P **P** **03 19 59.3 +6.4**
HFS Hagfors 41.32 320 P **P** **03 19 53.5 -0.6**
comp=Z,2.2nm,0.4s,mb4.2,baz=96,slow=11,SNR=31
BRG Berggiesshubel 41.43 306 *e*P **P** **03 20 01.7 +6.6**
BRG pmax pmax
comp=Z,6.0nm,1.3s,mb4.1
BRG pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
BRG Berggiesshubel 41.43 306 *e*P **P** **03 19 55.0 -0.1**
comp=Z,14nm,0.8s,mb4.6
BRG Berggiesshubel 41.43 306 *e*P **P** **03 20 01.7 +6.6**
comp=Z,10nm,1.3s,mb4.3
BRG *e* 03 20 03.6
comp=Z,14nm,0.8s
YAK Yakutsk 41.51 37 *e*P **P** **03 19 54.2 -1.4**
YAK pmax pmax
comp=Z,8.0nm,0.8s,mb4.4
MOA Molln 41.66 301 ⇑*i*P **P** **03 20 03.1 +6.1**
comp=Z,7.2nm,1.1s,mb4.2
MOA Molln 41.66 301 ⇑*i*pP pP 03 20 03.1 -10
comp=Z,7.2nm,1.1s
FBE Freiberg 41.79 306 *e*P **P** **03 19 58.1 0.0**
comp=Z,17nm,0.9s,mb4.7
GEC2 GERESS Array S 41.86 303 *e*P **P** **03 19 58.9 +0.2**
GEC2 pmax pmax
comp=Z,12nm,1.2s,mb4.4
GEC2 GERESS Array S 41.86 303 *e*P **P** **03 19 58.9 +0.2**
comp=Z,12nm,1.2s,mb4.4
GERES GERESS Array B 41.86 303 P **P** **03 19 59.0 +0.3**
comp=Z,0.8nm,0.6s,mb3.5,baz=70,slow=7.8,SNR=6.2
GERES PP PP 03 21 39.0 +2.6
comp=Z,2.2nm,1.0s,baz=67,slow=7.7,SNR=3.5
KHC Kasperske Hory 41.90 303 *e*P **P** **03 19 59.0 0.0**
KHC *e* 03 20 05.0
KHC Kasperske Hory 41.90 303 *e*P **P** **03 19 59.0 0.0**
KHC *e* 03 20 05.0
KHC Kasperske Hory 41.90 303 *e*P **P** **03 19 59.0 0.0**
KHC x x 03 20 05.0
CLL Collm 41.96 307 *e*P **P** **03 20 01.0 +1.5**
comp=Z,10.0nm,0.9s,mb4.5
CLL *e*pP pP 03 20 19.0 +3.6
CLL Collm 41.96 307 *e*P **P** **03 20 01.0 +1.5**
CLL *e**PP pP 03 20 19.0 +3.6
CLL pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
CLL Collm 41.96 307 *e*P **P** **03 19 59.0 -0.5**
CLL ⇑*i*P(2) 03 20 07.3
comp=Z,10.0nm,0.9s
CLL *i* pP pP 03 20 13.4 -2.0
CLL *e*sP sP 03 20 19.0 -3.7
CLL *e*PP PP 03 21 38.0 +0.6
CLL *e*PP(2) 03 21 44.0
CLL *e*PcP PcP 03 21 55.0 +1.3
CLL LmV 03 39 00.0
comp=Z,200nm,19.6s
CLL Collm 41.96 307 *e*P **P** **03 19 58.9 -0.6**
comp=Z,10.0nm,0.7s,mb4.5
NKC Novy Kostel 42.46 305 AMS AMS 03 40 20.0
comp=Z,300nm,14.6s
GUNZ Gunzen 42.51 305 *e*P **P** **03 20 04.0 +0.1**
comp=Z,10.0nm,1.0s,mb4.5
WERD Werda 42.52 306 *e*P **P** **03 20 03.8 -0.2**
comp=Z,8.0nm,1.0s,mb4.4
NB2 NORSAR Subarra 42.59 321 P **P** **03 20 03.4 -1.0**
comp=Z,14nm,1.1s,mb4.6,baz=94,slow=8.6
NB2 NORSAR Subarra 42.59 321 P **P** **03 20 03.4 -1.0**
NB2 pmax pmax
comp=Z,14nm,1.1s,mb4.6
NOA NORSAR Array B 42.59 321 P **P** **03 20 03.7 -0.7**
comp=Z,2.3nm,0.6s,mb4.1,baz=92,slow=8.0,SNR=7.9
NOA PP PP 03 21 47.2 +3.3
comp=Z,1.7nm,0.9s,baz=95,slow=9.4,SNR=3.2
ROTZ Rotzenmuhle 42.68 305 *e*P **P** **03 20 05.7 +0.4**
comp=Z,7.0nm,1.1s,mb4.3
MANZ Manzenberg 42.71 305 *e*P **P** **03 20 05.7 +0.1**
comp=Z,5.0nm,0.9s,mb4.2
MOX Moxa 42.92 306 *e*P **P** **03 20 13.8 +6.5**
comp=Z,13nm,1.1s,mb4.6
MOX *e* 03 21 55.3
MOX Moxa 42.92 306 *e*P **P** **03 20 13.8 +6.5**
MOX *e* 03 21 55.3
MOX pmax pmax
comp=Z,13nm,1.1s,mb4.6
MOX Moxa 42.92 306 *e*P **P** **03 20 07.2 -0.1**
comp=Z,9.0nm,0.9s,mb4.5
TIXI Tiksi 43.11 23 *e*P **P** **03 20 08.5 0.0**
comp=Z,16nm,0.7s,mb4.8
TIXI Tiksi 43.11 23 *e*P **P** **03 20 08.5 0.0**
TIXI pmax pmax
comp=Z,15nm,0.7s,mb4.8
KLR Kul'dur 43.19 56 *e*P **P** **03 20 06.8 -2.6**
KLR MLR MLR
comp=Z,900nm,13.0s
BSEG Bad Segeberg 43.30 311 *e*P **P** **03 20 10.4 +0.2**
BSEG pmax pmax
comp=Z,16nm,1.0s,mb4.7
BSEG Bad Segeberg 43.30 311 *e*P **P** **03 20 10.4 +0.2**
comp=Z,16nm,1.0s,mb4.7
GRA1 Grafenberg Arr 43.32 305 *e*P **P** **03 20 11.3 +0.8**
comp=Z,29nm,0.9s,mb5.0
GRF Grafenberg Arr 43.32 305 *e*P **P** **03 20 11.3 +0.8**
GRF pmax pmax
comp=Z,29nm,0.9s,mb5.0
GRF Grafenberg Arr 43.32 305 *e*P **P** **03 20 11.3 +0.8**
GRF pmax pmax
comp=Z,29nm,0.9s,mb5.0
GRF Grafenberg Arr 43.32 305 *e*P **P** **03 20 11.3 +0.8**
comp=Z,29nm,0.9s,mb5.0
GRFO Grafenberg 43.33 305 *e*P **P** **03 20 11.6 +1.0**
comp=Z,17nm,0.8s,mb4.8
GRFO Grafenberg 43.33 305 *e*P **P** **03 20 11.6 +1.1**
GRFO pmax pmax
comp=Z,17nm,0.8s,mb4.8
CLZ Clausthal 43.52 308 *e*P **P** **03 20 12.0 -0.1**
CLZ pmax pmax
comp=Z,8.0nm,0.9s,mb4.5
CLZ Clausthal 43.52 308 *e*P **P** **03 20 12.0 -0.1**
comp=Z,8.0nm,0.9s,mb4.5
KSRS Korea Array 43.58 74 P **P** **03 20 12.6 -0.2**
comp=Z,1.3nm,0.9s,mb3.6,baz=282,slow=6.2,SNR=3.5
NRDL Niedersach Rie 43.59 309 *e*P **P** **03 20 12.9 +0.2**
comp=Z,14nm,0.9s,mb4.7
UBBA Unterbreizbach 43.91 306 *e*P **P** **03 20 15.2 0.0**
comp=Z,5.0nm,0.9s,mb4.2
FETA Feichten 44.17 301 ⇓*i*P **P** **03 20 23.2 +5.9**
comp=Z,11nm,1.1s,mb4.5
DAVA Damuels 44.68 301 ⇑*i*P **P** **03 20 23.0 +1.6**
comp=Z,19nm,0.9s,mb4.9
DAVOX Davos/Dischmat 44.79 301 P **P** **03 20 21.3 -1.0**
comp=Z,2.4nm,0.5s,mb4.3,baz=137,slow=13,SNR=7.0
STU Stuttgart 44.80 304 *e*P **P** **03 20 22.3 -0.1**
comp=Z,17nm,1.0s,mb4.8
TNS Taunus Mts 44.99 306 *e*P **P** **03 20 23.8 0.0**
TNS pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
TNS Taunus Mts 44.99 306 *e*P **P** **03 20 23.8 0.0**
comp=Z,8.0nm,1.0s,mb4.5
BFO Black Forest 45.46 303 *e*P **P** **03 20 27.2 -0.4**
BFO pmax pmax
comp=Z,11nm,0.9s,mb4.7
BFO Black Forest 45.46 303 *e*P **P** **03 20 27.2 -0.4**
comp=Z,11nm,0.9s,mb4.7
CDF Champ du Feu 46.12 304 *e*P **P** **03 20 32.4 -0.4**
comp=Z,20nm,0.9s,mb4.7
CDF Champ du Feu 46.12 304 *e*P **P** **03 20 32.4 -0.4**
comp=Z,9.9nm,0.9s,mb4.7
CDF Champ du Feu 46.12 304 *e*P **P** **03 20 32.4 -0.4**
CDF pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
MEM Membach 46.44 307 P **P** **03 20 43.5 +8.2**
comp=Z,8.1nm,1.1s,mb4.6
HINF Hinteralfeld 46.54 303 *e*P **P** **03 20 35.4 -0.7**
comp=Z,22nm,1.0s,mb4.8
HINF Hinteralfeld 46.54 303 *e*P **P** **03 20 35.4 -0.7**
comp=Z,11nm,1.0s,mb4.7
HINF Hinteralfeld 46.54 303 *e*P **P** **03 20 35.4 -0.7**
HINF pmax pmax
comp=Z,11nm,1.0s,mb4.7
WLF Walferdange 46.56 305 *e*P **P** **03 20 36.9 +0.7**
comp=Z,18nm,0.9s,mb5.0
WLF Walferdange 46.56 305 *e*P **P** **03 20 36.9 +0.7**
WLF pmax pmax
comp=Z,18nm,0.9s,mb5.0
WLF Walferdange 46.56 305 P **P** **03 20 44.4 +8.2**
comp=Z,12nm,1.1s,mb4.7
WLF Walferdange 46.56 305 *e*P **P** **03 20 36.6 +0.4**
comp=Z,18nm,0.9s,mb5.0
HAU Haudompre 46.83 303 *e*P **P** **03 20 37.8 -0.5**
comp=Z,20nm,0.9s,mb4.8
HAU *e*MLR MLR
comp=Z,106nm,17.5s
HAU Haudompre 46.83 303 *e*P **P** **03 20 37.8 -0.5**
comp=Z,9.9nm,0.9s,mb4.7
HAU LR LR
comp=Z,110nm,17.5s
HAU Haudompre 46.83 303 *e*P **P** **03 20 37.8 -0.5**
HAU pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
HAU MLR MLR
comp=Z,110nm,17.5s
LPG La Plagne 47.23 300 *e*P **P** **03 20 41.4 -0.1**
comp=Z,25nm,0.8s,mb4.9
LPG La Plagne 47.23 300 *e*P **P** **03 20 41.4 -0.1**
comp=Z,13nm,0.8s,mb4.9
LPG La Plagne 47.23 300 *e*P **P** **03 20 41.4 -0.1**
LPG pmax pmax
comp=Z,13nm,0.8s,mb4.9
LPL La Plagne 47.23 300 *e*P **P** **03 20 40.7 -0.8**
comp=Z,27nm,0.7s,mb5.0
LPL La Plagne 47.23 300 *e*P **P** **03 20 40.7 -0.8**
comp=Z,14nm,0.7s,mb5.0
LPL La Plagne 47.23 300 *e*P **P** **03 20 40.7 -0.8**
LPL pmax pmax
comp=Z,14nm,0.7s,mb5.0
SBF Sospel 47.24 297 *e*P **P** **03 20 40.5 -1.1**
comp=Z,63nm,1.0s,mb5.2
SBF Sospel 47.24 297 *e*P **P** **03 20 40.5 -1.1**
comp=Z,32nm,1.0s,mb5.2
SBF Sospel 47.24 297 *e*P **P** **03 20 40.5 -1.1**
SBF pmax pmax
comp=Z,32nm,1.0s,mb5.2
GIVF Givet 47.29 306 *e*P **P** **03 20 42.0 +0.1**
comp=Z,24nm,0.9s,mb4.8
GIVF Givet 47.29 306 *e*P **P** **03 20 42.0 +0.1**
comp=Z,12nm,0.9s,mb4.8
GIVF Givet 47.29 306 *e*P **P** **03 20 42.0 +0.1**
GIVF pmax pmax
comp=Z,12nm,0.9s,mb4.8
CABF La Chapelle 47.36 301 *e*P **P** **03 20 42.1 -0.4**
comp=Z,22nm,0.9s,mb4.8
CABF La Chapelle 47.36 301 *e*P **P** **03 20 42.1 -0.4**
comp=Z,11nm,0.9s,mb4.8
CABF La Chapelle 47.36 301 *e*P **P** **03 20 42.1 -0.4**
CABF pmax pmax
comp=Z,11nm,0.9s,mb4.8
UCC Uccle 47.42 307 P **P** **03 20 48.2 +5.3**
MBDF Montbardon 47.44 299 *e*P **P** **03 20 43.6 +0.5**
comp=Z,29nm,0.9s,mb4.9
MBDF Montbardon 47.44 299 *e*P **P** **03 20 43.6 +0.5**
comp=Z,14nm,0.9s,mb4.9
MBDF Montbardon 47.44 299 *e*P **P** **03 20 43.6 +0.5**
MBDF pmax pmax
comp=Z,15nm,0.9s,mb4.9
DOU Dourbes 47.44 306 P **P** **03 20 49.3 +6.3**
BAIF Baives 47.69 306 *e*P **P** **03 20 45.1 +0.1**
comp=Z,46nm,1.0s,mb5.2
BAIF Baives 47.69 306 *e*P **P** **03 20 45.1 +0.1**
comp=Z,23nm,1.0s,mb5.2
BAIF Baives 47.69 306 *e*P **P** **03 20 45.1 +0.1**
BAIF pmax pmax
comp=Z,23nm,1.0s,mb5.2
FRF La Foret Royal 47.88 297 *e*P **P** **03 20 45.9 -0.6**
comp=Z,24nm,0.9s,mb4.9
FRF La Foret Royal 47.88 297 *e*P **P** **03 20 45.9 -0.6**
comp=Z,12nm,0.9s,mb4.9
FRF La Foret Royal 47.88 297 *e*P **P** **03 20 45.9 -0.6**
FRF pmax pmax
comp=Z,12nm,0.9s,mb4.9
ORIF Oris-en-Rattie 47.98 299 *e*P **P** **03 20 46.1 -1.3**
comp=Z,16nm,1.0s,mb4.7
ORIF *e*MLR MLR
comp=Z,238nm,22.5s
ORIF Oris-en-Rattie 47.98 299 *e*P **P** **03 20 46.1 -1.3**
comp=Z,7.9nm,1.0s,mb4.7
ORIF Oris-en-Rattie 47.98 299 *e*P **P** **03 20 46.1 -1.3**
ORIF pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
SMRF Simiane la Rot 48.48 298 *e*P **P** **03 20 49.8 -1.4**
comp=Z,32nm,1.2s,mb4.9
SMRF Simiane la Rot 48.48 298 *e*P **P** **03 20 49.8 -1.4**
comp=Z,32nm,1.2s,mb5.2
LOR Lormes 48.65 303 *e*P **P** **03 20 51.4 -1.0**
comp=Z,11nm,0.7s,mb4.7
LOR *e*MLR MLR
comp=Z,106nm,21.0s
LOR Lormes 48.65 303 *e*P **P** **03 20 51.4 -1.0**
comp=Z,5.7nm,0.7s,mb4.7
LOR LR LR
comp=Z,110nm,21.0s
LOR Lormes 48.65 303 *e*P **P** **03 20 51.4 -1.0**
LOR pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
LOR MLR MLR
comp=Z,110nm,21.0s
KEST Kesra 48.73 287 P **P** **03 20 50.6 -2.6**
comp=Z,1.5nm,1.1s,mb3.9,baz=204,slow=18,SNR=2.1
VIVF Saint-Julien-l 48.82 300 *e*P **P** **03 20 53.7 -0.1**
comp=Z,50nm,1.2s,mb5.1
VIVF Saint-Julien-l 48.82 300 *e*P **P** **03 20 53.7 -0.1**
comp=Z,25nm,1.2s,mb5.1
VIVF Saint-Julien-l 48.82 300 *e*P **P** **03 20 53.7 -0.1**
VIVF pmax pmax
comp=Z,25nm,1.2s,mb5.1
SMF Signal de Mont 48.84 302 *e*P **P** **03 20 53.2 -0.7**
comp=Z,43nm,1.2s,mb5.1
SMF Signal de Mont 48.84 302 *e*P **P** **03 20 53.2 -0.7**
comp=Z,22nm,1.2s,mb5.0
SMF Signal de Mont 48.84 302 *e*P **P** **03 20 53.2 -0.7**
SMF pmax pmax
comp=Z,22nm,1.2s,mb5.1
SSF Saint Saulge 48.94 303 *e*P **P** **03 20 53.8 -0.8**
comp=Z,13nm,0.8s,mb4.7
SSF Saint Saulge 48.94 303 *e*P **P** **03 20 53.8 -0.8**
comp=Z,6.4nm,0.8s,mb4.7
SSF Saint Saulge 48.94 303 *e*P **P** **03 20 53.8 -0.8**
SSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
AVF Avril sur Loir 49.12 302 *e*P **P** **03 20 55.4 -0.6**
comp=Z,43nm,0.8s,mb5.2
AVF Avril sur Loir 49.12 302 *e*P **P** **03 20 55.4 -0.6**
comp=Z,21nm,0.8s,mb5.2
AVF Avril sur Loir 49.12 302 *e*P **P** **03 20 55.4 -0.6**
AVF pmax pmax
comp=Z,21nm,0.8s,mb5.2
HYF Humbligny 49.44 303 *e*P **P** **03 20 58.3 -0.2**
BGF Bois d'Agland 49.52 302 *e*P **P** **03 20 58.4 -0.7**

comp=Z,23nm,0.8s,mb5.0
BGF Bois d'Agland 49.52 302 *e*P P **03 20 58.4 -0.7**
comp=Z,11nm,0.8s,mb5.0
BGF Bois d'Agland 49.52 302 *e*P P **03 20 58.4 -0.7**
BGF pmax pmax
comp=Z,11nm,0.8s,mb4.9
LASF Ste Croix 49.62 299 *e*P P **03 20 59.9 0.0**
comp=Z,54nm,1.0s,mb5.2
TCF Toulx Ste Croi 50.02 302 *e*P P **03 21 02.6 -0.3**
comp=Z,42nm,0.9s,mb5.2
TCF Toulx Ste Croi 50.02 302 *e*P P **03 21 02.6 -0.3**
comp=Z,21nm,0.9s,mb5.2
TCF Toulx Ste Croi 50.02 302 *e*P P **03 21 02.6 -0.3**
TCF pmax pmax
comp=Z,21nm,0.9s,mb5.2
CAF Calviac 50.55 300 *e*P P **03 21 07.0 0.0**
comp=Z,25nm,1.1s,mb4.8
CAF Calviac 50.55 300 *e*P P **03 21 07.0 0.0**
comp=Z,12nm,1.1s,mb4.8
CAF Calviac 50.55 300 *e*P P **03 21 07.0 0.0**
CAF pmax pmax
comp=Z,12nm,1.1s,mb4.7
EKA Eskdalemuir Ar 50.75 315 P P **03 21 08.0 -0.3**
comp=Z,0.9nm,0.8s,mb3.8,baz=80,slow=8.1,SNR=3.5
RJF Les Rejaudoux 50.80 301 *e*P P **03 21 08.9 +0.1**
comp=Z,19nm,0.9s,mb4.7
RJF *e*MLR MLR
comp=Z,105nm,22.8s
RJF Les Rejaudoux 50.80 301 *e*P P **03 21 08.9 +0.1**
comp=Z,9.4nm,0.9s,mb4.7
RJF LR LR
comp=Z,110nm,22.8s
RJF Les Rejaudoux 50.80 301 *e*P P **03 21 08.9 +0.1**
RJF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
RJF MLR MLR
comp=Z,110nm,22.8s
LDF La Druitiere 50.81 306 *e*P P **03 21 08.1 -0.8**
comp=Z,45nm,1.1s,mb5.0
LDF La Druitiere 50.81 306 *e*P P **03 21 08.1 -0.8**
comp=Z,22nm,1.1s,mb5.0
LDF La Druitiere 50.81 306 *e*P P **03 21 08.1 -0.8**
LDF pmax pmax
comp=Z,22nm,1.1s,mb5.0
YSS Yuzh-Sakhalins 50.89 57 *e*P P **03 21 17.1 +7.6**
FLN La Foliniere 50.99 306 *e*P P **03 21 09.3 -0.9**
comp=Z,53nm,1.2s,mb5.0
FLN *e*MLR MLR
comp=Z,201nm,22.5s
FLN La Foliniere 50.99 306 *e*P P **03 21 09.3 -0.9**
comp=Z,26nm,1.2s,mb5.0
FLN LR LR
comp=Z,200nm,22.5s
FLN La Foliniere 50.99 306 *e*P P **03 21 09.3 -0.9**
FLN pmax pmax
comp=Z,26nm,1.2s,mb5.0
FLN MLR MLR
comp=Z,200nm,22.5s
MTLF Montolieu 50.99 298 *e*P P **03 21 10.0 -0.3**
comp=Z,17nm,0.9s,mb4.7
MTLF Montolieu 50.99 298 *e*P P **03 21 10.0 -0.3**
comp=Z,8.6nm,0.9s,mb4.7
MTLF Montolieu 50.99 298 *e*P P **03 21 10.0 -0.3**
MTLF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KMBO Kilima Mbogo 51.03 227 *e*P P **03 21 18.6 +7.7**
comp=Z,10nm,1.2s,mb4.6
KMBO Kilima Mbogo 51.03 227 *e*P P **03 21 18.6 +7.8**
KMBO pmax pmax
comp=Z,10.0nm,1.2s
GRR Gorron 51.34 305 *e*P P **03 21 11.9 -0.9**
comp=Z,33nm,0.7s,mb5.0
GRR Gorron 51.34 305 *e*P P **03 21 11.9 -0.9**
comp=Z,17nm,0.7s,mb5.1
GRR Gorron 51.34 305 *e*P P **03 21 11.9 -0.9**
GRR pmax pmax
comp=Z,17nm,0.7s,mb5.1
LFF La Frestale 51.44 301 *e*P P **03 21 13.4 -0.2**
comp=Z,35nm,0.8s,mb5.0
LFF La Frestale 51.44 301 *e*P P **03 21 13.4 -0.2**
comp=Z,18nm,0.8s,mb5.0
LFF La Frestale 51.44 301 *e*P P **03 21 13.4 -0.2**
LFF pmax pmax
comp=Z,18nm,0.8s,mb5.0
MFF Saint Martin d 51.46 303 *e*P P **03 21 12.7 -1.0**
comp=Z,45nm,1.3s,mb4.9
MFF Saint Martin d 51.46 303 *e*P P **03 21 12.7 -1.0**
comp=Z,22nm,1.3s,mb4.9
MFF Saint Martin d 51.46 303 *e*P P **03 21 12.7 -1.0**
MFF pmax pmax
comp=Z,22nm,1.3s,mb4.9
MAJO Matsushiro 51.53 71 *e*P P **03 21 14.0 -0.4**
comp=Z,11nm,0.8s,mb4.8
MAJO Matsushiro 51.53 71 *e*P P **03 21 14.0 -0.4**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.8
MAT Matsushiro 51.53 71 P P **03 21 14.2 -0.2**
MJAR Matsushiro Arr 51.54 71 P P **03 21 14.7 +0.2**
comp=Z,2.0nm,0.8s,mb4.1,baz=290,slow=9.7,SNR=4.1
ASAJ Asahikawa 51.74 60 P P **03 21 15.1 -0.8**
ASAJ pmax pmax
comp=Z,1.0nm,0.3s
ASAJ MLR MLR
comp=Z,143nm,18.1s
ASAJ Asahikawa 51.74 60 P P **03 21 15.1 -0.8**
comp=Z,1.1nm,0.3s,mb4.2,baz=192,slow=16,SNR=2.5
ASAJ LR LR 03 44 53.7
comp=Z,143nm,18.1s,baz=342,slow=38
DAG Danmarks Havn 52.32 343 *i* P P **03 21 19.0 -0.7**
comp=Z,5.6nm,0.5s,mb4.8
SGMF Saint Gilles 52.46 306 *e*P P **03 21 20.6 -0.5**
comp=Z,36nm,0.7s,mb5.1
SGMF Saint Gilles 52.46 306 *e*P P **03 21 20.6 -0.5**
comp=Z,18nm,0.7s,mb5.1
SGMF Saint Gilles 52.46 306 *e*P P **03 21 20.6 -0.5**
SGMF pmax pmax
comp=Z,18nm,0.7s,mb5.1
ROSF Rostrenen 52.88 306 *e*P P **03 21 23.6 -0.7**
comp=Z,63nm,1.1s,mb5.2
ROSF Rostrenen 52.88 306 *e*P P **03 21 23.6 -0.7**
comp=Z,31nm,1.1s,mb5.2
ROSF Rostrenen 52.88 306 *e*P P **03 21 23.6 -0.7**
ROSF pmax pmax
comp=Z,31nm,1.1s,mb5.2
QUIF Quistinic 52.96 306 *e*P P **03 21 24.0 -0.8**
comp=Z,34nm,0.9s,mb5.2
QUIF Quistinic 52.96 306 *e*P P **03 21 24.0 -0.8**
comp=Z,17nm,0.9s,mb5.0
QUIF Quistinic 52.96 306 *e*P P **03 21 24.0 -0.8**
QUIF pmax pmax
comp=Z,17nm,0.9s,mb5.0
ETSF Etsaut 53.05 299 *e*P P **03 21 25.4 -0.1**
comp=Z,30nm,1.1s,mb4.8
ETSF Etsaut 53.05 299 *e*P P **03 21 25.4 -0.1**
comp=Z,15nm,1.1s,mb4.8
ETSF Etsaut 53.05 299 *e*P P **03 21 25.4 -0.1**
ETSF pmax pmax
comp=Z,15nm,1.1s,mb4.8
SJPF Ste Jean 53.42 299 *e*P P **03 21 28.2 -0.1**
comp=Z,29nm,1.1s,mb4.8
SJPF Ste Jean 53.42 299 *e*P P **03 21 28.2 -0.1**
comp=Z,14nm,1.1s,mb4.8
SJPF Ste Jean 53.42 299 *e*P P **03 21 28.2 -0.1**
SJPF pmax pmax
comp=Z,14nm,1.1s,mb4.8
BILL Bilibino 55.99 27 *e*P P **03 21 52.6 +6.1**
BILL pmax pmax
comp=Z,16nm,1.2s,mb4.9
ESDC Sonseca Array 56.70 297 P P **03 21 51.7 -0.3**
comp=Z,0.9nm,0.5s,mb4.1,baz=58,slow=7.3,SNR=8.4
CBIJ Chichi jima 58.94 79 LR LR 03 50 46.7
comp=Z,60nm,19.2s,baz=18,slow=39
RES Resolute Bay 66.07 356 *e*P P **03 22 55.0 +0.3**
comp=Z,94nm,0.9s,mb5.8
RES Resolute Bay 66.07 356 *e*P P **03 22 55.0 +0.3**
RES pmax pmax
comp=Z,94nm,0.9s,mb5.8
TOA0 Torodi Ar. Sit 66.32 268 *e*P P **03 22 55.8 -1.3**
TORD Torodi Ar. Bea 66.32 268 P P **03 22 56.2 -0.9**
comp=Z,1.7nm,0.6s,mb4.3,baz=49,slow=5.8,SNR=12
TORD LR LR 03 58 05.7
comp=Z,51nm,21.2s,baz=215,slow=42
LSZ Lusaka 67.68 226 *e*P P **03 23 08.6 +3.0**
comp=Z,2.3nm,0.9s,mb4.2
LSZ Lusaka 67.68 226 *e*P P **03 23 08.6 +3.0**
LSZ pmax pmax
comp=Z,2.0nm,0.9s,mb4.2

IMA2 Indian Mountai 69.42 18 *e*P P **03 23 15.8 -0.1**
INK Inuvik 71.19 10 *e*P P **03 23 27.5 +0.9**
COLA College 71.77 17 *e*P P **03 23 30.8 +0.6**
comp=Z,4.9nm,0.9s,mb4.4
COLA College 71.77 17 *e*P P **03 23 30.8 +0.7**
COLA pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
DAWY Dawson 74.21 14 *e*P P **03 23 45.0 +0.5**
SML Sawmill 74.29 18 *e*P P **03 23 44.6 -0.5**
SML *e*pP pP 03 23 56.2 -6.1
LIC Lamto 75.77 266 *e*P P **03 23 56.7 +2.3**
comp=Z,9.2nm,1.1s,mb4.3
LIC *e*MLR MLR
comp=Z,81nm,21.8s
LIC Lamto 75.77 266 *e*P P **03 23 56.7 +2.3**
comp=Z,4.6nm,1.1s,mb4.3
LIC LR LR
comp=Z,40nm,21.8s
YKW3 Yellowknife Ar 78.49 3 *e*P P **03 24 09.3 +0.5**
YKA Yellowknife Ar 78.56 3 P P **03 24 09.7 +0.6**
YKA Yellowknife Ar 78.56 3 P P **03 24 09.7 +0.6**
comp=Z,3.0nm,0.5s,mb4.5,baz=350,slow=5.5,SNR=99
SCHQ Schefferville 79.84 337 P P **03 24 16.8 +0.5**
comp=Z,1.2nm,0.7s,mb3.9,baz=90,slow=11,SNR=3.7
FCC Fort Churchill 81.70 353 *e*P P **03 24 27.2 +1.0**
WRA Warramunga Arr 82.98 123 P P **03 24 33.3 -0.1**
comp=Z,1.6nm,0.8s,mb4.1,baz=324,slow=4.9,SNR=18
WB2 Warramunga Arr 82.98 123 *e*P P **03 24 32.9 -0.5**
ASAR Alice Springs 85.37 126 P P **03 24 46.0 +0.6**
comp=Z,0.7nm,0.9s,mb3.8,baz=316,slow=5.2,SNR=7.1
FFC Flin Flon 86.31 356 *e*P P **03 24 50.6 +0.9**
FFC *e*gP pP 03 25 02.2 -5.1
EDM Edmonton 87.88 3 *e*P P **03 24 58.5 +1.2**
ULM Lac du Bonnet 90.28 352 LR LR 04 07 14.4
comp=Z,92nm,19.6s,baz=31,slow=37
PDAR Pinedale Array 98.43 1 LR LR 04 12 25.6
comp=Z,74nm,19.1s,baz=257,slow=37

NEIC ***28*** *03:13:35.1, 38.40N×20.45E, h5km, MD3.6(ATH), After ATH.*
CSEM ***28*** *03:13:35.1, 38.40N×20.45E, h5km, MD3.6/5, After ATH*
ATH 28 03:13:35.1, 38.40N×20.45E, h4km, MD3.6/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.25**	**154**	*e*PG	Pg	03 13 40.4	+0.5
VLS				*e*SG	Sg	03 13 44.2	+1.1
RLS	**Riolos of Patr**	**0.87**	**113**	*e*PG	Pg	03 13 51.7	-0.1
EVR	**Evrytania**	**1.18**	**64**	*e*PB	Pb	03 13 57.3	-0.8
KEK	**Kerkira**	**1.41**	**339**	*e*PB	Pb	03 14 01.4	-0.5
THL	**Klokotos Trika**	**1.69**	**46**	*e*PB	Pb	03 14 06.8	+0.1

MAN 28 03:24:57, 641N×12663E, h63km, mb4.7, ML3.6, MS3.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.65**	**325**	*e*P	Pn	03 25 13.1	+2.2
MATI				*e*S	Sn	03 25 25.5	+4.5
GSPH	**General Santos**	**1.70**	**259**	*e*P	Pn	03 25 22.4	-2.1
GSPH				*e*S	Sn	03 25 41.5	-3.8
BUKP	**Musuan**	**2.13**	**313**	*e*P	Pn	03 25 33.5	+3.1
BUKP				*e*S	Sn	03 25 57.4	+1.7

IDC 28 03:26:43.9±1.6, 2864N×14034E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.6/18, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=53.9km s-min=28.4km az=96.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.25**	**133**	Pn	Pn	03 27 21.9	-0.5
	16nm,0.3s,baz=274,slow=19,SNR=2.6						
CBIJ				Sn	Sn	03 27 43.3	-7.5
	33nm,0.3s,baz=288,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**48.64**	**188**	P	P	03 35 29.7	0.0
	0.6nm,0.5s,baz=5.1,slow=7.7,SNR=11						
YKA	**Yellowknife Ar**	**71.56**	**28**	P	P	03 38 06.1	-0.4
	0.2nm,0.6s,baz=298,slow=6.0,SNR=4.6						
NVAR	**Mina Array Bea**	**80.84**	**51**	P	P	03 39 00.7	+0.9
	0.7nm,0.4s,baz=296,slow=6.9,SNR=3.5						

MOS ***28*** *03:39:52.7±1.0, 5220N×16461W, h10km, mb4.8/43, Error ellipse: s-maj=11.8km s-min=6.6km az=96.5*
IDC ***28*** *03:39:52.6±0.7, 5219N×16460W, h0km, mb4.3/22, mb1 4.4/22, mb1mx4.4/26, mbtmp4.3/22, MS3.6/6, Ms1 3.7/6, ms1mx3.2/36, Error ellipse: s-maj=23.1km s-min=12.0km az=173.0*
ISCJB ***28*** *03:39:55.9±0.2, 5240N±0.03×16452W±0.04, h26km, mb4.5/87, MS4.1/11, Error ellipse: s-maj=4.9km s-min=2.6km az=26.8*
NEIC ***28*** *03:39:56.3, 5229N×16448W, h26km, mb4.6/53, ML4.2(AEIC), After AEIC.*
SZGRF ***28*** *03:39:57.4, 5178N×16672W, h33km, mb4.6, South of Aleutian Islands*
BJI ***28*** *03:39:57.8, 53.13N×164.91W, h18km, mB5.1, mb4.8, Ms4.8, Msz4.5*
ISC 28 03:39:58.2±0.2, 5244N±0.03×16452W±0.03, h27km, h27km±1.3km:pP-P, n298, σ0.99/303, mb4.5/86, MS4.1/11, 47C-47D, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UNV	**Unalaska Valle**	**1.84**	**320**	P	**Pn**	**03 40 26.6**	**-1.3**
UNV				S	**Sn**	**03 40 50.2**	**-0.1**
AKUT	**Akutan**	**1.85**	**337**	P	**Pn**	**03 40 27.2**	**-0.8**
AKUT				*e*P		03 40 27.7	
AKUT				S	**Sn**	**03 40 52.0**	**+1.5**
AKLV	**Akutan Long Va**	**1.92**	**334**	P	**Pn**	**03 40 27.9**	**-1.1**
AKLV				S	**Sn**	**03 40 53.0**	**+0.7**
AKGG	**Akutan Green G**	**1.97**	**334**	P	**Pn**	**03 40 28.9**	**-0.8**
AKGG				S	**Sn**	**03 40 54.2**	**+0.8**
FALS	**False Pass**	**2.51**	**15**	P	**Pn**	**03 40 36.0**	**-1.1**
FALS				S	**Sn**	**03 41 07.4**	**+0.8**
SDPT	**Sand Point**	**3.77**	**38**	*e*P	**Pn**	**03 40 53.5**	**-0.9**
SDPT				P		03 40 53.8	
SDPT				S	**Sn**	**03 41 36.2**	**-1.6**
CHGN	**Chignik**	**5.26**	**40**	*e*P	**Pn**	**03 41 14.2**	**-0.7**
ATKA	**Atka Island**	**5.94**	**271**	P	**Pn**	**03 41 22.6**	**-1.5**
ATKA				S	**Sn**	**03 42 27.6**	**-3.6**
ADK	**Adak**	**7.50**	**271**	P	**Pn**	**03 41 43.9**	**-1.8**
KDAK	**Kodiak Island**	**8.68**	**47**	P	**Pn**	**03 41 59.6**	**-2.1**
KDAK	**Kodiak Island**	**8.68**	**47**	Pn	**Pn**	**03 41 59.0**	**-2.8**
	4.8nm,0.3s,baz=217,slow=8.6,SNR=56						
KDAK				Sn	**Sn**	**03 43 32.6**	**-6.0**
	0.7nm,0.3s,baz=336,slow=20,SNR=3.8						
SVW2	**Sparrevohn**	**9.96**	**26**	P	**Pn**	**03 42 17.9**	**-1.2**
SVW2				*e*P		03 42 19.8	
SLKM	**Skilak Lake**	**11.28**	**39**	*e*Pn	**Pn**	**03 42 35.5**	**-1.8**
TTA	**Tatalina**	**11.44**	**20**	*e*Pn	**Pn**	**03 42 38.8**	**-0.7**
	14nm,1.0s						
TTA				*e*P		03 42 44.3	
TTA	**Tatalina**	**11.44**	**20**	*e*P	**Pn**	**03 42 38.8**	**-0.7**
TTA				pmax	pmax		
	comp=Z,14nm,1.0s						
GAMB	**Gambell**	**11.97**	**344**	*e*Pn	**Pn**	**03 42 46.7**	**0.0**
PMR	**Palmer**	**12.39**	**36**	*e*Pn	**Pn**	**03 42 49.5**	**-3.0**
SML	**Sawmill**	**12.82**	**37**	*e*Pn	**Pn**	**03 42 56.0**	**-2.3**
IMA2	**Indian Mountai**	**14.71**	**18**	*e*Pn	**Pn**	**03 43 24.0**	**0.0**
COLA	**College**	**15.11**	**28**	*e*Pn	**Pn**	**03 43 25.1**	**-4.3**
	comp=Z,2.5nm,0.6s						
COLA	**College**	**15.11**	**28**	*e*P	**Pn**	**03 43 26.0**	**-3.4**
EGAK	**Eagle**	**17.20**	**35**	*e*Pn	**Pn**	**03 43 54.2**	**-1.9**
DAWY	**Dawson**	**17.47**	**38**	*e*Pn	**Pn**	**03 43 57.9**	**-1.6**
DLBC	**Dease Lake**	**20.30**	**59**	P	**P**	**03 44 33.3**	**+1.8**
	baz=296,slow=9.6						
BILL	**Bilibino**	**20.99**	**329**	*e*P	**P**	**03 44 39.2**	**+0.3**
	comp=Z,5.9nm,0.8s						
BILL	**Bilibino**	**20.99**	**329**	*e*P	**P**	**03 44 38.5**	**-0.3**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
INK	**Inuvik**	**21.70**	**31**	*e*P	**P**	**03 44 45.6**	**-0.9**
INK	**Inuvik**	**21.70**	**31**	P	**P**	**03 44 45.4**	**-1.1**
INK						03 48 44.5	
INK				pmax	pmax		
	comp=Z,12nm,0.6s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK				MLR	MLR		
	comp=Z,203nm,18.2s						
INK	**Inuvik**	**21.70**	**31**	P	**P**	**03 44 45.4**	**-1.1**
	comp=Z,12nm,0.6s,mb4.5,baz=228,slow=11,SNR=51						
INK				PcP	PcP	03 48 44.5	-1.8
	comp=Z,1.0nm,0.6s,baz=154,slow=5.2,SNR=5.8						
INK				LR	LR	03 54 39.5	
	comp=Z,203nm,18.2s,MS3.6,baz=101,slow=40						
SEY	**Seymchan**	**24.82**	**312**	*e*P	**P**	**03 45 16.4**	**-1.1**
A07A	**Ashnola River,**	**27.81**	**79**	⇓P	**P**	**03 45 44.7**	**0.0**
	baz=28						
YKA	**Yellowknife Ar**	**27.95**	**49**	P	**P**	**03 45 46.7**	**+0.9**
YKA				PcP	PcP	03 48 59.1	-1.1
YKA	**Yellowknife Ar**	**27.95**	**49**	P	**P**	**03 45 46.7**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.3,baz=270,slow=7.1,SNR=9.2						
YKA				PcP	PcP	03 48 59.1	-1.1
	comp=Z,1.4nm,0.6s,baz=277,slow=2.2,SNR=15						
A08A	**Turner Farm, O**	**28.51**	**79**	⇑P	**P**	**03 45 49.3**	**-1.7**
	baz=28						
B08A	**Colville Reser**	**28.73**	**80**	⇑P	**P**	**03 45 52.5**	**-0.3**
	baz=29						
A09A	**Danville**	**28.92**	**78**	⇓P	**P**	**03 45 54.2**	**-0.3**
	baz=29						
G06A	**Carlson Farm,**	**29.39**	**86**	⇑P	**P**	**03 46 00.5**	**+1.7**
	baz=29						
B09A	**Rice**	**29.41**	**79**	⇑P	**P**	**03 45 59.2**	**+0.3**
	baz=29						
YBH	**Yreka Blue Hor**	**30.02**	**94**	⇓P	**P**	**03 46 05.5**	**+1.2**
	baz=30						
NEW	**Newport**	**30.10**	**79**	*e*P	**P**	**03 46 05.3**	**+0.3**
	comp=Z,7.4nm,0.8s,mb4.5						
NEW	**Newport**	**30.10**	**79**	*e*P	**P**	**03 46 05.3**	**+0.3**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NEW	**Newport**	**30.10**	**79**	P	**P**	**03 46 04.0**	**-1.0**
	comp=Z,7.7nm,0.7s,mb4.5,baz=297,slow=8.1,SNR=12						
A11A	**Hall Mountain,**	**30.25**	**77**	⇓P	**P**	**03 46 07.0**	**+0.6**
	baz=30						
B11A	**Sandpoint**	**30.48**	**78**	⇓P	**P**	**03 46 08.6**	**+0.3**
	baz=30						
D10A	**Wagner Farm, O**	**30.55**	**81**	⇑P	**P**	**03 46 08.3**	**-0.7**
	baz=30						
I07A	**Izee**	**30.68**	**88**	⇓P	**P**	**03 46 10.2**	**0.0**
	baz=30						
J06A	**Christmas Vall**	**30.73**	**89**	⇑P	**P**	**03 46 11.7**	**+1.1**
	baz=31						
B12A	**Libby**	**30.93**	**78**	⇑P	**P**	**03 46 12.6**	**+0.3**
	baz=31						
L05A	**Lakeview**	**30.98**	**92**	⇓P	**P**	**03 46 15.0**	**+2.1**
	baz=31						
P01C	**Double 8 Ranch**	**30.99**	**98**	⇓P	**P**	**03 46 14.2**	**+1.2**
	baz=31						
G09A	**Cove**	**31.11**	**84**	⇓P	**P**	**03 46 14.0**	**0.0**
	baz=31						
E11A	**Bogner Ranch,**	**31.53**	**82**	⇓P	**P**	**03 46 16.5**	**-1.2**
	baz=31						
K07A	**Rock Creek Ran**	**31.59**	**90**	⇑P	**P**	**03 46 18.9**	**+0.7**
	baz=31						
BSMT	**Bassoo Peak**	**31.68**	**78**	*e*P	**P**	**03 46 19.7**	**+0.8**
D12A	**Red Ives Fores**	**31.72**	**80**	⇑P	**P**	**03 46 18.5**	**-0.7**
	baz=32						
F11A	**Grangeville**	**31.80**	**82**	⇑P	**P**	**03 46 19.8**	**-0.2**
	baz=32						
I09A	**Lost Marbles R**	**31.82**	**86**	⇓P	**P**	**03 46 20.2**	**0.0**
	baz=32						
C13A	**Hot Springs**	**31.89**	**78**	P	**P**	**03 46 21.1**	**+0.3**
	baz=32,SNR=6.1						
G11A	**Walters Elk Ra**	**31.97**	**83**	⇑P	**P**	**03 46 21.6**	**+0.1**
	baz=32						
H10A	**Noah's Angus R**	**32.10**	**85**	⇑P	**P**	**03 46 22.6**	**0.0**
	baz=32						
J09A	**Fry Pan Ranch,**	**32.14**	**87**	⇓P	**P**	**03 46 23.4**	**+0.4**
	baz=32						
D13A	**Huson**	**32.23**	**79**	⇓P	**P**	**03 46 21.6**	**-2.2**
	baz=32						
C14A	**Swan Lake**	**32.34**	**78**	⇑P	**P**	**03 46 23.8**	**-0.9**
	baz=32						
N06A	**Buffalo Meadow**	**32.35**	**93**	⇓P	**P**	**03 46 24.7**	**-0.2**
	baz=32						
F12A	**Elk City**	**32.41**	**82**	⇓P	**P**	**03 46 24.8**	**-0.5**
	baz=32						
L08A	**Fields**	**32.43**	**90**	⇓P	**P**	**03 46 25.1**	**-0.5**
	baz=32						
H11A	**Donnelly**	**32.48**	**84**	P	**P**	**03 46 26.1**	**+0.1**
	baz=32,SNR=5.8						
E13A	**Victor**	**32.71**	**80**	⇓P	**P**	**03 46 27.9**	**-0.1**
	baz=32						
D14A	**Greenough**	**32.81**	**79**	P	**P**	**03 46 29.0**	**+0.1**
	baz=33,SNR=5.6						
F13A	**Darby**	**32.95**	**81**	⇓P	**P**	**03 46 30.1**	**0.0**
	baz=33						
CHMT	**Chamberlain Mo**	**33.05**	**79**	*e*P	**P**	**03 46 30.7**	**-0.2**
E14A	**Clinton**	**33.14**	**80**	⇓P	**P**	**03 46 32.2**	**+0.5**
	baz=33						
H12A	**Diamond D Ranc**	**33.27**	**84**	⇓P	**P**	**03 46 33.3**	**+0.4**
	baz=33						
G13A	**Cobalt**	**33.36**	**82**	⇑P	**P**	**03 46 33.8**	**+0.1**
	baz=33						
D15A	**Lincoln**	**33.42**	**78**	P	**P**	**03 46 34.2**	**0.0**
	baz=33,SNR=8.2						
F14A	**Wisdom**	**33.52**	**81**	⇓P	**P**	**03 46 35.3**	**+0.3**
	baz=33,SNR=6.9						
H13A	**Challis**	**33.63**	**83**	⇓P	**P**	**03 46 36.2**	**+0.2**
	baz=33						
E15A	**Deer Lodge**	**33.65**	**79**	P	**P**	**03 46 36.5**	**+0.3**
	baz=34,SNR=5.1						
G14A	**Jackson**	**33.76**	**82**	⇓P	**P**	**03 46 37.4**	**+0.3**
	baz=34						
J12A	**Stokes Ranch,**	**33.82**	**86**	⇑P	**P**	**03 46 38.2**	**+0.5**
	baz=34						
YSS	**Yuzh-Sakhalins**	**33.90**	**282**	*e*P	**P**	**03 46 36.5**	**-1.8**
YSS				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
I13A	**Wildhorse Cree**	**34.06**	**84**	⇑P	**P**	**03 46 40.5**	**+0.8**
	baz=34						
HLID	**Hailey**	**34.07**	**85**	*e*P	**P**	**03 46 40.2**	**+0.3**
	comp=Z,64nm,2.9s,mb5.0						
HLID	**Hailey**	**34.07**	**85**	⇑P	**P**	**03 46 39.9**	**+0.1**
	baz=34						
TIXI	**Tiksi**	**34.21**	**329**	*e*P	**P**	**03 46 41.7**	**+0.9**
	comp=Z,25nm,2.1s,mb4.8						
TIXI	**Tiksi**	**34.21**	**329**	*e*P	**P**	**03 46 41.4**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
J13A	**Cove Ranch, Pi**	**34.30**	**85**	⇑P	**P**	**03 46 42.5**	**+0.6**
	baz=34						
O09A	**Fish Creek Ran**	**34.31**	**92**	⇑P	**P**	**03 46 42.6**	**+0.6**
	baz=34						
G15A	**Dillon**	**34.38**	**81**	P	**P**	**03 46 42.9**	**+0.3**
	baz=34,SNR=7.6						
L12A	**House Creek Ra**	**34.49**	**87**	⇓P	**P**	**03 46 43.9**	**+0.3**
	baz=34						
BOZ	**Bozeman (W)**	**34.65**	**80**	*e*P	**P**	**03 46 45.3**	**+0.4**
BOZ	**Bozeman (W)**	**34.65**	**80**	P	**P**	**03 46 45.4**	**+0.5**
	baz=34,SNR=6.4						
NVAR	**Mina Array Bea**	**34.70**	**95**	P	**P**	**03 46 46.0**	**+0.5**
	comp=Z,2.2nm,0.8s,mb4.1,baz=304,slow=7.3,SNR=6.4						
NVAR				PcP	PcP	03 49 16.9	-1.9
	comp=Z,0.4nm,0.3s,baz=254,slow=6.0,SNR=3.5						
RES	**Resolute Bay**	**35.02**	**26**	*e*P	**P**	**03 46 48.0**	**+0.2**
	comp=Z,57nm,0.6s,mb5.7						
RES	**Resolute Bay**	**35.02**	**26**	*e*P	**P**	**03 46 48.0**	**+0.3**
RES				pmax	pmax		
	comp=Z,57nm,0.6s,mb5.7						
L13A	**Double Diamond**	**35.18**	**87**	⇓P	**P**	**03 46 50.4**	**+0.9**
	baz=35						
N12A	**Clover Valley,**	**35.22**	**89**	⇓P	**P**	**03 46 50.0**	**+0.2**
	baz=35						
YAK	**Yakutsk**	**35.34**	**312**	*e*P	**P**	**03 46 50.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
S08C	**White Mtn Res**	**35.38**	**96**	⇑P	**P**	**03 46 51.2**	**0.0**
	baz=35						
HELL	**Mitchell Peak,**	**35.39**	**98**	⇓P	**P**	**03 46 50.8**	**-0.5**
	baz=35						
ASAJ	**Asahikawa**	**35.45**	**278**	P	**P**	**03 46 49.9**	**-1.9**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ASAJ	**Asahikawa**	**35.45**	**278**	P	**P**	**03 46 49.9**	**-1.9**
	comp=Z,7.0nm,0.8s,mb4.6,baz=320,slow=3.5,SNR=6.0						
Q10A	**Clear Creek Ra**	**35.62**	**93**	⇑P	**P**	**03 46 53.8**	**+0.5**
	baz=36						
O12A	**Currie**	**35.75**	**90**	⇑P	**P**	**03 46 54.5**	**+0.1**
	baz=36						
**

R10A **Warm Springs** 36.02 94 ⇓P P 03 46 56.5 -0.2
baz=36
S10A **Tonopah Range,** 36.07 94 ⇓P P 03 46 57.1 0.0
baz=36
FFC **Flin Flon** 36.12 61 *e*P P 03 46 57.0 -0.3
comp=Z,7.1nm,1.3s,mb4.4
FFC **Flin Flon** 36.12 61 *e*P P 03 46 57.1 -0.3
FFC pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
MOOW **Moose Ponds** 36.20 82 *e*P P 03 46 58.3 +0.1
TPAW **Teton Pass** 36.21 82 *e*P P 03 46 59.4 +1.1
comp=Z,86nm,3.0s
REDW **Red Top Meadow** 36.34 83 *e*P P 03 46 59.9 +0.4
comp=Z,7.0nm,1.0s,mb4.5
RLMT **Red Lodge** 36.35 79 *e*P P 03 46 59.9 +0.4
comp=Z,9.5nm,1.0s,mb4.7
SNOW **Snow King Moun** 36.35 82 *e*P P 03 46 59.8 +0.4
comp=Z,3.4nm,0.7s,mb4.4
LOHW **Long Hollow** 36.36 82 *e*P P 03 47 00.3 +0.7
comp=Z,3.4nm,0.8s,mb4.3
ISA **Isabella** 36.40 99 ⇑P P 03 46 58.5 -1.5
baz=36
R11A **Troy Canyon, C** 36.41 93 ⇑P P 03 46 59.8 -0.3
baz=36
Q12A **Willow Creek R** 36.45 91 ⇑P P 03 47 00.7 +0.3
baz=36
TPNV **Topopah Spring** 36.90 95 *e*P P 03 47 03.4 -0.9
comp=Z,13nm,1.3s,mb4.6
TPNV **Topopah Spring** 36.90 95 *e*P P 03 47 03.4 -0.9
TPNV pmax pmax
comp=Z,13nm,1.3s,mb4.6
TPNV **Topopah Spring** 36.90 95 ⇓P P 03 47 03.7 -0.6
baz=37
DUG **Dugway** 36.98 88 *e*P P 03 47 04.5 -0.3
comp=Z,7.0nm,1.2s,mb4.4
DUG **Dugway** 36.98 88 *e*P P 03 47 04.5 -0.4
DUG pmax pmax
comp=Z,7.0nm,1.2s,mb4.4
Q13A **Wheeler Ranch,** 36.99 91 ⇓P P 03 47 03.6 -1.4
baz=37
S12A **Delamar Landin** 37.33 93 ⇓P P 03 47 07.5 -0.4
baz=37
T11A **Corn Creek, Al** 37.34 94 ⇓P P 03 47 07.8 -0.2
baz=37
BW06 **Boulder Array** 37.46 82 *e*P P 03 47 09.0 0.0
comp=Z,6.7nm,0.7s,mb4.6
PDAR **Pinedale Array** 37.46 82 P P 03 47 09.0 0.0
comp=Z,6.1nm,0.6s,mb4.6,baz=301,slow=4.5,SNR=56
GSC **Goldstone** 37.65 98 ⇑P P 03 47 10.7 +0.1
baz=38
HABR **Khabarovsk** 37.69 289 *e*P P 03 47 09.2 -1.6
HABR *e* 03 48 35.4
HABR *e*S S 03 52 57.3 -1.7
HABR *e* 03 57 21.0
S13A **Holt Ranch, En** 37.96 92 ⇑P P 03 47 13.3 +0.1
baz=38
T13A **Saint George** 38.29 93 ⇓P P 03 47 15.3 -0.7
baz=38
V12A **Nelson** 38.55 96 ⇑P P 03 47 18.4 +0.2
baz=38
FCC **Fort Churchill** 38.58 52 *e*P P 03 47 17.7 -0.5
comp=Z,3.1nm,0.9s,mb4.0
FCC **Fort Churchill** 38.58 52 *e*P P 03 47 17.7 -0.5
FCC pmax pmax
comp=Z,3.0nm,0.9s,mb4.0
GMRC **Granite Mounta** 38.70 97 ⇓P P 03 47 18.7 -0.7
baz=38
U14A **Mt Trumbull** 39.12 93 ⇑P P 03 47 22.9 0.0
baz=39
KLR **Kul'dur** 39.22 292 *e*P P 03 47 19.7 -3.9
MONP **Monument Peak** 39.53 100 ⇑P P 03 47 28.3 +1.8
baz=39
W13A **Hualapai Mount** 39.56 95 ⇓P P 03 47 26.4 -0.2
baz=39
W14A **Seligman** 39.97 95 ⇑P P 03 47 30.1 +0.1
baz=40
Y12C **Blythe** 40.08 98 ⇓P P 03 47 30.6 -0.4
baz=40
W15A **Williams** 40.49 94 ⇓P P 03 47 34.2 -0.2
baz=40
X14A **Yava** 40.59 95 P P 03 47 35.2 0.0
baz=40,SNR=5.3
Y14A **Wickenburg** 40.88 96 ⇓P P 03 47 37.0 -0.6
baz=41
X15A **Humboldt** 40.98 95 ⇓P P 03 47 38.0 -0.4
baz=41
ULM **Lac du Bonnet** 41.47 65 P P 03 47 41.5 -0.7
comp=Z,6.8nm,0.7s,mb4.4,baz=308,slow=10,SNR=18
116A **Eloy** 42.61 96 ⇓P P 03 47 51.3 -0.5
baz=42
MJAR **Matsushiro Arr** 42.66 272 P P 03 47 49.8 -2.4
comp=Z,1.0nm,0.6s,mb3.7,baz=8.7,slow=15,SNR=4.5
SDCO **Great Sand Dun** 42.96 86 *e*P P 03 47 54.5 -0.1
comp=Z,3.3nm,0.9s,mb4.1
LAZ **Ladron** 44.15 91 *e*P P 03 48 04.1 0.0
ANMO **Albuquerque** 44.20 90⇑*e*P P 03 48 02.6 -1.9
BOD **Bodaibo** 44.23 311 *e*P P 03 48 03.4 -1.1
BOD pmax pmax
comp=Z,3.0nm,1.3s,mb3.9
BNM **Barren Site** 44.63 91 *e*P P 03 48 08.0 0.0
ECSD **EROS,Sioux Fal** 44.63 73 *e*P P 03 48 06.3 -1.6
comp=Z,2.5nm,0.4s,mb4.4
CN2 **Changchun** 45.83 288 *e*P P 03 48 16.5 -0.9
CN2 *e*XP sP 03 48 29.3 +0.3
CN2 *e*S S 03 54 57.5 -1.9
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,16.0s,MS4.5
CN2 LR LR
comp=E,300nm,16.0s,MS4.5
CN2 LR LR
comp=Z,400nm,18.0s,MS4.4
HIA **Hailar** 45.87 298 *e*P P 03 48 17.3 -0.3
MNTX **Cornudas Mount** 47.07 92 *e*P P 03 48 26.9 -0.4
comp=Z,4.2nm,0.9s,mb4.4
CIT **Chita** 47.56 304 *e*P P 03 48 29.7 -1.1
KSRS **Korea Array** 48.33 280 P P 03 48 36.5 -0.5
KSRS pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
KSRS **Korea Array** 48.33 280 P P 03 48 36.5 -0.5
comp=Z,5.9nm,1.0s,mb4.6,baz=59,slow=7.3,SNR=13
DAG **Danmarks Havn** 49.25 10⇓*i*P P 03 48 44.7 +1.2
comp=Z,2.5nm,0.4s,mb4.6
JNU **Nakatsue** 49.43 274 P P 03 48 45.0 -0.4
comp=Z,8.8nm,0.7s,mb4.9,baz=357,slow=22,SNR=7.0
LTX **Lajitas** 49.78 93 *e*P P 03 48 47.5 -0.7
comp=Z,5.8nm,0.7s,mb4.7
LTX **Lajitas** 49.78 93 *e*P P 03 48 47.5 -0.7
LTX pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
HDIL **Hopedale** 50.87 72 *e*P P 03 48 54.6 -1.8
comp=Z,16nm,0.6s,mb5.1
JCT **Junction City** 51.34 89 *e*P P 03 48 58.4 -1.6
comp=Z,11nm,0.6s,mb5.0
JCT **Junction City** 51.34 89 *e*P P 03 48 58.4 -1.5
JCT pmax pmax
comp=Z,11nm,0.6s,mb5.0
TLY **Talaya** 52.66 308 *e*P P 03 49 09.9 +0.5
TLY *e* pP 03 49 18.7 +0.9
TLY *e* 03 56 49.9
TLY pmax pmax
comp=Z,10.0nm,1.3s,mb4.6
SCHQ **Schefferville** 53.30 46 P P 03 49 13.7 -0.5
comp=Z,1.8nm,0.9s,mb4.0,baz=276,slow=10,SNR=2.7
ULN **Ulaanbaatar** 53.42 303 *e*P P 03 49 15.0 -0.2
comp=Z,4.8nm,0.9s,mb4.4
ULN **Ulaanbaatar** 53.42 303 *e*P P 03 49 15.0 -0.1
ULN pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
ZAK **Zakamensk** 53.67 307 *e*P P 03 49 17.4 +0.5
ZAK *e* 03 50 23.3
ZAK pmax pmax
comp=Z,2.0nm,1.7s,mb3.8
ZAK pmax pmax
comp=Z,2.0nm,1.1s,mb4.0
SONM **Songino Array** 53.77 303 P P 03 49 18.3 +0.6
comp=Z,1.0nm,0.6s,mb3.9,baz=46,slow=6.1,SNR=10
WVT **Waverly** 54.67 75 *e*P P 03 49 21.8 -2.7
comp=Z,5.0nm,0.8s,mb4.6
WVT **Waverly** 54.67 75 *e*P P 03 49 21.8 -2.6
WVT pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
HHC **Hu-ho-hao-te** 55.63 294 *e*P P 03 49 31.5 +0.2
HHC AP pP 03 49 36.0 -3.8
HHC XP sP 03 49 38.8 -4.2
HHC PP PP 03 51 36.5 +1.2
HHC S S 03 57 13.5 -1.9
HHC XS sS 03 57 21.5 -7.8
HHC SCS ScS 03 59 16.5 -1.8
HHC SS SS 04 00 58.0 -2.1
HHC AMB AMB
comp=Z,12nm,0.7s,mb5.0
HHC AMB AMB
comp=Z,56nm,5.0s
HHC LR LR
comp=N,199nm,11.9s,MS4.6
HHC LR LR
comp=E,274nm,14.3s,MS4.6
HHC LR LR
comp=Z,138nm,11.9s,MS4.3
NJ2 **Nanjing** 57.46 281 *e*P P 03 49 47.0 +2.6
NJ2 AMB AMB
comp=Z,20nm,0.6s,mb5.3
ARCES **ARCESS Array B** 58.11 356 P P 03 49 48.8 +0.3
comp=Z,3.6nm,0.8s,mb4.4,baz=17,slow=8.1,SNR=5.0
ARCES LR LR 04 14 24.2
comp=Z,53nm,19.2s,MS3.7,baz=231,slow=36
ZALV **Zalesovo Beam** 59.32 320 P P 03 49 56.9 -0.2
ZALV **Zalesovo Beam** 59.32 320 P P 03 49 56.9 -0.2
comp=Z,1.9nm,0.7s,mb4.2,baz=31,slow=6.9,SNR=7.0
ZAL **Zalesovo** 59.34 320 P P 03 49 56.9 -0.3
WES **Weston** 59.62 59 *e*P P 03 49 58.0 -1.3
comp=Z,30nm,1.1s,mb5.2
WES **Weston** 59.62 59 *e*P P 03 49 58.0 -1.3
WES pmax pmax
comp=Z,30nm,1.1s,mb5.2
GTA **Gaotai** 63.05 300 *e*P P 03 50 23.0 +0.4
GTA AP pP 03 50 32.8 +1.7
GTA XP sP 03 50 37.3 +2.9
GTA AMB AMB
comp=Z,6.0nm,0.9s,mb4.7
LZH **Lanzhou** 63.28 295 *e*P P 03 50 24.0 -0.2
LZH AP pP 03 50 28.8 -3.9
LZH XP sP 03 50 31.3 -4.7
LZH *e*PP PP 03 52 44.5 +1.4
LZH AMB AMB
comp=Z,21nm,1.5s,mb5.0
LZH AMB AMB
comp=Z,122nm,6.6s
LZH LR LR
comp=N,336nm,15.4s
LZH LR LR
comp=Z,472nm,18.7s,MS4.7
KURK **Kurchatov** 64.24 321 *e*P P 03 50 30.3 +0.1
comp=Z,2.7nm,0.8s,mb4.3
KURK **Kurchatov** 64.24 321 *e*P P 03 50 30.3 +0.1
KURK pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BRVK **Borovoye** 65.32 327 *e*P P 03 50 38.1 +0.9
comp=Z,4.4nm,0.8s,mb4.5
BRVK **Borovoye** 65.32 327 *e*P P 03 50 38.1 +0.9
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
WMQ **Urumqi** 65.78 311 *e*P P 03 50 40.3 0.0
WMQ AP pP 03 50 44.8 -4.1
WMQ XP sP 03 50 47.3 -4.8
WMQ PP PP 03 53 07.5 +2.8
WMQ AMB AMB
comp=Z,4.0nm,0.4s,mb4.8
WMQ AMB AMB
comp=Z,127nm,4.0s
ARU **Arti** 65.85 335 *e*P P 03 50 41.1 +0.5
comp=Z,4.1nm,0.4s,mb4.8
ARU **Arti** 65.85 335*d i*P P 03 50 40.8 +0.2
ARU PPP 03 54 39.8
ARU S S 03 59 25.3 +0.1
ARU SS SS 04 03 42.0 +3.0
ARU pmax pmax
comp=Z,8.0nm,1.0s,mb4.7
MKAR **Makanchi Array** 65.86 316 *i* P P 03 50 40.5 -0.3
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR **Makanchi Array** 65.86 316 P P 03 50 40.6 -0.2
comp=Z,1.3nm,0.7s,mb4.1,baz=48,slow=6.3,SNR=15
FINES **FINESS Array B** 66.15 354 P P 03 50 43.0 +0.5
comp=Z,3.7nm,0.8s,mb4.4,baz=20,slow=6.1,SNR=10
NB2 **NORSAR Subarra** 66.82 2 P P 03 50 47.0 +0.3
comp=Z,3.1nm,0.9s,mb4.3,baz=357,slow=6.5
NB2 **NORSAR Subarra** 66.82 2 P P 03 50 47.0 +0.3
NB2 pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
NOA **NORSAR Array B** 66.82 2 P P 03 50 47.6 +0.9
comp=Z,2.3nm,0.8s,mb4.2,baz=359,slow=6.5,SNR=9.4
NOA LR LR 04 18 43.1
comp=Z,23nm,18.3s,MS3.4,baz=345,slow=35
CD2 **Chengdu** 67.14 291 *e*P P 03 50 50.3 +1.0
CD2 AP pP 03 51 00.5 +2.6
CD2 XP sP 03 51 05.0 +3.9
CD2 PP PP 03 53 19.8 +2.8
CD2 S S 03 59 40.0 -1.7
CD2 XS sS 03 59 57.0 +1.1
CD2 SS SS 04 04 00.8 +0.4
CD2 AMB AMB
comp=Z,10.0nm,1.2s,mb4.7
CD2 AMB AMB
comp=Z,20nm,6.8s
GYA **Guiyang** 68.79 286 P P 03 51 01.3 +1.6
GYA AP pP 03 51 11.5 +3.2
GYA XP sP 03 51 15.5 +4.0
GYA PCP PcP 03 51 25.5 +1.3
GYA PP PP 03 53 34.5 +3.1
GYA SCP 03 55 25.0
GYA S S 03 59 59.5 -2.0
GYA SKS 04 00 52.8
GYA SCS ScS 04 00 54.0 -4.0
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
GYA AMB AMB
comp=Z,80nm,4.5s
GYA LR LR
comp=N,480nm,19.8s,MS4.8
GYA LR LR
comp=E,370nm,18.8s,MS4.8
GYA LR LR
comp=Z,310nm,19.4s,MS4.5
PPT **Papeete** 70.92 165 LR LR 04 16 10.3
comp=Z,182nm,20.5s,MS4.3,baz=350,slow=31
OBN **Obninsk** 71.39 347⇑*e*P P 03 51 14.7 -0.5
OBN pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
ESK **Eskdalemuir** 71.50 11 *e*P P 03 51 16.6 +0.8
comp=Z,9.2nm,0.9s,mb4.7
ESK **Eskdalemuir** 71.50 11 *e*P P 03 51 16.6 +0.8
ESK pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
KMI **Kunming** 72.10 288 P P 03 51 20.0 +0.1
KMI AP pP 03 51 29.8 +1.2
KMI XP sP 03 51 35.3 +3.5
KMI PP PP 03 54 03.0 +3.1
KMI S S 04 00 37.8 -2.3
KMI SS SS 04 05 16.5 -0.4
KMI AMB AMB
comp=Z,12nm,0.5s,mb5.1
KMI AMB AMB
comp=Z,75nm,4.6s
KMI LR LR
comp=N,410nm,13.7s,MS5.0
KMI LR LR
comp=E,495nm,18.3s,MS5.0
KMI LR LR
comp=Z,583nm,15.7s,MS5.0
EKS2 **Erkin-Say** 72.74 319 *e*P P 03 51 23.8 +0.4
UCH **Uchtor** 72.81 318 *e*P P 03 51 25.2 +1.4
AML **Almayashu** 73.22 319 *e*P P 03 51 27.3 +0.9
AKASG **Malin Array Be** 76.58 351 *i* P P 03 51 45.5 0.0
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG **Malin Array Be** 76.58 351 P P 03 51 45.2 -0.3
comp=Z,2.4nm,0.5s,mb4.4,baz=9.9,slow=5.6,SNR=14
CLL **Collm** 76.60 2 *e*P P 03 51 46.0 +0.3
CLL *e**PP pP 03 51 55.0 +0.6
CLL pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
CLL **Collm** 76.60 2 *e*P P 03 51 46.0 +0.3
comp=Z,4.0nm,1.1s,mb4.3
CLL *e*pP pP 03 51 55.0 +0.6
MEM **Membach** 77.01 6 P P 03 51 49.8 +1.8
BRG **Berggiesshubel** 77.05 1 *e*P P 03 51 49.4 +1.2
BRG *e* pP 03 51 57.2 +0.3
BRG pmax pmax
comp=Z,3.0nm,1.1s,mb4.1
BRG **Berggiesshubel** 77.05 1 *e*P P 03 51 49.4 +1.2
comp=Z,4.3nm,1.1s,mb4.3
BRG *e* pP 03 51 57.2 +0.2
comp=Z,5.3nm,1.0s
BCLA **Clavier** 77.15 7 P P 03 51 49.6 +0.8
PVCC **Panska Ves** 77.40 1 *e*P P 03 51 50.9 +0.7
UPC **Upice** 77.42 360 *e*P P 03 51 51.4 +1.1
UPC *e*pP pP 03 51 59.8 +0.8
DPC **Dobruska-Polom** 77.58 359 *e*P P 03 51 52.5 +1.3
DPC *e*pP pP 03 52 00.3 +0.4
PRU **Pruhonice** 77.94 1 *e*P P 03 52 00.8 +7.6
PRU **Pruhonice** 77.94 1 *e*pP pP 03 52 00.8 -1.1
WLF **Walferdange** 77.96 6 *e*P P 03 51 54.9 +1.5
comp=Z,7.9nm,0.9s,mb4.6
WLF **Walferdange** 77.96 6 *e*P P 03 51 54.9 +1.6
WLF pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
OKC **Ostrava-Krasne** 78.07 358 *e*P P 03 51 55.1 +1.2
OKC *e*pP pP 03 52 03.4 +0.7
KWP **Kalwaria** 78.12 355 *e*P P 03 51 55.1 +0.9
KWP **Kalwaria** 78.12 355⇓*i*P P 03 51 55.6 +1.4
MORC **Moravsky Berou** 78.14 359 *e*P P 03 51 55.1 +0.8
comp=Z,4.2nm,0.8s,mb4.4
MORC **Moravsky Berou** 78.14 359 *e*P P 03 51 55.1 +0.8
MORC pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
GRA1 **Grafenberg Arr** 78.18 3 *e*P P 03 51 55.8 +1.3
comp=Z,7.0nm,1.0s,mb4.5
GRF **Grafenberg Arr** 78.18 3 *e*P P 03 51 55.8 +1.3
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GRF **Grafenberg Arr** 78.18 3 *e*P P 03 51 55.8 +1.3
GRF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
GRF **Grafenberg Arr** 78.18 3 *e*P P 03 51 55.8 +1.3
comp=Z,7.0nm,1.0s,mb4.5
STHS **Stebnicka Huta** 78.40 356 *i* P P 03 51 57.9 +2.2
comp=Z,11nm,0.8s,mb4.8
STHS *e* pP 03 52 05.7 +1.2
STHS **Stebnicka Huta** 78.40 356 *i* P P 03 51 57.9 +2.2
STHS *e* pP 03 52 05.7 +1.2
STHS pmax pmax
comp=Z,11nm,0.8s,mb4.8
GRR **Gorron** 78.59 11 *e*P P 03 51 56.1 -0.7
comp=Z,22nm,1.2s,mb4.7
GRR **Gorron** 78.59 11 *e*P P 03 51 56.1 -0.7
comp=Z,11nm,1.2s,mb4.7
GRR **Gorron** 78.59 11 *e*P P 03 51 56.1 -0.7
GRR pmax pmax
comp=Z,11nm,1.2s,mb4.7
VRAC **Vranov** 78.62 359 LR LR 04 27 07.1
comp=Z,19nm,21.4s,MS3.4,baz=92,slow=36
VRAC **Vranov** 78.62 359⇑*i*P P 03 51 58.3 +1.3
KHC **Kasperske Hory** 78.79 1 *e*P P 03 51 59.3 +1.4
KHC *e*pP pP 03 52 07.4 +0.7
KOLS **Kolonicke sedl** 78.83 355 *e*P P 03 51 59.3 +1.1
CRVS **Cervenica-Dubn** 78.90 356 *e*P P 03 51 59.0 +0.5
CRVS **Cervenica-Dubn** 78.90 356 *e*P P 03 51 58.9 +0.4
GEC2 **GERESS Array S** 79.08 1 *e*P P 03 52 00.5 +1.0
GERES **GERESS Array B** 79.08 1 P P 03 52 00.6 +1.1
comp=Z,2.2nm,0.9s,mb4.1,baz=0.0,slow=4.0,SNR=11
CDF **Champ du Feu** 79.28 6 *e*P P 03 51 59.4 -1.2
KECS **Kecovo** 79.36 357 *i* P P 03 52 02.3 +1.3
comp=Z,4.6nm,1.0s,mb4.4
KECS *e* pP 03 52 10.6 +0.8
KECS **Kecovo** 79.36 357 *i* P P 03 52 02.3 +1.3
KECS *e* pP 03 52 10.6 +0.8
KECS pmax pmax
comp=Z,5.0nm,1.0s,mb4.4
VYHS **Vyhne** 79.40 358 *i* P P 03 52 02.5 +1.2
comp=Z,4.4nm,1.0s,mb4.3
VYHS *e* pP 03 52 10.8 +0.8
VYHS **Vyhne** 79.40 358 *i* P P 03 52 02.5 +1.2
VYHS *e* pP 03 52 10.8 +0.8
VYHS pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
MODS **Modra-Piesok** 79.55 359 *e*P P 03 52 04.0 +1.9
MODS *e*pP pP 03 52 12.1 +1.3
TRPA **Tarpa** 79.62 355⇑*i*P P 03 52 04.2 +1.7
ZST **Bratislava** 79.73 359 *e*P P 03 52 04.8 +1.7
comp=Z,5.3nm,0.9s,mb4.5
ZST *e* pP 03 52 12.7 +0.9
ZST **Bratislava** 79.73 359 *e*P P 03 52 04.8 +1.7
ZST *e* pP 03 52 12.7 +0.9
ZST pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
HINF **Hinteralfeld** 79.85 6 *e*P P 03 52 01.4 -2.3
PSZ **Piszkesteto** 79.95 357 *e*P P 03 52 05.7 +1.4
comp=Z,4.3nm,0.8s,mb4.4
PSZ **Piszkesteto** 79.95 357 *e*P P 03 52 05.7 +1.5
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
PSZ **Piszkesteto** 79.95 357⇑*i*P P 03 52 06.2 +2.0
CONA **Conrad Observa** 80.01 360⇓*i*PcP PcP 03 52 06.2 -5.7
comp=Z,6.0nm,1.0s
LOR **Lormes** 80.17 8 *e*P P 03 52 04.8 -0.7
SSF **Saint Saulge** 80.35 8 *e*P P 03 52 05.9 -0.5
comp=Z,13nm,1.0s,mb4.5
SSF **Saint Saulge** 80.35 8 *e*P P 03 52 05.9 -0.5
comp=Z,6.6nm,1.0s,mb4.5
SSF **Saint Saulge** 80.35 8 *e*P P 03 52 05.9 -0.5
SSF pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
MFF **Saint Martin d** 80.43 11 *e*P P 03 52 06.3 -0.6
comp=Z,17nm,0.9s,mb4.7
MFF **Saint Martin d** 80.43 11 *e*P P 03 52 06.3 -0.6
comp=Z,8.6nm,0.9s,mb4.7
MFF **Saint Martin d** 80.43 11 *e*P P 03 52 06.3 -0.6
MFF pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
AVF **Avril sur Loir** 80.60 8 *e*P P 03 52 07.1 -0.7
comp=Z,8.7nm,0.9s,mb4.4
AVF **Avril sur Loir** 80.60 8 *e*P P 03 52 07.1 -0.7
comp=Z,4.3nm,0.9s,mb4.4
AVF **Avril sur Loir** 80.60 8 *e*P P 03 52 07.1 -0.7
AVF pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
WTTA **Wattenberg** 80.62 3⇑*i*P P 03 52 09.6 +1.8
comp=Z,6.0nm,0.6s,mb4.7
WTTA **Wattenberg** 80.62 3⇑*i*PcP PcP 03 52 09.6 -5.0
comp=Z,6.0nm,0.6s
WTTA **Wattenberg** 80.62 3⇑*i*P P 03 52 09.6 +1.7
WTTA pmax pmax
comp=Z,6.0nm,0.6s,mb4.7
SMF **Signal de Mont** 80.79 8 *e*P P 03 52 08.1 -0.7
comp=Z,14nm,1.1s,mb4.5
SMF **Signal de Mont** 80.79 8 *e*P P 03 52 08.1 -0.7
comp=Z,6.8nm,1.1s,mb4.5
SMF **Signal de Mont** 80.79 8 *e*P P 03 52 08.1 -0.7
SMF pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
KBA **Koelnbreinsper** 80.84 1⇑*i*P P 03 52 10.4 +1.4
comp=Z,10nm,0.8s,mb4.8
KBA **Koelnbreinsper** 80.84 1⇑*i*PcP PcP 03 52 10.4 -5.2
comp=Z,10nm,0.8s
KBA **Koelnbreinsper** 80.84 1⇑*i*P P 03 52 10.4 +1.3
KBA pmax pmax
comp=Z,10.0nm,0.8s,mb4.8
DRGR 80.95 355⇑*i*P P 03 52 10.4 +0.8
TCF **Toulx Ste Croi** 80.99 9 *e*P P 03 52 09.0 -0.9
comp=Z,4.7nm,0.7s,mb4.2
TCF **Toulx Ste Croi** 80.99 9 *e*P P 03 52 09.0 -0.9
comp=Z,2.3nm,0.7s,mb4.2
TCF **Toulx Ste Croi** 80.99 9 *e*P P 03 52 09.0 -0.9
TCF pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
KIV **Kislovodsk** 81.15 340 *e*P P 03 52 11.7 +0.9
comp=Z,16nm,0.9s,mb4.9
KIV **Kislovodsk** 81.15 340⇑*e*P P 03 52 11.2 +0.4
KIV pmax pmax
comp=Z,17nm,1.2s,mb4.8
MLR **Muntele Rosu** 82.03 353⇓*i*P P 03 52 18.1 +2.7
LPG **La Plagne** 82.15 6 *e*P P 03 52 16.8 +0.8
comp=Z,17nm,1.1s,mb4.6
LPG **La Plagne** 82.15 6 *e*P P 03 52 16.8 +0.8
comp=Z,8.5nm,1.1s,mb4.6
LPG **La Plagne** 82.15 6 *e*P P 03 52 16.8 +0.8
LPG pmax pmax
comp=Z,9.0nm,1.1s,mb4.6
BZS **Buzias** 82.18 356⇑*i*P P 03 52 16.8 +0.7
SMRF **Simiane la Rot** 83.58 7 *e*P P 03 52 22.7 -0.8
comp=Z,30nm,1.2s,mb5.0
SMRF **Simiane la Rot** 83.58 7 *e*P P 03 52 22.7 -0.8

comp=Z,30nm,1.2s,mb5.3
ESDC Sonseca Array 86.71 15 P **P** **03 52 38.9 -0.4**
comp=Z,1.5nm,0.7s,mb4.4,baz=352,slow=6.1,SNR=6.0
ESDC LR LR 04 33 54.2
comp=Z,26nm,20.4s,MS3.6,baz=270,slow=37
OTAV Otavalo 87.41 93 *e*P **P** **03 52 45.1 +2.1**
comp=Z,1.4nm,0.5s,mb4.5
WRA Warramunga Arr 89.43 235 *i* P **P** **03 52 51.7 -0.6**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 89.43 235 P **P** **03 52 49.2 -3.1**
comp=Z,0.9nm,0.8s,mb4.2,baz=34,slow=5.9,SNR=5.5
ASAR Alice Springs 92.78 234 P **P** **03 53 05.5 -2.2**
comp=Z,1.5nm,1.0s,mb4.4,baz=30,slow=5.0,SNR=6.1

*TEH **28** 03:57:44.3, 32.93N×46.36E, h11km, ML4.0*
*IDC **28** 03:58:12.5±0.8, 33.02N×46.43E, h0km, mb3.9/15, mb1 4.0/18, mb1mx3.9/24, mbtmp3.9/18, ML3.8/3, Error ellipse: s-maj=21.6km s-min=15.0km az=151.0*
*CSEM **28** 03:58:12.5±0.1, 32.89N×46.34E, h15km, mb4.2/13, Error ellipse: s-maj=1.7km s-min=1.3km az=176.0*
*ISCJB **28** 03:58:12.2±0.3, 32.87N±003×46.40E±003, h10km, mb4.0/26, Error ellipse: s-maj=4.0km s-min=3.7km az=25.1*
*THR **28** 03:58:12.6±1.8, 32.95N×46.30E, h14km±18km, ML3.9*
*MOS **28** 03:58:15.4±1.0, 32.97N×46.40E, h33km, mb4.3/13, Error ellipse: s-maj=11.5km s-min=8.5km az=120.7*
*NEIC **28** 03:58:16.2, 33.03N×46.50E, h14km, mb4.2/13, ML3.9(THR), After THR.*
*SGS **28** 03:58:18.4, 32.88N×46.52E, h18km*
*NAO **28** 03:58:21.9, 33.53N×46.19E, h33km, mb3.8*

ISC 28 03:58:15.8±1.0, 32.96N±003×46.38E±003, h18km±6km, n126, σ1$19/136, mb4.0/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGHG	**Ghaleghazi**	**1.37**	**7**	*e*Pg	**Pg**	**03 58 40.1**	**-2.1**
IGHG				*e*Sg	**Sg**	**03 58 59.9**	**-0.3**
IGHG				*e*		03 59 03.8	
comp=Z,61μm,0.3s							
IGHG	**Ghaleghazi**	**1.37**	**7**	*e*Pg	**Pg**	**03 58 40.1**	**-2.1**
IGHG				*e*Sg	**Sg**	**03 58 59.9**	**-0.3**
IKOM	**Komasi**	**1.54**	**38**	*e*Pn	**Pn**	**03 58 42.7**	**+0.4**
IKOM				*e*Lg		03 59 05.2	
IKOM				*e*		03 59 06.6	
comp=Z,92μm,0.2s							
IVIS	**Veys**	**1.61**	**14**	*e*Pn	**Pn**	**03 58 44.3**	**+1.0**
IVIS				*e*Sn	**Sn**	**03 59 05.6**	**+2.0**
IVIS				*e*		03 59 10.6	
comp=Z,30μm,0.2s							
IVIS	**Veys**	**1.61**	**14**	*e*Pn	**Pn**	**03 58 44.3**	**+1.0**
IVIS				*e*Sn	**Sn**	**03 59 05.6**	**+2.0**
BHD	**Baghdad**	**1.71**	**281**	*ex*	x	03 58 46.0	
BHD				*ex*	x	03 59 09.0	
IDHR	**Dehrash**	**1.73**	**0**	*e*Pn	**Pn**	**03 58 46.4**	**+1.4**
ILIN	**Laeen**	**2.01**	**14**	*e*Pn	**Pn**	**03 58 50.1**	**+1.3**
ILIN				*e*Sn	**Sn**	**03 59 15.8**	**+2.3**
ILIN				*e*		03 59 25.5	
comp=Z,13μm,0.2s							
ILIN	**Laeen**	**2.01**	**14**	*e*Pn	**Pn**	**03 58 50.1**	**+1.3**
ILIN				*e*Sn	**Sn**	**03 59 15.8**	**+2.3**
SHGR	**Shooshtar-Gavs**	**2.21**	**112**	Pn	**Pn**	**03 58 53.0**	**+1.4**
SHGR				Sg	**Sg**	**03 59 23.0**	**-4.0**
SHGR	**Shooshtar-Gavs**	**2.21**	**112**	*e*Pg	**Pg**	**03 58 53.5**	**-4.8**
SHGR				*e*Sg	**Sg**	**03 59 23.7**	**-3.3**
SHGR				AML	AML	03 59 34.5	
comp=N,667nm,0.6s							
SHGR				AML	AML	03 59 38.7	
comp=E,535nm,0.4s							
SHGR	**Shooshtar-Gavs**	**2.21**	**112**	*e*Pg	**Pg**	**03 58 53.5**	**-4.8**
SNR=90							
SHGR				*e*Sg	**Sg**	**03 59 23.7**	**-3.3**
SNR=90							
SNGE	**Sanandaj**	**2.27**	**20**	*e*Pg	**Pg**	**03 58 53.9**	**-5.5**
SNGE	**Sanandaj**	**2.27**	**20**	Pn	**Pn**	**03 58 53.0**	**+0.6**
SNGE	**Sanandaj**	**2.27**	**20**	*e*Pg	**Pg**	**03 58 53.9**	**-5.5**
SNR=90							
MIB	**Mutribah**	**3.25**	**165**	*e*P	**Pn**	**03 59 08.4**	**+2.4**
ASAO	**Ashtian**	**3.42**	**61**	*e*Pn	**Pn**	**03 59 09.8**	**+1.5**
ASAO				AML	AML	03 59 52.9	
comp=N,274nm,0.6s							
ASAO				AML	AML	03 59 53.8	
comp=E,359nm,0.6s							
ASAO	**Ashtian**	**3.42**	**61**	Pn	**Pn**	**03 59 09.0**	**+0.7**
UMR	**Umm Al-Rimmam**	**3.59**	**161**	*e*P	**Pn**	**03 59 12.2**	**+1.7**
UMR				AML	AML	03 59 56.0	
comp=Z,83nm,0.3s							
NAY	**Al-Naaiem**	**3.77**	**168**	*e*P	**Pn**	**03 59 15.3**	**+2.2**
NAY				AML	AML	04 00 03.1	
comp=Z,21nm,0.4s							
KBD	**Kabd**	**3.94**	**163**	*e*P	**Pn**	**03 59 17.4**	**+2.0**
KBD				AML	AML	04 00 05.7	
comp=Z,122nm,0.3s							
RDF	**Al-Radifah**	**4.15**	**166**	*e*P	**Pn**	**03 59 20.4**	**+2.1**
RDF				AML	AML	04 00 11.5	
comp=Z,61nm,0.3s							
MSL	**Mosul**	**4.29**	**322**	*ex*	x	03 59 38.5	
MSL				*ex*	x	04 00 28.0	
IKLH	**Kalahroud**	**4.38**	**84**	*e*Pn	**Pn**	**03 59 23.0**	**+1.7**
IKLH				*e*		03 59 27.8	
comp=Z,1μm,0.2s							
IAZR	**Azarshahr**	**4.72**	**356**	*e*Pn	**Pn**	**03 59 27.0**	**+1.0**
IAZR				*e*		03 59 51.4	
comp=Z,2μm,0.2s							
THKV	**Tehran--Karaj**	**4.74**	**50**	*e*Pn	**Pn**	**03 59 27.1**	**+0.7**
THKV				AML	AML	04 00 25.1	
comp=N,86nm,0.6s							
THKV	**Tehran--Karaj**	**4.74**	**50**	*e*Pn	**Pn**	**03 59 27.0**	**+0.6**
SNR=52							
IGAR	**Garneh**	**4.96**	**97**	*e*Pn	**Pn**	**03 59 27.4**	**-2.0**
IGAR				*e*Sn	**Sn**	**04 00 21.1**	**-5.2**
IGAR				*e*		04 00 28.3	
comp=Z,2μm,0.1s							
IGAR	**Garneh**	**4.96**	**97**	*e*Pn	**Pn**	**03 59 27.4**	**-2.0**
IGAR				*e*Sn	**Sn**	**04 00 21.1**	**-5.2**
IZEF	**Zefreh**	**5.00**	**89**	*e*Pn	**Pn**	**03 59 29.1**	**-0.9**
IZEF				*e*		03 59 52.3	
comp=Z,419nm,0.2s							
DAMV	**Damavand**	**5.34**	**59**	Pn	**Pn**	**03 59 36.0**	**+1.4**
DAMV	**Damavand**	**5.34**	**59**	*e*Pn	**Pn**	**03 59 34.9**	**+0.4**
DAMV				AML	AML	04 00 36.9	
comp=E,68nm,0.6s							
DAMV				AML	AML	04 00 37.4	
comp=N,65nm,0.6s							
ISHB	**Shabestar**	**5.34**	**354**	*e*Pn	**Pn**	**03 59 35.7**	**+1.0**
ISHB				*e*		03 59 59.7	
comp=Z,706nm,0.2s							
IDMV	**Damavand**	**5.36**	**59**	*e*Pn	**Pn**	**03 59 35.2**	**+0.4**
IDMV				*e*Sn	**Sn**	**04 00 34.7**	**-1.4**
IDMV				*e*		04 00 38.8	
comp=Z,1μm,0.3s							
IDMV	**Damavand**	**5.36**	**59**	*e*Pn	**Pn**	**03 59 35.2**	**+0.4**
IDMV				*e*Sn	**Sn**	**04 00 34.7**	**-1.4**
ASYS		**5.72**	**198**	P	**Pn**	**03 59 40.4**	**+0.6**
IMRD	**Marand**	**5.76**	**355**	*e*Pn	**Pn**	**03 59 42.3**	**+1.9**
IMRD				*e*		04 00 10.9	
comp=Z,547nm,0.2s							
IPRN	**Paran-Amol**	**5.84**	**54**	*e*Pn	**Pn**	**03 59 42.2**	**+0.8**
IPRN				*e*		04 00 13.3	
comp=Z,613nm,0.3s							
IFIR	**Firoozkooh**	**5.91**	**61**	*e*Pn	**Pn**	**03 59 42.6**	**+0.1**
ILAS	**Lasjerd**	**5.96**	**64**	*e*Pn	**Pn**	**03 59 43.4**	**+0.2**
ILAS				*e*		04 01 23.2	
comp=Z,320nm,0.3s							
ISHM	**Shahmirzad**	**6.38**	**62**	*e*Pn	**Pn**	**03 59 49.1**	**+0.2**
ISHM				*e*		04 00 19.8	
comp=Z,494nm,0.2s							
IANJ	**Anjiloo**	**6.72**	**66**	*e*Pn	**Pn**	**03 59 53.3**	**-0.3**
IANJ				*e*		04 01 05.0	
comp=Z,223nm,0.4s							
IGLO	**Galoogah**	**6.75**	**58**	*e*Pn	**Pn**	**04 00 00.1**	**+6.2**
IGLO				*e*		04 00 05.6	
comp=Z,318nm,0.1s							
ICHK	**Chekchek**	**6.81**	**94**	*e*Pn	**Pn**	**03 59 54.3**	**-0.5**
ICHK				*e*		04 01 15.1	
comp=Z,246nm,0.2s							
BQGSS		**7.54**	**159**	P	**Pn**	**04 00 04.6**	**-0.2**
IBAF	**Bafgh**	**7.90**	**98**	*e*Pn	**Pn**	**04 00 10.1**	**+0.3**
ASF	**Jabal al Asfar**	**8.04**	**267**	P	**Pn**	**04 00 11.5**	**-0.2**
ASF						04 01 40.6	
ASF	**Jabal al Asfar**	**8.04**	**267**	Pn	**Pn**	**04 00 11.5**	**-0.3**
comp=Z,0.5nm,0.3s,baz=97,slow=16,SNR=4.6							
ASF				Sn	**Sn**	**04 01 40.6**	**-1.7**
comp=Z,1.0nm,0.3s,baz=72,slow=19,SNR=3.9							
ASF				Lg		04 02 31.2	
comp=Z,0.6nm,0.3s,baz=143,slow=20,SNR=3.9							
MALT	**Malatya**	**8.39**	**312**	*e*Pn	**Pn**	**04 00 17.7**	**+1.2**
comp=Z,3.9nm,0.6s							
MALT	**Malatya**	**8.39**	**312**	*e*P	**Pn**	**04 00 17.7**	**+1.2**
MALT				pmax	pmax		
comp=Z,4.0nm,0.6s							
MALT	**Malatya**	**8.39**	**312**	*e*P	**Pn**	**04 00 17.7**	**+1.2**
comp=Z,4.0nm,0.6s							
MMAI	**Mount Meron Ar**	**9.22**	**273**	Lg		04 03 14.3	
comp=Z,1.7nm,0.3s,baz=92,slow=35,SNR=4.0							
BTHS		**9.71**	**155**	P	**Pn**	**04 00 34.4**	**-0.3**
BTHS		**9.71**	**155**	P	**Pn**	**04 00 34.3**	**-0.3**
EIL	**Elat**	**10.31**	**254**	Lg		04 03 53.7	
comp=Z,1.0nm,0.3s,baz=12,slow=7.9,SNR=5.8							
HRDDS		**10.36**	**164**	S	**Sn**	**04 02 32.5**	**-6.8**
HRDDS		**10.36**	**164**	P	**Pn**	**04 00 43.0**	**-0.6**
IDI	**Anoyia**	**17.94**	**283**	P	**Pn**	**04 02 23.1**	**-1.2**
comp=Z,0.3nm,0.3s,baz=18,slow=12,SNR=2.4							
AKTK	**Aktyubinsk**	**19.46**	**23**	P	**Pn**	**04 02 40.1**	**-2.4**
AKTK	**Aktyubinsk**	**19.46**	**23**	P	**Pn**	**04 02 40.2**	**-2.4**
AKTO	**Aktyubinsk**	**19.46**	**23**	P	**Pn**	**04 02 40.1**	**-2.4**
comp=Z,0.5nm,0.3s,baz=196,slow=12,SNR=9.3							
MLR	**Muntele Rosu**	**20.11**	**314**	P	**P**	**04 02 50.6**	**+2.1**
comp=Z,1.1nm,0.5s,baz=102,slow=14							
AKASG	**Malin Array Be**	**21.76**	**330**	P	**P**	**04 03 04.7**	**-1.6**
comp=Z,1.1nm,0.5s,mb3.6,baz=130,slow=11,SNR=4.0							
PSZ	**Piszkesteto**	**24.93**	**315**	*e*P	**P**	**04 03 38.9**	**+1.1**
comp=Z,2.2nm,0.7s,mb3.8							
PSZ	**Piszkesteto**	**24.93**	**315**	*e*P	**P**	**04 03 38.9**	**+1.1**
PSZ				pmax	pmax		
comp=Z,2.0nm,0.7s,mb3.8							
PSZ	**Piszkesteto**	**24.93**	**315**	*e*P	**P**	**04 03 38.9**	**+1.1**
comp=Z,2.0nm,0.7s,mb3.8							
BRVK	**Borovoye**	**26.41**	**33**	*e*P	**P**	**04 03 50.9**	**-0.2**
comp=Z,2.6nm,0.6s,mb3.9							
BRVK	**Borovoye**	**26.41**	**33**	*e*P	**P**	**04 03 50.9**	**-0.2**
BRVK				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.0							
BRVK	**Borovoye**	**26.41**	**33**	*e*P	**P**	**04 03 50.9**	**-0.2**
comp=Z,3.0nm,0.6s,mb4.0							
MORC	**Moravsky Berou**	**27.16**	**317**	*e*P	**P**	**04 03 58.9**	**+0.9**
comp=Z,2.1nm,0.8s,mb3.7							
MORC	**Moravsky Berou**	**27.16**	**317**	*e*P	**P**	**04 03 58.9**	**+0.9**
MORC				pmax	pmax		
comp=Z,2.0nm,0.8s,mb3.7							
MORC	**Moravsky Berou**	**27.16**	**317**	*e*P	**P**	**04 03 58.9**	**+0.9**
comp=Z,2.0nm,0.8s,mb3.7							
KURK	**Kurchatov**	**29.54**	**43**	*e*P	**P**	**04 04 19.4**	**+0.3**
comp=Z,1.2nm,0.6s,mb3.8							
KURK	**Kurchatov**	**29.54**	**43**	*e*P	**P**	**04 04 19.4**	**+0.3**
KURK				pmax	pmax		
comp=Z,1.0nm,0.6s,mb3.7							
KURK	**Kurchatov**	**29.54**	**43**	*e*P	**P**	**04 04 19.4**	**+0.3**
comp=Z,1.0nm,0.6s,mb3.7							
MKAR	**Makanchi Array**	**30.54**	**52**	P	**P**	**04 04 28.0**	**0.0**
MKAR	**Makanchi Array**	**30.54**	**52**	P	**P**	**04 04 28.0**	**0.0**
comp=Z,1.8nm,0.6s,mb4.0,baz=249,slow=7.0,SNR=11							
FINES	**FINESS Array B**	**31.38**	**341**	P	**P**	**04 04 33.5**	**-1.7**
comp=Z,0.9nm,0.8s,mb3.7,baz=141,slow=9.0,SNR=3.4							
MBDF	**Montbardon**	**32.70**	**303**	*e*P	**P**	**04 04 46.8**	**-0.3**
comp=Z,8.3nm,0.8s,mb4.4							
MBDF	**Montbardon**	**32.70**	**303**	*e*P	**P**	**04 04 46.8**	**-0.3**
MBDF				pmax	pmax		
comp=Z,4.0nm,0.8s,mb4.4							
MBDF	**Montbardon**	**32.70**	**303**	*e*P	**P**	**04 04 46.8**	**-0.3**
comp=Z,4.0nm,0.8s,mb4.4							
LPG	**La Plagne**	**32.82**	**304**	*e*P	**P**	**04 04 48.2**	**+0.1**
LPL	**La Plagne**	**32.84**	**304**	*e*P	**P**	**04 04 48.3**	**0.0**
comp=Z,12nm,0.9s,mb4.5							
LPL	**La Plagne**	**32.84**	**304**	*e*P	**P**	**04 04 48.3**	**0.0**
LPL				pmax	pmax		
comp=Z,6.0nm,0.9s,mb4.5							
LPL	**La Plagne**	**32.84**	**304**	*e*P	**P**	**04 04 48.3**	**0.0**
comp=Z,6.0nm,0.9s,mb4.5							
CABF	**La Chapelle**	**33.45**	**306**	*e*P	**P**	**04 04 53.7**	**+0.1**
comp=Z,4.6nm,0.5s,mb4.3							
CABF	**La Chapelle**	**33.45**	**306**	*e*P	**P**	**04 04 53.7**	**+0.1**
CABF				pmax	pmax		
comp=Z,2.0nm,0.5s,mb4.3							
CABF	**La Chapelle**	**33.45**	**306**	*e*P	**P**	**04 04 53.7**	**+0.1**
comp=Z,2.0nm,0.5s,mb4.3							
ZAL	**Zalesovo**	**34.29**	**41**	P	**P**	**04 04 58.9**	**-1.9**
ZALV	**Zalesovo Beam**	**34.31**	**41**	P	**P**	**04 04 58.9**	**-2.0**
comp=Z,1.1nm,0.4s,mb4.1,baz=262,slow=8.8,SNR=3.6							
SMF	**Signal de Mont**	**34.99**	**306**	*e*P	**P**	**04 05 06.4**	**-0.6**
comp=Z,1.1nm,0.8s,mb4.5							
SMF	**Signal de Mont**	**34.99**	**306**	*e*P	**P**	**04 05 06.4**	**-0.6**
SMF				pmax	pmax		
comp=Z,5.0nm,0.8s,mb4.5							
SMF	**Signal de Mont**	**34.99**	**306**	*e*P	**P**	**04 05 06.4**	**-0.6**
comp=Z,5.0nm,0.8s,mb4.5							
BGF	**Bois d'Agland**	**35.66**	**305**	*e*P	**P**	**04 05 12.1**	**-0.6**
comp=Z,5.8nm,0.6s,mb4.4							
BGF	**Bois d'Agland**	**35.66**	**305**	*e*P	**P**	**04 05 12.1**	**-0.6**
BGF				pmax	pmax		
comp=Z,3.0nm,0.6s,mb4.4							
BGF	**Bois d'Agland**	**35.66**	**305**	*e*P	**P**	**04 05 12.1**	**-0.6**
comp=Z,3.0nm,0.6s,mb4.4							
NB2	**NORSAR Subarra**	**36.14**	**332**	P	**P**	**04 05 15.6**	**-1.1**
comp=Z,1.3nm,0.8s,mb3.9,baz=125,slow=9.3							
NB2	**NORSAR Subarra**	**36.14**	**332**	P	**P**	**04 05 15.6**	**-1.1**
NB2				pmax	pmax		
comp=Z,1.0nm,0.8s,mb3.8							
NOA	**NORSAR Array B**	**36.14**	**332**	P	**P**	**04 05 15.3**	**-1.3**
NOA	**NORSAR Array B**	**36.14**	**332**	P	**P**	**04 05 15.3**	**-1.3**
comp=Z,0.6nm,0.7s,mb3.7,baz=125,slow=8.6,SNR=5.3							
ARCES	**ARCESS Array B**	**38.45**	**348**	P	**P**	**04 05 35.6**	**-0.5**
comp=Z,2.8nm,0.6s,mb4.1,baz=166,slow=8.8,SNR=35							
SGMF	**Saint Gilles**	**39.48**	**308**	*e*P	**P**	**04 05 44.0**	**-1.0**
ESDC	**Sonseca Array**	**40.68**	**294**	P	**P**	**04 05 55.3**	**+0.2**
comp=Z,0.6nm,0.5s,mb3.5,baz=78,slow=8.9,SNR=4.7							
TOA0	**Torodi Ar. Sit**	**45.20**	**255**	*e*P	**P**	**04 06 32.6**	**+0.7**
TOA0	**Torodi Ar. Sit**	**45.20**	**255**	*e*P	**P**	**04 06 32.7**	**+0.7**
TORD	**Torodi Ar. Bea**	**45.20**	**255**	P	**P**	**04 06 32.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**45.20**	**255**	P	**P**	**04 06 32.2**	**+0.2**
comp=Z,0.3nm,0.4s,mb3.5,baz=54,slow=7.3,SNR=3.5							
SONM	**Songino Array**	**46.90**	**53**	P	**P**	**04 06 44.7**	**-0.3**
comp=Z,0.5nm,0.5s,mb3.7,baz=283,slow=8.4,SNR=5.8							
ULN	**Ulaanbaatar**	**47.34**	**53**	*e*P	**P**	**04 06 48.3**	**-0.2**
comp=Z,1.6nm,0.6s,mb4.1							
ULN	**Ulaanbaatar**	**47.34**	**53**	*e*P	**P**	**04 06 48.3**	**-0.1**
ULN				pmax	pmax		
comp=Z,2.0nm,0.6s,mb4.2							
ULN	**Ulaanbaatar**	**47.34**	**53**	*e*P	**P**	**04 06 48.3**	**-0.1**
comp=Z,2.0nm,0.6s,mb4.2							
CHTO	**Chiang Mai**	**48.88**	**93**	*e*P	**P**	**04 06 59.3**	**-1.4**
comp=Z,2.6nm,0.7s,mb4.4							
CHTO	**Chiang Mai**	**48.88**	**93**	*e*P	**P**	**04 06 59.3**	**-1.4**
CHTO				pmax	pmax		
comp=Z,3.0nm,0.7s,mb4.4							
CHTO	**Chiang Mai**	**48.88**	**93**	*e*P	**P**	**04 06 59.3**	**-1.4**
comp=Z,3.0nm,0.7s,mb4.4							
BOD	**Bodaibo**	**51.04**	**40**	*e*P	**P**	**04 07 14.6**	**-2.0**
DBIC	**Dimbokro**	**54.17**	**253**	*e*P	**P**	**04 07 40.1**	**-0.3**
comp=Z,1.0nm,0.6s,mb3.9							
DBIC	**Dimbokro**	**54.17**	**253**	*e*P	**P**	**04 07 40.1**	**-0.3**
DBIC				pmax	pmax		
comp=Z,1.0nm,0.6s							
DBIC	**Dimbokro**	**54.17**	**253**	P	**P**	**04 07 40.0**	**-0.3**
comp=Z,2.3nm,1.0s,mb4.0,baz=4.8,slow=22,SNR=5.1							
DBIC	**Dimbokro**	**54.17**	**253**	*e*P	**P**	**04 07 40.1**	**-0.3**
comp=Z,1.0nm,0.6s,mb3.9							
BOSA	**Boshof**	**64.44**	**201**	P	**P**	**04 08 51.1**	**+0.1**
comp=Z,2.2nm,0.6s,mb4.4,baz=37,slow=9.5,SNR=7.0							
SCHQ	**Schefferville**	**75.53**	**327**	P	**P**	**04 09 58.5**	**-0.4**
comp=Z,2.3nm,0.8s,mb4.2,baz=60,slow=11,SNR=7.1							
INK	**Inuvik**	**79.04**	**360**	P	**P**	**04 10 17.4**	**-0.9**
INK	**Inuvik**	**79.04**	**360**	P	**P**	**04 10 17.4**	**-0.9**
comp=Z,0.2nm,0.4s,mb3.4,baz=343,slow=4.3,SNR=6.9							
YKA	**Yellowknife Ar**	**83.65**	**351**	P	**P**	**04 10 42.0**	**-0.9**
YKA	**Yellowknife Ar**	**83.65**	**351**	P	**P**	**04 10 42.0**	**-0.9**
comp=Z,0.6nm,0.7s,mb3.8,baz=17,slow=5.7,SNR=8.2							
WRA	**Warramunga Arr**	**98.94**	**108**	P	**P**	**04 11 53.9**	**-1.6**
comp=Z,0.4nm,0.9s,mb3.9,baz=318,slow=3.6,SNR=17							

*NIED **28** 04:05:00, 37.30N×136.70E, h5km, Mw4.7 Best double couple: M0 1.13000×10^16 NP1:φs347.00000°, δ30.00000°, λ105.00000°. NP2:φs150.00000°, δ61.00000°, λ81.00000°.*
*BJI **28** 04:05:28.1, 37.15N×137.29E, h32km, mB4.8, mb4.9, Ms4.5, Msz4.3*

*IDC **28** 04:05:29.9±0.4, 37.25N×136.56E, h0km, mb4.7/26, mb1 4.9/27, mb1mx4.9/31, mbtmp4.7/27, ML3.6/1, MS3.9/16, Ms1 3.9/16, ms1mx3.8/34, Error ellipse: s-maj=13.9km s-min=9.4km az=37.0*
*ISCJB **28** 04:05:30.7±0.1, 37.25N±002×136.50E±002, h10km, mb4.9/146, MS4.1/29, Error ellipse: s-maj=3.0km s-min=2.2km az=8.2*
*NEIC **28** 04:05:31.6±0.1, 37.22N×136.52E, h10km, mb5.0/103, MW4.6(NIED), Error ellipse: s-maj=4.4km s-min=3.4km az=171.0*
NEIC Recorded [4 JMA] in Ishikawa; [2 JMA] in Fukui and Toyama; [1 JMA] in Gifu, Nagano and Niigata Prefectures.
*JMA **28** 04:05:31.0, 37.28N×136.68E, h7km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs313.00000°, δ35.00000°, λ43.00000°. NP2: φs186.00000°, δ67.00000°, λ117.00000°. Principal axes: T Plg59.0000°, Azm134.0000°; N Plg25.0000°, Azm355.0000°; P Plg18.0000°, Azm256.0000°;*
JMA Felt IV J1.
*MOS **28** 04:05:31.1±0.9, 37.26N×136.51E, h17km, mb5.1/72, MS4.0/14 Error ellipse: s-maj=7.8km s-min=4.3km az=104.2*
*SZGRF **28** 04:05:41.0, 38.73N×137.61E, h33km, mb4.8, Eastern Sea of Japan*

ISC 28 04:05:31.1±0.7, 37.25N±002×136.49E±002, h3km±4km, h24km±5.6km:pP-P,n616,σ0$:83/627, mb4.9/146, MS4.1/29, 90C-72D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.40**	**144**	⇑P	**Pg**	**04 05 38.5**	**-0.2**
JJH				S	**Sg**	**04 05 44.1**	**+0.2**
JHG	**Hegura jima**	**0.69**	**30**	⇓P	**Pg**	**04 05 42.5**	**-1.8**
JSZ	**Suzu**	**0.72**	**74**	⇓P	**Pg**	**04 05 41.9**	**-3.0**
JSZ				S	**Sg**	**04 05 49.9**	**-4.4**
JTT	**Ttatey**	**0.93**	**133**	⇑P	**Pg**	**04 05 47.3**	**-1.7**
JTT				*e*S	**Sg**	**04 05 59.2**	**-1.9**
JKG	**Kaga**	**0.98**	**187**	⇓P	**Pg**	**04 05 50.7**	**+0.9**
JKG				*e*S	**Sg**	**04 06 05.3**	**+2.8**
MAT	**Matsushiro**	**1.55**	**117**	P	**Pn**	**04 05 56.4**	**-3.1**
MAT				S	**Sn**	**04 06 16.3**	**-3.8**
MAJO	**Matsushiro**	**1.55**	**117**	*e*Pn	**Pn**	**04 05 56.4**	**-3.2**
MAJO				*e*Sn	**Sn**	**04 06 18.1**	**-2.1**
MJAR	**Matsushiro Arr**	**1.55**	**117**	P	**Pn**	**04 05 56.7**	**-2.8**
MJAR						04 06 17.6	
MJAR	**Matsushiro Arr**	**1.55**	**117**	Pg	**Pn**	**04 05 56.7**	**-2.8**
161nm,0.3s,baz=300,slow=14,SNR=545							
MJAR				Lg		04 06 17.6	
176nm,0.3s,baz=308,slow=24,SNR=16							
MJAR				LR	LR	04 06 39.5	
comp=Z,5μm,18.6s,baz=280,slow=45							
JHJ	**Hachijo jima 2**	**4.93**	**146**	Pn	**Pn**	**04 06 46.2**	**+0.3**
6.9nm,0.3s,baz=60,slow=20,SNR=4.0							
JNU	**Nakatsue**	**6.17**	**230**	Pn	**Pn**	**04 07 06.4**	**+3.3**
4.6nm,0.3s,baz=30,slow=10,SNR=40							
JNU				Lg		04 08 45.5	
0.3nm,0.3s,baz=36,slow=19,SNR=2.6							
JNU				LR	LR	04 09 40.1	
comp=Z,2μm,19.5s,baz=36,slow=40							
KSRS	**Korea Array**	**6.83**	**274**	Pn	**Pn**	**04 07 15.5**	**+3.4**
5.3nm,0.3s,baz=87,slow=14,SNR=31							
KSRS				Sn	**Sn**	**04 08 34.1**	**+3.8**
3.7nm,0.3s,baz=86,slow=24,SNR=10							
KSRS				LR	LR	04 09 44.1	
comp=Z,1μm,20.4s,baz=92,slow=37							
VLA	**Vladivostok**	**6.84**	**330**	*e*P	**Pn**	**04 07 11.7**	**-0.5**
VLA				pmax	pmax		
comp=Z,12nm,0.8s							
ERM	**Erimo**	**7.01**	**45**	Pn	**Pn**	**04 07 15.5**	**+1.0**
comp=Z,1μm,0.8s,SNR=9.9							
ERM	**Erimo**	**7.01**	**45**	*e*Pn	**Pn**	**04 07 15.5**	**+1.0**
comp=Z,121nm,0.8s							
ERM	**Erimo**	**7.01**	**45**	*e*P	**Pn**	**04 07 15.5**	**+1.0**
ERM				pmax	pmax		
comp=Z,121nm,0.8s							
ASAJ	**Asahikawa**	**8.28**	**32**	P	**Pn**	**04 07 33.7**	**+1.7**
ASAJ				pmax	pmax		
comp=Z,3.0nm,0.3s							
ASAJ				MLR	MLR		
comp=Z,1μm,19.9s							
ASAJ	**Asahikawa**	**8.28**	**32**	Pn	**Pn**	**04 07 33.6**	**+1.7**
comp=Z,2.6nm,0.3s,baz=228,slow=19,SNR=24							
ASAJ				LR	LR	04 10 36.5	
comp=Z,1μ

SSE AMB AMB
comp=Z,74nm,3.8s
SSE LR LR
comp=N,222nm,18.9s
SSE LR LR
comp=E,334nm,18.9s
SSE LR LR
comp=Z,456nm,14.2s
NJ2 Nanjing 15.41 256 *e*P **Pn 04 09 10.3 +0.9**
NJ2 PP 04 09 22.5
NJ2 S **Sn 04 12 01.5 +0.9**
NJ2 AMB AMB
comp=Z,210nm,0.7s
NJ2 AMB AMB
comp=Z,140nm,3.8s
NJ2 LR LR
comp=N,2μm,13.7s
NJ2 LR LR
comp=E,2μm,15.2s
NJ2 LR LR
comp=Z,2μm,15.2s
BJT Baijiatuau 16.12 286 *e*P **Pn 04 09 21.4 +2.9**
comp=Z,53nm,1.1s
BJT Baijiatuau 16.12 286 *e*P **Pn 04 09 21.4 +2.8**
BJT pmax pmax
comp=Z,53nm,1.1s
HIA Hailar 17.07 320 *e*P **Pn 04 09 31.8 +1.2**
comp=Z,42nm,0.9s
HIA Hailar 17.07 320 *e*P **Pn 04 09 31.8 +1.2**
HIA pmax pmax
comp=Z,42nm,0.9s
YHNB Yeheng 18.00 230 *e*P **Pn 04 09 42.0 -0.4**
TIY Taiyuan 19.09 279⇑ *e*P **Pn 04 09 56.8 +1.3**
TIY PP 04 10 12.8
TIY S **Sn 04 13 40.5 +11**
TIY LR LR
comp=N,786nm,12.8s
TIY LR LR
comp=E,1μm,10.4s
TIY LR LR
comp=Z,1μm,13.9s
WHN Wuhan 19.54 256 *e*P **Pn 04 10 03.5 +2.5**
WHN S **Sn 04 13 49.0 +8.4**
WHN LR LR
comp=Z,2μm,16.1s
HHC Hu-ho-hao-te 19.67 288 *e*P **Pn 04 10 03.3 +0.8**
HHC PP 04 10 22.5
HHC S **Sn 04 13 39.3 -4.4**
HHC AMB AMB
comp=Z,17nm,0.9s
HHC AMB AMB
comp=Z,195nm,3.6s
HHC LR LR
comp=N,480nm,10.7s
HHC LR LR
comp=E,743nm,9.8s
HHC LR LR
comp=Z,725nm,11.6s
NRGR Nerungri 20.95 342 *e*P **P 04 10 14.2 -0.7**
CLNS Chul'man 21.07 342 *e*P **P 04 10 14.7 -1.5**
CLNS *e**PP 04 10 19.1
CLNS *e*PPP 04 10 37.2
CLNS *e*S **S 04 14 01.9 -9.2**
CLNS *e* 04 14 23.5
CLNS pmax pmax
comp=Z,25nm,0.8s,mb4.6
CLNS pmax pmax
comp=N,21nm,1.1s
CLNS pmax pmax
comp=E,3.0nm,0.8s
CLNS pmax pmax
comp=Z,20nm,0.9s,mb4.5
CLNS pmax pmax
comp=N,31nm,1.0s
CLNS pmax pmax
comp=E,22nm,1.0s
CLNS smax
comp=E,5.0nm,0.8s
CLNS smax
comp=Z,5.0nm,0.9s
CLNS smax
comp=N,7.0nm,1.0s
CLNS MLR MLR
comp=N,200nm,11.0s,MS4.1
CLNS MLR MLR
comp=Z,200nm,11.0s,MS3.8
CLNS MLR MLR
comp=E,400nm,12.0s,MS4.1
CIT Chita 21.88 320 *e*P **P 04 10 25.2 +0.3**
CIT *e* 04 10 36.0
CIT *e* 04 10 52.6
CIT *e* 04 14 28.8
CIT pmax pmax
comp=Z,89nm,2.2s,mb4.8
PET Petropavlovsk 22.07 37 *e*P **P 04 10 27.1 +0.2**
PET pmax pmax
comp=Z,44nm,1.3s,mb4.7
XAN Xi'an 22.60 270 P **P 04 10 34.5 +1.7**
XAN PP 04 11 04.3
XAN S **S 04 14 39.0 -2.4**
XAN SS 04 15 21.5
XAN AMB AMB
comp=Z,8.0nm,1.2s,mb4.0
XAN AMB AMB
comp=Z,88nm,7.4s
XAN LR LR
comp=N,833nm,14.1s,MS4.3
XAN LR LR
comp=E,340nm,18.4s,MS4.3
XAN LR LR
comp=Z,531nm,12.3s
ULN Ulaanbaatar 24.00 306 *e*P **P 04 10 47.7 +0.8**
comp=Z,55nm,1.2s,mb4.9
ULN Ulaanbaatar 24.00 306 *e*P **P 04 10 47.7 +0.9**
ULN pmax pmax
comp=Z,55nm,1.2s,mb4.9
MA2 Magadan 24.16 18 *e*P **P 04 10 46.3 -1.8**
comp=Z,80nm,1.0s,mb5.1
MA2 Magadan 24.16 18⇑ *e*P **P 04 10 46.4 -1.8**
MA2 pmax pmax
comp=Z,60nm,1.0s,mb5.0
GZH Guangzhou 24.40 241 P **P 04 10 47.8 -2.9**
GZH S **S 04 15 07.3 -3.9**
GZH LR LR
comp=N,1μm,12.0s,MS4.8
GZH LR LR
comp=E,1μm,12.6s,MS4.8
GZH LR LR
comp=Z,3μm,13.0s,MS4.9
SONM Songino Array 24.42 305 P **P 04 10 51.5 +0.8**
SONM 04 14 29.5
SONM Songino Array 24.42 305 P **P 04 10 51.5 +0.8**
comp=Z,18nm,0.9s,mb4.5,baz=108,slow=9.8,SNR=62
SONM PcP PcP 04 14 29.5 -0.1
comp=Z,0.5nm,0.6s,baz=134,slow=2.8,SNR=6.0
SONM LR LR 04 20 50.4
comp=Z,552nm,18.2s,MS4.1,baz=293,slow=38
GUMO Guam 24.72 160 LR LR 04 19 18.6
comp=Z,182nm,20.5s,MS3.6,baz=88,slow=34
YAK Yakutsk 25.17 352 *e*P **P 04 10 56.4 -0.9**
comp=Z,92nm,1.0s,mb5.3
YAK Yakutsk 25.17 352 *e*P **P 04 10 55.9 -1.4**
YAK *e**PP pP 04 11 04.4 +6.2
YAK *e* 04 11 32.1
YAK *e*PPP 04 11 42.2
YAK *e*S **S 04 15 21.9 -0.9**
YAK *e*SS 04 16 18.3
YAK *e*SSS 04 16 39.4
YAK *e* 04 21 54.9
YAK pmax pmax
comp=Z,65nm,1.0s,mb5.1
YAK pmax pmax
comp=N,27nm,1.1s
YAK pmax pmax
comp=E,14nm,1.0s
YAK pmax pmax
comp=Z,27nm,0.8s,mb4.8
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,20nm,1.7s
YAK smax
comp=N,376nm,6.8s
YAK smax
comp=E,108nm,4.4s
YAK pmax pmax
comp=E,332nm,16.2s
YAK pmax pmax
comp=N,80nm,13.9s
YAK MLR MLR
comp=Z,278nm,21.0s,MS3.8
YAK MLR MLR
comp=N,177nm,16.0s,MS3.8
YAK MLR MLR
comp=E,85nm,13.0s,MS3.8
BOD Bodaibo 25.35 331⇓ *i*P **P 04 10 57.2 -1.8**
BOD pmax pmax
comp=Z,13nm,1.2s,mb4.3
LZH Lanzhou 26.14 277 ⇓P **P 04 11 07.3 +0.8**
LZH AP pP 04 11 11.5 +4.2
LZH PP 04 11 49.5
LZH S **S 04 15 36.8 -2.0**
LZH AMB AMB
comp=Z,62nm,1.1s,mb5.0
LZH AMB AMB
comp=Z,225nm,5.7s
LZH LR LR
comp=N,985nm,12.5s
LZH LR LR
comp=Z,1μm,14.8s,MS4.6
ZAK Zakamensk 27.07 310⇑ *i*P **P 04 11 15.1 +0.4**
ZAK pmax pmax
comp=Z,10.0nm,1.0s,mb4.3
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.0
IRK Irkutsk 27.07 314⇑ *i*P **P 04 11 18.0 +3.3**
IRK pmax pmax
comp=Z,48nm,0.9s,mb5.0
TLY Talaya 27.25 312 *e*P **P 04 11 17.0 +0.7**
comp=Z,27nm,0.8s,mb4.8
TLY Talaya 27.25 312 *e*P **P 04 11 16.4 +0.2**
TLY *e*SS 04 17 09.9
TLY pmax pmax
comp=Z,26nm,0.8s,mb4.8
TLY MLR MLR
comp=Z,233nm,16.0s,MS3.9
GYA Guiyang 27.42 256⇑ *i*P **P 04 11 18.3 +0.3**
GYA XP sP 04 11 29.8 +11
GYA PP 04 12 06.8
GYA PCP PcP 04 14 29.3 -7.6
GYA S **S 04 16 02.8 +3.7**
GYA AMB AMB
comp=Z,30nm,1.2s,mb4.7
GYA AMB AMB
comp=Z,120nm,5.7s
GYA LR LR
comp=N,420nm,15.0s,MS4.3
GYA LR LR
comp=E,490nm,16.3s,MS4.3
GYA LR LR
comp=Z,680nm,15.1s,MS4.3
SEY Seymchan 27.50 16⇑ *e*P **P 04 11 17.4 -0.9**
CD2 Chengdu 27.75 267 *e*P **P 04 11 21.0 +0.1**
CD2 PP 04 12 10.0
CD2 PCP PcP 04 14 37.5 -0.1
CD2 S **S 04 16 01.8 -2.4**
CD2 AMB AMB
comp=Z,20nm,1.0s,mb4.7
CD2 AMB AMB
comp=Z,50nm,5.2s
CD2 LR LR
comp=N,630nm,16.8s,MS4.7
CD2 LR LR
comp=E,2μm,13.2s,MS4.7
CD2 LR LR
comp=Z,1μm,13.2s,MS4.6
GTA Gaotai 28.73 286 ⇑P **P 04 11 30.3 +0.7**
GTA PP PP 04 12 22.8 -11
GTA PCP PcP 04 14 40.5 +0.6
GTA S **S 04 16 20.0 +0.5**
GTA AMB AMB
comp=Z,6.0nm,1.0s,mb4.3
GTA AMB AMB
comp=Z,105nm,3.8s
GTA LR LR
comp=N,394nm,11.8s,MS4.4
GTA LR LR
comp=E,402nm,12.9s,MS4.4
GTA LR LR
comp=Z,344nm,12.5s,MS4.2
MOY Mondy 28.82 311 *e*P **P 04 11 30.7 +0.4**
QIZ Qiongzhong 29.54 239 P **P 04 11 36.8 -0.1**
QIZ S **S 04 16 32.5 0.0**
QIZ LR LR
comp=E,445nm,14.4s
QIZ LR LR
comp=Z,614nm,13.3s,MS4.4
KMI Kunming 31.14 257 P **P 04 11 51.3 +0.2**
KMI AP pP 04 12 02.5 +11
KMI XP sP 04 12 09.3 +17
KMI PP PP 04 12 55.5 -5.7
KMI S **S 04 16 53.8 -3.7**
KMI XS sS 04 17 14.8 +16
KMI AMB AMB
comp=Z,49nm,3.1s
KMI LR LR
comp=N,441nm,13.8s,MS4.4
KMI LR LR
comp=E,495nm,17.8s,MS4.4
KMI LR LR
comp=Z,583nm,16.2s,MS4.3
TIXI Tiksi 34.69 356 *e*P **P 04 12 20.1 -1.5**
comp=Z,47nm,0.9s,mb5.4
TIXI Tiksi 34.69 356 *c i*P **P 04 12 20.3 -1.3**
TIXI pmax pmax
comp=Z,52nm,0.9s,mb5.5
TIXI MLR MLR
comp=Z,222nm,12.0s,MS4.1
BILL Bilibino 35.02 19 *e*P **P 04 12 23.9 -0.6**
comp=Z,43nm,1.6s,mb5.1
BILL Bilibino 35.02 19⇑ *e*P **P 04 12 24.1 -0.4**
BILL pmax pmax
comp=Z,35nm,1.0s,mb5.2
WMQ Urumqi 37.22 296 *e*P **P 04 12 44.5 +0.9**
WMQ AP pP 04 12 49.0 +4.6
WMQ PP PP 04 14 11.8 +3.6
WMQ PCP PcP 04 15 04.8 +1.4
WMQ S **S 04 18 30.8 -0.3**
WMQ AMB AMB
comp=Z,117nm,2.3s,mb5.3
WMQ LR LR
comp=N,264nm,19.1s,MS4.1
WMQ LR LR
comp=E,140nm,20.0s,MS4.1
WMQ LR LR
comp=Z,163nm,22.9s,MS3.8
CHTO Chiang Mai 37.58 251 *e*P **P 04 12 47.8 +0.8**
comp=Z,5.8nm,0.8s,mb4.4
CHTO Chiang Mai 37.58 251 *e*P **P 04 12 47.8 +0.9**
CHTO pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
ZALV Zalesovo Beam 38.86 312 P **P 04 12 56.5 -0.8**
comp=Z,2.0nm,0.5s,mb4.1,baz=101,slow=6.2,SNR=8.3
ZALV PcP PcP 04 15 07.7 -0.6
comp=Z,6.7nm,0.8s,baz=87,slow=3.3,SNR=12
ZAL Zalesovo 38.87 312 P **P 04 12 56.5 -0.9**
ZAL 04 15 07.7
NVS Novosibirsk 39.84 314 *e*P **P 04 13 02.0 -3.5**
NVS pmax pmax
comp=N,7.0nm,1.9s
NVS pmax pmax
comp=E,16nm,1.9s
NVS pmax pmax
comp=Z,13nm,1.9s,mb4.3
MKAR Makanchi Array 40.66 301 P **P 04 13 11.6 -0.8**
MKAR 04 15 13.9
MKAR Makanchi Array 40.66 301 P **P 04 13 11.6 -0.8**
comp=Z,2.0nm,0.6s,baz=90,slow=9.3,SNR=13
MKAR PcP PcP 04 15 13.9 -0.2
comp=Z,3.8nm,1.0s,baz=75,slow=5.1,SNR=7.6
MKAR LR LR 04 30 34.7
comp=Z,283nm,19.5s,MS4.1,baz=91,slow=37
TAPN Taplejung 42.00 271 *e*P **P 04 13 26.0 +2.3**
comp=Z,28nm,1.3s,mb4.7
TNA Tin City 42.63 30 *e*P **P 04 13 28.1 -0.2**
comp=Z,19nm,0.9s,mb4.8
KURK Kurchatov 42.69 307 P **P 04 13 28.5 -0.5**
comp=Z,98nm,0.9s,mb5.5,SNR=12
KURK Kurchatov 42.69 307 *e*P **P 04 13 27.6 -1.3**
comp=Z,15nm,0.9s,mb4.7
KURK *e*PcP PcP 04 15 19.3 -1.4
KURK Kurchatov 42.69 307 *e*P **P 04 13 27.7 -1.3**
KURK *e* 04 15 19.3
KURK pmax pmax
comp=Z,15nm,0.9s,mb4.7
KSM Kuching 43.01 220 *e*P **P 04 13 33.0 +1.1**
JIRN Jiri 43.08 272 *e*P **P 04 13 33.4 +1.0**
comp=Z,41nm,1.1s,mb5.1
GKN Gorkha 44.17 274 *e*P **P 04 13 41.4 +0.2**
comp=Z,55nm,1.0s,mb5.2
KOLN Koldanda 45.09 274 *e*P **P 04 13 49.0 +0.4**
comp=Z,30nm,1.0s,mb5.1
UCH Uchtor 47.00 296 *e*P **P 04 14 04.4 +1.0**
comp=Z,2.8nm,1.0s,mb4.2
BRVK Borovoye 47.56 312 *e*P **P 04 14 06.8 -0.9**
comp=Z,6.1nm,1.0s,mb4.6
BRVK Borovoye 47.56 312 *e*P **P 04 14 06.8 -0.8**
BRVK pmax pmax
comp=Z,6.0nm,1.0s,mb4.6
AML Almayashu 47.61 296 *e*P **P 04 14 09.1 +0.9**
comp=Z,5.9nm,0.7s,mb4.7
SVW2 Sparrevohn 47.74 37 *e*P **P 04 14 08.3 -0.6**
IMA2 Indian Mountai 48.50 31 *e*P **P 04 14 14.2 -0.6**
PSI Prapat 48.62 234 P **P 04 14 16.1 -0.2**
comp=Z,1.7nm,0.3s,mb4.5,baz=345,slow=1.9,SNR=3.9
KDAK Kodiak Island 49.56 42 P **P 04 14 21.7 -1.3**
comp=Z,23nm,0.9s,mb5.2,baz=353,slow=7.3,SNR=6.9
KAKA Kakadu 49.84 185⇑ *i*P **P 04 14 24.1 -1.4**
comp=Z,19nm,0.9s,mb5.1
PMR Palmer 50.80 36 *e*P **P 04 14 30.6 -1.7**
comp=Z,14nm,0.9s,mb4.9
PMR Palmer 50.80 36 *e*P **P 04 14 30.6 -1.7**
PMR pmax pmax
comp=Z,14nm,0.9s,mb4.9
COLA College 50.99 32 *e*P **P 04 14 33.6 -0.1**
comp=Z,9.1nm,0.9s,mb4.7
COLA College 50.99 32 *e*P **P 04 14 33.6 -0.1**
COLA pmax pmax
comp=Z,9.0nm,0.9s,mb4.7
MENT Mentasta 53.08 34 *e*P **P 04 14 49.4 +0.1**
ARU Arti 53.57 318 *d i*P **P 04 14 51.7 -1.3**
ARU S **S 04 22 25.5 -1.1**
ARU SS SS 04 26 00.1 -6.3
ARU pmax pmax
comp=Z,19nm,1.7s,mb4.8
EGAK Eagle 53.84 32 *e*P **P 04 14 53.8 -1.1**
comp=Z,8.7nm,0.9s,mb4.7
HYB Hyderabad 54.29 265 *e*P **P 04 14 59.5 +0.7**
HYB Hyderabad 54.29 265 *i*P **P 04 14 59.5 +0.7**
DAWY Dawson 54.74 32 *e*P **P 04 15 01.4 -0.1**
AKTK Aktyubinsk 55.58 311 P **P 04 15 06.7 -1.0**
AKTO Aktyubinsk 55.58 311 P **P 04 15 06.7 -1.0**
comp=Z,1.4nm,0.7s,mb4.1,baz=78,slow=13,SNR=6.9
INK Inuvik 55.97 27 *e*P **P 04 15 09.5 -0.8**
comp=Z,944nm,0.9s
INK Inuvik 55.97 27 P **P 04 15 09.8 -0.4**
INK pmax pmax
comp=Z,23nm,0.9s
INK MLR MLR
comp=Z,105nm,19.3s
INK Inuvik 55.97 27 P **P 04 15 09.8 -0.4**
comp=Z,23nm,0.9s,mb5.2,baz=296,slow=7.0,SNR=83
INK LR LR 04 40 15.5
comp=Z,104nm,19.3s,MS3.9,baz=50,slow=37
FITZ Fitzroy Crossi 56.00 192 *e*P **P 04 15 10.3 -0.6**
comp=Z,19nm,1.0s,mb5.1
WB2 Warramunga Arr 56.92 182⇑ *i*P **P 04 15 16.3 -1.2**
WRA Warramunga Arr 56.92 182 P **P 04 15 16.5 -1.0**
comp=Z,21nm,0.8s,mb5.2,baz=359,slow=7.8,SNR=172
WRA LR LR 04 39 01.3
comp=Z,68nm,21.1s,MS3.7,baz=275,slow=35
CTA Charters Tower 57.77 169 *e*P **P 04 15 22.9 -0.6**
comp=Z,6.9nm,0.9s,mb4.7
CTA Charters Tower 57.77 169 *e*P **P 04 15 22.9 -0.6**
CTA pmax pmax
comp=Z,7.0nm,0.9s
CTA Charters Tower 57.77 169 LR LR 04 39 55.3
comp=Z,111nm,20.0s,MS4.0,baz=55,slow=36
CTAO Charters Tower 57.77 169 *e*P **P 04 15 22.7 -0.8**
comp=Z,27nm,1.4s,mb5.1
CTAO Charters Tower 57.77 169 *e*P **P 04 15 22.7 -0.8**
CTAO pmax pmax
comp=Z,27nm,1.4s,mb5.1
PRGR Permogore 58.41 326 *e*P **P 04 15 26.2 -1.4**
PRGR *e*S **S 04 23 20.4 -11**
PRGR *e*SS SS 04 27 15.1 -7.3
PRGR *e*SSS 04 29 37.1
ALE Alert 60.11 3 P **P 04 15 39.0 -0.1**
comp=Z,199nm,1.0s,mb6.1,SNR=15
ASAR Alice Springs 60.64 183 P **P 04 15 42.7 -0.6**
comp=Z,9.5nm,0.8s,mb5.0,baz=9.6,slow=7.3,SNR=63
ARCES ARCESS Array B 62.37 338 P **P 04 15 53.9 -0.6**
comp=Z,14nm,1.0s,mb5.0,baz=67,slow=9.3,SNR=6.8
ARCES LR LR 04 49 02.6
comp=Z,88nm,18.1s,MS4.0,baz=276,slow=42
RES Resolute Bay 63.34 13 *e*P **P 04 15 59.8 -1.2**
comp=Z,1μm,0.9s
RES Resolute Bay 63.34 13 *e*P **P 04 15 59.8 -1.1**
RES pmax pmax
comp=Z,1μm,0.9s
JOF Joensuu 63.88 331 *e*p **P 04 16 03.3 -1.3**
comp=Z,5.0nm,0.9s,mb4.5
JOF Joensuu 63.88 331 *e*P **P 04 16 03.3 -1.3**
JOF pmax pmax
comp=Z,5.0nm,0.9s,mb4.5
DAG Danmarks Havn 65.18 354⇓ *i*P **P 04 16 12.0 -1.0**
comp=Z,5.5nm,0.7s,mb4.7
OBN Obninsk 65.52 322⇑ *e*P **P 04 16 14.0 -1.5**
OBN pmax pmax
comp=Z,13nm,1.2s,mb4.8
OBN MLR MLR
comp=Z,200nm,14.0s,MS4.5
YKA Yellowknife Ar 65.56 29 P **P 04 16 14.5 -1.1**
YKA Yellowknife Ar 65.56 29 P **P 04 16 14.5 -1.1**
comp=Z,6.9nm,0.9s,mb4.7,baz=303,slow=6.7,SNR=89
KAF Kangasniemi 66.27 331 *ep* **P 04 16 17.9 -2.3**
comp=Z,4.2nm,0.6s,mb4.7,baz=50,slow=6.1
KAF Kangasniemi 66.27 331 *e*P **P 04 16 17.9 -2.3**
KAF pmax pmax
comp=Z,4.0nm,0.6s,mb4.6
FINES FINESS Array B 66.74 331 P **P 04 16 22.3 -1.0**
FINES FINESS Array B 66.74 331 *i*P **P 04 16 22.6 -0.6**
FINES pmax pmax
comp=Z,11nm,0.8s
FINES FINESS Array B 66.74 331 P **P 04 16 22.3 -1.0**
comp=Z,11nm,0.8s,mb4.9,baz=76,slow=8.0,SNR=39
ZEI Tsey 67.59 307 *e*P **P 04 16 27.2 -1.7**
ZEI *i* 04 16 36.4
ZEI *e* 04 18 56.8
KIV Kislovodsk 67.75 309 *e*P **P 04 16 29.8 -0.1**
KIV pmax pmax
comp=Z,13nm,1.1s,mb4.9
KIV MLR MLR
comp=Z,132nm,19.0s,MS4.2
VSU Vasula 68.22 328 *e*P **P 04 16 32.2 -0.4**
STKA Stephens Creek 68.93 175 *e*P **P 04 16 37.1 -0.1**
comp=Z,9.0nm,0.8s,mb4.8
STKA Stephens Creek 68.93 175 P **P 04 16 37.0 -0.3**
comp=Z,11nm,0.8s,mb4.9,baz=350,slow=7.0,SNR=13
B04A Port Angeles 69.27 45 ⇓P **P 04 16 38.8 -0.5**
baz=69
A04A Legoe Bay, Lum 69.36 44 ⇓P **P 04 16 40.4 +0.5**
baz=69
NLWA Neilton Lookou 69.43 46 *e*P **P 04 16 41.0 +0.7**
comp=Z,47nm,1.0s,mb5.4
NLWA Neilton Lookou 69.43 46 ⇓P **P 04 16 40.8 +0.4**
baz=69,SNR=5.0
A05A Maple Falls 69.55 44 ⇓P **P 04 16 41.3 +0.3**
baz=69
D03A Wishkah Elem. 69.63 46 ⇓P **P 04 16 42.4 +0.8**
baz=69
C04A Brinnon 69.76 45 ⇑P **P 04 16 41.6 -0.8**
baz=70
MBW Mount Baker 69.77 44 P **P 04 16 42.3 -0.1**
A06A Chilliwack 69.82 43 ⇑P **P 04 16 42.2 -0.6**
baz=70
CMW Cultus Mountai 69.85 44 P **P 04 16 43.2 +0.3**
B05A Bryant 69.95 44 P **P 04 16 43.7 +0.2**
baz=70,SNR=11
E03A Lebam 70.06 46 ⇑P **P 04 16 45.1 +0.8**
baz=70
B06A Marblemount 70.14 44 P **P 04 16 44.8 +0.1**
baz=70,SNR=9.0
D04A Dobbs Creek Ra 70.19 46 ⇓P **P 04 16 45.0 -0.1**
baz=70
A07A Ashnola River, 70.45 43 P **P 04 16 46.6 +0.1**
baz=70,SNR=7.0
C05A Tolt Reservoir 70.49 45 P **P 04 16 47.1 +0.2**

baz=70,SNR=11
ANN Anapa 70.50 312 *e*P P 04 16 38.2 -8.8
ANN pmax pmax
comp=Z,103nm,1.2s,mb5.6
E04A Onalaska 70.52 46 ⇓P P 04 16 47.7 +0.6
baz=70
D05A Enumclaw 70.61 45 P P 04 16 48.2 +0.7
baz=70,SNR=5.8
C06A Tall Timber Ra 70.81 44 ⇓P P 04 16 49.0 +0.2
baz=71
B07A Winthrop 70.93 43 P P 04 16 49.4 -0.1
baz=71,SNR=11
RCM Mount Rainier- 70.95 45 P P 04 16 50.8 +1.1
NLW Nelson Butte 71.03 44 P P 04 16 50.4 +0.3
F04A Amboy 71.06 46 ⇑P P 04 16 50.1 -0.3
baz=71,SNR=5.3
E05A Randle 71.09 46 ⇑P P 04 16 50.0 -0.5
baz=71
A08A Turner Farm, O 71.10 42 P P 04 16 50.5 -0.1
baz=71,SNR=11
D06A Cle Elum 71.25 45 P P 04 16 51.9 +0.4
baz=71,SNR=6.2
H03A Soap Creek Ran 71.26 48 ⇑P P 04 16 50.9 -0.6
baz=71
C07A Waterville 71.40 44 P P 04 16 52.3 -0.1
baz=71,SNR=9.8
B08A Colville Reser 71.41 43 P P 04 16 52.2 -0.2
baz=71,SNR=22
G04A Mulino 71.44 47 ⇓P P 04 16 52.8 +0.1
baz=71
WTV Waterville 71.45 44 P P 04 16 53.1 +0.4
A09A Danville 71.46 42 P P 04 16 53.0 +0.3
baz=71,SNR=14
E06A Yakima 71.54 45 P P 04 16 54.0 +0.7
baz=71,SNR=6.9
EDM Edmonton 71.57 37 *e*P P 04 16 52.4 -0.9
K01A Sixes 71.59 50 ⇑P P 04 16 53.6 0.0
baz=71
I03A Eugene 71.66 48 ⇓P P 04 16 54.1 +0.1
baz=71
AKASG Malin Array Be 71.67 320 *i* P P 04 16 53.0 -0.9
AKASG pmax pmax
comp=Z,17nm,0.9s
AKASG Malin Array Be 71.67 320 P P 04 16 52.8 -1.2
comp=Z,17nm,0.9s,mb5.0,baz=48,slow=6.2,SNR=48
AKBB Malin Array Si 71.67 320 *e*P P 04 16 52.9 -1.1
KIEV Kiev 71.68 320 *e*P P 04 16 53.1 -0.9
comp=Z,19nm,1.0s,mb5.0
KIEV Kiev 71.68 320 *e*P P 04 16 53.1 -0.9
KIEV pmax pmax
comp=Z,19nm,1.0s,mb5.0
D07A Quincy 71.73 44 ⇓P P 04 16 54.1 -0.3
baz=72
J02A Umpqua 71.82 49 ⇓P P 04 16 54.8 -0.3
baz=72
C08A Higginbotham F 71.90 43 ⇑P P 04 16 54.9 -0.5
baz=72
H04A Detroit Lake 71.90 47 ⇑P P 04 16 55.3 -0.2
baz=72,SNR=10
A10A Northport 72.00 42 ⇓P P 04 16 56.0 0.0
baz=72
B09A Rice 72.02 42 P P 04 16 56.2 +0.1
baz=72,SNR=18
G05A Wamic 72.09 47 ⇑P P 04 16 56.9 +0.3
baz=72
F06A Goldendale 72.10 46 ⇓P P 04 16 57.3 +0.6
baz=72
E07A Sunnyside 72.17 45 ⇓P P 04 16 56.8 -0.3
baz=72
J03A Ideyld Park 72.19 49 ⇓P P 04 16 58.0 +0.8
baz=72
K02A Glendale 72.21 50 ⇑P P 04 16 57.8 +0.5
baz=72
I04A Tendick Farm, 72.28 48 P P 04 16 58.3 +0.6
baz=72,SNR=6.6
C09A Chrisman Ranch 72.32 43 P P 04 16 58.1 +0.2
baz=72,SNR=15
OD2 Odessa Site #2 72.32 44 P P 04 16 57.7 -0.2
D08A Wollman Farm, 72.40 44 P P 04 16 58.2 -0.2
baz=72,SNR=11
NB2 NORSAR Subarra 72.41 335 P P 04 16 57.3 -0.9
comp=Z,7.5nm,0.9s,mb4.6,baz=43,slow=6.2
NB2 NORSAR Subarra 72.41 335 P P 04 16 57.3 -0.9
NB2 pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
NOA NORSAR Array B 72.41 335 P P 04 16 57.5 -0.8
comp=Z,4.6nm,0.9s,mb4.4,baz=41,slow=6.0,SNR=16
NOA LR LR 04 54 52.1
comp=Z,60nm,18.5s,MS3.9,baz=15,slow=41
CROR Criterion Ridg 72.43 47 P P 04 16 59.1 +0.4
HAWA Hanford 72.45 45 *e*P P 04 16 58.4 -0.3
comp=Z,27nm,1.0s,mb5.1
H05A Madras 72.49 47 ⇓P P 04 16 58.3 -0.7
baz=72
L02A Cave Junction 72.49 50 ⇑P P 04 16 58.9 -0.2
baz=72
G06A Carlson Farm, 72.49 46 P P 04 16 59.5 +0.6
baz=72,SNR=8.6
H2OWA Water 72.50 45 P P 04 16 59.3 +0.2
F07A Phinny Hill Vi 72.51 45 P P 04 16 59.5 +0.3
baz=72,SNR=6.8
B10A Chitwood Farm, 72.59 42 ⇓P P 04 16 59.9 +0.4
baz=72
A11A Hall Mountain, 72.65 41 P P 04 17 00.8 +0.9
baz=72,SNR=21
E08A Dider Farm, El 72.65 45 P P 04 16 60.0 0.0
baz=72,SNR=8.0
NEW Newport 72.66 42 *e*P P 04 16 59.7 -0.3
comp=Z,25nm,1.0s,mb5.1
NEW Newport 72.66 42 P P 04 16 59.8 -0.2
NEW pmax pmax
comp=Z,18nm,1.0s
NEW Newport 72.66 42 P P 04 16 59.8 -0.2
comp=Z,18nm,0.9s,mb5.0,baz=303,slow=5.4,SNR=16
D09A Jones Farm, Ri 72.73 44 ⇑P P 04 16 59.4 -1.0
baz=72
I05A Bend 72.74 47 ⇓P P 04 17 00.5 0.0
baz=72
J04A Umpqua Nationa 72.77 49 P P 04 17 01.5 +0.8
baz=72,SNR=7.6
H06A Lindquist Farm 72.95 47 ⇓P P 04 17 01.2 -0.5
baz=73,SNR=6.5
B11A Sandpoint 72.96 42 P P 04 17 02.3 +0.6
baz=73,SNR=10
G07A Ruggs Ranch, H 73.03 46 P P 04 17 02.6 +0.5
baz=73,SNR=7.4
A12A Yaak River Ran 73.04 41 ⇓P P 04 17 03.1 +0.9
baz=73
E09A Wood Farm, Sta 73.15 44 P P 04 17 03.2 +0.4
baz=73,SNR=11
J05A Fort Rock 73.27 48 P P 04 17 04.5 +0.9
baz=73,SNR=13
YBH Yreka Blue Hor 73.28 50 *e*P P 04 17 04.0 +0.3
comp=Z,28nm,1.1s,mb5.1
YBH Yreka Blue Hor 73.28 50 *e*P P 04 17 04.0 +0.3
YBH pmax pmax
comp=Z,28nm,1.1s
YBH Yreka Blue Hor 73.28 50 ⇑P P 04 17 03.7 0.0
baz=73,SNR=6.3
D10A Wagner Farm, O 73.31 43 P P 04 17 03.7 -0.1
baz=73,SNR=6.2
B12A Libby 73.36 41 ⇑P P 04 17 04.6 +0.6
baz=73
M02C Callahan 73.38 51 ⇑P P 04 17 04.7 +0.3
baz=73,SNR=5.5
G08A Pilot Rock 73.42 45 ⇑P P 04 17 03.8 -0.7
baz=73,SNR=7.7
N02C Big Bar 73.43 51 ⇑P P 04 17 04.0 -0.6
baz=73
H07A Lands Inn, Kim 73.48 46 ⇑P P 04 17 04.8 -0.1
baz=73
I06A Prineville 73.49 47 ⇑P P 04 17 04.8 -0.1
baz=73,SNR=8.9
MALT Malatya 73.50 306 *e*P P 04 17 05.5 +0.4
comp=Z,2.2nm,0.8s,mb4.1
MALT Malatya 73.50 306 *e*P P 04 17 05.5 +0.4
MALT pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
L04A Klamath Falls 73.52 49 ⇓P P 04 17 04.6 -0.6
baz=73
A13A Flathead Natio 73.68 40 ⇓P P 04 17 05.8 -0.2
baz=73
E10A Myers Farm, Un 73.74 44 P P 04 17 06.6 +0.3
baz=74,SNR=12
F09A S2 Ranch, Elgi 73.76 45 ⇓P P 04 17 06.6 +0.1
baz=74
M04C Macdoel 73.78 50 P P 04 17 07.3 +0.6
baz=74,SNR=16

K05A Summer Lake 73.80 48 P P 04 17 07.7 +0.9
baz=74,SNR=13
I07A Izee 73.82 47 P P 04 17 07.6 +0.7
baz=74,SNR=8.4
WALA Waterton Lakes 73.86 40 *e*P P 04 17 05.9 -1.2
comp=Z,24nm,1.1s,mb5.0
M03C McCloud 73.90 50 P P 04 17 08.3 +0.9
baz=74,SNR=5.4
J06A Christmas Vall 73.93 48 ⇑P P 04 17 07.1 -0.4
baz=74,SNR=9.0
F10A Beach Ranch, E 73.98 44 P P 04 17 08.1 +0.3
baz=74,SNR=15
B13A Whitefish 74.00 41 P P 04 17 08.5 +0.6
baz=74,SNR=23
H08A Prairie City 74.04 46 ⇑P P 04 17 07.9 -0.3
baz=74,SNR=9.2
WDC Whiskeytown Da 74.04 51 *e*P P 04 17 08.2 -0.1
comp=Z,26nm,1.1s,mb5.1
WDC Whiskeytown Da 74.04 51 *e*P P 04 17 08.2 -0.1
WDC pmax pmax
comp=Z,26nm,1.1s,mb5.1
WDC Whiskeytown Da 74.04 51 ⇓P P 04 17 07.4 -0.8
baz=74,SNR=7.8
G09A Cove 74.09 45 ⇓P P 04 17 07.9 -0.5
baz=74
O02C Red Bluff 74.12 52 ⇓P P 04 17 08.9 +0.1
baz=74
K06A Valley Falls 74.14 48 P P 04 17 09.7 +0.9
baz=74,SNR=9.0
L05A Lakeview 74.23 49 ⇓P P 04 17 09.6 +0.2
baz=74,SNR=5.9
E11A Bogner Ranch, 74.31 43 P P 04 17 09.3 -0.4
baz=74,SNR=9.1
D12A Red Ives Fores 74.35 42 P P 04 17 09.9 0.0
baz=74,SNR=9.3
J07A Hines 74.35 47 P P 04 17 11.2 +1.1
baz=74,SNR=16
C13A Hot Springs 74.38 42 P P 04 17 10.3 +0.3
baz=74,SNR=45
M05C Lookout 74.45 50 P P 04 17 11.2 +0.7
baz=74,SNR=8.0
I08A Drewsey 74.46 46 P P 04 17 11.5 +0.9
baz=74,SNR=14
GASB Alder Springs 74.47 52 P P 04 17 12.1 +1.3
baz=74,SNR=5.3
H09A Durkee 74.53 45 ⇓P P 04 17 10.5 -0.5
baz=74,SNR=5.1
HATC Hat Creek Radi 74.57 50 ⇑P P 04 17 11.9 +0.6
baz=74,SNR=7.9
BMO Blue Mountains 74.62 45 *e*P P 04 17 11.2 -0.3
comp=Z,30nm,1.1s,mb5.1
F11A Grangeville 74.63 44 P P 04 17 11.7 +0.1
baz=74,SNR=15
LBCM Butte Creek Ri 74.63 50 P P 04 17 12.1 +0.4
MOD Modoc 74.64 49 ⇓P P 04 17 11.0 -0.6
baz=74
O03C Acorn Hollow, 74.70 51 ⇑P P 04 17 11.4 -0.7
baz=74
C14A Swan Lake 74.76 41 P P 04 17 12.7 +0.5
baz=74,SNR=20
K07A Rock Creek Ran 74.80 48 P P 04 17 13.2 +0.6
baz=74,SNR=23
D13A Huson 74.80 42 P P 04 17 12.2 -0.3
baz=74,SNR=23
J08A Circle Bar Ran 74.85 47 P P 04 17 13.5 +0.6
baz=75,SNR=17
G11A Walters Elk Ra 74.87 44 P P 04 17 12.6 -0.3
baz=75,SNR=50
I09A Lost Marbles R 74.90 46 P P 04 17 13.9 +0.7
baz=75,SNR=12
M06C Likely Place G 74.94 50 ⇑P P 04 17 13.9 +0.4
baz=75
H10A Noah's Angus R 75.09 45 P P 04 17 14.1 -0.2
baz=75,SNR=22
MNRC McLaughlin Nat 75.10 52 ⇑P P 04 17 14.4 0.0
baz=75
O04C Chester 75.10 51 P P 04 17 15.0 +0.7
baz=75,SNR=20
L07A Adell 75.14 48 P P 04 17 15.8 +1.2
baz=75,SNR=6.5
F12A Elk City 75.21 43 P P 04 17 14.9 0.0
baz=75,SNR=66
K08A Mann Creek Ran 75.22 47 P P 04 17 15.9 +0.9
baz=75,SNR=5.8
J09A Fry Pan Ranch, 75.28 47 ⇓P P 04 17 15.6 +0.3
baz=75,SNR=18
ORV Oroville 75.29 51 P P 04 17 15.0 -0.5
baz=75,SNR=9.6
D14A Greenough 75.32 42 P P 04 17 15.1 -0.5
baz=75,SNR=30
E13A Victor 75.36 42 P P 04 17 15.1 -0.7
baz=75,SNR=8.8
I10A Payette 75.37 46 ⇓P P 04 17 14.9 -1.0
baz=75
O05C Quincy 75.41 51 P P 04 17 16.6 +0.4
baz=75,SNR=7.1
OHCM Honcut 75.43 52 *e*P P 04 17 15.5 -0.8
H11A Donnelly 75.44 45 P P 04 17 15.8 -0.5
baz=75,SNR=21
FCC Fort Churchill 75.50 25 *e*P P 04 17 15.2 -1.2
comp=Z,38nm,1.2s,mb5.2
FCC Fort Churchill 75.50 25 *e*P P 04 17 15.2 -1.2
FCC pmax pmax
comp=Z,38nm,1.2s,mb5.2
Q03C Winters 75.51 52 ⇓P P 04 17 17.2 +0.4
baz=75
CHMT Chamberlain Mo 75.56 42 *e*P P 04 17 16.3 -0.6
FFC Flin Flon 75.59 31 P P 04 17 16.0 -0.9
comp=Z,171nm,0.9s,mb6.0,SNR=14
FFC Flin Flon 75.59 31 *e*P P 04 17 15.8 -1.1
comp=Z,27nm,0.9s,mb5.2
FFC Flin Flon 75.59 31 *e*P P 04 17 15.8 -1.1
FFC pmax pmax
comp=Z,27nm,0.9s,mb5.2
KWP Kalwaria 75.60 322 *e*P P 04 17 16.8 -0.3
comp=Z,16nm,1.1s,mb4.9
KWP Kalwaria 75.60 322 *e*P P 04 17 16.8 -0.3
KWP pmax pmax
comp=Z,16nm,1.1s,mb4.9
N06A Buffalo Meadow 75.61 50 P P 04 17 17.5 +0.2
baz=75,SNR=14
M07A Soda Meadow 75.62 49 P P 04 17 18.2 +0.8
baz=75,SNR=22
L08A Fields 75.63 48 P P 04 17 17.8 +0.3
baz=75,SNR=21
K09A Rome 75.69 47 P P 04 17 18.1 +0.4
baz=75,SNR=6.1
F13A Darby 75.69 43 ⇑P P 04 17 16.6 -1.0
baz=75
E14A Clinton 75.75 42 P P 04 17 17.6 -0.4
baz=76,SNR=18
J10A Berg Farm, Mel 75.80 46 ⇓P P 04 17 18.7 +0.4
baz=76
BEKR Beckwourth 75.81 51 ⇑P P 04 17 18.4 -0.1
baz=76
D15A Lincoln 75.86 41 ⇑P P 04 17 18.5 -0.2
baz=76,SNR=9.3
O06A Flanigan 75.96 50 P P 04 17 20.0 +0.7
baz=76,SNR=15
P05C Yuba Gap, Truc 76.00 51 P P 04 17 19.7 +0.1
baz=76,SNR=7.7
N07B Gerlach 76.11 49 ⇓P P 04 17 20.2 0.0
baz=76
K10A MacKenzie Ranc 76.14 47 ⇑P P 04 17 21.0 +0.8
baz=76
L09A Wilkinson Ranc 76.14 48 P P 04 17 21.2 +0.9
baz=76,SNR=10
H12A Diamond D Ranc 76.18 44 P P 04 17 20.4 -0.1
baz=76,SNR=31
G13A Cobalt 76.18 44 P P 04 17 20.1 -0.4
baz=76,SNR=12
E15A Deer Lodge 76.19 42 P P 04 17 20.4 -0.1
baz=76,SNR=24
F14A Wisdom 76.20 43 P P 04 17 20.7 +0.2
baz=76,SNR=7.7
P06A Stead Airport, 76.21 51 ⇑P P 04 17 20.4 -0.4
baz=76
LAVA Lava Cap Winer 76.24 52 P P 04 17 20.7 -0.2
baz=76,SNR=8.5
BNLO Ben Lomond (Sa 76.30 54 ⇓P P 04 17 22.2 +0.9
baz=76
MFID Camas Ranch 76.34 46 ⇑P P 04 17 22.6 +1.2
baz=76
HRY Holter Researc 76.44 41 *e*P P 04 17 21.6 -0.3
STHS Stebnicka Huta 76.46 323 *e*P P 04 17 22.8 +0.8
comp=Z,3.5nm,1.3s,mb4.1
STHS Stebnicka Huta 76.46 323 *e*P P 04 17 22.8 +0.8
STHS pmax pmax

comp=Z,4.0nm,1.3s,mb4.2
H13A Challis 76.50 44 ⇓P P 04 17 23.0 +0.7
baz=76
G14A Jackson 76.51 43 ⇓P P 04 17 22.1 -0.2
baz=76
WCN Washoe City 76.53 51 P P 04 17 23.4 +0.8
baz=76,SNR=6.3
O07A Toulon 76.54 50 P P 04 17 23.3 +0.7
baz=76,SNR=20
OJC Ojcow 76.61 324 *e*P P 04 17 22.6 -0.2
N08A GE Springer Mi 76.62 49 P P 04 17 23.5 +0.5
baz=76,SNR=13
MLR Muntele Rosu 76.62 317 P P 04 17 22.6 -0.4
comp=Z,3.0nm,1.0s,mb4.2,baz=130,slow=18,SNR=3.2
K11A Parker Ranch, 76.62 46 ⇑P P 04 17 23.3 +0.2
baz=76
M09A Marrel Ranch, 76.63 48 ⇑P P 04 17 23.3 +0.1
baz=76
EGMT Eagleton 76.65 39 *e*P P 04 17 22.3 -0.7
comp=Z,37nm,0.9s,mb5.3
EGMT Eagleton 76.65 39 P P 04 17 23.2 +0.1
baz=76,SNR=6.5
F15A Butte 76.65 42 P P 04 17 23.4 +0.2
baz=76,SNR=53
R05C Kirkwood Meado 76.69 51 ⇑P P 04 17 23.5 +0.1
baz=76
CRVS Cervenica-Dubn 76.70 322 *e*P P 04 17 23.4 +0.1
L10A Juniper Basin 76.80 47 ⇑P P 04 17 24.3 +0.2
baz=76
J12A Stokes Ranch, 76.86 45 ⇑P P 04 17 24.1 -0.3
baz=77
CMB Columbia Colle 76.89 52 *e*P P 04 17 24.3 -0.4
comp=Z,35nm,1.1s,mb5.2
CMB Columbia Colle 76.89 52 *e*P P 04 17 24.3 -0.4
CMB pmax pmax
comp=Z,35nm,1.1s,mb5.2
CMB Columbia Colle 76.89 52 P P 04 17 24.8 +0.1
baz=77,SNR=12
DLMT Dillon 76.90 43 *e*P P 04 17 24.3 -0.3
comp=Z,80nm,1.0s,mb5.6
NIE Niedzica 76.91 323 *e*P P 04 17 24.9 +0.4
P07A Fallon 76.92 50 ⇑P P 04 17 24.9 +0.1
baz=77
N09A Rock Creek Ran 76.94 48 P P 04 17 25.8 +0.9
baz=77,SNR=9.2
PACP Pacheco Peak 76.94 53 ⇑P P 04 17 25.0 +0.1
baz=77
I13A Wildhorse Cree 76.99 44 ⇓P P 04 17 25.9 +0.8
baz=77
HLID Hailey 77.05 45 *e*P P 04 17 25.7 +0.2
comp=Z,18nm,1.0s,mb4.9
HLID Hailey 77.05 45 P P 04 17 25.9 +0.5
baz=77,SNR=20
G15A Dillon 77.09 43 P P 04 17 25.7 +0.1
baz=77,SNR=65
M10A I.L. Ranch, Tu 77.11 47 ⇑P P 04 17 26.7 +0.9
baz=77,SNR=18
MCMT McKenzie Canyo 77.11 43 *e*P P 04 17 25.5 -0.3
R06C Coleville 77.19 51 ⇓P P 04 17 26.1 -0.2
baz=77,SNR=11
BOZ Bozeman (W) 77.24 42 *e*P P 04 17 26.4 -0.1
comp=Z,31nm,1.3s,mb5.1
BOZ Bozeman (W) 77.24 42 *e*P P 04 17 26.4 0.0
BOZ pmax pmax
comp=Z,31nm,1.3s,mb5.1
BOZ Bozeman (W) 77.24 42 P P 04 17 26.7 +0.3
baz=77,SNR=25
J13A Cove Ranch, Pi 77.29 45 ⇑P P 04 17 27.6 +0.8
baz=77
P08A Dixie Valley 77.31 50 ⇓P P 04 17 27.6 +0.6
baz=77
S05C Merced 77.35 53 P P 04 17 27.7 +0.5
baz=77,SNR=5.3
K12A Draper Farm, C 77.36 46 ⇑P P 04 17 27.6 +0.4
baz=77
O09A Fish Creek Ran 77.56 49 P P 04 17 29.1 +0.7
baz=77,SNR=15
L12A House Creek Ra 77.60 46 ⇑P P 04 17 29.7 +1.1
baz=77
N10A Dunphy 77.62 48 ⇓P P 04 17 29.1 +0.4
baz=77
R07C Lee Vining 77.70 51 P P 04 17 30.2 +1.0
baz=78,SNR=6.1
K13A Stover Farm, H 77.82 45 ⇑P P 04 17 31.3 +1.5
baz=78
QLMT Earthquake Lak 77.88 42 *e*P P 04 17 30.4 +0.4
O10A Cortez Mining, 77.90 48 P P 04 17 31.6 +1.3
baz=78,SNR=7.2
Q08A Gabbs 77.92 50 P P 04 17 30.7 +0.3
baz=78,SNR=21
T06C Millerton Lake 77.95 53 P P 04 17 30.5 -0.1
baz=78,SNR=5.4
NVAR Mina Array Bea 77.95 51 P P 04 17 30.9 +0.3
comp=Z,14nm,1.0s,mb4.8,baz=305,slow=3.8,SNR=26
MORC Moravsky Berou 77.97 325 *e*P P 04 17 30.4 0.0
comp=Z,7.1nm,0.9s,mb4.6
MORC Moravsky Berou 77.97 325 *e*P P 04 17 30.4 0.0
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
P09A Austin 77.97 49 P P 04 17 31.6 +0.9
baz=78,SNR=6.5
KCC Kaiser Creek 78.00 52 ⇓P P 04 17 30.9 0.0
baz=78
N11A Elko Archery C 78.02 48 ⇑P P 04 17 31.4 +0.5
baz=78
PKD Parkfield 78.06 54 ⇑P P 04 17 27.5 -3.7
baz=78
U05C Westside ANR, 78.09 53 ⇓P P 04 17 31.4 0.0
baz=78
DPC Dobruska-Polom 78.12 326 *e*P P 04 17 31.8 +0.5
M12A Wells 78.12 47 P P 04 17 32.4 +0.9
baz=78,SNR=17
PSZ Piszkesteto 78.13 322 *e*P P 04 17 31.8 +0.4
comp=Z,4.2nm,0.8s,mb4.4
PSZ Piszkesteto 78.13 322 *e*P P 04 17 31.8 +0.4
PSZ pmax pmax
comp=Z,4.0nm,0.8s,mb4.4
UPC Upice 78.15 326 *e*P P 04 17 32.1 +0.7
GCMT Greycliff 78.17 41 *e*P P 04 17 32.0 +0.3
YMR Madison River 78.23 42 *e*P P 04 17 32.4 +0.4
comp=Z,35nm,1.3s,mb5.1
VYHS Vyhne 78.25 323 *e*P P 04 17 32.0 0.0
comp=Z,3.5nm,1.2s,mb4.2
VYHS Vyhne 78.25 323 *e*P P 04 17 32.0 0.0
VYHS pmax pmax
comp=Z,4.0nm,1.2s,mb4.2
L13A Double Diamond 78.25 46 ⇓P P 04 17 33.5 +1.3
baz=78
P10A Eureka 78.34 49 P P 04 17 33.8 +1.1
baz=78,SNR=8.0
Q09A Carvers 78.39 50 ⇓P P 04 17 32.8 -0.2
baz=78
K14A Jones Ranch, D 78.40 45 ⇓P P 04 17 33.7 +0.7
baz=78
N12A Clover Valley, 78.41 47 P P 04 17 34.1 +1.1
baz=78,SNR=13
YFT Old Faithful 78.44 42 *e*P P 04 17 34.2 +1.0
O11A Cowboy Ranch, 78.50 48 P P 04 17 34.5 +0.9
baz=78,SNR=8.3
HELL Mitchell Peak, 78.58 53 ⇑P P 04 17 33.9 -0.2
baz=78
MMAI Mount Meron Ar 78.58 303 P P 04 17 34.3 +0.1
comp=Z,0.9nm,0.5s,mb3.9,baz=69,slow=7.9,SNR=4.0
M13A Montello 78.59 46 P P 04 17 35.0 +0.9
baz=78,SNR=8.5
S08C White Mtn Res 78.61 51 P P 04 17 35.2 +0.9
baz=78,SNR=8.0
VRAC Vranov 78.73 325 P P 04 17 34.8 +0.1
comp=Z,3.8nm,0.7s,mb4.5,baz=60,slow=3.7,SNR=5.3
IMW Indian Meadow 78.75 43 *e*P P 04 17 35.6 +0.7
comp=Z,24nm,1.0s,mb5.1
FLWY Flagg Ranch 78.76 43 *e*P P 04 17 36.1 +1.1
comp=Z,33nm,1.1s,mb5.2
BRG Berggiesshubel 78.80 327 *e*P P 04 17 34.6 -0.4
BRG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
BRG Berggiesshubel 78.80 327 *e*P P 04 17 34.6 -0.4
comp=Z,4.3nm,0.9s,mb4.4
DCID1 Drake Creek 78.82 43 *e*P P 04 17 36.4 +1.1
R09A Tonopah 78.83 50 P P 04 17 35.8 +0.3
baz=79,SNR=15
Q10A Clear Creek Ra 78.88 50 ⇓P P 04 17 36.3 +0.6
baz=79
CLL Collm 78.88 328 *i* P P 04 17 34.8 -0.7
comp=Z,14nm,0.9s,mb4.9
CLL LmV 04 59 00.0
comp=Z,100nm,19.6s
N13A Wendover, West 78.89 47 P P 04 17 36.7 +1.0

baz=79,SNR=8.7
O12A Currie 78.95 48 P P 04 17 36.6 +0.5
baz=79,SNR=16
MOOW Moose Ponds 78.96 43 eP P 04 17 36.4 +0.3
comp=Z,20nm,1.2s,mb4.9
M14A Sheep Mountain 78.97 46 ⇓P P 04 17 37.2 +1.1
baz=79
TPAW Teton Pass 79.02 43 eP P 04 17 36.9 +0.5
comp=Z,23nm,1.2s,mb5.0
S09A Goldfield 79.06 51 P P 04 17 37.0 +0.2
baz=79,SNR=8.5
MODS Modra-Piesok 79.08 324 eP P 04 17 37.0 +0.4
LOHW Long Hollow 79.12 43 eP P 04 17 37.3 +0.3
comp=Z,10nm,1.1s,mb4.7
SNOW Snow King Moun 79.14 43 eP P 04 17 37.6 +0.5
comp=Z,22nm,1.0s,mb5.0
REDW Red Top Meadow 79.16 43 eP P 04 17 37.4 +0.3
comp=Z,26nm,1.1s,mb5.1
PRU Pruhonice 79.18 326 eP P 04 17 37.0 -0.1
TREC Trest 79.25 325 eP P 04 17 37.3 -0.2
R10A Warm Springs 79.27 50 ⇑P P 04 17 38.2 +0.3
baz=79
Q11A Duckwater 79.31 49 P P 04 17 38.6 +0.5
baz=79,SNR=7.5
S10A Tonopah Range, 79.32 50 ⇑P P 04 17 38.5 +0.3
baz=79
P12A McGill 79.36 48 P P 04 17 39.2 +0.8
baz=79,SNR=25
GRAC Grapevine Rang 79.42 51 ⇓P P 04 17 39.4 +0.7
baz=79
N14A Grayback Hills 79.49 46 ⇓P P 04 17 40.1 +1.2
baz=79
M15A Larsen Ranch, 79.51 46 ⇓P P 04 17 40.7 +1.5
baz=79
R11A Troy Canyon, C 79.67 50 ⇑P P 04 17 40.1 +0.1
baz=79
Q12A Willow Creek R 79.69 49 P P 04 17 40.8 +0.7
baz=79,SNR=6.4
P13A Bates Ranch, G 79.90 48 ⇑P P 04 17 41.2 -0.1
baz=80
NKC Novy Kostel 79.91 327 eP P 04 17 41.2 +0.1
HWUT Hardware Ranch 79.92 45 eP P 04 17 41.4 +0.1
comp=Z,28nm,1.1s,mb5.1
MPMC Manual Prospec 79.93 52 P P 04 17 41.9 +0.4
baz=80,SNR=5.5
S11A Rachel 80.02 50 ⇑P P 04 17 43.1 +1.1
baz=80
CONA Conrad Observa 80.06 324 ⇑*i*pP pP 04 17 42.4 -0.4
comp=Z,9.5nm,1.2s
FURC Furnace Creek, 80.07 52 ⇑P P 04 17 42.7 +0.5
baz=80
DUG Dugway 80.13 47 eP P 04 17 42.7 +0.2
comp=Z,26nm,1.2s,mb5.0
DUG Dugway 80.13 47 eP P 04 17 42.7 +0.2
DUG pmax pmax
comp=Z,25nm,1.2s,mb5.0
DUG Dugway 80.13 47 P P 04 17 43.0 +0.6
baz=80,SNR=12
TPNV Topopah Spring 80.15 51 eP P 04 17 42.5 -0.2
comp=Z,27nm,1.1s,mb5.1
TPNV Topopah Spring 80.15 51 eP P 04 17 42.5 -0.2
TPNV pmax pmax
comp=Z,27nm,1.1s,mb5.1
TPNV Topopah Spring 80.15 51 P P 04 17 43.2 +0.5
baz=80,SNR=8.5
Q13A Wheeler Ranch, 80.22 48 ⇑P P 04 17 43.9 +0.9
baz=80
KHC Kasperske Hory 80.23 326 eP P 04 17 43.0 +0.1
BW06 Boulder Array 80.26 43 eP P 04 17 42.5 -0.7
comp=Z,16nm,1.0s,mb4.9
PDAR Pinedale Array 80.26 43 P P 04 17 42.7 -0.4
comp=Z,12nm,0.9s,mb4.8,baz=291,slow=1.9,SNR=69
EDW2 Edwards Air Fo 80.35 53 ⇑P P 04 17 44.0 +0.2
baz=80
GERES GERESS Array B 80.39 326 P P 04 17 43.3 -0.4
comp=Z,2.4nm,0.9s,mb4.1,baz=41,slow=4.4,SNR=15
GERES LR LR 04 56 07.7
comp=Z,79nm,18.5s,MS4.1,baz=71,slow=38
U10A Ash Meadows, A 80.44 51 ⇑P P 04 17 44.4 +0.2
baz=80
S12A Delamar Landin 80.59 50 ⇑P P 04 17 45.6 +0.6
baz=80
T11A Corn Creek, Al 80.60 50 ⇑P P 04 17 45.0 0.0
baz=80
JLU Jordanelle 80.65 46 eP P 04 17 45.6 +0.3
NLU North Lily Min 80.71 46 eP P 04 17 45.8 +0.1
GSC Goldstone 80.84 53 ⇓P P 04 17 46.4 0.0
baz=81
GRA1 Grafenberg Arr 80.84 328 eP P 04 17 46.3 +0.2
comp=Z,14nm,1.1s,mb4.8
GRF Grafenberg Arr 80.84 328 eP P 04 17 46.3 +0.2
GRF pmax pmax
comp=Z,14nm,1.1s,mb4.8
GRF Grafenberg Arr 80.84 328 eP P 04 17 46.3 +0.2
GRF pmax pmax
comp=Z,14nm,1.1s,mb4.8
GRF Grafenberg Arr 80.84 328 eP P 04 17 46.3 +0.2
comp=Z,14nm,1.1s,mb4.8
GRFO Grafenberg 80.85 328 eP P 04 17 45.4 -0.7
comp=Z,16nm,1.0s,mb4.9
GRFO Grafenberg 80.85 328 eP P 04 17 45.4 -0.8
GRFO pmax pmax
comp=Z,16nm,1.0s,mb4.9
DAU Daniels Canyon 80.88 46 eP P 04 17 47.1 +0.6
MPU Maple Canyon 80.93 46 eP P 04 17 47.1 +0.3
comp=Z,17nm,1.0s,mb4.9
U11A Corn Creek 81.02 51 ⇓P P 04 17 48.7 +1.3
baz=81
S13A Holt Ranch, En 81.21 49 ⇑P P 04 17 48.8 +0.4
baz=81
TUQ Turquoise Mtn. 81.31 52 P P 04 17 49.4 +0.5
baz=81,SNR=7.0
PERS Pernice 81.34 323 eP P 04 17 48.5 -0.3
ULM Lac du Bonnet 81.41 31 P P 04 17 48.0 -1.2
comp=Z,24nm,1.0s,mb5.1,baz=315,slow=8.0,SNR=35
ULM LR LR 04 55 38.1
comp=Z,62nm,18.7s,MS4.0,baz=336,slow=37
HEC Hector,Ludlow 81.44 53 ⇓P P 04 17 50.4 +0.7
baz=81
S14A Cedar City 81.51 49 ⇑P P 04 17 50.1 +0.2
baz=81
U12A Valley of Fire 81.54 50 ⇑P P 04 17 50.2 +0.2
baz=81
T13A Saint George 81.54 50 ⇓P P 04 17 50.9 +0.8
baz=81
MSU Marysvale 81.60 48 eP P 04 17 50.7 +0.3
V12A Nelson 81.80 51 ⇓P P 04 17 51.4 -0.1
baz=82
GMRC Granite Mounta 81.90 52 P P 04 17 52.0 0.0
baz=82,SNR=9.6
U13A Pakoon Wash 81.90 50 ⇑P P 04 17 51.9 -0.1
baz=82
T14A Hurricane 82.02 49 ⇑P P 04 17 53.2 +0.6
baz=82
VISS Visnje 82.08 323 *i* P P 04 17 52.4 -0.4
PFO Pinyon Flat Ob 82.14 54 eP P 04 17 52.3 -1.0
comp=Z,32nm,1.3s,mb5.1
PFO Pinyon Flat Ob 82.14 54 P P 04 17 52.8 -0.5
PFO pmax pmax
comp=Z,17nm,0.9s,mb5.0
PFO Pinyon Flat Ob 82.14 54 P P 04 17 52.8 -0.6
comp=Z,16nm,0.9s,mb5.0,baz=285,slow=4.6,SNR=7.0
PFO Pinyon Flat Ob 82.14 54 ⇓P P 04 17 53.2 -0.1
baz=82
SRU San Rafael 82.17 46 eP P 04 17 53.0 -0.4
comp=Z,9.9nm,1.0s,mb4.7
SRU San Rafael 82.17 46 eP P 04 17 53.0 -0.4
SRU pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
BELC Belle Mtn. 82.18 53 ⇑P P 04 17 53.5 -0.1
baz=82
RWWY Rawlins 82.27 43 eP P 04 17 53.5 -0.4
comp=Z,19nm,1.0s,mb5.0
MEM Membach 82.27 331 P P 04 17 53.6 0.0
comp=Z,8.0nm,1.0s,mb4.6
U14A Mt Trumbull 82.38 50 ⇑P P 04 17 54.5 0.0
baz=82
JAVS Javornik 82.38 324 *i* P P 04 17 54.1 -0.2
T15A Red Dirt Ranch 82.47 49 ⇓P P 04 17 55.0 +0.1
baz=82
IRM Iron Mountain 82.62 53 ⇑P P 04 17 55.6 -0.3
baz=82
BCLA Clavier 82.70 331 P P 04 17 55.4 -0.5
BC3 Big Chuckw Mtn 82.75 53 P P 04 17 56.6 +0.1
baz=82,SNR=5.8
W13A Hualapai Mount 82.81 51 ⇑P P 04 17 56.5 -0.2
baz=82

AGMN Agassiz Refuge 82.92 32 eP P 04 17 55.3 -1.8
comp=Z,4.7nm,0.8s,mb4.6
FETA Feichten 83.08 326 ⇑*i*P P 04 17 57.4 -0.6
comp=Z,7.0nm,1.1s,mb4.6
BFO Black Forest 83.12 328 P P 04 17 57.8 -0.3
comp=Z,79nm,0.9s,mb5.7,SNR=6.9
BFO Black Forest 83.12 328 eP P 04 17 57.4 -0.7
comp=Z,12nm,0.9s,mb4.9
BFO Black Forest 83.12 328 eP P 04 17 57.4 -0.7
BFO pmax pmax
comp=Z,12nm,0.9s,mb4.9
PDMCI Parker Dam,Lak 83.17 52 ⇓P P 04 17 58.5 -0.2
baz=83
X13A Yucca 83.17 51 P P 04 17 59.0 +0.3
baz=83,SNR=9.9
W14A Seligman 83.23 51 P P 04 17 59.4 +0.4
baz=83,SNR=12
DAVA Damuels 83.25 327 ⇑*i*P P 04 17 58.6 -0.2
comp=Z,18nm,1.0s,mb5.1
DAVA Damuels 83.25 327 ⇑*i*P P 04 17 58.6 -0.2
comp=Z,18nm,1.0s,mb5.1
DAVA Damuels 83.25 327 ⇑*i*pP pP 04 17 58.6 -1.1
comp=Z,18nm,1.0s
Y12C Blythe 83.28 52 ⇓P P 04 17 59.5 +0.2
baz=83
BAIF Baives 83.41 331 eP P 04 17 58.5 -1.1
comp=Z,12nm,0.7s,mb4.7
BAIF Baives 83.41 331 eP P 04 17 58.5 -1.1
comp=Z,6.0nm,0.7s,mb4.7
BAIF Baives 83.41 331 eP P 04 17 58.5 -1.1
BAIF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
CDF Champ du Feu 83.49 329 eP P 04 17 59.3 -0.8
comp=Z,22nm,1.0s,mb4.8
CDF Champ du Feu 83.49 329 eP P 04 17 59.3 -0.8
comp=Z,11nm,1.0s,mb4.8
CDF Champ du Feu 83.49 329 eP P 04 17 59.3 -0.8
CDF pmax pmax
comp=Z,11nm,1.0s,mb4.8
W15A Williams 83.75 50 P P 04 18 02.8 +1.1
baz=84,SNR=6.1
X14A Yava 83.84 51 P P 04 18 02.6 +0.5
baz=84,SNR=22
WUAZ Wupatki 84.07 49 eP P 04 18 03.1 -0.2
comp=Z,29nm,1.1s,mb5.3
WUAZ Wupatki 84.07 49 P P 04 18 04.1 +0.8
baz=84,SNR=13
Y14A Wickenburg 84.11 52 P P 04 18 03.5 0.0
baz=84,SNR=13
HINF Hinteralfeld 84.14 329 eP P 04 18 01.3 -2.1
SMCO Snowmass 84.14 44 eP P 04 18 03.1 -0.4
comp=Z,16nm,1.1s,mb5.0
HAU Haudompre 84.20 329 eP P 04 18 02.5 -1.2
comp=Z,18nm,1.0s,mb4.8
HAU eMLR MLR
comp=Z,95nm,20.5s,MS3.9
HAU Haudompre 84.20 329 eP P 04 18 02.5 -1.2
comp=Z,8.8nm,1.0s,mb4.8
HAU LR LR
comp=Z,100nm,20.5s,MS4.2
HAU Haudompre 84.20 329 eP P 04 18 02.5 -1.2
HAU pmax pmax
comp=Z,9.0nm,1.0s,mb4.8
HAU MLR MLR
comp=Z,100nm,20.5s,MS4.2
X15A Humboldt 84.23 51 P P 04 18 04.6 +0.5
baz=84,SNR=24
ISCO Idaho Springs 84.45 43 eP P 04 18 05.1 0.0
comp=Z,7.1nm,1.3s,mb4.6
ISCO Idaho Springs 84.45 43 eP P 04 18 05.1 0.0
ISCO pmax pmax
comp=Z,7.0nm,1.3s,mb4.6
Z14A Wintersburg 84.53 52 ⇓P P 04 18 05.8 +0.2
baz=84
MVCO Mesa Verde 84.63 47 eP P 04 18 06.2 +0.1
comp=Z,22nm,1.2s,mb5.2
MVCO Mesa Verde 84.63 47 P P 04 18 06.6 +0.6
baz=84,SNR=6.5
EYMN Ely 85.00 30 eP P 04 18 06.4 -1.3
comp=Z,25nm,1.1s,mb5.3
CABF La Chapelle 85.41 328 eP P 04 18 08.8 -1.0
LOR Lormes 85.80 330 eP P 04 18 10.4 -1.3
comp=Z,19nm,1.0s,mb5.0
LOR eMLR MLR
comp=Z,58nm,20.8s,MS3.7
LOR Lormes 85.80 330 eP P 04 18 10.4 -1.3
comp=Z,9.4nm,1.0s,mb5.0
LOR LR LR
comp=Z,60nm,20.8s,MS4.0
LOR Lormes 85.80 330 eP P 04 18 10.4 -1.3
LOR pmax pmax
comp=Z,9.0nm,1.0s,mb5.0
LOR MLR MLR
comp=Z,60nm,20.8s,MS4.0
116A Eloy 85.84 52 ⇓P P 04 18 13.3 +1.1
baz=86
SDCO Great Sand Dun 85.97 45 eP P 04 18 12.4 -0.3
comp=Z,6.5nm,1.1s,mb4.8
LPL La Plagne 86.00 327 eP P 04 18 12.0 -0.8
comp=Z,26nm,1.4s,mb5.0
LPL La Plagne 86.00 327 eP P 04 18 12.0 -0.8
comp=Z,13nm,1.4s,mb5.0
LPL La Plagne 86.00 327 eP P 04 18 12.0 -0.8
LPL pmax pmax
comp=Z,13nm,1.4s,mb5.0
LPG La Plagne 86.01 327 eP P 04 18 12.4 -0.4
comp=Z,16nm,1.1s,mb4.9
LPG La Plagne 86.01 327 eP P 04 18 12.4 -0.4
comp=Z,7.8nm,1.1s,mb4.8
LPG La Plagne 86.01 327 eP P 04 18 12.4 -0.4
LPG pmax pmax
comp=Z,8.0nm,1.1s,mb4.9
ECSD EROS,Sioux Fal 86.11 36 eP P 04 18 11.6 -1.7
comp=Z,20nm,1.3s,mb5.2
SSF Saint Saulge 86.11 330 eP P 04 18 12.0 -1.3
comp=Z,20nm,1.0s,mb5.0
SSF Saint Saulge 86.11 330 eP P 04 18 12.0 -1.3
comp=Z,9.9nm,1.0s,mb5.0
SSF Saint Saulge 86.11 330 eP P 04 18 12.0 -1.3
SSF pmax pmax
comp=Z,10.0nm,1.0s,mb5.0
SCHQ Schefferville 86.12 13 P P 04 18 12.8 -0.4
SCHQ Schefferville 86.12 13 P P 04 18 12.8 -0.4
comp=Z,13nm,0.9s,mb5.2,baz=333,slow=8.7,SNR=16
FLN La Foliniere 86.22 333 eP P 04 18 12.3 -1.5
comp=Z,16nm,1.0s,mb4.9
FLN eMLR MLR
comp=Z,97nm,21.2s,MS3.9
FLN La Foliniere 86.22 333 eP P 04 18 12.3 -1.5
comp=Z,8.1nm,1.0s,mb4.9
FLN LR LR
comp=Z,100nm,21.3s,MS4.2
FLN La Foliniere 86.22 333 eP P 04 18 12.3 -1.5
FLN pmax pmax
comp=Z,8.0nm,1.0s,mb4.9
FLN MLR MLR
comp=Z,100nm,21.3s,MS4.2
LDF La Druitiere 86.23 333 eP P 04 18 12.5 -1.3
comp=Z,12nm,1.0s,mb4.8
LDF La Druitiere 86.23 333 eP P 04 18 12.5 -1.3
comp=Z,6.3nm,1.0s,mb4.8
LDF La Druitiere 86.23 333 eP P 04 18 12.5 -1.3
LDF pmax pmax
comp=Z,6.0nm,1.0s,mb4.8
SMF Signal de Mont 86.31 329 eP P 04 18 13.1 -1.2
comp=Z,6.0nm,0.7s,mb4.6
SMF Signal de Mont 86.31 329 eP P 04 18 13.1 -1.2
comp=Z,3.0nm,0.7s,mb4.6
SMF Signal de Mont 86.31 329 eP P 04 18 13.1 -1.2
SMF pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
AVF Avril sur Loir 86.39 330 eP P 04 18 13.5 -1.1
comp=Z,24nm,0.9s,mb5.1
AVF Avril sur Loir 86.39 330 eP P 04 18 13.5 -1.1
comp=Z,12nm,0.9s,mb5.1
AVF Avril sur Loir 86.39 330 eP P 04 18 13.5 -1.1
AVF pmax pmax
comp=Z,12nm,0.9s,mb5.1
TUC Tucson 86.59 51 eP P 04 18 16.1 +0.2
comp=Z,5.6nm,1.1s,mb4.7
TUC Tucson 86.59 51 eP P 04 18 16.1 +0.2
TUC pmax pmax
comp=Z,6.0nm,1.1s,mb4.7
GRR Gorron 86.67 333 eP P 04 18 14.1 -1.9
comp=Z,22nm,1.0s,mb5.0
GRR Gorron 86.67 333 eP P 04 18 14.1 -1.9
comp=Z,11nm,1.0s,mb5.0

GRR Gorron 86.67 333 eP P 04 18 14.1 -1.9
GRR pmax pmax
comp=Z,11nm,1.0s,mb5.0
BGF Bois d'Agland 86.78 330 eP P 04 18 15.3 -1.3
comp=Z,17nm,1.1s,mb4.9
BGF Bois d'Agland 86.78 330 eP P 04 18 15.3 -1.3
comp=Z,8.6nm,1.1s,mb4.9
BGF Bois d'Agland 86.78 330 eP P 04 18 15.3 -1.3
BGF pmax pmax
comp=Z,9.0nm,1.1s,mb4.9
217A Green Valley 86.93 52 ⇓P P 04 18 18.3 +0.7
baz=87
SBF Sospel 86.99 326 eP P 04 18 15.8 -1.9
comp=Z,57nm,1.2s,mb5.4
SBF Sospel 86.99 326 eP P 04 18 15.8 -1.9
comp=Z,28nm,1.2s,mb5.4
SBF Sospel 86.99 326 eP P 04 18 15.8 -1.9
SBF pmax pmax
comp=Z,28nm,1.2s,mb5.4
TCF Toulx Ste Croi 87.25 330 eP P 04 18 17.7 -1.2
218A Dragoon 87.27 51 ⇑P P 04 18 20.1 +0.8
baz=87
LAZ Ladron 87.37 48 eP P 04 18 17.7 -2.0
ANMO Albuquerque 87.39 47 eP P 04 18 20.0 +0.2
comp=Z,6.4nm,1.1s,mb4.8
ANMO Albuquerque 87.39 47 eP P 04 18 20.0 +0.2
ANMO pmax pmax
comp=Z,6.0nm,1.1s
SGMF Saint Gilles 87.39 334 eP P 04 18 18.5 -1.0
ROSF Rostrenen 87.57 334 eP P 04 18 19.6 -0.8
comp=Z,31nm,1.0s,mb5.2
ROSF Rostrenen 87.57 334 eP P 04 18 19.6 -0.8
comp=Z,16nm,1.0s,mb5.2
ROSF Rostrenen 87.57 334 eP P 04 18 19.6 -0.8
ROSF pmax pmax
comp=Z,16nm,1.0s,mb5.2
318A Bisbee 87.67 52 ⇓P P 04 18 21.8 +0.6
baz=87
SMRF Simiane la Rot 87.72 327 eP P 04 18 19.3 -1.9
comp=Z,19nm,1.1s,mb5.0
SMRF Simiane la Rot 87.72 327 eP P 04 18 19.3 -1.9
comp=Z,19nm,1.1s,mb5.2
LMR La Mourre 87.82 326 eP P 04 18 20.1 -1.6
comp=Z,37nm,1.1s,mb5.2
LMR La Mourre 87.82 326 eP P 04 18 20.1 -1.6
comp=Z,19nm,1.1s,mb5.2
LMR La Mourre 87.82 326 eP P 04 18 20.1 -1.6
LMR pmax pmax
comp=Z,19nm,1.1s,mb5.2
MFF Saint Martin d 87.91 332 eP P 04 18 21.3 -0.7
comp=Z,20nm,1.1s,mb5.0
MFF Saint Martin d 87.91 332 eP P 04 18 21.3 -0.7
comp=Z,10.0nm,1.1s,mb5.0
MFF Saint Martin d 87.91 332 eP P 04 18 21.3 -0.7
MFF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
KSU1 Kansas State U 89.67 38 eP P 04 18 29.1 -1.4
comp=Z,11nm,0.8s,mb5.2
MNTX Cornudas Mount 90.32 49 eP P 04 18 33.2 -0.4
comp=Z,14nm,2.0s,mb4.9
EPF Esparros 90.70 329 eP P 04 18 33.9 -1.3
comp=Z,17nm,1.2s,mb4.9
EPF Esparros 90.70 329 eP P 04 18 33.9 -1.3
comp=Z,8.4nm,1.3s,mb4.9
EPF Esparros 90.70 329 eP P 04 18 33.9 -1.3
EPF pmax pmax
comp=Z,8.0nm,1.3s,mb4.9
ETSF Etsaut 91.17 330 eP P 04 18 37.0 -0.4
WMOK Wichita Mounta 91.86 43 eP P 04 18 39.5 -1.3
comp=Z,16nm,1.8s,mb5.0
WMOK Wichita Mounta 91.86 43 eP P 04 18 39.5 -1.3
WMOK pmax pmax
comp=Z,16nm,1.8s,mb5.0
KEST Kesra 92.38 320 LR LR 05 04 40.0
comp=Z,29nm,19.1s,MS3.8,baz=194,slow=38
LTX Lajitas 93.04 49 eP P 04 18 45.6 -0.7
comp=Z,8.1nm,1.1s,mb5.1
LTX Lajitas 93.04 49 eP P 04 18 45.6 -0.7
LTX pmax pmax
comp=Z,8.0nm,1.1s,mb5.1
TXAR Lajitas Array 93.04 49 P P 04 18 45.9 -0.4
comp=Z,6.1nm,1.0s,mb5.0,baz=286,slow=3.5,SNR=41
JCT Junction City 94.48 46 eP P 04 18 52.5 -0.4
comp=Z,4.1nm,0.6s,mb5.0
JCT Junction City 94.48 46 eP P 04 18 52.5 -0.4
JCT pmax pmax
comp=Z,4.0nm,0.6s,mb5.0
MIAR Mount Ida 94.74 39 eP P 04 18 52.8 -1.2
comp=Z,4.6nm,0.9s,mb4.9
MIAR Mount Ida 94.74 39 eP P 04 18 52.8 -1.2
MIAR pmax pmax
comp=Z,5.0nm,0.9s,mb4.9
TORD Torodi Ar. Bea 114.30 311 PKiKP PKiKP 04 24 11.0 -1.7
comp=Z,0.6nm,0.6s,baz=18,slow=1.7,SNR=3.4
MAW Mawson 118.06 205 PKP PKPdf 04 24 18.2 -0.1
comp=Z,2.0nm,0.8s,baz=66,slow=20,SNR=3.5
LBTB Lobatse 120.77 261 PKP PKPdf 04 24 24.6 -0.2
comp=Z,4.1nm,0.8s,baz=104,slow=4.2,SNR=6.3
DBIC Dimbokro 123.33 312 PKP PKPdf 04 24 28.9 -1.2
comp=Z,2.5nm,0.8s,baz=322,slow=2.5,SNR=3.9
LIC Lamto 123.79 312 ePKIKP PKPdf 04 24 29.5 -1.5
comp=Z,18nm,1.1s
TSUM Tsumeb 124.16 271 PKP PKPdf 04 24 31.1 -0.3
comp=Z,2.2nm,1.1s,baz=7.6,slow=6.8,SNR=3.6
SDV Santo Domingo 127.54 35 ePKPdf PKPdf 04 24 37.5 -0.7
ROSC El Rosal 129.21 41 PKP PKPdf 04 24 41.5 +0.1
comp=Z,1.9nm,0.5s,baz=274,slow=23,SNR=3.8
LPAZ La Paz 149.84 53 PKPbc PKPbc 04 25 23.4 +0.3
comp=Z,6.9nm,1.0s,baz=127,slow=1.1,SNR=11
PLCA Paso Flores 158.73 108 PKP2 PKPab 04 26 04.5 -1.1
PLCA pmax pmax
comp=Z,2.0nm,0.9s
PLCA Paso Flores 158.73 108 PKPab PKPab 04 26 04.5 -1.1
comp=Z,2.1nm,0.9s,baz=256,slow=9.7,SNR=3.7

NIED **28** *04:22:00,4760N×15470E,h17km,Mw4.2 Best double couple: M₀1.99000×10¹⁵ NP1:φ₀306.00000°,δ23.00000°, λ170.00000°. NP2:φ₀46.00000°,δ86.00000°,λ67.00000°.*
BJI **28** *04:22:20.3, 4680N×15530E,h10km,mB4.7,mb4.5,Ms4.2, Msz3.9*
IDC **28** *04:22:21.4±0.6,4668N×15544E,h0km,mb4.2/16, mb1 4.4/18,mb1mx4.3/24,mbtmp4.2/18,ML3.9/2,MS3.2/5, Ms1 3.2/5,ms1mx2.9/37,Error ellipse: s-maj=19.1km s-min=14.3km az=151.0*
NEIC **28** *04:22:22.4±0.4,4675N×15530E,h10km,mb4.3/25,Error ellipse: s-maj=13.5km s-min=7.3km az=158.0*
ISCJB **28** *04:22:23.6±0.3,4669N±006×15520E±006,h33km, mb4.3/47,MS3.2/4,Error ellipse: s-maj=9.4km s-min=3.7km az=149.0*
MOS **28** *04:22:23.8±1.2,4672N×15527E,h33km,mb4.6/21,Error ellipse: s-maj=9.2km s-min=7.2km az=91.5*
SZGRF **28** *04:22:54.8,5097N×15565E,h33km,mb4.5,Kuril Islands, Russia*

ISC 28 04:22:24.2±2.0,4675N±006×15527E±008,h21km±15km, n132,σ1§19/130,mb4.3/47,MS3.2/4,4C,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.97**	**8**	*e*PN	**Pn**	**04 23 26.2**	**+2.3**
KUR	**Kuril'sk**	**5.38**	**256**	⇑*i*PN	**Pn**	**04 23 43.0**	**-0.1**
KUR				pmax	pmax		
	comp=N,150nm,0.7s						
KUR				pmax	pmax		
	comp=E,140nm,0.7s						
KUR				pmax	pmax		
	comp=Z,470nm,0.7s						
PET	**Petropavlovsk**	**6.65**	**18**	*e*PN	**Pn**	**04 23 57.2**	**-3.4**
YUK	**Yuzh-Kuril'sk**	**7.16**	**251**	PN	**Pn**	**04 24 08.0**	**+0.4**
NEM2	**Nemuro 2**	**7.55**	**247**	P	**Pn**	**04 24 11.7**	**-1.2**
NEM2				*e*S	**Sn**	**04 25 31.9**	**-5.9**
JRA	**Rausu**	**7.68**	**252**	P	**Pn**	**04 24 15.9**	**+1.1**
JNK	**Nakash**	**8.10**	**251**	P	**Pn**	**04 24 21.0**	**+0.5**
JAK	**Akkeshi**	**8.39**	**247**	P	**Pn**	**04 24 23.3**	**-1.2**
JAK				*e*S	**Sn**	**04 25 51.8**	**-6.8**
JTKR	**Abashiri--Toko**	**8.47**	**255**	P	**Pn**	**04 24 26.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**8.58**	**276**	⇑*i*PN	**Pn**	**04 24 31.7**	**+4.6**
JMP	**Maruseppu**	**8.82**	**256**	P	**Pn**	**04 24 31.9**	**+1.5**
JAR	**Ashoroputo**	**8.85**	**251**	P	**Pn**	**04 24 31.0**	**+0.3**
JOB	**Onbets**	**8.99**	**249**	P	**Pn**	**04 24 32.4**	**-0.3**
JKK2	**Kamakawa 2**	**9.28**	**256**	P	**Pn**	**04 24 38.1**	**+1.4**
ASAJ	**Asahikawa**	**9.29**	**258**	P	**Pn**	**04 24 38.8**	**+2.0**

ASAJ	**Asahikawa**	**9.29**	**258**	PN	**Pn**	**04 24 39.1**	**+2.3**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,91nm,20.7s						
ASAJ	**Asahikawa**	**9.29**	**258**	Pn	**Pn**	**04 24 39.0**	**+2.2**
	comp=Z,2.5nm,0.3s,baz=106,slow=19,SNR=12						
ASAJ				LR	LR	04 28 04.5	
	comp=Z,90nm,20.7s,baz=346,slow=36						
JCH	**Churui**	**9.43**	**248**	P	**Pn**	**04 24 37.9**	**-0.9**
JCH				*e*S	**Sn**	**04 26 15.7**	**-8.5**
JFR	**Furan**	**9.67**	**253**	P	**Pn**	**04 24 43.9**	**+1.8**
ERM	**Erimo**	**9.88**	**246**	*e*Pn	**Pn**	**04 24 45.1**	**+0.2**
JEM	**Erimo**	**9.88**	**246**	P	**Pn**	**04 24 44.7**	**-0.2**
JNBK	**Urakawa-nobuka**	**9.99**	**248**	P	**Pn**	**04 24 45.1**	**-1.4**
JBT2	**Biratori 2**	**10.00**	**251**	P	**Pn**	**04 24 46.1**	**-0.4**
JNB	**Noboribetsu**	**11.01**	**252**	P	**Pn**	**04 24 59.6**	**-0.8**
JKB	**Kayabe**	**11.29**	**250**	P	**Pn**	**04 25 02.6**	**-1.7**
JSH	**Shimam**	**11.59**	**255**	P	**Pn**	**04 25 08.5**	**+0.3**
JYM2	**Yakumo 2**	**11.61**	**252**	P	**Pn**	**04 25 07.6**	**-1.0**
JTH	**Tanohata**	**11.89**	**240**	*e*S	**Sn**	**04 27 13.2**	**-11**
JOSM	**Okushiri--Mats**	**12.21**	**253**	P	**Pn**	**04 25 15.6**	**-1.3**
OFUJ	**Ofunato**	**12.56**	**237**	*e*S	**Sn**	**04 27 30.9**	**-10**
MA2	**Magadan**	**13.12**	**350**	*e*PN	**Pn**	**04 25 29.6**	**+0.5**
MA2				pmax	pmax		
	comp=Z,4.0nm,1.3s						
KLR	**Kul'dur**	**15.93**	**288**	*e*P	**Pn**	**04 26 06.2**	**-0.6**
MAJO	**Matsushiro**	**16.30**	**237**	*e*P	**Pn**	**04 26 11.5**	**-0.2**
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	**16.30**	**237**	*e*P	**Pn**	**04 26 11.5**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MJAR	**Matsushiro Arr**	**16.30**	**237**	Pn	**Pn**	**04 26 10.3**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=5.2						
MDJ	**Mudanjiang**	**18.04**	**273**	*e*P	**Pn**	**04 26 32.2**	**-1.3**
	comp=Z,3.1nm,0.6s						
CN2	**Changchun**	**21.13**	**273**	*e*P	**P**	**04 27 12.5**	**+5.0**
YAK	**Yakutsk**	**21.14**	**326**⇑	*e*P	**P**	**04 27 05.8**	**-1.6**
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.1						
CLNS	**Chul'man**	**21.15**	**310**	*e*P	**P**	**04 27 06.7**	**-0.9**
CLNS				pmax	pmax		
	comp=N,9.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
BILL	**Bilibino**	**22.08**	**11**	*e*P	**P**	**04 27 17.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb3.7						
KSRS	**Korea Array**	**22.22**	**255**	P	**P**	**04 27 22.0**	**+2.8**
	comp=Z,9.8nm,1.1s,mb4.2,baz=55,slow=11,SNR=12						
KSRS				LR	LR	04 37 06.6	
	comp=Z,22nm,18.5s,MS2.6,baz=70,slow=40						
HIA	**Hailar**	**23.77**	**289**	*e*P	**P**	**04 27 36.4**	**+1.4**
BOD	**Bodaibo**	**27.13**	**309**	*e*P	**P**	**04 28 03.3**	**-2.2**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.5s,mb3.4						
TIXI	**Tiksi**	**27.90**	**342**	*e*P	**P**	**04 28 11.8**	**-0.4**
	comp=Z,2.6nm,0.6s,mb4.0						
TIXI	**Tiksi**	**27.90**	**342**	*e*P	**P**	**04 28 12.2**	**0.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.1						
NJ2	**Nanjing**	**31.42**	**255**	*e*P	**P**	**04 28 45.3**	**+1.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
ULN	**Ulaanbaatar**	**32.29**	**290**	*e*P	**P**	**04 28 50.7**	**-0.6**
SONM	**Songino Array**	**32.73**	**290**	P	**P**	**04 28 55.4**	**+0.3**
	comp=Z,1.5nm,0.7s,mb4.0,baz=62,slow=8.8,SNR=14						
SONM				LR	LR	04 41 41.4	
	comp=Z,60nm,20.1s,MS3.3,baz=206,slow=35						
IMA2	**Indian Mountai**	**32.94**	**36**	*e*P	**P**	**04 28 55.4**	**-1.3**
TLY	**Talaya**	**33.49**	**298**	*e*P	sP	04 29 12.8	+2.1
TLY				*e*		04 34 20.8	
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ZAK	**Zakamensk**	**34.02**	**296**	*e*P	**P**	**04 29 06.8**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
COLA	**College**	**35.22**	**38**	*e*P	**P**	**04 29 16.7**	**+0.2**
	comp=Z,3.9nm,0.9s,mb4.3						
COLA	**College**	**35.22**	**38**	*e*P	**P**	**04 29 16.7**	**+0.2**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
EGAK	**Eagle**	**38.08**	**38**	*e*P	**P**	**04 29 40.0**	**-0.8**
	comp=Z,3.9nm,0.8s,mb4.2						
LZH	**Lanzhou**	**39.37**	**273**	*e*P	**P**	**04 29 55.5**	**+3.5**
LZH				AP	pP	04 30 00.3	+1.8
LZH				XP	sP	04 30 02.8	+1.7
LZH				AMB	AMB		
	comp=Z,19nm,1.1s,mb4.7						
LZH				AMB	AMB		
	comp=Z,87nm,4.1s						
INK	**Inuvik**	**40.85**	**33**	*e*P	**P**	**04 30 03.9**	**-0.1**
	comp=Z,84nm,0.6s,mb5.5						
INK	**Inuvik**	**40.85**	**33**	P	**P**	**04 30 04.2**	**+0.2**
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
INK	**Inuvik**	**40.85**	**33**	P	**P**	**04 30 04.2**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.0,baz=291,slow=7.4,SNR=22						
ZALV	**Zalesovo Beam**	**43.81**	**306**	P	**P**	**04 30 28.1**	**0.0**
	comp=Z,2.2nm,0.5s,mb4.2,baz=68,slow=7.5,SNR=11						
ZALV				LR	LR	04 50 28.0	
	comp=Z,13nm,18.9s,MS2.9,baz=267,slow=38						
ZAL	**Zalesovo**	**43.82**	**306**	P	**P**	**04 30 28.2**	**-0.1**
NVS	**Novosibirsk**	**44.36**	**308**	*e*P	**P**	**04 30 29.1**	**-3.5**
MKAR	**Makanchi Array**	**48.25**	**298**	*i* P	**P**	**04 31 04.5**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.25**	**298**	P	**P**	**04 31 04.3**	**+1.0**
	comp=Z,1.0nm,0.5s,mb4.1,baz=70,slow=7.6,SNR=6.3						
KURK	**Kurchatov**	**48.59**	**304**	*e*P	**P**	**04 31 06.5**	**+0.6**
	comp=Z,6.3nm,0.7s,mb4.8						
KURK	**Kurchatov**	**48.59**	**304**	*e*P	**P**	**04 31 06.5**	**+0.7**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
YKA	**Yellowknife Ar**	**50.03**	**37**	P	**P**	**04 31 16.4**	**-0.2**
YKA				PcP	PcP	04 32 36.2	0.0
YKA	**Yellowknife Ar**	**50.03**	**37**	P	**P**	**04 31 16.4**	**-0.2**
	comp=Z,1.1nm,0.8s,mb4.0,baz=295,slow=7.3,SNR=12						
YKA				PcP	PcP	04 32 36.2	0.0
	comp=Z,0.1nm,0.4s,baz=294,slow=3.5,SNR=4.4						
CHKZ	**Chkalovo**	**51.56**	**311**	*i* P	**P**	**04 31 28.6**	**+0.3**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.0						
BRVK	**Borovoye**	**52.03**	**310**	*e*P	**P**	**04 31 33.7**	**+1.9**
	comp=Z,6.1nm,0.6s,mb4.7						
BRVK	**Borovoye**	**52.03**	**310**	*e*P	**P**	**04 31 33.7**	**+1.8**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
EDM	**Edmonton**	**55.24**	**47**	*e*P	**P**	**04 31 54.8**	**-0.5**
UCH	**Uchtor**	**55.37**	**297**	*e*P	**P**	**04 31 57.5**	**+1.0**
	comp=Z,0.5nm,0.4s,mb3.9						
EKS2	**Erkin-Say**	**55.58**	**298**	*e*P	**P**	**04 31 59.6**	**+1.7**
	comp=Z,2.6nm,0.8s,mb4.3						
BMO	**Blue Mountains**	**57.84**	**57**	*e*P	**P**	**04 32 14.9**	**+1.0**
	comp=Z,1.1nm,0.7s,mb4.0						
ARCES	**ARCESS Array B**	**58.33**	**341**	P	**P**	**04 32 16.3**	**-0.7**
	comp=Z,5.4nm,0.9s,mb4.6,baz=35,slow=8.0,SNR=4.0						
BOZ	**Bozeman (W)**	**60.57**	**54**	*e*P	**P**	**04 32 33.0**	**+0.2**
	comp=Z,1.5nm,1.0s,mb4.1						
BOZ	**Bozeman (W)**	**60.57**	**54**	*e*P	**P**	**04 32 33.0**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**61.11**	**64**	P	**P**	**04 32 37.3**	**+0.7**
	comp=Z,0.9nm,0.6s,mb4.1,baz=306,slow=7.7,SNR=3.9						
JOF	**Joensuu**	**61.98**	**335**	*e*p	**P**	**04 32 43.9**	**+1.8**
MOOW	**Moose Ponds**	**62.25**	**55**	*e*P	**P**	**04 32 44.8**	**+0.6**
	comp=Z,0.9nm,0.7s,mb4.0						
TPAW	**Teton Pass**	**62.29**	**55**	*e*P	**P**	**04 32 45.7**	**+1.2**
	comp=Z,2.5nm,0.8s,mb4.4						
DUG	**Dugway**	**63.31**	**59**	*e*P	**P**	**04 32 51.4**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.3						
DUG	**Dugway**	**63.31**	**59**	*e*P	**P**	**04 32 51.4**	**0.0**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
BW06	**Boulder Array**	**63.54**	**55**	*e*P	**P**	**04 32 52.9**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.1						
PDAR	**Pinedale Array**	**63.54**	**55**	P	**P**	**04 32 53.0**	**+0.2**
	comp=Z,1.1nm,0.8s,mb3.9,baz=267,slow=2.7,SNR=8.6						
MPU	**Maple Canyon**	**64.12**	**58**	*e*P	**P**	**04 32 56.2**	**-0.5**
	comp=Z,2.6nm,0.8s,mb4.3						
FINES	**FINESS Array B**	**64.66**	**336**	*i* P	**P**	**04 33 01.7**	**+1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	**FINESS Array B**	**64.66**	**336**	P	**P**	**04 33 01.8**	**+1.9**
	comp=Z,2.0nm,0.4s,mb4.5,baz=39,slow=7.9,SNR=18						
SRU	**San Rafael**	**65.36**	**59**	*e*P	**P**	**04 33 04.9**	**+0.1**
	comp=Z,1.4nm,0.7s,mb4.1						
SRU	**San Rafael**	**65.36**	**59**	*e*P	**P**	**04 33 04.9**	**+0.1**
SRU				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
NB2	**NORSAR Subarra**	**68.69**	**342**	P	**P**	**04 33 27.6**	**+2.0**
	comp=Z,0.8nm,0.4s,mb4.0,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**68.69**	**342**	P	**P**	**04 33 27.6**	**+2.0**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
NOA	**NORSAR Array B**	**68.69**	**342**	P	**P**	**04 33 28.1**	**+2.5**
	comp=Z,1.0nm,0.6s,mb3.9,baz=25,slow=6.4,SNR=8.4						
WRA	**Warramunga Arr**	**69.02**	**201**	P	**P**	**04 33 28.2**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.1,baz=22,slow=7.0,SNR=12						
ANMO	**Albuquerque**	**70.56**	**60**	*e*P	**P**	**04 33 37.6**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.7						
ANMO	**Albuquerque**	**70.56**	**60**	*e*P	**P**	**04 33 37.6**	**0.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	**Kislovodsk**	**71.85**	**315**	*e*P	**P**	**04 33 50.8**	**+5.6**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
AKASG	**Malin Array Be**	**72.36**	**327**	P	**P**	**04 33 50.5**	**+2.3**
AKASG	**Malin Array Be**	**72.36**	**327**	P	**P**	**04 33 50.5**	**+2.3**
	comp=Z,2.0nm,0.6s,mb4.2,baz=33,slow=6.4,SNR=4.0						
ASAR	**Alice Springs**	**72.70**	**200**	P	**P**	**04 33 51.3**	**+0.9**
	comp=Z,2.1nm,0.7s,mb4.2,baz=17,slow=5.4,SNR=16						
LTX	**Lajitas**	**76.19**	**62**	*e*P	**P**	**04 34 10.9**	**+0.1**
	comp=Z,9.1nm,1.1s,mb4.6						
LTX	**Lajitas**	**76.19**	**62**	*e*P	**P**	**04 34 10.9**	**0.0**
LTX				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
TXAR	**Lajitas Array**	**76.19**	**62**	P	**P**	**04 34 11.0**	**+0.1**
	comp=Z,5.3nm,0.7s,mb4.6,baz=303,slow=4.6,SNR=73						
DPC	**Dobruska-Polom**	**76.98**	**334**	*e*P	**P**	**04 34 21.6**	**+6.7**
CLL	**Collm**	**77.06**	**337**	*e*P	**P**	**04 34 21.0**	**+5.6**
CLL	**Collm**	**77.06**	**337**	*e*sP	sP	04 34 20.0	-4.8
PRU	**Pruhonice**	**77.82**	**335**	*e*P	**P**	**04 34 25.6**	**+6.0**
KHC	**Kasperske Hory**	**78.87**	**335**⇑	*e*P	**P**	**04 34 26.1**	**+0.7**
KHC	**Kasperske Hory**	**78.87**	**335**	*e*P	**P**	**04 34 31.5**	**+6.1**
GRA1	**Grafenberg Arr**	**79.01**	**337**	*e*P	**P**	**04 34 32.5**	**+6.3**
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**79.01**	**337**	*e*P	**P**	**04 34 32.5**	**+6.3**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**79.01**	**337**	*e*P	**P**	**04 34 32.5**	**+6.3**
GRF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**79.01**	**337**	*e*P	**P**	**04 34 32.5**	**+6.3**
	comp=Z,4.0nm,0.8s,mb4.4						
GERES	**GERESS Array B**	**79.09**	**335**	P	**P**	**04 34 30.0**	**+3.4**
	comp=Z,0.8nm,0.4s,mb4.0,baz=36,slow=6.1,SNR=9.4						
STKA	**Stephens Creek**	**79.23**	**192**	LR	LR	05 08 06.8	
	comp=Z,110nm,20.6s,MS4.2,baz=206,slow=35						
LOR	**Lormes**	**83.08**	**341**	*e*P	**P**	**04 34 45.7**	**-2.2**
	comp=Z,5.1nm,0.6s,mb4.4						
LOR	**Lormes**	**83.08**	**341**	*e*P	**P**	**04 34 45.7**	**-2.2**
	comp=Z,2.5nm,0.6s,mb4.4						
LOR	**Lormes**	**83.08**	**341**	*e*P	**P**	**04 34 45.7**	**-2.2**
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
SSF	**Saint Saulge**	**83.35**	**341**	*e*P	**P**	**04 34 47.2**	**-2.2**
SGMF	**Saint Gilles**	**83.42**	**345**	*e*P	**P**	**04 34 48.2**	**-1.5**
AVF	**Avril sur Loir**	**83.64**	**341**	*e*P	**P**	**04 34 49.0**	**-1.9**
	comp=Z,5.4nm,0.6s,mb4.5						
AVF	**Avril sur Loir**	**83.64**	**341**	*e*P	**P**	**04 34 49.0**	**-1.9**
	comp=Z,2.7nm,0.6s,mb4.5						
AVF	**Avril sur Loir**	**83.64**	**341**	*e*P	**P**	**04 34 49.0**	**-1.9**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
SMF	**Signal de Mont**	**83.67**	**341**	*e*P	**P**	**04 34 49.0**	**-2.0**
BGF	**Bois d'Agland**	**83.98**	**341**	*e*P	**P**	**04 34 50.6**	**-2.0**
LPL	**La Plagne**	**84.03**	**338**	*e*P	**P**	**04 34 51.7**	**-1.2**
	comp=Z,10nm,0.7s,mb4.8						
LPL	**La Plagne**	**84.03**	**338**	*e*P	**P**	**04 34 51.7**	**-1.2**
	comp=Z,5.1nm,0.7s,mb4.8						
LPL	**La Plagne**	**84.03**	**338**	*e*P	**P**	**04 34 51.7**	**-1.2**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
LPG	**La Plagne**	**84.05**	**338**	*e*P	**P**	**04 34 51.8**	**-1.1**
TCF	**Toulx Ste Croi**	**84.37**	**342**	*e*P	**P**	**04 34 53.0**	**-1.6**
PLCA	**Paso Flores**	**146.73**	**97**	PKPbc	PKPbc	04 42 04.0	0.0
PLCA	**Paso Flores**	**146.73**	**97**	PKPbc	PKPbc	04 42 04.0	0.0
	comp=Z,3.0nm,1.0s,baz=287,slow=3.9,SNR=5.6						

*ISCJB **28** 04:23:50.1±0.7, 2820S±005×13604E±006, h10km, Error ellipse: s-maj=9.8km s-min=5.9km az=137.8*
*IDC **28** 04:23:53.1±3.0, 2825S×13598E, h0km, mb1 3.9/3, mb1mx3.6/13, mbtmp3.7/3, ML3.7/3, Error ellipse: s-maj=53.9km s-min=16.7km az=54.0*

ISC 28 04:23:53.1±0.7, 2820S±005×13601E±006, h10km, n10, σ1§36/21, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBOO	**Buckleboo**	**4.60**	**180**	*e*P	**Pn**	**04 25 03.4**	**+0.7**
BBOO				*e*S	**Sn**	**04 25 50.6**	**-5.6**
	2.3nm,0.2s						
ASAR	**Alice Springs**	**4.89**	**337**	Pn	**Pn**	**04 25 08.5**	**+1.8**
	1.7nm,0.3s,baz=158,slow=12,SNR=51						
ASAR				Pg	**Pg**	**04 25 25.0**	**-1.9**
	1.0nm,0.3s,baz=155,slow=16,SNR=14						
ASAR				Sn	**Sn**	**04 26 02.6**	**-0.8**
	2.6nm,0.3s,baz=156,slow=23,SNR=11						
ASAR				Lg		04 26 31.2	
	1.8nm,0.3s,baz=164,slow=26,SNR=6.1						
STKA	**Stephens Creek**	**6.07**	**129**	*e*P	**Pn**	**04 25 24.3**	**+1.4**
STKA				*e*S	**Sn**	**04 26 29.9**	**-2.6**
	4.4nm,0.2s						
STKA	**Stephens Creek**	**6.07**	**129**	Pn	**Pn**	**04 25 24.1**	**+1.1**
	0.4nm,0.3s,baz=316,slow=12,SNR=4.1						
STKA				Sn	**Sn**	**04 26 30.4**	**-2.0**
	2.2nm,0.3s,baz=280,slow=13,SNR=8.9						
STKA				Lg		04 27 05.7	
	1.5nm,0.3s,baz=315,slow=19,SNR=4.0						
FORT	**Forrest**	**7.40**	**248**	*e*P	**Pn**	**04 25 39.9**	**-1.2**
	18nm,0.8s						
FORT				*e*S	**Sn**	**04 26 57.2**	**-7.9**
QLP	**Quilpie**	**7.48**	**80**	*e*P	**Pn**	**04 25 44.7**	**+2.4**
QLP				*e*S	**Sn**	**04 27 06.0**	**-1.2**
QIS	**Mount Isa**	**8.28**	**24**	*e*P	**Pn**	**04 25 54.4**	**+1.2**
QIS				*e*S	**Sn**	**04 27 22.8**	**-4.0**
	1.2nm,0.4s						
WB2	**Warramunga Arr**	**8.35**	**349**	*e*P	**Pn**	**04 25 54.3**	**0.0**
WB2				*e*S	**Sn**	**04 27 23.7**	**-5.0**
WRA	**Warramunga Arr**	**8.36**	**349**	Pn	**Pn**	**04 25 55.0**	**+0.7**
	2.9nm,0.3s,baz=168,slow=13,SNR=114						
WRA				Sn	**Sn**	**04 27 24.2**	**-4.5**
	0.8nm,0.3s,baz=169,slow=24,SNR=9.2						
WRA				Lg		04 28 17.7	
	0.3nm,0.3s,baz=170,slow=29,SNR=4.5						
CMSA	**Cobar Meteorol**	**9.04**	**114**	*e*P	**Pn**	**04 26 04.0**	**+0.4**
CMSA				*e*S	**Sn**	**04 27 39.0**	**-6.5**
	4.4nm,0.5s						

IDC 28 04:50:26.1±5.6, 1979S×16840E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.9/14, mbtmp4.0/3, MS3.5/2, Ms1 3.5/2, ms1mx3.0/21, Error ellipse: s-maj=327.8km s-min=70.4km az=159.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.92**	**219**	*e*P	Pn	04 51 06.7	-7.1
DZM				*e*S	Sn	04 51 40.4	-9.1
WRA	**Warramunga Arr**	**32.01**	**264**	P	P	04 56 54.1	-0.3
	1.1nm,1.1s,baz=96,slow=10,SNR=5.8						
WRA				LR	LR	05 10 40.1	
	comp=Z,74nm,18.6s,baz=115,slow=38						
ASAR	**Alice Springs**	**32.23**	**257**	P	P	04 56 55.7	-0.6
	1.7nm,0.8s,baz=79,slow=8.8,SNR=14						
FITZ	**Fitzroy Crossi**	**40.41**	**265**	P	P	04 58 07.3	+1.1
	3.2nm,1.0s,baz=152,slow=12,SNR=4.4						
FITZ				LR	LR	05 13 46.4	
	comp=Z,70nm,20.4s,baz=265,slow=35						
GERES	**GERESS Array B**	**144.59**	**331**	PKP	PKPdf	05 10 03.9	-0.6
	0.3nm,0.4s,baz=31,slow=2.3,SNR=3.9						

*ISCJB **28** 04:54:12.1±4.4, 625S±010×1464E±02, h64km±39km, mb4.5/23, Error ellipse: s-maj=26.8km s-min=15.2km az=163.3*
*IDC **28** 04:54:16.2±6.4, 625S×14621E, h86km±57km, mb3.9/10, mb1 4.0/11, mb1mx3.9/15, mbtmp3.9/11, ML4.1/1, Error ellipse: s-maj=34.9km s-min=16.6km az=79.0*
*NEIC **28** 04:54:24.9±2.8, 631S×14599E, h162km±26km, mb4.5/13, Error ellipse: s-maj=19.6km s-min=14.0km az=71.0*

ISC 28 04:54:13.6±3.9, 626S±010×1464E±02, h62km±35km, n35, σ0§90/30, mb4.5/22, 1D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**13.75**	**181**	*e*P	**Pn**	**04 57 34.5**	**+8.9**
	28nm,0.3s						
CTA	**Charters Tower**	**13.75**	**181**	P	**Pn**	**04 57 34.8**	**+9.3**
	10nm,0.3s,baz=358,slow=14,SNR=77						
CTAO	**Charters Tower**	**13.75**	**181**	*e*P	**Pn**	**04 57 34.4**	**+8.8**
	29nm,0.5s						
KAKA	**Kakadu**	**15.20**	**244**⇓	*i* P	**Pn**	**04 57 45.7**	**+1.1**
	65nm,0.6s						
WB2	**Warramunga Arr**	**17.95**	**220**	*e*P	**Pn**	**04 58 18.3**	**-0.7**
WB2	**Warramunga Arr**	**17.95**	**220**	*e*P	**Pn**	**04 58 18.1**	**-0.9**
WRA	**Warramunga Arr**	**17.96**	**220**	P	**Pn**	**04 58 18.8**	**-0.3**
	0.7nm,0.3s,baz=42,slow=11,SNR=34						
ASAR	**Alice Springs**	**21.08**	**214**	P	**P**	**04 58 52.6**	**-0.3**
	3.6nm,0.7s,mb3.8,baz=47,slow=8.1,SNR=21						
FITZ	**Fitzroy Crossi**	**23.44**	**238**	*e*P	**P**	**04 59 16.5**	**-1.0**
	7.7nm,0.5s,mb4.4						
FITZ	**Fitzroy Crossi**	**23.44**	**238**	P	**P**	**04 59 16.4**	**-1.2**
	4.4nm,0.4s,mb4.2,baz=73,slow=11,SNR=8.0						
STKA	**Stephens Creek**	**25.88**	**189**	P	**P**	**04 59 39.6**	**0.0**
	5.5nm,0.8s,mb4.2,baz=3.7,slow=11,SNR=6.0						
RPZ	**Rata Peaks**	**43.13**	**154**	P	**P**	**05 02 09.4**	**+1.5**
	6.9nm,0.6s,mb4.5,baz=355,slow=7.4,SNR=4.4						
MJAR	**Matsushiro Arr**	**43.27**	**350**	P	**P**	**05 02 08.9**	**-0.1**
	1.3nm,0.6s,mb3.9,baz=176,slow=7.1,SNR=4.7						
MAJO	**Matsushiro**	**43.27**	**350**	*e*P	**P**	**05 02 09.2**	**+0.2**
	6.3nm,0.6s,mb4.5						
KSRS	**Korea Array**	**46.79**	**340**	P	**P**	**05 02 36.1**	**-0.9**
	0.6nm,0.3s,mb4.0,baz=151,slow=18,SNR=3.9						
CHTO	**Chiang Mai**	**53.00**	**299**	*e*P	**P**	**05 03 23.3**	**-1.2**
	3.7nm,0.8s,mb4.4						
LSA	**Lhasa**	**63.93**	**307**	*e*P	**P**	**05 04 42.2**	**+1.7**
	11nm,0.6s,mb5.1						
TAPN	**Taplejung**	**65.81**	**304**	*e*P	**P**	**05 04 53.4**	**+0.7**
	7.5nm,0.4s,mb5.1						
JIRN	**Jiri**	**67.18**	**303**	*e*P	**P**	**05 05 02.6**	**+1.2**
	8.6nm,0.5s,mb5.1						
KKN	**Kakani**	**67.98**	**303**	*e*P	**P**	**05 05 07.4**	**+0.9**
	5.1nm,0.3s,mb5.0						
KOLN	**Koldanda**	**69.38**	**303**	*e*P	**P**	**05 05 15.4**	**+0.2**
	20nm,0.8s,mb5.1						
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**05 05 28.1**	**-0.3**
	1.3nm,0.9s,mb3.9,baz=323,slow=5.9,SNR=6.1						
MKAR	**Makanchi Array**	**77.33**	**321**	P	**P**	**05 06 01.8**	**+0.2**
	1.7nm,0.6s,mb4.2,baz=103,slow=6.8,SNR=11						
ZALV	**Zalesovo Beam**	**78.92**	**328**	P	**P**	**05 06 08.9**	**-1.3**
	1.4nm,0.4s,mb4.2,baz=115,slow=5.0,SNR=7.7						
UCH	**Uchtor**	**80.98**	**314**	*e*P	**P**	**05 06 22.6**	**+1.0**
	4.8nm,1.0s,mb4.4						
KURK	**Kurchatov**	**81.07**	**323**	*e*P	**P**	**05 06 20.8**	**-1.1**
	2.6nm,0.8s,mb4.2						
EKS2	**Erkin-Say**	**81.62**	**315**	*e*P	**P**	**05 06 25.6**	**+0.6**
	2.9nm,0.7s,mb4.3						
KBL	**Kabul**	**83.21**	**306**	*e*P	**P**	**05 06 32.5**	**-1.0**
	7.4nm,0.7s,mb4.8						
COLA	**College**	**85.61**	**23**	*e*P	**P**	**05 06 44.2**	**-0.8**
	7.7nm,0.7s,mb5.0						
BRVK	**Borovoye**

JJH				*eS*		**Sg**	**05 37 01.8**	**+0.3**
JSZ	**Suzu**	**0.59**	**74**	⇓P		**Pg**	**05 37 00.4**	**-0.1**
JSZ				*eS*		**Sg**	**05 37 08.4**	**+0.2**
JHG	**Hegura jima**	**0.60**	**21**	⇓P		**Pg**	**05 37 01.0**	**+0.3**
JTT	**Ttatey**	**0.87**	**141**	P		**Pg**	**05 37 05.6**	**-0.4**
JTT				*eS*		**Sg**	**05 37 16.9**	**-0.4**
JKG	**Kaga**	**1.04**	**195**	P		**Pg**	**05 37 09.1**	**-0.1**
JKG				*eS*		**Sg**	**05 37 23.0**	**+0.2**
MAT	**Matsushiro**	**1.45**	**120**	P		**Pn**	**05 37 14.8**	**-1.0**
MAT				S		**Sn**	**05 37 35.7**	**+0.7**

*ISCJB **28** 05:59:50.9±0.5, 4068N±004×3679E±004, h5km, Error ellipse: s-maj=5.4km s-min=4.1km az=17.9*
*CSEM **28** 05:59:50.0±0.6, 4070N×3682E, h3km±3km, MD3.2, Error ellipse: s-maj=4.7km s-min=3.2km az=14.0*
*DDA **28** 05:59:50.7, 4046N×3685E, h18km, Md3.0*
*ISK **28** 05:59:50.7, 4066N×3677E, h5km, MD3.2*

ISC 28 05:59:51.1±0.7, 4068N±004×3682E±004, h1km±6km, n14, σ0§68/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOKT	**Tokat**	**0.41**	**210**	*i* PG	**Pg**	**05 59 58.6**	**-0.3**
TOKT				*i* SG	**Sg**	**06 00 04.1**	**-0.2**
KVT	**Kavak**	**0.71**	**305**	PG	**Pg**	**06 00 04.8**	**+0.1**
KVT				SG	**Sg**	**06 00 13.8**	**-0.1**
GRSN	**GIRESUNGRSN**	**1.13**	**77**	*i* P	**Pg**	**06 00 12.1**	**-0.5**
GRSN				*i* S	**Sg**	**06 00 28.0**	**+0.7**
ESPY	**Espiye-Giresun**	**1.47**	**80**	PN	**Pn**	**06 00 18.6**	**-0.1**
DIKM	**Dikmen**	**1.53**	**310**	PN	**Pn**	**06 00 18.6**	**-0.9**
DIKM				SN	**Sn**	**06 00 39.5**	**-0.5**
CTKT	**Corum**	**1.54**	**269**	*i* P	**Pg**	**06 00 18.8**	**-1.8**
CTKT				*i* S	**Sg**	**06 00 42.0**	**+1.3**
YOZ	**Yozgat**	**1.55**	**228**	PN	**Pn**	**06 00 19.3**	**-0.4**
BOYT	**Boyabat**	**1.63**	**298**	*i* P	**Pg**	**06 00 21.7**	**-0.6**
BOYT				*i* S	**Sg**	**06 00 44.4**	**+1.1**
BYBT	**Boyabat**	**1.74**	**298**	*e*PN	**Pn**	**06 00 22.8**	**+0.4**
CORM	**Corum**	**1.74**	**254**	*e*PN	**Pn**	**06 00 22.7**	**+0.3**
BNN	**Bunyan**	**1.97**	**203**	*e*PN	**Pn**	**06 00 25.8**	**+0.2**
TOS	**Tosya**	**2.15**	**281**	*e*PN	**Pn**	**06 00 28.4**	**+0.4**
MALT	**Malatya**	**2.67**	**152**	*e*PN	**Pn**	**06 00 35.9**	**+0.8**
KAMT	**Kaman**	**2.72**	**242**	*e*PN	**Pn**	**06 00 35.9**	**+0.1**

IDC 28 06:08:51.4±4.3, 1637S×17655W, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.9/14, mbtmp3.9/3, Error ellipse: s-maj=333.7km s-min=35.3km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.67**	**258**	P	P	06 17 21.6	-0.5
	0.2nm,0.3s,baz=94,slow=8.1,SNR=4.1						
ASAR	**Alice Springs**	**46.92**	**253**	P	P	06 17 24.4	+0.3
	3.9nm,0.4s,baz=85,slow=8.3,SNR=59						
PDAR	**Pinedale Array**	**85.02**	**43**	P	P	06 21 29.2	+0.4
	0.6nm,0.7s,baz=224,slow=3.8,SNR=3.6						

*ISCJB **28** 06:46:33.9±5.4, 560S±02×275W±04, h119km±52km, mb4.1/5, Error ellipse: s-maj=42.4km s-min=26.9km az=159.6*
*IDC **28** 06:46:38.2±8.1, 5603S×2752W, h146km±75km, mb3.8/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.8/5, Error ellipse: s-maj=32.8km s-min=19.8km az=60.0*

ISC 28 06:46:35.1±5.3, 560S±02×274W±04, h113km±51km, n12, σ0§14/10, mb4.1/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.88**	**158**	*e*P	**Pn**	**06 50 17.5**	**-6.5**
VNA1				*e*		06 50 20.7	
VNA1				*e*		06 50 23.9	
VNA3	**Neumayer Olymp**	**17.07**	**160**	*e*P	**Pn**	**06 50 26.4**	**+0.1**
VNA3				*e*		06 50 29.7	
VNA3				*e*		06 50 32.5	
VNA2	**Neumayer--Watz**	**17.27**	**158**	*e*P	**Pn**	**06 50 28.8**	**0.0**
	baz=314,slow=13						
VNA2				*e*		06 50 32.3	
VNA2				*e*		06 50 35.9	
SNAA	**Sanae**	**18.83**	**156**	*e*P	**P**	**06 50 45.3**	**-0.3**
SNAA				*e*		06 50 48.2	
SNAA				*e*		06 50 50.9	
SNAA	**Sanae**	**18.83**	**156**	P	**P**	**06 50 45.7**	**+0.1**
	baz=294,slow=12						
QSPA	**South Pole Qui**	**34.23**	**180**	P	**P**	**06 53 09.6**	**+0.3**
	3.3nm,0.6s,mb4.4,baz=159,slow=2.3,SNR=28						
MAW	**Mawson**	**40.26**	**144**	P	**P**	**06 54 00.2**	**0.0**
	1.8nm,0.8s,mb4.0,baz=225,slow=11,SNR=6.1						
VNDA	**Vanda**	**46.60**	**183**	P	**P**	**06 54 50.8**	**-0.2**
	1.7nm,0.7s,mb3.9,baz=191,slow=3.4,SNR=9.5						
LPAZ	**La Paz**	**50.25**	**305**	P	**P**	**06 55 19.6**	**0.0**
	1.7nm,0.4s,mb4.3,baz=160,slow=4.8,SNR=14						
TORD	**Torodi Ar. Bea**	**73.10**	**30**	P	**P**	**06 57 52.9**	**0.0**
	1.2nm,0.5s,mb4.0,baz=199,slow=6.2,SNR=9.3						
YKA	**Yellowknife Ar**	**136.06**	**318**	PKP	PKPdf	07 05 39.9	-1.3
	0.2nm,0.5s,baz=129,slow=2.4,SNR=6.5						
SONM	**Songino Array**	**150.86**	**87**	PKPbc	PKPbc	07 06 11.8	-1.4
	1.6nm,0.6s,baz=234,slow=2.8,SNR=14						

*ISCJB **28** 06:49:31.3±0.6, 3836N±002×2046E±004, h5km, Error ellipse: s-maj=5.1km s-min=3.0km az=154.9*
*CSEM **28** 06:49:31.8±0.1, 3836N×2047E, h0km, MD3.6, Error ellipse: s-maj=2.0km s-min=1.1km az=66.0*
*THE **28** 06:49:31.5, 3834N×2046E, h3km, ML3.9*
*ATH **28** 06:49:31.3, 3833N×2044E, h5km±4km, MD3.6/10*
*NEIC **28** 06:49:31.3, 3833N×2044E, h5km, MD3.6(ATH), ML3.9(THE), After ATH.*

ISC 28 06:49:31.6±0.7, 3834N±003×2046E±005, h1km±6km, n22, σ1§26/34, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.19**	**147**	*e*PG	**Pg**	**06 49 35.7**	**+0.4**
VLS				*e*SG	**Sg**	**06 49 38.9**	**+1.1**
KFL	**Anninata**	**0.35**	**131**	*e*Pg	**Pg**	**06 49 38.3**	**0.0**
LKD	**Levkas**	**0.40**	**22**	*e*Pg	**Pg**	**06 49 38.7**	**-0.6**
LKD				*e*Sg	**Sg**	**06 49 44.4**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**109**	*e*PG	**Pg**	**06 49 47.3**	**-0.5**
RLS				*e*SB	**Sg**	**06 50 00.9**	**+2.2**
SELA	**Sela**	**1.13**	**93**	*e*Pg	**Pg**	**06 49 50.6**	**-2.7**
SELA				*e*Sg	**Sg**	**06 50 10.1**	**+2.1**
IGT	**Igoumenitsa**	**1.20**	**355**	*e*Pg	**Pg**	**06 49 54.4**	**-0.2**
IGT				*e*Sg	**Sg**	**06 50 11.5**	**+1.4**
IGT	**Igoumenitsa**	**1.20**	**355**	*e*Pg	**Pg**	**06 49 54.3**	**-0.3**
IGT				*e*Sg	**Sg**	**06 50 11.5**	**+1.4**
EVR	**Evrytania**	**1.21**	**61**	*e*PG	**Pg**	**06 49 54.0**	**-0.7**
EVR				*e*SB	**Sb**	**06 50 11.2**	**-0.1**
JAN	**Janina**	**1.35**	**13**	*e*PB	**Pb**	**06 49 57.1**	**-0.6**
KEK	**Kerkira**	**1.47**	**340**	*e*PG	**Pg**	**06 49 58.6**	**-1.1**
KEK				*e*SB	**Sg**	**06 50 20.4**	**+1.6**
AGG	**Agios Georgios**	**1.62**	**64**	*e*Pg	**Pg**	**06 50 00.8**	**-1.8**
AGG				*e*Sg	**Sg**	**06 50 24.0**	**+0.4**
ITM	**Ithomi**	**1.64**	**134**	*e*PB	**Pb**	**06 50 03.1**	**+0.5**
THL	**Klokotos Trika**	**1.72**	**44**	*e*PG	**Pg**	**06 50 03.5**	**-1.2**
THL				*e*SN	**Sg**	**06 50 28.8**	**+1.8**
PYL	**PYLOS**	**1.76**	**144**	*e*Pb	**Pb**	**06 50 02.7**	**-2.0**
VLX	**Vlachokerasia**	**1.80**	**122**	*e*Pb	**Pb**	**06 50 03.0**	**-2.4**
VLX				*e*Sb	**Sb**	**06 50 27.2**	**-1.3**
LTK	**Loutraki**	**2.00**	**98**	*e*PN	**Pn**	**06 50 06.7**	**+0.1**
LKR	**Lokris**	**2.02**	**80**	*e*PN	**Pn**	**06 50 07.6**	**+0.8**
KZN	**Kozani**	**2.21**	**27**	*e*PG	**Pg**	**06 50 12.6**	**-1.5**
DID	**Didima**	**2.35**	**110**	*e*Pn	**Pn**	**06 50 12.0**	**+0.7**
DID				*e*Sn	**Sn**	**06 50 40.6**	**-0.2**
FNA	**Florina**	**2.54**	**16**	*e*Pn	**Pn**	**06 50 13.2**	**-0.8**
VLI	**Veliai**	**2.55**	**129**	*e*PN	**Pn**	**06 50 16.5**	**+2.4**
TIP	**Timpagrande**	**3.01**	**287**	P	**Pn**	**06 50 22.0**	**+1.6**

*NEIC **28** 06:55:09.1, 897N×5959W, h35km, MW4.0(CAR), After CAR.*
*ISCJB **28** 06:55:10.4±1.6, 889N±004×6014W±008, h10km±8km, Error ellipse: s-maj=13.6km s-min=6.3km az=175.0*

ISC 28 06:55:11.4±1.6, 890N±004×6009W±008, h13km±9km, n17, σ1§44/29, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	**1.85**	**329**	*e*P	**Pn**	**06 55 44.8**	**+1.9**
TBH				*e*S	**Sn**	**06 56 07.8**	**+1.7**
RIOV	**Rio Grande**	**1.89**	**244**	*e*P	**Pn**	**06 55 45.4**	**+1.9**
RIOV				*e*S	**Sn**	**06 56 11.0**	**+3.8**
TPP	**Pointe-a-Pierr**	**1.95**	**317**	*e*P	**Pg**	**06 55 53.9**	**+5.0**
TPP	**Pointe-a-Pierr**	**1.95**	**317**	*e*P	**Pg**	**06 55 55.7**	**+6.9**
TPP				*e*S	**Sg**	**06 56 13.5**	**-0.7**
TRN	**Trinidad (W)**	**2.17**	**323**	*e*P	**Pn**	**06 55 50.1**	**+2.9**
TRN				*e*S	**Sn**	**06 56 17.2**	**+3.1**
TPR	**Prospect**	**2.38**	**343**	*e*P	**Pn**	**06 55 51.7**	**+1.6**
TPR				*e*S	**Sn**	**06 56 17.2**	**-1.9**
TCE	**Chacachacare**	**2.43**	**318**	*e*P	**Pn**	**06 55 49.5**	**-1.3**
TCE	**Chacachacare**	**2.43**	**318**	*e*P	**Pn**	**06 55 50.6**	**-0.2**
TCE				*e*S	**Sn**	**06 56 20.0**	**-0.4**
GUIV	**Guiria**	**2.73**	**310**	*e*P	**Pn**	**06 55 53.7**	**-1.2**
GUIV				*e*S	**Sn**	**06 56 27.1**	**-0.8**
GUNV	**Guanoco**	**3.08**	**294**	*e*P	**Pn**	**06 56 00.2**	**+0.4**
GUNV				*e*S	**Sn**	**06 56 37.6**	**+1.0**
GURV	**El Guri**	**3.17**	**249**	*e*P	**Pn**	**06 56 02.3**	**+1.2**
GURV				*e*S	**Sn**	**06 56 40.8**	**+2.0**
ORIV	**Oritupano**	**3.28**	**273**	*e*P	**Pn**	**06 56 03.2**	**+0.6**
LUEV	**Luepa**	**3.32**	**204**	*e*P	**Pn**	**06 56 01.8**	**-1.4**
LUEV				*e*S	**Sn**	**06 56 40.6**	**-1.9**
ITEV	**Isla Los Testi**	**3.87**	**309**	*e*P	**Pn**	**06 56 09.2**	**-1.4**
ITEV				*e*S	**Sn**	**06 56 54.0**	**-1.9**
BIRV	**Birongo**	**6.29**	**285**	*e*P	**Pn**	**06 56 44.1**	**+0.1**
BIRV				*e*S	**Sn**	**06 57 54.6**	**-1.2**
BAUV	**El Baul**	**7.86**	**271**	*e*P	**Pn**	**06 57 05.0**	**-0.5**
SDV	**Santo Domingo**	**10.42**	**271**	*e*Pn	**Pn**	**06 57 39.1**	**-1.5**
	3.4nm,0.4s						

IDC 28 07:03:21.5±2.3, 432S×12921E, h0km, mb3.8/1, mb1 3.5/3, mb1mx3.4/14, mbtmp3.4/3, ML3.0/2, Error ellipse: s-maj=170.9km s-min=29.3km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.31**	**163**	Pn	Pn	07 07 10.0	-2.1
	0.1nm,0.3s,baz=345,slow=13,SNR=4.9						
ASAR	**Alice Springs**	**19.76**	**167**	P	Pn	07 07 54.2	-0.4
	0.1nm,0.3s,baz=342,slow=10.0,SNR=5.9						
MKAR	**Makanchi Array**	**65.57**	**327**	P	P	07 14 07.1	+0.1
	0.3nm,0.3s,baz=128,slow=5.9,SNR=3.7						

CASC 28 07:07:45.6±2.4, 993N×8565W, h11km±15km, MD3.6, ML3.1,5C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCR	**Jicaral**	**0.54**	**99**	⇓*i*P	Pg	07 07 56.2	+0.1
JCR				*e*S	Sg	07 08 05.7	+2.5
2RIO	**Dos Rios de Up**	**0.72**	**35**	⇑*e*P	Pg	07 08 03.4	+3.8
2RIO				*e*S	Sg	07 08 16.3	+7.3
LIM1	**Limonal**	**0.86**	**27**	⇑*e*P	Pg	07 08 01.4	-0.7
LIM1				*e*S	Sg	07 08 12.6	-0.7
CUI		**0.86**	**33**	⇑*i*P	Pg	07 08 01.5	-0.8
CUI				*e*S	Sg	07 08 13.5	-0.1
FORC	**Fortuna**	**1.11**	**61**	*e*P	Pb	07 08 05.7	-1.0
FORC				*e*S	Sb	07 08 22.3	+1.2
CGA2	**Cerro Gallo 2**	**1.17**	**86**	*e*P	Pb	07 08 05.9	-1.9
SSNN	**San Juan del S**	**1.36**	**352**	*e*P	Pn	07 08 09.7	-0.8
MADN	**Villa Maderas**	**1.47**	**5**	*e*P	Pn	07 08 11.4	-0.6
MADN				*i*		07 08 18.0	
	comp=Z,248nm,0.3s						
LAJ	**Bijagual**	**1.51**	**93**	*e*P	Pn	07 08 04.1	-8.4
LCR2	**La Lucha 2**	**1.64**	**97**	*e*P	Pn	07 08 12.8	-1.5
URSC	**Urasca**	**1.85**	**93**	*e*P	Pn	07 08 16.8	-0.4
APON	**Apoyo**	**2.01**	**348**	*e*P	Pn	07 08 21.5	+2.0
APON				*e*S	Sn	07 08 46.0	+1.4
BAR1		**2.41**	**106**	*e*P	Pn	07 08 23.1	-1.8
COPN	**Copaltepe**	**2.42**	**338**	⇑*e*P	Pn	07 08 24.4	-0.7
LAPE	**La Pedrera**	**14.11**	**99**	⇑*i*P		07 08 01.4	
LAPE				*e*S		07 08 21.0	

*JMA **28** 07:09:59.0±0.2, 2280N×14525E, h0km, M5.7*
*BJI **28** 07:10:00.0, 2182N×145.17E, h103km, mB4.9, mb4.9*
*IDC **28** 07:10:00.3±1.9, 2205N×14464E, h48km±17km, mb4.4/18, mb1 4.5/22, mb1mx4.5/27, mbtmp4.5/22, ML4.7/4, MS4.0/20, Ms1 4.0/20, ms1mx4.0/26, Error ellipse: s-maj=19.3km s-min=10.7km az=89.0*
*ISCJB **28** 07:10:03.3±0.8, 2230N±003×14450E±004, h76km±6km, mb4.8/69, Error ellipse: s-maj=6.2km s-min=5.6km az=10.9*
*MOS **28** 07:10:05.3±0.8, 2212N×14441E, h103km, mb4.7/19, Error ellipse: s-maj=14.5km s-min=6.1km az=106.1*
*NEIC **28** 07:10:06.6±0.9, 2209N×14445E, h104km±8km, mb4.8/28, Error ellipse: s-maj=5.9km s-min=4.1km az=87.0*

ISC 28 07:10:04.6±0.7, 2227N±003×14455E±004, h77km±5km, h94km±2.9km; pP-P, n197, σ1§10/202, mb4.8/69, 12C-15D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**4.85**	**334**	P	**Pn**	**07 11 13.7**	**-1.3**
JHHJ				*e*S	**Sn**	**07 12 09.4**	**-0.5**
CBIJ	**Chichi jima**	**5.26**	**336**	P	**Pn**	**07 11 18.8**	**-1.9**
CBIJ				*e*S	**Sn**	**07 12 19.4**	**-0.6**
CBIJ	**Chichi jima**	**5.26**	**336**	P	**Pn**	**07 11 19.0**	**-1.7**
	200nm,0.3s,baz=226,slow=5.1,SNR=42						
CBIJ				S	**Sn**	**07 12 17.6**	**-2.4**
	238nm,0.3s,baz=316,slow=23,SNR=14						
GUMO	**Guam**	**8.64**	**178**	*e*Pn	**Pn**	**07 12 07.8**	**+0.9**
JHJ	**Hachijo jima 2**	**11.60**	**340**	S	**Sn**	**07 14 48.1**	**-6.7**
	13nm,0.3s,baz=270,slow=19,SNR=3.0						
BSO1	**Boso 1**	**12.73**	**347**	P	**Pn**	**07 12 59.5**	**-3.0**
JOD2	**Odawara 2**	**13.80**	**341**	P	**Pn**	**07 13 14.5**	**-2.2**
JOD2				*e*S	**Sn**	**07 15 41.7**	**-6.6**
JRY	**Ryogami san**	**14.55**	**341**	P	**Pn**	**07 13 24.2**	**-2.3**
JRY				*e*S	**Sn**	**07 15 58.1**	**-8.6**
JTO	**Tosashimizu**	**14.81**	**318**	P	**Pn**	**07 13 29.3**	**-0.6**
MJAR	**Matsushiro Arr**	**15.25**	**340**	P	**Pn**	**07 13 33.4**	**-2.1**
MJAR				S	**S**	**07 16 16.0**	**-20**
MJAR	**Matsushiro Arr**	**15.25**	**340**	P	**Pn**	**07 13 33.4**	**-2.1**
	4.1nm,0.3s,baz=165,slow=11,SNR=25						
MJAR				S	**S**	**07 16 16.0**	**-20**
	0.5nm,0.3s,baz=142,slow=15,SNR=4.7						
MJAR				LR	LR	07 18 07.1	
	comp=Z,80nm,19.8s,baz=165,slow=32						
MAJO	**Matsushiro**	**15.25**	**340**	*e*Pn	**Pn**	**07 13 36.2**	**+0.7**
	40nm,0.9s						
MAJO	**Matsushiro**	**15.25**	**340**	*e*P	**Pn**	**07 13 36.2**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,40nm,0.9s						
MAT	**Matsushiro**	**15.25**	**340**	P	**Pn**	**07 13 34.0**	**-1.5**
MAT				S	**S**	**07 16 21.5**	**-14**
MAT	**Matsushiro**	**15.25**	**340**	P	**Pn**	**07 13 34.4**	**-1.1**
MAT				*e*S	**S**	**07 16 17.1**	**-19**
JOW	**Kunigami**	**15.49**	**290**	P	**Pn**	**07 13 39.2**	**+0.6**
	comp=Z,4.3nm,0.3s,baz=122,slow=13,SNR=9.6						
JOW				LR	LR	07 18 58.3	
	comp=Z,321nm,21.1s,baz=283,slow=34						
JHS	**Saijyo**	**16.16**	**324**	P	**Pn**	**07 13 48.5**	**+1.6**
JSJ	**Shimokoshiki**	**16.19**	**308**	P	**Pn**	**07 13 52.4**	**+5.0**
JNU	**Nakatsue**	**16.21**	**315**	P	**Pn**	**07 13 49.0**	**+1.4**
	comp=Z,1.0nm,0.3s,baz=79,slow=16,SNR=8.2						
JNU				LR	LR	07 19 25.4	
	comp=Z,225nm,21.6s,baz=90,slow=34						
JMK	**Ichinoseki**	**16.87**	**351**	*e*S	**S**	**07 16 51.1**	**-18**
ERM	**Erimo**	**19.72**	**357**	*e*P	**Pn**	**07 14 29.5**	**-0.5**
	comp=Z,124nm,1.4s						
ERM	**Erimo**	**19.72**	**357**	*e*P	**Pn**	**07 14 29.5**	**-0.5**
ERM				pmax	pmax		
	comp=Z,124nm,1.4s						
JKB	**Kayabe**	**19.78**	**352**	P	**Pn**	**07 14 30.7**	**0.0**
JOSM	**Okushiri--Mats**	**20.21**	**349**	P	**P**	**07 14 34.4**	**+1.2**
KSRS	**Korea Array**	**20.85**	**320**	P	**P**	**07 14 41.5**	**+1.3**
KSRS				pmax	pmax		
	comp=Z,20nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,450nm,21.5s						
KSRS	**Korea Array**	**20.85**	**320**	P	**P**	**07 14 41.5**	**+1.3**
	comp=Z,20nm,0.9s,baz=143,slow=9.4,SNR=29						
KSRS				LR	LR	07 22 36.8	
	comp=Z,450nm,21.5s,baz=135,slow=36						
YHNB	**Yeheng**	**21.39**	**281**	*e*P	**P**	**07 14 45.6**	**-0.4**
ASAJ	**Asahikawa**	**21.85**	**356**	P	**P**	**07 14 52.0**	**+1.3**
ASAJ				pmax	pmax		
	comp=Z,13nm,0.8s						
ASAJ				MLR	MLR		
	comp=Z,409nm,21.9s						
ASAJ	**Asahikawa**	**21.85**	**356**	P	**P**	**07 14 52.0**	**+1.2**
	comp=Z,13nm,0.8s,mb4.3,baz=132,slow=16,SNR=7.5						
ASAJ				LR	LR	07 22 23.4	
	comp=Z,409nm,21.9s,baz=344,slow=34						
VLA	**Vladivostok**	**23.31**	**336**	*c*eP	**P**	**07 15 07.5**	**+1.8**
VLA				*i* *PP		07 15 28.9	
VLA				pmax	pmax		
	comp=Z,94nm,1.3s,mb5.0						
YSS	**Yuzh-Sakhalins**	**24.67**	**357**	*e*P	**P**	**07 15 19.0**	**+0.9**
	comp=Z,38nm,1.0s,mb4.8						
YSS	**Yuzh-Sakhalins**	**24.67**	**357**	⇑*i*P	**P**	**07 15 19.0**	**+0.9**
YSS				*e*		07 15 43.0	
YSS				pmax	pmax		
	comp=Z,40nm,1.2s,mb4.7						
NJ2	**Nanjing**	**24.80**	**299**	*e*P	**P**	**07 15 20.0**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8						
MDJ	**Mudanjiang**	**25.46**	**335**	P	**P**	**07 15 25.8**	**+0.5**
MDJ				AP	pP	07 15 45.8	+2.7
MDJ				XP	sP	07 15 56.8	+4.7
MDJ				PCP	PcP	07 18 54.8	-0.6
MDJ				S	**S**	**07 19 48.0**	**+1.2**
MDJ				PCS	PcS	07 22 36.3	+0.5
MDJ				AMB	AMB		
	comp=Z,8.0nm,1.2s,mb4.0						
MDJ				AMB	AMB		
	comp=Z,145nm,5.4s						
MDJ				LR	LR		
	comp=N,258nm,20.8s						
MDJ				LR	LR		
	comp=E,235nm,15.6s						
MDJ				LR	LR		
	comp=Z,372nm,20.8s						
MDJ	**Mudanjiang**	**25.46**	**335**	*e*P	**P**	**07 15 26.3**	**+0.9**
	comp=Z,34nm,1.1s,mb4.7						
DL2	**Dalian**	**25.67**	**315**	P	**P**	**07 15 29.0**	**+1.8**
DL2				S	**S**	**07 19 53.5**	**+3.3**
DL2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
DL2				LR	LR		
	comp=N,130nm,13.8s						
DL2				LR	LR		
	comp=E,110nm,14.6s						
DL2				LR	LR		
	comp=Z,200nm,18.4s						
SNY	**Shenyang**	**26.26**	**323**	⇓P	**P**	**07 15 32.5**	**-0.1**
SNY				S	**S**	**07 19 57.0**	**-2.5**
SNY				AMB	AMB		
	comp=Z,23nm,0.7s,mb4.7						
SNY				LR	LR		
	comp=N,202nm,21.3s						
SNY				LR	LR		
	comp=E,272nm,21.6s						
SNY				LR	LR		
	comp=Z,373nm,20.4s						
CN2	**Changchun**	**26.66**	**328**	*e*P	**P**	**07 15 38.0**	**+1.8**
CN2				*e*AP	pP	07 15 59.5	+5.5
CN2				*e*S	**S**	**07 20 02.5**	**-3.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,800nm,20.0s						
CN2				LR	LR		
	comp=E,500nm,20.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
HABR	**Khabarovsk**	**27.23**	**346**	P	**P**	**07 15 40.5**	**-0.7**
HABR				*e*PP	pP	07 16 02.8	+3.8
HABR				*e*SP		07 16 14.7	
HABR				*e*		07 16 31.8	
HABR				*e*		07 18 55.7	
HABR				*e*S	**S**	**07 20 14.3**	**-0.2**
HABR				*e*		07 20 53.1	
HABR				*e*		07 26 20.1	
WHN	**Wuhan**	**28.21**	**293**	P	**P**	**07 15 55.3**	**+5.1**
KLR	**Kul'dur**	**28.76**	**342**	*e*P	**P**	**07 15 52.8**	**-2.0**
KLR				MLR	MLR		
	comp=Z,1μm,14.0s						
BJI	**Beijing**	**29.87**	**313**	P	**P**	**07 16 08.8**	**+4.0**
BJI				AP	pP	07 16 25.8	+3.0
BJI				S	**S**	**07 20 51.3**	**-5.1**
BJI				LR	LR		
	comp=N,213nm,21.6s						
BJI				LR	LR		
	comp=E,98nm,19.1s						
BJI				LR	LR		
	comp=Z,245nm,27.8s						
MYLDM	**Lahad Datu**	**30.38**	**240**	⇓P	**P**	**07 16 11.1**	**+1.5**
MYLDM	**Lahad Datu**	**30.38**	**240**	⇑P	**P**	**07 16 11.9**	**+2.3**
KDM	**Kudat**	**30.77**	**244**	⇓P	**P**	**07 16 14.5**	**+1.5**
SDKM	**Sandakan**	**31.18**	**242**	⇑P	**P**	**07 16 18.2**	**+1.7**
TSM	**Tawau**	**31.41**	**239**	⇑P	**P**	**07 16 19.9**	**+1.3**
KKM	**Kota Kinabalu**	**31.76**	**244**	⇑P	**P**	**07 16 21.5**	**-0.2**
KKM	**Kota Kinabalu**	**31.76**	**244**	⇓P	**P**	**07 16 21.8**	**0.0**
HIA	**Hailar**	**33.34**	**330**	*e*P	**P**	**07 16 36.0**	**+0.9**
	comp=Z,4.1nm,0.4s,mb4.6						
HIA	**Hailar**	**33.34**	**330**	*e*P	**P**	**07 16 36.0**	**+0.9**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GYA	**Guiyang**	**34.68**	**285**	P	**P**	**07 16 46.5**	**-0.5**
GYA				AP	pP	07 17 09.3	+4.1
GYA				XP	sP	07 17 20.5	+6.4
GYA				PP	PP	07 18 07.5	+0.6
GYA				PCP	PcP	07 19 20.5	+0.9
GYA				S	**S**	**07 22 09.3**	**-2.2**
GYA				SCP	ScP

comp=E,103nm,25.2s
KMI LR LR
comp=Z,129nm,26.4s
KSM Kuching 39.18 243 ⇑P **P 07 17 24.7 -0.6**
ULN Ulaanbaatar 39.34 320 *eP* **P 07 17 26.0 -0.2**
comp=E,8.2nm,0.9s,mb4.6
ULN Ulaanbaatar 39.34 320 *eP* **P 07 17 26.0 -0.2**
ULN pmax pmax
comp=E,8.0nm,0.9s,mb4.5
SONM Songino Array 39.72 319 P **P 07 17 30.3 +0.9**
SONM 07 19 34.3
SONM Songino Array 39.72 319 P **P 07 17 30.3 +0.9**
comp=Z,3.0nm,0.6s,mb4.3,baz=130,slow=8.7,SNR=24
SONM PcP PcP 07 19 34.3 -0.3
comp=Z,1.4nm,0.6s,baz=134,slow=3.5,SNR=3.2
SONM LR LR 07 34 17.0
comp=Z,320nm,21.8s,baz=118,slow=36
SEY Seymchan 40.99 5⇓*eP* **P 07 17 41.1 +1.5**
YAK Yakutsk 41.03 349 *eP* **P 07 17 40.5 +0.5**
YAK *e* 07 19 40.7
YAK *eS* **S 07 23 45.8 -0.8**
YAK *eSS* SS 07 26 50.7 -0.6
YAK pmax pmax
comp=Z,22nm,0.8s,mb5.0
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,12nm,0.5s,mb5.0
YAK smax
comp=E,310nm,8.1s
YAK smax
comp=N,133nm,4.9s
GTA Gaotai 41.58 305 *eP* **P 07 17 45.5 +0.6**
GTA AP pP 07 18 05.5 +2.1
GTA XP sP 07 18 18.3 +6.1
GTA S **S 07 23 54.3 -1.1**
GTA AMB AMB
comp=Z,79nm,4.6s
GTA LR LR
comp=N,190nm,16.4s
GTA LR LR
comp=E,200nm,20.1s
GTA LR LR
comp=Z,160nm,16.0s
BOD Bodaibo 41.82 336 *eP* **P 07 17 46.9 +0.4**
BOD pmax pmax
comp=E,5.0nm,1.1s,mb4.2
CTA Charters Tower 42.13 178 *eP* **P 07 17 46.3 -3.1**
comp=Z,7.1nm,0.9s,mb4.4
CTA Charters Tower 42.13 178 *eP* **P 07 17 46.3 -3.1**
CTA pmax pmax
comp=Z,7.0nm,0.9s
CTA Charters Tower 42.13 178 P **P 07 17 45.0 -4.4**
comp=Z,9.3nm,0.8s,mb4.5,baz=357,slow=10.0,SNR=7.7
CTA LR LR 07 33 50.8
comp=Z,183nm,20.4s,baz=40,slow=34
CTAO Charters Tower 42.13 178 *eP* **P 07 17 49.1 -0.4**
ZAK Zakamensk 42.68 321 *eP* **P 07 17 54.3 +0.7**
ZAK pmax pmax
comp=E,5.0nm,1.3s,mb4.1
CHTO Chiang Mai 42.73 274 *eP* **P 07 17 53.5 -0.9**
TLY Talaya 43.05 323 *eP* **P 07 17 56.8 +0.2**
TLY *eS* **S 07 24 11.5 -5.2**
TLY pmax pmax
comp=E,5.0nm,1.2s,mb4.1
TLY MLR MLR
comp=Z,235nm,20.0s
WB2 Warramunga Arr 43.12 194 *eP* **P 07 17 54.6 -2.9**
WRA Warramunga Arr 43.12 194 P **P 07 17 54.6 -2.9**
WRA 07 19 43.7
WRA Warramunga Arr 43.12 194 P **P 07 17 54.6 -2.8**
comp=Z,73nm,0.5s,mb5.6,baz=17,slow=8.9,SNR=650
WRA PcP PcP 07 19 43.7 -2.4
comp=Z,1.3nm,0.4s,baz=9.8,slow=3.5,SNR=2.9
WRA ScP ScP 07 23 32.1 +1.6
comp=Z,3.1nm,1.1s,baz=6.0,slow=4.4,SNR=5.5
WRA LR LR 07 34 41.8
comp=Z,300nm,19.4s,baz=5.0,slow=34
KTGM Kuala Trenggan 43.41 253 ⇓P **P 07 17 59.9 -0.1**
FITZ Fitzroy Crossi 44.18 206 ⇑*iP* **P 07 18 03.8 -2.2**
comp=Z,40nm,0.8s,mb5.2
FITZ Fitzroy Crossi 44.18 206 P **P 07 18 03.8 -2.2**
comp=Z,25nm,0.8s,mb5.0,baz=35,slow=9.5,SNR=28
MYKOM Kota Tinggi 44.47 248 ⇓P **P 07 18 09.5 +1.0**
KGM Kluang 44.81 249 ⇓P **P 07 18 12.3 +1.1**
SNG Songkhla 44.87 257 P **P 07 18 12.0 +0.3**
KULM Kulim 45.64 255 *eP* **P 07 18 15.6 -2.2**
KULM Kulim 45.64 255 ⇑P **P 07 18 18.5 +0.7**
FRIM Kepong 45.70 252 ⇑P **P 07 18 19.0 +0.7**
ASAR Alice Springs 46.82 193 P **P 07 18 24.1 -2.7**
comp=Z,20nm,0.6s,mb5.0,baz=16,slow=9.1,SNR=254
ASAR PcP PcP 07 19 57.6 -1.2
comp=Z,1.9nm,0.8s,baz=10,slow=5.7,SNR=3.1
BILL Bilibino 47.72 11 *eP* **P 07 18 32.9 -0.4**
comp=Z,123nm,1.5s,mb5.5
BILL Bilibino 47.72 11⇓*eP* **P 07 18 37.8 +4.6**
BILL pmax pmax
comp=Z,23nm,1.7s,mb4.7
LSA Lhasa 48.22 290 P **P 07 18 39.0 +1.3**
TIXI Tiksi 50.22 354 *eP* **P 07 18 52.9 +0.6**
comp=Z,5.0nm,0.9s,mb4.4
TIXI Tiksi 50.22 354 *eP* **P 07 18 52.9 +0.6**
TIXI pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
GAMB Gambell 50.59 23 *eP* **P 07 19 02.6 +7.4**
WMQ Urumqi 51.20 309 P **P 07 19 00.0 -0.2**
WMQ AP pP 07 19 23.0 +3.7
WMQ XP sP 07 19 34.3 +6.3
WMQ PCP PcP 07 20 14.3 -0.2
WMQ PP PP 07 20 59.3 +1.8
WMQ S **S 07 26 09.5 -3.3**
WMQ AMB AMB
comp=Z,26nm,0.7s,mb5.4
WMQ AMB AMB
comp=Z,108nm,4.6s
WMQ LR LR
comp=N,61nm,20.4s
WMQ LR LR
comp=E,80nm,19.1s
WMQ LR LR
comp=Z,112nm,19.0s
TAPN Taplejung 51.48 288 *eP* **P 07 19 03.1 +0.6**
comp=Z,44nm,0.8s,mb5.5
ODAN Odare 51.82 287 *eP* **P 07 19 05.0 -0.1**
comp=Z,60nm,1.1s,mb5.5
JIRN Jiri 52.77 288 *eP* **P 07 19 12.7 +0.6**
comp=Z,29nm,0.5s,mb5.5
STKA Stephens Creek 53.91 183 *eP* **P 07 19 17.0 -3.2**
comp=Z,8.4nm,0.7s,mb4.9
STKA *e* 07 19 30.9
STKA Stephens Creek 53.91 183 P **P 07 19 16.7 -3.4**
comp=Z,10nm,0.7s,mb5.0,baz=354,slow=8.1,SNR=19
STKA LR LR 07 40 58.0
comp=Z,345nm,19.5s,baz=24,slow=35
GKN Gorkha 54.08 289 *eP* **P 07 19 21.5 -0.2**
comp=Z,14nm,0.4s,mb5.4
ZALV Zalesovo Beam 54.56 321 P **P 07 19 24.6 -0.1**
ZALV PcP PcP 07 20 25.4 -1.6
ZALV Zalesovo Beam 54.56 321 P **P 07 19 24.6 -0.1**
comp=Z,3.9nm,0.5s,mb4.7,baz=110,slow=8.4,SNR=12
ZALV PcP PcP 07 20 25.4 -1.6
comp=Z,3.9nm,0.5s,baz=115,slow=4.8,SNR=4.2
ZAL Zalesovo 54.57 321 P **P 07 19 24.6 -0.1**
ZAL 07 20 25.4
KOLN Koldanda 55.03 289 *eP* **P 07 19 28.5 0.0**
comp=Z,22nm,0.7s,mb5.3
FORT Forrest 55.07 197 ⇓*iP* **P 07 19 26.2 -2.4**
comp=Z,60nm,1.0s,mb5.6
MK31 Makanchi Array 55.25 312 *i* P **P 07 19 30.2 +0.4**
MK31 pmax pmax
comp=Z,10.0nm,0.7s,mb5.0
MKAR Makanchi Array 55.25 312 P **P 07 19 30.7 +0.9**
MKAR 07 20 28.3
MKAR Makanchi Array 55.25 312 P **P 07 19 30.7 +0.9**
comp=Z,12nm,0.7s,mb5.0,baz=92,slow=9.5,SNR=64
MKAR PcP PcP 07 20 28.3 -1.5
comp=Z,3.7nm,0.6s,baz=78,slow=5.4,SNR=3.7
MKAR ScP ScP 07 24 24.7 +2.9
comp=Z,0.3nm,0.5s,baz=88,slow=4.5,SNR=3.6
MKAR LR LR 07 45 50.9
comp=Z,92nm,19.0s,baz=302,slow=39
SVW2 Sparrevohn 56.27 30 *eP* **P 07 19 38.2 +1.3**
KDAK Kodiak Island 57.01 35 P **P 07 19 42.2 +0.1**
comp=Z,8.3nm,0.9s,mb4.8,baz=308,slow=19,SNR=5.3

KURK Kurchatov 57.93 317 *eP* **P 07 19 48.2 -0.5**
KLBR Kellerberrin 59.39 207 *eP* **P 07 19 55.6 -3.4**
comp=Z,43nm,0.7s,mb5.6
ULHL Ulahol 59.56 307 P **P 07 20 01.9 +1.7**
SNR=12
MUN Mundaring 60.38 208 *eP* **P 07 20 03.6 -2.2**
COLA College 60.57 27⇑*eP* **P 07 20 11.0 +4.3**
FRU Bishkek 60.72 308 *eP* **P 07 20 08.5 +0.3**
FRU *e* 07 20 42.0
AAK Ala-Archa 60.83 307 P **P 07 20 09.9 +1.1**
SNR=6.7
UCH Uchtor 60.84 307 P **P 07 20 11.0 +2.0**
SNR=16
EKS2 Erkin-Say 61.35 307 *eP* **P 07 20 12.6 +0.1**
comp=Z,6.9nm,0.9s,mb4.7
EKS2 Erkin-Say 61.35 307 P **P 07 20 13.8 +1.4**
SNR=6.1
AML Almayashu 61.46 307 *eP* **P 07 20 13.1 -0.1**
comp=Z,13nm,0.8s,mb5.0
AML Almayashu 61.46 307 P **P 07 20 15.1 +2.0**
SNR=15
CHKZ Chkalovo 62.91 320 *i* P **P 07 20 22.0 -0.6**
CHKZ pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
BRVK Borovoye 63.13 319 *eP* **P 07 20 23.6 -0.4**
KK31 Karatay Array 63.70 308 *i* P **P 07 20 28.5 +0.5**
KK31 pmax pmax
comp=Z,14nm,0.7s,mb4.9
DAWY Dawson 64.12 28 *eP* **P 07 20 30.6 +0.1**
INK Inuvik 66.54 24 *eP* **P 07 20 46.4 +0.4**
INK Inuvik 66.54 24 P **P 07 20 45.4 -0.6**
comp=Z,2.3nm,0.7s,mb4.1,baz=268,slow=6.4,SNR=13
ARU Arti 69.56 324 *eP* **P 07 21 05.0 -0.1**
comp=Z,8.7nm,0.7s,mb4.7
ARU Arti 69.56 324*d iP* **P 07 21 04.8 -0.3**
ARU pP 07 21 25.1 0.0
ARU 07 23 38.3
ARU *eS* S 07 30 07.0 +0.1
ARU SS SS 07 34 32.9 -2.5
ARU pmax pmax
comp=Z,15nm,1.2s,mb4.7
AKTO Aktyubinsk 71.00 318 LR LR 07 53 25.0
comp=Z,88nm,20.9s,baz=248,slow=37
YKA Yellowknife Ar 75.36 28 P **P 07 21 39.1 -0.4**
comp=Z,2.0nm,0.5s,mb4.1,baz=293,slow=5.8,SNR=52
YKA LR LR 07 54 56.9
comp=Z,94nm,18.2s,baz=215,slow=36
PPT Papeete 75.63 116 *eLQ* 07 22 08.2
comp=Z,678nm,24.8s
PPT *eLR* LR 07 23 10.4
comp=Z,357nm,25.2s
PPT Papeete 75.63 116 *eLR* LR 07 46 06.5
comp=Z,146nm,22.8s
PPT Papeete 75.63 116 LR LR 07 54 25.3
comp=Z,222nm,18.0s,baz=266,slow=35
RES Resolute Bay 76.23 14 *eP* **P 07 21 44.8 +0.6**
TBI Tubuai 78.58 121 *eLQ* 07 22 28.6
comp=Z,601nm,26.8s
TBI *eLR* LR 07 23 21.7
comp=Z,232nm,30.5s
TBI Tubuai 78.58 121 *eLR* LR 07 46 13.4
comp=Z,141nm,25.5s
ARCES ARCESS Array B 78.78 342 P **P 07 21 59.2 +0.7**
ARCES ARCESS Array B 78.78 342 P P **07 21 59.2 +0.7**
comp=Z,4.0nm,0.8s,mb4.3,baz=68,slow=6.7,SNR=11
NEW Newport 79.01 42 *eP* **P 07 22 00.3 +0.1**
JOF Joensuu 80.34 335 *ep* **P 07 22 06.4 -0.7**
comp=Z,13nm,0.5s,mb5.0
CMB Columbia Cole 80.41 53 *eP* **P 07 22 07.8 -0.2**
NVAR Mina Array Bea 81.80 52 P **P 07 22 16.1 +0.8**
comp=Z,3.6nm,0.7s,mb4.3,baz=272,slow=3.5,SNR=10.0
VRSR Storozhevoye 82.03 322 *eP* **P 07 22 16.6 +0.3**
VRSR pmax pmax
comp=Z,5.0nm,0.9s,mb4.3
VRSR pmax pmax
comp=N,2.0nm,0.8s
VRSR pmax pmax
comp=E,2.0nm,0.8s
HLID Hailey 82.54 46 *eP* **P 07 22 19.0 -0.1**
KAF Kangasniemi 82.74 335 *ep* **P 07 22 18.0 -1.8**
comp=E,4.8nm,0.5s,mb4.6,baz=53,slow=4.8
KAF Kangasniemi 82.74 335 *eP* **P 07 22 18.0 -1.8**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
LRM Limekiln Ridge 82.90 43 *eP* **P 07 22 20.9 0.0**
KIV Kislovodsk 82.93 315 *eP* **P 07 22 21.0 -0.1**
KIV pmax pmax
comp=Z,14nm,1.1s,mb4.7
KIV MLR MLR
comp=Z,94nm,19.0s
FINES FINESS Array B 83.21 335 P **P 07 22 21.7 -0.5**
comp=Z,8.2nm,0.5s,mb4.8,baz=70,slow=5.6,SNR=76
BOZ Bozeman (W) 83.54 43 *eP* **P 07 22 23.9 -0.1**
QLMT Earthquake Lak 83.97 44 *eP* **P 07 22 26.8 +0.3**
VSU Vasula 84.64 332⇓*eP* **P 07 22 29.0 -0.6**
FFC Flin Flon 84.67 32 *eP* **P 07 22 30.0 +0.2**
comp=Z,8.1nm,0.9s,mb4.7
FFC Flin Flon 84.67 32 *eP* **P 07 22 30.0 +0.2**
FFC pmax pmax
comp=Z,8.0nm,0.9s,mb4.7
IMW Indian Meadow 84.69 45 *eP* **P 07 22 30.1 0.0**
FLWY Flagg Ranch 84.77 44 *eP* **P 07 22 30.6 +0.1**
comp=Z,10.0nm,1.0s,mb4.7
TPAW Teton Pass 84.86 45 *eP* **P 07 22 31.1 +0.1**
comp=Z,28nm,2.0s,mb4.8
MOOW Moose Ponds 84.88 45 *eP* **P 07 22 31.1 0.0**
UMR Umm Al-Rimmam 84.90 300 *eP* **P 07 22 30.5 -0.9**
UMR AMb AMB 07 22 32.0
comp=Z,28nm,0.5s,mb5.4
LOHW Long Hollow 85.03 45 *eP* **P 07 22 31.9 +0.1**
comp=Z,20nm,1.8s,mb4.8
MIB Mutribah 85.11 300 *eP* **P 07 22 31.6 -0.9**
MIB AMb AMB 07 22 33.8
comp=Z,67nm,0.7s,mb5.7
RLMT Red Lodge 85.22 43 *eP* **P 07 22 34.1 +1.4**
HWUT Hardware Ranch 85.27 47 *eP* **P 07 22 33.2 +0.1**
comp=Z,18nm,1.4s,mb4.8
RDF Al-Radifah 85.28 299 *eP* **P 07 22 32.4 -1.0**
RDF AMb AMB 07 22 40.9
comp=Z,136nm,1.4s,mb5.7
NAY Al-Naaiem 85.40 300 *eP* **P 07 22 33.0 -1.0**
NAY AMb AMB 07 22 34.5
comp=Z,24nm,0.6s,mb5.3
JLU Jordanelle 85.78 48 *eP* **P 07 22 36.3 +0.7**
FCC Fort Churchill 85.97 26 *eP* **P 07 22 36.2 +0.1**
DAU Daniels Canyon 86.00 48 *eP* **P 07 22 36.6 0.0**
PDAR Pinedale Array 86.09 45 P **P 07 22 36.3 -0.8**
comp=Z,0.9nm,0.6s,mb3.9,baz=233,slow=0.7,SNR=7.7
PDAR LR LR 07 55 46.7
comp=Z,109nm,19.6s,baz=282,slow=32
LAO LASA Array 86.37 41 *eP* **P 07 22 38.4 0.0**
comp=Z,17nm,1.1s,mb4.9
SRU San Rafael 87.07 49 *eP* **P 07 22 41.9 -0.1**
AKASG Malin Array Be 87.78 325 P **P 07 22 43.8 -1.4**
comp=Z,3.2nm,0.5s,mb4.6,baz=53,slow=4.9,SNR=26
KIEV Kiev 87.79 325 *eP* **P 07 22 43.7 -1.4**
WUAZ Wupatki 88.05 52 *eP* **P 07 22 46.4 -0.3**
comp=Z,9.0nm,1.0s,mb4.8
NB2 NORSAR Subarra 88.87 339 P **P 07 22 48.9 -1.2**
comp=Z,3.9nm,0.7s,mb4.5,baz=54,slow=5.1
NB2 NORSAR Subarra 88.87 339 P **P 07 22 48.9 -1.2**
NB2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.6
NOA NORSAR Array B 88.87 339 P **P 07 22 49.3 -0.8**
NOA 07 26 22.2
NOA NORSAR Array B 88.87 339 P **P 07 22 49.2 -0.8**
comp=Z,3.1nm,0.7s,mb4.5,baz=46,slow=4.5,SNR=14
NOA PP PP 07 26 22.2 +2.7
comp=Z,0.9nm,0.8s,baz=45,slow=7.7,SNR=3.6
NOA LR LR 08 02 55.3
comp=Z,89nm,21.5s,baz=0.0,slow=36
SMCO Snowmass 89.49 47 *eP* **P 07 22 53.5 +0.1**
comp=Z,9.1nm,1.2s,mb4.7
ULM Lac du Bonnet 90.27 34 LR LR 08 02 46.0
comp=Z,153nm,18.9s,baz=332,slow=35
ANMO Albuquerque 91.88 51 *eP* **P 07 23 04.9 +0.2**
comp=Z,2.3nm,0.8s,mb4.5
ANMO Albuquerque 91.88 51⇑*eP* **P 07 23 05.3 +0.7**
ANMO *i* *PP pP 07 23 32.7 +7.2
ECSD EROS,Sioux Fal 93.69 40 *eP* **P 07 23 12.7 -0.1**
CLL Collm 95.30 332 *eP* **P 07 23 19.0 -1.0**
GERES GERESS Array B 96.74 330 LR LR 08 11 08.4
comp=Z,126nm,18.5s,baz=270,slow=38
SCHQ Schefferville 98.64 18 LR LR 08 05 54.9
comp=Z,130nm,20.0s,baz=16,slow=34
TORD Torodi Ar. Bea 129.35 310 PKP PKPdf 07 29 04.4 -0.7
comp=Z,1.4nm,0.5s,baz=38,slow=1.3,SNR=12
DBIC Dimbokro 138.47 310 PKP PKPdf 07 29 23.2 +1.0
comp=Z,3.0nm,0.8s,baz=5.0,slow=4.1,SNR=6.0
PLCA Paso Flores 145.17 130 PKP PKPdf 07 29 32.6 -0.8
comp=Z,23nm,0.7s,baz=230,slow=4.0,SNR=106
LCO Las Campanas 147.60 109 *e*PKPdf PKPdf 07 29 37.1 -0.8
LCO *e*PKPbc PKPbc 07 29 40.2 -0.4
LPAZ La Paz 148.63 85 PKP PKPdf 07 29 40.8 +0.9
LPAZ PKPbc PKPbc 07 29 44.2 +0.5
LPAZ La Paz 148.63 85 PKP PKPdf 07 29 40.8 +0.9
comp=Z,8.9nm,0.8s,baz=284,slow=2.9,SNR=24
LPAZ PKPbc PKPbc 07 29 44.2 +0.5
comp=Z,8.6nm,0.7s,baz=8.6,slow=5.6,SNR=24

*IDC **28** 07:20:27.1±4.1, 1290N×8792W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.6/18, mbtmp3.4/3, Error ellipse: s-maj=200.9km s-min=76.1km az=79.0*
*ISCJB **28** 07:20:36.9±0.5, 1280N±006×8826W±005, h90km±6km, mb3.8/6, Error ellipse: s-maj=12.0km s-min=5.1km az=36.9*
*CASC **28** 07:20:37.6±2.8, 1283N×8827W, h59km±36km, MD4.2, ML4.1, mb4.1(NEIC)*
*NEIC **28** 07:20:39.0±1.7, 1288N×88.16W, h89km±16km, mb4.1/4, MD4.5(CASC), Error ellipse: s-maj=34.7km s-min=8.8km az=65.0*

ISC 28 07:20:38.1±0.5, 1283N±006×8823W±005, h82km±7km, n51, σ0 95/50, mb3.8/6, 9C-11D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BLLM	**Bellamira**	**0.61**	**359**⇓	*eP*		x		07 21 06.2	
BLLM				*eS*		x		07 21 16.5	
CAHU	**Cacacuatique**	**0.93**	**1**	*eP*		x		07 21 10.7	
CAHU				*eS*		x		07 21 25.2	
SNVI	**San Vicente**	**0.98**	**323**⇓	*eP*		x		07 21 09.9	
SNVI				*eS*		x		07 21 23.6	
LCBS	**La Ceiba**	**1.10**	**318**⇓	*iP*		x		07 21 11.5	
LCBS				*eS*		x		07 21 24.9	
LFRS	**El Faro**	**1.13**	**314**⇓	*iP*		x		07 21 11.7	
LFRS				*eS*		x		07 21 25.6	
CRIN	**San Cristobal**	**1.16**	**96**	*eP*		**Pn**		**07 20 58.5 -0.7**	
CRIN				*eS*		**Sn**		**07 21 15.2 +0.2**	
LBRS	**Las Brisas**	**1.20**	**319**⇓	*eP*		x		07 21 13.1	
LBRS				*eS*		x		07 21 27.3	
BOQS	**Boqueron**	**1.36**	**311**⇑	*eP*		x		07 21 15.1	
BOQS				*eS*		x		07 21 32.1	
TEL3	**Telica 3**	**1.37**	**101**⇑	*iP*		**Pn**		**07 21 01.6 -0.3**	
TEL3				*eS*		**Sn**		**07 21 19.1 -0.8**	
TELN	**Telica**	**1.38**	**99**⇑	*iP*		**Pn**		**07 21 01.7 -0.3**	
TELN				*eS*		**Sn**		**07 21 21.6 +1.6**	
CNGN	**Cerro Negro**	**1.53**	**102**	*eP*		**Pn**		**07 21 32.5 -1.4**	
TGUH	**Tegucigalpa,Un**	**1.53**	**37**	*ePn*		**Pn**		**07 21 03.8 -0.1**	
TGUH				*eSn*		**Sn**		**07 21 26.6 +3.1**	
SBLS	**San Blas**	**1.69**	**307**⇓	*eP*		x		07 21 19.6	
SBLS				*eS*		x		07 21 39.2	
SNJE	**San Jose**	**1.69**	**308**	*eP*		x		07 21 19.3	
SNJE				*eS*		x		07 21 38.3	
MOMJ	**Momotombo**	**1.70**	**104**	*eP*		**Pn**		**07 21 05.8 -0.3**	
MOMJ				*eS*		**Sn**		**07 21 27.3 0.0**	
COPN	**Copaltepe**	**1.72**	**112**⇓	*eP*		**Pn**		**07 21 05.8 -0.7**	
COPN				*eS*		**Sn**		**07 21 26.3 -1.6**	
RTR	**El Retiro**	**1.74**	**308**	*eP*		x		07 21 20.3	
RTR				*eS*		x		07 21 42.8	
RBDL	**Robledal**	**1.91**	**312**⇓	*iP*		x		07 21 06.7	
APYN	**Apoyeque**	**1.93**	**108**⇑	*eP*		**Pn**		**07 21 09.2 +0.1**	
APYN				*eS*		**Sn**		**07 21 31.5 -1.2**	
XAVN	**Gruta Xavier**	**1.98**	**110**⇑	*eP*		**Pn**		**07 21 09.6 -0.1**	
XAVN				*eS*		**Sn**		**07 21 33.3 -0.6**	
TISN	**Laguna Tiscapa**	**2.03**	**110**⇓	*iP*		**Pn**		**07 21 10.4 -0.1**	
MGAN	**Managua**	**2.05**	**109**⇑	*eP*		**Pn**		**07 21 10.4 -0.3**	
MGAN				*eS*		**Sn**		**07 21 35.6 -0.1**	
MGAN				*i*				07 21 39.4	
	comp=N,2μm,0.4s								
CRUN	**El Crucero**	**2.06**	**114**	*eP*		**Pn**		**07 21 11.2 +0.3**	
CRUN				*eS*		**Sn**		**07 21 34.4 -1.5**	
HUEN		**2.06**	**104**⇑	*iP*		**Pn**		**07 21 10.8 -0.1**	
TICN	**Ticuantepe**	**2.10**	**112**	*eP*		**Pn**		**07 21 11.7 +0.2**	
TICN				*eS*		**Sn**		**07 21 37.3 +0.3**	
MASN	**Masaya**	**2.19**	**112**	*i*		**Sn**		**07 21 41.6 +2.5**	
	comp=E,3μm,0.5s								
APON	**Apoyo**	**2.30**	**113**⇓	*eP*		**Pn**		**07 21 13.6 -0.5**	
BOAB	**BOACO BROADBAN**	**2.53**	**98**⇑	*iP*		**Pn**		**07 21 16.1 -1.1**	
SSNN	**San Juan del S**	**2.79**	**123**	*eP*		**Pn**		**07 21 20.7 +0.1**	
CONN	**Concepcion**	**2.84**	**116**	*eP*		**Pn**		**07 21 21.9 +0.5**	
FUG	**Fuego 3**	**3.01**	**303**	*eP*		**Pn**		**07 21 23.7 +0.1**	
FUG				*eS*		**Sn**		**07 21 58.5 -0.2**	
LIM1	**Limonal**	**3.60**	**126**⇑	*eP*		**Pn**		**07 21 32.1 +0.4**	
JAT	**Jato**	**3.63**	**294**	*eP*		**Pn**		**07 21 31.6 -0.5**	
CUI		**3.68**	**125**⇓	*eP*		**Pn**		**07 21 33.2 +0.4**	
JCR	**Jicaral**	**4.25**	**134**	*eP*		**Pn**		**07 21 40.4 -0.2**	
CGA2	**Cerro Gallo 2**	**4.63**	**127**	*eP*		**Pn**		**07 21 47.2 +1.5**	
PRS1	**Puriscal**	**4.77**	**126**	*eP*		**Pn**		**07 21 49.4 +1.9**	
LAJ	**Bijagual**	**4.99**	**126**	*eP*		**Pn**		**07 21 48.8 -1.8**	
LCR2	**La Lucha 2**	**5.16**	**126**	*eP*		**Pn**		**07 21 54.5 +1.7**	
URSC	**Urasca**	**5.28**	**124**	*eP*		**Pn**		**07 21 55.5 +0.9**	
BAR1		**6.00**	**126**	*eP*		**Pn**		**07 22 05.8 +1.4**	
TEIG	**Tepich**	**7.35**	**360**	*ePn*		**Pn**		**07 22 24.4 +1.6**	
SDV	**Santo Domingo**	**17.71**	**101**	*eP*		**Pn**		**07 24 40.3 +0.7**	
	comp=E,9.7nm,1.1s								
SDV				*e*				07 24 54.8	
MIAR	**Mount Ida**	**22.16**	**348**	*eP*		**P**		**07 25 27.2 0.0**	
	comp=E,8.2nm,1.1s,mb4.0								
PDAR	**Pinedale Array**	**35.08**	**332**	P		**P**		**07 27 23.8 +0.4**	
	comp=E,0.3nm,0.6s,mb3.3,baz=133,slow=10,SNR=2.7								
REDW	**Red Top Meadow**	**36.14**	**332**	*eP*		**P**		**07 27 33.2 +0.9**	
	comp=E,3.6nm,0.8s,mb4.3								
REDW				*ep*	P	pP		07 27 48.6 -3.2	
FCC	**Fort Churchill**	**46.05**	**356**	*eP*		**P**		**07 28 52.1 -1.3**	
	comp=E,2.4nm,0.7s,mb4.0								
YKA	**Yellowknife Ar**	**53.05**	**345**	P		**P**		**07 29 45.6 -0.9**	
	comp=E,0.3nm,0.6s,mb3.5,baz=153,slow=6.6,SNR=11								
INK	**Inuvik**	**62.62**	**343**	P		**P**		**07 30 52.2 -1.2**	
	comp=E,0.5nm,0.8s,mb3.5,baz=156,slow=8.7,SNR=3.0								
WRA	**Warramunga Arr**	**138.65**	**254**	PKP		PKPdf		07 39 56.1 +0.7	
	comp=E,0.4nm,0.8s,baz=89,slow=2.5,SNR=4.9								
ASAR	**Alice Springs**	**138.70**	**249**	PKP		PKPdf		07 39 57.1 +1.7	
	comp=E,0.2nm,0.6s,baz=84,slow=2.9,SNR=4.2								

IDC 28 07:29:31.8±4.2, 678S×14742E, h0km, mb2.8/1, mb1 3.5/2, mb1mx3.3/12, mbtmp3.3/2, MS3.7/1, Ms1 3.7/1, ms1mx3.1/5, Error ellipse: s-maj=170.9km s-min=46.1km az=114.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.23**	**223**	P		P	Pn	07 33 47.0	+0.5
	baz=46,slow=12,SNR=4.7								
ASAR	**Alice Springs**	**21.23**	**216**	P		P		07 34 18.9	-0.6
	0.4nm,0.7s,baz=52,slow=8.7,SNR=3.5								
BATI	**Kupang**	**23.74**	**260**	LR		LR		07 44 33.3	
	comp=Z,163nm,18.5s,baz=8.6,slow=38								
TORD	**Torodi Ar. Bea**	**145.69**	**283**	PKPbc		PKPbc		07 49 13.0	-0.7
	4.1nm,0.7s,baz=74,slow=4.3,SNR=22								

*NEIC **28** 07:31:13.9, 3809N×2065E, h10km, MD3.6(ATH), After ATH.*
*CSEM **28** 07:31:13.9, 3809N×2065E, h10km, MD3.6/3, After ATH*

ATH 28 07:31:13.9, 3809N×2065E, h10km±3km, MD3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.10**	**331**	*ePG*		Pg		07 31 16.0	-0.5
VLS				*eSG*		Sg		07 31 19.2	+0.9
EVR	**Evrytania**	**1.23**	**47**	*ePB*		Pb		07 31 37.0	-0.2
ITM	**Ithomi**	**1.36**	**131**	*ePB*		Pb		07 31 39.5	+0.1
KEK	**Kerkira**	**1.75**	**338**	*ePG*		Pg		07 31 46.5	-1.0

CASC 28 07:32:05.7±2.1, 1238N×8817W, h24km±8km, MD4.0, ML3.6, 1C-4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**1.14**	**74**	*eP*			Pn	07 32 26.4	+0.2
CRIN				*eS*			Sn	07 32 42.7	+1.6
CRIN				*i*				07 32 48.7	
	comp=N,5μm,0.3s								
TEL3	**Telica 3**	**1.31**	**81**	*eP*			Pn	07 32 28.3	-0.2
TELN	**Telica**	**1.33**	**80**	*eP*			Pn	07 32 28.7	-0.1

CAHU	**Cacacuatique**	**1.39**	**358**	*e*P		x	07 32 46.4		
CAHU				*e*S		x	07 33 05.2		
SNVI	**San Vicente**	**1.39**	**332**	*e*P		x	07 32 45.7		
SNVI				*e*S		x	07 33 04.8		
CNGN	**Cerro Negro**	**1.45**	**85**	*e*P		Pn	07 32 28.9	-1.5	
CNGN				*e*S		Sn	07 32 49.1	+0.5	
CNGN				*i*			07 33 01.4		
	comp=E,851nm,0.2s								
LCBS	**La Ceiba**	**1.49**	**328**	*e*P		x	07 32 47.1		
LCBS				*e*S		x	07 33 07.6		
LFRS	**El Faro**	**1.51**	**325**	*e*P		x	07 32 47.0		
LFRS				*e*S		x	07 33 06.7		
COPN	**Copaltepe**	**1.56**	**97**	*e*P		Pn	07 32 31.3	-0.6	
COPN				*e*S		Sn	07 32 52.1	+0.8	
MOMJ	**Momotombo**	**1.60**	**89**	*e*P		Pn	07 32 32.3	-0.1	
LBRS	**Las Brisas**	**1.60**	**328**⇓	*e*P		x	07 32 49.2		
LBRS				*e*S		x	07 33 10.2		
BOQS	**Boqueron**	**1.73**	**322**⇓	*e*P		x	07 32 50.7		
BOQS				*e*S		x	07 33 13.5		
XAVN	**Gruta Xavier**	**1.82**	**97**	*e*P		Pn	07 32 35.7	+0.2	
TISN	**Laguna Tiscapa**	**1.88**	**97**	*e*P		Pn	07 32 35.9	-0.4	
MGAN	**Managua**	**1.90**	**97**	*e*P		Pn	07 32 36.2	-0.4	
MGAN				*i*			07 33 10.3		
	comp=E,392nm,0.4s								
TICN	**Ticuantepe**	**1.93**	**100**	*e*P		Pn	07 32 37.0	-0.1	
HUEN		**1.96**	**91**	*e*S		Sn	07 33 02.5	+1.2	
SBLS	**San Blas**	**2.03**	**316**	*e*P		x	07 32 54.6		
SBLS				*e*S		x	07 33 19.6		
SNJE	**San Jose**	**2.04**	**317**⇑	*e*P		x	07 32 55.5		
SNJE				*e*S		x	07 33 20.2		
RTR	**El Retiro**	**2.08**	**317**	*e*P		x	07 32 55.7		
RTR				*e*S		x	07 33 23.1		
APON	**Apoyo**	**2.11**	**102**⇓	*e*P		Pn	07 32 39.8	+0.2	
RBDL	**Robledal**	**2.27**	**320**⇓	*e*P		x	07 32 41.6		
BOAB	**BOACO BROADBAN**	**2.45**	**88**	*e*P		Pn	07 32 43.4	-0.9	
CGA2	**Cerro Gallo 2**	**4.33**	**122**	*e*P		Pn	07 33 10.9	+0.9	
PRS1	**Puriscal**	**4.47**	**122**	*e*P		Pn	07 33 14.2	+2.1	
LAJ	**Bijagual**	**4.70**	**122**	*e*P		Pn	07 33 12.2	-2.9	
LCR2	**La Lucha 2**	**4.86**	**122**	*e*P		Pn	07 33 18.9	+1.6	
URSC	**Urasca**	**5.00**	**120**	*e*P		Pn	07 33 21.6	+2.3	
BAR1		**5.70**	**123**	*e*P		Pn	07 33 29.4	+0.5	

IDC 28 07:39:35.8±1.0,**162N**×**12652E**,**h0**km,**mb4.1**/5,**mb1 4.1**/6,**mb1mx4.0**/16,**mbtmp4.0**/6,**ML3.7**/1,**Error ellipse: s-maj=89.4km s-min=17.5km az=70.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P	Pn	07 44 07.2	0.0
	0.2nm,0.3s,baz=16,slow=18,SNR=2.2						
WRA	**Warramunga Arr**	**22.76**	**161**	P	P	07 44 38.9	-0.9
	4.9nm,0.4s,baz=340,slow=11,SNR=57						
ASAR	**Alice Springs**	**26.14**	**164**	P	P	07 45 11.2	-0.6
	2.3nm,0.5s,baz=344,slow=7.1,SNR=29						
ASAR				PcP	PcP	07 48 39.0	-0.5
	0.3nm,0.5s,baz=349,slow=2.4,SNR=4.1						
STKA	**Stephens Creek**	**36.25**	**158**	P	P	07 46 41.9	+1.1
	2.2nm,0.9s,baz=349,slow=10,SNR=4.7						
SONM	**Songino Array**	**49.23**	**342**	P	P	07 48 27.4	+1.4
	1.4nm,0.9s,baz=158,slow=8.9,SNR=7.4						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	07 49 37.5	-1.0
	1.0nm,0.4s,baz=121,slow=8.5,SNR=15						
CFAA	**Coronel Fontan**	**147.07**	**156**	PKPbc	PKPbc	07 59 20.8	-0.5
	0.1nm,0.5s,baz=209,slow=4.3,SNR=7.1						

*ISCJB **28** 07:58:47.1±0.7,1667S×009×71.18W±009,h99km±5km, mb4.0/11,Error ellipse: s-maj=18.2km s-min=10.3km az=136.0*

*NEIC **28** 07:58:48.4±0.5,1675S×7122W,mb4.4/2,Error ellipse: s-maj=17.1km s-min=11.4km az=59.0*

NEIC Felt [II] at Mollendo.

*IDC **28** 07:58:48.4±0.8,1665S×7121W,h98km±6km,mb3.9/10, mb1 3.9/12,mb1mx3.8/19,mbtmp3.9/12,Error ellipse: s-maj=19.8km s-min=13.4km az=56.0*

ISC 28 07:58:48.0±0.6,**1673S**×009×**712W**±01,**h94**km±5km,**n23,** σ1**9**07/25,**mb4.0**/11,**1D,Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.37**	**315**⇓	*i* P	**Pn**	**07 59 02.1**	**-0.2**
ARE				*i* S	**Sn**	**07 59 12.6**	**-0.4**
LPAZ	**La Paz**	**2.99**	**82**	P	**Pn**	**07 59 40.5**	**+7.0**
	53nm,0.3s,baz=265,slow=11,SNR=1417						
LPAZ				S	**Sn**	**08 00 17.4**	**+8.9**
	3.8nm,0.3s,baz=236,slow=7.3,SNR=1.8						
NNA	**Nana**	**7.21**	**310**	*e*Pn	**Pn**	**08 00 33.1**	**+2.4**
NNA				S	**Sn**	**08 01 53.3**	**+2.3**
NNA	**Nana**	**7.21**	**310**	P	**Pn**	**08 00 30.1**	**-0.7**
	2.1nm,0.3s,baz=166,slow=8.6,SNR=8.0						
NNA				S	**Sn**	**08 01 53.3**	**+2.2**
	0.4nm,0.3s,baz=233,slow=20,SNR=3.0						
SIV	**San Ignacio**	**9.76**	**87**	P	**Pn**	**08 01 06.7**	**+1.2**
	3.1nm,0.3s,baz=273,slow=12,SNR=44						
CFAA	**Coronel Fontan**	**15.06**	**170**	P	**Pn**	**08 02 13.4**	**-2.3**
	0.0nm,0.3s,baz=344,slow=15,SNR=4.1						
PLCA	**Paso Flores**	**23.93**	**179**	P	**P**	**08 03 54.0**	**+0.8**
	2.2nm,0.7s,mb3.6,baz=350,slow=12,SNR=8.4						
SDV	**Santo Domingo**	**25.45**	**1**	*e*P	**P**	**08 04 07.0**	**-0.4**
	10nm,0.8s,mb4.3						
SDV	**Santo Domingo**	**25.45**	**1**	P	**P**	**08 04 06.1**	**-1.2**
	11nm,0.8s,mb4.3,baz=214,slow=10,SNR=21						
MIAR	**Mount Ida**	**55.25**	**338**	*e*P	**P**	**08 08 11.0**	**-0.5**
	2.7nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**68.91**	**331**	P	**P**	**08 09 42.9**	**+0.2**
	0.4nm,0.8s,mb3.3,baz=126,slow=7.5,SNR=3.5						
DBIC	**Dimbokro**	**69.59**	**76**	P	**P**	**08 09 48.3**	**+0.7**
	1.6nm,0.5s,mb4.2,baz=245,slow=7.6,SNR=10						
ULM	**Lac du Bonnet**	**70.14**	**343**	P	**P**	**08 09 48.5**	**-1.6**
	0.8nm,0.4s,mb3.9,baz=166,slow=2.7,SNR=3.5						
QSPA	**South Pole Qui**	**73.44**	**180**	P	**P**	**08 10 09.8**	**+0.2**
	2.7nm,0.8s,mb4.1,baz=190,slow=1.1,SNR=8.4						
TORD	**Torodi Ar. Bea**	**77.90**	**72**	P	**P**	**08 10 36.0**	**-0.1**
TORD				pP	pP	08 11 01.1	+0.6
TORD				sP	sP	08 11 11.6	+0.9
TORD	**Torodi Ar. Bea**	**77.90**	**72**	P	**P**	**08 10 36.0**	**-0.1**
	2.6nm,0.4s,mb4.3,baz=269,slow=4.6,SNR=22						
TORD				pP	pP	08 11 01.1	+0.6
	2.6nm,0.9s,baz=246,slow=6.2,SNR=4.7						
TORD				sP	sP	08 11 11.6	+0.9
	2.5nm,0.8s,baz=270,slow=4.2,SNR=4.9						
VNDA	**Vanda**	**81.15**	**190**	P	**P**	**08 10 53.9**	**+1.3**
VNDA	**Vanda**	**81.15**	**190**	P	**P**	**08 10 53.9**	**+1.3**
	0.4nm,0.3s,mb3.7,baz=130,slow=7.9,SNR=3.9						
YKA	**Yellowknife Ar**	**85.99**	**341**	P	**P**	**08 11 16.7**	**-0.7**
YKA				pP	pP	08 11 43.4	+1.2
YKA	**Yellowknife Ar**	**85.99**	**341**	P	**P**	**08 11 16.7**	**-0.7**
	0.8nm,0.5s,mb3.9,baz=134,slow=4.8,SNR=33						
YKA				pP	pP	08 11 43.4	+1.2
	0.4nm,0.6s,baz=135,slow=5.2,SNR=3.1						
MAW	**Mawson**	**89.50**	**164**	P	**P**	**08 11 34.5**	**+0.2**
	1.1nm,0.5s,mb4.3,baz=180,slow=4.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**138.44**	**21**	PKP	PKPdf	08 18 03.2	+0.9
	1.3nm,0.4s,baz=323,slow=2.2,SNR=3.7						
SONM	**Songino Array**	**148.92**	**3**	PKPbc	PKPbc	08 18 25.8	+1.0
	1.4nm,0.5s,baz=338,slow=2.1,SNR=14						

*NEIC **28** 08:00:11.2±3.9,2408S×17985W,h478km±37km,mb4.4/9, Error ellipse: s-maj=40.4km s-min=16.9km az=218.0*

*IDC **28** 08:00:12.0±7.2,2414S×17987W,h481km±66km,mb3.9/7, mb1 3.9/8,mb1mx3.6/15,mbtmp3.8/8,Error ellipse: s-maj=56.7km s-min=22.8km az=52.0*

ISC 28 08:00:15.3±4.5,**2445**S×02×**1798E**±03,**h499**km±39km,**n23,** σ0**9**4/20,**mb4.3**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**13.98**	**189**	P	**P**	**08 03 14.1**	**-0.5**
	1.3nm,0.3s,baz=79,slow=7.7,SNR=7.2						
URZ				S	**S**	**08 05 42.0**	**-0.5**
	0.4nm,0.3s,baz=77,slow=12,SNR=3.0						
EIDS	**Eidsvold**	**26.06**	**262**	*e*P	**P**	**08 05 09.4**	**+1.1**
	2.1nm,0.5s,mb3.8						
CTA	**Charters Tower**	**31.31**	**271**	*e*P	**P**	**08 05 55.3**	**+1.1**
	22nm,0.3s,mb5.1						
CTA	**Charters Tower**	**31.31**	**271**	P	**P**	**08 05 55.4**	**+1.2**
	28nm,0.4s,mb5.1,baz=95,slow=11,SNR=71						
CTAO	**Charters Tower**	**31.31**	**271**	*e*P	**P**	**08 05 55.0**	**+0.8**
	17nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**34.37**	**249**	*e*P	**P**	**08 06 21.2**	**+1.2**
	4.5nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**08 06 21.2**	**+1.2**
	4.3nm,0.5s,mb4.1,baz=97,slow=11,SNR=17						
ASAR	**Alice Springs**	**41.78**	**261**	P	**P**	**08 07 21.0**	**+0.3**
	2.7nm,0.4s,mb4.1,baz=96,slow=6.9,SNR=68						
WB2	**Warramunga Arr**	**42.19**	**267**	*e*P	**P**	**08 07 23.0**	**-0.9**
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**08 07 23.8**	**-0.2**
	8.9nm,0.4s,mb4.6,baz=98,slow=8.4,SNR=279						
FORT	**Forrest**	**45.97**	**250**	*e*P	**P**	**08 07 52.7**	**-0.4**
	25nm,0.6s,mb4.8						
KAKA	**Kakadu**	**46.19**	**276**	*e*P	**P**	**08 07 54.2**	**-0.8**
	6.6nm,0.3s,mb4.5						
KAKA	**Kakadu**	**46.19**	**276**	*e*P	**P**	**08 07 54.0**	**-0.9**
	19nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.62**	**266**	*e*P	**P**	**08 08 28.4**	**+0.4**
	12nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**50.62**	**266**	P	**P**	**08 08 28.5**	**+0.4**
	7.5nm,0.6s,mb4.2,baz=106,slow=12,SNR=13						
KLBR	**Kellerberrin**	**54.63**	**248**	*e*P	**P**	**08 08 56.0**	**-0.6**
	76nm,1.7s,mb4.8						
QSPA	**South Pole Qui**	**65.66**	**180**	*e*P	**P**	**08 10 11.0**	**+1.9**
	2.1nm,0.5s,mb4.0						
MAW	**Mawson**	**77.20**	**201**	P	**P**	**08 11 16.9**	**0.0**
	1.5nm,0.5s,mb3.8,baz=124,slow=3.6,SNR=9.9						
PSI	**Prapat**	**82.87**	**276**	P	**P**	**08 11 45.7**	**-1.9**
	3.8nm,0.7s,mb4.0,baz=176,slow=16,SNR=3.3						
ARCES	**ARCESS Array B**	**132.37**	**348**	PKP	PKPdf	08 18 29.5	-2.1
	4.0nm,0.9s,baz=29,slow=2.8,SNR=6.2						
AKASG	**Malin Array Be**	**145.32**	**327**	PKPbc	PKPbc	08 18 53.6	-2.9
	1.1nm,0.4s,baz=40,slow=3.3,SNR=4.7						
CLL	**Collm**	**151.31**	**343**	*e*PKPbc	PKPbc	08 19 10.0	-1.7
TORD	**Torodi Ar. Bea**	**168.64**	**189**	PKPab	PKPab	08 20 39.8	+1.5
	0.3nm,0.5s,baz=160,slow=4.6,SNR=3.3						

*CSEM **28** 08:01:11.9±0.1,3671N×3054E,h2km,MD3.4,Error ellipse: s-maj=3.1km s-min=2.2km az=159.0*

*ISCJB **28** 08:01:12.7±0.9,3670N±004×3052E±004,h3km±7km, Error ellipse: s-maj=6.9km s-min=4.8km az=174.3*

*ISK **28** 08:01:12.7,3666N×3059E,h8km,MD3.4*

*DDA **28** 08:01:15.7,3697N×3039E,h11km,Md3.7*

*ATH **28** 08:01:26.6,3601N×2950E,h10km,MD3.4/3*

ISC 28 08:01:13.1±0.9,**3670N**±004×**3051E**±004,**h1**km±7km,**n25,** σ1**9**17/31,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.23**	**30**	PG	**Pg**	**08 01 18.7**	**+1.2**
GOLH	**Golhisar**	**0.93**	**305**	*i* P	**Pg**	**08 01 29.8**	**-1.2**
GOLH				*i* S	**Sg**	**08 01 44.3**	**+1.2**
KSL	**Kastellorizon**	**0.93**	**234**	*e*PG	**Pg**	**08 01 30.0**	**-1.0**
ISP	**Isparta**	**1.14**	**360**	PN	**Pn**	**08 01 35.6**	**-0.5**
ISP				SN	**Sn**	**08 01 51.5**	**-0.8**
FETY	**Fethiye**	**1.15**	**267**	PN	**Pn**	**08 01 35.7**	**-0.6**
FETY				SN	**Sn**	**08 01 53.5**	**+0.8**
DENT	**Denizli**	**1.58**	**312**	PN	**Pn**	**08 01 43.5**	**+1.3**
KHL	**Karahalli**	**1.80**	**334**	PN	**Pn**	**08 01 45.9**	**+0.7**
YER	**Yerkesik**	**1.84**	**284**	PN	**Pn**	**08 01 46.2**	**+0.4**
SHUT	**Suhut-Afyon**	**1.85**	**1**	PN	**Pn**	**08 01 45.9**	**+0.1**
KONT	**Konya--Tatoy**	**1.93**	**49**	PN	**Pn**	**08 01 46.6**	**-0.3**
ERMK	**Ermenek**	**1.93**	**91**	*e*P	**Pn**	**08 01 50.2**	**+3.2**
ERMK				*e*S	**Sn**	**08 02 13.8**	**+2.0**
ARG	**Arkhangelos**	**1.98**	**257**	*e*PB	**Pb**	**08 01 48.0**	**-2.0**
MLSB	**Milas**	**2.27**	**286**	*e*PN	**Pn**	**08 01 53.2**	**+1.5**
DAT	**Datca**	**2.36**	**272**	*e*PN	**Pn**	**08 01 54.4**	**+1.5**
KIZT	**Kizilcal**	**2.43**	**26**	*e*PN	**Pn**	**08 01 53.9**	**0.0**
BDRM	**Kayabasi**	**2.49**	**279**	*i* P	**Pn**	**08 01 53.8**	**-0.9**
BDRM				*i* S	**Sn**	**08 02 25.3**	**-0.3**
LEF	**Lefka**	**2.49**	**129**	*e*PN	**Pn**	**08 01 52.1**	**-2.7**
GDZ	**Gediz**	**2.52**	**341**	*i* P	**Pn**	**08 01 52.2**	**-2.9**
GDZ				*i* S	**Sn**	**08 02 24.3**	**-2.1**
BODT	**Bodrum**	**2.59**	**279**	*e*PN	**Pn**	**08 01 57.0**	**+0.9**
IKL	**Isikli**	**2.60**	**99**	*e*PN	**Pn**	**08 01 55.7**	**-0.5**
ESKT	**Eskisehir**	**2.83**	**5**	*e*PN	**Pn**	**08 01 59.7**	**+0.4**
LFK	**Lefkose**	**2.83**	**119**	*e*PN	**Pn**	**08 01 58.4**	**-0.9**
KARP	**Karpathos**	**2.95**	**248**	*e*PN	**Pn**	**08 02 02.0**	**+1.0**
KAMT	**Kaman**	**3.67**	**43**	*e*PN	**Pn**	**08 02 10.4**	**-0.6**
IZI	**Iznik**	**3.72**	**348**	*e*PN	**Pn**	**08 02 11.9**	**+0.3**

*BJI **28** 08:08:03.9,3105S×178.16W,h20km,mB5.6,mb5.5,Ms5.4, Msz4.8*

*NEIC **28** 08:08:04.1±0.4,3102S×17807W,h10km,mb5.3/15,Error ellipse: s-maj=13.8km s-min=6.3km az=113.0*

*MOS **28** 08:08:07.6±1.1,3072S×17822W,h33km,mb5.4/5,Error ellipse: s-maj=16.9km s-min=11.9km az=82.3*

*ISCJB **28** 08:08:08.3±0.4,3122S±004×17844W±009,h36km, mb5.1/30,MS4.3/28,Error ellipse: s-maj=11.3km s-min=4.8km az=15.6*

*IDC **28** 08:08:10.7±0.5,3058S×17809W,h51km±4km,mb4.4/10, mb1 4.6/10,mb1mx4.5/13,mbtmp4.4/10,MS4.1/21, Ms1 4.1/21,ms1mx4.0/27,Error ellipse: s-maj=15.8km s-min=7.5km az=97.0*

ISC 28 08:08:10.0±0.4,**3116S**×004×**17836W**±009,**h38**km, **h38**km±3.5km**:pP-P,n179,**σ1**9**39**/111,**mb5.1**/30,**MS4.3**/28, **7C-5D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**12**	*e*Pn	**Pn**	**08 08 33.0**	**-7.3**
RAO				*e*Sn	**Sn**	**08 08 50.2**	**-13**
RAO	**Raoul Island**	**1.94**	**12**	P	**Pn**	**08 08 33.0**	**-7.4**
	517nm,0.3s,baz=199,slow=18,SNR=23						
RAO				S	**Sn**	**08 08 49.8**	**-14**
	3μm,0.3s,baz=72,slow=19,SNR=16						
RAO				LR	LR	08 09 10.7	
	comp=Z,3μm,21.9s,baz=209,slow=45						
PUZ	**Puketiti**	**7.44**	**201**	*e*P	**Pn**	**08 09 57.4**	**+1.4**
PUZ	**Puketiti**	**7.44**	**201**	PN	**Pn**	**08 09 57.4**	**+1.5**
PUZ				SN	**Sn**	**08 11 24.4**	**+5.3**
MWZ	**Matawai**	**7.92**	**204**	*e*P	**Pn**	**08 10 03.2**	**+0.7**
MWZ	**Matawai**	**7.92**	**204**	PN	**Pn**	**08 10 03.2**	**+0.7**
MWZ				SN	**Sn**	**08 11 38.2**	**+7.4**
URZ	**Urewera**	**8.01**	**207**	*e*P	**Pn**	**08 10 05.2**	**+1.5**
URZ	**Urewera**	**8.01**	**207**	P	**Pn**	**08 10 05.4**	**+1.6**
	4.3nm,0.3s,baz=260,slow=4.8,SNR=36						
URZ				S	**Sn**	**08 11 38.7**	**+5.7**
	30nm,0.3s,baz=240,slow=2.5,SNR=10						
URZ	**Urewera**	**8.01**	**207**	PN	**Pn**	**08 10 05.2**	**+1.5**
URZ				SN	**Sn**	**08 11 40.6**	**+7.6**
KNZ	**Kokohu**	**8.49**	**201**	PN	**Pn**	**08 10 11.4**	**+1.1**
KNZ				SN	**Sn**	**08 11 50.9**	**+6.0**
BKZ	**Black Stump Fm**	**9.03**	**206**	*e*P	**Pn**	**08 10 18.3**	**+0.5**
BKZ	**Black Stump Fm**	**9.03**	**206**	PN	**Pn**	**08 10 18.3**	**+0.5**
BKZ				SN	**Sn**	**08 12 04.7**	**+6.5**
PXZ	**Pawanui**	**9.67**	**202**	PN	**Pn**	**08 10 25.3**	**-1.2**
WPHZ	**Waipukurau**	**9.84**	**204**	PN	**Pn**	**08 10 29.1**	**+0.2**
TIWZ	**Tintock**	**10.67**	**204**	PN	**Pn**	**08 10 38.9**	**-1.2**
MRZ	**Mangatainoka R**	**10.68**	**206**	*e*P	**Pn**	**08 10 38.2**	**-2.1**
MRZ	**Mangatainoka R**	**10.68**	**206**	PN	**Pn**	**08 10 38.2**	**-2.1**
KIW	**Kapiti Island**	**11.11**	**207**	P	**Pn**	**08 10 43.9**	**-2.3**
KIW	**Kapiti Island**	**11.11**	**207**	PN	**Pn**	**08 10 43.9**	**-2.3**
MTW	**Mount Morrison**	**11.14**	**205**	P	**Pn**	**08 10 44.1**	**-2.6**
MTW	**Mount Morrison**	**11.14**	**205**	PN	**Pn**	**08 10 44.1**	**-2.5**
MRW	**Makara Radio**	**11.51**	**207**	*e*SN	**Sn**	**08 12 56.1**	**-2.7**
SNZO	**South Karori**	**11.57**	**207**	*e*Pn	**Pn**	**08 10 54.4**	**+1.8**
SNZO				*e*Sn	**Sn**	**08 12 59.5**	**-0.9**
TUWZ	**Tuamarina**	**11.98**	**209**	PN	**Pn**	**08 10 56.7**	**-1.4**
QRZ	**Quartz Range**	**12.14**	**215**	PN	**Pn**	**08 11 00.5**	**+0.2**
THZ	**Tophouse**	**12.70**	**211**	P	**Pn**	**08 11 06.5**	**-1.4**
THZ	**Tophouse**	**12.70**	**211**	*e*PN	**Pn**	**08 11 04.5**	**-3.4**
THZ				*e*SN	**Sn**	**08 13 27.1**	**-0.8**
KHZ	**Kahutara**	**12.97**	**208**	*e*P	**Pn**	**08 11 08.9**	**-2.7**
KHZ	**Kahutara**	**12.97**	**208**	PN	**Pn**	**08 11 08.9**	**-2.7**
DSZ	**Denniston Nort**	**13.20**	**214**	SN	**Sn**	**08 13 38.1**	**-1.9**
LTZ	**Lake Taylor**	**13.80**	**210**	*e*P	**Pn**	**08 11 21.1**	**-1.8**
LTZ	**Lake Taylor**	**13.80**	**210**	PN	**Pn**	**08 11 21.1**	**-1.9**
LTZ				*e*SN	**Sn**	**08 13 48.8**	**-6.0**
MQZ	**McQueen's Vall**	**14.41**	**207**	*e*SN	**Sn**	**08 14 00.4**	**-9.2**
RPZ	**Rata Peaks**	**15.08**	**211**	P	**Pn**	**08 11 40.5**	**+0.4**
	0.8nm,0.3s,baz=31,slow=2.8,SNR=3.8						
FOZ	**Fox Glacier**	**15.59**	**214**	*e*P	**Pn**	**08 11 45.7**	**-1.1**
FOZ	**Fox Glacier**	**15.59**	**214**	PN	**Pn**	**08 11 45.7**	**-1.1**
JCZ	**Jackson Bay**	**16.42**	**215**	*e*P	**Pn**	**08 11 56.6**	**-0.8**
JCZ	**Jackson Bay**	**16.42**	**215**	PN	**Pn**	**08 11 56.6**	**-0.8**
AFI	**Afiamalu**	**18.20**	**21**	*e*P	**Pn**	**08 12 13.2**	**-6.5**
	26nm,1.0s						
AFI	**Afiamalu**	**18.20**	**21**	*e*P	**Pn**	**08 12 13.2**	**-6.5**
AFI				pmax	pmax		
	comp=Z,26nm,1.0s						
ARMA	**Armidale**	**25.76**	**264**	*e*P	**P**	**08 13 42.7**	**+5.6**
	comp=Z,0.6nm,0.7s						
ARMA	**Armidale**	**25.76**	**264**	*e*P	**P**	**08 13 42.5**	**+5.5**
	comp=Z,0.6nm,0.7s						
TBI	**Tubuai**	**26.79**	**80**	*e*LR	LR	08 20 25.5	
	comp=Z,748nm,28.0s,baz=242						
TBI	**Tubuai**	**26.79**	**80**	*e*T		08 41 25.2	
	comp=Z,74nm,0.3s						
CNB	**Canberra Magne**	**27.25**	**253**	*e*P	**P**	**08 13 55.5**	**+5.1**
	comp=Z,8.5nm,0.5s,mb4.5						
EIDS	**Eidsvold**	**27.47**	**274**	*e*P	**P**	**08 13 53.6**	**+1.1**
	comp=Z,9.2nm,1.0s,mb4.3						
PAE	**Paea**	**29.35**	**69**	*e*T		08 44 29.8	
	comp=Z,160nm,0.3s						
PPT	**Papeete**	**29.40**	**69**	*e*LR	LR	08 21 33.1	
	comp=Z,619nm,26.8s,baz=236						
PPT	**Papeete**	**29.40**	**69**	*e*T		08 44 34.1	
	comp=Z,43nm,0.3s						
TVO	**Taravao**	**29.55**	**70**	*e*T		08 44 45.1	
	comp=Z,21nm,0.3s						
HNR	**Honiara**	**29.57**	**312**	LR	LR	08 24 06.3	
	comp=Z,234nm,20.2s,MS3.8,baz=182,slow=32						
TAU	**Tasmania Unive**	**29.61**	**237**	*e*P	**P**	**08 14 12.4**	**+1.1**
	comp=Z,123nm,1.7s,mb5.4						
VAH	**Vaihoa**	**32.24**	**68**	*e*T		08 48 05.6	
	comp=Z,205nm,0.2s						
CTA	**Charters Tower**	**33.62**	**281**	*e*P	**P**	**08 14 49.3**	**+2.4**
	comp=Z,53nm,0.7s,mb5.6						
CTA	**Charters Tower**	**33.62**	**281**	*e*P	**P**	**08 14 49.3**	**+2.4**
CTA				pmax	pmax		
	comp=Z,53nm,0.7s						
CTA	**Charters Tower**	**33.62**	**281**	P	**P**	**08 14 49.2**	**+2.3**
	comp=Z,52nm,0.7s,mb5.6,baz=105,slow=9.9,SNR=80						
CTA				LR	LR	08 26 36.6	
	comp=Z,444nm,19.4s,MS4.2,baz=26,slow=33						
CTAO	**Charters Tower**	**33.62**	**281**	*e*P	**P**	**08 14 49.0**	**+2.1**
	comp=Z,63nm,0.8s,mb5.6						
CTAO	**Charters Tower**	**33.62**	**281**	*e*P	**P**	**08 14 49.0**	**+2.1**
CTAO				pmax	pmax		
	comp=Z,63nm,0.8s,mb5.6						
STKA	**Stephens Creek**	**34.01**	**258**	*e*P	**P**	**08 14 51.2**	**+1.0**
	comp=Z,86nm,0.8s,mb5.7						
STKA	**Stephens Creek**	**34.01**	**258**	P	**P**	**08 14 54.0**	**+3.8**
	comp=Z,101nm,0.8s,mb5.8,baz=97,slow=9.4,SNR=112						
STKA				LR	LR	08 28 01.8	
	comp=Z,413nm,18.1s,MS4.2,baz=289,slow=35						
RKT	**Rikitea**	**39.23**	**89**	*e*LR	LR	08 26 00.2	
	comp=Z,1μm,33.8s						
RKT	**Rikitea**	**39.23**	**89**	*e*T		08 57 03.9	
	comp=Z,4.1nm,0.3s						
ASAR	**Alice Springs**	**42.76**	**268**	P	**P**	**08 16 05.0**	**+1.2**
	comp=Z,20nm,0.6s,mb5.0,baz=103,slow=6.9,SNR=254						
WB2	**Warramunga Arr**	**43.81**	**273**	*e*P	**P**	**08 16 12.9**	**+0.6**
WRA	**Warramunga Arr**	**43.82**	**273**	P	**P**	**08 16 13.1**	**+0.7**
	comp=Z,29nm,0.3s,mb5.5,baz=111,slow=8.1,SNR=952						
WRA				LR	LR	08 34 14.3	
	comp=Z,266nm,19.5s,MS4.2,baz=125,slow=36						
FORT	**Forrest**	**45.56**	**256**	*e*P	**P**	**08 16 27.2**	**+1.1**
	comp=Z,35nm,0.7s,mb5.4						
VNDA	**Vanda**	**47.32**	**186**	P	**P**	**08 16 44.1**	**+4.9**
	comp=Z,1.4nm,0.6s,mb4.0,baz=8.2,slow=8.0,SNR=7.8						
VNDA				LR	LR	08 34 38.4	
	comp=Z,135nm,19

NJ2				XS	sS	08 31 36.5	-5.6	
NJ2				AMB	AMB			
	comp=Z,30nm,0.5s,mb5.8							
NJ2				AMB	AMB			
	comp=Z,80nm,4.9s							
NJ2				LR	LR			
	comp=N,350nm,22.3s,MS5.2							
NJ2				LR	LR			
	comp=E,1μm,26.5s,MS5.2							
NJ2				LR	LR			
	comp=Z,1μm,26.5s,MS5.2							
ISA	**Isabella**	**87.05**	**45**	*e*P	**P**	**08 20 50.2**	**-1.2**	
	comp=Z,19nm,1.5s,mb5.1							
ISA	**Isabella**	**87.05**	**45**	*e*P	**P**	**08 20 50.2**	**-1.2**	
ISA				pmax	pmax			
	comp=Z,19nm,1.5s,mb5.1							
NVAR	**Mina Array Bea**	**89.00**	**43**	P	**P**	**08 20 58.4**	**-2.2**	
	comp=Z,1.4nm,0.5s,mb4.6,baz=225,slow=8.9,SNR=4.5							
NVAR				pP	pP	08 21 13.7	+1.2	
	comp=Z,0.8nm,0.3s,baz=205,slow=7.3,SNR=3.6							
CFAA	**Coronel Fontan**	**89.04**	**127**	P	**P**	**08 21 00.7**	**-0.5**	
	comp=Z,0.2nm,0.8s,baz=233,slow=10,SNR=4.0							
MDJ	**Mudanjiang**	**89.07**	**326**	P	**P**	**08 21 01.3**	**+0.6**	
MDJ				AP	pP	08 21 10.8	-1.9	
MDJ				XP	sP	08 21 14.3	-2.7	
MDJ				S	S	08 31 47.8	+1.5	
MDJ				AMB	AMB			
	comp=Z,4.0nm,0.5s,mb5.0							
MDJ				AMB	AMB			
	comp=Z,27nm,3.0s							
MDJ				LR	LR			
	comp=Z,69nm,21.5s,MS4.0							
HABR	**Khabarovsk**	**89.55**	**331**	*e*P	**P**	**08 21 02.4**	**-0.5**	
HABR				*e*		08 24 39.0		
CN2	**Changchun**	**90.55**	**323**	*e*P	**P**	**08 21 06.0**	**-1.7**	
CN2				*e*XP	sP	08 21 22.0	-2.0	
CN2				*e*S	S	08 31 56.8	-3.3	
CN2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb5.2							
CN2				AMB	AMB			
	comp=Z,200nm,5.0s							
CN2				LR	LR			
	comp=N,800nm,17.0s,MS5.3							
CN2				LR	LR			
	comp=E,600nm,17.0s,MS5.3							
CN2				LR	LR			
	comp=Z,1μm,19.0s,MS5.3							
KLR	**Kul'dur**	**91.53**	**330**	*e*P	**P**	**08 21 13.7**	**+1.6**	
GYA	**Guiyang**	**91.66**	**300**	⇑*i*P	**P**	**08 21 14.3**	**+1.0**	
GYA				AP	pP	08 21 25.8	+0.6	
GYA				PP	PP	08 24 56.0	+3.6	
GYA				SKS		08 31 43.0		
GYA				S	S	08 32 10.5	-0.5	
GYA				XS	sS	08 32 28.8	-2.1	
GYA				SS	SS	08 38 22.5	+3.3	
GYA				AMB	AMB			
	comp=Z,40nm,1.0s,mb5.7							
GYA				AMB	AMB			
	comp=Z,870nm,8.4s							
GYA				LR	LR			
	comp=N,970nm,21.7s,MS5.5							
GYA				LR	LR			
	comp=E,1μm,22.2s,MS5.5							
GYA				LR	LR			
	comp=Z,1μm,21.8s,MS5.3							
KMI	**Kunming**	**93.88**	**297**	P	**P**	**08 21 22.8**	**-0.8**	
KMI				AP	pP	08 21 35.3	-0.2	
KMI				XP	sP	08 21 39.8	-0.1	
KMI				AMB	AMB			
	comp=Z,9.0nm,0.8s,mb5.2							
GAMB	**Gambell**	**94.75**	**3**	*e*P	**P**	**08 21 23.8**	**-2.8**	
	comp=Z,9.5nm,1.4s,mb5.0							
CD2	**Chengdu**	**96.22**	**302**	*e*P	**P**	**08 21 35.0**	**+0.8**	
CD2				AMB	AMB			
	comp=Z,20nm,0.9s,mb5.5							
CD2				AMB	AMB			
	comp=Z,40nm,9.2s							
HHC	**Hu-ho-hao-te**	**96.53**	**314**	*e*P	**P**	**08 21 34.8**	**-0.5**	
HHC				AP	pP	08 21 45.0	-2.3	
HHC				XP	sP	08 21 49.8	-1.8	
HHC				PP	PP	08 25 32.0	+1.7	
HHC				S	S	08 32 50.8	-2.3	
HHC				XS	sS	08 33 08.5	-4.6	
HHC				SS	SS	08 39 26.0	-2.3	
HHC				AMB	AMB			
	comp=Z,14nm,0.7s,mb5.5							
HHC				AMB	AMB			
	comp=Z,157nm,4.6s							
HHC				LR	LR			
	comp=N,154nm,16.7s,MS5.0							
HHC				LR	LR			
	comp=E,450nm,20.2s,MS5.0							
HHC				LR	LR			
	comp=Z,88nm,15.5s,MS4.3							
SEY	**Seymchan**	**96.64**	**347**	⇑*e*P	**P**	**08 21 34.2**	**-1.0**	
PDAR	**Pinedale Array**	**96.89**	**44**	PKKPbc	PKKPbc	08 38 17.9	-1.2	
	comp=Z,0.7nm,0.8s,baz=69,slow=3.1,SNR=6.7							
PDAR				LR	LR	08 56 56.0		
	comp=Z,50nm,18.2s,MS4.0,baz=159,slow=30							
HIA	**Hailar**	**97.15**	**324**	*e*P	**P**	**08 21 36.8**	**-1.1**	
LPAZ	**La Paz**	**98.12**	**114**	LR	LR	08 55 11.7		
	comp=Z,48nm,20.9s,MS4.0,baz=29,slow=29							
LZH	**Lanzhou**	**98.92**	**307**	*e*P	**P**	**08 21 46.5**	**+0.3**	
LZH				AP	pP	08 21 57.3	-0.9	
LZH				XP	sP	08 22 01.3	-1.2	
LZH				PP	PP	08 25 51.5	+2.8	
LZH				AMB	AMB			
	comp=Z,23nm,1.5s,mb5.5							
LZH				AMB	AMB			
	comp=Z,128nm,6.7s							
LZH				LR	LR			
	comp=E,503nm,16.8s							
LZH				LR	LR			
	comp=Z,798nm,18.5s,MS5.2							
BILL	**Bilibino**	**99.56**	**354**	*e*P		08 21 54.5		
BILL				pmax	pmax			
	comp=Z,4.0nm,1.2s,mb4.7							
YKA	**Yellowknife Ar**	**106.26**	**26**	PKPdf	PKiKP	08 26 26.8	-2.6	
YKA				PKKPbc	PKKPbc	08 37 48.7	-3.7	
YKA	**Yellowknife Ar**	**106.26**	**26**	PKiKP	PKiKP	08 26 26.7	-2.6	
	comp=Z,0.2nm,0.5s,baz=251,slow=1.6,SNR=9.8							
YKA				PKKPbc	PKKPbc	08 37 48.7	-3.7	
	comp=Z,1.4nm,0.9s,baz=41,slow=3.1,SNR=12							
WMQ	**Urumqi**	**113.45**	**308**	PKP	PKiKP	08 26 43.5	0.0	
WMQ				PP	PP	08 27 39.8	+4.2	
WMQ				PP	PP			
	comp=Z,184nm,4.5s							
WMQ				LR	LR			
	comp=N,51nm,29.2s,MS4.2							
WMQ				LR	LR			
	comp=E,71nm,26.9s,MS4.2							
WMQ				LR	LR			
	comp=Z,254nm,20.2s							
BOSA	**Boshof**	**116.45**	**203**	PKP	PKPdf	08 26 51.0	+1.1	
	comp=Z,9.0nm,1.3s,baz=180,slow=7.1,SNR=3.1							
MKAR	**Makanchi Array**	**118.02**	**310**	PKP	PKPdf	08 26 49.9	-2.3	
MKAR	**Makanchi Array**	**118.02**	**310**	PKP	PKPdf	08 26 49.9	-2.3	
	comp=Z,0.8nm,0.4s,baz=188,slow=6.9,SNR=6.9							
ZALV	**Zalesovo Beam**	**118.39**	**318**	PKP	PKPdf	08 26 49.8	-2.9	
	comp=Z,0.7nm,0.5s,baz=12,slow=2.1,SNR=4.7							
ZAL	**Zalesovo**	**118.39**	**318**	PKIKP	PKPdf	08 26 49.8	-2.9	
KURK	**Kurchatov**	**121.34**	**314**	*e*PKPdf	PKPdf	08 26 56.5	-2.0	
KURK	**Kurchatov**	**121.34**	**314**	⇑*i*PKIKP	PKPdf	08 26 54.3	-4.2	
UCH	**Uchtor**	**122.15**	**303**	*e*PKPdf	PKPdf	08 26 59.6	-0.8	
AML	**Almayashu**	**122.72**	**303**	*e*PKPdf	PKPdf	08 27 00.9	-0.5	
EKS2	**Erkin-Say**	**122.79**	**303**	*e*PKPdf	PKPdf	08 27 00.6	-0.9	
BRVK	**Borovoye**	**126.79**	**315**	*e*PKPdf	PKPdf	08 27 07.3	-1.5	
SCHQ	**Schefferville**	**127.01**	**42**	PKP	PKPdf	08 27 06.8	-2.4	
SCHQ	**Schefferville**	**127.01**	**42**	PKP	PKPdf	08 27 06.8	-2.4	
	comp=Z,3.4nm,1.0s,baz=284,slow=4.2,SNR=3.9							
LSZ	**Lusaka**	**127.25**	**213**	*e*PKPdf	PKPdf	08 27 11.8	+0.8	
KMBO	**Kilima Mbogo**	**133.38**	**233**	PKP	PKPdf	08 27 23.4	+0.8	
KMBO	**Kilima Mbogo**	**133.38**	**233**	PKP	PKPdf	08 27 23.4	+0.8	
	comp=Z,1.8nm,0.9s,baz=252,slow=23,SNR=3.9							
APA	**Apatity**	**139.03**	**342**	⇓*e*PKIKP	PKPdf	08 27 27.0	-4.4	
APA				pmax	pmax			
	comp=Z,71nm,1.4s							
ARCES	**ARCESS Array B**	**139.26**	**347**	PKP	PKPdf	08 27 29.9	-1.9	
ARCES	**ARCESS Array B**	**139.26**	**347**	PKhKP		08 27 22.1		
	comp=Z,4.4nm,1.0s,baz=58,slow=2.5,SNR=13							
ARCES				PKP	PKPdf	08 27 29.9	-1.9	
	comp=Z,4.5nm,0.7s,baz=358,slow=1.5,SNR=8.0							
JOF	**Joensuu**	**143.00**	**338**	*e*pkp	PKPdf	08 27 31.7	-7.0	
ZEI	**Tsey**	**144.64**	**301**	*e*PKIKP	PKPdf	08 27 40.4	-1.8	
KAF	**Kangasniemi**	**145.15**	**340**	*e*pkp	PKPdf	08 27 38.5	-4.0	
	baz=40,slow=3.3							
KIV	**Kislovodsk**	**145.39**	**303**	*i* PKP2	PKPab	08 27 41.5	-2.2	
KIV				pmax	pmax			
	comp=Z,8.0nm,0.8s							
OBN	**Obninsk**	**145.61**	**324**	⇑*i*PKIKP	PKPdf	08 27 41.7	-1.8	
OBN				*e*		08 27 46.3		
OBN				*e*		08 27 57.6		
OBN				pmax	pmax			
	comp=Z,41nm,0.8s							
FINES	**FINESS Array B**	**145.74**	**339**	*i* PKP2	PKPab	08 27 41.2	-3.2	
FINES				pmax	pmax			
	comp=Z,37nm,0.8s							
FINES	**FINESS Array B**	**145.74**	**339**	PKPbc	PKPbc	08 27 41.3	-2.7	
	comp=Z,37nm,0.8s,baz=64,slow=4.4,SNR=119							
FINES				pPKPbc	pPKPbc	08 27 55.6	-0.6	
	comp=Z,20nm,0.8s,baz=67,slow=5.0,SNR=6.5							
VRSR	**Storozhevoye**	**145.87**	**317**	*c i* PKIKP	PKPdf	08 27 42.3	-1.7	
VRSR				pmax	pmax			
	comp=Z,2.0nm,0.5s							
VRSR				pmax	pmax			
	comp=N,1.0nm,0.8s							
VRSR				pmax	pmax			
	comp=E,1.0nm,1.0s							
VORD	**Divnogorie**	**145.90**	**316**	*e*PKIKP	PKPdf	08 27 41.5	-2.6	
VORD				pmax	pmax			
	comp=N,10.0nm,0.6s							
VORD				pmax	pmax			
	comp=Z,10.0nm,0.6s							
VORD				pmax	pmax			
	comp=E,10.0nm,0.8s							
ANN	**Anapa**	**148.94**	**306**	*i* PKHKP	PKPdf	08 27 46.6	-2.8	
ANN				pmax	pmax			
	comp=Z,63nm,1.1s							
MALT	**Malatya**	**149.09**	**294**	*e*PKPbc	PKPbc	08 27 53.9	-0.2	
NB2	**NORSAR Subarra1**	**149.45**	**351**	PKP	PKPdf	08 27 51.5	+1.8	
	comp=Z,44nm,1.4s,baz=14,slow=2.6							
NB2	**NORSAR Subarra1**	**149.45**	**351**	PKP	PKPdf	08 27 51.5	+1.8	
	baz=14,slow=2.6							
NOA	**NORSAR Array B**	**149.45**	**351**	PKPbc	PKPbc	08 27 51.9	-2.3	
	comp=Z,8.5nm,0.7s,baz=15,slow=4.2,SNR=30							
NOA				pPKPbc	pPKPbc	08 28 07.0	+0.6	
	comp=Z,12nm,0.8s,baz=15,slow=4.2,SNR=9.8							
KONO	**Kongsberg**	**151.00**	**352**	*e*PKPdf	PKPdf	08 27 50.3	-1.9	
KONO				*e*PKPbc	PKPbc	08 27 56.0	-1.9	
AKASG	**Malin Array Be**	**151.70**	**322**	PKPbc	PKPbc	08 27 57.8	-2.0	
	comp=Z,23nm,0.8s,baz=49,slow=2.5,SNR=28							
AKASG				pPKPbc	pPKPbc	08 28 12.1	-0.1	
	comp=Z,10nm,0.6s,baz=56,slow=2.6,SNR=7.8							
KIEV	**Kiev**	**151.72**	**322**	*e*PKPbc	PKPbc	08 27 58.2	-1.6	
SUW	**Suwalki**	**152.40**	**332**	*e*PKP	PKPbc	08 27 59.5	-1.8	
SUW				*e*		08 28 04.2		
DBIC	**Dimbokro**	**154.89**	**165**	PKP	PKPdf	08 27 58.8	-0.5	
	comp=Z,1.4nm,0.5s,baz=164,slow=5.0,SNR=4.0							
CLL	**Collm**	**158.18**	**341**	*e*PKPab	PKPab	08 28 36.0	-0.3	
CLL	**Collm**	**158.18**	**341**	*e*PKPab	PKPab	08 28 37.0	+0.7	
BRG	**Berggiesshubel**	**158.28**	**339**	*e*PKP2	PKPab	08 28 35.1	-1.6	
BRG				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BRG	**Berggiesshubel**	**158.28**	**339**	*e*P	PKPab	08 28 35.1	-1.6	
	comp=Z,1.5nm,0.6s							
CONA	**Conrad Observa**	**160.03**	**331**	⇑*i*PKPab	PKPab	08 28 40.3	-4.2	
	comp=Z,7.9nm,1.0s							
GERES	**GERESS Array B**	**160.10**	**336**	PKP	PKPdf	08 28 03.0	-1.6	
	comp=Z,0.4nm,0.3s,baz=328,slow=1.3,SNR=4.2							
BAIF	**Baives**	**161.02**	**355**	*e*PKP2	PKPab	08 28 45.6	-3.0	
TORD	**Torodi Ar. Bea**	**162.08**	**180**	PKP	PKPdf	08 28 08.2	+0.4	
	comp=Z,2.4nm,0.9s,baz=19,slow=2.0,SNR=6.9							
TORD				PKPab	PKPab	08 28 54.6	+0.5	
	comp=Z,4.2nm,0.6s,baz=162,slow=4.5,SNR=8.1							
CDF	**Champ du Feu**	**162.24**	**348**	*e*PKP2	PKPab	08 28 50.8	-3.2	
MEZF	**Maizieres J'vi**	**162.48**	**352**	*e*PKP2	PKPab	08 28 52.1	-3.0	
LOR	**Lormes**	**163.82**	**355**	*e*PKP2	PKPab	08 28 57.9	-3.1	
SSF	**Saint Saulge**	**164.05**	**355**	*e*PKP2	PKPab	08 28 58.9	-3.1	
	comp=Z,17nm,0.9s							
CABF	**La Chapelle**	**164.19**	**349**	*e*PKP2	PKPab	08 28 59.6	-3.0	
AVF	**Avril sur Loir**	**164.33**	**356**	*e*PKP2	PKPab	08 29 00.0	-3.2	
	comp=Z,22nm,1.2s							
SMF	**Signal de Mont**	**164.44**	**354**	*e*PKP2	PKPab	08 29 00.5	-3.2	
	comp=Z,28nm,1.1s							

*ISCJB **28** 08:17:25.0±0.6, 3429N±006×13828E±006, h275km±4km, mb3.0/4, Error ellipse: s-maj=9.1km s-min=8.3km az=2.5*
*IDC **28** 08:17:25.3±0.7, 3420N×13822E, h262km±7km, mb2.8/4, mb1 3.0/6, mb1mx2.9/21, mbtmp2.8/6, Error ellipse: s-maj=24.9km s-min=9.8km az=66.0*
*JMA **28** 08:17:25.0±0.3, 3429N×13824E, h280km±3km, M3.1*

ISC 28 08:17:26.0±0.6, 3430N±006×13828E±006, h269km±4km, n22, σ0°95°/32, mb3.0/4, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TK04	**Tokai 4**	**0.35**	**285**	P		P	**Pn**	**08 18 01.7**	**+1.0**
TK04				*e*S		S	**S**	**08 18 30.3**	**+2.2**
TK02	**Tokai 2**	**0.56**	**232**	P		P	**Pn**	**08 18 01.8**	**+0.5**
TK02				*e*S		S	**S**	**08 18 30.6**	**+1.5**
JOD2	**Odawara 2**	**1.17**	**34**	P		P	**Pn**	**08 18 05.0**	**+1.1**
JYN	**Shimob**	**1.22**	**10**	P		P	**Pn**	**08 18 05.1**	**+0.9**
JIE	**Ise**	**1.31**	**275**	P		P	**Pn**	**08 18 04.9**	**+0.1**
JHJ	**Hachijo jima 2**	**1.71**	**133**	P		P	**Pn**	**08 18 07.9**	**+0.1**
	8.3nm,0.3s,baz=72,slow=20,SNR=2.6								
JHJ				S		S	**S**	**08 18 39.0**	**-1.8**
	8.6nm,0.3s,baz=73,slow=19,SNR=4.2								
JRY	**Ryogami san**	**1.79**	**16**	P		P	**Pn**	**08 18 09.8**	**+1.6**
JRY				*e*S		S	**S**	**08 18 41.5**	**-0.2**
JGM	**Miyama**	**1.90**	**318**	P		P	**Pn**	**08 18 09.4**	**+0.2**
JGM				*e*S		S	**S**	**08 18 43.0**	**-0.4**
JWY	**Kouya**	**2.23**	**269**	P		P	**Pn**	**08 18 11.9**	**-0.2**
MJAR	**Matsushiro Arr**	**2.24**	**358**	P		P	**Pn**	**08 18 12.4**	**+0.3**
	2.0nm,0.3s,baz=180,slow=9.9,SNR=28								
MJAR				S		S	**S**	**08 18 48.0**	**-0.7**
	0.6nm,0.3s,baz=198,slow=16,SNR=5.7								
MAT	**Matsushiro**	**2.24**	**358**	P		P	**Pn**	**08 18 12.6**	**+0.5**
MAT				*e*S		S	**S**	**08 18 48.4**	**-0.4**
BSO1	**Boso 1**	**2.25**	**80**	P		P	**Pn**	**08 18 12.1**	**-0.2**
BSO1				*e*S		S	**S**	**08 18 48.3**	**-0.6**
JWZ	**Kozaga**	**2.27**	**251**	P		P	**Pn**	**08 18 11.7**	**-0.8**
JAG	**Ashikaga**	**2.33**	**24**	P		P	**Pn**	**08 18 12.7**	**-0.2**
JAG				*e*S		S	**S**	**08 18 48.4**	**-1.8**
JKG	**Kaga**	**2.54**	**322**	P		P	**Pn**	**08 18 15.1**	**+0.1**
JWT	**Wachi**	**2.57**	**293**	P		P	**Pn**	**08 18 15.0**	**-0.2**
JWT				*e*S		S	**S**	**08 18 52.3**	**-2.0**
JAI	**Aioi**	**3.22**	**262**	P		P	**Pn**	**08 18 21.0**	**-1.0**
KSRS	**Korea Array**	**8.98**	**294**	P		P	**Pn**	**08 19 31.6**	**0.0**
	0.1nm,0.3s,baz=112,slow=14,SNR=3.7								
SONM	**Songino Array**	**27.37**	**309**	P		P	**P**	**08 22 47.3**	**+0.8**
	0.5nm,0.5s,mb3.2,baz=94,slow=9.4,SNR=4.6								
MKAR	**Makanchi Array**	**43.48**	**304**	P		P	**P**	**08 25 02.8**	**0.0**
	0.5nm,0.5s,mb3.0,baz=90,slow=8.5,SNR=3.7								
WRA	**Warramunga Arr**	**54.07**	**185**	P		P	**P**	**08 26 21.6**	**-1.6**
	0.2nm,0.4s,mb2.8,baz=0.0,slow=7.6,SNR=5.6								
YKA	**Yellowknife Ar**	**67.44**	**29**	P		P	**P**	**08 27 53.5**	**+1.0**
	0.1nm,0.3s,mb3.0,baz=294,slow=6.4,SNR=2.6								

*ISCJB **28** 08:19:31.7±1.1, 2259S±007×66.1W±02, h252km±14km, mb3.6/4, Error ellipse: s-maj=27.6km s-min=12.1km az=179.5*
*IDC **28** 08:19:32.2±1.6, 2252S×6604W, h242km±16km, mb3.5/4, mb1 3.4/8, mb1mx3.2/19, mbtmp3.3/8, Error ellipse: s-maj=29.1km s-min=13.4km az=91.0*

ISC 28 08:19:32.5±1.1, 2255S±007×661W±02, h243km±14km, n11, σ0°91°/10, mb3.6/4, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.53**	**342**	P		P	**Pn**	**08 21 08.6**	**+1.4**
	0.3nm,0.3s,baz=167,slow=8.4,SNR=8.3								
LPAZ				S		S	**S**	**08 22 22.2**	**-0.7**
	0.2nm,0.3s,baz=325,slow=17,SNR=7.4								
SIV	**San Ignacio**	**8.06**	**37**	P		P	**Pn**	**08 21 27.0**	**+0.4**
	2.1nm,0.3s,baz=233,slow=9.4,SNR=81								
CFAA	**Coronel Fontan**	**9.22**	**192**	P		P	**Pn**	**08 21 39.8**	**-1.3**
	0.2nm,0.3s,baz=25,slow=12,SNR=40								
CFAA				S		S	**S**	**08 23 15.7**	**-9.5**
	0.5nm,0.3s,baz=271,slow=18,SNR=12								
PLCA	**Paso Flores**	**18.51**	**191**	P		P	**P**	**08 23 31.7**	**+0.8**
	0.1nm,0.3s,baz=344,slow=9.0,SNR=2.6								
QSPA	**South Pole Qui**	**67.64**	**180**	P		P	**P**	**08 30 03.8**	**+1.1**
	0.6nm,0.8s,mb3.3,baz=28,slow=1.0,SNR=9.1								
TORD	**Torodi Ar. Bea**	**75.26**	**69**	P		P	**P**	**08 30 48.1**	**-1.0**
	1.8nm,0.6s,mb3.9,baz=253,slow=5.9,SNR=8.1								
ULM	**Lac du Bonnet**	**77.14**	**341**	P		P	**P**	**08 30 58.5**	**-0.4**
	0.7nm,0.5s,mb3.5,baz=180,slow=7.1,SNR=3.8								
YKA	**Yellowknife Ar**	**93.06**	**340**	P		P	**P**	**08 32 17.8**	**-0.1**
	0.3nm,0.5s,mb3.6,baz=130,slow=4.7,SNR=9.8								
ASAR	**Alice Springs**	**130.12**	**204**	PKP		PKPdf		08 38 13.6	-0.5
	0.4nm,0.8s,baz=124,slow=1.3,SNR=3.6								
WRA	**Warramunga Arr**	**133.29**	**207**	PKP		PKPdf		08 38 20.1	0.0
	0.3nm,0.9s,baz=153,slow=1.9,SNR=6.4								
MKAR	**Makanchi Array**	**144.88**	**39**	PKP		PKPdf		08 38 40.3	0.0
	1.2nm,0.6s,baz=300,slow=3.4,SNR=7.7								

IDC 28 08:25:28.9±2.3, 2236S×6896W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=55.7km s-min=53.8km az=136.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.09**	**8**	P		Pn	Pn	08 27 02.0	+1.8
	0.3nm,0.3s,baz=188,slow=5.2,SNR=11								
SIV	**San Ignacio**	**9.78**	**51**	P		Pn	Pn	08 27 49.8	-1.1
	4.0nm,0.3s,baz=242,slow=15,SNR=94								
TORD	**Torodi Ar. Bea**	**77.69**	**70**	P		P		08 37 27.8	-0.2
	0.4nm,0.4s,baz=260,slow=4.1,SNR=4.5								
YKA	**Yellowknife Ar**	**91.98**	**341**	P		P		08 38 37.6	-1.4
	0.2nm,0.6s,baz=132,slow=4.7,SNR=4.6								
MKAR	**Makanchi Array**	**146.35**	**37**	PKPbc		PKPbc		08 45 12.4	+0.8
	0.4nm,0.5s,baz=334,slow=2.6,SNR=5.1								

IDC 28 08:37:15.4±1.6, 2204N×14345E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.4/19, mbtmp3.3/3, Error ellipse: s-maj=58.9km s-min=31.7km az=88.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**39.24**	**320**	P		P	P	08 44 45.4	0.0
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.2								
WRA	**Warramunga Arr**	**42.66**	**193**	P		P		08 45 13.8	-0.1
	0.4nm,0.7s,baz=15,slow=8.6,SNR=5.0								
YKA	**Yellowknife Ar**	**76.04**	**28**	P		P		08 49 04.5	+0.2
	0.1nm,0.5s,baz=290,slow=5.9,SNR=4.0								

IDC 28 08:44:53.2±3.3, 514S×15233E, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.8/15, mbtmp4.2/3, Error ellipse: s-maj=122.9km s-min=45.5km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.87**	**228**	P		P	P	08 49 58.5	0.0
	3.6nm,0.5s,baz=53,slow=9.9,SNR=66								
ASAR	**Alice Springs**	**25.59**	**222**	P		P		08 50 24.7	+0.5
	1.9nm,0.4s,baz=59,slow=8.5,SNR=26								
FITZ	**Fitzroy Crossi**	**29.09**	**242**	P		P		08 50 54.8	-1.0
	2.9nm,0.9s,baz=54,slow=12,SNR=3.6								
TORD	**Torodi Ar. Bea**	**149.97**	**287**	PKPbc		PKPbc		09 04 46.7	-0.1
	0.4nm,0.6s,baz=82,slow=3.0,SNR=2.4								

IDC 28 08:51:32.4±1.5, 137S×12782E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.5/15, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=127.6km s-min=22.5km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.52**	**161**	P		P	Pn	08 56 02.0	-0.7
	0.1nm,0.3s,baz=342,slow=12,SNR=14								
ASAR	**Alice Springs**	**22.93**	**166**	P		P		08 56 38.2	0.0
	0.7nm,0.5s,baz=344,slow=10,SNR=8.0								
SONM	**Songino Array**	**52.45**	**342**	P		P		09 00 48.4	+1.6
	0.5nm,1.1s,baz=148,slow=6.5,SNR=3.6								
MKAR	**Makanchi Array**	**62.36**	**326**	P		P		09 01 55.9	-0.9
	0.3nm,0.3s,baz=116,slow=6.6,SNR=3.0								

*ISCJB **28** 09:00:09.8±0.8, 3538N±005×13693E±006, h7km±9km, Error ellipse: s-maj=9.2km s-min=6.7km az=144.5*
*JMA **28** 09:00:10.0, 3540N×13695E, h9km, M2.5*
JMA Felt I J1.

ISC 28 09:00:10.0±0.8, 3538N±005×13693E±007, h8km±10km, n6, σ0°25°/9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAO	**Obara**	**0.30**	**113**	P		P	**Pg**	**09 00 15.7**	**-0.2**
JAO				S		S	**Sg**	**09 00 20.0**	**+0.2**
JGM	**Miyama**	**0.36**	**332**	P		P	**Pg**	**09 00 17.2**	**+0.1**
JGM				*e*S		S	**Sg**	**09 00 21.9**

	comp=N,30nm,0.7s								
SONA	**Sohna**	**8.24**	**155**		*e*P		**Pn**	09 07 21.4	**-1.6**
SONA					*e*S		**Sn**	09 08 51.5	**-3.3**
SONA					AML		AML	09 09 57.7	
	comp=E,41nm,0.4s								
SONA					AML		AML	09 09 58.0	
	comp=N,18nm,0.2s								
KOLN	**Koldanda**	**11.96**	**129**		*e*P		**Pn**	09 08 10.9	**-3.0**
	comp=N,34nm,0.5s								
GKN	**Gorkha**	**12.47**	**125**		*e*P		**Pn**	09 08 17.1	**-3.7**
	comp=N,26nm,0.3s								
MK31	**Makanchi Array**	**12.93**	**29**	⇑	Pn		**Pn**	09 08 36.7	**+10**
	comp=N,1.1nm,0.4s,baz=209,slow=11,SNR=5.5								
MKAR	**Makanchi Array**	**12.93**	**29**		Pn		**Pn**	09 08 24.6	**-2.3**
	comp=N,0.3nm,0.3s,baz=186,slow=11,SNR=5.7								
KKN	**Kakani**	**13.04**	**124**		*e*P		**Pn**	09 08 24.6	**-4.0**
	comp=N,35nm,0.5s								
JIRN	**Jiri**	**13.74**	**123**		*e*P		**Pn**	09 08 33.0	**-5.1**
	comp=N,98nm,0.4s								
TAPN	**Taplejung**	**14.98**	**120**		*e*P		**Pn**	09 08 48.6	**-6.1**
	comp=N,19nm,0.3s								
KURBB	**Kurchatov Arra**	**15.30**	**13**		Pn		**Pn**	09 08 59.6	**+1.0**
KURK	**Kurchatov**	**15.41**	**13**	⇓	Pn		**Pn**	09 09 01.5	**+1.5**
	comp=N,5.7nm,1.2s								
AB31	**Akbulak array**	**16.56**	**328**	⇓	Pn		**Pn**	09 09 11.7	**-2.9**
	comp=N,1.9nm,0.6s,baz=165,slow=13,SNR=33								
AB31				⇓	Sn		**Sn**	09 12 05.3	**-12**
	comp=N,1.0nm,0.5s,baz=150,slow=23,SNR=2.8								
BVA0	**Borovoye Array**	**17.32**	**354**	⇑	Pn		**Pn**	09 09 23.3	**-0.7**
	comp=N,0.3nm,0.6s,baz=174,slow=14,SNR=17								
CHKZ	**Chkalovo**	**17.95**	**355**	⇑	Pn		**Pn**	09 09 30.4	**-1.3**
	comp=N,5.5nm,1.7s								
AKTO	**Aktyubinsk**	**18.27**	**328**	⇑	Pn		**Pn**	09 09 36.0	**+0.3**
	comp=N,0.8nm,0.8s								
AKTO				⇑	Sn		**Sn**	09 12 49.8	**-8.9**
	comp=N,0.1nm,0.6s								
AKTO	**Aktyubinsk**	**18.27**	**328**		P		**Pn**	09 09 34.3	**-1.4**
AKTO					pmax		pmax		
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**18.27**	**328**		P		**Pn**	09 09 34.3	**-1.4**
	comp=Z,0.7nm,0.3s,baz=133,slow=8.2,SNR=14								
ZALV	**Zalesovo Beam**	**19.88**	**21**		P		**Pn**	09 09 51.4	**-3.4**
	comp=Z,1.8nm,0.3s,baz=213,slow=9.7,SNR=12								
NVS	**Novosibirsk**	**20.26**	**17**		*e*P		**P**	09 09 55.1	**-1.9**
NVS					*e*			09 13 41.7	
NVS					pmax		pmax		
	comp=N,4.0nm,0.6s								
NVS					pmax		pmax		
	comp=E,2.0nm,0.6s								
NVS					pmax		pmax		
	comp=Z,5.0nm,0.6s								
ZAK	**Zakamensk**	**26.15**	**47**		*e*P		**P**	09 10 56.0	**+0.7**
ZAK					pmax		pmax		
	comp=Z,2.0nm,1.0s,mb3.6								
SONM	**Songino Array**	**27.31**	**54**		P		**P**	09 11 05.6	**-0.2**
SONM					pmax		pmax		
	comp=Z,1.0nm,0.5s								
SONM	**Songino Array**	**27.31**	**54**		P		**P**	09 11 05.6	**-0.2**
	comp=Z,0.9nm,0.5s,mb3.6,baz=264,slow=10,SNR=11								
AKASG	**Malin Array Be**	**34.74**	**309**		P		**P**	09 12 10.3	**-0.8**
AKASG					pmax		pmax		
	comp=Z,1.0nm,0.4s								
AKASG	**Malin Array Be**	**34.74**	**309**		P		**P**	09 12 10.3	**-0.7**
	comp=Z,0.7nm,0.4s,mb3.9,baz=106,slow=11,SNR=5.3								
FINES	**FINESS Array B**	**39.03**	**326**		P		**P**	09 12 48.7	**+1.3**
FINES					pmax		pmax		
	comp=Z,2.0nm,1.0s								
FINES	**FINESS Array B**	**39.03**	**326**		P		**P**	09 12 48.7	**+1.3**
	comp=Z,1.6nm,1.0s,mb3.7,baz=128,slow=11,SNR=3.6								
ARCES	**ARCESS Array B**	**42.45**	**337**		P		**P**	09 13 15.6	**+0.2**
ARCES					pmax		pmax		
	comp=Z,4.0nm,0.9s								
ARCES	**ARCESS Array B**	**42.45**	**337**		P		**P**	09 13 15.6	**+0.2**
	comp=Z,3.5nm,0.9s,mb4.0,baz=123,slow=4.5,SNR=7.8								
NB2	**NORSAR Subarra**	**45.98**	**323**		P		**P**	09 13 44.5	**+0.7**
	comp=Z,1.5nm,0.8s,mb4.0,baz=95,slow=7.9								
NOA	**NORSAR Array B**	**45.98**	**323**		P		**P**	09 13 44.6	**+0.8**
NOA					pmax		pmax		
	comp=Z,1.0nm,0.7s								
NOA	**NORSAR Array B**	**45.98**	**323**		P		**P**	09 13 44.5	**+0.8**
	comp=Z,0.6nm,0.7s,mb3.6,baz=93,slow=7.8,SNR=3.3								
BSEG	**Bad Segeberg**	**46.44**	**313**		*e*P		**P**	09 13 47.3	**-0.2**
BSEG					*e*		pP	09 13 58.7	-2.6
TORD	**Torodi Ar. Bea**	**67.46**	**270**		P		**P**	09 16 14.6	**-2.2**
	comp=Z,0.3nm,0.4s,mb3.7,baz=54,slow=5.7,SNR=9.6								
KAKA	**Kakadu**	**73.87**	**119**		*e*P		**P**	09 16 56.3	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.3								
BOSA	**Boshof**	**78.38**	**222**		P		**P**	09 17 20.8	**-0.2**
BOSA					pmax		pmax		
	comp=Z,2.0nm,0.9s,mb4.0								
BOSA	**Boshof**	**78.38**	**222**		P		**P**	09 17 20.8	**-0.2**
	comp=Z,1.9nm,0.9s,mb4.0,baz=45,slow=2.9,SNR=3.0								
WRA	**Warramunga Arr**	**80.15**	**123**		P		**P**	09 17 31.8	**+0.9**
WRA					pmax		pmax		
	comp=Z,1.0nm,0.6s								
WRA	**Warramunga Arr**	**80.15**	**123**		P		**P**	09 17 31.8	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.8,baz=322,slow=5.2,SNR=22								
WB2	**Warramunga Arr**	**80.16**	**123**		*e*P		**P**	09 17 31.8	**+0.9**
YKA	**Yellowknife Ar**	**81.83**	**4**		P		**P**	09 17 39.1	**-0.2**
YKA					pmax		pmax		
	comp=Z,1.0nm,0.5s								
YKA	**Yellowknife Ar**	**81.83**	**4**		P		**P**	09 17 39.1	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=349,slow=5.4,SNR=15								
ASAR	**Alice Springs**	**82.43**	**126**		P		**P**	09 17 43.8	**+0.9**
ASAR					pmax		pmax		
	comp=Z,1.0nm,0.5s								
ASAR	**Alice Springs**	**82.43**	**126**		P		**P**	09 17 43.8	**+0.8**
	comp=Z,0.8nm,0.5s,mb3.9,baz=307,slow=5.1,SNR=20								
CTA	**Charters Tower**	**88.67**	**116**		*e*P		**P**	09 18 15.0	**+1.0**
	comp=Z,3.5nm,1.2s,mb4.6								

***IDC* 28 09:08:25.1±3.9, 2018S×16857E, *h*0km, *mb*4.2/4, *mb*1 4.3/4, *mb*1*mx*4.0/13, *mbtmp*4.2/4, *MS*3.2/1, *Ms*1 3.2/1, *ms*1*mx*2.6/17, *Error ellipse*: *s-maj*=114.1km *s-min*=50.5km *az*=139.0, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.73**	**226**	*e*P	Pn	09 09 07.6	**-2.6**
CTA	**Charters Tower**	**20.95**	**266**	LR	LR	09 20 00.1	
	comp=Z,57nm,19.2s,baz=305,slow=33						
STKA	**Stephens Creek**	**26.82**	**239**	P	P	09 14 06.2	**-0.9**
	2.2nm,0.7s,baz=68,slow=11,SNR=4.9						
WRA	**Warramunga Arr**	**32.12**	**264**	P	P	09 14 54.1	**-0.3**
	0.8nm,0.5s,baz=91,slow=8.4,SNR=24						
ASAR	**Alice Springs**	**32.30**	**257**	P	P	09 14 55.9	0.0
	3.1nm,0.6s,baz=84,slow=9.1,SNR=58						
FITZ	**Fitzroy Crossi**	**40.53**	**265**	*e*P	P	09 16 07.2	**+0.9**
	9.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**40.53**	**265**	P	P	09 16 07.0	**+0.7**
	3.1nm,0.5s,baz=95,slow=18,SNR=7.9						
GERES	**GERESS Array B**	**145.01**	**331**	PKPbc	PKPbc	09 28 03.2	-0.3
	0.4nm,0.3s,baz=37,slow=6.7,SNR=4.5						

NEIC ***28*** *09:13:37.0, 38.06N×26.71E, h5km, MD3.4(ISK), MD3.3(ATH), After ISK.*
ATH ***28*** *09:13:38.1, 38.15N×26.66E, h27km, MD3.3/4*
ISCJB ***28*** *09:13:38.1±1.3, 38.13N±0.02×26.70E±0.06, h3km±9km, Error ellipse: s-maj=7.6km s-min=3.8km az=167.9*
ISK ***28*** *09:13:38.0, 38.10N×26.79E, h5km, MD3.3*
DDA ***28*** *09:13:39.7, 38.18N×26.78E, h5km±3km, Md3.1*
CSEM ***28*** *09:13:40.3±0.1, 38.07N×26.69E, h25km, MD3.1, Error ellipse: s-maj=2.8km s-min=1.4km az=88.0*

ISC 28 09:13:39.3±0.9, 3813N±0.02×2672E±0.06, h9km±6km, n29, σ1§44/37, 3C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.43**	**168**	*e*PB	**Pg**	**09 13 48.6**	**+0.8**
SMG				*e*SB	**Sg**	**09 13 54.5**	**+1.0**
KDAG	**Bornova**	**0.51**	**58**	*i* P	**Pg**	**09 13 48.3**	**-0.9**
KDAG				*i* S	**Sg**	**09 13 53.8**	**-2.1**
AKS	**Akhisar**	**1.14**	**49**	PN	**Pn**	**09 13 59.8**	**-1.6**
AKHS	**Akhisar**	**1.14**	**49**	⇑*i*P	**Pb**	**09 13 59.1**	**-2.1**
AKHS				*i* S	**Sb**	**09 14 15.7**	**-0.4**
PRK	**Paraskevi**	**1.16**	**343**	*e*PN	**Pn**	**09 13 59.5**	**-2.3**
PRK				*e*SN	**Sn**	**09 14 15.6**	**-2.2**
BODT	**Bodrum**	**1.17**	**156**	PN	**Pn**	**09 14 00.9**	**-0.9**
AYVA	**Ayvalik**	**1.17**	**359**	⇑*i*P	**Pb**	**09 14 00.6**	**-1.1**
AYVA				*i* S	**Sb**	**09 14 16.1**	**-1.0**
MLSB	**Milas**	**1.19**	**135**	PN	**Pn**	**09 14 00.2**	**-1.9**
MLSB				SN	**Sn**	**09 14 16.9**	**-1.4**
BDRM	**Kayabasi**	**1.21**	**151**	*e*P	**Pn**	**09 14 01.0**	**-1.5**
BDRM				*i* S	**Sb**	**09 14 19.3**	**+1.1**
APE	**Apeiranthos**	**1.42**	**222**	*e*PN	**Pn**	**09 14 03.9**	**-1.4**
DAT	**Datca**	**1.56**	**154**	PN	**Pn**	**09 14 06.6**	**-0.6**
KULA	**Kula-Manisa**	**1.57**	**75**	PN	**Pn**	**09 14 07.3**	**-0.1**
YER	**Yerkesik**	**1.59**	**128**	PN	**Pn**	**09 14 08.4**	**+0.7**
EZN	**Ezine**	**1.72**	**350**	PN	**Pn**	**09 14 10.1**	**+0.7**
BALB	**Balikesir**	**1.76**	**31**	PN	**Pn**	**09 14 11.0**	**+1.1**
BOZC	**Bozcaada**	**1.78**	**343**	⇓*i*P	**Pn**	**09 14 08.5**	**-1.8**
BOZC				*i* S	**Sn**	**09 14 33.0**	**-0.1**
DST	**Dursunbey**	**2.09**	**45**	*e*PN	**Pn**	**09 14 15.5**	**+0.9**
GADA	**Gvkgeada**	**2.15**	**343**	*e*PN	**Pn**	**09 14 17.6**	**+2.2**
KHL	**Karahalli**	**2.22**	**84**	*e*PN	**Pn**	**09 14 17.2**	**+0.9**
GDZ	**Gediz**	**2.37**	**65**	⇑*i*P	**Pn**	**09 14 22.7**	**+4.4**
EDC	**Edincik**	**2.38**	**22**	*e*PN	**Pn**	**09 14 20.5**	**+2.0**
KCT	**Karacabey**	**2.48**	**30**	*e*PN	**Pn**	**09 14 21.9**	**+2.0**
RKY	**Sarkoy-Tekirda**	**2.58**	**8**	*e*PN	**Pn**	**09 14 23.3**	**+2.1**
ENEZ	**Enez**	**2.64**	**351**	*e*PN	**Pn**	**09 14 23.7**	**+1.7**
GEMT	**Gemlik**	**2.99**	**39**	*e*PN	**Pn**	**09 14 28.4**	**+1.5**
IZI	**Iznik**	**3.07**	**43**	*e*PN	**Pn**	**09 14 29.8**	**+1.8**
RDO	**Rodhopi**	**3.14**	**344**	*e*PN	**Pn**	**09 14 28.0**	**-1.0**
YLV	**Yalova**	**3.18**	**39**	*e*PN	**Pn**	**09 14 31.2**	**+1.6**
EDRB	**Edirne**	**3.71**	**0**	*e*PN	**Pn**	**09 14 38.6**	**+1.8**

IDC ***28*** *09:26:20.3±4.5, 2002S×16886E, h43km±9km, mb3.3/4, mb1 3.5/4, mb1mx3.4/13, mbtmp3.3/4, Error ellipse: s-maj=142.7km s-min=33.0km az=143.0*

ISC 28 09:26:19.1±7.1, 202S±04×1689E±05, h34km±54km, h42km±1.3km: pP-P, n6, σ0§09/6, mb3.5/4, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.00**	**230**	*e*P	**Pn**	**09 27 04.2**	**0.0**
DZM				*e*S	**Sn**	**09 27 38.9**	**0.0**
CTA	**Charters Tower**	**21.28**	**266**	P	**P**	**09 31 02.8**	**0.0**
	3.5nm,0.8s,mb3.8,baz=107,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**32.45**	**264**	P	**P**	**09 32 46.4**	**0.0**
	0.2nm,0.5s,mb3.2,baz=90,slow=8.3,SNR=3.0						
WRA				pP	pP	09 32 57.7	+1.3
	0.4nm,0.5s,baz=92,slow=8.4,SNR=3.2						
ASAR	**Alice Springs**	**32.63**	**257**	P	**P**	**09 32 48.0**	**+0.1**
	0.4nm,0.5s,mb3.6,baz=97,slow=9.6,SNR=6.0						
ASAR				pP	pP	09 32 59.8	+2.0
	0.9nm,0.6s,baz=90,slow=8.3,SNR=6.3						
SONM	**Songino Array**	**87.77**	**323**	P	**P**	**09 39 04.4**	**-0.1**
	0.2nm,0.6s,mb3.6,baz=134,slow=8.3,SNR=2.8						
SONM				pP	pP	09 39 17.3	+1.9
	0.5nm,0.8s,baz=131,slow=4.4,SNR=3.3						
GERES	**GERESS Array B**	**145.15**	**331**	PKPbc	PKPbc	09 45 51.2	-1.4
	0.5nm,0.2s,baz=50,slow=4.2,SNR=4.7						

CASC 28 09:53:02.4±1.9, 1416N×9160W, h45km±13km, MD3.7, 3C-2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.16**	**347**	⇑*e*P	Pn	09 53 10.4	+0.5
JAT				*e*S	Sn	09 53 15.4	+0.1
FUG	**Fuego 3**	**0.79**	**69**	⇓*e*P	Pn	09 53 17.3	+0.1
FUG				*e*S	Sn	09 53 29.8	+1.9
PCG	**Pacaya**	**0.99**	**76**	⇓*e*P	Pn	09 53 20.1	+0.3
RTR	**El Retiro**	**1.92**	**98**	*e*P	x	09 53 48.0	
RTR				*e*S	x	09 54 12.4	
SBLS	**San Blas**	**1.94**	**99**	*e*P	x	09 53 47.9	
SBLS				*e*S	x	09 54 10.5	
LFRS	**El Faro**	**2.52**	**102**	⇑*e*P	x	09 53 56.2	
LFRS				*e*S	x	09 54 26.7	
LCBS	**La Ceiba**	**2.59**	**101**	⇑*e*P	x	09 53 57.6	
LCBS				*e*S	x	09 54 29.0	
SNVI	**San Vicente**	**2.74**	**101**	*e*P	x	09 53 59.7	
SNVI				*e*S	x	09 54 31.9	

NEIC ***28*** *10:19:58.3, 3228S×7160W, h58km, MD3.7(GUC), After GUC.*

GUC 28 10:19:58.3±0.8, 3228S×7160W, h58km±4km, MD3.7, ML3.8, 15C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.29**	**151**	*e*P	Pn	10 20 08.7	+0.6
PACH				*i* S	Sn	10 20 16.1	+1.0
CHNG	**Los Chungos**	**0.41**	**12**	⇓*i*P	Pn	10 19 53.0	-16
CHNG				*i* S	Sn	10 20 01.4	-16
PTCH	**Petorca**	**0.57**	**88**	⇑*i*P	Pn	10 20 12.3	+1.4
PTCH				*i* S	Sn	10 20 22.2	+2.2
PTCH	**Petorca**	**0.57**	**88**	⇑*i*P	Pn	10 20 12.3	+1.4
PTCH				*i* S	Sn	10 20 22.2	+2.2
PTCH				AML	AML	10 20 23.8	
	comp=N,9μm,0.2s						
IHA	**Instituto Hidr**	**0.74**	**183**	⇑*i*P	Pn	10 20 12.7	-0.2
ROCH	**El Roble**	**0.85**	**144**	⇑*i*P	Pn	10 20 14.8	+0.6
ROCH				*i* S	Sn	10 20 27.6	+1.6
JACH	**Jahuel**	**0.94**	**115**	⇑*i*P	Pn	10 20 16.4	+0.9
JACH				*i* S	Sn	10 20 29.5	+1.4
LCCH	**Las Cruces**	**1.19**	**179**	⇓*i*P	Pn	10 20 18.9	+0.1
LCCH				*i* S	Sn	10 20 32.9	-1.1
CMCH	**Combarbala**	**1.22**	**25**	*e*P	Pn	10 20 19.9	+0.7
CMCH				*i* S	Sn	10 20 36.0	+1.3
CMCH	**Combarbala**	**1.22**	**25**	*e*P	Pn	10 20 19.9	+0.7
CMCH				*i* S	Sn	10 20 36.0	+1.3
CMCH				AML	AML	10 20 38.3	
	comp=N,12μm,0.8s						
SAN	**Santiago**	**1.41**	**146**	*i* S	Sn	10 20 40.3	+1.0
DSCH	**Colegio Aleman**	**1.41**	**142**	⇓*i*P	Pn	10 20 21.9	+0.2
DSCH				*i* S	Sn	10 20 40.1	+0.8
CLCH	**Cerro Calan**	**1.43**	**141**	⇑*i*P	Pn	10 20 23.5	+1.6
CLCH				*i* S	Sn	10 20 41.7	+2.0
CLCH	**Cerro Calan**	**1.43**	**141**	⇑*i*P	Pn	10 20 23.5	+1.6
CLCH				*i* S	Sn	10 20 41.7	+2.0
CLCH				AML	AML	10 20 43.8	
	comp=E,2μm,0.3s						
TACH	**Talagante**	**1.48**	**158**	*e*P	Pn	10 20 23.0	+0.4
FSR	**Penalolen**	**1.50**	**143**	⇑*i*P	Pn	10 20 24.0	+1.2
FSR				*i* S	Sn	10 20 42.6	+1.3
FSR	**Penalolen**	**1.50**	**143**	⇑*i*P	Pn	10 20 24.0	+1.2
FSR				*i* S	Sn	10 20 42.6	+1.3
FSR				AML	AML	10 20 46.3	
	comp=E,2μm,0.2s						
ANTU	**Antumapu**	**1.52**	**148**	⇑*i*P	Pn	10 20 23.9	+0.7
ANTU				*i* S	Sn	10 20 42.9	+1.0
ANTU	**Antumapu**	**1.52**	**148**	⇑*i*P	Pn	10 20 23.9	+0.7
ANTU				*i* S	Sn	10 20 42.9	+1.0
ANTU				AML	AML	10 20 44.9	
	comp=N,2μm,0.2s						
PCH	**Pirque**	**1.62**	**146**	⇑*i*P	Pn	10 20 25.3	+0.8
LNV	**Longovilo**	**1.68**	**175**	⇑*i*P	Pn	10 20 24.9	-0.4
LNV				*i* S	Sn	10 20 44.0	-1.7
CHCH	**Chadas Angostu**	**1.83**	**154**	*e*P	Pn	10 20 28.3	+0.9
CHCH				*i* S	Sn	10 20 50.7	+1.3
LMEL	**Las Melosas**	**1.95**	**143**	*e*P	Pn	10 20 30.3	+1.3
LMEL				*i* S	Sn	10 20 54.2	+1.8
LMEL	**Las Melosas**	**1.95**	**143**	*e*P	Pn	10 20 30.3	+1.3
LMEL				*i* S	Sn	10 20 54.2	+1.8
LMEL				AML	AML	10 20 55.4	
	comp=N,1μm,0.1s						
CACH	**El Canelo**	**2.01**	**156**	⇑*i*P	Pn	10 20 31.4	+1.5
CACH				*i* S	Sn	10 20 56.0	+2.1
TLL	**Tololo Astrono**	**2.22**	**18**	*e*P	Pn	10 20 34.0	+1.3
TLL				*i* S	Sn	10 21 00.7	+1.7
TLL	**Tololo Astrono**	**2.22**	**18**	*e*P	Pn	10 20 34.0	+1.3
TLL				*i* S	Sn	10 21 00.7	+1.7
TLL				AML	AML	10 21 06.9	
	comp=E,469nm,0.3s						
CICH	**Cipreses**	**2.26**	**154**	⇑*i*P	Pn	10 20 34.6	+1.4
SFDO	**San Fernando**	**2.38**	**168**	⇓*i*P	Pn	10 20 35.3	+0.5
LSCH	**La Serena**	**2.39**	**7**	⇓*i*P	Pn	10 20 35.6	+0.6
LSCH				*i* S	Sn	10 21 03.8	+0.7
NICH	**Los Niches**	**2.73**	**174**	*e*P	Pn	10 20 40.1	+0.4
VACH	**Vallenar**	**3.77**	**11**	*i* S	Sn	10 21 36.7	-0.3

ATH ***28*** *10:40:16.9, 3823N×2033E, h7km±2km, MD3.6/11*
NEIC ***28*** *10:40:17.0, 3823N×2033E, h7km, ML3.9(THE), ML3.0(ATH), After ATH.*
ISCJB ***28*** *10:40:18.4±0.7, 38.30N±0.03×20.39E±0.06, h10km, Error ellipse: s-maj=6.9km s-min=3.4km az=152.7*
CSEM ***28*** *10:40:18.9±0.1, 38.30N×20.40E, h2km, MD3.6, Error ellipse: s-maj=3.8km s-min=1.3km az=63.0*
THE ***28*** *10:40:19.0, 38.35N×20.46E, h3km, ML3.9*

ISC 28 10:40:18.7±0.8, 3829N±0.03×2038E±0.06, h10km, n25, σ1§32/39, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**124**	*e*PG	**Pg**	**10 40 22.4**	**-0.4**
VLS				*e*SG	**Sg**	**10 40 24.0**	**-1.6**
KFL	**Anninata**	**0.37**	**119**	*e*Pg	**Pg**	**10 40 25.1**	**-0.9**
KFL	**Anninata**	**0.37**	**119**	*e*Pg	**Pg**	**10 40 25.0**	**-0.9**
LKD	**Levkas**	**0.47**	**27**	*e*Pg	**Pg**	**10 40 25.4**	**-2.4**
LKD				*e*Sg	**Sg**	**10 40 31.6**	**-2.5**
LKD	**Levkas**	**0.47**	**27**	*e*Pg	**Pg**	**10 40 25.4**	**-2.5**
LKD				*e*Sg	**Sg**	**10 40 31.5**	**-2.5**
RLS	**Riolos of Patr**	**0.89**	**105**	*e*PG	**Pg**	**10 40 33.8**	**-1.9**
RLS				*e*SB	**Sg**	**10 40 47.5**	**+0.2**
SELA	**Sela**	**1.19**	**90**	*e*Pg	**Pn**	**10 40 39.5**	**-1.8**
SELA				*e*Sg	**Sg**	**10 40 56.5**	**-0.5**
IGT	**Igoumenitsa**	**1.24**	**358**	*e*Pg	**Pg**	**10 40 41.6**	**-1.0**
IGT				*e*Sg	**Sg**	**10 40 58.2**	**-0.6**
EVR	**Evrytania**	**1.28**	**60**	*e*PN	**Pn**	**10 40 41.5**	**-1.1**
EVR				*e*SB	**Sb**	**10 41 01.0**	**+1.6**
JAN	**Janina**	**1.41**	**15**	*e*PG	**Pg**	**10 40 44.5**	**-1.4**
JAN				*e*SB	**Sb**	**10 41 04.8**	**+1.5**
KEK	**Kerkira**	**1.49**	**342**	*e*Pb	**Pb**	**10 40 45.7**	**-0.8**
KEK				P	**Pg**	**10 40 49.7**	**+2.3**
KEK	**Kerkira**	**1.49**	**342**	P	**Pg**	**10 40 49.7**	**+2.3**
ITM	**Ithomi**	**1.65**	**132**	*e*PB	**Pb**	**10 40 48.1**	**-1.1**
AGG	**Agios Georgios**	**1.69**	**64**	*e*Pg	**Pn**	**10 40 47.9**	**-0.4**
AGG				*e*Sg	**Sb**	**10 41 10.7**	**-0.5**
AGG	**Agios Georgios**	**1.69**	**64**	*e*Pg	**Pn**	**10 40 47.8**	**-0.5**
AGG				*e*Sg	**Sb**	**10 41 10.7**	**-0.5**
PYL	**PYLOS**	**1.76**	**142**	*e*Pb	**Pn**	**10 40 50.0**	**+0.7**
THL	**Klokotos Trika**	**1.80**	**44**	*e*PN	**Pn**	**10 40 50.7**	**+0.9**
VLX	**Vlachokerasia**	**1.83**	**119**	*e*Pb	**Pb**	**10 40 51.3**	**-0.9**
VLX				*e*Sb	**Sb**	**10 41 15.7**	**+0.6**
LTK	**Loutraki**	**2.05**	**97**	*e*Pn	**Pn**	**10 40 54.0**	**+0.8**
LKR	**Lokris**	**2.09**	**79**	*e*PN	**Pn**	**10 40 55.1**	**+1.4**
KZN	**Kozani**	**2.29**	**28**	*e*PN	**Pn**	**10 40 59.0**	**+2.6**
DID	**Didima**	**2.39**	**108**	*e*Pn	**Pn**	**10 40 58.9**	**+1.1**
DID				*e*Sn	**Sn**	**10 41 29.1**	**+1.9**
LIT	**Litokhoron**	**2.44**	**41**	*e*Pn	**Pn**	**10 40 58.8**	**+0.2**
LIT				*e*Sn	**Sn**	**10 41 30.3**	**+1.8**
NAIG	**Nisos Aigina**	**2.51**	**101**	*e*PN	**Pn**	**10 41 01.0**	**+1.5**
VLI	**Veliai**	**2.56**	**127**	*e*PN	**Pn**	**10 41 01.5**	**+1.2**

IDC ***28*** *11:13:47.7±1.0, 37.30S×17698E, h164km±6km, mb3.7/5, mb1 3.8/5, mb1mx3.7/11, mbtmp3.7/5, Error ellipse: s-maj=28.1km s-min=17.1km az=61.0*
ISCJB ***28*** *11:13:50.4±0.5, 3797S±0.04×17665E±0.07, h184km±3km, mb4.0/7, Error ellipse: s-maj=9.0km s-min=6.4km az=18.1*
WEL ***28*** *11:13:51.3±0.3, 3783S×17679E, h176km±2km, ML5.0/25, Error ellipse: s-maj=2.1km s-min=1.8km az=90.0*
NEIC ***28*** *11:13:51.2, 3783S×17677E, h178km, MG5.0(WEL), After WEL.*

ISC 28 11:13:51.3±0.5, 3799S±0.04×17667E±0.07, h181km±3km, n148, σ1§17/148, mb4.0/7, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDRZ	**Edgecumbe**	**0.13**	**156**	P	**Pn**	**11 14 14.8**	**-0.3**
EDRZ	**Edgecumbe**	**0.13**	**156**	PN	**Pn**	**11 14 14.6**	**-0.3**
EDRZ				SN	**Sn**	**11 14 32.3**	**-1.3**
OPRZ	**Ohinepanea**	**0.17**	**327**	PN	**Pn**	**11 14 14.5**	**-0.7**
OPRZ				SN	**Sn**	**11 14 32.5**	**-1.1**
TAZ	**Tarawera**	**0.28**	**

WEL	**Wellington**	**3.61**	**203**	PN	**Pn**	**11 14 46.8**	**-0.5**
SNZO	**South Karori**	**3.65**	**204**	P	**Pn**	**11 14 47.1**	**-0.8**
SNZO				*e*P		11 14 47.4	
SNZO				*e*S	**Sn**	**11 15 31.4**	**-0.8**
SNZO	**South Karori**	**3.65**	**204**	PN	**Pn**	**11 14 47.1**	**-0.8**
BHW	**Baring Head**	**3.69**	**202**	P	**Pn**	**11 14 44.5**	**-3.9**
BHW	**Baring Head**	**3.69**	**202**	PN	**Pn**	**11 14 44.5**	**-3.9**
TCW	**Tory Channel**	**3.72**	**209**	P	**Pn**	**11 14 48.0**	**-0.7**
TCW	**Tory Channel**	**3.72**	**209**	PN	**Pn**	**11 14 48.0**	**-0.7**
TUWZ	**Tuamarina**	**4.03**	**211**	PN	**Pn**	**11 14 52.0**	**-0.7**
NNZ	**Nelson**	**4.11**	**217**	P	**Pn**	**11 14 52.7**	**-1.0**
NNZ	**Nelson**	**4.11**	**217**	PN	**Pn**	**11 14 52.7**	**-1.0**
QRZ	**Quartz Range**	**4.28**	**227**	*e*P	**Pn**	**11 14 54.2**	**-1.7**
QRZ	**Quartz Range**	**4.28**	**227**	PN	**Pn**	**11 14 54.2**	**-1.7**
BSWZ	**Blackbirch Sta**	**4.30**	**209**	P	**Pn**	**11 14 55.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**4.30**	**209**	PN	**Pn**	**11 14 55.5**	**-0.6**
THZ	**Tophouse**	**4.76**	**216**	*e*P	**Pn**	**11 15 00.9**	**-1.1**
THZ	**Tophouse**	**4.76**	**216**	PN	**Pn**	**11 15 00.9**	**-1.1**
KHZ	**Kahutara**	**5.03**	**207**	P	**Pn**	**11 15 04.5**	**-1.1**
KHZ	**Kahutara**	**5.03**	**207**	PN	**Pn**	**11 15 04.5**	**-1.0**
DSZ	**Denniston Nort**	**5.30**	**223**	*e*P	**Pn**	**11 15 07.1**	**-2.0**
LTZ	**Lake Taylor**	**5.85**	**214**	P	**Pn**	**11 15 14.2**	**-2.0**
LTZ	**Lake Taylor**	**5.85**	**214**	PN	**Pn**	**11 15 14.2**	**-2.0**
CRLZ	**Canterbury Las**	**6.37**	**208**	P	**Pn**	**11 15 21.0**	**-2.0**
MQZ	**McQueen's Vall**	**6.48**	**207**	*e*P	**Pn**	**11 15 21.9**	**-2.5**
MQZ	**McQueen's Vall**	**6.48**	**207**	PN	**Pn**	**11 15 21.9**	**-2.4**
WVZ	**Waitaha Valley**	**6.80**	**220**	*e*P	**Pn**	**11 15 27.6**	**-1.0**
RPZ	**Rata Peaks**	**7.13**	**215**	P	**Pn**	**11 15 31.7**	**-1.3**
RPZ	**Rata Peaks**	**7.13**	**215**	P	**Pn**	**11 15 32.1**	**-0.8**
	2.9nm,0.3s,baz=314,slow=1.7,SNR=13						
RPZ				S	**Sn**	**11 16 47.6**	**-5.8**
	19nm,0.3s,baz=21,slow=16,SNR=14						
RPZ	**Rata Peaks**	**7.13**	**215**	PN	**Pn**	**11 15 31.7**	**-1.2**
FOZ	**Fox Glacier**	**7.69**	**221**	*e*P	**Pn**	**11 15 37.5**	**-2.8**
FOZ	**Fox Glacier**	**7.69**	**221**	PN	**Pn**	**11 15 37.5**	**-2.7**
LBZ	**Lake Benmore**	**8.05**	**215**	*e*P	**Pn**	**11 15 43.2**	**-1.8**
ODZ	**Otahua Downs**	**8.38**	**211**	*e*P	**Pn**	**11 15 48.3**	**-1.0**
JCZ	**Jackson Bay**	**8.53**	**222**	*e*P	**Pn**	**11 15 49.1**	**-2.2**
WKZ	**Wanaka**	**8.93**	**218**	*e*P	**Pn**	**11 15 56.1**	**-0.5**
MSZ	**Milford Sound**	**9.37**	**222**	*e*P	**Pn**	**11 16 03.6**	**+1.3**
TUZ	**Tuapeka**	**9.53**	**211**	*e*P	**Pn**	**11 16 04.4**	**0.0**
MLZ	**Mavora Lakes**	**9.72**	**218**	*e*P	**Pn**	**11 16 07.5**	**+0.6**
ASAR	**Alice Springs**	**39.06**	**279**	P	**P**	**11 21 00.2**	**-0.4**
	1.5nm,0.4s,mb3.9,baz=123,slow=8.2,SNR=36						
ASAR				PcP	PcP	11 23 04.5	-2.4
	0.5nm,0.6s,baz=118,slow=3.9,SNR=5.2						
VNDA	**Vanda**	**40.15**	**185**	P	**P**	**11 21 14.4**	**+5.5**
	0.5nm,0.7s,mb3.3,baz=353,slow=9.5						
FORT	**Forrest**	**40.38**	**265**	*e*P	**P**	**11 21 12.3**	**+0.8**
	24nm,0.9s,mb4.8						
WB2	**Warramunga Arr**	**40.76**	**284**	*e*P	**P**	**11 21 13.9**	**-0.8**
WRA	**Warramunga Arr**	**40.77**	**284**	P	**P**	**11 21 13.9**	**-0.9**
	1.5nm,0.3s,mb4.1,baz=122,slow=8.0,SNR=81						
QSPA	**South Pole Qui**	**52.14**	**180**	P	**P**	**11 22 46.4**	**+4.1**
QSPA				*e*P		11 22 47.1	
QSPA				PcP	PcP	11 23 53.1	+1.6
QSPA	**South Pole Qui**	**52.14**	**180**	P	**P**	**11 22 46.4**	**+4.1**
	1.8nm,0.3s,mb4.1,baz=42,slow=10,SNR=51						
QSPA				PcP	PcP	11 23 53.1	+1.6
	2.4nm,0.8s,baz=14,slow=3.1,SNR=2.5						
MAW	**Mawson**	**63.65**	**203**	P	**P**	**11 24 04.2**	**+1.7**
	2.6nm,0.9s,mb4.1,baz=120,slow=6.4,SNR=3.5						
VNA3	**Neumayer Olymp**	**70.98**	**178**	*e*	**P**	**11 24 51.0**	**+2.5**
VNA3				*e*		11 24 54.8	
VNA3				*e*		11 24 57.5	
VNA2	**Neumayer--Watz**	**71.36**	**179**	*e*	**P**	**11 24 53.4**	**+2.6**
	baz=194,slow=6.9						
VNA2				*e*		11 24 56.7	
VNA2				*e*		11 24 59.5	
KSRS	**Korea Array**	**87.50**	**323**	P	**P**	**11 26 18.6**	**+0.5**
	1.6nm,0.7s,mb4.0,baz=148,slow=5.8,SNR=4.6						
YKA	**Yellowknife Ar**	**114.19**	**28**	PKiKP	PKiKP	11 32 05.9	-2.0
	0.2nm,0.5s,baz=250,slow=1.8,SNR=5.6						
MKAR	**Makanchi Array**	**119.13**	**308**	PKP	PKPdf	11 32 15.2	-2.8
	0.7nm,0.7s,baz=163,slow=1.5,SNR=5.7						
ZALV	**Zalesovo Beam**	**120.62**	**317**	PKP	PKPdf	11 32 17.1	-3.5
	0.7nm,0.4s,baz=243,slow=2.2,SNR=4.5						
ARCES	**ARCESS Array B**	**144.80**	**343**	PKP	PKPdf	11 33 02.6	-2.7
	7.0nm,0.7s,baz=37,slow=2.7,SNR=30						
JOF	**Joensuu**	**147.40**	**331**	*e*pkp	PKPdf	11 33 09.3	-0.6
DBIC	**Dimbokro**	**148.80**	**177**	PKPbc	PKPbc	11 33 17.2	-0.6
	2.1nm,0.3s,baz=122,slow=2.5,SNR=16						
KAF	**Kangasniemi**	**149.75**	**333**	*e*pkp	PKPdf	11 33 15.8	+2.1
	baz=49,slow=2.4						
FINES	**FINESS Array B**	**150.26**	**332**	PKPbc	PKPbc	11 33 17.6	-2.3
	4.6nm,0.6s,baz=47,slow=3.9,SNR=22						
AKASG	**Malin Array Be**	**153.70**	**309**	PKPbc	PKPbc	11 33 25.9	-2.1
	1.9nm,0.6s,baz=64,slow=2.3,SNR=9.1						
TORD	**Torodi Ar. Bea**	**154.86**	**192**	PKP	PKPdf	11 33 21.8	-1.0
	0.9nm,0.7s,baz=163,slow=1.3,SNR=4.3						
TORD				PKPbc	PKPbc	11 33 30.2	-1.3
	1.0nm,0.5s,baz=172,slow=3.3,SNR=12						
TORD				PKPab	PKPab	11 33 47.1	-0.2
	1.4nm,0.5s,baz=178,slow=3.8,SNR=7.2						
NB2	**NORSAR Subarra**	**155.18**	**343**	PKPdf	PKPdf	11 33 28.2	+6.5
	comp=Z,0.4nm,0.4s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**155.18**	**343**	PKPbc	PKPdf	11 33 27.6	+5.9
	comp=Z,0.7nm,0.6s,baz=35,slow=2.0,SNR=4.2						
HFS	**Hagfors**	**155.33**	**339**	PKPbc	PKPdf	11 33 28.4	+6.5
	comp=Z,0.5nm,0.4s,baz=104,slow=6.3,SNR=5.9						

*ISCJB **28** 11:24:53.9±0.8, 3817N±002×2664E±005, h1km±6km, Error ellipse: s-maj=6.3km s-min=4.0km az=177.6*
*CSEM **28** 11:24:54.5±0.3, 3815N×2668E, h8km, MD3.5, Error ellipse: s-maj=7.8km s-min=5.0km az=97.0*
*DDA **28** 11:24:54.7, 38.17N×2665E, h5km±4km, Md3.3*
*ATH **28** 11:24:54.3, 3813N×2668E, h27km±24km, MD3.5/4*
*NEIC **28** 11:24:54.5, 3813N×2662E, h23km, MD3.5(ATH), ML3.1(ISK), After ATH.*
*ISK **28** 11:24:55.9, 3815N×2682E, h6km, MD3.3*

ISC 28 11:24:54.2±0.7, 3816N±002×2662E±005, h1km±5km, n22, σ0§95/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.48**	**159**	*e*PB		**Pg**	**11 25 04.8**	**+1.4**
SMG				*e*SB		**Sg**	**11 25 10.1**	**+0.5**
KDAG	**Bornova**	**0.56**	**64**	*i* P		**Pg**	**11 25 05.0**	**0.0**
KDAG				*i* S		**Sg**	**11 25 11.3**	**-0.9**
KDAG	**Bornova**	**0.56**	**64**	*i* P		**Pg**	**11 25 04.9**	**-0.1**
PRK	**Paraskevi**	**1.12**	**346**	*e*PN		**Pn**	**11 25 16.4**	**-0.6**
PRK				*e*SN		**Sn**	**11 25 32.3**	**-0.7**
AYVA	**Ayvalik**	**1.15**	**3**	*i* P		**Pg**	**11 25 16.9**	**+0.6**
AYVA				*i* S		**Sg**	**11 25 31.4**	**+0.2**
AKHS	**Akhisar**	**1.18**	**52**	*i* P		**Pg**	**11 25 15.4**	**-1.4**
AKHS				*i* S		**Sg**	**11 25 32.1**	**0.0**
AKS	**Akhisar**	**1.18**	**52**	PG		**Pg**	**11 25 17.5**	**+0.7**
AKS				SG		**Sg**	**11 25 31.4**	**-0.7**
BODT	**Bodrum**	**1.22**	**153**	PN		**Pn**	**11 25 17.6**	**-0.8**
MLSB	**Milas**	**1.26**	**133**	*e*PN		**Pn**	**11 25 18.7**	**-0.2**
BDRM	**Kayabasi**	**1.27**	**149**	*i* P		**Pg**	**11 25 18.3**	**-0.2**
BDRM				*i* S		**Sg**	**11 25 33.7**	**-1.3**
APE	**Apeiranthos**	**1.39**	**219**	*e*PN		**Pn**	**11 25 20.2**	**-0.5**
DAT	**Datca**	**1.62**	**152**	*e*PN		**Pn**	**11 25 23.8**	**0.0**
KULA	**Kula-Manisa**	**1.64**	**77**	PN		**Pn**	**11 25 24.0**	**-0.2**
YER	**Yerkesik**	**1.67**	**127**	*e*PN		**Pn**	**11 25 25.4**	**+0.9**
EZN	**Ezine**	**1.68**	**352**	*e*PN		**Pg**	**11 25 26.8**	**+0.4**
BOZC	**Bozcaada**	**1.74**	**345**	*i* P		**Pn**	**11 25 24.9**	**-0.6**
BOZC				*i* S		**Sn**	**11 25 45.9**	**-2.4**
BALB	**Balikesir**	**1.78**	**33**	*e*PN		**Pn**	**11 25 26.6**	**+0.6**
BALB				*e*SN		**Sn**	**11 25 49.5**	**+0.3**
GADA	**Gvkgeada**	**2.11**	**345**	*e*PN		**Pb**	**11 25 33.7**	**+0.6**
GDZ	**Gediz**	**2.42**	**67**	*i* P		**Pn**	**11 25 33.7**	**-1.2**
GDZ				*i* S		**Sn**	**11 26 07.0**	**+1.7**
KCT	**Karacabey**	**2.50**	**32**	*e*PN		**Pn**	**11 25 37.5**	**+1.5**
RKY	**Sarkoy-Tekirda**	**2.56**	**10**	*e*PN		**Pn**	**11 25 39.4**	**+2.6**
RDO	**Rodhopi**	**3.10**	**345**	*e*PN		**Pn**	**11 25 44.5**	**+0.3**

*ISCJB **28** 11:55:59.1±0.8, 3541N±008×2228E±008, h10km, mb3.8/9, Error ellipse: s-maj=11.8km s-min=8.4km az=33.5*
*CSEM **28** 11:56:02.9, 3541N×2258E, h9km, MD3.7/9, After ATH*
*NEIC **28** 11:56:02.9, 3541N×2258E, h9km, MD3.8(ATH), After ATH.*
*ATH **28** 11:56:04.7, 3550N×2268E, h16km±6km, MD3.7/9*
*IDC **28** 11:56:05.6±3.5, 3546N×2252E, h50km±35km, mb3.6/9, mb1 3.6/9, mb1mx3.4/22, mbtmp3.6/9, Error ellipse: s-maj=28.4km s-min=22.5km az=151.0*

ISC 28 11:56:02.9±2.1, 356N±01×2240E±010, h20km±14km, n21, σ1§11/21, mb3.8/9, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.90**	**35**	*e*PN		**Pn**	**11 56 20.5**	**+0.2**
VLI	**Veliai**	**1.25**	**20**	*e*PN		**Pn**	**11 56 28.0**	**+2.9**
VAM	**Vamos**	**1.48**	**95**	*e*PN		**Pn**	**11 56 28.5**	**+0.2**
ITM	**Ithomi**	**1.67**	**347**	*e*PN		**Pn**	**11 56 37.0**	**+6.0**
IDI	**Anoyia**	**2.05**	**97**	P		**Pn**	**11 56 36.7**	**+0.5**
	14nm,0.3s,baz=278,slow=14,SNR=58							
NPS	**Neapolis**	**2.64**	**95**	*e*PN		**Pn**	**11 56 45.0**	**+0.7**
APE	**Apeiranthos**	**2.95**	**58**	*e*PB		**Pb**	**11 56 53.0**	**-1.8**
VLS	**Valsamata**	**3.00**	**332**	*e*PN		**Pn**	**11 56 56.0**	**+6.8**
EVR	**Evrytania**	**3.40**	**352**	*e*PN		**Pb**	**11 57 01.5**	**-0.8**
KARP	**Karpathos**	**3.88**	**89**	*e*PN		**Pn**	**11 57 02.5**	**+1.1**
ARG	**Arkhangelos**	**4.70**	**80**	P		**Pn**	**11 57 13.8**	**+1.2**
TIP	**Timpagrande**	**5.77**	**311**	P		**Pn**	**11 57 30.5**	**+3.2**
HFS	**Hagfors**	**25.24**	**350**	P		**P**	**12 01 27.2**	**+0.1**
	1.0nm,0.4s,mb3.7,baz=158,slow=9.6,SNR=9.8							
NOA	**NORSAR Array B**	**26.50**	**348**	P		**P**	**12 01 38.9**	**+0.4**
	0.6nm,0.7s,mb3.3,baz=164,slow=12,SNR=2.9							
TORD	**Torodi Ar. Bea**	**29.09**	**225**	P		**P**	**12 02 01.1**	**-1.0**
	0.8nm,0.6s,mb3.6,baz=32,slow=5.9,SNR=5.1							
AKTO	**Aktyubinsk**	**29.67**	**49**	P		**P**	**12 02 05.4**	**-1.6**
	0.5nm,0.4s,mb3.6,baz=266,slow=10,SNR=4.1							
ARCES	**ARCESS Array B**	**34.09**	**2**	P		**P**	**12 02 45.3**	**-0.2**
	3.7nm,1.1s,mb4.2,baz=187,slow=9.9,SNR=6.0							
MKAR	**Makanchi Array**	**45.44**	**57**	P		**P**	**12 04 18.9**	**-1.4**
	1.4nm,0.6s,mb4.0,baz=277,slow=6.9,SNR=9.7							
ZALV	**Zalesovo Beam**	**46.37**	**46**	P		**P**	**12 04 26.4**	**-1.1**
	0.6nm,0.3s,mb4.0,baz=272,slow=5.2,SNR=3.1							
SONM	**Songino Array**	**60.98**	**50**	P		**P**	**12 06 13.9**	**-0.6**
	0.5nm,0.5s,mb3.9,baz=279,slow=7.2,SNR=6.8							
YKA	**Yellowknife Ar**	**76.37**	**341**	P		**P**	**12 07 50.8**	**+0.6**
	0.3nm,0.6s,mb3.4,baz=33,slow=5.4,SNR=7.4							

IDC 28 12:08:40.5±0.7, 247N×9931E, h132km±21km, mb3.4/4, mb1 3.6/4, mb1mx3.3/19, mbtmp3.4/4, Error ellipse: s-maj=148.9km s-min=19.3km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.51**	**310**	P		Pn	12 09 01.0	+1.1
	68nm,0.3s,baz=339,slow=15,SNR=284							
PSI				S		Sn	12 09 15.7	+1.1
	20nm,0.3s,baz=21,slow=22,SNR=65							
WRA	**Warramunga Arr**	**40.96**	**125**	P		P	12 16 10.8	+0.3
	2.6nm,0.5s,baz=304,slow=9.1,SNR=61							
WRA				PcP		PcP	12 18 07.7	-0.7
	0.1nm,0.4s,baz=316,slow=2.4,SNR=4.3							
ASAR	**Alice Springs**	**42.52**	**130**	P		P	12 16 22.6	-0.6
	0.4nm,0.4s,baz=298,slow=7.5,SNR=5.3							
MKAR	**Makanchi Array**	**46.57**	**344**	P		P	12 16 55.0	+0.1
	0.3nm,0.4s,baz=152,slow=9.0,SNR=3.5							
ZALV	**Zalesovo Beam**	**52.68**	**349**	P		P	12 17 41.0	-0.1
	0.8nm,0.4s,baz=168,slow=7.3,SNR=6.0							

MAN 28 12:08:41, 1159N×12564E, h13km, mb3.9, ML2.7, MS2.3, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.20**	**275**	*e*P		Pg	12 08 47.3	+1.9
PLP	**Palo**	**0.77**	**237**	*e*P		Pg	12 08 56.5	+0.6
PLP				*e*S		Sg	12 09 10.9	+4.8
CNP	**Catarman**	**1.33**	**314**	*e*P		Pn	12 09 06.1	+0.9
CNP				*e*S		Sb	12 09 23.4	+0.7
MSLP	**Maasin**	**1.63**	**208**	*e*P		Pn	12 09 09.8	+0.4
MSLP				*e*S		Sn	12 09 35.4	+5.0
PVCP	**Virac**	**2.47**	**324**	*e*P		Pn	12 09 22.4	+1.4
PVCP				*e*S		Sn	12 10 02.3	+11

*HLW **28** 12:15:34.0, 2998N×3684E, h18km, Mb3.2*
*ISCJB **28** 12:15:36.1±0.9, 2989N±004×3636E±006, h0km, Error ellipse: s-maj=7.5km s-min=5.7km az=166.7*
*GII **28** 12:15:36.7±0.0, 2982N×3632E, h0km, ML1.9/2*
*SGS **28** 12:15:36.7, 3005N×3620E, h0km*
*CSEM **28** 12:15:37.8±0.3, 2979N×3621E, h1km±1km, ML1.9, Error ellipse: s-maj=4.2km s-min=3.4km az=145.0, Mining explosion.*

ISC 28 12:15:36.6±0.9, 2988N±004×3637E±006, h0km, n21, σ0§89/27, 4C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.17**	**278**	Pg		**Pg**	**12 15 57.7**	**-1.3**
HRFI				Sg		**Sg**	**12 16 15.0**	**+0.8**
ZFRI	**Zfri**	**1.23**	**303**	Pg		**Pg**	**12 15 59.7**	**-0.5**
EIL	**Elat**	**1.25**	**261**	Pg		**Pg**	**12 16 00.1**	**-0.5**
PRNI	**Paran**	**1.28**	**292**	Pg		**Pg**	**12 15 59.7**	**-1.3**
PRNI				Sg		**Sg**	**12 16 18.0**	**+0.4**
HQLS		**1.28**	**244**	P		**Pg**	**12 15 59.8**	**-1.2**
HQLS		**1.28**	**244**	P		**Pg**	**12 15 59.8**	**-1.3**
HQLS				S		**Sg**	**12 16 16.9**	**-0.7**
JLOS		**1.37**	**214**	P		**Pg**	**12 16 02.6**	**-0.2**
JLOS		**1.37**	**214**	P		**Pg**	**12 16 02.7**	**-0.2**
JLOS				S		**Sg**	**12 16 22.0**	**+1.3**
HBST	**Basata**	**1.57**	**246**	⇓P		**Pn**	**12 16 05.1**	**-0.6**
HBST				S		**Sn**	**12 16 28.4**	**+1.6**
MZDA	**Masada**	**1.67**	**329**	Pn		**Pn**	**12 16 08.0**	**+0.9**
YTIR	**Yattir**	**1.83**	**324**	Pn		**Pn**	**12 16 10.0**	**+0.7**
DSI	**Dead Sea**	**1.89**	**333**	Pn		**Pn**	**12 16 11.0**	**+0.9**
DSI	**Dead Sea**	**1.89**	**333**	Pn		**Pn**	**12 16 11.4**	**+1.3**
HDHB	**Dhahab**	**1.92**	**234**	P		**Pn**	**12 16 10.4**	**0.0**
HNKL	**Nakhl**	**2.08**	**272**	⇑P		**Pn**	**12 16 12.6**	**-0.1**
HNKL				S		**Sn**	**12 16 40.6**	**+1.4**
RSHS		**2.09**	**222**	P		**Pn**	**12 16 11.8**	**-1.0**
HKAT	**Jabal Katrina**	**2.48**	**238**	⇓P		**Pn**	**12 16 17.9**	**-0.2**
TR1		**2.82**	**229**	⇑P		**Pn**	**12 16 22.4**	**-0.5**
AMAG	**Maghara**	**2.84**	**286**	⇑P		**Pn**	**12 16 22.3**	**-0.9**
SUZ		**3.08**	**270**	⇑P		**Pn**	**12 16 26.4**	**+0.1**
WJHS		**3.13**	**180**	P		**Pn**	**12 16 28.3**	**+1.1**

*NIED **28** 12:16:00, 3720N×13660E, h5km, Mw3.6 Best double couple: M0 3.22000×10^14 NP1:φs39.00000°, δ54.00000°, λ135.00000°. NP2:φs159.00000°, δ55.00000°, λ45.00000°.*
*ISCJB **28** 12:16:38.3±0.9, 3719N±003×13657E±006, h7km±6km, mb3.4/3, Error ellipse: s-maj=8.0km s-min=5.5km az=164.9*
*JMA **28** 12:16:38.8±0.1, 3719N×13658E, h6km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs357.00000°, δ40.00000°, λ93.00000°. NP2: φs173.00000°, δ50.00000°, λ87.00000°. Principal axes: T Plg85.0000°, Azm62.0000°; N Plg2.0000°, Azm175.0000°; P Plg5.0000°, Azm265.0000°;*
JMA Felt III J1.
*IDC **28** 12:16:38.1±1.2, 3706N×13658E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.3/4, ML3.0/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/16 Error ellipse: s-maj=30.0km s-min=14.1km az=23.0*
*MOS **28** 12:16:40.2±3.1, 3716N×13645E, h33km, mb3.9/1, Error ellipse: s-maj=26.8km s-min=21.2km az=128.4*

ISC 28 12:16:39.4±0.8, 3718N±003×13661E±006, h7km±6km, n16, σ0§86/20, mb3.4/3, 2C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.29**	**152**	⇓P		**Pg**	**12 16 45.1**	**0.0**
JJH				*e*S		**Sg**	**12 16 49.8**	**+0.9**
JSZ	**Suzu**	**0.66**	**66**	⇓P		**Pg**	**12 16 51.6**	**-0.4**
JSZ				*e*S		**Sg**	**12 17 00.9**	**+0.3**
JHG	**Hegura jima**	**0.71**	**20**	⇑P		**Pg**	**12 16 52.3**	**-0.8**
JHG				*e*S		**Sg**	**12 17 02.5**	**+0.1**
JTT	**Ttatey**	**0.81**	**135**	⇓P		**Pg**	**12 16 54.8**	**-0.2**
JTT				*e*S		**Sg**	**12 17 06.7**	**+1.1**
JKG	**Kaga**	**0.93**	**194**	⇑P		**Pg**	**12 16 56.6**	**-0.6**
MAT	**Matsushiro**	**1.43**	**116**	P		**Pn**	**12 17 05.1**	**-0.6**
MAT				S		**Sn**	**12 17 24.5**	**-0.1**
MJAR	**Matsushiro Arr**	**1.43**	**116**	P		**Pn**	**12 17 05.8**	**+0.1**
MJAR							12 17 24.1	
MJAR				pmax	pmax			
	comp=Z,19nm,0.3s							
MJAR	**Matsushiro Arr**	**1.43**	**116**	Pg		**Pg**	**12 17 05.8**	**-1.0**
	comp=Z,18nm,0.3s,baz=292,slow=16,SNR=76							
MJAR				Lg			12 17 24.1	
	comp=Z,23nm,0.3s,baz=152,slow=30,SNR=16							
JNU	**Nakatsue**	**6.20**	**231**	LR		LR	12 20 30.1	
	comp=Z,50nm,18.2s,baz=277,slow=38							
KSRS	**Korea Array**	**6.93**	**275**	Pn		**Pn**	**12 18 21.7**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=90,slow=14,SNR=3.8							
YSS	**Yuzh-Sakhalins**	**10.78**	**23**	*e*P		**Pn**	**12 19 17.0**	**+3.0**
CIT	**Chita**	**22.00**	**320**	*e*P		**P**	**12 21 26.8**	**-7.1**
SONM	**Songino Array**	**24.54**	**305**	P		**P**	**12 22 00.8**	**+1.4**
	comp=Z,0.5nm,0.6s,mb3.2,baz=106,slow=8.7,SNR=4.9							
WRA	**Warramunga Arr**	**56.85**	**183**	P		**P**	**12 26 23.0**	**-1.6**
WRA				pmax	pmax			
	comp=Z,1.0nm,1.1s							
WRA	**Warramunga Arr**	**56.85**	**183**	P		**P**	**12 26 23.0**	**-1.6**
	comp=Z,0.9nm,1.1s,mb3.7,baz=359,slow=7.7,SNR=5.2							
YKA	**Yellowknife Ar**	**65.57**	**29**	P		**P**	**12 27 23.2**	**-0.1**
	comp=Z,0.3nm,0.8s,mb3.4,baz=308,slow=7.0,SNR=4.3							

IDC 28 12:28:19.8±2.1, 212N×12641E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/14, mbtmp3.7/3, Error ellipse: s-maj=182.6km s-min=25.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.27**	**161**	P		P	12 33 29.1	-0.1
	1.4nm,0.4s,baz=339,slow=10,SNR=40							
ASAR	**Alice Springs**	**26.65**	**165**	P		P	12 34 00.6	+0.1
	0.4nm,0.4s,baz=347,slow=12,SNR=8.0							
MKAR	**Makanchi Array**	**58.69**	**326**	P		P	12 38 19.3	+0.1
	0.5nm,0.4s,baz=129,slow=7.4,SNR=4.8							

IDC 28 12:57:14.0±58.0, 1682S×17930W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.9/14, mbtmp4.3/3, Error ellipse: s-maj=1050.0km s-min=154.5km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.42**	**240**	P		P	13 04 38.5	+1.0
	1.2nm,0.5s,baz=102,slow=11,SNR=4.0							
WRA	**Warramunga Arr**	**44.00**	**259**	P		P	13 05 23.1	-0.5
	0.9nm,0.5s,baz=96,slow=7.8,SNR=32							
ASAR	**Alice Springs**	**44.28**	**253**	P		P	13 05 25.4	-0.4
	7.4nm,0.4s,baz=90,slow=7.6,SNR=233							

*NEIC **28** 13:04:17.9, 4183N×12654W, h5km, MD3.2(NCEDC), After NCEDC.*
*ISCJB **28** 13:04:21.7±0.6, 4186N±002×12594W±005, h10km, mb3.6/2, Error ellipse: s-maj=5.7km s-min=2.4km az=169.4*
*IDC **28** 13:04:24.4±4.7, 4209N×12544W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.5/21, mbtmp3.5/4, ML3.6/2, MS3.0/1, Ms1 2.9/1, ms1mx2.6/20, Error ellipse: s-maj=67.6km s-min=24.1km az=67.0*

ISC 28 13:04:23.3±0.6, 4185N±002×12594W±005, h10km, n90, σ1§07/125, mb3.6/2, 46C-54D, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
M01C	**Crescent City**	**1.36**	**90**	P		**Pn**	**13 04 47.1**	**-1.2**
	baz=1.3,SNR=187							
M01C				⇑S		**Sb**	**13 05 05.4**	**-0.8**
	baz=1.3							
K01A	**Sixes**	**1.45**	**48**	⇓P		**Pn**	**13 04 48.4**	**-1.2**
	baz=1.5,SNR=15							
K01A				⇑S		**Sn**	**13 05 07.0**	**-1.6**
	baz=1.5							
KSXB	**Camp Six Broad**	**1.54**	**90**	P		**Pn**	**13 04 49.8**	**-1.0**
KRMB	**Red Mountain**	**1.56**	**102**	P		**Pn**	**13 04 49.8**	**-1.2**
JCC	**Jacoby Creek**	**1.77**	**125**	P		**Pn**	**13 04 52.0**	**-2.0**
	baz=1.7,SNR=70							
JCC			

M05C	**Lookout**	**3.63**	**96**	⇓P		**Pn**	**13 05 19.7**	**+0.2**
	baz=3.6								
J05A	**Fort Rock**	**3.76**	**66**	⇓P		**Pn**	**13 05 21.2**	**-0.1**
	baz=3.7,SNR=8.8								
J05A				⇑S		**Sn**	**13 06 06.7**	**+1.2**
	baz=3.7								
L05A	**Lakeview**	**3.81**	**85**	⇑P		**Pn**	**13 05 22.1**	**+0.1**
	baz=3.8,SNR=82								
K05A	**Summer Lake**	**3.84**	**75**	⇓P		**Pn**	**13 05 22.5**	**0.0**
	baz=3.8								
H04A	**Detroit Lake**	**3.94**	**43**	⇓P		**Pn**	**13 05 23.6**	**-0.2**
	baz=3.9,SNR=35								
H04A				⇑S		**Sn**	**13 06 08.6**	**-1.4**
	baz=3.9								
G03A	**Yamhill**	**3.96**	**28**	⇑P		**Pn**	**13 05 23.4**	**-0.6**
	baz=4.0,SNR=24								
G03A				⇓S		**Sn**	**13 06 08.7**	**-1.9**
	baz=4.0								
O04C	**Chester**	**3.98**	**111**	⇑P		**Pn**	**13 05 24.0**	**-0.2**
	baz=3.9								
O04C				⇓S		**Sn**	**13 06 11.9**	**+1.0**
	baz=3.9								
ORV	**Oroville**	**4.08**	**123**	⇓P		**Pn**	**13 05 24.5**	**-1.3**
	baz=4.0,SNR=19								
ORV				⇓S		**Sn**	**13 06 12.8**	**-0.8**
	baz=4.0								
SUTB	**Sutter Butte**	**4.11**	**128**	⇑P		**Pn**	**13 05 24.6**	**-1.5**
	baz=4.1								
SUTB				⇑S		**Sn**	**13 06 13.8**	**-0.4**
	baz=4.1								
M06C	**Likely Place G**	**4.15**	**97**	⇓P		**Pn**	**13 05 26.8**	**+0.1**
	baz=4.1								
G04A	**Mulino**	**4.19**	**36**	⇓P		**Pn**	**13 05 28.2**	**+1.0**
	baz=4.2								
G04A				⇓S		**Sn**	**13 06 15.5**	**-0.7**
	baz=4.2								
MOD	**Modoc**	**4.21**	**87**	*e*Pn		**Pn**	**13 05 27.6**	**+0.2**
MOD	**Modoc**	**4.21**	**87**	⇓P		**Pn**	**13 05 27.4**	**-0.1**
	baz=4.2,SNR=47								
O05C	**Quincy**	**4.25**	**115**	⇑S		**Sn**	**13 06 19.4**	**+1.8**
	baz=4.2								
K06A	**Valley Falls**	**4.32**	**75**	⇓P		**Pn**	**13 05 28.9**	**-0.1**
	baz=4.3								
F03A	**Seaside**	**4.42**	**22**	⇓P		**Pn**	**13 05 31.0**	**+0.6**
	baz=4.5								
F03A				⇑S		**Sn**	**13 06 20.8**	**-1.1**
	baz=4.5								
H05A	**Madras**	**4.43**	**49**	⇑P		**Pn**	**13 05 31.3**	**+0.8**
	baz=4.4								
H05A				⇓S		**Sn**	**13 06 22.4**	**+0.3**
	baz=4.4								
J06A	**Christmas Vall**	**4.50**	**70**	⇑P		**Pn**	**13 05 31.3**	**-0.2**
	baz=4.5								
N06A	**Buffalo Meadow**	**4.73**	**101**	⇓P		**Pn**	**13 05 34.9**	**+0.2**
	baz=4.7								
G05A	**Wamic**	**4.77**	**43**	⇑P		**Pn**	**13 05 36.3**	**+1.1**
	baz=4.8								
P05C	**Yuba Gap, Truc**	**4.79**	**120**	⇓P		**Pn**	**13 05 35.9**	**+0.4**
	baz=4.7								
P05C				⇑S		**Sn**	**13 06 31.6**	**+0.6**
	baz=4.7								
F04A	**Amboy**	**4.81**	**31**	⇑P		**Pn**	**13 05 36.0**	**+0.4**
	baz=4.8,SNR=22								
F04A				⇓S		**Sn**	**13 06 29.8**	**-1.6**
	baz=4.8								
L07A	**Adell**	**4.93**	**86**	⇓P		**Pn**	**13 05 37.3**	**0.0**
	baz=4.9,SNR=6.3								
E03A	**Lebam**	**4.99**	**19**	⇑P		**Pn**	**13 05 38.9**	**+0.7**
	baz=5.0,SNR=11								
H06A	**Lindquist Farm**	**5.00**	**53**	⇓P		**Pn**	**13 05 39.2**	**+0.9**
	baz=5.0								
H06A				⇑S		**Sn**	**13 06 37.9**	**+1.7**
	baz=5.0								
K07A	**Rock Creek Ran**	**5.04**	**78**	⇓P		**Pn**	**13 05 38.6**	**-0.3**
	baz=5.0								
LAVA	**Lava Cap Winer**	**5.04**	**126**	⇑P		**Pn**	**13 05 39.0**	**+0.2**
	baz=5.0								
LAVA				⇑S		**Sn**	**13 06 37.0**	**-0.2**
	baz=5.0								
M07A	**Soldier Meadow**	**5.10**	**93**	⇓P		**Pn**	**13 05 39.7**	**+0.1**
	baz=5.1,SNR=12								
G06A	**Carlson Farm,**	**5.13**	**47**	⇑P		**Pn**	**13 05 41.3**	**+1.2**
	baz=5.1								
G06A				⇓S		**Sn**	**13 06 39.2**	**0.0**
	baz=5.1								
WCN	**Washoe City**	**5.36**	**116**	⇓P		**Pn**	**13 05 43.7**	**+0.5**
	baz=5.3								
WCN				⇓S		**Sn**	**13 06 45.7**	**+0.8**
	baz=5.3								
H07A	**Lands Inn, Kim**	**5.40**	**57**	⇑P		**Pn**	**13 05 44.8**	**+0.9**
	baz=5.4								
E05A	**Randle**	**5.58**	**31**	⇑P		**Pn**	**13 05 47.0**	**+0.7**
	baz=5.6,SNR=13								
N08A	**GE Springer Mi**	**5.98**	**98**	⇓P		**Pn**	**13 05 52.0**	**+0.3**
	baz=5.9,SNR=11								
D05A	**Enumclaw**	**6.03**	**27**	⇑P		**Pn**	**13 05 54.3**	**+1.8**
	baz=6.1								
NVAR	**Mina Array Bea**	**6.78**	**118**	Pn		**Pn**	**13 06 03.4**	**+0.7**
NVAR	**Mina Array Bea**	**6.78**	**118**	Pn		**Pn**	**13 06 03.4**	**+0.7**
	0.4nm,0.3s,baz=297,slow=14,SNR=2.7								
B05A	**Bryant**	**6.96**	**22**	⇑P		**Pn**	**13 06 06.3**	**+1.1**
	baz=7.0,SNR=9.7								
C07A	**Waterville**	**7.18**	**34**	⇑P		**Pn**	**13 06 09.2**	**+1.0**
	baz=7.2								
O12A	**Currie**	**8.61**	**97**	⇑P		**Pn**	**13 06 30.1**	**+2.2**
	baz=8.6								
HLID	**Hailey**	**8.66**	**75**	⇑P		**Pn**	**13 06 30.2**	**+1.7**
	baz=8.6								
N13A	**Wendover, West**	**8.88**	**93**	⇑P		**Pn**	**13 06 34.1**	**+2.5**
	baz=8.8								
I13A	**Wildhorse Cree**	**8.92**	**73**	⇑P		**Pn**	**13 06 34.0**	**+1.8**
	baz=8.9								
Q12A	**Willow Creek R**	**8.93**	**105**	⇑P		**Pn**	**13 06 34.8**	**+2.6**
	baz=8.9								
F13A	**Darby**	**9.27**	**61**	⇓P		**Pn**	**13 06 39.2**	**+2.4**
	baz=9.2								
P13A	**Bates Ranch, G**	**9.38**	**101**	⇑P		**Pn**	**13 06 40.8**	**+2.4**
	baz=9.3								
M14A	**Sheep Mountain**	**9.43**	**88**	⇓P		**Pn**	**13 06 41.5**	**+2.4**
	baz=9.4								
N14A	**Grayback Hills**	**9.65**	**92**	⇑P		**Pn**	**13 06 43.6**	**+1.5**
	baz=9.6								
D13A	**Huson**	**9.73**	**54**	⇓P		**Pn**	**13 06 44.4**	**+1.2**
	baz=9.7								
PDAR	**Pinedale Array**	**12.17**	**80**	Pn		**Pn**	**13 07 18.3**	**+1.8**
	0.1nm,0.3s,baz=271,slow=14,SNR=5.4								
YKA	**Yellowknife Ar**	**21.74**	**14**	P		**P**	**13 09 14.3**	**-0.2**
	1.3nm,0.8s,mb3.4,baz=204,slow=12,SNR=16								
YKA				LR		LR	13 17 10.6		
	comp=Z,35nm,18.3s,baz=195,slow=36								
ULM	**Lac du Bonnet**	**22.37**	**58**	P		**P**	**13 09 17.9**	**-3.5**
	3.1nm,0.9s,mb3.7,baz=261,slow=12,SNR=2.3								

NIED ***28*** *13:13:00,28.10N×12930E,h44km,Mw3.9 Best double couple: M₀8.34000×10¹⁴ NP1:φs101.00000°,δ33.00000°, λ-98.00000°. NP2:φs291.00000°,δ57.00000°, λ-85.00000°.*

IDC ***28*** *13:13:29.6±1.1,2796N×12964E,h21km±5km,mb3.5/8, mb1 3.7/10,mb1mx3.7/20,mbtmp3.6/10,ML3.3/2,MS2.9/4, Ms1 2.9/4,ms1mx2.7/23,Error ellipse: s-maj=25.6km s-min=15.6km az=95.0*

ISCJB ***28*** *13:13:31.0±0.5,2801N±005×12943E±007,h40km±5km, mb3.5/8,Error ellipse: s-maj=12.3km s-min=3.4km az=36.0*

JMA ***28*** *13:13:30.8±0.1,2813N×12928E,h35km±2km,M3.9*

JMA Felt II J1.

NEIC ***28*** *13:13:30.8,2813N×12928E,h35km,MG4.2(JMA),After JMA.*

ISC 28 13:13:31.0±0.7,2798N±005×12945E±007,h25km±5km, h22km±2.1km:pP-P,n28,σ0§93/39,mb3.5/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.45**	**17**	P	**Pb**	**13 13 39.8**	**-0.6**
JAM				S	**Sb**	**13 13 46.3**	**-0.5**
JTK	**Tokunoshima**	**0.49**	**246**	P	**Pb**	**13 13 40.4**	**-0.6**
JTK				S	**Sb**	**13 13 47.3**	**-0.5**
JZK	**Kikaishima**	**0.56**	**54**	P	**Pb**	**13 13 43.1**	**+0.9**
JZK				S	**Sb**	**13 13 53.2**	**+3.2**
JOW	**Kunigami**	**1.55**	**223**	P	**Pn**	**13 13 56.9**	**-0.1**
JOW				S	**Sn**	**13 14 17.1**	**+0.8**
JOW	**Kunigami**	**1.55**	**223**	Pn	**Pn**	**13 13 57.7**	**+0.7**
	170nm,0.3s,baz=93,slow=18,SNR=603						
JOW				Sn	**Sn**	**13 14 17.1**	**+0.8**
	171nm,0.3s,baz=120,slow=20,SNR=22						
JIH	**Iheya**	**1.62**	**235**	P	**Pn**	**13 13 57.9**	**-0.1**
JIH				S	**Sn**	**13 14 18.2**	**+0.1**
JNN	**Nakanoshima**	**1.89**	**11**	P	**Pn**	**13 14 00.7**	**-0.9**
JNN				*e*S	**Sn**	**13 14 24.5**	**-0.1**
NAH1	**Naha**	**2.37**	**222**	P	**Pn**	**13 14 08.6**	**+0.4**
JJT2	**Tamagusuku 2**	**2.38**	**220**	P	**Pn**	**13 14 08.7**	**+0.3**
JJT2				*e*S	**Sn**	**13 14 37.3**	**+0.5**
JAGN	**Aguni-jima**	**2.41**	**235**	P	**Pn**	**13 14 08.7**	**-0.1**
JAGN				*e*S	**Sn**	**13 14 37.9**	**+0.5**
JKC	**Kuchinoerabu**	**2.56**	**15**	P	**Pn**	**13 14 10.4**	**-0.4**
JKC				*e*S	**Sn**	**13 14 39.7**	**-1.4**
JKE	**Kume jima 2**	**2.89**	**236**	P	**Pn**	**13 14 15.0**	**-0.4**
JKE				*e*S	**Sn**	**13 14 49.6**	**+0.2**
JTN	**Tanegashima 3**	**2.98**	**26**	P	**Pn**	**13 14 17.0**	**+0.4**
JTN				*e*S	**Sn**	**13 14 52.1**	**+0.6**
JNU	**Nakatsue**	**5.27**	**13**	Pn	**Pn**	**13 14 50.8**	**+2.7**
	14nm,0.3s,baz=331,slow=4.9,SNR=114						
JNU				Sn	**Sn**	**13 15 49.2**	**+1.3**
	1.4nm,0.3s,baz=303,slow=37,SNR=3.3						
JNU				LR	LR	13 17 06.7	
	comp=Z,80nm,20.5s,baz=309,slow=41						
KSRS	**Korea Array**	**9.53**	**353**	Pn	**Pn**	**13 15 46.9**	**+0.3**
	0.2nm,0.3s,baz=169,slow=14,SNR=5.5						
KSRS				LR	LR	13 19 36.9	
	comp=Z,67nm,18.9s,baz=180,slow=38						
JHJ	**Hachijo jima 2**	**10.27**	**58**	LR	LR	13 19 44.9	
	comp=Z,66nm,18.9s,baz=76,slow=37						
MJAR	**Matsushiro Arr**	**11.30**	**39**	Pn	**Pn**	**13 16 18.3**	**+7.5**
	baz=235,slow=15,SNR=4.2						
ASAJ	**Asahikawa**	**19.25**	**30**	P	**Pn**	**13 17 52.1**	**-2.3**
	0.2nm,0.3s,baz=238,slow=13,SNR=5.5						
ASAJ				LR	LR	13 25 12.7	
	comp=Z,37nm,18.9s,baz=360,slow=37						
SONM	**Songino Array**	**26.73**	**324**	P	**P**	**13 19 09.1**	**+0.9**
	0.4nm,0.4s,mb3.3,baz=134,slow=8.3,SNR=2.9						
MKAR	**Makanchi Array**	**41.21**	**310**	P	**P**	**13 21 15.1**	**+1.5**
	0.2nm,0.4s,mb3.1,baz=102,slow=7.9,SNR=3.2						
MKAR				pP	pP	13 21 20.3	-1.0
	1.1nm,0.7s,baz=94,slow=11,SNR=6.6						
ZALV	**Zalesovo Beam**	**41.54**	**321**	P	**P**	**13 21 16.7**	**+0.6**
	0.3nm,0.4s,mb3.3,baz=106,slow=9.0,SNR=2.7						
ZALV				pP	pP	13 21 22.6	-1.3
	1.1nm,0.5s,baz=114,slow=9.6,SNR=6.2						
WRA	**Warramunga Arr**	**47.88**	**174**	P	**P**	**13 22 05.6**	**-1.4**
	0.6nm,0.6s,mb3.8,baz=355,slow=8.0,SNR=6.8						
ASAR	**Alice Springs**	**51.53**	**175**	P	**P**	**13 22 34.1**	**-0.6**
	0.7nm,0.6s,mb3.7,baz=6.1,slow=15,SNR=11						
FINES	**FINESS Array B**	**71.88**	**331**	P	**P**	**13 24 49.8**	**-1.7**
	0.6nm,0.4s,mb3.9,baz=56,slow=6.3,SNR=9.0						
AKASG	**Malin Array Be**	**74.91**	**320**	pP	pP	13 25 15.9	-1.8
	0.8nm,0.5s,baz=58,slow=6.6,SNR=3.4						
YKA	**Yellowknife Ar**	**76.48**	**25**	P	**P**	**13 25 17.7**	**-0.6**
YKA	**Yellowknife Ar**	**76.48**	**25**	P	**P**	**13 25 17.7**	**-0.6**
	0.1nm,0.5s,mb3.0,baz=302,slow=5.7,SNR=4.0						
GERES	**GERESS Array B**	**84.46**	**323**	P	**P**	**13 26 00.7**	**-0.7**
	0.2nm,0.2s,mb3.8,baz=79,slow=5.1,SNR=2.3						
GERES				pP	pP	13 26 08.7	-1.0
	0.3nm,0.3s,baz=81,slow=8.2,SNR=2.2						

IDC ***28*** *13:21:35.0±0.6,2541N×10988W,h0km,mb4.4/18, mb1 4.5/23,mb1mx4.5/27,mbtmp4.4/23,ML3.7/5,MS4.7/22, Ms1 4.7/22,ms1mx4.5/32,Error ellipse: s-maj=13.3km s-min=9.9km az=62.0*

ISCJB ***28*** *13:21:35.9±0.3,2550N±003×10970W±003,h10km, mb4.9/66,MS4.8/33,Error ellipse: s-maj=4.7km s-min=2.8km az=38.6*

BJI ***28*** *13:21:35.1,2540N×10970W,h10km,mB5.4,mb5.0,Ms5.1, Msz4.8*

MOS ***28*** *13:21:36.9±1.1,2560N×10966W,h12km,mb5.3/37, MS4.9/9,Error ellipse: s-maj=8.2km s-min=4.5km az=88.4*

GCMT ***28*** *13:21:37.1±0.2,2560N×10980W,h15km,MW5.2/80, Moment Tensor Solution. s58,c81; s80,c139; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.58±.14; Mθθ-6.29±.13; Mφφ6.87±.15; Mrθ0.66±.37; Mrφ-1.91±.11; Mθφ0.98±.40; Best double couple: M₀6.95300×10¹⁶ NP1:φs307.00000°,δ80.00000°,λ-179.00000°. NP2: φs217.00000°,δ89.00000°,λ-10.00000°. Principal axes: T 7.2400, Plg6.0000°, Azm262.0000°; N -0.5730, Plg80.0000°, Azm33.0000°; P -6.6650, Plg7.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *13:21:37.1±0.3,2542N×10971W,h10km,mb5.0/50, MS5.1/4 Error ellipse: s-maj=6.3km s-min=4.2km az=45.0*

MEX ***28*** *13:21:38.8±2.7,2458N×10890W,h2km±23km,MD5.4*

SZGRF ***28*** *13:21:47.2,2724N×11051W,h33km,mb5.1,Gulf of California, Mexico*

ISC 28 13:21:36.9±0.2,2541N±002×10969W±003,h10km,n562, σ1§02/562,mb4.9/65,MS4.8/33,126C-118D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.42**	**204**	Pn	**Pn**	**13 22 01.3**	**-1.5**
	12nm,0.3s,baz=212,slow=1.0,SNR=32						
LPIG				Sn	**Sn**	**13 22 19.2**	**-2.3**
	157nm,0.3s,baz=327,slow=3.2,SNR=17						
LPIG	**La Paz**	**1.42**	**204**	*i* P	**Pn**	**13 22 01.2**	**-1.6**
LPIG				*i* S	**Sn**	**13 22 18.8**	**-2.7**
319A	**Douglas**	**5.95**	**3**	⇓P	**Pn**	**13 23 01.3**	**-3.9**
	baz=5.9						
318A	**Bisbee**	**6.01**	**358**	⇑P	**Pn**	**13 23 02.3**	**-3.7**
	baz=5.9						
217A	**Green Valley**	**6.42**	**351**	⇑P	**Pn**	**13 23 07.9**	**-3.7**
	baz=6.4						
218A	**Dragoon**	**6.55**	**357**	⇓P	**Pn**	**13 23 09.6**	**-3.7**
	baz=6.5						
LTX	**Lajitas**	**6.63**	**53**	*e*Pn	**Pn**	**13 23 12.0**	**-2.4**
LTX				*e*Sg	**Sg**	**13 25 02.2**	**-7.6**
216A	**Three Points,**	**6.75**	**347**	⇑P	**Pn**	**13 23 13.7**	**-2.3**
	baz=6.7						
TUC	**Tucson**	**6.94**	**352**	*e*Pn	**Pn**	**13 23 15.0**	**-3.7**
TUC				*e*Sg	**Sg**	**13 25 18.6**	**-1.2**
ZAIG	**Zacatecas**	**7.02**	**111**	*e*P	**Pn**	**13 23 13.9**	**-5.9**
ZAIG				*i* S	**Sn**	**13 24 28.3**	**-11**
MNTX	**Cornudas Mount**	**7.32**	**30**	*e*Pn	**Pn**	**13 23 21.1**	**-2.8**
MNTX				*e*Sg	**Sg**	**13 25 31.4**	**-0.5**
116A	**Eloy**	**7.34**	**347**	P	**Pn**	**13 23 20.9**	**-3.2**
	baz=7.3,SNR=98						
115A	**Sonoran Desert**	**7.60**	**344**	⇓P	**Pn**	**13 23 25.4**	**-2.3**
	baz=7.6,SNR=25						
Z14A	**Wintersburg**	**8.42**	**341**	⇓P	**Pn**	**13 23 36.8**	**-2.2**
	baz=8.4,SNR=8.0						
Y14A	**Wickenburg**	**8.97**	**342**	⇑P	**Pn**	**13 23 44.5**	**-2.1**
	baz=8.9,SNR=46						
LENM	**Lemitar**	**9.04**	**14**	*e*Pn	**Pn**	**13 23 48.6**	**+1.1**
BNM	**Barren Site**	**9.11**	**16**	*e*Pn	**Pn**	**13 23 46.3**	**-2.1**
BNM				*e*Sg	Sn	13 26 19.9	+49
Y13A	**Salome**	**9.12**	**338**	⇑P	**Pn**	**13 23 46.4**	**-2.1**
	baz=9.1,SNR=18						
DVTC	**Desert V Tower**	**9.14**	**324**	⇑P	**Pn**	**13 23 46.5**	**-2.4**
	baz=9.1						
LAZ	**Ladron**	**9.23**	**13**	*e*Pn	**Pn**	**13 23 51.2**	**+1.1**
LPM	**Los Pinos Moun**	**9.26**	**16**	*e*Pn	**Pn**	**13 23 50.8**	**+0.3**
LPM				*e*Sg	Sn	13 26 24.4	+50
X15A	**Humboldt**	**9.31**	**347**	⇓P	**Pn**	**13 23 49.5**	**-1.7**
	baz=9.3,SNR=29						
Y12C	**Blythe**	**9.31**	**334**	⇓P	**Pn**	**13 23 49.3**	**-1.9**
	baz=9.3,SNR=20						
X14A	**Yava**	**9.45**	**344**	⇑P	**Pn**	**13 23 51.5**	**-1.5**
	baz=9.4,SNR=27						
BAR	**Barrett**	**9.47**	**321**	*e*Pn	**Pn**	**13 23 55.0**	**+1.6**
MONP	**Monument Peak**	**9.49**	**323**	⇓P	**Pn**	**13 23 53.4**	**-0.3**
	baz=9.5,SNR=9.6						
BC3	**Big Chuckw Mtn**	**9.63**	**330**	⇓P	**Pn**	**13 23 55.0**	**-0.5**
	baz=9.6,SNR=17						
PDMCI	**Parker Dam,Lak**	**9.66**	**337**	P	**Pn**	**13 23 54.6**	**-1.5**
	baz=9.6,SNR=14						
X13A	**Yucca**	**9.83**	**340**	P	**Pn**	**13 23 57.1**	**-1.2**
	baz=9.8,SNR=24						
109C	**Camp Elliot, M**	**9.87**	**321**	⇑P	**Pn**	**13 23 57.9**	**-1.0**
	baz=9.9						
ANMO	**Albuquerque**	**9.91**	**16**	*e*Pn	**Pn**	**13 24 00.0**	**+0.6**
ANMO				*e*Sg	Sn	13 26 44.2	+54
ANMO	**Albuquerque**	**9.91**	**16**	*d*iP	**Pn**	**13 24 00.0**	**+0.6**
ANMO	**Albuquerque**	**9.91**	**16**	Pn	**Pn**	**13 24 00.0**	**+0.6**
	0.2nm,0.3s,baz=208,slow=13,SNR=29						
ANMO				Sn	**Sn**	**13 25 54.0**	**+3.3**
	0.4nm,0.3s,baz=176,slow=12,SNR=2.2						
ANMO				Lg		13 26 41.8	
	1.6nm,0.3s,baz=106,slow=21,SNR=4.0						
ANMO				LR	LR	13 28 43.3	
	comp=Z,2μm,19.2s,baz=71,slow=43						
IRM	**Iron Mountain**	**9.92**	**333**	⇓P	**Pn**	**13 23 59.5**	**-0.1**
	baz=9.9,SNR=12						
W15A	**Williams**	**9.99**	**348**	⇑P	**Pn**	**13 24 00.5**	**0.0**
	baz=9.9,SNR=32						
PFO	**Pinyon Flat Ob**	**10.07**	**326**	*e*Pn	**Pn**	**13 24 02.6**	**+1.0**
PFO	**Pinyon Flat Ob**	**10.07**	**326**	Pn	**Pn**	**13 24 01.0**	**-0.7**
	0.4nm,0.3s,baz=148,slow=10,SNR=10						
PFO				Sn	**Sn**	**13 25 53.7**	**-1.0**
	0.1nm,0.3s,baz=14,slow=9.2,SNR=1.9						
PFO				Lg		13 26 53.2	
	0.2nm,0.3s,baz=285,slow=18,SNR=2.3						
PFO	**Pinyon Flat Ob**	**10.07**	**326**	⇓P	**Pn**	**13 24 01.9**	**+0.2**
	baz=10						
JCT	**Junction City**	**10.09**	**58**	Pn	**Pn**	**13 24 04.3**	**+2.3**
	39nm,0.9s						
JCT	**Junction City**	**10.09**	**58**	P	**Pn**	**13 24 04.3**	**+2.3**
JCT				pmax	pmax		
	comp=Z,39nm,0.9s						
WUAZ	**Wupatki**	**10.18**	**352**	*e*Pn	**Pn**	**13 24 02.9**	**-0.2**
WUAZ	**Wupatki**	**10.18**	**352**	⇑P	**Pn**	**13 24 02.2**	**-0.9**
	baz=10,SNR=22						
W14A	**Seligman**	**10.20**	**344**	⇓P	**Pn**	**13 24 03.1**	**-0.3**
	baz=10,SNR=62						
W13A	**Hualapai Mount**	**10.31**	**340**	⇓P	**Pn**	**13 24 05.1**	**+0.1**
	baz=10,SNR=50						
GMRC	**Granite Mounta**	**10.67**	**332**	⇓P	**Pn**	**13 24 09.7**	**-0.2**
	baz=11,SNR=9.4						
LDFC	**Landfair**	**10.71**	**335**	*e*Pn	**Pn**	**13 24 12.7**	**+2.3**
BBRC	**Big Bear Sol-O**	**10.82**	**326**	⇑P	**Pn**	**13 24 13.2**	**+1.3**
	baz=11						
W12A	**Cal Nev Ari**	**10.82**	**337**	⇓P	**Pn**	**13 24 12.1**	**+0.1**
	baz=11,SNR=9.0						
HEC	**Hector,Ludlow**	**11.00**	**330**	⇑P	**Pn**	**13 24 15.0**	**+0.5**
	baz=11						
BFSC	**Mount Baldy St**	**11.19**	**324**	⇓P	**Pn**	**13 24 17.0**	**+0.1**
	baz=11						
V12A	**Nelson**	**11.20**	**338**	P	**Pn**	**13 24 17.8**	**+0.7**
	baz=11,SNR=11						
SZVM	**Salazar**	**11.29**	**120**	*i* S	**Sn**	**13 26 05.3**	**-20**
TUQ	**Turquoise Mtn.**	**11.35**	**333**	⇑P	**Pn**	**13 24 20.1**	**+1.0**
	baz=11,SNR=21						
PTVM	**Pico Tres Padr**	**11.36**	**119**	*e*P	**Pn**	**13 24 26.5**	**+7.2**
U14A	**Mt Trumbull**	**11.37**	**346**	⇓P	**Pn**	**13 24 19.5**	**0.0**
	baz=11						
MWC	**Mount Wilson**	**11.39**	**322**	*e*Pn	**Pn**	**13 24 29.2**	**+9.5**
V11A	**Goodsprings**	**11.51**	**336**	⇑P	**Pn**	**13 24 21.7**	**+0.4**
	baz=12						
U13A	**Pakoon Wash**	**11.57**	**343**	⇓P	**Pn**	**13 24 22.4**	**+0.3**
	baz=12						
SNCC	**San Nicolas Is**	**11.60**	**315**	⇑P	**Pn**	**13 24 23.3**	**+0.8**
	baz=12						
GSC	**Goldstone**	**11.61**	**330**	*e*Pn	**Pn**	**13 24 23.1**	**+0.4**
GSC	**Goldstone**	**11.61**	**330**	⇓P	**Pn**	**13 24 22.4**	**-0.3**
	baz=12						
IIO	**Organos**	**11.67**	**118**	*e*P	**Pn**	**13 24 30.7**	**+7.1**
U12A	**Valley of Fire**	**11.75**	**340**	⇓P	**Pn**	**13 24 24.7**	**+0.1**
	baz=12,SNR=13						
T15A	**Red Dirt Ranch**	**11.80**	**349**	⇑P	**Pn**	**13 24 25.6**	**+0.4**
	baz=12						
MVCO	**Mesa Verde**	**11.81**	**5**	*e*Pn	**Pn**	**13 24 25.6**	**+0.2**
MVCO	**Mesa Verde**	**11.81**	**5**	⇑P	**Pn**	**13 24 25.3**	**-0.1**
	baz=12,SNR=22						
EDW2	**Edwards Air Fo**	**11.86**	**325**	⇓P	**Pn**	**13 24 26.9**	**+0.8**
	baz=12						
SHOC	**Shoshone**	**11.89**	**333**	⇑P	**Pn**	**13 24 27.3**	**+0.7**
	baz=12,SNR=20						
T14A	**Hurricane**	**11.97**	**347**	⇑P	**Pn**	**13 24 28.7**	**+1.1**
	baz=12						
U11A	**Corn Creek**	**12.01**	**337**	⇑P	**Pn**	**13 24 29.5**	**+1.3**
	baz=12						
T12A	**Moapa**	**12.07**	**340**	⇑P	**Pn**	**13 24 29.9**	**+0.9**
	baz=12						
T13A	**Saint George**	**12.12**	**344**	⇑P	**Pn**	**13 24 30.4**	**+0.7**
	baz=12						
LRMC	**Laurel Mountai**	**12.17**	**327**	⇓P	**Pn**	**13 24 31.2**	**+0.8**
	baz=12,SNR=17						
U10A	**Ash Meadows, A**	**12.36**	**334**	⇑P	**Pn**	**13 24 33.9**	**+0.9**
	baz=12,SNR=42						
ARVC	**Arvin**	**12.49**	**323**	⇓P	**Pn**	**13 24 35.7**	**+0.9**
	baz=12,SNR=14						
CCUT	**Cedar City**	**12.50**	**346**	*e*Pn	**Pn**	**13 24 36.8**	**+1.9**
MPMC	**Manual Prospec**	**12.55**	**330**	⇓P	**Pn**	**13 24 36.4**	**+0.8**
	baz=12,SNR=18						
FURC	**Furnace Creek,**	**12.62**	**333**	⇓P	**Pn**	**13 24 37.0

U04C **Hernandez Rese** 14.47 322 ⇑P Pn 13 25 02.4 +0.5
baz=14,SNR=15
Q10A **Clear Creek Ra** 14.53 339 ⇓P Pn 13 25 03.0 +0.4
baz=14
NLU **North Lily Min** 14.64 353 *e*Pn Pn 13 25 05.0 +0.9
VHO **Vista Hermosa** 14.64 122 *i* P Pn 13 25 14.9 +11
MPU **Maple Canyon** 14.65 354 *e*Pn Pn 13 25 10.8 +6.5
P12A **McGill** 14.69 344 ⇓P Pn 13 25 05.2 +0.4
baz=15,SNR=37
R08A **Mina** 14.74 333 ⇑P Pn 13 25 05.7 +0.2
baz=15
ISCO **Idaho Springs** 14.75 12 *e*Pn Pn 13 25 06.4 +0.9
Q09A **Carvers** 14.80 337 ⇓P Pn 13 25 06.9 +0.6
baz=15
NVAR **Mina Array Bea** 14.89 333 Pn Pn 13 25 06.5 -0.9
comp=Z,0.5nm,0.3s,baz=144,slow=11,SNR=4.1
NVAR Sn Sn 13 27 53.1 +0.6
comp=Z,0.3nm,0.3s,baz=208,slow=35,SNR=1.9
NVAR Lg 13 29 25.6
comp=Z,0.6nm,0.3s,baz=160,slow=41,SNR=2.8
R07C **Lee Vining** 14.93 330 ⇓P Pn 13 25 09.1 +1.1
baz=15
HAST **UC Hastings Re** 14.93 320 ⇓P Pn 13 25 08.8 +0.7
baz=15
S05C **Merced** 14.96 325 ⇓P Pn 13 25 08.2 -0.2
baz=15
DUG **Dugway** 14.97 351 *e*Pn Pn 13 25 09.1 +0.4
DUG **Dugway** 14.97 351 ⇑P Pn 13 25 08.9 +0.3
baz=15,SNR=14
DAU **Daniels Canyon** 15.02 355 *e*Pn Pn 13 25 09.6 +0.3
Q08A **Gabbs** 15.11 335 P Pn 13 25 10.8 +0.3
baz=15,SNR=12
O13A **Hicks Ranch, I** 15.11 347 ⇑P Pn 13 25 10.7 +0.2
baz=15
PACP **Pacheco Peak** 15.22 322 ⇓P Pn 13 25 12.6 +0.7
baz=15
JLU **Jordanelle** 15.22 355 *e*Pn Pn 13 25 12.2 +0.3
P10A **Eureka** 15.27 340 ⇑P Pn 13 25 13.3 +0.8
baz=15,SNR=9.2
NOQ **North Oquirrh** 15.34 353 *e*P Pn 13 25 19.0 +5.6
CTU **Camp Tracy** 15.34 354 *e*Pn Pn 13 25 14.5 +1.0
O12A **Currie** 15.41 345 ⇓P Pn 13 25 14.1 -0.3
baz=15,SNR=19
P09A **Austin** 15.43 338 ⇑P Pn 13 25 15.4 +0.8
baz=15
R06C **Coleville** 15.46 330 ⇓P Pn 13 25 16.1 +1.0
baz=15,SNR=21
O11A **Cowboy Ranch,** 15.51 343 ⇓P Pn 13 25 16.9 +1.3
baz=16,SNR=17
CMB **Columbia Colle** 15.52 327 *e*P Pn 13 25 15.8 0.0
comp=Z,39nm,1.2s
CMB **Columbia Colle** 15.52 327 *e*P Pn 13 25 15.8 0.0
CMB pmax pmax
comp=Z,39nm,1.2s
CMB **Columbia Colle** 15.52 327 ⇑P Pn 13 25 16.3 +0.5
baz=16,SNR=12
S04C **Ingram Canyon,** 15.60 323 ⇑P Pn 13 25 17.6 +0.7
baz=16
N15A **Stansbury Isla** 15.62 352 ⇑P Pn 13 25 17.4 +0.3
baz=16
N14A **Grayback Hills** 15.67 350 ⇑P Pn 13 25 17.7 -0.1
baz=16
BGU **Big Grassy Mou** 15.72 351 *e*Pn Pn 13 25 16.2 -2.2
CBKS **Cedar Bluff** 15.79 30 *e*P Pn 13 25 25.8 +6.5
N13A **Wendover, West** 15.86 347 ⇓P Pn 13 25 20.0 -0.2
baz=16,SNR=24
P08A **Dixie Valley** 15.89 336 ⇓P Pn 13 25 20.9 +0.3
baz=16
R05C **Kirkwood Meado** 15.89 329 ⇑P Pn 13 25 21.2 +0.5
baz=16,SNR=20
O10A **Cortez Mining,** 15.90 341 ⇑P Pn 13 25 21.2 +0.5
baz=16,SNR=11
WENL **Wente Brothers** 15.92 323 ⇓P Pn 13 25 22.0 +1.0
baz=16
R04C **Big Horse Ranc** 15.96 326 ⇓P Pn 13 25 21.5 -0.1
baz=16
O09A **Fish Creek Ran** 16.00 339 P Pn 13 25 22.6 +0.5
baz=16,SNR=23
N12A **Clover Valley,** 16.03 345 ⇓P Pn 13 25 22.5 0.0
baz=16,SNR=20
P07A **Fallon** 16.07 333 ⇓P Pn 13 25 23.5 +0.6
baz=16
CMIG **Matias Romero** 16.08 118 *i* P Pn 13 25 22.1 -1.2
CMIG **Matias Romero** 16.08 118 Pn Pn 13 25 24.2 +1.0
comp=Z,0.1nm,0.3s,baz=22,slow=23,SNR=1.9
CMIG Sn Sn 13 28 28.4 +6.7
comp=Z,0.2nm,0.3s,baz=349,slow=18,SNR=2.4
CMIG Lg 13 30 07.7
comp=Z,0.2nm,0.3s,baz=43,slow=17,SNR=2.2
CMIG LR LR 13 31 41.3
comp=Z,3µm,20.2s,baz=277,slow=37
CMIG **Matias Romero** 16.08 118 *i* P Pn 13 25 14.9 -8.3
N11A **Elko Archery C** 16.17 343 ⇑P Pn 13 25 24.3 0.0
baz=16
M15A **Larsen Ranch,** 16.17 353 ⇓P Pn 13 25 24.2 -0.1
baz=16
BDM **Black Diamond** 16.22 323 ⇓P Pn 13 25 25.3 +0.4
baz=16
HWUT **Hardware Ranch** 16.23 355 *e*Pn Pn 13 25 24.5 -0.5
comp=Z,151nm,1.3s
PHWY **Pilot Hill** 16.23 11 *e*P Pn 13 25 28.3 +3.3
WCN **Washoe City** 16.24 331 P Pn 13 25 26.4 +1.3
baz=16,SNR=31
LAVA **Lava Cap Winer** 16.25 328 ⇓P Pn 13 25 26.1 +0.8
baz=16,SNR=6.9
N10A **Dunphy** 16.29 341 ⇓P Pn 13 25 26.1 +0.3
baz=16
M14A **Sheep Mountain** 16.34 350 ⇑P Pn 13 25 26.7 +0.3
baz=16
M13A **Montello** 16.34 348 ⇓P Pn 13 25 26.7 +0.4
baz=16
RWWY **Rawlins** 16.37 7 *e*P Pn 13 25 27.8 +1.0
O08A **Rochester Mine** 16.44 337 ⇑P Pn 13 25 28.8 +1.1
baz=16
HVU **Hansel Valley** 16.53 352 *e*P Pn 13 25 31.1 +2.3
M12A **Wells** 16.54 346 ⇑P Pn 13 25 29.0 0.0
baz=16
O07A **Toulon** 16.60 335 ⇑P Pn 13 25 30.3 +0.6
baz=17,SNR=38
P06A **Stead Airport,** 16.61 331 ⇓P Pn 13 25 30.9 +1.0
baz=17
P05C **Yuba Gap, Truc** 16.62 329 P Pn 13 25 30.8 +0.8
baz=17,SNR=13
Q04C **Lincoln** 16.63 326 ⇑P Pn 13 25 31.2 +1.1
baz=17
MIAR **Mount Ida** 16.65 53 *e*P Pn 13 25 33.7 +3.2
N09A **Rock Creek Ran** 16.73 339 ⇓P Pn 13 25 31.8 +0.5
baz=17,SNR=12
M11A **Holland Ranch,** 16.76 344 ⇑P Pn 13 25 32.1 +0.3
baz=17,SNR=17
Q03C **Winters** 16.80 325 ⇓P Pn 13 25 32.7 +0.4
baz=17
CVS **Carmenet Viney** 16.83 323 ⇑P Pn 13 25 33.0 +0.4
baz=17
N08A **GE Springer Mi** 16.87 337 P Pn 13 25 33.8 +0.6
baz=17,SNR=26
O06A **Flanigan** 16.98 332 ⇑P Pn 13 25 35.3 +0.7
baz=17,SNR=14
L13A **Double Diamond** 17.00 349 ⇓P Pn 13 25 34.9 +0.1
baz=17
NSHM **Saint Helena R** 17.03 323 *e*P Pn 13 25 37.9 +2.7
M10A **I.L. Ranch, Tu** 17.05 342 ⇓P Pn 13 25 36.1 +0.7
baz=17,SNR=17
OHCM **Honcut** 17.07 327 *e*P Pn 13 25 38.5 +2.8
SUTB **Sutter Butte** 17.13 326 P Pn 13 25 36.7 +0.2
baz=17
N07B **Gerlach** 17.17 335 ⇓P Pn 13 25 36.9 0.0
baz=17,SNR=5.7
MNRC **McLaughlin Nat** 17.21 324 ⇑P Pn 13 25 37.8 +0.4
baz=17
M09A **Marrel Ranch,** 17.22 340 ⇑P Pn 13 25 38.2 +0.6
baz=17,SNR=9.5
ORV **Oroville** 17.24 328 ⇑P Pn 13 25 38.5 +0.6
baz=17
L12A **House Creek Ra** 17.26 347 ⇓P Pn 13 25 38.1 0.0
baz=17
O05C **Quincy** 17.29 330 P Pn 13 25 39.4 +1.0
baz=17,SNR=21
BW06 **Boulder Array** 17.31 0 *e*P Pn 13 25 37.3 -1.4
PDAR **Pinedale Array** 17.31 0 P Pn 13 25 36.6 -2.1
PDAR S Sn 13 28 55.0 +3.7
PDAR Lg 13 30 39.2
PDAR LR LR 13 32 32.7
PDAR **Pinedale Array** 17.31 0 P Pn 13 25 36.6 -2.1
comp=Z,0.1nm,0.3s,baz=171,slow=10,SNR=48
PDAR S Sn 13 28 55.0 +3.7
baz=153,slow=10.0,SNR=1.9
PDAR Lg 13 30 39.2
baz=12,slow=41,SNR=4.0
PDAR LR LR 13 32 32.7
comp=Z,5µm,19.0s,baz=191,slow=38
K14A **Jones Ranch, D** 17.33 351 ⇓P Pn 13 25 39.0 +0.1
baz=17
AHID **Auburn Hatcher** 17.35 357 *e*Pn Pn 13 25 38.7 -0.5
comp=Z,113nm,1.5s
N06A **Buffalo Meadow** 17.48 334 ⇑P Pn 13 25 41.1 +0.3
baz=18,SNR=35
KSU1 **Kansas State U** 17.54 36 *e*P Pn 13 25 43.2 +1.7
L10A **Juniper Basin** 17.54 343 ⇓P Pn 13 25 41.9 +0.3
baz=18
K13A **Stover Farm, H** 17.57 349 ⇑P Pn 13 25 42.1 +0.2
baz=18
HOPS **Hopland** 17.63 323 ⇑P Pn 13 25 43.7 +1.1
baz=18
O04C **Chester** 17.66 330 ⇓P Pn 13 25 44.0 +1.0
baz=18,SNR=30
K12A **Draper Farm, C** 17.71 347 ⇑P Pn 13 25 43.9 +0.3
baz=18
ELFS **Eagle Lake Fie** 17.74 331 ⇓P Pn 13 25 44.8 +0.7
baz=18
M07A **Soldier Meadow** 17.77 336 ⇑P Pn 13 25 44.8 +0.4
baz=18,SNR=14
L09A **Wilkinson Ranc** 17.83 340 ⇑P Pn 13 25 45.5 +0.4
baz=18,SNR=14
GASB **Alder Springs** 17.92 326 ⇑P Pn 13 25 47.2 +0.9
baz=18
REDW **Red Top Meadow** 17.93 357 *e*Pn Pn 13 25 45.6 -0.7
comp=Z,70nm,1.3s
SNOW **Snow King Moun** 18.03 357 *e*Pn Pn 13 25 47.0 -0.5
K11A **Parker Ranch,** 18.09 345 ⇑P Pn 13 25 49.0 +0.7
baz=18
P01C **Double 8 Ranch** 18.11 324 ⇑P Pn 13 25 50.1 +1.5
baz=18
M06C **Likely Place G** 18.12 333 P Pn 13 25 49.7 +0.9
baz=18,SNR=23
DCID1 **Drake Creek** 18.18 357 *e*P Pn 13 25 49.8 +0.4
LBCM **Butte Creek Ri** 18.20 331 P Pn 13 25 50.7 +1.1
L08A **Fields** 18.20 339 P Pn 13 25 49.8 +0.1
baz=18,SNR=40
HATC **Hat Creek Radi** 18.23 330 ⇑P Pn 13 25 50.7 +0.8
baz=18
K10A **MacKenzie Ranc** 18.30 343 ⇓P Pn 13 25 51.0 +0.1
baz=18
MOOW **Mose Ponds** 18.32 358 *e*Pn Pn 13 25 50.4 -0.6
J13A **Cove Ranch, Pi** 18.32 350 ⇑P Pn 13 25 51.6 +0.5
baz=18
J12A **Stokes Ranch,** 18.34 347 ⇓P Pn 13 25 51.8 +0.4
baz=18
O02C **Red Bluff** 18.36 327 ⇑P Pn 13 25 52.2 +0.6
baz=18
L07A **Adell** 18.39 337 ⇓P Pn 13 25 52.5 +0.6
baz=18,SNR=8.0
K09A **Rome** 18.47 341 P Pn 13 25 53.3 +0.3
baz=18,SNR=90
IMW **Indian Meadow** 18.47 357 *e*Pn Pn 13 25 52.6 -0.4
WVOR **Wild Horse Val** 18.51 339 P Pn 13 25 53.6 +0.2
HLID **Hailey** 18.52 349 *e*P Pn 13 25 53.4 -0.1
HLID **Hailey** 18.52 349 ⇓P Pn 13 25 53.9 +0.4
baz=18,SNR=17
M05C **Lookout** 18.53 332 P Pn 13 25 55.0 +1.2
baz=18,SNR=21
WDC **Whiskeytown Da** 18.54 328 *e*P Pn 13 25 54.0 +0.2
comp=Z,64nm,1.4s
WDC **Whiskeytown Da** 18.54 328 *e*P Pn 13 25 54.0 +0.1
WDC pmax pmax
comp=Z,64nm,1.4s
WDC **Whiskeytown Da** 18.54 328 ⇑P Pn 13 25 54.3 +0.5
baz=18
MOD **Modoc** 18.64 335 *e*P Pn 13 25 56.5 +1.4
MOD **Modoc** 18.64 335 ⇑P Pn 13 25 55.5 +0.4
baz=19
FLWY **Flagg Ranch** 18.65 358 *e*P Pn 13 25 55.0 -0.1
MFID **Camas Ranch** 18.65 346 ⇑P Pn 13 25 55.0 -0.1
baz=19
K08A **Mann Creek Ran** 18.73 339 ⇓P Pn 13 25 55.7 -0.4
baz=19
I13A **Wildhorse Cree** 18.81 350 ⇑P Pn 13 25 57.0 0.0
baz=19
J10A **Berg Farm, Mel** 18.88 344 ⇑P Pn 13 25 58.2 +0.2
baz=19
M03C **McCloud** 18.89 330 ⇓P Pn 13 25 58.6 +0.5
baz=19,SNR=5.8
K07A **Rock Creek Ran** 18.95 338 P Pn 13 25 58.6 -0.1
baz=19,SNR=25
L05A **Lakeview** 18.98 334 ⇑P Pn 13 25 58.9 -0.2
baz=19,SNR=26
YFT **Old Faithful** 19.02 357 *e*Pn Pn 13 26 02.0 +2.4
J09A **Fry Pan Ranch,** 19.07 342 P Pn 13 25 59.9 -0.3
baz=19,SNR=15
N02C **Big Bar** 19.10 327 ⇓P Pn 13 26 01.0 +0.4
baz=19
M04C **Macdoel** 19.18 331 ⇓P Pn 13 26 02.4 +0.8
baz=19,SNR=31
YMR **Main River** 19.24 357 *e*P Pn 13 26 01.9 -0.4
comp=Z,109nm,1.4s
J08A **Circle Bar Ran** 19.30 340 ⇑P Pn 13 26 02.3 -0.6
baz=19,SNR=11
M02C **Callahan** 19.32 329 ⇑P Pn 13 26 02.6 -0.7
baz=19
K06A **Valley Falls** 19.40 336 P Pn 13 26 03.2 -0.9
baz=19,SNR=17
QLMT **Earthquake Lak** 19.43 356 *e*P Pn 13 26 04.0 -0.6
JCC **Jacoby Creek** 19.46 326 ⇓P Pn 13 26 04.1 -0.8
baz=19
H13A **Challis** 19.47 350 ⇑P Pn 13 26 03.9 -1.0
baz=19
I10A **Payette** 19.51 345 ⇑P Pn 13 26 04.8 -0.7
baz=20
L04A **Klamath Falls** 19.52 332 ⇑P Pn 13 26 05.7 +0.1
baz=20,SNR=13
YBH **Yreka Blue Hor** 19.52 330 ⇓P Pn 13 26 04.9 -0.8
baz=20
MCMT **McKenzie Canyo** 19.54 353 *e*P Pn 13 26 04.9 -1.0
H12A **Diamond D Ranc** 19.55 349 P Pn 13 26 05.1 -0.9
baz=20,SNR=28
J07A **Hines** 19.57 339 P Pn 13 26 05.6 -0.6
baz=20,SNR=38
K05A **Summer Lake** 19.58 335 ⇓P Pn 13 26 06.0 -0.3
baz=20,SNR=16
I09A **Lost Marbles R** 19.65 342 P Pn 13 26 06.2 -1.0
baz=20,SNR=19
RLMT **Red Lodge** 19.67 1 *e*P Pn 13 26 05.9 -1.5
J06A **Christmas Vall** 19.75 337 P Pn 13 26 07.3 -1.1
baz=20,SNR=47
K04A **Chilquin** 19.82 333 ⇓P Pn 13 26 08.2 -0.9
baz=20,SNR=21
I08A **Drewsey** 19.83 341 ⇑P Pn 13 26 07.7 -1.6
baz=20,SNR=13
G15A **Dillon** 19.84 354 ⇑P Pn 13 26 08.7 -0.7
baz=20,SNR=18
H11A **Donnelly** 19.92 347 P Pn 13 26 08.7 -1.7
baz=20,SNR=25
H10A **Noah's Angus R** 19.97 345 P Pn 13 26 09.3 -1.7
baz=20,SNR=52
G13A **Cobalt** 19.98 351 P Pn 13 26 09.4 -1.7
baz=20,SNR=28
G14A **Jackson** 20.02 352 ⇑P P 13 26 10.0 +0.2
baz=20
DLMT **Dillon** 20.05 354 *e*P P 13 26 10.9 +0.9
comp=Z,140nm,1.5s
J05A **Fort Rock** 20.18 335 P P 13 26 11.7 +0.1
baz=20,SNR=39
BOZ **Bozeman (W)** 20.25 356 *e*P P 13 26 12.2 -0.1
comp=Z,158nm,2.2s
BOZ **Bozeman (W)** 20.25 356 *e*P P 13 26 12.2 -0.1
BOZ pmax pmax
comp=Z,158nm,2.2s
BOZ **Bozeman (W)** 20.25 356 P P 13 26 12.3 0.0
baz=20,SNR=29
H09A **Burkee** 20.27 343 P P 13 26 12.8 +0.3
baz=20,SNR=12
I07A **Izee** 20.27 339 P P 13 26 12.6 0.0
baz=20,SNR=40
GCMT **Greycliff** 20.34 0 *e*P P 13 26 13.1 -0.2
BMO **Blue Mountains** 20.36 344 *e*P P 13 26 12.8 -0.6
comp=Z,48nm,0.9s
I06A **Prineville** 20.38 338 ⇓P P 13 26 13.6 -0.1
baz=20,SNR=33
TEIG **Tepich** 20.39 100 P P 13 26 16.4 +2.3
comp=Z,14nm,0.9s,baz=311,slow=12,SNR=3.2
TEIG S S 13 30 09.0 +6.3
comp=Z,16nm,1.1s,baz=241,slow=12,SNR=2.7
TEIG LR LR 13 35 14.0
comp=Z,2µm,20.7s,MS4.5,baz=294,slow=40
H08A **Prairie City** 20.41 341 ⇓P P 13 26 14.1 0.0
baz=20,SNR=50
LRM **Limekiln Ridge** 20.49 354 *e*P P 13 26 15.2 +0.3
J04A **Umpqua Nationa** 20.49 333 ⇓P P 13 26 15.3 +0.3
baz=20
F15A **Butte** 20.51 354 ⇑P P 13 26 14.9 -0.3
baz=20,SNR=25
F14A **Wisdom** 20.57 353 P P 13 26 16.1 +0.3
baz=20,SNR=6.0
G11A **Walters Elk Ra** 20.64 347 P P 13 26 16.2 -0.3
baz=21,SNR=57
F13A **Darby** 20.68 351 ⇑P P 13 26 16.7 -0.2
baz=21
H07A **Lands Inn, Kim** 20.75 340 ⇓P P 13 26 17.7 0.0
baz=21
F12A **Elk City** 20.79 349 P P 13 26 17.6 -0.6
baz=21,SNR=47
G09A **Cove** 20.87 344 ⇑P P 13 26 18.5 -0.6
baz=21
PLAL **Pickwick Lake** 20.94 58 *e*P P 13 26 20.3 +0.4
comp=Z,44nm,1.2s
I05A **Bend** 20.95 336 ⇓P P 13 26 19.8 -0.1
baz=21
I04A **Tendick Farm,** 21.07 334 ⇑P P 13 26 19.9 -1.3
baz=21
F11A **Grangeville** 21.08 347 P P 13 26 20.4 -0.9
baz=21,SNR=39
E15A **Deer Lodge** 21.10 354 P P 13 26 20.8 -0.7
baz=21,SNR=9.4
H06A **Lindquist Farm** 21.12 339 P P 13 26 21.0 -0.8
baz=21,SNR=5.9
ECSD **EROS,Sioux Fal** 21.17 27 *e*P P 13 26 21.3 -0.9
E14A **Clinton** 21.18 353 ⇑P P 13 26 22.0 -0.4
baz=21,SNR=14
LRAL **Lakeview Retre** 21.18 64 *e*P P 13 26 23.5 +0.9
G08A **Pilot Rock** 21.20 342 P P 13 26 22.5 -0.1
baz=21,SNR=30
E13A **Victor** 21.30 351 ⇓P P 13 26 22.9 -0.7
baz=21,SNR=29
F09A **S2 Ranch, Elgi** 21.31 344 P P 13 26 23.4 -0.4
baz=21,SNR=28
H05A **Madras** 21.35 337 ⇓P P 13 26 23.6 -0.7
baz=21
G07A **Ruggs Ranch, H** 21.39 340 P P 13 26 24.0 -0.6
baz=21,SNR=16
F10A **Beach Ranch, E** 21.39 345 P P 13 26 23.9 -0.8
baz=21,SNR=41
E11A **Bogner Ranch,** 21.54 348 ⇑P P 13 26 24.8 -1.4
baz=22,SNR=59
CROR **Criterion Ridg** 21.56 338 P P 13 26 25.7 -0.8
WVT **Waverly** 21.56 55 *e*P P 13 26 27.2 +0.6
I03A **Eugene** 21.57 333 ⇑P P 13 26 26.8 +0.2
baz=22
VTHM **Trough** 21.59 339 P P 13 26 26.0 -0.8
MSO **Missoula** 21.64 352 *e*P P 13 26 26.6 -0.7
comp=Z,78nm,1.6s,mb4.9
CHMT **Chamberlain Mo** 21.65 353 *e*P P 13 26 26.9 -0.5
G06A **Carlson Farm,** 21.66 339 P P 13 26 26.8 -0.8
baz=22,SNR=6.2
D15A **Lincoln** 21.71 355 P P 13 26 27.7 -0.3
baz=22,SNR=21
H04A **Detroit Lake** 21.73 335 ⇑P P 13 26 28.0 -0.4
baz=22
I02A **Mapleton** 21.83 332 ⇑P P 13 26 29.2 -0.2
baz=22
D14A **Greenough** 21.84 353 P P 13 26 28.7 -0.7
baz=22,SNR=38
E10A **Myers Farm, Un** 21.85 346 ⇓P P 13 26 28.8 -0.7
baz=22
G05A **Wamic** 21.90 338 ⇓P P 13 26 29.0 -1.1
baz=22
D13A **Huson** 21.97 351 P P 13 26 30.2 -0.6
baz=22,SNR=22
F07A **Phinny Hill Vi** 22.03 341 P P 13 26 30.2 -1.3
baz=22,SNR=15
D12A **Red Ives Fores** 22.06 350 ⇑P P 13 26 30.5 -1.3
baz=22
HOOD **Mount Hood Mea** 22.09 337 *e*P P 13 26 34.1 +2.0
E09A **Wood Farm, Sta** 22.12 344 ⇓P P 13 26 31.0 -1.4
baz=22
H03A **Soap Creek Ran** 22.16 334 ⇑P P 13 26 31.4 -1.5
baz=22
F06A **Goldendale** 22.18 339 ⇑P P 13 26 31.8 -1.4
baz=22
E08A **Dider Farm, El** 22.33 343 ⇑P P 13 26 33.4 -1.3
baz=22
HAWA **Hanford** 22.37 342 *e*P P 13 26 33.7 -1.4
comp=Z,38nm,0.8s,mb4.9
D10A **Wagner Farm, O** 22.43 346 P P 13 26 34.4 -1.4
baz=22,SNR=15
F05A **White Salmon** 22.51 338 ⇑P P 13 26 35.7 -0.9
baz=22
C14A **Swan Lake** 22.55 353 ⇓P P 13 26 36.0 -0.9
baz=22
C13A **Hot Springs** 22.56 351 ⇑P P 13 26 35.5 -1.6
baz=22,SNR=13
EGMT **Eagleton** 22.57 360 *e*P P 13 26 37.0 -0.2
EGMT **Eagleton** 22.57 360 ⇑P P 13 26 36.2 -1.0
baz=22
E07A **Sunnyside** 22.61 342 ⇓P P 13 26 36.0 -1.7
baz=23
D09A **Jones Farm, Ri** 22.67 345 ⇑P P 13 26 38.1 -0.2
baz=23
SWET **Sewanee** 22.67 59 *e*P P 13 26 39.2 +0.8
G03A **Yamhill** 22.68 335 ⇑P P 13 26 38.1 -0.4
baz=23
HDIL **Hopedale** 22.74 43 *e*P P 13 26 39.0 -0.1
D08A **Wollman Farm,** 22.82 344 ⇑P P 13 26 39.2 -0.7
baz=23,SNR=12
F04A **Amboy** 22.89 337 ⇑P P 13 26 40.2 -0.4
baz=23
E06A **Yakima** 22.94 340 ⇓P P 13 26 40.3 -0.8
baz=23,SNR=18
OD2 **Odessa Site #2** 23.08 344 P P 13 26 41.5 -1.1
C10A **Spiller Farm,** 23.16 347 ⇓P P 13 26 42.8 -0.7
baz=23
E05A **Randle** 23.20 339 ⇑P P 13 26 43.0 -0.9
baz=23,SNR=15
D07A **Quincy** 23.23 342 ⇓P P 13 26 43.3 -0.8
baz=23
B13A **Whitefish** 23.23 352 P P 13 26 43.1 -1.1
baz=23,SNR=22
F03A **Seaside** 23.31 335 ⇓P P 13 26 44.9 -0.1
baz=23
C09A **Chrisman Ranch** 23.36 345 ⇑P P 13 26 44.5 -1.0
baz=23
LON **Longmire** 23.39 339 *e*P P 13 26 45.0 -0.8
DGMT **Dagmar** 23.42 9 *e*P P 13 26 45.8 -0.4
D06A **Cle Elum** 23.48 341 ⇓P P 13 26 45.7 -1.1
baz=23
B12A **Libby** 23.48 350 ⇓P P 13 26 45.2 -1.6
baz=23
C08A **Higginbotham F** 23.52 344 ⇑P P 13 26 45.6 -1.7
baz=24
NEW **Newport** 23.55 348 *e*P P 13 26 46.1 -1.4
comp=Z,109nm,1.6s,mb5.0
NEW **Newport** 23.55 348 *e*P P 13 26 46.1 -1.5
NEW pmax pmax
comp=Z,109nm,1.6s
NEW **Newport** 23.55 348 P P 13 26 46.0 -1.5
comp=Z,10nm,0.8s,mb4.3,baz=152,slow=10,SNR=14
NEW S S 13 31 03.6 +2.4
comp=Z,1.2nm,0.6s,baz=351,slow=23,SNR=1.8
NEW Lg 13 33 42.9
comp=Z,1.9nm,0.6s,baz=288,slow=22,SNR=3.5
NEW LR LR 13 36 11.7
comp=Z,2µm,20.3s,MS4.6,baz=169,slow=37
E04A **Onalaska** 23.56 337 ⇓P P 13 26 46.8 -0.9
baz=24
B11A **Sandpoint** 23.58 349 ⇓P P 13 26 45.7 -2.1
baz=24,SNR=6.7
B10A **Chitwood Farm,** 23.61 347 ⇓P P 13 26 46.3 -1.8
baz=24
C07A **Waterville** 23.70 342 ⇑P P 13 26 47.8 -1.2
baz=24,SNR=26
A13A **Flathead Natio** 23.77 352 ⇓P P 13 26 48.4 -1.1
baz=24
E03A **Lebam** 23.82 336 ⇓P P 13 26 49.3 -0.8
baz=24
D05A **Enumclaw** 23.83 339 ⇑P P 13 26 49.5 -0.6
baz=24
WALA **Waterton Lakes** 23.84 353 *e*P P 13 26 49.1 -1.1
comp=Z,82nm,1.4s,mb5.0
CPCT **Cooper Cave** 23.84 59 *e*P P 13 26 50.6 +0.2
B09A **Rice** 23.91 346 P P 13 26 49.5 -1.4
baz=24,SNR=13
A12A **Yaak River Ran** 23.94 350 ⇓P P 13 26 49.6 -1.5
baz=24

A11A Hall Mountain, 24.08 349 ⇓P P **13 26 51.0 -1.4**
baz=24,SNR=22
B08A Colville Reser 24.13 344 ⇓P P **13 26 51.5 -1.4**
baz=24,SNR=31
GOGA Godfrey 24.15 65 *e*P P **13 26 53.5 +0.3**
C05A Tolt Reservoir 24.18 340 ⇑P P **13 26 52.7 -0.6**
baz=24
A10A Northport 24.32 347 ⇓P P **13 26 52.5 -2.1**
baz=24
B07A Winthrop 24.43 343 P P **13 26 54.2 -1.3**
baz=24,SNR=16
TKL Tuckaleechee C 24.48 59 P P **13 26 57.3 +1.1**
TKL S **S** **13 31 19.4 +2.9**
TKL Tuckaleechee C 24.48 59 P P **13 26 57.3 +1.1**
comp=Z,7.4nm,0.6s,mb4.3,baz=218,slow=8.6,SNR=10
TKL S **S** **13 31 19.4 +2.8**
comp=Z,1.1nm,0.3s,baz=78,slow=4.3,SNR=2.1
TKL Lg 13 34 19.5
comp=Z,3.5nm,1.0s,baz=16,slow=11,SNR=2.8
TKL LR LR 13 37 21.9
comp=Z,3µm,18.4s,MS4.8,baz=254,slow=38
A09A Danville 24.53 346 P P **13 26 55.6 -0.9**
baz=24,SNR=17
C04A Brinnon 24.62 338 ⇑P P **13 26 56.5 -0.8**
baz=25
A08A Turner Farm, O 24.67 345 ⇓P P **13 26 57.2 -0.5**
baz=25,SNR=11
B05A Bryant 24.81 340 ⇓P P **13 26 58.3 -0.8**
baz=25
B06A Marblemount 24.86 341 ⇓P P **13 26 58.0 -1.5**
baz=25
TZTN Tazewell 24.93 57 *e*P P **13 27 06.6 +6.3**
comp=Z,30nm,1.0s,mb4.8
A07A Ashnola River, 25.03 343 ⇓P P **13 26 59.7 -1.3**
baz=25
AGMN Agassiz Refuge 25.30 22 *e*P P **13 27 04.0 +0.5**
comp=Z,14nm,0.7s,mb4.6
A04A Legoe Bay, Lum 25.41 340 ⇓P P **13 27 03.6 -0.9**
baz=25
A05A Maple Falls 25.46 341 ⇑P P **13 27 03.5 -1.5**
baz=25
PGC Sidney 25.59 339 *e*P P **13 27 09.4 +3.3**
EYMN Ely 26.68 28 *e*P P **13 27 20.1 +4.0**
ACSO Alum Creek Sta 26.74 50 *e*P P **13 27 17.2 +0.5**
comp=Z,85nm,1.7s,mb5.0
ULM Lac du Bonnet 27.00 20 P P **13 27 18.8 -0.1**
comp=Z,5.9nm,0.9s,mb4.1,baz=221,slow=9.9,SNR=11
ULM Lg 13 35 36.1
comp=Z,1.9nm,0.9s,baz=35,slow=20,SNR=3.2
ULM LR LR 13 37 52.3
comp=Z,2µm,18.1s,MS4.7,baz=224,slow=36
ELN Prospectdale 27.28 57 *e*P P **13 27 26.7 +5.2**
BLA Blacksburg 27.52 58 P P **13 27 24.4 +0.6**
comp=Z,9.0nm,0.8s,mb4.5
BLA Blacksburg 27.52 58 P P **13 27 24.4 +0.7**
BLA pmax pmax
comp=Z,9.0nm,0.8s,mb4.5
EDM Edmonton 27.91 355 *e*P P **13 27 25.9 -1.1**
FFC Flin Flon 29.83 9 *e*P P **13 27 42.4 -1.6**
BBB Bella Bella 30.17 337 LR LR 13 39 23.9
comp=Z,1µm,20.0s,MS4.5,baz=150,slow=36
FCC Fort Churchill 35.10 14 *e*P P **13 28 28.4 -1.8**
comp=Z,21nm,0.8s,mb5.1
FCC Fort Churchill 35.10 14 *e*P P **13 28 28.4 -1.7**
FCC pmax pmax
comp=Z,21nm,0.8s,mb5.1
DLBC Dease Lake 36.00 342 *e*P P **13 28 38.2 +0.3**
YKA Yellowknife Ar 37.22 356 P P **13 28 46.2 -2.0**
YKA PcP PcP 13 31 06.8 -1.0
YKA S **S** **13 34 27.1 -7.8**
YKA LR LR 13 44 38.1
YKA Yellowknife Ar 37.22 356 P P **13 28 46.2 -2.0**
YKA 13 31 06.8
YKA S **S** **13 34 27.1 -7.8**
YKA Yellowknife Ar 37.22 356 P P **13 28 46.2 -2.0**
comp=Z,4.8nm,1.0s,mb4.3,baz=173,slow=7.8,SNR=36
YKA PcP PcP 13 31 06.8 -1.0
comp=Z,0.7nm,0.8s,baz=168,slow=2.8,SNR=3.6
YKA S **S** **13 34 27.1 -7.8**
comp=Z,0.1nm,0.3s,baz=125,slow=44,SNR=3.5
YKA LR LR 13 44 38.1
comp=Z,2µm,21.5s,MS4.8,baz=170,slow=37
YKW3 Yellowknife Ar 37.29 356 *e*P P **13 28 47.2 -1.5**
ROSC El Rosal 39.57 115 LR LR 13 47 46.6
comp=Z,489nm,19.2s,MS4.4,baz=357,slow=40
SDV Santo Domingo 40.59 107 *e*P P **13 29 19.0 +1.9**
comp=Z,8.5nm,0.7s,mb4.5
MTP Monte Pirata 41.49 91 *e*P P **13 29 26.3 +1.8**
SCHQ Schefferville 42.98 35 P P **13 29 37.1 +1.0**
comp=Z,2.5nm,0.6s,mb4.1,baz=66,slow=15,SNR=4.1
SCHQ LR LR 13 46 26.4
comp=Z,1µm,18.2s,MS4.9,baz=64,slow=35
DAWY Dawson 43.22 341 *e*P P **13 29 38.4 +0.5**
EGAK Eagle 44.27 341 *e*P P **13 29 46.5 +0.1**
comp=Z,27nm,1.2s,mb4.8
KDAK Kodiak Island 44.34 329 P P **13 29 46.1 -0.9**
comp=Z,19nm,0.7s,mb4.9,baz=129,slow=3.1,SNR=4.5
TAOE Nuku Hiva Isla 45.16 225 *e*LQ 13 40 27.7
comp=Z,4µm,28.8s
TAOE *e*LR LR 13 42 29.1
comp=Z,2µm,26.8s
INK Inuvik 45.27 348 *e*P P **13 29 53.9 -0.5**
comp=Z,2µm,1.7s
INK Inuvik 45.27 348 *e*P P **13 29 53.9 -0.4**
INK pmax pmax
comp=Z,2µm,1.7s
COLA College 46.41 339 *e*P P **13 30 02.8 -0.6**
comp=Z,19nm,1.1s,mb4.9
COLA College 46.41 339 *e*P P **13 30 02.8 -0.5**
COLA pmax pmax
comp=Z,19nm,1.1s,mb4.9
SVW2 Sparrevohn 47.25 332 *e*P P **13 30 09.3 -0.6**
TTA Tatalina 48.30 334 *e*P P **13 30 17.2 -0.9**
comp=Z,44nm,1.1s,mb5.4
TTA Tatalina 48.30 334 *e*P P **13 30 17.2 -0.9**
TTA pmax pmax
comp=Z,44nm,1.1s,mb5.4
IMA2 Indian Mountai 49.08 338 *e*P P **13 30 22.2 -1.8**
RES Resolute Bay 49.93 5 *e*P P **13 30 29.6 -0.8**
comp=Z,460nm,1.1s
RES Resolute Bay 49.93 5 *e*P P **13 30 29.6 -0.8**
RES pmax pmax
comp=Z,459nm,1.1s
TNA Tin City 54.12 334 *e*P P **13 31 02.5 +0.8**
comp=Z,14nm,1.3s,mb4.7
GAMB Gambell 55.19 331 *e*P P **13 31 11.4 +1.9**
comp=Z,14nm,1.4s,mb4.8
PPT Papeete 57.73 226 *e*S S **13 39 26.7 -0.5**
comp=Z,509nm,24.5s
PPT *e*LQ 13 45 56.2
comp=Z,616nm,23.8s
PPT *e*LR LR 13 48 17.8
comp=Z,1µm,27.5s,baz=35
PPT Papeete 57.73 226 LR LR 13 50 21.7
comp=Z,348nm,20.1s,MS4.5,baz=48,slow=30
LPAZ La Paz 57.93 131 P P **13 31 30.6 +1.0**
comp=Z,1.4nm,0.9s,mb4.0,baz=13,slow=8.7,SNR=4.0
ALE Alert 59.77 6 P P **13 31 39.0 -2.6**
comp=Z,66nm,1.2s,mb5.5,SNR=6.8
TBI Tubuai 61.92 222 *e*LQ 13 47 27.3
comp=Z,611nm,33.8s
TBI *e*LR LR 13 50 08.9
comp=Z,379nm,30.0s
BILL Bilibino 64.49 336⇑ *e*P P **13 32 12.6 -0.8**
BILL pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
DAG Danmarks Havn 65.70 15⇓ *e*P P **13 32 19.3 -1.9**
DAG pmax pmax
comp=Z,4.0nm,0.5s,mb4.7
DAG Danmarks Havn 65.70 15⇓ *i*P P **13 32 19.3 -1.9**
comp=Z,4.2nm,0.5s,mb4.7
PET Petropavlovsk 71.08 320 *e*P P **13 32 57.0 +1.8**
PET *e*S S 13 42 08.3 -3.2
PET pmax pmax
comp=Z,100nm,18.0s
PET pmax pmax
comp=Z,48nm,1.4s,mb5.2
SEY Seymchan 71.19 331⇑ *e*P P **13 32 56.5 +0.8**
MA2 Magadan 73.08 328⇑ *e*P P **13 33 08.4 +1.3**
MA2 pmax pmax
comp=Z,15nm,1.3s,mb4.8
PLCA Paso Flores 75.19 150 P P **13 33 20.5 +1.0**
PLCA LR LR 13 59 55.5
PLCA Paso Flores 75.19 150 P P **13 33 20.5 +1.0**
comp=Z,1.6nm,0.8s,mb4.0,baz=310,slow=4.8,SNR=4.9
PLCA LR LR 13 59 55.5

comp=Z,368nm,18.0s,MS4.7,baz=335,slow=31
TIXI Tiksi 75.21 344 *e*P P **13 33 17.9 -1.4**
comp=Z,14nm,0.9s,mb4.9
TIXI Tiksi 75.21 344 *e*P P **13 33 18.5 -0.8**
TIXI pmax pmax
comp=Z,15nm,0.9s,mb4.9
TIXI MLR MLR
comp=Z,485nm,19.0s,MS4.8
ARCES ARCESS Array B 79.99 15 P P **13 33 46.0 -0.1**
ARCES LR LR 14 11 22.1
ARCES ARCESS Array B 79.99 15 P P **13 33 46.0 -0.1**
comp=Z,14nm,1.0s,mb4.8,baz=322,slow=3.7,SNR=3.3
ARCES LR LR 14 11 22.1
comp=Z,337nm,18.2s,MS4.7,baz=324,slow=37
YAK Yakutsk 80.85 336 *e*P P **13 33 50.0 -0.7**
comp=Z,43nm,0.9s,mb5.4
YAK Yakutsk 80.85 336 *e*P P **13 33 48.1 -2.7**
YAK pmax pmax
comp=Z,30nm,0.8s,mb5.3
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.5s
ROSF Rostrenen 81.53 40 *e*P P **13 33 55.6 +0.9**
comp=E,129nm,1.4s,mb5.4
ROSF Rostrenen 81.53 40 *e*P P **13 33 55.6 +0.9**
comp=E,65nm,1.4s,mb5.4
ROSF Rostrenen 81.53 40 *e*P P **13 33 55.6 +0.9**
ROSF pmax pmax
comp=Z,65nm,1.4s,mb5.4
NB2 NORSAR Subarra 81.56 25 P P **13 33 57.3 +2.7**
comp=Z,5.3nm,0.9s,mb4.5,baz=308,slow=4.8
NB2 NORSAR Subarra 81.56 25 P P **13 33 57.3 +2.7**
NB2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.4
NOA NORSAR Array B 81.56 25 P P **13 33 54.4 -0.2**
comp=Z,3.4nm,0.8s,mb4.3,baz=309,slow=4.9,SNR=12
NOA LR LR 14 07 41.7
comp=Z,339nm,20.3s,MS4.7,baz=295,slow=34
KONO Kongsberg 81.78 27⇑ *e*P P **13 33 54.7 -1.1**
QUIF Quistinic 81.79 41 *e*P P **13 33 57.3 +1.2**
comp=Z,48nm,1.0s,mb5.1
QUIF Quistinic 81.79 41 *e*P P **13 33 57.3 +1.2**
comp=Z,24nm,1.0s,mb5.1
QUIF Quistinic 81.79 41 *e*P P **13 33 57.3 +1.2**
QUIF pmax pmax
comp=Z,24nm,1.0s,mb5.1
SGMF Saint Gilles 81.99 40 *e*P P **13 33 58.1 +1.0**
comp=Z,127nm,1.4s,mb5.3
SGMF Saint Gilles 81.99 40 *e*P P **13 33 58.1 +1.0**
comp=Z,64nm,1.4s,mb5.4
SGMF Saint Gilles 81.99 40 *e*P P **13 33 58.1 +1.0**
SGMF pmax pmax
comp=Z,64nm,1.4s,mb5.4
YSS Yuzh-Sakhalins 82.88 319 *e*P P **13 34 02.0 +0.2**
comp=Z,8.0nm,0.9s,mb4.8
YSS Yuzh-Sakhalins 82.88 319⇑ *e*P P **13 34 04.0 +2.2**
YSS pmax pmax
comp=Z,8.0nm,0.8s,mb4.8
GRR Gorron 82.90 39 *e*P P **13 34 03.4 +1.5**
comp=Z,117nm,1.5s,mb5.4
GRR Gorron 82.90 39 *e*P P **13 34 03.4 +1.5**
comp=Z,58nm,1.5s,mb5.4
GRR Gorron 82.90 39 *e*P P **13 34 03.4 +1.5**
GRR pmax pmax
comp=Z,58nm,1.5s,mb5.4
FLN La Foliniere 82.93 39 *e*P P **13 34 03.5 +1.5**
comp=Z,147nm,1.2s,mb5.6
FLN *e*MLR MLR
comp=Z,1µm,22.8s,MS4.8
FLN La Foliniere 82.93 39 *e*P P **13 34 03.5 +1.5**
comp=Z,73nm,1.2s,mb5.6
FLN LR LR
comp=Z,1µm,22.8s,MS5.1
FLN La Foliniere 82.93 39 *e*P P **13 34 03.5 +1.5**
FLN pmax pmax
comp=Z,73nm,1.2s,mb5.6
FLN MLR MLR
comp=Z,1µm,22.8s,MS5.1
EVO Evora 83.04 51 *e*P P **13 34 04.1 +1.3**
comp=Z,48nm,1.1s,mb5.1
EVO *e*MLR MLR
comp=Z,948nm,20.8s,MS4.8
LDF La Druitiere 83.22 39 *e*P P **13 34 03.9 +0.4**
comp=Z,62nm,1.2s,mb5.2
LDF La Druitiere 83.22 39 *e*P P **13 34 03.9 +0.4**
comp=Z,31nm,1.2s,mb5.2
LDF La Druitiere 83.22 39 *e*P P **13 34 03.9 +0.4**
LDF pmax pmax
comp=Z,31nm,1.2s,mb5.2
LVZ Lovozero 83.29 13⇑ *e*P P **13 34 05.4 +1.9**
LVZ pmax pmax
comp=Z,25nm,1.0s,mb5.2
MFF Saint Martin d 84.23 41 *e*P P **13 34 09.0 +0.3**
comp=Z,51nm,1.3s,mb5.2
MFF Saint Martin d 84.23 41 *e*P P **13 34 09.0 +0.3**
comp=Z,25nm,1.3s,mb5.2
MFF Saint Martin d 84.23 41 *e*P P **13 34 09.0 +0.3**
MFF pmax pmax
comp=Z,25nm,1.3s,mb5.2
ASAJ Asahikawa 84.39 316 P P **13 34 09.7 +0.1**
comp=Z,10nm,0.8s,mb5.0,baz=38,slow=5.8,SNR=8.0
BAIF Baives 84.83 36 *e*P P **13 34 13.0 +1.3**
comp=Z,37nm,0.9s,mb5.2
BAIF Baives 84.83 36 *e*P P **13 34 13.0 +1.3**
comp=Z,19nm,0.9s,mb5.2
BAIF Baives 84.83 36 *e*P P **13 34 13.0 +1.3**
BAIF pmax pmax
comp=Z,19nm,0.9s,mb5.2
GIVF Givet 85.13 36 *e*P P **13 34 14.5 +1.3**
comp=Z,38nm,0.9s,mb5.2
GIVF Givet 85.13 36 *e*P P **13 34 14.5 +1.3**
comp=Z,19nm,0.9s,mb5.2
GIVF Givet 85.13 36 *e*P P **13 34 14.5 +1.3**
GIVF pmax pmax
comp=Z,19nm,0.9s,mb5.2
ESDC Sonseca Array 85.29 48 P P **13 34 13.7 -0.5**
comp=Z,0.2nm,0.3s,baz=239,slow=26,SNR=5.4
ESDC LR LR 14 08 47.5
comp=Z,298nm,19.6s,baz=315,slow=33
SJPF Ste Jean 85.36 44 *e*P P **13 34 15.0 +0.5**
TCF Toulx Ste Croi 85.78 40 *e*P P **13 34 16.5 0.0**
comp=Z,28nm,1.0s,mb5.1
TCF Toulx Ste Croi 85.78 40 *e*P P **13 34 16.5 0.0**
comp=Z,14nm,1.0s,mb5.1
TCF Toulx Ste Croi 85.78 40 *e*P P **13 34 16.5 0.0**
TCF pmax pmax
comp=Z,14nm,1.0s,mb5.2
ETSF Etsaut 85.89 44 *e*P P **13 34 17.7 +0.6**
comp=Z,11nm,0.8s,mb4.8
ETSF Etsaut 85.89 44 *e*P P **13 34 17.7 +0.6**
comp=Z,5.6nm,0.8s,mb4.8
ETSF Etsaut 85.89 44 *e*P P **13 34 17.7 +0.6**
ETSF pmax pmax
comp=Z,6.0nm,0.8s,mb4.9
RJF Les Rejaudoux 85.90 41 *e*P P **13 34 17.3 +0.2**
comp=Z,19nm,0.9s,mb5.0
RJF *e*MLR MLR
comp=Z,640nm,21.8s,MS4.7
RJF Les Rejaudoux 85.90 41 *e*P P **13 34 17.3 +0.2**
comp=Z,9.6nm,0.9s,mb5.0
RJF LR LR
comp=Z,640nm,21.8s,MS5.0
RJF Les Rejaudoux 85.90 41 *e*P P **13 34 17.3 +0.2**
RJF pmax pmax
comp=Z,10.0nm,0.9s,mb5.0
RJF MLR MLR
comp=Z,640nm,21.8s,MS5.0
KAF Kangasniemi 85.94 19 *e*p P **13 34 17.8 +0.8**
BGF Bois d'Agland 86.00 40 *e*P P **13 34 17.5 -0.1**
comp=Z,27nm,1.0s,mb5.1
BGF Bois d'Agland 86.00 40 *e*P P **13 34 17.5 -0.1**
comp=Z,13nm,1.0s,mb5.1
BGF Bois d'Agland 86.00 40 *e*P P **13 34 17.5 -0.1**
BGF pmax pmax
comp=Z,13nm,1.0s,mb5.1
SSF Saint Saulge 86.11 39 *e*P P **13 34 18.1 0.0**
comp=Z,36nm,1.1s,mb5.2
SSF Saint Saulge 86.11 39 *e*P P **13 34 18.1 0.0**
comp=Z,18nm,1.1s,mb5.2
SSF Saint Saulge 86.11 39 *e*P P **13 34 18.1 0.0**
SSF pmax pmax
comp=Z,18nm,1.1s,mb5.2
AVF Avril sur Loir 86.17 39 *e*P P **13 34 18.2 -0.2**
comp=Z,23nm,1.1s,mb5.0
AVF Avril sur Loir 86.17 39 *e*P P **13 34 18.2 -0.2**
comp=Z,12nm,1.1s,mb5.0
AVF Avril sur Loir 86.17 39 *e*P P **13 34 18.2 -0.2**
AVF pmax pmax
comp=Z,12nm,1.1s,mb5.0
LOR Lormes 86.19 39 *e*P P **13 34 19.7 +1.2**
comp=Z,27nm,1.0s,mb5.1
LOR *e*MLR MLR
comp=Z,610nm,19.8s,MS4.7
LOR Lormes 86.19 39 *e*P P **13 34 19.7 +1.2**
comp=Z,13nm,1.0s,mb5.1
LOR LR LR
comp=Z,610nm,19.8s,MS5.0
LOR Lormes 86.19 39 *e*P P **13 34 19.7 +1.2**
LOR pmax pmax
comp=Z,13nm,1.0s,mb5.1
LOR MLR MLR
comp=Z,610nm,19.8s,MS5.0
EPF Esparros 86.39 44 *e*P P **13 34 19.7 +0.1**
comp=Z,25nm,1.0s,mb5.1
EPF Esparros 86.39 44 *e*P P **13 34 19.7 +0.1**
comp=Z,13nm,1.0s,mb5.1
EPF Esparros 86.39 44 *e*P P **13 34 19.7 +0.1**
EPF pmax pmax
comp=Z,13nm,1.0s,mb5.1
FINES FINESS Array B 86.39 20 P P **13 34 18.4 -0.9**
comp=Z,1.6nm,0.7s,mb4.4,baz=349,slow=3.4,SNR=10
HABR Khabarovsk 86.46 323 *e*P P **13 34 19.7 -0.1**
HABR *e* pP 13 34 21.9 -1.3
HABR *e* 13 37 42.7
HABR *e*S S 13 44 45.3 -11
HABR *e*SS SS 13 50 36.8 +1.7
SMF Signal de Mont 86.53 39 *e*P P **13 34 20.0 -0.2**
comp=Z,45nm,1.2s,mb5.3
SMF Signal de Mont 86.53 39 *e*P P **13 34 20.0 -0.2**
comp=Z,22nm,1.2s,mb5.3
SMF Signal de Mont 86.53 39 *e*P P **13 34 20.0 -0.2**
SMF pmax pmax
comp=Z,22nm,1.2s,mb5.3
JOF Joensuu 86.69 17 *e*p P **13 34 19.7 -1.0**
HAU Haudompre 87.16 37 *e*P P **13 34 24.4 +1.2**
HAU *e*MLR MLR
comp=Z,981nm,19.8s,MS4.9
HAU Haudompre 87.16 37 *e*P P **13 34 24.4 +1.2**
HAU MLR MLR
comp=Z,980nm,19.8s,MS5.2
MTLF Montolieu 87.38 43 *e*P P **13 34 24.6 +0.2**
comp=Z,36nm,1.1s,mb5.2
MTLF Montolieu 87.38 43 *e*P P **13 34 24.6 +0.2**
comp=Z,18nm,1.1s,mb5.2
MTLF Montolieu 87.38 43 *e*P P **13 34 24.6 +0.2**
MTLF pmax pmax
comp=Z,18nm,1.1s,mb5.2
MOX Moxa 88.29 33 *e*(P) P **13 34 32.3 +3.7**
MOX
comp=Z,700nm,18.0s
CLL Collm 88.53 32 *e*P P **13 34 31.0 +1.2**
GRA1 Grafenberg Arr 88.69 34 *e*P P **13 34 31.1 +0.6**
comp=Z,9.0nm,0.9s,mb5.1
GRF Grafenberg Arr 88.69 34 *e*P P **13 34 31.1 +0.6**
GRF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
GRF Grafenberg Arr 88.69 34 *e*P P **13 34 31.1 +0.6**
GRF pmax pmax
comp=Z,9.0nm,0.9s,mb5.1
GRF Grafenberg Arr 88.69 34 *e*P P **13 34 31.1 +0.6**
comp=Z,9.0nm,0.9s,mb5.1
LPG La Plagne 88.85 39 *e*P P **13 34 32.6 +1.2**
VSU Vasula 88.93 21⇑ *e*P P **13 34 31.6 +0.1**
BOD Bodaibo 89.40 338 *e*P P **13 34 31.6 -2.1**
BOD pmax pmax
comp=Z,12nm,1.0s,mb5.2
KHC Kasperske Hory 90.23 33⇑ *i*P P **13 34 37.6 -0.2**
GERES GERESS Array B 90.48 33 P P **13 34 39.9 +1.0**
comp=Z,0.9nm,0.6s,mb4.3,baz=333,slow=4.5,SNR=5.5
GERES LR LR 14 13 56.1
comp=Z,584nm,19.0s,MS5.0,baz=102,slow=35
MJAR Matsushiro Arr 91.21 312 P P **13 34 42.1 -0.5**
comp=Z,2.7nm,0.8s,mb4.6,baz=50,slow=2.1,SNR=4.6
MJAR LR LR 14 10 33.9
comp=Z,252nm,20.6s,MS4.6,baz=60,slow=32
URZ Urewera 93.29 229 LR LR 14 08 00.8
comp=Z,307nm,19.0s,MS4.8,baz=213,slow=30
CN2 Changchun 94.59 323 *e*P P **13 34 58.0 0.0**
CN2 *e*XP sP 13 35 05.0 +2.4
CN2 *e*S S 13 46 06.0 -5.0
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.5
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.9
CN2 LR LR
comp=E,200nm,15.0s,MS4.9
CN2 LR LR
comp=Z,200nm,17.0s,MS4.7
OBN Obninsk 94.75 19⇑ *e*P P **13 34 57.9 -0.6**
OBN pmax pmax
comp=Z,5.0nm,1.0s,mb4.9
OBN MLR MLR
comp=Z,300nm,18.0s,MS4.8
AKASG Malin Array Be 95.98 25 P P **13 35 03.1 -1.1**
comp=Z,0.2nm,0.3s,mb4.0,baz=307,slow=3.8,SNR=1.8
AKASG LR LR 14 17 44.3
comp=Z,393nm,21.0s,MS4.9,baz=335,slow=35
KEST Kesra 96.26 46 LR LR 14 16 31.6
comp=Z,131nm,21.0s,MS4.4,baz=225,slow=34
TLY Talaya 97.85 340 *e*P P **13 35 10.5 -2.1**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb5.0
TLY MLR MLR
comp=Z,211nm,17.0s,MS4.7
ARU Arti 97.88 7 *d i*P P **13 35 12.1 -0.6**
ARU *e* 13 39 07.0
ARU S SKSac 13 45 49.4 -0.9
ARU SS SS 13 53 15.4 -2.6
ARU pmax pmax
comp=Z,8.0nm,1.7s,mb5.0
ARU MLR MLR
comp=Z,585nm,18.0s,MS5.1
ZAK Zakamensk 99.09 339 *e*P P **13 35 20.0 +1.8**
ZAK pmax pmax
comp=Z,1.0nm,1.2s,mb4.2
RPZ Rata Peaks 99.88 226 LR LR 14 13 17.3
comp=Z,282nm,18.6s,MS4.8,baz=15,slow=31
ULN Ulaanbaatar 99.93 336⇑ *e*P Pdif 13 35 22.9 +0.9
ZALV Zalesovo Beam 99.98 351 P Pdif 13 35 22.7 +0.5
comp=Z,0.5nm,0.4s,baz=37,slow=4.5,SNR=4.7
ZAL Zalesovo 100.00 351 P Pdif 13 35 22.7 +0.4
SONM Songino Array 100.20 336 P Pdif 13 35 24.4 +1.2
comp=Z,2.0nm,0.9s,baz=25,slow=4.0,SNR=11
SSE Sheshan 105.68 316 PDIF Pdif 13 35 51.3 +3.8
SSE SS SS 13 55 09.3 +1.5
SSE LR LR
comp=N,41nm,20.0s,MS4.3
SSE LR LR
comp=E,83nm,20.0s,MS4.3
SSE LR LR
comp=Z,65nm,20.0s,MS4.2
LZH Lanzhou 111.12 331 *e*PKP PKiKP 13 40 06.5 -4.6
LZH XPKP 13 40 11.3
LZH *e*PP PP 13 40 49.0 +0.1
LZH SKS SKSdf 13 47 16.3 -7.2
LZH SKKS SKKSac 13 47 41.5 -12
LZH PP PP
comp=Z,83nm,8.7s
LZH LR LR
comp=N,219nm,18.2s
LZH LR LR
comp=Z,297nm,20.1s,MS4.9
CD2 Chengdu 115.50 328 *e*PKP PKPdf 13 40 19.5 -0.1
CD2 XPKP 13 40 27.3
CD2 PP PP 13 41 24.8 +4.6
CD2 PKS 13 43 55.0
CD2 SKS SKSdf 13 47 26.5 -5.6
CD2 SKKS SKKSac 13 48 14.5 -8.5
CD2 SS SS 13 57 16.0 -2.6
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,190nm,18.0s
CD2 LR LR
comp=E,560nm,25.2s
CD2 LR LR
comp=Z,230nm,21.6s,MS4.8
GYA Guiyang 117.64 323 PDIF Pdif 13 36 41.0 +0.3
GYA PKP PKPdf 13 40 24.0 +0.2
GYA PP PP 13 41 39.5 +4.2

GYA			PKS		13 43 59.5		
GYA			SKS	SKSdf	13 47 33.8	-2.5	
GYA			SKKS	SKKSac	13 48 31.3	-6.1	
GYA			S	Sdif	13 49 20.5	-3.6	
GYA			SS	SS	13 57 46.5	-0.3	
GYA			PP	PP			
	comp=Z,120nm,8.4s						
GYA			LR	LR			
	comp=N,270nm,22.7s,MS5.1						
GYA			LR	LR			
	comp=E,390nm,20.2s,MS5.1						
GYA			LR	LR			
	comp=Z,270nm,20.8s,MS4.8						
KMI	**Kunming**	**120.78 326**	PKP	PKPdf	13 40 29.3	-0.6	
KMI			XPKP		13 40 34.3		
KMI			PP	PP	13 42 01.3	+4.3	
KMI			SS	SS	13 58 26.5	-0.9	
KMI			PP	PP			
	comp=Z,58nm,4.7s						
KMI			LR	LR			
	comp=N,185nm,17.8s,MS4.8						
KMI			LR	LR			
	comp=E,111nm,17.8s,MS4.8						
KMI			LR	LR			
	comp=Z,176nm,20.9s,MS4.7						
WRA	**Warramunga Arr**	**121.15 261**	PKP	PKPdf	13 40 29.7	-1.0	
WRA	**Warramunga Apr**	**121.15 261**	PKP	PKPdf	13 40 29.7	-1.0	
	comp=Z,1.0nm,0.8s,baz=68,slow=2.1,SNR=5.4						

IDC 28 13:35:13.9±6.6, 619S×14744E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/13, mbtmp4.0/4, ML3.9/1, Error ellipse: s-maj=99.4km s-min=64.1km az=32.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.68 222**		P	Pn	13 39 34.1	+0.1
	0.4nm,0.3s,baz=44,slow=12,SNR=15						
ASAR	**Alice Springs**	**21.71 215**		P	P	13 40 07.3	+0.6
	2.7nm,0.5s,baz=51,slow=9.0,SNR=69						
FITZ	**Fitzroy Crossi**	**24.34 239**		P	P	13 40 33.8	+0.1
	1.9nm,0.4s,baz=70,slow=14,SNR=5.1						
STKA	**Stephens Creek**	**26.13 191**		P	P	13 40 49.0	-0.8
	2.9nm,0.7s,baz=5.7,slow=10,SNR=3.7						

*IDC **28** 13:39:30.8±3.2, 2174S×16976E, h0km, mb4.2/7, mb1 4.4/7, mb1mx4.2/13, mbtmp4.3/7, MS3.8/4, Ms1 3.8/4, ms1mx3.6/19, Error ellipse: s-maj=88.8km s-min=29.6km az=137.0*

ISC 28 13:39:42.1±4.7, 215S±04×1693E±03, h70km±28km, n14, σ1§12/13, mb4.2/7, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.75 256**		*eP*	**Pn**	**13 40 23.6**	**-0.4**
DZM				*eS*	**Sn**	**13 40 56.2**	**+0.1**
CTA	**Charters Tower**	**21.61 269**		*eP*	**P**	**13 44 27.7**	**+1.1**
	9.2nm,0.9s,mb4.1						
CTA	**Charters Tower**	**21.61 269**		P	**P**	**13 44 27.4**	**+0.8**
	12nm,0.9s,mb4.2,baz=85,slow=15,SNR=4.4						
CTA				LR	LR	13 51 27.4	
	comp=Z,169nm,19.8s,baz=130,slow=32						
STKA	**Stephens Creek**	**26.80 241**		*eP*	**P**	**13 45 17.1**	**+1.4**
	7.1nm,1.2s,mb4.1						
STKA	**Stephens Creek**	**26.80 241**		P	**P**	**13 45 16.6**	**+0.8**
	2.7nm,0.8s,mb3.8,baz=99,slow=9.8,SNR=2.9						
STKA				LR	LR	13 55 54.5	
	comp=Z,283nm,19.4s,baz=18,slow=36						
WB2	**Warramunga Arr**	**32.72 266**		*eP*	**P**	**13 46 07.3**	**-0.9**
WRA	**Warramunga Arr**	**32.73 266**		P	**P**	**13 46 06.8**	**-1.6**
	2.1nm,0.9s,mb4.0,baz=91,slow=8.5,SNR=12						
ASAR	**Alice Springs**	**32.74 259**		P	**P**	**13 46 09.1**	**+0.7**
	4.3nm,0.7s,mb4.4,baz=86,slow=9.0,SNR=36						
FITZ	**Fitzroy Crossi**	**41.15 267**		*eP*	**P**	**13 47 18.8**	**-1.0**
	11nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**41.15 267**		P	**P**	**13 47 20.1**	**+0.2**
	6.3nm,0.7s,mb4.5,baz=146,slow=9.2,SNR=8.7						
FITZ				LR	LR	14 05 37.6	
	comp=Z,85nm,18.4s,baz=271,slow=38						
JOW	**Kunigami**	**62.32 318**		LR	LR	14 12 38.8	
	comp=Z,100nm,21.9s,baz=108,slow=32						
MJAR	**Matsushiro Arr**	**64.73 333**		P	**P**	**13 50 15.5**	**+2.5**
	1.4nm,0.7s,mb3.9,baz=152,slow=9.4,SNR=3.8						
SONM	**Songino Array**	**89.03 323**		P	**P**	**13 52 28.0**	**-1.2**
	1.6nm,0.8s,mb4.1,baz=140,slow=5.4,SNR=9.2						
GERES	**GERESS Array B**	**146.46 330**		PKPbc	PKPbc	13 59 14.3	-0.9
	0.3nm,0.4s,baz=16,slow=5.3,SNR=2.7						

*CSEM **28** 13:54:52.4±0.2, 3837N×3477E, h2km, MD2.9, Error ellipse: s-maj=8.2km s-min=1.3km az=56.0*
*ISK **28** 13:54:52.1, 3849N×3509E, h6km, MD2.9*
*ISCJB **28** 13:54:55.4±0.8, 3843N±003×3495E±008, h19km±11km, Error ellipse: s-maj=10.7km s-min=5.5km az=171.4*
*DDA **28** 13:54:56.4, 3856N×3516E, h0km±3km, Md2.9*

ISC 28 13:54:54.3±0.5, 3846N±003×3500E±007, h20km±6km, n8, σ1§16/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVNT	**Avonos**	**0.33 341**		*i* P	**Pg**	**13 55 01.5**	**0.0**
AVNT				*i* S	**Sg**	**13 55 07.3**	**+0.8**
NIG	**Nigde**	**0.47 221**		PG	**Pg**	**13 55 03.3**	**-0.5**
NIG				SG	**Sg**	**13 55 10.4**	**+0.2**
KOZT	**Kozan**	**1.18 146**		PN	**Pn**	**13 55 15.0**	**-0.7**
KOZT				SN	**Sn**	**13 55 30.9**	**-0.3**
KARA	**Karaisali**	**1.20 178**		PN	**Pn**	**13 55 15.5**	**-0.5**
KARA				SN	**Sn**	**13 55 33.9**	**+2.2**
CDAG	**Cicekdag**	**1.26 337**		*i* P	**Pg**	**13 55 17.6**	**-1.0**
CDAG				*i* S	**Sg**	**13 55 35.5**	**+0.4**
ANDN	**Andirin**	**1.38 129**		*i* P	**Pg**	**13 55 20.3**	**-0.7**
ANDN				*i* S	**Sg**	**13 55 40.1**	**+1.1**
CTKT	**Corum**	**2.16 356**		*i* P	**Pg**	**13 55 33.1**	**-2.7**
CTKT				*i* S	**Sg**	**13 56 05.4**	**+1.5**
ELDT	**Eldivan**	**2.36 330**		*i* P	**Pg**	**13 55 37.2**	**-2.3**
ELDT				*i* S	**Sg**	**13 56 11.3**	**+1.1**

IDC 28 14:04:07.0±1.3, 106N×12616E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/15, mbtmp3.4/4, Error ellipse: s-maj=135.8km s-min=20.9km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.36 159**		P	P	14 09 05.8	-1.0
	0.9nm,0.7s,baz=338,slow=11,SNR=13						
ASAR	**Alice Springs**	**25.70 163**		P	P	14 09 40.1	+1.0
	0.3nm,0.3s,baz=348,slow=12,SNR=7.1						
SONM	**Songino Array**	**49.64 343**		P	P	14 13 00.7	+0.4
	0.4nm,0.8s,baz=134,slow=6.2,SNR=2.8						
MKAR	**Makanchi Array**	**59.43 326**		P	P	14 14 11.2	-0.3
	0.3nm,0.5s,baz=117,slow=8.4,SNR=3.4						

*NEIC **28** 14:04:43.3, 3757S×17894E, h22km, ML3.8(WEL), After WEL.*

WEL 28 14:04:44.2±0.9, 3751S×17883E, h33km, ML3.6/4, Error ellipse: s-maj=7.7km s-min=4.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.42 262**		P	Pb	14 04 53.5	-0.1
MXZ				S	Sb	14 04 59.7	-0.4
MXZ	**Matakaoa Point**	**0.42 262**		PN	Pn	14 04 53.5	-0.5
MXZ				SN	Sb	14 04 59.5	-0.6
PUZ	**Puketiti**	**0.73 219**		P	Pn	14 04 57.3	-0.9
PUZ				S	Sn	14 05 07.4	-0.8
PUZ	**Puketiti**	**0.73 219**		PN	Pn	14 04 57.3	-0.9
PUZ				SN	Sn	14 05 07.0	-1.2
PUZ				SN	Sn	14 05 07.4	-0.8
MWZ	**Matawai**	**1.32 231**		*eP*	Pn	14 05 06.1	-0.3
MWZ	**Matawai**	**1.32 231**		PN	Pn	14 05 06.1	-0.3
MWZ				SN	Sn	14 05 22.4	-0.5
URZ	**Urewera**	**1.56 241**		P	Pn	14 05 10.2	+0.6
URZ	**Urewera**	**1.56 241**		PN	Pn	14 05 10.2	+0.6
URZ				SN	Sn	14 05 29.4	+0.8
KNZ	**Kokohu**	**1.77 211**		*eP*	Pn	14 05 11.0	-1.5
KNZ	**Kokohu**	**1.77 211**		PN	Pn	14 05 11.0	-1.5
BKZ	**Black Stump Fm**	**2.48 227**		P	Pn	14 05 21.8	-0.5
BKZ	**Black Stump Fm**	**2.48 227**		PN	Pn	14 05 21.8	-0.4
WPHZ	**Waipukurau**	**3.17 215**		PN	Pn	14 05 29.4	-2.3
BFZ	**Birch Farm**	**3.76 212**		*eP*	Pn	14 05 36.7	-3.1
BFZ	**Birch Farm**	**3.76 212**		PN	Pn	14 05 36.7	-3.2
TIWZ	**Tintock**	**3.99 214**		PN	Pn	14 05 40.2	-2.9
MRZ	**Mangatainoka R**	**4.04 218**		*eP*	Pn	14 05 40.4	-3.4
MRZ	**Mangatainoka R**	**4.04 218**		PN	Pn	14 05 40.4	-3.3
MTW	**Mount Morrison**	**4.47 214**		P	Pn	14 05 45.5	-4.1
MTW	**Mount Morrison**	**4.47 214**		PN	Pn	14 05 45.5	-4.1
KIW	**Kapiti Island**	**4.53 221**		P	Pn	14 05 46.7	-3.8
KIW	**Kapiti Island**	**4.53 221**		PN	Pn	14 05 46.7	-3.8
CAW	**Cannon Point**	**4.63 218**		P	Pn	14 05 47.5	-4.4
CAW	**Cannon Point**	**4.63 218**		PN	Pn	14 05 47.5	-4.4

*IDC **28** 14:27:14.9±2.6, 5079N×156.14E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/20, mbtmp3.6/3, Error ellipse: s-maj=299.0km s-min=28.9km az=122.0*
*MOS **28** 14:27:20.2±1.1, 5044N×15700E, h46km, mb4.0/4, Error ellipse: s-maj=26.2km s-min=9.4km az=74.3*
*ISCJB **28** 14:27:21.5±1.0, 5049N±008×157.1E±0.1, h57km±9km, mb3.7/4, Error ellipse: s-maj=17.4km s-min=6.6km az=135.8*
*KRSC **28** 14:27:23.0±0.8, 5070N×15760E, h5km±5km, ML4.4*

ISC 28 14:27:22.4±1.0, 5047N±008×1571E±01, h47km±10km, n23, σ1§14/33, mb3.7/4, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.65 289**		*e*PN	**Pn**	**14 27 35.2**	**-0.1**
SKR				*i* S	**Sn**	**14 27 44.5**	**-0.1**
SKR				pmax	pmax		
	comp=N,160nm,0.4s						
SKR				pmax	pmax		
	comp=E,180nm,0.4s						
SKR				pmax	pmax		
	comp=Z,490nm,0.4s						
SKR				smax			
	comp=N,4μm,0.2s						
SKR				smax			
	comp=E,9μm,0.2s						
SKR				smax			
	comp=N,3μm,1.0s						
SKR				smax			
	comp=E,8μm,1.0s						
MIPR	**Malaya Ipel'ka**	**1.82 354**		*e*P	**Pn**	**14 27 51.9**	**+0.7**
RUS	**Russkaya**	**2.16 24**		*i* P	**Pn**	**14 27 55.6**	**-0.2**
RUS				*i* S	**Sn**	**14 28 19.8**	**-1.5**
GRL	**Gorelyy**	**2.17 16**		*e*P	**Pn**	**14 27 57.3**	**+1.3**
GRL				*i* S	**Sn**	**14 28 22.1**	**+0.4**
PET	**Petropavlovsk**	**2.74 20**		*e*PN	**Pn**	**14 28 04.8**	**+1.1**
PET				*e*S	**Sn**	**14 28 35.7**	**+0.2**
PET				pmax	pmax		
	comp=Z,32nm,0.8s						
PET				smax			
	comp=E,347nm,0.6s						
PET				smax			
	comp=N,351nm,0.6s						
PET	**Petropavlovsk**	**2.74 20**		*e*P	**Pn**	**14 28 04.7**	**+1.0**
PET				*i* S	**Sn**	**14 28 35.1**	**-0.4**
SDLR	**Sedlovina**	**3.02 21**		*e*P	**Pn**	**14 28 08.8**	**+1.1**
SDLR				*i* S	**Sn**	**14 28 41.4**	**-1.2**
NLC	**Nalytchevo**	**3.05 27**		P	**Pn**	**14 28 06.9**	**-1.1**
NLC				*i* S	**Sn**	**14 28 39.0**	**-4.2**
SPN	**Mys Shipunski**	**3.20 34**		*e*P	**Pn**	**14 28 10.3**	**+0.2**
SPN				*i* S	**Sn**	**14 28 44.8**	**-2.2**
GNL	**Ganaly**	**3.27 9**		*i* P	**Pn**	**14 28 13.0**	**+1.9**
GNL				*e*S	**Sn**	**14 28 49.0**	**+0.3**
MKZ	**Mys Kozlova**	**4.98 33**		*e*P	**Pn**	**14 28 35.0**	**+0.5**
MKZ				*i* S	**Sn**	**14 29 27.2**	**-3.5**
TUMR	**Tumrok**	**5.16 20**		P	**Pn**	**14 28 39.2**	**+2.2**
KBTR	**Krutoberegovo**	**6.69 29**		*e*P	**Pn**	**14 28 58.4**	**+0.4**
ERM	**Erimo**	**12.81 234**		*e*PN	**Pn**	**14 30 19.9**	**-1.7**
YAK	**Yakutsk**	**18.95 318**		*e*P	**Pn**	**14 31 38.3**	**-1.9**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
YKA	**Yellowknife Ar**	**46.37 40**		P	**P**	**14 35 43.3**	**-0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**46.37 40**		P	**P**	**14 35 43.3**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.5,baz=302,slow=7.9,SNR=9.0						
ARU	**Arti**	**54.06 317**		*e*P	**P**	**14 36 41.4**	**-0.2**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
AKASG	**Malin Array Be**	**69.86 328**		*i* P	**P**	**14 38 29.6**	**+1.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WRA	**Warramunga Arr**	**72.92 202**		*i* P	**P**	**14 38 46.0**	**-0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**72.92 202**		P	**P**	**14 38 46.0**	**-0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=18,slow=6.2,SNR=8.3						
ASAR	**Alice Springs**	**76.61 202**		*e*P	**P**	**14 39 07.9**	**+0.2**
ASAR	**Alice Springs**	**76.61 202**		P	**P**	**14 39 07.9**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=13,slow=5.7,SNR=8.0						

*ISCJB **28** 14:28:52.9±0.2, 2548N±002×10953W±002, h10km, mb5.1/87, MS4.9/38, Error ellipse: s-maj=4.1km s-min=1.7km az=43.5*
*IDC **28** 14:28:53.8±0.8, 2566N×10953W, h0km, mb4.5/14, mb1 4.7/18, mb1mx4.6/25, mbtmp4.5/18, ML4.1/4, MS4.8/22, Ms1 4.8/22, ms1mx4.6/27, Error ellipse: s-maj=24.9km s-min=14.1km az=49.0*
*NEIC **28** 14:28:54.7±0.3, 2550N×10963W, h10km, mb5.1/85, MS5.1/6, Error ellipse: s-maj=6.0km s-min=3.4km az=48.0*
NEIC Felt at Guasave, Sinaloa, Mexico.
*BJI **28** 14:28:54.7, 2550N×10960W, h10km, mB5.5, mb5.3, Ms5.2, Msz4.9*
*GCMT **28** 14:28:54.7±0.2, 2557N×10981W, h17km, MW5.3/85, Moment Tensor Solution. s60,c92; s85,c163; Duration: 1§1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$-0.90±.02; $M_{\phi\phi}$ 1.05±.02; $M_{r\theta}$ 0.02±.04; $M_{r\phi}$-0.25±.01; $M_{\theta\phi}$ 0.47±.05; Best double couple: $M_0$1.08800×10^{17} NP1:ϕ_s306.00000°, δ72.00000°, λ171.00000°. NP2: ϕ_s39.00000°, δ82.00000°, λ18.00000°. Principal axes: T 1.2350, Plg18.0000°, Azm263.0000°; N -0.2950, Plg70.0000°, Azm62.0000°; P -0.9400, Plg7.0000°, Azm171.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MEX **28** 14:28:55.9±2.9, 2541N×10958W, h10km, MD5.2*
*MOS **28** 14:28:55.6±1.1, 2584N×10948W, h10km, mb5.4/45, MS5.1/15, Error ellipse: s-maj=7.4km s-min=4.4km az=87.4*
*SZGRF **28** 14:29:00.8, 2329N×10520W, h33km, mb5.3, MS5.1, Central Mexico*

ISC 28 14:28:53.9±0.2, 2537N±002×10952W±002, h10km, n637, σ1§12/695, mb5.1/87, MS4.9/38, 142C-153D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**1.45 210**		Pn	**Pn**	**14 29 18.3**	**-1.9**
	23nm,0.3s,baz=340,slow=0.9,SNR=129						
LPIG				Lg		14 29 47.1	
	155nm,0.3s,baz=208,slow=22,SNR=8.7						
LPIG	**La Paz**	**1.45 210**		*i* P	**Pn**	**14 29 18.3**	**-1.9**
LPIG				*i* S	**Sn**	**14 29 36.2**	**-3.1**
MAIG	**Mazatlaan**	**3.56 127**		*i* P	**Pn**	**14 29 49.8**	**+0.5**
MAIG				*i* S	**Sn**	**14 30 35.6**	**+4.2**
MAIG	**Mazatlaan**	**3.56 127**		*e*P	**Pn**	**14 29 49.8**	**+0.5**
MAIG				*i* S	**Sn**	**14 30 30.6**	**-0.8**
319A	**Douglas**	**5.99 2**		⇑P	**Pn**	**14 30 18.7**	**-3.9**
	baz=5.8						
318A	**Bisbee**	**6.06 356**		⇓P	**Pn**	**14 30 19.0**	**-4.5**
	baz=5.9						
ANIG	**Ahuacatlan**	**6.29 132**		*i* P	**Pn**	**14 30 29.0**	**+2.2**
ANIG				*i* S	**Sn**	**14 31 39.6**	**+0.8**
217A	**Green Valley**	**6.48 350**		⇓P	**Pn**	**14 30 25.5**	**-3.8**
	baz=6.3						
LTX	**Lajitas**	**6.53 52**		*e*Pn	**Pn**	**14 30 27.6**	**-2.5**
	648nm,1.3s						
LTX				*e*Pg	**Pg**	**14 30 53.5**	**-5.5**
LTX				*e*Sg	**Sg**	**14 32 18.4**	**-5.3**
LTX	**Lajitas**	**6.53 52**		*e*P	**Pn**	**14 30 27.6**	**-2.4**
LTX				pmax	pmax		
	comp=Z,648nm,1.3s						
218A	**Dragoon**	**6.60 356**		⇑P	**Pn**	**14 30 26.4**	**-4.5**
	baz=6.4						
216A	**Three Points,**	**6.82 346**		⇑P	**Pn**	**14 30 30.5**	**-3.5**
	baz=6.7						
ZAIG	**Zacatecas**	**6.86 111**		*i* P	**Pn**	**14 30 39.3**	**+4.7**
ZAIG				*e*S	**Sb**	**14 32 08.1**	**-7.2**
ZAIG	**Zacatecas**	**6.86 111**		*i* P	**Pn**	**14 30 37.7**	**+3.1**
ZAIG				*i* S	**Sn**	**14 31 54.0**	**+1.2**
TUC	**Tucson**	**7.00 351**		*e*Pn	**Pn**	**14 30 32.1**	**-4.4**
	comp=Z,147nm,1.1s						
TUC				*e*Sg	**Sg**	**14 32 34.4**	**-4.3**
TUC	**Tucson**	**7.00 351**		*e*P	**Pn**	**14 30 32.1**	**-4.4**
TUC				pmax	pmax		
	comp=Z,147nm,1.1s						
MNTX	**Cornudas Mount**	**7.28 29**		*e*Pn	**Pn**	**14 30 38.8**	**-1.5**
	comp=Z,124nm,1.0s						
MNTX				*e*Sg	**Sg**	**14 32 34.3**	**+7.1**
116A	**Eloy**	**7.42 346**		P	**Pn**	**14 30 39.9**	**-2.3**
	baz=7.3,SNR=41						
115A	**Sonoran Desert**	**7.68 343**		⇑P	**Pn**	**14 30 43.0**	**-2.7**
	baz=7.5						
SFJM	**Santa Fe**	**7.70 128**		*i* P	**Pn**	**14 30 48.3**	**+2.2**
SFJM				*i* S	**Sn**	**14 32 24.8**	**+11**
Z14A	**Wintersburg**	**8.51 340**		⇑P	**Pn**	**14 30 54.7**	**-2.4**
	baz=8.3						
Z14A				⇑S	**Sn**	**14 32 33.9**	**+0.7**
	baz=8.3						
LENM	**Lemitar**	**9.04 14**		*e*Pn	**Pn**	**14 31 02.4**	**-2.0**
Y14A	**Wickenburg**	**9.06 341**		P	**Pn**	**14 31 02.2**	**-2.5**
	baz=8.9,SNR=13						
Y14A				⇓S	**Sn**	**14 32 46.0**	**-0.8**
	baz=8.9						
MMIG	**Aquila**	**9.08 140**		*i* P	**Pn**	**14 31 08.3**	**+3.2**
MMIG				*i* S	**Sn**	**14 32 43.0**	**-4.5**
BNM	**Barren Site**	**9.10 15**		*e*Pn	**Pn**	**14 31 03.3**	**-2.0**
LNIG	**Linares**	**9.12 91**		*e*P	**Pn**	**14 31 05.7**	**+0.1**
LNIG				*i* S	**Sn**	**14 32 49.3**	**+0.9**
Y13A	**Salome**	**9.21 337**		P	**Pn**	**14 31 04.5**	**-2.2**
	baz=9.0,SNR=12						
Y13A				⇓S	**Sn**	**14 32 52.4**	**+1.9**
	baz=9.0						
LAZ	**Ladron**	**9.24 12**		*e*Pn	**Pn**	**14 31 04.1**	**-3.0**
LPM	**Los Pinos Moun**	**9.26 15**		*e*Pn	**Pn**	**14 31 08.1**	**+0.7**
DVTC	**Desert V Tower**	**9.27 323**		⇑P	**Pn**	**14 31 07.1**	**-0.5**
	baz=9.1						
SWSC	**Sam W. Stewart**	**9.32 325**		⇑P	**Pn**	**14 31 06.8**	**-1.5**
	baz=9.2						
X15A	**Humboldt**	**9.39 346**		P	**Pn**	**14 31 08.0**	**-1.1**
	baz=9.2,SNR=14						
X15A				⇑S	**Sn**	**14 32 57.3**	**+2.5**
	baz=9.2						
Y12C	**Blythe**	**9.42 334**		⇓P	**Pn**	**14 31 07.7**	**-1.9**
	baz=9.2						
Y12C				⇓S	**Sn**	**14 32 53.7**	**-1.9**
	baz=9.2						
X14A	**Yava**	**9.53 343**		P	**Pn**	**14 31 09.5**	**-1.6**
	baz=9.4,SNR=17						
MONP	**Monument Peak**	**9.62 323**		⇑P	**Pn**	**14 31 12.3**	**-0.1**
	baz=9.5						
MONP				⇑S	**Sn**	**14 33 00.6**	**+0.2**
	baz=9.5						
BC3	**Big Chuckw Mtn**	**9.74 329**		⇑P	**Pn**	**14 31 14.1**	**+0.1**
	baz=9.6,SNR=15						
BC3				⇓S	**Sn**	**14 33 05.4**	**+2.0**
	baz=9.6						
PDMCI	**Parker Dam,Lak**	**9.76 337**		⇓P	**Pn**	**14 31 13.0**	**-1.3**
	baz=9.6						
PDMCI				⇓S	**Sn**	**14 33 06.9**	**+3.0**
	baz=9.6						
ANMO	**Albuquerque**	**9.91 15**		*e*Pn	**Pn**	**14 31 16.5**	**+0.2**
	comp=Z,60nm,1.2s						
ANMO	**Albuquerque**	**9.91 15**		*e*P	**Pn**	**14 31 16.5**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,60nm,1.2s						
ANMO	**Albuquerque**	**9.91 15**		Pn	**Pn**	**14 31 17.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=209,slow=12,SNR=30						
ANMO				Lg		14 33 59.5	
	comp=Z,0.7nm,0.3s,baz=170,slow=17,SNR=3.2						
X13A	**Yucca**	**9.92 339**		⇑P	**Pn**	**14 31 15.5**	**-1.0**
	baz=9.8,SNR=19						
X13A				⇓S	**Sn**	**14 33 11.0**	**+3.1**
	baz=9.8						
JCT	**Junction City**	**9.99 57**		*e*Pn	**Pn**	**14 31 19.2**	**+1.7**
	comp=Z,121nm,1.3s						
JCT	**Junction City**	**9.99 57**		*e*P	**Pn**	**14 31 19.2**	**+1.8**
JCT				pmax	pmax		
	comp=Z,121nm,1.3s						
109C	**Camp Elliot, M**	**10.00 320**		⇓P	**Pn**	**14 31 16.6**	**-1.1**
	baz=9.8						
109C				⇓S	**Sn**	**14 33 11.7**	**+1.8**
	baz=9.8						
IRM	**Iron Mountain**	**10.03 332**		⇓P	**Pn**	**14 31 17.0**	**-1.0**
	baz=9.9						
IRM				⇑S	**Sn**	**14 33 12.5**	**+1.9**
	baz=9.9						
W15A	**Williams**	**10.06 347**		P	**Pn**	**14 31 18.3**	**-0.1**
	baz=9.9,SNR=35						
PFO	**Pinyon Flat Ob**	**10.19 325**		Pn	**Pn**	**14 31 21.4**	**+1.2**
	comp=Z,156nm,2.0s,SNR=5.6						
PFO	**Pinyon Flat Ob**	**10.19 325**		*e*Pn	**Pn**	**14 31 19.3**	**-0.9**
	comp=Z,324nm,2.2s						
PFO	**Pinyon Flat Ob**	**10.19 325**		*e*P	**Pn**	**14 31 19.3**	**-0.9**
PFO				pmax	pmax		
	comp=Z,324nm,2.2s						
PFO	**Pinyon Flat Ob**	**10.19 325**		Pn	**Pn**	**14 31 20.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=12,SNR=6.2						
PFO				LR	LR	14 35 48.2	
	comp=Z,2μm,18.7s,baz=151,slow=42						
PFO	**Pinyon Flat Ob**	**10.19 325**		⇑P	**Pn**	**14 31 19.8**	**-0.4**
	baz=10.0						
PFO				⇓S	**Sn**	**14 33 16.2**	**+1.6**
	baz=10.0						
WUAZ	**Wupatki**	**10.24 351**		*e*Pn	**Pn**	**14 31 19.9**	**-1.0**
	comp=Z,255nm,1.6s						
WUAZ	**Wupatki**	**10.24 351**		⇓P	**Pn**	**14 31 20.8**	**0.0**
	baz=10,SNR=16						
BELC	**Belle Mtn.**	**10.28 328**		⇓P	**Pn**	**14 31 21.5**	**+0.1**
	baz=10						
BELC				⇑S	**Sn**	**14 33 18.5**	**+1.9**
	baz=10						
W14A	**Seligman**	**10.28 343**		P	**Pn**	**14 31 20.6**	**-0.8**
	baz=10,SNR=43						
NEE2	**Needles Airpor**	**10.35 336**		⇓P	**Pn**	**14 31 22.1**	**-0.3**
	baz=10						
NEE2				⇓S	**Sn**	**14 33 20.7**	**+2.2**
	baz=10						
W13A	**Hualapai Mount**	**10.40 340**		P	**Pn**	**14 31 23.0**	**-0.1**

V11A **Goodsprings** 11.61 335 ⇑P Pn 14 31 39.3 -0.2
baz=11
V11A ⇓S Sn 14 33 49.9 +0.7
baz=11
U13A **Pakoon Wash** 11.65 342 ⇑P Pn 14 31 39.9 -0.3
baz=12
U13A ⇑S Sn 14 33 52.4 +2.1
baz=12
DECC **Green Verdugo** 11.69 321 ⇑P Pn 14 31 41.1 +0.3
baz=12
GSC **Goldstone** 11.72 329 *e*Pn Pn 14 31 39.7 -1.4
comp=Z,42nm,1.3s
GSC **Goldstone** 11.72 329 *e*P Pn 14 31 39.7 -1.5
GSC pmax pmax
comp=Z,42nm,1.3s
GSC **Goldstone** 11.72 329 ⇑P Pn 14 31 42.0 +0.8
baz=12,SNR=5.1
GSC ⇓S Sn 14 33 52.9 +0.7
baz=12
SNCC **San Nicolas Is** 11.73 314 ⇓P Pn 14 31 41.1 -0.3
baz=12
U12A **Valley of Fire** 11.84 340 ⇓P Pn 14 31 43.1 +0.4
baz=12
U12A ⇓S Sn 14 33 56.8 +2.0
baz=12
MVCO **Mesa Verde** 11.84 4 *e*Pn Pn 14 31 42.6 -0.1
comp=Z,358nm,1.5s
MVCO **Mesa Verde** 11.84 4 ⇓P Pn 14 31 42.8 0.0
baz=12
T15A **Red Dirt Ranch** 11.87 349 ⇑P Pn 14 31 43.2 0.0
baz=12
PPM **Popocatepetl** 11.88 120 *i* P Pn 14 31 53.1 +10
EDW2 **Edwards Air Fo** 11.97 324 ⇓P Pn 14 31 44.9 +0.3
baz=12
EDW2 ⇑S Sn 14 33 58.3 0.0
baz=12
SHOC **Shoshone** 12.00 333 ⇓P Pn 14 31 45.7 +0.8
baz=12
BLG **Laguna Peak** 12.02 319 ⇓P Pn 14 31 45.9 +0.7
baz=12
BLG ⇓S Sn 14 34 00.8 +1.5
baz=12
T14A **Hurricane** 12.05 346 ⇑P Pn 14 31 45.3 -0.3
baz=12
U11A **Corn Creek** 12.11 337 ⇑P Pn 14 31 47.9 +1.4
baz=12
OSI **Osito Adit** 12.18 321 ⇑P Pn 14 31 47.7 +0.3
baz=12
OSI ⇓S Sn 14 34 07.4 +4.1
baz=12
T13A **Saint George** 12.20 343 ⇑P Pn 14 31 48.1 +0.4
baz=12
BSC **Santa Cruz Isl** 12.29 317 ⇑P Pn 14 31 48.9 0.0
baz=12
LRMC **Laurel Mountai** 12.29 327 P Pn 14 31 49.5 +0.6
baz=12,SNR=13
LRMC ⇑S Sn 14 34 08.2 +2.2
baz=12
U10A **Ash Meadows, A** 12.46 334 ⇑P Pn 14 31 51.4 +0.1
baz=12,SNR=21
CCUT **Cedar City** 12.58 346 *e*Pn Pn 14 31 53.8 +1.0
ARVC **Arvin** 12.61 323 ⇑P Pn 14 31 52.3 -1.1
baz=12,SNR=5.4
SBC **Santa Barbara** 12.64 318 ⇑P Pn 14 31 52.7 -1.0
baz=12
MPMC **Manual Prospec** 12.66 329 ⇓P Pn 14 31 54.2 +0.1
baz=12,SNR=26
MPMC ⇑S Sn 14 34 15.8 +0.7
baz=12
S13A **Holt Ranch, En** 12.72 344 ⇓P Pn 14 31 54.9 +0.1
baz=13
FURC **Furnace Creek,** 12.73 332 ⇓P Pn 14 31 54.7 -0.2
baz=13,SNR=5.4
S14A **Cedar City** 12.74 347 ⇓P Pn 14 31 54.7 -0.3
baz=13
T11A **Corn Creek, Al** 12.79 339 ⇑P Pn 14 31 54.9 -0.9
baz=13
T11A ⇓S Sn 14 34 20.0 +1.8
baz=13
SDCO **Great Sand Dun** 12.80 15 *e*Pn Pn 14 31 57.2 +1.2
comp=Z,124nm,1.5s
ISA **Isabella** 12.83 325 *e*Pn Pn 14 31 55.1 -1.2
comp=Z,432nm,1.9s
ISA **Isabella** 12.83 325 *e*P Pn 14 31 55.2 -1.1
ISA pmax pmax
comp=Z,432nm,1.9s
ISA **Isabella** 12.83 325 P Pn 14 31 56.1 -0.2
baz=13,SNR=27
ISA ⇑S Sn 14 34 20.0 +0.9
baz=13
TPNV **Topopah Spring** 12.89 335 *e*Pn Pn 14 31 57.7 +0.5
comp=Z,418nm,1.8s
TPNV **Topopah Spring** 12.89 335 *e*P Pn 14 31 57.7 +0.5
TPNV pmax pmax
comp=Z,418nm,1.8s
TPNV **Topopah Spring** 12.89 335 ⇓P Pn 14 31 57.3 +0.1
baz=13,SNR=5.9
HKT **Hockley** 12.96 66 *e*Pn Pn 14 31 58.1 0.0
comp=Z,40nm,1.2s
HKT **Hockley** 12.96 66 *e*P Pn 14 31 58.1 0.0
HKT pmax pmax
comp=Z,40nm,1.2s
PKM **Peak Mountain** 13.01 319 ⇑P Pn 14 31 58.0 -0.8
baz=13,SNR=7.2
S12A **Delamar Landin** 13.02 341 ⇓P Pn 14 31 58.3 -0.6
baz=13
WMOK **Wichita Mounta** 13.17 42 *e*Pn Pn 14 31 58.9 -2.1
comp=Z,68nm,1.2s
WMOK **Wichita Mounta** 13.17 42 *e*P Pn 14 31 58.9 -2.1
WMOK pmax pmax
comp=Z,68nm,1.2s
UTMO **Huajuapan** 13.22 122 *i* P Pn 14 32 02.1 +0.3
R14A **James Farms, M** 13.23 348 ⇑P Pn 14 32 00.5 -1.3
baz=13
CWC **Cottonwood Cre** 13.25 328 ⇓P Pn 14 32 01.2 -0.8
baz=13
VES **Vestal, Richgr** 13.28 324 ⇓P Pn 14 32 03.1 +0.6
baz=13
MSU **Marysvale** 13.29 351 *e*Pn Pn 14 32 03.1 +0.5
S11A **Rachel** 13.33 338 ⇓P Pn 14 32 02.3 -0.9
baz=13
GRAC **Grapevine Rang** 13.39 332 ⇑P Pn 14 32 03.4 -0.6
baz=13
SMMC **Simmler** 13.41 320 ⇑P Pn 14 32 03.2 -1.0
baz=13
R12A **Pony Springs,** 13.62 343 ⇓P Pn 14 32 07.8 +0.8
baz=14
RCTC **Rector, Farmer** 13.72 325 ⇑P Pn 14 32 08.7 +0.2
baz=14
SRU **San Rafael** 13.73 357 *e*Pn Pn 14 32 08.0 -0.5
comp=Z,179nm,1.9s
SRU **San Rafael** 13.73 357 *e*P Pn 14 32 08.0 -0.6
SRU pmax pmax
comp=Z,179nm,1.9s
V05C **Boulder Hill,** 13.75 322 ⇑P Pn 14 32 09.5 +0.6
baz=14
PTRM **Twissleman Ran** 13.77 321 *e*Pn Pn 14 32 08.5 -0.7
TIN **Tinemaha** 13.82 330 ⇓P Pn 14 32 10.6 +0.9
baz=14
S10A **Tonopah Range,** 13.88 336 ⇓P Pn 14 32 10.8 +0.1
baz=14
HELL **Mitchell Peak,** 13.90 326 P Pn 14 32 11.4 +0.5
baz=14,SNR=29
HELL ⇑S Sn 14 34 45.4 +0.1
baz=14
R11A **Troy Canyon, C** 13.92 340 ⇓P Pn 14 32 11.3 +0.1
baz=14
R11A ⇑S Sn 14 34 46.2 +0.4
baz=14
SMCO **Snowmass** 13.94 8 *e*Pn Pn 14 32 11.7 +0.3
comp=Z,58nm,1.2s
S09A **Goldfield** 13.95 334 ⇑P Pn 14 32 12.1 +0.5
baz=14,SNR=20
S09A ⇓S Sn 14 34 50.4 +3.9
baz=14
TMUT **Trail Mountain** 13.96 355 *e*Pn Pn 14 32 11.3 -0.4
Q13A **Wheeler Ranch,** 14.07 345 ⇓P Pn 14 32 13.6 +0.4
baz=14
R10A **Warm Springs** 14.10 338 P Pn 14 32 14.9 +1.2
baz=14,SNR=13
V04C **Ramage Ranch,** 14.14 319 ⇑P Pn 14 32 15.6 +1.3
baz=14
S08C **White Mtn Res** 14.16 331 P Pn 14 32 14.8 +0.4
baz=14,SNR=24
S08C ⇓S Sn 14 34 53.3 +1.7
baz=14
PKD **Parkfield** 14.17 321 ⇓P Pn 14 32 14.9 +0.3
baz=14

MTUM **Tungsten Hills** 14.21 329 *e*Pn Pn 14 32 16.5 +1.3
R09A **Tonopah** 14.34 335 ⇑P Pn 14 32 17.0 +0.1
baz=14
R09A ⇑S Sn 14 34 57.0 +1.0
baz=14
Q12A **Willow Creek R** 14.35 343 ⇓P Pn 14 32 16.4 -0.6
baz=14,SNR=19
Q11A **Duckwater** 14.40 340 ⇓P Pn 14 32 18.5 +0.8
baz=14,SNR=26
VHO **Vista Hermosa** 14.49 122 *i* P Pn 14 32 29.8 +11
T06C **Millerton Lake** 14.50 326 ⇑P Pn 14 32 19.0 -0.1
baz=14,SNR=11
T06C ⇑S Sn 14 35 01.8 +1.9
baz=14
P13A **Bates Ranch, G** 14.54 346 ⇓P Pn 14 32 19.1 -0.6
baz=14
KCC **Kaiser Creek** 14.55 327 ⇓P Pn 14 32 21.3 +1.5
baz=14,SNR=11
KCC ⇑S Sn 14 35 03.1 +1.9
baz=14
MLAC **Mammoth Lakes** 14.57 329 ⇓P Pn 14 32 19.5 -0.5
baz=14
U04C **Hernandez Rese** 14.60 321 ⇑P Pn 14 32 21.4 +1.0
baz=14,SNR=8.1
Q10A **Clear Creek Ra** 14.62 338 ⇓P Pn 14 32 21.8 +1.1
baz=14
NLU **North Lily Min** 14.70 352 *e*Pn Pn 14 32 21.2 -0.6
MPU **Maple Canyon** 14.71 354 *e*Pn Pn 14 32 23.1 +1.1
comp=Z,106nm,1.4s
ISCO **Idaho Springs** 14.76 12 *e*Pn Pn 14 32 22.2 -0.4
comp=Z,112nm,1.6s
ISCO **Idaho Springs** 14.76 12 *e*P Pn 14 32 22.2 -0.4
ISCO pmax pmax
comp=Z,112nm,1.6s
P12A **McGill** 14.78 343 ⇓P Pn 14 32 23.3 +0.4
baz=15,SNR=36
Q09A **Carvers** 14.90 336 ⇓P Pn 14 32 24.4 -0.2
baz=15,SNR=5.8
T05C **Eagle Field, D** 14.92 323 ⇑P Pn 14 32 26.2 +1.3
baz=15
NVAR **Mina Array Bea** 14.99 332 Pn Pn 14 32 28.0 +2.2
comp=Z,0.8nm,0.3s,baz=148,slow=12,SNR=10.0
R07C **Lee Vining** 15.04 330 ⇑P Pn 14 32 27.3 +0.9
baz=15
DUG **Dugway** 15.04 350 *e*Pn Pn 14 32 25.3 -1.1
comp=Z,61nm,1.3s
DUG **Dugway** 15.04 350 *e*P Pn 14 32 25.3 -1.1
DUG pmax pmax
comp=Z,61nm,1.3s
DUG **Dugway** 15.04 350 ⇓P Pn 14 32 27.2 +0.8
baz=15,SNR=8.4
HAST **UC Hastings Re** 15.06 320 ⇑P Pn 14 32 27.1 +0.3
baz=15
DAU **Daniels Canyon** 15.07 355 *e*Pn Pn 14 32 26.4 -0.5
S05C **Merced** 15.08 325 ⇓P Pn 14 32 27.5 +0.6
baz=15
O13A **Hicks Ranch, I** 15.19 347 ⇓P Pn 14 32 28.6 +0.2
baz=15
Q08A **Gabbs** 15.21 334 ⇓P Pn 14 32 30.3 +1.6
baz=15
JLU **Jordanelle** 15.28 354 *e*Pn Pn 14 32 28.9 -0.6
PACP **Pacheco Peak** 15.34 322 ⇓P Pn 14 32 31.5 +1.0
baz=15
P10A **Eureka** 15.36 339 ⇑P Pn 14 32 30.9 +0.2
baz=15
CTU **Camp Tracy** 15.39 354 *e*Pn Pn 14 32 29.6 -1.5
comp=Z,87nm,1.3s
NOQ **North Oquirrh** 15.39 353 *e*Pn Pn 14 32 30.6 -0.5
comp=Z,339nm,1.8s
O12A **Currie** 15.49 345 ⇓P Pn 14 32 32.9 +0.6
baz=15
P09A **Austin** 15.52 337 ⇑P Pn 14 32 33.0 +0.3
baz=15
R06C **Coleville** 15.57 330 P Pn 14 32 34.1 +0.7
baz=15,SNR=19
R06C ⇓S Sn 14 35 32.0 +6.0
baz=15
O11A **Cowboy Ranch,** 15.59 342 ⇓P Pn 14 32 35.3 +1.6
baz=15,SNR=22
CMB **Columbia Colle** 15.63 326 *e*Pn Pn 14 32 32.9 -1.3
comp=Z,97nm,1.5s
CMB **Columbia Colle** 15.63 326 *e*P Pn 14 32 32.9 -1.3
CMB pmax pmax
comp=Z,97nm,1.5s
CMB **Columbia Colle** 15.63 326 P Pn 14 32 33.3 -0.9
baz=16,SNR=14
CMB ⇓S Sn 14 35 29.7 +2.1
baz=16
Q07A **Schurz** 15.63 332 ⇑P Pn 14 32 34.5 +0.3
baz=16
N15A **Stansbury Isla** 15.68 352 ⇑P Pn 14 32 34.4 -0.4
baz=16
S04C **Ingram Canyon,** 15.73 323 ⇓P Pn 14 32 35.2 -0.3
baz=16
N14A **Grayback Hills** 15.74 350 ⇓P Pn 14 32 35.2 -0.4
baz=16
CBKS **Cedar Bluff** 15.75 29 *e*P Pn 14 32 37.6 +1.9
comp=Z,499nm,1.5s
CBKS **Cedar Bluff** 15.75 29 *e*P Pn 14 32 37.6 +1.9
CBKS pmax pmax
comp=Z,499nm,1.5s
HUIG **Huatulco** 15.77 125 *i* P Pn 14 32 43.2 +7.1
HUIG **Huatulco** 15.77 125 *i* P Pn 14 32 40.2 +4.1
BGU **Big Grassy Mou** 15.79 350 *e*Pn Pn 14 32 35.4 -0.8
CMIG **Matias Romero** 15.93 118 *i* P Pn 14 32 46.0 +7.8
CMIG LR LR 14 38 57.8
CMIG **Matias Romero** 15.93 118 Pn Pn 14 32 42.7 +4.5
comp=Z,0.4nm,0.3s,baz=299,slow=10,SNR=15
CMIG LR LR 14 38 57.8
comp=Z,5μm,20.4s,baz=277,slow=38
CMIG **Matias Romero** 15.93 118 *i* P Pn 14 32 38.0 -0.2
N13A **Wendover, West** 15.93 347 ⇓P Pn 14 32 38.0 -0.1
baz=16,SNR=10
BNLO **Ben Lomond (Sa** 15.93 320 ⇑P Pn 14 32 37.2 -0.9
baz=16
O10A **Cortez Mining,** 15.98 340 P Pn 14 32 39.0 +0.2
baz=16,SNR=19
P08A **Dixie Valley** 15.99 335 ⇑P Pn 14 32 39.8 +1.0
baz=16,SNR=8.1
R05C **Kirkwood Meado** 16.01 329 P Pn 14 32 39.1 0.0
baz=16,SNR=16
R05C ⇓S Sn 14 35 42.7 +6.1
baz=16
WENL **Wente Brothers** 16.05 322 P Pn 14 32 38.5 -1.1
baz=16,SNR=9.5
R04C **Big Horse Ranc** 16.08 326 ⇓P Pn 14 32 39.4 -0.6
baz=16
O09A **Fish Creek Ran** 16.09 338 P Pn 14 32 40.0 -0.2
baz=16,SNR=22
N12A **Clover Valley,** 16.11 345 ⇑P Pn 14 32 39.0 -1.4
baz=16,SNR=15
JRSC **Jasper Ridge** 16.16 321 ⇑P Pn 14 32 42.2 +1.1
baz=16
P07A **Fallon** 16.18 333 ⇓P Pn 14 32 41.2 0.0
baz=16
M15A **Larsen Ranch,** 16.23 352 ⇓P Pn 14 32 42.9 +0.9
baz=16
PHWY **Pilot Hill** 16.25 11 *e*P Pn 14 32 42.2 +0.1
N11A **Elko Archery C** 16.25 343 ⇑P Pn 14 32 42.8 +0.6
baz=16,SNR=5.4
HWUT **Hardware Ranch** 16.28 355 *e*P Pn 14 32 41.1 -1.5
comp=Z,398nm,1.8s
BDM **Black Diamond** 16.34 323 ⇑P Pn 14 32 44.5 +1.1
baz=16
WCN **Washoe City** 16.35 331 P Pn 14 32 44.2 +0.7
baz=16,SNR=33
WCN ⇑S Sn 14 35 50.9 +6.0
baz=16
N10A **Dunphy** 16.38 341 ⇑P Pn 14 32 43.8 0.0
baz=16
RWWY **Rawlins** 16.39 6 *e*Pn Pn 14 32 42.0 -2.0
comp=Z,73nm,1.3s
M14A **Sheep Mountain** 16.40 350 ⇓P Pn 14 32 44.1 -0.1
baz=16
M13A **Montello** 16.41 348 ⇓P Pn 14 32 45.5 +1.3
baz=16
O08A **Rochester Mine** 16.54 336 ⇓P Pn 14 32 46.5 +0.7
baz=16
MIAR **Mount Ida** 16.56 53 *e*Pn Pn 14 32 46.3 +0.2
comp=Z,102nm,1.3s
MIAR *e*P 14 32 49.6
MIAR **Mount Ida** 16.56 53 *e*P Pn 14 32 46.3 +0.2
MIAR pmax pmax
comp=Z,102nm,1.3s
HVU **Hansel Valley** 16.59 351 P Pn 14 32 45.1 -1.4
comp=Z,214nm,1.7s
HVU **Hansel Valley** 16.59 351 P Pn 14 32 45.1 -1.4
HVU pmax pmax
comp=Z,214nm,1.7s
M12A **Wells** 16.62 346 ⇓P Pn 14 32 46.5 -0.4
baz=16
O07A **Toulon** 16.70 334 P Pn 14 32 47.9 0.0
baz=16,SNR=36
P06A **Stead Airport,** 16.72 331 ⇑P Pn 14 32 48.8 +0.7
baz=17
P05C **Yuba Gap, Truc** 16.73 329 ⇓P Pn 14 32 49.7 +1.4
baz=17
P05C ⇓S Sn 14 35 58.4 +4.1
baz=17
Q04C **Lincoln** 16.75 326 ⇓P Pn 14 32 49.6 +1.1
baz=17
FARB **Farallon Islan** 16.80 320 ⇑P Pn 14 32 48.7 -0.6
baz=17
N09A **Rock Creek Ran** 16.82 339 ⇓P Pn 14 32 49.1 -0.3
baz=17,SNR=12
M11A **Holland Ranch,** 16.84 344 ⇑P Pn 14 32 49.7 0.0
baz=17,SNR=16
Q03C **Winters** 16.92 324 ⇓P Pn 14 32 51.5 +0.7
baz=17
CVS **Carmenet Viney** 16.95 323 ⇓P Pn 14 32 52.2 +1.1
baz=17
N08A **GE Springer Mi** 16.96 337 P Pn 14 32 51.0 -0.3
baz=17,SNR=28
MCCM **Marconi Confer** 17.04 322 ⇑P Pn 14 32 51.7 -0.6
baz=17
L13A **Double Diamond** 17.07 349 ⇓P Pn 14 32 51.6 -1.0
baz=17
O06A **Flanigan** 17.09 332 ⇑P Pn 14 32 52.5 -0.3
baz=17,SNR=11
O06A ⇓S Sn 14 36 05.4 +2.5
baz=17
M10A **I.L. Ranch, Tu** 17.13 342 P Pn 14 32 53.7 +0.4
baz=17,SNR=17
NSHM **Saint Helena R** 17.16 323 P Pn 14 32 52.1 -1.6
OHCM **Honcut** 17.18 327 *e*P Pn 14 32 53.7 -0.3
SUTB **Sutter Butte** 17.25 326 ⇑P Pn 14 32 54.6 -0.3
baz=17
N07B **Gerlach** 17.27 335 ⇓P Pn 14 32 54.1 -1.0
baz=17,SNR=5.7
M09A **Marrel Ranch,** 17.31 340 ⇑P Pn 14 32 55.6 0.0
baz=17
MNRC **McLaughlin Nat** 17.33 324 ⇑P Pn 14 32 56.6 +0.8
baz=17
L12A **House Creek Ra** 17.34 346 ⇑P Pn 14 32 56.3 +0.3
baz=17
BW06 **Boulder Array** 17.35 360 *e*P Pn 14 32 54.3 -1.9
comp=Z,124nm,2.6s
PDAR **Pinedale Array** 17.35 360 P Pn 14 32 54.8 -1.4
comp=Z,0.2nm,0.3s,baz=170,slow=10,SNR=48
PDAR LR LR 14 39 50.5
comp=Z,5μm,19.6s,baz=192,slow=38
ORV **Oroville** 17.36 327 ⇓P Pn 14 32 56.3 +0.1
baz=17
K14A **Jones Ranch, D** 17.39 351 ⇓P Pn 14 32 56.3 -0.3
baz=17
AHID **Auburn Hatcher** 17.40 356 *e*P Pn 14 32 55.7 -1.0
comp=Z,132nm,1.5s
O05C **Quincy** 17.41 329 P Pn 14 32 57.4 +0.6
baz=17,SNR=14
KSU1 **Kansas State U** 17.49 35 *e*P Pn 14 32 58.7 +0.9
comp=Z,239nm,1.5s
N06A **Buffalo Meadow** 17.58 333 P Pn 14 32 59.0 +0.1
baz=17,SNR=27
L10A **Juniper Basin** 17.63 343 ⇑P Pn 14 32 58.9 -0.6
baz=18
K13A **Stover Farm, H** 17.64 349 ⇓P Pn 14 32 59.4 -0.3
baz=18
HOPS **Hopland** 17.75 323 ⇑P Pn 14 33 00.8 -0.2
baz=18
O04C **Chester** 17.77 330 P Pn 14 33 01.5 +0.2
baz=18,SNR=28
K12A **Draper Farm, C** 17.78 347 ⇓P Pn 14 33 00.5 -1.0
baz=18
ELFS **Eagle Lake Fie** 17.85 331 ⇑P Pn 14 33 02.7 +0.4
baz=18
M07A **Soldier Meadow** 17.87 336 P Pn 14 33 03.4 +0.8
baz=18,SNR=22
L09A **Wilkinson Ranc** 17.92 340 P Pn 14 33 03.7 +0.5
baz=18,SNR=16
O03C **Acorn Hollow,** 17.96 327 ⇓P Pn 14 33 02.8 -0.9
baz=18
REDW **Red Top Meadow** 17.98 357 *e*P Pn 14 33 02.4 -1.5
comp=Z,208nm,1.6s
GASB **Alder Springs** 18.04 325 ⇑P Pn 14 33 04.5 -0.2
baz=18
SNOW **Snow King Moun** 18.08 357 *e*P Pn 14 33 04.0 -1.1
comp=Z,440nm,1.8s
TPAW **Teton Pass** 18.11 357 *e*P Pn 14 33 04.3 -1.2
comp=Z,114nm,1.4s
K11A **Parker Ranch,** 18.16 344 ⇑P Pn 14 33 05.2 -0.9
baz=18
K11A ⇓S Sn 14 36 35.7 +6.9
baz=18
LOHW **Long Hollow** 18.22 357 *e*P Pn 14 33 05.4 -1.4
comp=Z,63nm,1.2s
M06C **Likely Place G** 18.23 333 P Pn 14 33 07.5 +0.6
baz=18,SNR=21
M06C ⇓S Sn 14 36 38.5 +8.0
baz=18
P01C **Double 8 Ranch** 18.23 324 ⇓P Pn 14 33 07.2 +0.1
baz=18
L08A **Fields** 18.29 339 ⇑P Pn 14 33 08.1 +0.4
baz=18
L08A ⇓S Sn 14 36 36.0 +4.1
baz=18
LBCM **Butte Creek Ri** 18.30 330 P Pn 14 33 08.1 +0.2
HATC **Hat Creek Radi** 18.34 330 ⇑P Pn 14 33 09.4 +1.1
baz=18
MOOW **Moose Ponds** 18.36 357 Pn Pn 14 33 08.5 -0.1
comp=Z,72nm,1.3s
J13A **Cove Ranch, Pi** 18.38 349 ⇑P Pn 14 33 09.6 +0.7
baz=18
J13A ⇑S Sn 14 36 42.8 +8.7
baz=18
K10A **MacKenzie Ranc** 18.39 343 ⇑P Pn 14 33 08.6 -0.3
baz=18
K10A ⇓S Sn 14 36 41.6 +7.4
baz=18
J12A **Stokes Ranch,** 18.41 347 ⇑P Pn 14 33 08.6 -0.6
baz=18
J12A ⇑S Sn 14 36 42.6 +7.7
baz=18
O02C **Red Bluff** 18.47 326 ⇑P Pn 14 33 10.7 +0.8
baz=18
L07A **Adell** 18.48 336 P Pn 14 33 10.2 +0.2
baz=18,SNR=13
IMW **Indian Meadow** 18.52 357 *e*P Pn 14 33 09.9 -0.6
comp=Z,182nm,1.6s
KCPM **Cahto Peak** 18.52 324 *e*P Pn 14 33 08.1 -2.4
K09A **Rome** 18.56 341 P Pn 14 33 10.4 -0.5
baz=18,SNR=52
CCIG **Comitan** 18.58 116 *i* P Pn 14 33 17.1 +5.7
HLID **Hailey** 18.59 349 *e*P Pn 14 33 10.5 -0.7
comp=Z,41nm,1.3s
HLID **Hailey** 18.59 349 P Pn 14 33 11.5 +0.3
baz=18,SNR=12
HLID ⇑S Sn 14 36 45.3 +6.3
baz=18
WVOR **Wild Horse Val** 18.61 338 *e*P Pn 14 33 08.8 -2.7
comp=Z,802nm,2.3s
WVOR **Wild Horse Val** 18.61 338 *e*P Pn 14 33 08.8 -2.7
WVOR pmax pmax
comp=Z,802nm,2.3s
M05C **Lookout** 18.64 332 ⇓P Pn 14 33 11.3 -0.7
baz=18,SNR=11
M05C ⇑S Sn 14 36 45.3 +4.9
baz=18
WDC **Whiskeytown Da** 18.66 328 *e*P Pn 14 33 11.5 -0.7
comp=Z,76nm,1.5s
WDC **Whiskeytown Da** 18.66 328 *e*P Pn 14 33 11.5 -0.7
WDC pmax pmax
comp=Z,76nm,1.5s
WDC **Whiskeytown Da** 18.66 328 ⇓P Pn 14 33 12.2 0.0
baz=18,SNR=7.0
WDC ⇓S Sn 14 36 44.2 +3.4
baz=18
FLWY **Flagg Ranch** 18.69 357 *e*P Pn 14 33 11.6 -1.0
comp=Z,225nm,1.5s
MFID **Camas Ranch** 18.73 346 ⇑P Pn 14 33 11.6 -1.4
baz=19
MFID ⇑S Sn 14 36 49.4 +6.9
baz=19
MOD **Modoc** 18.75 334 *e*P Pn 14 33 13.5 +0.3
comp=Z,214nm,1.6s
MOD **Modoc** 18.75 334 ⇓P Pn 14 33 13.1 -0.1

baz=19
K08A **Mann Creek Ran** 18.82 339 ⇓P Pn 14 33 14.6 +0.5
baz=19
K08A ⇑S Sn 14 36 48.5 +3.8
baz=19
I13A **Wildhorse Cree** 18.88 350 ⇓P Pn 14 33 15.5 +0.7
baz=19
J10A **Berg Farm, Mel** 18.96 344 ⇓P Pn 14 33 14.2 -1.7
baz=19
J10A ⇓S Sn 14 36 52.6 +4.4
baz=19
M03C **McCloud** 19.00 330 ⇑P Pn 14 33 16.3 -0.1
baz=19
K07A **Rock Creek Ran** 19.04 338 P Pn 14 33 16.3 -0.5
baz=19,SNR=20
YFT **Old Faithful** 19.07 357 eP Pn 14 33 16.9 -0.3
L05A **Lakeview** 19.08 333 P Pn 14 33 16.4 -0.8
baz=19,SNR=13
HBAR **Harrisburg** 19.14 54 P Pn 14 33 18.5 +0.4
J09A **Fry Pan Ranch,** 19.16 341 P Pn 14 33 17.4 -0.8
baz=19,SNR=24
N02C **Big Bar** 19.22 327 ⇓P Pn 14 33 20.0 +1.1
baz=19
N02C ⇓S Sn 14 36 57.4 +3.0
baz=19
M04C **Macdoel** 19.29 331 P Pn 14 33 20.2 +0.4
baz=19,SNR=44
YMR **Madison River** 19.29 357 eP Pn 14 33 19.4 -0.4
comp=Z,98nm,1.3s
J08A **Circle Bar Ran** 19.38 340 ⇓P Pn 14 33 20.1 -0.8
baz=19
QLMT **Earthquake Lak** 19.48 356 P Pn 14 33 19.9 -2.2
K06A **Valley Falls** 19.50 336 P Pn 14 33 23.0 +0.7
baz=19,SNR=20
H13A **Challis** 19.53 350 ⇓P Pn 14 33 23.1 +0.4
baz=19
JCC **Jacoby Creek** 19.58 325 ⇑P Pn 14 33 24.3 +1.0
baz=19
I10A **Payette** 19.59 344 ⇑P Pn 14 33 23.7 +0.3
baz=19
MCMT **McKenzie Canyo** 19.60 353 eP Pn 14 33 22.5 -1.0
H12A **Diamond D Ranc** 19.62 349 ⇑P Pn 14 33 23.4 -0.4
baz=20,SNR=8.3
H12A ⇓S Sn 14 37 08.6 +4.7
baz=20
L04A **Klamath Falls** 19.63 332 P Pn 14 33 24.6 +0.8
baz=20,SNR=9.4
J07A **Hines** 19.67 338 P Pn 14 33 23.3 -1.0
baz=20,SNR=8.0
K05A **Summer Lake** 19.68 334 ⇓P Pn 14 33 23.0 -1.4
baz=20,SNR=15
RLMT **Red Lodge** 19.71 1 eP Pn 14 33 22.3 -2.5
comp=Z,55nm,1.4s
I09A **Lost Marbles R** 19.73 342 ⇑P Pn 14 33 22.6 -2.5
baz=20,SNR=14
GNAR **Gosnell** 19.79 53 eP Pn 14 33 25.4 -0.4
comp=Z,3μm,1.3s
J06A **Christmas Vall** 19.85 337 P Pn 14 33 24.7 -1.8
baz=20,SNR=61
G15A **Dillon** 19.90 354 P Pn 14 33 26.2 -0.8
baz=20,SNR=21
G15A ⇓S Sn 14 37 14.8 +4.2
baz=20
I08A **Drewsey** 19.91 341 ⇓P Pn 14 33 24.6 -2.7
baz=20
K04A **Chilquin** 19.92 333 ⇑P Pn 14 33 25.7 -1.7
baz=20,SNR=9.7
H11A **Donnelly** 20.00 346 P Pn 14 33 26.3 -1.9
baz=20,SNR=20
H11A ⇑S Sn 14 37 15.9 +2.9
baz=20
G13A **Cobalt** 20.05 350 P P 14 33 26.9 -0.1
baz=20,SNR=18
H10A **Noah's Angus R** 20.05 345 P P 14 33 26.4 -0.6
baz=20,SNR=26
H10A ⇑S S 14 37 17.1 +4.8
baz=20
G14A **Jackson** 20.08 352 ⇑P P 14 33 27.7 +0.3
baz=20
G14A ⇓S S 14 37 17.5 +4.5
baz=20
DLMT **Dillon** 20.10 354 eP P 14 33 27.8 +0.2
comp=Z,176nm,1.5s
TEIG **Tepich** 20.24 100 eP P 14 33 31.9 +2.6
TEIG **Tepich** 20.24 100 P P 14 33 32.1 +2.8
comp=Z,29nm,1.0s,baz=250,slow=7.9,SNR=6.4
TEIG LR LR 14 42 30.1
comp=Z,3μm,20.6s,MS4.6,baz=297,slow=40
J05A **Fort Rock** 20.28 335 P P 14 33 29.6 0.0
baz=20,SNR=37
BOZ **Bozeman (W)** 20.30 356 eP P 14 33 29.1 -0.7
comp=Z,86nm,1.6s
BOZ **Bozeman (W)** 20.30 356 eP P 14 33 29.1 -0.7
BOZ pmax pmax
comp=Z,86nm,1.6s
BOZ **Bozeman (W)** 20.30 356 P P 14 33 29.3 -0.5
baz=20,SNR=40
BOZ ⇓S S 14 37 23.1 +5.7
baz=20
H09A **Durkee** 20.35 343 P P 14 33 30.6 +0.3
baz=20,SNR=28
I07A **Izee** 20.36 339 P P 14 33 30.2 -0.2
baz=20,SNR=30
GCMT **Greyclift** 20.38 360 eP P 14 33 30.0 -0.6
M01C **Crescent City** 20.39 327 ⇑P P 14 33 29.5 -1.3
baz=20
BMO **Blue Mountains** 20.44 344 eP P 14 33 30.0 -1.2
comp=Z,140nm,1.3s
GLAT **Glass** 20.45 53 eP P 14 33 33.5 +2.0
I06A **Prineville** 20.48 337 P P 14 33 31.3 -0.4
baz=20,SNR=28
H08A **Prairie City** 20.50 341 P P 14 33 31.7 -0.2
baz=20,SNR=42
H08A ⇑S S 14 37 27.1 +5.8
baz=20
F15A **Butte** 20.57 354 P P 14 33 32.7 +0.1
baz=20,SNR=16
F15A ⇑S S 14 37 29.1 +6.5
baz=20
BRAL **Brewton** 20.57 69 eP P 14 33 35.1 +2.3
comp=Z,328nm,1.3s
J04A **Umpqua Nationa** 20.59 333 ⇑P P 14 33 33.3 +0.3
baz=20
F14A **Wisdom** 20.63 352 ⇑P P 14 33 33.7 +0.3
baz=20
G11A **Walters Elk Ra** 20.71 346 P P 14 33 33.5 -0.8
baz=21,SNR=33
G11A ⇑S S 14 37 31.9 +6.4
baz=21
F13A **Darby** 20.74 350 ⇑P P 14 33 33.5 -1.0
baz=21
F13A ⇓S S 14 37 32.2 +6.2
baz=21
PLAL **Pickwick Lake** 20.83 58 eP P 14 33 37.0 +1.3
comp=Z,77nm,1.2s
H07A **Lands Inn, Kim** 20.84 339 ⇑P P 14 33 34.9 -0.7
baz=21
F12A **Elk City** 20.86 349 P P 14 33 35.2 -0.6
baz=21,SNR=26
G09A **Cove** 20.95 344 ⇓P P 14 33 36.5 -0.3
baz=21
I05A **Bend** 21.05 336 ⇑P P 14 33 38.2 +0.3
baz=21
J03A **Ideyld Park** 21.06 332 ⇓P P 14 33 38.4 +0.3
baz=21
LRAL **Lakeview Retre** 21.07 64 eP P 14 33 39.5 +1.3
comp=Z,79nm,1.1s,mb5.0
VIPM **Ingram Point** 21.11 338 P P 14 33 38.2 -0.4
ECSD **EROS,Sioux Fal** 21.13 27 eP P 14 33 38.3 -0.6
comp=Z,79nm,1.1s,mb5.0
F11A **Grangeville** 21.16 347 P P 14 33 37.6 -1.5
baz=21,SNR=32
E15A **Deer Lodge** 21.16 354 P P 14 33 38.4 -0.6
baz=21,SNR=21
I04A **Tendick Farm,** 21.18 333 ⇑P P 14 33 40.0 +0.7
baz=21
H06A **Lindquist Farm** 21.21 338 ⇑P P 14 33 39.4 -0.3
baz=21
E14A **Clinton** 21.24 352 P P 14 33 39.5 -0.5
baz=21,SNR=21
G08A **Pilot Rock** 21.29 341 P P 14 33 39.6 -0.9
baz=21,SNR=15
K01A **Sixes** 21.29 328 ⇓P P 14 33 41.2 +0.7
baz=21
J02A **Umpqua** 21.32 331 ⇓P P 14 33 40.8 0.0
baz=21
E13A **Victor** 21.36 351 P P 14 33 40.5 -0.7
baz=21,SNR=20
HRY **Holter Researc** 21.38 356 eP P 14 33 40.8 -0.6
F09A **S2 Ranch, Elgi** 21.39 344 P P 14 33 40.9 -0.6
baz=21,SNR=16
LAO **LASA Array** 21.44 6 eP P 14 33 39.3 -2.7
comp=Z,322nm,1.7s,mb5.4
H05A **Madras** 21.45 337 ⇓P P 14 33 41.2 -1.0
baz=21
WVT **Waverly** 21.46 55 eP P 14 33 43.2 +0.8
comp=Z,69nm,1.1s,mb4.9
WVT **Waverly** 21.46 55 eP P 14 33 43.2 +0.8
WVT pmax pmax
comp=Z,69nm,1.1s,mb4.9
F10A **Beach Ranch, E** 21.47 345 P P 14 33 41.5 -0.9
baz=21,SNR=22
G07A **Ruggs Ranch, H** 21.48 340 P P 14 33 41.5 -1.0
baz=21,SNR=13
E11A **Bogner Ranch,** 21.62 347 P P 14 33 42.3 -1.7
baz=22,SNR=20
LNOR **Lincton Mounta** 21.64 343 P P 14 33 44.1 -0.1
CROR **Criterion Ridg** 21.66 338 P P 14 33 42.9 -1.5
I03A **Eugene** 21.68 332 ⇑P P 14 33 44.7 0.0
baz=22
MSO **Missoula** 21.70 352 eP P 14 33 43.7 -1.2
comp=Z,61nm,1.5s,mb4.8
CHMT **Chamberlain Mo** 21.71 353 eP P 14 33 44.0 -0.9
G06A **Carlson Farm,** 21.76 338 ⇑P P 14 33 44.2 -1.3
baz=22
D15A **Lincoln** 21.76 354 P P 14 33 44.8 -0.8
baz=22,SNR=18
H04A **Detroit Lake** 21.83 335 ⇓P P 14 33 45.0 -1.3
baz=22
D14A **Greenough** 21.90 353 P P 14 33 45.9 -1.2
baz=22,SNR=35
E10A **Myers Farm, Un** 21.93 346 ⇑P P 14 33 46.3 -1.0
baz=22
G05A **Wamic** 22.00 337 ⇑P P 14 33 46.7 -1.3
baz=22
D13A **Huson** 22.03 351 P P 14 33 47.4 -1.1
baz=22,SNR=13
F07A **Phinny Hill Vi** 22.12 340 ⇓P P 14 33 48.8 -0.6
baz=22
D12A **Red Ives Fores** 22.13 349 ⇓P P 14 33 48.9 -0.6
baz=22
E09A **Wood Farm, Sta** 22.20 344 ⇓P P 14 33 49.6 -0.6
baz=22
H03A **Soap Creek Ran** 22.26 333 ⇓P P 14 33 50.3 -0.6
baz=22
F06A **Goldendale** 22.27 339 ⇓P P 14 33 49.7 -1.3
baz=22
G04A **Mulino** 22.39 335 ⇓P P 14 33 50.2 -2.0
baz=22
E08A **Dider Farm, El** 22.41 343 ⇓P P 14 33 52.2 -0.3
baz=22
HAWA **Hanford** 22.46 342 eP P 14 33 50.5 -2.4
comp=Z,31nm,1.0s,mb4.7
D10A **Wagner Farm, O** 22.50 346 P P 14 33 52.2 -1.3
baz=22,SNR=17
SWET **Sewanee** 22.56 59 eP P 14 33 54.7 +0.5
F05A **White Salmon** 22.60 338 ⇓P P 14 33 54.2 -0.3
baz=22
C14A **Swan Lake** 22.61 353 ⇑P P 14 33 53.6 -0.9
baz=22
EGMT **Eagleton** 22.61 360 P P 14 33 53.6 -0.9
comp=Z,130nm,1.3s,mb5.2
EGMT **Eagleton** 22.61 360 ⇓P P 14 33 54.3 -0.3
baz=22,SNR=7.8
C13A **Hot Springs** 22.62 351 ⇓P P 14 33 54.4 -0.3
baz=22
HDIL **Hopedale** 22.67 43 eP P 14 33 56.5 +1.2
comp=Z,172nm,1.1s,mb5.4
E07A **Sunnyside** 22.70 341 ⇓P P 14 33 55.2 -0.3
baz=22
D09A **Jones Farm, Ri** 22.75 344 ⇑P P 14 33 56.1 0.0
baz=23
G03A **Yamhill** 22.79 334 ⇑P P 14 33 56.2 -0.3
baz=23
D08A **Wollman Farm,** 22.90 343 ⇑P P 14 33 57.4 -0.3
baz=23
F04A **Amboy** 22.98 336 ⇑P P 14 33 58.9 +0.4
baz=23
E06A **Yakima** 23.03 339 ⇓P P 14 33 58.0 -1.0
baz=23
C10A **Spilker Farm,** 23.24 347 ⇓P P 14 33 59.9 -1.3
baz=23
B13A **Whitefish** 23.29 352 P P 14 34 00.8 -0.9
baz=23,SNR=18
E05A **Randle** 23.30 338 P P 14 34 00.7 -1.1
baz=23,SNR=14
D07A **Quincy** 23.31 342 ⇑P P 14 34 00.7 -1.3
baz=23
C09A **Chrisman Ranch** 23.43 345 ⇓P P 14 34 02.7 -0.6
baz=23
DGMT **Dagmar** 23.44 9 eP P 14 34 01.8 -1.5
comp=Z,913nm,2.2s,mb5.8
WCI **Wyandotte Cave** 23.46 51 P P 14 34 04.6 +0.9
comp=Z,17nm,0.7s,mb4.6
WCI **Wyandotte Cave** 23.46 51 P P 14 34 04.6 +0.9
WCI pmax pmax
comp=Z,17nm,0.7s,mb4.6
B12A **Libby** 23.55 350 P P 14 34 02.7 -1.8
baz=23,SNR=5.9
D06A **Cle Elum** 23.57 340 ⇑P P 14 34 05.1 +0.4
baz=23
JFWS **Jewell Farm** 23.59 37 eP P 14 34 04.6 -0.3
comp=Z,78nm,1.4s,mb5.0
JFWS **Jewell Farm** 23.59 37 eP P 14 34 04.6 -0.3
JFWS pmax pmax
comp=Z,78nm,1.4s,mb5.0
FMW **Mount Fremont** 23.59 339 P P 14 34 04.0 -0.9
C08A **Higginbotham F** 23.61 344 ⇓P P 14 34 03.8 -1.2
baz=24
NEW **Newport** 23.62 347 eP P 14 34 02.3 -2.8
comp=Z,350nm,1.9s,mb5.5
NEW **Newport** 23.62 347 eP P 14 34 02.3 -2.8
NEW pmax pmax
comp=Z,349nm,1.9s
NEW **Newport** 23.62 347 P P 14 34 03.0 -2.1
comp=Z,9.7nm,1.0s,mb4.2,baz=130,slow=12,SNR=6.0
NEW LR LR 14 43 29.0
comp=Z,3μm,19.6s,MS4.7,baz=169,slow=38
B11A **Sandpoint** 23.65 349 ⇑P P 14 34 04.9 -0.5
baz=24,SNR=6.5
E04A **Onaiaska** 23.66 337 ⇓P P 14 34 06.0 +0.5
baz=24
TGUH **Tegucigalpa,Un** 23.74 114 P P 14 34 10.8 +4.4
comp=Z,79nm,1.1s,mb5.1
C07A **Waterville** 23.79 342 P P 14 34 05.7 -1.0
baz=24,SNR=19
A13A **Flathead Natio** 23.83 352 ⇓P P 14 34 07.7 +0.7
baz=24
WALA **Waterton Lakes** 23.89 353 eP P 14 34 05.5 -2.1
comp=Z,145nm,1.6s,mb5.2
D05A **Enumclaw** 23.92 339 ⇓P P 14 34 08.2 +0.3
baz=24
E03A **Lebam** 23.92 336 ⇓P P 14 34 07.5 -0.4
baz=24
B09A **Rice** 23.99 346 P P 14 34 08.4 -0.1
baz=24,SNR=5.3
A12A **Yaak River Ran** 24.01 350 ⇓P P 14 34 08.6 0.0
baz=24
GOGA **Godfrey** 24.03 64 eP P 14 34 09.8 +0.8
comp=Z,108nm,1.4s,mb5.1
GOGA **Godfrey** 24.03 64 eP P 14 34 09.8 +0.7
GOGA pmax pmax
comp=Z,108nm,1.4s,mb5.1
A11A **Hall Mountain,** 24.15 349 P P 14 34 08.5 -1.4
baz=24,SNR=23
B08A **Colville Reser** 24.21 344 P P 14 34 09.2 -1.3
baz=24,SNR=17
C05A **Tolt Reservoir** 24.27 340 ⇑P P 14 34 11.4 +0.3
baz=24
SOR **Soroa** 24.33 90 ePG P 14 34 05.8 -6.1
baz=98
SOR eSG S 14 38 40.0 +8.8
comp=N,2.8nm,8.6s
SOR e
comp=E,3.9nm,9.1s
TKL **Tuckaleechee C** 24.37 59 P P 14 34 12.6 +0.4
comp=E,34nm,1.1s,mb4.7,baz=231,slow=7.7,SNR=17
TKL LR LR 14 44 38.9
comp=E,4μm,18.7s,MS5.0,baz=256,slow=39
A10A **Northport** 24.39 347 ⇓P P 14 34 12.2 0.0
baz=24
B07A **Winthrop** 24.51 343 P P 14 34 12.0 -1.2
baz=24,SNR=16
A09A **Danville** 24.61 346 ⇓P P 14 34 12.8 -1.4
baz=24
C04A **Brinnon** 24.71 338 ⇑P P 14 34 14.1 -1.0
baz=24
A08A **Turner Farm, O** 24.75 345 ⇑P P 14 34 15.4 0.0
baz=25,SNR=7.4
NLWA **Neilton Lookou** 24.75 336 ⇓P P 14 34 16.4 +1.0
baz=25
TZTN **Tazewell** 24.83 57 eP P 14 34 17.2 +0.9
comp=E,165nm,1.8s,mb5.3
B05A **Bryant** 24.90 340 ⇓P P 14 34 16.8 0.0
baz=25
B06A **Marblemount** 24.95 341 ⇑P P 14 34 16.5 -0.7
baz=25
A07A **Ashnola River,** 25.12 343 ⇑P P 14 34 18.1 -0.7
baz=25
AGMN **Agassiz Refuge** 25.29 22 eP P 14 34 19.7 -0.6
comp=E,60nm,1.3s,mb5.0
A04A **Legoe Bay, Lum** 25.50 339 ⇑P P 14 34 20.9 -1.4
baz=25
A05A **Maple Falls** 25.55 341 ⇑P P 14 34 21.7 -1.0
baz=25
ULM **Lac du Bonnet** 26.99 19 P P 14 34 33.8 -1.9
comp=E,3.5nm,0.9s,mb3.9,baz=225,slow=8.9,SNR=5.1
ULM LR LR 14 45 09.7
comp=E,3μm,18.2s,MS4.8,baz=240,slow=36
MGV **Manicaragua** 27.21 91 ePG P 14 34 44.2 +6.2
BLA **Blacksburg** 27.42 57 eP P 14 34 42.5 +2.8
comp=E,31nm,0.9s,mb4.8
BLA **Blacksburg** 27.42 57 eP P 14 34 42.5 +2.8
BLA pmax pmax
comp=E,31nm,0.9s,mb4.8
EDM **Edmonton** 27.96 355 P P 14 34 44.6 +0.2
FFC **Flin Flon** 29.85 9 eP P 14 34 59.3 -1.9
comp=Z,39nm,1.5s,mb4.9
FFC **Flin Flon** 29.85 9 eP P 14 34 59.3 -1.8
FFC pmax pmax
comp=Z,39nm,1.5s,mb4.9
MSNY **Massena** 34.08 46 eP P 14 35 39.4 +1.0
FCC **Fort Churchill** 35.10 14 eP P 14 35 45.1 -2.0
comp=Z,44nm,1.3s,mb5.2
FCC **Fort Churchill** 35.10 14 eP P 14 35 45.1 -2.0
FCC pmax pmax
comp=Z,44nm,1.3s,mb5.2
DLBC **Dease Lake** 36.09 342 eP P 14 35 55.4 -0.1
YKA **Yellowknife Ar** 37.27 356 P P 14 36 03.6 -1.9
YKA LR LR 14 51 44.7
YKA **Yellowknife Ar** 37.27 356 P P 14 36 03.6 -1.9
comp=Z,3.1nm,0.9s,mb4.1,baz=174,slow=8.0,SNR=44
YKA LR LR 14 51 44.7
comp=Z,2μm,18.8s,MS4.9,baz=175,slow=37
OTAV **Otavalo** 39.05 125 eP P 14 36 25.6 +4.4
comp=Z,70nm,1.8s,mb5.1
ROSC **El Rosal** 39.42 115 LR LR 14 55 02.5
comp=Z,766nm,19.3s,MS4.5,baz=351,slow=40
SDV **Santo Domingo** 40.43 107 P P 14 36 35.3 +2.7
SDV **Santo Domingo** 40.43 107 P P 14 36 35.3 +2.7
comp=Z,12nm,0.8s,mb4.7,baz=338,slow=2.8,SNR=18
CPD **Cerro la Pandu** 41.03 91 eP P 14 36 37.8 +0.2
comp=Z,134nm,1.1s,mb5.5
CPD **Cerro la Pandu** 41.03 91 eP P 14 36 37.8 +0.2
CPD pmax pmax
comp=Z,134nm,1.1s,mb5.5
MTP **Monte Pirata** 41.34 91 eP P 14 36 41.9 +1.8
SCHQ **Schefferville** 42.92 35 LR LR 14 55 24.3
comp=Z,2μm,18.5s,MS5.0,baz=64,slow=37
EGAK **Eagle** 44.35 341 eP P 14 37 03.2 -0.8
comp=Z,48nm,1.4s,mb5.0
KDAK **Kodiak Island** 44.45 329 P P 14 37 04.2 -0.6
comp=Z,9.3nm,0.8s,mb4.6,baz=108,slow=10,SNR=3.7
TAOE **Nuku Hiva Isla** 45.24 225 eLR LR 14 49 43.5
comp=Z,3μm,26.8s
INK **Inuvik** 45.35 348 eP P 14 37 10.8 -1.0
comp=Z,2μm,1.7s
INK **Inuvik** 45.35 348 eP P 14 37 10.9 -0.9
INK pmax pmax
comp=Z,2μm,1.7s
COLA **College** 46.50 339 eP P 14 37 22.2 +1.2
comp=Z,50nm,1.5s,mb5.2
COLA **College** 46.50 339 eP P 14 37 22.2 +1.2
COLA pmax pmax
comp=Z,50nm,1.5s,mb5.2
SVW2 **Sparrevohn** 47.36 332 eP P 14 37 29.5 +1.8
comp=Z,0.5nm,1.8s
TTA **Tatalina** 48.41 334 eP P 14 37 36.1 +0.3
comp=Z,74nm,1.6s,mb5.5
TTA **Tatalina** 48.41 334 eP P 14 37 36.1 +0.3
TTA pmax pmax
comp=Z,74nm,1.6s,mb5.5
IMA2 **Indian Mountai** 49.17 338 eP P 14 37 43.2 +1.5
RES **Resolute Bay** 49.95 5 eP P 14 37 45.4 -2.1
comp=Z,900nm,1.4s
RES **Resolute Bay** 49.95 5 eP P 14 37 45.4 -2.1
RES pmax pmax
comp=Z,900nm,1.4s
RKT **Rikitea** 54.15 209 eS S 14 45 54.6 -1.7
comp=Z,357nm,29.8s
TNA **Tin City** 54.22 334 eP P 14 38 19.4 +0.1
comp=Z,39nm,1.6s,mb5.1
LPAZ **La Paz** 57.79 131 P P 14 38 52.7 +7.1
comp=Z,5.7nm,1.1s,mb4.5,baz=322,slow=8.3,SNR=9.9
LPAZ LR LR 15 01 18.5
comp=Z,314nm,21.2s,MS4.4,baz=130,slow=34
PPT **Papeete** 57.81 227 eS S 14 46 43.7 -1.5
comp=Z,736nm,28.0s
PPT eLQ 14 53 12.0
comp=Z,710nm,22.8s
PPT eLR LR 14 55 35.3
comp=Z,2μm,27.8s,baz=31
PPT **Papeete** 57.81 227 LR LR 14 56 39.8
comp=Z,556nm,18.2s,MS4.7,baz=54,slow=29
TBI **Tubuai** 61.99 222 eS S 14 47 37.6 -1.3
comp=Z,288nm,26.8s
TBI eLQ 14 54 42.1
comp=Z,876nm,36.0s
TBI eLR LR 14 57 26.6
comp=Z,652nm,29.5s
DAG **Danmarks Havn** 65.70 15 eP P 14 39 36.0 -2.1
DAG **Danmarks Havn** 65.70 15 i P P 14 39 36.0 -2.1
PET **Petropavlovsk** 71.21 320 eP P 14 40 14.9 +2.0
PET eS S 14 49 27.6 -2.3
PET pmax pmax
comp=Z,71nm,1.3s,mb5.4
SEY **Seymchan** 71.30 331 eP P 14 40 15.4 +2.1
MA2 **Magadan** 73.19 328 eP P 14 40 27.7 +3.0
MA2 eS S 14 49 54.5 +2.0
MA2 pmax pmax
comp=Z,40nm,1.9s,mb5.0
MA2 MLR MLR
comp=Z,400nm,19.4s,MS4.7
PLCA **Paso Flores** 75.08 150 P P 14 40 38.0 +2.2
PLCA LR LR 15 07 12.3
PLCA **Paso Flores** 75.08 150 P P 14 40 38.0 +2.2
comp=Z,4.0nm,0.8s,mb4.4,baz=322,slow=7.7,SNR=12
PLCA LR LR 15 07 12.3
comp=Z,353nm,18.9s,MS4.7,baz=339,slow=30
TIXI **Tiksi** 75.29 344 eP P 14 40 34.7 -2.0
TIXI pmax pmax
comp=Z,29nm,1.4s,mb5.0
TIXI MLR MLR
comp=Z,406nm,16.0s,MS4.8
ARCES **ARCESS Array B** 79.99 15 P P 14 41 02.4 -0.6
comp=Z,5.5nm,0.9s,mb4.5,baz=318,slow=6.4,SNR=3.7
ARCES LR LR 15 18 09.7
comp=Z,454nm,19.6s,MS4.8,baz=326,slow=37
YAK **Yakutsk** 80.94 336 eP P 14 41 10.1 +1.9
YAK pmax pmax
comp=Z,41nm,1.4s,mb5.2
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,15nm,1.3s
ROSF **Rostrenen** 81.46 40 eP P 14 41 12.4 +1.2
comp=E,168nm,1.6s,mb5.4
ROSF **Rostrenen** 81.46 40 eP P 14 41 12.4 +1.2
comp=E,84nm,1.6s,mb5.4
ROSF **Rostrenen** 81.46 40 eP P 14 41 12.4 +1.2
ROSF pmax pmax
comp=Z,84nm,1.6s,mb5.4
NB2 **NORSAR Subarra** 81.54 25 P P 14 41 12.2 +0.8
comp=Z,19nm,1.2s,mb4.9,baz=305,slow=5.1
NB2 **NORSAR Subarra** 81.54 25 P P 14 41 12.2 +0.8
NB2 pmax pmax
comp=Z,19nm,1.2s,mb4.9
NOA **NORSAR Array B** 81.54 25 P P 14 41 12.4 +1.1
comp=Z,5.0nm,1.0s,mb4.4,baz=310,slow=4.9,SNR=9.2
NOA LR LR 15 14 58.9
comp=Z,511nm,19.7s,MS4.9,baz=300,slow=34
QUIF **Quistinic** 81.73 41 eP P 14 41 14.3 +1.6
comp=Z,75nm,1.2s,mb5.2

QUIF Quistinic 81.73 41 *e*P P 14 41 14.3 +1.6
comp=Z,38nm,1.2s,mb5.2
QUIF Quistinic 81.73 41 *e*P P 14 41 14.3 +1.6
QUIF pmax pmax
comp=Z,37nm,1.2s,mb5.2
KONO Kongsberg 81.75 27 *e*P P 14 41 16.2 +3.7
comp=Z,21nm,1.0s,mb5.0
KONO Kongsberg 81.75 27 *e*P P 14 41 16.2 +3.7
KONO pmax pmax
comp=Z,21nm,1.0s,mb5.0
SGMF Saint Gilles 81.92 40 *e*P P 14 41 14.9 +1.2
comp=Z,168nm,1.5s,mb5.4
SGMF Saint Gilles 81.92 40 *e*P P 14 41 14.9 +1.2
comp=Z,84nm,1.5s,mb5.5
SGMF Saint Gilles 81.92 40 *e*P P 14 41 14.9 +1.2
SGMF pmax pmax
comp=Z,84nm,1.5s,mb5.5
GRR Gorron 82.84 40 *e*P P 14 41 20.3 +1.8
comp=Z,343nm,1.7s,mb5.8
GRR Gorron 82.84 40 *e*P P 14 41 20.3 +1.8
comp=Z,171nm,1.7s,mb5.8
GRR Gorron 82.84 40 *e*P P 14 41 20.3 +1.8
GRR pmax pmax
comp=Z,171nm,1.7s,mb5.8
FLN La Foliniere 82.87 39 *e*P P 14 41 20.6 +2.0
comp=Z,333nm,1.5s,mb5.8
FLN *e*MLR MLR
comp=Z,2μm,22.5s,MS5.0
FLN La Foliniere 82.87 39 *e*P P 14 41 20.6 +2.0
comp=Z,166nm,1.5s,mb5.8
FLN LR LR
comp=Z,2μm,22.5s,MS5.3
FLN La Foliniere 82.87 39 *e*P P 14 41 20.6 +2.0
FLN pmax pmax
comp=Z,167nm,1.5s,mb5.8
FLN MLR MLR
comp=Z,2μm,22.5s,MS5.3
EVO Evora 82.95 51 *e*P P 14 41 21.4 +2.2
comp=Z,104nm,1.4s,mb5.4
EVO *e*MLR MLR
comp=Z,1μm,21.0s,MS5.0
YSS Yuzh-Sakhalins 83.01 319 *e*P P 14 41 20.3 +0.9
YSS pmax pmax
comp=Z,5.0nm,0.6s,mb4.7
LDF La Druitiere 83.16 39 *e*P P 14 41 21.0 +0.9
comp=Z,368nm,1.8s,mb5.8
LDF La Druitiere 83.16 39 *e*P P 14 41 21.0 +0.9
comp=Z,184nm,1.8s,mb5.8
LDF La Druitiere 83.16 39 *e*P P 14 41 21.0 +0.9
LDF pmax pmax
comp=Z,184nm,1.8s,mb5.8
MFF Saint Martin d 84.17 41 *e*P P 14 41 26.0 +0.7
comp=Z,212nm,1.7s,mb5.7
MFF Saint Martin d 84.17 41 *e*P P 14 41 26.0 +0.7
comp=Z,106nm,1.7s,mb5.7
MFF Saint Martin d 84.17 41 *e*P P 14 41 26.0 +0.7
MFF pmax pmax
comp=Z,106nm,1.7s,mb5.7
UCC Uccle 84.44 36 AP pP 14 41 32.0 +2.0
comp=Z,42nm,2.1s
ASAJ Asahikawa 84.52 316 P P 14 41 26.2 -0.9
comp=Z,7.3nm,0.9s,mb4.8,baz=100,slow=6.1,SNR=3.5
SNF Seneffe 84.56 36 E 14 41 35.0
BAIF Baives 84.77 36 *e*P P 14 41 30.0 +1.7
DOU Dourbes 84.96 36 P P 14 41 30.5 +1.3
comp=Z,21nm,1.9s,mb5.0
DOU E 14 41 41.2
GIVF Givet 85.08 36 *e*P P 14 41 31.7 +1.8
comp=Z,247nm,1.9s,mb5.7
GIVF Givet 85.08 36 *e*P P 14 41 31.7 +1.8
comp=Z,124nm,1.8s,mb5.7
GIVF Givet 85.08 36 *e*P P 14 41 31.7 +1.8
GIVF pmax pmax
comp=Z,124nm,1.8s,mb5.7
BCLA Clavier 85.15 36 P P 14 41 31.7 +1.5
comp=Z,9.9nm,1.2s,mb4.8
ESDC Sonseca Array 85.20 48 P P 14 41 33.8 +3.1
comp=Z,3.1nm,0.9s,mb4.4,baz=308,slow=4.1,SNR=5.3
ESDC LR LR 15 16 15.2
comp=Z,481nm,20.1s,MS4.9,baz=310,slow=33
SJPF Ste Jean 85.29 44 *e*P P 14 41 31.5 +0.4
comp=Z,45nm,1.5s,mb5.1
SJPF Ste Jean 85.29 44 *e*P P 14 41 31.5 +0.4
comp=Z,22nm,1.5s,mb5.1
SJPF Ste Jean 85.29 44 *e*P P 14 41 31.5 +0.4
SJPF pmax pmax
comp=Z,22nm,1.5s,mb5.1
MEM Membach 85.41 35 P P 14 41 33.0 +1.5
comp=Z,13nm,1.4s,mb4.9
BSEG Bad Segeberg 85.56 31 *e*P P 14 41 33.3 +1.1
BSEG pmax pmax
comp=Z,35nm,1.2s,mb5.5
BSEG Bad Segeberg 85.56 31 *e*P P 14 41 33.3 +1.1
comp=Z,35nm,1.2s,mb5.5
TCF Toulx Ste Croi 85.72 40 *e*P P 14 41 33.5 +0.4
comp=Z,32nm,1.1s,mb5.1
TCF Toulx Ste Croi 85.72 40 *e*P P 14 41 33.5 +0.4
comp=Z,16nm,1.1s,mb5.2
TCF Toulx Ste Croi 85.72 40 *e*P P 14 41 33.5 +0.4
TCF pmax pmax
comp=Z,16nm,1.1s,mb5.2
ETSF Etsaut 85.82 44 *e*P P 14 41 34.6 +0.9
RJF Les Rejaudoux 85.83 41 *e*P P 14 41 34.3 +0.6
comp=Z,21nm,1.1s,mb5.0
RJF *e*MLR MLR
comp=Z,924nm,21.5s,MS4.8
RJF Les Rejaudoux 85.83 41 *e*P P 14 41 34.3 +0.6
comp=Z,10nm,1.1s,mb5.0
RJF LR LR
comp=Z,920nm,21.5s,MS5.1
RJF Les Rejaudoux 85.83 41 *e*P P 14 41 34.3 +0.6
RJF pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
RJF MLR MLR
comp=Z,920nm,21.5s,MS5.1
KAF Kangasniemi 85.93 19 *e*p P 14 41 35.0 +1.1
BGF Bois d'Agland 85.94 40 *e*P P 14 41 34.7 +0.5
comp=Z,27nm,1.0s,mb5.1
BGF Bois d'Agland 85.94 40 *e*P P 14 41 34.7 +0.5
comp=Z,13nm,1.0s,mb5.1
BGF Bois d'Agland 85.94 40 *e*P P 14 41 34.7 +0.5
BGF pmax pmax
comp=Z,13nm,1.0s,mb5.1
WLF Walferdange 86.03 36 P P 14 41 36.9 +2.3
SSF Saint Saulge 86.04 39 *e*P P 14 41 35.1 +0.4
comp=Z,40nm,1.1s,mb5.3
SSF Saint Saulge 86.04 39 *e*P P 14 41 35.1 +0.4
comp=Z,20nm,1.1s,mb5.3
SSF Saint Saulge 86.04 39 *e*P P 14 41 35.1 +0.4
SSF pmax pmax
comp=Z,20nm,1.1s,mb5.3
AVF Avril sur Loir 86.10 39 *e*P P 14 41 35.4 +0.4
comp=Z,42nm,1.3s,mb5.2
AVF Avril sur Loir 86.10 39 *e*P P 14 41 35.4 +0.4
comp=Z,21nm,1.3s,mb5.2
AVF Avril sur Loir 86.10 39 *e*P P 14 41 35.4 +0.4
AVF pmax pmax
comp=Z,21nm,1.3s,mb5.2
LOR Lormes 86.13 39 *e*P P 14 41 35.8 +0.6
comp=Z,66nm,1.4s,mb5.4
LOR *e*MLR MLR
comp=Z,812nm,19.8s,MS4.8
LOR Lormes 86.13 39 *e*P P 14 41 35.8 +0.6
comp=Z,33nm,1.4s,mb5.4
LOR LR LR
comp=Z,810nm,19.8s,MS5.1
LOR Lormes 86.13 39 *e*P P 14 41 35.8 +0.6
LOR pmax pmax
comp=Z,33nm,1.4s,mb5.4
LOR MLR MLR
comp=Z,810nm,19.8s,MS5.1
EPF Esparros 86.31 44 *e*P P 14 41 36.8 +0.6
NRDL Niedersach Rie 86.35 32 *e*P P 14 41 36.1 0.0
comp=Z,20nm,1.1s,mb5.3
FINES FINESS Array B 86.38 20 P P 14 41 35.5 -0.6
comp=Z,4.4nm,0.9s,mb4.7,baz=339,slow=4.7,SNR=8.2
SMF Signal de Mont 86.46 39 *e*P P 14 41 36.9 +0.1
comp=Z,24nm,1.0s,mb5.0
SMF Signal de Mont 86.46 39 *e*P P 14 41 36.9 +0.1
comp=Z,12nm,1.0s,mb5.1
SMF Signal de Mont 86.46 39 *e*P P 14 41 36.9 +0.1
SMF pmax pmax
comp=Z,12nm,1.0s,mb5.1
HABR Khabarovsk 86.59 323 *e*P P 14 41 37.4 0.0
HABR *e* pP 14 41 39.9 -0.8
HABR 14 44 59.5
HABR S S 14 52 02.7 -11

JOF Joensuu 86.69 17 *e*p P 14 41 38.0 +0.4
CLZ Clausthal 86.88 33 *e*P P 14 41 38.8 +0.1
CLZ pmax pmax
comp=Z,27nm,1.4s,mb5.3
CLZ Clausthal 86.88 33 *e*P P 14 41 38.8 +0.1
comp=Z,27nm,1.4s,mb5.3
TNS Taunus Mts 86.90 35 *e*P P 14 41 38.0 -0.9
TNS pmax pmax
comp=Z,41nm,1.9s,mb5.3
TNS Taunus Mts 86.90 35 *e*P P 14 41 38.0 -0.9
comp=Z,41nm,1.9s,mb5.3
HAU Haudompre 87.10 37 *e*P P 14 41 41.4 +1.5
HAU *e*MLR MLR
comp=Z,1μm,20.0s,MS5.1
HAU Haudompre 87.10 37 *e*P P 14 41 41.4 +1.5
HAU MLR MLR
comp=Z,1μm,20.0s,MS5.4
MTLF Montolieu 87.31 43 *e*P P 14 41 41.5 +0.5
comp=Z,33nm,1.3s,mb5.1
MTLF Montolieu 87.31 43 *e*P P 14 41 41.5 +0.5
comp=Z,16nm,1.3s,mb5.1
MTLF Montolieu 87.31 43 *e*P P 14 41 41.5 +0.5
MTLF pmax pmax
comp=Z,16nm,1.3s,mb5.1
UBBA Unterbreizbach 87.33 34 *e*P P 14 41 40.5 -0.5
comp=Z,45nm,1.8s,mb5.4
MOX Moxa 88.24 33 *e*P P 14 41 46.6 +1.3
comp=Z,44nm,2.2s,mb5.3
MOX
comp=Z,900nm,17.0s
MOX Moxa 88.24 33 *e*P P 14 41 46.6 +1.3
MOX pmax pmax
comp=Z,44nm,2.2s,mb5.3
MOX MLR MLR
comp=Z,900nm,17.0s,MS5.2
CLL Collm 88.49 32 *e*P P 14 41 48.0 +1.5
comp=Z,3.0nm,0.7s,mb4.6
CLL *e*S S 14 52 38.0 +5.7
CLL LR LR
comp=Z,1μm,19.3s,MS5.2
CLL Collm 88.49 32 *e*P P 14 41 48.0 +1.5
CLL *e*S S 14 52 38.0 +5.7
CLL pmax pmax
comp=Z,3.0nm,0.7s,mb4.6
CLL MLR MLR
comp=Z,1μm,19.3s,MS5.2
CLL Collm 88.49 32 *e*P P 14 41 48.0 +1.5
comp=Z,3.0nm,0.7s,mb4.6
CLL *e*PP PP 14 45 17.0 +3.2
CLL *e*S S 14 52 38.0 +5.7
CLL *e*SS SS 14 58 24.0 +2.6
GRA1 Grafenberg Arr 88.64 34 *e*P P 14 41 47.3 +0.1
comp=Z,40nm,1.3s,mb5.6
GRA1 LR LR
comp=Z,700nm,18.8s,MS5.1
GRF Grafenberg Arr 88.64 34 *e*P P 14 41 47.3 +0.1
GRF pmax pmax
comp=Z,40nm,1.3s,mb5.6
GRF MLR MLR
comp=Z,700nm,18.8s,MS5.1
GRF Grafenberg Arr 88.64 34 *e*P P 14 41 47.3 +0.1
comp=Z,40nm,1.3s,mb5.6
GRF *e*L 15 19 00.5
comp=Z,705nm,18.8s
LPG La Plagne 88.78 39 *e*P P 14 41 49.6 +1.6
comp=Z,75nm,1.7s,mb5.4
LPG La Plagne 88.78 39 *e*P P 14 41 49.6 +1.6
comp=Z,37nm,1.7s,mb5.4
LPG La Plagne 88.78 39 *e*P P 14 41 49.6 +1.6
LPG pmax pmax
comp=Z,37nm,1.7s,mb5.4
WERN Wernitzgruen 88.84 33 *e*P P 14 41 47.6 -0.6
comp=Z,46nm,1.9s,mb5.5
NKC Novy Kostel 88.91 33 AMS AMS 15 22 20.0
comp=Z,900nm,18.5s
BRG Berggiesshubel 89.22 32 *e*P P 14 41 55.3 +5.4
BRG pmax pmax
comp=Z,7.0nm,1.4s,mb4.8
BRG MLR MLR
comp=N,492nm,26.7s
BRG MLR MLR
comp=E,608nm,17.0s
BRG MLR MLR
comp=Z,734nm,17.1s
BRG Berggiesshubel 89.22 32 *e*P P 14 41 55.3 +5.4
comp=Z,11nm,1.4s,mb5.0
BRG
comp=N,822nm,26.7s
BRG
comp=E,1μm,17.0s
BRG
comp=Z,1μm,17.1s
BOD Bodaibo 89.49 338 *e*P P 14 41 48.5 -2.5
BOD pmax pmax
comp=Z,13nm,1.7s,mb5.0
PVCC Panska Ves 89.75 32 AMS AMS 15 20 50.0
comp=Z,1μm,17.1s
WET Wettzell 89.83 34 *e*P P 14 41 52.2 -0.6
WET pmax pmax
comp=Z,12nm,1.4s,mb5.0
WET Wettzell 89.83 34 *e*P P 14 41 52.2 -0.6
comp=Z,12nm,1.4s,mb5.0
LMR La Mourre 89.91 41 *e*P P 14 41 53.9 +0.6
comp=Z,135nm,1.6s,mb5.7
LMR La Mourre 89.91 41 *e*P P 14 41 53.9 +0.6
comp=Z,68nm,1.6s,mb5.7
LMR La Mourre 89.91 41 *e*P P 14 41 53.9 +0.6
LMR pmax pmax
comp=Z,68nm,1.6s,mb5.7
PRU Pruhonice 90.09 32 *e*P P 14 41 58.7 +4.7
PRU AMS AMS 15 23 10.0
comp=Z,900nm,16.1s
KHC Kasperske Hory 90.19 33 *e*P P 14 42 00.4 +5.9
KHC AMS AMS 15 22 20.0
comp=Z,1μm,16.8s
GERES GERESS Array B 90.43 34 P P 14 41 57.6 +2.0
comp=Z,0.9nm,0.7s,mb4.2,baz=316,slow=5.6,SNR=4.9
GERES LR LR 15 21 13.3
comp=Z,911nm,18.9s,MS5.2,baz=297,slow=35
DPC Dobruska-Polom 90.70 31 AMS AMS 15 21 30.0
comp=Z,800nm,17.3s
TREC Trest 91.02 32 AMS AMS 15 23 10.0
comp=Z,600nm,15.4s
MAT Matsushiro 91.35 312 P P 14 42 01.6 +1.4
MAT S S 14 52 59.0 -0.4
MJAR Matsushiro Arr 91.35 312 P P 14 42 02.0 +1.9
comp=Z,2.3nm,0.9s,mb4.5,baz=32,slow=2.2,SNR=9.5
MJAR LR LR 15 17 41.9
comp=Z,253nm,19.5s,MS4.7,baz=70,slow=32
OKC Ostrava-Krasne 91.91 31 AMS AMS 15 21 10.0
comp=Z,500nm,15.4s
CBIJ Chichi jima 93.45 302 LR LR 15 15 10.1
comp=Z,299nm,20.2s,MS4.7,baz=83,slow=30
HIA Hailar 93.71 330 *e*P P 14 42 11.8 +1.0
comp=Z,15nm,1.4s,mb5.2
HIA Hailar 93.71 330 *e*P P 14 42 11.8 +1.0
HIA pmax pmax
comp=Z,15nm,1.4s
HNR Honiara 94.45 262 LR LR 15 15 08.5
comp=Z,720nm,20.5s,MS5.1,baz=359,slow=29
CN2 Changchun 94.71 323 *e*P P 14 42 15.8 +0.3
CN2 *e*XP sP 14 42 22.0 +2.0
CN2 *e*S S 14 53 24.0 -5.0
CN2 AMB AMB
comp=Z,10.0nm,0.5s,mb5.5
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s,MS4.9
CN2 LR LR
comp=E,200nm,15.0s,MS4.9
CN2 LR LR
comp=Z,200nm,16.0s,MS4.7
OBN Obninsk 94.74 19 *e*P P 14 42 15.3 -0.1
OBN pmax pmax
comp=Z,6.0nm,0.4s,mb5.4
AKASG Malin Array Be 95.95 25 LR LR 15 25 02.0
comp=Z,488nm,20.9s,MS5.0,baz=340,slow=35
KEST Kesra 96.18 46 LR LR 15 23 58.8
comp=Z,194nm,20.3s,MS4.6,baz=218,slow=34
IRK Irkutsk 97.25 340 *e*P P 14 42 29.9 +3.0
IRK pmax pmax
comp=Z,27nm,2.2s,mb5.3
ARU Arti 97.90 7*c* *i*P P 14 42 31.5 +1.8
ARU *e* 14 46 25.8
ARU PPP 14 48 33.0
ARU S SKSac 14 53 08.8 +1.4
ARU SS SS 15 00 34.8 -0.5
ARU pmax pmax
comp=Z,19nm,2.8s,mb5.1
ARU MLR MLR
comp=Z,747nm,20.0s,MS5.2
TLY Talaya 97.94 340 *e*P P 14 42 34.1 +4.1
TLY *e* 14 53 11.9
TLY pmax pmax
comp=Z,10.0nm,1.7s,mb5.1
TLY MLR MLR
comp=Z,327nm,20.0s,MS4.8
SONM Songino Array 100.30 336 P Pdif 14 42 43.8 +3.2
comp=Z,1.6nm,1.0s,baz=32,slow=4.0,SNR=9.9
TORD Torodi Ar. Bea 102.86 69 P Pdif 14 42 55.5 +3.5
comp=Z,1.1nm,1.1s,baz=318,slow=6.4,SNR=4.0
ANN Anapa 103.93 24 *e*P Pdif 14 42 53.3 -3.4
ANN MLR MLR
comp=Z,679nm,21.0s,MS5.2
SSE Sheshan 105.81 316 PDIF Pdif 14 43 09.3 +4.2
SSE SS SS 15 02 27.5 +1.0
SSE LR LR
comp=N,34nm,23.8s,MS4.3
SSE LR LR
comp=E,90nm,23.8s,MS4.3
SSE LR LR
comp=Z,118nm,22.6s,MS4.4
LZH Lanzhou 111.23 331 *e*PKP PKiKP 14 47 26.8 -1.5
LZH XPKP 14 47 31.3
LZH *e*PP PP 14 48 08.5 +1.9
LZH SKS SKSdf 14 54 36.5 -4.1
LZH SKKS SKKSac 14 55 01.3 -10
LZH *e*SS SS 15 03 35.3 -3.6
LZH PP PP
comp=Z,93nm,8.9s
LZH LR LR
comp=N,305nm,18.1s
LZH LR LR
comp=Z,397nm,20.3s,MS5.0
CD2 Chengdu 115.61 328 *e*PKP PKPdf 14 47 37.5 +0.7
CD2 XPKP 14 47 45.5
CD2 PP PP 14 48 42.8 +4.9
CD2 PKS 14 51 13.0
CD2 SKS SKSdf 14 54 45.3 -3.9
CD2 SKKS SKKSac 14 55 32.5 -8.2
CD2 SS SS 15 04 34.3 -2.7
CD2 PP PP
comp=Z,140nm,10.8s
CD2 LR LR
comp=N,440nm,24.0s,MS5.1
CD2 LR LR
comp=E,270nm,20.8s,MS5.1
CD2 LR LR
comp=Z,320nm,21.6s,MS4.9
GYA Guiyang 117.76 323 PDIF Pdif 14 43 59.5 +1.3
GYA PKP PKPdf 14 47 41.8 +0.8
GYA PP PP 14 48 57.3 +4.2
GYA PKS 14 51 17.5
GYA SKS SKSdf 14 54 51.8 -1.7
GYA SKKS SKKSac 14 55 49.3 -5.9
GYA S Sdif 14 56 37.8 -4.2
GYA SS SS 15 05 04.0 -1.4
GYA PP PP
comp=Z,120nm,8.0s
GYA LR LR
comp=N,270nm,23.7s,MS5.0
GYA LR LR
comp=E,390nm,22.2s,MS5.0
GYA LR LR
comp=Z,270nm,21.8s,MS4.8
KMI Kunming 120.90 326 PKP PKPdf 14 47 47.3 +0.2
KMI PP PP 14 49 19.0 +4.3
KMI SS SS 15 05 45.8 0.0
KMI PP PP
comp=Z,75nm,5.0s
KMI LR LR
comp=N,209nm,15.2s,MS5.0
KMI LR LR
comp=E,135nm,16.7s,MS5.0
KMI LR LR
comp=Z,242nm,18.2s,MS4.9
WRA Warramunga Arr 121.29 261 PKP PKPdf 14 47 50.3 +2.4
comp=Z,0.6nm,0.7s,baz=65,slow=2.0,SNR=5.0
ASAR Alice Springs 122.76 257 PKP PKPdf 14 47 52.5 +1.9
comp=Z,0.4nm,0.6s,baz=90,slow=2.3,SNR=4.1

CSEM ***28*** *14:32:03.2±0.5,3813N×3888E,h15km,MD2.5,Error ellipse: s-maj=13.3km s-min=9.2km az=88.0*
ISK ***28*** *14:32:03.6,3808N×3877E,h3km,MD2.5*
ISCJB ***28*** *14:32:04.4±0.6,3807N±003×3878E±005,h3km,Error ellipse: s-maj=5.4km s-min=4.2km az=24.7*
DDA ***28*** *14:32:04.0,3804N×3887E,h7km±2km,Md3.0*
ISC 28 14:32:04.7±0.7,3807N±003×3876E±005,h1km±8km,n10,σ0§75/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MALT	**Malatya**	**0.36**	**313**	PG	**Pg**	**14 32 11.5**	**-0.1**
MALT				SG	**Sg**	**14 32 16.9**	**+0.6**
MYA	**Malataya**	**0.37**	**314**	PG	**Pg**	**14 32 11.9**	**+0.1**
ELZG	**Elazig**	**0.47**	**22**	*i* P	**Pg**	**14 32 13.6**	**0.0**
ELZG				*i* S	**Sg**	**14 32 20.2**	**+0.6**
ELZG	**Elazig**	**0.47**	**22**	*i* P	**Pg**	**14 32 13.6**	**0.0**
ELZG				*i* S	**Sg**	**14 32 20.2**	**+0.5**
URFA	**Urfa**	**0.63**	**176**	PG	**Pg**	**14 32 16.6**	**-0.1**
ATAB	**Bozova**	**0.70**	**212**	*i* P	**Pg**	**14 32 18.5**	**+0.4**
ATAB				*i* S	**Sg**	**14 32 28.2**	**+0.9**
GZT	**Gaziantep**	**1.19**	**234**	*i* P	**Pg**	**14 32 28.0**	**+0.5**
GZT				*i* S	**Sg**	**14 32 43.0**	**+0.2**
GAZ	**Gaziantep**	**1.52**	**235**	*e*PN	**Pn**	**14 32 33.5**	**+0.4**
GAZ				*e*SN	**Sn**	**14 32 54.2**	**+0.7**
MARD	**Mardin**	**1.77**	**115**	*i* P	**Pn**	**14 32 35.3**	**-1.1**
MARD				*i* S	**Sn**	**14 32 59.4**	**-0.1**
ANDN	**Andirin**	**1.97**	**257**	*e*P	**Pg**	**14 32 41.5**	**-1.1**
ANDN				*i* S	**Sg**	**14 33 06.0**	**-2.1**

IDC 28 14:36:24.4±1.1,081N×12570E,h0km,mb3.7/5,mb1 3.8/5,mb1mx3.7/16,mbtmp3.7/5,Error ellipse: s-maj=135.8km s-min=19.2km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.29**	**158**	P	P	14 41 22.7	-0.7
	1.8nm,0.7s,baz=337,slow=11,SNR=25						
ASAR	**Alice Springs**	**25.60**	**162**	P	P	14 41 56.1	+0.7
	0.6nm,0.3s,baz=339,slow=7.6,SNR=15						
SONM	**Songino Array**	**49.75**	**343**	P	P	14 45 18.2	-0.2
	0.8nm,0.9s,baz=165,slow=6.2,SNR=5.0						
MKAR	**Makanchi Array**	**59.39**	**327**	P	P	14 46 27.9	-0.7
	0.3nm,0.4s,baz=120,slow=7.5,SNR=6.0						
ZALV	**Zalesovo Beam**	**62.73**	**334**	P	P	14 46 52.0	+0.8
	0.3nm,0.3s,baz=91,slow=7.5,SNR=2.1						

ISCJB ***28*** *14:37:23.2±0.4,3834N±003×2029E±003,h10km,Error ellipse: s-maj=4.1km s-min=3.2km az=33.7*
CSEM ***28*** *14:37:23.5±0.2,3829N×2029E,h0km±1km,MD3.6,Error ellipse: s-maj=2.1km s-min=1.9km az=68.0*
ATH ***28*** *14:37:23.4,3838N×2039E,h5km±2km,MD3.6/10*
NEIC ***28*** *14:37:23.4,3838N×2039E,h4km,MD3.6(ATH), ML3.7(THE),After ATH.*
THE ***28*** *14:37:24.3,3839N×2038E,h3km,ML3.7*
ISC 28 14:37:24.0±0.4,3834N±003×2034E±003,h10km,n32,σ1§30/41,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.26**	**128**	*e*PG	**Pg**	**14 37 28.4**	**-0.8**
VLS				*e*SG	**Sg**	**14 37 33.1**	**+0.5**
KFL	**Anninata**	**0.42**	**122**	*e*Pg	**Pg**	**14 37 31.8**	**-0.4**
LKD	**Levkas**	**0.45**	**34**	*e*Pg	**Pg**	**14 37 31.3**	**-1.4**
LKD				*e*Sg	**Sg**	**14 37 37.2**	**-1.4**
RLS	**Riolos of Patr**	**0.93**	**107**	*e*PB	**Pb**	**14 37 40.6**	**-1.6**
IGT	**Igoumenitsa**	**1.20**	**360**	*e*Pg	**Pg**	**14 37 45.2**	**-1.7**
IGT				*e*Sg	**Sg**	**14 38 03.4**	**+0.9**
SELA	**Sela**	**1.23**	**92**	*e*Pg	**Pg**	**14 37 45.3**	**-2.3**
SELA				*e*Sg	**Sg**	**14 38 05.0**	**+1.5**
EVR	**Evrytania**	**1.29**	**63**	*e*PG	**Pg**	**14 37 46.4**	**-2.4**
JAN	**Janina**	**1.38**	**17**	*e*PB	**Pb**	**14 37 48.3**	**-1.6**
KEK	**Kerkira**	**1.44**	**343**	*e*PB	**Pb**	**14 37 49.9**	**-1.0**
AGG	**Agios Georgios**	**1.71**	**66**	*e*Pb	**Pb**	**14 37 53.5**	**-1.9**

AGG					*e*Sb	**Sb**	**14 38 17.7 +0.8**
ITM	**Ithomi**	**1.71**	**132**		*e*PG	**Pg**	**14 37 54.9 -1.9**
THL	**Klokotos Trika**	**1.79**	**46**	*e*PN	**Pn**	**14 37 56.0 +1.0**
PYL	**PYLOS**	**1.82**	**142**	*e*Pb	**Pb**	**14 37 57.4 0.0**
VLX	**Vlachokerasia**	**1.88**	**120**	*e*Pb	**Pb**	**14 37 56.9 -1.5**
VLX					*e*Sb	**Sb**	**14 38 23.1 +1.1**
LTK	**Loutraki**	**2.10**	**98**	*e*PN	**Pn**	**14 38 00.1 +0.9**
LKR	**Lokris**	**2.11**	**81**	*e*PN	**Pn**	**14 38 00.7 +1.3**
KZN	**Kozani**	**2.26**	**29**	*e*PN	**Pn**	**14 38 03.0 +1.6**
LIT	**Litokhoron**	**2.43**	**43**	*e*Pn	**Pn**	**14 38 02.9 -0.8**
LIT					*e*Sn	**Sn**	**14 38 34.5 +1.0**
DID	**Didima**	**2.44**	**109**	*e*Pn	**Pn**	**14 38 04.9 +1.1**
DID					*e*Sn	**Sn**	**14 38 36.3 +2.6**
FNA	**Florina**	**2.57**	**18**	*e*Pn	**Pn**	**14 38 06.7 +1.0**
FNA					*e*Sn	**Sn**	**14 38 37.7 +0.7**
VLI	**Veliai**	**2.62**	**127**	*e*PN	**Pn**	**14 38 09.5 +3.1**
PAIG	**Paliouri**	**3.05**	**58**	*e*Pn	**Pn**	**14 38 12.1 -0.1**
PE1	**Pezze di Greco**	**3.34**	**319**	*e*Pn	**Pn**	**14 38 16.8 +0.6**
SG1	**Sgolgore (BA)**	**3.77**	**313**	*e*Pn	**Pn**	**14 38 22.2 0.0**
CDT	**Castel del Mon**	**4.16**	**312**	*e*Pn	**Pn**	**14 38 28.5 +1.0**
SSY	**Sortino**	**4.33**	**256**	Pn	**Pn**	**14 38 29.6 -0.3**
HAVL	**Avola**	**4.36**	**253**	Pn	**Pn**	**14 38 29.0 -1.2**
MRLC	**Muro Lucano**	**4.46**	**304**	Pn	**Pn**	**14 38 32.4 +0.8**
PZI	**Palazzolo**	**4.46**	**255**	Pn	**Pn**	**14 38 30.8 -0.8**
SGO	**Sicignano**	**4.48**	**301**	Pn	**Pn**	**14 38 35.4 +3.5**
HMDC	**Modica**	**4.62**	**254**	Pn	**Pn**	**14 38 34.2 +0.4**
NRCA	**Norcia**	**7.10**	**312**	Pn	**Pn**	**14 39 10.5 +2.7**

*MAN **28** 14:40:30, 940N×125.30E, h4km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY I - SURIGAO CITY.
*ISCJB **28** 14:40:32.2±0.6, 942N±003×125.41E±005, h48km±6km, mb3.9/11, Error ellipse: s-maj=8.0km s-min=5.0km az=158.7*
*NEIC **28** 14:40:34.9±2.4, 924N×125.16E, h60km±23km, mb4.3/2, Error ellipse: s-maj=52.4km s-min=13.3km az=62.0*
NEIC Felt [I PIVS] at Surigao.
*IDC **28** 14:40:37.1±9.4, 922N×125.08E, h79km±87km, mb3.5/8, mb1 3.6/8, mb1mx3.5/18, mbtmp3.5/8, Error ellipse: s-maj=75.5km s-min=17.8km az=66.0*
ISC 28 14:40:33.4±0.6, 941N±003×12539E±005, h42km±7km, n27, σ1ᵍ34/38, mb3.9/11, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.89**	**324**	*e*P	**Pn**	**14 40 46.7**	**-2.7**
MSLP				*e*S	**Sn**	**14 41 00.2**	**-0.9**
CGP	**Cagayan de Oro**	**1.17**	**216**	↑*e*P	**Pn**	**14 40 51.5**	**-1.9**
CGP				*i* S	**Sn**	**14 41 08.1**	**0.0**
TBP	**Tagbilaran**	**1.53**	**281**	*e*P	**Pn**	**14 40 56.7**	**-1.5**
TBP				*e*S	**Sn**	**14 41 17.5**	**+0.6**
BIPH	**Bislig**	**1.55**	**142**	↓*i*P	**Pn**	**14 40 55.2**	**-3.3**
BIPH				*i* S	**Sn**	**14 41 18.3**	**+0.8**
BUKP	**Musuan**	**1.56**	**192**	*e*P	**Pn**	**14 40 57.6**	**-1.0**
BUKP				*e*S	**Sn**	**14 41 23.1**	**+5.5**
LLP	**Lapu-Lapu**	**1.67**	**303**	*e*P	**Pn**	**14 40 58.1**	**-2.0**
LLP				*e*S	**Sn**	**14 41 19.6**	**-0.6**
PLP	**Palo**	**1.79**	**347**	*e*P	**Pn**	**14 41 01.4**	**-0.4**
PLP				*e*S	**Sn**	**14 41 25.8**	**+2.5**
DCPH	**Dipolog City**	**2.17**	**248**	↓*i*P	**Pn**	**14 41 06.1**	**-1.0**
DCPH				*e*S	**Sn**	**14 41 34.3**	**+1.6**
DAV	**Davao City (W)**	**2.33**	**175**	Pn	**Pn**	**14 41 08.7**	**-0.6**
PAGZ	**Pagadian**	**2.52**	**232**	*e*P	**Pn**	**14 41 11.8**	**0.0**
PAGZ				*e*S	**Sn**	**14 41 44.1**	**+2.8**
MATI	**Mati**	**2.60**	**161**	*e*P	**Pn**	**14 41 14.3**	**+1.4**
MATI				*e*S	**Sn**	**14 41 53.1**	**+10**
GUIM	**Jordan**	**3.01**	**294**	*e*P	**Pn**	**14 41 18.8**	**+0.2**
CNP	**Catarman**	**3.16**	**347**	*e*P	**Pn**	**14 41 22.0**	**+1.3**
CNP				*e*S	**Sn**	**14 42 06.6**	**+9.5**
PVCP	**Virac**	**4.33**	**344**	*e*P	**Pn**	**14 41 40.9**	**+4.2**
OTRP	**Odiongan**	**4.42**	**312**	*e*P	**Pn**	**14 41 39.8**	**+1.9**
BATI	**Kupang**	**19.56**	**185**	P	**Pn**	**14 45 01.8**	**+2.4**
	1.4nm,0.3s,baz=92,slow=3.7,SNR=3.4						
WRA	**Warramunga Arr**	**30.47**	**163**	P	**P**	**14 46 41.1**	**-1.2**
	0.6nm,1.0s,mb3.3,baz=344,slow=9.4,SNR=2.4						
ASAR	**Alice Springs**	**33.91**	**166**	P	**P**	**14 47 11.3**	**-1.2**
	0.5nm,0.7s,mb3.6,baz=347,slow=7.0,SNR=7.2						
ASAR				PcP	PcP	14 49 50.8	+0.3
	0.2nm,0.5s,baz=343,slow=3.6,SNR=4.5						
CTA	**Charters Tower**	**35.79**	**145**	P	**P**	**14 47 30.0**	**+1.2**
	4.2nm,1.0s,mb4.3,baz=329,slow=5.9,SNR=3.0						
SONM	**Songino Array**	**41.53**	**341**	P	**P**	**14 48 18.1**	**+1.6**
	0.4nm,0.7s,mb3.2,baz=144,slow=5.4,SNR=3.2						
MKAR	**Makanchi Array**	**52.19**	**324**	P	**P**	**14 49 39.8**	**-0.1**
	0.8nm,0.6s,mb3.8,baz=120,slow=8.8,SNR=8.7						
ZALV	**Zalesovo Beam**	**54.96**	**332**	P	**P**	**14 50 05.3**	**+5.2**
	0.3nm,0.4s,mb3.7,baz=146,slow=6.2,SNR=2.1						
UCH	**Uchtor**	**55.16**	**315**	P	**P**	**14 50 02.7**	**+0.9**
	4.0nm,1.0s,mb4.4						
BRVK	**Borovoye**	**61.95**	**326**	*e*P	**P**	**14 50 48.6**	**-0.2**
	2.4nm,1.0s,mb4.3						
FINES	**FINESS Array B**	**86.23**	**332**	P	**P**	**14 53 09.5**	**-0.7**
	0.5nm,0.6s,mb4.0,baz=83,slow=4.4,SNR=3.1						
NOA	**NORSAR Array B**	**93.14**	**334**	P	**P**	**14 53 41.0**	**-1.7**
	0.6nm,0.7s,mb4.1,baz=109,slow=4.2,SNR=2.6						
YKA	**Yellowknife Ar**	**94.89**	**24**	P	**P**	**14 53 50.6**	**-0.2**
	0.2nm,0.5s,mb3.8,baz=303,slow=4.7,SNR=5.5						

NNC 28 15:05:11.4±4.9, 3744N×7027E, h0km, mb3.6, mpv3.2, 3C-2D, Error ellipse: s-maj=64.8km s-min=38.1km az=81.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.66**	**2**	↑Pn	Pn	15 06 39.8	+3.1
	0.9nm,0.4s,baz=183,slow=14,SNR=11						
KK31				↑Sn	Sn	15 07 49.2	+6.8
	0.5nm,0.4s,baz=183,slow=19,SNR=4.7						
TKM2	**Tokmak 2**	**6.82**	**35**	↓Pn	Pn	15 06 51.4	-1.3
	1.3nm,0.5s						
AB31	**Akbulak array**	**13.98**	**331**	↑Pn	Pn	15 08 32.3	+1.6
	0.9nm,0.8s,baz=0.0,slow=0.1,SNR=6.0						
AB31				↓Sn	Sn	15 11 02.6	-3.8
	0.1nm,0.5s						

*TEH **28** 15:04:58.7, 3575N×4940E, h4km, ML3.6*
*THR **28** 15:05:52.8±0.4, 3561N×4937E, h42km±10km, ML3.7*
*ISCJB **28** 15:05:53.4±0.6, 3564N±005×4946E±004, h10km, Error ellipse: s-maj=6.9km s-min=4.5km az=178.0*
*CSEM **28** 15:05:53.4±0.1, 3562N×4943E, h18km, ML3.6, Error ellipse: s-maj=4.1km s-min=2.6km az=10.0*
ISC 28 15:05:54.2±0.6, 3562N±005×4946E±004, h10km, n20, σ1ᵍ45/25, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRAZ	**Razeghan**	**0.44**	**119**	*e*Pg	**Pg**	**15 06 01.9**	**-0.9**
IRAZ				*e*		15 06 12.2	
	comp=Z,35μm,0.1s						
IMHD	**Mahdasht**	**0.98**	**86**	*e*Pg	**Pg**	**15 06 12.2**	**-0.9**
IMHD				*e*Sg	**Sg**	**15 06 26.9**	**+1.0**
IMHD				*e*		15 06 28.5	
	comp=Z,20μm,0.1s						
IMHD	**Mahdasht**	**0.98**	**86**	*e*Pg	**Pg**	**15 06 12.2**	**-0.9**
IMHD				*e*Sg	**Sg**	**15 06 26.9**	**+1.0**
ASAO	**Ashtian**	**1.16**	**156**	*e*Pg	**Pg**	**15 06 15.1**	**-1.5**
ASAO				*e*Sg	**Sg**	**15 06 31.6**	**-0.1**
THKV	**Tehran--Karaj**	**1.19**	**75**	*e*Pg	**Pg**	**15 06 16.4**	**-0.7**
THKV				*e*Sg	**Sg**	**15 06 33.6**	**+1.1**
THKV				AML	AML	15 06 40.0	
	comp=N,793nm,0.4s						
THKV				AML	AML	15 06 42.0	
	comp=E,785nm,0.6s						
THKV	**Tehran--Karaj**	**1.19**	**75**	*e*Pg	**Pg**	**15 06 16.4**	**-0.7**
	SNR=103						
THKV				*e*Sg	**Sg**	**15 06 33.6**	**+1.1**
	SNR=103						
CHTH	**Charan**	**1.38**	**77**	*e*Pg	**Pg**	**15 06 19.5**	**-1.3**
CHTH				AML	AML	15 06 44.0	
	comp=N,461nm,0.4s						
SNGE	**Sanandaj**	**1.81**	**254**	*e*Pg	**Pn**	**15 06 24.4**	**-1.0**
IAFJ	**Afjeh**	**1.85**	**82**	*e*	**Sg**	**15 06 59.2**	**+5.6**
	comp=Z,9μm,0.2s						
GHVR	**GHOM**	**1.89**	**127**	*e*Pg	**Pg**	**15 06 27.2**	**-3.2**
GHVR				AML	AML	15 07 01.8	
	comp=N,4μm,0.6s						
DAMV	**Damavand**	**2.04**	**89**	*e*Pg	**Pg**	**15 06 30.9**	**-2.5**
DAMV				AML	AML	15 07 02.1	
	comp=N,507nm,0.5s						
DAMV				AML	AML	15 07 09.5	
	comp=E,273nm,0.4s						
IDMV	**Damavand**	**2.10**	**90**	*e*Pn	**Pn**	**15 06 31.6**	**+2.2**
IDMV				*e*		15 07 04.1	
	comp=Z,8μm,0.2s						
ILIN	**Laeen**	**2.16**	**252**	*e*Pn	**Pn**	**15 06 30.8**	**+0.5**
ILIN				*e*		15 07 02.0	
	comp=Z,2μm,0.3s						
ISFB	**Sefidab**	**2.60**	**118**	*e*Pn	**Pn**	**15 06 39.2**	**+2.8**
ISFB				*e*		15 07 18.5	
	comp=Z,2μm,0.3s						
IFIR	**Firoozkooh**	**2.68**	**89**	*e*Pn	**Pn**	**15 06 41.8**	**+4.4**
IFIR				*e*		15 07 20.7	
	comp=Z,4μm,0.1s						
IGHG	**Ghaleghazi**	**2.70**	**242**	*e*Pn	**Pn**	**15 06 39.2**	**+1.5**
IGHG				*e*		15 07 26.6	
	comp=Z,2μm,0.3s						
IKLH	**Kalahroud**	**2.88**	**142**	*e*Pn	**Pn**	**15 06 43.5**	**+3.3**
IKLH				*e*		15 07 28.8	
	comp=Z,2μm,0.2s						
IAZR	**Azarshahr**	**3.47**	**307**	*e*Pn	**Pn**	**15 06 48.2**	**-0.1**
IAZR				*e*		15 07 03.4	
	comp=Z,1μm,0.3s						
IZEF	**Zefreh**	**3.61**	**138**	*e*Pn	**Pn**	**15 06 53.5**	**+3.3**
IZEF				*e*		15 08 04.3	
	comp=Z,265nm,0.2s						
IMRD	**Marand**	**4.31**	**317**	*e*Pn	**Pn**	**15 06 59.1**	**-0.7**
IMRD				*e*		15 07 14.3	
	comp=Z,416nm,0.2s						

JMA 28 15:27:05.1±0.4, 3053N×14037E, h188km±4km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.62**	**350**	P	Pn	15 27 50.2	+0.7
JHJ2				*e*S	Sn	15 28 24.6	+0.3
BSO1	**Boso 1**	**4.14**	**7**	P	Pn	15 28 07.5	-0.7
BSO1				*e*S	Sn	15 28 56.8	-1.0
BSO3	**Boso 3**	**4.26**	**2**	P	Pn	15 28 09.7	0.0
BSO3				S	Sn	15 29 00.3	-0.2
BSO4	**Boso 4**	**4.45**	**360**	P	Pn	15 28 13.4	+1.3
BSO4				*e*S	Sn	15 29 04.4	-0.3
JOD2	**Odawara 2**	**4.84**	**347**	P	Pn	15 28 18.4	+1.3
JOD2				*e*S	Sn	15 29 15.9	+2.1
JIE	**Ise**	**4.94**	**322**	P	Pn	15 28 19.2	+0.8
JWZ	**Kozaga**	**4.96**	**308**	P	Pn	15 28 18.3	-0.3
JKN2	**Miekihoku**	**5.07**	**318**	P	Pn	15 28 20.5	+0.5
JHU	**Hanno**	**5.38**	**351**	P	Pn	15 28 24.2	+0.1
JHU				*e*S	Sn	15 29 25.5	-0.9
JAO	**Obara**	**5.40**	**332**	P	Pn	15 28 25.6	+1.3
JRY	**Ryogami san**	**5.61**	**348**	P	Pn	15 28 27.7	+0.7
JYT	**Yasato**	**5.68**	**359**	P	Pn	15 28 27.3	-0.7
JHO	**Hitachi**	**6.07**	**2**	P	Pn	15 28 32.3	-0.7
JHO				*e*S	Sn	15 29 38.6	-3.8

*ISCJB **28** 15:30:10.4±0.7, 5859N±006×155.1W±0.1, h145km±7km, mb4.0/2, Error ellipse: s-maj=11.1km s-min=9.9km az=173.8*
*IDC **28** 15:30:12.1±1.9, 5862N×154.96W, h134km±33km, mb3.8/2, mb1 3.7/4, mb1mx3.2/20, mbtmp3.6/4, Error ellipse: s-maj=56.4km s-min=23.9km az=170.0*
*NEIC **28** 15:30:13.0, 5856N×155.03W, h137km, mb4.4/1, After AEIC.*
ISC 28 15:30:11.6±0.8, 5859N±006×1551W±01, h139km±7km, n33, σ0ᵍ82/36, mb4.0/2, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUL	**Augustine Lava**	**1.18**	**47**	P	**Pn**	**15 30 37.5**	**+0.7**
AUL				S	**Sn**	**15 30 57.3**	**+1.2**
KDAK	**Kodiak Island**	**1.56**	**120**	P	**Pn**	**15 30 40.6**	**-0.3**
KDAK				S	**Sn**	**15 31 02.6**	**-0.7**
KDAK	**Kodiak Island**	**1.56**	**120**	P	**Pn**	**15 30 40.8**	**-0.1**
	38nm,0.3s,baz=322,slow=11,SNR=24						
KDAK				S	**Sn**	**15 31 02.1**	**-1.2**
	56nm,0.3s,baz=180,slow=20,SNR=38						
SVW2	**Sparrevohn**	**2.53**	**355**	*e*P	**Pn**	**15 30 52.0**	**-0.4**
CHGN	**Chignik**	**2.91**	**219**	*e*P	**Pn**	**15 30 56.9**	**-0.3**
SLKM	**Skilak Lake**	**3.14**	**50**	P	**Pn**	**15 31 01.2**	**+1.0**
SEW	**Seward**	**3.27**	**60**	P	**Pn**	**15 31 02.5**	**+0.7**
FIB	**Fire Island**	**3.58**	**42**	P	**Pn**	**15 31 07.2**	**+1.2**
RC01	**Rabbit Creek A**	**3.69**	**45**	P	**Pn**	**15 31 07.5**	**+0.2**
PMR	**Palmer**	**4.24**	**42**	*e*P	**Pn**	**15 31 14.4**	**-0.2**
TTA	**Tatalina**	**4.38**	**355**	*e*P	**Pn**	**15 31 16.5**	**+0.2**
GHO	**Glory Hole Cre**	**4.44**	**41**	P	**Pn**	**15 31 16.8**	**-0.4**
MID	**Middleton Isla**	**4.61**	**76**	*e*P	**Pn**	**15 31 19.4**	**0.0**
SML	**Sawmill**	**4.67**	**43**	*e*Pn	**Pn**	**15 31 23.9**	**+3.6**
EYAK	**Cordova Ski Ar**	**5.15**	**64**	P	**Pn**	**15 31 26.2**	**-0.4**
KTH	**Kantishna Hill**	**5.38**	**20**	P	**Pn**	**15 31 29.8**	**+0.2**
RAGM	**Ragged Mountai**	**5.61**	**67**	P	**Pn**	**15 31 33.2**	**+0.4**
MENT	**Mentasta**	**7.07**	**47**	*e*P	**Pn**	**15 31 52.1**	**-0.2**
COLA	**College**	**7.18**	**26**	P	**Pn**	**15 31 52.6**	**-1.2**
IL1	**Eielson Array**	**7.33**	**29**	P	**Pn**	**15 31 54.1**	**-1.6**
IM3	**Indian Mountai**	**7.45**	**4**	P	**Pn**	**15 31 57.3**	**0.0**
IMA2	**Indian Mountai**	**7.54**	**4**	*e*P	**Pn**	**15 31 58.4**	**-0.1**
BCA3	**Beaver Creek A**	**7.90**	**50**	P	**Pn**	**15 32 03.1**	**-0.3**
PNL	**Peninsula**	**8.15**	**76**	P	**Pn**	**15 32 07.0**	**+0.2**
COLD	**Coldfoot**	**8.95**	**12**	P	**Pn**	**15 32 16.9**	**-0.5**
EGAK	**Eagle**	**9.06**	**41**	*e*P	**Pn**	**15 32 17.3**	**-1.7**
	5.3nm,0.6s						
DAWY	**Dawson**	**9.32**	**47**	P	**Pn**	**15 32 21.9**	**-0.4**
SKAG	**Skagway**	**10.23**	**77**	*e*P	**Pn**	**15 32 38.0**	**+3.5**
	17nm,0.6s						
INK	**Inuvik**	**13.62**	**36**	P	**Pn**	**15 33 18.2**	**-0.4**
	0.5nm,0.3s,baz=227,slow=13,SNR=21						
YKA	**Yellowknife Ar**	**20.05**	**62**	P	**P**	**15 34 34.5**	**+1.2**
YKA	**Yellowknife Ar**	**20.05**	**62**	P	**P**	**15 34 34.5**	**+1.2**
	0.2nm,0.3s,baz=278,slow=9.8,SNR=47						
SCHQ	**Schefferville**	**45.25**	**55**	P	**P**	**15 38 14.2**	**-0.3**
	1.8nm,0.6s,mb3.9,baz=292,slow=9.1,SNR=4.7						
SONM	**Songino Array**	**54.74**	**305**	P	**P**	**15 39 27.5**	**+1.5**
	2.7nm,0.8s,mb4.0,baz=41,slow=6.5,SNR=18						

*ISCJB **28** 15:40:33.3±0.7, 151.1N±01.1×449W±0.1, h10km, mb4.0/10, MS3.8/13, Error ellipse: s-maj=21.1km s-min=16.2km az=44.5*
*IDC **28** 15:40:33.7±0.8, 151.6N×449.0W, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, MS3.8/13, Ms1 3.8/13, ms1mx3.5/25, Error ellipse: s-maj=26.0km s-min=20.7km az=149.0*
*NEIC **28** 15:40:34.9±0.7, 1506N×4482W, h10km, mb4.1/1, Error ellipse: s-maj=21.3km s-min=15.9km az=128.0*
ISC 28 15:40:35.2±0.7, 151N±01×448W±01, h10km, n22, σ1ᵍ04/15, mb4.0/10, MS3.8/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**25.96**	**259**	P	**P**	**15 46 08.8**	**+0.7**
	4.3nm,1.0s,mb3.9						
SDV				LR	LR	15 55 25.9	
SDV	**Santo Domingo**	**25.96**	**259**	P	**P**	**15 46 07.2**	**-1.0**
	3.1nm,1.0s,mb3.8,baz=40,slow=15,SNR=2.3						
SDV				LR	LR	15 55 25.9	
	comp=Z,100nm,21.4s,MS3.3,baz=314,slow=34						
BBTS	**Babate**	**27.36**	**87**	LR	LR	15 55 02.8	
	comp=Z,256nm,18.3s,MS3.8,baz=52,slow=32						
ROSC	**El Rosal**	**30.73**	**254**	LR	LR	15 58 19.0	
	comp=Z,138nm,21.3s,MS3.6,baz=207,slow=35						
SIV	**San Ignacio**	**34.81**	**208**	P	**P**	**15 47 23.7**	**-2.6**
	1.2nm,1.1s,mb3.8,baz=312,slow=9.7,SNR=3.9						
LPAZ	**La Paz**	**38.75**	**217**	P	**P**	**15 48 01.2**	**+1.2**
LPAZ				LR	LR	16 03 57.2	
LPAZ	**La Paz**	**38.75**	**217**	P	**P**	**15 48 01.2**	**+1.2**
	1.5nm,0.8s,mb3.8,baz=39,slow=11,SNR=4.4						
LPAZ				LR	LR	16 03 57.2	
	comp=Z,128nm,18.4s,MS3.8,baz=297,slow=36						
DBIC	**Dimbokro**	**40.09**	**98**	LR	LR	16 02 30.2	
	comp=Z,123nm,18.0s,MS3.8,baz=176,slow=33						
SCHQ	**Schefferville**	**43.16**	**342**	LR	LR	16 03 56.5	
	comp=Z,95nm,18.7s,MS3.7,baz=94,slow=32						
ESDC	**Sonseca Array**	**43.26**	**47**	LR	LR	16 03 22.5	
	comp=Z,91nm,19.1s,MS3.7,baz=250,slow=32						
TORD	**Torodi Ar. Bea**	**45.11**	**86**	P	**P**	**15 48 52.3**	**+0.2**
	3.6nm,1.0s,mb4.2,baz=286,slow=8.1,SNR=14						
TORD				LR	LR	16 05 19.5	
	comp=Z,177nm,19.7s,MS4.0,baz=250,slow=33						
KEST	**Kesra**	**52.38**	**56**	LR	LR	16 09 27.5	
	comp=Z,40nm,19.1s,MS3.5,baz=206,slow=33						
ULM	**Lac du Bonnet**	**53.95**	**322**	P	**P**	**15 49 59.8**	**+0.7**
	2.9nm,0.8s,mb4.3,baz=110,slow=6.1,SNR=5.8						
ULM				LR	LR	16 08 57.4	
	comp=Z,144nm,18.7s,MS4.1,baz=350,slow=32						
PLCA	**Paso Flores**	**60.46**	**202**	P	**P**	**15 50 45.7**	**+0.6**
PLCA				LR	LR	16 17 33.5	
PLCA	**Paso Flores**	**60.46**	**202**	P	**P**	**15 50 45.7**	**+0.6**
	1.5nm,0.9s,mb4.0,baz=29,slow=10,SNR=3.1						
PLCA				LR	LR	16 17 33.5	
	comp=Z,135nm,19.5s,MS4.1,baz=262,slow=37						
PDAR	**Pinedale Array**	**61.38**	**311**	P	**P**	**15 50 52.1**	**+0.6**
	0.7nm,0.8s,mb3.8,baz=101,slow=8.0,SNR=5.2						
PDAR				LR	LR	16 14 19.9	
	comp=Z,120nm,20.9s,MS4.0,baz=108,slow=33						
MLR	**Muntele Rosu**	**65.94**	**47**	LR	LR	16 15 29.7	
	comp=Z,69nm,19.6s,MS3.9,baz=241,slow=32						
YKA	**Yellowknife Ar**	**67.39**	**332**	P	**P**	**15 51 29.1**	**-1.4**
YKA	**Yellowknife Ar**	**67.39**	**332**	P	**P**	**15 51 29.1**	**-1.4**
	1.2nm,1.0s,mb3.9,baz=106,slow=6.7,SNR=8.6						
AKASG	**Malin Array Be**	**68.38**	**41**	P	**P**	**15 51 37.5**	**+0.5**
AKASG	**Malin Array Be**	**68.38**	**41**	P	**P**	**15 51 37.5**	**+0.5**
	0.2nm,0.3s,mb3.6,baz=266,slow=5.9,SNR=3.5						
ZALV	**Zalesovo Beam**	**98.95**	**27**	P	**P**	**15 54 15.2**	**-0.7**
	0.4nm,0.4s,mb4.3,baz=324,slow=7.1,SNR=2.5						

IDC 28 15:42:29.6±3.3, 3118S×17814W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.8/13, mbtmp3.8/3, ML2.9/1, Error ellipse: s-maj=71.8km s-min=37.1km az=108.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.07**	**208**	Pn	Pn	15 44 28.2	+0.3
	0.2nm,0.3s,baz=262,slow=11,SNR=3.1						
URZ				Sn	Sn	15 45 59.4	-0.5
	1.0nm,0.3s,baz=195,slow=17,SNR=10						
ASAR	**Alice Springs**	**42.95**	**268**	P	P	15 50 30.4	0.0
	0.5nm,0.6s,baz=101,slow=6.5,SNR=9.0						
WRA	**Warramunga Arr**	**44.01**	**273**	P	P	15 50 39.0	0.0
	0.9nm,0.5s,baz=111,slow=8.1,SNR=27						
FINES	**FINESS Array B**	**145.84**	**339**	PKPbc	PKPbc	16 02 09.2	-0.8
	0.7nm,0.5s,baz=64,slow=4.8,SNR=3.7						

*MOS **28** 15:52:22.8±0.8, 1819N×14566E, h170km, mb4.7/12, Error ellipse: s-maj=16.2km s-min=8.4km az=94.3*
*ISCJB **28** 15:52:23.1±0.2, 1809N±003×14576E±003, h169km, mb4.5/54, Error ellipse: s-maj=4.7km s-min=4.3km az=166.8*
*IDC **28** 15:52:24.2±0.5, 1814N×14574E, h172km±4km, mb4.1/21, mb1 4.2/25, mb1mx4.2/28, mbtmp4.1/25, MS3.8/5, Ms1 3.8/5, ms1mx3.3/26, Error ellipse: s-maj=13.6km s-min=6.2km az=95.0*
*GCMT **28** 15:52:24.5±0.3, 1820N×146.13E, h158km±2km, MW5.1/80, Moment Tensor Solution. s32,c39; s80,c124; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.77±.13; Mθθ5.18±.14; Mφφ-3.42±.16; Mrθ-0.08±.11; Mθφ-1.02±.14; Mφr2.54±.10; Best double couple: Mo5.32300×10¹⁶ NP1:φs237.00000°, δ63.00000°, λ-156.00000°. NP2: φs136.00000°, δ68.00000°, λ-29.00000°. Principal axes: T 5.3220, Plg3.0000°, Azm188.0000°; N -0.0080, Plg54.0000°, Azm282.0000°; P -5.3240, Plg35.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **28** 15:52:24.5±0.2, 1811N×145.79E, mb4.7/23 Error ellipse: s-maj=7.9km s-min=5.6km az=110.0*
*BJI **28** 15:52:31.0, 1895N×145.33E, h172km, mb4.8, mb4.5*
ISC 28 15:52:24.7±0.2, 1814N±003×14573E±004, h171km, h171km±1.9km:pP-P, n311, σ0ᵍ62/314, mb4.5/54, 81C-86D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.61**	**191**	*e*Pn	**Pn**	**15 53 32.3**	**-1.1**
GUMO	**Guam**	**4.61**	**191**	P	**Pn**	**15 53 32.5**	**-0.9**
GUMO				S	**Sn**	**15 54 25.4**	**-1.7**
GUMO				pmax	pmax		
	comp=Z,84nm,0.3s						
GUMO				smax			
	comp=N,69nm,0.3s						
GUMO	**Guam**	**4.61**	**191**	P	**Pn**	**15 53 32.5**	**-0.8**
	comp=N,84nm,0.3s,baz=138,slow=3.0,SNR=54						
GUMO				S	**Sn**	**15 54 25.4**	**-1.7**
	comp=N,69nm,0.3s,baz=30,slow=20,SNR=2.9						
CBIJ	**Chichi jima**	**9.49**	**340**	P	**Pn**	**15 54 37.1**	**-0.5**
	comp=N,33nm,0.3s,baz=300,slow=22,SNR=11						
CBIJ				S	**Sn**	**15 56 16.6**	**-6.6**

GYA Guiyang 36.97 290 P **P** **15 59 19.3 +1.6**
GYA AP pP 15 59 55.5 +1.4
GYA XP sP 16 00 14.3 +0.7
GYA PP PP 16 00 51.0 +5.5
GYA PCP PcP 16 01 37.0 +1.8
GYA S **S** **16 04 52.5 +2.2**
GYA SCP ScP 16 05 07.3 +1.1
GYA PCS PcS 16 05 24.5 +0.8
GYA SCS ScS 16 09 14.0 -0.1
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.5
GYA AMB AMB
comp=Z,80nm,7.9s
HHC Hu-ho-hao-te 37.01 315 *eP* **P** **15 59 18.5 +0.7**
HHC AP pP 15 59 53.0 -1.2
HHC XP sP 16 00 12.0 -1.8
HHC PP PP 16 00 47.8 +2.0
HHC S **S** **16 04 52.0 +1.4**
HHC XS sS 16 05 49.8 -4.8
HHC AMB AMB
comp=Z,16nm,0.9s,mb4.7
HHC AMB AMB
comp=Z,126nm,5.7s
HHC LR LR
comp=N,153nm,14.3s
HHC LR LR
comp=E,138nm,13.1s
HHC LR LR
comp=Z,171nm,14.3s
CTA Charters Tower 38.00 179 P **P** **15 59 25.9 -0.4**
comp=Z,1.8nm,0.4s,mb4.0
WB2 Warramunga Arr 39.46 197 *eP* **P** **15 59 38.4 -0.1**
WRA Warramunga Ar 39.47 197 P **P** **15 59 38.8 +0.3**
comp=Z,34nm,0.8s,mb5.0,baz=18,slow=9.2,SNR=108
WRA ScP ScP 16 05 14.0 -1.6
comp=Z,2.5nm,0.7s,baz=14,slow=4.2,SNR=12
WRA S **S** **16 05 26.0 -1.8**
comp=Z,1.5nm,0.8s,baz=11,slow=14,SNR=4.2
CD2 Chengdu 40.02 297 *eP* **P** **15 59 44.0 +0.9**
CD2 AP pP 16 00 20.0 +0.1
CD2 XP sP 16 00 37.5 -1.8
CD2 PP PP 16 01 22.5 +3.8
CD2 S **S** **16 05 37.8 +1.7**
CD2 XS sS 16 06 38.5 -2.1
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.5
CD2 AMB AMB
comp=Z,20nm,5.2s
CD2 LR LR
comp=N,240nm,15.6s
CD2 LR LR
comp=E,520nm,15.6s
CD2 LR LR
comp=Z,220nm,14.4s
KMI Kunming 40.43 288 P **P** **15 59 48.5 +2.0**
KMI AMB AMB
comp=Z,3.0nm,0.9s,mb3.9
FITZ Fitzroy Crossi 41.08 210 *eP* **P** **15 59 52.3 +0.5**
comp=Z,36nm,0.7s,mb5.1
FITZ Fitzroy Crossi 41.08 210 P **P** **15 59 52.2 +0.4**
comp=Z,25nm,0.8s,mb4.9
ASAR Alice Springs 43.13 196 P **P** **16 00 07.8 -0.5**
comp=Z,2.7nm,0.4s,mb4.2,baz=19,slow=6.7,SNR=62
ASAR ScP ScP 16 05 28.2 -1.9
comp=Z,1.2nm,0.7s,baz=19,slow=3.9,SNR=6.5
ASAR S **S** **16 06 19.9 -1.8**
comp=Z,1.2nm,0.7s,baz=18,slow=16,SNR=6.1
SONM Songino Array 43.60 322 P **P** **16 00 11.0 -0.8**
SONM *PP pP 16 00 49.5 +0.3
SONM Songino Array 43.60 322 P **P** **16 00 11.0 -0.8**
comp=Z,2.2nm,0.6s,mb3.9,baz=135,slow=9.2,SNR=19
SONM pP pP 16 00 49.5 +0.3
comp=Z,3.4nm,0.7s,baz=129,slow=7.7,SNR=3.7
SONM ScP ScP 16 05 30.7 -1.0
comp=Z,1.3nm,1.2s,baz=122,slow=5.2,SNR=2.8
SONM LR LR 16 18 09.6
comp=Z,112nm,18.6s,baz=89,slow=35
YAK Yakutsk 45.27 349 *eP* **P** **16 00 23.8 -1.0**
YAK *e* 16 02 02.3
YAK *e* 16 02 08.4
YAK *eS* **S** **16 06 48.5 -3.3**
YAK *e* 16 10 12.2
YAK pmax pmax
comp=Z,10.0nm,0.8s,mb4.5
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.2s
YAK pmax pmax
comp=Z,42nm,4.0s
YAK pmax pmax
comp=N,115nm,4.5s
YAK pmax pmax
comp=E,80nm,5.0s
YAK smax
comp=E,134nm,4.5s
YAK smax
comp=N,100nm,4.8s
ZAK Zakamensk 46.61 324 *eP* **P** **16 00 34.9 -0.6**
ZAK pmax pmax
comp=Z,1.0nm,1.1s,mb3.4
ZAK pmax pmax
comp=Z,6.0nm,1.5s,mb4.0
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
PSI Prapat 48.31 257 P **P** **16 00 50.3 +1.1**
comp=Z,4.2nm,0.7s,mb4.2,baz=130,slow=8.0,SNR=6.1
STKA Stephens Creek 49.89 185 *eP* **P** **16 00 59.0 -1.8**
comp=Z,3.5nm,0.4s,mb4.3
STKA Stephens Creek 49.89 185 P **P** **16 00 59.8 -1.0**
comp=Z,3.9nm,0.4s,mb4.4,baz=6.6,slow=9.0,SNR=21
LSA Lhasa 50.80 294 P **P** **16 01 13.3 +5.5**
LSA Lhasa 50.80 294 P **P** **16 01 08.9 +1.1**
comp=Z,4.9nm,0.8s,mb4.2
LSA Lhasa 50.80 294 P **P** **16 01 08.9 +1.1**
LSA pmax pmax
comp=Z,5.0nm,0.8s,mb4.2
AKUT Akutan 51.60 34 *eP* **P** **16 01 12.9 -0.5**
comp=Z,25nm,0.5s,mb5.1
TAPN Taplejung 53.89 291 *eP* pP 16 02 11.0 +1.5
comp=Z,84nm,1.6s
ODAN Odare 54.20 290 *eP* pP 16 02 13.6 +1.8
comp=Z,107nm,1.6s
TIXI Tiksi 54.42 354 *eP* **P** **16 01 34.2 +0.5**
TIXI pmax pmax
comp=Z,3.0nm,1.0s,mb4.0
WMQ Urumqi 54.70 311 *eP* **P** **16 01 38.3 +2.1**
WMQ AP pP 16 02 15.3 +0.1
WMQ XP sP 16 02 33.3 -0.7
WMQ PCP PcP 16 02 39.3 +2.6
WMQ PP PP 16 03 44.8 +4.3
WMQ AMB AMB
comp=Z,5.0nm,0.7s,mb4.3
WMQ AMB AMB
comp=Z,99nm,4.5s
WMQ LR LR
comp=N,145nm,22.1s
WMQ LR LR
comp=Z,69nm,30.1s
JIRN Jiri 55.22 291 *eP* pP 16 02 19.1 -0.2
comp=Z,83nm,1.4s
KKN Kakani 56.02 292 *eP* pP 16 02 24.2 -0.8
comp=Z,80nm,1.6s
GKN Gorkha 56.57 292 *eP* pP 16 02 27.0 -2.0
comp=Z,145nm,1.3s
MUN Mundaring 57.31 210 *eP* **P** **16 01 55.5 +0.7**
KOLN Koldanda 57.50 292 *eP* pP 16 02 33.5 -2.2
comp=Z,162nm,1.6s
ZALV Zalesovo Beam 58.47 323 P **P** **16 02 02.0 -0.6**
comp=Z,1.2nm,0.6s,mb3.9,baz=103,slow=8.5,SNR=5.2
ZALV pP pP 16 02 41.9 -0.2
comp=Z,2.9nm,0.6s,baz=104,slow=7.1,SNR=4.1
ZAL Zalesovo 58.48 323 P **P** **16 02 02.1 -0.6**
ZAL *PP pP 16 02 41.9 -0.3
MKAR Makanchi Array 58.87 314 P **P** **16 02 05.6 +0.1**
comp=Z,0.5nm,0.5s,mb3.6,baz=93,slow=7.3,SNR=17
SVW2 Sparrevohn 59.29 29 *eP* **P** **16 02 08.7 +0.6**
TTA Tatalina 59.73 27 *eP* **P** **16 02 10.9 -0.2**
comp=Z,8.0nm,0.8s,mb4.6
TTA Tatalina 59.73 27 *eP* **P** **16 02 10.9 -0.2**
TTA pmax pmax
comp=Z,8.0nm,0.8s,mb4.6
KDAK Kodiak Island 59.80 33 P **P** **16 02 11.2 -0.5**
comp=Z,19nm,0.8s,mb5.0,baz=179,slow=2.4,SNR=20
KURK Kurchatov 61.70 318 *eP* **P** **16 02 24.1 -0.5**
comp=Z,3.6nm,0.8s,mb4.2
KURK Kurchatov 61.70 318 *eP* **P** **16 02 24.1 -0.6**
KURK pmax pmax
comp=Z,4.0nm,0.8s,mb4.3
DDI Dehra Dun 62.11 295 *ex* x 16 03 09.0
RPZ Rata Peaks 65.79 160 P **P** **16 02 48.3 -3.0**
comp=Z,15nm,0.8s,mb4.9,baz=131,slow=8.4,SNR=6.7
EGAK Eagle 66.54 27 *eP* **P** **16 02 55.8 -0.1**
comp=Z,2.9nm,0.6s,mb4.3
DAWY Dawson 67.23 27 *eP* **P** **16 02 60.0 -0.3**
INK Inuvik 69.87 23 *eP* **P** **16 03 16.0 -0.5**
comp=Z,236nm,0.8s,mb6.0
INK Inuvik 69.87 23 *eP* **P** **16 03 16.0 -0.5**
INK pmax pmax
comp=Z,236nm,0.8s
INK Inuvik 69.87 23 P **P** **16 03 16.0 -0.5**
comp=Z,6.4nm,0.7s,mb4.5,baz=275,slow=6.4,SNR=36
INK pP pP 16 03 56.5 -0.9
comp=Z,7.7nm,0.9s,baz=243,slow=8.4,SNR=5.8
NLWA Neilton Lookou 77.14 44 ⇓P **P** **16 03 59.6 +0.2**
baz=77
HDW Hoodsport 77.62 44 P **P** **16 04 03.3 +1.2**
C04A Brinnon 77.66 44 ⇑P **P** **16 04 02.2 0.0**
baz=78
I02A Mapleton 77.93 48 ⇓P **P** **16 04 03.5 -0.4**
baz=78
G03A Yamhill 78.01 46 ⇓P **P** **16 04 03.9 -0.4**
baz=78
CMW Cultus Mountai 78.05 43 P **P** **16 04 05.4 +1.0**
B05A Bryant 78.10 43 ⇑P **P** **16 04 04.7 0.0**
baz=78
H03A Soap Creek Ran 78.15 47 ⇑P **P** **16 04 05.1 +0.1**
baz=78
JCW Jim Creek 78.22 43 P **P** **16 04 06.2 +0.8**
J02A Umpqua 78.26 48 ⇑P **P** **16 04 06.0 +0.3**
baz=78
A06A Chilliwack 78.29 42 ⇓P **P** **16 04 06.1 +0.4**
baz=78
I03A Eugene 78.33 47 ⇑P **P** **16 04 06.0 -0.1**
baz=78
D05A Enumclaw 78.43 44 ⇓P **P** **16 04 05.6 -0.9**
baz=78
F04A Amboy 78.45 45 ⇑P **P** **16 04 06.7 0.0**
baz=78
YKA Yellowknife Ar 78.46 28 P **P** **16 04 05.8 -0.6**
YKA pP pP 16 04 47.2 -0.9
YKA LR LR 16 36 17.6
YKA Yellowknife Ar 78.46 28 P **P** **16 04 05.8 -0.6**
YKA *PP pP 16 04 47.2 -0.9
YKA Yellowknife Ar 78.46 28 P **P** **16 04 05.8 -0.6**
comp=Z,6.4nm,0.7s,mb4.4,baz=290,slow=5.5,SNR=98
YKA pP pP 16 04 47.2 -0.9
comp=Z,3.6nm,0.8s,baz=290,slow=5.7,SNR=5.6
YKA LR LR 16 36 17.6
comp=Z,87nm,20.8s,baz=205,slow=34
G04A Mulino 78.58 46 ⇑P **P** **16 04 07.0 -0.4**
baz=78
J03A Ideyld Park 78.69 48 ⇑P **P** **16 04 07.4 -0.6**
baz=78
E05A Randle 78.74 45 ⇓P **P** **16 04 08.2 0.0**
baz=79
H04A Detroit Lake 78.91 47 ⇓P **P** **16 04 09.2 -0.1**
baz=79,SNR=5.3
I04A Tendick Farm, 78.98 48 ⇓P **P** **16 04 09.2 -0.4**
baz=79
A07A Ashnola River, 79.00 42 ⇓P **P** **16 04 09.7 0.0**
baz=79
N02C Big Bar 79.08 51 ⇓P **P** **16 04 10.4 +0.2**
baz=79
F05A White Salmon 79.11 45 ⇓P **P** **16 04 10.6 +0.3**
baz=79
D06A Cle Elum 79.18 44 P **P** **16 04 11.0 +0.4**
baz=79,SNR=6.4
E06A Yakima 79.26 45 ⇓P **P** **16 04 11.2 +0.1**
baz=79,SNR=5.4
M02C Callahan 79.27 50 ⇓P **P** **16 04 11.4 +0.2**
baz=79
YBH Yreka Blue Hor 79.28 50 *eP* **P** **16 04 11.6 +0.3**
comp=Z,5.5nm,0.6s,mb4.4
YBH Yreka Blue Hor 79.28 50 *eP* **P** **16 04 11.6 +0.3**
YBH pmax pmax
comp=Z,5.0nm,0.6s
YBH Yreka Blue Hor 79.28 50 ⇑P **P** **16 04 11.9 +0.5**
baz=79
B07A Winthrop 79.33 42 P **P** **16 04 11.8 +0.5**
baz=79,SNR=6.8
J04A Umpqua Nationa 79.33 48 ⇓P **P** **16 04 12.0 +0.5**
baz=79,SNR=6.1
G05A Wamic 79.37 46 ⇓P **P** **16 04 12.0 +0.3**
baz=79
EBG Ellensburg 79.44 44 P **P** **16 04 12.7 +0.7**
C07A Waterville 79.57 43 P **P** **16 04 12.5 -0.2**
baz=79,SNR=7.5
H05A Madras 79.58 46 ⇑P **P** **16 04 12.8 -0.1**
baz=79
F06A Goldendale 79.60 45 ⇑P **P** **16 04 12.9 -0.1**
baz=79
O02C Red Bluff 79.62 51 ⇓P **P** **16 04 13.4 +0.2**
baz=79
CROR Criterion Ridg 79.66 46 P **P** **16 04 13.6 +0.3**
WDC Whiskeytown Da 79.70 51 ⇓P **P** **16 04 13.1 -0.5**
baz=80
A08A Turner Farm, O 79.74 42 P **P** **16 04 14.1 +0.5**
baz=80,SNR=7.1
D07A Quincy 79.76 44 ⇓P **P** **16 04 13.4 -0.4**
baz=80
K04A Chilquin 79.76 49 ⇓P **P** **16 04 13.9 0.0**
baz=80
L04A Klamath Falls 79.76 49 ⇑P **P** **16 04 14.3 +0.4**
baz=80
GASB Alder Springs 79.81 52 ⇓P **P** **16 04 14.4 +0.2**
baz=80
G06A Carlson Farm, 79.84 46 ⇑P **P** **16 04 13.8 -0.4**
baz=80
B08A Colville Reser 79.86 42 ⇑P **P** **16 04 14.3 0.0**
baz=80,SNR=11
M04C Macdoel 79.90 49 ⇑P **P** **16 04 14.9 +0.3**
baz=80,SNR=5.1
J05A Fort Rock 79.94 48 ⇑P **P** **16 04 15.1 +0.3**
baz=80,SNR=16
RES Resolute Bay 79.95 14 *eP* **P** **16 04 13.5 -0.8**
comp=Z,75nm,0.6s,mb5.5
RES Resolute Bay 79.95 14 *eP* **P** **16 04 13.5 -0.8**
RES pmax pmax
comp=Z,75nm,0.6s,mb5.5
E07A Sunnyside 80.01 44 ⇓P **P** **16 04 15.4 +0.3**
baz=80
A09A Danville 80.17 42 ⇓P **P** **16 04 16.2 +0.3**
baz=80
H06A Lindquist Farm 80.18 46 P **P** **16 04 16.3 +0.3**
baz=80,SNR=5.0
C08A Higginbotham F 80.20 43 ⇓P **P** **16 04 16.2 0.0**
baz=80,SNR=5.4
RSW Rattlesnake Hi 80.23 44 P **P** **16 04 16.9 +0.7**
K05A Summer Lake 80.33 48 ⇑P **P** **16 04 17.5 +0.6**
baz=80,SNR=9.6
WRD Warden 80.41 44 P **P** **16 04 17.4 +0.2**
HATC Hat Creek Radi 80.43 50 ⇑P **P** **16 04 17.6 +0.1**
baz=80
I06A Prineville 80.48 47 ⇑P **P** **16 04 17.8 +0.2**
baz=80,SNR=5.5
G07A Ruggs Ranch, H 80.48 46 ⇑P **P** **16 04 17.3 -0.4**
baz=80
D08A Wollman Farm, 80.48 44 P **P** **16 04 17.6 0.0**
baz=80,SNR=5.0
M05C Lookout 80.52 50 ⇑P **P** **16 04 17.8 -0.1**
baz=80
OD2 Odessa Site #2 80.53 43 P **P** **16 04 18.0 +0.1**
E08A Dider Farm, El 80.55 44 ⇑P **P** **16 04 18.1 +0.1**
baz=80
L05A Lakeview 80.55 49 ⇓P **P** **16 04 18.1 0.0**
baz=80
B09A Rice 80.60 42 ⇓P **P** **16 04 18.4 +0.2**
baz=80,SNR=7.0
C09A Chrisman Ranch 80.70 43 ⇓P **P** **16 04 18.7 -0.1**
baz=80
J06A Christmas Vall 80.71 48 ⇓P **P** **16 04 18.8 -0.1**
baz=80
H07A Lands Inn, Kim 80.74 46 ⇑P **P** **16 04 19.0 -0.1**
baz=81
ORV Oroville 80.75 51 ⇑P **P** **16 04 19.0 -0.2**
baz=81
K06A Valley Falls 80.76 48 ⇓P **P** **16 04 19.4 +0.2**
baz=81,SNR=10
JRSC Jasper Ridge 80.77 54 ⇑P **P** **16 04 18.9 -0.4**
baz=81
O04C Chester 80.84 51 ⇓P **P** **16 04 19.9 +0.2**
baz=81,SNR=5.5
D09A Jones Farm, Ri 80.89 44 ⇓P **P** **16 04 19.9 +0.2**
baz=81,SNR=8.5
I07A Izee 80.93 47 ⇑P **P** **16 04 20.0 -0.1**
baz=81
G08A Pilot Rock 80.96 45 ⇓P **P** **16 04 20.1 -0.1**
baz=81
M06C Likely Place G 81.04 50 ⇓P **P** **16 04 20.7 0.0**
baz=81
E09A Wood Farm, Sta 81.15 44 ⇑P **P** **16 04 21.4 +0.2**
baz=81,SNR=6.2
J07A Hines 81.26 47 ⇓P **P** **16 04 21.8 -0.1**
baz=81
NEW Newport 81.30 42 *eP* **P** **16 04 21.8 -0.1**
comp=Z,16nm,1.0s,mb4.6
NEW Newport 81.30 42 *eP* **P** **16 04 21.8 -0.1**
NEW pmax pmax
comp=Z,16nm,1.0s
C10A Spilker Farm, 81.31 43 ⇑P **P** **16 04 22.0 0.0**
baz=81
P05C Yuba Gap, Truc 81.48 52 ⇑P **P** **16 04 22.9 -0.2**
baz=81
K07A Rock Creek Ran 81.50 48 P **P** **16 04 23.4 +0.3**
baz=81,SNR=17
BEKR Beckwourth 81.50 51 P **P** **16 04 23.3 +0.1**
baz=81,SNR=14
LAVA Lava Cap Winer 81.53 52 ⇓P **P** **16 04 23.1 -0.3**
baz=81,SNR=6.4
F09A S2 Ranch, Elgi 81.54 45 ⇑P **P** **16 04 23.2 -0.1**
baz=81
D10A Wagner Farm, O 81.56 43 ⇓P **P** **16 04 23.3 0.0**
baz=81
A11A Hall Mountain, 81.57 41 ⇓P **P** **16 04 24.2 +0.8**
baz=81,SNR=5.3
HAST UC Hastings Re 81.58 55 ⇑P **P** **16 04 24.1 +0.4**
baz=81
PACP Pacheco Peak 81.61 54 ⇓P **P** **16 04 23.6 -0.2**
baz=81
I08A Drewsey 81.62 47 ⇓P **P** **16 04 24.0 +0.2**
baz=81
L07A Adell 81.63 49 ⇑P **P** **16 04 24.3 +0.5**
baz=81
N06A Buffalo Meadow 81.64 50 ⇓P **P** **16 04 23.9 +0.1**
baz=82,SNR=6.5
G09A Cove 81.76 45 ⇓P **P** **16 04 24.7 +0.3**
baz=82
O06A Flanigan 81.81 51 P **P** **16 04 25.3 +0.5**
baz=82,SNR=8.9
E10A Myers Farm, Un 81.84 44 ⇓P **P** **16 04 24.6 -0.2**
baz=82
F10A Beach Ranch, E 81.92 44 ⇓P **P** **16 04 25.5 +0.3**
baz=82
M07A Soldier Meadow 81.93 49 ⇓P **P** **16 04 25.7 +0.3**
baz=82,SNR=7.3
CMB Columbia Colle 82.00 53 ⇓P **P** **16 04 25.8 0.0**
baz=82
EDM Edmonton 82.01 37 *eP* **P** **16 04 25.5 0.0**
H09A Durkee 82.02 46 ⇑P **P** **16 04 26.4 +0.6**
baz=82
K08A Mann Creek Ran 82.03 48 ⇑P **P** **16 04 26.2 +0.3**
baz=82,SNR=6.9
R05C Kirkwood Meado 82.05 52 ⇓P **P** **16 04 25.9 -0.2**
baz=82
I09A Lost Marbles R 82.18 46 ⇑P **P** **16 04 26.8 +0.2**
baz=82
U04C Hernandez Rese 82.18 54 ⇓P **P** **16 04 26.8 0.0**
baz=82
G10A Bishop Farm, J 82.20 45 P **P** **16 04 26.8 +0.1**
baz=82,SNR=9.9
BMO Blue Mountains 82.21 45 *eP* **P** **16 04 26.5 -0.2**
comp=Z,9.0nm,1.0s,mb4.3
BMO Blue Mountains 82.21 45 *eP* **P** **16 04 26.5 -0.3**
BMO pmax pmax
comp=Z,9.0nm,1.0s,mb4.3
S05C Merced 82.25 53 ⇑P **P** **16 04 27.0 -0.2**
baz=82
N07B Gerlach 82.26 50 P **P** **16 04 27.8 +0.7**
baz=82,SNR=9.6
J09A Fry Pan Ranch, 82.36 47 ⇑P **P** **16 04 27.8 +0.3**
baz=82,SNR=7.2
E11A Bogner Ranch, 82.48 44 P **P** **16 04 28.2 +0.1**
baz=82,SNR=6.5
O07A Toulon 82.51 50 ⇓P **P** **16 04 28.8 +0.4**
baz=82
R06C Coleville 82.57 52 ⇓P **P** **16 04 29.2 +0.5**
baz=82
F11A Grangeville 82.66 44 ⇓P **P** **16 04 28.6 -0.5**
baz=82
H10A Noah's Angus R 82.67 46 ⇓P **P** **16 04 28.7 -0.4**
baz=82,SNR=5.4
G11A Walters Elk Ra 82.74 45 ⇓P **P** **16 04 28.9 -0.6**
baz=82,SNR=10
A13A Flathead Natio 82.80 41 ⇑P **P** **16 04 30.0 +0.3**
baz=83
D12A Red Ives Fores 82.81 43 ⇑P **P** **16 04 29.8 -0.1**
baz=83
T06C Millerton Lake 82.82 54 ⇓P **P** **16 04 29.9 -0.2**
baz=83
L09A Wilkinson Ranc 82.82 48 P **P** **16 04 30.7 +0.7**
baz=83,SNR=7.7
N08A GE Springer Mi 82.86 50 P **P** **16 04 30.6 +0.3**
baz=83,SNR=11
B13A Whitefish 82.95 41 ⇓P **P** **16 04 30.7 +0.2**
baz=83,SNR=6.4
KCC Kaiser Creek 83.02 53 ⇓P **P** **16 04 31.2 +0.1**
baz=83
ARCES ARCESS Array B 83.03 342 P **P** **16 04 29.6 -0.9**
ARCES pP pP 16 05 13.6 +0.9
ARCES ARCESS Array B 83.03 342 P **P** **16 04 29.6 -0.9**
comp=Z,4.2nm,0.7s,mb4.3,baz=59,slow=7.2,SNR=6.5
ARCES pP pP 16 05 13.6 +0.9
comp=Z,2.3nm,0.7s,baz=61,slow=8.5,SNR=1.6
C13A Hot Springs 83.11 42 ⇑P **P** **16 04 31.1 -0.2**
baz=83,SNR=5.0
H11A Donnelly 83.13 45 P **P** **16 04 31.4 -0.1**
baz=83,SNR=5.1
K10A MacKenzie Ranc 83.15 47 ⇑P **P** **16 04 31.7 0.0**
baz=83
N09A Rock Creek Ran 83.28 49 ⇓P **P** **16 04 32.8 +0.4**
baz=83,SNR=7.2
F12A Elk City 83.30 44 ⇑P **P** **16 04 33.1 +0.7**
baz=83,SNR=8.4
PKM Peak Mountain 83.36 56 ⇓P **P** **16 04 33.3 +0.4**
baz=83
D13A Huson 83.38 43 ⇑P **P** **16 04 32.3 -0.4**
baz=83
HELL Mitchell Peak, 83.44 54 ⇓P **P** **16 04 32.9 -0.3**
baz=83
NVAR Mina Array Bea 83.45 52 P **P** **16 04 33.6 +0.3**
comp=Z,8.9nm,0.6s,mb4.7,baz=268,slow=4.3,SNR=16
Q08A Gabbs 83.60 51 P **P** **16 04 34.5 +0.4**
baz=83,SNR=5.2
C14A Swan Lake 83.61 42 P **P** **16 04 33.9 0.0**
baz=83,SNR=6.5
L10A Juniper Basin 83.65 48 ⇑P **P** **16 04 34.2 0.0**
baz=84
MFID Camas Ranch 83.67 46 ⇑P **P** **16 04 34.2 -0.1**
baz=84
O09A Fish Creek Ran 83.74 50 ⇓P **P** **16 04 35.1 +0.4**
baz=84,SNR=6.6
M10A I.L. Ranch, Tu 83.78 48 ⇑P **P** **16 04 35.0 +0.1**
baz=84
S08C White Mtn Res 83.84 53 ⇑P **P** **16 04 35.7 +0.4**
baz=84
F13A Darby 83.90 44 ⇑P **P** **16 04 34.6 -0.8**
baz=84
H12A Diamond D Ranc 83.96 45 ⇑P **P** **16 04 35.6 -0.1**
baz=84
D14A Greenough 83.99 42 ⇓P **P** **16 04 35.8 -0.1**
baz=84
G13A Cobalt 84.20 45 P **P** **16 04 36.6 -0.3**
baz=84,SNR=30
O10A Cortez Mining, 84.20 50 ⇓P **P** **16 04 36.8 -0.2**
baz=84
J12A Stokes Ranch, 84.23 46 ⇓P **P** **16 04 36.8 -0.3**
baz=84
H13A Challis 84.36 45 ⇓P **P** **16 04 37.3 -0.5**
baz=84
S09A Goldfield 84.48 52 ⇑P **P** **16 04 38.3 -0.3**
baz=84
K12A Draper Farm, C 84.56 47 ⇓P **P** **16 04 38.7 -0.1**
baz=84
HLID Hailey 84.59 46 ⇓P **P** **16 04 39.0 0.0**
baz=84,SNR=6.6
D15A Lincoln 84.64 42 ⇑P **P** **16 04 39.0 -0.1**
baz=84
G14A Jackson 84.66 44 ⇑P **P** **16 04 38.8 -0.5**
baz=84
I13A Wildhorse Cree 84.67 46 ⇓P **P** **16 04 39.6 +0.2**

baz=84
E15A Deer Lodge 84.78 43 ⇑P P 16 04 39.7 -0.2
baz=85,SNR=12
MPMC Manual Prospec 84.81 54 P P 16 04 40.5 +0.3
baz=85,SNR=5.7
J13A Cove Ranch, Pi 84.81 46 ⇓P P 16 04 40.3 +0.2
baz=85
O11A Cowboy Ranch, 84.86 50 ⇓P P 16 04 40.6 +0.2
baz=85,SNR=5.4
S10A Tonopah Range, 84.89 52 ⇑P P 16 04 40.7 +0.1
baz=85
M12A Wells 84.97 48 ⇑P P 16 04 41.2 +0.3
baz=85,SNR=5.9
N12A Clover Valley, 85.07 49 ⇓P P 16 04 40.9 -0.5
baz=85
F15A Butte 85.08 43 P P 16 04 41.4 0.0
baz=85,SNR=21
K13A Stover Farm, H 85.13 47 ⇓P P 16 04 41.8 +0.2
baz=85
DLMT Dillon 85.19 44 *e*P P 16 04 41.3 -0.6
comp=Z,9.4nm,0.8s,mb4.6
BFSC Mount Baldy St 85.26 56 ⇑P P 16 04 41.9 -0.6
baz=85
Q11A Duckwater 85.29 51 ⇑P P 16 04 42.4 -0.2
baz=85
G15A Dillon 85.33 44 ⇑P P 16 04 42.4 -0.2
baz=85,SNR=7.8
L13A Double Diamond 85.42 47 ⇓P P 16 04 43.0 -0.1
baz=85
TPNV Topopah Spring 85.47 53 ⇑P P 16 04 42.5 -0.9
baz=85
O12A Currie 85.47 49 ⇑P P 16 04 43.5 +0.1
baz=85,SNR=5.4
R11A Troy Canyon, C 85.50 51 ⇑P P 16 04 43.7 +0.1
baz=85
M13A Montello 85.52 48 ⇑P P 16 04 43.7 +0.1
baz=85
GSC Goldstone 85.58 54 ⇓P P 16 04 43.8 -0.2
baz=85
P12A McGill 85.62 50 ⇑P P 16 04 44.4 +0.2
baz=85
N13A Wendover, West 85.66 49 ⇑P P 16 04 44.1 -0.2
baz=86
BOZ Bozeman (W) 85.72 43 ⇓P P 16 04 44.4 -0.1
baz=86
K14A Jones Ranch, D 85.79 47 ⇓P P 16 04 45.0 0.0
baz=86
Q12A Willow Creek R 85.83 50 ⇓P P 16 04 45.6 +0.4
baz=86,SNR=5.4
M14A Sheep Mountain 86.04 48 ⇑P P 16 04 46.5 +0.3
baz=86
T11A Corn Creek, Al 86.15 52 ⇑P P 16 04 46.9 +0.1
baz=86
QLMT Earthquake Lak 86.15 44 *e*P P 16 04 47.1 +0.4
TUQ Turquoise Mtn. 86.22 54 ⇑P P 16 04 46.9 -0.3
baz=86
R12A Pony Springs, 86.23 51 ⇓P P 16 04 47.2 0.0
baz=86
P13A Bates Ranch, G 86.28 50 ⇓P P 16 04 47.5 +0.1
baz=86
S12A Delamar Landin 86.30 52 ⇓P P 16 04 48.0 +0.4
baz=86
N14A Grayback Hills 86.39 48 ⇓P P 16 04 47.7 -0.2
baz=86
PFO Pinyon Flat Ob 86.41 56 ⇓P P 16 04 47.8 -0.3
baz=86
GMRC Granite Mounta 86.64 55 ⇓P P 16 04 49.0 -0.2
baz=86
MONP Monument Peak 86.67 57 ⇑P P 16 04 49.5 0.0
baz=86
IMW Indian Meadow 86.83 45 *e*P P 16 04 51.0 +1.0
comp=Z,3.9nm,0.6s,mb4.4
DUG Dugway 86.89 49 *e*P P 16 04 50.2 -0.1
comp=Z,20nm,1.0s,mb4.9
DUG Dugway 86.89 49 *e*P P 16 04 50.2 -0.1
DUG pmax pmax
comp=Z,20nm,1.0s,mb4.9
DUG Dugway 86.89 49 P P 16 04 50.5 +0.2
baz=87,SNR=12
FLWY Flagg Ranch 86.92 45 *e*P P 16 04 50.9 +0.5
comp=Z,13nm,1.0s,mb4.7
U12A Valley of Fire 86.94 53 ⇑P P 16 04 50.7 0.0
baz=87
V12A Nelson 86.94 54 ⇓P P 16 04 50.6 -0.1
baz=87
S13A Holt Ranch, En 87.05 51 ⇑P P 16 04 51.5 +0.3
baz=87
HWUT Hardware Ranch 87.25 47 *e*P P 16 04 52.0 -0.1
comp=Z,18nm,1.1s,mb4.8
U13A Pakoon Wash 87.38 53 ⇑P P 16 04 52.8 +0.1
baz=87
FINES FINESS Array B 87.40 335 P P 16 04 49.7 -2.6
FINES FINESS Array B 87.40 335 P P 16 04 49.7 -2.6
comp=Z,0.7nm,0.4s,mb3.8,baz=66,slow=4.1,SNR=11
CCUT Cedar City 87.43 51 *e*P P 16 04 52.8 -0.2
S14A Cedar City 87.50 51 ⇑P P 16 04 53.3 0.0
baz=87
NLU North Lily Min 87.50 49 *e*P P 16 04 53.2 -0.1
FFC Flin Flon 87.54 32 *e*P P 16 04 52.6 -0.5
comp=Z,18nm,1.5s,mb4.7
FFC Flin Flon 87.54 32 *e*P P 16 04 52.6 -0.5
FFC pmax pmax
comp=Z,18nm,1.5s,mb4.7
JLU Jordanelle 87.70 48 *e*P P 16 04 53.9 -0.4
W13A Hualapai Mount 87.90 54 ⇑P P 16 04 55.1 -0.1
baz=88,SNR=5.5
MSU Marysvale 87.95 50 *e*P P 16 04 55.7 +0.3
U14A Mt Trumbull 87.97 52 ⇑P P 16 04 56.0 +0.4
baz=88
PDMCI Parker Dam,Lak 87.98 55 ⇑P P 16 04 55.4 -0.3
baz=88
X13A Yucca 88.12 54 ⇓P P 16 04 56.3 0.0
baz=88
PDAR Pinedale Array 88.19 45 P P 16 04 55.4 -1.1
comp=Z,0.8nm,0.4s,mb3.9,baz=190,slow=0.9,SNR=11
PDAR pP pP 16 05 38.0 -1.1
comp=Z,0.9nm,0.8s,baz=297,slow=6.5,SNR=2.9
T15A Red Dirt Ranch 88.35 52 ⇑P P 16 04 57.7 +0.3
baz=88
W14A Seligman 88.47 53 ⇓P P 16 04 58.3 +0.3
baz=88,SNR=6.5
X14A Yava 88.89 54 P P 16 05 00.8 +0.9
baz=89,SNR=8.4
SRU San Rafael 88.93 49 *e*P P 16 04 59.6 -0.4
comp=Z,7.6nm,0.7s,mb4.7
SRU San Rafael 88.93 49 *e*P P 16 04 59.6 -0.4
SRU pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
Y14A Wickenburg 88.99 55 P P 16 05 00.9 +0.5
baz=89,SNR=9.4
W15A Williams 89.11 53 ⇑P P 16 05 01.3 +0.4
baz=89
X15A Humboldt 89.38 54 ⇓P P 16 05 02.7 +0.4
baz=89,SNR=5.5
WUAZ Wupatki 89.66 53 *e*P P 16 05 02.8 -0.8
comp=Z,8.7nm,1.0s,mb4.6
WUAZ Wupatki 89.66 53 ⇑P P 16 05 03.9 +0.3
baz=90
216A Three Points, 90.91 56 ⇑P P 16 05 09.7 +0.3
baz=91
MVCO Mesa Verde 91.14 50 ⇓P P 16 05 10.6 +0.2
baz=91
SMCO Snowmass 91.43 48 *e*P P 16 05 11.8 +0.2
comp=Z,10nm,0.9s,mb4.9
SMCO *e*pP pP 16 05 54.4 -0.1
217A Green Valley 91.50 56 ⇑P P 16 05 12.8 +0.6
baz=91
218A Dragoon 92.03 56 ⇓P P 16 05 14.8 +0.2
baz=92
ULM Lac du Bonnet 93.04 34 P P 16 05 17.9 -1.0
comp=Z,1.1nm,0.4s,mb4.3,baz=301,slow=5.9,SNR=2.9
NOA NORSAR Array B 93.10 340 P P 16 05 17.0 -1.9
comp=Z,0.3nm,0.6s,mb3.6,baz=32,slow=6.8,SNR=2.2
TORD Torodi Ar. Bea 132.83 309 PKP PKPdf 16 11 21.8 +1.5
comp=Z,0.3nm,0.5s,baz=268,slow=3.8,SNR=3.1
SDV Santo Domingo 135.16 56 *e*PKPdf PKPdf 16 11 24.7 -0.1
PLCA Paso Flores 141.60 134 PKhKP 16 11 29.0
comp=Z,1.6nm,0.8s,baz=315,slow=1.4,SNR=3.6
PLCA PKP PKPdf 16 11 34.2 -1.6
comp=Z,1.4nm,0.7s,baz=49,slow=2.8,SNR=4.5
DBIC Dimbokro 141.92 308 PKP PKPdf 16 11 35.9 -1.3
comp=Z,2.1nm,1.1s,baz=326,slow=3.6,SNR=3.7
LCO Las Campanas 145.03 115 *e*PKP PKPdf 16 11 41.9 -0.3
LPAZ La Paz 147.62 92 PKPbc PKPbc 16 11 50.3 +0.5
comp=Z,12nm,0.8s,baz=273,slow=4.5,SNR=23

IDC 28 16:01:40.0±1.9, 102N×12592E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=173.0km s-min=24.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.41**	**159**	P	P	16 06 38.9	-1.4
	0.9nm,0.6s,baz=337,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**25.74**	**163**	P	P	16 07 13.5	+1.1
	0.6nm,0.3s,baz=346,slow=12,SNR=9.9						
MKAR	**Makanchi Array**	**59.33**	**327**	P	P	16 11 43.8	0.0
	0.3nm,0.3s,baz=124,slow=7.9,SNR=9.8						

*IDC **28** 16:05:14.9±1.4, 7222N×367E, h0km, mb3.2/4, mb1 3.5/9, mb1mx3.4/24, mbtmp3.4/9, ML3.2/5, MS3.0/4, Ms1 3.0/4, ms1mx2.7/19, Error ellipse: s-maj=24.7km s-min=19.4km az=32.0*
*ISCJB **28** 16:05:15.3±0.9, 7225N±008×43E±02, h10km, mb3.1/4, Error ellipse: s-maj=12.0km s-min=7.5km az=2.9*
*NEIC **28** 16:05:15.6±0.8, 7238N×375E, h10km, Error ellipse: s-maj=13.1km s-min=9.8km az=81.0*
*HEL **28** 16:05:15.3±1.0, 7242N×360E, h10km, ML2.2(BER)*
*BER **28** 16:05:16.2±1.4, 7240N×272E, h10km, ML2.2*

ISC 28 16:05:16.3±0.8, 7234N±007×40E±02, h10km, n21, σ0s97/28, mb3.1/4, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMIC	**Jan Mayen**	**4.19**	**257**	LR	LR	16 07 30.0	
	comp=Z,115nm,21.6s,baz=91,slow=33						
TRO	**Tromso**	**5.57**	**112**	*e*P	**Pn**	**16 06 38.8**	**-0.3**
TRO				*e*S	**Sn**	**16 07 41.5**	**-1.4**
TRO				AML	AML	16 07 43.8	
	comp=Z,3.6nm,0.4s						
TRO	**Tromso**	**5.57**	**112**	*e*P	**Pn**	**16 06 38.8**	**-0.3**
TRO				*e*S	**Sn**	**16 07 41.5**	**-1.4**
KIF	**Kilpisjarvi**	**6.48**	**113**	*e*P	**Pn**	**16 06 52.4**	**+0.9**
KIF				*e*S	**Sn**	**16 08 04.9**	**-0.4**
KBS	**Kingsbay**	**6.90**	**13**	*e*P	**Pn**	**16 06 54.4**	**-2.9**
KTK1	**Kautokeino**	**7.17**	**108**	*e*P	**Pn**	**16 07 03.6**	**+2.6**
KTK1				*e*S	**Sn**	**16 08 22.7**	**+0.3**
KTK1				AML	AML	16 08 31.4	
	comp=Z,3.3nm,0.9s						
KTK1	**Kautokeino**	**7.17**	**108**	*e*P	**Pn**	**16 07 03.6**	**+2.6**
KTK1				*e*S	**Sn**	**16 08 22.7**	**+0.3**
MOR8	**Moi Rana**	**7.20**	**144**	*e*P	**Pn**	**16 07 02.4**	**+1.0**
MOR8				*e*S	**Sn**	**16 08 19.2**	**-3.8**
MOR8				AML	AML	16 08 28.3	
	comp=Z,4.5nm,0.4s						
MOR8	**Moi Rana**	**7.20**	**144**	*e*P	**Pn**	**16 07 02.4**	**+1.0**
MOR8				*e*S	**Sn**	**16 08 22.6**	**-0.5**
ARCES	**ARCESS Array B**	**7.55**	**101**	Pn	**Pn**	**16 07 07.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=289,slow=12,SNR=15						
ARCES				Sn	**Sn**	**16 08 31.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=306,slow=20,SNR=2.5						
ARCES				LR	LR	16 09 54.8	
	comp=Z,102nm,19.9s,baz=147,slow=37						
KEV	**Kevo**	**7.89**	**98**	*e*Pn	**Pn**	**16 07 10.7**	**-0.1**
NSS	**Namsos**	**8.36**	**156**	*e*P	**Pn**	**16 07 15.9**	**-1.4**
NOA	**NORSAR Array B**	**11.68**	**162**	Pn	**Pn**	**16 08 02.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=345,slow=12,SNR=2.6						
HFS	**Hagfors**	**12.83**	**158**	Pn	**Pn**	**16 08 18.2**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=353,slow=11,SNR=13						
FINES	**FINESS Array B**	**13.81**	**131**	Pn	**Pn**	**16 08 32.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=336,slow=12,SNR=7.1						
FINES				LR	LR	16 13 44.6	
	comp=Z,72nm,19.8s,baz=264,slow=37						
EKA	**Eskdalemuir Ar**	**17.34**	**194**	P	**Pn**	**16 09 17.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=17,slow=14,SNR=3.1						
GERES	**GERESS Array B**	**23.98**	**164**	P	**P**	**16 10 30.7**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.0,baz=341,slow=7.5,SNR=4.2						
GERES				LR	LR	16 19 05.2	
	comp=Z,49nm,18.7s,baz=299,slow=35						
AKASG	**Malin Array Be**	**24.41**	**139**	P	**P**	**16 10 34.2**	**-0.3**
AKASG	**Malin Array Be**	**24.41**	**139**	P	**P**	**16 10 34.2**	**-0.2**
	comp=Z,1.1nm,0.7s,mb3.4,baz=342,slow=10,SNR=4.2						
YKA	**Yellowknife Ar**	**39.15**	**320**	P	**P**	**16 12 43.1**	**-0.3**
	comp=Z,0.1nm,0.3s,mb3.0,baz=31,slow=9.6,SNR=4.1						
MKAR	**Makanchi Array**	**42.73**	**82**	P	**P**	**16 13 14.7**	**+1.6**
	comp=Z,0.2nm,0.6s,mb3.0,baz=335,slow=6.4,SNR=3.5						

*MOS **28** 16:08:43.1±0.9, 4.66S×10.326E, h40km, mb5.2/33, Error ellipse: s-maj=11.4km s-min=6.0km az=113.8*
*BJI **28** 16:08:43.9, 5.37S×10.297E, h97km, mB5.0, mb5.0*
*ISCJB **28** 16:08:47.5±0.6, 4.80S±004×103.12E±004, h83km±5km, mb5.1/104, Error ellipse: s-maj=8.1km s-min=4.9km az=44.5*
*NEIC **28** 16:08:48.0±1.0, 4.77S×103.16E, h72km±8km, mb5.0/32, Error ellipse: s-maj=9.5km s-min=4.7km az=224.0*
NEIC Felt [III] at Kapahiang and Liwa.
*IDC **28** 16:08:48.5±2.1, 4.80S×10.320E, h75km±17km, mb4.8/24, mb1 4.8/24, mb1mx4.7/27, mbtmp4.8/24, MS3.9/7, Ms1 3.9/7, ms1mx3.6/21, Error ellipse: s-maj=17.6km s-min=8.9km az=46.0*

ISC 28 16:08:49.5±0.6, 4.84S±004×103.11E±004, h87km±4km, h85km±2.9km: pP-P, n249, σ0s95/240, mb5.1/104, 27C-16D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.29**	**336**	P	**Pn**	**16 09 08.6**	**-3.9**
	10μm,0.8s						
KLI	**Kotabumi**	**1.74**	**91**	P	**Pn**	**16 09 15.7**	**-2.4**
	2μm,0.7s						
SBJI	**Serang**	**3.26**	**113**	P	**Pn**	**16 09 37.6**	**-0.8**
	517nm,1.0s						
CBJI	**Citeko**	**4.03**	**113**	P	**Pn**	**16 09 50.5**	**+1.6**
	2μm,1.0s						
LEM	**Lembang**	**4.89**	**114**	P	**Pn**	**16 10 01.4**	**+0.8**
	400nm,1.0s						
MYKOM	**Kota Tinggi**	**6.63**	**6**	⇓P	**Pn**	**16 10 25.2**	**+0.8**
KGM	**Kluang**	**6.82**	**2**	⇑P	**Pn**	**16 10 27.6**	**+0.7**
BJII	**Banjamegara**	**7.01**	**111**	P	**Pn**	**16 10 29.6**	**+0.1**
	56nm,1.1s						
FRIM	**Kepong**	**8.16**	**349**	⇓P	**Pn**	**16 10 45.8**	**+0.5**
PSI	**Prapat**	**8.67**	**331**	P	**Pn**	**16 10 47.2**	**-5.0**
PSI				LR	LR	16 15 21.8	
PSI	**Prapat**	**8.67**	**331**	P	**Pn**	**16 10 47.2**	**-5.0**
	0.6nm,0.3s,baz=176,slow=5.8,SNR=8.4						
PSI				LR	LR	16 15 21.8	
	comp=Z,202nm,18.6s,baz=18,slow=46						
KSM	**Kuching**	**9.54**	**49**	*e*P	**Pn**	**16 11 04.5**	**+0.5**
KSM	**Kuching**	**9.54**	**49**	⇓P	**Pn**	**16 11 05.0**	**+0.9**
COCO	**West Island**	**9.58**	**220**	Pn	**Pn**	**16 10 58.4**	**-6.2**
	2μm,0.6s,SNR=8.2						
KTGM	**Kuala Trenggan**	**10.10**	**0**	⇑P	**Pn**	**16 11 14.4**	**+2.7**
KULM	**Kulim**	**10.36**	**346**	*e*P	**Pn**	**16 11 13.4**	**-1.9**
KULM	**Kulim**	**10.36**	**346**	⇑P	**Pn**	**16 11 14.1**	**-1.1**
SBUM	**Sibu**	**11.63**	**52**	⇓P	**Pn**	**16 11 35.6**	**+3.1**
BTM	**Bintulu**	**12.77**	**51**	⇑P	**Pn**	**16 11 51.3**	**+3.5**
KKM	**Kota Kinabalu**	**16.97**	**51**	⇓P	**Pn**	**16 12 45.6**	**+4.0**
PCI	**Palu**	**17.15**	**77**	P	**Pn**	**16 12 47.6**	**+3.8**
	136nm,0.8s						
TSM	**Tawau**	**17.31**	**59**	⇓P	**Pn**	**16 12 48.8**	**+3.0**
SDKM	**Sandakan**	**17.50**	**54**	⇓P	**Pn**	**16 12 51.3**	**+3.3**
KDM	**Kudat**	**18.00**	**50**	⇓P	**Pn**	**16 12 56.1**	**+2.1**
BATI	**Kupang**	**21.05**	**106**	P	**P**	**16 13 26.1**	**-0.5**
	84nm,0.5s,mb5.3,baz=258,slow=1.7,SNR=27						
BATI				S	**S**	**16 17 06.7**	**-10**
	16nm,0.5s,baz=272,slow=14,SNR=3.8						
MBWA	**Marble Bar**	**22.87**	**137**	*e*P	**P**	**16 13 44.9**	**-0.9**
CHTO	**Chiang Mai**	**23.86**	**350**	*e*P	**P**	**16 13 53.4**	**-1.6**
	20nm,0.8s,mb4.5						
CHTO	**Chiang Mai**	**23.86**	**350**	*e*P	**P**	**16 13 53.4**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
QIZ	**Qiongzhong**	**24.63**	**15**	P	**P**	**16 14 01.8**	**-0.2**
QIZ				XP	sP	16 14 30.5	-1.3
QIZ				S	**S**	**16 18 20.0**	**+2.8**
QIZ				XS	sS	16 18 52.0	+0.7
QIZ				AMB	AMB		
	comp=Z,8.0nm,0.8s,mb4.2						
QIZ				AMB	AMB		
	comp=Z,153nm,4.8s						
QIZ				LR	LR		
	comp=N,141nm,22.5s						
QIZ				LR	LR		
	comp=Z,218nm,19.2s						
FITZ	**Fitzroy Crossi**	**25.66**	**123**	*e*P	**P**	**16 14 11.0**	**-0.4**
	comp=Z,38nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**25.66**	**123**	P	**P**	**16 14 11.3**	**-0.1**
	comp=Z,24nm,0.6s,mb4.8,baz=303,slow=6.8,SNR=50						
FITZ				PcP	PcP	16 17 40.8	+0.8
	comp=Z,5.0nm,0.8s,baz=219,slow=4.8,SNR=3.7						
KMI	**Kunming**	**29.79**	**359**	P	**P**	**16 14 49.5**	**+1.4**
KMI				AP	pP	16 15 07.8	-0.3
KMI				XP	sP	16 15 20.8	+2.6
KMI				PP	PP	16 15 52.5	-4.5
KMI				S	**S**	**16 19 43.0**	**+4.5**
KMI				XS	sS	16 20 16.5	+3.5
KMI				SS	SS	16 21 25.3	-23
KMI				AMB	AMB		
	comp=Z,19nm,0.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,115nm,6.2s						
KMI				LR	LR		
	comp=N,216nm,16.1s						
KMI				LR	LR		
	comp=E,138nm,15.1s						
KMI				LR	LR		
	comp=Z,235nm,15.1s						
KAKA	**Kakadu**	**29.99**	**107**	*e*P	**P**	**16 14 47.7**	**-2.4**
	comp=Z,13nm,0.5s,mb4.8						
GYA	**Guiyang**	**31.31**	**6**	P	**P**	**16 15 05.0**	**+3.5**
GYA				AP	pP	16 15 24.5	+3.0
GYA				XP	sP	16 15 34.3	+2.7
GYA				PP	PP	16 16 11.8	-2.0
GYA				S	**S**	**16 20 06.0**	**+3.8**
GYA				XS	sS	16 20 39.5	+2.7
GYA				SS	SS	16 21 59.0	-21
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=N,490nm,18.4s						
GYA				LR	LR		
	comp=E,640nm,19.4s						
GYA				LR	LR		
	comp=Z,460nm,18.0s						
SHL	**Shillong**	**32.14**	**341**	*e*P	**P**	**16 15 08.0**	**-0.8**
BOK	**Bokaro**	**33.05**	**330**	*e*P	**P**	**16 15 17.1**	**+0.3**
BOK				AMb	AMB	16 15 18.4	
	comp=Z,73nm,1.0s,mb5.5						
BLSP	**Bilaspur**	**33.77**	**323**	*e*P	**P**	**16 15 23.6**	**+0.5**
BLSP				*ex*	x	16 15 24.9	
	comp=Z,29nm,0.6s						
WRA	**Warramunga Arr**	**33.89**	**119**	P	**P**	**16 15 23.9**	**-0.4**
	comp=Z,18nm,0.5s,mb5.1,baz=298,slow=9.1,SNR=279						
WRA				PcP	PcP	16 18 01.8	+0.6
	comp=Z,5.0nm,0.6s,baz=303,slow=2.1,SNR=7.8						
WRA				S	**S**	**16 20 41.0**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=299,slow=15,SNR=4.5						
WB2	**Warramunga Arr**	**33.90**	**119**	*e*P	**P**	**16 15 23.9**	**-0.4**
ODAN	**Odare**	**35.00**	**335**	*e*P	**P**	**16 15 33.3**	**-0.3**
	comp=Z,27nm,0.4s,mb5.4						
ASAR	**Alice Springs**	**35.08**	**125**	P	**P**	**16 15 34.7**	**+0.3**
ASAR						16 18 05.6	
ASAR				S	**S**	**16 21 00.6**	**-0.2**
ASAR	**Alice Springs**	**35.08**	**125**	P	**P**	**16 15 34.7**	**+0.3**
	comp=Z,26nm,0.7s,mb5.2,baz=295,slow=7.3,SNR=411						
ASAR				PcP	PcP	16 18 05.5	+1.0
	comp=Z,7.0nm,0.7s,baz=308,slow=2.5,SNR=13						
ASAR				S	**S**	**16 21 00.6**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=302,slow=16,SNR=7.9						
ASAR				ScP	ScP	16 21 46.3	+3.7
	comp=Z,0.5nm,0.9s,baz=292,slow=2.9,SNR=4.6						
TAPN	**Taplejung**	**35.30**	**336**	*e*P	**P**	**16 15 36.2**	**0.0**
	comp=Z,72nm,1.0s,mb5.5						
CD2	**Chengdu**	**35.56**	**1**	*e*P	**P**	**16 15 38.0**	**-0.4**
CD2				AP	pP	16 16 00.3	+1.7
CD2				XP	sP	16 16 12.0	+3.3
CD2				PP	PP	16 17 01.0	+0.2
CD2				PCP	PcP	16 18 05.0	-0.8
CD2				S	**S**	**16 21 06.0**	**-1.9**
CD2				XS	sS	16 21 44.8	+2.0
CD2				SCS	ScS	16 25 44.5	-4.5
CD2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.5						
CD2				AMB	AMB		
	comp=Z,150nm,5.8s						
CD2				LR	LR		
	comp=N,340nm,16.8s						
CD2				LR	LR		
	comp=E,320nm,13.2s						
CD2				LR	LR		
	comp=Z,230nm,14.4s						
KAD	**Karad**	**36.07**	**308**	*e*P	**P**	**16 15 42.4**	**-0.5**
KAD				*ex*	x	16 15 44.6	
	comp=Z,21nm,0.6s						
JIRN	**Jiri**	**36.21**	**334**	*e*P	**P**	**16 15 44.0**	**0.0**
	comp=Z,78nm,0.8s,mb5.7						
LSA	**Lhasa**	**36.21**	**342**	P	**P**	**16 15 40.0**	**-4.0**
LSA	**Lhasa**	**36.21**	**342**	*e*P	**P**	**16 15 44.1**	**+0.1**
	comp=Z,24nm,0.9s,mb5.1						
LSA	**Lhasa**	**36.21**	**342**	*e*P	**P**	**16 15 44.1**	**+0.1**
LSA				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
KKN	**Kakani**	**36.73**	**333**	*e*P	**P**	**16 15 48.0**	**-0.4**
	comp=Z,66nm,0.7s,mb5.7						
GKN	**Gorkha**	**37.20**	**332**	*e*P	**P**	**16 15 52.4**	**0.0**
	comp=Z,78nm,0.7s,mb5.7						
KOLN	**Koldanda**	**37.50**	**331**	*e*P	**P**	**16 15 54.8**	**-0.1**
	comp=Z,140nm,0.7s,mb6.0						
BHPL	**Bhopal**	**37.53**	**319**	*e*P	**P**	**16 15 54.7**	**-0.5**
BHPL				*ex*	x	16 15 57.2	
XAN	**Xi'an**	**39.06**	**8**	P	**P**	**16 16 07.0**	**-1.0**
XAN				AMB	AMB		
	comp=Z,25nm,0.8s,mb5.1						
NJ2	**Nanjing**	**39.63**	**21**	*e*P	**P**	**16 16 14.0**	**+1.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
JOW	**Kunigami**	**39.80**	**36**	P	**P**	**16 16 15.3**	**+1.1**
	comp=Z,22nm,0.9s,mb5.0,baz=256,slow=11,SNR=5.8						
AGRA	**Agra**	**40.11**	**324**	*e*P	**P**	**16 16 16.5**	**-0.3**
AGRA				AMb	AMB	16 16 17.0	
	comp=Z,80nm,0.3s,mb6.0						
LZH	**Lanzhou**	**40.72**	**1**	⇓P	**P**	**16 16 22.0**	**+0.3**
LZH				AP	pP	16 16 44.5	+2.2
LZH				XP	sP	16 16 56.5	+4.2
LZH				PP	PP	16 18 01.3	+4.0
LZH				S	**S**	**16 22 26.3**	**+0.6**
LZH				XS	sS	16 23 05.0	+3.9
LZH				SS	SS	16 25 26.5	-3.3
LZH				AMB	AMB		
	comp=Z,35nm,1.1s,mb5.1						
LZH				AMB	AMB		
	comp=Z,162nm,5.6s						
LZH				LR	LR		
	comp=N,656nm,14.2s						
LZH				LR	LR		
	comp=Z,997nm,17.6s						
SONA	**Sohna**	**41.37**	**324**	*e*P	**P**	**16 16 26.9**	**-0.3**
SONA				AMb	AMB	16 16 27.8	
	comp=Z,43nm,0.6s,mb5.5						
AYAN	**Aya Nagar**	**41.52**	**324**	*e*P	**P**	**16 16 28.0**	**-0.4**
AYAN				AMb	AMB	16 16 31.0	
	comp=Z,25nm,0.7s,mb5.1						
AJM	**Ajmer**	**41.59**	**320**	*e*P	**P**	**16 16 28.8**	**-0.2**
AJM				AMb	AMB	16 16 29.8	
	comp=Z,16nm,0.3s,mb5.2						
NDI	**New Delhi**	**41.62**	**325**	*e*P	**P**	**16 16 27.5**	**-1.7**
	comp=Z,11nm,0.7s,mb4.7						
NDI				*ex*	x	16 18 14.0	
BHGR	**Bahadurgarh**	**41.78**	**324**	*ex*	x	16 16 26.8	
JOSI	**Joshimath**	**41.80**	**329**	*e*P	**P**	**16 16 29.8**	**-0.8**
JOSI				AMb	AMB	16 16 32.1	
	comp=Z,132nm,0.8s,mb5.7						
KHET	**Khetri**	**42.00**	**323**	*e*P	**P**	**16 16 32.4**	**+0.1**
KHET				*ex*	x	16 16 33.9	
	comp=Z,30nm,0.6s						
KKR	**Kurukshetra**	**42.81**	**326**	*ex*	x	16 16 31.4	
SDNR	**Sundarnagar**	**43.91**	**327**	*e*P	**P**	**16 16 48.0**	**+0.4**
GTA	**Gaotai**	**44.14**	**356**	⇑P	**P**	**16 16 49.5**	**+0.2**
GTA				AP	pP	16 17 10.3	+0.1
GTA				XP	sP	16 17 18.3	-1.8
GTA				PCP	PcP	16 18 34.0	+1.0
GTA				PP	PP	16 18 35.3	+1.4
GTA				S	**S**	**16 23 18.8**	**+2

GTA LR LR
comp=N,176nm,17.1s
GTA LR LR
comp=E,124nm,19.0s
GTA LR LR
comp=Z,225nm,17.9s
CTA Charters Tower 44.60 114 *e*P **P 16 16 53.7 +0.3**
comp=Z,36nm,0.6s,mb5.3
CTA Charters Tower 44.60 114 *e*P **P 16 16 53.7 +0.3**
CTA pmax pmax
comp=Z,36nm,0.6s
CTA Charters Tower 44.60 114 P **P 16 16 53.9 +0.5**
comp=Z,58nm,0.8s,mb5.3,baz=284,slow=10.0,SNR=50
CTAO Charters Tower 44.60 114 *e*P **P 16 16 53.8 +0.4**
comp=Z,60nm,0.8s,mb5.4
CTAO Charters Tower 44.60 114 *e*P **P 16 16 53.8 +0.4**
CTAO pmax pmax
comp=Z,60nm,0.8s,mb5.4
STKA Stephens Creek 44.95 131 *e*P **P 16 16 56.7 +0.7**
comp=Z,23nm,0.8s,mb5.0
STKA Stephens Creek 44.95 131 P **P 16 16 56.8 +0.8**
comp=Z,31nm,0.7s,mb5.1,baz=308,slow=7.9,SNR=58
STKA LR LR 16 34 21.9
comp=Z,222nm,20.1s,baz=206,slow=34
THN Thein Dam 45.30 327 *e*P **P 16 16 57.0 -1.7**
GUMO Guam 45.31 66 P **P 16 16 56.9 -2.1**
comp=Z,67nm,0.5s,mb5.6,baz=217,slow=5.1,SNR=7.9
HHC Hu-ho-hao-te 46.13 9 *e*P **P 16 17 05.5 +0.4**
HHC AP pP 16 17 24.0 -2.1
HHC PP PP 16 18 54.0 -0.9
HHC S **S 16 23 45.3 +0.8**
HHC SS SS 16 27 01.8 -9.1
HHC AMB AMB
comp=Z,21nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,73nm,3.8s
HHC LR LR
comp=N,163nm,17.8s
HHC LR LR
comp=E,130nm,13.1s
HHC LR LR
comp=Z,137nm,14.3s
BJT Baijiatuan 46.23 14 *e*P **P 16 17 06.2 +0.3**
comp=Z,12nm,0.8s,mb4.7
BJT Baijiatuan 46.23 14 *e*P **P 16 17 06.2 +0.3**
BJT pmax pmax
comp=Z,13nm,0.8s
BJI Beijing 46.25 14 P **P 16 17 05.8 -0.3**
BJI AP pP 16 17 25.0 -2.1
BJI XP sP 16 17 35.5 -1.4
BJI PP PP 16 18 55.5 -0.8
BJI XS sS 16 24 26.3 +4.0
BJI AMB AMB
comp=Z,26nm,0.8s,mb5.0
BJI LR LR
comp=N,141nm,22.7s
BJI LR LR
comp=E,86nm,21.9s
BJI LR LR
comp=Z,137nm,22.7s
KSRS Korea Array 48.01 27 P **P 16 17 20.1 +0.3**
comp=Z,9.7nm,0.6s,mb4.8,baz=227,slow=7.1,SNR=48
KSRS PcP PcP 16 18 46.8 +0.2
comp=Z,4.2nm,0.9s,baz=215,slow=4.2,SNR=6.5
WMQ Urumqi 50.40 346 P **P 16 17 38.0 +0.1**
WMQ AP pP 16 17 58.8 -0.4
WMQ XP sP 16 18 09.5 +0.5
WMQ PCP PcP 16 18 55.5 +0.3
WMQ PP PP 16 19 36.0 +1.6
WMQ S **S 16 24 44.5 -0.1**
WMQ AMB AMB
comp=Z,30nm,1.1s,mb5.1
WMQ AMB AMB
comp=Z,86nm,3.7s
WMQ LR LR
comp=N,132nm,27.0s
WMQ LR LR
comp=E,164nm,27.0s
WMQ LR LR
comp=Z,58nm,24.5s
KSH Kashi 50.74 333 *e*P **P 16 17 40.5 -0.1**
KSH *e*AP pP 16 18 04.0 +2.1
KSH *e*XP sP 16 18 15.3 +3.6
KSH *e*PCP PcP 16 18 55.5 -1.0
KSH *e*PP PP 16 19 39.5 +1.9
KSH *e*SCP ScP 16 22 41.0 -4.1
KSH *e*PCS PcS 16 22 51.5 -2.5
KSH *e*S **S 16 24 47.5 -2.1**
KSH *e*PS 16 25 13.5
KSH *e*XS sS 16 25 29.5 +3.5
KSH *e*SCS ScS 16 27 18.3 -4.8
KSH *e*SS SS 16 28 22.5 -2.9
KSH AMB AMB
comp=Z,96nm,0.5s,mb6.1
KSH LR LR
comp=N,357nm,3.9s
KSH LR LR
comp=E,1μm,5.1s
KSH LR LR
comp=Z,647nm,5.2s
ARMA Armidale 52.23 125 *e*P **P 16 17 54.1 +2.2**
CN2 Changchun 52.44 20 *e*P **P 16 17 52.5 -0.7**
CN2 PCP PcP 16 19 02.5 -0.3
CN2 *e*S **S 16 25 12.3 -0.5**
CN2 AMB AMB
comp=Z,20nm,0.6s,mb5.3
CN2 AMB AMB
comp=Z,200nm,3.0s
SONM Songino Array 52.53 3 P **P 16 17 54.3 +0.6**
SONM 16 19 03.4
SONM Songino Array 52.53 3 P **P 16 17 54.3 +0.6**
comp=Z,25nm,0.8s,mb5.3,baz=181,slow=9.0,SNR=151
SONM PcP PcP 16 19 03.4 +0.4
comp=Z,6.6nm,0.7s,baz=186,slow=4.1,SNR=11
SONM ScP ScP 16 22 56.6 +4.0
comp=Z,0.9nm,1.0s,baz=159,slow=4.5,SNR=3.6
SONM LR LR 16 42 45.9
comp=Z,106nm,20.3s,baz=69,slow=39
ULN Ulaanbaatar 52.60 3 *e*P **P 16 17 54.5 +0.2**
comp=Z,15nm,0.9s,mb5.0
ULN *e*PcP PcP 16 19 03.5 +0.3
ULN Ulaanbaatar 52.60 3 *e*P **P 16 17 54.5 +0.3**
ULN *e* 16 19 03.5
ULN pmax pmax
comp=Z,15nm,0.9s,mb5.0
MAJO Matsushiro 52.63 36 *e*P **P 16 17 53.7 -1.0**
comp=Z,11nm,0.8s,mb5.0
MAJO Matsushiro 52.63 36 *e*P **P 16 17 53.7 -1.0**
MAJO pmax pmax
comp=Z,11nm,0.8s,mb4.9
MAT Matsushiro 52.63 36 P **P 16 17 53.0 -1.7**
MAT *e*S **S 16 25 10.0 -5.7**
MJAR Matsushiro Arr 52.64 36 P **P 16 17 53.7 -1.0**
comp=Z,15nm,0.8s,mb5.0,baz=215,slow=7.1,SNR=41
MJAR PcP PcP 16 19 04.1 +0.4
comp=Z,3.9nm,0.8s,baz=188,slow=3.6,SNR=5.6
KZA Kyzart 53.14 334 P **P 16 17 58.6 +0.3**
SNR=7.8
UCH Uchtor 53.59 334 *e*P **P 16 18 01.3 -0.3**
comp=Z,6.8nm,0.6s,mb4.8
UCH *e*PcP PcP 16 19 09.1 +1.9
UCH Uchtor 53.59 334 P **P 16 18 01.6 0.0**
SNR=14
TKM2 Tokmak 2 53.68 335 P **P 16 18 02.2 0.0**
SNR=60
KBK Karagaybulak 53.74 334 P **P 16 18 03.1 +0.4**
SNR=33
AML Almayashu 53.87 333 *e*P **P 16 18 03.6 -0.1**
comp=Z,18nm,0.6s,mb5.3
AML *e*PcP PcP 16 19 09.9 +1.6
AML Almayashu 53.87 333 P **P 16 18 03.9 +0.2**
SNR=23
AAK Ala-Archa 53.92 334 P **P 16 18 03.6 -0.4**
comp=Z,54nm,0.6s,mb5.8,SNR=6.9
AAK Ala-Archa 53.92 334 P **P 16 18 04.2 +0.2**
SNR=7.7
EKS2 Erkin-Say 54.26 334 *e*P **P 16 18 06.4 -0.1**
comp=Z,33nm,0.7s,mb5.5
EKS2 Erkin-Say 54.26 334 P **P 16 18 06.7 +0.2**
SNR=30
VLA Vladivostok 54.38 26⇑*i*P **P 16 18 06.0 -1.4**
VLA pmax pmax
comp=Z,9.0nm,0.6s,mb5.0
USP Ospenovka 54.43 335 P **P 16 18 07.0 -0.7**
SNR=22
MK31 Makanchi Array 54.62 343 *i* P **P 16 18 07.9 -1.1**
MK31 pmax pmax
comp=Z,22nm,0.7s,mb5.3
MKAR Makanchi Array 54.62 343 P **P 16 18 08.3 -0.7**
MKAR Makanchi Array 54.62 343 *i* P **P 16 18 08.3 -0.7**
MKAR pmax pmax
comp=Z,21nm,0.7s
MKAR Makanchi Array 54.62 343 P **P 16 18 08.3 -0.7**
comp=Z,21nm,0.7s,mb5.3,baz=144,slow=7.9,SNR=213
MDJ Mudanjiang 54.67 23 P **P 16 18 09.5 +0.1**
MDJ AP pP 16 18 28.5 -2.5
MDJ PCP PcP 16 19 12.0 +0.8
MDJ PP PP 16 20 12.8 -0.1
MDJ SCP ScP 16 23 00.5 -1.5
MDJ PCS PcS 16 23 11.0 +0.2
MDJ S **S 16 25 45.3 +2.4**
MDJ SS SS 16 29 33.0 +5.8
MDJ AMB AMB
comp=Z,8.0nm,1.1s,mb4.7
MDJ AMB AMB
comp=Z,95nm,4.4s
MDJ LR LR
comp=N,16nm,32.3s
MDJ LR LR
comp=E,35nm,28.4s
MDJ LR LR
comp=Z,64nm,25.2s
ZAK Zakamensk 55.00 0 *e*P **P 16 18 11.9 +0.2**
ZAK *e* 16 19 12.9
ZAK pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
ZAK pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
KK31 Karatay Array 56.10 332 *i* P **P 16 18 18.3 -1.4**
KK31 pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
TLY Talaya 56.31 0 P **P 16 18 22.8 +1.8**
comp=Z,125nm,0.7s,mb6.0,SNR=12
TLY Talaya 56.31 0 *e*P **P 16 18 22.1 +1.1**
comp=Z,14nm,0.7s,mb5.1
TLY Talaya 56.31 0 *e*P **P 16 18 22.1 +1.1**
TLY pmax pmax
comp=Z,15nm,0.8s,mb5.1
MOY Mondy 56.32 358 *e*P **P 16 18 21.7 +0.6**
HNR Honiara 56.53 98 P **P 16 18 22.8 -0.5**
comp=Z,37nm,0.5s,mb5.6,baz=256,slow=14,SNR=3.6
KURK Kurchatov 59.22 342 P **P 16 18 40.7 -0.8**
comp=Z,169nm,0.7s,mb6.2,SNR=20
KURK Kurchatov 59.22 342 *e*P **P 16 18 40.5 -0.9**
comp=Z,21nm,0.8s,mb5.2
KURK *e*PcP PcP 16 19 28.8 -0.2
KURK Kurchatov 59.22 342⇑*i*P **P 16 18 40.5 -1.0**
KURK pmax pmax
comp=Z,11nm,0.9s,mb4.9
KLR Kul'dur 59.34 21 *e*P **P 16 18 38.0 -4.3**
ABKT Ailbek 59.61 320 P **P 16 18 44.6 +0.2**
comp=Z,143nm,0.6s,mb6.2,SNR=11
HABR Khabarovsk 59.99 24 *e*P **P 16 18 46.1 -0.7**
HABR *e* 16 19 34.8
HABR *e*S **S 16 26 54.1 +1.6**
HABR pmax pmax
comp=Z,12nm,0.9s,mb4.9
ASAJ Asahikawa 60.28 32 P **P 16 18 48.8 -0.1**
comp=Z,18nm,0.6s,mb5.3,baz=241,slow=11,SNR=42
ZAL Zalesovo 60.55 348 P **P 16 18 49.9 -0.6**
ZALV Zalesovo Beam 60.55 348 P **P 16 18 49.9 -0.6**
ZALV Zalesovo Beam 60.55 348 P **P 16 18 49.9 -0.6**
comp=Z,26nm,0.4s,mb5.6,baz=164,slow=5.1,SNR=116
NVS Novosibirsk 61.73 347 *e*P **P 16 18 55.7 -2.7**
NVS *e*S **S 16 27 14.1 -0.3**
NVS pmax pmax
comp=Z,15nm,1.3s,mb4.9
NVS pmax pmax
comp=N,12nm,1.4s
NVS pmax pmax
comp=E,8.0nm,1.4s
NVS smax
comp=N,19nm,2.4s
YSS Yuzh-Sakhalins 62.32 30 *e*P **P 16 19 01.8 -0.7**
comp=N,31nm,0.8s,mb5.4
YSS Yuzh-Sakhalins 62.32 30⇑*i*P **P 16 19 02.0 -0.6**
YSS *e* pP 16 19 21.5 -3.1
YSS pmax pmax
comp=N,30nm,1.0s
YSS pmax pmax
comp=E,20nm,1.0s
YSS pmax pmax
comp=Z,50nm,1.0s,mb5.5
QRN Al-Qurain 62.66 306 *e*P **P 16 19 04.8 -0.4**
QRN AMb AMB 16 19 06.2
comp=Z,115nm,0.9s,mb5.8
KBD Kabd 63.01 306 *e*P **P 16 19 08.0 +0.5**
KBD AMb AMB 16 19 09.4
comp=Z,164nm,1.2s,mb5.8
RDF Al-Radifah 63.02 306 *e*P **P 16 19 07.8 +0.1**
RDF AMb AMB 16 19 09.5
comp=Z,95nm,0.8s,mb5.8
BOD Bodaibo 63.08 7 *e*P **P 16 19 06.3 -1.1**
BOD pmax pmax
comp=Z,13nm,0.9s,mb4.9
UMR Umm Al-Rimmam 63.13 306 *e*P **P 16 19 08.4 0.0**
UMR AMb AMB 16 19 10.2
comp=Z,139nm,0.7s,mb6.0
NAY Al-Naaiem 63.40 306 *e*P **P 16 19 10.4 +0.3**
NAY AMb AMB 16 19 11.7
comp=Z,44nm,0.7s,mb5.5
MIB Mutribah 63.53 307 *e*P **P 16 19 11.2 +0.2**
MIB AMb AMB 16 19 13.0
comp=Z,73nm,0.8s,mb5.5
RST Umm Al-Ruwaisa 63.69 306 *e*P **P 16 19 12.2 +0.1**
RST AMb AMB 16 19 13.4
comp=Z,105nm,0.7s,mb5.8
BRVK Borovoye 63.99 339 *e*P **P 16 19 12.6 -0.9**
comp=Z,5.8nm,0.4s,mb4.8
BRVK Borovoye 63.99 339 *e*P **P 16 19 12.6 -0.9**
BRVK pmax pmax
comp=Z,6.0nm,0.4s,mb4.8
CHKZ Chkalovo 64.37 339 *i* P **P 16 19 15.3 -0.6**
CHKZ pmax pmax
comp=Z,16nm,0.6s,mb5.0
KMBO Kilima Mbogo 65.86 271 LR LR 16 44 41.2
comp=Z,60nm,18.9s,baz=89,slow=33
MAW Mawson 68.35 195 LR LR 16 43 20.4
comp=Z,163nm,19.0s,baz=173,slow=30
YAK Yakutsk 69.74 13 *e*P **P 16 19 48.2 -1.6**
comp=Z,49nm,0.6s,mb5.5
YAK Yakutsk 69.74 13⇑*e*P **P 16 19 48.2 -1.6**
YAK pmax pmax
comp=Z,51nm,0.7s,mb5.5
SVE Sverdlovsk 70.49 337⇓*e*P **P 16 19 54.2 -0.3**
SVE pmax pmax
comp=Z,21nm,0.8s,mb5.0
SVE MLR MLR
comp=Z,1μm,25.0s
ARU Arti 71.05 336 P **P 16 19 57.4 -0.5**
comp=Z,94nm,1.3s,mb5.5,SNR=6.3
ARU Arti 71.05 336 *e*P **P 16 19 56.6 -1.3**
comp=Z,18nm,1.0s,mb4.8
ARU Arti 71.05 336⇑*e*P **P 16 19 57.1 -0.8**
ARU pmax pmax
comp=Z,20nm,1.0s,mb4.9
ZEI Tsey 71.41 318 *e*P **P 16 20 00.7 +0.3**
ZEI *e**PP pP 16 20 09.2 -14
ZEI *e* pP 16 20 19.1 -3.8
ZEI pmax pmax
comp=Z,9.0nm,0.6s,mb4.8
KIV Kislovodsk 72.71 319 P **P 16 20 08.0 -0.1**
comp=Z,8.4nm,0.6s,mb4.8
KIV Kislovodsk 72.71 319 *e*P **P 16 20 08.2 +0.1**
KIV pmax pmax
comp=Z,9.0nm,0.7s,mb4.7
MALT Malatya 73.54 312 *e*P **P 16 20 13.7 +0.6**
comp=Z,9.5nm,1.2s,mb4.4
MALT Malatya 73.54 312 *e*P **P 16 20 13.7 +0.6**
MALT pmax pmax
comp=Z,9.0nm,1.2s,mb4.4
PET Petropavlovsk 74.11 31⇑*i*P **P 16 20 14.9 -1.3**
PET pmax pmax
comp=Z,109nm,1.3s,mb5.4
LSZ Lusaka 74.21 256 *e*P **P 16 20 17.7 +0.2**
comp=Z,4.6nm,1.2s,mb4.1
LSZ Lusaka 74.21 256 *e*P **P 16 20 17.7 +0.2**
LSZ pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MA2 Magadan 74.37 23⇑*e*P **P 16 20 17.1 -0.4**
MA2 pmax pmax
comp=Z,15nm,1.7s,mb4.5
SOC Sochi 74.54 318 *e*P **P 16 20 17.9 -0.9**
SOC *e*PPP 16 24 49.8
SOC *e*S S 16 29 49.0 +1.7
SOC *e* 16 30 30.2
SOC pmax pmax
comp=Z,22nm,0.7s,mb5.0
VRHR Novokhopersk 76.42 325 *e*P **P 16 20 29.3 -0.1**
VRHR pmax pmax
comp=N,10.0nm,0.3s
VRHR pmax pmax
comp=Z,20nm,0.3s,mb5.3
VRHR pmax pmax
comp=E,10.0nm,0.5s
BOSA Boshof 77.04 242 P **P 16 20 34.2 +0.7**
BOSA LR LR 16 49 35.8
BOSA Boshof 77.04 242 P **P 16 20 34.2 +0.7**
comp=E,3.4nm,1.0s,mb4.0,baz=119,slow=8.7,SNR=3.7
BOSA LR LR 16 49 35.8
comp=E,102nm,18.2s,baz=268,slow=32
SEY Seymchan 77.12 21⇑*e*P **P 16 20 32.7 -0.4**
VRSR Storozhevoye 77.86 325*c* *i*P **P 16 20 36.9 -0.6**
VRSR pmax pmax
comp=N,2.0nm,0.8s
VRSR pmax pmax
comp=Z,5.0nm,0.8s,mb4.3
VRSR pmax pmax
comp=E,4.0nm,0.9s
TIXI Tiksi 78.19 8 *e*P **P 16 20 36.7 -2.2**
comp=E,2.5nm,0.4s,mb4.3
TIXI Tiksi 78.19 8⇓*i*P **P 16 20 37.2 -1.7**
TIXI pmax pmax
comp=Z,3.0nm,0.6s,mb4.2
VNDA Vanda 78.79 169 P **P 16 20 42.6 +0.4**
comp=Z,2.2nm,0.9s,mb4.0,baz=303,slow=6.0,SNR=6.3
PRGR Permogore 79.51 336⇓*i*P **P 16 20 46.6 +0.3**
PRGR *e* 16 23 44.5
PRGR *e*S S 16 30 41.8 +1.2
MOS Moscow 80.53 329 *e*P **P 16 20 50.3 -1.6**
MOS pmax pmax
comp=Z,67nm,1.0s,mb5.4
OBN Obninsk 80.84 328 *e*P **P 16 20 53.9 +0.3**
comp=Z,21nm,0.5s,mb5.2
OBN Obninsk 80.84 328*c* *i*P **P 16 20 53.8 +0.2**
OBN pmax pmax
comp=Z,39nm,0.8s,mb5.3
AKASG Malin Array Be 83.62 322 P **P 16 21 07.8 -0.4**
comp=Z,8.8nm,0.7s,mb4.7,baz=89,slow=4.8,SNR=38
KIEV Kiev 83.63 322 *e*P **P 16 21 07.6 -0.7**
comp=Z,9.3nm,0.8s,mb4.7
KIEV Kiev 83.63 322 *e*P **P 16 21 07.6 -0.7**
KIEV pmax pmax
comp=Z,9.0nm,0.8s,mb4.7
VRI Vrincioaia 84.04 317⇓*e*P **P 16 21 11.8 +1.3**
VRI Vrincioaia 84.04 317⇓*i*P **P 16 21 11.8 +1.3**
MLR Muntele Rosu 84.49 316⇑*e*P **P 16 21 13.5 +0.8**
MLR Muntele Rosu 84.49 316 P **P 16 21 13.4 +0.6**
comp=Z,12nm,0.9s,mb4.7,baz=161,slow=2.6,SNR=13
MLR Muntele Rosu 84.49 316⇑*i*P **P 16 21 13.5 +0.7**
VTS Vitosha 85.85 313⇑*e*P **P 16 21 20.0 +0.4**
VTS Vitosha 85.85 313⇑*i*P **P 16 21 20.0 +0.4**
JOF Joensuu 86.11 334 *e*p **P 16 21 19.8 -0.6**
comp=Z,17nm,0.6s,mb5.2
JOF Joensuu 86.11 334 *e*P **P 16 21 19.8 -0.6**
JOF pmax pmax
comp=Z,17nm,0.6s,mb5.2
DRGR 86.95 317⇑*e*P **P 16 21 25.8 +0.8**
DRGR 86.95 317⇑*i*P **P 16 21 25.8 +0.9**
BZS Buzias 87.50 316⇑*e*P **P 16 21 28.2 +0.6**
BZS Buzias 87.50 316⇑*i*P **P 16 21 28.3 +0.7**
KOLS Kolonicke sedl 87.62 319 *e*P **P 16 21 29.3 +1.2**
SUW Suwalki 87.99 324 *e*P **P 16 21 30.0 +0.3**
FINES FINESS Array B 88.06 332 P **P 16 21 30.2 +0.3**
comp=Z,10.0nm,0.5s,mb5.1,baz=109,slow=6.4,SNR=65
KAF Kangasniemi 88.11 333 *e*p **P 16 21 30.6 +0.5**
comp=Z,27nm,0.6s,mb5.5,baz=97,slow=4.3
KAF Kangasniemi 88.11 333 *e*P **P 16 21 30.6 +0.5**
KAF pmax pmax
comp=Z,27nm,0.6s,mb5.5
CRVS Cervenica-Dubn 88.14 319 *e*P **P 16 21 31.2 +0.6**
STHS Stebnicka Huta 88.37 320 *e*P **P 16 21 33.1 +1.5**
comp=Z,11nm,0.7s,mb5.0
STHS Stebnicka Huta 88.37 320 *e*P **P 16 21 33.1 +1.5**
STHS pmax pmax
comp=Z,11nm,0.7s,mb5.0
STHS Stebnicka Huta 88.37 320 *e*P **P 16 21 33.0 +1.4**
KECS Kecovo 88.71 319 *e*P **P 16 21 34.0 +0.7**
comp=Z,3.1nm,0.7s,mb4.5
KECS Kecovo 88.71 319 *e*P **P 16 21 34.0 +0.7**
KECS pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
PSZ Piszkesteto 89.02 318⇑*e*P **P 16 21 35.3 +0.5**
PSZ Piszkesteto 89.02 318⇑*i*P **P 16 21 35.3 +0.5**
OJC Ojcow 89.41 320 *e*P **P 16 21 37.7 +1.2**
PKSM Moragy 89.64 316⇑*e*P **P 16 21 38.1 +0.4**
PKSM Moragy 89.64 316⇑*i*P **P 16 21 38.1 +0.4**
VYHS Vyhne 89.80 319 *e*P **P 16 21 39.2 +0.8**
comp=Z,3.7nm,1.3s,mb4.3
VYHS Vyhne 89.80 319 *e*P **P 16 21 39.2 +0.8**
VYHS pmax pmax
comp=Z,4.0nm,1.3s,mb4.4
KOLL Kolacno 90.10 319 *e*P **P 16 21 41.1 +1.3**
ARCES ARCESS Array B 90.19 340 P **P 16 21 39.8 +0.1**
comp=Z,12nm,0.8s,mb5.1,baz=93,slow=6.3,SNR=23
ARCES LR LR 17 05 51.6
comp=Z,62nm,18.8s,baz=340,slow=38
OKC Ostrava-Krasne 90.42 320 *e*P **P 16 21 42.6 +1.4**
MORC Moravsky Berou 90.80 320 *e*P **P 16 21 43.9 +0.9**
comp=Z,6.8nm,0.8s,mb4.8
MORC Moravsky Berou 90.80 320 *e*P **P 16 21 43.9 +0.9**
MORC pmax pmax
comp=Z,7.0nm,0.8s,mb4.8
MORC Moravsky Berou 90.80 320⇓*i*P **P 16 21 44.0 +1.0**
MODS Modra-Piesok 90.82 318 *e*P **P 16 21 44.6 +1.5**
DPC Dobruska-Polom 91.64 320 *e*P **P 16 21 48.2 +1.3**
UPC Upice 91.86 320 *e*P **P 16 21 49.0 +1.1**
PRU Pruhonice 92.75 320 *e*P **P 16 21 53.0 +1.0**
BRG Berggiesshubel 93.20 321 *e*P **P 16 21 54.7 +0.6**
BRG pmax pmax
comp=Z,4.0nm,0.7s,mb4.9
BRG Berggiesshubel 93.20 321 *e*P **P 16 21 54.7 +0.6**
comp=Z,5.8nm,0.7s,mb5.0
GERES GERESS Array B 93.22 319 P **P 16 21 54.2 0.0**
comp=Z,1.5nm,0.7s,mb4.4,baz=84,slow=4.2,SNR=11
KHC Kasperske Hory 93.32 319 *e*P **P 16 21 55.0 +0.3**
CLL Collm 93.81 321 *e*P **P 16 21 57.0 +0.1**
NB2 NORSAR Subarra 95.13 331 P **P 16 22 02.3 -0.4**
comp=Z,1.9nm,0.7s,mb4.6,baz=95,slow=5.3
NB2 NORSAR Subarra 95.13 331 P **P 16 22 02.3 -0.4**
NB2 pmax pmax
comp=Z,2.0nm,0.7s,mb4.7
NOA NORSAR Array B 95.13 331 P **P 16 22 02.6 -0.1**
comp=Z,2.5nm,0.7s,mb4.8,baz=92,slow=4.7,SNR=14
DAVOX Davos/Dischmat 95.72 316 P **P 16 22 06.4 +0.7**
comp=Z,1.8nm,0.5s,mb4.7,baz=96,slow=4.3,SNR=3.4
YKA Yellowknife Ar 116.12 18 PKP PKPdf 16 27 21.8 -0.4
comp=Z,0.8nm,0.7s,baz=331,slow=1.9,SNR=21
SCHQ Schefferville 129.50 352 PKP PKPdf 16 27 48.2 +0.1
SCHQ Schefferville 129.50 352 PKP PKPdf 16 27 48.2 +0.2
comp=Z,3.3nm,0.8s,baz=358,slow=3.8,SNR=6.7
NVAR Mina Array Bea 129.71 42 PKP PKPdf 16 27 51.1 +2.1
comp=Z,1.5nm,0.6s,baz=297,slow=2.9,SNR=3.6
ULM Lac du Bonnet 132.01 16 PKP PKPdf 16 27 53.5 +0.5
ULM Lac du Bonnet 132.01 16 PKP PKPdf 16 27 53.5 +0.5
comp=Z,3.9nm,0.7s,baz=340,slow=3.6,SNR=8.0
HWUT Hardware Ranch 132.07 35 *e*P PKPdf 16 27 54.6 +1.3
PDAR Pinedale Array 132.41 33 PKP PKPdf 16 27 55.2 +1.3
comp=Z,0.9nm,0.6s,baz=193,slow=0.9,SNR=9.9
PLCA Paso Flores 134.28 187 PKP PKPdf 16 27 58.8 +1.2
comp=Z,1.0nm,0.8s,baz=208,slow=1.6,SNR=2.1
ANMO Albuquerque 139.44 39⇓*i*PKIKP PKPdf 16 28 09.3 +2.0
WMOK Wichita Mounta 144.00 32 *e*PKPpre 16 28 13.1
LTX Lajitas 144.85 43 *e*PKP PKPdf 16 28 17.0 -0.1
MVL Millersville 145.00 359 *e*PKP PKPdf 16 28 16.1 -0.9
MCWV Mont Chateau 145.24 4 *e*PKP PKPdf 16 28 17.2 -0.2
SDMD Soldier's Deli 145.59 360 *e*PKP PKPdf 16 28 18.0 0.0
WCI Wyandotte Cave 145.68 13 *e*PKP PKPdf 16 28 18.2 0.0
JCT Junction City 146.58 38 *e*PKPbc PKPbc 16 28 21.9 +0.3
MIAR Mount Ida 146.64 26 *e*PKPbc PKPbc 16 28 22.0 +0.3
WVT Waverly 147.28 17 *e*PKPbc PKPbc 16 28 23.1 -0.3
URVA University of 147.42 1 *e*PKPbc PKPbc 16 28 23.7 -0.1
URVA *e*PKPab PKPab 16 28 25.7 -0.1
TZTN Tazewell 147.86 10 *e*PKPbc PKPbc 16 28 24.4 -0.6
TZTN *e*PKPab PKPab 16 28 27.4 -0.2
GOGA Godfrey 150.92 11 *e*PKPbc PKPbc 16 28 32.6 -0.1

GOGA				*e*PKPab	PKPab	16 28 39.4	-0.7
LPAZ	**La Paz**	**157.29**	**202**	PKP	PKPdf	16 28 38.6	+2.3
	comp=Z,1.7nm,1.0s,baz=86,slow=3.1,SNR=4.5						

*ISCJB **28** 16:35:48.3±1.4, 3834N±005×2039E±010, h2km, Error ellipse: s-maj=11.8km s-min=6.6km az=154.5*
*ATH **28** 16:35:48.6, 3878N×2129E, h10km, MD3.4/3*
*NEIC **28** 16:35:48.6, 3878N×2129E, h10km, MD3.4(ATH), ML3.3(THE), After ATH.*
*CSEM **28** 16:35:49.8±0.7, 38.36N×2047E, h2km, ML3.3, Error ellipse: s-maj=19.1km s-min=8.9km az=65.0*
*THE **28** 16:35:49.0, 3835N×2044E, h3km, ML3.3*

ISC 28 16:35:47.8±2.2, 3832N±007×203E±01, h1km±15km, n7, σ0§63/9, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.41**	**120**	*e*Pg	**Pg**	**16 35 55.3**	**-0.4**
LKD	**Levkas**	**0.46**	**33**	*e*Pg	**Pg**	**16 35 56.1**	**-0.6**
LKD				*e*Sg	**Sg**	**16 36 02.8**	**+0.1**
SELA	**Sela**	**1.23**	**91**	*e*Sg	**Sg**	**16 36 27.2**	**-0.1**
SELA				*e*Sg	**Sg**	**16 36 28.8**	**+1.5**
KEK	**Kerkira**	**1.46**	**344**	*e*PB	**Pb**	**16 36 16.5**	**+0.9**
ITM	**Ithomi**	**1.70**	**131**	*e*PB	**Pb**	**16 36 20.0**	**+0.2**
AGG	**Agios Georgios**	**1.72**	**65**	*e*Pb	**Pn**	**16 36 17.9**	**-0.9**
VLX	**Vlachokerasia**	**1.88**	**120**	*e*Sb	**Sb**	**16 36 46.9**	**+0.2**

*ISCJB **28** 16:42:53.9±0.6, 4487N±003×2242E±006, h5km±6km, Error ellipse: s-maj=7.2km s-min=4.6km az=7.9*
*BEO **28** 16:42:55.1±0.6, 4485N×2247E, h7km±3km, ML1.8/3*
*BUC **28** 16:42:55.7±0.9, 4497N×2250E, h14km±3km, MD2.7/2, Error ellipse: s-maj=10.2km s-min=3.7km az=319.0*

ISC 28 16:42:54.5±0.7, 4487N±003×2246E±006, h8km±6km, n9, σ0§70/16, 3D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJES	**Djerdap**	**0.24**	**169**	*e*Pg	**Pg**	**16 42 59.8**	**+0.5**
DJES				*e*Sg	**Sg**	**16 43 02.9**	**+0.3**
GZR	**Gura Zlata**	**0.57**	**23**	⇓ *i* P	**Pg**	**16 43 05.6**	**+0.1**
GZR				S	**Sg**	**16 43 12.9**	**0.0**
BZS	**Buzias**	**0.95**	**322**	⇓ *i* Pg	**Pg**	**16 43 13.0**	**+0.2**
BZS				*e*Sg	**Sg**	**16 43 25.6**	**+0.4**
BZS	**Buzias**	**0.95**	**322**	⇓ *i* P	**Pg**	**16 43 13.2**	**+0.4**
BZS				S	**Sg**	**16 43 25.5**	**+0.3**
SVIS	**Svilajnac**	**1.05**	**237**	*e*Pg	**Pg**	**16 43 14.9**	**+0.2**
BEO	**Belgrade**	**1.43**	**269**	*e*Pg	**Pg**	**16 43 20.0**	**-1.8**
DIVS	**Divcibare**	**1.93**	**247**	*e*Pn	**Pn**	**16 43 28.7**	**+1.2**
DIVS				*e*Sn	**Sn**	**16 43 52.0**	**+0.1**
DIVS				*e*Sg	**Sg**	**16 43 56.7**	**+0.3**
DRGR		**1.93**	**5**	S	**Sn**	**16 43 51.2**	**-0.7**
BARS	**Barje**	**2.10**	**193**	*e*Pn	**Pn**	**16 43 30.0**	**+0.1**
BARS				*e*Sg	**Sg**	**16 44 00.9**	**-1.1**

IDC 28 16:45:42.1±1.5, 4659N×15325E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/19, mbtmp3.5/5, MS3.0/1, Ms1 3.0/1, ms1mx2.3/25, Error ellipse: s-maj=46.9km s-min=34.2km az=103.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**7.90**	**256**	Pn	Pn	16 47 44.7	+6.6
	baz=97,slow=13						
SONM	**Songino Array**	**31.48**	**290**	LR	LR	17 06 34.2	
	comp=Z,23nm,18.5s,baz=46,slow=40						
MKAR	**Makanchi Array**	**47.10**	**298**	P	P	16 54 15.7	+0.1
	0.5nm,0.8s,baz=62,slow=8.4,SNR=3.9						
YKA	**Yellowknife Ar**	**51.00**	**37**	P	P	16 54 45.1	0.0
	0.2nm,0.6s,baz=306,slow=8.5,SNR=4.0						
FINES	**FINESS Array B**	**64.23**	**335**	P	P	16 56 18.3	0.0
	0.4nm,0.4s,baz=35,slow=7.0,SNR=5.8						
NOA	**NORSAR Array B**	**68.41**	**341**	P	P	16 56 45.1	0.0
	0.5nm,0.7s,baz=32,slow=6.3,SNR=2.9						
ASAR	**Alice Springs**	**72.08**	**199**	P	P	16 57 08.0	+0.1
	0.4nm,1.1s,baz=17,slow=5.2,SNR=3.6						

*IDC **28** 16:46:11.2±1.2, 6713N×2015E, h0km, mb1 2.8/3, mb1mx2.7/19, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=18.2km s-min=9.4km az=105.0*
*ISCJB **28** 16:46:13.2±0.6, 6704N±003×211E±0.1, h0km, Error ellipse: s-maj=6.5km s-min=4.0km az=177.1*
*HEL **28** 16:46:14.1±0.1, 6708N×2091E, h0km, ML1.9, ML1.9(UPP), Explosion*

ISC 28 16:46:14.0±0.6, 6706N±003×210E±01, h0km, n15, σ1§05/23, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.17**	**289**	*i* P	**Pg**	**16 46 16.6**	**-0.8**
ERTU	**Ertsjaerv**	**0.70**	**137**	*i* P	**Pg**	**16 46 27.0**	**-0.4**
PAJU	**Pajala**	**0.83**	**92**	*i* P	**Pg**	**16 46 29.3**	**-0.7**
HARU	**Harads**	**0.91**	**180**	*e*P	**Pg**	**16 46 30.5**	**-0.9**
LANU	**Lannavaara**	**1.06**	**21**	*e*P	**Pg**	**16 46 32.8**	**-1.6**
SJUU	**Sjulsmark**	**1.58**	**171**	*e*P	**Pn**	**16 46 42.7**	**-0.6**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**16 46 44.0**	**-0.8**
HEF				*e*S	**Sn**	**16 47 06.5**	**-0.6**
HEF				MSG		16 47 10.1	
	comp=Z,7.3nm,0.2s						
KIF	**Kilpisjarvi**	**1.95**	**358**	*e*P	**Pn**	**16 46 48.9**	**+0.6**
KIF				*e*S	**Sn**	**16 47 15.7**	**+2.2**
SGF	**Sodankyl**	**2.19**	**77**	*e*P	**Pn**	**16 46 52.4**	**+0.9**
SGF				*e*SG	**Sg**	**16 47 22.5**	**-1.6**
OUL	**Oulu**	**2.82**	**133**	*e*P	**Pn**	**16 47 01.5**	**+1.3**
OUL				*e*S	**Sn**	**16 47 35.0**	**+0.2**
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn	**Pn**	**16 47 01.8**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=220,slow=14,SNR=76						
ARCES				Sn	**Sn**	**16 47 40.2**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=219,slow=22,SNR=7.5						
KU6	**Riekki**	**3.71**	**102**	*e*P	**Pn**	**16 47 12.7**	**+0.3**
KU6				*e*S	**Sn**	**16 47 58.0**	**+1.3**
KU6				MSG		16 48 13.6	
	comp=Z,2.3nm,0.2s						
VAF	**Ylistaro**	**4.10**	**169**	*e*P	**Pn**	**16 47 18.7**	**+0.9**
VAF				*e*S	**Sn**	**16 48 04.7**	**-1.7**
VAF				MSG		16 48 25.5	
	comp=Z,2.6nm,0.4s						
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**16 47 45.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=343,slow=12,SNR=4.0						
FINES				Sn	**Sn**	**16 48 55.7**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=341,slow=21,SNR=6.7						
FINES				Lg		16 49 26.2	
	comp=Z,0.2nm,0.3s,baz=332,slow=30,SNR=3.0						
NOA	**NORSAR Array B**	**7.40**	**220**	Pn	**Pn**	**16 47 56.4**	**-6.8**
	comp=Z,0.1nm,0.3s,baz=39,slow=13,SNR=2.8						

IDC 28 16:55:11.8±9.1, 3378S×17965W, h52km±82km, mb3.2/2, mb1 3.5/3, mb1mx3.4/13, mbtmp3.3/3, ML3.6/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/8, Error ellipse: s-maj=60.8km s-min=47.7km az=7.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**4.61**	**201**	PN	Pn	16 56 18.6	-0.2
MWZ	**Matawai**	**5.09**	**206**	PN	Pn	16 56 26.4	+1.0
MWZ				SN	Sn	16 57 24.7	+1.9
MWZ				SN	Sn	16 57 26.0	+3.2
URZ	**Urewera**	**5.18**	**210**	P	Pn	16 56 28.3	+1.5
	2.0nm,0.3s,baz=72,slow=3.2,SNR=15						
URZ				S	Sn	16 57 24.8	-0.4
	3.7nm,0.3s,baz=302,slow=23,SNR=6.2						
URZ	**Urewera**	**5.18**	**210**	PN	Pn	16 56 28.2	+1.5
URZ				SN	Sn	16 57 25.3	+0.1
URZ				SN	Sn	16 57 25.6	+0.4
ASAR	**Alice Springs**	**41.66**	**271**	P	P	17 02 54.4	-0.9
	0.2nm,0.5s,baz=111,slow=8.9,SNR=6.8						
WRA	**Warramunga Arr**	**42.96**	**277**	P	P	17 03 06.9	+1.0
	0.3nm,0.3s,baz=116,slow=8.2,SNR=21						
WRA				LR	LR	17 21 28.9	
	comp=Z,88nm,19.2s,baz=170,slow=37						
ARCES	**ARCESS Array B**	**141.56**	**346**	PKP	PKPdf	17 14 34.6	-1.5
	2.9nm,1.0s,baz=58,slow=3.4,SNR=2.6						
FINES	**FINESS Array B**	**147.77**	**337**	PKPbc	PKPbc	17 14 48.8	-1.2
	0.6nm,0.5s,baz=56,slow=4.8,SNR=8.3						
NOA	**NORSAR Array B**	**151.83**	**349**	PKPbc	PKPbc	17 15 00.1	+0.2
	0.6nm,0.6s,baz=14,slow=4.1,SNR=3.5						

*ISCJB **28** 17:16:50.1±1.2, 3817N±006×204E±0.1, h24km±6km, Error ellipse: s-maj=14.8km s-min=9.4km az=155.5*
*ATH **28** 17:16:50.1, 38.16N×2063E, h27km, MD3.5/7*
*NEIC **28** 17:16:50.1, 3816N×2063E, h27km, MD3.5(ATH), ML3.4(THE), After ATH.*
*THE **28** 17:16:51.4, 3835N×2040E, h3km, ML3.4*
*CSEM **28** 17:16:52.7±0.1, 3835N×2066E, h8km, MD3.5, Error ellipse: s-maj=5.2km s-min=2.0km az=82.0*

ISC 28 17:16:50.4±1.3, 3817N±006×204E±01, h21km±7km, n15, σ1§17/21, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**88**	*e*PB	**Pb**	**17 16 55.3**	**0.0**
VLS				*e*SB	**Sb**	**17 16 58.6**	**-0.1**
KFL	**Anninata**	**0.34**	**100**	*e*Pg	**Pb**	**17 16 58.0**	**+0.2**
LKD	**Levkas**	**0.58**	**23**	*e*Pg	**Pb**	**17 16 58.5**	**-3.3**
LKD				*e*Sg	**Sb**	**17 17 04.8**	**-4.9**
LKD	**Levkas**	**0.58**	**23**	*e*Pg	**Pb**	**17 16 58.5**	**-3.4**
LKD				*e*Sg	**Sb**	**17 17 04.8**	**-4.9**
RLS	**Riolos of Patr**	**0.88**	**97**	*e*PN	**Pn**	**17 17 03.4**	**-4.1**
EVR	**Evrytania**	**1.36**	**56**	*e*PN	**Pn**	**17 17 12.7**	**-1.4**
IGT	**Igoumenitsa**	**1.36**	**359**	*e*Pg	**Pn**	**17 17 13.0**	**-1.2**
IGT				*e*Sg	**Sn**	**17 17 31.7**	**+0.1**
JAN	**Janina**	**1.53**	**14**	*e*PN	**Pn**	**17 17 17.5**	**+1.0**
ITM	**Ithomi**	**1.59**	**128**	*e*PN	**Pn**	**17 17 16.1**	**-1.2**
KEK	**Kerkira**	**1.60**	**344**	*e*PB	**Pb**	**17 17 19.5**	**+0.2**
PYL	**PYLOS**	**1.68**	**139**	*e*Pb	**Pb**	**17 17 23.3**	**+2.7**
AGG	**Agios Georgios**	**1.76**	**60**	*e*Pb	**Pb**	**17 17 20.4**	**-1.6**
AGG				*e*Sb	**Sb**	**17 17 44.6**	**+0.9**
THL	**Klokotos Trika**	**1.90**	**42**	*e*PN	**Pn**	**17 17 21.2**	**-0.3**
LTK	**Loutraki**	**2.06**	**93**	*e*Pn	**Pn**	**17 17 27.6**	**+3.8**
FNA	**Florina**	**2.73**	**16**	*e*Pn	**Pn**	**17 17 34.4**	**+1.5**
FNA				*e*Sn	**Sn**	**17 18 06.0**	**+0.8**

IDC 28 17:28:15.3±1.5, 8590N×2217E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/21, mbtmp3.5/4, ML3.5/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/24, Error ellipse: s-maj=40.3km s-min=28.0km az=76.0, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARCES	**ARCESS Array B**	**16.47**	**176**	Pn	Pn	17 32 04.8	-2.5
	0.2nm,0.3s,baz=356,slow=11,SNR=19						
ARCES				LR	LR	17 38 23.5	
	comp=Z,59nm,19.5s,baz=173,slow=37						
NOA	**NORSAR Array B**	**25.08**	**193**	P	P	17 33 41.0	+0.1
	1.4nm,0.9s,baz=3.1,slow=10,SNR=3.3						
INK	**Inuvik**	**25.64**	**339**	LR	LR	17 42 07.1	
	comp=Z,37nm,19.1s,baz=121,slow=32						
HFS	**Hagfors**	**25.96**	**190**	LR	LR	17 45 37.9	
	comp=Z,30nm,18.1s,baz=287,slow=40						
YKA	**Yellowknife Ar**	**30.79**	**322**	P	P	17 34 31.9	0.0
	0.2nm,0.7s,baz=358,slow=8.7,SNR=4.0						
GERES	**GERESS Array B**	**37.27**	**189**	LR	LR	17 50 38.6	
	comp=Z,24nm,19.9s,baz=99,slow=36						
MKAR	**Makanchi Array**	**41.47**	**116**	LR	LR	17 55 19.9	
	comp=Z,32nm,20.5s,baz=355,slow=39						
SONM	**Songino Array**	**42.10**	**91**	P	P	17 36 08.6	+0.2
	0.6nm,1.0s,baz=331,slow=8.3,SNR=3.6						

*MOS **28** 17:44:53.0±0.9, 675N×12663E, h33km, mb4.6/12, Error ellipse: s-maj=23.4km s-min=9.6km az=110.3*
*ISCJB **28** 17:44:59.0±0.7, 668N±003×12671E±006, h86km±6km, mb4.3/37, Error ellipse: s-maj=9.7km s-min=5.6km az=170.6*
*NEIC **28** 17:45:00.4±1.2, 674N×12675E, h85km±11km, mb4.5/10, Error ellipse: s-maj=13.9km s-min=6.7km az=72.0*
*BJI **28** 17:45:00.4, 670N×12680E, h84km, mB4.8, mb4.8*
*MAN **28** 17:45:01, 691N×12655E, h12km, mb5.0, ML3.9, MS4.0*
*IDC **28** 17:45:01.9±4.2, 673N×12674E, h98km±40km, mb4.0/18, mb1 4.0/19, mb1mx4.0/23, mbtmp4.0/19, MS3.6/5, Ms1 3.6/5, ms1mx3.1/25, Error ellipse: s-maj=23.2km s-min=9.8km az=84.0*

ISC 28 17:45:00.6±0.7, 665N±004×12667E±006, h84km±6km, n91, σ1§04/95, mb4.3/36, 7C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.16**	**291**	*e*Pn	**Pn**	**17 45 21.0**	**-0.8**
DAV				*e*Sn	**Sn**	**17 45 37.5**	**-0.2**
DAV	**Davao City (W)**	**1.16**	**291**	⇑ *e*P	**Pn**	**17 45 21.0**	**-0.8**
DMPH	**Davao City--Mi**	**1.23**	**290**	⇑ *i* P	**Pn**	**17 45 22.4**	**-0.2**
DMPH				*i* S	**Sn**	**17 45 37.8**	**-1.4**
BIPH	**Bislig**	**1.55**	**349**	⇓ *i* P	**Pn**	**17 45 22.7**	**-4.1**
BIPH				*i* S	**Sn**	**17 45 38.6**	**-7.9**
GSPH	**General Santos**	**1.80**	**252**	*e*P	**Pn**	**17 45 27.3**	**-2.6**
GSPH				*e*S	**Sn**	**17 45 50.5**	**-1.8**
BUKP	**Musuan**	**2.01**	**307**	*e*P	**Pn**	**17 45 32.3**	**-0.4**
BUKP				*e*S	**Sn**	**17 46 00.6**	**+3.4**
CTBH	**Cotabato--PC H**	**2.47**	**283**	⇑ *i* P	**Pn**	**17 45 38.9**	**0.0**
CTBH				*i* S	**Sn**	**17 46 08.3**	**0.0**
CGP	**Cagayan de Oro**	**2.65**	**313**	⇑ *i* P	**Pn**	**17 45 40.9**	**-0.4**
PAGZ	**Pagadian**	**3.47**	**290**	*e*P	**Pn**	**17 45 53.0**	**+0.7**
DCPH	**Dipolog City**	**3.81**	**300**	*e*P	**Pn**	**17 45 57.6**	**+0.6**
MSLP	**Maasin**	**3.90**	**333**	*e*P	**Pn**	**17 45 57.0**	**-1.2**
MSLP				*e*S	**Sn**	**17 46 51.2**	**+8.4**
TBP	**Tagbilaran**	**4.10**	**318**	*e*P	**Pn**	**17 46 00.9**	**-0.1**
TBP				*e*S	**Sn**	**17 46 49.9**	**+2.0**
LLP	**Lapu-Lapu**	**4.52**	**324**	⇓ *e*P	**Pn**	**17 46 07.0**	**+0.4**
LLP				*e*S	**Sn**	**17 46 57.0**	**-0.9**
PLP	**Palo**	**4.79**	**340**	*e*P	**Pn**	**17 46 12.5**	**+2.3**
PLP				*e*S	**Sn**	**17 47 14.2**	**+10**
OCLP	**Ormoc**	**4.82**	**335**	*e*P	**Pn**	**17 46 11.3**	**+0.6**
OCLP				*e*S	**Sn**	**17 47 13.8**	**+8.4**
GUIM	**Jordan**	**5.64**	**315**	*e*P	**Pn**	**17 46 22.7**	**+0.7**
CNP	**Catarman**	**6.15**	**341**	*e*P	**Pn**	**17 46 28.5**	**-0.3**
CNP				*e*S	**Sn**	**17 47 37.7**	**0.0**
CUYO	**Cuyo Island**	**6.97**	**307**	*e*P	**Pn**	**17 46 41.5**	**+1.4**
PVCP	**Virac**	**7.33**	**340**	*e*P	**Pn**	**17 46 46.4**	**+1.4**
ENPP	**El Nido**	**8.47**	**303**	*e*P	**Pn**	**17 47 01.6**	**+1.1**
BATI	**Kupang**	**17.01**	**190**	P	**Pn**	**17 48 56.2**	**+2.9**
	2.7nm,0.3s,baz=308,slow=3.7,SNR=8.6						
KSM	**Kuching**	**17.11**	**253**	*e*P	**Pn**	**17 48 58.4**	**+3.9**
KAKA	**Kakadu**	**20.07**	**163**	*e*P	**P**	**17 49 27.6**	**+0.2**
	18nm,0.6s						
JOW	**Kunigami**	**20.13**	**4**	P	**P**	**17 49 27.9**	**0.0**
	5.7nm,0.6s,baz=155,slow=15,SNR=3.6						
FITZ	**Fitzroy Crossi**	**24.62**	**182**	*e*P	**P**	**17 50 13.7**	**+0.4**
	5.2nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**24.62**	**182**	P	**P**	**17 50 13.7**	**+0.4**
	2.1nm,0.4s,mb3.9,baz=360,slow=13,SNR=4.4						
CBIJ	**Chichi jima**	**25.12**	**34**	P	**P**	**17 50 16.2**	**-1.6**
	62nm,0.6s,mb5.2,baz=230,slow=16,SNR=3.5						
NJ2	**Nanjing**	**26.30**	**345**	*e*P	**P**	**17 50 33.3**	**+4.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8						
WRA	**Warramunga Arr**	**27.48**	**164**	*i* P	**P**	**17 50 38.0**	**-1.1**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
WRA	**Warramunga Arr**	**27.48**	**164**	P	**P**	**17 50 38.7**	**-0.4**
	comp=Z,3.1nm,0.4s,mb4.2,baz=342,slow=10,SNR=29						
WB2	**Warramunga Arr**	**27.49**	**164**	*e*P	**P**	**17 50 38.9**	**-0.3**
PSI	**Prapat**	**27.91**	**263**	LR	LR	18 02 00.5	
	comp=Z,80nm,19.5s,baz=257,slow=36						
ASAR	**Alice Springs**	**30.95**	**167**	P	**P**	**17 51 09.7**	**-0.2**
	comp=Z,1.0nm,0.3s,mb4.0,baz=341,slow=7.0,SNR=48						
ASAR				PcP	PcP	17 54 05.1	+0.6
	comp=Z,1.7nm,0.5s,baz=350,slow=2.4,SNR=13						
MJAR	**Matsushiro Arr**	**31.57**	**18**	P	**P**	**17 51 13.7**	**-1.4**
	comp=Z,1.8nm,0.9s,mb3.8,baz=207,slow=7.8,SNR=3.6						
CTA	**Charters Tower**	**32.82**	**144**	*e*P	**P**	**17 51 27.2**	**+0.9**
	comp=Z,3.5nm,0.7s,mb4.3						
CTA	**Charters Tower**	**32.82**	**144**	*e*P	**P**	**17 51 27.2**	**+0.9**
CTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CTAO	**Charters Tower**	**32.82**	**144**	*e*P	**P**	**17 51 26.1**	**-0.2**
	comp=Z,3.8nm,0.6s,mb4.4						
CTAO	**Charters Tower**	**32.82**	**144**	*e*P	**P**	**17 51 26.2**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
HNR	**Honiara**	**36.81**	**115**	P	**P**	**17 52 00.6**	**-0.2**
	comp=Z,13nm,0.4s,mb5.2,baz=262,slow=7.1,SNR=2.2						
KLBR	**Kellerberrin**	**38.97**	**192**	*e*P	**P**	**17 52 19.0**	**+0.3**
	comp=Z,37nm,1.2s,mb5.1						
MUN	**Mundaring**	**39.69**	**194**	*e*P	**P**	**17 52 26.1**	**+1.4**
ASAJ	**Asahikawa**	**39.84**	**18**	P	**P**	**17 52 25.7**	**-0.1**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ASAJ	**Asahikawa**	**39.84**	**18**	P	**P**	**17 52 25.7**	**-0.1**
	comp=Z,6.7nm,1.1s,mb4.4,baz=219,slow=8.8,SNR=9.4						
NWAO	**Narrogin (SRO)**	**40.37**	**192**	P	**P**	**17 52 31.6**	**+1.3**
	comp=Z,9.1nm,0.5s,mb4.9,baz=1.0,slow=11,SNR=12						
GTA	**Gaotai**	**40.59**	**327**	*e*P	**P**	**17 52 32.8**	**+0.7**
GTA				AP	pP	17 52 49.0	-3.1
STKA	**Stephens Creek**	**40.88**	**160**	*e*P	**P**	**17 52 34.6**	**+0.1**
	comp=Z,3.8nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**40.88**	**160**	P	**P**	**17 52 34.6**	**+0.2**
	comp=Z,4.6nm,0.5s,mb4.6,baz=337,slow=9.0,SNR=22						
STKA				LR	LR	18 09 05.9	
	comp=Z,142nm,19.0s,baz=32,slow=35						
HABR	**Khabarovsk**	**42.28**	**8**	*e*P	**P**	**17 52 53.7**	**+8.0**
HABR				*e*	PcP	17 54 43.0	+4.9
HABR				*e*SS	ScS	18 02 45.5	+6.2
TAPN	**Taplejung**	**42.30**	**304**	*e*P	**P**	**17 52 47.0**	**+0.7**
	comp=Z,7.9nm,0.7s,mb4.5						
ODAN	**Odare**	**42.39**	**303**	*e*P	**P**	**17 52 47.6**	**+0.6**
	comp=Z,6.8nm,0.5s,mb4.6						
JIRN	**Jiri**	**43.67**	**303**	*e*P	**P**	**17 52 58.2**	**+0.9**
ULN	**Ulaanbaatar**	**44.34**	**341**	⇓ *e*P	**P**	**17 53 06.0**	**+3.6**
KKN	**Kakani**	**44.47**	**303**	*e*P	**P**	**17 53 03.8**	**+0.1**
	comp=Z,4.5nm,0.6s,mb4.4						
SONM	**Songino Array**	**44.53**	**341**	P	**P**	**17 53 03.9**	**+0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=164,slow=8.7,SNR=9.7						
SONM				LR	LR	18 12 30.3	
	comp=Z,32nm,20.4s,baz=74,slow=37						
GKN	**Gorkha**	**45.08**	**303**	*e*P	**P**	**17 53 08.3**	**-0.3**
	comp=Z,2.8nm,0.5s,mb4.3						
KOLN	**Koldanda**	**45.86**	**303**	*e*P	**P**	**17 53 15.0**	**+0.2**
	comp=Z,6.9nm,0.5s,mb4.6						
ZAK	**Zakamensk**	**47.77**	**340**	*e*P	**P**	**17 53 32.6**	**+3.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.5s,mb3.4						
MK31	**Makanchi Array**	**55.15**	**324**	*i* P	**P**	**17 54 24.4**	**0.0**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
MKAR	**Makanchi Array**	**55.15**	**324**	P	**P**	**17 54 24.5**	**+0.1**
MKAR				PcP	PcP	17 55 27.9	+3.3
MKAR				LR	LR	18 20 19.8	
MKAR	**Makanchi Array**	**55.15**	**324**	P	**P**	**17 54 24.5**	**+0.1**
MKAR						17 55 28.0	
MKAR	**Makanchi Array**	**55.15**	**324**	P	**P**	**17 54 24.5**	**+0.1**
	comp=Z,3.2nm,0.5s,mb4.6,baz=120,slow=7.8,SNR=94						
MKAR				PcP	PcP	17 55 27.9	+3.3
	comp=Z,1.9nm,0.7s,baz=124,slow=3.7,SNR=6.1						
MKAR				LR	LR	18 20 19.8	
	comp=Z,28nm,18.3s,baz=359,slow=38						
ZALV	**Zalesovo Beam**	**57.98**	**332**	P	**P**	**17 54 43.2**	**-1.1**
	comp=Z,2.2nm,0.5s,mb4.4,baz=121,slow=7.4,SNR=12						
ZAL	**Zalesovo**	**57.98**	**332**	P	**P**	**17 54 43.2**	**-1.2**
UCH	**Uchtor**	**58.02**	**316**	*e*P	**P**	**17 54 43.9**	**-0.9**
	comp=Z,4.7nm,0.6s,mb4.7						
NVS	**Novosibirsk**	**59.26**	**332**	*e*P	**P**	**17 54 49.1**	**-4.1**
KURK	**Kurchatov**	**59.27**	**327**	*e*P	**P**	**17 54 52.4**	**-1.0**
	comp=Z,5.4nm,0.6s,mb4.8						
KURK	**Kurchatov**	**59.27**	**327**	*e*P	**P**	**17 54 52.4**	**-1.0**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
RPZ	**Rata Peaks**	**64.18**	**146**	LR	LR	18 22 46.0	
	comp=Z,182nm,18.4s,baz=325,slow=35						
BRVK	**Borovoye**	**64.93**	**326**	*e*P	**P**	**17 55 30.9**	**-0.3**
	comp=Z,5.3nm,0.8s,mb4.4						
BRVK	**Borovoye**	**64.93**	**326**	*e*P	**P**	**17 55 30.9**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**65.01**	**327**	*i* P	**P**	**17 55 30.9**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
ARU	**Arti**	**72.45**	**327**	⇑ *e*P	**P**	**17 56 17.0**	**-0.9**
ARU				pmax	pmax		
	comp=Z,13nm,1.8s,mb4.5						
KIV	**Kislovodsk**	**81.09**	**313**	*e*P	**P**	**17 57 01.3**	**-5.5**
KIV				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.1						
KIV				MLR	MLR		
	comp=Z,20nm,19.0s						
OBN	**Obninsk**	**84.65**	**325**	⇑ *e*P	**P**	**17 57 22.2**	**-2.8**
OBN				pmax	pmax		
	comp=Z,24nm,2.1s,mb4.8						
**E

ATH	**Athens Observa**	**2.69**	**98**	*e*PB	**Pn**	**18 06 15.5**	**-1.0**
BIA	**Bitola**	**2.74**	**16**	*e*Pn	**Pn**	**18 06 18.2**	**+0.9**
BIA	**Bitola**	**2.74**	**16**	*e*Pn	**Pn**	**18 06 18.1**	**+0.8**
OHR	**Ohrid**	**2.75**	**7**	*e*Pn	**Pn**	**18 06 18.2**	**+0.8**
OHR				*e*Pn	**Pn**	**18 06 19.6**	**+2.2**
OHR	**Ohrid**	**2.75**	**7**	*e*Pn	**Pn**	**18 06 17.8**	**+0.4**
KVR	**Kavouri**	**2.75**	**101**	*e*PB	**Pb**	**18 06 17.0**	**-5.4**
PTL	**Penteli**	**2.79**	**96**	*e*PB	**Pb**	**18 06 18.5**	**-4.4**
AOS	**Alonnisos**	**2.87**	**73**	*e*Pn	**Pn**	**18 06 19.4**	**+0.3**
TIP	**Timpagrande**	**2.92**	**287**	P	**Pn**	**18 06 21.3**	**+1.6**
PAIG	**Paliouri**	**3.01**	**58**	*e*Pn	**Pn**	**18 06 20.6**	**-0.4**
PAIG				*e*Sn	**Sn**	**18 06 59.0**	**+1.5**
GRI	**Girifalco**	**3.11**	**279**	Pn	**Pn**	**18 06 23.3**	**+0.9**
PLG	**Polygyros**	**3.12**	**49**	*e*Pn	**Pn**	**18 06 22.5**	**+0.1**
PLG	**Polygyros**	**3.12**	**49**	*e*PN	**Pn**	**18 06 22.4**	**-0.1**
PE1	**Pezze di Greco**	**3.31**	**318**	*e*Pn	**Pn**	**18 06 26.1**	**+1.0**
SOH	**Sokhos**	**3.37**	**43**	*e*Pn	**Pn**	**18 06 26.9**	**+1.0**
KNT	**Kendrikon**	**3.40**	**34**	*e*Pn	**Pn**	**18 06 26.4**	**0.0**
OUR	**Ouranopolis**	**3.42**	**54**	*e*Pn	**Pn**	**18 06 26.8**	**+0.1**
PUK	**Puka**	**3.67**	**355**	*i* PN	**Pn**	**18 06 30.4**	**+0.3**
ULC	**Ulcinj**	**3.68**	**347**	⇑*i*Pn	**Pn**	**18 06 29.9**	**-0.2**
ULC				*e*Sn	**Sn**	**18 07 13.4**	**-0.5**
MTTG	**Motta San Giov**	**3.69**	**266**	Pn	**Pn**	**18 06 30.7**	**+0.4**
SG1	**Sgolgore (BA)**	**3.75**	**312**	*e*Pn	**Pn**	**18 06 32.3**	**+1.1**
BUM	**Brajici-Budva**	**4.07**	**345**	⇑*i*Pn	**Pn**	**18 06 35.7**	**+0.2**
BUM				*e*Sn	**Sn**	**18 07 22.1**	**-1.5**
MGR	**Morigerati**	**4.12**	**297**	Pn	**Pn**	**18 06 37.7**	**+1.5**
PDG	**Podgorica**	**4.13**	**349**	⇑*i*Pn	**Pn**	**18 06 36.4**	**0.0**
PDG				*e*Sn	**Sn**	**18 07 23.9**	**-1.1**
TTG	**Podgorica**	**4.13**	**349**	⇑*i*Pn	**Pn**	**18 06 36.4**	**0.0**
TTG				*e*Sn	**Sn**	**18 07 23.9**	**-1.1**
CDT	**Castel del Mon**	**4.14**	**312**	*e*Pn	**Pn**	**18 06 37.3**	**+0.8**
PVY	**Plav**	**4.22**	**356**	⇑*i*Pn	**Pn**	**18 06 38.5**	**+0.9**
PVY				*e*Sn	**Sn**	**18 07 27.0**	**-0.3**
HCY	**Herceg Novi**	**4.30**	**341**	⇑*i*Pn	**Pn**	**18 06 38.1**	**-0.6**
HCY				*e*Sn	**Sn**	**18 07 28.3**	**-1.0**
SSY	**Sortino**	**4.36**	**255**	Pn	**Pn**	**18 06 36.7**	**-2.8**
HAVL	**Avola**	**4.38**	**253**	Pn	**Pn**	**18 06 37.5**	**-2.4**
SGO	**Sicignano**	**4.47**	**301**	Pn	**Pn**	**18 06 43.3**	**+2.3**
PZI	**Palazzolo**	**4.48**	**255**	Pn	**Pn**	**18 06 39.8**	**-1.4**
BEY	**Berane**	**4.50**	**356**	⇑*i*Pn	**Pn**	**18 06 42.0**	**+0.5**
BEY				*e*Sn	**Sn**	**18 07 34.1**	**-0.1**
IVA	**Berane**	**4.50**	**356**	⇑*i*Pn	**Pn**	**18 06 42.0**	**+0.5**
IVA				*e*Sn	**Sn**	**18 07 34.1**	**-0.1**
NKY	**Niksic**	**4.54**	**347**	⇑*i*Pn	**Pn**	**18 06 42.6**	**+0.5**
NKY				*e*Sn	**Sn**	**18 07 33.7**	**-1.6**
HVZN	**Vizzini**	**4.62**	**257**	Pn	**Pn**	**18 06 46.1**	**+2.9**
HMDC	**Modica**	**4.64**	**254**	Pn	**Pn**	**18 06 41.7**	**-1.7**
BRY	**Bratogost**	**4.72**	**344**	⇑*i*Pn	**Pn**	**18 06 43.6**	**-0.9**
BRY				*e*Sn	**Sn**	**18 07 38.0**	**-1.6**
IDI	**Anoyia**	**4.77**	**129**	P	**Pn**	**18 06 46.7**	**+1.5**
	0.3nm,0.3s,baz=266,slow=15,SNR=4.1						
IDI				S	**Sn**	**18 07 36.4**	**-4.6**
	1.4nm,0.3s,baz=273,slow=19,SNR=3.4						
CSSN	**Cassano Irpino**	**4.80**	**303**	Pn	**Pn**	**18 06 49.0**	**+3.4**
RDO	**Rodhopi**	**4.86**	**54**	*e*PN	**Pn**	**18 06 46.5**	**+0.1**
FG5	**Orsara di Pugl**	**4.87**	**308**	Pn	**Pn**	**18 06 48.3**	**+1.8**
RGNG	**Rignano Grg**	**4.92**	**313**	Pn	**Pn**	**18 06 49.0**	**+1.8**
STON	**Ston**	**4.92**	**337**	*e*Pn	**Pn**	**18 06 45.7**	**-1.5**
STON				Sn	**Sn**	**18 07 40.1**	**-4.4**
STON	**Ston**	**4.92**	**337**	*e*Pn	**Pn**	**18 06 45.6**	**-1.6**
STON				Sn	**Sn**	**18 07 40.1**	**-4.4**
UPM	**Unac-Piva**	**4.94**	**348**	⇑*i*Pn	**Pn**	**18 06 47.2**	**-0.3**
UPM				*e*Sn	**Sn**	**18 07 43.9**	**-1.1**
PLE	**Pljevlja**	**5.00**	**352**	⇑*i*Pn	**Pn**	**18 06 48.9**	**+0.6**
PLE				*e*Sn	**Sn**	**18 07 45.3**	**-1.1**
FG2	**Serracapriola**	**5.25**	**312**	Pn	**Pn**	**18 06 54.8**	**+3.1**
SGG	**Gregorio Mates**	**5.49**	**305**	Pn	**Pn**	**18 06 58.0**	**+3.0**
NRCA	**Norcia**	**7.08**	**311**	Pn	**Pn**	**18 07 19.8**	**+3.0**
NVLJ	**Novalja**	**7.42**	**328**	*e*Pn	**Pn**	**18 07 20.6**	**-1.0**
NVLJ				Sn	**Sn**	**18 08 40.7**	**-5.4**
MLR	**Muntele Rosu**	**8.23**	**29**	P	**Pn**	**18 07 35.9**	**+3.2**
	0.1nm,0.3s,baz=212,slow=9.5,SNR=3.2						
OBKA	**Obir**	**9.18**	**334**	⇑*i*Pn	**Pn**	**18 07 45.8**	**0.0**
OBKA				⇑*i*Sn	**Sn**	**18 09 24.1**	**-5.3**
MOA	**Molln**	**10.45**	**337**	⇓*i*Pn	**Pn**	**18 08 02.6**	**-0.5**
MOA				⇑*i*Sn	**Sn**	**18 09 55.3**	**-5.3**
GERES	**GERESS Array B**	**11.51**	**337**	P	**Pn**	**18 08 15.7**	**-1.8**
	0.2nm,0.3s,baz=150,slow=14,SNR=3.8						
HFS	**Hagfors**	**22.18**	**351**	P	**P**	**18 10 28.3**	**-1.0**
	1.5nm,0.6s,mb3.6,baz=152,slow=13,SNR=6.3						
EKA	**Eskdalemuir Ar**	**23.18**	**325**	P	**P**	**18 10 34.0**	**-6.0**
	1.9nm,1.0s,mb3.5,baz=142,slow=8.6,SNR=3.6						
FINES	**FINESS Array B**	**23.36**	**7**	P	**P**	**18 10 38.6**	**-3.3**
	0.6nm,0.5s,mb3.3,baz=177,slow=9.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**30.10**	**218**	P	**P**	**18 11 33.6**	**-10**
	0.2nm,0.7s,mb3.0,baz=44,slow=8.6,SNR=2.5						
ARCES	**ARCESS Array B**	**31.34**	**3**	P	**P**	**18 11 51.3**	**-2.3**
	2.7nm,1.0s,mb4.0,baz=198,slow=8.4,SNR=3.5						
MKAR	**Makanchi Array**	**45.31**	**59**	P	**P**	**18 13 48.1**	**-3.2**
	0.4nm,0.5s,mb3.5,baz=271,slow=7.6,SNR=8.1						
ZALV	**Zalesovo Beam**	**45.66**	**48**	P	**P**	**18 13 51.4**	**-2.6**
	1.7nm,0.4s,mb4.3,baz=273,slow=8.5,SNR=8.2						
ZALV	**Zalesovo Beam**	**45.66**	**48**	P	**P**	**18 13 51.3**	**-2.7**

*NEIC **28** 18:05:43.3, 32.16S×69.74W, h132km, MD3.3(GUC), After GUC.*

GUC 28 18:05:43.3±0.8, 3216S×6974W, h132km±9km, MD3.3, ML3.5, 11C-2D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.89**	**234**	*e*P	Pn	18 06 05.8	+0.5
JACH				*i* S	Sn	18 06 23.2	+1.1
FCH	**Farellones**	**1.26**	**202**	⇑*i*P	Pn	18 06 09.7	+0.8
FCH				*i* S	Sn	18 06 29.8	+1.5
FCH				AML	AML	18 06 30.7	
	comp=E,563nm,0.2s						
ROCH	**El Roble**	**1.35**	**233**	*e*P	Pn	18 06 10.4	+0.6
ROCH				*i* S	Sn	18 06 31.2	+1.2
CLCH	**Cerro Calan**	**1.41**	**208**	⇑*i*P	Pn	18 06 11.8	+1.3
CLCH				*i* S	Sn	18 06 33.4	+2.2
CLCH	**Cerro Calan**	**1.41**	**208**	⇑*i*P	Pn	18 06 11.8	+1.3
CLCH				*i* S	Sn	18 06 33.4	+2.2
CLCH				AML	AML	18 06 34.1	
	comp=E,1μm,0.4s						
CHNG	**Los Chungos**	**1.52**	**280**	⇓*i*P	Pn	18 05 55.5	-16
CHNG				*i* S	Sn	18 06 17.1	-16
CHNG				AML	AML	18 06 23.5	
	comp=E,204nm,0.2s						
ANTU	**Antumapu**	**1.60**	**208**	*e*P	Pn	18 06 13.2	+0.7
ANTU				*i* S	Sn	18 06 36.1	+1.1
ANTU	**Antumapu**	**1.60**	**208**	*e*P	Pn	18 06 13.2	+0.7
ANTU				*i* S	Sn	18 06 36.1	+1.1
ANTU				AML	AML	18 06 37.4	
	comp=E,876nm,0.4s						
PCH	**Pirque**	**1.60**	**204**	⇓*i*P	Pn	18 06 13.2	+0.6
RCDM	**Rinconada Maip**	**1.60**	**214**	⇑*i*P	Pn	18 06 13.2	+0.5
RCDM				*i* S	Sn	18 06 36.3	+1.2
RCDM	**Rinconada Maip**	**1.60**	**214**	⇑*i*P	Pn	18 06 13.2	+0.5
RCDM				*i* S	Sn	18 06 36.3	+1.2
RCDM				AML	AML	18 06 37.1	
	comp=E,1μm,0.2s						
LMEL	**Las Melosas**	**1.73**	**193**	⇑*i*P	Pn	18 06 15.4	+1.3
LMEL				AML	AML	18 06 48.1	
	comp=N,339nm,0.2s						
TACH	**Talagante**	**1.80**	**214**	⇑*i*P	Pn	18 06 15.1	+0.2
TACH				*i* S	Sn	18 06 39.3	+0.1
CHCH	**Chadas Angostu**	**1.93**	**203**	⇑*i*P	Pn	18 06 16.9	+0.4
CHCH				*i* S	Sn	18 06 42.6	+0.7
LCCH	**Las Cruces**	**2.03**	**229**	*e*P	Pn	18 06 18.3	+0.7
CACH	**El Canelo**	**2.08**	**200**	⇑*i*P	Pn	18 06 19.4	+1.0
CACH				*i* S	Sn	18 06 47.1	+1.9
CICH	**Cipreses**	**2.23**	**195**	⇑*i*P	Pn	18 06 20.9	+0.8
LNV	**Longovilo**	**2.28**	**218**	⇑*i*P	Pn	18 06 20.2	-0.6
LNV				*i* S	Sn	18 06 48.6	-0.9
LCO	**Las Campanas**	**3.24**	**345**	*e*P	Pn	18 06 33.5	+0.4
VACH	**Vallenar**	**3.68**	**346**	*i* S	Sn	18 07 22.3	+0.5

IDC 28 18:09:20.2±5.0, 1962S×16821E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/12, mbtmp3.6/2, Error ellipse: s-maj=216.3km s-min=74.7km az=157.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**31.84**	**264**	P	P	18 15 47.3	+0.2
	0.4nm,0.7s,baz=93,slow=8.5,SNR=7.0						
ASAR	**Alice Springs**	**32.09**	**257**	P	P	18 15 49.0	-0.2
	1.1nm,0.7s,baz=85,slow=9.3,SNR=15						
GERES	**GERESS Array B**	**144.36**	**331**	PKP	PKPdf	18 28 58.0	-0.3
	0.4nm,0.7s,baz=45,slow=1.5,SNR=3.6						

*MOS **28** 18:13:07.0±3.3, 4108N×4832E, h10km, mb4.2/1, Error ellipse: s-maj=23.0km s-min=8.8km az=108.9*
*IDC **28** 18:13:08.9±3.4, 4123N×4862E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/24, mbtmp3.6/6, ML3.9/2, Error ellipse: s-maj=56.9km s-min=21.9km az=177.0*
*NEIC **28** 18:13:11.3±2.6, 4143N×4857E, h10km, Error ellipse: s-maj=47.5km s-min=15.4km az=180.0*
*ISCJB **28** 18:13:16.3±1.2, 419N±0.1×4892E±007, h40km±12km, mb3.5/4, Error ellipse: s-maj=17.9km s-min=8.2km az=163.6*
*NNC **28** 18:13:23.1±3.6, 4185N×5015E, h0km, mb3.3, Error ellipse: s-maj=28.6km s-min=23.4km az=46.0*
*CSEM **28** 18:13:23.1±3.6, 4185N×5015E, h0km, mb3.3, Error ellipse: s-maj=28.6km s-min=23.4km az=46.0, After NNC*

ISC 28 18:13:16.7±1.2, 4172N±009×4883E±007, h33km±7km, n22, σ0°87/30, mb3.5/4, 5C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRN	**Derbent**	**0.48**	**310**	*i* PG	**Pb**	**18 13 26.0**	**-1.0**
DRN				*e*S	**Sb**	**18 13 35.2**	**+1.1**
DRN				pmax	pmax		
	comp=Z,349nm,0.2s						
GNBR	**Gunib**	**1.54**	**296**	*e*PN	**Pn**	**18 13 33.0**	**-8.9**
GNBR				pmax	pmax		
	comp=Z,91nm,0.3s						
MAK	**Makhachkala**	**1.58**	**322**	*e*PN	**Pn**	**18 13 48.6**	**+6.2**
MAK				*e*		18 14 13.5	
MAK				pmax	pmax		
	comp=Z,96nm,0.3s						
MAK				smax			
	comp=N,1.0nm,0.4s						
MAK				smax			
	comp=E,1.0nm,0.6s						
XNZR	**Khunzakh**	**1.78**	**298**	*i* PN	**Pn**	**18 13 41.0**	**-4.2**
XNZR				*i* S	**Sn**	**18 14 06.5**	**-0.2**
XNZR				pmax	pmax		
	comp=Z,110nm,0.2s						
KRNR	**Karanay**	**1.81**	**308**	*e*PN	**Pn**	**18 13 39.0**	**-6.5**
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
DGRG	**David-gareji**	**2.61**	**265**	P	**Pn**	**18 13 57.2**	**+0.7**
MTA	**Mtatsminda**	**3.02**	**271**	P	**Pb**	**18 14 09.0**	**-0.8**
TBLG	**Delisi**	**3.06**	**272**	P	**Pn**	**18 14 03.1**	**+0.3**
GOR	**Gori**	**3.54**	**276**	P	**Pb**	**18 14 17.6**	**-0.9**
KIV	**Kislovodsk**	**5.04**	**298**	P	**Pn**	**18 14 25.5**	**-4.4**
	comp=Z,12nm,0.7s						
KIV	**Kislovodsk**	**5.04**	**298**	PN	**Pn**	**18 14 25.5**	**-4.4**
KIV				pmax	pmax		
	comp=Z,12nm,0.7s						
AKTK	**Aktyubinsk**	**10.79**	**33**	Pn	**Pn**	**18 15 50.2**	**+1.5**
AKTK				Sn	**Sn**	**18 17 43.6**	**-4.6**
AKTO	**Aktyubinsk**	**10.79**	**33**	Pn	**Pn**	**18 15 50.2**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=212,slow=11,SNR=17						
AKTO				Sn	**Sn**	**18 17 43.6**	**-4.6**
	comp=Z,0.9nm,0.3s,baz=212,slow=19,SNR=4.9						
AKTO	**Aktyubinsk**	**10.79**	**33**	Pn	**Pn**	**18 15 50.2**	**+1.4**
	comp=Z,0.2nm,0.3s						
AKTO				Sn	**Sn**	**18 17 47.0**	**-1.3**
	comp=Z,0.6nm,0.5s						
AB31	**Akbulak array**	**10.84**	**42**	⇑Pn	**Pn**	**18 15 50.1**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=222,slow=12,SNR=32						
AB31				⇑Sn	**Sn**	**18 17 48.2**	**-1.2**
	comp=Z,3.0nm,0.5s,baz=219,slow=22,SNR=10						
KK31	**Karatay Array**	**16.07**	**78**	⇓Pn	**Pn**	**18 16 59.1**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=291,slow=13,SNR=9.5						
KK31				⇑Sn	**Sn**	**18 19 51.1**	**-6.0**
	comp=Z,0.9nm,0.4s,baz=267,slow=23,SNR=4.4						
AKASG	**Malin Array Be**	**16.23**	**310**	Pn	**Pn**	**18 16 56.8**	**-5.3**
	comp=Z,0.4nm,0.3s,baz=117,slow=19,SNR=3.5						
BVA0	**Borovoye Array**	**18.39**	**45**	⇑Pn	**Pn**	**18 17 29.4**	**+0.5**
	comp=Z,0.6nm,1.4s,baz=229,slow=13,SNR=6.1						
BVA0				⇑Sn	**Sn**	**18 20 45.0**	**-8.0**
	comp=Z,0.8nm,1.1s						
FINES	**FINESS Array B**	**24.05**	**333**	P	**P**	**18 18 28.6**	**+0.1**
	comp=Z,0.4nm,0.3s,mb3.3,baz=141,slow=9.7,SNR=4.9						
MKAR	**Makanchi Array**	**24.38**	**67**	P	**P**	**18 18 31.9**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.0,baz=262,slow=9.3,SNR=7.5						
HFS	**Hagfors**	**28.31**	**323**	P	**P**	**18 19 06.7**	**-0.3**
	comp=Z,0.4nm,0.4s,mb3.4,baz=99,slow=9.2,SNR=3.1						
ARCES	**ARCESS Array B**	**30.41**	**344**	P	**P**	**18 19 25.6**	**+0.2**
	comp=Z,10nm,1.3s,mb4.4,baz=144,slow=11,SNR=5.5						

IDC 28 18:20:28.1±1.7, 865S×12435E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/14, mbtmp3.4/4, ML3.3/3, Error ellipse: s-maj=52.5km s-min=23.1km az=78.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**1.69**	**203**	Pn	Pn	18 20 59.4	+0.5
	16nm,0.3s,baz=34,slow=3.9,SNR=44						
BATI				Sn	Sn	18 21 15.2	-6.0
	52nm,0.3s,baz=162,slow=20,SNR=48						
FITZ	**Fitzroy Crossi**	**9.48**	**173**	Pn	Pn	18 22 44.2	-1.8
	0.1nm,0.3s,baz=3.7,slow=13,SNR=4.5						
FITZ				Sn	Sn	18 24 16.4	-17
	1.3nm,0.3s,baz=128,slow=23,SNR=13						
WRA	**Warramunga Arr**	**14.82**	**140**	Pn	Pn	18 23 59.1	0.0
	0.2nm,0.3s,baz=319,slow=14,SNR=8.5						
WRA				Sn	Sn	18 26 32.3	-12
	0.4nm,0.3s,baz=307,slow=25,SNR=9.6						
ASAR	**Alice Springs**	**17.51**	**150**	P	Pn	18 24 34.9	+1.1
	0.1nm,0.3s,baz=320,slow=12,SNR=13						
MKAR	**Makanchi Array**	**66.68**	**330**	P	P	18 31 20.8	+0.1
	0.4nm,0.5s,baz=131,slow=7.7,SNR=9.4						

*KISR **28** 18:26:08.3±0.8, 3155N×4498E, h34km±999km, ML1.9*

THR 28 18:26:12.2±0.4, 3258N×4835E, h17km±3km, ML2.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.60**	**141**	*e*Pg	Pg	18 26 23.9	-0.3
SHGR				*e*Sg	Sg	18 26 32.5	+0.3
SHGR				AML	AML	18 26 48.0	
	comp=N,204nm,0.6s						
ASAO	**Ashtian**	**2.41**	**35**	*e*Pn	Pn	18 26 53.0	+2.2
ASAO				*e*Sg	Sg	18 27 27.9	-1.7
ASAO				AML	AML	18 27 41.5	
	comp=N,26nm,0.7s						
ASAO				AML	AML	18 27 42.3	
	comp=E,21nm,0.7s						
SNGE	**Sanandaj**	**2.64**	**342**	*e*Pn	Pn	18 26 56.3	+2.3
MIB	**Mutribah**	**2.90**	**198**	*e*P	Pn	18 26 56.1	-1.5
MIB				*e*S	Sn	18 27 32.7	+0.7
MIB				AML	AML	18 27 35.1	
	comp=Z,5.1nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.07**	**190**	*e*P	Pn	18 27 02.4	+2.6
UMR				*e*S	Sn	18 27 42.7	+6.6
UMR				AML	AML	18 27 45.2	
	comp=Z,6.6nm,0.3s						
GHVR	**GHOM**	**3.10**	**52**	*e*Pn	Pn	18 27 02.2	+1.8
GHVR				AML	AML	18 28 02.9	
	comp=N,12nm,0.6s						
NAY	**Al-Naaiem**	**3.45**	**196**	*e*P	Pn	18 27 01.1	-4.1
NAY				*e*S	Sn	18 27 41.1	-4.6
NAY				AML	AML	18 27 42.6	
	comp=Z,1.8nm,0.4s						
RDF	**Al-Radifah**	**3.71**	**191**	*e*P	Pn	18 27 07.6	-1.0
RDF				*e*S	Sn	18 27 51.1	-0.8
RDF				AML	AML	18 27 51.2	
	comp=Z,3.7nm,0.3s						
NASN	**Na'in**	**3.76**	**85**	*e*Pn	Pn	18 27 11.8	+2.4

CASC 28 18:28:38.0±2.6, 1202N×8821W, h20km±14km, MD3.8, ML3.3, 5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEL3	**Telica 3**	**1.44**	**68**	*e*P	Pn	18 29 02.5	-0.5
TELN	**Telica**	**1.47**	**67**	⇓*e*P	Pn	18 29 02.9	-0.4
CNGN	**Cerro Negro**	**1.55**	**72**	⇓*e*P	Pn	18 29 03.3	-1.2
CNGN				*e*S	Sn	18 29 26.1	+2.0
CNGN				*i*		18 29 28.8	
	comp=E,459nm,0.3s						
COPN	**Copaltepe**	**1.59**	**84**	⇓*e*P	Pn	18 29 04.6	-0.5
COPN				*e*S	Sn	18 29 25.9	+0.8
MOMJ	**Momotombo**	**1.68**	**77**	⇓*e*P	Pn	18 29 05.7	-0.6
XAVN	**Gruta Xavier**	**1.85**	**86**	*e*P	Pn	18 29 08.6	0.0
TISN	**Laguna Tiscapa**	**1.91**	**86**	*e*P	Pn	18 29 09.3	-0.1
MGAN	**Managua**	**1.93**	**86**	*e*P	Pn	18 29 09.5	-0.2
MGAN				*e*S	Sn	18 29 32.4	-0.9
MGAN				*i*		18 29 33.0	
	comp=N,512nm,0.0s						
TICN	**Ticuantepe**	**1.94**	**90**	⇓*e*P	Pn	18 29 09.8	0.0
HUEN		**2.02**	**81**	*e*P	Pn	18 29 10.8	-0.2
BOAB	**BOACO BROADBAN**	**2.52**	**80**	*e*P	Pn	18 29 16.5	-1.4
CONN	**Concepcion**	**2.57**	**100**	*e*P	Pn	18 29 17.7	-0.9
LCR2	**La Lucha 2**	**4.72**	**118**	*e*P	Pn	18 29 50.0	+2.0
URSC	**Urasca**	**4.87**	**116**	*e*P	Pn	18 29 52.5	+2.4
BAR1		**5.55**	**119**	*e*P	Pn	18 30 00.6	+1.0

*BJI **28** 18:42:51.5, 1970N×10950W, h10km, mB5.6, mb5.4, Ms5.0, Ms24.6*
*GCMT **28** 18:42:55.5±0.2, 1994N×10924W, h15km, MW5.3/88, Moment Tensor Solution. s66,c106; s88,c159; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr-0.08±.02; Mθθ-1.12±.02; Mφφ1.20±.02; Mrθ0.21±.05; Mθφ0.27±.02; Mφr-0.12±.05; Best double couple: Mo1.21600×10^17 NP1:φs231.00000°, δ79.00000°, λ-5.00000°. NP2:φs322.00000°, δ85.00000°, λ-169.00000°. Principal axes: T 1.2370, Plg4.0000°, Azm96.0000°; N -0.0420, Plg78.0000°, Azm346.0000°; P -1.1950, Plg11.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **28** 18:42:55.5±0.7, 1970N×10945W, h10km, mb4.8/35 Error ellipse: s-maj=11.4km s-min=6.1km az=219.0*
*IDC **28** 18:42:58.0±0.9, 2030N×10869W, h0km, mb4.2/9, mb1 4.4/11, mb1mx4.3/18, mbtmp4.2/11, ML3.9/2, MS4.7/22, Ms1 4.7/22, ms1mx4.6/32, Error ellipse: s-maj=32.9km s-min=17.6km az=77.0*
*MEX **28** 18:42:57.6±4.7, 1976N×10944W, h34km±999km, MD4.9*
*MOS **28** 18:42:57.4±1.4, 1981N×10931W, h33km, mb4.9/13, Error ellipse: s-maj=12.3km s-min=5.8km az=91.3*
*ISCJB **28** 18:42:59.1±0.9, 1983N±005×10922W±004, h42km±7km, mb4.6/33, MS4.7/23, Error ellipse: s-maj=10.0km s-min=3.8km az=31.7*

ISC 28 18:43:01.2±0.8, 1983N±005×10927W±004, h45km±5km, n301, σ0°89/289, mb4.6/33, MS4.7/23, 79C-75D, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAIG	**Mazatlaan**	**4.26**	**38**	*e*P	**Pn**	**18 44 00.7**	**-2.9**
MAIG				*i* S	**Sn**	**18 44 50.8**	**-1.3**
LPIG	**La Paz**	**4.36**	**347**	Pn	**Pn**	**18 44 00.0**	**-4.9**
	8.2nm,0.3s,baz=9.5,slow=4.1,SNR=7.7						
LPIG				Sn	**Sn**	**18 45 01.4**	**+6.9**
	7.7nm,0.3s,baz=199,slow=19,SNR=4.5						
LPIG				LR	LR	18 45 27.3	
	comp=Z,14μm,18.9s,baz=172,slow=37						
LPIG	**La Paz**	**4.36**	**347**	*i* P	**Pn**	**18 44 01.1**	**-3.9**
LPIG				*i* S	**Sn**	**18 44 49.2**	**-5.3**
ANIG	**Ahuacatlan**	**4.62**	**74**	*i* P	**Pn**	**18 44 05.9**	**-2.5**
ANIG				*e*S	**Sn**	**18 45 00.9**	**+0.2**
MMIG	**Aquila**	**5.81**	**104**	*e*P	**Pn**	**18 44 23.5**	**-1.3**
MMIG				*e*S	**Sn**	**18 45 31.3**	**+1.2**
SFJM	**Santa Fe**	**5.89**	**83**	*i* P	**Pn**	**18 44 23.8**	**-2.1**
SFJM				*i* S	**Sn**	**18 45 36.3**	**+4.2**
ZAIG	**Zacatecas**	**6.90**	**64**	*e*P	**Pn**	**18 44 40.5**	**+0.7**
ZAIG				*e*S	**Sn**	**18 46 01.2**	**+4.3**
MEIG	**Mezcala**	**9.33**	**100**	*i* P	**Pn**	**18 45 12.9**	**-0.2**
PTVM	**Pico Tres Padr**	**9.57**	**90**	*e*P	**Pn**	**18 45 20.5**	**+4.1**
IIO	**Organos**	**9.94**	**90**	*e*P	**Pn**	**18 45 27.4**	**+6.0**
PPM	**Popocatepetl**	**10.07**	**93**	*i* P	**Pn**	**18 45 24.3**	**+1.1**
LNIG	**Linares**	**10.38**	**59**	*e*P	**Pn**	**18 45 24.3**	**-3.2**
LNIG				*i* S	**Sn**	**18 47 21.8**	**-0.6**
UTMO	**Huajuapan**	**11.04**	**98**	*i* P	**Pn**	**18 45 36.3**	**-0.2**
318A	**Bisbee**	**11.58**	**357**	⇓

HKT pmax pmax
comp=Z,61nm,1.5s
GMRC Granite Mounta 15.93 340 P **Pn** 18 46 42.6 +0.4
baz=16,SNR=12
BFSC Mount Baldy St 16.17 334 ⇓P **Pn** 18 46 45.1 -0.2
baz=16
HEC Hector,Ludlow 16.20 339 ⇑P **Pn** 18 46 45.5 -0.1
baz=16
V12A Nelson 16.58 344 ⇑P **Pn** 18 46 50.6 +0.2
baz=17,SNR=6.3
TUQ Turquoise Mtn. 16.62 341 ⇓P **Pn** 18 46 51.1 +0.2
baz=17
CCIG Comitan 16.67 99 *i* P **Pn** 18 46 53.7 +2.1
GSC Goldstone 16.79 338 *e*P **Pn** 18 46 53.2 +0.2
comp=Z,80nm,1.5s
GSC **Goldstone** 16.79 338 *e*P **Pn** 18 46 53.2 +0.2
pmax pmax
comp=Z,81nm,1.5s
GSC Goldstone 16.79 338 ⇑P **Pn** 18 46 53.2 +0.2
baz=17
V11A Goodsprings 16.85 342 ⇓P **Pn** 18 46 54.2 +0.4
baz=17
EDW2 Edwards Air Fo 16.86 335 ⇑P **Pn** 18 46 53.8 -0.1
baz=17
U14A Mt Trumbull 16.88 349 ⇓P **Pn** 18 46 55.0 +0.8
baz=17
U13A Pakoon Wash 17.03 347 ⇑P **Pn** 18 46 56.4 +0.4
baz=17
U12A Valley of Fire 17.18 345 ⇓P **Pn** 18 46 58.4 +0.6
baz=18
LRMC Laurel Mountai 17.27 336 ⇓P **Pn** 18 46 58.9 -0.1
baz=18
MVCO Mesa Verde 17.33 2 *e*P **Pn** 18 46 59.4 -0.4
comp=Z,413nm,2.0s
MVCO Mesa Verde 17.33 2 P **Pn** 18 47 00.8 +1.0
baz=18,SNR=17
T15A Red Dirt Ranch 17.34 352 ⇑P **Pn** 18 47 00.9 +1.0
baz=18
T14A Hurricane 17.49 350 ⇓P **Pn** 18 47 03.0 +1.3
baz=18
MPMC Manual Prospec 17.71 338 ⇑P **Pn** 18 47 04.6 +0.2
baz=18
ISA Isabella 17.74 335 P **Pn** 18 47 05.7 +0.9
comp=Z,103nm,1.9s
ISA Isabella 17.74 335 P **Pn** 18 47 05.7 +0.9
ISA pmax pmax
comp=Z,103nm,1.9s
FURC Furnace Creek, 17.87 340 ⇓P **Pn** 18 47 06.6 +0.2
baz=18
CCUT Cedar City 18.02 349 *e*P **Pn** 18 47 09.2 +1.0
T11A Corn Creek, Al 18.11 345 ⇓P **Pn** 18 47 09.7 +0.3
baz=18
TPNV Topopah Spring 18.12 342 *e*P **Pn** 18 47 10.1 +0.7
comp=Z,165nm,1.7s
TPNV Topopah Spring 18.12 342 *e*P **Pn** 18 47 10.1 +0.7
TPNV pmax pmax
comp=Z,165nm,1.7s
TPNV Topopah Spring 18.12 342 ⇑P **Pn** 18 47 09.9 +0.5
baz=18,SNR=15
S13A Holt Ranch, En 18.14 348 ⇑P **Pn** 18 47 10.3 +0.6
baz=18
VES Vestal, Richgr 18.14 334 ⇓P **Pn** 18 47 09.2 -0.5
baz=18
SDCO Great Sand Dun 18.15 10 *e*P **Pn** 18 47 10.8 +0.9
comp=Z,50nm,1.4s
S14A Cedar City 18.19 350 ⇓P **Pn** 18 47 11.5 +1.2
baz=18
S12A Delamar Landin 18.37 346 ⇑P **Pn** 18 47 13.8 +1.3
baz=19
MSU Marysvale 18.79 353 *e*P **Pn** 18 47 17.3 -0.3
HELL Mitchell Peak, 18.84 335 ⇓P **Pn** 18 47 17.0 -1.1
baz=19,SNR=8.7
R12A Pony Springs, 19.01 347 ⇑P **Pn** 18 47 19.6 -0.5
baz=19
S10A Tonopah Range, 19.12 342 ⇓P **Pn** 18 47 20.8 -0.8
baz=19
S09A Goldfield 19.13 340 ⇓P **Pn** 18 47 20.8 -0.9
baz=19
S08C White Mtn Res 19.24 338 ⇑P **Pn** 18 47 22.3 -0.7
baz=20,SNR=9.6
SRU San Rafael 19.25 357 *e*P **Pn** 18 47 21.8 -1.2
comp=Z,26nm,1.2s
SRU San Rafael 19.25 357 *e*P **Pn** 18 47 21.8 -1.2
SRU pmax pmax
comp=Z,26nm,1.2s
R11A Troy Canyon, C 19.25 345 ⇓P **Pn** 18 47 22.3 -0.8
baz=20
MTUM Tungsten Hills 19.25 337 *e*P **Pn** 18 47 22.2 -0.9
R10A Warm Springs 19.38 343 ⇓P **Pn** 18 47 23.3 -1.4
baz=20
SMCO Snowmass 19.39 5 *e*P **Pn** 18 47 24.5 -0.2
comp=Z,254nm,1.9s
T06C Millerton Lake 19.40 334 ⇑P **Pn** 18 47 23.1 -1.8
baz=20
Q13A Wheeler Ranch, 19.50 349 ⇓P **Pn** 18 47 25.2 -0.9
baz=20
KCC Kaiser Creek 19.52 335 ⇑P **Pn** 18 47 24.5 -1.7
baz=20,SNR=7.7
R09A Tonopah 19.56 341 ⇑P **Pn** 18 47 25.4 -1.3
baz=20
TEIG Tepich 19.73 85 LR LR 18 55 43.8
comp=Z,2µm,18.3s,baz=347,slow=40
Q12A Willow Creek R 19.74 347 ⇑P **Pn** 18 47 27.6 -1.3
baz=20,SNR=13
Q11A Duckwater 19.74 345 ⇑P **Pn** 18 47 27.6 -1.3
baz=20
P13A Bates Ranch, G 19.98 349 ⇓P **Pn** 18 47 30.3 -1.4
baz=20
NVAR Mina Array Bea 20.12 339 P **P** 18 47 29.9 -1.4
comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=5.4
ISCO Idaho Springs 20.15 8 *e*P **P** 18 47 32.3 +0.7
comp=Z,20nm,1.2s
ISCO Idaho Springs 20.15 8 *e*P **P** 18 47 32.3 +0.7
ISCO pmax pmax
comp=Z,20nm,1.2s
P12A McGill 20.17 347 P **P** 18 47 32.6 +0.9
baz=20,SNR=7.6
MIAR Mount Ida 20.20 40 P **P** 18 47 30.9 -1.3
comp=Z,29nm,1.4s
MIAR Mount Ida 20.20 40 P **P** 18 47 30.9 -1.3
MIAR pmax pmax
comp=Z,29nm,1.4s
NLU North Lily Min 20.20 354 *e*P **P** 18 47 31.9 -0.2
MPU Maple Canyon 20.22 355 *e*P **P** 18 47 33.1 +0.7
comp=Z,97nm,1.4s
Q08A Gabbs 20.39 340 ⇓P **P** 18 47 34.6 +0.4
baz=21,SNR=6.5
DUG Dugway 20.53 352 *e*P **P** 18 47 36.1 +0.5
comp=Z,127nm,1.4s
DUG Dugway 20.53 352 *e*P **P** 18 47 36.1 +0.5
DUG pmax pmax
comp=Z,127nm,1.4s
DUG Dugway 20.53 352 P **P** 18 47 36.9 +1.3
baz=21,SNR=21
CMB Columbia Colle 20.55 334 *e*P **P** 18 47 35.1 -0.9
comp=Z,54nm,1.8s
CMB Columbia Colle 20.55 334 *e*P **P** 18 47 35.1 -0.9
CMB pmax pmax
comp=Z,54nm,1.8s
CMB Columbia Colle 20.55 334 ⇓P **P** 18 47 35.5 -0.5
baz=21
DAU Daniels Canyon 20.59 356 *e*P **P** 18 47 37.0 +0.8
R06C Coleville 20.61 337 ⇑P **P** 18 47 37.3 +0.7
baz=21,SNR=8.0
O13A Hicks Ranch, I 20.64 350 ⇑P **P** 18 47 37.7 +0.9
baz=21
CBKS Cedar Bluff 20.64 22 *e*P **P** 18 47 35.0 -1.9
comp=Z,92nm,1.3s
CBKS Cedar Bluff 20.64 22 *e*P **P** 18 47 35.0 -1.9
CBKS pmax pmax
comp=Z,92nm,1.3s
P10A Eureka 20.68 344 ⇓P **P** 18 47 37.8 +0.6
baz=21
JLU Jordanelle 20.79 355 *e*P **P** 18 47 38.6 +0.1
WENL Wente Brothers 20.80 331 ⇑P **P** 18 47 38.9 +0.3
baz=21
NOQ North Oquirrh 20.90 354 *e*P **P** 18 47 39.8 +0.2
comp=Z,240nm,1.8s
CTU Camp Tracy 20.91 355 *e*P **P** 18 47 39.0 -0.7
comp=Z,78nm,1.3s
O12A Currie 20.91 348 ⇑P **P** 18 47 40.3 +0.5
baz=21,SNR=16
O11A Cowboy Ranch, 20.97 346 ⇑P **P** 18 47 40.6 +0.3
baz=21
R05C Kirkwood Meado 21.01 336 ⇓P **P** 18 47 40.9 +0.1
baz=21,SNR=6.6
N14A Grayback Hills 21.22 352 ⇑P **P** 18 47 43.4 +0.3
baz=22
BGU Big Grassy Mou 21.27 352 *e*P **P** 18 47 43.5 -0.1
LAVA Lava Cap Winer 21.32 335 ⇓P **P** 18 47 43.8 -0.3
baz=22
O10A Cortez Mining, 21.32 345 ⇓P **P** 18 47 44.5 +0.4
baz=22
N13A Wendover, West 21.38 350 P **P** 18 47 45.8 +0.9
baz=22,SNR=7.3
O09A Fish Creek Ran 21.38 343 ⇓P **P** 18 47 45.4 +0.5
baz=22,SNR=7.8
WCN Washoe City 21.41 337 ⇓P **P** 18 47 45.6 +0.4
baz=22
N12A Clover Valley, 21.53 348 P **P** 18 47 47.2 +0.8
baz=22,SNR=13
PHWY Pilot Hill 21.65 8 *e*P **P** 18 47 47.7 0.0
P05C Yuba Gap, Truc 21.73 336 ⇓P **P** 18 47 48.9 +0.3
baz=22
M15A Larsen Ranch, 21.74 354 ⇓P **P** 18 47 49.5 +0.9
baz=22
HWUT Hardware Ranch 21.80 355 *e*P **P** 18 47 49.0 -0.3
comp=Z,61nm,1.3s,mb4.9
M13A Montello 21.86 350 ⇑P **P** 18 47 50.6 +0.6
baz=22
O07A Toulon 21.88 340 P **P** 18 47 50.9 +0.7
baz=22,SNR=12
M14A Sheep Mountain 21.88 352 ⇑P **P** 18 47 50.7 +0.5
baz=22
M12A Wells 22.05 349 ⇓P **P** 18 47 52.3 +0.3
baz=22
N09A Rock Creek Ran 22.11 343 ⇑P **P** 18 47 52.8 +0.2
baz=22
BEKR Beckwourth 22.13 337 ⇑P **P** 18 47 52.5 -0.3
baz=22
MNRC McLaughlin Nat 22.14 332 ⇑P **P** 18 47 52.5 -0.5
baz=22
O06A Flanigan 22.20 338 ⇑P **P** 18 47 53.5 -0.1
baz=22
N08A GE Springer Mi 22.22 342 ⇑P **P** 18 47 54.0 +0.2
baz=22
M11A Holland Ranch, 22.24 347 ⇑P **P** 18 47 54.9 +0.9
baz=22
ORV Oroville 22.30 334 ⇓P **P** 18 47 54.8 +0.1
baz=22
M10A I.L. Ranch, Tu 22.49 346 ⇑P **P** 18 47 57.7 +1.0
baz=23,SNR=6.9
HOPS Hopland 22.52 331 ⇓P **P** 18 47 56.8 -0.2
baz=23
L13A Double Diamond 22.54 351 ⇓P **P** 18 47 58.2 +1.0
baz=23
N06A Buffalo Meadow 22.73 339 ⇓P **P** 18 47 59.3 +0.1
baz=23
O04C Chester 22.80 336 ⇑P **P** 18 48 00.1 +0.2
baz=23
PDAR Pinedale Array 22.87 359 P **P** 18 47 59.4 -1.2
comp=Z,3.0nm,0.9s,mb3.7,baz=169,slow=8.3,SNR=13
PDAR LR LR 18 56 52.0
comp=Z,2µm,18.3s,MS4.7,baz=179,slow=37
GASB Alder Springs 22.90 333 ⇓P **P** 18 48 00.7 -0.3
baz=23
M08A Happy Creek Ra 22.90 342 ⇓P **P** 18 48 01.3 +0.3
baz=23
M07A Soldier Meadow 23.09 341 ⇑P **P** 18 48 03.1 +0.2
baz=23
K13A Stover Farm, H 23.11 351 ⇑P **P** 18 48 03.8 +0.6
baz=23
L09A Wilkinson Ranc 23.24 344 ⇑P **P** 18 48 04.8 +0.3
baz=24
M06C Likely Place G 23.35 338 ⇓P **P** 18 48 05.7 0.0
baz=24
REDW Red Top Meadow 23.50 357 *e*P **P** 18 48 07.2 +0.2
comp=Z,88nm,1.6s,mb4.9
SNOW Snow King Moun 23.60 357 P **P** 18 48 08.0 +0.1
comp=Z,471nm,2.1s,mb5.5
TPAW Teton Pass 23.64 357 P **P** 18 48 08.3 +0.1
comp=Z,161nm,1.9s,mb5.1
L07A Adell 23.71 341 ⇓P **P** 18 48 09.7 +0.7
baz=24
M05C Lookout 23.73 337 ⇑P **P** 18 48 09.5 +0.5
baz=24
LOHW Long Hollow 23.74 358 *e*P **P** 18 48 07.7 -1.5
comp=Z,133nm,1.9s,mb5.0
K10A MacKenzie Ranc 23.76 346 ⇑P **P** 18 48 09.6 +0.2
baz=24
LRAL Lakeview Retre 23.83 52 *e*P **P** 18 48 12.2 +2.1
comp=Z,61nm,1.6s,mb4.8
J13A Cove Ranch, Pi 23.86 351 ⇑P **P** 18 48 10.9 +0.7
baz=24
J12A Stokes Ranch, 23.86 349 ⇑P **P** 18 48 11.0 +0.7
baz=24
WVOR Wild Horse Val 23.89 343 *e*P **P** 18 48 09.3 -1.2
comp=Z,25nm,1.1s,mb4.6
WVOR Wild Horse Val 23.89 343 *e*P **P** 18 48 09.4 -1.1
WVOR pmax pmax
comp=Z,25nm,1.1s,mb4.6
K09A Rome 23.89 344 ⇑P **P** 18 48 11.4 +0.8
baz=24
MOD Modoc 23.91 339 *e*P **P** 18 48 11.2 +0.5
comp=Z,38nm,1.6s,mb4.6
MOD Modoc 23.91 339 ⇓P **P** 18 48 10.9 +0.1
baz=24
PLAL Pickwick Lake 24.05 47 P **P** 18 48 10.4 -1.6
comp=Z,46nm,1.5s,mb4.7
HLID Hailey 24.05 351 *e*P **P** 18 48 12.0 0.0
comp=Z,233nm,2.4s,mb5.2
HLID Hailey 24.05 351 ⇑P **P** 18 48 12.1 0.0
baz=24,SNR=7.3
N02C Big Bar 24.12 333 ⇑P **P** 18 48 12.7 0.0
baz=24
K08A Mann Creek Ran 24.12 343 ⇓P **P** 18 48 13.3 +0.6
baz=24
MFID Camas Ranch 24.15 348 ⇓P **P** 18 48 13.3 +0.4
baz=24
L05A Lakeview 24.22 339 ⇓P **P** 18 48 13.5 -0.1
baz=24
K07A Rock Creek Ran 24.30 342 ⇑P **P** 18 48 14.6 +0.3
baz=25,SNR=8.1
M04C Macdoel 24.35 337 ⇑P **P** 18 48 14.8 0.0
baz=25
I13A Wildhorse Cree 24.36 351 ⇓P **P** 18 48 15.3 +0.5
baz=25
J09A Fry Pan Ranch, 24.51 345 ⇑P **P** 18 48 16.7 +0.5
baz=25
J08A Circle Bar Ran 24.70 344 ⇑P **P** 18 48 18.1 +0.2
baz=25
K06A Valley Falls 24.70 340 ⇓P **P** 18 48 18.2 +0.2
baz=25,SNR=7.2
YNR Norris Junctio 24.84 358 *e*P **P** 18 48 20.7 +1.4
K05A Summer Lake 24.85 339 ⇑P **P** 18 48 19.9 +0.6
baz=25
QLMT Earthquake Lak 25.00 356 *e*P **P** 18 48 20.8 +0.2
H13A Challis 25.01 352 ⇑P **P** 18 48 21.1 +0.3
baz=25
J06A Christmas Vall 25.08 341 ⇓P **P** 18 48 21.7 +0.3
baz=25
H12A Diamond D Ranc 25.09 351 P **P** 18 48 22.3 +0.8
baz=25,SNR=13
I08A Drewsey 25.24 344 ⇓P **P** 18 48 23.5 +0.6
baz=26
G15A Dillon 25.41 355 ⇓P **P** 18 48 25.4 +1.1
baz=26
H11A Donnelly 25.43 349 ⇑P **P** 18 48 24.8 +0.2
baz=26
J05A Fort Rock 25.46 339 ⇑P **P** 18 48 24.3 -0.5
baz=26,SNR=5.1
H10A Noah's Angus R 25.46 348 ⇑P **P** 18 48 24.8 -0.1
baz=26
G13A Cobalt 25.53 352 P **P** 18 48 26.1 +0.6
baz=26,SNR=12
I07A Izee 25.65 343 ⇓P **P** 18 48 26.9 +0.4
baz=26
SWET Sewanee 25.66 48 *e*P **P** 18 48 30.0 +3.2
J04A Umpqua Nationa 25.72 338 ⇑P **P** 18 48 26.2 -1.0
baz=26
H09A Durkee 25.73 346 ⇑P **P** 18 48 28.0 +0.7
baz=26
BOZ Bozeman (W) 25.82 356 *e*P **P** 18 48 27.1 -1.0
comp=Z,13nm,1.4s,mb4.3
BOZ Bozeman (W) 25.82 356 *e*P **P** 18 48 27.1 -1.0
BOZ pmax pmax
comp=Z,13nm,1.4s,mb4.3
BOZ Bozeman (W) 25.82 356 ⇓P **P** 18 48 29.0 +0.9
baz=26
BMO Blue Mountains 25.83 347 P **P** 18 48 27.1 -1.2
comp=Z,22nm,1.5s,mb4.5
H08A Prairie City 25.84 344 ⇓P **P** 18 48 28.2 0.0
baz=26
F15A Butte 26.08 355 ⇓P **P** 18 48 31.5 +1.1
baz=26
ECSD EROS,Sioux Fal 26.09 21 P **P** 18 48 30.2 -0.3
comp=Z,7.0nm,0.9s,mb4.2
G11A Walters Elk Ra 26.15 349 ⇑P **P** 18 48 31.0 0.0
baz=26
F13A Darby 26.23 352 ⇑P **P** 18 48 31.8 +0.1
baz=26
F12A Elk City 26.33 351 P **P** 18 48 32.7 0.0
baz=27,SNR=9.4
H06A Lindquist Farm 26.49 342 ⇓P **P** 18 48 34.4 +0.3
baz=27
F11A Grangeville 26.60 349 ⇑P **P** 18 48 34.7 -0.5
baz=27
E15A Deer Lodge 26.67 355 ⇓P **P** 18 48 36.4 +0.6
baz=27
E14A Clinton 26.75 353 ⇑P **P** 18 48 36.5 +0.1
baz=27
I03A Eugene 26.77 337 ⇓P **P** 18 48 37.0 +0.3
baz=27
G07A Ruggs Ranch, H 26.79 344 ⇑P **P** 18 48 36.6 -0.3
baz=27
E13A Victor 26.85 352 ⇑P **P** 18 48 37.0 -0.3
baz=27
H04A Detroit Lake 27.02 339 ⇑P **P** 18 48 36.9 -2.0
baz=27
E11A Bogner Ranch, 27.07 349 P **P** 18 48 38.5 -0.8
baz=27,SNR=6.1
CHMT Chamberlain Mo 27.21 354 *e*P **P** 18 48 40.3 -0.3
D15A Lincoln 27.27 355 ⇓P **P** 18 48 41.6 +0.4
baz=28
D14A Greenough 27.40 354 P **P** 18 48 42.5 +0.2
baz=28,SNR=7.2
TKL Tuckaleechee C 27.41 50 P **P** 18 48 40.1 -2.5
comp=Z,1.1nm,0.3s,mb3.9,baz=282,slow=15,SNR=1.9
D13A Huson 27.53 352 ⇓P **P** 18 48 43.3 -0.1
baz=28
D12A Red Ives Fores 27.61 351 ⇑P **P** 18 48 43.3 -0.8
baz=28
D10A Wagner Farm, O 27.93 348 ⇓P **P** 18 48 46.8 -0.3
baz=28
TZTN Tazewell 28.00 48 P **P** 18 48 49.5 +1.7
comp=Z,27nm,1.2s,mb4.8
C14A Swan Lake 28.11 354 ⇓P **P** 18 48 49.4 +0.8
baz=28
B09A Rice 29.41 348 ⇓P **P** 18 49 00.4 +0.1
baz=30
A11A Hall Mountain, 29.62 351 ⇓P **P** 18 49 02.2 +0.2
baz=30
ULM Lac du Bonnet 32.17 16 P **P** 18 49 20.2 -4.3
ULM Lac du Bonnet 32.17 16 P **P** 18 49 20.2 -4.3
comp=Z,6.7nm,1.1s,mb4.4,baz=200,slow=12,SNR=4.5
ULM LR LR 19 02 31.5
comp=Z,2µm,18.3s,MS4.9,baz=93,slow=37
FFC Flin Flon 35.28 7 *e*P **P** 18 49 49.7 -1.7
comp=Z,42nm,1.6s,mb5.1
FFC Flin Flon 35.28 7 *e*P **P** 18 49 49.7 -1.7
FFC pmax pmax
comp=Z,42nm,1.6s,mb5.1
BBB Bella Bella 35.49 340 LR LR 19 03 52.5
comp=Z,756nm,18.7s,MS4.5,baz=151,slow=36
SDV Santo Domingo 38.88 101 *e*P **P** 18 50 23.3 +0.7
comp=Z,16nm,0.8s,mb4.8
FCC Fort Churchill 40.42 12 *e*P **P** 18 50 33.1 -1.7
comp=Z,22nm,1.0s,mb4.8
FCC Fort Churchill 40.42 12 *e*P **P** 18 50 33.1 -1.7
FCC pmax pmax
comp=Z,22nm,1.0s,mb4.8
TAOE Nuku Hiva Isla 41.68 230 *e*LQ 19 00 20.1
comp=Z,7µm,28.1s
TAOE *e*LR LR 19 02 03.5
comp=Z,2µm,23.2s
YKA Yellowknife Ar 42.79 356 P **P** 18 50 52.4 -1.7
YKA PcP PcP 18 52 48.4 +3.7
YKA Yellowknife Ar 42.79 356 P **P** 18 50 52.3 -1.7
comp=Z,2.8nm,0.9s,mb4.0,baz=172,slow=7.9,SNR=44
YKA PcP PcP 18 52 48.4 +3.7
comp=Z,0.6nm,0.8s,baz=165,slow=3.1,SNR=5.8
YKA LR LR 19 09 05.7
comp=Z,2µm,18.6s,MS4.9,baz=165,slow=37
SCHQ Schefferville 47.39 32 P **P** 18 51 27.9 -2.8
comp=Z,1.2nm,0.4s,mb4.2,baz=256,slow=14,SNR=2.0
SCHQ LR LR 19 11 11.5
comp=Z,768nm,18.2s,MS4.7,baz=76,slow=36
KDAK Kodiak Island 49.33 331 LR LR 19 09 29.3
comp=Z,449nm,21.1s,MS4.4,baz=108,slow=32
RKT Rikitea 49.51 212 *e*LR LR 19 05 53.5
comp=Z,1µm,27.8s
INK Inuvik 50.79 349 *e*P **P** 18 51 55.9 -0.7
comp=Z,577nm,1.1s
INK Inuvik 50.79 349 *e*P **P** 18 51 55.9 -0.6
INK pmax pmax
comp=Z,577nm,1.1s
INK Inuvik 50.79 349 LR LR 19 15 21.9
comp=Z,789nm,19.2s,MS4.8,baz=165,slow=38
COLA College 51.75 340 *e*P **P** 18 52 02.1 -1.7
TTA Tatalina 53.49 336 *e*P **P** 18 52 15.3 -1.3
LPAZ La Paz 54.06 129 P **P** 18 52 22.8 +1.4
comp=Z,2.8nm,0.9s,mb4.2,baz=297,slow=6.8,SNR=3.6
LPAZ LR LR 19 12 26.6
comp=Z,496nm,20.9s,MS4.5,baz=192,slow=33
PPT Papeete 54.29 229 *e*S **S** 19 00 01.4 +3.5
comp=Z,546nm,25.5s
PPT *e*LR LR 19 08 07.4
comp=Z,684nm,23.5s,baz=39
PPT Papeete 54.29 229 LR LR 19 08 58.0
comp=Z,641nm,18.8s,MS4.7,baz=304,slow=28
IMA2 Indian Mountai 54.40 339 P **P** 18 52 21.6 -1.7
RES Resolute Bay 55.43 5 P **P** 18 52 31.2 +0.6
comp=Z,154nm,0.4s
RES *e* 18 52 37.3
RES Resolute Bay 55.43 5 P **P** 18 52 31.2 +0.6
RES *e* 18 52 37.3
RES pmax pmax
comp=Z,154nm,0.4s
TBI Tubuai 58.12 224 *e*S **S** 19 00 52.5 +3.9
comp=Z,235nm,30.2s
TBI *e*LQ 19 07 07.5
comp=Z,506nm,30.5s
TBI *e*LR LR 19 09 39.0
comp=Z,551nm,28.0s
SFJD Kangerlussuaq 59.83 23 LR LR 19 16 55.8
comp=Z,788nm,21.2s,MS4.8,baz=224,slow=34
PLCA Paso Flores 70.18 150 P **P** 18 54 13.4 +4.2
comp=Z,0.9nm,0.6s,mb3.9,baz=354,slow=10,SNR=2.6
PLCA LR LR 19 18 07.6
comp=Z,712nm,18.7s,MS5.0,baz=322,slow=30
DAG Danmarks Havn 70.99 14 ⇓ *e*P **P** 18 54 12.4 -1.2
DAG pmax pmax
comp=Z,3.0nm,0.9s,mb4.2
DAG Danmarks Havn 70.99 14 ⇓ *i*P **P** 18 54 12.4 -1.2
comp=Z,2.5nm,0.9s,mb4.1
PET Petropavlovsk 75.64 321 *e*P **P** 18 54 38.0 -3.4
PET *e*S S 19 04 15.6 -3.6
PET MLR MLR
comp=Z,300nm,18.0s,MS4.6
SEY Seymchan 76.27 332 ⇑ *e*P **P** 18 54 44.0 -0.8
MA2 Magadan 78.03 329 ⇓ *e*P **P** 18 54 51.0 -3.8
MA2 pmax pmax
comp=Z,8.0nm,1.3s,mb4.5
TIXI Tiksi 80.66 344 *e*P **P** 18 55 07.5 -1.4
comp=Z,16nm,1.1s,mb4.9
TIXI Tiksi 80.66 344 *e*P **P** 18 55 07.3 -1.5
TIXI *e*S S 19 05 15.7 +3.2
TIXI *i* SS SS 19 10 32.1 +7.1
TIXI pmax pmax
comp=Z,36nm,2.8s,mb4.8
ARCES ARCESS Array B 85.27 15 P **P** 18 55 34.8 +2.1
comp=Z,7.6nm,1.0s,mb4.8,baz=316,slow=3.8,SNR=4.0
ARCES LR LR 19 33 45.6
comp=Z,601nm,19.0s,MS5.0,baz=327,slow=36
YAK Yakutsk 86.08 336 ⇑ *e*P **P** 18 55 36.1 -0.8
YAK pmax pmax
comp=Z,13nm,1.3s,mb5.0
NOA NORSAR Array B 86.44 25 P **P** 18 55 40.3 +1.6
comp=Z,1.0nm,0.9s,mb4.0,baz=307,slow=5.0,SNR=2.9
NOA LR LR 19 32 34.1
comp=Z,421nm,21.1s,MS4.8,baz=325,slow=35
YSS Yuzh-Sakhalins 87.33 319 ⇓ *e*P **P** 18 55 42.0 -1.3
YSS pmax pmax
comp=Z,9.0nm,1.7s,mb4.7
ESDC Sonseca Array 88.70 48 LR LR 19 35 32.0
comp=Z,219nm,18.1s,MS4.6,baz=325,slow=36
CLL Collm 93.04 32 *e*P **P** 18 56 10.0 +0.1
CLL *e*SS SS 19 13 24.0 -2.8
CLL *e*SSSS 19 20 48.0
CLL Lm 19 39 00.0
comp=N,300nm,19.1s
CLL Lm 19 39 00.0
comp=E,200nm,20.3s

CLL					Lm			19 39 00.0	
	comp=Z,400nm,19.7s								
BOD	**Bodaibo**	**94.70**	**338**	*eP*	**P**		**18 56 20.8**	**+3.4**
BOD					pmax	pmax			
	comp=Z,3.0nm,1.3s,mb4.6								
GERES	**GERESS Array B**	**94.89**	**34**	LR	LR		19 38 45.6		
	comp=Z,240nm,18.9s,MS4.7,baz=96,slow=36								
MJAR	**Matsushiro Arr**	**95.19**	**312**	LR	LR		19 32 10.8		
	comp=Z,342nm,21.2s,MS4.8,baz=95,slow=31								
CN2	**Changchun**	**99.28**	**323**	*eP*	**P**		**18 56 36.3**	**-2.1**
KEST	**Kesra**	**99.83**	**46**	LR	LR		19 41 13.6		
	comp=Z,105nm,20.5s,MS4.3,baz=266,slow=35								
OBN	**Obninsk**	**99.88**	**19**↑	*eP*	Pdif		18 56 40.3	-0.6	
OBN					pmax	pmax			
	comp=Z,4.0nm,0.6s,mb5.0								
BJI	**Beijing**	**106.92**	**325**	PDIF	Pdif		18 57 09.0	-3.2	
BJI				SS	SS		19 16 41.0	+0.4	
BJI				LR	LR				
	comp=N,121nm,23.6s,MS4.7								
BJI				LR	LR				
	comp=E,237nm,23.6s,MS4.7								
BJI				LR	LR				
	comp=Z,132nm,24.9s,MS4.4								
HHC	**Hu-ho-hao-te**	**108.70**	**328**	*e*PDIF	Pdif		18 57 14.5	-5.6	
HHC				SS	SS		19 17 00.5	-4.0	
HHC				PP	PP				
	comp=Z,142nm,5.3s								
HHC				LR	LR				
	comp=N,201nm,16.7s,MS5.3								
HHC				LR	LR				
	comp=E,599nm,14.3s,MS5.3								
HHC				LR	LR				
	comp=Z,251nm,16.7s,MS4.9								
NJ2	**Nanjing**	**110.83**	**317**	*e*PKP	PKiKP		19 01 23.3	-6.4	
CD2	**Chengdu**	**120.40**	**327**	*e*PKP	PKPdf		19 01 45.3	-2.8	
CD2				PP	PP		19 03 15.8	+2.0	
CD2				PKS			19 05 20.8		
CD2				SKS	SKSdf		19 08 53.3	-3.5	
CD2				SKKS	SKKSac		19 10 04.3	-6.8	
CD2				SS	SS		19 19 39.3	+0.7	
CD2				PP	PP				
	comp=Z,120nm,8.2s								
CD2				LR	LR				
	comp=N,170nm,22.4s								
CD2				LR	LR				
	comp=Z,150nm,21.2s,MS4.6								
WRA	**Warramunga Arr**	**120.53**	**258**	PKhKP			19 01 47.5		
	comp=Z,0.6nm,0.8s,baz=76,slow=2.2,SNR=4.0								
WRA				PKP	PKPdf		19 01 53.9	+5.3	
	comp=Z,0.9nm,0.7s,baz=74,slow=2.2,SNR=14								
ASAR	**Alice Springs**	**121.61**	**254**	PKhKP			19 01 48.8		
	comp=Z,0.3nm,0.8s,baz=89,slow=2.5,SNR=3.6								
ASAR				PKP	PKPdf		19 01 55.5	+5.0	
	comp=Z,0.9nm,0.7s,baz=73,slow=2.0,SNR=13								
GYA	**Guiyang**	**122.27**	**322**	*e*PDIF	Pdif		18 58 18.3	-2.1	
GYA				PKP	PKPdf		19 01 49.0	-2.8	
GYA				PP	PP		19 03 28.5	+1.8	
GYA				PKS			19 05 24.3		
GYA				SKS	SKSdf		19 08 59.0	-1.5	
GYA				SKKS	SKKSac		19 10 19.5	-3.9	
GYA				S	Sdif		19 11 16.3	-2.0	
GYA				SS	SS		19 20 04.5	+1.6	
GYA				PP	PP				
	comp=Z,120nm,7.8s								
GYA				LR	LR				
	comp=N,290nm,21.2s,MS5.0								
GYA				LR	LR				
	comp=E,240nm,20.8s,MS5.0								
GYA				LR	LR				
	comp=Z,160nm,20.7s,MS4.7								
KMI	**Kunming**	**125.54**	**324**	PKP	PKPdf		19 01 54.5	-3.6	
KMI				XPKP			19 02 00.3		
KMI				PP	PP		19 03 49.5	+0.9	
KMI				SS	SS		19 20 45.0	+0.9	
KMI				PP	PP				
	comp=Z,80nm,6.1s								
KMI				LR	LR				
	comp=N,132nm,21.0s,MS4.7								
KMI				LR	LR				
	comp=E,132nm,25.2s,MS4.7								
KMI				LR	LR				
	comp=Z,162nm,22.4s,MS4.6								

ISCJB ***28*** *18:59:33.0±0.8, 4593N±006×1065W±0.1, h0km, Error ellipse: s-maj=13.6km s-min=7.0km az=28.0*
NEIC ***28*** *18:59:34.6±0.8, 4597N×10658W, h0km, ML2.7, Error ellipse: s-maj=14.2km s-min=8.2km az=120.0, Suspected Mining explosion.*
NEIC 10 km [5 miles] NNE of Colstrip.
IDC ***28*** *18:59:35.0±1.2, 4583N×10669W, h0km, mb1 3.2/3, mb1mx3.1/22, mbtmp2.9/3, ML3.0/2, Error ellipse: s-maj=42.0km s-min=8.2km az=131.0*

ISC 28 18:59:34.7±0.8, 4596N±006×1066W±0.1, h0km, n10, σ0§91/12, Montana

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**0.76**	**17**	*eP*	**Pg**	**18 59 47.6**	**-1.6**
RLMT	**Red Lodge**	**2.09**	**247**	*eP*	**Pn**	**19 00 11.1**	**+0.2**
GCMT	**Greycliff**	**2.19**	**267**	P	**Pn**	**19 00 13.6**	**+1.3**
EGMT	**Eagleton**	**3.01**	**314**	P	**Pn**	**19 00 23.1**	**-0.4**
BOZ	**Bozeman (W)**	**3.57**	**267**	P	**Pn**	**19 00 30.4**	**-0.8**
PDAR	**Pinedale Array**	**3.86**	**215**	Pn	**Pn**	**19 00 34.9**	**-0.3**
	0.2nm,0.3s,baz=50,slow=13,SNR=8.5						
PDAR				Pg	**Pg**	**19 00 44.5**	**-4.0**
	1.2nm,0.3s,baz=47,slow=18,SNR=23						
PDAR				Sn	**Sn**	**19 01 21.2**	**0.0**
	0.6nm,0.3s,baz=26,slow=19,SNR=7.2						
PDAR				Lg		19 01 31.2	
	1.4nm,0.3s,baz=43,slow=29,SNR=8.0						
RWWY	**Rawlins**	**4.30**	**187**	P	**Pn**	**19 00 40.9**	**-0.4**
ULM	**Lac du Bonnet**	**8.33**	**55**	Pn	**Pn**	**19 01 37.6**	**+1.0**
ULM				Lg		19 03 58.2	
ULM	**Lac du Bonnet**	**8.33**	**55**	Pn	**Pn**	**19 01 37.6**	**+1.0**
	0.1nm,0.3s,baz=232,slow=13,SNR=2.8						
ULM				Lg		19 03 58.2	
	0.4nm,0.3s,baz=163,slow=17,SNR=2.9						
YKA	**Yellowknife Ar**	**17.20**	**347**	P	**Pn**	**19 03 37.1**	**+1.1**
	0.0nm,0.3s,baz=164,slow=14,SNR=3.4						

NEIC ***28*** *19:26:15.0, 38.18S×176.45E, h132km, MG3.8(WEL), After WEL.*

WEL 28 19:26:14.9±0.4, 3818S×17643E, h132km±3km, ML3.7/15, Error ellipse: s-maj=2.9km s-min=2.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.54**	**99**	P	Pn	19 26 34.4	-0.1
URZ	**Urewera**	**0.54**	**99**	PN	Pn	19 26 34.4	0.0
URZ				SN	Sn	19 26 49.4	+0.2
MWZ	**Matawai**	**0.88**	**100**	*e*P	Pn	19 26 37.1	+0.2
MWZ				S	Sn	19 26 53.5	-0.1
MWZ	**Matawai**	**0.88**	**100**	*e*PN	Pn	19 26 37.1	+0.2
MWZ				SN	Sn	19 26 53.5	-0.1
BKZ	**Black Stump Fm**	**0.99**	**177**	P	Pn	19 26 38.1	+0.2
BKZ				S	Sn	19 26 55.6	+0.2
BKZ	**Black Stump Fm**	**0.99**	**177**	PN	Pn	19 26 38.1	+0.2
BKZ				SN	Sn	19 26 55.6	+0.2
FWVZ	**Far West T-bar**	**1.28**	**212**	*e*P	Pn	19 26 41.2	+0.5
FWVZ	**Far West T-bar**	**1.28**	**212**	PN	Pn	19 26 41.2	+0.4
KNZ	**Kokohu**	**1.28**	**131**	*e*P	Pn	19 26 40.9	+0.1
KNZ	**Kokohu**	**1.28**	**131**	PN	Pn	19 26 40.9	+0.1
WNVZ	**Wahianoa**	**1.32**	**209**	PN	Pn	19 26 41.6	+0.4
MOVZ	**Moawhango**	**1.34**	**203**	PN	Pn	19 26 41.2	-0.2
MTVZ	**Mangateitei**	**1.42**	**212**	PN	Pn	19 26 42.6	+0.3
WPHZ	**Waipukurau**	**1.88**	**180**	PN	Pn	19 26 46.9	-0.6
TSZ	**Takapari Road**	**1.91**	**191**	P	Pn	19 26 47.2	-0.7
TSZ	**Takapari Road**	**1.91**	**191**	PN	Pn	19 26 47.2	-0.7
BFZ	**Birch Farm**	**2.50**	**183**	*e*P	Pn	19 26 53.7	-1.5
BFZ	**Birch Farm**	**2.50**	**183**	PN	Pn	19 26 53.7	-1.5
TIWZ	**Tintock**	**2.63**	**189**	PN	Pn	19 26 55.2	-1.6
TIWZ				SN	Sn	19 27 27.1	-1.9
KIW	**Kapiti Island**	**2.92**	**203**	P	Pn	19 26 58.2	-2.4
KIW	**Kapiti Island**	**2.92**	**203**	PN	Pn	19 26 58.2	-2.4
MTW	**Mount Morrison**	**3.06**	**193**	P	Pn	19 26 59.7	-2.6
MTW	**Mount Morrison**	**3.06**	**193**	PN	Pn	19 26 59.7	-2.6
CAW	**Cannon Point**	**3.11**	**199**	P	Pn	19 27 00.5	-2.5
CAW	**Cannon Point**	**3.11**	**199**	PN	Pn	19 27 00.5	-2.5
DUWZ	**D'Urville Isla**	**3.26**	**216**	PN	Pn	19 27 02.4	-2.5
TRWZ	**Traveller**	**3.27**	**190**	PN	Pn	19 27 02.4	-2.6
PAWZ	**Paruwai Farm**	**3.29**	**193**	P	Pn	19 27 02.5	-2.8
PAWZ	**Paruwai Farm**	**3.29**	**193**	PN	Pn	19 27 02.5	-2.9
MSWZ	**Moikau Station**	**3.36**	**195**	P	Pn	19 27 03.2	-3.0
MSWZ	**Moikau Station**	**3.36**	**195**	PN	Pn	19 27 03.2	-3.0
SNZO	**South Karori**	**3.40**	**203**	P	Pn	19 27 03.5	-3.2
SNZO	**South Karori**	**3.40**	**203**	PN	Pn	19 27 03.5	-3.2
TCW	**Tory Channel**	**3.46**	**208**	P	Pn	19 27 04.4	-3.1
TCW	**Tory Channel**	**3.46**	**208**	PN	Pn	19 27 04.4	-3.1
TUWZ	**Tuamarina**	**3.77**	**210**	PN	Pn	19 27 08.3	-3.3
NNZ	**Nelson**	**3.84**	**217**	*eP*	Pn	19 27 09.5	-3.1
NNZ	**Nelson**	**3.84**	**217**	PN	Pn	19 27 09.5	-3.0
QRZ	**Quartz Range**	**4.01**	**228**	*eP*	Pn	19 27 11.8	-3.0
QRZ	**Quartz Range**	**4.01**	**228**	PN	Pn	19 27 11.8	-3.1
THZ	**Tophouse**	**4.49**	**216**	*eP*	Pn	19 27 17.7	-3.5
THZ	**Tophouse**	**4.49**	**216**	PN	Pn	19 27 17.7	-3.4
KHZ	**Kahutara**	**4.78**	**207**	*eP*	Pn	19 27 21.0	-4.0
KHZ	**Kahutara**	**4.78**	**207**	PN	Pn	19 27 21.0	-4.0
MQZ	**McQueen's Vall**	**6.22**	**206**	*eP*	Pn	19 27 38.5	-5.8

ISCJB ***28*** *19:32:00.7±0.9, 3727N±004×13667E±007, h7km±7km, mb3.2/2, Error ellipse: s-maj=8.9km s-min=7.0km az=164.0*
IDC ***28*** *19:32:00.6±1.6, 3700N×13661E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, ML2.9/1, Error ellipse: s-maj=49.2km s-min=14.5km az=18.0*
JMA ***28*** *19:32:01.3, 3725N×13670E, h8km±1km, M3.4*
JMA Felt II J1.

ISC 28 19:32:01.5±0.9, 3725N±004×13672E±006, h7km±7km, n10, σ0§95/14, mb3.2/2, 1C-2D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.33**	**171**	⇑P	**Pg**	**19 32 08.0**	**+0.1**
JJH				*e*S	**Sg**	**19 32 12.9**	**+0.7**
JSZ	**Suzu**	**0.55**	**69**	⇓P	**Pg**	**19 32 12.0**	**-0.1**
JHG	**Hegura jima**	**0.62**	**15**	P	**Pg**	**19 32 13.7**	**+0.3**
JTT	**Ttatey**	**0.81**	**142**	P	**Pg**	**19 32 16.9**	**-0.2**
JTT				*e*S	**Sg**	**19 32 28.5**	**+0.9**
JKG	**Kaga**	**1.02**	**198**	⇓P	**Pg**	**19 32 20.2**	**-0.8**
JKG				*e*S	**Sg**	**19 32 34.3**	**0.0**
MAT	**Matsushiro**	**1.39**	**120**	P	**Pn**	**19 32 26.3**	**-0.9**
MAT				S	**Sb**	**19 32 46.6**	**+1.0**
MJAR	**Matsushiro Arr**	**1.39**	**120**	Pg	**Pg**	**19 32 25.1**	**-3.0**
	13nm,0.3s,baz=44,slow=12,SNR=77						
MJAR				Lg		19 32 46.8	
	12nm,0.3s,baz=355,slow=13,SNR=14						
KSRS	**Korea Array**	**7.01**	**274**	Pn	**Pn**	**19 33 44.8**	**+0.4**
	0.2nm,0.3s,baz=87,slow=14,SNR=2.7						
SONM	**Songino Array**	**24.57**	**305**	P	**P**	**19 37 23.2**	**+1.5**
	0.3nm,0.6s,mb3.0,baz=110,slow=9.7,SNR=4.2						
WRA	**Warramunga Arr**	**56.93**	**183**	P	**P**	**19 41 45.7**	**-1.6**
	0.4nm,0.8s,mb3.5,baz=359,slow=7.5,SNR=8.3						

ISCJB ***28*** *19:48:03.8±1.0, 620N±007×127.14E±008, h10km, mb3.7/4, Error ellipse: s-maj=13.4km s-min=7.9km az=147.0*
IDC ***28*** *19:48:03.9±1.7, 582N×12533E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/17, mbtmp3.8/4, Error ellipse: s-maj=177.9km s-min=23.5km az=64.0*

ISC 28 19:48:06.1±1.0, 617N±007×12705E±009, h10km, n11, σ1§23/16, mb3.7/4, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**1.78**	**301**	⇑*i*P	**Pn**	**19 48 37.0**	**+0.1**
GSPH	**General Santos**	**2.09**	**268**	*e*P	**Pn**	**19 48 40.3**	**-0.9**
GSPH				*i* S	**Sn**	**19 49 06.8**	**-0.3**
BIPH	**Bislig**	**2.12**	**341**	⇑*i*P	**Pn**	**19 48 36.5**	**-5.1**
BIPH				*i* S	**Sn**	**19 48 57.8**	**-10**
BUKP	**Musuan**	**2.60**	**311**	*e*P	**Pn**	**19 48 47.1**	**-1.1**
BUKP				*e*S	**Sn**	**19 49 22.4**	**+2.4**
CGP	**Cagayan de Oro**	**3.26**	**314**	⇓*e*P	**Pn**	**19 48 56.6**	**-0.7**
CGP				*i* S	**Sn**	**19 49 36.2**	**+0.1**
PAGZ	**Pagadian**	**4.00**	**295**	*e*P	**Pn**	**19 49 08.8**	**+1.2**
MSLP	**Maasin**	**4.50**	**331**	*e*P	**Pn**	**19 49 11.9**	**-2.4**
MSLP				*e*S	**Sn**	**19 50 07.6**	**+0.8**
WRA	**Warramunga Arr**	**26.92**	**165**	P	**P**	**19 53 48.9**	**+1.3**
	0.7nm,0.5s,mb3.4,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**30.39**	**169**	P	**P**	**19 54 18.0**	**-0.6**
	0.4nm,0.6s,mb3.3,baz=342,slow=6.9,SNR=6.7						
ASAR				PcP	PcP	19 57 15.4	-3.1
	0.5nm,0.6s,baz=346,slow=2.5,SNR=8.9						
STKA	**Stephens Creek**	**40.29**	**161**	P	**P**	**19 55 47.0**	**+3.4**
	3.6nm,0.7s,mb4.2,baz=356,slow=6.9,SNR=6.7						
MKAR	**Makanchi Array**	**55.76**	**324**	P	**P**	**19 57 38.2**	**-5.0**
	0.6nm,0.5s,mb3.9,baz=117,slow=7.0,SNR=9.2						

IGQ 28 19:48:39.8, 165S×7776W, h179km±17km, Mb4.1, Ms3.9, 6C, Error ellipse: s-maj=12.0km s-min=5.3km az=38.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	**0.67**	**287**	⇑P	Pn	19 49 05.9	+0.7
PATA	**Patacocha**	**0.69**	**282**	P	Pn	19 49 06.0	+0.6
RUN5	**Runtun**	**0.70**	**289**	⇑P	Pn	19 49 06.0	+0.6
ARRY	**Arrayan**	**0.71**	**282**	⇑P	Pn	19 49 06.0	+0.6
IGUA	**Igualata**	**0.89**	**280**	⇑P	Pn	19 49 07.4	+0.8
PORT	**Chimborazo Vol**	**1.03**	**280**	⇑P	Pn	19 49 09.1	+1.5
TAMB	**Tambo**	**1.12**	**327**	P	Pn	19 49 09.3	+1.0
VC1	**Cotopaxi 1**	**1.19**	**327**	P	Pn	19 49 09.7	+0.9
ANTI	**Antisana**	**1.26**	**342**	⇑P	Pn	19 49 11.2	+1.7
JUA2	**San Juan 2**	**1.66**	**329**	P	Pn	19 49 13.6	+0.4
CAYR	**Refugio Cayamb**	**1.67**	**352**	P	Pn	19 49 14.9	+1.5
GGP	**Refugio Guagua**	**1.69**	**330**	P	Pn	19 49 14.4	+0.9
TERV	**Terraza Guagua**	**1.69**	**330**	P	Pn	19 49 16.0	+2.5
PINO	**Pino**	**1.71**	**330**	P	Pn	19 49 15.0	+1.3
YANA	**Yana**	**1.72**	**332**	P	Pn	19 49 15.1	+1.3
CAYA	**Cayambe**	**1.73**	**352**	P	Pn	19 49 15.1	+1.2

NNC ***28*** *19:48:39.7±7.3, 3918N×7135E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=58.8km s-min=40.4km az=13.0*

ISC 28 19:48:51.6±1.6, 4007N±010×7197E±007, h10km, n11, σ1§38/15, 3C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.44**	**32**	P	**Pn**	**19 49 32.2**	**+0.7**
	SNR=58						
UCH	**Uchtor**	**2.89**	**41**	P	**Pn**	**19 49 37.6**	**-0.1**
	SNR=17						
EKS2	**Erkin-Say**	**2.93**	**27**	P	**Pn**	**19 49 40.5**	**+2.2**
	SNR=17						
AAK	**Ala-Archa**	**3.19**	**36**	P	**Pn**	**19 49 42.7**	**+0.9**
	SNR=14						
KK31	**Karatay Array**	**3.23**	**341**	Pn	**Pb**	**19 49 45.6**	**-3.4**
	1.6nm,0.2s,baz=142,slow=12,SNR=82						
KK31				⇑Sn	**Sg**	**19 50 34.9**	**-0.3**
	11nm,0.6s,baz=154,slow=23,SNR=7.4						
KBK	**Karagaybulak**	**3.42**	**40**	P	**Pn**	**19 49 45.5**	**+0.5**
	SNR=9.3						
CHMS	**Chumysh**	**3.60**	**35**	P	**Pn**	**19 49 48.0**	**+0.5**
	SNR=22						
USP	**Ospenovka**	**3.72**	**30**	P	**Pn**	**19 49 49.9**	**+0.9**
	SNR=8.4						
TKM2	**Tokmak 2**	**3.94**	**42**	⇑Pn	**Pn**	**19 49 50.0**	**-2.2**
	3.4nm,0.6s						
TKM2				⇑Sn	**Sg**	**19 50 57.2**	**-1.0**
	7.8nm,0.6s						
AB31	**Akbulak array**	**12.54**	**321**	⇓Pn	**Pn**	**19 51 47.7**	**-2.4**
	0.8nm,0.5s,baz=115,slow=11,SNR=18						
AB31				⇓Sn	**Sn**	**19 54 11.1**	**+1.3**
	1.3nm,0.6s,baz=130,slow=22,SNR=5.2						
AKTO	**Aktyubinsk**	**14.26**	**321**	⇓Pn	**Pn**	**19 52 10.6**	**-2.8**
	0.2nm,0.6s						
AKTO				⇓Sn	**Sn**	**19 54 52.5**	**+0.9**
	0.3nm,1.0s						

IDC 28 20:01:10.8±1.7, 925S×12511E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/14, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=27.4km s-min=16.5km az=140.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**1.71**	**236**	Pg	Pg	20 01 43.0	-0.7
	32nm,0.3s,baz=61,slow=3.5,SNR=81						
BATI				Lg		20 02 04.5	
	26nm,0.3s,baz=107,slow=19,SNR=8.9						
FITZ	**Fitzroy Crossi**	**8.81**	**177**	Pn	Pn	20 03 19.1	-0.5
	0.2nm,0.3s,baz=17,slow=18,SNR=3.9						
FITZ				Sn	Sn	20 04 52.9	-6.7
	0.2nm,0.3s,baz=122,slow=19,SNR=2.6						
WRA	**Warramunga Arr**	**13.88**	**141**	Pn	Pn	20 04 28.8	-0.1
	0.2nm,0.3s,baz=316,slow=15,SNR=16						
WRA				Sn	Sn	20 06 54.4	-9.4
	0.1nm,0.3s,baz=318,slow=24,SNR=3.8						
ASAR	**Alice Springs**	**16.62**	**151**	Pn	Pn	20 05 05.5	+0.3
	0.1nm,0.3s,baz=318,slow=12,SNR=7.8						
ASAR				Sn	Sn	20 07 59.9	-11
	0.1nm,0.3s,baz=318,slow=22,SNR=3.0						
MKAR	**Makanchi Array**	**67.58**	**330**	P	P	20 12 09.1	0.0
	0.3nm,0.8s,baz=130,slow=7.3,SNR=3.3						

IDC 28 20:02:43.1±14.0, 2859N×14296E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/18, mbtmp3.4/3, ML3.9/1, MS3.8/1, Ms1 3.8/1, ms1mx2.7/19, Error ellipse: s-maj=420.0km s-min=48.8km az=60.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**15.38**	**309**	Pn	Pn	20 06 20.8	-0.7
	0.5nm,0.3s,baz=166,slow=15,SNR=4.7						
CTA	**Charters Tower**	**48.50**	**176**	LR	LR	20 27 27.5	
	comp=Z,104nm,21.1s,baz=166,slow=31						
WRA	**Warramunga Arr**	**48.97**	**191**	P	P	20 11 30.9	-0.5
	0.4nm,0.4s,baz=14,slow=9.4,SNR=17						
ASAR	**Alice Springs**	**52.68**	**190**	P	P	20 12 00.2	+0.8
	0.1nm,0.4s,baz=12,slow=6.7,SNR=4.2						

ISCJB ***28*** *20:04:44.0±1.1, 275N±02×567E±0.1, h10km, mb3.6/11, Error ellipse: s-maj=24.3km s-min=14.8km az=171.3*
IDC ***28*** *20:04:44.1±1.3, 2753N×5663E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.7/24, mbtmp3.7/11, Error ellipse: s-maj=29.9km s-min=20.5km az=172.0*
NEIC ***28*** *20:04:45.6±0.8, 2752N×5661E, h10km, mb3.8/1, Error ellipse: s-maj=18.6km s-min=13.5km az=179.0*
CSEM ***28*** *20:04:47.5±0.5, 2763N×5664E, h33km, mb3.8/1, Error ellipse: s-maj=23.3km s-min=6.1km az=178.0*

ISC 28 20:04:45.8±1.1, 275N±02×567E±01, h10km, n15, σ0§70/15, mb3.6/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMAI	**Mount Meron Ar**	**19.18**	**292**	P	**Pn**	**20 09 12.0**	**+1.5**
	0.2nm,0.3s,baz=298,slow=40,SNR=2.3						
AKTK	**Aktyubinsk**	**22.92**	**2**	P	**P**	**20 09 50.3**	**+0.6**
AKTO	**Aktyubinsk**	**22.92**	**2**	P	**P**	**20 09 50.3**	**+0.6**
	1.6nm,0.5s,mb3.7,baz=179,slow=11,SNR=9.1						
MKAR	**Makanchi Array**	**27.85**	**39**	P	**P**	**20 10 35.3**	**-0.1**
	0.2nm,0.7s,mb2.8,baz=225,slow=7.8,SNR=2.9						
AKASG	**Malin Array Be**	**31.16**	**325**	P	**P**	**20 11 04.2**	**-0.5**
	0.8nm,0.6s,mb3.8,baz=130,slow=8.7,SNR=9.9						
ZALV	**Zalesovo Beam**	**33.53**	**30**	P	**P**	**20 11 24.9**	**-0.5**
	0.9nm,0.6s,mb3.9,baz=241,slow=9.8,SNR=5.9						
FINES	**FINESS Array B**	**39.62**	**337**	P	**P**	**20 12 16.9**	**-0.4**
FINES	**FINESS Array B**	**39.62**	**337**	P	**P**	**20 12 16.9**	**-0.4**
	0.7nm,0.5s,mb3.6,baz=135,slow=10,SNR=6.9						
DAVOX	**Davos/Dischmat**	**41.28**	**311**	P	**P**	**20 12 31.4**	**+0.2**
	2.0nm,0.7s,mb3.9,baz=172,slow=14,SNR=3.9						
SONM	**Songino Array**	**43.40**	**48**	P	**P**	**20 12 48.4**	**-0.1**
	0.2nm,0.6s,mb3.0,baz=254,slow=9.3,SNR=4.4						
NB2	**NORSAR Subarra**	**45.21**	**331**	P	**P**	**20 13 02.2**	**-0.6**
	comp=Z,0.7nm,0.6s,mb3.7,baz=116,slow=7.9						
NOA	**NORSAR Array B**	**45.21**	**331**	P	**P**	**20 13 01.4**	**-1.4**
	comp=Z,0.7nm,0.6s,mb3.6,baz=116,slow=7.8,SNR=5.4						
ESDC	**Sonseca Array**	**51.09**	**300**	P	**P**	**20 13 48.3**	**-0.3**
	comp=Z,0.5nm,0.6s,mb3.6,baz=66,slow=7.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**53.12**	**266**	P	**P**	**20 14 03.0**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.5,baz=63,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**88.68**	**113**	P	**P**	**20 17 40.6**	**+0.9**
	comp=Z,0.6nm,1.0s,mb3.9,baz=312,slow=4.5,SNR=3.4						

IDC 28 20:06:17.4±4.7, 2518S×17778W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/12, mbtmp3.5/2, Error ellipse: s-maj=226.4km s-min=52.1km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.84**	**261**	P	P	20 14 25.1	-0.4
	0.5nm,0.7s,baz=107,slow=8.5,SNR=6.7						
WRA	**Warramunga Arr**	**44.35**	**267**	P	P	20 14 29.8	+0.2
	0.3nm,0.4s,baz=105,slow=7.8,SNR=12						
NB2	**NORSAR Subarra**	**143.63**	**353**	PKP	PKPdf	20 25 51.8	-1.8
	comp=Z,0.7nm,0.7s,baz=10,slow=2.9						
NOA	**NORSAR Array B**	**143.63**	**353**	PKP	PKPdf	20 25 52.1	-1.5
	comp=Z,1.0nm,0.8s,baz=12,slow=4.5,SNR=5.0						
AKASG	**Malin Array Be**	**147.13**	**328**	PKPbc	PKPbc	20 26 01.8	-0.4
	comp=Z,0.6nm,0.5s,baz=47,slow=2.8,SNR=7.0						

*NEIC

	0.9nm,0.1s,SNR=12						
ETOB				Sn	**Sn**	**20 35 46.7**	**-0.2**
	SNR=7.9						
EGUA	**Guajares**	**3.47**	**288**	P	**Pn**	**20 35 11.1**	**-0.8**
	0.5nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**3.50**	**294**	P	**Pn**	**20 35 12.9**	**+0.7**
	1.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**3.50**	**294**	Pn	**Pn**	**20 35 12.9**	**+0.7**
	1.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.51**	**305**	Pn	**Pn**	**20 35 13.4**	**+0.9**
EQES				Sn	**Sn**	**20 35 52.5**	**-0.3**
EQES	**Quesada**	**3.51**	**305**	P	**Pn**	**20 35 13.4**	**+0.9**
	6.3nm,1.1s,SNR=4.7						
EQES				S	**Sn**	**20 35 52.5**	**-0.3**
	4.6nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.51**	**305**	Pn	**Pn**	**20 35 13.4**	**+0.9**
	6.3nm,1.1s,SNR=4.7						
EQES				Sn	**Sn**	**20 35 52.5**	**-0.3**
	SNR=7.9						
EVIA	**Vianos**	**3.72**	**320**	P	**Pn**	**20 35 15.8**	**+0.5**
	1.1nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**20 35 57.6**	**-0.2**
	7.2nm,0.3s,SNR=7.9						

CSEM ***28*** *20:35:07.7±0.5, 38.32N×20.25E, h1km±3km, ML3.1, Error ellipse: s-maj=11.8km s-min=4.5km az=61.0*
ATH ***28*** *20:35:07.6, 38.18N×20.28E, h15km±9km, MD3.4/4*
NEIC ***28*** *20:35:07.9, 38.20N×20.26E, h4km, MD3.4(ATH), After ATH.*
ISCJB ***28*** *20:35:08.7±1.0, 38.35N±0.04×20.38E±0.08, h3km, Error ellipse: s-maj=9.5km s-min=4.1km az=153.4*
THE ***28*** *20:35:08.3, 38.37N×20.32E, h3km, ML3.1*
ISC 28 20:35:09.1±1.1, 38.35N±0.04×20.40E±0.08, h2km±7km, n11, σ0 81/18, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.23**	**138**	*e*PB	**Pg**	**20 35 13.8**	**+0.3**
VLS				*e*SB	**Sg**	**20 35 17.0**	**+0.6**
KFL	**Anninata**	**0.39**	**127**	*e*Pg	**Pg**	**20 35 16.4**	**-0.2**
LKD	**Levkas**	**0.41**	**29**	*e*Pg	**Pg**	**20 35 16.1**	**-1.0**
LKD				*e*Sg	**Sg**	**20 35 22.4**	**0.0**
IGT	**Igoumenitsa**	**1.19**	**358**	*e*Pg	**Pg**	**20 35 30.1**	**-1.8**
IGT				*e*Sg	**Sg**	**20 35 47.5**	**+0.3**
IGT	**Igoumenitsa**	**1.19**	**358**	*e*Pg	**Pg**	**20 35 30.1**	**-1.8**
IGT				*e*Sg	**Sg**	**20 35 47.5**	**+0.2**
EVR	**Evrytania**	**1.25**	**62**	*e*PN	**Pn**	**20 35 34.0**	**+0.5**
JAN	**Janina**	**1.36**	**15**	*e*PN	**Pg**	**20 35 37.0**	**+1.8**
KEK	**Kerkira**	**1.44**	**341**	*e*PN	**Pn**	**20 35 36.5**	**+0.3**
SRN	**Sarande**	**1.56**	**349**	*i* Pn	**Pn**	**20 35 38.1**	**+0.2**
SRN				*i* Sn	**Sn**	**20 35 58.7**	**0.0**
AGG	**Agios Georgios**	**1.66**	**65**	*e*Pb	**Pn**	**20 35 38.4**	**-0.8**
AGG				*e*Sb	**Sb**	**20 36 02.5**	**+0.8**
DID	**Didima**	**2.40**	**110**	*e*Pn	**Pn**	**20 35 49.5**	**+0.2**
DID				*e*Sn	**Sb**	**20 36 21.8**	**-1.2**

IDC ***28*** *20:39:54.9±0.8, 12.83N×92.41E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.8/20, mbtmp3.8/9, Error ellipse: s-maj=38.0km s-min=19.0km az=61.0*
NEIC ***28*** *20:39:59.2±0.7, 12.91N×92.47E, h30km, mb4.0/3, Error ellipse: s-maj=26.2km s-min=14.2km az=66.0*
BJI ***28*** *20:40:00.2, 12.80N×92.60E, h30km, mb3.9*
ISCJB ***28*** *20:40:01.6±0.9, 12.82N±0.08×92.2E±0.1, h72km±11km, mb3.8/10, Error ellipse: s-maj=20.0km s-min=9.4km az=146.1*
ISC 28 20:40:02.8±0.8, 12.85N±0.07×92.3E±0.1, h61km±10km, n25, σ1 9 25/29, mb3.8/10, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.26**	**160**	*e*P	**Pn**	**20 40 33.6**	**+9.3**
PBA				*e*S	**Sn**	**20 40 40.6**	**+0.2**
PBA				AML	AML	20 40 56.1	
	comp=N,3μm,0.7s						
PBA				AML	AML	20 40 56.9	
	comp=E,2μm,0.2s						
VIS	**Vishakhapatnam**	**9.92**	**300**	*i* P	**Pn**	**20 42 22.3**	**-0.3**
VIS				*e*S	**Sn**	**20 44 03.4**	**-9.0**
VIS				*ex*	x	20 44 07.5	
	comp=E,46nm,0.6s						
VIS				*ex*	x	20 44 07.6	
	comp=N,83nm,0.7s						
BOK	**Bokaro**	**12.47**	**332**	*e*P	**Pn**	**20 42 55.8**	**-1.6**
BLSP	**Bilaspur**	**13.38**	**315**	*e*P	**Pn**	**20 43 08.8**	**-1.0**
BLSP				*e*S	**Sn**	**20 45 25.9**	**-11**
BLSP				AML	AML	20 45 58.1	
	comp=N,13nm,0.2s						
BLSP				AML	AML	20 45 58.4	
	comp=E,7.7nm,0.2s						
TAPN	**Taplejung**	**15.05**	**344**	*e*P	**Pn**	**20 43 38.7**	**+6.8**
	comp=E,9.6nm,0.6s						
KMI	**Kunming**	**15.69**	**37**	P	**Pn**	**20 43 42.0**	**+1.9**
KMI				AP	pP	20 43 45.8	-10
KMI				XP	sP	20 43 47.5	-16
KMI				AMB	AMB		
	comp=Z,4.0nm,0.8s						
JIRN	**Jiri**	**15.80**	**340**	*e*P	**Pn**	**20 43 42.8**	**+1.3**
	comp=Z,14nm,0.7s						
LSA	**Lhasa**	**16.80**	**357**	*e*P	**Pn**	**20 43 57.8**	**+3.8**
LSA	**Lhasa**	**16.80**	**357**	*e*P	**Pn**	**20 43 47.9**	**-6.1**
	comp=Z,3.2nm,0.7s						
KOLN	**Koldanda**	**16.93**	**333**	*e*P	**Pn**	**20 43 56.1**	**+0.5**
	comp=Z,18nm,0.6s						
KOLN				*e*S	**S**	**20 46 51.2**	**-19**
BHPL	**Bhopal**	**17.50**	**308**	*e*P	**Pn**	**20 44 05.2**	**+2.5**
BHPL				*ex*	x	20 46 42.3	
MK31	**Makanchi Array**	**34.87**	**348**	*e*P	**P**	**20 46 46.0**	**-2.1**
MK31				*e*	pP	20 46 56.0	-7.3
MKAR	**Makanchi Array**	**34.87**	**348**	P	**P**	**20 46 48.6**	**+0.5**
	comp=Z,0.9nm,0.8s,mb3.7,baz=153,slow=8.2,SNR=8.6						
MKAR				PcP	PcP	20 49 21.6	+1.7
	comp=Z,0.3nm,0.7s,baz=170,slow=2.6,SNR=3.1						
SONM	**Songino Array**	**36.81**	**16**	P	**P**	**20 47 04.7**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.4,baz=205,slow=6.3,SNR=4.5						
SONM				PcP	PcP	20 49 26.2	+0.6
	comp=Z,0.3nm,0.8s,baz=233,slow=2.1,SNR=3.6						
KURK	**Kurchatov**	**39.38**	**346**	P	**P**	**20 47 24.1**	**-2.1**
ZALV	**Zalesovo Beam**	**41.42**	**353**	P	**P**	**20 47 42.8**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.6,baz=170,slow=10,SNR=4.6						
WRA	**Warramunga Arr**	**52.66**	**128**	P	**P**	**20 49 10.4**	**-0.8**
	comp=Z,1.1nm,0.7s,mb3.9,baz=305,slow=8.4,SNR=8.5						
WRA				PcP	PcP	20 50 21.5	+1.0
	comp=Z,0.6nm,0.5s,baz=316,slow=3.6,SNR=3.6						
ASAR	**Alice Springs**	**54.52**	**132**	P	**P**	**20 49 23.9**	**-0.9**
	comp=Z,0.5nm,0.6s,mb3.7,baz=309,slow=6.8,SNR=5.6						
TIXI	**Tiksi**	**62.76**	**12**	*e*P	**P**	**20 50 20.6**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.5						
TIXI				*e*		20 50 28.5	
FINES	**FINESS Array B**	**67.50**	**332**	P	**P**	**20 50 53.1**	**+1.0**
	comp=Z,1.2nm,0.7s,mb4.0,baz=91,slow=10,SNR=4.6						
GERES	**GERESS Array B**	**72.95**	**317**	P	**P**	**20 51 27.8**	**+2.1**
	comp=Z,0.2nm,0.6s,mb3.2,baz=84,slow=5.5,SNR=3.9						
NB2	**NORSAR Subarra**	**74.54**	**330**	P	**P**	**20 51 35.3**	**+0.5**
	comp=Z,1.7nm,0.9s,mb4.0,baz=91,slow=6.2						
NOA	**NORSAR Array B**	**74.54**	**330**	P	**P**	**20 51 34.1**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.5,baz=94,slow=5.8,SNR=3.3						
BOSA	**Boshof**	**76.75**	**236**	P	**P**	**20 51 49.2**	**+1.2**
BOSA	**Boshof**	**76.75**	**236**	P	**P**	**20 51 49.2**	**+1.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=262,slow=9.6,SNR=3.1						

NEIC ***28*** *20:40:21.6, 15.59N×98.75W, h10km, MD4.0(MEX), After MEX.*
MEX 28 20:40:24.4±1.2, 15.80N×98.76W, h16km±34km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.84**	**46**	*i* P	Pb	20 40 37.2	-3.5
PNIG				*i* S	Sb	20 40 49.3	-2.5
PNIG	**Pinotepa**	**0.84**	**46**	*i* P	Pb	20 40 37.4	-3.4
PNIG				*i* S	Sb	20 40 47.3	-4.5
ACX	**Acapulco**	**1.53**	**314**	*i* P	Pn	20 40 45.2	-5.9
ACX				*i* S	Sn	20 41 10.3	-0.4
ACX	**Acapulco**	**1.53**	**314**	*i* P	Pn	20 40 47.5	-3.6
ACX				*i* S	Sn	20 41 10.3	-0.4
CAIG	**El Cayaco**	**1.90**	**311**	*i* P	Pn	20 40 55.4	-0.8
CAIG				*i* S	Sn	20 41 14.8	-5.1
CAIG	**El Cayaco**	**1.90**	**311**	*i* P	Pn	20 40 52.1	-4.1
CAIG				*i* S	Sn	20 41 14.8	-5.1
UTMO	**Huajuapan**	**2.21**	**24**	*i* P	Pn	20 40 58.6	-1.9
UTMO				*i* S	Sn	20 41 24.5	-3.0
MEIG	**Mezcala**	**2.27**	**339**	*e*P	Pn	20 40 57.7	-3.5
MEIG				*i* S	Sn	20 41 24.6	-4.2
VHO	**Vista Hermosa**	**2.32**	**57**	*i* P	Pn	20 40 59.7	-2.2
VHO				*i* S	Sn	20 41 27.6	-2.5
VHO	**Vista Hermosa**	**2.32**	**57**	*i* P	Pn	20 40 59.7	-2.2
VHO				*i* S	Sn	20 41 26.2	-3.9
OXX	**Oaxaca**	**2.33**	**57**	*e*P	Pn	20 40 58.1	-4.0
PLIG	**Platanillo**	**2.67**	**345**	*i* P	Pn	20 41 05.6	-1.2
PLIG				*i* S	Sn	20 41 32.9	-5.9
PLIG	**Platanillo**	**2.67**	**345**	*i* P	Pn	20 41 04.1	-2.7
PLIG				*i* S	Sn	20 41 33.1	-5.7
TPIG	**Tehuac#an**	**2.92**	**27**	*i* S	Sn	20 41 42.0	-3.1
PPM	**Popocatepetl**	**3.25**	**2**	*i* P	Pn	20 41 14.7	0.0
PPM				*e*S	Sn	20 41 57.5	+4.4
PPM	**Popocatepetl**	**3.25**	**2**	*i* P	Pn	20 41 14.7	0.0
PPM				*i* S	Sn	20 41 54.7	+1.6
SZVM	**Salazar**	**3.55**	**350**	*i* P	Pn	20 41 21.7	+2.8
SZVM				*i* S	Sn	20 42 01.8	+1.3
IIO	**Organos**	**3.77**	**1**	*i* P	Pn	20 41 33.5	+12
PTVM	**Pico Tres Padr**	**3.78**	**355**	*i* P	Pn	20 41 39.5	+17
CMIG	**Matias Romero**	**3.93**	**70**	*i* P	Pn	20 41 21.8	-2.4
CMIG				*i* S	Sn	20 41 55.9	-14
CMIG	**Matias Romero**	**3.93**	**70**	*e*P	Pn	20 41 19.7	-4.4
CMIG				*i* S	Sn	20 42 04.5	-5.5

IDC 28 20:46:01.0±2.1, 660S×13023E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.5/14, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=55.1km s-min=31.4km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**7.42**	**241**	P	Pn	20 47 50.7	+0.1
	1.8nm,0.3s,baz=120,slow=19,SNR=6.3						
BATI				S	Sn	20 49 01.6	-14
	2.6nm,0.3s,baz=257,slow=22,SNR=8.0						
FITZ	**Fitzroy Crossi**	**12.28**	**201**	P	Pn	20 48 53.6	-3.7
	0.2nm,0.3s,baz=28,slow=17,SNR=3.1						
FITZ				S	Sn	20 50 51.1	-24
	0.3nm,0.3s,baz=264,slow=23,SNR=6.2						
WRA	**Warramunga Arr**	**13.86**	**164**	Pn	Pn	20 49 18.3	-0.6
	0.3nm,0.3s,baz=347,slow=13,SNR=7.3						
WRA				S	Sn	20 51 40.8	-13
	1.1nm,0.3s,baz=342,slow=22,SNR=14						
ASAR	**Alice Springs**	**17.34**	**169**	P	Pn	20 50 05.1	+0.5
	0.1nm,0.3s,baz=339,slow=9.5,SNR=7.1						
ASAR				S	Sn	20 53 04.9	-13
	0.2nm,0.3s,baz=148,slow=17,SNR=6.2						
MKAR	**Makanchi Array**	**68.01**	**327**	P	P	20 57 02.2	+0.1
	0.2nm,0.4s,baz=130,slow=6.6,SNR=6.5						

IGQ ***28*** *20:57:22.6, 156S×77.81W, h206km±5km, Mb4.8, Ms4.7, Error ellipse: s-maj=3.2km s-min=1.6km az=49.5*
ISCJB ***28*** *20:57:24.6±0.2, 141S±0.03×77.56W±0.03, h185km, mb4.6/72, Error ellipse: s-maj=5.1km s-min=3.6km az=135.4*
IDC ***28*** *20:57:25.8±0.4, 129S×77.44W, h182km±3km, mb4.2/19, mb1 4.3/20, mb1mx4.3/21, mbtmp4.2/20, MS4.0/1, Ms1 4.0/1, ms1mx3.3/27, Error ellipse: s-maj=15.1km s-min=7.9km az=65.0*
BJI ***28*** *20:57:25.6, 1.12S×77.61W, h180km, mB5.0*
GCMT ***28*** *20:57:25.9±0.3, 1.60S×77.81W, h192km±1km, MW5.3/67, Moment Tensor Solution. s41,c54; s67,c95; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.61±.03; Mθθ0.46±.04; Mφφ0.15±.04; Mrθ0.38±.03; Mrφ-0.29±.03; Mθφ-0.62±.03; Best double couple: M0 0.95400×10^17 NP1:φs321.00000°, δ70.00000°, λ-76.00000°. Principal axes: T 0.9240, Plg24.0000°, Azm40.0000°; N 0.0590, Plg13.0000°, Azm136.0000°; P -0.9830, Plg62.0000°, Azm252.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***28*** *20:57:25.9±0.2, 140S×77.57W, mb4.7/54, MD4.7(IGQ) Error ellipse: s-maj=6.8km s-min=4.4km az=57.0*
NEIC Felt at Portoviejo.
ISC 28 20:57:26.2±0.2, 146S±0.03×77.51W±0.03, h187km, h187km±1.0km:pP-P, n436, σ0 81/380, mb4.6/72, 101C-95D, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULBA	**Ulba**	**0.89**	**271**	↑P	**Pn**	**20 57 51.5**	**-2.4**
RUN5	**Runtun**	**0.91**	**273**	↑P	**Pn**	**20 57 51.7**	**-2.3**
PATA	**Patacocha**	**0.92**	**267**	↑P	**Pn**	**20 57 51.8**	**-2.3**
RETU	**Refugio**	**0.93**	**270**	↑P	**Pn**	**20 57 51.9**	**-2.3**
ARRY	**Arrayan**	**0.94**	**267**	↑P	**Pn**	**20 57 51.4**	**-2.9**
JUIV	**Juive**	**0.95**	**272**	↑P	**Pn**	**20 57 51.7**	**-2.6**
BILB	**Tungurahua vol**	**0.98**	**271**	↑P	**Pn**	**20 57 52.1**	**-2.5**
IGUA	**Igualata**	**1.12**	**268**	↑P	**Pn**	**20 57 52.8**	**-2.8**
TAMB	**Tambo**	**1.14**	**312**	↓P	**Pn**	**20 57 54.3**	**-1.4**
ANTI	**Antisana**	**1.19**	**327**	↓P	**Pn**	**20 57 55.3**	**-0.8**
VC1	**Cotopaxi 1**	**1.20**	**312**	↓P	**Pn**	**20 57 55.0**	**-1.3**
PORT	**Chimborazo Vol**	**1.26**	**270**	↑P	**Pn**	**20 57 54.5**	**-2.2**
CAYR	**Refugio Cayamb**	**1.54**	**341**	↓P	**Pn**	**20 57 59.2**	**0.0**
CAYA	**Cayambe**	**1.59**	**343**	↓P	**Pn**	**20 57 59.7**	**0.0**
JUA2	**San Juan 2**	**1.65**	**319**	↓P	**Pn**	**20 57 58.5**	**-1.8**
GGP	**Refugio Guagua**	**1.67**	**320**	P	**Pn**	**20 57 58.9**	**-1.6**
TERV	**Terraza Guagua**	**1.68**	**319**	P	**Pn**	**20 57 59.0**	**-1.5**
PINO	**Pino**	**1.69**	**320**	↓P	**Pn**	**20 57 59.1**	**-1.5**
YANA	**Yana**	**1.70**	**322**	↓P	**Pn**	**20 57 59.1**	**-1.6**
COTA	**Cotacachi**	**1.96**	**335**	↓P	**Pn**	**20 58 02.8**	**-0.7**
MAG1	**Magdalena**	**2.65**	**301**	↑P	**Pn**	**20 58 07.1**	**-4.0**
CHIS	**Cerro-Chispas-**	**3.24**	**277**	↓P	**Pn**	**20 58 12.5**	**-5.6**
CHIS				↓S	**Sn**	**20 58 48.1**	**-10**
ATAH	**Atahualpa**	**5.58**	**189**	P	**Pn**	**20 58 48.2**	**+0.3**
	baz=8.7,slow=10						
ATAH				S	**Sn**	**20 59 50.4**	**-1.7**
	57nm,0.3s,baz=11,slow=5.2,SNR=15						
ROSC	**El Rosal**	**7.03**	**27**	P	**Pn**	**20 59 08.4**	**+1.5**
	3.7nm,0.3s,baz=282,slow=23,SNR=6.6						
ROSC				S	**Sn**	**21 00 14.3**	**-12**
	1.4nm,0.3s,baz=111,slow=11,SNR=4.8						
NNA	**Nana**	**10.48**	**176**	*e*Pn	**Pn**	**20 59 50.7**	**-1.3**
	102nm,0.9s						
NNA				*e*Sn	**Sn**	**21 01 37.5**	**-11**
NNA	**Nana**	**10.48**	**176**	P	**Pn**	**20 59 50.9**	**-1.1**
	7.2nm,0.3s,baz=345,slow=11,SNR=17						
NNA				S	**Sn**	**21 01 37.8**	**-11**
	25nm,0.3s,baz=287,slow=22,SNR=9						
BCIP	**Isla Barro Col**	**10.81**	**348**	*e*Pn	**Pn**	**20 59 55.4**	**-0.8**
	68nm,0.6s						
BCIP				*e*Sn	**Sn**	**21 01 57.7**	**+1.2**
SDV	**Santo Domingo**	**12.35**	**34**	*e*Pn	**Pn**	**21 00 16.2**	**+0.1**
	34nm,0.5s						
SDV	**Santo Domingo**	**12.35**	**34**	P	**Pn**	**21 00 16.4**	**+0.3**
	5.4nm,0.3s,baz=232,slow=12,SNR=36						
ARE	**Arequipa**	**16.05**	**159**	*e*P	**Pn**	**21 01 03.0**	**+1.2**
PCRV	**Puerto La Cruz**	**17.26**	**48**	P	**Pn**	**21 01 16.9**	**+0.5**
	4.8nm,0.3s,baz=292,slow=4.8,SNR=17						
LPAZ	**La Paz**	**17.39**	**148**	P	**Pn**	**21 01 19.2**	**+1.2**
LPAZ	**La Paz**	**17.39**	**148**	P	**Pn**	**21 01 19.2**	**+1.2**
	2.0nm,0.3s,baz=338,slow=9.9,SNR=39						
TGUH	**Tegucigalpa,Un**	**18.20**	**328**	P	**P**	**21 01 23.7**	**-1.5**
GRGR	**Grenville**	**20.75**	**49**	*e*P	**P**	**21 01 51.1**	**-1.6**
SDDR	**Presa de Saban**	**21.21**	**16**	*e*P	**P**	**21 01 59.4**	**+1.9**
	308nm,1.4s,mb5.4						
SIV	**San Ignacio**	**21.71**	**133**	P	**P**	**21 02 04.1**	**+1.4**
	14nm,0.8s,mb4.5,baz=311,slow=9.7,SNR=47						
TEIG	**Tepich**	**24.00**	**334**	P	**P**	**21 02 23.5**	**-0.3**
TEIG	**Tepich**	**24.00**	**334**	P	**P**	**21 02 23.5**	**-0.3**
	9.0nm,0.3s,mb4.7,baz=146,slow=3.8,SNR=15						
CMIG	**Matias Romero**	**25.16**	**318**	P	**P**	**21 02 33.9**	**-0.6**
	15nm,0.7s,mb4.6,baz=119,slow=6.4,SNR=26						
CMIG				pP	pP	21 03 13.7	+1.5
	13nm,1.0s,baz=114,slow=8.4,SNR=3.7						
CFAA	**Coronel Fontan**	**31.24**	**165**	P	**P**	**21 03 29.9**	**+1.6**
	0.7nm,0.6s,mb3.6,baz=345,slow=9.1,SNR=13						
CFAA				pP	pP	21 04 07.4	+0.5
	1.0nm,0.8s,baz=350,slow=7.7,SNR=4.7						
LRAL	**Lakeview Retre**	**35.46**	**346**	*e*P	**P**	**21 04 03.6**	**-1.2**
	11nm,0.5s,mb4.7						
TKL	**Tuckaleechee C**	**37.38**	**352**	P	**P**	**21 04 19.3**	**-1.7**
	4.7nm,0.6s,mb4.3,baz=177,slow=8.2,SNR=3.7						
TZTN	**Tazewell**	**38.22**	**352**	*e*P	**P**	**21 04 27.2**	**-0.8**
	21nm,0.6s,mb5.0						
PLCA	**Paso Flores**	**39.60**	**172**	P	**P**	**21 04 40.0**	**+0.6**
	21nm,1.0s,mb4.7,baz=349,slow=9.8,SNR=28						
PLCA				pP	pP	21 05 20.3	+1.0
	11nm,0.9s,baz=352,slow=9.4,SNR=4.9						
PLCA				PcP	PcP	21 06 43.2	+0.5
	3.7nm,0.8s,baz=348,slow=7.3,SNR=3.4						
WMOK	**Wichita Mounta**	**41.16**	**333**	*e*P	**P**	**21 04 51.6**	**-0.7**
	12nm,0.8s,mb4.6						
MNTX	**Cornudas Mount**	**42.26**	**324**	P	**P**	**21 05 00.5**	**-0.8**
	16nm,1.0s,mb4.6						
HDIL	**Hopedale**	**43.17**	**347**	*e*P	**P**	**21 05 06.3**	**-2.2**
	75nm,0.5s,mb5.6						
KSU1	**Kansas State U**	**44.01**	**339**	*e*P	**P**	**21 05 14.2**	**-1.0**
	23nm,0.7s,mb4.9						
319A	**Douglas**	**44.45**	**320**	↑P	**P**	**21 05 19.3**	**+0.5**
	baz=45						
318A	**Bisbee**	**44.95**	**319**	↓P	**P**	**21 05 23.2**	**+0.4**
	baz=45						
ANMO	**Albuquerque**	**45.24**	**326**	*e*P	**P**	**21 05 25.3**	**+0.3**
	43nm,0.9s,mb5.1						
ANMO	**Albuquerque**	**45.24**	**326**	P	**P**	**21 05 25.4**	**+0.4**
	20nm,0.5s,mb5.0,baz=139,slow=8.8,SNR=50						
ANMO					pP	21 06 06.0	+0.2
	9.8nm,1.0s,baz=145,slow=9.1,SNR=2.9						
NCB	**Newcomb**	**45.32**	**3**	*e*P	**P**	**21 05 25.5**	**0.0**
	12nm,0.6s,mb4.7						
218A	**Dragoon**	**45.33**	**320**	↑P	**P**	**21 05 26.3**	**+0.5**
	baz=45						
217A	**Green Valley**	**45.70**	**319**	↑P	**P**	**21 05 28.9**	**+0.2**
	baz=46						
LBNH	**Lisbon**	**45.77**	**6**	*e*P	**P**	**21 05 29.6**	**+0.6**
	8.2nm,0.5s,mb4.6						
LONY	**Lake Ozonia**	**45.95**	**3**	*e*P	**P**	**21 05 30.2**	**-0.2**
	69nm,1.4s,mb5.1						
TUC	**Tucson**	**46.03**	**320**	*e*P	**P**	**21 05 31.0**	**-0.2**
	8.7nm,0.7s,mb4.5						
216A	**Three Points,**	**46.27**	**319**	↓P	**P**	**21 05 33.1**	**0.0**
	baz=46						
116A	**Eloy**	**46.78**	**319**	↓P	**P**	**21 05 37.2**	**+0.1**
	baz=47						
115A	**Sonoran Desert**	**47.21**	**319**	↓P	**P**	**21 05 40.5**	**+0.1**
	baz=47						
MVCO	**Mesa Verde**	**48.01**	**326**	*e*P	**P**	**21 05 46.3**	**-0.1**
	33nm,1.5s,mb4.8						
MVCO	**Mesa Verde**	**48.01**	**326**	↓P	**P**	**21 05 46.2**	**-0.3**
	baz=48						
Z14A	**Wintersburg**	**48.10**	**319**	↑P	**P**	**21 05 47.4**	**+0.1**
	baz=48						
ECSD	**EROS,Sioux Fal**	**48.14**	**341**	*e*P	**P**	**21 05 45.2**	**-2.1**
	3.6nm,0.6s,mb4.2						
ECSD				*e*pP	pP	21 06 26.8	-1.8
X15A	**Humboldt**	**48.36**	**321**	P	**P**	**21 05 49.8**	**+0.6**
	baz=48,SNR=8.8						
ISCO	**Idaho Springs**	**48.45**	**331**	*e*P	**P**	**21 05 50.3**	**+0.5**
	7.0nm,1.1s,mb4.2						
COWI	**Conover**	**48.46**	**349**	*e*P	**P**	**21 05 48.3**	**-1.4**
	7.9nm,0.5s,mb4.6						
Y14A	**Wickenburg**	**48.50**	**320**	P	**P**	**21 05 50.5**	**+0.2**
	baz=49,SNR=6.5						
WUAZ	**Wupatki**	**48.50**	**323**	*e*P	**P**	**21 05 51.0**	**+0.7**
	35nm,1.0s,mb4.9						
WUAZ	**Wupatki**	**48.50**	**323**	↑P	**P**	**21 05 50.9**	**+0.6**
	baz=49						
SMCO	**Snowmass**	**48.65**	**329**	*e*P	**P**	**21 05 52.1**	**+0.7**
	8.5nm,1.0s,mb4.3						
X14A	**Yava**	**48.76**	**320**	P	**P**	**21 05 53.0**	**+0.7**
	baz=49,SNR=10						
W15A	**Williams**	**48.83**	**322**	↓P	**P**	**21 05 53.7**	**+0.9**
	baz=49						
Y13A	**Salome**	**48.96**	**319**	↓P	**P**	**21 05 54.1**	**+0.3**
	baz=49						
W14A	**Seligman**	**49.36**	**321**	↓P	**P**	**21 05 57.2**	**+0.3**
	baz=50						
Y12C	**Blythe**	**49.37**	**319**	↑P	**P**	**21 05 57.1**	**+0.1**
	baz=50						
X13A	**Yucca**	**49.44**	**320**	↓P	**P**	**21 05 57.5**	**+0.1**
	baz=50						
PDMCI	**Parker Dam,Lak**	**49.46**	**319**	↑P	**P**	**21 05 57.4**	**-0.2**
	baz=50						
PHWY	**Pilot Hill**	**49.55**	**332**	*e*P	**P**	**21 05 58.6**	**+0.4**
SWSC	**Sam W. Stewart**	**49.75**	**317**	↑P	**P**	**21 05 60.0**	**+0.2**
	baz=50						
DVTC	**Desert V Tower**	**49.79**	**316**	↑P	**P**	**21 06 00.9**	**+0.8**
	baz=50						
W13A	**Hualapai Mount**	**49.79**	**320**	↓P	**P**	**21 06 00.7**	**+0.6**
	baz=50						
BC3	**Big Chuckw Mtn**	**49.93**	**318**	↑P	**P**	**21 06 01.1**	**-0.1**
	baz=50						
**IRM

O13A **Hicks Ranch, I** 53.12 325 ⇓P P 21 06 25.2 +0.6
baz=53
ISA **Isabella** 53.12 318 ⇓P P 21 06 25.2 +0.4
baz=53
N14A **Grayback Hills** 53.16 326 ⇑P P 21 06 25.4 +0.5
baz=53
M15A **Larsen Ranch,** 53.18 327 ⇓P P 21 06 24.7 -0.4
baz=53
P12A **McGill** 53.22 324 P P 21 06 26.2 +0.8
baz=53,SNR=8.5
S10A **Tonopah Range,** 53.26 322 ⇑P P 21 06 26.5 +0.7
baz=53
Q11A **Duckwater** 53.26 323 P P 21 06 26.4 +0.6
baz=53,SNR=11
R10A **Warm Springs** 53.30 322 ⇑P P 21 06 27.2 +1.1
baz=53
S09A **Goldfield** 53.53 321 ⇓P P 21 06 28.0 +0.3
baz=54
PKM **Peak Mountain** 53.61 317 ⇑P P 21 06 28.6 +0.3
baz=54
VES **Vestal, Richgr** 53.63 318 ⇓P P 21 06 29.3 +0.8
baz=54
O12A **Currie** 53.65 325 P P 21 06 29.1 +0.6
baz=54,SNR=5.2
M14A **Sheep Mountain** 53.70 327 ⇑P P 21 06 28.7 -0.2
baz=54
Q10A **Clear Creek Ra** 53.70 323 ⇑P P 21 06 29.8 +0.9
baz=54
REDW **Red Top Meadow** 53.71 330 *e*P P 21 06 28.8 -0.1
3.5nm,0.6s,mb4.3
USHA **Ushuaia** 53.72 173 P P 21 06 30.2 +1.4
8.7nm,0.7s,mb4.6,baz=336,slow=8.6,SNR=4.7
R09A **Tonopah** 53.75 322 ⇑P P 21 06 29.6 +0.3
baz=54
ULM **Lac du Bonnet** 53.86 345 P P 21 06 28.0 -1.9
4.1nm,0.3s,mb4.6,baz=145,slow=6.8,SNR=14
ULM pP pP 21 07 09.9 -2.2
3.1nm,0.7s,baz=162,slow=12,SNR=2.0
S08C **White Mtn Res** 54.00 320 P P 21 06 32.0 +0.9
baz=54,SNR=6.5
M13A **Montello** 54.05 326 ⇑P P 21 06 31.1 -0.3
baz=54
HELL **Mitchell Peak,** 54.07 319 P P 21 06 31.7 0.0
baz=54,SNR=7.4
O11A **Cowboy Ranch,** 54.09 324 ⇓P P 21 06 32.0 +0.3
baz=54
IMW **Indian Meadow** 54.15 331 *e*P P 21 06 32.2 +0.1
9.5nm,0.8s,mb4.6
N12A **Clover Valley,** 54.20 325 ⇓P P 21 06 32.1 -0.4
baz=54
K14A **Jones Ranch, D** 54.33 328 ⇓P P 21 06 32.9 -0.4
baz=54
M12A **Wells** 54.50 326 ⇓P P 21 06 34.1 -0.6
baz=55
NVAR **Mina Array Bea** 54.63 321 P P 21 06 36.2 +0.5
2.2nm,0.5s,mb4.2,baz=129,slow=7.8,SNR=13
Q08A **Gabbs** 54.66 322 ⇓P P 21 06 36.1 +0.3
baz=55
O10A **Cortez Mining,** 54.68 324 ⇑P P 21 06 36.7 +0.7
baz=55
K13A **Stover Farm, H** 54.88 327 ⇓P P 21 06 37.0 -0.3
baz=55
O09A **Fish Creek Ran** 55.02 323 P P 21 06 38.9 +0.4
baz=55,SNR=5.3
U04C **Hernandez Rese** 55.07 318 ⇓P P 21 06 38.8 -0.1
baz=55
S05C **Merced** 55.31 319 ⇓P P 21 06 40.8 +0.2
baz=55
R06C **Coleville** 55.41 320 ⇓P P 21 06 41.6 +0.3
baz=56
HAST **UC Hastings Re** 55.60 317 ⇓P P 21 06 42.5 -0.1
baz=56
N09A **Rock Creek Ran** 55.64 324 ⇑P P 21 06 42.2 -0.7
baz=56
HLID **Hailey** 55.68 328 *e*P P 21 06 43.1 0.0
4.8nm,0.8s,mb4.4
HLID **Hailey** 55.68 328 ⇑P P 21 06 43.2 +0.1
baz=56
CMB **Columbia Colle** 55.74 319 ⇑P P 21 06 43.6 0.0
baz=56
PACP **Pacheco Peak** 55.76 318 ⇑P P 21 06 44.0 +0.2
baz=56
BOZ **Bozeman (W)** 55.77 332 *e*P P 21 06 43.4 -0.3
4.4nm,0.8s,mb4.3
BOZ *e*pP pP 21 07 25.4 -0.7
BOZ **Bozeman (W)** 55.77 332 ⇓P P 21 06 43.5 -0.1
baz=56
I13A **Wildhorse Cree** 55.77 329 ⇑P P 21 06 43.9 +0.2
baz=56
L10A **Juniper Basin** 55.82 326 ⇓P P 21 06 44.1 +0.1
baz=56
G15A **Dillon** 55.83 331 ⇓P P 21 06 45.0 +0.9
baz=56
J12A **Stokes Ranch,** 55.84 327 ⇓P P 21 06 44.3 +0.1
baz=56
R05C **Kirkwood Meado** 55.92 320 ⇓P P 21 06 45.0 +0.2
baz=56
K11A **Parker Ranch,** 56.02 326 ⇑P P 21 06 45.8 +0.2
baz=56
O07A **Toulon** 56.03 322 P P 21 06 46.3 +0.7
baz=56,SNR=5.5
WCN **Washoe City** 56.06 321 ⇑P P 21 06 46.0 +0.1
baz=56
R04C **Big Horse Ranc** 56.22 319 P P 21 06 48.1 +1.1
baz=56,SNR=5.6
H13A **Challis** 56.29 329 ⇓P P 21 06 48.0 +0.6
baz=56
F15A **Butte** 56.32 331 ⇑P P 21 06 47.5 -0.1
baz=56
MFID **Camas Ranch** 56.34 327 ⇑P P 21 06 47.6 -0.2
baz=56
G14A **Jackson** 56.37 330 ⇓P P 21 06 47.3 -0.7
baz=56
LAVA **Lava Cap Winer** 56.37 320 ⇑P P 21 06 47.8 -0.3
baz=56
L09A **Wilkinson Ranc** 56.46 325 P P 21 06 48.7 +0.1
baz=57,SNR=5.8
N07B **Gerlach** 56.46 323 ⇓P P 21 06 49.2 +0.5
baz=57
K10A **MacKenzie Ranc** 56.50 326 ⇑P P 21 06 48.8 0.0
baz=57
M08A **Happy Creek Ra** 56.52 324 ⇓P P 21 06 48.6 -0.5
baz=57
H12A **Diamond D Ranc** 56.59 329 P P 21 06 49.7 +0.2
baz=57,SNR=8.9
P05C **Yuba Gap, Truc** 56.60 321 P P 21 06 50.0 +0.3
baz=57,SNR=6.2
JRSC **Jasper Ridge** 56.61 318 ⇓P P 21 06 50.7 +0.9
baz=57
O06A **Flanigan** 56.62 322 ⇑P P 21 06 50.0 +0.2
baz=57
G13A **Cobalt** 56.65 330 ⇑P P 21 06 49.6 -0.3
baz=57
BDM **Black Diamond** 56.66 319 ⇑P P 21 06 51.2 +1.1
baz=57
SCHQ **Schefferville** 56.79 7 P P 21 06 50.0 -0.6
8.3nm,0.8s,mb4.6,baz=204,slow=6.5,SNR=17
SCHQ PcP PcP 21 07 44.5 +0.3
2.4nm,0.6s,baz=153,slow=2.3,SNR=2.4
Q04C **Lincoln** 56.83 320 ⇑P P 21 06 52.4 +1.1
baz=57
K09A **Rome** 56.93 325 P P 21 06 52.4 +0.5
baz=57,SNR=25
M07A **Soldier Meadow** 56.95 323 ⇓P P 21 06 51.7 -0.4
baz=57
L08A **Fields** 56.96 325 P P 21 06 52.4 +0.2
baz=57,SNR=13
N06A **Buffalo Meadow** 56.97 322 P P 21 06 51.9 -0.3
baz=57,SNR=16
O05C **Quincy** 57.18 321 ⇓P P 21 06 54.1 +0.4
baz=57
F13A **Darby** 57.19 330 ⇓P P 21 06 53.4 -0.3
baz=57
E14A **Clinton** 57.22 331 ⇑P P 21 06 53.6 -0.3
baz=57,SNR=5.7
WVOR **Wild Horse Val** 57.28 325 P P 21 06 53.9 -0.5
25nm,1.2s,mb4.9
H11A **Donnelly** 57.30 328 ⇓P P 21 06 53.1 -1.4
baz=57
ORV **Oroville** 57.31 320 ⇑P P 21 06 55.3 +0.6
baz=57
I10A **Payette** 57.31 327 ⇓P P 21 06 53.9 -0.7
baz=57
J09A **Fry Pan Ranch,** 57.36 326 P P 21 06 55.2 +0.3
baz=58,SNR=5.8
K08A **Mann Creek Ran** 57.38 325 ⇓P P 21 06 55.2 +0.1
baz=58
L07A **Adell** 57.44 324 P P 21 06 56.0 +0.6
baz=58,SNR=5.0
O04C **Chester** 57.49 321 P P 21 06 55.9 0.0
baz=58,SNR=5.5
MNRC **McLaughlin Nat** 57.55 319 ⇑P P 21 06 57.4 +1.1
baz=58
E13A **Victor** 57.58 331 ⇑P P 21 06 56.4 0.0
baz=58
H10A **Noah's Angus R** 57.62 328 ⇑P P 21 06 55.3 -1.3
baz=58
F12A **Elk City** 57.63 330 P P 21 06 56.6 -0.1
baz=58,SNR=11
M06C **Likely Place G** 57.63 322 ⇑P P 21 06 57.3 +0.4
baz=58
I09A **Lost Marbles R** 57.75 327 ⇑P P 21 06 57.6 0.0
baz=58
J08A **Circle Bar Ran** 57.77 326 P P 21 06 57.6 -0.2
baz=58,SNR=5.9
K07A **Rock Creek Ran** 57.80 325 ⇓P P 21 06 58.1 +0.1
baz=58
G11A **Walters Elk Ra** 57.91 329 ⇓P P 21 06 58.3 -0.4
baz=58
HATC **Hat Creek Radi** 58.01 322 ⇑P P 21 07 00.1 +0.6
baz=58
M05C **Lookout** 58.13 322 P P 21 07 00.4 +0.1
baz=58,SNR=8.7
GASB **Alder Springs** 58.15 320 ⇑P P 21 07 01.4 +0.9
baz=58
D13A **Huson** 58.17 331 ⇓P P 21 06 60.0 -0.5
baz=58
F11A **Grangeville** 58.18 329 P P 21 07 00.2 -0.3
baz=58,SNR=6.0
G10A **Bishop Farm, J** 58.28 328 ⇑P P 21 07 00.9 -0.3
baz=58
C14A **Swan Lake** 58.31 332 ⇑P P 21 07 02.0 +0.6
baz=58
L05A **Lakeview** 58.34 323 ⇑P P 21 07 02.4 +0.6
baz=58
K06A **Valley Falls** 58.45 324 ⇑P P 21 07 03.2 +0.7
baz=59
E11A **Bogner Ranch,** 58.52 329 P P 21 07 02.1 -0.8
baz=59,SNR=5.8
WDC **Whiskeytown Da** 58.55 321 *e*P P 21 07 01.1 -2.2
2.5nm,0.4s,mb4.4
WDC pP pP 21 07 42.1 -4.1
D12A **Red Ives Fores** 58.58 331 ⇓P P 21 07 02.8 -0.5
baz=59
H08A **Prairie City** 58.62 327 P P 21 07 04.5 +0.9
baz=59,SNR=9.2
G09A **Cove** 58.62 328 ⇑P P 21 07 03.8 +0.1
baz=59
C13A **Hot Springs** 58.64 332 ⇓P P 21 07 02.6 -1.1
baz=59
J06A **Christmas Vall** 58.66 325 ⇓P P 21 07 04.2 +0.2
baz=59
K05A **Summer Lake** 58.78 324 P P 21 07 05.8 +0.9
baz=59,SNR=5.9
F10A **Beach Ranch, E** 58.79 329 ⇓P P 21 07 04.6 -0.2
baz=59
M04C **Macdoel** 58.80 322 ⇓P P 21 07 04.9 0.0
baz=59
I07A **Izee** 58.80 326 ⇑P P 21 07 05.5 +0.6
baz=59,SNR=10.0
F09A **S2 Ranch, Elgi** 58.97 328 P P 21 07 06.5 +0.4
baz=59,SNR=8.5
E10A **Myers Farm, Un** 59.07 329 ⇑P P 21 07 06.4 -0.4
baz=59
B13A **Whitefish** 59.08 332 ⇓P P 21 07 06.3 -0.5
baz=59
I06A **Prineville** 59.12 325 ⇑P P 21 07 07.9 +0.8
baz=59
H07A **Lands Inn, Kim** 59.16 326 ⇓P P 21 07 07.6 +0.3
baz=59
N02C **Big Bar** 59.17 321 ⇑P P 21 07 07.5 0.0
baz=59
K04A **Chilquin** 59.21 323 ⇓P P 21 07 08.4 +0.7
baz=59
G08A **Pilot Rock** 59.27 327 P P 21 07 08.2 +0.1
baz=59,SNR=21
YBH **Yreka Blue Hor** 59.30 322 ⇓P P 21 07 07.3 -1.1
baz=59
J05A **Fort Rock** 59.31 324 P P 21 07 08.9 +0.4
baz=59,SNR=11
A13A **Flathead Natio** 59.46 333 ⇑P P 21 07 09.5 +0.2
baz=60
D10A **Wagner Farm, O** 59.54 330 P P 21 07 09.1 -0.8
baz=60,SNR=8.5
E09A **Wood Farm, Sta** 59.62 329 ⇑P P 21 07 10.1 -0.4
baz=60
G07A **Ruggs Ranch, H** 59.64 327 ⇑P P 21 07 10.2 -0.5
baz=60
H06A **Lindquist Farm** 59.68 326 P P 21 07 11.5 +0.6
baz=60,SNR=6.4
J04A **Umpqua Nationa** 59.80 324 P P 21 07 11.9 +0.1
baz=60,SNR=6.8
I05A **Bend** 59.86 325 ⇑P P 21 07 12.4 +0.3
baz=60
B11A **Sandpoint** 60.03 331 ⇑P P 21 07 13.0 -0.2
baz=60
D09A **Jones Farm, Ri** 60.07 329 ⇓P P 21 07 13.3 -0.2
baz=60
H05A **Madras** 60.13 325 ⇓P P 21 07 14.4 +0.4
baz=60
G06A **Carlson Farm,** 60.15 326 P P 21 07 15.1 +1.0
baz=60,SNR=7.3
I04A **Tendick Farm,** 60.31 324 ⇑P P 21 07 14.3 -0.9
baz=60
K02A **Glendale** 60.36 322 ⇑P P 21 07 15.5 -0.1
baz=60
D08A **Wollman Farm,** 60.38 329 ⇑P P 21 07 15.6 -0.1
baz=60
A11A **Hall Mountain,** 60.39 332 ⇑P P 21 07 15.6 0.0
baz=60
G05A **Wamic** 60.54 326 ⇓P P 21 07 17.6 +0.8
baz=61
F06A **Goldendale** 60.56 327 ⇑P P 21 07 17.6 +0.7
baz=61
H04A **Detroit Lake** 60.70 325 ⇓P P 21 07 17.4 -0.4
baz=61
J02A **Umpqua** 60.75 323 ⇑P P 21 07 18.4 +0.2
baz=61
B09A **Rice** 60.89 330 P P 21 07 19.1 0.0
baz=61,SNR=14
C08A **Higginbotham F** 60.92 329 ⇑P P 21 07 19.1 -0.2
baz=61
E06A **Yakima** 61.15 327 ⇓P P 21 07 21.4 +0.6
baz=61
I02A **Mapleton** 61.27 323 ⇓P P 21 07 22.9 +1.2
baz=61
H03A **Soap Creek Ran** 61.33 324 ⇑P P 21 07 22.3 +0.1
baz=61
C07A **Waterville** 61.38 329 ⇓P P 21 07 22.9 +0.5
baz=62
B08A **Colville Reser** 61.44 330 ⇑P P 21 07 22.8 0.0
baz=62
A09A **Danville** 61.47 330 ⇓P P 21 07 22.5 -0.5
baz=62
E05A **Randle** 61.59 327 ⇑P P 21 07 23.9 +0.1
baz=62
G03A **Yamhill** 61.70 325 ⇓P P 21 07 25.4 +0.9
baz=62
A08A **Turner Farm, O** 61.80 330 P P 21 07 25.3 +0.1
baz=62,SNR=5.8
B07A **Winthrop** 61.91 329 ⇑P P 21 07 25.9 0.0
baz=62
D05A **Enumclaw** 62.09 327 ⇓P P 21 07 27.9 +0.8
baz=62
A07A **Ashnola River,** 62.42 330 ⇑P P 21 07 30.0 +0.7
baz=63
E03A **Lebam** 62.58 326 ⇑P P 21 07 31.2 +0.9
baz=63
B06A **Marblemount** 62.65 329 ⇓P P 21 07 31.0 +0.2
baz=63
B05A **Bryant** 62.81 328 ⇓P P 21 07 32.2 +0.3
baz=63
C04A **Brinnon** 62.95 327 ⇓P P 21 07 33.2 +0.4
baz=63
D03A **Wishkah Elem.** 63.02 326 ⇓P P 21 07 34.7 +1.3
baz=63
NLWA **Neilton Lookou** 63.24 327 ⇑P P 21 07 35.5 +0.7
baz=63
A05A **Maple Falls** 63.26 329 ⇓P P 21 07 35.0 +0.2
baz=63
A04A **Legoe Bay, Lum** 63.41 328 ⇑P P 21 07 36.7 +0.9
baz=64
B04A **Port Angeles** 63.44 327 ⇓P P 21 07 36.8 +0.8
baz=64
YKA **Yellowknife Ar** 69.64 343 P P 21 08 14.0 -1.0
4.8nm,0.6s,mb4.4,baz=139,slow=5.7,SNR=97
YKA pP pP 21 08 57.0 -2.4
1.1nm,0.8s,baz=139,slow=5.8,SNR=2.1
LIC **Lamto** 72.76 83 *e*P P 21 08 34.7 -0.1
110nm,1.1s,mb5.2
LIC **Lamto** 72.76 83 *e*P P 21 08 34.7 -0.1
55nm,1.1s,mb5.2
DBIC **Dimbokro** 72.96 83 P P 21 08 36.0 +0.1
15nm,0.5s,mb5.0,baz=254,slow=6.0,SNR=70
DBIC pP pP 21 09 19.5 -1.1
15nm,0.9s,baz=258,slow=5.5,SNR=4.5
MORF **Marmelete** 74.21 51 *e*pP pP 21 09 29.0 +1.4
PVAQ **Vaqueiros** 74.95 51 *e*pP pP 21 09 32.9 +0.9
EVO **Evora** 75.00 50 *e*P P 21 08 46.4 -0.9
EVO **Evora** 75.00 50 *e*pP pP 21 09 31.1 -1.1
PESTR **Estremoz** 75.40 49 *e*pP pP 21 09 33.6 -1.0
PBAR **Barrancos** 75.65 50 *e*pP pP 21 09 36.6 +0.5
PCBR **Castelo Branco** 75.72 48 *e*pP pP 21 09 35.8 -0.6
MTE **Manteigas** 75.81 48 *e*pP pP 21 09 37.6 +0.7
PVRL **Vila Real** 75.90 47 *e*pP pP 21 09 38.1 +0.7
ESPR **Espera** 76.28 52 P pP 21 09 39.2 -0.5
MVO **Moncorvo** 76.38 47 *e*pP pP 21 09 40.0 -0.1
MDT **Midelt** 76.47 56 pP pP 21 09 40.2 -0.7
9.4nm,1.0s,baz=280,slow=7.4,SNR=6.9
PBRG **Braganca** 76.74 46 *e*pP pP 21 09 43.0 +0.8
ECAB **El Cabril** 76.88 50 P pP 21 09 42.7 -0.4
ELUQ **Luque** 77.66 51 P pP 21 09 48.1 +0.5
ELOJ **Sierra Loja** 77.67 52 P pP 21 09 48.2 +0.6
ERON **Agron** 77.92 52 P pP 21 09 49.2 +0.2
ECOG **Cogollos-Vega** 78.16 52 P pP 21 09 50.5 +0.2
EBAN **Banos Encina** 78.16 51 P pP 21 09 50.4 +0.1
ESDC **Sonseca Array** 78.32 49 P P 21 09 05.6 -0.3
ESDC pP pP 21 09 49.5 -1.7
ESDC P pP 21 09 50.8 -0.4
ESDC **Sonseca Array** 78.32 49 P P 21 09 05.6 -0.3
0.9nm,0.7s,mb3.5,baz=260,slow=11,SNR=2.9
ESDC pP pP 21 09 49.5 -1.7
12nm,0.9s,baz=260,slow=5.8,SNR=16
ENIJ **Nijar** 79.17 52 P pP 21 09 55.0 -1.0
EVIA **Vianos** 79.24 50 P pP 21 09 56.0 -0.3
TORD **Torodi Ar. Bea** 79.83 76 P P 21 09 14.0 -0.5
TORD pP pP 21 09 58.9 -1.2
TORD **Torodi Ar. Bea** 79.83 76 P P 21 09 14.0 -0.5
5.5nm,0.4s,mb4.5,baz=283,slow=5.9,SNR=53
TORD pP pP 21 09 58.9 -1.2
10nm,1.1s,baz=287,slow=4.4,SNR=7.9
EGAK **Eagle** 80.37 337 *e*P P 21 09 16.4 0.0
18nm,0.8s,mb4.8
EGAK *e*pP pP 21 10 00.8 -1.1
ROSF **Rostrenen** 80.66 41 *e*P P 21 09 18.0 -0.3
ROSF *e*pP pP 21 10 04.2 +0.3
SJPF **Ste Jean** 81.01 46 *e*P P 21 09 20.5 +0.2
SJPF *e*pP pP 21 10 06.7 +0.8
ETSF **Etsaut** 81.45 46 *e*P P 21 09 22.4 -0.2
VNA3 **Neumayer Olymp** 81.61 162 *e*P P 21 09 23.9 +1.0
VNA3 *e* 21 09 25.4
VNA3 *e* 21 09 28.1
VNA3 *e* 21 09 34.6
VNA3 *e* 21 09 37.1
VNA3 *e* 21 09 46.5
VNA3 *e* 21 09 53.2
VNA3 *e* pP 21 10 08.2 -0.3
VNA3 *e* 21 10 15.8
VNA3 *e* 21 10 20.6
VNA3 *e* 21 10 26.1
VNA3 *e* 21 12 32.0
VNA1 **Neumayer--Stat** 81.84 162 *e*P P 21 09 25.6 +1.5
VNA1 *e* 21 09 27.0
VNA1 *e* 21 09 29.6
VNA1 *e* 21 09 35.6
VNA1 *e* 21 09 37.9
VNA1 *e* 21 09 48.0
VNA1 *e* 21 09 55.5
VNA1 *e* pP 21 10 09.5 -0.3
VNA1 *e* 21 10 18.3
VNA1 *e* 21 10 23.1
VNA1 *e* 21 10 27.6
VNA1 *e* 21 12 34.7
EPF **Esparros** 82.12 46 *e*P P 21 09 26.4 +0.3
61nm,1.5s,mb4.7
EPF **Esparros** 82.12 46 *e*P P 21 09 26.4 +0.3
30nm,1.5s,mb4.7
VNA2 **Neumayer--Watz** 82.20 162 *e*P P 21 09 26.9 +0.9
baz=286,slow=5.5
VNA2 *e* 21 09 31.1
VNA2 *e* 21 09 37.3
VNA2 *e* 21 09 39.6
VNA2 *e* 21 09 49.1
VNA2 *e* 21 09 55.8
VNA2 *e* pP 21 10 11.3 -0.4
VNA2 *e* 21 10 20.3
VNA2 *e* 21 10 24.1
VNA2 *e* 21 10 30.8
VNA2 *e* 21 12 37.1
GRR **Gorron** 82.24 41 *e*P P 21 09 26.0 -0.6
77nm,1.7s,mb4.8
GRR *e*pP pP 21 10 12.6 +0.2
GRR **Gorron** 82.24 41 *e*P P 21 09 26.0 -0.6
39nm,1.7s,mb4.8
GRR *e*pP pP 21 10 12.6 +0.2
MFF **Saint Martin d** 82.39 43 *e*P P 21 09 27.1 -0.3
78nm,1.6s,mb4.8
MFF **Saint Martin d** 82.39 43 *e*P P 21 09 27.1 -0.3
39nm,1.6s,mb4.8
FLN **La Foliniere** 82.56 41 *e*P P 21 09 27.8 -0.4
FLN *e*pP pP 21 10 14.4 +0.4
LFF **La Frestale** 82.72 45 *e*P P 21 09 28.6 -0.5
120nm,1.6s,mb5.1
LFF **La Frestale** 82.72 45 *e*P P 21 09 28.6 -0.5
60nm,1.6s,mb5.1
LDF **La Druitiere** 82.76 41 *e*P P 21 09 28.7 -0.6
COLA **College** 83.06 336 *e*P P 21 09 30.8 +0.3
9.3nm,0.9s,mb4.5
RJF **Les Rejaudoux** 83.32 44 *e*P P 21 09 31.6 -0.6
115nm,1.9s,mb5.0
RJF *e*pP pP 21 10 18.3 +0.2
RJF **Les Rejaudoux** 83.32 44 *e*P P 21 09 31.6 -0.6
58nm,1.9s,mb5.0
RJF *e*pP pP 21 10 18.3 +0.2
MTLF **Montolieu** 83.53 46 *e*P P 21 09 32.7 -0.6
MTLF *e*pP pP 21 10 19.3 +0.1
CAF **Calviac** 83.65 45 *e*P P 21 09 33.4 -0.5
133nm,1.8s,mb5.1
CAF **Calviac** 83.65 45 *e*P P 21 09 33.4 -0.5
67nm,1.8s,mb5.1
SNAA **Sanae** 83.82 162 *e*P P 21 09 35.0 +0.7
SNAA *e* 21 09 36.1
SNAA *e* 21 09 38.8
SNAA *e* 21 09 45.9
SNAA *e* 21 09 48.6
SNAA *e* 21 10 00.5
SNAA *e* pP 21 10 21.0 +0.8
SNAA *e* 21 10 28.0
SNAA *e* 21 10 32.9
SNAA *e* 21 10 38.9
TCF **Toulx Ste Croi** 83.95 43 *e*P P 21 09 34.7 -0.7
TCF *e*pP pP 21 10 21.3 0.0
HYF **Humbligny** 84.38 42 *e*P P 21 09 37.4 -0.2
BGF **Bois d'Agland** 84.42 43 *e*P P 21 09 37.4 -0.4
80nm,1.5s,mb4.9
BGF *e*pP pP 21 10 23.9 +0.2
BGF **Bois d'Agland** 84.42 43 *e*P P 21 09 37.4 -0.4
40nm,1.5s,mb4.9
BGF *e*pP pP 21 10 23.9 +0.2
DAG **Danmarks Havn** 84.58 11 ⇑/P pP 21 10 23.5 -0.5
2.7nm,0.7s
AVF **Avril sur Loir** 84.80 43 *e*P P 21 09 38.8 -0.9
26nm,1.3s,mb4.5
AVF *e*pP pP 21 10 25.5 -0.2
AVF **Avril sur Loir** 84.80 43 *e*P P 21 09 38.8 -0.9
13nm,1.3s,mb4.5
AVF *e*pP pP 21 10 25.5 -0.2
LASF **Ste Croix** 84.80 46 *e*P P 21 09 39.9 +0.2
SSF **Saint Saulge** 84.94 43 *e*P P 21 09 39.3 -1.0
37nm,1.6s,mb4.6
SSF **Saint Saulge** 84.94 43 *e*P P 21 09 39.3 -1.0
18nm,1.6s,mb4.6
SMF **Signal de Mont** 85.11 43 *e*P P 21 09 40.3 -0.9
49nm,1.5s,mb4.7
SMF **Signal de Mont** 85.11 43 *e*P P 21 09 40.3 -0.9
25nm,1.5s,mb4.7
LOR **Lormes** 85.20 43 *e*P P 21 09 40.9 -0.8
57nm,1.6s,mb4.7
LOR *e*pP pP 21 10 27.5 -0.2

LOR	**Lormes**	**85.20**	**43**	*e*P		**P**	**21 09 40.9**	**-0.8**
	28nm,1.6s,mb4.8								
LOR				*e*pP		pP	21 10 27.5	-0.2	
VIVF	**Saint-Julien-l**	**85.47**	**45**	*e*P		**P**	**21 09 43.2**	**+0.1**
	13nm,1.1s,mb4.3								
VIVF				*e*pP		pP	21 10 29.7	+0.6	
VIVF	**Saint-Julien-l**	**85.47**	**45**	*e*P		**P**	**21 09 43.2**	**+0.1**
	6.3nm,1.0s,mb4.3								
VIVF				*e*pP		pP	21 10 29.7	+0.6	
IMA2	**Indian Mountai**	**85.73**	**337**	*e*P		**P**	**21 09 43.3**	**-0.6**	
BAIF	**Baives**	**85.79**	**40**	*e*P		**P**	**21 09 44.0**	**-0.5**	
	31nm,1.5s,mb4.5								
BAIF	**Baives**	**85.79**	**40**	*e*P		**P**	**21 09 44.0**	**-0.5**	
	15nm,1.5s,mb4.5								
SNF	**Seneffe**	**85.89**	**39**	P		**P**	**21 09 45.3**	**+0.3**	
SNF				AP		pP	21 10 27.8	-3.3	
UCC	**Uccle**	**85.98**	**39**	P		**P**	**21 09 44.9**	**-0.5**	
	comp=Z,26nm,2.4s,mb4.5								
SMRF	**Simiane la Rot**	**86.02**	**46**	*e*P		**P**	**21 09 45.8**	**0.0**	
SMRF				*e*pP		pP	21 10 32.7	+0.8	
DOU	**Dourbes**	**86.04**	**40**	P		**P**	**21 09 46.0**	**+0.3**	
	comp=Z,8.9nm,1.5s,mb4.3								
DOU				AP		pP	21 10 30.5	-1.3	
MEZF	**Maizieres J'vi**	**86.15**	**41**	*e*P		**P**	**21 09 45.7**	**-0.6**	
MEZF				*e*pP		pP	21 10 32.5	+0.1	
GIVF	**Givet**	**86.19**	**40**	*e*P		**P**	**21 09 46.2**	**-0.2**	
	comp=Z,112nm,1.5s,mb5.1								
GIVF	**Givet**	**86.19**	**40**	*e*P		**P**	**21 09 46.2**	**-0.2**	
	comp=Z,56nm,1.5s,mb5.1								
ORIF	**Oris-en-Rattie**	**86.33**	**45**	*e*P		**P**	**21 09 47.7**	**+0.4**	
BCLA	**Clavier**	**86.53**	**39**	P		**P**	**21 09 46.6**	**-1.5**	
BCLA				AP		pP	21 10 35.7	+1.5	
CABF	**La Chapelle**	**86.65**	**43**	*e*P		**P**	**21 09 48.4**	**-0.4**	
	comp=Z,98nm,1.8s,mb5.0								
CABF	**La Chapelle**	**86.65**	**43**	*e*P		**P**	**21 09 48.4**	**-0.4**	
	comp=Z,49nm,1.8s,mb5.0								
BEBN	**Eben Emael**	**86.81**	**39**	P		**P**	**21 09 50.5**	**+1.1**	
MBDF	**Montbardon**	**86.95**	**45**	*e*P		**P**	**21 09 50.2**	**-0.1**	
LPL	**La Plagne**	**86.99**	**44**	*e*P		**P**	**21 09 50.8**	**+0.3**	
LPL				*e*pP		pP	21 10 37.7	+1.0	
WLF	**Walferdange**	**86.99**	**40**	P		**P**	**21 09 50.9**	**+0.6**	
WLF				AP		pP	21 10 35.8	-0.7	
MEM	**Membach**	**87.00**	**39**	P		**P**	**21 09 51.3**	**+0.9**	
MEM				AP		pP	21 10 37.9	+1.4	
LPG	**La Plagne**	**87.00**	**44**	*e*P		**P**	**21 09 50.9**	**+0.4**	
HINF	**Hinteralfeld**	**87.28**	**42**	*e*P		**P**	**21 09 50.8**	**-1.0**	
CDF	**Champ du Feu**	**87.61**	**42**	*e*P		**P**	**21 09 52.7**	**-0.6**	
	comp=Z,51nm,1.7s,mb4.8								
CDF				*e*pP		pP	21 10 39.7	0.0	
CDF	**Champ du Feu**	**87.61**	**42**	*e*P		**P**	**21 09 52.7**	**-0.6**	
	comp=Z,25nm,1.7s,mb4.8								
CDF				*e*pP		pP	21 10 39.7	0.0	
KEST	**Kesra**	**88.29**	**54**	pP		pP	21 10 43.4	+0.2	
	comp=Z,2.5nm,0.9s,baz=247,slow=5.5,SNR=3.7								
NB2	**NORSAR Subarra**	**90.65**	**29**	P		pP	21 10 52.0	-1.7	
	comp=Z,5.4nm,1.4s,baz=270,slow=4.8								
NOA	**NORSAR Array B**	**90.65**	**29**	P		**P**	**21 10 05.4**	**-1.8**	
	comp=Z,2.4nm,1.1s,mb4.2,baz=270,slow=4.5,SNR=3.4								
NOA				pP		pP	21 10 51.1	-2.6	
	comp=Z,1.4nm,0.8s,baz=269,slow=4.7,SNR=3.2								
CLL	**Collm**	**91.45**	**39**	*e*P		**P**	**21 10 11.0**	**-0.2**	
	comp=Z,28nm,1.9s,mb5.0								
CLL				*e*SKSac		SKSac	21 20 25.0	-0.8	
CLL				*e*S		S	21 20 57.0	+2.5	
KHC	**Kasperske Hory**	**91.81**	**41**	*e*P		**P**	**21 10 13.3**	**+0.4**	
KHC				*e*pP		pP	21 11 00.3	+0.9	
GERES	**GERESS Array B**	**91.89**	**41**	P		**P**	**21 10 11.6**	**-1.7**	
	comp=Z,0.2nm,0.3s,mb3.6,baz=9.0,slow=26,SNR=2.8								
GERES				pP		pP	21 10 57.3	-2.5	
	comp=Z,0.2nm,0.5s,baz=266,slow=39,SNR=2.7								
BRG	**Berggiesshubel**	**92.04**	**39**	*e*P		**P**	**21 10 14.6**	**+0.6**	
	comp=Z,18nm,1.6s,mb4.8								
BRG				*e*		pP	21 10 57.3	-3.2	
	comp=Z,4.8nm,1.0s								
PRU	**Pruhonice**	**92.43**	**40**	*e*P		**P**	**21 10 17.0**	**+1.2**	
PRU				*e*pP		pP	21 11 03.4	+1.1	
UPC	**Upice**	**93.37**	**40**	*e*P		**P**	**21 10 21.2**	**+1.1**	
UPC				*e*pP		pP	21 11 08.2	+1.6	
DPC	**Dobruska-Polom**	**93.57**	**40**	*e*P		**P**	**21 10 21.8**	**+0.8**	
DPC				*e*		pP	21 11 06.7	-0.9	
DPC	**Dobruska-Polom**	**93.57**	**40**	*e*P		**P**	**21 10 21.8**	**+0.8**	
DPC				*e*pP		pP	21 11 06.7	-0.9	
ZST	**Bratislava**	**94.16**	**42**	*e*P		pP	21 11 10.6	+0.3	
MODS	**Modra-Piesok**	**94.27**	**42**	*e*P		pP	21 11 11.9	+1.1	
MODS	**Modra-Piesok**	**94.27**	**42**	*e*P		**P**	**21 10 25.4**	**+1.1**	
KOLL	**Kolacno**	**95.01**	**42**	*e*P		pP	21 11 15.5	+1.3	
VYHS	**Vyhne**	**95.30**	**42**	*e*P		**P**	**21 10 29.1**	**+0.1**	
	comp=Z,4.3nm,1.4s,mb4.5								
VYHS	**Vyhne**	**95.30**	**42**	*e*P		pP	21 11 17.2	+1.6	
ARCES	**ARCESS Array B**	**95.91**	**20**	P		**P**	**21 10 29.2**	**-2.0**	
	comp=Z,10nm,1.2s,mb5.0,baz=305,slow=4.3,SNR=10.0								
KECS	**Kecovo**	**96.40**	**42**	*e*P		pP	21 11 22.0	+1.4	
STHS	**Stebnicka Huta**	**96.81**	**41**	*e*P		pP	21 11 25.6	+3.2	
CRHS	**Cervenica-Dubn**	**97.00**	**41**	*e*P		**P**	**21 10 34.9**	**-1.8**	
FINES	**FINESS Array B**	**97.76**	**28**	P		**P**	**21 10 38.0**	**-1.7**	
	comp=Z,1.0nm,0.8s,mb4.3,baz=270,slow=3.8,SNR=4.4								
ZALV	**Zalesovo Beam**	**125.69**	**13**	PKP		PKPdf	21 16 05.5	0.0	
	comp=Z,1.4nm,0.5s,baz=277,slow=1.8,SNR=7.8								
ZALV				pPKP		pPKPdf	21 16 53.0	-1.1	
	comp=Z,3.3nm,0.9s,baz=267,slow=2.7,SNR=5.4								
STKA	**Stephens Creek**	**130.29**	**225**	*e*P		PKPdf	21 16 14.5	-0.4	
	comp=Z,5.0nm,1.0s								
STKA	**Stephens Creek**	**130.29**	**225**	PKP		PKPdf	21 16 14.2	-0.7	
	comp=Z,2.9nm,0.7s,baz=345,slow=7.7,SNR=4.8								
MKAR	**Makanchi Array**	**131.53**	**18**	PKP		PKPdf	21 16 16.7	0.0	
	comp=Z,0.6nm,0.4s,baz=286,slow=3.0,SNR=24								
MKAR				pPKP		pPKPdf	21 17 04.2	-1.3	
	comp=Z,1.3nm,0.9s,baz=321,slow=1.7,SNR=5.3								
CTA	**Charters Tower**	**132.06**	**241**	PKP		PKPdf	21 16 18.4	-0.1	
	comp=Z,4.1nm,0.6s,baz=45,slow=1.0,SNR=6.9								
SONM	**Songino Array**	**133.68**	**356**	PKP		PKPdf	21 16 21.5	+0.7	
	comp=Z,0.6nm,0.4s,baz=286,slow=0,SNR=13								
SONM				SKPbc		SKPbc	21 19 31.9	-0.2	
	comp=Z,1.2nm,0.8s,baz=342,slow=2.0,SNR=7.1								
WMQ	**Urumqi**	**135.81**	**15**	*e*PKP		PKPdf	21 16 21.5	-3.4	
KSRS	**Korea Array**	**137.20**	**330**	PKP		PKPdf	21 16 27.6	-0.1	
	comp=Z,3.7nm,1.0s,baz=328,slow=1.5,SNR=6.5								
KSRS				pPKP		pPKPdf	21 17 13.0	-3.5	
	comp=Z,2.2nm,0.9s,baz=56,slow=1.4,SNR=3.5								
FORT	**Forrest**	**139.75**	**215**	*e*P		PKPdf	21 16 28.2	-4.4	
	comp=Z,22nm,1.0s								
HHC	**Hu-ho-hao-te**	**139.94**	**349**	*e*PKP		PKPdf	21 16 34.0	+1.4	
HHC				XPKP			21 17 33.5		
HHC				PP		PP	21 19 35.5	+5.9	
HHC				SKS		SKSdf	21 23 26.3	+0.9	
HHC				SKKS		SKKSac	21 26 08.3	+2.2	
HHC				PP		PP			
	comp=Z,101nm,5.3s								
ASAR	**Alice Springs**	**140.54**	**229**	PKhKP			21 16 25.5		
	comp=Z,1.5nm,0.4s,baz=126,slow=3.7,SNR=26								
ASAR				SKPbc		SKPbc	21 19 51.0	-2.1	
	comp=Z,0.6nm,0.7s,baz=131,slow=3.5,SNR=4.5								
GTA	**Gaotai**	**142.15**	**3**	PKP		PKPdf	21 16 39.0	+2.4	
GTA				XPKP			21 17 39.8		
WB2	**Warramunga Arr**	**142.20**	**234**	*e*P			21 16 31.5		
WRA	**Warramunga Arr**	**142.21**	**234**	PKhKP			21 16 31.5		
	comp=Z,1.8nm,0.3s,baz=122,slow=2.7,SNR=108								
WRA				SKPbc		SKPbc	21 19 56.2	-1.3	
	comp=Z,1.6nm,0.8s,baz=123,slow=2.4,SNR=6.5								
KLBR	**Kellerberrin**	**144.08**	**203**	*e*P		PKPdf	21 16 37.6	-2.6	
	comp=Z,15nm,0.4s								
MUN	**Mundaring**	**144.29**	**200**	*e*P		PKPdf	21 16 38.5	-2.1	
JOW	**Kunigami**	**144.65**	**318**	PKP		PKPdf	21 16 40.0	-1.4	
	comp=Z,9.2nm,0.4s,baz=60,slow=1.7,SNR=16								
LZH	**Lanzhou**	**145.52**	**358**	||PKP		PKPdf	21 16 43.8	+1.2
LZH				PKP		PKPdf	21 16 46.5	+3.9	
LZH				APKP			21 17 31.0		
LZH				XPKP			21 17 51.3		
LZH				PP		PP	21 20 09.0	+5.8	
LZH				PKS			21 20 18.8		
LZH				SKS		SKSdf	21 23 33.0	-1.2	
LZH				SKKS		SKKSac	21 26 38.8	+0.5	
LZH				PP		PP			
	comp=Z,93nm,9.1s								
LZH				LR		LR			
	comp=N,123nm,18.0s								
LZH				LR		LR			
	comp=Z,237nm,20.2s								
NJ2	**Nanjing**	**145.88**	**335**	*e*PKP		PKPdf	21 16 44.3	+1.0	
XAN	**Xi'an**	**147.03**	**350**	PKP		PKPdf	21 16 45.5	+0.3	
KAKA	**Kakadu**	**147.11**	**244**	*e*P		PKPdf	21 16 46.6	+0.8	
	comp=Z,22nm,0.4s								
KOLN	**Koldanda**	**148.20**	**33**	*e*P		PKPdf	21 16 51.0	+3.7	
GKN	**Gorkha**	**148.56**	**31**	*e*P		PKPdf	21 16 51.8	+3.9	
	comp=Z,38nm,0.7s								
KKN	**Kakani**	**149.07**	**31**	*e*P		PKPdf	21 16 51.8	+3.1	
JIRN	**Jiri**	**149.63**	**29**	*e*P		PKPdf	21 16 52.5	+2.9	
	comp=Z,13nm,0.4s								
LSA	**Lhasa**	**149.91**	**20**	*e*PKP		PKPdf	21 16 53.5	+3.5	
FITZ	**Fitzroy Crossi**	**150.05**	**229**	*e*P		PKPdf	21 16 54.7	+4.2	
	comp=Z,28nm,1.0s								
FITZ				*e*			21 17 01.7		
FITZ	**Fitzroy Crossi**	**150.05**	**229**	PKPbc		PKPbc	21 16 54.6	-1.0	
	comp=Z,15nm,0.9s,baz=110,slow=1.3,SNR=14								
FITZ				pPKPbc		pPKPbc	21 17 43.8	-0.3	
	comp=Z,5.8nm,0.8s,baz=175,slow=0.8,SNR=3.2								
TAPN	**Taplejung**	**150.62**	**28**	*e*P		PKPdf	21 16 54.1	+2.9	
	comp=Z,22nm,0.4s								
CD2	**Chengdu**	**150.68**	**358**	*e*PKP		PKPdf	21 16 48.8	-2.4	
CD2				APKP			21 17 33.8		
CD2				XPKP			21 17 55.5		
CD2				PP		PP	21 20 35.3	+2.1	
CD2				SKS		SKSdf	21 23 36.8	-4.7	
CD2				SKKS		SKKSac	21 27 01.8	-5.4	
CD2				PP		PP			
	comp=Z,90nm,10.2s								
HYB	**Hyderabad**	**151.63**	**55**	*i* PKP		PKPab	21 17 08.5	-0.1	
HYB				*e*			21 17 47.0		
GYA	**Guiyang**	**154.82**	**351**	PKP		PKPdf	21 16 55.3	-2.0	
GYA				PKP2		PKPab	21 17 22.0	+0.2	
GYA				APKP			21 17 43.3		
GYA				XPKP			21 18 01.8		
GYA				PKS			21 20 28.0		
GYA				PP		PP	21 20 59.5	+2.9	
GYA				SKS		SKSdf	21 23 41.5	-5.1	
GYA				PP		PP			
	comp=Z,110nm,7.6s								
KMI	**Kunming**	**156.47**	**359**	PKP		PKPdf	21 16 59.3	-0.3	

ISCJB ***28*** *20:59:56.8±0.4, 3856N±002×2202E±004, h12km±5km, Error ellipse: s-maj=5.0km s-min=4.1km az=157.7*
ATH ***28*** *20:59:56.9, 3855N×2194E, h19km±4km, MD3.2/8*
NEIC ***28*** *20:59:56.9, 3855N×2194E, h19km, MD3.2(ATH), After ATH.*
CSEM ***28*** *20:59:57.4±0.1, 3855N×2195E, h2km, ML3.1, Error ellipse: s-maj=2.4km s-min=1.6km az=46.0*
THE ***28*** *20:59:57.8, 3858N×2201E, h11km, ML3.1*
ISC 28 20:59:57.4±0.4, 3856N±003×2201E±004, h15km±5km, n17, σ0°84/25, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SELA	**Sela**	**0.30**	**197**	*e*Pg	**Pg**	**21 00 04.0**	**+0.4**
SELA				*e*Sg	**Sg**	**21 00 08.7**	**+0.8**
EVR	**Evrytania**	**0.38**	**336**	*e*PB	**Pg**	**21 00 04.6**	**-0.6**
AGG	**Agios Georgios**	**0.52**	**29**	*e*Pg	**Pg**	**21 00 07.4**	**-0.3**
AGG				*e*Sg	**Sg**	**21 00 15.8**	**+1.0**
RLS	**Riolos of Patr**	**0.66**	**220**	*e*PN	**Pg**	**21 00 09.9**	**-0.4**
LKR	**Lokris**	**0.78**	**83**	*e*PN	**Pg**	**21 00 13.0**	**+0.4**
LTK	**Loutraki**	**0.93**	**125**	*e*Pg	**Pg**	**21 00 15.5**	**+0.1**
LTK				*e*Sg	**Sg**	**21 00 28.1**	**+0.6**
THL	**Klokotos Trika**	**1.00**	**0**	*e*PN	**Pg**	**21 00 16.0**	**-0.7**
LKD	**Levkas**	**1.07**	**278**	*e*Pg	**Pg**	**21 00 16.5**	**-1.6**
LKD				*e*Sg	**Sg**	**21 00 33.5**	**+1.4**
VLS	**Valsamata**	**1.18**	**251**	*e*PB	**Pn**	**21 00 17.6**	**-1.8**
VLX	**Vlachokerasia**	**1.23**	**166**	*e*Pg	**Pg**	**21 00 20.3**	**-0.8**
VLX				*e*Sg	**Sg**	**21 00 36.8**	**-0.2**
ITM	**Ithomi**	**1.38**	**183**	*e*PN	**Pn**	**21 00 23.0**	**+0.8**
JAN	**Janina**	**1.41**	**321**	*e*PN	**Pn**	**21 00 23.7**	**+1.1**
DID	**Didima**	**1.44**	**137**	*e*Pg	**Pg**	**21 00 23.5**	**-1.5**
DID				*e*Sg	**Sg**	**21 00 43.8**	**+0.1**
LIT	**Litokhoron**	**1.58**	**14**	*e*Pg	**Pn**	**21 00 24.5**	**-0.4**
LIT				*e*Sg	**Sn**	**21 00 44.8**	**-0.2**
IGT	**Igoumenitsa**	**1.62**	**307**	*e*Pb	**Pb**	**21 00 27.2**	**+0.1**
IGT				*e*Sb	**Sb**	**21 00 47.1**	**-0.3**
VLI	**Veliai**	**1.98**	**158**	*e*PB	**Pn**	**21 00 31.0**	**+0.5**
KEK	**Kerkira**	**2.06**	**304**	*e*PN	**Pn**	**21 00 32.8**	**+1.2**

IDC 28 21:06:11.3±1.5, 358N×12763E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.5/16, mbtmp3.4/4, Error ellipse: s-maj=126.2km s-min=20.9km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.28**	**165**	P	P	21 11 30.8	+0.4
	0.8nm,0.4s,baz=344,slow=10,SNR=19						
WB2	**Warramunga Arr**	**24.29**	**164**	*e*P	P	21 11 30.6	+0.2
ASAR	**Alice Springs**	**27.76**	**168**	P	P	21 12 01.7	-0.1
	0.2nm,0.6s,baz=354,slow=8.4,SNR=3.2						
SONM	**Songino Array**	**47.73**	**341**	P	P	21 14 49.3	-0.6
	0.2nm,0.7s,baz=155,slow=8.4,SNR=4.1						
MKAR	**Makanchi Array**	**58.20**	**325**	P	P	21 16 07.6	+0.4
	0.4nm,0.4s,baz=114,slow=7.7,SNR=16						

IDC ***28*** *21:17:09.0±0.4, 629S×2951E, h0km, mb5.3/25, mb1 5.4/27, mb1mx5.4/28, mbtmp5.3/27, ML5.3/2, MS5.6/35, Ms1 5.6/35, ms1mx5.5/39, Error ellipse: s-maj=13.5km s-min=10.3km az=73.0*
CRAAG ***28*** *21:17:08.1, 629S×2957E, Mw5.8*
MOS ***28*** *21:17:09.6±0.8, 6.10S×2973E, h10km, mb6.0/115, MS5.5/61, Error ellipse: s-maj=9.2km s-min=2.8km az=100.3*
ISCJB ***28*** *21:17:09.8±0.1, 622S±002×2962E±002, h13km, mb5.8/286, MS5.7/237, Error ellipse: s-maj=3.7km s-min=2.9km az=146.9*
BJI ***28*** *21:17:09.8, 569S×2932E, h12km, mB6.0, mb5.6, Ms6.1, Msz5.7*
NEIC ***28*** *21:17:10.7±0.1, 627S×2967E, h8km, mb5.8/144, ME6.0, MS5.8/158, MW5.7, Error ellipse: s-maj=4.8km s-min=3.3km az=70.0 Broadband fault plane solution: P waves. NP1:φs125.00000°, δ70.00000°, λ-150.00000°. NP2:φs24.00000°, δ62.00000°, λ-23.00000°. Principal axes: T Plg5.0000°, Azm253.0000°; N Plg0.0000°, Azm0.0000°; P Plg75.0000°, Azm315.0000°; Moment Tensor Solution. s25 Moment tensor: Scale 10^17 Nm; Mrr-2.45; Mθθ-2.64; Mφφ5.09; Mrθ-2.71; Mθφ0.72; Mφr-0.72; Best double couple: M0 5.30000×10^17 NP1:φs149.00000°, δ54.00000°, λ-151.00000°. NP2:φs41.00000°, δ67.00000°, λ-40.00000°. Principal axes: T 5.2900, Plg8.0000°, Azm98.0000°; N -0.0400, Plg45.0000°, Azm196.0000°; P -5.2500, Plg44.0000°, Azm0.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Kigoma, Tanzania. Felt by people in high-rise buildings in Nairobi, Kenya.
GCMT ***28*** *21:17:10.6±0.1, 636S×2970E, h14km, MW5.8/92, Moment Tensor Solution. s84,c164; s92,c270; Duration: 2s0 Moment tensor: Scale 10^17Nm; Mrr-2.73±.05; Mθθ-3.49±.05; Mφφ6.22±.07; Mrθ-2.83±.16; Mθφ-2.43±.05; Mφr-0.03±.11; Best double couple: M0 6.54300×10^17 NP1:φs25.00000°, δ61.00000°, λ-26.00000°. NP2:φs129.00000°, δ67.00000°, λ-148.00000°. Principal axes: T 6.8380, Plg4.0000°, Azm256.0000°; N -0.5900, Plg51.0000°, Azm161.0000°; P -6.2480, Plg38.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
IGIL ***28*** *21:17:12.8, 596S×2984E, h10km, MS5.7*
SZGRF ***28*** *21:17:14.8, 604S×3009E, h33km, mb6.0, MS5.5, Lake Tanganyika region*
BGS ***28*** *21:17:20.2, 408S×3120E, h9km, mb5.7, MS5.6*
ISC 28 21:17:11.9±0.1, 625S±002×2968E±002, h14km, h14km±.6km: pP-P, n1141, σ0°84/1081, mb5.8/286, MS5.7/237, 30C-283D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**5.71**	**11**	Pn	**Pn**	**21 18 34.9**	**-1.4**
LSZ	**Lusaka**	**9.09**	**189**	*e*Pn	**Pn**	**21 19 19.9**	**-2.8**
	489nm,0.6s						
LSZ				*e*Sn	**Sn**	**21 20 52.9**	**-12**
LSZ	**Lusaka**	**9.09**	**189**	Pn	**Pn**	**21 19 19.9**	**-2.9**
	SNR=210						
LSZ	**Lusaka**	**9.09**	**189**	Pn	**Pn**	**21 19 19.7**	**-3.0**
	48nm,0.3s,baz=7.8,slow=12,SNR=317						
LSZ				Sn	**Sn**	**21 20 55.9**	**-9.1**
	123nm,0.3s,baz=135,slow=18,SNR=8.0						
LSZ				Lg		21 21 48.6	
	115nm,0.3s,baz=112,slow=14,SNR=11						
LSZ				LR	LR	21 23 00.9	
	comp=Z,116μm,18.4s,baz=13,slow=39						
KMBO	**Kilima Mbogo**	**9.11**	**56**	*e*Pn	**Pn**	**21 19 18.5**	**-4.4**
	904nm,1.0s						
KMBO				*e*Sn	**Sn**	**21 20 55.9**	**-9.4**
KMBO	**Kilima Mbogo**	**9.11**	**56**	P	**Pn**	**21 19 19.3**	**-3.7**
KMBO						21 20 58.7	
KMBO				pmax	pmax		
	comp=Z,23nm,0.3s						
KMBO				smax			
	comp=N,169nm,0.3s						
KMBO	**Kilima Mbogo**	**9.11**	**56**	Pn	**Pn**	**21 19 18.9**	**-4.1**
	SNR=313						
KMBO	**Kilima Mbogo**	**9.11**	**56**	Pn	**Pn**	**21 19 19.3**	**-3.7**
	comp=N,23nm,0.3s,baz=225,slow=14,SNR=120						
KMBO				Sn	**Sn**	**21 20 58.6**	**-6.7**
	comp=N,169nm,0.3s,baz=304,slow=16,SNR=8.9						
KMBO				Lg		21 21 50.8	
	comp=N,490nm,0.3s,baz=307,slow=22,SNR=14						
MATP	**Matopo**	**14.14**	**185**	Pn	**Pn**	**21 20 24.9**	**-7.0**
	comp=N,8.4nm,0.3s,baz=7.5,slow=14,SNR=142						
MATP				Sn	**Sn**	**21 22 51.5**	**-17**
	comp=N,8.0nm,0.3s,baz=356,slow=13,SNR=2.6						
MATP				Lg		21 24 26.2	
	comp=N,23nm,0.3s,baz=76,slow=23,SNR=5.3						
MATP				LR	LR	21 26 14.1	
	comp=N,41μm,20.0s,baz=10.0,slow=39						
TSUM	**Tsumeb**	**17.45**	**221**	*e*Pn	**Pn**	**21 21 09.2**	**-5.8**
	comp=N,1μm,1.4s						
TSUM				*e*Sn	**Sn**	**21 24 13.6**	**-16**
TSUM	**Tsumeb**	**17.45**	**221**	P	**Pn**	**21 21 09.4**	**-5.6**
	comp=N,5.5nm,0.3s,baz=24,slow=12,SNR=122						
TSUM				S	**Sn**	**21 24 10.2**	**-19**
	comp=N,3.7nm,0.3s,baz=69,slow=17,SNR=2.3						
TSUM				Lg		21 26 22.6	
	comp=N,9.0nm,0.3s,baz=97,slow=17,SNR=5.6						
TSUM				LR	LR	21 28 13.4	
	comp=N,40μm,20.9s,baz=33,slow=38						
LBTB	**Lobatse**	**19.07**	**191**	P	**Pn**	**21 21 30.6**	**-4.2**
	comp=N,6.3nm,0.3s,baz=21,slow=14,SNR=160						
LBTB				S	**Sn**	**21 24 48.2**	**-20**
	comp=N,6.0nm,0.3s,baz=12,slow=16,SNR=2.6						
LBTB				Lg		21 26 58.5	
	comp=N,3.5nm,0.3s,baz=299,slow=19,SNR=2.5						
LBTB				LR	LR	21 29 07.8	
	comp=N,53μm,18.0s,baz=27,slow=38						
SLR	**Silverton**	**19.42**	**184**	*e*P	**Pn**	**21 21 40.3**	**+1.2**
SLR				*e*S	**Sn**	**21 25 26.5**	**+10**
SLR				AML	AML	21 28 51.4	
	comp=Z,145nm,0.7s						
KSR	**Koster**	**19.68**	**187**	*e*P	**Pn**	**21 21 41.2**	**-0.9**
KSR				*e*S	**Sn**	**21 25 29.4**	**+6.5**
KSR				AML	AML	21 28 32.8	
	comp=Z,180nm,0.8s						
DESE	**Dese**	**19.89**	**30**	*e*P	**Pn**	**21 21 45.9**	**+1.2**
DESE				S	**Sn**	**21 25 36.2**	**+7.9**
PRYS	**Parys**	**20.68**	**186**	*e*P	**P**	**21 21 53.6**	**+2.0**
PRYS				*e*S	**S**	**21 25 49.9**	**+7.6**
PRYS				AML	AML	21 29 29.2	
	comp=Z,117nm,0.8s						
OPO	**Ambohidratompo**	**21.00**	**127**	P	**P**	**21 21 54.5**	**-0.6**
	comp=Z,19nm,0.9s,mb4.5,baz=299,slow=10.0,SNR=26						
MRKH	**Merkhyat**	**21.97**	**7**	*i* P	**P**	**21 22 05.8**	**+0.3**
MRKH				AMb	AMB	21 22 14.0	
	comp=Z,502nm,1.4s,mb5.8						
MRKH				*i* S	**S**	**21 26 09.1**	**+1.4**
MRKH				AMS	AMS	21 31 04.0	
	comp=Z,11μm,17.2s,MS5.3						
ATD	**Arta Tunnel**	**21.99**	**37**	P	**P**	**21 22 06.7**	**+0.9**
	comp=Z,215nm,1.2s,mb5.4,baz=255,slow=4.1,SNR=32						
ATD				S	**S**	**21 26 17.6**	**+9.4**
	comp=Z,86nm,1.2s,baz=9.1,slow=1.2,SNR=4.4						
ATD				Lg		21 28 39.4	
	comp=Z,131nm,1.2s,baz=73,slow=22,SNR=10						
ATD				LR	LR	21 31 52.1	
	comp=Z,5μm,19.9s,MS5.0,baz=202,slow=40						
SEK	**Senekal**	**22.04**	**185**	*e*P	**P**	**21 22 08.2**	**+2.0**
SEK				*e*S	**S**	**21 26 17.5**	**+8.5**
SEK				AML	AML	21 30 13.7	
	comp=Z,161nm,0.6s						
BOSA	**Boshof**	**22

MIB **Mutribah** 39.65 24 *e*P P 21 24 42.7 -0.7
MIB AMb AMB 21 24 46.7
comp=Z,162nm,1.4s,mb5.5
JMDO Jabal Madar 39.79 44 P P 21 24 44.6 -0.1
SNR=29
JMDO Jabal Madar 39.79 44 P P 21 24 44.6 -0.1
SNR=29
RCY Rachaya 39.94 8 *e*P P 21 24 46.4 +0.6
ASHO Ashiyiah 40.06 39 P P 21 24 47.6 +0.6
SNR=50
ASHO Ashiyiah 40.06 39 P P 21 24 47.6 +0.6
SNR=50
HOQ Hoqain 40.09 41 P P 21 24 47.3 +0.2
SNR=101
HOQ Hoqain 40.09 41 P P 21 24 47.3 +0.2
SNR=101
HATD Hatta, Dubai 40.21 39 P P 21 24 48.8 +0.6
SNR=32
HATD Hatta, Dubai 40.21 39 P P 21 24 48.8 +0.6
SNR=32
SMDO Samad 40.22 43 P P 21 24 48.3 0.0
SNR=34
SMDO Samad 40.22 43 P P 21 24 48.3 0.0
SNR=34
BHL Bhannes 40.33 8 *e*P P 21 24 49.4 +0.3
WBK Wadi Bani Khal 40.55 44 P P 21 24 51.5 +0.6
SNR=36
WBK Wadi Bani Khal 40.55 44 P P 21 24 51.5 +0.6
SNR=36
BIDO Bidbid 40.58 42 P P 21 24 51.9 +0.6
SNR=29
BIDO Bidbid 40.58 42 P P 21 24 51.9 +0.6
SNR=29
HWQ Hawqa 40.74 8 *e*P P 21 24 53.1 +0.8
FKH Fakeheh 40.76 9 *e*P P 21 24 53.8 +1.2
PPCY Paphos 40.99 3 P P 21 24 54.2 -0.2
XRY Khrisi 41.07 355 *e*P P 21 24 56.0 +0.9
BANOM Banah 41.12 38 P P 21 24 56.0 +0.3
SNR=22
BANOM Banah 41.12 38 P P 21 24 56.0 +0.3
SNR=22
CSS Prodhromos 41.13 5 P P 21 24 56.1 +0.5
comp=Z,2.2nm,0.9s
CSS Prodhromos 41.13 5 *e*P P 21 24 55.5 -0.1
GVD Gavdhos 41.20 353 *e*P P 21 24 55.4 -0.9
comp=Z,159nm,1.0s,mb5.6
GVD Gavdhos 41.20 353 *e*P P 21 24 56.0 -0.2
ZKR Zakros 41.27 356 *e*P P 21 24 57.4 +0.6
ALFC Alevga 41.27 4 P P 21 24 56.9 +0.1
MAMC Mammari 41.33 4 P P 21 24 58.2 +1.0
LAST Lasithi 41.38 355 *e*P P 21 24 58.1 +0.5
NPS Neapolis 41.47 355 *e*P P 21 24 59.8 +1.5
KARP Karpathos 41.64 357 *e*P P 21 25 01.0 +1.2
BHD Baghdad 41.70 19 *ex* x 21 24 58.0
BHD *ex* x 21 31 16.0
VAM Vamos 41.75 353 *e*P P 21 25 01.5 +0.8
ARG Arkhangelos 42.26 358 *e*P P 21 25 06.5 +1.6
KYTH Kithira 42.76 352 *e*P P 21 25 10.0 +1.1
ERMK Ermenek 42.77 4 *i* P P 21 25 10.6 +1.6
BDRM Kayabasi 43.14 357 ⇓*i*P P 21 25 11.9 -0.1
VLI Veliai 43.20 352 *e*P P 21 25 16.5 +4.0
GOLH Golhisar 43.26 360 ⇓*i*P P 21 25 14.7 +1.8
APE Apeiranthos 43.26 355 *e*P P 21 25 12.7 -0.3
APE Apeiranthos 43.26 355 *e*P P 21 25 14.0 +1.0
APE Apeiranthos 43.26 355 ⇑*i*P P 21 25 12.7 -0.3
ASCN Ascension 43.72 265 *e*P P 21 25 17.4 +0.3
comp=Z,138nm,0.8s,mb5.7
ASCN LR LR
comp=Z,4µm,21.0s,MS5.3
ITM Ithomi 43.80 351 *e*P P 21 25 18.0 +0.7
SMG Samos 43.81 357 *e*P P 21 25 18.0 +0.6
ISP Isparta 43.87 1 *e*P P 21 25 18.3 +0.5
comp=Z,543nm,1.1s,mb6.2
ISP Isparta 43.87 1 *e*P P 21 25 18.3 +0.5
ISP pmax pmax
comp=Z,540nm,1.1s,mb6.2
ISP Isparta 43.87 1 ⇓*i*P P 21 25 18.4 +0.6
DID Didima 43.94 353 *e*P P 21 25 17.4 -1.0
GZT Gaziantep 44.00 9 ⇓*i*P P 21 25 19.5 +0.6
ANDN Andirin 44.04 8 ⇓*i*P P 21 25 20.0 +0.8
MSL Mosul 44.14 16 *ex* x 21 25 21.0
MSL *ex* x 21 31 55.0
NAIG Nisos Aigina 44.16 353 *e*P P 21 25 20.0 -0.2
KVR Kavouri 44.19 353 *e*P P 21 25 20.5 +0.1
ATAB Bozova 44.23 10 ⇓*i*P P 21 25 21.7 +0.9
ATH Athens Observa 44.34 353 *e*P P 21 25 22.0 +0.4
PTL Penteli 44.40 353 *e*P P 21 25 23.0 +0.9
KDAG Bornova 44.48 357 ⇓*i*P P 21 25 23.1 +0.4
LTK Loutraki 44.48 352 *e*P P 21 25 22.0 -0.8
MANT Manisa 44.52 359 ⇓*i*P P 21 25 24.0 +1.0
CHOS Chios island 44.53 356 *e*P P 21 25 22.3 -0.8
MARD Mardin 44.56 13 ⇓*i*P P 21 25 23.8 +0.4
AKHS Akhisar 44.93 358 ⇓*i*P P 21 25 26.8 +0.5
VLS Valsamata 45.00 350 *e*P P 21 25 27.0 +0.1
AVNT Avonos 45.05 6 ⇓*i*P P 21 25 27.9 +0.6
MALT Malatya 45.07 10 *e*P P 21 25 28.0 +0.6
comp=Z,297nm,1.5s,mb5.9
MALT Malatya 45.07 10 *e*P P 21 25 28.0 +0.5
MALT pmax pmax
comp=Z,300nm,1.5s,mb5.9
MALT Malatya 45.07 10 ⇓*i*P P 21 25 28.4 +0.9
GDZ Gediz 45.11 360 ⇓*i*P P 21 25 28.6 +0.9
ELZG Elazig 45.35 10 ⇓*i*P P 21 25 30.5 +0.9
PRK Paraskevi 45.37 356 *e*P P 21 25 31.0 +1.2
HVZN Vizzini 45.41 343 P P 21 25 30.7 +0.5
AYVA Ayvalik 45.41 357 ⇓*i*P P 21 25 30.6 +0.5
HAKT HAKKARI 45.50 16 ⇓*i*P P 21 25 31.4 +0.5
LKD Levkas 45.51 350 *e*P P 21 25 30.5 -0.4
AOS Alonnisos 45.51 354 *e*P P 21 25 31.1 +0.2
EVR Evrytania 45.52 351 *e*P P 21 25 32.0 +1.0
ESKT Eskisehir 45.55 1 ⇓*i*P P 21 25 31.5 +0.3
AGG Agios Georgios 45.55 352 *e*P P 21 25 30.9 -0.3
CDAG Cicekdag 45.85 5 ⇓*i*P P 21 25 33.6 0.0
BORA Eskisehir 45.90 1 ⇓*i*P P 21 25 34.8 +0.7
KEST Kesra 45.93 337 P P 21 25 34.2 -0.1
comp=Z,56nm,1.3s,mb5.3,baz=129,slow=3.4,SNR=24
KEST LR LR 21 45 49.2
comp=Z,4µm,18.5s,MS5.4,baz=290,slow=38
ANTO Ankara 45.98 3 *e*P P 21 25 35.0 +0.4
comp=Z,278nm,1.4s,mb6.0
ANTO LR LR
comp=Z,3µm,19.0s,MS5.2
ANTO Ankara 45.98 3 P P 21 25 35.5 +0.9
SNR=66
ANTO Ankara 45.98 3 P P 21 25 35.5 +0.9
SNR=66
ANTO Ankara 45.98 3 ⇓*i*P P 21 25 35.1 +0.5
BOZC Bozcaada 45.98 356 ⇓*i*P P 21 25 35.0 +0.4
SCLL Scilla 46.14 345 P P 21 25 36.8 +0.9
LOS Limnos 46.15 355 *e*P P 21 25 36.6 +0.7
BNGL BINGOL 46.21 12 ⇓*i*P P 21 25 37.7 +1.2
PAIG Paliouri 46.28 354 *e*P P 21 25 35.8 -1.2
CSLB Castelbuono 46.30 343 P P 21 25 38.3 +1.1
TVAN Van 46.34 15 ⇓*i*P P 21 25 38.8 +1.4
IGT Igoumenitsa 46.36 350 *e*P P 21 25 37.7 0.0
JAN Janina 46.40 351 *e*P P 21 25 39.5 +1.6
LIT Litokhoron 46.59 352 *e*P P 21 25 37.8 -1.7
ELDT Eldivan 46.63 4 ⇑*i*P P 21 25 39.9 +0.1
KEK Kerkira 46.63 350 *e*P P 21 25 44.0 +4.2
OUR Ouranopolis 46.65 354 *e*P P 21 25 40.1 +0.3
PLG Polygyros 46.74 353 *e*P P 21 25 39.7 -0.9
PLG Polygyros 46.74 353 *e*P P 21 25 46.5 +5.9
TIP Timpagrande 46.76 346 P P 21 25 41.1 +0.4
SART Tekirdag 46.76 357 ⇓*i*P P 21 25 41.4 +0.6
HENT Hendek 46.85 1 ⇓*i*P P 21 25 41.9 +0.4
CTKT Corum 46.88 5 ⇓*i*P P 21 25 42.2 +0.6
KZN Kozani 46.89 352 *e*P P 21 25 42.5 +0.7
KELT Kelkit 47.00 10 ⇓*i*P P 21 25 42.8 +0.2
HORT Hortiatis 47.01 353 *e*P P 21 25 42.4 -0.3
TUTA Tutak 47.02 14 ⇓*i*P P 21 25 43.9 +1.1
ALN Alexandroupoli 47.03 356 *e*P P 21 25 42.9 +0.1
THE Thessaloniki 47.06 353 *e*P P 21 25 42.6 -0.4
ERZM Erzurum 47.17 12 ⇓*i*P P 21 25 45.2 +1.2
ELBA Catalca 47.18 359 ⇓*i*P P 21 25 43.7 -0.2
SOH Sokhos 47.20 353 *e*P P 21 25 44.0 -0.1
USI Ustica 47.28 342 P P 21 25 45.7 +0.9
RDO Rodhopi 47.31 356 *e*P P 21 25 45.0 -0.1
CGMA Guelma 47.33 335 P P 21 25 48.0 +2.7
DYDN Diyadin 47.37 15 ⇓*i*P P 21 25 46.9 +1.4
FNA Florina 47.42 351 *e*P P 21 25 45.6 -0.3
CTEI Djebel Teioual 47.42 334 P P 21 25 46.0 0.0
GRG Griva 47.45 353 *e*P P 21 25 45.2 -0.9
CASM Ain Smara 47.55 334 P P 21 25 48.0 +1.0

CKFL Kef-Lekhel 47.57 335 P P 21 25 48.0 +0.8
KNT Kendrikon 47.59 353 *e*P P 21 25 47.3 +0.2
GRSN GIRESUNGRSN 47.60 9 ⇑*i*P P 21 25 47.4 +0.1
BIA Bitola 47.66 351 ⇓*i*P P 21 25 46.9 -0.9
BALT Daday 47.67 4 ⇓*i*P P 21 25 48.0 +0.2
BOYT Boyabat 47.68 5 ⇑*i*P P 21 25 48.0 +0.1
CKHR Kef el Ahmar 47.78 333 P P 21 25 48.0 -0.8
VAY Valandovo 47.78 353 ⇓*i*P P 21 25 48.9 +0.2
KDZ Kurdzhali 47.82 356 P P 21 25 48.7 -0.3
OHR Ohrid 47.83 351 ⇓*i*P P 21 25 48.5 -0.5
CAEH 'Ain El Ouahch 47.84 335 P P 21 25 49.0 -0.3
MACK Trabzon 47.86 10 ⇓*i*P P 21 25 49.7 +0.4
MMB Musomiste 47.91 354 P P 21 25 48.7 -1.0
RZN Rozhen 47.92 355 P P 21 25 49.6 -0.1
MGR Morigerati 47.96 345 P P 21 25 49.2 -0.9
SET Setif 47.98 333 P P 21 25 51.0 +0.7
DFRA Djebel Bou Aff 48.06 334 P P 21 25 52.0 +1.1
DIGO Kars 48.11 14 ⇓*i*P P 21 25 52.1 +0.8
STIP Stip 48.20 352 ⇓*i*P P 21 25 52.6 +0.6
DIM Dimitrovgrad 48.21 356 P P 21 25 51.9 -0.1
ATAF Djebel Tarf 48.22 332 P P 21 25 55.2 +3.0
KKB Krupnik 48.26 353 P P 21 25 52.5 +0.1
PLD Plovdiv 48.33 355 P P 21 25 53.1 +0.2
ARTV Artvin 48.52 12 ⇓*i*P P 21 25 55.2 +0.8
AKET Djebel Ketaf 48.55 332 P P 21 25 50.1 -4.6
JMB Yambol 48.56 357 P P 21 25 53.4 -1.3
SKO Skopje 48.57 352 ⇓*i*P P 21 25 55.4 +0.6
MNGI Mangalore 48.73 67 *i* P P 21 25 56.0 -0.5
MNGI *eS* S 21 32 58.0 -1.1
PGB Panagyurishte 48.82 355 P P 21 25 55.7 -1.0
BHJ Bhuj 48.83 52 *eP* P 21 25 57.5 +0.4
BHJ AMb AMB 21 25 59.6
comp=Z,959nm,1.7s,mb6.5
ADJB Djebel Djouab 48.84 332 P P 21 25 52.5 -4.5
ULC Ulcinj 48.92 350 ⇓*i*P P 21 25 57.6 +0.2
VTS Vitosha 48.96 354 ⇓*i*P P 21 25 58.0 +0.2
VTS Vitosha 48.96 354 ⇓*i*P P 21 25 58.0 +0.2
TRIS Tristan da Cun 49.02 225 PFAKE 21 26 10.0 +12
TRIS LR LR
comp=Z,6µm,22.0s,MS5.5
EMHD Djebel Mahouad 49.11 331 P P 21 26 04.6 +5.6
FG5 Orsara di Pugl 49.11 346 P P 21 25 59.4 +0.5
VENT Ventotene 49.14 344 P P 21 25 58.8 -0.4
PRD Provadia 49.26 358 P P 21 25 59.8 -0.2
ETRT Tiaret 49.28 329 P P 21 26 05.8 +5.4
BUM Brajici-Budva 49.31 349 ⇓*i*P P 21 26 01.3 +0.9
TRD Trivandrum 49.36 73 *eP* P 21 26 00.8 -0.6
TRD *ex* x 21 26 08.5
comp=Z,695nm,1.9s
TTG Podgorica 49.37 350 ⇓*i*P P 21 26 00.5 -0.4
PVL Pavlikeni 49.39 356 P P 21 25 59.8 -1.2
RGNG Rignano Grg 49.40 346 P P 21 26 01.0 -0.2
PVY Plav 49.41 351 ⇓*i*P P 21 26 02.5 +1.3
HCY Herceg Novi 49.52 349 ⇓*i*P P 21 26 03.0 +0.9
ABA Alger-Bouzarea 49.56 332 P P 21 26 01.3 -1.1
DGRG David-gareji 49.59 15 P P 21 26 04.2 +1.5
MTA Mtatsminda 49.67 15 P P 21 26 03.7 +0.5
IVA Berane 49.69 351 ⇓*i*P P 21 26 03.9 +0.6
TBLG Delisi 49.69 15 P P 21 26 04.1 +0.7
MIDA Miranda 49.70 345 P P 21 26 03.9 +0.4
PSN Preselentsi 49.71 359 P P 21 26 02.7 -0.8
GOR Gori 49.78 14 P P 21 26 05.4 +1.4
NKY Niksic 49.78 350 ⇓*i*P P 21 26 04.6 +0.5
KAD Karad 49.80 61 *eP* P 21 26 04.2 -0.4
KAD *ex* x 21 26 10.6
comp=Z,119nm,1.4s
EANR 'Ain N'Sour 49.82 329 P P 21 26 09.0 +4.5
ZIMR 49.82 356 P P 21 26 04.4 +0.1
ECHA Ech Chlef 49.85 330 P P 21 26 09.5 +4.8
EBNR Beni Rached 49.88 330 P P 21 26 10.0 +5.1
BRY Bratogost 49.95 349 ⇓*i*P P 21 26 05.8 +0.5
POO Poona 50.02 60 *eP* P 21 26 06.0 -0.3
POO *ex* x 21 26 13.2
comp=Z,154nm,1.6s
UPM Unac-Piva 50.18 350 ⇓*i*P P 21 26 07.6 +0.6
ONI Oni 50.19 13 P P 21 26 07.7 +0.6
PLE Pljevlja 50.22 350 ⇓*i*P P 21 26 08.1 +0.8
CERT Cerreto 50.33 344 P P 21 26 08.4 +0.2
SOC Sochi 50.42 9 *i* P P 21 26 08.7 -0.2
SOC Sochi 50.42 9 *d* P P 21 26 07.0 -1.9
SOC *e**SP sP 21 26 10.0 -5.2
SOC *e* 21 27 25.6
SOC *e* 21 28 02.0
SOC *e*PPP 21 29 02.4
SOC *i* S S 21 33 21.4 -0.5
SOC *e* 21 35 55.7
SOC *e*SS SS 21 36 51.2 -4.9
SOC pmax pmax
comp=Z,144nm,1.2s,mb5.9
SOC pmax pmax
comp=Z,937nm,3.1s
SOC MLR MLR
comp=Z,4µm,12.0s,MS5.6
BUC1 Bucharest 50.47 357 P P 21 26 09.4 +0.2
ZEI Tsey 50.47 14 *eP* P 21 26 10.5 +1.2
ZEI *i* pP 21 26 14.6 +0.8
ZEI pmax pmax
comp=Z,252nm,1.0s,mb6.2
AQU L'Aquila 50.59 344 ⇓P P 21 26 10.3 +0.1
AQU L'Aquila 50.59 344 ⇓*i*P P 21 26 10.3 +0.1
CRAR CRAIOVA 50.62 355 P P 21 26 10.7 +0.4
TOLF Tolfa 50.72 343 P P 21 26 11.5 +0.3
HARR Harsova 50.73 358 ⇑P P 21 26 11.3 +0.2
HARR Harsova 50.73 358 ⇑*i*P P 21 26 11.3 +0.1
SIM Simferopol' 51.12 4 *d* P P 21 26 14.0 -0.1
SIM *e* 21 28 12.0
SIM *e*S S 21 33 31.0 -0.5
SIM *e*SS ScS 21 36 07.0 +2.6
SIM pmax pmax
comp=Z,75nm,1.1s,mb5.5
SIM MLR MLR
comp=Z,2µm,17.4s,MS5.2
CFR Carcaliu 51.21 359 P P 21 26 11.9 -2.9
OSPF L'Ospedale 51.23 340 *eP* P 21 26 14.5 -0.5
ANN Anapa 51.29 7 *eP* P 21 26 12.4 -3.0
ANN *i* *PP pP 21 26 15.1 -4.8
ANN *e* 21 27 29.4
ANN *e* 21 28 14.2
ANN *e*S S 21 33 29.9 -4.0
ANN *e* 21 36 08.7
ANN *e*SS SS 21 37 03.1 -6.7
ANN pmax pmax
comp=Z,91nm,1.3s,mb5.5
ANN MLR MLR
comp=N,2µm,15.0s,MS5.2
ANN MLR MLR
comp=E,840nm,15.0s,MS5.2
ANN MLR MLR
comp=Z,3µm,15.0s,MS5.5
MAON Monte Argentar 51.31 342 P P 21 26 15.5 -0.1
ABKT Ailbek 51.31 29 P P 21 26 15.2 -0.5
comp=Z,106nm,1.1s,mb5.7,SNR=10
VAN Vannovskaya 51.32 29 *eP* P 21 26 11.6 -4.2
VAN Vannovskaya 51.32 29 P P 21 26 11.6 -4.2
VAN S S 21 33 34.7 +0.2
KIV Kislovodsk 51.33 12 P P 21 26 16.5 +0.8
comp=Z,895nm,1.2s,mb6.6,SNR=35
KIV Kislovodsk 51.33 12 *eP* P 21 26 15.7 -0.1
comp=Z,238nm,1.2s,mb6.0
KIV LR LR
comp=Z,5µm,19.0s,MS5.5
KIV Kislovodsk 51.33 12 ⇓*i*P P 21 26 15.8 +0.1
KIV *e* 21 27 31.4
KIV *e* 21 28 11.7
KIV *e*S S 21 33 33.1 -1.4
KIV pmax pmax
comp=Z,195nm,1.1s,mb6.0
KIV pmax pmax
comp=Z,635nm,5.2s
KIV MLR MLR
comp=Z,3µm,18.0s,MS5.4
KIV Kislovodsk 51.33 12 P P 21 26 16.2 +0.5
SNR=61
KIV Kislovodsk 51.33 12 P P 21 26 16.2 +0.5
SNR=61
SNTG Esanatoglia 51.56 344 P P 21 26 17.5 +0.1
MAK Makhachkala 51.58 17 *d* P P 21 26 18.4 +0.8
MAK *e* 21 27 32.2
MAK *i* 21 28 14.8
MAK *e*PPP 21 29 15.0
MAK *i* S S 21 33 41.2 +3.2
MAK *e* 21 36 10.9

MAK pmax pmax
comp=Z,202nm,1.0s,mb6.0
MAK MLR MLR
comp=Z,8µm,16.0s,MS5.8
MLR Muntele Rosu 51.61 357 P P 21 26 18.1 +0.3
MLR pmax pmax
comp=Z,51nm,0.8s
MLR MLR MLR
comp=Z,9µm,18.8s
MLR Muntele Rosu 51.61 357 P P 21 26 18.1 +0.2
comp=Z,50nm,0.8s,mb5.5,baz=164,slow=3.6,SNR=45
MLR LR LR 21 52 39.9
comp=Z,9µm,18.8s,MS5.8,baz=164,slow=41
MLR Muntele Rosu 51.61 357 ⇑*i*P P 21 26 18.0 +0.2
MURB Monte Urbino 51.68 344 P P 21 26 17.5 -0.8
GZR Gura Zlata 51.78 354 ⇓P P 21 26 19.4 +0.4
GZR Gura Zlata 51.78 354 ⇓*i*P P 21 26 19.4 +0.4
PLOR Plostina 51.94 357 P P 21 26 20.3 +0.1
PLOR Plostina 51.94 357 ⇑*i*P P 21 26 19.9 -0.3
VRI Vrincioaia 51.95 357 ⇓*i*P P 21 26 20.1 -0.2
PGF Pioggiola 52.09 341 ⇓*i*P P 21 26 21.0 -0.4
comp=Z,330nm,1.5s,mb5.8
PGF Pioggiola 52.09 341 ⇓*i*P P 21 26 21.0 -0.4
comp=Z,165nm,1.5s,mb5.7
PGF Pioggiola 52.09 341 ⇓*i*P P 21 26 21.0 -0.4
PGF pmax pmax
comp=Z,165nm,1.5s,mb5.7
BZS Buzias 52.13 353 ⇓P P 21 26 21.5 -0.2
BZS Buzias 52.13 353 P P 21 26 22.1 +0.4
BZS Buzias 52.13 353 ⇓*i*P P 21 26 21.5 -0.2
CART Cartagena 52.16 329 *eP* P 21 26 21.7 -0.3
comp=Z,85nm,1.0s,mb5.6
CSNT Castellina Chi 52.22 343 P P 21 26 21.3 -1.1
EMUR La Murta 52.47 329 P P 21 26 22.4 -2.0
comp=Z,564nm,3.4s
EBER Berja 52.63 327 P P 21 26 23.8 -1.8
comp=Z,21nm,0.8s,mb5.1
EBEN Beniarda 52.63 331 P P 21 26 22.9 -2.6
comp=Z,114nm,1.3s,mb5.6
PALK Pallekele 52.64 76 P P 21 26 27.7 +1.6
comp=Z,546nm,1.9s,mb6.2,SNR=18
PALK Pallekele 52.64 76 *eP* P 21 26 26.9 +0.8
comp=Z,465nm,1.8s,mb6.1
PALK LR LR
comp=Z,4µm,20.0s,MS5.4
PALK Pallekele 52.64 76 P P 21 26 27.7 +1.6
SNR=28
EGUA Guajares 52.95 327 P P 21 26 28.8 +0.9
comp=Z,1.5nm,0.5s
KIS Kishinev 53.02 359 *k i*P P 21 26 26.0 -2.2
KIS *e* 21 29 35.0
KIS *e*S S 21 34 00.0 +2.5
KIS *e*SS SS 21 37 30.0 -7.1
KIS pmax pmax
comp=Z,450nm,2.0s,mb6.0
KIS pmax pmax
comp=Z,2µm,6.0s
KIS pmax pmax
comp=N,1µm,4.0s
KIS MLR MLR
comp=Z,2µm,15.0s,MS5.4
KIS MLR MLR
comp=N,2µm,14.0s,MS5.4
KIS MLR MLR
comp=E,1µm,15.0s,MS5.4
KIS MLR MLR
comp=Z,3µm,16.0s
KIS Kishinev 53.02 359 ⇓*i*P P 21 26 26.0 -2.2
comp=Z,500nm,2.0s,mb6.1
BOJS Bojanci 53.11 347 *i* P P 21 26 28.9 0.0
PKSM Moragy 53.15 350 ⇓P P 21 26 29.3 +0.2
PKSM Moragy 53.15 350 P P 21 26 29.3 +0.5
PKSM Moragy 53.15 350 ⇓*i*P P 21 26 29.3 +0.1
DRGR 53.17 354 ⇓P P 21 26 30.0 +0.7
DRGR 53.17 354 ⇓*i*P P 21 26 30.0 +0.7
ERON Agron 53.22 327 P P 21 26 30.6 +0.7
comp=Z,33nm,0.8s,mb5.3
GSCL Gusciola 53.23 343 P P 21 26 29.1 -0.7
IAS Iasi 53.24 358 P P 21 26 29.6 -0.2
ETOB Tobarra 53.24 330 P P 21 26 28.6 -1.4
comp=Z,475nm,3.3s
ECOG Cogollos-Vega 53.27 327 P P 21 26 30.8 +0.5
comp=Z,14nm,0.8s,mb5.0
ECOG Cogollos-Vega 53.27 327 P P 21 26 30.8 +0.5
ECOG pmax pmax
comp=Z,14nm,0.8s,mb4.9
EQES Quesada 53.40 328 P P 21 26 31.0 -0.2
comp=Z,62nm,1.3s,mb5.4
EMIJ Mijas 53.43 325 P P 21 26 30.2 -1.3
comp=Z,82nm,1.3s,mb5.5
VISS Visnje 53.49 347 *i* P P 21 26 31.4 -0.3
ELOJ Sierra Loja 53.50 326 P P 21 26 32.6 +0.6
comp=Z,18nm,0.8s,mb5.0
ELOJ Sierra Loja 53.50 326 P P 21 26 32.6 +0.6
ELOJ pmax pmax
comp=Z,18nm,0.8s,mb5.0
LMR La Mourre 53.63 339 ⇓*i*P P 21 26 32.5 -0.3
AKL Akola 53.64 59 ⇓*i*P P 21 26 33.7 +0.4
AKL *i* x x 21 36 28.2
ECHE Chera 53.68 331 P P 21 26 33.7 +0.4
comp=Z,54nm,1.4s,mb5.3
ECHE Chera 53.68 331 P P 21 26 33.7 +0.4
ECHE pmax pmax
comp=Z,54nm,1.4s,mb5.3
HYB Hyderabad 53.69 63 *eP* P 21 26 32.0 -1.7
HYB *e*PcP PcP 21 27 40.5 +0.5
HYB *e*PP PP 21 28 34.0 -0.8
HYB *e* 21 28 42.5
HYB *e*S S 21 34 04.0 -3.7
HYB *e*ScS ScS 21 36 24.0 +0.5
HYB Hyderabad 53.69 63 *eP* P 21 26 32.0 -1.7
HYB *e* 21 27 40.5
HYB *e* 21 28 34.0
HYB *e*S S 21 34 04.0 -3.7
HYB *e* 21 36 24.0
HYB Hyderabad 53.69 63 *i* P P 21 26 32.0 -1.7
HYB *e*PcP PcP 21 27 41.0 +1.0
HYB *e*PP PP 21 28 34.0 -0.8
HYB *e* 21 28 42.5
HYB *e*S S 21 34 04.0 -3.7
HYB *e*ScS ScS 21 36 24.0 +0.5
HYB LR LR 21 42 04.0
comp=Z,8.2nm,18.0s
REVF Revere 53.69 340 *eP* P 21 26 32.1 -1.1
EVIA Vianos 53.72 329 P P 21 26 33.4 -0.2
comp=Z,98nm,1.1s,mb5.7
EVIA Vianos 53.72 329 P P 21 26 33.4 -0.2
EVIA pmax pmax
comp=Z,98nm,1.1s,mb5.7
EJIF Jimena Fronter 53.74 325 P P 21 26 33.2 -0.6
comp=Z,31nm,1.1s,mb5.2
EJIF Jimena Fronter 53.74 325 P P 21 26 33.2 -0.6
EJIF pmax pmax
comp=Z,31nm,1.1s,mb5.2
JAVS Javornik 53.75 347 *i* P P 21 26 33.5 -0.2
MDRS Chennai 53.77 69 *eP* P 21 26 33.8 -0.5
MDRS AMb AMB 21 26 39.6
comp=Z,123nm,1.6s,mb5.6
SBF Sospel 53.78 340 ⇓*i*P P 21 26 33.6 -0.3
comp=Z,348nm,1.3s,mb5.8
SBF Sospel 53.78 340 ⇓*i*P P 21 26 33.6 -0.3
comp=Z,174nm,1.3s,mb5.8
SBF Sospel 53.78 340 ⇓*i*P P 21 26 33.6 -0.3
SBF pmax pmax
comp=Z,174nm,1.3s,mb5.8
FRF La Foret Royal 53.78 339 ⇓*i*P P 21 26 33.7 -0.2
comp=Z,125nm,1.1s,mb5.5
FRF La Foret Royal 53.78 339 ⇓*i*P P 21 26 33.7 -0.2
comp=Z,63nm,1.1s,mb5.5
FRF La Foret Royal 53.78 339 ⇓*i*P P 21 26 33.7 -0.2
FRF pmax pmax
comp=Z,63nm,1.1s,mb5.5
LJU Ljubljana 53.79 347 *eP* P 21 26 34.0 +0.1
FIN Finale Ligure 53.83 341 P P 21 26 33.7 -0.5
LUCF Luceram 53.84 340 *eP* P 21 26 34.5 +0.2
SAOF Saorge 53.85 340 *eP* P 21 26 33.6 -0.8
ELUQ Luque 53.86 327 P P 21 26 33.9 -0.8
comp=Z,12nm,0.8s,mb4.9
ELUQ Luque 53.86 327 P P 21 26 33.9 -0.7
ELUQ pmax pmax
comp=Z,12nm,0.8s,mb4.9
CALN Calern 53.87 340 *eP* P 21 26 34.7 +0.2
QLNO Quiliano 53.89 341 P P 21 26 34.2 -0.5
AUTN L'Aution 53.90 340 *eP* P 21 26 34.9 +0.2
MVIF Mont Vial 53.90 340 *eP* P 21 26 35.2 +0.4

VOY	**Vojsko**	**53.92**	**346**	*e*P		**P**	**21 26 34.7**	**-0.2**
VOY				*e*			21 27 33.8		
VOY				*e*			21 28 41.7		
TOUF	**Mont Tournerai**	**53.98**	**340**	*e*P		**P**	**21 26 35.7**	**+0.4**
TAVF	**Tavernes**	**54.04**	**339**	*e*P		**P**	**21 26 35.4**	**-0.4**
EBAN	**Banos Encina**	**54.04**	**328**	P		**P**	**21 26 34.9**	**-1.1**
	comp=Z,70nm,0.9s,mb5.6								
EBAN	**Banos Encina**	**54.04**	**328**	P		**P**	**21 26 34.9**	**-1.0**
EBAN				pmax		pmax			
	comp=Z,70nm,0.9s,mb5.6								
EMOS	**Mosqueruela**	**54.05**	**332**	P		**P**	**21 26 34.9**	**-1.0**
	comp=Z,926nm,3.3s								
EPOB	**Poblet**	**54.13**	**334**	P		**P**	**21 26 36.0**	**-0.5**
	comp=Z,114nm,1.4s,mb5.6								
ERTA	**Horta de San J**	**54.15**	**333**	P		**P**	**21 26 36.4**	**-0.2**
	comp=Z,195nm,1.3s,mb5.9								
STV	**Sta Anna Valdi**	**54.15**	**340**	P		**P**	**21 26 37.1**	**+0.5**
SFS	**San Fernando**	**54.18**	**324**	*e*P		**P**	**21 26 34.6**	**-2.3**
PERS	**Pernice**	**54.22**	**348**	*e*P		**P**	**21 26 37.5**	**+0.5**
OBKA	**Obir**	**54.22**	**347**	⇓*i*P		**P**	**21 26 37.4**	**+0.3**
	comp=Z,1µm,4.1s								
ESPR	**Espera**	**54.26**	**325**	P		**P**	**21 26 36.4**	**-1.1**
	comp=Z,202nm,1.0s,mb6.0								
EJON	**La Jonquera**	**54.26**	**336**	P		**P**	**21 26 36.7**	**-0.7**
	comp=Z,54nm,1.3s,mb5.3								
TREF	**Trevaresse**	**54.29**	**338**	*e*P		**P**	**21 26 37.9**	**+0.3**
BUD	**Budapest**	**54.32**	**351**	⇓*i*P		**P**	**21 26 38.1**	**+0.3**
AJM	**Ajmer**	**54.37**	**51**	*e*P		**P**	**21 26 37.8**	**-0.7**
AJM				*ex*		x	21 26 46.9		
	comp=Z,196nm,1.6s								
EMIR	**Miracle**	**54.39**	**334**	P		**P**	**21 26 37.2**	**-1.2**
	comp=Z,72nm,0.8s,mb5.7								
STOF	**St-Etienne Org**	**54.43**	**339**	*e*P		**P**	**21 26 39.8**	**+1.2**
CFTV	**Fuerteventura**	**54.46**	**312**	P		**P**	**21 26 40.2**	**+1.0**
	comp=Z,68nm,1.0s,mb5.5								
EADA	**Adamuz**	**54.47**	**327**	P		**P**	**21 26 38.5**	**-0.6**
	comp=Z,74nm,1.0s,mb5.6								
FILF	**Fillols**	**54.49**	**336**	*e*P		**P**	**21 26 39.7**	**+0.6**
PRAF	**Pradon**	**54.52**	**338**	*e*P		**P**	**21 26 39.5**	**+0.2**
SMRF	**Simiane la Rot**	**54.53**	**339**	⇓*i*P		**P**	**21 26 39.7**	**+0.4**
	comp=Z,159nm,1.3s,mb5.6								
SMRF	**Simiane la Rot**	**54.53**	**339**	⇓*i*P		**P**	**21 26 39.7**	**+0.4**
	comp=Z,159nm,1.3s,mb5.9								
SURF	**Saint Ours**	**54.53**	**340**	*e*P		**P**	**21 26 40.2**	**+0.8**
MYKA	**Terra Mystica**	**54.54**	**346**	⇓*i*P		**P**	**21 26 39.7**	**+0.3**
	comp=Z,8µm,3.5s								
PSZ	**Piszkesteto**	**54.62**	**352**	*e*P		**P**	**21 26 39.4**	**-0.5**
	comp=Z,310nm,1.4s,mb6.2								
PSZ	**Piszkesteto**	**54.62**	**352**	P		**P**	**21 26 39.9**	**0.0**
PSZ				pmax		pmax			
	comp=Z,310nm,1.4s,mb6.2								
PSZ	**Piszkesteto**	**54.62**	**352**	⇓*i*P		**P**	**21 26 39.9**	**0.0**
PSZ	**Piszkesteto**	**54.62**	**352**	⇓*i*P		**P**	**21 26 39.8**	**-0.1**
ARSA	**Arzberg**	**54.72**	**348**	⇓*i*P		**P**	**21 26 41.2**	**+0.5**
	comp=Z,883nm,2.8s,mb6.3								
MBDF	**Montbardon**	**54.77**	**340**	⇓*i*P		**P**	**21 26 41.5**	**+0.5**
	comp=Z,205nm,1.2s,mb5.7								
MBDF	**Montbardon**	**54.77**	**340**	⇓*i*P		**P**	**21 26 41.5**	**+0.5**
	comp=Z,102nm,1.2s,mb5.7								
MBDF	**Montbardon**	**54.77**	**340**	⇓*i*P		**P**	**21 26 41.5**	**+0.5**
MBDF				pmax		pmax			
	comp=Z,103nm,1.2s,mb5.7								
CARF	**Carcanieres**	**54.80**	**335**	*e*P		**P**	**21 26 41.7**	**+0.3**
LRDF	**Larcque-de-Fa**	**54.81**	**336**	*e*P		**P**	**21 26 41.6**	**+0.2**
ECAB	**El Cabril**	**54.87**	**326**	P		**P**	**21 26 40.5**	**-1.4**
	comp=Z,121nm,1.0s,mb5.9								
ABTA	**Abfaltersbach**	**54.92**	**346**	⇓*i*P		**P**	**21 26 42.5**	**+0.4**
	comp=Z,1µm,6.5s								
SOP	**Sopron**	**54.94**	**349**	⇓*i*P		**P**	**21 26 42.5**	**+0.3**
UZH	**Uzhgorod**	**55.03**	**354**	⇑*i*P		**P**	**21 26 41.2**	**-1.7**
UZH				*i*		pP	21 26 46.4	-1.0
UZH				*i*			21 28 44.0		
UZH				*i* S		**S**	**21 34 21.0**	**-3.7**
UZH				MLR		MLR			
	comp=Z,3µm,15.0s,MS5.4								
KBA	**Koelnbreinsper**	**55.03**	**346**	⇓*i*P		**P**	**21 26 43.4**	**+0.5**
	comp=Z,805nm,3.2s								
KBA	**Koelnbreinsper**	**55.03**	**346**	⇓*i*P		**P**	**21 26 43.4**	**+0.5**
KBA				pmax		pmax			
	comp=Z,805nm,3.2s								
BHPL	**Bhopal**	**55.08**	**56**	*e*P		**P**	**21 26 43.6**	**-0.1**
BHPL				*ex*		x	21 26 51.8		
	comp=Z,324nm,1.6s								
KECS	**Kecovo**	**55.09**	**353**	*i* P		**P**	**21 26 43.6**	**+0.3**
	comp=Z,61nm,1.1s,mb5.5								
KECS				*e*		pP	21 26 47.9	0.0
KECS	**Kecovo**	**55.09**	**353**	*i* P		**P**	**21 26 43.6**	**+0.3**
KECS				*e*		pP	21 26 47.9	0.0
KECS				pmax		pmax			
	comp=Z,61nm,1.1s,mb5.5								
MUGIO	**Muggio**	**55.11**	**343**	⇓*i*P		**P**	**21 26 42.1**	**-1.4**
	comp=Z,637nm,3.0s,mb6.1								
ESAC	**San Caprasio**	**55.12**	**333**	P		**P**	**21 26 42.5**	**-1.2**
	comp=Z,363nm,1.2s,mb6.3								
OCF	**Saint Nazaire**	**55.15**	**339**	*e*P		**P**	**21 26 44.7**	**+0.9**
OG26	**St.-Nazaire-De**	**55.15**	**339**	*e*P		**P**	**21 26 44.7**	**+0.9**
ETOR	**Torete**	**55.16**	**331**	P		**P**	**21 26 43.6**	**-0.4**
	comp=Z,46nm,1.3s,mb5.3								
ETOR	**Torete**	**55.16**	**331**	P		**P**	**21 26 43.6**	**-0.4**
ETOR				pmax		pmax			
	comp=Z,46nm,1.3s,mb5.3								
SALF	**Salau**	**55.23**	**335**	*e*P		**P**	**21 26 45.8**	**+1.4**
ORIF	**Oris-en-Rattie**	**55.24**	**340**	⇓*i*P		**P**	**21 26 44.7**	**+0.2**
ORIF				*e*MLR		MLR			
	comp=Z,6µm,18.8s,MS5.4								
LASF	**Ste Croix**	**55.25**	**338**	⇓*i*P		**P**	**21 26 45.0**	**+0.4**
	comp=Z,673nm,1.5s,mb6.2								
ESDC	**Sonseca Array**	**55.25**	**329**	P		**P**	**21 26 44.1**	**-0.6**
	comp=Z,21nm,1.1s,mb5.1								
ESDC	**Sonseca Array**	**55.25**	**329**	P		**P**	**21 26 44.3**	**-0.4**
	comp=Z,61nm,1.1s,mb5.6,baz=138,slow=7.5,SNR=28								
ESDC				LR		LR	21 52 27.9		
	comp=Z,5µm,18.8s,MS5.6,baz=125,slow=38								
BERNI	**Berninapass**	**55.27**	**344**	⇓*i*P		**P**	**21 26 45.1**	**+0.4**
	comp=Z,923nm,3.3s								
MTLF	**Montolieu**	**55.28**	**336**	⇓*i*P		**P**	**21 26 44.8**	**0.0**
CONA	**Conrad Observa**	**55.30**	**349**	⇓*i*P		**P**	**21 26 45.3**	**+0.4**
	comp=Z,1µm,4.1s								
KOLS	**Kolonicke sedl**	**55.33**	**354**	*e*P		**P**	**21 26 45.2**	**+0.2**
KOLS				*e*			21 26 54.1		
ZST	**Bratislava**	**55.33**	**350**	*e*P		**P**	**21 26 45.0**	**-0.1**
	comp=Z,98nm,1.1s,mb5.8								
ZST				*e*		pP	21 26 49.1	-0.5
ZST				*e*PP		PP	21 28 50.5	+1.5
ZST				*e*S		**S**	**21 34 27.7**	**-1.0**
ZST				LR		LR			
	comp=Z,4µm,14.1s,MS5.7								
ZST	**Bratislava**	**55.33**	**350**	*e*P		**P**	**21 26 45.0**	**-0.1**
ZST				*e*pP		pP	21 26 49.1	-0.5
ZST				*e*PP		PP	21 28 50.5	+1.5
ZST				*e*S		**S**	**21 34 27.7**	**-1.0**
VYHS	**Vyhne**	**55.34**	**351**	*i* P		**P**	**21 26 44.6**	**-0.5**
	comp=Z,71nm,1.1s,mb5.6								
VYHS				*e*		pP	21 26 49.5	-0.2
VYHS				*e*PP		PP	21 28 49.9	+0.9
VYHS				*e*S		**S**	**21 34 27.5**	**-1.3**
VYHS	**Vyhne**	**55.34**	**351**	*i* P		**P**	**21 26 44.6**	**-0.5**
VYHS				*e*		pP	21 26 49.5	-0.2
VYHS				*e*			21 28 49.9		
VYHS				*e*S		**S**	**21 34 27.5**	**-1.3**
VYHS				pmax		pmax			
	comp=Z,71nm,1.1s,mb5.6								
VYHS	**Vyhne**	**55.34**	**351**	*i* P		**P**	**21 26 44.6**	**-0.5**
VYHS				*e*pP		pP	21 26 49.5	-0.2
VYHS				*e*PP		PP	21 28 49.9	+0.9
VYHS				*e*S		**S**	**21 34 27.4**	**-1.4**
EMIN	**Mina Concepcio**	**55.35**	**325**	P		**P**	**21 26 44.7**	**-0.8**
	comp=Z,128nm,1.6s,mb5.7								
PAB	**San Pablo**	**55.36**	**328**	*e*P		**P**	**21 26 44.6**	**-0.9**
	comp=Z,52nm,1.2s,mb5.4								
PAB				LR		LR			
	comp=Z,8µm,19.0s,MS5.8								
PAB	**San Pablo**	**55.36**	**328**	P		**P**	**21 26 45.1**	**-0.3**
PAB				pmax		pmax			
	comp=Z,52nm,1.2s,mb5.4								
CRVS	**Cervenica-Dubn**	**55.39**	**353**	*e*P		**P**	**21 26 45.5**	**0.0**
CRVS				*e*pP		pP	21 26 51.9	+1.9
CRVS				*e*S		**S**	**21 34 28.2**	**-1.3**
FUORN	**Ofenpass-Fuorn**	**55.39**	**344**	⇓*i*P		**P**	**21 26 45.9**	**+0.3**
	comp=Z,969nm,4.2s								
GDM	**Grand'Maison**	**55.41**	**340**	*e*P		**P**	**21 26 45.5**	**-0.2**
MLS	**Moulis**	**55.43**	**335**	*e*P		**P**	**21 26 46.1**	**+0.2**
LPG	**La Plagne**	**55.45**	**341**	⇓*i*P		**P**	**21 26 46.6**	**+0.6**
	comp=Z,221nm,1.1s,mb5.8								
LPG	**La Plagne**	**55.45**	**341**	⇓*i*P		**P**	**21 26 46.6**	**+0.6**
	comp=Z,111nm,1.1s,mb5.8								
LPG	**La Plagne**	**55.45**	**341**	⇓*i*P		**P**	**21 26 46.6**	**+0.6**
LPG				pmax		pmax			
	comp=Z,111nm,1.1s,mb5.8								
MODS	**Modra-Piesok**	**55.47**	**350**	*e*P		**P**	**21 26 46.0**	**-0.1**
MODS				*e*pP		pP	21 26 50.1	-0.5
MODS				*e*PP		PP	21 28 51.8	+1.6
MODS				*e*S		**S**	**21 34 30.9**	**+0.3**
LPL	**La Plagne**	**55.47**	**341**	⇓*i*P		**P**	**21 26 45.9**	**-0.3**
	comp=Z,274nm,1.4s,mb5.8								
LPL	**La Plagne**	**55.47**	**341**	⇓*i*P		**P**	**21 26 45.9**	**-0.3**
	comp=Z,137nm,1.4s,mb5.8								
LPL	**La Plagne**	**55.47**	**341**	⇓*i*P		**P**	**21 26 45.9**	**-0.3**
LPL				pmax		pmax			
	comp=Z,137nm,1.4s,mb5.8								
KOLL	**Kolacno**	**55.48**	**351**	*e*P		**P**	**21 26 46.0**	**-0.2**
KOLL				*e*pP		pP	21 26 50.7	0.0
VDL	**Val di Lei**	**55.50**	**343**	⇓*i*P		**P**	**21 26 46.0**	**-0.3**
	comp=Z,730nm,3.6s								
MOA	**Molln**	**55.55**	**347**	⇓*i*P		**P**	**21 26 46.8**	**+0.2**
	comp=Z,1µm,4.2s								
NGP	**Nagpur**	**55.56**	**59**	*e*P		**P**	**21 26 45.1**	**-2.1**
NGP				*ex*		x	21 26 52.1		
	comp=Z,119nm,1.7s								
NGP				*e*S		**S**	**21 34 30.6**	**-2.2**
GRN	**Grenoble**	**55.57**	**340**	*e*P		**P**	**21 26 47.3**	**+0.5**
SMOL	**Smolenice**	**55.58**	**350**	*e*P		**P**	**21 26 46.5**	**-0.4**
SMOL				*e*		pP	21 26 51.1	-0.3
SMOL	**Smolenice**	**55.58**	**350**	*e*P		**P**	**21 26 46.5**	**-0.4**
SMOL				*e*pP		pP	21 26 51.1	-0.3
VIVF	**Saint-Julien-l**	**55.61**	**339**	⇓*i*P		**P**	**21 26 47.7**	**+0.5**
	comp=Z,638nm,1.6s,mb6.1								
VIVF	**Saint-Julien-l**	**55.61**	**339**	⇓*i*P		**P**	**21 26 47.7**	**+0.5**
	comp=Z,319nm,1.6s,mb6.1								
VIVF	**Saint-Julien-l**	**55.61**	**339**	⇓*i*P		**P**	**21 26 47.7**	**+0.5**
VIVF				pmax		pmax			
	comp=Z,319nm,1.6s,mb6.1								
EBIE	**Bielsa**	**55.62**	**334**	P		**P**	**21 26 47.1**	**-0.1**
	comp=Z,187nm,1.7s,mb5.8								
WTTA	**Wattenberg**	**55.62**	**345**	⇓*i*P		**P**	**21 26 47.6**	**+0.4**
	comp=Z,866nm,3.3s								
WTTA	**Wattenberg**	**55.62**	**345**	⇓*i*P		**P**	**21 26 47.6**	**+0.4**
WTTA				pmax		pmax			
	comp=Z,866nm,3.3s								
RESF	**Ens**	**55.63**	**334**	*e*P		**P**	**21 26 48.1**	**+0.8**
FETA	**Feichten**	**55.64**	**344**	⇓*i*P		**P**	**21 26 47.4**	**+0.1**
	comp=Z,931nm,4.6s								
DAVOX	**Davos/Dischmat**	**55.65**	**344**	LR		LR	21 54 06.7		
	comp=Z,6µm,18.3s,MS5.7,baz=160,slow=40								
DAVOX	**Davos/Dischmat**	**55.65**	**344**	⇓*i*P		**P**	**21 26 46.4**	**-1.0**
	comp=Z,376nm,2.2s,mb6.0								
EGRO	**El Granado**	**55.65**	**324**	P		**P**	**21 26 48.0**	**+0.4**
	comp=Z,55nm,0.7s,mb5.7								
SQTA	**Sankt Quirin**	**55.69**	**345**	⇓*i*P		**P**	**21 26 47.8**	**+0.1**
	comp=Z,58nm,1.0s,mb5.6								
SQTA	**Sankt Quirin**	**55.69**	**345**	⇓*i*P		**P**	**21 26 47.8**	**+0.1**
SQTA				pmax		pmax			
	comp=Z,58nm,1.0s,mb5.6								
PVAQ	**Vaqueiros**	**55.70**	**324**	*i* P		**P**	**21 26 52.8**	**+4.8**
PVAQ				*e*S		**S**	**21 34 37.3**	**+3.2**
PVAQ				*e*LR		LR	21 44 22.8		
	comp=Z,5µm,21.4s								
FUSIO	**Fusio**	**55.70**	**343**	⇓*i*P		**P**	**21 26 47.2**	**-0.6**
	comp=Z,149nm,0.9s,mb6.0								
WATA	**Walderalm**	**55.70**	**345**	⇓*i*P		**P**	**21 26 47.8**	**0.0**
	comp=Z,80nm,1.2s,mb5.6								
WATA	**Walderalm**	**55.70**	**345**	⇓*i*P		**P**	**21 26 47.8**	**0.0**
WATA				pmax		pmax			
	comp=Z,80nm,1.2s,mb5.6								
PBDV	**Barranco-do-Ve**	**55.72**	**324**	*e*S		**S**	**21 34 23.1**	**-11**
PBDV	**Barranco-do-Ve**	**55.72**	**324**	*e*LR		LR	21 44 24.3		
	comp=Z,3µm,26.8s								
DIX	**Grande Dixence**	**55.76**	**341**	⇓*i*P		**P**	**21 26 47.4**	**-0.8**
	comp=Z,343nm,2.2s,mb6.0								
EPF	**Esparros**	**55.81**	**334**	⇓*i*P		**P**	**21 26 49.5**	**+0.9**
	comp=Z,259nm,1.1s,mb5.9								
EPF	**Esparros**	**55.81**	**334**	⇓*i*P		**P**	**21 26 49.5**	**+0.9**
	comp=Z,129nm,1.1s,mb5.9								
EPF	**Esparros**	**55.81**	**334**	⇓*i*P		**P**	**21 26 49.5**	**+0.9**
EPF				pmax		pmax			
	comp=Z,129nm,1.1s,mb5.9								
VIEF	**Viey**	**55.83**	**334**	*e*P		**P**	**21 26 49.4**	**+0.6**
MOTA	**Moosalm**	**55.84**	**345**	⇓*i*P		**P**	**21 26 48.4**	**-0.3**
	comp=Z,74nm,1.1s,mb5.6								
MOTA	**Moosalm**	**55.84**	**345**	⇓*i*P		**P**	**21 26 48.4**	**-0.3**
MOTA				pmax		pmax			
	comp=Z,74nm,1.1s,mb5.6								
LIKS	**Likavka**	**55.84**	**352**	*e*P		**P**	**21 26 50.1**	**+1.4**
	comp=Z,58nm,0.7s,mb5.7								
LIKS	**Likavka**	**55.84**	**352**	*e*P		**P**	**21 26 50.1**	**+1.4**
LIKS				pmax		pmax			
	comp=Z,58nm,0.7s,mb5.7								
PBAR	**Barrancos**	**55.84**	**325**	*i* P		**P**	**21 26 53.5**	**+4.5**
PBAR				*e*S		**S**	**21 34 36.9**	**+1.0**
PBAR				*e*LQ			21 42 23.2		
PBAR				*e*LR		LR	21 45 30.3		
	comp=Z,4µm,17.3s								
EMV	**Vieux Emosson**	**55.90**	**341**	⇓*i*P		**P**	**21 26 48.2**	**-1.0**
	comp=Z,267nm,2.9s,mb5.8								
STHS	**Stebnicka Huta**	**55.92**	**353**	*i* P		**P**	**21 26 49.9**	**+0.6**
STHS				*e*pP		pP	21 26 54.1	+0.3
STHS				*e*PP		PP	21 28 51.1	-3.1
LABF	**Labassere**	**55.94**	**334**	*e*P		**P**	**21 26 50.7**	**+1.2**
SALAN	**Lac Salanfe**	**55.95**	**341**	⇓*i*P		**P**	**21 26 48.4**	**-1.2**
	comp=Z,247nm,2.6s,mb5.8								
KWP	**Kalwaria**	**55.98**	**355**	*i* P		**P**	**21 26 50.0**	**+0.3**
	comp=Z,500nm,1.6s,mb6.3								
KWP				*e*pP		pP	21 26 51.6	-2.6
KWP				*e*sP		sP	21 26 54.1	-1.9
KWP				*e*PP		PP	21 28 54.2	-0.5
KWP				*e*S		**S**	**21 34 38.3**	**+1.0**
KWP				*e*			21 34 48.7		
KWP				LMZ			21 51 56.0		
	comp=Z,4µm,22.6s								
KWP	**Kalwaria**	**55.98**	**355**	⇓*i*P		**P**	**21 26 50.0**	**+0.3**
KWP				*e*pP		pP	21 26 51.6	-2.7
KWP				*e*sP		sP	21 26 54.1	-1.9
KWP				*e*PP		PP	21 28 54.2	-0.5
KWP				*e*S		**S**	**21 34 38.3**	**+1.0**
KWP				*e*			21 34 48.7		
KWP	**Kalwaria**	**55.98**	**355**	⇓*i*P		**P**	**21 26 49.7**	**0.0**
GRYON	**Gryon**	**56.00**	**341**	⇓*i*P		**P**	**21 26 48.6**	**-1.3**
	comp=Z,170nm,2.0s,mb5.7								
PLONS	**Plons/SG**	**56.03**	**343**	⇓*i*P		**P**	**21 26 49.3**	**-0.8**
	comp=Z,712nm,2.5s,mb6.3								
NIE	**Niedzica**	**56.03**	**353**	*i* P		**P**	**21 26 50.3**	**+0.2**
SENIN	**Lac Senin/Sane**	**56.04**	**341**	⇓*i*P		**P**	**21 26 49.1**	**-1.1**
	comp=Z,354nm,3.0s								
LVV	**L'vov**	**56.05**	**356**	*e*P		**P**	**21 26 48.5**	**-1.7**
LVV				*e*			21 29 00.9		
LVV				*e*			21 30 08.5		
LVV				*i* S		**S**	**21 34 33.1**	**-5.2**
LVV				*e*			21 34 55.5		
LVV				*e*			21 38 17.7		
LVV				MLR		MLR			
	comp=Z,100nm,15.0s								
LVV				MLR		MLR			
	comp=E,100nm,20.0s								
LVV				MLR		MLR			
	comp=N,100nm,15.0s								
RETA	**Reutte**	**56.06**	**345**	⇓*i*P		**P**	**21 26 49.9**	**-0.4**
	comp=N,474nm,3.0s,mb6.0								
GUD	**Guadarrama**	**56.07**	**329**	P		**P**	**21 26 50.1**	**-0.4**
	comp=N,66nm,1.4s,mb5.5								
GUD	**Guadarrama**	**56.07**	**329**	P		**P**	**21 26 50.1**	**-0.4**
GUD				pmax		pmax			
	comp=Z,66nm,1.4s,mb5.5								
ETSF	**Etsaut**	**56.10**	**334**	⇓*i*P		**P**	**21 26 51.5**	**+0.8**
	comp=Z,477nm,1.5s,mb6.0								
ETSF	**Etsaut**	**56.10**	**334**	⇓*i*P		**P**	**21 26 51.5**	**+0.8**
	comp=Z,239nm,1.5s,mb6.0								
ETSF	**Etsaut**	**56.10**	**334**	⇓*i*P		**P**	**21 26 51.5**	**+0.8**
ETSF				pmax		pmax			
	comp=Z,239nm,1.5s,mb6.0								
DAVA	**Damuels**	**56.11**	**344**	⇑*i*P		**P**	**21 26 50.3**	**-0.3**
	comp=Z,237nm,1.8s,mb5.9								
HASLI	**Hasliberg/Brie**	**56.13**	**342**	⇓*i*P		**P**	**21 26 49.9**	**-0.9**
	comp=Z,353nm,1.2s,mb6.3								
AIGLE	**Aigle**	**56.13**	**341**	⇓*i*P		**P**	**21 26 49.4**	**-1.5**
	comp=Z,483nm,4.1s								
BNALP	**Bannalp**	**56.15**	**343**	⇓*i*P		**P**	**21 26 50.2**	**-0.8**
	comp=Z,635nm,2.3s,mb6.2								
REYF	**Montagne du Re**	**56.16**	**334**	*e*P		**P**	**21 26 52.3**	**+1.2**
PFVI	**Vila Bisbo**	**56.17**	**323**	*i* P		**P**	**21 26 56.3**	**+5.0**
PFVI				*e*S		**S**	**21 34 44.5**	**+4.2**
PFVI				*e*LR		LR	21 44 36.6		
	comp=Z,2µm,15.8s								
MUO	**Muotathal**	**56.17**	**343**	⇓*i*P		**P**	**21 26 50.5**	**-0.7**
	comp=Z,602nm,2.0s,mb6.3								
MORF	**Marmelete**	**56.18**	**323**	*i* P		**P**	**21 26 56.9**	**+5.5**
MORF				*e*S		**S**	**21 34 42.6**	**+2.1**
MORF	**Marmelete**	**56.18**	**323**	*e*LR		LR	21 44 45.8		
	comp=Z,3µm,19.3s								
PBEJ	**Beja**	**56.21**	**325**	*e*P		**P**	**21 26 52.1**	**+0.5**
PBEJ				*i* P		pP	21 26 55.8	-0.4
LIENZ	**Kamor/St.Gall**	**56.23**	**344**	⇓*i*P		**P**	**21 26 50.7**	**-0.8**
	comp=Z,489nm,3.1s								
EBAD	**Badajoz**	**56.23**	**326**	P		**P**	**21 26 51.9**	**+0.2**
	comp=Z,149nm,1.4s,mb5.8								
ATE	**Arette**	**56.31**	**334**	*e*P		**P**	**21 26 53.8**	**+1.6**
PTEO	**Sao Teotonio**	**56.38**	**324**	*i* P		**P**	**21 26 59.0**	**+6.1**
LARF	**Larrau**	**56.40**	**333**	*e*P		**P**	**21 26 53.8**	**+1.0**
VRAC	**Vranov**	**56.49**	**350**	⇓P		**P**	**21 26 52.8**	**-0.6**
VRAC	**Vranov**	**56.49**	**350**	P		**P**	**21 26 53.2**	**-0.2**
VRAC	**Vranov**	**56.49**	**350**	LR		LR	21 53 34.1		
	comp=Z,3µm,20.1s,MS5.3,baz=172,slow=39								
VRAC	**Vranov**	**56.49**	**350**	⇓*i*P		**P**	**21 26 52.8**	**-0.6**
WILA	**Wila**	**56.50**	**343**	⇓*i*P		**P**	**21 26 53.0**	**-0.5**
	comp=Z,746nm,3.2s								
GIMEL	**St. Georges /**	**56.52**	**341**	⇓*i*P		**P**	**21 26 52.5**	**-1.2**
	comp=Z,889nm,4.4s								
COLF	**Collangettes**	**56.54**	**338**	*e*P		**P**	**21 26 54.4**	**+0.6**
FUR	**Furstenfeldbru**	**56.55**	**345**	*e*P		**P**	**21 26 53.1**	**-0.7**
FUR				pmax		pmax			
	comp=Z,179nm,1.0s,mb6.0								
FUR	**Furstenfeldbru**	**56.55**	**345**	*e*P		**P**	**21 26 53.1**	**-0.7**
	comp=Z,179nm,1.0s,mb6.0								
ZUR	**Degenried**	**56.55**	**343**	⇓*i*P		**P**	**21 26 53.0**	**-0.8**
	comp=Z,938nm,3.3s								
SJPF	**Ste Jean**	**56.56**	**333**	⇓*i*P		**P**	**21 26 54.9**	**+0.9**
	comp=Z,324nm,1.2s,mb5.9								
SJPF	**Ste Jean**	**56.56**	**333**	⇓*i*P		**P**	**21 26 54.9**	**+0.9**
	comp=Z,162nm,1.2s,mb5.9								
SJPF	**Ste Jean**	**56.56**	**333**	⇓*i*P		**P**	**21 26 54.9**	**+0.9**
SJPF				pmax		pmax			
	comp=Z,162nm,1.2s,mb5.9								
WEIN	**Weingarten**	**56.58**	**343**	⇓*i*P		**P**	**21 26 53.1**	**-0.9**
	comp=Z,460nm,3.5s								
GEC2	**GERESS Array S**	**56.62**	**347**	*e*P		**P**	**21 26 54.1**	**-0.2**
GEC2				*e*S		**S**	**21 34 42.5**	**-3.4**
GEC2				pmax		pmax			
	comp=Z,270nm,1.4s,mb6.1								
GEC2	**GERESS Array S**	**56.62**	**347**	*e*P		**P**	**21 26 54.1**	**-0.2**
	comp=Z,270nm,1.4s,mb6.1								
GEC2				*e*S		**S**	**21 34 42.5**	**-3.4**
GERES	**GERESS Array B**	**56.62**	**347**	P		**P**	**21 26 53.6**	**-0.7**
GERES							21 29 00.7		
GERES	**GERESS Array B**	**56.62**	**347**	P		**P**	**21 26 53.6**	**-0.6**
	comp=

KHC ePP PP 21 29 02.1 -1.0
KHC ex x 21 30 09.4
KHC eS **S** **21 34 47.4 -2.4**
KHC AMS AMS 21 54 30.0
comp=Z,6µm,15.6s
SLE Schleitheim 56.94 343 ⇓*i* P **P** **21 26 56.0 -0.6**
comp=Z,805nm,2.7s,mb6.3
BBS Basel-Blauen 56.96 342 *e*P **P** **21 26 56.8 +0.1**
BOURR Bourrignon 56.98 342 ⇓*i* P **P** **21 26 56.8 -0.1**
comp=Z,981nm,2.0s,mb6.5
RAC Raciborz 56.98 351 *e*P **P** **21 26 57.0 +0.2**
RAC eS **S** **21 34 50.8 +0.2**
RAC LR LR
comp=Z,3µm,19.6s,MS5.4
RAC Raciborz 56.98 351 *e*P **P** **21 26 57.0 +0.2**
RAC eS **S** **21 34 50.8 +0.2**
RAC MLR MLR
comp=Z,3µm,19.6s,MS5.4
RAC MLR MLR
comp=N,4µm,20.1s,MS5.8
RAC MLR MLR
comp=E,5µm,16.7s,MS5.8
RAC MLR MLR
comp=Z,4µm,17.0s
LOMF Lomont 57.07 342 *e*P **P** **21 26 57.5 0.0**
WET Wettzell 57.08 347 *e*P **P** **21 26 57.0 -0.6**
WET *e* 21 29 03.0
WET pmax pmax
comp=Z,173nm,1.2s,mb6.0
WET Wettzell 57.08 347 *e*P **P** **21 26 57.0 -0.6**
comp=Z,173nm,1.2s,mb6.0
WET ePP PP 21 29 03.0 -1.6
SPAK Spaichingen-Ko 57.16 343 *e*P **P** **21 26 58.1 0.0**
JBP Jabalpur 57.17 57 ⇓*i* P **P** **21 26 57.8 -0.9**
JBP *ex* x 21 27 05.8
comp=Z,210nm,1.7s
JBP *i* S **S** **21 34 54.5 +0.4**
FELD Feldberg im Sc 57.18 343 *e*P **P** **21 26 58.1 -0.2**
VERF Verneugheol 57.18 338 *e*P **P** **21 26 58.8 +0.4**
RJF Les Rejaudoux 57.19 337 ⇓*i* P **P** **21 26 58.7 +0.3**
comp=Z,378nm,1.4s,mb5.9
RJF *e*MLR MLR
comp=Z,9µm,19.0s,MS5.6
RJF Les Rejaudoux 57.19 337 ⇓*i* P **P** **21 26 58.7 +0.3**
comp=Z,189nm,1.4s,mb5.9
RJF LR LR
comp=Z,9µm,19.0s,MS5.9
RJF Les Rejaudoux 57.19 337 ⇓*i* P **P** **21 26 58.7 +0.3**
RJF pmax pmax
comp=Z,189nm,1.4s,mb5.9
RJF MLR MLR
comp=Z,9µm,19.0s,MS5.9
LFF La Frestale 57.20 336 ⇓*i* P **P** **21 26 59.0 +0.5**
comp=Z,354nm,1.2s,mb6.0
LFF La Frestale 57.20 336 ⇓*i* P **P** **21 26 59.0 +0.5**
comp=Z,177nm,1.2s,mb6.0
LFF La Frestale 57.20 336 ⇓*i* P **P** **21 26 59.0 +0.5**
LFF pmax pmax
comp=Z,177nm,1.2s,mb6.0
PCBR Castelo Branco 57.25 326 *i* P **P** **21 27 03.4 +4.5**
LIS Lisbon 57.42 324 *e*P **P** **21 26 59.7 -0.5**
LIS eS **S** **21 34 58.4 +1.6**
LIS eS **S** **21 34 58.7 +1.9**
LIS AMS AMS 21 53 19.6
comp=N,5µm,14.1s
LIS Lisbon 57.42 324 *e*P **P** **21 26 59.7 -0.5**
LIS eS **S** **21 34 58.4 +1.6**
MOF Molkenrain 57.42 342 *e*P **P** **21 27 00.1 +0.1**
NDI New Delhi 57.44 50 *e*P **P** **21 26 58.5 -2.1**
NDI eS **S** **21 34 56.0 -1.5**
SMF Signal de Mont 57.45 339 ⇓*i* P **P** **21 27 00.3 +0.1**
comp=N,169nm,1.1s,mb5.7
SMF Signal de Mont 57.45 339 ⇓*i* P **P** **21 27 00.3 +0.1**
comp=N,85nm,1.1s,mb5.7
SMF Signal de Mont 57.45 339 ⇓*i* P **P** **21 27 00.3 +0.1**
SMF pmax pmax
comp=Z,85nm,1.1s,mb5.7
HINF Hinteralfeld 57.47 342 ⇓*i* P **P** **21 27 00.2 -0.2**
comp=Z,88nm,0.9s,mb5.5
HINF Hinteralfeld 57.47 342 ⇓*i* P **P** **21 27 00.2 -0.2**
comp=Z,44nm,0.9s,mb5.5
HINF Hinteralfeld 57.47 342 ⇓*i* P **P** **21 27 00.2 -0.2**
HINF pmax pmax
comp=Z,44nm,0.9s,mb5.5
BFO Black Forest 57.49 343 *e*P **P** **21 27 00.1 -0.4**
BFO eS **S** **21 34 55.8 -1.6**
BFO pmax pmax
comp=Z,128nm,1.4s,mb5.8
BFO Black Forest 57.49 343 *e*P **P** **21 27 00.1 -0.4**
comp=Z,128nm,1.4s,mb5.8
BFO eS **S** **21 34 55.8 -1.6**
PRU Pruhonice 57.53 348 ⇓*i* P **P** **21 26 59.6 -1.1**
PRU *ep*P pP 21 27 03.5 -1.8
PRU *e*PP PP 21 29 02.5 -6.0
PRU *ex* x 21 30 26.9
PRU eS **S** **21 34 53.9 -3.9**
PRU AMS AMS 21 54 10.0
comp=Z,4µm,16.9s
DPC Dobruska-Polom 57.55 350 *e*P **P** **21 27 04.1 +3.3**
DPC *e*PP PP 21 29 06.6 -2.1
DPC *ex* x 21 30 26.9
DPC eS **S** **21 34 52.6 -5.4**
DPC AMS AMS 21 55 20.0
comp=Z,3µm,15.0s
VORD Divnogorie 57.58 7 *e*P **P** **21 27 00.2 -0.9**
VORD pmax pmax
comp=N,140nm,1.3s
VORD pmax pmax
comp=Z,140nm,1.3s,mb5.8
VORD pmax pmax
comp=E,70nm,0.8s
VORD MLR MLR
comp=N,2µm,13.0s,MS5.5
VORD MLR MLR
comp=Z,2µm,13.0s,MS5.4
VORD MLR MLR
comp=E,2µm,18.0s,MS5.5
PRA Prague 57.63 348 ⇓P **P** **21 27 01.0 -0.4**
PRA pP pP 21 27 05.0 -1.0
STU Stuttgart 57.66 344 *e*P **P** **21 27 01.6 0.0**
comp=Z,313nm,1.7s,mb6.1
STU eS **S** **21 34 59.4 -0.1**
PMAFR Mafra 57.66 325 eS **S** **21 35 05.4 +5.5**
PMAFR Mafra 57.66 325 eLR LR 21 47 22.3
comp=Z,5µm,15.5s
ELAN Lanestosa 57.67 332 P **P** **21 27 01.6 -0.3**
comp=Z,477nm,1.6s,mb6.3
MTE Manteigas 57.67 327 *i* P **P** **21 27 06.5 +4.6**
MTE eS **S** **21 35 03.8 +3.7**
MTE eLQ 21 41 33.3
MTE eLR LR 21 46 49.5
comp=Z,5µm,17.1s
BGF Bois d'Agland 57.73 338 ⇓*i* P **P** **21 27 02.5 +0.3**
comp=Z,141nm,1.2s,mb5.6
BGF Bois d'Agland 57.73 338 ⇓*i* P **P** **21 27 02.5 +0.3**
comp=Z,71nm,1.2s,mb5.6
BGF Bois d'Agland 57.73 338 ⇓*i* P **P** **21 27 02.5 +0.3**
BGF pmax pmax
comp=Z,71nm,1.2s,mb5.6
ECH Echery 57.74 342 *e*P **P** **21 27 01.8 -0.4**
TCF Toulx Ste Croi 57.74 338 ⇓*i* P **P** **21 27 03.1 +0.8**
comp=Z,482nm,1.4s,mb6.0
TCF Toulx Ste Croi 57.74 338 ⇓*i* P **P** **21 27 03.1 +0.8**
comp=Z,241nm,1.4s,mb6.0
TCF Toulx Ste Croi 57.74 338 ⇓*i* P **P** **21 27 03.1 +0.8**
TCF pmax pmax
comp=Z,241nm,1.4s,mb6.0
AVF Avril sur Loir 57.75 339 ⇓*i* P **P** **21 27 02.3 0.0**
comp=Z,240nm,1.2s,mb5.8
AVF Avril sur Loir 57.75 339 ⇓*i* P **P** **21 27 02.3 0.0**
comp=Z,120nm,1.2s,mb5.8
AVF Avril sur Loir 57.75 339 ⇓*i* P **P** **21 27 02.3 0.0**
AVF pmax pmax
comp=Z,120nm,1.2s,mb5.8
UPC Upice 57.75 350 ⇓*i* P **P** **21 27 01.7 -0.6**
HAU Haudompre 57.80 342 ⇓*i* P **P** **21 27 02.6 0.0**
comp=Z,189nm,1.3s,mb5.7
HAU *e*MLR MLR
comp=Z,4µm,17.0s,MS5.3
HAU Haudompre 57.80 342 ⇓*i* P **P** **21 27 02.6 0.0**
comp=Z,94nm,1.3s,mb5.7
HAU LR LR
comp=Z,4µm,17.0s,MS5.6
HAU Haudompre 57.80 342 ⇓*i* P **P** **21 27 02.6 0.0**
HAU pmax pmax
comp=Z,95nm,1.3s,mb5.7
HAU MLR MLR
comp=Z,4µm,17.0s,MS5.6
VRSR Storozhevoye 57.82 7 *d i*P **P** **21 27 01.5 -1.2**
VRSR *e* 21 27 54.0
VRSR *e*S **S** **21 35 01.2 -0.3**
VRSR *e* 21 36 53.7
VRSR pmax pmax
comp=Z,220nm,5.5s
VRSR pmax pmax
comp=N,110nm,5.9s
VRSR pmax pmax
comp=E,20nm,6.0s
VRSR smax
comp=N,60nm,4.8s
VRSR smax
comp=Z,20nm,3.3s
VRSR smax
comp=E,80nm,4.4s
VRSR MLR MLR
comp=Z,360nm,18.0s,MS4.5
ROTZ Rotzenmuhle 57.82 347 *e*P **P** **21 27 02.3 -0.5**
comp=Z,218nm,1.3s,mb6.0
ROTZ *e*PP PP 21 29 08.8 -2.3
ROTZ *e*PPP 21 30 28.4
CDF Champ du Feu 57.88 343 ⇓*i* P **P** **21 27 02.8 -0.4**
comp=Z,181nm,1.0s,mb5.8
CDF Champ du Feu 57.88 343 ⇓*i* P **P** **21 27 02.8 -0.4**
comp=Z,91nm,1.0s,mb5.8
CDF Champ du Feu 57.88 343 ⇓*i* P **P** **21 27 02.8 -0.4**
CDF pmax pmax
comp=Z,91nm,1.0s,mb5.8
SSF Saint Saulge 57.92 339 ⇓*i* P **P** **21 27 03.2 -0.3**
comp=Z,117nm,1.4s,mb5.4
SSF Saint Saulge 57.92 339 ⇓*i* P **P** **21 27 03.2 -0.3**
comp=Z,58nm,1.4s,mb5.4
SSF Saint Saulge 57.92 339 ⇓*i* P **P** **21 27 03.2 -0.3**
SSF pmax pmax
comp=Z,58nm,1.4s,mb5.4
MVO Moncorvo 57.94 328 *i* P **P** **21 27 08.4 +4.6**
MVO eS **S** **21 35 06.3 +2.8**
MVO eLQ 21 44 24.8
MVO eLR LR 21 48 16.4
comp=Z,6µm,14.1s
LOR Lormes 57.98 340 ⇓*i* P **P** **21 27 03.7 -0.2**
comp=Z,157nm,1.1s,mb5.6
LOR *e*MLR MLR
comp=Z,6µm,18.2s,MS5.5
LOR Lormes 57.98 340 ⇓*i* P **P** **21 27 03.7 -0.2**
comp=Z,78nm,1.1s,mb5.7
LOR LR LR
comp=Z,6µm,18.3s,MS5.8
LOR Lormes 57.98 340 ⇓*i* P **P** **21 27 03.7 -0.2**
LOR pmax pmax
comp=Z,78nm,1.1s,mb5.7
LOR MLR MLR
comp=Z,6µm,18.3s,MS5.8
GRA1 Grafenberg Arr 57.98 346 *e*P **P** **21 27 03.6 -0.3**
comp=Z,371nm,1.1s,mb6.3
GRA1 *e*PP PP 21 29 11.0 -1.6
GRA1 *e*S **S** **21 34 59.4 -4.4**
GRA1 LR LR
comp=Z,4µm,19.0s,MS5.5
GRF Grafenberg Arr 57.98 346 *e*P **P** **21 27 03.6 -0.3**
GRF *e* 21 29 11.0
GRF *e*S **S** **21 34 59.4 -4.4**
GRF pmax pmax
comp=Z,371nm,1.1s,mb6.3
GRF MLR MLR
comp=N,4.0nm,19.0s
GRF Grafenberg Arr 57.98 346 *e*P **P** **21 27 03.6 -0.3**
GRF *e* 21 29 11.0
GRF *e*S **S** **21 34 59.4 -4.4**
GRF pmax pmax
comp=Z,371nm,1.1s,mb6.3
GRF MLR MLR
comp=Z,4µm,19.0s,MS5.5
GRF Grafenberg Arr 57.98 346 *e*P **P** **21 27 03.6 -0.3**
comp=Z,371nm,1.1s,mb6.3
GRF *e*PP PP 21 29 11.0 -1.6
GRF *e*S **S** **21 34 59.4 -4.4**
GRF *e*L 21 55 04.9
comp=Z,3µm,19.0s
GRFO Grafenberg 57.98 346 *e*P **P** **21 27 03.6 -0.3**
comp=Z,314nm,1.1s,mb6.3
GRFO LR LR
comp=Z,3µm,19.0s,MS5.5
GRFO Grafenberg 57.98 346 *e*P **P** **21 27 03.6 -0.3**
GRFO pmax pmax
comp=Z,314nm,1.1s,mb6.3
GRFO MLR MLR
comp=Z,3µm,19.0s,MS5.5
KSP Ksiaz 58.02 350 *i* P **P** **21 27 03.7 -0.4**
comp=Z,700nm,2.9s,mb6.2
KSP *ep*P pP 21 27 06.1 -2.6
KSP *es*P sP 21 27 08.0 -2.5
KSP *e*PcP PcP 21 27 56.7 +0.7
KSP *e*PP PP 21 29 14.2 +1.3
KSP eS **S** **21 35 04.0 -0.3**
KSP *e* 21 35 19.0
KSP LMZ 21 55 40.4
comp=Z,6µm,19.7s
KSP Ksiaz 58.02 350 ⇓*e*P **P** **21 27 03.6 -0.6**
KSP *e**PP pP 21 27 07.4 -1.4
KSP *e* 21 29 12.2
KSP *e*PPP 21 30 36.5
KSP eS **S** **21 35 00.5 -3.8**
KSP *e* 21 36 57.5
KSP *es*S SS 21 39 01.0 +5.1
KSP MLR MLR
comp=Z,7µm,19.7s,MS5.8
VRHR Novokhopersk 58.03 9 *e*P **P** **21 27 03.5 -0.7**
VRHR pmax pmax
comp=Z,110nm,0.7s,mb6.0
VRHR pmax pmax
comp=N,50nm,0.6s
VRHR pmax pmax
comp=E,30nm,0.6s
PVCC Panska Ves 58.04 349 ⇓*i* P **P** **21 27 03.6 -0.7**
PVCC *ep*P pP 21 27 07.9 -1.0
PVCC *ex* x 21 30 32.0
PVCC eS **S** **21 35 04.7 +0.2**
PVCC AMS AMS 21 54 30.0
comp=Z,4µm,16.9s
MANZ Manzenberg 58.05 347 *e*P **P** **21 27 04.0 -0.3**
comp=Z,295nm,1.2s,mb6.2
MANZ *e*PPP 21 30 31.9
VIS Vishakhapatnam 58.06 65 *e*P **P** **21 27 04.0 -1.1**
VIS *i* S **S** **21 35 06.9 +0.9**
THEF They Montfort 58.11 342 *e*P **P** **21 27 05.1 +0.3**
NKC Novy Kostel 58.20 347 ⇓*i* P **P** **21 27 05.5 +0.1**
NKC *ep*P pP 21 27 09.7 -0.3
NKC *e*PP PP 21 29 13.0 -1.5
NKC *e* 21 30 32.1
NKC eS **S** **21 35 07.7 +1.1**
NKC Novy Kostel 58.20 347 ⇓*i* P **P** **21 27 05.5 +0.1**
NKC *ep*P pP 21 27 09.7 -0.3
NKC *e*PP PP 21 29 13.0 -1.5
NKC *ex* x 21 30 32.1
NKC eS **S** **21 35 07.7 +1.1**
NKC AMS AMS 21 57 00.0
comp=Z,5µm,14.4s
LANF Langenberg 58.23 343 *e*P **P** **21 27 05.3 -0.4**
PBRG Braganca 58.25 329 *i* P **P** **21 27 10.3 +4.4**
THN Thein Dam 58.27 46 *e*P **P** **21 27 05.9 -0.4**
WERN Wernitzgruen 58.27 347 *e*P **P** **21 27 05.8 -0.1**
comp=Z,247nm,1.5s,mb6.0
VOR Voronezh 58.32 7 ⇓*i* P **P** **21 27 06.0 -0.2**
VOR pmax pmax
comp=Z,600nm,1.0s,mb6.6
MATF Mathat 58.34 336 *e*P **P** **21 27 06.3 -0.2**
ECAL Calabor 58.34 329 P **P** **21 27 08.1 +1.5**
comp=Z,83nm,1.1s,mb5.7
GUNZ Gunzen 58.35 347 *e*P **P** **21 27 06.5 0.0**
comp=Z,179nm,1.3s,mb5.9
PVRL Vila Real 58.38 327 *e*P **P** **21 27 08.2 +1.3**
PVRL *i* P pP 21 27 12.4 +0.9
HYF Humbligny 58.41 339 *e*P **P** **21 27 07.2 +0.3**
WERD Werda 58.44 347 *e*P **P** **21 27 07.0 -0.1**
comp=Z,383nm,1.7s,mb6.2
KTD Kalmit 58.46 344 *e*P **P** **21 27 07.6 +0.4**
BRG Berggiesshubel 58.49 348 *i* P **P** **21 27 06.6 -0.8**
comp=Z,115nm,1.9s,mb5.6
BRG *i* 21 30 50.0
BRG PP PP 21 29 16.0 -1.1
BRG S **S** **21 35 14.0 +3.6**
BRG SS SS 21 39 04.0 +0.8
BRG pmax pmax
comp=Z,115nm,1.9s,mb5.6
BRG pmax pmax
comp=Z,83nm,1.4s,mb5.6
BRG pmax pmax
comp=Z,6.0nm,1.7s,mb4.3
BRG MLR MLR
comp=N,2µm,17.2s,MS5.5
BRG MLR MLR
comp=E,2µm,13.9s,MS5.5
BRG MLR MLR
comp=Z,3µm,16.2s,MS5.5
BRG Berggiesshubel 58.49 348 *e*P **P** **21 27 06.5 -0.9**
comp=Z,138nm,1.4s,mb5.8
BRG *e*S **S** **21 35 06.6 -3.8**
BRG Berggiesshubel 58.49 348 *i* P **P** **21 27 06.6 -0.8**
comp=Z,192nm,1.9s,mb5.8
BRG *i* pP 21 27 10.9 -1.1
comp=Z,138nm,1.4s
BRG PP PP 21 29 16.0 -1.1
BRG *i* 21 30 50.0
BRG S **S** **21 35 14.0 +3.6**
BRG SS SS 21 39 04.0 +0.8
BRG *e*PKPPKP 21 56 59.9
comp=Z,10.0nm,1.7s
BRG
comp=N,4µm,17.1s
BRG
comp=E,3µm,13.9s
BRG
comp=Z,5µm,16.2s
TOD Tromm 58.52 344 *e*P **P** **21 27 08.1 +0.4**
EARI Arriondas 58.57 331 P **P** **21 27 09.2 +1.0**
comp=Z,344nm,1.6s,mb6.1
BLSP Bilaspur 58.58 59 *e*P **P** **21 27 07.8 -0.9**
MEZF Maizieres J'vi 58.65 341 ⇓*i* P **P** **21 27 09.3 +0.7**
comp=Z,231nm,1.1s,mb5.8
MEZF Maizieres J'vi 58.65 341 ⇓*i* P **P** **21 27 09.3 +0.7**
comp=Z,231nm,1.1s,mb6.1
FBE Freiberg 58.66 348 *e*P **P** **21 27 07.8 -0.8**
comp=Z,102nm,1.3s,mb5.7
WAR Warsaw 58.73 354 *e*P **P** **21 27 08.5 -0.5**
WAR *ep*P pP 21 27 11.2 -2.5
WAR *es*P sP 21 27 12.8 -2.6
WAR *e*PP PP 21 29 17.8 -1.4
WAR eS **S** **21 35 14.4 +1.0**
WAR LMZ 21 53 10.6
comp=Z,2µm,24.2s
WAR Warsaw 58.73 354 *e*P **P** **21 27 08.5 -0.6**
WAR *e**PP pP 21 27 11.2 -2.5
WAR *e**SP sP 21 27 12.8 -2.6
WAR *e* 21 29 17.7
WAR eS **S** **21 35 14.4 +1.0**
WAR MLR MLR
comp=Z,2µm,24.2s,MS5.2
MOX Moxa 58.78 347 *e*P **P** **21 27 09.2 -0.2**
comp=Z,282nm,1.6s,mb6.0
MOX *e* 21 29 17.2
MOX
comp=Z,4µm,20.0s
MOX Moxa 58.78 347 *e*P **P** **21 27 09.2 -0.2**
MOX *e* 21 29 17.2
MOX pmax pmax
comp=Z,282nm,1.6s,mb6.0
MOX MLR MLR
comp=Z,4µm,20.0s,MS5.5
MOX Moxa 58.78 347 *e*P **P** **21 27 09.2 -0.2**
comp=Z,206nm,1.2s,mb6.0
MOX *e*PP PP 21 29 17.6 -2.0
OLEF Ile d'Oleron 58.87 335 *e*P **P** **21 27 10.5 +0.3**
DDI Dehra Dun 58.89 49 *e*P **P** **21 27 10.8 +0.2**
MFF Saint Martin d 58.91 336 ⇓*i* P **P** **21 27 10.8 +0.3**
comp=Z,186nm,1.2s,mb5.7
MFF Saint Martin d 58.91 336 ⇓*i* P **P** **21 27 10.8 +0.3**
comp=Z,93nm,1.2s,mb5.7
MFF Saint Martin d 58.91 336 ⇓*i* P **P** **21 27 10.8 +0.3**
MFF pmax pmax
comp=Z,93nm,1.2s,mb5.7
CLL Collm 59.09 348 *i* P **P** **21 27 11.0 -0.6**
comp=Z,142nm,1.5s,mb5.8
CLL eS **S** **21 35 16.0 -2.2**
CLL *eP'P'* 21 56 58.0
CLL Collm 59.09 348 *i* P **P** **21 27 11.0 -0.6**
CLL eS **S** **21 35 16.0 -2.2**
CLL pmax pmax
comp=Z,142nm,1.5s,mb5.8
CLL Collm 59.09 348 *i* P **P** **21 27 11.0 -0.6**
comp=Z,142nm,1.5s,mb5.8
CLL *e*Plp 21 27 12.0
comp=N,400nm,11.5s
CLL *e*Plp 21 27 12.0
CLL *i* pP pP 21 27 15.5 -0.7
comp=Z,150nm,1.3s
CLL *e*PP PP 21 29 23.0 +0.6
CLL *e*PPlp 21 29 24.0
CLL *e*PPP 21 30 43.0
CLL eS **S** **21 35 16.0 -2.2**
CLL *es*S SS 21 39 17.0 +4.3
CLL Lm 21 55 00.0
comp=N,5µm,19.3s
CLL Lm 21 55 00.0
comp=E,2µm,18.5s
CLL Lm 21 55 00.0
comp=Z,5µm,18.7s
CLL *e*PKPPKPbc 21 56 58.0
CLL Collm 59.09 348 *e*P **P** **21 27 10.9 -0.7**
comp=Z,150nm,1.3s,mb5.9
RUP Ruppelstein 59.10 343 *e*P **P** **21 27 12.2 +0.5**
ABH Alteburg 59.12 344 *e*P **P** **21 27 11.8 0.0**
TNS Taunus Mts 59.18 344 *e*P **P** **21 27 12.1 -0.1**
TNS *e*PPP 21 30 44.2
TNS eS **S** **21 35 18.6 -0.7**
TNS pmax pmax
comp=Z,196nm,1.1s,mb6.0
TNS Taunus Mts 59.18 344 *e*P **P** **21 27 12.1 -0.1**
comp=Z,196nm,1.1s,mb6.0
TNS *e*PPP 21 30 44.2
TNS eS **S** **21 35 18.6 -0.7**
UBBA Unterbreizbach 59.32 346 *e*P **P** **21 27 13.2 0.0**
comp=Z,322nm,1.7s,mb6.1
WLF Walferdange 59.33 342 *e*P **P** **21 27 13.4 +0.2**
comp=Z,128nm,1.3s,mb5.8
WLF Walferdange 59.33 342 P **P** **21 27 14.0 +0.7**
WLF pmax pmax
comp=Z,130nm,1.2s,mb5.8
WLF Walferdange 59.33 342 P **P** **21 27 13.3 0.0**
comp=Z,72nm,1.4s,mb5.5
WLF Walferdange 59.33 342 *e*P **P** **21 27 13.2 -0.1**
comp=Z,139nm,1.3s,mb5.8
WLF *e*PP PP 21 29 24.0 -0.5
WLF eS **S** **21 35 19.8 -1.5**
EZAM Zamans 59.52 328 P **P** **21 27 15.0 +0.2**
comp=Z,63nm,0.9s,mb5.7
EZAM Zamans 59.52 328 P **P** **21 27 15.0 +0.3**
EZAM pmax pmax
comp=Z,63nm,0.9s,mb5.7
EPON Pontenova 59.55 330 P **P** **21 27 14.8 -0.1**
comp=Z,364nm,1.4s,mb6.2
STS Santiago 59.96 328 P **P** **21 27 17.8 0.0**
comp=Z,26nm,0.6s,mb5.4
STS Santiago 59.96 328 P **P** **21 27 17.8 0.0**
STS pmax pmax
comp=Z,26nm,0.6s,mb5.4
RUE Ruedersdorf 60.05 349 *e*P **P** **21 27 17.9 -0.3**
comp=Z,277nm,1.1s,mb6.2
RUE Ruedersdorf 60.05 349 *e*P **P** **21 27 17.5 -0.7**
comp=Z,366nm,1.3s,mb6.2
GIVF Givet 60.12 342 ⇓*i* P **P** **21 27 18.5 -0.2**
comp=Z,107nm,1.0s,mb5.5
GIVF Givet 60.12 342 ⇓*i* P **P** **21 27 18.5 -0.2**
comp=Z,54nm,1.0s,mb5.5
GIVF Givet 60.12 342 ⇓*i* P **P** **21 27 18.5 -0.2**
GIVF pmax pmax
comp=Z,54nm,1.0s,mb5.5
CLZ Clausthal 60.18 346 *e*P **P** **21 27 19.1 0.0**
CLZ eS **S** **21 35 33.0 +0.8**
CLZ pmax pmax

comp=Z,390nm,2.2s,mb6.0
CLZ Clausthal 60.18 346 *e*P **P 21 27 19.1 0.0**
comp=Z,390nm,2.2s,mb6.0
CLZ *e*S **S 21 35 33.0 +0.8**
DOU Dourbes 60.19 342 P **P 21 27 19.0 -0.2**
comp=Z,14nm,1.2s,mb4.9
MEM Membach 60.21 343 P **P 21 27 19.3 -0.1**
comp=Z,40nm,2.7s,mb5.0
BCLA Clavier 60.25 342 P **P 21 27 18.9 -0.8**
comp=Z,77nm,2.2s,mb5.3
BAIF Baives 60.28 341⇓*i*P **P 21 27 19.7 -0.1**
comp=Z,135nm,1.2s,mb5.5
BAIF Baives 60.28 341⇓*i*P **P 21 27 19.7 -0.1**
comp=Z,67nm,1.2s,mb5.5
BAIF Baives 60.28 341⇓*i*P **P 21 27 19.7 -0.1**
BAIF pmax pmax
comp=Z,67nm,1.2s,mb5.5
SUW Suwalki 60.28 356 *i* P **P 21 27 19.2 -0.6**
comp=Z,800nm,1.6s,mb6.5
SUW *es*P sP 21 27 23.7 -2.4
SUW *e*PP PP 21 29 30.8 -2.1
SUW *e*S **S 21 35 35.1 +1.7**
SUW *e* 21 35 45.6
SUW LMZ 21 53 46.6
comp=Z,3µm,24.0s
SUW Suwalki 60.28 356⇓*i*P **P 21 27 19.2 -0.6**
SUW *es*P sP 21 27 23.7 -2.4
SUW *e*PP PP 21 29 30.8 -2.1
SUW *e*S **S 21 35 35.1 +1.7**
SUW *e* 21 35 45.6
SUW Suwalki 60.28 356⇓*i*P **P 21 27 19.2 -0.6**
SUW *e*'SP sP 21 27 23.7 -2.4
SUW *e* 21 29 30.8
SUW *e*S **S 21 35 35.1 +1.7**
SUW *e* 21 35 45.6
SUW pmax pmax
comp=Z,800nm,1.6s,mb6.5
SUW MLR MLR
comp=Z,3µm,24.0s,MS5.4
BEBN Eben Emael 60.48 343 P **P 21 27 21.8 +0.7**
LDF La Druitiere 60.54 338⇓*i*P **P 21 27 21.5 -0.1**
comp=Z,174nm,1.1s,mb5.8
LDF La Druitiere 60.54 338⇓*i*P **P 21 27 21.5 -0.1**
comp=Z,87nm,1.1s,mb5.8
LDF La Druitiere 60.54 338⇓*i*P **P 21 27 21.5 -0.1**
LDF pmax pmax
comp=Z,87nm,1.1s,mb5.8
MNK Minsk 60.54 359*de*P **P 21 27 20.0 -1.5**
MNK *e* 21 27 20.0
MNK *e*PPP 21 31 08.0
MNK *e*S **S 21 35 32.0 -4.7**
MNK *e* 21 37 10.0
MNK pmax pmax
comp=Z,21µm,1.8s
MNK pmax pmax
comp=N,19µm,1.8s
SNF Seneffe 60.65 342 P **P 21 27 22.4 +0.1**
comp=Z,67nm,2.6s,mb5.3
GRR Gorron 60.65 337⇓*i*P **P 21 27 22.4 0.0**
comp=Z,170nm,1.0s,mb5.8
GRR Gorron 60.65 337⇓*i*P **P 21 27 22.4 0.0**
comp=Z,85nm,1.0s,mb5.8
GRR Gorron 60.65 337⇓*i*P **P 21 27 22.4 0.0**
GRR pmax pmax
comp=Z,85nm,1.0s,mb5.8
FLN La Foliniere 60.81 338⇓*i*P **P 21 27 23.1 -0.4**
comp=Z,89nm,1.0s,mb5.6
FLN *e*MLR MLR
comp=Z,5µm,19.5s,MS5.3
FLN La Foliniere 60.81 338⇓*i*P **P 21 27 23.1 -0.4**
comp=Z,45nm,1.0s,mb5.5
FLN LR LR
comp=Z,5µm,19.5s,MS5.6
FLN La Foliniere 60.81 338⇓*i*P **P 21 27 23.1 -0.4**
FLN pmax pmax
comp=Z,45nm,1.0s,mb5.5
FLN MLR MLR
comp=Z,5µm,19.5s,MS5.6
NRDL Niedersach Rie 60.85 346 *e*P **P 21 27 24.2 +0.6**
comp=Z,501nm,1.2s,mb6.5
NRDL *e*PP PP 21 29 37.3 -0.6
UCC Uccle 60.88 342 P **P 21 27 24.2 +0.3**
comp=Z,108nm,1.6s,mb5.7
QUIF Quistinic 61.20 335⇓*i*P **P 21 27 26.4 +0.3**
comp=Z,178nm,1.1s,mb5.8
QUIF Quistinic 61.20 335⇓*i*P **P 21 27 26.4 +0.3**
comp=Z,89nm,1.1s,mb5.8
QUIF Quistinic 61.20 335⇓*i*P **P 21 27 26.4 +0.3**
QUIF pmax pmax
comp=Z,89nm,1.1s,mb5.8
SGMF Saint Gilles 61.21 336⇓*i*P **P 21 27 26.1 -0.1**
comp=Z,159nm,1.2s,mb5.7
SGMF Saint Gilles 61.21 336⇓*i*P **P 21 27 26.1 -0.1**
comp=Z,79nm,1.2s,mb5.7
SGMF Saint Gilles 61.21 336⇓*i*P **P 21 27 26.1 -0.1**
SGMF pmax pmax
comp=Z,79nm,1.2s,mb5.7
AB31 Akbulak array 61.25 22 *i* P **P 21 27 24.9 -1.6**
IBBN Ibbenburen 61.25 345 *e*P **P 21 27 27.1 +0.7**
comp=Z,356nm,1.9s,mb6.2
IBBN *e*PP PP 21 29 40.2 -1.3
IDID Didziasalis 61.39 358 *e*P **P 21 27 27.1 -0.2**
IDID AMb AMB 21 27 34.8
comp=Z,48nm,1.9s,mb5.3
OBN Obninsk 61.41 4 P **P 21 27 27.9 +0.5**
comp=Z,1µm,1.4s,mb6.8,SNR=9.5
OBN Obninsk 61.41 4 *i* P **P 21 27 25.9 -1.5**
OBN LR LR
comp=Z,2µm,16.0s,MS5.3
OBN Obninsk 61.41 4*d* iP **P 21 27 25.9 -1.5**
OBN *i* pP 21 27 31.1 -0.9
OBN *i* 21 29 42.9
OBN *i* S **S 21 35 49.3 +1.6**
OBN *e*SS SS 21 39 51.8 +3.0
OBN pmax pmax
comp=Z,276nm,1.4s,mb6.2
OBN MLR MLR
comp=Z,2µm,16.0s,MS5.3
IIGN Ignalina 61.44 358 *e*P **P 21 27 27.5 -0.1**
IIGN AMb AMB 21 27 35.2
comp=Z,74nm,1.8s,mb5.5
KK31 Karatay Array 61.49 33 *i* P **P 21 27 26.9 -1.3**
KK31 pmax pmax
comp=Z,160nm,1.4s,mb6.0
AKTO Aktyubinsk 61.54 20 LR LR 21 56 38.3
comp=Z,4µm,18.7s,MS5.6,baz=35,slow=38
ROSF Rostrenen 61.57 336⇓*i*P **P 21 27 28.5 -0.1**
comp=Z,157nm,1.3s,mb5.7
ROSF Rostrenen 61.57 336⇓*i*P **P 21 27 28.5 -0.1**
comp=Z,79nm,1.3s,mb5.7
ROSF Rostrenen 61.57 336⇓*i*P **P 21 27 28.5 -0.1**
ROSF pmax pmax
comp=Z,79nm,1.3s,mb5.7
IZAR Zarasai 61.84 358 *e*P **P 21 27 30.3 0.0**
IZAR AMb AMB 21 27 37.5
comp=Z,49nm,1.7s,mb5.4
KOLN Koldanda 62.05 54 *e*P **P 21 27 29.3 -3.0**
comp=Z,887nm,1.5s,mb6.7
RGN Rugen 62.10 349 *e*P **P 21 27 31.8 -0.3**
comp=Z,280nm,1.2s,mb6.3
RGN *e*S **S 21 35 57.0 +0.4**
MOS Moscow 62.12 5^K *i*P **P 21 27 32.1 0.0**
MOS *e* 21 28 14.7
MOS *e*PPP 21 31 16.7
MOS *e*S **S 21 35 58.6 +1.9**
MOS pmax pmax
comp=Z,2µm,2.2s,mb6.8
MOS pmax pmax
comp=Z,647nm,1.7s,mb6.5
MOS MLR MLR
comp=Z,2µm,14.0s,MS5.4
MOS MLR MLR
comp=N,2µm,16.0s
BSEG Bad Segeberg 62.13 347 *e*P **P 21 27 32.1 -0.2**
BSEG *e*S **S 21 35 57.0 0.0**
BSEG pmax pmax
comp=Z,298nm,1.2s,mb6.3
BSEG Bad Segeberg 62.13 347 *e*P **P 21 27 32.1 -0.2**
comp=Z,298nm,1.2s,mb6.3
BSEG *e*S **S 21 35 57.0 0.0**
BSD Bornholm Skovb 62.37 350⇓*i*P **P 21 27 33.0 -0.8**
BSD *i* 21 29 51.4
BSD *e*S **S 21 36 00.0 +0.1**
BSD pmax pmax
comp=Z,150nm,1.2s,mb6.0
BSD MLR MLR
comp=Z,3µm,19.0s,MS5.5
BSD Bornholm Skovb 62.37 350⇓*i*P **P 21 27 33.0 -0.8**
comp=Z,148nm,1.2s,mb6.0
BSD *i* 21 29 51.4
BSD *e*S **S 21 36 00.0 +0.1**
BSD
comp=Z,3µm,19.0s
BOK Bokaro 62.41 59 *e*P **P 21 27 31.6 -3.2**
BOK *ex* x 21 27 41.7
comp=Z,145nm,2.0s
KSH Kashi 62.43 39 P **P 21 27 34.8 +0.2**
KSH AP pP 21 27 39.5 +0.3
KSH *e*XP sP 21 27 41.8 +0.9
KSH *e*PCP PcP 21 28 14.5 +0.5
KSH *e*PP PP 21 29 52.8 +0.7
KSH *e*SCP ScP 21 32 14.5 -1.3
KSH *e*PCS PcS 21 32 16.3 -0.9
KSH *e*S **S 21 35 57.3 -4.0**
KSH AMB AMB
comp=Z,430nm,1.2s,mb6.5
KSH AMB AMB
comp=Z,5µm,3.6s
KSH LR LR
comp=N,33µm,15.8s,MS6.8
KSH LR LR
comp=E,43µm,16.0s,MS6.8
KSH LR LR
comp=Z,17µm,20.6s,MS6.2
AML Almayashu 62.64 36 PFAKE 21 27 50.0 +14
AML LR LR
comp=Z,7µm,20.0s,MS5.8
AML Almayashu 62.64 36 P **P 21 27 36.1 +0.1**
SNR=25
GKN Gorkha 62.98 54 *e*P **P 21 27 35.6 -2.9**
comp=Z,703nm,1.3s,mb6.6
SYO Syowa Base 63.02 176⇑*i*P **P 21 27 37.6 -0.4**
SYO Syowa Base 63.02 176*i*pP pP 21 27 40.0 -2.6
EKS2 Erkin-Say 63.02 35 *e*P **P 21 27 37.9 -0.6**
comp=Z,97nm,1.7s,mb5.7
EKS2 LR LR
comp=Z,8µm,19.0s,MS5.9
EKS2 Erkin-Say 63.02 35 P **P 21 27 38.9 +0.4**
SNR=23
UCH Uchtor 63.17 36 *e*P **P 21 27 39.3 -0.2**
comp=Z,149nm,1.7s,mb5.8
UCH LR LR
comp=Z,6µm,21.0s,MS5.8
UCH Uchtor 63.17 36 P **P 21 27 39.8 +0.2**
SNR=34
WOL Wolverton 63.18 339 *e*P **P 21 27 40.0 +0.7**
COP Copenhagen 63.35 349⇓*i*P **P 21 27 40.8 +0.4**
COP *i* 21 29 59.9
COP *e*S **S 21 36 17.6 +5.4**
COP pmax pmax
comp=Z,53nm,1.1s,mb5.6
COP MLR MLR
comp=Z,1µm,17.0s,MS5.2
COP Copenhagen 63.35 349⇓*i*P **P 21 27 40.8 +0.4**
comp=Z,53nm,1.1s,mb5.6
COP *i* 21 29 59.9
COP *e*S **S 21 36 17.6 +5.4**
COP *i* 21 40 09.9
COP
comp=Z,1µm,17.0s
SKP1 Kophill 63.37 339 *e*P **P 21 27 40.8 +0.2**
AAK Ala-Archa 63.42 36 P **P 21 27 39.4 -1.7**
comp=Z,132nm,2.1s,mb5.7,SNR=15
AAK Ala-Archa 63.42 36 P **P 21 27 41.8 +0.7**
SNR=16
KKN Kakani 63.42 55 *e*P **P 21 27 38.5 -2.9**
comp=Z,592nm,1.4s,mb6.5
SWK Warminster 63.42 338 *e*P **P 21 27 41.1 +0.2**
KZA Kyzart 63.52 36 P **P 21 27 42.2 +0.4**
SNR=11
SWN1 Swindon 63.55 339 *e*P **P 21 27 41.9 +0.1**
SWN1 AMb AMB 21 27 48.3
comp=Z,353nm,1.5s,mb6.2
FRU Bishkek 63.61 35⇓*e*P **P 21 27 42.0 -0.4**
FRU *e* 21 30 05.0
FRU *e*PPP 21 31 34.0
FRU *e*S **S 21 36 18.0 +2.0**
FRU *e* 21 37 36.0
FRU pmax pmax
comp=Z,200nm,2.1s,mb5.8
FRU MLR MLR
comp=Z,7µm,18.0s,MS5.9
KBK Karagaybulak 63.69 36 P **P 21 27 43.2 +0.3**
SNR=24
CHMS Chumysh 63.79 35 P **P 21 27 43.0 -0.5**
SNR=13
USP Ospenovka 63.81 35 P **P 21 27 43.2 -0.5**
SNR=30
HEX Exmoor 63.94 337 *e*P **P 21 27 45.0 +0.6**
JIRN Jiri 64.11 55 *e*P **P 21 27 44.0 -2.0**
comp=Z,399nm,1.3s,mb6.3
HTL Hartland 64.15 337 AMS AMS 22 00 16.5
comp=Z,4µm,18.2s,MS5.6
HTL Hartland 64.15 337 AMS AMS 22 00 16.5
comp=Z,4µm,18.2s
ULHL Ulahol 64.20 37 P **P 21 27 45.7 -0.6**
SNR=7.1
TKM2 Tokmak 2 64.23 36 *e*P **P 21 27 46.0 -0.5**
comp=Z,104nm,1.5s,mb5.6
TKM2 LR LR
comp=Z,7µm,20.0s,MS5.8
TKM2 Tokmak 2 64.23 36 *e*P **P 21 27 46.0 -0.5**
TKM2 pmax pmax
comp=Z,104nm,1.5s,mb5.6
TKM2 MLR MLR
comp=Z,7µm,20.0s,MS5.8
TKM2 Tokmak 2 64.23 36 P **P 21 27 46.2 -0.3**
SNR=31
HAE Alders End 64.25 339 *e*P **P 21 27 46.6 +0.2**
CWF Charnwood Fore 64.38 340 *e*P **P 21 27 47.2 0.0**
CWF AMb AMB 21 27 53.3
comp=Z,144nm,1.6s,mb5.8
MCH1 Michaelchurch 64.38 338 *e*P **P 21 27 47.2 0.0**
MCH1 AMb AMB 21 27 53.0
comp=Z,178nm,1.2s,mb6.0
VSU Vasula 64.54 358 *i* P **P 21 27 47.7 -0.5**
VSU Vasula 64.54 358*d* iP **P 21 27 47.6 -0.6**
HTR Trewern Hill 64.55 338 *e*P **P 21 27 48.2 -0.1**
MUD Monsted U'grnd 64.72 348⇓*i*P **P 21 27 49.9 +0.5**
MUD *i* 21 30 11.5
MUD *i* S **S 21 36 32.4 +3.2**
MUD pmax pmax
comp=Z,240nm,1.1s,mb6.1
MUD MLR MLR
comp=Z,2µm,16.0s,MS5.3
MUD Monsted U'grnd 64.72 348⇓*i*P **P 21 27 49.9 +0.5**
comp=Z,236nm,1.1s,mb6.1
MUD *i* 21 30 11.5
MUD *i* S **S 21 36 32.4 +3.2**
MUD
comp=Z,2µm,16.0s
HLM1 Long Mynd 64.76 339 *e*P **P 21 27 48.9 -0.8**
ODAN Odare 64.79 57 *e*P **P 21 27 49.3 -1.2**
KWE Weaver Farm 64.80 340 *e*P **P 21 27 49.0 -0.9**
KBI1 Birley Grange 64.88 340 *e*P **P 21 27 49.7 -0.8**
RCBR Riachuelo 65.18 266 PFAKE 21 28 10.0 +17
RCBR LR LR
comp=Z,4µm,21.0s,MS5.6
SBD1 Bryn Du 65.21 339 *e*P **P 21 27 52.1 -0.6**
TAPN Taplejung 65.24 56 *e*P **P 21 27 51.3 -2.1**
comp=Z,1µm,2.0s,mb6.6
MAW Mawson 65.25 167 P **P 21 27 53.0 +0.3**
comp=Z,57nm,1.0s,mb5.6,baz=323,slow=6.9,SNR=34
MAW LR LR 21 53 58.1
comp=Z,3µm,18.3s,MS5.5,baz=329,slow=34
MAIT Maitri 65.46 186 *e*P **P 21 27 53.1 -0.9**
HPK Haverah Park 65.50 340 *e*P **P 21 27 54.9 +0.4**
HPK AMb AMB 21 28 00.8
comp=Z,282nm,1.4s,mb6.1
HPK AMS AMS 21 56 38.5
comp=Z,4µm,18.2s,MS5.6
HPK Haverah Park 65.50 340 P **P 21 27 54.9 +0.4**
HPK AMb AMB 21 28 00.8
comp=Z,282nm,1.4s,mb6.1
DSB Dublin 66.64 337 *e*P **P 21 28 01.1 -0.7**
comp=Z,51nm,1.1s,mb5.5
DLF Lyons Farm 66.73 337⇑*i*P **P 21 28 02.2 -0.2**
ARU Arti 66.81 17 P **P 21 28 02.6 -0.3**
comp=Z,1µm,0.9s,mb6.9,SNR=37
ARU Arti 66.81 17 *e*P **P 21 28 02.3 -0.6**
comp=Z,271nm,1.1s,mb6.2
ARU LR LR
comp=Z,3µm,19.0s,MS5.6
ARU Arti 66.81 17*d* iP **P 21 28 02.4 -0.5**
ARU *e* 21 28 30.8
ARU *e*PPP 21 32 07.8
ARU *e*S S 21 36 52.9 -1.8
ARU 21 37 57.6
ARU SS SS 21 41 05.7 -7.4
ARU SSS 21 44 12.6
ARU pmax pmax
comp=Z,460nm,1.7s,mb6.2
ARU MLR MLR
comp=Z,2µm,15.0s,MS5.5
SNART Snartemo 66.88 347 *e*P **P 21 28 03.6 +0.4**
SNART AMb AMB 21 28 09.8
comp=Z,127nm,1.6s,mb5.7
XSO Sourhope Farm 66.97 341 *e*P **P 21 28 03.8 -0.1**
ECK Cauldkaine Hil 67.00 340 *e*P **P 21 28 04.0 -0.1**
DCN Croghan 67.06 337⇑*i*P **P 21 28 04.0 -0.5**
ESK Eskdalemuir 67.14 340 P **P 21 28 05.0 0.0**
comp=Z,270nm,1.0s,mb6.2,SNR=5.3
ESK Eskdalemuir 67.14 340 *e*P **P 21 28 05.6 +0.6**
ESK AMb AMB 21 28 11.4
comp=Z,96nm,1.6s,mb5.6
ESK AMS AMS 21 57 41.3
comp=Z,3µm,18.9s,MS5.6
ESK Eskdalemuir 67.14 340 P **P 21 28 05.6 +0.6**
ESK AMb AMB 21 28 11.4
comp=Z,96nm,1.6s,mb5.6
ESK Eskdalemuir 67.14 340 *e*P **P 21 28 05.0 0.0**
comp=Z,124nm,1.4s,mb5.8
ESK LR LR
comp=Z,4µm,19.0s,MS5.6
ESK Eskdalemuir 67.14 340 *e*P **P 21 28 05.0 0.0**
ESK pmax pmax
comp=Z,124nm,1.4s,mb5.8
ESK MLR MLR
comp=Z,4µm,19.0s,MS5.6
MIRA Miradouro 67.28 315 *e*P **P 21 28 13.0 +6.7**
GAL1 Galloway 67.29 339 *e*P **P 21 28 06.0 0.0**
GAL1 AMb AMB 21 28 09.9
comp=Z,93nm,1.6s,mb5.6
GAL1 AMS AMS 22 00 16.4
comp=Z,5µm,17.2s,MS5.8
GAL1 Galloway 67.29 339 P **P 21 28 06.0 0.0**
GAL1 AMb AMB 21 28 09.9
comp=Z,93nm,1.6s,mb5.6
PFAD Fenais da Ajud 67.33 315 *e*P **P 21 28 12.9 +6.3**
DMUB Kingscourt 67.34 338 *e*P **P 21 28 05.8 -0.5**
HFS Hagfors 67.37 351 LR LR 22 00 38.8
comp=Z,3µm,21.5s,MS5.4,baz=162,slow=39
PRCH Ribeira Ch 67.39 315 *e*P **P 21 28 13.7 +6.7**
comp=Z,46nm,0.6s,mb5.7
MESC Monte Escuro 67.40 315 *e*P **P 21 28 13.9 +6.9**
LFA Lagoa do Fogo 67.42 315 *e*P **P 21 28 14.0 +6.9**
PMAT Coroa da Mata 67.43 315 *e*P **P 21 28 13.4 +6.2**
comp=Z,104nm,1.0s,mb5.8
ESY Stoneypath 67.44 341 *e*P **P 21 28 06.7 -0.2**
PVER Pico Vermelho 67.45 315 *e*P **P 21 28 14.1 +6.8**
comp=Z,108nm,0.9s,mb5.9
EBL Broad Law 67.46 341 *e*P **P 21 28 07.1 +0.1**
CML Cha da Macela 67.46 315 *e*P **P 21 28 11.4 +4.0**
FINES FINESS Array B 67.55 358 *i*P **P 21 28 07.0 -0.4**
FINES pmax pmax
comp=Z,18nm,0.7s
FINES FINESS Array B 67.55 358 P **P 21 28 07.0 -0.4**
comp=Z,18nm,0.7s,mb5.2,baz=160,slow=6.2,SNR=64
KONO Kongsberg 67.60 349 *e*P **P 21 28 05.7 -2.1**
KONO Kongsberg 67.60 349 *e*P **P 21 28 07.2 -0.6**
comp=Z,269nm,1.5s,mb6.0
KONO LR LR
comp=Z,3µm,19.0s,MS5.5
KONO Kongsberg 67.60 349 *e*P **P 21 28 07.2 -0.6**
KONO Kongsberg 67.60 349 *e*P **P 21 28 07.2 -0.6**
KONO pmax pmax
comp=Z,269nm,1.5s,mb6.0
KONO MLR MLR
comp=Z,3µm,19.0s,MS5.5
EDI Edinburgh 67.63 341 *e*P **P 21 28 08.8 +0.8**
EDI AMb AMB 21 28 14.5
comp=Z,166nm,1.9s,mb5.8
EDI AMS AMS 22 02 29.5
comp=Z,4µm,17.3s,MS5.7
EDI Edinburgh 67.63 341 P **P 21 28 08.8 +0.8**
EDI AMb AMB 21 28 14.5
comp=Z,166nm,1.9s,mb5.8
EAU Auchinoon 67.65 341 *e*P **P 21 28 07.7 -0.5**
SVE Sverdlovsk 67.77 18*c* iP **P 21 28 08.2 -0.7**
SVE *e*S S 21 37 09.6 +3.4
SVE pmax pmax
comp=Z,179nm,1.4s,mb5.9
SVE MLR MLR
comp=Z,4µm,18.0s,MS5.7
PGBU Glenifferbraes 67.97 340 *e*P **P 21 28 11.1 +0.9**
PGBU AMb AMB 21 28 17.8
comp=Z,145nm,1.8s,mb5.7
EBH Black Hill 68.00 341 *e*P **P 21 28 10.5 +0.2**
BLS5 Blasjo 68.03 347 *e*P **P 21 28 12.1 +1.5**
comp=Z,61nm,1.3s,mb5.5
BLS5 Blasjo 68.03 347 *e*P **P 21 28 12.1 +1.5**
BLS5 *es*P sP 21 28 16.2 -0.7
BLS5 AMb AMB 21 28 19.6
comp=Z,61nm,1.3s,mb5.5
KMY Karmoy 68.11 347 *e*P **P 21 28 10.6 -0.4**
comp=Z,106nm,1.8s,mb5.6
KMY Karmoy 68.11 347 *e*P **P 21 28 10.6 -0.4**
KMY AMb AMB 21 28 18.4
comp=Z,106nm,1.9s,mb5.6
SHL Shillong 68.14 59 *e*P **P 21 28 13.0 +1.1**
comp=Z,53nm,1.5s,mb5.3
SHL *e*S S 21 37 15.0 +3.1
KAF Kangasniemi 68.21 358 *e*P **P 21 28 10.9 -0.7**
comp=Z,380nm,2.0s,mb6.1,baz=175,slow=6.1
KAF Kangasniemi 68.21 358 *e*P **P 21 28 10.9 -0.7**
KAF pmax pmax
comp=Z,380nm,2.0s,mb6.1
BRVK Borovoye 68.32 25 *e*P **P 21 28 11.1 -1.4**
comp=Z,67nm,1.4s,mb5.5
BRVK LR LR
comp=Z,4µm,19.0s,MS5.6
BRVK Borovoye 68.32 25 *e*P **P 21 28 11.1 -1.4**
BRVK pmax pmax
comp=Z,67nm,1.4s,mb5.5
BRVK MLR MLR
comp=Z,4µm,19.0s,MS5.6
BRVK Borovoye 68.32 25 P **P 21 28 11.7 -0.8**
SNR=29
SNAA Sanae 68.42 191 *e*P **P 21 28 14.6 +1.7**
SNAA *e* pP 21 28 18.5 +1.0
SNAA *e* pP 21 28 20.1 +2.6
SNAA *e* 21 28 23.9
SNAA *e* 21 28 38.9
SNAA *e* 21 34 36.2
SNAA Sanae 68.42 191*ce*P **P 21 28 14.0 +1.1**
ODD1 Odda 68.44 348 *e*P **P 21 28 12.4 -0.6**
comp=Z,144nm,1.8s,mb5.7
ODD1 Odda 68.44 348 *e*P **P 21 28 12.4 -0.6**
ODD1 AMb AMB 21 28 20.3
comp=Z,144nm,1.8s,mb5.7
NB2 NORSAR Subarra 68.62 350 P **P 21 28 14.3 +0.1**
comp=Z,5.1nm,0.8s,mb4.5,baz=157,slow=6.5
NB2 NORSAR Subarra 68.62 350 P **P 21 28 14.3 +0.1**
NB2 pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
NOA NORSAR Array B 68.62 350 P **P 21 28 14.1 -0.1**
NOA LR LR 22 00 02.6
NOA NORSAR Array B 68.62 350 P **P 21 28 14.1 -0.1**
comp=Z,44nm,0.9s,mb5.4,baz=163,slow=5.9,SNR=86
NOA LR LR 22 00 02.6
comp=Z,2µm,21.7s,MS5.4,baz=120,slow=38
VNA1 Neumayer--Stat 68.70 193 *e*P **P 21 28 16.6 +2.0**
VNA1 *e* pP 21 28 20.5 +1.2
VNA1 *e* 21 28 22.9
VNA1 *e* 21 28 26.1
VNA1 *e* 21 28 29.7
VNA1 *e* 21 28 32.1
VNA1 *e* 21 28 39.0
VNA1 *e* 21 28 40.8
VNA1 *e* 21 28 49.1
VNA1 *e* 21 28 56.2
VNA2 Neumayer--Watz 68.72 192 *e*P **P 21 28 16.2 +1.4**
baz=24,slow=7.3
VNA2 *e* pP 21 28 20.3 +0.9
VNA2 *e* pP 21 28 21.7 +2.3

VNA2 e 21 28 24.9
VNA2 e 21 28 28.8
VNA2 e 21 28 30.6
VNA2 e 21 28 35.4
VNA2 e 21 28 38.6
VNA2 e 21 28 40.4
VNA2 e 21 28 48.8
VNA2 e 21 28 56.3
VNA2 e 21 34 33.7
PRGR Permogore 68.81 8 ⇓*i*P **P 21 28 14.5 -0.8**
PRGR *e*S S 21 37 19.1 +0.7
CHKZ Chkalovo 68.90 25 *i* P **P 21 28 12.7 -3.4**
CHKZ pmax pmax
comp=Z,64nm,1.5s,mb5.3
LSA Lhasa 68.91 55 P **P 21 28 16.8 +0.1**
LSA AP pP 21 28 26.5 +5.2
LSA S S 21 37 17.0 -3.9
LSA AMB AMB
comp=Z,90nm,1.3s,mb5.5
LSA LR LR
comp=N,2μm,22.0s,MS5.6
LSA LR LR
comp=E,3μm,21.0s,MS5.6
LSA LR LR
comp=Z,4μm,21.4s,MS5.6
LSA Lhasa 68.91 55 *e*P **P 21 28 16.9 +0.2**
comp=Z,139nm,1.3s,mb5.7
LSA LR LR
comp=Z,5μm,22.0s,MS5.7
LSA Lhasa 68.91 55 *e*P **P 21 28 16.9 +0.2**
LSA pmax pmax
comp=Z,139nm,1.3s,mb5.7
LSA MLR MLR
comp=Z,5μm,22.0s,MS5.7
JOF Joensuu 68.98 1 *e*p **P 21 28 15.4 -1.0**
comp=Z,392nm,2.1s,mb6.0
JOF Joensuu 68.98 1 *e*P **P 21 28 15.4 -1.0**
JOF pmax pmax
comp=Z,392nm,2.1s,mb6.0
SOKR Solikamsk 69.06 14*d i*P **P 21 28 17.1 +0.2**
SOKR S S 21 37 23.0 +1.5
SOKR pmax pmax
comp=Z,300nm,1.0s,mb6.2
SOKR MLR MLR
comp=Z,2μm,13.0s,MS5.4
EGD Espegrend 69.06 347 *e*P **P 21 28 17.8 +0.8**
BER Bergen 69.14 347 *e*P **P 21 28 17.4 0.0**
comp=Z,158nm,1.3s,mb5.8
BER LR LR
comp=Z,2μm,19.9s,MS5.4
BER Bergen 69.14 347 *e*P **P 21 28 17.4 0.0**
BER AMb AMB 21 28 27.6
comp=Z,158nm,1.3s,mb5.8
BER *e*S S 21 37 24.9 +2.5
BER *e*SS SS 21 41 49.0 0.0
BER AMS AMS 22 05 35.8
comp=Z,2μm,19.9s,MS5.4
BER Bergen 69.14 347 *e*P **P 21 28 17.5 +0.1**
BER pmax pmax
comp=Z,158nm,1.3s,mb5.8
BER MLR MLR
comp=Z,2μm,19.9s,MS5.4
KSB Sheil Bridge 69.40 340 *e*P **P 21 28 19.2 +0.1**
VNA3 Neumayer Olymp 69.45 193 *e*P **P 21 28 20.5 +1.2**
VNA3 *e* pP 21 28 24.5 +0.6
VNA3 *e* pP 21 28 25.9 +2.0
VNA3 *e* 21 28 28.9
VNA3 *e* 21 28 33.7
VNA3 *e* 21 28 35.7
VNA3 *e* 21 28 40.5
VNA3 *e* 21 28 42.8
VNA3 *e* 21 28 52.6
VNA3 *e* 21 29 00.0
VNA3 *e* 21 34 36.6
KPL Plockton 69.58 340 *e*P **P 21 28 20.2 0.0**
KPL AMb AMB 21 28 26.6
comp=Z,91nm,2.8s,mb5.2
KPL AMS AMS 22 01 49.2
comp=Z,4μm,17.6s,MS5.7
KPL Plockton 69.58 340 P **P 21 28 20.2 0.0**
KPL AMb AMB 21 28 26.6
comp=Z,91nm,2.8s,mb5.2
IMP Imphal 69.67 61 *e*P **P 21 28 23.0 +1.5**
HYA Hoyanger 69.67 348 *e*P **P 21 28 21.4 +0.6**
comp=Z,248nm,1.3s,mb6.0
HYA Hoyanger 69.67 348 *e*P **P 21 28 21.4 +0.6**
HYA AMb AMB 21 28 29.1
comp=Z,248nm,1.3s,mb6.0
PSI Prapat 69.72 85 P **P 21 28 22.5 +0.5**
comp=Z,27nm,0.8s,mb5.2,baz=284,slow=6.0,SNR=10
PSI LR LR 21 55 47.5
comp=Z,1μm,19.3s,MS5.2,baz=264,slow=33
MK31 Makanchi Array 70.35 35 *e*P **P 21 28 24.1 -1.1**
MKAR Makanchi Array 70.35 35 *i* P **P 21 28 24.6 -0.6**
MKAR pmax pmax
comp=Z,50nm,1.2s
MKAR Makanchi Array 70.35 35 P **P 21 28 24.6 -0.6**
comp=Z,50nm,1.2s,mb5.3,baz=237,slow=4.2,SNR=121
MKAR PKPPKP 21 56 28.6
comp=Z,0.6nm,1.1s,baz=232,slow=1.4,SNR=3.7
MKAR LR LR 22 01 11.4
comp=Z,4μm,18.2s,MS5.7,baz=249,slow=38
KURK Kurchatov 70.63 31 P **P 21 28 26.0 -0.8**
comp=Z,374nm,1.4s,mb6.1,SNR=27
KURK Kurchatov 70.63 31 *e*P **P 21 28 25.6 -1.2**
comp=Z,135nm,1.4s,mb5.7
KURK LR LR
comp=Z,6μm,19.0s,MS5.8
KURK Kurchatov 70.63 31 *e*P **P 21 28 25.7 -1.1**
KURK pmax pmax
comp=Z,135nm,1.4s,mb5.7
KURK MLR MLR
comp=Z,6μm,19.0s,MS5.8
KURK Kurchatov 70.63 31 P **P 21 28 26.9 +0.1**
SNR=41
KURK Kurchatov 70.63 31 P **P 21 28 26.9 +0.1**
SNR=41
MOL Molde 70.69 349 AMS AMS 22 02 23.8
comp=Z,2μm,21.0s,MS5.4
KULM Kulim 71.76 82 *e*P **P 21 28 33.4 -1.1**
KULM Kulim 71.76 82 ⇑P **P 21 28 33.9 -0.6**
NSS Namsos 71.82 352 *e*P **P 21 28 29.6 -4.2**
comp=Z,272nm,1.8s,mb5.9
NSS LR LR
comp=Z,2μm,18.5s,MS5.5
NSS Namsos 71.82 352 *e*P **P 21 28 29.6 -4.2**
NSS AMb AMB 21 28 39.1
comp=Z,272nm,1.8s,mb5.9
NSS *e*S S 21 37 54.3 +0.8
NSS *e*SS SS 21 42 30.8 +0.8
NSS AMS AMS 22 04 36.7
comp=Z,2μm,18.5s,MS5.5
IPM Ipoh 72.02 83 ⇑P **P 21 28 35.4 -0.6**
NNT Nongplab 72.08 75 P **P 21 28 37.5 +1.2**
WMQ Urumqi 72.14 40 P **P 21 28 36.3 +0.2**
WMQ AP pP 21 28 40.8 0.0
WMQ XP sP 21 28 43.3 +0.8
WMQ PCP PcP 21 28 55.5 +1.1
WMQ PP PP 21 31 17.5 +0.9
WMQ S S 21 37 55.0 -3.1
WMQ XS sS 21 38 02.8 -3.0
WMQ SKS 21 38 35.0
WMQ SCS ScS 21 38 37.8 -4.3
WMQ SS SS 21 42 32.8 -3.1
WMQ AMB AMB
comp=Z,75nm,1.4s,mb5.4
WMQ AMB AMB
comp=Z,1μm,4.6s
WMQ LR LR
comp=N,7μm,25.2s,MS5.9
WMQ LR LR
comp=E,3μm,23.6s,MS5.9
WMQ LR LR
comp=Z,3μm,20.5s,MS5.6
BDT Bhumibol Dam 72.32 70 P **P 21 28 38.0 +0.3**
comp=Z,16nm,1.0s,mb4.9
FRIM Kepong 72.45 85 ⇓P **P 21 28 38.6 0.0**
CHG Chiang Mai 72.61 68 ⇓P **P 21 28 39.2 -0.2**
comp=Z,150nm,1.2s,mb5.8
CHTO Chiang Mai 72.61 68 *e*P **P 21 28 38.8 -0.6**
comp=Z,256nm,1.4s,mb6.0
CHTO LR LR
comp=Z,1μm,22.0s,MS5.1
CHTO Chiang Mai 72.61 68 *e*P **P 21 28 38.8 -0.6**
CHTO pmax pmax
comp=Z,257nm,1.4s,mb6.0
CHTO MLR MLR
comp=Z,1μm,22.0s,MS5.1
CHTO Chiang Mai 72.61 68 P **P 21 28 39.4 -0.1**
SNR=124
CHTO Chiang Mai 72.61 68 P **P 21 28 39.4 -0.1**
SNR=124
NST Nakhon Sawan 73.06 72 P **P 21 28 42.0 -0.1**
comp=Z,92nm,1.0s,mb5.7
MOR8 Moi Rana 73.09 354 *e*P **P 21 28 41.3 +0.1**
comp=Z,122nm,1.7s,mb5.5
MOR8 Moi Rana 73.09 354 *e*P **P 21 28 41.3 +0.1**
MOR8 *e*sP sP 21 28 45.6 -2.0
MOR8 AMb AMB 21 28 49.2
comp=Z,122nm,1.7s,mb5.6
STOK Stokkvaagen 73.41 353 *e*P **P 21 28 43.0 -0.1**
comp=Z,185nm,1.8s,mb5.7
STOK Stokkvaagen 73.41 353 *e*P **P 21 28 43.0 -0.1**
STOK AMb AMB 21 28 46.6
comp=Z,185nm,1.8s,mb5.7
CHRT Chiangrai 73.62 67 ⇑P **P 21 28 46.0 +0.6**
comp=Z,53nm,0.9s,mb5.5
APA Apatity 73.69 1⇑ *i*P **P 21 28 44.0 -0.8**
APA *i* pP 21 28 48.0 -1.5
APA *e*PPP 21 33 20.0
APA *i* S S 21 38 14.0 -0.7
APA *i* PS 21 38 55.0
APA *i* SS SS 21 43 00.0 +1.6
APA pmax pmax
comp=Z,150nm,1.3s,mb5.8
APA pmax pmax
comp=Z,1μm,7.0s
APA MLR MLR
comp=Z,6μm,14.0s,MS6.0
KGM Kluang 73.97 86 ⇑P **P 21 28 47.8 +0.1**
LVZ Lovozero 74.05 2⇑ *e*P **P 21 28 44.6 -2.3**
LVZ pmax pmax
comp=Z,126nm,2.1s,mb5.5
KTGM Kuala Trenggan 74.22 83 ⇑P **P 21 28 49.4 +0.4**
MYKOM Kota Tinggi 74.47 86 ⇓P **P 21 28 51.1 +0.6**
KTK1 Kautokeino 75.22 358 *e*P **P 21 28 54.2 +0.6**
comp=Z,210nm,1.8s,mb5.8
KTK1 Kautokeino 75.22 358 *e*P **P 21 28 54.2 +0.6**
KTK1 AMb AMB 21 28 58.0
comp=Z,210nm,1.8s,mb5.8
NVS Novosibirsk 75.32 29 ⇓*i*P **P 21 28 54.2 -0.3**
NVS *i* 21 31 41.0
NVS pmax pmax
comp=N,262nm,1.7s
NVS pmax pmax
comp=Z,444nm,1.7s,mb6.1
NVS pmax pmax
comp=E,93nm,1.8s
NVS pmax pmax
comp=N,60nm,1.6s
NVS pmax pmax
comp=Z,76nm,1.6s,mb5.4
NVS pmax pmax
comp=E,37nm,1.7s
ZAL Zalesovo 75.58 30 P **P 21 28 54.9 -1.1**
ZAL 21 31 51.0
ZALV Zalesovo Beam 75.60 30 P **P 21 28 54.9 -1.2**
ZALV PP PP 21 31 51.0 +5.2
ZALV Zalesovo Beam 75.60 30 P **P 21 28 54.9 -1.2**
comp=E,28nm,1.1s,mb5.1,baz=255,slow=4.5,SNR=80
ZALV PP PP 21 31 51.0 +5.2
comp=E,6.4nm,0.9s,baz=242,slow=8.2,SNR=4.0
ARCES ARCESS Array B 75.67 358 P **P 21 28 56.4 +0.2**
ARCES LR LR 22 08 32.3
ARCES ARCESS Array B 75.67 358 P **P 21 28 56.4 +0.2**
comp=E,29nm,0.8s,mb5.2,baz=165,slow=4.7,SNR=45
ARCES LR LR 22 08 32.3
comp=E,3μm,19.4s,MS5.6,baz=174,slow=41
KKTK Khon Kaen 75.72 71 P **P 21 28 57.5 -0.1**
KEV Kevo 75.86 359 *e*P **P 21 28 57.8 +0.5**
comp=E,154nm,1.3s,mb5.8
KEV LR LR
comp=Z,2μm,20.0s,MS5.5
KEV Kevo 75.86 359 *e*P **P 21 28 57.8 +0.5**
KEV pmax pmax
comp=Z,154nm,1.3s,mb5.8
KEV MLR MLR
comp=Z,2μm,20.0s,MS5.5
TRO Tromso 76.07 356 *e*P **P 21 28 58.2 -0.4**
comp=Z,115nm,1.4s,mb5.6
TRO LR LR
comp=Z,2μm,15.9s,MS5.5
TRO Tromso 76.07 356 *e*P **P 21 28 58.2 -0.4**
TRO AMb AMB 21 29 03.6
comp=Z,115nm,1.4s,mb5.6
TRO *e*S S 21 38 42.1 +0.8
TRO *e*SS SS 21 43 36.0 +1.4
TRO AMS AMS 22 08 14.3
comp=Z,2μm,15.9s,MS5.5
TRO Tromso 76.07 356 *e*P **P 21 28 58.2 -0.3**
TRO pmax pmax
comp=Z,115nm,1.4s,mb5.6
TRO MLR MLR
comp=Z,2μm,15.9s,MS5.5
KMI Kunming 77.47 63 P **P 21 29 07.5 +0.1**
KMI AP pP 21 29 11.0 -1.1
KMI PP PP 21 32 01.3 -0.9
KMI S S 21 38 58.5 +0.2
KMI AMB AMB
comp=Z,94nm,1.7s,mb5.4
KMI AMB AMB
comp=Z,727nm,3.8s
KMI LR LR
comp=N,485nm,29.4s
KMI LR LR
comp=E,1μm,22.1s
KMI LR LR
comp=Z,2μm,36.8s
UBT Ubonrachathani 77.60 73 ⇑P **P 21 29 12.0 +3.7**
GTA Gaotai 78.85 48 ⇓P **P 21 29 15.3 +0.6**
GTA AP pP 21 29 18.5 -1.0
GTA XP sP 21 29 22.3 +1.1
GTA PP PP 21 32 16.0 +2.5
GTA S S 21 39 12.8 +0.2
GTA XS sS 21 39 21.8 +1.4
GTA SKS 21 39 26.0
GTA SS SS 21 44 20.0 +2.2
GTA AMB AMB
comp=Z,62nm,1.5s,mb5.3
GTA AMB AMB
comp=Z,824nm,5.3s
GTA LR LR
comp=N,2μm,23.2s,MS5.4
GTA LR LR
comp=E,1μm,25.9s,MS5.4
GTA LR LR
comp=Z,2μm,34.2s
CD2 Chengdu 79.68 57⇑ *i*P **P 21 29 20.0 +0.5**
CD2 AP pP 21 29 24.8 +0.6
CD2 XP sP 21 29 27.8 +1.9
CD2 PP PP 21 32 21.8 +1.2
CD2 S S 21 39 19.3 -2.5
CD2 XS sS 21 39 27.3 -2.3
CD2 SS SS 21 44 29.3 -1.3
CD2 AMB AMB
comp=Z,60nm,1.4s,mb5.3
CD2 AMB AMB
comp=Z,630nm,6.9s
CD2 LR LR
comp=N,3μm,19.2s,MS5.8
CD2 LR LR
comp=E,3μm,20.4s,MS5.8
CD2 LR LR
comp=Z,3μm,20.4s,MS5.6
BORG Borgarnes 80.17 340 PFAKE 21 29 30.0 +8.6
BORG LR LR
comp=Z,3μm,22.0s,MS5.6
BORG Borgarnes 80.17 340 LR LR 22 09 28.7
comp=Z,2μm,18.2s,MS5.5,baz=302,slow=39
CASY Casey 80.63 156 PFAKE 21 29 40.0 +16
CASY LR LR
comp=Z,4μm,20.0s,MS5.8
KSM Kuching 80.84 88 *e*P **P 21 29 25.4 -0.7**
KSM Kuching 80.84 88 ⇓P **P 21 29 26.6 +0.5**
BJO Bjornoya 80.87 357 AMS AMS 22 13 05.1
comp=Z,1μm,22.3s,MS5.3
LZH Lanzhou 81.00 52 ⇓P **P 21 29 27.0 +0.5**
LZH AP pP 21 29 31.5 +0.3
LZH XP sP 21 29 34.3 +1.4
LZH PP PP 21 32 33.5 +2.0
LZH S S 21 39 33.5 -2.0
LZH SKS 21 39 40.5
LZH XS sS 21 39 41.8 -1.5
LZH SS SS 21 44 50.3 +0.1
LZH AMB AMB
comp=Z,163nm,1.3s,mb5.8
LZH AMB AMB
comp=Z,768nm,4.8s
LZH LR LR
comp=E,4μm,15.7s
LZH LR LR
comp=Z,6μm,19.2s,MS5.9
JMIC Jan Mayen 81.15 348 *e*P **P 21 29 30.1 +3.6**
JMIC *e* 21 39 34.1
JMIC LR LR
comp=Z,1μm,17.4s,MS5.3
JMIC Jan Mayen 81.15 348 *e*P **P 21 29 30.1 +3.6**
JMIC *e*SKS 21 39 42.2
JMIC *e*SS SS 21 44 52.9 +2.0
JMIC AMS AMS 22 10 27.9
comp=Z,1μm,17.4s,MS5.3
JMIC Jan Mayen 81.15 348 LR LR 22 10 18.3
comp=Z,2μm,18.2s,MS5.5,baz=322,slow=39
GYA Guiyang 81.21 62 ⇓*i*P **P 21 29 27.5 -0.3**
GYA AP pP 21 29 31.8 -0.7
GYA XP sP 21 29 35.0 +0.8
GYA PP PP 21 32 35.8 +2.4
GYA S S 21 39 37.0 -1.0
GYA SKS 21 39 43.5
GYA SS SS 21 44 54.3 +0.6
GYA AMB AMB
comp=Z,130nm,1.0s,mb5.8
GYA AMB AMB
comp=Z,580nm,4.9s
GYA LR LR
comp=N,2μm,24.8s,MS5.3
GYA LR LR
comp=E,670nm,22.4s,MS5.3
GYA LR LR
comp=Z,2μm,25.1s,MS5.3
QIZ Qiongzhong 82.78 70 P **P 21 29 36.5 +0.3**
QIZ XP sP 21 29 42.5 -0.1
QIZ PP PP 21 32 47.3 +0.8
QIZ S S 21 39 54.3 -0.1
QIZ AMB AMB
comp=Z,43nm,1.8s,mb5.2
QIZ AMB AMB
comp=Z,426nm,4.9s
QIZ LR LR
comp=E,1μm,19.6s
QIZ LR LR
comp=Z,937nm,18.3s,MS5.2
QIZ Qiongzhong 82.78 70 *e*P **P 21 29 36.7 +0.5**
comp=Z,252nm,1.9s,mb5.9
QIZ LR LR
comp=Z,837nm,20.0s,MS5.1
SBUM Sibu 82.85 87 ⇓P **P 21 29 36.8 +0.1**
MOY Mondy 83.46 36 *e*P **P 21 29 40.2 +1.2**
MOY pmax pmax
comp=Z,337nm,1.7s,mb6.1
MUN Mundaring 83.79 121 *e*P **P 21 29 40.5 -0.7**
BTM Bintulu 83.80 86 ⇓P **P 21 29 41.9 +0.4**
QSPA South Pole Qui 83.83 180 P **P 21 29 40.8 +0.4**
QSPA LR LR
comp=Z,4μm,20.0s,MS5.8
QSPA South Pole Qui 83.83 180 P **P 21 29 40.8 +0.4**
comp=Z,40nm,1.1s,mb5.5,baz=258,slow=2.6,SNR=25
ZAK Zakamensk 84.45 38⇑ *i*P **P 21 29 44.2 +0.1**
ZAK pmax pmax
comp=Z,32nm,1.5s,mb5.2
NWAO Narrogin (SRO) 84.59 122 *e*P **P 21 29 47.3 +2.0**
comp=Z,264nm,1.8s,mb6.1
NWAO LR LR
comp=Z,2μm,19.0s,MS5.5
NWAO Narrogin (SRO) 84.59 122 P **P 21 29 45.5 +0.2**
NWAO pmax pmax
comp=Z,51nm,1.1s
NWAO MLR MLR
comp=Z,2μm,18.3s
NWAO Narrogin (SRO) 84.59 122 P **P 21 29 45.5 +0.2**
comp=Z,51nm,1.1s,mb5.6,baz=280,slow=4.8,SNR=9.0
NWAO LR LR 22 04 42.9
comp=Z,2μm,18.3s,MS5.5,baz=271,slow=34
XAN Xi'an 84.61 55 P **P 21 29 45.3 0.0**
XAN SKS 21 40 08.3
XAN AMB AMB
comp=Z,34nm,1.9s,mb5.2
XAN AMB AMB
comp=Z,439nm,7.7s
XAN LR LR
comp=N,3μm,19.6s,MS5.7
XAN LR LR
comp=E,2μm,18.7s,MS5.7
XAN LR LR
comp=Z,2μm,19.4s,MS5.5
SPB4 Spitsbergen Ar 84.63 357 *e*P **P 21 29 45.4 +0.9**
TLY Talaya 85.04 37 P **P 21 29 47.0 0.0**
comp=Z,148nm,1.4s,mb5.9,SNR=11
TLY Talaya 85.04 37 *e*P **P 21 29 47.9 +0.9**
comp=Z,98nm,1.6s,mb5.7
TLY LR LR
comp=Z,3μm,20.0s,MS5.7
TLY Talaya 85.04 37*d i*P **P 21 29 47.2 +0.2**
TLY *e* 21 33 04.5
TLY *e*S S 21 40 11.2 -4.7
TLY *e* 21 41 29.6
TLY pmax pmax
comp=Z,71nm,1.6s,mb5.5
TLY MLR MLR
comp=Z,3μm,16.0s,MS5.7
TLY Talaya 85.04 37 P **P 21 29 48.0 +1.0**
SNR=33
TLY Talaya 85.04 37 P **P 21 29 48.0 +1.0**
SNR=33
KLBR Kellerberrin 85.13 121 *e*P **P 21 29 49.9 +1.9**
comp=Z,159nm,1.4s,mb6.0
IRK Irkutsk 85.57 36 ⇓*i*P **P 21 29 49.3 -0.4**
IRK *e*S S 21 40 19.2 -1.9
IRK pmax pmax
comp=Z,179nm,1.7s,mb6.0
KBS Kingsbay 85.58 357 *e*P **P 21 29 50.4 +1.1**
comp=Z,109nm,1.2s,mb6.0
KBS LR LR
comp=Z,1μm,21.0s,MS5.4
KBS Kingsbay 85.58 357 *e*P **P 21 29 50.1 +0.9**
KBS *e*S S 21 40 20.6 +0.3
KBS Kingsbay 85.58 357 *e*P **P 21 29 50.4 +1.2**
KBS pmax pmax
comp=Z,109nm,1.2s,mb6.0
KBS MLR MLR
comp=Z,1μm,21.0s,MS5.4
SONM Songino Array 85.75 41 P **P 21 29 51.4 +0.7**
SONM 21 33 04.0
SONM Songino Array 85.75 41 P **P 21 29 51.4 +0.7**
comp=Z,22nm,1.1s,mb5.3,baz=240,slow=3.6,SNR=102
SONM PP PP 21 33 04.0 -6.0
comp=Z,5.4nm,1.1s,baz=235,slow=7.0,SNR=4.1
SONM PKKPbc PKKPbc 21 47 54.2 -0.4
comp=Z,0.6nm,0.8s,baz=100,slow=4.4,SNR=4.9
SONM LR LR 22 09 40.9
comp=Z,3μm,20.4s,MS5.7,baz=272,slow=37
PMSA Palmer Station 85.99 205 LR LR 22 07 10.7
comp=Z,5μm,18.7s,MS6.0,baz=78,slow=35
ULN Ulaanbaatar 86.19 41 *e*P **P 21 29 53.1 +0.2**
comp=Z,72nm,1.4s,mb5.7
ULN LR LR
comp=Z,3μm,21.0s,MS5.6
ULN Ulaanbaatar 86.19 41 *e*P **P 21 29 53.1 +0.3**
ULN pmax pmax
comp=Z,72nm,1.4s,mb5.7
ULN MLR MLR
comp=Z,3μm,21.0s,MS5.6
ULN Ulaanbaatar 86.19 41 P **P 21 29 53.7 +0.8**
SNR=40
GZH Guangzhou 86.62 66 P **P 21 29 57.5 +2.0**
GZH S S 21 40 35.5 +2.9
GZH AMB AMB
comp=Z,93nm,1.5s,mb5.8
GZH LR LR
comp=N,1μm,21.3s,MS5.5
GZH LR LR
comp=E,2μm,19.0s,MS5.5
GZH LR LR
comp=Z,2μm,18.8s,MS5.5
BTO Baotou 86.74 49 *e*P **P 21 29 56.0 +0.3**
BTO AMB AMB

comp=Z,34nm,1.7s,mb5.3
KKM Kota Kinabalu 87.22 84 *e*P **P 21 29 58.9 +0.2**
KKM Kota Kinabalu 87.22 84 ⇓P **P 21 29 58.5 -0.2**
DAG Danmarks Havn 87.31 350 ⇑*i*P **P 21 29 57.2 -0.5**
DAG pmax pmax
comp=Z,12nm,0.9s,mb5.1
DAG Danmarks Havn 87.31 350 ⇑*i*P **P 21 29 57.2 -0.5**
comp=Z,12nm,0.9s,mb5.1
TRQA Tornquist 87.50 232 *e*P **P 21 29 60.0 +0.5**
comp=Z,102nm,1.6s,mb5.8
TRQA LR LR
comp=Z,3μm,22.0s,MS5.7
MBWA Marble Bar 87.82 111 PFAKE 21 30 10.0 +8.6
MBWA LR LR
comp=Z,2μm,22.0s,MS5.5
KDM Kudat 87.93 83 ⇑P **P 21 30 02.3 +0.3**
HHC Hu-ho-hao-te 87.93 49 ⇓P **P 21 30 02.5 +1.0**
HHC AP pP 21 30 07.5 +1.3
HHC XP sP 21 30 09.3 +1.4
HHC PP PP 21 33 29.0 +1.1
HHC SKS 21 40 26.5
HHC S S 21 40 41.5 -3.0
HHC XS sS 21 40 51.0 -1.4
HHC SS SS 21 46 32.8 +0.5
HHC AMB AMB
comp=Z,75nm,1.2s,mb5.8
HHC AMB AMB
comp=Z,862nm,3.7s
HHC LR LR
comp=N,4μm,17.8s,MS5.9
HHC LR LR
comp=E,2μm,19.0s,MS5.9
HHC LR LR
comp=Z,3μm,20.2s,MS5.7
TIY Taiyuan 88.07 52 *i*P **P 21 29 57.8 -4.4**
TIY PP PP 21 33 24.5 -4.6
TIY LR LR
comp=N,2μm,16.5s,MS5.8
TIY LR LR
comp=E,2μm,17.7s,MS5.8
TIY LR LR
comp=Z,3μm,18.5s,MS5.8
SDKM Sandakan 88.14 84 ⇓P **P 21 30 03.2 +0.1**
WHN Wuhan 88.56 59 ⇑P **P 21 30 05.0 +0.3**
WHN LR LR
comp=Z,4μm,24.8s,MS5.7
TSM Tawau 88.67 86 ⇓P **P 21 30 06.4 +0.9**
USHA Ushuaia 89.60 215 LR LR 22 06 32.9
comp=Z,4μm,18.2s,MS5.9,baz=76,slow=33
BBGH Gun Hill 90.67 283 PFAKE 21 30 30.0 +15
BBGH LR LR
comp=Z,2μm,20.0s,MS5.6
CIT Chita 91.11 38 *e*P **P 21 30 15.8 -0.3**
CIT *e* 21 30 22.4
CIT *e* 21 33 56.6
CIT pmax pmax
comp=Z,111nm,1.7s,mb5.9
BJT Baijiatuau 91.29 50 *e*P **P 21 30 17.5 +0.3**
comp=Z,41nm,1.4s,mb5.6
BJT LR LR
comp=Z,3μm,22.0s,MS5.7
BJT Baijiatuau 91.29 50 *e*P **P 21 30 17.5 +0.3**
BJT pmax pmax
comp=Z,41nm,1.4s
BJT MLR MLR
comp=Z,3μm,22.0s
BJI Beijing 91.29 50 P **P 21 30 17.5 +0.2**
BJI AP pP 21 30 21.0 -1.0
BJI PP PP 21 33 53.8 -0.9
BJI SS SS 21 47 21.5 +0.4
BJI AMB AMB
comp=Z,20nm,1.4s,mb5.2
BJI AMB AMB
comp=Z,597nm,9.2s
BJI LR LR
comp=N,5μm,20.2s,MS6.0
BJI LR LR
comp=E,2μm,20.2s,MS6.0
BJI LR LR
comp=Z,2μm,26.6s
QZH Quanzhou 91.61 65 P **P 21 30 19.3 +0.2**
QZH SKS 21 40 46.3
QZH S S 21 41 21.5 +2.1
QZH AMB AMB
comp=Z,80nm,1.0s,mb6.0
QZH AMB AMB
comp=Z,460nm,5.1s
QZH LR LR
comp=N,2μm,15.7s,MS5.8
QZH LR LR
comp=E,2μm,15.4s,MS5.8
QZH LR LR
comp=Z,2μm,15.0s,MS5.8
SFJD Kangerlussuaq 91.93 337 PFAKE 21 30 30.0 +10
SFJD LR LR
comp=Z,3μm,20.0s,MS5.8
DRV Dumont d'Urvil 92.20 158 P sP 21 30 36.0 +8.6
DRV S SKSac 21 40 58.0 +4.4
DRV SS SS 21 47 42.0 +10
DRV L 21 57 00.0
DRV R 22 02 00.0
BOD Bodaibo 92.22 32 *e*P **P 21 30 19.2 -1.9**
BOD *e* 21 40 50.5
BOD pmax pmax
comp=Z,34nm,1.5s,mb5.5
VNDA Vanda 92.27 171 P **P 21 30 20.9 -0.2**
comp=Z,7.3nm,1.2s,mb4.9,baz=249,slow=6.9,SNR=9.7
VNDA LR LR 22 08 07.6
comp=Z,3μm,21.2s,MS5.7,baz=219,slow=33
NJ2 Nanjing 92.57 58 *e*P **P 21 30 23.5 +0.1**
NJ2 AP pP 21 30 27.5 -0.6
NJ2 XP sP 21 30 30.3 +0.5
NJ2 PP PP 21 34 08.5 +3.5
NJ2 S S 21 41 23.0 -4.7
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.7
NJ2 AMB AMB
comp=Z,340nm,6.8s
NJ2 LR LR
comp=N,12μm,23.3s
NJ2 LR LR
comp=E,11μm,16.4s
NJ2 LR LR
comp=Z,21μm,17.8s
SBA Scott Base 92.78 172 *e*P **P 21 30 26.9 +3.4**
comp=Z,110nm,1.7s,mb6.0
SBA LR LR
comp=Z,5μm,21.0s,MS5.9
SBA Scott Base 92.78 172 *e*P **P 21 30 26.9 +3.5**
SBA pmax pmax
comp=Z,110nm,1.7s,mb6.0
SBA MLR MLR
comp=Z,5μm,21.0s,MS5.9
BATI Kupang 92.80 101 P **P 21 30 25.7 +0.9**
comp=Z,64nm,1.1s,mb6.0,baz=291,slow=8.6,SNR=10
CFAA Coronel Fontan 93.47 238 LR LR 22 10 53.4
comp=Z,206nm,19.8s,MS4.6,baz=102,slow=35
PLCA Paso Flores 93.67 229 P **P 21 30 28.9 +0.6**
comp=Z,14nm,1.1s,mb5.3,baz=105,slow=4.7,SNR=13
PLCA LR LR 22 08 34.1
comp=Z,4μm,19.9s,MS5.8,baz=97,slow=33
FITZ Fitzroy Crossi 93.71 109 *e*P **P 21 30 28.6 -0.3**
comp=Z,39nm,0.9s,mb5.8
FITZ Fitzroy Crossi 93.71 109 P **P 21 30 28.8 -0.1**
comp=Z,24nm,0.9s,mb5.6,baz=244,slow=5.4,SNR=20
FITZ LR LR 22 11 29.8
comp=Z,863nm,18.4s,MS5.2,baz=163,slow=35
FORT Forrest 93.99 121 *e*P **P 21 30 33.7 +3.7**
comp=Z,35nm,1.0s,mb5.7
YHNB Yeheng 94.11 66 *e*P **P 21 30 34.0 +3.4**
TATO Taipei 94.23 65 PFAKE 21 30 40.0 +8.8
TATO LR LR
comp=Z,1μm,21.0s,MS5.3
SSE Sheshan 94.47 59 P **P 21 30 32.5 +0.4**
SSE PP PP 21 34 18.0 -1.9
SSE S S 21 41 42.8 -1.7
SSE XS sS 21 41 48.5 -3.9
SSE AMB AMB
comp=Z,30nm,0.8s,mb5.8
SSE AMB AMB
comp=Z,127nm,5.4s
SSE LR LR
comp=N,2μm,20.2s,MS5.7
SSE LR LR
comp=E,2μm,20.2s,MS5.7
SSE LR LR
comp=Z,1μm,17.5s,MS5.5
HIA Hailar 94.72 41 *e*P **P 21 30 32.8 0.0**
comp=Z,33nm,1.4s,mb5.6
HIA LR LR
comp=Z,4μm,20.0s,MS5.9
HIA Hailar 94.72 41 *e*P **P 21 30 32.8 0.0**
HIA pmax pmax
comp=Z,33nm,1.4s
HIA MLR MLR
comp=Z,4μm,20.0s
PCRV Puerto La Cruz 95.32 280 LR LR 22 10 30.7
comp=Z,865nm,19.5s,MS5.2,baz=291,slow=34
DL2 Dalian 95.39 52 *e*P **P 21 30 37.5 +1.3**
DL2 SKS 21 41 13.5
DL2 S S 21 41 53.0 +0.9
DL2 AMB AMB
comp=Z,10.0nm,1.2s,mb5.1
DL2 AMB AMB
comp=Z,140nm,3.7s
DL2 LR LR
comp=N,1μm,17.9s,MS5.5
DL2 LR LR
comp=E,810nm,17.3s,MS5.5
LPAZ La Paz 95.72 253 P **P 21 30 38.3 +0.2**
comp=E,3.1nm,0.9s,mb4.7,baz=106,slow=9.0,SNR=7.7
LPAZ LR LR 22 13 53.1
comp=E,1μm,18.0s,MS5.4,baz=253,slow=36
LCO Las Campanas 96.02 240 PFAKE 21 30 50.0 +11
LCO LR LR
comp=Z,3μm,20.0s,MS5.7
DAV Davao City (W) 96.58 84 PFAKE 21 30 50.0 +7.9
DAV LR LR
comp=Z,853nm,20.0s,MS5.2
BBSR BB Station 97.00 302 PFAKE 21 30 50.0 +6.4
BBSR LR LR
comp=Z,4μm,20.0s,MS5.9
SNY Shenyang 97.03 49 P **P 21 30 41.0 -2.5**
SNY PP PP 21 34 42.3 +2.9
SNY S S 21 41 53.3 -13
SNY AMB AMB
comp=Z,172nm,3.9s
SNY LR LR
comp=N,4μm,23.7s,MS5.9
SNY LR LR
comp=E,2μm,26.1s,MS5.9
SNY LR LR
comp=Z,3μm,19.5s
SJG San Juan 97.44 287 PFAKE 21 31 00.0 +14
SJG LR LR
comp=Z,1.0nm,21.0s
CN2 Changchun 98.45 47 *e*P **P 21 30 49.8 -0.1**
CN2 *e*AP pP 21 30 54.5 -0.2
CN2 *e*XP sP 21 30 56.8 +0.5
CN2 PP PP 21 34 48.0 -2.2
CN2 *e*S S 21 42 13.3 -4.9
CN2 AMB AMB
comp=Z,10.0nm,1.1s,mb5.3
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,5μm,20.0s,MS6.0
CN2 LR LR
comp=E,2μm,20.0s,MS6.0
CN2 LR LR
comp=Z,3μm,19.0s,MS5.8
TIXI Tiksi 98.79 18 *e*P **P 21 30 49.7 -1.1**
comp=Z,31nm,1.8s,mb5.5
TIXI LR LR
comp=Z,3μm,19.0s,MS5.7
TIXI Tiksi 98.79 18 *e*P **P 21 30 49.3 -1.5**
TIXI *e*S SKSac 21 41 28.0 -0.2
TIXI pmax pmax
comp=Z,17nm,1.8s,mb5.3
SCHQ Schefferville 98.83 324 LR LR 22 13 27.7
comp=Z,2μm,19.1s,MS5.7,baz=96,slow=34
INCN Inchon 99.28 53 PFAKE 21 31 00.0 +6.3
INCN LR LR
comp=Z,1μm,21.0s,MS5.4
YAK Yakutsk 100.18 28 PFAKE 21 31 10.0 +13
YAK LR LR
comp=Z,2μm,19.0s,MS5.6
YAK Yakutsk 100.18 28 *e*P Pdif 21 30 56.1 -1.2
YAK *e* 21 35 04.7
YAK *e*S SKSac 21 41 34.4 -1.0
YAK *e*SS SS 21 49 33.0 +7.2
YAK *e*SSS 21 53 18.7
YAK pmax pmax
comp=Z,17nm,1.2s
YAK pmax pmax
comp=N,6.0nm,1.4s
YAK pmax pmax
comp=E,13nm,1.6s
YAK pmax pmax
comp=Z,255nm,4.5s
YAK pmax pmax
comp=N,55nm,3.0s
YAK pmax pmax
comp=E,34nm,1.7s
YAK smax
comp=E,749nm,13.8s
YAK smax
comp=N,102nm,2.3s
KSRS Korea Array 100.30 53 P Pdif 21 30 57.3 -0.6
comp=N,1.6nm,0.8s,baz=266,slow=3.4,SNR=4.7
ASAR Alice Springs 100.42 115 P Pdif 21 30 58.2 -0.1
comp=N,5.3nm,1.0s,baz=254,slow=4.2,SNR=19
ASAR PP PP 21 34 55.3 -10
comp=N,2.0nm,1.0s,baz=250,slow=6.7,SNR=4.5
ASAR PKKP PKKPbc 21 47 16.2 +0.9
comp=N,2.3nm,1.0s,baz=77,slow=3.5,SNR=10.0
PKME Peaks-Kenny Pk 100.72 315 PFAKE 21 31 10.0 +10
PKME LR LR
comp=Z,4μm,21.0s,MS5.9
SDV Santo Domingo 101.10 278 PFAKE 21 31 10.0 +8.6
SDV LR LR
comp=Z,457nm,19.0s,MS5.0
MDJ Mudanjiang 101.41 46 P Pdif 21 31 02.8 0.0
MDJ PP PP 21 35 10.3 -2.4
MDJ S Sdif 21 42 40.8 -1.8
MDJ AMB AMB
comp=Z,5.0nm,1.8s
MDJ AMB AMB
comp=Z,157nm,5.1s
MDJ LR LR
comp=N,4μm,23.2s,MS6.0
MDJ LR LR
comp=E,2μm,19.5s,MS6.0
MDJ LR LR
comp=Z,2μm,20.7s,MS5.6
MDJ Mudanjiang 101.41 46 PFAKE 21 31 10.0 +7.2
MDJ LR LR
comp=Z,3μm,20.0s,MS5.8
WRA Warramunga Arr 101.54 112 P Pdif 21 31 03.0 -0.3
comp=Z,7.3nm,0.9s,baz=259,slow=2.9,SNR=31
WRA PP PP 21 35 08.4 -5.8
comp=Z,4.5nm,1.2s,baz=266,slow=4.7,SNR=5.5
WRA PKKPbc PKKPbc 21 47 11.8 -0.2
comp=Z,2.3nm,1.0s,baz=70,slow=2.0,SNR=5.1
WB2 Warramunga Arr 101.55 112 *e*P Pdif 21 31 07.1 +3.7
WES Weston 102.31 312 PFAKE 21 31 20.0 +13
WES LR LR
comp=Z,3μm,20.0s,MS5.8
SDDR Presa de Saban 102.36 288 PFAKE 21 31 20.0 +13
SDDR LR LR
comp=Z,2μm,22.0s,MS5.7
HRV Harvard--Oak R 102.48 312 PFAKE 21 31 20.0 +12
HRV LR LR
comp=Z,3μm,19.0s,MS5.8
KLR Kul'dur 102.58 41 *e*P Pdif 21 31 02.7 -5.3
KLR pmax pmax
comp=Z,50nm,2.0s
LBNH Lisbon 102.65 314 PFAKE 21 31 20.0 +12
LBNH LR LR
comp=Z,3μm,20.0s,MS5.8
NCB Newcomb 104.32 314 PFAKE 21 31 30.0 +14
NCB LR LR
comp=Z,2μm,20.0s,MS5.6
LONY Lake Ozonia 104.51 314 PFAKE 21 31 30.0 +13
LONY LR LR
comp=Z,4μm,22.0s,MS5.9
NNA Nana 104.74 256 PFAKE 21 31 30.0 +12
NNA LR LR
comp=Z,2μm,20.0s,MS5.7
HABR Khabarovsk 104.83 42 *i*P Pdif 21 31 15.2 -2.8
HABR *e* 21 35 33.3
HABR *e*S Sdif 21 43 05.8 -5.3
HABR *e*SS SS 21 50 23.5 -7.4
TAU Tasmania Unive 105.39 138 PFAKE 21 35 50.0 +15
TAU LR LR
comp=Z,4μm,20.0s,MS5.9
BINY Binghamton 105.78 312 PFAKE 21 35 50.0 +15
BINY LR LR
comp=Z,4μm,20.0s,MS5.9
CBN Corbin 107.24 308 PFAKE 21 35 50.0 +12
CBN LR LR
comp=Z,5μm,19.0s,MS6.1
SSPA Standing Stone 107.37 311 PFAKE 21 35 50.0 +12
SSPA LR LR
comp=Z,5μm,20.0s,MS6.0
CNNC Cliffs of the 107.93 305 PFAKE 21 35 50.0 +10
CNNC LR LR
comp=Z,4μm,21.0s,MS5.9
OTAV Otavalo 108.05 268 PFAKE 21 35 50.0 +10
OTAV LR LR
comp=Z,2μm,22.0s,MS5.5
MAJO Matsushiro 108.57 54 PFAKE 21 35 50.0 +9.3
MAJO LR LR
comp=Z,2μm,22.0s,MS5.7
MJAR Matsushiro Arr 108.57 54 PP PP 21 36 11.2 +5.1
comp=Z,1.9nm,1.0s,baz=248,slow=8.9,SNR=4.1
ERPA Erie 108.74 312 PFAKE 21 35 50.0 +9.1
ERPA LR LR
comp=Z,3μm,20.0s,MS5.9
MCWV Mont Chateau 108.98 310 PFAKE 21 35 50.0 +8.6
MCWV LR LR
comp=Z,5μm,20.0s,MS6.1
BLA Blacksburg 109.75 307 PFAKE 21 35 50.0 +7.1
BLA LR LR
comp=Z,4μm,19.0s,MS6.0
NHSC New Hope 110.01 303 PFAKE 21 35 50.0 +6.4
NHSC LR LR
comp=Z,3μm,22.0s,MS5.8
YSS Yuzh-Sakhalins 110.22 42 PFAKE 21 35 50.0 +6.5
YSS LR LR
comp=Z,3μm,20.0s,MS5.9
MA2 Magadan 110.75 28 PFAKE 21 36 00.0 +16
MA2 LR LR
comp=Z,2μm,19.0s,MS5.8
ACSO Alum Creek Sta 111.27 311 PFAKE 21 36 00.0 +14
ACSO LR LR
comp=Z,5μm,20.0s,MS6.1
AAM Ann Arbor 111.39 313 PFAKE 21 36 00.0 +14
AAM LR LR
comp=Z,3μm,19.0s,MS5.9
DWPF Disney 111.53 298 PFAKE 21 36 00.0 +13
DWPF LR LR
comp=Z,3μm,20.0s,MS5.9
ERM Erimo 111.54 47 PFAKE 21 36 00.0 +14
ERM LR LR
comp=Z,3μm,20.0s,MS5.9
BILL Bilibino 111.83 16 *e*PKiKP PKiKP 21 35 47.7 +1.8
BILL LR LR
comp=Z,5μm,20.0s,MS6.1
BILL Bilibino 111.83 16 ⇑*i*PKIKP PKiKP 21 35 44.1 -1.8
BILL *e* 21 36 29.0
BILL *e*SS SS 21 52 12.9 +9.1
BILL pmax pmax
comp=Z,11nm,1.4s
TZTN Tazewell 112.33 307 PFAKE 21 36 00.0 +12
TZTN LR LR
comp=Z,4μm,20.0s,MS6.0
CTAO Charters Tower 112.40 115 PFAKE 21 36 00.0 +12
CTAO LR LR
comp=Z,2μm,20.0s,MS5.8
GOGA Godfrey 112.72 304 PFAKE 21 36 00.0 +11
GOGA LR LR
comp=Z,2μm,21.0s,MS5.8
WCI Wyandotte Cave 114.18 309 PFAKE 21 36 00.0 +8.7
WCI LR LR
comp=Z,3μm,19.0s,MS6.0
COWI Conover 114.27 318 PFAKE 21 36 00.0 +8.8
COWI LR LR
comp=Z,3μm,19.0s,MS5.9
EYMN Ely 115.22 321 PFAKE 21 36 00.0 +7.0
EYMN LR LR
comp=Z,3μm,19.0s,MS6.0
LRAL Lakeview Retre 115.70 304 PFAKE 21 36 10.0 +16
LRAL LR LR
comp=Z,2μm,21.0s,MS5.8
WVT Waverly 115.80 307 PFAKE 21 36 10.0 +15
WVT LR LR
comp=Z,5μm,20.0s,MS6.2
GUMO Guam 115.89 78 PFAKE 21 36 10.0 +15
GUMO LR LR
comp=Z,694nm,22.0s,MS5.2
HDIL Hopedale 115.91 312 PFAKE 21 36 10.0 +15
HDIL LR LR
comp=Z,7μm,20.0s,MS6.3
JFWS Jewell Farm 115.96 315 PFAKE 21 36 10.0 +15
JFWS LR LR
comp=Z,3μm,20.0s,MS5.9
BRAL Brewton 116.07 301 PFAKE 21 36 10.0 +15
BRAL LR LR
comp=Z,4μm,19.0s,MS6.0
PLAL Pickwick Lake 116.22 306 PFAKE 21 36 10.0 +15
PLAL LR LR
comp=Z,4μm,19.0s,MS6.0
INK Inuvik 117.01 353 PKiKP PKPdf 21 35 56.0 +0.1
TGUH Tegucigalpa,Un 117.61 283 PFAKE 21 36 10.0 +11
TGUH LR LR
comp=Z,1μm,20.0s,MS5.6
PET Petropavlovsk 117.64 32 PFAKE 21 36 10.0 +13
PET LR LR
comp=Z,2μm,19.0s,MS5.7
AGMN Agassiz Refuge 117.80 322 PFAKE 21 36 10.0 +12
AGMN LR LR
comp=Z,2μm,20.0s,MS5.8
YKA Yellowknife Ar 118.07 342 PKP PKPdf 21 35 56.9 -1.2
YKA PP PP 21 37 07.8 -4.5
YKA PKKPbc PKKPbc 21 46 21.8 +1.9
YKA Yellowknife Ar 118.07 342 PKP PKPdf 21 35 56.9 -1.2
comp=Z,3.3nm,1.0s,baz=39,slow=2.1,SNR=17
YKA PP PP 21 37 07.8 -4.5
comp=Z,1.4nm,1.1s,baz=46,slow=7.7,SNR=4.7
YKA PKKPbc PKKPbc 21 46 21.7 +1.9
comp=Z,2.0nm,1.1s,baz=216,slow=3.6,SNR=10
FFC Flin Flon 118.12 331 PFAKE 21 36 10.0 +12
FFC LR LR
comp=Z,2μm,19.0s,MS5.8
TEIG Tepich 118.35 290 PFAKE 21 36 10.0 +10
TEIG LR LR
comp=Z,2μm,20.0s,MS5.8
ECSD EROS,Sioux Fal 120.07 318 *e*PKPdf PKPdf 21 36 04.1 +1.6
ECSD LR LR
comp=Z,3μm,19.0s,MS6.0
IMA2 Indian Mountai 120.23 2 PKPdf PKPdf 21 36 05.3 +3.2
MIAR Mount Ida 120.73 307 *e*PKPdf PKPdf 21 36 05.5 +1.4
MIAR LR LR
comp=Z,3μm,21.0s,MS5.9
EGAK Eagle 121.21 355 *e*PKPdf PKPdf 21 36 04.1 +0.1
EGAK LR LR
comp=Z,1μm,20.0s,MS5.6
COLA College 121.45 359 ⇓*i*PKP PKPdf 21 36 06.0 +1.5
COLA LR LR
comp=Z,1μm,20.0s,MS5.6
KSU1 Kansas State U 121.72 312 PFAKE 21 36 20.0 +14
KSU1 LR LR
comp=Z,4μm,19.0s,MS6.1
DAWY Dawson 121.76 354 PKPdf PKPdf 21 36 03.9 -1.2
NATX Nacogdoches 122.30 304 PFAKE 21 36 20.0 +13
NATX LR LR
comp=Z,3μm,20.0s,MS5.9
DGMT Dagmar 122.63 325 PFAKE 21 36 20.0 +13
DGMT LR LR
comp=Z,2μm,20.0s,MS5.8
SNZO South Karori 122.86 149 PFAKE 21 36 20.0 +12
SNZO LR LR
comp=Z,2μm,19.0s,MS5.8
HKT Hockley 123.71 302 PFAKE 21 36 20.0 +10
HKT LR LR
comp=Z,2μm,20.0s,MS5.8
CBKS Cedar Bluff 124.10 313 PFAKE 21 36 20.0 +10
CBKS LR LR
comp=Z,5μm,20.0s,MS6.2
LAO LASA Array 124.75 324 PFAKE 21 36 20.0 +8.6
LAO LR LR
comp=Z,4μm,19.0s,MS6.1
PMR Palmer 124.77 359 PFAKE 21 36 20.0 +9.0
PMR LR LR
comp=Z,1μm,19.0s,MS5.6
WMOK Wichita Mounta 124.79 308 *e*PKPdf PKPdf 21 36 12.2 +0.4

WMOK LR LR
comp=Z,4μm,19.0s,MS6.1
SMY Shemya 125.28 26 PFAKE 21 36 20.0 +7.8
SMY LR LR
comp=Z,2μm,21.0s,MS5.8
EGMT Eagleton 125.95 327 PFAKE 21 36 30.0 +16
EGMT LR LR
comp=Z,2μm,20.0s,MS5.9
KVTX Kingsville 126.02 300 PFAKE 21 36 30.0 +16
KVTX LR LR
comp=Z,3μm,19.0s,MS5.9
JCT Junction City 126.89 304 *e*PKPdf PKPdf 21 36 17.2 +1.2
JCT LR LR
comp=Z,3μm,20.0s,MS6.0
AMTX Amarillo 126.99 309 PFAKE 21 36 30.0 +14
AMTX LR LR
comp=Z,4μm,20.0s,MS6.1
RLMT Red Lodge 127.38 324 PFAKE 21 36 30.0 +14
RLMT LR LR
comp=Z,3μm,22.0s,MS5.9
ISCO Idaho Springs 127.83 317 *e*PKPdf PKPdf 21 36 18.3 +0.8
ISCO LR LR
comp=Z,4μm,19.0s,MS6.2
SIT Sitka 127.97 350 PFAKE 21 36 30.0 +13
SIT LR LR
comp=Z,4μm,20.0s,MS6.1
HNR Honiara 128.05 107 PFAKE 21 36 30.0 +11
HNR LR LR
comp=Z,1μm,19.0s,MS5.5
BOZ Bozeman (W) 128.42 326 PKPdf PKPdf 21 36 18.1 -0.3
BOZ LR LR
comp=Z,3μm,19.0s,MS6.0
CHMT Chamberlain Mo 128.50 328 *e*PKPdf PKPdf 21 36 19.7 +1.1
KDAK Kodiak Island 128.57 2 PFAKE 21 36 30.0 +12
KDAK LR LR
comp=Z,459nm,21.0s,MS5.1
YMR Madison River 128.63 325 PFAKE 21 36 30.0 +11
YMR LR LR
comp=Z,3μm,20.0s,MS5.9
BW06 Boulder Array 128.88 322 PFAKE 21 36 30.0 +11
BW06 LR LR
comp=Z,3μm,20.0s,MS6.0
PDAR Pinedale Array 128.88 322 PKP PKPdf 21 36 19.2 -0.1
comp=Z,6.7nm,1.0s,baz=87,slow=3.1,SNR=22
MSO Missoula 128.92 328 PFAKE 21 36 30.0 +11
MSO LR LR
comp=Z,2μm,21.0s,MS5.7
SMCO Snowmass 129.05 317 *e*PKPdf PKPdf 21 36 21.4 +1.6
REDW Red Top Meadow 129.32 323 *e*PKPdf PKPdf 21 36 22.1 +1.9
NEW Newport 129.52 332 PFAKE 21 36 30.0 +10
NEW LR LR
comp=Z,2μm,22.0s,MS5.8
ADK Adak 129.56 21 PFAKE 21 36 30.0 +10
ADK LR LR
comp=Z,2μm,19.0s,MS5.8
AHID Auburn Hatcher 129.82 323 PFAKE 21 36 30.0 +8.8
AHID LR LR
comp=Z,2μm,20.0s,MS5.9
ANMO Albuquerque 130.58 311 *e*PKPdf PKPdf 21 36 23.4 +0.5
HWUT Hardware Ranch 130.76 322 PFAKE 21 36 30.0 +7.0
HWUT LR LR
comp=Z,4μm,20.0s,MS6.1
MNTX Cornudas Mount 131.03 307 *e*PKPdf PKPdf 21 36 23.0 -0.8
MNTX LR LR
comp=Z,3μm,20.0s,MS6.0
BNM Barren Site 131.04 311 *e*PKPdf PKPdf 21 36 25.8 +2.0
MVCO Mesa Verde 131.04 315 PFAKE 21 36 40.0 +16
MVCO LR LR
comp=Z,3μm,21.0s,MS5.9
DAU Daniels Canyon 131.24 320 *e*PKPdf PKPdf 21 36 23.4 -0.6
JLU Jordanelle 131.26 321 *e*PKPdf PKPdf 21 36 25.1 +1.1
HLID Hailey 131.27 325 PFAKE 21 36 40.0 +16
HLID LR LR
comp=Z,3μm,21.0s,MS5.9
LAZ Ladron 131.32 311 PKPdf PKPdf 21 36 25.5 +1.2
MPU Maple Canyon 131.70 320 PFAKE 21 36 40.0 +15
MPU LR LR
comp=Z,4μm,19.0s,MS6.2
BMO Blue Mountains 131.99 329 PFAKE 21 36 40.0 +15
BMO LR LR
comp=Z,3μm,19.0s,MS6.0
HAWA Hanford 132.00 332 PFAKE 21 36 40.0 +15
HAWA LR LR
comp=Z,2μm,20.0s,MS5.9
DUG Dugway 132.35 321 PFAKE 21 36 40.0 +14
DUG LR LR
comp=Z,2μm,21.0s,MS5.9
MSU Marysvale 132.88 319 *e*PKPdf PKPdf 21 36 30.1 +3.0
NLWA Neilton Lookou 133.16 335 PFAKE 21 36 40.0 +13
NLWA LR LR
comp=Z,3μm,19.0s,MS6.0
WUAZ Wupatki 133.89 315 *e*PKPdf PKPdf 21 36 30.9 +1.8
WUAZ LR LR
comp=Z,3μm,20.0s,MS6.0
WVOR Wild Horse Val 134.35 327 PFAKE 21 36 40.0 +10
WVOR LR LR
comp=Z,2μm,20.0s,MS5.8
TUC Tucson 134.97 310 *e*PKPdf PKPdf 21 36 32.4 +1.1
TUC LR LR
comp=Z,3μm,21.0s,MS6.0
COR Corvallis 135.11 333 PFAKE 21 36 40.0 +8.9
COR LR LR
comp=Z,2μm,21.0s,MS5.9
MOD Modoc 135.61 328 PFAKE 21 36 40.0 +7.9
MOD LR LR
comp=Z,2μm,19.0s,MS5.8
TPNV Topopah Spring 136.42 319 PFAKE 21 36 50.0 +16
TPNV LR LR
comp=Z,4μm,19.0s,MS6.2
NVAR Mina Array Bea 136.80 323 PKP PKPdf 21 36 33.4 -1.1
comp=Z,2.5nm,0.8s,baz=64,slow=4.9,SNR=8.7
YBH Yreka Blue Hor 136.98 329 PFAKE 21 36 50.0 +15
YBH LR LR
comp=Z,2μm,20.0s,MS5.8
WDC Whiskeytown Da 137.73 328 PFAKE 21 36 50.0 +14
WDC LR LR
comp=Z,2μm,20.0s,MS5.8
CMB Columbia Colle 138.30 324 PFAKE 21 36 50.0 +13
CMB LR LR
comp=Z,4μm,20.0s,MS6.1
PFO Pinyon Flat Ob 138.46 315 PFAKE 21 36 50.0 +12
PFO LR LR
comp=Z,3μm,19.0s,MS6.0
ISA Isabella 138.63 319 PFAKE 21 36 50.0 +12
ISA LR LR
comp=Z,3μm,19.0s,MS6.0
HOPS Hopland 139.16 327 PFAKE 21 36 50.0 +11
HOPS LR LR
comp=Z,2μm,21.0s,MS5.8
MCCM Marconi Confer 139.66 326 PFAKE 21 36 50.0 +10
MCCM LR LR
comp=Z,2μm,19.0s,MS6.0
SAO San Andreas Ge 139.78 323 PFAKE 21 36 50.0 +10
SAO LR LR
comp=Z,2μm,21.0s,MS5.9
SNCC San Nicolas Is 140.77 317 PFAKE 21 36 50.0 +8.1
SNCC LR LR
comp=Z,4μm,20.0s,MS6.2
FUNA Funafuti 146.25 115 *e*PKPbc PKPbc 21 36 55.5 +2.4
FUNA LR LR
comp=Z,7μm,19.0s,MS6.5
RKT Rikitea 147.18 207 *e*SS SS 21 59 19.4 -0.4
comp=Z,895nm,30.2s
RKT Rikitea 147.18 207 *e*LR LR 22 25 23.5
comp=Z,2μm,32.0s
TBI Tubuai 150.57 182 *e*PP PP 21 40 35.2 -3.2
comp=Z,153nm,25.5s
TBI Tubuai 150.57 182 *e*SS SS 21 59 55.5 -1.4
comp=Z,495nm,31.5s
TBI Tubuai 150.57 182 *e*LR LR 22 27 20.9
comp=Z,3μm,30.0s
AFI Afiamalu 150.76 133 PFAKE 21 37 10.0 +11
AFI LR LR
comp=Z,1μm,19.0s,MS5.8
PPT Papeete 156.32 182 *e*PP PP 21 41 12.8 +1.9
comp=Z,165nm,24.5s
PPT Papeete 156.32 182 *e*SS SS 22 01 11.2 +11
comp=Z,1μm,24.8s
PPT Papeete 156.32 182 *e*LR LR 22 29 56.1
comp=Z,3μm,23.0s
TAOE Nuku Hiva Isla 161.89 214 *e*SS SS 22 01 28.1 -32
comp=Z,9μm,29.6s
TAOE Nuku Hiva Isla 161.89 214 *e*LR LR 22 32 22.4
comp=Z,6μm,21.8s

IDC 28 21:30:28.5±3.1, 3317S×17836W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.8/13, mbtmp3.7/3, ML3.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/26, Error ellipse: s-maj=74.2km s-min=36.4km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.27**	**215**	Pn	Pn	21 32 02.7	+0.5
	0.9nm,0.3s,baz=342,slow=20,SNR=6.1						
URZ				Sn	Sn	21 33 14.3	-0.2
	1.5nm,0.3s,baz=166,slow=21,SNR=9.6						
ASAR	**Alice Springs**	**42.73**	**270**	P	P	21 38 27.6	0.0
	0.6nm,0.6s,baz=108,slow=7.6,SNR=8.9						
WRA	**Warramunga Arr**	**43.97**	**275**	P	P	21 38 37.5	-0.1
	0.5nm,0.5s,baz=117,slow=7.6,SNR=4.8						
RPN	**Rapa Nui**	**59.03**	**104**	LR	LR	21 58 53.0	
	comp=Z,48nm,19.7s,baz=135,slow=29						
FINES	**FINESS Array B**	**147.62**	**338**	PKPbc	PKPbc	21 50 13.2	-0.8
	0.7nm,0.6s,baz=38,slow=7.0,SNR=6.0						

*PRU **28** 21:48:44.5, 5030N×1879E, h0km*
*VIE **28** 21:48:47.5±0.8, 4984N×1879E, h0km, mb2.0/4, ML2.4/4, Error ellipse: s-maj=7.0km s-min=4.8km az=0.0 39 km E of Ostrava Suspected Mining induced.*

WAR 28 21:48:43.9, 5025N×1888E, ML2.8, 2C-1D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.47**	**250**	*e*Pg	Pg	21 48 53.7	+0.8
RAC				*e*Sg	Sg	21 49 01.0	+2.0
OJC	**Ojcow**	**0.59**	**92**	*e*Pg	Pg	21 48 55.2	0.0
OJC				*e*Sg	Sg	21 49 03.6	+0.7
OKC	**Ostrava-Krasne**	**0.62**	**229**	*e*PG	Pg	21 48 56.1	+0.3
OKC				*e*SG	Sg	21 49 04.1	+0.2
	38nm,0.6s						
LIKS	**Likavka**	**1.21**	**173**	*e*SN	Sn	21 49 23.7	-1.3
NIE	**Niedzica**	**1.24**	**131**	*e*Pg	Pg	21 49 07.7	0.0
NIE				*e*Sg	Sg	21 49 25.1	+1.3
DPC	**Dobruska-Polom**	**1.64**	**275**	*e*PG	Pg	21 49 12.9	-2.5
DPC				*e*SG	Sg	21 49 35.1	-1.5
	25nm,0.6s						
KOLL	**Kolacno**	**1.70**	**191**	*e*PN	Pn	21 49 16.9	+2.2
KOLL				*e*SN	Sn	21 49 38.2	+1.1
STHS	**Stebnicka Huta**	**1.74**	**118**	*e*PN	Pn	21 49 15.9	+0.6
STHS				*e*SN	Sn	21 49 41.5	+3.3
VYHS	**Vyhne**	**1.75**	**181**	*e*PN	Pn	21 49 14.5	-1.0
VYHS				*e*SN	Sn	21 49 38.6	+0.1
KSP	**Ksiaz**	**1.75**	**291**	*e*Pn	Pn	21 49 16.6	+1.0
KSP				*e*Pg	Pg	21 49 18.3	+0.8
KSP				*e*Sg	Sg	21 49 40.2	0.0
UPC	**Upice**	**1.85**	**279**	*e*SG	Sg	21 49 41.1	-2.3
SMOL	**Smolenice**	**1.98**	**209**	*e*SN	Sn	21 49 45.5	+1.5
KECS	**Kecovo**	**2.05**	**149**	*e*PN	Pn	21 49 21.2	+1.6
KECS				*e*		21 49 43.7	
KWP	**Kalwaria**	**2.55**	**103**	*e*Pn	Pn	21 49 31.3	+4.8
KWP				*e*P*	Pb	21 49 34.2	+3.8
KWP				*e*Pg	Pg	21 49 38.8	+6.1
KWP				*e*Sn	Sn	21 50 03.8	+5.7
KWP				*e*Sg	Sg	21 50 13.8	+8.0
KOLS	**Kolonicke sedl**	**2.57**	**119**	*e*PG	Pg	21 49 33.7	+0.6
PRU	**Pruhonice**	**2.80**	**266**	*e*PN	Pn	21 49 27.5	-2.4
PRU				*e*PG	Pg	21 49 34.1	-3.5
PRU				*e*SG	Sg	21 50 11.9	-2.0
	6.0nm,0.5s						
CONA	**Conrad Observa**	**3.05**	**222**	*i*Pn	Pn	21 49 32.2	-1.2
BRG	**Berggiesshubel**	**3.21**	**283**	PG	Pg	21 49 44.5	-0.9
BRG				SG	Sg	21 50 24.9	-2.0
	10nm,0.9s						
KHC	**Kasperske Hory**	**3.62**	**254**	*e*PN	Pn	21 49 40.7	-0.4
KHC				*e*PG	Pg	21 49 49.0	-4.2
KHC				*e*SN	Sn	21 50 19.0	-5.5
KHC				*e*SG	Sg	21 50 37.8	-2.3
	8.4nm,0.4s						
MOA	**Molln**	**3.87**	**233**	*i*Pn	Pn	21 49 44.6	+0.1
MOA				*i*Sg	Sg	21 50 45.5	-2.6
	comp=Z,3.3nm,0.5s						
CLL	**Collm**	**3.88**	**288**	*e*Sg	Sg	21 50 48.0	-0.4
	comp=Z,7.0nm,0.6s						

*IDC **28** 21:52:35.0±0.7, 645N×12692E, h0km, mb4.0/9, mb1 4.1/9, mb1mx4.0/18, mbtmp3.9/9, Error ellipse: s-maj=52.2km s-min=15.4km az=72.0*
*ISCJB **28** 21:52:42.8±1.3, 640N±007×1270E±0.1, h79km±10km, mb4.0/12, Error ellipse: s-maj=20.2km s-min=11.7km az=169.8*
*NEIC **28** 21:52:43.6±2.1, 644N×12700E, h68km±20km, Error ellipse: s-maj=32.5km s-min=10.6km az=71.0*

ISC 28 21:52:44.1±1.3, 640N±007×1270E±01, h72km±10km, n22, σ0.0 75/27, mb4.0/12, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.52**	**296**	*e*P	**Pn**	**21 53 09.3**	**0.0**
DAV	**Davao City (W)**	**1.52**	**296**	*i*e*P	**Pn**	**21 53 10.5**	**+1.1**
DMPH	**Davao City--Mi**	**1.58**	**295**	*i*P	**Pn**	**21 53 11.0**	**+0.7**
BIPH	**Bislig**	**1.87**	**342**	*i*P	**Pn**	**21 53 10.3**	**-3.7**
BIPH				*i* S	**Sn**	**21 53 36.6**	**-0.1**
GSPH	**General Santos**	**2.01**	**261**	*e*P	**Pn**	**21 53 14.5**	**-1.5**
GSPH				*e*S	**Sn**	**21 53 52.4**	**+12**
BUKP	**Musuan**	**2.38**	**308**	*e*P	**Pn**	**21 53 22.4**	**+1.4**
BUKP				*e*S	**Sn**	**21 53 38.6**	**-11**
CTBH	**Cotabato--PC H**	**2.81**	**287**	*e*P	**Sn**	**21 53 58.1**	**-1.4**
CTBH				*i* S	**Sn**	**21 54 06.3**	**+6.8**
CGP	**Cagayan de Oro**	**3.03**	**313**	*i*e*P	**Pn**	**21 53 30.0**	**+0.3**
CGP				*i* S	**Sn**	**21 54 11.3**	**+6.4**
WRA	**Warramunga Arr**	**27.17**	**165**	P	**P**	**21 58 20.3**	**-0.6**
	2.1nm,0.7s,mb3.8,baz=348,slow=10,SNR=19						
ASAR	**Alice Springs**	**30.64**	**167**	P	**P**	**21 58 51.6**	**-0.2**
	0.2nm,0.3s,mb3.3,baz=354,slow=7.5,SNR=3.6						
ASAR				PcP	PcP	22 01 49.6	+1.0
	0.6nm,0.6s,baz=351,slow=2.4,SNR=8.0						
MJAR	**Matsushiro Arr**	**31.72**	**17**	P	**P**	**21 59 00.1**	**-1.0**
	1.8nm,0.7s,mb3.9,baz=180,slow=9.3,SNR=5.2						
STKA	**Stephens Creek**	**40.55**	**161**	P	**P**	**22 00 17.4**	**+0.9**
	7.4nm,0.8s,mb4.6,baz=335,slow=9.5,SNR=3.0						
JIRN	**Jiri**	**44.04**	**304**	*e*P	**P**	**22 00 45.6**	**+0.6**
	10nm,0.7s,mb4.7						
KKN	**Kakani**	**44.84**	**303**	*e*P	**P**	**22 00 51.3**	**-0.1**
SONM	**Songino Array**	**44.86**	**340**	P	**P**	**22 00 51.2**	**0.0**
	0.2nm,0.5s,mb3.1,baz=147,slow=8.4,SNR=3.2						
SONM				PcP	PcP	22 02 32.3	+0.5
	0.3nm,0.7s,baz=163,slow=5.0,SNR=3.1						
GKN	**Gorkha**	**45.45**	**303**	*e*P	**P**	**22 00 55.9**	**-0.3**
	8.2nm,0.9s,mb4.5						
KOLN	**Kolkanda**	**46.23**	**303**	*e*P	**P**	**22 01 02.5**	**+0.1**
	17nm,0.7s,mb4.9						
MKAR	**Makanchi Array**	**55.52**	**324**	P	**P**	**22 02 11.7**	**-0.1**
	1.4nm,0.6s,mb4.2,baz=114,slow=7.1,SNR=24						
MKAR				PcP	PcP	22 03 11.5	+0.5
	0.6nm,0.7s,baz=122,slow=4.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**58.33**	**332**	P	**P**	**22 02 30.8**	**-0.8**
	0.4nm,0.3s,mb3.9,baz=118,slow=6.0,SNR=6.0						
AKTK	**Aktyubinsk**	**71.72**	**321**	P	**P**	**22 03 58.7**	**+0.2**
AKTO	**Aktyubinsk**	**71.72**	**321**	P	**P**	**22 03 58.7**	**+0.2**
	1.2nm,0.6s,mb3.9,baz=101,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**96.99**	**24**	P	**P**	**22 06 08.3**	**+0.8**
	0.4nm,0.8s,mb3.9,baz=301,slow=5.0,SNR=5.1						

IDC 28 21:57:25.1±9.0, 2139S×6794W, h134km±61km, mb4.0/3, mb1 3.9/5, mb1mx3.6/16, mbtmp3.8/5, Error ellipse: s-maj=99.4km s-min=30.6km az=10.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.08**	**358**	P	Pn	21 58 41.0	+1.7
	1.1nm,0.3s,baz=190,slow=6.4,SNR=21						
SIV	**San Ignacio**	**8.44**	**52**	P	Pn	21 59 24.1	-0.4
	4.0nm,0.3s,baz=241,slow=11,SNR=49						
SIV				S	Sn	22 00 57.7	-0.4
	0.1nm,0.3s,baz=311,slow=23,SNR=8.1						
DBIC	**Dimbokro**	**67.84**	**73**	P	P	22 08 09.5	+0.2
	5.2nm,0.7s,baz=221,slow=7.9,SNR=14						
TORD	**Torodi Ar. Bea**	**76.47**	**70**	P	P	22 09 00.5	-0.1
	3.5nm,0.6s,baz=254,slow=5.7,SNR=14						
YKA	**Yellowknife Ar**	**91.38**	**340**	P	P	22 10 14.4	-0.9
	0.3nm,0.5s,baz=134,slow=5.0,SNR=6.1						
MKAR	**Makanchi Array**	**145.01**	**37**	PKPbc	PKPbc	22 16 46.1	+0.2
	0.5nm,0.7s,baz=328,slow=3.0,SNR=5.3						

IDC 28 22:17:28.6±3.3, 2705S×14043E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/12, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=130.6km s-min=26.0km az=90.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.14**	**199**	P	Pn	22 21 41.0	-1.0
	0.3nm,0.3s,baz=20,slow=12,SNR=11						
ASAR	**Alice Springs**	**21.77**	**196**	P	P	22 22 21.9	-0.2
	1.0nm,0.5s,baz=28,slow=10,SNR=10						
MKAR	**Makanchi Array**	**70.84**	**322**	P	P	22 28 47.9	+0.6
	0.5nm,0.7s,baz=104,slow=7.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**72.80**	**329**	P	P	22 28 58.8	0.0
	0.3nm,0.5s,baz=112,slow=6.4,SNR=2.2						

IDC 28 22:21:09.7±5.7, 3273S×17937W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.7/12, mbtmp3.7/2, Error ellipse: s-maj=245.5km s-min=56.6km az=161.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.88**	**270**	P	P	22 29 00.8	-1.0
	0.6nm,0.6s,baz=110,slow=8.0,SNR=5.0						
WRA	**Warramunga Arr**	**43.08**	**275**	P	P	22 29 12.4	+0.8
	0.7nm,0.4s,baz=116,slow=8.0,SNR=14						
FINES	**FINESS Array B**	**146.89**	**338**	PKPbc	PKPbc	22 40 52.5	-0.7
	1.0nm,0.8s,baz=37,slow=4.8,SNR=7.0						

*ISCJB **28** 22:34:55.7±0.3, 2549N±007×12492E±005, h115km±6km, mb3.6/5, Error ellipse: s-maj=13.0km s-min=4.0km az=150.0*
*IDC **28** 22:34:56.8±6.5, 2583N×12491E, h95km±37km, mb3.5/5, mb1 3.5/6, mb1mx3.3/21, mbtmp3.5/6, Error ellipse: s-maj=104.8km s-min=27.4km az=5.0*
*JMA **28** 22:34:57.0±0.2, 2553N×12483E, h105km, M3.5*
*NEIC **28** 22:34:57.4±0.9, 2553N×12490E, h114km±10km, MG3.5(JMA), Error ellipse: s-maj=18.2km s-min=10.7km az=149.0*

ISC 28 22:34:56.7±0.3, 2549N±007×12491E±005, h109km±6km, n29, σ1.9 02/46, mb3.6/5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMJ	**Miyako jima 2**	**0.76**	**153**	P	**Pn**	**22 35 15.8**	**+0.3**
JMJ				S	**Sn**	**22 35 30.2**	**+0.6**
JOGS	**Gusukube**	**0.86**	**148**	P	**Pn**	**22 35 17.4**	**+1.0**
JOGS				S	**Sn**	**22 35 32.2**	**+1.0**
JTJ	**Tarama**	**0.87**	**193**	P	**Pn**	**22 35 16.8**	**+0.3**
JTJ				S	**Sn**	**22 35 31.1**	**-0.3**
JIJ	**Ishigaki jima**	**1.32**	**212**	P	**Pn**	**22 35 21.2**	**-0.2**
JIJ				S	**Sn**	**22 35 38.4**	**-1.6**
JKRS	**Kuro-shima**	**1.49**	**213**	P	**Pn**	**22 35 23.4**	**0.0**
JKRS				S	**Sn**	**22 35 43.2**	**-0.4**
IRIF	**Iriomote-Funau**	**1.57**	**223**	P	**Pn**	**22 35 24.2**	**-0.2**
IRIF				S	**Sn**	**22 35 44.6**	**-0.7**
HATJ	**Hateruma jima**	**1.75**	**215**	P	**Pn**	**22 35 26.5**	**0.0**
HATJ				S	**Sn**	**22 35 48.7**	**-0.4**
JKE	**Kume jima 2**	**1.88**	**63**	P	**Pn**	**22 35 28.8**	**+0.6**
JKE				*e*S	**Sn**	**22 35 52.5**	**+0.3**
YOJ	**Yonaguni jima**	**2.01**	**240**	P	**Pn**	**22 35 30.4**	**+0.7**
YOJ				S	**Sn**	**22 35 54.4**	**-0.5**
JAGN	**Aguni-jima**	**2.37**	**62**	P	**Pn**	**22 35 35.0**	**+0.7**
JAGN				S	**Sn**	**22 36 02.4**	**-0.8**
JJT2	**Tamagusuku 2**	**2.64**	**75**	P	**Pn**	**22 35 39.0**	**+1.1**
JIH	**Iheya**	**3.15**	**60**	P	**Pn**	**22 35 45.3**	**+0.7**
JIH				*e*S	**Sn**	**22 36 19.4**	**-2.2**
NACB	**Ninganchiao**	**3.29**	**247**	*e*Pn	**Pn**	**22 35 46.5**	**0.0**
NACB				*e*Sn	**Sn**	**22 36 21.8**	**-3.1**
JOW	**Kunigami**	**3.31**	**65**	P	**Pn**	**22 35 46.8**	**+0.1**
JOW				*e*S	**Sn**	**22 36 27.3**	**+1.9**
JOW	**Kunigami**	**3.31**	**65**	P	**Pn**	**22 35 46.8**	**0.0**
	13nm,0.3s,baz=233,slow=9.2,SNR=94						
JOW				S	**Sn**	**22 36 21.9**	**-3.5**
	4.2nm,0.3s,baz=113,slow=26,SNR=4.1						
YHNB	**Yeheng**	**3.31**	**256**	*e*Pn	**Pn**	**22 35 49.0**	**+2.2**
YHNB				*e*Sn	**Sn**	**22 36 27.8**	**+2.4**
JTK	**Tokunoshima**	**4.28**	**57**	P	**Pn**	**22 35 59.1**	**-0.7**
JAM	**Amami Oshima**	**5.10**	**54**	P	**Pn**	**22 36 10.2**	**-0.7**
JAM				*e*S	**Sn**	**22 37 04.9**	**-3.7**
JMZ	**Minamidaito 2**	**5.70**	**85**	P	**Pn**	**22 36 16.7**	**-2.4**
JMZ				*e*S	**Sn**	**22 37 15.4**	**-7.8**
MDJ	**Mudanjiang**	**19.46**	**10**	P	**P**	**22 39 15.2**	**+0.6**
HIA	**Hailar**	**24.07**	**352**	*e*P	**P**	**22 40 02.5**	**+0.7**
YSS	**Yuzh-Sakhalins**	**25.69**	**29**	P	**P**	**22 40 17.0**	**+0.5**
SONM	**Songino Array**	**26.66**	**332**	P	**P**	**22 40 25.2**	**0.0**
	0.4nm,0.5s,mb3.2,baz=153,slow=9.2,SNR=6.6						
MKAR	**Makanchi Array**	**39.83**	**313**	P	**P**	**22 42 19.0**	**-0.3**
MKAR	**Makanchi Array**	**39.83**	**313**	P	**P**	**22 42 19.0**	**-0.3**
	0.7nm,0.4s,mb3.8,baz=100,slow=10,SNR=21						
ZALV	**Zalesovo Beam**	**41.07**	**325**	P	**P**	**22 42 27.6**	**-1.8**
	0.7nm,0.4s,mb3.9,baz=108,slow=8.0,SNR=5.3						
MBWA	**Marble Bar**	**46.64**	**187**	P	**P**	**22 43 14.8**	**+0.6**
FINES	**FINESS Array B**	**72.02**	**330**	P	**P**	**22 46 07.4**	**-1.0**
	1.2nm,1.1s,mb3.7,baz=54,slow=7.2,SNR=3.5						
YKA	**Yellowknife Ar**	**80.43**	**24**	P	**P**	**22 46 56.9**	**+0.9**
	0.6nm,0.6s,mb3.6,baz=307,slow=4.7,SNR=11						

IDC 28 22:36:12.7±1.9, 105N×12611E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.7/3, Error ellipse: s-maj=170.9km s-min=24.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.37**	**159**	P	P	22 41 12.0	-0.5
	1.4nm,0.6s,baz=338,slow=11,SNR=97						
ASAR	**Alice Springs**	**25.71**	**163**	P	P	22 41 45.4	+0.5
	1.1nm,0.3s,baz=342,slow=8.8,SNR=18						
MKAR	**Makanchi Array**	**59.41**	**326**	P	P	22 46 17.1	0.0
	0.2nm,0.3s,baz=124,slow=7.2,SNR=7.1						

*DDA **28** 22:41:48.0, 3868N×3944E, h14km±3km, Md3.0*
*ISK **28** 22:41:49.3, 3841N×3926E, h5km, MD2.8*
*ISCJB **28** 22:41:50.2±0.6, 3839N±004×3931E±004, h10km, Error ellipse: s-maj=6.5km s-min=4.7km az=9.8*
*CSEM **28** 22:41:50.1±0.1, 3841N×3926E, h5km, MD2.8, Error ellipse: s-maj=4.8km s-min=3.3km az=151.0*

ISC 28 22:41:50.6±0.8, 3841N±005×3932E±006, h10km±9km, n9, σ0.0 94/14, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.28**	**289**	*i*P	**Pg**	**22 41 55.9**	**-0.3**
ELZG				*i* S	**Sg**	**22 42 01.8**	**+1.7**
MALT	**Malatya**	**0.71**	**263**	PG	**Pg**	**22 42 02.3**	**-2.0**
MALT				SG	**Sg**	**22 42 13.9**	**+0.3**
MYA	**Malataya**	**0.71**	**264**	PG	**Pg**	**22 42 03.1**	**-1.2**
BINT	**Bingol**	**1.03**	**63**	PG	**Pg**	**22 42 10.8**	**+0.4**
URFA	**Urfa**	**1.04**	**202**	PG	**Pg**	**22 42 10.4**	**-0.3**
URFA				SG	**Sg**	**22 42 25.3**	**+1.0**
EZC	**Erzincan**	**1.39**	**16**	*e*PN	**Pn**	**22 42 16.4**	**+0.3**
MARD	**Mardin**	**1.59**	**133**	*i*P	**Pn**	**22 42 18.5**	**-0.3**
MARD				*i* S	**Sn**	**22 42 39.4**	**+0.1**
BTMT	**Batman**	**1.72**	**97**	*e*PN	**Pn**	**22 42 20.7**	**+0.2**
GZT	**Gaziantep**	**1.74**	**233**	*i*P	**Pn**	**22 42 20.1**	**-0.7**
GZT				*i* S	**Sn**	**22 42 46.8**	**+3.7**

NEIC 28 22:47:12.5±1.1, 5228N×17625W, h270km±15km, mb4.3/2, Error ellipse: s-maj=44.8km s-min=11.0km az=169.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.48**	**214**	P	Pn	22 47 46.7	-0.9
ADK				S	S	22 48 11.7	-3.6
AMKA	**Amchitka**	**2.91**	**254**	P	Pn	22 48 05.7	+0.6
AMKA				S	S	22 48 45.5

COLA	**College**	**19.22**	**38**	*e*P	P		22 51 16.1	-0.5
	6.6nm,0.8s							
EGAK	**Eagle**	**21.82**	**41**	*e*P	P		22 51 42.9	+0.1
	13nm,0.8s							
DAWY	**Dawson**	**22.36**	**44**	*e*P	P		22 51 46.4	-1.3
WRAK	**Wrangell Islan**	**25.58**	**63**	P	P		22 52 23.0	+6.1
FCC	**Fort Churchill**	**44.19**	**48**	P	P		22 54 55.2	+0.7

*ISCJB **28** 22:49:19.0±0.6, 4602S±007×346E±02, h10km, mb3.9/9, MS3.7/2, Error ellipse: s-maj=23.2km s-min=8.3km az=166.9*
*IDC **28** 22:49:19.4±0.8, 4605S×3476E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.9/21, mbtmp4.0/11, ML3.9/2, MS3.8/4, Ms1 3.7/4, ms1mx3.6/17, Error ellipse: s-maj=40.7km s-min=14.2km az=72.0*
*NEIC **28** 22:49:20.8±0.6, 4606S×3462E, h10km, mb4.3/1, Error ellipse: s-maj=24.2km s-min=9.2km az=74.0*

ISC 28 22:49:20.9±0.6, **4602S**±007×**347E**±02, **h10**km, **(h8**km±.8km**; pP-P), n22,** σ1**93/25, mb3.9/9, MS3.7/2, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**17.32**	**317**	Pn	**Pn**	**22 53 21.4**	**-1.3**
SUR				Sn	**Sn**	**22 56 22.6**	**-13**
SUR				LR	LR	22 58 39.3	
SUR	**Sutherland**	**17.32**	**317**	Pn	**Pn**	**22 53 21.4**	**-1.3**
	0.5nm,0.3s,baz=318,slow=17,SNR=5.6						
SUR				Sn	**Sn**	**22 56 22.6**	**-13**
	0.3nm,0.3s,baz=180,slow=16,SNR=3.3						
SUR				LR	LR	22 58 39.3	
	comp=Z,301nm,18.2s,baz=81,slow=32						
BOSA	**Boshof**	**18.90**	**334**	P	**Pn**	**22 53 40.6**	**-1.4**
	0.3nm,0.3s,baz=167,slow=18,SNR=5.9						
BOSA				S	**Sn**	**22 56 55.2**	**-18**
	0.1nm,0.3s,baz=330,slow=20,SNR=2.0						
BOSA				LR	LR	22 59 49.4	
	comp=Z,200nm,18.4s,baz=92,slow=33						
LBTB	**Lobatse**	**22.20**	**338**	P	**P**	**22 54 18.4**	**+1.2**
LBTB				S	**S**	**22 58 14.5**	**-7.1**
LBTB	**Lobatse**	**22.20**	**338**	P	**P**	**22 54 18.4**	**+1.2**
	4.1nm,0.7s,mb4.0,baz=167,slow=9.4,SNR=6.3						
LBTB				S	**S**	**22 58 14.5**	**-7.1**
	1.4nm,0.7s,baz=308,slow=18,SNR=2.8						
MATP	**Matopo**	**26.03**	**347**	P	**P**	**22 54 53.7**	**-0.4**
MATP	**Matopo**	**26.03**	**347**	P	**P**	**22 54 53.7**	**-0.4**
	3.3nm,0.8s,mb3.9,baz=166,slow=10,SNR=6.3						
MAW	**Mawson**	**26.12**	**156**	P	**P**	**22 54 53.3**	**-1.2**
	4.8nm,1.0s,mb4.0,baz=320,slow=7.9,SNR=3.5						
MAW				LR	LR	23 03 03.2	
	comp=Z,200nm,18.2s,MS3.7,baz=149,slow=32						
LSZ	**Lusaka**	**31.13**	**348**	P	**P**	**22 55 40.6**	**+1.0**
	3.4nm,0.7s,mb4.3,baz=166,slow=14,SNR=8.0						
LSZ				LR	LR	23 06 10.7	
	comp=Z,184nm,21.7s,MS3.7,baz=7.6,slow=32						
SNAA	**Sanae**	**31.22**	**202**	*e*	**P**	**22 55 40.4**	**+0.5**
SNAA				*e*	pP	22 55 42.0	-1.0
SNAA				*e*		22 55 45.6	
SNAA	**Sanae**	**31.22**	**202**	P	**P**	**22 55 40.4**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=31,slow=5.9,SNR=8.4						
VNA2	**Neumayer--Watz**	**32.08**	**205**	*e*	**P**	**22 55 48.8**	**+1.3**
	baz=63,slow=8.5						
VNA2				*e*	pP	22 55 51.1	+0.6
VNA2				*e*		22 55 55.4	
VNA2				*e*		22 56 00.1	
VNA2				*e*		22 56 02.8	
VNA1	**Neumayer--Stat**	**32.20**	**205**	*e*	**P**	**22 55 53.4**	**+4.8**
VNA1				*e*	pP	22 55 56.2	+4.6
VNA1				*e*		22 55 59.5	
VNA1				*e*		22 56 03.7	
VNA1				*e*		22 56 06.7	
VNA3	**Neumayer Olymp**	**32.88**	**205**	*e*	**P**	**22 55 54.9**	**+0.4**
VNA3				*e*	pP	22 55 57.2	-0.4
VNA3				*e*		22 56 01.7	
VNA3				*e*		22 56 05.8	
VNA3				*e*		22 56 09.0	
QSPA	**South Pole Qui**	**44.20**	**180**	P	**P**	**22 57 29.1**	**-0.3**
	0.6nm,0.5s,mb3.6,baz=88,slow=4.2,SNR=8.3						
VNDA	**Vanda**	**52.52**	**167**	P	**P**	**22 58 33.3**	**-0.3**
	0.6nm,0.8s,mb3.6,baz=263,slow=8.2,SNR=3.7						
PMSA	**Palmer Station**	**52.95**	**212**	P	**P**	**22 58 34.8**	**-2.0**
	223nm,1.5s						
TORD	**Torodi Ar. Bea**	**65.97**	**324**	P	**P**	**23 00 08.5**	**+1.2**
	1.5nm,0.7s,mb4.2,baz=160,slow=7.0,SNR=5.6						
TRQA	**Tornquist**	**67.90**	**238**	P	**P**	**23 00 20.3**	**+0.9**
	1.7nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**79.39**	**113**	P	**P**	**23 01 27.6**	**+0.3**
	0.4nm,0.8s,baz=217,slow=5.5,SNR=3.6						
PDAR	**Pinedale Array**	**154.39**	**276**	PKPab	PKPab	23 09 39.1	+4.0
	0.8nm,0.9s,baz=106,slow=9.5,SNR=2.8						
YKA	**Yellowknife Ar**	**155.98**	**324**	PKPab	PKPab	23 09 42.4	+1.0
	0.3nm,0.7s,baz=56,slow=4.2,SNR=6.1						

*ISCJB **28** 22:56:01.1±2.4, 118S±0.1×16627E±0.10, h37km±20km, mb4.5/13, Error ellipse: s-maj=20.2km s-min=13.0km az=39.8*
*NEIC **28** 22:56:04.4±1.6, 1170S×16635E, h58km±14km, mb4.5/4, Error ellipse: s-maj=13.2km s-min=10.0km az=205.0*
*IDC **28** 22:56:05.1±6.3, 1177S×16626E, h61km±49km, mb4.0/10, mb1 4.1/11, mb1mx4.0/17, mbtmp4.1/11, ML5.1/1, Error ellipse: s-maj=42.9km s-min=19.3km az=84.0*

ISC 28 22:56:03.2±1.9, **1175**S-01×**16629E**±009, **h41**km±16km, **n30,** σ0**82**/30, **mb4.5**/13, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.64**	**290**	P	**Pn**	**22 57 39.8**	**+1.5**
HNR				*e*Sn	**Sn**	**22 58 51.0**	**-1.8**
HNR	**Honiara**	**6.64**	**290**	P	**Pn**	**22 57 39.8**	**+1.5**
	36nm,0.3s,baz=120,slow=3.0,SNR=9.7						
CTA	**Charters Tower**	**20.96**	**244**	P	**P**	**23 00 44.9**	**+2.0**
CTA	**Charters Tower**	**20.96**	**244**	P	**P**	**23 00 44.9**	**+2.0**
	7.2nm,1.0s,baz=94,slow=12,SNR=4.2						
CTAO	**Charters Tower**	**20.96**	**244**	*e*P	**P**	**23 00 44.5**	**+1.6**
	7.1nm,0.9s						
AFI	**Afiamalu**	**21.50**	**98**	P	**P**	**23 00 48.1**	**-0.6**
RAO	**Raoul Island**	**22.81**	**142**	P	**P**	**23 01 02.4**	**-0.2**
STKA	**Stephens Creek**	**30.32**	**225**	P	**P**	**23 02 11.1**	**+0.2**
STKA	**Stephens Creek**	**30.32**	**225**	P	**P**	**23 02 11.1**	**+0.2**
	3.3nm,0.9s,mb4.0,baz=124,slow=6.8,SNR=3.8						
WRA	**Warramunga Arr**	**31.75**	**251**	P	**P**	**23 02 22.8**	**-0.8**
	1.8nm,0.7s,mb4.0,baz=83,slow=9.1,SNR=17						
WRA				PcP	PcP	23 05 14.4	-0.2
	1.4nm,0.9s,baz=74,slow=3.4,SNR=7.5						
ASAR	**Alice Springs**	**32.97**	**244**	P	**P**	**23 02 32.9**	**-1.4**
	2.4nm,0.6s,mb4.3,baz=71,slow=9.5,SNR=30						
ASAR				PcP	PcP	23 05 17.3	-0.5
	2.1nm,0.8s,baz=90,slow=2.8,SNR=13						
KSRS	**Korea Array**	**60.74**	**326**	P	**P**	**23 06 10.9**	**+0.1**
	1.4nm,0.6s,mb4.3,baz=134,slow=7.7,SNR=4.4						
VNDA	**Vanda**	**65.82**	**181**	P	**P**	**23 06 43.5**	**-0.3**
VNDA	**Vanda**	**65.82**	**181**	P	**P**	**23 06 43.5**	**-0.3**
	1.3nm,0.7s,mb4.1,baz=351,slow=4.9,SNR=10						
SBA	**Scott Base**	**66.11**	**180**	*e*P	**P**	**23 06 45.8**	**+0.1**
	4.4nm,0.8s,mb4.5						
QSPA	**South Pole Qui**	**78.27**	**180**	*e*P	**P**	**23 07 58.3**	**0.0**
	4.8nm,0.8s,mb4.5						
QSPA	**South Pole Qui**	**78.27**	**180**	P	**P**	**23 07 58.2**	**-0.1**
	5.2nm,1.0s,mb4.4,baz=348,slow=3.4,SNR=8.8						
SONM	**Songino Array**	**79.53**	**324**	P	**P**	**23 08 06.0**	**+0.4**
	1.9nm,0.5s,mb4.3,baz=143,slow=5.6,SNR=29						
TAPN	**Taplejung**	**85.40**	**299**	*e*P	**P**	**23 08 37.5**	**+0.7**
ODAN	**Odare**	**85.55**	**298**	*e*P	**P**	**23 08 38.3**	**+0.8**
JIRN	**Jiri**	**86.78**	**299**	*e*P	**P**	**23 08 44.4**	**+0.8**
KKN	**Kakani**	**87.60**	**299**	*e*P	**P**	**23 08 47.9**	**+0.4**
	18nm,0.8s,mb5.3						
GKN	**Gorkha**	**88.20**	**299**	*e*P	**P**	**23 08 50.1**	**-0.3**
	30nm,0.8s,mb5.6						
MK31	**Makanchi Array**	**94.39**	**317**	*e*P	**P**	**23 09 18.5**	**-0.2**
MKAR	**Makanchi Array**	**94.39**	**317**	P	**P**	**23 09 18.5**	**-0.2**
MKAR	**Makanchi Array**	**94.39**	**317**	P	**P**	**23 09 18.5**	**-0.1**
	4.8nm,0.8s,mb5.0,baz=93,slow=6.1,SNR=40						
ZALV	**Zalesovo Beam**	**94.42**	**324**	P	**P**	**23 09 17.7**	**-1.0**
ZALV	**Zalesovo Beam**	**94.42**	**324**	P	**P**	**23 09 17.7**	**-1.0**
	0.7nm,0.6s,mb4.3,baz=77,slow=6.7,SNR=5.7						
KURK	**Kurchatov**	**97.51**	**320**	*e*P	**P**	**23 09 32.7**	**-0.1**
	0.9nm,0.6s,mb4.5						
ARCES	**ARCESS Array B**	**117.13**	**346**	PKP	PKPdf	23 14 41.5	-1.8
	3.4nm,0.9s,baz=83,slow=2.8,SNR=5.5						

*ATH **28** 22:58:08.5, 3491N×2639E, h19km±2km, MD3.5/7*
*NEIC **28** 22:58:08.5, 3491N×2639E, h19km, MD3.5(ATH), After ATH.*
*CSEM **28** 22:58:09.4±0.3, 3494N×2638E, h5km, MD3.5, Error ellipse: s-maj=9.5km s-min=3.5km az=162.0*
*DDA **28** 22:58:52.4, 3707N×2745E, h0km±98km*

ISC 28 22:58:09.1±1.9, **350N**±01×**2639E**±007, **h1**km±12km, **n9,** σ0**88**/13, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	**0.58**	**262**	*e*PN	**Pg**	**22 58 20.0**	**-0.1**
NPS	**Neapolis**	**0.70**	**296**	*e*PN	**Pg**	**22 58 22.3**	**-0.3**
NPS				*e*SN	**Sg**	**22 58 31.9**	**+0.2**
KARP	**Karpathos**	**0.86**	**47**	*e*PB	**Pb**	**22 58 25.1**	**-1.7**
KARP				*e*SN	**Sg**	**22 58 38.6**	**+1.8**
VAM	**Vamos**	**1.85**	**285**	*e*PN	**Pn**	**22 58 42.1**	**+0.2**
ARG	**Arkhangelos**	**1.89**	**48**	*e*PN	**Pn**	**22 58 42.3**	**-0.2**
APE	**Apeiranthos**	**2.21**	**342**	*e*PN	**Pn**	**22 58 47.5**	**+0.6**
BDRM	**Kayabasi**	**2.27**	**22**	*i* P	**Pb**	**22 58 51.6**	**+0.8**
BDRM				*i* S	**Sn**	**22 59 10.8**	**-5.4**
AYDN	**Tasoluk**	**2.95**	**24**	*i* P	**Pg**	**22 59 10.8**	**+5.1**
AYDN				*i* S	**Sg**	**22 59 42.7**	**-1.3**
VLI	**Veliai**	**3.31**	**303**	*e*PN	**Pn**	**22 59 02.0**	**+0.1**

*ISCJB **28** 23:04:06.8±1.3, 3689N±007×716E±0.1, h161km±25km, Error ellipse: s-maj=20.9km s-min=7.2km az=154.9*
*NNC **28** 23:04:12.2±5.4, 3778N×7070E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=41.3km s-min=36.1km az=5.0*

ISC 28 23:04:05.1±1.2, **3686N**±007×**712E**±02, **h169**km±22km, **n9,** σ0**74**/14, **6C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.76**	**139**	*e*P	**Pn**	**23 05 30.1**	**+1.3**
THN				*e*S	**Sn**	**23 06 33.4**	**-1.1**
KK31	**Karatay Array**	**6.26**	**355**	⇑Pn	**Pn**	**23 05 36.3**	**+1.0**
	2.9nm,0.3s,baz=180,slow=14,SNR=218						
KK31				⇑Sn	**Sn**	**23 06 41.2**	**-5.1**
	3.0nm,0.3s,baz=183,slow=24,SNR=14						
TKM2	**Tokmak 2**	**6.92**	**28**	⇑Pn	**Pn**	**23 05 43.6**	**-0.4**
	1.6nm,0.5s						
TKM2				⇓Sn	**Sn**	**23 07 02.1**	**0.0**
	2.0nm,0.9s						
KOLN	**Koldanda**	**13.83**	**127**	*e*P	**Pn**	**23 07 13.9**	**-0.2**
	3.4nm,0.3s						
GKN	**Gorkha**	**14.35**	**124**	*e*P	**Pn**	**23 07 20.3**	**-0.2**
	2.7nm,0.2s						
AB31	**Akbulak array**	**14.86**	**330**	⇓Pn	**Pn**	**23 07 31.0**	**+4.3**
	0.3nm,0.3s,baz=220,slow=23,SNR=17						
AB31				⇑Sn	**Sn**	**23 10 02.9**	**-9.1**
	1.8nm,0.9s,baz=163,slow=24,SNR=5.8						
JIRN	**Jiri**	**15.62**	**122**	*e*P	**Pn**	**23 07 36.1**	**-0.1**
	8.0nm,0.4s						
AKTO	**Aktyubinsk**	**16.56**	**329**	⇑Pn	**Pn**	**23 07 53.7**	**+6.2**
	0.3nm,0.8s						
AKTO				⇑Sn	**Sn**	**23 10 51.8**	**-0.9**
	0.5nm,1.4s						
TAPN	**Taplejung**	**16.86**	**120**	*e*P	**Pn**	**23 07 51.6**	**+0.4**

*ISCJB **28** 23:32:05.2±0.3, 4221N±002×3.12E±002, h10km±2km, Error ellipse: s-maj=2.8km s-min=1.6km az=152.0*
*LDG **28** 23:32:07.6±0.1, 4206N×3.18E, h5km, Md3.5/1, Ml3.5/36, Error ellipse: s-maj=1.3km s-min=0.8km az=143.0*
*NEIC **28** 23:32:07.9, 4207N×320E, h11km, ML3.5(LDG), ML3.4(STR), MN3.1(MDD), After MDD.*
NEIC Felt [III] at Bagur, Camallera, Flassa, Fontanillas, La Bisbal, La Escala, Montras, Palafrugell, Palamos, Pals, San Antonio de Calonge, Torroella de Montgri and Vilajuiga; [II] at Calonge and Rosas, Spain.
*MDD **28** 23:32:08.1±0.4, 4208N×3.18E, h11km, mbLg3.1/32, Error ellipse: s-maj=3.1km s-min=2.3km az=101.0, PRXIMO III LA BISBAL D'EMPORD.GI, RAS III PALAFRUGELL PALAMOS PALS III TORROELLA DE MONTGR.GI II-III CAMALLERA FLA.GI, ESCALA II-III SAN ANTONIO DE CALONGE II-III SANT SADURN DE HEURA II-III VILAJUIGA II CALONGE ROSES I BANYOLES CASS DE LA SELVA CELR.GI I PLATJA ARO SANT FELIU DE GUIXOLS*
MDD EMS: III BEGUR FONTANILLES.
*CSEM **28** 23:32:08.6±0.1, 4209N×3.19E, h15km, ML3.5/42, Error ellipse: s-maj=1.4km s-min=0.8km az=139.0*
*STR **28** 23:32:09.2±0.5, 4226N×3.16E, h5km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 28 23:32:07.3±0.3, **4216N**±001×**316E**±002, **h15**km±1km, **n240,** σ1**20**/497, **1D, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EJON	**La Jonquera**	**0.35**	**326**	⇓Pg	**Pg**	**23 32 16.2**	**+1.6**
	SNR=18						
EJON				Lg		23 32 22.2	
	549nm,0.1s,SNR=31						
EJON	**La Jonquera**	**0.35**	**326**	Pg	**Pg**	**23 32 16.2**	**+1.7**
	SNR=18						
SJAF	**Saint Jean de**	**0.38**	**328**	Pg	**Pg**	**23 32 16.7**	**+1.6**
SJAF	**Saint Jean de**	**0.38**	**328**	P	**Pg**	**23 32 16.8**	**+1.7**
SJAF				S	**Sg**	**23 32 23.4**	**+3.0**
FILF	**Fillols**	**0.60**	**312**	Pg	**Pg**	**23 32 21.6**	**+2.6**
FILF				Sg	**Sg**	**23 32 32.0**	**+5.0**
FILF	**Fillols**	**0.60**	**312**	P	**Pg**	**23 32 21.6**	**+2.6**
FILF				S	**Sg**	**23 32 31.4**	**+4.4**
VALF	**Valcebollere**	**0.88**	**286**	Pg	**Pg**	**23 32 24.6**	**+0.2**
VALF				Sg	**Sg**	**23 32 36.9**	**+1.0**
LRDF	**Laroque-de-Fa**	**0.90**	**330**	Pg	**Pg**	**23 32 26.0**	**+1.2**
CARF	**Carcanieres**	**0.96**	**306**	Pg	**Pg**	**23 32 26.6**	**+0.8**
CARF				Sg	**Sg**	**23 32 39.8**	**+1.4**
EMIR	**Miracle**	**1.24**	**259**	Pn	**Pn**	**23 32 30.0**	**0.0**
	1.4nm,0.1s,SNR=7.9						
EMIR				Pg	**Pg**	**23 32 30.4**	**-0.7**
	153nm,0.2s,SNR=315						
EMIR				Lg		23 32 47.1	
	331nm,0.1s,SNR=39						
EMIR	**Miracle**	**1.24**	**259**	Pn	**Pn**	**23 32 30.0**	**0.0**
	1.4nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**1.24**	**259**	Pg	**Pg**	**23 32 30.4**	**-0.8**
	153nm,0.2s,SNR=315						
MTLF	**Montolieu**	**1.37**	**330**	*e*Pg	**Pg**	**23 32 34.3**	**+0.6**
MTLF				*e*Sn	**Sn**	**23 32 50.9**	**+1.3**
MTLF	**Montolieu**	**1.37**	**330**	*e*Pn	**Pn**	**23 32 32.7**	**+0.9**
MTLF				*e*Pg	**Pg**	**23 32 34.3**	**+0.6**
MTLF				*e*Sn	**Sn**	**23 32 50.9**	**+1.3**
MTLF	**Montolieu**	**1.37**	**330**	*e*Pg	**Pg**	**23 32 34.3**	**+0.6**
MTLF				*e*Sn	**Sn**	**23 32 50.9**	**+1.3**
SALF	**Salau**	**1.57**	**293**	Pn	**Pn**	**23 32 36.6**	**+2.0**
SALF				Sg	**Sg**	**23 32 58.3**	**+0.2**
MLS	**Moulis**	**1.72**	**298**	Pg	**Pg**	**23 32 40.4**	**+0.1**
MLS				Sg	**Sg**	**23 33 03.8**	**+1.1**
EPOB	**Poblet**	**1.75**	**243**	Pn	**Pn**	**23 32 37.1**	**0.0**
	9.3nm,0.1s,SNR=160						
EPOB				Pg	**Pg**	**23 32 39.2**	**-1.7**
	84nm,0.2s,SNR=7.9						
EPOB				Sn	**Sn**	**23 32 59.2**	**+0.2**
	38nm,0.1s,SNR=7.9						
EPOB				Lg		23 33 00.8	
	329nm,0.2s,SNR=6.4						
EPOB	**Poblet**	**1.75**	**243**	Pn	**Pn**	**23 32 37.1**	**0.0**
	9.3nm,0.1s,SNR=160						
EPOB	**Poblet**	**1.75**	**243**	Pg	**Pg**	**23 32 39.2**	**-1.7**
	84nm,0.2s,SNR=7.9						
EPOB				Sn	**Sn**	**23 32 59.2**	**+0.1**
	38nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**1.98**	**15**	*e*P	**Pn**	**23 32 42.9**	**+2.6**
LASF	**Ste Croix**	**1.98**	**15**	*e*Pg	**Pg**	**23 32 46.0**	**+0.6**
LASF				*e*Sn	**Sn**	**23 33 06.5**	**+1.7**
LASF				*e*Sg	**Sg**	**23 33 13.1**	**+2.0**
	121nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**1.98**	**15**	*e*Pn	**Pn**	**23 32 40.5**	**+0.2**
LASF				*e*P		23 32 42.9	
LASF				*e*Pg	**Pg**	**23 32 46.0**	**+0.6**
LASF				*e*Sn	**Sn**	**23 33 06.5**	**+1.7**
LASF				*e*Sg	**Sg**	**23 33 13.1**	**+2.0**
LASF	**Ste Croix**	**1.98**	**15**	Pn	**Pn**	**23 32 40.5**	**+0.2**
LASF				P		23 32 42.9	
LASF				Pg	**Pg**	**23 32 46.0**	**+0.6**
LASF				Sn	**Sn**	**23 33 06.5**	**+1.7**
LASF				Lg		23 33 13.1	
	0.1nm,0.3s						
LASF	**Ste Croix**	**1.98**	**15**	*e*Pn	**Pn**	**23 32 40.5**	**+0.2**
	SNR=1.0						
LASF	**Ste Croix**	**1.98**	**15**	*e*P	**Pn**	**23 32 42.9**	**+2.6**
LASF	**Ste Croix**	**1.98**	**15**	*e*Pg	**Pg**	**23 32 46.0**	**+0.6**
LASF				*e*Sn	**Sn**	**23 33 06.5**	**+1.7**
LASF				*e*Sg	**Sg**	**23 33 13.1**	**+2.0**
	60nm,0.3s,SNR=1.0						
GELF	**Grande-Etoile**	**2.07**	**53**	Pn	**Pn**	**23 32 41.1**	**-0.4**
RESF	**Ens**	**2.18**	**288**	Pn	**Pn**	**23 32 46.0**	**+3.0**
RESF				Sg	**Sg**	**23 33 17.9**	**+0.4**
PRAF	**Pradon**	**2.21**	**41**	Pn	**Pn**	**23 32 43.9**	**+0.5**
EPF	**Esparros**	**2.25**	**294**	*e*P	**Pn**	**23 32 46.8**	**+2.8**
EPF	**Esparros**	**2.25**	**294**	*e*Pg	**Pg**	**23 32 50.5**	**0.0**
EPF				*e*Sg	**Sg**	**23 33 20.0**	**+0.2**
EPF	**Esparros**	**2.25**	**294**	*e*Pn	**Pn**	**23 32 44.5**	**+0.5**
EPF				*e*P		23 32 46.8	
EPF				*e*Pg	**Pg**	**23 32 50.5**	**0.0**
EPF				*e*Sg	**Sg**	**23 33 20.0**	**+0.2**
EPF	**Esparros**	**2.25**	**294**	*e*P	**Pn**	**23 32 46.8**	**+2.8**
EPF	**Esparros**	**2.25**	**294**	*e*Pg	**Pg**	**23 32 50.5**	**0.0**
EPF				*e*Sg	**Sg**	**23 33 20.0**	**+0.2**
EBIE	**Bielsa**	**2.29**	**284**	Pn	**Pn**	**23 32 46.6**	**+2.1**
	3.8nm,0.1s,SNR=66						
EBIE				Pg	**Pg**	**23 32 50.6**	**-0.7**
	14nm,0.2s,SNR=14						
EBIE				Lg		23 33 20.5	
	146nm,0.3s,SNR=25						
EBIE	**Bielsa**	**2.29**	**284**	Pn	**Pn**	**23 32 46.6**	**+2.1**
	3.8nm,0.1s,SNR=66						
EBIE	**Bielsa**	**2.29**	**284**	Pg	**Pg**	**23 32 50.6**	**-0.7**
	14nm,0.2s,SNR=14						
ETOS	**Mallorca**	**2.40**	**186**	Pn	**Pn**	**23 32 43.5**	**-2.5**
	1.2nm,0.1s,SNR=6.0						
ETOS				Sn	**Sn**	**23 33 08.7**	**-6.4**
	21nm,0.3s,SNR=5.0						
ETOS	**Mallorca**	**2.40**	**186**	Pn	**Pn**	**23 32 43.5**	**-2.5**
	1.2nm,0.1s,SNR=6.0						
VIEF	**Viey**	**2.43**	**288**	Pn	**Pn**	**23 32 48.7**	**+2.4**
ERTA	**Horta de San J**	**2.44**	**241**	Pn	**Pn**	**23 32 46.3**	**-0.2**
	3.0nm,0.1s,SNR=25						
ERTA				Pg	**Pg**	**23 32 51.7**	**-2.3**
	13nm,0.2s,SNR=11						
ERTA				Sn	**Sn**	**23 33 15.5**	**-0.5**
	69nm,0.4s,SNR=6.3						
ERTA				Lg		23 33 23.1	
	95nm,0.3s,SNR=14						
ERTA	**Horta de San J**	**2.44**	**241**	Pn	**Pn**	**23 32 46.3**	**-0.2**
	3.0nm,0.1s,SNR=25						
ERTA	**Horta de San J**	**2.44**	**241**	Pg	**Pg**	**23 32 51.7**	**-2.3**
	13nm,0.2s,SNR=11						
ERTA				Sn	**Sn**	**23 33 15.5**	**-0.4**
	69nm,0.4s,SNR=6.3						
LABF	**Labassere**	**2.44**	**292**	Pn	**Pn**	**23 32 49.6**	**+3.0**
LABF				Sg	**Sg**	**23 33 26.5**	**+0.7**
SMRF	**Simiane la Rot**	**2.54**	**43**	*e*Pg	**Pg**	**23 32 57.1**	**+1.2**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**23 33 18.7**	**+0.3**
SMRF				*e*Sg	**Sg**	**23 33 29.7**	**+0.9**
	62nm,0.3s						
SMRF	**Simiane la Rot**	**2.54**	**43**	*e*Pn	**Pn**	**23 32 48.5**	**+0.6**
SMRF				*e*Pg	**Pg**	**23 32 57.1**	**+1.2**
SMRF				*e*Sn	**Sn**	**23 33 18.7**	**+0.3**
SMRF				*e*Sg	**Sg**	**23 33 29.7**	**+0.9**
SMRF	**Simiane la Rot**	**2.54**	**43**	Pn	**Pn**	**23 32 48.5**	**+0.6**
SMRF				Pg	**Pg**	**23 32 57.1**	**+1.2**
SMRF				Sn	**Sn**	**23 33 18.7**	**+0.3**
SMRF				Lg		23 33 29.7	
	62nm,0.3s						
SMRF	**Simiane la Rot**	**2.54**	**43**	*e*Pn	**Pn**	**23 32 48.5**	**+0.6**
	SNR=1.0						
SMRF	**Simiane la Rot**	**2.54**	**43**	*e*Pg	**Pg**	**23 32 57.1**	**+1.2**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**23 33 18.7**	**+0.3**
SMRF				*e*Sg	**Sg**	**23 33 29.7**	**+0.9**
	31nm,0.3s						
TAVF	**Tavernes**	**2.58**	**55**	Pn	**Pn**	**23 32 48.8**	**+0.3**
STOF	**St-Etienne Org**	**2.73**	**47**	Pn	**Pn**	**23 32 51.1**	**+0.6**
LMR	**La Mourre**	**2.73**	**63**	*e*Pn	**Pn**	**23 32 49.9**	**-0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**23 33 21.4**	**-1.9**
	26nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**2.73**	**63**	*e*Pn	**Pn**	**23 32 49.9**	**-0.7**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**23 33 21.4**	**-1.9**
	13nm,0.2s,SNR=1.0						
ESAC	**San Caprasio**	**2.74**	**262**	Pn	**Pn**	**23 32 51.3**	**+0.6**
ESAC				Pg	**Pg**	**23 32 57.7**	**-2.1**
ESAC				Sn	**Sn**	**23 33 22.2**	**-1.2**
ESAC				Lg		23 33 33.7	
ESAC	**San Caprasio**	**2.74**	**262**	Pn	**Pn**	**23 32 51.3**	**+0.6**
	5.4nm,0.1s,SNR=15						
ESAC				Pg	**Pg**

VIVF Sn Sn 23 33 28.2 +0.5
VIVF Lg 23 33 40.8
38nm,0.2s
VIVF Saint-Julien-l 2.91 22 *e*Pn **Pn 23 32 53.8 +0.8**
SNR=1.0
VIVF Saint-Julien-l 2.91 22 *e*P **Pn 23 32 56.6 +3.6**
VIVF Saint-Julien-l 2.91 22 *e*Pg **Pg 23 33 03.0 -0.1**
VIVF *e*Sn **Sn 23 33 28.2 +0.5**
VIVF *e*Sg **Sg 23 33 40.8 -0.1**
38nm,0.2s,SNR=1.0
FRF La Foret Royal 2.92 60 *e*Pg **Pg 23 33 02.7 -0.6**
SNR=1.0
FRF *e*Sn **Sn 23 33 27.2 -0.8**
19nm,0.2s
FRF La Foret Royal 2.92 60 *e*Pn **Pn 23 32 52.9 -0.3**
FRF *e*Pg **Pg 23 33 02.7 -0.6**
FRF *e*Sn **Sn 23 33 27.2 -0.8**
FRF La Foret Royal 2.92 60 Pn **Pn 23 32 52.9 -0.3**
FRF Pg **Pg 23 33 02.7 -0.6**
FRF Sn **Sn 23 33 27.2 -0.8**
9.4nm,0.2s
FRF La Foret Royal 2.92 60 *e*Pn **Pn 23 32 52.9 -0.3**
SNR=1.0
FRF La Foret Royal 2.92 60 *e*Pg **Pg 23 33 02.7 -0.6**
SNR=1.0
FRF *e*Sn **Sn 23 33 27.2 -0.8**
9.4nm,0.2s
ATE Arette 2.99 289 Pn **Pn 23 32 56.6 +2.5**
ATE Sg **Sg 23 33 42.1 -1.4**
CALN Calern 3.17 59 Pn **Pn 23 32 56.9 +0.4**
LARF Larrau 3.18 287 Pn **Pn 23 32 58.9 +2.2**
LARF Sg **Sg 23 33 49.2 -0.3**
ORDF Ordiarp 3.20 291 Pg **Pg 23 33 07.7 -0.8**
ORDF Ordiarp 3.20 291 Pn **Pn 23 32 58.5 +1.6**
ORDF Pg **Pg 23 33 07.7 -0.8**
ORDF Ordiarp 3.20 291 Pg **Pg 23 33 07.7 -0.8**
EMOS Mosqueruela 3.27 238 Pn **Pn 23 32 58.0 0.0**
3.0nm,0.2s,SNR=17
EMOS Pg **Pg 23 33 07.5 -2.5**
10.0nm,0.2s,SNR=20
EMOS Sn **Sn 23 33 36.1 -0.5**
35nm,0.5s,SNR=5.0
EMOS Lg 23 33 50.0
40nm,0.3s
EMOS Mosqueruela 3.27 238 Pn **Pn 23 32 58.0 0.0**
3.0nm,0.2s,SNR=17
EMOS Mosqueruela 3.27 238 Pg **Pg 23 33 07.5 -2.5**
10.0nm,0.2s,SNR=20
EMOS Sn **Sn 23 33 36.1 -0.5**
35nm,0.5s,SNR=5.0
LFF La Frestale 3.29 329 *e*Pg **Pg 23 33 09.9 -0.4**
LFF *e*Sn **Sn 23 33 36.9 -0.1**
SNR=1.0
LFF *e*Sg **Sg 23 33 53.9 +1.0**
46nm,0.3s,SNR=1.0
LFF La Frestale 3.29 329 *e*Pn **Pn 23 32 59.5 +1.3**
LFF *e*Pg **Pg 23 33 09.9 -0.4**
LFF *e*Sn **Sn 23 33 36.9 -0.1**
LFF *e*Sg **Sg 23 33 53.9 +1.0**
LFF La Frestale 3.29 329 Pn **Pn 23 32 59.5 +1.3**
LFF Pg **Pg 23 33 09.9 -0.4**
LFF Sn **Sn 23 33 36.9 -0.1**
LFF Lg 23 33 53.9
23nm,0.3s
LFF La Frestale 3.29 329 *e*Pn **Pn 23 32 59.5 +1.3**
SNR=1.0
LFF La Frestale 3.29 329 *e*Pg **Pg 23 33 09.9 -0.4**
LFF *e*Sn **Sn 23 33 36.9 -0.1**
SNR=1.0
LFF *e*Sg **Sg 23 33 53.9 +1.0**
23nm,0.3s,SNR=1.0
RJF Les Rejaudoux 3.36 340 *e*Pg **Pg 23 33 11.5 -0.2**
SNR=1.0
RJF *e*Sn **Sn 23 33 38.0 -0.8**
SNR=1.0
RJF *e*Sg **Sg 23 33 56.2 +1.0**
37nm,0.2s,SNR=1.0
RJF Les Rejaudoux 3.36 340 *e*Pn **Pn 23 33 00.0 +0.8**
RJF *e*Pg **Pg 23 33 11.5 -0.2**
RJF *e*Sn **Sn 23 33 38.0 -0.8**
RJF *e*Sg **Sg 23 33 56.2 +1.0**
RJF Les Rejaudoux 3.36 340 Pn **Pn 23 33 00.0 +0.8**
RJF Pg **Pg 23 33 11.5 -0.2**
RJF Sn **Sn 23 33 38.0 -0.8**
RJF Lg 23 33 56.2
18nm,0.2s
RJF Les Rejaudoux 3.36 340 *e*Pn **Pn 23 33 00.0 +0.8**
SNR=1.0
RJF Les Rejaudoux 3.36 340 *e*Pg **Pg 23 33 11.5 -0.2**
SNR=1.0
RJF *e*Sn **Sn 23 33 38.0 -0.8**
SNR=1.0
RJF *e*Sg **Sg 23 33 56.2 +1.0**
18nm,0.2s,SNR=1.0
SJPF Ste Jean 3.37 288 *e*P **Pn 23 33 01.6 +2.3**
SJPF Ste Jean 3.37 288 *e*Pg **Pg 23 33 10.6 -1.3**
SNR=1.0
SJPF *e*Sn **Sn 23 33 37.5 -1.5**
SJPF *e*Sg **Sg 23 33 54.8 -0.7**
62nm,0.3s,SNR=1.0
SJPF Ste Jean 3.37 288 *e*Pn **Pn 23 32 59.4 +0.1**
SJPF *e*P 23 33 01.6
SJPF *e*Pg **Pg 23 33 10.6 -1.3**
SJPF *e*Sn **Sn 23 33 37.5 -1.5**
SJPF *e*Sg **Sg 23 33 54.8 -0.7**
SJPF Ste Jean 3.37 288 Pn **Pn 23 32 59.4 +0.1**
SJPF P 23 33 01.6
SJPF Pg **Pg 23 33 10.6 -1.3**
SJPF Sn **Sn 23 33 37.5 -1.5**
SJPF Lg 23 33 54.8
31nm,0.3s
SJPF Ste Jean 3.37 288 *e*Pn **Pn 23 32 59.4 +0.1**
SNR=1.0
SJPF Ste Jean 3.37 288 *e*P **Pn 23 33 01.6 +2.3**
SJPF Ste Jean 3.37 288 *e*Pg **Pg 23 33 10.6 -1.3**
SNR=1.0
SJPF *e*Sn **Sn 23 33 37.5 -1.5**
SJPF *e*Sg **Sg 23 33 54.8 -0.7**
31nm,0.3s,SNR=1.0
ORIF Oris-en-Rattie 3.40 35 *e*Pg **Pg 23 33 11.6 -0.7**
ORIF *e*Sn **Sn 23 33 39.4 -0.2**
SNR=1.0
ORIF *e*Sg **Sg 23 33 57.1 +0.8**
11nm,0.5s
ORIF Oris-en-Rattie 3.40 35 *e*Pn **Pn 23 33 01.3 +1.7**
ORIF *e*Pg **Pg 23 33 11.6 -0.7**
ORIF *e*Sn **Sn 23 33 39.4 -0.2**
ORIF *e*Sg **Sg 23 33 57.1 +0.8**
ORIF Oris-en-Rattie 3.40 35 Pn **Pn 23 33 01.3 +1.7**
ORIF Pg **Pg 23 33 11.6 -0.7**
ORIF Sn **Sn 23 33 39.4 -0.2**
ORIF Oris-en-Rattie 3.40 35 *e*Pg **Pg 23 33 11.6 -0.7**
ORIF *e*Sn **Sn 23 33 39.4 -0.2**
SNR=1.0
ORIF *e*Sg **Sg 23 33 57.1 +0.8**
5.6nm,0.5s
IPRE Itoiz 3.40 282 Pn **Pn 23 33 01.3 +1.6**
0.6nm,0.1s,SNR=7.9
IPRE Pg **Pg 23 33 10.2 -2.3**
1.8nm,0.1s,SNR=6.2
IPRE Lg 23 33 56.0
43nm,0.4s,SNR=9.4
IPRE Itoiz 3.40 282 Pn **Pn 23 33 01.3 +1.6**
0.6nm,0.1s,SNR=7.9
IPRE Itoiz 3.40 282 Pg **Pg 23 33 10.2 -2.2**
1.8nm,0.1s,SNR=6.2
MVIF Mont Vial 3.41 58 Pn **Pn 23 33 00.1 +0.3**
EIBI Ibiza 3.42 204 Pn **Pn 23 32 57.6 -2.4**
3.0nm,0.1s,SNR=6.8
EIBI Sn **Sn 23 33 35.2 -5.1**
46nm,0.8s
EIBI Ibiza 3.42 204 Pn **Pn 23 32 57.6 -2.4**
3.0nm,0.1s,SNR=6.8
EIBI Sn **Sn 23 33 35.2 -5.0**
46nm,0.8s
IZUN Zunzarren 3.48 283 Pn **Pn 23 33 02.8 +1.9**
1.1nm,0.1s,SNR=7.9
IZUN Pg **Pg 23 33 12.6 -1.4**
1.3nm,0.1s,SNR=7.9
IZUN Lg 23 33 59.9
30nm,0.4s,SNR=7.9
IZUN Zunzarren 3.48 283 Pn **Pn 23 33 02.8 +1.9**
1.1nm,0.1s,SNR=7.9
IZUN Zunzarren 3.48 283 Pg **Pg 23 33 12.6 -1.4**
1.3nm,0.1s,SNR=7.9

TOUF Mont Tournerai 3.52 57 Pn **Pn 23 33 01.7 +0.3**
LUCF Luceram 3.53 59 Pn **Pn 23 33 01.4 -0.1**
EARA Aranguren 3.56 282 Pg **Pg 23 33 13.2 -2.2**
2.5nm,0.1s,SNR=4.0
EARA Sn **Sn 23 33 42.7 -1.0**
SNR=4.0
EARA Lg 23 34 02.8
72nm,0.4s,SNR=7.9
EARA Aranguren 3.56 282 Pg **Pg 23 33 13.2 -2.2**
2.5nm,0.1s,SNR=4.0
EARA Sn **Sn 23 33 42.7 -0.9**
SNR=4.0
IUSE Utxeti 3.56 284 Pn **Pn 23 33 03.4 +1.4**
1.9nm,0.1s,SNR=4.0
IUSE Pg **Pg 23 33 14.4 -1.2**
2.2nm,0.1s,SNR=6.6
IUSE Lg 23 34 01.9
35nm,0.3s,SNR=7.1
IUSE Utxeti 3.56 284 Pn **Pn 23 33 03.4 +1.4**
1.9nm,0.1s,SNR=4.0
IUSE Utxeti 3.56 284 Pg **Pg 23 33 14.4 -1.2**
2.2nm,0.1s,SNR=6.6
SBF Sospel 3.57 60 *e*Pn **Pn 23 33 01.8 -0.3**
SNR=1.0
SBF *e*Sn **Sn 23 33 43.0 -0.9**
16nm,0.2s,SNR=1.0
SBF Sospel 3.57 60 *e*Pn **Pn 23 33 01.8 -0.3**
SNR=1.0
SBF *e*Sn **Sn 23 33 43.0 -0.9**
8.2nm,0.2s,SNR=1.0
ELIZ Elizondo 3.60 288 Pn **Pn 23 33 05.0 +2.5**
5.4nm,0.2s,SNR=26
ELIZ Pg **Pg 23 33 15.0 -1.2**
7.3nm,0.2s,SNR=11
ELIZ Sn **Sn 23 33 45.7 +1.1**
SNR=4.0
ELIZ Lg 23 34 03.0
20nm,0.2s,SNR=6.1
AUTN L'Aution 3.63 58 Pn **Pn 23 33 03.5 +0.7**
AUTN L'Aution 3.63 58 Pn **Pn 23 33 03.1 +0.3**
AUTN Pn **Pn 23 33 03.5 +0.7**
AUTN L'Aution 3.63 58 Pn **Pn 23 33 03.5 +0.7**
MBDF Montbardon 3.68 44 *e*Pg **Pg 23 33 17.3 -0.4**
MBDF *e*Sn **Sn 23 33 46.0 -0.5**
11nm,0.6s
MBDF Montbardon 3.68 44 *e*Pn **Pn 23 33 05.1 +1.6**
MBDF *e*Pg **Pg 23 33 17.3 -0.4**
MBDF *e*Sn **Sn 23 33 46.0 -0.5**
MBDF Montbardon 3.68 44 *e*Pg **Pg 23 33 17.3 -0.4**
MBDF *e*Sn **Sn 23 33 46.0 -0.5**
5.5nm,0.6s
STV Sta Anna Valdi 3.69 54 P **Pn 23 33 04.3 +0.6**
SAOF Saorge 3.70 59 Pn **Pn 23 33 04.7 +0.8**
PZZ Prazzo 3.71 49 Pn **Pn 23 33 05.8 +1.8**
NEGI Negi 3.74 62 P **Pn 23 33 03.7 -0.7**
ENR Entracque 3.74 55 P **Pn 23 33 04.8 +0.4**
DOI San Damiano 3.79 50 Pn **Pn 23 33 06.7 +1.6**
MONE Monesi 3.88 59 P **Pn 23 33 06.4 +0.2**
IMI Imperia 3.88 62 Pn **Pn 23 33 05.9 -0.5**
ECHE Chera 4.04 232 Pn **Pn 23 33 07.4 -1.2**
0.3nm,0.1s,SNR=7.9
ECHE Pg **Pg 23 33 21.1 -3.7**
4.3nm,0.2s,SNR=12
ECHE Sn **Sn 23 33 53.5 -2.2**
SNR=7.9
ECHE Lg 23 34 13.2
2.5nm,0.3s,SNR=7.9
RORO 4.09 60 P **Pn 23 33 09.1 -0.1**
ETOR Torete 4.14 253 Pn **Pn 23 33 10.7 +0.9**
4.2nm,0.2s,SNR=13
ETOR Pg **Pg 23 33 23.3 -3.2**
13nm,0.2s,SNR=14
ETOR Sn **Sn 23 33 57.2 -0.7**
SNR=7.9
ETOR Lg 23 34 16.6
125nm,0.4s
ETOR Torete 4.14 253 Pn **Pn 23 33 10.7 +0.8**
4.2nm,0.2s,SNR=13
ETOR Torete 4.14 253 Pn **Pn 23 33 10.8 +0.9**
TCF Toulx Ste Croi 4.18 351 *e*Pg **Pg 23 33 27.1 -0.3**
TCF *e*Sg **Sg 23 34 21.8 +0.2**
19nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 4.18 351 *e*Pn **Pn 23 33 11.3 +0.8**
TCF *e*Pg **Pg 23 33 27.1 -0.3**
TCF *e*Sg **Sg 23 34 21.8 +0.2**
TCF Toulx Ste Croi 4.18 351 *e*Pg **Pg 23 33 27.1 -0.3**
TCF *e*Sg **Sg 23 34 21.8 +0.2**
9.7nm,0.2s,SNR=1.0
RSP Reno Superiore 4.22 43 P **Pn 23 33 13.1 +2.1**
ECRI Cripan 4.22 278 Pn **Pn 23 33 12.3 +1.3**
2.4nm,0.1s,SNR=7.9
ECRI Sn **Sn 23 33 59.6 -0.4**
SNR=7.9
ECRI Lg 23 34 21.5
11nm,0.2s,SNR=5.9
ECRI Cripan 4.22 278 Pn **Pn 23 33 12.3 +1.3**
2.4nm,0.1s,SNR=7.9
ECRI Sn **Sn 23 33 59.6 -0.4**
SNR=7.9
FIN Finale Ligure 4.22 59 Pn **Pn 23 33 11.5 +0.5**
LPG La Plagne 4.23 37 *e*Pg **Pg 23 33 27.4 -0.9**
LPG *e*Sn **Sn 23 34 00.0 -0.2**
SNR=1.0
LPG *e*Sg **Sg 23 34 23.0 -0.1**
12nm,0.7s
LPG La Plagne 4.23 37 *e*Pn **Pn 23 33 13.7 +2.6**
LPG *e*Pg **Pg 23 33 27.4 -0.9**
LPG *e*Sn **Sn 23 34 00.0 -0.2**
LPG *e*Sg **Sg 23 34 23.0 -0.1**
LPG La Plagne 4.23 37 *e*Pg **Pg 23 33 27.4 -0.9**
LPG *e*Sn **Sn 23 34 00.0 -0.2**
SNR=1.0
LPG *e*Sg **Sg 23 34 23.0 -0.1**
5.8nm,0.7s
LPL La Plagne 4.24 36 *e*Pg **Pg 23 33 27.6 -0.8**
LPL *e*Sn **Sn 23 34 00.1 -0.3**
LPL *e*Sg **Sg 23 34 23.6 +0.3**
6.2nm,0.5s
LPL La Plagne 4.24 36 *e*Pn **Pn 23 33 13.6 +2.4**
LPL *e*Pg **Pg 23 33 27.6 -0.8**
LPL *e*Sn **Sn 23 34 00.1 -0.3**
LPL *e*Sg **Sg 23 34 23.6 +0.3**
LPL La Plagne 4.24 36 *e*Pg **Pg 23 33 27.6 -0.8**
LPL *e*Sn **Sn 23 34 00.1 -0.3**
LPL *e*Sg **Sg 23 34 23.6 +0.3**
3.1nm,0.5s
EBEN Beniarda 4.31 218 Pn **Pn 23 33 11.4 -0.8**
EBEN Sn **Sn 23 33 58.4 -3.7**
EBEN Beniarda 4.31 218 Pn **Pn 23 33 11.4 -0.8**
SNR=7.9
EBEN Sn **Sn 23 33 58.4 -3.8**
SNR=7.9
PGF Pioggiola 4.35 83 *e*Pn **Pn 23 33 10.4 -2.3**
SNR=1.0
PGF *e*Sn **Sn 23 33 56.1 -7.0**
BGF Bois d'Agland 4.40 357 *e*Pg **Pg 23 33 30.9 -0.7**
SNR=1.0
BGF *e*Sn **Sn 23 34 02.8 -1.7**
BGF *e*Sg **Sg 23 34 28.3 -0.3**
78nm,0.4s,SNR=1.0
BGF Bois d'Agland 4.40 357 *e*Pn **Pn 23 33 14.8 +1.3**
BGF *e*Pg **Pg 23 33 30.9 -0.7**
BGF *e*Sn **Sn 23 34 02.8 -1.7**
BGF *e*Sg **Sg 23 34 28.3 -0.3**
BGF Bois d'Agland 4.40 357 *e*Pg **Pg 23 33 30.9 -0.7**
SNR=1.0
BGF *e*Sn **Sn 23 34 02.8 -1.7**
BGF *e*Sg **Sg 23 34 28.3 -0.3**
39nm,0.4s,SNR=1.0
SMF Signal de Mont 4.51 6 *e*Pg **Pg 23 33 33.1 -0.6**
SNR=1.0
SMF *e*Sn **Sn 23 34 06.6 -0.5**
SMF *e*Sg **Sg 23 34 30.8 -1.3**
33nm,0.4s,SNR=1.0
SMF Signal de Mont 4.51 6 *e*Pn **Pn 23 33 15.7 +0.7**
SMF *e*Pg **Pg 23 33 33.1 -0.6**
SMF *e*Sn **Sn 23 34 06.6 -0.5**
SMF *e*Sg **Sg 23 34 30.8 -1.3**
SMF Signal de Mont 4.51 6 *e*Pg **Pg 23 33 33.1 -0.6**
SNR=1.0
SMF *e*Sn **Sn 23 34 06.6 -0.5**
SMF *e*Sg **Sg 23 34 30.8 -1.3**
17nm,0.4s,SNR=1.0
PCP Pian Castagno 4.59 57 P **Pn 23 33 16.5 +0.4**
AVF Avril sur Loir 4.63 2 *e*Pg **Pg 23 33 35.2 -0.8**

AVF *e*Sn **Sn 23 34 08.5 -1.6**
SNR=1.0
AVF *e*Sg **Sg 23 34 35.4 -0.6**
16nm,0.3s,SNR=1.0
AVF Avril sur Loir 4.63 2 *e*Pn **Pn 23 33 17.6 +0.9**
AVF *e*Pg **Pg 23 33 35.2 -0.8**
AVF *e*Sn **Sn 23 34 08.5 -1.6**
AVF *e*Sg **Sg 23 34 35.4 -0.6**
AVF Avril sur Loir 4.63 2 *e*Pg **Pg 23 33 35.2 -0.8**
AVF *e*Sn **Sn 23 34 08.5 -1.6**
SNR=1.0
AVF *e*Sg **Sg 23 34 35.4 -0.6**
7.9nm,0.3s,SNR=1.0
TRAV 4.72 43 P **Pn 23 33 19.3 +1.5**
SSF Saint Saulge 4.91 3 *e*Pg **Pg 23 33 40.5 -0.8**
SSF *e*Sg **Sg 23 34 43.3 -1.5**
17nm,0.4s,SNR=1.0
SSF Saint Saulge 4.91 3 *e*Pn **Pn 23 33 21.4 +1.0**
SSF *e*Pg **Pg 23 33 40.5 -0.8**
SSF *e*Sg **Sg 23 34 43.3 -1.5**
SSF Saint Saulge 4.91 3 *e*Pg **Pg 23 33 40.5 -0.8**
SSF *e*Sg **Sg 23 34 43.3 -1.5**
8.6nm,0.4s,SNR=1.0
ORO Oropa 4.92 44 Pn **Pn 23 33 22.7 +2.2**
CABF La Chapelle 4.92 24 *e*Pg **Pg 23 33 40.4 -1.1**
CABF *e*Sn **Sn 23 34 16.0 -1.2**
CABF *e*Sg **Sg 23 34 44.6 -0.6**
24nm,0.7s,SNR=1.0
CABF La Chapelle 4.92 24 *e*Pn **Pn 23 33 21.9 +1.3**
CABF *e*Pg **Pg 23 33 40.4 -1.1**
CABF *e*Sn **Sn 23 34 16.0 -1.2**
CABF *e*Sg **Sg 23 34 44.6 -0.6**
CABF La Chapelle 4.92 24 *e*Pg **Pg 23 33 40.4 -1.1**
CABF *e*Sn **Sn 23 34 16.0 -1.2**
CABF *e*Sg **Sg 23 34 44.6 -0.6**
12nm,0.7s,SNR=1.0
ELAN Lanestosa 4.97 285 Pn **Pn 23 33 23.2 +1.9**
0.6nm,0.1s,SNR=8.7
ELAN Sn **Sn 23 34 18.0 -0.6**
SNR=7.9
ELAN Lg 23 34 45.8
11nm,0.4s
ELAN Lanestosa 4.97 285 Pn **Pn 23 33 23.2 +1.8**
0.6nm,0.1s,SNR=8.7
ELAN Sn **Sn 23 34 18.0 -0.6**
SNR=7.9
ETOB Tobarra 5.02 227 Pn **Pn 23 33 21.3 -0.7**
3.5nm,0.3s,SNR=14
ETOB Sn **Sn 23 34 15.3 -4.4**
98nm,1.7s,SNR=5.0
ETOB Tobarra 5.02 227 Pn **Pn 23 33 21.3 -0.7**
3.5nm,0.3s,SNR=14
ETOB Sn **Sn 23 34 15.3 -4.4**
98nm,1.7s,SNR=5.0
MFF Saint Martin d 5.03 333 *e*Pn **Pn 23 33 23.0 +0.8**
SNR=1.0
MFF *e*Sn **Sn 23 34 18.7 -1.3**
MFF *e*Sg **Sg 23 34 48.0 -0.8**
8.6nm,0.3s,SNR=1.0
MFF Saint Martin d 5.03 333 *e*Pn **Pn 23 33 23.0 +0.8**
SNR=1.0
MFF *e*Sn **Sn 23 34 18.7 -1.3**
MFF *e*Sg **Sg 23 34 48.0 -0.8**
4.3nm,0.3s,SNR=1.0
HYF Humbligny 5.12 356 *e*Pg **Pg 23 33 45.2 -0.1**
HYF *e*Sn **Sn 23 34 21.2 -1.0**
HYF *e*Sg **Sg 23 34 51.4 -0.2**
LOR Lormes 5.13 5 *e*Pg **Pg 23 33 44.3 -1.3**
SNR=1.0
LOR *e*Sn **Sn 23 34 20.6 -1.8**
baz=187,SNR=1.0
LOR *e*Sg **Sg 23 34 50.8 -1.2**
11nm,0.3s,baz=186,SNR=1.0
LOR Lormes 5.13 5 *e*Pn **Pn 23 33 24.4 +0.9**
LOR *e*Pg **Pg 23 33 44.3 -1.3**
LOR *e*Sn **Sn 23 34 20.6 -1.8**
LOR *e*Sg **Sg 23 34 50.8 -1.2**
LOR Lormes 5.13 5 *e*Pg **Pg 23 33 44.3 -1.3**
SNR=1.0
LOR *e*Sn **Sn 23 34 20.6 -1.8**
SNR=1.0
LOR *e*Sg **Sg 23 34 50.8 -1.2**
5.4nm,0.3s,SNR=1.0
CODM 5.37 63 P **Pn 23 33 23.6 -3.2**
EVIA Vianos 5.57 233 Pn **Pn 23 33 29.8 +0.2**
EVIA Pg **Pg 23 33 48.7 -5.2**
EVIA Lg 23 35 01.7
EVIA Vianos 5.57 233 Lg 23 35 01.7
0.6nm,0.2s,SNR=7.9
EVIA Vianos 5.57 233 Pn **Pn 23 33 29.8 +0.3**
GUD Guadarrama 5.70 257 Pn **Pn 23 33 31.3 -0.1**
0.4nm,0.2s,SNR=9.2
GUD Sn **Sn 23 34 33.4 -3.1**
11nm,0.5s,SNR=5.0
ESDC Sonseca Array 5.94 248 Pn **Pn 23 33 33.9 -0.7**
1.2nm,0.3s,baz=66,slow=14,SNR=6.9
ESDC Sn **Sn 23 34 38.9 -3.4**
0.6nm,0.3s,baz=62,slow=23,SNR=3.9
ESDC Lg 23 35 09.9
3.2nm,0.3s,baz=64,slow=30,SNR=7.9
ESDC Sonseca Array 5.94 248 Pn **Pn 23 33 33.9 -0.7**
1.2nm,0.3s,SNR=6.9
ESDC Sn **Sn 23 34 38.9 -3.4**
0.6nm,0.3s,SNR=3.9
SFTF Sexfontaines 6.19 12 *e*Pn **Pn 23 33 38.8 +0.8**
SFTF *e*Sn **Sn 23 34 47.4 -1.1**
SFTF *e*Sg **Sg 23 35 25.0 -0.8**
baz=195
HINF Hinteralfeld 6.23 24 *e*Pn **Pn 23 33 38.5 -0.1**
SNR=1.0
HINF *e*Sn **Sn 23 34 47.3 -2.2**
HINF *e*Sg **Sg 23 35 25.2 -2.1**
7.4nm,0.4s
HINF Hinteralfeld 6.23 24 *e*Pn **Pn 23 33 38.5 -0.1**
SNR=1.0
HINF *e*Sn **Sn 23 34 47.3 -2.2**
HINF *e*Sg **Sg 23 35 25.2 -2.1**
3.7nm,0.4s
EARI Arriondas 6.27 283 Pn **Pn 23 33 40.2 +1.1**
0.6nm,0.1s,SNR=12
EARI Pg **Pg 23 34 02.5 -4.8**
SNR=7.9
EARI Sn **Sn 23 34 49.3 -1.1**
48nm,1.3s,SNR=5.0
EARI Arriondas 6.27 283 Pn **Pn 23 33 40.2 +1.1**
0.6nm,0.1s,SNR=12
EARI Sn **Sn 23 34 49.3 -1.1**
48nm,1.3s,SNR=5.0
HAU Haudompre 6.27 20 *e*Pn **Pn 23 33 39.7 +0.6**
SNR=1.0
HAU *e*Sn **Sn 23 34 47.9 -2.4**
HAU *e*Sg **Sg 23 35 26.3 -2.0**
EQES Quesada 6.46 230 Pn **Pn 23 33 42.6 +0.7**
0.6nm,0.3s,SNR=5.0
EQES Sn **Sn 23 34 51.0 -4.3**
SNR=4.0
EQES Quesada 6.46 230 Pn **Pn 23 33 42.6 +0.8**
0.6nm,0.3s,SNR=5.0
EQES Sn **Sn 23 34 51.0 -4.3**
SNR=4.0
MEZF Maizieres J'vi 6.48 11 *e*Pn **Pn 23 33 41.3 -0.7**
SNR=1.0
MEZF *e*Sn **Sn 23 34 53.6 -2.0**
MEZF *e*Sg **Sg 23 35 32.7 -2.5**
baz=193
RFYF Reffroy 6.67 13 *e*Sn **Sn 23 34 58.5 -1.8**
baz=190
RFYF *e*Sg **Sg 23 35 39.9 -1.4**
7.5nm,0.3s,baz=198
RFYF Reffroy 6.67 13 *e*Sn **Sn 23 34 58.5 -1.8**
RFYF *e*Sg **Sg 23 35 39.9 -1.4**
3.8nm,0.3s
LDF La Druitiere 6.84 341 *e*Pn **Pn 23 33 47.4 +0.5**
SNR=1.0
LDF *e*Sn **Sn 23 35 02.0 -2.3**
LDF *e*Sg **Sn 23 35 45.3 +41**
6.6nm,0.5s
LDF La Druitiere 6.84 341 *e*Pn **Pn 23 33 47.4 +0.5**
SNR=1.0
LDF *e*Sn **Sn 23 35 02.0 -2.3**
LDF *e*Sg **Sn 23 35 45.3 +41**
3.3nm,0.5s
GRR Gorron 6.84 337 *e*Pn **Pn 23 33 47.3 +0.3**
SNR=1.0
GRR *e*Sn **Sn 23 35 01.9 -2.6**
GRR *e*Sg **Sn 23 35 44.8 +40**

	6.3nm,0.3s								
GRR	**Gorron**	**6.84**	**337**	*e*Pn		**Pn**	**23 33 47.3**	**+0.3**
	SNR=1.0								
GRR				*e*Sn		**Sn**	**23 35 01.9**	**-2.6**
GRR				*e*Sg		**Sn**	**23 35 44.8**	**+40**
	3.2nm,0.3s								
CDF	**Champ du Feu**	**6.89**	**23**	*e*Pn		**Pn**	**23 33 47.5**	**-0.2**
	SNR=1.0								
CDF				*e*Sn		**Sn**	**23 35 03.7**	**-2.1**
	SNR=1.0								
CDF				*e*Sg		**Sn**	**23 35 46.9**	**+41**
	4.4nm,0.5s								
CDF	**Champ du Feu**	**6.89**	**23**	*e*Pn		**Pn**	**23 33 47.5**	**-0.2**
	SNR=1.0								
CDF				*e*Sn		**Sn**	**23 35 03.7**	**-2.1**
	SNR=1.0								
CDF				*e*Sg		**Sn**	**23 35 46.9**	**+41**
	2.2nm,0.5s								
FLN	**La Foliniere**	**7.08**	**340**	*e*Pn		**Pn**	**23 33 50.9**	**+0.6**
	baz=165,SNR=1.0								
FLN				*e*Sn		**Sn**	**23 35 07.2**	**-3.2**
	SNR=1.0								
FLN				*e*Sg		Sn	23 35 52.8	+42
	7.2nm,0.5s,baz=162								
FLN	**La Foliniere**	**7.08**	**340**	*e*Pn		**Pn**	**23 33 50.9**	**+0.6**
	SNR=1.0								
FLN				*e*Sn		**Sn**	**23 35 07.2**	**-3.2**
	SNR=1.0								
FLN				*e*Sg		Sn	23 35 52.8	+42
	3.6nm,0.5s								
EQUE	**Quentar**	**7.09**	**228**	Pn		**Pn**	**23 33 50.7**	**+0.2**
	0.1nm,0.1s,SNR=4.0								
QUIF	**Quistinic**	**7.29**	**324**	*e*Pn		**Pn**	**23 33 53.4**	**+0.3**
	SNR=1.0								
QUIF				*e*Sn		**Sn**	**23 35 11.3**	**-4.3**
QUIF				*e*Sg		Sn	23 35 59.1	+44
	5.1nm,0.4s								
QUIF	**Quistinic**	**7.29**	**324**	*e*Pn		**Pn**	**23 33 53.4**	**+0.3**
	SNR=1.0								
QUIF				*e*Sn		**Sn**	**23 35 11.3**	**-4.3**
QUIF				*e*Sg		Sn	23 35 59.1	+44
	2.5nm,0.4s								
SGMF	**Saint Gilles**	**7.31**	**328**	*e*Pn		**Pn**	**23 33 53.6**	**+0.2**
	SNR=1.0								
SGMF				*e*Sn		**Sn**	**23 35 10.7**	**-5.3**
	8.5nm,0.7s,SNR=1.0								
SGMF				*e*Sg		Sn	23 35 59.7	+44
	3.9nm,0.4s								
SGMF	**Saint Gilles**	**7.31**	**328**	*e*Pn		**Pn**	**23 33 53.6**	**+0.2**
	SNR=1.0								
SGMF				*e*Sn		**Sn**	**23 35 10.7**	**-5.3**
	4.2nm,0.7s,SNR=1.0								
SGMF				*e*Sg		Sn	23 35 59.7	+44
	2.0nm,0.4s								
ECAL	**Calabor**	**7.37**	**272**	Pn		**Pn**	**23 33 54.0**	**-0.2**
	SNR=7.9								
ECAL				Sn		**Sn**	**23 35 13.2**	**-4.3**
	SNR=4.0								
ECAL				Lg			23 35 60.0		
	8.5nm,0.4s,SNR=4.0								
ECAL	**Calabor**	**7.37**	**272**	Pn		**Pn**	**23 33 54.0**	**-0.2**
	SNR=7.9								
ROSF	**Rostrenen**	**7.66**	**326**	*e*Pn		**Pn**	**23 33 58.8**	**+0.6**
	SNR=1.0								
ROSF				*e*Sn		**Sn**	**23 35 18.0**	**-6.7**
ROSF				*e*Sg		Sn	23 36 10.5	+46
	2.0nm,0.3s								
ROSF	**Rostrenen**	**7.66**	**326**	Pn		**Pn**	**23 33 58.8**	**+0.6**
ROSF				Sn		**Sn**	**23 35 18.0**	**-6.7**
ROSF				Lg			23 36 10.5		
	1.0nm,0.3s								
ROSF	**Rostrenen**	**7.66**	**326**	*e*Pn		**Pn**	**23 33 58.8**	**+0.6**
	SNR=1.0								
ROSF				*e*Sg		Sn	23 36 10.5	+46
	1.0nm,0.3s								
EPON	**Pontenova**	**7.68**	**282**	Pn		**Pn**	**23 33 58.2**	**-0.3**
	0.3nm,0.2s,SNR=7.9								
EPON				Lg			23 36 14.1		
	SNR=7.9								
EPON	**Pontenova**	**7.68**	**282**	Pn		**Pn**	**23 33 58.2**	**-0.3**
MVO	**Moncorvo**	**7.69**	**266**	*e*Pn		**Pn**	**23 33 58.4**	**-0.3**
BAIF	**Baives**	**7.94**	**5**	*e*Pn		**Pn**	**23 34 02.3**	**+0.3**
BAIF				*e*Sg		Sn	23 36 19.4	+48
	3.0nm,0.4s								
BAIF	**Baives**	**7.94**	**5**	*e*Pn		**Pn**	**23 34 02.3**	**+0.3**
BAIF				*e*Sg		Sn	23 36 19.4	+48
	1.5nm,0.4s								
GIVF	**Givet**	**8.03**	**8**	*e*Sg		Sx	23 36 22.9		
	4.9nm,0.3s								
GIVF	**Givet**	**8.03**	**8**	*e*Sg		Sx	23 36 22.9		
	2.5nm,0.3s								
EBAD	**Badajoz**	**8.46**	**250**	Sn		**Sn**	**23 35 36.9**	**-7.6**
	SNR=7.9								
EBAD				Lg			23 36 32.4		
	SNR=7.9								
PESTR	**Estremoz**	**8.82**	**252**	*e*Pn		**Pn**	**23 34 13.2**	**-1.0**

IDC 28 23:47:02.8±22.0, 417S×15142E, h326km±192km, mb3.8/3, mb1 4.0/3, mb1mx3.3/14, mbtmp3.8/3, Error ellipse: s-maj=137.9km s-min=50.5km az=80.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**225**	P	P	23 51 39.0	+0.2
	18nm,0.5s,baz=50,slow=9.7,SNR=236						
ASAR	**Alice Springs**	**25.72**	**219**	P	P	23 52 04.0	-0.5
	1.1nm,0.6s,baz=51,slow=8.0,SNR=19						
FITZ	**Fitzroy Crossi**	**28.77**	**239**	P	P	23 52 31.9	+0.4
	2.7nm,0.3s,baz=54,slow=10,SNR=11						
MKAR	**Makanchi Array**	**78.95**	**319**	P	P	23 58 30.9	+0.1
	0.1nm,0.5s,baz=106,slow=6.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**148.80**	**289**	PKPbc	PKPbc	00 06 12.6	-0.5
	0.2nm,0.4s,baz=47,slow=2.3,SNR=3.6						

*MOS **29** 00:11:33.5±0.8, 5504N×16242E, h23km, mb4.3/1, Error ellipse: s-maj=36.9km s-min=12.6km az=70.3*
*KRSC **29** 00:11:33.8±0.4, 5507N×16230E, h23km±22km, ML4.2*
*ISCJB **29** 00:11:34.5±0.9, 5504N±002×16241E±009, h31km±7km, Error ellipse: s-maj=9.0km s-min=3.5km az=11.5*

ISC 29 00:11:34.5±1.4, 5508N±002×1624E±01, h19km±13km, n26, σ0 85/51, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.64**	**215**	*i* P	**Pb**	**00 11 46.8**	**-0.3**
MKZ				*i* S	**Sb**	**00 11 55.6**	**-0.1**
KBTR	**Krutoberegovo**	**1.16**	**12**	*e*P	**Pn**	**00 11 54.9**	**-0.8**
KBTR				*i* S	**Sb**	**00 12 10.9**	**+0.4**
TUMR	**Tumrok**	**1.29**	**280**	*e*P	**Pn**	**00 11 57.2**	**-0.3**
TUMR				*i* S	**Sn**	**00 12 14.4**	**+0.1**
ZLN	**Zelenaya**	**1.29**	**317**	*e*P	**Pn**	**00 11 57.6**	**0.0**
ZLN				*i* S	**Sn**	**00 12 14.9**	**+0.6**
BZMR	**Bezymyannaya**	**1.37**	**309**	*e*P	**Pn**	**00 11 58.3**	**-0.3**
BZMR				*i* S	**Sn**	**00 12 15.5**	**-0.7**
CIRR	**Tsirk**	**1.39**	**319**	*e*P	**Pn**	**00 11 59.2**	**+0.4**
CIRR				*i* S	**Sn**	**00 12 17.0**	**+0.4**
KMNR	**Kamenistaya**	**1.39**	**300**	*e*P	**Pn**	**00 11 58.6**	**-0.3**
KMNR				*i* S	**Sn**	**00 12 16.6**	**-0.1**
KIRR	**Kirishev**	**1.45**	**308**	*e*P	**Pn**	**00 11 59.9**	**+0.2**
KIRR				*i* S	**Sn**	**00 12 18.5**	**+0.4**
KPT	**Kopyto**	**1.51**	**307**	*e*P	**Pn**	**00 12 00.4**	**-0.1**
KPT				*i* S	**Sn**	**00 12 19.4**	**-0.3**
KRSR	**Krestovskiy**	**1.53**	**319**	*e*P	**Pn**	**00 12 00.2**	**-0.6**
KRSR				*i* S	**Sn**	**00 12 18.8**	**-1.4**
KLY	**Klyuchi**	**1.57**	**322**	*e*P	**Pn**	**00 11 59.7**	**-1.7**
KLY				*i* S	**Sn**	**00 12 18.8**	**-2.4**
SMKR	**Semkarok**	**1.59**	**342**	*e*P	**Pn**	**00 12 01.6**	**0.0**
SMKR				*i* S	**Sn**	**00 12 21.6**	**0.0**
BDR	**Baidarnaya**	**1.63**	**337**	*e*P	**Pn**	**00 12 02.7**	**+0.5**
BDR				*i* S	**Sn**	**00 12 23.4**	**+0.8**
SRKR	**Sorokina**	**1.72**	**337**	*e*P	**Pn**	**00 12 03.7**	**+0.3**
SRKR				*i* S	**Sn**	**00 12 25.9**	**+1.1**
KOZ	**Kozyrevsk**	**1.72**	**306**	*e*P	**Pn**	**00 12 03.7**	**+0.2**
KOZ				*i* S	**Sn**	**00 12 26.1**	**+1.2**
SRDR	**Sredinnyy**	**1.95**	**311**	*e*P	**Pn**	**00 12 06.5**	**0.0**
SRDR				*e*S	**Sn**	**00 12 30.5**	**+0.1**
KII	**Karymskiy**	**2.00**	**240**	*e*P	**Pn**	**00 12 06.9**	**-0.3**
KII				*i* S	**Sn**	**00 12 31.0**	**-0.7**
SPN	**Mys Shipunski**	**2.42**	**216**	*e*P	**Pn**	**00 12 11.1**	**-1.9**
SPN				*i* S	**Sn**	**00 12 38.5**	**-3.6**
NLC	**Nalytchevo**	**2.61**	**224**	*e*P	**Pn**	**00 12 15.1**	**-0.6**
NLC				*i* S	**Sn**	**00 12 45.6**	**-1.3**
AVH	**Avacha**	**2.81**	**231**	*e*P	**Pn**	**00 12 18.9**	**+0.6**
AVH				*i* S	**Sn**	**00 12 52.4**	**+0.8**
GNL	**Ganaly**	**2.94**	**244**	*e*P	**Pn**	**00 12 20.6**	**+0.4**
PET	**Petropavlovsk**	**3.01**	**228**	*e*PN	**Pn**	**00 12 21.7**	**+0.6**
PET				*e*S	**Sn**	**00 12 59.1**	**+2.5**
PET				pmax	pmax		
	comp=Z,155nm,0.3s						
PET				smax			
	comp=E,216nm,0.5s						
PET				smax			
	comp=N,252nm,0.4s						
PET	**Petropavlovsk**	**3.01**	**228**	*e*P	**Pn**	**00 12 21.5**	**+0.4**
PET				*i* S	**Sn**	**00 12 56.3**	**-0.3**
RUS	**Russkaya**	**3.50**	**222**	*e*P	**Pn**	**00 12 28.4**	**+0.5**
RUS				*i* S	**Sn**	**00 13 08.1**	**-0.7**
GRL	**Gorelyy**	**3.59**	**227**	*e*P	**Pn**	**00 12 31.0**	**+1.9**
GRL				*i* S	**Sn**	**00 13 11.4**	**+0.4**
MIPR	**Malaya Ipel'ka**	**4.36**	**232**	*e*P	**Pn**	**00 12 41.6**	**+1.9**
MIPR				*i* S	**Sn**	**00 13 30.5**	**+0.5**

IDC 29 00:12:18.1±5.5, 489S×14839E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/14, mbtmp3.8/4, Error ellipse: s-maj=160.6km s-min=31.0km az=105.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.28**	**221**	P	P	00 16 55.6	+0.1
	1.7nm,0.4s,baz=51,slow=12,SNR=22						
ASAR	**Alice Springs**	**23.32**	**215**	P	P	00 17 28.4	+0.3
	1.7nm,0.4s,baz=48,slow=8.3,SNR=26						
FITZ	**Fitzroy Crossi**	**25.83**	**238**	P	P	00 17 50.8	-0.6
	1.2nm,0.4s,baz=63,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**77.53**	**320**	P	P	00 24 16.2	+0.3
	0.3nm,0.7s,baz=100,slow=6.1,SNR=2.7						

*IDC **29** 00:12:20.1±0.7, 5518N×16207E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/22, mbtmp4.1/12, MS3.5/5, Ms1 3.5/5, ms1mx3.2/28, Error ellipse: s-maj=25.6km s-min=14.8km az=144.0*
*MOS **29** 00:12:22.7±1.2, 5504N×16257E, h28km, mb4.3/9, Error ellipse: s-maj=11.8km s-min=6.4km az=72.2*
*KRSC **29** 00:12:24.4±0.8, 5509N×162.19E, h18km±18km, ML4.8*
*ISCJB **29** 00:12:24.3±0.6, 5506N±002×16246E±006, h35km±5km, mb4.2/23, MS3.5/6, Error ellipse: s-maj=6.0km s-min=3.3km az=17.2*
*BJI **29** 00:12:25.4, 5490N×16260E, h46km, mB4.7, mb4.3, Ms4.1, Msz3.9*
*NEIC **29** 00:12:26.4±1.2, 5488N×16260E, h46km±12km, mb4.4/10, Error ellipse: s-maj=11.5km s-min=6.4km az=151.0*

ISC 29 00:12:24.1±0.8, 5511N±002×16241E±005, h20km±6km, n97, σ1 822/116, mb4.2/23, MS3.5/6, 8C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.68**	**216**	*i* P	**Pb**	**00 12 36.4**	**-0.8**
MKZ				*i* S	**Sb**	**00 12 45.1**	**-1.0**
KBTR	**Krutoberegovo**	**1.13**	**12**	*i* P	**Pn**	**00 12 44.7**	**-0.1**
KBTR				*i* S	**Sb**	**00 13 00.0**	**+0.8**
ZLN	**Zelenaya**	**1.29**	**316**	*i* P	**Pn**	**00 12 47.4**	**+0.4**
TUMR	**Tumrok**	**1.31**	**279**	*e*P	**Pn**	**00 12 47.3**	**+0.1**
TUMR				*e*S	**Sn**	**00 13 03.8**	**-0.3**
BZMR	**Bezymyannaya**	**1.37**	**308**	*i* P	**Pn**	**00 12 47.8**	**-0.3**
BZMR				*i* S	**Sn**	**00 13 04.6**	**-1.0**
KMNR	**Kamenistaya**	**1.40**	**299**	*i* P	**Pn**	**00 12 48.5**	**0.0**
KMNR				*i* S	**Sn**	**00 13 06.5**	**+0.2**
KPT	**Kopyto**	**1.51**	**306**	*e*P	**Pn**	**00 12 50.2**	**+0.2**
KPT				*i* S	**Sn**	**00 13 08.7**	**-0.4**
KRSR	**Krestovskiy**	**1.53**	**318**	*e*P	**Pn**	**00 12 49.4**	**-0.8**
KRSR				*i* S	**Sn**	**00 13 07.4**	**-2.1**
KLY	**Klyuchi**	**1.57**	**321**	*e*P	**Pn**	**00 12 49.7**	**-1.1**
KLY				*i* S	**Sn**	**00 13 07.9**	**-2.5**
BDR	**Baidarnaya**	**1.61**	**336**	*i* P	**Pn**	**00 12 52.5**	**+1.1**
BDR				*i* S	**Sn**	**00 13 13.1**	**+1.5**
SRKR	**Sorokina**	**1.70**	**336**	*i* P	**Pn**	**00 12 53.3**	**+0.7**
SRKR				*i* S	**Sn**	**00 13 14.4**	**+0.6**
KOZ	**Kozyrevsk**	**1.73**	**305**	*e*P	**Pn**	**00 12 53.3**	**+0.3**
KOZ				*i* S	**Sn**	**00 13 14.6**	**+0.2**
SRDR	**Sredinnyy**	**1.95**	**310**	*e*P	**Pn**	**00 12 56.4**	**+0.4**
SRDR				*e*S	**Sn**	**00 13 19.5**	**-0.3**
KII	**Karymskiy**	**2.03**	**239**	*e*P	**Pn**	**00 12 57.1**	**0.0**
KII				*i* S	**Sn**	**00 13 21.1**	**-0.8**
SPN	**Mys Shipunski**	**2.45**	**216**	*e*P	**Pn**	**00 13 01.1**	**-1.9**
SPN				*i* S	**Sn**	**00 13 27.8**	**-4.5**
NLC	**Nalytchevo**	**2.65**	**224**	*e*P	**Pn**	**00 13 05.3**	**-0.3**
NLC				*i* S	**Sn**	**00 13 35.0**	**-2.1**
AVH	**Avacha**	**2.84**	**231**	*e*P	**Pn**	**00 13 09.7**	**+1.5**
AVH				*i* S	**Sn**	**00 13 42.8**	**+1.0**
GNL	**Ganaly**	**2.97**	**243**	*e*P	**Pn**	**00 13 11.8**	**+1.8**
INSR	**Institute**	**3.03**	**229**	P	**Pn**	**00 13 11.9**	**+1.0**
INSR				*i* S	**Sn**	**00 13 46.8**	**+0.2**
PET	**Petropavlovsk**	**3.04**	**228**	*e*Pn	**Pn**	**00 13 11.4**	**+0.4**
PET				*e*Sn	**Sn**	**00 13 47.5**	**+0.7**
PET	**Petropavlovsk**	**3.04**	**228**	*i*PN	**Pn**	**00 13 11.7**	**+0.7**
PET				*i* S	**Sn**	**00 13 48.9**	**+2.1**
PET				pmax	pmax		
	comp=Z,768nm,0.6s						
PET				smax			
	comp=N,2μm,0.6s						
PET				smax			
	comp=E,2μm,0.8s						
PET				smax			
	comp=E,2μm,0.7s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PET	**Petropavlovsk**	**3.04**	**228**	*e*P	**Pn**	**00 13 11.5**	**+0.5**
PET				*i* S	**Sn**	**00 13 45.9**	**-0.9**
RUS	**Russkaya**	**3.54**	**222**	*e*P	**Pn**	**00 13 18.9**	**+1.0**
RUS				*i* S	**Sn**	**00 13 57.9**	**-1.1**
GRL	**Gorelyy**	**3.63**	**227**	P	**Pn**	**00 13 20.3**	**+1.2**
GRL				*i* S	**Sn**	**00 14 01.4**	**+0.2**
MIPR	**Malaya Ipel'ka**	**4.39**	**232**	*e*P	**Pn**	**00 13 31.4**	**+1.8**
SKR	**Severo-Kuril's**	**5.84**	**223**	*e*PN	**Pn**	**00 13 50.5**	**+1.0**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
MA2	**Magadan**	**7.72**	**310**	*e*Pn	**Pn**	**00 14 20.0**	**+4.7**
MA2	**Magadan**	**7.72**	**310**	*i*ePN	**Pn**	**00 14 14.4**	**-0.9**
SEY	**Seymchan**	**9.39**	**331**	*i*ePN	**Pn**	**00 14 36.0**	**-2.0**
BILL	**Bilibino**	**13.11**	**6**	*i*ePN	**Pn**	**00 15 27.9**	**-0.9**
YSS	**Yuzh-Sakhalins**	**14.78**	**245**	*e*P	**Pn**	**00 15 51.0**	**-0.7**
YSS	**Yuzh-Sakhalins**	**14.78**	**245**	*e*P	**Pn**	**00 15 50.4**	**-1.3**
ASAJ	**Asahikawa**	**16.84**	**237**	P	**Pn**	**00 16 18.8**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**16.84**	**237**	Pn	**Pn**	**00 16 18.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=104,slow=4.2,SNR=7.2						
ERM	**Erimo**	**18.19**	**232**	*e*P	**Pn**	**00 16 32.9**	**-2.3**
YAK	**Yakutsk**	**18.26**	**306**	*e*P	**Pn**	**00 16 39.0**	**+3.0**
	comp=Z,18nm,0.4s						
YAK	**Yakutsk**	**18.26**	**306**	*e*P	**Pn**	**00 16 39.0**	**+3.1**
YAK				pmax	pmax		
	comp=Z,18nm,0.4s						
TIXI	**Tiksi**	**21.88**	**332**	*e*P	**P**	**00 17 16.1**	**+0.9**
	comp=Z,17nm,1.0s,mb4.4						
TIXI	**Tiksi**	**21.88**	**332**	*i*eP	**P**	**00 17 12.6**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
TTA	**Tatalina**	**22.42**	**53**	*e*P	**P**	**00 17 19.1**	**-2.1**
	comp=Z,12nm,1.1s,mb4.2						
TTA	**Tatalina**	**22.42**	**53**	*e*P	**P**	**00 17 19.1**	**-2.0**
TTA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.2						
SVW2	**Sparrevohn**	**22.67**	**58**	*e*P	**P**	**00 17 24.0**	**+0.3**
MDJ	**Mudanjiang**	**23.40**	**257**	P	**P**	**00 17 31.5**	**-0.1**
IMA2	**Indian Mountai**	**23.64**	**45**	*e*P	**P**	**00 17 33.8**	**+0.1**
IMA2				*e*		00 17 45.8	
KDAK	**Kodiak Island**	**24.67**	**65**	P	**P**	**00 17 42.5**	**-0.6**
	comp=Z,11nm,0.7s,mb4.5,baz=338,slow=9.5,SNR=8.3						
MAJO	**Matsushiro**	**24.87**	**232**	*e*P	**P**	**00 17 43.7**	**-1.5**
	comp=Z,8.4nm,0.5s,mb4.5						
MAJO	**Matsushiro**	**24.87**	**232**	*e*P	**P**	**00 17 43.7**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.5						
MJAR	**Matsushiro Arr**	**24.87**	**232**	P	**P**	**00 17 43.9**	**-1.3**
	comp=Z,3.4nm,0.6s,mb4.1,baz=27,slow=8.3,SNR=7.0						
MJAR				LR	LR	00 28 19.0	
	comp=Z,92nm,19.0s,MS3.3,baz=35,slow=39						
PMR	**Palmer**	**25.71**	**56**	P	**P**	**00 17 52.6**	**0.0**
COLA	**College**	**26.02**	**48**	*e*P	**P**	**00 17 55.7**	**+0.4**
COLA	**College**	**26.02**	**48**	*i*eP	**P**	**00 17 54.3**	**-1.1**
BOD	**Bodaibo**	**26.43**	**296**	*e*P	**P**	**00 18 02.2**	**+3.1**
HIA	**Hailar**	**26.47**	**275**	*e*P	**P**	**00 18 00.8**	**+1.3**
KSRS	**Korea Array**	**29.25**	**247**	LR	LR	00 29 19.2	
	comp=Z,82nm,19.1s,MS3.4,baz=234,slow=35						
JNU	**Nakatsue**	**31.12**	**238**	LR	LR	00 30 56.2	
	comp=Z,76nm,20.4s,MS3.4,baz=244,slow=36						
INK	**Inuvik**	**31.44**	**40**	*e*P	**P**	**00 18 44.0**	**+0.4**
	comp=Z,52nm,0.5s,mb5.6						
INK	**Inuvik**	**31.44**	**40**	P	**P**	**00 18 43.6**	**0.0**
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
INK				MLR	MLR		
	comp=Z,105nm,18.2s						
INK	**Inuvik**	**31.44**	**40**	P	**P**	**00 18 43.5**	**0.0**
	comp=Z,1.6nm,0.5s,mb4.1,baz=308,slow=15,SNR=8.1						
INK				LR	LR	00 32 49.1	
	comp=Z,105nm,18.2s,MS3.5,baz=312,slow=39						
BJT	**Baijiatuan**	**33.96**	**263**	P	**P**	**00 19 10.7**	**+4.8**
TLY	**Talaya**	**34.32**	**289**	P	**P**	**00 19 10.8**	**+2.0**
ULN	**Ulaanbaatar**	**34.41**	**281**	*e*P	**P**	**00 19 11.3**	**+1.6**
SONM	**Songino Array**	**34.80**	**282**	P	**P**	**00 19 12.0**	**-1.1**
	comp=Z,0.1nm,0.5s,mb3.0,baz=61,slow=8.9,SNR=2.7						
YKA	**Yellowknife Ar**	**40.76**	**45**	P	**P**	**00 20 03.4**	**+0.2**
YKA	**Yellowknife Ar**	**40.76**	**45**	P	**P**	**00 20 03.4**	**+0.2**
	comp=Z,3.2nm,0.6s,mb4.2,baz=300,slow=7.9,SNR=39						
RES	**Resolute Bay**	**40.94**	**23**	*e*P	**P**	**00 20 03.9**	**-0.7**
	comp=Z,28nm,0.4s,mb5.2						
RES	**Resolute Bay**	**40.94**	**23**	*e*P	**P**	**00 20 03.9**	**-0.7**
RES				pmax	pmax		
	comp=Z,28nm,0.4s,mb5.2						
ENH	**Enshi**	**44.75**	**259**	P	**P**	**00 20 33.9**	**-2.0**
KBS	**Kingsbay**	**45.07**	**352**	*i*eP	**P**	**00 20 37.7**	**-0.2**
KURK	**Kurchatov**	**47.84**	**302**	*e*P	**P**	**00 20 58.6**	**-1.4**
	comp=Z,1.1nm,0.4s,mb4.2						
MKAR	**Makanchi Array**	**48.52**	**295**	P	**P**	**00 21 01.8**	**-3.5**
MKAR	**Makanchi Array**	**48.52**	**295**	*i*eP	**P**	**00 21 06.6**	**+1.3**
MKAR	**Makanchi Array**	**48.52**	**295**	P	**P**	**00 21 01.8**	**-3.5**
	comp=Z,0.3nm,0.6s,mb3.5,baz=39,slow=2.9,SNR=3.8						
GYA	**Guiyang**	**49.26**	**258**	P	**P**	**00 21 13.0**	**+1.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
BRVK	**Borovoye**	**50.24**	**308**	P	**P**	**00 21 20.9**	**+2.6**
	comp=Z,1.4nm,0.7s,mb4.1						
BRVK	**Borovoye**	**50.24**	**308**	P	**P**	**00 21 20.9**	**+2.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
FCC	**Fort Churchill**	**51.06**	**41**	*e*P	**P**	**00 21 24.1**	**-0.3**
	comp=Z,2.6nm,0.5s,mb4.4						
FCC	**Fort Churchill**	**51.06**	**41**	*e*P	**P**	**00 21 24.1**	**-0.3**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
KMI	**Kunming**	**52.51**	**260**	P	**P**	**00 21 38.0**	**+2.3**
KMI				PP	PP	00 23 38.0	+3.5
KMI				AMB	AMB		
	comp=Z,11nm,0.7s,mb4.9						
KMI				AMB	AMB		
	comp=Z,58nm,4.4s						
KMI				LR	LR		
	comp=N,140nm,18.3s,MS4.1						
KMI				LR	LR		
	comp=E,97nm,19.2s,MS4.1						
KMI				LR	LR		
	comp=Z,73nm,10.7s						
ARU	**Arti**	**52.84**	**317**	P	**P**	**00 21 39.4**	**+1.7**
ARU	**Arti**	**52.84**	**317**	P	**P**	**00 21 39.4**	**+1.7**
TKM2	**Tokmak 2**	**54.64**	**296**	P	**P**	**00 21 52.4**	**+1.3**
PDAR	**Pinedale Array**	**55.38**	**63**	P	**P**	**00 21 58.0**	**+1.6**
	comp=Z,1.1nm,0.7s,mb4.0,baz=312,slow=3.0,SNR=9.5						
LSA	**Lhasa**	**55.66**	**274**	P	**P**	**00 21 59.7**	**+1.0**
UCH	**Uchtor**	**55.69**	**296**	*e*P	**P**	**00 22 00.4**	**+1.7**
	comp=Z,1.0nm,0.6s,mb4.0						
AML	**Almayashu**	**56.18**	**296**	P	**P**	**00 22 05.8**	**+3.6**
ULM	**Lac du Bonnet**	**56.46**	**49**	P	**P**	**00 22 04.0**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.3,baz=333,slow=9.2,SNR=6.0						
FINES	**FINESS Array B**	**58.80**	**337**	*i* P	**P**	**00 22 19.7**	**-0.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	**FINESS Array B**	**58.80**	**337**	P	**P**	**00 22 18.2**	**-2.1**
	comp=Z,0.6nm,0.6s,mb3.8,baz=62,slow=4.5,SNR=4.3						
NB2	**NORSAR Subarra**	**61.98**	**345**	P	**P**	**00 22 38.9**	**-3.1**
	comp=Z,0.9nm,0.8s,mb4.0,baz=29,slow=6.2						
NB2	**NORSAR Subarra**	**61.98**	**345**	P	**P**	**00 22 38.9**	**-3.1**
	comp=Z,0.9nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**61.98**	**345**	P	**P**	**00 22 38.9**	**-3.1**
NB2				pmax	pmax	

QIZ					LR	LR		
	comp=N,455nm,13.7s							
QIZ					LR	LR		
	comp=Z,570nm,13.0s,MS4.2							
SHL	**Shillong**	**23.65**	**350**	*eP*	**P**	**P**	**01 41 13.0**	**-1.1**
KMI	**Kunming**	**23.69**	**15**	P	**P**	**P**	**01 41 14.0**	**-0.5**
KMI				AP			01 41 22.8	
KMI				XP		sP	01 41 27.0	+7.0
KMI				PP			01 41 49.8	
KMI				S		**S**	**01 45 29.0**	**-0.1**
KMI				AMB		AMB		
	comp=Z,13nm,0.7s,mb4.5							
KMI				AMB		AMB		
	comp=Z,111nm,4.2s							
KMI				LR		LR		
	comp=N,203nm,13.2s,MS3.8							
KMI				LR		LR		
	comp=E,112nm,14.1s,MS3.8							
KMI				LR		LR		
	comp=Z,186nm,10.6s,MS3.8							
GYA	**Guiyang**	**26.17**	**22**	*iP*	**P**	**P**	**01 41 36.8**	**-0.3**
GYA				AMB		AMB		
	comp=Z,20nm,0.9s,mb4.7							
JIRN	**Jiri**	**27.11**	**340**	*eP*	**P**	**P**	**01 41 46.7**	**+1.1**
	comp=Z,30nm,0.9s,mb4.8							
KKN	**Kakani**	**27.55**	**339**	*eP*	**P**	**P**	**01 41 50.6**	**+1.1**
	comp=Z,11nm,0.6s,mb4.7							
LSA	**Lhasa**	**27.81**	**351**	*eP*	**P**	**P**	**01 41 52.8**	**+0.9**
	comp=Z,14nm,1.1s,mb4.5							
LSA	**Lhasa**	**27.81**	**351**	*eP*	**P**	**P**	**01 41 52.8**	**+0.9**
LSA				pmax		pmax		
	comp=Z,14nm,1.1s,mb4.5							
GKN	**Gorkha**	**27.98**	**338**	*eP*	**P**	**P**	**01 41 55.0**	**+1.6**
	comp=Z,22nm,0.7s,mb4.9							
KOLN	**Koldanda**	**28.18**	**336**	*eP*	**P**	**P**	**01 41 56.0**	**+0.8**
	comp=Z,11nm,0.8s,mb4.5							
MBWA	**Marble Bar**	**32.67**	**136**	P	**P**	**P**	**01 42 35.5**	**+0.6**
XAN	**Xi'an**	**33.87**	**19**	P	**P**	**P**	**01 42 44.0**	**-1.3**
XAN				AP		pP	01 42 50.0	+0.8
XAN				AMB		AMB		
	comp=Z,38nm,0.7s,mb5.4							
LZH	**Lanzhou**	**34.50**	**11**	*eP*	**P**	**P**	**01 42 50.3**	**-0.4**
LZH				AP		pP	01 42 57.5	+2.9
LZH				XP		sP	01 43 00.0	+3.8
LZH				AMB		AMB		
	comp=Z,17nm,1.2s,mb4.8							
LZH				AMB		AMB		
	comp=Z,67nm,4.3s							
FITZ	**Fitzroy Crossi**	**35.29**	**126**	*eP*	**P**	**P**	**01 42 57.3**	**-0.5**
	comp=Z,4.1nm,0.7s,mb4.5							
FITZ	**Fitzroy Crossi**	**35.29**	**126**	P	**P**	**P**	**01 42 57.2**	**-0.5**
	comp=Z,2.2nm,0.7s,mb4.2,baz=295,slow=13,SNR=4.3							
GTA	**Gaotai**	**37.23**	**5**	*eP*	**P**	**P**	**01 43 13.8**	**-0.2**
GTA				AP		pP	01 43 20.8	+2.8
GTA				XP		sP	01 43 25.0	+5.4
GTA				AMB		AMB		
	comp=Z,7.0nm,1.4s,mb4.3							
BJT	**Baijiatuau**	**41.82**	**23**	*eP*	**P**	**P**	**01 43 53.1**	**+0.7**
	comp=Z,9.2nm,0.6s,mb4.6							
BJT	**Baijiatuau**	**41.82**	**23**	*eP*	**P**	**P**	**01 43 53.1**	**+0.7**
BJT				pmax		pmax		
	comp=Z,9.0nm,0.6s							
WRA	**Warramunga Arr**	**43.38**	**122**	P	**P**	**P**	**01 44 05.1**	**-0.2**
	comp=Z,2.9nm,1.0s,mb4.0,baz=299,slow=9.4,SNR=11							
UCH	**Uchtor**	**44.38**	**337**	*eP*	**P**	**P**	**01 44 13.4**	**+0.3**
	comp=Z,4.0nm,1.0s,mb4.1							
TKM2	**Tokmak 2**	**44.57**	**338**	P	**P**	**P**	**01 44 13.2**	**-1.3**
ASAR	**Alice Springs**	**44.76**	**127**	P	**P**	**P**	**01 44 16.4**	**0.0**
	comp=Z,1.0nm,0.7s,mb3.7,baz=296,slow=8.1,SNR=7.2							
EKS2	**Erkin-Say**	**45.04**	**337**	P	**P**	**P**	**01 44 16.7**	**-1.6**
KSRS	**Korea Array**	**45.65**	**36**	LR	LR	LR	02 04 13.9	
	comp=Z,64nm,18.2s,MS3.6,baz=353,slow=37							
MK31	**Makanchi Array**	**46.09**	**347**	*eP*	**P**	**P**	**01 44 26.4**	**-0.1**
MKAR	**Makanchi Array**	**46.09**	**347**	P	**P**	**P**	**01 44 26.8**	**+0.3**
	comp=Z,7.1nm,0.8s,mb4.7,baz=161,slow=7.7,SNR=47							
SONM	**Songino Array**	**46.35**	**9**	P	**P**	**P**	**01 44 28.9**	**+0.3**
	comp=Z,3.4nm,0.8s,mb4.3,baz=188,slow=9.0,SNR=28							
ULN	**Ulaanbaatar**	**46.49**	**10**	*eP*	**P**	**P**	**01 44 27.7**	**-2.0**
ZAK	**Zakamensk**	**48.43**	**6**	*eP*	**P**	**P**	**01 44 46.3**	**+1.6**
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.7s,mb3.9							
TLY	**Talaya**	**49.75**	**6**	*eP*	**P**	**P**	**01 44 55.8**	**+1.1**
	comp=Z,4.5nm,0.9s,mb4.5							
TLY	**Talaya**	**49.75**	**6**	*eP*	**P**	**P**	**01 44 56.1**	**+1.3**
TLY				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.5							
TLY				MLR		MLR		
	comp=Z,53nm,18.0s,MS3.6							
KURK	**Kurchatov**	**50.62**	**346**	*eP*	**P**	**P**	**01 45 02.2**	**+0.7**
	comp=Z,1.2nm,0.5s,mb4.1							
KURK	**Kurchatov**	**50.62**	**346**	*eP*	**P**	**P**	**01 45 02.2**	**+0.7**
KURK				pmax		pmax		
	comp=Z,1.0nm,0.5s,mb4.0							
HIA	**Hailar**	**51.07**	**20**	*eP*	**P**	**P**	**01 45 04.8**	**-0.1**
ZAL	**Zalesovo**	**52.46**	**352**	P	**P**	**P**	**01 45 15.2**	**+0.1**
ZALV	**Zalesovo Beam**	**52.47**	**352**	P	**P**	**P**	**01 45 15.2**	**0.0**
	comp=Z,5.1nm,0.5s,mb4.7,baz=180,slow=6.7,SNR=25							
NVS	**Novosibirsk**	**53.58**	**351**	*eP*	**P**	**P**	**01 45 19.0**	**-4.4**
CTAO	**Charters Tower**	**53.81**	**117**	*eP*	**P**	**P**	**01 45 26.1**	**+0.4**
	comp=Z,2.2nm,0.6s,mb4.3							
CTAO	**Charters Tower**	**53.81**	**117**	*eP*	**P**	**P**	**01 45 26.1**	**+0.4**
CTAO				pmax		pmax		
	comp=Z,2.0nm,0.6s,mb4.2							
BRVK	**Borovoye**	**55.09**	**341**	*eP*	**P**	**P**	**01 45 34.1**	**-0.3**
	comp=Z,1.3nm,0.4s,mb4.3							
BRVK	**Borovoye**	**55.09**	**341**	*eP*	**P**	**P**	**01 45 34.2**	**-0.2**
BRVK				pmax		pmax		
	comp=Z,1.0nm,0.4s,mb4.2							
KLR	**Kul'dur**	**55.86**	**27**	*eP*	**P**	**P**	**01 45 36.8**	**-3.2**
HABR	**Khabarovsk**	**56.92**	**30**	*eP*	**P**	**P**	**01 45 44.5**	**-3.1**
HABR				*e*			01 47 51.0	
HABR				S		**S**	**01 53 35.2**	**-6.0**
HABR				*e*			01 55 31.5	
BOD	**Bodaibo**	**57.27**	**11**	*eP*	**P**	**P**	**01 45 49.4**	**-0.5**
BOD				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
YSS	**Yuzh-Sakhalins**	**60.13**	**35**	*eP*	**P**	**P**	**01 46 09.5**	**-0.6**
YSS				pmax		pmax		
	comp=Z,7.0nm,1.0s,mb4.7							
KIV	**Kislovodsk**	**62.94**	**319**	*eP*	**P**	**P**	**01 46 30.9**	**+1.8**
KIV				pmax		pmax		
	comp=Z,4.0nm,1.0s,mb4.5							
KIV				MLR		MLR		
	comp=Z,23nm,18.0s,MS3.4							
YAK	**Yakutsk**	**64.79**	**17**	*eP*	**P**	**P**	**01 46 40.0**	**-0.9**
YAK				pmax		pmax		
	comp=Z,13nm,0.7s,mb5.1							
MA2	**Magadan**	**70.91**	**26**	*eP*	**P**	**P**	**01 47 18.5**	**-1.0**
MA2				pmax		pmax		
	comp=Z,7.0nm,1.3s,mb4.4							
OBN	**Obninsk**	**71.29**	**328**	*iP*	**P**	**P**	**01 47 22.2**	**+0.3**
OBN				pmax		pmax		
	comp=Z,14nm,1.7s,mb4.6							
TIXI	**Tiksi**	**72.43**	**10**	*eP*	**P**	**P**	**01 47 27.2**	**-1.2**
	comp=Z,4.0nm,0.9s,mb4.3							
TIXI	**Tiksi**	**72.43**	**10**	*eP*	**P**	**P**	**01 47 27.2**	**-1.3**
TIXI				pmax		pmax		
	comp=Z,4.0nm,0.9s,mb4.3							
SEY	**Seymchan**	**73.28**	**23**	*eP*	**P**	**P**	**01 47 32.6**	**-1.1**
FINES	**FINESS Array B**	**78.70**	**333**	P	**P**	**P**	**01 48 05.4**	**+0.8**
	comp=Z,0.8nm,0.7s,mb3.8,baz=113,slow=6.7,SNR=3.3							
ARCES	**ARCESS Array B**	**81.31**	**340**	P	**P**	**P**	**01 48 19.1**	**+0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=81,slow=5.6,SNR=3.7							
ARCES				LR		LR	02 26 30.2	
	comp=Z,48nm,20.3s,MS3.8,baz=216,slow=37							
GERES	**GERESS Array B**	**83.45**	**319**	P	**P**	**P**	**01 48 31.2**	**+1.0**
	comp=Z,0.2nm,0.2s,mb3.7,baz=95,slow=4.7,SNR=3.6							
CLL	**Collm**	**84.07**	**321**	P		PcP	01 48 38.0	+0.8
CLL	**Collm**	**84.07**	**321**	*e*(PcP)		PcP	01 48 38.0	+0.8
NOA	**NORSAR Array B**	**85.69**	**331**	LR		LR	02 33 25.6	
	comp=Z,22nm,18.5s,MS3.6,baz=340,slow=40							
RAO	**Raoul Island**	**87.44**	**119**	P		**P**	**01 48 49.6**	**-0.9**

NIED ***29*** *01:46:00, 37.20N× 136.60E, h5km, Mw3.5 Best double couple: M₀1.73000× 10¹⁴ NP1:φs308.00000°, δ55.00000°, λ-28.00000°. NP2:φs55.00000°, δ67.00000°, λ-142.00000°.*

ISCJB ***29*** *01:46:18.4± 1.2, 3726N± 005× 13667E± 008, h9km± 8km, Error ellipse: s-maj=11.4km s-min=7.1km az=30.5*

JMA ***29*** *01:46:19.1, 3723N× 13669E, h8km± 1km, M3.8*

JMA Felt II J1.

ISC 29 01:46:18.6±1.2,**3725N**±005×**13665E**±008,**h13km**±7km,**n6, σ0s29/11,Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.34**	**162**	P	**Pg**	**01 46 25.5**	**0.0**
JJH				S	**Sg**	**01 46 30.3**	**+0.2**
JSZ	**Suzu**	**0.60**	**71**	P	**Pg**	**01 46 30.1**	**-0.2**
JSZ				S	**Sg**	**01 46 38.1**	**-0.1**
JHG	**Hegura jima**	**0.63**	**20**	P	**Pg**	**01 46 31.4**	**+0.5**
JTT	**Ttatey**	**0.84**	**140**	P	**Pg**	**01 46 34.6**	**-0.3**
JTT				S	**Sg**	**01 46 46.0**	**0.0**
JKG	**Kaga**	**1.01**	**195**	P	**Pb**	**01 46 37.5**	**-0.4**
JKG				S	**Sg**	**01 46 51.3**	**+0.2**
MAT	**Matsushiro**	**1.43**	**119**	P	**Pn**	**01 46 44.0**	**-0.3**
MAT				*e*S	**Sn**	**01 47 03.5**	**+0.5**

IDC 29 01:56:15.7±4.3,**523S**×**14994E**,**h0km, mb3.7**/4,**mb1 4.0**/4, **mb1mx3.7**/14,**mbtmp3.7**/4,**Error ellipse: s-maj=119.3km s-min=28.7km az=106.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.08**	**225**	P	P	02 01 02.8	+1.0
	2.4nm,0.4s,baz=51,slow=11,SNR=32						
ASAR	**Alice Springs**	**23.98**	**219**	P	P	02 01 31.5	-0.5
	0.5nm,0.4s,baz=50,slow=8.4,SNR=8.3						
FITZ	**Fitzroy Crossi**	**26.97**	**240**	P	P	02 01 59.3	0.0
	1.3nm,0.3s,baz=53,slow=13,SNR=7.6						
SONM	**Songino Array**	**65.20**	**329**	P	P	02 06 59.0	+0.2
	0.2nm,0.3s,baz=150,slow=6.5,SNR=2.6						

ISCJB ***29*** *02:04:08.3± 1.3, 175S± 0.1× 69.1W± 0.1, h182km± 10km, mb3.9/6, Error ellipse: s-maj=24.1km s-min=15.3km az=11.2*

IDC ***29*** *02:04:08.7± 1.9, 1756S× 69.11W, h169km± 12km, mb3.7/4, mb1 3.8/5, mb1mx3.5/17, mbtmp3.8/5, Error ellipse: s-maj=27.5km s-min=24.2km az=13.0*

NEIC ***29*** *02:04:08.8± 1.1, 1759S× 6909W, h172km± 9km, mb4.0/2, Error ellipse: s-maj=17.7km s-min=14.1km az=221.0*

ISC 29 02:04:09.2±1.4,**176S**×**02×691W**±0.1,**h174km**±11km,**n11, σ0s38/12,mb3.9/6,Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.57**	**35**	P	**Pn**	**02 04 41.8**	**+0.4**
	12nm,0.3s,baz=227,slow=7.8,SNR=359						
LPAZ				S	**Sn**	**02 05 06.2**	**-0.1**
	6.1nm,0.3s,baz=328,slow=22,SNR=22						
SIV	**San Ignacio**	**7.83**	**80**	P	**Pn**	**02 05 59.9**	**-0.4**
	5.2nm,0.3s,baz=275,slow=11,SNR=60						
SIV				S	**Sn**	**02 07 27.8**	**-0.2**
	0.6nm,0.3s,baz=352,slow=20,SNR=6.6						
PLCA	**Paso Flores**	**23.11**	**183**	P	**P**	**02 08 59.5**	**-0.1**
	1.3nm,0.9s,mb3.4,baz=17,slow=10,SNR=3.0						
LTX	**Lajitas**	**57.36**	**324**	*eP*	**P**	**02 13 39.1**	**-0.2**
	1.5nm,0.7s,mb3.9						
WMOK	**Wichita Mounta**	**59.20**	**332**	*eP*	**P**	**02 13 52.2**	**+0.3**
	3.3nm,0.9s,mb4.2						
DBIC	**Dimbokro**	**67.82**	**75**	P	**P**	**02 14 49.4**	**+0.5**
DBIC	**Dimbokro**	**67.82**	**75**	P	**P**	**02 14 49.4**	**+0.5**
	3.4nm,0.5s,mb4.3,baz=238,slow=8.2,SNR=12						
TOA0	**Torodi Ar. Sit**	**76.22**	**71**	*eP*	**P**	**02 15 39.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.22**	**71**	P	**P**	**02 15 39.3**	**+0.5**
	2.9nm,0.8s,mb4.0,baz=254,slow=5.5,SNR=8.6						
YKA	**Yellowknife Ar**	**87.46**	**341**	P	**P**	**02 16 35.6**	**-0.9**
	0.5nm,0.7s,mb3.5,baz=132,slow=4.7,SNR=9.3						
SONM	**Songino Array**	**149.60**	**6**	PKPbc	PKPbc	02 23 38.4	+0.4
	0.1nm,0.4s,baz=336,slow=3.2,SNR=2.7						

IDC 29 02:28:06.8±1.9,**285N**×**12801E**,**h0km, mb3.6**/4,**mb1 3.8**/4, **mb1mx3.5**/16,**mbtmp3.6**/4,**Error ellipse: s-maj=134.4km s-min=25.1km az=66.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.49**	**165**	P	P	02 33 18.2	-0.3
	0.4nm,0.3s,baz=345,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.97**	**168**	P	P	02 33 50.7	+0.4
	0.2nm,0.4s,baz=356,slow=10,SNR=4.6						
STKA	**Stephens Creek**	**36.87**	**161**	P	P	02 35 16.7	-0.4
	3.4nm,1.0s,baz=329,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**59.00**	**325**	P	P	02 38 08.5	+0.1
	0.4nm,0.5s,baz=122,slow=8.8,SNR=4.7						

CSEM ***29*** *02:38:38.6± 0.1, 2759N× 5531E, h14km, mb4.0/4, Error ellipse: s-maj=2.7km s-min=2.3km az=163.0*

IDC ***29*** *02:38:38.5± 0.8, 2772N× 5516E, h0km, mb3.8/13, mb1 3.8/14, mb1mx3.7/25, mbtmp3.8/14, ML3.8/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/30, Error ellipse: s-maj=24.5km s-min=15.1km az=125.0*

MOS ***29*** *02:38:41.4± 1.1, 2767N× 5515E, h33km, mb4.3/3, Error ellipse: s-maj=20.8km s-min=13.1km az=91.0*

THR ***29*** *02:38:42.9± 0.4, 2780N× 5526E, h14km± 6km, ML3.8*

ISCJB ***29*** *02:38:42.9± 0.8, 2765N± 004× 5513E± 004, h48km± 8km, mb3.9/15, Error ellipse: s-maj=7.5km s-min=5.3km az=143.5*

KISR ***29*** *02:38:42.2± 0.5, 2809N× 5507E, h21km± 999km, ML3.7*

NEIC ***29*** *02:38:42.9, 2780N× 5526E, h14km, mb3.9/6, ML3.8(THR), MN3.7(TEH), After THR.*

TEH ***29*** *02:38:49.7, 2758N× 5517E, h12km, ML3.7*

ISC 29 02:38:45.0±0.7,**2766N**±004×**5518E**±004,**h49km**±7km,**n70, σ1s06/83,mb3.9/15,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBR	**Kerman**	**2.70**	**31**	Pn	**Pn**	**02 39 26.0**	**+0.2**
KRBR				Sg	**Sn**	**02 40 02.0**	**+4.7**
KRBR	**Kerman**	**2.70**	**31**	*e*Pn	**Pn**	**02 39 26.2**	**+0.4**
KRBR				*e*Sg	**Sn**	**02 40 02.7**	**+5.5**
KRBR				AML	AML	02 40 07.2	
	comp=N,181nm,0.7s						
KRBR	**Kerman**	**2.70**	**31**	Pn	**Pn**	**02 39 26.0**	**+0.2**
KRBR				*e*Sg	**Sn**	**02 40 02.7**	**+5.4**
	SNR=90						
SHI	**Shiraz**	**3.06**	**311**	*e*Pn	**Pn**	**02 39 36.3**	**+5.5**
SHI				*e*		02 40 32.1	
	comp=Z,1μm,0.2s						
IMEH	**Mehriz**	**3.75**	**353**	*e*Pn	**Pn**	**02 39 42.4**	**+2.2**
IMEH				*e*		02 40 31.1	
	comp=Z,1μm,0.4s						
IBAF	**Bafgh**	**3.93**	**5**	Pn	**Pn**	**02 39 43.3**	**+0.6**
ZHSF	**Zahedan**	**5.29**	**67**	*e*Pn	**Pn**	**02 40 02.0**	**+0.6**
ZHSF	**Zahedan**	**5.29**	**67**	Pn	**Pn**	**02 40 01.0**	**-0.4**
BTHS		**5.31**	**228**	P	**Pn**	**02 40 00.1**	**-1.5**
BOQSS		**5.48**	**252**	P	**Pn**	**02 40 03.9**	**-0.2**
BOQSS		**5.48**	**252**	P	**Pn**	**02 40 03.8**	**-0.3**
NASN	**Na'in**	**5.51**	**339**	*e*Pn	**Pn**	**02 40 05.7**	**+1.2**
NASN				Sn	**Sn**	**02 41 06.1**	**-0.4**
NASN				AML	AML	02 41 18.5	
	comp=N,14nm,0.4s						
NASN	**Na'in**	**5.51**	**339**	Pn	**Pn**	**02 40 05.0**	**+0.5**
NASN				Sn	**Sn**	**02 41 06.0**	**-0.6**
IZEF	**Zefreh**	**5.77**	**335**	Pn	**Pn**	**02 40 07.0**	**-1.0**
IZEF	**Zefreh**	**5.77**	**335**	*e*Pn	**Pn**	**02 40 07.1**	**-0.9**
IZEF				*e*		02 40 08.3	
	comp=Z,162nm,0.2s						
IKLH	**Kalahroud**	**6.44**	**332**	*e*Pn	**Pn**	**02 40 15.2**	**-1.9**
IKLH				*e*		02 40 19.0	
	comp=Z,211nm,0.2s						
IKLH				*e*Sn	**Sn**	**02 41 28.1**	**-1.1**
IKLH	**Kalahroud**	**6.44**	**332**	*e*Pn	**Pn**	**02 40 15.2**	**-1.9**
IKLH				Sn	**Sn**	**02 41 27.1**	**-2.1**
QRN	**Al-Qurain**	**6.50**	**281**	*e*P	**Pn**	**02 40 19.4**	**+1.4**
QRN				*e*S	**Sn**	**02 41 31.5**	**+0.8**
QRN				AMb	AMB	02 41 36.4	
	comp=Z,26nm,0.4s						
RDF	**Al-Radifah**	**6.84**	**282**	*e*P	**Pn**	**02 40 24.0**	**+1.3**
RDF				*e*S	**Sn**	**02 41 40.3**	**+1.1**
RDF				AML	AML	02 41 45.3	
	comp=Z,13nm,0.5s						
RDF	**Al-Radifah**	**6.84**	**282**	*e*P	**Pn**	**02 40 24.0**	**+1.3**
RDF				*e*S	**Sn**	**02 41 40.3**	**+1.1**
HRDDS		**7.00**	**229**	S	**Sn**	**02 41 42.0**	**-1.1**
HRDDS		**7.00**	**229**	P	**Pn**	**02 40 23.1**	**-1.8**
NAY	**Al-Naaiem**	**7.16**	**285**	*e*P	**Pn**	**02 40 28.1**	**+1.1**
NAY				*e*S	**Sn**	**02 41 48.1**	**+1.0**
NAY				AMb	AMB	02 41 52.2	
	comp=Z,17nm,0.8s						
NAY	**Al-Naaiem**	**7.16**	**285**	*e*P	**Pn**	**02 40 28.1**	**+1.0**
	comp=Z,17nm,0.8s						
NAY				*e*S	**Sn**	**02 41 48.1**	**+1.0**
MIB	**Mutribah**	**7.20**	**289**	*e*P	**Pn**	**02 40 28.1**	**+0.5**
MIB				*e*S	**Sn**	**02 41 48.1**	**-0.1**
MIB				AML	AML	02 41 52.3	
	comp=Z,14nm,0.5s						
MIB	**Mutribah**	**7.20**	**289**	*e*P	**Pn**	**02 40 28.1**	**+0.4**
GHVR	**GHOM**	**7.57**	**335**	*e*Pn	**Pn**	**02 40 34.3**	**+1.6**
ASAO	**Ashtian**	**8.16**	**329**	*e*Pn	**Pn**	**02 40 42.4**	**+1.7**
ASAO				Sn	**Sn**	**02 42 09.9**	**-1.6**
ASAO				AML	AML	02 42 19.8	
	comp=N,20nm,0.6s						
ASAO				AML	AML	02 42 21.0	
	comp=E,18nm,0.6s						
ASAO	**Ashtian**	**8.16**	**329**	Pn	**Pn**	**02 40 42.0**	**+1.2**
ASAO				Sn	**Sn**	**02 42 09.0**	**-2.6**
IKOM	**Komasi**	**9.24**	**317**	*e*Pn	**Pn**	**02 40 55.6**	**0.0**
IKOM				*e*		02 42 51.8	
	comp=Z,335nm,0.2s						
ASYS		**9.62**	**272**	S	**Sn**	**02 42 42.3**	**-5.1**
ASYS		**9.62**	**272**	P	**Pn**	**02 40 58.5**	**-2.3**
MALT	**Malatya**	**17.59**	**311**	*e*Pn	**Pn**	**02 42 46.5**	**+0.1**
	comp=Z,3.9nm,1.0s						
MALT	**Malatya**	**17.59**	**311**	*e*P	**Pn**	**02 42 46.6**	**+0.1**
MALT				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MALT	**Malatya**	**17.59**	**311**	*e*P	**Pn**	**02 42 46.6**	**+0.1**
	comp=Z,4.0nm,1.0s						
ZEI	**Tsey**	**17.64**	**332**	*e*P	**Pn**	**02 42 50.9**	**+3.8**
EIL	**Elat**	**17.86**	**281**	LR	LR	02 50 52.4	
	comp=Z,24nm,18.0s,baz=97,slow=41						
MMAI	**Mount Meron Ar**	**17.88**	**292**	P	**Pn**	**02 42 49.1**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=96,slow=14,SNR=2.1						
KIV	**Kislovodsk**	**19.12**	**332**	*e*P	**Pn**	**02 43 03.1**	**-1.9**
	comp=Z,5.5nm,0.8s						
KIV	**Kislovodsk**	**19.12**	**332**	*e*P	**Pn**	**02 43 03.1**	**-1.9**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	**Kislovodsk**	**19.12**	**332**	*e*P	**Pn**	**02 43 03.1**	**-1.9**
	comp=Z,5.5nm,0.8s						
ATD	**Arta Tunnel**	**19.78**	**218**	LR	LR	02 50 52.7	
	comp=Z,54nm,18.7s,baz=229,slow=37						
AML	**Almayashu**	**20.89**	**41**	*e*P	**P**	**02 43 24.1**	**+1.1**
	comp=Z,6.7nm,0.8s						
AML	**Almayashu**	**20.89**	**41**	*e*P	**P**	**02 43 24.1**	**+1.1**
	comp=Z,6.7nm,0.8s						
EKS2	**Erkin-Say**	**21.27**	**40**	*e*P	**P**	**02 43 26.6**	**-0.4**
	comp=Z,1.7nm,0.7s,mb3.5						
EKS2	**Erkin-Say**	**21.27**	**40**	*e*P	**P**	**02 43 26.6**	**-0.5**
	comp=Z,1.7nm,0.7s,mb3.5						
AKTK	**Aktyubinsk**	**22.84**	**5**	P	**P**	**02 43 43.0**	**-0.8**
AKTO	**Aktyubinsk**	**22.84**	**5**	P	**P**	**02 43 43.0**	**-0.8**
	comp=Z,4.9nm,0.9s,mb3.9,baz=182,slow=7.7,SNR=12						
MKAR	**Makanchi Array**	**28.60**	**41**	P	**P**	**02 44 36.1**	**-0.3**
	comp=Z,0.9nm,0.6s,mb3.7,baz=229,slow=7.4,SNR=12						
KMBO	**Kilima Mbogo**	**33.41**	**214**	*e*P	**P**	**02 45 21.6**	**+2.5**
	comp=Z,5.5nm,1.3s,mb4.3						
KMBO	**Kilima Mbogo**	**33.41**	**214**	P	**P**	**02 45 19.9**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KMBO	**Kilima Mbogo**	**33.41**	**214**	P	**P**	**02 45 19.9**	**+0.8**
	comp=Z,2.8nm,1.1s,mb4.1,baz=358,slow=3.8,SNR=4.5						
ZAL	**Zalesovo**	**34.07**	**31**	P	**P**	**02 45 24.7**	**+0.2**
ZALV	**Zalesovo Beam**	**34.09**	**31**	P	**P**	**02 45 24.7**	**+0.1**
	comp=Z,1.5nm,0.4s,mb4.2,baz=226,slow=8.4,SNR=6.5						
FINES	**FINESS Array B**	**38.98**	**338**	P	**P**	**02 46 05.5**	**-0.6**
	comp=Z,1.1nm,0.9s,mb3.6,baz=140,slow=10.0,SNR=4.4						
SONM	**Songino Array**	**44.31**	**49**	P	**P**	**02 46 49.9**	**0.0**
SONM	**Songino Array**	**44.31**	**49**	P	**P**	**02 46 49.9**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.2,baz=258,slow=7.2,SNR=3.2						
NB2	**NORSAR Subarra**	**44.43**	**331**	P	**P**	**02 46 51.2**	**+0.5**
	comp=Z,1.1nm,1.4s,mb3.9,baz=118,slow=8.6						
NB2	**NORSAR Subarra**	**44.43**	**331**	P	**P**	**02 46 51.2**	**+0.5**
NB2				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb3.8						
NOA	**NORSAR Array B**	**44.43**	**331**	P	**P**	**02 46 48.6**	**-2.1**
	comp=Z,0.5nm,0.9s,mb3.2,baz=128,slow=7.9,SNR=2.8						
OPO	**Ambohidratompo**	**46.60**	**190**	P	**P**	**02 47 09.1**	**+0.8**
	comp=Z,3.4nm,0.9s,mb4.2,baz=39,slow=13,SNR=4.1						
ESDC	**Sonseca Array**	**49.85**	**300**	P	**P**	**02 47 33.7**	**+0.5

n36,σ1°08/38, mb4.1/15, MS3.6/6, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.88**	**171**	*e*P	**Pn**	**02 50 56.1**	**+1.1**
PIP	**Pasuquin**	**2.06**	**211**	*i*P	**Pn**	**02 50 53.2**	**-4.2**
PIP				*e*S	**Sn**	**02 51 15.2**	**-6.8**
APYP	**Conner**	**2.29**	**192**	*e*P	**Pn**	**02 50 59.1**	**-1.4**
CVP	**Callao Caves**	**2.40**	**178**	*e*P	**Pn**	**02 51 07.5**	**+5.5**
CVP				*i* S	**Sn**	**02 51 32.2**	**+2.0**
ABRA	**Dolores**	**2.63**	**202**	*e*P	**Pn**	**02 51 03.8**	**-1.5**
CAUP	**Cauayan**	**3.15**	**178**	*e*P	**Pn**	**02 51 05.8**	**-6.6**
NACB	**Ninganchiao**	**4.04**	**358**	*e*Pn	**Pn**	**02 51 23.8**	**-0.8**
NACB				*e*Sn	**Sn**	**02 52 10.7**	**0.0**
BALP	**Baler**	**4.35**	**182**	*e*P	**Pn**	**02 51 29.2**	**+0.4**
YHNB	**Yeheng**	**4.55**	**356**	*e*Pn	**Pn**	**02 51 32.3**	**+0.8**
YHNB				*e*Sn	**Sn**	**02 52 23.4**	**+0.3**
JOW	**Kunigami** 6.0nm,0.3s,baz=212,slow=11,SNR=17	**8.99**	**41**	P	**Pn**	**02 52 32.4**	**+0.1**
JOW				S	**Sn**	**02 54 11.3**	**-0.8**
	1.3nm,0.3s,baz=124,slow=14,SNR=2.6						
JOW				LR	LR	02 56 01.2	
	comp=Z,434nm,18.6s,baz=269,slow=38						
JNU	**Nakatsue**	**15.31**	**30**	LR	LR	03 00 03.1	
	comp=Z,141nm,21.5s,baz=316,slow=38						
KSRS	**Korea Array** 0.4nm,0.3s,baz=199,slow=11,SNR=5.7	**18.10**	**16**	P	**Pn**	**02 54 33.2**	**+0.4**
KSRS				LR	LR	03 02 13.2	
	comp=Z,95nm,18.2s,baz=13,slow=39						
BJT	**Baijiatuau** 24nm,0.9s	**20.41**	**348**	*e*P	**P**	**02 54 57.8**	**0.0**
BJI	**Beijing**	**20.43**	**348**	P	**P**	**02 54 57.8**	**-0.2**
BJI				S	**S**	**02 58 46.8**	**+3.0**
BJI				AMB	AMB		
	comp=Z,17nm,0.8s						
BJI				LR	LR		
	comp=N,175nm,17.6s,MS3.5						
BJI				LR	LR		
	comp=E,107nm,18.6s,MS3.5						
BJI				LR	LR		
	comp=Z,94nm,21.5s,MS3.1						
PSI	**Prapat**	**28.13**	**235**	LR	LR	03 07 30.7	
	comp=Z,96nm,18.7s,MS3.4,baz=353,slow=36						
ASAJ	**Asahikawa**	**29.59**	**31**	LR	LR	03 07 57.0	
	comp=Z,46nm,19.3s,MS3.1,baz=126,slow=36						
ULN	**Ulaanbaatar**	**30.13**	**340**	*e*P	**P**	**02 56 32.5**	**+2.6**
	comp=Z,2.2nm,0.7s,mb4.0						
SONM	**Songino Array**	**30.32**	**339**	P	**P**	**02 56 31.5**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.7,baz=153,slow=10,SNR=11						
SONM				LR	LR	03 10 45.3	
	comp=Z,93nm,18.2s,MS3.5,baz=357,slow=40						
MKAR	**Makanchi Array**	**41.67**	**319**	P	**P**	**02 58 08.2**	**-0.3**
	comp=Z,1.5nm,0.6s,mb3.8,baz=114,slow=9.3,SNR=17						
WRA	**Warramunga Arr**	**41.68**	**162**	P	**P**	**02 58 08.4**	**-0.4**
	comp=Z,4.4nm,0.7s,mb4.2,baz=342,slow=8.8,SNR=36						
ZALV	**Zalesovo Beam**	**43.96**	**329**	P	**P**	**02 58 25.5**	**-1.4**
	comp=Z,2.8nm,0.8s,mb4.0,baz=122,slow=7.8,SNR=5.4						
TKM2	**Tokmak 2**	**44.74**	**311**	*e*P	**P**	**02 58 36.5**	**+3.2**
	comp=Z,2.6nm,0.8s,mb4.1						
ASAR	**Alice Springs**	**45.10**	**164**	P	**P**	**02 58 36.4**	**+0.1**
	comp=Z,1.6nm,0.3s,mb4.3,baz=344,slow=6.9,SNR=19						
KURK	**Kurchatov**	**45.57**	**323**	*e*P	**P**	**02 58 43.5**	**+3.7**
	comp=Z,2.3nm,0.9s,mb4.1						
ARCES	**ARCESS Array B**	**73.49**	**339**	P	**P**	**03 01 52.3**	**+0.5**
	comp=Z,5.1nm,0.9s,mb4.5,baz=77,slow=13,SNR=5.8						
FINES	**FINESS Array B**	**75.21**	**330**	P	**P**	**03 02 00.8**	**-1.1**
FINES	**FINESS Array B**	**75.21**	**330**	P	**P**	**03 02 00.8**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.7,baz=101,slow=9.9,SNR=5.0						
AKASG	**Malin Array Be**	**76.25**	**319**	P	**P**	**03 02 09.6**	**+1.4**
AKASG	**Malin Array Be**	**76.25**	**319**	P	**P**	**03 02 09.6**	**+1.4**
	comp=Z,0.2nm,0.3s,mb3.5,baz=66,slow=4.9,SNR=3.8						
NB2	**NORSAR Subarra**	**82.05**	**333**	P	**P**	**03 02 38.7**	**-0.9**
	comp=Z,1.6nm,1.0s,mb3.9,baz=62,slow=5.3						
NOA	**NORSAR Array B**	**82.05**	**333**	P	**P**	**03 02 39.0**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.8,baz=59,slow=5.2,SNR=4.9						
NOA				LR	LR	03 42 17.6	
	comp=Z,35nm,19.9s,MS3.7,baz=20,slow=38						
RES	**Resolute Bay**	**82.58**	**9**	*e*P	**P**	**03 02 42.7**	**+0.5**
	comp=Z,40nm,0.8s,mb5.5						
GERES	**GERESS Array B**	**86.30**	**321**	P	**P**	**03 02 59.7**	**-1.8**
	comp=Z,0.3nm,0.8s,mb3.6,baz=326,slow=0.5,SNR=3.7						
YKA	**Yellowknife Ar**	**86.51**	**23**	P	**P**	**03 03 01.9**	**-0.3**
YKA	**Yellowknife Ar**	**86.51**	**23**	P	**P**	**03 03 01.9**	**-0.3**
	comp=Z,0.9nm,0.6s,mb4.2,baz=309,slow=4.6,SNR=23						
PPT	**Papeete**	**94.71**	**107**	LR	LR	03 41 12.1	
	comp=Z,173nm,19.3s,MS4.5,baz=106,slow=32						

*CSEM **29** 02:52:06.7±0.2, 3970N×3310E, h2km, MD2.5, Error ellipse: s-maj=10.4km s-min=2.7km az=31.0*
*ISK **29** 02:52:06.8, 3982N×3322E, h6km, MD2.5*
*ISCJB **29** 02:52:07.4±0.6, 3975N±004×33.18E±004, h10km, Error ellipse: s-maj=6.1km s-min=3.5km az=28.6*
*DDA **29** 02:52:08.5, 3969N×3320E, h18km±6km, Md3.2*
ISC 29 02:52:08.1±0.6, 3974N±004×3315E±004, h10km, n8, σ1°17/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.30**	**294**	*e*PG	**Pg**	**02 52 13.3**	**-0.9**
ANTO				*e*SG	**Sg**	**02 52 18.7**	**+0.4**
LOD	**Lodumlu**	**0.33**	**296**	*e*PG	**Pg**	**02 52 14.3**	**-0.4**
LOD				*e*SG	**Sg**	**02 52 20.0**	**+0.8**
KAMT	**Kaman**	**0.57**	**131**	*e*PG	**Pg**	**02 52 19.4**	**+0.2**
KAMT				*e*SG	**Sg**	**02 52 27.0**	**+0.3**
ELDT	**Eldivan**	**0.78**	**16**	*i* P	**Pg**	**02 52 22.7**	**-0.4**
ELDT				*i* S	**Sg**	**02 52 33.8**	**+0.5**
CDAG	**Cicekdag**	**0.95**	**97**	*i* P	**Pg**	**02 52 24.6**	**-1.7**
CDAG				*i* S	**Sg**	**02 52 35.9**	**-2.8**
CDAG	**Cicekdag**	**0.95**	**97**	*i* P	**Pg**	**02 52 24.6**	**-1.8**
CTKT	**Corum**	**1.53**	**54**	*i* P	**Pg**	**02 52 36.3**	**-1.2**
CTKT				*i* S	**Sg**	**02 52 59.7**	**+2.3**
AVNT	**Avonos**	**1.64**	**126**	*i* P	**Pg**	**02 52 40.0**	**+0.5**
AVNT				*i* S	**Sg**	**02 53 02.5**	**+1.8**

IDC 29 03:11:18.7±2.4, 362S×13580E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.8/12, mbtmp3.8/4, ML4.1/1, Error ellipse: s-maj=106.6km s-min=27.2km az=82.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.3s,baz=6.1,slow=13,SNR=17	**16.29**	**185**	Pn	Pn	03 15 08.1	-1.0
WRA				Sn	Sn	03 18 02.0	-8.6
	0.4nm,0.3s,baz=12,slow=22,SNR=5.0						
ASAR	**Alice Springs** 2.7nm,0.4s,baz=15,slow=10,SNR=42	**20.02**	**185**	P	P	03 15 53.6	+0.4
ASAR				S	S	03 19 32.1	-7.1
	6.3nm,1.0s,baz=14,slow=24,SNR=14						
SONM	**Songino Array** 0.3nm,0.5s,baz=139,slow=6.7,SNR=3.5	**57.35**	**337**	P	P	03 21 07.9	-0.7
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=105,slow=9.0,SNR=5.6	**68.76**	**324**	P	P	03 22 25.3	+0.8

*ISCJB **29** 03:12:40.3±0.5, 4051N±003×2350E±004, h11km, Error ellipse: s-maj=4.5km s-min=3.3km az=140.3*
*THE **29** 03:12:40.9, 4051N×2349E, h8km, ML2.6*
*ATH **29** 03:12:40.8, 4052N×2343E, h14km, MD3.2/3*
*CSEM **29** 03:12:41.3±0.1, 4051N×2351E, h2km, ML2.6, Error ellipse: s-maj=1.6km s-min=1.2km az=70.0*
*NEIC **29** 03:12:41.2, 4051N×2349E, h11km, MD3.2(ATH), ML2.6(THE), After ATH.*
ISC 29 03:12:40.6±0.9, 4049N±003×2349E±004, h16km±10km, n16, σ0°48/27, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLG	**Polygyros**	**0.12**	**198**	*e*Pg	**Pg**	**03 12 44.1**	**0.0**
PLG				*e*Sg	**Sg**	**03 12 46.5**	**0.0**
HORT	**Hortiatis**	**0.32**	**290**	*e*Pg	**Pg**	**03 12 47.3**	**0.0**
HORT				*e*Sg	**Sg**	**03 12 51.6**	**-0.1**
SOH	**Sokhos**	**0.35**	**342**	*e*Pg	**Pg**	**03 12 47.6**	**-0.2**
SOH				*e*Sg	**Sg**	**03 12 52.5**	**-0.1**
OUR	**Ouranopolis**	**0.40**	**113**	*e*Pg	**Pg**	**03 12 49.1**	**+0.4**
OUR				*e*Sg	**Sg**	**03 12 54.6**	**+0.4**
THE	**Thessaloniki**	**0.43**	**290**	*e*Pg	**Pg**	**03 12 48.1**	**-1.1**
THE				*e*Sg	**Sg**	**03 12 55.1**	**+0.1**
PAIG	**Paliouri**	**0.58**	**166**	*e*Pg	**Pg**	**03 12 52.0**	**0.0**
SRS	**Serrai**	**0.63**	**7**	*e*Pg	**Pg**	**03 12 52.6**	**-0.4**
KNT	**Kendrikon**	**0.81**	**326**	*e*Pg	**Pg**	**03 12 56.0**	**-0.3**
KNT				*e*Sg	**Sg**	**03 13 07.3**	**+0.3**
LIT	**Litokhoron**	**0.86**	**243**	*e*Pg	**Pg**	**03 12 57.9**	**+0.6**
NVR	**Nevrokopi**	**0.90**	**18**	*e*PB	**Pg**	**03 12 57.9**	**-0.2**
NVR				*e*SB	**Sg**	**03 13 10.3**	**+0.3**
VAY	**Valandovo**	**1.09**	**320**	*e*Pg	**Pg**	**03 13 01.1**	**-0.5**
VAY	**Valandovo**	**1.09**	**320**	*e*Pg	**Pg**	**03 13 01.2**	**-0.3**
VAY				*e*Sg	**Sg**	**03 13 15.6**	**-0.2**
VAY	**Valandovo**	**1.09**	**320**	*e*Pg	**Pg**	**03 13 01.1**	**-0.5**
VAY				*e*Sg	**Sg**	**03 13 15.6**	**-0.2**
STIP	**Stip**	**1.56**	**321**	*e*Pn	**Pg**	**03 13 10.4**	**-0.1**
STIP				*e*Sn	**Sg**	**03 13 32.4**	**+1.6**
STIP	**Stip**	**1.56**	**321**	*e*Pn	**Pg**	**03 13 10.4**	**-0.1**
STIP				*e*Sn	**Sg**	**03 13 32.3**	**+1.5**
RDO	**Rodhopi**	**1.68**	**66**	*e*PN	**Pg**	**03 13 12.5**	**-0.4**

*ATH **29** 03:24:17.9, 3897N×26.14E, h19km±1km, MD3.3/4*
*ISCJB **29** 03:24:17.6±0.9, 3899N±003×2638E±005, h5km±6km, Error ellipse: s-maj=6.7km s-min=3.9km az=147.7*
*DDA **29** 03:24:18.6, 3898N×2642E, h5km±2km, Md3.2*
*ISK **29** 03:24:18.2, 3905N×2644E, h8km, MD3.4*
*NEIC **29** 03:24:18.0, 3902N×2641E, h15km, MD3.3(ATH), MD3.3(ISK), After ISK.*
*CSEM **29** 03:24:18.2±0.1, 3902N×2639E, h15km, MD3.2, Error ellipse: s-maj=2.6km s-min=2.0km az=59.0*
ISC 29 03:24:18.5±0.7, 3899N±003×2640E±005, h10km±4km, n29, σ0°78/41, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.27**	**339**	*e*PB	**Pg**	**03 24 24.5**	**+0.4**
PRK				*e*SB	**Sg**	**03 24 29.1**	**+1.3**
AYVA	**Ayvalik**	**0.39**	**35**	*i* P	**Pg**	**03 24 26.3**	**+0.1**
AYVA				*i* S	**Sg**	**03 24 31.2**	**-0.3**
EZN	**Ezine**	**0.84**	**356**	PG	**Pg**	**03 24 33.7**	**-1.0**
EZN				SG	**Sg**	**03 24 45.5**	**-0.1**
BOZC	**Bozcaada**	**0.89**	**343**	*i* P	**Pg**	**03 24 35.7**	**0.0**
BOZC				*i* S	**Sg**	**03 24 48.0**	**+0.6**
KDAG	**Bornova**	**0.90**	**130**	*i* P	**Pg**	**03 24 35.1**	**-0.7**
KDAG				*i* S	**Sg**	**03 24 46.8**	**-0.7**
AKHS	**Akhisar**	**1.11**	**95**	*i* P	**Pb**	**03 24 39.3**	**-0.5**
AKHS				*i* S	**Sg**	**03 24 55.0**	**+0.7**
AKS	**Akhisar**	**1.11**	**95**	PN	**Pn**	**03 24 39.0**	**-1.1**
GADA	**Gvkgeada**	**1.26**	**342**	*e*PN	**Pn**	**03 24 41.5**	**-0.7**
GADA				*e*SN	**Sn**	**03 24 58.4**	**-0.8**
BALB	**Balikesir**	**1.32**	**60**	*e*PN	**Pn**	**03 24 43.2**	**+0.2**
BALB				*e*SN	**Sn**	**03 25 00.2**	**-0.5**
SMG	**Samos**	**1.32**	**165**	*e*PN	**Pn**	**03 24 43.9**	**+0.9**
BTOK	**Tokmak**	**1.48**	**58**	*i* P	**Pn**	**03 24 44.6**	**-0.6**
BTOK				*i* S	**Sn**	**03 25 04.7**	**+0.1**
ENEZ	**Enez**	**1.75**	**354**	*e*PN	**Pn**	**03 24 48.5**	**-0.5**
MANT	**Manisa**	**1.76**	**106**	*i* P	**Pn**	**03 24 48.3**	**-0.7**
MANT				*i* S	**Sn**	**03 25 14.4**	**+2.9**
EDC	**Edincik**	**1.77**	**39**	*e*PN	**Pn**	**03 24 48.5**	**-0.6**
BNT	**Bandirma**	**1.80**	**40**	*e*PN	**Pn**	**03 24 48.7**	**-0.9**
SART	**Tekirdag**	**1.80**	**19**	*i* P	**Pn**	**03 24 49.2**	**-0.4**
SART				*i* S	**Sn**	**03 25 13.9**	**+1.4**
KULA	**Kula-Manisa**	**1.83**	**104**	*e*PN	**Pn**	**03 24 50.0**	**0.0**
DST	**Dursunbey**	**1.84**	**70**	*e*PN	**Pn**	**03 24 50.4**	**+0.3**
MRMT	**Marmara Adasi**	**1.86**	**29**	*e*PN	**Pn**	**03 24 50.0**	**-0.4**
MFT	**Murefte**	**1.92**	**20**	*e*PN	**Pn**	**03 24 51.3**	**+0.1**
KCT	**Karacabey**	**1.98**	**49**	*e*PN	**Pn**	**03 24 50.9**	**-1.1**
MLSB	**Milas**	**2.01**	**147**	*e*PN	**Pn**	**03 24 54.7**	**+2.2**
APE	**Apeiranthos**	**2.04**	**200**	*e*PN	**Pn**	**03 24 52.5**	**-0.3**
RDO	**Rodhopi**	**2.25**	**343**	*e*PN	**Pn**	**03 24 56.0**	**+0.2**
GDZ	**Gediz**	**2.40**	**87**	*i* P	**Pn**	**03 24 58.2**	**+0.3**
GDZ				*i* S	**Sn**	**03 25 35.6**	**+8.2**
IZI	**Iznik**	**2.73**	**59**	*e*PN	**Pn**	**03 25 02.8**	**+0.4**
YLV	**Yalova**	**2.78**	**55**	*e*PN	**Pn**	**03 25 03.6**	**+0.5**
EDRB	**Edirne**	**2.87**	**5**	*e*PN	**Pn**	**03 25 04.5**	**+0.2**
ADVT	**Abdulvahap**	**2.95**	**60**	*e*PN	**Pn**	**03 25 06.6**	**+1.2**

IDC 29 03:45:37.8±1.3, 1107S×12090E, h0km, mb3.7/3, mb1 3.9/7, mb1mx3.8/16, mbtmp3.8/7, ML3.9/4, Error ellipse: s-maj=36.1km s-min=20.0km az=49.0, South of Sumba

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Kupang** 85nm,0.3s,baz=292,slow=2.6,SNR=44	**2.85**	**73**	Pn	Pn	03 46 26.4	+1.8
BATI				Sn	Sn	03 46 59.7	+0.1
	13nm,0.3s,baz=210,slow=20,SNR=3.6						
FITZ	**Fitzroy Crossi** 1.4nm,0.3s,baz=342,slow=15,SNR=14	**8.36**	**147**	Pn	Pn	03 47 40.8	+0.4
FITZ				Sn	Sn	03 49 09.5	-6.2
	0.9nm,0.3s,baz=177,slow=18,SNR=6.9						
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=305,slow=14,SNR=10.0	**15.66**	**126**	Pn	Pn	03 49 18.0	-2.0
WRA				Sn	Sn	03 51 59.8	-15
	0.1nm,0.3s,baz=134,slow=21,SNR=5.8						
ASAR	**Alice Springs** 0.2nm,0.3s,baz=318,slow=13,SNR=12	**17.62**	**137**	P	Pn	03 49 43.5	-1.4
ASAR				S	Sn	03 52 49.8	-12
	0.1nm,0.3s,baz=318,slow=25,SNR=2.9						
STKA	**Stephens Creek** 2.1nm,0.8s,baz=298,slow=15,SNR=3.3	**28.18**	**140**	P	P	03 51 32.8	+0.7
SONM	**Songino Array** 0.2nm,0.4s,baz=145,slow=7.9,SNR=3.1	**60.04**	**349**	P	P	03 55 45.2	-1.2
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=142,slow=7.2,SNR=2.6	**67.14**	**332**	P	P	03 56 34.5	+1.1

*IDC **29** 04:06:55.0±1.6, 2096S×17393W, h0km, mb4.3/6, mb1 4.6/6, mb1mx4.3/15, mbtmp4.3/6, Error ellipse: s-maj=81.5km s-min=23.1km az=153.0*
*ISCJB **29** 04:06:59.5±0.7, 207S±02×1742W±02, h33km, mb4.5/12, Error ellipse: s-maj=29.0km s-min=14.7km az=145.8*
*NEIC **29** 04:07:01.9±0.6, 2075S×17407W, h35km, mb4.6/6, Error ellipse: s-maj=28.0km s-min=14.6km az=145.0*
ISC 29 04:07:01.5±0.7, 207S±02×1741W±02, h35km, n42, σ0°68/18, mb4.5/12, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 45nm,0.4s	**7.12**	**19**	*e*Pn	**Pn**	**04 08 36.9**	**-6.2**
AFI				*e*Sn	**Sn**	**04 09 48.3**	**-15**
RAR	**Rarotonga** 4.8nm,0.3s,baz=185,slow=21,SNR=16	**13.42**	**95**	Pn	**Pn**	**04 09 57.7**	**-12**
RAR				Sn	Sn	04 12 08.3	-29
	2.6nm,0.3s,baz=113,slow=15,SNR=6.0						
CTAO	**Charters Tower** 2.7nm,0.6s,mb4.2	**37.08**	**264**	*e*P	**P**	**04 14 08.5**	**-0.1**
ASAR	**Alice Springs** 3.6nm,0.9s,mb4.4,baz=91,slow=8.2,SNR=24	**48.00**	**256**	P	**P**	**04 15 37.1**	**-0.2**
ASAR				PcP	PcP	04 17 05.7	+0.6
	1.1nm,0.7s,baz=101,slow=4.6,SNR=4.1						
WRA	**Warramunga Arr** 1.7nm,0.7s,mb4.2,baz=97,slow=7.3,SNR=11	**48.16**	**261**	P	**P**	**04 15 37.5**	**-1.2**
MBWA	**Marble Bar** 8.7nm,0.8s,mb4.9	**61.34**	**257**	*e*P	**P**	**04 17 14.1**	**-0.1**
QSPA	**South Pole Qui** 6.6nm,1.1s,mb4.5	**69.37**	**180**	*e*P	**P**	**04 18 06.1**	**+1.0**
MJAR	**Matsushiro Ar** 1.2nm,0.4s,mb4.2,baz=154,slow=5.4,SNR=5.2	**72.58**	**321**	P	**P**	**04 18 25.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	**77.75**	**331**	*e*P	**P**	**04 18 56.1**	**+1.4**
NVAR	**Mina Array Bea** 3.1nm,0.6s,mb4.4,baz=215,slow=7.5,SNR=13	**78.72**	**41**	P	**P**	**04 19 00.2**	**0.0**
SLKM	**Skilak Lake**	**83.22**	**12**	*e*P	**P**	**04 19 23.6**	**-0.1**
SRU	**San Rafael** 2.3nm,0.7s,mb4.4	**84.08**	**44**	*e*P	**P**	**04 19 28.7**	**0.0**
TTA	**Tatalina** 1.5nm,0.4s,mb4.5	**84.57**	**8**	*e*P	**P**	**04 19 31.1**	**+0.5**
PDAR	**Pinedale Array** 1.3nm,0.8s,mb4.2,baz=218,slow=3.2,SNR=11	**86.66**	**42**	P	**P**	**04 19 40.2**	**-1.2**
COLA	**College** 26nm,1.8s,mb5.2	**87.67**	**11**	*e*P	**P**	**04 19 45.4**	**-0.4**
INK	**Inuvik**	**93.55**	**14**	*e*P	**P**	**04 20 12.9**	**-0.3**
YKA	**Yellowknife Ar** 1.1nm,0.7s,mb4.4,baz=238,slow=4.4,SNR=24	**95.21**	**24**	P	**P**	**04 20 20.6**	**-0.2**
MKAR	**Makanchi Array**	**113.98**	**313**	PKP	PKiKP	04 25 36.2	-0.5
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=122,slow=0.7,SNR=3.8	**113.98**	**313**	PKP	PKiKP	04 25 36.2	-0.5
TKM2	**Tokmak 2**	**118.48**	**308**	*e*PKPdf	PKPdf	04 25 45.3	-0.1
EKS2	**Erkin-Say**	**119.81**	**308**	*e*PKPdf	PKPdf	04 25 48.9	+0.9
ARCES	**ARCESS Array B** 5.4nm,0.9s,baz=330,slow=4.2,SNR=8.3	**129.73**	**351**	PKP	PKPdf	04 26 05.5	-0.7
KIV	**Kislovodsk**	**141.67**	**316**	*e*PKPdf	PKPdf	04 26 29.3	+0.1
AKASG	**Malin Array Be** 4.9nm,0.5s,baz=40,slow=4.1,SNR=39	**144.87**	**334**	PKPbc	PKPdf	04 26 33.8	-0.8
AKBB	**Malin Array Si**	**144.87**	**334**	*e*PKPdf	PKPdf	04 26 33.7	-0.9
KIEV	**Kiev**	**144.88**	**334**	*e*PKPdf	PKPdf	04 26 33.6	-1.1
MALT	**Malatya**	**146.90**	**309**	*e*PKPbc	PKPbc	04 26 42.3	+1.9
STHS	**Stebnicka Huta**	**148.84**	**340**	*e*PKP	PKPbc	04 26 44.6	-0.6
KOLS	**Kolonicke sedl**	**148.92**	**339**	*e*PKP	PKPbc	04 26 47.2	+1.8
CLL	**Collm**	**148.95**	**351**	*e*PKPbc	PKPbc	04 26 46.0	+0.6
CRVS	**Cervenica-Dubn**	**149.22**	**340**	*e*PKP	PKPbc	04 26 47.5	+1.3
BRG	**Berggiesshubel** 6.2nm,1.1s	**149.23**	**350**	*e*P	PKPbc	04 26 47.1	+1.0
MORC	**Moravsky Berou**	**149.54**	**345**	*e*PKPbc	PKPbc	04 26 47.9	+1.0
KECS	**Kecovo**	**149.90**	**340**	*e*PKP	PKPbc	04 26 47.7	-0.2
KECS				*e*		04 26 59.7	
VYHS	**Vyhne**	**150.38**	**342**	*e*PKP	PKPbc	04 26 50.0	+1.0
KOLL	**Kolacno**	**150.42**	**343**	*e*PKP	PKPbc	04 26 50.0	+0.9
PSZ	**Piszkesteto**	**150.58**	**341**	*e*PKPbc	PKPbc	04 26 47.9	-1.6
GRA1	**Grafenberg Arr**	**150.76**	**353**	*e*PKP	PKPbc	04 26 50.5	+0.6
GRF	**Grafenberg Arr**	**150.76**	**353**	*e*PKP	PKPbc	04 26 50.5	+0.6
MODS	**Modra-Piesok**	**150.91**	**344**	*e*PKP	PKPbc	04 26 51.8	+1.5
KHC	**Kasperske Hory**	**150.97**	**350**	*e*PKPbc	PKPbc	04 26 51.0	+0.6
GERES	**GERESS Array B** 1.3nm,0.6s,baz=5.7,slow=1.3,SNR=12	**151.23**	**349**	PKPbc	PKPbc	04 26 51.6	+0.5

*TIR **29** 04:37:28.0±1.4, 4289N×1362E, h0km±999km*
*NEIC **29** 04:37:29.8, 4283N×1320E, h4km, ML4.0(PDG), ML3.8(STR), ML3.8(ROM), ML3.7(LDG), After ROM.*
*MOS **29** 04:37:29.8±1.1, 4286N×1321E, h12km, mb4.4/4, Error ellipse: s-maj=4.8km s-min=3.0km az=107.4*
*CSEM **29** 04:37:29.6±0.1, 4289N×1319E, h0km, mb4.0/3, ML3.6/13, Error ellipse: s-maj=1.6km s-min=0.9km az=38.0*
*ROM **29** 04:37:29.8±0.1, 4283N×1320E, h4km±1km, Ml3.8/66, Error ellipse: s-maj=1.5km s-min=1.0km az=122.0*
*ISCJB **29** 04:37:30.4±0.2, 4286N±001×1319E±001, h13km±1km, mb4.0/8, MS3.3/4, Error ellipse: s-maj=2.1km s-min=1.4km az=38.5*
*LDG **29** 04:37:30.6±0.1, 4284N×1328E, h10km, Ml3.7/17, ms2.8/6, Error ellipse: s-maj=4.0km s-min=2.6km az=37.0*
*PDG **29** 04:37:30.6±0.6, 4284N×1322E, h10km, ML4.0/10, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*PRU **29** 04:37:31.0, 4292N×1330E, h0km*
*SZGRF **29** 04:37:32.4, 4291N×1327E, h10km, mb3.9, Central Italy*
*IDC **29** 04:37:32.0±1.0, 4302N×1312E, h0km, mb3.7/7, mb1 3.8/14, mb1mx3.7/26, mbtmp3.7/14, ML3.7/7, MS3.2/5, Ms1 3.2/5, ms1mx2.7/38, Error ellipse: s-maj=17.8km s-min=12.9km az=79.0*
*STR **29** 04:37:37.5±1.1, 4315N×1286E, h10km, Ml3.7, Error ellipse: s-maj=0.6km s-min=0.0km az=0.0*
*NAO **29** 04:37:48.0, 4319N×1277E, h33km, mb3.2*
ISC 29 04:37:31.5±0.2, 4283N±001×1315E±001, h11km±1km, n312, σ1°18/415, mb4.0/8, MS3.3/4, 38C-28D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.03**	**290**	*i*Pg	**Pg**	**04 37 32.5**	**-1.0**
LNSS	**Leonessa** 59µm,0.5s	**0.23**	**200**	Pg	**Pg**	**04 37 36.1**	**-0.3**
LNSS				Sg	**Sg**	**04 37 41.1**	**+1.5**
CESI	**CESI - Serrava** 19µm,0.3s	**0.25**	**315**	Pg	**Pg**	**04 37 36.2**	**-0.5**
CESI				Sg	**Sg**	**04 37 41.2**	**+1.0**
CAMP	**Campotosto** 3µm,0.7s	**0.35**	**146**	*i*Pg	**Pg**	**04 37 36.9**	**-1.5**
CAMP				Sg	**Sg**	**04 37 42.6**	**-0.4**
TERO	**Teramo** 30µm,0.6s	**0.39**	**121**	*i*Pg	**Pg**	**04 37 37.3**	**-1.9**
TERO				Sg	**Sg**	**04 37 43.3**	**-1.1**
OFFI	**Offida** 39µm,0.6s	**0.41**	**74**	*i*Pg	**Pg**	**04 37 38.2**	**-1.3**
OFFI				Sg	**Sg**	**04 37 45.6**	**+0.6**
ASS	**Assisi**	**0.44**	**303**	Pg	**Pg**	**04 37 39.5**	**-0.5**
ASS				Sg	**Sg**	**04 37 47.5**	**+1.7**
SNTG	**Esanatoglia**	**0.46**	**341**	*i*Pg	**Pg**	**04 37 39.2**	**-1.2**
AQU	**L'Aquila**	**0.51**	**158**	|P	**Pg**	**04 37 40.0**	**-1.3**
AQU				Sg	**Sg**	**04 37 48.4**	**+0.4**
AQU	**L'Aquila**	**0.51**	**158**	*i*Pg	**Pg**	**04 37 40.0**	**-1.3**
AQU				Sg	**Sg**	**04 37 48.4**	**+0.4**
	20µm,1.1s						
CING	**Cingoli**	**0.55**	**4

	354nm,1.4s								
BSSO	**Busso**	**1.67**	**139**		Pn	**Pn**	04 38 01.6	**+1.0**
	3µm,1.5s								
SGG	**Gregorio Mates**	**1.70**	**147**		Pn	**Pn**	04 38 01.5	**+0.5**
	1µm,0.8s								
CIGN	**Sant'Elia a Pi**	**1.75**	**131**		Pn	**Pn**	04 38 01.3	**-0.4**
	909nm,0.9s								
PTRJ	**Pietraroja**	**1.79**	**144**		Pn	**Pn**	04 38 03.2	**+1.0**
	1µm,0.8s								
SEI	**Scarperia**	**1.79**	**314**		Pn	**Pn**	04 38 02.6	**+0.3**
	3µm,0.9s								
FG2	**Serracapriola**	**1.81**	**124**		Pn	**Pn**	04 38 02.6	**+0.1**
	2µm,0.7s								
CRMI	**Carmignano**	**1.86**	**302**		Pn	**Pn**	04 38 03.3	**+0.1**
	198nm,1.0s								
FNVD	**Fontana Vidola**	**1.99**	**313**		Pn	**Pn**	04 38 05.6	**+0.6**
	1µm,1.2s								
PZZT	**Monte Pizzetto**	**2.12**	**309**		Pn	**Pn**	04 38 06.5	**-0.2**
	474nm,0.9s								
NVLJ	**Novalja**	**2.14**	**35**	*e*	Pn	**Pn**	04 38 05.5	**-1.6**
NVLJ					Sn	**Sn**	04 38 33.0	**-0.6**
NVLJ	**Novalja**	**2.14**	**35**	*e*	Pn	**Pn**	04 38 05.5	**-1.6**
NVLJ					Sn	**Sn**	04 38 32.9	**-0.7**
RGNG	**Rignano Grg**	**2.14**	**122**		Pn	**Pn**	04 38 06.8	**-0.3**
MRB1	**Monte Rocchett**	**2.17**	**141**		Pn	**Pn**	04 38 09.3	**+1.8**
SGRT	**San Giovanni R**	**2.20**	**118**		Pn	**Pn**	04 38 07.9	**0.0**
	1µm,0.9s								
MAIM		**2.22**	**300**		P	**Pn**	04 38 08.3	**+0.1**
MAIM		**2.22**	**300**		Pn	**Pn**	04 38 08.6	**+0.4**
	285nm,0.8s								
MAIM					S	**Sn**	04 38 36.4	**+0.8**
BDI	**Bagni Di Lucca**	**2.23**	**305**		Pn	**Pn**	04 38 08.0	**-0.3**
	433nm,1.0s								
MSAG	**Monte S. Angel**	**2.33**	**118**		Pn	**Pn**	04 38 09.7	**0.0**
	1µm,0.6s								
MS1	**Monte Sant'Ang**	**2.36**	**117**	*e*	Pn	**Pn**	04 38 14.0	**+4.0**
FGMS	**Monte Sant'Ang**	**2.36**	**117**		Pn	**Pn**	04 38 09.8	**-0.3**
	361nm,0.5s								
SGTA	**Sant Agata di**	**2.36**	**135**		Pn	**Pn**	04 38 11.1	**+1.0**
CAFE	**Carife**	**2.38**	**138**		Pn	**Pn**	04 38 11.7	**+1.4**
	479nm,0.8s								
GSCL	**Gusciola**	**2.41**	**310**		Pn	**Pn**	04 38 11.2	**+0.5**
	146nm,0.8s								
CSSN	**Cassano Irpino**	**2.41**	**144**		Pn	**Pn**	04 38 11.8	**+1.0**
	260nm,1.2s								
VLC	**Villacollemand**	**2.41**	**305**		Pn	**Pn**	04 38 10.7	**-0.1**
	444nm,1.3s								
SARO	**Sassorosso**	**2.42**	**305**		P	**Pn**	04 38 10.3	**-0.6**
SARO					S	**Sn**	04 38 40.2	**-0.2**
SNAL	**S. Angelo Dei**	**2.44**	**140**		Pn	**Pn**	04 38 13.0	**+1.8**
	809nm,1.0s								
MCRV	**Calabrutti - M**	**2.54**	**143**		Pn	**Pn**	04 38 12.9	**+0.4**
	286nm,0.8s								
ERBM	**Eremo**	**2.55**	**310**		Pn	**Pn**	04 38 14.0	**+1.4**
	220nm,0.7s								
VINC	**Vinca**	**2.55**	**302**		P	**Pn**	04 38 12.2	**-0.4**
VINC					S	**Sn**	04 38 42.8	**-0.8**
VALM		**2.60**	**307**		P	**Pn**	04 38 12.8	**-0.6**
VALM					S	**Sn**	04 38 44.3	**-0.6**
VULT	**Monte Vulture**	**2.62**	**135**		Pn	**Pn**	04 38 14.6	**+0.9**
	615nm,0.8s								
BACM		**2.67**	**304**		P	**Pn**	04 38 13.9	**-0.4**
BACM					S	**Sn**	04 38 45.8	**-0.8**
SGO	**Sicignano**	**2.78**	**144**		Pn	**Pn**	04 38 16.5	**+0.6**
	63nm,0.5s								
GRAM		**2.79**	**308**		P	**Pn**	04 38 15.7	**-0.3**
GRAM					S	**Sn**	04 38 48.8	**-0.8**
CDRU	**Civita di Ruta**	**2.84**	**145**		Pn	**Pn**	04 38 17.1	**+0.5**
	115nm,0.8s								
CDT	**Castel del Mon**	**2.91**	**126**	*e*	Pn	**Pn**	04 38 17.6	**0.0**
CMPR	**Campora**	**2.98**	**146**		Pn	**Pn**	04 38 20.2	**+1.6**
SC2M	**Scurtabr**	**3.06**	**302**		P	**Pn**	04 38 20.0	**+0.3**
SC2M	**Scurtabr**	**3.06**	**302**		Pn	**Pn**	04 38 20.2	**+0.5**
SC2M					S	**Sn**	04 38 55.3	**-1.0**
PGF	**Pioggiola**	**3.07**	**266**	*e*	Pn	**Pn**	04 38 20.3	**+0.5**
	SNR=1.0								
PGF				*e*	Sn	**Sn**	04 38 55.2	**-1.3**
	70nm,0.9s								
PGF	**Pioggiola**	**3.07**	**266**	*e*	Pn	**Pn**	04 38 20.3	**+0.5**
	SNR=1.0								
PGF				*e*	Sn	**Sn**	04 38 55.2	**-1.3**
	35nm,0.9s								
MCEL	**Monticello**	**3.19**	**141**		Pn	**Pn**	04 38 22.6	**+1.1**
	226nm,1.0s								
AMUR	**Altamura**	**3.21**	**125**		Pn	**Pn**	04 38 22.0	**+0.2**
	246nm,0.7s								
MTSN	**Montesano sull**	**3.22**	**142**		Pn	**Pn**	04 38 23.5	**+1.6**
	237nm,1.1s								
MGR	**Morigerati**	**3.24**	**145**		Pn	**Pn**	04 38 23.8	**+1.7**
VOY	**Vojsko**	**3.25**	**9**	*e*	Pn	**Pn**	04 38 21.2	**-1.1**
VOY				*e*			04 38 21.7	
VOY				*e*	(Sn)	**Sn**	04 39 16.6	**+16**
VOY				*e*			04 39 21.2	
SG1	**Sgolgore (BA)**	**3.30**	**126**	*e*	Pn	**Pn**	04 38 22.7	**-0.3**
BOB	**Bobbio (Coli)**	**3.31**	**307**		Pn	**Pn**	04 38 25.8	**+2.7**
SIRI	**Monte Sirino -**	**3.34**	**141**		Pn	**Pn**	04 38 25.0	**+1.5**
STON	**Ston**	**3.35**	**88**	*e*	Pn	**Pn**	04 38 23.0	**-0.6**
STON					Sn	**Sn**	04 39 00.1	**-3.2**
LJU	**Ljubljana**	**3.37**	**17**	*e*	Pn	**Pn**	04 38 23.0	**-0.9**
SALO	**Salr**	**3.37**	**327**		Pn	**Pn**	04 38 25.1	**+1.1**
	492nm,1.0s								
CTI	**Castel Tesino**	**3.40**	**342**		Pn	**Pn**	04 38 24.7	**+0.4**
	180nm,0.8s								
SCHR	**S. Chirico Rap**	**3.42**	**139**		Pn	**Pn**	04 38 25.9	**+1.2**
	118nm,1.1s								
GMNA	**Gemona**	**3.45**	**1**		Pn	**Pn**	04 38 24.4	**-0.7**
	949nm,0.9s								
MAGA	**Magasa**	**3.46**	**329**		Pn	**Pn**	04 38 25.6	**+0.4**
	777nm,0.5s								
CRAC	**Craco**	**3.48**	**134**		Pn	**Pn**	04 38 26.2	**+0.7**
NOCI	**Noci**	**3.56**	**123**		Pn	**Pn**	04 38 26.5	**-0.1**
	256nm,0.9s								
PTCC	**Patocco-Chiusa**	**3.58**	**2**		Pn	**Pn**	04 38 26.0	**-0.9**
	43nm,0.3s								
DOBS	**Dobrina**	**3.72**	**26**	*i*	Pn	**Pn**	04 38 28.7	**0.0**
DOBS				*i*	Sn	**Sn**	04 39 13.3	**+0.9**
MABI	**Malga Bissina**	**3.74**	**331**		Pn	**Pn**	04 38 29.7	**+0.7**
	79nm,0.8s								
PCP	**Pian Castagno**	**3.75**	**299**		P	**Pn**	04 38 29.3	**+0.1**
PE1	**Pezze di Greco**	**3.78**	**121**	*e*	Pn	**Pn**	04 38 29.3	**-0.3**
FVI	**Forni Avoltri**	**3.78**	**356**		Pn	**Pn**	04 38 29.4	**-0.2**
	199nm,1.1s								
OBKA	**Obir**	**3.82**	**15**	*i*	Pn	**Pn**	04 38 30.0	**-0.1**
	SNR=10.0								
OBKA				⇓	*i* Sn	**Sn**	04 39 14.7	**-0.2**
OBKA				⇑	*i* Sg	**Sg**	04 39 36.0	**+2.0**
	295nm,0.8s								
MYKA	**Terra Mystica**	**3.82**	**5**	⇑	*i* Pn	**Pn**	04 38 30.1	**0.0**
APPI	**Appiano**	**3.90**	**340**		Pn	**Pn**	04 38 31.8	**+0.5**
	128nm,0.4s								
RORO		**3.92**	**291**		P	**Pn**	04 38 31.5	**0.0**
ABTA	**Abfaltersbach**	**3.95**	**354**	⇑	*i* Pn	**Pn**	04 38 32.4	**+0.5**
	SNR=83								
ABTA				⇑	*i* Sn	**Sn**	04 39 19.0	**+0.8**
HCY	**Herceg Novi**	**3.96**	**94**	⇑	*i* Pn	**Pn**	04 38 31.2	**-0.9**
HCY					*e*Sn	**Sn**	04 39 18.7	**+0.1**
BRY	**Bratogost**	**3.97**	**87**	*e*	Pn	**Pn**	04 38 31.2	**-1.0**
BRY					*e*Sn	**Sn**	04 39 19.0	**+0.4**
SEST	**Monte Rota**	**3.98**	**351**		Pn	**Pn**	04 38 33.2	**+0.9**
NEGI	**Negi**	**4.10**	**286**		P	**Pn**	04 38 33.7	**-0.3**
MONE	**Monesi**	**4.12**	**290**		P	**Pn**	04 38 35.0	**+0.7**
BRMO	**Bormio**	**4.15**	**332**		Pn	**Pn**	04 38 36.5	**+1.8**
	82nm,0.9s								
SAOF	**Saorge**	**4.24**	**288**		P	**Pn**	04 38 37.9	**+2.0**
UPM	**Unac-Piva**	**4.24**	**83**	*e*	Pn	**Pn**	04 38 35.9	**0.0**
UPM				*e*	Sn	**Sn**	04 39 26.0	**+0.6**
KBA	**Koelnbreinsper**	**4.26**	**2**	*i*	Pn	**Pn**	04 38 36.4	**+0.3**
	SNR=58								
KBA				⇑	*i* Sn	**Sn**	04 39 25.8	**+0.1**
KBA	**Koelnbreinsper**	**4.26**	**2**	*e*	Pn	**Pn**	04 38 36.2	**+0.1**
KBA	**Koelnbreinsper**	**4.26**	**2**		Pn	**Pn**	04 38 36.4	**+0.3**
	58nm,1.0s								
KBA				*i*	Sn	**Sn**	04 39 25.9	**+0.2**
MUGI	**Muggio**	**4.27**	**318**		Pn	**Pn**	04 38 36.8	**+0.5**
BUM	**Brajici-Budva**	**4.28**	**95**	⇑	*i* Pn	**Pn**	04 38 35.6	**-0.9**
BUM					*e*Sn	**Sn**	04 39 26.6	**+0.3**
SBF	**Sospel**	**4.29**	**286**	*e*	Pn	**Pn**	04 38 37.3	**+0.6**
	SNR=1.0								
SBF				*e*	Sn	**Sn**	04 39 24.7	**-2.0**
	58nm,0.6s								
SBF	**Sospel**	**4.29**	**286**	*e*	Pn	**Pn**	04 38 37.3	**+0.6**
	SNR=1.0								
SBF				*e*	Sn	**Sn**	04 39 24.7	**-2.0**
	29nm,0.6s								
NKY	**Niksic**	**4.30**	**88**	⇑	*i* Pn	**Pn**	04 38 36.0	**-0.8**
NKY					*e*Sn	**Sn**	04 39 27.3	**+0.4**
FUORN	**Ofenpass-Fuorn**	**4.32**	**333**		Pn	**Pn**	04 38 39.0	**+2.1**
VAI	**Varese**	**4.37**	**316**		Pn	**Pn**	04 38 38.6	**+0.9**
	22nm,0.3s								
ENR	**Entracque**	**4.39**	**291**		P	**Pn**	04 38 38.5	**+0.5**
TOUF	**Mont Tournerai**	**4.46**	**287**		P	**Pn**	04 38 40.2	**+1.3**
STV	**Sta Anna Valdi**	**4.47**	**291**		P	**Pn**	04 38 39.3	**+0.3**
PDG	**Podgorica**	**4.53**	**93**	⇑	*i* Pn	**Pn**	04 38 39.0	**-0.9**
PDG					*e*Sn	**Sn**	04 39 32.8	**+0.3**
TTG	**Podgorica**	**4.53**	**93**	⇑	*i* Pn	**Pn**	04 38 39.0	**-0.9**
TTG					*e*Sn	**Sn**	04 39 32.8	**+0.3**
FETA	**Feichten**	**4.53**	**339**	⇑	*i* Pn	**Pn**	04 38 41.1	**+1.2**
	SNR=53								
FETA				⇑	*i* Sn	**Sn**	04 39 34.6	**+2.0**
TUE	**Stuetta**	**4.54**	**325**		Pn	**Pn**	04 38 41.9	**+1.8**
	84nm,0.6s								
WTTA	**Wattenberg**	**4.57**	**347**	⇓	*i* Pn	**Pn**	04 38 41.8	**+1.4**
	SNR=30								
WTTA				⇓	*i* Sn	**Sn**	04 39 35.8	**+2.4**
WTTA	**Wattenberg**	**4.57**	**347**		Pn	**Pn**	04 38 41.8	**+1.4**
	29nm,8.0s								
WTTA					Sn	**Sn**	04 39 35.8	**+2.4**
DAVOX	**Davos/Dischmat**	**4.59**	**331**		Pn	**Pn**	04 38 42.5	**+1.8**
	12nm,0.3s,baz=151,slow=18,SNR=68								
DAVOX					Sn	**Sn**	04 39 35.5	**+1.6**
	3.9nm,0.3s,baz=305,slow=14,SNR=4.1								
ULC	**Ulcinj**	**4.60**	**99**	⇑	*i* Pn	**Pn**	04 38 40.0	**-0.9**
ULC					*e*Sn	**Sn**	04 39 33.9	**-0.3**
PLE	**Pljevlja**	**4.60**	**82**	*e*	Pn	**Pn**	04 38 40.9	**0.0**
PLE				*e*	Sn	**Sn**	04 39 33.9	**-0.4**
SQTA	**Sankt Quirin**	**4.61**	**343**	⇓	*i* Pn	**Pn**	04 38 41.7	**+0.7**
	SNR=47								
SQTA				⇑	*i* Sn	**Sn**	04 39 37.4	**+3.1**
SQTA	**Sankt Quirin**	**4.61**	**343**		Pn	**Pn**	04 38 41.7	**+0.8**
	47nm,3.0s								
SQTA					Sn	**Sn**	04 39 37.4	**+3.1**
WATA	**Walderalm**	**4.65**	**347**	⇑	*i* Pn	**Pn**	04 38 42.4	**+0.9**
	SNR=16								
WATA				⇑	*i* Sn	**Sn**	04 39 37.6	**+2.2**
WATA	**Walderalm**	**4.65**	**347**		Pn	**Pn**	04 38 42.4	**+0.9**
	15nm,5.0s								
WATA					Sn	**Sn**	04 39 37.6	**+2.2**
CALN	**Calern**	**4.66**	**284**		P	**Pn**	04 38 42.7	**+1.0**
TRAV		**4.72**	**307**		P	**Pn**	04 38 41.8	**-0.8**
ARSA	**Arzberg**	**4.74**	**20**	⇓	*i* Pn	**Pn**	04 38 42.6	**-0.1**
ARSA				⇓	*i* Sn	**Sn**	04 39 35.3	**-2.3**
MOTA	**Moosalm**	**4.75**	**343**	⇑	*i* Pn	**Pn**	04 38 43.6	**+0.8**
	SNR=21								
MOTA	**Moosalm**	**4.75**	**343**		Pn	**Pn**	04 38 43.6	**+0.7**
	20nm,7.0s								
FRF	**La Foret Royal**	**4.81**	**281**	*e*	Pn	**Pn**	04 38 43.3	**-0.4**
	SNR=1.0								
FRF				*e*	Sn	**Sn**	04 39 36.9	**-2.5**
	20nm,0.6s								
FRF	**La Foret Royal**	**4.81**	**281**	*e*	Pn	**Pn**	04 38 43.3	**-0.4**
	SNR=1.0								
FRF				*e*	Sn	**Sn**	04 39 36.9	**-2.5**
	10nm,0.6s								
BGLD	**Berchtesgaden**	**4.83**	**359**	⇓	*i* Pn	**Pn**	04 38 44.7	**+0.7**
RSP	**Reno Superiore**	**4.84**	**301**		P	**Pn**	04 38 43.6	**-0.6**
SURF	**Saint Ours**	**4.89**	**292**		P	**Pn**	04 38 46.7	**+1.9**
LMR	**La Mourre**	**4.89**	**278**	*e*	Pn	**Pn**	04 38 43.9	**-0.9**
	SNR=1.0								
LMR				*e*	Sn	**Sn**	04 39 38.2	**-3.2**
	10nm,0.5s								
LMR	**La Mourre**	**4.89**	**278**	*e*	Pn	**Pn**	04 38 43.9	**-0.9**
	SNR=1.0								
LMR				*e*	Sn	**Sn**	04 39 38.2	**-3.2**
	5.1nm,0.5s								
RETA	**Reutte**	**4.96**	**341**	⇑	*i* Pn	**Pn**	04 38 47.1	**+1.4**
	SNR=46								
RETA				⇓	*i* Sn	**Sn**	04 39 45.4	**+2.4**
BEY	**Berane**	**4.96**	**87**	⇑	*i* Pn	**Pn**	04 38 46.3	**+0.5**
BEY					*e*Sn	**Sn**	04 39 42.9	**-0.3**
IVA	**Berane**	**4.96**	**87**	⇑	*i* Pn	**Pn**	04 38 46.3	**+0.5**
IVA					*e*Sn	**Sn**	04 39 42.9	**-0.3**
MBDF	**Montbardon**	**4.99**	**295**	*e*	Pn	**Pn**	04 38 46.7	**+0.4**
	SNR=1.0								
MBDF				*e*	Sn	**Sn**	04 39 41.4	**-2.5**
	19nm,0.6s,SNR=1.0								
MBDF	**Montbardon**	**4.99**	**295**	*e*	Pn	**Pn**	04 38 46.7	**+0.4**
	SNR=1.0								
MBDF				*e*	Sn	**Sn**	04 39 41.4	**-2.5**
	9.5nm,0.6s,SNR=1.0								
DAVA	**Damuels**	**5.03**	**334**	⇓	*i* Pn	**Pn**	04 38 48.5	**+1.8**
	SNR=28								
DAVA	**Damuels**	**5.03**	**334**		Pn	**Pn**	04 38 48.5	**+1.8**
	27nm,5.0s								
PVY	**Plav**	**5.04**	**90**	⇑	*i* Pn	**Pn**	04 38 47.2	**+0.4**
PVY					*e*Sn	**Sn**	04 39 45.0	**+0.1**
PUK	**Puka**	**5.05**	**97**	*i*	PN	**Pn**	04 38 48.1	**+1.0**
PUK				*i*	SN	**Sn**	04 39 44.6	**-0.8**
MOA	**Molln**	**5.09**	**9**	⇓	*i* Pn	**Pn**	04 38 47.6	**0.0**
	SNR=10								
MOA				⇓	*i* Sn	**Sn**	04 39 47.4	**+1.2**
MOA	**Molln**	**5.09**	**9**		Pn	**Pn**	04 38 47.6	**+0.1**
	10.0nm,1.0s								
MOA					Sn	**Sn**	04 39 47.4	**+1.2**
DIVS	**Divcibare**	**5.14**	**73**		Pn	**Pn**	04 38 48.8	**+0.5**
PKSM	**Moragy**	**5.18**	**47**	⇓	P	**Pn**	04 38 48.6	**-0.3**
PKSM	**Moragy**	**5.18**	**47**	⇓	*i* P	**Pn**	04 38 48.6	**-0.3**
TIR	**Tirane**	**5.21**	**104**	*i*	PN	**Pn**	04 38 49.2	**-0.1**
LPG	**La Plagne**	**5.32**	**302**	*e*	Pn	**Pn**	04 38 51.0	**+0.2**
	SNR=1.0								
LPG				*e*	Sn	**Sn**	04 39 48.9	**-3.1**
	17nm,0.6s,SNR=1.0								
LPG	**La Plagne**	**5.32**	**302**	*e*	Pn	**Pn**	04 38 51.0	**+0.2**
	SNR=1.0								
LPG				*e*	Sn	**Sn**	04 39 48.9	**-3.1**
	8.6nm,0.6s,SNR=1.0								
FGSL	**Fruska Gora**	**5.34**	**62**		Pn	**Pn**	04 38 50.7	**-0.3**
LPL	**La Plagne**	**5.34**	**302**	*e*	Pn	**Pn**	04 38 50.8	**-0.2**
	SNR=1.0								
LPL				*e*	Sn	**Sn**	04 39 49.6	**-2.9**
	20nm,0.4s								
LPL	**La Plagne**	**5.34**	**302**	*e*	Pn	**Pn**	04 38 50.8	**-0.2**
	SNR=1.0								
LPL				*e*	Sn	**Sn**	04 39 49.6	**-2.9**
	10nm,0.4s								
SOP	**Sopron**	**5.42**	**25**	*e*	Pn	**Pn**	04 38 51.6	**-0.5**
CONA	**Conrad Observa**	**5.45**	**20**	⇑	*i* Pn	**Pn**	04 38 51.7	**-0.8**
	SNR=13								
CONA				⇑	*i* Sn	**Sn**	04 39 54.2	**-0.9**
GDM	**Grand'Maison**	**5.60**	**298**		P	**Pn**	04 38 58.0	**+3.4**
SMRF	**Simiane la Rot**	**5.64**	**284**	*e*	Pn	**Pn**	04 38 55.3	**+0.2**
	SNR=1.0								
ORIF	**Oris-en-Rattie**	**5.66**	**294**	*e*	P	**Pn**	04 38 58.7	**+3.4**
	SNR=1.0								
ORIF				*e*	Sn	**Sn**	04 39 58.3	**-1.9**
	26nm,0.7s								
ORIF				*e*	MLR	MLR			
	comp=Z,179nm,18.5s								
ORIF	**Oris-en-Rattie**	**5.66**	**294**	*e*	P	**Pn**	04 38 58.7	**+3.4**
	SNR=1.0								
ORIF				*e*	Sn	**Sn**	04 39 58.3	**-1.9**
	comp=Z,13nm,0.7s								
GRN	**Grenoble**	**5.86**	**297**		P	**Pn**	04 39 00.7	**+2.6**
KEK	**Kerkira**	**5.90**	**120**	⇓	*i* PB	**Pb**	04 38 59.3	**-15**
OHR	**Ohrid**	**5.95**	**104**	*e*	Pn	**Pn**	04 38 59.5	**+0.1**
GEC2	**GERESS Array S**	**6.03**	**3**	*e*	Pn	**Pn**	04 38 59.6	**-0.9**
GEC2				*e*	Sn	**Sn**	04 40 06.3	**-3.2**
GERES	**GERESS Array B**	**6.03**	**3**		Pn	**Pn**	04 38 59.4	**-1.1**
	comp=Z,3.2nm,0.3s,baz=174,slow=13,SNR=53								
GERES					Sn	**Sn**	04 40 07.1	**-2.4**
	comp=Z,5.3nm,0.3s,baz=166,slow=23,SNR=11								
ZST	**Bratislava**	**6.05**	**26**	*e*	PN	**Pn**	04 39 03.1	**+2.4**
ZST				*e*	SN	**Sn**	04 40 05.1	**-4.7**
ZST	**Bratislava**	**6.05**	**26**	*e*	P	**Pn**	04 39 03.1	**+2.4**
ZST				*e*	Sn	**Sn**	04 40 05.2	**-4.6**
BBS	**Basel-Blauen**	**6.12**	**321**		P	**Pn**	04 39 03.4	**+1.7**
KBN	**Korca**	**6.12**	**108**	*e*	PN	**Pn**	04 39 03.4	**+1.6**
KBN				*i*	SN	**Sn**	04 40 14.1	**+2.3**
FELD	**Feldberg im Sc**	**6.22**	**326**		P	**Pn**	04 39 03.6	**+0.6**
MODS	**Modra-Piesok**	**6.26**	**26**	*e*	PN	**Pn**	04 39 04.7	**+1.1**
MODS				*e*	SN	**Sn**	04 40 10.5	**-4.6**
CABF	**La Chapelle**	**6.29**	**309**	*e*	Pn	**Pn**	04 39 04.6	**+0.5**
	SNR=1.0								
CABF				*e*	Sn	**Sn**	04 40 13.6	**-2.4**
	comp=Z,69nm,1.1s								
KHC	**Kasperske Hory**	**6.32**	**3**	*e*	PN	**Pn**	04 39 03.3	**-1.1**
KHC				*ex*		x	04 39 13.0	
KHC				*e*	PG	**Pg**	04 39 31.5	**-0.8**
KHC				*e*	SN	**Sn**	04 40 13.5	**-2.9**
WET	**Wettzell**	**6.32**	**358**	*e*	Sn	**Sn**	04 40 12.8	**-3.9**
BIA	**Bitola**	**6.36**	**104**	*e*	Pn	**Pn**	04 39 05.6	**+0.6**
BIA	**Bitola**	**6.36**	**104**	*e*	Pn	**Pn**	04 39 05.5	**+0.5**
LOMF	**Lomont**	**6.36**	**318**		P	**Pn**	04 39 05.8	**+0.7**
LOMF					S	**Sn**	04 40 20.1	**+2.5**
BARS	**Barje**	**6.38**	**87**		Pn	**Pn**	04 39 05.0	**-0.3**
VIVF	**Saint-Julien-l**	**6.46**	**291**	*e*	Pn	**Pn**	04 39 06.8	**+0.4**
BFO	**Black Forest**	**6.46**	**330**	*e*	Pn	**Pn**	04 39 06.8	**+0.4**
MOF	**Molkenrain**	**6.57**	**322**		P	**Pn**	04 39 08.3	**+0.4**
TREC	**Trest**	**6.67**	**13**	*e*	PN	**Pn**	04 39 08.5	**-0.8**
HINF	**Hinteralfeld**	**6.68**	**321**	*e*	Pn	**Pn**	04 39 09.1	**-0.3**
	SNR=1.0								
HINF				*e*	Sn	**Sn**	04 40 19.4	**-6.0**
	comp=Z,30nm,0.5s								
HINF	**Hinteralfeld**	**6.68**	**321**	*e*	Pn	**Pn**	04 39 09.1	**-0.3**
	SNR=1.0								
HINF				*e*	Sn	**Sn**	04 40 19.4	**-6.0**
	comp=Z,15nm,0.5s								
BZS	**Buzias**	**6.69**	**62**	⇓	P	**Pn**	04 39 08.0	**-1.6**
BZS	**Buzias**	**6.69**	**62**	⇓	*i* P	**Pn**	04 39 08.0	**-1.6**
STIP	**Stip**	**6.80**	**97**	*e*	Pn	**Pn**	04 39 11.0	**-0.1**
STIP	**Stip**	**6.80**	**97**	*e*	Pn	**Pn**	04 39 10.9	**-0.2**
KOLL	**Kolacno**	**6.83**	**31**	*e*	PN	**Pn**	04 39 10.9	**-0.5**
KOLL	**Kolacno**	**6.83**	**31**	*e*	Pn	**Pn**	04 39 11.0	**-0.4**
ECH	**Echery**	**6.84**	**324**		P	**Pn**	04 39 11.8	**+0.2**
ECH					S	**Sn**	04 40 29.6	**+0.3**
LASF	**Ste Croix**	**6.88**	**284**	*e*	Pn	**Pn**	04 39 12.0	**-0.1**
VRAC	**Vranov**	**6.91**	**19**	⇓	P	**Pn**	04 39 19.1	**+6.5**
VRAC	**Vranov**	**6.91**	**19**	⇓	*i* P	**Pn**	04 39 19.1	**+6.5**
VYHS	**Vyhne**	**6.93**	**33**	*e*	PN	**Pn**	04 39 10.1	**-2.7**
CDF	**Champ du Feu**	**6.94**	**326**	*e*	Pn	**Pn**	04 39 12.8	**-0.2**
	SNR=1.0								
CDF				*e*	Sn	**Sn**	04 40 26.8	**-5.0**
	comp=Z,27nm,0.6s								
ROTZ	**Rotzenmuhle**	**6.97**	**355**	*e*	Sn	**Sn**	04 40 28.7	**-4.0**
GRF	**Grafenberg Arr**	**7.00**	**350**	*e*	Sn	**Sn**	04 40 28.8	**-4.4**
GRFO	**Grafenberg**	**7.00**	**350**	*e*	Pn	**Pn**	04 39 14.4	**+0.6**
	comp=Z,39nm,1.1s								
GRFO	**Grafenberg**	**7.00**	**350**	*e*	P	**Pn**	04 39 14.4	**+0.7**
GRFO					pmax	pmax			
	comp=Z,39nm,1.1s								
GRFO	**Grafenberg**	**7.00**	**350**	*e*	Pn	**Pn**	04 39 14.4	**+0.7**
	comp=Z,39nm,1.1s								
HAU	**Haudompre**	**7.05**	**320**	*e*	Pn	**Pn**	04 39

MMAI	**Mount Meron Ar**	**20.05**	**112**	P		**P**	**04 42 06.1**	**+1.6**
	comp=Z,2.2nm,0.5s,baz=316,slow=10,SNR=3.2							
FINES	**FINESS Array B**	**20.19**	**18**	P		**P**	**04 42 05.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=205,slow=8.4,SNR=8.6							
KIV	**Kislovodsk**	**21.45**	**77**	*eP*		**P**	**04 42 20.3**	**+0.8**
KIV				pmax	pmax			
	comp=Z,17nm,1.0s,mb4.3							
KIV				MLR	MLR			
	comp=Z,32nm,13.0s,MS2.9							
KIV	**Kislovodsk**	**21.45**	**77**	*eP*		**P**	**04 42 20.3**	**+0.8**
	comp=Z,32nm,13.0s							
LVZ	**Lovozero**	**27.63**	**17**⇑	*eP*		**P**	**04 43 18.6**	**0.0**
TORD	**Torodi Ar. Bea**	**31.19**	**202**	P		**P**	**04 43 54.1**	**+3.5**
	comp=Z,0.5nm,0.4s,mb3.7,baz=350,slow=6.0,SNR=4.3							
TORD				LR	LR		04 57 42.7	
	comp=Z,103nm,19.2s,MS3.5,baz=255,slow=39							
ARU	**Arti**	**31.78**	**49**⇑	*eP*		**P**	**04 43 56.6**	**+1.2**
ARU				pmax	pmax			
	comp=Z,7.0nm,0.9s,mb4.5							
ARU	**Arti**	**31.78**	**49**	*eP*		**P**	**04 43 56.6**	**+1.2**
	comp=Z,7.0nm,0.9s,mb4.5							
BBTS	**Babate**	**37.91**	**231**	LR	LR		05 00 43.4	
	comp=Z,54nm,18.5s,MS3.4,baz=197,slow=37							
KURK	**Kurchatov**	**44.20**	**56**	*eP*		**P**	**04 45 40.6**	**+0.5**
ZAL	**Zalesovo**	**46.91**	**50**	P		**P**	**04 46 03.2**	**+1.6**
ZALV	**Zalesovo Beam**	**46.92**	**50**	P		**P**	**04 46 03.1**	**+1.5**
	comp=Z,0.5nm,0.3s,mb3.9,baz=298,slow=6.4,SNR=2.9							
MKAR	**Makanchi Array**	**47.77**	**60**	P		**P**	**04 46 09.5**	**+1.1**
MKAR	**Makanchi Array**	**47.77**	**60**	*i* P		**P**	**04 46 10.1**	**+1.7**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**47.77**	**60**	P		**P**	**04 46 09.5**	**+1.1**
	comp=Z,1.2nm,0.8s,mb4.0,baz=287,slow=8.7,SNR=5.0							
TLY	**Talaya**	**58.26**	**47**⇓	*eP*		**P**	**04 47 27.4**	**+1.7**
TLY				pmax	pmax			
	comp=Z,2.0nm,1.3s,mb4.0							
TLY	**Talaya**	**58.26**	**47**	*eP*		**P**	**04 47 27.4**	**+1.7**
	comp=Z,2.0nm,1.3s,mb4.0							
SONM	**Songino Array**	**61.81**	**50**	P		**P**	**04 47 52.7**	**+2.6**
	comp=Z,0.9nm,0.8s,mb3.8,baz=297,slow=7.1,SNR=6.2							
YKA	**Yellowknife Ar**	**67.00**	**336**	P		**P**	**04 48 24.9**	**+1.1**
YKA	**Yellowknife Ar**	**67.00**	**336**	P		**P**	**04 48 24.9**	**+1.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=42,slow=6.2,SNR=15							
YKA	**Yellowknife Ar**	**67.00**	**336**	P		**P**	**04 48 24.9**	**+1.1**
SEY	**Seymchan**	**69.67**	**19**⇑	*eP*		**P**	**04 48 41.3**	**+0.8**
KSRS	**Korea Array**	**80.52**	**47**	LR	LR		05 30 02.6	
	comp=Z,20nm,18.3s,MS3.5,baz=30,slow=39							

IDC 29 04:37:48.8±2.5, 2133S×6979W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.7/16, mbtmp3.8/4, ML4.0/2, Error ellipse: s-maj=59.3km s-min=49.2km az=174.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.26**	**18**	Pn	Pn	04 39 09.2	+0.5
	1.5nm,0.3s,baz=206,slow=6.8,SNR=44						
SIV	**San Ignacio**	**9.82**	**59**	Pn	Pn	04 40 11.5	+0.2
	1.7nm,0.3s,baz=256,slow=13,SNR=49						
TORD	**Torodi Ar. Bea**	**78.07**	**71**	P	P	04 49 50.0	+0.1
	0.3nm,0.4s,baz=256,slow=5.6,SNR=8.0						
YKA	**Yellowknife Ar**	**90.76**	**341**	P	P	04 50 53.3	0.0
	0.2nm,0.5s,baz=135,slow=4.5,SNR=5.0						

IGQ 29 04:39:23.2, 179S×8024W, h12km±7km, Mb4.1, Ms3.9, 3C-7D, Error ellipse: s-maj=9.4km s-min=3.3km az=111.0, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PORT	**Chimborazo Vol**	**1.50**	**77**	P	Pn	04 39 51.9	+2.0
PORT	**Chimborazo Vol**	**1.50**	**77**	S	Sn	04 40 11.2	+1.8
IGUA	**Igualata**	**1.63**	**79**	⇓P	Pn	04 39 53.9	+2.3
IGUA	**Igualata**	**1.63**	**79**	⇓S	Sn	04 40 13.5	+0.9
MAG1	**Magdalena**	**1.77**	**15**	P	Pn	04 39 54.4	+0.8
ARRY	**Arrayan**	**1.80**	**81**	⇓P	Pn	04 39 56.1	+2.1
ARRY	**Arrayan**	**1.80**	**81**	⇓S	Sn	04 40 19.3	+2.3
PATA	**Patacocha**	**1.83**	**81**	⇓P	Pn	04 39 56.8	+2.4
PATA	**Patacocha**	**1.83**	**81**	⇓S	Sn	04 40 21.7	+4.3
VC1	**Cotopaxi 1**	**2.16**	**58**	⇑P	Pn	04 40 02.7	+3.7
TAMB	**Tambo**	**2.17**	**60**	⇑P	Pn	04 40 02.6	+3.6
TAMB	**Tambo**	**2.17**	**60**	⇑S	Sn	04 40 30.1	+4.3
JUA2	**San Juan 2**	**2.26**	**46**	P	Pn	04 40 02.9	+2.5
TERV	**Terraza Guagua**	**2.29**	**45**	⇓P	Pn	04 40 04.4	+3.6
GGP	**Refugio Guagua**	**2.30**	**46**	P	Pn	04 40 03.4	+2.5
GGP	**Refugio Guagua**	**2.30**	**46**	S	Sn	04 40 33.9	+4.8
PINO	**Pino**	**2.30**	**45**	P	Pn	04 40 02.4	+1.5
YANA	**Yana**	**2.35**	**45**	P	Pn	04 40 04.0	+2.3
YANA	**Yana**	**2.35**	**45**	S	Sn	04 40 34.0	+3.5
ANTI	**Antisana**	**2.47**	**57**	P	Pn	04 40 07.5	+4.2
COTA	**Cotacachi**	**2.84**	**42**	P	Pn	04 40 10.5	+2.1
CAYR	**Refugio Cayamb**	**2.86**	**51**	P	Pn	04 40 13.5	+4.8

*ISCJB **29** 05:02:43.2±2.8, 3205N×007×1420E±02, h10km±19km, mb3.7/3, Error ellipse: s-maj=25.5km s-min=9.5km az=164.1*
*IDC **29** 05:02:43.9±1.3, 3203N×14186E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.5/21, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=36.5km s-min=22.6km az=71.0*
*JMA **29** 05:02:44.2±0.5, 3218N×14186E, h0km, M3.9*
ISC 29 05:02:44.6±3.4, 3205N×007×1419E±02, h6km±23km, n12, σ0s42/16, mb3.7/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.03**	**302**	P	**Pn**	**05 03 19.5**	**+0.1**
JHJ	**Hachijo jima 2**	**2.06**	**302**	Pn	**Pn**	**05 03 19.2**	**-0.6**
	14nm,0.3s,baz=93,slow=12,SNR=3.8						
BSO1	**Boso 1**	**2.70**	**344**	P	**Pn**	**05 03 28.3**	**-0.2**
BSO1				*eS*	**Sn**	**05 04 01.0**	**-0.5**
BSO3	**Boso 3**	**2.97**	**338**	P	**Pn**	**05 03 32.8**	**+0.6**
BSO3				*eS*	**Sn**	**05 04 08.6**	**+0.4**
JHO	**Hitachi**	**4.67**	**347**	P	**Pn**	**05 03 55.2**	**-0.5**
JHO				*eS*	**Sn**	**05 04 45.7**	**-4.5**
CBIJ	**Chichi jima**	**4.95**	**177**	Pn	**Pn**	**05 03 59.2**	**-0.2**
	5.0nm,0.3s,baz=278,slow=19,SNR=4.4						
MJAR	**Matsushiro Arr**	**5.41**	**327**	Pn	**Pn**	**05 04 06.5**	**+0.7**
	0.8nm,0.3s,baz=155,slow=11,SNR=5.4						
JFT	**Otama**	**5.60**	**347**	P	**Pn**	**05 04 08.3**	**-0.1**
JFT				*eS*	**Sn**	**05 05 08.1**	**-4.9**
JMK	**Ichinoseki**	**6.90**	**356**	*eS*	**Sn**	**05 05 38.3**	**-6.8**
MKAR	**Makanchi Array**	**47.23**	**306**	P	**P**	**05 11 18.4**	**+0.2**
	0.7nm,0.5s,mb3.9,baz=88,slow=10,SNR=5.5						
WRA	**Warramunga Arr**	**52.20**	**189**	P	**P**	**05 11 56.3**	**0.0**
	0.7nm,0.4s,mb4.0,baz=4.8,slow=7.7,SNR=5.3						
YKA	**Yellowknife Ar**	**67.94**	**29**	P	**P**	**05 13 44.2**	**+0.3**
	0.2nm,0.8s,mb3.2,baz=296,slow=6.3,SNR=4.1						

*ISCJB **29** 05:17:17.9±0.6, 1063N×004×6256W×003, h92km±6km, Error ellipse: s-maj=6.5km s-min=4.2km az=167.0*
*FUNV **29** 05:17:19.2, 1067N×6248W, h83km, MW3.5*
*TRN **29** 05:17:20.7, 1069N×6248W, h80km, MD3.3*
*NEIC **29** 05:17:20.7, 1069N×6248W, h80km, MD3.3(TRN), After TRN.*
ISC 29 05:17:18.9±0.6, 1063N×004×6256W×003, h85km±7km, n21, σ0s93/37, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.33**	**87**	*eS*	**Sn**	**05 17 39.9**	**-1.8**
GUNV	**Guanoco**	**0.60**	**219**⇑	*i* P	**Pn**	**05 17 35.6**	**+1.5**
GUNV				*eS*	**Sn**	**05 17 46.9**	**+1.6**
CRUV	**Carupano**	**0.67**	**274**	*eP*	**Pn**	**05 17 35.3**	**+0.6**
CRUV				*eS*	**Sn**	**05 17 46.6**	**+0.1**
TCE	**Chacachacare**	**0.79**	**85**	*eP*	**Pn**	**05 17 36.8**	**+0.8**
TCE				*eS*	**Sn**	**05 17 48.4**	**-0.4**
ITEV	**Isla Los Testi**	**0.92**	**322**	⇓P	**Pn**	**05 17 37.7**	**+0.4**
ITEV				*eS*	**Sn**	**05 17 50.6**	**-0.6**
TPP	**Pointe-a-Pierr**	**1.13**	**106**	*eP*	**Pn**	**05 17 41.1**	**+1.2**
TPP				*eS*	**Sn**	**05 17 56.0**	**+0.3**
TRN	**Trinidad (W)**	**1.14**	**89**	*eP*	**Pn**	**05 17 40.5**	**+0.5**
TRN				*eS*	**Sn**	**05 17 54.4**	**-1.3**
TBH	**Brigand Hill**	**1.47**	**95**	*eP*	**Pn**	**05 17 44.8**	**+0.7**
TBH				*eS*	**Sn**	**05 18 03.7**	**+0.5**
GRW	**Mount Saint Ca**	**1.76**	**30**	*eP*	**Pn**	**05 17 48.2**	**+0.4**
GRW				*eS*	**Sn**	**05 18 08.8**	**-1.0**
ORIV	**Oritupano**	**1.76**	**209**	*eP*	**Pn**	**05 17 48.8**	**+1.0**
ORIV				*eS*	**Sn**	**05 18 10.2**	**+0.4**
TPR	**Prospect**	**1.83**	**72**	*eP*	**Pn**	**05 17 49.4**	**+0.6**
TPR				*eS*	**Sn**	**05 18 10.8**	**-0.7**
PCRV	**Puerto La Cruz**	**2.09**	**258**	*eP*	**Pn**	**05 17 52.9**	**+0.7**
PCRV				*eS*	**Sn**	**05 18 16.2**	**-1.4**
RIOV	**Rio Grande**	**2.65**	**164**	*eP*	**Pn**	**05 18 00.1**	**+0.5**
RIOV				*eS*	**Sn**	**05 18 29.0**	**-1.9**
PRGV	**PARIAGUAN**	**2.77**	**228**	*eP*	**Pn**	**05 18 01.2**	**-0.1**
PRGV				*eS*	**Sn**	**05 18 33.9**	**0.0**
GURV	**El Guri**	**2.90**	**190**	*eP*	**Pn**	**05 18 03.0**	**0.0**
BIRV	**Birongo**	**3.65**	**268**	*eP*	**Pn**	**05 18 14.1**	**+0.9**
MERV	**Las Mercedes**	**3.93**	**250**	*eP*	**Pn**	**05 18 16.9**	**-0.1**
MERV				*eS*	**Sn**	**05 19 00.5**	**-1.5**
LUEV	**Luepa**	**4.88**	**167**	*eP*	**Pn**	**05 18 28.8**	**-1.1**
LUEV				*eS*	**Sn**	**05 19 21.0**	**-4.1**
CAOV	**Caicara del Or**	**4.96**	**229**	*eP*	**Pn**	**05 18 31.3**	**+0.3**
CAOV				*eS*	**Sn**	**05 19 23.7**	**-3.4**
TURV	**Turiamo**	**5.20**	**269**	*eP*	**Pn**	**05 18 34.2**	**0.0**
BAUV	**El Baul**	**5.66**	**253**	*eP*	**Pn**	**05 18 39.8**	**-0.7**

*IDC **29** 05:24:40.5±0.7, 1387N×5982W, h0km, mb4.3/10, mb1 4.4/13, mb1mx4.2/23, mbtmp4.3/13, ML3.6/3, MS3.5/8, Ms1 3.5/8, ms1mx3.2/35, Error ellipse: s-maj=20.3km s-min=15.2km az=86.0*
*BJI **29** 05:24:42.0, 1360N×5990W, h15km, mB5.3, Ms5.0, Msz4.8*
*NEIC **29** 05:24:44.4, 1359N×5995W, h15km, mb4.7/33, MD4.4(TRN), After TRN.*
NEIC Felt [III] on Martinique. Also felt on Saint Lucia.
*TRN **29** 05:24:45.8, 1359N×5995W, h35km, MD4.4, M4.7(FDF)*
TRN Felt (III) in Martinique.
*ISCJB **29** 05:24:46.9±0.2, 1366N±002×5999W±003, h66km, mb4.5/43, Error ellipse: s-maj=4.3km s-min=3.0km az=175.2*
ISC 29 05:24:49.7±0.2, 1363N±002×6012W±003, h68km, h68km±2km: pP-P, n263, σ0s78/273, mb4.5/43, 59C-77D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	**Gun Hill**	**0.73**	**132**	*e*Pn	**Pn**	**05 25 02.5**	**-2.3**
BBGH				*e*Sn	**Sn**	**05 25 14.2**	**-1.8**
BBSP	**Saint Philip**	**0.83**	**129**	*e*P	**Pn**	**05 24 59.7**	**-6.3**
BBSP				*e*S	**Sn**	**05 25 10.7**	**-7.4**
SLB	**Belfond**	**0.92**	**282**	*e*P	**Pn**	**05 25 05.0**	**-2.1**
BHS	**Barnard House**	**1.04**	**251**	*e*P	**Pn**	**05 25 07.4**	**-1.2**
BHS				*e*S	**Sn**	**05 25 23.2**	**+0.5**
SSV	**Crater Summit**	**1.09**	**254**	*e*P	**Pn**	**05 25 07.9**	**-1.3**
SSV				*e*S	**Sn**	**05 25 24.1**	**+0.2**
SVV	**Soufriere Volc**	**1.11**	**254**	*e*P	**Pn**	**05 25 08.5**	**-1.1**
SVV				*e*S	**Sn**	**05 25 24.4**	**-0.1**
SVB	**Belmont**	**1.16**	**252**⇑	*i* P	**Pn**	**05 25 09.0**	**-1.2**
SVB				*e*S	**Sn**	**05 25 16.1**	**-9.4**
MVM	**Montagne Vaucl**	**1.19**	**321**⇓	*i* P	**Pn**	**05 25 08.6**	**-1.9**
FCV	**Fort Charlotte**	**1.20**	**247**	*e*P	**Pn**	**05 25 09.5**	**-1.1**
FCV				*e*S	**Sn**	**05 25 26.2**	**-0.1**
FCV	**Fort Charlotte**	**1.20**	**247**	*e*P	**Pn**	**05 25 09.5**	**-1.1**
FCV				*e*S	**Sn**	**05 25 26.2**	**-0.1**
BIM	**Bigot**	**1.28**	**314**	*e*P	**Pn**	**05 25 10.2**	**-1.6**
FDF	**Fort de France**	**1.48**	**318**⇓	*e*P	**Pn**	**05 25 13.0**	**-1.4**
DSHT	**Scott's Head**	**1.99**	**322**	*e*P	**Pn**	**05 25 20.7**	**-0.5**
DSHT				*e*S	**Sn**	**05 25 43.2**	**-2.0**
DBCT	**Belle View Cho**	**2.02**	**324**	*e*P	**Pn**	**05 25 20.5**	**-1.1**
DBCT				*e*S	**Sn**	**05 25 42.5**	**-3.3**
MDN	**Morne-Daniel**	**2.08**	**324**	*e*P	**Pn**	**05 25 21.6**	**-0.9**
MDN				*e*S	**Sn**	**05 25 46.8**	**-0.6**
GRW	**Mount Saint Ca**	**2.10**	**226**	*e*P	**Pn**	**05 25 22.8**	**+0.1**
GRGR	**Grenville**	**2.12**	**225**	*e*Pn	**Pn**	**05 25 21.8**	**-0.1**
GRGR				*e*Sn	**Sn**	**05 25 49.9**	**+1.7**
DWS	**Wesley**	**2.25**	**329**	*e*P	**Pn**	**05 25 24.5**	**-0.2**
DWS				*e*S	**Sn**	**05 25 49.7**	**-1.7**
TPR	**Prospect**	**2.52**	**195**	*e*P	**Pn**	**05 25 27.9**	**-0.4**
TPR				*e*S	**Sn**	**05 25 42.2**	**-16**
MGG	**Marie-Galante**	**2.55**	**333**⇓	*e*P	**Pn**	**05 25 27.5**	**-1.3**
TBG	**Guadaloupe-3**	**2.66**	**326**⇓	*e*P	**Pn**	**05 25 29.5**	**-0.7**
DOG	**Dongo Capester**	**2.79**	**329**	*e*P	**Pn**	**05 25 31.5**	**-0.6**
HMG	**Houelmont**	**2.79**	**327**	*e*P	**Pn**	**05 25 31.6**	**-0.5**
HMG				*e*S	**Sn**	**05 26 06.1**	**+1.4**
SCG	**Saint Claude**	**2.82**	**328**⇓	*e*P	**Pn**	**05 25 32.0**	**-0.5**
SCG				*e*S	**Sn**	**05 26 05.3**	**-0.1**
BCG	**Bois Riant Cap**	**2.84**	**329**	*e*P	**Pn**	**05 25 32.0**	**-0.7**
LZG	**Guadaloupe-1**	**2.96**	**327**	*e*P	**Pn**	**05 25 34.0**	**-0.5**
TRN	**Trinidad (W)**	**3.22**	**203**	*e*P	**Pn**	**05 25 37.7**	**-0.3**
TRN	**Trinidad (W)**	**3.22**	**203**	*e*P	**Pn**	**05 25 38.4**	**+0.4**
TBH	**Brigand Hill**	**3.27**	**197**	*e*P	**Pn**	**05 25 41.1**	**+2.6**
TBH	**Brigand Hill**	**3.27**	**197**	*e*P	**Pn**	**05 25 42.1**	**+3.5**
TCE	**Chacachacare**	**3.33**	**209**	*e*P	**Pn**	**05 25 37.7**	**-1.8**
TCE				*e*S	**Sn**	**05 26 15.9**	**-1.9**
TCE	**Chacachacare**	**3.33**	**209**	*e*P	**Pn**	**05 25 38.6**	**-0.8**
TCE				*e*S	**Sn**	**05 26 15.9**	**-1.9**
TPP	**Pointe-a-Pierr**	**3.54**	**202**	*e*P	**Pn**	**05 25 43.6**	**+1.2**
SKI	**Saint Kitts**	**4.46**	**326**	*e*P	**Pn**	**05 25 56.2**	**+1.2**
SKI				*e*S	**Sn**	**05 26 47.4**	**+1.8**
PCRV	**Puerto La Cruz**	**5.60**	**233**	Pn	**Pn**	**05 26 10.8**	**+0.3**
	2.6nm,0.3s,baz=145,slow=1.5,SNR=21						
PCRV				Sn	**Sn**	**05 27 11.0**	**-2.5**
	2.8nm,0.3s,baz=253,slow=17,SNR=3.2						
MTP	**Monte Pirata**	**6.86**	**311**	*e*Pn	**Pn**	**05 26 27.7**	**0.0**
CPD	**Cerro la Pandu**	**7.09**	**309**	*e*Pn	**Pn**	**05 26 30.4**	**-0.4**
	64nm,0.8s						
CPD				*e*Sn	**Sn**	**05 27 44.5**	**-5.6**
SDV	**Santo Domingo**	**11.34**	**247**	*e*Pn	**Pn**	**05 27 28.9**	**-0.1**
	7.6nm,0.6s						
SDV	**Santo Domingo**	**11.34**	**247**	Pn	**Pn**	**05 27 28.3**	**-0.7**
	0.6nm,0.3s,baz=44,slow=6.7,SNR=8.5						
SDV				LR	LR	05 33 03.2	
	comp=Z,90nm,18.1s,baz=166,slow=43						
SDDR	**Presa de Saban**	**11.97**	**298**	*e*Pn	**Pn**	**05 27 38.5**	**+1.0**
	67nm,0.6s						
ROSC	**El Rosal**	**16.51**	**239**	Pn	**Pn**	**05 28 39.1**	**+2.0**
	2.2nm,0.3s,baz=46,slow=3.6,SNR=9.6						
ROSC				LR	LR	05 35 43.7	
	comp=Z,125nm,18.5s,baz=25,slow=39						
BCIP	**Isla Barro Col**	**19.83**	**259**	*e*P	**Pn**	**05 29 15.4**	**-1.9**
	48nm,1.0s						
OTAV	**Otavalo**	**22.51**	**235**	*e*P	**P**	**05 29 41.8**	**-2.1**
	1.9nm,0.6s,mb3.6						
ATAH	**Atahualpa**	**27.38**	**223**	P	**P**	**05 30 29.0**	**+0.1**
	4.2nm,0.5s,mb4.2,baz=60,slow=8.1,SNR=3.5						
TEIG	**Tepich**	**27.70**	**288**	P	**P**	**05 30 28.7**	**-3.0**
	8.0nm,0.8s,mb4.3,baz=105,slow=20,SNR=3.5						
GOGA	**Godfrey**	**28.96**	**317**	*e*P	**P**	**05 30 42.8**	**0.0**
	1.9nm,0.6s,mb3.9						
SIV	**San Ignacio**	**29.45**	**182**	P	**P**	**05 30 47.1**	**-0.1**
	0.5nm,0.4s,mb3.5,baz=3.3,slow=22,SNR=3.7						
NNA	**Nana**	**30.38**	**214**	*e*P	**P**	**05 30 55.5**	**0.0**
	11nm,0.6s,mb4.7						
TKL	**Tuckaleechee C**	**30.56**	**320**	LR	LR	05 41 23.7	
	comp=Z,118nm,19.9s,baz=239,slow=33						
LPAZ	**La Paz**	**30.77**	**195**	P	**P**	**05 31 02.2**	**+3.4**
LPAZ				LR	LR	05 45 15.0	
LPAZ	**La Paz**	**30.77**	**195**	P	**P**	**05 31 02.2**	**+3.4**
	0.7nm,0.7s,mb3.5,baz=12,slow=9.3,SNR=2.8						
LPAZ				LR	LR	05 45 15.0	
	comp=Z,64nm,18.8s,baz=103,slow=40						
LRAL	**Lakeview Retre**	**31.19**	**313**	*e*P	**P**	**05 31 02.6**	**+0.1**
	16nm,0.9s,mb4.8						
WVT	**Waverly**	**33.46**	**317**	*e*P	**P**	**05 31 21.5**	**-0.8**
	4.1nm,0.9s,mb4.3						
CMIG	**Matias Romero**	**33.67**	**280**	LR	LR	05 43 41.5	
	comp=Z,62nm,20.8s,baz=110,slow=34						
NATX	**Nacogdoches**	**36.41**	**306**	*e*P	**P**	**05 31 48.2**	**+0.4**
	31nm,0.6s,mb5.4						
MIAR	**Mount Ida**	**36.70**	**310**	*e*P	**P**	**05 31 50.1**	**-0.2**
	18nm,0.9s,mb5.0						
JCT	**Junction City**	**40.17**	**301**	*e*P	**P**	**05 32 18.2**	**-1.3**
	18nm,1.0s,mb4.8						
WMOK	**Wichita Mounta**	**40.71**	**308**	*e*P	**P**	**05 32 22.1**	**-1.7**
	11nm,0.6s,mb4.9						
SCHQ	**Schefferville**	**41.44**	**354**	P	**P**	**05 32 28.4**	**-1.0**
	7.0nm,0.9s,mb4.5,baz=202,slow=8.4,SNR=8.6						
ECSD	**EROS,Sioux Fal**	**43.29**	**321**	*e*P	**P**	**05 32 43.6**	**-1.1**
	6.6nm,0.6s,mb4.5						
ECSD				*e*pP	pP	05 33 00.9	-0.8
MNTX	**Cornudas Mount**	**45.11**	**301**	*e*P	**P**	**05 32 58.8**	**-0.7**
	21nm,0.8s,mb4.9						
AGMN	**Agassiz Refuge**	**45.48**	**327**	*e*P	**P**	**05 33 01.0**	**-1.1**
	22nm,0.6s,mb5.1						
AGMN				*e*pP	pP	05 33 17.9	-1.2
CFAA	**Coronel Fontan**	**45.65**	**190**	P	**P**	**05 33 06.7**	**+3.2**
CFAA	**Coronel Fontan**	**45.65**	**190**	P	**P**	**05 33 06.7**	**+3.2**
	0.1nm,0.5s,baz=358,slow=6.0,SNR=5.8						
ULM	**Lac du Bonnet**	**46.68**	**329**	P	**P**	**05 33 10.4**	**-1.1**
	5.3nm,0.4s,mb4.6,baz=129,slow=9.4,SNR=22						
BNM	**Barren Site**	**46.71**	**304**	*e*P	**P**	**05 33 12.3**	**+0.3**
BNM				*e*pP	pP	05 33 29.1	-0.1
ANMO	**Albuquerque**	**46.78**	**305**	*e*P	**P**	**05 33 12.4**	**-0.1**
	3.8nm,1.2s,mb4.0						
ANMO				*e*pP	pP	05 33 29.3	-0.4
LAZ	**Ladron**	**47.18**	**304**	*e*P	**P**	**05 33 15.8**	**+0.2**
ISCO	**Idaho Springs**	**47.60**	**312**	*e*P	**P**	**05 33 18.8**	**-0.1**
	2.2nm,0.6s,mb4.2						
ISCO				*e*pP	pP	05 33 35.9	-0.2
PHWY	**Pilot Hill**	**48.02**	**314**	*e*P	**P**	**05 33 21.4**	**-0.6**
PHWY				*e*pP	pP	05 33 38.8	-0.5
319A	**Douglas**	**48.31**	**300**	⇑P	**P**	**05 33 25.2**	**+0.7**
	baz=48						
LPIG	**La Paz**	**48.40**	**290**	LR	LR	05 52 11.3	
	comp=Z,64nm,21.2s,baz=42,slow=34						
318A	**Bisbee**	**48.92**	**300**	⇑P	**P**	**05 33 29.7**	**+0.6**
	baz=49						
218A	**Dragoon**	**49.06**	**301**	⇑P	**P**	**05 33 30.7**	**+0.5**
	baz=49						
217A	**Green Valley**	**49.67**	**300**	⇑P	**P**	**05 33 35.6**	**+0.7**
	baz=50						
TUC	**Tucson**	**49.73**	**301**	*e*P	**P**	**05 33 35.6**	**+0.2**
	6.1nm,0.9s,mb4.5						
TUC				*e*pP	pP	05 33 52.5	-0.2
216A	**Three Points,**	**50.25**	**300**	⇓P	**P**	**05 33 39.5**	**+0.3**
	baz=50						
116A	**Eloy**	**50.54**	**301**	⇓P	**P**	**05 33 41.9**	**+0.5**
	baz=51						
WUAZ	**Wupatki**	**50.82**	**305**	*e*P	**P**	**05 33 43.8**	**+0.4**
	2.7nm,0.5s,mb4.5						
WUAZ				*e*pP	pP	05 34 00.9	0.0
115A	**Sonoran Desert**	**51.00**	**301**	⇓P	**P**	**05 33 45.6**	**+0.7**
	baz=51						
SRU	**San Rafael**	**51.01**	**310**	*e*P	**P**	**05 33 44.8**	**-0.1**
	3.3nm,0.6s,mb4.5						
X15A	**Humboldt**	**51.31**	**303**	⇓P	**P**	**05 33 47.6**	**+0.4**
	baz=51						
BW06	**Boulder Array**	**51.40**	**314**	*e*P	**P**	**05 33 47.2**	**-0.5**
	11nm,1.1s,mb4.8						
BW06				*e*pP	pP	05 34 03.9	-1.2
PDAR	**Pinedale Array**	**51.40**	**314**	P	**P**	**05 33 47.4**	**-0.3**
	6.8nm,0.5s,mb4.9,baz=117,slow=9.7,SNR=64						
W15A	**Williams**	**51.47**	**304**	⇓P	**P**	**05 33 49.3**	**+1.0**
	baz=52						
TMUT	**Trail Mountain**	**51.57**	**310**	*e*P	**P**	**05 33 49.3**	**+0.3**
TMUT				*e*pP	pP	05 34 06.5	0.0
FCC	**Fort Churchill**	**51.68**	**338**	*e*P	**P**	**05 33 48.6**	**-0.8**
	5.3nm,0.8s,mb4.6						
Z14A	**Wintersburg**	**51.70**	**302**	⇓P	**P**	**05 33 50.8**	**+0.7**
	baz=52						
X14A	**Yava**	**51.84**	**303**	⇓P	**P**	**05 33 52.0**	**+0.9**
	baz=52						
T15A	**Red Dirt Ranch**	**51.93**	**306**	⇓P	**P**	**05 33 52.7**	**+0.9**
	baz=52						
RLMT	**Red Lodge**	**52.01**	**317**	*e*P	**P**	**05 33 52.0**	**-0.2**
	7.8nm,1.0s,mb4.7						
RLMT				*e*pP	pP	05 34 09.0	-0.7
JLU	**Jordanelle**	**52.10**	**311**	*e*P	**P**	**05 33 53.3**	**+0.3**
JLU				*e*pP	pP	05 34 10.5	0.0
W14A	**Seligman**	**52.13**	**304**	⇓P	**P**	**05 33 53.6**	**+0.4**
	baz=

HLID			ℯpP		pP	05 34 31.5	-0.4
L12A	House Creek Ra	55.09 312	⇑P		P	05 34 15.1	+0.3
	baz=55						
O11A	Cowboy Ranch,	55.10 310	P		P	05 34 15.5	+0.5
	baz=55,SNR=17						
K12A	Draper Farm, C	55.13 313	⇑P		P	05 34 15.4	+0.3
	baz=55						
H13A	Challis	55.19 315	⇓P		P	05 34 15.4	0.0
	baz=55						
E14A	Clinton	55.23 317	⇑P		P	05 34 16.1	+0.4
	baz=55						
S10A	Tonopah Range,	55.39 307	⇑P		P	05 34 17.7	+0.6
	baz=56						
J12A	Stokes Ranch,	55.42 313	⇓P		P	05 34 17.2	0.0
	baz=56						
D14A	Greenough	55.45 318	⇓P		P	05 34 17.3	0.0
	baz=56						
M11A	Holland Ranch,	55.49 311	P		P	05 34 18.1	+0.5
	baz=56,SNR=10						
F13A	Darby	55.59 317	⇓P		P	05 34 18.2	-0.1
	baz=56						
H12A	Diamond D Ranc	55.60 315	⇑P		P	05 34 18.5	+0.1
	baz=56						
P10A	Eureka	55.61 309	⇓P		P	05 34 19.1	+0.6
	baz=56						
E13A	Victor	55.69 317	P		P	05 34 19.5	+0.5
	baz=56,SNR=6.5						
O10A	Cortez Mining,	55.77 310	⇓P		P	05 34 20.3	+0.6
	baz=56						
R09A	Tonopah	55.82 307	⇓P		P	05 34 20.3	+0.1
	baz=56						
C14A	Swan Lake	55.82 319	⇑P		P	05 34 20.4	+0.4
	baz=56						
S09A	Goldfield	55.85 306	⇑P		P	05 34 20.9	+0.5
	baz=56						
K11A	Parker Ranch,	55.97 313	⇓P		P	05 34 21.6	+0.5
	baz=56						
M10A	I.L. Ranch, Tu	56.05 311	⇓P		P	05 34 22.1	+0.4
	baz=56						
D13A	Huson	56.07 318	⇓P		P	05 34 21.6	-0.1
	baz=56						
P09A	Austin	56.11 309	⇓P		P	05 34 22.2	+0.1
	baz=56						
L10A	Juniper Basin	56.13 312	⇓P		P	05 34 22.4	+0.1
	baz=56						
F12A	Elk City	56.20 316	⇑P		P	05 34 22.4	-0.3
	baz=56						
O09A	Fish Creek Ran	56.26 309	P		P	05 34 23.7	+0.5
	baz=56,SNR=14						
C13A	Hot Springs	56.32 319	⇓P		P	05 34 23.7	+0.1
	baz=56						
H11A	Donnelly	56.43 315	⇑P		P	05 34 24.1	-0.3
	baz=56						
B13A	Whitefish	56.47 319	⇑P		P	05 34 24.5	-0.1
	baz=56						
S08C	White Mtn Res	56.56 306	⇓P		P	05 34 26.3	+0.9
	baz=57						
K10A	MacKenzie Ranc	56.57 312	⇑P		P	05 34 25.7	+0.3
	baz=57						
Q08A	Gabbs	56.59 308	⇓P		P	05 34 25.9	+0.3
	baz=57						
A13A	Flathead Natio	56.62 320	⇑P		P	05 34 25.7	+0.1
	baz=57						
D12A	Red Ives Fores	56.64 318	⇑P		P	05 34 26.0	+0.2
	baz=57						
N09A	Rock Creek Ran	56.64 310	⇓P		P	05 34 26.1	+0.2
	baz=57						
J10A	Berg Farm, Mel	56.65 313	⇓P		P	05 34 25.9	0.0
	baz=57						
M09A	Marrel Ranch,	56.70 311	P		P	05 34 26.8	+0.5
	baz=57,SNR=5.2						
G11A	Walters Elk Ra	56.79 316	⇓P		P	05 34 26.8	0.0
	baz=57						
NVAR	Mina Array Bea	56.81 307	P		P	05 34 27.9	+0.7
	2.9nm,0.6s,mb4.5,baz=102,slow=4.7,SNR=13						
F11A	Grangeville	56.84 316	P		P	05 34 27.0	-0.3
	baz=57,SNR=6.8						
H10A	Noah's Angus R	56.91 315	P		P	05 34 26.8	-0.9
	baz=57,SNR=6.3						
L09A	Wilkinson Ranc	56.98 311	P		P	05 34 29.0	+0.7
	baz=57,SNR=6.4						
E11A	Bogner Ranch,	57.01 317	P		P	05 34 28.0	-0.4
	baz=57,SNR=11						
N08A	GE Springer Mi	57.08 310	P		P	05 34 29.2	+0.2
	baz=57,SNR=7.0						
HELL	Mitchell Peak,	57.12 305	⇑P		P	05 34 29.8	+0.5
	baz=57						
K09A	Rome	57.17 312	⇓P		P	05 34 29.9	+0.2
	baz=57						
B12A	Libby	57.21 319	⇑P		P	05 34 30.6	+0.8
	baz=57						
J09A	Fry Pan Ranch,	57.33 313	⇑P		P	05 34 31.4	+0.6
	baz=57						
G10A	Bishop Farm, J	57.34 315	⇓P		P	05 34 30.1	-0.7
	baz=57						
M08A	Happy Creek Ra	57.39 311	P		P	05 34 31.3	+0.1
	baz=58,SNR=9.4						
A12A	Yaak River Ran	57.40 320	⇓P		P	05 34 31.6	+0.5
	baz=58						
L08A	Fields	57.51 311	P		P	05 34 33.0	+1.0
	baz=58,SNR=8.5						
EDM	Edmonton	57.52 325	ℯP		P	05 34 30.7	-1.1
EDM			ℯpP		pP	05 34 48.0	-1.6
O07A	Toulon	57.53 309	⇑P		P	05 34 32.1	-0.1
	baz=58						
H09A	Durkee	57.57 314	⇑P		P	05 34 32.2	-0.2
	baz=58						
N07B	Gerlach	57.71 310	⇓P		P	05 34 33.5	+0.1
	baz=58						
R06C	Coleville	57.71 307	⇓P		P	05 34 34.4	+0.9
	baz=58						
G09A	Cove	57.79 315	⇓P		P	05 34 33.4	-0.6
	baz=58						
A11A	Hall Mountain,	57.85 320	⇓P		P	05 34 34.3	0.0
	baz=58						
D10A	Wagner Farm, O	57.90 317	⇑P		P	05 34 34.0	-0.6
	baz=58						
M07A	Soldier Meadow	57.97 310	P		P	05 34 35.6	+0.4
	baz=58,SNR=7.3						
I08A	Drewsey	58.03 313	⇑P		P	05 34 35.7	0.0
	baz=58						
NEW	Newport	58.13 319	ℯP		P	05 34 35.2	-1.0
	10nm,0.9s,mb4.9						
NEW			ℯpP		pP	05 34 52.6	-1.5
L07A	Adell	58.21 311	⇓P		P	05 34 37.1	+0.2
	baz=58						
R05C	Kirkwood Meado	58.22 307	P		P	05 34 38.1	+1.0
	baz=58,SNR=7.3						
P06A	Stead Airport,	58.23 308	⇑P		P	05 34 37.5	+0.4
	baz=58						
H08A	Prairie City	58.23 314	P		P	05 34 37.3	+0.2
	baz=58,SNR=8.7						
O06A	Flanigan	58.25 309	⇓P		P	05 34 37.0	-0.2
	baz=58						
K07A	Rock Creek Ran	58.27 312	⇑P		P	05 34 37.2	-0.1
	baz=58						
N06A	Buffalo Meadow	58.35 310	⇑P		P	05 34 37.2	-0.7
	baz=58						
G08A	Pilot Rock	58.60 315	⇑P		P	05 34 39.4	-0.2
	baz=59						
P05C	Yuba Gap, Truc	58.72 308	⇓P		P	05 34 40.5	0.0
	baz=59						
I07A	Izee	58.73 313	P		P	05 34 40.7	+0.2
	baz=59,SNR=6.3						
LAVA	Lava Cap Winer	58.74 307	⇓P		P	05 34 41.7	+1.0
	baz=59						
R04C	Big Horse Ranc	58.83 307	⇑P		P	05 34 41.9	+0.6
	baz=59						
B09A	Rice	58.83 319	⇑P		P	05 34 40.9	-0.3
	baz=59						
H07A	Lands Inn, Kim	58.87 314	⇓P		P	05 34 41.1	-0.4
	baz=59						
K06A	Valley Falls	59.01 312	⇑P		P	05 34 42.7	+0.2
	baz=59						
J06A	Christmas Vall	59.02 312	⇓P		P	05 34 42.4	-0.1
	baz=59						
G07A	Ruggs Ranch, H	59.09 315	⇑P		P	05 34 42.5	-0.5
	baz=59						
I06A	Prineville	59.20 313	⇓P		P	05 34 43.6	-0.1
	baz=59						
C08A	Higginbotham F	59.25 318	⇓P		P	05 34 43.6	-0.4
	baz=59						
A09A	Danville	59.26 319	⇑P		P	05 34 44.2	+0.1
	baz=59						
L05A	Lakeview	59.31 311	⇑P		P	05 34 45.1	+0.6
	baz=59						
M05C	Lookout	59.43 310	⇓P		P	05 34 45.3	-0.1
	baz=60						
H06A	Lindquist Farm	59.44 314	⇓P		P	05 34 45.9	+0.5
	baz=60						
K05A	Summer Lake	59.47 312	P		P	05 34 46.5	+0.9
	baz=60,SNR=7.0						
B08A	Colville Reser	59.58 318	⇓P		P	05 34 46.3	0.0
	baz=60						
HATC	Hat Creek Radi	59.58 309	⇓P		P	05 34 46.9	+0.4
	baz=60						
SUTB	Sutter Butte	59.61 308	⇑P		P	05 34 46.8	+0.1
	baz=60						
A08A	Turner Farm, O	59.69 319	⇓P		P	05 34 46.5	-0.5
	baz=60						
D07A	Quincy	59.72 317	⇓P		P	05 34 47.2	-0.1
	baz=60						
G06A	Carlson Farm,	59.75 315	⇑P		P	05 34 48.1	+0.5
	baz=60						
J05A	Fort Rock	59.81 312	P		P	05 34 49.5	+1.5
	baz=60,SNR=5.2						
TORD	Torodi Ar. Bea	59.98 83	P		P	05 34 46.5	-3.1
	3.8nm,0.9s,mb4.5,baz=274,slow=7.0,SNR=8.2						
TORD				LR	LR	05 55 05.0	
	comp=Z,71nm,21.6s,baz=355,slow=31						
M04C	Macdoel	60.01 310	P		P	05 34 50.0	+0.7
	baz=60,SNR=5.9						
H05A	Madras	60.05 314	⇑P		P	05 34 50.5	+0.9
	baz=60						
L04A	Klamath Falls	60.10 311	⇑P		P	05 34 50.6	+0.6
	baz=60						
B07A	Winthrop	60.11 318	⇑P		P	05 34 49.3	-0.7
	baz=60						
M03C	McCloud	60.14 310	⇓P		P	05 34 50.1	-0.2
	baz=60						
D06A	Cle Elum	60.30 317	⇓P		P	05 34 51.0	-0.3
	baz=60						
A07A	Ashnola River,	60.42 319	⇓P		P	05 34 52.7	+0.6
	baz=60						
J04A	Umpqua Nationa	60.43 312	⇓P		P	05 34 52.6	+0.3
	baz=60						
F05A	White Salmon	60.45 315	⇓P		P	05 34 52.8	+0.5
	baz=60						
M02C	Callahan	60.70 310	⇓P		P	05 34 53.9	-0.2
	baz=61						
H04A	Detroit Lake	60.73 314	⇑P		P	05 34 54.1	-0.1
	baz=61						
N02C	Big Bar	60.97 309	⇓P		P	05 34 55.8	-0.1
	baz=61						
O01C	Eel River Cons	61.28 308	⇑P		P	05 34 58.7	+0.6
	baz=61						
E04A	Onalaska	61.44 316	⇓P		P	05 34 58.4	-0.6
	baz=62						
C04A	Brinnon	61.82 317	⇑P		P	05 35 01.6	0.0
	baz=62						
F03A	Seaside	61.90 315	⇑P		P	05 35 02.9	+0.8
	baz=62						
YKA	Yellowknife Ar	61.99 335	P		P	05 35 01.2	-1.2
	3.5nm,0.6s,mb4.5,baz=107,slow=7.6,SNR=49						
RES	Resolute Bay	64.03 350	ℯP		P	05 35 15.2	-0.6
DAWY	Dawson	73.15 333	ℯP		P	05 36 12.9	+0.2
IMA2	Indian Mountai	79.10 336	ℯP		P	05 36 46.3	-0.1
WMQ	Urumqi	115.72 25		PKP	PKPdf	05 43 20.5	-4.0
WMQ				PP	PP	05 44 28.5	+1.4
WMQ				PP	PP		
	comp=Z,141nm,5.2s						
WMQ				LR	LR		
	comp=N,1μm,23.8s						
WMQ				LR	LR		
	comp=E,594nm,29.2s						
WMQ				LR	LR		
	comp=Z,527nm,23.8s						
MDJ	Mudanjiang	121.36 352		PKP	PKPdf	05 43 29.8	-5.6
HHC	Hu-ho-hao-te	125.25 8	ℯ	PKP	PKPdf	05 43 37.3	-5.6
HHC				PP	PP	05 45 31.5	-0.5
HHC				PKS		05 47 13.0	
HHC				PP	PP		
	comp=Z,93nm,5.0s						
CD2	Chengdu	133.08 19	ℯ	PKP	PKPdf	05 43 56.0	-2.1
CD2				PP	PP	05 46 26.0	+2.7
CD2				PKS		05 47 31.0	
CD2				PP	PP		
	comp=Z,90nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,22.4s						
CD2				LR	LR		
	comp=Z,110nm,24.6s						
NJ2	Nanjing	134.57 1	ℯ	PKP	PKPdf	05 44 04.3	+3.4
KMI	Kunming	138.01 24		PKP	PKPdf	05 44 05.5	-2.0
GYA	Guiyang	138.13 18	ℯ	PDIF	Pdif	05 41 15.0	-1.8
GYA				PKP	PKPdf	05 44 06.5	-1.1
GYA				PP	PP	05 46 58.0	+2.9
GYA				PKS		05 47 40.8	
GYA				PP	PP		
	comp=Z,90nm,7.4s						
GYA				LR	LR		
	comp=N,120nm,20.4s						
GYA				LR	LR		
	comp=E,140nm,21.7s						
GYA				LR	LR		
	comp=Z,130nm,21.8s						
WRA	Warramunga Arr	164.81 244		PKPab	PKPab	05 45 42.1	-0.8
	comp=Z,1.4nm,0.7s,baz=105,slow=4.1,SNR=7.6						

*ISCJB **29** 05:39:30.9±0.2,4541N×001×11256W±0.002,h10km, mb3.6/3,Error ellipse: s-maj=1.8km s-min=1.6km az=138.4*

*IDC **29** 05:39:31.0±0.7,4541N×11251W,h0km,mb3.4/2, mb1 3.8/7,mb1mx3.6/25,mbtmp3.6/7,ML3.4/5,Error ellipse: s-maj=13.4km s-min=7.3km az=51.0*

*NEIC **29** 05:39:31.0,4534N×11258W,h13km,mb3.9/1, ML3.5(BUT),MW3.7(SLM),After BUT.*

NEIC Felt [IV] at Dillon, [III] at Twin Bridges and [II] at Butte and Whitehall. Felt at Clancy, Darby, Ennis, Florence, Helena, Missoula, Sheridan, Stevensville and Three Forks. Also felt at Salmon, Idaho.

ISC 29 05:39:32.0±0.1,4540N±001×11251W±001,h10km,n190, σ1s09/279,**mb3.6/3,80C-71D,Montana**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DLMT	Dillon	0.07	237		Op ℯPg	Pg	05 39 33.5	-0.7
G15A	Dillon	0.24	176	⇑P		Pg	05 39 35.5	-1.3
	baz=0.2,SNR=1000							
G15A				⇓S		Sg	05 39 38.6	-1.4
	baz=0.2							
F15A	Butte	0.44	2	⇓P		Pg	05 39 41.2	+0.6
	baz=0.5,SNR=1000							
F15A				⇓S		Sg	05 39 48.0	+1.5
	baz=0.5							
MCMT	McKenzie Canyo	0.62	203		ℯPg	Pg	05 39 41.8	-2.2
BOZ	Bozeman (W)	0.67	68		ℯPg	Pg	05 39 44.6	-0.3
BOZ					ℯSg	Sg	05 39 54.3	+0.7
G14A	Jackson	0.69	257	⇓P		Pg	05 39 43.8	-1.5
	baz=0.6							
G14A				⇓S		Sg	05 39 52.4	-1.8
	baz=0.6							
F14A	Wisdom	0.73	305	⇓P		Pg	05 39 45.7	-0.4
	baz=0.7,SNR=1000							
F14A				⇓S		Sg	05 39 55.5	-0.1
	baz=0.7							
QLMT	Earthquake Lak	0.95	126		ℯPg	Pg	05 39 49.2	-1.1
E15A	Deer Lodge	1.03	355	⇑P		Pg	05 39 51.8	+0.1
	baz=1.1,SNR=1000							
E15A				⇓S		Sg	05 40 06.2	+1.1
	baz=1.1							
E14A	Clinton	1.23	326	⇓P		Pn	05 39 54.7	-0.4
	baz=1.2,SNR=1000							
E14A				⇓S		Sb	05 40 11.7	+0.7
	baz=1.2							
G13A	Cobalt	1.25	256	⇓P		Pn	05 39 54.0	-1.5
	baz=1.2,SNR=1000							
G13A				⇑S		Sb	05 40 09.5	-2.4
	baz=1.2							
YMR	Madison River	1.32	123		ℯPn	Pn	05 39 55.9	-0.5
YMR					ℯSn	Sn	05 40 14.6	+0.6
F13A	Darby	1.34	288	⇓P		Pn	05 39 55.9	-0.8
	baz=1.3,SNR=1000							
F13A				⇑S		Sb	05 40 12.5	-1.8
	baz=1.3							
HRY	Holter Researc	1.39	20		ℯPn	Pn	05 39 57.6	+0.1
YNR	Norris Junctio	1.47	117		ℯPn	Pn	05 39 58.8	+0.3
YNR					ℯSn	Sn	05 40 18.1	+0.4
H13A	Challis	1.49	237	P		Pn	05 39 57.6	-1.2
	baz=1.4,SNR=1000							
H13A				⇑S		Sn	05 40 16.4	-2.0
	baz=1.4							
YFT	Old Faithful	1.52	128		ℯPn	Pn	05 39 59.5	+0.3
YFT					ℯSn	Sn	05 40 19.6	+0.5
E13A	Victor	1.57	312	⇑P		Pn	05 39 59.2	-0.6
	baz=1.6,SNR=1000							
E13A				⇑S		Sn	05 40 21.1	+1.0
	baz=1.6							
CHMT	Chamberlain Mo	1.60	341		ℯPn	Pn	05 40 00.3	+0.1
D15A	Lincoln	1.64	360	P		Pn	05 40 01.2	+0.4
	baz=1.7,SNR=1000							
D15A				⇑S		Sn	05 40 25.7	+3.7
	baz=1.7							
MSO	Missoula	1.74	326		ℯPn	Pn	05 40 01.3	-0.9
MSO					ℯPg	Pg	05 40 04.4	-1.0
MSO					ℯSn	Sn	05 40 25.9	+1.5
D14A	Greenough	1.82	338	⇓P		Pn	05 40 03.2	0.0
	baz=1.8,SNR=152							
D14A				⇓S		Sn	05 40 29.9	+3.5
	baz=1.8							
FLWY	Flagg Ranch	1.84	135		ℯPn	Pn	05 40 04.3	+0.6
FLWY					ℯSg	Sg	05 40 31.7	+0.5
H12A	Diamond D Ranc	1.87	244	⇓P		Pn	05 40 03.0	-1.0
	baz=1.8,SNR=1000							
H12A				⇓S		Sn	05 40 26.2	-1.4
	baz=1.8							
I13A	Wildhorse Cree	1.88	218	⇓P		Pn	05 40 02.9	-1.2
	baz=1.8,SNR=1000							
I13A				⇓S		Sn	05 40 27.4	-0.4
	baz=1.8							
IMW	Indian Meadow	1.88	143		ℯPn	Pn	05 40 04.5	+0.5
IMW					ℯSg	Sg	05 40 31.4	-0.9
F12A	Elk City	1.96	281	P		Pn	05 40 04.7	-0.5
	baz=1.9,SNR=1000							
F12A				⇑S		Sn	05 40 31.4	+1.5
	baz=1.9							
GCMT	Greycliff	2.04	78		ℯPn	Pn	05 40 06.9	+0.7
GCMT					ℯSg	Sg	05 40 36.4	-0.9
DCID1	Drake Creek	2.04	152		ℯPn	Pn	05 40 07.0	+0.7
DCID1					ℯSg	Sg	05 40 35.6	-2.0
MOOW	Moose Ponds	2.08	142		ℯPn	Pn	05 40 07.6	+0.7
MOOW					ℯSn	Sn	05 40 35.1	+2.3
D13A	Huson	2.17	322	P		Pn	05 40 08.0	-0.1
	baz=2.2,SNR=85							
D13A				⇑Sb		Sb	05 40 40.4	+2.3
	baz=2.2							
TPAW	Teton Pass	2.21	149		ℯPn	Pn	05 40 10.0	+1.3
LOHW	Long Hollow	2.25	142		ℯPn	Pn	05 40 10.2	+1.0
LOHW					ℯSg	Sg	05 40 40.8	-3.4
HLID	Hailey	2.29	217		ℯPn	Pn	05 40 08.8	-0.9
RLMT	Red Lodge	2.31	96		ℯPn	Pn	05 40 11.5	+1.5
RLMT					ℯSg	Sg	05 40 44.7	-1.4
SNOW	Snow King Moun	2.31	146		ℯPn	Pn	05 40 11.6	+1.6
SNOW					ℯSg	Sg	05 40 42.9	-3.3
J13A	Cove Ranch, Pi	2.33	211	⇑P		Pn	05 40 09.7	-0.6
	baz=2.3,SNR=665							
J13A				⇓S		Sn	05 40 39.0	0.0
	baz=2.3							
REDW	Red Top Meadow	2.36	149		ℯPn	Pn	05 40 11.9	+1.1
REDW					ℯSg	Sg	05 40 44.6	-3.1
C14A	Swan Lake	2.52	341	⇑P		Pn	05 40 13.1	+0.2
	baz=2.5							
C14A				⇓Sb		Sb	05 40 50.9	+2.7
	baz=2.5							
D12A	Red Ives Fores	2.57	311	⇑P		Pn	05 40 13.3	-0.4
	baz=2.6							
D12A				⇑Sb		Sb	05 40 52.1	+2.3
	baz=2.6							
H11A	Donnelly	2.58	256	⇑P		Pn	05 40 12.8	-1.0
	baz=2.5,SNR=307							
H11A				⇑Sb		Sb	05 40 50.7	+0.7
	baz=2.5							
F11A	Grangeville	2.60	282	⇑P		Pn	05 40 13.3	-0.8
	baz=2.6,SNR=54							
F11A				⇑Sb		Sb	05 40 51.1	+0.5
	baz=2.6							
G11A	Walters Elk Ra	2.65	271	⇑P		Pn	05 40 13.7	-1.0
	baz=2.6,SNR=286							
G11A				⇑Sb		Sb	05 40 53.0	+1.1
	baz=2.6							
C13A	Hot Springs	2.69	329	⇓P		Pn	05 40 15.2	0.0
	baz=2.7,SNR=90							
C13A				⇑Sb		Sb	05 40 55.6	+2.5
	baz=2.7							
E11A	Bogner Ranch,	2.75	292	P		Pn	05 40 15.2	-0.9
	baz=2.7,SNR=116							
E11A				⇑Sg		Sg	05 40 56.3	-4.1
	baz=2.7							
AHID	Auburn Hatcher	2.82	158		ℯPn	Pn	05 40 19.1	+2.0
J12A	Stokes Ranch,	2.84	222	⇓P		Pn	05 40 16.5	-0.8
	baz=2.8,SNR=208							
J12A				⇑Sb		Sb	05 40 56.9	-0.6
	baz=2.8							
K14A	Jones Ranch, D	2.90	190	⇑P		Pn	05 40 17.3	-0.8
	baz=2.8,SNR=66							
K14A				⇑Sb		Sb	05 40 58.1	-1.0
	baz=2.8							
K13A	Stover Farm, H	2.98	203	⇑P		Pn	05 40 18.5	-0.7
	baz=2.9,SNR=26							
K13A				⇓Sb		Sb	05 41 02.1	+0.7
	baz=2.9							
MFID	Camas Ranch	3.10	231	⇑P		Pn	05 40 20.1	-0.8
	baz=3.0,SNR=94							
MFID				⇑Sb		Sb	05 41 05.3	+0.4
	baz=3.0							
H10A	Noah's Angus R	3.11	256	P		Pn	05 40 19.2	-1.8
	baz=3.1,SNR=58							
H10A				⇑Sb		Sb	05 41 06.0	+0.6
	baz=3.1							
EGMT	Eagleton	3.24	35		ℯPn	Pn	05 40 23.5	+0.7
G10A	Bishop Farm, J	3.25	270	P		Pn	05 40 22.1	-0.8
	baz=3.2,SNR=197							
G10A				⇑Sb		Sb	05 41 10.4	+1.0
	baz=3.2							
K12A	Draper Farm, C	3.26	213	⇓P		Pn	05 40 22.3	-0.8
	baz=3.2,SNR=49							
K12A				⇑Sb		Sb	05 41 09.6	0.0
	baz=3.2							
B13A	Whitefish	3.26	336	⇓P		Pn	05 40 23.3	+0.2
	baz=3.3,SNR=14							
B13A				⇓Sb		Sb	05 41 13.6	+4.0
	baz=3.3							
I10A	Payette	3.33	248	⇑P		Pn	05 40 23.2	-0.8
	baz=3.3,SNR=9.7							
I10A				⇓Sb		Sb	05 41 12.6	+1.1
	baz=3.3							
F10A	Beach Ranch, E	3.35	281	⇓P		Pn	05 40 24.1	-0.3
	baz=3.3,SNR=126							
F10A				⇑Sb		Sb	05 41 14.2	+1.9
	baz=3.3							
BW06	Boulder Array	3.39	140		ℯPn	Pn	05 40 28.8	+4.0
PDAR	Pinedale Array	3.39	140	Pn		Pn	05 40 29.1	+4.3
	1.8nm,0.3s,baz=329,slow=9.8,SNR=51							
PDAR					Lg		05 41 15.1	
	7.4nm,0.3s,baz=292,slow=24,SNR=9.1							
E10A	Myers Farm, Un	3.39	290	⇓P		Pn	05 40 24.3	-0.5
	baz=3.4							
E10A				⇓Sb		Sb	05 41 15.3	+2.1
	baz=3.4							
BMO	Blue Mountains	3.44	263		ℯPn	Pn	05 40 23.8	-1.7
BMO					ℯPg	Pg	05 40 32.7	-5.1
BMO					ℯSg	Sg	05 41 18.3	-4.0
L13A	Double Diamond	3.47	198	⇓P		Pn	05 40 25.4	-0.6
	baz=3.4							
L13A				⇑Sb		Sb	05 41 15.4	-0.2
	baz=3.4							
HVU	Hansel Valley	3.62	183		ℯPn	Pn	05 40 24.1	-4.0
HVU					ℯPg	Pg	05 40 34.9	-6.5
HVU					ℯSg	Sg	05 41 22.3	-6.0
J10A	Berg Farm, Mel	3.63	239	⇑P		Pn	05 40 27.4	-0.8
	baz=3.6,SNR=30							
J10A				⇑Sb		Sb	05 41 21.9	+1.6
	baz=3.6							
K11A	Parker Ranch,	3.65	225	⇑P		Pn	05 40 27.8	-0.7
	baz=3.6,SNR=16							
K11A				⇓Sb		Sb

baz=3.7
H09A Durkee 3.73 260 ⇑P Pn 05 40 28.4 -1.1
baz=3.7,SNR=18
H09A ⇑Sb Sb 05 41 26.2 +3.1
baz=3.7
A13A Flathead Natio 3.76 341 ⇑P Pn 05 40 30.8 +0.8
baz=3.8
A13A ⇓Sb Sb 05 41 29.2 +5.1
baz=3.8
WALA Waterton Lakes 3.78 346 *e*Pn Pn 05 40 30.9 +0.7
WALA *e*Sg Sg 05 41 30.5 -2.9
F09A S2 Ranch, Elgi 3.81 277 ⇑P Pn 05 40 30.2 -0.4
baz=3.8,SNR=14
F09A ⇑Sb Sb 05 41 28.1 +2.8
baz=3.8
HWUT Hardware Ranch 3.85 169 *e*Pn Pn 05 40 35.8 +4.5
M15A Larsen Ranch, 3.94 179 ⇓Sb Sb 05 41 29.5 +0.4
baz=3.9
M14A Sheep Mountain 3.94 189 ⇑P Pn 05 40 32.2 -0.3
baz=3.9
M14A ⇑Sb Sb 05 41 30.0 +0.8
baz=3.9
I09A Lost Marbles R 3.99 251 P Pn 05 40 32.4 -0.8
baz=3.9,SNR=21
I09A ⇓Sb Sb 05 41 32.7 +2.0
baz=3.9
B11A Sandpoint 4.03 320 ⇓P Pn 05 40 34.0 +0.4
baz=4.0
B11A ⇑Sb Sb 05 41 36.5 +4.9
baz=4.0
LNOR Lincton Mounta 4.08 279 P Pn 05 40 34.7 +0.4
E09A Wood Farm, Sta 4.08 288 ⇓P Pn 05 40 34.4 0.0
baz=4.1,SNR=7.8
E09A ⇑Sb Sb 05 41 36.7 +3.4
baz=4.1
K10A MacKenzie Ranc 4.09 232 ⇓P Pn 05 40 34.2 -0.4
baz=4.0,SNR=20
K10A ⇑Sb Sb 05 41 35.5 +2.0
baz=4.0
SPUT South Promonto 4.09 179 *e*Pn Pn 05 40 33.2 -1.3
SPUT *e*Pg Pg 05 40 45.2 -5.2
SPUT *e*Sg Sg 05 41 32.4 -11
C10A Spilker Farm, 4.10 308 ⇑P Pn 05 40 34.1 -0.5
baz=4.1,SNR=9.9
C10A ⇓Sb Sb 05 41 38.0 +4.4
baz=4.1
A12A Yaak River Ran 4.13 330 ⇑Sb Sb 05 41 39.4 +4.7
baz=4.2
M13A Montello 4.21 197 ⇓Sb Sb 05 41 38.0 +0.9
baz=4.2
NEW Newport 4.27 314 *e*Pn Pn 05 40 36.0 -1.0
NEW *e*Pg Pg 05 40 51.1 -2.6
NEW *e*Sg Sg 05 41 43.9 -5.1
NEW Newport 4.27 314 Pn Pn 05 40 36.9 0.0
3.7nm,0.3s,baz=133,slow=12,SNR=31
NEW Pg Pg 05 40 49.9 -3.8
9.2nm,0.3s,baz=134,slow=14,SNR=14
NEW Lg 05 41 44.2
51nm,0.3s,baz=56,slow=23,SNR=21
J09A Fry Pan Ranch, 4.28 243 P Pn 05 40 36.7 -0.4
baz=4.2,SNR=61
M12A Wells 4.35 205 ⇑Sb Sb 05 41 43.5 +2.5
baz=4.3
D09A Jones Farm, Ri 4.35 294 ⇓P Pn 05 40 37.3 -0.8
baz=4.3,SNR=7.2
D09A ⇓Sb Sb 05 41 45.1 +4.1
baz=4.3
L10A Juniper Basin 4.39 222 ⇑P Pn 05 40 38.5 -0.1
baz=4.3,SNR=40
L10A ⇓Sb Sb 05 41 45.3 +3.2
baz=4.3
A11A Hall Mountain, 4.42 325 ⇓P Pn 05 40 39.6 +0.6
baz=4.4,SNR=9.8
H08A Prairie City 4.46 261 ⇓P Pn 05 40 39.0 -0.6
baz=4.4,SNR=375
H08A ⇑S Sn 05 41 29.5 -2.0
baz=4.4
BGU Big Grassy Mou 4.49 185 *e*Pn Pn 05 40 43.8 +3.8
BGU *e*Sg Sg 05 41 48.1 -8.0
N15A Stansbury Isla 4.51 180 ⇑Sb Sb 05 41 49.3 +3.8
baz=4.5
G08A Pilot Rock 4.55 271 ⇑P Pn 05 40 40.1 -0.7
baz=4.5
G08A ⇓S Sn 05 41 32.5 -1.2
baz=4.5
LAO LASA Array 4.56 71 *e*Pn Pn 05 40 40.4 -0.6
LAO *e*Pg Pg 05 40 55.6 -3.8
LAO *e*Sg Sg 05 41 57.5 -0.9
YPT Yellepit 4.56 280 P Pn 05 40 41.6 +0.6
I08A Drewsey 4.57 253 ⇑P Pn 05 40 40.4 -0.7
baz=4.5,SNR=13
I08A ⇓S Sn 05 41 33.6 -0.7
baz=4.5
N14A Grayback Hills 4.57 186 ⇑Sb Sb 05 41 49.6 +2.2
baz=4.5
K09A Rome 4.63 236 ⇑P Pn 05 40 41.7 -0.1
baz=4.6,SNR=17
M11A Holland Ranch, 4.63 212 ⇓P Pn 05 40 42.4 +0.4
baz=4.6
M11A ⇑Sb Sb 05 41 51.6 +2.5
baz=4.6
C09A Chrisman Ranch 4.64 303 ⇓P Pn 05 40 42.1 0.0
baz=4.6
E08A Dider Farm, El 4.70 286 ⇑P Pn 05 40 42.2 -0.6
baz=4.7
N13A Wendover, West 4.71 196 ⇑P Pn 05 40 43.0 0.0
baz=4.7
N13A ⇓Sb Sb 05 41 53.0 +1.7
baz=4.7
CTU Camp Tracy 4.74 173 *e*Pn Pn 05 40 47.6 +4.2
D08A Wollman Farm, 4.75 293 ⇑P Pn 05 40 42.9 -0.6
baz=4.7
D08A ⇑Sb Sb 05 41 56.1 +3.7
baz=4.7
NOQ North Oquirrh 4.75 176 *e*Pn Pn 05 40 48.6 +4.9
OT3 Othello 3 4.85 288 P Pn 05 40 44.5 -0.4
JLU Jordanelle 4.86 170 *e*Pn Pn 05 40 48.7 +3.6
M10A I.L. Ranch, Tu 4.86 219 ⇓P Pn 05 40 45.1 0.0
baz=4.8
M10A ⇓Sb Sb 05 41 58.5 +2.8
baz=4.8
B09A Rice 4.90 310 P Pn 05 40 45.0 -0.7
baz=4.9,SNR=28
N12A Clover Valley, 4.91 203 ⇑P Pn 05 40 45.7 -0.1
baz=4.9
A10A Northport 4.97 318 ⇓P Pn 05 40 46.4 -0.1
baz=5.0
LOCW Locke Island 4.99 288 P Pn 05 40 46.5 -0.4
HAWA Hanford 5.00 284 *e*Pn Pn 05 40 46.1 -0.9
HAWA *e*Sg Sg 05 42 06.5 -5.9
L09A Wilkinson Ranc 5.04 230 ⇓P Pn 05 40 47.2 -0.4
baz=5.0
RSW Rattlesnake Hi 5.04 284 P Pn 05 40 47.4 -0.2
G07A Ruggs Ranch, H 5.05 271 ⇓P Pn 05 40 47.1 -0.6
baz=5.0,SNR=45
K08A Mann Creek Ran 5.07 240 ⇑P Pn 05 40 47.7 -0.2
baz=5.0,SNR=28
H07A Lands Inn, Kim 5.07 263 ⇑P Pn 05 40 47.5 -0.4
baz=5.0
DAU Daniels Canyon 5.07 169 *e*Pn Pn 05 40 52.5 +4.5
PRW Prosser 5.08 282 P Pn 05 40 48.2 +0.1
C08A Higginbotham F 5.10 300 P Pn 05 40 47.4 -0.9
baz=5.1,SNR=13
SNIWA Snively Ranch 5.10 285 P Pn 05 40 48.2 -0.2
GBB Gable Butte 5.10 286 P Pn 05 40 48.0 -0.4
BENWA Benson Ranch 5.15 285 P Pn 05 40 48.8 -0.3
I07A Izee 5.15 258 P Pn 05 40 48.9 -0.2
baz=5.1,SNR=36
MDW Midway 5.19 286 P Pn 05 40 49.3 -0.4
DUG Dugway 5.21 183 *e*Pn Pn 05 40 53.7 +3.8
F07A Phinny Hill Vi 5.22 278 ⇑P Pn 05 40 50.1 0.0
baz=5.2
J07A Hines 5.28 250 ⇑P Pn 05 40 50.7 -0.1
baz=5.2,SNR=11
L08A Fields 5.30 235 ⇓P Pn 05 40 51.3 +0.1
baz=5.2
WVOR Wild Horse Val 5.33 238 *e*Pn Pn 05 40 51.3 -0.2
51nm,0.8s
WVOR *e*Pg Pg 05 41 06.8 -7.2
WVOR *e*Sg Sg 05 42 19.4 -3.6
M09A Marrel Ranch, 5.36 224 ⇑P Pn 05 40 52.7 +0.7
baz=5.3
O12A Currie 5.39 199 ⇓P Pn 05 40 53.0 +0.7
baz=5.3
MPU Maple Canyon 5.42 173 *e*Pn Pn 05 40 57.0 +4.2
11nm,0.6s
NLU North Lily Min 5.45 176 *e*Pn Pn 05 40 54.4 +1.2

B08A Colville Reser 5.53 305 P Pn 05 40 53.5 -0.8
baz=5.5,SNR=14
K07A Rock Creek Ran 5.56 243 ⇓P Pn 05 40 54.6 -0.1
baz=5.5,SNR=26
H06A Lindquist Farm 5.58 266 ⇓P Pn 05 40 54.4 -0.6
baz=5.5,SNR=37
I06A Prineville 5.68 258 ⇓P Pn 05 40 55.6 -0.7
baz=5.6
C07A Waterville 5.69 296 ⇓P Pn 05 40 55.8 -0.7
baz=5.7,SNR=11
G06A Carlson Farm, 5.73 271 P Pn 05 40 56.4 -0.6
baz=5.7,SNR=27
EBG Ellensburg 5.80 288 P Pn 05 40 58.1 +0.1
F06A Goldendale 5.82 277 ⇓P Pn 05 40 58.2 -0.1
baz=5.8
A08A Turner Farm, O 5.82 310 P Pn 05 40 57.7 -0.6
baz=5.8,SNR=12
M08A Happy Creek Ra 5.82 229 ⇑P Pn 05 40 58.5 +0.2
baz=5.8
J06A Christmas Vall 5.89 251 ⇓P Pn 05 40 59.1 -0.1
baz=5.8,SNR=49
L07A Adell 5.99 238 ⇓P Pn 05 41 00.9 +0.2
baz=5.9,SNR=9.3
E06A Yakima 6.01 284 P Pn 05 41 00.7 -0.2
baz=6.0,SNR=96
B07A Winthrop 6.04 303 ⇓P Pn 05 41 00.8 -0.5
baz=6.0
D06A Cle Elum 6.05 290 P Pn 05 41 01.5 +0.1
baz=6.0,SNR=14
K06A Valley Falls 6.15 248 ⇑P Pn 05 41 02.9 +0.1
baz=6.1
G05A Wamic 6.21 272 P Pn 05 41 03.3 -0.3
baz=6.2,SNR=19
H05A Madras 6.22 266 ⇓P Pn 05 41 03.4 -0.4
baz=6.2
F05A White Salmon 6.29 278 ⇑P Pn 05 41 04.7 0.0
baz=6.2
M07A Soldier Meadow 6.29 233 ⇓P Pn 05 41 05.2 +0.4
baz=6.2
SRU San Rafael 6.46 166 *e*Pn Pn 05 41 10.6 +3.6
DGMT Dagmar 6.47 59 *e*Pn Pn 05 41 07.6 +0.4
A07A Ashnola River, 6.48 307 ⇓P Pn 05 41 07.4 +0.1
baz=6.5
E05A Randle 6.55 283 ⇑P Pn 05 41 08.1 -0.2
baz=6.5,SNR=13
PHWY Pilot Hill 6.57 126 *e*Pn Pn 05 41 10.1 +1.5
J05A Fort Rock 6.60 254 ⇑P Pn 05 41 09.3 +0.3
baz=6.5
MOD Modoc 6.64 241 *e*Pn Pn 05 41 09.3 -0.3
D05A Enumclaw 6.80 289 ⇑P Pn 05 41 12.1 +0.3
baz=6.8
MSU Marysvale 6.89 178 *e*Pn Pn 05 41 19.6 +6.7
H04A Detroit Lake 6.89 267 P Pn 05 41 13.1 +0.1
baz=6.8,SNR=13
L05A Lakeview 6.90 244 ⇓P Pn 05 41 13.3 +0.3
baz=6.8
M06C Likely Place G 7.17 237 ⇑P Pn 05 41 17.3 +0.6
baz=7.1
SMCO Snowmass 7.45 145 *e*Pn Pn 05 41 22.2 +1.5
ISCO Idaho Springs 7.56 135 *e*Pn Pn 05 41 25.6 +3.4
H03A Soap Creek Ran 7.67 268 ⇑P Pn 05 41 24.1 +0.4
baz=7.6
EDM Edmonton 7.85 356 *e*Pn Pn 05 41 25.0 -1.1
NVAR Mina Array Bea 8.19 214 Pn Pn 05 41 33.6 +2.8
NVAR Pg Pn 05 41 54.7 +24
NVAR Mina Array Bea 8.19 214 Pn Pn 05 41 33.6 +2.8
0.3nm,0.3s,baz=23,slow=13,SNR=4.4
NVAR Pg Pn 05 41 54.7 +24
0.4nm,0.3s,baz=29,slow=15,SNR=3.8
MVCO Mesa Verde 8.72 158 *e*Pn Pn 05 41 40.5 +2.4
ECSD EROS,Sioux Fal 11.47 93 *e*Pn Pn 05 42 14.7 -1.0
FFC Flin Flon 11.52 32 *e*Pn Pn 05 42 15.1 -1.2
CBKS Cedar Bluff 11.54 120 *e*Pn Pn 05 42 17.3 +0.6
AGMN Agassiz Refuge 11.76 70 *e*Pn Pn 05 42 17.2 -2.5
ULM Lac du Bonnet 12.18 61 Pn Pn 05 42 22.0 -3.4
ULM Pg Pn 05 43 13.1 +48
ULM Lg 05 45 47.0
ULM Lac du Bonnet 12.18 61 Pn Pn 05 42 22.0 -3.4
0.6nm,0.3s,baz=254,slow=10,SNR=8.4
ULM Pg Pn 05 43 13.1 +48
0.8nm,0.3s,baz=237,slow=17,SNR=3.1
ULM Lg 05 45 47.0
0.8nm,0.3s,baz=159,slow=19,SNR=3.8
MNTX Cornudas Mount 14.77 155 *e*P Pn 05 43 09.4 +8.7
WMOK Wichita Mounta 14.94 131 *e*P Pn 05 43 03.9 +0.8
5.8nm,0.8s
YKA Yellowknife Ar 17.17 357 Pn Pn 05 43 27.8 -3.9
0.1nm,0.3s,baz=176,slow=13,SNR=8.9
WVT Waverly 20.80 108 *e*P P 05 44 13.2 0.0
4.7nm,0.9s
LRAL Lakeview Retre 23.20 113 *e*P P 05 44 39.9 +1.0
17nm,1.3s,mb4.3
INK Inuvik 25.40 342 P P 05 44 59.8 +0.7
0.5nm,0.9s,mb3.0,baz=149,slow=5.9,SNR=2.9
SONM Songino Array 81.08 335 P P 05 51 48.9 +1.9
0.6nm,0.9s,mb3.5,baz=22,slow=4.7,SNR=3.4

IDC 29 05:40:58.6±3.1, 3411S×17882W, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.8/13, mbtmp3.9/3, ML3.8/1, Error ellipse: s-maj=75.9km s-min=36.6km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.29**	**217**	Pn	Pn	05 42 19.4	+0.7
	3.0nm,0.3s,baz=156,slow=10,SNR=14						
URZ				Sn	Sn	05 43 19.3	-1.1
	2.8nm,0.3s,baz=151,slow=19,SNR=7.1						
ASAR	**Alice Springs**	**42.36**	**271**	P	P	05 48 55.0	+0.4
	0.7nm,0.6s,baz=111,slow=7.5,SNR=8.1						
WRA	**Warramunga Arr**	**43.68**	**276**	P	P	05 49 04.9	-0.5
	0.3nm,0.3s,baz=120,slow=7.6,SNR=4.7						
FINES	**FINESS Array B**	**148.34**	**337**	PKPbc	PKPbc	06 00 45.2	-0.8
	1.5nm,0.8s,baz=69,slow=5.1,SNR=5.5						

*IDC **29** 05:48:37.9±1.2, 938N×12560E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.8/18, mbtmp3.7/6, Error ellipse: s-maj=68.3km s-min=26.0km az=71.0*
*ISCJB **29** 05:48:41.9±0.8, 944N×004×12549E±005, h31km±6km, mb3.7/6, Error ellipse: s-maj=8.6km s-min=6.7km az=177.5*
*MAN **29** 05:48:41, 940N×12533E, h1km, mb4.9, ML3.8, MS3.8*
MAN INTENSITY I - SURIGAO CITY.

ISC 29 05:48:41.6±1.0, 939N±004×12547E±005, h16km±6km, n21, σ1ᵍ15/30, mb3.7/6, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.39**	**3**	*e*P	**Pg**	**05 48 49.0**	**-0.6**
SCPH				*e*S	**Sg**	**05 48 55.6**	**+0.6**
MSLP	**Maasin**	**0.96**	**321**	*e*P	**Pb**	**05 48 58.2**	**-1.5**
MSLP				*e*S	**Sb**	**05 49 12.1**	**0.0**
CGP	**Cagayan de Oro**	**1.20**	**220**	⇑*i*P	**Pn**	**05 49 03.5**	**-0.1**
CGP				*i* S	**Sb**	**05 49 19.8**	**+0.6**
BIPH	**Bislig**	**1.48**	**144**	*e*P	**Pn**	**05 49 07.5**	**-0.1**
BIPH				*i* S	**Sn**	**05 49 30.0**	**+3.4**
BUKP	**Musuan**	**1.55**	**195**	*e*P	**Pn**	**05 49 09.0**	**+0.5**
BUKP				*e*S	**Sn**	**05 49 34.2**	**+5.9**
TBP	**Tagbilaran**	**1.61**	**281**	*e*P	**Pn**	**05 49 08.3**	**-1.0**
TBP				*e*S	**Sn**	**05 49 23.8**	**-6.1**
LLP	**Lapu-Lapu**	**1.75**	**302**	⇓*e*P	**Pn**	**05 49 10.2**	**-1.0**
LLP				*e*S	**Sn**	**05 49 29.4**	**-3.7**
PLP	**Palo**	**1.83**	**345**	*i* P	**Pn**	**05 49 13.0**	**+0.6**
PLP				*e*S	**Sn**	**05 49 37.4**	**+2.2**
SNPH	**Sibulan**	**2.20**	**269**	*e*P	**Pn**	**05 49 18.0**	**+0.5**
DCPH	**Dipolog City**	**2.24**	**249**	⇑*e*P	**Pn**	**05 49 17.4**	**-0.5**
DCPH				*e*S	**Sn**	**05 49 45.5**	**+0.3**
PAGZ	**Pagadian**	**2.57**	**234**	*e*P	**Pn**	**05 49 23.3**	**+0.8**
GUIM	**Jordan**	**3.09**	**294**	*e*P	**Pn**	**05 49 29.8**	**+0.1**
CNP	**Catarman**	**3.20**	**346**	*e*P	**Pn**	**05 49 34.0**	**+2.8**
PVCP	**Virac**	**4.38**	**343**	*e*P	**Pn**	**05 49 55.0**	**+7.6**
OTRP	**Odiongan**	**4.50**	**311**	*e*P	**Pn**	**05 49 51.3**	**+2.3**
ASAR	**Alice Springs**	**33.87**	**166**	P	**P**	**05 55 22.4**	**-1.1**
	0.4nm,0.5s,mb3.6,baz=350,slow=7.0,SNR=7.3						
SONM	**Songino Array**	**41.58**	**341**	P	**P**	**05 56 29.0**	**+0.5**
	0.2nm,0.5s,mb3.0,baz=157,slow=4.1,SNR=2.8						
MKAR	**Makanchi Array**	**52.26**	**324**	P	**P**	**05 57 51.7**	**-0.3**
	0.7nm,0.6s,mb3.6,baz=122,slow=8.0,SNR=8.5						
INK	**Inuvik**	**85.39**	**21**	P	**P**	**06 01 16.4**	**-1.4**
	0.6nm,0.5s,mb4.0,baz=271,slow=2.6,SNR=6.8						
FINES	**FINESS Array B**	**86.29**	**332**	P	**P**	**06 01 20.1**	**-2.3**
	0.6nm,0.5s,mb4.0,baz=90,slow=7.6,SNR=3.5						

YKA Yellowknife Ar 94.88 24 P **P** 06 02 01.5 -1.1
0.2nm,0.5s,mb3.8,baz=308,slow=5.0,SNR=4.5

*NIED **29** 05:52:00, 3080N×14190E, h5km, Mw5.1 Best double couple: M0 4.41000×10^16 NP1:φs359.00000°, δ44.00000°, λ84.00000°. NP2:φs187.00000°, δ46.00000°, λ96.00000°.*
*JMA **29** 05:52:51.6±0.1, 3082N×14188E, h25km, M5.1*
*BJI **29** 05:52:53.0, 3097N×14189E, h43km, mB5.0, mb4.8, Ms4.9, Msz4.7*
*MOS **29** 05:52:53.8±0.9, 3092N×14180E, h32km, mb5.4/71, MS4.8/53, Error ellipse: s-maj=8.8km s-min=4.3km az=109.4*
*ISCJB **29** 05:52:54.4±0.1, 3088N±002×14172E±002, h37km, mb5.2/159, MS4.8/151, Error ellipse: s-maj=3.2km s-min=2.8km az=136.5*
*IDC **29** 05:52:55.6±1.8, 3084N×14188E, h39km±15km, mb4.7/24, mb1 4.7/29, mb1mx4.7/30, mbtmp4.7/29, ML4.2/5, MS4.6/21, Ms1 4.6/21, ms1mx4.5/25, Error ellipse: s-maj=14.7km s-min=8.6km az=97.0*
*GCMT **29** 05:52:56.2±0.2, 3087N×14208E, h12km, MW5.2/83, Moment Tensor Solution. s58,c85; s83,c146; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr 5.78±.10; Mθθ 0.05±.09; Mφφ -5.83±.10; Mrθ 0.01±.31; Mrφ 0.17±.08; Mθφ 4.72±.28; Best double couple: Mo 7.48400×10^16 NP1:φs177.00000°, δ25.00000°, λ88.00000°. NP2: φs359.00000°, δ65.00000°, λ91.00000°. Principal axes: T 7.4570, Plg70.0000°, Azm271.0000°; N 0.0500, Plg1.0000°, Azm179.0000°; P -7.5100, Plg20.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*SZGRF **29** 05:52:56.8, 3103N×14144E, h33km, mb5.4, Southeast of Honshu, Japan*
*NEIC **29** 05:52:56.2±0.1, 3089N×14178E, mb5.1/90, MS4.8/109, MW5.0(NIED), Error ellipse: s-maj=3.8km s-min=3.2km az=156.0*

ISC 29 05:52:56.3±0.1, 3090N±002×14175E±003, h39km, h39km±.8km:pP-P, n517, σ1ᵍ01/495, mb5.2/159, MS4.8/151, 27C-19D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.75**	**324**	P	**Pn**	**05 53 37.2**	**-0.7**
JHJ2				*e*S	**Sn**	**05 54 12.2**	**+2.4**
JHJ	**Hachijo jima 2**	**2.77**	**323**	Pn	**Pn**	**05 53 37.6**	**-0.6**
	57nm,0.3s,baz=185,slow=16,SNR=10						
JHJ				Sn	**Sn**	**05 54 10.8**	**+0.5**
	168nm,0.3s,baz=91,slow=21,SNR=10						
JHJ				LR	LR	05 54 39.6	
	comp=Z,8μm,20.9s,baz=238,slow=36						
BSO1	**Boso 1**	**3.79**	**350**	P	**Pn**	**05 53 51.9**	**-0.4**
BSO1				*e*S	**Sn**	**05 54 34.0**	**-1.6**
CBIJ	**Chichi jima**	**3.81**	**174**	Pn	**Pn**	**05 53 49.7**	**-2.8**
	146nm,0.3s,baz=320,slow=13,SNR=47						
CBIJ				Sn	**Sn**	**05 54 32.1**	**-4.0**
	229nm,0.3s,baz=100,slow=23,SNR=5.5						
BSO3	**Boso 3**	**4.02**	**345**	P	**Pn**	**05 53 55.0**	**-0.4**
BSO4	**Boso 4**	**4.24**	**344**	P	**Pn**	**05 53 59.8**	**+1.4**
JOD2	**Odawara 2**	**4.89**	**333**	P	**Pn**	**05 54 07.0**	**-0.3**
JOD2				*e*S	**Sn**	**05 55 02.9**	**+0.3**
JYT	**Yasato**	**5.47**	**347**	P	**Pn**	**05 54 15.7**	**+0.5**
JYT				*e*S	**Sn**	**05 55 15.6**	**-1.2**
JNY	**Yasuok**	**5.51**	**325**	P	**Pn**	**05 54 17.7**	**+1.9**
JRY	**Ryogami san**	**5.63**	**336**	P	**Pn**	**05 54 17.8**	**+0.4**
JRY				*e*S	**Sn**	**05 55 24.6**	**+3.8**
JAO	**Obara**	**5.76**	**320**	P	**Pn**	**05 54 21.6**	**+2.4**
JAO				*e*S	**Sn**	**05 55 32.5**	**+8.5**
JHO	**Hitachi**	**5.78**	**351**	P	**Pn**	**05 54 16.6**	**-2.9**
JHO				*e*S	**Sn**	**05 55 19.7**	**-4.7**
MJAR	**Matsushiro Arr**	**6.35**	**333**	Pn	**Pn**	**05 54 27.3**	**0.0**
	19nm,0.3s,baz=155,slow=11,SNR=211						
MJAR				Sn	**Sn**	**05 55 36.0**	**-2.5**
	baz=149,slow=11,SNR=2.5						
MAJO	**Matsushiro**	**6.35**	**333**	*e*Pn	**Pn**	**05 54 27.4**	**0.0**
MAJO				*e*Sn	**Sn**	**05 55 42.0**	**+3.4**
MAT	**Matsushiro**	**6.35**	**333**	P	**Pn**	**05 54 27.3**	**-0.1**
MAT				S	**Sn**	**05 55 39.6**	**+1.0**
MAT	**Matsushiro**	**6.35**	**333**	P	**Pn**	**05 54 27.1**	**-0.3**
MAT				*e*S	**Sn**	**05 55 40.6**	**+2.0**
JWT	**Wachi**	**6.89**	**311**	P	**Pn**	**05 54 36.6**	**+1.9**
JMM	**Marumori**	**6.99**	**354**	P	**Pn**	**05 54 33.3**	**-2.8**
JMM				*e*S	**Sn**	**05 55 47.0**	**-7.3**
JAD	**Aida**	**7.54**	**304**	P	**Pn**	**05 54 46.7**	**+3.0**
JSD	**Sado**	**7.68**	**339**	P	**Pn**	**05 54 43.8**	**-1.7**
JMK	**Ichinoseki**	**8.04**	**357**	P	**Pn**	**05 54 47.2**	**-3.3**
JMK				*e*S	**Sn**	**05 56 12.0**	**-8.1**
JOM	**Ohasama**	**8.56**	**358**	P	**Pn**	**05 54 54.2**	**-3.4**
JOM				*e*S	**Sn**	**05 56 25.3**	**-7.5**
JNU	**Nakatsue**	**9.49**	**286**	P	**Pn**	**05 55 15.4**	**+4.9**
JNU	**Nakatsue**	**9.49**	**286**	Pn	**Pn**	**05 55 14.1**	**+3.6**
	0.9nm,0.3s,baz=59,slow=19,SNR=14						
JNU				LR	LR	05 58 46.2	
	comp=Z,3μm,18.0s,baz=93,slow=36						
JTM	**Tenmabayashi**	**9.88**	**357**	P	**Pn**	**05 55 12.1**	**-3.6**
JTM				*e*S	**Sn**	**05 56 57.0**	**-8.2**
ERM	**Erimo**	**11.15**	**5**	*e*Pn	**Pn**	**05 55 27.8**	**-5.2**
	38nm,0.7s						
ERM	**Erimo**	**11.15**	**5**	*e*P	**Pn**	**05 55 27.8**	**-5.2**
ERM				pmax	pmax		
	comp=Z,37nm,0.7s						
JEM	**Erimo**	**11.15**	**5**	P	**Pn**	**05 55 30.2**	**-2.8**
JEM				*e*S	**Sn**	**05 57 22.7**	**-14**
JOW	**Kunigami**	**12.49**	**254**	Pn	**Pn**	**05 55 52.5**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=124,slow=17,SNR=2.4						
JOW				LR	LR	06 00 02.1	
	comp=Z,2μm,20.8s,baz=299,slow=34						
KSRS	**Korea Array**	**13.18**	**303**	Pn	**Pn**	**05 56 00.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=114,slow=13,SNR=38						
KSRS				LR	LR	06 00 55.4	
	comp=Z,2μm,19.7s,baz=110,slow=36						
ASAJ	**Asahikawa**	**13.21**	**3**	P	**Pn**	**05 55 56.0**	**-5.2**
ASAJ	**Asahikawa**	**13.21**	**3**	Pn	**Pn**	**05 55 56.4**	**-4.8**
	comp=Z,2.4nm,0.3s,baz=213,slow=11,SNR=9.3						
ASAJ				Sn	**Sn**	**05 58 14.6**	**-12**
	comp=Z,1.0nm,0.3s,baz=61,slow=19,SNR=4.8						
ASAJ				LR	LR	06 01 44.8	
	comp=Z,3μm,18.8s,baz=168,slow=40						
INCN	**Inchon**	**14.12**	**302**	*e*Pn	**Pn**	**05 56 12.1**	**-1.6**
KUR	**Kuril'sk**	**15.09**	**17**	P	**Pn**	**05 56 24.5**	**-2.1**
KUR				S	S	05 59 08.0	-20
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,80nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
KUR				smax			
	comp=N,5μm,16.0s						
KUR				smax			
	comp=E,11μm,16.0s						
YSS	**Yuzh-Sakhalins**	**16.05**	**2**	*e*Pn	**Pn**	**05 56 34.5**	**-4.5**
	comp=E,227nm,1.6s						
YSS	**Yuzh-Sakhalins**	**16.05**	**2**	⇓*e*P	**Pn**	**05 56 34.0**	**-4.9**
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
YSS				MLR	MLR		
	comp=N,2μm,16.0s						
YSS				MLR	MLR		
	comp=Z,3μm,16.0s						
YSS				MLR	MLR		
	comp=E,2μm,14.0s						
MDJ	**Mudanjiang**	**16.70**	**328**	P	**Pn**	**05 56 44.8**	**-2.4**
MDJ				AP	pP	05 56 55.0	-3.9
MDJ				XP	sP	05 56 59.3	-4.7
MDJ				S	**S**	**05 59 47.5**	**-14**
MDJ				SCP	ScP	06 05 07.5	+1.1
MDJ				PCS	PcS	06 05 11.0	+0.5
MDJ				AMB	AMB		
	comp=Z,17nm,1.6s						
MDJ				AMB	AMB		
	comp=Z,132nm,4.8s						
MDJ				LR	LR		
	comp=N,2μm,22.5s						
MDJ				LR	LR		
	comp=E,2μm,23.5s						
MDJ				LR	LR		
	comp=Z,3μm,17.8s						
GUMO	**Guam**	**17.47**	**170**	*e*Pn	**Pn**	**05 56 58.1**	**+1.1**

SSE	**Sheshan**	**17.64**	**276**	P	**Pn**	**05 57 00.8**	**+1.8**
SSE				S	**S**	**06 00 17.0**	**-3.7**
SSE				AMB	AMB		
	comp=Z,39nm,0.7s						
SSE				AMB	AMB		
	comp=Z,732nm,11.7s						
SSE				LR	LR		
	comp=N,1μm,18.9s						
SSE				LR	LR		
	comp=E,2μm,18.6s						
SSE				LR	LR		
	comp=Z,3μm,17.1s						
UGL	**Uglegorsk**	**18.15**	**1**	*e*P	**Pn**	**05 57 06.0**	**+0.8**
UGL				*e*S	**S**	**06 00 30.0**	**-0.9**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				pmax	pmax		
	comp=Z,900nm,5.0s						
UGL				smax			
	comp=N,2μm,6.0s						
UGL				smax			
	comp=E,2μm,6.0s						
UGL				smax			
	comp=Z,1μm,8.0s						
UGL				MLR	MLR		
	comp=N,2μm,16.0s						
UGL				MLR	MLR		
	comp=E,2μm,16.0s						
UGL				MLR	MLR		
	comp=Z,2μm,16.0s						
SNY	**Shenyang**	**18.21**	**312**	⇓P	**Pn**	**05 57 05.8**	**-0.2**
SNY				AP	pP	05 57 13.0	-2.7
SNY				XP	sP	05 57 18.0	-2.7
SNY				S	**S**	**06 00 28.8**	**-3.4**
SNY				AMB	AMB		
	comp=Z,358nm,8.6s						
SNY				LR	LR		
	comp=N,2μm,13.1s						
SNY				LR	LR		
	comp=E,2μm,14.3s						
SNY				LR	LR		
	comp=Z,2μm,14.9s						
CN2	**Changchun**	**18.23**	**319**	*e*P	**Pn**	**05 57 04.8**	**-1.3**
CN2				*e*AP	pP	05 57 13.0	-2.8
CN2				*e*S	**S**	**06 00 23.5**	**-8.9**
CN2				AMB	AMB		
	comp=Z,50nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,2μm,15.0s						
CN2				LR	LR		
	comp=E,2μm,15.0s						
CN2				LR	LR		
	comp=Z,2μm,18.0s						
HABR	**Khabarovsk**	**18.27**	**346**	⇓*i*P	**Pn**	**05 57 07.2**	**+0.5**
HABR				*e*		06 00 32.5	
HABR				pmax	pmax		
	comp=Z,103nm,1.1s						
DL2	**Dalian**	**18.31**	**301**	P	**Pn**	**05 57 08.0**	**+0.8**
DL2				S	**S**	**06 00 34.3**	**0.0**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s						
DL2				AMB	AMB		
	comp=Z,160nm,8.3s						
DL2				LR	LR		
	comp=N,2μm,14.4s						
DL2				LR	LR		
	comp=E,1μm,15.9s						
DL2				LR	LR		
	comp=Z,2μm,12.7s						
TATO	**Taipei**	**18.84**	**257**	*e*Pn	**Pn**	**05 57 14.0**	**+0.3**
	comp=Z,178nm,1.0s						
YHNB	**Yeheng**	**19.06**	**256**	*e*P	**Pn**	**05 57 15.7**	**-0.6**
NACB	**Ninganchiao**	**19.08**	**254**	*e*P	**Pn**	**05 57 15.5**	**-1.1**
NJ2	**Nanjing**	**19.56**	**279**	*e*P	**Pn**	**05 57 20.5**	**-1.8**
NJ2				AP	pP	05 57 28.5	-2.1
NJ2				XP	sP	05 57 33.3	-2.3
NJ2				PP		05 57 38.5	
NJ2				S	**S**	**06 00 53.5**	**-6.0**
NJ2				AMB	AMB		
	comp=Z,2μm,6.3s						
NJ2				LR	LR		
	comp=N,1μm,14.3s						
NJ2				LR	LR		
	comp=E,2μm,14.4s						
NJ2				LR	LR		
	comp=Z,6μm,14.8s						
KLR	**Kul'dur**	**19.81**	**340**	*e*P	**Pn**	**05 57 19.5**	**-5.5**
KLR				MLR	MLR		
	comp=N,1μm,13.0s						
KLR				MLR	MLR		
	comp=Z,6μm,13.0s						
QZH	**Quanzhou**	**21.29**	**260**	⇑*i*P	**P**	**05 57 38.8**	**-0.8**
QZH				S	**S**	**06 01 28.5**	**-5.4**
QZH				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.8						
QZH				AMB	AMB		
	comp=Z,590nm,7.5s						
QZH				LR	LR		
	comp=N,2μm,17.6s,MS4.9						
QZH				LR	LR		
	comp=E,5μm,22.4s,MS4.9						
QZH				LR	LR		
	comp=Z,3μm,22.2s,MS4.6						
BJT	**Baijiatuau**	**22.67**	**301**	*e*P	**P**	**05 57 52.9**	**-1.3**
	comp=Z,48nm,0.7s,mb5.0						
BJT				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
BJT	**Baijiatuau**	**22.67**	**301**	*e*P	**P**	**05 57 52.9**	**-1.3**
BJT				pmax	pmax		
	comp=Z,48nm,0.7s						
BJT				MLR	MLR		
	comp=Z,3μm,20.0s						
BJI	**Beijing**	**22.68**	**301**	P	**P**	**05 57 52.5**	**-1.7**
BJI				S	**S**	**06 02 00.3**	**+0.3**
BJI				AMB	AMB		
	comp=Z,66nm,1.2s,mb4.9						
BJI				AMB	AMB		
	comp=Z,359nm,3.2s						
BJI				LR	LR		
	comp=N,2μm,16.8s,MS4.7						
BJI				LR	LR		
	comp=E,2μm,19.1s,MS4.7						
BJI				LR	LR		
	comp=Z,2μm,19.8s,MS4.5						
WHN	**Wuhan**	**23.54**	**276**	*e*P	**P**	**05 58 01.0**	**-2.1**
WHN				S	**S**	**06 02 00.0**	**-14**
WHN				LR	LR		
	comp=N,836nm,14.0s,MS4.9						
WHN				LR	LR		
	comp=E,3μm,14.0s,MS4.9						
WHN				LR	LR		
	comp=Z,5μm,17.4s,MS5.0						
HIA	**Hailar**	**24.75**	**324**	*e*P	**P**	**05 58 13.7**	**-0.3**
	comp=Z,60nm,0.9s,mb5.1						
HIA				LR	LR		
	comp=Z,2μm,19.0s,MS4.6						
HIA	**Hailar**	**24.75**	**324**	*e*P	**P**	**05 58 13.7**	**-0.2**
HIA				pmax	pmax		
	comp=Z,59nm,0.9s						
HIA				MLR	MLR		
	comp=Z,2μm,19.0s						
TIY	**Taiyuan**	**25.09**	**294**	P	**P**	**05 58 15.0**	**-2.2**
TIY				LR	LR		
	comp=N,2μm,18.5s,MS4.9						
TIY				LR	LR		
	comp=E,2μm,13.8s,MS4.9						
TIY				LR	LR		
	comp=Z,3μm,15.6s,MS4.9						
PET	**Petropavlovsk**	**25.30**	**24**	PFAKE		05 58 30.0	+11
PET				LR	LR		
	comp=Z,1μm,19.0s,MS4.4						
PET	**Petropavlovsk**	**25.30**	**24**	*e*P	**P**	**05 58 25.4**	**+6.5**
PET				*e*S	**S**	**06 02 42.6**	**+0.5**
PET				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.5						
PET				MLR	MLR		
	comp=Z,1μm,18.0s						
HHC	**Hu-ho-hao-te**	**26.28**	**301**	*e*P	**P**	**05 58 27.0**	**-1.0**
HHC				AP	pP	05 58 36.0	-2.8
HHC				XP	sP	05 58 41.0	-2.6
HHC				PP		05 59 09.0	
HHC				PCP	PcP	06 01 53.3	-0.2
HHC				S	**S**	**06 02 53.8**	**-4.1**
HHC				XS	sS	06 03 11.0	-5.0
HHC				SS		06 04 03.3	
HHC				AMB	AMB		
	comp=Z,33nm,0.5s,mb5.1						
HHC				AMB	AMB		
	comp=Z,241nm,5.1s						
HHC				LR	LR		
	comp=N,561nm,15.5s,MS4.8						
HHC				LR	LR		
	comp=E,2μm,14.3s,MS4.8						
HHC				LR	LR		
	comp=Z,2μm,14.3s,MS4.8						
GZH	**Guangzhou**	**26.43**	**260**	P	**P**	**05 58 26.3**	**-3.2**
GZH				S	**S**	**06 02 57.5**	**-3.0**
GZH				LR	LR		
	comp=N,455nm,14.2s,MS4.6						
GZH				LR	LR		
	comp=E,1μm,15.7s,MS4.6						
GZH				LR	LR		
	comp=Z,2μm,17.6s,MS4.7						
BTO	**Baotou**	**27.38**	**299**	*e*P	**P**	**05 58 37.3**	**-0.6**
BTO				AMB	AMB		
	comp=Z,13nm,1.2s,mb4.3						
XAN	**Xi'an**	**27.81**	**285**	P	**P**	**05 58 41.0**	**-0.8**
XAN				PP		05 59 30.0	
XAN				AMB	AMB		
	comp=Z,23nm,0.9s,mb4.8						
XAN				LR	LR		
	comp=N,268nm,12.7s,MS4.6						
XAN				LR	LR		
	comp=E,1μm,13.8s,MS4.6						
XAN				LR	LR		
	comp=Z,1μm,13.2s,MS4.7						
DAV	**Davao City (W)**	**28.14**	**216**	PFAKE		05 59 00.0	+15
DAV				LR	LR		
	comp=Z,1μm,21.0s,MS4.4						
NRGR	**Nerungri**	**28.37**	**340**	*e*P	**P**	**05 58 44.0**	**-2.5**
CLNS	**Chul'man**	**28.47**	**340**	*e*P	**P**	**05 58 47.7**	**+0.3**
CLNS				*e*PPP		05 59 43.2	
CLNS				*e*		06 01 59.1	
CLNS				*e*S	**S**	**06 03 31.7**	**-0.3**
CLNS				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.0						
CLNS				pmax	pmax		
	comp=N,56nm,1.3s						
CLNS				pmax	pmax		
	comp=E,24nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.9						
CLNS				pmax	pmax		
	comp=N,48nm,1.1s						
CLNS				pmax	pmax		
	comp=E,32nm,0.9s						
CLNS				smax			
	comp=N,241nm,12.4s						
CLNS				smax			
	comp=Z,85nm,11.5s						
CLNS				smax			
	comp=E,305nm,12.8s						
CLNS				MLR	MLR		
	comp=Z,800nm,16.0s,MS4.4						
CLNS				MLR	MLR		
	comp=N,400nm,15.0s,MS4.6						
CLNS				MLR	MLR		
	comp=E,1μm,14.0s,MS4.6						
MA2	**Magadan**	**29.31**	**9**	*e*P	**P**	**05 58 54.5**	**-0.3**
MA2				LR	LR		
	comp=Z,582nm,20.0s,MS4.2						
MA2	**Magadan**	**29.31**	9⇑	*e*P	**P**	**05 58 54.3**	**-0.5**
MA2				pmax	pmax		
	comp=Z,31nm,1.9s,mb4.7						
MA2				MLR	MLR		
	comp=Z,800nm,19.0s,MS4.4						
CIT	**Chita**	**29.55**	**324**	*e*P	**P**	**05 58 57.6**	**+0.6**
CIT				*e*	pP	05 59 10.6	+2.7
CIT				*e*		05 59 50.8	
CIT				pmax	pmax		
	comp=Z,138nm,2.4s,mb5.3						
GYA	**Guiyang**	**31.02**	**271**	P	**P**	**05 59 12.0**	**+1.7**
GYA				AP	pP	05 59 23.5	+2.3
GYA				XP	sP	05 59 26.8	+0.9
GYA				PP	PP	06 00 14.3	-6.4
GYA				PCP	PcP	06 02 07.8	+2.2
GYA				S	**S**	**06 04 13.3**	**+0.6**
GYA				XS	sS	06 04 30.8	0.0
GYA				SCP	ScP	06 05 46.5	+1.1
GYA				SS	SS	06 05 58.3	-28
GYA				SCS	ScS	06 09 42.0	-0.5
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,480nm,17.9s,MS4.4						
GYA				LR	LR		
	comp=E,510nm,18.4s,MS4.4						
GYA				LR	LR		
	comp=Z,430nm,18.9s,MS4.1						
QIZ	**Qiongzhong**	**31.14**	**255**	P	**P**	**05 59 12.0**	**+0.6**
QIZ				S	**S**	**06 04 16.3**	**+1.7**
QIZ				XS	sS	06 04 31.3	-1.5
QIZ				AMB	AMB		
	comp=Z,99nm,4.5s						
QIZ				LR	LR		
	comp=E,578nm,15.9s						
QIZ				LR	LR		
	comp=Z,756nm,18.4s,MS4.4						
QIZ	**Qiongzhong**	**31.14**	**255**	PFAKE		05 59 20.0	+8.6
QIZ				LR	LR		
	comp=Z,739nm,20.0s,MS4.3						
ULN	**Ulaanbaatar**	**31.39**	**313**	*e*P	**P**	**05 59 13.8**	**+0.5**
	comp=Z,53nm,1.1s,mb5.3						
ULN				LR	LR		
	comp=Z,1μm,19.0s,MS4.7						
ULN	**Ulaanbaatar**	**31.39**	**313**	*e*P	**P**	**05 59 13.8**	**+0.5**
ULN				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.3						
ULN				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.7						
ULN	**Ulaanbaatar**	**31.39**	**313**	P	**P**	**05 59 14.7**	**+1.4**
	SNR=31						
ULN	**Ulaanbaatar**	**31.39**	**313**	P	**P**	**05 59 14.7**	**+1.4**
	SNR=31						
SONM	**Songino Array**	**31.79**	**312**	P	**P**	**05 59 17.9**	**+1.1**
	comp=Z,17nm,0.9s,mb4.9,baz=118,slow=8.8,SNR=95						
SONM				LR	LR	06 12 51.1	
	comp=Z,2μm,18.1s,MS4.8,baz=110,slow=38						
LZH	**Lanzhou**	**31.89**	**290**	*e*P	**P**	**05 59 16.8**	**-1.1**
LZH				AP	pP	05 59 24.3	-4.5
LZH				PP	PP	06 00 21.0	-9.3
LZH				PCP	PcP	06 02 06.0	-1.8
LZH				*e*S	**S**	**06 04 24.0**	**-2.2**
LZH				XS	sS	06 04 44.0	-0.3
LZH				AMB	AMB		
	comp=Z,25nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,99nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,14.2s						
LZH				LR	LR		
	comp=Z,2μm,15.8s,MS4.8						
YAK	**Yakutsk**	**32.12**	**349**	*e*P	**P**	**05 59 18.6**	**-0.9**
YAK				*e*pP	pP	05 59 29.7	-0.8
YAK				LR	LR		
	comp=Z,857nm,19.0s,MS4.5						
YAK	**Yakutsk**	**32.12**	**349**	*e*P	**P**	**05 59 18.1**	**-1.4**
YAK				*i* *PP	pP	05 59 29.2	-1.2
YAK				*e*		06 00 21.2	
YAK				*i* PPP		06 00 35.3	
YAK				*e*S	**S**	**06 04 32.3**	**+3.3**
YAK				*e*SS	SS	06 06 27.1	-21
YAK				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
YAK				pmax	pmax		
	comp=N,17nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.1						
YAK				pmax	pmax		
	comp=N,33nm,1.7s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.3s						
YAK				smax			
	comp=N,300nm,23.1s						
YAK				smax			
	comp=E,100nm,16.6s						
YAK				MLR	MLR		
	comp=Z,900nm,18.0s,MS4.5						
YAK				MLR	MLR		
	comp=N,800nm,19.0s,MS4.5						
YAK				MLR	MLR		
	comp=E,400nm,17.0s,MS4.5						
CD2	**Chengdu**	**32.49**	**280**	P	**P**	**05 59 25.5**	**+2.3**
CD2				AP	pP	05 59 35.0	+0.8
CD2				XP	sP	05 59 38.8	-0.1
CD2				PP	PP	06 00 34.0	-3.1
CD2				PCP	PcP	06 02 13.3	+3.8
CD2				S	**S**	**06 04 37.0**	**+1.4**
CD2				XS	sS	06 04 53.0	-0.8
CD2				SS	SS	06 06 33.0	-23
CD2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.4						
CD2				AMB	AMB		
	comp=Z,210nm,6.0s						
CD2				LR	LR		
	comp=N,2μm,14.4s,MS5.0						
CD2				LR	LR		
	comp=E,2μm,14.8s,MS5.0						
CD2				LR	LR		
	comp=Z,2μm,14.4s,MS5.0						
SEY	**Seymchan**	**32.76**	9⇑	*e*P	**P**	**05 59 24.2**	**-1.0**
BOD	**Bodaibo**	**32.98**	**333**	⇓*i*P	**P**	**05 59 26.5**	**-0.7**
BOD				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
KKM	**Kota Kinabalu**	**34.43**	**229**	*e*P	**P**	**05 59 40.8**	**+0.6**
ZAK	**Zakamensk**	**34.57**	**315**	⇓*i*P	**P**	**05 59 41.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,23nm,1.7s,mb4.8						
IRK	**Irkutsk**	**34.67**	**319**	⇑*i*P	**P**	**05 59 42.6**	**+0.7**
IRK				*e*		05 59 59.6	
IRK				pmax	pmax		
	comp=Z,98nm,2.1s,mb5.4						
KMI	**Kunming**	**34.79**	**270**	P	**P**	**05 59 44.3**	**+1.0**
KMI				AP	pP	05 59 54.5	+0.2
KMI				XP	sP	05 59 58.5	-0.5
KMI				PP	PP	06 01 02.3	-0.3
KMI				S	**S**	**06 05 07.0**	**-4.3**
KMI				SS	SS	06 07 25.5	-18
KMI				AMB	AMB		
	comp=Z,12nm,1.1s,mb4.7						
KMI				AMB	AMB		
	comp=Z,137nm,6.1s						
KMI				LR	LR		
	comp=N,495nm,17.9s,MS4.6						
KMI				LR	LR		
	comp=E,732nm,14.8s,MS4.6						
KMI				LR	LR		
	comp=Z,1μm,13.7s,MS4.9						
TLY	**Talaya**	**34.81**	**318**	P	**P**	**05 59 44.1**	**+1.0**
	comp=Z,214nm,0.9s,mb6.1,SNR=14						
TLY	**Talaya**	**34.81**	**318**	*e*P	**P**	**05 59 44.6**	**+1.5**
	comp=Z,22nm,0.9s,mb5.1						
TLY				LR	LR		
	comp=Z,2μm,19.0s,MS4.9						
TLY	**Talaya**	**34.81**	**318***c*	*i*P	**P**	**05 59 44.6**	**+1.5**
TLY				*e*S	**S**	**06 05 12.0**	**+1.0**
TLY				pmax	pmax		
	comp=Z,99nm,1.8s,mb5.4						
TLY				MLR	MLR		
	comp=Z,2μm,16.0s,MS4.9						
TLY	**Talaya**	**34.81**	**318**	P	**P**	**05 59 45.0**	**+1.8**
	SNR=30						
TLY	**Talaya**	**34.81**	**318**	P	**P**	**05 59 45.0**	**+1.8**
	SNR=30						
GTA	**Gaotai**	**35.06**	**296**	*e*P	**P**	**05 59 45.0**	**-0.5**
GTA				AP	pP	05 59 53.8	-2.7
GTA				XP	sP	05 59 57.5	-3.7
GTA				PP	PP	06 01 03.5	-1.9
GTA				PCP	PcP	06 02 17.5	+0.8
GTA				S	**S**	**06 05 12.0**	**-3.2**
GTA				XS	sS	06 05 30.5	-3.0
GTA				SCP	ScP	06 05 58.8	-0.4
GTA				PCS	PcS	06 06 01.5	-1.9
GTA				SS	SS	06 07 29.5	-19
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
GTA				AMB	AMB		
	comp=Z,156nm,5.7s						
GTA				LR	LR		
	comp=N,1μm,16.3s,MS5.0						
GTA				LR	LR		
	comp=E,2μm,16.7s,MS5.0						
GTA				LR	LR		
	comp=Z,2μm,16.0s,MS5.0						
MOY	**Mondy**	**36.36**	**317**	*e*P	**P**	**05 59 57.4**	**+1.0**
MOY				pmax	pmax		
	comp=Z,92nm,2.4s,mb5.3						
ADK	**Adak**	**36.90**	**43**	PFAKE		06 00 10.0	+9.0
ADK				LR	LR		
	comp=Z,1μm,20.0s,MS4.6						
BILL	**Bilibino**	**39.85**	**14**	P	**P**	**06 00 25.8**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.5						
BILL	**Bilibino**	**39.85**	**14**	*i* P	**P**	**06 00 23.7**	**-1.9**
BILL				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.7						
CHTO	**Chiang Mai**	**40.44**	**263**	*e*P	**P**	**06 00 30.3**	**-0.8**
	comp=Z,6.8nm,0.7s,mb4.5						
CHTO				LR	LR		
	comp=Z,568nm,20.0s,MS4.4						
CHTO	**Chiang Mai**	**40.44**	**263**	*e*P	**P**	**06 00 30.3**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
CHTO				MLR	MLR		
	comp=Z,568nm,20.0s,MS4.4						
CHTO	**Chiang Mai**	**40.44**	**263**	P	**P**	**06 00 30.6**	**-0.4**
	SNR=7.9						
CHTO	**Chiang Mai**	**40.44**	**263**	P	**P**	**06 00 30.6**	**-0.4**
	SNR=7.9						
CM31	**Chiang Mai Arr**	**40.59**	**262**	PFAKE		06 00 40.0	+7.7
CM31				LR	LR		
	comp=Z,326nm,21.0s,MS4.2						
TIXI	**Tiksi**	**41.40**	**354**	*e*P	**P**	**06 00 37.4**	**-0.9**
	comp=Z,6.5nm,0.6s,mb4.4						
TIXI				*e*PP	PP	06 02 20.6	+6.4
TIXI				LR	LR		
	comp=Z,460nm,20.0s,MS4.3						
TIXI	**Tiksi**	**41.40**	**354**	*e*P	**P**	**06 00 36.4**	**-1.9**
TIXI				*e*		06 02 20.8	
TIXI				*e*S	**S**	**06 06 50.3**	**+0.2**
TIXI				*e*SS	SS	06 09 54.7	-0.1
TIXI				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,567nm,14.0s,MS4.6						
KAPI	**Kappang**	**41.45**	**214**	P	**P**	**06 00 38.3**	**-1.1**
	comp=Z,172nm,1.0s,mb5.6,SNR=8.1						
KSM	**Kuching**	**41.74**	**232**	*e*P	**P**	**06 00 42.4**	**+0.6**
KSM				*e*pP	pP	06 00 54.0	+1.0
LSA	**Lhasa**	**43.40**	**282**	P	**P**	**06 00 55.5**	**+0.3**
LSA	**Lhasa**	**43.40**	**282**	*e*P	**P**	**06 00 56.2**	**+1.0**
	comp=Z,6.1nm,0.3s,mb4.8						
LSA				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
LSA	**Lhasa**	**43.40**	**282**	*e*P	**P**	**06 00 56.2**	**+1.0**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.8						
LSA				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.8						
HNR	**Honiara**	**43.74**	**154**	PFAKE		06 01 10.0	+12
HNR				LR	LR		
	comp=Z,641nm,20.0s,MS4.5						
SHL	**Shillong**	**43.97**	**276**	*e*P	**P**	**06 01 00.1**	**+0.3**
WMQ	**Urumqi**	**44.12**	**303**	⇓*i*P	**P**	**06 01 02.0**	**+1.2**
WMQ				AP	pP	06 01 12.0	0.0
WMQ				XP	sP	06 01 16.0	-0.7
WMQ				PP	PP	06 02 46.0	+2.0
WMQ				PCP	PcP	06 02 48.0	+2.6
WMQ				SCP	ScP	06 06 35.5	+1.4
WMQ				PCS	PcS	06 06 39.5	+1.1
WMQ				S	**S**	**06 07 31.3**	**+0.4**
WMQ				XS	sS	06 07 47.5	-2.0
WMQ				AMB	AMB		
	comp=Z,31nm,1.4s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,362nm,4.0s						
WMQ				LR	LR		
	comp=N,1μm,25.5s,MS4.7						
WMQ				LR	LR		
	comp=E,594nm,28.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,535nm,25.4s,MS4.3						

KAKA Kakadu 44.28 193 *e*P **P** **06 01 00.9 -1.3**
comp=Z,33nm,0.7s,mb5.2
BATI Kupang 44.41 206 P **P** **06 01 01.6 -1.7**
comp=Z,31nm,0.5s,mb5.3,baz=352,slow=5.0,SNR=4.3
BATI LR LR 06 19 08.0
comp=Z,298nm,18.3s,MS4.2,baz=123,slow=35
KULM Kulim 46.23 245 *e*P **P** **06 01 18.4 +0.6**
KULM *e*pP pP 06 01 29.2 +0.1
ZALV Zalesovo Beam 46.41 317 P **P** **06 01 18.8 0.0**
ZALV PcP PcP 06 02 53.2 +0.1
ZALV LR LR 06 21 39.3
ZALV Zalesovo Beam 46.41 317 P **P** **06 01 18.8 0.0**
comp=Z,18nm,1.0s,mb5.0,baz=97,slow=6.3,SNR=48
ZALV PcP PcP 06 02 53.2 +0.1
comp=Z,5.2nm,0.6s,baz=104,slow=2.9,SNR=4.5
ZALV LR LR 06 21 39.3
comp=Z,991nm,18.1s,MS4.8,baz=124,slow=37
ZAL Zalesovo 46.42 317 P **P** **06 01 18.8 -0.1**
ZAL 06 02 53.2
TAPN Taplejung 46.96 280 *e*P **P** **06 01 23.0 -0.5**
comp=Z,115nm,1.6s,mb5.6
NVS Novosibirsk 47.43 318⇑ *i*P **P** **06 01 26.7 0.0**
NVS *e*S **S** **06 08 16.5 -1.6**
NVS pmax pmax
comp=Z,90nm,1.4s,mb5.5
NVS pmax pmax
comp=N,39nm,1.8s
NVS pmax pmax
comp=E,79nm,1.3s
NVS smax
comp=E,60nm,2.2s
MK31 Makanchi Array 47.82 307 *i* P **P** **06 01 29.6 -0.3**
MK31 pmax pmax
comp=Z,41nm,0.8s,mb5.5
MKAR Makanchi Array 47.82 307⇑ *e*P **P** **06 01 30.5 +0.6**
MKAR Makanchi Array 47.82 307 P **P** **06 01 30.5 +0.6**
comp=Z,25nm,0.7s,mb5.3,baz=91,slow=9.6,SNR=171
MKAR LR LR 06 22 42.1
comp=Z,720nm,19.0s,MS4.7,baz=92,slow=37
JIRN Jiri 48.15 281 *e*P **P** **06 01 32.9 +0.2**
comp=Z,138nm,1.0s,mb5.9
CHGN Chignik 48.31 40 *e*P **P** **06 01 33.6 +0.1**
KKN Kakani 48.88 281 *e*P **P** **06 01 38.1 -0.2**
comp=Z,84nm,1.0s,mb5.7
PSI Prapat 49.12 244 P **P** **06 01 40.4 +0.1**
comp=Z,13nm,0.9s,mb5.0,baz=50,slow=4.0,SNR=8.8
GKN Gorkha 49.35 282 *e*P **P** **06 01 41.5 -0.5**
comp=Z,99nm,1.1s,mb5.8
KURK Kurchatov 50.10 312 P **P** **06 01 47.7 +0.4**
comp=Z,318nm,0.8s,SNR=31
KURK Kurchatov 50.10 312 *e*P **P** **06 01 47.5 +0.2**
comp=Z,55nm,1.0s,mb5.5
KURK *e*pP pP 06 01 58.6 0.0
KURK LR LR
comp=Z,2μm,20.0s,MS5.0
KURK Kurchatov 50.10 312 *e*P **P** **06 01 47.5 +0.2**
KURK *e**PP pP 06 01 58.6 0.0
KURK pmax pmax
comp=Z,55nm,1.0s,mb5.5
KURK MLR MLR
comp=Z,2μm,20.0s,MS5.0
KURK Kurchatov 50.10 312 P **P** **06 01 47.8 +0.5**
SNR=28
KURK Kurchatov 50.10 312 P **P** **06 01 47.8 +0.5**
SNR=28
KOLN Koldanda 50.30 282 *e*P **P** **06 01 48.9 -0.2**
comp=Z,52nm,0.8s,mb5.6
SVW2 Sparrevohn 50.33 34 *e*P **P** **06 01 49.1 +0.3**
TTA Tatalina 50.39 32 *e*P **P** **06 01 49.4 +0.1**
TTA *e*pP pP 06 02 00.2 -0.4
TTA *e*sP sP 06 02 04.2 -1.0
CTA Charters Tower 50.88 175 *e*P **P** **06 01 52.9 -0.5**
comp=Z,10nm,0.6s,mb4.9
CTA Charters Tower 50.88 175 P **P** **06 01 52.7 -0.7**
comp=Z,12nm,0.6s,mb5.0,baz=358,slow=7.8,SNR=19
CTA LR LR 06 22 04.1
comp=Z,328nm,20.5s,MS4.3,baz=107,slow=34
CTAO Charters Tower 50.88 175 *e*P **P** **06 01 53.3 -0.1**
comp=Z,51nm,1.4s,mb5.3
CTAO *e*pP pP 06 02 05.3 +0.5
CTAO Charters Tower 50.88 175 *e*P **P** **06 01 53.3 -0.1**
CTAO *e**PP pP 06 02 05.3 +0.5
CTAO pmax pmax
comp=Z,51nm,1.4s,mb5.3
WB2 Warramunga Arr 51.05 189 *e*P **P** **06 01 53.5 -1.2**
WB2 *e*pP pP 06 02 05.5 -0.6
WB2 *e*S **S** **06 09 05.1 -4.4**
WRA Warramunga Arr 51.05 189 P **P** **06 01 53.6 -1.1**
WRA S **S** **06 09 07.1 -2.4**
WRA LR LR 06 22 43.0
WRA Warramunga Arr 51.05 189 P **P** **06 01 53.6 -1.1**
WRA S **S** **06 09 07.1 -2.4**
WRA Warramunga Arr 51.05 189 P **P** **06 01 53.6 -1.1**
comp=Z,26nm,0.4s,mb5.5,baz=5.2,slow=7.5,SNR=124
WRA S **S** **06 09 07.1 -2.4**
comp=Z,3.5nm,1.0s,baz=8.5,slow=14,SNR=5.5
WRA LR LR 06 22 43.0
comp=Z,570nm,18.9s,MS4.6,baz=5.0,slow=35
FITZ Fitzroy Crossi 51.13 200 *e*P **P** **06 01 54.8 -0.5**
comp=Z,16nm,0.8s,mb5.0
FITZ Fitzroy Crossi 51.13 200 P **P** **06 01 54.9 -0.4**
comp=Z,8.3nm,0.6s,mb4.8,baz=24,slow=11,SNR=14
FITZ LR LR 06 19 28.6
comp=Z,98nm,21.8s,MS3.8,baz=19,slow=31
KDAK Kodiak Island 51.59 39 P **P** **06 01 57.0 -1.4**
comp=Z,359nm,0.6s,SNR=8.8
KDAK Kodiak Island 51.59 39 *e*P **P** **06 01 56.8 -1.6**
comp=Z,130nm,1.3s,mb5.7
KDAK *e*pP pP 06 02 08.2 -1.5
KDAK LR LR
comp=Z,321nm,19.0s,MS4.4
KDAK Kodiak Island 51.59 39 P **P** **06 01 56.7 -1.7**
comp=Z,36nm,0.7s,mb5.4,baz=267,slow=5.7,SNR=33
IMA2 Indian Mountai 51.89 28 *e*P **P** **06 02 00.7 +0.2**
IMA2 *e*pP pP 06 02 11.6 -0.3
JOSI Joshimath 52.81 287 *e*P **P** **06 02 06.7 -1.2**
SLKM Skilak Lake 52.90 35 P **P** **06 02 06.4 -1.7**
TKM2 Tokmak 2 52.98 303 *e*P **P** **06 02 10.3 +1.3**
comp=Z,61nm,1.5s,mb5.3
TKM2 LR LR
comp=Z,651nm,19.0s,MS4.7
TKM2 Tokmak 2 52.98 303 *e*P **P** **06 02 10.3 +1.3**
TKM2 pmax pmax
comp=Z,61nm,1.5s,mb5.3
TKM2 MLR MLR
comp=Z,651nm,19.0s,MS4.7
TKM2 Tokmak 2 52.98 303 P **P** **06 02 10.4 +1.5**
SNR=11
KSH Kashi 53.37 298 *e*P **P** **06 02 13.8 +2.0**
KSH *e*AP pP 06 02 23.5 +0.2
KSH *e*XP sP 06 02 28.0 +0.1
KSH *e*PCP PcP 06 03 21.0 +2.1
KSH PP PP 06 04 15.3 +3.0
KSH *e*SCP ScP 06 07 15.0 +1.5
KSH *e*PCS PcS 06 07 18.5 +0.7
KSH *e*S **S** **06 09 40.8 -0.3**
KSH *e*PS 06 09 55.3
KSH AMB AMB
comp=Z,2μm,3.2s
KSH LR LR
comp=N,645nm,4.5s
KSH LR LR
comp=E,1μm,5.3s
KSH LR LR
comp=Z,609nm,5.4s
KZA Kyzart 53.39 302 P **P** **06 02 14.6 +2.6**
SNR=6.7
PMR Palmer 53.46 34 *e*P **P** **06 02 12.2 0.0**
comp=Z,77nm,1.4s,mb5.4
PMR LR LR
comp=Z,508nm,21.0s,MS4.5
PMR Palmer 53.46 34 *e*P **P** **06 02 12.2 0.0**
PMR pmax pmax
comp=Z,77nm,1.4s,mb5.4
PMR MLR MLR
comp=Z,508nm,21.0s,MS4.5
KBK Karagaybulak 53.50 302 P **P** **06 02 13.8 +1.0**
SNR=15
KLP Kalpa 53.60 288 *e*P **P** **06 02 13.0 -0.6**
KLP AMb AMB 06 02 15.1
comp=Z,33nm,1.5s,mb5.0
FRU Bishkek 53.71 303 *e*P **P** **06 02 14.0 -0.3**
FRU pmax pmax
comp=Z,80nm,2.0s,mb5.3
FRU MLR MLR
comp=Z,1μm,16.0s,MS5.0

USP Ospenovka 53.71 303 P **P** **06 02 15.4 +1.1**
SNR=16
AAK Ala-Archa 53.84 303 P **P** **06 02 15.8 +0.6**
comp=Z,62nm,0.8s,mb5.6,SNR=10
AAK Ala-Archa 53.84 303 P **P** **06 02 16.1 +0.8**
SNR=8.9
UCH Uchtor 53.90 302 *e*P **P** **06 02 17.0 +1.3**
comp=Z,46nm,1.5s,mb5.2
UCH LR LR
comp=Z,877nm,19.0s,MS4.8
UCH Uchtor 53.90 302 P **P** **06 02 17.3 +1.6**
SNR=14
DDI Dehra Dun 54.12 287 *e*P **P** **06 02 15.8 -1.7**
COLA College 54.18 30 *e*P **P** **06 02 17.3 0.0**
comp=Z,17nm,1.1s,mb4.9
COLA LR LR
comp=Z,222nm,19.0s,MS4.2
COLA College 54.18 30 *e*P **P** **06 02 17.3 -0.1**
COLA pmax pmax
comp=Z,17nm,1.1s,mb4.9
COLA MLR MLR
comp=Z,222nm,19.0s,MS4.2
EKS2 Erkin-Say 54.35 303 *e*P **P** **06 02 19.4 +0.5**
comp=Z,7.4nm,0.8s,mb4.7
EKS2 LR LR
comp=Z,969nm,19.0s,MS4.9
EKS2 Erkin-Say 54.35 303 P **P** **06 02 20.2 +1.3**
SNR=10
AML Almayashu 54.52 302 *e*P **P** **06 02 21.8 +1.6**
comp=Z,27nm,0.7s,mb5.4
AML LR LR
comp=Z,774nm,20.0s,MS4.8
AML Almayashu 54.52 302 P **P** **06 02 21.9 +1.7**
SNR=9.8
ASAR Alice Springs 54.78 189 P **P** **06 02 21.0 -1.1**
comp=Z,14nm,0.5s,mb5.2,baz=355,slow=4.9,SNR=121
ASAR S **S** **06 09 59.1 -1.1**
comp=Z,1.7nm,0.9s,baz=11,slow=14,SNR=7.0
BRVK Borovoye 55.09 316 *e*P **P** **06 02 24.6 +0.5**
comp=Z,14nm,0.7s,mb5.1
BRVK LR LR
comp=Z,1μm,19.0s,MS5.0
BRVK Borovoye 55.09 316 *e*P **P** **06 02 24.6 +0.5**
BRVK pmax pmax
comp=Z,14nm,0.7s,mb5.1
BRVK MLR MLR
comp=Z,1μm,19.0s,MS5.0
BRVK Borovoye 55.09 316 P **P** **06 02 24.9 +0.8**
SNR=11
BRVK Borovoye 55.09 316 P **P** **06 02 24.9 +0.8**
SNR=11
EYAK Cordova Ski Ar 55.11 35 *e*P **P** **06 02 18.9 -5.3**
comp=Z,45nm,1.3s,mb5.3
KKR Kurukshetra 55.25 287 *e*x x 06 02 18.4
NDI New Delhi 55.34 285 *e*P **P** **06 02 25.0 -1.3**
NDI *e*S **S** **06 10 07.0 -0.9**
THN Thein Dam 55.39 290 *e*P **P** **06 02 25.1 -1.5**
SONA Sohna 55.59 285 *e*P **P** **06 02 28.2 +0.1**
SONA AMb AMB 06 02 29.2
comp=Z,42nm,1.2s,mb5.3
RTK Rohtak 55.89 286 *e*P **P** **06 02 26.6 -3.6**
RTK AMb AMB 06 02 28.3
comp=Z,44nm,0.7s,mb5.6
MBWA Marble Bar 55.92 205 P **P** **06 02 29.3 -1.1**
comp=Z,18nm,0.7s,mb5.2
KK31 Karatay Array 56.60 304 *i* P **P** **06 02 35.3 +0.1**
KK31 pmax pmax
comp=Z,68nm,0.9s,mb5.7
KHET Khetri 56.71 285 *e*P **P** **06 02 36.2 +0.1**
KHET AMb AMB 06 02 38.0
comp=Z,62nm,1.1s,mb5.5
EGAK Eagle 57.04 30 *e*P **P** **06 02 37.4 -0.5**
comp=Z,7.7nm,0.8s,mb4.8
EGAK LR LR
comp=Z,341nm,19.0s,MS4.5
DAWY Dawson 57.86 31 *e*P **P** **06 02 44.0 +0.4**
INK Inuvik 59.75 25 *e*P **P** **06 02 55.7 -1.1**
comp=Z,205nm,0.9s,mb6.2
INK Inuvik 59.75 25 P **P** **06 02 55.5 -1.2**
INK pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 59.75 25 P **P** **06 02 55.5 -1.2**
comp=Z,6.1nm,0.7s,mb4.7,baz=288,slow=6.5,SNR=25
SVE Sverdlovsk 60.01 321 *i* P **P** **06 02 59.8 +1.1**
SVE *e*S **S** **06 11 25.1 +17**
SVE pmax pmax
comp=Z,85nm,1.1s,mb5.7
SIT Sitka 60.93 38 PFAKE 06 03 20.0 +15
SIT LR LR
comp=Z,1μm,19.0s,MS5.1
ARU Arti 61.21 321 P **P** **06 03 07.2 +0.3**
comp=Z,208nm,1.1s,mb6.2,SNR=5.4
ARU Arti 61.21 321 *e*P **P** **06 03 07.1 +0.2**
ARU LR LR
comp=Z,622nm,20.0s,MS4.8
ARU Arti 61.21 321 *c i*P **P** **06 03 07.0 +0.1**
ARU *e* 06 03 48.6
ARU *e* 06 05 19.5
ARU S **S** **06 11 24.9 +1.2**
ARU *e*SS SS 06 15 21.3 -2.3
ARU pmax pmax
comp=Z,55nm,1.2s,mb5.6
ARU MLR MLR
comp=Z,586nm,18.0s,MS4.8
SOKR Solikamsk 61.42 325 *e*P pP 06 03 21.4 +1.5
SOKR S **S** **06 11 32.3 +6.0**
SOKR pmax pmax
comp=Z,20nm,1.0s,mb5.2
SOKR MLR MLR
comp=Z,940nm,19.0s,MS5.0
PALK Pallekele 61.51 261 PFAKE 06 03 20.0 +10
PALK LR LR
comp=Z,261nm,22.0s,MS4.3
ARMA Armidale 61.70 170 *e*P **P** **06 03 10.3 -0.1**
POO Poona 62.08 276 *e*P **P** **06 03 12.0 -1.3**
comp=Z,33nm,0.8s,mb5.5
KAD Karad 62.33 274 *e*P **P** **06 03 14.7 -0.3**
STKA Stephens Creek 62.44 180 *e*P **P** **06 03 14.9 -0.4**
comp=Z,8.4nm,0.9s,mb4.9
STKA *e*pP pP 06 03 27.7 +0.7
STKA Stephens Creek 62.44 180 P **P** **06 03 14.1 -1.2**
comp=Z,4.8nm,0.6s,mb4.8,baz=341,slow=8.9,SNR=9.3
STKA LR LR 06 29 57.0
comp=Z,697nm,21.1s,MS4.8,baz=279,slow=36
FORT Forrest 62.71 193⇓ *i*P **P** **06 03 16.9 -0.2**
comp=Z,95nm,0.5s,mb6.2
FORT *e*pP pP 06 03 28.5 -0.3
AKTK Aktyubinsk 63.07 315 P **P** **06 03 19.4 0.0**
AKTO Aktyubinsk 63.07 315 P **P** **06 03 19.4 0.0**
comp=Z,12nm,0.8s,mb5.1,baz=84,slow=6.9,SNR=31
DLBC Dease Lake 63.34 36 P **P** **06 03 20.8 -0.4**
baz=328,slow=5.3
PRGR Permogore 66.09 329⇓ *i*P **P** **06 03 39.6 +0.6**
PRGR *e* 06 04 06.3
PRGR *e* 06 06 07.3
ABKT Ailbek 67.16 301 P **P** **06 03 47.7 +1.5**
comp=Z,113nm,0.7s,mb6.0,SNR=5.0
NWAO Narrogin (SRO) 67.59 202 *e*P **P** **06 03 48.8 +0.1**
comp=Z,30nm,0.9s,mb5.3
NWAO Narrogin (SRO) 67.59 202 P **P** **06 03 48.9 +0.1**
NWAO pmax pmax
comp=Z,17nm,0.8s
NWAO Narrogin (SRO) 67.59 202 P **P** **06 03 48.9 +0.1**
comp=Z,16nm,0.8s,mb5.1,baz=45,slow=8.4,SNR=9.6
LVZ Lovozero 67.83 337 PFAKE 06 04 00.0 +10
LVZ LR LR
comp=Z,781nm,20.0s,MS4.9
APA Apatity 68.40 337⇑ *i*P **P** **06 03 53.6 +0.1**
APA *i* pP 06 04 06.5 +1.2
APA pmax pmax
comp=Z,12nm,0.8s,mb5.0
RES Resolute Bay 68.46 14 *e*P **P** **06 03 52.6 -1.2**
comp=Z,294nm,1.0s
RES Resolute Bay 68.46 14 *e*P **P** **06 03 52.6 -1.2**
RES pmax pmax
comp=Z,294nm,1.0s
YKW3 Yellowknife Ar 68.96 29 *e*P **P** **06 03 56.8 -0.3**
YKA Yellowknife Ar 68.99 29 P **P** **06 03 56.3 -1.0**
YKA pmax pmax
comp=Z,6.0nm,0.7s
YKA Yellowknife Ar 68.99 29 P **P** **06 03 56.3 -0.9**
comp=Z,5.6nm,0.7s,mb4.6,baz=295,slow=6.3,SNR=49
KEV Kevo 69.28 340 PFAKE 06 04 10.0 +11
KEV LR LR
comp=Z,722nm,19.0s,MS4.9
ARCES ARCESS Array B 69.83 340 P **P** **06 04 02.7 +0.3**
ARCES LR LR 06 42 13.4
ARCES ARCESS Array B 69.83 340 P **P** **06 04 02.7 +0.3**
comp=Z,6.0nm,0.7s,mb4.6,baz=79,slow=7.7,SNR=13
ARCES LR LR 06 42 13.4
comp=Z,478nm,19.6s,MS4.8,baz=74,slow=42
GNW Green Mountain 71.28 45 *e*P **P** **06 04 11.7 +0.1**
JOF Joensuu 71.52 333 *e*p **P** **06 04 11.8 -0.9**
comp=Z,12nm,0.7s,mb4.9
JOF Joensuu 71.52 333 *e*P **P** **06 04 11.8 -0.9**
JOF pmax pmax
comp=Z,12nm,0.7s,mb4.9
DAG Danmarks Havn 71.89 355⇓ *e*P **P** **06 04 14.1 -0.7**
DAG pmax pmax
comp=Z,11nm,1.0s,mb4.7
DAG Danmarks Havn 71.89 355⇓ *i*P **P** **06 04 14.1 -0.7**
comp=Z,11nm,1.0s,mb4.7
LON Longmire 72.25 46 *e*P **P** **06 04 18.2 +0.8**
COR Corvallis 72.27 48 PFAKE 06 04 30.0 +12
COR LR LR
comp=Z,495nm,20.0s,MS4.8
MOS Moscow 72.37 325 *e*P **P** **06 04 17.5 -0.5**
MOS *i* pP 06 04 29.6 -0.2
MOS MLR MLR
comp=Z,1μm,18.0s,MS5.2
MAK Makhachkala 72.52 310 *e*P **P** **06 04 16.1 -3.0**
MAK *e*S S 06 13 43.4 +2.7
MAK pmax pmax
comp=Z,268nm,1.6s,mb5.9
MAK MLR MLR
comp=Z,2μm,16.1s,MS5.4
OBN Obninsk 73.20 325 *e*P **P** **06 04 22.5 -0.4**
OBN *e*pP pP 06 04 34.5 -0.3
OBN LR LR
comp=Z,1μm,19.0s,MS5.2
OBN Obninsk 73.20 325⇓ *e*P **P** **06 04 22.4 -0.5**
OBN *e* pP 06 04 34.9 +0.1
OBN pmax pmax
comp=Z,49nm,1.4s,mb5.2
OBN MLR MLR
comp=Z,1μm,18.0s,MS5.1
VRSR Storozhevoye 73.75 320 *e*P **P** **06 04 26.5 +0.3**
VRSR pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
VRSR pmax pmax
comp=N,4.0nm,1.0s
VRSR pmax pmax
comp=E,6.0nm,1.2s
VRSR MLR MLR
comp=Z,80nm,17.0s,MS4.1
VRSR MLR MLR
comp=N,30nm,16.0s,MS4.0
VRSR MLR MLR
comp=E,50nm,17.0s,MS4.0
HAWA Hanford 73.82 45 *e*P **P** **06 04 27.1 +0.4**
comp=E,46nm,1.7s,mb5.1
KAF Kangasniemi 73.89 334 *e*p **P** **06 04 26.0 -0.8**
comp=E,10nm,0.6s,mb4.9,baz=51,slow=5.5
KAF Kangasniemi 73.89 334 *e*P **P** **06 04 26.0 -0.8**
KAF pmax pmax
comp=Z,10.0nm,0.6s,mb4.9
YBH Yreka Blue Hor 73.93 51 *e*P **P** **06 04 28.4 +1.0**
comp=Z,26nm,1.5s,mb4.9
YBH LR LR
comp=Z,626nm,19.0s,MS4.9
YBH Yreka Blue Hor 73.93 51 *e*P **P** **06 04 28.4 +1.0**
YBH pmax pmax
comp=Z,26nm,1.5s
YBH MLR MLR
comp=Z,626nm,19.0s
EDM Edmonton 74.01 37 *e*P **P** **06 04 27.4 -0.3**
HATD Hatta, Dubai 74.16 290 P **P** **06 04 30.2 +1.2**
SNR=6.7
HATD Hatta, Dubai 74.16 290 P **P** **06 04 30.2 +1.2**
SNR=6.7
NEW Newport 74.37 43 *e*P **P** **06 04 29.8 -0.1**
comp=Z,34nm,1.4s,mb5.1
NEW Newport 74.37 43 *e*P **P** **06 04 29.8 -0.1**
NEW pmax pmax
comp=Z,34nm,1.4s
FINES FINESS Array B 74.38 333 *i* P **P** **06 04 29.7 0.0**
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 74.38 333 P **P** **06 04 29.4 -0.3**
comp=Z,6.4nm,0.8s,mb4.6,baz=63,slow=6.4,SNR=26
WDC Whiskeytown Da 74.57 52 PFAKE 06 04 40.0 +8.8
WDC LR LR
comp=Z,693nm,21.0s,MS4.9
DGRG David-gareji 74.62 309 P **P** **06 04 28.0 -3.5**
HOPS Hopland 74.94 53 PFAKE 06 04 50.0 +17
HOPS LR LR
comp=Z,549nm,20.0s,MS4.8
ZEI Tsey 74.97 311 *e*P **P** **06 04 33.3 -0.2**
ZEI *i* pP 06 04 42.0 -3.4
ZEI pmax pmax
comp=Z,11nm,0.9s,mb4.8
KIV Kislovodsk 75.19 312 P **P** **06 04 36.6 +1.9**
comp=Z,278nm,0.7s,SNR=7.7
KIV Kislovodsk 75.19 312 *e*P **P** **06 04 36.5 +1.9**
comp=Z,27nm,0.8s,mb5.2
KIV LR LR
comp=Z,495nm,19.0s,MS4.8
KIV Kislovodsk 75.19 312 *c i*P **P** **06 04 35.9 +1.2**
KIV *e* pP 06 04 48.2 +1.6
KIV *e*S S 06 14 12.5 +1.9
KIV *e*SS SS 06 19 03.1 +3.3
KIV pmax pmax
comp=Z,53nm,1.1s,mb5.4
KIV pmax pmax
comp=Z,118nm,5.2s
KIV MLR MLR
comp=Z,471nm,20.0s,MS4.8
KIV Kislovodsk 75.19 312 P **P** **06 04 36.8 +2.1**
SNR=16
KIV Kislovodsk 75.19 312 P **P** **06 04 36.8 +2.1**
SNR=16
KIV Kislovodsk 75.19 312⇓ *i*P **P** **06 04 35.7 +1.0**
ONI Oni 75.35 311 P **P** **06 04 37.2 +1.6**
MOD Modoc 75.44 50 *e*P **P** **06 04 36.4 +0.2**
MOD LR LR
comp=Z,710nm,19.0s,MS5.0
WALA Waterton Lakes 75.82 41 *e*P **P** **06 04 38.0 -0.2**
comp=Z,15nm,0.8s,mb5.0
OHCM Honcut 75.87 53 *e*P **P** **06 04 38.0 -0.7**
VSU Vasula 75.89 331 *e*P **P** **06 04 38.9 +0.5**
BMO Blue Mountains 75.93 46 *e*P **P** **06 04 37.9 -1.0**
comp=Z,47nm,1.7s,mb5.1
BMO LR LR
comp=Z,324nm,19.0s,MS4.7
BSMT Bassoo Peak 75.94 42 *e*P **P** **06 04 39.9 +1.0**
WVOR Wild Horse Val 76.27 49 PFAKE 06 04 50.0 +9.1
WVOR LR LR
comp=Z,738nm,21.0s,MS5.0
MSO Missoula 76.96 43 *e*P **P** **06 04 44.5 -0.1**
SAO San Andreas Ge 77.13 55 PFAKE 06 05 00.0 +14
SAO LR LR
comp=Z,945nm,21.0s,MS5.1
SOC Sochi 77.24 313 *c i*P **P** **06 04 46.8 +0.4**
SOC *e* 06 07 34.8
SOC *e*PPP 06 09 37.1
SOC *e*S S 06 14 35.4 +2.2
SOC *e* 06 15 04.4
SOC *e*SSS 06 22 44.0
SOC pmax pmax
comp=Z,31nm,0.8s,mb5.3
SOC MLR MLR
comp=Z,533nm,17.0s,MS4.9
CMB Columbia Colle 77.25 53 *e*P **P** **06 04 46.9 +0.3**
comp=Z,22nm,1.3s,mb4.9
CMB *e*PP PP 06 07 40.0 -0.4
CMB LR LR
comp=Z,436nm,20.0s,MS4.8
CMB Columbia Colle 77.25 53 *e*P **P** **06 04 46.9 +0.4**
CMB *e* 06 07 40.0
CMB pmax pmax
comp=Z,22nm,1.3s,mb4.9
CMB MLR MLR
comp=Z,436nm,20.0s,MS4.8
CHMT Chamberlain Mo 77.31 43 *e*P **P** **06 04 46.2 -0.5**
MNK Minsk 77.77 327 *e*P **P** **06 04 48.0 -1.1**
ANN Anapa 78.02 315 *e*P **P** **06 04 50.9 +0.2**
ANN *e*S S 06 14 44.8 +3.2
ANN pmax pmax
comp=Z,66nm,1.3s,mb5.4
HRY Holter Researc 78.25 42 *e*P **P** **06 04 52.5 +0.5**
LRM Limekiln Ridge 78.36 43 *e*P **P** **06 04 52.6 +0.1**

HLID Hailey 78.37 46 *e*P P 06 04 52.6 0.0
comp=Z,6.2nm,0.9s,mb4.5
HLID LR LR
comp=Z,273nm,22.0s,MS4.5
NVAR Mina Array Bea 78.48 52 P P 06 04 53.1 -0.3
comp=Z,5.5nm,0.7s,mb4.6,baz=278,slow=7.2,SNR=21
DLMT Dillon 78.53 44 *e*P P 06 04 54.6 +1.1
comp=Z,19nm,1.1s,mb5.0
MSL Mosul 78.66 305 *ex* x 06 04 55.0
EGMT Eagleton 78.71 40 *e*P P 06 04 54.8 +0.4
comp=Z,47nm,1.4s,mb5.2
EGMT LR LR
comp=Z,248nm,20.0s,MS4.5
FFC Flin Flon 78.72 32 P P 06 04 54.4 +0.1
comp=Z,59nm,0.8s,mb5.6,SNR=6.1
FFC Flin Flon 78.72 32 *e*P P 06 04 53.2 -1.1
comp=Z,5.4nm,0.8s,mb4.5
FFC LR LR
comp=Z,443nm,20.0s,MS4.8
FFC Flin Flon 78.72 32 *e*P P 06 04 53.3 -1.0
FFC pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
FFC MLR MLR
comp=Z,443nm,20.0s,MS4.8
MIB Mutribah 78.74 298 *e*P P 06 04 55.0 +0.1
MIB AMb AMB 06 04 56.5
comp=Z,37nm,0.7s,mb5.4
KBD Kabd 78.78 297 *e*P P 06 04 55.4 +0.3
KBD AMb AMB 06 05 00.0
comp=Z,124nm,0.7s,mb5.9
BOZ Bozeman (W) 78.94 43 *e*P P 06 04 56.3 +0.6
comp=Z,42nm,1.9s,mb5.0
BOZ LR LR
comp=Z,303nm,20.0s,MS4.6
BOZ Bozeman (W) 78.94 43 *e*P P 06 04 56.3 +0.5
BOZ pmax pmax
comp=Z,42nm,1.9s,mb5.0
BOZ MLR MLR
comp=Z,303nm,20.0s,MS4.6
RDF Al-Radifah 79.01 297 *e*P P 06 04 56.9 +0.5
RDF AMb AMB 06 05 00.1
comp=Z,44nm,0.5s,mb5.6
NAY Al-Naaiem 79.08 297 *e*P P 06 04 56.9 +0.1
NAY AMb AMB 06 05 00.2
comp=Z,30nm,0.6s,mb5.4
RST Umm Al-Ruwaisa 79.15 298 *e*P P 06 04 57.2 0.0
RST AMb AMB 06 04 59.9
comp=Z,52nm,0.7s,mb5.6
BHD Baghdad 79.24 302 *ex* x 06 04 55.0
AKASG Malin Array Be 79.34 323 *i* P P 06 04 57.7 -0.1
AKASG pmax pmax
comp=Z,17nm,0.7s
AKASG Malin Array Be 79.34 323 P P 06 04 57.8 0.0
comp=Z,17nm,0.7s,mb5.1,baz=48,slow=5.7,SNR=87
AKASG LR LR 06 42 36.6
comp=Z,1μm,19.7s,MS5.2,baz=40,slow=38
KIEV Kiev 79.35 323 *e*P P 06 04 57.8 -0.1
comp=Z,27nm,0.8s,mb5.2
KIEV *e*pP pP 06 05 09.5 -0.3
KIEV LR LR
comp=Z,1μm,20.0s,MS5.2
KIEV Kiev 79.35 323 *e*P P 06 04 57.8 -0.1
KIEV *e**PP pP 06 05 09.5 -0.4
KIEV pmax pmax
comp=Z,27nm,0.8s,mb5.2
KIEV MLR MLR
comp=Z,1μm,20.0s,MS5.2
QLMT Earthquake Lak 79.51 44 *e*P P 06 04 59.0 +0.2
ISA Isabella 79.76 55 PFAKE 06 05 10.0 +10
ISA LR LR
comp=Z,819nm,19.0s,MS5.1
YMR Madison River 79.87 44 *e*P P 06 05 01.6 +0.8
comp=Z,17nm,0.9s,mb5.0
YMR LR LR
comp=Z,507nm,20.0s,MS4.9
NB2 NORSAR Subarra 79.95 338 P P 06 05 00.4 -0.5
comp=Z,14nm,0.8s,mb5.0,baz=41,slow=5.6
NB2 NORSAR Subarra 79.95 338 P P 06 05 00.4 -0.5
NB2 pmax pmax
comp=Z,14nm,0.8s,mb4.9
NOA NORSAR Array B 79.95 338 P P 06 05 00.6 -0.3
comp=Z,4.7nm,0.7s,mb4.5,baz=41,slow=5.3,SNR=24
NOA LR LR 06 43 38.0
comp=Z,371nm,18.8s,MS4.8,baz=40,slow=38
YNR Norris Junctio 80.02 44 *e*P P 06 05 04.8 +3.1
YFT Old Faithful 80.07 44 *e*P P 06 05 04.0 +2.1
SUW Suwalki 80.22 328 *e*P P 06 05 03.2 +0.7
IMW Indian Meadow 80.32 44 *e*P P 06 05 03.6 +0.4
comp=Z,16nm,0.9s,mb4.9
FLWY Flagg Ranch 80.36 44 *e*P P 06 05 04.6 +1.1
comp=Z,26nm,1.0s,mb5.1
MOOW Moose Ponds 80.52 44 *e*P P 06 05 04.5 +0.2
comp=Z,40nm,1.7s,mb5.1
TPAW Teton Pass 80.53 45 *e*P P 06 05 03.5 +0.9
comp=Z,16nm,0.8s,mb5.0
RLMT Red Lodge 80.62 43 *e*P P 06 05 05.1 +0.3
comp=Z,9.3nm,0.6s,mb4.9
RLMT *e*PP PP 06 08 13.5 +5.2
RLMT LR LR
comp=Z,383nm,20.0s,MS4.8
TPNV Topopah Spring 80.64 53 *e*P P 06 05 04.1 -1.0
comp=Z,23nm,1.4s,mb4.9
TPNV LR LR
comp=Z,435nm,19.0s,MS4.8
TPNV Topopah Spring 80.64 53 *e*P P 06 05 04.1 -1.0
TPNV pmax pmax
comp=Z,23nm,1.4s,mb4.9
TPNV MLR MLR
comp=Z,435nm,19.0s,MS4.8
REDW Red Top Meadow 80.67 45 *e*P P 06 05 05.6 +0.4
comp=Z,22nm,1.2s,mb5.0
SNOW Snow King Moun 80.67 45 *e*P P 06 05 05.9 +0.8
comp=Z,10nm,0.8s,mb4.8
LOHW Long Hollow 80.68 45 *e*P P 06 05 05.3 +0.1
comp=Z,40nm,1.7s,mb5.1
MALT Malatya 80.81 309 *e*P P 06 05 08.0 +1.9
comp=Z,45nm,1.4s,mb5.2
MALT Malatya 80.81 309 *e*P P 06 05 08.0 +2.0
MALT pmax pmax
comp=Z,45nm,1.4s,mb5.2
MALT Malatya 80.81 309⇑ *i*P P 06 05 07.7 +1.7
AHID Auburn Hatcher 80.84 45 *e*P P 06 05 07.6 +1.5
comp=Z,11nm,0.7s,mb4.9
AHID LR LR
comp=Z,305nm,21.0s,MS4.6
GSC Goldstone 81.11 54 *e*P P 06 05 08.0 +0.3
GSC LR LR
comp=Z,637nm,22.0s,MS4.9
DUG Dugway 81.18 48 *e*P P 06 05 07.7 -0.3
comp=Z,14nm,0.9s,mb4.9
DUG LR LR
comp=Z,476nm,20.0s,MS4.8
DUG Dugway 81.18 48 *e*P P 06 05 07.7 -0.3
DUG pmax pmax
comp=Z,14nm,0.9s,mb4.9
DUG MLR MLR
comp=Z,476nm,20.0s,MS4.8
HWUT Hardware Ranch 81.20 47 *e*P P 06 05 08.2 +0.2
comp=Z,44nm,1.3s,mb5.2
HWUT LR LR
comp=Z,205nm,20.0s,MS4.5
LAO LASA Array 81.44 40 PFAKE 06 05 20.0 +11
LAO LR LR
comp=Z,264nm,21.0s,MS4.6
KONO Kongsberg 81.53 338 PFAKE 06 05 20.0 +11
KONO LR LR
comp=Z,704nm,19.0s,MS5.0
CTU Camp Tracy 81.59 47 *e*P P 06 05 10.9 +0.8
comp=Z,13nm,0.8s,mb4.9
PPT Papeete 81.67 116 LR LR 06 38 15.6
comp=Z,399nm,19.4s,MS4.8,baz=296,slow=33
BW06 Boulder Array 81.78 45 *e*P P 06 05 10.4 -0.7
BW06 LR LR
comp=Z,385nm,20.0s,MS4.8
PDAR Pinedale Array 81.78 45 P P 06 05 10.5 -0.6
comp=Z,5.6nm,0.8s,mb4.5,baz=270,slow=1.9,SNR=33
PDAR LR LR 06 36 48.3
comp=Z,250nm,20.4s,MS4.6,baz=315,slow=32
NLU North Lily Min 81.79 48 *e*P P 06 05 11.9 +0.7
JLU Jordanelle 81.83 47 *e*P P 06 05 11.9 +0.5
SFJD Kangerlussuaq 81.95 5 PFAKE 06 05 20.0 +8.5
SFJD LR LR
comp=Z,389nm,20.0s,MS4.8
MPU Maple Canyon 82.04 48 *e*P P 06 05 13.5 +1.0
DAU Daniels Canyon 82.06 48 *e*P P 06 05 12.7 +0.1
PFO Pinyon Flat Ob 82.25 56 *e*P P 06 05 13.3 -0.3
comp=Z,44nm,1.7s,mb5.1
PFO LR LR
comp=Z,787nm,20.0s,MS5.1
PFO Pinyon Flat Ob 82.25 56 *e*P P 06 05 13.3 -0.4
PFO pmax pmax
comp=Z,44nm,1.7s,mb5.1
PFO MLR MLR
comp=Z,787nm,20.0s,MS5.1
CCUT Cedar City 82.26 51 *e*P P 06 05 13.6 -0.1
LVV L'vov 82.51 325 *e*P pP 06 05 26.3 -0.5
LVV *e* 06 05 31.1
LVV *e* 06 16 13.9
LVV *e* 06 24 18.9
LVV MLR MLR
comp=Z,700nm,19.0s,MS5.0
LVV MLR MLR
comp=N,500nm,18.0s,MS5.1
LVV MLR MLR
comp=E,600nm,18.0s,MS5.1
MSU Marysvale 82.52 49 *e*P P 06 05 15.2 +0.2
MSU *e*PcP PcP 06 05 21.0 +1.0
SRU San Rafael 83.25 48 *e*P P 06 05 18.0 -0.8
comp=E,7.1nm,0.7s,mb4.8
SRU San Rafael 83.25 48 *e*P P 06 05 18.0 -0.8
SRU pmax pmax
comp=Z,7.0nm,0.7s,mb4.8
KWP Kalwaria 83.28 325 *e*P P 06 05 19.7 +0.9
KWP Kalwaria 83.28 325⇑ *i*P P 06 05 18.6 -0.2
VRI Vrincioaia 83.60 320 P P 06 05 21.7 +1.3
VRI Vrincioaia 83.60 320⇓ *i*P P 06 05 21.2 +0.8
ANTO Ankara 83.61 313 *e*P P 06 05 21.7 +1.1
comp=Z,13nm,0.6s,mb5.2
ANTO *e*pP pP 06 05 33.4 +0.7
ANTO LR LR
comp=Z,260nm,20.0s,MS4.6
ANTO Ankara 83.61 313 *e*P P 06 05 21.7 +1.1
ANTO *e**PP pP 06 05 33.4 +0.7
ANTO pmax pmax
comp=Z,13nm,0.6s,mb5.2
ANTO MLR MLR
comp=Z,260nm,20.0s,MS4.6
ANTO Ankara 83.61 313 P P 06 05 21.9 +1.3
SNR=8.7
ANTO Ankara 83.61 313 P P 06 05 21.9 +1.3
SNR=8.7
ANTO Ankara 83.61 313⇓ *i*P P 06 05 22.1 +1.5
PLOR Plostina 83.65 320⇓ *i*P P 06 05 21.7 +1.0
HARR Harsova 83.65 319⇑ P P 06 05 20.8 0.0
HARR Harsova 83.65 319⇑ *i*P P 06 05 20.8 +0.1
KOLS Kolonicke sedl 83.96 325 *i* P P 06 05 22.8 +0.6
STHS Stebnicka Huta 84.14 326 *i* P P 06 05 24.4 +1.2
comp=Z,16nm,1.1s,mb5.1
STHS Stebnicka Huta 84.14 326 *i* P P 06 05 24.4 +1.2
STHS pmax pmax
comp=Z,16nm,1.1s,mb5.1
UZH Uzhgorod 84.15 325 *e*P P 06 05 23.6 +0.4
UZH *e* pP 06 05 33.2 -2.1
UZH *i* S S 06 15 46.8 +1.7
UZH *e* 06 16 55.0
UZH MLR MLR
comp=Z,770nm,17.0s,MS5.2
MLR Muntele Rosu 84.26 320⇑ P P 06 05 25.0 +1.2
MLR Muntele Rosu 84.26 320⇑ *i*P P 06 05 25.0 +1.2
OJC Ojcow 84.29 327 *e*P P 06 05 24.1 +0.2
OJC *e*PcP PcP 06 05 26.3 -1.3
OJC *e*sP sP 06 05 35.5 -4.9
OJC *e*PP PP 06 08 37.3 -0.9
OJC *e*S S 06 15 47.4 +0.9
OJC *e*SS SS 06 21 15.0 -0.5
OJC L 06 46 20.3
comp=Z,0.6nm,19.4s
CRVS Cervenica-Dubn 84.38 325 *i* P P 06 05 25.0 +0.6
CRVS *e*S S 06 15 50.0 +2.6
ULM Lac du Bonnet 84.47 33 P P 06 05 23.8 -1.0
comp=Z,1.4nm,0.6s,mb4.3,baz=292,slow=11,SNR=3.5
ULM LR LR 06 42 16.9
comp=Z,330nm,18.5s,MS4.8,baz=284,slow=35
NIE Niedzica 84.59 326 *e*P P 06 05 26.5 +1.1
WUAZ Wupatki 84.72 52 *e*P P 06 05 27.6 +1.2
comp=Z,16nm,1.1s,mb5.0
WUAZ LR LR
comp=Z,441nm,21.0s,MS4.8
PHWY Pilot Hill 85.11 44 *e*P P 06 05 29.0 +0.8
KECS Kecovo 85.14 325 *i* P P 06 05 28.8 +0.6
comp=Z,3.1nm,0.8s,mb4.5
KECS *e* pP 06 05 40.5 +0.2
KECS Kecovo 85.14 325 *i* P P 06 05 28.8 +0.6
KECS *e* pP 06 05 40.5 +0.2
KECS pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
KECS Kecovo 85.14 325 *i* P P 06 05 28.8 +0.6
KECS *i* pP pP 06 05 40.5 +0.2
DRGR 85.15 323 P P 06 05 29.0 +0.7
DRGR 85.15 323⇓ *i*P P 06 05 28.8 +0.5
OKC Ostrava-Krasne 85.33 327 *e*P P 06 05 29.6 +0.5
OKC *e* pP 06 05 29.6 +0.5
OKC *e*SKS 06 15 59.7
OKC Ostrava-Krasne 85.33 327 *e*P P 06 05 29.6 +0.5
OKC *e*pP pP 06 05 40.8 -0.4
OKC *e*S S 06 15 59.7 +2.9
OKC AMS AMS 06 53 10.0
comp=Z,500nm,16.3s
RUE Ruedersdorf 85.36 331 *e*P P 06 05 29.7 +0.4
comp=Z,23nm,0.5s,mb5.6
KSP Ksiaz 85.46 329 *e*P P 06 05 30.8 +1.0
KSP Ksiaz 85.46 329⇑ *e*P P 06 05 29.8 0.0
KSP *e**PP pP 06 05 41.6 -0.3
KSP *e*S S 06 15 59.0 +0.9
KSP *e*SS SS 06 21 33.0 +0.4
MVCO Mesa Verde 85.65 49 *e*P P 06 05 31.4 +0.4
comp=Z,7.2nm,0.8s,mb5.0
MVCO LR LR
comp=Z,393nm,21.0s,MS4.8
MORC Moravsky Berou 85.65 327 *e*P P 06 05 31.5 +0.8
comp=Z,47nm,1.6s,mb5.5
MORC *e*pP pP 06 05 42.8 0.0
MORC Moravsky Berou 85.65 327⇓ *i*P P 06 05 31.5 +0.8
DPC Dobruska-Polom 85.80 328 *e*P P 06 05 32.0 +0.5
DPC *e*pP pP 06 05 43.7 +0.1
DPC *e*S S 06 16 03.9 +2.5
DPC AMS AMS 06 47 30.0
comp=Z,500nm,15.7s
AGMN Agassiz Refuge 85.81 34 PFAKE 06 05 40.0 +8.4
AGMN LR LR
comp=Z,399nm,19.0s,MS4.8
PSZ Piszkesteto 85.81 325 *e*P P 06 05 32.5 +0.9
comp=Z,16nm,1.1s,mb5.2
PSZ *e*pP pP 06 05 43.9 +0.2
PSZ Piszkesteto 85.81 325 *e*P P 06 05 32.5 +0.9
PSZ *e**PP pP 06 05 43.9 +0.2
PSZ pmax pmax
comp=Z,16nm,1.1s,mb5.2
PSZ Piszkesteto 85.81 325⇓ *e*P P 06 05 32.5 +0.9
PSZ Piszkesteto 85.81 325⇑ *i*P P 06 05 31.8 +0.2
UPC Upice 85.83 329 *e*P P 06 05 31.7 +0.1
UPC *e*pP pP 06 05 43.8 +0.1
ISCO Idaho Springs 85.93 45 *e*P P 06 05 33.1 +0.8
comp=Z,15nm,1.3s,mb5.1
ISCO LR LR
comp=Z,369nm,20.0s,MS4.8
ISCO Idaho Springs 85.93 45 *e*P P 06 05 33.1 +0.8
ISCO pmax pmax
comp=Z,15nm,1.3s,mb5.1
ISCO MLR MLR
comp=Z,369nm,20.0s,MS4.8
VYHS Vyhne 85.94 326 *i* P P 06 05 32.7 +0.5
comp=Z,10nm,1.1s,mb5.0
VYHS *e* pP 06 05 43.9 -0.3
VYHS *e*PP PP 06 08 52.2 +0.6
VYHS *e*S S 06 16 06.2 +3.4
VYHS Vyhne 85.94 326 *i* P P 06 05 32.7 +0.5
VYHS *e* pP 06 05 43.9 -0.3
VYHS *e* 06 08 52.2
VYHS *e*S S 06 16 06.2 +3.4
VYHS pmax pmax
comp=Z,10.0nm,1.1s,mb5.0
VYHS Vyhne 85.94 326 *i* P P 06 05 32.7 +0.5
VYHS *i* pP pP 06 05 43.8 -0.4
VYHS *e*PP PP 06 08 52.2 +0.6
VYHS *e*S S 06 16 06.2 +3.4
KOLL Kolacno 86.08 326 *e*P P 06 05 33.6 +0.7
VRAC Vranov 86.42 328 P P 06 05 35.3 +0.7
VRAC Vranov 86.42 328⇓ *i*P P 06 05 35.0 +0.5
PVCC Panska Ves 86.45 329 *e*P P 06 05 35.4 +0.7
PVCC *e*pP pP 06 05 47.1 +0.3
BRG Berggiesshubel 86.47 330 *e*P P 06 05 34.5 -0.3
BRG S S 06 16 09.0 +1.0
BRG SS SS 06 21 53.0 +5.6
BRG pmax pmax
comp=Z,15nm,1.6s,mb5.0
BRG MLR MLR
comp=N,156nm,19.6s,MS4.7
BRG MLR MLR
comp=E,270nm,19.4s,MS4.7
BRG MLR MLR
comp=Z,354nm,14.3s
BRG Berggiesshubel 86.47 330 *e*P P 06 05 34.5 -0.3
comp=Z,25nm,1.6s,mb5.2
BRG S S 06 16 09.0 +1.0
BRG SS SS 06 21 53.0 +5.6
BRG
comp=N,261nm,19.6s
BRG
comp=E,451nm,19.4s
BRG
comp=Z,591nm,14.3s
CLL Collm 86.55 331 *i* P P 06 05 35.5 +0.4
comp=Z,31nm,1.2s,mb5.4
CLL *e* pP 06 05 47.0 -0.2
CLL *e*S S 06 16 09.0 +0.3
CLL Collm 86.55 331 *i* P P 06 05 35.5 +0.4
CLL *e* pP 06 05 47.0 -0.2
CLL *e*S S 06 16 09.0 +0.3
CLL pmax pmax
comp=Z,31nm,1.2s,mb5.4
CLL Collm 86.55 331 *i* P P 06 05 35.5 +0.4
comp=Z,31nm,1.2s,mb5.4
CLL *i* pP pP 06 05 46.6 -0.6
comp=Z,35nm,1.3s
CLL *e*S S 06 16 09.0 +0.3
CLL *e*SS SS 06 21 54.0 +5.5
MODS Modra-Piesok 86.76 327 *i* P P 06 05 37.1 +0.9
MODS *e* pP 06 05 48.6 +0.3
MODS *e*S S 06 16 13.2 +2.3
MODS Modra-Piesok 86.76 327 *i* P P 06 05 37.1 +0.9
MODS *i* pP pP 06 05 48.6 +0.3
MODS *e*S S 06 16 13.2 +2.3
PRU Pruhonice 86.86 329 *e*P P 06 05 37.7 +1.0
PRU *e*pP pP 06 05 48.2 -0.6
PRU *e*S S 06 16 12.3 +0.6
PRU AMS AMS 06 49 10.0
comp=Z,700nm,17.0s
TUC Tucson 86.94 54 *e*P P 06 05 37.7 +0.3
TUC LR LR
comp=Z,744nm,20.0s,MS5.1
ZST Bratislava 86.97 327 *i* P P 06 05 38.2 +0.9
comp=Z,6.5nm,0.9s,mb4.9
ZST *e* pP 06 05 49.5 +0.1
ZST *e*S S 06 16 16.4 +3.5
ZST Bratislava 86.97 327 *i* P P 06 05 38.2 +0.9
ZST *e* pP 06 05 49.5 +0.1
ZST *e*S S 06 16 16.4 +3.5
ZST pmax pmax
comp=Z,7.0nm,0.9s,mb4.9
ZST Bratislava 86.97 327 *i* P P 06 05 38.2 +0.9
ZST *i* pP pP 06 05 49.5 +0.1
ZST *e*S S 06 16 16.4 +3.5
NKC Novy Kostel 87.59 330 *e*P P 06 05 40.5 +0.3
PKSM Moragy 87.61 324⇑ P P 06 05 40.5 +0.1
PKSM Moragy 87.61 324⇑ *i*P P 06 05 40.5 +0.1
MOX Moxa 87.63 331 *e*P P 06 05 41.4 +1.0
MOX
comp=Z,300nm,20.0s
CONA Conrad Observa 87.75 327⇑ *i*PcP PcP 06 05 41.4 -1.5
comp=Z,20nm,1.4s
KHC Kasperske Hory 87.91 329 *e*P P 06 05 41.9 +0.1
KHC *e* pP 06 05 53.9 0.0
KHC *e*PP PP 06 09 04.5 -3.0
KHC *e* 06 09 20.5
KHC *e*SKS 06 16 23.8
KHC LR LR
comp=Z,700nm,16.4s,MS5.2
KHC Kasperske Hory 87.91 329 *e*P P 06 05 41.9 +0.1
KHC *e* pP 06 05 53.9 0.0
KHC *e* 06 09 04.5
KHC *e* 06 16 23.8
KHC MLR MLR
comp=Z,700nm,16.4s,MS5.2
KHC Kasperske Hory 87.91 329 *e*P P 06 05 41.9 +0.1
KHC *e*pP pP 06 05 53.9 0.0
KHC *e*PP PP 06 09 04.5 -3.0
KHC x x 06 09 20.5
KHC *e*S S 06 16 23.8 +1.9
KHC AMS AMS 06 50 00.0
comp=Z,700nm,16.4s
GERES GERESS Array B 88.07 329 P P 06 05 42.1 -0.4
GERES 06 09 10.0
GERES GERESS Array B 88.07 329 P P 06 05 42.1 -0.4
comp=Z,0.9nm,0.5s,mb4.2,baz=46,slow=3.9,SNR=7.5
GERES PP PP 06 09 10.0 +1.3
comp=Z,0.4nm,0.5s,baz=41,slow=4.3,SNR=4.9
GERES LR LR 06 48 26.5
comp=Z,434nm,18.8s,MS4.9,baz=178,slow=38
EYMN Ely 88.14 33 PFAKE 06 05 50.0 +7.2
EYMN LR LR
comp=Z,435nm,20.0s,MS4.9
ANMO Albuquerque 88.32 50 *e*P P 06 05 45.1 +1.1
ANMO *e*PP PP 06 09 17.2 +6.0
ANMO LR LR
comp=Z,810nm,19.0s,MS5.2
GRA1 Grafenberg Arr 88.52 330 *e*P P 06 05 43.9 -0.7
comp=Z,38nm,1.8s,mb5.4
GRA1 *e*PP PP 06 09 12.3 0.0
GRF Grafenberg Arr 88.52 330 *e*P P 06 05 43.9 -0.7
GRF *e* 06 09 12.3
GRF pmax pmax
comp=Z,38nm,1.8s,mb5.4
GRF Grafenberg Arr 88.52 330 *e*P P 06 05 43.9 -0.7
GRF *e* 06 09 12.3
GRF pmax pmax
comp=Z,38nm,1.8s,mb5.4
GRF Grafenberg Arr 88.52 330 *e*P P 06 05 43.9 -0.7
comp=Z,38nm,1.8s,mb5.4
GRF *e*PP PP 06 09 12.3 0.0
GRFO Grafenberg 88.52 330 PFAKE 06 06 00.0 +15
GRFO LR LR
comp=Z,285nm,19.0s,MS4.7
MOA Molln 88.54 328⇑ *i*P P 06 05 45.9 +1.1
comp=Z,18nm,1.6s,mb5.1
MOA Molln 88.54 328⇑ *i*PcP PcP 06 05 45.9 -0.5
comp=Z,18nm,1.6s
ECSD EROS,Sioux Fal 88.55 38 *e*P P 06 05 44.9 0.0
comp=Z,6.7nm,1.0s,mb4.9
ECSD LR LR
comp=Z,469nm,20.0s,MS4.9
ESK Eskdalemuir 89.02 341 PFAKE 06 06 00.0 +13
ESK LR LR
comp=Z,265nm,19.0s,MS4.7
PERS Pernice 89.03 326 *e*P P 06 05 46.6 -0.5
PDKS Podkum 89.50 326 *e*P P 06 05 48.6 -0.7
CADS Cadrg 89.98 327 *e*P P 06 05 49.9 -1.7
ABTA Abfaltersbach 90.16 328 *i*PcP PcP 06 05 52.1 -1.5
comp=Z,10nm,1.1s
COWI Conover 90.59 33 PFAKE 06 06 10.0 +16
COWI LR LR
comp=Z,423nm,19.0s,MS4.9
FETA Feichten 90.76 329⇑ *i*PcP PcP 06 05 55.0 -1.3
comp=Z,11nm,1.2s
BFO Black Forest 90.78 331 *e*P P 06 05 54.5 -0.7
comp=Z,35nm,1.4s,mb5.5
BFO LR LR
comp=Z,455nm,19.0s,MS4.9
BFO Black Forest 90.78 331 *e*P P 06 05 54.5 -0.7
BFO pmax pmax
comp=Z,35nm,1.4s,mb5.5
BFO MLR MLR
comp=Z,455nm,19.0s,MS4.9
DAVA Damuels 90.93 330⇑ *i*P P 06 05 55.9 0.0
comp=Z,29nm,1.4s,mb5.4
DAVA Damuels 90.93 330⇑ *i*PcP PcP 06 05 55.9 -1.1
comp=Z,29nm,1.4s
MNTX Cornudas Mount 91.00 52 *e*P P 06 05 56.8 +0.2
MNTX LR LR
comp=Z,398nm,20.0s,MS4.8
SCHQ Schefferville 91.14 16 P P 06 05 56.2 -0.5
comp=Z,4.0nm,1.1s,mb4.7,baz=245,slow=19,SNR=3.7
SCHQ LR LR 06 53 53.8
comp=Z,277nm,18.2s,MS4.7,baz=332,slow=40

CDF	**Champ du Feu**	**91.15**	**332**	*e*P		**P**	**06 05 56.6**	**-0.4**
	comp=Z,80nm,1.5s,mb5.5							
CDF	**Champ du Feu**	**91.15**	**332**	*e*P		**P**	**06 05 56.6**	**-0.4**
	comp=Z,40nm,1.5s,mb5.5							
CDF	**Champ du Feu**	**91.15**	**332**	*e*P		**P**	**06 05 56.6**	**-0.4**
CDF					pmax	pmax		
	comp=Z,40nm,1.5s,mb5.5							
AMTX	**Amarillo**	**91.44**	**47**	*e*P		**P**	**06 06 00.0**	**+1.5**
AMTX					LR	LR		
	comp=Z,548nm,19.0s,MS5.0							
KSU1	**Kansas State U**	**91.71**	**42**	PFAKE			06 06 10.0	+10
KSU1					LR	LR		
	comp=Z,251nm,19.0s,MS4.7							
HINF	**Hinteralfeld**	**91.80**	**331**	*e*P		**P**	**06 05 59.2**	**-0.8**
HAU	**Haudompre**	**91.85**	**332**	*e*P		**P**	**06 05 59.5**	**-0.7**
HAU				*e*MLR		MLR		
	comp=Z,452nm,17.8s,MS4.7							
HAU	**Haudompre**	**91.85**	**332**	*e*P		**P**	**06 05 59.5**	**-0.7**
HAU					MLR	MLR		
	comp=Z,450nm,17.8s,MS5.0							
JFWS	**Jewell Farm**	**92.41**	**35**	PFAKE			06 06 10.0	+7.1
JFWS					LR	LR		
	comp=Z,437nm,19.0s,MS4.9							
WMOK	**Wichita Mounta**	**93.34**	**46**	PFAKE			06 06 20.0	+13
WMOK					LR	LR		
	comp=Z,394nm,19.0s,MS4.9							
LOR	**Lormes**	**93.44**	**333**	*e*P		**P**	**06 06 07.0**	**-0.6**
	comp=Z,71nm,1.6s,mb5.6							
LOR				*e*MLR		MLR		
	comp=Z,381nm,19.5s,MS4.6							
LOR	**Lormes**	**93.44**	**333**	*e*P		**P**	**06 06 07.0**	**-0.6**
	comp=Z,36nm,1.6s,mb5.5							
LOR					LR	LR		
	comp=Z,380nm,19.5s,MS4.9							
LOR	**Lormes**	**93.44**	**333**	*e*P		**P**	**06 06 07.0**	**-0.6**
LOR					pmax	pmax		
	comp=Z,35nm,1.6s,mb5.5							
LOR					MLR	MLR		
	comp=Z,380nm,19.5s,MS4.9							
GLMI	**Grayling**	**93.61**	**31**	PFAKE			06 06 20.0	+12
GLMI					LR	LR		
	comp=Z,325nm,19.0s,MS4.8							
LPL	**La Plagne**	**93.67**	**330**	*e*P		**P**	**06 06 07.3**	**-1.4**
	comp=Z,64nm,1.5s,mb5.5							
LPL	**La Plagne**	**93.67**	**330**	*e*P		**P**	**06 06 07.3**	**-1.4**
	comp=Z,32nm,1.5s,mb5.5							
LPL	**La Plagne**	**93.67**	**330**	*e*P		**P**	**06 06 07.3**	**-1.4**
LPL					pmax	pmax		
	comp=Z,32nm,1.5s,mb5.5							
LPG	**La Plagne**	**93.68**	**330**	*e*P		**P**	**06 06 07.7**	**-1.0**
	comp=Z,33nm,1.2s,mb5.4							
LPG	**La Plagne**	**93.68**	**330**	*e*P		**P**	**06 06 07.7**	**-1.0**
	comp=Z,17nm,1.2s,mb5.3							
LPG	**La Plagne**	**93.68**	**330**	*e*P		**P**	**06 06 07.7**	**-1.0**
LPG					pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3							
SSF	**Saint Saulge**	**93.75**	**333**	*e*P		**P**	**06 06 08.5**	**-0.5**
SMF	**Signal de Mont**	**93.96**	**332**	*e*P		**P**	**06 06 09.5**	**-0.4**
	comp=Z,60nm,1.4s,mb5.5							
SMF	**Signal de Mont**	**93.96**	**332**	*e*P		**P**	**06 06 09.5**	**-0.4**
	comp=Z,30nm,1.4s,mb5.5							
SMF	**Signal de Mont**	**93.96**	**332**	*e*P		**P**	**06 06 09.5**	**-0.4**
SMF					pmax	pmax		
	comp=Z,30nm,1.4s,mb5.5							
AVF	**Avril sur Loir**	**94.03**	**333**	*e*P		**P**	**06 06 09.9**	**-0.4**
	comp=Z,41nm,1.1s,mb5.5							
AVF	**Avril sur Loir**	**94.03**	**333**	*e*P		**P**	**06 06 09.9**	**-0.4**
	comp=Z,20nm,1.1s,mb5.5							
AVF	**Avril sur Loir**	**94.03**	**333**	*e*P		**P**	**06 06 09.9**	**-0.4**
AVF					pmax	pmax		
	comp=Z,21nm,1.1s,mb5.5							
MBDF	**Montbardon**	**94.28**	**330**	*e*P		**P**	**06 06 10.5**	**-1.0**
	comp=Z,34nm,1.2s,mb5.3							
MBDF	**Montbardon**	**94.28**	**330**	*e*P		**P**	**06 06 10.5**	**-1.0**
	comp=Z,17nm,1.2s,mb5.4							
MBDF	**Montbardon**	**94.28**	**330**	*e*P		**P**	**06 06 10.5**	**-1.0**
MBDF					pmax	pmax		
	comp=Z,17nm,1.2s,mb5.3							
HDIL	**Hopedale**	**94.63**	**36**	PFAKE			06 06 20.0	+6.8
HDIL					LR	LR		
	comp=Z,490nm,20.0s,MS5.0							
TCF	**Toulx Ste Croi**	**94.89**	**333**	*e*P		**P**	**06 06 14.0**	**-0.2**
VIVF	**Saint-Julien-l**	**95.07**	**331**	*e*P		**P**	**06 06 14.6**	**-0.5**
	comp=Z,61nm,1.5s,mb5.5							
VIVF	**Saint-Julien-l**	**95.07**	**331**	*e*P		**P**	**06 06 14.6**	**-0.5**
	comp=Z,31nm,1.5s,mb5.5							
VIVF	**Saint-Julien-l**	**95.07**	**331**	*e*P		**P**	**06 06 14.6**	**-0.5**
VIVF					pmax	pmax		
	comp=Z,31nm,1.5s,mb5.5							
SMRF	**Simiane la Rot**	**95.40**	**330**	*e*P		**P**	**06 06 14.5**	**-2.1**
	comp=Z,99nm,1.6s,mb5.7							
SMRF	**Simiane la Rot**	**95.40**	**330**	*e*P		**P**	**06 06 14.5**	**-2.1**
	comp=Z,99nm,1.6s,mb6.0							
JCT	**Junction City**	**95.48**	**50**	*e*P		**P**	**06 06 17.0**	**-0.3**
	comp=Z,3.8nm,0.6s,mb5.0							
JCT					LR	LR		
	comp=Z,430nm,20.0s,MS4.9							
JCT	**Junction City**	**95.48**	**50**	*e*P		**P**	**06 06 17.0**	**-0.3**
JCT					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb5.0							
JCT					MLR	MLR		
	comp=Z,430nm,20.0s,MS4.9							
AAM	**Ann Arbor**	**96.03**	**32**	PFAKE			06 06 30.0	+11
AAM					LR	LR		
	comp=Z,351nm,21.0s,MS4.8							
LASF	**Ste Croix**	**96.05**	**331**	*e*P		**P**	**06 06 18.2**	**-1.4**
	comp=Z,67nm,1.4s,mb5.6							
MIAR	**Mount Ida**	**96.61**	**43**	*e*P		**P**	**06 06 23.5**	**+1.1**
	comp=Z,3.5nm,0.8s,mb4.8							
MIAR					LR	LR		
	comp=Z,278nm,20.0s,MS4.7							
MIAR	**Mount Ida**	**96.61**	**43**	*e*P		**P**	**06 06 23.5**	**+1.2**
MIAR					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.9							
MIAR					MLR	MLR		
	comp=Z,278nm,20.0s,MS4.7							
ERPA	**Erie**	**97.80**	**30**	PFAKE			06 06 40.0	+12
ERPA					LR	LR		
	comp=Z,279nm,21.0s,MS4.7							
NATX	**Nacogdoches**	**97.90**	**46**	PFAKE			06 06 40.0	+12
NATX					LR	LR		
	comp=Z,415nm,19.0s,MS4.9							
ACSO	**Alum Creek Sta**	**97.97**	**33**	PFAKE			06 06 40.0	+12
ACSO					LR	LR		
	comp=Z,226nm,19.0s,MS4.7							
HKT	**Hockley**	**98.40**	**48**	PFAKE			06 06 40.0	+10
HKT					LR	LR		
	comp=Z,506nm,21.0s,MS5.0							
WVT	**Waverly**	**98.69**	**39**	PFAKE			06 06 40.0	+8.3
WVT					LR	LR		
	comp=Z,400nm,21.0s,MS4.9							
PLAL	**Pickwick Lake**	**99.42**	**39**	PFAKE			06 06 50.0	+15
PLAL					LR	LR		
	comp=Z,381nm,21.0s,MS4.9							
MCWV	**Mont Chateau**	**99.87**	**31**	PFAKE			06 06 50.0	+13
MCWV					LR	LR		
	comp=Z,277nm,20.0s,MS4.8							
SSPA	**Standing Stone**	**99.92**	**30**	PFAKE			06 06 50.0	+13
SSPA					LR	LR		
	comp=Z,390nm,19.0s,MS4.9							
TZTN	**Tazewell**	**100.60**	**36**	PFAKE			06 06 50.0	+10
TZTN					LR	LR		
	comp=Z,269nm,21.0s,MS4.7							
WES	**Weston**	**100.98**	**24**	PFAKE			06 06 50.0	+8.4
WES					LR	LR		
	comp=Z,672nm,22.0s,MS5.1							
LRAL	**Lakeview Retre**	**101.47**	**40**	PFAKE			06 07 00.0	+16
LRAL					LR	LR		
	comp=Z,159nm,19.0s,MS4.5							
BLA	**Blacksburg**	**101.59**	**33**	PFAKE			06 07 00.0	+16
BLA					LR	LR		
	comp=Z,159nm,19.0s,MS4.5							
CBN	**Corbin**	**102.16**	**31**	PFAKE			06 07 00.0	+13
CBN					LR	LR		
	comp=Z,348nm,21.0s,MS4.8							
KMBO	**Kilima Mbogo**	**103.01**	**277**	PFAKE			06 07 00.0	+9.3
KMBO					LR	LR		
	comp=Z,200nm,20.0s,MS4.6							
GOGA	**Godfrey**	**103.08**	**38**	PFAKE			06 07 00.0	+9.0
GOGA					LR	LR		
	comp=Z,363nm,20.0s,MS4.9							
PAB	**San Pablo**	**103.15**	**334**	PFAKE			06 07 00.0	+8.7
PAB					LR	LR		
	comp=Z,254nm,20.0s,MS4.8							
CNNC	**Cliffs of the**	**104.38**	**33**	PFAKE			06 07 10.0	+13
CNNC					LR	LR		
	comp=Z,304nm,20.0s,MS4.8							
NHSC	**New Hope**	**105.01**	**35**	PFAKE			06 11 30.0	+16
NHSC					LR	LR		
	comp=Z,234nm,19.0s,MS4.8							
DWPF	**Disney**	**108.31**	**40**	PFAKE			06 11 30.0	+9.3
DWPF					LR	LR		
	comp=Z,442nm,21.0s,MS5.0							
TEIG	**Tepich**	**110.05**	**50**	PFAKE			06 11 40.0	+16
TEIG					LR	LR		
	comp=Z,384nm,20.0s,MS5.0							
TGUH	**Tegucigalpa,Un**	**115.06**	**54**	PFAKE			06 11 50.0	+16
TGUH					LR	LR		
	comp=Z,282nm,19.0s,MS4.9							
LSZ	**Lusaka**	**117.74**	**268**	PFAKE			06 11 50.0	+11
LSZ					LR	LR		
	comp=Z,154nm,20.0s,MS4.6							
QSPA	**South Pole Qui**	**120.66**	**180**	PFAKE			06 11 50.0	+7.4
QSPA					LR	LR		
	comp=Z,415nm,20.0s,MS5.1							
SDDR	**Presa de Saban**	**121.11**	**37**	PFAKE			06 12 00.0	+15
SDDR					LR	LR		
	comp=Z,441nm,21.0s,MS5.1							
TORD	**Torodi Ar. Bea**	**121.77**	**313**	PKP	PKPdf		06 11 46.1	-0.6
	comp=Z,0.7nm,0.5s,baz=38,slow=2.3,SNR=4.9							
TORD					PP	PP	06 13 17.6	-1.6
	comp=Z,2.9nm,1.0s,baz=33,slow=6.6,SNR=7.3							
TSUM	**Tsumeb**	**128.56**	**269**	PKP	PKPdf		06 12 00.7	+1.2
TSUM					LR	LR		
	comp=Z,211nm,22.0s,MS4.8							
TSUM	**Tsumeb**	**128.56**	**269**	PKP	PKPdf		06 12 00.7	+1.2
	comp=Z,1.4nm,0.7s,baz=353,slow=8.1,SNR=4.6							
SDV	**Santo Domingo**	**129.71**	**43**	*e*PKPdf		PKPdf	06 12 02.2	+0.2
SDV					LR	LR		
	comp=Z,108nm,21.0s,MS4.5							
ROSC	**El Rosal**	**130.48**	**50**	PKP	PKPdf		06 12 03.7	+0.2
	comp=Z,2.8nm,0.7s,baz=240,slow=13,SNR=5.4							
DBIC	**Dimbokro**	**130.84**	**314**	PKP	PKPdf		06 12 04.2	+0.1
	comp=Z,5.1nm,1.0s,baz=2.1,slow=0.8,SNR=3.9							
OTAV	**Otavalo**	**130.87**	**59**	PFAKE			06 12 20.0	+16
OTAV					LR	LR		
	comp=Z,153nm,21.0s,MS4.7							
VNA2	**Neumayer--Watz**	**136.49**	**194**	*e*PKPdf		PKPdf	06 12 14.6	+1.7
	baz=46,slow=2.2							
VNA2				*e*			06 12 17.9	
VNA2				*e*			06 12 20.9	
VNA2				*e*			06 12 24.4	
VNA2				*e*			06 12 27.9	
VNA2				*e*			06 12 32.5	
VNA2				*e*			06 12 35.4	
VNA2				*e*			06 12 40.6	
VNA2				*e*			06 12 45.9	
VNA3	**Neumayer Olymp**	**136.70**	**193**	*e*PKPdf		PKPdf	06 12 15.6	+2.3
VNA3				*e*			06 12 19.4	
VNA3				*e*			06 12 23.2	
VNA3				*e*			06 12 25.6	
VNA3				*e*			06 12 30.0	
VNA3				*e*			06 12 34.9	
VNA3				*e*			06 12 37.8	
VNA3				*e*			06 12 42.7	
VNA3				*e*			06 12 48.0	
LPAZ	**La Paz**	**149.11**	**69**	PKPbc		PKPbc	06 12 39.8	-1.2
	comp=Z,7.3nm,1.0s,baz=358,slow=5.6,SNR=7.6							
PLCA	**Paso Flores**	**152.16**	**120**	PKPbc		PKPbc	06 12 47.8	+0.3
	comp=Z,5.0nm,1.0s,baz=262,slow=4.9,SNR=6.0							

*ISCJB **29** 06:06:37.3±0.8, 1126N±006×62.17W±004, h125km±6km, Error ellipse: s-maj=9.4km s-min=6.6km az=179.4*
*FUNV **29** 06:06:40.3, 11.18N×6220W, h122km, MW3.2*
*TRN **29** 06:06:40.1, 1134N×6190W, h117km, MD3.2*
*NEIC **29** 06:06:40.1, 1134N×6190W, h117km, MD3.2(TRN), After TRN.*

ISC 29 06:06:38.0±0.9, 1126N±006×6216W±004, h122km±7km, n18, σ1§11/31, 2C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.61**	**186**	*i*P		**06 06 58.0**	**+1.0**
GUIV				*e*S		**06 07 11.7**	**+0.5**
TCE	**Chacachacare**	**0.69**	**145**	*e*P		**06 06 58.5**	**+1.0**
TCE				*e*S		**06 07 12.6**	**+0.4**
TRN	**Trinidad (W)**	**0.96**	**129**	*i*P		**06 07 00.9**	**+1.1**
TRN				*e*S		**06 07 16.0**	**-0.3**
ITEV	**Isla Los Testi**	**0.96**	**276**	*i*P		**06 07 00.5**	**+0.7**
ITEV				*e*S		**06 07 16.7**	**+0.4**
GRW	**Mount Saint Ca**	**1.02**	**29**	*e*P		**06 07 00.3**	**-0.1**
GRW				*e*S		**06 07 15.7**	**-1.7**
TPP	**Pointe-a-Pierr**	**1.17**	**143**	*e*P		**06 07 03.5**	**+1.7**
TPP				*e*S		**06 07 19.8**	**-0.2**
CRUV	**Carupano**	**1.21**	**241**	*i*P		**06 07 03.4**	**+1.1**
CRUV				*e*S		**06 07 20.3**	**-0.4**
TBH	**Brigand Hill**	**1.32**	**126**	*e*P		**06 07 04.4**	**+0.9**
TBH				*e*S		**06 07 20.5**	**-2.4**
GUNV	**Guanoco**	**1.34**	**215**	*e*P		**06 07 05.1**	**+1.4**
GUNV				*e*S		**06 07 22.6**	**-0.7**
TPR	**Prospect**	**1.36**	**93**	*e*P		**06 07 02.7**	**-1.2**
TPR				*e*S		**06 07 20.2**	**-3.4**
PCRV	**Puerto La Cruz**	**2.66**	**246**	*e*P		**06 07 21.0**	**+1.0**
PCRV				*e*S		**06 07 49.5**	**-2.8**
RIOV	**Rio Grande**	**3.19**	**174**	*e*P		**06 07 27.4**	**+0.5**
PRGV	**PARIAGUAN**	**3.49**	**225**	*e*P		**06 07 31.3**	**+0.5**
PRGV				*e*S		**06 08 08.3**	**-3.3**
BIRV	**Birongo**	**4.11**	**259**	*e*P		**06 07 39.9**	**+0.8**
MERV	**Las Mercedes**	**4.54**	**244**	*e*P		**06 07 44.5**	**-0.3**
LUEV	**Luepa**	**5.43**	**173**	*e*P		**06 07 55.6**	**-1.1**
CAOV	**Caicara del Or**	**5.67**	**227**	*e*P		**06 07 59.3**	**-0.7**
CAOV				*e*S		**06 08 56.9**	**-7.1**
BAUV	**El Baul**	**6.23**	**249**	*e*P		**06 08 06.6**	**-1.0**

*ISCJB **29** 06:34:14.3±1.3, 37.19N±004×13663E±008, h9km±7km, Error ellipse: s-maj=10.5km s-min=5.7km az=14.0*
*JMA **29** 06:34:14.6, 37.18N×13663E, h1km±1km, M3.5*
JMA Felt II J1.

ISC 29 06:34:14.5±1.1, 3718N±003×13661E±008, h13km±7km, n6, σ0§30/12, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.29**	**152**	P		**06 34 20.5**	**+0.1**
JJH				*e*S		**06 34 24.6**	**+0.2**
JSZ	**Suzu**	**0.66**	**66**	P		**06 34 26.9**	**-0.3**
JSZ				*e*S		**06 34 35.8**	**-0.1**
JHG	**Hegura jima**	**0.71**	**20**	P		**06 34 28.1**	**-0.2**
JHG				*e*S		**06 34 38.1**	**+0.5**
JTT	**Ttatey**	**0.81**	**135**	P		**06 34 29.6**	**-0.6**
JTT				*e*S		**06 34 41.1**	**+0.2**
JKG	**Kaga**	**0.93**	**194**	P		**06 34 32.1**	**-0.3**
JKG				*e*S		**06 34 44.8**	**+0.3**
MAT	**Matsushiro**	**1.43**	**116**	P		**06 34 40.3**	**+0.2**
MAT				S		**06 34 58.8**	**0.0**

PGC 29 07:05:06.8±1.3, 5014N×13035W, h10km, ML2.9/5, Mw3.5, 217km west of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.51**	**70**	Trac			
HOLB	**Holberg**	**1.51**	**70**	Pn	Pn	07 05 31.4	-2.4
HOLB				Sn	Sn	07 05 48.5	-5.0
PHC	**Port Hardy**	**1.95**	**72**	Trac			
PHC	**Port Hardy**	**1.95**	**72**	Pn	Pn	07 05 37.3	-2.7
PHC				Sn	Sn	07 06 00.9	-3.6
MAYB	**Maynard**	**2.06**	**81**	Trac			
MAYB	**Maynard**	**2.06**	**81**	Pn	Pn	07 05 40.3	-1.1
MAYB				Sn	Sn	07 06 03.3	-3.8
WOSB	**Woss**	**2.43**	**88**	Trac			
WOSB	**Woss**	**2.43**	**88**	Pn	Pn	07 05 44.8	-1.8
WOSB				Sn	Sn	07 06 13.2	-3.1
BBB	**Bella Bella**	**2.49**	**34**	Trac			
BBB	**Bella Bella**	**2.49**	**34**	Pn	Pn	07 05 45.9	-1.5
BBB				Sn	Sn	07 06 14.4	-3.4

WEL 29 07:29:48.0±1.2, 3706S×17768E, h75km±6km, ML3.5/6, Error ellipse: s-maj=9.0km s-min=8.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**1.11**	**156**	PN	Pn	07 30 07.2	-0.9
PUZ				SN	Sn	07 30 23.6	+0.4
OPRZ	**Ohinepanea**	**1.19**	**228**	P*	Pn	07 30 09.2	+0.1
URZ	**Urewera**	**1.28**	**201**	P*	Pn	07 30 09.9	-0.3
URZ				S*	Sn	07 30 26.8	-0.2
BKZ	**Black Stump Fm**	**2.31**	**204**	PN	Pn	07 30 23.6	-0.2
WPVZ	**Whakapapa**	**2.73**	**217**	PN	Pn	07 30 31.6	+2.2
MOVZ	**Moawhango**	**2.79**	**212**	PN	Pn	07 30 30.3	-0.1
WPHZ	**Waipukurau**	**3.16**	**198**	PN	Pn	07 30 34.0	-1.3
WAZ	**Wanganui**	**3.43**	**217**	PN	Pn	07 30 39.0	0.0
TIWZ	**Tintock**	**3.97**	**200**	PN	Pn	07 30 43.8	-2.5
KIW	**Kapiti Island**	**4.37**	**209**	PN	Pn	07 30 48.7	-3.1
CAW	**Cannon Point**	**4.53**	**206**	PN	Pn	07 30 50.5	-3.4
TUWZ	**Tuamarina**	**5.24**	**212**	PN	Pn	07 30 59.9	-3.8

*ATH **29** 07:31:09.3, 3800N×27.15E, h38km±4km, MD3.3/3*
*ISCJB **29** 07:31:11.1±0.7, 3801N±005×2706E±006, h33km, Error ellipse: s-maj=7.1km s-min=6.4km az=33.7*
*CSEM **29** 07:31:11.3, 3805N×2668E, h24km, MD3.3/3, After ATH*

ISC 29 07:31:11.6±0.9, 3797N±007×2703E±008, h38km±22km, n10, σ0§86/14, 2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.30**	**211**	*i*P		**06 07 31 18.4**	**-1.3**
SMG				*e*S		**06 07 31 25.9**	**+0.6**
SMG	**Samos**	**0.30**	**211**	*e*P		**06 07 31 18.4**	**-1.3**
SMG				*e*S		**06 07 31 25.9**	**+0.6**
KDAG	**Bornova**	**0.47**	**23**	*i*P		**06 07 31 14.0**	**-7.9**
AYDN	**Tasoluk**	**0.74**	**114**	*i*P		**06 07 31 36.3**	**+0.7**
BDRM	**Kayabasi**	**0.96**	**160**	*i*P		**06 07 31 28.4**	**-0.2**
AKHS	**Akhisar**	**1.10**	**34**	*i*P		**06 07 31 25.6**	**-4.9**
MANT	**Manisa**	**1.31**	**66**	*i*P		**06 07 31 30.1**	**-3.4**
PRK	**Paraskevi**	**1.41**	**335**	*e*PN		**06 07 31 34.6**	**-0.1**
PRK				*e*SN		**06 07 31 52.5**	**+0.4**
APE	**Apeiranthos**	**1.49**	**233**	*e*PN		**06 07 31 36.7**	**+0.8**
GDZ	**Gediz**	**2.22**	**59**	*i*P		**06 07 31 45.4**	**-0.6**
GDZ				*i*S		**06 07 32 12.8**	**+0.6**

*NEIC **29** 07:56:22.3±1.6, 1094S×16538E, h10km, mb4.4/4, Error ellipse: s-maj=29.9km s-min=20.3km az=110.0*
*IDC **29** 07:56:34.7±8.3, 1075S×16476E, h84km±60km, mb3.5/6, mb1 3.7/7, mb1mx3.6/16, mbtmp3.7/7, ML5.2/1, MS3.6/9, Ms1 3.6/9, ms1mx3.5/19, Error ellipse: s-maj=60.5km s-min=26.9km az=95.0*

ISC 29 07:56:32.5±4.8, 109S±02×1649E±03, h71km±34km, n20, σ0§67/14, mb3.7/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.06**	**286**	P		**07 57 45.7**	**-0.2**
	94nm,0.3s,baz=142,slow=1.1,SNR=20						
HNR				S		**07 58 43.4**	**+0.3**
	42nm,0.3s,baz=249,slow=2.2,SNR=3.3						
HNR				LR	LR	07 59 35.9	
	comp=Z,412nm,20.2s,baz=174,slow=37						
CTA	**Charters Tower**	**20.15**	**241**	*e*P		**P**	**08 01 01.8**	**+0.7**
	14nm,1.2s						
CTA	**Charters Tower**	**20.15**	**241**	P		**P**	**08 01 00.1**	**-1.0**
	7.0nm,1.0s,baz=51,slow=13,SNR=3.5						
CTA				LR	LR	08 07 43.8	
	comp=Z,187nm,19.6s,baz=53,slow=33						
CTAO	**Charters Tower**	**20.15**	**241**	*e*P		**P**	**08 01 01.5**	**+0.5**
	21nm,1.1s						
STKA	**Stephens Creek**	**30.01**	**222**	*e*P		**P**	**08 02 34.3**	**-0.2**
	4.5nm,0.8s,mb4.2						
STKA				LR	LR	08 13 22.6	
STKA	**Stephens Creek**	**30.01**	**222**	P		**P**	**08 02 37.5**	**+3.0**
	3.9nm,0.7s,mb4.2,baz=39,slow=9.1,SNR=5.9						
STKA				LR	LR	08 13 22.6	
	comp=Z,284nm,18.4s,baz=28,slow=34						
WB2	**Warramunga Arr**	**30.75**	**249**	*e*P		**P**	**08 02 41.7**	**+0.5**
WRA	**Warramunga Arr**	**30.76**	**249**	P		**P**	**08 02 41.0**	**-0.3**
	0.6nm,0.5s,mb3.6,baz=79,slow=9.3,SNR=5.6						
WRA				LR	LR	08 14 23.0	
	comp=Z,219nm,19.4s,baz=85,slow=35						
KAKA	**Kakadu**	**31.81**	**263**	*e*P		**P**	**08 02 49.6**	**-1.0**
	2.3nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**32.13**	**243**	P		**P**	**08 02 53.2**	**-0.1**
	0.4nm,0.6s,mb3.3,baz=64,slow=10,SNR=10.0						
CBIJ	**Chichi jima**	**43.69**	**330**	LR		LR	08 20 55.2	
	comp=Z,13nm,21.2s,baz=137,slow=34						
PPT	**Papeete**	**44.56**	**104**	*e*LR		LR	08 17 11.3	
	214nm,24.8s						
TBI	**Tubuai**	**45.19**	**112**	*e*LR		LR	08 17 28.0	
	152nm,27.5s						
JHJ	**Hachijo jima 2**	**49.85**	**332**	LR		LR	08 25 39.0	
	comp=Z,211nm,18.3s,baz=75,slow=35						
JNU	**Nakatsue**	**54.44**	**325**	LR		LR	08 25 59.8	
	comp=Z,34nm,19.2s,baz=106,slow=32						
ASAJ	**Asahikawa**	**58.34**	**341**	LR		LR	08 26 36.9	
	comp=Z,75nm,21.1s,baz=164,slow=31						
SONM	**Songino Array**	**78.02**	**324**	P		**P**	**08 08 23.8**	**+0.6**
SONM	**Songino Array**	**78.02**	**324**	P		**P**	**08 08 23.8**	**+0.6**
	0.3nm,0.7s,mb3.1,baz=132,slow=4.3,SNR=2.7						
MKAR	**Makanchi Array**	**92.81**	**317**	P		**P**	**08 09 36.9**	**-0.2**
	0.2nm,0.3s,mb3.9,baz=91,slow=5.8,SNR=3.1						
YKA	**Yellowknife Ar**	**95.19**	**27**	LR		LR	08 49 01.1	
	comp=Z,35nm,20.6s,baz=215,slow=33						

*NEIC **29** 08:29:56.0, 1499N×9590W, h15km, MD4.2(MEX), After MEX.*

MEX 29 08:29:54.7±1.3, 1495N×9591W, h15km±32km, MD4.2, Off coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.83**	**347**	*i*P		08 30 07.3	-3.5
HUIG				*i*S		08 30 17.6	-4.3
VHO	**Vista Hermosa**	**2.25**	**340**	*i*P		08

mb3.7/6, Error ellipse: s-maj=13.8km s-min=6.7km az=3.3
*IDC **29** 09:02:14.9±1.8, 2387S×6669W, h187km±17km, mb3.6/6, mb1 3.7/9, mb1mx3.5/19, mbtmp3.5/9, Error ellipse: s-maj=27.0km s-min=12.5km az=89.0*
*NEIC **29** 09:02:14.4±0.9, 2401S×6665W, h183km±32km, MG4.6(GUC), Error ellipse: s-maj=25.7km s-min=10.2km az=108.0*
*GUC **29** 09:02:17.4±0.6, 24.13S×6738W, h240km, ML4.6*
ISC 29 09:02:14.2±0.8, **2403S**±004×**6671W**±009, **h180**km±10km, **n20**, σ1.39/26, **mb3.7**/6, **2C-2D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.26**	**281**	⇑iP	**Pn**	**09 03 08.6**	**+2.5**
CEN1				iS	**Sn**	**09 03 47.6**	**+1.1**
CEN1				AML	AML	09 03 51.0	
	comp=N,419nm,0.4s						
ANCH	**Antofagasta**	**3.41**	**275**	⇑iP	**Pn**	**09 03 09.4**	**+1.6**
ANCH				iS	**Sn**	**09 03 48.4**	**-1.3**
CPN1	**Cerro Paranal**	**3.42**	**259**	eP	**Pn**	**09 03 09.6**	**+1.6**
CPN1				iS	**Sn**	**09 03 49.5**	**-0.5**
CPN1				AML	AML	09 03 51.7	
	comp=E,812nm,0.3s						
CDCH	**Caldera**	**4.80**	**230**	⇓iP	**Pn**	**09 03 25.1**	**-0.4**
CDCH				iS	**Sn**	**09 04 18.3**	**-3.2**
CDCH	**Caldera**	**4.80**	**230**	⇓iP	**Pn**	**09 03 25.1**	**-0.4**
CDCH				iS	**Sn**	**09 04 18.3**	**-3.2**
CDCH				AML	AML	09 04 19.6	
	comp=N,201nm,0.5s						
VACH	**Vallenar**	**5.80**	**218**	iS	**Sn**	**09 04 44.1**	**-0.9**
CFAA	**Coronel Fontan**	**7.67**	**190**	P	**Pn**	**09 04 04.4**	**+1.4**
CFAA				S	**Sn**	**09 05 26.4**	**-2.7**
CFAA	**Coronel Fontan**	**7.67**	**190**	P	**Pn**	**09 04 04.4**	**+1.4**
	comp=N,0.2nm,0.3s,baz=6.5,slow=11,SNR=10.0						
CFAA				S	**Sn**	**09 05 26.4**	**-2.7**
	comp=N,0.5nm,0.3s,baz=281,slow=18,SNR=12						
LPAZ	**La Paz**	**7.82**	**350**	P	**Pn**	**09 04 06.3**	**+1.1**
	comp=N,1.7nm,0.3s,baz=182,slow=8.5,SNR=38						
LPAZ				S	**Sn**	**09 05 31.3**	**-1.7**
	comp=N,0.4nm,0.3s,baz=76,slow=21,SNR=4.8						
SIV	**San Ignacio**	**9.59**	**35**	P	**Pn**	**09 04 27.5**	**-0.9**
	comp=N,0.7nm,0.3s,baz=225,slow=9.6,SNR=18						
TRQA	**Tornquist**	**14.55**	**165**	ePn	**Pn**	**09 05 32.2**	**+0.6**
PLCA	**Paso Flores**	**16.96**	**190**	P	**Pn**	**09 06 00.1**	**-0.7**
	comp=N,0.2nm,0.3s,baz=0.2,slow=12,SNR=8.2						
SNAA	**Sanae**	**59.23**	**161**	P	**P**	**09 11 57.3**	**+1.3**
	comp=N,0.4nm,0.7s,mb3.4,baz=302,slow=13,SNR=4.3						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**09 12 44.1**	**+2.3**
	comp=N,3.6nm,0.5s,mb4.5,baz=157,slow=0.3,SNR=32						
TORD	**Torodi Ar. Bea**	**76.33**	**69**	P	**P**	**09 13 43.0**	**-0.7**
	comp=N,1.0nm,0.5s,mb3.7,baz=259,slow=5.7,SNR=18						
PDAR	**Pinedale Array**	**77.31**	**329**	P	**P**	**09 13 48.6**	**0.0**
	comp=N,0.3nm,0.5s,mb3.2,baz=124,slow=7.4,SNR=4.2						
ULM	**Lac du Bonnet**	**78.34**	**341**	P	**P**	**09 13 51.8**	**-2.3**
	comp=N,1.0nm,0.5s,mb3.7,baz=157,slow=7.5,SNR=6.1						
YKA	**Yellowknife Ar**	**94.25**	**340**	P	**P**	**09 15 11.8**	**-0.4**
	comp=N,0.6nm,0.5s,mb4.0,baz=135,slow=4.5,SNR=24						
ASAR	**Alice Springs**	**128.54**	**204**	PKP	PKPdf	09 21 00.0	-0.3
	comp=N,0.7nm,0.7s,baz=144,slow=2.1,SNR=11						
WRA	**Warramunga Arr**	**131.72**	**207**	PKP	PKPdf	09 21 06.6	+0.2
	comp=N,0.6nm,0.4s,baz=154,slow=1.9,SNR=4.9						

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*ISCJB **29** 09:13:06.5±0.8, 11.19N±004×6163W±004, h74km±8km, Error ellipse: s-maj=7.2km s-min=6.8km az=2.1*
*FUNV **29** 09:13:08.5, 11.15N×6157W, h46km, MW2.5*
*TRN **29** 09:13:08.5, 1123N×6159W, h50km, MD3.1*
*NEIC **29** 09:13:08.5, 1123N×6159W, h50km, MD3.1(TRN), After TRN.*
ISC 29 09:13:07.5±0.8, **1120N**±004×**6162W**±004, **h65**km±10km, **n17**, σ0.69/27, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCE	**Chacachacare**	**0.51**	**194**	eP	**Pn**	**09 13 20.5**	**+0.4**
TCE				eS	**Sn**	**09 13 29.5**	**+0.3**
TRN	**Trinidad (W)**	**0.58**	**158**	eP	**Pn**	**09 13 21.2**	**+0.4**
TRN				eS	**Sn**	**09 13 30.5**	**0.0**
GUIV	**Guiria**	**0.80**	**227**	eP	**Pn**	**09 13 23.3**	**0.0**
GUIV				eS	**Sn**	**09 13 34.9**	**-0.1**
TPR	**Prospect**	**0.83**	**91**	eP	**Pn**	**09 13 24.5**	**+0.9**
TPR				eS	**Sn**	**09 13 34.5**	**-1.1**
TPP	**Pointe-a-Pierr**	**0.89**	**169**	eP	**Pn**	**09 13 25.1**	**+0.7**
TPP				eS	**Sn**	**09 13 36.7**	**-0.2**
TBH	**Brigand Hill**	**0.89**	**142**	eP	**Pn**	**09 13 25.3**	**+0.8**
TBH				eS	**Sn**	**09 13 36.9**	**0.0**
GRW	**Mount Saint Ca**	**0.96**	**358**	eP	**Pn**	**09 13 25.8**	**+0.5**
GRW				eS	**Sn**	**09 13 37.4**	**-1.0**
ITEV	**Isla Los Testi**	**1.49**	**276**	eP	**Pn**	**09 13 32.7**	**+0.5**
ITEV				eS	**Sn**	**09 13 50.9**	**+0.1**
GUNV	**Guanoco**	**1.65**	**232**	eP	**Pn**	**09 13 35.4**	**+1.0**
GUNV				eS	**Sn**	**09 13 54.0**	**-0.8**
CRUV	**Carupano**	**1.67**	**252**	eP	**Pn**	**09 13 34.6**	**0.0**
CRUV				eS	**Sn**	**09 13 54.3**	**-0.7**
RIOV	**Rio Grande**	**3.11**	**183**	eP	**Pn**	**09 13 54.0**	**-0.2**
PCRV	**Puerto La Cruz**	**3.13**	**251**	eP	**Pn**	**09 13 54.9**	**+0.5**
PRGV	**PARIAGUAN**	**3.84**	**231**	eP	**Pn**	**09 14 03.2**	**-1.0**
BIRV	**Birongo**	**4.62**	**262**	eP	**Pn**	**09 14 15.7**	**+0.8**
LUEV	**Luepa**	**5.32**	**178**	eP	**Pn**	**09 14 22.4**	**-2.0**
CAOV	**Caicara del Or**	**6.02**	**231**	eP	**Pn**	**09 14 34.0**	**-0.1**
BAUV	**El Baul**	**6.71**	**251**	eP	**Pn**	**09 14 43.4**	**0.0**

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*LDG **29** 09:13:50.5±0.5, 4321N×8803E, h10km, Mb4.9/14, Ms3.4/6, Error ellipse: s-maj=31.2km s-min=4.2km az=76.0*
*IDC **29** 09:13:51.9±0.7, 4335N×8796E, h0km, mb4.2/15, mb1 4.3/18, mb1mx4.2/25, mbtmp4.2/18, ML3.5/3, MS3.3/4, Ms1 3.4/4, ms1mx3.0/32, Error ellipse: s-maj=24.1km s-min=14.7km az=42.0*
*ISCJB **29** 09:13:53.6±0.9, 4348N±003×8796E±004, h18km±6km, mb4.5/42, MS3.7/8, Error ellipse: s-maj=6.2km s-min=4.5km az=43.2*
*NNC **29** 09:13:55.4±4.7, 4359N×8787E, h11km±28km, mb4.2, mpv4.2, Error ellipse: s-maj=33.6km s-min=25.0km az=89.0*
*BJI **29** 09:13:55.5, 4351N×8799E, h24km, mB4.5, mb4.5, ML4.3, Ms4.3, Msz3.9*
*MOS **29** 09:13:56.1±1.1, 4359N×8798E, h33km, mb4.9/23, Error ellipse: s-maj=9.9km s-min=5.4km az=129.1*
*NEIC **29** 09:13:56.6±0.6, 4349N×8796E, h25km, mb4.7/21, Error ellipse: s-maj=10.2km s-min=8.9km az=138.0*
*SZGRF **29** 09:14:49.3, 4767N×8094E, h33km, mb4.7, Eastern Kazakhstan*
ISC 29 09:13:55.1±0.8, **4349N**±003×**8798E**±004, **h15**km±5km, **n150**, σ0.95/159, **mb4.5**/42, **MS3.7**/8, **29C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.39**	**328**	⇓iPG	**Pg**	**09 14 02.3**	**-0.7**
WMQ				SG	**Sg**	**09 14 09.0**	**+0.8**
WMQ				Smax			
	comp=N,13μm,0.7s						
WMQ				Smax			
	comp=E,26μm,0.7s						
MK31	**Makanchi Array**	**5.20**	**311**	⇑Pn	**Pn**	**09 15 13.5**	**+1.1**
	comp=E,24nm,0.7s,baz=127,slow=14,SNR=207						
MK31				⇑Sn	**Sn**	**09 16 12.3**	**+0.1**
	comp=E,88nm,0.6s,baz=132,slow=24						
MK31				⇑Lg		09 16 35.7	
	comp=E,209nm,0.9s,baz=124,slow=26						
MK31	**Makanchi Array**	**5.20**	**311**	ePn	**Pn**	**09 15 13.3**	**+0.9**
MK31				eSn	**Sn**	**09 16 13.2**	**+1.1**
MK31	**Makanchi Array**	**5.20**	**311**	iP	**Pn**	**09 15 13.3**	**+0.9**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.1s						
MKAR	**Makanchi Array**	**5.20**	**311**	P	**Pn**	**09 15 13.3**	**+0.9**
MKAR						09 16 13.1	
MKAR	**Makanchi Array**	**5.20**	**311**	Pn	**Pn**	**09 15 13.2**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=122,slow=16,SNR=109						
MKAR				Sn	**Sn**	**09 16 13.1**	**+1.0**
	comp=Z,14nm,0.3s,baz=129,slow=25,SNR=9.1						
MKAR				LR	LR	09 17 50.0	
	comp=Z,288nm,19.8s,baz=107,slow=45						
TKM2	**Tokmak 2**	**9.06**	**271**	⇓Pn	**Pn**	**09 16 05.9**	**+0.6**
	comp=Z,6.5nm,0.6s						
TKM2				⇑Lg		09 18 43.0	
	comp=Z,42nm,0.9s						
TKM2	**Tokmak 2**	**9.06**	**271**	ePn	**Pn**	**09 16 06.4**	**+1.1**
	comp=Z,10nm,0.7s						
TKM2	**Tokmak 2**	**9.06**	**271**	iP	**Pn**	**09 16 05.9**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KURBB	**Kurchatov Arra**	**9.61**	**321**	⇑Pn	**Pn**	**09 16 11.4**	**-1.4**
	comp=Z,3.2nm,0.8s						
KURBB				⇑Sn	**Sn**	**09 17 58.2**	**-2.2**
	comp=Z,16nm,0.9s						
KURBB				⇑Lg		09 18 55.2	
	comp=Z,39nm,0.9s						
KURK	**Kurchatov**	**9.63**	**322**	⇑Pn	**Pn**	**09 16 11.4**	**-1.7**
	comp=Z,8.3nm,1.3s						
KURK				⇑Sn	**Sn**	**09 17 58.5**	**-2.5**
	comp=Z,21nm,0.9s						
KURK				⇓Lg		09 18 54.7	
	comp=Z,105nm,1.5s						
KURK	**Kurchatov**	**9.63**	**322**	ePn	**Pn**	**09 16 11.9**	**-1.2**
	comp=Z,14nm,0.8s						
KURK				eSn	**Sn**	**09 17 56.4**	**-4.6**
KURK	**Kurchatov**	**9.63**	**322**	eP	**Pn**	**09 16 11.9**	**-1.2**
KURK				e		09 17 56.4	
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
GTA	**Gaotai**	**9.78**	**111**	eP	**Pn**	**09 16 15.5**	**+0.3**
GTA				AP		09 16 20.3	
GTA				XP		09 16 23.0	
GTA				S	**Sn**	**09 17 58.8**	**-5.8**
GTA				SS		09 18 22.8	
GTA				AMB	AMB		
	comp=Z,7.0nm,0.5s						
GTA				AMB	AMB		
	comp=Z,54nm,5.3s						
GTA				LR	LR		
	comp=N,707nm,12.9s						
GTA				LR	LR		
	comp=E,820nm,8.4s						
GTA				LR	LR		
	comp=Z,603nm,8.7s						
FRU	**Bishkek**	**9.79**	**271**	eP	**Pn**	**09 16 20.0**	**+4.7**
FRU				pmax	pmax		
	comp=E,220nm,1.8s						
UCH	**Uchtor**	**9.97**	**267**	ePn	**Pn**	**09 16 16.6**	**-1.2**
	comp=E,16nm,0.8s						
EKS2	**Erkin-Say**	**10.43**	**270**	ePn	**Pn**	**09 16 22.6**	**-1.4**
	comp=E,7.1nm,0.8s						
AML	**Almayashu**	**10.59**	**268**	Pn	**Pn**	**09 16 27.3**	**+1.1**
	comp=E,10nm,0.8s						
ZAL	**Zalesovo**	**10.66**	**350**	P	**Pn**	**09 16 26.5**	**-0.7**
ZAL						09 18 23.4	
ZALV	**Zalesovo Beam**	**10.67**	**350**	Pn	**Pn**	**09 16 26.4**	**-0.8**
	comp=E,0.4nm,0.3s,baz=174,slow=13,SNR=22						
ZALV				Sn	**Sn**	**09 18 23.4**	**-2.9**
	comp=E,4.3nm,0.3s,baz=162,slow=25,SNR=11						
ZALV				LR	LR	09 20 55.7	
	comp=E,97nm,18.2s,baz=156,slow=39						
NVS	**Novosibirsk**	**11.77**	**346**	eP	**Pn**	**09 16 42.8**	**+0.4**
ZAK	**Zakamensk**	**12.51**	**51**	eP	**Pn**	**09 16 59.8**	**+7.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KK31	**Karatay Array**	**12.73**	**274**	Pn	**Pn**	**09 16 56.1**	**+0.5**
	comp=Z,16nm,1.2s,baz=68,slow=14,SNR=50						
KK31	**Karatay Array**	**12.73**	**274**	iP	**Pn**	**09 16 56.1**	**+0.5**
KK31				pmax	pmax		
	comp=Z,25nm,1.2s						
TLY	**Talaya**	**13.36**	**47**	iP	**Pn**	**09 17 03.8**	**-0.2**
SONM	**Songino Array**	**13.59**	**65**	Pn	**Pn**	**09 17 07.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=252,slow=14,SNR=6.1						
SONM				Lg		09 20 50.4	
	comp=Z,0.4nm,0.3s,baz=258,slow=24,SNR=3.7						
ULN	**Ulaanbaatar**	**14.03**	**65**	P	**Pn**	**09 17 21.6**	**+8.4**
	comp=Z,5.8nm,0.8s						
ULN	**Ulaanbaatar**	**14.03**	**65**	iP	**Pn**	**09 17 14.2**	**+1.0**
LZH	**Lanzhou**	**14.25**	**116**	eP	**Pn**	**09 17 13.5**	**-2.9**
LZH				PCP	PcP	09 22 30.5	-3.3
LZH				AMB	AMB		
	comp=Z,13nm,1.0s						
LZH				AMB	AMB		
	comp=Z,114nm,5.2s						
LZH				LR	LR		
	comp=N,701nm,9.6s						
LZH				LR	LR		
	comp=Z,909nm,11.5s						
BVA0	**Borovoye Array**	**15.07**	**315**	⇑Pn	**Pn**	**09 17 27.1**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=126,slow=10						
BRVK	**Borovoye**	**15.14**	**315**	ePn	**Pn**	**09 17 26.3**	**-1.9**
	comp=Z,35nm,0.9s						
BRVK				eSn	**Sn**	**09 20 05.3**	**-10**
BRVK	**Borovoye**	**15.14**	**315**	eP	**Pn**	**09 17 26.3**	**-2.0**
BRVK				e		09 20 05.3	
BRVK				pmax	pmax		
	comp=Z,35nm,0.9s						
DDI	**Dehra Dun**	**15.34**	**214**	ex	**Pn**	**09 17 32.0**	**+1.0**
GKN	**Gorkha**	**15.69**	**191**	eP	**Pn**	**09 17 35.6**	**0.0**
	comp=Z,65nm,0.8s						
KKN	**Kakani**	**15.82**	**189**	eP	**Pn**	**09 17 36.9**	**-0.4**
	comp=Z,20nm,0.5s						
JIRN	**Jiri**	**15.86**	**186**	eP	**Pn**	**09 17 37.6**	**-0.3**
	comp=Z,44nm,0.8s						
KOLN	**Koldanda**	**16.08**	**194**	eP	**Pn**	**09 17 40.1**	**-0.6**
	comp=Z,17nm,0.8s						
TAPN	**Taplejung**	**16.11**	**181**	eP	**Pn**	**09 17 39.7**	**-1.3**
	comp=Z,55nm,1.1s						
NDI	**New Delhi**	**17.12**	**214**	eP	**Pn**	**09 17 52.0**	**-1.9**
KBL	**Kabul**	**17.19**	**245**	ePn	**Pn**	**09 17 56.2**	**+1.5**
	comp=Z,15nm,0.9s						
HHC	**Hu-ho-hao-te**	**17.67**	**90**	eP	**Pn**	**09 18 02.8**	**+2.2**
HHC				XP	sP	09 18 07.8	+0.3
HHC				PP		09 18 15.3	
HHC				AMB	AMB		
	comp=Z,27nm,0.6s						
HHC				LR	LR		
	comp=N,480nm,3.9s						
HHC				LR	LR		
	comp=E,205nm,2.5s						
HHC				LR	LR		
	comp=Z,160nm,6.4s						
XAN	**Xi'an**	**18.82**	**113**	P	**Pn**	**09 18 15.8**	**+1.0**
XAN				AMB	AMB		
	comp=Z,5.0nm,0.8s						
XAN				LR	LR		
	comp=N,208nm,9.6s						
XAN				LR	LR		
	comp=E,188nm,9.2s						
XAN				LR	LR		
	comp=Z,258nm,9.0s						
AB31	**Akbulak array**	**20.12**	**296**	⇑Pn	**P**	**09 18 27.9**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=91,slow=10						
AKTK	**Aktyubinsk**	**21.49**	**299**	P	**P**	**09 18 41.9**	**-1.3**
AKTO	**Aktyubinsk**	**21.49**	**299**	⇑Pn	**P**	**09 18 42.5**	**-0.7**
	comp=Z,2.5nm,1.0s,mb3.5						
AKTO	**Aktyubinsk**	**21.49**	**299**	P	**P**	**09 18 41.9**	**-1.3**
	comp=Z,7.5nm,0.7s,mb4.1,baz=92,slow=9.3,SNR=18						
BOD	**Bodaibo**	**21.67**	**39**	⇑iP	**P**	**09 18 45.9**	**+0.9**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
SVE	**Sverdlovsk**	**21.83**	**317**	eP	**P**	**09 18 46.8**	**+0.1**
HIA	**Hailar**	**22.55**	**64**	iP	**P**	**09 18 54.9**	**+0.4**
ARU	**Arti**	**22.71**	**315**	eP	**P**	**09 18 55.4**	**-0.8**
	comp=Z,14nm,0.5s,mb4.6						
ARU	**Arti**	**22.71**	**315**	iP	**P**	**09 18 56.8**	**+0.7**
GYA	**Guiyang**	**22.79**	**132**	⇑iP	**P**	**09 18 58.0**	**+0.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
WHN	**Wuhan**	**24.59**	**113**	P	**P**	**09 19 14.8**	**+0.2**
NJ2	**Nanjing**	**26.80**	**105**	eP	**P**	**09 19 32.3**	**-2.3**
NJ2				XP	sP	09 19 42.3	+1.4
NJ2				PP		09 20 18.0	
NJ2				S	**S**	**09 24 04.5**	**-5.6**
NJ2				XS	sS	09 24 20.5	+3.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,50nm,7.4s						
NJ2				LR	LR		
	comp=N,570nm,12.2s,MS4.4						
NJ2				LR	LR		
	comp=E,470nm,14.4s,MS4.4						
NJ2				LR	LR		
	comp=Z,470nm,14.4s,MS4.2						
TIXI	**Tiksi**	**34.44**	**22**	⇓iP	**P**	**09 20 41.6**	**0.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
OBN	**Obninsk**	**34.70**	**308**	⇑eP	**P**	**09 20 44.2**	**+0.1**
OBN				e		09 21 54.9	
OBN				eSS	SS	09 28 25.2	-18
OBN				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.7						
JOF	**Joensuu**	**37.55**	**321**	ep	**P**	**09 21 07.4**	**-0.9**
	comp=Z,8.0nm,0.8s,mb4.5						
JOF	**Joensuu**	**37.55**	**321**	eP	**P**	**09 21 07.4**	**-0.9**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
AKASG	**Malin Array Be**	**39.70**	**302**	eP	**P**	**09 21 26.2**	**-0.4**
AKASG	**Malin Array Be**	**39.70**	**302**	P	**P**	**09 21 26.2**	**-0.4**
	comp=Z,5.5nm,0.8s,mb4.3,baz=67,slow=8.7,SNR=11						
KAF	**Kangasniemi**	**39.86**	**320**	ep	**P**	**09 21 27.0**	**-0.7**
	comp=Z,4.2nm,0.5s,mb4.4,baz=88,slow=8.1						
KAF	**Kangasniemi**	**39.86**	**320**	eP	**P**	**09 21 27.0**	**-0.7**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**39.99**	**319**	iP	**P**	**09 21 29.2**	**+0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**39.99**	**319**	P	**P**	**09 21 29.3**	**+0.5**
	comp=Z,3.3nm,0.8s,mb4.1,baz=91,slow=8.8,SNR=10						
ARCES	**ARCESS Array B**	**40.51**	**331**	P	**P**	**09 21 34.1**	**+1.1**
	comp=Z,3.4nm,0.9s,mb4.0,baz=72,slow=8.6,SNR=6.1						
ARCES				LR	LR	09 40 30.3	
	comp=Z,86nm,19.7s,MS3.6,baz=102,slow=39						
MA2	**Magadan**	**40.56**	**44**	⇑eP	**P**	**09 21 33.7**	**+0.1**
MA2				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
SUW	**Suwalki**	**42.56**	**308**	eP	**P**	**09 21 51.3**	**+1.3**
KWP	**Kalwaria**	**44.03**	**302**	eP	**P**	**09 22 03.3**	**+1.4**
OJC	**Ojcow**	**45.62**	**303**	eP	**P**	**09 22 15.2**	**+0.6**
NB2	**NORSAR Subarra**	**47.14**	**320**	P	**P**	**09 22 26.2**	**-0.2**
	comp=Z,8.7nm,1.0s,mb4.6,baz=73,slow=7.9						
NB2	**NORSAR Subarra**	**47.14**	**320**	P	**P**	**09 22 26.2**	**-0.2**
NB2				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
NOA	**NORSAR Array B**	**47.14**	**320**	P	**P**	**09 22 26.6**	**+0.2**
	comp=Z,4.8nm,0.8s,mb4.5,baz=74,slow=7.7,SNR=15						
NOA				LR	LR	09 42 26.1	
	comp=Z,28nm,19.1s,MS3.2,baz=0.0,slow=36						
DPC	**Dobruska-Polom**	**47.67**	**305**	eP	**P**	**09 22 31.9**	**+1.2**
UPC	**Upice**	**47.80**	**305**	eP	**P**	**09 22 32.5**	**+0.8**
PVCC	**Panska Ves**	**48.65**	**305**	eP	**P**	**09 22 39.2**	**+0.9**
CONA	**Conrad Observa**	**48.86**	**302**	⇑iP	**P**	**09 22 41.3**	**+1.4**
	comp=Z,12nm,1.4s,mb4.7						
PRU	**Pruhonice**	**48.87**	**305**	eP	**P**	**09 22 39.3**	**-0.6**
BRG	**Berggiesshubel**	**48.90**	**306**	eP	**P**	**09 22 40.8**	**+0.7**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
BRG	**Berggiesshubel**	**48.90**	**306**	eP	**P**	**09 22 40.8**	**+0.7**
	comp=Z,10nm,1.2s,mb4.7						
CLL	**Collm**	**49.28**	**307**	eP	**P**	**09 22 43.0**	**-0.1**
	comp=Z,15nm,0.9s,mb5.0						
CLL	**Collm**	**49.28**	**307**	eP	**P**	**09 22 41.0**	**-2.1**
CLL				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
CLL	**Collm**	**49.28**	**307**	iP	**P**	**09 22 43.3**	**+0.2**
	comp=Z,15nm,0.9s,mb5.0						
CLL				LmV		09 44 00.0	
	comp=Z,100nm,18.3s						
KHC	**Kasperske Hory**	**49.78**	**304**	eP	**P**	**09 22 47.3**	**+0.4**
GERES	**GERESS Array B**	**49.82**	**304**	P	**P**	**09 22 48.5**	**+1.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=60,slow=6.8,SNR=8.9						
GRA1	**Grafenberg Arr**	**50.97**	**306**	eP	**P**	**09 22 56.9**	**+1.1**
	comp=Z,11nm,1.1s,mb4.7						
GRF	**Grafenberg Arr**	**50.97**	**306**	eP	**P**	**09 22 56.9**	**+1.1**
GRF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
GRF	**Grafenberg Arr**	**50.97**	**306**	eP	**P**	**09 22 56.9**	**+1.1**
GRF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
GRF	**Grafenberg Arr**	**50.97**	**306**	eP	**P**	**09 22 56.9**	**+1.1**
	comp=Z,11nm,1.1s,mb4.7						
WTTA	**Wattenberg**	**51.74**	**303**	⇑iP	**P**	**09 23 02.5**	**+0.8**
	comp=Z,17nm,1.0s,mb4.9						
WTTA	**Wattenberg**	**51.74**	**303**	⇑iP	**P**	**09 23 02.5**	**+0.8**
WTTA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
FETA	**Feichten**	**52.41**	**303**	⇑iP	**P**	**09 23 07.0**	**+0.3**
	comp=Z,8.1nm,0.9s,mb4.7						
CDF	**Champ du Feu**	**53.86**	**305**	eP	**P**	**09 23 17.4**	**+0.1**
HINF	**Hinteralfeld**	**54.39**	**305**	eP	**P**	**09 23 21.2**	**0.0**
GIVF	**Givet**	**54.51**	**308**	eP	**P**	**09 23 22.4**	**+0.4**
	comp=Z,12nm,0.8s,mb4.7						
GIVF	**Givet**	**54.51**	**308**	eP	**P**	**09 23 22.4**	**+0.4**
	comp=Z,6.2nm,0.8s,mb4.7						
GIVF	**Givet**	**54.51**	**308**	eP	**P**	**09 23 22.4**	**+0.4**
GIVF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
HAU	**Haudompre**	**54.60**	**305**	eP	**P**	**09 23 22.6**	**-0.1**
HAU				eMLR	MLR		
	comp=Z,91nm,18.0s,MS3.6						
HAU	**Haudompre**	**54.60**	**305**	eP	**P**	**09 23 22.6**	**-0.1**
HAU				MLR	MLR		
	comp=Z,90nm,18.0s,MS3.9						
BAIF	**Baives**	**54.88**	**308**	eP	**P**	**09 23 25.2**	**+0.5**
	comp=Z,24nm,1.2s,mb4.8						
BAIF	**Baives**	**54.88**	**308**	eP	**P**	**09 23 25.2**	**+0.5**
	comp=Z,12nm,1.2s,mb4.8						
BAIF	**Baives**	**54.88**	**308**	eP	**P**	**09 23 25.2**	**+0.5**
BAIF				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
MEZF	**Maizieres J'vi**	**55.13**	**306**	eP	**P**	**09 23 27.2**	**+0.7**
CABF	**La Chapelle**	**55.42**	**304**	eP	**P**	**09 23 29.4**	**+0.7**
LPG	**La Plagne**	**55.56**	**303**	⇑iP	**P**	**09 23 30.7**	**+1.0**
	comp=Z,44nm,0.9s,mb5.2						
LPG	**La Plagne**	**55.56**	**303**	⇑iP	**P**	**09 23 30.7**	**+1.0**
	comp=Z,22nm,0.9s,mb5.2						
LPG	**La Plagne**	**55.56**	**303**	⇑iP	**P**	**09 23 30.7**	**+1.0**
LPG				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
LPL	**La Plagne**	**55.56**	**303**	eP	**P**	**09 23 30.6**	**+0.9**
	comp=Z,44nm,0.9s,mb5.2						
LPL	**La Plagne**	**55.56**	**303**	eP	**P**	**09 23 30.6**	**+0.9**
	comp=Z,22nm,0.9s,mb5.2						
LPL	**La Plagne**	**55.56**	**303**	eP	**P**	**09 23 30.6**	**+0.9**
LPL				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.2						
MBDF	**Montbardon**	**55.92**	**302**	eP	**P**	**09 23 32.9**	**+0.6**
	comp=Z,14nm,0.8s,mb4.7						
MBDF	**Montbardon**	**55.92**	**302**	eP	**P**	**09 23 32.9**	**+0.6**
	comp=Z,6.8nm,0.8s,mb4.7						
MBDF	**Montbardon**	**55.92**	**302**	eP	**P**	**09 23 32.9**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
ORIF	**Oris-en-Rattie**	**56.38**	**302**	eP	**P**	**09 23 36.2**	**+0.6**
	comp=Z,14nm,0.8s,mb4.7						
ORIF				eMLR	MLR		
	comp=Z,82nm,18.5s,MS3.5						
ORIF	**Oris-en-Rattie**	**56.38**	**302**	eP	**P**	**09 23 36.2**	**+0.6**
	comp=Z,7.3nm,0.8s,mb4.8						
ORIF	**Oris-en-Rattie**	**56.38**	**302**	eP	**P**	**09 23 36.2**	**+0.6**
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
LOR	**Lormes**	**56.43**	**306**	⇑iP	**P**	**09 23 35.2**	**-0.7**
	comp=Z,12nm,0.7s,mb4.7						
LOR				eMLR	MLR		
	comp=Z,68nm,18.2s,MS3.5						
LOR	**Lormes**	**56.43**	**306**	⇑iP	**P**	**09 23 35.2**	**-0.7**
	comp=Z,6.0nm,0.7s,mb4.7						
LOR				LR	LR		
	comp=Z,70nm,18.3s,MS3.8						
LOR	**Lormes**	**56.43**	**306**	⇑iP	**P**	**09 23 35.2**	**-0.7**
LOR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
LOR				MLR	MLR		
	comp=Z,70nm,18.3s,MS3.8						
SSF	**Saint Saulge**	**56.74**	**306**	eP	**P**	**09 23 38.2**	**+0.1**
SMF	**Signal de Mont**	**56.75**	**305**	eP	**P**	**09 23 38.0**	**-0.2**
	comp=Z,16nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**56.75**	**305**	eP	**P**	**09 23 38.0**	**-0.2**
	comp=Z,8.2nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**56.75**	**305**	eP	**P**	**09 23 38.0**	**-0.2**
SMF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
AVF	**Avril sur Loir**	**56.97**	**305**	⇑iP	**P**	**09 23 39.4**	**-0.3**
	comp=Z,5.8nm,0.7s,mb4.4						
AVF	**Avril sur Loir**	**56.97**	**305**	⇑iP	**P**	**09 23 39.4**	**-0.3**
	comp=Z,2.9nm,0.7s,mb4.4						
AVF	**Avril sur Loir**	**56.97**	**305**	⇑iP	**P**	**09 23 39.4**	**-0.3**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
TCF	**Toulx Ste Croi**	**57.90**	**305**	eP	**P**	**09 23 46.4**	**+0.1**
	comp=Z,20nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**57.90**	**305**	eP	**P**	**09 23 46.4**	**+0.1**

	comp=Z,9.9nm,0.9s,mb4.8							
TCF	**Toulx Ste Croi**	**57.90**	**305**	*e*P		**P**	**09 23 46.4**	**+0.1**
TCF				pmax		pmax		
	comp=Z,10.0nm,0.9s,mb4.8							
LASF	**Ste Croix**	**58.05**	**302**	*e*P		**P**	**09 23 47.7**	**+0.3**
	comp=Z,79nm,1.5s,mb5.2							
LDF	**La Druitiere**	**58.07**	**309**	*e*P		**P**	**09 23 47.1**	**-0.4**
GRR	**Gorron**	**58.59**	**309**	*e*P		**P**	**09 23 50.7**	**-0.4**
	comp=Z,56nm,1.4s,mb5.1							
GRR	**Gorron**	**58.59**	**309**	*e*P		**P**	**09 23 50.7**	**-0.4**
	comp=Z,28nm,1.4s,mb5.1							
GRR	**Gorron**	**58.59**	**309**	*e*P		**P**	**09 23 50.7**	**-0.4**
GRR				pmax		pmax		
	comp=Z,28nm,1.4s,mb5.1							
CAF	**Calviac**	**58.70**	**304**	*e*P		**P**	**09 23 52.3**	**+0.4**
RJF	**Les Rejaudoux**	**58.83**	**305**	*e*P		**P**	**09 23 53.2**	**+0.4**
RJF				*e*MLR		MLR		
	comp=Z,71nm,17.0s,MS3.6							
RJF	**Les Rejaudoux**	**58.83**	**305**	*e*P		**P**	**09 23 53.2**	**+0.4**
RJF				MLR		MLR		
	comp=Z,70nm,17.0s,MS3.9							
LFF	**La Frestale**	**59.49**	**305**	*e*P		**P**	**09 23 57.8**	**+0.4**
KMBO	**Kilima Mbogo**	**63.43**	**240**	P		**P**	**09 24 23.7**	**-0.7**
	comp=Z,2.3nm,1.0s,mb4.3,baz=25,slow=7.8,SNR=4.4							
ESDC	**Sonseca Array**	**65.35**	**302**	P		**P**	**09 24 35.7**	**-1.0**
	comp=Z,0.2nm,0.3s,mb3.6,baz=65,slow=8.4,SNR=4.2							
YKA	**Yellowknife Ar**	**72.82**	**11**	*i* P		**P**	**09 25 22.5**	**-0.1**
YKA				pmax		pmax		
	comp=Z,2.0nm,1.1s							
YKA	**Yellowknife Ar**	**72.82**	**11**	P		**P**	**09 25 22.5**	**-0.1**
	comp=Z,2.4nm,1.1s,mb4.1,baz=342,slow=5.8,SNR=15							
WRA	**Warramunga Arr**	**76.11**	**135**	P		**P**	**09 25 41.5**	**-0.8**
WRA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
WRA	**Warramunga Arr**	**76.11**	**135**	P		**P**	**09 25 41.5**	**-0.8**
	comp=Z,3.5nm,0.7s,mb4.4,baz=334,slow=5.6,SNR=15							
TORD	**Torodi Ar. Bea**	**78.41**	**277**	P		**P**	**09 25 54.0**	**-1.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=43,slow=4.9,SNR=15							
ASAR	**Alice Springs**	**79.02**	**138**	P		**P**	**09 25 57.6**	**-0.8**
	comp=Z,1.7nm,0.7s,mb4.1,baz=332,slow=6.0,SNR=15							
ULM	**Lac du Bonnet**	**86.58**	**2**	P		**P**	**09 26 36.8**	**-0.7**
	comp=Z,2.3nm,0.9s,mb4.4,baz=292,slow=5.4,SNR=3.9							
DBIC	**Dimbokro**	**87.51**	**277**	P		**P**	**09 26 40.0**	**-2.6**
	comp=Z,3.3nm,0.9s,mb4.6,baz=347,slow=5.6,SNR=4.8							
PDAR	**Pinedale Array**	**92.70**	**13**	P		**P**	**09 27 06.2**	**-0.3**
	comp=Z,0.3nm,0.7s,mb3.9,baz=20,slow=3.0,SNR=2.8							
LPAZ	**La Paz**	**146.12**	**316**	PKP2		PKPab	09 33 33.4	-2.1
LPAZ				pmax		pmax		
	comp=Z,1.0nm,0.7s							
LPAZ	**La Paz**	**146.12**	**316**	PKPbc		PKPbc	09 33 33.4	-1.4
	comp=Z,1.0nm,0.7s,baz=19,slow=5.2,SNR=3.1							

*ISCJB **29** 09:15:35.9±0.4, 4475N±005×14107E±0.10, h279km±4km, mb3.7/7, Error ellipse: s-maj=11.0km s-min=7.9km az=12.1*
*IDC **29** 09:15:36.3±0.9, 4474N×14093E, h270km±14km, mb3.1/5, mb1 3.3/6, mb1mx3.1/20, mbtmp3.1/6, Error ellipse: s-maj=37.5km s-min=24.4km az=159.0*
*JMA **29** 09:15:36.2±0.2, 4479N×14104E, h279km±2km, M3.3*
*NEIC **29** 09:15:36.3±0.9, 4470N×141.13E, h271km±10km, mb4.8/2, Error ellipse: s-maj=22.7km s-min=13.6km az=118.0*

ISC 29 09:15:36.8±0.4, **4473N**±005×**14106E**±010, **h274**km±4km, **n31**, σ0°**83**/45, **mb3.7**/7, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYG	**Yagishiri**	**0.40**	**139**	P	**Pn**	**09 16 12.4**	**+0.1**
JYG				*e*S	**S**	**09 16 40.6**	**+0.4**
JRR	**Rishiri**	**0.44**	**23**	P	**Pn**	**09 16 12.5**	**+0.3**
JSS	**Shosan**	**0.66**	**120**	P	**Pn**	**09 16 13.6**	**+0.7**
JSS				*e*S	**S**	**09 16 42.2**	**+0.7**
JWK2	**Keihoku**	**0.83**	**45**	P	**Pn**	**09 16 13.2**	**-0.3**
JWK2				*e*S	**S**	**09 16 41.5**	**-1.1**
JHR	**Hokuryu**	**1.10**	**154**	P	**Pn**	**09 16 15.7**	**+0.7**
JHR				*e*S	**S**	**09 16 46.2**	**+1.1**
JSE	**Soyaes**	**1.11**	**78**	P	**Pn**	**09 16 14.2**	**-0.7**
JSE				*e*S	**S**	**09 16 43.6**	**-1.4**
ASAJ	**Asahikawa**	**1.26**	**119**	P	**Pn**	**09 16 15.8**	**0.0**
	4.5nm,0.3s,baz=277,slow=8.3,SNR=37						
ASAJ				S	**S**	**09 16 46.6**	**-0.1**
	0.9nm,0.3s,baz=181,slow=32,SNR=8.9						
JSK	**Shakotan**	**1.44**	**197**	P	**Pn**	**09 16 17.3**	**+0.2**
JSK				*e*S	**S**	**09 16 48.8**	**-0.1**
JKK2	**Kamakawa 2**	**1.48**	**125**	P	**Pn**	**09 16 17.5**	**+0.2**
JEW	**Eniwo**	**1.91**	**171**	P	**Pn**	**09 16 21.3**	**+0.7**
JFR	**Furan**	**1.92**	**144**	P	**Pn**	**09 16 20.7**	**+0.1**
JTKR	**Abashiri--Toko**	**2.18**	**109**	P	**Pn**	**09 16 23.5**	**+0.7**
JTKR				*e*S	**S**	**09 17 00.1**	**+0.8**
JAR	**Ashorobuto**	**2.42**	**125**	P	**Pn**	**09 16 25.8**	**+0.7**
JAR				*e*S	**S**	**09 17 04.6**	**+1.2**
YSS	**Yuzh-Sakhalins**	**2.52**	**27**	*e*Pn	**Pn**	**09 16 25.2**	**-0.6**
JCH	**Churui**	**2.69**	**141**	P	**Pn**	**09 16 26.4**	**-1.3**
JCH				*e*S	**S**	**09 17 04.7**	**-3.5**
JNBK	**Urakawa-nobuka**	**2.74**	**153**	P	**Pn**	**09 16 28.4**	**+0.2**
JNBK				*e*S	**S**	**09 17 09.7**	**+0.7**
JKB	**Kayabe**	**2.84**	**180**	P	**Pn**	**09 16 28.9**	**-0.3**
JKB				*e*S	**S**	**09 17 11.5**	**+0.6**
JOSM	**Okushiri--Mats**	**2.89**	**204**	P	**Pn**	**09 16 29.4**	**-0.3**
JAK	**Akkeshi**	**3.15**	**122**	P	**Pn**	**09 16 32.5**	**+0.1**
JAK				*e*S	**S**	**09 17 13.5**	**-3.0**
JOT	**Ohata**	**3.35**	**180**	P	**Pn**	**09 16 34.1**	**-0.4**
JOT				*e*S	**S**	**09 17 18.4**	**-2.0**
MJAR	**Matsushiro Arr**	**8.46**	**196**	P	**Pn**	**09 17 35.2**	**-0.8**
MJAR	**Matsushiro Arr**	**8.46**	**196**	P	**Pn**	**09 17 35.2**	**-0.8**
	0.3nm,0.3s,baz=4.5,slow=13,SNR=6.2						
TLY	**Talaya**	**25.67**	**299**	*e*P	**P**	**09 20 43.4**	**+1.7**
	22nm,0.9s,mb4.6						
INK	**Inuvik**	**47.76**	**30**	*e*P	**P**	**09 23 45.9**	**-0.2**
	32nm,0.5s,mb4.9						
YKA	**Yellowknife Ar**	**57.37**	**32**	P	**P**	**09 24 56.2**	**0.0**
YKA	**Yellowknife Ar**	**57.37**	**32**	P	**P**	**09 24 56.2**	**0.0**
	0.7nm,0.6s,mb3.2,baz=307,slow=6.8,SNR=18						
FINES	**FINESS Array B**	**61.94**	**330**	P	**P**	**09 25 26.6**	**-0.6**
	0.8nm,0.7s,mb3.5,baz=58,slow=8.4,SNR=2.8						
NOA	**NORSAR Array B**	**67.02**	**336**	P	**P**	**09 25 59.6**	**-0.4**
	0.4nm,0.8s,mb3.2,baz=27,slow=8.4,SNR=2.3						
AKASG	**Malin Array Be**	**68.12**	**320**	P	**P**	**09 26 06.8**	**-0.2**
AKASG	**Malin Array Be**	**68.12**	**320**	P	**P**	**09 26 06.8**	**-0.2**
	0.1nm,0.3s,mb3.1,baz=38,slow=6.0,SNR=4.3						
PDAR	**Pinedale Array**	**72.52**	**47**	P	**P**	**09 26 34.5**	**+0.8**
	0.3nm,0.6s,mb3.1,baz=326,slow=7.9,SNR=3.0						

*IDC **29** 09:20:26.7±2.0, 969S×11255E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/17, mbtmp4.0/5, Error ellipse: s-maj=99.6km s-min=21.0km az=48.0*
*ISCJB **29** 09:20:39.2±2.7, 94S±06×1130E±05, h111km±42km, mb3.9/5, Error ellipse: s-maj=127.2km s-min=18.4km az=43.2*

ISC 29 09:20:39.7±2.6, **95S**±06×**1130E**±06, **h102**km±40km, **n6**, σ1°**31**/7, **mb3.8**/5, **1D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**3.14**	**302**	‖*e*P	**Pn**	**09 21 26.2**	**-1.1**
YOGI				*e*S	**Sn**	**09 22 05.0**	**+0.9**
WRA	**Warramunga Arr**	**23.09**	**119**	P	**P**	**09 25 36.0**	**-0.8**
	2.1nm,0.9s,mb3.5,baz=291,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**24.45**	**128**	P	**P**	**09 25 50.5**	**+1.3**
	2.0nm,0.7s,mb3.6,baz=305,slow=9.1,SNR=29						
SONM	**Songino Array**	**57.39**	**355**	P	**P**	**09 30 18.0**	**+0.6**
	0.9nm,0.4s,mb4.2,baz=172,slow=7.4,SNR=8.3						
MKAR	**Makanchi Array**	**62.38**	**337**	P	**P**	**09 30 51.8**	**+0.2**
	1.3nm,0.5s,mb4.2,baz=146,slow=7.1,SNR=7.5						
AKTO	**Aktyubinsk**	**76.35**	**327**	P	**P**	**09 32 16.5**	**-1.1**
	1.1nm,0.7s,mb3.7,baz=102,slow=9.3,SNR=4.4						

*NEIC **29** 09:24:04.7, 3993N×2445E, h23km, MD3.4(ATH), After ATH.*
*ISCJB **29** 09:24:05.5±0.8, 3991N±007×2450E±006, h20km±12km, Error ellipse: s-maj=11.1km s-min=7.6km az=5.0*
*CSEM **29** 09:24:05.4±0.2, 3988N×2451E, h15km, ML3.1, Error ellipse: s-maj=4.1km s-min=3.0km az=171.0*
*THE **29** 09:24:05.6, 3990N×2453E, h20km, ML3.1*
*ATH **29** 09:24:05.4, 3993N×2441E, h32km, MD3.4/5*

ISC 29 09:24:05.3±0.8, **3991N**±006×**2449E**±006, **h18**km±8km, **n11**, σ0°**95**/14, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.46**	**87**	*e*Pg	**Pg**	**09 24 14.4**	**-0.2**
OUR	**Ouranopolis**	**0.57**	**318**	*e*Pg	**Pg**	**09 24 17.4**	**+0.7**
PAIG	**Paliouri**	**0.62**	**272**	*e*Pg	**Pg**	**09 24 17.2**	**-0.3**
PAIG				*e*Sg	**Sg**	**09 24 27.1**	**+1.3**
AOS	**Alonnisos**	**0.88**	**212**	*e*Pg	**Pg**	**09 24 21.5**	**-0.8**
PLG	**Polygyros**	**0.92**	**300**	*e*Pg	**Pg**	**09 24 22.9**	**-0.3**
PLG				*e*Sg	**Sg**	**09 24 35.0**	**-0.3**
PLG	**Polygyros**	**0.92**	**300**	*e*PN	**Pn**	**09 24 22.5**	**-0.9**
PLG	**Polygyros**	**0.92**	**300**	*e*Pg	**Pg**	**09 24 22.9**	**-0.3**
PLG				*e*Sg	**Sg**	**09 24 35.0**	**-0.3**
NEO	**Neokhori**	**1.15**	**239**	*e*PN	**Pn**	**09 24 25.7**	**-0.7**
RDO	**Rodhopi**	**1.47**	**33**	*e*PB	**Pb**	**09 24 30.9**	**-1.2**
NVR	**Nevrokopi**	**1.51**	**342**	*e*PN	**Pn**	**09 24 32.5**	**+1.0**
PRK	**Paraskevi**	**1.53**	**115**	*e*PN	**Pn**	**09 24 33.9**	**+2.2**

GUC 29 09:25:23.6±0.4, **4540S**×**7306W, h6**km±3km, **ML4.3, Southern Chile**

GUC 29 09:29:05.8±0.4, **4539S**×**7306W, h6**km±2km, **ML3.9, Southern Chile**

*SZGRF **29** 09:54:27.6, 3723N×13594E, h33km, mb4.8, Sea of Japan*
*NIED **29** 09:55:00, 3860N×13370E, h500km, Mw4.9 Best double couple: M0 2.16000×10^16 NP1:φs163.00000°, δ69.00000°, λ22.00000°. NP2:φs65.00000°, δ70.00000°, λ157.00000°.*
*MOS **29** 09:55:21.3±0.9, 3868N×13346E, h446km, mb4.5/36, Error ellipse: s-maj=9.3km s-min=5.8km az=88.8*
*JMA **29** 09:55:21.5±0.2, 3860N×13372E, h487km±3km, M4.5*
*ISCJB **29** 09:55:22.5±0.2, 3870N±003×13348E±002, h449km±2km, mb4.5/96, Error ellipse: s-maj=4.0km s-min=2.6km az=173.1*
*IDC **29** 09:55:23.1±0.6, 3863N×13355E, h458km±7km, mb4.0/24, mb1 4.1/29, mb1mx4.0/34, mbtmp4.0/29, Error ellipse: s-maj=9.4km s-min=7.6km az=58.0*
*NEIC **29** 09:55:23.6±0.1, 3861N×13345E, mb4.6/61, MW4.8(NIED), Error ellipse: s-maj=4.5km s-min=3.6km az=151.0*
*BJI **29** 09:55:23.1, 3869N×13346E, h479km, mB4.7, mb5.0*

ISC 29 09:55:23.2±0.1, **3867N**±002×**13349E**±002, **h446**km±2km, **h451**km±6.2km**: pP-P, n533,** σ0°**77**/584, **mb4.5**/96, **96C-88D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAI	**Saigo**	**2.47**	**183**	P	**P**	**09 56 28.1**	**+1.8**
SAI				*e*S	**S**	**09 57 20.4**	**+3.0**
JHG	**Hegura jima**	**2.82**	**106**	P	**P**	**09 56 29.6**	**+0.9**
JHG				*e*S	**S**	**09 57 23.5**	**+1.7**
JKG	**Kaga**	**3.29**	**136**	P	**P**	**09 56 32.9**	**+0.7**
JKG				S	**S**	**09 57 28.9**	**+0.7**
JSZ	**Suzu**	**3.29**	**111**	P	**P**	**09 56 32.9**	**+0.7**
JSZ				*e*S	**S**	**09 57 29.0**	**+0.8**
JHS	**Saijyo**	**3.68**	**185**	P	**P**	**09 56 36.4**	**+1.0**
JHS				S	**S**	**09 57 34.9**	**+0.9**
JWT	**Wachi**	**3.71**	**155**	P	**P**	**09 56 36.7**	**+1.0**
JWT				S	**S**	**09 57 34.9**	**+0.3**
JGT	**Gotsu**	**3.75**	**195**	P	**P**	**09 56 36.4**	**+0.3**
JGT				*e*S	**S**	**09 57 35.7**	**+0.5**
JSD	**Sado**	**3.80**	**98**	P	**P**	**09 56 36.7**	**+0.3**
JSD				*e*S	**S**	**09 57 35.8**	**-0.1**
JGM	**Miyama**	**3.93**	**138**	P	**P**	**09 56 37.9**	**+0.3**
JGM				S	**S**	**09 57 37.6**	**-0.4**
MAT	**Matsushiro**	**4.31**	**118**	P	**P**	**09 56 40.5**	**-0.4**
MAT				S	**S**	**09 57 43.7**	**-0.4**
MAJO	**Matsushiro**	**4.31**	**118**	*e*P	**P**	**09 56 40.8**	**-0.1**
MAJO				*e*S	**S**	**09 57 46.2**	**+2.1**
MJAR	**Matsushiro Arr**	**4.31**	**118**	P	**P**	**09 56 41.0**	**+0.1**
MJAR				S	**S**	**09 57 44.4**	**+0.3**
MJAR	**Matsushiro Arr**	**4.31**	**118**	P	**P**	**09 56 41.0**	**+0.1**
	29nm,0.3s,baz=302,slow=8.0,SNR=529						
MJAR				S	**S**	**09 57 44.4**	**+0.3**
	0.3nm,0.3s,baz=310,slow=17,SNR=2.7						
KSRS	**Korea Array**	**4.56**	**256**	P	**P**	**09 56 45.9**	**+2.7**
	14nm,0.3s,baz=74,slow=9.1,SNR=272						
KSRS				S	**S**	**09 57 52.7**	**+4.4**
	baz=66,slow=13,SNR=5.0						
VLA	**Vladivostok**	**4.61**	**345**	*c i* P	**P**	**09 56 44.8**	**+1.3**
VLA				pmax	pmax		
	comp=Z,242nm,1.1s						
JIE	**Ise**	**4.99**	**148**	P	**P**	**09 56 47.6**	**+0.2**
JIE				S	**S**	**09 57 54.4**	**-1.6**
JRY	**Ryogami san**	**5.06**	**120**	P	**P**	**09 56 46.6**	**-1.4**
JRY				*e*S	**S**	**09 57 54.4**	**-2.7**
JWZ	**Kozaga**	**5.43**	**160**	P	**P**	**09 56 51.6**	**-0.2**
JWZ				S	**S**	**09 58 01.4**	**-2.5**
INCN	**Inchon**	**5.54**	**260**	*e*P	**P**	**09 56 55.1**	**+2.4**
	comp=Z,184nm,0.6s						
INCN				*e*S	**S**	**09 58 09.0**	**+3.3**
JOD2	**Odawara 2**	**5.63**	**125**	P	**P**	**09 56 52.4**	**-1.2**
JOD2				*e*S	**S**	**09 58 04.1**	**-3.3**
JOSM	**Okushiri--Mats**	**5.70**	**51**	P	**P**	**09 56 54.1**	**-0.1**
JOSM				S	**S**	**09 58 07.1**	**-1.5**
JTO	**Tosashimizu**	**5.82**	**186**	P	**P**	**09 56 56.5**	**+0.8**
JTO				S	**S**	**09 58 11.6**	**+0.5**
JNU	**Nakatsue**	**5.93**	**202**	P	**P**	**09 56 57.8**	**+1.0**
	comp=Z,28nm,0.3s,baz=25,slow=11,SNR=270						
JMK	**Ichinoseki**	**6.04**	**85**	P	**P**	**09 56 56.2**	**-1.6**
JMK				*e*S	**S**	**09 58 10.2**	**-4.9**
JOT	**Ohata**	**6.40**	**63**	P	**P**	**09 57 00.6**	**-0.8**
JKB	**Kayabe**	**6.60**	**58**	P	**P**	**09 57 02.3**	**-1.2**
JKB				*e*S	**S**	**09 58 20.8**	**-4.8**
MDJ	**Mudanjiang**	**6.62**	**335**	P	**P**	**09 57 05.5**	**+1.9**
MDJ				S	**S**	**09 58 29.8**	**+3.9**
MDJ				SCP	ScP	10 05 49.3	-1.9
MDJ				PCS	PcS	10 06 33.0	-2.1
MDJ				SCS	ScS	10 09 22.8	-1.5
MDJ				AMB	AMB		
	comp=Z,86nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,139nm,6.2s						
BSO1	**Boso 1**	**7.23**	**121**	P	**P**	**09 57 07.5**	**-2.8**
BSO1				*e*S	**S**	**09 58 31.6**	**-6.4**
JHJ	**Hachijo jima 2**	**7.53**	**135**	P	**P**	**09 57 13.2**	**-0.4**
	comp=Z,40nm,0.3s,baz=235,slow=21,SNR=23						
JHJ				S	**S**	**09 58 41.3**	**-2.7**
	comp=Z,41nm,0.3s,baz=58,slow=21,SNR=8.7						
JHJ2	**Mitsune**	**7.56**	**135**	P	**P**	**09 57 12.7**	**-1.2**
JSJ	**Shimokoshiki**	**7.63**	**205**	P	**P**	**09 57 16.1**	**+1.5**
CN2	**Changchun**	**7.93**	**313**	‖P	**P**	**09 57 19.8**	**+2.1**
CN2				*e*S	**S**	**09 58 52.0**	**+0.3**
CN2				SCS	ScS	10 09 25.5	-0.6
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
ERM	**Erimo**	**8.11**	**63**	*e*P	**P**	**09 57 18.0**	**-1.5**
	comp=Z,84nm,0.3s						
ERM				*e*S	**S**	**09 58 45.4**	**-10**
ERM	**Erimo**	**8.11**	**63**	*e*P	**P**	**09 57 18.0**	**-1.6**
ERM				*e*S	**S**	**09 58 45.4**	**-10**
ERM				pmax	pmax		
	comp=Z,84nm,0.3s						
SNY	**Shenyang**	**8.21**	**296**	‖P	**P**	**09 57 23.0**	**+2.3**
SNY				S	**S**	**09 58 55.3**	**-1.9**
SNY				AMB	AMB		
	comp=Z,283nm,1.1s						
ASAJ	**Asahikawa**	**8.74**	**49**	P	**P**	**09 57 24.8**	**-1.6**
ASAJ				S	**S**	**09 59 01.6**	**-6.1**
ASAJ				pmax	pmax		
	comp=Z,39nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
ASAJ	**Asahikawa**	**8.74**	**49**	P	**P**	**09 57 24.8**	**-1.6**
	comp=N,38nm,0.3s,baz=239,slow=11,SNR=264						
ASAJ				S	**S**	**09 59 01.6**	**-6.2**
	comp=N,3.5nm,0.3s,baz=49,slow=26,SNR=12						
JWK2	**Keihoku**	**9.12**	**41**	P	**P**	**09 57 30.1**	**-0.5**
DL2	**Dalian**	**9.27**	**275**	*i* P	**P**	**09 57 34.5**	**+2.3**
DL2				XP		09 59 01.5	
DL2				S	**S**	**09 59 19.3**	**+0.9**
DL2				AMB	AMB		
	comp=Z,300nm,0.9s						
DL2				AMB	AMB		
	comp=Z,170nm,3.8s						
JTKR	**Abashiri--Toko**	**9.46**	**53**	P	**P**	**09 57 32.8**	**-1.4**
JTKR				*e*S	**S**	**09 59 14.1**	**-8.0**
HABR	**Khabarovsk**	**9.87**	**6**	⇑*i* P	**P**	**09 57 39.0**	**+0.4**
HABR				*e*S	**S**	**09 59 32.3**	**+2.2**
HABR				pmax	pmax		
	comp=Z,133nm,1.0s						
NEM2	**Nemuro 2**	**10.38**	**59**	P	**P**	**09 57 42.1**	**-2.2**
NEM2				*e*S	**S**	**09 59 30.7**	**-10**
KLR	**Kul'dur**	**10.63**	**354**	*e*P	**P**	**09 57 43.5**	**-3.4**
KLR				*e*S	**S**	**09 59 40.5**	**-4.9**
KLR				smax			
	comp=N,900nm,7.0s						
KLR				smax			
	comp=E,800nm,7.0s						
YSS	**Yuzh-Sakhalins**	**10.71**	**36**	*e*P	**P**	**09 57 47.4**	**-0.5**
	comp=E,80nm,0.4s						
YSS				*e*S	**S**	**09 59 45.8**	**-1.2**
YSS	**Yuzh-Sakhalins**	**10.71**	**36**	⇑*i* P	**P**	**09 57 46.4**	**-1.4**
YSS				*e*S	**S**	**09 59 43.0**	**-4.1**
YSS				pmax	pmax		
	comp=N,110nm,1.1s						
YSS				pmax	pmax		
	comp=Z,150nm,1.1s						
YSS				smax			
	comp=Z,300nm,1.5s						
YSS				smax			
	comp=N,290nm,1.4s						
YSS				smax			
	comp=E,220nm,1.2s						
YUK	**Yuzh-Kuril'sk**	**10.73**	**56**	*e*P	**P**	**09 57 48.5**	**+0.4**
YUK				*i* S	**S**	**09 59 44.0**	**-3.6**
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				pmax	pmax		
	comp=N,310nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=N,2μm,8.0s						
YUK				smax			
	comp=N,370nm,0.5s						
YUK				smax			
	comp=E,520nm,0.6s						
YUK				smax			
	comp=N,5μm,1.0s						
YUK				smax			
	comp=E,5μm,1.0s						
KUR	**Kuril'sk**	**12.54**	**54**	P	**P**	**09 58 05.0**	**-2.8**
KUR				S	**S**	**10 00 19.0**	**-4.7**
KUR				pmax	pmax		
	comp=Z,110nm,0.5s						
KUR				smax			
	comp=N,130nm,0.8s						
KUR				smax			
	comp=E,50nm,0.8s						
JOW	**Kunigami**	**12.59**	**202**	P	**P**	**09 58 06.1**	**-2.5**
JOW	**Kunigami**	**12.59**	**202**	P	**P**	**09 58 04.7**	**-3.9**
	comp=E,5.3nm,0.3s,baz=84,slow=11,SNR=16						
JOW				S	**S**	**10 00 14.5**	**-11**
	comp=E,1.5nm,0.3s,baz=171,slow=28,SNR=11						
TIA	**Tai'an**	**13.23**	**264**	P	**P**	**09 58 16.0**	**+0.6**
TIA				AMB	AMB		
	comp=Z,59nm,0.8s						
BJI	**Beijing**	**13.47**	**281**	P	**P**	**09 58 16.3**	**-1.6**
BJI				S	**S**	**10 00 42.8**	**+0.6**
BJI				AMB	AMB		
	comp=Z,27nm,0.8s						
BJI				AMB	AMB		
	comp=Z,276nm,5.2s						
NJ2	**Nanjing**	**13.64**	**245**	*e*P	**P**	**09 58 20.5**	**+0.7**
NJ2				XP		09 59 59.3	
NJ2				S	**S**	**10 00 44.5**	**-1.3**
NJ2				PCP	PcP	10 03 12.5	+2.8
NJ2				PCS	PcS	10 06 45.0	+0.4
CBIJ	**Chichi jima**	**13.65**	**145**	P	**P**	**09 58 14.4**	**-5.6**
	comp=Z,18nm,0.3s,baz=64,slow=21,SNR=16						
CBIJ				S	**S**	**10 00 33.4**	**-13**
	comp=Z,20nm,0.3s,baz=112,slow=24,SNR=11						
HHC	**Hu-ho-hao-te**	**17.00**	**284**	*e*P	**P**	**09 58 54.0**	**-1.4**
HHC				S	**S**	**10 01 44.0**	**-6.7**
HHC				PCP	PcP	10 03 15.8	+1.3
HHC				PCS	PcS	10 06 52.5	+1.8
HHC				AMB	AMB		
	comp=Z,37nm,1.0s						
HHC				AMB	AMB		
	comp=Z,108nm,4.7s						
TATO	**Taipei**	**17.02**	**220**	*e*P	**P**	**09 58 55.1**	**-0.8**
	comp=Z,44nm,0.6s						
WHN	**Wuhan**	**17.70**	**249**	P	**P**	**09 59 01.8**	**-1.1**
BTO	**Baotou**	**18.17**	**284**	*e*P	**P**	**09 59 06.3**	**-1.4**
NRGR	**Nerungri**	**18.91**	**345**	*e*P	**P**	**09 59 11.2**	**-3.3**
NRGR				S	**S**	**10 02 22.4**	**-0.9**
NRGR				smax			
	comp=N,249nm,1.1s						
CLNS	**Chul'man**	**19.05**	**345**	*e*P	**P**	**09 59 12.9**	**-2.8**
CLNS				*e*S	**S**	**10 02 25.1**	**-0.4**
CLNS				pmax	pmax		
	comp=Z,14nm,0.8s						
CLNS				pmax	pmax		
	comp=N,12nm,0.7s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.9s						
CLNS				smax			
	comp=E,34nm,1.2s						
CLNS				smax			
	comp=Z,14nm,0.7s						
CLNS				smax			
	comp=N,25nm,1.2s						
SKR	**Severo-Kuril's**	**19.99**	**46**	*e*P	**P**	**09 59 23.1**	**-1.3**
XAN	**Xi'an**	**20.30**	**264**	P	**P**	**09 59 26.3**	**-1.2**
XAN				AMB	AMB		
	comp=Z,41nm,0.9s						
ULN	**Ulaanbaatar**	**21.25**	**304**	*e*P	**P**	**09 59 36.1**	**+0.2**
	comp=Z,26nm,0.9s,mb4.8						
ULN	**Ulaanbaatar**	**21.25**	**304**	*e*P	**P**	**09 59 36.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,26nm,0.9s,mb4.8						
SONM	**Songino Array**	**21.66**	**304**	P	**P**	**09 59 39.8**	**+0.1**
	comp=Z,18nm,0.7s,mb4.7,baz=110,slow=8.9,SNR=78				

CD2 AMB AMB
comp=Z,30nm,0.6s,mb4.9
CD2 AMB AMB
comp=Z,110nm,5.7s
GYA Guiyang 25.58 250 ⇑ *i* P **P 10 00 16.3 +1.3**
GYA PCP PcP 10 03 33.5 +1.7
GYA S **S 10 04 11.3 +1.1**
GYA PCS PcS 10 07 13.3 +0.3
GYA SCS ScS 10 10 18.0 -0.2
GYA AMB AMB
comp=Z,10.0nm,0.9s,mb4.2
GYA AMB AMB
comp=Z,80nm,4.2s
GTA Gaotai 26.08 282 P **P 10 00 19.0 -0.3**
GTA PCP PcP 10 03 33.8 +1.1
GTA S **S 10 04 19.3 +1.5**
GTA SCP ScP 10 06 27.5 -1.9
GTA PCS PcS 10 07 11.0 -3.1
GTA SCS ScS 10 10 18.5 -1.5
GTA AMB AMB
comp=Z,28nm,0.8s,mb4.7
GTA AMB AMB
comp=Z,107nm,6.5s
SEY Seymchan 26.86 19 ⇑ *i* P **P 10 00 24.8 -1.0**
QIZ Qiongzhong 28.35 233 P **P 10 00 37.5 -2.0**
QIZ S **S 10 04 55.0 +1.3**
QIZ AMB AMB
comp=Z,12nm,1.6s,mb4.1
QIZ AMB AMB
comp=Z,59nm,5.2s
KMI Kunming 29.24 252 P **P 10 00 48.5 +1.2**
KMI AMB AMB
comp=Z,9.0nm,0.7s,mb4.3
TIXI Tiksi 33.14 357 *e*P **P 10 01 19.1 -1.2**
comp=Z,25nm,0.6s,mb4.8
TIXI *e*PcP PcP 10 03 50.0 -0.5
TIXI Tiksi 33.14 357 *i* P **P 10 01 19.0 -1.2**
TIXI pmax pmax
comp=Z,37nm,0.8s,mb4.9
WMQ Urumqi 34.47 294 P **P 10 01 31.5 -0.4**
BILL Bilibino 34.50 21 *e*P **P 10 01 32.0 +0.1**
comp=Z,103nm,0.9s,mb5.3
BILL Bilibino 34.50 21 ⇑ *i* P **P 10 01 31.0 -0.8**
BILL pmax pmax
comp=Z,144nm,1.3s,mb5.2
CHTO Chiang Mai 35.88 246 *e*P **P 10 01 43.8 -0.2**
comp=Z,10nm,0.7s,mb4.4
CHTO Chiang Mai 35.88 246 *e*P **P 10 01 43.8 -0.3**
CHTO pmax pmax
comp=Z,10.0nm,0.7s,mb4.3
LSA Lhasa 35.88 269 P **P 10 01 44.5 +0.5**
ZALV Zalesovo Beam 36.15 311 P **P 10 01 45.0 -0.8**
comp=Z,6.1nm,0.3s,mb4.5,baz=100,slow=7.0,SNR=30
ZALV PcP PcP 10 03 58.0 -1.7
comp=Z,2.2nm,0.6s,baz=107,slow=1.9,SNR=4.4
ZALV ScP ScP 10 07 00.1 -2.9
comp=Z,11nm,0.8s,baz=98,slow=3.3,SNR=26
ZAL Zalesovo 36.16 311 P **P 10 01 45.0 -0.9**
ZAL 10 03 58.0
ZAL 10 07 00.1
ADK Adak 36.74 52 *e*P **P 10 01 49.3 -1.5**
comp=Z,38nm,0.8s,mb4.9
ADK Adak 36.74 52 *e*P **P 10 01 49.3 -1.5**
ADK pmax pmax
comp=Z,38nm,0.8s,mb4.9
NVS Novosibirsk 37.15 313 *i* P **P 10 01 52.6 -1.5**
NVS *e*S **S 10 06 59.8 -7.4**
NVS pmax pmax
comp=N,10.0nm,1.2s
NVS pmax pmax
comp=Z,11nm,1.2s,mb4.2
NVS smax
comp=E,24nm,2.2s
SHL Shillong 37.27 262 *e*P **P 10 01 55.0 -0.6**
MKAR Makanchi Array 37.89 299 *i* P **P 10 01 59.7 -0.7**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 37.89 299 P **P 10 01 59.8 -0.6**
comp=Z,5.1nm,0.5s,mb4.2,baz=89,slow=10,SNR=58
MKAR ScP ScP 10 07 07.3 -2.5
comp=Z,5.2nm,0.9s,baz=70,slow=4.5,SNR=17
TAPN Taplejung 39.65 267 *e*P **P 10 02 14.7 -0.3**
comp=Z,15nm,0.4s,mb4.8
KURK Kurchatov 39.94 306 *e*P **P 10 02 16.3 -0.7**
comp=Z,31nm,0.8s,mb4.8
KURK Kurchatov 39.94 306 *e*P **P 10 02 16.3 -0.7**
KURK pmax pmax
comp=Z,31nm,0.8s,mb4.8
ODAN Odare 40.13 267 *e*P **P 10 02 18.4 -0.5**
comp=Z,60nm,0.9s,mb5.0
JIRN Jiri 40.69 269 *e*P **P 10 02 23.4 0.0**
comp=Z,17nm,0.2s,mb5.0
GAMB Gambell 40.72 34 *e*P **P 10 02 23.1 +0.1**
KKN Kakani 41.34 270 *e*P **P 10 02 28.3 -0.3**
comp=Z,67nm,0.6s,mb5.3
GKN Gorkha 41.75 270 *e*P **P 10 02 31.2 -0.6**
comp=Z,26nm,0.3s,mb5.2
KOLN Koldanda 42.67 271 *e*P **P 10 02 38.7 -0.4**
comp=Z,18nm,0.3s,mb4.9
TKM2 Tokmak 2 43.29 295 *e*P **P 10 02 44.3 +0.5**
comp=Z,50nm,1.4s,mb4.8
TKM2 Tokmak 2 43.29 295 *e*P **P 10 02 44.3 +0.5**
TKM2 pmax pmax
comp=Z,50nm,1.4s,mb4.8
TKM2 Tokmak 2 43.29 295 P **P 10 02 44.4 +0.6**
SNR=11
KZA Kyzart 43.76 294 P **P 10 02 48.5 +1.0**
SNR=5.9
KBK Karagaybulak 43.82 295 P **P 10 02 48.4 +0.4**
SNR=15
KSH Kashi 43.98 290 *e*P **P 10 02 50.5 +1.3**
KSH *e*AP pP 10 04 16.0 +1.8
KSH *e*PCP PcP 10 04 27.5 +1.9
KSH *e*PP PP 10 04 42.3 +1.6
KSH *e*S **S 10 08 49.0 +1.6**
KSH *e*XS sS 10 11 21.8 +0.6
KSH *e*SS SS 10 12 12.5 -2.6
KSH AMB AMB
comp=Z,42nm,0.1s
KSH AMB AMB
comp=Z,1μm,4.4s
USP Ospenovka 43.98 296 P **P 10 02 48.9 -0.3**
SNR=10
AAK Ala-Archa 44.15 295 P **P 10 02 50.5 0.0**
SNR=7.2
UCH Uchtor 44.25 294 *e*P **P 10 02 52.2 +1.0**
comp=Z,4.8nm,0.8s,mb4.0
UCH Uchtor 44.25 294 P **P 10 02 52.2 +1.0**
SNR=7.5
EKS2 Erkin-Say 44.65 295 P **P 10 02 54.3 -0.1**
SNR=5.3
BRVK Borovoye 44.84 310 *e*P **P 10 02 55.1 -0.5**
comp=Z,5.6nm,0.6s,mb4.2
BRVK Borovoye 44.84 310 *e*P **P 10 02 55.1 -0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.6s,mb4.2
AML Almayashu 44.86 294 *e*P **P 10 02 56.7 +0.7**
comp=Z,26nm,0.8s,mb4.7
AML Almayashu 44.86 294 P **P 10 02 56.9 +0.8**
SNR=25
TTA Tatalina 47.71 36 *e*P **P 10 03 17.4 -0.1**
SVW2 Sparrevohn 48.08 38 *e*P **P 10 03 20.6 +0.3**
IMA2 Indian Mountai 48.52 31 *e*P **P 10 03 23.7 +0.2**
KDAK Kodiak Island 50.09 42 P **P 10 03 34.7 -0.7**
KDAK Kodiak Island 50.09 42 P **P 10 03 34.7 -0.7**
comp=Z,33nm,0.6s,mb4.9,baz=298,slow=4.9,SNR=27
SLKM Skilak Lake 50.76 38 *e*P **P 10 03 39.5 -0.7**
ARU Arti 50.91 316 *e*P **P 10 03 40.6 -0.8**
comp=Z,8.8nm,0.4s,mb4.4
ARU Arti 50.91 316 *d* *i* P **P 10 03 40.7 -0.7**
ARU *e* 10 04 45.7
ARU *e**PP pP 10 05 07.3 -2.2
ARU *e* 10 05 39.5
ARU *e*S **S 10 10 24.1 +0.9**
ARU SS SS 10 14 01.3 -3.3
ARU pmax pmax
comp=Z,13nm,1.0s,mb4.2
COLA College 51.07 33 *e*P **P 10 03 42.7 +0.3**
comp=Z,44nm,0.9s,mb4.8
COLA College 51.07 33 *e*P **P 10 03 42.7 +0.3**
COLA pmax pmax
comp=Z,44nm,0.9s,mb4.8
PMR Palmer 51.08 37 *e*P **P 10 03 41.9 -0.6**
comp=Z,37nm,0.7s,mb4.8
PMR Palmer 51.08 37 *e*P **P 10 03 41.9 -0.6**
PMR pmax pmax
comp=Z,37nm,0.7s,mb4.8
AKTK Aktyubinsk 52.85 309 P **P 10 03 54.3 -1.2**
AKTK ScP ScP 10 08 08.4 -3.2
AKTO Aktyubinsk 52.85 309 P **P 10 03 54.3 -1.2**
comp=Z,4.4nm,0.5s,mb4.0,baz=79,slow=13,SNR=18
AKTO ScP ScP 10 08 08.4 -3.2
comp=Z,1.9nm,0.6s,baz=100,slow=4.2,SNR=5.0
MENT Mentasta 53.25 34 *e*P **P 10 03 58.6 +0.4**
EGAK Eagle 53.88 32 *e*P **P 10 04 02.5 -0.2**
comp=Z,20nm,0.6s,mb4.6
DAWY Dawson 54.82 33 *e*P **P 10 04 09.3 0.0**
INK Inuvik 55.77 27 *e*P **P 10 04 15.7 -0.3**
comp=Z,798nm,0.8s
INK *e*PP PP 10 06 28.3 +2.3
INK Inuvik 55.77 27 P **P 10 04 15.6 -0.3**
INK 10 05 06.9
INK pmax pmax
comp=Z,13nm,0.5s
INK pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 55.77 27 P **P 10 04 15.6 -0.3**
comp=Z,13nm,0.5s,mb4.5,baz=300,slow=7.0,SNR=178
INK PcP PcP 10 05 06.9 -1.8
comp=Z,6.0nm,1.0s,baz=292,slow=6.0,SNR=3.5
PALK Pallekele 56.77 251 *e*P **P 10 04 23.2 -0.5**
comp=Z,5.8nm,0.8s,mb4.0
PALK *e*PcP PcP 10 05 11.3 -2.2
FITZ Fitzroy Crossi 56.95 189 *e*P **P 10 04 23.8 -0.9**
comp=Z,6.3nm,0.7s,mb4.0
FITZ Fitzroy Crossi 56.95 189 P **P 10 04 23.7 -1.0**
comp=Z,3.3nm,0.7s,mb3.8,baz=11,slow=8.5,SNR=6.0
SKAG Skagway 58.21 37 *e*P **P 10 04 33.9 +1.0**
comp=Z,40nm,1.0s,mb4.7
WRA Warramunga Arr 58.30 179 *i* P **P 10 04 32.2 -1.8**
WRA pmax pmax
comp=Z,9.0nm,0.6s
WRA Warramunga Arr 58.30 179 P **P 10 04 32.3 -1.7**
comp=Z,9.0nm,0.6s,mb4.3,baz=356,slow=7.7,SNR=84
WRA pP pP 10 06 05.8 +0.5
comp=Z,2.4nm,0.9s,baz=354,slow=7.5,SNR=5.0
WB2 Warramunga Arr 58.31 179 ⇓ *i* P **P 10 04 31.9 -2.1**
CTA Charters Tower 59.66 166 *e*P **P 10 04 41.6 -1.5**
comp=Z,4.2nm,0.6s,mb4.0
CTA Charters Tower 59.66 166 P **P 10 04 42.1 -1.0**
CTA pmax pmax
comp=Z,5.0nm,0.6s
CTA Charters Tower 59.66 166 P **P 10 04 42.1 -1.0**
comp=Z,5.3nm,0.6s,mb4.2,baz=353,slow=7.7,SNR=14
CTAO Charters Tower 59.66 166 *e*P **P 10 04 41.8 -1.4**
comp=Z,9.9nm,0.5s,mb4.2
CTAO Charters Tower 59.66 166 *e*P **P 10 04 41.8 -1.3**
CTAO pmax pmax
comp=Z,5.0nm,0.5s,mb4.2
ARCES ARCESS Array B 60.16 337 P **P 10 04 45.4 -0.5**
comp=Z,7.8nm,0.7s,mb4.3,baz=46,slow=11,SNR=5.7
MBWA Marble Bar 60.89 195 *e*P **P 10 04 49.9 -1.4**
comp=Z,38nm,1.4s,mb4.6
DLBC Dease Lake 61.14 37 *e*P **P 10 04 53.4 +0.9**
JOF Joensuu 61.47 329 *e*p **P 10 04 52.5 -2.1**
comp=Z,1.3nm,0.3s,mb3.8
JOF Joensuu 61.47 329 *e*P **P 10 04 52.5 -2.1**
JOF pmax pmax
comp=Z,1.0nm,0.3s,mb3.7
ASAR Alice Springs 62.01 180 P **P 10 04 57.3 -1.3**
comp=Z,4.6nm,0.8s,mb4.0,baz=10,slow=12,SNR=68
RES Resolute Bay 62.50 13 *e*P **P 10 05 00.5 -0.7**
comp=Z,916nm,0.8s
RES Resolute Bay 62.50 13 *e*P **P 10 05 00.5 -0.7**
RES pmax pmax
comp=Z,916nm,0.8s
KAF Kangasniemi 63.87 330 *e*p **P 10 05 08.5 -1.7**
baz=55,slow=6.0
FINES FINESS Array B 64.33 329 *i* P **P 10 05 12.5 -0.7**
FINES pmax pmax
comp=Z,6.0nm,0.6s
FINES FINESS Array B 64.33 329 P **P 10 05 12.2 -1.0**
comp=Z,5.7nm,0.6s,mb4.3,baz=76,slow=8.0,SNR=23
KIV Kislovodsk 65.01 307 *e*P **P 10 05 17.7 -0.1**
comp=Z,9.5nm,0.4s,mb4.8
KIV Kislovodsk 65.01 307 *e*P **P 10 05 17.5 -0.3**
KIV pmax pmax
comp=Z,12nm,1.0s,mb4.5
YKW3 Yellowknife Ar 65.40 28 *e*P **P 10 05 19.5 -0.5**
YKA Yellowknife Ar 65.45 28 *i* P **P 10 05 19.7 -0.5**
YKA pmax pmax
comp=Z,15nm,0.9s
YKA Yellowknife Ar 65.45 28 P **P 10 05 19.7 -0.5**
comp=Z,14nm,0.9s,mb4.6,baz=308,slow=6.4,SNR=190
ANN Anapa 67.78 310 *e*P **P 10 05 42.3 +7.2**
ANN pmax pmax
comp=Z,29nm,1.1s,mb4.8
AKASG Malin Array Be 69.05 319 *i* P **P 10 05 41.2 -1.5**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 69.05 319 P **P 10 05 41.3 -1.4**
comp=Z,0.9nm,0.3s,mb3.8,baz=51,slow=6.0,SNR=9.5
FORT Forrest 69.28 185 *e*P **P 10 05 41.8 -2.4**
comp=Z,11nm,0.5s,mb4.6
HFS Hagfors 69.88 332 P **P 10 05 46.4 -1.2**
comp=Z,9.5nm,0.5s,mb4.5,baz=59,slow=5.7,SNR=38
B04A Port Angeles 69.93 44 ⇓ P **P 10 05 48.2 +0.2**
baz=70
A04A Legoe Bay, Lum 69.97 43 ⇑ P **P 10 05 48.5 +0.2**
baz=70
NLWA Neilton Lookou 70.11 45 ⇑ P **P 10 05 49.9 +0.7**
baz=70
NB2 NORSAR Subarra 70.11 334 P **P 10 05 47.8 -1.1**
comp=Z,11nm,0.7s,mb4.5,baz=44,slow=6.2
NB2 NORSAR Subarra 70.11 334 P **P 10 05 47.8 -1.1**
NB2 pmax pmax
comp=Z,11nm,0.7s,mb4.5
NOA NORSAR Array B 70.11 334 P **P 10 05 47.9 -1.0**
comp=Z,10.0nm,0.7s,mb4.5,baz=42,slow=6.0,SNR=53
NOA pP pP 10 07 27.8 +3.4
comp=Z,1.1nm,0.7s,baz=42,slow=6.0,SNR=3.2
A05A Maple Falls 70.14 43 ⇑ P **P 10 05 49.3 +0.1**
baz=70
D03A Wishkah Elem. 70.33 45 ⇑ P **P 10 05 51.3 +0.8**
baz=70
CMW Cultus Mountai 70.46 43 P **P 10 05 51.6 +0.4**
B05A Bryant 70.57 43 P **P 10 05 52.0 +0.1**
baz=70,SNR=5.5
GNW Green Mountain 70.59 44 *e*P **P 10 05 52.2 +0.2**
B06A Marblemount 70.74 43 ⇓ P **P 10 05 52.7 -0.2**
baz=70
E03A Lebam 70.78 45 ⇑ P **P 10 05 53.3 +0.2**
baz=70
ARMA Armidale 70.78 163 *e*P **P 10 05 53.5 +0.3**
D04A Dobbs Creek Ra 70.87 45 ⇑ P **P 10 05 54.2 +0.5**
baz=71
A07A Ashnola River, 71.00 42 ⇓ P **P 10 05 54.0 -0.4**
baz=71
HTW Haystack Looko 71.02 44 P **P 10 05 54.8 +0.3**
C05A Toft Reservoir 71.12 44 P **P 10 05 55.6 +0.4**
baz=71,SNR=5.2
F03A Seaside 71.15 46 ⇓ P **P 10 05 56.0 +0.7**
baz=71
E04A Onalaska 71.22 45 ⇓ P **P 10 05 56.2 +0.4**
baz=71
D05A Enumclaw 71.27 44 P **P 10 05 56.8 +0.8**
baz=71,SNR=5.4
GSM Grass Mountain 71.36 44 P **P 10 05 57.2 +0.6**
C06A Tall Timber Ra 71.42 43 ⇑ P **P 10 05 57.0 +0.2**
baz=71
B07A Winthrop 71.50 42 ⇓ P **P 10 05 57.2 -0.2**
baz=71
FMW Mount Fremont 71.59 44 P **P 10 05 58.1 +0.1**
LON Longmire 71.63 44 *e*P **P 10 05 57.9 -0.3**
A08A Turner Farm, O 71.64 42 P **P 10 05 58.0 -0.2**
baz=71,SNR=6.2
TDL Tradedollar La 71.64 45 P **P 10 05 58.9 +0.6**
G03A Yamhill 71.67 46 ⇑ P **P 10 05 58.8 +0.4**
baz=71
E05A Randle 71.77 45 ⇓ P **P 10 05 58.9 -0.1**
baz=72
F04A Amboy 71.78 45 P **P 10 05 59.2 +0.1**
baz=72,SNR=5.7
EDM Edmonton 71.82 36 *e*P **P 10 05 59.1 -0.1**
D06A Cle Elum 71.89 44 ⇓ P **P 10 05 59.4 -0.2**
baz=72
B08A Colville Reser 71.98 42 P **P 10 06 00.1 -0.1**
baz=72,SNR=11
A09A Danville 71.98 41 ⇑ P **P 10 06 00.4 +0.2**
baz=72
C07A Waterville 72.00 43 P **P 10 05 60.0 -0.4**
baz=72,SNR=7.5
H03A Soap Creek Ran 72.04 47 ⇓ P **P 10 06 01.0 +0.4**
baz=72
WTV Waterville 72.05 43 P **P 10 06 00.3 -0.3**
I02A Mapleton 72.14 48 ⇑ P **P 10 06 01.7 +0.5**
baz=72
G04A Mulino 72.19 46 ⇑ P **P 10 06 01.4 -0.1**
baz=72
E06A Yakima 72.21 44 P **P 10 06 02.1 +0.6**
baz=72,SNR=5.2
D07A Quincy 72.36 43 P **P 10 06 02.3 -0.1**
baz=72,SNR=7.7
EPH Ephrata 72.46 43 P **P 10 06 02.8 -0.2**
I03A Eugene 72.47 47 P **P 10 06 04.2 +1.0**
baz=72,SNR=5.6
K01A Sixes 72.47 49 ⇑ P **P 10 06 03.8 +0.7**
baz=72
C08A Higginbotham F 72.48 42 P **P 10 06 02.9 -0.2**
baz=72,SNR=6.1
A10A Northport 72.51 41 ⇑ P **P 10 06 02.9 -0.3**
baz=72
B09A Rice 72.55 42 P **P 10 06 03.6 +0.1**
baz=72,SNR=12
J02A Umpqua 72.67 48 ⇓ P **P 10 06 04.3 0.0**
baz=72
H04A Detroit Lake 72.67 46 ⇑ P **P 10 06 03.9 -0.3**
baz=72,SNR=8.5
VFP Flag Point 72.69 46 P **P 10 06 04.8 +0.5**
F06A Goldendale 72.79 45 ⇓ P **P 10 06 05.2 +0.3**
baz=72
NWAO Narrogin (SRO) 72.82 194 P **P 10 06 03.9 -1.2**
comp=Z,5.6nm,0.6s,mb4.3,baz=18,slow=3.6,SNR=4.8
G05A Wamic 72.82 46 ⇓ P **P 10 06 05.3 +0.2**
baz=73
C09A Chrisman Ranch 72.88 42 P **P 10 06 05.5 +0.1**
baz=73,SNR=9.5
OD2 Odessa Site #2 72.91 43 P **P 10 06 05.2 -0.4**
D08A Wollman Farm, 73.00 43 P **P 10 06 06.1 0.0**
baz=73,SNR=8.0
J03A Ideyld Park 73.02 48 ⇑ P **P 10 06 06.8 +0.5**
baz=73
K02A Glendale 73.08 49 ⇓ P **P 10 06 06.8 +0.2**
baz=73
I04A Tendick Farm, 73.08 47 ⇓ P **P 10 06 06.5 -0.2**
baz=73,SNR=10.0
HAWA Hanford 73.09 44 *e*P **P 10 06 07.0 +0.3**
comp=Z,15nm,0.8s,mb4.6
B10A Chitwood Farm, 73.11 41 ⇑ P **P 10 06 06.9 +0.2**
baz=73
A11A Hall Mountain, 73.13 40 ⇓ P **P 10 06 07.4 +0.5**
baz=73,SNR=12
F07A Phinny Hill Vi 73.18 44 ⇑ P **P 10 06 07.4 +0.2**
baz=73
NEW Newport 73.18 41 *e*P **P 10 06 07.0 -0.2**
comp=Z,17nm,1.1s,mb4.5
NEW Newport 73.18 41 *e*P **P 10 06 07.0 -0.2**
NEW pmax pmax
comp=Z,17nm,1.1s
G06A Carlson Farm, 73.20 45 ⇓ P **P 10 06 07.1 -0.2**
baz=73,SNR=5.0
H05A Madras 73.23 46 ⇓ P **P 10 06 07.7 +0.2**
baz=73
E08A Dider Farm, El 73.28 43 ⇓ P **P 10 06 07.7 -0.1**
baz=73
D09A Jones Farm, Ri 73.33 43 ⇑ P **P 10 06 07.9 -0.1**
baz=73
C10A Spiker Farm, 73.37 42 ⇑ P **P 10 06 07.9 -0.3**
baz=73
B11A Sandpoint 73.46 41 ⇓ P **P 10 06 09.0 +0.3**
baz=73,SNR=7.4
A12A Yaak River Ran 73.50 40 ⇑ P **P 10 06 09.0 0.0**
baz=73
I05A Bend 73.51 46 ⇓ P **P 10 06 09.5 +0.4**
baz=73
J04A Umpqua Nationa 73.59 48 ⇓ P **P 10 06 09.8 +0.2**
baz=73,SNR=6.7
H06A Lindquist Farm 73.68 46 P **P 10 06 10.0 -0.1**
baz=73,SNR=5.4
G07A Ruggs Ranch, H 73.72 45 ⇑ P **P 10 06 10.4 +0.2**
baz=74
E09A Wood Farm, Sta 73.76 43 P **P 10 06 10.7 +0.1**
baz=74,SNR=5.8
D10A Wagner Farm, O 73.88 42 P **P 10 06 10.8 -0.3**
baz=74,SNR=5.2
OJC Ojcow 74.05 322 *e*P **P 10 06 11.9 -0.2**
J05A Fort Rock 74.07 47 ⇑ P **P 10 06 12.9 +0.5**
baz=74,SNR=17
G08A Pilot Rock 74.09 44 ⇑ P **P 10 06 12.2 -0.2**
baz=74
A13A Flathead Natio 74.12 39 ⇑ P **P 10 06 12.9 +0.4**
baz=74
YBH Yreka Blue Hor 74.17 49 ⇑ P **P 10 06 12.9 0.0**
baz=74
H07A Lands Inn, Kim 74.20 45 P **P 10 06 13.3 +0.3**
baz=74,SNR=5.4
K04A Chilquin 74.20 48 P **P 10 06 13.9 +0.8**
baz=74,SNR=5.1
I06A Prineville 74.24 46 P **P 10 06 14.1 +0.8**
baz=74,SNR=6.4
M02C Callahan 74.29 49 ⇑ P **P 10 06 14.3 +0.7**
baz=74
WALA Waterton Lakes 74.29 39 *e*P **P 10 06 13.2 -0.2**
comp=Z,6.0nm,0.7s,mb4.2
E10A Myers Farm, Un 74.33 43 P **P 10 06 13.8 0.0**
baz=74,SNR=10
N02C Big Bar 74.37 50 ⇓ P **P 10 06 14.4 +0.3**
baz=74
L04A Klamath Falls 74.38 48 ⇓ P **P 10 06 14.1 0.0**
baz=74
F09A S2 Ranch, Elgi 74.40 44 ⇓ P **P 10 06 13.9 -0.2**
baz=74
B13A Whitefish 74.46 40 P **P 10 06 14.7 +0.2**
baz=74,SNR=12
I07A Izee 74.55 46 ⇓ P **P 10 06 15.0 -0.1**
baz=74,SNR=8.9
F10A Beach Ranch, E 74.59 43 ⇓ P **P 10 06 15.2 -0.1**
baz=74,SNR=6.1
K05A Summer Lake 74.61 47 ⇓ P **P 10 06 15.7 +0.3**
baz=74,SNR=8.4
SFJD Kangerlussuaq 74.61 2 *i* P **P 10 06 13.8 -1.2**
SFJD pmax pmax
comp=Z,20nm,0.6s,mb4.8
SFJD Kangerlussuaq 74.61 2 *i* P **P 10 06 13.8 -1.2**
comp=Z,20nm,0.6s,mb4.8
M04C Macdoel 74.65 49 ⇑ P **P 10 06 15.4 -0.2**
baz=74,SNR=12
J06A Christmas Vall 74.71 47 ⇑ P **P 10 06 15.9 -0.1**
baz=74,SNR=8.4
H08A Prairie City 74.74 45 P **P 10 06 16.4 +0.3**
baz=74,SNR=6.8
G09A Cove 74.74 44 ⇓ P **P 10 06 16.4 +0.3**
baz=74
M03C McCloud 74.80 49 ⇑ P **P 10 06 16.6 +0.2**
baz=75,SNR=6.1
C13A Hot Springs 74.87 40 ⇑ P **P 10 06 16.9 +0.2**
baz=75,SNR=20
D12A Red Ives Fores 74.88 41 ⇑ P **P 10 06 16.3 -0.6**
baz=75
E11A Bogner Ranch, 74.89 42 P **P 10 06 16.7 -0.2**
baz=75,SNR=6.4
K06A Valley Falls 74.94 47 ⇑ P **P 10 06 17.3 0.0**
baz=75,SNR=11
WDC Whiskeytown Da 74.97 50 ⇑ P **P 10 06 17.2 -0.3**
baz=75,SNR=7.9
L05A Lakeview 75.07 48 ⇓ P **P 10 06 18.6 +0.5**
baz=75,SNR=7.2
O02C Red Bluff 75.07 50 ⇑ P **P 10 06 18.5 +0.4**
baz=75
G10A Bishop Farm, J 75.09 44 P **P 10 06 18.2 +0.1**
baz=75,SNR=16
J07A Hines 75.11 46 P **P 10 06 19.0 +0.8**
baz=75,SNR=15
I08A Drewsey 75.18 45 ⇑ P **P 10 06 19.1 +0.5**
baz=75,SNR=7.9
H09A Durkee 75.20 44 ⇓ P **P 10 06 18.8 +0.1**
baz=75,SNR=12
F11A Grangeville 75.22 43 P **P 10 06 18.6 -0.1**
baz=75,SNR=12
C14A Swan Lake 75.23 40 ⇑ P **P 10 06 18.8 0.0**
baz=75
BMO Blue Mountains 75.27 44 *e*P **P 10 06 19.2 +0.1**
comp=Z,11nm,0.8s,mb4.4
D13A Huson 75.31 41 P **P 10 06 19.0 -0.3**
baz=75,SNR=7.9
M05C Lookout 75.32 49 ⇓ P **P 10 06 19.5 0.0**
baz=75
MORC Moravsky Berou 75.42 323 *e*P **P 10 06 18.6 -1.2**
GASB Alder Springs 75.44 51 ⇑ P **P 10 06 20.3 +0.2**
baz=75,SNR=6.5

MOD **Modoc** 75.47 48 ⇓P P 10 06 20.0 -0.2
baz=75,SNR=7.7
HATC **Hat Creek Radi** 75.47 49 ⇑P P 10 06 20.5 +0.2
baz=75,SNR=5.7
G11A **Walters Elk Ra** 75.48 43 P P 10 06 19.9 -0.3
baz=75,SNR=20
LBCM **Butte Creek Ri** 75.52 49 P P 10 06 20.7 +0.1
FFC **Flin Flon** 75.56 30 *e*P P 10 06 19.9 -0.6
comp=Z,40nm,0.8s,mb5.0
FFC **Flin Flon** 75.56 30 *e*P P 10 06 19.9 -0.6
FFC pmax pmax
comp=Z,40nm,0.8s,mb5.0
K07A **Rock Creek Ran** 75.58 47 P P 10 06 21.1 +0.2
baz=75,SNR=15
I09A **Lost Marbles R** 75.60 45 P P 10 06 21.4 +0.4
baz=75,SNR=9.0
O03C **Acorn Hollow,** 75.64 50 ⇑P P 10 06 20.8 -0.5
baz=75
H10A **Noah's Angus R** 75.75 44 P P 10 06 21.5 -0.3
baz=76,SNR=16
MSO **Missoula** 75.75 41 *e*P P 10 06 21.8 0.0
F12A **Elk City** 75.78 42 ⇑P P 10 06 21.7 -0.2
baz=76
M06C **Likely Place G** 75.81 48 ⇑P P 10 06 21.7 -0.5
baz=76
D14A **Greenough** 75.81 40 P P 10 06 21.8 -0.3
baz=76,SNR=25
E13A **Victor** 75.89 41 ⇓P P 10 06 21.8 -0.7
baz=76
L07A **Adell** 75.95 47 P P 10 06 23.9 +0.9
baz=76,SNR=28
K08A **Mann Creek Ran** 75.98 46 P P 10 06 23.9 +0.8
baz=76,SNR=7.0
J09A **Fry Pan Ranch,** 76.00 45 P P 10 06 23.7 +0.5
baz=76,SNR=18
O04C **Chester** 76.00 49 P P 10 06 23.8 +0.5
baz=76,SNR=20
I10A **Payette** 76.05 44 ⇓P P 10 06 23.9 +0.5
baz=76
CHMT **Chamberlain Mo** 76.05 40 *e*P P 10 06 22.9 -0.4
H11A **Donnelly** 76.07 43 ⇓P P 10 06 22.8 -0.7
baz=76
MNRC **McLaughlin Nat** 76.09 51 P P 10 06 24.5 +0.8
baz=76,SNR=5.6
WVOR **Wild Horse Val** 76.09 47 *e*P P 10 06 23.8 +0.1
comp=Z,11nm,1.0s,mb4.3
WVOR **Wild Horse Val** 76.09 47 *e*P P 10 06 23.8 +0.1
WVOR pmax pmax
comp=Z,11nm,1.0s,mb4.3
VRAC **Vranov** 76.19 323 P P 10 06 23.5 -0.6
comp=Z,4.8nm,0.6s,mb4.2,baz=84,slow=6.4,SNR=4.4
ORV **Oroville** 76.24 50 P P 10 06 24.0 -0.6
baz=76,SNR=9.2
F13A **Darby** 76.25 42 P P 10 06 23.9 -0.6
baz=76,SNR=5.9
E14A **Clinton** 76.26 41 P P 10 06 24.4 -0.1
baz=76,SNR=11
O05C **Quincy** 76.33 50 P P 10 06 25.1 0.0
baz=76,SNR=9.7
D15A **Lincoln** 76.33 40 P P 10 06 24.9 0.0
baz=76,SNR=11
CLL **Collm** 76.40 326 *e*P P 10 06 24.0 -1.3
comp=Z,11nm,0.8s,mb4.4
CLL **Collm** 76.40 326 *e*P P 10 06 24.0 -1.3
CLL pmax pmax
comp=Z,11nm,0.8s,mb4.4
CLL **Collm** 76.40 326 *i*P P 10 06 24.8 -0.5
comp=Z,11nm,0.8s,mb4.4
CLL *e*S S 10 15 38.0 +4.9
L08A **Fields** 76.41 47 P P 10 06 25.9 +0.4
baz=76,SNR=10
K09A **Rome** 76.43 46 P P 10 06 25.6 0.0
baz=76,SNR=7.4
M07A **Soldier Meadow** 76.45 48 P P 10 06 26.4 +0.7
baz=76,SNR=12
N06A **Buffalo Meadow** 76.47 48 P P 10 06 26.2 +0.3
baz=76,SNR=13
J10A **Berg Farm, Mel** 76.49 45 ⇑P P 10 06 26.1 +0.1
baz=76
Q03C **Winters** 76.50 51 ⇑P P 10 06 26.4 +0.3
baz=76
E15A **Deer Lodge** 76.69 41 P P 10 06 27.0 0.0
baz=76,SNR=11
BEKR **Beckwourth** 76.72 49 P P 10 06 27.3 0.0
baz=76,SNR=13
F14A **Wisdom** 76.73 41 P P 10 06 27.2 0.0
baz=76,SNR=6.8
G13A **Cobalt** 76.76 42 P P 10 06 26.6 -0.8
baz=76,SNR=7.4
Q04C **Lincoln** 76.76 51 ⇑P P 10 06 27.4 -0.1
baz=76
H12A **Diamond D Ranc** 76.79 43 P P 10 06 27.6 0.0
baz=76,SNR=34
O06A **Flanigan** 76.85 49 P P 10 06 28.2 +0.3
baz=77,SNR=15
K10A **MacKenzie Ranc** 76.86 45 ⇑P P 10 06 28.0 0.0
baz=77
M08A **Happy Creek Ra** 76.87 47 ⇑P P 10 06 27.9 -0.1
baz=77
L09A **Wilkinson Ranc** 76.91 46 ⇓P P 10 06 28.2 0.0
baz=77,SNR=6.1
P05C **Yuba Gap, Truc** 76.93 50 ⇑P P 10 06 28.0 -0.5
baz=77
N07B **Gerlach** 76.96 48 ⇓P P 10 06 27.8 -0.7
baz=77
MFID **Camas Ranch** 77.02 44 ⇑P P 10 06 29.0 +0.1
baz=77
EGMT **Eagleton** 77.02 38 *e*P P 10 06 22.6 -6.1
comp=Z,28nm,0.3s,mb5.3
H13A **Challis** 77.10 43 ⇑P P 10 06 28.9 -0.4
baz=77
P06A **Stead Airport,** 77.12 49 ⇓P P 10 06 29.6 +0.1
baz=77
JRSC **Jasper Ridge** 77.13 52 ⇓P P 10 06 29.1 -0.5
baz=77
F15A **Butte** 77.16 41 P P 10 06 29.9 +0.4
baz=77,SNR=22
LRM **Limekiln Ridge** 77.20 41 *e*P P 10 06 29.9 +0.2
LAVA **Lava Cap Winer** 77.20 50 P P 10 06 29.6 -0.4
baz=77,SNR=8.2
K11A **Parker Ranch,** 77.33 45 ⇑P P 10 06 30.4 -0.1
baz=77
O07A **Toulon** 77.41 48 P P 10 06 31.6 +0.5
baz=77,SNR=8.2
M09A **Marrel Ranch,** 77.42 47 ⇓P P 10 06 30.9 -0.1
baz=77
DLMT **Dillon** 77.43 41 *e*P P 10 06 31.4 +0.4
comp=Z,45nm,0.7s,mb5.1
N08A **GE Springer Mi** 77.44 48 P P 10 06 31.4 +0.3
baz=77,SNR=14
WCN **Washoe City** 77.44 50 ⇓P P 10 06 31.1 -0.1
baz=77
CONA **Conrad Observa** 77.50 322 ⇓*i*P P 10 06 32.1 +0.7
comp=Z,4.8nm,0.8s,mb4.0
J12A **Stokes Ranch,** 77.53 44 ⇑P P 10 06 31.4 -0.2
baz=77
L10A **Juniper Basin** 77.54 46 ⇓P P 10 06 31.8 +0.1
baz=77
I13A **Wildhorse Cree** 77.61 43 ⇑P P 10 06 32.6 +0.5
baz=77
G15A **Dillon** 77.62 41 P P 10 06 32.3 +0.2
baz=77,SNR=55
R05C **Kirkwood Meado** 77.63 50 ⇑P P 10 06 32.4 +0.1
baz=77
S04C **Ingram Canyon,** 77.63 52 ⇓P P 10 06 31.8 -0.5
baz=77
MCMT **McKenzie Canyo** 77.67 42 *e*P P 10 06 32.3 0.0
HLID **Hailey** 77.69 44 P P 10 06 33.0 +0.6
baz=77,SNR=13
BOZ **Bozeman (W)** 77.74 41 *e*P P 10 06 32.8 +0.1
comp=Z,12nm,0.7s,mb4.5
BOZ **Bozeman (W)** 77.74 41 *e*P P 10 06 32.8 +0.1
BOZ pmax pmax
comp=Z,12nm,0.7s,mb4.4
BOZ **Bozeman (W)** 77.74 41 ⇓P P 10 06 32.8 +0.1
baz=78
N09A **Rock Creek Ran** 77.75 47 ⇓P P 10 06 33.2 +0.4
baz=78
P07A **Fallon** 77.80 49 ⇓P P 10 06 33.6 +0.4
baz=78
GERES **GERESS Array B** 77.86 324 P P 10 06 32.6 -0.8
comp=Z,1.7nm,0.8s,baz=42,slow=6.1,SNR=11
M10A **I.L. Ranch, Tu** 77.87 46 P P 10 06 34.4 +0.9
baz=78,SNR=10
CMB **Columbia Colle** 77.87 51 *e*P P 10 06 33.4 -0.2
comp=Z,18nm,1.1s,mb4.4
CMB **Columbia Colle** 77.87 51 *e*P P 10 06 33.4 -0.2
CMB pmax pmax
comp=Z,18nm,1.1s,mb4.4
CMB **Columbia Colle** 77.87 51 P P 10 06 33.4 -0.2
baz=78,SNR=9.2
J13A **Cove Ranch, Pi** 77.93 44 ⇑P P 10 06 34.3 +0.5
baz=78
PACP **Pacheco Peak** 77.97 52 ⇑P P 10 06 34.3 +0.1
baz=78
K12A **Draper Farm, C** 78.04 45 ⇓P P 10 06 34.4 0.0
baz=78
R06C **Coleville** 78.12 50 P P 10 06 35.5 +0.6
baz=78,SNR=6.2
HAST **UC Hastings Re** 78.20 53 ⇓P P 10 06 34.9 -0.5
baz=78
Q07A **Schurz** 78.24 49 ⇓P P 10 06 35.8 +0.3
baz=78
L12A **House Creek Ra** 78.31 45 ⇓P P 10 06 36.0 +0.1
baz=78
M11A **Holland Ranch,** 78.35 46 P P 10 06 37.3 +1.2
baz=78,SNR=9.7
GRA1 **Grafenberg Arr** 78.36 326 *e*P P 10 06 35.8 -0.2
comp=Z,10.0nm,1.1s,mb4.2
GRF **Grafenberg Arr** 78.36 326 *e*P P 10 06 35.8 -0.2
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
GRF **Grafenberg Arr** 78.36 326 *e*P P 10 06 35.8 -0.2
GRF pmax pmax
comp=Z,10.0nm,1.1s,mb4.2
GRF **Grafenberg Arr** 78.36 326 *e*P P 10 06 35.8 -0.2
comp=Z,10.0nm,1.1s,mb4.2
O09A **Fish Creek Ran** 78.39 48 P P 10 06 37.0 +0.7
baz=78,SNR=5.0
QLMT **Earthquake Lak** 78.40 41 *e*P P 10 06 36.4 +0.1
K13A **Stover Farm, H** 78.48 44 ⇓P P 10 06 37.7 +0.9
baz=78
R07C **Lee Vining** 78.65 50 P P 10 06 38.8 +1.0
baz=78,SNR=7.4
O10A **Cortez Mining,** 78.70 47 ⇓P P 10 06 38.5 +0.5
baz=78
Q08A **Gabbs** 78.81 49 P P 10 06 39.2 +0.6
baz=79,SNR=10.0
P09A **Austin** 78.82 48 ⇑P P 10 06 39.2 +0.5
baz=79
M12A **Wells** 78.85 45 P P 10 06 39.7 +0.9
baz=79,SNR=6.7
YNR **Norris Junctio** 78.87 41 *e*P P 10 06 40.9 +2.1
L13A **Double Diamond** 78.94 44 ⇑P P 10 06 40.0 +0.7
baz=79
T06C **Millerton Lake** 78.94 51 ⇓P P 10 06 38.8 -0.6
baz=79
YFT **Old Faithful** 78.97 41 *e*P P 10 06 41.4 +2.1
KCC **Kaiser Creek** 78.98 51 ⇓P P 10 06 39.4 -0.1
baz=79
K14A **Jones Ranch, D** 79.04 44 ⇑P P 10 06 40.5 +0.7
baz=79
PKD **Parkfield** 79.11 53 ⇓P P 10 06 41.2 +0.9
baz=79
U05C **Westside ANR,** 79.12 52 ⇓P P 10 06 40.6 +0.3
baz=79
N12A **Clover Valley,** 79.16 46 P P 10 06 41.3 +0.8
baz=79,SNR=9.5
P10A **Eureka** 79.17 48 ⇓P P 10 06 40.6 +0.1
baz=79
Q09A **Carvers** 79.27 49 ⇓P P 10 06 41.4 +0.4
baz=79
DGMT **Dagmar** 79.28 35 *e*P P 10 06 40.7 -0.2
comp=Z,26nm,0.8s,mb4.8
O11A **Cowboy Ranch,** 79.29 47 P P 10 06 41.8 +0.6
baz=79,SNR=5.5
FLWY **Flagg Ranch** 79.30 41 *e*P P 10 06 42.3 +1.2
comp=Z,24nm,1.1s,mb4.7
RLMT **Red Lodge** 79.30 40 *e*P P 10 06 41.4 +0.3
KBA **Koelnbreinsper** 79.31 323 ⇑*i*P P 10 06 42.2 +1.1
comp=Z,6.4nm,1.1s,mb4.1
KBA **Koelnbreinsper** 79.31 323 ⇑*i*P P 10 06 42.2 +1.1
KBA pmax pmax
comp=Z,6.0nm,1.1s,mb4.0
M13A **Montello** 79.31 45 ⇑P P 10 06 41.3 +0.1
baz=79
EKA **Eskdalemuir Ar** 79.31 336 P P 10 06 40.3 -0.7
comp=Z,2.1nm,0.6s,mb3.9,baz=35,slow=4.7,SNR=9.7
MOOW **Moose Ponds** 79.50 42 *e*P P 10 06 42.6 +0.4
comp=Z,15nm,1.1s,mb4.4
S08C **White Mtn Res** 79.56 50 P P 10 06 43.4 +0.8
baz=79,SNR=8.0
HELL **Mitchell Peak,** 79.57 51 P P 10 06 42.2 -0.5
baz=79,SNR=5.9
TPAW **Teton Pass** 79.58 42 *e*P P 10 06 43.4 +0.8
comp=Z,11nm,0.8s,mb4.4
N13A **Wendover, West** 79.62 46 ⇑P P 10 06 43.3 +0.4
baz=79
M14A **Sheep Mountain** 79.66 45 ⇑P P 10 06 43.5 +0.4
baz=79
LOHW **Long Hollow** 79.67 42 *e*P P 10 06 43.3 +0.2
comp=Z,32nm,1.8s,mb4.5
SNOW **Snow King Moun** 79.70 42 *e*P P 10 06 44.0 +0.8
comp=Z,13nm,0.8s,mb4.5
O12A **Currie** 79.72 46 ⇓P P 10 06 43.5 +0.1
baz=80,SNR=11
REDW **Red Top Meadow** 79.72 42 *e*P P 10 06 44.0 +0.6
comp=Z,12nm,1.0s,mb4.4
R09A **Tonopah** 79.72 49 P P 10 06 44.0 +0.5
baz=80,SNR=7.4
Q10A **Bear Creek Ra** 79.73 48 ⇓P P 10 06 43.4 -0.1
baz=80
S09A **Goldfield** 79.97 49 P P 10 06 45.2 +0.3
baz=80,SNR=11
VES **Vestal, Richgr** 80.08 52 ⇑P P 10 06 44.6 -0.9
baz=80
R10A **Warm Springs** 80.14 49 P P 10 06 46.5 +0.8
baz=80,SNR=5.6
Q11A **Duckwater** 80.15 48 ⇑P P 10 06 45.9 +0.1
baz=80
P12A **McGill** 80.16 47 P P 10 06 46.3 +0.5
baz=80,SNR=9.8
N14A **Grayback Hills** 80.19 45 ⇓P P 10 06 46.2 +0.2
baz=80
RETA **Reutte** 80.20 325 ⇑*i*P P 10 06 45.4 -0.4
comp=Z,8.0nm,0.9s,mb4.2
S10A **Tonopah Range,** 80.22 49 ⇓P P 10 06 46.4 +0.2
baz=80
PKM **Peak Mountain** 80.24 53 ⇑P P 10 06 46.8 +0.6
baz=80
O13A **Hicks Ranch, I** 80.24 46 ⇑P P 10 06 46.5 +0.4
baz=80
GRAC **Grapevine Rang** 80.36 50 P P 10 06 47.3 +0.4
baz=80,SNR=8.5
Q12A **Willow Creek R** 80.50 47 P P 10 06 48.0 +0.5
baz=80,SNR=6.8
R11A **Troy Canyon, C** 80.52 48 ⇓P P 10 06 47.7 0.0
baz=80
HWUT **Hardware Ranch** 80.56 44 *e*P P 10 06 48.0 +0.2
comp=Z,16nm,0.9s,mb4.6
ISA **Isabella** 80.57 52 ⇑P P 10 06 47.0 -1.0
baz=80
P13A **Bates Ranch, G** 80.68 46 ⇓P P 10 06 48.9 +0.4
baz=80
DAVA **Damuels** 80.75 325 ⇑*i*P P 10 06 48.4 -0.3
comp=Z,14nm,0.9s,mb4.5
BW06 **Boulder Array** 80.81 42 *e*P P 10 06 48.7 -0.5
comp=Z,13nm,1.0s,mb4.4
PDAR **Pinedale Array** 80.81 42 P P 10 06 48.6 -0.5
comp=Z,9.3nm,0.8s,mb4.3,baz=320,slow=1.0,SNR=64
DUG **Dugway** 80.85 45 *e*P P 10 06 50.0 +0.6
DUG **Dugway** 80.85 45 ⇑P P 10 06 49.4 0.0
baz=81
S11A **Rachel** 80.90 49 ⇓P P 10 06 50.1 +0.4
baz=81
MPMC **Manual Prospec** 80.91 51 P P 10 06 50.0 +0.2
baz=81,SNR=8.5
Q13A **Wheeler Ranch,** 81.02 47 ⇓P P 10 06 50.9 +0.6
baz=81
FURC **Furnace Creek,** 81.02 50 P P 10 06 50.6 +0.2
baz=81,SNR=9.5
TPNV **Topopah Spring** 81.07 50 *e*P P 10 06 50.2 -0.4
comp=Z,20nm,1.2s,mb4.5
TPNV **Topopah Spring** 81.07 50 *e*P P 10 06 50.2 -0.4
TPNV pmax pmax
comp=Z,20nm,1.2s,mb4.5
TPNV **Topopah Spring** 81.07 50 ⇓P P 10 06 50.5 -0.1
baz=81
CTU **Camp Tracy** 81.09 44 *e*P P 10 06 51.1 +0.5
R12A **Pony Springs,** 81.11 48 ⇑P P 10 06 50.9 +0.1
baz=81
DAVOX **Davos/Dischmat** 81.13 325 P P 10 06 50.4 -0.3
comp=Z,3.6nm,0.6s,mb4.1,baz=149,slow=4.7,SNR=4.6
JLU **Jordanelle** 81.32 44 *e*P P 10 06 52.3 +0.5
U10A **Ash Meadows, A** 81.38 50 P P 10 06 53.1 +1.0
baz=81,SNR=5.1
ULM **Lac du Bonnet** 81.39 30 P P 10 06 51.0 -0.9
comp=Z,22nm,0.7s,mb4.8,baz=322,slow=6.4,SNR=50
EDW2 **Edwards Air Fo** 81.39 52 P P 10 06 52.4 +0.2
baz=81,SNR=7.1
S12A **Delamar Landin** 81.45 48 ⇑P P 10 06 53.2 +0.6
baz=81
T11A **Corn Creek, Al** 81.48 49 ⇓P P 10 06 53.1 +0.4
baz=81
DAU **Daniels Canyon** 81.56 44 *e*P P 10 06 53.4 +0.3
MPU **Maple Canyon** 81.63 45 *e*P P 10 06 53.5 +0.1
GSC **Goldstone** 81.83 51 *e*P P 10 06 54.6 0.0
GSC **Goldstone** 81.83 51 ⇑P P 10 06 54.5 0.0
baz=82
U11A **Corn Creek** 81.94 49 ⇓P P 10 06 55.7 +0.6
baz=82
BFSC **Mount Baldy St** 82.02 52 ⇓P P 10 06 54.8 -0.7
baz=82
S13A **Holt Ranch, En** 82.05 48 ⇑P P 10 06 56.0 +0.3
baz=82
TUQ **Turquoise Mtn.** 82.28 50 P P 10 06 57.4 +0.6
baz=82,SNR=5.4
V11A **Goodsprings** 82.30 50 ⇑P P 10 06 56.6 -0.4
baz=82
S14A **Cedar City** 82.32 47 ⇑P P 10 06 57.1 +0.1
baz=82
TMUT **Trail Mountain** 82.36 45 *e*P P 10 06 57.7 +0.5
MSU **Marysvale** 82.37 46 *e*P P 10 06 58.1 +0.9
T13A **Saint George** 82.40 48 ⇓P P 10 06 57.9 +0.5
baz=82
U12A **Valley of Fire** 82.43 49 ⇓P P 10 06 57.8 +0.2
baz=82
HEC **Hector,Ludlow** 82.44 51 ⇓P P 10 06 57.5 -0.1
baz=82
MURC **Murrieta** 82.72 53 ⇑P P 10 06 58.8 -0.4
baz=82
V12A **Nelson** 82.73 50 P P 10 06 59.5 +0.4
baz=82,SNR=5.8
U13A **Pakoon Wash** 82.78 49 ⇑P P 10 06 59.8 +0.5
baz=82
T14A **Hurricane** 82.85 48 ⇓P P 10 06 59.3 -0.4
baz=83
SRU **San Rafael** 82.87 45 *e*P P 10 06 59.7 -0.1
comp=Z,5.6nm,0.9s,mb4.1
SRU **San Rafael** 82.87 45 *e*P P 10 06 59.7 -0.1
SRU pmax pmax
comp=Z,6.0nm,0.9s,mb4.1
GMRC **Granite Mounta** 82.88 51 P P 10 06 59.8 0.0
baz=83,SNR=8.4
AGMN **Agassiz Refuge** 82.95 31 *e*P P 10 06 58.9 -1.1
LDFC **Landfair** 83.01 50 *e*P P 10 07 00.6 0.0
PFO **Pinyon Flat Ob** 83.18 52 P P 10 07 01.1 -0.3
baz=83,SNR=6.0
BELC **Belle Mtn.** 83.20 52 ⇓P P 10 07 01.4 -0.1
baz=83
U14A **Mt Trumbull** 83.24 48 ⇑P P 10 07 02.5 +0.8
baz=83
T15A **Red Dirt Ranch** 83.29 47 ⇓P P 10 07 01.6 -0.3
baz=83
IRM **Iron Mountain** 83.61 51 P P 10 07 03.7 +0.2
baz=83,SNR=7.1
MONP **Monument Peak** 83.68 53 ⇓P P 10 07 03.6 -0.4
baz=83
W13A **Hualapai Mount** 83.73 50 ⇓P P 10 07 03.9 -0.3
baz=84
BC3 **Big Chuckw Mtn** 83.77 52 ⇓P P 10 07 04.3 0.0
baz=84
PHWY **Pilot Hill** 83.98 40 *e*P P 10 07 05.0 -0.2
X13A **Yucca** 84.11 50 P P 10 07 06.4 +0.3
baz=84,SNR=11
PDMCI **Parker Dam,Lak** 84.12 50 ⇑P P 10 07 05.8 -0.3
baz=84
W14A **Seligman** 84.13 49 P P 10 07 06.6 +0.5
baz=84,SNR=5.7
Y12C **Blythe** 84.27 51 ⇓P P 10 07 06.7 -0.1
baz=84
W15A **Williams** 84.63 49 ⇑P P 10 07 09.0 +0.3
baz=84
Y13A **Salome** 84.64 50 ⇑P P 10 07 09.1 +0.3
baz=84
SMCO **Snowmass** 84.75 43 *e*P P 10 07 09.6 +0.4
comp=Z,12nm,0.8s,mb4.6
X14A **Yava** 84.76 49 P P 10 07 10.1 +0.9
baz=84,SNR=7.2
WUAZ **Wupatki** 84.92 48 *e*P P 10 07 10.9 +0.8
comp=Z,9.9nm,0.9s,mb4.4
WUAZ **Wupatki** 84.92 48 ⇑P P 10 07 10.7 +0.7
baz=85
ISCO **Idaho Springs** 85.01 42 *e*P P 10 07 10.3 0.0
comp=Z,3.6nm,0.7s,mb4.1
ISCO **Idaho Springs** 85.01 42 *e*P P 10 07 10.4 0.0
ISCO pmax pmax
comp=Z,4.0nm,0.7s,mb4.2
Y14A **Wickenburg** 85.06 50 P P 10 07 11.0 +0.3
baz=85,SNR=5.5
X15A **Humboldt** 85.13 49 P P 10 07 11.7 +0.6
baz=85,SNR=7.5
SCHQ **Schefferville** 85.25 12 P P 10 07 10.6 -0.7
comp=Z,10nm,0.8s,mb4.5,baz=357,slow=6.3,SNR=13
MVCO **Mesa Verde** 85.34 45 *e*P P 10 07 12.6 +0.5
comp=Z,6.5nm,0.9s,mb4.3
MVCO **Mesa Verde** 85.34 45 ⇓P P 10 07 12.5 +0.4
baz=85
115A **Sonoran Desert** 86.38 50 ⇑P P 10 07 16.9 -0.3
baz=86
116A **Eloy** 86.79 50 ⇑P P 10 07 19.1 0.0
baz=87
TUC **Tucson** 87.52 50 *e*P P 10 07 22.9 +0.4
217A **Green Valley** 87.88 50 ⇑P P 10 07 24.3 +0.1
baz=88
ANMO **Albuquerque** 88.12 45 *e*P P 10 07 26.3 +1.0
ANMO **Albuquerque** 88.12 45 *i*P P 10 07 25.0 -0.3
BNM **Barren Site** 88.61 46 *e*P P 10 07 28.2 +0.6
318A **Bisbee** 88.61 50 ⇑P P 10 07 27.6 -0.1
baz=88
KSU1 **Kansas State U** 89.99 37 *e*P P 10 07 33.5 -0.4
comp=Z,16nm,0.7s,mb5.0
DBIC **Dimbokro** 120.61 310 PKIKP PKPdf 10 13 22.0 -1.8
DBIC pmax pmax
comp=Z,2.0nm,0.6s
DBIC **Dimbokro** 120.61 310 PKP PKPdf 10 13 21.9 -1.9
comp=Z,1.5nm,0.6s,baz=150,slow=14,SNR=4.4
SDV **Santo Domingo** 127.63 31 *e*PKPdf PKPdf 10 13 36.3 -0.9
LPAZ **La Paz** 150.73 46 PKIKP PKPbc 10 14 24.0 -0.4
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ **La Paz** 150.73 46 PKPbc PKPbc 10 14 24.0 -0.4
comp=Z,4.2nm,0.8s,baz=327,slow=3.2,SNR=12

CSEM **29** *10:06:45.5, 3454N×2299E, h28km, MD3.6/3, After ATH*
ATH 29 10:06:45.5, 3438N×2307E, h27km, MD3.6/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.96**	**61**	*e*PN	Pn	10 07 04.0	+0.9
GVD				*e*SN	Sn	10 07 17.5	+1.6
NPS	**Neapolis**	**2.27**	**66**	*e*PN	Pn	10 07 23.0	+1.8
KARP	**Karpathos**	**3.56**	**70**	*e*PN	Pn	10 07 41.5	+2.6

UCR **29** *10:14:44.9, 1807N×102.13W, h30km*
IDC **29** *10:17:57.2±4.7, 1242N×8729W, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/18, mbtmp3.7/5, ML3.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/26, Error ellipse: s-maj=93.1km s-min=41.6km az=8.0*
CASC **29** *10:17:59.3±2.6, 1293N×8747W, h118km±14km, MD3.9*
ISCJB **29** *10:18:03.8±0.7, 1239N±008×8754W±008, h69km±10km, mb3.7/5, Error ellipse: s-maj=17.6km s-min=8.0km az=42.4*
INET **29** *10:18:09.2, 1225N×8722W, h28km, MD3.3*
ISC 29 10:18:05.6±0.6, 1248N±009×8742W±008, h61km±9km, n31, σ0.94/34, mb3.7/5, 1C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEL3	**Telica 3**	**0.57**	**80**	*e*P	Pn	10 18 19.2	+0.8
TELN	**Telica**	**0.59**	**78**	*e*P	Pn	10 18 19.5	+0.9
COPN	**Copaltepe**	**0.86**	**110**	*e*P	Pn	10 18 20.9	-1.0
MOMJ	**Momotombo**	**0.86**	**94**	*e*P	Pn	10 18 22.5	+0.6
XAVN	**Gruta Xavier**	**1.12**	**107**	⇓*e*P	Pn	10 18 25.1	-0.1
XAVN				*e*S	Sn	10 18 46.3	+6.5
TISN	**Laguna Tiscapa**	**1.17**	**106**	*e*P	Pn	10 18 25.6	-0.3
MGAN	**Managua**	**1.19**	**106**	*e*P	Pn	10 18 25.7	-0.4
MGAN				*e*S	Sn	10 18 45.7	+4.2
CRUN	**El Crucero**	**1.20**	**114**	*e*P	Pn	10 18 25.5	-0.8

HUEN		**1.23 96**⇑	*e*P	**Pn**	**10 18 27.1**	**+0.5**
TICN	**Ticuantepe**	**1.24 111**⇓	*e*P	**Pn**	**10 18 26.9**	**+0.1**
APON	**Apoyo**	**1.44 113**	*e*P	**Pn**	**10 18 28.7**	**-0.7**
SSNN	**San Juan del S**	**1.94 127**	*e*P	**Pn**	**10 18 34.8**	**-1.5**
CONN	**Concepcion**	**1.98 117**	*e*P	**Pn**	**10 18 35.7**	**-1.0**
MADN	**Villa Maderas**	**2.13 120**	*e*P	**Pn**	**10 18 38.0**	**-0.8**
LIM1	**Limonal**	**2.76 130**⇓	*e*P	**Pn**	**10 18 48.8**	**+1.4**
CUI		**2.84 129**	*e*P	**Pn**	**10 18 48.4**	**-0.2**
CUI			*e*S	**Sn**	**10 19 28.9**	**+7.3**
VCR	**Vista de Mar**	**2.92 143**	*e*P	**Pn**	**10 18 50.5**	**+0.9**
JCR	**Jicaral**	**3.46 139**	*e*P	**Pn**	**10 18 59.1**	**+2.2**
CGA2	**Cerro Gallo 2**	**3.79 130**	*e*P	**Pn**	**10 19 02.0**	**+0.4**
PRS1	**Puriscal**	**3.93 129**	*e*P	**Pn**	**10 19 04.2**	**+0.8**
LAJ	**Bijagual**	**4.15 128**	*e*P	**Pn**	**10 19 01.9**	**-4.5**
LCR2	**La Lucha 2**	**4.32 129**	*e*P	**Pn**	**10 19 08.2**	**-0.5**
URSC	**Urasca**	**4.43 126**	*e*P	**Pn**	**10 19 11.0**	**+0.7**
BAR1		**5.16 128**	*e*P	**Pn**	**10 19 19.1**	**-1.2**
CMIG	**Matias Romero**	**8.55 303**	Pn	**Pn**	**10 20 05.1**	**-1.6**
	0.2nm,0.3s,baz=107,slow=14,SNR=4.5					
CMIG			Sn	**Sn**	**10 21 42.3**	**+0.5**
	0.2nm,0.3s,baz=20,slow=15,SNR=2.6					
CMIG			LR	LR	10 23 54.0	
	comp=Z,80nm,18.9s,baz=231,slow=41					
TKL	**Tuckaleechee C**	**23.31 8**	P	**P**	**10 23 12.8**	**+4.5**
	2.2nm,0.7s,mb3.7,baz=204,slow=12,SNR=4.7					
PDAR	**Pinedale Array**	**35.76 332**	P	**P**	**10 25 00.3**	**+1.7**
	0.9nm,0.8s,mb3.7,baz=122,slow=10,SNR=5.4					
ULM	**Lac du Bonnet**	**38.30 351**	P	**P**	**10 25 18.8**	**-1.2**
	1.1nm,0.6s,mb3.8,baz=180,slow=12,SNR=4.1					
SCHQ	**Schefferville**	**45.24 17**	P	**P**	**10 26 17.1**	**+0.4**
	2.5nm,0.8s,mb4.1,baz=225,slow=11,SNR=4.4					
YKA	**Yellowknife Ar**	**53.59 345**	P	**P**	**10 27 19.9**	**-0.3**
	0.4nm,0.8s,mb3.4,baz=133,slow=8.0,SNR=8.5					
WRA	**Warramunga Arr**	**139.31 254**	PKP	PKPdf	10 37 26.3	-0.3
	0.4nm,0.6s,baz=118,slow=1.7,SNR=3.2					

ISCJB ***29*** *10:20:44.5±0.5, 3230N±006×494E±0.1, h10km, Error ellipse: s-maj=17.4km s-min=3.9km az=26.7*
THR ***29*** *10:20:44.6±0.5, 3216N×4954E, h14km±7km, ML2.7*
CSEM ***29*** *10:20:45.6±0.1, 3216N×4961E, h18km, ML2.7 Error ellipse: s-maj=5.7km s-min=1.5km az=122.0*
KISR ***29*** *10:20:45.5±1.0, 3205N×4949E, h34km±83km, ML2.7*

ISC 29 10:20:45.6±0.5, 3226N±006×495E±01, h10km, n17, σ0§98/31, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAO	**Ashtian**	**2.32**	**11**	*e*Pg	**Pg**	**10 21 28.2**	**-1.8**
ASAO				*e*Sg	**Sg**	**10 22 00.6**	**+0.4**
ASAO				AML	AML	10 22 06.8	
	comp=N,36nm,0.8s						
ASAO				AML	AML	10 22 08.8	
	comp=E,32nm,0.5s						
ASAO	**Ashtian**	**2.32**	**11**	*e*Pg	**Pg**	**10 21 28.2**	**-1.9**
	SNR=90						
ASAO				*e*Sg	**Sg**	**10 22 00.6**	**+0.4**
	SNR=90						
GHVR	**GHOM**	**2.68**	**34**	*e*Pn	**Pn**	**10 21 30.0**	**+1.2**
GHVR				*e*Sg	**Sg**	**10 22 09.4**	**-2.2**
GHVR	**GHOM**	**2.68**	**34**	*e*Pn	**Pn**	**10 21 30.0**	**+1.3**
	SNR=52						
GHVR				*e*Sg	**Sg**	**10 22 09.4**	**-2.2**
	SNR=90						
NASN	**Na'in**	**2.85**	**78**	*e*Pn	**Pn**	**10 21 31.7**	**+0.6**
MIB	**Mutribah**	**3.07**	**217**	*e*P	**Pn**	**10 21 34.5**	**+0.4**
MIB				*e*S	**Sn**	**10 22 11.6**	**+0.8**
MIB				AML	AML	10 22 13.8	
	comp=Z,13nm,0.3s						
MIB	**Mutribah**	**3.07**	**217**	*e*P	**Pn**	**10 21 34.5**	**+0.4**
MIB				*e*S	**Sn**	**10 22 11.6**	**+0.8**
UMR	**Umm Al-Rimmam**	**3.10**	**210**	*e*P	**Pn**	**10 21 34.7**	**+0.1**
KBD	**Kabd**	**3.44**	**207**	*e*P	**Pn**	**10 21 39.0**	**-0.3**
KBD				*e*S	**Sn**	**10 22 19.2**	**-0.9**
KBD				AML	AML	10 22 21.6	
	comp=Z,29nm,0.2s						
KBD	**Kabd**	**3.44**	**207**	*e*P	**Pn**	**10 21 39.0**	**-0.3**
KBD				*e*S	**Sn**	**10 22 19.2**	**-0.9**
	comp=Z,29nm,0.2s						
RST	**Umm Al-Ruwaisa**	**3.49**	**218**	*e*P	**Pn**	**10 21 40.5**	**+0.6**
RST				*e*S	**Sn**	**10 22 20.4**	**-0.8**
RST				AML	AML	10 22 23.9	
	comp=Z,16nm,0.5s						
RST	**Umm Al-Ruwaisa**	**3.49**	**218**	*e*P	**Pn**	**10 21 40.5**	**+0.6**
RST				*e*S	**Sn**	**10 22 20.4**	**-0.8**
	comp=Z,16nm,0.5s						
NAY	**Al-Naaiem**	**3.57**	**213**	*e*P	**Pn**	**10 21 41.2**	**+0.2**
NAY				*e*S	**Sn**	**10 22 23.4**	**+0.1**
NAY				AML	AML	10 22 26.6	
	comp=Z,6.4nm,0.5s						
NAY	**Al-Naaiem**	**3.57**	**213**	*e*P	**Pn**	**10 21 41.2**	**+0.2**
NAY				*e*S	**Sn**	**10 22 23.4**	**+0.1**
	comp=Z,6.4nm,0.5s						
RDF	**Al-Radifah**	**3.72**	**207**	*e*P	**Pn**	**10 21 42.9**	**-0.2**
RDF				*e*S	**Sn**	**10 22 26.4**	**-0.6**
RDF				AML	AML	10 22 29.6	
	comp=Z,17nm,0.4s						
RDF	**Al-Radifah**	**3.72**	**207**	*e*P	**Pn**	**10 21 42.9**	**-0.2**
RDF				*e*S	**Sn**	**10 22 26.4**	**-0.6**
	comp=Z,17nm,0.4s						
THKV	**Tehran--Karaj**	**3.82**	**17**	*e*Pn	**Pn**	**10 21 46.5**	**+2.0**
THKV				AML	AML	10 23 00.2	
	comp=N,10nm,0.8s						
THKV				AML	AML	10 23 01.2	
	comp=E,13nm,0.7s						

VIE 29 10:26:59.5±0.4, 4665N×1361E, h0km, ML1.1/1, 4C, Error ellipse: s-maj=2.9km s-min=1.1km az=156.0 6 km N of Sankt Georgen im Gailtal Suspected Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYKA	**Terra Mystica**	**0.03**	**136**⇑	*i*Pg	Pg	10 27 00.4	+0.3
	20nm,0.1s						
MYKA				⇑*i*Sg	Sg	10 27 00.9	+0.4
	154nm,0.3s						
OBKA	**Obir**	**0.67**	**102**⇑	*i*Pg	Pg	10 27 12.3	+0.1
	comp=Z,1.0nm,0.2s						
OBKA				⇑*i*Sg	Sg	10 27 21.4	+0.6
	comp=E,2.3nm,0.3s						

KRSC 29 10:42:34.1±0.4, 5265N×16047E, h17km±16km, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.52**	**329**	*e*P	Pg	10 42 45.3	+0.8
SPN				*i* S	Sg	10 42 52.7	+1.1
NLC	**Nalytchevo**	**0.86**	**308**	*e*P	Pb	10 42 50.5	0.0
NLC				*i* S	Sb	10 43 01.7	0.0
PET	**Petropavlovsk**	**1.16**	**289**	*e*P	Pn	10 42 55.6	0.0
PET				*i* S	Sb	10 43 11.1	+0.6
RUS	**Russkaya**	**1.22**	**260**	*e*P	Pn	10 42 56.6	+0.3
RUS				*i* S	Sb	10 43 12.4	+0.4
AVH	**Avacha**	**1.22**	**301**	*e*P	Pn	10 42 56.5	+0.2
GRL	**Gorelyy**	**1.47**	**267**	*e*P	Pn	10 43 01.1	+1.4
GRL				*i* S	Sn	10 43 20.1	+1.7
KII	**Karymskiy**	**1.52**	**337**	*e*P	Pn	10 43 01.0	+0.6
KII				*i* S	Sn	10 43 20.3	+0.5
GNL	**Ganaly**	**1.85**	**306**	*e*P	Pn	10 43 06.4	+1.5
GNL				*i* S	Sn	10 43 30.7	+2.8
MKZ	**Mys Kozlova**	**2.05**	**21**	*e*P	Pn	10 43 07.5	-0.3
MKZ				*i* S	Sn	10 43 31.8	-1.1
MIPR	**Malaya Ipel'ka**	**2.30**	**262**	*e*P	Pn	10 43 13.8	+2.6
MIPR				*i* S	Sn	10 43 42.9	+3.8
TUMR	**Tumrok**	**2.65**	**356**	*e*P	Pn	10 43 17.8	+1.9
TUMR				*i* S	Sn	10 43 49.7	+2.1
KMNR	**Kamenistaya**	**3.12**	**358**	*e*P	Pn	10 43 24.5	+2.1
KBTR	**Krutoberegovo**	**3.82**	**20**	*e*P	Pn	10 43 35.0	+3.0
KBTR				*i* S	Sn	10 44 20.6	+4.1

ISCJB ***29*** *10:44:59.6±0.7, 206S±0.1×1779W±0.1, h400km, mb4.2/12, Error ellipse: s-maj=17.7km s-min=15.0km az=38.5*
IDC ***29*** *10:45:02.8±5.7, 2060S×17784W, h417km±60km, mb3.7/8, mb1 4.0/9, mb1mx3.8/14, mbtmp3.7/9, Error ellipse: s-maj=24.9km s-min=17.2km az=52.0*

ISC 29 10:45:01.2±0.7, 206S±01×1779W±01, h400km, n23, σ1§08/19, mb4.2/12, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**18.16 193**		P	**P**	**10 48 47.0**	**-0.2**
	2.0nm,0.3s,baz=158,slow=21,SNR=12						
ARMA	**Armidale**	**29.16 244**		*e*P	**P**	**10 50 30.0**	**+2.4**
CTA	**Charters Tower**	**33.62 264**⇓		*i*P	**P**	**10 51 07.6**	**+1.3**
	28nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**37.88 244**⇓		*i*P	**P**	**10 51 42.8**	**+0.9**
	5.1nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**37.88 244**		P	**P**	**10 51 43.0**	**+1.1**
	6.0nm,0.5s,mb4.2,baz=88,slow=11,SNR=32						
ASAR	**Alice Springs**	**44.64 257**		P	**P**	**10 52 36.3**	**+0.1**
	26nm,0.8s,mb4.6,baz=94,slow=8.0,SNR=289						
WB2	**Warramunga Arr**	**44.72 262**		*e*P	**P**	**10 52 35.9**	**-1.0**
WRA	**Warramunga Arr**	**44.73 262**		P	**P**	**10 52 36.6**	**-0.4**
	15nm,0.6s,mb4.5,baz=96,slow=8.5,SNR=95						
KAKA	**Kakadu**	**48.12 271**		*e*P	**P**	**10 53 02.5**	**-0.5**
	23nm,0.4s,mb4.9						
FORT	**Forrest**	**49.40 247**		*e*P	**P**	**10 53 10.6**	**-1.8**
	14nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**53.16 262**		*e*P	**P**	**10 53 40.0**	**-0.1**
	13nm,1.9s,mb3.9						
VNDA	**Vanda**	**57.85 185**		P	**P**	**10 54 13.1**	**+0.9**
	0.9nm,0.6s,mb3.3,baz=12,slow=6.1,SNR=6.2						
MJAR	**Matsushiro Arr**	**70.35 324**		P	**P**	**10 55 32.6**	**-0.4**
	5.3nm,0.5s,mb4.3,baz=156,slow=6.1,SNR=26						
MAT	**Matsushiro**	**70.36 324**		P	**P**	**10 55 32.4**	**-0.6**
KSRS	**Korea Array**	**77.04 319**		P	**P**	**10 56 11.8**	**+0.5**
	2.1nm,0.5s,mb4.0,baz=127,slow=6.0,SNR=16						
NVAR	**Mina Array Bea**	**80.98 43**		P	**P**	**10 56 33.7**	**+1.3**
	0.9nm,0.8s,mb3.6,baz=210,slow=6.5,SNR=6.1						
VNA3	**Neumayer Olymp**	**88.06 176**		*e*	**P**	**10 57 03.1**	**-3.8**
VNA3				*e*		10 57 07.0	
VNA2	**Neumayer--Watz**	**88.50 177**		*e*	**P**	**10 57 05.9**	**-3.1**
	baz=216,slow=2.8						
VNA2				*e*		10 57 09.3	
PDAR	**Pinedale Array**	**88.92 43**		P	**P**	**10 57 11.2**	**-0.2**
	1.1nm,0.7s,mb3.7,baz=210,slow=2.4,SNR=9.6						
AKASG	**Malin Array Be**	**143.15 331**		PKhKP		11 03 42.6	
	2.1nm,0.5s,baz=43,slow=4.3,SNR=9.7						
GERES	**GERESS Array B**	**150.31 345**		PKPbc	PKPbc	11 04 05.9	+0.2
	0.5nm,0.3s,baz=0.0,slow=1.6,SNR=4.8						
DBIC	**Dimbokro**	**164.60 153**		PKPab	PKPab	11 05 15.0	-1.2
	3.4nm,0.9s,baz=170,slow=6.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**172.60 177**		PKPab	PKPab	11 05 49.5	-1.9
	0.6nm,0.6s,baz=185,slow=3.7,SNR=5.0						

IDC ***29*** *10:49:37.8±0.9, 1301N×9253E, h33km±5km, mb3.8/11, mb1 3.9/11, mb1mx3.8/21, mbtmp3.8/11, MS2.8/1, Ms1 2.8/1, ms1mx2.6/28, Error ellipse: s-maj=31.3km s-min=13.5km az=59.0*
ISCJB ***29*** *10:49:39.0±2.9, 1359N±005×9236E±008, h32km±22km, mb3.9/11, Error ellipse: s-maj=12.5km s-min=8.8km az=164.4*

ISC 29 10:49:42.0±1.0, 1348N±007×9225E±009, h44km±11km, h35km±6km: pP-P, n19, σ0§99/24, mb3.9/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.88**	**165**	*e*P	**Pn**	**10 50 12.8**	**+1.2**
PBA				*e*P		10 50 12.8	
PBA				*e*S	**Sn**	**10 50 33.0**	**-1.0**
PBA				*e*S	**Sn**	**10 50 33.6**	**-0.4**
PBA				*ex*	x	10 50 49.2	
	comp=N,3μm,0.9s						
PBA				*ex*	x	10 50 51.2	
	comp=E,3μm,0.4s						
VIS	**Vishakhapatnam**	**9.57**	**297**	*e*P	**Pn**	**10 51 57.9**	**+0.7**
VIS				*e*S	**Sn**	**10 53 38.3**	**-5.2**
VIS				*i* S	**Sn**	**10 53 39.9**	**-3.6**
VIS				*ex*	x	10 53 42.3	
	comp=N,105nm,0.6s						
VIS				*ex*	x	10 53 42.3	
	comp=E,79nm,0.3s						
BOK	**Bokaro**	**11.90**	**330**	*e*P	**Pn**	**10 52 27.9**	**-1.1**
BOK				*e*S	**Sn**	**10 54 31.4**	**-9.1**
BOK				*ex*	x	10 54 59.7	
	comp=E,12nm,0.3s						
BOK				*ex*	x	10 55 00.3	
	comp=N,14nm,0.5s						
PSI	**Prapat**	**12.49**	**148**	LR	LR	10 57 38.2	
	comp=N,50nm,21.0s,baz=350,slow=40						
BLSP	**Bilaspur**	**12.91**	**313**	*e*P	**Pn**	**10 52 42.8**	**-0.1**
BLSP				*e*S	**Sn**	**10 54 56.0**	**-9.2**
BLSP				*ex*	x	10 55 07.2	
	comp=N,11nm,0.3s						
BLSP				*ex*	x	10 55 07.3	
	comp=E,12nm,0.2s						
TRD	**Trivandrum**	**15.80**	**253**	*e*S	**S**	**10 56 18.8**	**-10**
BHPL	**Bhopal**	**17.08**	**307**	*e*P	**Pn**	**10 53 37.7**	**+0.1**
BHPL				*ex*	x	10 56 45.7	
KAD	**Karad**	**17.83**	**285**	*e*S	**S**	**10 57 09.6**	**-0.4**
MKAR	**Makanchi Array**	**34.25**	**348**	P	**P**	**10 56 25.4**	**+1.8**
	comp=E,0.9nm,0.6s,mb3.9,baz=161,slow=8.6,SNR=9.6						
SONM	**Songino Array**	**36.22**	**16**	P	**P**	**10 56 41.5**	**+1.0**
	comp=E,0.9nm,0.7s,mb3.8,baz=201,slow=7.5,SNR=7.4						
SONM				pP	pP	10 56 51.3	-1.2
	comp=E,0.3nm,0.5s,baz=187,slow=10,SNR=3.0						
KSRS	**Korea Array**	**39.72**	**47**	P	**P**	**10 57 07.2**	**-2.9**
	comp=E,0.9nm,0.6s,mb3.7,baz=236,slow=8.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**40.80**	**353**	P	**P**	**10 57 18.5**	**-0.3**
	comp=E,0.5nm,0.3s,mb3.6,baz=157,slow=9.0,SNR=5.0						
WRA	**Warramunga Arr**	**53.08**	**128**	P	**P**	**10 58 48.6**	**-6.6**
	comp=E,1.1nm,0.7s,mb3.9,baz=307,slow=8.1,SNR=7.1						
WRA				pP	pP	10 58 58.2	-10
	comp=E,0.8nm,0.5s,baz=305,slow=8.5,SNR=4.3						
WRA				PcP	PcP	10 59 59.2	-4.1
	comp=E,0.4nm,0.5s,baz=320,slow=3.2,SNR=4.0						
ASAR	**Alice Springs**	**54.97**	**132**	P	**P**	**10 59 02.3**	**-6.6**
	comp=E,0.8nm,0.4s,mb4.1,baz=311,slow=7.2,SNR=28						
ASAR				pP	pP	10 59 12.6	-8.9
	comp=E,0.5nm,0.4s,baz=307,slow=7.0,SNR=4.1						
STKA	**Stephens Creek**	**65.32**	**135**	P	**P**	**11 00 13.2**	**-6.5**
	comp=E,3.9nm,1.1s,mb4.4,baz=350,slow=6.1,SNR=3.2						
FINES	**FINESS Array B**	**66.92**	**331**	P	**P**	**11 00 29.8**	**+0.3**
	comp=E,2.3nm,1.1s,mb4.1,baz=102,slow=10,SNR=3.1						
FINES				pP	pP	11 00 40.0	-2.4
	comp=E,0.6nm,0.4s,baz=92,slow=7.0,SNR=2.0						
ARCES	**ARCESS Array B**	**69.40**	**340**	P	**P**	**11 00 45.3**	**+0.4**
	comp=E,3.1nm,1.0s,mb4.2,baz=116,slow=8.1,SNR=3.2						
GERES	**GERESS Array B**	**72.45**	**317**	P	**P**	**11 01 04.4**	**+0.6**
	comp=E,0.3nm,0.3s,mb3.7,baz=103,slow=4.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**87.53**	**283**	P	**P**	**11 02 24.9**	**-0.9**
	comp=E,0.6nm,0.7s,mb3.9,baz=99,slow=4.2,SNR=3.5						

IDC 29 11:11:22.9±8.9, 820S×12685E, h166km±93km, mb3.4/3, mb1 3.8/5, mb1mx3.5/13, mbtmp3.6/5, Error ellipse: s-maj=147.6km s-min=31.5km az=69.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.74**	**149**	P	Pn	11 14 29.8	-1.2
	2.6nm,0.3s,baz=323,slow=14,SNR=63						
WRA				S	Sn	11 16 55.9	-7.7
	2.8nm,0.3s,baz=329,slow=22,SNR=15						
ASAR	**Alice Springs**	**16.80**	**157**	P	Pn	11 15 09.8	+1.2
	1.7nm,0.3s,baz=340,slow=11,SNR=72						
ASAR				S	S	11 18 14.3	-0.5
	0.7nm,0.3s,baz=320,slow=21,SNR=8.5						
SONM	**Songino Array**	**58.66**	**344**	P	P	11 21 02.7	+0.1
	0.4nm,0.5s,baz=165,slow=7.6,SNR=4.2						
MKAR	**Makanchi Array**	**67.56**	**329**	P	P	11 22 02.5	+1.1
	0.8nm,0.7s,baz=129,slow=8.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**71.32**	**335**	P	P	11 22 23.1	-1.2
	1.0nm,0.3s,baz=116,slow=6.6,SNR=4.0						

MOS ***29*** *11:19:01.5±2.4, 5759N×12054E, h10km, mb4.3/1, Error ellipse: s-maj=24.9km s-min=18.0km az=57.6*

BYKL 29 11:19:02.3±0.6, 5736N×12080E, h4km±19km, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHNR	**Khani**	**0.63**	**226**	*e*Pg	Pg	11 19 13.6	-0.7
KHNR				*e*Sg	Sg	11 19 21.4	-1.0
CRS	**Chara**	**1.46**	**253**	*e*P	Pn	11 19 28.5	-0.8
CRS				*e*		11 19 46.8	
CRS				pmax	pmax		
	comp=Z,203nm,0.5s						
CRS				smax			
	comp=E,221nm,0.6s						

CRS	**Chara**	**1.46**	**253**⇑	*i*Pg	Pg	11 19 28.4	-1.8
CRS				*e*		11 19 30.2	
CRS				*e*Sg	Sg	11 19 46.4	-2.6
CRS				max			
	comp=E,203nm,0.9s						
CRS				Smax			
	comp=E,353nm,0.9s						
NRGR	**Nerungri**	**2.26**	**107**	*e*P	Pn	11 19 42.4	+2.1
NRGR				S	Sn	11 20 11.2	+2.6
NRGR				smax			
	comp=E,134nm,0.5s						
CLNS	**Chul'man**	**2.29**	**101**	*e*P	Pn	11 19 47.5	+6.7
CLNS				*e*		11 20 14.5	
CLNS				pmax	pmax		
	comp=N,10.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,17nm,0.2s						
CLNS				pmax	pmax		
	comp=E,20nm,0.3s						
CLNS				smax			
	comp=E,390nm,0.4s						
CLNS				smax			
	comp=Z,356nm,0.6s						
CLNS				smax			
	comp=N,662nm,0.5s						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s						
CLNS	**Chul'man**	**2.29**	**101**	*e*Pg	Pg	11 19 42.9	-3.3
CLNS				*e*Sg	Sg	11 20 14.2	-1.7
IENR	**Iengra**	**2.51**	**115**	*e*Pg	Pg	11 19 48.0	-2.3
IENR				*e*Sg	Sg	11 20 20.4	-2.3
ALDR	**Aldan**	**2.76**	**61**	*e*	Pn	11 19 42.5	-4.7
ALDR				*e*Sg	Sg	11 20 26.2	-4.5
NLYR	**Nelyaty**	**2.93**	**255**	*e*Pn	Pn	11 19 49.7	+0.2
NLYR				*e*Pg	Pg	11 19 53.2	-5.1
NLYR				*e*		11 20 24.5	
NLYR				*e*Sg	Sg	11 20 30.9	-5.3
TUP	**Tupik**	**2.98**	**190**	*e*P	Pn	11 19 50.2	-0.1
TUP				*e*S	Sn	11 20 25.1	-1.3
TUP				pmax	pmax		
	comp=Z,136nm,0.7s						
TUP				smax			
	comp=E,445nm,0.8s						
TUP	**Tupik**	**2.98**	**190**	*e*Pn	Pn	11 19 50.1	-0.2
TUP				*e*Pg	Pg	11 19 55.4	-4.0
TUP				*e*Sg	Sg	11 20 33.7	-4.2
TUP				Pmax			
	comp=E,135nm,0.7s						
TUP				Smax			
	comp=E,443nm,0.8s						
BOD	**Bodaibo**	**3.69**	**280**	*e*P	Pn	11 19 59.0	-1.0
BOD				pmax	pmax		
	comp=Z,23nm,0.8s						
BOD	**Bodaibo**	**3.69**	**280**	*e*Pn	Pn	11 19 59.6	-0.4
BOD				*e*Pg	Pg	11 20 06.9	-6.0
BOD				*e*Sg	Sg	11 20 53.9	-6.7
BOD				Pmax			
	comp=Z,22nm,0.8s						
BOD				Smax			
	comp=Z,189nm,0.7s						
SVKR	**Severomuysk**	**4.18**	**256**	*e*Pg	Pg	11 20 18.7	-3.6
SVKR				*e*Sg	Sg	11 21 12.5	-3.9
SVKR				Pmax			
	comp=Z,47nm,0.5s						
SVKR				Smax			
	comp=Z,234nm,0.8s						
UKT	**Uakit**	**4.40**	**248**	*e*P	Pn	11 20 09.2	-0.6
UKT				*e*S	Sn	11 20 59.3	-2.1
UKT				pmax	pmax		
	comp=Z,19nm,0.9s						
UKT				smax			
	comp=N,72nm,1.3s						
UKT	**Uakit**	**4.40**	**248**	*e*Pg	Pg	11 20 21.1	-5.5
UKT				*e*Sg	Sg	11 21 17.0	-6.5
UKT				Pmax			
	comp=N,19nm,0.9s						
UKT				Smax			
	comp=N,72nm,0.6s						
YOA	**Uoyan**	**5.14**	**260**	*e*Sg	Sg	11 21 40.7	-6.7
YOA				Smax			
	comp=N,611nm,1.7s						
KMO	**Kumora**	**5.50**	**258**	*e*P	Pn	11 20 24.3	-0.6
KMO				*e*S	Sn	11 21 24.3	-4.2
KMO				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KMO				smax			
	comp=E,103nm,1.2s						
KMO	**Kumora**	**5.50**	**258**	*e*Pn	Pn	11 20 25.2	+0.3
KMO				*e*Pg	Pg	11 20 42.2	-5.4
KMO				*e*Sg	Sg	11 21 53.1	-5.7
KMO				Pmax			
	comp=E,9.0nm,0.9s						
KMO				Smax			
	comp=E,104nm,1.0s						
YLYR	**Ulyunkhan**	**5.94**	**249**	*e*Pn	Pn	11 20 32.8	+1.9
YLYR				*e*Pg	Pg	11 20 49.6	-6.3
YLYR				*e*Sg	Sg	11 22 05.0	-7.8
YLYR				Pmax			
	comp=E,4.0nm,0.7s						
YLYR				Smax			
	comp=E,60nm,1.7s						
NIZ	**Nizh Angarsk**	**6.42**	**260**	*e*	Pn	11 20 41.4	+3.9
NIZ				*e*Pg	Pg	11 20 57.5	-7.7
NIZ				*e*		11 22 08.3	
NIZ				*e*Sg	Sg	11 22 20.0	-8.4
NIZ				Pmax			
	comp=E,4.0nm,0.9s						
NIZ				Smax			
	comp=E,44nm,1.0s						
YAK	**Yakutsk**	**6.49**	**40**	*e*P	Pn	11 20 35.9	-2.5
YAK				*e*		11 21 46.0	
YAK				pmax	pmax		
	comp=N,2.0nm,0.4s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.5s						
YAK				pmax	pmax		
	comp=Z,17nm,0.5s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.4s						
YAK				pmax	pmax		
	comp=E,5.

comp=Z,9.0nm,1.1s

*KRSC **29** 11:20:03.5±2.1, 6088N×16556E, h17km±22km, ML4.3*
*IDC **29** 11:20:04.1±0.8, 6076N×16550E, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.1/23, mbtmp4.0/13, MS3.3/7, Ms1 3.3/7, ms1mx2.9/39, Error ellipse: s-maj=24.4km s-min=16.9km az=174.0*
*BJI **29** 11:20:04.1, 6080N×16560E, h10km, mB4.9, mb4.7, Ms4.1, Ms2.3*
*MOS **29** 11:20:06.7±1.0, 6081N×16558E, h29km, mb4.6/13, Error ellipse: s-maj=16.2km s-min=8.8km az=92.5*
*NEIC **29** 11:20:06.1±0.4, 6076N×16556E, h10km, mb4.5/24, Error ellipse: s-maj=12.5km s-min=6.0km az=181.0*
*ISCJB **29** 11:20:07.3±1.3, 6084N±004×16553E±006, h29km±9km, mb4.4/45, MS3.5/11, Error ellipse: s-maj=6.7km s-min=4.5km az=144.7*

ISC 29 11:20:10.6±0.6, 6084N±004×16554E±006, h38km±6km, h31km±7.3km:pP-P, n95, σ1§06/102, mb4.4/45, MS3.5/11, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**4.86**	**198**	*e*P	**Pn**	**11 21 19.5**	**-1.5**
KBTR				*i* S	**Sn**	**11 22 15.6**	**-0.3**
TUMR	**Tumrok**	**6.26**	**210**	*e*P	**Pn**	**11 21 41.1**	**+0.8**
SEY	**Seymchan**	**6.56**	**294**	*i* PN	**Pn**	**11 21 43.4**	**-0.9**
MKZ	**Mys Kozlova**	**6.62**	**200**	*e*P	**Pn**	**11 21 44.0**	**-1.2**
MKZ				*i* S	**Sn**	**11 22 58.2**	**-1.1**
BILL	**Bilibino**	**7.24**	**2**	*e*PN	**Pn**	**11 21 53.5**	**-0.1**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	**Bilibino**	**7.24**	**2**	*e*P	**Pn**	**11 21 53.2**	**-0.4**
BILL				*i* S	**Sn**	**11 23 13.5**	**-0.8**
MA2	**Magadan**	**7.47**	**267**	*e*Pn	**Pn**	**11 21 55.9**	**-0.9**
MA2				*e*Sn	**Sn**	**11 23 22.3**	**+2.3**
MA2	**Magadan**	**7.47**	**267**	*i* PN	**Pn**	**11 21 55.8**	**-1.0**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MA2	**Magadan**	**7.47**	**267**	*e*P	**Pn**	**11 21 56.0**	**-0.8**
MA2				*i* S	**Sn**	**11 23 19.0**	**-1.0**
GNL	**Ganaly**	**8.26**	**213**	*e*P	**Pn**	**11 22 09.2**	**+1.6**
AVH	**Avacha**	**8.44**	**209**	P	**Pn**	**11 22 11.3**	**+1.1**
YAK	**Yakutsk**	**17.05**	**290**	*e*P	**Pn**	**11 24 07.6**	**+1.9**
	comp=Z,40nm,0.5s						
YAK	**Yakutsk**	**17.05**	**290**	*e*P	**Pn**	**11 24 06.9**	**+1.2**
YAK				*e*S	**S**	**11 27 15.9**	**-6.6**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,0.7s						
YAK				pmax	pmax		
	comp=E,23nm,1.0s						
YAK				smax			
	comp=N,66nm,3.1s						
YAK				smax			
	comp=E,88nm,4.2s						
YAK				MLR	MLR		
	comp=Z,200nm,14.0s						
YAK				MLR	MLR		
	comp=N,80nm,9.0s						
YAK				MLR	MLR		
	comp=E,100nm,11.0s						
TIXI	**Tiksi**	**17.94**	**322**	*e*P	**Pn**	**11 24 17.3**	**+0.7**
TIXI	**Tiksi**	**17.94**	**322**	*e*P	**Pn**	**11 24 17.9**	**+1.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TTA	**Tatalina**	**18.06**	**67**	*e*P	**Pn**	**11 24 20.6**	**+2.5**
	comp=Z,11nm,1.3s						
TTA	**Tatalina**	**18.06**	**67**	*e*P	**Pn**	**11 24 20.6**	**+2.5**
TTA				pmax	pmax		
	comp=Z,11nm,1.3s						
IMA2	**Indian Mountai**	**18.68**	**56**	*e*P	**Pn**	**11 24 26.5**	**+0.9**
COLA	**College**	**21.25**	**59**	*e*P	**P**	**11 24 53.4**	**+0.5**
	comp=Z,7.8nm,1.0s,mb4.0						
COLA	**College**	**21.25**	**59**	*e*P	**P**	**11 24 53.4**	**+0.5**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.0						
HABR	**Khabarovsk**	**21.31**	**248**	P	**P**	**11 24 53.1**	**-0.6**
HABR				*e*		11 25 12.7	
HABR				*e*S	**S**	**11 28 47.1**	**-0.8**
HABR				*e*SS		11 29 12.2	
ASAJ	**Asahikawa**	**21.62**	**230**	LR	LR	11 33 39.5	
	comp=Z,74nm,18.5s,MS3.1,baz=160,slow=38						
EGAK	**Eagle**	**24.05**	**57**	*e*P	**P**	**11 25 20.1**	**-1.5**
	comp=Z,12nm,0.7s,mb4.4						
DAWY	**Dawson**	**25.00**	**59**	*e*P	**P**	**11 25 29.1**	**-1.1**
INK	**Inuvik**	**26.13**	**48**	*e*P	**P**	**11 25 39.7**	**-0.7**
INK	**Inuvik**	**26.13**	**48**	P	**P**	**11 25 39.2**	**-1.2**
	comp=Z,1.8nm,0.8s,mb3.7,baz=288,slow=9.0,SNR=20						
INK				LR	LR	11 39 01.1	
	comp=Z,50nm,18.1s,MS3.1,baz=196,slow=43						
MDJ	**Mudanjiang**	**26.69**	**249**	P	**P**	**11 25 44.8**	**-0.9**
MDJ				AP	pP	11 25 55.5	-0.8
MDJ				S	**S**	**11 30 16.3**	**-1.9**
MDJ				SCP	ScP	11 32 45.5	+0.6
MDJ				PCS	PcS	11 32 50.3	+0.9
MDJ				AMB	AMB		
	comp=Z,5.0nm,2.1s,mb3.7						
MDJ				AMB	AMB		
	comp=Z,79nm,5.2s						
MDJ				LR	LR		
	comp=N,107nm,15.1s,MS3.6						
MDJ				LR	LR		
	comp=E,99nm,16.6s,MS3.6						
MDJ				LR	LR		
	comp=Z,181nm,7.5s						
CN2	**Changchun**	**29.23**	**253**	*e*P	**P**	**11 26 10.0**	**+1.6**
DLBC	**Dease Lake**	**31.50**	**65**	*e*P	**P**	**11 26 31.7**	**+3.5**
DLBC	**Dease Lake**	**31.50**	**65**	P	**P**	**11 26 31.7**	**+3.5**
	baz=301,slow=7.2						
KSRS	**Korea Array**	**33.21**	**242**	LR	LR	11 40 25.8	
	comp=Z,27nm,18.4s,MS3.0,baz=85,slow=37						
ULN	**Ulaanbaatar**	**35.22**	**275**	*i* P	**P**	**11 27 00.2**	**-0.5**
SONM	**Songino Array**	**35.56**	**276**	PcP	PcP	11 29 32.5	+0.7
	comp=Z,1.0nm,0.9s,baz=38,slow=2.6,SNR=4.6						
SONM				LR	LR	11 42 23.3	
	comp=Z,43nm,19.1s,MS3.2,baz=220,slow=38						
YKA	**Yellowknife Ar**	**35.69**	**52**	P	**P**	**11 27 03.7**	**-0.9**
YKA				PcP	PcP	11 29 31.8	-0.2
YKA	**Yellowknife Ar**	**35.69**	**52**	P	**P**	**11 27 03.7**	**-0.8**
	comp=Z,0.8nm,0.5s,mb3.9,baz=306,slow=8.1,SNR=19						
YKA				PcP	PcP	11 29 31.7	-0.2
	comp=Z,0.6nm,0.9s,baz=313,slow=3.6,SNR=7.2						
BJI	**Beijing**	**36.53**	**258**	P	**P**	**11 27 12.0**	**0.0**
BJI				AP	pP	11 27 23.3	+0.5
BJI				S	**S**	**11 32 50.5**	**-1.0**
BJI				AMB	AMB		
	comp=Z,9.0nm,0.9s,mb4.6						
HHC	**Hu-ho-hao-te**	**38.13**	**263**	*e*P	**P**	**11 27 24.8**	**-0.8**
HHC				AMB	AMB		
	comp=Z,14nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,123nm,4.2s						
ZALV	**Zalesovo Beam**	**41.42**	**298**	P	**P**	**11 27 52.7**	**0.0**
ZALV				LR	LR	11 46 41.3	
ZALV	**Zalesovo Beam**	**41.42**	**298**	P	**P**	**11 27 52.7**	**0.0**
	comp=Z,0.8nm,0.5s,mb3.6,baz=46,slow=6.4,SNR=3.5						
ZALV				LR	LR	11 46 41.3	
	comp=Z,53nm,18.3s,MS3.5,baz=21,slow=38						
ZAL	**Zalesovo**	**41.43**	**298**	P	**P**	**11 27 52.7**	**-0.2**
NJ2	**Nanjing**	**41.77**	**248**	*e*P	**P**	**11 27 57.3**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
WALA	**Waterton Lakes**	**44.80**	**67**	*e*P	**P**	**11 28 20.8**	**+0.6**
	comp=Z,4.0nm,0.9s,mb4.2						
LZH	**Lanzhou**	**45.62**	**266**	*e*P	**P**	**11 28 29.5**	**+2.7**
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb4.9						
LZH				AMB	AMB		
	comp=Z,67nm,4.1s						
FCC	**Fort Churchill**	**45.72**	**46**	*e*P	**P**	**11 28 26.3**	**-1.0**
	comp=Z,2.9nm,0.7s,mb4.3						
FCC	**Fort Churchill**	**45.72**	**46**	*e*P	**P**	**11 28 26.3**	**-1.0**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KURK	**Kurchatov**	**46.39**	**299**	*e*P	**P**	**11 28 32.8**	**+0.2**
	comp=Z,14nm,0.6s,mb5.0						
KURK	**Kurchatov**	**46.39**	**299**	*e*P	**P**	**11 28 32.8**	**+0.2**
KURK				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
EGMT	**Eagleton**	**47.43**	**65**	*e*P	**P**	**11 28 40.3**	**-0.5**
	comp=Z,12nm,1.3s,mb4.7						
WMQ	**Urumqi**	**47.45**	**286**	P	**P**	**11 28 42.5**	**+1.5**
WMQ				AP	pP	11 28 47.0	-5.0
WMQ				XP	sP	11 28 49.5	-7.0
WMQ				PCP	PcP	11 30 12.5	+1.7
WMQ				PP	PP	11 30 33.3	+1.1
WMQ				S	**S**	**11 35 35.5**	**+3.0**
WMQ				AMB	AMB		
	comp=Z,9.0nm,0.8s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,79nm,3.7s						
WMQ				LR	LR		
	comp=N,31nm,16.3s						
WMQ				LR	LR		
	comp=E,78nm,23.2s						
WMQ				LR	LR		
	comp=Z,33nm,17.5s,MS3.4						
MK31	**Makanchi Array**	**47.70**	**293**	*i* P	**P**	**11 28 42.0**	**-0.9**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MKAR	**Makanchi Array**	**47.70**	**293**	P	**P**	**11 28 42.4**	**-0.5**
MKAR				LR	LR	11 49 58.5	
MKAR	**Makanchi Array**	**47.70**	**293**	*i* P	**P**	**11 28 42.4**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**47.70**	**293**	P	**P**	**11 28 42.4**	**-0.5**
	comp=Z,2.6nm,0.6s,mb4.4,baz=49,slow=7.5,SNR=18						
MKAR				LR	LR	11 49 58.5	
	comp=Z,41nm,19.5s,MS3.4,baz=179,slow=38						
BRVK	**Borovoye**	**48.08**	**306**	*e*P	**P**	**11 28 46.3**	**+0.5**
	comp=Z,10nm,0.9s,mb4.9						
BRVK	**Borovoye**	**48.08**	**306**	*e*P	**P**	**11 28 46.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
HLID	**Hailey**	**48.68**	**72**	*e*P	**P**	**11 28 50.5**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.3						
RLMT	**Red Lodge**	**49.85**	**67**	*e*P	**P**	**11 28 59.5**	**+0.1**
	comp=Z,8.2nm,0.9s,mb4.8						
CD2	**Chengdu**	**49.86**	**262**	*e*P	**P**	**11 29 00.5**	**+0.9**
CD2				XP	sP	11 29 07.5	-7.7
CD2				PP	PP	11 30 56.3	+1.9
CD2				S	**S**	**11 36 08.5**	**+1.9**
CD2				XS	sS	11 36 16.3	-8.7
CD2				SS	SS	11 39 37.3	-1.9
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CD2				AMB	AMB		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,110nm,13.6s						
CD2				LR	LR		
	comp=Z,100nm,14.6s,MS4.0						
FLWY	**Flagg Ranch**	**50.00**	**69**	*e*P	**P**	**11 29 01.4**	**+0.8**
	comp=Z,8.9nm,0.8s,mb4.8						
IMW	**Indian Meadow**	**50.03**	**70**	*e*P	**P**	**11 29 03.1**	**+2.3**
	comp=Z,3.7nm,0.8s,mb4.5						
TPAW	**Teton Pass**	**50.34**	**70**	*e*P	**P**	**11 29 03.4**	**+0.2**
	comp=Z,3.7nm,0.7s,mb4.5						
LOHW	**Long Hollow**	**50.41**	**70**	*e*P	**P**	**11 29 04.1**	**+0.4**
	comp=Z,2.7nm,0.7s,mb4.4						
NVAR	**Mina Array Bea**	**50.83**	**80**	P	**P**	**11 29 07.1**	**+0.2**
NVAR	**Mina Array Bea**	**50.83**	**80**	P	**P**	**11 29 07.1**	**+0.2**
	comp=Z,0.7nm,0.7s,mb3.7,baz=322,slow=5.9,SNR=5.1						
BW06	**Boulder Array**	**51.55**	**69**	*e*P	**P**	**11 29 12.0**	**-0.2**
	comp=Z,5.1nm,0.9s,mb4.5						
PDAR	**Pinedale Array**	**51.55**	**69**	P	**P**	**11 29 12.5**	**+0.3**
	comp=Z,3.8nm,0.7s,mb4.4,baz=320,slow=3.0,SNR=20						
ULM	**Lac du Bonnet**	**51.57**	**54**	P	**P**	**11 29 11.8**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.1,baz=316,slow=8.4,SNR=3.3						
GYA	**Guiyang**	**52.17**	**256**	P	**P**	**11 29 18.8**	**+1.7**
GYA				PCP	PcP	11 30 31.3	+3.0
GYA				PP	PP	11 31 18.3	+2.9
GYA				SCP	ScP	11 34 23.0	+1.1
GYA				S	**S**	**11 36 37.5**	**-1.2**
GYA				SCS	ScS	11 39 02.0	-1.6
GYA				SS	SS	11 40 13.0	-3.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,480nm,20.9s,MS4.7						
GYA				LR	LR		
	comp=E,410nm,19.4s,MS4.7						
GYA				LR	LR		
	comp=Z,430nm,19.9s,MS4.5						
SRU	**San Rafael**	**53.99**	**73**	*e*P	**P**	**11 29 30.3**	**0.0**
	comp=Z,2.3nm,0.7s,mb4.2						
SRU	**San Rafael**	**53.99**	**73**	*e*P	**P**	**11 29 30.3**	**0.0**
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
GSC	**Goldstone**	**54.04**	**81**	*e*P	**P**	**11 29 32.0**	**+1.2**
FINES	**FINESS Array B**	**54.14**	**337**	*i* P	**P**	**11 29 30.3**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**54.14**	**337**	P	**P**	**11 29 29.6**	**-1.6**
	comp=Z,1.5nm,0.8s,mb4.0,baz=44,slow=6.3,SNR=4.1						
EKS2	**Erkin-Say**	**54.72**	**295**	*e*P	**P**	**11 29 36.5**	**+0.9**
	comp=Z,2.4nm,0.7s,mb4.3						
AKTK	**Aktyubinsk**	**54.83**	**312**	P	**P**	**11 29 36.0**	**-0.2**
AKTK				LR	LR	11 55 40.2	
AKTO	**Aktyubinsk**	**54.83**	**312**	P	**P**	**11 29 36.0**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.1,baz=44,slow=7.8,SNR=5.5						
AKTO				LR	LR	11 55 40.2	
	comp=Z,30nm,18.1s,MS3.4,baz=237,slow=39						
KMI	**Kunming**	**55.17**	**259**	P	**P**	**11 29 40.8**	**+1.7**
KMI				AP	pP	11 29 48.3	-2.0
KMI				AMB	AMB		
	comp=Z,6.0nm,0.8s,mb4.7						
SMCO	**Snowmass**	**55.58**	**70**	*e*P	**P**	**11 29 42.5**	**+0.7**
	comp=Z,2.0nm,0.7s,mb4.3						
KK31	**Karatay Array**	**55.79**	**298**	*i* P	**P**	**11 29 43.1**	**-0.2**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
NB2	**NORSAR Subarra**	**56.85**	**345**	P	**P**	**11 29 49.8**	**-0.8**
	comp=Z,2.0nm,0.6s,mb4.3,baz=14,slow=7.4						
NB2	**NORSAR Subarra**	**56.85**	**345**	P	**P**	**11 29 49.8**	**-0.8**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NOA	**NORSAR Array B**	**56.85**	**345**	P	**P**	**11 29 50.2**	**-0.3**
	comp=Z,2.7nm,0.7s,mb4.4,baz=14,slow=7.3,SNR=4.9						
KSU1	**Kansas State U**	**60.29**	**63**	*e*P	**P**	**11 30 14.0**	**-0.9**
	comp=Z,11nm,0.6s,mb5.0						
WMOK	**Wichita Mounta**	**62.96**	**67**	*e*P	**P**	**11 30 32.8**	**-0.1**
	comp=Z,5.8nm,0.8s,mb4.8						
WMOK	**Wichita Mounta**	**62.96**	**67**	*e*P	**P**	**11 30 32.8**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
AKASG	**Malin Array Be**	**63.41**	**331**	*i* P	**P**	**11 30 35.7**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**63.41**	**331**	P	**P**	**11 30 35.1**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=25,slow=6.5,SNR=6.6						
WVT	**Waverly**	**66.53**	**58**	*e*P	**P**	**11 30 55.0**	**-1.1**
	comp=Z,6.1nm,0.8s,mb4.7						
WVT	**Waverly**	**66.53**	**58**	*e*P	**P**	**11 30 55.1**	**-1.0**
WVT				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MORC	**Moravsky Berou**	**66.76**	**338**	*e*P	**P**	**11 30 55.4**	**-2.0**
	comp=Z,2.8nm,0.5s,mb4.5						
MORC	**Moravsky Berou**	**66.76**	**338**	*e*P	**P**	**11 30 55.4**	**-2.0**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
WRA	**Warramunga Arr**	**84.35**	**209**	P	**P**	**11 32 36.3**	**-1.9**
	comp=Z,0.7nm,0.6s,mb4.0,baz=10,slow=5.7,SNR=5.0						
ASAR	**Alice Springs**	**88.03**	**209**	P	**P**	**11 32 55.6**	**-0.6**
	comp=Z,0.3nm,0.8s,mb3.5,baz=11,slow=5.0,SNR=4.2						
QSPA	**South Pole Qui**	**150.61**	**180**	*e*PKPbc	PKPbc	11 39 55.2	-1.0
QSPA	**South Pole Qui**	**150.61**	**180**	PKPbc	PKPbc	11 39 55.5	-0.6
	comp=Z,2.8nm,0.7s,baz=273,slow=0.6,SNR=14						

*NEIC **29** 11:36:47.6, 3620N×2409E, h9km, MD3.5(ATH), After ATH.*
*CSEM **29** 11:36:47.6, 3620N×2409E, h9km, MD3.5/3, After ATH*

ATH 29 11:36:43.2, 3614N×2339E, h50km±35km, MD3.5/3, 1C-2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	**Vamos**	**0.98**	**138**	⇑*i*P	Pn	11 37 01.9	+1.2
VAM				*e*S	Sn	11 37 15.5	+1.9
APE	**Apeiranthos**	**1.96**	**61**	*e*P	Pn	11 37 15.5	+1.6
NPS	**Neapolis**	**2.01**	**115**	⇓*i*P	Pn	11 37 15.3	+0.7
KARP	**Karpathos**	**3.12**	**100**	⇓*i*P	Pn	11 37 32.0	+2.1

*ISCJB **29** 11:43:09.6±0.8, 3202N±005×1420E±02, h33km, mb3.7/3, Error ellipse: s-maj=21.1km s-min=4.0km az=165.1*
*JMA **29** 11:43:10.3±0.3, 3209N×14198E, h31km, M3.5*
*IDC **29** 11:43:12.2±1.2, 3157N×14077E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, ML3.5/2, Error ellipse: s-maj=47.5km s-min=15.9km az=73.0*

ISC 29 11:43:11.5±2.5, 3205N±005×1421E±02, h31km±20km, n16, σ1§08/23, mb3.7/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.17**	**300**	P	**Pn**	**11 43 44.2**	**-1.2**
JHJ	**Hachijo jima 2**	**2.19**	**300**	Pn	**Pn**	**11 43 44.5**	**-1.3**
	13nm,0.3s,baz=231,slow=22,SNR=16						
JHJ				Sn	**Sn**	**11 44 06.6**	**-5.3**
	23nm,0.3s,baz=56,slow=22,SNR=5.5						
BSO1	**Boso 1**	**2.75**	**341**	P	**Pn**	**11 43 52.7**	**-0.7**
BSO1				S	**Sn**	**11 44 24.8**	**-0.8**
JHU	**Hanno**	**4.44**	**330**	P	**Pn**	**11 44 17.8**	**+1.2**
JHU				S	**Sn**	**11 45 05.7**	**-1.5**
JYT	**Yasato**	**4.45**	**340**	S	**Sn**	**11 45 07.7**	**+0.3**
JYN	**Shimob**	**4.51**	**321**	P	**Pn**	**11 44 18.9**	**+1.2**
JYN				S	**Sn**	**11 45 10.9**	**+1.8**
JHO	**Hitachi**	**4.71**	**345**	P	**Pn**	**11 44 19.9**	**-0.5**
JHO				S	**Sn**	**11 45 11.1**	**-2.9**
JRY	**Ryogami san**	**4.75**	**327**	P	**Pn**	**11 44 21.5**	**+0.6**
JAG	**Ashikaga**	**4.87**	**334**	P	**Pn**	**11 44 23.2**	**+0.6**
JAG				S	**Sn**	**11 45 17.7**	**-0.1**
CBIJ	**Chichi jima**	**4.94**	**179**	P	**Pn**	**11 44 24.4**	**+0.9**
CBIJ				S	**Sn**	**11 45 18.3**	**-1.2**
CBIJ	**Chichi jima**	**4.94**	**179**	Pn	**Pn**	**11 44 22.4**	**-1.2**
	6.7nm,0.3s,baz=229,slow=20,SNR=7.0						
CBIJ				Sn	**Sn**	**11 45 18.1**	**-1.4**
	5.6nm,0.3s,baz=108,slow=19,SNR=4.1						
MJAR	**Matsushiro Arr**	**5.50**	**326**	Pn	**Pn**	**11 44 31.8**	**+0.6**
	0.7nm,0.3s,baz=156,slow=11,SNR=7.0						
MKAR	**Makanchi Array**	**47.35**	**306**	P	**P**	**11 51 43.1**	**+0.7**
	0.6nm,0.4s,mb3.8,baz=88,slow=9.0,SNR=4.4						
WRA	**Warramunga Arr**	**52.22**	**189**	P	**P**	**11 52 20.5**	**+0.9**
	0.6nm,0.5s,mb3.8,baz=7.8,slow=7.7,SNR=5.0						
ASAR	**Alice Springs**	**55.94**	**189**	P	**P**	**11 52 47.5**	**+0.8**
	0.2nm,0.5s,mb3.4,baz=4.9,slow=7.3,SNR=9.2						
PDAR	**Pinedale Array**	**80.80**	**45**	P	pP	11 55 34.2	+2.2
	0.7nm,1.1s,baz=259,slow=1.5,SNR=4.0						

*NEIC **29** 11:44:37.6, 3467N×2355E, h10km, MD3.5(ATH), After ATH.*
*CSEM **29** 11:44:37.6, 3467N×2355E, h10km, MD3.5/8, After ATH*

ATH 29 11:44:37.7, 3467N×2354E, h10km±4km, MD3.4/7, 1C-2D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.48**	**69**	*e*PB	Pg	11 44 47.0	-0.1
VAM	**Vamos**	**0.91**	**36**	*e*PG	Pg	11 44 54.7	-0.6
VAM				*e*SB	Sb	11 45 08.3	+0.5
VAM	**Vamos**	**0.91**	**36**	⇑Pb	Pb	11 44 54.2	-1.4
VAM				*e*Sb	Sb	11 45 08.3	+0.5
KYTH	**Kithira**	**1.66**	**346**	*e*PB	Pg	11 45 09.1	+0.8
XRY	**Khrisi**	**1.79**	**83**	*e*PG	Pg	11 45 11.5	-0.4
NPS	**Neapolis**	**1.80**	**70**	*e*PN	Pn	11 45 10.0	+1.2
VLI	**Veliai**	**2.10**	**347**	*e*PN	Pn	11 45 15.0	+2.1
APE	**Apeiranthos**	**2.89**	**33**	Pn	Pn	11 45 21.5	-2.2
KARP	**Karpathos**	**3.10**	**73**	⇓*i*PN	Pn	11 45 25.8	-0.8
KARP	**Karpathos**	**3.10**	**73**	⇓Pn	Pn	11 45 24.3	-2.3

*NIED **29** 11:53:00, 4670N×15300E, h23km, Mw4.2 Best double couple: M0 2.03000×10^15 NP1:φs219.00000°, δ57.00000°, λ-177.00000°. NP2:φs128.00000°, δ88.00000°, λ-33.00000°.*
*JMA **29** 11:53:21.6±0.9, 4666N×15303E, h30km, M4.6*
*ISCJB **29** 11:53:23.6±0.9, 4658N±006×15272E±008, h60km±8km, mb4.3/24, Error ellipse: s-maj=12.4km s-min=5.9km az=141.1*
*MOS **29** 11:53:24.9±1.1, 4670N×15268E, h72km, mb4.5/5, Error ellipse: s-maj=12.7km s-min=9.0km az=87.6*
*IDC **29** 11:53:27.7±3.6, 4673N×15267E, h75km±32km, mb3.7/18, mb1 3.9/19, mb1mx3.9/24, mbtmp3.7/19, MS3.5/5, Ms1 3.5/5, ms1mx3.1/33, Error ellipse: s-maj=18.0km s-min=13.6km az=144.0*
*NEIC **29** 11:53:28.4±1.4, 4681N×15268E, h80km±12km, mb4.6/3, Error ellipse: s-maj=12.1km s-min=8.5km az=137.0*

ISC 29 11:53:25.5±0.8, 4660N±006×15276E±008, h59km±7km, n87, σ1§27/99, mb4.3/24, MS3.6/4, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.68**	**250**	⇑*i*PN	**Pn**	**11 54 13.0**	**-6.8**
KUR				*e*S	**Sn**	**11 55 02.0**	**+0.2**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,430nm,0.9s						
KUR				smax			
	comp=E,850nm,0.9s						
SKR	**Severo-Kuril's**	**4.65**	**27**	*e*PN	**Pn**	**11 54 32.4**	**-0.7**
SKR				*e*S	**Sn**	**11 55 20.2**	**-5.5**
SKR				pmax	pmax		
	comp=N,30nm,0.5s						
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax			
	comp=N,80nm,0.5s						
SKR				smax			
	comp=E,90nm,0.5s						
SKR				smax			
	comp=Z,50nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.50**	**245**	*e*PN	**Pn**	**11 54 45.9**	**+1.2**
YUK				*e*S	**Sn**	**11 55 45.0**	**-1.5**
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				pmax	pmax		
	comp=N,420nm,0.5s						
YUK				pmax	pmax		
	comp=E,340nm,0.5s						
YUK				pmax	pmax		

JFR	**Furan**	**8.00**	**248**	P	**Pn**	**11 55 19.8**	**+0.9**
JAB	**Ashibetsu**	**8.08**	**251**	P	**Pn**	**11 55 22.3**	**+2.3**
ERM	**Erimo**	**8.27**	**240**	*e*Pn	**Pn**	**11 55 22.6**	**0.0**
	comp=Z,22nm,0.6s						
ERM				*e*Sn	**Sn**	**11 56 48.5**	**-6.1**
ERM	**Erimo**	**8.27**	**240**	*e*PN	**Pn**	**11 55 22.6**	**0.0**
ERM				pmax	pmax		
	comp=Z,22nm,0.6s						
JNBK	**Urakawa-nobuka**	**8.36**	**242**	P	**Pn**	**11 55 22.7**	**-1.2**
JNBK				*e*S	**Sn**	**11 56 52.1**	**-4.6**
JNB	**Noboribetsu**	**9.33**	**248**	P	**Pn**	**11 55 37.1**	**-0.1**
JNB				*e*S	**Sn**	**11 57 18.4**	**-2.1**
JKB	**Kayabe**	**9.64**	**245**	P	**Pn**	**11 55 39.8**	**-1.6**
JKB				*e*S	**Sn**	**11 57 22.3**	**-5.8**
JSH	**Shimam**	**9.89**	**251**	P	**Pn**	**11 55 45.2**	**+0.4**
JYM2	**Yakumo 2**	**9.94**	**248**	P	**Pn**	**11 55 44.7**	**-0.7**
JANG	**Nango**	**10.27**	**237**	P	**Pn**	**11 55 46.0**	**-3.9**
JANG				*e*S	**Sn**	**11 57 33.1**	**-10**
JTH	**Tanohata**	**10.36**	**234**	*e*S	**Sn**	**11 57 35.1**	**-11**
JOSM	**Okushiri--Mats**	**10.53**	**249**	P	**Pn**	**11 55 52.6**	**-0.9**
OFUJ	**Ofunato**	**11.07**	**231**	P	**Pn**	**11 55 57.1**	**-3.8**
JRG	**Rokugo**	**11.42**	**235**	*e*S	**Sn**	**11 58 01.9**	**-10**
JIO	**Ouri**	**11.70**	**230**	*e*S	**Sn**	**11 58 06.4**	**-12**
MA2	**Magadan**	**13.05**	**356**	*e*Pn	**Pn**	**11 56 26.7**	**-1.1**
KLR	**Kul'dur**	**14.33**	**288**	*e*P	**Pn**	**11 56 50.8**	**+5.9**
MJAR	**Matsushiro Arr**	**14.79**	**232**	P	**Pn**	**11 56 57.4**	**+6.2**
	comp=Z,0.4nm,0.3s,baz=34,slow=9.5,SNR=5.5						
MAJO	**Matsushiro**	**14.80**	**232**	*e*P	**Pn**	**11 56 55.7**	**+4.6**
MAT	**Matsushiro**	**14.80**	**232**	P	**Pn**	**11 56 57.3**	**+6.2**
SEY	**Seymchan**	**16.37**	**359**	*e*P	**Pn**	**11 57 11.1**	**+0.1**
KSRS	**Korea Array**	**20.52**	**252**	P	**P**	**11 58 00.9**	**+2.2**
	comp=Z,2.8nm,0.6s,baz=62,slow=9.3,SNR=11						
BILL	**Bilibino**	**22.59**	**13**	*e*P	**P**	**11 58 19.0**	**-1.5**
BILL				*e*		11 58 31.4	
BILL				*e*		11 58 40.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
BOD	**Bodaibo**	**25.90**	**310**	*e*P	**P**	**11 58 48.4**	**-3.1**
SONM	**Songino Array**	**31.15**	**290**	P	**P**	**11 59 39.2**	**+0.8**
	comp=Z,0.8nm,0.8s,mb3.6,baz=69,slow=9.2,SNR=2.8						
SONM				LR	LR	12 12 18.2	
	comp=Z,77nm,18.5s,MS3.4,baz=262,slow=36						
KDAK	**Kodiak Island**	**34.39**	**51**	P	**P**	**12 00 05.3**	**-1.1**
	comp=Z,4.4nm,0.7s,mb4.5,baz=230,slow=7.9,SNR=3.4						
INK	**Inuvik**	**41.91**	**32**	*e*P	**P**	**12 01 10.0**	**+0.4**
	comp=Z,38nm,0.6s,mb5.2						
INK	**Inuvik**	**41.91**	**32**	*e*P	**P**	**12 01 10.0**	**+0.4**
INK				pmax	pmax		
	comp=Z,38nm,0.6s						
INK	**Inuvik**	**41.91**	**32**	P	**P**	**12 01 10.2**	**+0.7**
	comp=Z,1.9nm,0.9s,mb3.7,baz=274,slow=6.1,SNR=14						
ZALV	**Zalesovo Beam**	**42.50**	**306**	P	**P**	**12 01 12.2**	**-2.4**
ZALV				PcP	PcP	12 03 05.7	-0.5
ZALV	**Zalesovo Beam**	**42.50**	**306**	P	**P**	**12 01 12.2**	**-2.4**
	comp=Z,0.7nm,0.4s,mb3.7,baz=64,slow=8.6,SNR=3.9						
ZALV				PcP	PcP	12 03 05.7	-0.5
	comp=Z,1.1nm,0.6s,baz=66,slow=5.0,SNR=5.2						
ZALV				LR	LR	12 20 11.7	
	comp=Z,86nm,18.2s,MS3.7,baz=70,slow=38						
ZAL	**Zalesovo**	**42.52**	**306**	P	**P**	**12 01 12.2**	**-2.5**
ZAL						12 03 05.7	
MK31	**Makanchi Array**	**46.79**	**297**	*e*P	**P**	**12 01 47.9**	**-1.0**
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**12 01 48.1**	**-0.7**
MKAR				PcP	PcP	12 03 21.3	+0.2
MKAR	**Makanchi Array**	**46.79**	**297**	*i* P	**P**	**12 01 47.4**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**46.79**	**297**	P	**P**	**12 01 48.1**	**-0.7**
	comp=Z,0.7nm,0.4s,mb3.9,baz=72,slow=8.3,SNR=5.2						
MKAR				PcP	PcP	12 03 21.3	+0.2
	comp=Z,0.8nm,0.7s,baz=61,slow=6.1,SNR=4.0						
MKAR				LR	LR	12 22 36.3	
	comp=Z,109nm,18.5s,MS3.8,baz=0.2,slow=38						
KURK	**Kurchatov**	**47.24**	**304**	*i* P	**P**	**12 01 51.7**	**-0.6**
YKA	**Yellowknife Ar**	**51.19**	**37**	P	**P**	**12 02 22.1**	**-0.1**
YKA	**Yellowknife Ar**	**51.19**	**37**	*e*P	**P**	**12 02 22.4**	**+0.2**
YKA	**Yellowknife Ar**	**51.19**	**37**	P	**P**	**12 02 22.1**	**-0.1**
	comp=Z,0.4nm,0.6s,mb3.5,baz=296,slow=7.1,SNR=8.2						
TAPN	**Taplejung**	**53.87**	**273**	*e*P	**P**	**12 02 43.9**	**+1.4**
	comp=Z,12nm,0.7s,mb4.9						
JIRN	**Jiri**	**54.72**	**274**	*e*P	**P**	**12 02 50.1**	**+1.4**
	comp=Z,26nm,0.6s,mb5.4						
KKN	**Kakani**	**55.26**	**275**	*e*P	**P**	**12 02 54.3**	**+1.7**
	comp=Z,18nm,0.6s,mb5.3						
GKN	**Gorkha**	**55.57**	**276**	*e*P	**P**	**12 02 55.8**	**+1.0**
	comp=Z,27nm,0.6s,mb5.5						
KOLN	**Koldanda**	**56.42**	**276**	*e*P	**P**	**12 03 01.6**	**+0.7**
	comp=Z,21nm,0.8s,mb5.2						
FCC	**Fort Churchill**	**61.52**	**33**	*e*P	**P**	**12 03 35.2**	**-0.5**
	comp=Z,2.9nm,0.7s,mb4.5						
FCC	**Fort Churchill**	**61.52**	**33**	*e*P	**P**	**12 03 35.2**	**-0.6**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
NVAR	**Mina Array Bea**	**62.72**	**62**	P	**P**	**12 03 45.5**	**+1.4**
	comp=Z,0.3nm,0.6s,mb3.6,baz=303,slow=8.4,SNR=2.6						
FINES	**FINESS Array B**	**64.07**	**335**	P	**P**	**12 03 51.9**	**-0.7**
FINES	**FINESS Array B**	**64.07**	**335**	*i* P	**P**	**12 03 51.9**	**-0.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FINES	**FINESS Array B**	**64.07**	**335**	P	**P**	**12 03 51.9**	**-0.7**
	comp=Z,1.9nm,0.4s,mb4.4,baz=34,slow=8.5,SNR=23						
PDAR	**Pinedale Array**	**65.03**	**54**	P	**P**	**12 04 00.1**	**+0.9**
	comp=Z,0.7nm,1.0s,mb3.7,baz=309,slow=5.4,SNR=3.9						
ULM	**Lac du Bonnet**	**66.80**	**41**	P	**P**	**12 04 10.2**	**-0.2**
	comp=Z,1.6nm,0.6s,mb4.2,baz=336,slow=10.0,SNR=3.1						
NB2	**NORSAR Subarra**	**68.29**	**341**	P	**P**	**12 04 19.0**	**-0.7**
	comp=Z,1.9nm,0.6s,mb4.3,baz=28,slow=6.2						
NB2	**NORSAR Subarra**	**68.29**	**341**	P	**P**	**12 04 19.0**	**-0.7**
NB2				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
NOA	**NORSAR Array B**	**68.29**	**341**	P	**P**	**12 04 19.4**	**-0.3**
	comp=Z,2.1nm,0.5s,mb4.4,baz=28,slow=6.4,SNR=12						
NOA				LR	LR	12 35 38.2	
	comp=Z,20nm,20.9s,MS3.3,baz=165,slow=37						
WRA	**Warramunga Arr**	**68.29**	**199**	P	**P**	**12 04 20.2**	**+0.1**
	comp=Z,0.7nm,0.6s,mb3.8,baz=21,slow=6.8,SNR=4.9						
AKASG	**Malin Array Be**	**71.54**	**326**	*i* P	**P**	**12 04 39.0**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.54**	**326**	P	**P**	**12 04 39.0**	**-0.7**
	comp=Z,2.3nm,0.5s,mb4.4,baz=33,slow=6.1,SNR=10						
ASAR	**Alice Springs**	**71.99**	**198**	P	**P**	**12 04 44.0**	**+1.3**
	comp=Z,0.8nm,0.6s,mb3.9,baz=9.3,slow=5.5,SNR=25						
SCHQ	**Schefferville**	**73.54**	**23**	P	**P**	**12 04 51.2**	**-0.4**
SCHQ	**Schefferville**	**73.54**	**23**	P	**P**	**12 04 51.2**	**-0.4**
	comp=Z,3.7nm,0.8s,mb4.3,baz=45,slow=5.7,SNR=2.7						
CLL	**Collm**	**76.50**	**335**	*e*P	**P**	**12 05 08.0**	**-0.7**
CLL	**Collm**	**76.50**	**335**	*i* P	**P**	**12 05 08.4**	**-0.3**
MLR	**Muntele Rosu**	**77.05**	**325**	P	**P**	**12 05 12.9**	**+1.0**
	comp=Z,1.1nm,0.3s,mb4.2,baz=318,slow=5.5,SNR=3.2						
GERES	**GERESS Array B**	**78.48**	**334**	P	**P**	**12 05 20.0**	**+0.2**
	comp=Z,0.5nm,0.2s,mb4.1,baz=34,slow=5.5,SNR=4.8						
CFAA	**Coronel Fontan**	**145.26**	**79**	PKPbc	PKPbc	12 12 56.3	+0.3
	comp=Z,0.3nm,0.5s,baz=304,slow=1.6,SNR=4.6						
PLCA	**Paso Flores**	**148.44**	**95**	PKPbc	PKPbc	12 13 05.2	+0.4
PLCA	**Paso Flores**	**148.44**	**95**	PKPbc	PKPbc	12 13 05.2	+0.4
	comp=Z,2.0nm,0.9s,baz=308,slow=2.8,SNR=3.3						

*BJI **29** 12:02:18.4, 707S×13077E, h10km, mb4.5*
*ISCJB **29** 12:02:27.5±2.3, 652S±008×13045E±008, h38km±22km, mb4.6/26, MS4.0/2, Error ellipse: s-maj=15.4km s-min=9.4km az=135.8*
*IDC **29** 12:02:29.4±5.9, 649S×13038E, h34km±46km, mb4.1/10, mb1 4.2/11, mb1mx4.1/14, mbtmp4.2/11, ML5.2/3, MS3.8/3, Ms1 3.7/3, ms1mx3.2/18, Error ellipse: s-maj=33.5km s-min=15.1km az=76.0*
*NEIC **29** 12:02:29.1±0.4, 647S×13025E, h30km, mb4.6/11, Error ellipse: s-maj=17.9km s-min=7.1km az=73.0*

ISC 29 12:02:29.8±1.6, 651S±007×13049E±008, h41km±16km, n53, σ0°72/58, mb4.6/26, MS4.0/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.46**	**163**	*e*P	**Pn**	**12 04 07.4**	**+5.0**
KAKA	231nm,0.4s			*e*S	**Sn**	**12 05 14.9**	**0.0**
BATI	**Kupang**	**7.69**	**241**	Pn	**Pn**	**12 04 24.0**	**+4.8**
BATI	25nm,0.3s,baz=138,slow=3.3,SNR=40			Sn	**Sn**	**12 05 45.6**	**+0.5**
BATI	34nm,0.3s,baz=288,slow=20,SNR=7.5			LR	LR	12 06 46.7	
	comp=Z,180nm,18.5s,baz=88,slow=34						
FITZ	**Fitzroy Crossi**	**12.46**	**202**	*e*P	**Pn**	**12 05 23.5**	**-1.1**
	78nm,0.3s						
FITZ				*e*S	**Sn**	**12 07 30.1**	**-12**
FITZ	**Fitzroy Crossi**	**12.46**	**202**	Pn	**Pn**	**12 05 24.0**	**-0.6**
	14nm,0.3s,baz=36,slow=12,SNR=84						
FITZ				Sn	**Sn**	**12 07 31.4**	**-11**
	15nm,0.3s,baz=238,slow=20,SNR=8.6						
WRA	**Warramunga Arr**	**13.87**	**165**	Pn	**Pn**	**12 05 43.5**	**-0.4**
	8.5nm,0.3s,baz=339,slow=13,SNR=103						
WRA				Sn	**Sn**	**12 08 08.3**	**-8.3**
	11nm,0.3s,baz=347,slow=22,SNR=14						
WB2	**Warramunga Arr**	**13.87**	**165**	*e*P	**Pn**	**12 05 43.2**	**-0.7**
WB2				*e*S	**Sn**	**12 08 08.5**	**-8.2**
ASAR	**Alice Springs**	**17.38**	**169**	P	**Pn**	**12 06 30.1**	**+0.8**
	7.8nm,0.3s,baz=339,slow=9.7,SNR=295						
ASAR				S	**S**	**12 09 33.5**	**-15**
	4.0nm,0.3s,baz=325,slow=17,SNR=13						
MBWA	**Marble Bar**	**17.91**	**215**	*e*Pn	**Pn**	**12 06 35.8**	**-0.1**
	12nm,0.5s						
KKM	**Kota Kinabalu**	**18.93**	**311**	*e*P	**Pn**	**12 06 49.8**	**+1.5**
CTA	**Charters Tower**	**20.41**	**133**	*e*P	**P**	**12 07 08.3**	**+4.8**
	4.0nm,0.7s						
CTA				*e*S	**S**	**12 10 54.2**	**+4.2**
CTA	**Charters Tower**	**20.41**	**133**	P	**P**	**12 07 07.8**	**+4.3**
	5.7nm,0.7s,baz=315,slow=13,SNR=4.4						
STKA	**Stephens Creek**	**27.29**	**159**	*e*P	**P**	**12 08 12.2**	**+1.7**
	2.6nm,0.4s,mb4.1						
STKA				*e*S	sS	12 13 21.8	+16
STKA	**Stephens Creek**	**27.29**	**159**	P	**P**	**12 08 11.5**	**+1.0**
	3.2nm,0.5s,mb4.1,baz=325,slow=15,SNR=11						
STKA				LR	LR	12 18 41.0	
	comp=Z,130nm,21.1s,MS3.5,baz=26,slow=36						
NWAO	**Narrogin (SRO)**	**29.04**	**203**	P	**P**	**12 08 26.0**	**-0.1**
	1.9nm,0.4s,mb4.2,baz=12,slow=14,SNR=3.0						
PSI	**Prapat**	**32.84**	**285**	P	**P**	**12 08 59.8**	**-0.1**
	7.1nm,0.9s,mb4.6,baz=55,slow=2.9,SNR=6.3						
MJAR	**Matsushiro Arr**	**43.43**	**9**	P	**P**	**12 10 28.8**	**+0.2**
	1.7nm,0.7s,mb3.9,baz=185,slow=9.8,SNR=2.3						
XAN	**Xi'an**	**45.20**	**335**	P	**P**	**12 10 42.5**	**-0.4**
XAN				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.5						
SHL	**Shillong**	**49.23**	**312**	*e*P	**P**	**12 11 19.5**	**+5.1**
RPZ	**Rata Peaks**	**51.33**	**143**	LR	LR	12 34 59.3	
	comp=Z,440nm,18.5s,MS4.5,baz=170,slow=38						
LSA	**Lhasa**	**52.18**	**316**	*e*P	**P**	**12 11 37.0**	**+0.4**
	comp=Z,8.6nm,0.8s,mb4.7						
ODAN	**Odare**	**53.30**	**310**	*e*P	**P**	**12 11 44.2**	**-0.8**
	comp=Z,23nm,0.6s,mb5.3						
TAPN	**Taplejung**	**53.32**	**311**	*e*P	**P**	**12 11 44.5**	**-0.6**
	comp=Z,18nm,0.5s,mb5.3						
GTA	**Gaotai**	**53.78**	**331**	*e*P	**P**	**12 11 48.5**	**+0.3**
GTA				AP	pP	12 11 52.8	-7.2
GTA				XP	sP	12 11 56.0	-8.8
GTA				AMB	AMB		
	comp=Z,4.0nm,0.9s,mb4.3						
JIRN	**Jiri**	**54.63**	**311**	*e*P	**P**	**12 11 54.2**	**-0.4**
	comp=Z,25nm,0.7s,mb5.4						
KKN	**Kakani**	**55.39**	**310**	*e*P	**P**	**12 11 59.3**	**-0.8**
	comp=Z,20nm,0.6s,mb5.3						
GKN	**Gorkha**	**55.98**	**310**	*e*P	**P**	**12 12 03.6**	**-0.8**
	comp=Z,31nm,0.6s,mb5.5						
KOLN	**Koldanda**	**56.66**	**309**	*e*P	**P**	**12 12 08.3**	**-0.9**
	comp=Z,25nm,0.8s,mb5.3						
ULN	**Ulaanbaatar**	**57.95**	**342**	*e*P	**P**	**12 12 18.9**	**+1.0**
	comp=Z,4.1nm,0.7s,mb4.6						
SONM	**Songino Array**	**58.13**	**341**	P	**P**	**12 12 20.1**	**+0.9**
	comp=Z,0.8nm,0.4s,mb4.1,baz=162,slow=7.2,SNR=18						
MK31	**Makanchi Array**	**68.08**	**326**	*e*P	**P**	**12 13 24.9**	**-0.3**
MKAR	**Makanchi Array**	**68.08**	**326**	P	**P**	**12 13 25.4**	**+0.2**
MKAR	**Makanchi Array**	**68.08**	**326**	P	**P**	**12 13 25.4**	**+0.2**
	comp=Z,8.4nm,0.5s,mb5.0,baz=123,slow=7.8,SNR=77						
TKM2	**Tokmak 2**	**69.91**	**320**	*e*P	**P**	**12 13 36.8**	**0.0**
	comp=Z,4.1nm,0.7s,mb4.5						
TKM2	**Tokmak 2**	**69.91**	**320**	P	**P**	**12 13 37.3**	**+0.6**
	SNR=5.8						
UCH	**Uchtor**	**70.27**	**319**	*e*P	**P**	**12 13 39.7**	**+0.8**
	comp=Z,9.1nm,0.8s,mb4.8						
UCH	**Uchtor**	**70.27**	**319**	P	**P**	**12 13 40.1**	**+1.2**
	SNR=9.8						
AAK	**Ala-Archa**	**70.48**	**320**	P	**P**	**12 13 41.1**	**+0.9**
	SNR=6.9						
AML	**Almayashu**	**70.76**	**319**	*e*P	**P**	**12 13 42.5**	**+0.6**
	comp=Z,13nm,0.8s,mb4.9						
AML	**Almayashu**	**70.76**	**319**	P	**P**	**12 13 43.0**	**+1.1**
	SNR=15						
USP	**Ospenovka**	**70.78**	**320**	P	**P**	**12 13 42.3**	**+0.2**
	SNR=11						
EKS2	**Erkin-Say**	**70.96**	**319**	*e*P	**P**	**12 13 43.4**	**+0.3**
	comp=Z,8.9nm,0.8s,mb4.8						
EKS2	**Erkin-Say**	**70.96**	**319**	P	**P**	**12 13 43.9**	**+0.8**
	SNR=10						
ZAA0	**Zalesovo Array**	**71.36**	**333**	*e*P	**P**	**12 13 43.9**	**-1.3**
ZALV	**Zalesovo Beam**	**71.36**	**333**	P	**P**	**12 13 44.5**	**-0.7**
	comp=Z,2.3nm,0.7s,mb4.2,baz=128,slow=5.1,SNR=10						
KURK	**Kurchatov**	**72.35**	**328**	*e*P	**P**	**12 13 50.8**	**-0.5**
	comp=Z,2.6nm,0.6s,mb4.3						
VNDA	**Vanda**	**72.88**	**173**	P	**P**	**12 13 54.9**	**+0.9**
VNDA	**Vanda**	**72.88**	**173**	P	**P**	**12 13 54.9**	**+0.9**
	comp=Z,0.7nm,0.6s,mb3.8,baz=307,slow=8.3,SNR=5.2						
MAW	**Mawson**	**75.58**	**201**	P	**P**	**12 14 09.9**	**0.0**
	comp=Z,1.5nm,0.6s,mb4.1,baz=102,slow=11,SNR=5.2						
QSPA	**South Pole Qui**	**83.47**	**180**	*e*P	**P**	**12 14 52.0**	**-0.6**
	comp=Z,2.7nm,0.5s,mb4.5						
AKTK	**Aktyubinsk**	**83.98**	**322**	P	**P**	**12 14 54.9**	**-0.8**
AKTO	**Aktyubinsk**	**83.98**	**322**	P	**P**	**12 14 54.9**	**-0.8**
	comp=Z,1.2nm,0.4s,mb4.4,baz=110,slow=5.0,SNR=4.9						
LPAZ	**La Paz**	**150.80**	**141**	PKPbc	PKPbc	12 22 20.3	+1.5
LPAZ	**La Paz**	**150.80**	**141**	PKPbc	PKPbc	12 22 20.3	+1.5
	comp=Z,2.1nm,0.4s,baz=157,slow=1.6,SNR=18						

*IDC **29** 12:06:46.0±0.9, 3552N×14098E, h0km, mb3.5/6, mb1 3.9/9, mb1mx3.7/23, mbtmp3.7/9, ML3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=33.1km s-min=18.3km az=104.0*
*ISCJB **29** 12:06:51.7±0.5, 3563N±004×14076E±007, h58km±4km, mb3.6/6, Error ellipse: s-maj=10.0km s-min=6.3km az=173.7*
*JMA **29** 12:06:52.5±0.1, 3570N×14071E, h50km±1km, M3.3*

ISC 29 12:06:52.4±0.5, 3564N±004×14078E±007, h49km±5km, n20, σ1°98/27, mb3.6/6, 1C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.09**	**46**	⇓P	**Pn**	**12 07 00.3**	**+0.2**
CHOJ				S	**Sn**	**12 07 05.9**	**+0.3**
JCN	**Nagara**	**0.52**	**245**	⇓P	**Pn**	**12 07 04.5**	**+0.7**
JCN				S	**Sn**	**12 07 12.8**	**+0.8**
BSO4	**Boso 4**	**0.74**	**209**	P	**Pn**	**12 07 07.6**	**+1.0**
JYT	**Yasato**	**0.76**	**321**	⇓P	**Pn**	**12 07 05.9**	**-1.0**
JYT				S	**Sn**	**12 07 15.9**	**-1.4**
BSO3	**Boso 3**	**0.86**	**195**	⇑P	**Pn**	**12 07 09.2**	**+0.9**
JHO	**Hitachi**	**0.99**	**350**	⇓P	**Pn**	**12 07 09.6**	**-0.3**
JHO				S	**Sn**	**12 07 23.2**	**+0.4**
BSO1	**Boso 1**	**1.00**	**170**	P	**Pn**	**12 07 10.4**	**+0.3**
JAG	**Ashikaga**	**1.33**	**307**	P	**Pn**	**12 07 13.9**	**-0.7**
MJAR	**Matsushiro Arr**	**2.27**	**294**	Pn	**Pn**	**12 07 28.1**	**+0.8**
	8.1nm,0.3s,baz=100,slow=14,SNR=42						
MAT	**Matsushiro**	**2.27**	**294**	P	**Pn**	**12 07 28.3**	**+0.9**
MAT				*e*S	**Sn**	**12 07 54.4**	**+0.2**
JHJ	**Hachijo jima 2**	**2.64**	**198**	Pn	**Pn**	**12 07 32.5**	**0.0**
	35nm,0.3s,baz=119,slow=16,SNR=23						
JHJ				Sn	**Sn**	**12 08 01.6**	**-1.8**
	62nm,0.3s,baz=73,slow=24,SNR=12						
ASAJ	**Asahikawa**	**8.58**	**9**	Pn	**Pn**	**12 08 51.1**	**-2.9**
	1.6nm,0.3s,baz=202,slow=10.0,SNR=15						
ASAJ				Sn	**Sn**	**12 10 22.7**	**-6.6**
	0.2nm,0.3s,baz=81,slow=19,SNR=1.9						
CBIJ	**Chichi jima**	**8.60**	**172**	Pn	**Pn**	**12 08 51.3**	**-3.0**
	7.4nm,0.3s,baz=283,slow=19,SNR=7.7						
CBIJ				Sn	**Sn**	**12 10 20.9**	**-9.0**
	6.0nm,0.3s,baz=292,slow=19,SNR=3.8						
KSRS	**Korea Array**	**10.50**	**284**	LR	LR	12 13 06.0	
	comp=Z,63nm,21.1s,baz=335,slow=36						
WRA	**Warramunga Arr**	**55.61**	**187**	P	**P**	**12 16 22.5**	**-0.7**
	0.6nm,0.3s,mb4.1,baz=1.7,slow=7.4,SNR=5.3						
INK	**Inuvik**	**55.86**	**27**	P	**P**	**12 16 26.0**	**+1.5**
	1.0nm,1.1s,mb3.8,baz=316,slow=5.2,SNR=3.6						
ASAR	**Alice Springs**	**59.34**	**187**	P	**P**	**12 16 48.5**	**-0.9**
	0.4nm,0.8s,mb3.5,baz=24,slow=9.4,SNR=3.1						
YKA	**Yellowknife Ar**	**65.27**	**30**	P	**P**	**12 17 27.7**	**-1.0**
	0.2nm,0.8s,mb3.2,baz=288,slow=5.8,SNR=3.6						
NVAR	**Mina Array Bea**	**76.24**	**53**	P	**P**	**12 18 37.4**	**+1.6**
	0.3nm,0.6s,mb3.4,baz=280,slow=5.4,SNR=2.5						
PDAR	**Pinedale Array**	**79.01**	**45**	P	**P**	**12 18 52.6**	**+1.5**
	0.3nm,0.6s,mb3.4,baz=279,slow=1.7,SNR=3.1						

*GII **29** 12:12:02.5±0.0, 2987N×3636E, h0km*
*SGS **29** 12:12:03.0, 3007N×3632E, h8km*
*CSEM **29** 12:12:04.1±0.2, 2977N×3625E, h2km, ML3.0, Error ellipse: s-maj=4.9km s-min=4.1km az=88.0, Mining explosion.*

ISC 29 12:12:01.7±1.5, 2985N±006×3642E±008, h0km, n10, σ0°76/13, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRFI	**Mount Harif**	**1.21**	**279**	Pg	**Pg**	**12 12 24.2**	**-0.7**
HRFI				Sg	**Sg**	**12 12 41.3**	**+0.7**
ZFRI	**Zfri**	**1.28**	**303**	Pg	**Pg**	**12 12 25.4**	**-0.8**
EIL	**Elat**	**1.29**	**262**	Pg	**Pg**	**12 12 26.3**	**-0.1**
EIL				Sg	**Sg**	**12 12 44.0**	**+0.9**
HQLS		**1.30**	**245**	P	**Pg**	**12 12 26.0**	**-0.7**
HQLS		**1.30**	**245**	P	**Pg**	**12 12 26.0**	**-0.7**
HQLS				S	**Sg**	**12 12 43.3**	**-0.2**
PRNI	**Paran**	**1.32**	**292**	Pg	**Pg**	**12 12 25.7**	**-1.3**
JLOS		**1.38**	**216**	P	**Pg**	**12 12 28.4**	**+0.3**
RMNI	**Mount Ramon**	**1.61**	**298**	Pn	**Pn**	**12 12 32.0**	**+0.6**
MZDA	**Masada**	**1.71**	**328**	Pn	**Pn**	**12 12 34.1**	**+1.3**
RSHS		**2.10**	**223**	P	**Pn**	**12 12 38.3**	**+0.2**

*IDC **29** 12:20:52.1±1.1, 2136S×16917E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.2/14, mbtmp4.1/9, MS3.8/8, Ms1 3.8/8, ms1mx3.6/18, Error ellipse: s-maj=31.0km s-min=24.1km az=147.0*
*ISCJB **29** 12:20:58.8±0.8, 2065S±01×1686E±01, h33km, mb4.1/8, MS3.8/7, Error ellipse: s-maj=22.8km s-min=10.8km az=145.3*

ISC 29 12:21:00.4±0.8, 2065S±01×1687E±01, h35km, (h34km±6.4km:pP-P), n25, σ1°13/18, mb4.1/9, MS3.8/7, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.55**	**235**	*e*P	**Pn**	**12 21 36.9**	**-2.3**
DZM				*e*S	**Sn**	**12 22 09.4**	**+0.3**
HNR	**Honiara**	**13.96**	**322**	LR	LR	12 29 25.6	
	comp=Z,185nm,20.2s,baz=181,slow=35						
CTA	**Charters Tower**	**21.05**	**267**	*e*P	**P**	**12 25 44.9**	**+3.5**
	7.7nm,0.9s,mb4.0						
CTA	**Charters Tower**	**21.05**	**267**	P	**P**	**12 25 42.5**	**+1.1**
	1.0nm,0.4s,mb3.5,baz=108,slow=17,SNR=2.8						
CTA				LR	LR	12 31 58.4	
	comp=Z,238nm,21.8s,MS3.5,baz=342,slow=31						
STKA	**Stephens Creek**	**26.70**	**240**	*e*P	**P**	**12 26 38.5**	**+2.2**
	4.4nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**26.70**	**240**	P	**P**	**12 26 34.2**	**-2.1**
	3.3nm,1.0s,mb3.8,baz=90,slow=12,SNR=2.3						
STKA				LR	LR	12 37 42.8	
	comp=Z,406nm,18.1s,MS4.0,baz=19,slow=38						
RAR	**Rarotonga**	**29.43**	**97**	LR	LR	12 35 27.4	
	comp=Z,56nm,19.9s,MS3.2,baz=249,slow=30						
WB2	**Warramunga Arr

baz=183,slow=4.5
VNA2 *e* 12 53 18.2
VNA2 *e* pP 12 53 22.7 -4.5
VNA2 *e* pP 12 53 27.3 +0.1
VNA2 *e* 12 53 34.0
SONM Songino Array 88.47 323 P **P 12 53 15.2 -0.1**
0.9nm,0.9s,mb4.0,baz=143,slow=5.4,SNR=6.4
NVAR Mina Array Bea 90.25 49 P **P 12 53 27.3 +3.3**
0.4nm,0.6s,mb3.9,baz=229,slow=8.2,SNR=2.9
PDAR Pinedale Array 98.09 47 LR LR 13 28 20.6
comp=Z,50nm,20.2s,MS4.0,baz=76,slow=29
KHC Kasperske Hory 145.77 331 *eP* PKPdf 13 00 02.0 +0.5
GERES GERESS Array B 145.92 330 PKPbc PKPbc 13 00 01.8 -0.6
1.8nm,0.9s,baz=57,slow=3.7,SNR=7.1

BUC 29 12:52:10.2±0.6, 4629N×2352E, h5km, MD2.6/2, 2C-1D, Error ellipse: s-maj=5.4km s-min=1.7km az=78.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRGR		**0.75**	**312**	⇑*iP*	Pg	12 52 25.5	+0.9
DRGR				*i* S	Sg	12 52 36.8	+2.4
GZR	**Gura Zlata**	**1.03**	**210**	⇓*iP*	Pg	12 52 31.0	+1.0
GZR				*i* S	Sg	12 52 45.3	+1.9
BZS	**Buzias**	**1.49**	**244**	⇑*iP*	Pn	12 52 39.5	+2.0
BZS				*i* S	Sn	12 52 58.8	+1.5

*ISCJB **29** 13:18:41.5±0.2, 4584N×001×7.12E×002, h12km±2km, Error ellipse: s-maj=2.6km s-min=1.7km az=178.8*
*NEIC **29** 13:18:42.2, 4585N×7.17E, h10km, ML2.8(LDG), ML2.5(STR), ML2.4(ROM), ML2.1(ZUR), After ROM.*
*GEN **29** 13:18:42.8, 4584N×7.19E, h4km, ML2.0*
*CSEM **29** 13:18:42.2±0.1, 4579N×7.26E, h5km, ML2.8/20, Error ellipse: s-maj=0.9km s-min=0.7km az=91.0*
*ROM **29** 13:18:42.2±0.2, 4585N×7.17E, h10km±1km, Md2.4/10, Ml2.2/4, Error ellipse: s-maj=1.9km s-min=1.7km az=49.0*
*ZUR **29** 13:18:43.0, 4584N×7.18E, h6km±3km, ML2.1/8*
*LDG **29** 13:18:43.9±0.1, 4586N×7.16E, h2km, Md2.7/2, Ml2.8/22, Error ellipse: s-maj=1.6km s-min=1.0km az=105.0*
*STR **29** 13:18:45.4±0.3, 4593N×708E, h5km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 29 13:18:42.5±0.2, 4584N±001×715E±002, h12km±2km, n106, σ0§99/205, 6C-1D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRGE	**Morge**	**0.10**	**219**	Pg	**Pg**	**13 18 45.4**	**+0.1**
MRGE				Sg	**Sg**	**13 18 47.2**	**0.0**
	3µm,0.1s						
EMV	**Vieux Emosson**	**0.28**	**322**	*i* Sg	**Pg**	**13 18 48.8**	**+0.5**
	384nm,0.2s						
EMV	**Vieux Emosson**	**0.28**	**322**	⇑*i*Pg	**Sg**	**13 18 52.9**	**+0.8**
	384nm,0.2s						
EMV	**Vieux Emosson**	**0.28**	**322**	Pg	**Pg**	**13 18 48.9**	**+0.6**
EMV				Sg	**Sg**	**13 18 52.9**	**+0.8**
DIX	**Grande Dixence**	**0.30**	**37**	*e*Sg	**Pg**	**13 18 48.9**	**+0.3**
	584nm,0.2s						
DIX	**Grande Dixence**	**0.30**	**37**	⇓*i*Pg	**Sg**	**13 18 52.8**	**+0.2**
	584nm,0.2s						
DIX	**Grande Dixence**	**0.30**	**37**	Pg	**Pg**	**13 18 48.8**	**+0.2**
DIX				Sg	**Sg**	**13 18 53.0**	**+0.4**
SALAN	**Lac Salanfe**	**0.32**	**338**	*i* Sg	**Pg**	**13 18 49.7**	**+0.6**
	112nm,0.4s						
SALAN	**Lac Salanfe**	**0.32**	**338**	⇑*i*Pg	**Sg**	**13 18 54.2**	**+0.7**
	112nm,0.4s						
SALAN	**Lac Salanfe**	**0.32**	**338**	⇑*i*Pg	**Sg**	**13 18 54.2**	**+0.7**
	112nm,0.4s						
GRYON	**Gryon**	**0.41**	**356**	⇑*i*Pg	**Pg**	**13 18 51.1**	**+0.5**
	174nm,0.1s						
LPL	**La Plagne**	**0.44**	**222**	*e*Pg	**Pg**	**13 18 51.6**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**13 18 57.9**	**+0.9**
	50nm,0.2s						
LPL	**La Plagne**	**0.44**	**222**	*e*Pg	**Pg**	**13 18 51.6**	**+0.5**
	SNR=1.0						
LPL				*e*Sg	**Sg**	**13 18 57.9**	**+0.9**
	25nm,0.2s						
LPG	**La Plagne**	**0.45**	**219**	*e*Pg	**Pg**	**13 18 51.6**	**+0.3**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**13 18 57.6**	**+0.4**
	94nm,0.2s						
LPG	**La Plagne**	**0.45**	**219**	*e*Pg	**Pg**	**13 18 51.6**	**+0.3**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**13 18 57.6**	**+0.4**
	47nm,0.2s						
AIGLE	**Aigle**	**0.52**	**345**	⇑*i*Pg	**Pg**	**13 18 53.1**	**+0.5**
	317nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.53**	**11**	⇑*i*Pg	**Pg**	**13 18 53.1**	**+0.2**
	241nm,0.2s						
SENIN				*e*Sg	**Sg**	**13 19 00.9**	**+1.0**
	241nm,0.2s						
TRAV		**0.54**	**128**	P	**Pg**	**13 18 52.7**	**-0.3**
MMK	**Mattmark**	**0.60**	**70**	Pg	**Pg**	**13 18 53.9**	**-0.4**
MMK				Sg	**Sg**	**13 19 01.9**	**-0.4**
MMK	**Mattmark**	**0.60**	**70**	*e*P	**Pg**	**13 18 53.6**	**-0.7**
	201nm,0.2s						
MMK	**Mattmark**	**0.60**	**70**	Pg	**Pg**	**13 18 53.9**	**-0.4**
ORX	**Oropa**	**0.62**	**110**	Pg	**Pg**	**13 18 54.3**	**-0.3**
ORX				Sg	**Sg**	**13 19 02.2**	**-0.5**
ORO	**Oropa**	**0.62**	**110**	Pg	**Pg**	**13 18 54.4**	**-0.2**
ORO				Sg	**Sg**	**13 19 02.3**	**-0.5**
	99nm,0.2s						
LKBD	**Leukerbad**	**0.64**	**31**	*e*Pg	**Pg**	**13 18 54.8**	**-0.1**
	71nm,0.4s						
RSP	**Reno Superiore**	**0.70**	**174**	Pg	**Pg**	**13 18 56.3**	**+0.3**
RSP				Sg	**Sg**	**13 19 05.1**	**0.0**
	103nm,0.2s						
RSP	**Reno Superiore**	**0.70**	**174**	P	**Pg**	**13 18 55.9**	**-0.1**
RSP	**Reno Superiore**	**0.70**	**174**	Pg	**Pg**	**13 18 56.3**	**+0.3**
RSP				Sg	**Sg**	**13 19 05.1**	**0.0**
	103nm,0.2s						
BNI	**Bardonecchia**	**0.86**	**203**	Pg	**Pg**	**13 18 58.9**	**-0.2**
BNI				Sg	**Sg**	**13 19 10.0**	**-0.3**
	20nm,0.2s						
CABF	**La Chapelle**	**1.06**	**317**	*e*Pn	**Pn**	**13 19 04.3**	**+1.1**
CABF	**La Chapelle**	**1.06**	**317**	*e*P	**Pb**	**13 19 05.7**	**+2.8**
CABF				*e*Sn	**Sn**	**13 19 19.1**	**+1.1**
	28nm,0.4s,SNR=1.0						
CABF	**La Chapelle**	**1.06**	**317**	*e*Pg	**Pg**	**13 19 03.7**	**+0.7**
CABF				*e*Pn	**Pn**	**13 19 04.3**	**+1.1**
CABF				*e*P		13 19 05.7	
CABF				*e*Sn	**Sn**	**13 19 19.1**	**+1.1**
CABF	**La Chapelle**	**1.06**	**317**	*e*Pn	**Pn**	**13 19 04.3**	**+1.1**
CABF	**La Chapelle**	**1.06**	**317**	*e*P	**Pb**	**13 19 05.7**	**+2.8**
CABF				*e*Sn	**Sn**	**13 19 19.1**	**+1.1**
	14nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**1.15**	**194**	*e*Pn	**Pn**	**13 19 04.2**	**-0.2**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**13 19 19.9**	**+0.4**
	36nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**1.15**	**194**	*e*Pn	**Pn**	**13 19 04.2**	**-0.2**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**13 19 19.9**	**+0.4**
	18nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.29**	**224**	*e*Pn	**Pn**	**13 19 07.5**	**+1.2**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**13 19 24.5**	**+1.1**
	14nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.29**	**224**	*e*Pn	**Pn**	**13 19 07.5**	**+1.2**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**13 19 24.5**	**+1.1**
	7.1nm,0.3s,SNR=1.0						
PZZ	**Prazzo**	**1.34**	**181**	Pg	**Pg**	**13 19 07.2**	**-1.0**
PZZ				Sg	**Sg**	**13 19 25.5**	**-0.1**
LOMF	**Lomont**	**1.52**	**352**	Pg	**Pg**	**13 19 12.7**	**+0.9**
LOMF				Sg	**Sg**	**13 19 33.0**	**+1.5**
STV	**Sta Anna Valdi**	**1.60**	**175**	P	**Pn**	**13 19 10.0**	**-0.7**
STV				S	**Sn**	**13 19 28.7**	**-2.6**
ENR	**Entracque**	**1.63**	**173**	P	**Pn**	**13 19 10.5**	**-0.5**
ENR				S	**Sn**	**13 19 29.9**	**-2.0**
PCP	**Pian Castagno**	**1.63**	**142**	P	**Pn**	**13 19 10.9**	**-0.2**
PCP				S	**Sn**	**13 19 29.7**	**-2.3**
BBS	**Basel-Blauen**	**1.64**	**9**	Pg	**Pg**	**13 19 14.5**	**+0.5**
BBS				Sg	**Sg**	**13 19 36.9**	**+1.6**
MONE	**Monesi**	**1.82**	**166**	P	**Pn**	**13 19 13.1**	**-0.5**
MONE				S	**Sn**	**13 19 34.3**	**-2.2**
TOUF	**Mont Tournerai**	**1.83**	**178**	Pn	**Pg**	**13 19 18.0**	**+0.4**
RORO		**1.85**	**159**	P	**Pn**	**13 19 12.3**	**-1.7**
LUCF	**Luceram**	**1.96**	**176**	Pn	**Pn**	**13 19 19.2**	**+3.7**
HINF	**Hinteralfeld**	**1.98**	**354**	*e*Pg	**Pg**	**13 19 20.4**	**-0.2**
HINF				*e*Sn	**Sn**	**13 19 40.2**	**-0.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**13 19 45.8**	**-0.5**
	30nm,0.2s						
HINF	**Hinteralfeld**	**1.98**	**354**	*e*Pn	**Pn**	**13 19 16.4**	**+0.5**
HINF				*e*Pg	**Pg**	**13 19 20.4**	**-0.2**
HINF				*e*Sn	**Sn**	**13 19 40.2**	**-0.5**
HINF				*e*Sg	**Sg**	**13 19 45.8**	**-0.5**
HINF	**Hinteralfeld**	**1.98**	**354**	*e*Pg	**Pg**	**13 19 20.4**	**-0.2**
HINF				*e*Sn	**Sn**	**13 19 40.2**	**-0.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**13 19 45.8**	**-0.5**
	15nm,0.2s						
SBF	**Sospel**	**1.99**	**174**	*e*Pg	**Pg**	**13 19 21.6**	**+0.9**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**13 19 47.6**	**+1.1**
	26nm,0.4s						
SBF	**Sospel**	**1.99**	**174**	*e*Pg	**Pg**	**13 19 21.6**	**+0.9**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**13 19 47.6**	**+1.1**
	13nm,0.4s						
VIVF	**Saint-Julien-l**	**2.01**	**241**	*e*P	**Pn**	**13 19 19.5**	**+3.3**
VIVF	**Saint-Julien-l**	**2.01**	**241**	*e*Pg	**Pg**	**13 19 21.2**	**+0.2**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**13 19 46.7**	**-0.3**
	28nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.01**	**241**	*e*Pn	**Pn**	**13 19 17.4**	**+1.2**
VIVF				*e*P		13 19 19.5	
VIVF				*e*Pg	**Pg**	**13 19 21.2**	**+0.2**
VIVF				*e*Sg	**Sg**	**13 19 46.7**	**-0.3**
VIVF	**Saint-Julien-l**	**2.01**	**241**	*e*P	**Pn**	**13 19 19.5**	**+3.3**
VIVF	**Saint-Julien-l**	**2.01**	**241**	*e*Pg	**Pg**	**13 19 21.2**	**+0.2**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**13 19 46.7**	**-0.3**
	14nm,0.2s,SNR=1.0						
MOF	**Molkenrain**	**2.01**	**360**	Pg	**Pg**	**13 19 21.4**	**+0.4**
FELD	**Feldberg im Sc**	**2.12**	**16**	Pn	**Pn**	**13 19 18.2**	**+0.5**
SMRF	**Simiane la Rot**	**2.18**	**211**	*e*Pn	**Pn**	**13 19 19.8**	**+1.3**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**13 19 53.6**	**+1.1**
	3.1nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**2.18**	**211**	*e*Pn	**Pn**	**13 19 19.8**	**+1.3**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**13 19 53.6**	**+1.1**
	1.5nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**2.23**	**346**	*e*Pg	**Pg**	**13 19 25.0**	**-0.3**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**13 19 53.7**	**-0.5**
	12nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**2.23**	**346**	*e*Pn	**Pn**	**13 19 19.8**	**+0.5**
HAU				*e*Pg	**Pg**	**13 19 25.0**	**-0.3**
HAU				*e*Sg	**Sg**	**13 19 53.7**	**-0.5**
HAU	**Haudompre**	**2.23**	**346**	*e*Pg	**Pg**	**13 19 25.0**	**-0.3**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**13 19 53.7**	**-0.5**
	5.8nm,0.3s,SNR=1.0						
FRF	**La Foret Royal**	**2.31**	**189**	*e*Pg	**Pg**	**13 19 26.6**	**-0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**13 19 57.4**	**+0.7**
	18nm,0.5s						
FRF	**La Foret Royal**	**2.31**	**189**	*e*Pg	**Pg**	**13 19 26.6**	**-0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**13 19 57.4**	**+0.7**
	8.8nm,0.5s						
SMF	**Signal de Mont**	**2.43**	**290**	*e*P	**Pn**	**13 19 25.2**	**+3.2**
SMF	**Signal de Mont**	**2.43**	**290**	*e*Pg	**Pg**	**13 19 29.1**	**0.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**13 19 59.5**	**-1.1**
	13nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.43**	**290**	*e*Pn	**Pn**	**13 19 22.8**	**+0.8**
SMF				*e*P		13 19 25.2	
SMF				*e*Pg	**Pg**	**13 19 29.1**	**0.0**
SMF				*e*Sg	**Sg**	**13 19 59.5**	**-1.1**
SMF	**Signal de Mont**	**2.43**	**290**	*e*P	**Pn**	**13 19 25.2**	**+3.2**
SMF	**Signal de Mont**	**2.43**	**290**	*e*Pg	**Pg**	**13 19 29.1**	**0.0**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**13 19 59.5**	**-1.1**
	6.4nm,0.2s,SNR=1.0						
THEF	**They Montfort**	**2.51**	**342**	Pg	**Pg**	**13 19 29.9**	**-0.8**
LMR	**La Mourre**	**2.55**	**191**	*e*Pg	**Pg**	**13 19 31.6**	**+0.2**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**13 20 04.7**	**+0.3**
	4.6nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.55**	**191**	*e*Pn	**Pn**	**13 19 24.9**	**+1.2**
LMR				*e*Pg	**Pg**	**13 19 31.6**	**+0.2**
LMR				*e*Sg	**Sg**	**13 20 04.7**	**+0.3**
LMR	**La Mourre**	**2.55**	**191**	*e*Pg	**Pg**	**13 19 31.6**	**+0.2**
	SNR=1.0						
LMR				*e*Sg	**Sg**	**13 20 04.7**	**+0.3**
	2.3nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**2.57**	**2**	*e*Pg	**Pg**	**13 19 31.1**	**-0.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**13 19 54.0**	**-1.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**13 20 03.2**	**-1.9**
	6.4nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	**2.57**	**2**	*e*Pn	**Pn**	**13 19 24.5**	**+0.5**
CDF				*e*Pg	**Pg**	**13 19 31.1**	**-0.7**
CDF				*e*Sn	**Sn**	**13 19 54.0**	**-1.1**
CDF				*e*Sg	**Sg**	**13 20 03.2**	**-1.9**
CDF	**Champ du Feu**	**2.57**	**2**	*e*Pg	**Pg**	**13 19 31.1**	**-0.7**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**13 19 54.0**	**-1.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**13 20 03.2**	**-1.9**
	3.2nm,0.4s,SNR=1.0						
LOR	**Lormes**	**2.68**	**303**	*e*Pn	**Pn**	**13 19 27.0**	**+1.5**
	baz=125,SNR=1.0						
LOR	**Lormes**	**2.68**	**303**	*e*Pg	**Pg**	**13 19 33.4**	**-0.5**
	baz=124,SNR=1.0						
LOR				*e*Sg	**Sg**	**13 20 06.7**	**-1.9**
	8.9nm,0.3s,SNR=1.0						
LOR	**Lormes**	**2.68**	**303**	*e*Pn	**Pn**	**13 19 27.0**	**+1.5**
LOR				*e*Pg	**Pg**	**13 19 33.4**	**-0.5**
LOR				*e*Sg	**Sg**	**13 20 06.7**	**-1.9**
LOR	**Lormes**	**2.68**	**303**	*e*Pg	**Pg**	**13 19 33.4**	**-0.5**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**13 20 06.7**	**-1.9**
	4.4nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**2.77**	**329**	*e*Pg	**Pg**	**13 19 35.5**	**0.0**
	baz=147						
SFTF				*e*Sn	**Sn**	**13 19 58.9**	**-1.1**
SFTF				*e*Sg	**Sg**	**13 20 10.4**	**-1.0**
	8.1nm,0.3s,baz=144						
SFTF	**Sexfontaines**	**2.77**	**329**	*e*Pg	**Pg**	**13 19 35.5**	**0.0**
SFTF				*e*Sn	**Sn**	**13 19 58.9**	**-1.1**
SFTF				*e*Sg	**Sg**	**13 20 10.4**	**-1.0**
	4.1nm,0.3s						
AVF	**Avril sur Loir**	**2.80**	**291**	*e*Pg	**Pg**	**13 19 35.9**	**-0.2**
AVF				*e*Sn	**Sn**	**13 19 59.8**	**-0.9**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**13 20 10.0**	**-2.3**
	3.6nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.80**	**291**	*e*Pn	**Pn**	**13 19 28.5**	**+1.5**
AVF				*e*Pg	**Pg**	**13 19 35.9**	**-0.2**
AVF				*e*Sn	**Sn**	**13 19 59.8**	**-0.9**
AVF				*e*Sg	**Sg**	**13 20 10.0**	**-2.3**
AVF	**Avril sur Loir**	**2.80**	**291**	*e*Pg	**Pg**	**13 19 35.9**	**-0.2**
AVF				*e*Sn	**Sn**	**13 19 59.8**	**-0.9**
	SNR=1.0						
SSF	**Saint Saulge**	**2.80**	**297**	*e*Pg	**Pg**	**13 19 35.7**	**-0.4**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**13 20 10.4**	**-1.9**
	13nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**2.80**	**297**	*e*Pn	**Pn**	**13 19 27.9**	**+0.8**
SSF				*e*Pg	**Pg**	**13 19 35.7**	**-0.4**
SSF				*e*Sg	**Sg**	**13 20 10.4**	**-1.9**
SSF	**Saint Saulge**	**2.80**	**297**	*e*Pg	**Pg**	**13 19 35.7**	**-0.4**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**13 20 10.4**	**-1.9**
	6.7nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**2.93**	**234**	*e*Pg	**Pg**	**13 19 37.6**	**-1.0**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**13 20 16.4**	**-0.2**
	2.6nm,0.4s						
LASF	**Ste Croix**	**2.93**	**234**	*e*Pn	**Pn**	**13 19 30.2**	**+1.3**
LASF				*e*Pg	**Pg**	**13 19 37.6**	**-1.0**
LASF				*e*Sg	**Sg**	**13 20 16.4**	**-0.2**
LASF	**Ste Croix**	**2.93**	**234**	*e*Pg	**Pg**	**13 19 37.6**	**-1.0**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**13 20 16.4**	**-0.2**
	1.3nm,0.4s						
RFYF	**Reffroy**	**3.01**	**338**	*e*Pg	**Pg**	**13 19 39.4**	**-0.8**
RFYF				*e*Sg	**Sg**	**13 20 17.5**	**-1.7**
	7.7nm,0.3s,baz=160						
RFYF	**Reffroy**	**3.01**	**338**	*e*Pg	**Pg**	**13 19 39.4**	**-0.8**
RFYF				*e*Sg	**Sg**	**13 20 17.5**	**-1.7**
	3.8nm,0.3s						
MEZF	**Maizieres J'vi**	**3.02**	**332**	*e*P	**Pn**	**13 19 33.7**	**+3.6**
BGF	**Bois d'Agland**	**3.07**	**285**	*e*Pg	**Pg**	**13 19 40.7**	**-0.7**
BGF				*e*Sn	**Sn**	**13 20 08.8**	**+1.3**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**13 20 20.8**	**-0.3**
	12nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.07**	**285**	*e*Pn	**Pn**	**13 19 32.5**	**+1.7**
BGF				*e*Pg	**Pg**	**13 19 40.7**	**-0.7**
BGF				*e*Sn	**Sn**	**13 20 08.8**	**+1.3**
BGF				*e*Sg	**Sg**	**13 20 20.8**	**-0.3**
BGF	**Bois d'Agland**	**3.07**	**285**	*e*Pg	**Pg**	**13 19 40.7**	**-0.7**
BGF				*e*Sn	**Sn**	**13 20 08.8**	**+1.3**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**13 20 20.8**	**-0.3**
	6.2nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.47**	**279**	*e*Sn	**Sn**	**13 20 16.7**	**-0.5**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**13 20 32.4**	**-1.4**
	6.7nm,0.3s						
TCF	**Toulx Ste Croi**	**3.47**	**279**	*e*Sn	**Sn**	**13 20 16.7**	**-0.5**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**13 20 32.4**	**-1.4**
	3.3nm,0.3s						
CAF	**Calviac**	**3.70**	**257**	*e*Sg	**Sg**	**13 20 40.0**	**-1.2**
	3.1nm,0.3s						
CAF	**Calviac**	**3.70**	**257**	*e*Sg	**Sg**	**13 20 40.0**	**-1.2**
	1.5nm,0.3s						
MTLF	**Montolieu**	**4.32**	**236**	*e*Pn	**Pn**	**13 19 48.3**	**+0.3**
LDF	**La Druitiere**	**5.67**	**302**	*e*Pn	**Pn**	**13 20 07.7**	**+1.2**
LDF				*e*Pg	**Pg**	**13 20 28.3**	**-2.6**
GRR	**Gorron**	**6.03**	**298**	*e*Pn	**Pn**	**13 20 11.3**	**-0.1**

WEL 29 13:22:35.9±0.1, 3668S×17759E, h182km±1km, ML3.5/6, Error ellipse: s-maj=2.2km s-min=1.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**1.49**	**159**	PN	Pn	13 23 08.0	+0.1
PUZ				SN	Sn	13 23 32.0	-0.8
URZ	**Urewera**	**1.62**	**193**	PN	Pn	13 23 09.5	+0.4
URZ				SN	Sn	13 23 35.2	+0.1
MWZ	**Matawai**	**1.66**	**182**	PN	Pn	13 23 09.7	+0.2
MWZ				SN	Sn	13 23 36.1	+0.5
KNZ	**Kokohu**	**2.34**	**178**	PN	Pn	13 23 16.9	+0.1
KNZ				SN	Sn	13 23 47.8	-0.9
BKZ	**Black Stump Fm**	**2.63**	**199**	PN	Pn	13 23 20.4	+0.3
BFZ	**Birch Farm**	**4.13**	**194**	PN	Pn	13 23 38.1	-0.5
MRZ	**Mangatainoka R**	**4.28**	**201**	PN	Pn	13 23 39.4	-1.0
TIWZ	**Tintock**	**4.30**	**197**	PN	Pn	13 23 39.8	-1.0

*IDC **29** 13:30:09.0±0.8, 1109N×12574E, h0km, mb4.0/10, mb1 4.1/10, mb1mx4.0/19, mbtmp4.0/10, Error ellipse: s-maj=47.0km s-min=17.2km az=73.0*
*ISCJB **29** 13:30:17.6±0.8, 1107N±005×12568E±008, h80km±7km, mb4.0/10, Error ellipse: s-maj=13.1km s-min=7.9km az=0.1*
*MAN **29** 13:30:18, 1109N×12557E, h39km, mb4.6, ML3.5, MS3.4*

ISC 29 13:30:18.5±0.8, 1107N±005×12569E±008, h73km±7km, n28, σ1§04/30, mb4.0/10, 3C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.58**	**335**	*e*P	**Pn**	**13 30 32.8**	**+0.4**
PLP	**Palo**	**0.70**	**278**	*e*P	**Pn**	**13 30 31.8**	**-1.9**
PLP				*i* S	**Sn**	**13 30 41.5**	**-3.4**
OCLP	**Ormoc**	**1.06**	**269**	*e*P	**Pn**	**13 30 37.5**	**-0.4**
MSLP	**Maasin**	**1.24**	**221**	*e*P	**Pn**	**13 30 40.2**	**0.0**
MSLP				*e*S	**Sn**	**13 30 57.9**	**+1.5**
CNP	**Catarman**	**1.75**	**325**	*e*P	**Pn**	**13 30 47.6**	**+0.7**
LLP	**Lapu-Lapu**	**1.85**	**246**	⇑*i*P	**Pn**	**13 30 47.2**	**-1.0**
LLP				*e*S	**Sn**	**13 31 08.4**	**-2.4**
TBP	**Tagbilaran**	**2.26**	**233**	*e*P	**Pn**	**13 30 53.6**	**-0.1**
PVCP	**Virac**	**2.92**	**329**	⇓*i*P	**Pn**	**13 31 02.5**	**-0.2**
PVCP				*i* S		13 31 08.3	
PVCP	**Virac**	**2.92**	**329**	*e*P	**Pn**	**13 31 02.5**	**-0.3**
PVCP				*e*S		13 31 09.5	
RCP	**Roxas**	**2.93**	**280**	⇑*e*P	**Pn**	**13 31 03.2**	**+0.5**
SNPH	**Sibulan**	**2.96**	**235**	*e*P	**Pn**	**13 31 03.0**	**-0.3**
GUIM	**Jordan**	**3.08**	**262**	*e*P	**Pn**	**13 31 04.8**	**0.0**
BUKP	**Musuan**	**3.23**	**191**	*e*P	**Pn**	**13 31 09.0**	**+2.1**
KALP	**Kalibo**	**3.34**	**281**	⇑*e*P	**Sn**	**13 31 48.5**	**+1.5**
OTRP	**Odiongan**	**3.82**	**290**	*e*P	**Pn**	**13 31 15.4**	**+0.5**
PAGZ	**Pagadian**	**3.93**	**216**	*e*P	**Pn**	**13 31 16.9**	**+0.5**
CAUP	**Cauayan**	**6.94**	**328**	*e*P	**Pn**	**13 31 58.0**	**+0.4**
WRA	**Warramunga Arr**	**31.97**	**165**	P	**P**	**13 36 36.7**	**-1.0**
	0.3nm,0.6s,mb3.2,baz=344,slow=9.2,SNR=2.6						

MAT				S	Sn	13 41 03.8	+1.7		
JHJ	**Hachijo jima 2**	**2.88**	**185**	Pn	Pn	13 40 59.1	+0.6		
	8.7nm,0.3s,baz=105,slow=20,SNR=6.3								
JHJ				Sn	Sn	13 41 32.1	0.0		
	31nm,0.3s,baz=74,slow=22,SNR=7.1								
SONM	**Songino Array**	**27.52**	**306**	P	P	13 45 52.5	-1.9		
	0.3nm,0.5s,mb3.1,baz=116,slow=9.7,SNR=5.1								
ZALV	**Zalesovo Beam**	**41.85**	**313**	P	P	13 47 56.8	-0.7		
	0.6nm,0.5s,mb3.5,baz=99,slow=6.5,SNR=4.5								
MKAR	**Makanchi Array**	**43.79**	**303**	P	P	13 48 13.2	-0.1		
	0.2nm,0.4s,mb3.2,baz=95,slow=10,SNR=5.3								
WRA	**Warramunga Arr**	**55.90**	**187**	P	P	13 49 45.3	+0.2		
	0.3nm,0.5s,mb3.6,baz=2.0,slow=7.5,SNR=3.7								
ASAR	**Alice Springs**	**59.62**	**187**	P	P	13 50 11.7	+0.5		
	0.1nm,0.5s,mb3.1,baz=359,slow=6.2,SNR=2.8								

CASC 29 13:55:51.4±3.0, 871N×8356W, h0km±5km, MD3.8, 3C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAR1		**0.58**	**25**↑	*e*P	Pg	13 56 03.4	+0.7
BUS	**Buena Vista**	**0.86**	**347**	*e*P	Pg	13 56 08.5	+0.5
BUS				*e*S	Sg	13 56 24.5	+5.4
TBS2		**0.90**	**85**	*e*P	Pg	13 56 15.8	+7.1
TBS2				*e*S	Sg	13 56 30.0	+10
BRU	**Baru**	**0.99**	**84**	*e*P	Pg	13 56 10.4	-0.1
BRU				*e*S	Sg	13 56 27.4	+3.9
LCR2	**La Lucha 2**	**1.11**	**337**↑	*e*P	Pg	13 56 11.9	-0.8
LCR2				*e*S	Sg	13 56 28.5	+1.3
URSC	**Urasca**	**1.14**	**349**↓	*e*P	Pg	13 56 12.9	-0.4
CNI	**Changuinola**	**1.25**	**56**↓	*i*P	Pg	13 56 15.2	-0.2
CNI				*e*S	Sg	13 56 34.0	+2.4
LAJ	**Bijagual**	**1.27**	**334**	*e*P	Pg	13 56 16.9	+1.0
PRS1	**Puriscal**	**1.46**	**330**	*e*P	Pn	13 56 17.0	-2.1
PRS1				*e*S	Sg	13 56 36.9	-1.7
CGA2	**Cerro Gallo 2**	**1.57**	**326**↓	*e*P	Pn	13 56 19.6	-1.0
CGA2				*e*S	Sn	13 56 41.8	+0.1
JCR	**Jicaral**	**1.90**	**307**	*e*P	Pn	13 56 25.3	+0.2
JCR				*e*S	Sn	13 56 50.3	+0.5
CUI		**2.51**	**321**↑	*i*P	Pn	13 56 34.5	+1.1
CUI				*e*S	Sn	13 57 08.7	+3.9
LAPE	**La Pedrera**	**11.92**	**95**	*e*P		13 56 37.1	
LAPE				*e*S		13 57 10.5	
PTP	**Ponta Puerca**	**19.84**	**60**	*e*P		13 56 06.8	
PTP				*e*S		13 56 21.4	

PGC 29 13:56:16.3±0.4, 5110N×13074W, h10km, ML2.9/4, Mw3.5, 215km Wsw of Bella Bella, Bc Queen Charlotte Islands Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.72**	**105**	Pn	Pn	13 56 45.0	-1.2
BBB	**Bella Bella**	**1.96**	**55**	Trac			
BBB	**Bella Bella**	**1.96**	**55**	Pn	Pn	13 56 48.2	-1.4
BBB				Sn	Sn	13 57 09.7	-4.5
PHC	**Port Hardy**	**2.13**	**99**	Trac			
PHC	**Port Hardy**	**2.13**	**99**	Pn	Pn	13 56 49.1	-2.8
PHC				Sn	Sn	13 57 14.8	-3.6
MOBC	**Moresby Island**	**2.21**	**342**	Pn	Pn	13 56 51.0	-2.1
MAYB	**Maynard**	**2.37**	**106**	Trac			
MAYB	**Maynard**	**2.37**	**106**	Pn	Pn	13 56 53.5	-1.7
WOSB	**Woss**	**2.82**	**108**	Trac			
WOSB	**Woss**	**2.82**	**108**	Pn	Pn	13 56 59.6	-1.7

*ISCJB **29** 14:11:00.7±1.0, 3840N×2042E×008, h2km, Error ellipse: s-maj=9.2km s-min=4.6km az=161.4*
*CSEM **29** 14:11:01.6±0.4, 3841N×2035E, h2km, MD3.3, Error ellipse: s-maj=8.8km s-min=3.8km az=70.0*
*THE **29** 14:11:01.3, 3844N×2042E, h3km, ML3.5*
*ATH **29** 14:11:01.0, 3834N×2039E, h12km±2km, MD3.3/4*
*NEIC **29** 14:11:01.3, 3844N×2042E, h0km, MD3.3(ATH), ML3.5(THE), After THE.*

ISC 29 14:11:00.3±1.5, 3839N±004×2035E±010, h4km±11km, n12, σ0$81/17, 3C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**139**↑	*i*PG	**Pg**	14 11 05.8	**0.0**
VLS				*e*SG	**Sg**	14 11 10.1	**+0.6**
LKD	**Levkas**	**0.39**	**36**	*e*Pg	**Pg**	14 11 07.1	**-0.7**
LKD				*e*Sg	**Sg**	14 11 13.0	**0.0**
KFL	**Anninata**	**0.44**	**129**	*e*Pg	**Pg**	14 11 08.4	**-0.4**
IGT	**Igoumenitsa**	**1.14**	**359**	*e*Pg	**Pn**	14 11 22.1	**-1.0**
SELA	**Sela**	**1.22**	**95**	*e*Pg	**Pg**	14 11 23.1	**-0.6**
SELA				*e*Sg	**Sg**	14 11 40.3	**+0.9**
EVR	**Evrytania**	**1.25**	**65**	*e*PB	**Pb**	14 11 24.8	**+0.2**
KEK	**Kerkira**	**1.39**	**342**↓	*i*PB	**Pb**	14 11 28.2	**+1.3**
AGG	**Agios Georgios**	**1.67**	**67**	*e*Pg	**Pn**	14 11 29.0	**-1.4**
ITM	**Ithomi**	**1.74**	**134**↑	*i*PB	**Pb**	14 11 32.8	**0.0**
THL	**Klokotos Trika**	**1.75**	**47**↑	*i*PN	**Pn**	14 11 33.1	**+1.7**
VLX	**Vlachokerasia**	**1.90**	**122**	*e*Pn	**Pb**	14 11 35.4	**-0.2**
VLX				*e*Sb	**Sg**	14 12 01.0	**-0.4**
DID	**Didima**	**2.44**	**110**	*e*Pn	**Pg**	14 11 42.5	**-4.6**
DID				*e*Sn	**Sg**	14 12 13.4	**-5.5**

*NIED **29** 14:35:00, 3170N×13850E, h400km, Mw4.8 Best double couple: M0 1.89000×10^16 NP1:φs129.00000°, δ40.00000°, λ-130.00000°. NP2:φs357.00000°, δ60.00000°, λ-62.00000°.*
*BJI **29** 14:35:07.6, 3155N×138.11E, h373km, mB4.5, mb4.4*
*ISCJB **29** 14:35:08.6±0.3, 3146N±003×13835E±004, h395km±2km, mb4.3/80, Error ellipse: s-maj=4.8km s-min=4.4km az=15.9*
*MOS **29** 14:35:08.3±0.8, 3148N×138.16E, h387km, mb4.5/34, Error ellipse: s-maj=13.9km s-min=5.4km az=108.2*
*JMA **29** 14:35:09.4±0.5, 3167N×13850E, h412km±5km, M4.6*
*NEIC **29** 14:35:10.1±0.5, 3149N×138.19E, h390km±5km, mb4.4/39, Error ellipse: s-maj=6.6km s-min=4.6km az=108.0*
*IDC **29** 14:35:10.2±0.6, 3152N×13821E, h391km±5km, mb3.8/19, mb1 3.9/25, mb1mx3.9/30, mbtmp3.9/25, Error ellipse: s-maj=9.7km s-min=8.1km az=87.0*

ISC 29 14:35:10.2±0.3, 3152N±003×13826E±004, h392km±2km, h396km±11.3km; pP-P, n203, σ0$90/240, mb4.3/80, 15C-10D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.05**	**39**	P	**Pn**	14 36 05.8	**+0.2**
	307nm,0.3s,baz=226,slow=16,SNR=185						
JHJ				S	**S**	14 36 50.6	**+0.2**
	1μm,0.3s,baz=66,slow=19,SNR=14						
JHJ2	**Mitsune**	**2.06**	**39**	P	**Pn**	14 36 05.8	**+0.1**
TK01	**Tokai 1**	**2.31**	**346**	P	**Pn**	14 36 08.3	**+0.9**
TK01				*e*S	**S**	14 36 54.9	**+1.3**
TK02	**Tokai 2**	**2.46**	**350**	P	**Pn**	14 36 09.8	**+1.4**
JMY	**Miyakejima3**	**2.75**	**22**	P	**Pn**	14 36 10.6	**-0.1**
JWZ	**Kozaga**	**2.94**	**314**	P	**Pn**	14 36 12.9	**+0.7**
JWZ				S	**S**	14 37 02.3	**-0.1**
JIE	**Ise**	**3.15**	**336**	P	**Pn**	14 36 14.9	**+1.0**
JIE				S	**S**	14 37 05.8	**+0.3**
JWY	**Kouya**	**3.50**	**321**	P	**Pn**	14 36 18.2	**+1.1**
JWY				S	**S**	14 37 11.5	**+0.3**
JOD2	**Odawara 2**	**3.80**	**10**	P	**Pn**	14 36 19.1	**-0.6**
JOD2				S	**S**	14 37 14.6	**-1.5**
BSO1	**Boso 1**	**3.87**	**35**	P	**Pn**	14 36 18.7	**-1.7**
BSO1				S	**S**	14 37 13.2	**-4.2**
JYN	**Shimob**	**3.97**	**3**	P	**Pn**	14 36 21.7	**+0.3**
JRY	**Ryogami san**	**4.52**	**7**	P	**Pn**	14 36 26.5	**-0.2**
JRY				S	**S**	14 37 25.4	**-3.5**
JTO	**Tosashimizu**	**4.81**	**288**	P	**Pn**	14 36 30.4	**+0.6**
MJAR	**Matsushiro Arr**	**5.01**	**360**	P	**Pn**	14 36 31.1	**-0.6**
	28nm,0.3s,baz=172,slow=11,SNR=380						
MJAR				S	**S**	14 37 35.0	**-3.1**
	9.2nm,0.3s,baz=170,slow=16,SNR=5.3						
MAJO	**Matsushiro**	**5.01**	**360**↑	*e*Pn	**Pn**	14 36 31.0	**-0.8**
	213nm,0.5s						
MAJO	**Matsushiro**	**5.01**	**360**↑	*e*P	**Pn**	14 36 31.0	**-0.8**
MAJO				pmax	pmax		
	comp=Z,213nm,0.5s						
MAT	**Matsushiro**	**5.01**	**360**	P	**Pn**	14 36 31.4	**-0.4**
MAT				S	**S**	14 37 34.9	**-3.2**
JHS	**Saijyo**	**5.53**	**310**	P	**Pn**	14 36 38.7	**+1.4**
CBIJ	**Chichi jima**	**5.58**	**141**	P	**Pn**	14 36 34.5	**-3.6**
CBIJ	**Chichi jima**	**5.58**	**141**	P	**Pn**	14 36 34.6	**-3.5**
	comp=Z,34nm,0.3s,baz=269,slow=22,SNR=25						
CBIJ				S	**S**	14 37 43.2	**-6.3**
	comp=Z,290nm,0.3s,baz=285,slow=22,SNR=36						
JNU	**Nakatsue**	**6.45**	**286**	P	**Pn**	14 36 48.8	**+1.3**
	comp=Z,5.0nm,0.3s,baz=86,slow=14,SNR=26						
JNU				S	**S**	14 38 07.5	**+0.8**
	baz=120,slow=20,SNR=3.1						
JMK	**Ichinoseki**	**7.80**	**17**	P	**Pn**	14 37 01.6	**-1.0**
JMK				S	**S**	14 38 28.6	**-6.0**
JOW	**Kunigami**	**9.89**	**244**	P	**Pn**	14 37 27.9	**+0.8**
	comp=Z,4.5nm,0.3s,baz=79,slow=12,SNR=16						
JOW				S	**S**	14 39 18.8	**-0.8**
	comp=Z,0.2nm,0.3s,baz=144,slow=19,SNR=1.8						
JOT	**Ohata**	**10.09**	**12**	P	**Pn**	14 37 29.2	**+0.1**
KSRS	**Korea Array**	**10.38**	**308**	P	**Pn**	14 37 32.3	**-0.2**
	comp=Z,1.6nm,0.3s,baz=123,slow=11,SNR=29						
KSRS				S	**S**	14 39 30.2	**+1.0**
	baz=124,slow=22,SNR=3.6						
INCN	**Inchon**	**11.28**	**305**	*e*P	**Pn**	14 37 42.6	**-0.4**
	comp=Z,67nm,1.1s						
VLA	**Vladivostok**	**12.63**	**338**	*i*P	**P**	14 37 58.2	**+1.2**
ASAJ	**Asahikawa**	**13.03**	**14**	P	**P**	14 38 02.3	**+1.0**
ASAJ				S	**S**	14 40 21.6	**-1.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ	**Asahikawa**	**13.03**	**14**	P	**P**	14 38 02.3	**+1.0**
	comp=N,3.8nm,0.3s,baz=215,slow=10,SNR=39						
ASAJ				S	**S**	14 40 21.6	**-1.3**
	comp=N,0.8nm,0.3s,baz=51,slow=24,SNR=7.7						
MDJ	**Mudanjiang**	**14.73**	**335**	P	**P**	14 38 20.0	**+0.1**
MDJ				S	**S**	14 40 58.3	**+1.3**
MDJ				SCP	ScP	14 46 01.8	+1.9
MDJ				PCS	PcS	14 46 40.0	+1.0
MDJ				SCS	ScS	14 49 39.8	+2.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,60nm,4.0s						
MDJ				LR	LR		
	comp=N,92nm,13.2s						
MDJ				LR	LR		
	comp=E,82nm,12.6s						
MDJ				LR	LR		
	comp=Z,117nm,15.0s						
DL2	**Dalian**	**15.45**	**303**	P	**P**	14 38 25.5	**-2.3**
DL2				*e*XP		14 39 58.0	
DL2				S	**S**	14 41 11.3	**0.0**
DL2				AMB	AMB		
	comp=Z,20nm,1.0s						
DL2				AMB	AMB		
	comp=Z,100nm,4.0s						
YSS	**Yuzh-Sakhalins**	**15.80**	**11**↑	*i*P	**P**	14 38 31.9	**+0.5**
	comp=Z,43nm,0.4s						
YSS				*e*S	**S**	14 41 19.4	**+1.5**
YSS	**Yuzh-Sakhalins**	**15.80**	**11**↓	*i*P	**P**	14 38 32.8	**+1.4**
YSS				*e*S	**S**	14 41 17.3	**-0.6**
YSS				smax			
	comp=N,70nm,1.1s						
YSS				smax			
	comp=E,40nm,1.1s						
CN2	**Changchun**	**15.89**	**324**	*e*P	**P**	14 38 32.8	**+0.4**
CN2				*e*S	**S**	14 41 20.0	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
YHNB	**Yeheng**	**16.38**	**250**	*e*P	**P**	14 38 35.6	**-2.3**
NACB	**Ninganchiao**	**16.44**	**248**	*e*P	**P**	14 38 36.4	**-2.3**
NJ2	**Nanjing**	**16.51**	**277**	*e*P	**P**	14 38 38.3	**-1.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s						
HABR	**Khabarovsk**	**17.11**	**353**↑	*i*P	**P**	14 38 43.9	**-1.5**
HABR				*e*S	**S**	14 41 42.2	**-1.3**
HABR				pmax	pmax		
	comp=Z,40nm,1.0s						
UGL	**Uglegorsk**	**17.77**	**8**	*e*P	**P**	14 38 54.0	**+1.6**
UGL				*e*S	**S**	14 42 02.0	**+5.7**
UGL				pmax	pmax		
	comp=Z,74nm,0.9s						
UGL				smax			
	comp=N,600nm,6.0s						
UGL				smax			
	comp=E,700nm,6.0s						
KLR	**Kul'dur**	**18.36**	**346**	*e*P	**P**	14 38 54.0	**-4.6**
BJI	**Beijing**	**19.79**	**302**	P	**P**	14 39 12.3	**-0.9**
BJI				XP	sP	14 40 56.0	-3.9
BJI				S	**S**	14 42 30.5	**-1.3**
BJI				AMB	AMB		
	comp=Z,10.0nm,1.5s						
BJI				AMB	AMB		
	comp=Z,108nm,3.6s						
HIA	**Hailar**	**22.55**	**327**	*e*P	**P**	14 39 38.4	**+0.3**
	comp=Z,59nm,1.1s,mb4.9						
HIA	**Hailar**	**22.55**	**327**	*e*P	**P**	14 39 38.4	**+0.3**
HIA				pmax	pmax		
	comp=Z,59nm,1.1s						
HHC	**Hu-ho-hao-te**	**23.40**	**301**	*e*P	**P**	14 39 45.8	**-0.1**
HHC				XP	sP	14 41 36.3	-2.9
HHC				PCP	PcP	14 43 22.3	+2.8
HHC				S	**S**	14 43 24.5	**-5.0**
HHC				SCP	ScP	14 46 22.0	+2.3
HHC				PCS	PcS	14 47 00.8	+1.7
HHC				AMB	AMB		
	comp=Z,22nm,0.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,76nm,5.0s						
BTO	**Baotou**	**24.48**	**300**	*e*P	**P**	14 39 55.0	**-0.6**
XAN	**Xi'an**	**24.76**	**284**	P	**P**	14 39 57.3	**-0.9**
XAN				AMB	AMB		
	comp=Z,9.0nm,1.2s,mb4.1						
GYA	**Guiyang**	**28.04**	**268**	P	**P**	14 40 28.0	**+0.6**
GYA				AP		14 41 37.8	
GYA				XP	sP	14 42 22.0	-2.3
GYA				PCP	PcP	14 43 33.3	+2.8
GYA				S	**S**	14 44 43.5	**+0.7**
GYA				SCP	ScP	14 46 36.0	+2.5
GYA				XS	sS	14 46 48.0	-6.3
GYA				PCS	PcS	14 47 14.3	+1.0
GYA				SCS	ScS	14 50 27.8	+0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
QIZ	**Qiongzhong**	**28.45**	**251**	P	**P**	14 40 29.3	**-1.8**
QIZ				AP		14 41 41.8	
QIZ				S	**S**	14 44 49.5	**0.0**
QIZ				AMB	AMB		
	comp=Z,13nm,1.4s,mb4.1						
QIZ				AMB	AMB		
	comp=Z,51nm,5.4s						
ULN	**Ulaanbaatar**	**28.78**	**314**↓	*i*P	**P**	14 40 33.5	**-0.1**
	comp=Z,24nm,1.0s,mb4.5						
ULN				*e*PcP	PcP	14 43 33.0	+1.0
ULN	**Ulaanbaatar**	**28.78**	**314**↓	*i*P	**P**	14 40 33.5	**-0.1**
ULN				*e*		14 43 33.0	
ULN				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.5						
LZH	**Lanzhou**	**28.86**	**288**	*e*P	**P**	14 40 34.5	**0.0**
LZH				AP		14 41 39.5	
LZH				XP	sP	14 42 26.0	-5.7
LZH				AMB	AMB		
	comp=Z,23nm,1.0s,mb4.5						
LZH				AMB	AMB		
	comp=Z,89nm,4.1s						
SONM	**Songino Array**	**29.18**	**313**	P	**P**	14 40 36.9	**-0.2**
SONM						14 43 32.2	
SONM	**Songino Array**	**29.18**	**313**	P	**P**	14 40 36.9	**-0.2**
	comp=Z,6.1nm,0.6s,mb4.1,baz=118,slow=7.8,SNR=58						
SONM				PcP	PcP	14 43 32.2	-0.8
	comp=Z,1.6nm,0.7s,baz=134,slow=3.1,SNR=5.4						
SONM				ScP	ScP	14 46 37.1	+0.4
	comp=Z,2.6nm,0.9s,baz=136,slow=2.9,SNR=13						
MA2	**Magadan**	**29.29**	**13**	*e*P	**P**	14 40 38.4	**+0.4**
	comp=Z,38nm,0.8s,mb4.8						
MA2	**Magadan**	**29.29**	**13**↑	*i*P	**P**	14 40 38.4	**+0.5**
MA2				pmax	pmax		
	comp=Z,37nm,0.7s,mb4.8						
CD2	**Chengdu**	**29.44**	**278**	*e*P	**P**	14 40 39.3	**-0.4**
CD2				XP	sP	14 42 33.5	-3.4
CD2				PCP	PcP	14 43 34.8	+0.7
CD2				S	**S**	14 45 05.8	**+1.1**
CD2				XS	sS	14 47 11.0	-5.6
CD2				SCS	ScS	14 50 32.0	-1.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
CD2				AMB	AMB		
	comp=Z,20nm,5.4s						
YAK	**Yakutsk**	**31.03**	**352**	*e*P	**P**	14 40 52.5	**-0.6**
	comp=Z,15nm,0.9s,mb4.3						
YAK	**Yakutsk**	**31.03**	**352**	*e*P	**P**	14 40 52.5	**-0.5**
YAK				*e*S	**S**	14 45 26.5	**-1.9**
YAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.3						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				smax			
	comp=N,200nm,4.4s						
YAK				smax			
	comp=E,100nm,4.6s						
BOD	**Bodaibo**	**31.11**	**335**	*e*P	**P**	14 40 51.6	**-2.2**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb3.6						
KMI	**Kunming**	**31.81**	**267**	P	**P**	14 41 03.0	**+2.6**
KMI				AMB	AMB		
	comp=Z,6.0nm,0.7s,mb4.0						
ZAK	**Zakamensk**	**32.04**	**316**	*i*P	**P**	14 41 02.0	**0.0**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.7						
GTA	**Gaotai**	**32.10**	**295**	*e*P	**P**	14 41 02.0	**-0.6**
GTA				AP	pP	14 42 13.0	-1.9
GTA				XP	sP	14 42 57.3	-3.1
GTA				PCP	PcP	14 43 41.5	+0.5
GTA				S	**S**	14 45 40.0	**-5.6**
GTA				SCP	ScP	14 46 51.8	+5.2
GTA				PCS	PcS	14 47 28.3	+2.0
GTA				XS	sS	14 47 48.0	-10
GTA				SCS	ScS	14 50 42.0	-4.4
GTA				AMB	AMB		
	comp=Z,9.0nm,1.6s,mb3.9						
GTA				AMB	AMB		
	comp=Z,115nm,9.1s						
GTA				LR	LR		
	comp=N,96nm,7.6s						
GTA				LR	LR		
	comp=E,76nm,6.9s						
GTA				LR	LR		
	comp=Z,82nm,11.5s						
TLY	**Talaya**	**32.36**	**319**	*e*P	**P**	14 41 05.2	**+0.5**
	comp=Z,3.4nm,0.7s,mb3.8						
TLY	**Talaya**	**32.36**	**319**	*e*P	**P**	14 41 05.6	**+0.9**
TLY				*e*S	**S**	14 45 47.1	**-2.2**
TLY				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.1						
SEY	**Seymchan**	**32.70**	**12**↓	*e*P	**P**	14 41 07.5	**0.0**
MOY	**Mondy**	**33.87**	**317**	*e*P	**P**	14 41 18.1	**+0.5**
KSM	**Kuching**	**39.88**	**227**	*e*P	**P**	14 42 08.3	**+0.2**
BILL	**Bilibino**	**40.04**	**16**	*e*P	**P**	14 42 09.5	**+0.9**
	comp=Z,28nm,0.9s,mb4.6						
BILL	**Bilibino**	**40.04**	**16**↓	*i*P	**P**	14 42 08.7	**+0.1**
BILL				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.5						
TIXI	**Tiksi**	**40.51**	**355**↑	*i*P	**P**	14 42 12.3	**-0.1**
	comp=Z,18nm,1.1s,mb4.3						
TIXI				*e*PcP	PcP	14 44 05.0	-0.9
TIXI	**Tiksi**	**40.51**	**355**↑	*i*P	**P**	14 42 11.6	**-0.8**
TIXI				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.2						
WMQ	**Urumqi**	**41.27**	**302**	P	**P**	14 42 18.5	**-0.4**
WMQ				AP	pP	14 43 33.5	-1.1
WMQ				PP	PP	14 44 04.0	-0.1
WMQ				PCP	PcP	14 44 10.0	+1.0
WMQ				XP	sP	14 44 15.8	-3.5
WMQ				SCP	ScP	14 47 22.5	+1.7
WMQ				PCS	PcS	14 48 00.5	-0.2
WMQ				S	**S**	14 48 03.5	**+0.5**
WMQ				AMB	AMB		
	comp=Z,19nm,1.0s,mb4.4						
BATI	**Kupang**	**43.78**	**201**	P	**P**	14 42 38.7	**-0.5**
	comp=Z,24nm,0.8s,mb4.6,baz=67,slow=3.8,SNR=5.3						
KULM	**Kulim**	**43.83**	**241**	P	**P**	14 42 39.8	**+0.1**
TAPN	**Taplejung**	**43.91**	**278**	*e*P	**P**	14 42 40.5	**+0.4**
	comp=Z,13nm,0.7s,mb4.4						
ZALV	**Zalesovo Beam**	**43.92**	**317**	P	**P**	14 42 38.9	**-0.9**
	comp=Z,2.9nm,0.4s,mb4.0,baz=98,slow=6.1,SNR=24						
ZALV				PcP	PcP	14 44 17.9	+0.1
	comp=Z,4.1nm,0.5s,baz=91,slow=3.3,SNR=12						
ZALV				ScP	ScP	14 47 30.6	-0.7
	comp=Z,1.5nm,0.6s,baz=101,slow=4.7,SNR=5.1						
ZAL	**Zalesovo**	**43.93**	**317**	P	**P**	14 42 38.9	**-1.0**
ZAL						14 44 17.9	
KAKA	**Kakadu**	**44.33**	**188**	*e*P	**P**	14 42 43.3	**-0.2**
	comp=Z,3.2nm,0.7s,mb3.8						
ODAN	**Odare**	**44.33**	**277**	*e*P	**P**	14 42 43.7	**+0.2**
	comp=Z,37nm,0.8s,mb4.8						
NVS	**Novosibirsk**	**44.96**	**318**	*i*P	**P**	14 42 47.3	**-0.6**
NVS				pmax	pmax		
	comp=E,19nm,1.7s						
NVS				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.3						
MK31	**Makanchi Array**	**45.06**	**306**	*i*P	**P**	14 42 48.4	**-0.4**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**45.06**	**306**	P	**P**	14 42 48.9	**+0.1**
MKAR						14 44 22.1	
MKAR				S	**S**	14 48 56.7	**-0.8**
MKAR	**Makanchi Array**	**45.06**	**306**	P	**P**	14 42 48.9	**+0.1**
	comp=Z,8.5nm,0.8s,mb4.1,baz=90,slow=9.0,SNR=66						
MKAR				PcP	PcP	14 44 22.1	+0.2
	comp=Z,1.2nm,0.5s,baz=69,slow=4.9,SNR=5.7						
MKAR				ScP	ScP	14 47 35.6	-0.6
	comp=Z,0.4nm,0.5s,baz=89,slow=4.9,SNR=5.1						
MKAR				S	**S**	14 48 56.7	**-0.8**
	comp=Z,0.1nm,0.4s,baz=114,slow=32,SNR=2.6						
JIRN	**Jiri**	**45.10**	**279**	*e*P	**P**	14 42 50.3	**+0.9**
	comp=Z,67nm,0.8s,mb5.0						
KKN	**Kakani**	**45.83**	**280**	*e*P	**P**	14 42 55.3	**+0.3**
	comp=Z,27nm,0.8s,mb4.6						
GKN	**Gorkha**	**46.30**	**280**	*e*P	**P**	14 42 58.9	**+0.2**
	comp=Z,39nm,1.0s,mb4.7						
KOLN	**Koldanda**	**47.24**	**280**	*e*P	**P**	14 43 06.4	**+0.5**
	comp=Z,41nm,1.0s,mb4.7						
KURK	**Kurchatov**	**47.47**	**312**↓	*e*P	**P**	14 43 05.6	**-1.6**
	comp=Z,28nm,1.0s,mb4.5						
KURK	**Kurchatov**	**47.47**	**312**↓	*e*P	**P**	14 43 05.6	**-1.6**
KURK				pmax

WRA PcP PcP 14 44 45.9 +1.1
comp=Z,1.5nm,0.6s,baz=358,slow=4.2,SNR=6.0
WRA pP pP 14 45 00.0 +4.1
comp=Z,3.4nm,1.0s,baz=2.7,slow=7.6,SNR=5.6
EKS2 Erkin-Say 51.49 302 *eP* **P 14 43 37.3 -0.1**
comp=Z,5.1nm,1.0s,mb3.7
EKS2 *e*PcP PcP 14 44 45.2 -0.1
AML Almayashu 51.64 301 *eP* **P 14 43 39.4 +0.9**
comp=Z,19nm,0.6s,mb4.5
AML *e*PcP PcP 14 44 45.9 0.0
AML Almayashu 51.64 301 P **P 14 43 39.6 +1.1**
SNR=8.6
CTAO Charters Tower 51.88 170 *eP* **P 14 43 40.2 -0.1**
comp=Z,4.8nm,0.9s,mb3.7
CTAO Charters Tower 51.88 170 *eP* **P 14 43 40.3 -0.1**
CTAO pmax pmax
comp=Z,5.0nm,0.9s,mb3.7
BRVK Borovoye 52.55 315⇑ *iP* **P 14 43 44.8 -0.1**
comp=Z,19nm,1.1s,mb4.2
BRVK *e*PcP PcP 14 44 49.3 +0.2
BRVK Borovoye 52.55 315⇑ *iP* **P 14 43 44.8 -0.1**
BRVK *e* 14 44 49.3
BRVK pmax pmax
comp=Z,19nm,1.1s,mb4.2
KDAK Kodiak Island 52.98 39 P **P 14 43 48.2 +0.3**
comp=Z,11nm,0.7s,mb4.2,baz=294,slow=4.7,SNR=8.6
KK31 Karatay Array 53.77 303 *iP* **P 14 43 53.6 -0.2**
KK31 pmax pmax
comp=Z,9.0nm,0.4s,mb4.3
ASAR Alice Springs 55.03 185 P **P 14 44 02.6 -0.3**
comp=Z,1.7nm,0.6s,mb3.5,baz=14,slow=14,SNR=35
ASAR pP pP 14 45 28.3 +4.3
comp=Z,1.0nm,0.9s,baz=8.3,slow=6.6,SNR=3.4
COLA College 55.14 30 P **P 14 44 04.0 +0.8**
comp=Z,5.3nm,0.7s,mb3.9
COLA College 55.14 30 P **P 14 44 04.0 +0.8**
COLA pmax pmax
comp=Z,5.0nm,0.7s,mb3.9
MBWA Marble Bar 55.31 201 *eP* **P 14 44 04.8 -0.1**
comp=Z,11nm,0.7s,mb4.2
SVE Sverdlovsk 57.64 321 *iP* **P 14 44 19.9 -0.8**
SVE *e* 14 46 34.0
SVE *e*S **S 14 51 58.8 +11**
SVE pmax pmax
comp=Z,23nm,1.2s,mb4.4
PALK Pallekele 58.67 259 *eP* **P 14 44 27.3 -1.2**
comp=Z,12nm,1.2s,mb4.1
ARU Arti 58.84 320 *eP* **P 14 44 28.8 -0.2**
comp=Z,40nm,1.2s,mb4.6
ARU Arti 58.84 320⇓ *iP* **P 14 44 28.6 -0.3**
ARU pmax pmax
comp=Z,54nm,2.0s,mb4.5
INK Inuvik 60.48 25 *eP* **P 14 44 40.2 +0.5**
comp=Z,225nm,1.0s,mb5.5
INK Inuvik 60.48 25 P **P 14 44 40.0 +0.2**
INK pmax pmax
comp=Z,7.0nm,0.9s
INK Inuvik 60.48 25 P **P 14 44 40.0 +0.2**
comp=Z,7.0nm,0.9s,mb4.1,baz=286,slow=6.4,SNR=26
AKTK Aktyubinsk 60.49 314 P **P 14 44 39.9 -0.3**
AKTO Aktyubinsk 60.49 314 P **P 14 44 39.9 -0.3**
comp=Z,3.5nm,0.5s,mb4.0,baz=78,slow=14,SNR=9.9
STKA Stephens Creek 63.13 177 *eP* **P 14 44 57.8 +0.1**
comp=Z,2.4nm,0.6s,mb3.9
STKA Stephens Creek 63.13 177 P **P 14 44 57.8 +0.1**
comp=Z,3.5nm,0.6s,mb4.0,baz=346,slow=11,SNR=9.2
PRGR Permogore 64.00 328 *eP* **P 14 45 02.2 -0.8**
NWAO Narrogin (SRO) 67.11 199 *eP* **P 14 45 22.8 -0.1**
comp=Z,12nm,1.0s,mb4.5
NWAO Narrogin (SRO) 67.11 199 P **P 14 45 22.9 0.0**
NWAO pmax pmax
comp=Z,6.0nm,1.1s
NWAO Narrogin (SRO) 67.11 199 P **P 14 45 22.9 0.0**
comp=Z,6.3nm,1.1s,mb4.2,baz=28,slow=7.9,SNR=7.2
ARCES ARCESS Array B 68.23 340 P **P 14 45 30.1 +0.7**
comp=Z,6.1nm,0.7s,mb4.3,baz=64,slow=9.1,SNR=22
RES Resolute Bay 68.56 13 *eP* **P 14 45 32.4 +1.0**
comp=Z,347nm,1.0s
RES Resolute Bay 68.56 13 *eP* **P 14 45 32.4 +1.0**
RES pmax pmax
comp=Z,347nm,1.0s
JOF Joensuu 69.60 332 *ep* **P 14 45 37.1 -0.7**
comp=Z,3.9nm,0.4s,mb4.3
JOF Joensuu 69.60 332 *eP* **P 14 45 37.1 -0.7**
JOF pmax pmax
comp=Z,4.0nm,0.4s,mb4.3
YKA Yellowknife Ar 69.88 28 P **P 14 45 40.2 +0.7**
YKA Yellowknife Ar 69.88 28 P **P 14 45 40.2 +0.7**
comp=Z,3.4nm,0.8s,mb3.9,baz=296,slow=6.0,SNR=46
OBN Obninsk 70.95 323 *eP* **P 14 45 45.9 -0.2**
comp=Z,43nm,1.0s,mb4.9
OBN Obninsk 70.95 323⇑ *eP* **P 14 45 46.3 +0.2**
OBN *e* 14 48 28.9
OBN pmax pmax
comp=Z,53nm,1.5s,mb4.8
VRSR Storozhevoye 71.35 319 *eP* **P 14 45 48.7 +0.2**
VRSR pmax pmax
comp=Z,7.0nm,1.0s,mb4.2
VRSR pmax pmax
comp=N,6.0nm,0.9s
VRSR pmax pmax
comp=E,9.0nm,1.0s
KAF Kangasniemi 72.00 333 *ep* **P 14 45 51.4 -0.7**
comp=E,6.9nm,0.4s,mb4.5,baz=54,slow=5.5
KAF Kangasniemi 72.00 333 *eP* **P 14 45 51.4 -0.7**
KAF pmax pmax
comp=Z,7.0nm,0.4s,mb4.5
FINES FINESS Array B 72.46 332 *iP* **P 14 45 55.0 +0.1**
FINES pmax pmax
comp=Z,5.0nm,0.4s
FINES FINESS Array B 72.46 332 P **P 14 45 55.0 +0.1**
comp=Z,4.9nm,0.4s,mb4.4,baz=74,slow=5.6,SNR=58
KIV Kislovodsk 72.55 311 *eP* **P 14 45 56.2 +0.5**
comp=Z,9.4nm,0.8s,mb4.4
KIV Kislovodsk 72.55 311 *eP* **P 14 45 54.8 -0.9**
KIV pmax pmax
comp=Z,24nm,1.0s,mb4.7
KIV MLR MLR
comp=Z,79nm,19.0s
ANN Anapa 75.45 314 *eP* **P 14 46 11.2 -1.1**
ANN pmax pmax
comp=Z,43nm,1.3s,mb4.9
MIB Mutribah 75.80 296 *eP* **P 14 46 13.2 -1.3**
MIB AMb AMB 14 46 14.6
comp=Z,27nm,0.6s,mb5.1
KBD Kabd 75.82 296 *eP* **P 14 46 14.0 -0.7**
KBD AMb AMB 14 46 15.1
comp=Z,93nm,0.5s
NAY Al-Naaiem 76.13 296 *eP* **P 14 46 15.5 -0.9**
NAY AMb AMB 14 46 16.5
comp=Z,21nm,0.5s,mb5.0
RST Umm Al-Ruwaisa 76.20 296 *eP* **P 14 46 15.8 -1.0**
RST AMb AMB 14 46 17.2
comp=Z,30nm,0.7s,mb5.0
AKASG Malin Array Be 77.03 322 *iP* **P 14 46 20.8 -0.2**
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG Malin Array Be 77.03 322 P **P 14 46 20.5 -0.4**
comp=Z,6.5nm,0.4s,mb4.6,baz=49,slow=5.8,SNR=47
KIEV Kiev 77.05 322 *eP* **P 14 46 20.5 -0.6**
comp=Z,40nm,1.3s,mb4.9
KIEV Kiev 77.05 322 *eP* **P 14 46 20.5 -0.5**
KIEV pmax pmax
comp=Z,40nm,1.3s,mb4.9
MALT Malatya 78.08 308 *eP* **P 14 46 27.6 +0.6**
comp=Z,4.8nm,1.1s,mb4.0
MALT Malatya 78.08 308 *eP* **P 14 46 27.6 +0.6**
MALT pmax pmax
comp=Z,5.0nm,1.1s,mb4.1
MALT Malatya 78.08 308⇑ *iP* **P 14 46 28.3 +1.3**
SUW Suwalki 78.09 327 *eP* **P 14 46 27.3 +0.6**
NB2 NORSAR Subarra 78.22 337 P **P 14 46 27.1 -0.2**
comp=Z,18nm,1.1s,mb4.6,baz=43,slow=5.3
NB2 NORSAR Subarra 78.22 337 P **P 14 46 27.1 -0.2**
NB2 pmax pmax
comp=Z,18nm,1.1s,mb4.6
NOA NORSAR Array B 78.22 337 P **P 14 46 27.1 -0.2**
comp=Z,8.3nm,0.9s,mb4.3,baz=45,slow=5.3,SNR=20
FFC Flin Flon 79.76 31 *eP* **P 14 46 35.7 +0.1**
comp=Z,10nm,1.6s,mb4.2
FFC Flin Flon 79.76 31 *eP* **P 14 46 35.7 +0.1**
FFC pmax pmax
comp=Z,10.0nm,1.6s,mb4.2
FCC Fort Churchill 80.09 25 P **P 14 46 37.6 +0.3**
NVAR Mina Array Bea 80.44 51 P **P 14 46 41.3 +1.7**
comp=Z,1.4nm,0.9s,mb3.6,baz=293,slow=5.7,SNR=9.1

KWP Kalwaria 81.04 324 *eP* **P 14 46 43.9 +1.4**
VRI Vrincioaia 81.19 319⇓ *iP* **P 14 46 45.0 +1.7**
KOLS Kolonicke sedl 81.70 323 *iP* **P 14 46 46.3 +0.4**
comp=Z,13nm,1.4s,mb4.5
KOLS Kolonicke sedl 81.70 323 *i* P **P 14 46 46.3 +0.4**
KOLS pmax pmax
comp=Z,13nm,1.4s,mb4.5
MLR Muntele Rosu 81.85 319⇑ *iP* **P 14 46 47.5 +0.7**
STHS Stebnicka Huta 81.92 324 *eP* **P 14 46 47.5 +0.5**
comp=Z,8.4nm,1.4s,mb4.3
STHS Stebnicka Huta 81.92 324 *eP* **P 14 46 47.5 +0.5**
STHS pmax pmax
comp=Z,8.0nm,1.4s,mb4.3
TRPA Tarpa 82.07 322⇑ *iP* **P 14 46 48.7 +0.9**
OJC Ojcow 82.11 325 *eP* **P 14 46 47.2 -0.8**
CRVS Cervenica-Dubn 82.13 324 *iP* **P 14 46 48.2 0.0**
NIE Niedzica 82.38 324 *eP* **P 14 46 50.4 +1.0**
DRGR 82.82 321⇓ *iP* **P 14 46 52.3 +0.6**
HWUT Hardware Ranch 82.92 45 *eP* **P 14 46 54.4 +2.1**
comp=Z,6.9nm,1.0s,mb4.3
OKC Ostrava-Krasne 83.16 326 *eP* **P 14 46 53.8 +0.4**
KSP Ksiaz 83.36 327 *eP* **P 14 46 55.1 +0.8**
PDAR Pinedale Array 83.42 43 P **P 14 46 55.5 +0.7**
comp=Z,2.6nm,1.0s,mb3.9,baz=322,slow=1.3,SNR=15
MORC Moravsky Berou 83.49 326 *eP* **P 14 46 54.8 -0.2**
comp=Z,10.0nm,1.2s,mb4.4
MORC Moravsky Berou 83.49 326 *eP* **P 14 46 54.8 -0.2**
MORC pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
MORC Moravsky Berou 83.49 326⇑ *iP* **P 14 46 55.4 +0.4**
PSZ Piszkesteto 83.57 323 P **P 14 46 54.6 -0.8**
comp=Z,10nm,1.1s,mb4.5
PSZ Piszkesteto 83.57 323 P **P 14 46 54.6 -0.8**
PSZ pmax pmax
comp=Z,10.0nm,1.1s,mb4.5
DPC Dobruska-Polom 83.68 327 *eP* **P 14 46 56.4 +0.4**
UPC Upice 83.72 327 *eP* **P 14 46 56.6 +0.5**
VYHS Vyhne 83.72 324 *iP* **P 14 46 56.3 +0.1**
comp=Z,5.4nm,1.2s,mb4.2
VYHS Vyhne 83.72 324 *i* P **P 14 46 56.3 +0.1**
VYHS pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
VYHS Vyhne 83.72 324 *iP* **P 14 46 56.2 0.0**
PVCC Panska Ves 84.37 328 *eP* **P 14 46 59.4 0.0**
BRG Berggiesshubel 84.41 328 *eP* **P 14 46 54.8 -4.8**
BRG pmax pmax
comp=Z,2.0nm,0.6s,mb4.0
BRG Berggiesshubel 84.41 328 *e*(P) **P 14 46 54.8 -4.8**
comp=Z,3.0nm,0.6s,mb4.2
CLL Collm 84.52 329 *eP* **P 14 46 59.0 -1.1**
comp=Z,10.0nm,1.2s,mb4.4
CLL Collm 84.52 329 *eP* **P 14 46 59.0 -1.1**
CLL pmax pmax
comp=Z,10.0nm,1.2s,mb4.4
CLL Collm 84.52 329 *eP* **P 14 46 59.0 -1.1**
comp=Z,10.0nm,1.2s,mb4.4
CLL *e*PP PP 14 50 21.0 -0.2
MODS Modra-Piesok 84.57 325 *eP* **P 14 47 00.8 +0.4**
comp=Z,4.1nm,1.4s,mb4.0
MODS Modra-Piesok 84.57 325 *eP* **P 14 47 00.8 +0.4**
MODS pmax pmax
comp=Z,4.0nm,1.4s,mb4.0
PRU Pruhonice 84.76 327 *eP* **P 14 47 01.5 +0.2**
KHC Kasperske Hory 85.81 327 *eP* **P 14 47 06.4 -0.1**
GERES GERESS Array B 85.95 327 P **P 14 47 06.6 -0.6**
comp=Z,1.2nm,0.6s,mb3.8,baz=28,slow=6.0,SNR=8.9

*IDC **29** 14:40:40.3±0.4,3163S×7177W,h0km,mb5.2/16, mb1 5.3/19,mb1mx5.3/20,mbtmp5.2/19,ML4.7/3,MS5.2/13, Ms1 5.2/13,ms1mx4.9/19,Error ellipse: s-maj=21.3km s-min=11.4km az=82.0*
*MOS **29** 14:40:42.6±1.2,3159S×7203W,h22km,mb5.6/30, MS5.1/14, Error ellipse: s-maj=17.1km s-min=7.3km az=98.6*
*GUC **29** 14:40:42.8±0.7,3161S×7196W,h28km±3km,ML5.6*
*ISCJB **29** 14:40:43.7±0.9,3160S±002×7186W±006,h27km±6km, mb5.3/82,MS5.2/50,Error ellipse: s-maj=8.3km s-min=3.1km az=169.0*
*NEIC **29** 14:40:44.1±0.9,3159S×7184W,h25km±6km,mb5.4/66, MS5.2/33,ML5.6(GUC),Error ellipse: s-maj=7.1km s-min=2.6km az=80.0*
NEIC Felt [III] at Canela, Illapel, Los Vilos, Puchuncavi, Salamanca, Valparaiso and Vina del Mar; [II] at Coquimbo, La Ligua, La Serena, Petorca, San Felipe and Santiago.
*GCMT **29** 14:40:44.1±0.1,3163S×7216W,h27km,MW5.6/82, Moment Tensor Solution. s77,c131; s82,c190; Duration: 1s6 Moment tensor: Scale 10^17^Nm; Mrr 1.89±.04; Mθθ 0.23±.03; Mϕϕ -2.12±.03; Mrθ -0.49±.06; Mθϕ -0.49±.02; Mϕr -2.54±.10; Best double couple: M☉3.30400×10^17^ NP1:φs12.00000°,δ19.00000°, λ91.00000°. NP2:φs191.00000°,δ71.00000°,λ90.00000°. Principal axes: T 3.1400, Plg64.0000°, Azm101.0000°; N 0.3240, Plg0.0000°, Azm191.0000°; P -3.4670, Plg26.0000°, Azm281.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BJI **29** 14:40:44.0,3160S×7180W,h25km,mB5.4,Ms5.5,Msz5.3*
ISC 29 14:40:43.4±0.9,3159S±002×7180W±004,h15km±5km, h16km±2.9km:pP-P,n638,σ0s79/467,mb5.3/81,MS5.2/50, 98C-97D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.39**	**139**	⇓ *iP*	**Pg**	**14 40 35.4**	**-16**
CHNG				*i* S	**Sg**	**14 40 42.2**	**-14**
CMCH	**Combarbala**	**0.80**	**59**	⇑ *iP*	**Pg**	**14 40 59.6**	**+0.7**
CMCH				*i* S	**Sg**	**14 41 12.2**	**+2.9**
CMCH	**Combarbala**	**0.80**	**59**	⇑ *iP*	**Pg**	**14 40 59.6**	**+0.7**
CMCH				*i* S	**Sg**	**14 41 12.2**	**+2.9**
CMCH				AML	AML	14 41 14.2	
	comp=E,359μm,0.6s						
PACH	**Papudo**	**0.99**	**162**	⇓ *iP*	**Pb**	**14 41 01.1**	**-1.3**
PTCH	**Petorca**	**1.00**	**133**	⇓ *iP*	**Pb**	**14 41 02.3**	**-0.2**
PTCH				*i* S	**Sb**	**14 41 16.5**	**+1.1**
PTCH	**Petorca**	**1.00**	**133**	⇓ *iP*	**Pb**	**14 41 02.3**	**-0.2**
PTCH				*i* S	**Sb**	**14 41 16.5**	**+1.1**
PTCH				AML	AML	14 41 20.1	
	comp=N,265μm,0.6s						
OVCH	**Ovalle**	**1.10**	**28**	⇑ *iP*	**Pb**	**14 41 04.3**	**+0.1**
OVCH				*i* S	**Sb**	**14 41 20.1**	**+1.8**
IHA	**Instituto Hidr**	**1.44**	**175**	*eP*	**Pn**	**14 41 07.0**	**-2.0**
JACH	**Jahuel**	**1.49**	**137**	⇑ *iP*	**Pn**	**14 41 10.3**	**+0.5**
ROCH	**El Roble**	**1.53**	**154**	*eP*	**Pn**	**14 41 10.0**	**-0.3**
TLL	**Tololo Astrono**	**1.65**	**31**	⇑ *iP*	**Pn**	**14 41 12.6**	**+0.7**
TLL				*i* S	**Sn**	**14 41 38.0**	**+5.0**
TLL	**Tololo Astrono**	**1.65**	**31**	⇑ *iP*	**Pn**	**14 41 12.6**	**+0.7**
TLL				*i* S	**Sn**	**14 41 38.0**	**+5.0**
TLL				AML	AML	14 41 43.5	
	comp=N,61μm,0.8s						
LSCH	**La Serena**	**1.74**	**16**	*eP*	**Pn**	**14 41 13.5**	**+0.3**
LSCH				*i* S	**Sn**	**14 41 36.5**	**+1.4**
DSCH	**Colegio Aleman**	**2.08**	**150**	*iP*	**Pn**	**14 41 17.8**	**0.0**
SAN	**Santiago**	**2.09**	**153**	*eP*	**Pn**	**14 41 18.3**	**+0.3**
SAN				AML	AML	14 42 01.6	
	comp=N,24μm,0.7s						
CLCH	**Cerro Calan**	**2.09**	**150**	*eP*	**Pn**	**14 41 18.5**	**+0.5**
CLCH				AML	AML	14 41 55.6	
	comp=E,132μm,0.6s						
FCH	**Farellones**	**2.15**	**144**	⇑ *iP*	**Pn**	**14 41 19.5**	**+0.7**
FCH				*i* S	**Sn**	**14 41 47.9**	**+2.6**
FCH				AML	AML	14 41 51.9	
	comp=E,24μm,0.6s						
FSR	**Penalolen**	**2.17**	**151**	*eP*	**Pn**	**14 41 19.3**	**+0.2**
FSR				AML	AML	14 41 58.6	
	comp=N,92μm,0.7s						
TACH	**Talagante**	**2.18**	**161**	⇑ *iP*	**Pn**	**14 41 19.1**	**-0.1**
ANTU	**Antumapu**	**2.21**	**154**	*eP*	**Pn**	**14 41 19.2**	**-0.3**
ANTU				*i* S	**Sn**	**14 41 47.5**	**+0.9**
ANTU	**Antumapu**	**2.21**	**154**	*eP*	**Pn**	**14 41 19.2**	**-0.3**
ANTU				*i* S	**Sn**	**14 41 47.5**	**+0.9**
ANTU				AML	AML	14 42 01.5	
	comp=N,52μm,0.7s						
PCH	**Pirgue**	**2.30**	**152**	*eP*	**Pn**	**14 41 20.8**	**0.0**
YECH	**El Yeso**	**2.53**	**146**	*eP*	**Pn**	**14 41 24.8**	**+0.8**
YECH				*i* S	**Sn**	**14 41 56.9**	**+2.4**
YECH				AML	AML	14 42 16.6	
	comp=N,23μm,0.6s						
LMEL	**Las Melosas**	**2.62**	**150**	⇑ *iP*	**Pn**	**14 41 26.0**	**+0.7**

LMEL AML AML 14 42 13.9
comp=N,27μm,0.7s
LCO Las Campanas 2.74 21⇑ *eP* **Pn 14 41 26.8 0.0**
LCO *eP*b **Pb 14 41 31.3 -0.8**
LCO *e*Sn **Sn 14 41 58.9 -0.8**
LCO *e*Sg **Sg 14 42 10.3 -1.1**
CICH Cipreses 2.96 157⇓ *iP* **Pn 14 41 30.4 +0.5**
CFAA Coronel Fontan 3.04 91 Pn **Pn 14 41 34.9 +3.9**
CFAA Lg 14 42 17.0
CFAA LR LR 14 43 02.9
CFAA Coronel Fontan 3.04 91 Pn **Pn 14 41 34.9 +3.9**
comp=N,36nm,0.3s,baz=266,slow=11,SNR=344
CFAA Lg 14 42 17.0
comp=N,87nm,0.3s,baz=48,slow=3.4,SNR=11
CFAA LR LR 14 43 02.9
comp=N,7μm,18.5s,baz=110,slow=47
SFDO San Fernando 3.09 168⇓ *iP* **Pn 14 41 31.1 -0.6**
VACH Vallenar 3.13 17 *eP* **Pn 14 41 32.5 +0.2**
NICH Los Niches 3.44 172 *eP* **Pn 14 41 35.9 -0.6**
PLCA Paso Flores 9.18 174 Pn **Pn 14 42 54.2 -1.1**
PLCA Lg 14 45 27.9
PLCA LR LR 14 46 58.7
PLCA Paso Flores 9.18 174 Pn **Pn 14 42 54.2 -1.1**
comp=N,2.1nm,0.3s,baz=339,slow=13,SNR=86
PLCA Lg 14 45 27.9
comp=N,1.0nm,0.3s,baz=253,slow=19,SNR=2.8
PLCA LR LR 14 46 58.7
comp=N,12μm,20.3s,baz=349,slow=41
TRQA Tornquist 10.33 131 *ePn* **Pn 14 43 11.7 +0.6**
comp=N,17nm,0.6s
TRQA *e*Sn **Sn 14 45 04.7 -1.9**
TRQA *e*Sg Sn 14 46 07.7 +61
LPA La Plata 12.07 110 *deP* **Pn 14 43 34.0 -0.9**
LPA *e*PP 14 43 42.0
LPA *e*S **Sn 14 45 47.0 -2.2**
LPAZ La Paz 15.59 13 Pn **Pn 14 44 22.6 -0.2**
comp=N,1.0nm,0.3s,baz=179,slow=9.8,SNR=92
SIV San Ignacio 18.35 35 P **Pn 14 44 56.1 -1.3**
comp=N,1.5nm,0.3s,baz=228,slow=12,SNR=90
NNA Nana 20.05 345 *eP* **P 14 45 16.4 +0.2**
comp=N,80nm,1.2s
NNA Nana 20.05 345 P **P 14 45 16.6 +0.4**
comp=N,14nm,0.6s,baz=170,slow=11,SNR=5.0
NNA LR LR 14 51 21.3
comp=N,4μm,19.9s,MS4.8,baz=76,slow=32
EFI East Falkland 22.47 157 P **P 14 45 43.1 +1.2**
comp=N,1μm,0.9s,mb6.3,SNR=5.8
EFI East Falkland 22.47 157 *eP* **P 14 45 41.6 -0.4**
comp=N,146nm,0.8s,mb5.5
EFI LR LR
comp=Z,9μm,19.0s,MS5.2
EFI East Falkland 22.47 157 *eP* **P 14 45 41.6 -0.3**
EFI pmax pmax
comp=Z,146nm,0.8s,mb5.5
EFI MLR MLR
comp=Z,9μm,19.0s,MS5.2
USHA Ushuaia 23.36 175 P **P 14 45 50.3 -0.9**
comp=Z,94nm,0.8s,mb5.2,baz=331,slow=7.0,SNR=20
USHA LR LR 14 55 49.8
comp=Z,12μm,18.3s,MS5.4,baz=341,slow=39
ATAH Atahualpa 25.23 344 P **P 14 46 08.3 -0.6**
comp=Z,13nm,0.8s,mb4.5,baz=178,slow=7.4,SNR=8.1
ATAH LR LR 14 54 17.6
comp=Z,3μm,18.1s,MS4.9,baz=22,slow=32
PMSA Palmer Station 33.56 174 P **P 14 47 22.6 +0.1**
comp=Z,190nm,1.3s,mb5.9
ROSC El Rosal 36.32 356 P **P 14 47 47.4 +0.7**
comp=Z,13nm,0.4s,mb5.2,baz=130,slow=2.4,SNR=10
SDV Santo Domingo 40.26 2⇑ *eP* **P 14 48 18.3 -1.6**
comp=Z,31nm,1.0s,mb5.0
SDV LR LR
comp=Z,1μm,19.0s,MS4.7
RCBR Riachuelo 42.23 60 P **P 14 48 31.2 -5.1**
comp=Z,42nm,1.2s,mb4.9
BBGH Gun Hill 46.00 17 PFAKE 14 49 20.0 +14
BBGH LR LR
comp=Z,4μm,19.0s,MS5.4
TGUH Tegucigalpa,Un 47.75 340 *eP* **P 14 49 19.7 -0.4**
comp=Z,71nm,0.9s,mb5.7
TGUH LR LR
comp=Z,1μm,19.0s,MS4.8
CPD Cerro la Pandu 49.66 7 *eP* **P 14 49 32.5 -2.1**
comp=Z,37nm,1.0s,mb5.4
CPD Cerro la Pandu 49.66 7 *eP* **P 14 49 32.5 -2.2**
CPD pmax pmax
comp=Z,37nm,1.0s,mb5.4
MTP Monte Pirata 49.76 8 *eP* **P 14 49 32.3 -3.1**
SDDR Presa de Saban 50.28 1 *eP* **P 14 49 38.9 -0.4**
comp=Z,19nm,1.0s,mb5.1
SDDR LR LR
comp=Z,1μm,20.0s,MS5.0
VNA3 Neumayer Olymp 51.52 159 *e*Pdiff **P 14 49 47.8 -0.3**
VNA3 *e* 14 49 49.1
VNA3 *e* pP 14 49 50.7 -2.1
VNA3 *e* pP 14 49 53.4 +0.6
VNA3 *e* 14 49 57.7
VNA3 *e* 14 50 00.6
VNA3 *e* 14 50 04.8
VNA3 *e* 14 50 10.5
VNA3 *e* 14 51 01.5
VNA1 Neumayer--Stat 51.81 158 *e*Pdiff **P 14 49 51.2 +0.8**
VNA1 *e* 14 49 52.2
VNA1 *e* 14 49 53.3
VNA1 *e* pP 14 49 56.6 +1.6
VNA1 *e* 14 50 01.5
VNA1 *e* 14 50 04.5
VNA1 *e* 14 50 08.6
VNA1 *e* 14 50 14.2
VNA1 *e* 14 51 04.5
VNA2 Neumayer--Watz 52.16 158 *e*Pdiff **P 14 49 52.5 -0.4**
VNA2 *e* 14 49 53.9
VNA2 *e* pP 14 49 55.8 -1.8
VNA2 *e* pP 14 49 58.1 +0.5
VNA2 *e* 14 50 02.4
VNA2 *e* 14 50 06.5
VNA2 *e* 14 50 10.3
VNA2 *e* 14 50 16.5
VNA2 *e* 14 51 04.3
SNAA Sanae 53.74 159 *e*Pdiff **P 14 50 04.0 -0.6**
SNAA *e* 14 50 05.3
SNAA *e* pP 14 50 07.0 -2.3
SNAA *e* pP 14 50 09.4 +0.1
SNAA *e* 14 50 14.9
SNAA *e* 14 50 17.9
SNAA *e* 14 50 22.2
SNAA *e* 14 50 28.0
SNAA *e* 14 51 11.2
SNAA Sanae 53.74 159⇑ *eP* **P 14 50 03.1 -1.5**
SNAA Sanae 53.74 159 P **P 14 50 04.0 -0.6**
comp=Z,56nm,0.9s,mb5.5,baz=277,slow=6.9,SNR=114
TEIG Tepich 53.89 341⇑ *eP* **P 14 50 04.9 -1.3**
comp=Z,74nm,0.9s,mb5.6
TEIG LR LR
comp=Z,736nm,19.0s,MS4.8
RKT Rikitea 56.08 262 *e*S **S 14 58 07.0 -3.7**
comp=Z,1μm,28.2s
RKT *e*LR LR 15 06 44.5
comp=Z,2μm,26.0s,baz=120
MAIT Maitri 58.42 157 *eP* **P 14 50 35.7 -2.4**
QSPA South Pole Qui 58.64 180 *eP* **P 14 50 39.2 -0.2**
comp=Z,180nm,1.1s,mb6.0
QSPA *e* 14 50 46.6
DWPF Disney 60.07 350 PFAKE 14 51 00.0 +10
DWPF LR LR
comp=Z,738nm,19.0s,MS4.8
BBSR BB Station 63.97 7 *eP* **P 14 51 12.5 -3.5**
comp=Z,54nm,0.9s,mb5.6
BBSR LR LR
comp=Z,722nm,19.0s,MS4.9
SBA Scott Base 65.47 191 *eP* **P 14 51 24.6 -0.8**
comp=Z,87nm,1.6s,mb5.5
SBA Scott Base 65.47 191 *eP* **P 14 51 24.6 -0.8**
SBA pmax pmax
comp=Z,87nm,1.6s,mb5.5
GOGA Godfrey 65.58 349 *eP* **P 14 51 24.2 -2.3**
comp=Z,15nm,1.0s,mb5.0
GOGA *e* 14 51 35.2
GOGA *e*PP PP 14 53 56.4 +5.1
GOGA Godfrey 65.58 349 *eP* **P 14 51 24.2 -2.3**
GOGA *e* 14 51 35.2
GOGA *e* 14 53 56.4
GOGA pmax pmax
comp=Z,15nm,1.0s,mb5.0
LHS Liberty Hill 66.26 352 P **P 14 51 29.3 -1.5**

VNDA **Vanda** 66.50 191 P P 14 51 31.8 -0.2
comp=Z,9.7nm,1.2s,mb4.7,baz=143,slow=4.4,SNR=14
VNDA LR LR 15 19 45.7
comp=Z,625nm,18.1s,MS4.9,baz=129,slow=35
NATX **Nacogdoches** 66.62 339 P P 14 51 30.1 -3.1
comp=Z,107nm,1.5s,mb5.7
TAOE **Nuku Hiva Isla** 66.99 274 eS S 15 00 25.2 -4.2
comp=Z,2µm,24.8s
TAOE **Nuku Hiva Isla** 66.99 274 eLR LR 15 11 50.1
comp=Z,5µm,26.4s,baz=130
LTX **Lajitas** 67.74 330 PFAKE 14 51 50.0 +10
LTX LR LR
comp=Z,115nm,22.0s,MS4.1
SWET **Sewanee** 67.77 348⇓ eP P 14 51 39.3 -1.1
PLAL **Pickwick Lake** 67.96 346 eP P 14 51 40.2 -1.5
comp=Z,24nm,1.0s,mb5.2
SYO **Syowa Base** 68.03 159⇓ iP P 14 51 39.0 -2.8
SYO **Syowa Base** 68.03 159⇓ eSP sP 14 51 52.0 +3.6
TBI **Tubuai** 68.10 255 eS S 15 00 40.1 -2.4
comp=Z,854nm,23.8s
TBI **Tubuai** 68.10 255 eLR LR 15 12 20.4
comp=Z,3µm,25.8s,baz=105
MIAR **Mount Ida** 68.90 341 eP P 14 51 46.2 -1.4
comp=Z,39nm,1.3s,mb5.2
MIAR LR LR
comp=Z,577nm,20.0s,MS4.8
MIAR **Mount Ida** 68.90 341 eP P 14 51 46.2 -1.4
MIAR pmax pmax
comp=Z,39nm,1.3s,mb5.2
MIAR MLR MLR
comp=Z,577nm,20.0s,MS4.8
ELN **Prospectdale** 68.97 352 eP P 14 51 47.2 -0.7
WVT **Waverly** 69.02 346 eP P 14 51 46.5 -1.8
comp=Z,46nm,1.0s,mb5.4
WVT LR LR
comp=Z,582nm,22.0s,MS4.8
WVT **Waverly** 69.02 346 eP P 14 51 46.5 -1.7
WVT pmax pmax
comp=Z,46nm,1.0s,mb5.4
WVT MLR MLR
comp=Z,582nm,22.0s,MS4.8
MNTX **Cornudas Mount** 70.52 330 eP P 14 51 55.5 -2.1
comp=Z,23nm,1.1s,mb5.0
WMOK **Wichita Mounta** 70.69 337 eP P 14 51 57.2 -1.3
comp=Z,32nm,1.3s,mb5.1
WMOK LR LR
comp=Z,435nm,20.0s,MS4.7
WMOK **Wichita Mounta** 70.69 337 eP P 14 51 57.3 -1.3
WMOK pmax pmax
comp=Z,32nm,1.3s,mb5.1
WMOK MLR MLR
comp=Z,435nm,20.0s,MS4.7
PPT **Papeete** 70.81 261 eS S 15 01 10.6 -4.0
comp=Z,2µm,24.8s
PPT **Papeete** 70.81 261 eLR LR 15 13 38.6
comp=Z,1µm,24.2s,baz=109
PPT **Papeete** 70.81 261 LR LR 15 16 52.9
comp=Z,1µm,18.3s,MS5.3,baz=357,slow=31
MVL **Millersville** 71.35 356 eP P 14 52 02.6 +0.1
comp=Z,44nm,1.3s,mb5.2
AMTX **Amarillo** 71.85 334 eP P 14 52 04.4 -1.2
comp=Z,52nm,1.1s,mb5.4
319A **Douglas** 71.99 327 ⇑P P 14 52 07.3 +0.8
baz=72
ACSO **Alum Creek Sta** 72.20 351 eP P 14 52 05.8 -1.7
comp=Z,32nm,0.8s,mb5.3
ACSO LR LR
comp=Z,914nm,21.0s,MS5.0
318A **Bisbee** 72.38 326 ⇑P P 14 52 09.3 +0.4
baz=73
218A **Dragoon** 72.85 327 ⇑P P 14 52 12.2 +0.6
baz=73
217A **Green Valley** 73.05 326 ⇓P P 14 52 13.2 +0.4
baz=73
BRYW **Bryant College** 73.14 0 eP P 14 52 12.5 -0.6
comp=Z,216nm,1.2s,mb6.0
BNM **Barren Site** 73.16 330 eP P 14 52 13.7 +0.3
LPM **Los Pinos Moun** 73.30 330 eP P 14 52 14.4 +0.2
LENM **Lemitar** 73.32 330 eP P 14 52 12.8 -1.6
TUC **Tucson** 73.47 326 eP P 14 52 14.4 -0.9
comp=Z,8.0nm,1.1s,mb4.6
TUC **Tucson** 73.47 326 eP P 14 52 14.4 -0.9
TUC pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
QUA2 **Belchertown** 73.50 360 eP P 14 52 15.2 0.0
comp=Z,26nm,0.5s,mb5.4
216A **Three Points,** 73.54 326 ⇓P P 14 52 16.6 +0.9
baz=74
LAZ **Ladron** 73.59 330 eP P 14 52 17.0 +1.0
ERPA **Erie** 73.73 354 eP P 14 52 15.4 -1.1
comp=Z,41nm,0.9s,mb5.4
ANMO **Albuquerque** 73.78 331 eP P 14 52 16.7 -0.4
comp=Z,35nm,1.4s,mb5.1
ANMO e 14 52 27.5
ANMO e 14 52 30.7
ANMO LR LR
comp=Z,2µm,20.0s,MS5.3
ANMO **Albuquerque** 73.78 331 eP P 14 52 16.7 -0.3
ANMO e 14 52 27.5
ANMO e 14 52 30.7
ANMO pmax pmax
comp=Z,35nm,1.4s
ANMO MLR MLR
comp=Z,2µm,20.0s
KSU1 **Kansas State U** 74.02 340 eP P 14 52 17.1 -1.3
comp=Z,10nm,0.9s,mb4.8
KSU1 e 14 52 24.2
KSU1 LR LR
comp=Z,561nm,19.0s,MS4.9
DBIC **Dimbokro** 74.22 72 P P 14 52 20.1 -0.1
comp=Z,120nm,1.1s,mb5.7,baz=211,slow=6.1,SNR=77
DBIC LR LR 15 21 51.9
comp=Z,3µm,20.7s,MS5.5,baz=213,slow=33
115A **Sonoran Desert** 74.49 325 ⇑P P 14 52 21.9 +0.7
baz=75,SNR=10.0
ACCN **Adirondack Com** 74.63 359 eP P 14 52 21.2 -0.5
comp=Z,59nm,1.2s,mb5.4
CBKS **Cedar Bluff** 74.71 338 eP P 14 52 21.8 -0.6
comp=Z,80nm,1.1s,mb5.6
CBKS **Cedar Bluff** 74.71 338 eP P 14 52 21.8 -0.6
CBKS pmax pmax
comp=Z,79nm,1.1s,mb5.6
HNH **Hanover** 74.93 360 eP P 14 52 24.0 +0.5
comp=Z,72nm,1.1s,mb5.5
Z14A **Wintersburg** 75.37 325 ⇑P P 14 52 27.0 +0.7
baz=76
MAW **Mawson** 75.43 164 eP P 14 52 25.8 -0.5
comp=Z,34nm,1.0s,mb5.2
MAW **Mawson** 75.43 164 P P 14 52 25.6 -0.7
comp=Z,45nm,1.0s,mb5.3,baz=216,slow=6.0,SNR=30
MAW LR LR 15 24 31.4
comp=Z,3µm,20.9s,MS5.6,baz=227,slow=35
LBNH **Lisbon** 75.46 360 eP P 14 52 25.3 -1.2
comp=Z,48nm,1.0s,mb5.4
LBNH **Lisbon** 75.46 360 eP P 14 52 25.3 -1.3
LBNH pmax pmax
comp=Z,48nm,1.0s,mb5.4
SUR **Sutherland** 75.82 119 P P 14 52 30.8 +1.6
comp=Z,524nm,1.0s,mb6.4,SNR=11
SUR **Sutherland** 75.82 119 eP P 14 52 29.5 +0.3
comp=Z,95nm,1.0s,mb5.7
SUR LR LR
comp=Z,2µm,19.0s,MS5.5
Y14A **Wickenburg** 75.87 326 ⇓P P 14 52 29.5 +0.3
baz=76,SNR=9.1
LONY **Lake Ozonia** 75.88 358 eP P 14 52 28.0 -0.9
comp=Z,58nm,1.1s,mb5.4
X15A **Humboldt** 75.95 326 P P 14 52 30.3 +0.7
baz=76,SNR=16
JFWS **Jewell Farm** 76.05 346 eP P 14 52 27.7 -2.3
comp=Z,60nm,1.3s,mb5.4
JFWS **Jewell Farm** 76.05 346 eP P 14 52 27.7 -2.3
JFWS pmax pmax
comp=Z,61nm,1.3s,mb5.4
FRNY **Flat Rock** 76.08 359 eP P 14 52 29.7 -0.3
comp=Z,54nm,1.0s,mb5.4
Y13A **Salome** 76.17 325 ⇓P P 14 52 31.7 +0.8
baz=76,SNR=5.3
X14A **Yava** 76.25 326 P P 14 52 31.9 +0.6
baz=76,SNR=7.8
MSNY **Massena** 76.27 358 eP P 14 52 30.2 -1.0
MSNY e 14 52 40.8
DVTC **Desert V Tower** 76.39 323 ⇓P P 14 52 32.8 +0.6
baz=77
WUAZ **Wupatki** 76.40 328 eP P 14 52 31.7 -0.4
comp=Z,33nm,1.1s,mb5.2
WUAZ **Wupatki** 76.40 328 P P 14 52 32.9 +0.8
baz=77,SNR=14
SWSC **Sam W. Stewart** 76.46 323 ⇓P P 14 52 33.4 +0.9
baz=77
Y12C **Blythe** 76.46 324 ⇓P P 14 52 33.5 +0.9
baz=77
PKME **Peaks-Kenny Pk** 76.52 2 eP P 14 52 32.3 -0.3
comp=Z,43nm,1.1s,mb5.3
W15A **Williams** 76.53 327 P P 14 52 34.1 +1.2
baz=77,SNR=5.1
MVCO **Mesa Verde** 76.56 331 eP P 14 52 33.0 0.0
comp=Z,50nm,1.3s,mb5.3
MVCO **Mesa Verde** 76.56 331 P P 14 52 33.5 +0.5
baz=77,SNR=13
PDMCI **Parker Dam,Lak** 76.71 325 ⇑P P 14 52 34.3 +0.3
baz=77
MONP **Monument Peak** 76.74 323 P P 14 52 35.2 +1.1
baz=77,SNR=5.5
X13A **Yucca** 76.80 325 P P 14 52 34.8 +0.4
baz=77,SNR=21
BC3 **Big Chuckw Mtn** 76.85 324 P P 14 52 35.3 +0.6
baz=77,SNR=18
W14A **Seligman** 76.94 326 P P 14 52 36.0 +0.8
baz=77,SNR=14
IRM **Iron Mountain** 77.10 324 P P 14 52 36.6 +0.5
baz=77,SNR=13
W13A **Hualapai Mount** 77.23 326 P P 14 52 37.7 +0.8
baz=78,SNR=15
PFO **Pinyon Flat Ob** 77.32 323 P P 14 52 38.0 +0.6
comp=Z,143nm,1.2s,mb5.8,SNR=6.0
PFO **Pinyon Flat Ob** 77.32 323 P P 14 52 38.4 +1.0
baz=78,SNR=9.3
BELC **Belle Mtn.** 77.40 324 ⇑P P 14 52 38.7 +0.9
baz=78
SMCO **Snowmass** 77.63 333 eP P 14 52 39.2 +0.3
comp=Z,19nm,1.9s,mb4.7
ISCO **Idaho Springs** 77.65 334 eP P 14 52 38.7 -0.4
comp=Z,26nm,1.2s,mb5.0
ISCO **Idaho Springs** 77.65 334 eP P 14 52 38.7 -0.4
ISCO pmax pmax
comp=Z,26nm,1.2s,mb5.0
GMRC **Granite Mounta** 77.85 324 P P 14 52 41.2 +0.9
baz=78,SNR=13
W12A **Cal Nev Ari** 77.87 325 ⇑P P 14 52 41.6 +1.2
baz=78
U14A **Mt Trumbull** 77.97 327 ⇓P P 14 52 42.0 +1.0
baz=78
T15A **Red Dirt Ranch** 78.10 328 ⇑P P 14 52 42.4 +0.8
baz=78
CIS **Catalina Islan** 78.18 322 ⇑P P 14 52 42.9 +0.7
baz=78
V12A **Nelson** 78.21 325 P P 14 52 42.6 +0.4
baz=78,SNR=18
HEC **Hector,Ludlow** 78.22 324 ⇑P P 14 52 43.2 +0.8
baz=78,SNR=9.4
ECSD **EROS,Sioux Fal** 78.32 342 eP P 14 52 41.3 -1.4
comp=Z,36nm,0.9s,mb5.3
U13A **Pakoon Wash** 78.34 326 ⇓P P 14 52 43.6 +0.6
baz=79
BFSC **Mount Baldy St** 78.44 323 ⇑P P 14 52 44.7 +1.1
baz=79,SNR=9.1
TUQ **Turquoise Mtn.** 78.50 325 ⇓P P 14 52 44.5 +0.5
baz=79,SNR=5.6
V11A **Goodsprings** 78.58 325 P P 14 52 44.8 +0.5
baz=78,SNR=6.8
U12A **Valley of Fire** 78.62 326 ⇑P P 14 52 45.5 +1.0
baz=79
T13A **Saint George** 78.80 327 ⇓P P 14 52 46.6 +1.1
baz=79
GSC **Goldstone** 78.83 324 eP P 14 52 45.3 -0.5
comp=Z,24nm,1.1s,mb5.0
GSC **Goldstone** 78.83 324 eP P 14 52 45.3 -0.5
GSC pmax pmax
comp=Z,24nm,1.1s,mb5.0
GSC **Goldstone** 78.83 324 P P 14 52 46.4 +0.6
baz=79,SNR=9.6
PHWY **Pilot Hill** 78.90 335 eP P 14 52 45.5 -0.5
CCUT **Cedar City** 78.98 328 eP P 14 52 47.0 +0.5
CCUT e 14 52 57.5
S14A **Cedar City** 79.06 328 ⇑P P 14 52 47.7 +0.8
baz=79
BLG **Laguna Peak** 79.07 322 ⇑P P 14 52 47.8 +0.7
baz=79
EDW2 **Edwards Air Fo** 79.11 323 P P 14 52 47.5 +0.2
baz=79,SNR=13
S13A **Holt Ranch, En** 79.23 327 ⇑P P 14 52 48.8 +0.9
baz=80
MSU **Marysvale** 79.23 329 eP P 14 52 48.0 +0.1
OSI **Osito Adit** 79.28 322 ⇑P P 14 52 48.6 +0.3
baz=80
BSC **Santa Cruz Isl** 79.29 321 ⇓P P 14 52 48.6 +0.3
baz=80
LRMC **Laurel Mountai** 79.42 323 ⇑P P 14 52 49.8 +0.9
baz=80
U10A **Ash Meadows, A** 79.48 325 P P 14 52 50.1 +0.9
baz=80,SNR=11
T11A **Corn Creek, Al** 79.60 326 ⇑P P 14 52 50.6 +0.7
baz=80
TSUM **Tsumeb** 79.68 106 eP P 14 52 50.5 -0.4
comp=Z,74nm,1.1s,mb5.5
TSUM e 14 53 03.0
TSUM LR LR
comp=Z,3µm,20.0s,MS5.6
S12A **Delamar Landin** 79.72 327 ⇓P P 14 52 51.5 +1.0
baz=80
MPMC **Manual Prospec** 79.77 324 P P 14 52 51.2 +0.4
baz=80,SNR=8.4
FURC **Furnace Creek,** 79.78 325 ⇑P P 14 52 51.7 +0.8
baz=80
TPNV **Topopah Spring** 79.86 325 eP P 14 52 51.0 -0.3
comp=Z,30nm,1.1s,mb5.1
TPNV **Topopah Spring** 79.86 325 eP P 14 52 51.0 -0.3
TPNV pmax pmax
comp=Z,30nm,1.1s,mb5.1
TPNV **Topopah Spring** 79.86 325 P P 14 52 52.2 +0.9
baz=80,SNR=18
ISA **Isabella** 79.96 323 eP P 14 52 52.0 +0.1
comp=Z,34nm,1.0s,mb5.2
ISA LR LR
comp=Z,718nm,19.0s,MS5.0
ISA **Isabella** 79.96 323 eP P 14 52 52.0 +0.1
ISA pmax pmax
comp=Z,34nm,1.0s,mb5.2
ISA MLR MLR
comp=Z,718nm,19.0s,MS5.0
ISA **Isabella** 79.96 323 P P 14 52 52.6 +0.7
baz=80,SNR=25
PKM **Peak Mountain** 80.08 322 P P 14 52 53.4 +0.9
baz=80,SNR=19
S11A **Rachel** 80.17 326 ⇓P P 14 52 53.7 +0.7
baz=80
R12A **Pony Springs,** 80.18 327 ⇑P P 14 52 54.0 +1.0
baz=80
MPU **Maple Canyon** 80.24 330 eP P 14 52 53.2 -0.1
comp=Z,31nm,1.1s,mb5.2
NLU **North Lily Min** 80.38 330 eP P 14 52 53.2 -0.8
VES **Vestal, Richgr** 80.41 323 P P 14 52 55.2 +0.9
baz=81,SNR=7.4
DAU **Daniels Canyon** 80.42 331 eP P 14 52 54.0 -0.2
GRAC **Grapevine Rang** 80.45 325 ⇓P P 14 52 55.3 +0.8
baz=81
SMMC **Simmler** 80.49 322 ⇑P P 14 52 55.8 +1.1
baz=81
JLU **Jordanelle** 80.65 330 eP P 14 52 55.1 -0.4
R11A **Troy Canyon, C** 80.66 327 ⇓P P 14 52 56.2 +0.6
baz=81
S10A **Tonopah Range,** 80.80 326 ⇓P P 14 52 56.8 +0.4
baz=81
P13A **Bates Ranch, G** 80.83 328 ⇑P P 14 52 57.1 +0.7
baz=81
Q12A **Willow Creek R** 80.86 327 P P 14 52 57.1 +0.5
baz=81,SNR=5.5
DUG **Dugway** 80.90 329 eP P 14 52 56.6 -0.2
comp=Z,28nm,1.2s,mb5.1
DUG **Dugway** 80.90 329 eP P 14 52 56.7 -0.1
DUG pmax pmax
comp=Z,28nm,1.2s,mb5.1
DUG **Dugway** 80.90 329 P P 14 52 57.2 +0.4
baz=81,SNR=12
TIN **Tinemaha** 80.92 324 ⇑P P 14 52 57.7 +0.6
baz=81
S09A **Goldfield** 80.95 325 P P 14 52 58.0 +0.9
baz=81,SNR=5.2
R10A **Warm Springs** 80.95 326 P P 14 52 58.1 +1.0
baz=81,SNR=18
BOSA **Boshof** 81.01 118 P P 14 52 57.0 -1.0
comp=Z,78nm,0.9s,mb5.7,baz=249,slow=6.3,SNR=50
BOSA LR LR 15 28 17.5
comp=Z,2µm,18.2s,MS5.5,baz=241,slow=35
HELL **Mitchell Peak,** 81.03 323 P P 14 52 57.5 -0.1
baz=81,SNR=22
Q11A **Duckwater** 81.09 327 P P 14 52 58.4 +0.5
baz=81,SNR=17
EYMN **Ely** 81.12 347 eP P 14 52 56.7 -1.1
comp=Z,32nm,1.2s,mb5.1
V04C **Ramage Ranch,** 81.19 321 P P 14 52 59.2 +0.7
baz=81
S08C **White Mtn Res** 81.24 324 P P 14 52 59.2 +0.6
baz=82,SNR=9.8
P12A **McGill** 81.25 328 ⇑P P 14 52 59.3 +0.6
baz=82
PKD **Parkfield** 81.26 322 P P 14 52 59.6 +0.8
baz=82,SNR=6.5
R09A **Tonopah** 81.28 326 P P 14 52 59.2 +0.3
baz=82,SNR=13
MTUM **Tungsten Hills** 81.32 324 eP P 14 52 58.6 -0.5
O13A **Hicks Ranch, I** 81.36 329 ⇓P P 14 53 00.2 +0.9
baz=82
Q10A **Clear Creek Ra** 81.42 326 ⇑P P 14 53 00.2 +0.6
baz=82
HWUT **Hardware Ranch** 81.54 331 eP P 14 52 59.4 -0.8
comp=Z,38nm,1.2s,mb5.2
HWUT LR LR
comp=Z,2µm,19.0s,MS5.5
N14A **Grayback Hills** 81.60 330 ⇓P P 14 53 01.1 +0.6
baz=82
T06C **Millerton Lake** 81.63 323 ⇓P P 14 53 01.4 +0.6
baz=82
MLAC **Mammoth Lakes** 81.67 324 ⇑P P 14 53 02.0 +1.0
baz=82
KCC **Kaiser Creek** 81.68 324 P P 14 53 00.9 -0.1
baz=82,SNR=11
V03C **Hunter Liggett** 81.68 322 ⇑P P 14 53 02.1 +1.0
baz=82
U04C **Hernandez Rese** 81.70 322 ⇓P P 14 53 02.0 +0.8
baz=82,SNR=5.8
PDAR **Pinedale Array** 81.71 333 P P 14 53 00.5 -0.5
comp=Z,8.3nm,1.2s,mb4.5,baz=144,slow=5.5,SNR=26
PDAR PKKPbc PKKPbc 15 11 31.5 -3.2
comp=Z,1.4nm,0.9s,baz=17,slow=1.5,SNR=8.1
PDAR LR LR 15 26 03.5
comp=Z,1µm,18.4s,MS5.2,baz=151,slow=33
M15A **Larsen Ranch,** 81.79 330 ⇓P P 14 53 02.0 +0.5
baz=82
Q09A **Carvers** 81.80 326 ⇓P P 14 53 02.5 +0.8
baz=82
O12A **Currie** 81.81 328 P P 14 53 01.8 +0.2
baz=82,SNR=15
NVAR **Mina Array Bea** 82.03 325 P P 14 53 03.3 +0.5
comp=Z,15nm,0.8s,mb4.9,baz=140,slow=6.3,SNR=56
NVAR PKKPbc PKKPbc 15 11 33.1 -0.5
comp=Z,0.3nm,0.5s,baz=327,slow=1.0,SNR=3.9
N13A **Wendover, West** 82.05 329 P P 14 53 03.2 +0.4
baz=82,SNR=5.4
P10A **Eureka** 82.08 327 ⇑P P 14 53 03.5 +0.4
baz=82
O11A **Cowboy Ranch,** 82.12 328 P P 14 53 03.7 +0.4
baz=82,SNR=22
HAST **UC Hastings Re** 82.12 322 P P 14 53 04.1 +0.7
baz=82,SNR=6.1
R07C **Lee Vining** 82.13 324 P P 14 53 04.4 +1.0
baz=82,SNR=8.7
M14A **Sheep Mountain** 82.20 330 ⇓P P 14 53 03.5 -0.2
baz=82
S05C **Merced** 82.21 323 ⇑P P 14 53 04.2 +0.3
baz=82
P09A **Austin** 82.35 326 P P 14 53 04.7 +0.2
baz=83,SNR=7.2
AGMN **Agassiz Refuge** 82.39 344 eP P 14 53 02.8 -1.7
comp=Z,28nm,1.2s,mb5.1
N12A **Clover Valley,** 82.42 328 P P 14 53 04.7 -0.2
baz=83,SNR=11
M13A **Montello** 82.44 329 P P 14 53 04.9 0.0
baz=83,SNR=8.4
PACP **Pacheco Peak** 82.45 322 ⇓P P 14 53 05.4 +0.3
baz=83
O10A **Cortez Mining,** 82.63 327 ⇓P P 14 53 06.0 0.0
baz=83,SNR=7.0
R06C **Coleville** 82.67 324 P P 14 53 07.1 +0.9
baz=83,SNR=15
REDW **Red Top Meadow** 82.72 332 eP P 14 53 05.3 -1.0
comp=Z,48nm,1.4s,mb5.3
CMB **Columbia Colle** 82.77 323 eP P 14 53 05.0 -1.7
comp=Z,22nm,1.4s,mb5.0
CMB LR LR
comp=Z,503nm,19.0s,MS4.9
CMB **Columbia Colle** 82.77 323 eP P 14 53 05.0 -1.7
CMB pmax pmax
comp=Z,22nm,1.4s,mb5.0
CMB MLR MLR
comp=Z,503nm,19.0s,MS4.9
CMB **Columbia Colle** 82.77 323 P P 14 53 06.5 -0.2
baz=83,SNR=6.0
M12A **Wells** 82.82 329 P P 14 53 06.7 -0.2
baz=83,SNR=9.2
S04C **Ingram Canyon,** 82.85 322 ⇑P P 14 53 07.4 +0.2
baz=83
O09A **Fish Creek Ran** 82.86 327 P P 14 53 08.1 +0.9
baz=83,SNR=6.3
P08A **Dixie Valley** 82.91 326 ⇑P P 14 53 07.7 +0.3
baz=83
L13A **Double Diamond** 82.94 330 ⇓P P 14 53 07.6 +0.1
baz=83
K14A **Jones Ranch, D** 82.99 331 ⇑P P 14 53 08.1 +0.3
baz=83
R05C **Kirkwood Meado** 83.12 324 ⇑P P 14 53 09.1 +0.6
baz=83,SNR=9.0
TORD **Torodi Ar. Bea** 83.20 70 P P 14 53 08.7 -0.8
comp=Z,69nm,0.8s,mb5.7,baz=259,slow=4.0,SNR=219
TORD LR LR 15 27 58.8
comp=Z,2µm,19.5s,MS5.5,baz=235,slow=34
R04C **Big Horse Ranc** 83.22 323 ⇑P P 14 53 09.6 +0.6
baz=83
M11A **Holland Ranch,** 83.22 328 P P 14 53 09.2 +0.3
baz=84,SNR=38
WCN **Washoe City** 83.42 325 ⇓P P 14 53 10.6 +0.5
baz=84
L12A **House Creek Ra** 83.45 329 ⇓P P 14 53 10.8 +0.7
baz=84
K13A **Stover Farm, H** 83.46 330 ⇓P P 14 53 10.7 +0.6
baz=84
BDM **Black Diamond** 83.47 322 ⇑P P 14 53 11.0 +0.7
baz=84
LAVA **Lava Cap Winer** 83.49 324 P P 14 53 10.4 -0.1
baz=84,SNR=11
N09A **Rock Creek Ran** 83.55 327 ⇓P P 14 53 10.7 0.0
baz=84
RLMT **Red Lodge** 83.60 334 eP P 14 53 09.9 -1.0
comp=Z,19nm,1.2s,mb5.1
M10A **I.L. Ranch, Tu** 83.63 328 ⇑P P 14 53 11.1 0.0
baz=84,SNR=8.3
N08A **GE Springer Mi** 83.78 326 ⇓P P 14 53 12.5 +0.6
baz=84
K12A **Draper Farm, C** 83.80 330 ⇓P P 14 53 12.2 +0.3
baz=84
P05C **Yuba Gap, Truc** 83.84 324 P P 14 53 12.7 +0.4
baz=84,SNR=14
FARB **Farallon Islan** 83.87 322 ⇑P P 14 53 12.6 +0.1
baz=84
Q04C **Lincoln** 83.88 323 ⇑P P 14 53 12.5 +0.1
baz=84
M09A **Marrel Ranch,** 83.97 327 ⇓P P 14 53 12.7 -0.2
baz=84
L10A **Juniper Basin** 84.04 328 ⇓P P 14 53 13.6 +0.4
baz=84
Q03C **Winters** 84.05 323 ⇑P P 14 53 13.6 +0.3
baz=84
CVS **Carmenet Viney** 84.07 322 ⇓P P 14 53 14.0 +0.5
baz=84
J13A **Cove Ranch, Pi** 84.11 330 ⇓P P 14 53 14.2 +0.7
baz=84
O06A **Flanigan** 84.12 325 ⇓P P 14 53 14.1 +0.5
baz=84,SNR=6.1
BEKR **Beckwourth** 84.15 325 P P 14 53 14.2 +0.4
baz=84,SNR=18
QLMT **Earthquake Lak** 84.18 333 eP P 14 53 13.1 -0.7
N07B **Gerlach** 84.18 326 P P 14 53 14.1 +0.2
baz=84,SNR=23
ULM **Lac du Bonnet** 84.23 345 P P 14 53 12.5 -1.4
comp=Z,28nm,1.1s,mb5.3,baz=160,slow=3.9,SNR=25
ULM PKKPbc PKKPbc 15 11 25.8 -3.3
comp=Z,2.0nm,0.7s,baz=330,slow=2.9,SNR=3.5
NSHM **Saint Helena R** 84.28 322 eP P 14 53 13.6 -0.8
OHCM **Honcut** 84.31 324 eP P 14 53 14.4 -0.2
GCMT **Greycliff** 84.32 334 eP P 14 53 13.9 -0.6
HLID **Hailey** 84.34 330 eP P 14 53 14.1 -0.6
comp=Z,19nm,1.1s,mb5.1

HLID LR LR
comp=Z,807nm,22.0s,MS5.1
HLID Hailey 84.34 330 P **P** **14 53 14.7 0.0**
baz=85,SNR=19
J12A Stokes Ranch, 84.38 330 ⇑P **P** **14 53 14.8 -0.1**
baz=85
SUTB Sutter Butte 84.38 323 ⇓P **P** **14 53 14.6 -0.4**
baz=85
K11A Parker Ranch, 84.40 329 ⇑P **P** **14 53 14.6 -0.4**
baz=85
M08A Happy Creek Ra 84.42 327 P **P** **14 53 15.3 +0.2**
baz=85,SNR=13
ORV Oroville 84.48 324 P **P** **14 53 15.9 +0.4**
baz=85,SNR=17
O05C Quincy 84.50 324 ⇓P **P** **14 53 15.6 0.0**
baz=85
I13A Wildhorse Cree 84.50 331 ⇑P **P** **14 53 15.7 +0.2**
baz=85
L09A Wilkinson Ranc 84.54 328 P **P** **14 53 15.5 -0.2**
baz=85,SNR=7.7
N06A Buffalo Meadow 84.57 325 P **P** **14 53 16.1 +0.2**
baz=85,SNR=42
MCMT McKenzie Canyo 84.74 332 *e*P **P** **14 53 16.2 -0.4**
M07A Soldier Meadow 84.75 326 ⇓P **P** **14 53 17.3 +0.5**
baz=85,SNR=12
K10A MacKenzie Ranc 84.78 328 ⇓P **P** **14 53 16.8 -0.1**
baz=85
DGMT Dagmar 84.81 339 *e*P **P** **14 53 16.5 -0.4**
comp=Z,62nm,0.9s,mb5.7
MFID Camas Ranch 84.83 329 ⇓P **P** **14 53 17.2 0.0**
baz=85
O04C Chester 84.86 324 ⇑P **P** **14 53 17.0 -0.4**
baz=85,SNR=7.5
G15A Dillon 84.87 332 P **P** **14 53 17.4 0.0**
baz=85,SNR=13
ELFS Eagle Lake Fie 84.91 325 P **P** **14 53 18.0 +0.4**
baz=85,SNR=16
BOZ Bozeman (W) 84.94 333 *e*P **P** **14 53 16.0 -1.7**
comp=Z,9.6nm,1.2s,mb4.8
BOZ Bozeman (W) 84.94 333 *e*P **P** **14 53 16.0 -1.6**
BOZ pmax pmax
comp=Z,10.0nm,1.2s,mb4.8
BOZ Bozeman (W) 84.94 333 P **P** **14 53 18.1 +0.4**
baz=85,SNR=9.4
L08A Fields 84.98 327 P **P** **14 53 17.3 -0.6**
baz=85,SNR=26
DLMT Dillon 85.08 332 *e*P **P** **14 53 18.0 -0.3**
comp=Z,39nm,1.3s,mb5.4
H13A Challis 85.09 331 ⇓P **P** **14 53 18.4 -0.1**
baz=85
K09A Rome 85.10 328 P **P** **14 53 17.7 -0.8**
baz=85,SNR=16
GASB Alder Springs 85.18 323 ⇓P **P** **14 53 18.7 -0.3**
baz=85,SNR=8.8
M06C Likely Place G 85.23 325 P **P** **14 53 19.4 +0.2**
baz=86,SNR=13
WVOR Wild Horse Val 85.31 327 *e*P **P** **14 53 18.6 -0.9**
comp=Z,18nm,1.1s,mb5.1
WVOR Wild Horse Val 85.31 327 *e*P **P** **14 53 18.7 -0.9**
WVOR pmax pmax
comp=Z,18nm,1.1s,mb5.1
L07A Adell 85.31 327 P **P** **14 53 20.1 +0.5**
baz=86,SNR=16
G14A Jackson 85.32 332 ⇓P **P** **14 53 20.0 +0.5**
baz=86
H12A Diamond D Ranc 85.33 331 ⇑P **P** **14 53 19.8 +0.2**
baz=86
P01C Double 8 Ranch 85.36 323 ⇓P **P** **14 53 20.0 0.0**
baz=86
HATC Hat Creek Radi 85.42 325 P **P** **14 53 20.2 0.0**
baz=86,SNR=6.5
F15A Butte 85.43 333 P **P** **14 53 20.1 0.0**
baz=86,SNR=16
K08A Mann Creek Ran 85.47 327 P **P** **14 53 20.5 +0.1**
baz=86,SNR=7.4
G13A Cobalt 85.51 331 P **P** **14 53 20.5 0.0**
baz=86,SNR=22
O02C Red Bluff 85.61 323 ⇓P **P** **14 53 21.1 -0.1**
baz=86
J09A Fry Pan Ranch, 85.62 328 P **P** **14 53 21.6 +0.5**
baz=86,SNR=14
M05C Lookout 85.68 325 P **P** **14 53 21.4 -0.1**
baz=86,SNR=8.1
MOD Modoc 85.68 326 ⇓P **P** **14 53 21.5 0.0**
baz=86
LTIM Timbered Crate 85.70 325 P **P** **14 53 21.4 -0.2**
F14A Wisdom 85.76 332 P **P** **14 53 22.1 +0.3**
baz=86,SNR=26
WDC Whiskeytown Da 85.78 324 *e*P **P** **14 53 19.8 -2.2**
comp=Z,13nm,0.9s,mb5.2
WDC Whiskeytown Da 85.78 324 *e*P **P** **14 53 19.8 -2.2**
WDC pmax pmax
comp=Z,13nm,0.9s,mb5.2
WDC Whiskeytown Da 85.78 324 P **P** **14 53 21.9 -0.1**
baz=86,SNR=6.3
I10A Payette 85.79 329 ⇓P **P** **14 53 22.2 +0.3**
baz=86
K07A Rock Creek Ran 85.79 327 P **P** **14 53 22.5 +0.5**
baz=86,SNR=37
H11A Donnelly 85.94 330 P **P** **14 53 22.2 -0.4**
baz=86,SNR=17
E15A Deer Lodge 85.98 333 P **P** **14 53 22.6 -0.2**
baz=86,SNR=7.8
L05A Lakeview 86.05 326 ⇑P **P** **14 53 22.9 -0.4**
baz=86,SNR=20
I09A Lost Marbles R 86.11 329 P **P** **14 53 23.5 0.0**
baz=86,SNR=19
F13A Darby 86.12 332 P **P** **14 53 23.1 -0.4**
baz=86,SNR=26
SCHQ Schefferville 86.17 3 P **P** **14 53 22.7 -0.8**
comp=Z,58nm,1.1s,mb5.7,baz=167,slow=4.2,SNR=16
EGMT Eagleton 86.25 336 *e*P **P** **14 53 22.5 -1.6**
comp=Z,31nm,1.2s,mb5.4
EGMT *e* 14 53 32.7
EGMT Eagleton 86.25 336 P **P** **14 53 23.1 -1.0**
baz=86,SNR=9.9
E14A Clinton 86.30 333 P **P** **14 53 24.5 +0.1**
baz=87,SNR=8.1
M04C Macdoel 86.34 325 P **P** **14 53 24.6 -0.1**
baz=87,SNR=10
K06A Valley Falls 86.35 326 P **P** **14 53 25.1 +0.4**
baz=87,SNR=9.8
N02C Big Bar 86.35 323 ⇓P **P** **14 53 25.1 +0.3**
baz=87,SNR=5.9
J07A Hines 86.35 327 P **P** **14 53 24.9 +0.2**
baz=87,SNR=6.5
I08A Drewsey 86.43 328 ⇑P **P** **14 53 25.2 +0.1**
baz=87
D15A Lincoln 86.44 333 P **P** **14 53 24.9 -0.2**
baz=87,SNR=17
F12A Elk City 86.47 331 ⇓P **P** **14 53 24.9 -0.3**
baz=87
M02C Callahan 86.55 324 ⇑P **P** **14 53 25.6 -0.2**
baz=87
K05A Summer Lake 86.59 326 P **P** **14 53 26.5 +0.6**
baz=87,SNR=21
E13A Victor 86.60 332 P **P** **14 53 25.8 -0.1**
baz=87,SNR=19
G11A Walters Elk Ra 86.61 330 P **P** **14 53 25.8 -0.2**
baz=87,SNR=36
BMO Blue Mountains 86.62 329 *e*P **P** **14 53 24.6 -1.3**
comp=Z,21nm,1.2s,mb5.2
CHMT Chamberlain Mo 86.62 333 *e*P **P** **14 53 24.8 -1.2**
H09A Durkee 86.62 329 ⇑P **P** **14 53 25.8 -0.2**
baz=87
J06A Christmas Vall 86.65 327 P **P** **14 53 26.0 -0.1**
baz=87,SNR=22
L04A Klamath Falls 86.66 325 ⇑P **P** **14 53 26.1 -0.1**
baz=87,SNR=9.1
YBH Yreka Blue Hor 86.73 324 *e*P **P** **14 53 24.9 -1.7**
comp=Z,14nm,1.0s,mb5.2
YBH Yreka Blue Hor 86.73 324 *e*P **P** **14 53 24.9 -1.7**
YBH pmax pmax
comp=Z,14nm,1.0s
YBH Yreka Blue Hor 86.73 324 P **P** **14 53 26.9 +0.3**
baz=87,SNR=8.5
D14A Greenough 86.85 333 P **P** **14 53 26.8 -0.3**
baz=87,SNR=19
G10A Bishop Farm, J 86.89 330 ⇓P **P** **14 53 27.4 +0.1**
baz=87
K04A Chilquin 86.91 326 ⇓P **P** **14 53 27.4 -0.1**
baz=87
F11A Grangeville 86.95 331 P **P** **14 53 27.3 -0.3**
baz=87,SNR=6.6
H08A Prairie City 86.95 328 P **P** **14 53 27.5 -0.1**
baz=87,SNR=12
I07A Izee 86.99 328 P **P** **14 53 28.0 +0.2**
baz=87,SNR=30

J05A Fort Rock 87.18 326 P **P** **14 53 28.9 +0.1**
baz=87,SNR=22
I06A Prineville 87.21 327 ⇓P **P** **14 53 29.1 +0.2**
baz=88,SNR=24
D13A Huson 87.24 332 P **P** **14 53 28.6 -0.3**
baz=88,SNR=19
E11A Bogner Ranch, 87.35 331 ⇓P **P** **14 53 28.4 -1.1**
baz=88
H07A Lands Inn, Kim 87.41 328 ⇑P **P** **14 53 29.5 -0.3**
baz=88
F10A Beach Ranch, E 87.47 330 P **P** **14 53 30.0 -0.1**
baz=88,SNR=8.6
C14A Swan Lake 87.51 333 ⇑P **P** **14 53 30.0 -0.3**
baz=88
F09A S2 Ranch, Elgi 87.55 330 P **P** **14 53 30.0 -0.5**
baz=88,SNR=7.1
D12A Red Ives Fores 87.56 332 ⇓P **P** **14 53 29.9 -0.6**
baz=88
J04A Umpqua Nationa 87.57 326 P **P** **14 53 30.7 +0.1**
baz=88,SNR=8.8
G08A Pilot Rock 87.68 329 P **P** **14 53 30.9 -0.2**
baz=88,SNR=18
C13A Hot Springs 87.76 333 P **P** **14 53 31.1 -0.4**
baz=88,SNR=11
E10A Myers Farm, Un 87.83 331 P **P** **14 53 31.2 -0.6**
baz=88,SNR=8.9
VIPM Ingram Point 87.83 327 P **P** **14 53 32.2 +0.3**
I05A Bend 87.86 327 ⇓P **P** **14 53 31.8 -0.2**
baz=88
H06A Lindquist Farm 87.87 328 P **P** **14 53 32.4 +0.4**
baz=88,SNR=26
K02A Glendale 87.88 325 P **P** **14 53 32.2 0.0**
baz=88,SNR=6.6
G07A Ruggs Ranch, H 87.98 328 P **P** **14 53 32.9 +0.4**
baz=88,SNR=20
I04A Tendick Farm, 88.13 326 P **P** **14 53 32.8 -0.5**
baz=88,SNR=8.7
H05A Madras 88.22 327 ⇓P **P** **14 53 33.3 -0.4**
baz=88
B13A Whitefish 88.29 333 P **P** **14 53 33.2 -0.7**
baz=88,SNR=8.4
E09A Wood Farm, Sta 88.29 330 ⇑P **P** **14 53 33.8 -0.2**
baz=88
D10A Wagner Farm, O 88.35 331 P **P** **14 53 33.5 -0.7**
baz=89,SNR=7.5
J02A Umpqua 88.37 325 ⇑P **P** **14 53 34.3 -0.2**
baz=89
G06A Carlson Farm, 88.39 328 ⇓P **P** **14 53 34.8 +0.3**
baz=89,SNR=12
F07A Phinny Hill Vi 88.58 329 ⇓P **P** **14 53 35.6 +0.2**
baz=89
WALA Waterton Lakes 88.63 334 *e*P **P** **14 53 34.7 -0.9**
comp=Z,38nm,1.1s,mb5.6
WALA *e* 14 53 45.0
E08A Dider Farm, El 88.66 329 ⇑P **P** **14 53 35.6 -0.2**
baz=89
I03A Eugene 88.68 326 ⇑P **P** **14 53 35.7 -0.2**
baz=89,SNR=5.9
H04A Detroit Lake 88.69 327 P **P** **14 53 35.8 -0.2**
baz=89,SNR=10
G05A Wamic 88.71 327 ⇑P **P** **14 53 35.9 -0.1**
baz=89
A13A Flathead Natio 88.72 333 ⇑P **P** **14 53 35.9 -0.1**
baz=89
D09A Jones Farm, Ri 88.79 330 ⇓P **P** **14 53 35.8 -0.5**
baz=89
HAWA Hanford 88.79 329 *e*P **P** **14 53 35.6 -0.7**
comp=Z,44nm,1.2s,mb5.7
B12A Libby 88.80 333 ⇓P **P** **14 53 35.6 -0.7**
baz=89,SNR=6.3
F06A Goldendale 88.87 328 ⇓P **P** **14 53 36.9 +0.2**
baz=89
I02A Mapleton 88.97 325 ⇓P **P** **14 53 38.0 +0.7**
baz=89
C10A Spilker Farm, 88.97 331 ⇓P **P** **14 53 37.4 +0.3**
baz=89
D08A Wollman Farm, 89.05 330 P **P** **14 53 38.1 +0.6**
baz=89,SNR=6.3
B11A Sandpoint 89.08 332 ⇑P **P** **14 53 37.7 0.0**
baz=89
A12A Yaak River Ran 89.20 333 ⇑P **P** **14 53 38.6 +0.4**
baz=90
H03A Soap Creek Ran 89.21 326 P **P** **14 53 39.2 +0.8**
baz=89,SNR=5.5
OD2 Odessa Site #2 89.22 330 P **P** **14 53 37.8 -0.5**
G04A Mulino 89.22 327 ⇓P **P** **14 53 38.8 +0.4**
baz=90
NEW Newport 89.25 332 PFAKE **14 53 50.0 +12**
NEW LR LR
comp=Z,1μm,19.0s,MS5.4
F05A White Salmon 89.26 328 ⇑P **P** **14 53 39.0 +0.4**
baz=90
C09A Chrisman Ranch 89.36 331 P **P** **14 53 38.9 -0.1**
baz=90,SNR=7.1
A11A Hall Mountain, 89.50 332 P **P** **14 53 38.7 -0.9**
baz=90,SNR=20
E06A Yakima 89.55 329 P **P** **14 53 40.8 +0.9**
baz=90,SNR=5.1
EBG Ellensburg 89.65 329 P **P** **14 53 40.8 +0.4**
C08A Higginbotham F 89.67 330 ⇓P **P** **14 53 39.9 -0.5**
baz=90
F04A Amboy 89.74 327 ⇓P **P** **14 53 40.8 0.0**
baz=90
B09A Rice 89.79 331 P **P** **14 53 40.1 -0.9**
baz=90,SNR=13
FFC Flin Flon 89.81 343 P **P** **14 53 39.2 -1.7**
comp=Z,104nm,1.0s,mb6.1,SNR=6.9
FFC Flin Flon 89.81 343 PFAKE **14 53 50.0 +9.1**
FFC LR LR
comp=Z,555nm,20.0s,MS5.0
E05A Randle 89.91 328 ⇓P **P** **14 53 41.2 -0.5**
baz=90
D06A Cle Elum 89.99 329 ⇑P **P** **14 53 41.9 -0.1**
baz=90
A10A Northport 89.99 332 ⇑P **P** **14 53 41.5 -0.5**
baz=90
C07A Waterville 90.03 330 P **P** **14 53 41.4 -0.7**
baz=90,SNR=14
PFVI Vila Bisbo 90.19 45 *e*P **P** **14 53 44.7 +1.5**
PFVI Vila Bisbo 90.19 45 *e*LR LR 15 26 08.6
comp=Z,2μm,23.2s
B08A Valvile Reser 90.23 331 ⇓P **P** **14 53 42.4 -0.6**
baz=90
LSZ Lusaka 90.36 108 *e*P **P** **14 53 45.0 +0.4**
comp=Z,63nm,1.1s,mb5.9
LSZ *e* 14 53 57.5
LSZ LR LR
comp=Z,2μm,19.0s,MS5.5
LSZ Lusaka 90.36 108 *e*P **P** **14 53 45.0 +0.4**
LSZ *e* 14 53 57.5
LSZ pmax pmax
comp=Z,63nm,1.1s,mb5.9
LSZ MLR MLR
comp=Z,2μm,19.0s,MS5.5
A09A Danville 90.41 331 P **P** **14 53 43.2 -0.6**
baz=91,SNR=8.2
MORF Marmelete 90.41 45 *e*P **P** **14 53 47.9 +3.7**
MORF Marmelete 90.41 45 *e*LR LR 15 26 41.9
comp=Z,2μm,15.7s
D05A Enumclaw 90.49 328 ⇑P **P** **14 53 44.1 -0.2**
baz=91
B07A Winthrop 90.65 330 P **P** **14 53 43.9 -1.1**
baz=91,SNR=16
A08A Turner Farm, O 90.67 331 ⇑P **P** **14 53 44.3 -0.8**
baz=91,SNR=12
C05A Tolt Reservoir 90.74 329 ⇓P **P** **14 53 45.5 +0.1**
baz=91
PBDV Barranco-do-Ve 90.81 46 *e*P **P** **14 53 47.1 +1.1**
PBDV Barranco-do-Ve 90.81 46 *e*LR LR 15 24 01.8
comp=Z,2μm,21.2s
PVAQ Vaqueiros 91.04 46 *e*P **P** **14 53 49.2 +2.1**
PVAQ Vaqueiros 91.04 46 *e*LR LR 15 23 36.9
comp=Z,2μm,21.0s
PMAFR Mafra 91.10 44 *e*P **P** **14 53 48.3 +0.9**
PMAFR Mafra 91.10 44 *e*LR LR 15 24 21.5
comp=Z,2μm,22.5s
A07A Ashnola River, 91.21 330 P **P** **14 53 47.1 -0.5**
baz=92,SNR=12
B06A Marblemount 91.28 330 ⇓P **P** **14 53 47.4 -0.6**
baz=92
C04A Brinnon 91.33 328 ⇓P **P** **14 53 48.0 -0.2**
baz=92
B05A Bryant 91.35 329 ⇓P **P** **14 53 47.7 -0.6**
baz=92
NLWA Neilton Lookou 91.49 328 ⇓P **P** **14 53 49.2 +0.3**
baz=92
EDM Edmonton 91.86 336 *e*P **P** **14 53 48.0 -2.5**
A05A Maple Falls 91.90 330 ⇓P **P** **14 53 50.6 -0.2**
baz=92
PBAR Barrancos 91.95 46 *e*P **P** **14 53 52.6 +1.3**
PBAR Barrancos 91.95 46 *e*LR LR 15 24 52.6
comp=Z,2μm,16.6s
A04A Legoe Bay, Lum 91.96 329 ⇑P **P** **14 53 51.3 +0.2**
baz=92
PESTR Estremoz 92.05 45 *e*P **P** **14 53 54.4 +2.6**
PESTR Estremoz 92.05 45 *e*LR LR 15 24 35.1
comp=Z,1μm,27.4s
MTE Manteigas 93.06 44 *e*P **P** **14 53 56.0 -0.4**
MTE Manteigas 93.06 44 *e*LR LR 15 26 07.8
comp=Z,2μm,19.8s
MVO Moncorvo 93.85 43 *e*P **P** **14 54 01.4 +1.4**
MVO Moncorvo 93.85 43 *e*LR LR 15 26 45.1
comp=Z,1μm,22.0s
ESDC Sonseca Array 94.76 46 P **P** **14 54 03.4 -0.8**
comp=Z,1.7nm,0.7s,mb4.6,baz=236,slow=4.3,SNR=6.5
ESDC LR LR 15 36 19.2
comp=Z,1μm,18.6s,MS5.5,baz=225,slow=35
YKA Yellowknife Ar 99.84 341 P Pdif **14 54 24.8 -2.5**
YKA PKKPbc PKKPbc **15 10 43.4 -5.2**
YKA Yellowknife Ar 99.84 341 P Pdif **14 54 24.8 -2.5**
comp=Z,1.9nm,0.7s,baz=141,slow=4.4,SNR=28
YKA PKKPbc PKKPbc **15 10 43.4 -5.2**
comp=Z,0.6nm,0.7s,baz=317,slow=2.8,SNR=7.8
BORG Borgarnes 103.76 20 PFAKE **14 54 50.0 +5.3**
BORG LR LR
comp=Z,616nm,19.0s,MS5.2
ESK Eskdalemuir 104.45 33 PFAKE **14 55 00.0 +12**
ESK LR LR
comp=Z,904nm,20.0s,MS5.3
KMBO Kilima Mbogo 105.56 101 PFAKE **14 59 20.0 +13**
KMBO LR LR
comp=Z,2μm,20.0s,MS5.6
INK Inuvik 109.48 340 PKKPbc PKKPbc **15 10 17.1 -2.1**
comp=Z,3.7nm,0.9s,baz=177,slow=0.6,SNR=10
GERES GERESS Array B 110.31 45 PKiKP PKiKP **14 59 13.0 -1.5**
comp=Z,2.6nm,0.9s,baz=264,slow=4.0,SNR=10.0
CLL Collm 110.93 42 *e*Pdif Pdif **14 55 19.0 +2.4**
CLL *e*PKP PKiKP **14 59 17.0 +1.4**
CLL *e*PS PS **15 09 27.0 +2.1**
CLL LR LR
comp=Z,1μm,19.5s,MS5.5
CLL Collm 110.93 42 *e*(Pdif) Pdif **14 55 19.0 +2.4**
CLL *i* PKiKP PKiKP **14 59 16.1 +0.5**
CLL *e*PP PP **14 59 55.0 +0.8**
CLL *e*Sdif Sdif **15 07 40.0 +6.7**
CLL *e*PS PS **15 09 27.0 +2.1**
CLL *e*SS SS **15 15 36.0 +11**
CLL *e*SSS **15 19 42.0**
CLL Lm **15 45 00.0**
comp=N,200nm,20.2s
CLL Lm **15 45 00.0**
comp=E,1μm,19.8s
CLL Lm **15 45 00.0**
comp=Z,1μm,19.5s
BRG Berggiesshubel 111.29 43 P PKiKP **14 59 16.2 -0.1**
BRG *e* **15 09 09.0**
BRG LR LR
comp=Z,580nm,24.8s,MS5.1
BRG Berggiesshubel 111.29 43 *e*PKIKP PKiKP **14 59 16.2 -0.1**
BRG pmax pmax
comp=Z,6.0nm,1.4s
BRG MLR MLR
comp=N,133nm,23.7s,MS5.0
BRG MLR MLR
comp=E,448nm,21.4s,MS5.0
BRG MLR MLR
comp=Z,576nm,24.8s,MS5.1
BRG Berggiesshubel 111.29 43 *e*(P) PKiKP **14 59 16.2 -0.1**
comp=Z,11nm,1.4s
BRG *e* **15 09 09.0**
BRG
comp=N,222nm,23.7s
BRG
comp=E,748nm,21.4s
BRG
comp=Z,962nm,24.8s
PMR Palmer 111.61 330 PFAKE **14 59 30.0 +13**
PMR LR LR
comp=Z,602nm,19.0s,MS5.2
COLA College 112.55 333 PFAKE **14 59 30.0 +12**
COLA LR LR
comp=Z,704nm,19.0s,MS5.3
VYHS Vyhne 113.29 46 *i* PKP PKiKP **14 59 19.8 -0.4**
NOA NORSAR Array B 113.88 32 PKiKP PKiKP **14 59 19.6 -1.3**
comp=Z,2.1nm,0.9s,baz=249,slow=1.8,SNR=5.1
BZS Buzias 114.01 50 ⇑*i*P PKiKP **14 59 22.5 +0.9**
KECS Kecovo 114.31 47 *e*PKP PKiKP **14 59 21.5 -0.6**
HFS Hagfors 114.69 33 PKP PKiKP **14 59 20.2 -2.3**
comp=Z,1.8nm,0.7s,baz=144,slow=2.8,SNR=3.9
DRGR 115.14 49 ⇑*i*P PKiKP **14 59 23.4 -0.4**
NWAO Narrogin (SRO) 115.27 188 PFAKE **14 59 40.0 +15**
NWAO LR LR
comp=Z,764nm,19.0s,MS5.3
TRPA Tarpa 115.48 48 ⇑*i*P PKPdf **14 59 25.2 +0.8**
KWP Kalwaria 116.08 46 *e*PKP PKPdf **14 59 25.6 +0.1**
KWP Kalwaria 116.08 46 ⇑*i*P PKPdf **14 59 26.6 +1.1**
MLR Muntele Rosu 116.83 51 PKP PKPdf **14 59 26.6 -0.5**
comp=Z,6.6nm,1.0s,baz=18,slow=4.9,SNR=5.9
MLR Muntele Rosu 116.83 51 ⇑*i*P PKPdf **14 59 26.7 -0.4**
CTAO Charters Tower 116.98 221 PFAKE **14 59 40.0 +12**
CTAO LR LR
comp=Z,706nm,19.0s,MS5.3
SUW Suwalki 117.68 42 *e*PKP PKPdf **14 59 27.4 -1.0**
ASAR Alice Springs 119.80 207 PKIKP PKPdf **14 59 28.2 -5.4**
ASAR **14 59 32.8**
ASAR Alice Springs 119.80 207 PKhKP **14 59 28.1**
comp=Z,0.9nm,0.9s,baz=194,slow=24,SNR=4.4
ASAR PKP PKPdf **14 59 32.8 -0.9**
comp=Z,2.9nm,0.9s,baz=154,slow=2.2,SNR=18
ASAR PKKPbc PKKPbc **15 09 42.2 -0.6**
comp=Z,2.7nm,0.9s,baz=336,slow=3.4,SNR=12
ASAR SKKP **15 13 40.2**
comp=Z,1.5nm,1.0s,baz=338,slow=4.5,SNR=4.5
KIEV Kiev 120.39 46 *e*PKPdf PKPdf **14 59 31.5 -2.2**
AKASG Malin Array Be 120.40 46 PKP PKPdf **14 59 31.9 -1.8**
comp=Z,10nm,0.9s,baz=265,slow=2.7,SNR=29
FINES FINESS Array B 120.88 34 PKP PKPdf **14 59 32.8 -1.6**
FINES PKKPbc PKKPbc **15 09 38.7 -0.6**
FINES FINESS Array B 120.88 34 PKP PKPdf **14 59 32.8 -1.6**
comp=Z,3.7nm,0.9s,baz=180,slow=9.3,SNR=9.7
FINES PKKPbc PKKPbc **15 09 38.7 -0.6**
comp=Z,3.2nm,0.9s,baz=94,slow=5.7,SNR=7.0
KAF Kangasniemi 121.10 33 *e*p PKPdf **14 59 32.3 -2.5**
comp=Z,13nm,0.8s
KAF Kangasniemi 121.10 33 *e*PKIKP PKPdf **14 59 32.3 -2.5**
KAF pmax pmax
comp=Z,13nm,0.8s
ARCES ARCESS Array B 121.74 24 PKP PKPdf **14 59 35.0 -0.8**
ARCES PKKPbc PKKPbc **15 09 35.1 -1.1**
ARCES ARCESS Array B 121.74 24 PKP PKPdf **14 59 35.0 -0.8**
comp=Z,12nm,1.1s,baz=327,slow=13,SNR=6.2
ARCES PKKPbc PKKPbc **15 09 35.1 -1.1**
comp=Z,5.5nm,0.9s,baz=22,slow=11,SNR=3.9
WB2 Warramunga Arr 122.95 210 *e*PKP PKPdf **14 59 37.6 -2.2**
WRA Warramunga Arr 122.96 210 PKP PKPdf **14 59 37.6 -2.2**
comp=Z,9.2nm,1.2s,baz=154,slow=1.8,SNR=18
WRA PKKPbc PKKPbc **15 09 30.2 -0.6**
comp=Z,2.3nm,1.0s,baz=346,slow=3.6,SNR=8.3
JOF Joensuu 123.51 32 *e*p PKPdf **14 59 37.4 -2.0**
comp=Z,24nm,1.0s
JOF Joensuu 123.51 32 *e*PKIKP PKPdf **14 59 37.4 -2.0**
JOF pmax pmax
comp=Z,24nm,1.0s
MALT Malatya 123.63 62 *e*PKPdf PKPdf **14 59 39.2 -1.1**
MALT Malatya 123.63 62 ⇓*i*P PKPdf **14 59 40.2 -0.2**
ANN Anapa 124.48 55 *i* PKIKP PKPdf **14 59 39.5 -2.3**
ANN pmax pmax
comp=Z,28nm,1.6s
LVZ Lovozero 125.02 26 ⇑*i*PKIKP PKPdf **14 59 43.6 +1.5**
OBN Obninsk 125.53 42 PFAKE **14 59 50.0 +6.5**
OBN LR LR
comp=Z,948nm,22.0s,MS5.4
OBN Obninsk 125.53 42 ⇑*i*PKIKP PKPdf **14 59 43.0 -0.5**
OBN *e* **15 01 32.0**
OBN *e*SS SS **15 18 36.0 +2.2**
OBN pmax pmax
comp=Z,43nm,1.2s
OBN MLR MLR
comp=Z,700nm,19.0s,MS5.3
SOC Sochi 125.84 57 *i* PKIKP PKPdf **14 59 42.1 -2.3**
SOC *e*PPP **15 04 20.9**
SOC *e* **15 06 55.7**
SOC *e*PS PS **15 11 39.0 -0.7**

SOC					*e*SS	SS	15 18 33.4	-5.0		
SOC					pmax	pmax				
	comp=Z,7.0nm,0.4s									
VRSR	**Storozhevoye**	**126.69**	**47**	*e*PKIKP	PKPdf	14 59 45.6	-0.2			
VRSR				pmax	pmax					
	comp=Z,5.0nm,1.0s									
VRSR				pmax	pmax					
	comp=N,4.0nm,3.9s									
VRSR				pmax	pmax					
	comp=E,2.0nm,1.0s									
FITZ	**Fitzroy Crossi**	**127.84**	**201**	*e*PKP	PKPdf	14 59 48.0	-1.1			
	comp=E,22nm,0.8s									
FITZ	**Fitzroy Crossi**	**127.84**	**201**	PKP	PKPdf	14 59 47.4	-1.7			
	comp=E,13nm,0.8s,baz=188,slow=4.4,SNR=19									
KIV	**Kislovodsk**	**128.02**	**57**	*e*PKPdf	PKPdf	14 59 48.6	0.0			
KIV				LR	LR					
	comp=Z,596nm,20.0s,MS5.3									
KIV	**Kislovodsk**	**128.02**	**57**	*i* PKIKP	PKPdf	14 59 48.8	+0.2			
KIV				*e*		15 01 50.2				
KIV				*e*PS	PS	15 11 58.7	-0.1			
KIV				*e*SS	SS	15 19 08.3	+2.7			
KIV				pmax	pmax					
	comp=E,21nm,1.1s									
KIV	**Kislovodsk**	**128.02**	**57**	⇓*i* P	PKPdf	14 59 49.1	+0.5			
GOF	**Gofitskoye**	**128.44**	**55**	*e*PKHKP		14 59 35.5				
GOF				pmax	pmax					
	comp=Z,30nm,1.0s									
ZEI	**Tsey**	**128.69**	**58**	*e*PKIKP	PKPdf	14 59 49.7	-0.2			
ZEI				*e*		15 01 56.5				
KAKA	**Kakadu**	**130.20**	**212**	*e*PKP	PKPdf	14 59 51.5	-2.2			
	comp=Z,8.0nm,0.8s									
PRGR	**Permogore**	**130.22**	**34**	*i* PKIKP	PKPdf	14 59 52.7	+0.5			
BILL	**Bilibino**	**130.75**	**335**	*e*PKPdf	PKPdf	14 59 52.7	-0.4			
BILL	**Bilibino**	**130.75**	**335**	*i* PKIKP	PKPdf	14 59 52.0	-1.1			
BILL				*e*		15 02 12.1				
BILL				*e*SS	SS	15 19 34.5	-3.1			
BILL				pmax	pmax					
	comp=Z,12nm,1.2s									
BATI	**Kupang**	**135.88**	**202**	PKP	PKPdf	15 00 03.1	-1.3			
	comp=Z,13nm,0.7s,baz=59,slow=2.9,SNR=4.0									
SOKR	**Solikamsk**	**136.02**	**35**	*i* PKIKP	PKPdf	15 00 02.7	-0.5			
SOKR				pmax	pmax					
	comp=Z,30nm,0.9s									
ARU	**Arti**	**137.77**	**39**	*e*PKPdf	PKPdf	15 00 05.5	-1.1			
ARU				*e*		15 00 15.4				
ARU	**Arti**	**137.77**	**39**	⇑*i* PKIKP	PKPdf	15 00 06.3	-0.2			
SEY	**Seymchan**	**138.03**	**332**	*i* PKIKP	PKPdf	15 00 06.8	0.0			
TIXI	**Tiksi**	**138.36**	**350**	*e*PKPpre		14 59 54.9				
TIXI				*e*PKPdf	PKPdf	15 00 06.2	-1.0			
TIXI				*e*SKP		15 03 37.0				
TIXI	**Tiksi**	**138.36**	**350**	*i* PKIKP	PKPdf	15 00 07.6	+0.4			
TIXI				MLR	MLR					
	comp=Z,300nm,20.0s,MS5.0									
AKTK	**Aktyubinsk**	**138.60**	**48**	PKP	PKPdf	15 00 08.4	+0.1			
AKTO	**Aktyubinsk**	**138.60**	**48**	PKP	PKPdf	15 00 08.4	+0.1			
	comp=Z,13nm,1.1s,baz=346,slow=0.7,SNR=16									
SVE	**Sverdlovsk**	**138.76**	**38**	⇑*e*P	Pdif	14 57 23.9	+3.6			
SVE				*e*		15 00 07.5				
SVE				*e*SS	SS	15 21 10.7	-3.8			
SVE				pmax	pmax					
	comp=Z,27nm,1.1s									
SVE				MLR	MLR					
	comp=Z,1μm,23.0s,MS5.5									
MA2	**Magadan**	**140.23**	**327**	⇑*i* PKIKP	PKPdf	15 00 09.6	-1.3			
TRD	**Trivandrum**	**142.97**	**122**	⇓*ex*	PKPdf	15 00 20.0	+2.7			
MNGI	**Mangalore**	**144.17**	**114**	*i* P	PKPdf	15 00 18.0	-1.4			
BHJ	**Bhuj**	**144.93**	**94**	*e*P	PKPdf	15 00 20.0	-0.4			
BRVK	**Borovoye**	**145.28**	**41**	*e*PKPdf	PKPdf	15 00 19.5	-0.5			
KAD	**Karad**	**146.08**	**107**	⇑*i* P	PKPdf	15 00 22.4	-0.2			
POO	**Poona**	**146.42**	**105**	*e*P	PKPdf	15 00 21.3	-1.8			
YAK	**Yakutsk**	**146.52**	**342**	*e*PKPdf	PKPdf	15 00 21.7	-0.3			
YAK	**Yakutsk**	**146.52**	**342**	*e* PKP2	PKPdf	15 00 21.6	-0.3			
YAK				*e*		15 03 47.7				
YAK				*e*		15 07 22.5				
YAK				pmax	pmax					
	comp=N,25nm,1.1s									
YAK				pmax	pmax					
	comp=Z,276nm,1.1s									
YAK				pmax	pmax					
	comp=E,33nm,1.0s									
YAK				pmax	pmax					
	comp=Z,100nm,1.0s									
YAK				pmax	pmax					
	comp=N,20nm,1.2s									
YAK				pmax	pmax					
	comp=E,40nm,1.0s									
MDRS	**Chennai**	**148.39**	**119**	⇑*e*P	PKPdf	15 00 25.5	-1.0			
MDRS				*ex*	x	15 03 16.5				
YSS	**Yuzh-Sakhalins**	**149.46**	**310**	*e*PKPbc	PKPbc	15 00 29.9	-1.8			
YSS				*e*PKPab	PKPab	15 00 36.9	+0.3			
YSS	**Yuzh-Sakhalins**	**149.46**	**310**	*e*PKP2	PKPdf	15 00 30.0	+2.8			
YSS				MLR	MLR					
	comp=E,300nm,17.0s									
YSS				MLR	MLR					
	comp=Z,500nm,17.0s,MS5.4									
HYB	**Hyderabad**	**149.67**	**111**	*e*PKP	PKPdf	15 00 28.5	0.0			
HYB				*e*		15 00 32.0				
HYB				*e*		15 00 40.5				
HYB	**Hyderabad**	**149.67**	**111**	*i* PKP	PKPdf	15 00 28.5	0.0			
	comp=Z,145nm,1.0s									
HYB				*e*		15 00 32.0				
HYB				*e*		15 00 40.5				
KSM	**Kuching**	**149.98**	**184**	*e*PKPdf	PKPdf	15 00 28.1	-1.1			
KSM				*e*PKPbc	PKPbc	15 00 32.2	-1.8			
KSM				*e*PKPab	PKPab	15 00 40.6	+1.0			
KSM	**Kuching**	**149.98**	**184**	⇓P	PKPbc	15 00 32.8	-1.3			
PSI	**Prapat**	**150.06**	**161**	PKPbc	PKPbc	15 00 31.8	-2.5			
	comp=Z,121nm,0.9s,baz=200,slow=4.7,SNR=56									
PSI				PKPab	PKPab	15 00 40.0	+0.1			
	comp=Z,85nm,0.9s,baz=237,slow=8.0,SNR=7.8									
MYKOM	**Kota Tinggi**	**150.08**	**171**	⇓P	PKPbc	15 00 32.6	-1.7			
KGM	**Kluang**	**150.23**	**170**	⇓P	PKPbc	15 00 33.9	-0.8			
AJM	**Ajmer**	**150.29**	**91**	*e*P	PKPdf	15 00 26.3	-3.0			
AJM				*ex*	x	15 00 36.1				
	comp=Z,57nm,1.0s									
ASAJ	**Asahikawa**	**150.32**	**305**	PKPbc	PKPbc	15 00 33.5	-0.4			
	comp=Z,5.8nm,0.9s,baz=270,slow=4.0,SNR=3.7									
ASAJ				PKPab	PKPab	15 00 40.2	-0.1			
	comp=Z,44nm,1.0s,baz=273,slow=4.9,SNR=17									
EKS2	**Erkin-Say**	**150.60**	**58**	*e*PKPdf	PKPdf	15 00 29.6	+0.5			
EKS2				*e*PKPbc	PKPbc	15 00 34.8	+0.2			
EKS2	**Erkin-Say**	**150.60**	**58**	P	PKPdf	15 00 29.4	+0.2			
	SNR=7.5									
AML	**Almayashu**	**150.63**	**59**	*e*PKPdf	PKPdf	15 00 29.3	0.0			
AML				*e*PKPbc	PKPbc	15 00 35.1	+0.4			
AML				*e*PKPab	PKPab	15 00 42.3	+0.7			
AML	**Almayashu**	**150.63**	**59**	P	PKPdf	15 00 29.9	+0.6			
	SNR=9.3									
SBUM	**Sibu**	**150.77**	**188**	⇑P	PKPbc	15 00 35.2	-0.7			
NVS	**Novosibirsk**	**150.77**	**30**	*e*PKIKP	PKPdf	15 00 29.5	+0.5			
NVS				pmax	pmax					
	comp=N,24nm,1.0s									
NVS				pmax	pmax					
	comp=Z,307nm,1.0s									
NVS				pmax	pmax					
	comp=E,86nm,1.2s									
KURK	**Kurchatov**	**150.95**	**40**	*e*PKPdf	PKPdf	15 00 29.2	-0.2			
KURK				*e*PKPbc	PKPbc	15 00 35.0	-0.2			
USP	**Ospenovka**	**151.00**	**57**	P	PKPbc	15 00 35.2	-0.3			
	SNR=28									
AAK	**Ala-Archa**	**151.12**	**58**	P	PKPdf	15 00 31.4	+1.4			
	SNR=6.8									
FRIM	**Kepong**	**151.13**	**166**	⇓P	PKPbc	15 00 35.4	-1.4			
FRU	**Bishkek**	**151.17**	**58**	*e*PKIKP	PKPbc	15 00 36.0	0.0			
FRU				pmax	pmax					
	comp=Z,160nm,1.8s									
UCH	**Uchtor**	**151.21**	**59**	*e*PKPdf	PKPdf	15 00 30.4	+0.3			
UCH				*e*PKPbc	PKPbc	15 00 37.2	+1.1			
UCH	**Uchtor**	**151.21**	**59**	P	PKPdf	15 00 31.0	+0.9			
	SNR=12									
CHMS	**Chumysh**	**151.23**	**57**	P	PKPbc	15 00 35.6	-0.5			
	SNR=11									
TSM	**Tawau**	**151.37**	**200**	⇑P	PKPbc	15 00 36.7	-0.6			
BTM	**Bintulu**	**151.39**	**190**	⇑P	PKPbc	15 00 37.6	+0.2			
KBK	**Karagaybulak**	**151.44**	**58**	P	PKPbc	15 00 37.7	+1.1			
	SNR=10									
BHPL	**Bhopal**	**151.51**	**99**	*e*P	PKPdf	15 00 31.9	+0.7			
BHPL				*i* PP	PP	15 04 17.4	+0.3			
KZA	**Kyzart**	**151.78**	**59**	P	PKPbc	15 00 39.0	+1.7			
	SNR=10									
TKM2	**Tokmak 2**	**151.86**	**57**	*e*PKPdf	PKPdf	15 00 30.4	-0.7			
TKM2				*e*PKPbc	PKPbc	15 00 37.4	-0.1			
TKM2				*e*PKPab	PKPab	15 00 46.3	-0.4			
TKM2				*e*SKP		15 04 13.8				
TKM2	**Tokmak 2**	**151.86**	**57**	P	PKPdf	15 00 31.0	-0.1			
	SNR=5.9									
ZAL	**Zalesovo**	**152.06**	**30**	PKIKP	PKPdf	15 00 30.1	-0.9			
ZAL						15 00 37.1				
ZALV	**Zalesovo Beam**	**152.06**	**30**	PKP	PKPdf	15 00 30.1	-1.0			
	comp=Z,11nm,0.9s,baz=294,slow=1.5,SNR=39									
ZALV				PKPbc	PKPbc	15 00 37.1	-0.5			
	comp=Z,159nm,0.7s,baz=326,slow=2.8,SNR=115									
ZALV				PKPab	PKPab	15 00 47.9	+0.7			
	comp=Z,45nm,0.6s,baz=313,slow=3.4,SNR=11									
IPM	**Ipoh**	**152.20**	**165**	⇓P	PKPbc	15 00 37.0	-2.3			
CLNS	**Chul'man**	**152.22**	**340**	*e*PKIKP	PKPbc	15 00 36.9	-1.0			
CLNS				pmax	pmax					
	comp=Z,38nm,1.0s									
CLNS				pmax	pmax					
	comp=N,16nm,1.1s									
CLNS				pmax	pmax					
	comp=E,13nm,1.1s									
SDKM	**Sandakan**	**152.85**	**200**	⇓P	PKPbc	15 00 39.1	-1.6			
KULM	**Kulim**	**152.90**	**163**	⇑P	PKPbc	15 00 38.3	-2.4			
NDI	**New Delhi**	**153.09**	**88**	*e*P	PKPdf	15 00 32.5	-0.9			
KTGM	**Kuala Trenggan**	**153.45**	**169**	⇑P	PKPbc	15 00 38.0	-4.0			
BOD	**Bodaibo**	**153.47**	**353**	*e*PKIKP	PKPdf	15 00 31.8	-1.2			
BOD				*e*		15 00 51.0				
BOD				pmax	pmax					
	comp=Z,17nm,1.1s									
BOD				pmax	pmax					
	comp=Z,35nm,1.0s									
KKM	**Kota Kinabalu**	**153.50**	**198**	⇓P	PKPbc	15 00 39.8	-2.3			
VIS	**Vishakhapatnam**	**153.59**	**116**	*e*P	PKPdf	15 00 33.4	-1.0			
VIS				*i* PP	PP	15 04 28.7	+0.1			
HABR	**Khabarovsk**	**153.61**	**317**	PKIKP	PKPdf	15 00 31.4	-2.1			
HABR				*i*		15 00 40.2				
HABR				*e*		15 00 53.1				
HABR				*e*		15 04 26.6				
HABR						15 07 38.6				
DDI	**Dehra Dun**	**154.15**	**85**	*e*P	PKPdf	15 00 34.2	-0.7			
MJAR	**Matsushiro Arr**	**154.71**	**289**	PKP	PKPdf	15 00 33.9	-1.6			
	comp=Z,0.4nm,0.3s,baz=156,slow=2.4,SNR=4.1									
MJAR				PKPbc	PKPbc	15 00 43.3	-0.7			
	comp=Z,3.8nm,1.1s,baz=269,slow=0.6,SNR=7.3									
MJAR				PKPab	PKPab	15 00 57.0	-2.0			
	comp=Z,3.7nm,0.9s,baz=152,slow=2.1,SNR=4.3									
MAT	**Matsushiro**	**154.71**	**289**	PKP2	PKPab	15 00 58.0	-1.0			
BLSP	**Bilaspur**	**154.96**	**106**	*e*P	PKPdf	15 00 34.8	-1.4			
BLSP				*i* PP	PP	15 04 35.8	-0.7			
MKAR	**Makanchi Array**	**154.98**	**45**	PKP	PKPdf	15 00 33.4	-2.0			
MKAR				PKPbc	PKPbc	15 00 43.4	-0.8			
MKAR				PKPab	PKPab	15 00 59.3	-0.4			
MKAR	**Makanchi Array**	**154.98**	**45**	PKP	PKPdf	15 00 33.4	-2.0			
	comp=Z,4.2nm,0.8s,baz=323,slow=1.1,SNR=30									
MKAR				PKPbc	PKPbc	15 00 43.4	-0.8			
	comp=Z,21nm,1.0s,baz=33,slow=1.6,SNR=29									
MKAR				PKPab	PKPab	15 00 59.3	-0.4			
	comp=Z,7.7nm,0.8s,baz=318,slow=1.6,SNR=4.7									
KLR	**Kul'dur**	**155.02**	**322**	*e*PKIKP	PKPdf	15 00 28.6	-6.8			
KOLN	**Koldanda**	**158.30**	**94**	*e*PKIKP	PKPdf	15 00 39.0	-1.4			
	comp=Z,25nm,1.1s									
BOK	**Bokaro**	**158.79**	**106**	*e*P	PKPdf	15 00 37.4	-3.6			
BOK				*e*PP	PP	15 04 54.2	-3.5			
MDJ	**Mudanjiang**	**158.81**	**314**	PKP	PKPdf	15 00 40.8	+0.4			
IRK	**Irkutsk**	**159.16**	**7**	*e*PKP2	PKPab	15 01 16.2	-1.3			
IRK				*e*		15 04 58.9				
IRK				pmax	pmax					
	comp=Z,77nm,1.2s									
CIT	**Chita**	**159.21**	**351**	*e*PKP2	PKPab	15 01 18.6	+0.9			
GKN	**Gorkha**	**159.25**	**94**	*e*PKIKP	PKPdf	15 00 40.2	-1.3			
	comp=Z,47nm,1.2s									
TLY	**Talaya**	**159.64**	**8**	*e*PKP2	PKPab	15 01 20.2	+0.6			
TLY				*e*		15 05 03.8				
TLY				*e*SS	SS	15 25 12.0	+5.3			
TLY				pmax	pmax					
	comp=Z,37nm,1.3s									
KKN	**Kakani**	**159.74**	**95**	*e*PKIKP	PKPdf	15 00 41.5	-0.6			
	comp=Z,24nm,1.1s									
WMQ	**Urumqi**	**159.75**	**47**	PKP	PKPdf	15 00 41.5	-0.1			
WMQ				APKP		15 00 52.0				
WMQ				XPKP		15 00 56.0				
WMQ				PKP2	PKPab	15 01 22.5	+2.1			
WMQ				PP	PP	15 05 05.0	+2.8			
WMQ				PP	PP					
	comp=Z,316nm,6.8s									
WMQ				LR	LR					
	comp=N,432nm,22.3s,MS5.3									
WMQ				LR	LR					
	comp=E,349nm,26.0s,MS5.3									
WMQ				LR	LR					
	comp=Z,546nm,24.0s,MS5.3									
JIRN	**Jiri**	**160.47**	**96**	*e*PKIKP	PKPdf	15 00 41.7	-1.2			
	comp=Z,21nm,1.1s									
ZAK	**Zakamensk**	**160.87**	**10**	*e*PKP2	PKPab	15 01 24.9	-0.1			
ZAK				*e*		15 05 07.5				
ZAK				pmax	pmax					
	comp=Z,11nm,1.1s									
ZAK				pmax	pmax					
	comp=Z,2.0nm,1.1s									
ZAK				pmax	pmax					
	comp=Z,2.0nm,1.9s									
ODAN	**Odare**	**161.24**	**99**	*e*PKIKP	PKPdf	15 00 43.2	-0.5			
	comp=Z,38nm,0.9s									
TAPN	**Taplejung**	**161.67**	**98**	*e*PKIKP	PKPdf	15 00 43.4	-0.8			
	comp=Z,34nm,1.3s									
CN2	**Changchun**	**161.74**	**317**	*e*PKP	PKPdf	15 00 39.0	-4.7			
CN2				*e*PP	PP	15 05 11.0	-1.8			
CN2				SS	SS	15 25 28.3	-2.0			
CN2				PP	PP					
	comp=Z,200nm,8.0s									
CN2				LR	LR					
	comp=N,200nm,19.0s									
CN2				LR	LR					
	comp=E,300nm,19.0s									
CN2				LR	LR					
	comp=Z,500nm,22.0s									
KSRS	**Korea Array**	**162.74**	**295**	PKP	PKPdf	15 00 44.5	-0.5			
	comp=Z,0.3nm,0.4s,baz=49,slow=1.8,SNR=3.2									
KSRS				PKPab	PKPab	15 01 33.9	+0.1			
	comp=Z,8.3nm,1.1s,baz=91,slow=4.3,SNR=10									
BDT	**Bhumibol Dam**	**163.46**	**148**	P	PKPdf	15 00 46.0	-0.2			
SONM	**Songino Array**	**163.71**	**4**	PKP	PKPdf	15 00 44.9	-0.6			
	comp=Z,1.9nm,0.9s,baz=79,slow=3.2,SNR=6.9									
SONM				PKPab	PKPab	15 01 36.7	-0.8			
	comp=Z,14nm,1.0s,baz=338,slow=4.1,SNR=10									
ULN	**Ulaanbaatar**	**163.72**	**3**	*e*PKPdf	PKPdf	15 00 46.1	+0.6			
ULN				*e*PKPab	PKPab	15 01 37.6	+0.1			
ULN				*e*PP	PP	15 05 19.6	-2.7			
SHL	**Shillong**	**164.46**	**109**	*e*PKP	PKPdf	15 00 47.0	+0.1			
SHL				*e*PP	PP	15 05 31.5	+3.5			
CHG	**Chiang Mai**	**164.78**	**145**	⇑P	PKPdf	15 00 58.1	+11			
	comp=Z,46nm,0.9s									
CHTO	**Chiang Mai**	**164.78**	**145**	*e*PKPdf	PKPdf	15 00 45.5	-1.9			
CHTO				*e*		15 00 55.4				
CHTO				*e*PKPab	PKPab	15 01 41.1	-1.9			
LSA	**Lhasa**	**165.20**	**93**	PKP	PKPdf	15 00 46.0	-1.4			
LSA	**Lhasa**	**165.20**	**93**	*e*PKIKP	PKPdf	15 00 46.6	-0.8			
LSA				*e*		15 01 44.7				
DL2	**Dalian**	**166.83**	**307**	PKPR	PKPdf	15 00 50.3	+1.9			
DL2				PP	PP	15 05 42.0	+2.2			
DL2				PP	PP					
	comp=Z,140nm,7.3s									
DL2				LR	LR					
	comp=N,230nm,15.5s									
DL2				LR	LR					
	comp=E,170nm,16.7s									
DL2				LR	LR					
	comp=Z,320nm,19.9s									
QIZ	**Qiongzhong**	**167.41**	**187**	PKP	PKPdf	15 00 44.5	-4.9			
QIZ				PKP2	PKPab	15 01 50.8	-3.6			
QIZ				PP	PP	15 05 40.3	-1.2			
QIZ				SKKS	SKKSac	15 12 22.8	-6.9			
QIZ				PP	PP					
	comp=Z,188nm,15.5s									
QIZ				LR	LR					
	comp=N,281nm,19.1s									
QIZ				LR	LR					
	comp=Z,391nm,19.7s									
SSE	**Sheshan**	**168.89**	**271**	PKP	PKPdf	15 00 49.3	-0.8			
SSE				PP	PP	15 05 51.5	+0.5			
SSE				PP	PP					
	comp=Z,116nm,7.4s									
SSE				LR	LR					
	comp=N,86nm,37.0s									
SSE				LR	LR					
	comp=E,223nm,36.0s									
SSE				LR	LR					
	comp=Z,175nm,27.5s									
BJI	**Beijing**	**169.37**	**325**	PKP	PKPdf	15 00 45.8	-4.3			
BJI				PP	PP	15 05 53.5	+1.3			
BJI				PP	PP					
	comp=Z,458nm,6.6s									
BJI				LR	LR					
	comp=N,318nm,21.0s									
BJI				LR	LR					
	comp=E,497nm,21.0s									
BJI				LR	LR					
	comp=Z,627nm,22.2s									
GTA	**Gaotai**	**169.63**	**39**	*e*PKP	PKPdf	15 00 50.5	+0.2			
GTA				PKS		15 04 22.5				
GTA				PP	PP	15 05 57.5	+3.9			
GTA				LR	LR					
	comp=N,146nm,22.2s									
GTA				LR	LR					
	comp=E,239nm,19.1s									
GTA				LR	LR					
	comp=Z,343nm,25.2s									
HHC	**Hu-ho-hao-te**	**170.37**	**345**	*e*PKP	PKPdf	15 00 51.3	+0.6			
HHC				PKS		15 04 22.3				
HHC				PP	PP	15 05 58.3	+1.7			
HHC				SKS	SKSdf	15 07 53.8	+0.2			
HHC				SKKS	SKKSac	15 12 45.5	+1.9			
HHC				SS	SS	15 26 57.8	+1.2			
HHC				PP	PP					
	comp=Z,214nm,9.4s									
HHC				LR	LR					
	comp=N,525nm,18.7s									
HHC				LR	LR					
	comp=E,522nm,21.1s									
HHC				LR	LR					
	comp=Z,815nm,21.0s									
NJ2	**Nanjing**	**170.93**	**276**	*e*PKP	PKPdf	15 00 46.5	-4.8			
NJ2				APKP		15 00 56.8				
NJ2				XPKP		15 01 00.8				
NJ2				PKP2	PKPab	15 02 06.3	-3.8			
NJ2				PKS		15 04 16.5				
NJ2				PP	PP	15 05 58.0	-3.2			
NJ2				PP	PP					
	comp=Z,330nm,5.4s									
NJ2				LR	LR					
	comp=N,2μm,32.3s									
NJ2				LR	LR					
	comp=E,2μm,33.8s									
NJ2				LR	LR					
	comp=Z,1μm,33.0s									
KMI	**Kunming**	**171.96**	**142**	PKP	PKPdf	15 00 50.3	-1.7			
KMI				APKP		15 00 54.8				
KMI				XPKP		15 00 57.0				
KMI				PKP2	PKPab	15 02 14.5	-0.1			
KMI				PP	PP	15 06 03.0	-2.2			
KMI				SKKS	SKKSac	15 12 53.0	+0.9			
KMI				SS	SS	15 27 11.3	-2.1			
KMI				PP	PP					
	comp=Z,356nm,7.6s									
KMI				LR	LR					
	comp=N,273nm,17.9s									
KMI				LR	LR					
	comp=E,373nm,17.9s									
KMI				LR	LR					
	comp=Z,564nm,15.7s									
LZH	**Lanzhou**	**174.23**	**38**	*e*PKP	PKPdf	15 00 53.5	+0.9			
LZH				APKP		15 00 59.0				
LZH				XPKP		15 01 01.5				
LZH				PKS		15 04 25.0				
LZH				PP	PP	15 06 15.3	-1.0			
LZH				SKKS	SKKSac	15 12 58.0	-4.5			
LZH				SS	SS	15 27 35.3	-0.1			
LZH				PP	PP					
	comp=Z,359nm,4.9s									
LZH				LR	LR					
	comp=N,525nm,19.5s									
LZH				LR	LR					
	comp=Z,601nm,20.8s									
GYA	**Guiyang**	**174.72**	**165**	*i* PKP	PKPdf	15 00 52.5	-0.5			
GYA				PKP2	PKPab	15 02 28.3	+1.6			
GYA				PKS		15 04 23.5				
GYA				PP	PP	15 06 21.0	+3.0			
GYA				SKS	SKSdf	15 07 54.3	-1.4			
GYA				SKKS	SKKSac	15 13 05.8	+0.9			
GYA				SS	SS	15 27 40.5	+1.6			
GYA				PP	PP					
	comp=Z,130nm,7.8s									
GYA				LR	LR					
	comp=N,340nm,22.8s									
GYA				LR	LR					
	comp=E,380nm,21.6s									
GYA				LR	LR					
	comp=Z,260nm,22.0s									
CD2	**Chengdu**	**176.13**	**99**	*e*PKP	PKPdf	15 00 52.0	-1.3			
CD2				APKP		15 01 02.8				
CD2				XPKP		15 01 07.8				
CD2				PKP2	PKPab	15 02 33.5	+0.2			
CD2				PP	PP	15 06 27.5	+0.9		

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELR	**Kotokel**	**0.28**	**179**	⇓*i*Pg	Pg	14 58 14.8	-0.1
KELR				*e*Sg	Sg	14 58 19.0	-0.1
KELR				Pmax			
	3μm,0.1s						
KELR				Smax			
	5μm,0.3s						
MXMB	**Maximikha**	**0.46**	**61**	⇓*i*Pg	Pg	14 58 17.2	-0.9
MXMB				*i* Sg	Sg	14 58 23.7	-0.7
MXMB				Pmax			
	213nm,0.1s						
MXMB				Smax			
	2μm,0.4s						
OGRR	**Ongureny**	**0.67**	**335**	⇑*i*PG	Pg	14 58 21.3	-0.5
OGRR				*e*		14 58 30.6	
OGRR				pmax	pmax		
	comp=Z,111nm,0.2s						
OGRR				smax			
	comp=E,1μm,0.3s						
OGRR	**Ongureny**	**0.67**	**335**	⇑*i*Pg	Pg	14 58 21.4	-0.4
	comp=E,148nm,0.2s						
OGRR				⇓*i*Pg	Pg	14 58 21.4	-0.4
	comp=E,47nm,0.2s						
OGRR				⇑*i*Pg	Pg	14 58 21.4	-0.4
	comp=E,132nm,0.2s						
OGRR				*e*Sg	Sg	14 58 30.0	-0.7
OGRR				Pmax			
	comp=E,113nm,0.2s						
OGRR				Smax			
	comp=E,1μm,0.2s						
ZRHB	**Zarechye**	**0.74**	**229**	⇓*i*Pg	Pg	14 58 22.6	-0.5
ZRHB				*e*Sg	Sg	14 58 33.2	+0.2
ZRHB				Pmax			
	comp=E,50nm,0.2s						
ZRHB				Smax			
	comp=E,588nm,0.3s						
TRG	**Tyrgan**	**1.08**	**256**	*e*PG	Pg	14 58 28.6	-0.9
TRG				*e*		14 58 43.4	
TRG				pmax	pmax		
	comp=Z,76nm,0.2s						
TRG				smax			
	comp=N,777nm,0.2s						
TRG	**Tyrgan**	**1.08**	**256**	⇑*i*Pg	Pg	14 58 28.9	-0.6
TRG				*e*Sg	Sg	14 58 43.9	+0.2
TRG				Pmax			
	comp=N,75nm,0.2s						
TRG				Smax			
	comp=N,818nm,0.4s						
FFNB	**Fofonovo**	**1.27**	**219**	Pg	Pg	14 58 32.0	-1.2
FFNB				*e*Sg	Sg	14 58 49.9	0.0
FFNB				Pmax			
	comp=N,230nm,0.1s						
FFNB				Smax			
	comp=N,1μm,0.2s						
SYVR	**Suvo**	**1.31**	**61**	*e*PG	Pg	14 58 32.0	-1.9
SYVR				*e*		14 58 49.7	
SYVR				pmax	pmax		
	comp=Z,82nm,0.1s						
SYVR				smax			
	comp=N,420nm,0.4s						
SYVR	**Suvo**	**1.31**	**61**	⇓*i*Pg	Pg	14 58 32.0	-1.9
SYVR				*e*Sg	Sg	14 58 49.7	-1.4
SYVR				Pmax			
	comp=N,81nm,0.2s						
SYVR				Smax			
	comp=N,426nm,0.5s						
KAB	**Kabansk**	**1.32**	**222**	*e*PG	Pg	14 58 33.2	-0.8
LSTR	**Listvyanka**	**2.30**	**241**	*e*Pn	Pn	14 58 46.5	+1.0
LSTR				*e*Pg	Pg	14 58 49.4	-3.4
LSTR				*e*Sg	Sg	14 59 18.9	-3.7
LSTR				Pmax			
	comp=N,10.0nm,0.2s						
LSTR				Smax			
	comp=N,73nm,0.5s						
IRK	**Irkutsk**	**2.45**	**252**	*e*PN	Pn	14 58 52.9	+5.4
IRK				*e*		14 59 23.6	
IRK				pmax	pmax		
	comp=Z,20nm,0.2s						
IRK				smax			
	comp=N,466nm,0.4s						
IRK	**Irkutsk**	**2.45**	**252**	*e*	Pn	14 58 58.8	+11
IRK				*e*Sg	Sg	14 59 23.9	-3.4
IRK				Smax			
	comp=N,473nm,0.6s						
YLYR	**Ulyunkhan**	**2.59**	**44**	⇓*i*Pn	Pn	14 58 50.0	+0.6
YLYR				*e*		14 58 53.7	
YLYR				*e*Sg	Sg	14 59 28.1	-3.8
YLYR				max			
	comp=N,6.0nm,0.3s						
YLYR				Smax			
	comp=N,56nm,0.5s						
NIZ	**Nizh Angarsk**	**2.87**	**17**	⇑*i*Pn	Pn	14 58 54.5	+1.2
NIZ				*e*Pg	Pg	14 58 59.2	-4.4
NIZ				*e*Sg	Sg	14 59 35.7	-5.1
NIZ				Pmax			
	comp=N,9.0nm,0.3s						
NIZ				Smax			
	comp=N,52nm,0.4s						
TLY	**Talaya**	**3.04**	**245**	*e*Pg	Pg	14 59 02.9	-3.9
TLY				*e*Sg	Sg	14 59 41.7	-4.4
TLY				Pmax			
	comp=N,5.0nm,0.2s						
TLY				Smax			
	comp=N,86nm,0.4s						
KMO	**Kumora**	**3.39**	**31**	*e*Pn	Pn	14 59 01.3	+0.9
KMO				*e*		14 59 08.6	
KMO				*e*Sg	Sg	14 59 54.5	-2.8
KMO				max			
	comp=N,21nm,0.2s						
KMO				Smax			
	comp=N,46nm,0.6s						
CIT	**Chita**	**3.50**	**105**	*e*PN	Pn	14 59 11.6	+10
CIT	**Chita**	**3.50**	**105**	*e*	Pn	14 59 08.4	+6.5
CIT				*e*Pg	Pg	14 59 11.2	-4.4
CIT				*e*Sg	Sg	14 59 56.5	-4.4
CIT				Pmax			
	comp=N,34nm,0.3s						
CIT				Smax			
	comp=N,99nm,0.8s						
ARS	**Arshan**	**3.63**	**254**	*e*PN	Pn	14 59 12.5	+8.8
ARS				*e*		14 59 59.2	
ARS				pmax	pmax		
	comp=Z,9.0nm,0.2s						
ARS				smax			
	comp=E,234nm,0.4s						
ARS	**Arshan**	**3.63**	**254**	*e*Pg	Pg	14 59 13.7	-4.4
ARS				*e*Sg	Sg	15 00 00.5	-4.6
ARS				Pmax			
	comp=E,10.0nm,0.1s						
ARS				Smax			
	comp=E,281nm,0.8s						
ZAK	**Zakamensk**	**3.99**	**230**	*e*	Pn	14 59 18.5	+10
ZAK				*e*Sg	Sg	15 00 14.1	-2.7
ZAK				max			
	comp=E,2.0nm,0.7s						
ZAK				Smax			
	comp=E,30nm,1.2s						
UKT	**Uakit**	**4.08**	**51**	*e*Pn	Pn	14 59 11.3	+1.4
UKT				*e*		14 59 18.5	
UKT				*e*Pg	Pg	14 59 22.1	-4.5
UKT				*e*Sg	Sg	15 00 14.5	-4.9
UKT				Pmax			
	comp=E,5.0nm,0.7s						
UKT				Smax			
	comp=E,35nm,1.0s						
KPC	**Khapcheranga**	**4.29**	**139**	*e*Pn	Pn	14 59 12.4	-0.4
KPC				*e*Pg	Pg	14 59 25.1	-5.7
KPC				*e*Sg	Sg	15 00 20.0	-6.4
KPC				Pmax			
	comp=E,7.0nm,0.2s						
KPC				Smax			
	comp=E,39nm,0.9s						
SVKR	**Severomuysk**	**4.44**	**44**	*e*	Pn	14 59 43.2	+28
SVKR				*e*Sg	Sg	15 00 26.6	-4.3
SVKR				Smax			
	comp=E,69nm,0.5s						
MOY	**Mondy**	**4.55**	**255**	*e*	Pn	14 59 25.4	+9.0
MOY				*e*Pg	Pg	14 59 29.6	-6.1
MOY				*e*		15 00 14.4	
MOY				*e*Sg	Sg	15 00 28.2	-6.4
MOY				Pmax			
	comp=E,3.0nm,0.3s						
MOY				Smax			
	comp=E,56nm,1.0s						
ORL	**Orlik**	**5.04**	**268**	*e*Pn	Pn	14 59 25.8	+2.8
ORL				*e*		14 59 41.8	
ORL				*e*		15 00 24.8	
ORL				*e*Sg	Sg	15 00 44.4	-5.8
ORL				max			
	comp=E,4.0nm,0.5s						
ORL				Smax			
	comp=E,29nm,0.8s						
NLYR	**Nelyaty**	**5.61**	**49**	*e*	Pn	14 59 33.5	+2.6
NLYR				*e*		15 00 41.4	
NLYR				*e*Sg	Sn	15 01 04.3	+30
BOD	**Bodaibo**	**5.86**	**33**	*e*PN	Pn	14 59 51.7	+17
BOD	**Bodaibo**	**5.86**	**33**	*e*	Pn	14 59 50.2	+16
BOD				*e*		15 00 39.2	
BOD				*e*Sg	Sn	15 01 10.3	+29
BOD				Smax			
	comp=E,16nm,1.5s						
TUP	**Tupik**	**7.19**	**74**	*e*PN	Pn	14 59 52.5	0.0
TUP				*e*PG	Pn	15 00 15.8	+23
TUP				*e*SG	Sn	15 01 49.7	+36
TUP	**Tupik**	**7.19**	**74**	*e*	Pn	15 00 35.1	+43
TUP				*e*Sg	Sn	15 01 51.6	+38
TUP				Smax			
	comp=E,33nm,1.0s						

*IDC **29** 15:37:50.3±1.2,3293N×9081E,h0km,mb3.9/6,mb1 4.0/7, mb1mx3.7/22,mbtmp3.8/7,ML2.6/1, Error ellipse: s-maj=51.8km s-min=20.6km az=63.0*
*NEIC **29** 15:37:56.5±0.7,3312N×9099E,h35km, Error ellipse: s-maj=28.6km s-min=13.4km az=84.0*
*ISCJB **29** 15:37:57.3±2.3,331N±01×911E±03,h62km±24km, mb3.8/6, Error ellipse: s-maj=36.6km s-min=20.7km az=173.9*

ISC 29 15:37:58.5±2.1,331N±01×911E±03,h55km±22km,n11, σ0§62/12,mb3.8/6,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**3.37**	**179**	*e*Pn	**Pn**	**15 38 49.0**	**+0.3**
LSA				*e*Sn	**Sn**	**15 39 33.9**	**+6.4**
MKAR	**Makanchi Array**	**15.25**	**336**	Pn	**Pn**	**15 41 22.4**	**-7.9**
	0.0nm,0.3s,baz=146,slow=12,SNR=2.1						
SONM	**Songino Array**	**18.73**	**34**	P	**Pn**	**15 42 13.0**	**-0.4**
	baz=224,slow=12,SNR=3.5						
ZAA0	**Zalesovo Array**	**21.33**	**350**	*e*P	**P**	**15 42 34.0**	**-6.7**
ARCES	**ARCESS Array B**	**50.91**	**336**	P	**P**	**15 46 53.6**	**-0.1**
	3.9nm,1.0s,mb4.3,baz=87,slow=5.6,SNR=3.0						
NB2	**NORSAR Subarra**	**56.88**	**325**	P	**P**	**15 47 37.0**	**-0.4**
	comp=Z,0.1nm,0.6s,mb3.0,baz=82,slow=7.9						
NOA	**NORSAR Array B**	**56.88**	**325**	P	**P**	**15 47 36.1**	**-1.3**
	comp=Z,0.7nm,0.7s,mb3.8,baz=81,slow=7.3,SNR=4.3						
WRA	**Warramunga Arr**	**66.97**	**136**	P	**P**	**15 48 45.1**	**-0.5**
	comp=Z,0.7nm,0.8s,mb3.8,baz=328,slow=6.2,SNR=5.9						
ASAR	**Alice Springs**	**69.64**	**138**	P	**P**	**15 49 02.0**	**-0.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=323,slow=6.0,SNR=13						
INK	**Inuvik**	**73.61**	**16**	P	**P**	**15 49 26.7**	**+1.2**
	comp=Z,1.6nm,0.9s,mb4.0,baz=338,slow=4.3,SNR=5.6						
YKA	**Yellowknife Ar**	**82.54**	**12**	P	**P**	**15 50 15.6**	**+0.6**
	comp=Z,0.3nm,0.6s,mb3.5,baz=332,slow=4.6,SNR=6.6						

*NEIC **29** 15:43:31.4,3163S×7191W,h31km, ML3.2(GUC), After GUC.*

GUC 29 15:43:31.4±0.9,3163S×7191W,h31km±3km,MB3.9, ML3.2,3C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.43**	**125**	⇓*i*P	Pb	15 43 23.4	-17
CHNG				*i* S	Sb	15 43 30.0	-17
CHNG				AML	AML	15 43 30.7	
	comp=N,1μm,0.4s						
CMCH	**Combarbala**	**0.90**	**60**	⇑*i*P	Pn	15 43 47.8	-0.2
CMCH				*i* S	Sn	15 44 00.2	+0.2
CMCH	**Combarbala**	**0.90**	**60**	⇑*i*P	Pn	15 43 47.8	-0.2
CMCH				*i* S	Sn	15 44 00.2	+0.2
CMCH				AML	AML	15 44 06.8	
	comp=E,3μm,0.7s						
PACH	**Papudo**	**0.99**	**156**	*e*P	Pn	15 43 49.1	0.0
PACH				*i* S	Sn	15 44 03.0	+0.9
OVCH	**Ovalle**	**1.19**	**31**	*e*P	Pn	15 43 52.3	+0.4
OVCH				*i* S	Sn	15 44 08.6	+1.5
ROCH	**El Roble**	**1.54**	**150**	⇑*i*P	Pn	15 43 57.8	+1.1
ROCH				*i* S	Sn	15 44 18.9	+3.3
TLL	**Tololo Astrono**	**1.74**	**33**	*e*P	Pn	15 44 01.0	+1.4
TLL				*i* S	Sn	15 44 24.8	+4.1
TLL	**Tololo Astrono**	**1.74**	**33**	*e*P	Pn	15 44 01.0	+1.4
TLL				*i* S	Sn	15 44 24.8	+4.1
TLL				AML	AML	15 44 28.9	
	comp=E,347nm,0.3s						
PEL	**Peldehue**	**1.83**	**146**	⇓*i*P	Pn	15 44 02.2	+1.4
PEL				*i* S	Sn	15 44 25.4	+2.5
PEL				AML	AML	15 44 30.6	
	comp=E,936nm,0.4s						
FCH	**Farellones**	**2.18**	**141**	*e*P	Pn	15 44 07.3	+1.8
FCH				*i* S	Sn	15 44 34.8	+3.4
FCH				AML	AML	15 44 42.2	
	comp=E,198nm,0.4s						
TACH	**Talagante**	**2.18**	**158**	*e*P	Pn	15 44 07.0	+1.5
PCH	**Pirque**	**2.31**	**150**	*e*P	Pn	15 44 08.8	+1.5
CHCH	**Chadas Angostu**	**2.53**	**155**	*e*P	Pn	15 44 12.1	+1.7
LMEL	**Las Melosas**	**2.64**	**147**	⇓*i*P	Pn	15 44 14.0	+2.2
LMEL				*i* S	Sn	15 44 45.9	+3.1
LMEL	**Las Melosas**	**2.64**	**147**	⇓*i*P	Pn	15 44 14.4	+2.2
LMEL				*i* S	Sn	15 44 45.9	+3.1
LMEL				AML	AML	15 44 58.2	
	comp=N,140nm,0.2s						
CICH	**Cipreses**	**2.96**	**155**	*e*P	Pn	15 44 17.8	+1.5
SFDO	**San Fernando**	**3.07**	**166**	⇓*i*P	Pn	15 44 18.9	+1.1

*VIE **29** 15:48:19.4±0.3,4305N×1373E,h10km,mb2.8/7,ML2.9/7, Error ellipse: s-maj=8.0km s-min=1.8km az=103.0*
*ISCJB **29** 15:48:20.8±0.3,4307N±002×1356E±004,h26km±4km, Error ellipse: s-maj=5.1km s-min=3.3km az=175.7*
*CSEM **29** 15:48:20.1±0.1,4307N×1350E,h25km,MD3.0/22, Error ellipse: s-maj=1.9km s-min=1.3km az=74.0*
*ROM **29** 15:48:21.0±0.3,4306N×1350E,h10km±4km,Md3.0/22, Ml2.8/19, Error ellipse: s-maj=3.2km s-min=3.0km az=23.0*

ISC 29 15:48:21.1±0.3,4306N±002×1352E±004,h19km±3km,n34, σ0§94/54,4C-6D,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFFI	**Offida**	**0.17**	**136**	Pg	**Pg**	**15 48 26.1**	**+0.4**
OFFI				Sg	**Sg**	**15 48 31.2**	**+2.4**
	6μm,0.6s						
NRCA	**Norcia**	**0.38**	**233**	⇓*i*Pg	**Pg**	**15 48 28.4**	**-0.6**
NRCA				Sg	**Sg**	**15 48 33.8**	**-0.5**
CING	**Cingoli**	**0.40**	**323**	Pg	**Pg**	**15 48 28.8**	**-0.6**
CING				Sg	**Sg**	**15 48 35.8**	**+0.8**
	527nm,0.2s						
TERO	**Teramo**	**0.44**	**172**	Pg	**Pg**	**15 48 29.0**	**-1.1**
TERO				Sg	**Sg**	**15 48 37.0**	**+0.8**
	564nm,0.5s						
CESI	**CESI - Serrava**	**0.46**	**263**	Pg	**Pg**	**15 48 29.9**	**-0.5**
CESI				Sg	**Sg**	**15 48 37.6**	**+0.9**
	2μm,0.3s						
SNTG	**Esanatoglia**	**0.47**	**295**	Pg	**Pg**	**15 48 30.1**	**-0.6**
SNTG				Sg	**Sg**	**15 48 37.2**	**+0.1**
AOI	**Ancona**	**0.49**	**7**	Pg	**Pg**	**15 48 30.5**	**-0.6**
AOI				Sg	**Sg**	**15 48 38.9**	**+1.1**
	613nm,0.3s						
CAMP	**Campotosto**	**0.53**	**189**	Pg	**Pg**	**15 48 30.5**	**-1.2**
CAMP				Sg	**Sg**	**15 48 40.1**	**+1.2**
	105nm,0.5s						
LNSS	**Leonessa**	**0.58**	**218**	Pg	**Pg**	**15 48 31.7**	**-0.9**
LNSS				Sg	**Sg**	**15 48 41.4**	**+1.0**
	1μm,0.4s						
ARVD	**Arcevia**	**0.61**	**316**	Pg	**Pg**	**15 48 32.6**	**-0.6**
ARVD				Sg	**Sg**	**15 48 42.4**	**+0.9**
	169nm,0.1s						
ASS	**Assisi**	**0.64**	**271**	Pg	**Pg**	**15 48 32.9**	**-0.9**
ASS				Sg	**Sg**	**15 48 43.3**	**+1.0**
	49nm,0.6s						
VCEL	**Villa Celiera**	**0.70**	**161**	Pg	**Pg**	**15 48 35.2**	**+0.3**
	365nm,0.5s						
FAGN	**Fagnano**	**0.79**	**177**	Pg	**Pg**	**15 48 36.4**	**-0.2**
	435nm,0.4s						
FSSB	**Fossombrone**	**0.83**	**320**	Pg	**Pg**	**15 48 36.7**	**-0.7**
	300nm,0.4s						
FIAM	**Fiamignano**	**0.85**	**201**	Pg	**Pg**	**15 48 35.9**	**-1.7**
	287nm,0.7s						
MNS	**Montasola**	**0.92**	**223**	Pg	**Pg**	**15 48 37.4**	**-1.6**
	235nm,0.4s						
PESA	**Pesaro**	**1.01**	**331**	Pg	**Pg**	**15 48 40.6**	**-0.2**
	243nm,0.3s						
BADI	**Badiali**	**1.04**	**296**	Pg	**Pg**	**15 48 40.0**	**-1.2**
	339nm,0.7s						
PTQR	**Pietraquaria**	**1.04**	**185**	Pn	**Pn**	**15 48 41.0**	**+0.4**
	121nm,0.6s						
INTR	**Introdacqua**	**1.08**	**165**	Pn	**Pn**	**15 48 40.1**	**-1.1**
	276nm,0.5s						
CERT	**Cerreto**	**1.18**	**200**	Pn	**Pn**	**15 48 43.1**	**+0.5**
	164nm,0.7s						
SACS	**San Casciano d**	**1.20**	**261**	Pn	**Pn**	**15 48 43.7**	**+0.8**
	181nm,1.0s						
GUAR	**Guarcino**	**1.27**	**187**	Pn	**Pn**	**15 48 45.9**	**+2.1**
	133nm,0.8s						
CRE	**Caprese Michel**	**1.28**	**297**	Pn	**Pn**	**15 48 45.9**	**+2.0**
	48nm,0.4s						
NVLJ	**Novalja**	**1.79**	**32**	*e*Pn	**Pn**	**15 48 51.6**	**+0.7**
NVLJ				Sn	**Sn**	**15 49 12.5**	**-0.7**
NVLJ	**Novalja**	**1.79**	**32**	*e*Pn	**Pn**	**15 48 51.6**	**+0.6**
NVLJ				Sn	**Sn**	**15 49 12.4**	**-0.8**
JAVS	**Javornik**	**2.86**	**8**	*i* Pn	**Pn**	**15 49 05.5**	**-0.2**
JAVS				*e*Sn	**Sn**	**15 49 39.7**	**+0.1**
VOY	**Vojsko**	**2.98**	**5**	*e*Pn	**Pn**	**15 49 06.6**	**-0.8**
VOY				*e*(Sn)	**Sn**	**15 49 41.6**	**-1.0**
VOY				*e*		15 49 42.8	
OBKA	**Obir**	**3.53**	**12**	⇓*i*Pn	**Pn**	**15 49 14.2**	**-0.6**
OBKA				⇑*i*Sn	**Sn**	**15 49 57.0**	**+1.0**
MYKA	**Terra Mystica**	**3.57**	**1**	⇑*i*Pn	**Pn**	**15 49 15.7**	**+0.2**
ABTA	**Abfaltersbach**	**3.76**	**349**	⇓*i*Pn	**Pn**	**15 49 18.3**	**+0.3**
ABTA				⇑*i*Sn	**Sn**	**15 50 03.5**	**+1.8**
MOA	**Molln**	**4.82**	**6**	⇑*i*Pn	**Pn**	**15 49 32.4**	**-0.2**
MOA				⇓*i*Sn	**Sn**	**15 50 28.1**	**+0.2**
MOA	**Molln**	**4.82**	**6**	Pn	**Pn**	**15 49 32.4**	**-0.2**
MOA				Sn	**Sn**	**15 50 28.0**	**+0.2**
CONA	**Conrad Observa**	**5.14**	**18**	⇓*i*Pn	**Pn**	**15 49 36.4**	**-0.6**
CONA				⇓*i*Sn	**Sn**	**15 50 35.0**	**-0.7**

*IDC **29** 16:09:38.4±9.6,2087S×16854E,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.9/13,mbtmp3.9/4,MS3.4/1,Ms1 3.4/1, ms1mx2.9/16, Error ellipse: s-maj=276.6km s-min=54.9km az=138.0*

ISC 29 16:09:39.9±4.8,208S±06×1686E±07,h10km,n6,σ0§56/6, mb3.8/4,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.35**	**237**	*e*P	**Pn**	**16 10 18.4**	**-0.2**
DZM				*e*S	**Sn**	**16 10 47.9**	**+0.4**
RPZ	**Rata Peaks**	**22.96**	**175**	LR	LR	16 21 44.8	
	comp=Z,111nm,21.5s,baz=180,slow=32						
WRA	**Warramunga Arr**	**32.06**	**265**	P	**P**	**16 16 06.6**	**-0.5**
	0.6nm,0.8s,mb3.5,baz=94,slow=8.9,SNR=5.0						
ASAR	**Alice Springs**	**32.16**	**258**	P	**P**	**16 16 07.7**	**-0.3**
	1.2nm,0.5s,mb4.0,baz=92,slow=8.7,SNR=35						
FITZ	**Fitzroy Crossi**	**40.48**	**266**	P	**P**	**16 17 19.2**	**+0.1**
	1.4nm,0.6s,mb3.9,baz=136,slow=8.1,SNR=4.5						
SONM	**Songino Array**	**88.07**	**323**	P	**P**	**16 22 31.1**	**+0.6**
	0.6nm,0.8s,mb3.9,baz=138,slow=6.0,SNR=4.7						

IDC 29 16:12:04.6±8.6,2101S×6761W,h184km±60km,mb3.7/1, mb1 4.1/2,mb1mx3.4/15,mbtmp3.8/2,MS3.4/2,Ms1 3.4/2, ms1mx2.9/23,Error ellipse: s-maj=184.9km s-min=73.6km az=72.0,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.73**	**354**	P	Pn	16 13 15.7	+0.5
	8.6nm,0.3s,baz=170,slow=8.0,SNR=109						
LPAZ				S	Sn	16 14 12.1	+1.5
	baz=192,slow=19,SNR=1.6						
LPAZ				LR	LR	16 15 23.9	
	comp=Z,74nm,18.4s,baz=237,slow=42						
PCRV	**Puerto La Cruz**	**31.13**	**6**	LR	LR	16 32 37.6	
	comp=Z,404nm,20.4s,baz=57,slow=40						
YKA	**Yellowknife Ar**	**91.14**	**340**	P	P	16 24 47.8	-0.1
	0.6nm,0.5s,baz=131,slow=4.5,SNR=16						
MKAR	**Makanchi Array**	**144.53**	**36**	PKP	PKPdf	16 31 18.5	-0.4
	1.4nm,0.6s,baz=313,slow=3.3,SNR=19						
SONM	**Songino Array**	**152.81**	**9**	PKPbc	PKPbc	16 31 39.8	+0.3
	0.2nm,0.5s,baz=338,slow=2.3,SNR=2.4						

*ISCJB **29** 16:17:17.4±0.7,3830N±005×68.19E±007,h10km,mb3.4/3, Error ellipse: s-maj=9.1km s-min=6.1km az=136.6*
*IDC **29** 16:17:20.4±1.9,3827N×6840E,h0km,mb3.6/3,mb1 3.6/6, mb1mx3.4/24,mbtmp3.5/6,ML3.2/3, Error ellipse: s-maj=38.1km s-min=22.8km az=165.0*
*NEIC **29** 16:17:22.6±1.3,3855N×6826E,h10km, Error ellipse: s-maj=24.5km s-min=11.1km az=165.0*
*NNC **29** 16:17:23.4±3.8,3859N×6822E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=38.2km s-min=18.8km az=173.0*

ISC 29 16:17:20.5±0.8,3833N±006×6822E±007,h10km,n22, σ1§45/27,mb3.4/3,4C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.08**	**19**	⇓Pn	**Pn**	**16 18 38.3**	**+1.7**
	1.1nm,0.3s,baz=201,slow=13,SNR=31						
KK31				⇑Pg	**Pg**	**16 18 52.3**	**-5.5**
	5.9nm,0.5s,baz=207,slow=17,SNR=13						
KK31				Lg		16 19 57.4	
	40nm,0.6s,baz=199,slow=27,SNR=12						
AML	**Almayashu**	**5.65**	**46**	*e*Pn	**Pn**	**16 18 45.0**	**+0.5**
	28nm,0.7s						
AML				*e*Sn	**Sn**	**16 19 48.4**	**-1.1**
EKS2	**Erkin-Say**	**6.05**	**43**	*e*Pn	**Pn**	**16 18 50.8**	**+0.8**
	7.8nm,0.7s						
UCH	**Uchtor**	**6.19**	**49**	*e*Pn	**Pn**	**16 18 52.3**	**+0.4**
	14nm,0.6s						
TKM2	**Tokmak 2**	**7.25**	**48**	⇑Pn	**Pn**	**16 19 07.7**	**+1.3**
	3.4nm,0.5s						
TKM2				⇓Sn	**Sn**	**16 20 30.3**	**+1.7**
	7.9nm,0.8s						
TKM2				⇓Lg		16 21 07.6	
	8.7nm,0.6s						
TKM2	**Tokmak 2**	**7.25**	**48**	*e*Pn	**Pn**	**16 19 06.7**	**+0.3**
	5.5nm,0.5s						
AB31	**Akbulak array**	**12.45**	**334**	⇑Pn	**Pn**	**16 20 18.2**	**+0.7**
	0.4nm,0.2s,baz=166,slow=11,SNR=49						
MKAR	**Makanchi Array**	**13.37**	**46**	Pn	**Pn**	**16 20 29.1**	**-1.0**
	0.0nm,0.3s,baz=238,slow=13,SNR=5.0						
AKTK	**Aktyubinsk**	**14.12**	**332**	P	**Pn**	**16 20 39.8**	**-0.6**
AKTK				Sn	**Sn**	**16 23 15.5**	**-1.5**
AKTO	**Aktyubinsk**	**14.12**	**332**	⇑Pn	**Pn**	**16 20 41.3**	**+0.9**
	1.5nm,1.8s						
AKTO	**Aktyubinsk**	**14.12**	**332**	Pn	**Pn**	**16 20 39.8**	**-0.6**
	0.1nm,0.3s,baz=151,slow=19,SNR=3.8						
AKTO				Sn	**Sn**	**16 23 15.5**	**-1.5**
	0.1nm,0.3s,baz=100,slow=19,SNR=2.9						
KOLN	**Koldanda**	**16.62**	**125**	*e*P	**Pn**	**16 21 18.3**	**+4.7**
	6.7nm,0.6s						
GKN	**Gorkha**	**17.15**	**122**	*e*P	**Pn**	**16 21 18.3**	**-1.9**
	10.0nm,0.5s						
KKN	**Kakani**	**17.71**	**121**	*e*P	**Pn**	**16 21 24.1**	**-3.2**
	8.0nm,0.5s

az=58.0

GCMT ***29*** *16:19:46.1±0.3, 4.93N×8257W, h24km±1km, MW5.0/69, Moment Tensor Solution. s31,c38; s69,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.02±.18; $M_{\theta\theta}$0.50±.13; $M_{\phi\phi}$-0.52±.18; $M_{r\theta}$0.33±.19; $M_{\theta\phi}$3.90±.13; $M_{\phi r}$-0.28±.22; Best double couple: Mw3.95700×10^{16} NP1:ϕ_s4.00000°, δ85.00000°, λ-176.00000°. NP2: ϕ_s274.00000°, δ86.00000°, λ-5.00000°. Principal axes: T 3.9230, Plg1.0000°, Azm319.0000°; N 0.0670, Plg84.0000°, Azm58.0000°; P -3.9900, Plg6.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CASC ***29*** *16:19:46.7±1.8, 5.00N×8265W, h36km±999km, MD4.4, mb4.6(NEIC)*

NEIC ***29*** *16:19:46.1±0.4, 5.03N×8270W, h10km, mb4.6/17, MD4.4(CASC), Error ellipse: s-maj=8.9km s-min=5.4km az=59.0*

BJI ***29*** *16:19:46.1, 5.00N×8270W, h10km, mB5.5, Ms4.8, Msz4.8*

ISC 29 16:19:46.3±1.6, 509N±003×8267W±004, h8km±11km, n84, σ1§26/79, mb4.5/25, MS4.3/8, 6C-3D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AZU	**Azuero**	**3.58**	**41**⇑	*e*P	**Pn**	**16 20 41.4**	**-0.8**
AZU				*e*S	**Sn**	**16 21 21.8**	**-3.0**
BAR1		**4.17**	**351**	*e*P	**Pn**	**16 20 49.1**	**-1.2**
BAR1				*e*S	**Sn**	**16 21 39.5**	**+0.2**
CNI	**Changuinola**	**4.30**	**2**⇑	*e*P	**Pn**	**16 20 52.8**	**+0.7**
CNI				*e*S	**Sn**	**16 21 45.4**	**+3.0**
CNI	**Changuinola**	**4.30**	**2**⇓	*e*P	**Pn**	**16 20 52.6**	**+0.6**
CNI				*e*S	**Sn**	**16 21 42.5**	**0.0**
BUS	**Buena Vista**	**4.57**	**346**⇓	*e*P	**Pn**	**16 20 55.7**	**0.0**
BUS				*e*S	**Sn**	**16 21 49.4**	**+0.4**
LCR2	**La Lucha 2**	**4.81**	**344**⇑	*e*P	**Pn**	**16 20 58.1**	**-1.0**
LCR2				*e*S	**Sn**	**16 21 54.0**	**-0.9**
URSC	**Urasca**	**4.84**	**347**⇑	*e*P	**Pn**	**16 20 58.9**	**-0.6**
URSC				*e*S	**Sn**	**16 21 54.0**	**-1.8**
BCIP	**Isla Barro Col**	**4.93**	**35**	*e*Pn	**Pn**	**16 21 01.1**	**+0.5**
LAJ	**Bijagual**	**4.96**	**343**⇑	*e*P	**Pn**	**16 21 00.1**	**-1.0**
LAJ				*e*S	**Sn**	**16 21 56.6**	**-2.0**
SJS	**Escuela Geolog**	**5.01**	**344**	*e*P	**Pn**	**16 21 02.2**	**+0.3**
SJS				*e*S	**Sn**	**16 22 00.7**	**+0.8**
PRS1	**Puriscal**	**5.13**	**342**⇑	*e*P	**Pn**	**16 21 01.7**	**-1.8**
CGA2	**Cerro Gallo 2**	**5.21**	**340**⇓	*e*P	**Pn**	**16 21 04.2**	**-0.3**
CGA2				*e*S	**Sn**	**16 22 05.1**	**+0.3**
JCR	**Jicaral**	**5.31**	**333**	*e*P	**Pn**	**16 21 05.0**	**-1.0**
VCR	**Vista de Mar**	**5.80**	**330**	*e*P	**Pn**	**16 21 11.8**	**-0.9**
VCR				*e*S	**Sn**	**16 22 18.0**	**-1.5**
CUI		**6.07**	**336**	*i* P	**Pn**	**16 21 16.4**	**-0.1**
CUI				*i* S	**Sn**	**16 22 26.4**	**+0.3**
ROSC	**El Rosal**	**8.31**	**91**	Pn	**Pn**	**16 21 48.9**	**+1.8**
	0.8nm,0.3s,baz=106,slow=20,SNR=2.3						
ROSC				Sn	**Sn**	**16 23 23.8**	**+2.5**
	2.0nm,0.3s,baz=270,slow=20,SNR=1.9						
TGUH	**Tegucigalpa,Un**	**10.00**	**333**	*e*Pn	**Pn**	**16 22 15.8**	**+5.4**
	29nm,0.6s						
SDV	**Santo Domingo**	**12.52**	**72**	*e*Pn	**Pn**	**16 22 45.6**	**+0.7**
	34nm,0.9s						
SDV				*e*Sn	**Sn**	**16 25 01.2**	**-3.6**
SDV	**Santo Domingo**	**12.52**	**72**	Pn	**Pn**	**16 22 46.4**	**+1.5**
	1.0nm,0.3s,baz=306,slow=9.1,SNR=12						
SDV				Sn	**Sn**	**16 25 04.3**	**-0.4**
	1.0nm,0.3s,baz=33,slow=17,SNR=3.3						
SDV				LR	LR	16 27 23.2	
	comp=Z,472nm,19.4s,baz=239,slow=37						
ATAH	**Atahualpa**	**12.74**	**160**	Pn	**Pn**	**16 22 48.5**	**+0.5**
	2.5nm,0.3s,baz=348,slow=6.6,SNR=13						
ATAH				LR	LR	16 27 20.1	
	comp=Z,2µm,19.4s,baz=336,slow=36						
TEIG	**Tepich**	**16.00**	**341**	LR	LR	16 29 14.6	
	comp=Z,668nm,19.1s,baz=60,slow=35						
CMIG	**Matias Romero**	**16.90**	**316**	Pn	**Pn**	**16 23 43.7**	**+0.4**
	0.2nm,0.3s,baz=121,slow=7.2,SNR=9.5						
CMIG				LR	LR	16 29 18.2	
	comp=Z,546nm,19.5s,baz=123,slow=34						
SDDR	**Presa de Saban**	**17.71**	**38**	*e*Pn	**Pn**	**16 23 55.1**	**+1.6**
	17nm,0.8s						
NNA	**Nana**	**17.93**	**161**	*e*Pn	**Pn**	**16 23 55.1**	**-1.0**
	79nm,1.0s						
NNA	**Nana**	**17.93**	**161**	P	**Pn**	**16 23 54.4**	**-1.7**
	2.5nm,0.3s,baz=332,slow=9.9,SNR=9.7						
NNA				LR	LR	16 29 47.9	
	comp=Z,132nm,20.1s,baz=158,slow=34						
PCRV	**Puerto La Cruz**	**18.57**	**73**	P	**Pn**	**16 24 04.2**	**+0.2**
	0.5nm,0.3s,baz=306,slow=7.4,SNR=5.5						
CPD	**Cerro la Pandu**	**20.82**	**50**	*e*P	**P**	**16 24 29.9**	**+1.4**
	13nm,0.4s						
MTP	**Monte Pirata**	**21.14**	**51**	*e*P	**P**	**16 24 28.4**	**-3.5**
MTP				*e*		16 24 40.6	
BBGH	**Gun Hill**	**24.16**	**69**	P	**P**	**16 24 59.8**	**-3.3**
	458nm,1.1s,mb5.8						
LPAZ	**La Paz**	**25.65**	**146**	P	**P**	**16 25 15.8**	**-0.8**
	8.0nm,0.8s,mb4.3,baz=336,slow=8.2,SNR=31						
LPAZ				LR	LR	16 36 27.2	
	comp=Z,598nm,19.7s,MS4.1,baz=307,slow=39						
LRAL	**Lakeview Retre**	**28.09**	**352**	*e*P	**P**	**16 25 39.4**	**+0.8**
	11nm,0.7s,mb4.6						
SIV	**San Ignacio**	**29.92**	**135**	P	**P**	**16 25 53.5**	**-1.5**
	9.1nm,1.1s,mb4.4,baz=307,slow=9.7,SNR=22						
MIAR	**Mount Ida**	**31.00**	**342**	P	**P**	**16 26 05.2**	**+0.9**
	7.4nm,1.0s,mb4.5						
WVT	**Waverly**	**31.25**	**352**	*e*P	**P**	**16 26 05.5**	**-1.1**
	6.7nm,0.8s,mb4.5						
BNM	**Barren Site**	**36.47**	**325**	*e*P	**P**	**16 26 51.6**	**-0.3**
ANMO	**Albuquerque**	**36.97**	**327**	*e*P	**P**	**16 26 58.8**	**+2.6**
	7.9nm,1.2s,mb4.4						
SDCO	**Great Sand Dun**	**38.60**	**330**	*e*P	**P**	**16 27 11.4**	**+1.5**
	6.7nm,1.2s,mb4.2						
CFAA	**Coronel Fontan**	**39.00**	**160**	P	**P**	**16 27 12.1**	**-1.3**
	0.4nm,0.6s,baz=341,slow=8.4,SNR=5.1						
WUAZ	**Wupatki**	**40.21**	**323**	*e*P	**P**	**16 27 25.4**	**+2.0**
	18nm,1.2s,mb4.7						
WUAZ				*e*		16 27 34.4	
SMCO	**Snowmass**	**40.44**	**330**	*e*P	**P**	**16 27 27.4**	**+2.1**
	5.9nm,0.8s,mb4.4						
SRU	**San Rafael**	**42.22**	**327**	*e*P	**P**	**16 27 41.6**	**+1.6**
	1.5nm,0.9s,mb3.6						
MSU	**Marysvale**	**42.72**	**325**	*e*P	**P**	**16 27 46.2**	**+2.2**
PDAR	**Pinedale Array**	**44.45**	**332**	P	**P**	**16 27 59.2**	**+1.4**
PDAR				LR	LR	16 48 44.2	
PDAR	**Pinedale Array**	**44.45**	**332**	P	**P**	**16 27 59.2**	**+1.4**
	1.6nm,0.8s,mb3.8,baz=123,slow=11,SNR=11						
PDAR				LR	LR	16 48 44.2	
	comp=Z,124nm,21.5s,MS3.8,baz=282,slow=39						
HWUT	**Hardware Ranch**	**44.58**	**329**	*e*P	**P**	**16 27 59.7**	**+0.8**
	3.6nm,0.7s,mb4.3						
ISA	**Isabella**	**44.85**	**318**	*e*P	**P**	**16 28 03.3**	**+2.2**
	13nm,1.4s,mb4.6						
NVAR	**Mina Array Bea**	**46.34**	**321**	P	**P**	**16 28 14.8**	**+1.8**
NVAR	**Mina Array Bea**	**46.34**	**321**	P	**P**	**16 28 14.8**	**+1.9**
	3.7nm,0.8s,mb4.3,baz=130,slow=7.8,SNR=16						
ULM	**Lac du Bonnet**	**46.36**	**348**	P	**P**	**16 28 11.0**	**-1.8**
ULM	**Lac du Bonnet**	**46.36**	**348**	P	**P**	**16 28 11.0**	**-1.8**
	1.1nm,0.5s,mb4.0,baz=183,slow=18,SNR=3.1						
PLCA	**Paso Flores**	**46.94**	**167**	P	**P**	**16 28 16.0**	**-1.5**
PLCA	**Paso Flores**	**46.94**	**167**	P	**P**	**16 28 16.0**	**-1.5**
	4.7nm,0.9s,mb4.4,baz=343,slow=9.5,SNR=7.3						
TRQA	**Tornquist**	**47.04**	**158**	P	**P**	**16 28 15.8**	**-2.5**
	7.0nm,1.1s,mb4.5						
HLID	**Hailey**	**47.45**	**329**	P	**P**	**16 28 22.0**	**+0.5**
WVOR	**Wild Horse Val**	**49.00**	**325**	*e*P	**P**	**16 28 34.1**	**+0.6**
	20nm,1.4s,mb5.0						
SCHQ	**Schefferville**	**51.22**	**12**	P	**P**	**16 28 49.7**	**-0.4**
SCHQ				LR	LR	16 51 07.3	
SCHQ	**Schefferville**	**51.22**	**12**	P	**P**	**16 28 49.7**	**-0.4**
	7.2nm,0.9s,mb4.6,baz=91,slow=3.1,SNR=5.9						
SCHQ				LR	LR	16 51 07.3	
	comp=Z,94nm,18.3s,MS3.9,baz=153,slow=37						
EDM	**Edmonton**	**54.16**	**338**	*e*P	**P**	**16 29 11.1**	**-0.8**
EFI	**East Falkland**	**60.33**	**163**	P	**P**	**16 29 53.9**	**-1.6**
	61nm,1.2s,mb5.5						
YKA	**Yellowknife Ar**	**61.93**	**344**	P	**P**	**16 30 06.1**	**-0.1**
YKA	**Yellowknife Ar**	**61.93**	**344**	P	**P**	**16 30 06.1**	**-0.1**
	3.0nm,0.9s,mb4.4,baz=140,slow=6.4,SNR=22						
INK	**Inuvik**	**71.60**	**342**	*e*P	**P**	**16 31 08.5**	**+0.7**
	201nm,0.9s						
EGAK	**Eagle**	**72.38**	**337**	*e*P	**P**	**16 31 13.0**	**+0.4**
	6.1nm,0.9s,mb4.5						
ESDC	**Sonseca Array**	**78.07**	**51**	P	**P**	**16 31 45.9**	**0.0**
	0.5nm,0.3s,mb3.9,baz=261,slow=6.9,SNR=4.7						
ESDC				LR	LR	16 59 38.6	
	comp=Z,95nm,18.9s,MS4.1,baz=345,slow=31						
TORD	**Torodi Ar. Bea**	**83.38**	**77**	P	**P**	**16 32 14.7**	**-0.1**
	0.5nm,0.5s,mb3.8,baz=15,slow=6.2,SNR=4.1						
HFS	**Hagfors**	**88.79**	**30**	LR	LR	17 04 06.5	
	comp=Z,156nm,21.7s,MS4.4,baz=331,slow=30						
VRAC	**Vranov**	**92.19**	**40**	LR	LR	17 07 05.0	
	comp=Z,162nm,21.1s,MS4.5,baz=275,slow=31						
ZALV	**Zalesovo Beam**	**120.25**	**9**	PKP	PKPdf	16 38 39.4	+1.4
	0.6nm,0.3s,baz=328,slow=4.1,SNR=3.1						
MDJ	**Mudanjiang**	**122.68**	**333**	PKP	PKPdf	16 38 41.0	-2.0
MKAR	**Makanchi Array**	**126.65**	**13**	PKP	PKPdf	16 38 51.5	+0.9
	0.5nm,0.8s,baz=336,slow=0.8,SNR=4.4						
SONM	**Songino Array**	**126.70**	**352**	PKP	PKPdf	16 38 52.8	+2.2
	0.2nm,0.5s,baz=302,slow=0.7,SNR=3.0						
WMQ	**Urumqi**	**130.54**	**9**	PKP	PKPdf	16 38 56.3	-1.7
WMQ				PP	PP	16 41 15.8	+4.6
WMQ				PP	PP		
	comp=Z,94nm,4.8s						
WMQ				LR	LR		
	comp=N,57nm,18.5s						
WMQ				LR	LR		
	comp=E,49nm,26.4s						
WMQ				LR	LR		
	comp=Z,197nm,21.2s,MS4.8						
HHC	**Hu-ho-hao-te**	**132.46**	**345**	*e*PKP	PKPdf	16 39 02.5	+0.8
HHC				PP	PP	16 41 29.5	+5.9
HHC				PKS		16 42 38.0	
HHC				SKS	SKSdf	16 46 13.5	-0.1
HHC				SKKS	SKKSac	16 48 21.5	0.0
HHC				SS	SS	16 59 07.5	+5.2
HHC				PP	PP		
	comp=Z,211nm,7.6s						
HHC				LR	LR		
	comp=N,140nm,27.5s,MS4.6						
HHC				LR	LR		
	comp=E,116nm,28.0s,MS4.6						
HHC				LR	LR		
	comp=Z,209nm,29.0s,MS4.7						
LZH	**Lanzhou**	**138.59**	**352**	*e*PKP	PKPdf	16 39 15.0	+1.7
ASAR	**Alice Springs**	**140.24**	**239**	PKP	PKPdf	16 39 15.1	-1.5
	comp=Z,0.5nm,0.7s,baz=121,slow=2.5,SNR=5.2						
WRA	**Warramunga Arr**	**141.10**	**244**	PKP	PKPdf	16 39 16.5	-1.8
	comp=Z,0.6nm,0.8s,baz=108,slow=2.3,SNR=5.2						
CD2	**Chengdu**	**143.68**	**351**	*e*PKP	PKPdf	16 39 20.5	-2.1
KOLN	**Koldanda**	**144.74**	**21**	*e*P	PKPdf	16 39 23.3	-1.3
	comp=Z,5.4nm,0.7s						
GKN	**Gorkha**	**144.89**	**20**	*e*P	PKPdf	16 39 22.6	-2.2
	comp=Z,15nm,0.8s						
KKN	**Kakani**	**145.30**	**19**	*e*P	PKPbc	16 39 24.5	-0.7
	comp=Z,28nm,0.7s						
JIRN	**Jiri**	**145.71**	**18**	*e*P	PKPdf	16 39 26.6	+0.4
	comp=Z,10nm,0.8s						
TAPN	**Taplejung**	**146.44**	**16**	*e*P	PKPdf	16 39 30.4	+2.9
	comp=Z,22nm,1.3s						
GYA	**Guiyang**	**147.36**	**344**	*e*PKP	PKPdf	16 39 27.3	-1.7
GYA				PKP2	PKPab	16 39 33.8	+0.6
GYA				PP	PP	16 42 59.0	+3.7
GYA				PP	PP		
	comp=Z,70nm,6.9s						
KMI	**Kunming**	**149.51**	**350**	PKP	PKPdf	16 39 28.3	-4.3
KMI				APKP		16 39 35.5	

ISCJB ***29*** *16:40:55.6±0.9, 3840N±003×2044E±007, h11km, Error ellipse: s-maj=7.8km s-min=4.4km az=159.7*

THE ***29*** *16:40:56.0, 3840N×2043E, h3km, ML3.3*

ATH ***29*** *16:40:55.6, 3838N×2047E, h15km±7km, MD3.4/5*

NEIC ***29*** *16:40:55.7, 3840N×2049E, h11km, MD3.4(ATH), ML3.3(THE), After ATH.*

CSEM ***29*** *16:40:56.5±0.2, 3837N×2045E, h2km, MD3.4, Error ellipse: s-maj=4.7km s-min=2.2km az=72.0*

ISC 29 16:40:55.8±1.0, 3840N±004×2041E±007, h4km±7km, n12, σ1§00/17, 1C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.27**	**147**⇑	*i*PB	**Pg**	**16 41 00.7**	**-0.2**
VLS				*e*SB	**Sg**	**16 41 05.0**	**+0.7**
LKD	**Levkas**	**0.36**	**32**	*e*Pg	**Pg**	**16 41 02.1**	**-0.6**
LKD				*e*Sg	**Sg**	**16 41 07.7**	**+0.2**
LKD	**Levkas**	**0.36**	**32**	*e*Sg	**Sg**	**16 41 07.7**	**+0.2**
KFL	**Anninata**	**0.42**	**134**	*e*Pg	**Pg**	**16 41 03.2**	**-0.5**
IGT	**Igoumenitsa**	**1.13**	**357**	*e*Pg	**Pg**	**16 41 16.9**	**-0.5**
IGT				*e*Sg	**Sg**	**16 41 33.9**	**+1.7**
SELA	**Sela**	**1.18**	**96**	*e*Sg	**Sg**	**16 41 35.0**	**+1.4**
EVR	**Evrytania**	**1.21**	**64**	*e*PN	**Pn**	**16 41 17.2**	**-2.3**
JAN	**Janina**	**1.30**	**15**	*e*PN	**Pn**	**16 41 20.9**	**+0.1**
KEK	**Kerkira**	**1.39**	**340**	*i*PN	**Pn**	**16 41 22.2**	**+0.2**
AGG	**Agios Georgios**	**1.63**	**67**	*e*Pg	**Pg**	**16 41 24.1**	**-2.9**
AGG				*e*Sg	**Sg**	**16 41 47.6**	**-0.5**
THL	**Klokotos Trika**	**1.71**	**47**	*i*PN	**Pn**	**16 41 26.9**	**+0.5**
DID	**Didima**	**2.41**	**111**	*e*Pn	**Pn**	**16 41 36.5**	**+0.5**
DID				*e*Sn	**Sn**	**16 42 06.3**	**+0.4**

IDC 29 16:53:55.2±7.5, 1077S×16206E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.7/14, mbtmp3.7/5, Error ellipse: s-maj=208.2km s-min=32.8km az=118.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.21**	**248**	P	P	16 59 49.2	-0.7
	0.5nm,0.4s,baz=78,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**29.72**	**241**	P	P	17 00 04.5	+1.1
	0.2nm,0.6s,baz=64,slow=10,SNR=4.8						
KSRS	**Korea Array**	**57.67**	**328**	P	P	17 03 47.9	+0.4
	1.5nm,0.9s,baz=153,slow=8.4,SNR=4.4						
SONM	**Songino Array**	**76.33**	**325**	P	P	17 05 46.6	+0.5
	0.6nm,0.7s,baz=135,slow=5.4,SNR=6.8						
MKAR	**Makanchi Array**	**90.86**	**317**	P	P	17 07 00.2	-0.5
	0.3nm,0.4s,baz=87,slow=6.6,SNR=4.3						

CSEM ***29*** *16:59:15.8±0.1, 3874N×3046E, h2km, MD2.7, Error ellipse: s-maj=4.1km s-min=1.6km az=87.0*

ISK ***29*** *16:59:16.5, 3874N×3051E, h2km, MD2.7*

ISCJB ***29*** *16:59:17.2±0.7, 3873N±004×3047E±006, h8km±9km, Error ellipse: s-maj=8.5km s-min=6.3km az=161.5*

DDA ***29*** *16:59:17.2, 3868N×3047E, h2km±1km, Md2.7*

ISC 29 16:59:17.5±0.7, 3871N±004×3047E±007, h12km±7km, n10, σ0§85/16, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.17**	**159**	*i* PG	**Pg**	**16 59 20.9**	**-0.5**
SHUT				*i* SG	**Sg**	**16 59 24.9**	**+0.9**
ESKT	**Eskisehir**	**0.86**	**20**	PG	**Pg**	**16 59 33.0**	**-1.1**
ESKT				SG	**Sg**	**16 59 45.6**	**+0.3**
ESKT	**Eskisehir**	**0.86**	**20**	*i* P	**Pg**	**16 59 32.3**	**-1.8**
ESKT				*i* S	**Sg**	**16 59 46.6**	**+1.3**
SEYT	**Eskypehyr**	**0.86**	**20**	*i* P	**Pg**	**16 59 32.3**	**-1.8**
SEYT				*i* S	**Sg**	**16 59 46.6**	**+1.3**
GDZ	**Gediz**	**0.86**	**296**	*i* P	**Pg**	**16 59 33.4**	**-0.7**
GDZ				*i* S	**Sg**	**16 59 45.5**	**+0.1**
ISP	**Isparta**	**0.87**	**178**	*e*PG	**Pg**	**16 59 34.5**	**+0.2**
KIZT	**Kizilcal**	**1.11**	**81**	*e*PN	**Pn**	**16 59 38.2**	**-0.8**
BORA	**Eskisehir**	**1.17**	**359**	*i* P	**Pb**	**16 59 38.7**	**-1.0**
BORA				*i* S	**Sb**	**16 59 55.4**	**+0.7**
GULT	**Gulveren**	**1.72**	**1**	*e*PN	**Pn**	**16 59 47.7**	**+0.4**
IZI	**Iznik**	**1.80**	**335**	*e*PN	**Pn**	**16 59 49.6**	**+1.2**

ISCJB ***29*** *17:05:35.7±0.9, 3724N±004×13672E±007, h11km±7km, Error ellipse: s-maj=9.8km s-min=5.6km az=15.3*

JMA ***29*** *17:05:36.1, 3723N×13673E, h11km±1km, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s30.00000°, δ34.00000°, λ63.00000°. NP2:ϕ_s241.00000°, δ60.00000°, λ107.00000°. Principal axes: T Plg70.0000°, Azm189.0000°; N Plg15.0000°, Azm52.0000°; P Plg13.0000°, Azm319.0000°;*

JMA Felt I J1.

ISC 29 17:05:35.9±0.9, 3724N±003×13671E±008, h15km±6km, n6, σ0§20/12, 1C-3D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.32**	**169**	⇓P	**Pg**	**17 05 42.4**	**0.0**
JJH				S	**Sg**	**17 05 47.0**	**+0.2**
JSZ	**Suzu**	**0.56**	**68**	P	**Pg**	**17 05 46.8**	**-0.1**
JSZ				S	**Sg**	**17 05 54.3**	**-0.1**
JHG	**Hegura jima**	**0.63**	**15**	⇓P	**Pg**	**17 05 48.2**	**-0.1**
JHG				S	**Sg**	**17 05 57.0**	**+0.3**
JTT	**Ttatey**	**0.81**	**141**	⇓P	**Pg**	**17 05 51.1**	**-0.4**
JTT				S	**Sg**	**17 06 02.3**	**+0.2**
JKG	**Kaga**	**1.00**	**198**	⇑P	**Pb**	**17 05 54.7**	**-0.3**
JKG				S	**Sb**	**17 06 08.1**	**+0.1**
MAT	**Matsushiro**	**1.39**	**120**	P	**Pn**	**17 06 00.7**	**0.0**
MAT				S	**Sn**	**17 06 18.8**	**+0.1**

IDC 29 17:08:42.4±1.4, 1464S×7167W, h109km±20km, mb3.7/3, mb1 3.8/6, mb1mx3.6/20, mbtmp3.7/6, Error ellipse: s-maj=57.1km s-min=10.8km az=26.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.79**	**116**	P	**Pn**	**17 09 40.8**	**+2.0**
	6.3nm,0.3s,baz=284,slow=9.6,SNR=80						
LPAZ				S	**Sn**	**17 10 23.8**	**+1.2**
	baz=255,slow=16,SNR=2.7						
NNA	**Nana**	**5.68**	**297**	P	**Pn**	**17 10 05.3**	**+0.8**
	5.3nm,0.3s,baz=122,slow=12,SNR=11						
NNA				S	**Sn**	**17 11 08.2**	**-0.2**
	13nm,0.3s,baz=31,slow=23,SNR=16						
SIV	**San Ignacio**	**10.31**	**99**	P	**Pn**	**17 11 06.4**	**-0.9**
	1.6nm,0.3s,baz=278,slow=13,SNR=19						
PCRV	**Puerto La Cruz**	**25.62**	**16**	P	**P**	**17 14 01.9**	**+0.1**
	7.2nm,0.7s,baz=166,slow=10,SNR=1.7						
TORD	**Torodi Ar. Bea**	**77.69**	**73**	P	**P**	**17 20 27.2**	**-0.4**
	0.8nm,0.4s,baz=259,slow=5.7,SNR=4.9						
YKA	**Yellowknife Ar**	**83.88**	**341**	P	**P**	**17 21 00.1**	**+0.6**
	0.3nm,0.6s,baz=134,slow=5.1,SNR=6.2						

GUC ***29*** *17:09:03.5±0.8, 3161S×72.13W, h24km±4km, ML5.7*

MOS ***29*** *17:09:03.4±1.1, 3165S×72.10W, h16km, mb5.5/32, MS5.3/22, Error ellipse: s-maj=17.1km s-min=7.3km az=96.5*

ISCJB ***29*** *17:09:06.6±0.5, 3161S±002×7177W±006, h34km±5km, mb5.3/83, MS5.3/73, Error ellipse: s-maj=8.8km s-min=4.0km az=172.2*

GCMT ***29*** *17:09:07.1±0.1, 3159S×7206W, h22km, MW5.7/81, Moment Tensor Solution. s81,c142; s76,c169; Duration: 1§6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.17±.04; $M_{\theta\theta}$0.31±.03; $M_{\phi\phi}$-2.49±.04; $M_{r\theta}$-0.13±.06; $M_{\theta\phi}$-0.81±.03; $M_{\phi r}$-2.70±.10; Best double couple: M_o3.64900×10^{17} NP1:ϕ_s29.00000°, δ22.00000°, λ112.00000°. NP2:ϕ_s185.00000°, δ69.00000°, λ81.00000°. Principal axes: T 3.4220, Plg65.0000°, Azm80.0000°; N 0.4480, Plg8.0000°, Azm188.0000°; P -3.8760, Plg24.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***29*** *17:09:07.0±1.1, 3160S×7171W, h34km±7km, mb5.4/69, MS5.4/50, MW5.8, ML5.7(GUC) Error ellipse: s-maj=7.7km s-min=3.1km az=80.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17}Nm; M_{rr}2.19; $M_{\theta\theta}$-1.08; $M_{\phi\phi}$-1.11; $M_{r\theta}$1.62; $M_{\theta\phi}$-3.09; $M_{\phi r}$-4.39; Best double couple: M_o5.80000×10^{17} NP1:ϕ_s75.00000°, δ39.00000°, λ157.00000°. NP2:ϕ_s183.00000°, δ76.00000°, λ54.00000°. Principal axes: T 6.5300, Plg46.0000°, Azm56.0000°; N -1.5100, Plg35.0000°, Azm194.0000°; P -5.0200, Plg22.0000°, Azm300.0000°;*

NEIC Felt [IV] at Canela Baja, Illapel, Los Vilos, Mincha and Salamanca; [III] at Coquimbo, La Serena, Petorca, Quillota, San Antonio, San Felipe, Valparaiso and Vina del Mar; [II] at Copiapo and Tierra Amarilla. Also felt at Ovalle.

BJI ***29*** *17:09:07.0, 3160S×7170W, h33km, mB5.5, Ms5.6, Msz5.4*

IDC ***29*** *17:09:08.1±2.2, 3168S×7194W, h45km±19km, mb4.8/17, mb1 4.9/20, mb1mx4.9/21, mbtmp4.8/20, ML4.9/3, MS5.2/19, Ms1 5.2/19, ms1mx5.0/26, Error ellipse: s-maj=19.8km s-min=11.6km az=80.0*

ISC 29 17:09:03.5±1.0, 3160S±002×7188W±005, h3km±6km, h3km± 2km:pP-P, n641, σ0§88/463, mb5.3/82, MS5.3/73, 117C-86D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.43**	**131**⇓	*i*P	**Pg**	**17 08 57.6**	**-14**
CHNG				*i* S	**Sg**	**17 09 04.8**	**-13**
PACH	**Papudo**	**1.01**	**158**⇓	*i*P	**Pg**	**17 09 23.2**	**+0.4**
OVCH	**Ovalle**	**1.15**	**31**⇓	*e*P	**Pg**	**17 09 25.7**	**+0.2**
OVCH				*i* S	**Sg**	**17 09 42.1**	**+1.8**
OVCH	**Ovalle**	**1.15**	**31**⇓	*e*P	**Pg**	**17 09 25.7**	**+0.2**
OVCH				*i* S	**Sg**	**17 09 42.1**	**+1.8**
OVCH				AML	AML	17 09 49.1	
	comp=N,313µm,0.7s						
IHA	**Instituto Hidr**	**1.44**	**172**	*e*P	**Pn**	**17 09 28.6**	**-1.9**
JACH	**Jahuel**	**1.54**	**135**⇑	*i*P	**Pn**	**17 09 32.1**	**+0.2**
ROCH	**El Roble**	**1.55**	**152**⇓	*i*P	**Pn**	**17 09 32.0**	**-0.1**

EFI LR LR
comp=Z,12µm,20.0s,MS5.3
EFI East Falkland 22.49 157 *e*P **P 17 14 02.8 -1.1**
EFI pmax pmax
comp=Z,341nm,1.4s,mb5.6
EFI MLR MLR
comp=Z,12µm,20.0s,MS5.3
USHA Ushuaia 23.35 175 P **P 17 14 11.3 -1.7**
comp=Z,67nm,0.9s,mb5.1,baz=328,slow=4.0,SNR=13
USHA LR LR 17 24 11.4
comp=Z,12µm,19.3s,MS5.4,baz=341,slow=39
ATAH Atahualpa 25.22 345 P **P 17 14 30.0 -0.6**
comp=Z,18nm,0.9s,mb4.6,baz=168,slow=8.5,SNR=7.0
ATAH LR LR 17 22 57.1
comp=Z,3µm,18.4s,MS4.8,baz=18,slow=33
OTAV Otavalo 32.27 348⇑*i*P **P 17 15 34.7 +1.1**
PMSA Palmer Station 33.55 174 PFAKE
PMSA LR LR
comp=Z,9µm,21.0s,MS5.5
ROSC El Rosal 36.33 356 P **P 17 16 09.2 +0.4**
comp=Z,25nm,0.8s,mb5.2,baz=80,slow=4.9,SNR=15
SDV Santo Domingo 40.27 2⇑*e*P **P 17 16 40.0 -2.0**
SDV LR LR
comp=Z,1µm,20.0s,MS4.8
SDV Santo Domingo 40.27 2 P **P 17 16 41.7 -0.2**
comp=Z,26nm,0.9s,mb5.0,baz=204,slow=4.7,SNR=20
SDV LR LR 17 33 37.1
comp=Z,1µm,18.7s,MS4.8,baz=15,slow=36
BCIP Isla Barro Col 41.24 348⇑*e*P **P 17 16 49.6 -0.3**
comp=Z,280nm,1.8s,mb5.6
BCIP *e* 17 16 57.8
PCRV Puerto La Cruz 42.11 11 P **P 17 16 55.1 -1.9**
comp=Z,21nm,0.9s,mb4.8,baz=0.6,slow=3.6,SNR=6.4
PCRV LR LR 17 35 19.7
comp=Z,4µm,19.7s,MS5.3,baz=321,slow=37
RCBR Riachuelo 42.30 60 PFAKE
RCBR LR LR
comp=Z,15µm,19.0s,MS5.9
GRGR Grenville 44.57 14⇑*e*P **P 17 17 14.7 -2.3**
comp=Z,173nm,1.0s,mb5.8
BBGH Gun Hill 46.03 17 P **P 17 17 27.7 -0.8**
BBGH LR LR
comp=Z,963nm,1.4s,mb6.5
comp=Z,4µm,20.0s,MS5.4
TGUH Tegucigalpa,Un 47.74 340⇑*e*P **P 17 17 41.7 -0.2**
comp=Z,97nm,1.0s,mb5.8
TGUH LR LR
comp=Z,1µm,19.0s,MS4.9
CPD Cerro la Pandu 49.68 7⇑*e*P **P 17 17 54.2 -2.6**
comp=Z,36nm,1.1s,mb5.3
CPD Cerro la Pandu 49.68 7⇑*e*P **P 17 17 54.2 -2.6**
CPD pmax pmax
comp=Z,36nm,1.1s,mb5.3
SJG San Juan 49.73 7 PFAKE
SJG LR LR
comp=Z,1.0nm,20.0s
MTP Monte Pirata 49.78 8⇑*e*P **P 17 17 54.8 -2.8**
MTP *e* 17 18 03.2
SDDR Presa de Saban 50.29 1 P **P 17 18 00.9 -0.5**
VNA3 Neumayer Olymp 51.53 159 *e*P **P 17 18 09.8 -0.4**
VNA3 *e* pP 17 18 10.8 -0.2
VNA3 *e* 17 18 16.6
VNA3 *e* 17 18 21.4
VNA3 *e* 17 18 24.6
VNA3 *e* 17 18 26.1
VNA3 *e* 17 18 27.8
VNA3 *e* 17 19 06.6
VNA3 *e* 17 19 22.8
VNA3 *e* 17 20 13.9
VNA1 Neumayer--Stat 51.83 158 *e*P **P 17 18 12.4 0.0**
VNA1 *e* pP 17 18 13.3 0.0
VNA1 *e* 17 18 19.3
VNA1 *e* 17 18 25.4
VNA1 *e* 17 18 28.4
VNA1 *e* 17 18 30.2
VNA1 *e* 17 18 32.0
VNA1 *e* 17 19 08.9
VNA1 *e* 17 19 24.6
VNA1 *e* 17 20 15.4
VNA2 Neumayer--Watz 52.17 158 *e*P **P 17 18 14.4 -0.6**
VNA2 *e* pP 17 18 15.5 -0.3
VNA2 *e* 17 18 21.4
VNA2 *e* 17 18 26.1
VNA2 *e* 17 18 29.4
VNA2 *e* 17 18 30.7
VNA2 *e* 17 18 32.6
VNA2 *e* 17 19 11.4
VNA2 *e* 17 19 26.6
VNA2 *e* 17 20 17.7
SNAA Sanae 53.76 159 *e*P **P 17 18 26.0 -0.7**
SNAA *e* pP 17 18 26.9 -0.6
SNAA *e* 17 18 33.0
SNAA *e* 17 18 37.6
SNAA *e* 17 18 39.7
SNAA *e* 17 18 41.4
SNAA *e* 17 18 43.1
SNAA *e* 17 19 17.1
SNAA *e* 17 19 32.8
SNAA Sanae 53.76 159⇓*e*P **P 17 18 25.6 -1.1**
TEIG Tepich 53.88 341⇑*i*P **P 17 18 27.3 -0.7**
comp=Z,90nm,0.8s,mb5.8
TEIG *e* 17 18 35.9
TEIG LR LR
comp=Z,839nm,19.0s,MS4.8
RKT Rikitea 56.01 262 *e*S **S 17 26 40.2 +7.2**
comp=Z,2µm,28.2s
RKT *e*LR LR 17 35 15.2
comp=Z,3µm,26.0s
MAIT Maitri 58.44 157 *e*P **P 17 18 57.2 -3.0**
QSPA South Pole Qui 58.63 180 *e*P **P 17 19 01.1 -0.3**
comp=Z,157nm,1.4s,mb5.8
BBSR BB Station 63.99 7 PFAKE
BBSR LR LR
comp=Z,1µm,20.0s,MS5.1
HKT Hockley 65.30 337 *e*P **P 17 19 45.1 -1.7**
comp=Z,80nm,1.8s,mb5.5
HKT *e* 17 19 55.4
HKT Hockley 65.30 337 *e*P **P 17 19 45.1 -1.7**
HKT *e* 17 19 55.4
HKT pmax pmax
comp=Z,80nm,1.8s,mb5.5
SBA Scott Base 65.45 191 *e*P **P 17 19 46.6 -0.6**
comp=Z,43nm,1.1s,mb5.4
SBA LR LR
comp=Z,929nm,19.0s,MS5.0
SBA Scott Base 65.45 191 *e*P **P 17 19 46.6 -0.6**
SBA pmax pmax
comp=Z,43nm,1.1s,mb5.4
SBA MLR MLR
comp=Z,929nm,19.0s,MS5.0
GOGA Godfrey 65.58 349 *e*P **P 17 19 45.0 -3.5**
comp=Z,22nm,0.8s,mb5.2
GOGA Godfrey 65.58 349 *e*P **P 17 19 45.0 -3.5**
GOGA pmax pmax
comp=Z,22nm,0.8s,mb5.2
LRAL Lakeview Retre 65.85 346 *e*P **P 17 19 43.3 -7.0**
comp=Z,22nm,0.9s,mb5.2
VNDA Vanda 66.48 191 P **P 17 19 51.4 -2.4**
comp=Z,2.9nm,0.9s,mb4.3,baz=136,slow=5.3,SNR=8.5
VNDA LR LR 17 47 58.3
comp=Z,951nm,18.3s,MS5.0,baz=129,slow=35
NATX Nacogdoches 66.61 339 *e*P **P 17 19 54.5 -0.6**
comp=Z,84nm,1.4s,mb5.6
TAOE Nuku Hiva Isla 66.92 274 *e*S S 17 28 56.3 +4.5
comp=Z,2µm,25.1s
TAOE Nuku Hiva Isla 66.92 274 *e*LR LR 17 40 22.7
comp=Z,7µm,26.8s,baz=123
JCT Junction City 67.19 334 *e*P **P 17 19 57.8 -1.1**
comp=Z,36nm,0.9s,mb5.4
JCT Junction City 67.19 334 *e*P **P 17 19 57.8 -1.1**
JCT pmax pmax
comp=Z,36nm,0.9s,mb5.4
LTX Lajitas 67.72 330 PFAKE 17 20 10.0 +7.8
LTX LR LR
comp=Z,65nm,22.0s
SWET Sewanee 67.76 348⇑*e*P **P 17 20 00.9 -1.5**
TBI Tubuai 68.03 255 *e*S S 17 29 09.0 +4.1
comp=Z,1µm,27.5s
TBI Tubuai 68.03 255 *e*LR LR 17 40 52.7
comp=Z,4µm,25.8s
SYO Syowa Base 68.05 159⇑*e*P **P 17 20 00.0 -3.9**
SYO Syowa Base 68.05 159⇓*e*pP pP 17 20 10.6 +5.8
MIAR Mount Ida 68.89 341 *e*P **P 17 20 08.6 -0.9**
comp=Z,30nm,1.2s,mb5.1
MIAR LR LR
comp=Z,410nm,20.0s,MS4.7
MIAR Mount Ida 68.89 341 *e*P **P 17 20 08.6 -0.9**
MIAR pmax pmax
comp=Z,30nm,1.2s,mb5.1
MIAR MLR MLR
comp=Z,410nm,20.0s,MS4.7
URVA University of 69.01 355 *e*P **P 17 20 09.8 -0.4**
WVT Waverly 69.01 346 *e*P **P 17 20 08.3 -1.9**
comp=Z,60nm,0.8s,mb5.6
WVT *e* 17 20 18.9
WVT LR LR
comp=Z,474nm,22.0s,MS4.7
WVT Waverly 69.01 346 *e*P **P 17 20 08.3 -1.9**
WVT *e* 17 20 18.9
WVT pmax pmax
comp=Z,60nm,0.8s,mb5.6
WVT MLR MLR
comp=Z,474nm,22.0s,MS4.7
GLAT Glass 69.46 345 *e*P **P 17 20 10.9 -2.1**
GLAT *e* 17 20 21.4
MNTX Cornudas Mount 70.50 330 *e*P **P 17 20 17.6 -1.8**
comp=Z,13nm,0.8s,mb4.9
WMOK Wichita Mounta 70.67 337 *e*P **P 17 20 18.7 -1.8**
comp=Z,32nm,1.4s,mb5.1
WMOK LR LR
comp=Z,506nm,20.0s,MS4.8
WMOK Wichita Mounta 70.67 337 *e*P **P 17 20 18.7 -1.8**
WMOK pmax pmax
comp=Z,32nm,1.4s,mb5.1
WMOK MLR MLR
comp=Z,506nm,20.0s,MS4.8
PPT Papeete 70.74 261 *e*S S 17 29 42.4 +5.4
comp=Z,1µm,25.0s
PPT Papeete 70.74 261 *e*LR LR 17 41 57.7
comp=Z,2µm,24.2s,baz=116
PPT Papeete 70.74 261 LR LR 17 43 17.5
comp=Z,1µm,18.7s,MS5.1,baz=132,slow=29
AMTX Amarillo 71.83 335 *e*P **P 17 20 27.4 0.0**
comp=Z,63nm,1.1s,mb5.5
319A Douglas 71.96 327⇑P **P 17 20 28.6 +0.2**
baz=72
ACSO Alum Creek Sta 72.21 351 *e*P **P 17 20 28.4 -1.2**
comp=Z,18nm,0.8s,mb5.0
ACSO LR LR
comp=Z,769nm,20.0s,MS5.0
318A Bisbee 72.35 326⇓P **P 17 20 30.8 +0.1**
baz=73
218A Dragoon 72.82 327⇓P **P 17 20 33.6 +0.1**
baz=73
BNM Barren Site 73.14 330 *e*P **P 17 20 35.9 +0.6**
LPM Los Pinos Moun 73.28 330 *e*P **P 17 20 35.9 -0.3**
LENM Lemitar 73.29 330 *e*P **P 17 20 36.9 +0.7**
216A Three Points, 73.51 326⇓P **P 17 20 38.3 +0.7**
baz=74
LAZ Ladron 73.57 330 *e*P **P 17 20 38.5 +0.7**
ANMO Albuquerque 73.75 331 *e*P **P 17 20 37.7 -1.2**
comp=Z,24nm,1.1s,mb5.0
ANMO LR LR
comp=Z,2µm,20.0s,MS5.4
ANMO Albuquerque 73.75 331 *e*P **P 17 20 37.7 -1.2**
ANMO pmax pmax
comp=Z,24nm,1.1s
ANMO MLR MLR
comp=Z,2µm,20.0s
KSU1 Kansas State U 74.00 340 *e*P **P 17 20 37.4 -2.9**
comp=Z,80nm,1.8s,mb5.3
KSU1 LR LR
comp=Z,825nm,19.0s,MS5.0
116A Eloy 74.09 326⇑P **P 17 20 41.9 +1.0**
baz=74
DBIC Dimbokro 74.30 72 P **P 17 20 41.5 -1.1**
comp=Z,39nm,0.7s,mb5.5,baz=211,slow=6.3,SNR=69
DBIC LR LR 17 50 13.8
comp=Z,4µm,20.7s,MS5.7,baz=212,slow=33
115A Sonoran Desert 74.46 325 P **P 17 20 43.8 +0.7**
baz=75,SNR=9.0
CBKS Cedar Bluff 74.70 338 *e*P **P 17 20 43.3 -1.1**
comp=Z,59nm,1.1s,mb5.4
CBKS Cedar Bluff 74.70 338 *e*P **P 17 20 43.3 -1.0**
CBKS pmax pmax
comp=Z,59nm,1.1s,mb5.4
NCB Newcomb 75.24 358 P **P 17 20 45.3 -2.0**
comp=Z,16nm,1.0s,mb4.9
MAW Mawson 75.44 164 *e*P **P 17 20 47.2 -1.2**
comp=Z,21nm,1.1s,mb5.0
MAW Mawson 75.44 164 *e*P **P 17 20 47.2 -1.2**
MAW pmax pmax
comp=Z,21nm,1.1s
MAW Mawson 75.44 164 P **P 17 20 46.1 -2.3**
comp=Z,21nm,1.0s,mb5.0,baz=230,slow=5.9,SNR=15
MAW LR LR 17 52 52.9
comp=Z,4µm,20.9s,MS5.7,baz=226,slow=35
SDCO Great Sand Dun 75.79 333⇑*e*P **P 17 20 51.1 +0.4**
comp=Z,12nm,0.8s,mb4.9
SDCO *e* 17 21 00.4
SDCO LR LR
comp=Z,1µm,20.0s,MS5.2
Y14A Wickenburg 75.84 326 P **P 17 20 51.1 +0.1**
baz=76,SNR=7.0
SUR Sutherland 75.88 119 *e*P **P 17 20 50.6 -0.9**
comp=Z,26nm,0.7s,mb5.3
SUR LR LR
comp=Z,3µm,19.0s,MS5.6
LONY Lake Ozonia 75.89 358 *e*P **P 17 20 48.8 -2.2**
comp=Z,35nm,1.1s,mb5.2
X15A Humboldt 75.92 327 P **P 17 20 52.2 +0.7**
baz=76,SNR=8.8
FRNY Flat Rock 76.08 359 *e*P **P 17 20 51.1 -1.0**
comp=Z,39nm,1.0s,mb5.3
Y13A Salome 76.14 325⇓P **P 17 20 53.7 +1.0**
baz=76
X14A Yava 76.22 326 P **P 17 20 54.1 +1.0**
baz=77,SNR=6.5
MSNY Massena 76.28 358 *e*P **P 17 20 51.5 -1.8**
MSNY *e* 17 21 01.1
DVTC Desert V Tower 76.36 323⇑P **P 17 20 54.9 +0.8**
baz=77
WUAZ Wupatki 76.37 328 *e*P **P 17 20 54.7 +0.6**
comp=Z,44nm,1.2s,mb5.3
SWSC Sam W. Stewart 76.42 323⇓P **P 17 20 55.1 +0.7**
baz=77
Y12C Blythe 76.43 325⇓P **P 17 20 55.1 +0.7**
baz=77
W15A Williams 76.50 327 P **P 17 20 56.0 +1.2**
baz=77,SNR=6.0
MVCO Mea Verde 76.54 331 *e*P **P 17 20 55.2 +0.3**
comp=Z,54nm,1.3s,mb5.3
MVCO Mesa Verde 76.54 331⇑P **P 17 20 55.6 +0.7**
baz=77
MONP Monument Peak 76.71 323⇑P **P 17 20 56.7 +0.7**
baz=77
X13A Yucca 76.77 325 P **P 17 20 56.7 +0.4**
baz=77,SNR=17
BC3 Big Chuckw Mtn 76.82 324 P **P 17 20 57.2 +0.6**
baz=77,SNR=15
W14A Seligman 76.91 326⇑P **P 17 20 57.5 +0.4**
baz=77,SNR=11
IRM Iron Mountain 77.07 324 P **P 17 20 58.4 +0.4**
baz=77,SNR=9.6
W13A Hualapai Mount 77.20 326⇓P **P 17 20 59.0 +0.2**
baz=78,SNR=11
PFO Pinyon Flat Ob 77.29 323 *e*P **P 17 20 58.5 -0.8**
comp=Z,20nm,1.0s,mb5.0
PFO *e* 17 21 08.7
PFO Pinyon Flat Ob 77.29 323 *e*P **P 17 20 58.5 -0.8**
PFO *e* 17 21 08.7
PFO pmax pmax
comp=Z,20nm,1.0s,mb5.0
PFO Pinyon Flat Ob 77.29 323⇑P **P 17 20 60.0 +0.7**
baz=78,SNR=8.8
NEE2 Needles Airpor 77.29 325⇑P **P 17 21 00.2 +1.0**
baz=78
BELC Belle Mtn. 77.37 324⇑P **P 17 21 00.6 +1.0**
baz=78
RAR Rarotonga 77.48 253 LR LR 17 47 57.3
comp=Z,998nm,18.1s,MS5.2,baz=243,slow=30
SMCO Snowmass 77.61 333⇑*i*P **P 17 21 01.1 +0.2**
comp=Z,79nm,1.1s,mb5.6
ISCO Idaho Springs 77.63 334 *e*P **P 17 21 00.5 -0.5**
comp=Z,25nm,1.1s,mb5.1
ISCO Idaho Springs 77.63 334 *e*P **P 17 21 00.5 -0.5**
ISCO pmax pmax
comp=Z,25nm,1.1s,mb5.1
GMRC Granite Mounta 77.81 324 P **P 17 21 03.0 +0.8**
baz=78,SNR=16
W12A Cal Nev Ari 77.84 325⇑P **P 17 21 03.2 +0.9**
baz=78
SCI San Clemente I 77.89 321⇑P **P 17 21 03.5 +0.8**
baz=78
U14A Mt Trumbull 77.94 327⇑P **P 17 21 03.6 +0.8**
baz=78
T15A Red Dirt Ranch 78.07 328⇓P **P 17 21 04.5 +1.0**
baz=78
V12A Nelson 78.17 325⇓P **P 17 21 05.0 +0.9**
baz=78
HEC Hector,Ludlow 78.19 324 P **P 17 21 05.1 +0.9**
baz=78,SNR=11
U13A Pakoon Wash 78.31 326⇑P **P 17 21 06.0 +1.1**
baz=79
ECSD EROS,Sioux Fal 78.31 342 *e*P **P 17 21 03.1 -1.5**
comp=Z,95nm,1.4s,mb5.5
BFSC Mount Baldy St 78.40 323⇑P **P 17 21 06.1 +0.7**
baz=79,SNR=8.0
T14A Hurricane 78.42 327⇓P **P 17 21 06.4 +0.9**
baz=79
TUQ Turquoise Mtn. 78.47 325⇓P **P 17 21 06.9 +1.1**
baz=79
V11A Goodsprings 78.55 325⇑P **P 17 21 06.7 +0.5**
baz=79
U12A Valley of Fire 78.59 326 P **P 17 21 07.2 +0.8**
baz=79,SNR=5.6
SNCC San Nicolas Is 78.62 321⇓P **P 17 21 07.9 +1.2**
baz=79
T13A Saint George 78.77 327⇓P **P 17 21 08.1 +0.7**
baz=79
GSC Goldstone 78.80 324⇓*e*P **P 17 21 07.5 -0.1**
comp=Z,15nm,1.0s,mb4.9
GSC *e* 17 21 17.2
GSC Goldstone 78.80 324⇓*e*P **P 17 21 07.5 -0.1**
GSC *e* 17 21 17.2
GSC pmax pmax
comp=Z,15nm,1.0s,mb4.9
GSC Goldstone 78.80 324⇓P **P 17 21 08.2 +0.6**
baz=79,SNR=6.1
PHWY Pilot Hill 78.88 335⇑*e*P **P 17 21 06.5 -1.4**
PHWY *e* 17 21 17.6
CCUT Cedar City 78.95 328⇑*e*P **P 17 21 09.1 +0.7**
SRU San Rafael 78.99 330 *e*P **P 17 21 07.9 -0.6**
comp=Z,30nm,1.3s,mb5.1
SRU San Rafael 78.99 330 *e*P **P 17 21 07.9 -0.7**
SRU pmax pmax
comp=Z,30nm,1.3s,mb5.1
S14A Cedar City 79.03 328⇑P **P 17 21 10.0 +1.1**
baz=79
BLG Laguna Peak 79.04 322⇓P **P 17 21 10.0 +1.0**
baz=79
EDW2 Edwards Air Fo 79.07 323 P **P 17 21 09.1 0.0**
baz=79,SNR=12
ARUT Antelope Range 79.18 328 *e*P **P 17 21 10.5 +0.8**
S13A Holt Ranch, En 79.20 327⇑P **P 17 21 10.5 +0.7**
baz=80
MSU Marysvale 79.21 329 *e*P **P 17 21 09.4 -0.4**
MSU *e* 17 21 20.0
BSC Santa Cruz Isl 79.25 321 P **P 17 21 11.8 +1.7**
baz=80,SNR=5.8
LRMC Laurel Mountai 79.39 323 P **P 17 21 12.1 +1.2**
baz=80,SNR=8.0
TMUT Trail Mountain 79.44 330 *e*P **P 17 21 11.5 +0.5**
TMUT *e* 17 21 20.1
U10A Ash Meadows, A 79.45 325⇓P **P 17 21 12.1 +1.0**
baz=80
T11A Corn Creek, Al 79.57 326⇑P **P 17 21 13.0 +1.2**
baz=80
MPMC Manual Prospec 79.74 324 P **P 17 21 12.5 -0.2**
baz=80,SNR=8.4
TSUM Tsumeb 79.75 106 *e*P **P 17 21 12.5 -0.8**
comp=Z,49nm,1.3s,mb5.3
TSUM *e* 17 21 24.1
TSUM LR LR
comp=Z,4µm,21.0s,MS5.7
FURC Furnace Creek, 79.75 325⇑P **P 17 21 13.3 +0.6**
baz=80
TPNV Topopah Spring 79.83 325 *e*P **P 17 21 13.3 +0.1**
comp=Z,24nm,1.0s,mb5.1
TPNV Topopah Spring 79.83 325 *e*P **P 17 21 13.3 +0.1**
TPNV pmax pmax
comp=Z,24nm,1.0s,mb5.1
TPNV Topopah Spring 79.83 325⇓P **P 17 21 14.0 +0.8**
baz=80
ISA Isabella 79.93 323 *e*P **P 17 21 13.8 +0.1**
comp=Z,30nm,1.0s,mb5.2
ISA LR LR
comp=Z,956nm,19.0s,MS5.2
ISA Isabella 79.93 323 *e*P **P 17 21 13.9 +0.1**
ISA pmax pmax
comp=Z,30nm,1.0s,mb5.2
ISA MLR MLR
comp=Z,956nm,19.0s,MS5.2
ISA Isabella 79.93 323 P **P 17 21 14.4 +0.7**
baz=80,SNR=24
PKM Peak Mountain 80.04 322 P **P 17 21 15.3 +0.9**
baz=80,SNR=14
S11A Rachel 80.14 326⇑P **P 17 21 16.1 +1.2**
baz=80
R12A Pony Springs, 80.16 327⇑P **P 17 21 15.9 +1.0**
baz=80
MPU Maple Canyon 80.22 330 *e*P **P 17 21 15.5 +0.2**
comp=Z,28nm,1.1s,mb5.1
NLU North Lily Min 80.36 330 *e*P **P 17 21 17.1 +1.1**
VES Vestal, Richgr 80.38 323 P **P 17 21 17.0 +0.8**
baz=81,SNR=7.2
DAU Daniels Canyon 80.39 331 *e*P **P 17 21 16.0 -0.1**
GRAC Grapevine Rang 80.42 325⇓P **P 17 21 17.2 +0.8**
baz=81
SMMC Simmler 80.45 322⇑P **P 17 21 17.6 +1.0**
baz=81
R11A Troy Canyon, C 80.63 327⇓P **P 17 21 18.3 +0.8**
baz=81
JLU Jordanelle 80.63 331 *e*P **P 17 21 16.9 -0.5**
S10A Tonopah Range, 80.77 326⇓P **P 17 21 18.7 +0.5**
baz=81
P13A Bates Ranch, G 80.80 328⇑P **P 17 21 18.8 +0.5**
baz=81
Q12A Willow Creek R 80.83 327⇑P **P 17 21 19.4 +0.9**
baz=81
DUG Dugway 80.87 329⇑*i*P **P 17 21 18.3 -0.4**
comp=Z,56nm,1.4s,mb5.3
DUG Dugway 80.87 329⇑*i*P **P 17 21 18.3 -0.4**
DUG pmax pmax
comp=Z,57nm,1.4s,mb5.3
DUG Dugway 80.87 329⇑P **P 17 21 19.7 +1.0**
baz=81
S09A Goldfield 80.92 325⇑P **P 17 21 19.8 +0.8**
baz=81
R10A Warm Springs 80.92 326⇓P **P 17 21 20.4 +1.3**
baz=81
HELL Mitchell Peak, 81.00 323 P **P 17 21 19.3 -0.2**
baz=81,SNR=20
Q11A Duckwater 81.06 327⇑P **P 17 21 20.6 +0.8**
baz=81
BOSA Boshof 81.07 118 P **P 17 21 18.8 -1.5**
comp=Z,37nm,0.8s,mb5.4,baz=229,slow=4.9,SNR=44
BOSA LR LR 17 54 02.1
comp=Z,2µm,19.1s,MS5.5,baz=235,slow=33
EYMN Ely 81.12 347 *e*P **P 17 21 18.9 -1.0**
comp=Z,40nm,1.3s,mb5.2
EYMN *e* 17 21 30.6
S08C White Mtn Res 81.20 324 P **P 17 21 21.2 +0.7**
baz=82,SNR=9.9
P12A McGill 81.22 328⇓P **P 17 21 21.4 +0.8**
baz=82
R09A Tonopah 81.25 326⇑P **P 17 21 21.1 +0.3**
baz=82
MTUM Tungsten Hills 81.29 324 *e*P **P 17 21 20.5 -0.6**
Q10A Clear Creek Ra 81.39 326⇑P **P 17 21 22.0 +0.5**
baz=82
HWUT Hardware Ranch 81.52 331 *e*P **P 17 21 21.1 -1.0**
comp=Z,91nm,1.4s,mb5.5
HWUT LR LR
comp=Z,2µm,19.0s,MS5.5
BGU Big Grassy Mou 81.57 330 P **P 17 21 20.9 -1.5**
N14A Grayback Hills 81.58 330⇑P **P 17 21 22.8 +0.4**
baz=82
T06C Millerton Lake 81.60 323⇓P **P 17 21 23.5 +0.8**
baz=82
MLAC Mammoth Lakes 81.64 324⇑P **P 17 21 23.7 +0.8**
baz=82
KCC Kaiser Creek 81.64 324 P **P 17 21 22.6 -0.3**
baz=82,SNR=9.2
V03C Hunter Liggett 81.64 322⇑P **P 17 21 23.6 +0.6**
baz=82
U04C Hernandez Rese 81.66 322 P **P 17 21 23.9 +0.8**
baz=82,SNR=7.8

PDAR Pinedale Array 81.69 333 P P 17 21 21.2 -1.7
comp=Z,5.9nm,1.1s,mb4.4,baz=149,slow=6.1,SNR=17
PDAR PKKPbc PKKPbc 17 39 53.0 -3.8
comp=Z,1.1nm,0.9s,baz=101,slow=0.8,SNR=6.6
PDAR LR LR 17 54 33.7
comp=Z,993nm,18.3s,MS5.2,baz=153,slow=33
M15A Larsen Ranch, 81.76 330 ⇓P P 17 21 23.8 +0.4
baz=82
Q09A Carvers 81.77 326 ⇓P P 17 21 24.1 +0.6
baz=82
O12A Currie 81.79 328 P P 17 21 23.6 +0.1
baz=82,SNR=8.7
NVAR Mina Array Bea 82.00 325 P P 17 21 25.1 +0.4
comp=Z,15nm,0.8s,mb4.9,baz=142,slow=6.5,SNR=50
N13A Wendover, West 82.02 329 ⇓P P 17 21 25.4 +0.6
baz=82
P10A Eureka 82.05 327 ⇑P P 17 21 26.2 +1.2
baz=82,SNR=10
HAST UC Hastings Re 82.09 322 ⇑P P 17 21 26.2 +0.9
baz=82
O11A Cowboy Ranch, 82.09 328 P P 17 21 25.3 +0.2
baz=82,SNR=22
R07C Lee Vining 82.10 324 P P 17 21 26.3 +1.0
baz=82,SNR=8.0
Q08A Gabbs 82.15 325 P P 17 21 25.5 0.0
baz=82,SNR=15
S05C Merced 82.18 323 ⇑P P 17 21 25.9 +0.2
baz=82
M14A Sheep Mountain 82.18 330 ⇑P P 17 21 25.7 +0.1
baz=82
AHID Auburn Hatcher 82.30 332 eP P 17 21 26.4 +0.2
comp=Z,64nm,1.5s,mb5.3
P09A Austin 82.32 326 ⇑P P 17 21 26.8 +0.4
baz=83
AGMN Agassiz Refuge 82.39 344 eP P 17 21 24.6 -1.9
comp=Z,106nm,1.8s,mb5.5
AGMN e 17 21 34.5
N12A Clover Valley, 82.39 328 P P 17 21 26.7 0.0
baz=83,SNR=9.2
M13A Montello 82.42 329 P P 17 21 27.2 +0.4
baz=83,SNR=10
PACP Pacheco Peak 82.42 322 ⇑P P 17 21 27.4 +0.4
baz=83,SNR=5.1
CASY Casey 82.42 181 PFAKE 17 21 40.0 +13
CASY LR LR
comp=Z,3µm,19.0s,MS5.7
O10A Cortez Mining, 82.60 327 ⇓P P 17 21 27.9 +0.1
baz=83
R06C Coleville 82.64 324 P P 17 21 29.0 +0.9
baz=83,SNR=12
REDW Red Top Meadow 82.70 332 eP P 17 21 28.7 +0.4
comp=Z,46nm,1.4s,mb5.3
REDW e 17 21 37.1
CMB Columbia Colle 82.73 323 eP P 17 21 28.3 -0.3
comp=Z,18nm,1.2s,mb5.0
CMB LR LR
comp=Z,576nm,19.0s,MS5.0
CMB Columbia Colle 82.73 323 eP P 17 21 28.3 -0.3
CMB pmax pmax
comp=Z,18nm,1.2s,mb5.0
CMB MLR MLR
comp=Z,576nm,19.0s,MS5.0
CMB Columbia Colle 82.73 323 P P 17 21 29.0 +0.4
baz=83,SNR=5.4
S04C Ingram Canyon, 82.81 322 ⇓P P 17 21 29.4 +0.4
baz=83
O09A Fish Creek Ran 82.83 327 P P 17 21 30.2 +1.2
baz=83,SNR=5.7
TPAW Teton Pass 82.84 332 eP P 17 21 27.7 -1.3
comp=Z,40nm,1.4s,mb5.3
P08A Dixie Valley 82.88 326 ⇑P P 17 21 30.4 +1.1
baz=83
L13A Double Diamond 82.91 330 ⇓P P 17 21 29.9 +0.5
baz=83
K14A Jones Ranch, D 82.96 331 ⇑P P 17 21 29.9 +0.2
baz=83
R05C Kirkwood Meado 83.09 324 ⇑P P 17 21 30.8 +0.4
baz=83,SNR=5.9
IMW Indian Meadow 83.18 333 eP P 17 21 30.6 -0.2
comp=Z,62nm,1.6s,mb5.4
R04C Big Horse Ranc 83.18 323 ⇓P P 17 21 31.9 +1.0
baz=84
M11A Holland Ranch, 83.19 328 P P 17 21 30.9 0.0
baz=84,SNR=13
FLWY Flagg Ranch 83.24 333 eP P 17 21 30.5 -0.6
comp=Z,97nm,1.5s,mb5.6
FLWY e 17 21 39.4
TORD Torodi Ar. Bea 83.27 70 P P 17 21 30.7 -1.2
comp=Z,47nm,0.7s,mb5.6,baz=259,slow=4.8,SNR=146
TORD LR LR 17 55 50.6
comp=Z,3µm,19.6s,MS5.7,baz=235,slow=34
WCN Washoe City 83.39 325 ⇑P P 17 21 32.4 +0.4
baz=84
L12A House Creek Ra 83.42 329 ⇑P P 17 21 32.2 +0.1
baz=84
K13A Stover Farm, H 83.43 330 ⇑P P 17 21 32.8 +0.7
baz=84
LAVA Lava Cap Winer 83.46 324 P P 17 21 32.6 +0.3
baz=84,SNR=10
N09A Rock Creek Ran 83.52 327 ⇓P P 17 21 32.8 +0.2
baz=84
RLMT Red Lodge 83.58 334 eP P 17 21 31.6 -1.3
comp=Z,90nm,1.8s,mb5.6
YFT Old Faithful 83.61 333 P P 17 21 38.4 +5.4
N08A GE Springer Mi 83.75 327 P P 17 21 33.4 -0.4
baz=84,SNR=8.8
K12A Draper Farm, C 83.77 330 ⇑P P 17 21 33.8 0.0
baz=84
P05C Yuba Gap, Truc 83.81 324 P P 17 21 35.0 +0.9
baz=84,SNR=12
FARB Farallon Islan 83.84 322 ⇑P P 17 21 34.4 +0.1
baz=84
YMR Madison River 83.84 333 eP P 17 21 35.2 +1.0
comp=Z,147nm,1.5s,mb5.9
Q04C Lincoln 83.85 323 ⇑P P 17 21 34.8 +0.5
baz=84
L10A Juniper Basin 84.01 328 ⇓P P 17 21 35.4 +0.3
baz=84
Q03C Winters 84.02 323 ⇓P P 17 21 35.9 +0.7
baz=84
CVS Carmenet Viney 84.03 322 ⇑P P 17 21 35.9 +0.6
baz=84
J13A Cove Ranch, Pi 84.08 330 ⇑P P 17 21 35.7 +0.3
baz=84
O06A Flanigan 84.09 325 ⇓P P 17 21 35.7 +0.1
baz=84,SNR=7.0
BEKR Beckwourth 84.12 325 P P 17 21 36.0 +0.3
baz=84,SNR=17
N07B Gerlach 84.15 326 ⇓P P 17 21 36.0 +0.2
baz=84,SNR=5.8
QLMT Earthquake Lak 84.16 333 eP P 17 21 35.6 -0.1
ULM Lac du Bonnet 84.22 345 P P 17 21 33.0 -2.9
comp=Z,14nm,0.9s,mb5.1,baz=163,slow=6.3,SNR=16
NSHM Saint Helena R 84.24 322 eP P 17 21 36.4 0.0
OHCM Honcut 84.28 324 eP P 17 21 35.7 -0.8
GCMT Greycliff 84.30 334 eP P 17 21 35.7 -0.7
HLID Hailey 84.32 330 eP P 17 21 36.1 -0.4
comp=Z,14nm,1.0s,mb5.0
HLID LR LR
comp=Z,982nm,20.0s,MS5.2
HLID Hailey 84.32 330 P P 17 21 36.9 +0.3
baz=85,SNR=15
J12A Stokes Ranch, 84.35 330 ⇑P P 17 21 37.0 +0.2
baz=85
K11A Parker Ranch, 84.37 329 ⇑P P 17 21 36.8 -0.1
baz=85
M08A Happy Creek Ra 84.39 327 ⇓P P 17 21 37.4 +0.4
baz=85,SNR=11
ORV Oroville 84.45 324 P P 17 21 37.7 +0.3
baz=85,SNR=12
O05C Quincy 84.47 324 P P 17 21 38.1 +0.6
baz=85,SNR=5.8
I13A Wildhorse Cree 84.48 331 ⇓P P 17 21 38.1 +0.7
baz=85
L09A Wilkinson Ranc 84.51 328 ⇓P P 17 21 37.7 0.0
baz=85
N06A Buffalo Meadow 84.54 325 P P 17 21 37.7 -0.1
baz=85,SNR=26
MCMT McKenzie Canyo 84.71 332 eP P 17 21 37.9 -0.7
M07A Soldier Meadow 84.72 326 ⇑P P 17 21 39.1 +0.4
baz=85
DGMT Dagmar 84.79 339 eP P 17 21 37.3 -1.6
comp=Z,61nm,0.8s,mb5.8
MFID Camas Ranch 84.80 329 ⇑P P 17 21 39.5 +0.4
baz=85
O04C Chester 84.83 324 P P 17 21 40.0 +0.7
baz=85,SNR=6.1
G15A Dillon 84.85 332 P P 17 21 39.9 +0.7
baz=85,SNR=12
ELFS Eagle Lake Fie 84.88 325 P P 17 21 39.7 +0.2
baz=85,SNR=14
BOZ Bozeman (W) 84.92 333 eP P 17 21 38.9 -0.7
comp=Z,8.8nm,1.1s,mb4.8
BOZ Bozeman (W) 84.92 333 eP P 17 21 38.9 -0.7
BOZ pmax pmax
comp=Z,9.0nm,1.1s,mb4.8
BOZ Bozeman (W) 84.92 333 P P 17 21 39.5 0.0
baz=85,SNR=9.6
DLMT Dillon 85.06 333 eP P 17 21 40.3 0.0
comp=Z,53nm,1.4s,mb5.5
H13A Challis 85.07 331 ⇓P P 17 21 40.3 -0.1
baz=85
K09A Rome 85.07 328 P P 17 21 40.2 -0.2
baz=85,SNR=11
GASB Alder Springs 85.14 323 ⇓P P 17 21 41.7 +0.8
baz=86,SNR=9.5
M06C Likely Place G 85.20 325 P P 17 21 41.3 +0.2
baz=86,SNR=9.6
WVOR Wild Horse Val 85.28 327 eP P 17 21 40.7 -0.7
comp=Z,24nm,1.2s,mb5.2
WVOR e 17 21 50.7
WVOR Wild Horse Val 85.28 327 eP P 17 21 40.7 -0.8
WVOR e 17 21 50.7
WVOR pmax pmax
comp=Z,24nm,1.2s,mb5.2
L07A Adell 85.28 327 P P 17 21 42.0 +0.5
baz=86,SNR=12
H12A Diamond D Ranc 85.30 331 P P 17 21 42.0 +0.5
baz=86,SNR=5.7
P01C Double 8 Ranch 85.33 323 ⇓P P 17 21 41.9 +0.1
baz=86
URZ Urewera 85.37 228 LR LR 17 52 51.9
comp=Z,2µm,18.3s,MS5.4,baz=34,slow=31
HATC Hat Creek Radi 85.39 325 P P 17 21 41.9 -0.2
baz=86,SNR=6.4
F15A Butte 85.41 333 P P 17 21 41.6 -0.4
baz=86,SNR=11
K08A Mann Creek Ran 85.44 328 ⇓P P 17 21 42.7 +0.4
baz=86
G13A Cobalt 85.49 331 P P 17 21 42.0 -0.5
baz=86,SNR=16
RPZ Rata Peaks 85.55 220 LR LR 17 52 48.2
comp=Z,1µm,18.9s,MS5.3,baz=136,slow=31
O02C Red Bluff 85.57 323 ⇓P P 17 21 42.6 -0.4
baz=86
J09A Fry Pan Ranch, 85.60 328 P P 17 21 44.2 +1.2
baz=86,SNR=11
KCPM Cahto Peak 85.61 323 eP P 17 21 44.0 +0.7
KCPM e 17 21 52.8
M05C Lookout 85.64 325 P P 17 21 43.1 -0.2
baz=86,SNR=11
MOD Modoc 85.65 326 ⇑P P 17 21 43.5 +0.1
baz=86
LTIM Timbered Crate 85.67 325 P P 17 21 43.1 -0.4
F14A Wisdom 85.73 332 P P 17 21 43.9 +0.2
baz=86,SNR=23
WDC Whiskeytown Da 85.75 324 eP P 17 21 41.7 -2.1
comp=Z,32nm,1.4s,mb5.3
WDC e 17 21 51.3
WDC Whiskeytown Da 85.75 324 eP P 17 21 41.7 -2.2
WDC e 17 21 51.3
WDC pmax pmax
comp=Z,32nm,1.4s,mb5.4
WDC Whiskeytown Da 85.75 324 P P 17 21 43.0 -0.9
baz=86,SNR=5.4
I10A Payette 85.76 329 ⇓P P 17 21 43.5 -0.3
baz=86
K07A Rock Creek Ran 85.76 327 P P 17 21 44.0 +0.1
baz=86,SNR=26
H11A Donnelly 85.92 330 P P 17 21 44.8 +0.2
baz=86,SNR=8.8
E15A Deer Lodge 85.95 333 P P 17 21 44.9 +0.1
baz=86,SNR=7.9
L05A Lakeview 86.02 326 P P 17 21 45.6 +0.4
baz=86,SNR=17
O01C Eel River Cons 86.07 323 ⇑P P 17 21 45.6 +0.1
baz=86
I09A Lost Marbles R 86.08 329 P P 17 21 45.8 +0.4
baz=86,SNR=9.1
F13A Darby 86.10 332 P P 17 21 45.0 -0.4
baz=86,SNR=20
SCHQ Schefferville 86.19 3 P P 17 21 44.0 -1.7
comp=Z,36nm,1.1s,mb5.5,baz=157,slow=4.6,SNR=11
EGMT Eagleton 86.23 336 eP P 17 21 45.1 -0.9
comp=Z,70nm,1.6s,mb5.6
EGMT e 17 21 53.5
EGMT Eagleton 86.23 336 ⇓P P 17 21 45.8 -0.3
baz=87
E14A Clinton 86.28 333 P P 17 21 46.3 0.0
baz=87,SNR=10
M04C Macdoel 86.30 325 P P 17 21 47.0 +0.4
baz=87,SNR=8.4
N02C Big Bar 86.31 324 P P 17 21 47.0 +0.3
baz=87,SNR=6.2
K06A Valley Falls 86.32 327 P P 17 21 46.8 +0.1
baz=87,SNR=12
J07A Hines 86.32 327 P P 17 21 47.2 +0.6
baz=87,SNR=7.2
I08A Drewsey 86.41 328 ⇓P P 17 21 46.8 -0.2
baz=87
D15A Lincoln 86.42 333 P P 17 21 46.8 -0.2
baz=87,SNR=20
F12A Elk City 86.45 331 ⇑P P 17 21 46.4 -0.8
baz=87
M02C Callahan 86.51 324 P P 17 21 48.0 +0.4
baz=87,SNR=6.6
K05A Summer Lake 86.56 326 P P 17 21 48.4 +0.5
baz=87,SNR=18
E13A Victor 86.58 332 P P 17 21 47.6 -0.1
baz=87,SNR=10
G11A Walters Elk Ra 86.58 330 P P 17 21 48.9 +1.0
baz=87,SNR=10
BMO Blue Mountains 86.59 329 eP P 17 21 46.3 -1.6
comp=Z,41nm,1.4s,mb5.5
CHMT Chamberlain Mo 86.59 333 eP P 17 21 46.9 -1.0
CHMT e 17 21 56.0
H09A Durkee 86.60 329 ⇑P P 17 21 48.5 +0.5
baz=87
J06A Christmas Vall 86.62 327 P P 17 21 47.9 -0.2
baz=87,SNR=21
YBH Yreka Blue Hor 86.69 324 eP P 17 21 46.8 -1.7
comp=Z,11nm,0.8s,mb5.1
YBH Yreka Blue Hor 86.69 324 eP P 17 21 46.8 -1.7
YBH pmax pmax
comp=Z,11nm,0.8s
YBH Yreka Blue Hor 86.69 324 P P 17 21 47.5 -1.0
baz=87,SNR=12
D14A Greenough 86.83 333 P P 17 21 49.0 0.0
baz=87,SNR=8.5
G10A Bishop Farm, J 86.86 330 ⇑P P 17 21 49.0 -0.2
baz=87,SNR=13
K04A Chiloquin 86.88 326 ⇑P P 17 21 49.5 +0.1
baz=87
H08A Prairie City 86.93 329 ⇑P P 17 21 49.2 -0.4
baz=87,SNR=12
F11A Grangeville 86.93 331 ⇑P P 17 21 49.3 -0.2
baz=87
I07A Izee 86.96 328 P P 17 21 49.5 -0.2
baz=87,SNR=19
G09A Cove 87.13 329 ⇓P P 17 21 50.4 -0.1
baz=88
KRMB Red Mountain 87.14 324 eP P 17 21 50.6 -0.1
KRMB e 17 22 00.2
J05A Fort Rock 87.15 326 P P 17 21 50.8 +0.1
baz=88,SNR=16
I06A Prineville 87.18 327 P P 17 21 51.2 +0.4
baz=88,SNR=21
D13A Huson 87.22 332 P P 17 21 51.2 +0.3
baz=88,SNR=16
RAO Raoul Island 87.28 237 LR LR 17 50 44.3
comp=Z,1µm,21.7s,MS5.3,baz=117,slow=29
E11A Bogner Ranch, 87.33 331 ⇓P P 17 21 50.7 -0.7
baz=88
H07A Lands Inn, Kim 87.38 328 P P 17 21 51.7 -0.1
baz=88,SNR=13
F10A Beach Ranch, E 87.45 330 P P 17 21 52.4 +0.3
baz=88,SNR=7.6
C14A Swan Lake 87.49 333 ⇑P P 17 21 52.0 -0.2
baz=88
F09A S2 Ranch, Elgi 87.53 330 P P 17 21 52.7 +0.3
baz=88,SNR=6.5
J04A Umpqua Nationa 87.53 326 P P 17 21 52.5 0.0
baz=88,SNR=9.4
D12A Red Ives Fores 87.54 332 ⇑P P 17 21 51.7 -0.7
baz=88
G08A Pilot Rock 87.66 329 P P 17 21 52.8 -0.3
baz=88,SNR=10.0
C13A Hot Springs 87.74 333 P P 17 21 53.6 +0.2
baz=88,SNR=7.1
E10A Myers Farm, Un 87.80 331 ⇑P P 17 21 54.1 +0.4
baz=88
I05A Bend 87.84 327 ⇓P P 17 21 54.0 +0.1
baz=88
H06A Lindquist Farm 87.84 328 P P 17 21 54.3 +0.3
baz=88,SNR=19
K02A Glendale 87.85 325 P P 17 21 54.9 +0.8
baz=88,SNR=8.5
G07A Ruggs Ranch, H 87.95 328 P P 17 21 54.8 +0.2
baz=88,SNR=18
I04A Tendick Farm, 88.10 326 ⇑P P 17 21 55.0 -0.2
baz=88
IRO Indian Ridge 88.18 326 P P 17 21 55.8 +0.2
H05A Madras 88.19 327 ⇑P P 17 21 55.3 -0.3
baz=88
E09A Wood Farm, Sta 88.26 330 ⇓P P 17 21 55.5 -0.4
baz=89
B13A Whitefish 88.26 333 P P 17 21 55.9 0.0
baz=89,SNR=5.2
D10A Wagner Farm, O 88.33 331 ⇓P P 17 21 55.7 -0.5
baz=89
J02A Umpqua 88.34 325 ⇑P P 17 21 56.7 +0.3
baz=89
G06A Carlson Farm, 88.36 328 ⇓P P 17 21 56.4 -0.1
baz=89,SNR=9.0
BROR Big Rock Looko 88.47 326 P P 17 21 57.4 +0.4
F07A Phinny Hill Vi 88.56 329 ⇑P P 17 21 57.3 0.0
baz=89
WALA Waterton Lakes 88.61 334 eP P 17 21 56.4 -1.1
comp=Z,50nm,1.3s,mb5.7
E08A Dider Farm, El 88.64 330 ⇓P P 17 21 57.3 -0.4
baz=89
I03A Eugene 88.65 326 ⇑P P 17 21 57.5 -0.3
baz=89
H04A Detroit Lake 88.66 327 P P 17 21 56.9 -0.9
baz=89,SNR=8.8
G05A Wamic 88.68 328 ⇓P P 17 21 57.9 -0.1
baz=89
A13A Flathead Natio 88.70 334 ⇑P P 17 21 57.9 0.0
baz=89
D09A Jones Farm, Ri 88.76 330 ⇓P P 17 21 57.8 -0.5
baz=89
HAWA Hanford 88.77 329 eP P 17 21 58.1 -0.2
comp=Z,91nm,1.5s,mb5.9
HAWA e 17 22 07.5
B12A Libby 88.78 333 ⇑P P 17 21 58.3 0.0
baz=89,SNR=6.3
VFP Flag Point 88.81 328 P P 17 21 59.2 +0.6
F06A Goldendale 88.84 328 ⇓P P 17 21 58.7 +0.1
baz=89
C10A Spilker Farm, 88.95 331 ⇓P P 17 21 58.7 -0.4
baz=89
D08A Wollman Farm, 89.02 330 P P 17 21 58.8 -0.7
baz=89,SNR=5.3
B11A Sandpoint 89.06 332 ⇑P P 17 21 59.1 -0.5
baz=89
COR Corvallis 89.11 326 P P 17 22 00.7 +0.7
comp=Z,45nm,1.0s,mb5.8
COR Corvallis 89.11 326 P P 17 22 00.7 +0.7
COR pmax pmax
comp=Z,45nm,1.0s,mb5.8
A12A Yaak River Ran 89.18 333 ⇑P P 17 22 00.8 +0.6
baz=90
H03A Soap Creek Ran 89.18 326 ⇓P P 17 22 00.6 +0.3
baz=90
G04A Mulino 89.19 327 ⇑P P 17 22 00.6 +0.3
baz=90
OD2 Odessa Site #2 89.19 330 P P 17 21 59.8 -0.5
NEW Newport 89.22 332 PFAKE 17 22 10.0 +10
NEW LR LR
comp=Z,2µm,19.0s,MS5.5
F05A White Salmon 89.23 328 ⇓P P 17 22 01.0 +0.4
baz=90
C09A Chrisman Ranch 89.33 331 P P 17 22 00.7 -0.3
baz=90,SNR=5.3
A11A Hall Mountain, 89.47 332 P P 17 22 00.6 -1.0
baz=90,SNR=16
E06A Yakima 89.52 329 P P 17 22 01.9 +0.1
baz=90,SNR=5.1
D07A Quincy 89.58 329 ⇓P P 17 22 01.7 -0.4
baz=90
C08A Higginbotham F 89.64 330 ⇓P P 17 22 02.0 -0.4
baz=90
B09A Rice 89.77 331 P P 17 22 01.8 -1.1
baz=90,SNR=10
FFC Flin Flon 89.80 343 P P 17 22 01.7 -1.2
comp=Z,70nm,1.0s,mb5.9,SNR=5.8
FFC Flin Flon 89.80 343 eP P 17 22 00.9 -2.1
comp=Z,17nm,1.1s,mb5.3
FFC LR LR
comp=Z,723nm,20.0s,MS5.1
FFC Flin Flon 89.80 343 eP P 17 22 00.9 -2.0
FFC pmax pmax
comp=Z,17nm,1.1s,mb5.3
FFC MLR MLR
comp=Z,723nm,20.0s,MS5.1
E05A Randle 89.88 328 ⇓P P 17 22 02.4 -1.2
baz=90
D06A Cle Elum 89.96 329 ⇑P P 17 22 03.2 -0.7
baz=90
A10A Northport 89.97 332 ⇓P P 17 22 02.9 -1.0
baz=90
C07A Waterville 90.00 330 P P 17 22 03.4 -0.7
baz=90,SNR=10
B08A Colville Reser 90.21 331 ⇑P P 17 22 03.9 -1.2
baz=90
F03A Seaside 90.24 327 ⇑P P 17 22 04.8 -0.5
baz=91
PFVI Vila Bisbo 90.25 45 eP P 17 22 08.2 +2.7
PFVI Vila Bisbo 90.25 45 eLR LR 17 52 39.6
comp=Z,2µm,25.4s
A09A Danville 90.38 331 P P 17 22 05.5 -0.4
baz=91,SNR=9.3
LSZ Lusaka 90.43 108 eP P 17 22 06.6 -0.4
comp=Z,52nm,1.4s,mb5.7
LSZ e 17 22 17.8
LSZ LR LR
comp=Z,2µm,20.0s,MS5.6
LSZ Lusaka 90.43 108 eP P 17 22 06.6 -0.4
LSZ e 17 22 17.8
LSZ pmax pmax
comp=Z,52nm,1.4s,mb5.7
LSZ MLR MLR
comp=Z,2µm,20.0s,MS5.6
D05A Enumclaw 90.46 328 ⇓P P 17 22 05.3 -0.9
baz=91
MORF Marmelete 90.47 45 eP P 17 22 09.1 +2.6
MORF Marmelete 90.47 45 eLR LR 17 51 37.5
comp=Z,2µm,11.0s
B07A Winthrop 90.62 330 P P 17 22 05.7 -1.2
baz=91,SNR=12
A08A Turner Farm, O 90.65 331 P P 17 22 06.6 -0.5
baz=91,SNR=9.4
E03A Lebam 90.69 327 ⇓P P 17 22 06.5 -0.8
baz=91
PBDV Barranco-do-Ve 90.87 46 eP P 17 22 09.3 +0.9
PBDV Barranco-do-Ve 90.87 46 eLR LR 17 53 35.2
comp=Z,3µm,18.6s
PVAQ Vaqueiros 91.10 46 eP P 17 22 09.8 +0.3
PVAQ Vaqueiros 91.10 46 eLR LR 17 51 19.2
comp=Z,3µm,23.5s
PMAFR Mafra 91.16 44 eP P 17 22 10.8 +1.1
PMAFR Mafra 91.16 44 eLR LR 17 52 19.0
comp=Z,2µm,25.9s
A07A Ashnola River, 91.18 330 P P 17 22 08.9 -0.6
baz=92,SNR=8.5
B06A Marblemount 91.25 330 ⇓P P 17 22 08.9 -0.9
baz=92
B05A Bryant 91.32 329 ⇑P P 17 22 09.5 -0.7
baz=92
CMW Cultus Mountai 91.45 329 P P 17 22 09.7 -1.1
NLWA Neilton Lookou 91.46 328 ⇑P P 17 22 11.2 +0.3
baz=92
EDM Edmonton 91.84 337 eP P 17 22 10.4 -2.1
EDM e 17 22 22.8
FCC Fort Churchill 91.91 349 eP P 17 22 11.2 -1.4
comp=Z,86nm,1.8s,mb5.8
FCC e 17 22 20.9
FCC Fort Churchill 91.91 349 eP P 17 22 11.2 -1.5
FCC e 17 22 20.9
FCC pmax pmax
comp=Z,86nm,1.8s,mb5.8
A04A Legoe Bay, Lum 91.93 329 ⇑P P 17 22 12.8 -0.2
baz=92

PBAR Barrancos 92.01 46 *e*P P 17 22 14.2 +0.5
PBAR Barrancos 92.01 46 *e*LR LR 17 53 20.3
comp=Z,3μm,18.4s
PESTR Estremoz 92.11 45 *e*P P 17 22 15.8 +1.7
PESTR Estremoz 92.11 45 *e*LR LR 17 52 46.1
comp=Z,2μm,15.9s
MTE Manteigas 93.12 44 *e*P P 17 22 18.8 +0.1
MTE Manteigas 93.12 44 *e*LR LR 17 53 30.8
comp=Z,2μm,24.0s
MVO Moncorvo 93.91 43 *e*P P 17 22 23.1 +0.8
MVO Moncorvo 93.91 43 *e*LR LR 17 53 33.6
comp=Z,2μm,25.3s
ESDC Sonseca Array 94.82 46 P P 17 22 24.8 -1.8
comp=Z,1.5nm,0.8s,mb4.5,baz=244,slow=4.4,SNR=4.6
ESDC LR LR 18 04 41.0
comp=Z,2μm,18.5s,MS5.6,baz=225,slow=35
YKA Yellowknife Ar 99.83 341 P Pdif 17 22 45.7 -3.7
YKA PKKPbc PKKPbc 17 39 05.1 -5.6
YKA Yellowknife Ar 99.83 341 P Pdif 17 22 45.7 -3.6
comp=Z,2.0nm,0.7s,baz=139,slow=4.3,SNR=36
YKA PKKPbc PKKPbc 17 39 05.1 -5.6
comp=Z,0.4nm,0.8s,baz=335,slow=2.7,SNR=4.5
BORG Borgarnes 103.80 20 PFAKE 17 23 20.0 +13
BORG LR LR
comp=Z,947nm,20.0s,MS5.3
ESK Eskdalemuir 104.50 33 PFAKE 17 23 20.0 +10
ESK LR LR
comp=Z,1μm,20.0s,MS5.4
KMBO Kilima Mbogo 105.63 101 PFAKE 17 27 40.0 +11
KMBO LR LR
comp=Z,2μm,20.0s,MS5.7
GERES GERESS Array B 110.37 45 PKiKP PKiKP 17 27 35.4 -1.3
comp=Z,2.1nm,0.9s,baz=194,slow=1.1,SNR=10
KHC Kasperske Hory 110.41 44 *e*PKP PKiKP 17 27 36.0 -0.8
KHC *ep*PKP 17 27 49.3
KHC *e*PP PP 17 28 06.5 -6.0
KHC *ex* x 17 28 14.7
KHC AMS AMS 18 22 30.0
comp=Z,600nm,16.3s
CLL Collm 110.99 42 *e*Pdif Pdif 17 23 37.0 -1.9
CLL *e*PKP PKiKP 17 27 37.0 -0.8
CLL *e*SKS SKSac 17 34 15.0 -3.4
CLL *e*Sdif Sdif 17 36 03.0 +5.8
CLL LR LR
comp=Z,1μm,19.3s,MS5.6
CLL Collm 110.99 42 *e*P Pdif 17 23 37.0 -1.9
CLL *e* 17 27 37.0
CLL *e* 17 34 15.0
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL MLR MLR
comp=Z,1μm,19.3s,MS5.6
CLL Collm 110.99 42 *e*Pdif Pdif 17 23 37.0 -1.9
comp=Z,5.0nm,0.9s
CLL *e*PKiKP PKiKP 17 27 37.0 -0.8
CLL *e*PP PP 17 28 13.0 -3.6
CLL *e*SKSac SKSac 17 34 15.0 -3.4
CLL *e*Sdif Sdif 17 36 03.0 +5.8
CLL *e*PS PS 17 37 49.0 +1.7
CLL *e*SS SS 17 43 55.0 +6.2
CLL Lm 18 13 00.0
comp=N,200nm,19.5s
CLL Lm 18 13 00.0
comp=E,1μm,20.1s
CLL Lm 18 13 00.0
comp=Z,1μm,19.3s
PRU Pruhonice 111.34 44 *e*PKIKP PKiKP 17 27 45.2 +6.7
PRU MLR MLR
comp=Z,600nm,20.2s,MS5.2
PRU Pruhonice 111.34 44 *ep*PKP 17 27 45.2
PRU AMS AMS 18 26 40.0
comp=Z,600nm,20.2s
BRG Berggiesshubel 111.35 43 P PKiKP 17 27 38.0 -0.5
BRG *e* 17 37 26.0
BRG S SP 17 37 51.0 +1.1
BRG *e* 17 39 03.0
BRG SS SS 17 43 53.0 -0.7
BRG LR LR
comp=Z,590nm,17.3s,MS5.2
BRG Berggiesshubel 111.35 43 *e*PKIKP PKiKP 17 27 38.0 -0.5
BRG S SP 17 37 51.0 +1.1
BRG *e* 17 39 03.0
BRG SS SS 17 43 53.0 -0.7
BRG pmax pmax
comp=Z,1.0nm,0.7s
BRG MLR MLR
comp=N,143nm,15.7s,MS5.3
BRG MLR MLR
comp=E,546nm,12.0s,MS5.3
BRG MLR MLR
comp=Z,592nm,17.3s
BRG smax
comp=N,2.0nm,0.2s
BRG Berggiesshubel 111.35 43 *e*(P) PKiKP 17 27 38.0 -0.5
comp=N,2.0nm,0.7s
BRG *e* 17 37 26.0
BRG S SP 17 37 51.0 +1.1
BRG *e* 17 39 03.0
BRG SS SS 17 43 53.0 -0.7
BRG
comp=N,239nm,15.7s
BRG
comp=E,912nm,12.0s
BRG
comp=Z,989nm,17.3s
PVCC Panska Ves 111.57 43 AMS AMS 18 13 20.0
comp=Z,2μm,22.3s
PMR Palmer 111.58 330 PFAKE 17 27 50.0 +11
PMR LR LR
comp=Z,800nm,19.0s,MS5.3
TREC Trest 111.62 45 AMS AMS 18 14 40.0
comp=Z,900nm,17.5s
UPC Upice 112.41 44 *e*PKP PKiKP 17 27 39.1 -1.4
COLA College 112.53 333 PFAKE 17 27 50.0 +10
COLA LR LR
comp=Z,654nm,20.0s,MS5.2
DPC Dobruska-Polom 112.53 44 *e*PKP PKiKP 17 27 39.6 -1.2
DPC *e*PP PP 17 28 18.8 -8.9
DPC AMS AMS 18 19 30.0
comp=Z,700nm,21.1s
MORC Moravsky Berou 113.04 45⇑ *i*P PKiKP 17 27 41.4 -0.4
OKC Ostrava-Krasne 113.43 45 AMS AMS 18 15 50.0
comp=Z,700nm,20.2s
NB2 NORSAR Subarra113.93 32 PKPdf PKiKP 17 27 41.7 -1.4
comp=Z,4.9nm,1.2s,baz=254,slow=1.9
NOA NORSAR Array B113.93 32 PKiKP PKiKP 17 27 42.0 -1.1
comp=Z,1.7nm,0.9s,baz=255,slow=1.8,SNR=5.9
NOA PKKPbc PKKPbc 17 38 29.9 +3.5
comp=Z,1.4nm,0.8s,baz=70,slow=4.4,SNR=5.2
DRGR 115.20 49⇑ *i*P PKiKP 17 27 43.3 -2.7
NWAO Narrogin (SRO) 115.25 188 PFAKE 17 28 00.0 +13
NWAO LR LR
comp=Z,836nm,19.0s,MS5.4
TRPA Tarpa 115.54 48⇓ *i*P PKPdf 17 27 46.6 0.0
KWP Kalwaria 116.14 46 *e*PKP PKPdf 17 27 48.4 +0.7
MLR Muntele Rosu 116.89 51⇑ *i*P PKPdf 17 27 49.0 -0.3
CTAO Charters Tower 116.92 221 PFAKE 17 28 00.0 +10
CTAO LR LR
comp=Z,809nm,20.0s,MS5.3
VRI Vrincioaia 117.53 51⇑ *i*P PKPdf 17 27 49.5 -1.0
SUW Suwalki 117.73 42 *e*PKP PKPdf 17 27 48.6 -2.0
ASAR Alice Springs 119.76 207 PKP PKPdf 17 27 52.5 -3.2
comp=Z,1.9nm,0.8s,baz=139,slow=2.1,SNR=16
ASAR PKKPbc PKKPbc 17 38 03.9 -1.2
comp=Z,1.6nm,0.8s,baz=334,slow=2.8,SNR=20
KIEV Kiev 120.45 46 *e*PKPdf PKPdf 17 27 53.0 -3.0
AKASG Malin Array Be 120.46 46 PKP PKPdf 17 27 53.9 -2.1
comp=Z,5.5nm,0.7s,baz=263,slow=2.8,SNR=30
AKASG PKKPbc PKKPbc 17 38 00.6 -2.1
comp=Z,0.2nm,0.4s,baz=58,slow=4.3,SNR=3.8
VSU Vasula 120.72 37⇓ *i*PKIKP PKPdf 17 27 54.6 -1.6
FINES FINESS Array B 120.93 34 PKP PKPdf 17 27 53.1 -3.4
FINES PKKPbc PKKPbc 17 37 58.7 -2.5
FINES FINESS Array B 120.93 34 PKP PKPdf 17 27 53.1 -3.4
comp=Z,3.0nm,0.8s,baz=5.7,slow=1.9,SNR=11
FINES PKKPbc PKKPbc 17 37 58.7 -2.5
comp=Z,2.7nm,0.9s,baz=92,slow=9.5,SNR=6.7
KAF Kangasniemi 121.15 33 *e*pkp PKPdf 17 27 54.9 -2.1
ARCES ARCESS Array B 121.78 24 PKP PKPdf 17 27 56.4 -1.6
comp=Z,5.0nm,0.8s,baz=5.4,slow=5.1,SNR=8.1
SIM Simferopol' 122.28 54 *i* PKIKP PKPdf 17 27 59.0 -0.7
SIM *e* 17 29 33.0
SIM *e*PPP 17 32 16.0
SIM pmax pmax
comp=Z,147nm,17.3s

KEV Kevo 122.32 24 PFAKE 17 28 10.0 +11
KEV LR LR
comp=Z,723nm,19.0s,MS5.3
WB2 Warramunga Arr 122.91 210 *e*P Pdif 17 24 32.2 +0.3
WB2 *e*PKP PKPdf 17 27 58.2 -3.6
WRA Warramunga Arr 122.91 210 PKP PKPdf 17 28 00.5 -1.3
comp=Z,2.1nm,0.7s,baz=155,slow=1.7,SNR=11
JOF Joensuu 123.56 32 *e*pkp PKPdf 17 27 59.5 -2.1
MALT Malatya 123.70 62 *e*PKPdf PKPdf 17 28 01.1 -1.6
MALT *e* 17 28 13.5
ANN Anapa 124.55 55 *i* PKIKP PKPdf 17 28 02.3 -1.8
ANN pmax pmax
comp=Z,26nm,1.4s
APA Apatity 124.60 27⇑ *i*PKIKP PKPdf 17 28 02.8 -0.7
APA pmax pmax
comp=Z,20nm,0.8s
APA MLR MLR
comp=Z,1μm,20.0s,MS5.5
OBN Obninsk 125.59 42 PFAKE 17 28 20.0 +14
OBN LR LR
comp=Z,1μm,21.0s,MS5.5
OBN Obninsk 125.59 42⇑ *i*PKIKP PKPdf 17 28 04.8 -0.9
OBN *e* 17 35 05.0
OBN *e*SS SS 17 46 51.2 -6.6
OBN pmax pmax
comp=Z,17nm,0.9s
SOC Sochi 125.91 57 *i* PKIKP PKPdf 17 28 00.5 -6.2
SOC *e* 17 35 05.6
SOC *e*PS PS 17 39 54.5 -7.7
SOC *e*SS SS 17 46 56.7 -5.8
MOS Moscow 126.24 41 *e*PKIKP PKPdf 17 28 05.2 -1.7
MOS *e* 17 28 15.0
MOS MLR MLR
comp=Z,1μm,20.0s,MS5.6
VRSR Storozhevoye 126.75 47 *i* PKIKP PKPdf 17 28 07.4 -0.7
VRSR pmax pmax
comp=Z,4.0nm,1.1s
VRSR pmax pmax
comp=N,3.0nm,2.8s
VRSR pmax pmax
comp=E,2.0nm,0.8s
FITZ Fitzroy Crossi 127.80 201 *e*PKP PKPdf 17 28 10.2 -1.0
comp=E,16nm,0.8s
FITZ Fitzroy Crossi 127.80 201 PKP PKPdf 17 28 09.0 -2.2
comp=E,8.9nm,0.8s,baz=213,slow=3.6,SNR=16
KIV Kislovodsk 128.09 57 PFAKE 17 28 20.0 +9.1
KIV LR LR
comp=Z,832nm,21.0s,MS5.4
KIV Kislovodsk 128.09 57 *i* PKIKP PKPdf 17 28 10.1 -0.8
KIV *e* 17 30 10.9
KIV *e*PS PS 17 40 17.6 -3.7
KIV *e*SS SS 17 47 25.5 -4.2
KIV pmax pmax
comp=Z,12nm,1.2s
GOF Gofitskoye 128.51 55 *e*P Pdif 17 24 46.9 -10
ZEI Tsey 128.76 58 *e*PKIKP PKPdf 17 28 12.5 +0.3
PRGR Permogore 130.27 34 *i* PKIKP PKPdf 17 28 14.8 +0.4
BILL Bilibino 130.73 335 *e*PKPdf PKPdf 17 28 13.5 -1.6
BILL Bilibino 130.73 335⇓ *e*PKIKP PKPdf 17 28 13.1 -2.0
BILL *e* 17 28 23.1
BILL *e*SS SS 17 48 01.9 +1.2
BILL pmax pmax
comp=Z,8.0nm,1.2s
BATI Kupang 135.84 202 PKP PKPdf 17 28 25.1 -1.4
comp=Z,11nm,0.7s,baz=219,slow=7.3,SNR=4.2
ARU Arti 137.82 39 *e*PKPdf PKPdf 17 28 27.7 -1.1
ARU LR LR
comp=Z,1μm,19.0s,MS5.6
ARU Arti 137.82 39 *i* PKIKP PKPdf 17 28 28.3 -0.5
SEY Seymchan 138.01 331⇓ *e*PKIKP PKPdf 17 28 24.1 -4.8
SEY *i* 17 28 29.3
TIXI Tiksi 138.36 350 *e*PKPpre 17 28 18.2
TIXI *e*PKPdf PKPdf 17 28 27.7 -1.6
TIXI Tiksi 138.36 350 *i* PKIKP PKPdf 17 28 26.6 -2.7
TIXI pmax pmax
comp=Z,14nm,1.0s
AKTK Aktyubinsk 138.67 48 PKP PKPdf 17 28 27.4 -3.1
AKTO Aktyubinsk 138.67 48 PKP PKPdf 17 28 27.4 -3.1
comp=Z,5.7nm,1.1s,baz=292,slow=1.7,SNR=8.4
SVE Sverdlovsk 138.81 38⇑ *i*PKIKP PKPdf 17 28 29.9 -0.7
SVE *e*SS SS 17 49 35.5 -2.9
SVE pmax pmax
comp=Z,22nm,1.2s
SVE MLR MLR
comp=Z,1μm,24.0s,MS5.6
YOGI Yogyakarta 140.75 183⇑ *e*P PKiKP 17 28 43.5 +5.4
TRD Trivandrum 143.03 122⇓ *e*x x 17 28 42.0
MNGI Mangalore 144.23 114 *i* P PKPdf 17 28 38.7 -2.8
PALK Pallekele 144.79 128 *e*PKPdf PKPdf 17 28 39.9 -2.7
PALK LR LR
comp=Z,1μm,20.0s,MS5.6
BHJ Bhuj 145.00 94 *e*P PKPdf 17 28 40.9 -1.8
BRVK Borovoye 145.34 41⇑ *i*PKPdf PKPdf 17 28 41.4 -0.9
BRVK *e* 17 28 53.1
BRVK LR LR
comp=Z,1μm,20.0s,MS5.7
KAD Karad 146.15 107 *e*P PKPdf 17 28 42.5 -2.3
POO Poona 146.49 105 *e*P PKPdf 17 28 43.8 -1.6
YAK Yakutsk 146.51 342⇑ *e*PKPdf PKPdf 17 28 43.5 -0.6
YAK *e*PKKPdf PKKPdf 17 37 44.3 -1.8
YAK LR LR
comp=Z,474nm,20.0s,MS5.3
YAK Yakutsk 146.51 342 *i* PKP2 PKPab 17 28 43.6 -2.8
YAK *e*SS SKKSdf 17 44 45.3 -15
YAK pmax pmax
comp=Z,192nm,1.0s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,24nm,1.0s
YAK pmax pmax
comp=Z,100nm,2.5s
YAK pmax pmax
comp=N,100nm,2.9s
YAK pmax pmax
comp=E,200nm,5.0s
KBL Kabul 147.26 74 *e*PKPdf PKPdf 17 28 45.0 -1.2
MDRS Chennai 148.45 119⇑ *e*x x 17 28 50.5
MDRS *e*x x 17 30 07.5
LATR Latur 148.66 107 *i* x x 17 28 37.9
YSS Yuzh-Sakhalins 149.41 310 *e*PKPbc PKPbc 17 28 52.3 -1.4
YSS *e*PKPab PKPab 17 28 58.2 -0.3
YSS LR LR
comp=Z,658nm,21.0s,MS5.4
YSS Yuzh-Sakhalins 149.41 310 *e*PKP2 PKPbc 17 28 52.7 -1.0
HYB Hyderabad 149.74 111 *e*PKP PKPdf 17 28 50.5 -0.2
HYB *e* 17 28 54.0
HYB *e* 17 29 06.0
HYB Hyderabad 149.74 111 *i* PKP PKPdf 17 28 50.5 -0.2
comp=Z,85nm,1.0s
HYB *e* 17 28 54.0
HYB *e* 17 29 06.0
KSM Kuching 149.97 184 *e*PKPbc PKPbc 17 28 54.6 -1.5
KSM *e*PKPab PKPab 17 29 01.4 -0.2
PSI Prapat 150.07 161 PKP PKPdf 17 28 48.4 -3.1
comp=Z,80nm,0.9s,baz=190,slow=2.1,SNR=5.1
PSI PKPbc PKPbc 17 28 54.3 -2.1
comp=Z,80nm,0.9s,baz=270,slow=1.0,SNR=71
ERM Erimo 150.27 300 *e*PKPbc PKPbc 17 28 55.6 -0.3
ASAJ Asahikawa 150.27 305 PKPbc PKPbc 17 28 52.5 -3.4
comp=Z,14nm,1.0s,baz=215,slow=4.2,SNR=7.2
ASAJ PKPab PKPab 17 29 01.9 -0.2
comp=Z,34nm,0.9s,baz=273,slow=6.6,SNR=21
AJM Ajmer 150.36 91 *e*P PKPdf 17 28 48.1 -3.4
EKS2 Erkin-Say 150.66 58 *e*PKPdf PKPdf 17 28 50.7 -0.7
EKS2 *e*PKPbc PKPbc 17 28 56.4 -0.5
EKS2 *e* 17 29 07.9
EKS2 LR LR
comp=Z,1μm,20.0s,MS5.7
EKS2 Erkin-Say 150.66 58 P PKPdf 17 28 51.5 +0.1
SNR=7.7
AML Almayashu 150.70 59 *e*PKPdf PKPdf 17 28 50.8 -0.7
AML *e*PKPbc PKPbc 17 28 56.9 -0.1
AML Almayashu 150.70 59 P PKPbc 17 28 57.0 0.0
SNR=8.4
NVS Novosibirsk 150.82 30 *e*PKIKP PKPdf 17 28 50.2 -1.0
NVS pmax pmax
comp=Z,242nm,1.1s
NVS pmax pmax
comp=E,48nm,1.2s
NVS pmax pmax
comp=N,23nm,1.5s
NVS pmax pmax
comp=Z,343nm,1.5s

NVS pmax pmax
comp=E,91nm,1.6s
KURK Kurchatov 151.00 40 *e*PKPdf PKPdf 17 28 49.2 -2.5
KURK *e*PKPbc PKPbc 17 28 55.9 -1.5
KURK *e*SKP 17 32 33.3
KURK LR LR
comp=Z,1μm,20.0s,MS5.6
USP Ospenovka 151.06 57 P PKPbc 17 28 58.9 +1.1
SNR=21
AAK Ala-Archa 151.19 58 P PKPbc 17 28 58.3 +0.2
SNR=12
FRU Bishkek 151.24 58 *i* PKIKP PKPbc 17 28 57.0 -1.2
FRU pmax pmax
comp=Z,100nm,2.0s
FRU MLR MLR
comp=Z,2μm,20.0s,MS5.8
UCH Uchtor 151.28 59 *e*PKPdf PKPdf 17 28 52.5 +0.1
UCH *e*PKPbc PKPbc 17 28 58.2 -0.1
UCH *e* 17 29 10.6
UCH LR LR
comp=Z,1μm,20.0s,MS5.7
UCH Uchtor 151.28 59 P PKPdf 17 28 52.9 +0.5
SNR=9.3
CHMS Chumysh 151.30 57 P PKPbc 17 28 57.7 -0.7
SNR=8.6
KBK Karagaybulak 151.51 58 P PKPbc 17 29 00.2 +1.4
SNR=6.9
BHPL Bhopal 151.58 99 *e*P PKPdf 17 28 50.4 -3.0
KZA Kyzart 151.85 59 P PKPbc 17 28 59.8 +0.1
SNR=9.0
TKM2 Tokmak 2 151.92 57 *e*PKPdf PKPdf 17 28 51.6 -1.8
TKM2 *e*PKPbc PKPbc 17 28 58.8 -1.0
TKM2 LR LR
comp=Z,855nm,20.0s,MS5.5
TKM2 Tokmak 2 151.92 57 P PKPdf 17 28 53.7 +0.4
SNR=5.3
ZAL Zalesovo 152.11 30 PKIKP PKPdf 17 28 50.7 -2.5
ZAL 17 28 57.7
ZAA0 Zalesovo Array 152.11 30 *e*PKPdf PKPdf 17 28 50.5 -2.7
ZAA0 *e*PKPbc PKPbc 17 28 58.6 -1.3
ZALV Zalesovo Beam 152.11 30 PKP PKPdf 17 28 50.7 -2.6
ZALV PKPbc PKPbc 17 28 57.7 -2.1
ZALV PKPab PKPab 17 29 09.7 +0.3
ZALV Zalesovo Beam 152.11 30 PKP PKPdf 17 28 50.7 -2.6
comp=Z,8.3nm,0.8s,baz=281,slow=2.4,SNR=28
ZALV PKPbc PKPbc 17 28 57.7 -2.1
comp=Z,214nm,0.8s,baz=306,slow=1.9,SNR=203
ZALV PKPab PKPab 17 29 09.7 +0.3
comp=Z,71nm,0.8s,baz=341,slow=3.8,SNR=8.7
CLNS Chul'man 152.21 340 *e*PKIKP PKPbc 17 28 59.4 -0.6
CLNS pmax pmax
comp=Z,40nm,0.9s
CLNS pmax pmax
comp=N,12nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.8s
KULM Kulim 152.91 163 *e*PKPdf PKPdf 17 28 53.8 -2.0
KULM *e*PKPbc PKPbc 17 29 00.8 -2.1
KULM *e*PKPab PKPab 17 29 12.5 -1.3
NDI New Delhi 153.16 88 *ex* x 17 29 02.0
BOD Bodaibo 153.47 353 *e*PKIKP PKPdf 17 28 53.4 -1.7
BOD pmax pmax
comp=Z,30nm,1.0s
HABR Khabarovsk 153.57 317⇑ *e*PKIKP PKPdf 17 28 53.9 -1.6
HABR *i* 17 29 01.4
HABR *e* 17 29 02.1
HABR *e* 17 29 14.0
HABR *e* 17 32 48.7
HABR *e* 17 35 59.9
HABR MLR MLR
comp=Z,270nm,16.0s,MS5.2
VIS Vishakhapatnam 153.65 116 *e*P PKPdf 17 28 53.9 -2.7
DDI Dehra Dun 154.22 85 *e*P PKPdf 17 28 55.3 -1.8
MJAR Matsushiro Arr 154.65 289 PKPbc PKPbc 17 29 02.6 -3.4
comp=Z,1.7nm,0.9s,baz=169,slow=1.0,SNR=4.8
MJAR PKPab PKPab 17 29 19.3 -1.5
comp=Z,4.1nm,0.8s,baz=108,slow=1.9,SNR=8.1
MAJO Matsushiro 154.65 289 PFAKE 17 29 10.0 +13
MAJO LR LR
comp=Z,473nm,19.0s,MS5.3
MAT Matsushiro 154.65 289 *e*PKP PKPbc 17 29 03.5 -2.5
KLR Kul'dur 154.99 322 *e*PKIKP PKPdf 17 28 52.8 -4.7
BLSP Bilaspur 155.02 106 *e*P PKPdf 17 28 54.2 -4.3
BLSP *ex* x 17 29 13.2
comp=Z,22nm,1.8s
MKAR Makanchi Array 155.04 45 PKP PKPdf 17 28 56.1 -1.5
MKAR PKPbc PKPdf 17 29 05.2 +7.6
MKAR PKPab PKPab 17 29 21.3 -0.8
MKAR Makanchi Array 155.04 45 PKIKP PKPdf 17 28 56.1 -1.6
MKAR 17 29 05.2
MKAR Makanchi Array 155.04 45 PKP PKPdf 17 28 56.1 -1.5
comp=Z,3.4nm,0.8s,baz=332,slow=1.2,SNR=34
MKAR PKPbc PKPdf 17 29 05.2 +7.6
comp=Z,12nm,0.8s,baz=311,slow=2.4,SNR=28
MKAR PKPab PKPab 17 29 21.3 -0.8
comp=Z,4.7nm,0.7s,baz=273,slow=3.7,SNR=5.1
KOLN Koldanda 158.37 94 *e*P PKPdf 17 29 00.9 -1.7
comp=Z,22nm,1.2s
MDJ Mudanjiang 158.76 314 PKP PKPdf 17 29 02.3 -0.2
MDJ SS SS 17 53 23.8 +1.3
MDJ PP PP
comp=Z,193nm,6.7s
MDJ LR LR
comp=N,126nm,21.1s,MS5.0
MDJ LR LR
comp=E,236nm,24.6s,MS5.0
MDJ LR LR
comp=Z,377nm,26.9s,MS5.1
BOK Bokaro 158.86 106 *e*P PKPdf 17 29 00.4 -2.9
IRK Irkutsk 159.18 7 *e*PKIKP PKPdf 17 29 10.3 +7.6
IRK *e* 17 29 39.4
IRK *e* 17 33 19.1
IRK pmax pmax
comp=Z,78nm,2.1s
MOY Mondy 159.27 13 *e*PKIKP PKPdf 17 29 02.7 -0.2
MOY pmax pmax
comp=Z,44nm,2.2s
GKN Gorkha 159.32 94 *e*P PKPdf 17 29 02.0 -1.7
comp=Z,31nm,1.1s
TLY Talaya 159.67 8 PFAKE 17 29 10.0 +6.7
TLY LR LR
comp=Z,855nm,20.0s,MS5.6
TLY Talaya 159.67 8 *i* PKIKP PKPdf 17 29 03.7 +0.4
TLY *e* 17 46 40.8
TLY *e*SS SS 17 53 31.4 +1.1
TLY pmax pmax
comp=Z,31nm,1.3s
TLY MLR MLR
comp=Z,845nm,21.0s,MS5.6
KKN Kakani 159.81 95 *e*P PKPdf 17 29 03.9 -0.4
WMQ Urumqi 159.81 47 PKP PKPdf 17 29 02.5 -1.3
WMQ APKP 17 29 16.5
WMQ XPKP 17 29 22.0
WMQ PKP2 PKPab 17 29 43.5 +0.7
WMQ PP PP 17 33 25.3 +0.7
WMQ PP PP
comp=Z,378nm,11.5s
WMQ LR LR
comp=N,593nm,22.3s,MS5.4
WMQ LR LR
comp=E,394nm,24.6s,MS5.4
WMQ LR LR
comp=Z,690nm,23.9s,MS5.4
JIRN Jiri 160.54 96 *e*P PKPdf 17 29 03.9 -1.2
comp=Z,20nm,1.0s
ZAK Zakamensk 160.89 9 *e*PKIKP PKPdf 17 29 03.2 -1.5
ZAK *e* 17 29 47.0
ZAK pmax pmax
comp=Z,3.0nm,1.6s
ZAK pmax pmax
comp=Z,10.0nm,1.2s
ZAK pmax pmax
comp=Z,4.0nm,1.3s
ZAK pmax pmax
comp=Z,2.0nm,1.6s
ODAN Odare 161.31 99 *e*P PKPdf 17 29 04.8 -1.1
comp=Z,29nm,0.9s
CN2 Changchun 161.70 317 *e*PKP PKPdf 17 29 05.5 -0.3
CN2 *e*PP PP 17 33 38.0 +3.4
CN2 *e*SS SS 17 53 54.3 +1.1
CN2 LR LR
comp=N,500nm,20.0s
CN2 LR LR
comp=E,400nm,20.0s
CN2 LR LR

comp=Z,500nm,18.0s
TAPN Taplejung 161.74 98 *e*P PKPdf 17 29 05.9 -0.5
comp=Z,20nm,1.2s
KSRS Korea Array 162.68 295 PKP PKPdf 17 29 04.3 -2.7
comp=Z,0.7nm,0.8s,baz=218,slow=1.7,SNR=3.6
KSRS PKPab PKPab 17 29 54.4 -1.2
comp=Z,8.1nm,1.0s,baz=80,slow=5.1,SNR=9.8
SONM Songino Array 163.73 4 PKP PKPdf 17 29 05.8 -1.9
comp=Z,1.4nm,0.9s,baz=20,slow=0.5,SNR=8.0
SONM PKPab PKPab 17 29 59.3 -0.3
comp=Z,9.4nm,0.9s,baz=337,slow=3.5,SNR=17
ULN Ulaanbaatar 163.73 3 *e*PKPdf PKPdf 17 29 05.1 -2.6
ULN *e*PKPab PKPab 17 29 59.0 -0.7
ULN *e*PP PP 17 33 44.1 -0.3
ULN LR LR
comp=Z,946nm,20.0s
SHL Shillong 164.53 109 *e*PKP PKPdf 17 29 09.0 -0.1
CHTO Chiang Mai 164.81 145 *e*PKPdf PKPdf 17 29 08.0 -1.6
CHTO *e*PKPab PKPab 17 30 03.0 -2.2
CHTO *e* 17 30 13.7
CHTO *e*PP PP 17 33 46.0 -4.8
CHTO Chiang Mai 164.81 145 *e*PKIKP PKPdf 17 29 08.0 -1.5
CHTO *e* 17 30 03.0
CHTO *e* 17 33 46.0
LSA Lhasa 165.27 93 PKP PKPdf 17 29 09.5 -0.1
LSA Lhasa 165.27 93 *e*PKIKP PKPdf 17 29 08.8 -0.8
LSA *e* 17 30 04.3
DL2 Dalian 166.78 307 PKPR PKPdf 17 29 11.3 +0.8
DL2 PP PP 17 34 04.8 +3.2
DL2 PP PP
comp=Z,140nm,5.6s
DL2 LR LR
comp=N,260nm,16.4s
DL2 LR LR
comp=E,120nm,16.2s
DL2 LR LR
comp=Z,320nm,16.9s
QIZ Qiongzhong 167.39 187 PKP PKPdf 17 29 10.8 -0.8
QIZ SKKS SKKSac 17 40 46.3 -6.8
QIZ LR LR
comp=N,379nm,19.4s
QIZ LR LR
comp=Z,442nm,22.6s
SSE Sheshan 168.81 271 PKP PKPdf 17 29 10.5 -1.7
SSE PP PP 17 34 13.8 +1.1
SSE PP PP
comp=Z,158nm,8.0s
SSE LR LR
comp=N,296nm,29.9s
SSE LR LR
comp=E,123nm,29.9s
SSE LR LR
comp=Z,411nm,25.5s
BJI Beijing 169.34 324 PKP PKPdf 17 29 11.0 -1.2
BJI PP PP
comp=Z,372nm,5.7s
BJI LR LR
comp=N,386nm,20.9s
BJI LR LR
comp=E,666nm,24.6s
BJI LR LR
comp=Z,763nm,21.6s
GTA Gaotai 169.68 39 *e*PKP PKPdf 17 29 11.5 -1.0
GTA PKS 17 32 46.8
GTA LR LR
comp=N,142nm,21.6s
GTA LR LR
comp=E,157nm,22.5s
GTA LR LR
comp=Z,346nm,20.6s
HHC Hu-ho-hao-te 170.36 344 *e*PKP PKPdf 17 29 11.3 -1.5
HHC PKS 17 32 42.8
HHC PP PP 17 34 16.0 -2.7
HHC SKS SKSdf 17 36 13.0 -4.1
HHC SKKS SKKSac 17 41 08.0 +1.0
HHC SS SS 17 55 16.0 -3.9
HHC PP PP
comp=Z,288nm,4.9s
HHC LR LR
comp=N,579nm,20.6s
HHC LR LR
comp=E,501nm,21.1s
HHC LR LR
comp=Z,848nm,20.0s
NJ2 Nanjing 170.85 276 *e*PKP PKPdf 17 29 12.3 -1.1
NJ2 APKP 17 29 22.8
NJ2 XPKP 17 29 26.8
NJ2 PKP2 PKPab 17 30 32.3 +0.4
NJ2 PKS 17 32 43.5
NJ2 PP PP 17 34 24.0 +1.1
NJ2 PP PP
comp=Z,450nm,6.6s
NJ2 LR LR
comp=N,3μm,31.3s
NJ2 LR LR
comp=E,2μm,30.4s
NJ2 LR LR
comp=Z,4μm,32.0s
BTO Baotou 170.88 351 *e*PKP PKPdf 17 29 11.0 -2.1
KMI Kunming 172.00 142 PKP PKPdf 17 29 12.0 -2.1
KMI APKP 17 29 21.0
KMI XPKP 17 29 25.0
KMI PKP2 PKPab 17 30 33.3 -3.6
KMI PP PP 17 34 24.3 -3.1
KMI SKKS SKKSac 17 41 06.0 -10
KMI PP PP
comp=Z,408nm,7.9s
KMI LR LR
comp=N,367nm,20.7s
KMI LR LR
comp=E,264nm,18.4s
KMI LR LR
comp=Z,671nm,20.7s
LZH Lanzhou 174.28 37 *e*PKP PKPdf 17 29 14.5 -0.2
LZH PKS 17 32 44.3
LZH PP PP 17 34 36.0 -2.6
LZH SKKS SKKSac 17 41 26.3 0.0
LZH PP PP
comp=Z,341nm,5.0s
LZH LR LR
comp=N,659nm,18.1s
LZH LR LR
comp=Z,940nm,19.6s
GYA Guiyang 174.72 166 *i* PKP PKPdf 17 29 13.3 -1.9
GYA APKP 17 29 26.0
GYA XPKP 17 29 31.3
GYA PKP2 PKPab 17 30 48.5 -0.3
GYA PKS 17 32 43.5
GYA PP PP 17 34 42.0 +1.9
GYA SKS SKSdf 17 36 09.5 -10
GYA SKKS SKKSac 17 41 23.0 -5.5
GYA SS SS 17 55 57.3 -5.1
GYA PP PP
comp=Z,230nm,7.2s
GYA LR LR
comp=N,510nm,19.4s
GYA LR LR
comp=E,340nm,19.2s
GYA LR LR
comp=Z,540nm,18.0s
CD2 Chengdu 176.20 99 PKP PKPdf 17 29 14.5 -0.9
CD2 APKP 17 29 24.0
CD2 XPKP 17 29 29.3
CD2 PKP2 PKPab 17 30 55.5 -0.2
CD2 PKS 17 32 45.8
CD2 PP PP 17 34 49.8 +0.8
CD2 SKS SKSdf 17 36 13.0 -6.4
CD2 SKKS SKKSac 17 41 30.3 -5.7
CD2 PP PP
comp=Z,210nm,10.8s
CD2 LR LR
comp=N,700nm,18.6s
CD2 LR LR
comp=E,1μm,21.6s
CD2 LR LR
comp=Z,1μm,21.0s
XAN Xi'an 177.47 345 PKP PKPdf 17 29 12.5 -3.0
XAN PKP2 PKPab 17 31 02.0 +1.1
XAN LR LR
comp=N,210nm,14.6s
XAN LR LR
comp=E,522nm,17.4s
XAN LR LR
comp=Z,639nm,18.8s

NEIC ***29*** *17:18:06.2,3163S×7201W,h20km,ML3.9(GUC), After GUC.*

GUC 29 17:18:06.2±0.8,3163S×7201W,h20km±4km,ML3.9, 2C-3D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.50**	**120**	⇓	*i*P		Pb	17 17 58.8	-17
CHNG					*i*S		Sg	17 18 05.7	-17
CHNG					AML		AML	17 18 08.9	
	comp=E,7μm,0.7s								
PACH	**Papudo**	**1.02**	**152**		*e*P		Pb	17 18 24.4	-0.8
PACH					*i*S		Sb	17 18 38.3	+0.1
OVCH	**Ovalle**	**1.23**	**34**		*e*P		Pn	17 18 27.5	-0.8
OVCH					*i*S		Sb	17 18 43.6	-0.7
IHA	**Instituto Hidr**	**1.42**	**168**	⇓	*i*P		Pn	17 18 30.3	-0.6
ROCH	**El Roble**	**1.58**	**148**		*e*P		Pn	17 18 33.7	+0.7
JACH	**Jahuel**	**1.59**	**131**		*e*P		Pn	17 18 33.5	+0.3
JACH					*i*S		Sn	17 18 54.1	+0.9
LSCH	**La Serena**	**1.84**	**21**		*e*P		Pn	17 18 37.4	+0.7
LSCH					*i*S		Sn	17 19 00.8	+1.4
LSCH	**La Serena**	**1.84**	**21**		*e*P		Pn	17 18 37.4	+0.7
LSCH					*i*S		Sn	17 19 00.8	+1.4
LSCH					AML		AML	17 19 09.0	
	comp=N,826nm,0.6s								
CLCH	**Cerro Calan**	**2.15**	**145**		*e*P		Pn	17 18 42.3	+1.4
CLCH					*i*S		Sn	17 19 10.3	+3.2
CLCH	**Cerro Calan**	**2.15**	**145**		*e*P		Pn	17 18 42.3	+1.4
CLCH					*i*S		Sn	17 19 10.3	+3.2
CLCH					AML		AML	17 19 19.7	
	comp=E,5μm,0.6s								
TACH	**Talagante**	**2.21**	**156**	⇓	*i*P		Pn	17 18 42.7	+1.0
ANTU	**Antumapu**	**2.25**	**149**		*i*S		Sn	17 19 11.9	+2.3
ANTU					AML		AML	17 19 22.9	
	comp=N,2μm,0.7s								
CHCH	**Chadas Angostu**	**2.56**	**154**	⇑	*i*P		Pn	17 18 47.9	+1.3
CACH	**El Canelo**	**2.74**	**155**		*e*P		Pn	17 18 51.0	+1.9
LCO	**Las Campanas**	**2.85**	**24**		*e*Pn		Pn	17 18 49.8	-0.8
LCO					*e*Sn		Sn	17 19 25.2	+0.9
CICH	**Cipreses**	**2.99**	**154**		*e*P		Pn	17 18 54.3	+1.8
SFDO	**San Fernando**	**3.09**	**165**	⇑	*i*P		Pn	17 18 54.4	+0.6

IDC ***29*** *17:19:40.7±6.2,373N×12305E,h510km±87km,mb3.1/6, mb1 3.3/7,mb1mx3.1/20,mbtmp3.2/7, Error ellipse: s-maj=89.4km s-min=17.5km az=63.0*
ISCJB ***29*** *17:19:43.0±1.7,35N±02×1226E±03,h565km±32km, mb3.9/7, Error ellipse: s-maj=49.9km s-min=14.5km az=151.6*
NEIC ***29*** *17:19:43.5±1.3,353N×12270E,h550km±23km,mb4.7/2, Error ellipse: s-maj=36.1km s-min=10.8km az=62.0*

ISC 29 17:19:43.5±1.8,35N±02×1227E±03,h549km±31km,n10, σ0s38/10,mb3.9/7,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	**6.93**	**291**		*e*P		**P**	**17 21 31.0**	**+0.2**
BATI	**Kupang**	**13.67**	**176**		P		**P**	**17 22 39.1**	**-0.2**
	2.3nm,0.3s,baz=322,slow=7.1,SNR=6.8								
KAKA	**Kakadu**	**18.81**	**149**		*e*P		**P**	**17 23 28.5**	**-0.4**
	6.4nm,0.6s								
FITZ	**Fitzroy Crossi**	**21.68**	**172**		P		**P**	**17 23 55.3**	**+0.4**
	4.5nm,1.1s,mb4.0,baz=357,slow=17,SNR=3.4								
WRA	**Warramunga Arr**	**25.97**	**154**		P		**P**	**17 24 32.3**	**-0.7**
	1.9nm,0.3s,mb4.2,baz=336,slow=9.6,SNR=24								
ASAR	**Alice Springs**	**29.14**	**159**		P		**P**	**17 25 00.9**	**+0.2**
	1.0nm,0.5s,mb3.7,baz=336,slow=7.7,SNR=56								
HNR	**Honiara**	**39.28**	**109**		*e*P		**P**	**17 26 26.2**	**+0.5**
	26nm,0.6s,mb4.9								
STKA	**Stephens Creek**	**39.52**	**154**		P		**P**	**17 26 27.6**	**+0.3**
	3.3nm,0.9s,mb3.9,baz=328,slow=9.5,SNR=4.7								
SONM	**Songino Array**	**46.33**	**345**		P		**P**	**17 27 19.7**	**-0.5**
	0.4nm,0.5s,mb3.2,baz=162,slow=8.8,SNR=4.8								
MKAR	**Makanchi Array**	**55.49**	**327**		P		**P**	**17 28 26.9**	**+0.2**
	1.2nm,0.3s,mb3.5,baz=125,slow=7.8,SNR=52								

NEIC ***29*** *17:28:04.4,3160S×7183W,h32km,ML4.1(GUC), After GUC.*

GUC 29 17:28:04.4±0.9,3160S×7183W,h32km±4km,MD4.1, ML4.1,4C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.83**	**59**	⇑	*i*P		Pn	17 28 19.3	-0.5
CMCH					*i*S		Sn	17 28 31.4	+0.4
CMCH	**Combarbala**	**0.83**	**59**	⇑	*i*P		Pn	17 28 19.3	-0.5
CMCH					*i*S		Sn	17 28 31.4	+0.4
CMCH					AML		AML	17 28 36.8	
	comp=N,14μm,0.9s								
PACH	**Papudo**	**0.99**	**160**		*e*P		Pn	17 28 22.1	0.0
PACH					*i*S		Sn	17 28 35.8	+0.8
OVCH	**Ovalle**	**1.13**	**29**	⇓	*i*P		Pn	17 28 24.3	+0.3
OVCH					*i*S		Sn	17 28 39.9	+1.5
IHA	**Instituto Hidr**	**1.43**	**174**		*e*P		Pn	17 28 28.6	+0.5
JACH	**Jahuel**	**1.51**	**136**		*e*P		Pn	17 28 30.8	+1.6
JACH					*i*S		Sn	17 28 51.0	+3.3
PEL	**Peldehue**	**1.82**	**148**	⇓	*i*P		Pn	17 28 35.3	+1.8
PEL					*i*S		Sn	17 28 58.0	+2.6
PEL					AML		AML	17 29 03.9	
	comp=E,4μm,0.7s								
CLCH	**Cerro Calan**	**2.10**	**149**		*e*P		Pn	17 28 40.2	+2.8
CLCH					*i*S		Sn	17 29 06.4	+4.0
CLCH	**Cerro Calan**	**2.10**	**149**		*e*P		Pn	17 28 40.2	+2.8
CLCH					*i*S		Sn	17 29 06.4	+4.0
CLCH					AML		AML	17 29 13.0	
	comp=E,2μm,0.8s								
FCH	**Farellones**	**2.16**	**143**		*e*P		Pn	17 28 40.4	+2.2
FCH					*i*S		Sn	17 29 07.4	+3.5
FCH					AML		AML	17 29 11.7	
	comp=E,962nm,0.3s								
TACH	**Talagante**	**2.18**	**160**		*e*P		Pn	17 28 40.2	+1.7
ANTU	**Antumapu**	**2.21**	**153**	⇑	*i*P		Pn	17 28 40.6	+1.8
ANTU					*i*S		Sn	17 29 07.6	+2.5
ANTU	**Antumapu**	**2.21**	**153**	⇑	*i*P		Pn	17 28 40.6	+1.8
ANTU					*i*S		Sn	17 29 07.6	+2.5
ANTU					AML		AML	17 29 20.9	
	comp=E,1μm,0.4s								
CHCH	**Chadas Angostu**	**2.53**	**157**		*e*P		Pn	17 28 44.8	+1.6
LMEL	**Las Melosas**	**2.63**	**149**		*e*P		Pn	17 28 47.0	+2.4
LMEL					S		Sn	17 29 20.7	+5.3
LMEL	**Las Melosas**	**2.63**	**149**		*e*P		Pn	17 28 47.0	+2.4
LMEL					*i*S		Sn	17 29 20.7	+5.3
LMEL					AML		AML	17 29 30.2	
	comp=N,870nm,0.4s								
LCO	**Las Campanas**	**2.76**	**21**		*e*Pn		Pn	17 28 46.6	+0.1
SFDO	**San Fernando**	**3.08**	**167**		*e*P		Pn	17 28 52.2	+1.4
TRQA	**Tornquist**	**10.34**	**131**		*e*Pn		Pn	17 30 34.4	+3.8
	comp=N,4.4nm,0.6s								

GUC 29 17:37:45.8±0.9,3162S×7182W,h27km±6km,MD3.8, ML3.5,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.38**	**134**	⇑	*i*P		Pb	17 37 37.3	-17
CHNG					*i*S		Sb	17 37 43.8	-16
CMCH	**Combarbala**	**0.83**	**58**	⇓	*i*P		Pb	17 38 00.6	-1.0
CMCH					*i*S		Sb	17 38 12.7	+0.3
CMCH					AML		AML	17 38 16.5	
	comp=E,7μm,0.6s								
OVCH	**Ovalle**	**1.14**	**28**		*e*P		Pn	17 38 06.2	+0.2
OVCH					*i*S		Sn	17 38 21.3	+0.5
PEL	**Peldehue**	**1.79**	**148**		*e*P		Pn	17 38 16.1	+1.1
PEL					*i*S		Sn	17 38 39.5	+2.6
PEL					AML		AML	17 38 45.0	
	comp=E,1μm,0.4s								
FCH	**Farellones**	**2.14**	**143**		*e*P		Pn	17 38 21.9	+2.2
FCH					*e*S		Sn	17 38 49.0	+3.7
FCH					AML		AML	17 38 53.6	
	comp=E,243nm,0.3s								
LMEL	**Las Melosas**	**2.60**	**149**		*e*P		Pn	17 38 28.2	+2.1
LMEL					AML		AML	17 39 12.3	
	comp=N,155nm,0.3s								

ISCJB ***29*** *17:45:20.5±1.1,3834N±004×2029E±008,h3km, Error ellipse: s-maj=9.8km s-min=4.6km az=159.3*
ATH ***29*** *17:45:21.3,3829N×2035E,h14km±3km,MD3.6/6*
NEIC ***29*** *17:45:21.3,3830N×2036E,h14km,MD3.6(ATH), ML3.6(THE),After ATH.*
CSEM ***29*** *17:45:22.2±0.2,3835N×2034E,h1km±1km,MD3.6,Error ellipse: s-maj=4.0km s-min=2.0km az=63.0*
THE ***29*** *17:45:22.6,3836N×2041E,h3km,ML3.6*

ISC 29 17:45:20.7±1.4,3832N±005×2028E±009,h4km±8km,n13, σ0s63/17,1C,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.28**	**119**	⇑	*i*PG		**Pg**	**17 45 26.2**	**0.0**
VLS					*e*SG		**Sg**	**17 45 30.3**	**+0.4**
KFL	**Anninata**	**0.45**	**117**		*e*Pg		**Pg**	**17 45 28.8**	**-0.7**
LKD	**Levkas**	**0.49**	**37**		*e*Pg		**Pg**	**17 45 29.3**	**-0.9**
LKD					*e*Sg		**Sg**	**17 45 36.1**	**-0.4**
SELA	**Sela**	**1.27**	**91**		*e*Sg		**Sg**	**17 46 02.0**	**+0.4**
SELA					*e*Sg		**Sg**	**17 46 02.5**	**+0.8**
EVR	**Evrytania**	**1.34**	**63**		*e*PG		**Pn**	**17 45 45.2**	**-1.1**
JAN	**Janina**	**1.41**	**18**		*e*PB		**Pg**	**17 45 48.9**	**+1.1**
KEK	**Kerkira**	**1.44**	**345**		*e*PG		**Pg**	**17 45 48.8**	**+0.4**
MEV	**Metsovon**	**1.65**	**27**		*e*Pg		**Pg**	**17 45 52.1**	**-0.1**
ITM	**Ithomi**	**1.73**	**130**		*e*PG		**Pb**	**17 45 52.5**	**-0.6**
AGG	**Agios Georgios**	**1.76**	**66**		*e*Pb		**Pn**	**17 45 52.4**	**+0.4**
PYL	**PYLOS**	**1.83**	**140**		*e*Pb		**Pb**	**17 45 54.5**	**-0.4**
PYL					*e*Sb		**Sb**	**17 46 19.0**	**+0.8**
THL	**Klokotos Trika**	**1.84**	**47**		*e*PN		**Pn**	**17 45 53.9**	**+0.7**
VLX	**Vlachokerasia**	**1.92**	**119**		*e*Sb		**Sb**	**17 46 20.2**	**-0.3**

BJI ***29*** *17:46:19.0,32.11S×7179W,h10km,mB4.9,Ms5.3,Msz5.1*
NEIC ***29*** *17:46:20.8±1.3,3157S×7208W,h4km±7km,mb4.8/12, ML5.2(GUC),Error ellipse: s-maj=10.6km s-min=3.6km az=86.0*
NEIC Felt [IV] at Canela Baja, Illapel, Los Vilos and Salamanca; [III] at Cabildo; [II] at Coquimbo, La Serena, Ovalle, San Antonio, San Felipe, Valparaiso and Vina del Mar.
GCMT ***29*** *17:46:20.8±0.2,3169S×72.12W,h20km±1km,MW5.3/59, Moment Tensor Solution. s29,c38; s59,c83; Duration: 1s1 Moment tensor: Scale 10^17Nm; Mrr0.41±.03; Mθθ0.07±.02; Mϕϕ-0.48±.02; Mrθ-0.15±.04; Mrϕ0.06±.01; Mθϕ-0.92±.11; Best double couple: M0 1.03500×10^17 NP1:ϕs336.00000°,δ15.00000°,λ59.00000°. NP2: ϕs188.00000°,δ78.00000°,λ98.00000°. Principal axes: T 1.0110, Plg57.0000°, Azm108.0000°; N 0.0480, Plg7.0000°, Azm7.0000°; P -1.0590, Plg32.0000° Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***29*** *17:46:21.3±1.0,3159S±002×7209W±004,h14km±6km, mb4.5/24,MS5.0/17 Error ellipse: s-maj=6.0km s-min=3.2km az=168.6*
GUC ***29*** *17:46:22.7±0.9,3161S×7204W,h29km±3km,ML5.2*
IDC ***29*** *17:46:27.3±2.3,3162S×7185W,h47km±21km,mb4.3/14, mb1 4.3/18,mb1mx4.3/21,mbtmp4.3/18,ML4.4/4,MS4.8/19, Ms1 4.8/19,ms1mx4.7/24, Error ellipse: s-maj=21.9km s-min=12.6km az=87.0*

ISC 29 17:46:21.3±0.9,3159S±002×7203W±005,h3km±5km, h9km±6km:pP-P,n119,σ0s84/104,mb4.5/23,MS5.0/18, 6C-3D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.54**	**123**	⇓	*i*P		**Pg**	**17 46 16.0**	**-16**
CHNG					*i*S		**Sg**	**17 46 23.6**	**-15**
CMCH	**Combarbala**	**0.97**	**65**	⇑	*i*P		**Pg**	**17 46 39.5**	**-0.4**
CMCH					*i*S		**Sg**	**17 46 52.7**	**+0.2**
CMCH	**Combarbala**	**0.97**	**65**	⇑	*i*P		**Pg**	**17 46 39.5**	**-0.4**
CMCH					*i*S		**Sg**	**17 46 52.7**	**+0.2**
CMCH					AML		AML	17 46 58.4	
	comp=E,199μm,0.8s								
PACH	**Papudo**	**1.07**	**152**	⇓	*i*P		**Pg**	**17 46 41.6**	**-0.2**
PTCH	**Petorca**	**1.15**	**126**		*e*P		**Pg**	**17 46 42.9**	**-0.5**
PTCH					*i*S		**Sg**	**17 46 58.0**	**-0.3**
PTCH	**Petorca**	**1.15**	**126**		*e*P		**Pg**	**17 46 42.9**	**-0.5**
PTCH					*i*S		**Sg**	**17 46 58.0**	**-0.3**
PTCH					AML		AML	17 47 00.8	
	comp=N,82μm,0.6s								
OVCH	**Ovalle**	**1.21**	**36**		*e*P		**Pg**	**17 46 44.0**	**-0.4**
OVCH					*i*S		**Sg**	**17 47 00.5**	**+0.3**
IHA	**Instituto Hidr**	**1.47**	**167**		*e*P		**Pn**	**17 46 47.8**	**-0.9**
ROCH	**El Roble**	**1.62**	**148**		*e*P		**Pn**	**17 46 50.6**	**-0.2**
JACH	**Jahuel**	**1.63**	**132**	⇑	*i*P		**Pn**	**17 46 50.6**	**-0.3**
LSCH	**La Serena**	**1.81**	**22**		*e*P		**Pn**	**17 46 53.0**	**-0.3**
LSCH					*i*S		**Sn**	**17 47 17.1**	**+0.4**
LCCH	**Las Cruces**	**1.92**	**169**		*e*P		**Pn**	**17 46 54.2**	**-0.7**
PEL	**Peldehue**	**1.92**	**144**	⇓	*i*P		**Pn**	**17 46 54.8**	**-0.1**
PEL					*i*S		**Sn**	**17 47 19.5**	**0.0**
PEL					AML		AML	17 47 30.9	
	comp=E,41μm,0.5s								
STL	**Santa Lucia**	**2.18**	**148**		*e*P		**Pn**	**17 46 58.1**	**-0.4**
STL					*i*S		**Sn**	**17 47 25.1**	**-0.9**
DSCH	**Colegio Aleman**	**2.18**	**146**		*e*P		**Pn**	**17 46 58.2**	**-0.2**
DSCH					*i*S		**Sn**	**17 47 25.1**	**-0.9**
CLCH	**Cerro Calan**	**2.20**	**145**		*e*P		**Pn**	**17 46 59.5**	**+0.8**
CLCH					*i*S		**Sn**	**17 47 27.2**	**+0.9**
CLCH	**Cerro Calan**	**2.20**	**145**		*e*P		**Pn**	**17 46 59.5**	**+0.8**
CLCH					*i*S		**Sn**	**17 47 27.2**	**+0.9**
CLCH					AML		AML	17 47 33.4	
	comp=E,21μm,0.3s								
TACH	**Talagante**	**2.25**	**156**		*i*P		**Pn**	**17 46 60.0**	**+0.5**
FSR	**Penalolen**	**2.27**	**147**		*e*P		**Pn**	**17 47 00.1**	**+0.4**
FSR					S		**Sn**	**17 47 28.9**	**+0.9**
FSR	**Penalolen**	**2.27**	**147**		*e*P		**Pn**	**17 47 00.1**	**+0.4**
FSR					*i*S		**Sn**	**17 47 28.9**	**+0.9**
FSR					AML		AML	17 47 37.7	
	comp=N,21μm,0.5s								
FCH	**Farellones**	**2.27**	**140**		*e*P		**Pn**	**17 46 60.0**	**+0.3**
FCH					*i*S		**Sn**	**17 47 27.6**	**-0.6**
FCH					AML		AML	17 47 37.9	
	comp=E,9μm,1.2s								
ANTU	**Antumapu**	**2.30**	**150**		*e*P		**Pn**	**17 47 00.3**	**+0.3**
ANTU					*i*S		**Sn**	**17 47 28.3**	**-0.5**
ANTU	**Antumapu**	**2.30**	**150**		*e*P		**Pn**	**17 47 00.3**	**+0.3**
ANTU					*i*S		**Sn**	**17 47 28.3**	**-0.5**
ANTU					AML		AML	17 47 42.0	
	comp=N,15μm,0.7s								
PCH	**Pirque**	**2.39**	**148**		*e*P		**Pn**	**17 47 01.3**	**-0.1**
SJCH	**San Jose de Ma**	**2.48**	**146**		*e*P		**Pn**	**17 47 02.1**	**-0.5**
CHCH	**Chadas Angostu**	**2.61**	**154**		*e*P		**Pn**	**17 47 04.3**	**0.0**
YECH	**El Yeso**	**2.64**	**142**		*e*P		**Pn**	**17 47 05.3**	**+0.6**
YECH					*i*S		**Sn**	**17 47 37.9**	**+0.7**
YECH					AML		AML	17 47 49.8	
	comp=E,10μm,0.5s								
LMEL	**Las Melosas**	**2.73**	**146**	⇑	*i*P		**Pn**	**17 47 06.4**	**+0.5**
LMEL					*i*S		**Sn**	**17 47 39.1**	**-0.2**
LMEL	**Las Melosas**	**2.73**	**146**	⇑	*i*P		**Pn**	**17 47 06.4**	**+0.5**
LMEL					*i*S		**Sn**	**17 47 39.1**	**-0.2**
LMEL					AML		AML	17 47 52.6	
	comp=N,11μm,0.3s								
CACH	**El Canelo**	**2.79**	**155**		*e*P		**Pn**	**17 47 07.9**	**+1.1**
LCO	**Las Campanas**	**2.81**	**24**		*e*Pn		**Pn**	**17 47 06.7**	**-0.4**
LCO					*e*Sn		**Sn**	**17 47 42.1**	**+0.6**
CICH	**Cipreses**	**3.04**	**154**		*e*P		**Pn**	**17 47 10.6**	**+0.3**
SFDO	**San Fernando**	**3.13**	**165**		*e*P		**Pn**	**17 47 11.1**	**-0.4**
VACH	**Vallenar**	**3.20**	**20**		*e*P		**Pn**	**17 47 12.3**	**-0.1**
VACH					AML		AML	17 48 08.3	
	comp=N,13μm,0.5s								
CFAA	**Coronel Fontan**	**3.23**	**91**		P		**Pn**	**17 47 15.0**	**+2.1**
CFAA					S		**Sn**	**17 47 57.9**	**+6.0**
CFAA					LR		LR	17 48 45.8	
CFAA	**Coronel Fontan**	**3.23**	**91**		P		**Pn**	**17 47 15.0**	**+2.1**
	comp=N,5.3nm,0.3s,baz=268,slow=11,SNR=107								
CFAA					S		**Sn**	**17 47 57.9**	**+6.0**
	comp=N,31nm,0.3s,baz=256,slow=17,SNR=5.2								
CFAA					LR		LR	17 48 45.8	
	comp=N,4μm,19.6s,baz=324,slow=45								
NICH	**Los Niches**	**3.47**	**169**		*e*P		**Pn**	**17 47 16.6**	**+0.5**
PLCA	**Paso Flores**	**9.20**	**173**		P		**Pn**	**17 48 35.1**	**+0.3**
PLCA					S		**Sn**	**17 50 30.8**	**+12**
PLCA					LR		LR	17 52 35.5	
PLCA	**Paso Flores**	**9.20**	**173**		P		**Pn**	**17 48 35.1**	**+0.3**
	comp=N,3.1nm,0.3s,baz=333,slow=11,SNR=73								
PLCA					S		**Sn**	**17 50 30.8**	**+12**
	comp=N,0.4nm,0.3s,baz=238,slow=23,SNR=2.0								
PLCA					LR		LR	17 52 35.5	
	comp=N,2μm,20.9s,baz=350,slow=40								
TRQA	**Tornquist**	**10.47**	**131**		*e*Pn		**Pn**	**17 48 53.4**	**+1.1**
	comp=N,44nm,0.6s								
ARE	**Arequipa**	**15.07**	**2**		*e*P		**Pn**	**17 50 04.0**	**+8.8**
LPAZ	**La Paz**	**15.64**	**14**		P		**Pn**	**17 50 03.6**	**+0.9**
	comp=N,0.4nm,0.3s,baz=186,slow=7.4,SNR=28								

SIV San Ignacio 18.46 35 P **Pn** **17 50 36.7 -1.5**
comp=N,1.2nm,0.3s,baz=222,slow=10,SNR=25

NNA Nana 20.01 346 LR LR 17 56 57.6
comp=N,1µm,19.2s,MS4.3,baz=270,slow=31

EFI East Falkland 22.55 157 *eP* **P** **17 51 21.9 -0.4**
comp=N,37nm,0.7s,mb4.9

USHA Ushuaia 23.37 175 P **P** **17 51 31.2 +0.2**
comp=N,13nm,0.8s,mb4.4,baz=347,slow=6.8,SNR=3.6

USHA LR LR 18 00 32.3
comp=N,1µm,20.2s,MS4.3,baz=334,slow=36

ATAH Atahualpa 25.18 345 P **P** **17 51 49.4 +1.4**
comp=N,4.9nm,0.8s,mb4.1,baz=132,slow=15,SNR=3.6

ATAH LR LR 17 59 07.3
comp=N,980nm,19.9s,MS4.3,baz=15,slow=30

PMSA Palmer Station 33.58 174 LR LR 18 07 22.9
comp=N,2µm,19.9s,MS4.8,baz=140,slow=38

ROSC El Rosal 36.31 356 P **P** **17 53 27.4 +1.1**
comp=N,3.7nm,0.4s,mb4.6,baz=288,slow=17,SNR=2.1

SDV Santo Domingo 40.27 2 *eP* **P** **17 53 59.1 -0.5**
comp=N,8.2nm,0.8s,mb4.5

SDV Santo Domingo 40.27 2 P **P** **17 53 60.0 +0.4**
comp=N,1.8nm,0.4s,mb4.2,baz=265,slow=15,SNR=3.5

VNA3 Neumayer Olymp 51.59 159 *eP* **P** **17 55 28.7 +0.4**
VNA3 *e* pP 17 55 31.2 +1.8
VNA3 *e* 17 55 32.7
VNA3 *e* 17 55 34.7
VNA3 *e* 17 55 38.4
VNA3 *e* 17 55 41.2
VNA3 *e* 17 55 45.7
VNA3 *e* 17 55 47.9
VNA3 *e* 17 55 51.4

VNA1 Neumayer--Stat 51.89 158 *eP* **P** **17 55 31.8 +1.2**
VNA1 *e* pP 17 55 34.8 +3.1
VNA1 *e* 17 55 36.8
VNA1 *e* 17 55 38.3
VNA1 *e* 17 55 40.9
VNA1 *e* 17 55 43.2

VNA2 Neumayer--Watz 52.23 158 *eP* **P** **17 55 33.4 +0.3**
VNA2 *e* pP 17 55 35.7 +1.5
VNA2 *e* 17 55 37.4
VNA2 *e* 17 55 39.2
VNA2 *e* 17 55 42.5
VNA2 *e* 17 55 45.3
VNA2 *e* 17 55 49.8
VNA2 *e* 17 55 51.9
VNA2 *e* 17 55 54.9

SNAA Sanae 53.81 159 *eP* **P** **17 55 44.9 +0.1**
SNAA *e* pP 17 55 47.0 +1.1
SNAA *e* 17 55 48.9
SNAA *e* 17 55 50.6
SNAA *e* 17 55 53.8
SNAA *e* 17 55 56.8
SNAA *e* 17 56 00.8
SNAA *e* 17 56 02.4
SNAA *e* 17 56 05.3

TEIG Tepich 53.83 341 *eP* **P** **17 55 42.6 -2.8**
comp=N,17nm,0.7s,mb5.1

RKT Rikitea 55.89 262 *eS* **S** **18 03 45.3 -3.7**
comp=N,426nm,27.8s

RKT *e*LR LR 18 12 19.3
comp=N,1µm,25.8s

QSPA South Pole Qui 58.64 180 P **P** **17 56 18.0 -1.1**
QSPA South Pole Qui 58.64 180 P **P** **17 56 18.0 -1.1**
comp=N,9.1nm,0.8s,mb4.9,baz=144,slow=2.7,SNR=30

DWPF Disney 60.04 350 P **P** **17 56 24.7 -4.7**
VNDA Vanda 66.46 191 P **P** **17 57 12.7 +1.3**
comp=N,0.7nm,0.7s,mb3.8,baz=110,slow=5.4,SNR=2.2

TAOE Nuku Hiva Isla 66.80 274 *e*LR LR 18 17 27.5
comp=N,2µm,25.7s

TBI Tubuai 67.91 255 *e*LR LR 18 17 58.7
comp=N,2µm,25.5s

SYO Syowa Base 68.10 159⇑ *eP* **P** **17 57 20.6 -1.3**
ELN Prospectdale 68.94 353 P **P** **17 57 24.9 -2.5**
WVT Waverly 68.98 346 *eP* **P** **17 57 25.9 -1.8**
comp=N,13nm,0.9s,mb4.8

BBTS Babate 70.32 58 LR LR 18 28 48.5
comp=N,1µm,18.1s,MS5.2,baz=69,slow=36

PPT Papeete 70.62 261 *e*LR LR 18 19 15.0
comp=N,738nm,23.8s

PPT Papeete 70.62 261 LR LR 18 23 18.0
comp=N,599nm,18.5s,MS4.9,baz=106,slow=31

ANMO Albuquerque 73.69 331 P **P** **17 57 49.4 -6.8**
comp=N,9.5nm,1.4s,mb4.5

DBIC Dimbokro 74.41 72 P **P** **17 57 59.6 -1.4**
comp=N,11nm,0.7s,mb4.9,baz=218,slow=6.8,SNR=24

DBIC LR LR 18 27 23.7
comp=N,1µm,20.8s,MS5.2,baz=198,slow=33

MAW Mawson 75.48 164 *eP* **P** **17 58 06.9 +0.6**
comp=N,3.6nm,0.9s,mb4.3

MAW Mawson 75.48 164 P **P** **17 58 06.1 -0.2**
comp=N,1.9nm,0.5s,mb4.3,baz=222,slow=7.8,SNR=10

MAW LR LR 18 31 51.2
comp=N,779nm,18.0s,MS5.0,baz=229,slow=36

SUR Sutherland 75.99 119 *eP* **P** **17 58 10.5 +0.6**
comp=N,8.3nm,0.7s,mb4.8

ISA Isabella 79.85 323 *eP* **P** **17 58 32.8 +1.8**
comp=N,9.1nm,1.1s,mb4.6

ISA *e* 17 58 41.4

TSUM Tsumeb 79.87 106 P **P** **17 58 31.4 -0.3**
comp=N,5.1nm,0.9s,mb4.5

TSUM Tsumeb 79.87 106 LR LR 18 29 36.8
comp=N,2µm,18.3s,MS5.4,baz=208,slow=32

BOSA Boshof 81.19 118 P **P** **17 58 38.1 -0.5**
comp=N,9.3nm,0.8s,mb4.8,baz=238,slow=5.7,SNR=14

BOSA LR LR 18 28 52.1
comp=N,963nm,19.0s,MS5.2,baz=178,slow=31

HWUT Hardware Ranch 81.45 331 *eP* **P** **17 58 40.0 +0.5**
comp=N,7.4nm,1.0s,mb4.6

PDAR Pinedale Array 81.62 333 P **P** **17 58 40.8 +0.4**
comp=N,0.7nm,0.8s,mb3.6,baz=150,slow=6.8,SNR=4.6

PDAR LR LR 18 31 30.7
comp=N,439nm,18.1s,MS4.9,baz=108,slow=33

NVAR Mina Array Bea 81.92 325 P **P** **17 58 42.8 +0.8**
comp=N,3.2nm,0.8s,mb4.3,baz=144,slow=6.5,SNR=13

TOA0 Torodi Ar. Sit 83.38 70 *eP* **P** **17 58 48.7 -1.5**
TORD Torodi Ar. Bea 83.38 70 P **P** **17 58 49.0 -1.3**
comp=N,10nm,0.6s,mb5.0,baz=264,slow=4.6,SNR=41

TORD LR LR 18 33 00.7
comp=N,1µm,19.8s,MS5.3,baz=220,slow=34

ULM Lac du Bonnet 84.18 345 P **P** **17 58 52.7 -0.7**
ULM Lac du Bonnet 84.18 345 P **P** **17 58 52.7 -0.7**
comp=N,2.4nm,0.9s,mb4.3,baz=163,slow=4.5,SNR=4.0

HLID Hailey 84.25 330 *eP* **P** **17 58 54.8 +0.8**
comp=N,1.7nm,0.8s,mb4.2

HLID *e* 17 59 02.6

SCHQ Schefferville 86.18 3 LR LR 18 38 49.7
comp=N,246nm,18.9s,MS4.6,baz=275,slow=36

MATP Matopo 88.02 113 LR LR 18 36 49.0
comp=N,1µm,18.1s,MS5.4,baz=152,slow=34

MDT Midelt 90.29 51 LR LR 18 38 33.1
comp=N,457nm,21.2s,MS4.9,baz=61,slow=35

LSZ Lusaka 90.55 108 *eP* **P** **17 59 25.1 -0.1**
comp=N,7.3nm,1.4s,mb4.8

LSZ Lusaka 90.55 108 LR LR 18 36 52.5
comp=N,1µm,18.5s,MS5.4,baz=210,slow=34

ESDC Sonseca Array 94.90 46 LR LR 18 40 04.6
comp=N,497nm,20.3s,MS5.0,baz=270,slow=34

YKA Yellowknife Ar 99.78 341 P Pdif 18 00 05.9 -0.9
comp=N,0.4nm,0.6s,baz=140,slow=4.0,SNR=8.6

YKA PKKPbc PKKPbc 18 16 25.5 -3.0
comp=N,0.2nm,0.4s,baz=322,slow=3.7,SNR=5.5

ASAR Alice Springs 119.71 207 PKP PKPdf 18 05 12.2 -1.1
comp=N,0.7nm,0.8s,baz=130,slow=1.6,SNR=10

ASAR PKKPbc PKKPbc 18 15 22.9 -0.1
comp=N,0.3nm,0.5s,baz=341,slow=3.2,SNR=8.7

AKASG Malin Array Be 120.54 46 PKP PKPdf 18 05 12.2 -1.7
comp=N,0.6nm,0.5s,baz=261,slow=3.8,SNR=7.1

WRA Warramunga Arr 122.86 210 PKP PKPdf 18 05 17.5 -1.9
comp=N,0.9nm,0.4s,baz=160,slow=1.8,SNR=6.6

BRVK Borovoye 145.41 41 *e*PKPdf PKPdf 18 05 59.9 -0.2
YAK Yakutsk 146.46 342 *e*PKPdf PKPdf 18 06 00.5 -1.1
HYB Hyderabad 149.85 111 *eP* PKPbc 18 06 14.0 +0.6
HYB Hyderabad 149.85 111 *i* PKP PKPbc 18 06 14.0 +0.6
ASAJ Asahikawa 150.16 305 PKPab PKPab 18 06 18.9 -0.5
comp=N,4.6nm,0.8s,baz=272,slow=13,SNR=4.5

EKS2 Erkin-Say 150.76 58 *e*PKPbc PKPbc 18 06 14.9 +0.1
AML Almayashu 150.80 59 *e*PKPbc PKPbc 18 06 14.5 -0.5
KURK Kurchatov 151.07 40 *e*PKPbc PKPbc 18 06 14.4 -0.9
UCH Uchtor 151.38 59 *e*PKPdf PKPdf 18 06 11.6 +1.3
UCH *e*PKPbc PKPbc 18 06 16.9 +0.6
ZALV Zalesovo Beam 152.16 30 PKPbc PKPbc 18 06 16.9 -0.7
ZALV PKPab PKPab 18 06 26.3 -1.1
ZALV Zalesovo Beam 152.16 30 PKPbc PKPbc 18 06 16.9 -0.7
comp=N,28nm,0.5s,baz=302,slow=3.2,SNR=109

ZALV PKPab PKPab 18 06 26.3 -1.1
comp=N,21nm,0.7s,baz=307,slow=4.5,SNR=6.7

MK31 Makanchi Array 155.12 45 *e*PKPdf PKPdf 18 06 14.4 -1.0
MK31 *e* 18 06 23.6
MKAR Makanchi Array 155.12 45 PKP PKPdf 18 06 12.5 -2.9
MKAR PKPbc PKPdf 18 06 24.0 +8.5
MKAR PKPab PKPab 18 06 40.3 +0.2
MKAR Makanchi Array 155.12 45 PKP PKPdf 18 06 12.5 -2.9
comp=N,0.6nm,0.7s,baz=325,slow=1.5,SNR=5.2

MKAR PKPbc PKPdf 18 06 24.0 +8.5
comp=N,0.8nm,0.5s,baz=296,slow=1.9,SNR=8.8

MKAR PKPab PKPab 18 06 40.3 +0.2
comp=N,1.7nm,0.6s,baz=290,slow=3.6,SNR=7.7

MDJ Mudanjiang 158.67 314 PKP PKPdf 18 06 18.3 -1.8
WMQ Urumqi 159.90 47 PKP PKPdf 18 06 17.8 -3.7
WMQ APKP 18 06 22.8
WMQ XPKP 18 06 25.8
WMQ PKP2 PKPab 18 06 58.3 -2.5
WMQ PP PP 18 10 40.0 -2.7
WMQ PP PP
comp=Z,125nm,4.4s

WMQ LR LR
comp=N,190nm,21.2s,MS5.1

WMQ LR LR
comp=E,239nm,21.2s,MS5.1

WMQ LR LR
comp=Z,312nm,22.6s,MS5.1

KSRS Korea Array 162.56 295 PKPab PKPab 18 07 13.1 +0.3
comp=Z,2.1nm,0.9s,baz=108,slow=4.1,SNR=4.9

SONM Songino Array 163.73 4 PKPab PKPab 18 07 17.2 -0.1
comp=Z,1.1nm,0.8s,baz=329,slow=4.0,SNR=7.6

HHC Hu-ho-hao-te 170.32 344 *e*PKP PKPdf 18 06 30.5 0.0
HHC PKS 18 10 02.5
HHC PP PP 18 11 40.0 +3.9
HHC SKS SKSdf 18 13 32.8 -1.9
HHC SKKS SKKSac 18 18 25.0 +0.6
HHC SS SS 18 32 36.5 -0.6
HHC PP PP
comp=Z,124nm,5.9s

HHC LR LR
comp=N,579nm,20.6s

HHC LR LR
comp=E,602nm,21.0s

HHC LR LR
comp=Z,848nm,20.0s

NJ2 Nanjing 170.73 276 *e*PKP PKPdf 18 06 26.3 -4.7
KMI Kunming 172.08 143 PKP PKPdf 18 06 31.0 -0.9
GYA Guiyang 174.76 167 *e*PKP PKPdf 18 06 31.5 -1.4
GYA PKS 18 10 02.5
GYA SKS SKSdf 18 13 32.0 -4.9
GYA PP PP
comp=Z,110nm,8.4s

GYA LR LR
comp=N,120nm,20.4s

GYA LR LR
comp=E,180nm,21.0s

GYA LR LR
comp=Z,240nm,20.6s

CD2 Chengdu 176.33 100 *e*PKP PKPdf 18 06 30.8 -2.3
CD2 XPKP 18 06 38.3
CD2 PP PP 18 12 08.5 +1.2
CD2 SKS SKSdf 18 13 28.5 -8.5
CD2 SKKS SKKSac 18 18 49.5 -4.7
CD2 SS SS 18 33 32.8 -5.8
CD2 PP PP
comp=Z,90nm,10.2s

CD2 LR LR
comp=N,180nm,26.5s

CD2 LR LR
comp=Z,160nm,24.2s

*ISCJB **29** 17:51:56.1±0.4,2207N±005×143.10E±008, h23km, mb4.3/38, MS4.2/7, Error ellipse: s-maj=11.2km s-min=6.9km az=175.5*

*MOS **29** 17:51:56.9±1.3, 2203N×143.03E, h31km, mb4.5/25, Error ellipse: s-maj=19.3km s-min=8.0km az=106.4*

*IDC **29** 17:51:57.4±0.8, 2205N×143.09E, h23km±4km, mb3.9/15, mb1 4.0/17, mb1mx4.0/23, mbtmp3.9/17, ML4.1/2, MS4.3/4, Ms1 4.3/4, ms1mx3.7/26, Error ellipse: s-maj=22.4km s-min=14.0km az=82.0*

*NEIC **29** 17:51:57.5±0.3, 2208N×143.13E, mb4.5/17, Error ellipse: s-maj=11.4km s-min=7.2km az=83.0*

*BJI **29** 17:51:57.4, 22.10N×143.10E, h23km, mB4.8, mb4.4, Ms4.2, Msz3.9*

ISC 29 17:51:58.0±0.4, 2206N±005×14316E±008, h25km, h25km±1.0km; pP-P, n86, σ1s10/84, mb4.3/38, MS4.2/7, 1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.09**	**350**	Pn		**Pn**		**17 53 12.9**	**+0.2**
CBIJ	21nm,0.3s,baz=314,slow=19,SNR=16			Sn		**Sn**		**17 54 09.3**	**-1.5**
MJAR	1.5nm,0.3s,baz=253,slow=19,SNR=2.5 **Matsushiro Arr**	**15.06**	**344**	Pn		**Pn**		**17 55 27.2**	**-2.0**
KSRS	0.3nm,0.3s,baz=159,slow=11,SNR=4.4			P		**P**		**17 56 32.1**	**+1.0**
KSRS	**Korea Array**	**20.21**	**323**	pmax		pmax			
KSRS	comp=Z,6.0nm,0.8s			MLR		MLR			
KSRS	comp=Z,229nm,22.0s,MS3.5 **Korea Array**	**20.21**	**323**	P		**P**		**17 56 32.1**	**+1.0**
KSRS	comp=Z,5.5nm,0.8s,baz=138,slow=12,SNR=11			LR		LR		18 03 29.7	
ASAJ	comp=Z,229nm,21.9s,MS3.5,baz=344,slow=34 **Asahikawa**	**22.00**	**359**	P		**P**		**17 56 52.0**	**+1.7**
ASAJ	comp=Z,6.0nm,0.9s			pmax		pmax			
ASAJ	**Asahikawa**	**22.00**	**359**	P		**P**		**17 56 52.0**	**+1.7**
YSS	comp=Z,5.5nm,0.9s,mb4.0,baz=112,slow=18,SNR=3.5 **Yuzh-Sakhalins**	**24.84**	**359**	*eP*		**P**		**17 57 19.0**	**+0.7**
YSS	comp=Z,6.9nm,0.8s,mb4.2 **Yuzh-Sakhalins**	**24.84**	**359**	*eP*		**P**		**17 57 19.9**	**+1.6**
MDJ	**Mudanjiang**	**25.12**	**337**	P		**P**		**17 57 22.8**	**+1.9**
MDJ				S		**S**		**18 01 37.3**	**-6.9**
MDJ				PCS		PcS		18 04 33.0	-1.9
MDJ				AMB		AMB			
MDJ	comp=Z,4.0nm,1.6s,mb3.7			AMB		AMB			
MDJ	comp=Z,93nm,6.7s			LR		LR			
MDJ	comp=N,140nm,22.2s,MS3.6			LR		LR			
MDJ	comp=E,207nm,26.0s,MS3.6			LR		LR			
KLR	comp=Z,102nm,8.0s **Kul'dur**	**28.59**	**344**	*eP*		**P**		**17 57 50.2**	**-1.8**
KKM	**Kota Kinabalu**	**30.52**	**243**	P		**P**		**17 58 08.7**	**-0.9**
HHC	**Hu-ho-hao-te**	**32.57**	**312**	*eP*		**P**		**17 58 29.5**	**+2.1**
HHC				PCP		PcP		18 01 12.5	-1.0
HHC				S		**S**		**18 03 34.8**	**-6.7**
HHC				PCS		PcS		18 04 57.0	-1.5
HHC				SS		SS		18 05 40.8	-21
HHC				AMB		AMB			
HHC	comp=Z,22nm,0.8s,mb5.1			AMB		AMB			
HHC	comp=Z,164nm,5.2s			LR		LR			
HHC	comp=N,133nm,16.8s			LR		LR			
HHC	comp=E,226nm,10.4s			LR		LR			
PET	comp=Z,186nm,15.3s,MS3.9 **Petropavlovsk**	**33.11**	**17**	P		**P**		**17 58 38.6**	**+6.7**
PET	comp=Z,30nm,1.0s,mb5.2 **Petropavlovsk**	**33.11**	**17**	P		**P**		**17 58 38.6**	**+6.7**
PET				pmax		pmax			
GYA	comp=Z,30nm,1.0s,mb5.2 **Guiyang**	**33.49**	**285**	P		**P**		**17 58 36.5**	**+0.9**
GYA				AMB		AMB			
CD2	comp=Z,10.0nm,0.8s,mb4.8 **Chengdu**	**36.20**	**293**	*eP*		**P**		**17 58 59.8**	**+0.9**
CD2				AMB		AMB			
CD2	comp=Z,10.0nm,0.8s,mb4.8			AMB		AMB			
KMI	comp=Z,20nm,5.2s **Kunming**	**37.07**	**283**	P		**P**		**17 59 07.0**	**+0.5**
KMI				AMB		AMB			
ULN	comp=Z,5.0nm,0.8s,mb4.4 **Ulaanbaatar**	**38.67**	**321**	*eP*		**P**		**17 59 19.9**	**+0.2**
ULN	comp=Z,3.8nm,1.0s,mb4.1 **Ulaanbaatar**	**38.67**	**321**	*eP*		**P**		**17 59 19.9**	**+0.3**
ULN	comp=Z,4.0nm,1.0s,mb4.1			pmax		pmax			

SONM Songino Array 39.05 320 P **P** **17 59 22.2 -0.6**
SONM *PP pP 17 59 30.0 -0.2
SONM pmax pmax
comp=Z,1.0nm,0.5s

SONM pmax pmax
comp=Z,1.0nm,0.7s

SONM Songino Array 39.05 320 P **P** **17 59 22.2 -0.6**
comp=Z,0.8nm,0.5s,mb3.7,baz=144,slow=9.8,SNR=8.5

SONM pP pP 17 59 30.0 -0.2
comp=Z,1.2nm,0.7s,baz=129,slow=6.5,SNR=6.3

YAK Yakutsk 41.01 350 *eP* **P** **17 59 38.8 0.0**
BOD Bodaibo 41.49 337 *eP* **P** **17 59 42.7 -0.2**
BOD pmax pmax
comp=Z,4.0nm,1.1s,mb4.0

CTA Charters Tower 42.00 176 *e*PKP **P** **17 59 48.6 +1.2**
comp=Z,4.0nm,1.0s,mb4.0

CTA Charters Tower 42.00 176 *eP* **P** **17 59 48.6 +1.2**
CTA pmax pmax
comp=Z,4.0nm,1.0s

CTAO Charters Tower 42.00 176 *eP* **P** **17 59 45.8 -1.6**
comp=Z,4.5nm,0.9s,mb4.1

CTAO Charters Tower 42.00 176 *eP* **P** **17 59 45.8 -1.6**
CTAO pmax pmax
comp=Z,4.0nm,0.9s,mb4.0

ZAK Zakamensk 42.04 322 *eP* **P** **17 59 48.1 +0.6**
ZAK pmax pmax
comp=Z,5.0nm,1.1s,mb4.1

WB2 Warramunga Arr 42.63 192 *e*PKP **P** **17 59 52.8 +0.3**
WRA Warramunga Arr 42.63 192 P **P** **17 59 52.1 -0.4**
WRA pmax pmax
comp=Z,2.0nm,0.6s

WRA Warramunga Arr 42.63 192 P **P** **17 59 52.1 -0.5**
comp=Z,2.0nm,0.6s,mb4.0,baz=13,slow=8.6,SNR=12

ASAR Alice Springs 46.34 192 P **P** **18 00 21.8 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.7s

ASAR Alice Springs 46.34 192 P **P** **18 00 21.8 -0.3**
comp=Z,0.9nm,0.7s,mb3.8,baz=17,slow=9.7,SNR=16

LSA Lhasa 47.09 291 P **P** **18 00 29.3 +1.2**
comp=Z,2.3nm,0.5s,mb4.4

LSA Lhasa 47.09 291 P **P** **18 00 29.3 +1.2**
LSA pmax pmax
comp=Z,2.0nm,0.5s,mb4.3

TIXI Tiksi 50.29 354 *eP* **P** **18 00 54.7 +2.6**
comp=Z,1.9nm,0.8s,mb4.2

TIXI Tiksi 50.29 354 *eP* **P** **18 00 54.7 +2.6**
TIXI pmax pmax
comp=Z,2.0nm,0.8s,mb4.2

WMQ Urumqi 50.33 309 ⇓P **P** **18 00 53.8 +0.9**
WMQ PCP PcP 18 02 10.8 -0.5
WMQ PP PP 18 02 52.3 +4.0
WMQ AMB AMB
comp=Z,5.0nm,1.2s,mb4.4

WMQ AMB AMB
comp=Z,173nm,4.6s

WMQ LR LR
comp=N,150nm,23.0s,MS4.1

WMQ LR LR
comp=E,137nm,23.2s,MS4.1

WMQ LR LR
comp=Z,166nm,22.2s,MS4.0

STKA Stephens Creek 53.65 182 P **P** **18 01 16.9 -0.6**
STKA Stephens Creek 53.65 182 P **P** **18 01 16.9 -0.6**
comp=Z,4.0nm,1.0s,mb4.3,baz=311,slow=13,SNR=3.6

ZAA0 Zalesovo Array 53.91 321 *eP* **P** **18 01 18.5 -0.8**
ZALV Zalesovo Beam 53.91 321 P **P** **18 01 18.8 -0.5**
comp=Z,3.9nm,0.5s,mb4.6,baz=103,slow=7.6,SNR=17

ZALV pP pP 18 01 25.6 -1.3
comp=Z,9.6nm,0.8s,baz=101,slow=7.7,SNR=13

ZAL Zalesovo 53.92 321 P **P** **18 01 18.8 -0.6**
ZAL *PP pP 18 01 25.7 -1.3
ZAL pmax pmax
comp=Z,4.0nm,0.5s

ZAL pmax pmax
comp=Z,10.0nm,0.8s

MK31 Makanchi Array 54.44 312 *eP* **P** **18 01 22.5 -0.7**
MKAR Makanchi Array 54.44 312 P **P** **18 01 23.2 0.0**
MKAR *PP pP 18 01 29.7 -1.2
MKAR pmax pmax
comp=Z,1.0nm,0.5s

MKAR pmax pmax
comp=Z,1.0nm,0.5s

MKAR Makanchi Array 54.44 312 P **P** **18 01 23.2 0.0**
comp=Z,0.8nm,0.5s,mb3.9,baz=89,slow=9.5,SNR=9.8

MKAR pP pP 18 01 29.6 -1.3
comp=Z,1.3nm,0.5s,baz=86,slow=9.1,SNR=11

KURK Kurchatov 57.20 317 *eP* **P** **18 01 38.8 -4.2**
comp=Z,4.0nm,0.9s,mb4.5

KURK Kurchatov 57.20 317 *eP* **P** **18 01 38.8 -4.2**
KURK pmax pmax
comp=Z,4.0nm,0.9s,mb4.5

TKM2 Tokmak 2 59.11 308 *eP* **P** **18 01 55.4 -1.1**
comp=Z,4.5nm,0.9s,mb4.5

TKM2 Tokmak 2 59.11 308 *eP* **P** **18 01 55.4 -1.1**
TKM2 pmax pmax
comp=Z,5.0nm,0.9s,mb4.5

UCH Uchtor 59.94 307 *eP* **P** **18 02 02.6 +0.4**
comp=Z,5.5nm,1.0s,mb4.5

AML Almayashu 60.55 307 *eP* **P** **18 02 07.6 +1.2**
comp=Z,3.7nm,0.8s,mb4.6

BRVK Borovoye 62.45 319 *eP* **P** **18 02 17.7 -1.3**
comp=Z,7.2nm,0.9s,mb4.8

BRVK Borovoye 62.45 319 *eP* **P** **18 02 17.7 -1.3**
BRVK pmax pmax
comp=Z,7.0nm,0.9s,mb4.8

INK Inuvik 67.24 24 P **P** **18 02 49.7 -0.3**
comp=Z,102nm,1.1s

INK Inuvik 67.24 24 P **P** **18 02 50.0 0.0**
INK pmax pmax
comp=Z,1.0nm,0.9s

INK Inuvik 67.24 24 P **P** **18 02 50.0 0.0**
comp=Z,1.0nm,0.8s,mb3.8,baz=248,slow=4.9,SNR=4.0

ARU Arti 68.96 324 *eP* **P** **18 03 00.2 -0.8**
comp=Z,3.6nm,0.6s,mb4.5

ARU Arti 68.96 324 *eP* **P** **18 03 00.2 -0.8**
ARU pmax pmax
comp=Z,4.0nm,0.6s,mb4.5

DLBC Dease Lake 69.83 34 P **P** **18 03 08.6 +2.2**
YKA Yellowknife Ar 76.14 28 P **P** **18 03 43.6 0.0**
YKA pP pP 18 03 51.2 -0.4
YKA Yellowknife Ar 76.14 28 P **P** **18 03 43.6 0.0**
YKA *PP pP 18 03 51.2 -0.3
YKA pmax pmax
comp=Z,1.0nm,0.5s

YKA pmax pmax
comp=Z,1.0nm,0.5s

YKA Yellowknife Ar 76.14 28 P **P** **18 03 43.6 0.0**
comp=Z,0.7nm,0.5s,mb3.8,baz=291,slow=5.9,SNR=9.6

YKA pP pP 18 03 51.2 -0.3
comp=Z,0.6nm,0.5s,baz=293,slow=5.8,SNR=6.1

PPT Papeete 76.70 115 LR LR 18 32 47.9
comp=Z,243nm,18.6s,MS4.5,baz=57,slow=32

RES Resolute Bay 76.73 13 P **P** **18 03 47.1 +0.3**
comp=Z,76nm,1.0s

RES Resolute Bay 76.73 13 P **P** **18 03 47.1 +0.3**
RES pmax pmax
comp=Z,76nm,1.0s

ARCES ARCESS Array B 78.57 341 P **P** **18 03 56.0 -1.1**
ARCES pP pP 18 04 03.3 -1.8
ARCES ARCESS Array B 78.57 341 P **P** **18 03 56.0 -1.1**
ARCES *PP pP 18 04 03.3 -1.7
ARCES pmax pmax
comp=Z,4.0nm,0.8s

ARCES pmax pmax
comp=Z,3.0nm,0.9s

ARCES ARCESS Array B 78.57 341 P **P** **18 03 56.0 -1.1**
comp=Z,3.5nm,0.8s,mb4.3,baz=75,slow=10,SNR=3.2

ARCES pP pP 18 04 03.3 -1.8
comp=Z,3.1nm,0.9s,baz=74,slow=8.9,SNR=1.3

CMB Columbia Colle 81.56 52 P **P** **18 04 14.6 +0.7**
comp=Z,2.1nm,0.7s,mb4.2

CMB Columbia Colle 81.56 52 P **P** **18 04 14.6 +0.7**
CMB pmax pmax
comp=Z,2.0nm,0.7s,mb4.2

FINES FINESS Array B 82.84 334 P **P** **18 04 18.6 -1.5**
FINES pmax pmax
comp=Z,1.0nm,0.6s

FINES FINESS Array B 82.84 334 P **P** **18 04 18.6 -1.6**
comp=Z,0.8nm,0.6s,mb3.9,baz=63,slow=5.7,SNR=6.7

NVAR Mina Array Bea 82.93 52 P **P** **18 04 21.5 +0.4**
comp=Z,1.6nm,0.7s,mb4.1,baz=263,slow=7.5,SNR=6.3

BOZ Bozeman (W) 84.52 43 P **P** **18 04 26.3 -2.8**
comp=Z,1.4nm,0.8s,mb4.1

BOZ Bozeman (W) 84.52 43 P **P** **18 04 26.3 -2.8**
BOZ pmax pmax
comp=Z,1.0nm,0.8s,mb4.0

FFC	Flin Flon	85.53	32	*e*P	P	18 04 34.2	+0.3
	comp=Z,2.9nm,0.8s,mb4.6						
FFC	Flin Flon	85.53	32	*e*P	P	18 04 34.2	+0.3
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
DUG	Dugway	86.11	48	*e*P	P	18 04 32.9	-4.2
	comp=Z,3.2nm,0.6s,mb4.7						
DUG	Dugway	86.11	48	*e*P	P	18 04 32.9	-4.2
DUG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
PDAR	Pinedale Array	87.15	45	P	P	18 04 42.3	+0.2
	comp=Z,0.5nm,0.8s,mb3.8,baz=306,slow=5.0,SNR=4.5						
AKASG	Malin Array Be	87.20	324	P	P	18 04 40.6	-1.6
	comp=Z,0.2nm,0.2s,mb3.9,baz=48,slow=4.3,SNR=3.5						
ULM	Lac du Bonnet	91.15	33	LR	LR	18 41 32.9	
	comp=Z,246nm,20.6s,MS4.6,baz=80,slow=33						
GERES	GERESS Array B	96.26	329	LR	LR	18 53 22.8	
	comp=Z,310nm,18.0s,MS4.8,baz=240,slow=38						
LPAZ	La Paz	149.93	85	PKIKP	PKPbc	18 11 47.7	+0.7
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LPAZ	La Paz	149.93	85	PKPbc	PKPbc	18 11 47.7	+0.7
	comp=Z,2.0nm,0.7s,baz=251,slow=4.6,SNR=11						

CSEM ***29*** *17:53:04.6±0.2, 3781N×3528E, h5km, MD2.9, Error ellipse: s-maj=5.8km s-min=5.1km az=43.0*
ISK ***29*** *17:53:04.6, 3783N×3526E, h5km, MD2.9*
ISCJB ***29*** *17:53:07.5±0.6, 3773N±004×3531E±006, h29km±9km, Error ellipse: s-maj=8.1km s-min=7.1km az=36.2*
DDA ***29*** *17:53:08.6, 3782N×3537E, h7km±5km, Md3.1*

ISC 29 17:53:07.3±0.8**, 3775N**±004×**3531E**±004**, h16**km±9km**, n11**, σ1°05'17", Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	Kozan	0.49	123	PG	Pg	17 53 16.8	-0.3
KOZT				SG	Sg	17 53 24.3	+0.7
KARA	Karaisali	0.53	203	PG	Pg	17 53 16.2	-1.6
KARA				SG	Sg	17 53 25.3	+0.4
NIG	Nigde	0.66	303	PG	Pg	17 53 16.1	-4.2
ANDN	Andirin	0.84	101	*i* P	Pb	17 53 22.7	-0.8
ANDN				*i* S	Sb	17 53 35.8	+1.4
MERS	Mersin	1.08	216	*e*PN	Pn	17 53 26.8	-1.0
AVNT	Avonos	1.09	341	*i* P	Pb	17 53 27.4	-0.3
AVNT				*i* S	Sb	17 53 42.1	+0.3
BNN	Bunyan	1.18	21	*e*PN	Pn	17 53 26.1	-3.0
IKL	Isikli	1.99	221	*e*PN	Pn	17 53 40.8	+0.4
CDAG	Cicekdag	2.01	339	*i* P	Pn	17 53 41.5	+0.9
CDAG				*i* S	Sb	17 54 09.4	+1.1
KAMT	Kaman	2.05	323	*e*PN	Pn	17 53 39.7	-1.4
ERMK	Ermenek	2.21	241	*i* P	Pb	17 53 47.1	+0.1
ERMK				*i* S	Sg	17 54 19.8	+1.3

ISCJB ***29*** *18:01:22.1±0.3, 4936N±001×682E±003, h0km, Error ellipse: s-maj=3.1km s-min=1.9km az=179.1*
NEIC ***29*** *18:01:23.5, 4938N×683E, h1km, ML2.7(LDG), ML2.2(STR), After LDG.*
CSEM ***29*** *18:01:23.6±0.1, 4937N×684E, h1km, ML2.7/10, Error ellipse: s-maj=1.6km s-min=0.9km az=104.0*
LDG ***29*** *18:01:23.5±0.1, 4938N×683E, h1km, Md2.9/1, Ml2.7/9, Error ellipse: s-maj=1.7km s-min=1.1km az=104.0, Suspected Mining induced.*
BGR ***29*** *18:01:23.6±0.3, 4935N×683E, h1km, ML1.9/3, Error ellipse: s-maj=3.3km s-min=3.3km az=57.0*
BNS ***29*** *18:01:25.5±0.4, 4945N×683E, h1km, ML1.6*

ISC 29 18:01:23.1±0.3**, 4936N**±001×**682E**±003**, h0**km**, n53, σ0°72', 76", Germany**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RUP	Ruppelstein	0.37	24	*e*Pg	Pg	18 01 30.8	+0.6
	SNR=9.3						
RUP	Ruppelstein	0.37	24	Pg	Pg	18 01 30.6	+0.3
RUP				Sg	Sg	18 01 35.4	+0.3
WLF	Walferdange	0.53	305	*e*Pg	Pg	18 01 34.1	+0.8
	SNR=2.3						
WLF				*e*Sg	Sg	18 01 40.2	0.0
	SNR=3.0						
WLF	Walferdange	0.53	305	P	Pg	18 01 34.2	+0.9
ABH	Alteburg	0.70	42	Pg	Pg	18 01 36.5	-0.1
LANF	Langenberg	0.75	120	*e*Pg	Pg	18 01 37.8	+0.3
	SNR=7.4						
LANF	Langenberg	0.75	120	Pg	Pg	18 01 37.6	+0.1
LANF				Sg	Sg	18 01 47.7	+0.5
KTD	Kalmit	0.83	93	*e*Pg	Pg	18 01 39.6	+0.6
	SNR=5.0						
KTD	Kalmit	0.83	93	Pg	Pg	18 01 39.7	+0.8
BGG	Burgeitz	0.91	21	*e*Pg	Pg	18 01 41.0	+0.5
BGG				*e*Sg	Sg	18 01 52.9	+0.7
	19nm,0.3s						
CDF	Champ du Feu	1.00	162	*e*Pn	Pn	18 01 43.0	-1.3
CDF				*e*Sg	Sg	18 01 55.6	+0.4
	31nm,0.5s						
CDF	Champ du Feu	1.00	162	*e*Pg	Pg	18 01 42.1	-0.1
CDF				*e*Pn	Pn	18 01 43.0	-1.3
CDF				*e*Sg	Sg	18 01 55.6	+0.4
CDF	Champ du Feu	1.00	162	*e*Pn	Pn	18 01 43.0	-1.3
CDF				*e*Sg	Sg	18 01 55.6	+0.4
	15nm,0.5s						
RFYF	Reffroy	1.15	231	*e*Pg	Pg	18 01 46.3	+1.1
	baz=53						
RFYF				*e*Sg	Sg	18 02 01.9	+1.8
	39nm,0.4s						
RFYF	Reffroy	1.15	231	*e*Pg	Pg	18 01 46.3	+1.1
RFYF				*e*Sg	Sg	18 02 01.9	+1.8
	19nm,0.4s						
ECH	Echery	1.17	169	*e*Pg	Pg	18 01 45.5	0.0
	SNR=8.0						
ECH	Echery	1.17	169	Pg	Pg	18 01 46.1	+0.6
ECH				Sg	Sg	18 02 01.4	+0.7
ECH	Echery	1.17	169	Pg	Pg	18 01 45.5	0.0
	SNR=8.0						
ECH				Sg	Sg	18 02 01.4	+0.7
STB	Steinbach	1.23	1	*e*Pg	Pg	18 01 46.9	+0.1
STB				*e*Sg	Sg	18 02 02.5	-0.2
	13nm,0.5s						
THEF	They Montfort	1.27	206	*e*Pg	Pg	18 01 47.3	0.0
	SNR=4.0						
THEF	They Montfort	1.27	206	Pg	Pg	18 01 47.3	-0.1
	SNR=4.0						
THEF				Sg	Sg	18 02 04.5	+0.8
TOD	Tromm	1.31	79	*e*Pg	Pg	18 01 48.2	-0.1
	SNR=3.4						
KLL	Kalltalsperre	1.33	346	*e*Pg	Pg	18 01 48.4	-0.1
MEM	Membach	1.35	337	P	Pg	18 01 48.7	-0.4
MEM	Membach	1.35	337	P	Pg	18 01 48.6	-0.5
DREG	Dreilaegerbach	1.35	344	*e*Pg	Pg	18 01 48.9	-0.2
DREG				*e*Sg	Sg	18 02 05.6	-1.1
	16nm,0.6s						
TNS	Taunus Mts	1.36	50	*e*Pg	Pg	18 01 48.8	-0.4
	SNR=3.7						
TNS				*e*Sg	Sg	18 02 07.1	+0.3
	SNR=7.6						
HAU	Haudompre	1.40	193	*e*Pg	Pg	18 01 49.7	-0.1
HAU				*e*Sg	Sg	18 02 08.2	+0.3
	30nm,0.6s						
HAU	Haudompre	1.40	193	*e*Pg	Pg	18 01 49.7	-0.1
HAU				*e*Sg	Sg	18 02 08.2	+0.3
	15nm,0.6s						
BFO	Black Forest	1.44	136	*e*Pg	Pg	18 01 49.7	-0.9
	SNR=5.6						
BFO				*e*Sg	Sg	18 02 08.1	-1.1
	SNR=4.7						
BFO	Black Forest	1.44	136	*e*P	Pn	18 01 49.4	-0.9
BFO	Black Forest	1.44	136	*e*P	Pn	18 01 49.4	-1.0
BCLA	Clavier	1.44	318	P	Pn	18 01 51.3	+0.8
BCLA	Clavier	1.44	318	P	Pn	18 01 51.2	+0.7
HGN	Heimansgroeve	1.52	338	*e*Pg	Pg	18 01 51.5	-0.7
HGN				*e*Sg	Sg	18 02 11.2	-0.6
MOF	Molkenrain	1.53	172	*e*Pg	Pg	18 01 52.5	+0.1
	SNR=7.4						
MOF	Molkenrain	1.53	172	Pg	Pg	18 01 52.5	+0.1
MOF				Sg	Sg	18 02 12.7	+0.6
HINF	Hinteralfeld	1.55	179	*e*Pg	Pg	18 01 52.4	-0.4
HINF				*e*Sg	Sg	18 02 12.9	+0.1
	17nm,0.3s						
HINF	Hinteralfeld	1.55	179	*e*Pg	Pg	18 01 52.4	-0.4
HINF				*e*Sg	Sg	18 02 12.9	+0.1
	8.6nm,0.3s						
DOU	Dourbes	1.62	298	P	Pn	18 01 54.3	+1.3
DOU	Dourbes	1.62	298	P	Pn	18 01 54.2	+1.3
SFTF	Sexfontaines	1.66	226	*e*Sg	Sg	18 02 16.0	-0.2
	10nm,0.4s						
SFTF	Sexfontaines	1.66	226	*e*Sg	Sg	18 02 16.0	-0.2
	5.2nm,0.4s						
FELD	Feldberg im Sc	1.68	152	*e*Pg	Pg	18 01 55.5	+0.1
	SNR=4.6						
FELD	Feldberg im Sc	1.68	152	Pg	Pg	18 01 55.3	0.0
BAIF	Baives	1.83	293	*e*Pg	Pg	18 01 57.8	-0.5
CABF	La Chapelle	2.80	190	*e*Sg	Sg	18 02 52.2	-0.8
	14nm,0.6s						
CABF	La Chapelle	2.80	190	*e*Sg	Sg	18 02 52.2	-0.8
	7.1nm,0.6s						
LOR	Lormes	2.88	224	*e*Sn	Sn	18 02 42.4	-3.2
	14nm,0.5s						
LOR	Lormes	2.88	224	*e*Sn	Sn	18 02 42.4	-3.2
	6.9nm,0.5s						
SMF	Signal de Mont	3.38	217	*e*Sg	Sg	18 03 10.1	-1.5
	5.9nm,0.4s						
SMF	Signal de Mont	3.38	217	*e*Sg	Sg	18 03 10.1	-1.5
	3.0nm,0.4s						
BRG	Berggiesshubel	4.82	69	SG	Sg	18 03 58.1	+0.1
	2.5nm,0.2s						

NEIC ***29*** *18:08:20.4, 3162S×7185W, h33km±2km,* **MD4.0, ML3.8, 8C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	Los Chungos	0.40	131	⇓*i* P	Pb	18 08 11.8	-18
CHNG				*i* S	Sb	18 08 18.6	-17
CMCH	Combarbala	0.85	59	⇓*i* P	Pn	18 08 35.9	-0.2
CMCH				*i* S	Sn	18 08 48.1	+0.7
CMCH	Combarbala	0.85	59	⇓*i* P	Pn	18 08 35.9	-0.2
CMCH				*i* S	Sn	18 08 48.1	+0.7
CMCH				AML	AML	18 08 53.9	
	comp=N,7μm,0.8s						
PACH	Papudo	0.98	159	⇓*i* P	Pn	18 08 38.0	+0.1
PACH				*i* S	Sn	18 08 51.8	+1.2
PTCH	Petorca	1.01	130	⇑*i* P	Pn	18 08 38.6	+0.3
PTCH				*i* S	Sn	18 08 52.0	+0.6
PTCH	Petorca	1.01	130	⇑*i* P	Pn	18 08 38.6	+0.3
PTCH				*i* S	Sn	18 08 52.0	+0.6
PTCH				AML	AML	18 08 54.4	
	comp=N,11μm,0.2s						
OVCH	Ovalle	1.15	29	⇓*i* P	Pn	18 08 40.9	+0.7
OVCH				*i* S	Sn	18 08 56.8	+2.0
JACH	Jahuel	1.50	135	*e*P	Pn	18 08 46.4	+1.4
JACH				*i* S	Sn	18 09 06.9	+3.4
ROCH	El Roble	1.53	152	*e*P	Pn	18 08 46.8	+1.5
ROCH				*i* S	Sn	18 09 06.8	+2.8
TLL	Tololo Astrono	1.71	32	⇑*i* P	Pn	18 08 49.2	+1.5
TLL				*i* S	Sn	18 09 12.2	+3.7
TLL	Tololo Astrono	1.71	32	⇑*i* P	Pn	18 08 49.2	+1.5
TLL				*i* S	Sn	18 09 12.2	+3.7
TLL				AML	AML	18 09 16.8	
	comp=E,720nm,0.4s						
PEL	Peldehue	1.81	147	⇑*i* P	Pn	18 08 51.0	+1.7
PEL				*i* S	Sn	18 09 13.8	+2.7
PEL				AML	AML	18 09 20.8	
	comp=E,2μm,0.4s						
FCH	Farellones	2.16	143	⇑*i* P	Pn	18 08 55.8	+1.8
FCH				*i* S	Sn	18 09 23.5	+3.9
FCH				AML	AML	18 09 28.2	
	comp=E,448nm,0.1s						
TACH	Talagante	2.17	159	*e*P	Pn	18 08 55.9	+1.7
PCH	Pirque	2.29	151	*e*P	Pn	18 08 57.7	+1.8
PCH				*i* S	Sn	18 09 25.8	+2.8
CHCH	Chadas Angostu	2.52	157	*e*P	Pn	18 09 00.6	+1.6
LMEL	Las Melosas	2.62	148	⇑*i* P	Pn	18 09 02.7	+2.3
LMEL				*i* S	Sn	18 09 33.7	+2.7
LMEL	Las Melosas	2.62	148	⇑*i* P	Pn	18 09 02.7	+2.3
LMEL				*i* S	Sn	18 09 33.7	+2.7
LMEL				AML	AML	18 09 45.4	
	comp=N,360nm,0.9s						
LCO	Las Campanas	2.78	21	*e*Pn	Pn	18 09 03.0	+0.4

ISCJB ***29*** *18:14:40.5±1.1, 3840N±004×2046E±008, h11km±9km, Error ellipse: s-maj=10.9km s-min=5.8km az=151.9*
ATH ***29*** *18:14:40.2, 3842N×2056E, h20km±1km, MD3.4/3*
NEIC ***29*** *18:14:40.5, 3845N×2058E, h12km, MD3.4(ATH), ML3.2(THE), After ATH.*
CSEM ***29*** *18:14:41.7±0.2, 3841N×2052E, h10km, ML3.2, Error ellipse: s-maj=5.0km s-min=2.5km az=78.0*
THE ***29*** *18:14:41.6, 3840N×2045E, h3km, ML3.2*

ISC 29 18:14:41.1±0.9**, 3839N**±004×**2044E**±007**, h15**km±6km**, n12**, σ1°07', 18", C, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.25	151	⇑*i* PB	Pg	18 14 46.3	-0.2
VLS				*e*SB	Sg	18 14 50.7	+0.6
LKD	Levkas	0.35	28	*e*Pg	Pg	18 14 47.8	-0.6
LKD				*e*Sg	Sg	18 14 53.4	+0.1
LKD	Levkas	0.35	28	*e*Pg	Pg	18 14 47.8	-0.6
LKD				*e*Sg	Sg	18 14 53.3	+0.1
KFL	Anninata	0.40	136	*e*Pg	Pg	18 14 49.0	-0.1
IGT	Igoumenitsa	1.14	356	*e*Pg	Pg	18 15 02.4	-0.7
IGT				*e*Sg	Sg	18 15 19.4	+1.5
SELA	Sela	1.15	95	*e*Pg	Pg	18 15 01.9	-1.3
SELA				*e*Sg	Sg	18 15 19.2	+1.0
EVR	Evrytania	1.19	64	*e*PN	Pn	18 15 00.8	-2.4
KEK	Kerkira	1.41	339	*e*PN	Pn	18 15 06.9	+0.7
MEV	Metsovon	1.52	24	*e*Pg	Pg	18 15 10.0	-0.3
AGG	Agios Georgios	1.61	66	*e*Pg	Pg	18 15 10.6	-1.3
AGG				*e*Sg	Sg	18 15 33.7	+0.8
THL	Klokotos Trika	1.69	46	*e*PN	Pn	18 15 10.1	0.0
DID	Didima	2.38	111	*e*Pn	Pn	18 15 22.2	+2.6

IDC ***29*** *18:19:04.9±0.7, 3531N×2142E, h0km, mb4.1/16, mb1 4.1/24, mb1mx4.1/31, mbtmp4.0/24, ML3.8/8, MS4.2/2, Ms1 4.2/2, ms1mx3.4/42, Error ellipse: s-maj=15.9km s-min=12.9km az=13.0*
NEIC ***29*** *18:19:06.0, 3507N×2129E, h18km, mb4.0/5, ML4.3(THE), ML4.2(ATH), After ATH.*
BJI ***29*** *18:19:06.4, 3553N×2056E, h43km, mB4.9, mb4.5, Msz4.8*
ATH ***29*** *18:19:07.4, 3525N×2130E, h31km, MD4.1/14, ML4.2*
CSEM ***29*** *18:19:08.6±0.1, 3518N×2137E, h40km, mb4.4/16, Error ellipse: s-maj=2.1km s-min=1.6km az=57.0*
MOS ***29*** *18:19:08.6±1.2, 3535N×2136E, h33km, mb4.5/16, Error ellipse: s-maj=8.2km s-min=3.6km az=89.4*
ISCJB ***29*** *18:19:08.1±0.5, 3531N±003×2123E±003, h38km±4km, mb4.4/32, Error ellipse: s-maj=5.3km s-min=3.8km az=37.2*
PDG ***29*** *18:19:10.0±0.2, 3558N×2067E, h11km±11km, ML4.2/10, Error ellipse: s-maj=228.7km s-min=45.0km az=90.0*
THE ***29*** *18:19:10.2, 3534N×2133E, h20km, ML4.3*
HLW ***29*** *18:19:12.0, 3524N×2216E, h21km, Mb3.8*
NAO ***29*** *18:19:13.0, 3582N×2315E, h33km, mb3.9*

ISC 29 18:19:08.7±0.9**, 3526N**±002×**2130E**±003**, h27**km±7km**, n201, σ1°22'/233", mb4.4/32, 6C-9D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	1.67	12	*e*Pg	Pn	18 19 36.8	+0.7
KYTH	Kithira	1.74	54	*e*PN	Pn	18 19 37.6	+0.5
VLI	Veliai	1.97	42	*e*PB	Pb	18 19 41.9	-1.9
ITM	Ithomi	1.98	15	*e*PB	Pb	18 19 41.7	-2.3
KARN	Karanos	2.14	86	*e*Pn	Pn	18 19 42.2	-0.5
VLX	Vlachokerasia	2.27	22	*e*Pn	Pn	18 19 46.9	+2.4
VLX				*e*Sn	Sn	18 20 11.6	0.0
GVD	Gavdhos	2.32	100	*e*Pn	Pn	18 19 45.6	+0.4
GVD	Gavdhos	2.32	100	*e*PN	Pn	18 19 45.5	+0.3
VAM	Vamos	2.37	86	*e*PN	Pn	18 19 46.0	+0.1
DID	Didima	2.73	34	*e*Pn	Pn	18 19 51.2	+0.5
KFL	Anninata	2.87	352	*e*Pn	Pn	18 19 53.5	+0.8
IDI	Anoyia	2.94	88	Pn	Pn	18 19 53.1	-0.5
	13nm,0.3s,baz=279,slow=16,SNR=56						
IDI				Sn	Sn	18 20 29.3	+1.3
	12nm,0.3s,baz=334,slow=18,SNR=8.3						
IDI				LR	LR	18 20 40.8	
	comp=Z,1μm,19.6s,baz=268,slow=34						
IDI	Anoyia	2.94	88	Pn	Pn	18 19 53.1	-0.5
IDI				Sn	Sn	18 20 29.3	+1.4
VLS	Valsamata	2.96	349	*e*PN	Pn	18 19 55.0	+1.0
KVR	Kavouri	3.24	37	*e*PN	Pn	18 20 00.0	+2.2
ATH	Athens Observa	3.33	35	*e*PN	Pn	18 20 00.5	+1.5
PTL	Penteli	3.46	36	*e*PN	Pn	18 20 01.0	+0.2
LKD	Levkas	3.48	352	*e*Pn	Pn	18 20 02.0	+1.0
LKD				*e*Sn	Sn	18 20 39.4	-1.9
NPS	Neapolis	3.53	89	*e*PN	Pn	18 20 03.5	+1.8
XRY	Khrisi	3.62	95	*e*PN	Pn	18 20 04.5	+1.5
LKR	Lokris	3.64	21	*e*PN	Pn	18 20 03.5	+0.2
EVR	Evrytania	3.67	6	*e*PN	Pn	18 20 06.5	+2.8
AGG	Agios Georgios	3.84	12	*e*Pn	Pn	18 20 07.8	+1.7
APE	Apeiranthos	3.87	61	*e*PN	Pn	18 20 06.7	+0.3
NEO	Neokhori	4.32	20	*e*PN	Pn	18 20 12.8	+0.2
IGT	Igoumenitsa	4.33	350	*e*Pn	Pn	18 20 13.0	+0.3
THL	Klokotos Trika	4.33	7	*e*PN	Pn	18 20 13.8	+1.0
JAN	Janina	4.40	355	*e*PN	Pn	18 20 14.5	+0.8
AOS	Alonnisos	4.41	27	*e*Pn	Pn	18 20 13.9	0.0
LJBD	Adjabya	4.44	192	*i* P	Pn	18 20 13.4	-0.8
	SNR=23						
MEV	Metsovon	4.51	359	*e*Pn	Pn	18 20 16.9	+1.6
KEK	Kerkira	4.60	345	*e*PN	Pn	18 20 17.5	+1.0
KARP	Karpathos	4.79	85	*e*PN	Pn	18 20 21.0	+1.9
LIT	Litokhoron	4.92	11	*e*Pn	Pn	18 20 21.4	+0.6
LIT				*e*Sn	Sn	18 21 16.6	-0.3
PAIG	Paliouri	5.02	21	*e*Pn	Pn	18 20 22.2	-0.1
TIP	Timpagrande	5.33	318	P	Pn	18 20 26.9	+0.4
PLG	Polygyros	5.38	18	*e*Pn	Pn	18 20 26.9	-0.2
PLG	Polygyros	5.38	18	*e*PN	Pn	18 20 27.2	+0.1
OUR	Ouranopolis	5.49	22	*e*Pn	Pn	18 20 28.6	0.0
HORT	Hortiatis	5.51	14	*e*Pn	Pn	18 20 29.1	+0.1
HORT	Hortiatis	5.51	14	*e*Pn	Pn	18 20 29.0	0.0
FNA	Florina	5.51	1	*e*Pn	Pn	18 20 28.8	-0.2
LIA	Limnos Island	5.56	33	P	Pn	18 20 35.8	+6.2
ARG	Arkhangelos	5.63	78	P	Pn	18 20 31.1	+0.5
GRG	Griva	5.75	8	*e*Pn	Pn	18 20 32.3	+0.1
SOH	Sokhos	5.78	16	*e*Pn	Pn	18 20 32.9	+0.2
OHR	Ohrid	5.85	356	*e*Pn	Pn	18 20 33.7	0.0
OHR				*e*Sn	Sn	18 21 38.5	-1.3
OHR	Ohrid	5.85	356	*e*Pn	Pn	18 20 33.6	-0.1
OHR				*e*Sn	Sn	18 21 38.5	-1.3
VAE	Valguarnera	5.98	294	Pn	Pn	18 20 36.2	+0.7
	3.9nm,0.3s,baz=97,slow=23,SNR=11						
VAE				Sn	Sn	18 21 40.2	-2.8
	2.5nm,0.3s,baz=84,slow=18,SNR=1.7						
KNT	Kendrikon	6.02	12	*e*Pn	Pn	18 20 35.9	-0.1
KRUS	Krusevo	6.10	360	*e*Pn	Pn	18 20 37.5	+0.5
KRUS				*e*Sn	Sn	18 21 43.9	-2.0
KRUS	Krusevo	6.10	360	*e*Pn	Pn	18 20 37.4	+0.4
KRUS				*e*Sn	Sn	18 21 43.8	-2.0
VAY	Valandovo	6.13	9	*e*Pn	Pn	18 20 37.6	+0.1
VAY				*e*Sn	Sn	18 21 45.8	-0.9
VAY	Valandovo	6.13	9	*e*Pn	Pn	18 20 37.5	0.0
VAY				*e*Sn	Sn	18 21 45.8	-0.9
HMAT	Matruh	6.39	129	⇑*i* P	Pn	18 20 36.7	-4.4
NVR	Nevrokopi	6.40	18	*e*PN	Pn	18 20 41.9	+0.7
MMB	Musomiste	6.60	16	*i* P	Pn	18 20 43.9	0.0
KKB	Krupnik	6.74	11	*e*P	Pn	18 20 47.1	+1.3
ULC	Ulcinj	6.88	347	*e*Pn	Pn	18 20 47.3	-0.5
ULC				*e*Sn	Sn	18 21 59.4	-5.7
SWA1		7.05	147	P	Pn	18 20 48.5	-1.7
SWA1				S	Sn	18 21 58.9	-11
BUM	Brajici-Budva	7.27	346	*e*Pn	Pn	18 20 51.6	-1.6
BUM				*e*Sn	Sn	18 22 09.1	-5.7
PDG	Podgorica	7.33	348	*e*Pn	Pn	18 20 53.2	-0.7
TTG	Podgorica	7.33	348	*e*Pn	Pn	18 20 53.2	-0.7
TTG				*e*Sn	Sn	18 22 10.6	-5.6
PVY	Plav	7.39	352	*e*Pn	Pn	18 20 54.0	-0.8
PVY				*e*Sn	Sn	18 22 13.0	-4.8
VTS	Vitosha	7.47	11	*e*P	Pn	18 20 57.0	+1.2
VTS	Vitosha	7.47	11	P	Pn	18 20 57.4	+1.6
HCY	Herceg Novi	7.50	344	*e*Pn	Pn	18 20 55.2	-1.1
HCY				*e*Sn	Sn	18 22 13.7	-6.6
BARS	Barje	7.56	3	Pn	Pn	18 20 56.2	-0.8
BEY	Berane	7.67	352	*e*Pn	Pn	18 20 58.3	-0.4
IVA	Berane	7.67	352	*e*Pn	Pn	18 20 58.3	-0.4
IVA				*e*Sn	Sn	18 22 19.7	-5.0
NKY	Niksic	7.75	347	*e*Pn	Pn	18 20 58.5	-1.2
NKY				*e*Sn	Sn	18 22 20.3	-6.2
BRY	Bratogost	7.92	345	*e*Pn	Pn	18 21 00.9	-1.1
BRY				*e*Sn	Sn	18 22 23.9	-6.8
STON	Ston	8.10	341	*e*Pn	Pn	18 21 02.4	-2.1
STON				Sn	Sn	18 22 26.1	-9.0
UPM	Unac-Piva	8.14	348	*e*Pn	Pn	18 21 04.5	-0.6
UPM				*e*Sn	Sn	18 22 30.1	-6.1
PLE	Pljevlja	8.19	350	*e*Pn	Pn	18 21 05.5	-0.2
PLE				*e*Sn	Sn	18 22 31.2	-6.1
HBRG	Burj al 'Arab	8.56	121	⇑*e*P	Pn	18 21 06.7	-4.2
KEST	Kesra	9.76	276	Pn	Pn	18 21 28.8	+1.4
	0.1nm,0.3s,baz=274,slow=19,SNR=3.0						
KEST				Sn	Sn	18 23 12.2	-3.8
	0.1nm,0.3s,baz=204,slow=20,SNR=3.7						
HFRF	Mahat Farafira	10.07	142	P	Pn	18 21 29.6	-2.0
GZR	Gura Zlata	10.18	6	⇓*i* P	Pn	18 21 34.2	+1.2
NVLJ	Novalja	10.52	334	Sn	Sn	18 23 27.9	-6.5
MLR	Muntele Rosu	10.81	18	Pn	Pn	18 21 45.0	+3.3
	baz=188,slow=15						
MLR	Muntele Rosu	10.81	18	⇓*i* P	Pn	18 21 48.7	+7.1
AMAG	Maghara	11.01	111	P	Pn	18 21 39.8

CDF	**Champ du Feu**	**16.75**	**326**	*e*P		**Pn**	**18 22 55.9**	**-5.4**
	comp=Z,47nm,1.3s							
HAU	**Haudompre**	**16.90**	**323**	*e*P		**Pn**	**18 22 57.8**	**-5.4**
	comp=Z,20nm,1.0s							
HAU	**Haudompre**	**16.90**	**323**	*e*P		**Pn**	**18 22 57.8**	**-5.4**
	comp=Z,10.0nm,1.0s							
HAU	**Haudompre**	**16.90**	**323**	*e*P		**Pn**	**18 22 57.8**	**-5.4**
HAU					pmax	pmax		
	comp=Z,10.0nm,1.0s							
CLL	**Collm**	**17.12**	**342**	*i* P		**Pn**	**18 23 08.4**	**+2.5**
CLL					pmax	pmax		
	comp=Z,36nm,2.1s							
CLL	**Collm**	**17.12**	**342**	*i* P		**Pn**	**18 23 08.4**	**+2.5**
	comp=Z,36nm,2.1s							
CLL				*i* pP		pP	18 23 11.6	-3.0
SSF	**Saint Saulge**	**17.80**	**317**	*e*P		**Pn**	**18 23 07.7**	**-6.6**
	comp=Z,22nm,1.3s							
ETSF	**Etsaut**	**18.57**	**301**	*e*P		**Pn**	**18 23 18.6**	**-5.3**
	comp=Z,26nm,1.0s							
KIV	**Kislovodsk**	**18.58**	**56**	*e*P		**Pn**	**18 23 23.2**	**-0.8**
KIV					pmax	pmax		
	comp=Z,8.0nm,1.2s							
KIV	**Kislovodsk**	**18.58**	**56**	*e*P		**Pn**	**18 23 23.2**	**-0.8**
	comp=Z,8.0nm,1.2s							
ZEI	**Tsey**	**19.06**	**60**	*e*P		**Pn**	**18 23 28.9**	**-0.8**
SJPF	**Ste Jean**	**19.10**	**301**	*e*P		**Pn**	**18 23 24.7**	**-5.6**
	comp=Z,79nm,1.0s							
ESDC	**Sonseca Array**	**20.51**	**290**	P		**P**	**18 23 45.7**	**+1.1**
	comp=Z,7.2nm,0.8s,baz=88,slow=11,SNR=16							
LDF	**La Druitiere**	**20.68**	**317**	*e*P		**P**	**18 23 46.7**	**+0.2**
	comp=Z,8.6nm,0.6s							
LDF	**La Druitiere**	**20.68**	**317**	*e*P		**P**	**18 23 46.7**	**+0.2**
LDF					pmax	pmax		
	comp=Z,4.0nm,0.6s							
LDF	**La Druitiere**	**20.68**	**317**	*e*P		**P**	**18 23 46.7**	**+0.2**
	comp=Z,4.3nm,0.6s							
FLN	**La Foliniere**	**20.97**	**317**	*e*P		**P**	**18 23 52.2**	**+2.6**
	comp=Z,26nm,0.9s							
FLN	**La Foliniere**	**20.97**	**317**	*e*P		**P**	**18 23 52.2**	**+2.6**
FLN					pmax	pmax		
	comp=Z,13nm,0.9s							
FLN	**La Foliniere**	**20.97**	**317**	*e*P		**P**	**18 23 52.2**	**+2.6**
	comp=Z,13nm,0.9s							
GRR	**Gorron**	**20.99**	**315**	*e*P		**P**	**18 23 51.6**	**+1.8**
	comp=Z,14nm,0.7s							
GRR	**Gorron**	**20.99**	**315**	*e*P		**P**	**18 23 51.6**	**+1.8**
GRR					pmax	pmax		
	comp=Z,7.0nm,0.6s							
GRR	**Gorron**	**20.99**	**315**	*e*P		**P**	**18 23 51.6**	**+1.8**
	comp=Z,7.2nm,0.6s							
VRHR	**Novokhopersk**	**21.57**	**37**	*e*P		**P**	**18 23 55.5**	**-0.5**
VRHR					pmax	pmax		
	comp=Z,10.0nm,0.3s,mb4.7							
VRHR					pmax	pmax		
	comp=N,20nm,0.5s							
VRHR					pmax	pmax		
	comp=E,40nm,0.8s							
VRHR	**Novokhopersk**	**21.57**	**37**	*e*P		**P**	**18 23 55.5**	**-0.5**
	comp=E,20nm,0.5s,mb4.8							
MDT	**Midelt**	**21.60**	**271**	P		**P**	**18 23 57.7**	**+1.2**
	comp=E,2.5nm,0.9s,mb3.6,baz=100,slow=14,SNR=2.6							
OBN	**Obninsk**	**22.48**	**23**	⇓*i*P		**P**	**18 24 04.0**	**-1.7**
OBN				*e*			18 24 19.8	
OBN					pmax	pmax		
	comp=Z,32nm,1.7s,mb4.5							
OBN	**Obninsk**	**22.48**	**23**	*i* P		**P**	**18 24 04.0**	**-1.7**
	comp=Z,32nm,1.7s,mb4.5							
MIB	**Mutribah**	**22.59**	**97**	*e*P		**P**	**18 24 06.2**	**-0.9**
MIB					AMb	AMB	18 24 11.7	
	comp=Z,20nm,0.7s,mb4.7							
MIB	**Mutribah**	**22.59**	**97**	*e*P		**P**	**18 24 06.2**	**-0.8**
	comp=Z,20nm,0.7s,mb4.7							
NAY	**Al-Naaiem**	**22.71**	**98**	*e*P		**P**	**18 24 07.6**	**-0.8**
NAY					AMb	AMB	18 24 11.4	
	comp=Z,10.0nm,0.5s,mb4.5							
NAY	**Al-Naaiem**	**22.71**	**98**	*e*P		**P**	**18 24 07.6**	**-0.8**
	comp=Z,10.0nm,0.5s,mb4.5							
UMR	**Umm Al-Rimmam**	**22.98**	**97**	*e*P		**P**	**18 24 10.1**	**-1.2**
UMR					AMb	AMB	18 24 14.1	
	comp=Z,13nm,0.6s,mb4.6							
UMR	**Umm Al-Rimmam**	**22.98**	**97**	*e*P		**P**	**18 24 10.1**	**-1.1**
	comp=Z,13nm,0.6s,mb4.6							
RDF	**Al-Radifah**	**23.08**	**99**	*e*P		**P**	**18 24 10.8**	**-1.5**
MOS	**Moscow**	**23.34**	**24**	*e*P		**P**	**18 24 13.6**	**-1.2**
MOS				*e*S		**S**	**18 28 20.4**	**-5.0**
MOS					pmax	pmax		
	comp=Z,29nm,1.0s,mb4.7							
MOS	**Moscow**	**23.34**	**24**	*e*P		**P**	**18 24 13.6**	**-1.2**
	comp=Z,29nm,1.0s,mb4.7							
MOS				*e*S		**S**	**18 28 20.4**	**-5.0**
VSU	**Vasula**	**23.49**	**7**	*e*P		**P**	**18 24 13.5**	**-2.7**
HFS	**Hagfors**	**25.37**	**351**	P		**P**	**18 24 32.7**	**-0.7**
	comp=Z,3.8nm,0.8s,mb4.0,baz=164,slow=12,SNR=7.8							
EKA	**Eskdalemuir Ar**	**26.20**	**328**	P		**P**	**18 24 41.5**	**+0.6**
	comp=Z,4.8nm,0.8s,mb4.1,baz=130,slow=9.2,SNR=10							
FINES	**FINESS Array B**	**26.38**	**5**	*i* P		**P**	**18 24 42.0**	**-0.4**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**26.38**	**5**	P		**P**	**18 24 42.0**	**-0.4**
	comp=Z,1.5nm,0.8s,mb3.6,baz=152,slow=8.6,SNR=5.6							
FINES	**FINESS Array B**	**26.38**	**5**	*i* P		**P**	**18 24 42.0**	**-0.4**
	comp=Z,2.0nm,0.8s,mb3.7							
NB2	**NORSAR Subarra**	**26.59**	**349**	P		**P**	**18 24 45.6**	**+1.2**
	comp=Z,1.6nm,0.7s,mb3.7,baz=158,slow=9.3							
NOA	**NORSAR Array B**	**26.59**	**349**	P		**P**	**18 24 44.0**	**-0.4**
	comp=Z,1.7nm,0.8s,mb3.6,baz=158,slow=9.3,SNR=7.7							
KAF	**Kangasniemi**	**27.06**	**5**	*e*p		**P**	**18 24 48.5**	**0.0**
	comp=Z,2.2nm,0.4s,mb4.0							
KAF	**Kangasniemi**	**27.06**	**5**	*e*P		**P**	**18 24 48.5**	**0.0**
KAF					pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0							
TORD	**Torodi Ar. Bea**	**28.26**	**224**	P		**P**	**18 25 00.2**	**+0.5**
	comp=Z,1.1nm,0.8s,mb3.5,baz=32,slow=8.6,SNR=5.6							
JOF	**Joensuu**	**28.38**	**10**	*e*p		**P**	**18 24 51.1**	**-9.2**
PRGR	**Permogore**	**30.56**	**23**	*e*P		**P**	**18 25 17.6**	**-2.1**
PRGR				*e*S		**S**	**18 30 08.2**	**-11**
PRGR					pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6							
ARCES	**ARCESS Array B**	**34.41**	**3**	P		**P**	**18 25 52.4**	**-0.8**
ARCES	**ARCESS Array B**	**34.41**	**3**	P		**P**	**18 25 52.4**	**-0.8**
	comp=Z,2.4nm,0.8s,mb4.2,baz=185,slow=8.5,SNR=8.7							
KMBO	**Kilima Mbogo**	**39.15**	**154**	LR		LR	18 45 20.6	
	comp=Z,979nm,19.9s,baz=278,slow=40							
KURK	**Kurchatov**	**43.57**	**51**	*e*P		**P**	**18 27 09.4**	**-0.7**
NVS	**Novosibirsk**	**46.25**	**45**	*i* P		**P**	**18 27 31.7**	**+0.3**
NVS					pmax	pmax		
	comp=Z,20nm,1.6s,mb4.8							
NVS					pmax	pmax		
	comp=N,5.0nm,1.3s							
NVS					pmax	pmax		
	comp=E,9.0nm,1.6s							
NVS	**Novosibirsk**	**46.25**	**45**	*i* P		**P**	**18 27 31.7**	**+0.3**
	comp=E,5.0nm,1.3s,mb4.3							
MKAR	**Makanchi Array**	**46.35**	**56**	*i* P		**P**	**18 27 32.2**	**-0.1**
MKAR					pmax	pmax		
	comp=Z,3.0nm,0.5s							
MKAR	**Makanchi Array**	**46.35**	**56**	P		**P**	**18 27 32.2**	**-0.1**
	comp=Z,2.8nm,0.5s,mb4.4,baz=276,slow=7.1,SNR=30							
ZALV	**Zalesovo Beam**	**47.21**	**46**	P		**P**	**18 27 37.8**	**-1.1**
	comp=Z,4.7nm,0.4s,mb4.8,baz=272,slow=9.0,SNR=29							
LSZ	**Lusaka**	**50.68**	**171**	P		**P**	**18 28 06.7**	**+0.8**
LSZ					pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1							
LSZ	**Lusaka**	**50.68**	**171**	P		**P**	**18 28 06.7**	**+0.8**
	comp=Z,0.7nm,0.4s,mb3.9,baz=49,slow=11,SNR=2.9							
KOLN	**Koldanda**	**52.88**	**80**	*e*P		**P**	**18 28 22.8**	**+0.4**
	comp=Z,9.7nm,0.7s,mb4.8							
GKN	**Gorkha**	**53.62**	**79**	*e*P		**P**	**18 28 27.9**	**+0.1**
	comp=Z,26nm,0.6s,mb5.4							
KKN	**Kakani**	**54.22**	**79**	*e*P		**P**	**18 28 32.6**	**+0.4**
	comp=Z,13nm,0.5s,mb5.1							
JIRN	**Jiri**	**55.01**	**79**	*e*P		**P**	**18 28 38.8**	**+0.9**
	comp=Z,9.0nm,0.5s,mb5.1							
TAPN	**Taplejung**	**56.36**	**78**	*e*P		**P**	**18 28 48.3**	**+0.7**
	comp=Z,6.8nm,0.6s,mb4.8							
GTA	**Gaotai**	**60.68**	**61**	*e*P		**P**	**18 29 18.5**	**+0.9**
GTA					AMB	AMB		
	comp=Z,7.0nm,1.0s,mb4.8							
SCHQ	**Schefferville**	**61.04**	**319**	P		**P**	**18 29 20.4**	**+0.7**
	comp=Z,6.3nm,1.1s,mb4.7,baz=63,slow=18,SNR=3.8							
SONM	**Songino Array**	**61.84**	**50**	P		**P**	**18 29 25.4**	**+0.1**
SONM					pmax	pmax		
	comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**61.84**	**50**	P		**P**	**18 29 25.4**	**+0.1**
	comp=Z,2.1nm,0.8s,mb4.3,baz=279,slow=7.8,SNR=20							
TIXI	**Tiksi**	**62.16**	**20**	⇑*e*P		**P**	**18 29 27.1**	**0.0**
TIXI					pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0							
TIXI	**Tiksi**	**62.16**	**20**	*e*P		**P**	**18 29 27.1**	**0.0**
	comp=Z,1.0nm,0.8s,mb4.0							
ULN	**Ulaanbaatar**	**62.24**	**49**	*e*P		**P**	**18 29 27.9**	**0.0**
BOD	**Bodaibo**	**62.30**	**37**	⇓*i*P		**P**	**18 29 27.2**	**-0.9**
BOD					pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.5							
BOD	**Bodaibo**	**62.30**	**37**	*i* P		**P**	**18 29 27.2**	**-0.9**
	comp=Z,4.0nm,1.0s,mb4.5							
YKA	**Yellowknife Ar**	**76.34**	**341**	*i* P		**P**	**18 30 56.0**	**+1.1**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
YKA	**Yellowknife Ar**	**76.34**	**341**	P		**P**	**18 30 56.0**	**+1.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=36,slow=5.3,SNR=11							
ULM	**Lac du Bonnet**	**78.42**	**324**	P		**P**	**18 31 07.2**	**+0.4**
	comp=Z,1.8nm,0.9s,mb4.0,baz=87,slow=3.8,SNR=4.5							
PDAR	**Pinedale Array**	**90.31**	**326**	P		**P**	**18 32 08.2**	**+1.0**
	comp=Z,0.5nm,0.8s,mb3.9,baz=60,slow=3.9,SNR=4.5							
WRA	**Warramunga Arr**	**119.75**	**94**	PKP		PKPdf	18 37 56.6	-0.1
	comp=Z,0.4nm,0.9s,baz=313,slow=1.7,SNR=4.6							
ASAR	**Alice Springs**	**121.18**	**98**	PKIKP		PKPdf	18 37 59.1	-0.2
ASAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
ASAR	**Alice Springs**	**121.18**	**98**	PKP		PKPdf	18 37 59.1	-0.2
	comp=Z,0.6nm,0.6s,baz=297,slow=1.4,SNR=12							

ISCJB ***29*** *18:22:44.3±1.1,3155S±002×72.11W±004,h10km±7km, mb4.5/12,Error ellipse: s-maj=6.3km s-min=3.8km az=177.5*
GUC ***29*** *18:22:46.7±0.9,3160S×7201W,h18km±4km,ML4.8*
NEIC ***29*** *18:22:46.7±2.1,3156S×7200W,h18km±12km,mb4.8/2, ML4.8(GUC),Error ellipse: s-maj=11.4km s-min=4.1km az=94.0*
IDC ***29*** *18:22:48.9±5.2,3161S×7199W,h33km±37km,mb4.4/10, mb1 4.4/14,mb1mx4.3/18,mbtmp4.4/14,ML4.4/4,MS3.0/1, Ms1 3.0/1,ms1mx2.6/29,Error ellipse: s-maj=27.3km s-min=18.8km az=69.0*

ISC 29 18:22:44.7±1.0,3156S±002×7205W±005,h2km±5km,n71, σ0∂77/71,mb4.6/11,12C-8D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.57**	**124**	⇓*i*P		Px		18 22 39.8	
CHNG				*i* S		Sx		18 22 46.7	
CMCH	**Combarbala**	**0.98**	**67**	⇑*i*P		**Pg**		**18 23 03.4**	**-0.1**
CMCH				*i* S		**Sg**		**18 23 17.1**	**+1.0**
CMCH	**Combarbala**	**0.98**	**67**	⇑*i*P		**Pg**		**18 23 03.4**	**-0.1**
CMCH				*i* S		**Sg**		**18 23 17.1**	**+1.0**
CMCH					AML	AML		18 23 21.7	
	comp=N,99μm,0.6s								
PACH	**Papudo**	**1.10**	**152**	⇓*i*P		**Pg**		**18 23 05.6**	**-0.2**
PTCH	**Petorca**	**1.18**	**127**	⇑*i*P		**Pg**		**18 23 06.4**	**-1.0**
PTCH				*i* S		**Sg**		**18 23 21.1**	**-1.6**
PTCH	**Petorca**	**1.18**	**127**	⇑*i*P		**Pg**		**18 23 06.4**	**-1.0**
PTCH				*i* S		**Sg**		**18 23 21.1**	**-1.6**
PTCH					AML	AML		18 23 24.1	
	comp=N,23μm,0.9s								
OVCH	**Ovalle**	**1.20**	**38**	⇓*i*P		**Pg**		**18 23 07.8**	**+0.1**
OVCH				*i* S		**Sg**		**18 23 24.0**	**+0.7**
IHA	**Instituto Hidr**	**1.50**	**167**	⇑*i*P		**Pn**		**18 23 11.6**	**-1.1**
ROCH	**El Roble**	**1.66**	**148**	⇓*i*P		**Pn**		**18 23 14.6**	**-0.2**
JACH	**Jahuel**	**1.66**	**132**	*e*P		**Pn**		**18 23 14.5**	**-0.5**
TLL	**Tololo Astrono**	**1.75**	**38**	⇑*i*P		**Pn**		**18 23 16.7**	**+0.5**
TLL				S		**Sg**		**18 23 41.1**	**0.0**
TLL	**Tololo Astrono**	**1.75**	**38**	⇑*i*P		**Pn**		**18 23 16.7**	**+0.5**
TLL				*i* S		**Sg**		**18 23 41.1**	**0.0**
TLL					AML	AML		18 23 47.1	
	comp=E,21μm,0.5s								
LSCH	**La Serena**	**1.79**	**23**	*i* P		**Pn**		**18 23 16.9**	**+0.2**
LSCH				*i* S		**Sn**		**18 23 40.5**	**+0.6**
LCCH	**Las Cruces**	**1.95**	**168**	⇓*i*P		**Pn**		**18 23 18.4**	**-0.4**
PEL	**Peldehue**	**1.95**	**144**	⇓*i*P		**Pn**		**18 23 19.0**	**0.0**
PEL				*i* S		**Sn**		**18 23 43.8**	**-0.2**
PEL					AML	AML		18 23 48.3	
	comp=N,15μm,0.5s								
SAN	**Santiago**	**2.22**	**149**	*e*P		**Pn**		**18 23 23.4**	**+0.9**
SAN				*i* S		**Sn**		**18 23 51.0**	**+0.4**
SAN	**Santiago**	**2.22**	**149**	*e*P		**Pn**		**18 23 23.4**	**+0.9**
SAN				*i* S		**Sn**		**18 23 51.0**	**+0.4**
SAN					AML	AML		18 24 00.1	
	comp=N,7μm,0.6s								
CLCH	**Cerro Calan**	**2.23**	**145**	⇑*i*P		**Pn**		**18 23 23.5**	**+0.8**
CLCH				*i* S		**Sn**		**18 23 51.5**	**+0.6**
CLCH	**Cerro Calan**	**2.23**	**145**	⇑*i*P		**Pn**		**18 23 23.5**	**+0.8**
CLCH				*i* S		**Sn**		**18 23 51.5**	**+0.6**
CLCH					AML	AML		18 23 55.1	
	comp=E,21μm,0.6s								
TACH	**Talagante**	**2.29**	**156**	⇓*i*P		**Pn**		**18 23 23.9**	**+0.4**
FCH	**Farellones**	**2.30**	**140**	⇑*i*P		**Pn**		**18 23 24.0**	**+0.3**
FCH				*i* S		**Sn**		**18 23 53.4**	**+0.8**
FCH					AML	AML		18 23 58.6	
	comp=N,4μm,0.8s								
ANTU	**Antumapu**	**2.33**	**150**	*i* P		**Pn**		**18 23 24.9**	**+0.8**
ANTU				*e*S		**Sn**		**18 23 53.8**	**+0.4**
ANTU	**Antumapu**	**2.33**	**150**	*i* P		**Pn**		**18 23 24.9**	**+0.8**
ANTU				*e*S		**Sn**		**18 23 53.8**	**+0.4**
ANTU					AML	AML		18 24 00.5	
	comp=N,5μm,0.5s								
CHCH	**Chadas Angostu**	**2.64**	**154**	⇓*i*P		**Pn**		**18 23 28.8**	**+0.4**
LMEL	**Las Melosas**	**2.76**	**146**	⇑*i*P		**Pn**		**18 23 30.6**	**+0.6**
LMEL				*i* S		**Sn**		**18 24 04.2**	**+0.3**
LMEL	**Las Melosas**	**2.76**	**146**	⇑*i*P		**Pn**		**18 23 30.6**	**+0.6**
LMEL				*i* S		**Sn**		**18 24 04.2**	**+0.3**
LMEL					AML	AML		18 24 18.7	
	comp=N,3μm,0.8s								
CACH	**El Canelo**	**2.82**	**155**	*e*P		**Pn**		**18 23 32.0**	**+1.1**
CICH	**Cipreses**	**3.07**	**154**	*e*P		**Pn**		**18 23 35.1**	**+0.8**
SFDO	**San Fernando**	**3.17**	**164**	*e*P		**Pn**		**18 23 35.9**	**+0.3**
CFAA	**Coronel Fontan**	**3.25**	**92**	Pn		**Pn**		**18 23 38.3**	**+1.5**
	comp=N,15nm,0.3s,baz=265,slow=11,SNR=91								
CFAA					Sn		**Sb**	**18 24 21.4**	**-1.9**
	comp=N,42nm,0.3s,baz=204,slow=23,SNR=10								
CFAA					LR	LR		18 25 06.7	
	comp=N,223nm,19.6s,baz=164,slow=43								
NICH	**Los Niches**	**3.50**	**169**	*e*P		**Pn**		**18 23 40.4**	**+0.2**
PLCA	**Paso Flores**	**9.23**	**173**	Pn		**Pn**		**18 24 58.9**	**+0.1**
PLCA	**Paso Flores**	**9.23**	**173**	Pn		**Pn**		**18 24 58.9**	**+0.1**
	comp=N,1.3nm,0.3s,baz=338,slow=12,SNR=20								
TRQA	**Tornquist**	**10.51**	**131**	*e*Pn		**Pn**		**18 25 16.1**	**-0.3**
	comp=N,43nm,0.6s								
LPAZ	**La Paz**	**15.62**	**14**	Pn		**Pn**		**18 26 27.6**	**+1.5**
	comp=N,0.5nm,0.3s,baz=186,slow=6.7,SNR=42								
SIV	**San Ignacio**	**18.45**	**35**	P		**Pn**		**18 27 00.0**	**-1.7**
	comp=N,0.7nm,0.3s,baz=228,slow=12,SNR=17								
VNA3	**Neumayer Olymp**	**51.62**	**159**	*e*Pdiff		**P**		**18 31 52.2**	**0.0**
VNA3				*e*				18 31 54.9	
VNA3				*e*				18 31 57.6	
VNA3				*e*				18 32 00.0	
VNA3				*e*				18 32 02.4	
VNA3				*e*				18 32 06.4	
VNA3				*e*				18 32 09.9	
VNA3				*e*				18 32 14.9	
VNA3				*e*				18 32 19.6	
VNA1	**Neumayer--Stat**	**51.92**	**158**	*e*Pdiff		**P**		**18 31 54.8**	**+0.3**
VNA1				*e*				18 31 56.9	
VNA1				*e*				18 32 00.1	
VNA1				*e*				18 32 02.0	
VNA1				*e*				18 32 06.0	
VNA1				*e*				18 32 09.8	
VNA1				*e*				18 32 12.4	
VNA1				*e*				18 32 17.1	
VNA1				*e*				18 32 21.2	
VNA2	**Neumayer--Watz**	**52.26**	**158**	*e*Pdiff		**P**		**18 31 57.0**	**0.0**
	baz=288,slow=8.5								
VNA2				*e*				18 31 59.4	
VNA2				*e*				18 32 01.7	
VNA2				*e*				18 32 04.0	
VNA2				*e*				18 32 07.7	
VNA2				*e*				18 32 11.8	
VNA2				*e*				18 32 15.2	
VNA2				*e*				18 32 20.1	
VNA2				*e*				18 32 24.2	
SNAA	**Sanae**	**53.84**	**159**	*e*Pdiff		**P**		**18 32 08.4**	**-0.3**
SNAA				*e*				18 32 10.4	
SNAA				*e*				18 32 13.1	
SNAA				*e*				18 32 14.6	
SNAA				*e*				18 32 17.7	
SNAA				*e*				18 32 20.7	
SNAA				*e*				18 32 23.7	
SNAA				*e*				18 32 27.7	
SNAA				*e*				18 32 31.7	

QSPA	**South Pole Qui**	**58.67**	**180**	*e*P			**P**	**18 32 43.2**	**+0.1**
	comp=N,9.6nm,0.9s,mb4.8								
WVT	**Waverly**	**68.94**	**346**	*e*P			**P**	**18 33 50.8**	**-0.4**
	comp=N,5.7nm,0.8s,mb4.5								
DBIC	**Dimbokro**	**74.42**	**72**	P			**P**	**18 34 23.8**	**-1.0**
	comp=N,16nm,0.6s,mb5.1,baz=214,slow=6.8,SNR=38								
MAW	**Mawson**	**75.52**	**164**	P			**P**	**18 34 29.2**	**-1.0**
	comp=N,1.3nm,0.5s,mb4.2,baz=215,slow=7.5,SNR=6.7								
BOSA	**Boshof**	**81.22**	**118**	P			**P**	**18 35 01.2**	**-1.3**
	comp=N,6.0nm,0.6s,mb4.7,baz=238,slow=4.1,SNR=18								
PDAR	**Pinedale Array**	**81.59**	**333**	P			**P**	**18 35 04.4**	**+0.5**
	comp=N,0.2nm,0.6s,baz=141,slow=5.8,SNR=3.3								
NVAR	**Mina Array Bea**	**81.88**	**325**	P			**P**	**18 35 06.4**	**+0.9**
	comp=N,0.5nm,0.6s,mb3.6,baz=115,slow=10,SNR=3.7								
TORD	**Torodi Ar. Bea**	**83.39**	**70**	P			**P**	**18 35 12.8**	**-1.1**
	comp=N,15nm,0.7s,mb5.2,baz=261,slow=4.5,SNR=73								
ULM	**Lac du Bonnet**	**84.15**	**345**	P			**P**	**18 35 15.8**	**-1.2**
	comp=N,0.7nm,0.4s,mb4.2,baz=135,slow=1.4,SNR=2.9								
SCHQ	**Schefferville**	**86.16**	**3**	P			**P**	**18 35 25.9**	**-1.0**
SCHQ	**Schefferville**	**86.16**	**3**	P			**P**	**18 35 25.9**	**-1.0**
	comp=N,2.9nm,0.7s,mb4.6,baz=109,slow=14,SNR=3.7								
MATP	**Matopo**	**88.04**	**113**	P			**P**	**18 35 36.6**	**-0.5**
	comp=N,3.3nm,0.6s,mb4.7,baz=245,slow=4.3,SNR=12								
LSZ	**Lusaka**	**90.58**	**108**	P			**P**	**18 35 48.5**	**-0.6**
	comp=N,2.7nm,0.6s,mb4.7,baz=124,slow=1.9,SNR=8.8								
YKA	**Yellowknife Ar**	**99.75**	**341**	P		Pdif		18 36 28.0	-2.4
	comp=N,0.2nm,0.5s,baz=145,slow=4.6,SNR=5.7								
ASAR	**Alice Springs**	**119.73**	**208**	PKP		PKPdf		18 41 35.0	-2.0
ASAR	**Alice Springs**	**119.73**	**208**	PKP		PKPdf		18 41 35.0	-2.0
	comp=N,0.3nm,0.7s,baz=139,slow=1.0,SNR=4.8								
AKASG	**Malin Array Be**	**120.54**	**46**	PKP		PKPdf		18 41 35.8	-1.7
	comp=N,0.2nm,0.2s,baz=252,slow=2.9,SNR=4.5								
ARCES	**ARCESS Array B**	**121.81**	**24**	PKP		PKPdf		18 41 36.9	-2.5
ARCES	**ARCESS Array B**	**121.81**	**24**	PKP		PKPdf		18 41 36.9	-2.5
	comp=N,4.1nm,0.8s,baz=28,slow=8.2,SNR=3.6								
WRA	**Warramunga Arr**	**122.88**	**210**	PKP		PKPdf		18 41 41.2	-1.9
	comp=N,0.5nm,0.6s,baz=157,slow=1.8,SNR=6.3								
BRVK	**Borovoye**	**145.40**	**41**	*e*PKPdf		PKPdf		18 42 23.6	-0.2
YAK	**Yakutsk**	**146.43**	**342**	*e*PKPdf		PKPdf		18 42 25.1	-0.1
HYB	**Hyderabad**	**149.88**	**111**	*e*P		PKPbc		18 42 36.5	-0.6
HYB	**Hyderabad**	**149.88**	**111**	*i* PKP		PKPbc		18 42 36.5	-0.6
EKS2	**Erkin-Say**	**150.77**	**58**	*e*PKPbc		PKPbc		18 42 38.3	-0.2
KURK	**Kurchatov**	**151.07**	**40**	*e*PKPbc		PKPbc		18 42 38.4	-0.6
UCH	**Uchtor**	**151.38**	**59**	*e*PKPbc		PKPbc		18 42 40.3	+0.3
ZAA0	**Zalesovo Array**	**152.15**	**30**	*e*PKPbc		PKPbc		18 42 40.7	-0.7
ZALV	**Zalesovo Beam**	**152.15**	**30**	PKP		PKPdf		18 42 34.2	-0.5
	comp=N,36nm,0.5s,baz=299,slow=2.8,SNR=3.9								
ZALV						PKPbc	PKPbc	18 42 40.9	-0.5
	comp=N,36nm,0.5s,baz=326,slow=2.7,SNR=175								
MKAR	**Makanchi Array**	**155.11**	**45**	PKP		PKPdf		18 42 38.0	-1.1
	comp=N,0.6nm,0.7s,baz=17,slow=0.9,SNR=4.5								
MKAR						PKPbc	PKPdf	18 42 47.4	+8.2
	comp=N,1.7nm,0.6s,baz=294,slow=1.5,SNR=13								
MKAR						PKPab	PKPab	18 43 03.3	-0.5
	comp=N,1.8nm,0.6s,baz=285,slow=3.8,SNR=9.3								
SONM	**Songino Array**	**163.71**	**4**	PKP		PKPdf		18 42 48.4	-0.6

PLCA	**Paso Flores**	**9.21**	**173**	P	**Pn**	**18 34 10.0**	**+0.2**
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PLCA				MLR	MLR		
	comp=Z,2µm,18.8s						
PLCA	**Paso Flores**	**9.21**	**173**	P	**Pn**	**18 34 09.9**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=339,slow=14,SNR=15						
PLCA				LR	LR	18 37 50.4	
	comp=Z,2µm,18.8s,baz=343,slow=38						
TRQA	**Tornquist**	**10.43**	**131**	*e*Pn	**Pn**	**18 34 26.1**	**-0.5**
ARE	**Arequipa**	**15.05**	**2**	*e*P	**Pn**	**18 35 38.0**	**+8.1**
LPAZ	**La Paz**	**15.62**	**14**	P	**Pn**	**18 35 38.0**	**+0.7**
LPAZ	**La Paz**	**15.62**	**14**	P	**Pn**	**18 35 38.0**	**+0.8**
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LPAZ	**La Paz**	**15.62**	**14**	P	**Pn**	**18 35 38.0**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=191,slow=8.0,SNR=92						
SIV	**San Ignacio**	**18.41**	**35**	P	**Pn**	**18 36 10.7**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=220,slow=12,SNR=22						
NNA	**Nana**	**20.01**	**346**	LR	LR	18 42 17.6	
	comp=Z,648nm,19.9s,MS4.0,baz=155,slow=31						
EFI	**East Falkland**	**22.53**	**157**	*e*P	**P**	**18 36 56.6**	**-0.3**
	comp=Z,34nm,0.7s,mb4.9						
EFI	**East Falkland**	**22.53**	**157**	*e*P	**P**	**18 36 56.6**	**-0.3**
EFI				pmax	pmax		
	comp=Z,34nm,0.7s,mb4.9						
USHA	**Ushuaia**	**23.38**	**175**	P	**P**	**18 37 05.8**	**0.0**
	comp=Z,16nm,0.8s,mb4.5,baz=322,slow=6.4,SNR=9.5						
USHA				LR	LR	18 47 48.6	
	comp=Z,2µm,18.3s,MS4.6,baz=343,slow=40						
ATAH	**Atahualpa**	**25.18**	**345**	LR	LR	18 45 52.5	
	comp=Z,500nm,18.6s,MS4.1,baz=356,slow=33						
PMSA	**Palmer Station**	**33.58**	**174**	LR	LR	18 52 00.3	
	comp=Z,1µm,19.8s,MS4.6,baz=132,slow=36						
ROSC	**El Rosal**	**36.30**	**356**	P	**P**	**18 39 00.3**	**-0.7**
	comp=Z,7.7nm,0.3s,mb5.1,baz=90,slow=20,SNR=2.9						
SDV	**Santo Domingo**	**40.25**	**2**	*e*P	**P**	**18 39 32.0**	**-2.3**
	comp=Z,9.8nm,0.8s,mb4.6						
TGUH	**Tegucigalpa,Un**	**47.70**	**340**	*e*P	**P**	**18 40 34.3**	**+0.2**
	comp=Z,13nm,0.4s,mb5.3						
CPD	**Cerro la Pandu**	**49.67**	**8**	*e*P	**P**	**18 40 47.8**	**-1.4**
	comp=Z,23nm,1.2s,mb5.1						
CPD	**Cerro la Pandu**	**49.67**	**8**	*e*P	**P**	**18 40 47.8**	**-1.4**
CPD				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.1						
VNA3	**Neumayer Olymp**	**51.57**	**159**	*e*P	**P**	**18 41 03.3**	**+0.3**
VNA3				*e*	pP	18 41 06.1	+1.3
VNA3				*e*		18 41 07.9	
VNA3				*e*		18 41 11.8	
VNA3				*e*		18 41 13.4	
VNA3				*e*		18 41 16.2	
VNA3				*e*		18 41 18.3	
VNA3				*e*		18 41 22.0	
VNA3				*e*		18 41 26.2	
VNA3				*e*		18 41 33.8	
VNA3				*e*		18 42 16.2	
VNA1	**Neumayer--Stat**	**51.87**	**158**	*e*P	**P**	**18 41 05.7**	**+0.4**
VNA1				*e*	pP	18 41 08.0	+1.0
VNA1				*e*		18 41 09.8	
VNA1				*e*		18 41 14.6	
VNA1				*e*		18 41 16.6	
VNA1				*e*		18 41 18.9	
VNA1				*e*		18 41 20.9	
VNA1				*e*		18 41 23.8	
VNA1				*e*		18 41 27.3	
VNA1				*e*		18 41 34.9	
VNA1				*e*		18 42 18.2	
VNA2	**Neumayer--Watz**	**52.22**	**158**	*e*P	**P**	**18 41 07.8**	**0.0**
VNA2				*e*	pP	18 41 10.2	+0.6
VNA2				*e*		18 41 12.0	
VNA2				*e*		18 41 16.1	
VNA2				*e*		18 41 17.5	
VNA2				*e*		18 41 20.1	
VNA2				*e*		18 41 21.5	
VNA2				*e*		18 41 25.3	
VNA2				*e*		18 41 29.9	
VNA2				*e*		18 41 37.6	
VNA2				*e*		18 42 19.0	
SNAA	**Sanae**	**53.80**	**159**	*e*P	**P**	**18 41 19.3**	**-0.2**
SNAA				*e*	pP	18 41 21.7	+0.5
SNAA				*e*		18 41 23.4	
SNAA				*e*		18 41 25.5	
SNAA				*e*		18 41 27.2	
SNAA				*e*		18 41 29.4	
SNAA				*e*		18 41 31.8	
SNAA				*e*		18 41 34.3	
SNAA				*e*		18 41 37.6	
SNAA				*e*		18 41 50.1	
SNAA				*e*		18 42 24.7	
SNAA	**Sanae**	**53.80**	**159**	*e*P	**P**	**18 41 18.8**	**-0.7**
TEIG	**Tepich**	**53.84**	**341**	*e*P	**P**	**18 41 19.7**	**-0.6**
	comp=Z,45nm,0.7s,mb5.5						
RKT	**Rikitea**	**55.95**	**262**	*e*T		19 42 19.8	
	comp=Z,9.1nm,0.3s						
QSPA	**South Pole Qui**	**58.65**	**180**	*e*P	**P**	**18 41 54.4**	**+0.3**
	comp=Z,16nm,0.7s,mb5.2						
VNDA	**Vanda**	**66.49**	**191**	P	**P**	**18 42 46.4**	**0.0**
VNDA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VNDA	**Vanda**	**66.49**	**191**	P	**P**	**18 42 46.4**	**-0.1**
	comp=Z,1.4nm,1.0s,mb4.0,baz=13,slow=2.0,SNR=3.6						
JCT	**Junction City**	**67.14**	**334**	*e*P	**P**	**18 42 50.9**	**-0.2**
	comp=Z,8.1nm,0.6s,mb4.9						
JCT	**Junction City**	**67.14**	**334**	*e*P	**P**	**18 42 50.9**	**-0.2**
JCT				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
TBI	**Tubuai**	**67.97**	**255**	*e*LR	LR	19 03 37.4	
	comp=Z,301nm,27.2s						
TBI	**Tubuai**	**67.97**	**255**	*e*T		19 57 10.8	
	comp=Z,8.0nm,0.3s						
SYO	**Syowa Base**	**68.09**	**159**	⇑*e*P	**P**	**18 42 54.0**	**-2.7**
MIAR	**Mount Ida**	**68.85**	**341**	*e*P	**P**	**18 43 01.0**	**-0.8**
	comp=Z,3.9nm,0.6s,mb4.5						
MIAR	**Mount Ida**	**68.85**	**341**	*e*P	**P**	**18 43 01.0**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
WVT	**Waverly**	**68.98**	**346**	*e*P	**P**	**18 43 01.1**	**-1.4**
	comp=Z,23nm,0.8s,mb5.2						
WVT	**Waverly**	**68.98**	**346**	*e*P	**P**	**18 43 01.2**	**-1.3**
WVT				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
MEH	**Mehetia**	**69.27**	**261**	*e*T		19 58 56.5	
	comp=Z,40nm,0.3s						
MNTX	**Cornudas Mount**	**70.45**	**330**	*e*P	**P**	**18 43 10.8**	**-0.9**
	comp=Z,16nm,1.2s,mb4.8						
AMTX	**Amarillo**	**71.78**	**335**	*e*P	**P**	**18 43 17.6**	**-2.1**
	comp=Z,37nm,1.3s,mb5.2						
LPM	**Los Pinos Moun**	**73.23**	**331**	*e*P	**P**	**18 43 29.3**	**+0.9**
ANMO	**Albuquerque**	**73.70**	**331**	*e*P	**P**	**18 43 31.3**	**+0.2**
	comp=Z,13nm,1.3s,mb4.7						
ANMO	**Albuquerque**	**73.70**	**331**	*e*P	**P**	**18 43 31.3**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,13nm,1.3s						
ANMO	**Albuquerque**	**73.70**	**331**	LR	LR	19 11 39.8	
	comp=Z,315nm,19.2s,MS4.6,baz=209,slow=32						
DBIC	**Dimbokro**	**74.35**	**72**	*e*P	**P**	**18 43 34.1**	**-1.3**
	comp=Z,40nm,0.7s,mb5.5						
DBIC	**Dimbokro**	**74.35**	**72**	*e*P	**P**	**18 43 34.1**	**-1.3**
DBIC				pmax	pmax		
	comp=Z,40nm,0.7s						
DBIC	**Dimbokro**	**74.35**	**72**	P	**P**	**18 43 34.7**	**-0.7**
	comp=Z,38nm,0.7s,mb5.4,baz=215,slow=6.1,SNR=64						
MAW	**Mawson**	**75.48**	**164**	P	**P**	**18 43 41.0**	**-0.1**
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MAW				MLR	MLR		
	comp=Z,395nm,21.2s						
MAW	**Mawson**	**75.48**	**164**	P	**P**	**18 43 41.0**	**-0.1**
	comp=Z,8.3nm,0.9s,mb4.7,baz=238,slow=6.6,SNR=13						
MAW				LR	LR	19 15 12.6	
	comp=Z,395nm,21.2s,MS4.7,baz=245,slow=34						
SDCO	**Great Sand Dun**	**75.75**	**333**	*e*P	**P**	**18 43 43.9**	**+1.0**
	comp=Z,3.0nm,0.6s,mb4.4						
SUR	**Sutherland**	**75.94**	**119**	*e*P	**P**	**18 43 44.8**	**+0.4**
	comp=Z,26nm,0.7s,mb5.3						
RAR	**Rarotonga**	**77.42**	**253**	LR	LR	19 12 46.5	
	comp=Z,239nm,18.9s,MS4.5,baz=221,slow=32						
SMCO	**Snowmass**	**77.56**	**333**	*e*P	**P**	**18 43 54.7**	**+1.6**
	comp=Z,24nm,1.0s,mb5.1						
ECSD	**EROS,Sioux Fal**	**78.27**	**342**	*e*P	**P**	**18 43 56.0**	**-0.9**
	comp=Z,18nm,0.9s,mb5.0						
PHWY	**Pilot Hill**	**78.84**	**335**	*e*P	**P**	**18 44 00.8**	**+0.6**
CCUT	**Cedar City**	**78.90**	**328**	*e*P	**P**	**18 44 02.1**	**+1.5**
MSU	**Marysvale**	**79.16**	**329**	*e*P	**P**	**18 44 02.8**	**+0.8**
TMUT	**Trail Mountain**	**79.39**	**330**	*e*P	**P**	**18 44 04.1**	**+0.8**
TPNV	**Topopah Spring**	**79.78**	**325**	*e*P	**P**	**18 44 06.5**	**+1.1**
	comp=Z,14nm,1.1s,mb4.8						
TPNV	**Topopah Spring**	**79.78**	**325**	*e*P	**P**	**18 44 06.5**	**+1.1**
TPNV				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
TSUM	**Tsumeb**	**79.81**	**106**	*e*P	**P**	**18 44 04.6**	**-1.6**
	comp=Z,19nm,1.3s,mb4.9						
ISA	**Isabella**	**79.88**	**323**	*e*P	**P**	**18 44 07.1**	**+1.2**
	comp=Z,17nm,1.0s,mb4.9						
ISA	**Isabella**	**79.88**	**323**	*e*P	**P**	**18 44 07.1**	**+1.1**
ISA				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
DUG	**Dugway**	**80.83**	**329**	*e*P	**P**	**18 44 11.4**	**+0.4**
	comp=Z,8.7nm,1.1s,mb4.6						
DUG	**Dugway**	**80.83**	**329**	*e*P	**P**	**18 44 11.4**	**+0.4**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
BOSA	**Boshof**	**81.14**	**118**	P	**P**	**18 44 12.8**	**-0.4**
BOSA				LR	LR	19 15 35.3	
BOSA	**Boshof**	**81.14**	**118**	P	**P**	**18 44 12.8**	**-0.4**
BOSA				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
BOSA				MLR	MLR		
	comp=Z,228nm,18.3s,MS4.6						
BOSA	**Boshof**	**81.14**	**118**	P	**P**	**18 44 12.8**	**-0.4**
	comp=Z,20nm,0.8s,mb5.1,baz=236,slow=5.2,SNR=31						
BOSA				LR	LR	19 15 35.3	
	comp=Z,228nm,18.3s,MS4.6,baz=157,slow=32						
MTUM	**Tungsten Hills**	**81.23**	**324**	*e*P	**P**	**18 44 14.0**	**+0.8**
HWUT	**Hardware Ranch**	**81.47**	**331**	*e*P	**P**	**18 44 14.3**	**-0.1**
	comp=Z,12nm,1.0s,mb4.8						
PDAR	**Pinedale Array**	**81.64**	**333**	P	**P**	**18 44 15.2**	**0.0**
	comp=Z,2.0nm,0.9s,mb4.0,baz=145,slow=5.4,SNR=12						
NVAR	**Mina Array Bea**	**81.94**	**325**	P	**P**	**18 44 18.1**	**+1.2**
	comp=Z,7.6nm,0.8s,mb4.7,baz=144,slow=6.8,SNR=28						
CMB	**Columbia Colle**	**82.68**	**323**	*e*P	**P**	**18 44 21.0**	**+0.2**
	comp=Z,5.0nm,1.0s,mb4.5						
CMB	**Columbia Colle**	**82.68**	**323**	*e*P	**P**	**18 44 21.0**	**+0.2**
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
FLWY	**Flagg Ranch**	**83.20**	**333**	*e*P	**P**	**18 44 23.6**	**+0.3**
	comp=Z,6.8nm,1.0s,mb4.6						
TORD	**Torodi Ar. Bea**	**83.32**	**70**	P	**P**	**18 44 23.9**	**-0.8**
	comp=Z,36nm,0.7s,mb5.5,baz=261,slow=4.8,SNR=145						
ULM	**Lac du Bonnet**	**84.18**	**345**	P	**P**	**18 44 27.1**	**-1.2**
	comp=Z,10nm,1.0s,mb4.9,baz=158,slow=1.0,SNR=11						
OHCM	**Honcut**	**84.22**	**324**	*e*P	**P**	**18 44 29.4**	**+0.7**
HLID	**Hailey**	**84.27**	**330**	*e*P	**P**	**18 44 29.4**	**+0.6**
	comp=Z,7.6nm,1.1s,mb4.7						
MCMT	**McKenzie Canyo**	**84.67**	**332**	*e*P	**P**	**18 44 31.7**	**+0.9**
WVOR	**Wild Horse Val**	**85.23**	**327**	*e*P	**P**	**18 44 34.1**	**+0.4**
	comp=Z,5.4nm,1.1s,mb4.6						
WVOR	**Wild Horse Val**	**85.23**	**327**	*e*P	**P**	**18 44 34.1**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
RPZ	**Rata Peaks**	**85.53**	**220**	P	**P**	**18 44 36.3**	**+0.8**
	comp=Z,13nm,0.8s,mb5.2,baz=342,slow=3.2,SNR=4.2						
WDC	**Whiskeytown Da**	**85.69**	**324**	*e*P	**P**	**18 44 34.7**	**-1.4**
	comp=Z,7.6nm,0.8s,mb5.0						
WDC	**Whiskeytown Da**	**85.69**	**324**	*e*P	**P**	**18 44 34.7**	**-1.4**
WDC				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb5.0						
SCHQ	**Schefferville**	**86.17**	**3**	P	**P**	**18 44 37.6**	**-0.4**
	comp=Z,21nm,1.1s,mb5.3,baz=163,slow=5.4,SNR=7.6						
BMO	**Blue Mountains**	**86.54**	**330**	*e*P	**P**	**18 44 39.9**	**-0.3**
	comp=Z,5.9nm,1.1s,mb4.7						
CHMT	**Chamberlain Mo**	**86.55**	**333**	*e*P	**P**	**18 44 40.0**	**-0.2**
LSZ	**Lusaka**	**90.49**	**108**	*e*P	**P**	**18 45 00.2**	**+0.4**
	comp=Z,4.0nm,0.6s,mb4.9						
LSZ	**Lusaka**	**90.49**	**108**	*e*P	**P**	**18 45 00.2**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.9						
EDM	**Edmonton**	**91.80**	**337**	*e*P	**P**	**18 45 02.3**	**-2.5**
ESDC	**Sonseca Array**	**94.85**	**46**	LR	LR	19 25 52.8	
	comp=Z,165nm,18.8s,MS4.5,baz=190,slow=34						
YKA	**Yellowknife Ar**	**99.79**	**341**	P	Pdif	18 45 39.6	-2.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**99.79**	**341**	P	Pdif	18 45 39.6	-2.1
	comp=Z,1.2nm,0.7s,baz=139,slow=4.3,SNR=21						
ASAR	**Alice Springs**	**119.75**	**207**	PKIKP	PKPdf	18 50 46.1	-2.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ASAR	**Alice Springs**	**119.75**	**207**	PKP	PKPdf	18 50 46.1	-2.1
	comp=Z,0.9nm,0.8s,baz=147,slow=2.2,SNR=4.2						
ASAR				PKKPbc	PKKPbc	19 00 57.1	-0.5
	comp=Z,0.8nm,0.6s,baz=339,slow=2.9,SNR=17						
AKASG	**Malin Array Be**	**120.49**	**46**	PKP	PKPdf	18 50 46.9	-1.6
AKASG	**Malin Array Be**	**120.49**	**46**	PKIKP	PKPdf	18 50 46.9	-1.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**120.49**	**46**	PKP	PKPdf	18 50 46.9	-1.6
	comp=Z,2.2nm,0.7s,baz=262,slow=2.8,SNR=10						
VSU	**Vasula**	**120.73**	**37**	‖*i* PKIKP	PKPdf	18 50 47.4	-1.4
FINES	**FINESS Array B**	**120.95**	**34**	PKP	PKPdf	18 50 46.9	-2.2
	comp=Z,1.3nm,0.8s,baz=106,slow=4.8,SNR=5.0						
FINES				PKKPbc	PKKPbc	19 00 51.3	-2.3
	comp=Z,0.4nm,0.7s,baz=110,slow=2.2,SNR=4.3						
ARCES	**ARCESS Array B**	**121.79**	**24**	PKIKP	PKPdf	18 50 48.8	-1.7
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES	**ARCESS Array B**	**121.79**	**24**	PKP	PKPdf	18 50 48.8	-1.7
	comp=Z,3.8nm,0.8s,baz=308,slow=4.3,SNR=8.0						
PUL	**Pulkovo**	**122.77**	**36**	*i* PKIKP	PKPdf	18 50 50.4	-2.2
WRA	**Warramunga Arr**	**122.90**	**210**	PKIKP	PKPdf	18 50 52.6	-1.7
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**122.90**	**210**	PKP	PKPdf	18 50 52.6	-1.6
	comp=Z,1.2nm,0.6s,baz=160,slow=1.8,SNR=7.2						
WRA				PKKPbc	PKKPbc	19 00 44.5	-1.1
	comp=Z,0.6nm,0.6s,baz=339,slow=4.4,SNR=8.1						
OBN	**Obninsk**	**125.61**	**42**	⇑*i* PKIKP	PKPdf	18 50 55.6	-2.6
OBN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.6						
FITZ	**Fitzroy Crossi**	**127.80**	**201**	*e*P	PKPdf	18 51 01.9	-1.8
	comp=Z,5.9nm,0.7s						
KIV	**Kislovodsk**	**128.13**	**57**	*i* PKIKP	PKPdf	18 51 01.4	-2.0
KIV				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,94nm,21.0s,MS4.5						
PRGR	**Permogore**	**130.28**	**34**	*i* PKIKP	PKPdf	18 51 06.2	-0.7
BILL	**Bilibino**	**130.69**	**335**	*e*PKIKP	PKPdf	18 51 05.2	-2.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARU	**Arti**	**137.84**	**39**	*e*PKPdf	PKPdf	18 51 21.0	-0.3
ARU	**Arti**	**137.84**	**39**	⇑*i* PKIKP	PKPdf	18 51 21.1	-0.2
SEY	**Seymchan**	**137.96**	**331**	‖*i* PKIKP	PKPdf	18 51 20.9	-0.4
TIXI	**Tiksi**	**138.33**	**350**	*e*PKPdf	PKPdf	18 51 20.9	-0.9
TIXI	**Tiksi**	**138.33**	**350**	‖*i* PKIKP	PKPdf	18 51 21.0	-0.8
SVE	**Sverdlovsk**	**138.84**	**38**	*e*PKIKP	PKPdf	18 51 23.0	-0.1
PALK	**Pallekele**	**144.85**	**128**	*e*PKPdf	PKPdf	18 51 33.4	-1.8
BRVK	**Borovoye**	**145.36**	**41**	*e*PKP	PKPdf	18 51 34.2	-0.6
KAD	**Karad**	**146.21**	**107**	*e*P	PKPdf	18 51 35.5	-1.9
YAK	**Yakutsk**	**146.47**	**342**	*e*PKPdf	PKPdf	18 51 35.8	-0.6
YAK				*e*PKPbc	PKPbc	18 51 36.9	-0.9
YAK	**Yakutsk**	**146.47**	**342**	*e*PKP2	PKPab	18 51 36.7	-2.1
YAK				pmax	pmax		
	comp=Z,108nm,1.1s						
YAK				pmax	pmax		
	comp=N,11nm,1.4s						
YAK				pmax	pmax		
	comp=E,13nm,1.2s						
POO	**Poona**	**146.55**	**105**	*e*P	PKPdf	18 51 36.3	-1.7
KBL	**Kabul**	**147.31**	**74**	*e*PKPbc	PKPbc	18 51 39.5	-1.7
YSS	**Yuzh-Sakhalins**	**149.35**	**310**	*i* PKP2	PKPbc	18 51 45.4	-0.6
HYB	**Hyderabad**	**149.80**	**111**	*e*PKP	PKPbc	18 51 47.5	-0.5
HYB				*e*		18 51 59.5	
HYB	**Hyderabad**	**149.80**	**111**	*i* PKP	PKPbc	18 51 47.5	-0.5
HYB				*e*		18 51 59.5	
AJM	**Ajmer**	**150.42**	**91**	*e*P	PKPdf	18 51 38.8	-5.2
AJM				*ex*	x	18 51 49.9	
	comp=Z,18nm,0.7s						
EKS2	**Erkin-Say**	**150.71**	**58**	*e*PKPdf	PKPdf	18 51 43.7	-0.3
EKS2				*e*PKPbc	PKPbc	18 51 49.6	+0.1
EKS2	**Erkin-Say**	**150.71**	**58**	P	PKPbc	18 51 49.8	+0.3
	SNR=13						
AML	**Almayashu**	**150.74**	**59**	*e*PKPbc	PKPbc	18 51 49.7	+0.1
AML	**Almayashu**	**150.74**	**59**	P	PKPbc	18 51 50.3	+0.7
	SNR=7.3						
NVS	**Novosibirsk**	**150.83**	**30**	*e*PKIKP	PKPdf	18 51 43.6	-0.1
NVS				pmax	pmax		
	comp=Z,90nm,0.9s						
NVS				pmax	pmax		
	comp=N,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,26nm,1.0s						
KURK	**Kurchatov**	**151.03**	**40**	*e*PKPdf	PKPdf	18 51 43.7	-0.5
KURK				*e*PKPbc	PKPbc	18 51 49.3	-0.6
USP	**Ospenovka**	**151.10**	**57**	P	PKPbc	18 51 50.3	-0.1
	SNR=15						
AAK	**Ala-Archa**	**151.23**	**58**	P	PKPbc	18 51 51.2	+0.5
	SNR=7.2						
FRU	**Bishkek**	**151.28**	**57**	*e*PKIKP	PKPbc	18 51 50.0	-0.8
FRU				*e*		18 52 02.0	
FRU				pmax	pmax		
	comp=Z,60nm,1.6s						
UCH	**Uchtor**	**151.32**	**59**	*e*PKPdf	PKPdf	18 51 45.6	+0.7
UCH				*e*PKPbc	PKPbc	18 51 51.4	+0.5
UCH	**Uchtor**	**151.32**	**59**	P	PKPbc	18 51 51.9	+0.9
	SNR=13						
CHMS	**Chumysh**	**151.34**	**57**	P	PKPbc	18 51 51.2	+0.2
	SNR=5.7						
KBK	**Karagaybulak**	**151.55**	**58**	P	PKPbc	18 51 51.7	+0.2
	SNR=6.4						
BHPL	**Bhopal**	**151.65**	**99**	*e*P	PKPdf	18 51 43.2	-2.8
TKM2	**Tokmak 2**	**151.96**	**57**	*e*PKPdf	PKPdf	18 51 45.7	-0.1
TKM2				*e*PKPbc	PKPbc	18 51 51.8	-0.5
TKM2	**Tokmak 2**	**151.96**	**57**	P	PKPbc	18 51 52.0	-0.4
	SNR=5.6						
ZAL	**Zalesovo**	**152.12**	**30**	PKIKP	PKPdf	18 51 44.2	-1.5
ZAL						18 51 51.1	
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAL				pmax	pmax		
	comp=Z,99nm,0.6s						
ZAA0	**Zalesovo Array**	**152.12**	**30**	*e*PKPdf	PKPdf	18 51 44.8	-0.9
ZAA0				*e*PKPbc	PKPbc	18 51 51.3	-1.0
ZALV	**Zalesovo Beam**	**152.12**	**30**	PKP	PKPdf	18 51 44.2	-1.6
	comp=Z,3.8nm,0.8s,baz=291,slow=2.5,SNR=16						
ZALV				PKPbc	PKPbc	18 51 51.1	-1.3
	comp=Z,99nm,0.6s,baz=300,slow=3.1,SNR=227						
BOD	**Bodaibo**	**153.44**	**353**	⇑*i* PKIKP	PKPbc	18 51 53.5	-1.7
BOD				*e*		18 52 05.1	
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOD				pmax	pmax		
	comp=Z,13nm,1.0s						
HABR	**Khabarovsk**	**153.51**	**317**	*i* PKIKP	PKPbc	18 51 54.6	-1.0
HABR				*e*		18 52 06.9	
HABR						18 58 54.0	
HABR				*e*SS	SS	19 15 17.7	-0.2
HABR				*e*SSS		19 21 09.6	
KLR	**Kul'dur**	**154.93**	**322**	*e*PKIKP	PKPbc	18 51 58.0	-0.6
MK31	**Makanchi Array**	**155.06**	**45**	*e*PKPdf	PKPdf	18 51 48.9	-1.3
MK31				*e*PKPbc	PKPdf	18 51 58.1	+7.9
MKAR	**Makanchi Array**	**155.06**	**45**	PKIKP	PKPdf	18 51 49.3	-0.9
MKAR						18 51 58.4	
MKAR						18 52 13.0	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**155.06**	**45**	PKP	PKPdf	18 51 49.3	-0.9
	comp=Z,1.5nm,0.7s,baz=2.1,slow=0.8,SNR=18						
MKAR				PKPbc	PKPdf	18 51 58.4	+8.2
	comp=Z,6.2nm,0.8s,baz=304,slow=2.0,SNR=29						
MKAR				PKPab	PKPab	18 52 13.0	-1.6
	comp=Z,4.3nm,0.6s,baz=296,slow=1.7,SNR=4.7						
BLSP	**Bilaspur**	**155.09**	**106**	*e*P	PKPdf	18 51 48.5	-2.5
KOLN	**Koldanda**	**158.43**	**94**	*e*P	PKPdf	18 51 54.5	-0.7
MDJ	**Mudanjiang**	**158.70**	**314**	PKP	PKPdf	18 51 54.5	-0.4
GKN	**Gorkha**	**159.38**	**94**	*e*P	PKPdf	18 51 55.6	-0.7
WMQ	**Urumqi**	**159.84**	**47**	PKP	PKPdf	18 51 55.0	-1.3
WMQ				APKP		18 52 09.5	
WMQ				PKP2	P

NEIC ***29*** *18:40:33.0±1.3, 1701S×17507W, h247km±18km, mb4.2/4, Error ellipse: s-maj=21.2km s-min=17.9km az=161.0*
ISCJB ***29*** *18:40:33.3±1.8, 168S±02×1750W±02, h278km±33km, mb4.3/10, Error ellipse: s-maj=42.6km s-min=28.5km az=30.9*
IDC ***29*** *18:40:44.7±11.0, 1737S×17537W, h341km±106km, mb4.3/5, mb1 4.4/5, mb1mx3.7/15, mbtmp4.3/5, Error ellipse: s-maj=59.7km s-min=29.9km az=40.0*

ISC 29 18:40:34.2±2.0, 168S±03×1750W±02, h273km±36km, n17, σ0§40/15, mb4.3/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.23**	**47**	*e*	P	**Pn**		**18 41 41.8**	**0.0**
AFI				*e*	S	**S**		**18 42 27.5**	**-8.2**
URZ	**Urewera**	**22.45**	**197**		P	**P**		**18 45 10.1**	**-0.2**
	17nm,0.4s,mb4.8,baz=284,slow=2.5,SNR=21								
ARMA	**Armidale**	**33.32**	**240**	*e*	P	**P**		**18 46 47.2**	**+0.3**
CTA	**Charters Tower**	**36.88**	**259**	*e*	P	**P**		**18 47 17.1**	**-0.1**
	5.5nm,1.0s,mb3.9								
STKA	**Stephens Creek**	**42.02**	**241**	*e*	P	**P**		**18 47 59.5**	**+0.1**
	9.7nm,0.9s,mb4.0								
STKA	**Stephens Creek**	**42.02**	**241**		P	**P**		**18 47 59.4**	**-0.1**
	12nm,0.7s,mb4.2,baz=75,slow=7.9,SNR=17								
WB2	**Warramunga Arr**	**48.06**	**258**	*e*	P	**P**		**18 48 46.6**	**-0.2**
WRA	**Warramunga Arr**	**48.07**	**258**		P	**P**		**18 48 46.8**	**-0.1**
	4.1nm,0.6s,mb4.0,baz=96,slow=7.2,SNR=91								
WRA					PcP	PcP		18 50 12.0	+1.8
	0.7nm,0.5s,baz=97,slow=3.2,SNR=4.2								
ASAR	**Alice Springs**	**48.25**	**253**		P	**P**		**18 48 48.4**	**+0.1**
	68nm,0.5s,mb5.2,baz=88,slow=8.5,SNR=1727								
ASAR					PcP	PcP		18 50 11.8	+1.0
	1.6nm,0.5s,baz=102,slow=4.0,SNR=4.1								
KAKA	**Kakadu**	**50.91**	**267**	*e*	P	**P**		**18 49 08.9**	**+0.5**
	4.8nm,0.5s,mb4.1								
FORT	**Forrest**	**53.44**	**244**	*e*	P	**P**		**18 49 26.5**	**-0.1**
	8.4nm,0.6s,mb4.2								
KLBR	**Kellerberrin**	**62.25**	**243**	*e*	P	**P**		**18 50 27.3**	**-0.3**
	11nm,0.8s,mb4.5								
QSPA	**South Pole Qui**	**73.21**	**180**	*e*	P	**P**		**18 51 35.8**	**+0.9**
	2.9nm,0.6s,mb4.1								
MAW	**Mawson**	**85.95**	**199**		P	**P**		**18 52 42.6**	**-0.8**
	3.4nm,0.7s,mb4.3,baz=138,slow=8.7,SNR=11								
CLL	**Collm**	**145.03**	**351**	*i*	PKPbc	PKPbc		18 59 41.9	+3.1
KHC	**Kasperske Hory**	**147.05**	**350**	*e*	PKP	PKPbc		18 59 47.5	+2.7
GERES	**GERESS Array B**	**147.31**	**349**		PKPbc	PKPbc		18 59 48.9	+3.4
	0.8nm,0.5s,baz=30,slow=3.2,SNR=9.1								

IDC 29 18:47:59.3±47.0, 1641S×17697W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/14, mbtmp3.9/3, Error ellipse: s-maj=877.7km s-min=157.1km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.56**	**240**		P	P		18 55 41.1	+0.4
	0.9nm,0.5s,baz=90,slow=10,SNR=3.3								
WRA	**Warramunga Arr**	**46.27**	**258**		P	P		18 56 26.5	-0.4
	0.5nm,0.7s,baz=95,slow=7.8,SNR=8.1								
ASAR	**Alice Springs**	**46.53**	**253**		P	P		18 56 28.8	-0.2
	2.1nm,0.4s,baz=89,slow=8.1,SNR=54								

ISCJB ***29*** *19:02:09.5±1.3, 4846N±009×1549E±01, h46km±10km, mb4.1/19, Error ellipse: s-maj=20.9km s-min=6.9km az=41.8*
MOS ***29*** *19:02:10.0±1.3, 4844N×15496E, h55km, mb4.2/2, Error ellipse: s-maj=16.2km s-min=12.0km az=66.9*
NEIC ***29*** *19:02:12.1±2.1, 4847N×15480E, h54km±19km, mb4.0/2, Error ellipse: s-maj=15.5km s-min=12.5km az=117.0*
IDC ***29*** *19:02:15.5±4.2, 4845N×15468E, h86km±38km, mb3.5/13, mb1 3.7/15, mb1mx3.6/22, mbtmp3.5/15, MS3.9/1, Ms1 3.9/1, ms1mx3.0/27, Error ellipse: s-maj=22.3km s-min=17.2km az=114.0*

ISC 29 19:02:11.3±1.2, 4847N±009×1550E±01, h45km±9km, n33, σ1§02/34, mb4.1/19, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.34**	**18**	*e*	PN	**P**	**Pn**	**19 02 47.0**	**-0.1**
SKR					S	*e*	**Sn**	**19 03 14.0**	**-0.6**
SKR					pmax	pmax			
	comp=Z,190nm,0.6s								
SKR					pmax	pmax			
	comp=N,70nm,0.4s								
SKR					pmax	pmax			
	comp=E,50nm,0.4s								
SKR					smax				
	comp=N,460nm,0.5s								
SKR					smax				
	comp=E,290nm,0.5s								
SKR					smax				
	comp=Z,490nm,1.0s								
KUR	**Kuril'sk**	**5.85**	**239**	⇑*i*	PN	**P**	**Pn**	**19 03 34.0**	**-1.3**
KUR					S	*e*	**Sn**	**19 04 40.5**	**-0.5**
KUR					pmax	pmax			
	comp=Z,90nm,0.6s								
KUR					smax				
	comp=N,210nm,0.9s								
KUR					smax				
	comp=E,210nm,0.9s								
YSS	**Yuzh-Sakhalins**	**8.38**	**264**	*e*	P	**Pn**		**19 04 08.7**	**-1.2**
	comp=E,8.9nm,0.7s								
YSS	**Yuzh-Sakhalins**	**8.38**	**264**	*e*	PN	**Pn**		**19 04 11.0**	**+1.0**
ASAJ	**Asahikawa**	**9.60**	**248**		PN	**Pn**		**19 04 28.7**	**+1.9**
ASAJ					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ASAJ	**Asahikawa**	**9.60**	**248**		P	**Pn**		**19 04 28.6**	**+1.9**
	comp=Z,1.2nm,0.3s,baz=66,slow=13,SNR=16								
KLR	**Kul'dur**	**15.30**	**282**	*e*	P	**Pn**		**19 05 46.0**	**+2.1**
MJAR	**Matsushiro Arr**	**17.12**	**232**		P	**Pn**		**19 06 07.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=28,slow=12,SNR=3.3								
KSRS	**Korea Array**	**22.53**	**251**		P	**P**		**19 07 06.6**	**-0.5**
	comp=Z,3.1nm,0.8s,mb3.8,baz=52,slow=10,SNR=8.5								
SONM	**Songino Array**	**31.98**	**287**		P	**P**		**19 08 31.2**	**-1.6**
	comp=Z,0.3nm,0.8s,mb3.2,baz=52,slow=8.7,SNR=3.5								
MKAR	**Makanchi Array**	**47.28**	**297**		P	**P**		**19 10 39.1**	**-0.7**
	comp=Z,0.8nm,0.6s,mb3.8,baz=64,slow=8.8,SNR=4.4								
YKA	**Yellowknife Ar**	**48.80**	**38**		P	**P**		**19 10 52.5**	**+1.2**
YKA	**Yellowknife Ar**	**48.80**	**38**		P	**P**		**19 10 52.5**	**+1.2**
	comp=Z,0.9nm,0.8s,mb3.8,baz=298,slow=7.4,SNR=9.9								
LSA	**Lhasa**	**51.44**	**273**	*e*	P	**P**		**19 11 13.3**	**+1.5**
	comp=Z,1.3nm,0.5s,mb4.1								
LSA	**Lhasa**	**51.44**	**273**	*e*	P	**P**		**19 11 13.3**	**+1.5**
LSA					pmax	pmax			
	comp=Z,1.0nm,0.5s,mb4.0								
TAPN	**Taplejung**	**55.26**	**273**	*e*	P	**P**		**19 11 39.7**	**-0.1**
	comp=Z,2.1nm,0.3s,mb4.6								
ODAN	**Odare**	**55.79**	**273**	*e*	P	**P**		**19 11 46.4**	**+2.7**
	comp=Z,4.1nm,0.3s,mb4.9								
JIRN	**Jiri**	**56.06**	**275**	*e*	P	**P**		**19 11 45.5**	**-0.1**
	comp=Z,5.1nm,0.6s,mb4.7								
KKN	**Kakani**	**56.58**	**275**	*e*	P	**P**		**19 11 49.0**	**-0.3**
	comp=Z,8.2nm,0.9s,mb4.8								
ARCES	**ARCESS Array B**	**56.64**	**341**		P	**P**		**19 11 48.9**	**-0.2**
	comp=Z,5.7nm,0.9s,mb4.6,baz=5.3,slow=13,SNR=2.8								
ARCES					LR	LR		19 41 01.5	
	comp=Z,96nm,19.0s,baz=96,slow=41								
GKN	**Gorkha**	**56.86**	**276**	*e*	P	**P**		**19 11 51.4**	**+0.1**
	comp=Z,8.2nm,0.7s,mb4.9								
PDAR	**Pinedale Array**	**62.73**	**56**		P	**P**		**19 12 32.6**	**+1.2**
	comp=Z,0.5nm,0.9s,mb3.6,baz=270,slow=1.5,SNR=3.8								
FINES	**FINESS Array B**	**63.01**	**335**		P	**P**		**19 12 32.0**	**-1.0**
	comp=Z,0.4nm,0.3s,mb4.0,baz=34,slow=7.8,SNR=5.1								
ULM	**Lac du Bonnet**	**64.40**	**42**		P	**P**		**19 12 42.3**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.9,baz=326,slow=11,SNR=3.0								
NB2	**NORSAR Subarra**	**67.00**	**342**		P	**P**		**19 12 58.6**	**-0.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=25,slow=6.5								
NB2	**NORSAR Subarra**	**67.00**	**342**		P	**P**		**19 12 58.6**	**-0.2**
NB2					pmax	pmax			
	comp=Z,1.0nm,0.6s,mb4.0								
NOA	**NORSAR Array B**	**67.00**	**342**		P	**P**		**19 12 58.3**	**-0.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=25,slow=6.4,SNR=5.4								
WRA	**Warramunga Arr**	**70.56**	**201**		P	**P**		**19 13 20.1**	**-1.3**
	comp=Z,1.7nm,0.9s,mb4.0,baz=14,slow=6.6,SNR=6.1								
AKASG	**Malin Array Be**	**70.81**	**327**		P	**P**		**19 13 21.5**	**-1.1**
	comp=Z,0.3nm,0.4s,mb3.6,baz=33,slow=6.6,SNR=2.8								
ASAR	**Alice Springs**	**74.25**	**200**		P	**P**		**19 13 43.0**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=19,slow=4.5,SNR=7.6								
KHC	**Kasperske Hory**	**77.22**	**335**	*e*	P	**P**		**19 14 01.0**	**+0.8**
GERES	**GERESS Array B**	**77.45**	**335**		P	**P**		**19 14 01.6**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.0,baz=34,slow=5.9,SNR=13								
PLCA	**Paso Flores**	**147.09**	**94**		PKPbc	PKPbc		19 21 48.3	-0.3
	comp=Z,1.2nm,0.8s,baz=297,slow=4.5,SNR=3.2								

IDC 29 19:08:41.9±3.0, 2023S×16801E, h34km±7km, mb3.8/3, mb1 4.1/3, mb1mx3.7/12, mbtmp3.8/3, Error ellipse: s-maj=106.9km s-min=33.2km az=146.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.34**	**218**	*e*	P	Pn		19 09 12.8	-5.2
DZM					S	*e*Sn		19 09 40.4	-5.2
WRA	**Warramunga Arr**	**31.59**	**265**		P	P		19 15 01.7	0.0
	1.0nm,1.0s,baz=92,slow=8.5,SNR=4.5								
WRA					pP	pP		19 15 11.3	-0.2
	1.5nm,1.0s,baz=94,slow=9.3,SNR=6.1								
ASAR	**Alice Springs**	**31.77**	**258**		P	P		19 15 03.2	-0.1
	3.9nm,0.7s,baz=82,slow=9.1,SNR=72								
ASAR					pP	pP		19 15 13.2	+0.2
	5.3nm,0.7s,baz=87,slow=8.9,SNR=24								
SONM	**Songino Array**	**87.32**	**324**		P	P		19 21 25.6	+0.5
	0.7nm,0.8s,baz=111,slow=6.3,SNR=5.1								
SONM					pP	pP		19 21 37.2	+1.2
	0.6nm,0.9s,baz=138,slow=6.3,SNR=3.3								
GERES	**GERESS Array B**	**144.79**	**330**		PKP	PKPdf		19 28 14.6	-0.6
	1.6nm,0.8s,baz=35,slow=3.3,SNR=13								
GERES					pPKP	pPKPdf		19 28 24.8	-1.5
	1.9nm,0.8s,baz=29,slow=3.0,SNR=8.2								

CSEM ***29*** *19:09:39.3±0.7, 3906N×1735E, h30km, ML3.9/3, Error ellipse: s-maj=11.7km s-min=7.1km az=133.0*
ROM ***29*** *19:09:40.2±0.8, 3912N×1735E, h10km, Md2.7/8, Ml2.7/12, Error ellipse: s-maj=10.9km s-min=6.0km az=52.0*

ISC 29 19:09:38.7±1.7, 3915N±006×1743E±009, h8km±14km, n14, σ1§01/19, 1C, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIP	**Timpagrande**	**0.52**	**274**		Pg	**Pg**		**19 09 50.2**	**+1.4**
TIP					Sg	**Sg**		**19 09 54.5**	**-1.1**
	451nm,0.6s								
SERS	**Sersale**	**0.59**	**259**	⇑*i*	Pg	**Pg**		**19 09 52.3**	**+2.3**
SERS					Sg	**Sg**		**19 09 57.7**	**0.0**
	389nm,0.9s								
CARO	**Carolei**	**0.94**	**277**		Pg	**Pg**		**19 09 54.9**	**-2.0**
	263nm,0.7s								
ORI	**Oriolo Calabro**	**1.19**	**321**		Pg	**Pg**		**19 10 02.7**	**+1.2**
ORI					Sg	**Sg**		**19 10 17.5**	**+0.6**
	326nm,0.4s								
CRAC	**Craco**	**1.44**	**328**		Pg	**Pg**		**19 10 06.9**	**+0.6**
CRAC					Sg	**Sg**		**19 10 25.8**	**+0.8**
	186nm,0.4s								
SCHR	**S. Chirico Rap**	**1.48**	**316**		Pg	**Pg**		**19 10 06.7**	**-0.4**
SCHR					Sg	**Sg**		**19 10 26.5**	**+0.1**
	63nm,0.5s								
SIRI	**Monte Sirino -**	**1.59**	**311**		Pg	**Pg**		**19 10 08.8**	**-0.4**
	58nm,0.7s								
MIGL	**Miglionico**	**1.64**	**333**		Pg	**Pg**		**19 10 08.6**	**-1.6**
	683nm,1.4s								
PE1	**Pezze di Greco**	**1.66**	**360**	*e*	Pn	**Pg**		**19 10 11.0**	**+0.5**
NOCI	**Noci**	**1.66**	**350**		Pg	**Pg**		**19 10 09.7**	**-0.9**
	141nm,0.6s								
MTSN	**Montesano sull**	**1.71**	**311**		Pg	**Pg**		**19 10 10.3**	**-1.2**
	106nm,1.1s								
MGR	**Morigerati**	**1.75**	**305**		Pg	**Pn**		**19 10 09.8**	**+0.4**
	90nm,1.0s								
SG1	**Sgolgore (BA)**	**1.79**	**341**	*e*	Pn	**Pg**		**19 10 13.3**	**+0.3**
AMUR	**Altamura**	**1.87**	**340**		Pg	**Pb**		**19 10 12.8**	**-0.3**
	66nm,0.5s								

ISCJB ***29*** *19:19:12.2±0.6, 1078N±004×6233W±003, h84km±7km, Error ellipse: s-maj=6.5km s-min=4.5km az=3.1*
FUNV ***29*** *19:19:13.3, 1087N×6223W, h71km, MW2.9*
TRN ***29*** *19:19:15.2, 1083N×6217W, h80km, MD3.1*
NEIC ***29*** *19:19:15.2, 1083N×6217W, h80km, MD3.1(TRN), After TRN.*

ISC 29 19:19:13.1±0.6, 1079N±004×6233W±003, h78km±7km, n18, σ0§87/34, 2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.17**	**143**	*e*	P	**Pn**		**19 19 24.4**	**-0.2**
GUIV				*e*	S	**Sn**		**19 19 31.8**	**-1.1**
TCE	**Chacachacare**	**0.57**	**99**	*e*	P	**Pn**		**19 19 28.4**	**+1.0**
TCE				*e*	S	**Sn**		**19 19 38.0**	**+0.2**
GUNV	**Guanoco**	**0.87**	**224**	*e*	P	**Pn**		**19 19 31.0**	**+0.5**
GUNV				*e*	S	**Sn**		**19 19 45.1**	**+1.7**
CRUV	**Carupano**	**0.90**	**263**	⇓*i*	P	**Pn**		**19 19 31.0**	**+0.1**
CRUV				*e*	S	**Sn**		**19 19 44.6**	**+0.5**
TRN	**Trinidad (W)**	**0.92**	**98**	*e*	P	**Pn**		**19 19 32.1**	**+1.1**
TRN				*e*	S	**Sn**		**19 19 44.2**	**-0.2**
ITEV	**Isla Los Testi**	**0.97**	**306**	⇓*e*	P	**Pn**		**19 19 31.7**	**0.0**
ITEV				*e*	S	**Sn**		**19 19 44.8**	**-0.7**
TPP	**Pointe-a-Pierr**	**0.98**	**118**	*e*	P	**Pn**		**19 19 32.0**	**+0.2**
TPP				*e*	S	**Sn**		**19 19 45.4**	**-0.3**
TBH	**Brigand Hill**	**1.28**	**103**	*e*	P	**Pn**		**19 19 36.9**	**+1.4**
TBH				*e*	S	**Sn**		**19 19 51.6**	**-0.6**
GRW	**Mount Saint Ca**	**1.51**	**26**	*e*	P	**Pn**		**19 19 39.0**	**+0.4**
GRW				*e*	S	**Sn**		**19 19 57.8**	**+0.1**
TPR	**Prospect**	**1.57**	**75**	*e*	P	**Pn**		**19 19 39.7**	**+0.4**
TPR				*e*	S	**Sn**		**19 19 56.4**	**-2.7**
PCRV	**Puerto La Cruz**	**2.35**	**255**	*e*	P	**Pn**		**19 19 50.4**	**+0.7**
PCRV				*e*	S	**Sn**		**19 20 17.9**	**+0.2**
IBAV	**Isla La Blanqu**	**2.44**	**295**	*e*	P	**Pn**		**19 19 51.3**	**+0.5**
IBAV				*e*	S	**Sn**		**19 20 18.7**	**-1.0**
RIOV	**Rio Grande**	**2.75**	**169**	*e*	P	**Pn**		**19 19 55.7**	**+0.7**
RIOV				*e*	S	**Sn**		**19 20 26.5**	**-0.8**
PRGV	**PARIAGUAN**	**3.04**	**229**	*e*	P	**Pn**		**19 19 59.3**	**+0.3**
PRGV				*e*	S	**Sn**		**19 20 34.3**	**-0.2**
LUEV	**Luepa**	**4.99**	**170**	*e*	P	**Pn**		**19 20 24.6**	**-0.9**
CAOV	**Caicara del Or**	**5.23**	**229**	*e*	P	**Pn**		**19 20 29.2**	**+0.3**
CAOV				*e*	S	**Sn**		**19 21 25.1**	**-2.8**
TURV	**Turiamo**	**5.43**	**267**	*e*	P	**Pn**		**19 20 30.8**	**-0.7**
BAUV	**El Baul**	**5.92**	**252**	*e*	P	**Pn**		**19 20 38.3**	**+0.1**
BAUV				*e*	S	**Sn**		**19 21 41.0**	**-3.7**

NEIC ***29*** *19:21:54.3, 3163S×7195W, h4km, ML3.2(GUC), After GUC.*

GUC 29 19:21:54.3±0.4, 3163S×7195W, h4km±3km, MD3.6, ML3.2, 5C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.46**	**124**	⇓*i*	P	Pg		19 21 47.9	-15
CHNG				*i*	S	Sg		19 21 55.1	-14
CMCH	**Combarbala**	**0.93**	**61**	⇑*i*	P	Pg		19 22 12.3	+0.2
CMCH				*i*	S	Sg		19 22 25.9	+1.7
CMCH	**Combarbala**	**0.93**	**61**	⇑*i*	P	Pg		19 22 12.3	+0.2
CMCH				*i*	S	Sg		19 22 25.9	+1.7
CMCH					AML	AML		19 22 27.8	
	comp=E,2μm,0.7s								
JACH	**Jahuel**	**1.56**	**133**	⇑*i*	P	Pn		19 22 22.2	-0.5
JACH				*i*	S	Sn		19 22 43.4	0.0
ROCH	**El Roble**	**1.56**	**150**	⇑*i*	P	Pn		19 22 22.7	0.0
ROCH				*i*	S	Sn		19 22 44.0	+0.6
TLL	**Tololo Astrono**	**1.76**	**34**	*e*	P	Pn		19 22 25.6	+0.1
TLL				*i*	S	Sn		19 22 49.7	+1.5
TLL	**Tololo Astrono**	**1.76**	**34**	*e*	P	Pn		19 22 25.6	+0.1
TLL				*i*	S	Sn		19 22 49.7	+1.5
TLL					AML	AML		19 22 54.5	
	comp=E,280nm,0.3s								
PEL	**Peldehue**	**1.85**	**145**	*e*	P	Pn		19 22 26.8	+0.1
TACH	**Talagante**	**2.19**	**157**	⇑*i*	P	Pn		19 22 32.3	+0.8
TACH				*i*	S	Sn		19 23 01.2	+2.1
LCO	**Las Campanas**	**2.82**	**23**	*e*	P	Pn		19 22 39.0	-1.1

IDC 29 19:23:17.1±4.2, 499S×15125E, h135km±33km, mb3.6/6, mb1 3.8/6, mb1mx3.6/13, mbtmp3.6/6, Error ellipse: s-maj=49.9km s-min=22.0km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.18**	**226**		P	P		19 28 02.2	-0.2
	1.3nm,0.3s,baz=52,slow=10,SNR=18								
ASAR	**Alice Springs**	**24.98**	**220**		P	P		19 28 28.9	+0.5
	1.8nm,0.3s,baz=52,slow=9.1,SNR=64								
ASAR					ScP	ScP		19 35 26.8	0.0
	0.4nm,0.7s,baz=56,slow=2.1,SNR=5.3								
SONM	**Songino Array**	**65.67**	**329**		P	P		19 33 48.3	+1.4
	0.7nm,0.5s,baz=146,slow=5.5,SNR=6.5								
MKAR	**Makanchi Array**	**79.46**	**319**		P	P		19 35 08.6	0.0
	0.3nm,0.6s,baz=126,slow=6.2,SNR=3.8								
ZALV	**Zalesovo Beam**	**80.46**	**327**		P	P		19 35 12.6	-1.2
	0.9nm,0.5s,baz=120,slow=4.0,SNR=4.7								
NVAR	**Mina Array Bea**	**93.42**	**52**		P	P		19 36 17.9	+0.5
	0.2nm,0.3s,baz=257,slow=7.0,SNR=2.9								
GERES	**GERESS Array B**	**123.40**	**328**		PKP	PKPdf		19 41 58.0	-0.3
	0.2nm,0.5s,baz=57,slow=4.9,SNR=4.2								
TORD	**Torodi Ar. Bea**	**148.89**	**287**		PKPbc	PKPbc		19 42 49.0	-1.0
	1.4nm,0.7s,baz=89,slow=2.2,SNR=12								

NEIC ***29*** *20:21:10.9, 3162S×7191W, h15km, ML3.3(GUC), After GUC.*

GUC 29 20:21:10.9±1.0, 3162S×7191W, h15km±8km, MD3.7, ML3.3, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.44**	**127**	⇑*i*	P	Pg		20 21 03.0	-17
CHNG				*i*	S	Sg		20 21 10.3	-15
CMCH	**Combarbala**	**0.90**	**61**	⇑*i*	P	Pb		20 21 26.8	-1.3
CMCH				*i*	S	Sb		20 21 39.3	-0.5
CMCH	**Combarbala**	**0.90**	**61**	⇑*i*	P	Pb		20 21 26.8	-1.3
CMCH				*i*	S	Sb		20 21 39.3	-0.5
CMCH					AML	AML		20 21 42.6	
	comp=E,4μm,0.5s								
OVCH	**Ovalle**	**1.18**	**31**	⇓*i*	P	Pn		20 21 31.8	-1.0
OVCH				*i*	S	Sb		20 21 46.9	-1.0
JACH	**Jahuel**	**1.54**	**134**	*e*	P	Pn		20 21 37.6	-0.2
JACH				*i*	S	Sn		20 21 57.6	0.0
ROCH	**El Roble**	**1.55**	**151**	*e*	P	Pn		20 21 38.0	0.0
PEL	**Peldehue**	**1.84**	**146**	⇑*i*	P	Pn		20 21 42.4	+0.5
PEL				*i*	S	Sn		20 22 05.4	+0.4
PEL					AML	AML		20 22 10.9	
	comp=E,513nm,0.3s								
FCH	**Farellones**	**2.19**	**142**	*e*	P	Pn		20 21 47.8	+1.1
FCH				*i*	S	Sn		20 22 16.8	+3.3
FCH					AML	AML		20 22 24.9	
	comp=E,151nm,0.5s								
TACH	**Talagante**	**2.19**	**158**	*e*	P	Pn		20 21 47.3	+0.6
LMEL	**Las Melosas**	**2.65**	**148**	*e*	P	Pn		20 21 54.0	+1.0

KISR ***29*** *20:20:58.0±3.0, 4381N×14987E, h0km, 999km, mb5.3*
NIED ***29*** *20:21:00, 4220N×14320E, h50km, Mw4.7 Best double couple: M0 1.13000×10^16 NP1:φs254.00000°, δ23.00000°, λ150.00000°. NP2:φs11.00000°, δ79.00000°, λ69.00000°.*
ISCJB ***29*** *20:21:26.0±0.3, 4216N±003×14318E±003, h61km±2km, mb4.7/73, Error ellipse: s-maj=5.0km s-min=3.2km az=44.8*
MOS ***29*** *20:21:25.6±1.1, 4223N×14312E, h53km, mb4.8/31, Error ellipse: s-maj=9.5km s-min=5.1km az=103.5*
BJI ***29*** *20:21:25.6, 4217N×14311E, h58km, mB5.0, mb4.9, Ms4.0, Msz3.9*
IDC ***29*** *20:21:26.9±0.5, 4215N×14319E, h53km±4km, mb4.1/17, mb1 4.2/24, mb1mx4.2/28, mbtmp4.2/24, MS3.7/13, Ms1 3.7/13, ms1mx3.6/29, Error ellipse: s-maj=13.7km s-min=7.4km az=88.0*
JMA ***29*** *20:21:27.8±0.1, 4227N×14315E, h47km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs275.00000°, δ53.00000°, λ155.00000°. NP2: φs21.00000°, δ70.00000°, λ40.00000°. Principal axes: T Plg42.0000°, Azm244.0000°; N Plg46.0000°, Azm42.0000°; P Plg11.0000°, Azm144.0000°;*
JMA Felt III J1.
NEIC ***29*** *20:21:27.5±0.5, 4221N×14313E, h57km±4km, mb4.6/25, MW4.6(NIED) Error ellipse: s-maj=6.4km s-min=4.7km az=130.0*
NEIC Recorded [3 JMA] in south-central Hokkaido and [1 JMA] in eastern and southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate Prefectures, Honshu.
SZGRF ***29*** *20:21:35.5, 4292N×14181E, h33km, mb4.7, Hokkaido, Japan, region*

ISC 29 20:21:27.3±0.3, 4218N±003×14319E±003, h56km±2km, h56km±1.3km:pP-P, n232, σ0§89/256, mb4.7/73, MS3.9/19, 16C-15D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.17**	**188**	⇑	P	**Pn**		**20 21 36.3**	**+0.2**
JEM				*e*	S	**Sn**		**20 21 43.1**	**+0.7**
ERM	**Erimo**	**0.17**	**188**	⇓*i*	Pn	**Pn**		**20 21 36.3**	**+0.3**
ERM				*e*	Sn	**Sn**		**20 21 43.8**	**+1.4**
ERM	**Erimo**	**0.17**	**188**	*d i*	PN	**Pn**		**20 21 36.3**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.34**	**287**	⇓	P	**Pn**		**20 21 36.5**	**-0.8**
JNBK					S	**Sn**		**20 21 43.6**	**-0.

comp=Z,6.6nm,0.3s,baz=32,slow=13,SNR=94
HABR Khabarovsk 8.51 320 *e*PN **Pn** **20 23 29.1 +1.5**
HABR *e* 20 25 06.3
HABR pmax pmax
comp=Z,28nm,1.2s
JHJ Hachijo jima 2 9.44 198 P **Pn** **20 23 38.8 -1.7**
comp=Z,48nm,0.3s,baz=80,slow=23,SNR=14
JHJ S **Sn** **20 25 16.7 -8.4**
comp=Z,30nm,0.3s,baz=270,slow=20,SNR=4.6
MDJ Mudanjiang 10.19 288 P **Pn** **20 23 50.0 -0.7**
MDJ S **Sn** **20 25 42.5 -0.9**
MDJ SCP ScP 20 33 24.5 +1.9
MDJ PCS PcS 20 33 30.0 +1.4
MDJ SCS ScS 20 36 59.3 +2.0
MDJ AMB AMB
comp=Z,9.0nm,1.8s
MDJ LR LR
comp=N,215nm,18.6s
MDJ LR LR
comp=E,456nm,23.1s
MDJ LR LR
comp=Z,624nm,22.8s
KLR Kul'dur 10.65 315 *e*PN **Pn** **20 23 56.6 -0.4**
KLR MLR MLR
comp=E,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s
KSRS Korea Array 12.65 253 P **Pn** **20 24 25.2 +1.0**
comp=Z,0.4nm,0.3s,baz=66,slow=13,SNR=40
KSRS S **Sn** **20 26 53.7 +10**
comp=Z,0.8nm,0.3s,baz=53,slow=25,SNR=6.7
KSRS LR LR 20 29 09.9
comp=Z,227nm,18.4s,baz=37,slow=36
CN2 Changchun 13.09 283 *e*P **Pn** **20 24 31.0 +0.7**
CN2 *e*XP 20 24 49.5
CN2 *e*S **Sn** **20 26 54.8 +0.6**
CN2 AMB AMB
comp=Z,20nm,0.9s
CN2 LR LR
comp=N,300nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
CN2 LR LR
comp=Z,500nm,17.0s
JNU Nakatsue 13.29 231 P **Pn** **20 24 32.2 -0.8**
comp=Z,0.8nm,0.3s,baz=24,slow=19,SNR=7.0
JNU LR LR 20 29 38.5
comp=Z,205nm,20.8s,baz=231,slow=37
CBIJ Chichi jima 15.07 183 P **Pn** **20 24 54.4 -2.3**
comp=Z,6.5nm,0.3s,baz=76,slow=23,SNR=9.8
CBIJ S S 20 27 27.8 -29
comp=Z,6.3nm,0.3s,baz=41,slow=19,SNR=4.0
DL2 Dalian 16.71 266 P **Pn** **20 25 17.0 -0.4**
DL2 AP pP 20 25 29.5 -1.6
DL2 *e*S **S** **20 28 20.3 -10**
DL2 AMB AMB
comp=Z,20nm,0.7s
DL2 LR LR
comp=N,160nm,14.3s
DL2 LR LR
comp=E,140nm,15.3s
DL2 LR LR
comp=Z,190nm,15.6s
HIA Hailar 17.79 301 *e*P **Pn** **20 25 30.9 +0.2**
comp=Z,5.9nm,0.8s
HIA Hailar 17.79 301 *e*P **Pn** **20 25 30.9 +0.2**
HIA pmax pmax
comp=Z,6.0nm,0.8s
MA2 Magadan 18.04 13 P **Pn** **20 25 32.7 -0.9**
comp=Z,10.0nm,0.9s
MA2 Magadan 18.04 13 *e*P **Pn** **20 25 32.8 -0.8**
JOW Kunigami 19.59 223 P **Pn** **20 25 50.3 -2.2**
comp=Z,2.6nm,0.3s,baz=40,slow=8.1,SNR=13
JOW LR LR 20 34 07.4
comp=Z,164nm,19.0s,baz=149,slow=39
BJI Beijing 20.44 273 P **P** **20 25 58.0 -1.8**
BJI S **S** **20 29 45.8 +0.3**
BJI AMB AMB
comp=Z,18nm,1.1s
BJI AMB AMB
comp=Z,220nm,4.3s
BJI LR LR
comp=N,195nm,16.6s
BJI LR LR
comp=E,289nm,26.0s
BJI LR LR
comp=Z,448nm,29.5s
BJT Baijiatuan 20.45 273 *e*P **P** **20 25 58.0 -2.0**
comp=Z,19nm,0.8s
BJT Baijiatuan 20.45 273 *e*P **P** **20 25 58.0 -1.9**
BJT pmax pmax
comp=Z,19nm,0.8s
TIA Tai'an 21.02 262 *e*P **P** **20 26 03.5 -2.6**
YAK Yakutsk 21.45 342 *e*P **P** **20 26 07.7 -2.8**
YAK Yakutsk 21.45 342 *e*P **P** **20 26 06.7 -3.8**
YAK *e*S **S** **20 29 58.1 -6.9**
YAK *e**SS sS 20 30 34.8 +9.3
YAK *e* 20 37 25.6
YAK pmax pmax
comp=Z,25nm,0.9s,mb4.5
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK smax
comp=N,200nm,5.0s
YAK smax
comp=E,100nm,2.0s
SEY Seymchan 21.48 12 ⇓ *i*P **P** **20 26 08.7 -2.1**
NJ2 Nanjing 21.81 250 *e*P **P** **20 26 15.3 +0.6**
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb4.7
HHC Hu-ho-hao-te 23.65 277 *e*P **P** **20 26 33.3 -0.1**
HHC AP 20 26 47.5
HHC XP sP 20 26 55.0 +1.3
HHC PP 20 27 07.8
HHC PCP PcP 20 30 19.0 +2.6
HHC S **S** **20 30 39.3 -4.5**
HHC XS sS 20 31 04.8 -2.5
HHC SS 20 31 32.5
HHC SCP ScP 20 33 51.0 +1.3
HHC PCS PcS 20 33 57.3 +1.6
HHC AMB AMB
comp=Z,15nm,0.9s,mb4.4
HHC LR LR
comp=N,178nm,17.8s,MS3.8
HHC LR LR
comp=E,235nm,19.1s,MS3.8
HHC LR LR
comp=Z,316nm,21.6s,MS3.8
BOD Bodaibo 24.16 320 *e*P **P** **20 26 34.1 -3.7**
BOD pmax pmax
comp=Z,3.0nm,0.8s,mb3.8
YHNB Yeheng 25.11 233 P **P** **20 26 46.6 -0.2**
WHN Wuhan 25.84 253 ⇓ P **P** **20 26 54.8 +1.4**
ULN Ulaanbaatar 26.00 295 *e*P **P** **20 26 54.2 -0.4**
SONM Songino Array 26.44 295 P **P** **20 26 58.7 +0.1**
SONM 20 30 22.8
SONM Songino Array 26.44 295 P **P** **20 26 58.7 +0.1**
comp=Z,11nm,0.9s,mb4.4,baz=78,slow=8.8,SNR=68
SONM PcP PcP 20 30 22.8 +0.3
comp=Z,0.4nm,0.6s,baz=94,slow=2.4,SNR=2.4
SONM LR LR 20 37 46.1
comp=Z,269nm,21.0s,MS3.8,baz=52,slow=37
XAN Xi'an 28.02 265 P **P** **20 27 12.5 -0.4**
XAN AMB AMB
comp=Z,8.0nm,0.5s,mb4.6
TLY Talaya 28.31 303 *e*P **P** **20 27 15.2 -0.1**
TLY Talaya 28.31 303 *e*P **P** **20 27 15.2 -0.1**
TLY pmax pmax
comp=Z,11nm,1.1s,mb4.4
TLY MLR MLR
comp=Z,210nm,22.0s,MS3.7
ZAK Zakamensk 28.49 301 *e*P **P** **20 27 16.4 -0.5**
ZAK *e* 20 28 04.0
ZAK pmax pmax
comp=Z,4.0nm,1.3s,mb3.9
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.6
BILL Bilibino 28.71 18 *e*P **P** **20 27 17.2 -1.5**
BILL *e**PP pP 20 27 31.0 -1.7
BILL *e*S **S** **20 32 03.4 -0.1**
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.1
MOY Mondy 29.96 303 *e*P **P** **20 27 30.1 +0.2**
MOY pmax pmax
comp=Z,29nm,2.4s,mb4.6
TIXI Tiksi 30.38 351 *i*P **P** **20 27 32.4 -1.0**
LZH Lanzhou 30.92 272 *e*P **P** **20 27 37.5 -1.0**
LZH AP pP 20 27 50.5 -2.1
LZH XP sP 20 27 57.5 -1.8
LZH AMB AMB
comp=Z,15nm,1.0s,mb4.8
LZH AMB AMB
comp=Z,67nm,4.1s
GTA Gaotai 32.69 280 P **P** **20 27 55.0 +0.9**
GTA AP pP 20 28 09.8 +1.6
GTA XP sP 20 28 18.0 +3.2
GTA PP PP 20 29 03.8 -4.9
GTA PCP PcP 20 30 40.8 +2.2
GTA S **S** **20 33 02.5 -3.9**
GTA XS sS 20 33 28.5 -1.8
GTA SCP ScP 20 34 19.0 +1.3
GTA SS SS 20 34 59.5 -29
GTA AMB AMB
comp=Z,26nm,0.8s,mb5.2
GTA AMB AMB
comp=Z,118nm,10.7s
GTA LR LR
comp=N,163nm,11.5s,MS4.0
GTA LR LR
comp=E,142nm,14.5s,MS4.0
GTA LR LR
comp=Z,186nm,20.3s
CD2 Chengdu 33.34 263 P **P** **20 28 00.8 +0.9**
CD2 AP pP 20 28 15.8 +1.8
CD2 XP sP 20 28 23.0 +2.4
CD2 PP PP 20 29 14.0 -2.0
CD2 S **S** **20 33 16.3 -0.3**
CD2 XS sS 20 33 42.0 +1.4
CD2 SS SS 20 35 18.8 -23
CD2 AMB AMB
comp=Z,30nm,0.6s,mb5.4
CD2 AMB AMB
comp=Z,80nm,5.2s
CD2 LR LR
comp=N,280nm,14.4s,MS4.3
CD2 LR LR
comp=E,350nm,14.6s,MS4.3
CD2 LR LR
comp=Z,210nm,15.8s,MS4.0
GYA Guiyang 33.70 254 P **P** **20 28 03.0 0.0**
GYA AP pP 20 28 20.5 +3.3
GYA XP sP 20 28 26.8 +3.0
GYA PP PP 20 29 19.3 -0.8
GYA PCP PcP 20 30 44.0 +2.3
GYA S **S** **20 33 22.5 +0.2**
GYA XS sS 20 33 48.5 +2.2
GYA SCP ScP 20 34 22.5 +1.1
GYA PCS PcS 20 34 29.8 +2.1
GYA SCS ScS 20 38 22.3 -0.7
GYA AMB AMB
comp=Z,10.0nm,0.7s,mb4.8
GYA AMB AMB
comp=Z,270nm,5.9s
GYA LR LR
comp=N,490nm,18.4s,MS4.4
GYA LR LR
comp=E,360nm,17.0s,MS4.4
GYA LR LR
comp=Z,400nm,19.6s,MS4.2
KMI Kunming 37.33 256 P **P** **20 28 35.0 +0.9**
KMI AP pP 20 28 49.0 +0.6
KMI XP sP 20 28 56.5 +1.5
KMI PP PP 20 30 03.3 +3.3
KMI S **S** **20 34 18.5 +0.7**
KMI XS sS 20 34 44.0 +2.0
KMI SS SS 20 36 51.5 -12
KMI AMB AMB
comp=Z,37nm,0.9s,mb5.2
KMI AMB AMB
comp=Z,149nm,5.5s
KMI LR LR
comp=N,98nm,23.9s,MS3.8
KMI LR LR
comp=E,145nm,22.0s,MS3.8
KMI LR LR
comp=Z,129nm,22.5s,MS3.7
ZAA0 Zalesovo Array 39.64 308 *e*P **P** **20 28 52.7 -0.5**
ZALV Zalesovo Beam 39.64 308 P **P** **20 28 52.7 -0.5**
comp=Z,13nm,0.7s,mb4.8,baz=87,slow=7.9,SNR=64
ZALV PcP PcP 20 31 00.0 +0.9
comp=Z,3.2nm,0.8s,baz=93,slow=3.0,SNR=4.4
ZALV LR LR 20 46 26.4
comp=Z,90nm,18.6s,MS3.6,baz=39,slow=38
ZAL Zalesovo 39.66 308 P **P** **20 28 52.7 -0.6**
ZAL 20 31 00.0
WMQ Urumqi 39.97 292 P **P** **20 28 56.5 +0.4**
WMQ AP pP 20 29 11.5 +1.0
WMQ XP sP 20 29 19.5 +2.5
WMQ PP PP 20 30 33.5 +4.9
WMQ PCP PcP 20 31 01.5 +1.2
WMQ SCP ScP 20 34 44.0 -0.4
WMQ PCS PcS 20 34 50.5 0.0
WMQ S **S** **20 34 57.5 +0.2**
WMQ XS sS 20 35 23.5 +1.9
WMQ AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
WMQ LR LR
comp=N,70nm,19.6s,MS3.9
WMQ LR LR
comp=E,153nm,18.6s,MS3.9
WMQ LR LR
comp=Z,192nm,19.6s,MS4.0
NVS Novosibirsk 40.45 309 *i*P **P** **20 28 59.7 -0.2**
NVS *e* 20 31 01.4
NVS *i*S **S** **20 35 01.9 -2.3**
NVS pmax pmax
comp=Z,20nm,1.7s,mb4.6
NVS pmax pmax
comp=N,18nm,2.1s
NVS pmax pmax
comp=E,25nm,1.9s
NVS smax
comp=N,38nm,3.0s
NVS smax
comp=E,12nm,2.5s
SVW2 Sparrevohn 40.66 41 P **P** **20 28 60.0 -1.6**
IMA2 Indian Mountai 41.59 33 *e*P **P** **20 29 10.3 +1.1**
KDAK Kodiak Island 42.44 46 P **P** **20 29 16.1 0.0**
comp=E,7.0nm,0.8s,mb4.3,baz=117,slow=7.5,SNR=4.1
MKAR Makanchi Array 42.74 298 P **P** **20 29 18.2 -0.5**
MKAR PcP PcP 20 31 09.5 +0.2
MKAR LR LR 20 48 01.5
MKAR Makanchi Array 42.74 298 *i*P **P** **20 29 19.0 +0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 42.74 298 P **P** **20 29 18.2 -0.5**
comp=Z,4.8nm,0.6s,mb4.4,baz=81,slow=9.5,SNR=65
MKAR PcP PcP 20 31 09.5 +0.2
comp=Z,1.7nm,0.8s,baz=72,slow=5.4,SNR=3.3
MKAR LR LR 20 48 01.5
comp=Z,70nm,18.1s,MS3.6,baz=292,slow=37
LSA Lhasa 43.32 271 P **P** **20 29 25.8 +2.2**
LSA Lhasa 43.32 271 *e*P **P** **20 29 25.3 +1.7**
comp=Z,5.5nm,0.8s,mb4.3
LSA Lhasa 43.32 271 *e*P **P** **20 29 25.3 +1.7**
LSA pmax pmax
comp=Z,6.0nm,0.8s,mb4.4
KURK Kurchatov 44.00 304 *e*P **P** **20 29 28.7 -0.1**
comp=Z,18nm,0.9s,mb4.8
KURK Kurchatov 44.00 304 *e*P **P** **20 29 28.7 -0.1**
KURK pmax pmax
comp=Z,18nm,0.9s,mb4.8
COLA College 44.04 35 P **P** **20 29 30.5 +1.6**
comp=Z,10nm,0.8s,mb4.6
COLA College 44.04 35 P **P** **20 29 30.5 +1.6**
COLA pmax pmax
comp=Z,11nm,0.8s,mb4.6
CHG Chiang Mai 44.04 252 ⇑ P **P** **20 29 30.4 +0.9**
comp=Z,29nm,0.7s,mb5.1
CHTO Chiang Mai 44.04 252 *e*P **P** **20 29 30.5 +1.0**
NST Nakhon Sawan 45.35 248 P **P** **20 29 41.2 +1.2**
EGAK Eagle 46.89 35 *e*P **P** **20 29 51.5 +0.1**
TAPN Taplejung 47.13 270 *e*P **P** **20 29 55.1 +1.3**
comp=Z,44nm,0.7s,mb5.5
ODAN Odare 47.63 270 *e*P **P** **20 29 58.6 +0.8**
comp=Z,29nm,0.8s,mb5.3
JIRN Jiri 48.09 272 *e*P **P** **20 30 02.2 +0.9**
comp=Z,25nm,0.6s,mb5.4
BRVK Borovoye 48.30 309 *e*P **P** **20 30 01.0 -1.5**
TKM2 Tokmak 2 48.54 295 *e*P **P** **20 30 05.1 +0.6**
comp=Z,14nm,0.8s,mb5.0
TKM2 Tokmak 2 48.54 295 *e*P **P** **20 30 05.1 +0.5**
TKM2 pmax pmax
comp=Z,14nm,0.8s,mb5.0
TKM2 Tokmak 2 48.54 295 P **P** **20 30 05.6 +1.0**
SNR=18
KKN Kakani 48.69 272 *e*P **P** **20 30 06.3 +0.4**
comp=Z,46nm,0.7s,mb5.6
GKN Gorkha 49.05 273 *e*P **P** **20 30 08.7 0.0**
comp=Z,28nm,0.5s,mb5.5
KBK Karagaybulak 49.09 295 P **P** **20 30 09.6 +0.8**
SNR=14
KZA Kyzart 49.12 294 P **P** **20 30 10.6 +1.6**
SNR=6.3
USP Ospenovka 49.14 296 P **P** **20 30 09.4 +0.2**
SNR=7.1
INK Inuvik 49.21 29 *e*P **P** **20 30 09.6 +0.3**
INK Inuvik 49.21 29 P **P** **20 30 09.3 0.0**
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 49.21 29 P **P** **20 30 09.3 0.0**
comp=Z,1.2nm,0.4s,mb4.3,baz=283,slow=6.3,SNR=13
UCH Uchtor 49.55 295 *e*P **P** **20 30 11.8 -0.5**
KSH Kashi 49.71 291 *e*P **P** **20 30 14.8 +1.2**
KSH *e*AP pP 20 30 24.8 -3.6
KSH *e*PCP PcP 20 31 36.3 +2.4
KSH *e*PP PP 20 32 09.8 +1.5
KSH *e*SCP ScP 20 35 27.8 +3.3
KSH *e*PCS PcS 20 35 31.5 +0.8
KSH *e*S **S** **20 37 19.0 +0.7**
KSH *e*SCS ScS 20 40 00.8 +0.9
KSH AMB AMB
comp=Z,21nm,0.3s,mb5.7
KSH AMB AMB
comp=Z,358nm,3.3s
EKS2 Erkin-Say 49.87 295 *e*P **P** **20 30 14.9 +0.2**
comp=Z,5.6nm,0.8s,mb4.7
EKS2 Erkin-Say 49.87 295 P **P** **20 30 15.3 +0.6**
SNR=7.5
KOLN Koldanda 49.95 273 *e*P **P** **20 30 16.2 +0.7**
comp=Z,65nm,0.9s,mb5.7
AML Almayashu 50.15 295 *e*P **P** **20 30 17.1 +0.3**
comp=Z,134nm,0.8s
AML Almayashu 50.15 295 P **P** **20 30 17.3 +0.5**
SNR=6.2
SVE Sverdlovsk 52.28 316 ⇑ *e*P **P** **20 30 33.0 +0.4**
SVE *e* 20 41 26.2
SVE pmax pmax
comp=Z,28nm,0.8s,mb5.2
ARU Arti 53.49 317 *e*P **P** **20 30 41.4 -0.1**
comp=Z,17nm,0.8s,mb5.0
ARU *e*pP pP 20 30 56.5 0.0
ARU Arti 53.49 317 *c i*P **P** **20 30 40.5 -1.0**
ARU *e* 20 31 43.7
ARU *e* 20 32 38.6
ARU PPP 20 33 52.8
ARU *e*S **S** **20 38 10.7 +0.9**
ARU *e*SS SS 20 41 51.6 +1.6
ARU pmax pmax
comp=Z,24nm,1.0s,mb5.1
BLSP Bilaspur 54.26 268 *e*P **P** **20 30 46.6 -1.0**
KAKA Kakadu 55.51 193 *e*P **P** **20 30 56.9 +0.4**
comp=Z,5.0nm,0.6s,mb4.7
VIS Vishakhapatnam 56.08 263 *e*P **P** **20 31 00.4 -0.3**
VIS *ex* x 20 31 02.3
comp=Z,13nm,0.7s
BHPL Bhopal 57.10 273 *e*P **P** **20 31 07.8 -0.2**
PRGR Permogore 57.24 326 *e*P **P** **20 31 07.2 -1.2**
PRGR *e* 20 33 14.3
PRGR *e*S **S** **20 38 59.5 -0.2**
PRGR *e*SS SS 20 42 55.3 +6.6
PRGR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
RES Resolute Bay 57.28 16 *e*P **P** **20 31 08.1 -0.4**
comp=Z,178nm,0.9s
RES Resolute Bay 57.28 16 *e*P **P** **20 31 08.1 -0.4**
RES pmax pmax
comp=Z,178nm,0.9s
AJM Ajmer 57.29 278 *e*P **P** **20 31 08.7 -0.6**
AJM *ex* x 20 31 10.1
comp=Z,19nm,1.0s
YKA Yellowknife Ar 58.70 32 P **P** **20 31 18.9 +0.4**
YKA Yellowknife Ar 58.70 32 P **P** **20 31 18.9 +0.4**
comp=Z,0.6nm,0.5s,mb3.9,baz=306,slow=6.6,SNR=11
ARCES ARCESS Array B 59.68 339 P **P** **20 31 25.6 +0.3**
comp=Z,2.8nm,0.8s,mb4.3,baz=353,slow=3.9,SNR=7.0
ARCES LR LR 21 00 46.4
comp=Z,62nm,20.2s,MS3.7,baz=269,slow=40
HYB Hyderabad 59.80 267 *e*P **P** **20 31 27.0 +0.2**
HYB Hyderabad 59.80 267 *i*P **P** **20 31 27.0 +0.2**
DAG Danmarks Havn 60.77 355 ⇑ *i*P **P** **20 31 32.1 -0.5**
DAG pmax pmax
comp=Z,2.0nm,0.4s,mb4.6
DAG Danmarks Havn 60.77 355 ⇑ *i*P **P** **20 31 32.1 -0.5**
comp=Z,1.7nm,0.4s,mb4.5
JOF Joensuu 62.09 331 *ep* **P** **20 31 39.9 -1.8**
comp=Z,4.2nm,0.5s,mb4.8
JOF Joensuu 62.09 331 *e*P **P** **20 31 39.9 -1.8**
JOF pmax pmax
comp=Z,4.0nm,0.5s,mb4.8
WB2 Warramunga Arr 62.35 189 *e*P **P** **20 31 43.2 -0.6**
WRA Warramunga Arr 62.35 189 P **P** **20 31 43.5 -0.3**
comp=Z,3.4nm,0.9s,mb4.5,baz=8.7,slow=7.0,SNR=17
WRA pP pP 20 31 58.4 -0.7
comp=Z,5.4nm,0.9s,baz=7.8,slow=6.9,SNR=10
POO Poona 62.60 271 *e*P **P** **20 31 45.1 -0.6**
POO *ex* x 20 31 46.7
comp=Z,17nm,1.7s
KAD Karad 63.12 269 *e*P **P** **20 31 48.3 -0.9**
KAF Kangasniemi 64.38 332 *ep* **P** **20 31 55.2 -1.6**
comp=Z,2.0nm,0.5s,mb4.4,baz=46,slow=6.2
KAF Kangasniemi 64.38 332 *e*P **P** **20 31 55.2 -1.6**
KAF pmax pmax
comp=Z,2.0nm,0.5s,mb4.4
OBN Obninsk 64.82 323 *e*P **P** **20 31 59.4 -0.4**
OBN *e**PP pP 20 32 14.2 -1.0
OBN *e**SP sP 20 32 20.3 -1.2
OBN *e* 20 32 30.0
OBN pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
FINES FINESS Array B 64.92 332 P **P** **20 31 59.8 -0.5**
FINES pP pP 20 32 15.8 +0.1
FINES LR LR 21 01 51.7
FINES FINESS Array B 64.92 332 P **P** **20 31 59.8 -0.5**
FINES *PP pP 20 32 15.8 +0.1
FINES FINESS Array B 64.92 332 P **P** **20 31 59.8 -0.5**
comp=Z,4.0nm,0.6s,mb4.7,baz=45,slow=7.8,SNR=30
FINES pP pP 20 32 15.8 +0.1
comp=Z,3.9nm,0.7s,baz=49,slow=8.6,SNR=4.2
FINES LR LR 21 01 51.7
comp=Z,72nm,18.5s,MS3.9,baz=52,slow=37
ASAR Alice Springs 66.08 189 P **P** **20 32 09.4 +1.2**
comp=Z,1.2nm,0.9s,mb3.9,baz=7.4,slow=5.9,SNR=13
ASAR pP pP 20 32 23.8 +0.2
comp=Z,2.3nm,0.8s,baz=8.1,slow=5.8,SNR=9.3
KIV Kislovodsk 68.60 310 *e*P **P** **20 32 24.4 +0.3**
comp=Z,12nm,0.8s,mb4.9
KIV *e*pP pP 20 32 40.3 +0.8
KIV Kislovodsk 68.60 310 *e*P **P** **20 32 24.4 +0.3**
KIV *e* 20 32 49.5
KIV *e*S S 20 41 23.2 +1.0
KIV pmax pmax
comp=Z,18nm,1.0s,mb5.0
KIV MLR MLR
comp=Z,59nm,18.0s,MS3.9
ZEI Tsey 68.64 309 *e*P **P** **20 32 22.9 -1.4**
ZEI *e**PP pP 20 32 38.8 -1.0
ZEI *e* 20 32 47.1
ZEI pmax pmax
comp=Z,3.0nm,0.8s,mb4.3
NB2 NORSAR Subarra 69.97 337 P **P** **20 32 31.6 -0.6**
comp=Z,6.7nm,1.0s,mb4.5,baz=35,slow=6.5
NB2 NORSAR Subarra 69.97 337 P **P** **20 32 31.6 -0.6**
NB2 pmax pmax
comp=Z,7.0nm,1.0s,mb4.5
NOA NORSAR Array B 69.97 337 P **P** **20 32 31.3 -0.9**
NOA *PP pP 20 32 46.1 -1.7
NOA NORSAR Array B 69.97 337 P **P** **20 32 31.3 -0.9**
comp=Z,3.8nm,0.8s,mb4.4,baz=36,slow=6.1,SNR=18
NOA pP pP 20 32 46.1 -1.7
comp=Z,4.1nm,0.8s,baz=36,slow=6.1,SNR=7.5
NOA LR LR 21 06 45.7
comp=Z,49nm,19.0s,MS3.8,baz=35,slow=39

BOZ	**Bozeman (W)**	**70.11**	**46**	*e*P		**P**	**20 32 35.0**	**+1.7**
	comp=Z,2.4nm,0.6s,mb4.3								
BOZ	**Bozeman (W)**	**70.11**	**46**	*e*P		**P**	**20 32 35.0**	**+1.6**
BOZ					pmax	pmax			
	comp=Z,2.0nm,0.6s,mb4.2								
NVAR	**Mina Array Bea**	**70.87**	**55**	P		**P**	**20 32 37.7**	**-0.5**
NVAR	**Mina Array Bea**	**70.87**	**55**	P		**P**	**20 32 37.7**	**-0.4**
	comp=Z,1.2nm,0.6s,mb4.0,baz=311,slow=4.7,SNR=6.8								
AKASG	**Malin Array Be**	**71.08**	**322**	P		P	**20 32 38.8**	**-0.4**
	comp=Z,1.5nm,0.4s,mb4.3,baz=42,slow=6.2,SNR=15								
LKWY	**Lake**	**71.47**	**46**	*e*P		**P**	**20 32 40.2**	**-1.5**
BW06	**Boulder Array**	**73.13**	**47**	*e*P		**P**	**20 32 51.9**	**+0.3**
PDAR	**Pinedale Array**	**73.13**	**47**	P		**P**	**20 32 52.9**	**+1.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=272,slow=0.1,SNR=19								
PDAR					pP	pP	20 33 05.8	-1.3	
	comp=Z,0.8nm,0.5s,baz=304,slow=0.3,SNR=4.8								
ULM	**Lac du Bonnet**	**74.48**	**35**	P		**P**	**20 32 59.2**	**-0.1**
ULM	**Lac du Bonnet**	**74.48**	**35**	P		**P**	**20 32 59.2**	**-0.1**
	comp=Z,4.5nm,1.2s,mb4.3,baz=324,slow=9.6,SNR=3.9								
UMR	**Umm Al-Rimmam**	**74.54**	**296**	*e*P		**P**	**20 32 58.8**	**-1.3**
UMR					AMb	AMB	20 33 00.4		
	comp=Z,23nm,0.5s,mb5.4								
MIB	**Mutribah**	**74.63**	**296**	*e*P		**P**	**20 32 59.9**	**-0.7**
MIB					AMb	AMB	20 33 00.8		
	comp=Z,16nm,0.7s,mb5.1								
MALT	**Malatya**	**74.69**	**308**	⇑*i*P		**P**	**20 33 02.5**	**+1.7**
KWP	**Kalwaria**	**74.75**	**324**	*e*P		**P**	**20 33 01.9**	**+1.0**
KWP	**Kalwaria**	**74.75**	**324**	⇑*i*P		**P**	**20 33 01.6**	**+0.7**
QRN	**Al-Qurain**	**74.92**	**295**	*e*P		**P**	**20 33 01.8**	**-0.5**
QRN					AMb	AMB	20 33 02.6		
	comp=Z,31nm,0.4s,mb5.5								
NAY	**Al-Naaiem**	**75.05**	**296**	*e*P		**P**	**20 33 01.9**	**-1.2**
NAY					AMb	AMB	20 33 03.5		
	comp=Z,9.0nm,0.7s,mb4.8								
RDF	**Al-Radifah**	**75.06**	**295**	*e*P		**P**	**20 33 02.1**	**-0.9**
RDF					AMb	AMB	20 33 03.8		
	comp=Z,27nm,0.7s,mb5.3								
RST	**Umm Al-Ruwaisa**	**75.06**	**296**	*e*P		**P**	**20 33 01.9**	**-1.2**
RST					AMb	AMB	20 33 04.5		
	comp=Z,18nm,1.1s,mb4.9								
KOLS	**Kolonicke sedl**	**75.46**	**324**	*e*P		**P**	**20 33 04.4**	**-0.6**
KOLS	**Kolonicke sedl**	**75.46**	**324**	*e*P		**P**	**20 33 04.3**	**-0.7**
OJC	**Ojcow**	**75.53**	**326**	*e*P		**P**	**20 33 05.8**	**+0.4**
STHS	**Stebnicka Huta**	**75.53**	**325**	*i*P		**P**	**20 33 06.5**	**+1.1**
	comp=Z,2.6nm,0.7s,mb4.3								
STHS				*i*	PP	pP	20 33 22.1	+1.0	
STHS	**Stebnicka Huta**	**75.53**	**325**	*i*P		**P**	**20 33 06.5**	**+1.1**
STHS					pmax	pmax			
	comp=Z,3.0nm,0.7s,mb4.3								
CRVS	**Cervenica-Dubn**	**75.83**	**325**	*e*P		**P**	**20 33 06.8**	**-0.3**
TRPA	**Tarpa**	**75.95**	**324**	⇓*i*P		**P**	**20 33 08.7**	**+0.9**
MLR	**Muntele Rosu**	**76.34**	**320**	⇑*i*P		**P**	**20 33 10.1**	**0.0**
OKC	**Ostrava-Krasne**	**76.50**	**327**	*e*P		**P**	**20 33 11.4**	**+0.5**
MORC	**Moravsky Berou**	**76.79**	**327**	*e*P		**P**	**20 33 13.1**	**+0.6**
	comp=Z,4.5nm,1.0s,mb4.3								
MORC	**Moravsky Berou**	**76.79**	**327**	*e*P		**P**	**20 33 13.1**	**+0.6**
MORC					pmax	pmax			
	comp=Z,4.0nm,1.0s,mb4.3								
MORC	**Moravsky Berou**	**76.79**	**327**	⇓*i*P		**P**	**20 33 13.3**	**+0.8**
UPC	**Upice**	**76.82**	**328**	*e*P		**P**	**20 33 13.4**	**+0.7**
UPC				*e*pP		pP	20 33 31.5	+3.1	
DPC	**Dobruska-Polom**	**76.82**	**328**	*e*P		**P**	**20 33 13.4**	**+0.7**
DPC				*e*pP		pP	20 33 28.4	0.0	
ANTO	**Ankara**	**76.83**	**312**	⇓*i*P		**P**	**20 33 14.0**	**+1.0**
VYHS	**Vyhne**	**77.26**	**326**	*e*P		**P**	**20 33 15.5**	**+0.3**
	comp=Z,183nm,5.1s								
VYHS				*i*	PP	pP	20 33 30.9	0.0	
VYHS	**Vyhne**	**77.26**	**326**	*e*P		**P**	**20 33 15.5**	**+0.3**
VYHS					pmax	pmax			
	comp=Z,183nm,5.1s								
CLL	**Collm**	**77.31**	**331**	⇑*i*P		**P**	**20 33 15.1**	**-0.3**
	comp=Z,7.0nm,0.8s,mb4.6								
CLL				*e*pP		pP	20 33 30.0	-1.1	
CLL				*e*S		S	20 43 02.0	+1.2	
CLL	**Collm**	**77.31**	**331**	⇑*i*P		**P**	**20 33 15.1**	**-0.3**
CLL				*e**PP		pP	20 33 30.0	-1.1	
CLL				*e*S		S	20 43 02.0	+1.2	
CLL					pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.6								
CLL	**Collm**	**77.31**	**331**	⇑*i*P		**P**	**20 33 15.1**	**-0.3**
	comp=Z,7.0nm,0.8s,mb4.6								
CLL				*i*	pP	pP	20 33 30.1	-1.0	
CLL				*i*	sP	sP	20 33 37.5	+0.1	
CLL				*e*PP		PP	20 36 08.0	-1.4	
CLL				*e*S		S	20 43 02.0	+1.2	
CLL				LmV			21 06 00.0		
	comp=Z,100nm,21.0s								
PVCC	**Panska Ves**	**77.35**	**329**	*e*P		**P**	**20 33 14.6**	**-1.1**
VRAC	**Vranov**	**77.54**	**327**	⇓*i*P		**P**	**20 33 17.5**	**+0.8**
PRU	**Pruhonice**	**77.80**	**329**	*e*P		**P**	**20 33 18.6**	**+0.4**
PRU				*e*pP		pP	20 33 33.6	-0.3	
SMOL	**Smolenice**	**77.83**	**326**	*e*P		**P**	**20 33 18.6**	**+0.2**
GZR	**Gura Zlata**	**77.90**	**322**	⇓*i*P		**P**	**20 33 19.2**	**+0.4**
MODS	**Modra-Piesok**	**78.00**	**326**	*e*P		**P**	**20 33 19.6**	**+0.3**
BZS	**Buzias**	**78.26**	**322**	⇓*i*P		**P**	**20 33 21.0**	**+0.2**
KHC	**Kasperske Hory**	**78.86**	**329**	*e*P		**P**	**20 33 24.5**	**+0.4**
KHC				*e*pP		pP	20 33 39.1	-0.7	
GERES	**GERESS Array B**	**79.05**	**329**	P		**P**	**20 33 25.2**	**+0.1**
GERES				*PP		pP	20 33 39.6	-1.3	
GERES	**GERESS Array B**	**79.05**	**329**	P		**P**	**20 33 25.2**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=34,slow=5.5,SNR=11								
GERES					pP	pP	20 33 39.6	-1.3	
	comp=Z,0.9nm,0.8s,baz=26,slow=6.5,SNR=3.7								
GERES					LR	LR	21 09 07.5		
	comp=Z,67nm,18.9s,MS4.0,baz=273,slow=36								
GRA1	**Grafenberg Arr**	**79.28**	**331**	*e*P		**P**	**20 33 26.7**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.6								
GRF	**Grafenberg Arr**	**79.28**	**331**	*e*P		**P**	**20 33 26.7**	**+0.3**
GRF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6								
GRF	**Grafenberg Arr**	**79.28**	**331**	*e*P		**P**	**20 33 26.7**	**+0.3**
GRF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.6								
GRF	**Grafenberg Arr**	**79.28**	**331**	*e*P		**P**	**20 33 26.7**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.6								
SCHQ	**Schefferville**	**80.02**	**17**	P		**P**	**20 33 31.2**	**+1.0**
	comp=Z,2.2nm,0.7s,mb4.2,baz=306,slow=8.7,SNR=3.0								
CDF	**Champ du Feu**	**81.77**	**332**	*e*P		**P**	**20 33 39.8**	**+0.1**
HAU	**Haudompre**	**82.44**	**332**	*e*P		**P**	**20 33 43.0**	**-0.2**
HAU				*e*MLR		MLR			
	comp=Z,47nm,17.8s,MS3.6								
HAU	**Haudompre**	**82.44**	**332**	*e*P		**P**	**20 33 43.0**	**-0.2**
HAU					MLR	MLR			
	comp=Z,50nm,17.8s,MS3.9								
MEZF	**Maizieres J'vi**	**82.45**	**333**	*e*P		**P**	**20 33 43.4**	**+0.1**
CABF	**La Chapelle**	**83.73**	**332**	*e*P		**P**	**20 33 50.0**	**+0.1**
LOR	**Lormes**	**83.92**	**333**	*e*P		**P**	**20 33 50.7**	**-0.2**
	comp=Z,14nm,1.0s,mb4.8								
LOR				*e*MLR		MLR			
	comp=Z,93nm,22.0s,MS3.8								
LOR	**Lormes**	**83.92**	**333**	*e*P		**P**	**20 33 50.7**	**-0.2**
	comp=Z,7.2nm,1.0s,mb4.8								
LOR					LR	LR			
	comp=Z,90nm,22.0s,MS4.1								
LOR	**Lormes**	**83.92**	**333**	*e*P		**P**	**20 33 50.7**	**-0.2**
LOR					pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8								
LOR					MLR	MLR			
	comp=Z,90nm,22.0s,MS4.1								
SSF	**Saint Saulge**	**84.22**	**334**	*e*P		**P**	**20 33 52.3**	**-0.1**
	comp=Z,8.0nm,0.8s,mb4.6								
SSF	**Saint Saulge**	**84.22**	**334**	*e*P		**P**	**20 33 52.3**	**-0.1**
	comp=Z,4.0nm,0.8s,mb4.6								
SSF	**Saint Saulge**	**84.22**	**334**	*e*P		**P**	**20 33 52.3**	**-0.1**
SSF					pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.6								
LPL	**La Plagne**	**84.44**	**331**	*e*P		**P**	**20 33 53.4**	**-0.1**
LPG	**La Plagne**	**84.45**	**331**	*e*P		**P**	**20 33 53.3**	**-0.3**
SMF	**Signal de Mont**	**84.47**	**333**	*e*P		**P**	**20 33 53.7**	**0.0**
	comp=Z,9.2nm,0.8s,mb4.7								
SMF	**Signal de Mont**	**84.47**	**333**	*e*P		**P**	**20 33 53.7**	**0.0**
	comp=Z,4.6nm,0.8s,mb4.7								
SMF	**Signal de Mont**	**84.47**	**333**	*e*P		**P**	**20 33 53.7**	**0.0**
SMF					pmax	pmax			
	comp=Z,5.0nm,0.8s,mb4.7								
AVF	**Avril sur Loir**	**84.50**	**334**	*e*P		**P**	**20 33 53.9**	**+0.1**
	comp=Z,13nm,0.7s,mb4.8								
AVF	**Avril sur Loir**	**84.50**	**334**	*e*P		**P**	**20 33 53.9**	**+0.1**
	comp=Z,6.4nm,0.7s,mb4.9								
AVF	**Avril sur Loir**	**84.50**	**334**	*e*P		**P**	**20 33 53.9**	**+0.1**
AVF					pmax	pmax			
	comp=Z,6.0nm,0.7s,mb4.8								
MBDF	**Montbardon**	**85.10**	**330**	*e*P		**P**	**20 33 56.9**	**0.0**
TCF	**Toulx Ste Croi**	**85.32**	**334**	*e*P		**P**	**20 33 58.3**	**+0.4**
LMR	**La Mourre**	**86.39**	**330**	*e*P		**P**	**20 34 03.1**	**-0.2**
CAF	**Calviac**	**86.57**	**333**	*e*P		**P**	**20 34 05.2**	**+1.0**
	comp=Z,12nm,0.8s,mb4.9								
CAF	**Calviac**	**86.57**	**333**	*e*P		**P**	**20 34 05.2**	**+1.0**
	comp=Z,6.3nm,0.8s,mb4.9								
CAF	**Calviac**	**86.57**	**333**	*e*P		**P**	**20 34 05.2**	**+1.0**
CAF					pmax	pmax			
	comp=Z,6.0nm,0.8s,mb4.9								
RPZ	**Rata Peaks**	**89.10**	**160**	LR		LR	21 13 07.5		
	comp=Z,94nm,18.2s,MS4.2,baz=47,slow=35								
ETSF	**Etsaut**	**89.24**	**334**	*e*P		**P**	**20 34 18.0**	**+1.1**
	comp=Z,9.5nm,0.7s,mb4.9								
ETSF	**Etsaut**	**89.24**	**334**	*e*P		**P**	**20 34 18.0**	**+1.1**
	comp=Z,4.8nm,0.7s,mb4.9								
ETSF	**Etsaut**	**89.24**	**334**	*e*P		**P**	**20 34 18.0**	**+1.1**
ETSF					pmax	pmax			
	comp=Z,5.0nm,0.7s,mb5.0								
ESDC	**Sonseca Array**	**93.24**	**335**	LR		LR	21 18 42.9		
	comp=Z,32nm,19.9s,MS3.8,baz=330,slow=37								
DBIC	**Dimbokro**	**123.31**	**321**	PKP		PKPdf	20 40 18.6	+0.3	
	comp=Z,1.5nm,0.7s,baz=40,slow=6.8,SNR=3.7								
BOSA	**Boshof**	**128.67**	**264**	PKP		PKPdf	20 40 29.5	+1.5	
	comp=Z,2.2nm,0.9s,baz=175,slow=8.1,SNR=3.1								
SNAA	**Sanae**	**146.06**	**198**	*e*PKPdf		PKPdf	20 40 57.0	-1.5	
SNAA				*e*			20 41 00.1		
SNAA				*e*			20 41 03.0		
SNAA				*e*			20 41 06.0		
SNAA				*e*			20 41 08.5		
SNAA				*e*			20 41 14.5		
SNAA				*e*			20 41 17.4		
SNAA				*e*			20 41 21.1		
SNAA				*e*			20 41 28.8		
SNAA				*e*			20 41 31.4		
SNAA				*e*			20 41 34.5		
SNAA				*e*			20 41 39.2		
SNAA				*e*			20 41 41.9		
SNAA				*e*			20 41 45.6		
SNAA				*e*			20 41 48.8		
SNAA				*e*			20 41 52.3		
VNA2	**Neumayer--Watz**	**147.64**	**198**	*e*PKPdf		PKPdf	20 41 01.5	+0.3	
VNA2				*e*			20 41 05.1		
VNA2				*e*			20 41 07.9		
VNA2				*e*			20 41 10.3		
VNA2				*e*			20 41 13.1		
VNA2				*e*			20 41 19.6		
VNA2				*e*			20 41 23.1		
VNA2				*e*			20 41 27.4		
VNA2				*e*			20 41 33.5		
VNA2				*e*			20 41 37.8		
VNA2				*e*			20 41 40.4		
VNA2				*e*			20 41 45.1		
VNA2				*e*			20 41 48.1		
VNA2				*e*			20 41 51.4		
VNA2				*e*			20 41 54.3		
VNA2				*e*			20 41 58.7		
VNA2				*e*			20 42 01.0		
VNA3	**Neumayer Olymp**	**147.89**	**196**	*e*PKPdf		PKPdf	20 41 01.9	+0.3	
VNA3				*e*			20 41 04.6		
VNA3				*e*			20 41 06.6		
VNA3				*e*			20 41 10.1		
VNA3				*e*			20 41 11.8		
VNA3				*e*			20 41 20.5		
VNA3				*e*			20 41 22.4		
VNA3				*e*			20 41 25.9		
VNA3				*e*			20 41 33.0		
VNA3				*e*			20 41 36.3		
VNA3				*e*			20 41 40.1		
VNA3				*e*			20 41 44.4		
VNA3				*e*			20 41 47.0		
VNA3				*e*			20 41 50.0		
VNA3				*e*			20 41 53.0		
VNA3				*e*			20 41 56.7		
VNA3				*e*			20 41 58.8		
VNA1	**Neumayer--Stat**	**148.03**	**198**	*e*PKPdf		PKPdf	20 41 02.9	+1.0	
VNA1				*e*			20 41 06.3		
VNA1				*e*			20 41 08.4		
VNA1				*e*			20 41 11.4		
VNA1				*e*			20 41 13.9		
VNA1				*e*			20 41 20.8		
VNA1				*e*			20 41 23.2		
VNA1				*e*			20 41 27.6		
VNA1				*e*			20 41 33.5		
VNA1				*e*			20 41 37.9		
VNA1				*e*			20 41 41.2		
VNA1				*e*			20 41 45.7		
VNA1				*e*			20 41 48.6		
VNA1				*e*			20 41 51.8		
VNA1				*e*			20 41 54.6		
VNA1				*e*			20 41 57.6		
VNA1				*e*			20 42 00.0		

MAN 29 20:32:50,920N×12698E,h32km,mb4.8,ML3.7,MS3.8, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.18**	**211**	*e*P		Pn	20 33 11.2	+0.8
BIPH				*i*	S	Sn	20 33 24.8	-0.5
SCPH	**Surigao**	**1.58**	**292**	*e*P		Pn	20 33 16.0	+0.1
MSLP	**Maasin**	**2.29**	**294**	*e*P		Pn	20 33 27.8	+2.2
BUKP	**Musuan**	**2.31**	**236**	*e*P		Pn	20 33 29.5	+3.7
BUKP				*e*S		Sn	20 33 58.1	+4.9
CGP	**Cagayan de Oro**	**2.38**	**252**	⇑*e*P		Pn	20 33 27.4	+0.6
CGP				*e*S		Sn	20 33 56.0	+1.1
TBP	**Tagbilaran**	**3.12**	**279**	*e*P		Pn	20 33 38.1	+1.1

*NEIC **29** 20:33:29.1,3166S×7180W,h8km,ML3.4(GUC),After GUC.*

GUC 29 20:33:29.1±0.7,3166S×7180W,h8km±8km,MD4.0,ML3.4, 5C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.84**	**55**	⇑*i*P		Pg	20 33 45.0	-0.2
CMCH				*i*	S	Sg	20 33 57.6	+1.5
CMCH	**Combarbala**	**0.84**	**55**	⇑*i*P		Pg	20 33 45.0	-0.2
CMCH				*i*	S	Sg	20 33 57.6	+1.5
CMCH					AML	AML	20 34 05.6	
	comp=E,3μm,1.0s							
PTCH	**Petorca**	**0.95**	**129**	⇑*i*P		Pg	20 33 46.7	-0.8
PTCH				*i*	S	Sg	20 33 59.7	-0.1
PTCH	**Petorca**	**0.95**	**129**	⇑*i*P		Pg	20 33 46.7	-0.8
PTCH				*i*	S	Sg	20 33 59.7	-0.1
PTCH					AML	AML	20 34 07.4	
	comp=N,3μm,0.3s							
OVCH	**Ovalle**	**1.17**	**26**	⇑*i*P		Pb	20 33 50.2	-1.2
OVCH				*i*	S	Sg	20 34 06.0	-0.6
JACH	**Jahuel**	**1.45**	**135**	*e*P		Pn	20 33 55.0	-0.5
JACH				*i*	S	Sn	20 34 14.7	0.0
ROCH	**El Roble**	**1.47**	**153**	*i*P		Pn	20 33 55.3	-0.6
ROCH				*i*	S	Sn	20 34 15.5	+0.3
LCO	**Las Campanas**	**2.80**	**20**	*e*P		Pn	20 34 12.8	-1.4
CICH	**Cipreses**	**2.90**	**157**	*e*P		Pn	20 34 17.1	+1.7

MAN 29 20:52:59,924N×12670E,h46km,mb4.8,ML3.8,MS3.8, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.31**	**294**	*e*P		Pn	20 53 21.7	+0.9
SCPH				*e*S		Sn	20 53 39.2	+2.0
BUKP	**Musuan**	**2.11**	**230**	*e*P		Pn	20 53 35.2	+3.4
CGP	**Cagayan de Oro**	**2.13**	**249**	⇑*i*P		Pn	20 53 33.7	+1.6
CGP				*i*	S	Sn	20 53 59.1	+1.8
TBP	**Tagbilaran**	**2.83**	**279**	*e*P		Pn	20 53 44.2	+2.4

GUC 29 20:56:32.3±0.3,4541S×7308W,h5km±1km,ML4.1, Southern Chile

*NEIC **29** 20:58:18.3, 1546N×9669W, h2km, MD4.0(MEX), After MEX.*

MEX 29 20:58:18.1±0.9,1548N×9671W,h2km±10km,MD4.0,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.65**	**64**	*i*P		Pg	20 58 30.3	-0.3
HUIG				*i*	S	Sg	20 58 39.7	+0.7
VHO	**Vista Hermosa**	**1.58**	**359**	*i*P		Pn	20 58 43.4	-3.8
VHO				*i*	S	Sn	20 59 01.9	-6.4
VHO	**Vista Hermosa**	**1.58**	**359**	*i*P		Pn	20 58 43.4	-3.8
VHO				*i*	S	Sn	20 59 02.9	-5.4
OXX	**Oaxaca**	**1.59**	**360**	*i*P		Pn	20 58 44.0	-3.3
OXX				*i*	S	Sn	20 59 02.6	-5.9
PNIG	**Pinotepa**	**1.63**	**304**	*i*P		Pn	20 58 41.6	-6.3
PNIG				*i*	S	Sn	20 59 06.2	-3.3
PNIG	**Pinotepa**	**1.63**	**304**	*i*P		Pn	20 58 42.1	-5.8
PNIG				*i*	S	Sn	20 59 06.2	-3.3
CMIG	**Matias Romero**	**2.38**	**47**	*i*P		Pn	20 58 54.3	-3.9
CMIG				*i*	S	Sn	20 59 24.3	-3.6
UTMO	**Huajuapan**	**2.56**	**336**	*i*P		Pn	20 58 59.5	-1.1
UTMO				*i*	S	Sn	20 59 26.9	-5.5
TPIG	**Tehuac#an**	**2.99**	**348**	*e*P		Pn	20 59 02.7	-3.8
TPIG				*i*	S	Sn	20 59 39.9	-3.1
PLIG	**Platanillo**	**3.94**	**318**	*i*P		Pn	20 59 17.9	-1.8
PLIG				*i*	S	Sn	21 00 16.1	+10
PLIG	**Platanillo**	**3.94**	**318**	*i*P		Pn	20 59 17.9	-1.8
PLIG				*i*	S	Sn	21 00 06.9	+0.4
PPM	**Popocatepetl**	**4.01**	**333**	*i*P		Pn	20 59 25.9	+5.3
PPM				*i*	S	Sn	21 00 11.6	+3.4
PPM	**Popocatepetl**	**4.01**	**333**	*e*P		Pn	20 59 18.1	-2.5
PPM				*e*P			20 59 22.5	
PPM				*i*	S	Sn	21 00 04.8	-3.4
YAIG	**Yautepec**	**4.04**	**327**	*i*S		Sn	21 00 06.7	-2.4
IIO	**Organos**	**4.51**	**335**	*i*P		Pn	20 59 26.0	-1.5

*IDC **29** 20:58:43.4±1.0, 1185S×16613E, h0km, mb4.2/11, mb1 4.3/12, mb1mx4.2/17, mbtmp4.2/12, ML4.9/1, MS3.8/3, Ms1 3.8/3, ms1mx3.5/21, Error ellipse: s-maj=26.9km s-min=22.5km az=127.0*

*BJI **29** 20:58:44.1, 1180S×166.10E, h10km, mB5.0, mb4.7*

*NEIC **29** 20:58:45.1±0.9, 1176S×166.14E, h10km, mb4.3/2, Error ellipse: s-maj=22.3km s-min=16.2km az=117.0*

*ISCJB **29** 20:58:47.0±6.1, 119S±0.1×1660E±0.1, h30km±41km, mb4.3/15, MS3.7/3, Error ellipse: s-maj=21.1km s-min=15.9km az=41.6*

ISC 29 20:58:50.3±3.5,1181S±010×1660E±02,h42km±27km,n24, σ1s14/23,mb4.3/15,MS3.7/3,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HNR	**Honiara**	**6.42**	**291**		Pn	**Pn**	**21 00 22.0**	**-0.4**
	23nm,0.3s,baz=171,slow=2.4,SNR=7.5							
HNR					Sn	**Sn**	**21 01 34.5**	**+0.1**
	24nm,0.3s,baz=256,slow=14,SNR=4.4							
CTA	**Charters Tower**	**20.69**	**244**	*e*P		**P**	**21 03 28.5**	**+1.5**
	4.9nm,1.2s							
CTA	**Charters Tower**	**20.69**	**244**	P		**P**	**21 03 27.5**	**+0.5**
	8.3nm,1.0s,baz=81,slow=14,SNR=4.8							
CTA					LR	LR	21 09 54.5	
	comp=Z,215nm,19.5s,MS3.5,baz=57,slow=32							
ARMA	**Armidale**	**22.82**	**214**	*e*P		**P**	**21 03 51.7**	**+2.0**
STKA	**Stephens Creek**	**30.08**	**225**	LR		LR	21 16 36.0	
	comp=Z,296nm,19.7s,MS3.9,baz=27,slow=36							
WB2	**Warramunga Arr**	**31.47**	**251**	*e*P		**P**	**21 05 07.3**	**-0.9**
WRA	**Warramunga Arr**	**31.48**	**251**	P		**P**	**21 05 07.2**	**-1.1**
	1.2nm,0.5s,mb4.0,baz=84,slow=9.2,SNR=9.2							
WRA					PcP	PcP	21 08 00.5	-0.3
	0.5nm,1.0s,baz=61,slow=0.2,SNR=5.0							
ASAR	**Alice Springs**	**32.69**	**244**	P		**P**	**21 05 17.5**	**-1.4**
	0.7nm,0.6s,mb3.8,baz=71,slow=10,SNR=11							
ASAR					PcP	PcP	21 08 03.8	-0.3
	1.4nm,0.9s,baz=65,slow=2.2,SNR=8.7							
KAKA	**Kakadu**	**32.81**	**265**	*e*P		**P**	**21 05 19.2**	**-0.8**
	2.6nm,0.4s,mb4.5							
FITZ	**Fitzroy Crossi**	**39.45**	**256**	P		**P**	**21 06 17.3**	**+0.6**
	1.5nm,0.6s,mb3.9,baz=96,slow=10,SNR=2.7							
BATI	**Kupang**	**41.58**	**268**	P		**P**	**21 06 35.5**	**+1.1**
	7.0nm,0.6s,mb4.5,baz=249,slow=9.4,SNR=3.2							
PPT	**Papeete**	**43.26**	**103**	LR		LR	21 20 29.5	
	comp=Z,86nm,19.2s,MS3.7,baz=259,slow=30							
MJAR	**Matsushiro Arr**	**54.77**	**333**	P		**P**	**21 08 14.3**	**-1.5**
	1.4nm,0.6s,mb4.2,baz=42,slow=2.0,SNR=4.4							
VNDA	**Vanda**	**65.73**	**181**	P		**P**	**21 09 28.8**	**-1.5**
	1.4nm,0.8s,mb4.0,baz=348,slow=8.2,SNR=5.8							
BJI	**Beijing**	**69.24**	**321**	P		**P**	**21 09 52.8**	**-0.2**
BJI					AMB	AMB		
	comp=Z,9.0nm,1.3s,mb4.5							
LZH	**Lanzhou**	**75.47**	**312**	*e*P		**P**	**21 10 32.5**	**+2.3**
LZH					AP	pP	21 10 40.5	-

KUR pmax pmax
comp=E,260nm,0.7s
KUR pmax pmax
comp=Z,3μm,0.7s
KUR smax
comp=N,4μm,0.7s
KUR smax
comp=E,5μm,0.7s
KUR smax
comp=N,25μm,2.0s
KUR MLR MLR
comp=N,11μm,12.0s
KUR MLR MLR
comp=E,11μm,12.0s
KUR MLR MLR
comp=Z,19μm,12.0s
KUR Kuril'sk 4.14 261 ⇓*i*P **Pn 21 08 39.0 -0.9**
KUR AMB AMB 21 08 40.0
comp=Z,5μm,2.0s
KUR AMB AMB 21 08 41.3
comp=Z,860nm,0.7s
KUR AMB AMB 21 08 41.3
comp=Z,260nm,0.7s
KUR AMB AMB 21 08 41.3
comp=Z,3μm,0.7s
KUR A 21 09 38.4
comp=Z,25μm,2.0s
KUR A 21 09 38.4
comp=Z,15μm,2.0s
KUR AMS AMS 21 11 53.0
comp=Z,11μm,12.0s
KUR AMS AMS 21 11 53.0
comp=Z,19μm,12.0s
SKR Severo-Kuril's 4.95 18 *e*P **Pn 21 08 46.7 -4.2**
SKR AMB AMB 21 08 52.5
comp=Z,150nm,0.5s
SKR AMB AMB 21 08 52.5
comp=Z,510nm,0.8s
SKR AMB AMB 21 08 52.5
comp=Z,380nm,0.9s
SKR A 21 09 48.9
comp=Z,620nm,0.5s
SKR A 21 09 48.9
comp=Z,230nm,0.5s
SKR A 21 09 48.9
comp=Z,250nm,0.5s
SKR A 21 09 52.0
comp=Z,4μm,8.0s
SKR A 21 09 52.0
comp=Z,8μm,8.0s
SKR A 21 09 52.0
comp=Z,3μm,8.0s
SKR A 21 09 52.0
comp=Z,4μm,8.0s
SKR A 21 09 52.0
comp=Z,8μm,8.0s
SKR A 21 09 52.0
comp=Z,3μm,8.0s
SKR AMS AMS 21 10 37.0
comp=Z,19μm,18.0s
SKR AMS AMS 21 10 37.0
comp=Z,11μm,16.0s
SKR AMS AMS 21 10 37.0
comp=Z,19μm,18.0s
SKR AMS AMS 21 10 37.0
comp=Z,11μm,16.0s
YUK Yuzh-Kuril'sk 5.88 253 *i* PN **Pn 21 09 04.0 +0.3**
YUK pmax pmax
comp=E,300nm,0.5s
YUK pmax pmax
comp=Z,1μm,0.5s
YUK pmax pmax
comp=N,2μm,1.5s
YUK pmax pmax
comp=E,3μm,1.5s
YUK pmax pmax
comp=Z,5μm,1.5s
YUK MLR MLR
comp=N,13μm,12.0s
YUK MLR MLR
comp=E,5μm,12.0s
YUK MLR MLR
comp=Z,5μm,12.0s
YUK Yuzh-Kuril'sk 5.88 253 ⇓*i*P **Pn 21 09 04.0 +0.3**
YUK AMB AMB 21 09 06.8
comp=Z,300nm,0.5s
YUK AMB AMB 21 09 06.8
comp=Z,1μm,0.5s
YUK AMB AMB 21 09 10.0
comp=Z,5μm,1.5s
YUK AMB AMB 21 09 10.0
comp=Z,2μm,1.5s
YUK AMB AMB 21 09 10.0
comp=Z,3μm,1.5s
YUK *i* S **Sn 21 10 09.5 -2.1**
YUK A 21 10 15.3
comp=Z,4μm,0.8s
YUK A 21 10 15.3
comp=Z,5μm,0.8s
YUK A 21 10 25.0
comp=Z,9μm,2.0s
YUK A 21 10 25.0
comp=Z,8μm,2.0s
YUK AMS AMS 21 12 30.0
comp=Z,13μm,12.0s
YUK AMS AMS 21 12 30.0
comp=Z,5μm,12.0s
YUK AMS AMS 21 12 30.0
comp=Z,5μm,12.0s
NEM2 Nemuro 2 6.24 248 P **Pn 21 09 07.7 -0.9**
NEM2 *e*S **Sn 21 10 15.2 -5.3**
JRA Rausu 6.41 254 P **Pn 21 09 12.3 +1.4**
JRA *e*S **Sn 21 10 22.2 -2.4**
JNK Nakash 6.81 252 P **Pn 21 09 17.1 +0.6**
JNK *e*S **Sn 21 10 31.2 -3.4**
JAK Akkeshi 7.09 248 P **Pn 21 09 19.5 -0.8**
JAK *e*S **Sn 21 10 34.4 -7.0**
JTKR Abashiri--Toko 7.21 257 P **Pn 21 09 23.6 +1.6**
JAR Ashorobuto 7.56 252 P **Pn 21 09 27.7 +0.9**
JAR *e*S **Sn 21 10 49.7 -3.4**
JMP Maruseppu 7.58 258 P **Pn 21 09 28.8 +1.8**
YSS Yuzh-Sakhalins 7.59 281 Pn **Pn 21 09 28.6 +1.4**
comp=Z,172nm,0.9s
YSS Yuzh-Sakhalins 7.59 281 ⇓*i*PN **Pn 21 09 30.0 +2.8**
YSS pmax pmax
comp=E,230nm,1.0s
YSS pmax pmax
comp=Z,220nm,1.0s
YSS pmax pmax
comp=N,50nm,0.9s
YSS MLR MLR
comp=Z,3μm,14.0s
YSS MLR MLR
comp=N,3μm,13.0s
YSS Yuzh-Sakhalins 7.59 281 ⇓*i*P **Pn 21 09 30.0 +2.8**
YSS AMB AMB 21 09 32.0
comp=N,50nm,0.9s
YSS AMB AMB 21 09 32.0
comp=N,220nm,1.0s
YSS AMB AMB 21 09 32.0
comp=N,230nm,1.0s
YSS *e*rx rx 21 09 43.8
YSS *e*S **Sn 21 10 54.0 +0.2**
YSS *e*LQ 21 11 10.0
YSS *e*LR LR 21 11 48.0
YSS AMS AMS 21 13 03.0
comp=N,3μm,14.0s
YSS AMS AMS 21 13 03.0
comp=N,3μm,13.0s
JOB Onbets 7.69 250 P **Pn 21 09 28.9 +0.3**
JOB *e*S **Sn 21 10 51.2 -5.0**
PET Petropavlovsk 7.73 23 *e*Pn **Pn 21 09 24.9 -4.1**
comp=N,510nm,1.5s
PET *e*Sn **Sn 21 10 46.2 -11**
PET Petropavlovsk 7.73 23 *e*PN **Pn 21 09 26.1 -2.9**
PET pmax pmax
comp=Z,169nm,0.9s
PET MLR MLR
comp=Z,5μm,17.0s
PET MLR MLR
comp=Z,5μm,16.0s
JSE Soyaes 7.86 266 P **Pn 21 09 33.8 +2.9**
JKK2 Kamakawa 2 8.04 258 P **Pn 21 09 35.3 +2.0**
ASAJ Asahikawa 8.06 260 P **Pn 21 09 36.1 +2.4**
ASAJ Asahikawa 8.06 260 PN **Pn 21 09 34.1 +0.4**
ASAJ pmax pmax
comp=Z,7.0nm,0.3s
ASAJ Asahikawa 8.06 260 Pn **Pn 21 09 34.0 +0.4**
comp=Z,7.4nm,0.3s,baz=89,slow=16,SNR=106
JCH Churui 8.13 249 P **Pn 21 09 34.3 -0.3**
JCH *e*S **Sn 21 11 00.9 -6.2**
JWK2 Keihoku 8.27 269 P **Pn 21 09 41.1 +4.5**
JFR Furan 8.40 254 P **Pn 21 09 39.3 +1.0**
JFR *e*S **Sn 21 11 10.8 -2.9**
UGL Uglegorsk 8.42 295 *e*PN **Pn 21 09 41.0 +2.4**
UGL pmax pmax
comp=Z,139nm,0.9s
UGL pmax pmax
comp=Z,1μm,4.0s
UGL MLR MLR
comp=N,8μm,12.0s
UGL MLR MLR
comp=E,6μm,12.0s
UGL MLR MLR
comp=Z,3μm,12.0s
UGL Uglegorsk 8.42 295 *e*P **Pn 21 09 41.0 +2.4**
UGL AMB AMB 21 09 44.5
comp=Z,139nm,0.9s
UGL AMB AMB 21 09 48.0
comp=Z,1μm,4.0s
UGL *e*rx rx 21 09 57.0
UGL *e*L 21 11 44.0
UGL AMS AMS 21 13 33.0
comp=Z,8μm,12.0s
UGL AMS AMS 21 13 33.0
comp=Z,6μm,12.0s
UGL AMS AMS 21 13 33.0
comp=Z,3μm,12.0s
JSS Shosan 8.50 263 P **Pn 21 09 42.8 +3.2**
JAB Ashibetsu 8.52 257 P **Pn 21 09 42.3 +2.3**
JEM Erimo 8.56 246 P **Pn 21 09 40.6 +0.1**
ERM Erimo 8.56 246 Pn **Pn 21 09 42.1 +1.6**
comp=Z,2μm,0.9s,SNR=23
ERM Erimo 8.56 246 *e*Pn **Pn 21 09 41.3 +0.8**
comp=Z,298nm,0.8s
ERM Erimo 8.56 246 *e*PN **Pn 21 09 41.6 +1.1**
ERM pmax pmax
comp=Z,300nm,0.9s
JNBK Urakawa-nobuka 8.69 248 P **Pn 21 09 41.4 -0.9**
JNBK *e*S **Sn 21 11 12.4 -8.4**
JBT2 Biratori 2 8.71 252 P **Pn 21 09 42.9 +0.3**
TYV Tymovskoe 8.78 308 *e*P **Pn 21 09 49.2 +5.8**
TYV AMB AMB 21 09 51.0
comp=Z,1μm,3.0s
TYV AMB AMB 21 09 51.0
comp=Z,600nm,3.0s
TYV AMB AMB 21 09 51.0
comp=Z,1μm,3.0s
TYV AMB AMB 21 09 57.0
comp=Z,31nm,0.8s
TYV AMB AMB 21 09 57.0
comp=Z,88nm,0.8s
TYV AMB AMB 21 09 57.0
comp=Z,143nm,1.0s
TYV *e*S **Sn 21 11 18.0 -4.9**
TYV A 21 11 28.0
comp=Z,900nm,5.0s
TYV A 21 11 28.0
comp=Z,600nm,6.0s
JHR Hokuryu 8.78 259 P **Pn 21 09 46.1 +2.6**
JEW Eniwo 9.30 254 P **Pn 21 09 51.3 +0.7**
JEW *e*S **Sn 21 11 33.6 -2.2**
JNB Noboribetsu 9.73 253 P **Pn 21 09 56.6 +0.1**
JNB *e*S **Sn 21 11 40.6 -5.8**
JSK Shakotan 9.77 259 P **Pn 21 09 58.4 +1.4**
JKB Kayabe 10.00 250 P **Pn 21 09 59.5 -0.7**
JKB *e*S **Sn 21 11 43.6 -9.4**
OKH Okha 10.24 321 ⇑*i*P **Pn 21 10 06.0 +2.6**
OKH *e*P 21 10 06.1
OKH AMB AMB 21 10 07.0
comp=Z,500nm,1.1s
OKH AMB AMB 21 10 09.8
comp=Z,1μm,5.0s
OKH AMB AMB 21 10 09.8
comp=Z,2μm,4.0s
OKH AMB AMB 21 10 09.8
comp=Z,1μm,4.0s
OKH *e*LQ 21 12 44.2
OKH AMS AMS 21 15 20.2
comp=Z,4μm,14.0s
OKH AMS AMS 21 15 20.2
comp=Z,3μm,14.0s
OKH AMS AMS 21 15 20.2
comp=Z,4μm,13.0s
JSH Shimam 10.32 256 P **Pn 21 10 06.0 +1.3**
JYM2 Yakumo 2 10.33 253 P **Pn 21 10 04.9 +0.1**
JANG Nango 10.51 242 P **Pn 21 10 04.7 -2.5**
JANG *e*S **Sn 21 11 51.2 -14**
JTM Tenmabayashi 10.55 245 P **Pn 21 10 06.2 -1.5**
JTM *e*S **Sn 21 11 55.0 -11**
JTH Tanohata 10.56 239 P **Pn 21 10 04.8 -3.1**
JTH *e*S **Sn 21 11 54.4 -12**
JSR Shiriuchi 10.58 250 P **Pn 21 10 05.1 -3.0**
JKZ Kuzumaki 10.86 241 P **Pn 21 10 09.7 -2.2**
JOSM Okushiri--Mats 10.94 254 P **Pn 21 10 12.9 -0.2**
JAH Hinai 11.16 243 P **Pn 21 10 14.3 -1.8**
JOM Ohasama 11.20 239 P **Pn 21 10 14.4 -2.2**
OFUJ Ofunato 11.23 236 P **Pn 21 10 14.6 -2.5**
OFUJ *e*S **Sn 21 12 10.3 -13**
JRG Rokugo 11.64 240 P **Pn 21 10 20.9 -1.8**
JRG *e*S **Sn 21 12 21.5 -12**
JIO Ouri 11.84 235 P **Pn 21 10 22.6 -2.8**
JIO *e*S **Sn 21 12 24.7 -13**
TEY Ternei 12.01 271 *e*P **Pn 21 10 27.0 -0.7**
TEY AMB AMB 21 10 32.5
comp=Z,140nm,1.3s
TEY AMB AMB 21 10 32.5
comp=Z,240nm,1.3s
TEY *e*L 21 13 48.0
JYA Atsumi 12.70 239 P **Pn 21 10 35.3 -1.9**
JYA *e*S **Sn 21 12 49.3 -10**
JFK Kawauchi 12.87 232 P **Pn 21 10 36.8 -2.8**
JFK *e*S **Sn 21 12 50.8 -13**
HABR Khabarovsk 12.88 288 *e*PN **Pn 21 10 43.1 +3.5**
HABR *e* 21 13 06.7
HABR pmax pmax
comp=Z,38nm,1.3s
JFY Yanaizu 13.50 235 P **Pn 21 10 47.1 -1.1**
MA2 Magadan 13.69 354 *e*Pn **Pn 21 10 46.9 -3.7**
comp=Z,62nm,0.7s
MA2 Magadan 13.69 354 ⇑*e*P **Pn 21 10 47.8 -2.8**
MA2 pmax pmax
comp=Z,67nm,0.8s
MA2 MLR MLR
comp=Z,2μm,16.0s
JSD Sado 13.94 241 P **Pn 21 10 52.1 -2.0**
MAJO Matsushiro 14.96 236 *e*Pn **Pn 21 11 06.1 -2.0**
comp=Z,267nm,0.8s
MAJO *e* 21 11 16.7
MAJO Matsushiro 14.96 236 *e*P **Pn 21 11 06.1 -2.0**
MAJO pmax pmax
comp=Z,270nm,0.8s
MAT Matsushiro 14.96 236 P **Pn 21 11 06.1 -2.0**
MAT S **Sn 21 13 59.0 +4.6**
MAT Matsushiro 14.96 236 P **Pn 21 11 06.6 -1.5**
MJAR Matsushiro Arr 14.96 236 Pn **Pn 21 11 06.7 -1.3**
comp=Z,1.4nm,0.3s,baz=31,slow=13,SNR=41
KLR Kul'dur 15.11 290 *e*P **Pn 21 11 08.0 -2.0**
KLR pmax pmax
comp=E,120nm,1.6s
KLR pmax pmax
comp=Z,100nm,1.6s
VLA Vladivostok 15.78 267 ⇓*e*P **Pn 21 11 17.2 -1.6**
VLA pmax pmax
comp=Z,251nm,1.6s
VLA MLR MLR
comp=Z,2μm,13.0s
JHJ Hachijo jima 2 16.71 224 Pn **Pn 21 11 30.9 0.0**
comp=Z,5.1nm,0.3s,baz=238,slow=6.7,SNR=2.3
SEY Seymchan 16.97 358 ⇑*i*P **Pn 21 11 29.9 -3.9**
MDJ Mudanjiang 16.98 274 P **Pn 21 11 33.3 -0.8**
MDJ AP pP 21 11 38.3 +1.8
MDJ XP sP 21 11 39.8 +3.1
MDJ S **Sn 21 14 41.0 -2.2**
MDJ SCP ScP 21 19 55.5 -0.4
MDJ AMB AMB
comp=Z,28nm,1.1s
MDJ AMB AMB
comp=Z,140nm,3.8s
MDJ LR LR
comp=N,2μm,17.1s
MDJ LR LR
comp=E,1μm,14.5s
MDJ LR LR
comp=Z,3μm,14.9s
ZEA Zeya 18.61 304 *e*P **Pn 21 11 48.9 -5.4**
ZEA AMB AMB 21 11 52.5
comp=Z,24nm,1.0s
ZEA AMB AMB 21 11 52.5
comp=Z,37nm,1.4s
ZEA AMB AMB 21 11 52.5
comp=Z,46nm,1.4s
ZEA *e*rx rx 21 12 17.0
ZEA *e*rx rx 21 12 20.9
ZEA *e*S **Sn 21 15 16.0 -6.7**
ZEA A 21 15 27.0
comp=Z,700nm,9.0s
ZEA A 21 15 27.0
comp=Z,500nm,7.0s
CN2 Changchun 20.07 274 *e*P **P 21 12 07.5 -2.6**
CN2 XP sP 21 12 14.3 +3.6
CN2 *e*S **S 21 15 46.0 -10**
CN2 AMB AMB
comp=Z,50nm,0.9s
CN2 AMB AMB
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,13.0s,MS4.8
CN2 LR LR
comp=E,2μm,13.0s,MS4.8
CN2 LR LR
comp=Z,3μm,14.0s,MS4.8
CLNS Chul'man 20.79 312 *e*P **P 21 12 17.6 -0.2**
CLNS *e* 21 12 29.6
CLNS *e*S **S 21 16 06.3 -4.0**
CLNS *e* 21 16 22.7
CLNS *e*SS 21 16 41.7
CLNS pmax pmax
comp=Z,66nm,0.7s
CLNS pmax pmax
comp=N,67nm,0.9s
CLNS pmax pmax
comp=E,39nm,0.9s
CLNS smax
comp=N,94nm,1.1s
CLNS smax
comp=Z,18nm,1.2s
CLNS smax
comp=E,59nm,1.9s
CLNS MLR MLR
comp=E,3μm,15.0s,MS4.8
CLNS MLR MLR
comp=Z,2μm,15.0s,MS4.7
CLNS MLR MLR
comp=N,2μm,16.0s,MS4.8
KSRS Korea Array 20.96 255 P **P 21 12 20.8 +1.0**
comp=N,41nm,0.8s,baz=59,slow=10,SNR=92
CBIJ Chichi jima 20.97 210 P **P 21 12 21.8 +1.8**
comp=N,95nm,1.0s,baz=0.0,slow=7.1,SNR=4.4
YAK Yakutsk 21.14 328 *e*P **P 21 12 18.0 -3.6**
comp=N,170nm,0.8s,mb5.4
YAK LR LR
comp=Z,931nm,22.0s,MS4.1
YAK Yakutsk 21.14 328 *e*P **P 21 12 18.8 -2.8**
YAK *e* 21 12 33.3
YAK *e*S **S 21 16 08.3 -8.9**
YAK *e* 21 16 25.0
YAK pmax pmax
comp=N,40nm,1.0s
YAK pmax pmax
comp=Z,144nm,1.0s,mb5.3
YAK pmax pmax
comp=E,35nm,1.2s
YAK smax
comp=N,600nm,2.2s
YAK smax
comp=Z,600nm,2.5s
YAK smax
comp=E,900nm,3.1s
YAK MLR MLR
comp=N,900nm,16.0s,MS4.4
YAK MLR MLR
comp=E,900nm,15.0s,MS4.4
JNU Nakatsue 21.69 242 P **P 21 12 29.4 +1.8**
comp=E,75nm,1.0s,mb5.1,baz=38,slow=13,SNR=12
JNU LR LR 21 20 46.8
comp=E,2μm,21.9s,MS4.4,baz=210,slow=36
INCN Inchon 21.82 257 *e*P **P 21 12 30.2 +1.2**
comp=E,203nm,0.9s,mb5.5
INCN LR LR
comp=Z,804nm,20.0s,MS4.1
SNY Shenyang 22.00 270 ⇑P **P 21 12 31.5 +0.5**
SNY AP 21 12 37.5
SNY XP sP 21 12 43.8 +12
SNY AMB AMB
comp=Z,90nm,0.9s,mb5.2
SNY AMB AMB
comp=Z,220nm,3.6s
SNY LR LR
comp=N,2μm,12.7s,MS4.8
SNY LR LR
comp=E,2μm,13.5s,MS4.8
SNY LR LR
comp=Z,2μm,15.7s,MS4.6
HIA Hailar 22.97 290 *e*P **P 21 12 37.1 -4.1**
comp=Z,17nm,0.8s,mb4.5
HIA LR LR
comp=Z,675nm,22.0s,MS4.0
HIA Hailar 22.97 290 *e*P **P 21 12 37.1 -4.1**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA MLR MLR
comp=Z,675nm,22.0s
BILL Bilibino 23.02 12 *e*P **P 21 12 37.7 -3.9**
comp=Z,181nm,1.2s,mb5.4
BILL Bilibino 23.02 12 ⇓*i*P **P 21 12 38.1 -3.5**
BILL *e* 21 13 06.8
BILL *e*PCP PcP 21 16 27.5 -3.4
BILL *e*S **S 21 16 47.1 -5.7**
BILL *e*SS 21 17 00.0
BILL pmax pmax
comp=Z,43nm,1.3s,mb4.7
DL2 Dalian 24.56 265 *i* P **P 21 12 57.3 +0.6**
DL2 S **S 21 17 16.5 -1.7**
DL2 AMB AMB
comp=Z,50nm,0.8s,mb5.1
DL2 AMB AMB
comp=Z,120nm,5.8s
DL2 LR LR
comp=N,480nm,13.3s,MS4.4
DL2 LR LR
comp=E,650nm,14.8s,MS4.4
DL2 LR LR
comp=Z,730nm,14.5s,MS4.3
CIT Chita 26.72 298 *e*P **P 21 13 14.1 -2.0**
BOD Bodaibo 26.75 311 *e*P **P 21 13 12.8 -3.6**
BOD *e* 21 17 49.0
BOD pmax pmax
comp=Z,31nm,1.3s,mb4.7
JOW Kunigami 27.81 235 P **P 21 13 26.6 +0.5**
comp=Z,17nm,0.9s,mb4.7,baz=54,slow=11,SNR=4.2
BJI Beijing 27.86 271 P **P 21 13 28.8 +2.3**
BJI PCP PcP 21 16 41.8 -0.5
BJI S **S 21 18 11.8 +1.3**
BJI SCP ScP 21 20 22.5 -1.4
BJI AMB AMB
comp=Z,47nm,0.9s,mb5.1
BJI LR LR
comp=N,2μm,19.3s,MS4.8
BJI LR LR
comp=E,922nm,16.7s,MS4.8
BJI LR LR
comp=Z,1μm,19.3s,MS4.5
BJT Baijiatuau 27.88 271 *e*P **P 21 13 27.9 +1.3**
comp=Z,40nm,0.8s,mb5.1
BJT LR LR
comp=Z,2μm,20.0s,MS4.7
BJT Baijiatuau 27.88 271 *e*P **P 21 13 27.9 +1.3**
BJT pmax pmax
comp=Z,40nm,0.8s
BJT MLR MLR
comp=Z,2μm,20.0s
TIXI Tiksi 28.28 344 *e*P **P 21 13 25.4 -4.5**
comp=Z,14nm,0.8s,mb4.6
TIXI LR LR
comp=Z,510nm,19.0s,MS4.1
TIXI Tiksi 28.28 344*c i*P **P 21 13 25.6 -4.3**

TIXI eS S 21 18 07.5 -9.0
TIXI pmax pmax
comp=Z,34nm,1.4s,mb4.8
TIXI MLR MLR
comp=Z,1μm,14.0s,MS4.7
TIA Tai'an 29.00 263 eP P **21 13 38.0 +1.3**
SSE Sheshan 29.20 251 P P **21 13 40.5 +2.0**
SSE S S **21 18 32.5 +0.7**
SSE XS sS 21 18 44.5 +12
SSE AMB AMB
comp=Z,34nm,0.8s,mb5.1
SSE AMB AMB
comp=Z,117nm,3.2s
SSE LR LR
comp=N,1μm,20.4s,MS4.5
SSE LR LR
comp=E,484nm,20.5s,MS4.5
SSE LR LR
comp=Z,908nm,21.1s,MS4.4
NJ2 Nanjing 30.16 255 eP P **21 13 48.5 +1.5**
NJ2 AP 21 13 52.0
NJ2 XP sP 21 13 54.5 +6.9
NJ2 PP PP 21 14 47.3 -7.6
NJ2 S S **21 18 44.5 -2.3**
NJ2 XS sS 21 18 52.5 +5.0
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.0
NJ2 AMB AMB
comp=Z,120nm,7.7s
NJ2 LR LR
comp=N,4μm,18.5s,MS5.1
NJ2 LR LR
comp=E,1μm,16.0s,MS5.1
NJ2 LR LR
comp=Z,1μm,16.0s,MS4.7
HHC Hu-ho-hao-te 30.74 276 eP P **21 13 52.8 +0.8**
HHC AP 21 13 57.3
HHC XP sP 21 13 59.8 +7.2
HHC PP PP 21 14 54.0 -7.1
HHC PCP PcP 21 16 51.3 +1.7
HHC S S **21 18 52.0 -3.6**
HHC XS sS 21 19 00.0 +3.6
HHC SCP ScP 21 20 32.0 -1.1
HHC PCS PcS 21 20 34.0 +0.7
HHC AMB AMB
comp=Z,66nm,0.6s,mb5.6
HHC LR LR
comp=N,2μm,20.0s
HHC LR LR
comp=E,2μm,12.8s
HHC LR LR
comp=Z,2μm,13.4s
ULN Ulaanbaatar 31.51 291⇑ eP P **21 13 57.1 -1.6**
ULN LR LR
comp=Z,657nm,19.0s,MS4.3
ULN Ulaanbaatar 31.51 291 P P **21 13 58.3 -0.4**
SNR=9.5
ULN Ulaanbaatar 31.51 291 P P **21 13 58.3 -0.4**
SNR=9.5
BTO Baotou 31.91 276 eP P **21 14 02.0 -0.3**
SONM Songino Array 31.94 291 P P **21 14 01.6 -0.9**
comp=Z,2.4nm,0.4s,mb4.4,baz=81,slow=7.7,SNR=14
SONM LR LR 21 27 26.6
comp=Z,951nm,18.4s,MS4.5,baz=254,slow=37
IRK Irkutsk 32.38 299 eP P **21 14 04.3 -2.1**
IRK pmax pmax
comp=Z,23nm,1.5s,mb4.8
TTA Tatalina 32.72 41 eP P **21 14 08.4 -0.8**
TTA e 21 14 21.8
TTA pmax pmax
comp=Z,58nm,1.2s,mb5.4
SVW2 Sparrevohn 32.75 44 eP P **21 14 09.2 -0.3**
TLY Talaya 32.86 298 P P **21 14 09.3 -1.2**
comp=Z,126nm,0.8s,mb5.9,SNR=9.8
TLY Talaya 32.86 298 eP P **21 14 08.7 -1.9**
comp=Z,16nm,0.8s,mb5.0
TLY LR LR
comp=Z,1μm,21.0s,MS4.5
TLY Talaya 32.86 298 eP P **21 14 09.1 -1.4**
TLY eSS SS 21 21 30.1 -19
TLY pmax pmax
comp=Z,18nm,0.8s,mb5.0
TLY MLR MLR
comp=Z,1μm,17.0s,MS4.7
TLY Talaya 32.86 298 P P **21 14 09.5 -1.0**
SNR=11
TLY Talaya 32.86 298 P P **21 14 09.5 -1.0**
SNR=11
ZAK Zakamensk 33.34 296 eP P **21 14 13.3 -1.5**
ZAK e 21 16 57.3
ZAK pmax pmax
comp=Z,10.0nm,1.1s,mb4.7
WHN Wuhan 34.13 257⇓ P P **21 14 22.0 +0.2**
WHN S S **21 19 50.0 +1.4**
WHN LR LR
comp=N,311nm,18.0s,MS4.2
WHN LR LR
comp=E,284nm,18.0s,MS4.2
WHN LR LR
comp=Z,2μm,15.1s,MS5.0
IMA2 Indian Mountai 34.18 35 eP P **21 14 21.0 -0.9**
KDAK Kodiak Island 34.27 50 P P **21 14 20.7 -2.1**
KDAK LR LR
comp=Z,286nm,22.0s,MS4.0
KDAK Kodiak Island 34.27 50 P P **21 14 20.7 -2.1**
comp=Z,9.6nm,0.9s,mb4.7,baz=307,slow=7.1,SNR=5.4
MOY Mondy 34.48 299 eP P **21 14 23.1 -1.6**
QZH Quanzhou 35.06 245⇑ iP P **21 14 32.0 +2.1**
QZH S S **21 20 04.0 +0.9**
QZH AMB AMB
comp=Z,100nm,1.0s,mb5.7
QZH LR LR
comp=N,1μm,17.6s,MS4.9
QZH LR LR
comp=E,710nm,13.3s,MS4.9
QZH LR LR
comp=Z,760nm,17.8s,MS4.5
XAN Xi'an 35.84 267 P P **21 14 37.0 +0.4**
XAN S S **21 20 10.8 -4.2**
XAN AMB AMB
comp=Z,22nm,0.8s,mb5.1
XAN LR LR
comp=N,532nm,13.0s,MS4.6
XAN LR LR
comp=E,612nm,15.6s,MS4.6
XAN LR LR
comp=Z,975nm,15.2s,MS4.7
PMR Palmer 35.87 43 eP P **21 14 35.6 -0.9**
comp=Z,5.6nm,0.6s,mb4.7
PMR eP 21 14 36.1
PMR LR LR
comp=Z,864nm,19.0s,MS4.5
PMR Palmer 35.87 43 eP P **21 14 34.4 -2.1**
PMR e 21 14 48.8
PMR pmax pmax
comp=Z,40nm,1.4s,mb5.2
COLA College 36.48 38⇑ eP P **21 14 40.2 -1.4**
comp=Z,67nm,1.2s,mb5.5
COLA LR LR
comp=Z,594nm,19.0s,MS4.4
LZH Lanzhou 38.30 273⇓ iP P **21 14 58.3 +0.8**
LZH AP 21 15 01.3
LZH PP PP 21 16 28.0 +3.2
LZH PCP PcP 21 17 12.0 +0.6
LZH eS S **21 20 50.0 -2.4**
LZH XS sS 21 21 00.3 +7.2
LZH SS SS 21 23 30.0 -10
LZH AMB AMB
comp=Z,90nm,1.5s,mb5.3
LZH AMB AMB
comp=Z,219nm,5.8s
LZH LR LR
comp=E,2μm,15.7s
LZH LR LR
comp=Z,2μm,16.2s,MS5.0
EGAK Eagle 39.34 38 eP P **21 15 04.5 -1.3**
comp=Z,64nm,1.1s,mb5.3
EGAK e 21 15 17.5
EGAK LR LR
comp=Z,541nm,20.0s,MS4.4
GTA Gaotai 39.47 280 eP P **21 15 08.0 +0.8**
GTA AP 21 15 12.0
GTA XP sP 21 15 15.5 +7.6
GTA PP PP 21 16 44.8 +7.3
GTA PCP PcP 21 17 19.3 +4.3
GTA SCP ScP 21 21 01.8 -2.8
GTA S S **21 21 06.3 -3.6**
GTA XS sS 21 21 15.5 +4.8
GTA SS SS 21 23 50.0 -14
GTA SCS ScS 21 25 13.5 -3.1
GTA AMB AMB
comp=Z,23nm,1.2s,mb4.8
GTA AMB AMB
comp=Z,126nm,7.3s
GTA LR LR
comp=N,1μm,19.9s,MS4.9
GTA LR LR
comp=E,844nm,15.3s,MS4.9
GTA LR LR
comp=Z,1μm,14.9s,MS4.8
GZH Guangzhou 39.74 249 P P **21 15 06.3 -3.4**
GZH S S **21 21 08.0 -6.3**
GZH LR LR
comp=N,988nm,19.1s,MS4.8
GZH LR LR
comp=E,886nm,18.2s,MS4.8
GZH LR LR
comp=Z,1μm,21.0s,MS4.6
DAWY Dawson 40.17 39 eP P **21 15 11.6 -1.1**
CD2 Chengdu 41.21 266 P P **21 15 23.0 +1.3**
CD2 AP 21 15 28.3
CD2 XP sP 21 15 31.0 +8.6
CD2 PP PP 21 17 01.3 +4.7
CD2 PCP PcP 21 17 23.0 +2.2
CD2 S S **21 21 35.0 -1.1**
CD2 XS sS 21 21 42.5 +5.7
CD2 SS SS 21 24 34.3 -4.3
CD2 SCS ScS 21 25 25.0 -2.2
CD2 AMB AMB
comp=Z,110nm,1.0s,mb5.4
CD2 AMB AMB
comp=Z,180nm,6.0s
CD2 LR LR
comp=N,820nm,13.8s,MS4.9
CD2 LR LR
comp=E,950nm,14.6s,MS4.9
CD2 LR LR
comp=Z,690nm,18.0s,MS4.6
GYA Guiyang 41.94 259⇓ iP P **21 15 28.5 +0.8**
GYA AP 21 15 33.0
GYA XP sP 21 15 34.8 +6.4
GYA PP PP 21 17 09.5 +4.9
GYA PCP PcP 21 17 26.3 +3.1
GYA SCP ScP 21 21 15.5 +1.0
GYA S S **21 21 47.8 +0.8**
GYA XS sS 21 21 52.8 +5.1
GYA SS SS 21 24 47.5 -5.7
GYA SCS ScS 21 25 31.0 -0.8
GYA AMB AMB
comp=Z,90nm,0.9s,mb5.4
GYA LR LR
comp=N,730nm,18.0s,MS4.8
GYA LR LR
comp=E,640nm,16.2s,MS4.8
GYA LR LR
comp=Z,620nm,19.8s,MS4.5
INK Inuvik 42.07 32 eP P **21 15 27.7 -0.6**
comp=Z,891nm,0.9s,mb6.4
INK Inuvik 42.07 32 P P **21 15 28.2 -0.1**
comp=Z,15nm,0.7s,mb4.7,baz=289,slow=7.1,SNR=60
ZAA0 Zalesovo Array 43.35 307 eP P **21 15 36.0 -2.9**
ZALV Zalesovo Beam 43.35 307 P P **21 15 36.2 -2.7**
ZALV PcP PcP 21 17 27.5 0.0
ZALV LR LR 21 34 24.1
ZALV Zalesovo Beam 43.35 307 P P **21 15 36.2 -2.7**
comp=Z,8.7nm,0.4s,mb4.8,baz=61,slow=6.9,SNR=60
ZALV PcP PcP 21 17 27.5 0.0
comp=Z,3.7nm,0.7s,baz=72,slow=4.7,SNR=3.4
ZALV LR LR 21 34 24.1
comp=Z,661nm,18.3s,MS4.6,baz=65,slow=37
ZAL Zalesovo 43.37 307 P P **21 15 36.2 -2.8**
ZAL 21 17 27.5
NVS Novosibirsk 43.94 308⇑ iP P **21 15 41.2 -2.4**
NVS i S S **21 22 05.9 -10**
NVS e 21 25 23.6
NVS pmax pmax
comp=E,23nm,1.4s
NVS pmax pmax
comp=Z,22nm,1.4s,mb4.7
NVS pmax pmax
comp=N,14nm,1.6s
NVS smax
comp=N,24nm,2.2s
NVS smax
comp=E,14nm,2.2s
QIZ Qiongzhong 44.92 248 P P **21 15 53.0 +1.1**
QIZ PP PP 21 17 43.5 +6.8
QIZ S S **21 22 29.3 -1.4**
QIZ AMB AMB
comp=Z,16nm,1.4s,mb4.7
QIZ AMB AMB
comp=Z,177nm,4.7s
QIZ LR LR
comp=N,599nm,13.8s
QIZ LR LR
comp=Z,880nm,15.3s,MS4.8
KMI Kunming 45.49 261 P P **21 15 57.0 +0.6**
KMI AP 21 16 02.0
KMI XP sP 21 16 04.0 +7.0
KMI PP PP 21 17 44.5 +1.9
KMI S S **21 22 38.0 -0.9**
KMI XS sS 21 22 46.0 +6.3
KMI SS SS 21 25 53.3 -9.3
KMI AMB AMB
comp=Z,33nm,1.3s,mb5.0
KMI AMB AMB
comp=Z,120nm,3.9s
KMI LR LR
comp=N,677nm,14.8s,MS4.8
KMI LR LR
comp=E,590nm,16.0s,MS4.8
KMI LR LR
comp=Z,540nm,17.2s,MS4.5
WMQ Urumqi 45.55 292 P P **21 15 56.5 -0.1**
WMQ AP 21 16 01.0
WMQ XP sP 21 16 03.5 +6.2
WMQ PCP PcP 21 17 36.5 +1.3
WMQ PP PP 21 17 43.5 +0.6
WMQ S S **21 22 36.3 -3.1**
WMQ XS sS 21 22 43.5 +3.3
WMQ SCS ScS 21 25 49.5 -4.5
WMQ SS SS 21 25 51.5 -11
WMQ AMB AMB
comp=Z,18nm,0.8s,mb5.0
WMQ AMB AMB
comp=Z,188nm,5.4s
WMQ LR LR
comp=N,3μm,16.8s,MS5.3
WMQ LR LR
comp=E,846nm,16.8s,MS5.3
WMQ LR LR
comp=Z,1μm,14.6s,MS4.9
DLBC Dease Lake 45.83 45 eP P **21 15 59.5 +0.9**
DLBC Dease Lake 45.83 45 P P **21 15 58.6 -0.1**
baz=303,slow=9.5
MK31 Makanchi Array 47.62 298 eP P **21 16 11.4 -1.4**
MKAR Makanchi Array 47.62 298 i P P **21 16 11.3 -1.5**
MKAR pmax pmax
comp=Z,25nm,0.7s
MKAR Makanchi Array 47.62 298 P P **21 16 11.4 -1.4**
comp=Z,25nm,0.7s,mb5.3,baz=67,slow=7.9,SNR=252
MKAR LR LR 21 37 13.7
comp=Z,1μm,18.4s,MS4.9,baz=244,slow=37
KURK Kurchatov 48.09 304 P P **21 16 14.9 -1.5**
comp=Z,304nm,1.0s,mb6.3,SNR=18
KURK Kurchatov 48.09 304 i P P **21 16 14.4 -2.0**
KURK LR LR
comp=Z,623nm,21.0s,MS4.6
KURK Kurchatov 48.09 304 i P P **21 16 14.4 -2.0**
KURK MLR MLR
comp=Z,623nm,21.0s,MS4.6
KURK Kurchatov 48.09 304 P P **21 16 14.7 -1.7**
SNR=13
KURK Kurchatov 48.09 304 P P **21 16 14.7 -1.7**
SNR=13
ALE Alert 50.44 6 P P **21 16 32.0 -2.0**
comp=Z,102nm,1.2s,mb5.7,SNR=12
LSA Lhasa 50.70 274 P P **21 16 38.3 +1.7**
LSA AP 21 16 47.3
LSA XP sP 21 16 51.0 +14
LSA PCP PcP 21 17 52.5 -1.4
LSA PP PP 21 18 36.0 +3.5
LSA SCP ScP 21 21 46.5 -4.4
LSA PCS PcS 21 21 50.5 -0.9
LSA S S **21 23 52.0 -0.6**
LSA SCS ScS 21 26 26.3 -2.4
LSA AMB AMB
comp=Z,20nm,0.8s,mb5.1
LSA LR LR
comp=N,500nm,31.2s,MS4.5
LSA LR LR
comp=E,570nm,33.3s,MS4.5
LSA LR LR
comp=Z,570nm,20.4s
LSA Lhasa 50.70 274 eP P **21 16 39.0 +2.4**
comp=Z,29nm,0.7s,mb5.3
LSA LR LR
comp=Z,625nm,21.0s,MS4.6
LSA Lhasa 50.70 274 eP P **21 16 39.0 +2.4**
LSA pmax pmax
comp=Z,29nm,0.7s,mb5.3
LSA MLR MLR
comp=Z,625nm,21.0s,MS4.6
YKA Yellowknife Ar 51.28 36 P P **21 16 40.0 -0.6**
comp=Z,8.6nm,0.9s,mb4.7,baz=295,slow=7.0,SNR=86
RES Resolute Bay 51.41 18 eP P **21 16 40.7 -0.7**
BRVK Borovoye 51.66 310 P P **21 16 42.8 -0.7**
comp=Z,160nm,0.6s,mb6.1,SNR=8.2
BRVK Borovoye 51.66 310⇑ iP P **21 16 41.0 -2.5**
BRVK MLR MLR
comp=Z,890nm,21.0s,MS4.8
BRVK Borovoye 51.66 310 P P **21 16 42.3 -1.3**
SNR=9.5
BRVK Borovoye 51.66 310 P P **21 16 42.3 -1.3**
SNR=9.5
CHG Chiang Mai 52.33 258⇓ P P **21 16 50.1 +1.2**
comp=Z,61nm,0.9s,mb5.5
CHTO Chiang Mai 52.33 258 eP P **21 16 49.9 +1.0**
comp=Z,31nm,1.0s,mb5.2
CHTO LR LR
comp=Z,396nm,20.0s,MS4.5
CHTO Chiang Mai 52.33 258 eP P **21 16 49.9 +1.0**
CHTO pmax pmax
comp=Z,31nm,1.0s,mb5.2
CHTO MLR MLR
comp=Z,396nm,20.0s,MS4.5
CHTO Chiang Mai 52.33 258 P P **21 16 50.5 +1.6**
SNR=18
SHL Shillong 52.74 269 i P P **21 16 53.0 +1.1**
SHL eS S **21 24 22.0 +1.2**
SPB4 Spitsbergen Ar 53.40 350 eP P **21 16 54.6 -1.5**
ULHL Ulahol 53.62 296 P P **21 16 59.4 +1.1**
SNR=12
TKM2 Tokmak 2 53.67 297 eP P **21 16 58.4 -0.2**
comp=Z,8.9nm,0.7s,mb4.8
TKM2 LR LR
comp=Z,863nm,20.0s,MS4.8
TKM2 Tokmak 2 53.67 297 eP P **21 16 58.4 -0.1**
TKM2 pmax pmax
comp=Z,9.0nm,0.7s,mb4.8
TKM2 MLR MLR
comp=Z,863nm,20.0s,MS4.8
TKM2 Tokmak 2 53.67 297 P P **21 16 58.7 +0.2**
SNR=13
USP Ospenovka 54.16 298 P P **21 17 01.6 -0.5**
SNR=37
KBK Karagaybulak 54.21 297 P P **21 17 02.1 -0.4**
SNR=13
FRU Bishkek 54.32 297 eP P **21 17 03.0 -0.3**
FRU e 21 17 15.0
KZA Kyzart 54.34 296 P P **21 17 04.4 +1.0**
SNR=14
AAK Ala-Archa 54.51 297 P P **21 17 03.5 -1.1**
comp=Z,142nm,0.7s,mb6.1,SNR=21
AAK Ala-Archa 54.51 297 P P **21 17 04.7 +0.1**
SNR=20
B05A Bryant 54.53 55⇓ P P **21 17 03.8 -0.9**
baz=54
TAPN Taplejung 54.53 274 eP P **21 17 06.4 +1.4**
comp=Z,78nm,0.9s,mb5.8
SVE Sverdlovsk 54.63 318⇓ eP P **21 17 03.6 -1.7**
SVE eS S **21 24 38.0 -7.6**
SVE eSS SS 21 28 31.0 +3.4
SVE pmax pmax
comp=Z,29nm,0.8s,mb5.4
SVE MLR MLR
comp=Z,1μm,15.0s,MS5.0
SOKR Solikamsk 54.91 322 eP P **21 17 06.1 -1.2**
SOKR pmax pmax
comp=Z,20nm,1.1s,mb5.1
SOKR MLR MLR
comp=Z,430nm,16.0s,MS4.6
EKS2 Erkin-Say 54.94 297 eP P **21 17 07.7 -0.1**
comp=Z,18nm,0.7s,mb5.2
EKS2 LR LR
comp=Z,714nm,22.0s,MS4.7
EKS2 Erkin-Say 54.94 297 P P **21 17 07.8 0.0**
SNR=25
ODAN Odare 55.06 274 eP P **21 17 09.9 +1.1**
comp=Z,101nm,1.2s,mb5.7
A07A Ashnola River, 55.08 53⇑ P P **21 17 07.8 -0.9**
baz=55
AML Almayashu 55.28 297 eP P **21 17 10.6 +0.4**
comp=Z,7.1nm,0.6s,mb4.9
AML LR LR
comp=Z,734nm,20.0s,MS4.8
AML Almayashu 55.28 297 P P **21 17 10.8 +0.5**
SNR=8.9
KSH Kashi 55.29 293 eP P **21 17 11.8 +1.4**
KSH eAP 21 17 17.0
KSH eXP sP 21 17 19.0 +8.0
KSH ePCP PcP 21 18 12.5 +1.4
KSH ePP PP 21 19 17.3 +3.7
KSH eSCP ScP 21 22 09.0 -1.8
KSH ePCS PcS 21 22 11.0 0.0
KSH eS S **21 24 52.0 -3.0**
KSH eXS sS 21 25 00.3 +4.6
KSH ePS 21 25 06.0
KSH eSCS ScS 21 26 54.5 -6.1
KSH AMB AMB
comp=Z,57nm,0.4s,mb6.0
KSH AMB AMB
comp=Z,442nm,3.5s
KSH LR LR
comp=Z,4μm,18.5s,MS5.5
JIRN Jiri 55.39 275 eP P **21 17 12.8 +1.5**
comp=Z,166nm,1.0s,mb6.0
G03A Yamhill 55.41 58⇑ P P **21 17 11.2 0.0**
baz=55
A08A Turner Farm, O 55.75 53⇓ P P **21 17 12.6 -0.9**
baz=55
ARU Arti 55.81 318 P P **21 17 11.4 -2.5**
comp=Z,329nm,0.6s,mb6.5,SNR=25
ARU Arti 55.81 318⇓ iP P **21 17 11.6 -2.3**
ARU LR LR
comp=Z,616nm,19.0s,MS4.7
ARU Arti 55.81 318⇓ iP P **21 17 11.5 -2.4**
ARU pmax pmax
comp=Z,60nm,1.3s,mb5.5
ARU MLR MLR
comp=Z,600nm,15.0s,MS4.8
KKN Kakani 55.94 276 eP P **21 17 16.4 +1.2**
comp=Z,191nm,1.1s,mb6.0
C07A Waterville 55.99 54⇑ P P **21 17 14.7 -0.6**
baz=56
B08A Colville Reser 56.03 53⇑ P P **21 17 14.6 -1.0**
baz=56
A09A Danville 56.12 52⇑ P P **21 17 15.2 -0.9**
baz=56
GKN Gorkha 56.25 277 eP P **21 17 18.6 +1.2**
comp=Z,67nm,0.5s,mb6.0
J02A Umpqua 56.31 60⇓ P P **21 17 17.5 -0.1**
baz=56
H04A Detroit Lake 56.41 58⇑ P P **21 17 17.8 -0.5**
baz=56,SNR=5.8
EDM Edmonton 56.55 46 eP P **21 17 18.5 -0.7**
B09A Rice 56.66 53⇑ P P **21 17 18.6 -1.4**
baz=56
J03A Ideyld Park 56.67 60⇓ P P **21 17 20.1 -0.1**
baz=56
K02A Glendale 56.69 61⇓ P P **21 17 20.0 -0.3**
baz=56
I04A Tendick Farm, 56.77 59⇓ P P **21 17 20.9 0.0**
baz=56
C09A Chrisman Ranch 56.94 54⇑ P P **21 17 21.3 -0.7**
baz=57

D08A **Wollman Farm,** 56.98 55 ⇓P P 21 17 21.2 -1.2
baz=57
H05A **Madras** 56.99 58 ⇓P P 21 17 22.1 -0.4
baz=57
G06A **Carlson Farm,** 57.01 57 ⇓P P 21 17 21.8 -0.8
baz=57
KOLN **Koldanda** 57.12 277 eP P 21 17 24.9 +1.3
comp=Z,103nm,0.9s,mb5.9
J04A **Umpqua Nationa** 57.26 60 ⇓P P 21 17 24.0 -0.4
baz=57
NEW **Newport** 57.32 53 P P 21 17 23.6 -1.0
NEW LR LR
comp=Z,779nm,22.0s,MS4.8
NEW **Newport** 57.32 53 P P 21 17 23.6 -1.0
comp=Z,2.6nm,0.5s,mb4.5,baz=318,slow=7.5,SNR=3.7
A11A **Hall Mountain,** 57.34 52 ⇓P P 21 17 24.0 -0.8
baz=57
DAG **Danmarks Havn** 57.39 358 ⇓iP P 21 17 23.8 -1.0
DAG pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
DAG **Danmarks Havn** 57.39 358 ⇓iP P 21 17 23.8 -1.0
comp=Z,9.7nm,0.8s,mb4.9
H06A **Lindquist Farm** 57.47 57 ⇑P P 21 17 25.3 -0.5
baz=57
G07A **Ruggs Ranch, H** 57.56 57 ⇓P P 21 17 25.8 -0.7
baz=57
B11A **Sandpoint** 57.64 52 ⇑P P 21 17 26.3 -0.7
baz=57
E09A **Wood Farm, Sta** 57.73 55 ⇑P P 21 17 27.2 -0.4
baz=57
YBH **Yreka Blue Hor** 57.76 62 ⇑P P 21 17 27.6 -0.3
baz=58
J05A **Fort Rock** 57.76 59 ⇑P P 21 17 27.5 -0.4
baz=57
M02C **Callahan** 57.86 62 ⇓P P 21 17 28.4 -0.2
baz=58
D10A **Wagner Farm, O** 57.91 54 ⇓P P 21 17 28.2 -0.7
baz=58
G08A **Pilot Rock** 57.96 56 ⇓P P 21 17 28.4 -0.8
baz=58
I06A **Prineville** 57.99 58 ⇑P P 21 17 29.3 -0.2
baz=58
BOK **Bokaro** 58.05 272 eP P 21 17 31.1 +0.9
BOK ex x 21 17 33.5
comp=Z,35nm,1.1s
APA **Apatity** 58.16 337 ⇑iP P 21 17 29.0 -1.3
APA eS S 21 25 32.0 -0.2
APA pmax pmax
comp=Z,27nm,0.6s,mb5.5
APA MLR MLR
comp=Z,1μm,17.0s,MS5.0
PRGR **Permogore** 58.19 328 ⇓iP P 21 17 29.6 -1.0
PRGR eS S 21 25 25.8 -6.9
PRGR pmax pmax
comp=Z,119nm,0.9s,mb5.9
M04C **Macdoel** 58.26 61 ⇓P P 21 17 30.9 -0.5
baz=58
K05A **Summer Lake** 58.29 60 ⇑P P 21 17 31.9 +0.2
baz=58
F09A **S2 Ranch, Elgi** 58.33 55 ⇑P P 21 17 31.4 -0.4
baz=58
I07A **Izee** 58.33 58 P P 21 17 32.4 +0.5
baz=58,SNR=6.3
E10A **Myers Farm, Un** 58.33 54 ⇓P P 21 17 31.2 -0.7
baz=58
J06A **Christmas Vall** 58.43 59 ⇓P P 21 17 32.3 -0.3
baz=58
WDC **Whiskeytown Da** 58.53 63 ⇑P P 21 17 32.9 -0.5
baz=58
F10A **Beach Ranch, E** 58.56 55 ⇓P P 21 17 32.7 -0.8
baz=58
H08A **Prairie City** 58.57 57 ⇑P P 21 17 33.1 -0.4
baz=58
O02C **Red Bluff** 58.61 63 ⇑P P 21 17 34.1 +0.2
baz=58
K06A **Valley Falls** 58.63 59 ⇓P P 21 17 33.6 -0.4
baz=58
G09A **Cove** 58.65 56 ⇓P P 21 17 33.5 -0.6
baz=58
ARCES **ARCESS Array B** 58.67 341 P P 21 17 32.8 -1.1
comp=Z,11nm,0.6s,mb5.1,baz=35,slow=7.4,SNR=61
ARCES LR LR 21 45 47.8
comp=Z,444nm,19.0s,MS4.6,baz=28,slow=39
P01C **Double 8 Ranch** 58.68 64 ⇑P P 21 17 34.5 +0.1
baz=58
B13A **Whitefish** 58.71 51 ⇓P P 21 17 33.9 -0.6
baz=58,SNR=8.9
L05A **Lakeview** 58.72 60 ⇑P P 21 17 34.5 -0.1
baz=58
J07A **Hines** 58.86 58 ⇓P P 21 17 34.7 -0.8
baz=58
E11A **Bogner Ranch,** 58.92 54 ⇓P P 21 17 34.9 -1.1
baz=58
M05C **Lookout** 58.93 61 ⇑P P 21 17 35.8 -0.3
baz=59
GASB **Alder Springs** 58.96 64 ⇓P P 21 17 36.7 +0.4
baz=59
G10A **Bishop Farm, J** 59.02 55 ⇓P P 21 17 36.0 -0.6
baz=59,SNR=14
HATC **Hat Creek Radi** 59.05 62 ⇑P P 21 17 37.1 +0.1
baz=59
C13A **Hot Springs** 59.06 52 ⇑P P 21 17 36.7 -0.2
baz=59
MOD **Modoc** 59.12 60 eP P 21 17 37.6 +0.2
comp=Z,11nm,1.0s,mb4.8
MOD **Modoc** 59.12 60 ⇓P P 21 17 37.6 +0.2
baz=59,SNR=7.3
BMO **Blue Mountains** 59.17 56 eP P 21 17 37.0 -0.7
comp=Z,12nm,1.2s,mb4.8
BMO LR LR
comp=Z,461nm,21.0s,MS4.6
F11A **Grangeville** 59.22 54 ⇑P P 21 17 37.9 -0.2
baz=59
K07A **Rock Creek Ran** 59.30 59 ⇓P P 21 17 38.4 -0.2
baz=59
DDI **Dehra Dun** 59.33 283 eP P 21 17 38.3 -0.8
SDNR **Sundarnagar** 59.34 285 eP P 21 17 39.5 +0.4
M06C **Likely Place G** 59.43 61 ⇑P P 21 17 39.4 -0.2
baz=59
I09A **Lost Marbles R** 59.43 57 ⇑P P 21 17 39.3 -0.3
baz=59
G11A **Walters Elk Ra** 59.44 55 P P 21 17 39.5 -0.1
baz=59,SNR=11
D13A **Huson** 59.46 52 ⇑P P 21 17 39.1 -0.6
baz=59
O04C **Chester** 59.58 62 ⇑P P 21 17 40.8 +0.1
baz=59
KTK1 **Kautokeino** 59.59 341 eP P 21 17 40.1 -0.2
ELFS **Eagle Lake Fie** 59.62 62 ⇓P P 21 17 41.1 +0.2
baz=59
L07A **Adell** 59.63 60 ⇓P P 21 17 41.0 0.0
baz=59
K08A **Mann Creek Ran** 59.72 58 ⇓P P 21 17 41.4 -0.2
baz=59
ORV **Oroville** 59.77 63 ⇓P P 21 17 41.9 0.0
baz=60
J09A **Fry Pan Ranch,** 59.79 58 ⇑P P 21 17 41.7 -0.4
baz=60
F12A **Elk City** 59.81 54 P P 21 17 42.2 +0.1
baz=59,SNR=17
WVOR **Wild Horse Val** 59.81 59 eP P 21 17 42.4 +0.2
comp=Z,10nm,0.9s,mb4.8
WVOR LR LR
comp=Z,398nm,21.0s,MS4.5
WVOR **Wild Horse Val** 59.81 59 eP P 21 17 42.4 +0.2
WVOR pmax pmax
comp=Z,10.0nm,0.9s,mb4.8
WVOR MLR MLR
comp=Z,398nm,21.0s,MS4.5
MSO **Missoula** 59.91 52 eP P 21 17 42.0 -0.8
comp=Z,12nm,1.1s,mb4.8
MSO LR LR
comp=Z,304nm,19.0s,MS4.5
TRO **Tromso** 59.99 343 eP P 21 17 40.9 -2.1
comp=Z,151nm,0.8s,mb6.1
TRO LR LR
comp=Z,240nm,21.4s,MS4.3
TRO **Tromso** 59.99 343 eP P 21 17 40.9 -2.1
TRO AMb AMB 21 17 43.0
comp=Z,151nm,0.8s,mb6.0
TRO AMS AMS 21 49 23.4
comp=Z,240nm,21.4s,MS4.3
D14A **Greenough** 59.99 52 P P 21 17 43.2 -0.1
baz=60,SNR=12
E13A **Victor** 60.00 53 ⇑P P 21 17 43.3 -0.1
baz=60
H11A **Donnelly** 60.00 55 P P 21 17 43.4 0.0
baz=60,SNR=7.4

N06A **Buffalo Meadow** 60.09 61 ⇓P P 21 17 44.3 +0.2
baz=60
M07A **Soldier Meadow** 60.11 60 ⇑P P 21 17 44.4 +0.2
baz=60
K09A **Rome** 60.19 58 ⇓P P 21 17 44.9 0.0
baz=60
CHMT **Chamberlain Mo** 60.23 52 eP P 21 17 44.1 -0.9
BEKR **Beckwourth** 60.30 62 ⇑P P 21 17 45.6 0.0
baz=60
F13A **Darby** 60.31 54 P P 21 17 45.5 -0.1
baz=60,SNR=11
E14A **Clinton** 60.40 53 P P 21 17 46.1 -0.1
baz=60,SNR=5.7
O06A **Flanigan** 60.44 62 ⇓P P 21 17 46.7 +0.1
baz=60
M08A **Happy Creek Ra** 60.55 60 ⇑P P 21 17 47.5 +0.3
baz=60
D15A **Lincoln** 60.56 52 ⇓P P 21 17 46.9 -0.3
baz=60
N07B **Gerlach** 60.60 61 ⇑P P 21 17 47.3 -0.3
baz=60
L09A **Wilkinson Ranc** 60.64 59 ⇓P P 21 17 47.3 -0.5
baz=60
LAVA **Lava Cap Winer** 60.73 63 ⇓P P 21 17 48.6 +0.1
baz=60
H12A **Diamond D Ranc** 60.76 55 ⇓P P 21 17 48.1 -0.5
baz=60
G13A **Galt** 60.78 54 P P 21 17 48.5 -0.3
baz=60,SNR=18
F14A **Wisdom** 60.83 53 ⇑P P 21 17 48.8 -0.3
baz=60
E15A **Deer Lodge** 60.87 52 ⇑P P 21 17 48.8 -0.5
baz=60
MFID **Camas Ranch** 60.88 57 ⇓P P 21 17 48.9 -0.5
baz=60
NDI **New Delhi** 60.93 282 eP P 21 17 49.0 -1.0
WCN **Washoe City** 61.01 62 ⇓P P 21 17 50.7 +0.3
baz=61
FFC **Flin Flon** 61.06 40 P P 21 17 50.3 -0.2
comp=Z,88nm,1.0s,mb5.8,SNR=9.4
FFC **Flin Flon** 61.06 40 eP P 21 17 49.8 -0.7
comp=Z,20nm,0.9s,mb5.3
FFC LR LR
comp=Z,305nm,20.0s,MS4.5
FFC **Flin Flon** 61.06 40 eP P 21 17 49.8 -0.7
FFC pmax pmax
comp=Z,20nm,0.9s,mb5.2
FFC MLR MLR
comp=Z,305nm,20.0s,MS4.5
H13A **Challis** 61.09 55 ⇓P P 21 17 50.5 -0.4
baz=61
KULM **Kulim** 61.11 245 eP P 21 17 52.5 +1.2
K11A **Parker Ranch,** 61.15 57 ⇓P P 21 17 50.8 -0.5
baz=61
R05C **Kirkwood Meado** 61.17 63 ⇑P P 21 17 51.5 0.0
baz=61
F15A **Butte** 61.30 53 ⇑P P 21 17 51.8 -0.5
baz=61,SNR=7.7
L10A **Juniper Basin** 61.31 58 ⇓P P 21 17 52.2 -0.2
baz=61
CMB **Columbia Colle** 61.38 64 ⇓P P 21 17 53.1 +0.1
baz=61
J12A **Stokes Ranch,** 61.40 56 ⇓P P 21 17 53.0 0.0
baz=61
N09A **Rock Creek Ran** 61.43 60 ⇑P P 21 17 53.1 -0.2
baz=61
PACP **Pacheco Peak** 61.45 65 ⇓P P 21 17 53.4 0.0
baz=61
EGMT **Eagleton** 61.45 49 eP P 21 17 52.1 -1.1
comp=Z,55nm,1.5s,mb5.5
EGMT LR LR
comp=Z,707nm,22.0s,MS4.8
EGMT **Eagleton** 61.45 49 ⇓P P 21 17 52.7 -0.5
baz=61
KAKA **Kakadu** 61.51 204 eP P 21 17 54.2 +0.3
comp=Z,7.4nm,0.6s,mb5.0
I13A **Wildhorse Cree** 61.56 55 ⇑P P 21 17 53.5 -0.6
baz=61
HLID **Hailey** 61.61 56 eP P 21 17 54.0 -0.4
comp=Z,11nm,1.1s,mb4.9
HLID LR LR
comp=Z,240nm,19.0s,MS4.4
HLID **Hailey** 61.61 56 ⇓P P 21 17 54.1 -0.3
baz=61
HAST **UC Hastings Re** 61.66 66 ⇓P P 21 17 55.3 +0.4
baz=61
FCC **Fort Churchill** 61.67 33 eP P 21 17 53.5 -1.0
comp=Z,35nm,1.2s,mb5.4
FCC **Fort Churchill** 61.67 33 eP P 21 17 53.5 -1.1
FCC pmax pmax
comp=Z,35nm,1.2s,mb5.4
R06C **Coleville** 61.67 63 ⇑P P 21 17 55.1 +0.2
baz=61
G15A **Dillon** 61.72 53 ⇓P P 21 17 54.8 -0.3
baz=61
BLSP **Bilaspur** 61.75 273 eP P 21 17 55.3 -0.3
BLSP ex x 21 18 03.8
comp=Z,19nm,1.0s
J13A **Cove Ranch, Pi** 61.84 56 ⇓P P 21 17 55.8 -0.2
baz=62
BOZ **Bozeman (W)** 61.90 52 eP P 21 17 56.3 0.0
comp=Z,17nm,1.2s,mb5.0
BOZ LR LR
comp=Z,287nm,20.0s,MS4.4
BOZ **Bozeman (W)** 61.90 52 eP P 21 17 56.3 0.0
BOZ pmax pmax
comp=Z,17nm,1.2s,mb5.0
BOZ MLR MLR
comp=Z,287nm,20.0s,MS4.4
BOZ **Bozeman (W)** 61.90 52 P P 21 17 56.8 +0.5
baz=62,SNR=16
O09A **Fish Creek Ran** 62.05 60 ⇑P P 21 17 57.7 +0.3
baz=62
BATI **Kupang** 62.11 214 LR LR 21 47 06.6
comp=Z,191nm,18.2s,MS4.3,baz=125,slow=38
L12A **House Creek Ra** 62.12 57 ⇑P P 21 17 58.1 +0.1
baz=62
JOF **Joensuu** 62.16 334 ep P 21 17 55.7 -2.1
comp=Z,84nm,0.8s,mb5.9
JOF **Joensuu** 62.16 334 eP P 21 17 55.7 -2.1
JOF pmax pmax
comp=Z,84nm,0.8s,mb5.9
O10A **Cortez Mining,** 62.39 60 ⇑P P 21 18 00.5 +0.8
baz=62
Q08A **Gabbs** 62.40 62 P P 21 18 00.4 +0.6
baz=62,SNR=7.7
KCC **Kaiser Creek** 62.49 64 ⇓P P 21 18 01.1 +0.7
baz=62
QLMT **Earthquake Lak** 62.52 53 P P 21 18 00.3 -0.2
M12A **Wells** 62.63 58 ⇓P P 21 18 01.5 +0.2
baz=62
L13A **Double Diamond** 62.79 57 ⇓P P 21 18 02.5 +0.1
baz=62
GCMT **Greycliff** 62.88 51 eP P 21 18 03.2 +0.3
N12A **Clover Valley,** 62.91 58 ⇓P P 21 18 03.4 +0.2
baz=63
K14A **Jones Ranch, D** 62.95 56 ⇑P P 21 18 03.5 +0.1
baz=63
O11A **Cowboy Ranch,** 62.99 59 ⇑P P 21 18 03.9 +0.2
baz=63
HELL **Mitchell Peak,** 63.08 64 P P 21 18 04.2 -0.1
baz=63,SNR=8.8
S08C **White Mtn Res** 63.10 63 ⇑P P 21 18 04.6 +0.1
baz=63
M13A **Montello** 63.11 58 ⇑P P 21 18 04.2 -0.3
baz=63
R09A **Tonopah** 63.31 62 P P 21 18 06.3 +0.4
baz=63,SNR=6.3
Q10A **Clear Creek Ra** 63.36 61 ⇓P P 21 18 06.2 0.0
baz=63
IMW **Indian Meadow** 63.37 54 eP P 21 18 06.1 -0.2
comp=Z,16nm,1.1s,mb5.1
FLWY **Flagg Ranch** 63.39 53 eP P 21 18 07.2 +0.9
comp=Z,18nm,1.3s,mb5.0
O12A **Currie** 63.45 59 P P 21 18 07.0 +0.3
baz=63,SNR=11
M14A **Sheep Mountain** 63.50 57 ⇑P P 21 18 07.5 +0.4
baz=63
RLMT **Red Lodge** 63.52 52 eP P 21 18 07.6 +0.4
comp=Z,32nm,1.5s,mb5.1
RLMT LR LR
comp=Z,414nm,19.0s,MS4.6
MOOW **Moose Ponds** 63.58 54 eP P 21 18 07.5 0.0
comp=Z,28nm,1.5s,mb5.1
TPAW **Teton Pass** 63.62 54 eP P 21 18 09.1 +1.2
comp=Z,39nm,1.2s,mb5.3
REDW **Red Top Meadow** 63.76 54 eP P 21 18 09.7 +0.9
comp=Z,33nm,1.2s,mb5.2

Q11A **Duckwater** 63.80 60 ⇓P P 21 18 09.1 0.0
baz=64
S10A **Tonopah Range,** 63.80 62 ⇓P P 21 18 09.1 -0.1
baz=64
MOR8 **Moi Rana** 63.84 343 eP P 21 18 06.4 -2.5
comp=Z,92nm,0.6s,mb6.0
MOR8 **Moi Rana** 63.84 343 eP P 21 18 06.4 -2.5
MOR8 AMb AMB 21 18 08.3
comp=Z,92nm,0.6s,mb6.0
P12A **McGill** 63.85 60 ⇓P P 21 18 09.4 -0.1
baz=64
VIS **Vishakhapatnam** 63.87 269 eP P 21 18 10.3 +0.5
VIS ex x 21 18 25.8
comp=Z,52nm,1.5s
GRAC **Grapevine Rang** 63.91 63 ⇑P P 21 18 10.6 +0.8
baz=64
STOK **Stokkvaagen** 63.98 343 eP P 21 18 08.9 -1.0
O13A **Hicks Ranch, I** 63.99 58 ⇓P P 21 18 10.7 +0.4
baz=64
AHID **Auburn Hatcher** 64.00 55 PFAKE 21 18 20.0 +10
AHID LR LR
comp=Z,325nm,19.0s,MS4.5
DGMT **Dagmar** 64.04 46 PFAKE 21 18 20.0 +9.5
DGMT LR LR
comp=Z,634nm,19.0s,MS4.8
SBC **Santa Barbara** 64.04 67 ⇓P P 21 18 10.1 -0.6
baz=64
ISA **Isabella** 64.06 65 PFAKE 21 18 20.0 +9.1
ISA LR LR
comp=Z,171nm,19.0s,MS4.2
ISA **Isabella** 64.06 65 ⇓P P 21 18 10.1 -0.7
baz=64
AJM **Ajmer** 64.09 282 eP P 21 18 11.3 +0.2
AJM ex x 21 18 25.5
comp=Z,59nm,1.1s
LAO **LASA Array** 64.15 49 PFAKE 21 18 20.0 +8.7
LAO LR LR
comp=Z,641nm,22.0s,MS4.8
R11A **Troy Canyon, C** 64.15 61 ⇑P P 21 18 10.8 -0.6
baz=64
Q12A **Willow Creek R** 64.17 60 ⇓P P 21 18 11.3 -0.3
baz=64
KAF **Kangasniemi** 64.27 335 ep P 21 18 09.7 -2.1
comp=Z,73nm,0.7s,mb5.8,baz=37,slow=6.2
KAF **Kangasniemi** 64.27 335 eP P 21 18 09.7 -2.1
KAF pmax pmax
comp=Z,73nm,0.7s,mb5.8
BHPL **Bhopal** 64.29 277 eP P 21 18 12.7 +0.2
BHPL ex x 21 18 16.5
comp=Z,61nm,0.7s
P13A **Bates Ranch, G** 64.40 59 ⇓P P 21 18 12.6 -0.5
baz=64
MPMC **Manual Prospec** 64.42 64 ⇑P P 21 18 13.2 0.0
baz=64
HWUT **Hardware Ranch** 64.47 56 eP P 21 18 13.4 0.0
comp=Z,8.9nm,1.0s,mb4.8
HWUT LR LR
comp=Z,380nm,22.0s,MS4.5
S11A **Rachel** 64.50 62 ⇓P P 21 18 13.5 -0.2
baz=64
FURC **Furnace Creek,** 64.56 63 ⇓P P 21 18 13.8 -0.3
baz=64
TPNV **Topopah Spring** 64.63 62 eP P 21 18 14.2 -0.5
comp=Z,11nm,0.9s,mb4.9
TPNV LR LR
comp=Z,422nm,22.0s,MS4.6
TPNV **Topopah Spring** 64.63 62 eP P 21 18 14.2 -0.4
TPNV pmax pmax
comp=Z,11nm,0.9s,mb4.9
TPNV MLR MLR
comp=Z,422nm,22.0s,MS4.6
TPNV **Topopah Spring** 64.63 62 ⇑P P 21 18 14.7 +0.1
baz=64,SNR=8.1
DUG **Dugway** 64.64 58 eP P 21 18 14.3 -0.3
comp=Z,17nm,1.0s,mb5.0
DUG LR LR
comp=Z,319nm,20.0s,MS4.5
DUG **Dugway** 64.64 58 eP P 21 18 14.3 -0.3
DUG pmax pmax
comp=Z,17nm,1.0s,mb5.0
DUG MLR MLR
comp=Z,319nm,20.0s,MS4.5
DUG **Dugway** 64.64 58 ⇓P P 21 18 14.6 0.0
baz=64
EDW2 **Edwards Air Fo** 64.86 65 ⇑P P 21 18 16.1 0.0
baz=65
FIA1 **FINESS Array S** 64.86 335 eP P 21 18 14.9 -0.8
FINES **FINESS Array B** 64.87 335 iP P 21 18 14.3 -1.4
FINES pmax pmax
comp=Z,61nm,0.6s
FINES **FINESS Array B** 64.87 335 P P 21 18 14.4 -1.3
comp=Z,61nm,0.6s,mb5.8,baz=35,slow=7.9,SNR=330
PUL **Pulkovo** 64.87 332 ⇑eP P 21 18 14.7 -1.0
BW06 **Boulder Array** 64.87 54 PFAKE 21 18 30.0 +14
BW06 LR LR
comp=Z,325nm,21.0s,MS4.5
PDAR **Pinedale Array** 64.87 54 P P 21 18 15.9 -0.2
comp=Z,8.5nm,1.1s,mb4.7,baz=300,slow=2.9,SNR=24
PDAR LR LR 21 42 55.0
comp=Z,159nm,20.1s,MS4.2,baz=335,slow=33
T11A **Corn Creek, Al** 65.08 62 ⇑P P 21 18 17.5 -0.1
baz=65
JLU **Jordanelle** 65.18 57 eP P 21 18 18.6 +0.5
MOS **Moscow** 65.26 326 eP P 21 18 16.2 -2.2
MOS i 21 18 29.7
MOS e 21 18 47.0
MOS eS S 21 26 55.1 -7.3
MOS e 21 28 12.9
MOS pmax pmax
comp=Z,83nm,1.0s,mb5.7
MOS MLR MLR
comp=Z,700nm,20.0s,MS4.9
GSC **Goldstone** 65.34 64 P P 21 18 19.1 -0.2
comp=Z,2.0nm,0.4s,mb4.5
GSC **Goldstone** 65.34 64 P P 21 18 19.1 -0.1
GSC pmax pmax
comp=Z,2.0nm,0.4s,mb4.5
S13A **Holt Ranch, En** 65.69 61 ⇑P P 21 18 21.7 +0.3
baz=65
NSS **Namsos** 65.78 343 eP P 21 18 19.4 -2.2
SFJD **Kangerlussuaq** 65.81 10 PFAKE 21 18 30.0 +8.3
SFJD LR LR
comp=Z,463nm,22.0s,MS4.6
SFJD **Kangerlussuaq** 65.81 10 iP P 21 18 21.8 +0.1
SFJD pmax pmax
comp=Z,24nm,1.2s,mb5.1
SFJD MLR MLR
comp=Z,260nm,18.0s,MS4.5
SFJD **Kangerlussuaq** 65.81 10 iP P 21 18 21.8 +0.1
comp=Z,24nm,1.2s,mb5.1
SFJD
comp=Z,250nm,18.0s
V11A **Goodsprings** 65.85 63 ⇑P P 21 18 22.4 -0.1
baz=66
HEC **Hector,Ludlow** 65.94 64 ⇑P P 21 18 23.1 0.0
baz=66
T13A **Saint George** 66.03 61 ⇑P P 21 18 24.3 +0.7
baz=66
CTA **Charters Tower** 66.13 188 eP P 21 18 24.8 +0.5
comp=Z,2.2nm,0.4s,mb4.5
CTA **Charters Tower** 66.13 188 P P 21 18 24.5 +0.2
CTA pmax pmax
comp=Z,3.0nm,0.4s
CTA MLR MLR
comp=Z,233nm,19.8s
CTA **Charters Tower** 66.13 188 P P 21 18 24.5 +0.2
comp=Z,2.5nm,0.4s,mb4.6,baz=3.9,slow=8.1,SNR=7.9
CTA LR LR 21 44 28.5
comp=Z,233nm,19.8s,MS4.4,baz=29,slow=33
OBN **Obninsk** 66.13 326 eP P 21 18 22.2 -1.8
OBN LR LR
comp=Z,391nm,21.0s,MS4.6
OBN **Obninsk** 66.13 326 iP P 21 18 22.8 -1.2
OBN e 21 20 46.1
OBN eS S 21 27 08.4 -4.6
OBN eSS SS 21 31 21.4 -6.2
OBN pmax pmax
comp=Z,150nm,1.3s,mb5.9
OBN MLR MLR
comp=Z,400nm,15.0s,MS4.8
V12A **Nelson** 66.28 63 ⇓P P 21 18 25.3 0.0
baz=66
U13A **Pakoon Wash** 66.38 62 ⇑P P 21 18 25.9 0.0
baz=66
GMRC **Granite Mounta** 66.39 64 ⇑P P 21 18 26.0 0.0
baz=66
PFO **Pinyon Flat Ob** 66.65 65 PFAKE 21 18 40.0 +12

PFO LR LR
comp=Z,331nm,22.0s,MS4.5
ULM Lac du Bonnet 66.83 41 P P 21 18 28.2 -0.3
comp=Z,3.4nm,0.8s,mb4.4,baz=340,slow=9.1,SNR=5.9
U14A Mt Trumbull 66.86 61 ⇑P P 21 18 29.2 +0.2
baz=66
IRM Iron Mountain 67.11 64 ⇑P P 21 18 30.8 +0.2
baz=67,SNR=7.5
MONP Monument Peak 67.14 66 ⇑P P 21 18 31.3 +0.5
baz=67
BC3 Big Chuckw Mtn 67.25 65 ⇓P P 21 18 31.7 +0.2
baz=67
W13A Hualapai Mount 67.29 63 ⇓P P 21 18 31.8 0.0
baz=67
ABKT Ailbek 67.31 301 P P 21 18 32.2 +0.4
comp=Z,201nm,0.6s,mb6.3,SNR=18
HYB Hyderabad 67.40 272 *eP* **P 21 18 32.5 -0.1**
HYB Hyderabad 67.40 272 *i P* **P 21 18 32.5 -0.1**
PDMCI Parker Dam,Lak 67.65 63 ⇑P P 21 18 34.4 +0.3
baz=67
X13A Yucca 67.65 63 P P 21 18 34.2 +0.1
baz=67,SNR=7.5
W14A Seligman 67.71 62 P P 21 18 34.8 +0.4
baz=67,SNR=11
Y12C Blythe 67.78 64 ⇑P P 21 18 35.0 +0.1
baz=68
VRSR Storozhevoye 67.92 322 *c i* **P P 21 18 34.5 -0.9**
VRSR *e* 21 19 01.4
VRSR pmax pmax
comp=Z,10.0nm,0.8s,mb4.9
VRSR pmax pmax
comp=N,7.0nm,0.9s
VRSR pmax pmax
comp=E,6.0nm,0.9s
VRSR MLR MLR
comp=Z,70nm,15.0s,MS4.0
VRSR MLR MLR
comp=N,30nm,16.0s,MS4.0
VRSR MLR MLR
comp=E,60nm,16.0s,MS4.0
WB2 Warramunga Arr 67.94 200 *eP* **P 21 18 36.1 +0.3**
WRA Warramunga Arr 67.95 200 *i P* **P 21 18 36.2 +0.4**
WRA pmax pmax
comp=Z,6.0nm,0.6s
WRA Warramunga Arr 67.95 200 P P 21 18 36.3 +0.4
comp=Z,5.8nm,0.6s,mb4.8,baz=19,slow=6.8,SNR=34
VORD Divnogorie 68.05 322 *eP* **P 21 18 35.3 -1.0**
VORD pmax pmax
comp=Z,70nm,0.7s,mb5.8
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.4s
AGMN Agassiz Refuge 68.22 42 *eP* **P 21 18 36.2 -1.2**
comp=E,39nm,1.5s,mb5.2
AGMN LR LR
comp=Z,447nm,19.0s,MS4.7
W15A Williams 68.23 62 ⇑P P 21 18 38.2 +0.5
baz=68
X14A Yava 68.32 63 ⇑P P 21 18 38.9 +0.7
baz=68,SNR=5.8
WUAZ Wupatki 68.55 61 PFAKE 21 18 50.0 +10
WUAZ LR LR
comp=Z,260nm,21.0s,MS4.4
Y14A Wickenburg 68.60 63 ⇓P P 21 18 40.3 +0.3
baz=68
DOMB Dombas 68.60 343 *eP* **P 21 18 39.0 -0.5**
comp=Z,42nm,1.1s,mb5.3
DOMB Dombas 68.60 343 *eP* **P 21 18 39.0 -0.5**
DOMB AMb AMB 21 18 40.3
comp=Z,42nm,1.1s,mb5.3
FITZ Fitzroy Crossi 68.68 209 *eP* **P 21 18 41.7 +1.2**
comp=Z,6.8nm,0.8s,mb4.6
SMCO Snowmass 68.71 55 *eP* **P 21 18 40.6 0.0**
comp=Z,13nm,0.9s,mb4.8
X15A Humboldt 68.71 62 P P 21 18 41.5 +0.9
baz=68,SNR=7.1
NB2 NORSAR Subarra 69.05 341 P P 21 18 41.4 -0.9
comp=Z,39nm,0.7s,mb5.5,baz=27,slow=6.5
NB2 NORSAR Subarra 69.05 341 P P 21 18 41.4 -0.9
NB2 pmax pmax
comp=Z,39nm,0.7s,mb5.5
NOA NORSAR Array B 69.05 341 P P 21 18 41.5 -0.9
comp=Z,41nm,0.7s,mb5.5,baz=28,slow=6.4,SNR=200
NOA LR LR 21 53 44.1
comp=Z,296nm,18.1s,MS4.6,baz=15,slow=40
ISCO Idaho Springs 69.06 54 *eP* **P 21 18 43.0 +0.2**
comp=Z,13nm,1.1s,mb4.8
ISCO LR LR
comp=Z,524nm,19.0s,MS4.8
ISCO Idaho Springs 69.06 54 *eP* **P 21 18 43.0 +0.2**
ISCO pmax pmax
comp=Z,13nm,1.1s,mb4.8
ISCO MLR MLR
comp=Z,524nm,19.0s,MS4.8
MVCO Mesa Verde 69.14 58 *eP* **P 21 18 43.2 -0.1**
comp=Z,27nm,1.4s,mb5.0
MVCO LR LR
comp=Z,364nm,20.0s,MS4.6
MVCO Mesa Verde 69.14 58 ⇓P P 21 18 43.6 +0.3
baz=69
BORG Borgarnes 69.51 358 P P 21 18 49.0 +3.9
comp=Z,594nm,0.9s,mb6.5,SNR=6.0
BORG Borgarnes 69.51 358 *eP* **P 21 18 48.0 +2.9**
comp=Z,82nm,0.8s,mb5.7
FOO Floro 69.79 345 *eP* **P 21 18 45.8 -1.1**
MNK Minsk 69.84 330 *eP* **P 21 18 46.0 -1.4**
MNK pmax pmax
comp=Z,190nm,1.5s,mb5.8
115A Sonoran Desert 69.91 64 ⇑P P 21 18 48.5 +0.4
baz=70
POO Poona 69.91 276 ⇑ *i P* **P 21 18 48.0 -0.3**
comp=Z,50nm,1.0s,mb5.4
POO *eP* 21 18 49.2
POO *ex* x 21 18 57.1
comp=Z,42nm,1.0s
HYA Hoyanger 69.97 344 ⇓ *i P* **P 21 18 48.4 +0.3**
comp=Z,74nm,0.8s,mb5.7
HYA Hoyanger 69.97 344 ⇓ *i P* **P 21 18 48.4 +0.3**
HYA AMb AMB 21 18 51.2
comp=Z,74nm,0.8s,mb5.7
SUE Sulen 70.34 345 *eP* **P 21 18 49.9 -0.5**
comp=Z,75nm,1.3s,mb5.5
SUE Sulen 70.34 345 *eP* **P 21 18 49.9 -0.5**
SUE AMb AMB 21 18 52.9
comp=Z,75nm,1.3s,mb5.5
EYMN Ely 70.48 40 *eP* **P 21 18 50.0 -1.4**
comp=Z,17nm,1.3s,mb4.8
EYMN LR LR
comp=Z,486nm,20.0s,MS4.8
SDCO Great Sand Dun 70.53 56 *eP* **P 21 18 52.0 +0.2**
comp=Z,4.5nm,0.9s,mb4.4
SDCO LR LR
comp=Z,367nm,19.0s,MS4.7
KONO Kongsberg 70.65 342 *eP* **P 21 18 51.2 -1.0**
comp=Z,41nm,1.0s,mb5.3
KONO LR LR
comp=Z,476nm,20.0s,MS4.8
KONO Kongsberg 70.65 342 *eP* **P 21 18 52.4 +0.2**
KONO AMS AMS 21 55 17.6
comp=Z,343nm,21.0s,MS4.6
KONO Kongsberg 70.65 342 *eP* **P 21 18 51.2 -1.0**
KONO pmax pmax
comp=Z,41nm,1.0s,mb5.3
KONO MLR MLR
comp=Z,476nm,20.0s,MS4.8
ASK Askoy 70.80 344 *eP* **P 21 18 52.8 -0.3**
comp=Z,174nm,1.2s,mb5.9
ASK Askoy 70.80 344 *eP* **P 21 18 52.8 -0.3**
ASK AMb AMB 21 18 55.9
comp=Z,174nm,1.2s,mb5.9
RUND Rundenannen 70.83 344 ⇓ *i P* **P 21 18 55.3 +2.1**
comp=Z,124nm,1.1s,mb5.8
RUND Rundenannen 70.83 344 ⇓ *i P* **P 21 18 55.3 +2.1**
RUND AMb AMB 21 18 58.1
comp=Z,124nm,1.1s,mb5.7
BER Bergen 70.86 344 *eP* **P 21 18 53.4 -0.1**
comp=Z,80nm,0.9s,mb5.7
BER LR LR
comp=Z,260nm,13.6s,MS4.7
BER Bergen 70.86 344 *eP* **P 21 18 53.3 -0.2**
BER *eP* 21 18 53.4
BER AMb AMB 21 18 55.5
comp=Z,80nm,0.9s,mb5.7
BER AMS AMS 21 53 45.3
comp=Z,256nm,13.6s,MS4.7
BER Bergen 70.86 344 *eP* **P 21 18 53.4 -0.1**

BER pmax pmax
comp=Z,80nm,0.9s,mb5.7
BER MLR MLR
comp=Z,260nm,13.6s,MS4.7
EGD Espegrend 70.98 344 *eP* **P 21 18 54.3 +0.1**
comp=Z,84nm,1.3s,mb5.5
EGD Espegrend 70.98 344 *eP* **P 21 18 54.3 +0.1**
EGD AMb AMB 21 18 57.1
comp=Z,84nm,1.3s,mb5.5
ODD1 Odda 71.04 343 ⇓ *i P* **P 21 18 53.3 -1.3**
comp=Z,51nm,0.9s,mb5.5
ODD1 Odda 71.04 343 ⇓ *i P* **P 21 18 53.3 -1.3**
ODD1 AMb AMB 21 18 55.3
comp=Z,51nm,0.9s,mb5.4
ECSD EROS,Sioux Fal 71.12 46 *eP* **P 21 18 53.9 -1.4**
comp=Z,28nm,1.2s,mb5.1
ECSD LR LR
comp=Z,770nm,22.0s,MS4.9
217A Green Valley 71.41 63 ⇓P P 21 18 57.3 0.0
baz=71
BLS5 Blasjo 71.53 343 *eP* **P 21 18 58.4 +0.8**
comp=Z,30nm,0.8s,mb5.3
BLS5 Blasjo 71.53 343 *eP* **P 21 18 58.4 +0.8**
BLS5 AMb AMB 21 19 01.0
comp=Z,30nm,0.8s,mb5.3
KIV Kislovodsk 71.59 315 P P 21 18 58.0 -0.2
comp=Z,527nm,0.8s,mb6.5,SNR=30
KIV Kislovodsk 71.59 315 ⇓P P 21 18 58.6 +0.5
KIV LR LR
comp=Z,517nm,19.0s,MS4.8
KIV Kislovodsk 71.59 315 *eP* **P 21 18 57.0 -1.2**
KIV *e* 21 19 17.5
KIV *e* 21 21 33.7
KIV *eS* S 21 28 15.2 -2.9
KIV *eSS* SS 21 32 51.4 -0.8
KIV pmax pmax
comp=Z,89nm,1.0s,mb5.7
KIV pmax pmax
comp=Z,84nm,4.7s
KIV MLR MLR
comp=Z,583nm,18.0s,MS4.9
KIV Kislovodsk 71.59 315 P P 21 18 59.1 +0.9
SNR=25
KIV Kislovodsk 71.59 315 P P 21 18 59.1 +0.9
SNR=25
KIV Kislovodsk 71.59 315 ⇓ *i P* **P 21 18 58.6 +0.4**
ASAR Alice Springs 71.64 199 P P 21 19 00.0 +1.5
comp=Z,6.7nm,0.7s,mb4.7,baz=13,slow=5.3,SNR=124
218A Dragoon 71.76 63 ⇑P P 21 18 59.3 -0.1
baz=72
SUW Suwalki 71.82 332 *eP* **P 21 18 58.2 -1.2**
ZEI Tsey 71.84 313 *eP* **P 21 18 59.5 -0.2**
ZEI *e* 21 21 34.4
ZEI pmax pmax
comp=Z,30nm,0.8s,mb5.3
ANMO Albuquerque 71.89 58 *eP* **P 21 19 00.6 +0.4**
KMY Karmoy 71.96 344 *eP* **P 21 18 60.0 -0.2**
comp=Z,75nm,1.1s,mb5.5
KMY Karmoy 71.96 344 *eP* **P 21 18 60.0 -0.2**
KMY AMb AMB 21 19 02.9
comp=Z,75nm,1.1s,mb5.5
DGRG David-gareji 72.03 311 P P 21 19 01.9 +1.0
MTA Mtatsminda 72.16 312 P P 21 19 02.3 +0.7
318A Bisbee 72.16 63 ⇓P P 21 19 01.3 -0.5
baz=72
TBLG Delisi 72.16 312 P P 21 19 02.6 +1.0
ONI Oni 72.20 313 P P 21 19 03.4 +1.5
SNART Snartemo 72.36 342 *eP* **P 21 19 02.5 -0.1**
SNART AMb AMB 21 19 05.1
comp=Z,80nm,1.0s,mb5.6
AKASG Malin Array Be 72.37 327 P P 21 19 01.7 -1.1
AKASG LR LR 21 51 41.5
AKASG Malin Array Be 72.37 327 P P 21 19 01.7 -1.1
comp=Z,45nm,0.5s,mb5.7,baz=34,slow=6.0,SNR=234
AKASG LR LR 21 51 41.5
comp=Z,442nm,21.1s,MS4.7,baz=20,slow=37
AKBB Malin Array Si 72.37 327 *eP* **P 21 19 01.5 -1.3**
KIEV Kiev 72.38 327 *eP* **P 21 19 01.3 -1.5**
comp=Z,52nm,0.6s,mb5.6
KIEV LR LR
comp=Z,547nm,20.0s,MS4.8
KIEV Kiev 72.38 327 *eP* **P 21 19 01.3 -1.5**
KIEV pmax pmax
comp=Z,52nm,0.6s,mb5.6
KIEV MLR MLR
comp=Z,547nm,20.0s,MS4.8
319A Douglas 72.64 63 ⇑P P 21 19 04.6 -0.1
baz=72
COWI Conover 72.93 40 PFAKE 21 19 20.0 +14
COWI LR LR
comp=Z,354nm,20.0s,MS4.6
PALK Pallekele 72.98 263 PFAKE 21 19 20.0 +13
PALK LR LR
comp=Z,176nm,19.0s,MS4.4
CBKS Cedar Bluff 73.01 52 PFAKE 21 19 20.0 +13
CBKS LR LR
comp=Z,354nm,19.0s,MS4.7
SOC Sochi 73.31 316 *c i* **P P 21 19 08.5 0.0**
SOC *e* 21 19 20.6
SOC *eS* S 21 28 31.4 -6.4
SOC *e* 21 29 12.4
SOC pmax pmax
comp=Z,47nm,0.8s,mb5.5
SOC MLR MLR
comp=Z,702nm,19.0s,MS5.0
BSD Bornholm Skovb 73.38 337 ⇓ *i P* **P 21 19 08.0 -0.7**
comp=Z,49nm,0.9s,mb5.4
BSD
comp=Z,160nm,19.0s
BSD
comp=Z,170nm,20.0s
ANN Anapa 73.48 318 *eP* **P 21 19 07.3 -2.1**
ANN *eS* S 21 28 36.0 -3.7
ANN pmax pmax
comp=Z,90nm,1.5s,mb5.5
MUD Monsted U'grnd 73.64 340 *i P* **P 21 19 10.3 +0.1**
MUD pmax pmax
comp=Z,38nm,1.0s,mb5.3
MUD MLR MLR
comp=Z,300nm,17.0s,MS4.7
MUD Monsted U'grnd 73.64 340 *i P* **P 21 19 10.3 +0.1**
comp=Z,38nm,1.0s,mb5.3
MUD
comp=Z,300nm,17.0s
DIGO Kars 73.82 312 *i P* **P 21 19 12.8 +1.3**
SCHQ Schefferville 73.84 23 P P 21 19 10.3 -1.1
SCHQ LR LR 21 52 42.8
SCHQ Schefferville 73.84 23 P P 21 19 10.3 -1.1
comp=Z,2.7nm,0.6s,mb4.3,baz=34,slow=3.2,SNR=8.5
SCHQ LR LR 21 52 42.8
comp=Z,360nm,20.5s,MS4.7,baz=151,slow=37
ARTV Artvin 74.00 313 *i P* **P 21 19 13.4 +0.9**
KSU1 Kansas State U 74.49 49 PFAKE 21 19 30.0 +15
KSU1 LR LR
comp=Z,416nm,19.0s,MS4.8
AMTX Amarillo 74.73 56 PFAKE 21 19 30.0 +13
AMTX LR LR
comp=Z,432nm,20.0s,MS4.7
MVH1 Achvaich 74.80 348 *eP* **P 21 19 18.4 +1.5**
MNTX Cornudas Mount 74.80 60 PFAKE 21 19 30.0 +13
MNTX LR LR
comp=Z,341nm,20.0s,MS4.6
TUTA Tutak 74.86 311 *i P* **P 21 19 17.0 -0.6**
SIM Simferopol' 74.88 320 *c i* **P P 21 19 17.0 -0.6**
SIM *i* 21 19 30.0
SIM *eS* S 21 28 52.0 -3.4
SIM pmax pmax
comp=Z,21nm,0.9s,mb5.1
SIM MLR MLR
comp=Z,490nm,17.7s,MS4.8
MCD Coleburn Disti 74.99 347 *eP* **P 21 19 19.4 +1.4**
LVV L'vov 75.02 329 *eP* **P 21 19 16.0 -2.3**
LVV *e* 21 19 31.0
LVV *eS* S 21 28 48.0 -8.8
LVV *e* 21 29 20.2
LVV MLR MLR
comp=Z,200nm,16.0s,MS4.5
LVV MLR MLR
comp=N,100nm,14.0s,MS4.6
LVV MLR MLR
comp=E,200nm,17.0s,MS4.6
TVAN Van 75.19 310 *eP* **P 21 19 16.1 -3.5**
MME1 Meikle Cairn 75.21 347 *eP* **P 21 19 20.4 +1.1**
ERZM Erzurum 75.23 313 *i P* **P 21 19 21.8 +2.1**
MDO Dochfour 75.30 348 *eP* **P 21 19 21.2 +1.4**

KAC Achnashellach 75.37 348 *eP* **P 21 19 20.4 +2.2**
KIS Kishinev 75.50 325 *eP* **P 21 19 19.0 -2.2**
KIS *e* 21 19 32.0
KIS pmax pmax
comp=Z,160nm,2.0s,mb5.6
KIS MLR MLR
comp=N,500nm,15.0s
KIS MLR MLR
comp=Z,700nm,15.0s,MS5.1
KIS Kishinev 75.50 325 *eP* **P 21 19 19.0 -2.2**
comp=Z,200nm,2.0s,mb5.7
KIS *eLQ* 21 49 20.0
comp=Z,600nm,16.0s
KIS LRM 21 55 26.0
comp=Z,500nm,15.0s
KPL Plockton 75.58 349 *eP* **P 21 19 21.1 -0.3**
KPL AMb AMB 21 19 24.4
comp=Z,66nm,1.2s,mb5.4
KPL AMS AMS 22 02 57.0
comp=Z,155nm,17.3s,MS4.4
KPL Plockton 75.58 349 P P 21 19 21.1 -0.3
KPL AMb AMB 21 19 24.4
comp=Z,66nm,1.2s,mb5.4
KWP Kalwaria 75.65 330 *eP* **P 21 19 22.2 +0.3**
KWP Kalwaria 75.65 330 *eP* **P 21 19 22.2 +0.3**
KWP Kalwaria 75.65 330 *eP* **P 21 19 21.2 -0.7**
KWP pmax pmax
comp=Z,110nm,1.0s,mb5.7
KWP Kalwaria 75.65 330 ⇓ *i P* **P 21 19 22.3 +0.4**
BSEG Bad Segeberg 75.65 339 *eP* **P 21 19 21.5 -0.4**
comp=Z,26nm,1.0s,mb5.1
KSB Sheil Bridge 75.67 348 *eP* **P 21 19 21.8 -0.1**
IAS Iasi 75.85 325 P P 21 19 23.2 +0.1
KAR1 Arisaig 76.01 349 *eP* **P 21 19 23.2 -0.7**
GRSN GIRESUNGRSN 76.02 315 *i P* **P 21 19 24.3 +0.1**
RUE Ruedersdorf 76.03 336 *eP* **P 21 19 23.6 -0.5**
comp=Z,48nm,0.9s,mb5.4
RUE Ruedersdorf 76.03 336 *eP* **P 21 19 23.4 -0.6**
comp=Z,66nm,1.1s,mb5.5
KELT Kelkit 76.12 314 *i P* **P 21 19 25.8 +1.0**
OJC Ojcow 76.15 332 *eP* **P 21 19 24.4 -0.4**
EBH Black Hill 76.32 347 *eP* **P 21 19 25.4 -0.3**
STHS Stebnicka Huta 76.34 330 *i P* **P 21 19 26.3 +0.4**
comp=Z,20nm,0.8s,mb5.1
STHS *ePP* PP 21 22 14.2 -2.3
STHS Stebnicka Huta 76.34 330 *i P* **P 21 19 26.3 +0.4**
STHS *e* 21 22 14.2
STHS pmax pmax
comp=Z,20nm,0.8s,mb5.1
KOLS Kolonicke sedl 76.39 329 *i P* **P 21 19 26.3 +0.1**
KOLS *ePP* PP 21 22 16.3 -0.7
WMOK Wichita Mounta 76.48 54 *eP* **P 21 19 26.0 -1.0**
comp=Z,13nm,1.2s,mb4.8
WMOK LR LR
comp=Z,276nm,21.0s,MS4.5
WMOK Wichita Mounta 76.48 54 *eP* **P 21 19 26.0 -1.0**
WMOK pmax pmax
comp=Z,13nm,1.2s,mb4.7
WMOK MLR MLR
comp=Z,276nm,21.0s,MS4.5
ESY Stoneypath 76.49 347 *eP* **P 21 19 27.9 +1.3**
EAB Aberfoyle 76.50 348 *eP* **P 21 19 26.5 -0.1**
EDI Edinburgh 76.58 347 *eP* **P 21 19 28.5 +1.3**
EDI AMb AMB 21 19 39.3
comp=Z,52nm,1.9s,mb5.1
EDI AMS AMS 21 59 27.3
comp=Z,153nm,17.6s,MS4.4
EDI Edinburgh 76.58 347 P P 21 19 28.5 +1.3
EDI AMb AMB 21 19 39.3
comp=Z,52nm,1.9s,mb5.1
UZH Uzhgorod 76.64 329 ⇑ *i P* **P 21 19 26.0 -1.6**
UZH *i* 21 19 38.2
UZH *i* 21 19 43.8
UZH *eS* S 21 29 10.0 -4.7
NIE Niedzica 76.66 331 *i P* **P 21 19 28.3 +0.6**
EAU Auchinoon 76.69 347 *eP* **P 21 19 27.8 0.0**
CRVS Cervenica-Dubn 76.70 330 *i P* **P 21 19 28.0 0.0**
KSP Ksiaz 76.73 334 *eP* **P 21 19 28.3 +0.2**
KSP Ksiaz 76.73 334 *eP* **P 21 19 27.9 -0.2**
KSP *eS* S 21 29 11.0 -4.6
KSP MLR MLR
comp=Z,1μm,18.9s,MS5.2
TRPA Tarpa 76.97 329 ⇑ *i P* **P 21 19 29.8 +0.3**
NRDL Niedersach Rie 77.01 338 *eP* **P 21 19 29.2 -0.4**
comp=Z,32nm,0.9s,mb5.2
OKC Ostrava-Krasne 77.02 332 *eP* **P 21 19 29.2 -0.5**
OKC AMS AMS 21 58 30.0
comp=Z,500nm,16.2s
HDIL Hopedale 77.11 44 *eP* **P 21 19 29.2 -1.1**
comp=Z,17nm,0.6s,mb5.2
HDIL LR LR
comp=Z,442nm,21.0s,MS4.8
UPC Upice 77.11 334 *eP* **P 21 19 30.0 -0.2**
DPC Dobruska-Polom 77.15 334 *eP* **P 21 19 30.1 -0.4**
DPC AMS AMS 21 57 50.0
comp=Z,600nm,18.6s
ESK Eskdalemuir 77.17 347 P P 21 19 32.5 +2.1
comp=Z,187nm,0.9s,mb6.0,SNR=12
ESK Eskdalemuir 77.17 347 *eP* **P 21 19 30.1 -0.3**
ESK AMb AMB 21 19 34.9
comp=Z,59nm,1.7s,mb5.2
ESK AMS AMS 21 59 43.7
comp=Z,167nm,17.8s,MS4.4
ESK Eskdalemuir 77.17 347 P P 21 19 30.1 -0.3
ESK AMb AMB 21 19 34.9
comp=Z,59nm,1.7s,mb5.2
ESK Eskdalemuir 77.17 347 *eP* **P 21 19 31.8 +1.4**
comp=Z,20nm,0.8s,mb5.1
ESK LR LR
comp=Z,261nm,20.0s,MS4.5
ESK Eskdalemuir 77.17 347 *eP* **P 21 19 31.8 +1.4**
ESK pmax pmax
comp=Z,20nm,0.8s,mb5.1
ESK MLR MLR
comp=Z,261nm,20.0s,MS4.5
KEMA Kemaliye 77.17 314 *i P* **P 21 19 31.7 +0.9**
CFR Carcaliu 77.26 324 P P 21 19 34.5 +3.3
BOYT Boyabat 77.26 317 *i P* **P 21 19 32.4 +1.2**
VRI Vrincioaia 77.27 325 P P 21 19 31.6 +0.4
VRI Vrincioaia 77.27 325 ⇓ *i P* **P 21 19 31.6 +0.4**
MORC Moravsky Berou 77.27 333 P P 21 19 31.2 +0.1
MORC Moravsky Berou 77.27 333 *eP* **P 21 19 31.0 -0.1**
MORC pmax pmax
comp=Z,39nm,1.0s,mb5.3
MORC Moravsky Berou 77.27 333 ⇑ *i P* **P 21 19 31.2 +0.1**
ECK Cauldkaine Hil 77.28 347 *eP* **P 21 19 32.3 +1.2**
CLL Collm 77.29 336 ⇑ *i P* **P 21 19 30.0 -1.2**
comp=Z,66nm,0.7s,mb5.7
CLL *eS* S 21 29 23.0 +1.3
CLL LR LR
comp=Z,500nm,19.4s,MS4.8
CLL Collm 77.29 336 ⇑ *i P* **P 21 19 30.0 -1.2**
CLL *eS* S 21 29 23.0 +1.3
CLL pmax pmax
comp=Z,66nm,0.7s,mb5.7
CLL MLR MLR
comp=Z,500nm,19.4s,MS4.8
CLL Collm 77.29 336 ⇑ *i P* **P 21 19 30.0 -1.2**
comp=Z,66nm,0.7s,mb5.7
CLL *i* pP 21 19 33.9
CLL *eS* S 21 29 23.0 +1.3
CLL LmV 21 56 00.0
comp=Z,500nm,19.4s
CLL Collm 77.29 336 *eP* **P 21 19 30.3 -0.9**
comp=Z,47nm,1.2s,mb5.3
PLOR Plostina 77.31 325 ⇓P P 21 19 31.7 +0.3
PLOR Plostina 77.31 325 ⇓ *i P* **P 21 19 31.6 +0.2**
LIKS Likavka 77.38 331 *eP* **P 21 19 32.3 +0.5**
comp=Z,32nm,1.3s,mb5.1
LIKS Likavka 77.38 331 *eP* **P 21 19 32.3 +0.5**
LIKS pmax pmax
comp=Z,32nm,1.3s,mb5.1
KECS Kecovo 77.40 330 *i P* **P 21 19 31.7 -0.2**
comp=Z,12nm,1.2s,mb4.7
KECS Kecovo 77.40 330 *i P* **P 21 19 31.7 -0.2**
KECS pmax pmax
comp=Z,12nm,1.2s,mb4.7
BRG Berggiesshubel 77.41 335 *eP* **P 21 19 31.1 -0.7**
comp=Z,21nm,1.0s,mb5.0
BRG *e* 21 22 13.3
comp=Z,16nm,1.9s
XAL Allendale 77.44 346 *eP* **P 21 19 33.2 +1.2**
MARD Mardin 77.48 311 *i P* **P 21 19 33.8 +1.3**
PVCC Panska Ves 77.53 335 *eP* **P 21 19 32.2 -0.4**
PVCC AMS AMS 21 57 40.0

comp=Z,700nm,17.3s
CLZ Clausthal 77.53 338 *e*P **P 21 19 32.6 0.0**
CLZ pmax pmax
comp=Z,47nm,1.3s,mb5.3
CLZ Clausthal 77.53 338 *e*P **P 21 19 32.6 0.0**
comp=Z,47nm,1.3s,mb5.3
FBE Freiberg 77.54 336 *e*P **P 21 19 32.0 -0.6**
comp=Z,38nm,0.8s,mb5.4
HOQ Hoqain 77.61 291 P **P 21 19 36.8 +3.4**
SNR=8.0
HOQ Hoqain 77.61 291 P **P 21 19 36.8 +3.4**
SNR=8.0
HARR Harsova 77.74 324 P **P 21 19 34.5 +0.6**
HARR Harsova 77.74 324 ⇓*i*P **P 21 19 34.2 +0.4**
IBBN Ibbenburen 77.78 339 *e*P **P 21 19 33.8 -0.1**
comp=Z,45nm,0.9s,mb5.4
GAL1 Galloway 77.83 347 *e*P **P 21 19 33.6 -0.6**
GAL1 AMb AMB 21 19 38.0
comp=Z,65nm,1.2s,mb5.4
GAL1 AMS AMS 21 59 14.9
comp=Z,171nm,18.5s,MS4.4
GAL1 Galloway 77.83 347 P **P 21 19 33.6 -0.6**
GAL1 AMb AMB 21 19 38.0
comp=Z,65nm,1.2s,mb5.4
GCL Cushendall 77.84 348 *e*P **P 21 19 34.3 +0.1**
BALT Daday 77.88 318 *i*P **P 21 19 35.4 +0.7**
MALT Malatya 77.93 313 P **P 21 19 36.7 +1.6**
MALT Malatya 77.93 313 P **P 21 19 36.4 +1.4**
MALT pmax pmax
comp=Z,54nm,1.4s,mb5.3
MALT Malatya 77.93 313 ⇓*i*P **P 21 19 36.1 +1.1**
CTKT Corum 77.94 317 *i*P **P 21 19 35.8 +0.7**
JMDO Jabal Madar 77.94 290 P **P 21 19 39.7 +4.3**
SNR=5.9
JMDO Jabal Madar 77.94 290 P **P 21 19 39.7 +4.3**
SNR=5.9
VYHS Vyhne 77.95 331 *i*P **P 21 19 35.3 +0.3**
comp=Z,19nm,1.3s,mb4.9
VYHS Vyhne 77.95 331 *i*P **P 21 19 35.3 +0.3**
VYHS pmax pmax
comp=Z,19nm,1.3s,mb4.9
VRAC Vranov 77.98 333 P **P 21 19 35.6 +0.5**
VRAC Vranov 77.98 333 ⇓*i*P **P 21 19 35.5 +0.4**
PRU Pruhonice 78.01 334 *e*P **P 21 19 34.7 -0.6**
PRU AMS AMS 21 57 40.0
comp=Z,700nm,14.7s
KOLL Kolacno 78.03 331 *i*P **P 21 19 35.5 +0.1**
DRGR 78.04 328 P **P 21 19 35.9 +0.4**
DRGR 78.04 328 ⇓*i*P **P 21 19 35.6 +0.1**
PSZ Piszkesteto 78.09 330 P **P 21 19 36.3 +0.6**
PSZ Piszkesteto 78.09 330 P **P 21 19 36.2 +0.5**
PSZ pmax pmax
comp=Z,27nm,1.0s,mb5.1
PSZ Piszkesteto 78.09 330 *e*P **P 21 19 36.3 +0.6**
PSZ Piszkesteto 78.09 330 ⇓*i*P **P 21 19 36.3 +0.6**
HPK Haverah Park 78.20 345 *e*P **P 21 19 36.3 +0.1**
HPK AMb AMB 21 19 39.4
comp=Z,143nm,0.7s,mb6.0
WERD Werda 78.26 336 *e*P **P 21 19 36.4 -0.2**
comp=Z,28nm,1.1s,mb5.1
BSY Bisya 78.27 290 P **P 21 19 41.5 +4.3**
SNR=6.6
BSY Bisya 78.27 290 P **P 21 19 41.5 +4.3**
SNR=6.6
MOX Moxa 78.28 336 *e*P **P 21 19 36.6 -0.1**
comp=Z,38nm,1.2s,mb5.2
MOX
comp=Z,500nm,18.0s
MOX Moxa 78.28 336 *e*P **P 21 19 36.6 -0.1**
MOX pmax pmax
comp=Z,38nm,1.2s,mb5.2
MOX MLR MLR
comp=Z,500nm,18.0s,MS4.9
MOX Moxa 78.28 336 *e*P **P 21 19 36.4 -0.3**
comp=Z,39nm,1.1s,mb5.2
STKA Stephens Creek 78.30 190 *e*P **P 21 19 37.6 +0.8**
comp=Z,6.1nm,1.4s,mb4.3
STKA Stephens Creek 78.30 190 P **P 21 19 37.9 +1.1**
comp=Z,4.2nm,0.8s,mb4.4,baz=76,slow=5.9,SNR=6.9
GUNZ Gunzen 78.33 336 *e*P **P 21 19 36.8 -0.2**
comp=Z,31nm,1.0s,mb5.2
TREC Trest 78.34 334 *e*P **P 21 19 37.2 +0.1**
TREC AMS AMS 21 58 20.0
comp=Z,800nm,14.5s
WERN Wernitzgruen 78.38 336 *e*P **P 21 19 37.1 -0.2**
comp=Z,29nm,0.8s,mb5.3
SMOL Smolenice 78.40 332 *i*P **P 21 19 38.0 +0.5**
NKC Novy Kostel 78.41 336 *e*P **P 21 19 37.2 -0.3**
NKC AMS AMS 21 59 30.0
comp=Z,600nm,12.9s
UBBA Unterbreizbach 78.56 337 *e*P **P 21 19 37.9 -0.4**
comp=Z,19nm,0.9s,mb5.0
MODS Modra-Piesok 78.58 332 *i*P **P 21 19 39.2 +0.8**
comp=Z,16nm,1.0s,mb4.9
MODS Modra-Piesok 78.58 332 *i*P **P 21 19 39.2 +0.8**
MODS pmax pmax
comp=Z,16nm,1.0s,mb4.9
GMM Mts of Mourne 78.63 348 *e*P **P 21 19 39.0 +0.4**
ELDT Eldivan 78.68 318 *i*P **P 21 19 39.8 +0.6**
MANZ Manzenberg 78.73 336 *e*P **P 21 19 39.0 -0.2**
comp=Z,24nm,1.0s,mb5.1
ZST Bratislava 78.79 332 *i*P **P 21 19 40.7 +1.1**
comp=Z,28nm,1.0s,mb5.1
ZST Bratislava 78.79 332 *i*P **P 21 19 40.7 +1.1**
ZST pmax pmax
comp=Z,28nm,1.0s,mb5.2
KBI1 Birley Grange 78.86 345 *e*P **P 21 19 40.0 +0.1**
ROTZ Rotzenmuhle 78.90 336 *e*P **P 21 19 40.2 0.0**
comp=Z,39nm,1.2s,mb5.2
CDAG Cicekdag 78.92 317 *i*P **P 21 19 40.2 -0.2**
AEU East Anglia Un 78.94 343 *e*P **P 21 19 42.2 +1.9**
JCT Junction City 79.00 57 PFAKE 21 19 50.0 +8.9
JCT LR LR
comp=Z,282nm,21.0s,MS4.6
KHC Kasperske Hory 79.06 335 *e*P **P 21 19 41.1 0.0**
KHC *e* 21 19 48.0
KHC LR LR
comp=Z,700nm,14.6s,MS5.1
KHC Kasperske Hory 79.06 335 *e*P **P 21 19 41.1 0.0**
KHC pP 21 19 48.0
KHC AMS AMS 21 58 20.0
comp=Z,700nm,14.6s
DMUB Kingscourt 79.09 348 *e*P **P 21 19 34.2 -7.0**
DMUB Kingscourt 79.09 348 ⇑*i*P **P 21 19 43.5 +2.3**
DMUB Kingscourt 79.09 348 ⇑*i*P **P 21 19 43.5 +2.3**
GZT Gaziantep 79.11 313 *i*P **P 21 19 42.6 +1.1**
KWE Weaver Farm 79.14 345 *e*P **P 21 19 42.0 +0.5**
GZR Gura Zlata 79.19 327 P **P 21 19 42.1 +0.3**
GZR Gura Zlata 79.19 327 ⇓*i*P **P 21 19 43.2 +1.3**
GRA1 Grafenberg Arr 79.25 336 *e*P **P 21 19 42.3 +0.2**
comp=Z,58nm,1.3s,mb5.3
GRA1 LR LR
comp=Z,300nm,21.9s,MS4.6
GRF Grafenberg Arr 79.25 336 *e*P **P 21 19 42.3 +0.2**
GRF pmax pmax
comp=Z,58nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,300nm,21.9s,MS4.6
GRF Grafenberg Arr 79.25 336 *e*P **P 21 19 42.3 +0.2**
GRF pmax pmax
comp=Z,58nm,1.3s,mb5.3
GRF MLR MLR
comp=Z,300nm,21.9s,MS4.6
GRF Grafenberg Arr 79.25 336 *e*P **P 21 19 42.3 +0.2**
comp=Z,58nm,1.3s,mb5.3
GRF *e*L 22 00 03.3
comp=Z,298nm,21.9s
GRFO Grafenberg 79.25 336 *e*P **P 21 19 42.3 +0.2**
comp=Z,64nm,0.8s,mb5.6
GRFO LR LR
comp=Z,384nm,19.0s,MS4.8
GRFO Grafenberg 79.25 336 *e*P **P 21 19 42.3 +0.2**
GRFO pmax pmax
comp=Z,64nm,0.8s,mb5.6
GRFO MLR MLR
comp=Z,384nm,19.0s,MS4.8
SGKT Sivrigoynuk 79.25 319 *i*P **P 21 19 42.0 -0.3**
WET Wettzell 79.26 335 *e*P **P 21 19 42.4 +0.2**
WET pmax pmax
comp=Z,47nm,1.0s,mb5.4
WET Wettzell 79.26 335 *e*P **P 21 19 42.4 +0.2**
comp=Z,47nm,1.0s,mb5.4
GEC2 GERESS Array S 79.28 334 *e*P **P 21 19 42.0 -0.3**
GEC2 pmax pmax
comp=Z,22nm,1.0s,mb5.0
GEC2 GERESS Array S 79.28 334 *e*P **P 21 19 42.0 -0.3**
comp=Z,22nm,1.0s,mb5.0
GERES GERESS Array B 79.28 334 P **P 21 19 42.2 -0.1**
comp=Z,10.0nm,0.7s,mb4.9,baz=32,slow=6.3,SNR=59
GERES LR LR 21 58 49.7
comp=Z,707nm,18.1s,MS5.0,baz=202,slow=39
CWF Charnwood Fore 79.31 345 *e*P **P 21 19 43.4 +1.0**
CWF AMb AMB 21 19 46.5
comp=Z,67nm,1.3s,mb5.4
UMR Umm Al-Rimmam 79.33 302 *e*P **P 21 19 42.3 -0.7**
UMR AMb AMB 21 19 46.2
comp=Z,55nm,0.8s,mb5.6
AVNT Avonos 79.35 316 *i*P **P 21 19 43.6 +0.8**
MIB Mutribah 79.37 302 *e*P **P 21 19 42.7 -0.4**
MIB AMb AMB 21 19 45.6
comp=Z,69nm,0.7s,mb5.7
SOP Sopron 79.41 332 ⇓*e*P **P 21 19 45.3 +2.3**
CONA Conrad Observa 79.42 333 ⇑*i*pP pP 21 19 43.4 -0.1
comp=Z,71nm,1.3s,SNR=31
BZS Buzias 79.44 328 P **P 21 19 43.3 +0.1**
BZS Buzias 79.44 328 ⇓*i*P **P 21 19 42.7 -0.5**
ANTO Ankara 79.47 318 P **P 21 19 44.9 +1.4**
ANTO LR LR
comp=Z,270nm,20.0s,MS4.6
ANTO Ankara 79.47 318 P **P 21 19 44.4 +0.9**
ANTO pmax pmax
comp=Z,15nm,0.8s,mb5.0
ANTO Ankara 79.47 318 ⇑*i*P **P 21 19 44.2 +0.7**
SBD1 Bryn Du 79.49 346 *e*P **P 21 19 44.6 +1.2**
MIAR Mount Ida 79.50 51 PFAKE 21 19 50.0 +6.3
MIAR LR LR
comp=Z,238nm,20.0s,MS4.5
TNS Taunus Mts 79.51 338 *e*P **P 21 19 43.5 0.0**
TNS pmax pmax
comp=Z,52nm,0.7s,mb5.6
TNS Taunus Mts 79.51 338 *e*P **P 21 19 43.5 0.0**
comp=Z,52nm,0.7s,mb5.6
ANDN Andirin 79.55 314 *i*P **P 21 19 45.0 +1.1**
DLF Lyons Farm 79.63 348 *e*P **P 21 19 36.7 -7.4**
DLF Lyons Farm 79.63 348 ⇑*i*P **P 21 19 46.2 +2.1**
ZIMR 79.64 325 P **P 21 19 44.3 0.0**
BEBN Eben Emael 79.67 340 P **P 21 19 44.3 0.0**
comp=Z,25nm,1.1s,mb5.1
DCN Croghan 79.69 349 ⇑*i*P **P 21 19 46.5 +2.1**
CRAR CRAIOVA 79.70 326 P **P 21 19 45.0 +0.3**
SZH Strazhica 79.73 324 *i*P **P 21 19 44.0 -0.8**
MEM Membach 79.77 340 P **P 21 19 45.0 +0.1**
comp=Z,42nm,0.9s,mb5.4
HLM1 Long Mynd 79.80 346 *e*P **P 21 19 45.7 +0.7**
QRN Al-Qurain 79.80 301 *e*P **P 21 19 45.2 -0.3**
QRN AMb AMB 21 19 50.1
comp=Z,75nm,0.6s,mb5.8
NAY Al-Naaiem 79.84 302 *e*P **P 21 19 45.0 -0.7**
NAY AMb AMB 21 19 49.0
comp=Z,41nm,1.0s,mb5.3
FORT Forrest 79.88 202 *e*P **P 21 19 46.7 +1.2**
comp=Z,13nm,0.7s,mb5.0
RDF Al-Radifah 79.89 301 *e*P **P 21 19 46.0 0.0**
RDF AMb AMB 21 19 50.7
comp=Z,129nm,0.8s,mb5.9
TOD Tromm 79.98 338 *e*P **P 21 19 45.8 -0.3**
PKSM Moragy 79.99 330 P **P 21 19 45.6 -0.6**
PKSM Moragy 79.99 330 ⇓*i*P **P 21 19 45.5 -0.7**
MOA Molln 80.00 334 ⇓*i*P **P 21 19 46.0 -0.1**
comp=Z,101nm,2.4s,mb5.3,SNR=9.5
ABH Alteburg 80.06 339 *e*P **P 21 19 46.0 -0.5**
ERPA Erie 80.10 37 PFAKE 21 20 00.0 +13
ERPA LR LR
comp=Z,266nm,20.0s,MS4.6
ARSA Arzberg 80.13 333 ⇑*i*P **P 21 19 47.1 +0.2**
comp=Z,42nm,1.4s,mb5.2,SNR=15
ARSA Arzberg 80.13 333 ⇑*i*P **P 21 19 47.1 +0.2**
comp=Z,42nm,1.4s,mb5.2
ARSA Arzberg 80.13 333 ⇑*i*pP pP 21 19 47.1 -0.3
comp=Z,42nm,1.4s,SNR=15
SNF Seneffe 80.27 341 P **P 21 19 46.1 -1.5**
comp=Z,21nm,1.9s,mb4.7
HTR Trewern Hill 80.29 346 *e*P **P 21 19 47.5 -0.2**
ACSO Alum Creek Sta 80.32 40 PFAKE 21 20 00.0 +12
ACSO LR LR
comp=Z,303nm,21.0s,MS4.6
MCH1 Michaelchurch 80.32 346 *e*P **P 21 19 48.0 +0.1**
MCH1 AMb AMB 21 19 54.8
comp=Z,63nm,2.0s,mb5.2
PMOR Pomariorio Ree 80.33 123 *e*T 22 48 23.9
comp=Z,4.0nm,0.2s
RUP Ruppelstein 80.35 339 *e*P **P 21 19 47.7 -0.3**
WCI Wyandotte Cave 80.38 44 PFAKE 21 20 00.0 +12
WCI LR LR
comp=Z,634nm,22.0s,MS4.9
SWN1 Swindon 80.58 345 *e*P **P 21 19 49.7 +0.4**
SWN1 AMb AMB 21 19 53.7
comp=Z,247nm,1.5s,mb5.9
DOU Dourbes 80.58 340 P **P 21 19 49.2 -0.1**
comp=Z,16nm,1.5s,mb4.7
KOGS Kog 80.60 332 *e*P **P 21 19 48.9 -0.5**
FUR Furstenfeldbru 80.61 336 *e*P **P 21 19 49.6 +0.1**
FUR pmax pmax
comp=Z,61nm,0.9s,mb5.5
FUR Furstenfeldbru 80.61 336 *e*P **P 21 19 49.6 +0.1**
comp=Z,61nm,0.9s,mb5.5
WLF Walferdange 80.61 339 *e*P **P 21 19 51.0 +1.6**
comp=Z,22nm,0.8s,mb5.1
WLF Walferdange 80.61 339 *e*P **P 21 19 51.0 +1.6**
WLF pmax pmax
comp=Z,22nm,0.8s,mb5.1
WLF Walferdange 80.61 339 P **P 21 19 48.0 -1.5**
comp=Z,22nm,1.7s,mb4.8
WLF Walferdange 80.61 339 *e*P **P 21 19 51.1 +1.7**
comp=Z,29nm,1.1s,mb5.1
HGH Gray Hill 80.64 345 *e*P **P 21 19 49.5 0.0**
STU Stuttgart 80.64 337 *e*P **P 21 19 49.8 +0.2**
comp=Z,40nm,0.8s,mb5.4
ESKT Eskisehir 80.65 319 *i*P **P 21 19 49.2 -0.7**
WOL Wolverton 80.66 344 *e*P **P 21 19 50.2 +0.5**
MENF Mencas 80.69 342 *e*P **P 21 19 48.8 -1.1**
BAIF Baives 80.70 341 *e*P **P 21 19 49.4 -0.6**
comp=Z,38nm,0.8s,mb5.1
BAIF Baives 80.70 341 *e*P **P 21 19 49.4 -0.6**
comp=Z,19nm,0.8s,mb5.1
BAIF Baives 80.70 341 *e*P **P 21 19 49.4 -0.6**
BAIF pmax pmax
comp=Z,19nm,0.8s,mb5.1
PERS Pernice 80.80 332 *i*P **P 21 19 50.5 0.0**
LANF Langenberg 80.82 338 *e*P **P 21 19 50.3 -0.3**
DIM Dimitrovgrad 80.90 324 *i*P **P 21 19 52.5 +1.3**
KBA Koelnbreinsper 80.97 334 ⇓*i*P **P 21 19 51.5 +0.1**
comp=Z,109nm,1.8s,mb5.5,SNR=96
KBA Koelnbreinsper 80.97 334 ⇓*i*pP pP 21 19 51.5 -0.4
comp=Z,109nm,1.8s,SNR=96
KBA Koelnbreinsper 80.97 334 ⇓*i*P **P 21 19 51.5 +0.1**
KBA pmax pmax
comp=Z,109nm,1.8s,mb5.5
PGB Panagyurishte 81.04 325 *i*P **P 21 19 53.0 +1.1**
OBKA Obir 81.10 333 ⇑*i*P **P 21 19 52.6 +0.5**
comp=Z,19nm,1.4s,mb4.8,SNR=12
OBKA Obir 81.10 333 ⇑*i*pP pP 21 19 52.6 0.0
comp=Z,19nm,1.4s,SNR=12
WATA Walderalm 81.27 335 ⇓*i*P **P 21 19 53.4 +0.4**
comp=Z,37nm,1.0s,mb5.3,SNR=20
WATA Walderalm 81.27 335 ⇓*i*pP pP 21 19 53.4 -0.1
comp=Z,37nm,1.0s,SNR=20
WATA Walderalm 81.27 335 ⇓*i*P **P 21 19 53.4 +0.4**
WATA pmax pmax
comp=Z,37nm,1.0s,mb5.3
WVT Waverly 81.27 46 PFAKE 21 20 00.0 +6.8
WVT LR LR
comp=Z,449nm,19.0s,MS4.8
MYKA Terra Mystica 81.28 333 ⇓*i*pP pP 21 19 53.1 -0.5
comp=Z,29nm,1.0s
BFO Black Forest 81.28 337 P **P 21 19 53.5 +0.5**
comp=Z,266nm,1.0s,mb6.1,SNR=17
BFO Black Forest 81.28 337 *e*P **P 21 19 53.0 0.0**
comp=Z,53nm,1.0s,mb5.4
BFO LR LR
comp=Z,358nm,22.0s,MS4.7
BFO Black Forest 81.28 337 *e*P **P 21 19 53.0 0.0**
BFO pmax pmax
comp=Z,53nm,1.0s,mb5.4
BFO MLR MLR
comp=Z,358nm,22.0s,MS4.7
BFO Black Forest 81.28 337 *e*P **P 21 19 53.0 0.0**
comp=Z,53nm,1.0s,mb5.4
WTTA Wattenberg 81.32 335 ⇑*i*P **P 21 19 53.6 +0.4**
comp=Z,66nm,0.9s,mb5.6,SNR=50
WTTA Wattenberg 81.32 335 ⇑*i*pP pP 21 19 53.6 -0.1
comp=Z,66nm,0.9s,SNR=50
WTTA Wattenberg 81.32 335 ⇑*i*P **P 21 19 53.6 +0.3**
WTTA pmax pmax
comp=Z,66nm,0.9s,mb5.6
HEX Exmoor 81.36 346 *e*P **P 21 19 53.6 +0.2**
SPAK Spaichingen-Ko 81.36 337 *e*P **P 21 19 53.4 -0.1**
RETA Reutte 81.37 336 ⇑*i*pP pP 21 19 53.6 -0.4
comp=Z,84nm,1.7s,SNR=25
VTS Vitosha 81.39 325 P **P 21 19 54.0 +0.2**
VTS Vitosha 81.39 325 *i*P **P 21 19 56.0 +2.2**
VTS Vitosha 81.39 325 ⇓*i*P **P 21 19 55.8 +2.0**
MOTA Moosalm 81.40 335 ⇑*i*P **P 21 19 53.8 +0.1**
comp=Z,64nm,1.0s,mb5.5,SNR=49
MOTA Moosalm 81.40 335 ⇑*i*pP pP 21 19 53.8 -0.4
comp=Z,64nm,1.0s,SNR=40
MOTA Moosalm 81.40 335 ⇑*i*P **P 21 19 53.8 +0.1**
MOTA pmax pmax
comp=Z,65nm,1.0s,mb5.5
CRES Cresnjev 81.41 332 *e*P **P 21 19 53.1 -0.6**
PPT Papeete 81.42 126 *e*LR LR 21 45 32.9
comp=Z,510nm,26.2s
PPT Papeete 81.42 126 LR LR 21 48 50.4
comp=Z,256nm,20.5s,MS4.6,baz=314,slow=30
CDF Champ du Feu 81.48 338 *e*P **P 21 19 53.7 -0.4**
comp=Z,134nm,1.1s,mb5.5
CDF Champ du Feu 81.48 338 *e*P **P 21 19 53.7 -0.4**
comp=Z,67nm,1.1s,mb5.5
CDF Champ du Feu 81.48 338 *e*P **P 21 19 53.7 -0.4**
CDF pmax pmax
comp=Z,67nm,1.1s,mb5.5
SQTA Sankt Quirin 81.48 335 ⇓*i*P **P 21 19 54.2 0.0**
comp=Z,57nm,1.0s,mb5.4,SNR=30
SQTA Sankt Quirin 81.48 335 ⇓*i*pP pP 21 19 54.2 -0.5
comp=Z,57nm,1.0s,SNR=30
SQTA Sankt Quirin 81.48 335 ⇓*i*P **P 21 19 54.2 +0.1**
SQTA pmax pmax
comp=Z,57nm,1.0s,mb5.5
LBNH Lisbon 81.48 31 PFAKE 21 20 10.0 +16
LBNH LR LR
comp=Z,590nm,20.0s,MS4.9
ABTA Abfaltersbach 81.52 334 ⇓*i*P **P 21 19 53.4 -0.9**
comp=Z,26nm,1.5s,mb5.0,SNR=11
FVI Forni Avoltri 81.57 334 P **P 21 19 56.7 +2.1**
GDZ Gediz 81.62 319 *i*P **P 21 19 54.9 -0.1**
ALN Alexandroupoli 81.65 323 *e*P **P 21 19 55.9 +0.8**
ECH Echery 81.69 338 *e*P **P 21 19 54.9 -0.3**
HKT Hockley 81.70 55 PFAKE 21 20 10.0 +14
HKT LR LR
comp=Z,409nm,19.0s,MS4.8
BTOK Tokmak 81.72 321 *i*P **P 21 19 55.9 +0.3**
VOY Vojsko 81.73 333 *e*P **P 21 19 55.3 -0.2**
VOY *e* 21 19 56.4
BOJS Bojanci 81.76 332 *e*P **P 21 19 54.9 -0.8**
FELD Feldberg im Sc 81.78 337 *e*P **P 21 19 55.1 -0.6**
FETA Feichten 81.80 335 ⇑*i*pP pP 21 19 55.9 -0.4
comp=Z,71nm,1.6s,SNR=19
DAVA Damuels 81.80 336 ⇑*i*P **P 21 19 56.0 +0.2**
comp=Z,58nm,1.8s,mb5.2,SNR=18
DAVA Damuels 81.80 336 ⇑*i*pP pP 21 19 56.0 -0.3
comp=Z,58nm,1.8s,SNR=18
MEZF Maizieres J'vi 81.96 340 *e*P **P 21 19 56.6 0.0**
comp=Z,101nm,0.8s,mb5.5
MEZF Maizieres J'vi 81.96 340 *e*P **P 21 19 56.6 0.0**
comp=Z,101nm,0.8s,mb5.8
THEF They Montfort 81.98 339 *e*P **P 21 19 56.4 -0.4**
DYA Yadsworthy 81.99 346 *e*P **P 21 19 56.3 -0.5**
DYA AMb AMB 21 20 00.6
comp=Z,104nm,1.1s,mb5.7
DYA AMS AMS 22 03 39.9
comp=Z,169nm,17.0s,MS4.5
DYA Yadsworthy 81.99 346 P **P 21 19 56.3 -0.5**
DYA AMb AMB 21 20 00.6
comp=Z,104nm,1.1s,mb5.7
MMB Musomiste 82.03 324 *i*P **P 21 19 58.0 +0.9**
MOF Molkenrain 82.03 338 *e*P **P 21 19 56.2 -0.9**
PLAL Pickwick Lake 82.05 47 PFAKE 21 20 10.0 +13
PLAL LR LR
comp=Z,211nm,21.0s,MS4.5
HAU Haudompre 82.09 339 *e*P **P 21 19 56.8 -0.6**
comp=Z,51nm,0.9s,mb5.2
HAU *e*MLR MLR
comp=Z,462nm,22.2s,MS4.5
HAU Haudompre 82.09 339 *e*P **P 21 19 56.8 -0.6**
comp=Z,26nm,0.9s,mb5.2
HAU LR LR
comp=Z,460nm,22.3s,MS4.8
HAU Haudompre 82.09 339 *e*P **P 21 19 56.8 -0.6**
HAU pmax pmax
comp=Z,26nm,0.9s,mb5.2
HAU MLR MLR
comp=Z,460nm,22.3s,MS4.8
HINF Hinteralfeld 82.14 338 *e*P **P 21 19 57.2 -0.4**
comp=Z,35nm,0.8s,mb5.0
HINF Hinteralfeld 82.14 338 *e*P **P 21 19 57.2 -0.4**
comp=Z,18nm,0.8s,mb5.0
HINF Hinteralfeld 82.14 338 *e*P **P 21 19 57.2 -0.4**
HINF pmax pmax
comp=Z,17nm,0.8s,mb5.0
APPI Appiano 82.15 335 P **P 21 19 59.0 +1.3**
MCWV Mont Chateau 82.19 39 PFAKE 21 20 10.0 +12
MCWV LR LR
comp=Z,597nm,20.0s,MS5.0
SSPA Standing Stone 82.21 37 PFAKE 21 20 10.0 +12
SSPA LR LR
comp=Z,207nm,19.0s,MS4.5
PLE Pljevlja 82.22 328 ⇑*i*P **P 21 20 00.1 +2.0**
BBS Basel-Blauen 82.29 338 *e*P **P 21 19 57.7 -0.7**
BRMO Bormio 82.40 335 P **P 21 20 00.0 +1.0**
IVA Berane 82.43 328 ⇑*i*P **P 21 19 59.8 +0.6**
UPM Unac-Piva 82.50 328 ⇑*i*P **P 21 20 00.6 +1.0**
STIP 82.56 326 *i*P **P 21 19 59.8 -0.1**
LOMF Lomont 82.58 338 *e*P **P 21 19 59.4 -0.5**
SKO Skopje 82.61 326 ⇓*i*P **P 21 20 02.4 +2.2**
PVY Plav 82.64 327 ⇑*i*P **P 21 20 00.2 -0.1**
TUE Stuetta 82.70 336 P **P 21 20 00.9 +0.4**
VAY Valandovo 82.72 325 ⇓*i*P **P 21 20 02.2 +1.4**
KNT Kendrikon 82.72 325 *e*P **P 21 20 00.3 -0.5**
MABI Malga Bissina 82.74 335 P **P 21 20 02.7 +1.9**
NKY Niksic 82.81 328 ⇑*i*P **P 21 20 01.0 -0.2**
BRY Bratogost 82.90 328 ⇑*i*P **P 21 20 01.3 -0.4**
FLN La Foliniere 82.95 343 *e*P **P 21 20 01.8 0.0**
comp=Z,64nm,0.9s,mb5.4
FLN *e*MLR MLR
comp=Z,438nm,20.8s,MS4.5
FLN La Foliniere 82.95 343 *e*P **P 21 20 01.8 0.0**
comp=Z,32nm,0.9s,mb5.3
FLN LR LR
comp=Z,440nm,20.8s,MS4.8
FLN La Foliniere 82.95 343 *e*P **P 21 20 01.8 0.0**
FLN pmax pmax
comp=Z,32nm,0.9s,mb5.3
FLN MLR MLR
comp=Z,440nm,20.8s,MS4.8
OUR Ouranopolis 82.98 324 *e*P **P 21 20 03.6 +1.5**
TZTN Tazewell 83.03 43 PFAKE 21 20 10.0 +7.5
TZTN LR LR
comp=Z,378nm,22.0s,MS4.7
LDF La Druitiere 83.03 343 *e*P **P 21 20 02.1 -0.2**
comp=Z,44nm,1.0s,mb5.2
LDF La Druitiere 83.03 343 *e*P **P 21 20 02.1 -0.2**
comp=Z,22nm,1.0s,mb5.1
LDF La Druitiere 83.03 343 *e*P **P 21 20 02.1 -0.2**
LDF pmax pmax
comp=Z,22nm,1.0s,mb5.1
TTG Podgorica 83.05 328 ⇑*i*P **P 21 20 01.6 -0.8**
GOLH Golhisar 83.09 318 *i*P **P 21 20 02.1 -0.7**
GRG Griva 83.10 325 *e*P **P 21 20 04.3 +1.6**
CSS Prodhromos 83.11 314 *e*P **P 21 20 02.5 -0.3**
comp=Z,18nm,0.8s,mb5.2
KDAG Bornova 83.18 320 *i*P **P 21 20 02.3 -0.9**
KRUS Krusevo 83.20 326 *i*P **P 21 20 04.1 +0.9**
BUM Brajici-Budva 83.29 328 ⇑*i*P **P 21 20 03.3 -0.4**
HCY Herceg Novi 83.31 328 *e*P **P 21 20 03.7 -0.1**
GRR Gorron 83.38 343 *e*P **P 21 20 04.3 +0.3**
comp=Z,74nm,0.8s,mb5.5
GRR Gorron 83.38 343 *e*P **P 21 20 04.3 +0.3**
comp=Z,37nm,0.8s,mb5.5
GRR Gorron 83.38 343 *e*P **P 21 20 04.3 +0.3**
GRR pmax pmax

comp=Z,37nm,0.8s,mb5.5
LOR Lormes 83.40 340 *e*P **P 21 20 04.0 -0.2**
comp=Z,133nm,1.0s,mb5.6
LOR *e*MLR MLR
comp=Z,523nm,22.5s,MS4.5
LOR Lormes 83.40 340 *e*P **P 21 20 04.0 -0.2**
comp=Z,67nm,1.0s,mb5.6
LOR LR LR
comp=Z,520nm,22.5s,MS4.8
LOR Lormes 83.40 340 *e*P **P 21 20 04.0 -0.2**
LOR pmax pmax
comp=Z,67nm,1.0s,mb5.6
LOR MLR MLR
comp=Z,520nm,22.5s,MS4.8
VAI Varese 83.41 336 P **P 21 20 04.3 0.0**
PAIG Paliouri 83.45 324 *e*P **P 21 20 05.8 +1.2**
ULC Ulcinj 83.45 328 *i*P **P 21 20 04.7 +0.2**
CABF La Chapelle 83.45 338 *e*P **P 21 20 04.4 -0.1**
comp=Z,52nm,0.9s,mb5.2
CABF La Chapelle 83.45 338 *e*P **P 21 20 04.4 -0.1**
comp=Z,26nm,0.9s,mb5.3
CABF La Chapelle 83.45 338 *e*P **P 21 20 04.4 -0.1**
CABF pmax pmax
comp=Z,26nm,0.9s,mb5.3
BIA Bitola 83.47 326 *i*P **P 21 20 05.8 +1.1**
OHR Ohrid 83.59 326 *i*P **P 21 20 05.1 -0.2**
FNA Florina 83.65 326 *e*P **P 21 20 06.9 +1.3**
SSF Saint Saulge 83.68 340 *e*P **P 21 20 05.5 -0.1**
comp=Z,64nm,0.9s,mb5.5
SSF Saint Saulge 83.68 340 *e*P **P 21 20 05.5 -0.1**
comp=Z,32nm,0.9s,mb5.5
SSF Saint Saulge 83.68 340 *e*P **P 21 20 05.5 -0.1**
SSF pmax pmax
comp=Z,32nm,0.9s,mb5.5
HYF Humbligny 83.69 341 *e*P **P 21 20 06.1 +0.5**
CHOS Chios island 83.72 321 *e*P **P 21 20 06.8 +0.8**
KLBR Kellerberrin 83.81 210 *e*P **P 21 20 06.5 +0.3**
comp=Z,30nm,1.2s,mb5.3
SGMF Saint Gilles 83.84 344 *e*P **P 21 20 06.9 +0.5**
comp=Z,76nm,0.7s,mb5.7
SGMF Saint Gilles 83.84 344 *e*P **P 21 20 06.9 +0.5**
comp=Z,38nm,0.7s,mb5.6
SGMF Saint Gilles 83.84 344 *e*P **P 21 20 06.9 +0.5**
SGMF pmax pmax
comp=Z,38nm,0.7s,mb5.6
ROSF Rostrenen 83.89 345 *e*P **P 21 20 07.3 +0.6**
comp=Z,99nm,0.9s,mb5.6
ROSF Rostrenen 83.89 345 *e*P **P 21 20 07.3 +0.6**
comp=Z,50nm,0.9s,mb5.6
ROSF Rostrenen 83.89 345 *e*P **P 21 20 07.3 +0.6**
ROSF pmax pmax
comp=Z,50nm,0.9s,mb5.6
BLA Blacksburg 83.94 41 PFAKE 21 20 20.0 +13
BLA LR LR
comp=Z,450nm,20.0s,MS4.8
AVF Avril sur Loir 83.97 340 *e*P **P 21 20 07.3 +0.2**
comp=Z,90nm,1.0s,mb5.6
AVF Avril sur Loir 83.97 340 *e*P **P 21 20 07.3 +0.2**
comp=Z,45nm,1.0s,mb5.5
AVF Avril sur Loir 83.97 340 *e*P **P 21 20 07.3 +0.2**
AVF pmax pmax
comp=Z,45nm,1.0s,mb5.5
SMF Signal de Mont 83.98 340 *e*P **P 21 20 07.3 +0.1**
comp=Z,202nm,1.2s,mb5.8
SMF Signal de Mont 83.98 340 *e*P **P 21 20 07.3 +0.1**
comp=Z,101nm,1.2s,mb5.8
SMF Signal de Mont 83.98 340 *e*P **P 21 20 07.3 +0.1**
SMF pmax pmax
comp=Z,101nm,1.2s,mb5.8
RSM Repubblica di 84.07 333 P **P 21 20 09.2 +1.5**
LRAL Lakeview Retre 84.13 47 PFAKE 21 20 20.0 +12
LRAL LR LR
comp=Z,510nm,19.0s,MS4.9
BDRM Kayabasi 84.20 320 *i*P **P 21 20 07.7 -0.7**
ERBM Eremo 84.25 334 P **P 21 20 10.3 +1.7**
QUIF Quistinic 84.28 345 *e*P **P 21 20 09.0 +0.3**
comp=Z,20nm,0.6s,mb5.1
QUIF Quistinic 84.28 345 *e*P **P 21 20 09.0 +0.3**
comp=Z,9.9nm,0.6s,mb5.1
QUIF Quistinic 84.28 345 *e*P **P 21 20 09.0 +0.3**
QUIF pmax pmax
comp=Z,10.0nm,0.6s,mb5.1
SFI Santa Sofia 84.28 333 P **P 21 20 11.1 +2.4**
LPL La Plagne 84.30 337 *e*P **P 21 20 09.5 +0.7**
comp=Z,44nm,0.7s,mb5.4
LPL La Plagne 84.30 337 *e*P **P 21 20 09.5 +0.7**
comp=Z,22nm,0.7s,mb5.4
LPL La Plagne 84.30 337 *e*P **P 21 20 09.5 +0.7**
LPL pmax pmax
comp=Z,22nm,0.7s,mb5.4
BGF Bois d'Agland 84.31 340 *e*P **P 21 20 09.1 +0.3**
comp=Z,28nm,0.6s,mb5.3
BGF Bois d'Agland 84.31 340 *e*P **P 21 20 09.1 +0.3**
comp=Z,14nm,0.6s,mb5.3
BGF Bois d'Agland 84.31 340 *e*P **P 21 20 09.1 +0.3**
BGF pmax pmax
comp=Z,14nm,0.6s,mb5.3
LPG La Plagne 84.31 337 *e*P **P 21 20 09.7 +0.8**
comp=Z,88nm,0.9s,mb5.6
LPG La Plagne 84.31 337 *e*P **P 21 20 09.7 +0.8**
comp=Z,44nm,0.9s,mb5.6
LPG La Plagne 84.31 337 *e*P **P 21 20 09.7 +0.8**
LPG pmax pmax
comp=Z,44nm,0.9s,mb5.6
VMG Vicchio 84.32 334 P **P 21 20 10.8 +1.8**
CBN Corbin 84.46 38 PFAKE 21 20 20.0 +10
CBN LR LR
comp=Z,237nm,19.0s,MS4.6
RSP Reno Superiore 84.49 337 P **P 21 20 10.7 +0.9**
CRE Caprese Michel 84.50 333 P **P 21 20 12.5 +2.6**
BADI Badiali 84.51 333 P **P 21 20 12.8 +2.9**
SNTG Esanatoglia 84.52 332 P **P 21 20 10.6 +0.6**
BDI Bagni Di Lucca 84.52 334 P **P 21 20 12.3 +2.3**
MEV Metsovon 84.56 325 *e*P **P 21 20 13.2 +2.9**
MURB Monte Urbino 84.64 333 P **P 21 20 12.8 +2.2**
TCF Toulx Ste Croi 84.71 341 *e*P **P 21 20 11.3 +0.4**
comp=Z,54nm,0.8s,mb5.4
TCF Toulx Ste Croi 84.71 341 *e*P **P 21 20 11.3 +0.4**
comp=Z,27nm,0.8s,mb5.4
TCF Toulx Ste Croi 84.71 341 *e*P **P 21 20 11.3 +0.4**
TCF pmax pmax
comp=Z,27nm,0.8s,mb5.4
AGG Agios Georgios 84.77 324 *e*P **P 21 20 10.6 -0.7**
NRCA Norcia 84.84 332 P **P 21 20 12.6 +1.0**
TERO Teramo 84.86 332 P **P 21 20 13.3 +1.6**
MFF Saint Martin d 84.94 342 *e*P **P 21 20 12.7 +0.7**
comp=Z,79nm,0.8s,mb5.6
MFF Saint Martin d 84.94 342 *e*P **P 21 20 12.7 +0.7**
comp=Z,40nm,0.8s,mb5.6
MFF Saint Martin d 84.94 342 *e*P **P 21 20 12.7 +0.7**
MFF pmax pmax
comp=Z,40nm,0.8s,mb5.6
MBDF Montbardon 85.02 337 *e*P **P 21 20 12.5 +0.1**
comp=Z,47nm,0.8s,mb5.3
MBDF Montbardon 85.02 337 *e*P **P 21 20 12.5 +0.1**
comp=Z,24nm,0.8s,mb5.4
MBDF Montbardon 85.02 337 *e*P **P 21 20 12.5 +0.1**
MBDF pmax pmax
comp=Z,24nm,0.8s,mb5.4
ORIF Oris-en-Rattie 85.08 338 *e*P **P 21 20 13.5 +0.8**
comp=Z,69nm,0.8s,mb5.5
ORIF *e*MLR MLR
comp=Z,406nm,20.0s,MS4.5
ORIF Oris-en-Rattie 85.08 338 *e*P **P 21 20 13.5 +0.8**
comp=Z,35nm,0.8s,mb5.5
ORIF Oris-en-Rattie 85.08 338 *e*P **P 21 20 13.5 +0.8**
ORIF pmax pmax
comp=Z,35nm,0.8s,mb5.5
DOI San Damiano 85.09 337 P **P 21 20 13.8 +1.0**
IGT Igoumenitsa 85.13 326 *e*P **P 21 20 14.6 +1.4**
AQU L'Aquila 85.17 332 ⇓P **P 21 20 13.2 0.0**
AQU L'Aquila 85.17 332 ⇓*i*P **P 21 20 13.2 -0.1**
NWAO Narrogin (SRO) 85.21 210 LR LR 21 54 47.5
comp=Z,177nm,20.6s,MS4.4,baz=195,slow=33
FIAM Fiamignano 85.34 332 P **P 21 20 16.6 +2.5**
VIVF Saint-Julien-l 85.45 338 *e*P **P 21 20 15.2 +0.6**
comp=Z,44nm,0.8s,mb5.3
VIVF Saint-Julien-l 85.45 338 *e*P **P 21 20 15.2 +0.6**
comp=Z,22nm,0.8s,mb5.3
VIVF Saint-Julien-l 85.45 338 *e*P **P 21 20 15.2 +0.6**
VIVF pmax pmax
comp=Z,22nm,0.8s,mb5.3
IMI Imperia 85.46 336 P **P 21 20 15.2 +0.5**
PTQR Pietraquaria 85.47 331 P **P 21 20 15.8 +1.0**
FRNF Fournols 85.47 340 *e*P **P 21 20 18.6 +3.9**
SAOF Saorge 85.48 336 *e*P **P 21 20 17.2 +2.4**

FG5 Orsara di Pugl 85.49 330 P **P 21 20 16.2 +1.3**
AUTN L'Aution 85.51 336 *e*P **P 21 20 16.0 +1.1**
FG4 Candela 85.53 330 P **P 21 20 16.0 +0.9**
TOUF Mont Tournerai 85.54 336 *e*P **P 21 20 18.0 +2.9**
GOGA Godfrey 85.60 45 PFAKE 21 20 30.0 +14
GOGA LR LR
comp=Z,387nm,20.0s,MS4.8
SDI San Donato 85.61 331 P **P 21 20 17.2 +1.7**
LUCF Luceram 85.63 336 *e*P **P 21 20 18.1 +2.6**
SBF Sospel 85.63 336 *e*P **P 21 20 16.2 +0.7**
comp=Z,110nm,0.9s,mb5.8
SBF Sospel 85.63 336 *e*P **P 21 20 16.2 +0.7**
comp=Z,55nm,0.9s,mb5.8
SBF Sospel 85.63 336 *e*P **P 21 20 16.2 +0.7**
SBF pmax pmax
comp=Z,55nm,0.9s,mb5.8
MVIF Mont Vial 85.68 336 *e*P **P 21 20 18.5 +2.7**
BRAL Brewton 85.69 49 PFAKE 21 20 30.0 +14
BRAL LR LR
comp=Z,360nm,19.0s,MS4.8
REVF Revere 85.76 336 *e*P **P 21 20 18.6 +2.4**
RJF Les Rejaudoux 85.80 341 *e*P **P 21 20 17.1 +0.8**
comp=Z,79nm,1.0s,mb5.6
RJF *e*MLR MLR
comp=Z,415nm,21.8s,MS4.5
RJF Les Rejaudoux 85.80 341 *e*P **P 21 20 17.1 +0.8**
comp=Z,39nm,1.0s,mb5.6
RJF LR LR
comp=Z,410nm,21.8s,MS4.8
RJF Les Rejaudoux 85.80 341 *e*P **P 21 20 17.1 +0.8**
RJF pmax pmax
comp=Z,39nm,1.0s,mb5.6
RJF MLR MLR
comp=Z,410nm,21.8s,MS4.8
CALN Calern 85.88 337 *e*P **P 21 20 19.6 +2.8**
CAF Calviac 86.03 340 *e*P **P 21 20 18.7 +1.2**
comp=Z,58nm,0.7s,mb5.6
CAF Calviac 86.03 340 *e*P **P 21 20 18.7 +1.2**
comp=Z,29nm,0.7s,mb5.6
CAF Calviac 86.03 340 *e*P **P 21 20 18.7 +1.2**
CAF pmax pmax
comp=Z,29nm,0.7s,mb5.6
SMRF Simiane la Rot 86.03 338 *e*P **P 21 20 17.1 -0.4**
comp=Z,20nm,0.8s,mb5.1
SMRF Simiane la Rot 86.03 338 *e*P **P 21 20 17.1 -0.4**
comp=Z,20nm,0.8s,mb5.4
FRF La Foret Royal 86.13 337 *e*P **P 21 20 18.7 +0.7**
comp=Z,20nm,0.8s,mb5.1
FRF La Foret Royal 86.13 337 *e*P **P 21 20 18.7 +0.7**
comp=Z,10nm,0.8s,mb5.1
FRF La Foret Royal 86.13 337 *e*P **P 21 20 18.7 +0.7**
FRF pmax pmax
comp=Z,10.0nm,0.8s,mb5.1
TBI Tubuai 86.14 130 *e*T 22 55 41.5
comp=Z,7.4nm,0.3s
LFF La Frestale 86.32 341 *e*P **P 21 20 20.1 +1.2**
comp=Z,56nm,0.7s,mb5.6
LFF La Frestale 86.32 341 *e*P **P 21 20 20.1 +1.2**
comp=Z,28nm,0.7s,mb5.6
LFF La Frestale 86.32 341 *e*P **P 21 20 20.1 +1.2**
LFF pmax pmax
comp=Z,28nm,0.7s,mb5.6
LMR La Mourre 86.38 337 *e*P **P 21 20 19.4 +0.2**
comp=Z,51nm,0.8s,mb5.5
LMR La Mourre 86.38 337 *e*P **P 21 20 19.4 +0.2**
comp=Z,26nm,0.8s,mb5.5
LMR La Mourre 86.38 337 *e*P **P 21 20 19.4 +0.2**
LMR pmax pmax
comp=Z,26nm,0.8s,mb5.5
PGF Pioggiola 86.38 335 *e*P **P 21 20 19.0 -0.3**
comp=Z,37nm,0.8s,mb5.4
PGF Pioggiola 86.38 335 *e*P **P 21 20 19.0 -0.3**
comp=Z,19nm,0.8s,mb5.4
PGF Pioggiola 86.38 335 *e*P **P 21 20 19.0 -0.3**
PGF pmax pmax
comp=Z,19nm,0.8s,mb5.4
LASF Ste Croix 86.39 339 *e*P **P 21 20 20.4 +1.1**
comp=Z,59nm,1.1s,mb5.4
CNNC Cliffs of the 86.72 40 PFAKE 21 20 30.0 +8.9
CNNC LR LR
comp=Z,327nm,19.0s,MS4.8
NHSC New Hope 87.43 43 PFAKE 21 20 40.0 +15
NHSC LR LR
comp=Z,490nm,20.0s,MS4.9
MTLF Montolieu 87.48 340 *e*P **P 21 20 26.0 +1.4**
comp=Z,26nm,0.6s,mb5.3
MTLF Montolieu 87.48 340 *e*P **P 21 20 26.0 +1.4**
comp=Z,13nm,0.6s,mb5.3
MTLF Montolieu 87.48 340 *e*P **P 21 20 26.0 +1.4**
MTLF pmax pmax
comp=Z,13nm,0.6s,mb5.3
EPF Esparros 88.22 341 *e*P **P 21 20 29.1 +0.9**
comp=Z,18nm,0.8s,mb5.1
EPF Esparros 88.22 341 *e*P **P 21 20 29.1 +0.9**
comp=Z,9.1nm,0.8s,mb5.1
EPF Esparros 88.22 341 *e*P **P 21 20 29.1 +0.9**
EPF pmax pmax
comp=Z,9.0nm,0.8s,mb5.0
SJPF Ste Jean 88.49 342 *e*P **P 21 20 31.3 +1.9**
ETSF Etsaut 88.55 341 *e*P **P 21 20 30.5 +0.8**
comp=Z,22nm,0.7s,mb5.3
ETSF Etsaut 88.55 341 *e*P **P 21 20 30.5 +0.8**
comp=Z,11nm,0.7s,mb5.3
ETSF Etsaut 88.55 341 *e*P **P 21 20 30.5 +0.8**
ETSF pmax pmax
comp=Z,11nm,0.7s,mb5.3
DWPF Disney 90.92 46 PFAKE 21 20 50.0 +8.9
DWPF LR LR
comp=Z,312nm,21.0s,MS4.7
ESDC Sonseca Array 92.37 343 P **P 21 20 46.4 -1.1**
comp=Z,2.1nm,0.8s,mb4.5,baz=350,slow=3.9,SNR=3.2
ESDC LR LR 22 04 20.7
comp=Z,221nm,20.1s,MS4.6,baz=55,slow=37
KEST Kesra 92.50 332 P **P 21 20 48.0 -0.3**
comp=Z,8.0nm,0.8s,mb5.1,baz=343,slow=2.5,SNR=24
KEST LR LR 22 06 38.3
comp=Z,118nm,18.4s,MS4.4,baz=179,slow=38
PAB San Pablo 92.57 343 PFAKE 21 21 00.0 +11
PAB LR LR
comp=Z,327nm,20.0s,MS4.8
TORD Torodi Ar. Bea 115.92 329 PKKPab PKKPab 21 36 54.3 -4.1
comp=Z,0.5nm,0.6s,baz=191,slow=3.8,SNR=6.8
VNDA Vanda 123.36 178 PKP PKPdf 21 26 30.9 -1.8
comp=Z,0.5nm,0.4s,baz=336,slow=14,SNR=2.4
DBIC Dimbokro 124.15 334 PKP PKPdf 21 26 33.8 -2.4
comp=Z,1.4nm,0.7s,baz=87,slow=4.2,SNR=4.3
PLCA Paso Flores 147.75 97 PKP2 PKPab 21 27 21.3 -2.6
PLCA pmax pmax
comp=Z,5.0nm,0.7s
PLCA Paso Flores 147.75 97 PKPbc PKPbc 21 27 21.3 -0.1
comp=Z,5.1nm,0.7s,baz=290,slow=3.3,SNR=9.2
MAIT Maitri 149.14 203 *e*PKPdf PKPdf 21 27 21.4 +1.5
SNAA Sanae 151.95 196 *e*PKPdf PKPdf 21 27 25.9 +1.6
SNAA *e* 21 27 30.7
SNAA *e* 21 27 32.9
SNAA *e* 21 27 36.3
SNAA *e* 21 27 40.5
SNAA *e* 21 27 45.2
SNAA *e* 21 27 48.7
SNAA *e* 21 27 50.7
SNAA *e* 21 27 54.9
SNAA *e* 21 27 59.4
SNAA *e* 21 28 04.2
SNAA *e* 21 28 09.5
SNAA *e* 21 28 15.1
SNAA *e* 21 28 19.8
SNAA *e* 21 28 31.0
SNAA Sanae 151.95 196 PKIKP PKPbc 21 27 29.8 -1.0
SNAA pmax pmax
comp=Z,1.0nm,0.5s
SNAA Sanae 151.95 196 PKPbc PKPbc 21 27 29.8 -1.0
comp=Z,1.2nm,0.5s,baz=192,slow=5.7,SNR=15
VNA2 Neumayer--Watz 153.38 194 *e*PKPdf PKPdf 21 27 27.8 +1.4
VNA2 *e* 21 27 33.6
VNA2 *e* 21 27 36.9
VNA2 *e* 21 27 41.0
VNA2 *e* 21 27 46.8
VNA2 *e* 21 27 51.5
VNA2 *e* 21 27 54.5
VNA2 *e* 21 27 57.1
VNA2 *e* 21 28 00.5
VNA2 *e* 21 28 04.8
VNA2 *e* 21 28 09.6
VNA2 *e* 21 28 13.6
VNA2 *e* 21 28 16.2
VNA2 *e* 21 28 18.5
VNA2 *e* 21 28 22.1
VNA2 *e* 21 28 26.4
VNA2 *e* 21 28 36.6
VNA3 Neumayer Olymp 153.46 192 *e*PKPdf PKPdf 21 27 27.8 +1.3
VNA3 *e* 21 27 32.7
VNA3 *e* 21 27 36.1
VNA3 *e* 21 27 39.4
VNA3 *e* 21 27 46.8
VNA3 *e* 21 27 51.2
VNA3 *e* 21 27 55.0
VNA3 *e* 21 27 57.2
VNA3 *e* 21 28 00.3
VNA3 *e* 21 28 05.0
VNA3 *e* 21 28 08.3
VNA3 *e* 21 28 13.7
VNA3 *e* 21 28 15.9
VNA3 *e* 21 28 19.0
VNA3 *e* 21 28 22.0
VNA3 *e* 21 28 24.2
VNA3 *e* 21 28 26.7
VNA3 *e* 21 28 35.9
VNA1 Neumayer--Stat 153.77 194 *e*PKPdf PKPbc 21 27 33.4 -1.4
VNA1 *e* 21 27 39.5
VNA1 *e* 21 27 42.8
VNA1 *e* 21 27 46.1
VNA1 *e* 21 27 52.4
VNA1 *e* 21 27 56.1
VNA1 *e* 21 28 00.3
VNA1 *e* 21 28 02.2
VNA1 *e* 21 28 05.7
VNA1 *e* 21 28 09.0
VNA1 *e* 21 28 14.5
VNA1 *e* 21 28 20.3
VNA1 *e* 21 28 23.3
VNA1 *e* 21 28 28.5
VNA1 *e* 21 28 38.6

*ISCJB **29** 21:59:25.7±0.5, 38.39N±002×3929E±002, h2km±5km, Error ellipse: s-maj=4.0km s-min=3.2km az=164.8*
*CSEM **29** 21:59:25.5±0.1, 38.37N×3924E, h2km, ML3.5, Error ellipse: s-maj=2.6km s-min=1.9km az=168.0*
*ISK **29** 21:59:25.1, 38.42N×3924E, h5km, MD3.2*
*DDA **29** 21:59:26.2, 38.43N×3934E, h7km±2km, Md3.5, Ml3.5*
ISC 29 21:59:26.7±0.5, 38.40N±002×3928E±003, h5km±4km, n26, σ1°08/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.25**	**293**	*i* P	**Pg**	**21 59 31.7**	**+0.1**
ELZG				*i* S	**Sg**	**21 59 35.6**	**+0.6**
MALT	**Malatya**	**0.67**	**263**	*i* PG	**Pg**	**21 59 38.2**	**-1.5**
MALT				*i* SG	**Sg**	**21 59 49.8**	**+1.4**
MYA	**Malataya**	**0.67**	**264**	*i* PG	**Pg**	**21 59 38.3**	**-1.4**
MYA				*i* SG	**Sg**	**21 59 48.6**	**+0.2**
DIY	**Diyarbakir**	**0.90**	**124**	PG	**Pg**	**21 59 43.8**	**-0.2**
URFA	**Urfa**	**1.02**	**201**	PG	**Pg**	**21 59 46.7**	**+0.4**
URFA				SG	**Sg**	**22 00 01.3**	**+1.7**
BINT	**Bingol**	**1.06**	**63**	PG	**Pg**	**21 59 46.8**	**-0.3**
KEMA	**Kemaliye**	**1.06**	**325**	*i* P	**Pg**	**21 59 45.5**	**-1.7**
KEMA				*i* S	**Sg**	**22 00 00.5**	**-0.5**
ATAB	**Bozova**	**1.21**	**220**	*i* P	**Pg**	**21 59 49.0**	**-1.0**
ATAB				*i* S	**Sg**	**22 00 05.0**	**-0.6**
EZC	**Erzincan**	**1.41**	**17**	PN	**Pn**	**21 59 51.6**	**-1.4**
BNGL	**BINGOL**	**1.57**	**69**	*i* P	**Pn**	**21 59 52.5**	**-2.6**
BNGL				*i* S	**Sg**	**22 00 19.2**	**+2.1**
MARD	**Mardin**	**1.61**	**132**	*i* P	**Pn**	**21 59 54.6**	**-1.1**
MARD				*i* S	**Sn**	**22 00 16.5**	**-0.3**
GZT	**Gaziantep**	**1.71**	**233**	*i* P	**Pn**	**21 59 56.3**	**-0.8**
GZT				*i* S	**Sn**	**22 00 19.0**	**-0.3**
KELT	**Kelkit**	**1.75**	**359**	*i* P	**Pn**	**21 59 58.8**	**+1.2**
KELT				*i* S	**Sg**	**22 00 22.6**	**-0.3**
BTMT	**Batman**	**1.75**	**96**	PN	**Pn**	**21 59 56.5**	**-1.2**
GAZ	**Gaziantep**	**2.04**	**234**	PN	**Pn**	**22 00 02.0**	**+0.3**
GUMT	**Gumushane**	**2.06**	**4**	PN	**Pn**	**22 00 02.7**	**+0.7**
EZM	**Erzurum**	**2.21**	**46**	PN	**Pn**	**22 00 04.3**	**+0.3**
ANDN	**Andirin**	**2.46**	**251**	*i* P	**Pn**	**22 00 02.9**	**-4.5**
ANDN				*i* S	**Sg**	**22 00 47.3**	**+1.6**
ESPY	**Espiye-Giresun**	**2.55**	**351**	*e*PN	**Pn**	**22 00 09.6**	**+0.9**
GRSN	**GIRESUNGRSN**	**2.64**	**343**	*i* P	**Pn**	**22 00 05.7**	**-4.2**
GRSN				*i* S	**Sb**	**22 00 47.8**	**+0.6**
BNN	**Bunyan**	**2.73**	**281**	*e*PN	**Pn**	**22 00 11.9**	**+0.8**
KOZT	**Kozan**	**2.88**	**253**	*e*PN	**Pn**	**22 00 13.5**	**+0.3**
TUTA	**Tutak**	**2.94**	**69**	*e*P	**Pn**	**22 00 15.8**	**+1.9**
TUTA				*i* S	**Sg**	**22 00 57.7**	**-3.3**
COBT	**Iskenderun**	**3.05**	**233**	*i* P	**Pn**	**22 00 20.5**	**-0.9**
COBT				*i* S	**Sg**	**22 01 04.5**	**-0.2**
HAKT	**HAKKARI**	**3.60**	**102**	*i* P	**Pn**	**22 00 22.9**	**-0.2**
HAKT				*i* S	**Sg**	**22 01 22.9**	**+0.6**
HKR	**Hakkari**	**3.62**	**102**	*e*PN	**Pn**	**22 00 25.0**	**+1.6**

*KISR **29** 22:02:47.0±0.8, 27.97N×5152E, h34km±302km, ML2.7*
*CSEM **29** 22:02:48.0±0.2, 28.07N×5176E, h2km, ML3.6, Error ellipse: s-maj=6.5km s-min=1.9km az=53.0*
ISC 29 22:02:48.8±2.3, 28.1N±01×519E±01, h11km±14km, n16, σ0°64/25, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOQSS		**3.20**	**226**	P	**Pg**	**22 03 50.6**	**+0.4**
QRN	**Al-Qurain**	**3.58**	**281**	*e*P	**Pn**	**22 03 43.7**	**-0.5**
QRN				*e*S	**Sn**	**22 04 25.8**	**-0.6**
QRN				AML	AML	22 04 26.9	
	comp=Z,15nm,0.2s						
KBD	**Kabd**	**3.85**	**287**	*e*P	**Pn**	**22 03 48.1**	**+0.1**
KBD				*e*S	**Sn**	**22 04 33.7**	**+0.4**
KBD				AML	AML	22 04 36.3	
	comp=Z,36nm,0.3s						
KBD	**Kabd**	**3.85**	**287**	*e*P	**Pn**	**22 03 48.1**	**+0.1**
KBD				*e*S	**Sn**	**22 04 33.7**	**+0.4**
RDF	**Al-Radifah**	**3.92**	**283**	*e*P	**Pn**	**22 03 48.1**	**-0.9**
RDF				*e*S	**Sn**	**22 04 35.1**	**+0.1**
RDF				AML	AML	22 04 36.8	
	comp=Z,14nm,0.3s						
RDF	**Al-Radifah**	**3.92**	**283**	*e*P	**Pn**	**22 03 48.1**	**-0.9**
RDF				*e*S	**Sn**	**22 04 35.1**	**+0.1**
	comp=Z,14nm,0.3s						
UMR	**Umm Al-Rimmam**	**3.95**	**292**	*e*P	**Pn**	**22 03 49.5**	**+0.2**
BTHS		**4.19**	**194**	P	**Pn**	**22 03 53.0**	**+0.4**
NAY	**Al-Naaiem**	**4.25**	**286**	*e*P	**Pn**	**22 03 53.6**	**+0.1**
NAY				*e*S	**Sn**	**22 04 42.9**	**-0.3**
NAY				AML	AML	22 04 43.6	
	comp=Z,5.2nm,0.6s						
NAY	**Al-Naaiem**	**4.25**	**286**	*e*P	**Pn**	**22 03 53.6**	**+0.1**
NAY				*e*S	**Sn**	**22 04 42.9**	**-0.3**
MIB	**Mutribah**	**4.34**	**294**	*e*P	**Pn**	**22 03 55.3**	**+0.6**
MIB				*e*S	**Sn**	**22 04 46.5**	**+1.2**
MIB				AML	AML	22 04 51.6	
	comp=Z,8.9nm,0.5s						
MIB	**Mutribah**	**4.34**	**294**	*e*P	**Pn**	**22 03 55.3**	**+0.6**
MIB				*e*S	**Sn**	**22 04 46.5**	**+1.2**
HRDDS		**5.64**	**204**	P	**Pn**	**22 04 13.3**	**+0.7**
ASYS		**6.74**	**266**	P	**Pn**	**22 04 26.3**	**-1.4**
LYLS		**7.41**	**216**	S	**Sn**	**22 05 54.7**	**-6.2**
LYLS		**7.41**	**216**	P	**Pn**	**22 04 36.2**	**-0.6**

*NEIC **29** 22:22:55.7, 1665N×9850W, h1km, MD4.2(MEX), After MEX.*
MEX 29 22:22:56.4±1.3, 1665N×9846W, h4km±17km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.41**	**128**	*i* P	Pg	22 23 04.2	-0.1
PNIG				*i* S	Sg	22 23 09.4	-0.2
UTMO	**Huajuapan**	**1.33**	**28**	*i* P	Pn	22 23 17.7	-4.1
UTMO				*i* S	Sg	22 23 35.4	-4.0
ACX	**Acapulco**	**1.41**	**279**	*i* P	Pn	22 23 17.6	-5.2
ACX				*i* S	Sb	22 23 38.7	-2.9
VHO	**Vista Hermosa**	**1.71**	**75**	*i* P	Pn	22 23 24.3	-2.7
VHO				*i* S	Sn	22 23 44.7	-4.6
OXX	**Oaxaca**	**1.72**	**75**	*i* P	Pn	22 23 23.9	-3.3
OXX				*i* S	Sn	22 23 46.4	-3.2
CAIG	**El Cayaco**	**1.77**	**283**	*e*P	Pn	22 23 24.4	-3.4
CAIG				*i* S	Sn	22 23 47.4	-3.4
CAIG	**El Cayaco**	**1.77**	**283**	*e*P	Pn	22 23 24.4	-3.4
CAIG				*i* S	Sn	22 23 45.6	-5.2

PLIG	**Platanillo**	**2.00**	**330**	*i* P	Pn	22 23 31.6	+0.6
PLIG				*i* S	Sn	22 23 57.9	+1.5
PLIG	**Platanillo**	**2.00**	**330**	*e*P	Pn	22 23 29.6	-1.3
PLIG				*i* S	Sn	22 23 52.7	-3.7
TPIG	**Tehuac#an**	**2.05**	**31**	*i* P	Pn	22 23 30.3	-1.4
TPIG				*i* S	Sn	22 23 56.7	-1.1
YAIG	**Yautepec**	**2.28**	**345**	*i* P	Pn	22 23 35.9	+1.1
YAIG				*i* S	Sn	22 24 01.9	-1.4
YAIG	**Yautepec**	**2.28**	**345**	*e*P	Pn	22 23 33.1	-1.6
YAIG				*i* S	Sn	22 24 00.8	-2.4
PPM	**Popocatepetl**	**2.41**	**356**	*i* P	Pn	22 23 33.3	-3.3
PPM				*e*P		22 23 37.0	
PPM				*i* S	Sn	22 24 07.3	+0.7
PPM	**Popocatepetl**	**2.41**	**356**	*i* P	Pn	22 23 33.3	-3.3
PPM				*e*P		22 23 36.0	
PPM				*i* S	Sn	22 24 05.4	-1.2
HUIG	**Huatulco**	**2.43**	**111**	*i* P	Pn	22 23 33.4	-3.4
HUIG				*i* S	Sn	22 23 59.8	-7.2
HUIG	**Huatulco**	**2.43**	**111**	*i* P	Pn	22 23 33.4	-3.4
HUIG				*i* S	Sn	22 24 07.7	+0.7
UNM	**Universidad Na**	**2.75**	**346**	*e*P	Pn	22 23 43.0	+1.7
SZVM	**Salazar**	**2.80**	**342**	*e*P	Pn	22 23 41.2	-0.7
SZVM				*i* S	Sn	22 24 13.1	-3.1
PBVM	**Pinon**	**2.84**	**348**	*e*P	Pn	22 23 43.2	+0.7
PBVM				*i* S	Sn	22 24 18.1	+0.9
IIO	**Organos**	**2.94**	**355**	*e*P	Pn	22 23 45.1	+1.2
IIO				*i* S	Sn	22 24 16.3	-3.3
PTVM	**Pico Tres Padr**	**2.99**	**348**	*i* P	Pn	22 23 45.1	+0.5
PTVM				*i* S	Sn	22 24 22.8	+1.8
CMIG	**Matias Romero**	**3.46**	**82**	*i* P	Pn	22 23 47.2	-3.7
CMIG				*i* S	Sn	22 24 37.1	+4.7
CMIG	**Matias Romero**	**3.46**	**82**	*i* P	Pn	22 23 47.2	-3.7
CMIG				*i* S	Sn	22 24 29.4	-3.0
MOIG	**Morelia**	**3.98**	**320**	*i* P	Pn	22 24 03.1	+5.0
MOIG				*i* S	Sn	22 24 42.5	-2.7
MOIG	**Morelia**	**3.98**	**320**	*e*P	Pn	22 23 56.7	-1.5
MOIG				*i* S	Sn	22 24 42.5	-2.7
MMIG	**Aquila**	**4.94**	**290**	*i* P	Pn	22 24 08.0	-3.4
MMIG				*i* S	Sn	22 25 07.2	-1.7
SCX	**San Cristobal**	**5.59**	**88**	*e*P	Pn	22 24 13.5	-6.8
CCIG	**Comitan**	**6.08**	**93**	*i* S	Sn	22 25 25.2	-12
CCIG	**Comitan**	**6.08**	**93**	*i* S	Sn	22 25 37.6	+0.4

*IDC **29** 22:39:23.2±0.7, 2331N×14396E, h0km, mb4.0/12, mb1 4.0/15, mb1mx4.0/22, mbtmp4.0/15, ML3.6/3, MS2.9/2, Ms1 2.9/2, ms1mx2.7/24, Error ellipse: s-maj=29.9km s-min=13.8km az=76.0*

*ISCJB **29** 22:39:26.1±0.4, 2336N±005×1440E±0.1, h33km, mb4.2/26, Error ellipse: s-maj=13.8km s-min=7.1km az=165.2*

*NEIC **29** 22:39:28.3±0.4, 2338N×14400E, h35km, mb4.4/11, Error ellipse: s-maj=15.8km s-min=7.8km az=80.0*

*BJI **29** 22:39:28.2, 2340N×14400E, h35km, mB5.1, mb4.7*

ISC 29 22:39:28.4±0.4, 2339N±005×1441E±01, h35km, n42, σ0§99/43, mb4.2/26, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.06**	**336**	Pn	**Pn**	**22 40 27.1**	**-1.0**
	5.2nm,0.3s,baz=293,slow=19,SNR=3.2						
CBIJ				Sn	**Sn**	**22 41 13.2**	**-1.2**
	24nm,0.3s,baz=295,slow=22,SNR=7.8						
CBIJ				LR	LR	22 41 25.5	
	comp=Z,116nm,21.9s,baz=138,slow=30						
MJAR	**Matsushiro Arr**	**14.05**	**340**	Pn	**Pn**	**22 42 43.0**	**-1.9**
	0.3nm,0.3s,baz=279,slow=15,SNR=4.1						
MAJO	**Matsushiro**	**14.05**	**340**	Pn	**Pn**	**22 42 41.6**	**-3.3**
KSRS	**Korea Array**	**19.71**	**319**	P	**Pn**	**22 43 55.6**	**-0.7**
	0.3nm,0.3s,baz=133,slow=12,SNR=8.0						
KSRS				LR	LR	22 51 22.4	
	comp=Z,60nm,19.2s,baz=130,slow=36						
YSS	**Yuzh-Sakhalins**	**23.54**	**358**	P	**P**	**22 44 35.1**	**-0.3**
HNR	**Honiara**	**36.13**	**153**	P	**P**	**22 46 26.9**	**-0.4**
	41nm,0.3s,baz=261,slow=7.6,SNR=3.9						
ULN	**Ulaanbaatar**	**38.20**	**319**	*e*P	**P**	**22 46 43.8**	**-0.7**
	2.0nm,1.0s,mb3.8						
SONM	**Songino Array**	**38.58**	**319**	P	**P**	**22 46 47.9**	**+0.1**
	0.5nm,0.5s,mb3.5,baz=118,slow=7.4,SNR=9.1						
CTA	**Charters Tower**	**43.26**	**177**	P	**P**	**22 47 27.4**	**+0.8**
	1.6nm,0.4s,mb4.1,baz=354,slow=10,SNR=2.5						
CTAO	**Charters Tower**	**43.26**	**177**	*e*P	**P**	**22 47 27.5**	**+0.9**
	9.8nm,1.4s,mb4.3						
WRA	**Warramunga Arr**	**44.09**	**193**	P	**P**	**22 47 32.7**	**-0.6**
	0.6nm,0.4s,mb3.6,baz=11,slow=8.7,SNR=4.7						
LSA	**Lhasa**	**47.41**	**290**	*e*P	**P**	**22 47 59.9**	**+0.4**
	1.8nm,0.4s,mb4.3						
ASAR	**Alice Springs**	**47.80**	**193**	P	**P**	**22 48 01.2**	**-1.2**
	0.4nm,0.5s,mb3.7,baz=15,slow=14,SNR=4.4						
WMQ	**Urumqi**	**50.15**	**308**	P	**P**	**22 48 21.3**	**+0.9**
MBWA	**Marble Bar**	**50.22**	**210**	*e*P	**P**	**22 48 19.6**	**-1.5**
	27nm,1.2s,mb5.2						
TAPN	**Taplejung**	**50.71**	**287**	*e*P	**P**	**22 48 25.8**	**+1.0**
	4.2nm,0.4s,mb4.7						
JIRN	**Jiri**	**51.99**	**288**	*e*P	**P**	**22 48 35.2**	**+0.8**
	7.9nm,0.7s,mb4.8						
GKN	**Gorkha**	**53.30**	**288**	*e*P	**P**	**22 48 44.6**	**+0.5**
	3.9nm,0.4s,mb4.7						
ZALV	**Zalesovo Beam**	**53.41**	**321**	P	**P**	**22 48 44.5**	**+0.1**
	2.4nm,0.4s,mb4.4,baz=107,slow=8.1,SNR=16						
MKAR	**Makanchi Array**	**54.17**	**312**	P	**P**	**22 48 50.7**	**+0.5**
MKAR	**Makanchi Array**	**54.17**	**312**	P	**P**	**22 48 50.7**	**+0.5**
	1.3nm,0.6s,mb4.0,baz=86,slow=9.0,SNR=46						
KOLN	**Koldanda**	**54.24**	**288**	*e*P	**P**	**22 48 51.4**	**+0.4**
	6.4nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**55.00**	**183**	P	**P**	**22 48 54.6**	**-1.6**
	1.9nm,0.7s,mb4.2,baz=128,slow=5.2,SNR=3.5						
KDAK	**Kodiak Island**	**56.36**	**35**	P	**P**	**22 49 06.9**	**+1.2**
	6.8nm,0.8s,mb4.7,baz=294,slow=10.0,SNR=3.1						
KURK	**Kurchatov**	**56.81**	**316**	*e*P	**P**	**22 49 09.0**	**0.0**
	1.5nm,0.3s,mb4.5						
TKM2	**Tokmak 2**	**58.96**	**307**	*e*P	**P**	**22 49 25.5**	**+1.2**
	1.1nm,0.4s,mb4.2						
COLA	**College**	**59.78**	**27**	P	**P**	**22 49 29.9**	**+0.3**
UCH	**Uchtor**	**59.81**	**306**	*e*P	**P**	**22 49 32.5**	**+2.3**
	1.6nm,0.6s,mb4.2						
EKS2	**Erkin-Say**	**60.32**	**307**	*e*P	**P**	**22 49 33.6**	**-0.1**
	0.9nm,0.6s,mb4.0						
AML	**Almayashu**	**60.43**	**306**	*e*P	**P**	**22 49 35.8**	**+1.3**
	1.9nm,0.6s,mb4.3						
NWAO	**Narrogin (SRO)**	**61.57**	**206**	*e*P	**P**	**22 49 41.1**	**-1.0**
	51nm,1.4s						
BRVK	**Borovoye**	**61.99**	**319**	*e*P	**P**	**22 49 45.4**	**+0.6**
	4.2nm,0.6s,mb4.8						
INK	**Inuvik**	**65.71**	**24**	P	**P**	**22 50 07.9**	**-1.1**
ARU	**Arti**	**68.39**	**323**	*e*P	**P**	**22 50 26.9**	**+0.6**
	3.6nm,0.5s,mb4.7						
YKA	**Yellowknife Ar**	**74.59**	**28**	P	**P**	**22 51 04.8**	**+1.3**
YKA	**Yellowknife Ar**	**74.59**	**28**	P	**P**	**22 51 04.8**	**+1.3**
	0.3nm,0.5s,mb3.5,baz=292,slow=5.7,SNR=5.6						
RES	**Resolute Bay**	**75.25**	**14**	P	**P**	**22 51 07.6**	**+0.4**
ARCES	**ARCESS Array B**	**77.58**	**342**	P	**P**	**22 51 21.5**	**+1.1**
ARCES	**ARCESS Array B**	**77.58**	**342**	P	**P**	**22 51 21.5**	**+1.1**
	1.4nm,0.6s,mb4.0,baz=44,slow=5.4,SNR=4.3						
KIV	**Kislovodsk**	**81.83**	**314**	P	**P**	**22 51 42.8**	**-1.1**
FINES	**FINESS Array B**	**82.01**	**335**	P	**P**	**22 51 45.1**	**+0.5**
	0.7nm,0.6s,mb3.8,baz=50,slow=4.8,SNR=9.0						
NOA	**NORSAR Array B**	**87.67**	**339**	P	**P**	**22 52 12.0**	**-1.0**
	0.2nm,0.7s,mb3.5,baz=221,slow=15,SNR=2.8						

IDC 29 22:40:22.3±2.1, 064S×12834E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/15, mbtmp3.6/3, Error ellipse: s-maj=158.5km s-min=25.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.07**	**163**	P	P	22 44 57.5	+0.2
	0.4nm,0.4s,baz=343,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**23.52**	**167**	P	P	22 45 34.2	-0.1
	0.6nm,0.4s,baz=344,slow=10,SNR=8.0						
MKAR	**Makanchi Array**	**62.04**	**326**	P	P	22 50 44.7	+0.1
	0.8nm,0.5s,baz=114,slow=8.2,SNR=8.0						

*ATH **29** 22:57:59.5, 3825N×22.15E, h23km±2km, MD3.3/8, ML3.2*
*NEIC **29** 22:57:59.5, 3825N×22.15E, h23km, ML3.3(THE), ML3.2(ATH), After ATH.*
*ISCJB **29** 22:58:00.1±0.5, 3828N±003×22.10E±004, h21km±5km, Error ellipse: s-maj=6.1km s-min=4.7km az=152.5*
*CSEM **29** 22:58:00.0±0.1, 3826N×22.14E, h12km, ML3.3, Error ellipse: s-maj=2.1km s-min=1.6km az=30.0*
*THE **29** 22:58:00.0, 3828N×22.18E, h10km, ML3.3*

ISC 29 22:58:00.2±0.5, 3827N±003×2215E±004, h13km±4km, n20, σ1§05/29, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELA	**Sela**	**0.20**	**271**	*e*Pg	**Pg**	**22 58 04.2**	**-0.6**
SELA				*e*Sg	**Sg**	**22 58 09.4**	**+1.6**
SELA	**Sela**	**0.20**	**271**	*e*Pg	**Pg**	**22 58 04.2**	**-0.5**
SELA				*e*Sg	**Sg**	**22 58 09.4**	**+1.6**
RLS	**Riolos of Patr**	**0.58**	**249**	*e*PN	**Pg**	**22 58 10.9**	**-0.7**
LTK	**Loutraki**	**0.69**	**111**	*e*Pg	**Pg**	**22 58 12.8**	**-0.8**
LTK				*e*Sg	**Sg**	**22 58 23.1**	**+0.4**
EVR	**Evrytania**	**0.70**	**337**	*e*PB	**Pb**	**22 58 12.8**	**-1.4**
EVR				*e*SN	**Sg**	**22 58 24.6**	**+1.6**
AGG	**Agios Georgios**	**0.76**	**10**	*e*Pg	**Pg**	**22 58 13.2**	**-1.8**
AGG				*e*Sg	**Sg**	**22 58 25.6**	**+0.6**
LKR	**Lokris**	**0.77**	**60**	*e*PN	**Pn**	**22 58 13.7**	**-3.0**
LKR				*e*SB	**Sb**	**22 58 25.0**	**-0.7**
VLX	**Vlachokerasia**	**0.92**	**169**	*e*Pg	**Pg**	**22 58 16.4**	**-1.5**
VLX				*e*Sg	**Sg**	**22 58 30.6**	**+0.7**
ITM	**Ithomi**	**1.10**	**189**	*e*PN	**Pn**	**22 58 20.2**	**-1.2**
DID	**Didima**	**1.15**	**131**	*e*Pg	**Pg**	**22 58 21.0**	**-1.4**
DID				*e*Sg	**Sg**	**22 58 37.9**	**+0.6**
NAIG	**Nisos Aigina**	**1.17**	**115**	*e*PN	**Pn**	**22 58 22.5**	**+0.2**
ATH	**Athens Observa**	**1.27**	**103**	*e*PN	**Pn**	**22 58 23.5**	**-0.1**
ATH				*e*SN	**Sn**	**22 58 41.0**	**+0.5**
THL	**Klokotos Trika**	**1.29**	**355**	*e*PN	**Pn**	**22 58 24.4**	**+0.4**
NEO	**Neokhori**	**1.33**	**39**	*e*PN	**Pn**	**22 58 24.6**	**+0.1**
KVR	**Kavouri**	**1.35**	**109**	*e*PN	**Pn**	**22 58 25.3**	**+0.5**
PTL	**Penteli**	**1.37**	**99**	*e*PN	**Pn**	**22 58 25.2**	**+0.2**
VLI	**Veliai**	**1.67**	**158**	*e*PN	**Pn**	**22 58 29.0**	**-0.2**
APE	**Apeiranthos**	**2.94**	**113**	P	**Pn**	**22 58 47.6**	**+1.0**
VAM	**Vamos**	**3.30**	**150**	P	**Pn**	**22 58 52.8**	**+1.3**
SMG	**Samos**	**3.74**	**97**	P	**Pn**	**22 58 59.4**	**+1.8**

*IDC **29** 22:59:57.0±0.9, 3855N×2044E, h0km, mb3.7/10, mb1 3.7/18, mb1mx3.6/29, mbtmp3.6/18, ML3.4/7, Error ellipse: s-maj=17.0km s-min=14.3km az=123.0*

*ISCJB **29** 22:59:58.0±0.3, 3840N±002×2025E±003, h10km, mb3.7/10, Error ellipse: s-maj=3.3km s-min=2.5km az=44.9*

*ATH **29** 22:59:59.0, 3836N×2041E, h15km±2km, MD3.7/13, ML4.0*
*NEIC **29** 22:59:59.0, 3836N×2041E, h15km, ML4.2(THE), ML4.0(ATH), ML3.7(PDG), After ATH.*
*THE **29** 22:59:59.9, 3840N×2042E, h3km, ML4.2*
*CSEM **29** 23:00:00.3±0.1, 3834N×2043E, h8km, ML4.0, Error ellipse: s-maj=2.1km s-min=1.2km az=42.0*
*PDG **29** 23:00:01.9±0.5, 3849N×2028E, h30km±3km, ML3.7/10, Error ellipse: s-maj=2.5km s-min=3.0km az=0.0*
*NAO **29** 23:00:24.6, 4023N×1812E, h33km, mb3.1*

ISC 29 22:59:59.6±0.3, 3840N±002×2033E±002, h10km, n120, σ1§43/162, mb3.7/10, 16C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.30**	**137**	P	**Pg**	**22 59 59.5**	**-6.1**
VLS				*e*Pb	**Pg**	**23 00 04.4**	**-1.2**
VLS	**Valsamata**	**0.30**	**137**	*e*PB	**Pg**	**23 00 04.4**	**-1.2**
KFL	**Anninata**	**0.46**	**128**	*e*Pg	**Pg**	**23 00 07.1**	**-1.5**
RLS	**Riolos of Patr**	**0.96**	**110**	*e*PN	**Pn**	**23 00 16.0**	**-3.1**
IGT	**Igoumenitsa**	**1.14**	**0**	*e*Pg	**Pg**	**23 00 21.0**	**-0.5**
IGT				*e*Sg	**Sg**	**23 00 39.0**	**+2.8**
SELA	**Sela**	**1.23**	**95**	*e*Pg	**Pg**	**23 00 20.5**	**-2.8**
EVR	**Evrytania**	**1.27**	**65**	*e*PN	**Pn**	**23 00 21.7**	**-1.7**
JAN	**Janina**	**1.32**	**18**	*e*PN	**Pn**	**23 00 24.9**	**+0.8**
KEK	**Kerkira**	**1.38**	**343**	*e*PN	**Pn**	**23 00 25.4**	**+0.5**
SRN	**Sarande**	**1.50**	**350**	*i* PN	**Pg**	**23 00 29.7**	**+1.2**
SRN				*i* SN	**Sg**	**23 00 52.2**	**+4.2**
AGG	**Agios Georgios**	**1.69**	**68**	*e*Pb	**Pn**	**23 00 29.0**	**-0.2**
AGG				*e*Sb	**Sb**	**23 00 52.6**	**+0.6**
ITM	**Ithomi**	**1.75**	**133**	*e*PN	**Pn**	**23 00 30.7**	**+0.6**
THL	**Klokotos Trika**	**1.76**	**48**	*e*PN	**Pn**	**23 00 30.9**	**+0.8**
VLX	**Vlachokerasia**	**1.92**	**122**	*e*Pb	**Pb**	**23 00 34.0**	**-0.7**
LKR	**Lokris**	**2.11**	**82**	*e*PN	**Pn**	**23 00 35.5**	**+0.5**
LTK	**Loutraki**	**2.11**	**99**	*e*Pn	**Pn**	**23 00 34.4**	**-0.5**
KZN	**Kozani**	**2.21**	**30**	*e*PN	**Pn**	**23 00 37.6**	**+1.2**
KBN	**Korca**	**2.25**	**9**	*i* PN	**Pn**	**23 00 39.3**	**+2.4**
KBN				*i* SN	**Sg**	**23 01 11.6**	**-0.4**
LIT	**Litokhoron**	**2.39**	**44**	*e*Pn	**Pn**	**23 00 39.9**	**+1.1**
NEO	**Neokhori**	**2.44**	**67**	*e*PN	**Pn**	**23 00 39.9**	**+0.5**
DID	**Didima**	**2.46**	**110**	*e*Pn	**Pn**	**23 00 40.3**	**+0.5**
DID				*e*Sn	**Sn**	**23 01 11.5**	**+1.6**
FNA	**Florina**	**2.52**	**18**	*e*Pn	**Pn**	**23 00 41.5**	**+1.0**
FNA				*e*Sn	**Sn**	**23 01 13.3**	**+2.0**
NAIG	**Nisos Aigina**	**2.57**	**103**	*e*PB	**Pn**	**23 00 40.8**	**-0.5**
LCI	**Lecce**	**2.59**	**319**	Pn	**Pn**	**23 00 44.2**	**+2.7**
VLI	**Veliai**	**2.66**	**128**	*e*PB	**Pn**	**23 00 43.5**	**+0.9**
ATH	**Athens Observa**	**2.70**	**98**	*e*PN	**Pn**	**23 00 43.0**	**-0.1**
BIA	**Bitola**	**2.73**	**16**	*e*Pn	**Pn**	**23 00 44.0**	**+1.3**
BIA				*e*Sn	**Sn**	**23 01 18.5**	**0.0**
BIA	**Bitola**	**2.73**	**16**	*e*Pn	**Pn**	**23 00 44.9**	**+1.4**
BIA				*e*Sn	**Sn**	**23 01 19.7**	**+3.2**
OHR	**Ohrid**	**2.74**	**7**	*e*Pn	**Pn**	**23 00 44.7**	**+1.1**
OHR				*e*Sn	**Sn**	**23 01 19.6**	**+2.9**
OHR	**Ohrid**	**2.74**	**7**	*e*Pn	**Pn**	**23 00 44.6**	**+1.0**
OHR				*e*Sn	**Sn**	**23 01 19.6**	**+2.9**
KVR	**Kavouri**	**2.77**	**101**	*e*PN	**Pn**	**23 00 44.0**	**-0.1**
PTL	**Penteli**	**2.81**	**96**	*e*PB	**Pb**	**23 00 46.0**	**-3.8**
AOS	**Alonnisos**	**2.88**	**73**	*e*Pn	**Pn**	**23 00 46.1**	**+0.6**
TIP	**Timpagrande**	**2.90**	**287**	P	**Pn**	**23 00 48.2**	**+2.4**
TIR	**Tirane**	**2.97**	**353**	*i* PN	**Pn**	**23 00 48.3**	**+1.5**
TIR				*i* SN	**Sn**	**23 01 24.1**	**+1.6**
TIR	**Tirane**	**2.97**	**353**	*e*Pn	**Pn**	**23 00 47.6**	**+0.8**
TIR				*i* Sn	**Sn**	**23 01 24.1**	**+1.6**
GRG	**Griva**	**3.02**	**31**	*e*Pn	**Pn**	**23 00 47.6**	**+0.2**
PAIG	**Paliouri**	**3.02**	**59**	*e*Pn	**Pn**	**23 00 47.3**	**-0.2**
KRUS	**Krusevo**	**3.05**	**13**	*e*Pn	**Pn**	**23 00 49.5**	**+1.5**
KRUS				*e*Sn	**Sn**	**23 01 26.8**	**+2.3**
HORT	**Hortiatis**	**3.07**	**43**	*e*Pn	**Pn**	**23 00 48.5**	**+0.3**
PLG	**Polygyros**	**3.12**	**50**	*e*Pn	**Pn**	**23 00 48.8**	**-0.1**
PLG	**Polygyros**	**3.12**	**50**	*e*PN	**Pn**	**23 00 48.7**	**-0.1**
PE1	**Pezze di Greco**	**3.29**	**318**	*e*Pn	**Pn**	**23 00 52.1**	**+0.9**
SOH	**Sokhos**	**3.37**	**43**	*e*Pn	**Pn**	**23 00 53.1**	**+0.9**
VAY	**Valandovo**	**3.39**	**30**	*e*Pn	**Pn**	**23 00 51.8**	**-0.8**
VAY				*e*Sn	**Sn**	**23 01 32.2**	**-0.6**
VAY	**Valandovo**	**3.39**	**30**	*e*Pn	**Pn**	**23 00 51.8**	**-0.8**
VAY				*e*Sn	**Sn**	**23 01 32.2**	**-0.7**
KNT	**Kendrikon**	**3.40**	**35**	*e*Pn	**Pn**	**23 00 53.1**	**+0.4**
OUR	**Ouranopolis**	**3.43**	**54**	*e*Pn	**Pn**	**23 00 53.6**	**+0.5**
PUK	**Puka**	**3.66**	**355**	*i* PN	**Pn**	**23 00 56.7**	**+0.5**
PUK				*i* SN	**Sn**	**23 01 41.4**	**+2.0**
ULC	**Ulcinj**	**3.66**	**347**	⇑*i* PN	**Pn**	**23 00 56.0**	**-0.2**
ULC				*e*Sn	**Sn**	**23 01 36.5**	**-2.9**
SG1	**Sgolgore (BA)**	**3.73**	**312**	*e*Pn	**Pn**	**23 00 58.7**	**+1.5**
BUM	**Brajici-Budva**	**4.05**	**345**	*e*Pn	**Pn**	**23 01 01.5**	**-0.1**
BUM				*e*Sn	**Sn**	**23 01 46.6**	**-2.5**
KKB	**Krupnik**	**4.06**	**30**	*e*P	**Pn**	**23 01 01.9**	**+0.2**
LIA	**Limnos Island**	**4.06**	**67**	P	**Pb**	**23 01 08.7**	**-2.5**
MGR	**Morigerati**	**4.09**	**297**	Pn	**Pn**	**23 01 05.1**	**+2.9**
PDG	**Podgorica**	**4.11**	**349**	⇑*i* PN	**Pn**	**23 01 02.6**	**+0.1**
PDG				*e*Sn	**Sn**	**23 01 48.4**	**-2.2**
TTG	**Podgorica**	**4.11**	**349**	⇑*i* PN	**Pn**	**23 01 02.6**	**+0.1**
TTG				*e*Sn	**Sn**	**23 01 48.4**	**-2.2**
CDT	**Castel del Mon**	**4.12**	**312**	*e*Pn	**Pn**	**23 01 04.5**	**+1.9**
MMB	**Musomiste**	**4.12**	**38**	*i* P	**Pn**	**23 01 03.0**	**+0.4**
PVY	**Plav**	**4.20**	**356**	⇑*i* PN	**Pn**	**23 01 04.2**	**+0.5**
PVY				*e*Sn	**Sn**	**23 01 51.1**	**-1.8**
HCY	**Herceg Novi**	**4.28**	**342**	⇑*i* PN	**Pn**	**23 01 04.4**	**-0.4**
HCY				*e*Sn	**Sn**	**23 01 52.0**	**-2.8**
PZI	**Palazzolo**	**4.47**	**254**	Pn	**Pn**	**23 01 06.4**	**-1.0**
BEY	**Berane**	**4.48**	**356**	⇑*i* PN	**Pn**	**23 01 08.6**	**+1.0**
BEY				*e*Sn	**Sn**	**23 01 57.9**	**-1.9**
IVA	**Berane**	**4.48**	**356**	⇑*i* PN	**Pn**	**23 01 08.6**	**+1.0**
IVA				*e*Sn	**Sn**	**23 01 57.9**	**-1.9**
NKY	**Niksic**	**4.53**	**347**	⇑*i* PN	**Pn**	**23 01 08.3**	**+0.1**
NKY				*e*Sn	**Sn**	**23 01 58.7**	**-2.1**
BARS	**Barje**	**4.56**	**14**	Pn	**Pn**	**23 01 08.3**	**-0.4**
FG4	**Candela**	**4.61**	**308**	Pn	**Pn**	**23 01 12.0**	**+2.7**
BRY	**Bratogost**	**4.70**	**344**	⇑*i* PN	**Pn**	**23 01 10.1**	**-0.5**
BRY				*e*Sn	**Sn**	**23 02 02.5**	**-2.6**
RZN	**Rozhen**	**4.71**	**44**	*e*P	**Pn**	**23 01 15.2**	**+4.6**
FGMS	**Monte Sant'Ang**	**4.71**	**316**	Pn	**Pn**	**23 01 13.1**	**+2.4**
VTS	**Vitosha**	**4.73**	**27**	*e*P	**Pn**	**23 01 11.0**	**0.0**
VAE	**Valguarnera**	**4.77**	**261**	Pn	**Pn**	**23 01 13.3**	**+1.8**
	0.8nm,0.3s,baz=6.0,slow=15,SNR=4.5						
VAE				Sn	**Sn**	**23 02 06.1**	**-0.7**
	2.6nm,0.3s,baz=105,slow=7.7,SNR=4.1						
IDI	**Anoyia**	**4.79**	**129**	Pn	**Pn**	**23 01 12.7**	**+0.8**
	0.3nm,0.3s,baz=60,slow=18,SNR=3.3						
IDI				Sn	**Sn**	**23 02 05.8**	**-1.6**
	3.5nm,0.3s,baz=143,slow=22,SNR=7.4						
FG5	**Orsara di Pugl**	**4.85**	**308**	Pn	**Pn**	**23 01 15.3**	**+2.7**
RDO	**Rodhopi**	**4.86**	**54**	P	**Pn**	**23 01 14.1**	**+1.3**
RGNG	**Rignano Grg**	**4.90**	**313**	Pn	**Pn**	**23 01 14.6**	**+1.4**
STON	**Ston**	**4.90**	**337**	*e*Pn	**Pn**	**23 01 12.6**	**-0.7**
STON				Sn	**Sn**	**23 02 07.2**	**-2.8**
STON	**Ston**	**4.90**	**337**	*e*Pn	**Pn**	**23 01 12.5**	**-0.8**
STON				Sn	**Sn**	**23 02 07.1**	**-2.9**
UPM	**Unac-Piva**	**4.92**	**348**	⇑*i* PN	**Pn**	**23 01 14.1**	**+0.5**
UPM				*e*Sn	**Sn**	**23 02 08.2**	**-2.4**
PLE	**Pljevlja**	**4.98**	**352**	⇑*i* PN	**Pn**	**23 01 14.7**	**+0.3**
PLE				*e*Sn	**Sn**	**23 02 09.3**	**-2.7**
SMG	**Samos**	**5.18**	**96**	P	**Pn**	**23 01 17.7**	**+0.5**
FG2	**Serracapriola**	**5.22**	**312**	Pn	**Pn**	**23 01 19.7**	**+1.9**
SGG	**Gregorio Mates**	**5.46**	**305**	Pn	**Pn**	**23 01 25.0**	**+3.9**
GRUS	**Gruza**	**5.50**	**3**	Pn	**Pn**	**23 01 20.4**	**-1.1**
DIVS	**Divcibare**	**5.70**	**358**	Pn	**Pn**	**23 01 23.4**	**-0.9**
SDI	**San Donato**	**6.00**	**306**	Pn	**Pn**	**23 01 32.6**	**+4.2**
NRCA	**Norcia**	**7.05**	**311**	Pn	**Pn**	**23 01 45.7**	**+2.8**
NVLJ	**Novalja**	**7.40**	**328**	*e*Pn	**Pn**	**23 01 47.7**	**+0.1**
NVLJ				Sn	**Sn**	**23 03 07.8**	**-3.8**
NVLJ	**Novalja**	**7.40**	**328**	*e*Pn	**Pn**	**23 01 47.6**	**0.0**
FSSB	**Fossombrone**	**7.78**	**315**	Pn	**Pn**	**23 01 54.6**	**+1.8**
MLR	**Muntele Rosu**	**8.23**	**29**	Pn	**Pn**	**23 01 55.9**	**-3.1**
	0.0nm,0.3s,baz=209,slow=4.3,SNR=3.0						
MLR	**Muntele Rosu**	**8.23**	**29**	⇓*i* P	**Pn**	**23 02 03.2**	**+4.2**
PDKS	**Podkum**	**8.62**	**334**	*i* Pn	**Pn**	**23 02 04.0**	**-0.3**
PDKS				*i* Sn	**Sn**	**23 03 37.1**	**-4.5**
PLOR	**Plostina**	**8.80**	**30**	⇑*i* P	**Pn**	**23 02 08.4**	**+1.5**
VOY	**Vojsko**	**9.00**	**330**	*e*Pn	**Pn**	**23 02 09.3**	**-0.2**
VOY				*e*Sn	**Sn**	**23 03 47.2**	**-3.7**
OBKA	**Obir**	**9.16**	**334**	⇓*i* PN	**Pn**	**23 02 11.3**	**-0.4**
OBKA				*i* Sn	**Sn**	**23 03 50.5**	**-4.4**
OBKA	**Obir**	**9.16**	**334**	⇓*i* Pn	**Pn**	**23 02 11.4**	**-0.4**
OBKA				⇑*i* Sn	**Sn**	**23 03 50.5**	**-4.4**
KEST	**Kesra**	**9.17**	**257**	Pn	**Pn**	**23 02 13.4**	**+1.4**
	0.1nm,0.3s,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.96**	**37**	*e*P	**Pn**	**23 50 14.4**	**+8.3**
PBA				*e*S	**Sn**	**23 50 27.1**	**+8.5**
KULM	**Kulim**	**10.09**	**123**	*e*Pn	**Pn**	**23 52 11.5**	**+0.1**
PSI	**Prapat**	**10.48**	**140**	Pn	**Pn**	**23 52 17.1**	**+0.4**
	0.7nm,0.3s,baz=317,slow=20,SNR=5.1						
PSI				LR	LR	23 56 50.1	
	comp=Z,232nm,20.9s,baz=161,slow=40						
VIS	**Vishakhapatnam**	**10.91**	**309**	*e*P	**Pn**	**23 52 21.5**	**-1.2**
VIS				*i* S	**Sn**	**23 54 11.5**	**-12**
PALK	**Pallekele**	**11.86**	**253**	*e*Pn	**Pn**	**23 52 35.8**	**+0.1**
	22nm,0.8s						
BOK	**Bokaro**	**14.15**	**336**	*e*P	**Pn**	**23 53 05.6**	**-1.4**
BOK				*ex*	x	23 53 10.3	
	comp=Z,8.2nm,0.3s						
BOK				*ex*	x	23 55 36.0	
HYB	**Hyderabad**	**14.69**	**298**	*e*P	**Pn**	**23 53 22.0**	**+7.7**
HYB				*e*S	**Sn**	**23 55 42.5**	**-13**
HYB	**Hyderabad**	**14.69**	**298**	*i* P	**Pn**	**23 53 19.0**	**+4.7**
HYB				*e*		23 53 22.0	
HYB				*e*		23 55 42.5	
HYB				*e*S	**Sn**	**23 55 55.0**	**-0.8**
BLSP	**Bilaspur**	**14.73**	**321**	*e*P	**Pn**	**23 53 14.3**	**-0.4**
BLSP				*ex*	x	23 53 23.2	
	comp=Z,24nm,1.0s						
BLSP				*e*S	**Sn**	**23 55 56.4**	**-0.3**
TRD	**Trivandrum**	**15.16**	**262**	*e*P	**Pn**	**23 53 21.3**	**+0.9**
TRD				*ex*	x	23 55 51.9	
ODAN	**Odare**	**16.51**	**345**	*e*P	**Pn**	**23 53 37.4**	**-0.3**
	comp=Z,18nm,0.6s						
TAPN	**Taplejung**	**16.90**	**346**	*e*P	**Pn**	**23 53 42.4**	**-0.2**
	comp=Z,22nm,0.6s						
KMI	**Kunming**	**17.36**	**34**	P	**Pn**	**23 53 49.3**	**+0.9**
KMI				AP	pP	23 53 59.3	0.0
KMI				XP	sP	23 54 03.0	-1.5
KMI				AMB	AMB		
	comp=Z,9.0nm,0.5s						
JIRN	**Jiri**	**17.60**	**342**	*e*P	**Pn**	**23 53 51.1**	**-0.2**
	comp=Z,45nm,1.1s						
KKN	**Kakani**	**18.01**	**340**	*e*P	**Pn**	**23 53 55.7**	**-0.6**
	comp=Z,49nm,1.3s						
GKN	**Gorkha**	**18.43**	**339**	*e*P	**Pn**	**23 54 00.7**	**-0.7**
	comp=Z,8.2nm,0.3s						
KAD	**Karad**	**18.55**	**292**	*e*P	**Pn**	**23 54 04.3**	**+1.3**
KAD				AMb	AMB	23 54 07.9	
	comp=Z,13nm,0.8s						
KOLN	**Koldanda**	**18.62**	**336**	*e*P	**Pn**	**23 54 03.2**	**-0.5**
	comp=Z,20nm,0.8s						
LSA	**Lhasa**	**18.74**	**357**	P	**Pn**	**23 54 05.0**	**-0.2**
LSA	**Lhasa**	**18.74**	**357**	*e*P	**Pn**	**23 54 06.2**	**+1.0**
	comp=Z,31nm,0.6s						
LSA	**Lhasa**	**18.74**	**357**	*e*P	**Pn**	**23 54 06.2**	**+1.0**
LSA				pmax	pmax		
	comp=Z,31nm,0.6s						
QIZ	**Qiongzhong**	**18.90**	**63**	*e*P	**Pn**	**23 54 06.5**	**-0.7**
	comp=Z,28nm,1.5s						
KSM	**Kuching**	**20.32**	**116**	*e*P	**P**	**23 54 22.3**	**+0.5**
GYA	**Guiyang**	**20.68**	**40**	P	**P**	**23 54 28.5**	**+2.8**
GYA				AP		23 54 41.0	
GYA				PP		23 54 52.8	
GYA				S	**S**	**23 58 13.5**	**-1.1**
GYA				XS	sS	23 58 32.0	+1.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**22.65**	**27**	P	**P**	**23 54 49.3**	**+2.6**
CD2				AP		23 54 59.8	
CD2				PP		23 55 18.5	
CD2				S	**S**	**23 58 49.8**	**-2.6**
CD2				SS		23 59 35.0	
CD2				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
CD2				AMB	AMB		
	comp=Z,40nm,5.8s						
CD2				LR	LR		
	comp=N,120nm,13.2s,MS4.1						
CD2				LR	LR		
	comp=E,420nm,10.8s,MS4.1						
CD2				LR	LR		
	comp=Z,230nm,9.6s						
GTA	**Gaotai**	**29.21**	**12**	*e*P	**P**	**23 55 48.5**	**+1.6**
GTA				AP	pP	23 55 54.5	-3.5
GTA				XP	sP	23 55 58.5	-4.4
GTA				AMB	AMB		
	comp=Z,6.0nm,2.2s,mb3.9						
YHNB	**Yeheng**	**30.94**	**60**	P	**P**	**23 56 03.0**	**+0.7**
KBL	**Kabul**	**31.60**	**322**	*e*P	**P**	**23 56 08.6**	**+0.5**
	comp=Z,7.8nm,0.9s,mb4.5						
NJ2	**Nanjing**	**32.41**	**45**	*e*P	**P**	**23 56 19.3**	**+4.1**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.2						
UCH	**Uchtor**	**34.82**	**337**	*e*P	**P**	**23 56 36.7**	**+0.7**
	comp=Z,2.5nm,0.6s,mb4.3						
TKM2	**Tokmak 2**	**35.02**	**339**	*e*P	**P**	**23 56 37.6**	**-0.2**
	comp=Z,3.2nm,0.9s,mb4.2						
TKM2	**Tokmak 2**	**35.02**	**339**	*e*P	**P**	**23 56 37.6**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
AML	**Almayashu**	**35.07**	**336**	*e*P	**P**	**23 56 40.1**	**+1.9**
EKS2	**Erkin-Say**	**35.48**	**336**	*e*P	**P**	**23 56 42.5**	**+0.8**
	comp=Z,5.5nm,0.7s,mb4.6						
MK31	**Makanchi Array**	**36.75**	**349**	*i* P	**P**	**23 56 52.7**	**+0.2**
MK31				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
MKAR	**Makanchi Array**	**36.75**	**349**	P	**P**	**23 56 53.0**	**+0.5**
MKAR				PcP	PcP	23 59 14.5	+0.3
MKAR				LR	LR	00 14 51.0	
MKAR	**Makanchi Array**	**36.75**	**349**	P	**P**	**23 56 53.0**	**+0.5**
MKAR						23 59 14.5	
MKAR	**Makanchi Array**	**36.75**	**349**	P	**P**	**23 56 53.0**	**+0.5**
	comp=Z,6.1nm,0.8s,mb4.5,baz=167,slow=8.4,SNR=47						
MKAR				PcP	PcP	23 59 14.5	+0.3
	comp=Z,0.8nm,0.6s,baz=210,slow=3.3,SNR=4.3						
MKAR				LR	LR	00 14 51.0	
	comp=Z,53nm,18.4s,MS3.4,baz=286,slow=41						
KK31	**Karatay Array**	**37.20**	**333**	*i* P	**P**	**23 56 57.3**	**+0.9**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
SONM	**Songino Array**	**38.73**	**15**	P	**P**	**23 57 10.0**	**+0.8**
SONM						23 59 20.9	
SONM	**Songino Array**	**38.73**	**15**	P	**P**	**23 57 10.0**	**+0.8**
	comp=Z,1.1nm,0.6s,mb3.8,baz=205,slow=7.7,SNR=15						
SONM				PcP	PcP	23 59 20.9	+0.6
	comp=Z,0.6nm,0.6s,baz=211,slow=3.2,SNR=4.1						
SONM				LR	LR	00 16 00.5	
	comp=Z,63nm,18.9s,MS3.5,baz=88,slow=41						
ULN	**Ulaanbaatar**	**38.93**	**16**	P	**P**	**23 57 10.4**	**-0.5**
	comp=Z,4.2nm,0.4s,mb4.5						
ULN	**Ulaanbaatar**	**38.93**	**16**	P	**P**	**23 57 10.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
KURK	**Kurchatov**	**41.24**	**347**	*e*P	**P**	**23 57 30.5**	**+0.5**
	comp=Z,10nm,1.1s,mb4.4						
KURK				*e*	pP	23 57 41.5	+0.1
KURK	**Kurchatov**	**41.24**	**347**	*e*P	**P**	**23 57 30.5**	**+0.5**
KURK				*e*	pP	23 57 41.5	+0.1
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.4						
KSRS	**Korea Array**	**41.60**	**44**	P	**P**	**23 57 32.4**	**-0.8**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
KSRS				MLR	MLR		
	comp=Z,61nm,18.0s,MS3.5						
KSRS	**Korea Array**	**41.60**	**44**	P	**P**	**23 57 32.4**	**-0.8**
	comp=Z,0.5nm,0.3s,mb3.5,baz=251,slow=19,SNR=3.1						
KSRS				LR	LR	00 16 27.6	
	comp=Z,61nm,18.0s,MS3.5,baz=34,slow=39						
MBWA	**Marble Bar**	**41.82**	**140**	P	**P**	**23 57 34.8**	**-0.3**
ZAL	**Zalesovo**	**43.34**	**354**	P	**P**	**23 57 46.8**	**-0.2**
ZAA0	**Zalesovo Array**	**43.34**	**354**	*e*P	**P**	**23 57 47.0**	**0.0**
ZAA0				*e*	pP	23 57 57.6	-0.9
ZALV	**Zalesovo Beam**	**43.34**	**354**	P	**P**	**23 57 46.8**	**-0.3**
	comp=Z,8.2nm,0.8s,mb4.5,baz=175,slow=8.9,SNR=37						
ZALV				LR	LR	00 19 23.4	
	comp=Z,44nm,19.1s,MS3.4,baz=28,slow=41						
FITZ	**Fitzroy Crossi**	**43.85**	**131**	*e*P	**P**	**23 57 51.2**	**-0.4**
	comp=Z,13nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**43.85**	**131**	P	**P**	**23 57 51.1**	**-0.5**
	comp=Z,12nm,0.7s,mb4.7,baz=327,slow=7.5,SNR=19						
BRVK	**Borovoye**	**45.59**	**342**	*e*P	**P**	**23 58 05.3**	**+0.3**
	comp=Z,1.6nm,0.5s,mb4.2						
BRVK	**Borovoye**	**45.59**	**342**	*e*P	**P**	**23 58 05.3**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
CHKZ	**Chkalovo**	**46.02**	**342**	*i* P	**P**	**23 58 08.7**	**+0.3**
CHKZ				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
KAKA	**Kakadu**	**46.37**	**119**	*e*P	**P**	**23 58 10.5**	**-1.2**
	comp=Z,2.6nm,0.4s,mb4.5						
AKTO	**Aktyubinsk**	**48.38**	**331**	*i* P	**P**	**23 58 25.0**	**-1.8**
NWAO	**Narrogin (SRO)**	**49.71**	**152**	*e*P	**P**	**23 58 36.2**	**-1.1**
BOD	**Bodaibo**	**49.73**	**15**	*e*P	**P**	**23 58 36.4**	**-0.6**
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**51.61**	**126**	P	**P**	**23 58 51.5**	**-0.3**
	comp=Z,9.5nm,0.5s,mb5.0,baz=305,slow=8.6,SNR=34						
WB2	**Warramunga Arr**	**51.62**	**126**	*e*P	**P**	**23 58 51.5**	**-0.3**
WB2				*e*	pP	23 59 01.3	-2.2
HABR	**Khabarovsk**	**51.77**	**35**	*e*P	**P**	**23 58 51.4**	**-1.2**
HABR				*e*S	**S**	**00 06 12.8**	**+1.1**
HABR				*e*		00 08 38.5	
HABR				*e*SS	SS	00 09 51.3	+2.7
HABR				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb5.1						
SVE	**Sverdlovsk**	**51.89**	**339**	*e*P	**P**	**23 58 54.1**	**+0.7**
ARU	**Arti**	**52.37**	**337**	*e*P	**P**	**23 58 56.4**	**-0.5**
	comp=Z,2.4nm,0.6s,mb4.3						
ARU	**Arti**	**52.37**	**337⇑**	*e*P	**P**	**23 58 56.8**	**-0.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
ZEI	**Tsey**	**52.51**	**316**	*e*P	**P**	**23 59 00.2**	**+2.0**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ASAR	**Alice Springs**	**53.35**	**130**	P	**P**	**23 59 04.5**	**-0.1**
	comp=Z,4.2nm,0.5s,mb4.7,baz=305,slow=6.9,SNR=102						
KIV	**Kislovodsk**	**53.78**	**317**	*e*P	**P**	**23 59 08.3**	**+0.8**
	comp=Z,16nm,1.1s,mb4.9						
KIV				*e*	pP	23 59 20.3	+1.0
KIV	**Kislovodsk**	**53.78**	**317**	*e*P	**P**	**23 59 06.3**	**-1.2**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
MALT	**Malatya**	**55.03**	**309**	*e*P	**P**	**23 59 17.1**	**+0.4**
	comp=Z,4.8nm,1.1s,mb4.4						
MALT	**Malatya**	**55.03**	**309**	*e*P	**P**	**23 59 17.1**	**+0.3**
MALT				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
SOC	**Sochi**	**55.66**	**316**	*e*P	**P**	**23 59 18.3**	**-2.9**
SOC				*e*SP	sP	23 59 34.1	-3.5
SOC				*e*		00 00 27.8	
SOC				*e*		00 01 20.3	
SOC				*e*S	**S**	**00 06 58.9**	**-5.7**
SOC				*e*		00 09 04.4	
SOC				*e*SS	SS	00 10 50.6	+0.4
SOC				*e*SSS		00 12 59.3	
SOC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KMBO	**Kilima Mbogo**	**55.87**	**261**	P	**P**	**23 59 22.9**	**-0.3**
KMBO	**Kilima Mbogo**	**55.87**	**261**	LR	LR	00 19 51.9	
	comp=Z,64nm,18.3s,MS3.7,baz=96,slow=32						
ANN	**Anapa**	**57.61**	**317**	*e*P	**P**	**23 59 26.3**	**-8.7**
ANN				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
PRGR	**Permogore**	**60.81**	**337**	*e*P	**P**	**23 59 56.3**	**-0.5**
PRGR				*e*		00 00 40.7	
PRGR				*e*S	**S**	**00 08 09.8**	**-1.4**
PRGR				pmax	pmax		
	comp=Z,26nm,0.4s,mb5.7						
CTAO	**Charters Tower**	**61.50**	**120**	*e*P	**P**	**00 00 02.0**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.5						
CTAO	**Charters Tower**	**61.50**	**120**	*e*P	**P**	**00 00 02.0**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
OBN	**Obninsk**	**61.80**	**327**	*e*P	**P**	**00 00 03.6**	**0.0**
	comp=Z,13nm,0.6s,mb5.2						
OBN	**Obninsk**	**61.80**	**327⇑**	*e*P	**P**	**00 00 03.6**	**0.0**
OBN				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.2						
STKA	**Stephens Creek**	**63.60**	**134**	P	**P**	**00 00 16.3**	**+0.4**
	comp=Z,3.2nm,0.8s,mb4.4,baz=330,slow=11,SNR=5.2						
TIRR	**Tirgusor**	**63.75**	**314⇑**	*i* P	**P**	**00 00 16.8**	**0.0**
AKASG	**Malin Array Be**	**64.59**	**321**	P	**P**	**00 00 21.4**	**-0.8**
	comp=Z,3.1nm,0.6s,mb4.5,baz=91,slow=5.1,SNR=17						
TIXI	**Tiksi**	**64.70**	**12**	*i* P	**P**	**00 00 22.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,15nm,1.9s,mb4.7						
VRI	**Vrincioaia**	**65.18**	**316⇑**	*i* P	**P**	**00 00 27.4**	**+1.2**
PLOR	**Plostina**	**65.23**	**316⇑**	*i* P	**P**	**00 00 27.7**	**+1.2**
MLR	**Muntele Rosu**	**65.66**	**315⇑**	*i* P	**P**	**00 00 30.0**	**+0.7**
JOF	**Joensuu**	**67.30**	**334**	*ep*	**P**	**00 00 39.0**	**-0.4**
	comp=Z,10nm,0.7s,mb5.0						
DRGR		**68.07**	**316⇑**	*i* P	**P**	**00 00 44.7**	**+0.1**
KWP	**Kalwaria**	**68.48**	**319⇑**	*i* P	**P**	**00 00 46.4**	**-0.7**
FINES	**FINESS Array B**	**69.14**	**332**	*i* P	**P**	**00 00 51.0**	**0.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**69.14**	**332**	P	**P**	**00 00 51.1**	**+0.1**
	comp=Z,4.3nm,0.8s,mb4.4,baz=98,slow=7.9,SNR=14						
KAF	**Kangasniemi**	**69.23**	**333**	*ep*	**P**	**00 00 51.2**	**-0.3**
	comp=Z,3.6nm,0.7s,mb4.4,baz=106,slow=6.0						
KAF	**Kangasniemi**	**69.23**	**333**	*e*P	**P**	**00 00 51.2**	**-0.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
OJC	**Ojcow**	**70.42**	**319**	*e*P	**P**	**00 00 58.8**	**-0.2**
ARCES	**ARCESS Array B**	**71.78**	**340**	P	**P**	**00 01 06.9**	**-0.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=90,slow=5.2,SNR=8.9						
ARCES				LR	LR	00 35 04.4	
	comp=Z,113nm,20.9s,MS4.1,baz=352,slow=38						
TAU	**Tasmania Unive**	**73.45**	**141**	P	**P**	**00 01 16.8**	**-0.4**
BRG	**Berggiesshubel**	**74.19**	**320**	*e*P	**P**	**00 01 22.1**	**+0.5**
BRG				*e*	pP	00 01 30.9	-2.8
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
BRG	**Berggiesshubel**	**74.19**	**320**	*e*P	**P**	**00 01 22.1**	**+0.5**
	comp=Z,5.5nm,0.9s,mb4.5						
BRG				*e*	pP	00 01 30.9	-2.8
	comp=Z,1.5nm,0.6s						
GERES	**GERESS Array B**	**74.28**	**318**	P	**P**	**00 01 22.7**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.2,baz=86,slow=5.6,SNR=21						
KHC	**Kasperske Hory**	**74.37**	**318**	*i* P	**P**	**00 01 21.6**	**-1.1**
CLL	**Collm**	**74.80**	**320**	*e*P	**P**	**00 01 25.0**	**-0.1**
BOSA	**Boshof**	**75.55**	**237**	P	**P**	**00 01 30.2**	**+0.5**
	comp=Z,3.1nm,0.8s,mb4.3,baz=58,slow=10,SNR=5.5						
BOSA				LR	LR	00 30 29.7	
	comp=Z,88nm,19.5s,MS4.1,baz=136,slow=32						
GRA1	**Grafenberg Arr**	**75.92**	**319**	*e*P	**P**	**00 01 32.1**	**+0.6**
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**75.92**	**319**	*e*P	**P**	**00 01 32.1**	**+0.6**
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**75.92**	**319**	*e*P	**P**	**00 01 32.1**	**+0.6**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**75.92**	**319**	*e*P	**P**	**00 01 32.1**	**+0.6**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**75.92**	**319**	*e*P	**P**	**00 01 32.1**	**+0.6**
	comp=Z,5.0nm,1.0s,mb4.4						
NB2	**NORSAR Subarra**	**76.16**	**330**	P	**P**	**00 01 32.3**	**-0.4**
	comp=Z,4.0nm,0.8s,mb4.4,baz=96,slow=5.3						
NB2	**NORSAR Subarra**	**76.16**	**330**	P	**P**	**00 01 32.3**	**-0.4**
NB2				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
NOA	**NORSAR Array B**	**76.16**	**330**	P	**P**	**00 01 32.6**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.3,baz=92,slow=5.8,SNR=13						
KEST	**Kesra**	**77.92**	**304**	P	**P**	**00 01 43.3**	**+0.2**
	comp=Z,2.9nm,0.9s,mb4.2,baz=242,slow=5.8,SNR=5.3						
CASY	**Casey**	**78.14**	**173**	P	**P**	**00 01 43.5**	**0.0**
CDF	**Champ du Feu**	**78.55**	**317**	*e*P	**P**	**00 01 46.0**	**-0.3**
	comp=Z,4.8nm,0.8s,mb4.2						
CDF	**Champ du Feu**	**78.55**	**317**	*e*P	**P**	**00 01 46.0**	**-0.3**
	comp=Z,2.4nm,0.8s,mb4.2						
CDF	**Champ du Feu**	**78.55**	**317**	*e*P	**P**	**00 01 46.0**	**-0.3**
CDF				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SBF	**Sospel**	**78.75**	**313**	*e*P	**P**	**00 01 47.9**	**+0.4**
LPG	**La Plagne**	**79.11**	**314**	*e*P	**P**	**00 01 49.8**	**+0.3**
	comp=Z,7.9nm,0.7s,mb4.5						
LPG	**La Plagne**	**79.11**	**314**	*e*P	**P**	**00 01 49.8**	**+0.3**
	comp=Z,4.0nm,0.7s,mb4.5						
LPG	**La Plagne**	**79.11**	**314**	*e*P	**P**	**00 01 49.8**	**+0.3**
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LPL	**La Plagne**	**79.13**	**314**	*e*P	**P**	**00 01 49.8**	**+0.2**
	comp=Z,20nm,0.9s,mb4.8						
LPL	**La Plagne**	**79.13**	**314**	*e*P	**P**	**00 01 49.8**	**+0.2**
	comp=Z,10nm,0.9s,mb4.8						
LPL	**La Plagne**	**79.13**	**314**	*e*P	**P**	**00 01 49.8**	**+0.2**
LPL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MBDF	**Montbardon**	**79.16**	**314**	*e*P	**P**	**00 01 49.1**	**-0.7**
HAU	**Haudompre**	**79.20**	**317**	*e*P	**P**	**00 01 49.5**	**-0.4**
	comp=Z,9.6nm,0.8s,mb4.5						
HAU	**Haudompre**	**79.20**	**317**	*e*P	**P**	**00 01 49.5**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.5						
HAU	**Haudompre**	**79.20**	**317**	*e*P	**P**	**00 01 49.5**	**-0.4**
HAU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
FRF	**La Foret Royal**	**79.35**	**312**	*e*P	**P**	**00 01 49.8**	**-1.0**
CABF	**La Chapelle**	**79.49**	**316**	*e*P	**P**	**00 01 51.7**	**+0.2**
ORIF	**Oris-en-Rattie**	**79.78**	**314**	*e*P	**P**	**00 01 52.5**	**-0.6**
	comp=Z,8.3nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**79.78**	**314**	*e*P	**P**	**00 01 52.5**	**-0.6**
	comp=Z,4.2nm,0.8s,mb4.4						
ORIF	**Oris-en-Rattie**	**79.78**	**314**	*e*P	**P**	**00 01 52.5**	**-0.6**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
BAIF	**Baives**	**80.43**	**319**	*e*P	**P**	**00 01 56.6**	**+0.1**
	comp=Z,7.4nm,0.9s,mb4.3						
BAIF	**Baives**	**80.43**	**319**	*e*P	**P**	**00 01 56.6**	**+0.1**
	comp=Z,3.7nm,0.9s,mb4.3						
BAIF	**Baives**	**80.43**	**319**	*e*P	**P**	**00 01 56.6**	**+0.1**
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
VIVF	**Saint-Julien-l**	**80.64**	**314**	*e*P	**P**	**00 01 57.8**	**+0.1**
	comp=Z,17nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**80.64**	**314**	*e*P	**P**	**00 01 57.8**	**+0.1**
	comp=Z,8.4nm,0.9s,mb4.7						
VIVF	**Saint-Julien-l**	**80.64**	**314**	*e*P	**P**	**00 01 57.8**	**+0.1**
VIVF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
LOR	**Lormes**	**80.94**	**316**	*e*P	**P**	**00 01 59.0**	**-0.3**
	comp=Z,4.8nm,0.7s,mb4.3						
LOR	**Lormes**	**80.94**	**316**	*e*P	**P**	**00 01 59.0**	**-0.3**
	comp=Z,2.4nm,0.7s,mb4.2						
LOR	**Lormes**	**80.94**	**316**	*e*P	**P**	**00 01 59.0**	**-0.3**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
SMF	**Signal de Mont**	**81.02**	**316**	*e*P	**P**	**00 01 59.3**	**-0.5**
SSF	**Saint Saulge**	**81.21**	**316**	*e*P	**P**	**00 02 00.5**	**-0.2**
LASF	**Ste Croix**	**81.30**	**313**	*e*P	**P**	**00 02 01.7**	**+0.4**
AVF	**Avril sur Loir**	**81.34**	**316**	*e*P	**P**	**00 02 01.1**	**-0.4**
TCF	**Toulx Ste Croi**	**82.19**	**316**	*e*P	**P**	**00 02 06.1**	**+0.2**
CAF	**Calviac**	**82.47**	**314**	*e*P	**P**	**00 02 07.8**	**+0.4**
	comp=Z,5.2nm,0.8s,mb4.2						
CAF	**Calviac**	**82.47**	**314**	*e*P	**P**	**00 02 07.8**	**+0.4**
	comp=Z,2.6nm,0.8s,mb4.2						
CAF	**Calviac**	**82.47**	**314**	*e*P	**P**	**00 02 07.8**	**+0.4**
CAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MTLF	**Montolieu**	**82.58**	**313**	*e*P	**P**	**00 02 08.2**	**+0.2**
	comp=Z,12nm,0.8s,mb4.7						
MTLF	**Montolieu**	**82.58**	**313**	*e*P	**P**	**00 02 08.2**	**+0.2**
	comp=Z,6.1nm,0.8s,mb4.7						
MTLF	**Montolieu**	**82.58**	**313**	*e*P	**P**	**00 02 08.2**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
RJF	**Les Rejaudoux**	**82.80**	**315**	*e*P	**P**	**00 02 09.6**	**+0.5**
	comp=Z,13nm,1.0s,mb4.6						
RJF	**Les Rejaudoux**	**82.80**	**315**	*e*P	**P**	**00 02 09.6**	**+0.5**
	comp=Z,6.6nm,1.0s,mb4.6						
RJF	**Les Rejaudoux**	**82.80**	**315**	*e*P	**P**	**00 02 09.6**	**+0.5**
RJF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
LDF	**La Druitiere**	**83.42**	**318**	*e*P	**P**	**00 02 12.1**	**-0.2**
	comp=Z,11nm,0.9s,mb4.6						
LDF	**La Druitiere**	**83.42**	**318**	*e*P	**P**	**00 02 12.1**	**-0.2**
	comp=Z,5.5nm,0.9s,mb4.6						
LDF	**La Druitiere**	**83.42**	**318**	*e*P	**P**	**00 02 12.1**	**-0.2**
LDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
MFF	**Saint Martin d**	**83.75**	**316**	*e*P	**P**	**00 02 13.9**	**-0.1**
	comp=Z,15nm,0.9s,mb4.8						
MFF	**Saint Martin d**	**83.75**	**316**	*e*P	**P**	**00 02 13.9**	**-0.1**
	comp=Z,7.6nm,0.9s,mb4.8						
MFF	**Saint Martin d**	**83.75**	**316**	*e*P	**P**	**00 02 13.9**	**-0.1**
MFF				pmax	pmax		
	comp=Z,8

URZ	**Urewera**	**0.96 151**	*e*PN	Pn	01 23 55.5	-0.1
URZ			SN	S	01 24 19.9	+0.1
MWZ	**Matawai**	**1.22 139**	P	Pn	01 23 57.6	+0.3
MWZ			S	S	01 24 22.4	-0.4
MWZ	**Matawai**	**1.22 139**	PN	Pn	01 23 57.6	+0.3
MWZ			SN	S	01 24 22.4	-0.4
PUZ	**Puketiti**	**1.52 116**	P	Pn	01 23 59.8	0.0
PUZ	**Puketiti**	**1.52 116**	PN	Pn	01 23 59.8	0.0
BKZ	**Black Stump Fm**	**1.75 181**	P	Pn	01 24 01.9	+0.1
BKZ	**Black Stump Fm**	**1.75 181**	PN	Pn	01 24 01.9	+0.1
BKZ			SN	S	01 24 30.8	-0.1
KNZ	**Kokohu**	**1.84 151**	P	Pn	01 24 02.9	+0.2
KNZ			S	S	01 24 31.8	-0.6
KNZ	**Kokohu**	**1.84 151**	PN	Pn	01 24 02.9	+0.2
KNZ			SN	S	01 24 31.5	-0.9
OTVZ	**Oturere**	**1.87 201**	PN	Pn	01 24 03.9	+0.9
NGZ	**Ngauruhoe**	**1.90 202**	P	Pn	01 24 04.2	+1.0
NGZ	**Ngauruhoe**	**1.90 202**	PN	Pn	01 24 04.2	+1.0
WNVZ	**Wahianoa**	**2.04 201**	P	Pn	01 24 04.9	+0.3
WNVZ	**Wahianoa**	**2.04 201**	PN	Pn	01 24 04.9	+0.3
MOVZ	**Moawhango**	**2.08 197**	P	Pn	01 24 05.0	0.0
MOVZ	**Moawhango**	**2.08 197**	PN	Pn	01 24 05.0	0.0
PXZ	**Pawanui**	**2.63 174**	PN	Pn	01 24 10.6	-0.2
TSZ	**Takapari Road**	**2.68 189**	P	Pn	01 24 11.0	-0.4
TSZ	**Takapari Road**	**2.68 189**	PN	Pn	01 24 11.0	-0.4
BFZ	**Birch Farm**	**3.27 184**	*e*P	Pn	01 24 17.2	-0.9
BFZ	**Birch Farm**	**3.27 184**	PN	Pn	01 24 17.3	-0.8
MRZ	**Mangatainoka R**	**3.32 192**	P	Pn	01 24 17.1	-1.7
MRZ	**Mangatainoka R**	**3.32 192**	PN	Pn	01 24 17.1	-1.6
MRZ			SN	S	01 24 59.2	-2.2
TIWZ	**Tintock**	**3.39 188**	PN	Pn	01 24 18.5	-1.1
KIW	**Kapiti Island**	**3.66 199**	P	Pn	01 24 21.0	-1.8
KIW	**Kapiti Island**	**3.66 199**	PN	Pn	01 24 21.0	-1.9
MTW	**Mount Morrison**	**3.82 192**	P	Pn	01 24 22.7	-2.1
MTW	**Mount Morrison**	**3.82 192**	PN	Pn	01 24 22.7	-2.0
CAW	**Cannon Point**	**3.86 197**	P	Pn	01 24 23.5	-1.7
CAW	**Cannon Point**	**3.86 197**	PN	Pn	01 24 23.5	-1.7
DUWZ	**D'Urville Isla**	**3.94 210**	PN	Pn	01 24 24.5	-1.7
TRWZ	**Traveller**	**4.03 189**	PN	Pn	01 24 25.5	-1.8
MRW	**Makara Radio**	**4.06 200**	P	Pn	01 24 25.8	-1.9
MRW	**Makara Radio**	**4.06 200**	PN	Pn	01 24 25.8	-1.9
MSWZ	**Moikau Station**	**4.11 193**	P	Pn	01 24 26.1	-2.2
MSWZ	**Moikau Station**	**4.11 193**	PN	Pn	01 24 26.1	-2.3
SNZO	**South Karori**	**4.14 199**	P	Pn	01 24 26.3	-2.3
SNZO	**South Karori**	**4.14 199**	PN	Pn	01 24 26.3	-2.3
TCW	**Tory Channel**	**4.17 204**	P	Pn	01 24 27.1	-2.0
TCW	**Tory Channel**	**4.17 204**	PN	Pn	01 24 27.1	-2.0
TUWZ	**Tuamarina**	**4.48 206**	PN	Pn	01 24 30.8	-2.1
NNZ	**Nelson**	**4.51 212**	P	Pn	01 24 31.5	-1.8
NNZ	**Nelson**	**4.51 212**	PN	Pn	01 24 31.5	-1.8
QRZ	**Quartz Range**	**4.61 221**	*e*P	Pn	01 24 32.0	-2.5
QRZ	**Quartz Range**	**4.61 221**	PN	Pn	01 24 32.0	-2.4
BSWZ	**Blackbirch Sta**	**4.75 205**	P	Pn	01 24 34.1	-2.2
BSWZ	**Blackbirch Sta**	**4.75 205**	PN	Pn	01 24 34.1	-2.2
THZ	**Tophouse**	**5.16 212**	*e*PN	Pn	01 24 38.3	-3.2
KHZ	**Kahutara**	**5.50 204**	*e*P	Pn	01 24 43.2	-2.5
KHZ	**Kahutara**	**5.50 204**	PN	Pn	01 24 43.2	-2.5
DSZ	**Denniston Nort**	**5.66 219**	*e*P	Pn	01 24 44.2	-3.5
DSZ	**Denniston Nort**	**5.66 219**	PN	Pn	01 24 44.2	-3.5
MQZ	**McQueen's Vall**	**6.94 204**	PN	Pn	01 25 00.2	-4.0

NEIC ***30*** *01:31:04.1, 3790S×17674E, h6km, ML4.1(WEL), After WEL.*
NEIC Felt in the Matata area.

WEL 30 01:31:04.1±0.1, 3790S×17673E, h6km±1km, ML4.0/12, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.10**	**206**		P	Pg	01 31 06.5	+0.2
MARZ					S	Sg	01 31 08.1	+0.3
MARZ	**Manawahe**	**0.10**	**206**		PG	Pg	01 31 06.5	+0.2
MARZ					SG	Sg	01 31 08.1	+0.3
OPRZ	**Ohinepanea**	**0.15**	**290**		PG	Pg	01 31 07.4	+0.3
OPRZ					SG	Sg	01 31 10.1	+1.0
LIRZ	**Lichensteins R**	**0.29**	**249**		P	Pg	01 31 10.3	+0.5
LIRZ					S	Sg	01 31 16.9	+3.2
LIRZ	**Lichensteins R**	**0.29**	**249**		PG	Pg	01 31 10.3	+0.5
LIRZ					SG	Sg	01 31 14.9	+1.2
MKRZ	**Makatiti**	**0.32**	**221**		P	Pg	01 31 11.1	+0.8
MKRZ	**Makatiti**	**0.32**	**221**		PG	Pg	01 31 11.1	+0.8
TAZ	**Tarawera**	**0.38**	**208**		P	Pg	01 31 12.3	+0.9
TAZ	**Tarawera**	**0.38**	**208**		PG	Pg	01 31 12.3	+0.9
KARZ	**Kaharoa**	**0.40**	**252**		P	Pg	01 31 12.3	+0.4
KARZ	**Kaharoa**	**0.40**	**252**		PG	Pg	01 31 12.3	+0.4
TGRZ	**Tauranga**	**0.41**	**294**		PG	Pg	01 31 12.5	+0.5
URZ	**Urewera**	**0.47**	**141**		P	Pg	01 31 13.0	-0.1
URZ	**Urewera**	**0.47**	**141**		PG	Pg	01 31 13.0	-0.1
UTU	**Utuhina**	**0.51**	**237**		P	Pg	01 31 14.4	+0.5
UTU	**Utuhina**	**0.51**	**237**		PG	Pg	01 31 14.4	+0.6
WIZ	**White Island**	**0.52**	**45**		P	Pg	01 31 14.7	+0.7
WIZ	**White Island**	**0.52**	**45**		PG	Pg	01 31 14.7	+0.6
HRRZ	**Handcock Road**	**0.61**	**215**		P*	Pb	01 31 16.2	-0.9
PATZ	**Paeroa**	**0.61**	**218**		P	Pg	01 31 16.5	+0.7
PATZ	**Paeroa**	**0.61**	**218**		P*	Pb	01 31 16.3	-0.8
MWZ	**Matawai**	**0.77**	**125**		P	Pg	01 31 18.5	-0.3
MWZ	**Matawai**	**0.77**	**125**		P*	Pb	01 31 18.5	-1.2
TOZ	**Tahuroa Road**	**0.99**	**279**		P	Pg	01 31 21.7	-1.3
TOZ	**Tahuroa Road**	**0.99**	**279**		P*	Pb	01 31 21.7	-1.8
PUZ	**Puketiti**	**1.22**	**99**		P	Pg	01 31 24.3	-3.1
BKZ	**Black Stump Fm**	**1.28**	**188**		P	Pn	01 31 26.4	-2.1
BKZ	**Black Stump Fm**	**1.28**	**188**		P*	Pb	01 31 26.4	-2.2
KNZ	**Kokohu**	**1.34**	**147**		*e*P	Pn	01 31 29.0	-0.3
KNZ	**Kokohu**	**1.34**	**147**		PN	Pn	01 31 29.0	-0.3
KUZ	**Kuaotunu**	**1.40**	**325**		P	Pn	01 31 29.4	-0.7
KUZ	**Kuaotunu**	**1.40**	**325**		PN	Pn	01 31 29.4	-0.7
OTVZ	**Oturere**	**1.52**	**213**		*e*P*	Pb	01 31 30.8	-1.8
HIZ	**Hauiti**	**1.60**	**247**		P	Pn	01 31 31.1	-1.8
HIZ	**Hauiti**	**1.60**	**247**		PN	Pn	01 31 31.1	-1.8

NIED ***30*** *02:07:00, 3320N×13580E, h8km, Mw3.6 Best double couple: M₀2.88000×10¹⁴ NP1:φ₁68.00000°, δ51.00000°, λ3.00000°. NP2:φ₂76.00000°, δ88.00000°, λ141.00000°.*

JMA 30 02:07:04.5, 3321N×13583E, h31km±1km, M3.7, 2C-2D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**0.33**	**343**	⇓P		Pb	02 07 12.3	-0.2
JWZ					S	Sb	02 07 17.9	-0.1
JWM	**Minabe**	**0.75**	**328**	⇓P		Pn	02 07 18.6	-0.4
JWM					S	Sb	02 07 28.6	-0.5
JWY	**Kouya**	**1.02**	**349**	⇑P		Pn	02 07 22.9	+0.2
JWY					S	Sn	02 07 36.4	+0.4
JKN2	**Miekihoku**	**1.09**	**20**	⇑P		Pn	02 07 23.5	-0.1
JKN2					S	Sn	02 07 37.3	-0.4
JAI	**Aioi**	**1.29**	**297**	P		Pn	02 07 26.1	-0.3
JAI					S	Sn	02 07 42.2	-0.4

IDC ***30*** *02:13:27.8±4.8, 856S×15362E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/13, mbtmp3.9/4, MS3.0/2, Ms1 3.0/2, ms1mx2.7/20, Error ellipse: s-maj=151.2km s-min=32.2km az=116.0*

ISC 30 02:13:30.8±3.2, 89S±03×1541E±05, h35km, n8, σ0°86/6, mb3.9/5, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**13.48**	**213**		LR	LR	02 20 18.4	
	comp=Z,96nm,18.8s,baz=52,slow=30							
KAKA	**Kakadu**	**21.60**	**258**	*e*P		**P**	**02 18 17.5**	**-0.4**
	3.6nm,0.6s,mb4.0							
WB2	**Warramunga Arr**	**22.03**	**238**	*e*P		**P**	**02 18 22.6**	**+0.1**
WRA	**Warramunga Arr**	**22.04**	**238**	P		**P**	**02 18 23.4**	**+0.8**
	3.6nm,0.6s,mb4.0,baz=60,slow=9.5,SNR=6.0							
ASAR	**Alice Springs**	**24.28**	**230**	P		**P**	**02 18 44.4**	**-0.6**
	2.5nm,0.9s,mb3.6,baz=63,slow=9.4,SNR=16							
MKAR	**Makanchi Array**	**84.21**	**319**	P		**P**	**02 25 59.5**	**+0.8**
	0.6nm,0.7s,mb3.8,baz=116,slow=5.5,SNR=4.7							
ZALV	**Zalesovo Beam**	**85.22**	**326**	P		**P**	**02 26 03.0**	**-0.6**
	0.5nm,0.4s,mb4.0,baz=94,slow=6.4,SNR=4.4							
RPN	**Rapa Nui**	**91.80**	**118**	LR		LR	03 00 01.5	
	comp=Z,5.0nm,21.1s,baz=222,slow=30							

RSPR 30 02:26:27.0, 1970N×6552W, h88km±13km, MD3.7/8, 7C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.46**	**193**	⇑*e*P		Pn	02 26 51.5	-0.7
HUMP	**Col San Antoni**	**1.58**	**192**	⇑*e*P		Pn	02 26 52.4	-1.3
HUMP				*e*S		Sn	02 27 13.6	-0.3
MTP	**Monte Pirata**	**1.59**	**181**	⇓*e*P		Pn	02 26 53.2	-0.7
MTP	**Monte Pirata**	**1.59**	**181**	*e*S		Sn	02 27 14.0	-0.2
SJG	**San Juan**	**1.69**	**201**	⇑*e*P		Pn	02 26 54.4	-0.7
AOPR	**Arecibo Observ**	**1.78**	**221**	⇑*e*P		Pn	02 26 55.6	-0.8
CELP	**Cerrillos**	**1.90**	**212**	⇑*e*P		Pn	02 26 57.5	-0.4
ICM	**Isla Caja Muer**	**2.03**	**208**	⇑*e*P		Pn	02 26 59.3	-0.3
CRPR	**Cabo Rojo, PR**	**2.26**	**222**	⇑*e*P		Pn	02 27 02.7	+0.1
CRPR	**Cabo Rojo, PR**	**2.26**	**222**	*e*S		Sn	02 27 29.4	-0.4

NEIC ***30*** *02:26:43.5, 3324S×7008W, h113km, mb4.3/1, MD3.8(GUC), After GUC.*

GUC 30 02:26:43.5±0.8, 3324S×7008W, h113km±3km, MD3.8, ML3.8, 13C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.20**	**244**	⇑*i*P		Pn	02 26 59.9	+0.7
FCH				*i* S		Sn	02 27 12.0	+1.1
FCH				AML	AML		02 27 13.2	
	comp=N,6μm,0.3s							
CLCH	**Cerro Calan**	**0.41**	**248**	⇑*i*P		Pn	02 27 01.0	+0.9
CLCH				*i* S		Sn	02 27 13.7	+1.1
CLCH	**Cerro Calan**	**0.41**	**248**	⇑*i*P		Pn	02 27 01.0	+0.9
CLCH				*i* S		Sn	02 27 13.7	+1.1
CLCH				AML	AML		02 27 14.3	
	comp=N,5μm,0.4s							
YECH	**El Yeso**	**0.42**	**180**	⇑*i*P		Pn	02 27 00.1	0.0
YECH				*i* S		Sn	02 27 14.0	+1.3
DSCH	**Colegio Aleman**	**0.44**	**249**	⇑*i*P		Pn	02 26 59.9	-0.3
DSCH				*i* S		Sn	02 27 12.5	-0.4
FSR	**Penalolen**	**0.44**	**238**	*e*P		Pn	02 27 00.5	+0.2
FSR				*i* S		Sn	02 27 13.4	+0.5
FSR	**Penalolen**	**0.44**	**238**	*e*P		Pn	02 27 00.5	+0.2
FSR				*i* S		Sn	02 27 13.4	+0.5
FSR				AML	AML		02 27 14.6	
	comp=E,4μm,0.4s							
SJCH	**San Jose de Ma**	**0.46**	**210**	⇓*i*P		Pn	02 27 00.1	-0.2
SJCH				*i* S		Sn	02 27 13.3	+0.2
STL	**Santa Lucia**	**0.51**	**248**	⇑*i*P		Pn	02 27 00.5	-0.2
STL				*i* S		Sn	02 27 13.5	-0.1
STL				AML	AML		02 27 14.3	
	comp=E,1μm,0.3s							
PEL	**Peldehue**	**0.52**	**281**	⇓*i*P		Pn	02 27 01.0	+0.3
PEL				*i* S		Sn	02 27 13.9	+0.2
PEL				AML	AML		02 27 15.0	
	comp=E,7μm,0.4s							
PCH	**Pirque**	**0.52**	**224**	⇓*i*P		Pn	02 27 01.0	+0.2
PCH				*i* S		Sn	02 27 14.5	+0.7
SAN	**Santiago**	**0.53**	**247**	⇓*i*P		Pn	02 27 01.1	+0.2
SAN				*i* S		Sn	02 27 14.0	+0.2
SAN				AML	AML		02 27 14.7	
	comp=E,6μm,0.3s							
ANTU	**Antumapu**	**0.57**	**235**	*e*P		Pn	02 27 01.1	+0.1
ANTU				*i* S		Sn	02 27 14.8	+0.5
ANTU	**Antumapu**	**0.57**	**235**	*e*P		Pn	02 27 01.1	+0.1
ANTU				*i* S		Sn	02 27 14.8	+0.5
ANTU				AML	AML		02 27 15.4	
	comp=N,3μm,0.4s							
LMEL	**Las Melosas**	**0.61**	**190**	*e*P		Pn	02 27 01.8	+0.4
LMEL				*i* S		Sn	02 27 15.4	+0.5
LMEL	**Las Melosas**	**0.61**	**190**	*e*P		Pn	02 27 01.8	+0.4
LMEL				*i* S		Sn	02 27 15.4	+0.5
LMEL				AML	AML		02 27 19.8	
	comp=N,2μm,0.3s							
JACH	**Jahuel**	**0.71**	**322**	*e*P		Pn	02 27 02.7	+0.5
JACH				*i* S		Sn	02 27 16.7	+0.5
TACH	**Talagante**	**0.83**	**240**	⇓*i*P		Pn	02 27 02.9	-0.3
TACH				*i* S		Sn	02 27 17.5	-0.6
ROCH	**El Roble**	**0.83**	**289**	⇓*i*P		Pn	02 27 03.6	+0.4
ROCH				*i* S		Sn	02 27 18.8	+0.7
CHCH	**Chadas Angostu**	**0.84**	**215**	⇓*i*P		Pn	02 27 03.4	+0.1
CHCH				*i* S		Sn	02 27 18.4	+0.2
CACH	**El Canelo**	**0.97**	**206**	⇑*i*P		Pn	02 27 05.2	+0.6
CACH				*i* S		Sn	02 27 22.1	+1.5
CICH	**Cipreses**	**1.11**	**195**	⇑*i*P		Pn	02 27 06.7	+0.6
CICH				*i* S		Sn	02 27 24.7	+1.6
PTCH	**Petorca**	**1.21**	**324**	⇑*i*P		Pn	02 27 07.8	+0.7
PTCH				*i* S		Sn	02 27 25.8	+0.7
PTCH	**Petorca**	**1.21**	**324**	⇑*i*P		Pn	02 27 07.8	+0.7
PTCH				*i* S		Sn	02 27 25.8	+0.7
PTCH				AML	AML		02 27 27.1	
	comp=N,5μm,0.3s							
LCCH	**Las Cruces**	**1.27**	**259**	*e*P		Pn	02 27 07.9	+0.1
IHA	**Instituto Hidr**	**1.33**	**279**	⇑*i*P		Pn	02 27 08.4	0.0
SFDO	**San Fernando**	**1.57**	**209**	⇓*i*P		Pn	02 27 11.4	+0.1
SFDO				*i* S		Sn	02 27 32.5	0.0
CHNG	**Los Chungos**	**1.81**	**318**	*i* P		Pn	02 26 58.1	-16
CHNG				*i* S		Sn	02 27 21.1	-17
CMCH	**Combarbala**	**2.21**	**339**	⇑*i*P		Pn	02 27 19.7	+0.4
CMCH				*i* S		Sn	02 27 46.9	+0.3
CMCH	**Combarbala**	**2.21**	**339**	⇑*i*P		Pn	02 27 19.7	+0.4
CMCH				*i* S		Sn	02 27 46.9	+0.3
CMCH				AML	AML		02 27 49.5	
	comp=E,2μm,0.9s							
TLL	**Tololo Astrono**	**3.13**	**348**	*e*P		Pn	02 27 32.4	+1.1
TLL				AML	AML		02 28 12.3	
	comp=N,200nm,0.4s							
TRQA	**Tornquist**	**8.15**	**128**	*e*Pn		Pn	02 28 38.5	-0.6
	comp=N,5.6nm,0.8s							

BJI ***30*** *02:44:54.8, 2200N×14346E, h30km, mB5.0, mb4.7, Ms4.5, Msz4.3*
ISCJB ***30*** *02:44:56.8±2.3, 2204N±006×14300E±004, h24km±15km, mb4.8/87, MS3.8/15, Error ellipse: s-maj=10.0km s-min=6.4km az=9.0*
MOS ***30*** *02:45:01.2±0.9, 2211N×14293E, h59km, mb5.0/38, Error ellipse: s-maj=11.4km s-min=6.9km az=102.2*
NEIC ***30*** *02:45:01.4±3.7, 2198N×14300E, h52km±33km, mb5.0/41, Error ellipse: s-maj=8.0km s-min=6.2km az=62.0*
IDC ***30*** *02:45:07.2±7.3, 2192N×14288E, h110km±65km, mb4.1/15, mb1 4.2/15, mb1mx4.2/20, mbtmp4.1/15, MS3.5/12, Ms1 3.6/12, ms1mx3.4/29, Error ellipse: s-maj=26.6km s-min=13.1km az=75.0*

ISC 30 02:45:00.5±1.9, 2204N±006×14305E±004, h40km±16km, h21km±7.9km: pP-P, n186, σ0°92/182, mb4.8/87, MS3.8/15, 8C-1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**14.28**	**292**		LR	LR	02 52 57.0	
	comp=Z,165nm,19.2s,baz=231,slow=33							
MJAR	**Matsushiro Arr**	**15.06**	**345**		LR	LR	02 53 45.6	
	comp=Z,317nm,21.4s,baz=150,slow=34							
JNU	**Nakatsue**	**15.43**	**318**		LR	LR	02 53 16.4	
	comp=Z,90nm,20.7s,baz=336,slow=32							
YHNB	**Yeheng**	**20.07**	**282**	*e*P		**P**	**02 49 35.4**	**+4.7**
KSRS	**Korea Array**	**20.17**	**323**	P		**P**	**02 49 33.8**	**+2.2**
KSRS				pmax	pmax			
	comp=Z,11nm,1.0s							
KSRS				MLR	MLR			
	comp=Z,82nm,18.9s,MS3.1							
KSRS	**Korea Array**	**20.17**	**323**	P		**P**	**02 49 33.8**	**+2.3**
	comp=Z,11nm,1.0s,baz=135,slow=12,SNR=23							
KSRS				LR	LR		02 56 34.7	
	comp=Z,82nm,18.9s,MS3.1,baz=135,slow=34							
ASAJ	**Asahikawa**	**22.03**	**359**	LR	LR		02 57 13.0	
	comp=Z,72nm,21.1s,MS3.1,baz=170,slow=33							
NJ2	**Nanjing**	**23.70**	**300**	*e*P		**P**	**02 50 08.3**	**-0.5**
NJ2				AMB	AMB			
	comp=Z,20nm,0.5s,mb4.8							
YSS	**Yuzh-Sakhalins**	**24.86**	**360**	*e*P		**P**	**02 50 19.0**	**-0.2**
YSS				*e*			02 50 42.8	
YSS				pmax	pmax			
	comp=Z,40nm,1.2s,mb4.8							
DL2	**Dalian**	**24.88**	**317**	P		**P**	**02 50 20.0**	**+0.5**
DL2				AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.3							
MDJ	**Mudanjiang**	**25.11**	**337**	P		**P**	**02 50 21.3**	**-0.1**
MDJ				AMB	AMB			
	comp=Z,8.0nm,1.0s,mb4.2							
MDJ				AMB	AMB			
	comp=Z,79nm,6.7s							
SNY	**Shenyang**	**25.63**	**325**	⇑P		**P**	**02 50 25.0**	**-1.3**
SNY				AMB	AMB			
	comp=Z,16nm,1.4s,mb4.4							
TIA	**Tai'an**	**26.59**	**308**	*e*P		**P**	**02 50 35.8**	**+0.8**
HABR	**Khabarovsk**	**27.14**	**348**	P		**P**	**02 50 36.6**	**-3.2**
HABR				*e*			02 53 57.8	
HABR				*e*S		**S**	**02 55 12.2**	**-3.3**
HABR				*e*			03 01 26.8	
KLR	**Kul'dur**	**28.58**	**344**	*e*P		**P**	**02 50 49.7**	**-3.0**
KLR				pmax	pmax			
	comp=E,24nm,1.4s							
KLR				pmax	pmax			
	comp=Z,38nm,1.4s,mb4.9							
BJI	**Beijing**	**29.03**	**314**	P		**P**	**02 50 55.5**	**-1.3**
BJI				AMB	AMB			
	comp=Z,7.0nm,0.9s,mb4.4							
HHC	**Hu-ho-hao-te**	**32.52**	**313**	*e*P		**P**	**02 51 28.3**	**+0.8**
HHC				AP	pP		02 51 37.8	-0.8
HHC				XP	sP		02 51 42.0	-1.4
HHC				PP	PP		02 52 37.5	-3.9
HHC				PCP	PcP		02 54 15.0	+1.4
HHC				S	**S**		**02 56 40.8**	**+0.9**
HHC				XS	sS		02 56 56.5	-1.9
HHC				SCP	ScP		02 57 54.5	+0.1
HHC				PCS	PcS		02 57 58.5	-0.1
HHC				SS	SS		02 58 38.5	-22
HHC				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
HHC				LR	LR			
	comp=N,128nm,22.9s,MS4.1							
HHC				LR	LR			
	comp=E,437nm,22.9s,MS4.1							
HHC				LR	LR			
	comp=Z,89nm,26.0s,MS3.3							
HIA	**Hailar**	**32.86**	**331**	*i* P		**P**	**02 51 30.2**	**-0.2**
GYA	**Guiyang**	**33.40**	**285**	P		**P**	**02 51 36.5**	**+1.1**
GYA				AP	pP		02 51 41.0	-5.5
GYA				PP	PP		02 52 48.3	-3.1
GYA				PCP	PcP		02 54 18.0	+1.6
GYA				S	**S**		**02 56 56.5**	**+2.5**
GYA				PCS	PcS		02 58 03.0	+0.8
GYA				SCS	ScS		03 02 01.3	+2.5
GYA				AMB	AMB			
	comp=Z,20nm,0.9s,mb5.0							
GYA				AMB	AMB			
	comp=Z,120nm,4.9s							
GYA				LR	LR			
	comp=N,490nm,18.9s,MS4.4							
GYA				LR	LR			
	comp=E,510nm,18.0s,MS4.4							
GYA				LR	LR			
	comp=Z,480nm,17.8s,MS4.3							
CD2	**Chengdu**	**36.12**	**293**	*e*P		**P**	**02 51 59.3**	**+0.5**
CD2				AP	pP		02 52 09.0	-1.0
CD2				XP	sP		02 52 13.0	-1.8
CD2				PP	PP		02 53 21.8	+0.4
CD2				S	**S**		**02 57 35.0**	**-0.8**
CD2				XS	sS		02 57 51.3	-3.1
CD2				AMB	AMB			
	comp=Z,10.0nm,0.8s,mb4.8							
CD2				AMB	AMB			
	comp=Z,30nm,4.2s							
CD2				LR	LR			
	comp=E,470nm,16.8s							
CD2				LR	LR			
	comp=Z,180nm,15.6s,MS4.0							
LZH	**Lanzhou**	**36.77**	**301**	*e*P		**P**	**02 52 04.0**	**-0.3**
LZH				AMB	AMB			
	comp=Z,22nm,1.0s,mb4.9							
LZH				AMB	AMB			
	comp=Z,89nm,4.3s							
KMI	**Kunming**	**36.98**	**283**	P		**P**	**02 52 09.0**	**+2.7**
KMI				S		**S**	**02 57 55.5**	**+6.4**
KMI				AMB	AMB			
	comp=Z,6.0nm,0.5s,mb4.7							
KMI				LR	LR			
	comp=N,235nm,23.9s,MS4.2							
KMI				LR	LR			
	comp=E,391nm,25.5s,MS4.2							
KMI				LR	LR			
	comp=Z,94nm,5.4s							
MA2	**Magadan**	**37.91**	**6⇑**	*e*P		**P**	**02 52 12.9**	**-0.7**
MA2				pmax	pmax			
	comp=Z,9.0nm,1.3s,mb4.3							
SONM	**Songino Array**	**39.00**	**320**	P		**P**	**02 52 23.4**	**+0.4**
SONM				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SONM	**Songino Array**	**39.00**	**320**	P		**P**	**02 52 23.4**	**+0.4**
	comp=Z,6.4nm,0.8s,mb4.4,baz=125,slow=8.7,SNR=12							
GTA	**Gaotai**	**40.58**	**305**	*e*P		**P**	**02 52 36.8**	**+0.6**
GTA				AP	pP		02 52 40.8	-6.7
GTA				XP	sP		02 52 44.8	-7.5
GTA				PP	PP		02 54 13.3	+3.1
GTA				PCP	PcP		02 54 38.0	+0.1
GTA				S	**S**		**02 58 46.8**	**+3.8**
GTA				SS	SS		03 01 43.5	-0.3
GTA				AMB	AMB			
	comp=Z,5.0nm,1.4s,mb4.0							
GTA				AMB	AMB			
	comp=Z,137nm,6.5s							
GTA				LR	LR			
	comp=N,112nm,16.4s,MS4.0

WMQ LR LR
comp=E,61nm,19.4s,MS3.7
WMQ LR LR
comp=Z,254nm,22.2s,MS4.2
TIXI Tiksi 50.30 354 *eP* **P 02 53 51.7 -1.0**
TIXI Tiksi 50.30 354⇑ *eP* **P 02 53 51.2 -1.5**
TIXI pmax pmax
comp=Z,5.0nm,1.3s,mb4.4
ODAN Odare 50.57 287 *eP* **P 02 53 56.1 +0.7**
JIRN Jiri 51.53 288 *eP* **P 02 54 03.6 +1.0**
comp=Z,24nm,0.9s,mb5.1
GKN Gorkha 52.85 289 *eP* **P 02 54 12.7 +0.3**
comp=Z,23nm,1.0s,mb5.0
STKA Stephens Creek 53.62 182 P **P 02 54 17.0 -0.9**
comp=Z,5.2nm,0.8s,mb4.5,baz=331,slow=8.3,SNR=5.6
KOLN Koldanda 53.79 289 *eP* **P 02 54 19.7 +0.3**
comp=Z,10nm,0.7s,mb4.8
ZAA0 Zalesovo Array 53.87 322 *eP* **P 02 54 18.6 -0.9**
ZALV Zalesovo Beam 53.87 322 P **P 02 54 18.6 -0.9**
comp=Z,14nm,0.9s,mb4.9,baz=100,slow=6.5,SNR=36
ZALV LR LR 03 19 20.3
comp=Z,31nm,19.6s,MS3.4,baz=270,slow=38
ZAL Zalesovo 53.88 322 P **P 02 54 18.7 -0.9**
ZAL pmax pmax
comp=Z,14nm,0.9s
ZAL MLR MLR
comp=Z,31nm,19.6s
MKAR Makanchi Array 54.38 312 P **P 02 54 22.8 -0.6**
MKAR PcP PcP 02 55 24.9 -1.9
MKAR LR LR 03 16 42.1
MKAR Makanchi Array 54.38 312 P **P 02 54 22.8 -0.5**
MKAR 02 55 24.9
comp=Z,3.0nm,0.7s
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 54.38 312 P **P 02 54 22.8 -0.6**
comp=Z,2.6nm,0.7s,mb4.3,baz=91,slow=9.1,SNR=24
MKAR PcP PcP 02 55 24.9 -1.9
comp=Z,2.8nm,0.9s,baz=101,slow=3.8,SNR=7.1
MKAR LR LR 03 16 42.1
comp=Z,35nm,18.1s,MS3.5,baz=174,slow=35
NVS Novosibirsk 54.96 322 *i P* **P 02 54 27.3 -0.1**
NVS pmax pmax
comp=Z,23nm,1.8s,mb4.9
NVS pmax pmax
comp=N,11nm,1.6s
NVS pmax pmax
comp=E,25nm,1.6s
KURK Kurchatov 57.15 317 P **P 02 54 42.4 -0.7**
comp=E,87nm,0.9s,mb5.8,SNR=6.1
KURK Kurchatov 57.15 317 *eP* **P 02 54 42.9 -0.2**
comp=E,16nm,1.0s,mb5.0
KURK Kurchatov 57.15 317 *eP* **P 02 54 42.9 -0.2**
KURK pmax pmax
comp=Z,16nm,1.0s,mb5.0
ULHL Ulahol 58.59 307 P **P 02 54 54.6 +1.2**
SNR=7.9
TKM2 Tokmak 2 59.04 308 *eP* **P 02 54 57.2 +0.7**
comp=Z,11nm,1.0s,mb4.8
TKM2 Tokmak 2 59.04 308 *eP* **P 02 54 57.2 +0.7**
TKM2 pmax pmax
comp=Z,11nm,1.0s,mb4.8
TKM2 Tokmak 2 59.04 308 P **P 02 54 57.4 +0.8**
SNR=9.8
KZA Kyzart 59.34 307 P **P 02 55 00.4 +1.8**
SNR=9.8
KBK Karagaybulak 59.53 307 P **P 02 55 00.7 +0.8**
SNR=8.2
USP Ospenovka 59.83 308 P **P 02 55 02.3 +0.4**
SNR=7.3
UCH Uchtor 59.88 307 *eP* **P 02 55 03.9 +1.6**
comp=Z,25nm,1.3s,mb5.1
UCH Uchtor 59.88 307 P **P 02 55 04.0 +1.7**
SNR=20
EKS2 Erkin-Say 60.39 307 *eP* **P 02 55 06.4 +0.5**
comp=Z,9.6nm,1.1s,mb4.7
EKS2 Erkin-Say 60.39 307 P **P 02 55 06.6 +0.8**
SNR=6.9
AML Almayashu 60.49 307 *eP* **P 02 55 07.9 +1.4**
comp=Z,15nm,1.0s,mb5.0
AML Almayashu 60.49 307 P **P 02 55 08.2 +1.7**
SNR=15
SML Sawmill 60.73 30 *eP* **P 02 55 07.5 -0.3**
MCK McKinley 60.75 28 *eP* **P 02 55 07.7 -0.1**
comp=Z,4.0nm,0.8s,mb4.6
MCK McKinley 60.75 28 *eP* **P 02 55 07.7 -0.2**
MCK pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
BRVK Borovoye 62.40 319 P **P 02 55 19.7 +0.5**
comp=Z,121nm,0.8s,mb6.1,SNR=10.0
BRVK Borovoye 62.40 319 *eP* **P 02 55 18.8 -0.4**
comp=Z,24nm,1.0s,mb5.3
BRVK Borovoye 62.40 319 *eP* **P 02 55 18.8 -0.4**
BRVK pmax pmax
comp=Z,24nm,1.0s,mb5.3
KK31 Karatay Array 62.75 308 *i P* **P 02 55 21.4 -0.3**
KK31 pmax pmax
comp=Z,7.0nm,0.7s,mb4.9
INK Inuvik 67.31 24 *eP* **P 02 55 50.6 -0.2**
ARU Arti 68.92 324 *eP* **P 02 56 00.6 -0.6**
comp=Z,15nm,1.1s,mb4.8
ARU Arti 68.92 324⇑ *iP* **P 02 56 00.1 -1.1**
ARU pmax pmax
comp=Z,19nm,1.4s,mb4.8
AKTK Aktyubinsk 70.24 317 P **P 02 56 08.8 -0.7**
AKTO Aktyubinsk 70.24 317 P **P 02 56 08.8 -0.6**
AKTO pmax pmax
comp=Z,2.0nm,0.7s,mb4.2
AKTO Aktyubinsk 70.24 317 P **P 02 56 08.8 -0.7**
comp=Z,1.5nm,0.7s,mb4.0,baz=111,slow=6.8,SNR=7.4
PRGR Permogore 74.31 331 *i P* **P 02 56 31.0 -2.5**
PRGR pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
YKW3 Yellowknife Ar 76.19 28 *eP* **P 02 56 43.0 -1.2**
YKA Yellowknife Ar 76.22 28 P **P 02 56 43.7 -0.7**
YKA Yellowknife Ar 76.22 28 P **P 02 56 43.7 -0.7**
YKA pmax pmax
comp=Z,2.0nm,0.6s
YKA Yellowknife Ar 76.22 28 P **P 02 56 43.7 -0.7**
comp=Z,1.9nm,0.6s,mb4.2,baz=293,slow=5.7,SNR=42
RES Resolute Bay 76.78 13 *eP* **P 02 56 47.2 -0.2**
ARCES ARCESS Array B 78.56 341 P **P 02 56 56.5 -1.0**
ARCES pmax pmax
comp=Z,4.0nm,0.8s
ARCES MLR MLR
comp=Z,59nm,18.7s
ARCES ARCESS Array B 78.56 341 P **P 02 56 56.5 -1.0**
comp=Z,3.7nm,0.8s,mb4.4,baz=64,slow=5.6,SNR=6.4
ARCES LR LR 03 32 43.6
comp=Z,59nm,18.6s,MS4.0,baz=251,slow=36
YBH Yreka Blue Hor 78.69 50 *eP* **P 02 56 59.6 +0.9**
JOF Joensuu 79.96 334 *ep* **P 02 57 00.1 -5.1**
comp=Z,4.5nm,0.7s,mb4.5
NEW Newport 80.11 42 *eP* **P 02 57 06.5 +0.2**
comp=Z,5.9nm,0.9s,mb4.5
NEW Newport 80.11 42 *eP* **P 02 57 06.5 +0.2**
NEW pmax pmax
comp=Z,6.0nm,0.9s
OBN Obninsk 81.14 326⇑ *iP* **P 02 57 10.8 -0.9**
OBN *e* 03 00 16.9
OBN *eS* S 03 07 18.0 -0.4
OBN pmax pmax
comp=Z,30nm,1.6s,mb5.0
BMO Blue Mountains 81.28 45 *eP* **P 02 57 12.9 +0.3**
WVOR Wild Horse Val 81.29 48 *eP* **P 02 57 12.6 -0.1**
comp=Z,42nm,2.0s,mb5.0
WVOR Wild Horse Val 81.29 48 *eP* **P 02 57 12.6 -0.1**
WVOR pmax pmax
comp=Z,42nm,2.0s,mb5.0
VRSR Storozhevoye 81.36 322 *eP* **P 02 57 12.2 -0.7**
VRSR pmax pmax
comp=Z,4.0nm,1.0s,mb4.3
VRSR pmax pmax
comp=N,3.0nm,0.9s
VRSR pmax pmax
comp=E,3.0nm,1.0s
CMB Columbia Colle 81.65 52 *eP* **P 02 57 14.5 -0.2**
comp=E,14nm,1.1s,mb4.8
CMB Columbia Colle 81.65 52 *eP* **P 02 57 14.5 -0.3**
CMB pmax pmax
comp=Z,14nm,1.1s,mb4.8
ZEI Tsey 81.74 313 *eP* **P 02 57 14.5 -0.6**
ZEI *e* 03 00 19.7
ZEI pmax pmax
comp=Z,9.0nm,1.1s,mb4.6

WALA Waterton Lakes 81.76 40 *eP* **P 02 57 16.0 +0.9**
KIV Kislovodsk 82.10 314 *eP* **P 02 57 17.3 +0.3**
comp=Z,20nm,1.1s,mb5.0
KIV Kislovodsk 82.10 314 *eP* **P 02 57 17.3 +0.3**
KIV pmax pmax
comp=Z,20nm,1.1s,mb5.0
FINES FINESS Array B 82.83 334 P **P 02 57 19.1 -1.3**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 82.83 334 P **P 02 57 19.1 -1.3**
comp=Z,2.4nm,0.7s,mb4.3,baz=69,slow=6.3,SNR=8.0
NVAR Mina Array Bea 83.03 51 P **P 02 57 22.0 +0.1**
comp=Z,5.0nm,0.8s,mb4.6,baz=263,slow=4.0,SNR=35
HLID Hailey 83.70 46 *eP* **P 02 57 25.8 +0.5**
LRM Limekiln Ridge 84.02 43 *eP* **P 02 57 27.1 +0.3**
MIB Mutribah 84.02 300 *eP* **P 02 57 26.4 -0.8**
MIB AMb AMb 02 57 28.6
comp=Z,41nm,0.8s,mb5.6
RDF Al-Radifah 84.18 299 *eP* **P 02 57 27.1 -0.9**
RDF AMb AMb 02 57 28.5
comp=Z,20nm,0.9s,mb5.3
NAY Al-Naaiem 84.31 299 *eP* **P 02 57 27.9 -0.8**
NAY AMb AMb 02 57 30.1
comp=Z,31nm,1.0s,mb5.4
RST Umm Al-Ruwaisa 84.41 299 *eP* **P 02 57 28.0 -1.2**
RST AMb AMb 02 57 30.3
comp=Z,37nm,1.0s,mb5.5
BOZ Bozeman (W) 84.61 43 *eP* **P 02 57 30.3 +0.4**
EGMT Eagleton 84.70 40 *eP* **P 02 57 29.8 -0.4**
comp=Z,13nm,1.3s,mb4.9
QLMT Earthquake Lak 85.10 43 *eP* **P 02 57 33.4 +1.1**
TPNV Topopah Spring 85.11 52 *eP* **P 02 57 32.9 +0.3**
comp=Z,9.8nm,1.0s,mb4.9
TPNV Topopah Spring 85.11 52 *eP* **P 02 57 32.9 +0.4**
TPNV pmax pmax
comp=Z,10.0nm,1.0s,mb4.9
GSC Goldstone 85.36 54 *eP* **P 02 57 34.5 +0.7**
YMR Madison River 85.47 43 *eP* **P 02 57 35.2 +1.1**
comp=Z,16nm,0.9s,mb5.2
HVU Hansel Valley 85.54 47 *eP* **P 02 57 35.4 +0.8**
FFC Flin Flon 85.61 32 P **P 02 57 34.5 -0.1**
comp=Z,134nm,0.8s,mb6.2,SNR=9.9
FFC Flin Flon 85.61 32 *eP* **P 02 57 34.2 -0.4**
comp=Z,21nm,0.9s,mb5.4
FFC Flin Flon 85.61 32 *eP* **P 02 57 34.2 -0.4**
FFC pmax pmax
comp=Z,21nm,0.9s,mb5.4
YNR Norris Junctio 85.63 43 *eP* **P 02 57 37.5 +2.5**
YFT Old Faithful 85.65 44 *eP* **P 02 57 36.4 +1.3**
IMW Indian Meadow 85.83 44 *eP* **P 02 57 37.1 +1.1**
comp=Z,9.1nm,0.8s,mb5.1
LKWY Lake 85.87 43 *eP* **P 02 57 37.0 +0.8**
comp=Z,6.9nm,1.0s,mb4.8
LKWY Lake 85.87 43 *eP* **P 02 57 37.0 +0.8**
LKWY pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
FLWY Flagg Ranch 85.90 44 *eP* **P 02 57 37.0 +0.6**
comp=Z,12nm,0.9s,mb5.1
TPAW Teton Pass 86.00 45 *eP* **P 02 57 37.3 +0.4**
comp=Z,6.3nm,1.1s,mb4.8
MOOW Moose Ponds 86.02 44 *eP* **P 02 57 37.6 +0.7**
REDW Red Top Meadow 86.12 45 *eP* **P 02 57 38.3 +0.8**
comp=Z,16nm,1.4s,mb5.0
SNOW Snow King Moun 86.14 44 *eP* **P 02 57 37.7 +0.1**
LOHW Long Hollow 86.17 44 *eP* **P 02 57 38.4 +0.7**
DUG Dugway 86.20 48 *eP* **P 02 57 38.2 +0.3**
comp=Z,7.9nm,0.8s,mb5.0
DUG Dugway 86.20 48 *eP* **P 02 57 38.2 +0.3**
DUG pmax pmax
comp=Z,8.0nm,0.8s,mb5.0
PFO Pinyon Flat Ob 86.30 55 *eP* **P 02 57 38.5 0.0**
comp=Z,14nm,1.3s,mb5.0
PFO Pinyon Flat Ob 86.30 55 *eP* **P 02 57 38.5 0.0**
PFO pmax pmax
comp=Z,14nm,1.3s,mb5.0
RLMT Red Lodge 86.33 43 *eP* **P 02 57 39.0 +0.6**
comp=Z,8.0nm,0.6s,mb5.1
HWUT Hardware Ranch 86.44 46 *eP* **P 02 57 39.4 +0.4**
comp=Z,9.2nm,0.9s,mb5.0
CTU Camp Tracy 86.71 47 *eP* **P 02 57 40.1 -0.3**
comp=Z,13nm,1.1s,mb5.1
FCC Fort Churchill 86.79 26 *eP* **P 02 57 39.0 -1.4**
comp=Z,12nm,1.0s,mb5.1
FCC Fort Churchill 86.79 26 *eP* **P 02 57 39.0 -1.4**
FCC pmax pmax
comp=Z,12nm,1.0s,mb5.1
JLU Jordanelle 86.96 47 *eP* **P 02 57 42.2 +0.6**
AKASG Malin Array Be 87.16 324 P **P 02 57 39.7 -2.7**
AKASG pmax pmax
comp=Z,4.0nm,0.9s
AKASG Malin Array Be 87.16 324 P **P 02 57 39.6 -2.7**
comp=Z,3.7nm,0.9s,mb4.6,baz=49,slow=4.8,SNR=16
AKBB Malin Array Si 87.16 324 *eP* **P 02 57 40.4 -2.0**
DAU Daniels Canyon 87.18 47 *eP* **P 02 57 42.8 +0.1**
BW06 Boulder Array 87.24 45 *eP* **P 02 57 42.6 -0.3**
comp=Z,2.2nm,0.9s,mb4.4
PDAR Pinedale Array 87.24 45 P **P 02 57 42.6 -0.3**
comp=Z,1.3nm,0.8s,mb4.2,baz=261,slow=3.8,SNR=7.9
PDAR LR LR 03 40 13.3
comp=Z,58nm,18.1s,MS4.0,baz=143,slow=38
MALT Malatya 87.36 310 *eP* **P 02 57 43.1 -0.6**
comp=Z,6.7nm,1.1s,mb4.8
MALT Malatya 87.36 310 *eP* **P 02 57 43.1 -0.5**
MALT pmax pmax
comp=Z,7.0nm,1.1s,mb4.8
MSU Marysvale 87.38 49 *eP* **P 02 57 43.8 +0.1**
NOA NORSAR Array B 88.59 339 LR LR 03 43 32.7
comp=Z,21nm,18.7s,MS3.6,baz=0.0,slow=40
SMCO Snowmass 90.67 47 *eP* **P 02 57 59.1 -0.1**
comp=Z,8.8nm,0.9s,mb5.1
TUC Tucson 91.16 54 *eP* **P 02 58 02.0 +0.4**
ULM Lac du Bonnet 91.23 33 *eP* **P 02 58 00.7 -0.8**
comp=Z,3.7nm,0.9s,mb4.7
ULM Lac du Bonnet 91.23 33 P **P 02 58 00.6 -0.9**
comp=Z,3.8nm,0.9s,mb4.7,baz=269,slow=3.1,SNR=8.1
ISCO Idaho Springs 91.27 46 *eP* **P 02 58 02.7 +0.8**
comp=Z,5.6nm,1.0s,mb4.8
ISCO Idaho Springs 91.27 46 *eP* **P 02 58 02.7 +0.7**
ISCO pmax pmax
comp=Z,6.0nm,1.0s,mb4.9
SDCO Great Sand Dun 92.38 48 *eP* **P 02 58 07.4 +0.2**
comp=Z,4.9nm,1.0s,mb4.8
AGMN Agassiz Refuge 92.42 35 *eP* **P 02 58 06.5 -0.6**
ANMO Albuquerque 93.10 50 *eP* **P 02 58 10.5 0.0**
comp=Z,5.4nm,1.4s,mb4.8
ANMO Albuquerque 93.10 50 *eP* **P 02 58 10.5 0.0**
ANMO pmax pmax
comp=Z,5.0nm,1.4s
ECSD EROS,Sioux Fal 94.74 39 *eP* **P 02 58 17.4 -0.5**
CLL Collm 94.84 331 *eP* **P 02 58 19.0 +0.9**
ATD Arta Tunnel 94.99 284 LR LR 03 42 40.8
comp=Z,32nm,19.1s,MS3.8,baz=27,slow=36
LPIG La Paz 95.24 62 LR LR 03 32 21.4
comp=Z,43nm,20.7s,MS3.9,baz=248,slow=30
MNTX Cornudas Mount 95.49 53 *eP* **P 02 58 21.1 -0.4**
comp=Z,8.9nm,1.7s,mb4.9
AMTX Amarillo 96.50 48 *eP* **P 02 58 25.7 -0.4**
comp=Z,5.9nm,1.0s,mb5.0
LSZ Lusaka 118.31 264 *ePKPdf* PKPdf 03 03 43.9 -0.4
LPAZ La Paz 150.03 85 PKPbc PKPbc 03 04 48.0 +0.4
LPAZ PKPab PKPab 03 04 54.0 +0.6
LPAZ La Paz 150.03 85 PKIKP PKPbc 03 04 48.0 +0.4
LPAZ 03 04 54.1
LPAZ pmax pmax
comp=Z,9.0nm,0.9s
LPAZ pmax pmax
comp=Z,4.0nm,0.8s
LPAZ La Paz 150.03 85 PKPbc PKPbc 03 04 48.0 +0.4
comp=Z,8.8nm,0.9s,baz=300,slow=1.6,SNR=9.6
LPAZ PKPab PKPab 03 04 54.0 +0.6
comp=Z,4.4nm,0.8s,baz=199,slow=5.3,SNR=4.9

*ISCJB **30** 02:57:48.0±1.2,3165S×002×7213W×005,h15km±8km, mb4.4/6,MS4.2/4,Error ellipse: s-maj=7.7km s-min=3.7km az=177.8*
*GUC **30** 02:57:50.0±1.0,3165S×7196W,h27km±4km,MD4.7, ML4.6*
*NEIC **30** 02:57:50.0,3165S×7196W,h27km,ML4.6(GUC),After GUC.*
*IDC **30** 02:57:52.8±3.2,3163S×7195W,h42km±26km, mb4.6/4, mb1 4.3/8,mb1mx4.0/16,mbtmp4.3/8,ML3.9/4,MS3.9/5, Ms1 3.8/5,ms1mx3.3/27,Error ellipse: s-maj=34.3km s-min=26.9km az=76.0*

ISC 30 02:57:47.8±1.0,3164S×002×7204W×006,h2km±5km,n53, σ0=84/61,mb4.4/6,MS4.2/4,8C-9D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.52**	**118**	*i*	*P*	**Pg**	**02 57 42.4 -15**
CHNG				*i*	*S*	**Sg**	**02 57 49.1 -15**
CMCH	**Combarbala**	**1.00**	**62⇑**	*i*	*P*	**Pg**	**02 58 07.0 +0.1**
CMCH				*i*	*S*	**Sg**	**02 58 19.7 -0.3**
CMCH	**Combarbala**	**1.00**	**62⇑**	*i*	*P*	**Pg**	**02 58 07.0 +0.1**
CMCH				*i*	*S*	**Sg**	**02 58 19.7 -0.3**
CMCH					AML	AML	02 58 28.9
	comp=N,62μm,0.6s						
PACH	**Papudo**	**1.03**	**150⇓**	*i*	*P*	**Pg**	**02 58 07.9 +0.4**
PACH				*i*	*S*	**Sg**	**02 58 21.7 +0.9**
PTCH	**Petorca**	**1.12**	**124**	*eP*		**Pg**	**02 58 09.1 -0.3**
PTCH				*i*	*S*	**Sg**	**02 58 23.1 -0.9**
PTCH	**Petorca**	**1.12**	**124**	*eP*		**Pg**	**02 58 09.1 -0.3**
PTCH				*i*	*S*	**Sg**	**02 58 23.1 -0.9**
PTCH					AML	AML	02 58 25.1
	comp=N,27μm,0.5s						
OVCH	**Ovalle**	**1.26**	**35**	*eP*		**Pg**	**02 58 11.2 -0.7**
OVCH				*eS*		**Sg**	**02 58 27.6 -0.5**
IHA	**Instituto Hidr**	**1.42**	**166**	*eP*		**Pn**	**02 58 13.7 -0.9**
ROCH	**El Roble**	**1.58**	**147⇓**	*iP*		**Pn**	**02 58 16.7 -0.2**
JACH	**Jahuel**	**1.60**	**131**	*eP*		**Pn**	**02 58 17.0 -0.1**
TLL	**Tololo Astrono**	**1.81**	**36**	P		**Pn**	**02 58 19.8 -0.3**
TLL				*i*	*S*	**Sn**	**02 58 44.7 +1.1**
TLL	**Tololo Astrono**	**1.81**	**36**	*i*	*P*	**Pn**	**02 58 19.8 -0.3**
TLL				*i*	*S*	**Sn**	**02 58 44.7 +1.1**
TLL					AML	AML	02 58 50.0
	comp=E,9μm,0.4s						
LSCH	**La Serena**	**1.86**	**22**	*eP*		**Pn**	**02 58 21.1 +0.5**
LSCH				*i*	*S*	**Sn**	**02 58 44.8 +0.1**
PEL	**Peldehue**	**1.88**	**143⇓**	*iP*		**Pn**	**02 58 21.0 0.0**
PEL				*i*	*S*	**Sn**	**02 58 45.1 -0.1**
PEL					AML	AML	02 58 50.3
	comp=E,11μm,0.3s						
DSCH	**Colegio Aleman**	**2.14**	**145**	*eP*		**Pn**	**02 58 24.1 -0.5**
DSCH				*i*	*S*	**Sn**	**02 58 50.8 -0.9**
CLCH	**Cerro Calan**	**2.16**	**144⇓**	*iP*		**Pn**	**02 58 25.7 +0.9**
CLCH					AML	AML	02 59 02.0
	comp=E,12μm,0.6s						
TACH	**Talagante**	**2.21**	**155⇓**	*iP*		**Pn**	**02 58 25.9 +0.4**
FSR	**Penalolen**	**2.23**	**146⇑**	*iP*		**Pn**	**02 58 25.9 +0.2**
FSR				*i*	*S*	**Sn**	**02 58 53.4 -0.5**
FSR	**Penalolen**	**2.23**	**146⇑**	*iP*		**Pn**	**02 58 25.9 +0.2**
FSR				*i*	*S*	**Sn**	**02 58 53.4 -0.5**
FSR					AML	AML	02 59 03.3
	comp=N,5μm,0.7s						
FCH	**Farellones**	**2.23**	**139⇑**	*iP*		**Pn**	**02 58 26.2 +0.4**
FCH				*i*	*S*	**Sn**	**02 58 53.7 -0.3**
FCH					AML	AML	02 59 01.3
	comp=E,3μm,0.6s						
ANTU	**Antumapu**	**2.25**	**149⇓**	*iP*		**Pn**	**02 58 26.1 0.0**
ANTU					AML	AML	02 59 09.2
	comp=N,4μm,0.7s						
PCH	**Pirque**	**2.35**	**147⇑**	*iP*		**Pn**	**02 58 27.6 +0.2**
CHCH	**Chadas Angostu**	**2.56**	**153⇑**	*iP*		**Pn**	**02 58 31.0 +0.6**
LMEL	**Las Melosas**	**2.69**	**145⇑**	*iP*		**Pn**	**02 58 32.7 +0.6**
LMEL					AML	AML	02 59 24.8
	comp=E,2μm,0.5s						
CACH	**El Canelo**	**2.75**	**154⇓**	*iP*		**Pn**	**02 58 34.3 +1.4**
LCO	**Las Campanas**	**2.87**	**24**	*ePn*		**Pn**	**02 58 34.1 -0.4**
LCO				*eSn*		**Sn**	**02 59 11.7 +2.2**
CICH	**Cipreses**	**2.99**	**153⇓**	*iP*		**Pn**	**02 58 37.1 +0.8**
SFDO	**San Fernando**	**3.08**	**164⇓**	*iP*		**Pn**	**02 58 37.7 +0.2**
CFAA	**Coronel Fontan**	**3.24**	**90**	P		**Pn**	**02 58 41.7 +2.0**
	comp=E,4.0nm,0.3s,baz=261,slow=10,SNR=148						
CFAA				S		**Sn**	**02 59 23.1 +4.3**
	comp=E,11nm,0.3s,baz=50,slow=12,SNR=8.4						
CFAA				LR	LR	03 00 09.6	
	comp=E,174nm,19.5s,baz=198,slow=43						
PLCA	**Paso Flores**	**9.15**	**173**	P		**Pn**	**03 00 00.8 0.0**
PLCA	**Paso Flores**	**9.15**	**173**	P		**Pn**	**03 00 00.8 0.0**
	comp=E,0.5nm,0.3s,baz=334,slow=11,SNR=18						
TRQA	**Tornquist**	**10.45**	**131**	*ePn*		**Pn**	**03 00 21.9 +3.4**
	comp=E,12nm,0.6s						
LPAZ	**La Paz**	**15.70**	**14**	P		**Pn**	**03 01 30.9 +0.8**
	comp=E,0.2nm,0.3s,baz=191,slow=7.9,SNR=14						
SIV	**San Ignacio**	**18.51**	**35**	P		**Pn**	**03 02 03.9 -1.6**
	comp=E,0.3nm,0.3s,baz=220,slow=12,SNR=16						
PMSA	**Palmer Station**	**33.52**	**174**	LR	LR	03 17 32.7	
	comp=E,695nm,18.4s,MS4.4,baz=318,slow=35						
VNA3	**Neumayer Olymp**	**51.54**	**159**	*e*		**P**	**03 06 54.7 0.0**
VNA3				*e*		pP	03 06 56.9 +1.6
VNA3				*e*			03 07 03.2
VNA3				*e*			03 07 07.2
VNA3				*e*			03 07 11.9
VNA3				*e*			03 07 16.9
VNA2	**Neumayer--Watz**	**52.18**	**158**	*e*		**P**	**03 06 59.4 -0.1**
	baz=289,slow=8.8						
VNA2				*e*		pP	03 07 01.3 +1.2
VNA2				*e*			03 07 07.1
VNA2				*e*			03 07 11.0
VNA2				*e*			03 07 14.9
VNA2				*e*			03 07 18.6
SNAA	**Sanae**	**53.77**	**158**	*e*		**P**	**03 07 10.5 -0.6**
SNAA				*e*			03 07 14.0
SNAA				*e*			03 07 18.6
SNAA				*e*			03 07 22.1
SNAA				*e*			03 07 27.5
SNAA				*e*			03 07 31.7
DBIC	**Dimbokro**	**74.43**	**72**	P		**P**	**03 09 26.4 -1.4**
DBIC				LR	LR	03 39 19.9	
DBIC	**Dimbokro**	**74.43**	**72**	P		**P**	**03 09 26.4 -1.4**
	comp=E,9.6nm,0.8s,mb4.8,baz=208,slow=7.5,SNR=21						
DBIC				LR	LR	03 39 19.9	
	comp=E,75nm,20.4s,MS4.0,baz=172,slow=33						
SDCO	**Great Sand Dun**	**75.77**	**333**	*eP*		**P**	**03 09 35.3 +0.3**
	comp=E,0.8nm,0.8s,mb3.7						
BOSA	**Boshof**	**81.17**	**118**	P		**P**	**03 10 04.2 -1.1**
	comp=E,6.4nm,0.8s,mb4.6,baz=310,slow=3.2,SNR=9.4						
BOSA				LR	LR	03 40 42.6	
	comp=E,80nm,19.2s,MS4.1,baz=29,slow=32						
NVAR	**Mina Array Bea**	**81.96**	**325**	P		**P**	**03 10 09.3 +0.4**
	comp=E,0.6nm,0.8s,mb3.7,baz=142,slow=6.6,SNR=7.1						
TORD	**Torodi Ar. Bea**	**83.41**	**70**	P		**P**	**03 10 15.7 -1.4**
	comp=E,7.9nm,0.7s,mb4.8,baz=257,slow=4.9,SNR=42						
TORD				LR	LR	03 44 35.2	
	comp=E,78nm,18.2s,MS4.1,baz=220,slow=34						
SCHQ	**Schefferville**	**86.24**	**3**	P		**P**	**03 10 28.6 -1.7**
	comp=E,3.6nm,0.9s,mb4.6,baz=198,slow=7.7,SNR=3.7						
BRVK	**Borovoye**	**145.45**	**41**	*ePKPdf*	PKPdf		03 17 26.6 -0.4
EKS2	**Erkin-Say**	**150.80**	**58**	*ePKPdf*	PKPdf		03 17 36.3 +0.3
EKS2				*ePKPbc*	PKPbc		03 17 41.3 -0.3
TKM2	**Tokmak 2**	**152.06**	**57**	*ePKPbc*	PKPbc		03 17 44.0 -0.5
TKM2				*ePKPab*	PKPab		03 17 52.5 -1.5
ZAA0	**Zalesovo Array**	**152.21**	**30**	*ePKPbc*	PKPbc		03 17 43.7 -0.8
ZALV	**Zalesovo Beam**	**152.21**	**30**	PKPbc	PKPbc		03 17 43.4 -1.1
ZALV				PKPab	PKPab		03 17 51.3 -2.9
ZALV	**Zalesovo Beam**	**152.21**	**30**	PKPbc	PKPbc		03 17 43.4 -1.1
	comp=E,14nm,0.7s,baz=301,slow=3.3,SNR=23						
ZALV				PKPab	PKPab		03 17 51.3 -2.9
	comp=E,3.0nm,0.4s,baz=311,slow=3.8,SNR=3.6						
MKAR	**Makanchi Array**	**155.16**	**45**	PKPbc	PKPdf		03 17 49.9 +7.7
MKAR				PKPab	PKPab		03 18 05.0 -2.0
MKAR	**Makanchi Array**	**155.16**	**45**	PKPbc	PKPdf		03 17 49.9 +7.7
	comp=E,0.4nm,0.6s,baz=307,slow=2.4,SNR=4.6						
MKAR				PKPab	PKPab		03 18 05.0 -2.0
	comp=E,1.6nm,0.8s,baz=325,slow=1.9,SNR=4.2						

GUC 30 03:05:42.1±0.6,3141S×7169W,h23km±9km,MD3.5, ML2.3,3C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.50**	**161⇑**	*iP*		**Pb**	03 05 34.2 -18
CHNG				*i*	*S*	**Sb**	03 05 41.3 -18
CMCH	**Combarbala**	**0.64**	**68⇑**	*iP*		**Pb**	03 05 54.1 -0.4
CMCH				*i*	*S*	**Sb**	03 06 03.5 +0.6
CMCH					AML	AML	03 06 04.6
	comp=N,607nm,0.3s						
TLL	**Tololo Astrono**	**1.45**	**32⇑**	*iP*		**Pn**	03 06 07.6 +0.7
TLL				*i*	*S*	**Sn**	03 06 26.8 +1.5
TLL					AML	AML	03 06 31.6
	comp=N,50nm,0.6s						
FCH	**Farellones**	**2.25**	**149**	*i*	*S*	**Sn**	03 06 48.6 +3.7
FCH					AML	AML	03 06 55.7
	comp=E,18nm,0.4s						

*ISCJB **30** 03:08:39.8±1.0, 3167S×003×7210W×006, h15km±7km, mb4.2/5, Error ellipse: s-maj=8.6km s-min=4.1km az=172.5*
*GUC **30** 03:08:42.2±0.9, 3166S×7191W, h31km±3km, MD4.5, ML4.5*
*NEIC **30** 03:08:42.2, 3166S×7191W, h31km, ML4.5(GUC), After GUC.*
*IDC **30** 03:08:43.5±5.7, 3166S×7205W, h33km±40km, mb4.2/5, mb1 4.1/9, mb1mx3.9/17, mbtmp4.0/9, ML3.9/4, MS3.9/1, Ms1 3.9/1, ms1mx2.8/20, Error ellipse: s-maj=31.8km s-min=28.4km az=61.0*

ISC 30 03:08:39.8±1.0, 3168S±003×7201W±006, h2km±6km, n53, σ0§79/65, mb4.3/4, 9C-6D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.48**	**115**	⇓*iP*	**Pg**	**03 08 34.0**	**-15**
CHNG				*i* S	**Sg**	**03 08 40.1**	**-15**
CMCH	**Combarbala**	**1.00**	**60**	⇑*iP*	**Pg**	**03 08 59.0**	**0.0**
CMCH				*i* S	**Sg**	**03 09 11.7**	**-0.2**
CMCH	**Combarbala**	**1.00**	**60**	⇑*iP*	**Pg**	**03 08 59.0**	**0.0**
CMCH				*i* S	**Sg**	**03 09 11.7**	**-0.2**
CMCH				AML	AML	03 09 18.3	
	comp=N,27μm,0.6s						
PTCH	**Petorca**	**1.09**	**123**	⇓*iP*	**Pg**	**03 09 00.7**	**0.0**
PTCH				*i* S	**Sg**	**03 09 14.3**	**-0.5**
PTCH	**Petorca**	**1.09**	**123**	⇓*iP*	**Pg**	**03 09 00.7**	**0.0**
PTCH				*i* S	**Sg**	**03 09 14.3**	**-0.5**
PTCH				AML	AML	03 09 16.5	
	comp=N,30μm,0.3s						
OVCH	**Ovalle**	**1.27**	**33**	*eP*	**Pg**	**03 09 03.7**	**-0.4**
OVCH				*i* S	**Sg**	**03 09 19.4**	**-1.2**
IHA	**Instituto Hidr**	**1.38**	**167**	⇑*iP*	**Pn**	**03 09 05.6**	**-0.5**
ROCH	**El Roble**	**1.55**	**147**	*eP*	**Pn**	**03 09 08.4**	**0.0**
ROCH				*i* S	**Sn**	**03 09 28.3**	**-0.7**
JACH	**Jahuel**	**1.57**	**130**	*eP*	**Pn**	**03 09 08.5**	**-0.1**
TLL	**Tololo Astrono**	**1.83**	**35**	⇑*iP*	**Pn**	**03 09 12.2**	**0.0**
TLL				S	**Sn**	**03 09 37.1**	**+1.2**
TLL	**Tololo Astrono**	**1.83**	**35**	⇑*iP*	**Pn**	**03 09 12.2**	**0.0**
TLL				*i* S	**Sn**	**03 09 37.1**	**+1.2**
TLL				AML	AML	03 09 42.6	
	comp=E,5μm,0.5s						
PEL	**Peldehue**	**1.85**	**143**	⇓*iP*	**Pn**	**03 09 12.6**	**+0.2**
PEL				*i* S	**Sn**	**03 09 35.9**	**-0.5**
PEL				AML	AML	03 09 44.8	
	comp=N,10μm,0.7s						
DSCH	**Colegio Aleman**	**2.11**	**145**	*eP*	**Pn**	**03 09 15.7**	**-0.3**
DSCH				*i* S	**Sn**	**03 09 41.9**	**-0.9**
CLCH	**Cerro Calan**	**2.12**	**144**	*eP*	**Pn**	**03 09 17.2**	**+1.0**
CLCH				*eS*	**Sn**	**03 09 42.7**	**-0.5**
CLCH	**Cerro Calan**	**2.12**	**144**	*eP*	**Pn**	**03 09 17.2**	**+1.0**
CLCH				*eS*	**Sn**	**03 09 42.7**	**-0.5**
CLCH				AML	AML	03 09 49.5	
	comp=E,10μm,0.8s						
TACH	**Talagante**	**2.17**	**156**	*eP*	**Pn**	**03 09 17.4**	**+0.4**
FSR	**Penalolen**	**2.19**	**145**	*eP*	**Pn**	**03 09 17.5**	**+0.3**
FSR				*i* S	**Sn**	**03 09 44.0**	**-0.9**
FSR	**Penalolen**	**2.19**	**145**	*eP*	**Pn**	**03 09 17.5**	**+0.3**
FSR				*i* S	**Sn**	**03 09 44.0**	**-0.9**
FSR				AML	AML	03 09 55.6	
	comp=N,5μm,0.5s						
FCH	**Farellones**	**2.20**	**139**	⇑*iP*	**Pn**	**03 09 17.9**	**+0.6**
FCH				AML	AML	03 09 52.7	
	comp=E,2μm,0.5s						
ANTU	**Antumapu**	**2.22**	**149**	⇓*iP*	**Pn**	**03 09 17.6**	**+0.1**
ANTU				*i* S	**Sn**	**03 09 44.9**	**-0.7**
ANTU	**Antumapu**	**2.22**	**149**	⇓*iP*	**Pn**	**03 09 17.6**	**+0.1**
ANTU				*i* S	**Sn**	**03 09 44.9**	**-0.7**
ANTU				AML	AML	03 09 53.0	
	comp=N,3μm,0.2s						
PCH	**Pirque**	**2.32**	**147**	⇑*iP*	**Pn**	**03 09 19.3**	**+0.4**
CHCH	**Chadas Angostu**	**2.53**	**153**	*eP*	**Pn**	**03 09 22.5**	**+0.7**
LMEL	**Las Melosas**	**2.65**	**145**	⇑*iP*	**Pn**	**03 09 24.3**	**+0.8**
LMEL				*i* S	**Sn**	**03 09 55.5**	**-0.7**
LMEL	**Las Melosas**	**2.65**	**145**	⇑*iP*	**Pn**	**03 09 24.3**	**+0.8**
LMEL				*i* S	**Sn**	**03 09 55.5**	**-0.7**
LMEL				AML	AML	03 10 07.0	
	comp=N,2μm,0.6s						
CACH	**El Canelo**	**2.71**	**154**	*eP*	**Pn**	**03 09 25.9**	**+1.6**
LCO	**Las Campanas**	**2.89**	**23**	*ePn*	**Pn**	**03 09 26.3**	**-0.4**
LCO				*eSn*	**Sn**	**03 10 10.4**	**+8.4**
CICH	**Cipreses**	**2.96**	**154**	*eP*	**Pn**	**03 09 28.7**	**+1.0**
SFDO	**San Fernando**	**3.05**	**164**	*eP*	**Pn**	**03 09 29.3**	**+0.4**
CFAA	**Coronel Fontan**	**3.22**	**90**	Pn	**Pn**	**03 09 33.8**	**+2.5**
	comp=N,3.5nm,0.3s,baz=256,slow=10,SNR=73						
CFAA				Sn	**Sn**	**03 10 12.5**	**+2.2**
	comp=N,7.6nm,0.3s,baz=31,slow=4.2,SNR=8.9						
VACH	**Vallenar**	**3.27**	**20**	*eP*	**Pn**	**03 09 31.9**	**-0.2**
PLCA	**Paso Flores**	**9.12**	**173**	Pn	**Pn**	**03 10 52.0**	**-0.3**
	comp=N,0.5nm,0.3s,baz=255,slow=9.4,SNR=15						
TRQA	**Tornquist**	**10.41**	**130**	*ePn*	**Pn**	**03 11 10.6**	**+0.6**
	comp=N,569nm,1.8s						
LPAZ	**La Paz**	**15.72**	**14**	Pn	**Pn**	**03 12 23.0**	**+0.6**
	comp=N,0.1nm,0.3s,baz=187,slow=8.5,SNR=7.8						
SIV	**San Ignacio**	**18.52**	**35**	P	**Pn**	**03 12 56.2**	**-1.4**
	comp=N,0.2nm,0.3s,baz=236,slow=14,SNR=8.1						
USHA	**Ushuaia**	**23.29**	**175**	LR	LR	03 24 02.4	
	comp=N,293nm,21.4s,baz=118,slow=39						
VNA3	**Neumayer Olymp**	**51.50**	**159**	*e*	**P**	**03 17 46.6**	**+0.3**
VNA3				*e*		03 17 50.9	
VNA3				*e*		03 17 56.1	
VNA3				*e*		03 17 59.4	
VNA3				*e*		03 18 03.2	
VNA3				*e*		03 18 08.0	
VNA1	**Neumayer--Stat**	**51.80**	**158**	*e*	**P**	**03 17 48.3**	**-0.3**
VNA1				*e*		03 17 52.0	
VNA1				*e*		03 17 57.4	
VNA2	**Neumayer--Watz**	**52.15**	**158**	*e*	**P**	**03 17 51.6**	**+0.5**
	baz=293,slow=11						
VNA2				*e*		03 17 55.3	
VNA2				*e*		03 17 59.3	
VNA2				*e*		03 18 02.3	
VNA2				*e*		03 18 06.7	
VNA2				*e*		03 18 11.8	
VNA2				*e*		03 18 15.7	
SNAA	**Sanae**	**53.73**	**158**	*e*	**P**	**03 18 02.0**	**-0.8**
SNAA				*e*		03 18 05.6	
SNAA				*e*		03 18 09.8	
SNAA				*e*		03 18 14.8	
PPT	**Papeete**	**70.61**	**261**	*e*LR	LR	03 19 46.4	
	comp=N,98nm,21.2s						
DBIC	**Dimbokro**	**74.43**	**72**	P	**P**	**03 20 18.4**	**-1.3**
DBIC	**Dimbokro**	**74.43**	**72**	P	**P**	**03 20 18.4**	**-1.3**
	comp=N,4.9nm,0.7s,mb4.5,baz=206,slow=5.1,SNR=14						
BOSA	**Boshof**	**81.14**	**118**	P	**P**	**03 20 56.4**	**-0.6**
	comp=N,5.2nm,0.8s,mb4.5,baz=251,slow=6.9,SNR=6.0						
NVAR	**Mina Array Bea**	**81.99**	**325**	P	**P**	**03 21 01.1**	**+0.1**
	comp=N,0.8nm,0.8s,mb3.7,baz=149,slow=5.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**83.40**	**70**	P	**P**	**03 21 07.9**	**-1.1**
	comp=N,4.5nm,0.7s,mb4.6,baz=255,slow=4.8,SNR=25						
YKA	**Yellowknife Ar**	**99.87**	**341**	P	Pdif	03 22 23.4	-2.4
	comp=N,0.1nm,0.4s,baz=117,slow=7.8,SNR=4.9						
BRVK	**Borovoye**	**145.47**	**41**	*e*PKPdf	PKPdf	03 28 18.6	-0.3
EKS2	**Erkin-Say**	**150.80**	**58**	*e*PKPbc	PKPbc	03 28 33.6	0.0
ZAA0	**Zalesovo Array**	**152.23**	**30**	*e*PKPbc	PKPbc	03 28 35.7	-0.8
ZALV	**Zalesovo Beam**	**152.23**	**30**	PKPbc	PKPbc	03 28 35.6	-0.9
	comp=N,7.2nm,0.7s,baz=294,slow=2.9,SNR=18						
ZALV				PKPab	PKPab	03 28 43.3	-3.0
	comp=N,3.9nm,0.6s,baz=305,slow=3.4,SNR=4.8						
MKAR	**Makanchi Array**	**155.17**	**45**	PKPab	PKPab	03 28 58.4	-0.6
MKAR	**Makanchi Array**	**155.17**	**45**	PKPab	PKPab	03 28 58.4	-0.6
	comp=N,1.0nm,0.7s,baz=339,slow=3.0,SNR=5.9						

MOS 30 03:27:16.2±0.2, 4311N×4532E, h84km, mb3.6/1, 4C-4D, Error ellipse: s-maj=32.4km s-min=15.7km az=3.4, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNJR	**Sundja**	**0.37**	**264**	*eP*	Pn	03 27 31.2	+1.9
SNJR				*eS*	Sn	03 27 43.0	+3.9
VLKR	**Vladikavkaz**	**0.47**	**263**	*eP*	Pn	03 27 31.9	+1.8
VLKR				*eS*	Sn	03 27 44.0	+3.6
BTKR	**Batakoyurt**	**0.62**	**295**	⇑*iP*	Pn	03 27 33.0	+1.6
BTKR				*eS*	Sn	03 27 45.8	+3.1
TRKR	**Terskaya**	**0.75**	**325**	*eP*	Pn	03 27 34.0	+1.4
TRKR				*i* S	Sn	03 27 47.7	+2.8
ARNR	**Ardon**	**0.76**	**276**	*eP*	Pn	03 27 34.0	+1.2
ARNR				*eS*	Sn	03 27 47.8	+2.6
KMSR	**Komsomolskaya**	**0.79**	**290**	⇓*iP*	Pn	03 27 34.3	+1.2
KMSR				*eS*	Sn	03 27 48.3	+2.6
LACR	**Lac**	**0.80**	**250**	⇑*iP*	Pn	03 27 34.4	+1.2
LACR				*i* S	Sn	03 27 48.6	+2.7
KORR	**Kora**	**0.92**	**269**	⇓*iP*	Pn	03 27 35.8	+1.3
KORR				*i* S	Sn	03 27 50.3	+2.2
PRTR	**Priterechnaya**	**0.99**	**311**	⇓*iP*	Pn	03 27 36.1	+0.8
PRTR				*i* S	Sn	03 27 51.7	+2.0
ZEI	**Tsey**	**1.09**	**252**	⇑*iP*	Pn	03 27 37.3	+0.7
ZEI				*i* S	Sn	03 27 53.5	+1.6
LSNR	**Lesken**	**1.11**	**279**	⇓*iP*	Pn	03 27 37.7	+1.0
LSNR				*eS*	Sn	03 27 53.9	+1.7
DIGR	**Digorskoe uzhe**	**1.29**	**261**	⇑*iP*	Pn	03 27 39.5	+0.5
DIGR				*i* S	Sn	03 27 57.4	+1.3

*NEIC **30** 03:45:08.7, 3171S×7189W, h20km, ML3.8(GUC), After GUC.*

GUC 30 03:45:08.7±0.8, 3171S×7189W, h20km±5km, MD3.8, ML3.8, 8C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.38**	**118**	⇓*iP*	Pb	03 45 00.2	-16
CHNG				*i* S	Sb	03 45 06.5	-16
CMCH	**Combarbala**	**0.93**	**55**	⇑*iP*	Pb	03 45 25.3	-0.8
CMCH				*i* S	Sb	03 45 38.1	+0.1
CMCH	**Combarbala**	**0.93**	**55**	⇑*iP*	Pb	03 45 25.3	-0.8
CMCH				*i* S	Sb	03 45 38.1	+0.1
CMCH				AML	AML	03 45 39.2	
	comp=E,6μm,0.5s						
OVCH	**Ovalle**	**1.25**	**29**	⇑*iP*	Pn	03 45 30.5	-0.4
OVCH				*i* S	Sn	03 45 47.0	0.0
OVCH	**Ovalle**	**1.25**	**29**	⇑*iP*	Pn	03 45 30.5	-0.4
OVCH				*i* S	Sn	03 45 47.0	0.0
OVCH				AML	AML	03 45 50.5	
	comp=N,2μm,0.4s						
IHA	**Instituto Hidr**	**1.33**	**171**	⇑*iP*	Pn	03 45 31.9	-0.2
IHA				*i* S	Sn	03 45 48.9	-0.3
PEL	**Peldehue**	**1.76**	**145**	⇓*iP*	Pn	03 45 38.8	+0.8
PEL				*i* S	Sn	03 46 01.1	+1.4
PEL				AML	AML	03 46 07.8	
	comp=E,2μm,0.4s						
LSCH	**La Serena**	**1.88**	**17**	*i* P	Pn	03 45 40.1	+0.5
LSCH				*i* S	Sn	03 46 04.0	+1.3
STL	**Santa Lucia**	**2.02**	**149**	*i* P	Pn	03 45 41.5	-0.1
STL				*i* S	Sn	03 46 07.1	+0.8
FCH	**Farellones**	**2.11**	**141**	⇑*iP*	Pn	03 45 44.0	+1.2
FCH				*i* S	Sn	03 46 11.1	+2.7
FCH				AML	AML	03 46 18.4	
	comp=E,649nm,0.7s						
LMEL	**Las Melosas**	**2.57**	**147**	⇑*iP*	Pn	03 45 50.4	+1.4
LMEL				*i* S	Sn	03 46 22.6	+3.0
LMEL	**Las Melosas**	**2.57**	**147**	⇑*iP*	Pn	03 45 50.4	+1.4
LMEL				*i* S	Sn	03 46 22.6	+3.0
LMEL				AML	AML	03 46 33.8	
	comp=N,527nm,0.1s						
LCO	**Las Campanas**	**2.88**	**21**	*ePn*	Pn	03 45 53.0	-0.4
LCO				*eSn*	Sn	03 46 25.9	-1.5

*IPEC **30** 03:49:52.1±0.3, 5161N×1620E, h0km, ML2.1/3, Error ellipse: s-maj=1.9km s-min=1.5km az=45.0*
*ISCJB **30** 03:49:52.1±0.5, 5146N±003×16.10E±003, h0km, Error ellipse: s-maj=4.2km s-min=2.4km az=13.2*
*NEIC **30** 03:49:53.4±0.9, 5154N×1608E, h5km, ML2.8(SZGRF), ML2.7(BRA), Error ellipse: s-maj=10.6km s-min=4.5km az=22.0*
*PRU **30** 03:49:54.6, 5148N×1607E, h0km*
*WAR **30** 03:49:54, 5154N×1606E, ML2.6, Mining Induced*
*CSEM **30** 03:49:55.1±0.3, 5148N×1601E, h1km, ML3.2/8, Error ellipse: s-maj=4.9km s-min=2.8km az=19.0*
*VIE **30** 03:49:56.1±0.5, 5128N×1612E, h0km, mb2.2/5, ML2.8/5, Error ellipse: s-maj=3.5km s-min=3.2km az=151.0 65 km WNW of Wroclaw Suspected Mining induced.*

ISC 30 03:49:53.2±0.5, 5152N±003×1608E±003, h0km, n34, σ0§86/71, 4C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**169**	*ePg*	**Pg**	**03 50 07.3**	**+1.0**
KSP				*eSg*	**Sg**	**03 50 16.8**	**+1.6**
KSP	**Ksiaz**	**0.69**	**169**	⇓*iPg*	**Pg**	**03 50 07.3**	**+1.0**
KSP				*eSg*	**Sg**	**03 50 16.7**	**+1.5**
KSP	**Ksiaz**	**0.69**	**169**	*ePg*	**Pg**	**03 50 07.2**	**+0.9**
KSP				*eSg*	**Sg**	**03 50 16.7**	**+1.5**
UPC	**Upice**	**1.01**	**183**	*ePG*	**Pg**	**03 50 13.2**	**+0.7**
DPC	**Dobruska-Polom**	**1.18**	**172**	*ePG*	**Pg**	**03 50 16.1**	**+0.4**
DPC				*eSG*	**Sg**	**03 50 31.3**	**+0.3**
	40nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**225**	*ePG*	**Pg**	**03 50 19.5**	**0.0**
PVCC				*eSG*	**Sg**	**03 50 38.5**	**+1.2**
	196nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**245**	PN	**Pn**	**03 50 21.3**	**+0.1**
BRG				PG	**Pg**	**03 50 21.9**	**+0.1**
BRG				SG	**Sg**	**03 50 42.0**	**+0.9**
	64nm,0.3s						
PRU	**Pruhonice**	**1.82**	**213**	*ePN*	**Pn**	**03 50 25.4**	**-0.2**
PRU				*ePG*	**Pg**	**03 50 27.3**	**-0.7**
PRU				*eSG*	**Sg**	**03 50 51.5**	**0.0**
	32nm,0.3s						
CLL	**Collm**	**1.94**	**265**	*ePn*	**Pn**	**03 50 26.0**	**-1.4**
CLL				*ePg*	**Pg**	**03 50 30.0**	**-0.3**
CLL				*eSg*	**Sg**	**03 50 56.0**	**+0.5**
CLL	**Collm**	**1.94**	**265**	*ePn*	**Pn**	**03 50 26.0**	**-1.4**
	comp=Z,9.0nm,0.4s						
CLL				*ePg*	**Pg**	**03 50 30.0**	**-0.3**
CLL				*ex*	x	03 50 34.0	
CLL				*eSg*	**Sg**	**03 50 56.0**	**+0.5**
	comp=Z,23nm,0.3s						
MORC	**Moravsky Berou**	**1.97**	**151**	*ePn*	**Pn**	**03 50 27.6**	**-0.2**
MORC				*eSg*	**Sg**	**03 50 55.3**	**-1.2**
MORC	**Moravsky Berou**	**1.97**	**151**	*ePn*	**Pn**	**03 50 27.6**	**-0.2**
MORC				*eSg*	**Sg**	**03 50 55.3**	**-1.3**
OKC	**Ostrava-Krasne**	**2.13**	**141**	*ePG*	**Pg**	**03 50 33.7**	**-0.3**
OKC				*eSG*	**Sg**	**03 51 01.3**	**-0.4**
VRAC	**Vranov**	**2.23**	**171**	*ePn*	**Pn**	**03 50 32.0**	**+0.6**
VRAC				*eSg*	**Sg**	**03 51 04.5**	**-0.4**
	comp=Z,14nm,0.3s						
TREC	**Trest**	**2.26**	**190**	*ePN*	**Pn**	**03 50 32.2**	**+0.5**
TREC				*ePG*	**Pg**	**03 50 35.5**	**-0.9**
KRUC	**Moravsky**	**2.47**	**175**	*ePn*	**Pn**	**03 50 35.3**	**+0.7**
KRUC				*eSg*	**Sg**	**03 51 12.7**	**+0.4**
	comp=Z,5.4nm,0.2s						
NKC	**Novy Kostel**	**2.64**	**242**	*ePN*	**Pn**	**03 50 37.3**	**+0.4**
NKC				*ePG*	**Pg**	**03 50 43.6**	**-0.1**
NKC				*eSG*	**Sg**	**03 51 17.9**	**+0.1**
	comp=Z,36nm,0.3s						
OJC	**Ojcow**	**2.69**	**117**	*ePg*	**Pg**	**03 50 44.8**	**+0.1**
OJC				*eSg*	**Sg**	**03 51 20.7**	**+1.2**
KHC	**Kasperske Hory**	**2.88**	**215**	*ePN*	**Pn**	**03 50 39.9**	**-0.3**
KHC				*ePG*	**Pg**	**03 50 46.3**	**-2.0**
KHC				*eSN*	**Sn**	**03 51 16.5**	**+1.0**
KHC				*eSG*	**Sg**	**03 51 25.5**	**-0.1**
	comp=Z,11nm,0.3s						
MOX	**Moxa**	**2.95**	**255**	*ePG*	**Pg**	**03 50 48.9**	**-0.8**
MOX				*eSG*	**Sg**	**03 51 28.9**	**+1.0**
GEC2	**GERESS Array S**	**3.08**	**211**	*ePn*	**Pn**	**03 50 44.1**	**+1.1**
GEC2				*eSg*	**Sg**	**03 51 29.5**	**-2.6**
WET	**Wettzell**	**3.14**	**222**	*ePn*	**Pn**	**03 50 44.1**	**+0.3**
WET				*eSg*	**Sg**	**03 51 32.8**	**-1.2**
MODS	**Modra-Piesok**	**3.24**	**166**	*eSG*	**Sg**	**03 51 37.4**	**+0.2**
NIE	**Niedzica**	**3.42**	**126**	*eP*	**Pg**	**03 50 58.6**	**-0.1**
NIE				*eS*	**Sg**	**03 51 43.6**	**+0.5**
VYHS	**Vyhne**	**3.51**	**149**	*ePN*	**Pn**	**03 50 49.0**	**+0.1**
VYHS				*eSG*	**Sg**	**03 51 43.3**	**-2.5**
CLZ	**Clausthal**	**3.57**	**277**	*ePn*	**Pn**	**03 50 50.1**	**+0.4**
CONA	**Conrad Observa**	**3.59**	**182**	⇓*iPn*	**Pn**	**03 50 50.4**	**+0.3**
CONA				⇑*iPg*	**Pg**	**03 51 00.4**	**-1.7**
CONA				⇑*iSg*	**Sg**	**03 51 47.3**	**-1.3**
	comp=Z,13nm,0.5s						
BSD	**Bornholm Skovb**	**3.67**	**349**	*i* P	**Pn**	**03 50 49.2**	**-1.9**
BSD				*i* S	**Sn**	**03 51 29.7**	**-5.4**
MOA	**Molln**	**3.85**	**199**	⇑*iPn*	**Pn**	**03 50 54.3**	**+0.6**
MOA				⇓*iSg*	**Sg**	**03 51 57.3**	**+0.4**
	comp=Z,9.3nm,0.6s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*ePg*	**Pg**	**03 51 08.7**	**+0.6**
STHS				*eSg*	**Sg**	**03 51 59.4**	**+0.7**
STHS				*eSG*	**Sg**	**03 51 59.4**	**+0.7**
STHS	**Stebnicka Huta**	**3.91**	**121**	*ePG*	**Pg**	**03 51 08.7**	**+0.6**
CRVS	**Cervenica-Dubn**	**4.33**	**125**	*eSG*	**Sg**	**03 52 11.9**	**-0.4**
CRVS	**Cervenica-Dubn**	**4.33**	**125**	*eSg*	**Sg**	**03 52 12.0**	**-0.3**
KBA	**Koelnbreinsper**	**4.79**	**203**	⇑*iPn*	**Pn**	**03 51 07.3**	**+0.8**
KBA				⇓*iSg*	**Sg**	**03 52 27.1**	**+0.1**
	comp=Z,4.1nm,0.5s						

IDC 30 04:04:25.4±2.2, 078S×12819E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.6/15, mbtmp3.6/3, MS3.0/1, Ms1 3.0/1, ms1mx2.6/23, Error ellipse: s-maj=172.8km s-min=25.8km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.97**	**163**	P	Pn	04 08 58.8	-2.3
	0.2nm,0.3s,baz=342,slow=11,SNR=5.2						
WRA				LR	LR	04 16 25.5	
	comp=Z,46nm,20.7s,baz=165,slow=36						
ASAR	**Alice Springs**	**23.42**	**167**	P	P	04 09 36.8	+0.4
	1.2nm,0.8s,baz=340,slow=9.6,SNR=9.8						
MKAR	**Makanchi Array**	**62.08**	**326**	P	P	04 14 48.0	+0.1
	0.9nm,0.5s,baz=122,slow=8.2,SNR=7.2						

*SZGRF **30** 04:06:49.5, 2255S×17867W, h33km, South of Fiji Islands*
*ORF **30** 04:07:04.8, 1779S×17943E, h30km, mb5.6*
*MOS **30** 04:07:41.8±2.8, 2003S×17865W, h404km, mb4.8/13, Error ellipse: s-maj=12.7km s-min=10.8km az=100.3*
*ISCJB **30** 04:07:54.2±1.5, 2057S±007×17841W±006, h577km±18km, mb4.5/53, Error ellipse: s-maj=11.0km s-min=7.6km az=145.1*
*BJI **30** 04:07:54.0, 2040S×17840W, h584km, mB4.5, mb4.4*
*IDC **30** 04:07:55.5±1.9, 2044S×17841W, h575km±21km, mb3.9/16, mb1 4.1/16, mb1mx4.0/19, mbtmp3.9/16, Error ellipse: s-maj=13.9km s-min=10.0km az=155.0*
*BGS **30** 04:07:56.0, 2043S×17845W, h585km, mb4.6(NEIC)*
*NEIC **30** 04:07:56.0±1.2, 2043S×17845W, h584km±13km, mb4.6/33, Error ellipse: s-maj=9.5km s-min=5.8km az=145.0*

ISC 30 04:07:55.3±1.5, 2056S±007×17839W±006, h577km±17km, n274, σ0§91/101, mb4.5/53, 15C-41D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.22**	**261**	*eP*	**P**	**04 10 55.4**	**-1.1**
URZ	**Urewera**	**18.07**	**191**	P	**P**	**04 11 28.9**	**-3.4**
	2.1nm,0.3s,baz=0.6,slow=8.5,SNR=6.9						
URZ				S	**S**	**04 14 26.3**	**-2.4**
	0.7nm,0.3s,baz=46,slow=19,SNR=5.6						
RPZ	**Rata Peaks**	**24.72**	**199**	P	**P**	**04 12 32.5**	**+0.6**
	7.9nm,0.6s,mb4.5,baz=69,slow=8.6,SNR=5.9						
ARMA	**Armidale**	**28.71**	**244**	⇓*iP*	**P**	**04 13 08.3**	**+1.2**
CNB	**Canberra Magne**	**31.89**	**236**	*eP*	**P**	**04 13 34.7**	**+0.4**
	29nm,0.7s,mb5.0						
CTA	**Charters Tower**	**33.12**	**265**	⇓*iP*	**P**	**04 13 45.2**	**+0.3**
	28nm,0.4s,mb5.2						
CTA				*e*PCP	PcP	04 16 11.7	+1.0
CTA				*e*SCP	ScP	04 19 07.5	+6.7
CTA	**Charters Tower**	**33.12**	**265**	⇓*iP*	**P**	**04 13 45.2**	**+0.3**
CTA				*e*		04 16 11.7	
CTA				pmax	pmax		
	comp=Z,28nm,0.4s						
CTA	**Charters Tower**	**33.12**	**265**	P	**P**	**04 13 45.3**	**+0.4**
	comp=Z,65nm,0.7s,mb5.3,baz=93,slow=11,SNR=90						
CTA				PcP	PcP	04 16 11.6	+0.8
	comp=Z,4.1nm,0.6s,baz=82,slow=7.3,SNR=4.7						
CTAO	**Charters Tower**	**33.12**	**265**	*eP*	**P**	**04 13 45.1**	**+0.2**
	comp=Z,67nm,0.8s,mb5.3						
CTAO	**Charters Tower**	**33.12**	**265**	*eP*	**P**	**04 13 45.1**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,67nm,0.8s,mb5.3						
STKA	**Stephens Creek**	**37.43**	**244**	⇓*iP*	**P**	**04 14 21.2**	**+0.7**
	comp=Z,17nm,0.6s,mb4.8						
STKA				*e*PCP	PcP	04 16 24.9	+1.4
STKA	**Stephens Creek**	**37.43**	**244**	P	**P**	**04 14 21.2**	**+0.7**
	comp=Z,21nm,0.5s,mb4.9,baz=90,slow=9.6,SNR=45						
STKA				PcP	PcP	04 16 24.6	+1.1
	comp=Z,5.0nm,0.6s,baz=119,slow=3.3,SNR=3.6						
ASAR	**Alice Springs**	**44.15**	**257**	P	**P**	**04 15 14.1**	**+0.3**
	comp=Z,76nm,0.7s,mb5.3,baz=97,slow=7.7,SNR=822						
ASAR				PcP	PcP	04 16 46.7	+0.7
	comp=Z,7.9nm,0.5s,baz=108,slow=3.7,SNR=7.9						
ASAR				S	**S**	**04 21 07.0**	**+1.3**
	comp=Z,4.8nm,1.0s,baz=94,slow=15,SNR=17						
WB2	**Warramunga Arr**	**44.22**	**262**	⇓*iP*	**P**	**04 15 13.9**	**-0.5**
WB2				*eS*	**S**	**04 21 06.7**	**-0.1**
WB2				*e*SCS	ScS	04 24 14.2	+5.1
WRA	**Warramunga Arr**	**

TTA	**Tatalina**	**85.06**	**10**	*e*P		**P**	**04 19 30.6**	**+0.4**
	comp=Z,20nm,1.3s,mb4.6								
TTA	**Tatalina**	**85.06**	**10**	*e*P		**P**	**04 19 30.6**	**+0.4**
TTA				pmax	pmax				
	comp=Z,20nm,1.3s,mb4.6								
BJT	**Baijiatuau**	**85.67**	**316**	*e*P		**P**	**04 19 31.6**	**-2.1**
	comp=Z,20nm,0.4s,mb5.1								
BJT	**Baijiatuau**	**85.67**	**316**	*e*P		**P**	**04 19 31.6**	**-2.1**
BJT				pmax	pmax				
	comp=Z,20nm,0.4s								
SEY	**Seymchan**	**86.35**	**347**	⇓*e*P		**P**	**04 19 36.1**	**-0.2**
SYO	**Syowa Base**	**86.59**	**193**	⇓*e*P		**P**	**04 19 36.0**	**-1.6**
SYO	**Syowa Base**	**86.59**	**193**	⇓*e*PcP		PcP	04 19 37.4	-1.8
HLID	**Hailey**	**86.61**	**41**	*e*P		**P**	**04 19 38.8**	**+0.8**
	comp=Z,11nm,1.5s,mb4.4								
LAZ	**Ladron**	**86.98**	**52**	*e*P		**P**	**04 19 40.4**	**+0.4**
MNTX	**Cornudas Mount**	**87.08**	**55**	*e*P		**P**	**04 19 40.8**	**+0.2**
	comp=Z,13nm,1.4s,mb4.5								
MCK	**McKinley**	**87.11**	**13**	*e*P		**P**	**04 19 38.7**	**-1.2**
	comp=Z,6.7nm,0.7s,mb4.5								
MCK	**McKinley**	**87.11**	**13**	*e*P		**P**	**04 19 38.7**	**-1.2**
MCK				pmax	pmax				
	comp=Z,7.0nm,0.7s,mb4.5								
HWUT	**Hardware Ranch**	**87.38**	**44**	*e*P		**P**	**04 19 41.7**	**0.0**
	comp=Z,2.0nm,0.8s,mb3.9								
NEW	**Newport**	**87.63**	**36**	*e*P		**P**	**04 19 41.7**	**-1.0**
	comp=Z,1.6nm,0.6s,mb3.9								
NEW	**Newport**	**87.63**	**36**	*e*P		**P**	**04 19 41.7**	**-1.0**
NEW				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ANMO	**Albuquerque**	**87.72**	**51**	*e*P		**P**	**04 19 43.7**	**+0.2**
	comp=Z,4.1nm,1.1s,mb4.1								
ANMO	**Albuquerque**	**87.72**	**51**	*e*P		**P**	**04 19 43.7**	**+0.2**
ANMO				pmax	pmax				
	comp=Z,4.0nm,1.1s								
XAN	**Xi'an**	**87.88**	**308**	P		**P**	**04 19 45.3**	**+1.1**
XAN				AMB	AMB				
	comp=Z,11nm,0.9s,mb4.6								
VNA3	**Neumayer Olymp**	**88.11**	**176**	*e*P		**P**	**04 19 43.8**	**-0.9**
VNA3				*e*			04 19 47.1		
VNA3				*e*			04 19 48.8		
VNA3				*e*			04 19 56.0		
VNA3				*e*			04 19 58.9		
VNA3				*e*			04 20 03.9		
MCMT	**McKenzie Canyo**	**88.23**	**40**	*e*P		**P**	**04 19 46.2**	**+0.6**
DLBC	**Dease Lake**	**88.25**	**23**	P		**P**	**04 19 45.2**	**-0.2**
DLBC	**Dease Lake**	**88.25**	**23**	P		**P**	**04 19 45.2**	**-0.2**
	baz=178,slow=6.3								
COLA	**College**	**88.34**	**13**	*e*P		**P**	**04 19 44.3**	**-1.3**
	comp=Z,16nm,0.9s,mb4.7								
COLA	**College**	**88.34**	**13**	*e*P		**P**	**04 19 44.3**	**-1.3**
COLA				pmax	pmax				
	comp=Z,16nm,0.9s,mb4.8								
IMA2	**Indian Mountai**	**88.36**	**10**	*e*P		**P**	**04 19 44.9**	**-0.8**
HIA	**Hailar**	**88.53**	**325**	⇑*e*P		**P**	**04 19 47.3**	**+0.4**
VNA2	**Neumayer--Watz**	**88.55**	**177**	*e*P		**P**	**04 19 45.6**	**-1.1**
	baz=150,slow=1.8								
VNA2				*e*			04 19 47.2		
VNA2				*e*			04 19 49.8		
VNA2				*e*			04 19 51.6		
VNA2				*e*			04 19 58.6		
VNA2				*e*			04 20 00.9		
VNA2				*e*			04 20 07.2		
VNA2				*e*			04 20 15.4		
TPAW	**Teton Pass**	**88.72**	**42**	*e*P		**P**	**04 19 48.4**	**+0.4**
	comp=Z,15nm,1.5s,mb4.6								
SNOW	**Snow King Moun**	**88.83**	**42**	*e*P		**P**	**04 19 49.1**	**+0.6**
	comp=Z,10.0nm,1.1s,mb4.6								
MOOW	**Moose Ponds**	**88.98**	**42**	*e*P		**P**	**04 19 49.5**	**+0.4**
	comp=Z,3.2nm,1.0s,mb4.1								
LOHW	**Long Hollow**	**89.00**	**42**	*e*P		**P**	**04 19 49.4**	**+0.2**
	comp=Z,15nm,1.6s,mb4.6								
CHMT	**Chamberlain Mo**	**89.09**	**38**	*e*P		**P**	**04 19 49.2**	**-0.3**
QLMT	**Earthquake Lak**	**89.10**	**41**	*e*P		**P**	**04 19 50.8**	**+1.1**
FLWY	**Flagg Ranch**	**89.18**	**42**	*e*P		**P**	**04 19 51.1**	**+1.1**
	comp=Z,8.9nm,0.9s,mb4.6								
BW06	**Boulder Array**	**89.25**	**43**	*e*P		**P**	**04 19 49.8**	**-0.6**
	comp=Z,10nm,1.4s,mb4.5								
PDAR	**Pinedale Array**	**89.25**	**43**	P		**P**	**04 19 50.5**	**0.0**
	comp=Z,2.7nm,0.6s,mb4.3,baz=209,slow=3.2,SNR=28								
SMCO	**Snowmass**	**89.28**	**47**	*e*P		**P**	**04 19 50.9**	**+0.3**
	comp=Z,5.4nm,1.2s,mb4.2								
YMR	**Madison River**	**89.31**	**41**	*e*P		**P**	**04 19 51.8**	**+1.1**
	comp=Z,7.0nm,0.9s,mb4.5								
BOZ	**Bozeman (W)**	**89.39**	**40**	*e*P		**P**	**04 19 51.2**	**+0.2**
	comp=Z,11nm,1.5s,mb4.5								
BOZ	**Bozeman (W)**	**89.39**	**40**	*e*P		**P**	**04 19 51.2**	**+0.2**
BOZ				pmax	pmax				
	comp=Z,11nm,1.5s,mb4.5								
DAWY	**Dawson**	**89.61**	**16**	*e*P		**P**	**04 19 51.4**	**-0.2**
SDCO	**Great Sand Dun**	**89.67**	**49**	*e*P		**P**	**04 19 52.5**	**0.0**
	comp=Z,1.8nm,0.9s,mb3.9								
EGAK	**Eagle**	**89.75**	**15**	*e*P		**P**	**04 19 51.5**	**-0.7**
	comp=Z,14nm,1.2s,mb4.7								
CHTO	**Chiang Mai**	**89.92**	**290**	*e*P		**P**	**04 19 55.5**	**+1.5**
	comp=Z,6.6nm,0.8s,mb4.5								
CHTO	**Chiang Mai**	**89.92**	**290**	*e*P		**P**	**04 19 55.5**	**+1.4**
CHTO				pmax	pmax				
	comp=Z,7.0nm,0.8s,mb4.5								
CD2	**Chengdu**	**90.51**	**303**	*e*P		**P**	**04 19 58.0**	**+1.5**
CD2				AMB	AMB				
	comp=Z,10.0nm,0.9s,mb4.8								
CD2				AMB	AMB				
	comp=Z,30nm,9.4s								
YAK	**Yakutsk**	**92.03**	**338**	⇑*e*P		**P**	**04 20 01.7**	**-1.1**
YAK				pmax	pmax				
	comp=Z,22nm,0.8s,mb5.2								
YKA	**Yellowknife Ar**	**96.72**	**25**	P		**P**	**04 20 23.1**	**-0.9**
YKA	**Yellowknife Ar**	**96.72**	**25**	P		**P**	**04 20 23.1**	**-0.9**
	comp=Z,0.4nm,0.7s,mb3.8,baz=245,slow=4.5,SNR=8.9								
YKA				PKiKP	PKiKP		04 24 56.0	-0.8	
	comp=Z,0.1nm,0.8s,baz=209,slow=1.3,SNR=3.6								
TIXI	**Tiksi**	**98.71**	**345**	⇑*e*P		Pdif	04 20 33.9	+0.5	
RES	**Resolute Bay**	**107.96**	**16**	*e*PKP		PKiKP	04 25 16.4	-0.6	
MKAR	**Makanchi Array**	**110.97**	**313**	⇑*i*PKiKP		PKiKP	04 25 22.7	-0.8	
KURK	**Kurchatov**	**113.79**	**317**	*e*PKP		PKiKP	04 25 27.5	-1.2	
TKM2	**Tokmak 2**	**115.26**	**309**	*e*PKPdf		PKPdf	04 25 31.1	-0.7	
EKS2	**Erkin-Say**	**116.58**	**308**	*e*PKPdf		PKPdf	04 25 33.8	-0.5	
BRVK	**Borovoye**	**118.95**	**320**	*e*PKPdf		PKPdf	04 25 38.0	-0.6	
KBL	**Kabul**	**119.60**	**299**	*e*PKPdf		PKPdf	04 25 40.9	+0.5	
OPO	**Ambohidratompo**	**120.78**	**232**	PKP		PKPdf	04 25 44.2	+1.0	
	comp=Z,1.4nm,0.7s,baz=144,slow=5.5,SNR=4.2								
SUR	**Sutherland**	**124.25**	**200**	PKP		PKPdf	04 25 50.3	+0.7	
	comp=Z,8.4nm,1.0s,baz=121,slow=5.9,SNR=5.8								
ARU	**Arti**	**125.04**	**325**	*e*PKPdf		PKPdf	04 25 50.2	0.0	
BOSA	**Boshof**	**126.05**	**206**	PKP		PKPdf	04 25 53.8	+0.7	
	comp=Z,3.4nm,0.9s,baz=176,slow=4.5,SNR=4.5								
ARCES	**ARCESS Array B**	**128.91**	**349**	PKP		PKPdf	04 25 56.8	-0.5	
	comp=Z,1.8nm,0.4s,baz=88,slow=2.0,SNR=18								
JOF	**Joensuu**	**133.07**	**342**	*ep*		PKPdf	04 26 03.0	-2.2	
	comp=Z,4.4nm,0.5s								
KAF	**Kangasniemi**	**135.11**	**344**	*ep*		PKPdf	04 26 06.6	-2.5	
	comp=Z,2.5nm,0.5s								
FINES	**FINESS Array B**	**135.72**	**343**	PKP			04 25 56.1		
FINES				PKP		PKPdf	04 26 08.5	-1.7	
FINES	**FINESS Array B**	**135.72**	**343**	PKhKP			04 25 56.1		
	comp=Z,1.1nm,0.9s,baz=28,slow=3.3,SNR=3.1								
FINES				PKP		PKPdf	04 26 08.5	-1.7	
	comp=Z,1.7nm,0.4s,baz=92,slow=3.1,SNR=7.4								
LSZ	**Lusaka**	**135.84**	**218**	*e*PKPdf		PKPdf	04 26 12.6	+0.8	
OBN	**Obninsk**	**136.63**	**331**	⇓PKiKP		PKPdf	04 26 10.7	-1.4	
OBN				*e*			04 32 40.7		
OBN				*e*SS		SS	04 46 26.3	+6.1	
OBN				pmax	pmax				
	comp=Z,7.0nm,0.5s								
OBN				MLR	MLR				
	comp=Z,100nm,18.0s								
KIV	**Kislovodsk**	**138.73**	**314**	⇓*i*PKiKP		PKPdf	04 26 16.2	-0.1	
KIV				*i*			04 29 21.2		
KIV				*e*SS		SS	04 47 25.1	+39	
KIV				pmax	pmax				
	comp=Z,5.0nm,0.6s								
KMBO	**Kilima Mbogo**	**138.99**	**243**	*e*PKPdf		PKPdf	04 26 21.5	+3.7	
KMBO	**Kilima Mbogo**	**138.99**	**243**	PKP		PKPdf	04 26 20.2	+2.5	
	comp=Z,1.9nm,0.7s,baz=109,slow=5.7,SNR=5.3								
NB2	**NORSAR Subarra**	**139.00**	**353**	PKP		PKPdf	04 26 07.3	-8.9	
	comp=Z,1.0nm,0.6s,baz=16,slow=3.2								
NOA	**NORSAR Array B**	**139.00**	**353**	PKP		PKPdf	04 26 06.7	-10	
NOA	**NORSAR Array B**	**139.00**	**353**	PKhKP			04 26 06.7		
	comp=Z,2.6nm,0.7s,baz=19,slow=2.4,SNR=15								
MVH1	**Achvaich**	**142.44**	**5**	*e*P		PKPdf	04 26 18.6	-3.9	
KAC	**Achnashellach**	**142.76**	**6**	*e*P		PKPdf	04 26 20.1	-2.9	
SUW	**Suwalki**	**142.76**	**339**	*e*PKP		PKPdf	04 26 20.9	-2.3	
MCD	**Coleburn Disti**	**142.85**	**4**	*e*P		PKPdf	04 26 19.8	-3.4	
KPL	**Plockton**	**142.88**	**7**	*e*P		PKPdf	04 26 19.8	-3.5	
KPL				AMb	AMB		04 26 21.5		
	comp=Z,72nm,1.9s								
AKASG	**Malin Array Be**	**142.89**	**331**	PKP		PKPdf	04 26 20.5	-3.0	
AKASG	**Malin Array Be**	**142.89**	**331**	PKhKP			04 26 20.5		
	comp=Z,22nm,0.5s,baz=43,slow=4.2,SNR=255								
KIEV	**Kiev**	**142.90**	**331**	*e*PKPdf		PKPdf	04 26 20.3	-3.3	
MDO	**Dochfour**	**142.90**	**5**	*e*P		PKPdf	04 26 20.2	-3.1	
ELZG	**Elazig**	**143.20**	**307**	⇓*i*P		PKPdf	04 26 24.5	0.0	
KAR1	**Arisaig**	**143.27**	**7**	*e*P		PKPdf	04 26 21.2	-2.8	
KEMA	**Kemaliye**	**143.31**	**309**	⇓*i*P		PKPdf	04 26 24.1	-0.6	
MALT	**Malatya**	**143.68**	**307**	*e*PKPbc		PKPdf	04 26 25.2	-0.1	
MALT	**Malatya**	**143.68**	**307**	⇓*i*P		PKPdf	04 26 25.4	+0.1	
MUD	**Monsted U'grnd**	**143.72**	**353**	⇓*i*PKHKP			04 26 23.4		
MUD				pmax	pmax				
	comp=Z,65nm,1.1s								
MUD	**Monsted U'grnd**	**143.72**	**353**	⇓*i*P		PKPdf	04 26 23.4	-1.4	
	comp=Z,65nm,1.1s								
SIM	**Simferopol'**	**143.80**	**320**	*e*PKHKP			04 26 25.1		
SIM				pmax	pmax				
	comp=Z,47nm,0.8s								
BSD	**Bornholm Skovb**	**144.06**	**347**	⇓*i*P		PKPdf	04 26 24.2	-1.2	
EAB	**Aberfoyle**	**144.15**	**6**	*e*P		PKPdf	04 26 24.3	-1.3	
EBH	**Black Hill**	**144.16**	**5**	*e*P		PKPdf	04 26 24.6	-0.9	
EAU	**Auchinoon**	**144.56**	**5**	*e*P		PKPdf	04 26 25.6	-0.6	
GZT	**Gaziantep**	**144.62**	**306**	⇓*i*P		PKPdf	04 26 28.3	+1.3	
EBL	**Broad Law**	**144.66**	**5**	*e*P		PKPdf	04 26 26.2	-0.2	
BOYT	**Boyabat**	**145.00**	**314**	⇑*i*P		PKPdf	04 26 29.4	+1.9	
ESK	**Eskdalemuir**	**145.11**	**5**	*e*P		PKPdf	04 26 26.4	-0.9	
ESK				AMb	AMB		04 26 27.9		
	comp=Z,28nm,1.5s								
ESK	**Eskdalemuir**	**145.11**	**5**	*e*PKHKP			04 26 27.4		
GAL1	**Galloway**	**145.41**	**6**	*e*P		PKPdf	04 26 28.5	+0.7	
GAL1				AMb	AMB		04 26 28.9		
	comp=Z,32nm,1.6s								
CTKT	**Corum**	**145.43**	**313**	⇓*i*P		PKPdf	04 26 30.4	+2.1	
KIS	**Kishinev**	**145.58**	**326**	*e*PKHKP		PKPdf	04 26 29.0	+0.7	
KIS				pmax	pmax				
	comp=Z,100nm,1.4s								
KIS	**Kishinev**	**145.58**	**326**	*e*UNK		PKPdf	04 26 29.0	+0.7	
KIS				XM			04 26 30.0		
	comp=Z,100nm,1.4s								
XAL	**Allendale**	**145.63**	**4**	*e*P		PKPdf	04 26 29.0	+0.9	
LVV	**L'vov**	**145.80**	**334**	*i* PKHKP		PKPdf	04 26 29.8	+1.2	
BSEG	**Bad Segeberg**	**146.02**	**351**	*e*PKPbc		PKPbc	04 26 31.0	+0.2	
AVNT	**Avonos**	**146.13**	**310**	⇓*i*P		PKPbc	04 26 31.9	+0.2	
CDAG	**Cicekdag**	**146.14**	**311**	⇑*i*P		PKPdf	04 26 31.3	+1.9	
ELDT	**Eldivan**	**146.42**	**313**	⇑*i*P		PKPbc	04 26 33.0	+0.7	
KWP	**Kalwaria**	**146.48**	**335**	*e*PKP		PKPbc	04 26 32.5	+0.3	
HPK	**Haverah Park**	**146.57**	**3**	*e*P		PKPbc	04 26 31.8	-0.5	
HPK				AMb	AMB		04 26 34.7		
	comp=Z,96nm,1.9s								
OJC	**Ojcow**	**147.08**	**338**	*e*PKP		PKPbc	04 26 33.9	+0.1	
ANTO	**Ankara**	**147.13**	**313**	P		PKPbc	04 26 35.1	+0.8	
ANTO	**Ankara**	**147.13**	**313**	⇓*i*P		PKPbc	04 26 34.8	+0.5	
KOLS	**Kolonicke sedl**	**147.21**	**335**	*i* PKP		PKPbc	04 26 34.8	+0.6	
STHS	**Stebnicka Huta**	**147.22**	**336**	*i* PKP		PKPbc	04 26 35.0	+0.8	
KBI1	**Birley Grange**	**147.27**	**3**	*e*P		PKPbc	04 26 33.6	-0.6	
SGKT	**Sivrigoynuk**	**147.31**	**314**	⇑*i*P		PKPbc	04 26 35.1	+0.3	
VRI	**Vrincioaia**	**147.42**	**327**	P		PKPbc	04 26 35.2	+0.4	
VRI	**Vrincioaia**	**147.42**	**327**	⇓*i*P		PKPbc	04 26 34.5	-0.4	
TIRR	**Tirgusor**	**147.42**	**323**	P		PKPbc	04 26 35.1	+0.2	
TIRR	**Tirgusor**	**147.42**	**323**	⇓*i*P		PKPbc	04 26 35.0	+0.1	
UZH	**Uzhgorod**	**147.44**	**334**	⇓*i*PKIKP		PKPbc	04 26 34.2	-0.6	
PLOR	**Plostina**	**147.47**	**327**	⇓*i*P		PKPbc	04 26 35.1	+0.1	
KWE	**Weaver Farm**	**147.49**	**4**	*e*P		PKPbc	04 26 34.0	-0.8	
HARR	**Harsova**	**147.54**	**324**	P		PKPbc	04 26 36.1	+0.9	
HARR	**Harsova**	**147.54**	**324**	⇓*i*P		PKPbc	04 26 35.7	+0.5	
CRVS	**Cervenica-Dubn**	**147.56**	**335**	*i* PKP		PKPbc	04 26 35.0	-0.1	
NIE	**Niedzica**	**147.57**	**337**	*e*PKP		PKPbc	04 26 35.9	+0.8	
KSP	**Ksiaz**	**147.64**	**343**	*e*PKP		PKPbc	04 26 35.9	+0.7	
KSP	**Ksiaz**	**147.64**	**343**	*e*PKIKP		PKPbc	04 26 35.5	+0.2	
KSP				*e*			04 26 40.7		
TRPA	**Tarpa**	**147.73**	**333**	⇓*i*P		PKPbc	04 26 35.7	+0.1	
CWF	**Charnwood Fore**	**147.80**	**3**	*e*P		PKPbc	04 26 34.9	-0.7	
CWF				AMb	AMB		04 26 40.8		
	comp=Z,33nm,1.7s								
HENT	**Hendek**	**147.95**	**316**	⇑*i*P		PKPbc	04 26 36.7	+0.3	
IBBN	**Ibbenburen**	**147.95**	**353**	*e*PKPbc		PKPbc	04 26 35.8	-0.2	
IBBN				*e*PKPab		PKPab	04 26 42.3	+1.5	
OKC	**Ostrava-Krasne**	**147.96**	**340**	*e*PKPbc		PKPbc	04 26 36.1	0.0	
UPC	**Upice**	**148.02**	**343**	*e*PKPbc		PKPbc	04 26 36.4	+0.2	
CLL	**Collm**	**148.04**	**346**	⇓*i*P		PKPbc	04 26 36.4	+0.2	
CLL	**Collm**	**148.04**	**346**	*e*PKPdf		PKPdf	04 26 32.0	-0.2	
	comp=Z,17nm,1.6s								
CLL				⇓*i*PKPbc		PKPbc	04 26 36.4	+0.2	
	comp=Z,44nm,0.9s								
CLL				*i* PKiKP		PKiKP	04 26 38.1	+0.6	
	comp=Z,32nm,0.7s								
CLL				*ep*PKPbc		pPKPbc	04 28 45.0	-3.8	
CLL	**Collm**	**148.04**	**346**	*e*PKPbc		PKPbc	04 26 36.3	+0.1	
CLZ	**Clausthal**	**148.04**	**350**	*e*PKPbc		PKPbc	04 26 36.6	+0.4	
DPC	**Dobruska-Polom**	**148.07**	**342**	*e*PKPbc		PKPbc	04 26 37.1	+0.7	
DPC				*e*PKPab		PKPab	04 26 42.1	+0.7	
MLR	**Muntele Rosu**	**148.07**	**327**	P		PKPbc	04 26 36.0	+0.1	
MLR	**Muntele Rosu**	**148.07**	**327**	⇓*i*P		PKPbc	04 26 36.5	0.0	
MORC	**Moravsky Berou**	**148.21**	**340**	*e*PKPdf		PKPdf	04 26 33.2	+0.6	
MORC				*e*PKPbc		PKPbc	04 26 36.6	-0.1	
MORC				*e*PKPab		PKPab	04 26 41.6	-0.4	
MORC	**Moravsky Berou**	**148.21**	**340**	PKIKP		PKPbc	04 26 37.3	+0.6	
MORC	**Moravsky Berou**	**148.21**	**340**	⇓*i*P		PKPbc	04 26 37.0	+0.3	
BRG	**Berggiesshubel**	**148.22**	**345**	*e*PKP		PKPdf	04 26 34.0	+1.4	
BRG	**Berggiesshubel**	**148.22**	**345**	*e*PKPbc		PKPbc	04 26 36.9	+0.2	
BRG				*e*PKPab		PKPab	04 26 41.6	-0.4	
BRG	**Berggiesshubel**	**148.22**	**345**	*e*PKP		PKPdf	04 26 34.0	+1.4	
	comp=Z,5.7nm,1.1s								
BRG	**Berggiesshubel**	**148.22**	**345**	⇓*i*		PKPbc	04 26 37.1	+0.4	
	comp=Z,22nm,0.7s								
BRG				*i*			04 26 42.0		
	comp=Z,14nm,0.7s								
PVCC	**Panska Ves**	**148.39**	**344**	*e*PKPbc		PKPbc	04 26 37.6	+0.5	
WTSB	**Winterswijk**	**148.39**	**354**	*e*PKP		PKPbc	04 26 37.0	-0.1	
	comp=Z,49nm,0.7s								
MCH1	**Michaelchurch**	**148.42**	**5**	*e*P		PKPbc	04 26 36.1	-1.0	
MCH1				AMb	AMB		04 26 46.3		
	comp=Z,28nm,1.7s								
ESKT	**Eskisehir**	**148.62**	**313**	⇓*i*P		PKPbc	04 26 38.1	0.0	
CSS	**Prodhromos**	**148.63**	**304**	*e*PKPbc		PKPbc	04 26 38.3	0.0	
DRGR		**148.69**	**332**	P		PKPbc	04 26 38.1	+0.1	
DRGR		**148.69**	**332**	⇓*i*P		PKPbc	04 26 38.2	+0.2	
VYHS	**Vyhne**	**148.88**	**338**	*i* PKP		PKPbc	04 26 38.8	+0.4	
VYHS				*e*			04 26 45.4		
VYHS	**Vyhne**	**148.88**	**338**	*i* PKP		PKPbc	04 26 38.8	+0.4	
VYHS				*i*			04 26 45.4		
PRU	**Pruhonice**	**148.89**	**344**	*e*PKPbc		PKPbc	04 26 38.5	+0.1	
PRU				*e*PKPab		PKPab	04 26 44.9	+0.2	
MOX	**Moxa**	**148.95**	**348**	*e*P		PKPbc	04 26 38.9	+0.4	
	comp=Z,35nm,1.5s								
MOX	**Moxa**	**148.95**	**348**	*e*PKPbc		PKPbc	04 26 38.6	+0.1	
MOX				*e*PKPab		PKPab	04 26 46.0	+1.0	
KOLL	**Kolacno**	**148.96**	**338**	*i* PKP		PKPbc	04 26 39.1	+0.5	
PSZ	**Piszkesteto**	**148.96**	**336**	*e*PKPbc		PKPbc	04 26 38.8	+0.1	
PSZ	**Piszkesteto**	**148.96**	**336**	PKHKP		PKPbc	04 26 39.2	+0.6	
PSZ	**Piszkesteto**	**148.96**	**336**	⇓*i*P		PKPbc	04 26 38.9	+0.3	
UBBA	**Unterbreizbach**	**149.09**	**350**	*e*PKPbc		PKPbc	04 26 38.7	-0.1	
NKC	**Novy Kostel**	**149.17**	**346**	*e*PKPbc		PKPbc	04 26 39.5	+0.4	
NKC				*e*PKPab		PKPab	04 26 45.7	-0.2	
TREC	**Trest**	**149.26**	**342**	*e*PKPbc		PKPbc	04 26 39.4	+0.1	
SMOL	**Smolenice**	**149.34**	**339**	*e*PKP		PKPbc	04 26 40.7	+1.2	
MODS	**Modra-Piesok**	**149.52**	**339**	*i* PKP		PKPbc	04 26 41.0	+1.0	
ROTZ	**Rotzenmuhle**	**149.66**	**346**	*e*PKPbc		PKPbc	04 26 40.4	+0.2	
ROTZ				*e*PKPab		PKPab	04 26 48.3	+0.4	
HGN	**Heimansgroeve**	**149.66**	**355**	*e*PKP		PKPbc	04 26 40.0	-0.3	
	comp=Z,17nm,1.2s								
GZR	**Gura Zlata**	**149.71**	**330**	P		PKPbc	04 26 40.5	0.0	
GZR	**Gura Zlata**	**149.71**	**330**	⇓*i*P		PKPbc	04 26 40.3	-0.2	
ZST	**Bratislava**	**149.73**	**339**	*e*PKP		PKPbc	04 26 40.3	-0.2	
UCC	**Uccle**	**149.75**	**357**	PKPbc		PKPbc	04 26 40.4	0.0	
MEM	**Membach**	**149.81**	**354**	PKPbc		PKPbc	04 26 40.3	-0.3	
DYA	**Yadsworthy**	**149.87**	**7**	*e*P		PKPbc	04 26 39.7	-1.0	
DYA				AMb	AMB		04 26 41.9		
	comp=Z,78nm,1.9s								
TNS	**Taunus Mts**	**149.91**	**351**	*e*PKPbc		PKPbc	04 26 40.8	0.0	
KHC	**Kasperske Hory**	**149.93**	**344**	*e*PKP		PKPdf	04 26 32.5	-2.8	
KHC				*e*			04 26 41.0		
KHC				*e*			04 26 49.4		
KHC	**Kasperske Hory**	**149.93**	**344**	*d i*PKHKP			04 26 41.1		
KHC	**Kasperske Hory**	**149.93**	**344**	*e*PKPdf		PKPdf	04 26 32.5	-2.8	
KHC				PKPbc		PKPbc	04 26 41.0	+0.1	
KHC				*e*PKPab		PKPab	04 26 49.4	+0.3	
GRA1	**Grafenberg Arr**	**149.94**	**347**	*e*PKPbc		PKPbc	04 26 41.1	+0.2	
GRF	**Grafenberg Arr**	**149.94**	**347**	*e*PKPbc		PKPbc	04 26 41.1	+0.2	
GRFO	**Grafenberg**	**149.94**	**348**	*e*PKPbc		PKPbc	04 26 41.4	+0.5	
GRFO				*e*PKPab		PKPab	04 26 48.3	-0.8	
BZS	**Buzias**	**150.07**	**331**	P		PKPbc	04 26 41.4	0.0	
BZS	**Buzias**	**150.07**	**331**	⇓*i*P		PKPbc	04 26 41.3	-0.1	
WET	**Wettzell**	**150.09**	**345**	*e*PKPbc		PKPbc	04 26 41.7	+0.4	
GEC2	**GERESS Array S**	**150.16**	**344**	*e*PKPbc		PKPbc	04 26 41.5	+0.1	
GERES	**GERESS Array B**	**150.16**	**344**	PKP		PKPdf	04 26 36.3	+0.6	
	comp=Z,8.2nm,0.8s,baz=55,slow=5.1,SNR=20								
GERES				PKPbc	PKPbc		04 26 41.3	-0.1	
	comp=Z,8.4nm,0.8s,baz=22,slow=3.2,SNR=46								
GERES				PKPab	PKPab		04 26 49.5	-0.5	
	comp=Z,2.9nm,0.7s,baz=30,slow=4.8,SNR=7.3								
CONA	**Conrad Observa**	**150.37**	**340**	⇑*i*PKiKP		PKiKP	04 26 42.1	-0.4	
	comp=Z,18nm,0.8s								
BTOK	**Tokmak**	**150.37**	**316**	*i* P		PKPbc	04 26 42.1	-0.1	
DOU	**Dourbes**	**150.43**	**356**	PKPbc		PKPbc	04 26 42.0

0.3nm,0.7s,mb3.4,baz=336,slow=3.3,SNR=4.0
NB2 NORSAR Subarra 68.74 354 P **P** 05 02 12.2 **-0.8**
comp=Z,0.5nm,0.6s,mb3.6,baz=6.6,slow=6.5
NOA NORSAR Array B 68.74 354 P **P** 05 02 11.7 **-1.4**
comp=Z,0.6nm,0.6s,mb3.7,baz=9.0,slow=6.3,SNR=3.6

NIED ***30*** *05:04:00, 37.30N×136.60E, h5km, Mw3.4 Best double couple: M₀1.25000×10¹⁴ NP1:φ₉156.00000°, δ73.00000°, λ5.00000°. NP2:φ₉65.00000°, δ85.00000°, λ163.00000°.*

JMA 30 05:04:53.8, 37.30N×136.60E, h8km±1km, M3.7, 3C-1D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.40**	**159**	⇑P	Pg	05 05 02.0	+0.4
JJH				S	Sg	05 05 07.8	+0.9
JHG	**Hegura jima**	**0.60**	**25**	⇑P	Pg	05 05 05.3	-0.2
JHG				S	Sg	05 05 13.6	+0.2
JSZ	**Suzu**	**0.63**	**76**	⇓P	Pg	05 05 05.8	-0.1
JSZ				S	Sg	05 05 14.5	+0.5
JTT	**Ttatey**	**0.91**	**140**	P	Pg	05 05 11.3	0.0
JTT				eS	Sg	05 05 24.0	+0.9
JKG	**Kaga**	**1.04**	**192**	⇑P	Pg	05 05 13.4	-0.4
JKG				eS	Sg	05 05 27.7	+0.3
MAT	**Matsushiro**	**1.49**	**120**	P	Pn	05 05 21.0	+0.1
MAT				S	Sn	05 05 41.2	+0.7

ISCJB ***30*** *05:34:14.2±0.8, 5143N×004×1608E×003, h0km, Error ellipse: s-maj=5.8km s-min=2.8km az=13.4*
CSEM ***30*** *05:34:15.6±0.1, 5148N×1613E, h2km, ML3.1/3, Error ellipse: s-maj=2.0km s-min=1.9km az=35.0, Suspected Mining induced.*
NEIC ***30*** *05:34:15.2±0.9, 5151N×1610E, h5km, ML2.7(SZGRF), Error ellipse: s-maj=9.1km s-min=8.1km az=22.0*
WAR ***30*** *05:34:16.8, 5146N×1610E, ML2.5, Mining Induced*
VIE ***30*** *05:34:17.9±0.4, 5124N×1619E, h0km, mb2.0/4, ML2.6/4, Error ellipse: s-maj=2.6km s-min=2.2km az=174.0, Suspected Mining induced.*
PRU ***30*** *05:34:17.8, 5139N×1605E, h0km*
IDC ***30*** *05:34:17.1±1.2, 5150N×1588E, h0km, mb1 3.3/4, mb1mx3.1/20, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=24.7km s-min=10.6km az=109.0*

ISC 30 05:34:15.4±0.7, 5146N±003×1611E±003, h0km, n28, σ1⅋13/46, 1C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**05 34 28.4**	**+0.9**
KSP				*e*Sg	**Sg**	**05 34 36.6**	**+1.1**
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**05 34 28.2**	**+0.8**
KSP				*e*Sg	**Sg**	**05 34 36.5**	**+0.9**
UPC	**Upice**	**0.96**	**184**	*e*PG	**Pg**	**05 34 34.0**	**+0.3**
DPC	**Dobruska-Polom**	**1.12**	**173**	*e*PG	**Pg**	**05 34 37.0**	**+0.2**
DPC				*e*SG	**Sg**	**05 34 51.3**	**0.0**
	24nm,0.4s						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**05 34 41.8**	**+0.5**
PVCC				*e*SG	**Sg**	**05 34 59.3**	**+0.6**
	142nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**248**	Pg	**Pg**	**05 34 44.0**	**+0.1**
BRG				Sg	**Sg**	**05 35 04.0**	**+0.9**
BRG	**Berggiesshubel**	**1.49**	**248**	Pg	**Pg**	**05 34 44.0**	**+0.1**
BRG				Sg	**Sg**	**05 35 04.0**	**+0.9**
BRG	**Berggiesshubel**	**1.49**	**248**	PG	**Pg**	**05 34 44.0**	**+0.1**
BRG				SG	**Sg**	**05 35 04.0**	**+0.9**
	60nm,0.4s						
PRU	**Pruhonice**	**1.78**	**215**	*e*PG	**Pg**	**05 34 48.8**	**-0.7**
PRU				*e*SG	**Sg**	**05 35 10.3**	**-2.2**
	22nm,0.5s						
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**05 34 48.1**	**-1.1**
MORC				*e*Sn	**Sn**	**05 35 12.9**	**-1.1**
CLL	**Collm**	**1.96**	**267**	*e*Pg	**Pg**	**05 34 52.0**	**-0.8**
CLL				*ex*	x	05 34 53.0	
CLL				*e*Sg	**Sg**	**05 35 18.0**	**-0.2**
	comp=Z,20nm,0.3s						
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*SG	**Sg**	**05 35 20.8**	**-1.3**
VRAC	**Vranov**	**2.18**	**172**	Pn	**Pn**	**05 34 54.3**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=344,slow=15,SNR=3.0						
VRAC				Sn	**Sn**	**05 35 24.3**	**+3.9**
	comp=Z,3.5nm,0.3s,baz=77,slow=21,SNR=7.0						
NKC	**Novy Kostel**	**2.63**	**244**	*e*PG	**Pg**	**05 35 05.2**	**-0.5**
NKC				*e*SG	**Sg**	**05 35 41.1**	**+1.3**
	comp=Z,31nm,0.3s						
OJC	**Ojcow**	**2.65**	**117**	*e*Pg	**Pg**	**05 35 07.6**	**+1.5**
OJC				*e*Sg	**Sg**	**05 35 41.8**	**+1.4**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**05 35 03.3**	**+1.3**
KHC				*e*PG	**Pg**	**05 35 08.1**	**-1.7**
KHC				*e*SN	**Sn**	**05 35 36.6**	**-0.3**
KHC				*e*SG	**Sg**	**05 35 45.9**	**-0.8**
	comp=Z,8.2nm,0.4s						
MOX	**Moxa**	**2.95**	**256**	*e*PG	**Pg**	**05 35 11.8**	**-0.2**
MOX				*e*SG	**Sg**	**05 35 51.3**	**+1.1**
GERES	**GERESS Array B**	**3.04**	**212**	Pn	**Pn**	**05 35 06.3**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=40,slow=15,SNR=3.5						
GERES				Pg	**Pg**	**05 35 11.6**	**-2.1**
	comp=Z,1.5nm,0.3s,baz=30,slow=17,SNR=18						
GERES				Lg		05 35 50.8	
	comp=Z,3.3nm,0.3s,baz=33,slow=27,SNR=12						
GERES	**GERESS Array B**	**3.04**	**212**	Pg	**Pg**	**05 35 11.6**	**-2.1**
MODS	**Modra-Piesok**	**3.18**	**166**	*e*SG	**Sg**	**05 35 59.2**	**+1.7**
KOLL	**Kolacno**	**3.24**	**152**	*e*SG	**Sg**	**05 35 59.6**	**+0.1**
CONA	**Conrad Observa**	**3.54**	**183**	⇑*i*Sg	**Sg**	**05 36 07.5**	**-1.5**
	comp=Z,9.2nm,0.4s						
CONA	**Conrad Observa**	**3.54**	**183**	Sg	**Sg**	**05 36 07.5**	**-1.6**
	comp=Z,9.2nm,0.4s						
MOA	**Molln**	**3.81**	**199**	⇓*i*Sg	**Sg**	**05 36 17.9**	**+0.2**
	comp=Z,5.8nm,0.4s						
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*SG	**Sg**	**05 36 23.4**	**+3.9**
KECS	**Kecovo**	**4.10**	**135**	*e*	**Sg**	**05 36 25.9**	**-1.3**
FINES	**FINESS Array B**	**11.41**	**25**	Pn	**Pn**	**05 36 57.8**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=224,slow=11,SNR=3.4						
ARCES	**ARCESS Array B**	**18.67**	**10**	Pn	**Pn**	**05 38 29.6**	**-5.3**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=4.7						

IDC ***30*** *05:37:46.5±7.1, 601S×1308E, h60km±65km, mb4.1/3, mb1 4.0/6, mb1mx3.8/13, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=66.0km s-min=28.4km az=64.0*
NEIC ***30*** *05:37:46.3±2.8, 601S×1307E, h52km±28km, mb4.0/4, Error ellipse: s-maj=24.2km s-min=12.6km az=45.0*
ISCJB ***30*** *05:37:48.5±3.3, 622S±0.10×1306E±0.1, h94km±34km, mb4.0/5, Error ellipse: s-maj=26.7km s-min=12.5km az=154.3*

ISC 30 05:37:45.5±2.9, 60S±01×1308E±02, h46km±28km, n12, σ0⅋83/15, mb4.2/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.04**	**202**	P	**Pn**	**05 40 49.3**	**+1.1**
	0.3nm,0.3s,baz=45,slow=14,SNR=4.9						
FITZ				S	**Sn**	**05 43 03.8**	**-8.1**
	0.5nm,0.3s,baz=144,slow=19,SNR=6.1						
WRA	**Warramunga Arr**	**14.30**	**166**	P	**Pn**	**05 41 03.6**	**-1.8**
	0.4nm,0.3s,baz=348,slow=13,SNR=19						
WRA				S	**Sn**	**05 43 34.9**	**-7.7**
	1.4nm,0.3s,baz=346,slow=23,SNR=9.8						
ASAR	**Alice Springs**	**17.84**	**171**	P	**Pn**	**05 41 50.0**	**-0.3**
	0.5nm,0.3s,baz=355,slow=10,SNR=44						
ASAR				S	**S**	**05 44 59.3**	**-14**
	0.4nm,0.3s,baz=356,slow=28,SNR=6.8						
MBWA	**Marble Bar**	**18.49**	**214**	*e*P	**Pn**	**05 41 58.5**	**+0.2**
	8.4nm,0.9s						
KKM	**Kota Kinabalu**	**18.81**	**309**	*e*P	**Pn**	**05 42 02.1**	**-0.2**
CTA	**Charters Tower**	**20.57**	**134**	P	**P**	**05 42 22.8**	**+2.2**
	2.8nm,0.7s,baz=270,slow=15,SNR=4.2						
CTAO	**Charters Tower**	**20.57**	**134**	*e*P	**P**	**05 42 21.8**	**+1.2**
	2.8nm,0.5s						
STKA	**Stephens Creek**	**27.68**	**160**	P	**P**	**05 43 28.7**	**-0.5**
	2.1nm,0.8s,mb3.8,baz=344,slow=15,SNR=2.2						
NWAO	**Narrogin (SRO)**	**29.62**	**203**	P	**P**	**05 43 46.6**	**+0.1**
	5.1nm,0.8s,mb4.3,baz=11,slow=5.2,SNR=3.0						
MKAR	**Makanchi Array**	**67.80**	**326**	P	**P**	**05 48 38.6**	**-0.1**
	2.2nm,0.4s,mb4.5,baz=125,slow=7.7,SNR=33						
TKM2	**Tokmak 2**	**69.69**	**320**	*e*P	**P**	**05 48 50.4**	**-0.1**
	1.3nm,0.6s,mb4.0						
EKS2	**Erkin-Say**	**70.74**	**319**	*e*P	**P**	**05 48 57.0**	**0.0**
	1.7nm,0.7s,mb4.1						

CSEM ***30*** *06:03:15.9±0.2, 3965N×2952E, h2km, MD2.7, Error ellipse: s-maj=5.2km s-min=2.8km az=80.0*
ISCJB ***30*** *06:03:16.7±0.8, 3965N±005×2947E±004, h2km±8km, Error ellipse: s-maj=8.6km s-min=5.4km az=12.5*
ISK ***30*** *06:03:16.4, 3963N×2943E, h12km, MD2.7*

ISC 30 06:03:17.3±0.7, 3964N±005×2946E±005, h11km±8km, n14, σ0⅋80/19, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.55**	**178**	*i* P	**Pg**	**06 03 28.3**	**+0.3**
GDZ	**Gediz**	**0.55**	**178**	*i* P	**Pg**	**06 03 28.3**	**+0.3**
GDZ				*i* S	**Sg**	**06 03 40.1**	**+4.8**
IZI	**Iznik**	**0.69**	**1**	*i* PG	**Pg**	**06 03 29.9**	**-0.9**
BORA	**Eskisehir**	**0.80**	**72**	*i* P	**Pg**	**06 03 31.8**	**-0.9**
BORA	**Eskisehir**	**0.80**	**72**	*i* P	**Pg**	**06 03 31.8**	**-1.0**
BORA				*i* S	**Sg**	**06 03 43.7**	**+0.5**
GEMT	**Gemlik**	**0.82**	**345**	PG	**Pg**	**06 03 33.3**	**+0.1**
GEMT				SG	**Sg**	**06 03 45.1**	**+1.2**
YLV	**Yalova**	**0.93**	**356**	*e*PG	**Pg**	**06 03 34.7**	**-0.5**
KCT	**Karacabey**	**1.05**	**307**	*e*PG	**Pg**	**06 03 36.7**	**-0.9**
ESKT	**Eskisehir**	**1.08**	**96**	*e*PN	**Pn**	**06 03 37.5**	**-0.9**
ESKT				*e*SN	**Sn**	**06 03 54.1**	**+0.7**
ESKT	**Eskisehir**	**1.08**	**96**	*i* P	**Pb**	**06 03 38.6**	**+0.6**
SEYT	**Eskypehyr**	**1.08**	**96**	*i* P	**Pb**	**06 03 38.6**	**+0.6**
SEYT				*i* S	**Sg**	**06 03 56.3**	**+4.2**
BTOK	**Tokmak**	**1.11**	**277**	*i* P	**Pb**	**06 03 37.7**	**-0.8**
BTOK	**Tokmak**	**1.11**	**277**	*i* S	**Sg**	**06 03 54.3**	**+1.2**
GULT	**Gulveren**	**1.13**	**45**	*e*PN	**Pn**	**06 03 39.3**	**+0.2**

ISCJB ***30*** *06:08:12.7±1.7, 3343S±005×1794W±0.1, h2km±10km, mb4.5/10, MS4.0/11, Error ellipse: s-maj=17.0km s-min=5.5km az=21.2*
IDC ***30*** *06:08:12.3±0.7, 3353S×1791.0W, h0km, mb4.3/5, mb1 4.6/6, mb1mx4.4/12, mbtmp4.4/6, ML4.9/1, MS4.0/13, Ms1 4.0/13, ms1mx3.8/28, Error ellipse: s-maj=28.2km s-min=22.1km az=105.0*
NEIC ***30*** *06:08:17.7±1.2, 3346S×1791.0W, h36km±11km, mb4.8/4, Error ellipse: s-maj=21.9km s-min=11.6km az=116.0*

ISC 30 06:08:16.3±1.8, 3338S±005×1794W±01, h14km±11km, h14km±.5km: pP-P, n99, σ1⅋33/80, mb4.5/10, MS4.0/11, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.30**	**17**	Pn	**Pn**	**06 09 20.2**	**-1.1**
	59nm,0.3s,baz=53,slow=20,SNR=2.0						
RAO				Sn	**Sn**	**06 10 11.2**	**-0.1**
	264nm,0.3s,baz=90,slow=20,SNR=4.8						
MXZ	**Matakaoa Point**	**4.58**	**204**	*e*P	**Pn**	**06 09 27.8**	**+2.6**
MXZ	**Matakaoa Point**	**4.58**	**204**	*e*PN	**Pn**	**06 09 28.7**	**+3.6**
PUZ	**Puketiti**	**5.06**	**202**	*e*P	**Pn**	**06 09 33.9**	**+2.1**
PUZ	**Puketiti**	**5.06**	**202**	*e*PN	**Pn**	**06 09 33.9**	**+2.2**
PUZ				*e*SN	**Sn**	**06 10 31.2**	**+1.1**
MWZ	**Matawai**	**5.54**	**206**	P	**Pn**	**06 09 40.7**	**+2.3**
MWZ	**Matawai**	**5.54**	**206**	*e*PN	**Pn**	**06 09 40.4**	**+2.0**
MWZ				*e*SN	**Sn**	**06 10 46.9**	**+4.9**
URZ	**Urewera**	**5.64**	**209**	*e*P	**Pn**	**06 09 42.1**	**+2.4**
URZ	**Urewera**	**5.64**	**209**	Pn	**Pn**	**06 09 41.3**	**+1.6**
	5.7nm,0.3s,baz=17,slow=17,SNR=26						
URZ				Sn	**Sn**	**06 10 47.9**	**+3.5**
	43nm,0.3s,baz=201,slow=19,SNR=7.3						
URZ				LR	LR	06 12 00.4	
	comp=Z,391nm,18.7s,baz=16,slow=40						
URZ	**Urewera**	**5.64**	**209**	*e*PN	**Pn**	**06 09 41.6**	**+1.9**
URZ				SN	**Sn**	**06 10 48.2**	**+3.9**
WCZ	**Waipu Caves**	**5.77**	**242**	P	**Pn**	**06 09 48.5**	**+7.0**
WCZ	**Waipu Caves**	**5.77**	**242**	PN	**Pn**	**06 09 48.5**	**+7.1**
OUZ	**Omahuta**	**6.10**	**251**	*e*P	**Pn**	**06 09 52.5**	**+6.5**
OUZ	**Omahuta**	**6.10**	**251**	PN	**Pn**	**06 09 52.3**	**+6.4**
KNZ	**Kokohu**	**6.11**	**202**	*e*P	**Pn**	**06 09 47.0**	**+0.8**
KNZ	**Kokohu**	**6.11**	**202**	*e*PN	**Pn**	**06 09 47.0**	**+0.8**
KNZ				SN	**Sn**	**06 10 56.5**	**+0.5**
BKZ	**Black Stump Fm**	**6.67**	**209**	P	**Pn**	**06 09 56.8**	**+3.0**
BKZ	**Black Stump Fm**	**6.67**	**209**	*e*PN	**Pn**	**06 09 55.8**	**+2.0**
BKZ				*e*SN	**Sn**	**06 11 09.4**	**-0.1**
MOVZ	**Moawhango**	**7.18**	**212**	P	**Pn**	**06 10 03.1**	**+2.2**
WNVZ	**Wahianoa**	**7.19**	**213**	P	**Pn**	**06 10 04.6**	**+3.7**
WNVZ	**Wahianoa**	**7.19**	**213**	*e*PN	**Pn**	**06 10 04.3**	**+3.6**
TSZ	**Takapari Road**	**7.64**	**208**	*e*PN	**Pn**	**06 10 08.0**	**+0.8**
TSZ				SN	**Sn**	**06 11 32.7**	**-0.9**
BFZ	**Birch Farm**	**8.08**	**204**	*e*P	**Pn**	**06 10 13.1**	**-0.1**
BFZ	**Birch Farm**	**8.08**	**204**	*e*PN	**Pn**	**06 10 13.3**	**+0.1**
BFZ				SN	**Sn**	**06 11 40.2**	**-4.2**
TIWZ	**Tintock**	**8.29**	**206**	*e*PN	**Pn**	**06 10 15.8**	**-0.3**
MRZ	**Mangatainoka R**	**8.31**	**208**	*e*P	**Pn**	**06 10 15.9**	**-0.4**
MRZ	**Mangatainoka R**	**8.31**	**208**	*e*PN	**Pn**	**06 10 14.7**	**-1.6**
MRZ				SN	**Sn**	**06 11 44.0**	**-5.9**
KIW	**Kapiti Island**	**8.75**	**210**	P	**Pn**	**06 10 21.3**	**-1.1**
KIW	**Kapiti Island**	**8.75**	**210**	*e*PN	**Pn**	**06 10 20.9**	**-1.5**
MTW	**Mount Morrison**	**8.77**	**206**	P	**Pn**	**06 10 21.4**	**-1.2**
MTW	**Mount Morrison**	**8.77**	**206**	*e*PN	**Pn**	**06 10 21.3**	**-1.4**
CAW	**Cannon Point**	**8.89**	**208**	P	**Pn**	**06 10 23.1**	**-1.2**
CAW	**Cannon Point**	**8.89**	**208**	*e*PN	**Pn**	**06 10 21.4**	**-2.9**
MSWZ	**Moikau Station**	**9.09**	**206**	P	**Pn**	**06 10 25.1**	**-1.9**
MSWZ	**Moikau Station**	**9.09**	**206**	*e*PN	**Pn**	**06 10 25.0**	**-1.9**
MRW	**Makara Radio**	**9.14**	**209**	P	**Pn**	**06 10 28.2**	**+0.4**
SNZO	**South Karori**	**9.21**	**209**	*e*P	**Pn**	**06 10 26.9**	**-1.8**
SNZO	**South Karori**	**9.21**	**209**	*e*PN	**Pn**	**06 10 26.9**	**-1.7**
SNZO				*e*SN	**Sn**	**06 12 06.8**	**-5.2**
TCW	**Tory Channel**	**9.31**	**211**	P	**Pn**	**06 10 28.3**	**-1.7**
TCW	**Tory Channel**	**9.31**	**211**	*e*SN	**Sn**	**06 12 09.4**	**-5.0**
TUWZ	**Tuamarina**	**9.63**	**212**	*e*SN	**Sn**	**06 12 16.6**	**-5.8**
NNZ	**Nelson**	**9.72**	**214**	*e*PN	**Pn**	**06 10 35.5**	**-0.1**
NNZ				*e*SN	**Sn**	**06 12 22.2**	**-2.4**
THZ	**Tophouse**	**10.36**	**214**	*e*P	**Pn**	**06 10 43.4**	**-1.1**
THZ	**Tophouse**	**10.36**	**214**	PN	**Pn**	**06 10 42.3**	**-2.2**
THZ				SN	**Sn**	**06 12 36.4**	**-4.0**
KHZ	**Kahutara**	**10.61**	**210**	*e*P	**Pn**	**06 10 46.4**	**-1.5**
KHZ	**Kahutara**	**10.61**	**210**	*e*PN	**Pn**	**06 10 46.4**	**-1.5**
KHZ				*e*SN	**Sn**	**06 12 39.5**	**-6.9**
DSZ	**Denniston Nort**	**10.89**	**217**	*e*SN	**Sn**	**06 12 47.8**	**-5.5**
RPZ	**Rata Peaks**	**12.74**	**213**	Sn	**Sn**	**06 13 27.9**	**-11**
	2.3nm,0.3s,baz=70,slow=22,SNR=9.0						
DZM	**Mont Dzumac**	**16.84**	**308**	P	**Pn**	**06 12 16.8**	**+5.0**
	0.4nm,0.3s,baz=114,slow=18,SNR=5.8						
DZM				LR	LR	06 17 20.5	
	comp=Z,891nm,20.6s,baz=359,slow=32						
TBI	**Tubuai**	**28.07**	**77**	*e*LR	LR	06 21 00.0	
	572nm,29.0s,baz=236						
TBI	**Tubuai**	**28.07**	**77**	*e*T		06 42 43.2	
	31nm,0.3s						
HNR	**Honiara**	**30.51**	**317**	LR	LR	06 24 00.6	
	comp=Z,128nm,22.0s,MS3.5,baz=183,slow=31						
PAE	**Paea**	**30.97**	**67**	*e*T		06 46 22.8	
	53nm,0.3s						
PPT	**Papeete**	**31.03**	**67**	*e*LR	LR	06 22 18.9	
	474nm,27.8s,baz=224						
PPT	**Papeete**	**31.03**	**67**	*e*T		06 46 27.5	
	21nm,0.4s						
PPT	**Papeete**	**31.03**	**67**	LR	LR	06 24 16.5	
	comp=Z,230nm,18.4s,MS3.9,baz=317,slow=31						
TVO	**Tarvao**	**31.16**	**68**	*e*T		06 46 36.6	
	15nm,0.4s						
STKA	**Stephens Creek**	**32.77**	**262**	LR	LR	06 26 02.5	
	comp=Z,440nm,20.1s,MS4.2,baz=284,slow=32						
CTA	**Charters Tower**	**33.26**	**285**	*e*P	**P**	**06 14 56.0**	**+2.6**
	6.1nm,0.6s,mb4.7						
CTA	**Charters Tower**	**33.26**	**285**	LR	LR	06 26 04.1	
	comp=Z,203nm,18.4s,MS3.9,baz=88,slow=32						
PMOR	**Pomariorio Ree**	**33.86**	**65**	*e*T		06 50 00.1	
	7.8nm,0.4s						
VAH	**Vaihoa**	**33.92**	**66**	*e*T		06 50 04.3	
	34nm,0.2s						
RKT	**Rikitea**	**40.17**	**87**	*e*LR	LR	06 26 36.6	
	548nm,28.8s						
RKT	**Rikitea**	**40.17**	**87**	*e*T		06 57 47.3	
	4.9nm,0.3s						
ASAR	**Alice Springs**	**41.88**	**271**	P	**P**	**06 16 07.1**	**+0.8**
	5.5nm,0.7s,mb4.3,baz=110,slow=7.4,SNR=54						
WB2	**Warramunga Arr**	**43.13**	**276**	⇑*i*P	**P**	**06 16 16.8**	**+0.3**
WRA	**Warramunga Arr**	**43.14**	**276**	P	**P**	**06 16 17.1**	**+0.5**
	4.3nm,0.5s,mb4.4,baz=116,slow=7.7,SNR=51						
TAOE	**Nuku Hiva Isla**	**43.59**	**65**	*e*LR	LR	06 28 18.3	
	490nm,26.5s						
VNDA	**Vanda**	**45.02**	**186**	P	**P**	**06 16 26.0**	**-4.9**
	0.5nm,0.4s,mb3.7,baz=84,slow=2.8,SNR=8.7						
VNDA				LR	LR	06 31 26.4	
	comp=Z,61nm,18.5s,MS3.6,baz=194,slow=31						
FITZ	**Fitzroy Crossi**	**51.26**	**273**	*e*P	**P**	**06 17 20.0**	**+0.1**
	5.6nm,0.6s,mb4.7						
QSPA	**South Pole Qui**	**56.74**	**180**	*e*P	**P**	**06 18 01.1**	**+2.0**
	13nm,0.8s,mb5.0						
BATI	**Kupang**	**56.94**	**280**	LR	LR	06 42 11.1	
	comp=Z,115nm,18.2s,MS4.0,baz=58,slow=36						
SYO	**Syowa Base**	**73.95**	**194**	⇑*e*P	**P**	**06 19 55.8**	**+5.1**
SNAA	**Sanae**	**75.21**	**179**	*e*	**P**	**06 19 57.3**	**-0.7**
SNAA				*e*	pP	06 20 01.1	-1.4
SNAA				*e*		06 20 08.3	
SNAA				*e*		06 20 13.2	
SNAA				*e*		06 20 18.6	
SNAA				*e*		06 20 20.9	
SNAA				*e*		06 20 23.7	
VNA3	**Neumayer Olymp**	**75.42**	**177**	*e*	**P**	**06 19 59.2**	**+0.1**
VNA3				*e*	pP	06 20 03.6	0.0
VNA3				*e*		06 20 09.8	
VNA3				*e*		06 20 14.3	
VNA3				*e*		06 20 19.7	
VNA3				*e*		06 20 23.0	
VNA3				*e*		06 20 26.2	
VNA2	**Neumayer--Watz**	**75.83**	**177**	*e*	**P**	**06 20 02.0**	**+0.5**
	baz=177,slow=4.8						
VNA2				*e*	pP	06 20 06.5	+0.5
VNA2				*e*		06 20 12.5	
VNA2				*e*		06 20 16.8	
VNA2				*e*		06 20 22.9	
VNA2				*e*		06 20 25.5	
VNA2				*e*		06 20 28.4	
VNA1	**Neumayer--Stat**	**76.07**	**177**	*e*	**P**	**06 20 03.0**	**+0.1**
VNA1				*e*	pP	06 20 07.4	0.0
VNA1				*e*		06 20 13.9	
VNA1				*e*		06 20 18.4	
VNA1				*e*		06 20 24.3	
VNA1				*e*		06 20 27.0	
VNA1				*e*		06 20 29.5	
PLCA	**Paso Flores**	**81.33**	**133**	P	**P**	**06 20 33.0**	**+0.6**
	3.7nm,0.6s,mb4.5,baz=233,slow=5.0,SNR=21						
PLCA				LR	LR	06 49 02.8	
	comp=Z,104nm,20.6s,MS4.2,baz=92,slow=30						
PSI	**Prapat**	**84.60**	**277**	LR	LR	06 58 26.1	
	comp=Z,139nm,19.4s,MS4.3,baz=219,slow=36						
KSRS	**Korea Array**	**85.87**	**321**	P	**P**	**06 20 55.1**	**-0.4**
	0.7nm,0.3s,mb4.4,baz=142,slow=6.2,SNR=3.8						
PFO	**Pinyon Flat Ob**	**89.08**	**48**	LR	LR	06 55 19.5	
	comp=Z,136nm,20.0s,MS4.4,baz=268,slow=32						
NVAR	**Mina Array Bea**	**91.21**	**43**	P	**P**	**06 21 20.8**	**-0.1**
NVAR	**Mina Array Bea**	**91.21**	**43**	P	**P**	**06 21 20.8**	**-0.1**
	1.8nm,0.9s,mb4.4,baz=203,slow=6.3,SNR=11						
TUC	**Tucson**	**91.88**	**52**	*e*P	**P**	**06 21 22.4**	**-1.7**
	6.1nm,1.4s,mb4.7						
LPAZ	**La Paz**	**97.97**	**115**	LR	LR	06 55 38.7	
	comp=Z,70nm,19.9s,MS4.2,baz=36,slow=29						
NEW	**Newport**	**98.46**	**37**	LR	LR	06 56 34.8	
	comp=Z,94nm,19.2s,MS4.3,baz=191,slow=30						
MKAR	**Makanchi Array**	**118.76**	**309**	PKP	PKPdf	06 27 00.9	-2.8
	0.5nm,0.6s,baz=150,slow=1.1,SNR=6.2						
KURK	**Kurchatov**	**122.23**	**313**	*e*PKPdf	PKPdf	06 27 08.0	-2.2
ARCES	**ARCESS Array B**	**141.22**	**346**	PKhKP		06 27 40.1	
	4.9nm,0.9s,baz=64,slow=2.8,SNR=3.9						
JOF	**Joensuu**	**144.71**	**336**	*e*pkp	PKPdf	06 27 48.1	-3.7
KAF	**Kangasniemi**	**146.91**	**338**	*e*pkp	PKPdf	06 27 54.1	-1.5
FINES	**FINESS Array B**	**147.49**	**337**	PKPbc	PKPbc	06 27 56.4	-2.7
	5.6nm,0.6s,baz=59,slow=4.9,SNR=21						
NB2	**NORSAR Subarra**	**151.48**	**349**	PKP	PKPdf	06 28 06.7	+3.8
	comp=Z,5.9nm,0.7s,baz=17,slow=2.5						
NOA	**NORSAR Array B**	**151.48**	**349**	PKPbc	PKPbc	06 28 07.5	-1.6
	comp=Z,1.8nm,0.7s,baz=22,slow=4.6,SNR=19						
AKASG	**Malin Array Be**	**152.84**	**318**	PKPbc	PKPbc	06 28 10.3	-2.1
	comp=Z,0.6nm,0.5s,baz=64,slow=2.2,SNR=9.5						
DBIC	**Dimbokro**	**152.94**	**168**	PKP	PKPdf	06 28 04.6	-2.0
	comp=Z,6.7nm,1.1s,baz=163,slow=1.3,SNR=3.7						
DBIC				PKPbc	PKPbc	06 28 11.9	-1.9
	comp=Z,1.9nm,0

0.4nm,0.2s

IDC ***30*** *06:39:29.2±0.8, 10.11N×125.96E, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.1/8, Error ellipse: s-maj=73.7km s-min=18.0km az=74.0*

MAN ***30*** *06:39:35, 10.13N×126.09E, h21km, mb4.9, ML3.8, MS3.9*

ISCJB ***30*** *06:39:36.2±0.7, 1007N±004×12609E±006, h62km±7km, mb4.1/8, Error ellipse: s-maj=9.7km s-min=6.1km az=166.8*

ISC 30 06:39:37.3±0.7, 1007N±004×12609E±006, h57km±8km, n25, σ0°94/32, mb4.1/8, 3C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.66**	**244**⇓	*eP*	**Pn**	**06 39 48.8**	**-2.0**
SCPH				*eS*	**Sn**	**06 39 58.2**	**-2.4**
MSLP	**Maasin**	**1.21**	**273**	*eP*	**Pn**	**06 39 57.1**	**-0.9**
MSLP				*eS*	**Sn**	**06 40 13.6**	**+0.1**
PLP	**Palo**	**1.54**	**315**	*eP*	**Pn**	**06 40 01.0**	**-1.4**
PLP				*eS*	**Sn**	**06 40 21.0**	**-0.5**
BESP	**Borongan**	**1.65**	**337**	*eP*	**Pn**	**06 40 04.3**	**+0.4**
BESP				*eS*	**Sn**	**06 40 26.1**	**+2.0**
OCLP	**Ormoc**	**1.75**	**304**	*eP*	**Pn**	**06 40 05.4**	**+0.1**
BIPH	**Bislig**	**1.89**	**172**⇑	*iP*	**Pn**	**06 40 06.4**	**-0.9**
BIPH				*i* S	**Sn**	**06 40 31.3**	**+1.3**
LLP	**Lapu-Lapu**	**2.10**	**277**	*i* P	**Pn**	**06 40 10.9**	**+0.8**
LLP				*i* S	**Sn**	**06 40 35.7**	**+0.5**
TBP	**Tagbilaran**	**2.23**	**260**	*eP*	**Pn**	**06 40 12.2**	**+0.5**
TBP				*eS*	**Sn**	**06 40 37.8**	**-0.3**
BUKP	**Musuan**	**2.40**	**205**	*eP*	**Pn**	**06 40 15.6**	**+1.4**
CNP	**Catarman**	**2.80**	**330**	*eP*	**Pn**	**06 40 19.3**	**-0.4**
DCPH	**Dipolog City**	**3.08**	**242**⇑	*eP*	**Pn**	**06 40 23.8**	**+0.3**
DCPH				*eS*	**Sn**	**06 40 60.0**	**+1.0**
GUIM	**Jordan**	**3.49**	**279**	*eP*	**Pn**	**06 40 29.0**	**0.0**
RCP	**Roxas**	**3.60**	**295**⇑	*eP*	**Pn**	**06 40 31.4**	**+0.8**
PVCP	**Virac**	**3.98**	**332**⇓	*iP*	**Pn**	**06 40 37.0**	**+1.1**
PVCP	**Virac**	**3.98**	**332**	*eP*	**Pn**	**06 40 35.0**	**-0.8**
OTRP	**Odiongan**	**4.59**	**300**	*eP*	**Pn**	**06 40 44.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**27.99**	**181**	P	**P**	**06 45 23.0**	**+0.2**
	1.7nm,0.8s,mb3.7,baz=15,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**30.91**	**165**	P	**P**	**06 45 48.0**	**-0.7**
	1.2nm,0.6s,mb3.9,baz=343,slow=9.4,SNR=13						
ASAR	**Alice Springs**	**34.39**	**167**	P	**P**	**06 46 19.1**	**0.0**
	1.5nm,0.4s,mb4.3,baz=352,slow=6.8,SNR=49						
MKAR	**Makanchi Array**	**52.08**	**323**	P	**P**	**06 48 40.7**	**-0.7**
	1.3nm,0.7s,mb4.0,baz=123,slow=8.0,SNR=19						
ARCES	**ARCESS Array B**	**84.32**	**340**	P	**P**	**06 52 02.0**	**-0.8**
	5.2nm,1.1s,mb4.6,baz=72,slow=6.7,SNR=3.2						
FINES	**FINESS Array B**	**85.98**	**332**	P	**P**	**06 52 10.0**	**-1.2**
	0.9nm,0.6s,mb4.2,baz=54,slow=4.9,SNR=5.6						
VNDA	**Vanda**	**89.75**	**173**	P	**P**	**06 52 29.1**	**+0.3**
	0.5nm,0.6s,mb4.0,baz=299,slow=5.3,SNR=4.7						
YKA	**Yellowknife Ar**	**94.01**	**24**	P	**P**	**06 52 49.9**	**+0.9**
	0.3nm,0.7s,mb3.9,baz=301,slow=4.6,SNR=9.3						
PLCA	**Paso Flores**	**146.09**	**157**	PKPbc	PKPbc	06 59 10.6	-0.6
	1.0nm,0.7s,baz=255,slow=3.2,SNR=4.9						

IDC 30 06:43:15.5±8.6, 338N×12320E, h488km±115km, mb3.2/5, mb1 3.5/6, mb1mx3.2/19, mbtmp3.4/6, 2C, Error ellipse: s-maj=123.8km s-min=22.6km az=58.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**13.51**	**178**	P	P	06 46 10.7	+0.5
	8.3nm,0.3s,baz=326,slow=2.6,SNR=6.8						
KAKA	**Kakadu**	**18.43**	**150**⇑	*iP*	P	06 47 01.4	+0.9
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.48**	**174**	P	P	06 47 27.6	-0.6
	1.8nm,0.4s,baz=6.0,slow=9.3,SNR=5.4						
WRA	**Warramunga Arr**	**25.63**	**155**	P	P	06 48 05.3	-0.1
	2.9nm,0.3s,baz=337,slow=9.5,SNR=34						
WB2	**Warramunga Arr**	**25.64**	**155**⇑	*iP*	P	06 48 05.1	-0.3
ASAR	**Alice Springs**	**28.84**	**159**	P	P	06 48 33.8	+0.3
	2.2nm,0.7s,baz=337,slow=7.6,SNR=18						
STKA	**Stephens Creek**	**39.18**	**155**	P	P	06 50 00.7	+0.1
	2.3nm,0.5s,baz=323,slow=9.7,SNR=5.0						
MKAR	**Makanchi Array**	**55.88**	**327**	P	P	06 52 06.1	0.0
	0.2nm,0.3s,baz=123,slow=8.1,SNR=6.9						

NEIC ***30*** *06:43:50.9, 3270S×7170W, h30km, ML2.9(GUC), After GUC.*

GUC 30 06:43:50.9±0.8, 3270S×7170W, h30km±7km, MD3.9, ML2.9, 9C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.27**	**54**⇑	*iP*	Pb	06 43 58.0	0.0
PACH				*i* S	Sb	06 44 03.2	+0.5
PTCH	**Petorca**	**0.78**	**57**⇑	*iP*	Pn	06 44 05.9	0.0
PTCH				*i* S	Sb	06 44 16.4	+0.1
PTCH	**Petorca**	**0.78**	**57**⇑	*iP*	Pn	06 44 05.9	0.0
PTCH				*i* S	Sb	06 44 16.4	+0.1
PTCH				AML	AML	06 44 20.9	
	comp=N,477nm,0.3s						
CHNG	**Los Chungos**	**0.83**	**12**⇑	*iP*	Pn	06 43 48.5	-18
CHNG				*i* S	Sb	06 44 00.1	-17
JACH	**Jahuel**	**0.93**	**89**	*eP*	Pn	06 44 08.3	+0.3
JACH				*i* S	Sn	06 44 20.6	+0.3
PEL	**Peldehue**	**0.96**	**118**⇑	*iP*	Pn	06 44 08.3	-0.1
PEL				*i* S	Sn	06 44 21.6	+0.6
PEL				AML	AML	06 44 23.9	
	comp=E,2μm,0.4s						
TACH	**Talagante**	**1.15**	**146**⇑	*iP*	Pn	06 44 10.7	-0.2
STL	**Santa Lucia**	**1.16**	**130**⇑	*iP*	Pn	06 44 10.6	-0.4
STL				*i* S	Sn	06 44 26.3	+0.5
DSCH	**Colegio Aleman**	**1.18**	**127**⇑	*iP*	Pn	06 44 10.9	-0.5
DSCH				*i* S	Sn	06 44 26.9	+0.4
CLCH	**Cerro Calan**	**1.20**	**126**	*eP*	Pn	06 44 12.4	+0.7
CLCH				*i* S	Sn	06 44 28.6	+1.7
CLCH	**Cerro Calan**	**1.20**	**126**	*eP*	Pn	06 44 12.4	+0.7
CLCH				*i* S	Sn	06 44 28.6	+1.7
CLCH				AML	AML	06 44 32.4	
	comp=E,395nm,0.8s						
ANTU	**Antumapu**	**1.25**	**134**	*i* P	Pn	06 44 12.9	+0.6
ANTU				*i* S	Sn	06 44 29.1	+1.0
ANTU	**Antumapu**	**1.25**	**134**	*i* P	Pn	06 44 12.9	+0.6
ANTU				*i* S	Sn	06 44 29.1	+1.0
ANTU				AML	AML	06 44 32.9	
	comp=E,342nm,0.3s						
FSR	**Penalolen**	**1.25**	**129**	*eP*	Pn	06 44 12.8	+0.4
FSR				*i* S	Sn	06 44 29.3	+1.0
FSR	**Penalolen**	**1.25**	**129**	*eP*	Pn	06 44 12.8	+0.4
FSR				*i* S	Sn	06 44 29.3	+1.0
FSR				AML	AML	06 44 34.8	
	comp=N,317nm,0.4s						
FCH	**Farellones**	**1.34**	**118**	*eP*	Pn	06 44 14.5	+0.9
FCH				*i* S	Sn	06 44 32.6	+2.2
FCH				AML	AML	06 44 33.8	
	comp=E,320nm,0.2s						
PCH	**Pirque**	**1.36**	**133**⇑	*iP*	Pn	06 44 14.9	+1.1
SJCH	**San Jose de Ma**	**1.47**	**130**	*eP*	Pn	06 44 16.2	+0.8
SJCH				*i* S	Sn	06 44 35.6	+2.1
CHCH	**Chadas Angostu**	**1.51**	**145**	*eP*	Pn	06 44 17.0	+1.1
CMCH	**Combarbala**	**1.63**	**22**	*iP*	Pn	06 44 18.8	+1.2
CMCH				*i* S	Sn	06 44 40.0	+2.5
CMCH	**Combarbala**	**1.63**	**22**	*iP*	Pn	06 44 18.8	+1.2
CMCH				*i* S	Sn	06 44 40.0	+2.5
CMCH				AML	AML	06 44 43.8	
	comp=E,612nm,0.7s						
LMEL	**Las Melosas**	**1.70**	**133**	*eP*	Pn	06 44 20.1	+1.5
LMEL				*i* S	Sn	06 44 42.2	+2.9

MOS ***30*** *06:44:54.0±2.7, 2152S×17923W, h512km, mb4.9/23, Error ellipse: s-maj=10.9km s-min=8.5km az=65.7*

IDC ***30*** *06:44:57.5±1.2, 2177S×17919W, h566km±13km, mb4.2/28, mb1 4.2/29, mb1mx4.2/30, mbtmp4.2/29, Error ellipse: s-maj=9.4km s-min=8.3km az=139.0*

ISCJB ***30*** *06:44:57.3±0.2, 2194S±004×17928W±004, h580km, mb4.8/94, Error ellipse: s-maj=6.1km s-min=3.9km az=136.9*

BJI ***30*** *06:44:57.4, 2143S×17904W, h572km, mB4.8, mb4.9*

BGS ***30*** *06:44:58.3, 2177S×17931W, h578km, mb4.9(NEIC)*

NEIC ***30*** *06:44:58.4±0.1, 2177S×17931W, mb4.9/56, Error ellipse: s-maj=6.9km s-min=3.9km az=149.0*

SZGRF ***30*** *06:44:59.3, 2183S×17888W, h590km, Fiji Islands region*

ISC 30 06:44:58.7±0.2, 2192S±004×17926W±004, h582km, h582km±2.9km; pP-P, n523, σ0°84/224, mb4.8/93, 34C-29D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**10.68**	**43**	*eP*	**P**	**06 47 17.6**	**-6.5**
DZM	**Mont Dzumac**	**13.27**	**267**	*eP*	**P**	**06 47 49.9**	**-0.3**
DZM	**Mont Dzumac**	**13.27**	**267**	P	**P**	**06 47 49.8**	**-0.5**
	4.8nm,0.3s,baz=81,slow=18,SNR=32						
URZ	**Urewera**	**16.59**	**190**	P	**P**	**06 48 20.0**	**-1.9**
	12nm,0.3s,baz=293,slow=3.6,SNR=31						
URZ				S	**S**	**06 51 02.3**	**-5.3**
	1.3nm,0.3s,baz=49,slow=19,SNR=7.0						
URZ	**Urewera**	**16.59**	**190**	*ePN*	**P**	**06 48 15.4**	**-6.6**
CAW	**Cannon Point**	**19.73**	**193**	*ePN*	**P**	**06 48 49.4**	**-1.2**
SNZO	**South Karori**	**19.99**	**193**	*eP*	**P**	**06 48 51.8**	**-1.1**
	57nm,1.1s						
QRZ	**Quartz Range**	**20.09**	**198**	PN	**P**	**06 48 54.2**	**+0.3**
NNZ	**Nelson**	**20.22**	**196**	PN	**P**	**06 48 54.7**	**-0.4**
THZ	**Tophouse**	**20.86**	**197**	PN	**P**	**06 48 59.8**	**-0.9**
DSZ	**Denniston Nort**	**21.15**	**199**	PN	**P**	**06 49 03.8**	**+0.4**
KHZ	**Kahutara**	**21.31**	**195**	PN	**P**	**06 49 03.3**	**-1.5**
LTZ	**Lake Taylor**	**21.98**	**197**	PN	**P**	**06 49 09.1**	**-1.6**
RPZ	**Rata Peaks**	**23.18**	**198**	P	**P**	**06 49 21.6**	**+0.2**
RPZ	**Rata Peaks**	**23.18**	**198**	P	**P**	**06 49 21.6**	**+0.2**
	7.5nm,0.4s,mb4.7,baz=283,slow=2.0,SNR=6.4						
FOZ	**Fox Glacier**	**23.46**	**200**	PN	**P**	**06 49 22.3**	**-1.6**
HNR	**Honiara**	**23.52**	**299**	*eP*	**P**	**06 49 22.4**	**-2.4**
	314nm,0.9s,mb5.9						
HNR	**Honiara**	**23.52**	**299**	P	**P**	**06 49 24.3**	**-0.6**
HNR				pmax	pmax		
	comp=Z,478nm,1.1s,mb6.0						
HNR	**Honiara**	**23.52**	**299**	P	**P**	**06 49 24.3**	**-0.6**
	comp=Z,478nm,1.1s,mb6.0,baz=99,slow=2.4,SNR=3.9						
LBZ	**Lake Benmore**	**24.05**	**199**	PN	**P**	**06 49 27.4**	**-1.7**
ARMA	**Armidale**	**27.41**	**246**⇑	*iP*	**P**	**06 50 00.8**	**+1.9**
PPT	**Papeete**	**28.25**	**86**	*eP*	**P**	**06 50 05.2**	**-1.2**
	comp=Z,96nm,1.3s,mb5.3						
PPT	**Papeete**	**28.25**	**86**	P	**P**	**06 50 04.6**	**-1.8**
	comp=Z,60nm,0.8s,mb5.3,baz=250,slow=5.5,SNR=5.1						
CNB	**Canberra Magne**	**30.47**	**237**⇑	*iP*	**P**	**06 50 27.1**	**+1.8**
	comp=Z,18nm,0.4s,mb5.1						
PMOR	**Pomariorio Ree**	**30.50**	**82**	*eP*	**P**	**06 50 24.3**	**-1.5**
	comp=Z,61nm,0.8s,mb5.3						
VAH	**Vaihoa**	**30.67**	**83**	*eP*	**P**	**06 50 25.5**	**-1.8**
	comp=Z,99nm,0.9s,mb5.4						
CTA	**Charters Tower**	**32.21**	**267**⇑	*iP*	**P**	**06 50 41.0**	**+0.6**
	comp=Z,17nm,0.4s,mb5.0						
CTA				*i* PCP	PcP	06 53 11.7	+0.6
CTAO	**Charters Tower**	**32.21**	**267**	*eP*	**P**	**06 50 41.0**	**+0.6**
	comp=Z,17nm,0.4s,mb5.0						
CTAO	**Charters Tower**	**32.21**	**267**	*eP*	**P**	**06 50 41.0**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,17nm,0.4s,mb5.0						
STKA	**Stephens Creek**	**36.12**	**246**⇑	*iP*	**P**	**06 51 14.0**	**+1.1**
	comp=Z,7.8nm,0.4s,mb4.6						
STKA	**Stephens Creek**	**36.12**	**246**	P	**P**	**06 51 14.1**	**+1.2**
	comp=Z,8.2nm,0.4s,mb4.7,baz=85,slow=11,SNR=18						
STKA				PcP	PcP	06 53 22.9	+0.5
	comp=Z,3.4nm,0.5s,baz=90,slow=5.1,SNR=2.7						
STKA				ScP	ScP	06 56 18.0	+3.9
	comp=Z,3.0nm,0.7s,baz=98,slow=7.1,SNR=3.9						
ASAR	**Alice Springs**	**43.07**	**258**	P	**P**	**06 52 09.1**	**+0.6**
ASAR				PcP	PcP	06 53 44.9	-0.3
ASAR				ScP	ScP	06 56 45.8	+4.3
ASAR				S	**S**	**06 57 53.1**	**-0.1**
ASAR	**Alice Springs**	**43.07**	**258**	P	**P**	**06 52 09.1**	**+0.6**
ASAR						06 53 44.9	
ASAR				S	**S**	**06 57 53.1**	**-0.1**
ASAR	**Alice Springs**	**43.07**	**258**	P	**P**	**06 52 09.1**	**+0.6**
	comp=Z,6.5nm,0.5s,mb4.4,baz=91,slow=8.4,SNR=67						
ASAR				PcP	PcP	06 53 44.9	-0.3
	comp=Z,8.9nm,0.6s,baz=108,slow=3.2,SNR=21						
ASAR				ScP	ScP	06 56 45.8	+4.3
	comp=Z,2.2nm,0.8s,baz=96,slow=4.1,SNR=5.7						
ASAR				S	**S**	**06 57 53.1**	**-0.1**
	comp=Z,14nm,1.1s,baz=95,slow=15,SNR=34						
ASAR				PKiKP	PKiKP	07 00 44.8	-1.6
	comp=Z,0.5nm,0.6s,baz=87,slow=1.5,SNR=4.0						
WB2	**Warramunga Arr**	**43.25**	**264**	*eP*	**P**	**06 52 09.6**	**-0.4**
WB2				*ePcP*	PcP	06 53 46.2	+0.4
WB2				*eS*	**S**	**06 57 50.8**	**-5.1**
WRA	**Warramunga Arr**	**43.26**	**264**	P	**P**	**06 52 10.0**	**-0.1**
WRA				PcP	PcP	06 53 46.4	+0.5
WRA				ScP	ScP	06 56 46.5	+4.2
WRA				S	**S**	**06 57 54.6**	**-1.5**
WRA	**Warramunga Arr**	**43.26**	**264**	P	**P**	**06 52 10.0**	**-0.1**
WRA						06 53 46.4	
WRA				S	**S**	**06 57 54.6**	**-1.5**
WRA	**Warramunga Arr**	**43.26**	**264**	P	**P**	**06 52 10.0**	**-0.1**
	comp=Z,6.1nm,0.3s,mb4.6,baz=95,slow=7.8,SNR=95						
WRA				PcP	PcP	06 53 46.4	+0.5
	comp=Z,6.4nm,0.8s,baz=95,slow=3.8,SNR=10						
WRA				ScP	ScP	06 56 46.5	+4.2
	comp=Z,2.1nm,1.1s,baz=98,slow=4.2,SNR=3.7						
WRA				S	**S**	**06 57 54.6**	**-1.5**
	comp=Z,5.2nm,0.9s,baz=100,slow=14,SNR=10.0						
WRA				PKiKP	PKiKP	07 00 43.4	-3.2
	comp=Z,0.2nm,0.4s,baz=76,slow=0.6,SNR=4.8						
KAKA	**Kakadu**	**46.85**	**273**⇓	*iP*	**P**	**06 52 37.1**	**-0.5**
	comp=Z,16nm,0.4s,mb4.9						
KAKA				*eS*	**S**	**06 58 45.3**	**-1.2**
POHA	**Pohakuloa**	**47.47**	**31**	P	**P**	**06 52 40.1**	**-2.0**
	comp=Z,25nm,0.7s,mb4.9						
FORT	**Forrest**	**47.66**	**248**	*eP*	**P**	**06 52 42.8**	**-0.7**
	comp=Z,19nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**51.69**	**264**⇓	*iP*	**P**	**06 53 13.4**	**+0.3**
	comp=Z,12nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**51.69**	**264**	P	**P**	**06 53 13.5**	**+0.4**
	comp=Z,6.1nm,0.3s,mb4.4,baz=72,slow=5.0,SNR=22						
BATI	**Kupang**	**55.80**	**272**	P	**P**	**06 53 43.5**	**+1.5**
	comp=Z,54nm,0.6s,mb5.0,baz=206,slow=0.8,SNR=10						
SBA	**Scott Base**	**56.39**	**184**	*eP*	**P**	**06 53 48.6**	**+3.5**
	comp=Z,10nm,0.9s,mb4.0						
SBA				*ePcP*	PcP	06 54 35.2	+1.6
SBA				*epP*	pP	06 55 41.3	+5.1
SBA	**Scott Base**	**56.39**	**184**	*eP*	**P**	**06 53 48.6**	**+3.5**
SBA				*e*		06 54 35.2	
SBA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.0						
KLBR	**Kellerberrin**	**56.40**	**246**	*eP*	**P**	**06 53 46.0**	**0.0**
	comp=Z,18nm,0.8s,mb4.4						
VNDA	**Vanda**	**56.40**	**185**	P	**P**	**06 53 47.6**	**+2.4**
	comp=Z,2.1nm,0.6s,baz=358,slow=7.0,SNR=13						
VNDA				PcP	PcP	06 54 35.0	+1.3
	comp=Z,3.5nm,0.8s,baz=336,slow=5.3,SNR=7.3						
VNDA				ScP	ScP	06 57 40.2	+2.6
	comp=Z,1.2nm,0.8s,baz=129,slow=3.1,SNR=3.5						
MBWA	**Marble Bar**	**56.41**	**259**	*eP*	**P**	**06 53 46.2**	**-0.1**
	comp=Z,26nm,0.6s,mb4.6						
MBWA				*ePcP*	PcP	06 54 35.4	+0.6
NWAO	**Narrogin (SRO)**	**56.69**	**244**	P	**P**	**06 53 47.7**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,14nm,1.1s						
NWAO	**Narrogin (SRO)**	**56.69**	**244**	P	**P**	**06 53 47.7**	**-0.3**
	comp=Z,14nm,1.1s,mb4.1,baz=143,slow=10,SNR=3.4						
MUN	**Mundaring**	**57.66**	**245**	*eP*	**P**	**06 53 55.2**	**+0.6**
CBIJ	**Chichi jima**	**61.37**	**321**	P	**P**	**06 54 18.4**	**-0.7**
	comp=Z,72nm,0.5s,mb5.2,baz=305,slow=16,SNR=4.4						
CASY	**Casey**	**62.19**	**205**	*eP*	**P**	**06 54 24.9**	**+1.0**
	comp=Z,18nm,0.8s,mb4.3						
JHJ	**Hachijo jima 2**	**67.25**	**323**	P	**P**	**06 54 55.8**	**-0.4**
	comp=Z,92nm,0.4s,mb5.5,baz=237,slow=21,SNR=5.8						
QSPA	**South Pole Qui**	**68.16**	**180**	*eP*	**P**	**06 55 03.0**	**+2.0**
	comp=Z,37nm,0.8s,mb4.9						
QSPA				*epP*	pP	06 56 58.7	+0.4
QSPA	**South Pole Qui**	**68.16**	**180**	P	**P**	**06 55 02.8**	**+1.8**
	comp=Z,28nm,0.8s,mb4.8,baz=28,slow=1.7,SNR=83						
JOW	**Kunigami**	**70.19**	**311**	P	**P**	**06 55 14.6**	**+0.5**
	comp=Z,21nm,0.5s,mb4.8,baz=136,slow=7.5,SNR=13						
MJAR	**Matsushiro Arr**	**70.67**	**325**	P	**P**	**06 55 15.9**	**-0.7**
	comp=Z,17nm,0.6s,mb4.8,baz=158,slow=6.0,SNR=28						
MAJO	**Matsushiro**	**70.67**	**325**	*eP*	**P**	**06 55 16.2**	**-0.4**
	comp=Z,23nm,0.6s,mb4.9						
MAJO	**Matsushiro**	**70.67**	**325**	*eP*	**P**	**06 55 16.2**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.9						
MAT	**Matsushiro**	**70.67**	**325**	P	**P**	**06 55 16.0**	**-0.6**
KSM	**Kuching**	**72.46**	**279**	*eP*	**P**	**06 55 27.8**	**+0.2**
JNU	**Nakatsue**	**72.51**	**318**	P	**P**	**06 55 27.1**	**-0.4**
	comp=Z,22nm,0.9s,mb4.7,baz=114,slow=9.8,SNR=7.8						
NACB	**Ninganchiao**	**73.51**	**305**	*eP*	**P**	**06 55 32.6**	**-0.7**
YHNB	**Yeheng**	**73.95**	**305**	*eP*	**P**	**06 55 35.0**	**-0.8**
ASAJ	**Asahikawa**	**74.42**	**332**	P	**P**	**06 55 39.2**	**+1.2**
ASAJ				pmax	pmax		
	comp=Z,23nm,0.8s						
ASAJ	**Asahikawa**	**74.42**	**332**	P	**P**	**06 55 39.2**	**+1.2**
	comp=Z,23nm,0.8s,mb4.8,baz=219,slow=9.4,SNR=16						
UNV	**Unalaska Valle**	**76.25**	**8**	*eP*	**P**	**06 55 46.2**	**-1.7**
	comp=Z,21nm,0.6s,mb4.8						
YSS	**Yuzh-Sakhalins**	**76.64**	**334**	*eP*	**P**	**06 55 50.4**	**+0.2**
	comp=Z,55nm,1.4s,mb4.8						
YSS	**Yuzh-Sakhalins**	**76.64**	**334**⇓	*eP*	**P**	**06 55 50.6**	**+0.4**
YSS				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.6						
KSRS	**Korea Array**	**77.18**	**319**	P	**P**	**06 55 54.0**	**+0.6**
KSRS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
KSRS	**Korea Array**	**77.18**	**319**	P	**P**	**06 55 54.0**	**+0.6**
	comp=Z,6.4nm,0.9s,mb4.0,baz=143,slow=6.0,SNR=21						
SDPT	**Sand Point**	**78.61**	**11**	*eP*	**P**	**06 55 59.4**	**-1.2**
VLA	**Vladivostok**	**78.77**	**326**⇑	*eP*	**P**	**06 56 01.7**	**-0.1**
VLA				pmax	pmax		
	comp=Z,63nm,1.5s,mb4.7						
MAW	**Mawson**	**79.84**	**200**	P	**P**	**06 56 08.2**	**+1.2**
	comp=Z,10nm,0.7s,mb4.3,baz=151,slow=10,SNR=6.9						
CHGN	**Chignik**	**79.89**	**12**	*eP*	**P**	**06 56 05.8**	**-1.5**
NJ2	**Nanjing**	**79.89**	**310**	*eP*	**P**	**06 56 07.3**	**-0.6**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
NSHM	**Saint Helena R**	**80.20**	**42**	*eP*	**P**	**06 56 09.4**	**+0.1**
KIPM	**Iron Peak**	**80.47**	**40**	*eP*	**P**	**06 56 11.7**	**+0.9**
MWC	**Mount Wilson**	**80.62**	**47**	*eP*	**P**	**06 56 12.0**	**+0.3**
KHMM	**Horse Mountain**	**80.99**	**39**	*eP*	**P**	**06 56 14.1**	**+0.6**
HABR	**Khabarovsk**	**81.10**	**331**	*eP*	**P**	**06 56 13.8**	**0.0**
HABR				pmax	pmax		
	comp=Z,17nm,0.3s,mb5.0						
ISA	**Isabella**	**81.16**	**46**	*eP*	**P**	**06 56 14.7**	**+0.2**
	comp=Z,32nm,1.0s,mb4.7						
ISA				*ep*P	pP	06 58 17.6	-0.1
ISA	**Isabella**	**81.16**	**46**	*eP*	**P**	**06 56 14.7**	**+0.3**
ISA				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.7						
CMB	**Columbia Colle**	**81.30**	**43**	*eP*	**P**	**06 56 14.9**	**-0.2**
	comp=Z,18nm,1.0s,mb4.5						
CMB	**Columbia Colle**	**81.30**	**43**	*eP*	**P**	**06 56 14.9**	**-0.2**
CMB				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.5						
OHCM	**Honcut**	**81.39**	**42**	*eP*	**P**	**06 56 15.8**	**+0.3**
PFO	**Pinyon Flat Ob**	**81.39**	**49**	P	**P**	**06 56 15.6**	**0.0**
	comp=Z,4.9nm,0.8s,mb4.0,baz=273,slow=2.3,SNR=6.9						
WDC	**Whiskeytown Da**	**81.51**	**40**	*eP*	**P**	**06 56 16.6**	**+0.6**
	comp=Z,48nm,1.2s,mb4.9						
WDC	**Whiskeytown Da**	**81.51**	**40**	*eP*	**P**	**06 56 16.7**	**+0.6**
WDC				pmax	pmax		
	comp=Z,48nm,1.2s,mb4.9						
MTUM	**Tungsten Hills**	**82.07**	**45**	*eP*	**P**	**06 56 19.5**	**+0.5**
GSC	**Goldstone**	**82.08**	**47**	*eP*	**P**	**06 56 19.0**	**-0.1**
YBH	**Yreka Blue Hor**	**82.12**	**39**	*eP*	**P**	**06 56 19.6**	**+0.5**
	comp=Z,28nm,0.9s,mb4.8						
YBH	**Yreka Blue Hor**	**82.12**	**39**	*eP*	**P**	**06 56 19.6**	**+0.4**
YBH				pmax	pmax		
	comp=Z,28nm,0.9s						
LHEM	**Herd Peak**	**82.35**	**39**	P	**P**	**06 56 20.8**	**+0.5**
LBCM	**Butte Creek Ri**	**82.38**	**40**	P	**P**	**06 56 20.9**	**+0.4**
KDAK	**Kodiak Island**	**82.47**	**14**	P	**P**	**06 56 19.4**	**-1.1**
KDAK	**Kodiak Island**	**82.47**	**14**	P	**P**	**06 56 19.4**	**-1.1**
	comp=Z,9.0nm,0.7s,mb4.4,baz=135,slow=8.2,SNR=8.9						
LASM	**Arnica Sink**	**82.71**	**40**	P	**P**	**06 56 22.5**	**+0.4**
CN2	**Changchun**

DUG pmax pmax
comp=Z,7.0nm,1.3s,mb4.2
SEY Seymchan 87.49 347⇓ *e*P **P** 06 56 44.3 -0.4
TNA Tin City 87.63 5 *e*P **P** 06 56 44.5 -0.8
comp=Z,5.6nm,0.6s,mb4.5
NLU North Lily Min 87.74 45 *e*P **P** 06 56 46.3 -0.1
TMUT Trail Mountain 87.98 46 *e*P **P** 06 56 48.2 +0.6
TMUT pP pP 06 58 56.4 +3.0
XAN Xi'an 88.06 308 P **P** 06 56 48.8 +0.7
XAN AMB AMB
comp=Z,26nm,1.0s,mb4.9
MPU Maple Canyon 88.06 45 *e*P **P** 06 56 48.6 +0.7
HLID Hailey 88.16 41 *e*P **P** 06 56 48.9 +0.6
comp=Z,20nm,0.9s,mb4.9
SPUT South Promonto 88.20 44 *e*P **P** 06 56 49.0 +0.5
HVU Hansel Valley 88.24 43 *e*P **P** 06 56 49.2 +0.5
comp=Z,13nm,0.8s,mb4.7
HVU Hansel Valley 88.24 43 *e*P **P** 06 56 49.2 +0.5
HVU pmax pmax
comp=Z,13nm,0.8s,mb4.7
CTU Camp Tracy 88.33 45 *e*P **P** 06 56 49.7 +0.5
SRU San Rafael 88.35 46 *e*P **P** 06 56 50.0 +0.7
comp=Z,26nm,1.2s,mb4.8
SRU San Rafael 88.35 46 *e*P **P** 06 56 50.0 +0.7
SRU pmax pmax
comp=Z,26nm,1.2s,mb4.8
LENM Lemitar 88.46 52 *e*P **P** 06 56 50.7 +0.8
JLU Jordanelle 88.48 45 *e*P **P** 06 56 50.4 +0.6
MNTX Cornudas Mount 88.53 55 *e*P **P** 06 56 50.5 +0.2
comp=Z,15nm,0.8s,mb4.9
MNTX *e*pP pP 06 58 55.9 -0.5
MCK McKinley 88.61 13 *e*P **P** 06 56 48.4 -1.4
comp=Z,30nm,0.9s,mb5.1
MCK McKinley 88.61 13 *e*P **P** 06 56 48.4 -1.5
MCK pmax pmax
comp=Z,29nm,0.9s,mb5.1
BNM Barren Site 88.71 52 *e*P **P** 06 56 51.4 +0.3
SKAG Skagway 88.71 21 *e*P **P** 06 56 50.5 +0.1
comp=Z,15nm,0.9s,mb4.8
LPM Los Pinos Moun 88.78 52 *e*P **P** 06 56 52.1 +0.7
HWUT Hardware Ranch 88.92 44 *e*P **P** 06 56 51.7 -0.2
comp=Z,11nm,0.8s,mb4.7
KMI Kunming 88.95 298 P **P** 06 56 54.5 +2.1
KMI AMB AMB
comp=Z,11nm,1.4s,mb4.5
PLCA Paso Flores 89.15 134 P **P** 06 56 53.7 +0.6
PLCA Paso Flores 89.15 134 P **P** 06 56 53.7 +0.6
comp=Z,3.4nm,0.8s,mb4.2,baz=204,slow=5.2,SNR=7.5
HIA Hailar 89.17 325⇓ *e*P **P** 06 56 52.5 -0.3
ANMO Albuquerque 89.20 52 *e*P **P** 06 56 53.5 +0.1
comp=Z,12nm,1.0s,mb4.7
ANMO Albuquerque 89.20 52 *e*P **P** 06 56 53.5 +0.2
ANMO pmax pmax
comp=Z,12nm,1.0s
ANMO Albuquerque 89.20 52 P **P** 06 56 53.4 0.0
comp=Z,9.8nm,1.0s,mb4.6,baz=224,slow=5.8,SNR=36
NEW Newport 89.20 36 P **P** 06 56 52.4 -0.7
comp=Z,4.0nm,0.6s,mb4.4,baz=249,slow=2.7,SNR=11
HHC Hu-ho-hao-te 89.51 315 *e*P **P** 06 56 56.0 +1.4
HHC PP PP 07 00 41.3 +4.0
HHC SKS 07 06 30.5
HHC S S 07 06 56.0 -0.6
HHC SS SS 07 13 16.0 +4.9
HHC AMB AMB
comp=Z,26nm,0.8s,mb5.1
HHC AMB AMB
comp=Z,48nm,4.5s
GDL2 Guadalupe Moun 89.52 55 *e*P **P** 06 56 55.7 +0.8
GDL2 *e*pP pP 06 59 01.8 +0.5
CHTO Chiang Mai 89.62 290 *e*P **P** 06 56 57.2 +1.6
comp=Z,16nm,0.6s,mb5.0
CHTO Chiang Mai 89.62 290 *e*P **P** 06 56 57.2 +1.5
CHTO pmax pmax
comp=Z,16nm,0.6s,mb5.0
MCMT McKenzie Canyo 89.79 41 *e*P **P** 06 56 56.1 +0.3
AHID Auburn Hatcher 89.81 43 *e*P **P** 06 56 56.6 +0.6
comp=Z,9nm,0.9s,mb4.9
DLBC Dease Lake 89.81 23 *e*P **P** 06 56 55.7 +0.1
IMA2 Indian Mountai 89.84 10 *e*P **P** 06 56 54.7 -0.8
COLA College 89.84 13 *e*P **P** 06 56 53.8 -1.8
comp=Z,7.9nm,0.5s,mb4.8
COLA College 89.84 13 *e*P **P** 06 56 53.8 -1.8
COLA pmax pmax
comp=Z,8.0nm,0.5s,mb4.8
MSO Missoula 90.20 39 *e*P **P** 06 56 57.1 -0.6
DLMT Dillon 90.22 40 *e*P **P** 06 56 58.4 +0.6
comp=Z,9.6nm,0.8s,mb4.7
REDW Red Top Meadow 90.27 43 *e*P **P** 06 56 58.4 +0.3
comp=Z,29nm,1.0s,mb5.1
TPAW Teton Pass 90.27 43 *e*P **P** 06 56 58.5 +0.5
comp=Z,18nm,0.9s,mb4.9
BILL Bilibino 90.32 355 *e*P **P** 06 56 56.6 -1.1
comp=Z,14nm,0.8s,mb4.8
BILL Bilibino 90.32 355 *e*P **P** 06 56 56.6 -1.1
BILL pmax pmax
comp=Z,14nm,0.8s,mb4.8
SNOW Snow King Moun 90.38 43 *e*P **P** 06 56 59.1 +0.5
comp=Z,26nm,0.8s,mb5.1
IMW Indian Meadow 90.48 42 *e*P **P** 06 56 59.6 +0.5
comp=Z,22nm,0.9s,mb5.0
MOOW Moose Ponds 90.53 42 *e*P **P** 06 56 59.2 0.0
LRM Limekiln Ridge 90.55 40 *e*P **P** 06 56 59.5 +0.2
LOHW Long Hollow 90.55 43 *e*P **P** 06 56 59.6 +0.2
comp=Z,9.8nm,0.8s,mb4.8
CD2 Chengdu 90.57 303 *e*P **P** 06 56 59.8 0.0
CD2 AP pP 06 59 07.5 +1.2
CD2 XP sP 07 00 05.3 +1.0
CD2 PP PP 07 00 47.8 +2.0
CD2 SKS 07 06 33.8
CD2 SS SS 07 13 28.0 +1.4
CD2 AMB AMB
comp=Z,10.0nm,0.9s,mb4.8
CD2 AMB AMB
comp=Z,20nm,9.4s
CHMT Chamberlain Mo 90.65 39 *e*P **P** 06 56 59.0 -0.8
QLMT Earthquake Lak 90.65 41 *e*P **P** 06 57 00.9 +1.1
FLWY Flagg Ranch 90.73 42 *e*P **P** 06 57 00.8 +0.6
comp=Z,23nm,1.1s,mb5.0
BW06 Boulder Array 90.79 44 *e*P **P** 06 56 59.9 -0.6
comp=Z,12nm,0.9s,mb4.8
PDAR Pinedale Array 90.79 44 P **P** 06 57 00.0 -0.5
comp=Z,12nm,0.9s,mb4.8,baz=208,slow=3.4,SNR=76
SMCO Snowmass 90.80 48 *e*P **P** 06 57 01.1 +0.5
comp=Z,8.4nm,0.8s,mb4.7
YFT Old Faithful 90.83 42 *e*P **P** 06 57 02.6 +2.0
BOZ Bozeman (W) 90.95 40 *e*P **P** 06 57 00.9 -0.2
BOZ *e*pP pP 06 59 08.2 +0.5
DAWY Dawson 91.14 16 *e*P **P** 06 57 01.0 -0.5
LKWY Lake 91.15 42 *e*P **P** 06 57 02.9 +0.7
SDCO Great Sand Dun 91.17 50 *e*P **P** 06 57 02.5 +0.2
comp=Z,5.8nm,0.9s,mb4.5
EGAK Eagle 91.27 15 *e*P **P** 06 57 01.4 -0.8
comp=Z,13nm,0.6s,mb5.0
WALA Waterton Lakes 91.42 37 *e*P **P** 06 57 03.1 -0.1
comp=Z,7.1nm,0.8s,mb4.7
ISCO Idaho Springs 92.02 48 *e*P **P** 06 57 06.6 +0.4
RLMT Red Lodge 92.13 42 *e*P **P** 06 57 07.2 +0.6
LZH Lanzhou 92.70 308 *e*P **P** 06 57 11.0 +1.6
LZH XP sP 07 00 07.0 -7.1
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.2
LZH AMB AMB
comp=Z,127nm,4.6s
YAK Yakutsk 92.99 338 *e*P **P** 06 57 09.9 -0.2
YAK pmax pmax
comp=Z,24nm,0.9s,mb5.2
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,0.8s
EDM Edmonton 93.94 33 *e*P **P** 06 57 13.5 -1.1
INK Inuvik 95.94 16 *e*P **P** 06 57 22.0 -1.4
comp=E,230nm,1.0s
INK Inuvik 95.94 16 *e*P **P** 06 57 22.0 -1.4
INK pmax pmax
comp=Z,230nm,1.0s
INK Inuvik 95.94 16 PKiKP PKiKP 07 01 56.8 -1.4
comp=Z,0.5nm,0.6s,baz=220,slow=3.3,SNR=3.0
INK PKKPbc PKKPbc 07 14 08.4 -2.8
comp=Z,0.3nm,0.5s,baz=90,slow=3.0,SNR=3.6
DGMT Dagmar 96.76 40 *e*P **P** 06 57 27.8 +0.3
GTA Gaotai 96.96 310 *e*P **P** 06 57 29.5 +0.8
GTA AP pP 06 59 30.5 -5.3
GTA PP PP 07 01 34.5 -0.1
GTA SKS 07 07 14.3
GTA S S 07 07 57.0 -4.4
GTA SS SS 07 14 54.3 -1.8
GTA AMB AMB
comp=Z,5.0nm,1.5s,mb4.5
GTA AMB AMB
comp=Z,103nm,8.4s
YKA Yellowknife Ar 98.29 25 P Pdif 06 57 33.0 -1.5
YKA PP PP 07 01 38.6 -5.4
YKA Yellowknife Ar 98.29 25 P Pdif 06 57 33.0 -1.5
comp=Z,1.9nm,0.8s,baz=244,slow=4.4,SNR=40
YKA PP PP 07 01 38.6 -5.4
comp=Z,1.0nm,1.1s,baz=240,slow=7.2,SNR=5.8
YKA PKiKP PKiKP 07 02 01.1 -1.4
comp=Z,0.3nm,0.6s,baz=250,slow=1.4,SNR=6.9
YKA PKKPbc PKKPbc 07 14 01.1 -3.6
comp=Z,0.2nm,0.4s,baz=38,slow=2.5,SNR=11
LPAZ La Paz 102.59 113 PKKPbc PKKPbc 07 13 51.2 0.0
comp=Z,1.1nm,1.1s,baz=149,slow=5.9,SNR=3.1
WMQ Urumqi 106.96 311 PDIF Pdif 06 58 11.3 -1.8
WMQ PP PP 07 02 48.5 +0.2
WMQ PP PP
comp=Z,127nm,4.7s
RES Resolute Bay 109.48 16 *e*PKP PKiKP 07 02 21.4 -1.4
ZALV Zalesovo Beam 110.85 321 PKiKP PKiKP 07 02 24.5 -1.4
comp=Z,3.2nm,0.6s,baz=206,slow=0.3,SNR=9.1
ZAL Zalesovo 110.86 321 PKIKP PKiKP 07 02 24.5 -1.4
MKAR Makanchi Array 111.31 313 Pdif Pdif 06 58 33.2 +0.9
MKAR PKPdf PKiKP 07 02 25.7 -1.3
MKAR PKKPbc PKKPbc 07 13 24.5 -0.6
MKAR PKKPab PKKPab 07 13 36.2 +1.1
MKAR Makanchi Array 111.31 313 PKIKP PKiKP 07 02 25.7 -1.3
MKAR Makanchi Array 111.31 313 Pdiff Pdif 06 58 33.2 +0.9
comp=Z,0.4nm,0.6s,baz=86,slow=6.2,SNR=6.5
MKAR PKiKP PKiKP 07 02 25.7 -1.3
comp=Z,1.6nm,0.5s,baz=76,slow=3.4,SNR=17
MKAR PKKPbc PKKPbc 07 13 24.5 -0.6
comp=Z,0.8nm,0.6s,baz=289,slow=3.7,SNR=6.7
MKAR PKKPab PKKPab 07 13 36.2 +1.1
comp=Z,0.3nm,0.4s,baz=276,slow=4.5,SNR=3.8
KURK Kurchatov 114.23 317⇑ *i*PKIKP PKiKP 07 02 31.4 -1.1
TKM2 Tokmak 2 115.47 308 *e*PKPdf PKPdf 07 02 34.4 -0.7
EKS2 Erkin-Say 116.77 308 *e*PKPdf PKPdf 07 02 37.3 -0.3
AML Almayashu 116.78 307 *e*PKPdf PKPdf 07 02 37.6 -0.1
SCHQ Schefferville 120.51 38 PKP PKPdf 07 02 42.8 -1.7
comp=Z,1.2nm,0.3s,baz=230,slow=2.3,SNR=7.4
BOSA Boshof 124.47 206 PKP PKPdf 07 02 53.3 +0.3
comp=Z,7.2nm,0.9s,baz=107,slow=0.7,SNR=6.2
BOSA PKKPbc PKKPbc 07 12 37.0 -2.2
comp=Z,3.8nm,0.8s,baz=280,slow=6.3,SNR=4.3
ARU Arti 125.68 325 *e*PKPdf PKPdf 07 02 53.9 -0.4
ARU Arti 125.68 325 *i* PKIKP PKPdf 07 02 53.8 -0.5
ARU 07 04 54.2
SOKR Solikamsk 125.69 329 *e*PKIKP PKPdf 07 02 53.5 -0.7
SOKR pmax pmax
comp=Z,30nm,0.9s
AKTK Aktyubinsk 127.33 317 PKP PKPdf 07 02 56.9 -0.7
AKTO Aktyubinsk 127.33 317 PKIKP PKPdf 07 02 56.9 -0.7
AKTO pmax pmax
comp=Z,6.0nm,0.7s
AKTO Aktyubinsk 127.33 317 PKP PKPdf 07 02 56.9 -0.7
comp=Z,5.8nm,0.7s,baz=90,slow=4.0,SNR=24
ARCES ARCESS Array B 130.09 349 PKP PKPdf 07 03 01.5 -0.8
ARCES ARCESS Array B 130.09 349 PKHKP 07 02 50.9
ARCES 07 03 01.5
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES pmax pmax
comp=Z,16nm,0.6s
ARCES ARCESS Array B 130.09 349 PKhKP 07 02 50.9
comp=Z,3.9nm,0.9s,baz=349,slow=1.2,SNR=6.7
ARCES PKP PKPdf 07 03 01.5 -0.8
comp=Z,16nm,0.6s,baz=66,slow=1.5,SNR=39
JOF Joensuu 134.10 341 *ep* PKPdf 07 03 08.1 -2.0
LSZ Lusaka 134.28 218 *e*PKPdf PKPdf 07 03 11.9 0.0
FINES FINESS Array B 136.78 343 PKP PKPdf 07 03 14.1 -1.0
FINES FINESS Array B 136.78 343 PKhKP 07 03 02.4
comp=Z,1.3nm,0.6s,baz=53,slow=4.1,SNR=7.7
FINES PKP PKPdf 07 03 14.1 -1.0
comp=Z,4.9nm,0.5s,baz=79,slow=2.6,SNR=16
OBN Obninsk 137.42 330⇑ *i*PKIKP PKPdf 07 03 15.9 -0.6
OBN pmax pmax
comp=Z,34nm,1.2s
KMBO Kilima Mbogo 137.64 242 *e*PKPdf PKPdf 07 03 19.1 +0.9
KMBO Kilima Mbogo 137.64 242 PKhKP 07 03 09.0
comp=Z,0.8nm,0.4s,baz=207,slow=10,SNR=3.9
KMBO PKP PKPdf 07 03 20.1 +1.9
comp=Z,4.6nm,0.8s,baz=74,slow=2.9,SNR=10
ZEI Tsey 138.58 310 *e*PKIKP PKPdf 07 03 18.0 -1.0
KIV Kislovodsk 139.07 313 *e*PKPdf PKPdf 07 03 19.7 -0.2
KIV Kislovodsk 139.07 313 *i* PKIKP PKPdf 07 03 20.9 +1.1
NB2 NORSAR Subarra 140.23 352 PKP 07 03 14.0
comp=Z,2.1nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 140.23 352 PKP PKPdf 07 03 23.3 +1.9
NOA NORSAR Array B 140.23 352 PKhKP 07 03 14.1
comp=Z,8.3nm,0.8s,baz=16,slow=4.6,SNR=21
NOA PKP PKPdf 07 03 23.3 +1.9
comp=Z,1.7nm,0.6s,baz=13,slow=5.9,SNR=3.3
HFS Hagfors 140.74 350 PKHKP 07 03 15.5
HFS pmax pmax
comp=Z,11nm,0.4s
HFS pmax pmax
comp=N,2.0nm,0.7s
HFS Hagfors 140.74 350 PKhKP 07 03 15.5
comp=N,11nm,0.4s,baz=67,slow=3.9,SNR=116
HFS SKPbc SKPbc 07 06 05.7 +1.1
comp=N,2.3nm,0.7s,baz=2.9,slow=5.8,SNR=4.2
KONO Kongsberg 141.78 353 *e*PKPdf PKPdf 07 03 24.8 +0.6
ANN Anapa 142.25 316 *i* PKHKP 07 03 21.2
ANN pmax pmax
comp=Z,46nm,1.7s
MARD Mardin 142.26 303 *i* P PKPdf 07 03 23.0 -2.8
EZC Erzincan 142.38 307 *e*P PKPdf 07 03 24.7 -1.2
GUMT Gumushane 142.42 308 *e*P PKPdf 07 03 23.9 -2.1
KELT Kelkit 142.68 308 *i* P PKPdf 07 03 24.6 -1.8
GRSN GIRESUNGRSN 143.15 310 *i* P PKPdf 07 03 24.4 -2.8
ELZG Elazig 143.35 306 *i* P PKPdf 07 03 27.6 -0.1
KEMA Kemaliye 143.50 307 *i* P PKPdf 07 03 27.5 -0.4
RRH Rhenigidale 143.63 7 *e*P PKPdf 07 03 24.7 -2.8
AKASG Malin Array Be 143.65 329 PKP PKPdf 07 03 25.5 -2.3
AKASG Malin Array Be 143.65 329 *i* PKIKP PKiKP 07 03 35.0 +3.6
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 143.65 329 PKP PKPdf 07 03 25.5 -2.3
comp=Z,21nm,0.4s,baz=42,slow=4.2,SNR=146
KIEV Kiev 143.66 329 *e*PKPbc PKPdf 07 03 25.6 -2.2
SUW Suwalki 143.72 338 *e*PKP PKPdf 07 03 26.4 -1.4
URFA Urfa 143.75 304 *e*P PKPdf 07 03 27.7 -0.7
RRR Rubha Reidh 143.79 6 *e*P PKPdf 07 03 25.6 -2.2
MYA Malatya 143.82 305 *e*P PKPdf 07 03 28.8 +0.3
MALT Malatya 143.82 305 *e*PKPdf PKPdf 07 03 28.5 0.0
MALT Malatya 143.82 305⇓ *i*P PKPdf 07 03 28.3 -0.2
KAC Achnashellach 144.19 6 *e*P PKPdf 07 03 27.4 -1.1
MCD Coleburn Disti 144.26 4 *e*P PKPdf 07 03 27.1 -1.5
SIM Simferopol' 144.29 318 *i* PKIKP PKPdf 07 03 29.3 +0.2
SIM pmax pmax
comp=Z,47nm,0.8s
KPL Plockton 144.31 6 *e*P PKPdf 07 03 27.7 -1.1
KPL AMb AMB 07 03 29.8
comp=Z,93nm,1.5s
MDO Dochfour 144.32 5 *e*P PKPdf 07 03 27.3 -1.4
KSB Sheil Bridge 144.46 6 *e*P PKPdf 07 03 28.1 -0.9
KVT Kavak 144.67 311 *e*P PKPdf 07 03 30.8 +0.9
KAR1 Arisaig 144.71 6 *e*P PKPdf 07 03 28.8 -0.7
GZT Gaziantep 144.74 304 *i* P PKPdf 07 03 31.3 +1.2
DIKM Dikmen 145.00 312 *e*P PKPdf 07 03 31.5 +1.1
GAZ Gaziantep 145.06 304 *e*P PKPdf 07 03 31.8 +1.1
BOYT Boyabat 145.33 312 *i* P PKPdf 07 03 32.5 +1.5
BYBT Boyabat 145.41 312 *e*P PKPdf 07 03 32.9 +1.8
EAB Aberfoyle 145.57 5 *e*P PKPdf 07 03 30.7 -0.2
EBH Black Hill 145.57 4 *e*P PKPdf 07 03 31.3 +0.4
BNN Bunyan 145.59 307 *e*P PKPdf 07 03 32.9 +1.4
YOZ Yozgat 145.71 309 *e*P PKPdf 07 03 33.5 +1.8
BZK Bozkurt 145.72 313 *e*P PKPdf 07 03 33.5 +1.8
CTKT Corum 145.72 311 *i* P PKPdf 07 03 32.8 +1.1
PGBU Glenifferbraes 145.93 5 *e*P PKPdf 07 03 32.4 +0.9
PGBU AMb AMB 07 03 33.6
comp=Z,100nm,1.1s
ESY Stoneypath 145.96 3 *e*P PKPdf 07 03 32.2 +0.7
COBT Iskenderun 145.97 303 *i* P PKPdf 07 03 34.7 +2.4
EAU Auchinoon 145.98 4 *e*P PKPdf 07 03 32.8 +1.2
CORM Corum 146.00 310 *e*P PKPdf 07 03 34.7 +2.6
KOZT Kozan 146.03 305 *e*P PKPdf 07 03 35.4 +3.1
EBL Broad Law 146.07 4 *e*P PKPdf 07 03 33.1 +1.3
TOS Tosya 146.09 312 *e*P PKPdf 07 03 34.5 +2.2
HTY Hatay 146.17 303 *e*P PKPdf 07 03 34.9 +2.3
CEYT Ceyhan 146.23 304 *e*P PKPdf 07 03 35.2 +2.5
KIS Kishinev 146.24 325 *e*PKHKP PKPdf 07 03 33.0 +0.7
KIS Kishinev 146.24 325 *e*UNK 07 03 00.0
GMK Mull of Kintyr 146.28 7 *e*P PKPdf 07 03 33.6 +1.4
BALT Daday 146.32 313 *i* P PKPdf 07 03 35.3 +2.7
AVNT Avonos 146.34 308 *i* P PKPdf 07 03 35.0 +2.2
CDAG Cicekdag 146.40 309 *i* P PKPdf 07 03 34.5 +1.6
XSO Sourhope Farm 146.40 3 *e*P PKPdf 07 03 33.3 +1.0
EKA Eskdalemuir Ar 146.50 4 PKIKP PKPdf 07 03 34.1 +1.6
EKA pmax pmax
comp=Z,27nm,0.8s
EKA Eskdalemuir Ar 146.50 4 PKPbc PKPbc 07 03 34.1 -1.0
comp=Z,27nm,0.8s,baz=335,slow=2.7,SNR=52
ESK Eskdalemuir 146.52 4 *e*P PKPdf 07 03 34.0 +1.5
ESK AMb AMB 07 03 34.4
comp=Z,41nm,1.1s
ESK Eskdalemuir 146.52 4 *e*PKIKP PKPdf 07 03 34.2 +1.7
CANT Cankiri 146.55 311 *e*P PKPbc 07 03 36.1 +0.4
LVV L'vov 146.64 332 *i* PKIKP PKPdf 07 03 34.8 +1.9
ECK Cauldkaine Hil 146.66 4 *e*P PKPdf 07 03 34.2 +1.5
KARA Karaisali 146.69 305 *e*P PKPdf 07 03 35.7 +2.3
ELDT Eldivan 146.73 311 *i* P PKPbc 07 03 36.4 +0.2
GAL1 Galloway 146.84 6 *e*P PKPdf 07 03 34.6 +1.5
GAL1 AMb AMB 07 03 35.9
comp=Z,115nm,1.1s
SAFT Safranbolu 146.92 313 *e*P PKPbc 07 03 36.6 -0.1
KAMT Kaman 146.96 309 *e*P PKPdf 07 03 36.4 +2.6
XAL Allendale 147.03 3 *e*P PKPdf 07 03 35.5 +2.1
MERS Mersin 147.21 305 *e*P PKPbc 07 03 37.1 -0.5
BSEG Bad Segeberg 147.22 350 *e*PKPbc PKPbc 07 03 36.8 -0.2
KWP Kalwaria 147.34 333 *e*PKP PKPbc 07 03 37.5 0.0
KWP Kalwaria 147.34 333 *e*PKPbc PKPbc 07 03 37.3 -0.2
KWP Kalwaria 147.34 333⇑ *i*P PKPbc 07 03 37.4 -0.1
ANTO Ankara 147.42 311 *e*P PKPdf 07 03 37.0 +2.5
ANTO Ankara 147.42 311 *e*PKPdf PKPdf 07 03 34.2 -0.3
ANTO *e*PKPbc PKPbc 07 03 37.9 -0.1
ANTO Ankara 147.42 311 PKIKP PKPbc 07 03 38.2 +0.2
ANTO Ankara 147.42 311⇑ *i*P PKPbc 07 03 37.8 -0.2
LOD Lodumlu 147.44 311 *e*P PKPbc 07 03 38.0 0.0
MMAI Mount Meron Ar 147.46 297 PKPbc PKPbc 07 03 38.9 +0.5
comp=Z,24nm,0.5s,baz=60,slow=4.9,SNR=48
SGKT Sivrigoynuk 147.64 312 *i* P PKPdf 07 03 38.5 +3.6
EREN Erenkoy 147.87 302 *e*P PKPdf 07 03 38.7 +3.3
HPK Haverah Park 147.96 3 *e*P PKPdf 07 03 38.0 +3.0
HPK AMb AMB 07 03 39.5
comp=Z,92nm,1.9s
TIRR Tirgusor 147.99 321 P PKPbc 07 03 39.1 -0.2
TIRR Tirgusor 147.99 321⇓ *i*P PKPbc 07 03 39.0 -0.3
OJC Ojcow 148.02 337 *e*PKP PKPbc 07 03 38.8 -0.4
IKL Isikli 148.04 304 *e*P PKPbc 07 03 39.4 -0.3
KOLS Kolonicke sedl 148.06 333 *e*PKP PKPbc 07 03 39.4 +0.1
KOLS *e* 07 03 47.4
VRI Vrincioaia 148.07 325 P PKPbc 07 03 39.0 -0.4
VRI Vrincioaia 148.07 325⇑ *i*P PKPbc 07 03 39.2 -0.3
STHS Stebnicka Huta 148.11 334 *e*PKP PKPbc 07 03 39.6 +0.2
PLOR Plostina 148.13 325 PKHKP PKPbc 07 03 39.5 -0.1
HARR Harsova 148.13 322 P PKPbc 07 03 39.9 +0.2
HARR Harsova 148.13 322⇓ *i*P PKPbc 07 03 39.6 0.0
UZH Uzhgorod 148.28 332⇓ *i*PKHKP 07 03 38.8
UZH *i* 07 03 47.4
HENT Hendek 148.32 313 *i* P PKPdf 07 03 36.0 0.0
EIL Elat 148.33 291 PKPbc PKPbc 07 03 40.9 +0.2
comp=Z,28nm,0.9s,baz=26,slow=2.5,SNR=18
CRVS Cervenica-Dubn 148.43 334 *e*PKP PKPbc 07 03 40.0 -0.2
LFK Lefkose 148.44 302 *e*P PKPbc 07 03 40.5 -0.2
KIZT Kizilcal 148.47 309 *e*P PKPbc 07 03 40.4 -0.3
NIE Niedzica 148.48 335 *e*PKP PKPbc 07 03 40.8 +0.5
ERMK Ermenek 148.51 305 *i* P PKPbc 07 03 41.3 +0.4
TRPA Tarpa 148.55 332⇑ *i*P PKPbc 07 03 40.6 0.0
KBI1 Birley Grange 148.67 3 *e*P PKPdf 07 03 39.7 +3.6
KSP Ksiaz 148.67 341 *e*PKP PKPbc 07 03 41.2 +0.5
KSP Ksiaz 148.67 341⇓ *i*PKHKP PKPbc 07 03 41.0 +0.3
KSP *e* 07 03 46.8
MLR Muntele Rosu 148.74 325 P PKPbc 07 03 41.3 +0.2
MLR Muntele Rosu 148.74 325 PKPbc PKPbc 07 03 40.6 -0.5
comp=Z,28nm,0.9s,baz=328,slow=4.1,SNR=15
MLR Muntele Rosu 148.74 325⇑ *i*P PKPbc 07 03 41.2 +0.1
GULT Gulveren 148.76 313 *e*P PKPbc 07 03 41.0 -0.3
KWE Weaver Farm 148.89 3 *e*P PKPdf 07 03 40.0 +3.6
SBD1 Bryn Du 148.91 5 *e*P PKPdf 07 03 40.3 +3.8
OKC Ostrava-Krasne 148.93 338 *e*PKPbc PKPbc 07 03 41.3 -0.1
OKC *e*PKPab PKPab 07 03 47.8 -0.1
ESKT Eskisehir 148.93 311 *e*P PKPbc 07 03 41.5 -0.2
ESKT Eskisehir 148.93 311 *i* P PKPbc 07 03 41.2 -0.6
LEF Lefka 148.99 302 *e*P PKPbc 07 03 41.4 -0.6
UPC Upice 149.05 341 *e*PKPbc PKPbc 07 03 41.8 +0.1
UPC *e*PKPab PKPab 07 03 47.8 -0.5
BORA Eskisehir 149.05 312 *i* P PKPbc 07 03 41.8 -0.3
DPC Dobruska-Polom 149.09 340 *e*PKHKP PKPbc 07 03 42.0 +0.2
DPC *e* 07 03 49.0
DPC Dobruska-Polom 149.09 340 *e*PKPbc PKPbc 07 03 42.0 +0.2
DPC *e*PKPab PKPab 07 03 49.0 +0.5
DPC *ep*PKP pPKPdf 07 05 54.1 +1.7
CLL Collm 149.15 345 *e*PKP PKPdf 07 03 38.0 +1.1
CLL ⇓ *i*PKP PKPbc 07 03 41.6 -0.3
CLL Collm 149.15 345 *e*PKPdf PKPdf 07 03 38.0 +1.1
comp=Z,3.0nm,0.5s
CLL ⇓ *i*PKPbc PKPbc 07 03 41.6 -0.3
comp=Z,102nm,1.1s
CLL *i* PKPab PKPab 07 03 47.9 -0.8
comp=Z,29nm,0.9s
CLL *ep*PKPbc pPKPbc 07 05 57.0 +1.3
comp=Z,13nm,1.1s
CLL Collm 149.15 345 *e*PKPbc PKPbc 07 03 41.6 -0.3
CLL *e*PKPab PKPab 07 03 48.1 -0.6
CLL *ep*PKPbc pPKPbc 07 05 57.0 +1.3
KECS Kecovo 149.16 334 *e*PKP PKPbc 07 03 42.5 +0.5
IBBN Ibbenburen 149.18 352 *e*PKPbc PKPbc 07 03 41.5 -0.4
MORC Moravsky Berou 149.19 339 *e*PKPbc PKPbc 07 03 41.9 -0.2
MORC Moravsky Berou 149.19 339 PKHKP PKPbc 07 03 42.4 +0.4
MORC Moravsky Berou 149.19 339⇓ *i*P PKPbc 07 03 42.0 0.0
CWF Charnwood Fore 149.19 2 *e*P PKPbc 07 03 41.3 -0.6
CWF AMb AMB 07 03 42.4
comp=Z,58nm,1.4s
CLZ Clausthal 149.21 348 *e*PKHKP PKPbc 07 03 42.1 +0.1
CLZ Clausthal 149.21 348 *e*PKPdf PKPdf 07 03 37.0 0.0
CLZ *e*PKPbc PKPbc 07 03 42.1 +0.1
CLZ *ep*PKPbc pPKPbc 07 05 57.1 +1.2
ADVT Abdulvahap 149.28 314 *e*P PKPbc 07 03 41.8 -0.8
BRG Berggiesshubel 149.31 344 *e*PKP PKPdf 07 03 37.3 +0.1
BRG Berggiesshubel 149.31 344 *e*PKIKP PKPdf 07 03 37.3 +0.1
BRG Berggiesshubel 149.31 344 *e*PKPdf PKPdf 07 03 37.0 -0.2
BRG *e*PKPbc PKPbc 07 03 42.2 -0.1
BRG Berggiesshubel 149.31 344 *e*PKP PKPdf 07 03 37.3 +0.1
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 149.31 344⇓ *i* PKPbc 07 03 42.3 0.0
comp=Z,66nm,1.0s
BRG *i* 07 03 48.8
comp=Z,27nm,1.0s
BRG *i* pPKP pPKPdf 07 05 58.2 +5.4
comp=Z,3.5nm,0.7s
HLM1 Long Mynd 149.33 4 *e*P PKPbc 07 03 41.2 -1.0
PVCC Panska Ves 149.45 343 *e*PKPbc PKPbc 07 03 42.9 +0.3
YLV Yalova 149.46 314 *e*P PKPbc 07 03 41.0 -2.0
DRGR 149.47 330 P PKPbc 07 03 42.6 -0.2
DRGR 149.47 330⇓ *i*P PKPbc 07 03 42.5 -0.3
SHUT Suhut-Afyon 149.55 310 *e*P PKPbc 07 03 43.2 -0.1
WTSB Winterswijk 149.64 353 *e*PKP PKPdf 07 03 42.7 +5.0
comp=Z,136nm,0.8s
GEMT Gemlik 149.65 314 *e*P PKPbc 07 03 42.8 -0.7
HTR Trewern Hill 149.73 5 *e*P PKPbc 07 03 41.3 -2.0
VYHS Vyhne 149.80 336 *e*PKP PKPbc 07 03 43.3 -0.2
HAE Alders End 149.83 4 *e*P PKPbc 07 03 41.5 -2.0
MCH1 Michaelchurch 149.84 5 *e*P PKPbc 07 03 42.2 -1.3
MCH1 AMb AMB 07 03 43.2
comp=Z,93nm,1.0s
PSZ Piszkesteto 149.84 334 *e*PKPbc PKPbc 07 03 43.1 -0.6
PSZ Piszkesteto 149.84 334 PKHKP PKPbc 07 03 43.4 -0.3
PSZ Piszkesteto 149.84 334⇑ *e*PKP PKPbc 07 03 43.6 -0.1
PSZ Piszkesteto 149.84 334⇑ *i*P PKPbc 07 03 43.3 -0.4
ISP Isparta 149.87 308 *e*PKPbc PKPbc 07 03 43.3 -0.8
KOLL Kolacno 149.89 336 *e*PKP PKPbc 07 03 43.9 +0.2
VRAC Vranov 149.91 339 PKHKP PKPbc 07 03 43.8 0.0
VRAC 07 03 52.0
VRAC pmax pmax
comp=Z,21nm,0.8s
VRAC pmax pmax
comp=Z,17nm,0.6s
VRAC Vranov 149.91 339 PKPbc PKPbc 07 03 43.8 0.0
comp=Z,21nm,0.8s,baz=220,slow=1.8,SNR=13
VRAC PKPab PKPab 07 03 52.0 +0.1

comp=Z,17nm,0.6s,baz=78,slow=2.1,SNR=9.2
PRU Pruhonice 149.94 342 *e*PKPbc PKPbc 07 03 43.8 0.0
PRU *e*PKPab PKPab 07 03 52.2 +0.1
GDZ Gediz 150.08 311 *i* P PKPbc 07 03 43.9 -0.6
MOX Moxa 150.09 346 *e*PKP PKPbc 07 03 43.8 -0.3
comp=Z,68nm,1.3s
MOX *e* 07 03 51.7
MOX Moxa 150.09 346 *e*PKHKP PKPbc 07 03 43.8 -0.3
MOX *e* 07 03 51.7
MOX pmax pmax
comp=Z,68nm,1.3s
HGH Gray Hill 150.21 4 *e*P PKPbc 07 03 42.6 -1.8
UBBA Unterbreizbach 150.26 348 *e*PKPbc PKPbc 07 03 44.0 -0.5
NKC Novy Kostel 150.28 345 *e*PKPbc PKPbc 07 03 44.6 0.0
NKC *e*PKPab PKPab 07 03 51.9 -1.6
TREC Trest 150.28 340 *e*PKPbc PKPbc 07 03 44.4 -0.2
SMOL Smolenice 150.30 337 *e*PKP PKPbc 07 03 45.1 +0.4
GZR Gura Zlata 150.44 328⇑*i*P PKPbc 07 03 44.6 -0.5
MODS Modra-Piesok 150.47 337 *e*PKIKP PKPbc 07 03 45.6 +0.5
MODS Modra-Piesok 150.47 337 *e*PKP PKPbc 07 03 45.5 +0.4
EDRB Edirne 150.49 318 *e*P PKPbc 07 03 44.4 -0.9
BNT Bandirma 150.53 315 *e*P PKPbc 07 03 44.6 -0.9
WOL Wolverton 150.62 3 *e*P PKPbc 07 03 44.3 -1.0
ZST Bratislava 150.69 337 *e*PKP PKPbc 07 03 46.2 +0.6
HEX Exmoor 150.69 6 *e*P PKPbc 07 03 44.6 -0.9
HTL Hartland 150.69 7 *e*P PKPbc 07 03 44.4 -1.1
HTL AMb AMB 07 03 46.5
comp=Z,87nm,1.2s
BTOK Tokmak 150.75 314 *i* P PKPbc 07 03 45.0 -1.0
ROTZ Rotzenmuhle 150.77 345 *e*PKPbc PKPbc 07 03 45.3 -0.4
GOLH Golhisar 150.80 308 *i* P PKPdf 07 03 38.9 -1.1
BZS Buzias 150.84 329⇓*i*P PKPbc 07 03 45.6 -0.5
KULA Kula-Manisa 150.91 311 *e*P PKPbc 07 03 45.8 -0.7
BEBN Eben Emael 150.92 354 PKPbc PKPbc 07 03 45.5 -0.5
HGN Heimansgroeve 150.92 353 *e*PKP PKPdf 07 03 45.4 +5.7
comp=Z,38nm,0.8s
KHC Kasperske Hory 150.99 342 *e*PKIKP PKPdf 07 03 39.5 -0.4
KHC *e* 07 03 46.1
KHC *e* 07 03 56.5
KHC Kasperske Hory 150.99 342 *e*PKPdf PKPdf 07 03 39.5 -0.4
KHC *e*PKPbc PKPbc 07 03 46.1 -0.2
KHC *e*PKPab PKPab 07 03 56.5 0.0
KHC *ep*PKP pPKPdf 07 06 00.1 +4.6
UCC Uccle 151.04 355 PKPbc PKPbc 07 03 46.0 -0.3
MEM Membach 151.07 353 PKPbc PKPbc 07 03 46.0 -0.4
GRF Grafenberg Arr 151.07 346 *e*PKPbc PKPbc 07 03 46.0 -0.4
GRFO Grafenberg 151.07 346 *e*PKPbc PKPbc 07 03 46.1 -0.4
GRFO *e*PKPab PKPab 07 03 56.3 -0.5
TNS Taunus Mts 151.11 350 *e*PKPbc PKPbc 07 03 46.2 -0.3
WET Wettzell 151.17 343 *e*PKPdf PKPdf 07 03 39.5 -0.6
WET *e*PKPbc PKPbc 07 03 46.3 -0.4
WET *e*PKPab PKPab 07 03 57.2 0.0
WET *ep*PKPbc pPKPbc 07 06 02.4 +1.5
WET Wettzell 151.17 343 *e*PKIKP PKPbc 07 03 46.3 -0.4
WET Wettzell 151.17 343 *e*PKPdf PKPdf 07 03 39.5 -0.6
WET *e*PKPbc PKPbc 07 03 46.3 -0.4
WET *e*PKPab PKPab 07 03 57.2 0.0
WET *ep*PKPbc pPKPbc 07 06 02.3 +1.4
GEC2 GERESS Array S 151.21 342 *e*PKIKP PKPbc 07 03 46.5 -0.3
GEC2 GERESS Array S 151.21 342 *e*PKPdf PKPdf 07 03 39.9 -0.3
GEC2 *e*PKPbc PKPbc 07 03 46.5 -0.3
GEC2 *e*PKPab PKPab 07 03 57.3 -0.1
GERES GERESS Array B 151.21 342 PKIKP PKPdf 07 03 38.6 -1.6
GERES 07 03 46.5
GERES GERESS Array B 151.21 342 PKP PKPdf 07 03 38.6 -1.6
comp=Z,1.4nm,0.7s,baz=102,slow=5.7,SNR=7.7
GERES PKPbc PKPbc 07 03 46.5 -0.3
comp=Z,17nm,0.8s,baz=48,slow=2.0,SNR=72
GERES *ep*PKPbc pPKPbc 07 05 57.5 -3.6
comp=Z,0.2nm,0.2s,baz=46,slow=2.8,SNR=1.4
DYA Yadsworthy 151.30 6 *e*P PKPbc 07 03 46.0 -0.9
DYA AMb AMB 07 03 51.4
comp=Z,150nm,2.0s
SOP Sopron 151.31 337⇓*e*PKP PKPbc 07 03 47.0 0.0
BCLA Clavier 151.33 354 PKPbc PKPbc 07 03 46.4 -0.6
SNF Seneffe 151.33 355 PKPbc PKPbc 07 03 46.7 -0.3
CONA Conrad Observa 151.35 339⇑*i*PKPdf PKPdf 07 03 40.1 -0.4
comp=Z,3.3nm,0.7s
CONA ⇓*i*PKiKP PKiKP 07 03 47.3 -0.1
comp=Z,35nm,0.8s
CONA ⇓*i*PKPab PKPab 07 03 59.0 +1.0
comp=Z,13nm,0.7s
GIVF Givet 151.69 354 *e*PKP1 PKPbc 07 03 47.3 -0.5
comp=Z,152nm,1.0s
DOU Dourbes 151.72 355 PKPbc PKPbc 07 03 47.5 -0.3
PKSM Moragy 151.72 333 PKIKP PKPbc 07 03 47.6 -0.4
PKSM Moragy 151.72 333⇓*i*P PKPbc 07 03 47.5 -0.5
BAIF Baives 151.78 355 *e*PKP1 PKPbc 07 03 47.6 -0.4
comp=Z,42nm,0.7s
KDAG Bornova 151.93 312 *i* P PKPbc 07 03 47.9 -0.8
MOA Molln 151.94 340⇓*i* PKPbc 07 03 47.9 -0.5
comp=Z,14nm,1.0s
MOA Molln 151.94 340⇑*i* PKPab 07 04 01.0 +0.4
comp=Z,18nm,1.2s
MOA Molln 151.94 340⇑*i*P PKPdf 07 03 39.7 -1.6
MOA Molln 151.94 340⇑*i*PKPdf PKPdf 07 03 39.7 -1.6
MOA ⇑*i*PKPab PKPab 07 04 01.0 +0.4
comp=Z,18nm,1.2s
WLF Walferdange 151.98 353 *e*PKPbc PKPbc 07 03 48.6 +0.2
WLF *e*PKPab PKPab 07 04 00.1 -0.6
WLF Walferdange 151.98 353 PKPbc PKPbc 07 03 49.0 +0.6
WLF Walferdange 151.98 353 *e*PKPbc PKPbc 07 03 48.5 0.0
WLF *e*PKPab PKPab 07 04 00.3 -0.3
WLF *ep*PKPbc pPKPbc 07 06 04.4 +1.6
VTS Vitosha 152.12 323⇑*i*P PKPbc 07 03 49.0 0.0
STU Stuttgart 152.37 348 *e*PKPdf PKPdf 07 03 41.9 0.0
STU *e*PKPbc PKPbc 07 03 49.3 0.0
STU *e*PKPab PKPab 07 04 01.7 -0.6
FUR Furstenfeldbru 152.48 345 *e*PKPbc PKPbc 07 03 49.2 -0.4
FUR *e*PKPab PKPab 07 04 02.6 -0.2
KBA Koelnbreinsper 152.91 341⇓*i* PKPbc 07 03 49.5 -1.0
comp=Z,19nm,1.0s
KBA Koelnbreinsper 152.91 341⇑*i* PKPab 07 04 04.4 -0.3
comp=Z,11nm,0.6s
KBA Koelnbreinsper 152.91 341⇑*i*PKPdf PKPdf 07 03 40.9 -1.8
comp=Z,2.1nm,0.7s
KBA ⇓*i*PKPbc PKPbc 07 03 49.5 -1.0
comp=Z,19nm,1.0s
KBA ⇑*i*PKPab PKPab 07 04 04.4 -0.3
comp=Z,11nm,0.6s
BFO Black Forest 152.96 349 *e*PKIKP PKPbc 07 03 50.0 -0.6
BFO Black Forest 152.96 349 *e*PKPdf PKPdf 07 03 42.3 -0.5
BFO *e*PKPbc PKPbc 07 03 50.0 -0.6
BFO *e*PKPab PKPab 07 04 03.7 -1.1
BFO *ep*PKPbc pPKPbc 07 06 06.8 +1.7
CDF Champ du Feu 153.05 350 *e*PKP1 PKPbc 07 03 50.2 -0.6
comp=Z,36nm,0.9s
FLN La Foliniere 153.20 2 *e*PKP1 PKPbc 07 03 50.2 -0.9
comp=Z,42nm,0.6s
MYKA Terra Mystica 153.22 340⇑*i*PKPdf PKPdf 07 03 43.2 0.0
comp=Z,9.9nm,1.1s
MYKA ⇑*i*PKPbc PKPbc 07 03 50.3 -0.9
comp=Z,8.6nm,0.6s
MYKA ⇑*i*PKPab PKPab 07 04 05.3 -0.7
comp=Z,10nm,0.6s
WTTA Wattenberg 153.22 343⇓*i* PKPbc 07 03 50.5 -0.7
comp=Z,12nm,0.5s
WTTA Wattenberg 153.22 343⇑*i* PKPab 07 04 06.3 +0.3
comp=Z,35nm,1.5s
WTTA Wattenberg 153.22 343⇑*i*PKPdf PKPdf 07 03 43.0 -0.1
comp=Z,3.7nm,0.5s
WTTA ⇓*i*PKPbc PKPbc 07 03 50.5 -0.7
comp=Z,12nm,0.5s
WTTA ⇑*i*PKPab PKPab 07 04 06.3 +0.3
comp=Z,35nm,1.5s
MEZF Maizieres J'vi 153.25 354 *e*PKP1 PKPbc 07 03 50.8 -0.5
comp=Z,39nm,0.8s
LDF La Druitiere 153.37 1 *e*PKP1 PKPbc 07 03 50.4 -1.1
comp=Z,22nm,0.5s
ROSF Rostrenen 153.44 6 *e*PKP1 PKPbc 07 03 50.5 -1.2
comp=Z,28nm,0.7s
ABTA Abfaltersbach 153.45 342⇑*i*PKPdf PKPdf 07 03 42.8 -0.8
comp=Z,9.1nm,0.9s
ABTA ⇓*i*PKPbc PKPbc 07 03 50.7 -1.0
comp=Z,16nm,0.7s
ABTA ⇑*i*PKPab PKPab 07 04 06.3 -0.8
comp=Z,12nm,0.6s
GRR Gorron 153.56 2 *e*PKP1 PKPbc 07 03 51.1 -0.8
comp=Z,29nm,0.7s
HAU Haudompre 153.59 352 *e*PKP1 PKPbc 07 03 51.2 -0.8
comp=Z,14nm,0.6s
SGMF Saint Gilles 153.59 5 *e*PKP1 PKPbc 07 03 50.9 -1.1
comp=Z,53nm,0.8s
FETA Feichten 153.68 344⇑*i*PKPdf PKPdf 07 03 41.9 -1.9
comp=Z,12nm,1.0s
HINF Hinteralfeld 153.70 351 *e*PKP1 PKPbc 07 03 51.3 -0.9
comp=Z,7.3nm,0.7s
DAVOX Davos/Dischmat 154.11 346 PKP PKPdf 07 03 44.2 -0.3
comp=Z,5.6nm,0.9s,baz=16,slow=6.3,SNR=5.1
DAVOX PKPbc PKPbc 07 03 53.0 -0.1
comp=Z,11nm,0.6s,baz=238,slow=1.8,SNR=13
DAVOX PKPab PKPab 07 04 09.9 +0.1
comp=Z,12nm,0.7s,baz=21,slow=3.6,SNR=8.3
LOR Lormes 154.58 355 *e*PKP1 PKPdf 07 03 53.5 +8.4
comp=Z,14nm,0.8s
SSF Saint Saulge 154.82 356 *e*PKP1 PKPdf 07 03 54.0 +8.6
CABF La Chapelle 154.99 351 *e*PKP1 PKPdf 07 03 54.9 +9.2
MFF Saint Martin d 155.37 1 *e*PKP1 PKPdf 07 03 55.0 +8.8
comp=Z,20nm,0.8s
PCAB Cabril 158.93 19 *e*PKPab PKPab 07 04 30.6 -0.3
PBRG Braganca 159.20 16 *e*PKPab PKPab 07 04 31.7 -0.3
PVRL Vila Real 159.42 18 *e*PKPab PKPab 07 04 32.9 -0.1
MVO Moncorvo 159.72 17 *e*PKPdf PKPdf 07 03 52.0 +0.3
MVO Moncorvo 159.72 17 *e*PKPab PKPab 07 04 33.8 -0.5
MTE Manteigas 160.28 19 *e*PKPdf PKPdf 07 03 52.5 +0.2
PTOM Tomar 160.71 22 *e*PKPab PKPab 07 04 38.1 -0.6
PCBR Castelo Branco 160.81 20 *e*PKPdf PKPdf 07 03 53.3 +0.4
PCBR Castelo Branco 160.81 20 *e*PKPab PKPab 07 04 38.2 -0.9
EVO Evora 161.81 22 *e*PKIKP PKPdf 07 03 53.3 -0.7
comp=Z,29nm,1.2s
EVO Evora 161.81 22 *e*PKPab PKPab 07 04 42.7 -0.9
ESDC Sonseca Array 161.85 12 PKPab PKPab 07 04 42.5 -1.1
comp=Z,4.2nm,0.8s,baz=349,slow=4.5,SNR=11
PBEJ Beja 162.31 23 *e*PKPdf PKPdf 07 03 55.3 +0.8
PBEJ Beja 162.31 23 *e*PKPab PKPab 07 04 45.1 -0.7
PBAR Barrancos 162.47 21 *e*PKPdf PKPdf 07 03 55.0 +0.4
PBAR Barrancos 162.47 21 *e*PKPab PKPab 07 04 45.7 -0.8
PVAQ Vaqueiros 162.92 24 *e*PKPdf PKPdf 07 03 56.3 +1.2
PVAQ Vaqueiros 162.92 24 *e*PKPab PKPab 07 04 47.4 -1.1
PBDV Barranco-do-Ve 162.98 24 *e*PKPdf PKPdf 07 03 56.1 +1.0
LIC Lamto 163.43 159 *e*PKIKP PKPdf 07 03 54.8 -1.5
comp=Z,43nm,1.0s
DBIC Dimbokro 163.91 160 PKIKP PKPdf 07 03 55.9 -0.8
DBIC 07 04 54.1
DBIC pmax pmax
comp=Z,10.0nm,0.7s
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC Dimbokro 163.91 160 PKP PKPdf 07 03 55.9 -0.8
comp=Z,9.6nm,0.7s,baz=163,slow=1.5,SNR=20
DBIC PKPab PKPab 07 04 54.1 +0.8
comp=Z,4.5nm,0.8s,baz=181,slow=7.1,SNR=6.5
KEST Kesra 164.32 333 PKPab PKPab 07 04 54.5 -0.2
comp=Z,2.3nm,0.6s,baz=68,slow=3.7,SNR=7.1
MDT Midelt 168.15 22 PKP PKPdf 07 03 59.2 -0.2
comp=Z,4.6nm,1.0s,baz=38,slow=4.9,SNR=4.9
MDT PKPab PKPab 07 05 11.5 -0.2
comp=Z,4.8nm,0.9s,baz=313,slow=5.2,SNR=8.3
TORD Torodi Ar. Bea 171.23 186 PKP PKPdf 07 04 00.5 -1.2
comp=Z,7.0nm,0.8s,baz=284,slow=0.6,SNR=35
TORD PKPab PKPab 07 05 25.8 +0.2
comp=Z,4.2nm,0.7s,baz=169,slow=3.8,SNR=15

*ISCJB **30** 06:51:25.3±0.6,2200N±006×1429E±02,h33km,mb4.0/9, MS3.6/4,Error ellipse: s-maj=27.7km s-min=8.2km az=177.3*
*IDC **30** 06:51:27.1±8.2,2198N×143̸06E,h33km±62km,mb3.8/9, mb1 4.1/10,mb1mx3.9/21,mbtmp3.9/10,ML3.9/1,MS3.5/8, Ms1 3.5/8,ms1mx3.3/24,Error ellipse: s-maj=35.8km s-min=15.4km az=97.0*
ISC 30 06:51:27.5±2.4,2199N±008×1430E±02,h36km±23km,n20, σθ55/12,mb4.0/9,MS3.6/4,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**5.14**	**352**	Pn	**Pn**	**06 52 42.7**	**+0.8**
	11nm,0.3s,baz=262,slow=18,SNR=4.1						
CBIJ				Sn	**Sn**	**06 53 39.2**	**-0.8**
	7.0nm,0.3s,baz=108,slow=19,SNR=2.7						
JHJ	**Hachijo jima 2**	**11.45**	**346**	LR	LR	06 58 38.3	
	comp=Z,385nm,18.2s,baz=349,slow=38						
JOW	**Kunigami**	**14.26**	**293**	LR	LR	06 59 36.1	
	comp=Z,117nm,21.1s,baz=141,slow=34						
MJAR	**Matsushiro Arr**	**15.09**	**345**	LR	LR	07 00 06.5	
	comp=Z,163nm,19.6s,baz=180,slow=34						
JNU	**Nakatsue**	**15.43**	**318**	LR	LR	06 59 57.0	
	comp=Z,65nm,18.5s,baz=241,slow=33						
KSRS	**Korea Array**	**20.18**	**323**	LR	LR	07 02 55.9	
	comp=Z,61nm,19.3s,MS3.0,baz=150,slow=34						
HNR	**Honiara**	**35.37**	**150**	LR	LR	07 11 22.5	
	comp=Z,54nm,19.0s,MS3.3,baz=1.7,slow=34						
CTA	**Charters Tower**	**41.94**	**175**	*e*SCP	**P**	**06 59 15.1**	**+0.2**
WRA	**Warramunga Arr**	**42.53**	**192**	P	**P**	**06 59 19.0**	**-0.7**
	4.0nm,0.7s,mb4.2,baz=13,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**43.32**	**204**	P	**P**	**06 59 26.9**	**+0.7**
	2.5nm,0.7s,mb4.1,baz=23,slow=10,SNR=5.8						
ASAR	**Alice Springs**	**46.24**	**192**	P	**P**	**06 59 49.0**	**-0.3**
	1.4nm,0.7s,mb4.0,baz=17,slow=8.3,SNR=11						
STKA	**Stephens Creek**	**53.58**	**181**	P	**P**	**07 00 44.3**	**-0.7**
	2.7nm,0.6s,mb4.4,baz=16,slow=5.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**53.88**	**322**	P	**P**	**07 00 47.1**	**+0.1**
	1.5nm,0.5s,mb4.2,baz=112,slow=8.9,SNR=4.8						
MKAR	**Makanchi Array**	**54.38**	**313**	P	**P**	**07 00 51.1**	**+0.4**
	0.4nm,0.5s,mb3.6,baz=94,slow=8.3,SNR=5.0						
YKA	**Yellowknife Ar**	**76.27**	**28**	P	**P**	**07 03 11.6**	**-0.6**
	0.6nm,0.6s,mb3.7,baz=292,slow=5.9,SNR=8.9						
PPT	**Papeete**	**76.80**	**115**	LR	LR	07 32 23.5	
	comp=Z,192nm,21.0s,MS4.4,baz=60,slow=32						
NVAR	**Mina Array Bea**	**83.09**	**51**	P	**P**	**07 03 50.3**	**+0.6**
	1.6nm,0.7s,mb4.2,baz=266,slow=4.2,SNR=16						
PDAR	**Pinedale Array**	**87.30**	**45**	P	**P**	**07 04 11.0**	**+0.3**
	0.5nm,0.8s,mb3.8,baz=320,slow=4.4,SNR=4.0						
PDAR				LR	LR	07 35 30.6	
	comp=Z,45nm,21.0s,MS3.9,baz=174,slow=30						
PLCA	**Paso Flores**	**146.07**	**131**	PKPbc	PKPbc	07 11 03.0	-0.8
	0.8nm,0.8s,baz=231,slow=6.5,SNR=4.3						
LPAZ	**La Paz**	**150.08**	**85**	PKPbc	PKPbc	07 11 15.7	+0.5
	2.9nm,0.7s,baz=329,slow=2.0,SNR=15						

IDC 30 07:37:56.5±1.3,2033N×14736E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.5/19,mbtmp3.5/4,Error ellipse: s-maj=53.6km s-min=25.0km az=95.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**24.02**	**319**	P	P	07 43 14.0	+0.9
	0.5nm,0.3s,baz=132,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**42.00**	**198**	P	P	07 45 49.8	+0.1
	0.5nm,0.4s,baz=16,slow=9.2,SNR=13						
ASAR	**Alice Springs**	**45.65**	**197**	P	P	07 46 18.7	-0.3
	0.1nm,0.4s,baz=13,slow=9.1,SNR=4.6						
YKA	**Yellowknife Ar**	**75.82**	**28**	P	P	07 49 43.8	-0.4
	0.2nm,0.6s,baz=288,slow=5.5,SNR=5.6						

GUC 30 07:41:20.3±0.7,3168S×7195W,h24km±5km,MD3.7, ML2.7,1C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.43**	**119**	*e*P	Pb	07 41 12.3	-17
CHNG				*i* S	Sb	07 41 18.8	-17
CMCH	**Combarbala**	**0.95**	**58**	⇑*i*P	Pb	07 41 37.6	-0.5
CMCH				*i* S	Sb	07 41 50.3	+0.1
CMCH				AML	AML	07 41 51.4	
	comp=E,598nm,0.6s						
PEL	**Peldehue**	**1.81**	**144**	*e*P	Pn	07 41 51.0	+1.0
PEL				*i* S	Sn	07 42 14.3	+2.1
PEL				AML	AML	07 42 23.9	
	comp=E,166nm,0.6s						
FCH	**Farellones**	**2.16**	**140**	*e*P	Pn	07 41 56.2	+1.5
FCH				*i* S	Sn	07 42 24.5	+3.7
FCH				AML	AML	07 42 31.0	
	comp=E,47nm,0.2s						
LMEL	**Las Melosas**	**2.62**	**146**	*e*P	Pn	07 42 02.7	+1.7
LMEL				*i* S	Sn	07 42 35.0	+2.9
LMEL				AML	AML	07 42 44.0	
	comp=N,44nm,0.4s						

*IDC **30** 07:57:50.0±2.3,1401N×9308W,h0km,mb3.7/5,mb1 4.0/7, mb1mx3.8/21,mbtmp3.8/7,ML4.0/2,MS3.3/3,Ms1 3.3/3, ms1mx2.8/31,Error ellipse: s-maj=46.5km s-min=25.1km az=27.0*

*ISCJB **30** 07:57:55.0±1.1,1404N±007×9371W±005,h33km,mb3.8/6, Error ellipse: s-maj=10.4km s-min=7.0km az=1.6*
*MEX **30** 07:57:55.9±0.8,1397N×9366W,h16km±30km,MD4.2*
*NEIC **30** 07:57:56.0,1396N×9370W,h20km,mb4.0/2, MD4.2(MEX),After MEX.*
ISC 30 07:57:56.6±1.2,1404N±008×9367W±005,h35km,n23, σ1§25/34,mb3.8/6,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**2.68**	**33**	*i* P	**Pn**	**07 58 36.3**	**-0.9**
CCIG				*i* S	**Sn**	**07 59 09.7**	**+1.2**
CCIG	**Comitan**	**2.68**	**33**	*i* P	**Pn**	**07 58 35.8**	**-1.4**
CCIG				*i* S	**Sn**	**07 59 07.2**	**-1.3**
SCX	**San Cristobal**	**2.86**	**20**	*i* P	**Pn**	**07 58 39.6**	**-0.2**
SCX				*i* S	**Sn**	**07 59 13.2**	**+0.2**
HUIG	**Huatulco**	**2.92**	**306**	*i* P	**Pn**	**07 58 39.9**	**-0.6**
HUIG				*i* S	**Sn**	**07 59 12.3**	**-2.1**
HUIG	**Huatulco**	**2.92**	**306**	*i* P	**Pn**	**07 58 39.9**	**-0.6**
HUIG				*i* S	**Sn**	**07 59 12.7**	**-1.6**
CMIG	**Matias Romero**	**3.25**	**339**	Pn	**Pn**	**07 58 44.9**	**-0.2**
	3.1nm,0.3s,baz=155,slow=9.1,SNR=49						
CMIG				Sn	**Sn**	**07 59 23.4**	**+0.8**
	9.4nm,0.3s,baz=95,slow=17,SNR=11						
CMIG				LR	LR	08 00 11.5	
	comp=Z,139nm,19.5s,baz=68,slow=40						
CMIG	**Matias Romero**	**3.25**	**339**	*i* P	**Pn**	**07 58 45.0**	**-0.2**
CMIG				*i* S	**Sn**	**07 59 22.8**	**+0.2**
VHO	**Vista Hermosa**	**4.22**	**316**	*i* P	**Pn**	**07 59 03.0**	**+4.6**
VHO				*i* S	**Sn**	**07 59 42.6**	**-3.9**
VHO	**Vista Hermosa**	**4.22**	**316**	*i* P	**Pn**	**07 58 57.0**	**-1.4**
VHO				*i* S	**Sn**	**07 59 45.6**	**-0.9**
UTMO	**Huajuapan**	**5.48**	**314**	*i* P	**Pn**	**07 59 15.8**	**0.0**
UTMO				*i* S	**Sn**	**08 00 18.7**	**+1.1**
TEIG	**Tepich**	**8.03**	**39**	*i* P	**Pn**	**07 59 45.9**	**-4.9**
TEIG	**Tepich**	**8.03**	**39**	Pn	**Pn**	**07 59 44.6**	**-6.1**
	8.8nm,0.3s,baz=50,slow=0.7,SNR=48						
TEIG				Sn	**Sn**	**08 01 12.7**	**-7.7**
	1.1nm,0.3s,baz=307,slow=20,SNR=4.7						
TEIG				LR	LR	08 02 57.0	
	comp=Z,60nm,19.1s,baz=30,slow=40						
TEIG	**Tepich**	**8.03**	**39**	*i* P	**Pn**	**07 59 45.1**	**-5.6**
TEIG				*i* S	**Sn**	**08 01 14.5**	**-5.8**
JCT	**Junction City**	**17.31**	**342**	*e*P	**Pn**	**08 01 59.4**	**+3.9**
	4.6nm,0.8s						
AMTX	**Amarillo**	**21.98**	**342**	*e*P	**P**	**08 02 49.2**	**+1.7**
	9.4nm,0.6s,mb4.4						
SDV	**Santo Domingo**	**23.14**	**100**	*e*P	**P**	**08 02 59.5**	**-0.5**
SDV				*ep*P		08 03 06.1	
SDV	**Santo Domingo**	**23.14**	**100**	P	**P**	**08 02 52.2**	**-7.9**
	1.0nm,0.5s,mb3.5,baz=336,slow=10.0,SNR=2.2						
PDAR	**Pinedale Array**	**31.74**	**337**	P	**P**	**08 04 19.2**	**+1.9**
	0.2nm,0.6s,mb3.1,baz=106,slow=6.7,SNR=2.8						
NVAR	**Mina Array Bea**	**32.64**	**323**	P	**P**	**08 04 27.1**	**+1.9**
	0.6nm,0.8s,mb3.6,baz=129,slow=9.0,SNR=5.5						
ULM	**Lac du Bonnet**	**36.16**	**358**	P	**P**	**08 04 52.9**	**-2.6**
	2.6nm,0.8s,mb4.2,baz=183,slow=9.4,SNR=5.9						
YKA	**Yellowknife Ar**	**50.63**	**348**	P	**P**	**08 06 52.2**	**+0.3**
YKA	**Yellowknife Ar**	**50.63**	**348**	P	**P**	**08 06 52.2**	**+0.3**
	0.9nm,0.5s,mb4.0,baz=152,slow=7.3,SNR=23						
PPT	**Papeete**	**63.47**	**242**	LR	LR	08 28 00.2	
	comp=Z,231nm,19.1s,baz=223,slow=28						

IDC 30 08:14:04.3±9.0,674S×13008E,h167km±93km,mb3.9/1, mb1 3.7/5,mb1mx3.5/15,mbtmp3.6/5,Error ellipse: s-maj=79.7km s-min=26.0km az=40.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**7.22**	**241**	P	Pn	08 15 48.0	+0.6
	4.5nm,0.3s,baz=112,slow=7.3,SNR=4.6						
BATI				S	Sn	08 17 09.7	+1.2
	6.3nm,0.3s,baz=218,slow=21,SNR=6.8						
FITZ	**Fitzroy Crossi**	**12.10**	**201**	P	Pn	08 16 49.8	-1.5
	0.9nm,0.3s,baz=36,slow=11,SNR=8.1						
FITZ				S	Sn	08 19 01.0	-4.5
	0.6nm,0.3s,baz=57,slow=21,SNR=5.9						
WRA	**Warramunga Arr**	**13.76**	**163**	P	Pn	08 17 11.2	-1.3
	1.6nm,0.3s,baz=342,slow=13,SNR=36						
WRA				S	Sn	08 19 37.1	-8.4
	1.8nm,0.3s,baz=341,slow=21,SNR=9.3						
ASAR	**Alice Springs**	**17.23**	**168**	P	Pn	08 17 56.0	+1.0
	0.7nm,0.3s,baz=355,slow=9.3,SNR=27						
ASAR				S	S	08 21 02.7	-2.0
	0.3nm,0.3s,baz=350,slow=24,SNR=7.2						
MKAR	**Makanchi Array**	**68.05**	**327**	P	P	08 24 45.8	0.0
	2.0nm,0.6s,baz=120,slow=8.1,SNR=22						

*MOS **30** 08:15:24.0±1.3,2519S×17725W,h92km,mb4.7/8,Error ellipse: s-maj=17.1km s-min=11.9km az=71.3*
*BJI **30** 08:15:28.0,2530S×17730W,h140km,mB5.1, mb5.0*
*ISCJB **30** 08:15:29.1±0.3,2546S±005×17730W±007,h142km, mb4.5/36,Error ellipse: s-maj=9.6km s-min=7.0km az=19.5*
*IDC **30** 08:15:30.2±0.8,2521S×17732W,h143km±6km,mb4.0/11, mb1 4.2/11,mb1mx4.1/15,mbtmp4.0/11,MS2.8/1, Ms1 2.8/1,ms1mx2.5/28,Error ellipse: s-maj=20.0km s-min=13.6km az=160.0*
*NEIC **30** 08:15:30.1±0.2,2535S×17735W,mb4.7/18,Error ellipse: s-maj=10.0km s-min=6.2km az=144.0*
ISC 30 08:15:30.6±0.3,2549S±006×17727W±007,h144km, h144km±1.0km:pP-P,n126,σ0§95/75,mb4.5/36,3C-2D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.80**	**189**	*e*Pn	**Pn**	**08 16 27.1**	**-0.9**
RAO				*e*Sn	**Sn**	**08 17 14.6**	**+2.0**
RAO	**Raoul Island**	**3.80**	**189**	P	**Pn**	**08 16 26.7**	**-1.3**
RAO				S	**Sn**	**08 17 14.4**	**+1.8**
RAO				pmax	pmax		
	comp=Z,277nm,0.3s						
RAO				smax			
	comp=N,619nm,0.3s						
RAO	**Raoul Island**	**3.80**	**189**	P	**Pn**	**08 16 26.7**	**-1.3**
	comp=N,277nm,0.3s,baz=63,slow=23,SNR=12						
RAO				S	**Sn**	**08 17 14.4**	**+1.8**
	comp=N,619nm,0.3s,baz=103,slow=22,SNR=8.1						
AFI	**Afiamalu**	**12.62**	**25**	*e*Pn	**Pn**	**08 18 15.8**	**-9.3**
	comp=N,199nm,0.9s						
AFI	**Afiamalu**	**12.62**	**25**	*e*P	**Pn**	**08 18 15.8**	**-9.3**
AFI				pmax	pmax		
	comp=Z,199nm,0.9s						
URZ	**Urewera**	**13.60**	**199**	P	**Pn**	**08 18 28.8**	**-8.7**
	comp=Z,0.9nm,0.3s,baz=224,slow=7.4,SNR=1.9						
URZ				S	**Sn**	**08 20 56.0**	**-12**
	comp=Z,4.2nm,0.3s,baz=133

VNDA	**Vanda**	**53.03**	**186**	P		**P**	**08 24 34.8**	**+2.6**	
	comp=Z,0.7nm,0.7s,mb3.5,baz=3.6,slow=8.3,SNR=5.0								
FITZ	**Fitzroy Crossi**	**53.19**	**266**	P		**P**	**08 24 32.6**	**-1.6**	
	comp=Z,2.0nm,0.7s,mb4.0,baz=112,slow=14,SNR=4.3								
FITZ					pP	pP	08 25 09.3	+1.8	
	comp=Z,3.2nm,0.8s,baz=105,slow=7.3,SNR=4.2								
QSPA	**South Pole Qui**	**64.61**	**180**	*e*P		**P**	**08 25 53.8**	**+1.8**	
	comp=Z,14nm,0.9s,mb4.8								
QSPA					*e*pP	pP	08 26 27.9	+1.3	
MAW	**Mawson**	**77.13**	**200**	P		**P**	**08 27 08.9**	**+1.2**	
	comp=Z,11nm,0.9s,mb4.5,baz=146,slow=7.3,SNR=12								
MAW					pP	pP	08 27 44.3	+0.9	
	comp=Z,3.4nm,0.6s,baz=154,slow=5.8,SNR=2.0								
YSS	**Yuzh-Sakhalins**	**80.64**	**334**	*e*P		**P**	**08 27 25.8**	**-1.2**	
	comp=Z,13nm,0.4s,mb4.9								
YSS	**Yuzh-Sakhalins**	**80.64**	**334**	*i* P		**P**	**08 27 26.4**	**-0.6**	
YSS					pmax	pmax			
	comp=Z,60nm,1.7s,mb5.0								
KSRS	**Korea Array**	**81.06**	**319**	P		**P**	**08 27 29.9**	**+0.4**	
KSRS					pmax	pmax			
	comp=Z,3.0nm,0.9s,mb3.9								
KSRS	**Korea Array**	**81.06**	**319**	P		**P**	**08 27 29.9**	**+0.4**	
	comp=Z,2.6nm,0.9s,mb3.9,baz=148,slow=5.7,SNR=6.2								
SYO	**Syowa Base**	**82.03**	**193**‖	*e*P		**P**	**08 27 32.2**	**-2.0**	
SYO	**Syowa Base**	**82.03**	**193**‖	*e*PcP		PcP	08 27 37.0	-2.3	
ISA	**Isabella**	**82.36**	**45**	*e*P		**P**	**08 27 36.2**	**-0.2**	
ISA					*e*pP	pP	08 28 11.8	-0.6	
SNAA	**Sanae**	**83.03**	**178**	*e*P		**P**	**08 27 37.8**	**-1.5**	
SNAA				*e*			08 27 41.2		
SNAA				*e*			08 27 46.0		
SNAA				*e*			08 27 49.3		
SNAA				*e*			08 27 52.6		
SNAA				*e*			08 28 04.6		
SNAA				*e*		pP	08 28 14.1	-1.4	
SNAA	**Sanae**	**83.03**	**178**	*i* P		**P**	**08 27 39.5**	**+0.2**	
VNA3	**Neumayer Olymp**	**83.15**	**176**	*e*P		**P**	**08 27 38.8**	**-1.1**	
VNA3				*e*			08 27 42.6		
VNA3				*e*			08 27 48.3		
VNA3				*e*			08 27 53.4		
VNA3				*e*			08 27 57.3		
VNA3				*e*		pP	08 28 17.1	+1.0	
GSC	**Goldstone**	**83.21**	**46**	*e*P		**P**	**08 27 40.4**	**-0.3**	
GSC					*e*pP	pP	08 28 16.4	-0.5	
NJ2	**Nanjing**	**83.57**	**310**	*e*P		**P**	**08 27 42.5**	**-0.2**	
NJ2					AMB	AMB			
	comp=Z,20nm,0.5s,mb5.1								
VNA2	**Neumayer--Watz**	**83.59**	**177**	*e*P		**P**	**08 27 41.3**	**-0.9**	
VNA2				*e*			08 27 45.6		
VNA2				*e*			08 27 50.8		
VNA2				*e*			08 27 54.1		
VNA2				*e*			08 27 58.7		
VNA2				*e*			08 28 09.2		
VNA2				*e*		pP	08 28 18.6	+0.2	
VNA1	**Neumayer--Stat**	**83.82**	**176**	*e*P		**P**	**08 27 42.6**	**-0.8**	
VNA1				*e*			08 27 45.7		
VNA1				*e*			08 27 50.9		
VNA1				*e*			08 27 54.6		
VNA1				*e*			08 27 57.9		
VNA1				*e*			08 28 01.3		
VNA1				*e*			08 28 09.9		
VNA1				*e*		pP	08 28 19.4	-0.1	
NVAR	**Mina Array Bea**	**84.20**	**43**	P		**P**	**08 27 45.2**	**-0.4**	
	comp=Z,2.2nm,0.8s,mb4.0,baz=223,slow=8.7,SNR=25								
NVAR					pP	pP	08 28 20.9	-1.0	
	comp=Z,3.3nm,0.6s,baz=230,slow=9.8,SNR=12								
TPNV	**Topopah Spring**	**84.56**	**45**	*e*pP		pP	08 28 23.4	-0.5	
MDJ	**Mudanjiang**	**84.97**	**325**	P		**P**	**08 27 49.5**	**+0.1**	
MDJ					AMB	AMB			
	comp=Z,18nm,0.9s,mb4.8								
MDJ					AMB	AMB			
	comp=Z,90nm,5.2s								
HABR	**Khabarovsk**	**85.09**	**330**	*e*P		**P**	**08 27 50.9**	**+1.0**	
HABR				*e*			08 38 15.3		
HABR				*e*SS		SS	08 43 42.8	-2.0	
MOD	**Modoc**	**85.23**	**39**	*e*P		**P**	**08 27 50.9**	**+0.1**	
MOD					*e*pP	pP	08 28 26.5	-0.7	
PLCA	**Paso Flores**	**85.38**	**133**	P		**P**	**08 27 52.8**	**+1.0**	
	comp=Z,2.7nm,0.8s,mb4.0,baz=246,slow=7.5,SNR=5.5								
TUC	**Tucson**	**85.54**	**51**	*e*P		**P**	**08 27 53.3**	**+0.8**	
TUC					*e*pP	pP	08 28 28.4	-0.5	
CN2	**Changchun**	**86.64**	**322**	*e*P		**P**	**08 27 57.8**	**+0.1**	
CN2					*e*AP	pP	08 28 32.8	-1.3	
CN2					AMB	AMB			
	comp=Z,30nm,1.0s,mb5.1								
KLR	**Kul'dur**	**87.14**	**329**	*e*P		**P**	**08 27 55.2**	**-4.8**	
KLR					pmax	pmax			
	comp=Z,26nm,1.4s,mb4.9								
MA2	**Magadan**	**88.75**	**344**	*e*P		**P**	**08 28 06.8**	**-0.5**	
	comp=Z,2.8nm,0.4s,mb4.5								
MA2	**Magadan**	**88.75**	**344**	*i* P		**P**	**08 28 06.9**	**-0.4**	
MA2					pmax	pmax			
	comp=Z,9.0nm,1.0s,mb4.7								
MNTX	**Cornudas Mount**	**89.09**	**54**	*e*P		**P**	**08 28 09.8**	**+0.1**	
	comp=Z,25nm,2.3s,mb4.7								
MNTX					*e*pP	pP	08 28 45.0	-1.2	
TMUT	**Trail Mountain**	**89.16**	**45**	*e*P		**P**	**08 28 10.0**	**+0.2**	
TMUT					*e*pP	pP	08 28 45.9	-0.5	
SRU	**San Rafael**	**89.50**	**46**	*e*P		**P**	**08 28 11.3**	**0.0**	
SRU					*e*pP	pP	08 28 47.0	-0.9	
SRU	**San Rafael**	**89.50**	**46**	*e*P		**P**	**08 28 11.3**	**0.0**	
SRU					*e**PP	pP	08 28 47.0	-0.9	
SRU					pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0								
GYA	**Guiyang**	**89.69**	**300**	*e*P		**P**	**08 28 14.0**	**+1.4**	
GYA					AP	pP	08 28 50.3	+1.1	
GYA					XP	sP	08 29 05.0	+0.7	
GYA					PP	PP	08 31 50.0	+3.1	
GYA					SKS		08 38 28.8		
GYA					S	S	08 38 51.0	-1.0	
GYA					XS	sS	08 39 54.8	-0.6	
GYA					AMB	AMB			
	comp=Z,10.0nm,0.9s,mb4.8								
GYA					AMB	AMB			
	comp=Z,90nm,5.2s								
JLU	**Jordanelle**	**89.74**	**44**	*e*pP		pP	08 28 48.7	-0.3	
BJI	**Beijing**	**89.89**	**315**	P		**P**	**08 28 13.5**	**+0.3**	
BJI					AMB	AMB			
	comp=Z,12nm,1.3s,mb4.7								
ANMO	**Albuquerque**	**90.00**	**51**	*e*P		**P**	**08 28 14.1**	**+0.3**	
	comp=Z,2.9nm,1.0s,mb4.2								
ANMO					*e*pP	pP	08 28 49.9	-0.5	
ANMO	**Albuquerque**	**90.00**	**51**	*e*P		**P**	**08 28 14.1**	**+0.3**	
ANMO					*e**PP	pP	08 28 49.9	-0.5	
ANMO					pmax	pmax			
	comp=Z,3.0nm,1.0s								
SEY	**Seymchan**	**91.36**	**347**	*i* P		**P**	**08 28 19.1**	**-0.3**	
REDW	**Red Top Meadow**	**91.66**	**42**	*e*P		**P**	**08 28 21.4**	**+0.1**	
	comp=Z,7.7nm,1.1s,mb4.7								
REDW					*e*pP	pP	08 28 57.7	-0.2	
XAN	**Xi'an**	**91.67**	**307**	P		**P**	**08 28 22.5**	**+0.9**	
XAN					AMB	AMB			
	comp=Z,14nm,0.9s,mb5.0								
TPAW	**Teton Pass**	**91.67**	**42**	*e*pP		pP	08 28 57.9	-0.1	
DLMT	**Dillon**	**91.77**	**40**	*e*P		**P**	**08 28 13.0**	**-8.7**	
	comp=Z,9.6nm,1.3s,mb4.7								
DLMT					*e*pP	pP	08 28 57.5	-0.8	
SNOW	**Snow King Moun**	**91.78**	**42**	*e*P		**P**	**08 28 21.6**	**-0.2**	
	comp=Z,7.5nm,0.9s,mb4.7								
SNOW					*e*pP	pP	08 28 58.3	-0.2	
SMCO	**Snowmass**	**91.85**	**47**	*e*pP		pP	08 28 58.4	-0.6	
IMW	**Indian Meadow**	**91.91**	**41**	*e*P		**P**	**08 28 22.5**	**0.0**	
	comp=Z,6.9nm,1.0s,mb4.6								
IMW					*e*pP	pP	08 28 58.4	-0.7	
LOHW	**Long Hollow**	**91.95**	**42**	*e*P		**P**	**08 28 23.0**	**+0.4**	
	comp=Z,13nm,1.7s,mb4.7								
LOHW					*e*pP	pP	08 28 59.0	-0.3	
BW06	**Boulder Array**	**92.12**	**43**	*e*pP		pP	08 28 59.1	-1.0	
PDAR	**Pinedale Array**	**92.12**	**43**	P		**P**	**08 28 22.6**	**-0.8**	
	comp=Z,1.2nm,0.8s,mb4.0,baz=225,slow=2.7,SNR=12								
PDAR					pP	pP	08 28 58.0	-2.1	
	comp=Z,3.1nm,0.9s,baz=209,slow=3.4,SNR=14								
QLMT	**Earthquake Lak**	**92.14**	**41**	*e*P		**P**	**08 28 23.7**	**+0.2**	
QLMT					*e*pP	pP	08 29 00.6	+0.5	
FLWY	**Flagg Ranch**	**92.16**	**41**	*e*P		**P**	**08 28 24.0**	**+0.4**	
	comp=Z,5.5nm,0.8s,mb4.6								
FLWY					*e*pP	pP	08 28 59.6	-0.6	
KMI	**Kunming**	**92.19**	**297**	P		**P**	**08 28 26.5**	**+2.3**	
KMI					AMB	AMB			
	comp=Z,14nm,1.4s,mb4.8								
TRQA	**Tornquist**	**92.41**	**134**	*e*P		**P**	**08 28 22.8**	**-2.4**	
	comp=Z,6.6nm,1.2s,mb4.5								
BOZ	**Bozeman (W)**	**92.49**	**40**	*e*P		**P**	**08 28 24.1**	**-0.9**	
	comp=Z,1.2nm,0.8s,mb4.0								
BOZ					*e*pP	pP	08 29 00.8	-1.0	
BOZ	**Bozeman (W)**	**92.49**	**40**	*e*P		**P**	**08 28 24.1**	**-1.0**	
BOZ					*e**PP	pP	08 29 00.8	-0.9	
BOZ					pmax	pmax			
	comp=Z,1.0nm,0.8s,mb3.9								
HHC	**Hu-ho-hao-te**	**93.30**	**314**	*e*P		**P**	**08 28 29.5**	**+0.6**	
HHC					AP	pP	08 29 05.5	-0.1	
HHC					XP	sP	08 29 20.8	+0.1	
HHC					PP	PP	08 32 18.8	+3.7	
HHC					SKS		08 38 48.8		
HHC					S	S	08 39 22.8	-1.1	
HHC					XS	sS	08 40 25.5	-2.3	
HHC					SS	SS	08 45 46.3	+2.4	
HHC					AMB	AMB			
	comp=Z,23nm,1.0s,mb5.3								
HHC					AMB	AMB			
	comp=Z,138nm,5.6s								
HHC					LR	LR			
	comp=N,163nm,24.5s								
HHC					LR	LR			
	comp=E,351nm,30.6s								
HHC					LR	LR			
	comp=Z,98nm,27.5s								
CD2	**Chengdu**	**94.02**	**302**	*e*P		**P**	**08 28 32.8**	**+0.3**	
CD2					AP	pP	08 29 08.8	-0.4	
CD2					XP	sP	08 29 23.8	-0.5	
CD2					PP	PP	08 32 24.5	+3.5	
CD2					SKS		08 38 53.3		
CD2					S	S	08 39 28.5	-2.2	
CD2					XS	sS	08 40 31.8	-2.9	
CD2					SS	SS	08 45 56.5	+1.8	
CD2					AMB	AMB			
	comp=Z,10.0nm,0.8s,mb5.0								
CD2					AMB	AMB			
	comp=Z,30nm,5.2s								
BILL	**Bilibino**	**94.04**	**354**‖	*e*P		**P**	**08 28 27.1**	**-4.6**	
BILL				*i*			08 32 13.5		
BILL				*e*PS		PS	08 41 02.4	-0.9	
BILL					pmax	pmax			
	comp=Z,1.0nm,3.4s								
LZH	**Lanzhou**	**96.31**	**307**	*e*P		**P**	**08 28 43.0**	**+0.2**	
LZH					AP	pP	08 29 21.5	+2.0	
LZH					XP	sP	08 29 35.5	+0.9	
LZH					AMB	AMB			
	comp=Z,15nm,1.0s,mb5.3								
LZH					AMB	AMB			
	comp=Z,63nm,4.4s								
GTA	**Gaotai**	**100.62**	**309**	*e*P		Pdif	08 29 04.0	+2.0	
GTA					AP		08 29 40.5		
GTA					XP		08 29 55.5		
GTA					PP	PP	08 33 12.5	+1.1	
GTA					SKS		08 39 27.5		
GTA					S	Sdif	08 40 23.0	-3.5	
GTA					XS		08 41 26.5		
GTA					SS	SS	08 47 22.5	-4.6	
GTA					AMB	AMB			
	comp=Z,3.0nm,0.8s								
GTA					AMB	AMB			
	comp=Z,61nm,6.9s								
GTA					LR	LR			
	comp=N,527nm,10.3s								
GTA					LR	LR			
	comp=E,279nm,14.1s								
GTA					LR	LR			
	comp=Z,308nm,14.1s								
WMQ	**Urumqi**	**110.65**	**310**	PKP		PKiKP	08 33 43.0	-3.0	
WMQ					PP	PP	08 34 25.5	+0.3	
WMQ					PP	PP			
	comp=Z,51nm,4.2s								
ZALV	**Zalesovo Beam**	**114.75**	**320**	PKP		PKiKP	08 33 52.0	-1.6	
	comp=Z,0.7nm,0.4s,baz=162,slow=0.5,SNR=4.7								
ZAL	**Zalesovo**	**114.76**	**320**	PKIKP		PKiKP	08 33 52.0	-1.5	
MKAR	**Makanchi Array**	**115.05**	**312**	*i* PKIKP		PKiKP	08 33 53.0	-1.3	
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**115.05**	**312**	PKP		PKiKP	08 33 52.4	-1.9	
	comp=Z,1.7nm,0.6s,baz=70,slow=1.2,SNR=18								
UCH	**Uchtor**	**119.76**	**306**	*e*PKPdf		PKPdf	08 34 03.8	+0.3	
ARU	**Arti**	**129.63**	**323**	*i* PKIKP		PKPdf	08 34 21.5	-0.5	
ARU							08 36 29.9		
ARU							08 41 15.4		
ARCES	**ARCESS Array B**	**133.92**	**349**	PKP		PKPdf	08 34 29.6	-0.1	
	comp=Z,4.2nm,1.0s,baz=350,slow=1.4,SNR=7.3								
FINES	**FINESS Array B**	**140.72**	**342**	*i* PKIKP		PKPdf	08 34 44.0	+1.5	
FINES					pmax	pmax			
	comp=Z,1.0nm,0.3s								
FINES	**FINESS Array B**	**140.72**	**342**	PKhKP			08 34 34.2		
	comp=Z,0.3nm,0.3s,baz=29,slow=3.2,SNR=4.7								
FINES					PKP	PKPdf	08 34 42.9	+0.4	
	comp=Z,0.5nm,0.3s,baz=92,slow=5.7,SNR=4.1								
OBN	**Obninsk**	**141.41**	**329**‖	*i* PKIKP		PKPdf	08 34 44.3	+0.4	
OBN				*e*			08 37 45.1		
OBN					pmax	pmax			
	comp=Z,9.0nm,0.5s								
KIV	**Kislovodsk**	**142.78**	**310**‖	*i* PKIKP		PKPdf	08 34 47.8	+1.1	
KIV					pmax	pmax			
	comp=Z,4.0nm,0.5s								
NB2	**NORSAR Subarra1**	**143.99**	**353**	PKP		PKPdf	08 34 44.9	-3.4	
	comp=Z,8.3nm,0.9s,baz=14,slow=3.6								
NOA	**NORSAR Array B**	**143.99**	**353**	PKHKP			08 34 45.3		
NOA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
NOA	**NORSAR Array B**	**143.99**	**353**	PKP		PKPdf	08 34 45.3	-3.0	
	comp=Z,4.4nm,0.8s,baz=14,slow=2.3,SNR=12								
BNGL	**BINGOL**	**145.09**	**302**	*i* P		PKPbc	08 34 51.7	+1.0	
KONO	**Kongsberg**	**145.52**	**354**	*e*PKPdf		PKPdf	08 34 50.3	-0.7	
ANN	**Anapa**	**146.05**	**313**	*i* PKHKP			08 34 48.1		
ANN				*e*			08 41 48.4		
ANN					pmax	pmax			
	comp=Z,22nm,1.1s								
GRSN	**GIRESUNGRSN**	**146.78**	**307**	*i* P		PKPdf	08 34 54.9	+1.2	
ELZG	**Elazig**	**146.84**	**302**	*e*P		PKPbc	08 34 56.9	+0.9	
MALT	**Malatya**	**147.31**	**302**	*e*PKPbc		PKPbc	08 34 57.6	+0.3	
AKASG	**Malin Array Be**	**147.63**	**328**	PKIKP		PKPdf	08 34 56.3	+1.5	
AKASG					pmax	pmax			
	comp=Z,4.0nm,0.6s								
AKASG	**Malin Array Be**	**147.63**	**328**	PKPbc		PKPbc	08 34 56.3	-1.4	
	comp=Z,3.6nm,0.6s,baz=45,slow=3.9,SNR=12								
KIEV	**Kiev**	**147.65**	**328**	*e*PKPbc		PKPbc	08 34 56.2	-1.5	
KIEV				*e*PKPab		PKPab	08 34 59.0	-1.3	
GZT	**Gaziantep**	**148.18**	**300**	*i* P		PKPbc	08 34 60.0	+0.3	
BOYT	**Boyabat**	**149.03**	**309**	*i* P		PKPbc	08 35 01.2	-0.4	
COBT	**Iskenderun**	**149.38**	**299**	*i* P		PKPbc	08 35 03.0	+0.3	
BALT	**Daday**	**150.04**	**310**	*i* P		PKPbc	08 35 03.8	-0.3	
ANTO	**Ankara**	**151.08**	**307**	*e*PKPdf		PKPdf	08 34 59.8	-0.9	
ANTO				*e*PKPbc		PKPbc	08 35 06.6	0.0	
ANTO				*e*PKPab		PKPab	08 35 15.1	+0.3	
KWP	**Kalwaria**	**151.34**	**332**	*e*PKP		PKPbc	08 35 06.8	0.0	
OJC	**Ojcow**	**152.00**	**336**	*e*PKP		PKPbc	08 35 07.9	-0.5	
KOLS	**Kolonicke sedl**	**152.05**	**332**	*e*PKP		PKPbc	08 35 08.6	+0.1	
KOLS				*e*			08 35 15.6		
STHS	**Stebnicka Huta**	**152.10**	**334**	*e*PKP		PKPbc	08 35 08.6	0.0	
CRVS	**Cervenica-Dubn**	**152.42**	**333**	*e*PKP		PKPbc	08 35 08.6	-0.8	
KSP	**Ksiaz**	**152.62**	**341**	*i* PKIKP		PKPbc	08 35 09.6	-0.1	
UPC	**Upice**	**153.00**	**341**	*e*PKPbc		PKPbc	08 35 10.4	-0.2	
UPC				*e*PKPab		PKPab	08 35 22.9	+0.5	
CLL	**Collm**	**153.04**	**346**	*i* PKPbc		PKPbc	08 35 09.9	-0.8	
	comp=Z,8.0nm,1.0s								
CLL				*e*PKPab		PKPab	08 35 24.0	+1.4	
	comp=Z,11nm,1.1s								
CLL				*e*pPKPbc		pPKPbc	08 35 49.0	+0.1	
DPC	**Dobruska-Polom**	**153.05**	**341**	*e*PKPbc		PKPbc	08 35 10.5	-0.2	
DPC				*e*PKPab		PKPab	08 35 22.6	0.0	
KECS	**Kecovo**	**153.15**	**333**	*e*PKP		PKPab	08 35 22.2	-0.9	
BRG	**Berggiesshubel**	**153.23**	**344**	*e*PKIKP		PKPbc	08 35 10.6	-0.5	
BRG					pmax	pmax			
	comp=Z,4.0nm,0.7s								
BRG	**Berggiesshubel**	**153.23**	**344**	*e*PKP		PKPbc	08 35 10.6	-0.5	
	comp=Z,6.8nm,0.7s								
PVCC	**Panska Ves**	**153.38**	**343**	*e*PKPbc		PKPbc	08 35 11.1	-0.3	
VYHS	**Vyhne**	**153.78**	**335**	*e*PKP		PKPab	08 35 25.4	-0.4	
PRU	**Pruhonice**	**153.88**	**343**	*e*PKPbc		PKPbc	08 35 12.1	-0.4	
PRU				*e*PKPab		PKPab	08 35 24.4	-1.8	
MODS	**Modra-Piesok**	**154.45**	**337**	*e*PKP		PKPab	08 35 33.8	+5.1	
KHC	**Kasperske Hory**	**154.92**	**343**	*e*PKP		PKPbc	08 35 15.8	+1.1	
KHC				*e*PKPab		PKPab	08 35 30.0	-0.6	
GERES	**GERESS Array B**	**155.15**	**343**	PKIKP		PKPdf	08 35 12.5	+6.2	
GERES							08 35 30.4		
GERES					pmax	pmax			
	comp=Z,1.0nm,0.2s								
GERES	**GERESS Array B**	**155.15**	**343**	PKPbc		PKPdf	08 35 12.5	+6.2	
	comp=Z,0.3nm,0.2s,baz=40,slow=2.3,SNR=3.8								
GERES					PKPab	PKPab	08 35 30.4	-1.2	
	comp=Z,0.5nm,0.2s,baz=66,slow=3.2,SNR=4.7								
TORD	**Torodi Ar. Bea**	**167.69**	**175**	PKP		PKPdf	08 35 18.6	-1.8	
	comp=Z,3.0nm,1.0s,baz=328,slow=0.7,SNR=10								
TORD				PKPab		PKPab	08 36 26.9	-0.2	
	comp=Z,1.4nm,0.9s,baz=90,slow=4.4,SNR=4.6								

IDC 30 08:31:37.2±2.4, 948S×15056E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/13, mbtmp3.9/5, ML3.2/1, MS3.3/4, Ms1 3.2/4, ms1mx3.0/26, Error ellipse: s-maj=73.2km s-min=27.3km az=110.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.26**	**90**	LR	LR	08 36 29.7	
	comp=Z,63nm,18.6s,baz=184,slow=32						
CTA	**Charters Tower**	**11.34**	**201**	LR	LR	08 38 19.9	
	comp=Z,98nm,19.3s,baz=61,slow=36						
WRA	**Warramunga Arr**	**18.80**	**235**	P	Pn	08 35 58.5	-0.4
	0.1nm,0.3s,baz=60,slow=11,SNR=12						
ASAR	**Alice Springs**	**21.27**	**226**	P	P	08 36 25.6	+0.3
	3.0nm,0.8s,baz=61,slow=10.0,SNR=28						
STKA	**Stephens Creek**	**23.79**	**199**	P	P	08 36 52.2	+0.5
	1.9nm,0.7s,baz=355,slow=11,SNR=2.8						
STKA				LR	LR	08 44 53.5	
	comp=Z,83nm,18.5s,baz=26,slow=34						
FITZ	**Fitzroy Crossi**	**25.65**	**248**	P	P	08 37 08.2	-0.6
	2.3nm,0.9s,baz=108,slow=9.7,SNR=5.0						
RPZ	**Rata Peaks**	**38.49**	**156**	LR	LR	08 53 15.8	
	comp=Z,89nm,18.3s,baz=341,slow=34						
MJAR	**Matsushiro Arr**	**47.22**	**346**	P	P	08 40 12.1	+0.2
	1.5nm,0.8s,baz=174,slow=9.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.26**	**280**	PKPbc	PKPbc	08 51 28.1	-0.8
	1.2nm,0.8s,baz=89,slow=2.8,SNR=6.5						

*NEIC **30** 08:35:31.2, 3851S×17596E, h149km, MG3.8(WEL), After WEL.*

WEL 30 08:35:31.6±0.3, 3852S×17597E, h145km±2km, ML3.7/11, Error ellipse: s-maj=1.6km s-min=1.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WATZ	**Wairara**	**0.27**	**224**	PN	Pn	08 35 51.7	+0.2
WTVZ	**West Tongariro**	**0.67**	**206**	P	Pn	08 35 53.7	+0.3
WTVZ	**West Tongariro**	**0.67**	**206**	*e*PN	Pn	08 35 53.4	+0.1
OTVZ	**Oturere**	**0.69**	**200**	PN	Pn	08 35 54.0	+0.5
NGZ	**Ngauruhoe**	**0.72**	**204**	P	Pn	08 35 54.0	+0.3
NGZ	**Ngauruhoe**	**0.72**	**204**	PN	Pn	08 35 54.0	+0.3
WPVZ	**Whakapapa**	**0.77**	**206**	P	Pn	08 35 54.3	+0.3
WPVZ	**Whakapapa**	**0.77**	**206**	PN	Pn	08 35 54.3	+0.3
BKZ	**Black Stump Fm**	**0.77**	**148**	P	Pn	08 35 54.4	+0.4
BKZ				S	Sn	08 36 10.5	-0.6
BKZ	**Black Stump Fm**	**0.77**	**148**	PN	Pn	08 35 54.4	+0.4
BKZ				SN	Sn	08 36 11.4	+0.2
FWVZ	**Far West T-bar**	**0.81**	**204**	P	Pn	08 35 54.6	+0.3
FWVZ	**Far West T-bar**	**0.81**	**204**	PN	Pn	08 35 54.6	+0.3
WNVZ	**Wahianoa**	**0.86**	**200**	P	Pn	08 35 55.0	+0.2
WNVZ	**Wahianoa**	**0.86**	**200**	PN	Pn	08 35 55.0	+0.3
HIZ	**Hauiti**	**0.88**	**270**	P	Pn	08 35 54.5	-0.4
HIZ				S	Sn	08 36 12.5	0.0
HIZ	**Hauiti**	**0.88**	**270**	PN	Pn	08 35 54.5	-0.3
HIZ				*e*SN	Sn	08 36 12.6	+0.1
MOVZ	**Moawhango**	**0.91**	**191**	P	Pn	08 35 55.0	-0.1
MOVZ				S	Sn	08 36 12.3	-0.8
MOVZ	**Moawhango**	**0.91**	**191**	PN	Pn	08 35 55.0	-0.1
MOVZ				SN	Sn	08 36 12.3	-0.7
URZ	**Urewera**	**0.93**	**74**	P	Pn	08 35 55.1	-0.2
URZ	**Urewera**	**0.93**	**74**	PN	Pn	08 35 55.1	-0.2
URZ				*e*SN	Sn	08 36 12.6	-0.7
MTVZ	**Mangateitei**	**0.95**	**204**	PN	Pn	08 35 55.5	0.0
MWZ	**Matawai**	**1.23**	**82**	P	Pn	08 35 58.2	+0.1
MWZ	**Matawai**	**1.23**	**82**	PN	Pn	08 35 58.2	+0.2
MWZ				SN	Sn	08 36 17.9	-0.3

ISCJB ***30*** *08:37:52.2±1.2, 36.35N×008×713E±0.1, h118km±20km, mb4.3/4, Error ellipse: s-maj=18.5km s-min=8.4km az=143.2*

NNC ***30*** *08:38:01.7±2.5, 3722N×6994E, h0km, mb4.1, mpv4.3, Error ellipse: s-maj=23.1km s-min=18.4km az=120.0*

ISC 30 08:37:52.4±0.9, 3645N±006×7129E±010, h107km±18km, n21, σ1§18/26, mb4.3/4, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**5.48**	**134**	*e*P	**Pn**	**08 39 13.0**	**+1.3**
DLH				*e*S	**Sn**	**08 40 13.0**	**-0.5**
KK31	**Karatay Array**	**6.67**	**355**	⇑P	**Pn**	**08 39 30.0**	**+2.2**
	13nm,0.4s						
KK31				⇑S	**Sn**	**08 40 39.7**	**-2.6**
	14nm,0.6s						
SDNR	**Sundarnagar**	**6.82**	**135**	*e*P	**Pn**	**08 39 31.5**	**+1.6**
SDNR				*e*S	**Sn**	**08 40 42.9**	**-3.2**
KHET	**Khetri**	**9.18**	**154**	*e*P	**Pn**	**08 40 01.1**	**-0.8**
KHET				AMb	AMB	08 40 02.2	
	comp=Z,4.7nm,0.4s						
KHET				*e*S	**Sn**	**08 41 35.8**	**-7.6**
KUDL	**Kundal**	**9.37**	**151**	*e*P	**Pn**	**08 40 04.8**	**+0.3**
KUDL				AMb	AMB	08 40 06.1	
	comp=Z,8.9nm,1.1s						
KUDL				*e*S	**Sn**	**08 41 40.9**	**-7.2**
SONA	**Sohna**	**9.53**	**147**	*e*P	**Pn**	**08 40 07.0**	**+0.5**
SONA				AMb	AMB	08 40 08.4	
	comp=Z,6.6nm,0.4s						
SONA				*e*S	**Sn**	**08 41 44.4**	**-7.4**
GKN	**Gorkha**	**14.08**	**123**	*e*P	**Pn**	**08 41 06.0**	**-1.0**
	comp=Z,33nm,0.6s						
KKN	**Kakani**	**14.65**	**122**	*e*P	**Pn**	**08 41 13.4**	**-0.9**
	comp=Z,14nm,0.5s						
AB31	**Akbulak array**	**15.24**	**331**	P	**Pn**	**08 41 23.0**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=145,slow=12,SNR=79						
AB31				⇑S	**Sn**	**08 43 59.2**	**-11**
	comp=Z,1.0nm,0.5s,baz=148,slow=22,SNR=6.7						
JIRN	**Jiri**	**15.36**	**121**	*e*P	**Pn**	**08 41 23.3**	**0.0**
	comp=Z,40nm,0.6s						
TAPN	**Taplejung**	**16.61**	**118**	*e*P	**Pn**	**08 41 40.0**	**+1.2**
	comp=Z,12nm,0.5s						
ODAN	**Odare**	**16.69**	**120**	*e*P	**Pn**	**08 41 40.5**	**+0.7**
	comp=Z,12nm,0.5s						
AKTO	**Aktyubinsk**	**16.94**	**330**	⇓P	**Pn**	**08 41 43.6**	**+0.9**
	comp=Z,0.9nm,1.0s						
AKTO				⇓S	**Sn**	**08 44 40.6**	**-10**
	comp=Z,0.5nm,0.9s						
MIB	**Mutribah**	**21.10**	**259**	*e*P	**P**	**08 42 28.8**	**+0.5**
MIB				AMb	AMB	08 42 30.1	
	comp=Z,7.9nm,0.5s,mb4.3						
MTA	**Mtatsminda**	**21.19**	**292**	S	Sx	08 45 52.9	
TBLG	**Delisi**	**21.24**	**293**	S	Sx	08 45 54.5	
RDF	**Al-Radifah**	**21.31**	**256**	*e*P	**P**	**08 42 30.3**	**-0.3**
RDF				AMb	AMB	08 42 33.0	
	comp=Z,17nm,0.8s,mb4.4						
NAY	**Al-Naaiem**	**21.41**	**257**	*e*P	**P**	**08 42 31.2**	**-0.4**
NAY				AMb	AMB	08 42 33.2	
	comp=Z,4.7nm,0.6s,mb4.0						
RST	**Umm Al-Ruwaisa**	**21.50**	**258**	*e*P	**P**	**08 42 30.9**	**-1.6**
RST				AMb	AMB	08 42 34.1	
	comp=Z,17nm,0.5s,mb4.6						
GOR	**Gori**	**21.73**	**293**	S	Sx	08 46 09.7	
ONI	**Oni**	**22.28**	**295**	S	**S**	**08 46 32.7**	**-5.6**

NEIC ***30*** *08:48:30.7, 3168S×7191W, h32km, ML3.7(GUC), After GUC.*

GUC 30 08:48:30.7±0.9, 3168S×7191W, h32km±3km, MD4.1, ML3.7, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.40**	**120**	⇓*i*P	Pb	08 48 22.4	-17
CHNG				*i* S	Sb	08 48 28.9	-17
CMCH	**Combarbala**	**0.93**	**57**	⇑*i*P	Pn	08 48 47.3	-0.2
CMCH				*i* S	Sn	08 49 00.0	+0.3
CMCH	**Combarbala**	**0.93**	**57**	⇑*i*P	Pn	08 48 47.3	-0.2
CMCH				*i* S	Sn	08 49 00.0	+0.3
CMCH				AML	AML	08 49 01.8	
	comp=E,6μm,0.5s						
PTCH	**Petorca**	**1.02**	**125**	⇓*i*P	Pn	08 48 49.1	+0.4
PTCH				*i* S	Sn	08 49 02.9	+1.0
PTCH	**Petorca**	**1.02**	**125**	⇓*i*P	Pn	08 48 49.1	+0.4
PTCH				*i* S	Sn	08 49 02.9	+1.0
PTCH				AML	AML	08 49 04.4	
	comp=N,6μm,0.4s						
OVCH	**Ovalle**	**1.23**	**30**	⇑*i*P	Pn	08 48 52.1	+0.4
OVCH				*i* S	Sn	08 49 08.5	+1.3
IHA	**Instituto Hidr**	**1.36**	**170**	*e*P	Pn	08 48 53.7	+0.2
IHA				*i* S	Sn	08 49 09.9	-0.5
ROCH	**El Roble**	**1.50**	**150**	*e*P	Pn	08 48 57.3	+1.9
JACH	**Jahuel**	**1.50**	**132**	*e*P	Pn	08 48 57.0	+1.6
JACH				*i* S	Sn	08 49 16.9	+3.0
TLL	**Tololo Astrono**	**1.78**	**33**	P	Pn	08 49 00.5	+1.2
TLL				*i* S	Sn	08 49 25.2	+4.3
TLL	**Tololo Astrono**	**1.78**	**33**	⇑*i*P	Pn	08 49 00.5	+1.2
TLL				*i* S	Sn	08 49 25.2	+4.3
TLL				AML	AML	08 49 32.1	
	comp=N,992nm,0.5s						
PEL	**Peldehue**	**1.79**	**145**	⇓*i*P	Pn	08 49 00.9	+1.5
PEL				*i* S	Sn	08 49 23.6	+2.6
PEL				AML	AML	08 49 33.8	
	comp=E,2μm,0.5s						
LSCH	**La Serena**	**1.86**	**18**	*e*P	Pn	08 49 01.9	+1.6
STL	**Santa Lucia**	**2.05**	**149**	*e*P	Pn	08 49 04.7	+1.7
STL				*i* S	Sn	08 49 30.2	+2.7
DSCH	**Colegio Aleman**	**2.06**	**147**	*e*P	Pn	08 49 03.9	+0.9
DSCH				*i* S	Sn	08 49 29.3	+1.7
DSCH	**Colegio Aleman**	**2.06**	**147**	*e*P	Pn	08 49 03.9	+0.9
DSCH				*i* S	Sn	08 49 29.3	+1.7
DSCH				AML	AML	08 49 36.3	
	comp=N,207nm,0.7s						
CLCH	**Cerro Calan**	**2.07**	**146**	*e*P	Pn	08 49 04.9	+1.7
CLCH				*i* S	Sn	08 49 30.8	+2.9
CLCH	**Cerro Calan**	**2.07**	**146**	*e*P	Pn	08 49 04.9	+1.7
CLCH				*i* S	Sn	08 49 30.8	+2.9
CLCH				AML	AML	08 49 39.3	
	comp=E,2μm,0.6s						
TACH	**Talagante**	**2.13**	**158**	*e*P	Pn	08 49 05.7	+1.6
TACH				*i* S	Sn	08 49 31.8	+2.3
FCH	**Farellones**	**2.14**	**141**	*e*P	Pn	08 49 05.9	+1.7
FCH				*i* S	Sn	08 49 33.2	+3.5
FCH				AML	AML	08 49 41.0	
	comp=E,494nm,0.9s						
FSR	**Penalolen**	**2.14**	**147**	*e*P	Pn	08 49 05.9	+1.7
FSR				*i* S	Sn	08 49 32.5	+2.8
FSR	**Penalolen**	**2.14**	**147**	*e*P	Pn	08 49 05.9	+1.7
FSR				*i* S	Sn	08 49 32.5	+2.8
FSR				AML	AML	08 49 43.6	
	comp=N,786nm,0.6s						
ANTU	**Antumapu**	**2.17**	**151**	*e*P	Pn	08 49 06.6	+2.0
ANTU				*e*S	Sn	08 49 32.7	+2.3
ANTU	**Antumapu**	**2.17**	**151**	*e*P	Pn	08 49 06.6	+2.0
ANTU				*e*S	Sn	08 49 32.7	+2.3
ANTU				AML	AML	08 49 45.3	
	comp=N,498nm,0.6s						
PCH	**Pirque**	**2.27**	**149**	*e*P	Pn	08 49 07.8	+1.8
PCH				*i* S	Sn	08 49 35.5	+2.7
LMEL	**Las Melosas**	**2.60**	**147**	*e*P	Pn	08 49 12.5	+2.0
LMEL				*i* S	Sn	08 49 43.8	+2.9
LMEL	**Las Melosas**	**2.60**	**147**	*e*P	Pn	08 49 12.5	+2.0
LMEL				*i* S	Sn	08 49 43.8	+2.9
LMEL				AML	AML	08 49 58.1	
	comp=N,415nm,0.1s						
LCO	**Las Campanas**	**2.86**	**22**	P	Pn	08 49 14.6	+0.5
CICH	**Cipreses**	**2.92**	**155**	*e*P	Pn	08 49 17.0	+2.1
SFDO	**San Fernando**	**3.02**	**166**	*e*P	Pn	08 49 17.4	+1.0

NIED ***30*** *09:05:00, 4400N×14630E, h101km, Mw5.6 Best double couple: M₀2.44000×10¹⁷ NP1:φs332.00000°, δ34.00000°, λ6.00000°. NP2:φs237.00000°, δ87.00000°, λ124.00000°.*

BJI ***30*** *09:05:04.6, 4421N×14608E, h107km, mB5.6, mb5.6*

SKHL ***30*** *09:05:04.2±1.3, 4410N×14631E, h95km±5km, mb6.5/7, mbh6.3/3, Ms5.0/3, msh6.2/7*

SKHL Felt (III) at Yushno-Kurilsk.

ISCJB ***30*** *09:05:04.3±0.1, 4412N±002×14610E±002, h101km, mb5.5/324, Error ellipse: s-maj=2.8km s-min=1.7km az=146.8*

JMA ***30*** *09:05:05.7±0.2, 4395N×14632E, h99km±2km, M5.6 Broadband fault plane solution: P waves. NP1: φs359.00000°, δ37.00000°, λ18.00000°. NP2: φs255.00000°, δ80.00000°, λ125.00000°. Principal axes: T Plg44.0000°, Azm200.0000°; N Plg35.0000°, Azm68.0000°; P Plg26.0000°, Azm318.0000°;*

JMA Felt III J1.

IDC ***30*** *09:05:05.5±0.3, 4416N×14599E, h100km±2km, mb5.0/33, mb1 5.1/36, mb1mx5.1/37, mbtmp5.0/36, MS4.3/17, Ms1 4.3/17, ms1mx4.2/25 Error ellipse: s-maj=9.1km s-min=6.2km az=119.0*

NEIC ***30*** *09:05:05.7±0.1, 4414N×14601E, mb5.5/195, Error ellipse: s-maj=2.8km s-min=2.1km az=162.0*

NEIC Felt [IV] at Yuzhno-Kuril'sk, Kunashir. Recorded [3 JMA] in eastern Hokkaido, [2 JMA] in the Obihiro area and [1 JMA] in south-central and southwestern Hokkaido. Also recorded [1 JMA] in Aomori and Iwate Prefectures, Honshu.

BGS ***30*** *09:05:05.3, 4391N×14536E, h100km, mb5.8*

MOS ***30*** *09:05:05.7±0.9, 4411N×14606E, h114km, mb5.7/99, MS4.5/48, Error ellipse: s-maj=6.4km s-min=3.3km az=105.6*

MOS Felt (IV) at Yuzhno-Kuril'sk.

GCMT ***30*** *09:05:05.7±0.2, 4411N×14619E, h103km±1km, MW5.5/92, Moment Tensor Solution. s76,c142; s92,c179; Duration: 1§4 Moment tensor: Scale 10¹⁷Nm; Mrr0.20±.04; Mθθ1.36±.04; Mφφ-1.57±.04; Mrθ-1.67±.03; Mθφ-0.70±.04; Mφr-1.22±.03; Best double couple: M₀2.63300×10¹⁷ NP1:φs328.00000°, δ38.00000°, λ4.00000°. NP2:φs235.00000°, δ87.00000°, λ128.00000°. Principal axes: T 2.5550, Plg36.0000°, Azm177.0000°; N 0.1520, Plg38.0000°, Azm53.0000°; P -2.7120, Plg32.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SZGRF ***30*** *09:05:12.8, 4486N×14555E, h107km, mb6.0, Hokkaido, Japan, region*

ISC 30 09:05:06.1±0.1, 4413N±002×14607E±002, h103km, h103km±5km: pP-P, n1153, σ0§89/1166, mb5.5/324, 64C-251D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.18**	**238**	*e*P	**Pn**	**09 05 20.0**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**0.18**	**238**	⇑*i*PN	**Pn**	**09 05 20.1**	**-0.4**
YUK				*e*S	**Sn**	**09 05 31.0**	**-0.2**
YUK				pmax	pmax		
	comp=N,10μm,0.3s						
YUK				pmax	pmax		
	comp=E,13μm,0.3s						
YUK				pmax	pmax		
	comp=N,90μm,1.0s						
YUK				pmax	pmax		
	comp=E,215μm,1.0s						
YUK				pmax	pmax		
	comp=Z,132μm,1.0s						
YUK	**Yuzh-Kuril'sk**	**0.18**	**238**	⇑*i*P	**Pn**	**09 05 20.1**	**-0.4**
YUK				⇑*i*P		09 05 20.1	
YUK				AMB	AMB	09 05 21.1	
	comp=Z,10μm,0.2s						
YUK				AMB	AMB	09 05 21.1	
	comp=Z,13μm,0.2s						
YUK				AMB	AMB	09 05 21.1	
	comp=Z,19μm,0.2s						
YUK				AMB	AMB	09 05 22.0	
	comp=Z,132μm,1.0s						
YUK				AMB	AMB	09 05 22.0	
	comp=Z,90μm,1.0s						
YUK				AMB	AMB	09 05 22.0	
	comp=Z,215μm,1.0s						
YUK				*e*S	**Sn**	**09 05 31.0**	**-0.2**
JRA	**Rausu**	**0.71**	**255**	⇑P	**Pn**	**09 05 24.6**	**+0.8**
JRA				*e*S	**Sn**	**09 05 39.3**	**+2.2**
NEM2	**Nemuro 2**	**0.80**	**197**	⇓P	**Pn**	**09 05 23.2**	**-1.4**
NEM2				*e*S	**Sn**	**09 05 36.2**	**-2.4**
JNK	**Nakash**	**1.12**	**241**	⇓P	**Pn**	**09 05 28.6**	**+0.7**
JAK	**Akkeshi**	**1.51**	**222**	⇑P	**Pn**	**09 05 32.1**	**-0.5**
JAK				*e*S	**Sn**	**09 05 52.1**	**-0.5**
JTKR	**Abashiri--Toko**	**1.57**	**265**	⇓P	**Pn**	**09 05 34.9**	**+1.7**
JTKR				*e*S	**Sn**	**09 05 57.2**	**+3.3**
KUR	**Kuril'sk**	**1.69**	**49**	⇓*i*PN	**Pn**	**09 05 33.0**	**-1.8**
KUR				*i* S	**Sn**	**09 05 55.6**	**-1.0**
KUR				pmax	pmax		
	comp=N,10μm,2.0s						
KUR				pmax	pmax		
	comp=E,20μm,2.0s						
KUR				pmax	pmax		
	comp=Z,80μm,2.0s						
KUR				smax			
	comp=N,241μm,2.0s						
KUR				smax			
	comp=E,92μm,2.0s						
KUR	**Kuril'sk**	**1.69**	**49**	*e*P	**Pn**	**09 05 33.0**	**-1.8**
KUR				⇓*i*P		09 05 33.0	
KUR				AMB	AMB	09 05 34.0	
	comp=E,25μm,1.0s						
KUR				AMB	AMB	09 05 34.0	
	comp=E,80μm,1.0s						
KUR				AMB	AMB	09 05 34.0	
	comp=E,10μm,1.0s						
KUR				AMB	AMB	09 05 34.0	
	comp=E,20μm,1.0s						
KUR				*i* S	**Sn**	**09 05 55.6**	**-1.0**
KUR				A		09 06 06.0	
	comp=E,250μm,2.0s						
KUR				A		09 06 06.0	
	comp=E,275μm,2.0s						
JAR	**Ashorobuto**	**1.86**	**244**	⇑P	**Pn**	**09 05 38.4**	**+1.4**
JMP	**Maruseppu**	**1.96**	**267**	⇓P	**Pn**	**09 05 40.1**	**+2.0**
JMP				*e*S	**Sn**	**09 06 06.5**	**+3.9**
JOB	**Onbets**	**2.04**	**234**	⇑P	**Pn**	**09 05 39.9**	**+0.7**
JOB				*e*S	**Sn**	**09 06 05.6**	**+1.1**
JKK2	**Kamakawa 2**	**2.41**	**265**	⇓P	**Pn**	**09 05 46.3**	**+2.3**
JKK2				*e*S	**Sn**	**09 06 17.4**	**+4.3**
JCH	**Churui**	**2.49**	**233**	⇑P	**Pn**	**09 05 45.2**	**+0.1**
JCH				*e*S	**Sn**	**09 06 14.6**	**-0.4**
ASAJ	**Asahikawa**	**2.50**	**271**	⇓P	**Pn**	**09 05 47.8**	**+2.6**
ASAJ	**Asahikawa**	**2.50**	**271**	PN	**Pn**	**09 05 47.9**	**+2.7**
ASAJ				S	**Sn**	**09 06 18.0**	**+2.7**
ASAJ				smax			
	comp=N,133nm,0.3s						
ASAJ	**Asahikawa**	**2.50**	**271**	P	**Pn**	**09 05 47.9**	**+2.7**
	comp=N,1μm,0.3s,baz=99,slow=14,SNR=2157						
ASAJ				S	**Sn**	**09 06 18.0**	**+2.7**
	comp=N,133nm,0.3s,baz=301,slow=17,SNR=13						
JSE	**Soyaes**	**2.63**	**290**	P	**Pn**	**09 05 49.2**	**+2.4**
JAB	**Ashibetsu**	**2.85**	**259**	⇓P	**Pn**	**09 05 52.7**	**+2.8**
ERM	**Erimo**	**3.00**	**226**	Pn	**Pn**	**09 05 53.7**	**+1.8**
	comp=N,60μm,0.5s						
ERM	**Erimo**	**3.00**	**226**	*e*Pn	**Pn**	**09 05 52.0**	**+0.1**
ERM				*e*Sn	**Sn**	**09 06 27.2**	**0.0**
JBT2	**Biratori 2**	**3.02**	**245**	⇑P	**Pn**	**09 05 52.9**	**+0.8**
JSS	**Shosan**	**3.04**	**277**	⇓P	**Pn**	**09 05 55.8**	**+3.5**
JNBK	**Urakawa-nobuka**	**3.05**	**234**	⇑P	**Pn**	**09 05 52.0**	**-0.5**
JHR	**Hokuryu**	**3.16**	**264**	⇓P	**Pn**	**09 05 56.9**	**+2.9**
JWK2	**Keihoku**	**3.20**	**293**	⇓P	**Pn**	**09 05 58.2**	**+3.7**
JYG	**Yagishiri**	**3.35**	**277**	⇓P	**Pn**	**09 05 59.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**3.66**	**322**	*e*Pn	**Pn**	**09 06 02.2**	**+1.6**
YSS	**Yuzh-Sakhalins**	**3.66**	**322**	*i*PN	**Pn**	**09 06 03.1**	**+2.5**
YSS				*i* S	**Sn**	**09 06 45.0**	**+2.1**
YSS				pmax	pmax		
	comp=Z,1μm,0.7s						
YSS				pmax	pmax		
	comp=N,600nm,0.9s						
YSS				pmax	pmax		
	comp=E,950nm,0.9s						
YSS				smax			
	comp=E,5μm,1.2s						
YSS				smax			
	comp=N,20μm,4.0s						
YSS				MLR	MLR		
	comp=Z,7μm,13.0s						
YSS	**Yuzh-Sakhalins**	**3.66**	**322**	⇓*i*P	**Pn**	**09 06 03.1**	**+2.5**
YSS				⇓*i*P		09 06 03.1	
YSS				AMB	AMB	09 06 04.8	
	comp=Z,1μm,0.7s						
YSS				AMB	AMB	09 06 04.8	
	comp=Z,600nm,0.9s						
YSS				AMB	AMB	09 06 04.8	
	comp=Z,950nm,0.9s						
YSS				*i* S	**Sn**	**09 06 45.0**	**+2.1**
YSS				A		09 06 50.5	
	comp=Z,5μm,1.2s						
YSS				A		09 06 56.0	
	comp=Z,20μm,4.0s						
YSS				AMS	AMS	09 07 40.0	
	comp=Z,7μm,13.0s						
JNB	**Noboribetsu**	**4.03**	**247**	⇓P	**Pn**	**09 06 06.5**	**+0.9**
JSK	**Shakotan**	**4.13**	**261**	⇓P	**Pn**	**09 06 08.9**	**+2.0**
JKB	**Kayabe**	**4.32**	**240**	⇑P	**Pn**	**09 06 09.8**	**+0.2**
JOT	**Ohata**	**4.61**	**235**	⇑P	**Pn**	**09 06 12.4**	**-1.0**
JYM2	**Yakumo 2**	**4.63**	**246**	⇑P	**Pn**	**09 06 14.7**	**+0.9**
JSH	**Shimam**	**4.64**	**253**	⇓P	**Pn**	**09 06 15.6**	**+1.8**
JTM	**Tenmabayashi**	**4.99**	**230**	⇑P	**Pn**	**09 06 16.9**	**-1.6**
JSI2	**Shiura 2**	**5.18**	**236**	⇑P	**Pn**	**09 06 20.2**	**-1.0**
JKZ	**Kuzumaki**	**5.44**	**222**	⇑P	**Pn**	**09 06 22.6**	**-2.1**
UGL	**Uglegorsk**	**5.67**	**332**	⇓*i*PN	**Pn**	**09 06 30.8**	**+3.1**
UGL				*e*S	**Sn**	**09 07 38.0**	**+6.7**
UGL				pmax	pmax		
	comp=N,270nm,1.0s						
UGL				pmax	pmax		
	comp=E,250nm,1.0s						
UGL				pmax	pmax		
	comp=Z,1μm,1.0s						
UGL				pmax	pmax		
	comp=N,4μm,4.0s						
UGL				pmax	pmax		
	comp=E,3μm,4.0s						
UGL				pmax	pmax		
	comp=Z,5μm,4.0s						
UGL				smax			
	comp=N,37μm,5.0s						
UGL				smax			
	comp=E,27μm,5.0s						
UGL				smax			
	comp=Z,31μm,6.0s						
UGL	**Uglegorsk**	**5.67**	**332**	⇓*i*P	**Pn**	**09 06 30.8**	**+3.1**
UGL				⇓*i*P		09 06 30.8	
UGL				AMB	AMB	09 06 32.0	
	comp=Z,270nm,1.0s						
UGL				AMB	AMB	09 06 32.0	
	comp=Z,250nm,1.0s						
UGL				AMB	AMB	09 06 32.0	
	comp=Z,1μm,1.0s						
UGL				AMB	AMB	09 06 33.0	
	comp=Z,5μm,4.0s						
UGL				AMB	AMB	09 06 33.0	
	comp=Z,4μm,4.0s						
UGL				AMB	AMB	09 06 33.0	
	comp=Z,3μm,4.0s						
UGL				A		09 07 43.0	
	comp=Z,37μm,5.0s						
UGL				A		09 07 43.0	
	comp=Z,27μm,5.0s						
UGL				A		09 07 43.0	
	comp=Z,31μm,6.0s						
UGL				A		09 07 46.5	
	comp=Z,8μm,2.2s						
UGL				A		09 07 46.5	
	comp=Z,3μm,2.2s						
JIW	**Iwasaki**	**5.71**	**234**	P	**Pn**	**09 06 27.0**	**-1.4**
TEY	**Ternei**	**6.82**	**281**	*i* P	**Pn**	**09 06 45.0**	**+1.6**
TEY				AMB	AMB	09 06 45.5	
	comp=Z,11μm,4.0s						
TEY				AMB	AMB	09 06 45.5	
	comp=Z,10μm,3.0s						
TEY				AMB	AMB	09 06 47.0	
	comp=Z,1μm,1.5s						
TEY				AMB	AMB	09 06 47.0	
	comp=Z,2μm,1.0s						
TEY				AMB	AMB	09 06 47.0	
	comp=Z,2μm,1.0s						
TEY				*i* S	**Sn**	**09 08 03.0**	**+3.5**
TEY				A		09 08 05.0	
	comp=Z,5μm,4.0s						
TEY				A		09 08 05.0	
	comp=Z,10μm,5.0s						
TEY				AMS	AMS	09 09 41.0	
	comp=Z,4μm,11.0s						
TEY				AMS	AMS	09 09 41.0	
	comp=Z,5μm,12.0s						
TEY				AMS	AMS	09 09 41.0	
	comp=Z,11μm,12.0s						
TYV	**Tymovskoe**	**7.12**	**342**	*e*P	**Pn**	**09 06 48.8**	**+1.4**
TYV				AMB	AMB	09 06 52.0	
	comp=Z,2μm,3.0s						
TYV				AMB	AMB	09 06 52.0	
	comp=Z,2μm,5.0s						
TYV				AMB	AMB	09 06 52.0	
	comp=Z,1μm,5.0s						
TYV				AMB	AMB	09 06 53.8	
	comp=Z,479nm,0.8s						
TYV				AMB	AMB	09 06 53.8	
	comp=Z,222nm,0.8s						
TYV				AMB	AMB	09 06 53.8	
	comp=Z,426nm,0.8s						
TYV				*e*S	**Sn**	**09 08 08.5**	**+1.8**
TYV				A		09 08 49.8	
	comp=Z,1994μm,1.8s						
TYV				A		09 08 49.8	
	comp=Z,1960μm,2.0s						
HABR	**Khabarovsk**	**8.78**	**304**	⇓*i*PN	**Pn**	**09 07 14.1**	**+4.2**
HABR				*e*S	**Sn**	**09 08 55.6**	**+8.6**
HABR				pmax	pmax		
	comp=Z,4μm,1.3s						
SKR	**Severo-Kuril's**	**9.45**	**43**	*e*P	**Pn**	**09 07 17.9**	**-1.2**
SKR				AMB	AMB	09 07 25.2	
	comp=Z,2μm,2.0s						
SKR				AMB	AMB	09 07 25.2	
	comp=Z,490nm,0.9s						
SKR				AMB	AMB	09 07 25.2	
	comp=Z,330nm,0.9s						
SKR				AMB	AMB	09 07 25.2	
	comp=Z,660nm,0.9s						
SKR				AMB	AMB	09 07 25.2	
	comp=Z,1μm,2.0s						
SKR				AMB	AMB	09 07 25.2	
	comp=Z,2μm,2.0s						
SKR				*e*S	**Sn**	**09 08 58.0**	**-5.3**
SKR				A		09 09 09.9	
	comp=Z,260nm,1.0s						
SKR				A		09 09 26.0	
	comp=Z,3μm,8.0s						
SKR				A		09 09 26.0	
	comp=Z,6μm,8.0s						
SKR				A		09 09 26.0	
	comp=Z,5μm,8.0s						
SKR				A		09 09 26.0	
	comp=Z,2μm,8.0s						
SKR				A		09 09 26.0	
	comp=Z,6μm,8.0s						
SKR				A		09 09 26.0	
	comp=Z,5μm,8.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,3μm,12.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,3μm,12.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,3μm,12.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,4μm,12.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,3μm,12.0s						
SKR				AMS	AMS	09 11 25.0	
	comp=Z,4μm,12.0s						
OKH	**Okha**	**9.65**	**349**	⇓*i*PN	**Pn**	**09 07 24.4**	**+2.6**
OKH				*e*S	**Sn**	**09 09 19.0**	**+11**
OKH				pmax	pmax		
	comp=Z,4μm,5.8s						
OKH				smax			
	comp=E,6μm,9.0s						
OKH				smax			
	comp=Z,5μm,14.0s						
OKH	**Okha**	**9.65**	**349**	⇓*i*P	**Pn**	**09 07 24.4**	**+2.6**
OKH				*e*P		09 07 25.1	
OKH				AMB	AMB	09 07 26.0	
	comp=Z,2μm,4.4s						
OKH				AMB	AMB	09 07 26.0	
	comp=Z,4μm,5.8s						
OKH				AMB	AMB	09 07 26.0	
	comp=Z,2μm,6.0s						
OKH				AMB	AMB	09 07 27.3	
	comp=Z,900nm,1.1s						
OKH				A		09 09 28.0	
	comp=Z,6μm,8.0s						
OKH				A		09 09 28.0	
	comp=Z,5μm,10.0s						

OKH *eL* 09 10 02.0
OKH AMS AMS 09 12 33.8
comp=Z,5μm,15.0s
OKH AMS AMS 09 12 33.8
comp=Z,3μm,15.0s
OKH AMS AMS 09 12 33.8
comp=Z,5μm,14.0s
MAJO Matsushiro 9.66 221 *e*Pn **Pn 09 07 19.9 -2.2**
MAJO *e*Sn **Sn 09 09 06.7 -2.0**
MAT Matsushiro 9.66 221 P **Pn 09 07 19.6 -2.5**
MAT S **Sn 09 09 05.4 -3.3**
MJAR Matsushiro Arr 9.66 221 P **Pn 09 07 19.8 -2.3**
comp=Z,17nm,0.3s,baz=27,slow=13,SNR=85
MJAR S **Sn 09 09 06.1 -2.7**
comp=Z,3.0nm,0.3s,baz=33,slow=16,SNR=3.0
VLA Vladivostok 10.33 269⇑ *i*P **Pn 09 07 31.6 +0.5**
VLA Vladivostok 10.33 269 *e i*PN **Pn 09 07 31.5 +0.4**
VLA pmax pmax
comp=Z,560nm,0.8s
KLR Kul'dur 11.08 302⇑ *i*PN **Pn 09 07 39.5 -1.7**
KLR *e*S **Sn 09 09 49.5 +6.6**
KLR pmax pmax
comp=N,220nm,1.8s
KLR pmax pmax
comp=Z,2μm,1.8s
KLR pmax pmax
comp=N,2μm,9.0s
KLR pmax pmax
comp=E,5μm,9.0s
KLR pmax pmax
comp=Z,6μm,9.0s
KLR MLR MLR
comp=N,3μm,12.0s
KLR MLR MLR
comp=E,2μm,12.0s
KLR MLR MLR
comp=Z,11μm,12.0s
MDJ Mudanjiang 11.81 278 P **Pn 09 07 51.5 +0.6**
MDJ S **Sn 09 09 59.0 -1.7**
MDJ PCP PcP 09 13 30.0 +0.1
MDJ SCP ScP 09 16 53.0 -0.2
MDJ PCS PcS 09 17 04.3 +0.5
MDJ SCS ScS 09 20 28.8 0.0
MDJ AMB AMB
comp=Z,400nm,1.0s
MDJ AMB AMB
comp=Z,1μm,5.9s
JHJ Hachijo jima 2 12.04 206 P **Pn 09 07 50.6 -3.4**
comp=Z,58nm,0.3s,baz=74,slow=23,SNR=15
JHJ S **Sn 09 09 56.0 -10**
comp=Z,156nm,0.3s,baz=290,slow=21,SNR=7.7
JHJ LR LR 09 12 30.2
comp=Z,1μm,18.7s,baz=50,slow=37
PET Petropavlovsk 12.18 39 *e*Pn **Pn 09 07 56.3 +0.5**
PET Petropavlovsk 12.18 39⇑ *e*PN **Pn 09 07 56.0 +0.3**
PET *e*S **Sn 09 10 15.6 +6.2**
PET pmax pmax
comp=Z,600nm,1.6s
PET pmax pmax
comp=Z,500nm,7.9s
PET pmax pmax
comp=Z,280nm,1.2s
PET smax
comp=N,300nm,2.0s
PET MLR MLR
comp=Z,2μm,17.0s
PET MLR MLR
comp=Z,2μm,16.0s
CN2 Changchun 14.86 276⇓ *i*P **Pn 09 08 29.3 -1.4**
CN2 *e*S **Sn 09 11 10.8 -3.6**
CN2 AMB AMB
comp=Z,20nm,1.2s
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,7μm,17.0s
CN2 LR LR
comp=E,2μm,17.0s
CN2 LR LR
comp=Z,3μm,16.0s
KSRS Korea Array 15.26 250 P **Pn 09 08 35.0 -0.9**
comp=Z,1.6nm,0.3s,baz=61,slow=12,SNR=146
KSRS S **S 09 11 35.5 +1.5**
comp=Z,0.4nm,0.3s,baz=64,slow=24,SNR=4.0
KSRS PcP PcP 09 13 35.2 +0.7
baz=36,slow=0.9,SNR=6.9
KSRS LR LR 09 13 57.1
comp=Z,392nm,21.2s,baz=55,slow=35
KSRS pPcP 09 13 59.8
baz=29,slow=1.3,SNR=6.0
KSRS ScP ScP 09 16 58.7 -0.3
comp=Z,0.2nm,0.3s,baz=46,slow=1.1,SNR=11
ZEA Zeya 15.62 315⇓ *e*P **Pn 09 08 37.4 -2.8**
ZEA AMB AMB 09 08 39.8
comp=Z,610nm,1.6s
ZEA AMB AMB 09 08 39.8
comp=Z,650nm,1.6s
ZEA AMB AMB 09 08 39.8
comp=Z,1μm,1.8s
ZEA AMB AMB 09 08 41.0
comp=Z,2μm,4.0s
ZEA AMB AMB 09 08 41.0
comp=Z,3μm,5.0s
ZEA A 09 11 39.0
comp=Z,2μm,8.0s
ZEA A 09 11 39.0
comp=Z,1μm,8.0s
MA2 Magadan 15.73 9 *e*Pn **Pn 09 08 41.0 -0.5**
comp=Z,109nm,0.9s
MA2 Magadan 15.73 9 *d i*P **Pn 09 08 41.1 -0.4**
MA2 *e*S **S 09 11 32.5 -11**
MA2 pmax pmax
comp=N,100nm,1.0s
MA2 pmax pmax
comp=Z,200nm,1.0s
MA2 pmax pmax
comp=E,30nm,0.9s
INCN Inchon 16.13 252 *e*Pn **Pn 09 08 45.5 -1.1**
comp=E,130nm,0.9s
INCN Inchon 16.13 252 Pn **Pn 09 08 46.3 -0.3**
SNR=12
INCN Inchon 16.13 252 P **Pn 09 08 46.3 -0.3**
SNR=12
JNU Nakatsue 16.15 232 P **Pn 09 08 43.2 -3.8**
JNU S **S 09 11 49.8 -2.4**
baz=93,slow=25,SNR=2.2
JNU LR LR 09 15 32.0
comp=E,782nm,18.3s,baz=36,slow=39
SNY Shenyang 16.61 270 ⇓P **Pn 09 08 51.5 -1.1**
SNY XP sP 09 09 24.5 -0.7
SNY S **S 09 11 52.0 -10**
SNY PCS PcS 09 17 15.3 +3.1
SNY AMB AMB
comp=Z,84nm,1.3s
SNY AMB AMB
comp=Z,1μm,8.8s
SNY LR LR
comp=N,2μm,18.6s
SNY LR LR
comp=E,820nm,12.0s
SNY LR LR
comp=Z,3μm,14.2s
CBIJ Chichi jima 17.29 192 P **Pn 09 09 00.8 -0.1**
comp=Z,22nm,0.3s,baz=69,slow=7.3,SNR=9.6
CBIJ S **S 09 12 03.0 -11**
comp=Z,41nm,0.3s,baz=87,slow=23,SNR=9.0
NRGR Nerungri 18.40 320 *e*P **P 09 09 14.3 +1.5**
CLNS Chul'man 18.43 321 *e*P **P 09 09 11.8 -1.3**
CLNS *e*S **S 09 12 28.2 -10**
CLNS pmax pmax
comp=E,115nm,1.0s
CLNS pmax pmax
comp=Z,299nm,1.0s
CLNS pmax pmax
comp=N,271nm,1.2s
CLNS smax
comp=N,344nm,12.8s
CLNS smax
comp=Z,205nm,9.9s
CLNS smax
comp=E,233nm,13.4s
CLNS MLR MLR
comp=N,600nm,14.0s
CLNS MLR MLR
comp=Z,1μm,14.0s
CLNS MLR MLR
comp=E,800nm,13.0s

HIA Hailar 18.73 295 *e*P **P 09 09 14.7 -1.7**
comp=E,488nm,1.5s
HIA Hailar 18.73 295 *e*P **P 09 09 14.7 -1.8**
HIA pmax pmax
comp=Z,487nm,1.5s
DL2 Dalian 19.00 263 *i*P **P 09 09 20.0 +0.4**
DL2 XP sP 09 09 52.8 +1.1
DL2 SCP ScP 09 17 06.0 -0.7
DL2 SCS ScS 09 20 45.8 -2.4
DL2 AMB AMB
comp=Z,300nm,1.0s
DL2 AMB AMB
comp=Z,850nm,4.7s
SEY Seymchan 19.19 9⇓ *e*P **P 09 09 19.6 -1.7**
YAK Yakutsk 20.34 338 *e*P **P 09 09 32.5 -1.3**
comp=Z,312nm,0.7s
YAK LR LR
comp=Z,2μm,22.0s
YAK Yakutsk 20.34 338 *e*P **P 09 09 30.3 -3.5**
YAK *e*'PP 09 09 57.5
YAK *e*S **S 09 13 13.1 -2.8**
YAK *e*'SS sS 09 13 44.4 -3.7
YAK *e* 09 20 47.4
YAK pmax pmax
comp=Z,95nm,0.9s
YAK pmax pmax
comp=N,156nm,1.6s
YAK pmax pmax
comp=E,94nm,1.7s
YAK smax
comp=E,680nm,2.8s
YAK smax
comp=Z,320nm,2.4s
YAK smax
comp=N,460nm,1.6s
JAM Amami Oshima 20.49 226 P **P 09 09 37.2 +1.5**
JTK Tokunoshima 21.33 226 P **P 09 09 45.1 +0.4**
JTK S **S 09 13 34.2 -1.6**
JOW Kunigami 22.45 226 P **P 09 09 56.5 -0.1**
comp=N,150nm,0.9s,mb5.3,baz=30,slow=10,SNR=34
JOW S **S 09 13 54.0 -1.7**
comp=N,22nm,1.1s,baz=277,slow=24,SNR=6.8
BJI Beijing 22.50 270 P **P 09 09 55.8 -1.2**
BJI AP 09 10 14.3
BJI XP sP 09 10 29.0 -0.6
BJI S **S 09 13 55.5 -0.7**
BJI SCS ScS 09 21 00.8 +0.4
BJI AMB AMB
comp=Z,312nm,1.8s,mb5.3
BJT Baijiatuau 22.51 270 *e*P **P 09 09 55.8 -1.3**
comp=Z,1μm,1.6s,mb5.9
BJT LR LR
comp=Z,2μm,20.0s
BJT Baijiatuau 22.51 270 *e*P **P 09 09 55.8 -1.3**
BJT pmax pmax
comp=Z,1μm,1.6s
BJT MLR MLR
comp=Z,2μm,20.0s
CIT Chita 22.96 302 *e*P **P 09 09 56.6 -4.9**
CIT *e* 09 10 22.7
TIA Tai'an 23.40 260⇓ P **P 09 10 05.0 -0.6**
TIA S **S 09 14 11.0 +0.1**
TIA AMB AMB
comp=Z,369nm,1.0s,mb5.7
TIA AMB AMB
comp=Z,1μm,4.0s
TIA LR LR
comp=N,339nm,10.0s
TIA LR LR
comp=E,446nm,7.0s
SSE Sheshan 23.51 245⇓ P **P 09 10 07.8 +1.1**
SSE XP sP 09 10 40.5 +0.1
SSE S **S 09 14 10.0 -2.8**
SSE XS sS 09 14 43.5 -7.9
SSE AMB AMB
comp=Z,149nm,1.1s,mb5.2
SSE AMB AMB
comp=Z,738nm,4.6s
SSE LR LR
comp=N,1μm,28.8s
SSE LR LR
comp=E,1μm,28.7s
SSE LR LR
comp=Z,471nm,23.4s
BOD Bodaibo 24.11 316 *e*P **P 09 10 08.1 -3.8**
BOD *e* 09 10 37.2
BOD *e* 09 21 02.2
BOD pmax pmax
comp=Z,34nm,1.1s,mb4.6
NJ2 Nanjing 24.46 250 *e*P **P 09 10 16.0 +0.7**
NJ2 AP 09 10 40.5
NJ2 XP sP 09 10 52.5 +2.7
NJ2 PP 09 10 56.5
NJ2 S **S 09 14 26.5 -1.5**
NJ2 XS sS 09 15 08.5 +1.4
NJ2 AMB AMB
comp=Z,240nm,1.0s,mb5.5
NJ2 AMB AMB
comp=Z,2μm,7.1s
NJ2 LR LR
comp=N,5μm,24.9s
NJ2 LR LR
comp=E,2μm,21.3s
NJ2 LR LR
comp=Z,2μm,21.3s
HHC Hu-ho-hao-te 25.54 275 *e*P **P 09 10 26.0 +0.9**
HHC AP pP 09 10 49.5 +1.9
HHC XP sP 09 11 03.0 +3.5
HHC PP 09 11 10.3
HHC PCP PcP 09 13 56.3 +2.7
HHC S **S 09 14 43.0 -2.0**
HHC XS sS 09 15 24.5 0.0
HHC SS 09 15 54.0
HHC SCP ScP 09 17 24.0 +0.6
HHC PCS PcS 09 17 35.3 +1.1
HHC AMB AMB
comp=Z,2μm,5.9s
HHC LR LR
comp=N,2μm,18.3s
HHC LR LR
comp=E,588nm,19.4s
HHC LR LR
comp=Z,2μm,28.9s
TIY Taiyuan 26.09 267⇑ *e*P **P 09 10 31.5 +1.5**
TIY PP 09 11 20.5
TIY S **S 09 14 59.3 +5.7**
TIY SS 09 16 07.5
TIY AMB AMB
comp=Z,2μm,2.0s,mb6.3
TIY LR LR
comp=N,586nm,11.4s
TIY LR LR
comp=E,527nm,10.9s
TIY LR LR
comp=Z,382nm,17.2s
BILL Bilibino 26.22 17 *e*P **P 09 10 28.1 -2.7**
comp=Z,52nm,1.0s,mb4.9
BILL LR LR
comp=Z,825nm,20.0s
BILL Bilibino 26.22 17⇓ *e*P **P 09 10 29.0 -1.8**
BILL *e*PP 09 11 23.9
BILL *e*S **S 09 15 01.9 +6.8**
BTO Baotou 26.73 275 *e*P **P 09 10 36.5 +0.7**
BTO AMB AMB
comp=Z,184nm,1.1s,mb5.5
SONM Songino Array 27.61 292 P **P 09 10 44.1 +0.7**
comp=Z,47nm,0.7s,mb5.2,baz=80,slow=7.2,SNR=54
SONM LR LR 09 21 53.7
comp=Z,867nm,20.1s,baz=176,slow=37
TATO Taipei 27.67 234 PFAKE 09 11 00.0 +16
TATO LR LR
comp=Z,939nm,19.0s
YHNB Yeheng 27.96 234 P **P 09 10 49.1 +2.2**
NACB Ninganchiao 28.22 233 *e*P **P 09 10 49.4 +0.2**
WHN Wuhan 28.44 252⇓ P **P 09 10 51.5 +0.4**
WHN S **S 09 15 25.5 -5.3**
WHN LR LR
comp=N,797nm,15.0s
WHN LR LR
comp=E,862nm,12.0s
WHN LR LR
comp=Z,1μm,13.0s
IRK Irkutsk 28.68 301 *i*P **P 09 10 51.7 -1.3**
IRK pmax pmax
comp=Z,20nm,1.1s,mb4.7

TIXI Tiksi 28.83 349 *e*P **P 09 10 50.3 -3.9**
comp=Z,49nm,1.1s,mb5.0
TIXI LR LR
comp=Z,638nm,19.0s
TIXI Tiksi 28.83 349 *e*P **P 09 10 49.0 -5.1**
TIXI *e* 09 11 17.0
TIXI pmax pmax
comp=Z,7.0nm,0.7s,mb4.4
TLY Talaya 29.08 300 *e*P **P 09 10 56.1 -0.4**
TLY LR LR
comp=Z,1μm,20.0s
TLY Talaya 29.08 300 *e*P **P 09 10 55.7 -0.9**
TLY *e* 09 11 56.7
TLY pmax pmax
comp=Z,25nm,1.4s,mb4.7
TLY MLR MLR
comp=Z,1μm,14.0s
TLY Talaya 29.08 300 P **P 09 10 56.3 -0.2**
SNR=9.2
ZAK Zakamensk 29.38 298 *e*P **P 09 10 58.4 -0.8**
ZAK *e* pP 09 11 25.1 +3.0
ZAK *e* 09 11 59.5
ZAK *e* 09 14 04.4
ZAK pmax pmax
comp=Z,15nm,0.9s,mb4.6
ZAK pmax pmax
comp=Z,17nm,1.5s,mb4.5
QZH Quanzhou 29.43 238 *i*P **P 09 11 01.3 +1.4**
QZH S **S 09 15 45.0 -1.4**
QZH AMB AMB
comp=Z,370nm,2.0s,mb5.7
QZH LR LR
comp=N,780nm,12.0s
QZH LR LR
comp=E,690nm,9.2s
QZH LR LR
comp=Z,840nm,12.6s
XAN Xi'an 30.32 263 P **P 09 11 07.5 -0.2**
XAN S **S 09 15 57.3 -2.9**
XAN AMB AMB
comp=Z,45nm,1.1s,mb5.0
XAN LR LR
comp=N,663nm,22.0s
XAN LR LR
comp=E,584nm,15.3s
XAN LR LR
comp=Z,815nm,15.4s
GUMO Guam 30.45 182 PFAKE 09 11 20.0 +11
GUMO LR LR
comp=Z,943nm,21.0s
MOY Mondy 30.73 300 *e*P **P 09 11 10.6 -0.5**
MOY pmax pmax
comp=Z,55nm,1.8s,mb5.0
ENH Enshi 31.98 257 PFAKE 09 11 30.0 +7.7
ENH LR LR
comp=Z,3.0nm,20.0s
UNV Unalaska Valle 32.05 55 PFAKE 09 11 30.0 +7.4
UNV LR LR
comp=Z,4μm,19.0s
TNA Tin City 32.96 33 *e*P **P 09 11 29.5 -1.0**
TNA LR LR
comp=Z,416nm,19.0s
LZH Lanzhou 32.98 271 *e*P **P 09 11 32.3 +1.3**
LZH AP pP 09 11 56.0 +2.0
LZH XP sP 09 12 10.5 +4.6
LZH PP PP 09 12 46.3 -1.1
LZH PCP PcP 09 14 10.5 -2.1
LZH *e*S **S 09 16 43.3 +1.6**
LZH XS sS 09 17 26.0 +4.3
LZH SS SS 09 18 50.0 -18
LZH AMB AMB
comp=Z,96nm,1.5s,mb5.4
LZH AMB AMB
comp=Z,337nm,4.3s
LZH LR LR
comp=N,1μm,14.0s
LZH LR LR
comp=Z,2μm,15.5s
GZH Guangzhou 34.07 243 P **P 09 11 36.3 -4.2**
GZH S **S 09 16 50.0 -8.7**
GZH LR LR
comp=N,950nm,15.7s
GZH LR LR
comp=E,946nm,15.2s
GZH LR LR
comp=Z,795nm,18.2s
GTA Gaotai 34.46 278 P **P 09 11 44.5 +0.7**
GTA AP pP 09 12 09.0 +2.1
GTA XP sP 09 12 18.5 -0.2
GTA S **S 09 17 01.5 -3.0**
GTA SCP ScP 09 17 52.8 +0.4
GTA PCS PcS 09 18 05.5 +2.3
GTA SCS ScS 09 21 56.0 +0.7
GTA AMB AMB
comp=Z,112nm,1.8s,mb5.4
GTA AMB AMB
comp=Z,925nm,9.6s
GTA LR LR
comp=N,823nm,12.6s
GTA LR LR
comp=E,686nm,14.5s
GTA LR LR
comp=Z,1μm,13.4s
CD2 Chengdu 35.67 263 P **P 09 11 54.3 0.0**
CD2 AP pP 09 12 19.0 +1.5
CD2 XP sP 09 12 29.3 0.0
CD2 PP PP 09 13 20.8 +3.6
CD2 PCP PcP 09 14 23.8 +3.4
CD2 S **S 09 17 21.0 -2.2**
CD2 XS sS 09 18 02.5 -0.9
CD2 SS SS 09 19 48.3 -14
CD2 SCS ScS 09 21 59.8 -2.3
CD2 AMB AMB
comp=Z,300nm,0.9s,mb6.2
CD2 AMB AMB
comp=Z,540nm,4.6s
CD2 LR LR
comp=N,890nm,10.8s
CD2 LR LR
comp=Z,770nm,15.0s
GYA Guiyang 36.27 254⇑ *i*P **P 09 11 59.3 -0.1**
GYA AP pP 09 12 24.8 +2.1
GYA XP sP 09 12 37.0 +2.6
GYA PP PP 09 13 26.0 +2.2
GYA PCP PcP 09 14 23.8 +1.5
GYA S **S 09 17 31.8 -0.6**
GYA SCP ScP 09 17 59.5 +0.4
GYA PCS PcS 09 18 10.5 +0.3
GYA XS sS 09 18 14.0 +1.4
GYA SS SS 09 20 01.5 -10
GYA SCS ScS 09 22 04.0 -1.5
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.3
GYA AMB AMB
comp=Z,140nm,4.9s
GYA LR LR
comp=N,840nm,18.2s
GYA LR LR
comp=E,640nm,17.9s
GYA LR LR
comp=Z,680nm,18.4s
CHGN Chignik 36.55 50 *e*P **P 09 12 01.3 -0.1**
TTA Tatalina 37.63 39 *e*P **P 09 12 10.4 -0.1**
SVW2 Sparrevohn 37.81 42 *e*P **P 09 12 12.0 0.0**
IMA2 Indian Mountai 38.80 34 *e*P **P 09 12 19.3 -1.0**
QIZ Qiongzhong 39.25 242 P **P 09 12 25.0 +0.5**
QIZ XP sP 09 12 57.8 -1.9
QIZ PP PP 09 13 55.5 -1.0
QIZ S **S 09 18 17.8 +0.3**
QIZ XS sS 09 18 58.3 +0.2
QIZ AMB AMB
comp=Z,30nm,1.4s,mb4.9
QIZ AMB AMB
comp=Z,125nm,6.8s
QIZ Qiongzhong 39.25 242 PFAKE 09 12 40.0 +15
QIZ LR LR
comp=Z,411nm,19.0s
KDAK Kodiak Island 39.57 48 P **P 09 12 26.0 -0.7**
comp=Z,298nm,0.8s,mb6.2,SNR=13
KDAK Kodiak Island 39.57 48 *e*P **P 09 12 26.3 -0.4**
KDAK LR LR
comp=Z,143nm,20.0s
KDAK Kodiak Island 39.57 48 P **P 09 12 25.9 -0.8**
comp=Z,51nm,0.9s,mb5.3,baz=304,slow=7.4,SNR=43
KDAK pP pP 09 12 49.0 -1.3

comp=Z,49nm,0.9s,baz=233,slow=7.8,SNR=5.2
KMI Kunming 39.84 256 ⇓P **P** **09 12 30.0 +0.6**
KMI AP pP 09 12 52.8 -0.2
KMI XP sP 09 13 05.8 +1.1
KMI PP PP 09 14 05.0 +2.1
KMI PCP PcP 09 14 35.0 +1.6
KMI SCP ScP 09 18 12.8 +0.1
KMI S **S** **09 18 25.8 -0.6**
KMI XS sS 09 19 08.3 +1.3
KMI SS SS 09 21 18.5 -7.9
KMI SCS ScS 09 22 24.3 -1.8
KMI AMB AMB
comp=Z,171nm,1.1s,mb5.8
KMI AMB AMB
comp=Z,761nm,3.1s
KMI LR LR
comp=N,581nm,18.6s
KMI LR LR
comp=E,466nm,20.2s
KMI LR LR
comp=Z,491nm,16.7s
ZALV Zalesovo Beam 40.15 307 P **P** **09 12 29.5 -2.1**
ZALV pP pP 09 12 54.0 -1.2
ZALV PcP PcP 09 14 34.2 +0.3
ZALV pPcP 09 15 01.7
ZALV ScP ScP 09 18 12.9 -0.5
ZALV LR LR 09 30 54.3
ZALV Zalesovo Beam 40.15 307 P **P** **09 12 29.5 -2.1**
comp=Z,9.0nm,0.5s,mb4.9,baz=72,slow=9.7,SNR=26
ZALV pP pP 09 12 54.0 -1.2
comp=Z,4.2nm,0.4s,baz=99,slow=7.0,SNR=2.3
ZALV PcP PcP 09 14 34.2 +0.3
comp=Z,47nm,0.6s,baz=88,slow=2.8,SNR=20
ZALV pPcP 09 15 01.7
comp=Z,17nm,0.7s,baz=87,slow=2.6,SNR=6.0
ZALV ScP ScP 09 18 12.9 -0.5
comp=Z,2.5nm,0.4s,baz=76,slow=6.3,SNR=5.5
ZALV LR LR 09 30 54.3
comp=Z,436nm,18.7s,baz=86,slow=39
ZAL Zalesovo 40.16 306 P **P** **09 12 29.5 -2.2**
ZAL *PP pP 09 12 54.0 -1.3
ZAL 09 14 34.2
SLKM Skilak Lake 40.47 43 *eP* **P** **09 12 32.9 -1.2**
MCK McKinley 40.81 38 *eP* **P** **09 12 36.5 -0.4**
MCK LR LR
comp=Z,286nm,19.0s
NVS Novosibirsk 40.87 308 *i* P **P** **09 12 35.3 -2.2**
NVS *e*PP pP 09 13 14.0 +13
NVS *i* 09 14 35.8
NVS *e*S **S** **09 18 39.7 -1.3**
NVS *i* 09 22 30.7
NVS pmax pmax
comp=N,21nm,1.8s
NVS pmax pmax
comp=E,42nm,1.2s
NVS smax
comp=E,93nm,2.1s
PMR Palmer 40.89 41 *eP* **P** **09 12 37.0 -0.6**
comp=E,20nm,0.7s,mb5.1
PMR LR LR
comp=Z,234nm,20.0s
PMR Palmer 40.89 41 *eP* **P** **09 12 37.0 -0.6**
PMR pmax pmax
comp=Z,21nm,0.7s,mb5.1
PMR MLR MLR
comp=Z,234nm,20.0s
DAV Davao City (W) 41.03 212 PFAKE 09 12 50.0 +11
DAV LR LR
comp=Z,716nm,19.0s
COLA College 41.23 36 *eP* **P** **09 12 40.2 -0.2**
comp=Z,49nm,0.7s,mb5.5
COLA *e*pP pP 09 13 04.8 +0.9
COLA LR LR
comp=Z,329nm,19.0s
COLA College 41.23 36 *eP* **P** **09 12 40.2 -0.1**
COLA *e*PP pP 09 13 04.8 +0.8
COLA pmax pmax
comp=Z,49nm,0.7s,mb5.5
COLA MLR MLR
comp=Z,329nm,19.0s
WMQ Urumqi 41.23 291 ⇓*i*P **P** **09 12 41.5 +0.9**
WMQ AP pP 09 13 05.3 +1.0
WMQ XP sP 09 13 17.5 +1.5
WMQ PP PP 09 14 21.0 +3.4
WMQ PCP PcP 09 14 39.5 +1.9
WMQ SCP ScP 09 18 19.0 +1.1
WMQ PCS PcS 09 18 29.5 +0.8
WMQ S **S** **09 18 47.5 +0.9**
WMQ XS sS 09 19 27.0 -0.4
WMQ AMB AMB
comp=Z,243nm,0.8s,mb6.1
WMQ AMB AMB
comp=Z,2μm,3.8s
WMQ LR LR
comp=N,808nm,19.7s
WMQ LR LR
comp=E,827nm,17.3s
WMQ LR LR
comp=Z,726nm,15.0s
SML Sawmill 41.24 41 *eP* **P** **09 12 40.3 -0.2**
EYAK Cordova Ski Ar 42.65 43 *eP* **P** **09 12 52.2 +0.2**
comp=Z,17nm,0.8s,mb4.8
EYAK *e*pP pP 09 13 15.7 0.0
MENT Mentasta 43.23 39 *eP* **P** **09 12 56.6 0.0**
MKAR Makanchi Array 43.72 297 P **P** **09 13 00.6 -0.2**
MKAR PcP PcP 09 14 47.0 +1.1
MKAR pPcP 09 15 13.3
MKAR ScP ScP 09 18 27.5 -0.3
MKAR S **S** **09 19 23.7 +0.7**
MKAR LR LR 09 32 32.7
MKAR Makanchi Array 43.72 297 P **P** **09 13 00.6 -0.1**
MKAR 09 14 47.0
MKAR S **S** **09 19 23.7 +0.7**
MKAR Makanchi Array 43.72 297 P **P** **09 13 00.6 -0.2**
comp=Z,54nm,0.7s,mb5.4,baz=77,slow=8.3,SNR=214
MKAR PcP PcP 09 14 47.0 +1.2
comp=Z,18nm,0.9s,baz=62,slow=5.6,SNR=4.3
MKAR pPcP 09 15 13.3
comp=Z,6.7nm,0.7s,baz=50,slow=1.9,SNR=3.6
MKAR ScP ScP 09 18 27.5 -0.3
comp=Z,1.5nm,0.7s,baz=88,slow=3.4,SNR=4.3
MKAR S **S** **09 19 23.7 +0.7**
comp=Z,1.9nm,1.0s,baz=73,slow=22,SNR=3.1
MKAR LR LR 09 32 32.7
comp=Z,436nm,20.9s,baz=90,slow=38
EGAK Eagle 44.08 36 *eP* **P** **09 13 02.5 -0.9**
EGAK LR LR
comp=Z,663nm,19.0s
KURK Kurchatov 44.67 303 P **P** **09 13 07.9 -0.4**
comp=Z,384nm,0.9s,mb6.1,SNR=14
KURK Kurchatov 44.67 303 *eP* **P** **09 13 07.4 -0.8**
comp=Z,50nm,0.8s,mb5.3
KURK LR LR
comp=Z,540nm,20.0s
KURK Kurchatov 44.67 303 *eP* **P** **09 13 07.4 -0.9**
KURK pmax pmax
comp=Z,50nm,0.8s,mb5.3
KURK MLR MLR
comp=Z,540nm,20.0s
KURK Kurchatov 44.67 303 P **P** **09 13 08.2 0.0**
SNR=20
DAWY Dawson 44.96 37 *eP* **P** **09 13 09.8 -0.5**
LSA Lhasa 45.40 271 *eP* **P** **09 13 16.1 +1.8**
comp=Z,211nm,1.0s,mb5.8
LSA LR LR
comp=Z,573nm,21.0s
LSA Lhasa 45.40 271 *eP* **P** **09 13 16.1 +1.8**
LSA pmax pmax
comp=Z,211nm,1.0s,mb5.8
LSA MLR MLR
comp=Z,573nm,21.0s
SDKM Sandakan 45.95 222 ⇓P **P** **09 13 19.2 +0.5**
KKM Kota Kinabalu 46.08 223 *eP* **P** **09 13 20.0 +0.2**
KKM Kota Kinabalu 46.08 223 ⇓P **P** **09 13 20.2 +0.5**
INK Inuvik 46.47 30 *eP* **P** **09 13 21.2 -1.0**
INK Inuvik 46.47 30 P **P** **09 13 21.1 -1.1**
INK *PP pP 09 13 46.4 +0.1
INK S **S** **09 20 00.7 -1.4**
INK pmax pmax
comp=Z,19nm,0.5s
INK smax
comp=N,2.0nm,0.9s
INK Inuvik 46.47 30 P **P** **09 13 21.1 -1.1**
comp=N,19nm,0.5s,mb5.1,baz=300,slow=7.7,SNR=404
INK pP pP 09 13 46.4 0.0
comp=N,22nm,0.5s,baz=285,slow=6.7,SNR=8.3
INK S **S** **09 20 00.7 -1.4**
comp=N,2.1nm,0.9s,baz=74,slow=29,SNR=5.3
CHTO Chiang Mai 46.65 253 *eP* **P** **09 13 24.5 +0.3**
CHTO LR LR
comp=Z,283nm,21.0s
CHTO Chiang Mai 46.65 253 P **P** **09 13 25.1 +0.9**
SNR=102
TSM Tawau 46.80 220 ⇑P **P** **09 13 26.4 +1.0**
SHL Shillong 47.28 265 *i* P **P** **09 13 29.0 -0.1**
SHL *i* S **S** **09 20 12.8 -1.9**
SKAG Skagway 47.99 42 *eP* **P** **09 13 34.4 +0.3**
comp=Z,14nm,1.1s,mb4.7
BRVK Borovoye 48.70 309 P **P** **09 13 39.8 +0.1**
comp=Z,138nm,1.5s,mb5.7,SNR=11
BRVK Borovoye 48.70 309 *eP* **P** **09 13 39.5 -0.2**
BRVK MLR MLR
comp=Z,559nm,21.0s
BRVK Borovoye 48.70 309 P **P** **09 13 39.5 -0.1**
SNR=23
BRVK Borovoye 48.70 309 P **P** **09 13 39.5 -0.1**
SNR=23
TAPN Taplejung 49.23 270 *eP* **P** **09 13 44.9 +0.9**
comp=Z,693nm,1.1s,mb6.5
ULHL Ulahol 49.52 294 P **P** **09 13 47.1 +1.0**
SNR=48
TKM2 Tokmak 2 49.64 295 *eP* **P** **09 13 47.8 +0.9**
comp=Z,126nm,0.8s,mb5.9
TKM2 *e*pP pP 09 14 10.8 -0.5
TKM2 LR LR
comp=Z,590nm,22.0s
TKM2 Tokmak 2 49.64 295 *eP* **P** **09 13 47.8 +0.9**
TKM2 *e*PP pP 09 14 10.8 -0.5
TKM2 pmax pmax
comp=Z,126nm,0.8s,mb5.9
TKM2 MLR MLR
comp=Z,590nm,22.0s
TKM2 Tokmak 2 49.64 295 P **P** **09 13 47.8 +0.9**
SNR=144
ODAN Odare 49.74 270 *eP* **P** **09 13 48.5 +0.6**
comp=Z,591nm,1.7s,mb6.2
BTM Bintulu 50.09 225 ⇑P **P** **09 13 51.2 +0.5**
JIRN Jiri 50.14 272 *eP* **P** **09 13 51.9 +1.0**
comp=Z,799nm,1.1s,mb6.5
CHMS Chumysh 50.16 295 P **P** **09 13 50.9 +0.1**
SNR=24
KBK Karagaybulak 50.18 295 P **P** **09 13 51.8 +0.8**
SNR=114
USP Ospenovka 50.20 296 P **P** **09 13 51.4 +0.3**
SNR=126
AAI Ambon 50.24 203 P **P** **09 13 51.4 -0.3**
KZA Kyzart 50.25 294 P **P** **09 13 53.4 +1.8**
SNR=167
FRU Bishkek 50.32 295 ⇓*i*P **P** **09 13 52.0 -0.1**
FRU *e* 09 20 58.0
FRU pmax pmax
comp=Z,414nm,2.0s,mb6.0
AAK Ala-Archa 50.49 295 P **P** **09 13 52.0 -1.4**
comp=Z,622nm,0.8s,mb6.6,SNR=69
AAK Ala-Archa 50.49 295 P **P** **09 13 53.9 +0.5**
SNR=76
WRAK Wrangell Islan 50.55 45 PFAKE
WRAK LR LR
comp=Z,447nm,19.0s
UCH Uchtor 50.67 294 *eP* **P** **09 13 55.2 +0.4**
comp=Z,126nm,0.8s,mb6.0
UCH LR LR
comp=Z,538nm,21.0s
UCH Uchtor 50.67 294 P **P** **09 13 55.8 +1.0**
SNR=43
KKN Kakani 50.72 273 *eP* **P** **09 13 55.8 +0.5**
comp=Z,441nm,0.9s,mb6.5
DLBC Dease Lake 50.92 42 *eP* **P** **09 13 57.6 +1.3**
EKS2 Erkin-Say 50.95 295 *eP* **P** **09 13 57.4 +0.6**
comp=Z,1μm,1.3s,mb6.8
EKS2 LR LR
comp=Z,593nm,20.0s
EKS2 Erkin-Say 50.95 295 P **P** **09 13 57.2 +0.4**
SNR=116
KSH Kashi 51.00 291 *eP* **P** **09 13 58.8 +1.6**
KSH *e*AP pP 09 14 22.3 +0.6
KSH *e*XP sP 09 14 33.5 +0.3
KSH *e*PCP PcP 09 15 15.0 +3.1
KSH *e*PP PP 09 15 55.8 +1.4
KSH *e*S **S** **09 21 06.0 -0.4**
KSH *e*PS 09 21 30.5
KSH *e*XS sS 09 21 46.5 -1.9
KSH *e*SCS ScS 09 23 36.5 -1.0
KSH *e*SS SS 09 24 38.5 -3.6
KSH AMB AMB
comp=Z,209nm,0.6s,mb6.3
KSH LR LR
comp=N,2μm,7.5s
KSH LR LR
comp=E,611nm,3.5s
KSH LR LR
comp=Z,966nm,5.1s
GKN Gorkha 51.06 273 *eP* **P** **09 13 58.3 +0.5**
comp=Z,280nm,0.7s,mb6.4
KIP Kipapa 51.10 97 *eP* **P** **09 13 58.6 +0.4**
SBUM Sibu 51.17 226 ⇓P **P** **09 13 59.8 +1.1**
AML Almayashu 51.25 295 *eP* **P** **09 14 00.2 +1.1**
AML LR LR
comp=Z,652nm,22.0s
AML Almayashu 51.25 295 P **P** **09 14 00.3 +1.3**
SNR=92
KOLN Koldanda 51.94 274 *eP* **P** **09 14 05.2 +0.8**
comp=Z,799nm,1.1s,mb6.7
SVE Sverdlovsk 52.33 316 ⇓*eP* **P** **09 14 06.2 -0.7**
SVE *e* 09 15 17.6
SVE *e* 09 23 37.7
SVE pmax pmax
comp=Z,30nm,0.8s,mb5.4
SVE MLR MLR
comp=Z,1μm,18.0s
BOK Bokaro 52.67 268 *eP* **P** **09 14 10.3 +0.4**
BOK *ex* x 09 14 12.2
comp=Z,198nm,0.8s
BOK *i* x x 09 14 24.6
ALE Alert 52.79 5 P **P** **09 14 07.7 -2.3**
comp=Z,45nm,1.3s,mb5.3,SNR=5.2
SOKR Solikamsk 53.00 320 *di*P **P** **09 14 09.9 -1.8**
SOKR S **S** **09 21 33.9 +0.8**
SOKR pmax pmax
comp=Z,30nm,0.8s,mb5.4
SOKR MLR MLR
comp=Z,320nm,15.0s
KSM Kuching 53.00 227 *eP* **P** **09 14 12.8 +0.5**
KSM *ep*P pP 09 14 37.8 +0.9
KSM Kuching 53.00 227 ⇓P **P** **09 14 13.7 +1.4**
LGTI Lohaghat 53.37 277 *eP* **P** **09 14 16.0 +1.1**
ARU Arti 53.53 316 *eP* **P** **09 14 14.8 -1.0**
ARU LR LR
comp=Z,547nm,19.0s
ARU Arti 53.53 316 ⇓*eP* **P** **09 14 15.0 -0.7**
ARU pmax pmax
comp=Z,93nm,2.0s,mb5.5
KTGM Kuala Trenggan 53.92 237 ⇑P **P** **09 14 20.4 +1.3**
POHA Pohakuloa 53.95 97 *eP* **P** **09 14 19.9 +0.6**
POHA *ep*P pP 09 14 43.6 -0.4
KHU Kahuku 54.22 98 *eP* **P** **09 14 21.9 +0.7**
KHU *ep*P pP 09 14 45.7 -0.2
KBS Kingsbay 54.28 350 *eP* **P** **09 14 20.5 -0.4**
KBS LR LR
comp=Z,693nm,20.0s
KAPI Kappang 54.35 213 P **P** **09 14 20.4 -1.8**
comp=Z,209nm,0.6s,mb6.3,SNR=5.8
KAPI Kappang 54.35 213 P **P** **09 14 20.1 -2.1**
DDI Dehra Dun 54.43 280 *eP* **P** **09 14 22.6 0.0**
DDI *ex* x 09 21 47.6
SDNR Sundarnagar 54.53 282 *eP* **P** **09 14 23.5 +0.1**
HNR Honiara 54.77 163 *eP* **P** **09 14 26.0 +0.8**
comp=Z,286nm,1.0s,mb6.3
HNR LR LR
comp=Z,895nm,21.0s
HNR Honiara 54.77 163 *eP* **P** **09 14 26.0 +0.9**
HNR pmax pmax
comp=Z,286nm,1.0s,mb6.3
HNR MLR MLR
comp=Z,895nm,21.0s
HNR Honiara 54.77 163 P **P** **09 14 25.5 +0.3**
comp=Z,158nm,0.8s,mb6.1,baz=262,slow=3.1,SNR=6.4
RES Resolute Bay 54.83 17 *eP* **P** **09 14 23.7 -1.1**
KULM Kulim 55.47 239 *eP* **P** **09 14 31.0 +0.7**
KULM *ep*P pP 09 14 55.5 +0.3
KULM Kulim 55.47 239 ⇓P **P** **09 14 31.8 +1.6**
YKW3 Yellowknife Ar 55.88 34 *eP* **P** **09 14 32.2 -0.3**
YKA Yellowknife Ar 55.92 34 P **P** **09 14 32.4 -0.5**
YKA pP pP 09 14 56.8 -0.9
YKA S **S** **09 22 13.0 +0.7**
YKA LR LR 09 44 05.0
YKA Yellowknife Ar 55.92 34 P **P** **09 14 32.3 -0.5**
YKA *PP pP 09 14 56.8 -0.9
YKA S **S** **09 22 13.0 +0.7**
YKA pmax pmax
comp=Z,13nm,0.6s
YKA MLR MLR
comp=Z,137nm,18.8s
YKA Yellowknife Ar 55.92 34 P **P** **09 14 32.3 -0.5**
comp=Z,13nm,0.6s,mb5.1,baz=304,slow=7.0,SNR=196
YKA pP pP 09 14 56.8 -0.9
comp=Z,14nm,0.8s,baz=300,slow=6.5,SNR=13
YKA S **S** **09 22 13.0 +0.7**
comp=Z,0.4nm,0.8s,baz=304,slow=14,SNR=4.5
YKA LR LR 09 44 05.0
comp=Z,136nm,18.8s,baz=235,slow=42
NDI New Delhi 55.97 279 *i* P **P** **09 14 33.5 -0.2**
NDI *ex* x 09 21 11.0
MYKOM Kota Tinggi 56.32 234 ⇓P **P** **09 14 37.6 +1.3**
BLSP Bilaspur 56.41 269 *eP* **P** **09 14 36.6 -0.3**
BLSP *ex* x 09 14 38.1
comp=Z,119nm,0.6s
KGM Kluang 56.45 234 ⇓P **P** **09 14 39.1 +1.9**
FRIM Kepong 56.48 237 ⇓P **P** **09 14 38.6 +1.1**
PRGR Permogore 56.82 326 ⇓*i*P **P** **09 14 38.2 -1.0**
PRGR *eS* **S** **09 22 14.5 -10**
APA Apatity 57.71 335 ⇑*i*P **P** **09 14 44.0 -1.4**
APA *i* 09 15 43.3
APA pmax pmax
comp=Z,43nm,1.2s,mb5.3
BATI Kupang 57.78 206 P **P** **09 14 45.5 -1.0**
comp=Z,19nm,0.4s,mb5.5,baz=216,slow=2.4,SNR=8.0
BATI pP pP 09 15 11.7 +0.2
comp=Z,11nm,0.4s,baz=103,slow=11,SNR=1.5
KAKA Kakadu 57.91 196 ⇑*i*P **P** **09 14 46.1 -1.3**
comp=Z,0.7nm,0.3s,mb4.2
KAKA Kakadu 57.91 196 ⇑*i*P **P** **09 14 46.2 -1.2**
comp=Z,152nm,0.9s,mb6.0
TPI Tanjungpandan 57.97 227 P **P** **09 14 47.6 -0.3**
TPI Tanjungpandan 57.97 227 ⇑*eP* **P** **09 14 48.0 +0.1**
VIS Vishakhapatnam 58.38 264 *eP* **P** **09 14 50.7 -0.1**
VIS *ex* x 09 14 52.6
comp=Z,100nm,0.7s
KMMI Kalianget 58.61 218 P **P** **09 14 51.8 -0.5**
ARCES ARCESS Array B 58.62 339 P **P** **09 14 50.2 -1.5**
ARCES PcP PcP 09 15 40.8 +0.1
ARCES LR LR 09 43 24.4
ARCES ARCESS Array B 58.62 339 P **P** **09 14 50.2 -1.5**
ARCES 09 15 40.8
ARCES ARCESS Array B 58.62 339 P **P** **09 14 50.2 -1.5**
comp=Z,7.5nm,0.6s,mb4.9,baz=41,slow=7.0,SNR=39
ARCES PcP PcP 09 15 40.8 +0.1
comp=Z,3.4nm,0.3s,baz=59,slow=5.0,SNR=14
ARCES LR LR 09 43 24.4
comp=Z,450nm,18.2s,baz=37,slow=39
PGC Sidney 58.98 51 *eP* **P** **09 14 55.1 +0.6**
comp=Z,244nm,1.8s,mb5.9
PGC *ep*P pP 09 15 20.5 +0.9
BHPL Bhopal 59.11 273 *eP* **P** **09 14 56.2 +0.4**
AJM Ajmer 59.12 278 *eP* **P** **09 14 55.7 -0.1**
NLWA Neilton Lookou 59.43 52 *eP* **P** **09 14 58.8 +1.2**
KTK1 Kautokeino 59.56 339 *eP* **P** **09 14 59.2 +1.0**
MBW Mount Baker 59.77 50 P **P** **09 15 00.4 +0.5**
SGF Sodankyl 59.79 337 P **P** **09 14 59.0 -0.8**
GNW Green Mountain 59.93 51 *eP* **P** **09 15 02.3 +1.3**
TRO Tromso 60.15 341 *eP* **P** **09 14 59.4 -2.9**
TRO AMS AMS 09 44 36.0
comp=Z,388nm,21.4s
FUNA Funafuti 60.38 142 PFAKE 09 15 20.0 +16
FUNA LR LR
comp=Z,7μm,21.0s
RVC Mount Rainier- 60.76 52 P **P** **09 15 08.0 +1.3**
JCJI Jatiwangi 60.82 224 P **P** **09 15 08.5 +1.0**
FMW Mount Fremont 60.93 52 P **P** **09 15 08.6 +0.8**
LON Longmire 60.96 52 *eP* **P** **09 15 08.6 +0.5**
MTMW Mount Mitchell 61.14 53 P **P** **09 15 10.5 +1.2**
COR Corvallis 61.33 55 *eP* **P** **09 15 12.0 +1.4**
comp=Z,24nm,0.9s,mb5.2
COR pmax pmax
comp=Z,24nm,0.9s,mb5.2
COR Corvallis 61.33 55 *eP* **P** **09 15 12.0 +1.4**
JOF Joensuu 61.39 332 *ep* **P** **09 15 08.5 -2.2**
comp=Z,7.2nm,0.4s,mb5.1
LEM Lembang 61.44 225 P **P** **09 15 10.8 -0.9**
EBG Ellensburg 61.56 51 P **P** **09 15 13.1 +1.0**
OUL Oulu 61.63 335 P **P** **09 15 10.7 -1.6**
EDM Edmonton 61.65 42 *eP* **P** **09 15 12.7 +0.1**
KEBM Edson Butte 61.70 57 *ep*P pP 09 15 41.0 +2.5
HOOD Mount Hood Mea 61.87 53 *eP* **P** **09 15 15.4 +1.2**
VFP Flag Point 61.98 53 P **P** **09 15 16.2 +1.2**
HYB Hyderabad 62.01 267 *eP* **P** **09 15 15.0 -0.5**
comp=Z,250nm,1.0s,mb6.2
HYB Hyderabad 62.01 267 *eP* **P** **09 15 15.0 -0.5**
HYB pmax pmax
comp=Z,250nm,1.0s,mb6.2
HYB Hyderabad 62.01 267 *i* P **P** **09 15 15.0 -0.5**
comp=Z,250nm,1.0s,mb6.2
HYB *ep*P pP 09 15 42.0 +1.1
HYB *e*PP PP 09 17 36.0 +3.0
HYB *eS* **S** **09 23 30.0 -2.1**
RSW Rattlesnake Hi 62.41 51 P **P** **09 15 18.7 +0.9**
HAWA Hanford 62.45 51 *eP* **P** **09 15 18.4 +0.4**
comp=Z,52nm,1.1s,mb5.5
HAWA *ep*P pP 09 15 44.5 +1.1
NEW Newport 62.66 48 *eP* **P** **09 15 19.5 +0.1**
comp=Z,33nm,1.1s,mb5.2
NEW *ep*P pP 09 15 44.3 -0.5
NEW LR LR
comp=Z,240nm,19.0s
NEW Newport 62.66 48 *eP* **P** **09 15 19.5 0.0**
NEW *e*PP pP 09 15 44.3 -0.5
NEW pmax pmax
comp=Z,33nm,1.1s
NEW MLR MLR
comp=Z,240nm,19.0s
NEW Newport 62.66 48 P **P** **09 15 19.8 +0.3**
comp=Z,14nm,0.8s,mb5.0,baz=315,slow=6.8,SNR=22
NEW pP pP 09 15 44.5 -0.3
comp=Z,24nm,0.9s,baz=324,slow=5.0,SNR=7.4
KHMM Horse Mountain 63.23 58 *eP* **P** **09 15 25.3 +2.0**
BUOR Burton Butte 63.30 56 P **P** **09 15 24.7 +1.0**
YBH Yreka Blue Hor 63.34 57 *eP* **P** **09 15 25.2 +1.2**
YBH *ep*P pP 09 15 49.4 -0.1
VAN Vannovskaya 63.57 298 *eP* **P** **09 15 25.7 +0.1**
VAN *eS* **S** **09 23 51.9 +0.8**
ABKT Ailbek 63.57 298 P **P** **09 15 26.1 +0.5**
comp=Z,669nm,0.8s,mb6.5,SNR=11
KAF Kangasniemi 63.62 333 *ep* **P** **09 15 23.5 -2.1**
comp=Z,5.0nm,0.5s,mb4.6,baz=42,slow=6.3
KAF Kangasniemi 63.62 333 *eP* **P** **09 15 23.5 -2.1**
KAF pmax pmax
comp=Z,5.0nm,0.5s,mb4.6
MOS Moscow 63.68 323 *eP* **P** **09 15 23.4 -2.7**
MOS *eS* **S** **09 23 50.6 -1.4**
MOS pmax pmax
comp=Z,180nm,1.4s,mb5.7
JMIC Jan Mayen 63.74 351 *eP* **P** **09 15 29.2 +2.9**
BHV Bhavnagar 63.83 276 *eP* **P** **09 15 27.5 -0.1**
WALA Waterton Lakes 63.88 46 *eP* **P** **09 15 27.7 +0.2**
CTA Charters Tower 63.90 180 *eP* **P** **09 15 26.5 -1.3**
comp=Z,0.7nm,0.4s
CTA Charters Tower 63.90 180 ⇑*iP* **P** **09 15 26.5 -1.3**
comp=Z,31nm,0.7s,mb5.2
CTA Charters Tower 63.90 180 P **P** **09 15 26.6 -1.2**
comp=Z,36nm,0.7s,mb5.3,baz=356,slow=7.9,SNR=68
CTA LR LR 09 40 39.3
comp=Z,195nm,19.4s,baz=30,slow=33
CTAO Charters Tower 63.90 180 *eP* **P** **09 15 26.5 -1.3**
comp=Z,42nm,0.8s,mb5.3
CTAO LR LR
comp=Z,351nm,19.0s
CTAO Charters Tower 63.90 180 *eP* **P** **09 15 26.5 -1.3**
CTAO pmax pmax
comp=Z,43nm,0.8s,mb5.3
CTAO MLR MLR
comp=Z,351nm,19.0s
MOR8 Moi Rana 63.92 340 ⇑*iP* **P** **09 15 24.5 -2.9**
comp=Z,111nm,0.9s,mb5.7
MOR8 Moi Rana 63.92 340 ⇑*iP* **P** **09 15 24.5 -2.9**

MOR8 AMb AMB 09 15 27.4
comp=Z,111nm,0.9s,mb5.7
KCPM Cahto Peak 64.03 59 *e*P **P 09 15 28.9 +0.3**
WDC Whiskeytown Da 64.13 58 PFAKE 09 15 40.0 +11
WDC LR LR
comp=Z,189nm,20.0s
FINES FINESS Array B 64.18 332 P **P 09 15 27.6 -1.6**
comp=Z,11nm,0.5s,mb4.9,baz=44,slow=8.2,SNR=99
OBN Obninsk 64.55 323 *e*P **P 09 15 31.5 -0.2**
comp=Z,259nm,1.4s,mb5.9
OBN LR LR
comp=Z,438nm,20.0s
OBN Obninsk 64.55 323⇑ *i*P **P 09 15 31.1 -0.6**
OBN *e**PP pP 09 15 57.3 +0.1
OBN *i* S **S 09 23 55.3 -7.3**
OBN pmax pmax
comp=Z,163nm,1.3s,mb5.7
OBN MLR MLR
comp=Z,400nm,19.0s
BMO Blue Mountains 64.62 51 *e*P **P 09 15 33.0 +0.6**
comp=Z,37nm,1.3s,mb5.0
BMO *ep*P pP 09 15 58.4 +0.5
BMO LR LR
comp=Z,324nm,20.0s
WB2 Warramunga Arr 64.66 192⇑ *i*P **P 09 15 31.2 -1.5**
WB2 Warramunga Arr 64.66 192⇑ *i*P **P 09 15 31.3 -1.4**
WRA Warramunga Arr 64.66 192 P **P 09 15 31.3 -1.5**
WRA *PP pP 09 15 58.1 -0.2
WRA Warramunga Arr 64.66 192 P **P 09 15 31.3 -1.5**
comp=Z,91nm,0.8s,mb5.7,baz=12,slow=6.7,SNR=325
WRA pP pP 09 15 58.1 -0.2
comp=Z,13nm,1.0s,baz=10,slow=7.1,SNR=1.5
WRA ScP 09 20 00.2
comp=Z,4.1nm,1.2s,baz=0.7,slow=5.1,SNR=5.4
BHJ Bhuj 64.66 278 *e*P **P 09 15 34.6 +1.6**
BHJ AMb AMB 09 15 35.7
comp=Z,226nm,0.9s,mb6.0
POO Poona 64.67 272 *e*P **P 09 15 33.0 -0.1**
MOD Modoc 64.68 56 *e*P **P 09 15 33.7 +0.8**
FITZ Fitzroy Crossi 64.69 202⇑ *i*P **P 09 15 32.4 -0.6**
comp=Z,2.6nm,0.9s,mb4.1
FITZ Fitzroy Crossi 64.69 202⇑ *i*P **P 09 15 32.6 -0.4**
comp=Z,78nm,0.9s,mb5.5
FITZ Fitzroy Crossi 64.69 202⇑ *i*P **P 09 15 32.6 -0.4**
comp=Z,78nm,0.9s,mb5.5
FITZ Fitzroy Crossi 64.69 202 P **P 09 15 32.7 -0.3**
comp=Z,57nm,1.1s,mb5.3,baz=16,slow=8.2,SNR=70
LBCM Butte Creek Ri 64.70 57 P **P 09 15 33.7 +0.7**
KAD Karad 65.23 270 *e*P **P 09 15 36.5 -0.2**
MSO Missoula 65.25 48 *e*P **P 09 15 36.4 0.0**
comp=Z,60nm,1.3s,mb5.3
MSO *ep*P pP 09 16 01.6 -0.3
MSO LR LR
comp=Z,183nm,20.0s
NSHM Saint Helena R 65.34 60 *e*P **P 09 15 37.7 +0.5**
WVOR Wild Horse Val 65.34 54 *e*P **P 09 15 37.7 +0.6**
WVOR *ep*P pP 09 16 03.3 +0.7
WVOR LR LR
comp=Z,159nm,19.0s
OHCM Honcut 65.53 58 *e*P **P 09 15 38.5 +0.2**
XMIS Christmas Isla 65.56 224 P **P 09 15 37.6 -1.1**
MEF Metsahovi 65.64 332 P **P 09 15 37.5 -1.2**
FFC Flin Flon 65.86 36 P **P 09 15 39.8 -0.4**
comp=Z,102nm,0.7s,mb5.8,SNR=9.9
FFC Flin Flon 65.86 36 *e*P **P 09 15 39.3 -0.9**
comp=Z,45nm,0.9s,mb5.3
FFC *ep*P pP 09 16 05.8 +0.1
FFC Flin Flon 65.86 36 *e*P **P 09 15 39.3 -0.9**
FFC *e**PP pP 09 16 05.9 +0.1
FFC pmax pmax
comp=Z,45nm,0.9s,mb5.3
NSS Namsos 65.86 340 *e*P **P 09 15 39.0 -1.0**
VRSR Storozhevoye 65.92 319 *e*P **P 09 15 40.0 -0.7**
VRSR pmax pmax
comp=Z,10.0nm,1.1s,mb4.6
VRSR pmax pmax
comp=N,10.0nm,1.0s
VRSR pmax pmax
comp=E,10.0nm,1.0s
VORD Divnogorie 66.04 319 *e*P **P 09 15 40.0 -1.4**
VORD pmax pmax
comp=Z,190nm,1.5s,mb5.7
VORD pmax pmax
comp=N,80nm,0.9s
VORD pmax pmax
comp=E,120nm,1.3s
FCC Fort Churchill 66.08 30 *e*P **P 09 15 40.8 -0.8**
FCC *ep*P pP 09 16 06.9 -0.3
VSU Vasula 66.12 330 P **P 09 15 40.4 -1.4**
EGMT Eagleton 66.68 45 *e*P **P 09 15 45.4 -0.1**
comp=E,86nm,0.8s,mb5.6
EGMT *ep*P pP 09 16 11.2 0.0
EGMT LR LR
comp=Z,221nm,19.0s
LRM Limekiln Ridge 66.69 48 *e*P **P 09 15 46.2 +0.5**
MAK Makhachkala 66.89 308⇓ *i*P **P 09 15 47.2 +0.2**
MAK *e* pP 09 16 14.4 +1.7
MAK *i* 09 18 25.0
MAK *i* PPP 09 20 03.1
MAK *i* S S 09 24 29.7 -1.9
MAK *i* 09 25 07.2
MAK *e* 09 25 34.8
MAK pmax pmax
comp=Z,206nm,1.3s,mb5.8
DLMT Dillon 66.90 49 *e*P **P 09 15 48.0 +1.0**
comp=Z,76nm,1.2s,mb5.4
DLMT *ep*P pP 09 16 13.5 +0.8
CMB Columbia Colle 67.01 59 *e*P **P 09 15 48.3 +0.4**
CMB *ep*P pP 09 16 12.6 -0.8
CMB *e*PcP PcP 09 16 16.1 +0.6
CMB LR LR
comp=Z,178nm,20.0s
HLID Hailey 67.05 51 *e*P **P 09 15 48.6 +0.6**
HLID *ep*P pP 09 16 14.1 +0.4
HLID LR LR
comp=Z,308nm,21.0s
MCMT McKenzie Canyo 67.11 49 *e*P **P 09 15 48.5 +0.1**
MCMT *ep*P pP 09 16 14.1 +0.1
SAO San Andreas Ge 67.14 61 *e*P **P 09 15 48.9 +0.2**
SAO *ep*P pP 09 16 16.1 +1.7
BOZ Bozeman (W) 67.24 48 *e*P **P 09 15 49.9 +0.7**
comp=Z,40nm,0.8s,mb5.3
BOZ *ep*P pP 09 16 15.0 +0.2
BOZ LR LR
comp=Z,186nm,21.0s
BOZ Bozeman (W) 67.24 48 *e*P **P 09 15 49.9 +0.7**
BOZ *e**PP pP 09 16 15.0 +0.2
BOZ pmax pmax
comp=Z,40nm,0.8s,mb5.3
BOZ MLR MLR
comp=Z,186nm,21.0s
PALK Pallekele 67.36 258 P **P 09 15 50.0 -0.3**
comp=Z,338nm,1.1s,mb6.1,SNR=9.7
PALK Pallekele 67.36 258 *e*P **P 09 15 50.2 -0.1**
comp=Z,90nm,1.2s,mb5.5
PALK *e* pP 09 16 16.4 +0.4
PALK LR LR
comp=Z,168nm,22.0s
PALK Pallekele 67.36 258 P **P 09 15 50.8 +0.5**
SNR=9.6
PALK Pallekele 67.36 258 P **P 09 15 50.8 +0.5**
SNR=9.6
MNGI Mangalore 67.66 266 *i* P **P 09 15 51.7 -0.5**
MNGI *i* x x 09 24 34.1
QLMT Earthquake Lak 67.88 49 *e*P **P 09 15 54.1 +0.9**
NVAR Mina Array Bea 68.03 57 P **P 09 15 55.1 +0.8**
comp=Z,30nm,0.7s,mb5.2,baz=298,slow=4.6,SNR=38
NVAR pP pP 09 16 18.9 -1.1
comp=Z,19nm,0.7s,baz=283,slow=7.9,SNR=5.7
GCMT Greycliff 68.19 47 *e*P **P 09 15 55.4 +0.3**
GCMT *e* pP 09 16 21.0 +0.2
YMR Madison River 68.23 48 *e*P **P 09 15 56.2 +0.8**
comp=Z,28nm,0.8s,mb5.2
YMR *e*PcP PcP 09 16 21.5 +1.1
YMR LR LR
comp=Z,658nm,20.0s
IZAR Zarasai 68.30 328 *e*P **P 09 15 55.4 -0.2**
IZAR AMb AMB 09 15 57.6
comp=Z,36nm,1.0s,mb5.2
YNR Norris Junctio 68.36 48 *e*P **P 09 15 58.0 +1.8**
ASAR Alice Springs 68.38 192 P **P 09 15 55.8 -0.6**
comp=Z,81nm,0.7s,mb5.7,baz=9.4,slow=5.3,SNR=573
ASAR pP pP 09 16 21.4 -0.7
comp=Z,3.2nm,0.7s,baz=101,slow=20,SNR=3.3
ELK Elko 68.38 54 PFAKE 09 16 10.0 +14
ELK LR LR
comp=Z,36nm,21.0s
IDID Didziasalis 68.43 328 *e*P **P 09 15 56.2 -0.2**
IDID AMb AMB 09 15 58.7
comp=Z,58nm,1.3s,mb5.3
YFT Old Faithful 68.44 49 *e*P **P 09 15 59.1 +2.3**
YFT *e* pP 09 16 23.6 +1.2
DZM Mont Dzumac 68.47 160 P **P 09 15 58.9 +1.9**
comp=Z,64nm,1.0s,mb5.4,baz=18,slow=7.8,SNR=14
SFJD Kangerlussuaq 68.47 7 *e*P **P 09 15 55.6 -0.9**
comp=Z,80nm,1.4s,mb5.4
SFJD LR LR
comp=Z,454nm,20.0s
SFJD Kangerlussuaq 68.47 7 *i* P **P 09 15 54.8 -1.7**
SFJD *i* S S 09 24 42.9 -6.8
SFJD pmax pmax
comp=Z,55nm,1.3s,mb5.2
SFJD MLR MLR
comp=Z,220nm,22.0s
SFJD Kangerlussuaq 68.47 7 *i* P **P 09 15 54.8 -1.7**
comp=Z,55nm,1.3s,mb5.2
SFJD *i* S S 09 24 42.9 -6.8
SFJD
comp=Z,220nm,22.0s
MTUM Tungsten Hills 68.56 58 *e*P **P 09 15 58.8 +1.2**
MNK Minsk 68.60 326⇑ *i*P **P 09 15 56.0 -1.5**
MNK pmax pmax
comp=Z,730nm,1.5s,mb6.3
MNK pmax pmax
comp=E,480nm,1.6s
MNK pmax pmax
comp=N,560nm,1.4s
IIGN Ignalina 68.60 328 *e*P **P 09 15 57.4 -0.1**
IIGN AMb AMB 09 15 59.9
comp=Z,83nm,1.2s,mb5.4
LKWY Lake 68.60 48 *e*P **P 09 15 59.5 +1.8**
comp=Z,9.6nm,0.8s,mb4.7
LKWY *e* pP 09 16 25.2 +1.7
LKWY LR LR
comp=Z,287nm,20.0s
LKWY Lake 68.60 48 *e*P **P 09 15 59.5 +1.8**
LKWY *e* pP 09 16 25.2 +1.7
LKWY pmax pmax
comp=Z,10.0nm,0.8s,mb4.7
LKWY MLR MLR
comp=Z,287nm,20.0s
PTRM Twissleman Ran 68.62 61 *e*P **P 09 15 58.2 +0.3**
PTRM *e*PcP PcP 09 16 22.6 +0.3
DOMB Dombas 68.67 340⇓ *i*P **P 09 15 58.1 +0.3**
comp=Z,68nm,1.3s,mb5.3
DOMB Dombas 68.67 340⇓ *i*P **P 09 15 58.1 +0.3**
DOMB AMb AMB 09 15 59.7
comp=Z,68nm,1.3s,mb5.3
IMW Indian Meadow 68.75 49 *e*P **P 09 15 58.7 +0.1**
comp=Z,73nm,1.1s,mb5.4
IMW *ep*P pP 09 16 24.9 +0.5
FLWY Flagg Ranch 68.76 49 *e*P **P 09 16 00.2 +1.5**
comp=Z,33nm,0.9s,mb5.2
DCID1 Drake Creek 68.82 49 *e*P **P 09 16 00.7 +1.6**
DCID1 *ep*P pP 09 16 26.4 +1.6
RLMT Red Lodge 68.84 47 *e*P **P 09 15 59.8 +0.6**
comp=Z,18nm,0.8s,mb5.0
RLMT *ep*P pP 09 16 25.1 +0.2
KIV Kislovodsk 68.93 311 P **P 09 16 00.5 +0.8**
comp=Z,1µm,0.7s,mb6.8,SNR=20
KIV Kislovodsk 68.93 311 *e*P **P 09 16 00.6 +0.8**
comp=Z,162nm,0.8s,mb5.9
KIV *ep*P pP 09 16 26.0 +0.5
KIV LR LR
comp=Z,301nm,20.0s
KIV Kislovodsk 68.93 311*d iP* **P 09 16 00.1 +0.4**
KIV pmax pmax
comp=Z,392nm,1.6s,mb6.0
KIV MLR MLR
comp=Z,600nm,20.0s
KIV Kislovodsk 68.93 311 P **P 09 16 00.3 +0.6**
SNR=64
KIV Kislovodsk 68.93 311⇓ *i*P **P 09 16 00.4 +0.7**
MOOW Moose Ponds 68.96 49 *e*P **P 09 16 00.6 +0.7**
comp=Z,43nm,1.1s,mb5.2
MOOW *ep*P pP 09 16 26.2 +0.5
NB2 NORSAR Subarra 68.97 338 P **P 09 15 58.2 -1.5**
comp=Z,58nm,0.8s,mb5.5,baz=32,slow=6.5
NB2 NORSAR Subarra 68.97 338 P **P 09 15 58.2 -1.5**
NB2 pmax pmax
comp=Z,58nm,0.8s,mb5.5
NOA NORSAR Array B 68.97 338 P **P 09 15 58.2 -1.5**
NOA pP pP 09 16 24.8 -0.6
NOA LR LR 09 49 47.6
NOA NORSAR Array B 68.97 338 P **P 09 15 58.2 -1.5**
NOA *PP pP 09 16 24.8 -0.6
NOA NORSAR Array B 68.97 338 P **P 09 15 58.2 -1.5**
comp=Z,42nm,0.9s,mb5.3,baz=34,slow=6.2,SNR=94
NOA pP pP 09 16 24.8 -0.6
comp=Z,7.6nm,0.7s,baz=33,slow=6.2,SNR=2.3
NOA LR LR 09 49 47.6
comp=Z,447nm,21.5s,baz=5.0,slow=39
TPAW Teton Pass 69.01 49 *e*P **P 09 16 01.5 +1.2**
comp=Z,81nm,1.1s,mb5.5
TPAW *ep*P pP 09 16 26.7 +0.6
HFA0 Hagfors New Ar 69.03 337 P **P 09 15 58.2 -1.9**
ZEI Tsey 69.04 310 *e*P **P 09 16 00.7 +0.2**
ZEI *e* 09 18 32.3
ZEI *e*S S 09 24 56.0 -1.2
ZEI pmax pmax
comp=Z,30nm,0.5s,mb5.4
DGRG David-gareji 69.08 308 P **P 09 16 01.4 +0.7**
HVU Hansel Valley 69.12 52 *e*P **P 09 16 01.9 +0.9**
comp=Z,14nm,0.8s,mb4.8
HVU *ep*P pP 09 16 26.2 -0.5
HVU Hansel Valley 69.12 52 *e*P **P 09 16 01.9 +0.9**
HVU *e**PP pP 09 16 26.2 -0.6
HVU pmax pmax
comp=Z,14nm,0.8s,mb4.8
LOHW Long Hollow 69.12 49 *e*P **P 09 16 01.8 +0.8**
comp=Z,59nm,1.4s,mb5.2
LOHW *ep*P pP 09 16 27.0 +0.3
SNOW Snow King Moun 69.14 49 *e*P **P 09 16 02.0 +1.0**
comp=Z,49nm,1.0s,mb5.3
SNOW *ep*P pP 09 16 27.5 +0.7
DGMT Dagmar 69.14 42 *e*P **P 09 16 00.8 -0.1**
comp=Z,93nm,0.6s,mb5.8
DGMT *ep*P pP 09 16 27.1 +0.3
TRD Trivandrum 69.15 261⇓ *ex* x 09 15 26.0
REDW Red Top Meadow 69.15 49 *e*P **P 09 16 02.2 +1.1**
comp=Z,79nm,1.2s,mb5.4
REDW *ep*P pP 09 16 27.4 +0.5
MTA Mtatsminda 69.25 308 P **P 09 16 02.1 +0.4**
TBLG Delisi 69.25 308 P **P 09 16 03.2 +1.4**
MBWA Marble Bar 69.31 206 *e*P **P 09 16 01.8 -0.4**
comp=Z,117nm,1.3s,mb5.5
AHID Auburn Hatcher 69.41 50 *e*P **P 09 16 03.3 +0.6**
comp=Z,8.8nm,0.7s,mb4.7
AHID *e* pP 09 16 28.3 -0.2
AHID LR LR
comp=Z,176nm,20.0s
ONI Oni 69.42 310 P **P 09 16 03.4 +0.6**
BGU Big Grassy Mou 69.54 53 *e*P **P 09 16 03.5 -0.1**
BGU *ep*P pP 09 16 28.6 -0.7
SPUT South Promonto 69.62 52 *e*P **P 09 16 04.9 +0.9**
SPUT *ep*P pP 09 16 30.1 +0.3
ISA Isabella 69.70 60 *e*P **P 09 16 03.5 -1.1**
comp=Z,11nm,0.7s,mb4.8
ISA *e*PcP PcP 09 16 27.3 +0.4
ISA *ep*P pP 09 16 30.9 +0.4
ISA Isabella 69.70 60 *e*P **P 09 16 03.5 -1.1**
ISA *e* pP 09 16 27.3 -3.1
ISA *e**PP pP 09 16 30.9 +0.5
ISA pmax pmax
comp=Z,11nm,0.7s,mb4.8
HWUT Hardware Ranch 69.92 51 *e*P **P 09 16 06.2 +0.3**
comp=Z,11nm,0.6s,mb4.9
HYA Hoyanger 70.13 341⇓ *i*P **P 09 16 06.8 0.0**
comp=Z,115nm,1.6s,mb5.5
HYA Hoyanger 70.13 341⇓ *i*P **P 09 16 06.8 0.0**
HYA AMb AMB 09 16 09.8
comp=Z,115nm,1.6s,mb5.5
DUG Dugway 70.14 53 *e*P **P 09 16 08.1 +0.8**
DUG *ep*P pP 09 16 32.9 -0.2
DUG LR LR
comp=Z,192nm,20.0s
TPNV Topopah Spring 70.23 58 *e*P **P 09 16 08.5 +0.6**
comp=Z,32nm,0.8s,mb5.2
TPNV *e* pP 09 16 32.8 -0.9
TPNV pmax pmax
comp=Z,32nm,0.8s,mb5.2
TPNV MLR MLR
comp=Z,98nm,20.0s
TPNV Topopah Spring 70.23 58 *e*P **P 09 16 08.5 +0.6**
TPNV *e* pP 09 16 32.8 -0.9
TPNV pmax pmax
comp=Z,32nm,0.8s,mb5.2
TPNV MLR MLR
comp=Z,98nm,20.0s
NOQ North Oquirrh 70.24 52 *e*P **P 09 16 08.9 +1.1**
comp=Z,29nm,0.7s,mb5.2
NOQ *ep*P pP 09 16 33.6 -0.1
BW06 Boulder Array 70.26 49 *e*P **P 09 16 08.0 +0.1**
comp=Z,19nm,0.8s,mb5.0
BW06 *ep*P pP 09 16 33.5 -0.3
BW06 LR LR
comp=Z,203nm,20.0s
PDAR Pinedale Array 70.26 49 P **P 09 16 08.1 +0.1**
comp=Z,20nm,0.8s,mb5.0,baz=278,slow=2.2,SNR=103
PDAR pP pP 09 16 32.5 -1.3
comp=Z,21nm,0.8s,baz=292,slow=1.8,SNR=9.0
PDAR LR LR 09 49 15.5
comp=Z,124nm,18.5s,baz=143,slow=38
CTU Camp Tracy 70.42 52 *e*P **P 09 16 09.6 +0.7**
comp=Z,12nm,0.8s,mb4.8
CTU *ep*P pP 09 16 34.6 -0.2
KONO Kongsberg 70.57 338 *e*P **P 09 16 09.1 -0.5**
comp=Z,17nm,0.9s,mb4.9
KONO LR LR
comp=Z,791nm,21.0s
KONO Kongsberg 70.57 338 *e*P **P 09 16 08.9 -0.7**
KONO AMb AMB 09 16 12.8
comp=Z,67nm,1.4s,mb5.3
KONO *e*S S 09 25 14.8 +0.3
KONO AMS AMS 09 51 10.3
comp=Z,544nm,17.9s
KONO Kongsberg 70.57 338 *e*P **P 09 16 09.1 -0.4**
KONO pmax pmax
comp=Z,17nm,0.9s,mb4.9
KONO MLR MLR
comp=Z,791nm,21.0s
JLU Jordanelle 70.65 52 *e*P **P 09 16 11.3 +0.9**
JLU *ep*P pP 09 16 36.2 -0.1
SUW Suwalki 70.77 328 *e*P **P 09 16 10.5 -0.4**
SOC Sochi 70.77 312 *i* P **P 09 16 11.5 +0.5**
SOC Sochi 70.77 312*d iP* **P 09 16 10.0 -1.0**
SOC *e*S S 09 25 14.3 -3.1
SOC *e**SS sS 09 26 03.6 +1.9
SOC *e*SS SS 09 29 47.9 -2.6
SOC pmax pmax
comp=Z,530nm,2.4s,mb5.9
SOC pmax pmax
comp=Z,50nm,0.5s,mb5.6
AKASG Malin Array Be 70.81 323 *i* P **P 09 16 10.1 -1.0**
AKASG pmax pmax
comp=Z,43nm,0.6s
AKASG Malin Array Be 70.81 323 P **P 09 16 10.2 -0.9**
comp=Z,43nm,0.6s,mb5.5,baz=40,slow=6.6,SNR=202
AKASG pP pP 09 16 36.3 -0.7
comp=Z,12nm,0.6s,baz=39,slow=6.3,SNR=2.4
AKASG LR LR 09 49 13.5
comp=Z,283nm,18.2s,baz=80,slow=37
KIEV Kiev 70.82 323 *e*P **P 09 16 10.3 -0.9**
comp=Z,248nm,1.2s,mb5.9
KIEV LR LR
comp=Z,338nm,20.0s
KIEV Kiev 70.82 323 *e*P **P 09 16 10.3 -0.9**
KIEV pmax pmax
comp=Z,247nm,1.2s,mb5.9
KIEV MLR MLR
comp=Z,338nm,20.0s
DAU Daniels Canyon 70.89 52 *e*P **P 09 16 12.5 +0.7**
DAU *ep*P pP 09 16 38.1 +0.4
DIGO Kars 70.90 308 *i* P **P 09 16 13.1 +1.3**
MPU Maple Canyon 70.94 53 *e*P **P 09 16 12.8 +0.7**
comp=Z,28nm,0.7s,mb5.2
MPU *ep*P pP 09 16 37.8 -0.2
ASK Askoy 70.96 341 *e*P **P 09 16 11.6 -0.3**
comp=Z,249nm,1.6s,mb5.8
ASK Askoy 70.96 341 *e*P **P 09 16 11.6 -0.3**
ASK AMb AMB 09 16 14.9
comp=Z,249nm,1.6s,mb5.8
GSC Goldstone 70.97 59 *e*P **P 09 16 12.8 +0.4**
GSC *ep*P pP 09 16 37.6 -0.6
RUND Rundenannen 70.98 341 *e*P **P 09 16 14.2 +2.2**
comp=Z,144nm,1.6s,mb5.5
RUND Rundenannen 70.98 341 *e*P **P 09 16 14.2 +2.2**
RUND AMb AMB 09 16 16.9
comp=Z,144nm,1.6s,mb5.6
BORG Borgarnes 71.01 354 *e*P **P 09 16 11.6 -0.5**
comp=Z,203nm,1.8s,mb5.7
BER Bergen 71.02 341 *e*P **P 09 16 12.4 +0.2**
BER *ep*P 09 16 12.5
BER *e*S S 09 25 20.7 +1.0
BER AMS AMS 09 47 02.3
comp=Z,130nm,18.9s
BER Bergen 71.02 341 *e*P **P 09 16 12.5 +0.3**
BER MLR MLR
comp=Z,130nm,18.9s
ODD1 Odda 71.11 340⇓ *i*P **P 09 16 11.6 -1.2**
comp=Z,123nm,1.6s,mb5.5
ODD1 Odda 71.11 340⇓ *i*P **P 09 16 11.6 -1.2**
ODD1 AMb AMB 09 16 14.8
comp=Z,123nm,1.6s,mb5.5
ANN Anapa 71.13 315⇓ *i*P **P 09 16 12.3 -0.9**
ANN Anapa 71.13 315*c iP* **P 09 16 12.2 -1.0**
ANN *e* 09 16 30.7
ANN *e**PP pP 09 16 39.8 +0.7
ANN *e* 09 18 52.4
ANN *e*PPP 09 20 36.3
ANN *e*S S 09 25 22.4 +0.9
ANN pmax pmax
comp=Z,141nm,1.5s,mb5.6
EGD Espegrend 71.14 341 *e*P **P 09 16 13.0 0.0**
comp=Z,183nm,1.9s,mb5.6
EGD Espegrend 71.14 341 *e*P **P 09 16 13.0 0.0**
EGD AMb AMB 09 16 16.2
comp=Z,183nm,1.9s,mb5.6
ARTV Artvin 71.19 309 *i* P **P 09 16 14.3 +0.7**
DYDN Diyadin 71.30 307 *i* P **P 09 16 15.8 +1.4**
CCUT Cedar City 71.57 55 *e*P **P 09 16 16.7 +0.7**
CCUT *ep*P pP 09 16 42.1 +0.2
BLS5 Blasjo 71.58 340⇓ *i*P **P 09 16 16.5 +0.8**
comp=Z,55nm,1.7s,mb5.1
BLS5 Blasjo 71.58 340⇓ *i*P **P 09 16 16.5 +0.8**
BLS5 AMb AMB 09 16 19.7
comp=Z,55nm,1.7s,mb5.1
TMUT Trail Mountain 71.66 53 *e*P **P 09 16 17.0 +0.5**
ULM Lac du Bonnet 71.67 37 P **P 09 16 15.3 -1.0**
ULM pP pP 09 16 41.9 -0.3
ULM LR LR 09 46 45.8
ULM Lac du Bonnet 71.67 37 P **P 09 16 15.3 -1.0**
comp=Z,6.7nm,0.6s,mb4.7,baz=312,slow=6.6,SNR=24
ULM pP pP 09 16 41.9 -0.3
comp=Z,19nm,0.5s,baz=315,slow=7.0,SNR=13
ULM LR LR 09 46 45.8
comp=Z,188nm,19.0s,baz=2.8,slow=35
TUTA Tutak 71.90 307 *i* P **P 09 16 19.4 +1.5**
KMY Karmoy 72.07 340⇓ *i*P **P 09 16 18.2 -0.3**
comp=Z,151nm,1.8s,mb5.5
KMY Karmoy 72.07 340⇓ *i*P **P 09 16 18.2 -0.3**
KMY AMb AMB 09 16 21.4
comp=Z,151nm,1.8s,mb5.5
SRU San Rafael 72.18 53 *e*P **P 09 16 20.1 +0.5**
SRU *ep*P pP 09 16 45.2 -0.3
BANOM Banah 72.28 289 P **P 09 16 21.2 +0.8**
SNR=7.5
BANOM Banah 72.28 289 P **P 09 16 21.2 +0.8**
SNR=7.5
PFO Pinyon Flat Ob 72.30 60 P **P 09 16 20.2 -0.2**
comp=Z,100nm,0.8s,mb5.7,SNR=7.2
PFO Pinyon Flat Ob 72.30 60 *e*P **P 09 16 20.5 +0.2**
PFO *e* pP 09 16 45.5 -0.9
PFO Pinyon Flat Ob 72.30 60 P **P 09 16 20.9 +0.5**
PFO *PP pP 09 16 45.0 -1.3
PFO pmax pmax
comp=Z,13nm,0.9s,mb4.8
PFO Pinyon Flat Ob 72.30 60 P **P 09 16 20.9 +0.5**
comp=Z,13nm,0.9s,mb4.8,baz=314,slow=5.4,SNR=6.6
PFO pP pP 09 16 45.0 -1.4
comp=Z,11nm,0.8s,baz=300,slow=5.1,SNR=5.5
SNART Snartemo 72.33 339⇓ *i*P **P 09 16 19.9 -0.3**
SNART AMb AMB 09 16 22.9
comp=Z,130nm,1.4s,mb5.5
ERZM Erzurum 72.38 309 *i* P **P 09 16 21.8 +1.1**
BIDO Bidbid 72.60 286 P **P 09 16 23.8 +1.5**
SNR=17

WBK	Wadi Bani Khal	72.61	285		P		P	09 16 24.2	+1.8
	SNR=15								
HAKT	HAKKARI	72.62	306	*i*	P		P	09 16 23.0	+0.7
SIM	Simferopol'	72.70	316	*i*	P		P	09 16 22.7	+0.1
SIM					*e*S		S	09 25 40.0	+0.5
SIM						pmax	pmax		
	comp=Z,51nm,0.7s,mb5.5								
BSD	Bornholm Skovb	72.80	333	⇓	*i*	P	P	09 16 22.1	-0.9
BSD						pmax	pmax		
	comp=Z,160nm,0.9s,mb5.8								
BSD	Bornholm Skovb	72.80	333	⇓	*i*	P	P	09 16 22.1	-0.9
	comp=Z,160nm,0.9s,mb5.8								
SMDO	Samad	72.95	286		P		P	09 16 26.0	+1.6
	SNR=6.5								
COP	Copenhagen	73.11	335	⇑	*i*	P	P	09 16 25.4	+0.6
COP					*e*S		S	09 25 42.8	-1.0
COP						pmax	pmax		
	comp=Z,60nm,0.7s,mb5.5								
COP						MLR	MLR		
	comp=Z,150nm,18.0s								
COP	Copenhagen	73.11	335	⇑	*i*	P	P	09 16 25.4	+0.6
	comp=Z,60nm,0.7s,mb5.5								
COP					*e*S		S	09 25 42.8	-1.0
COP									
	comp=Z,150nm,18.0s								
HATD	Hatta, Dubai	73.12	288		P		P	09 16 26.0	+0.6
	SNR=24								
HATD	Hatta, Dubai	73.12	288		P		P	09 16 26.0	+0.6
	SNR=24								
HOQ	Hoqain	73.12	287		P		P	09 16 26.1	+0.6
	SNR=13								
HOQ	Hoqain	73.12	287		P		P	09 16 26.1	+0.6
	SNR=13								
AGMN	Agassiz Refuge	73.13	38		*e*P		P	09 16 24.2	-0.8
	comp=Z,24nm,0.9s,mb5.0								
AGMN						*e*pP	pP	09 16 50.6	-0.4
BNGL	BINGOL	73.15	308		*i*	P	P	09 16 26.9	+1.6
ASHO	Ashiyiah	73.26	288		P		P	09 16 26.8	+0.6
	SNR=22								
ASHO	Ashiyiah	73.26	288		P		P	09 16 26.8	+0.6
	SNR=22								
JMDO	Jabal Madar	73.37	285		P		P	09 16 27.6	+0.7
	SNR=17								
JMDO	Jabal Madar	73.37	285		P		P	09 16 27.6	+0.7
	SNR=17								
GRSN	GIRESUNGRSN	73.38	311		*i*	P	P	09 16 25.9	-0.8
KELT	Kelkit	73.38	310		*i*	P	P	09 16 27.6	+0.9
MUD	Monsted U'grnd	73.43	337		*i*	P	P	09 16 27.3	+0.7
MUD						pmax	pmax		
	comp=Z,79nm,0.9s,mb5.5								
MUD						MLR	MLR		
	comp=Z,340nm,20.0s								
MUD	Monsted U'grnd	73.43	337		*i*	P	P	09 16 27.3	+0.7
	comp=Z,79nm,0.9s,mb5.5								
MUD									
	comp=Z,330nm,20.0s								
PHWY	Pilot Hill	73.48	48		*e*P		P	09 16 27.5	+0.3
PHWY						*e*pP	pP	09 16 52.8	-0.5
LVV	L'vov	73.67	325		*i*	P	P	09 16 27.2	-1.0
LVV					*e*S		S	09 25 47.4	-2.8
LVV						MLR	MLR		
	comp=Z,260nm,16.0s								
KIS	Kishinev	73.73	321	ϰ	*i*	P	P	09 16 27.0	-1.6
KIS					*e*		pP	09 16 48.0	-6.6
KIS					*e*			09 17 05.0	
KIS					*e*S		S	09 25 46.0	-5.0
KIS					*e**SS		sS	09 26 34.0	-1.7
KIS					*e*			09 26 40.0	
KIS						pmax	pmax		
	comp=Z,480nm,1.8s,mb5.9								
KIS						MLR	MLR		
	comp=Z,400nm,18.0s								
KIS	Kishinev	73.73	321		*i*	P	P	09 16 27.0	-1.6
	comp=Z,500nm,1.8s,mb5.9								
KIS					*e*S		S	09 25 46.0	-5.0
KIS					*es*S		sS	09 26 34.0	-1.7
KIS					*e*L			09 47 40.0	
KIS						LRM		09 52 16.0	
	comp=Z,400nm,18.0s								
BSY	Bisya	73.75	286		P		P	09 16 29.9	+0.8
	SNR=19								
BSY	Bisya	73.75	286		P		P	09 16 29.9	+0.8
	SNR=19								
MSL	Mosul	73.85	305		*ex*		x	09 16 30.0	
MSL					*ex*		x	09 25 52.5	
SMCO	Snowmass	74.14	51		*e*P		P	09 16 31.9	+0.8
	comp=Z,26nm,0.8s,mb5.0								
SMCO						*e*pP	pP	09 16 57.1	-0.1
KWP	Kalwaria	74.36	326		*e*P		P	09 16 32.8	+0.6
KWP	Kalwaria	74.36	326	⇓	*i*	P	P	09 16 32.6	+0.4
ARMA	Armidale	74.36	175		*e*P		P	09 16 33.2	+1.0
ISCO	Idaho Springs	74.45	49		*e*P		P	09 16 33.9	+1.0
	comp=Z,48nm,1.4s,mb5.0								
ISCO						*e*pP	pP	09 16 59.1	+0.1
ISCO						LR	LR		
	comp=Z,245nm,19.0s								
ISCO	Idaho Springs	74.45	49		*e*P		P	09 16 33.9	+1.0
ISCO					*e**PP		pP	09 16 59.1	+0.1
ISCO						pmax	pmax		
	comp=Z,49nm,1.4s,mb5.0								
ISCO						MLR	MLR		
	comp=Z,245nm,19.0s								
MARD	Mardin	74.49	307		*i*	P	P	09 16 34.2	+1.0
MVCO	Mesa Verde	74.64	53		*e*P		P	09 16 34.5	+0.5
MVCO						*e*pP	pP	09 16 59.7	-0.5
MVCO						LR	LR		
	comp=Z,263nm,20.0s								
ELZG	Elazig	74.69	309		*i*	P	P	09 16 39.7	+5.4
MLA1	Latheron	74.81	344		*e*P		P	09 16 35.0	+0.4
BOYT	Boyabat	74.83	313		*i*	P	P	09 16 35.8	+0.8
OJC	Ojcow	75.04	328		*e*P		P	09 16 36.2	+0.1
KOLS	Kolonicke sedl	75.08	325		*e*P		P	09 16 36.4	0.0
STHS	Stebnicka Huta	75.11	326		*e*P		P	09 16 37.1	+0.5
	comp=Z,141nm,1.5s,mb5.5								
STHS	Stebnicka Huta	75.11	326		*e*P		P	09 16 37.1	+0.5
STHS						pmax	pmax		
	comp=Z,141nm,1.5s,mb5.5								
MALT	Malatya	75.12	309		*e*P		P	09 16 38.1	+1.2
	comp=Z,62nm,1.0s,mb5.3								
MALT	Malatya	75.12	309		*e*P		P	09 16 38.1	+1.3
MALT						pmax	pmax		
	comp=Z,62nm,1.0s,mb5.3								
MALT	Malatya	75.12	309	⇓	*i*	P	P	09 16 38.2	+1.4
BHD	Baghdad	75.13	302		*ex*		x	09 16 42.0	
BHD					*ex*		x	09 26 04.0	
BSEG	Bad Segeberg	75.25	335		*e*P		P	09 16 37.0	-0.3
	comp=Z,195nm,1.1s,mb5.8								
EYMN	Ely	75.29	36		*e*P		P	09 16 36.8	-0.8
	comp=Z,42nm,1.0s,mb5.1								
EYMN						*e*pP	pP	09 17 03.5	-0.2
EYMN						LR	LR		
	comp=Z,284nm,19.0s								
UZH	Uzhgorod	75.31	325	⇓	*i*	P	P	09 16 36.4	-1.3
UZH					*i*			09 16 49.2	
UZH					*i*			09 17 14.6	
UZH					*e*S		S	09 26 04.0	-4.6
UZH					*e*			09 26 47.4	
UZH						MLR	MLR		
	comp=Z,440nm,16.0s								
MVH1	Achvaich	75.33	344	⇑	*e*P		P	09 16 37.4	-0.3
CFR	Carcaliu	75.41	320		P		P	09 16 41.6	+3.3
CRVS	Cervenica-Dubn	75.43	326		*e*P		P	09 16 38.4	0.0
CTKT	Corum	75.46	313		*i*	P	P	09 16 39.3	+0.6
NIE	Niedzica	75.48	327		*e*P		P	09 16 39.4	+0.7
BALT	Daday	75.53	314		*i*	P	P	09 16 40.1	+1.0
VRI	Vrincioaia	75.53	321		P		P	09 16 39.6	+0.6
VRI	Vrincioaia	75.53	321	⇓	*i*	P	P	09 16 39.2	+0.2
UMR	Umm Al-Rimmam	75.56	297		*e*P		P	09 16 39.2	-0.2
UMR						AMb	AMB	09 16 41.9	
	comp=Z,206nm,0.6s,mb6.0								
UMR	Umm Al-Rimmam	75.56	297		*e*P		P	09 16 39.0	-0.5
UMR						AMb	AMB	09 16 41.9	
	comp=Z,207nm,0.6s,mb6.1								
PLOR	Plostina	75.58	321		P		P	09 16 39.8	+0.5
MIB	Mutribah	75.63	298		*e*P		P	09 16 39.5	-0.4
MIB						AMb	AMB	09 16 41.8	
	comp=Z,226nm,1.1s,mb5.8								
MIB	Mutribah	75.63	298		*e*P		P	09 16 39.3	-0.5
MIB						AMb	AMB	09 16 43.1	
	comp=Z,182nm,1.1s,mb5.7								
STKA	Stephens Creek	75.75	184	⇑	*i*	P	P	09 16 39.7	-0.5
	comp=Z,25nm,0.7s,mb5.0								
STKA	Stephens Creek	75.75	184		P		P	09 16 40.0	-0.2
	comp=Z,29nm,0.7s,mb5.1,baz=341,slow=7.1,SNR=50								
STKA						LR	LR	09 52 24.9	
	comp=Z,194nm,19.3s,baz=142,slow=38								
MDO	Dochfour	75.82	344	⇓	*e*P		P	09 16 40.0	-0.4
TIRR	Tirgusor	75.82	319		P		P	09 16 41.1	+0.5
TIRR	Tirgusor	75.82	319	⇓	*i*	P	P	09 16 40.7	0.0
KBD	Kabd	75.83	297		*e*P		P	09 16 40.8	-0.2
KBD	Kabd	75.83	297		*e*P		P	09 16 40.7	-0.4
KBD						AMb	AMB	09 16 44.2	
	comp=Z,369nm,0.4s,mb6.4								
KSP	Ksiaz	75.85	330		*e*P		P	09 16 40.8	+0.1
KSP	Ksiaz	75.85	330		*e*P		P	09 16 40.3	-0.4
KSP					*e*			09 19 27.5	
KSP					*e*S		S	09 26 12.0	-2.4
KSP						MLR	MLR		
	comp=Z,1μm,25.5s								
HARR	Harsova	75.87	320		P		P	09 16 41.4	+0.4
HARR	Harsova	75.87	320	⇓	*i*	P	P	09 16 41.1	+0.1
KAC	Achnashellach	75.95	345		*e*P		P	09 16 40.3	-0.9
SDCO	Great Sand Dun	75.97	51		*e*P		P	09 16 42.5	+0.8
	comp=Z,12nm,1.0s,mb4.6								
SDCO						*e*pP	pP	09 17 07.5	-0.3
SDCO						LR	LR		
	comp=Z,224nm,22.0s								
QRN	Al-Qurain	75.98	296		*e*P		P	09 16 41.8	-0.1
QRN						AMb	AMB	09 16 43.8	
	comp=Z,498nm,0.3s,mb6.7								
QRN	Al-Qurain	75.98	296		*e*P		P	09 16 41.8	0.0
QRN						AMb	AMB	09 16 43.5	
	comp=Z,438nm,0.3s,mb6.7								
OKC	Ostrava-Krasne	75.98	328	⇓	*i*	P	P	09 16 41.7	+0.2
OKC					*e*S		S	09 26 14.3	-1.6
OKC	Ostrava-Krasne	75.98	328	⇓	*i*	P	P	09 16 41.7	+0.2
OKC					*e*S		S	09 26 14.3	-1.6
OKC						AMS	AMS	09 49 50.0	
	comp=Z,500nm,25.1s								
RST	Umm Al-Ruwaisa	76.06	298		*e*P		P	09 16 41.6	-0.7
RST						AMb	AMB	09 16 44.6	
	comp=Z,285nm,1.3s,mb5.9								
RST	Umm Al-Ruwaisa	76.06	298		*e*P		P	09 16 41.5	-0.8
RST						AMb	AMB	09 16 44.6	
	comp=Z,293nm,1.2s,mb5.9								
NAY	Al-Naaiem	76.07	297		*e*P		P	09 16 42.0	-0.4
NAY						AMb	AMB	09 16 45.0	
	comp=Z,178nm,1.3s,mb5.7								
NAY	Al-Naaiem	76.07	297		*e*P		P	09 16 41.9	-0.5
NAY						AMb	AMB	09 16 45.7	
	comp=Z,117nm,1.1s,mb5.5								
RDF	Al-Radifah	76.09	297		*e*P		P	09 16 42.4	-0.1
RDF						AMb	AMB	09 16 44.1	
	comp=Z,210nm,0.8s,mb5.9								
RDF	Al-Radifah	76.09	297		*e*P		P	09 16 42.2	-0.3
RDF						AMb	AMB	09 16 47.3	
	comp=Z,278nm,1.0s,mb5.9								
KECS	Kecovo	76.16	326		*e*P		P	09 16 42.3	-0.2
	comp=Z,34nm,1.4s,mb4.9								
KECS	Kecovo	76.16	326		*e*P		P	09 16 42.3	-0.2
KECS						pmax	pmax		
	comp=Z,34nm,1.4s,mb4.9								
KECS	Kecovo	76.16	326		*e*P		P	09 16 42.2	-0.3
KPL	Plockton	76.17	345	⇑	*e*P		P	09 16 42.4	0.0
KPL						AMb	AMB	09 16 44.4	
	comp=Z,231nm,1.6s,mb5.7								
MLR	Muntele Rosu	76.17	321		P		P	09 16 43.0	+0.3
MLR	Muntele Rosu	76.17	321	⇑	*i*	P	P	09 16 42.8	+0.1
ISR	Istrita	76.19	321	⇓	P		P	09 16 43.7	+0.9
ISR	Istrita	76.19	321	⇓	*i*	P	P	09 16 43.7	+0.9
ECSD	EROS,Sioux Fal	76.20	42		*e*P		P	09 16 42.1	-0.8
	comp=Z,46nm,0.8s,mb5.3								
ECSD						*e*pP	pP	09 17 08.4	-0.7
ECSD						LR	LR		
	comp=Z,307nm,21.0s								
UPC	Upice	76.23	330	⇓	*e*P		P	09 16 42.8	-0.1
UPC						*e*pP	pP	09 17 05.6	-3.5
KSB	Sheil Bridge	76.24	344		*e*P		P	09 16 42.7	-0.1
DPC	Dobruska-Polom	76.24	330	⇓	*i*	P	P	09 16 43.5	+0.5
DPC					*ex*		x	09 17 14.0	
DPC					*e*S		S	09 26 18.5	-0.3
LIKS	Likavka	76.25	327		*e*P		P	09 16 44.4	+1.4
	comp=Z,105nm,1.3s,mb5.4								
LIKS	Likavka	76.25	327		*e*P		P	09 16 44.4	+1.4
LIKS						pmax	pmax		
	comp=Z,105nm,1.3s,mb5.4								
MORC	Moravsky Berou	76.26	329		*e*P		P	09 16 42.4	-0.6
	comp=Z,309nm,1.4s,mb5.8								
MORC	Moravsky Berou	76.26	329		*e*P		P	09 16 42.4	-0.7
MORC						pmax	pmax		
	comp=Z,309nm,1.4s,mb5.8								
MORC	Moravsky Berou	76.26	329	⇓	*i*	P	P	09 16 43.3	+0.2
ELDT	Eldivan	76.27	314		*i*	P	P	09 16 43.7	+0.4
GZT	Gaziantep	76.28	309		*i*	P	P	09 16 44.7	+1.2
FORT	Forrest	76.34	196		*e*P		P	09 16 43.2	-0.4
	comp=Z,103nm,0.7s,mb5.7								
FORT						*e*	pP	09 17 08.7	-1.1
FORT						*e*		09 17 53.1	
CDAG	Cicekdag	76.40	312		*i*	P	P	09 16 44.0	-0.1
PSN	Preselentsi	76.52	319		*i*	P	P	09 16 45.0	+0.4
DRGR		76.58	324		P		P	09 16 45.3	+0.4
DRGR		76.58	324	⇓	*i*	P	P	09 16 44.8	-0.1
KAR1	Arisaig	76.59	345	⇑	*e*P		P	09 16 44.7	-0.1
CLL	Collm	76.61	332	⇓	*i*	P	P	09 16 44.4	-0.6
	comp=Z,264nm,1.2s,mb5.8								
CLL						*es*P	sP	09 17 21.0	-1.3
CLL						*e*S	S	09 26 17.0	-5.8
CLL	Collm	76.61	332	⇓	*i*	P	P	09 16 44.4	-0.6
CLL						*e*S	S	09 26 17.0	-5.8
CLL						pmax	pmax		
	comp=Z,264nm,1.2s,mb5.8								
CLL	Collm	76.61	332	⇓	*i*	P	P	09 16 44.4	-0.6
	comp=Z,264nm,1.2s,mb5.8								
CLL						*ex*	x	09 17 14.0	
CLL						*es*P	sP	09 17 21.0	-1.3
CLL						*e*PP	PP	09 19 36.0	-1.8
CLL						*e*S	S	09 26 20.0	-2.8
CLL						*e*ScS	ScS	09 26 52.0	+0.4
CLL						*e*SS	SS	09 31 18.0	-0.8
CLL						*es*SS		09 32 02.0	
CLL						*es*SSS		09 35 18.0	
CLL						*e*SSSS		09 36 54.0	
CLL						L		09 55 00.0	
	comp=Z,300nm,20.1s								
CLL	Collm	76.61	332		*e*P		P	09 16 44.4	-0.6
	comp=Z,264nm,1.2s,mb5.8								
BRG	Berggiesshubel	76.66	331	⇓	*i*	P	P	09 16 44.9	-0.4
	comp=Z,71nm,1.4s,mb5.2								
BRG					*e*		pP	09 17 10.4	-1.1
BRG					*e*			09 17 22.5	
BRG					*i*	PP	PP	09 19 36.4	-1.8
BRG						S	S	09 26 21.0	-2.3
BRG						LR	LR		
	comp=Z,340nm,30.7s								
BRG	Berggiesshubel	76.66	331		*e*P		P	09 16 44.9	-0.4
	comp=Z,118nm,1.4s,mb5.4								
BRG	Berggiesshubel	76.66	331	⇓	*i*	P	P	09 16 44.9	-0.4
	comp=Z,118nm,1.4s,mb5.4								
BRG					*e*		pP	09 17 10.4	-1.1
	comp=Z,50nm,1.7s								
BRG					*e*			09 17 22.5	
	comp=Z,51nm,1.7s								
BRG					*i*	PP	PP	09 19 36.4	-1.8
	comp=Z,40nm,1.5s								
BRG						S	S	09 26 21.0	-2.3
BRG									
	comp=N,828nm,34.6s								
BRG									
	comp=E,873nm,27.2s								
BRG									
	comp=Z,561nm,30.7s								
TUC	Tucson	76.68	58		*e*P		P	09 16 46.1	+0.4
TUC						*e*pP	pP	09 17 11.5	-0.5
PVCC	Panska Ves	76.73	331	⇓	*i*	P	P	09 16 45.8	+0.1
EBH	Black Hill	76.76	343		*e*P		P	09 16 45.8	0.0
ANDN	Andirin	76.80	310		*i*	P	P	09 16 47.3	+0.9
VYHS	Vyhne	76.81	327		*e*P		P	09 16 46.4	+0.2
	comp=Z,135nm,1.7s,mb5.4								
VYHS	Vyhne	76.81	327		*e*P		P	09 16 46.4	+0.2
VYHS						pmax	pmax		
	comp=Z,135nm,1.7s,mb5.4								
PSZ	Piszkesteto	76.85	326		*e*P		P	09 16 46.7	+0.3
PSZ	Piszkesteto	76.85	326		P		P	09 16 47.0	+0.6
PSZ	Piszkesteto	76.85	326	⇓	*e*P		P	09 16 46.9	+0.5
PSZ	Piszkesteto	76.85	326	⇓	*i*	P	P	09 16 46.9	+0.5
ESY	Stoneypath	76.87	343		*e*P		P	09 16 45.6	-0.8
KOLL	Kolacno	76.91	327		*e*P		P	09 16 46.8	+0.1
JAVC	Velka Javorina	76.96	328		P		P	09 16 48.3	+1.3
EAB	Aberfoyle	76.98	344	⇑	*e*P		P	09 16 46.8	-0.2
VRAC	Vranov	77.00	329		P		P	09 16 47.6	+0.4
VRAC	Vranov	77.00	329	⇓	*i*	P	P	09 16 47.7	+0.5
CLZ	Clausthal	77.03	334		*e*P		P	09 16 47.4	0.0
CLZ						pmax	pmax		
	comp=Z,376nm,1.4s,mb5.9								
CLZ	Clausthal	77.03	334		*e*P		P	09 16 47.4	0.0
	comp=Z,376nm,1.4s,mb5.9								
ANTO	Ankara	77.06	313		P		P	09 16 48.7	+0.9
ANTO						LR	LR		
	comp=Z,303nm,20.0s								
ANTO	Ankara	77.06	313	⇓	*i*	P	P	09 16 48.1	+0.4
EBL	Broad Law	77.10	343	⇑	*e*P		P	09 16 47.6	-0.1
EAU	Auchinoon	77.12	343	⇑	*e*P		P	09 16 46.7	-1.1
PRA	Prague	77.16	330	⇓	P		P	09 16 48.0	-0.1
PRU	Pruhonice	77.19	330	⇓	*i*	P	P	09 16 48.4	+0.1
PRU						*e*pP	pP	09 17 13.9	-0.6
PRU						*e*S	S	09 26 28.3	-0.7
XSO	Sourhope Farm	77.19	342	⇑	*e*P		P	09 16 48.1	0.0
KRUC	Moravsky	77.28	329		P		P	09 16 49.0	+0.2
HENT	Hendek	77.33	315		*i*	P	P	09 16 49.5	+0.3
SMOL	Smolenice	77.33	328		*e*P		P	09 16 50.0	+0.9
LAZ	Ladron	77.39	54		*e*P		P	09 16 50.7	+1.0
LAZ						*e*pP	pP	09 17 15.8	-0.2
ANMO	Albuquerque	77.40	53		*e*P		P	09 16 50.5	+0.7
	comp=Z,17nm,1.0s,mb4.7								
ANMO						*e*pP	pP	09 17 15.7	-0.4
ANMO						LR	LR		
	comp=Z,233nm,19.0s								
ANMO	Albuquerque	77.40	53		*e*P		P	09 16 50.5	+0.7
ANMO					*e**PP		pP	09 17 15.7	-0.3
ANMO						pmax	pmax		
	comp=Z,17nm,1.0s								
ANMO						MLR	MLR		
	comp=Z,233nm,19.0s								
ANMO	Albuquerque	77.40	53		P		P	09 16 50.8	+1.0
	comp=Z,7.5nm,0.8s,mb4.5,baz=321,slow=7.3,SNR=16								
ANMO						pP	pP	09 17 15.6	-0.5
	comp=Z,9.1nm,0.9s,baz=301,slow=8.4,SNR=7.4								
TREC	Trest	77.42	329	⇓	*i*	P	P	09 16 49.7	+0.1
TREC						AMS	AMS	09 50 30.0	
	comp=Z,700nm,22.9s								
IBBN	Ibbenburen	77.44	335		*e*P		P	09 16 49.4	-0.2
	comp=Z,195nm,1.0s,mb5.8								
MODS	Modra-Piesok	77.51	328		*e*P		P	09 16 50.9	+0.8
MODS					*e*S		S	09 26 33.8	+1.2
SCHQ	Schefferville	77.52	19		P		P	09 16 49.5	-0.5
	comp=Z,6.3nm,0.4s,mb4.7,baz=348,slow=4.3,SNR=38								
SCHQ						pP	pP	09 17 16.1	-0.1
	comp=Z,20nm,0.9s,baz=335,slow=7.4,SNR=5.7								
SCHQ						LR	LR	09 54 25.4	
	comp=Z,358nm,18.3s,baz=161,slow=38								
ESK	Eskdalemuir	77.56	343		P		P	09 16 50.1	-0.1
	comp=Z,522nm,0.7s,mb6.4,SNR=5.9								
ESK	Eskdalemuir	77.56	343	⇑	*e*P		P	09 16 50.0	-0.3
ESK						AMb	AMB	09 16 52.3	
	comp=Z,141nm,1.8s,mb5.4								
ESK	Eskdalemuir	77.56	343		*e*P		P	09 16 50.1	-0.1
	comp=Z,79nm,0.9s,mb5.4								
ESK						LR	LR		
	comp=Z,249nm,19.0s								
ESK	Eskdalemuir	77.56	343		*e*P		P	09 16 50.1	-0.1
ESK						pmax	pmax		
	comp=Z,79nm,0.9s,mb5.4								
ESK						MLR	MLR		
	comp=Z,249nm,19.0s								
COBT	Iskenderun	77.61	309		*i*	P	P	09 16 52.1	+1.2
MOX	Moxa	77.64	332		*e*P		P	09 16 50.4	-0.4
	comp=Z,229nm,1.7s,mb5.6								
MOX									
	comp=Z,200nm,19.0s								
MOX	Moxa	77.64	332		*e*P		P	09 16 50.4	-0.4
MOX						pmax	pmax		
	comp=Z,229nm,1.7s,mb5.6								
MOX						MLR	MLR		
	comp=Z,200nm,19.0s								
MOX	Moxa	77.64	332		*e*P		P	09 16 50.5	-0.3
	comp=Z,170nm,1.4s,mb5.6								
GZR	Gura Zlata	77.65	323	⇓	*i*	P	P	09 16 51.2	+0.2
ECK	Cauldkaine Hil	77.67	343		*e*P		P	09 16 50.7	-0.1
NKC	Novy Kostel	77.71	332	⇓	*i*	P	P	09 16 51.0	-0.2
ZST	Bratislava	77.72	328		*e*P		P	09 16 52.4	+1.1
	comp=Z,41nm,1.1s,mb5.1								
ZST					*e*			09 17 06.7	
ZST					*e*S		S	09 26 35.2	+0.3
ZST						LR	LR		
	comp=Z,200nm,22.5s								
ZST	Bratislava	77.72	328		*e*P		P	09 16 52.4	+1.1
ZST					*e*			09 17 06.7	
ZST					*e*S		S	09 26 35.2	+0.3
ZST						pmax	pmax		
	comp=Z,41nm,1.1s,mb5.1								
ZST						MLR	MLR		
	comp=Z,200nm,22.5s								
ZST	Bratislava	77.72	328		*e*P		P	09 16 52.4	+1.1
ZST					*e*PCP		PcP	09 17 06.7	+5.7
ZST					*e*S		S	09 26 35.2	+0.3
ZST					*e*			10 02 38.7	
COWI	Conover	77.73	36		*e*P		P	09 16 50.3	-1.1
	comp=Z,21nm,0.7s,mb5.0								
COWI						*e*pP	pP	09 17 17.2

GRFO LR LR
comp=Z,358nm,22.0s
GRFO Grafenberg 78.59 332 *e*P **P** 09 16 56.3 +0.2
GRFO *e**PP pP 09 17 22.0 -0.4
GRFO pmax pmax
comp=Z,85nm,0.7s,mb5.7
GRFO MLR MLR
comp=Z,358nm,22.0s
PKSM Moragy 78.73 326 P **P** **09 16 56.5 -0.4**
PKSM Moragy 78.73 326 ⇓*i*P **P** **09 16 56.2 -0.7**
DIM Dimitrovgrad 79.02 319 *i*P **P** **09 16 59.3 +0.8**
TNS Taunus Mts 79.04 334 *e*P **P** **09 16 58.4 -0.1**
TNS pmax pmax
comp=Z,164nm,1.4s,mb5.7
TNS Taunus Mts 79.04 334 *e*P **P** **09 16 58.4 -0.1**
comp=Z,164nm,1.4s,mb5.7
MOA Molln 79.07 329 *i*P **P** **09 16 58.7 0.0**
comp=Z,268nm,2.2s,mb5.7,SNR=21
KBI1 Birley Grange 79.09 341 *e*P **P** **09 16 58.0 -0.6**
ARSA Arzberg 79.10 328 ⇓*i*P **P** **09 16 59.2 +0.3**
comp=Z,232nm,1.9s,mb5.7
CNB Canberra Magne 79.13 177 *e*P **P** **09 16 59.9 +1.0**
comp=Z,19nm,1.0s,mb4.9
SART Tekirdag 79.28 317 *i*P **P** **09 17 00.1 +0.2**
RBK Rabkut 79.34 284 P **P** **09 17 00.7 +0.1**
SNR=8.2
GDZ Gediz 79.34 315 *i*P **P** **09 17 00.5 +0.1**
WHFO Wadi Hawf 79.36 285 P **P** **09 17 00.4 -0.3**
SNR=21
PLD Plovdiv 79.36 320 P **P** **09 17 01.3 +0.9**
BEBN Eben Emael 79.39 336 P **P** **09 17 00.1 -0.3**
HWQ Hawqa 79.41 308 *e*P **P** **09 17 01.3 +0.5**
SIND Sindeldorf 79.42 333 P **P** **09 17 00.6 0.0**
MEM Membach 79.46 335 P **P** **09 17 00.4 -0.4**
comp=Z,76nm,1.5s,mb5.3
TOD Tromm 79.46 333 *e*P **P** **09 17 00.5 -0.3**
KOGS Kog 79.49 327 P **P** **09 17 02.0 +1.0**
CWF Charnwood Fore 79.51 341⇑*e*P **P** **09 17 00.7 -0.3**
CWF AMb AMB 09 17 04.0
comp=Z,293nm,1.7s,mb5.8
BTOK Tokmak 79.57 316 *i*P **P** **09 17 01.5 -0.1**
SWS Schriesheim-Wi 79.60 333 P **P** **09 17 01.6 0.0**
ABH Alteburg 79.62 334 *e*P **P** **09 17 01.4 -0.3**
DMUB Kingscourt 79.65 344 *e*P **P** **09 17 01.1 -0.6**
ALN Alexandroupoli 79.67 318 *e*P **P** **09 17 02.2 +0.1**
VTS Vitosha 79.67 321 *i*P **P** **09 17 02.6 +0.5**
VTS Vitosha 79.67 321 *i*P **P** **09 17 02.5 +0.4**
KLBR Kellerberrin 79.67 204 *e*P **P** **09 17 01.1 -0.9**
comp=Z,46nm,0.9s,mb5.3
KSU1 Kansas State U 79.71 45 *e*P **P** **09 17 01.4 -1.0**
comp=Z,43nm,0.8s,mb5.3
KSU1 *e*pP pP 09 17 27.1 -1.6
KSU1 LR LR
comp=Z,365nm,21.0s
ISP Isparta 79.75 313 P **P** **09 17 03.3 +0.7**
GROS Grobnik 79.77 328 *i*P **P** **09 17 02.3 -0.2**
PERS Pernice 79.77 328 *e*P **P** **09 17 02.5 0.0**
PERS *i* pP 09 17 29.2 +0.3
UCC Uccle 79.77 336 *i*P **P** **09 17 02.0 -0.5**
comp=Z,110nm,1.9s,mb5.4
JFWS Jewell Farm 79.78 38 *e*P **P** **09 17 01.7 -1.0**
comp=Z,10nm,0.6s,mb4.8
JFWS *e*pP pP 09 17 27.9 -1.2
JFWS LR LR
comp=Z,168nm,19.0s
JFWS Jewell Farm 79.78 38 *e*P **P** **09 17 01.7 -1.0**
JFWS *e**PP pP 09 17 27.9 -1.2
JFWS pmax pmax
comp=Z,10.0nm,0.6s,mb4.8
JFWS MLR MLR
comp=Z,168nm,19.0s
SBD1 Bryn Du 79.81 342 *e*P **P** **09 17 02.5 -0.2**
BCLA Clavier 79.83 336 P **P** **09 17 02.5 -0.3**
comp=Z,70nm,1.5s,mb5.3
BHL Bhannes 79.84 308 *e*P **P** **09 17 03.7 +0.5**
FUR Furstenfeldbru 79.88 331 *e*P **P** **09 17 03.2 +0.1**
FUR pmax pmax
comp=Z,201nm,1.1s,mb5.9
FUR Furstenfeldbru 79.88 331 *e*P **P** **09 17 03.2 +0.1**
comp=Z,201nm,1.1s,mb5.9
HDH Heidenheim-Cha 79.88 332 P **P** **09 17 03.8 +0.7**
RUP Ruppelstein 79.93 334 *e*P **P** **09 17 03.3 -0.1**
KTD Kalmit 79.94 334 *e*P **P** **09 17 03.1 -0.3**
SNF Seneffe 80.05 336 P **P** **09 17 03.6 -0.3**
STU Stuttgart 80.06 333 *e*P **P** **09 17 03.9 -0.2**
comp=Z,136nm,0.9s,mb5.8
KBA Koelnbreinsper 80.06 329 ⇓*i*P **P** **09 17 04.3 +0.2**
comp=Z,302nm,1.8s,mb5.8,SNR=25
KBA Koelnbreinsper 80.06 329 ⇓*i*P **P** **09 17 04.3 +0.2**
KBA pmax pmax
comp=Z,302nm,1.8s,mb5.8
ABTO Aybut 80.07 284 P **P** **09 17 05.0 +0.4**
SNR=15
HLM1 Long Mynd 80.08 341⇑*e*P **P** **09 17 03.3 -0.8**
OBKA Obir 80.09 328 *i*P **P** **09 17 04.1 -0.2**
comp=Z,193nm,2.2s,mb5.5,SNR=21
BARS Barje 80.11 322 P **P** **09 17 04.5 +0.1**
DLF Lyons Farm 80.14 344 *e*P **P** **09 17 04.2 -0.2**
AMTX Amarillo 80.16 51 *e*P **P** **09 17 05.3 +0.4**
comp=Z,8.4nm,0.5s,mb4.8
AMTX *e*PcP PcP 09 17 11.3 -0.5
AMTX *e*pP pP 09 17 30.8 -0.4
MMB Musomiste 80.22 320 *i*P **P** **09 17 05.5 +0.4**
DCN Croghan 80.25 344 *e*P **P** **09 17 04.4 -0.6**
WLF Walferdange 80.25 335 *e*P **P** **09 17 05.2 +0.1**
comp=Z,286nm,1.8s,mb5.8
WLF Walferdange 80.25 335 *e*P **P** **09 17 05.2 +0.2**
WLF pmax pmax
comp=Z,286nm,1.8s,mb5.8
WLF Walferdange 80.25 335 P **P** **09 17 04.8 -0.2**
comp=Z,77nm,2.1s,mb5.2
WLF Walferdange 80.25 335 *e*P **P** **09 17 05.1 +0.1**
comp=Z,109nm,1.3s,mb5.5
GIVF Givet 80.26 336 ⇓*i*P **P** **09 17 04.3 -0.8**
comp=Z,464nm,1.7s,mb5.8
GIVF Givet 80.26 336 ⇓*i*P **P** **09 17 04.3 -0.8**
comp=Z,232nm,1.7s,mb5.7
GIVF Givet 80.26 336 ⇓*i*P **P** **09 17 04.3 -0.8**
GIVF pmax pmax
comp=Z,232nm,1.7s,mb5.7
LEGS Legarje 80.27 328 *i*P **P** **09 17 04.7 -0.5**
LBG Lerchenberg 80.28 333 P **P** **09 17 05.5 +0.2**
BUCH Bad Urach 80.29 332 P **P** **09 17 05.5 +0.2**
KKB Krupnik 80.30 321 *i*P **P** **09 17 06.0 +0.5**
CRES Cresnjev 80.31 327 *e*P **P** **09 17 05.0 -0.5**
MYKA Terra Mystica 80.33 329 ⇓*i*P **P** **09 17 05.1 -0.5**
comp=Z,248nm,1.4s,mb5.8
DOU Dourbes 80.33 336 P **P** **09 17 05.0 -0.4**
LANF Langenberg 80.33 334 *e*P **P** **09 17 05.5 0.0**
MNTX Cornudas Mount 80.35 55 *e*P **P** **09 17 06.3 +0.4**
comp=Z,23nm,0.9s,mb5.0
MNTX *e*PcP PcP 09 17 14.1 +1.3
MNTX *e*pP pP 09 17 31.8 -0.6
MNTX LR LR
comp=Z,277nm,22.0s
HAE Alders End 80.45 341⇑*e*P **P** **09 17 05.6 -0.5**
BAIF Baives 80.48 336 ⇓*i*P **P** **09 17 05.6 -0.7**
comp=Z,213nm,1.3s,mb5.5
BAIF Baives 80.48 336 ⇓*i*P **P** **09 17 05.6 -0.7**
comp=Z,107nm,1.3s,mb5.5
BAIF Baives 80.48 336 ⇓*i*P **P** **09 17 05.6 -0.7**
BAIF pmax pmax
comp=Z,107nm,1.3s,mb5.5
BOZC Bozcaada 80.48 317 *i*P **P** **09 17 06.9 +0.5**
WATA Walderalm 80.48 331 *i*P **P** **09 17 06.5 +0.2**
comp=Z,110nm,1.3s,mb5.5,SNR=11
WATA Walderalm 80.48 331 *i*P **P** **09 17 06.5 +0.2**
WATA pmax pmax
comp=Z,110nm,1.3s,mb5.5
LJU Ljubljana 80.49 328 *e*P **P** **09 17 05.7 -0.7**
LJU *i* pP 09 17 30.4 -2.5
MUN Mundaring 80.50 205 *e*P **P** **09 17 06.0 -0.4**
WTTA Wattenberg 80.52 330 *i*P **P** **09 17 06.9 +0.3**
comp=Z,307nm,1.6s,mb5.9,SNR=29
WTTA Wattenberg 80.52 330 *i*P **P** **09 17 06.9 +0.3**
WTTA pmax pmax
comp=Z,307nm,1.6s,mb5.9
HTR Trewern Hill 80.58 341 *e*P **P** **09 17 06.5 -0.3**
MCH1 Michaelchurch 80.59 341 *e*P **P** **09 17 05.9 -0.9**
MCH1 AMb AMB 09 17 09.8
comp=Z,270nm,1.4s,mb5.9
MENF Mencas 80.61 338 *e*P **P** **09 17 07.2 +0.2**
PTCC Patocco-Chiusa 80.63 329 P **P** **09 17 06.1 -1.0**
RETA Reutte 80.64 331 *i*P **P** **09 17 07.2 0.0**
comp=Z,283nm,1.7s,mb5.8,SNR=23
MOTA Moosalm 80.64 331 ⇓*i*P **P** **09 17 07.3 +0.1**
comp=Z,126nm,1.2s,mb5.6,SNR=29
MOTA Moosalm 80.64 331 ⇓*i*P **P** **09 17 07.3 +0.1**
MOTA pmax pmax
comp=Z,125nm,1.2s,mb5.6
ABTA Abfaltersbach 80.64 330 ⇓*i*P **P** **09 17 06.6 -0.6**
comp=Z,111nm,1.8s,mb5.4,SNR=10
BOJS Bojanci 80.66 327 *i*P **P** **09 17 06.8 -0.5**
BOJS *e* pP 09 17 36.0 +2.3
GUT Gutenstein 80.69 332 P **P** **09 17 07.7 +0.2**
UBR Ueberruh 80.70 332 P **P** **09 17 07.6 +0.1**
GOLH Golhisar 80.70 314 *i*P **P** **09 17 07.7 -0.1**
SQTA Sankt Quirin 80.71 331 ⇓*i*P **P** **09 17 07.9 +0.4**
comp=Z,72nm,1.0s,mb5.4,SNR=17
SQTA Sankt Quirin 80.71 331 ⇓*i*P **P** **09 17 07.9 +0.3**
SQTA pmax pmax
comp=Z,72nm,1.0s,mb5.5
BFO Black Forest 80.73 333 P **P** **09 17 07.3 -0.3**
comp=Z,392nm,0.7s,mb6.3,SNR=15
BFO Black Forest 80.73 333 *e*P **P** **09 17 07.1 -0.5**
comp=Z,132nm,1.3s,mb5.6
BFO LR LR
comp=Z,274nm,22.0s
BFO Black Forest 80.73 333 *e*P **P** **09 17 07.1 -0.5**
BFO pmax pmax
comp=Z,132nm,1.3s,mb5.6
BFO MLR MLR
comp=Z,274nm,22.0s
BFO Black Forest 80.73 333 *e*P **P** **09 17 07.1 -0.5**
comp=Z,132nm,1.3s,mb5.6
VOY Vojsko 80.74 328 *e*P **P** **09 17 06.9 -0.8**
VOY *e* 09 17 11.0
SWN1 Swindon 80.76 340 *e*P **P** **09 17 07.0 -0.7**
PLE Pljevlja 80.76 324 ⇓*i*P **P** **09 17 08.6 +0.7**
SPAK Spaichingen-Ko 80.78 333 *e*P **P** **09 17 07.6 -0.3**
GMNA Gemona 80.78 329 P **P** **09 17 07.0 -1.0**
CEY Cerknica 80.78 328 P **P** **09 17 07.5 -0.5**
JAVS Javornik 80.79 328 *i*P **P** **09 17 07.0 -1.1**
JAVS *e* pP 09 17 37.1 +2.7
STIP Stip 80.84 321 *i*P **P** **09 17 06.5 -1.9**
LOS Limnos 80.88 318 *e*P **P** **09 17 08.6 0.0**
HGH Gray Hill 80.88 341⇑*e*P **P** **09 17 07.9 -0.5**
IVA Berane 80.91 323 ⇓*i*P **P** **09 17 08.7 0.0**
KNT Kendrikon 80.94 320 *e*P **P** **09 17 09.0 +0.1**
SKO Skopje 80.96 322 P **P** **09 17 11.3 +2.3**
SKO Skopje 80.96 322 *i*P **P** **09 17 09.7 +0.7**
VAY Valandovo 80.97 321 P **P** **09 17 09.6 +0.6**
VAY Valandovo 80.97 321 *i*P **P** **09 17 08.4 -0.7**
CDF Champ du Feu 81.00 334 ⇓*i*P **P** **09 17 08.6 -0.5**
comp=Z,212nm,1.0s,mb5.6
CDF Champ du Feu 81.00 334 ⇓*i*P **P** **09 17 08.6 -0.5**
comp=Z,106nm,1.0s,mb5.6
CDF Champ du Feu 81.00 334 ⇓*i*P **P** **09 17 08.6 -0.5**
CDF pmax pmax
comp=Z,106nm,1.0s,mb5.6
SOH Sokhos 81.00 320 P **P** **09 17 10.5 +1.3**
FETA Feichten 81.05 331 *i*P **P** **09 17 09.4 +0.1**
comp=Z,169nm,1.7s,mb5.6,SNR=20
UPM Unac-Piva 81.07 324 ⇓*i*P **P** **09 17 08.9 -0.7**
NWAO Narrogin (SRO) 81.07 204 *e*P **P** **09 17 08.9 -0.6**
comp=Z,191nm,1.3s,mb5.8
NWAO *e*pP pP 09 17 33.6 -2.3
NWAO Narrogin (SRO) 81.07 204 *e*P **P** **09 17 08.9 -0.5**
NWAO *e**PP pP 09 17 33.7 -2.2
NWAO pmax pmax
comp=Z,191nm,1.3s
NWAO Narrogin (SRO) 81.07 204 P **P** **09 17 09.4 -0.1**
SNR=5.1
NWAO Narrogin (SRO) 81.07 204 P **P** **09 17 09.3 -0.1**
comp=Z,68nm,0.7s,mb5.6,baz=27,slow=4.7,SNR=37
NWAO pP pP 09 17 36.5 +0.6
comp=Z,14nm,0.8s,baz=9.1,slow=4.5,SNR=2.8
SISB Singen-Schiene 81.08 332 P **P** **09 17 09.6 +0.1**
PVY Plav 81.11 323 ⇓*i*P **P** **09 17 09.2 -0.6**
DAVA Damuels 81.11 332 *i*P **P** **09 17 09.7 0.0**
comp=Z,197nm,1.4s,mb5.7,SNR=15
DAVA Damuels 81.11 332 *i*P **P** **09 17 09.7 0.0**
comp=Z,197nm,1.4s,mb5.8
STEIN Stein am Rhein 81.12 332 ⇓*i*P **P** **09 17 09.4 -0.4**
comp=Z,178nm,0.8s,mb6.0
SLE Schleitheim 81.17 333 ⇓P **P** **09 17 09.4 -0.6**
SLE Schleitheim 81.17 333 ⇓*i*P **P** **09 17 09.5 -0.5**
comp=Z,200nm,1.7s,mb5.7
KIZ Kirchzarten 81.19 333 P **P** **09 17 09.9 -0.2**
ECH Echery 81.21 334 *e*P **P** **09 17 09.8 -0.4**
FELD Feldberg im Sc 81.23 333 *e*P **P** **09 17 10.2 -0.1**
LIENZ Kamor/St.Gall 81.24 332 ⇓*i*P **P** **09 17 10.2 -0.2**
comp=Z,173nm,1.9s,mb5.6
HORT Hortiatis 81.29 320 *e*P **P** **09 17 10.1 -0.7**
PLG Polygyros 81.31 319 *e*P **P** **09 17 10.0 -0.9**
THE Thessaloniki 81.33 320 *e*P **P** **09 17 09.7 -1.3**
GRG Griva 81.33 320 *e*P **P** **09 17 10.7 -0.3**
WILA Wila 81.33 332 ⇑P **P** **09 17 11.4 +0.5**
WILA Wila 81.33 332 ⇓*i*P **P** **09 17 10.4 -0.5**
comp=Z,148nm,1.6s,mb5.6
APPI Appiano 81.34 330 P **P** **09 17 09.6 -1.3**
NKY Niksic 81.35 324 ⇓*i*P **P** **09 17 10.4 -0.6**
BRY Bratogost 81.47 324 ⇓*i*P **P** **09 17 10.7 -1.0**
PLONS Plons/SG 81.49 332 ⇓*i*P **P** **09 17 11.3 -0.4**
comp=Z,172nm,1.1s,mb5.8
SULZ Cheisacher 81.50 333 ⇓P **P** **09 17 11.5 -0.3**
SULZ Cheisacher 81.50 333 ⇓*i*P **P** **09 17 11.4 -0.4**
comp=Z,306nm,1.1s,mb6.0
MOF Molkenrain 81.54 333 *e*P **P** **09 17 11.5 -0.4**
TTG Podgorica 81.55 323 ⇓*i*P **P** **09 17 11.2 -0.9**
PAIG Paliouri 81.55 319 *e*P **P** **09 17 11.5 -0.6**
DAVOX Davos/Dischmat 81.55 331 ⇓*i*P **P** **09 17 12.1 +0.1**
comp=Z,94nm,0.8s,mb5.7
CTI Castel Tesino 81.55 330 P **P** **09 17 11.1 -1.0**
FUORN Ofenpass-Fuorn 81.56 331 ⇓*i*P **P** **09 17 12.5 +0.4**
comp=Z,144nm,1.0s,mb5.7
THEF They Montfort 81.57 334 *e*P **P** **09 17 11.8 -0.3**
CHOS Chios island 81.60 317 *e*P **P** **09 17 12.5 0.0**
MEZF Maizieres J'vi 81.61 335 ⇓*i*P **P** **09 17 12.0 -0.3**
comp=Z,303nm,1.1s,mb5.7
MEZF Maizieres J'vi 81.61 335 ⇓*i*P **P** **09 17 12.0 -0.3**
comp=Z,303nm,1.1s,mb6.0
BRMO Bormio 81.64 331 P **P** **09 17 12.1 -0.4**
HAU Haudompre 81.65 334 ⇓*i*P **P** **09 17 11.8 -0.7**
comp=Z,98nm,0.9s,mb5.3
HAU *e*MLR MLR
comp=Z,474nm,22.0s
HAU Haudompre 81.65 334 ⇓*i*P **P** **09 17 11.8 -0.7**
comp=Z,49nm,0.9s,mb5.3
HAU LR LR
comp=Z,470nm,22.0s
HAU Haudompre 81.65 334 ⇓*i*P **P** **09 17 11.8 -0.7**
HAU pmax pmax
comp=Z,49nm,0.9s,mb5.3
HAU MLR MLR
comp=Z,470nm,22.0s
HINF Hinteralfeld 81.66 334 ⇓*i*P **P** **09 17 11.6 -1.0**
comp=Z,71nm,0.7s,mb5.3
HINF Hinteralfeld 81.66 334 ⇓*i*P **P** **09 17 11.6 -1.0**
comp=Z,36nm,0.7s,mb5.3
HINF Hinteralfeld 81.66 334 ⇓*i*P **P** **09 17 11.6 -1.0**
HINF pmax pmax
comp=Z,36nm,0.7s,mb5.3
RAR Rarotonga 81.73 130 PFAKE 09 17 20.0 +6.8
RAR LR LR
comp=Z,2.0nm,21.0s
BBS Basel-Blauen 81.75 333 *e*P **P** **09 17 13.1 0.0**
BIA Bitola 81.77 321 *i*P **P** **09 17 11.6 -1.7**
LLS Linth-Limmern 81.79 332 ⇓P **P** **09 17 13.2 -0.1**
LLS Linth-Limmern 81.79 332 ⇓*i*P **P** **09 17 13.0 -0.3**
comp=Z,142nm,1.1s,mb5.7
BALST Balsthal 81.81 333 ⇓*i*P **P** **09 17 13.1 -0.3**
comp=Z,359nm,1.2s,mb6.1
BUM Brajici-Budva 81.81 323 ⇓*i*P **P** **09 17 13.0 -0.5**
MUO Muotathal 81.81 332 ⇓P **P** **09 17 13.4 0.0**
MUO Muotathal 81.81 332 ⇓*i*P **P** **09 17 13.2 -0.2**
comp=Z,226nm,1.5s,mb5.8
STON Ston 81.85 324 P **P** **09 17 13.2 -0.5**
HCY Herceg Novi 81.86 324 ⇓*i*P **P** **09 17 12.9 -0.8**
WMOK Wichita Mounta 81.86 49 *e*P **P** **09 17 13.6 -0.3**
comp=Z,14nm,0.9s,mb4.8
WMOK *e*pP pP 09 17 39.4 -1.1
WMOK LR LR
comp=Z,159nm,19.0s
WMOK Wichita Mounta 81.86 49 *e*P **P** **09 17 13.6 -0.3**
WMOK *e**PP pP 09 17 39.4 -1.0
WMOK pmax pmax
comp=Z,14nm,0.9s,mb4.8
WMOK MLR MLR
comp=Z,159nm,19.0s
HTL Hartland 81.87 342⇑*e*P **P** **09 17 13.8 +0.2**
HTL AMb AMB 09 17 17.1
comp=Z,325nm,1.6s,mb5.9
BOURR Bourrignon 81.91 333 ⇓*i*P **P** **09 17 13.5 -0.4**
comp=Z,172nm,1.5s,mb5.7
BDRM Kayabasi 81.92 315 *i*P **P** **09 17 14.7 +0.5**
ULC Ulcinj 81.93 323 ⇓*i*P **P** **09 17 13.8 -0.3**
OHR Ohrid 81.94 321 P **P** **09 17 13.5 -0.7**
OHR Ohrid 81.94 321 *i*P **P** **09 17 12.6 -1.5**
FNA Florina 81.94 321 *e*P **P** **09 17 13.6 -0.6**
MABI Malga Bissina 81.95 330 P **P** **09 17 13.5 -0.7**
VDL Val di Lei 81.96 331 ⇓P **P** **09 17 14.3 +0.1**
VDL Val di Lei 81.96 331 ⇓*i*P **P** **09 17 14.0 -0.2**
comp=Z,107nm,0.8s,mb5.7
BNALP Bannalp 81.97 332 ⇓*i*P **P** **09 17 14.1 -0.1**
comp=Z,128nm,1.3s,mb5.6
LIT Litokhoron 81.97 320 *e*P **P** **09 17 13.4 -0.9**
TUE Stuetta 82.00 331 P **P** **09 17 13.0 -1.4**
AOS Alonnisos 82.05 318 *e*P **P** **09 17 14.8 0.0**
LOMF Lomont 82.08 333 *e*P **P** **09 17 14.6 -0.2**
HDIL Hopedale 82.09 39 *e*P **P** **09 17 14.2 -0.8**
comp=Z,240nm,1.3s,mb5.9
HDIL *e*pP pP 09 17 40.9 -0.6
MAGA Magasa 82.16 330 P **P** **09 17 14.5 -0.7**
HASLI Hasliberg/Brie 82.16 332 ⇓*i*P **P** **09 17 14.9 -0.3**
comp=Z,230nm,1.3s,mb5.8
TIR Tirane 82.16 322 P **P** **09 17 16.5 +1.2**
FUSIO Fusio 82.25 332 ⇓*i*P **P** **09 17 15.6 -0.1**
comp=Z,137nm,1.1s,mb5.7
DYA Yadsworthy 82.26 341⇑*e*P **P** **09 17 15.7 0.0**
DYA AMb AMB 09 17 18.7
comp=Z,459nm,1.5s,mb6.1
WIMIS Wimmis 82.42 333 ⇓*i*P **P** **09 17 16.1 -0.5**
comp=Z,100nm,1.3s,mb5.5
MUGIO Muggio 82.59 331 ⇓*i*P **P** **09 17 16.7 -0.8**
LKBD Leukerbad 82.66 332 ⇓P **P** **09 17 17.8 0.0**
LKBD Leukerbad 82.66 332 ⇓*i*P **P** **09 17 17.4 -0.4**
comp=Z,131nm,1.1s,mb5.7
LPIG La Paz 82.72 64 P **P** **09 17 18.8 +0.3**
comp=Z,44nm,1.0s,mb5.3,baz=348,slow=7.9,SNR=3.9
LPIG pP pP 09 17 45.5 +0.5
comp=Z,42nm,1.0s,baz=181,slow=2.6,SNR=2.9
VAI Varese 82.73 331 P **P** **09 17 17.6 -0.6**
SENIN Lac Senin/Sane 82.79 333 ⇓*i*P **P** **09 17 18.4 -0.1**
comp=Z,84nm,0.8s,mb5.6
MMK Mattmark 82.84 332 ⇑P **P** **09 17 19.8 +1.0**
AGG Agios Georgios 82.90 319 *e*P **P** **09 17 19.0 -0.2**
AIGLE Aigle 82.92 333 ⇓*i*P **P** **09 17 18.6 -0.6**
comp=Z,163nm,1.7s,mb5.6
GRYON Gryon 82.95 333 ⇓*i*P **P** **09 17 19.0 -0.3**
comp=Z,107nm,1.1s,mb5.6
FLN La Foliniere 82.95 338 ⇓*i*P **P** **09 17 18.6 -0.7**
comp=Z,146nm,0.9s,mb5.5
FLN *e*MLR MLR
comp=Z,403nm,23.0s
FLN La Foliniere 82.95 338 ⇓*i*P **P** **09 17 18.6 -0.7**
comp=Z,73nm,0.9s,mb5.5
FLN LR LR
comp=Z,400nm,23.0s
FLN La Foliniere 82.95 338 ⇓*i*P **P** **09 17 18.6 -0.7**
FLN pmax pmax
comp=Z,73nm,0.9s,mb5.5
FLN MLR MLR
comp=Z,400nm,23.0s
CABF La Chapelle 82.97 333 ⇓*i*P **P** **09 17 18.9 -0.5**
comp=Z,60nm,0.8s,mb5.2
CABF La Chapelle 82.97 333 ⇓*i*P **P** **09 17 18.9 -0.5**
comp=Z,30nm,0.8s,mb5.2
CABF La Chapelle 82.97 333 ⇓*i*P **P** **09 17 18.9 -0.5**
CABF pmax pmax
comp=Z,30nm,0.8s,mb5.2
DIX Grande Dixence 83.00 332 ⇓P **P** **09 17 19.9 +0.3**
LDF La Druitiere 83.01 338 ⇓*i*P **P** **09 17 18.8 -0.8**
LOR Lormes 83.08 335 ⇓*i*P **P** **09 17 19.3 -0.7**
comp=Z,208nm,1.0s,mb5.6
LOR *e*MLR MLR
comp=Z,482nm,22.5s
LOR Lormes 83.08 335 ⇓*i*P **P** **09 17 19.3 -0.7**
comp=Z,104nm,1.0s,mb5.6
LOR LR LR
comp=Z,480nm,22.5s
LOR Lormes 83.08 335 ⇓*i*P **P** **09 17 19.3 -0.7**
LOR pmax pmax
comp=Z,104nm,1.0s,mb5.6
LOR MLR MLR
comp=Z,480nm,22.5s
LTX Lajitas 83.08 56 PFAKE 09 17 30.0 +10
LTX LR LR
comp=Z,63nm,20.0s
AAM Ann Arbor 83.11 35 *e*P **P** **09 17 20.2 -0.1**
comp=Z,21nm,0.6s,mb5.1
AAM *e*pP pP 09 17 47.3 +0.5
AAM LR LR
comp=Z,518nm,22.0s
AAM Ann Arbor 83.11 35 *e*P **P** **09 17 20.2 -0.1**
AAM *e**PP pP 09 17 47.3 +0.5
AAM pmax pmax
comp=Z,21nm,0.6s,mb5.1
AAM MLR MLR
comp=Z,518nm,22.0s
FSSB Fossombrone 83.14 328 P **P** **09 17 20.3 -0.1**
EMV Vieux Emosson 83.19 333 ⇓P **P** **09 17 20.5 -0.1**
EMV Vieux Emosson 83.19 333 ⇓*i*P **P** **09 17 20.4 -0.2**
comp=Z,121nm,1.4s,mb5.5
ORO Oropa 83.21 332 P **P** **09 17 20.3 -0.4**
ZCCA Zocca 83.25 329 P **P** **09 17 19.7 -1.2**
SFI Santa Sofia 83.31 329 P **P** **09 17 21.9 +0.7**
FNVD Fontana Vidola 83.36 329 P **P** **09 17 22.2 +0.7**
SEI Scarperia 83.37 329 P **P** **09 17 22.8 +1.3**
SSF Saint Saulge 83.37 335 ⇓*i*P **P** **09 17 20.9 -0.6**
comp=Z,102nm,1.0s,mb5.3
SSF Saint Saulge 83.37 335 ⇓*i*P **P** **09 17 20.9 -0.6**
comp=Z,51nm,1.0s,mb5.3
SSF Saint Saulge 83.37 335 ⇓*i*P **P** **09 17 20.9 -0.6**
SSF pmax pmax
comp=Z,51nm,1.0s,mb5.3
VMG Vicchio 83.38 329 P **P** **09 17 22.6 +1.0**
LTK Loutraki 83.39 318 *e*P **P** **09 17 19.7 -2.1**
GRR Gorron 83.40 339 ⇓*i*P **P** **09 17 21.2 -0.4**
comp=Z,183nm,0.8s,mb5.7
GRR Gorron 83.40 339 ⇓*i*P **P** **09 17 21.2 -0.4**
comp=Z,91nm,0.8s,mb5.7
GRR Gorron 83.40 339 ⇓*i*P **P** **09 17 21.2 -0.4**
GRR pmax pmax
comp=Z,91nm,0.8s,mb5.7
GSCL Gusciola 83.40 330 P **P** **09 17 22.4 +0.7**
ERBM Eremo 83.40 330 P **P** **09 17 22.6 +0.9**
HYF Humbligny 83.44 336 *e*P **P** **09 17 21.6 -0.2**
BOB Bobbio (Coli) 83.45 330 P **P** **09 17 22.0 +0.1**
SNTG Esanatoglia 83.45 328 P **P** **09 17 22.0 0.0**
BADI Badiali 83.50 328 P **P** **09 17 22.7 +0.5**
CRE Caprese Michel 83.52 328 P **P** **09 17 22.5 +0.2**
MURB Monte Urbino 83.60 328 P **P** **09 17 23.5 +0.8**
BDI Bagni Di Lucca 83.64 329 P **P** **09 17 22.5 -0.4**
SMF Signal de Mont 83.64 335 ⇓*i*P **P** **09 17 22.4 -0.5**
comp=Z,329nm,1.0s,mb5.8
SMF Signal de Mont 83.64 335 ⇓*i*P **P** **09 17 22.4 -0.5**
comp=Z,164nm,1.0s,mb5.8
SMF Signal de Mont 83.64 335 ⇓*i*P **P** **09 17 22.4 -0.5**
SMF pmax pmax
comp=Z,164nm,1.0s,mb5.8
AVF Avril sur Loir 83.66 335 ⇓*i*P **P** **09 17 22.5 -0.5**
comp=Z,214nm,0.9s,mb5.7
AVF Avril sur Loir 83.66 335 ⇓*i*P **P** **09 17 22.5 -0.5**
comp=Z,107nm,0.9s,mb5.7
AVF Avril sur Loir 83.66 335 ⇓*i*P **P** **09 17 22.5 -0.5**
AVF pmax pmax
comp=Z,107nm,0.9s,mb5.7
DID Didima 83.67 318 *e*P **P** **09 17 20.1 -3.2**
SELA Sela 83.70 319 *e*P **P** **09 17 22.5 -0.8**
ASS Assisi 83.72 328 P **P** **09 17 23.2 -0.2**
LPL La Plagne 83.72 333 ⇓*i*P **P** **09 17 23.4 +0.1**
comp=Z,129nm,0.8s,mb5.5
LPL La Plagne 83.72 333 ⇓*i*P **P** **09 17 23.4 +0.1**
comp=Z,64nm,0.8s,mb5.5
LPL La Plagne 83.72 333 ⇓*i*P **P** **09 17 23.4 +0.1**
LPL pmax pmax
comp=Z,64nm,0.8s,mb5.5
TERO Teramo 83.72 327 P **P** **09 17 23.3 -0.1**
LPG La Plagne 83.73 333 ⇓*i*P **P** **09 17 23.6 +0.2**
comp=Z,161nm,0.8s,mb5.6
LPG La Plagne 83.73 333 ⇓*i*P **P** **09 17 23.6 +0.2**
comp=Z,80nm,0.8s,mb5.6
LPG La Plagne 83.73 333 ⇓*i*P **P** **09 17 23.6 +0.2**

LPG pmax pmax
comp=Z,80nm,0.8s,mb5.6
NRCA Norcia 83.74 327 P **P** **09 17 23.7 +0.2**
RSP Reno Superiore 83.87 332 P **P** **09 17 22.9 -1.2**
CSNT Castellina Chi 83.89 329 P **P** **09 17 23.3 -0.9**
LKD Levkas 83.94 320 *eP* **P** **09 17 23.4 -1.1**
SGMF Saint Gilles 83.96 340⇓*iP* **P** **09 17 24.3 -0.2**
comp=Z,615nm,1.3s,mb6.0
SGMF Saint Gilles 83.96 340⇓*iP* **P** **09 17 24.3 -0.2**
comp=Z,308nm,1.3s,mb6.0
SGMF Saint Gilles 83.96 340⇓*iP* **P** **09 17 24.3 -0.2**
SGMF pmax pmax
comp=Z,308nm,1.3s,mb6.0
CIGN Sant'Elia a Pi 84.02 325 P **P** **09 17 24.8 -0.1**
BGF Bois d'Agland 84.02 335 *eP* **P** **09 17 24.9 +0.1**
comp=Z,84nm,0.7s,mb5.4
BGF Bois d'Agland 84.02 335 *eP* **P** **09 17 24.9 +0.1**
comp=Z,42nm,0.7s,mb5.4
BGF Bois d'Agland 84.02 335 *eP* **P** **09 17 24.9 +0.1**
BGF pmax pmax
comp=Z,42nm,0.7s,mb5.4
AQU L'Aquila 84.03 327 P **P** **09 17 25.6 +0.7**
AQU L'Aquila 84.03 327⇓*iP* **P** **09 17 26.0 +1.0**
ROSF Rostrenen 84.06 340⇓*iP* **P** **09 17 25.0 0.0**
comp=Z,438nm,0.9s,mb6.0
ROSF Rostrenen 84.06 340⇓*iP* **P** **09 17 25.0 0.0**
comp=Z,219nm,0.9s,mb6.0
ROSF Rostrenen 84.06 340⇓*iP* **P** **09 17 25.0 0.0**
ROSF pmax pmax
comp=Z,219nm,0.9s,mb6.0
MSNY Massena 84.09 28 *eP* **P** **09 17 24.2 -1.0**
BNI Bardonecchia 84.15 332 P **P** **09 17 25.9 +0.4**
FG5 Orsara di Pugl 84.18 325 P **P** **09 17 25.8 +0.1**
VLX Vlachokerasia 84.20 318 *eP* **P** **09 17 25.2 -0.6**
FG4 Candela 84.20 325 P **P** **09 17 25.8 0.0**
GDM Grand'Maison 84.20 333 *eP* **P** **09 17 26.2 +0.4**
RNI2 Rionero Sannit 84.28 326 P **P** **09 17 26.3 +0.1**
GRFL Gerfalco 84.29 329 P **P** **09 17 25.7 -0.5**
GRN Grenoble 84.29 333 *eP* **P** **09 17 26.7 +0.5**
MIDA Miranda 84.29 326 P **P** **09 17 26.0 -0.3**
PTQR Pietraquaria 84.31 327 P **P** **09 17 26.7 +0.3**
KFL Anninata 84.36 320 *eP* **P** **09 17 27.4 +0.7**
FIN Finale Ligure 84.37 331 P **P** **09 17 25.9 -0.7**
MBDF Montbardon 84.41 332⇓*iP* **P** **09 17 26.2 -0.6**
comp=Z,50nm,0.6s,mb5.2
MBDF Montbardon 84.41 332⇓*iP* **P** **09 17 26.2 -0.6**
comp=Z,25nm,0.6s,mb5.2
MBDF Montbardon 84.41 332⇓*iP* **P** **09 17 26.2 -0.6**
MBDF pmax pmax
comp=Z,25nm,0.6s,mb5.2
SDI San Donato 84.41 326 P **P** **09 17 26.2 -0.7**
QUIF Quistinic 84.42 340⇓*iP* **P** **09 17 26.6 -0.2**
comp=Z,192nm,0.8s,mb5.7
QUIF Quistinic 84.42 340⇓*iP* **P** **09 17 26.6 -0.2**
comp=Z,96nm,0.8s,mb5.7
QUIF Quistinic 84.42 340⇓*iP* **P** **09 17 26.6 -0.2**
QUIF pmax pmax
comp=Z,96nm,0.8s,mb5.7
TCF Toulx Ste Croi 84.45 336⇓*iP* **P** **09 17 26.8 -0.2**
comp=Z,103nm,0.7s,mb5.5
TCF Toulx Ste Croi 84.45 336⇓*iP* **P** **09 17 26.8 -0.2**
comp=Z,52nm,0.7s,mb5.5
TCF Toulx Ste Croi 84.45 336⇓*iP* **P** **09 17 26.8 -0.2**
TCF pmax pmax
comp=Z,52nm,0.7s,mb5.5
JCT Junction City 84.49 52 *eP* **P** **09 17 27.2 -0.3**
comp=Z,30nm,0.7s,mb5.2
JCT *ep*P pP 09 17 52.8 -1.3
JCT LR LR
comp=Z,143nm,21.0s
JCT Junction City 84.49 52 *eP* **P** **09 17 27.2 -0.3**
JCT *e**PP pP 09 17 52.8 -1.3
JCT pmax pmax
comp=Z,30nm,0.7s,mb5.2
JCT MLR MLR
comp=Z,143nm,21.0s
LONY Lake Ozonia 84.52 28 *eP* **P** **09 17 26.3 -1.1**
comp=Z,11nm,1.0s,mb4.8
LONY *ep*P pP 09 17 52.9 -1.1
LONY LR LR
comp=Z,267nm,22.0s
MRLC Muro Lucano 84.53 325 P **P** **09 17 27.9 +0.4**
ORIF Oris-en-Rattie 84.53 333⇓*iP* **P** **09 17 27.4 0.0**
comp=Z,106nm,0.7s,mb5.6
ORIF *e*MLR MLR
comp=Z,503nm,21.2s
ORIF Oris-en-Rattie 84.53 333⇓*iP* **P** **09 17 27.4 0.0**
comp=Z,53nm,0.7s,mb5.6
ORIF Oris-en-Rattie 84.53 333⇓*iP* **P** **09 17 27.4 0.0**
ORIF pmax pmax
comp=Z,53nm,0.7s,mb5.6
SURF Saint Ours 84.61 332 *eP* **P** **09 17 27.8 0.0**
FRNY Flat Rock 84.66 27 *eP* **P** **09 17 26.7 -1.3**
comp=Z,12nm,0.9s,mb4.8
FRNY *ep*P pP 09 17 53.7 -1.0
TAOE Nuku Hiva Isla 84.68 108 *eP* **P** **09 17 29.1 +0.5**
comp=Z,623nm,1.0s,mb6.5
TAOE Nuku Hiva Isla 84.68 108 *e*LR LR 09 43 46.3
comp=Z,1µm,25.5s,baz=314
COLF Collangettes 84.70 334 *eP* **P** **09 17 28.7 +0.5**
ERPA Erie 84.73 33 *eP* **P** **09 17 28.1 -0.4**
comp=Z,40nm,0.6s,mb5.5
ERPA *ep*P pP 09 17 55.6 +0.5
IMI Imperia 84.74 331 P **P** **09 17 27.8 -0.7**
MIAR Mount Ida 84.76 46 *eP* **P** **09 17 28.3 -0.5**
comp=Z,19nm,0.8s,mb5.1
MIAR *ep*P pP 09 17 54.6 -0.9
MIAR Mount Ida 84.76 46 *eP* **P** **09 17 28.3 -0.5**
MIAR *e**PP pP 09 17 54.6 -0.9
MIAR pmax pmax
comp=Z,19nm,0.8s,mb5.1
SAOF Saorge 84.79 331 *eP* **P** **09 17 27.9 -0.8**
AUTN L'Aution 84.83 331 *eP* **P** **09 17 28.2 -0.7**
MFF Saint Martin d 84.84 337⇓*iP* **P** **09 17 28.9 -0.1**
comp=Z,383nm,1.2s,mb5.9
MFF Saint Martin d 84.84 337⇓*iP* **P** **09 17 28.9 -0.1**
comp=Z,192nm,1.2s,mb5.9
MFF Saint Martin d 84.84 337⇓*iP* **P** **09 17 28.9 -0.1**
MFF pmax pmax
comp=Z,192nm,1.2s,mb5.9
TOUF Mont Tournerai 84.87 332 *eP* **P** **09 17 28.5 -0.7**
PYL PYLOS 84.88 318 *eP* **P** **09 17 26.6 -2.7**
PPT Papeete 84.89 120 *e*LR LR 09 44 06.4
comp=Z,2µm,32.0s,baz=320
SBF Sospel 84.94 331⇓*iP* **P** **09 17 28.6 -0.9**
comp=Z,141nm,0.7s,mb5.7
SBF Sospel 84.94 331⇓*iP* **P** **09 17 28.6 -0.9**
comp=Z,70nm,0.7s,mb5.7
SBF Sospel 84.94 331⇓*iP* **P** **09 17 28.6 -0.9**
SBF pmax pmax
comp=Z,71nm,0.7s,mb5.7
LUCF Luceram 84.94 331 *eP* **P** **09 17 28.7 -0.8**
VIVF Saint-Julien-l 84.98 334⇓*iP* **P** **09 17 29.6 -0.1**
comp=Z,111nm,0.9s,mb5.5
VIVF Saint-Julien-l 84.98 334⇓*iP* **P** **09 17 29.6 -0.1**
comp=Z,56nm,0.9s,mb5.5
VIVF Saint-Julien-l 84.98 334⇓*iP* **P** **09 17 29.6 -0.1**
VIVF pmax pmax
comp=Z,56nm,0.9s,mb5.5
MVIF Mont Vial 85.01 332 *eP* **P** **09 17 29.4 -0.4**
MUKL Al Mukalla 85.01 285¶ *eP* **P** **09 17 30.8 +0.5**
OCF Saint Nazaire 85.03 333 *eP* **P** **09 17 30.3 +0.4**
OG26 St.-Nazaire-De 85.03 333 *eP* **P** **09 17 30.3 +0.4**
ALLY Alegheny Colle 85.07 33 *eP* **P** **09 17 37.7 +7.5**
comp=Z,92nm,1.3s,mb5.5
REVF Revere 85.07 331 *eP* **P** **09 17 29.7 -0.5**
ACSO Alum Creek Sta 85.12 35 *eP* **P** **09 17 29.8 -0.6**
comp=Z,20nm,0.6s,mb5.2
ACSO *ep*P pP 09 17 56.4 -0.8
ACSO LR LR
comp=Z,243nm,20.0s
FRNF Fournols 85.16 335 *eP* **P** **09 17 31.1 +0.5**
NCB Newcomb 85.21 28 *eP* **P** **09 17 30.3 -0.6**
comp=Z,18nm,0.6s,mb5.2
NCB *ep*P pP 09 17 56.8 -0.7
NCB LR LR
comp=Z,300nm,21.0s
CALN Calern 85.22 332 *eP* **P** **09 17 30.8 -0.1**
STOF St-Etienne Org 85.34 332 *eP* **P** **09 17 31.7 +0.2**
WCI Wyandotte Cave 85.34 39 *eP* **P** **09 17 31.3 -0.3**
comp=Z,15nm,0.6s,mb5.1
WCI *ep*P pP 09 17 57.5 -0.8
WCI Wyandotte Cave 85.34 39 *eP* **P** **09 17 31.3 -0.3**
WCI *e**PP pP 09 17 57.5 -0.8
WCI pmax pmax
comp=Z,15nm,0.6s,mb5.1
GNAR Gosnell 85.42 42 *eP* **P** **09 17 32.2 +0.1**
comp=Z,1µm,1.2s,mb6.7
GNAR *ep*P pP 09 17 58.2 -0.5
SMRF Simiane la Rot 85.47 333⇓*iP* **P** **09 17 32.2 +0.1**
comp=Z,108nm,1.1s,mb5.4
SMRF Simiane la Rot 85.47 333⇓*iP* **P** **09 17 32.2 +0.1**
comp=Z,108nm,1.1s,mb5.7
FRF La Foret Royal 85.48 332 *eP* **P** **09 17 31.1 -1.1**
comp=Z,202nm,1.3s,mb5.6
FRF La Foret Royal 85.48 332 *eP* **P** **09 17 31.1 -1.1**
comp=Z,101nm,1.3s,mb5.6
FRF La Foret Royal 85.48 332 *eP* **P** **09 17 31.1 -1.1**
FRF pmax pmax
comp=Z,101nm,1.3s,mb5.6
VILF Villemus 85.53 332 *eP* **P** **09 17 32.7 +0.3**
PGF Pioggiola 85.53 330⇓*iP* **P** **09 17 31.6 -0.9**
comp=Z,113nm,0.8s,mb5.5
PGF Pioggiola 85.53 330⇓*iP* **P** **09 17 31.6 -0.9**
comp=Z,56nm,0.8s,mb5.5
PGF Pioggiola 85.53 330⇓*iP* **P** **09 17 31.6 -0.9**
PGF pmax pmax
comp=Z,56nm,0.8s,mb5.5
RJF Les Rejaudoux 85.55 336⇓*iP* **P** **09 17 32.5 0.0**
comp=Z,258nm,1.1s,mb5.8
RJF *e*MLR MLR
comp=Z,501nm,22.0s
RJF Les Rejaudoux 85.55 336⇓*iP* **P** **09 17 32.5 0.0**
comp=Z,129nm,1.1s,mb5.8
RJF LR LR
comp=Z,500nm,22.0s
RJF Les Rejaudoux 85.55 336⇓*iP* **P** **09 17 32.5 0.0**
RJF pmax pmax
comp=Z,129nm,1.1s,mb5.8
RJF MLR MLR
comp=Z,500nm,22.0s
TAVF Tavernes 85.63 332 *eP* **P** **09 17 33.0 +0.1**
LMR La Mourre 85.72 332⇓*iP* **P** **09 17 32.7 -0.7**
comp=Z,296nm,1.0s,mb5.9
LMR La Mourre 85.72 332⇓*iP* **P** **09 17 32.7 -0.7**
comp=Z,143nm,1.0s,mb5.9
LMR La Mourre 85.72 332⇓*iP* **P** **09 17 32.7 -0.7**
LMR pmax pmax
comp=Z,143nm,1.0s,mb5.9
LBNH Lisbon 85.73 26 PFAKE 09 17 40.0 +6.6
LBNH LR LR
comp=Z,286nm,21.0s
CAF Calviac 85.73 335⇓*iP* **P** **09 17 33.9 +0.5**
comp=Z,345nm,1.1s,mb5.9
CAF Calviac 85.73 335⇓*iP* **P** **09 17 33.9 +0.5**
comp=Z,173nm,1.0s,mb5.9
CAF Calviac 85.73 335⇓*iP* **P** **09 17 33.9 +0.5**
CAF pmax pmax
comp=Z,173nm,1.0s,mb5.9
PRAF Pradon 85.76 333 *eP* **P** **09 17 34.5 +0.9**
PUYF Puyloubier 85.82 332 *eP* **P** **09 17 34.1 +0.2**
TREF Trevaresse 85.85 333 *eP* **P** **09 17 34.6 +0.6**
ACCN Adirondack Com 85.92 28 *eP* **P** **09 17 33.8 -0.6**
comp=Z,10nm,0.5s,mb5.0
ACCN *ep*P pP 09 18 00.8 -0.2
LASF Ste Croix 85.94 334⇓*iP* **P** **09 17 34.7 +0.2**
comp=Z,281nm,1.4s,mb5.7
BERF Bertagne 86.02 332 *eP* **P** **09 17 35.2 +0.3**
GELF Grande-Etoile 86.05 332 *eP* **P** **09 17 35.4 +0.4**
LFF La Frestale 86.11 336⇓*iP* **P** **09 17 35.6 +0.3**
comp=Z,464nm,1.0s,mb6.0
LFF La Frestale 86.11 336⇓*iP* **P** **09 17 35.6 +0.3**
comp=Z,232nm,1.0s,mb6.1
LFF La Frestale 86.11 336⇓*iP* **P** **09 17 35.6 +0.3**
LFF pmax pmax
comp=Z,232nm,1.0s,mb6.1
BINY Binghamton 86.16 30 *eP* **P** **09 17 35.0 -0.6**
comp=Z,11nm,0.6s,mb5.0
BINY *ep*P pP 09 18 02.2 -0.1
OSPF L'Ospedale 86.23 329 *eP* **P** **09 17 35.5 -0.5**
WVT Waverly 86.34 41 *eP* **P** **09 17 35.9 -0.7**
comp=Z,20nm,0.9s,mb5.0
WVT *ep*P pP 09 18 02.5 -0.8
WVT Waverly 86.34 41 *eP* **P** **09 17 35.9 -0.7**
WVT *e**PP pP 09 18 02.5 -0.8
WVT pmax pmax
comp=Z,20nm,0.9s,mb5.0
NATX Nacogdoches 86.36 48 *eP* **P** **09 17 37.4 +0.6**
comp=Z,38nm,0.8s,mb5.4
NATX *ep*P pP 09 18 02.6 -0.9
SSPA Standing Stone 86.81 32 *eP* **P** **09 17 38.3 -0.5**
comp=Z,38nm,1.3s,mb5.2
SSPA *ep*P pP 09 18 05.0 -0.6
HKT Hockley 87.12 50 PFAKE 09 17 50.0 +10
HKT LR LR
comp=Z,175nm,19.0s
MTLF Montolieu 87.12 334⇓*iP* **P** **09 17 40.5 +0.3**
comp=Z,205nm,1.2s,mb5.6
MTLF Montolieu 87.12 334⇓*iP* **P** **09 17 40.5 +0.3**
comp=Z,102nm,1.2s,mb5.6
MTLF Montolieu 87.12 334⇓*iP* **P** **09 17 40.5 +0.3**
MTLF pmax pmax
comp=Z,102nm,1.2s,mb5.6
PLAL Pickwick Lake 87.15 42 *eP* **P** **09 17 39.9 -0.7**
comp=Z,29nm,1.0s,mb5.2
PLAL *ep*P pP 09 18 06.5 -0.8
PLAL LR LR
comp=Z,210nm,20.0s
WES Weston 87.58 27 PFAKE 09 17 50.0 +7.5
WES LR LR
comp=Z,716nm,19.0s
SJAF Saint Jean de 87.68 334 *eP* **P** **09 17 42.6 -0.3**
EJON La Jonquera 87.71 334 P **P** **09 17 42.9 -0.2**
comp=Z,217nm,2.0s,mb5.8
CARF Carcanieres 87.72 334 *eP* **P** **09 17 43.2 +0.1**
MLS Moulis 87.81 335 *eP* **P** **09 17 43.9 +0.4**
MVL Millersville 87.94 31 *eP* **P** **09 17 43.9 -0.3**
comp=Z,11nm,0.6s,mb5.0
MVL *ep*P pP 09 18 11.0 -0.1
TZTN Tazewell 87.96 38 *eP* **P** **09 17 44.1 -0.3**
comp=Z,10nm,0.6s,mb5.0
TZTN *ep*P pP 09 18 10.7 -0.5
EPF Esparros 87.97 336 *eP* **P** **09 17 44.2 -0.1**
comp=Z,148nm,1.3s,mb5.5
EPF Esparros 87.97 336 *eP* **P** **09 17 44.2 -0.1**
comp=Z,74nm,1.3s,mb5.5
EPF Esparros 87.97 336 *eP* **P** **09 17 44.2 -0.1**
EPF pmax pmax
comp=Z,74nm,1.3s,mb5.6
SWET Sewanee 87.97 40 *eP* **P** **09 17 44.1 -0.4**
SWET *ep*P pP 09 18 10.1 -1.2
DHBB Dhamar BB 88.15 288 *eP* **P** **09 17 46.5 +0.9**
VIEF Viey 88.20 336 *eP* **P** **09 17 46.0 +0.6**
EBIE Bielsa 88.34 336 P **P** **09 17 47.9 +1.8**
comp=Z,73nm,1.1s,mb5.6
ETSF Etsaut 88.36 336⇓*iP* **P** **09 17 46.3 +0.2**
comp=Z,79nm,0.7s,mb5.5
ETSF Etsaut 88.36 336⇓*iP* **P** **09 17 46.3 +0.2**
comp=Z,40nm,0.7s,mb5.5
ETSF Etsaut 88.36 336⇓*iP* **P** **09 17 46.3 +0.2**
ETSF pmax pmax
comp=Z,40nm,0.7s,mb5.6
ELIZ Elizondo 88.39 337 P **P** **09 17 46.9 +0.7**
comp=Z,26nm,0.9s,mb5.3
ELIZ Elizondo 88.39 337 P **P** **09 17 46.9 +0.6**
ELIZ pmax pmax
comp=Z,26nm,0.9s,mb5.3
CPCT Cooper Cave 88.43 39 P **P** **09 17 46.2 -0.4**
CPCT *ep*P pP 09 18 12.6 -0.9
ELN Prospectdale 88.58 36 *eP* **P** **09 17 47.0 -0.3**
ELN *ep*P pP 09 18 14.1 -0.1
TKL Tuckaleechee C 88.59 39 P **P** **09 17 47.4 0.0**
comp=Z,15nm,0.6s,mb5.2,baz=159,slow=0.9,SNR=40
TKL pP pP 09 18 13.6 -0.7
comp=Z,36nm,0.9s,baz=219,slow=1.4,SNR=7.0
BLA Blacksburg 88.74 35 *eP* **P** **09 17 47.6 -0.5**
comp=Z,128nm,1.5s,mb5.7
BLA *ep*P pP 09 18 15.3 +0.4
BLA Blacksburg 88.74 35 *eP* **P** **09 17 47.6 -0.4**
BLA *e**PP pP 09 18 15.4 +0.5
BLA pmax pmax
comp=Z,128nm,1.5s,mb5.7
SNZO South Karori 88.86 159 PFAKE 09 18 00.0 +12
SNZO LR LR
comp=Z,280nm,19.0s
CBN Corbin 89.11 33 *eP* **P** **09 17 49.6 -0.2**
comp=Z,21nm,0.6s,mb5.3
CBN *ep*P pP 09 18 17.5 +0.9
ECRI Cripan 89.18 337 P **P** **09 17 50.9 +0.9**
comp=Z,17nm,0.7s,mb5.2
ECRI Cripan 89.18 337 P **P** **09 17 50.9 +0.9**
ECRI pmax pmax
comp=Z,17nm,0.7s,mb5.2
LRAL Lakeview Retre 89.25 42 *eP* **P** **09 17 49.7 -0.9**
comp=Z,6.3nm,0.8s,mb4.7
LRAL *ep*P pP 09 18 16.8 -0.7
LRAL sSP 09 18 26.6
LRAL LR LR
comp=Z,178nm,19.0s
EPOB Poblet 89.28 334 P **P** **09 17 51.4 +0.9**
comp=Z,25nm,0.7s,mb5.3
TRBA At Turbah 89.28 288 *eP* **P** **09 17 51.7 +0.8**
TRBA AMb AMB 09 17 52.8
comp=Z,26nm,0.9s,mb5.2
TBI Tubuai 89.32 124 *e*LR LR 09 45 55.0
comp=Z,1µm,34.5s,baz=322
ESAC San Caprasio 89.41 336 P **P** **09 17 52.1 +1.0**
comp=Z,310nm,1.0s,mb6.3
URVA University of 89.60 33 *eP* **P** **09 17 51.4 -0.6**
URVA *ep*P pP 09 18 19.0 0.0
ERTA Horta de San J 89.87 335 P **P** **09 17 54.4 +1.1**
comp=Z,442nm,3.1s
RPZ Rata Peaks 90.26 162 P **P** **09 17 55.4 +0.8**
comp=Z,18nm,0.8s,mb5.3,baz=96,slow=10,SNR=4.5
GOGA Godfrey 90.61 40 PFAKE 09 18 10.0 +13
GOGA LR LR
comp=Z,294nm,22.0s
EMOS Mosqueruela 90.66 335 P **P** **09 17 57.2 +0.3**
comp=Z,254nm,2.0s,mb6.0
ETOR Torete 90.70 336 P **P** **09 17 57.4 +0.2**
comp=Z,65nm,1.0s,mb5.7
ETOR Torete 90.70 336 P **P** **09 17 57.4 +0.3**
ETOR pmax pmax
comp=Z,65nm,1.0s,mb5.7
LHS Liberty Hill 90.90 37 P **P** **09 17 57.4 -0.8**
LHS *ep*P pP 09 18 26.0 +0.9
ELOB Lobios 91.30 341 P **P** **09 17 59.5 -0.4**
comp=Z,308nm,3.6s
KEST Kesra 91.33 326 P **P** **09 17 59.9 -0.2**
comp=Z,6.2nm,0.8s,mb4.8,baz=42,slow=1.2,SNR=11
GUD Guadarrama 91.46 338 P **P** **09 17 59.6 -1.0**
comp=Z,19nm,1.4s,mb5.0
GUD Guadarrama 91.46 338 P **P** **09 17 59.6 -1.0**
GUD pmax pmax
comp=Z,19nm,1.4s,mb5.0
CNNC Cliffs of the 91.48 35 PFAKE 09 18 10.0 +9.2
CNNC LR LR
comp=Z,346nm,19.0s
ECHE Chera 91.52 335 P **P** **09 18 01.7 +0.8**
comp=Z,18nm,1.1s,mb5.2
ECHE Chera 91.52 335 P **P** **09 18 01.7 +0.8**
ECHE pmax pmax
comp=Z,18nm,1.1s,mb5.2
MVO Moncorvo 91.71 340 *eP* **P** **09 18 00.9 -0.9**
PVRL Vila Real 91.77 341 *eP* **P** **09 18 01.2 -0.9**
ESDC Sonseca Array 92.31 337 P **P** **09 18 04.1 -0.5**
comp=Z,12nm,0.8s,mb5.2,baz=19,slow=3.8,SNR=34
ESDC LR LR 10 02 11.0
comp=Z,189nm,21.7s,baz=10.0,slow=37
NHSC New Hope 92.34 37 PFAKE 09 18 20.0 +15
NHSC LR LR
comp=Z,178nm,19.0s
PAB San Pablo 92.53 338 *eP* **P** **09 18 05.3 -0.3**
comp=Z,36nm,1.3s,mb5.5
PAB LR LR
comp=Z,210nm,19.0s
PAB San Pablo 92.53 338 *eP* **P** **09 18 05.3 -0.3**
PAB pmax pmax
comp=Z,36nm,1.3s,mb5.5
PAB MLR MLR
comp=Z,210nm,19.0s
ETOB Tobarra 92.56 335 P **P** **09 18 06.9 +1.1**
comp=Z,13nm,0.8s,mb5.3
MTE Manteigas 92.56 340 *eP* **P** **09 18 04.7 -1.0**
EVIA Vianos 92.85 336 P **P** **09 18 07.6 +0.5**
comp=Z,52nm,1.0s,mb5.8
EVIA Vianos 92.85 336 P **P** **09 18 07.6 +0.5**
EVIA pmax pmax
comp=Z,52nm,1.0s,mb5.8
EBAN Banos Encina 93.66 337 P **P** **09 18 10.9 +0.1**
comp=Z,74nm,1.4s,mb5.8
EBAN Banos Encina 93.66 337 P **P** **09 18 10.9 0.0**
EBAN pmax pmax
comp=Z,74nm,1.4s,mb5.8
EQES Quesada 93.79 336 P **P** **09 18 12.0 +0.5**
comp=Z,27nm,1.3s,mb5.4
EADA Adamuz 93.88 337 P **P** **09 18 12.3 +0.4**
comp=Z,124nm,1.7s,mb6.0
ECAB El Cabril 94.20 338 P **P** **09 18 14.0 +0.7**
comp=Z,13nm,0.8s,mb5.3
EVO Evora 94.44 340 *eP* **P** **09 18 13.2 -1.2**
comp=Z,94nm,1.5s,mb5.6
EVO *e*MLR MLR
comp=Z,274nm,21.5s
PBAR Barrancos 94.54 339 *eP* **P** **09 18 13.7 -1.2**
ELOJ Sierra Loja 94.72 337 P **P** **09 18 15.4 -0.3**
comp=Z,48nm,1.4s,mb5.7
ELOJ Sierra Loja 94.72 337 P **P** **09 18 15.4 -0.3**
ELOJ pmax pmax
comp=Z,48nm,1.4s,mb5.7
ERON Agron 94.73 336 P **P** **09 18 15.3 -0.5**
comp=Z,17nm,0.9s,mb5.5
EMIN Mina Concepcio 94.83 339 P **P** **09 18 16.1 -0.1**
comp=Z,89nm,2.2s,mb5.8
ESPR Espera 95.45 338 P **P** **09 18 20.3 +1.2**
comp=Z,25nm,1.0s,mb5.6
RKT Rikitea 98.27 114 *e*LR LR 09 50 10.7
comp=Z,952nm,35.2s
TEIG Tepich 98.96 51 PFAKE 09 18 50.0 +15
TEIG LR LR
comp=Z,210nm,19.0s
KMBO Kilima Mbogo 104.23 282 PFAKE 09 19 10.0 +12
KMBO LR LR
comp=Z,181nm,19.0s
TGUH Tegucigalpa,Un 104.46 54 PFAKE 09 19 10.0 +11
TGUH LR LR
comp=Z,119nm,19.0s
SJG San Juan 111.41 33 PFAKE 09 23 40.0 +12
SJG LR LR
comp=Z,2.0nm,21.0s
TORD Torodi Ar. Bea 114.42 321 PKP PKiKP 09 23 33.1 -1.0
TORD pPKP 09 24 00.8
TORD PKKPbc PKKPbc 09 34 13.1 +1.4
TORD Torodi Ar. Bea 114.42 321 PKP PKiKP 09 23 33.1 -1.0
comp=Z,1.4nm,0.4s,baz=16,slow=2.0,SNR=22
TORD pPKP 09 24 00.8
comp=Z,1.1nm,0.4s,baz=12,slow=2.5,SNR=5.7
TORD PKKPbc PKKPbc 09 34 13.1 +1.4
comp=Z,1.5nm,0.8s,baz=203,slow=3.3,SNR=6.6
SDV Santo Domingo 117.65 42 PFAKE 09 23 50.0 +10
SDV LR LR
comp=Z,93nm,22.0s
MSKU Masuku 120.39 301 PFAKE 09 24 00.0 +14
MSKU LR LR
comp=Z,4.0nm,19.0s
LSZ Lusaka 120.44 278 PFAKE 09 24 00.0 +14
LSZ LR LR
comp=Z,219nm,19.0s
OTAV Otavalo 120.70 55 PFAKE 09 24 00.0 +14
OTAV LR LR
comp=Z,148nm,19.0s
VNDA Vanda 121.77 176 PKP PKPdf 09 23 45.8 -0.6
comp=Z,1.9nm,0.6s,baz=322,slow=3.8,SNR=9.5
VNDA pPKP pPKPdf 09 24 13.9 -0.5
comp=Z,2.0nm,0.8s,baz=315,slow=4.4,SNR=3.5
SBA Scott Base 122.37 175 *e*PKPdf PKPdf 09 23 48.1 +0.5
DBIC Dimbokro 123.03 325 PKP PKPdf 09 23 50.0 -0.8
DBIC pPKP pPKPdf 09 24 17.8 -1.1
DBIC PP PP 09 25 29.0 -1.2
DBIC PKKPab PKKPab 09 33 41.9 -2.8
DBIC Dimbokro 123.03 325 PKIKP PKPdf 09 23 50.0 -0.8
DBIC 09 24 17.8
DBIC 09 25 29.0
DBIC Dimbokro 123.03 325 PKP PKPdf 09 23 50.0 -0.8
comp=Z,6.3nm,0.6s,baz=34,slow=2.5,SNR=25
DBIC pPKP pPKPdf 09 24 17.8 -1.1
comp=Z,5.8nm,0.7s,baz=38,slow=1.9,SNR=4.0
DBIC PP PP 09 25 29.0 -1.2
comp=Z,3.7nm,0.9s,baz=11,slow=11,SNR=4.5
DBIC PKKPab PKKPab 09 33 41.9 -2.8
comp=Z,1.6nm,0.6s,baz=176,slow=6.2,SNR=5.6
LIC Lamto 123.50 325 *e*PKIKP PKPdf 09 23 49.8 -1.9
comp=Z,14nm,0.8s
LIC *e*MLR MLR
comp=Z,188nm,21.0s
LIC Lamto 123.50 325 *e*PKPdf PKPdf 09 23 49.8 -1.9
LIC LR LR

	comp=Z,90nm,21.0s								
MAW	**Mawson**	**127.46**	**209**		PKP	PKPdf	09 23 57.9	+0.4	
	comp=Z,6.6nm,0.8s,baz=48,slow=1.6,SNR=8.7								
TSUM	**Tsumeb**	**130.57**	**283**		PFAKE		09 24 20.0	+15	
TSUM					LR	LR			
	comp=Z,229nm,20.0s								
BOSA	**Boshof**	**130.91**	**268**		PKP	PKPdf	09 24 05.9	+0.6	
BOSA					PP	PP	09 26 25.7	+2.4	
BOSA	**Boshof**	**130.91**	**268**		PKP	PKPdf	09 24 05.9	+0.6	
	comp=Z,1.5nm,0.5s,baz=102,slow=5.3,SNR=5.6								
BOSA					PP	PP	09 26 25.7	+2.4	
	comp=Z,4.8nm,0.9s,baz=131,slow=2.6,SNR=3.6								
QSPA	**South Pole Qui**	**133.87**	**180**		*e*PKPdf	PKPdf	09 24 09.5	+0.2	
QSPA					*ep*PKPdf	pPKPdf	09 24 37.8	+0.3	
QSPA					*es*PKPdf		09 24 47.8		
QSPA	**South Pole Qui**	**133.87**	**180**		PKP	PKPdf	09 24 09.3	-0.1	
	comp=Z,12nm,0.9s,baz=300,slow=0.9,SNR=13								
LPAZ	**La Paz**	**139.94**	**57**		PKP	PKPdf	09 24 23.2	+0.7	
LPAZ					pPKP	pPKPdf	09 24 52.8	+2.2	
LPAZ	**La Paz**	**139.94**	**57**		PKhKP		09 24 15.2		
	comp=Z,0.7nm,0.4s,baz=235,slow=6.7,SNR=6.6								
LPAZ					PKP	PKPdf	09 24 23.2	+0.7	
	comp=Z,2.0nm,0.7s,baz=10,slow=4.1,SNR=8.4								
LPAZ					pPKP	pPKPdf	09 24 52.8	+2.2	
	comp=Z,5.2nm,0.8s,baz=356,slow=8.0,SNR=5.9								
MAIT	**Maitri**	**145.22**	**205**		*e*PKPdf	PKPdf	09 24 27.6	-2.5	
LCO	**Las Campanas**	**147.14**	**75**		*e*PKPbc	PKPbc	09 24 37.6	+0.5	
LCO					*ep*PKPdf	pPKPdf	09 25 03.8	+1.0	
SNAA	**Sanae**	**148.58**	**198**		*e*PKPdf	PKPdf	09 24 35.1	-0.6	
SNAA					*e*		09 24 39.7		
SNAA					*e*		09 24 42.2		
SNAA					*e*		09 24 44.4		
SNAA					*e*		09 24 54.1		
SNAA					*e*		09 25 05.7		
SNAA					*e*		09 25 07.2		
SNAA					*e*		09 25 10.9		
SNAA					*e*		09 25 14.8		
SNAA					*e*		09 25 21.4		
SNAA	**Sanae**	**148.58**	**198**		PKP2	PKPab	09 24 39.0	-4.4	
SNAA					pmax	pmax			
	comp=Z,15nm,0.9s								
SNAA					pmax	pmax			
	comp=N,8.0nm,0.8s								
SNAA	**Sanae**	**148.58**	**198**		PKPbc	PKPbc	09 24 39.0	-0.6	
	comp=N,15nm,0.9s,baz=157,slow=2.6,SNR=38								
SNAA					pPKPbc	pPKPbc	09 25 05.6	-1.8	
	comp=N,7.6nm,0.8s,baz=310,slow=2.0,SNR=4.0								
VNA2	**Neumayer--Watz**	**150.12**	**197**		*e*PKPdf	PKPdf	09 24 38.1	-0.1	
VNA2					*e*		09 24 44.0		
VNA2					*e*		09 24 46.6		
VNA2					*e*		09 24 50.6		
VNA2					*e*		09 24 57.0		
VNA2					*e*		09 25 10.1		
VNA2					*e*		09 25 11.6		
VNA2					*e*		09 25 15.3		
VNA2					*e*		09 25 19.1		
VNA2					*e*		09 25 25.2		
VNA3	**Neumayer Olymp**	**150.34**	**196**		*e*PKPdf	PKPdf	09 24 38.8	+0.2	
VNA3					*e*		09 24 44.2		
VNA3					*e*		09 24 46.8		
VNA3					*e*		09 24 50.7		
VNA3					*e*		09 24 57.7		
VNA3					*e*		09 25 10.2		
VNA3					*e*		09 25 11.8		
VNA3					*e*		09 25 15.2		
VNA3					*e*		09 25 19.6		
VNA3					*e*		09 25 25.5		
VNA1	**Neumayer--Stat**	**150.52**	**197**		*e*PKPdf	PKPdf	09 24 39.1	+0.2	
VNA1					*e*		09 24 45.3		
VNA1					*e*		09 24 47.5		
VNA1					*e*		09 24 51.0		
VNA1					*e*		09 24 58.7		
VNA1					*e*		09 25 12.3		
VNA1					*e*		09 25 13.8		
VNA1					*e*		09 25 16.5		
VNA1					*e*		09 25 21.0		
VNA1					*e*		09 25 26.8		
PLCA	**Paso Flores**	**152.90**	**96**		PKP	PKPdf	09 24 43.0	-0.4	
	comp=N,5.5nm,1.0s,baz=283,slow=3.0,SNR=6.7								
PLCA					PKPbc	PKPbc	09 24 50.5	-0.2	
	comp=N,26nm,0.9s,baz=257,slow=2.6,SNR=46								
PLCA					PKPab	PKPab	09 25 02.0	-0.3	
	comp=N,11nm,0.8s,baz=310,slow=6.9,SNR=7.7								
PLCA					pPKPbc	pPKPbc	09 25 17.4	-1.2	
	comp=N,15nm,0.9s,baz=247,slow=1.6,SNR=5.4								
HOPE	**Hope Point**	**169.70**	**172**		PFAKE		09 25 10.0	+10	
HOPE					LR	LR			
	comp=Z,4.0nm,21.0s								

*ISCJB **30** 09:09:35.9±0.4,3591N±003×11771W±003,h10km, mb3.9/3,Error ellipse: s-maj=4.3km s-min=3.4km az=22.5*
*NEIC **30** 09:09:35.0,3603N×11778W,h0km,mb4.0/1,ML4.0(PAS), After PAS.*
NEIC Felt at Barstow, Manhattan Beach, Moreno Valley, Oxnard, Ridgecrest, Tarzana, Trona and West Hills.
*IDC **30** 09:09:35.8±0.9,3597N×11786W,h0km,mb3.8/2, mb1 3.7/6,mb1mx3.6/23,mbtmp3.5/6,ML3.2/4,MS3.2/3, Ms1 3.2/3,ms1mx2.9/32,Error ellipse: s-maj=20.4km s-min=6.2km az=75.0*

ISC 30 09:09:37.6±0.4,3589N±003×11768W±003,h10km,n45, σ1§59/66,mb3.9/3,Central California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSC	**Goldstone**	**0.92**	**129**	*e*Pg	**Pg**	**09 09 54.2**	**-1.2**
TPNV	**Topopah Spring**	**1.56**	**47**	*e*Pn	**Pn**	**09 10 02.9**	**-2.5**
TPNV				*e*Sn	**Sn**	**09 10 26.2**	**+0.4**
MTUM	**Tungsten Hills**	**1.62**	**334**	*e*Pn	**Pn**	**09 10 01.5**	**-4.8**
MTUM				*e*Sn	**Sn**	**09 10 22.8**	**-4.4**
PTRM	**Twissleman Ran**	**2.07**	**264**	*e*Pn	**Pn**	**09 10 10.8**	**-1.6**
PTRM				*e*Sn	**Sn**	**09 10 37.5**	**-0.8**
PFO	**Pinyon Flat Ob**	**2.49**	**156**	*e*Pn	**Pn**	**09 10 18.6**	**+0.4**
PFO				*e*Sg	**Sg**	**09 11 00.2**	**+2.6**
PFO	**Pinyon Flat Ob**	**2.49**	**156**	Pn	**Pn**	**09 10 18.6**	**+0.5**
	4.4nm,0.3s,baz=347,slow=11,SNR=46						
PFO				Pg	**Pg**	**09 10 23.6**	**-1.7**
	42nm,0.3s,baz=334,slow=14,SNR=127						
PFO				Lg		09 10 58.8	
	76nm,0.3s,baz=63,slow=19,SNR=10						
NVAR	**Mina Array Bea**	**2.58**	**349**	Pn	**Pn**	**09 10 16.9**	**-2.5**
NVAR				Pg	**Pg**	**09 10 21.5**	**-5.6**
NVAR				Lg		09 10 54.4	
NVAR	**Mina Array Bea**	**2.58**	**349**	Pn	**Pn**	**09 10 16.9**	**-2.5**
	4.0nm,0.3s,baz=170,slow=15,SNR=63						
NVAR				Pg	**Pg**	**09 10 21.5**	**-5.6**
	40nm,0.3s,baz=170,slow=18,SNR=129						
NVAR				Lg		09 10 54.4	
	38nm,0.3s,baz=229,slow=33,SNR=6.0						
SNCC	**San Nicolas Is**	**3.04**	**211**	*e*Pn	**Pn**	**09 10 24.7**	**-1.1**
CMB	**Columbia Colle**	**3.04**	**315**	*e*Pn	**Pn**	**09 10 24.3**	**-1.5**
CMB				*e*Sn	**Sn**	**09 11 04.6**	**+2.3**
SAO	**San Andreas Ge**	**3.16**	**287**	*e*Pn	**Pn**	**09 10 25.9**	**-1.6**
CCUT	**Cedar City**	**3.84**	**63**	*e*Pn	**Pn**	**09 10 36.6**	**-0.2**
CCUT				*e*Sn	**Sn**	**09 11 22.9**	**+0.9**
ARUT	**Antelope Range**	**3.89**	**60**	*e*Pn	**Pn**	**09 10 36.6**	**-0.9**
ARUT				*e*Sg	**Sg**	**09 11 40.9**	**-1.8**
OHCM	**Honcut**	**4.58**	**320**	Pn	**Pn**	**09 10 49.5**	**+2.7**
OHCM				*e*S	**Sb**	**09 11 51.4**	**-1.7**
NSHM	**Saint Helena R**	**4.73**	**305**	*e*Pn	**Pn**	**09 10 49.7**	**+0.8**
NSHM				*e*Sn	**Sn**	**09 11 42.7**	**-1.1**
MSU	**Marysvale**	**5.11**	**58**	*e*Pn	**Pn**	**09 10 54.8**	**+0.6**
MSU				*e*Sg	**Sg**	**09 12 18.2**	**-3.6**
WUAZ	**Wupatki**	**5.15**	**92**	*e*Pn	**Pn**	**09 10 56.0**	**+1.4**
	207nm,0.7s						
WUAZ				*e*		09 11 11.6	
DUG	**Dugway**	**5.76**	**40**	*e*Pg	**Pg**	**09 11 26.5**	**-1.4**
	20nm,0.7s						
NLU	**North Lily Min**	**6.01**	**46**	*e*Pg	**Pg**	**09 11 28.5**	**-4.2**
NLU				*e*Sg	**Sg**	**09 12 45.4**	**-5.0**
WDC	**Whiskeytown Da**	**6.04**	**322**	*e*Sn	**Sn**	**09 12 19.2**	**+2.9**
TMUT	**Trail Mountain**	**6.16**	**55**	*e*Pn	**Pn**	**09 11 09.8**	**+1.1**
TMUT				*e*Sn	**Sn**	**09 12 20.9**	**+1.7**
BGU	**Big Grassy Mou**	**6.21**	**35**	*e*Pn	**Pn**	**09 11 10.8**	**+1.5**
BGU				*e*Sg	**Sg**	**09 12 53.7**	**-3.3**
MPU	**Maple Canyon**	**6.31**	**47**	*e*Pn	**Pn**	**09 11 10.1**	**-0.5**
	15nm,0.8s						
MPU				*e*Sg	**Sg**	**09 12 58.1**	**-1.9**
MOD	**Modoc**	**6.34**	**342**	*e*Pn	**Pn**	**09 11 15.2**	**+4.2**
	52nm,1.0s						
SRU	**San Rafael**	**6.53**	**58**	*e*Pn	**Pn**	**09 11 14.7**	**+1.0**
	19nm,0.7s						
SRU				*e*Pg	**Pg**	**09 11 37.2**	**-5.5**
SRU				*e*Sg	**Sg**	**09 13 06.9**	**-0.4**
WVOR	**Wild Horse Val**	**6.58**	**354**	*e*Pn	**Pn**	**09 11 08.9**	**-5.4**
	11nm,0.8s						
TUC	**Tucson**	**6.74**	**120**	*e*Pn	**Pn**	**09 11 16.1**	**-0.6**
	7.8nm,0.8s						
TUC				*e*Sg	**Sg**	**09 13 11.7**	**-2.4**
DAU	**Daniels Canyon**	**6.78**	**46**	*e*Pn	**Pn**	**09 11 18.6**	**+1.5**
SPUT	**South Promonto**	**6.78**	**36**	*e*Pn	**Pn**	**09 11 16.5**	**-0.7**
SPUT				*e*Sg	**Sg**	**09 13 11.2**	**-4.1**
JLU	**Jordanelle**	**6.79**	**44**	*e*Pn	**Pn**	**09 11 19.8**	**+2.5**
YBH	**Yreka Blue Hor**	**7.03**	**328**	*e*Pn	**Pn**	**09 11 22.0**	**+1.5**
HWUT	**Hardware Ranch**	**7.44**	**38**	*e*Pn	**Pn**	**09 11 29.1**	**+2.9**
	8.3nm,0.8s						
HWUT				*e*Sg	**Sg**	**09 13 36.9**	**+0.5**
MVCO	**Mesa Verde**	**7.51**	**77**	*e*Pn	**Pn**	**09 11 30.5**	**+3.4**
	48nm,0.8s						
MVCO				*e*Sg	**Sg**	**09 13 36.7**	**-1.8**
HLID	**Hailey**	**8.06**	**17**	*e*Pn	**Pn**	**09 11 35.5**	**+0.8**
	6.2nm,0.7s						
HLID				*e*Sg	Sn	09 13 47.0	+41
TPAW	**Teton Pass**	**9.19**	**32**	*e*Pn	**Pn**	**09 11 52.8**	**+2.6**
	14nm,1.3s						
ANMO	**Albuquerque**	**9.21**	**93**	Pn	**Pn**	**09 11 53.3**	**+2.9**
	0.1nm,0.3s,baz=297,slow=11,SNR=4.0						
ANMO				Pg	Pn	09 12 26.4	+36
	0.2nm,0.3s,baz=275,slow=13,SNR=13						
ANMO				Lg		09 14 25.5	
	0.1nm,0.3s,baz=335,slow=3.3,SNR=4.9						
ANMO				LR	LR	09 15 48.2	
	comp=Z,220nm,18.7s,baz=210,slow=40						
SNOW	**Snow King Moun**	**9.25**	**33**	*e*Pn	**Pn**	**09 11 51.8**	**+0.8**
	7.4nm,1.1s						
PDAR	**Pinedale Array**	**9.31**	**40**	Pn	**Pn**	**09 11 54.4**	**+2.6**
	0.0nm,0.3s,baz=230,slow=6.7,SNR=3.7						
PDAR				Lg		09 14 29.0	
	0.1nm,0.3s,baz=214,slow=31,SNR=4.3						
LOHW	**Long Hollow**	**9.44**	**33**	*e*Pn	**Pn**	**09 11 55.6**	**+2.1**
	8.0nm,1.2s						
MCMT	**McKenzie Canyo**	**9.66**	**21**	*e*Pn	**Pn**	**09 11 59.2**	**+2.6**
NEW	**Newport**	**12.37**	**2**	LR	LR	09 16 40.6	
	comp=Z,72nm,20.6s,baz=205,slow=35						
LPIG	**La Paz**	**13.37**	**150**	LR	LR	09 18 06.6	
	comp=Z,80nm,19.2s,baz=266,slow=38						
ULM	**Lac du Bonnet**	**21.33**	**41**	P	**P**	**09 14 24.4**	**-0.2**
	2.3nm,0.7s,mb3.6,baz=236,slow=8.7,SNR=6.8						
FFC	**Flin Flon**	**21.74**	**25**	*e*P	**P**	**09 14 27.7**	**-1.3**
	5.1nm,0.8s,mb4.0						
KSRS	**Korea Array**	**85.04**	**313**	P	**P**	**09 22 13.8**	**+0.3**
	0.8nm,0.7s,mb4.0,baz=66,slow=4.9,SNR=4.6						

*ISCJB **30** 09:15:46.8±0.8,5375S±008×1407E±06,h10km,mb4.3/8, MS3.8/4,Error ellipse: s-maj=51.1km s-min=11.5km az=175.1*
*IDC **30** 09:15:48.0±0.9,5377S×14063E,h0km,mb4.2/6, mb1 4.4/6,mb1mx4.2/13,mbtmp4.2/6,MS3.9/4,Ms1 3.8/4, ms1mx3.5/20,Error ellipse: s-maj=72.1km s-min=17.2km az=81.0*
*NEIC **30** 09:15:49.8±0.7,5376S×14051E,h10km,mb4.3/4,Error ellipse: s-maj=50.5km s-min=13.4km az=80.0*

ISC 30 09:15:48.6±0.8,5377S±008×1407E±06,h10km,n20, σ0§43/12,mb4.3/8,MS3.8/4,1C-1D,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**21.89**	**2**	*e*P	**P**	**09 20 42.6**	**+1.0**
	9.6nm,0.7s,mb4.3						
STKA	**Stephens Creek**	**21.89**	**2**	P	**P**	**09 20 42.4**	**+0.8**
	12nm,0.8s,mb4.4,baz=169,slow=9.9,SNR=4.9						
RPZ	**Rata Peaks**	**22.25**	**76**	LR	LR	09 27 39.8	
	comp=Z,243nm,20.5s,MS3.6,baz=326,slow=32						
FORT	**Forrest**	**24.72**	**333**	*e*P	**P**	**09 21 09.8**	**-0.1**
	21nm,0.7s,mb4.8						
VNDA	**Vanda**	**25.06**	**169**	P	**P**	**09 21 12.2**	**-0.3**
	2.0nm,0.7s,mb3.8,baz=327,slow=11,SNR=7.3						
URZ	**Urewera**	**29.28**	**73**	LR	LR	09 31 49.7	
	comp=Z,191nm,19.2s,MS3.7,baz=270,slow=33						
ASAR	**Alice Springs**	**30.49**	**348**	P	**P**	**09 22 01.4**	**-0.1**
	3.2nm,0.6s,mb4.2,baz=164,slow=10,SNR=42						
WB2	**Warramunga Arr**	**34.11**	**349**	*ip*	**P**	**09 22 32.8**	**-0.6**
WRA	**Warramunga Arr**	**34.12**	**349**	P	**P**	**09 22 32.8**	**-0.6**
	2.7nm,0.5s,mb4.4,baz=172,slow=7.6,SNR=30						
QSPA	**South Pole Qui**	**36.34**	**180**	P	**P**	**09 22 52.2**	**+0.2**
	4.2nm,1.0s,mb4.3,baz=356,slow=4.6,SNR=8.6						
FITZ	**Fitzroy Crossi**	**37.46**	**336**	*e*P	**P**	**09 23 02.4**	**+0.3**
	3.6nm,0.6s,mb4.4						
FITZ	**Fitzroy Crossi**	**37.46**	**336**	P	**P**	**09 23 02.4**	**+0.3**
	2.1nm,0.6s,mb4.2,baz=190,slow=10,SNR=5.4						
MAW	**Mawson**	**37.69**	**218**	LR	LR	09 36 30.8	
	comp=Z,150nm,19.5s,MS3.8,baz=75,slow=33						
KAKA	**Kakadu**	**41.47**	**348**	*e*P	**P**	**09 23 35.6**	**0.0**
	4.4nm,0.6s,mb4.3						
SYO	**Syowa Base**	**44.80**	**210**	*e*P	**P**	**09 24 02.2**	**+0.3**
BATI	**Kupang**	**45.53**	**336**	LR	LR	09 42 25.5	
	comp=Z,171nm,18.8s,MS4.0,baz=48,slow=35						
YKA	**Yellowknife Ar**	**141.52**	**46**	PKP	PKPdf	09 35 20.3	+1.9
	0.3nm,0.7s,baz=233,slow=3.0,SNR=8.8						
ULM	**Lac du Bonnet**	**145.80**	**72**	PKPbc	PKPbc	09 35 28.8	+1.9
	1.9nm,0.7s,baz=227,slow=3.4,SNR=4.7						
GERES	**GERESS Array B**	**147.14**	**283**	PKPbc	PKPbc	09 35 33.4	+2.6
	0.4nm,0.4s,baz=169,slow=2.7,SNR=4.1						
ARCES	**ARCESS Array B**	**147.36**	**324**	PKPbc	PKPbc	09 35 33.6	+2.7
	6.6nm,1.1s,baz=66,slow=5.0,SNR=3.5						

*ISCJB **30** 09:53:37.4±0.3,5649N±004×16200W±006,h196km±3km, mb4.2/33,Error ellipse: s-maj=7.0km s-min=4.7km az=142.8*
*IDC **30** 09:53:39.8±1.2,5649N×16206W,h212km±7km,mb3.8/13, mb1 4.0/14,mb1mx3.8/25,mbtmp3.9/14,Error ellipse: s-maj=19.3km s-min=12.4km az=27.0*
*NEIC **30** 09:53:39.3±0.4,5651N×16212W,mb4.5/18,Error ellipse: s-maj=8.4km s-min=6.4km az=120.0*
*BJI **30** 09:53:40.6,5642N×16253W,h200km,mB4.5,mb4.6*

ISC 30 09:53:38.4±0.3,5651N±004×16201W±006,h190km±3km, h200km±5.7km;pP-P,n93,σ0§94/99,mb4.4/33,Bristol Bay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	**Sand Point**	**1.45**	**143**	P	**Pn**	**09 54 10.1**	**-0.5**
SDPT				S	**Sn**	**09 54 34.5**	**-1.0**
FALS	**False Pass**	**1.83**	**206**	P	**Pn**	**09 54 14.6**	**+0.2**
FALS				S	**Sn**	**09 54 41.5**	**-0.7**
CHGN	**Chignik**	**2.01**	**94**	P	**Pn**	**09 54 16.4**	**+0.2**
AKUT	**Akutan**	**3.20**	**224**	P	**Pn**	**09 54 30.4**	**+0.5**
AKUT				S	**Sn**	**09 55 09.5**	**-0.5**
AKLV	**Akutan Long Va**	**3.25**	**225**	P	**Pn**	**09 54 30.9**	**+0.4**
UNV	**Unalaska Valle**	**3.71**	**226**	P	**Pn**	**09 54 36.0**	**-0.1**
UNV				S	**Sn**	**09 55 21.4**	**+0.3**
KDAK	**Kodiak Island**	**5.29**	**72**	P	**Pn**	**09 54 55.7**	**-0.5**
KDAK	**Kodiak Island**	**5.29**	**72**	P	**Pn**	**09 54 55.8**	**-0.4**
	172nm,0.3s,baz=263,slow=6.1,SNR=1334						
KDAK				S	**Sn**	**09 55 53.0**	**-4.4**
	51nm,0.3s,baz=327,slow=22,SNR=12						
AUL	**Augustine Lava**	**5.40**	**54**	P	**Pn**	**09 54 59.9**	**+2.3**
SVW2	**Sparrevohn**	**5.69**	**33**	P	**Pn**	**09 55 04.4**	**+3.1**
TTA	**Tatalina**	**7.12**	**23**	*e*P	**Pn**	**09 55 23.5**	**+3.6**
SLKM	**Skilak Lake**	**7.36**	**52**	P	**Pn**	**09 55 23.9**	**+0.8**
SEW	**Seward**	**7.53**	**56**	P	**Pn**	**09 55 25.3**	**-0.1**
FIB	**Fire Island**	**7.71**	**48**	P	**Pn**	**09 55 28.6**	**+1.0**
RC01	**Rabbit Creek A**	**7.85**	**49**	P	**Pn**	**09 55 29.4**	**0.0**
PMR	**Palmer**	**8.36**	**47**	P	**Pn**	**09 55 37.0**	**+0.8**
GHO	**Glory Hole Cre**	**8.54**	**46**	P	**Pn**	**09 55 38.9**	**+0.4**
SML	**Sawmill**	**8.80**	**47**	P	**Pn**	**09 55 42.1**	**+0.3**
MID	**Middleton Isla**	**8.83**	**64**	P	**Pn**	**09 55 41.3**	**-0.9**
EYAK	**Cordova Ski Ar**	**9.41**	**58**	*e*Pn	**Pn**	**09 55 48.6**	**-1.3**
	83nm,0.5s						
EYAK				*e*Sn	**Sn**	**09 57 28.9**	**-6.0**
TNA	**Tin City**	**9.52**	**345**	*e*Pn	**Pn**	**09 55 50.6**	**-0.6**
MCK	**McKinley**	**9.73**	**37**	*e*Pn	**Pn**	**09 55 54.2**	**+0.2**
IMA2	**Indian Mountai**	**10.38**	**19**	*e*P	**Pn**	**09 56 05.1**	**+2.7**
COLA	**College**	**10.86**	**34**	*e*Pn	**Pn**	**09 56 07.8**	**-0.8**
	20nm,0.8s						
MENT	**Mentasta**	**11.23**	**47**	*e*P	**Pn**	**09 56 12.9**	**-0.5**
EGAK	**Eagle**	**13.10**	**42**	*e*Pn	**Pn**	**09 56 35.4**	**-1.8**
DAWY	**Dawson**	**13.47**	**47**	*e*Pn	**Pn**	**09 56 41.6**	**-0.2**
SKAG	**Skagway**	**14.42**	**67**	*e*P	**Pn**	**09 56 53.8**	**+0.2**
	62nm,0.8s						
SIT	**Sitka**	**14.61**	**77**	*e*P	**Pn**	**09 56 58.5**	**+2.6**
	8.0nm,0.4s						
CRAG	**Craig**	**16.15**	**82**	*e*P	**Pn**	**09 57 17.4**	**+2.7**
	33nm,1.2s						
WRAK	**Wrangell Islan**	**16.34**	**78**	*e*P	**Pn**	**09 57 17.6**	**+0.7**
	9.1nm,0.4s						
DLBC	**Dease Lake**	**17.22**	**70**	*e*Pn	**Pn**	**09 57 27.5**	**0.0**
DLBC	**Dease Lake**	**17.22**	**70**	P	**Pn**	**09 57 27.1**	**-0.4**
	baz=291,slow=9.6						
DLBC				S	**S**	**10 00 40.1**	**+4.8**
INK	**Inuvik**	**17.50**	**36**	*e*P	**Pn**	**09 57 27.8**	**-2.9**
INK	**Inuvik**	**17.50**	**36**	P	**Pn**	**09 57 27.9**	**-2.8**
	3.4nm,0.3s,baz=233,slow=12,SNR=170						
INK				pP	pP	09 58 04.0	+3.9
	0.6nm,0.3s,baz=206,slow=8.9,SNR=2.3						
YKW3	**Yellowknife Ar**	**24.30**	**56**	*e*P	**P**	**09 58 38.0**	**+0.1**
YKA	**Yellowknife Ar**	**24.31**	**56**	P	**P**	**09 58 37.3**	**-0.8**
YKA				pP		09 59 19.1	
YKA				ScP	ScP	10 05 28.4	-3.9
YKA	**Yellowknife Ar**	**24.31**	**56**	P	**P**	**09 58 37.3**	**-0.8**
	11nm,0.5s,mb4.6,baz=278,slow=9.8,SNR=162						
YKA				pP		09 59 19.1	
	2.3nm,0.7s,baz=272,slow=11,SNR=1.6						
YKA				ScP	ScP	10 05 28.4	-3.9
	1.5nm,0.7s,baz=285,slow=2.9,SNR=24						
LON	**Longmire**	**26.44**	**94**	*e*P	**P**	**09 58 57.7**	**+0.3**
HOOD	**Mount Hood Mea**	**27.39**	**97**	*e*P	**P**	**09 59 06.3**	**+0.4**
HAWA	**Hanford**	**27.91**	**93**	*e*P	**P**	**09 59 10.3**	**-0.2**
	6.0nm,0.7s,mb4.4						
NEW	**Newport**	**28.16**	**88**	P	**P**	**09 59 12.3**	**-0.3**
NEW	**Newport**	**28.16**	**88**	P	**P**	**09 59 12.3**	**-0.3**
	2.9nm,0.8s,mb4.1,baz=318,slow=4.7,SNR=5.5						
BMO	**Blue Mountains**	**30.09**	**94**	*e*P	**P**	**09 59 29.8**	**+0.1**
	35nm,2.6s,mb4.6						
MOD	**Modoc**	**30.38**	**101**	*e*P	**P**	**09 59 32.7**	**+0.4**
WVOR	**Wild Horse Val**	**30.93**	**98**	*e*P	**P**	**09 59 37.4**	**+0.3**
	7.5nm,0.9s,mb4.4						
HLID	**Hailey**	**32.51**	**93**	*e*P	**P**	**09 59 50.9**	**-0.1**
MCMT	**McKenzie Canyo**	**32.57**	**90**	*e*P	**P**	**09 59 51.3**	**-0.2**
NVAR	**Mina Array Bea**	**33.91**	**103**	P	**P**	**10 00 03.3**	**+0.2**
	3.9nm,0.6s,mb4.3,baz=313,slow=7.1,SNR=46						
NVAR				ScP	ScP	10 06 00.1	-3.2
	0.5nm,0.7s,baz=264,slow=6.3,SNR=5.4						
IMW	**Indian Meadow**	**34.22**	**89**	*e*P	**P**	**10 00 06.4**	**+0.7**
	68nm,2.7s,mb4.9						
FLWY	**Flagg Ranch**	**34.24**	**89**	*e*P	**P**	**10 00 06.8**	**+0.9**
	60nm,2.1s,mb5.0						
TPAW	**Teton Pass**	**34.48**	**90**	*e*P	**P**	**10 00 08.6**	**+0.6**
	55nm,2.8s,mb4.8						
MTUM	**Tungsten Hills**	**34.56**	**105**	*e*P	**P**	**10 00 09.3**	**+0.6**
HVU	**Hansel Valley**	**34.60**	**94**	*e*P	**P**	**10 00 09.3**	**+0.4**
PTRM	**Twissleman Ran**	**34.96**	**109**	*e*P	**P**	**10 00 11.9**	**-0.2**
FCC	**Fort Churchill**	**35.03**	**57**	*e*P	**P**	**10 00 11.3**	**-1.1**
HON	**Honolulu**	**35.26**	**174**	*e*P	**P**	**10 00 14.3**	**-0.5**
HWUT	**Hardware Ranch**	**35.38**	**93**	*e*P	**P**	**10 00 16.1**	**+0.5**
	6.7nm,1.0s,mb4.2						
DUG	**Dugway**	**35.66**	**96**	*e*P	**P**	**10 00 17.8**	**-0.3**
PDAR	**Pinedale Array**	**35.72**	**90**	P	**P**	**10 00 17.9**	**-0.6**
	1.2nm,0.4s,mb3.9,baz=323,slow=3.3,SNR=39						
PDAR				ScP	ScP	10 06 06.2	-3.6
	0.7nm,1.0s,baz=321,slow=2.1,SNR=4.5						
ISA	**Isabella**	**35.87**	**107**	*e*P	**P**	**10 00 19.3**	**-0.6**
TPNV	**Topopah Spring**	**36.10**	**103**	*e*P	**P**	**10 00 21.7**	**-0.1**
	18nm,1.0s,mb4.7						
JLU	**Jordanelle**	**36.13**	**94**	*e*P	**P**	**10 00 22.0**	**-0.1**
ARUT	**Antelope Range**	**37.02**	**99**	*e*P	**P**	**10 00 29.2**	**-0.4**
GSC	**Goldstone**	**37.03**	**105**	*e*P	**P**	**10 00 29.5**	**-0.2**
	14nm,1.1s,mb4.5						
TMUT	**Trail Mountain**	**37.17

*ISCJB **30** 10:21:32.7±0.7, 3992N±003×2869E±005, h1km±8km, Error ellipse: s-maj=6.7km s-min=4.7km az=41.4*
*CSEM **30** 10:21:32.6±0.1, 3991N×2869E, h10km, MD2.7, Error ellipse: s-maj=4.0km s-min=3.2km az=130.0*
*ISK **30** 10:21:32.6, 3988N×2871E, h5km, MD2.7*
*DDA **30** 10:21:35.8, 3976N×2885E, h7km±3km, Md2.6*

ISC 30 10:21:33.3±0.6, 3992N±003×2868E±004, h9km±5km, n15, σ0§84/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.32**	**188**	*i* PG	**Pg**	**10 21 38.8**	**-0.8**
DST				*i* SG	**Sg**	**10 21 43.1**	**-0.7**
KCT	**Karacabey**	**0.43**	**324**	PG	**Pg**	**10 21 42.1**	**+0.5**
BTOK	**Tokmak**	**0.53**	**253**	*i* P	**Pg**	**10 21 43.4**	**-0.1**
BTOK				*i* S	**Sg**	**10 21 51.0**	**+0.6**
BALB	**Balikeşir**	**0.68**	**246**	*e*PG	**Pg**	**10 21 46.4**	**0.0**
IZI	**Iznik**	**0.73**	**55**	*e*PG	**Pg**	**10 21 47.0**	**-0.5**
EDC	**Edincik**	**0.76**	**304**	*e*PG	**Pg**	**10 21 48.7**	**+0.8**
YLV	**Yalova**	**0.83**	**39**	*e*PG	**Pg**	**10 21 49.6**	**+0.2**
GDZ	**Gediz**	**1.03**	**143**	*i* P	**Pg**	**10 21 51.8**	**-1.4**
GDZ				*i* S	**Sg**	**10 22 09.1**	**+2.5**
MRMT	**Marmara Adasi**	**1.08**	**310**	*e*PN	**Pn**	**10 21 53.8**	**-0.8**
HRT	**Hereke**	**1.17**	**40**	*e*PN	**Pn**	**10 21 55.4**	**-0.5**
AKHS	**Akhisar**	**1.24**	**213**	*i* P	**Pn**	**10 21 56.6**	**-0.2**
AKHS				*i* S	**Sb**	**10 22 14.1**	**+1.1**
BORA	**Eskisehir**	**1.36**	**91**	*i* P	**Pn**	**10 21 57.5**	**-1.0**
BORA				*i* S	**Sb**	**10 22 17.8**	**+1.2**
BORA	**Eskisehir**	**1.36**	**91**	*i* P	**Pn**	**10 21 57.5**	**-1.0**
BORA				*i* S	**Sb**	**10 22 17.8**	**+1.3**
MANT	**Manisa**	**1.43**	**184**	*i* P	**Pn**	**10 21 59.1**	**-0.4**
MANT				*i* S	**Sn**	**10 22 18.2**	**-0.2**
GULT	**Gulveren**	**1.49**	**69**	*e*PN	**Pn**	**10 22 00.9**	**+0.6**

*ISCJB **30** 10:24:12.6±0.6, 3988N±002×2388E±005, h12km±6km, Error ellipse: s-maj=6.1km s-min=4.0km az=177.4*
*CSEM **30** 10:24:13.2±0.1, 3987N×2390E, h10km, ML2.8, Error ellipse: s-maj=2.1km s-min=1.6km az=87.0*
*THE **30** 10:24:13.2, 3988N×2388E, h10km, ML2.8*
*ATH **30** 10:24:14.3, 3991N×2365E, h27km±2km, MD3.1/7*
*NEIC **30** 10:24:14.3, 3990N×2365E, h27km, MD3.1(ATH), After ATH.*

ISC 30 10:24:12.9±0.6, 3988N±002×2390E±005, h15km±6km, n18, σ0§55/28, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.17**	**287**	*e*Pg	**Pg**	**10 24 16.8**	**-0.4**
PAIG				*e*Sg	**Sg**	**10 24 19.8**	**-0.3**
OUR	**Ouranopolis**	**0.46**	**8**	*e*Pg	**Pg**	**10 24 22.4**	**+0.3**
OUR				*e*Sg	**Sg**	**10 24 29.1**	**+0.7**
PLG	**Polygyros**	**0.61**	**325**	*e*Pg	**Pg**	**10 24 23.9**	**-1.0**
PLG				*e*Sg	**Sg**	**10 24 32.7**	**-0.2**
PLG	**Polygyros**	**0.61**	**325**	*e*PB	**Pg**	**10 24 23.9**	**-0.9**
PLG				*e*SB	**Sg**	**10 24 32.0**	**-0.9**
AOS	**Alonnisos**	**0.70**	**181**	*e*Pg	**Pg**	**10 24 26.7**	**0.0**
AOS				*e*Sg	**Sg**	**10 24 37.0**	**+1.0**
NEO	**Neokhori**	**0.77**	**223**	*e*PN	**Pg**	**10 24 27.5**	**-0.4**
NEO				*e*SN	**Sg**	**10 24 38.0**	**-0.1**
LOS	**Limnos**	**0.91**	**86**	*e*Pg	**Pg**	**10 24 30.0**	**-0.6**
HORT	**Hortiatis**	**0.94**	**320**	*e*Pg	**Pg**	**10 24 31.4**	**+0.1**
HORT				*e*Sg	**Sg**	**10 24 44.0**	**+0.4**
LIA	**Limnos Island**	**0.99**	**88**	*e*PN	**Pn**	**10 24 37.0**	**+4.8**
SOH	**Sokhos**	**1.03**	**336**	*e*Pg	**Pg**	**10 24 32.4**	**-0.5**
SOH				*e*Sg	**Sg**	**10 24 46.4**	**+0.1**
SOH	**Sokhos**	**1.03**	**336**	*e*Pg	**Pg**	**10 24 32.3**	**-0.6**
SOH				*e*Sg	**Sg**	**10 24 46.4**	**0.0**
THE	**Thessaloniki**	**1.04**	**317**	*e*Pg	**Pg**	**10 24 33.1**	**+0.1**
THE				*e*Sg	**Sg**	**10 24 47.8**	**+1.2**
LIT	**Litokhoron**	**1.10**	**282**	*e*Sg	**Sg**	**10 24 49.0**	**+0.3**
LKR	**Lokris**	**1.41**	**210**	*e*PB	**Pb**	**10 24 38.7**	**-0.1**
NVR	**Nevrokopi**	**1.47**	**359**	*e*PB	**Pb**	**10 24 39.2**	**-0.8**
THL	**Klokotos Trika**	**1.48**	**259**	*e*PN	**Pn**	**10 24 39.0**	**0.0**
GRG	**Griva**	**1.57**	**314**	*e*Pg	**Pn**	**10 24 40.2**	**0.0**
RDO	**Rodhopi**	**1.78**	**44**	*e*PB	**Pb**	**10 24 46.0**	**+0.8**

IDC 30 10:46:14.7±2.9, 3357S×17870W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.7/13, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=69.0km s-min=35.4km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.79**	**215**	Pn	**Pn**	**10 47 42.0**	**+0.1**
	3.0nm,0.3s,baz=248,slow=1.9,SNR=17						
URZ				Sn	Sn	10 48 47.5	-1.4
	6.5nm,0.3s,baz=144,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**42.45**	**271**	P	P	10 54 11.7	+0.1
	0.2nm,0.3s,baz=113,slow=7.2,SNR=7.5						
WRA	**Warramunga Arr**	**43.73**	**276**	P	P	10 54 22.0	+0.1
	0.4nm,0.3s,baz=116,slow=8.2,SNR=18						
FINES	**FINESS Array B**	**147.88**	**338**	PKPbc	PKPbc	11 06 00.1	-0.8
	0.8nm,0.7s,baz=15,slow=5.8,SNR=3.1						

*ISCJB **30** 11:27:21.9±1.0, 608S±02×2268W±06, h10km, mb4.3/2, MS4.0/2, Error ellipse: s-maj=49.7km s-min=12.9km az=152.0*
*IDC **30** 11:27:24.0±7.8, 6038S×2680W, h0km, mb4.3/2, mb1 4.4/2, mb1mx3.8/13, mbtmp4.3/2, MS3.9/2, Ms1 3.8/2, ms1mx3.4/20, Error ellipse: s-maj=240.3km s-min=49.4km az=176.0*

ISC 30 11:27:24.2±1.0, 607S±02×266W±06, h10km, n9, σ0§35/6, mb4.3/2, MS4.0/2, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.43**	**151**	*e*	**Pn**	**11 30 21.2**	**+0.4**
VNA1				*e*		11 30 22.3	
VNA1				*e*		11 30 24.1	
VNA1				*e*		11 30 25.1	
VNA1				*e*		11 30 26.8	
VNA1				*e*		11 30 28.6	
VNA1				*e*		11 30 32.6	
VNA1				*e*		11 32 26.9	
VNA1				*e*		11 32 30.8	
VNA1				*e*		11 32 35.0	
VNA3	**Neumayer Olymp**	**12.54**	**154**	*e*	**Pn**	**11 30 22.5**	**+0.1**
VNA3				*e*		11 30 23.6	
VNA3				*e*		11 30 24.9	
VNA3				*e*		11 30 26.0	
VNA3				*e*		11 30 27.6	
VNA3				*e*		11 30 29.5	
VNA3				*e*		11 30 33.9	
VNA3				*e*		11 32 31.3	
VNA3				*e*		11 32 35.1	
VNA3				*e*		11 32 38.9	
VNA2	**Neumayer--Watz**	**12.83**	**151**	*e*	**Pn**	**11 30 26.2**	**-0.1**
VNA2				*e*		11 30 27.4	
VNA2				*e*		11 30 28.9	
VNA2				*e*		11 30 30.6	
VNA2				*e*		11 30 32.3	
VNA2				*e*		11 30 34.6	
VNA2				*e*		11 30 38.6	
VNA2				*e*		11 32 38.0	
VNA2				*e*		11 32 41.2	
VNA2				*e*		11 32 44.8	
SNAA	**Sanae**	**14.43**	**149**	*e*	**Pn**	**11 30 47.7**	**-0.4**
SNAA				*e*		11 30 48.6	
SNAA				*e*		11 30 49.6	
SNAA				*e*		11 30 50.8	
SNAA				*e*		11 30 51.9	
SNAA				*e*		11 30 53.8	
SNAA				*e*		11 30 57.4	
SNAA				*e*		11 33 16.2	
SNAA				*e*		11 33 20.1	
SNAA				*e*		11 33 24.5	
BOSA	**Boshof**	**47.03**	**71**	LR	LR	11 50 51.8	
	comp=Z,75nm,18.9s,MS3.7,baz=18,slow=30						
LPAZ	**La Paz**	**53.40**	**308**	P	**P**	**11 36 43.9**	**0.0**
	1.0nm,0.5s,mb4.0,baz=52,slow=16,SNR=7.1						
TORD	**Torodi Ar. Bea**	**77.02**	**28**	P	**P**	**11 39 17.0**	**0.0**
	3.0nm,0.4s,mb4.6,baz=199,slow=6.1,SNR=25						
URZ	**Urewera**	**79.46**	**199**	LR	LR	12 08 49.2	
	comp=Z,116nm,18.9s,MS4.2,baz=203,slow=31						
YKA	**Yellowknife Ar**	**139.76**	**314**	PKP	PKPdf	11 46 51.0	+0.5
	0.4nm,0.8s,baz=125,slow=2.3,SNR=9.3						

*CSEM **30** 11:29:59.9±0.2, 3870N×3118E, h2km, MD2.8, Error ellipse: s-maj=6.0km s-min=4.6km az=175.0*
*ISK **30** 11:30:00.7, 3871N×3118E, h10km, MD2.8*
*ISCJB **30** 11:30:01.1±0.5, 3868N±004×3120E±003, h10km, Error ellipse: s-maj=5.5km s-min=3.7km az=173.8*
*DDA **30** 11:30:02.7, 3876N×3123E, h6km±3km, Md3.0*

ISC 30 11:30:01.7±0.6, 3867N±004×3118E±003, h8km±9km, n12, σ0§87/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHUT	**Suhut-Afyon**	**0.51**	**257**	PG	**Pg**	**11 30 11.4**	**-0.1**
SHUT				SG	**Sg**	**11 30 19.1**	**+1.0**
KIZT	**Kizilcal**	**0.59**	**69**	*e*PG	**Pg**	**11 30 13.1**	**0.0**
KIZT				*e*SG	**Sg**	**11 30 19.9**	**-0.7**
KDHN	**Kadinhani**	**0.75**	**101**	*i* P	**Pg**	**11 30 15.8**	**-0.3**
KDHN				*i* S	**Sg**	**11 30 27.3**	**+1.4**
ESKT	**Eskisehir**	**0.88**	**343**	PG	**Pg**	**11 30 17.6**	**-1.1**
ESKT	**Eskisehir**	**0.88**	**343**	*i* P	**Pg**	**11 30 17.0**	**-1.7**
ESKT				*i* S	**Sg**	**11 30 29.9**	**-0.3**
SEYT	**Eskypehyr**	**0.88**	**343**	*i* P	**Pg**	**11 30 17.0**	**-1.7**
SEYT				*i* S	**Sg**	**11 30 30.0**	**-0.2**
ISP	**Isparta**	**0.98**	**213**	PG	**Pg**	**11 30 20.6**	**0.0**
KONT	**Konya--Tatoy**	**1.18**	**128**	*e*PG	**Pg**	**11 30 24.2**	**-0.1**
BORA	**Eskisehir**	**1.33**	**335**	*e*P	**Pn**	**11 30 25.6**	**-0.9**
BORA				*i* S	**Sg**	**11 30 45.7**	**+1.2**
KHL	**Karahalli**	**1.34**	**255**	*e*PG	**Pg**	**11 30 25.7**	**-1.8**
GDZ	**Gediz**	**1.39**	**288**	*i* P	**Pn**	**11 30 27.3**	**0.0**
GDZ				*i* S	**Sb**	**11 30 46.8**	**+1.1**
ELDT	**Eldivan**	**2.51**	**43**	*i* P	**Pn**	**11 30 42.7**	**-0.1**
ELDT				*i* S	**Sg**	**11 31 23.1**	**+0.7**

CASC 30 11:31:35.6±2.9, 1460N×9221W, h61km±161km, MD4.0, 1C-1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.62**	**117**	*e*P	Pn	11 31 49.1	+0.1
PCG	**Pacaya**	**1.56**	**97**	*e*P	Pn	11 32 01.7	+0.6
PCG				*e*S	Sn	11 32 22.3	+1.9
SNJE	**San Jose**	**2.62**	**106**	*e*P	x	11 32 50.1	
SNJE				*e*S	x	11 33 20.5	
BOQS	**Boqueron**	**2.97**	**106**	*e*P	x	11 32 55.7	
BOQS				*e*S	x	11 33 29.5	
LCBS	**La Ceiba**	**3.27**	**106**	*e*P	x	11 32 58.8	
LCBS				*e*S	x	11 33 38.8	
SNVI	**San Vicente**	**3.41**	**106**	*e*P	x	11 33 06.9	
SNVI				*e*S	x	11 33 46.9	

IDC 30 11:31:36.1±2.6, 5427N×8623E, h0km, mb1 3.5/1, mb1mx3.1/22, mbtmp3.5/1, ML3.5/1, Error ellipse: s-maj=19.4km s-min=2.2km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**0.89**	**249**	Pg	Pg	11 31 52.5	-0.5
	4.8nm,0.3s,baz=66,slow=17,SNR=41						
ZALV				Lg		11 32 06.0	
	14nm,0.3s,baz=64,slow=29,SNR=53						
MKAR	**Makanchi Array**	**7.89**	**200**	Pn	Pn	11 33 33.3	+1.3
	0.7nm,0.3s,baz=22,slow=12,SNR=11						
MKAR				Sn	Sn	11 35 01.6	-0.3
	0.4nm,0.3s,baz=24,slow=26,SNR=4.0						
MKAR				Lg		11 35 45.4	
	0.3nm,0.3s,baz=20,slow=28,SNR=7.4						

IDC 30 11:44:55.8±2.9, 1823S×16767E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/12, mbtmp3.6/3, MS4.1/1, Ms1 4.1/1, ms1mx2.9/20, Error ellipse: s-maj=228.7km s-min=32.7km az=158.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**30.76**	**101**	LR	LR	12 01 09.4	
	comp=Z,399nm,20.6s,baz=288,slow=32						
WRA	**Warramunga Arr**	**31.52**	**261**	P	P	11 51 21.4	+1.7
	0.2nm,0.6s,baz=90,slow=8.4,SNR=3.5						
ASAR	**Alice Springs**	**31.95**	**254**	P	P	11 51 21.9	-1.6
	0.9nm,0.8s,baz=87,slow=9.0,SNR=11						
NVAR	**Mina Array Bea**	**89.26**	**49**	P	P	11 57 54.1	+0.2
	0.4nm,0.6s,baz=233,slow=11,SNR=5.3						
GERES	**GERESS Array B**	**142.91**	**331**	PKP	PKPdf	12 04 31.9	+0.6
	0.2nm,0.3s,baz=25,slow=2.6,SNR=5.4						

*ISK **30** 11:50:25.8, 3850N×4428E, h5km, MD2.9*
*ISCJB **30** 11:50:26.6±1.1, 3846N±003×4437E±009, h2km, Error ellipse: s-maj=9.9km s-min=4.4km az=178.8*
*CSEM **30** 11:50:27.3±0.3, 3847N×4414E, h2km, MD2.9, Error ellipse: s-maj=7.8km s-min=3.8km az=92.0*
*DDA **30** 11:50:28.4, 3842N×4431E, h8km±3km, Md3.1*

ISC 30 11:50:26.4±1.7, 3845N±003×444E±01, h2km±11km, n12, σ1§01/19, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.80**	**330**	PG	**Pg**	**11 50 39.9**	**-1.8**
CLDR				SG	**Sg**	**11 50 51.7**	**-0.4**
TVAN	**Van**	**0.81**	**276**	*i* P	**Pg**	**11 50 41.0**	**-0.8**
TVAN				*i* S	**Sg**	**11 50 52.2**	**-0.1**
TVAN	**Van**	**0.81**	**276**	*i* P	**Pg**	**11 50 41.0**	**-0.9**
TVAN				*i* S	**Sg**	**11 50 52.2**	**-0.1**
VANT	**Van**	**0.82**	**270**	*e*PG	**Pg**	**11 50 41.5**	**-0.5**
VANB	**Van**	**0.83**	**280**	PG	**Pg**	**11 50 40.6**	**-1.7**
HAKT	**HAKKARI**	**1.06**	**213**	*i* P	**Pg**	**11 50 46.4**	**-0.3**
HAKT				*i* S	**Sg**	**11 51 02.0**	**+1.6**
DYDN	**Diyadin**	**1.23**	**332**	*i* P	**Pg**	**11 50 50.6**	**+0.6**
DYDN				*i* S	**Sg**	**11 51 06.4**	**+0.3**
CUKT	**Cukurca**	**1.37**	**209**	*e*PN	**Pn**	**11 50 53.2**	**+0.7**
TUTA	**Tutak**	**1.58**	**308**	*i* P	**Pn**	**11 50 54.9**	**-0.5**
TUTA				*i* S	**Sg**	**11 51 18.4**	**+1.3**
AGRB	**Hanur-Agry**	**1.59**	**316**	*e*PN	**Pn**	**11 50 54.9**	**-0.6**
SIRT	**Sirnak**	**1.84**	**240**	*e*PN	**Pn**	**11 50 59.0**	**0.0**
DIGO	**Kars**	**2.12**	**338**	*i* P	**Pb**	**11 51 06.1**	**+0.5**
DIGO				*i* S	**Sg**	**11 51 37.2**	**+2.6**

IDC 30 11:56:45.6±1.9, 284N×12719E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/16, mbtmp3.8/4, Error ellipse: s-maj=155.2km s-min=23.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.70**	**163**	P	P	12 01 59.1	-0.3
	1.5nm,0.7s,baz=343,slow=10,SNR=20						
WB2	**Warramunga Arr**	**23.71**	**163**	*e*P	P	12 01 59.2	-0.2
ASAR	**Alice Springs**	**27.14**	**166**	P	P	12 02 30.7	0.0
	0.3nm,0.3s,baz=345,slow=10,SNR=13						
STKA	**Stephens Creek**	**37.14**	**159**	P	P	12 03 58.1	0.0
	3.2nm,1.0s,baz=354,slow=9.3,SNR=5.1						
MKAR	**Makanchi Array**	**58.54**	**325**	P	P	12 06 44.1	+0.2
	0.5nm,0.5s,baz=136,slow=7.8,SNR=2.3						

*BJI **30** 12:00:18.4, 1050S×16150E, h100km, mB4.7, mb4.4*
*IDC **30** 12:00:20.8±0.8, 1051S×16148E, h105km±6km, mb4.1/13, mb1 4.2/14, mb1mx4.2/17, mbtmp4.1/14, MS3.5/4, Ms1 3.5/4, ms1mx3.2/22, Error ellipse: s-maj=18.9km s-min=15.8km az=106.0*
*NEIC **30** 12:00:20.4±0.7, 1046S×16150E, mb4.6/8, Error ellipse: s-maj=15.0km s-min=12.6km az=87.0*
*ISCJB **30** 12:00:22.0±1.3, 1052S±008×1614E±01, h126km±11km, mb4.3/18, Error ellipse: s-maj=17.1km s-min=12.7km az=177.2*

ISC 30 12:00:22.6±1.3, 1050S±008×1614E±01, h118km±11km, h102km±4.1km; pP-P, n32, σ0§77/30, mb4.3/18, 3D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.80**	**306**	P	**Pn**	**12 00 53.2**	**-0.3**
	1µm,0.3s,baz=125,slow=3.6,SNR=486						
HNR				LR	LR	12 01 27.3	
	comp=Z,382nm,20.7s,baz=5.7,slow=36						
DZM	**Mont Dzumac**	**12.47**	**158**	P	**Pn**	**12 03 15.7**	**-0.3**
	2.6nm,0.3s,baz=27,slow=11,SNR=25						
DZM				LR	LR	12 07 38.3	
	comp=Z,86nm,18.0s,baz=237,slow=35						
CTA	**Charters Tower**	**17.44**	**235**	*i* P	**Pn**	**12 04 21.1**	**+2.5**
	14nm,0.6s						
CTA	**Charters Tower**	**17.44**	**235**	P	**Pn**	**12 04 21.1**	**+2.5**
	3.9nm,0.3s,baz=60,slow=12,SNR=39						
CTAO	**Charters Tower**	**17.44**	**235**	*e*P	**Pn**	**12 04 19.9**	**+1.3**
	47nm,1.0s						
ARMA	**Armidale**	**21.81**	**203**	*e*P	**P**	**12 05 04.8**	**-0.4**
CNB	**Canberra Magne**	**27.03**	**202**	*e*P	**P**	**12 05 54.1**	**+0.4**
	20nm,1.1s,mb4.6						
WB2	**Warramunga Arr**	**27.71**	**247**	*e*P	**P**	**12 05 59.9**	**-0.1**
WRA	**Warramunga Arr**	**27.73**	**247**	P	**P**	**12 06 00.0**	**-0.1**
	11nm,0.5s,mb4.7,baz=77,slow=9.0,SNR=151						
WRA				ScP	ScP	12 12 44.8	+0.7
	0.4nm,1.0s,baz=73,slow=3.8,SNR=4.9						
STKA	**Stephens Creek**	**28.08**	**218**	*i* P	**P**	**12 06 02.8**	**-0.3**
	4.6nm,0.5s,mb4.3						
STKA	**Stephens Creek**	**28.08**	**218**	P	**P**	**12 06 03.3**	**+0.2**
	5.4nm,0.6s,mb4.3,baz=54,slow=14,SNR=20						
STKA				LR	LR	12 16 59.1	
	comp=Z,100nm,18.1s,baz=26,slow=36						
KAKA	**Kakadu**	**28.46**	**263**	*e*P	**P**	**12 06 06.3**	**-0.4**
	12nm,1.4s,mb4.2						
ASAR	**Alice Springs**	**29.31**	**240**	P	**P**	**12 06 13.1**	**-1.0**
	2.4nm,0.6s,mb4.0,baz=66,slow=9.4,SNR=41						
FITZ	**Fitzroy Crossi**	**35.44**	**254**	*i* P	**P**	**12 07 07.1**	**-0.5**
	19nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	**35.44**	**254**	P	**P**	**12 07 07.1**	**-0.6**
	10nm,0.7s,mb4.8,baz=93,slow=7.9,SNR=26						
FORT	**Forrest**	**36.95**	**232**	*e*P	**P**	**12 07 20.5**	**+0.1**
	11nm,0.6s,mb5.0						
BATI	**Kupang**	**37.13**	**267**	P	**P**	**12 07 23.4**	**+1.2**
	14nm,0.6s,mb5.1,baz=124,slow=4.6,SNR=5.4						
KLBR	**Kellerberrin**	**45.45**	**236**	*e*P	**P**	**12 08 29.5**	**-0.4**
	19nm,1.0s,mb4.8						
MUN	**Mundaring**	**46.82**	**236**	*e*P	**P**	**12 08 41.0**	**+0.3**
PPT	**Papeete**	**47.95**	**104**	LR	LR	12 27 27.8	
	comp=Z,219nm,18.0s,baz=8.3,slow=34						
JNU	**Nakatsue**	**52.24**	**327**	LR	LR	12 26 43.7	
	comp=Z,24nm,20.4s,baz=59,slow=30						
KSRS	**Korea Array**	**57.11**	**328**	P	**P**	**12 09 57.0**	**+0.2**
	3.1nm,0.9s,mb4.3,baz=150,slow=7.7,SNR=9.4						
VNDA	**Vanda**	**67.00**	**180**	P	**P**	**12 11 02.8**	**+0.5**
	0.7nm,0.6s,mb3.6,baz=304,slow=4.6,SNR=3.6						
GTA	**Gaotai**	**75.65**	**315**	*e*P	**P**	**12 11 55.5**	**+0.6**
GTA				AMB	AMB		
	comp=Z,6.0nm,1.4s,mb4.1						
SONM	**Songino Array**	**75.76**	**325**	P	**P**	**12 11 55.9**	**+0.6**
	comp=Z,4.1nm,0.7s,mb4.3,baz=156,slow=5.2,SNR=6.9						
SONM				pP	pP	12 12 21.8	-3.2
	comp=Z,3.1nm,0.6s,baz=147,slow=3.5,SNR=4.9						
MAW	**Mawson**	**83.61**	**202**	P	**P**	**12 12 36.6**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.1,baz=135,slow=6.0,SNR=7.7						
NVAR	**Mina Array Bea**	**88.95**	**51**	P	**P**	**12 13 04.4**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.6,baz=237,slow=9.4,SNR=3.5						
NVAR				pP	pP	12 13 31.2	-3.4
	comp=Z,0.9nm,0.7s,baz=224,slow=6.2,SNR=7.1						
MKAR	**Makanchi Array**	**90.24**	**318**	P	**P**	**12 13 09.0**	**-0.8**
MKAR				pP	pP	12 13 37.5	-2.9
MKAR	**Makanchi Array**	**90.24**	**318**	P	**P**	**12 13 09.0**	**-0.8**
	comp=Z,1.5nm,0.6s,mb4.3,baz=99,slow=5.0,SNR=9.4						
MKAR				pP	pP	12 13 37.5	-2.9
	comp=Z,0.4nm,0.3s,baz=103,slow=4.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**90.65**	**325**	P	**P**	**12 13 09.6**	**-2.0**
	comp=Z,0.6nm,0.6s,mb3.9,baz=76,slow=6.1,SNR=3.1						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**12 13 39.0**	**+0.9**
YKA				pP	pP	12 14 04.0	-4.7
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**12 13 39.0**	**+1.0**
	comp=Z,0.1nm,0.5s,mb3.5,baz=255,slow=4.0,SNR=3.7						
YKA				pP	pP	12 14 04.0	-4.7
	comp=Z,0.2nm,0.5s,baz=260,slow=4.6,SNR=3.4						

*NEIC **30** 12:01:56.9±0.6, 4650N×153.11E, h10km, mb4.1/1, Error ellipse: s-maj=21.2km s-min=13.9km az=107.0*
*ISCJB **30** 12:01:58.9±1.4, 465N±0.1×153.1E±0.2, h39km±13km, mb3.6/8, Error ellipse: s-maj=23.8km s-min=9.9km az=136.4*
*MOS **30** 12:02:00.9±1.4, 4659N×153.14E, h56km, mb4.2/5, Error ellipse: s-maj=18.2km s-min=13.1km az=63.4*
*IDC **30** 12:02:04.1±4.8, 4651N×153.13E, h67km±42km, mb3.4/8, mb1 3.5/9, mb1mx3.4/22, mbtmp3.4/9, ML3.5/1, Error ellipse: s-maj=31.2km s-min=19.3km az=109.0*

ISC 30 12:02:01.6±1.2, 466N±01×1531E±02, h44km±11km, n36, σ1§21/40, mb3.6/8, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.87**	**252**	*i* PN	**Pn**	**12 02 58.2**	**-0.4**
KUR				*e*S	**Sn**	**12 03 43.0**	**+0.2**
KUR				pmax	pmax		
	comp=N,80nm,0.4s						
KUR				pmax	pmax		
	comp=E,50nm,0.4s						
KUR				pmax	pmax		
	comp=Z,160nm,0.4s						
KUR				smax			
	comp=N,150nm,0.6s						
KUR				smax			
	comp=E,80nm,0.6s						
SKR	**Severo-Kuril's**	**4.60**	**25**	*e*PN	**Pn**	**12 03 08.1**	**-0.4**
NEM2	**Nemuro 2**	**6.10**	**241**	P	**Pn**	**12 03 27.2**	**-2.0**
NEM2				*e*S	**Sn**	**12 04 33.9**	**-3.8**
JRA	**Rausu**	**6.20**	**248**	P	**Pn**	**12 03 31.4**	**+0.9**
JNK	**Nakash**	**6.62**	**246**	P	**Pn**	**12 03 36.5**	**+0.2**
JAK	**Akkeshi**	**6.95**	**242**	P	**Pn**	**12 03 38.7**	**-2.0**
JAK				*e*S	**Sn**	**12 04 54.0**	**-4.4**
JTKR	**Abashiri--Toko**	**6.97**	**252**	P	**Pn**	**12 03 42.3**	**+1.2**
YSS	**Yuzh-Sakhalins**	**7.11**	**277**	*i* PN	**Pn**	**12 03 48.0**	**+5.0**
JAR	**Ashorobuto**	**7.37**	**247**	P	**Pn**	**12 03 47.0**	**+0.5**
JKK2	**Kamakawa 2**	**7.78**	**254**	P	**Pn**	**12 03 54.2**	**+2.1**
ASAJ	**Asahikawa**	**7.78**	**256**	PN	**Pn**

explosion.
*SGS **30** 12:09:34.5,3005N×3644E, h29km*
ISC 30 12:09:32.9±1.2,2986N±005×3638E±008,h0km,n15,
σ0§66/19,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HRFI	**Mount Harif**	**1.18**	**279**	Pg	**Pg**	**12 09 54.5**	**-1.1**
HRFI				Sg	**Sg**	**12 10 11.3**	**+0.5**
ZFRI	**Zfri**	**1.25**	**304**	Pg	**Pg**	**12 09 57.0**	**0.0**
EIL	**Elat**	**1.26**	**262**	Pg	**Pg**	**12 09 56.8**	**-0.3**
EIL				Sg	**Sg**	**12 10 14.0**	**+0.6**
HQLS		**1.28**	**245**	P	**Pg**	**12 09 56.8**	**-0.6**
HQLS		**1.28**	**245**	P	**Pg**	**12 09 56.8**	**-0.6**
HQLS				S	**Sg**	**12 10 13.8**	**-0.1**
PRNI	**Paran**	**1.29**	**293**	Pg	**Pg**	**12 09 56.7**	**-1.0**
JLOS		**1.36**	**215**	S	**Sg**	**12 10 17.0**	**+0.3**
JLOS		**1.36**	**215**	P	**Pg**	**12 09 58.7**	**-0.3**
JLOS		**1.36**	**215**	P	**Pg**	**12 09 58.7**	**-0.3**
JLOS				S	**Sg**	**12 10 17.0**	**+0.4**
KRMI	**Paran Flat**	**1.46**	**281**	Pn	**Pn**	**12 10 00.4**	**-0.1**
RMNI	**Mount Ramon**	**1.58**	**298**	Pn	**Pn**	**12 10 02.3**	**+0.1**
MZDA	**Masada**	**1.69**	**329**	Pn	**Pn**	**12 10 04.5**	**+0.7**
YTIR	**Yattir**	**1.86**	**324**	Pn	**Pn**	**12 10 06.8**	**+0.8**
RSHS		**2.08**	**222**	S	**Sn**	**12 10 39.2**	**+3.5**
RSHS		**2.08**	**222**	P	**Pn**	**12 10 08.9**	**-0.1**

*IDC **30** 12:24:44.9±0.8,8162N×495W, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.7/22, mbtmp3.7/10, ML3.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.8/31, Error ellipse: s-maj=29.6km s-min=16.1km az=51.0*
*CSEM **30** 12:24:44.1±0.1, 8158N×522W, h15km, mb4.4/2, Error ellipse: s-maj=6.8km s-min=3.5km az=33.0*
*ISCJB **30** 12:24:46.1±0.8, 813N±0.1×33W±0.5, h10km, mb3.6/9, MS3.2/2, Error ellipse: s-maj=16.1km s-min=9.5km az=21.7*
*NEIC **30** 12:24:46.7±0.7, 8160N×409W, h10km, mb4.4/2, Error ellipse: s-maj=22.7km s-min=10.9km az=51.0*
*NAO **30** 12:24:48.8±6.0, 8130N×236W*
ISC 30 12:24:49.4±3.8,813N±01×30W±05,h18km±25km,n27,
σ1§38/28,mb3.6/9,MS3.2/2,2D,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**3.51**	**126**	Pn	**Pn**	**12 25 42.3**	**-0.5**
KBS				Sn	**Sn**	**12 26 23.1**	**-0.6**
KBS	**Kingsbay**	**3.51**	**126**	*e*P	**Pn**	**12 25 42.2**	**-0.7**
KBS				*e*S	**Sn**	**12 26 22.7**	**-1.1**
SPA0	**Spitsbergen Ar**	**4.65**	**123**	Pn	**Pn**	**12 25 57.5**	**-1.0**
	baz=322,slow=12						
SPA0				Sn	**Sn**	**12 26 50.8**	**-1.0**
	baz=18,slow=18						
DAG	**Danmarks Havn**	**5.43**	**221**	*i*P	**Pn**	**12 26 06.8**	**-2.4**
	1.7nm,0.4s						
DAG	**Danmarks Havn**	**5.43**	**221**	*e*P	**Pn**	**12 26 06.8**	**-2.4**
	0.2nm,0.4s						
ARA0	**ARCESS Array S**	**13.54**	**134**	Pn	**Pn**	**12 27 58.7**	**-1.4**
	baz=354,slow=9.3						
ARA0				Sn	**Sn**	**12 30 24.4**	**-5.3**
	baz=356,slow=22						
ARCES	**ARCESS Array B**	**13.54**	**134**	Pn	**Pn**	**12 28 02.0**	**+1.9**
	0.3nm,0.3s,baz=348,slow=12,SNR=6.4						
ARCES				LR	LR	12 33 17.4	
	comp=Z,58nm,18.8s,baz=231,slow=37						
SFJD	**Kangerlussuaq**	**18.36**	**247**	LR	LR	12 36 36.2	
	comp=Z,100nm,18.3s,baz=9.9,slow=39						
NB2	**NORSAR Subarra**	**20.75**	**160**	P	**P**	**12 29 30.6**	**+2.0**
	comp=Z,2.5nm,0.9s,baz=354,slow=11						
NB2	**NORSAR Subarra**	**20.75**	**160**	P	**P**	**12 29 28.9**	**+0.3**
NOA	**NORSAR Array B**	**20.75**	**160**	P	**P**	**12 29 31.4**	**+2.8**
	comp=Z,2.4nm,0.8s,baz=347,slow=9.3,SNR=5.5						
KAF	**Kangasniemi**	**20.83**	**140**	*e*p	**P**	**12 29 29.4**	**0.0**
FIA0	**FINESS Array S**	**21.47**	**140**	P	**P**	**12 29 38.0**	**+1.8**
	baz=342,slow=14						
FIA0	**FINESS Array S**	**21.47**	**140**	P	**P**	**12 29 38.0**	**+1.8**
	SNR=4.5						
FINES	**FINESS Array B**	**21.47**	**140**	P	**P**	**12 29 38.2**	**+1.9**
	comp=Z,1.6nm,0.8s,mb3.4,baz=360,slow=17,SNR=4.7						
HFS	**Hagfors**	**21.79**	**157**	P	**P**	**12 29 42.3**	**+2.6**
	baz=37,slow=10						
HFS	**Hagfors**	**21.79**	**157**	P	**P**	**12 29 42.4**	**+2.7**
	comp=Z,2.6nm,0.8s,mb3.7,baz=15,slow=12,SNR=3.9						
INK	**Inuvik**	**28.26**	**323**	P	**P**	**12 30 34.8**	**-5.9**
	comp=Z,1.4nm,1.1s,mb3.5,baz=0.0,slow=8.1,SNR=3.1						
YKA	**Yellowknife Ar**	**31.86**	**305**	P	**P**	**12 31 07.4**	**-5.2**
YKA				PcP	PcP	12 33 60.0	-2.6
YKA				LR	LR	12 44 45.2	
YKA	**Yellowknife Ar**	**31.86**	**305**	P	**P**	**12 31 07.4**	**-5.2**
	comp=Z,0.3nm,0.8s,mb3.2,baz=13,slow=8.7,SNR=4.6						
YKA				PcP	PcP	12 33 60.0	-2.6
	comp=Z,0.7nm,0.9s,baz=9.3,slow=2.4,SNR=10.0						
YKA				LR	LR	12 44 45.2	
	comp=Z,45nm,20.0s,MS3.1,baz=140,slow=38						
YKA	**Yellowknife Ar**	**31.86**	**305**	PcP	PcP	12 34 00.0	-2.6
GERES	**GERESS Array B**	**33.05**	**160**	P	**P**	**12 31 25.9**	**+2.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=3.4,slow=6.7,SNR=8.1						
AKTO	**Aktyubinsk**	**36.20**	**109**	LR	LR	12 48 30.2	
	comp=Z,46nm,20.5s,MS3.2,baz=31,slow=39						
MKAR	**Makanchi Array**	**43.38**	**85**	P	**P**	**12 32 50.0**	**0.0**
	comp=Z,0.2nm,0.3s,mb3.3,baz=352,slow=8.7,SNR=3.4						
SONM	**Songino Array**	**45.86**	**62**	P	**P**	**12 33 10.0**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=278,slow=4.3,SNR=3.8						
PDAR	**Pinedale Array**	**50.45**	**294**	P	**P**	**12 33 44.2**	**-1.0**
	comp=Z,0.8nm,1.1s,mb3.7,baz=111,slow=3.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**68.23**	**175**	P	**P**	**12 35 48.5**	**+0.1**
	comp=Z,2.0nm,0.9s,mb4.1,baz=345,slow=5.0,SNR=7.0						

*MOS **30** 12:30:19.8±1.2, 3855N×6973E, h33km, mb4.1/7, Error ellipse: s-maj=16.7km s-min=9.3km az=83.1*
*NNC **30** 12:30:20.0±1.4, 3869N×6919E, h16km±5km, mb4.2, mpv4.2, Error ellipse: s-maj=11.9km s-min=10.2km az=133.0*
*IDC **30** 12:30:21.6±5.2, 3849N×6982E, h33km±37km, mb3.7/11, mb1 3.9/14, mb1mx3.7/26, mbtmp3.8/14, ML4.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/34, Error ellipse: s-maj=28.2km s-min=14.1km az=24.0*
*ISCJB **30** 12:30:22.0±0.9, 3863N±004×6962E±007, h54km±9km, mb3.9/15, Error ellipse: s-maj=9.7km s-min=7.1km az=172.7*
*BJI **30** 12:30:22.5, 3896N×6972E, h55km, mb4.5, ML3.9*
*NEIC **30** 12:30:24.2±1.8, 3865N×6977E, h54km±14km, mb4.2/2, Error ellipse: s-maj=18.8km s-min=9.6km az=195.0*
ISC 30 12:30:23.1±0.7,3865N±004×6950E±007,h50km±7km,n63,
σ1§29/72,mb3.9/15,6C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.51**	**9**	Pn	**Pn**	**12 31 30.6**	**+1.7**
	8.2nm,0.4s,baz=201,slow=17,SNR=6§9						
KK31				Pg	**Pn**	**12 31 42.8**	**+14**
	30nm,0.3s,baz=192,slow=28,SNR=15						
KK31				⇓Sn	**Sn**	**12 32 26.6**	**+6.5**
	11nm,0.3s,baz=192,slow=31,SNR=7.4						
KK31				⇑Lg		12 32 43.1	
	88nm,0.6s,baz=205,slow=29,SNR=3.5						
AML	**Almayashu**	**4.73**	**41**	*e*P	**Pn**	**12 31 31.8**	**-0.1**
AML	**Almayashu**	**4.73**	**41**	P	**Pn**	**12 31 32.0**	**+0.1**
	SNR=71						
KSH	**Kashi**	**5.11**	**78**	P	**Pn**	**12 31 36.5**	**-0.6**
KSH				S	**Sn**	**12 32 35.8**	**+1.0**
KSH				Smax			
	comp=N,396nm,0.6s						
KSH				Smax			
	comp=E,445nm,0.9s						
EKS2	**Erkin-Say**	**5.16**	**38**	*e*P	**Pn**	**12 31 38.4**	**+0.7**
	comp=E,30nm,0.6s						
EKS2	**Erkin-Say**	**5.16**	**38**	P	**Pn**	**12 31 40.3**	**+2.5**
	SNR=14						
CEP	**Cherat**	**5.20**	**157**	P	**Pn**	**12 31 37.8**	**-0.5**
UCH	**Uchtor**	**5.24**	**45**	*e*P	**Pn**	**12 31 38.4**	**-0.4**
UCH	**Uchtor**	**5.24**	**45**	P	**Pn**	**12 31 39.0**	**+0.2**
	SNR=46						
AAK	**Ala-Archa**	**5.50**	**42**	P	**Pn**	**12 31 42.7**	**+0.3**
	SNR=26						
KZA	**Kyzart**	**5.57**	**50**	P	**Pn**	**12 31 43.8**	**+0.5**
	SNR=33						
KBK	**Karagaybulak**	**5.76**	**44**	P	**Pn**	**12 31 47.0**	**+1.0**
	SNR=22						
CHCP	**Chirah Chowk**	**5.84**	**147**	P	**Pn**	**12 31 47.1**	**0.0**
CHMS	**Chumysh**	**5.89**	**41**	P	**Pn**	**12 31 50.2**	**+2.4**
	SNR=14						
USP	**Ospenovka**	**5.97**	**38**	P	**Pn**	**12 31 51.1**	**+2.3**
	SNR=19						
THW	**Thamme Wali**	**6.12**	**162**	P	**Pn**	**12 31 50.5**	**-0.5**
ULHL	**Ulahol**	**6.27**	**53**	P	**Pn**	**12 31 53.0**	**0.0**
	SNR=10						
TKM2	**Tokmak 2**	**6.29**	**45**	⇑Pn	**Pn**	**12 31 52.6**	**-0.7**
	comp=E,10.0nm,0.4s						
TKM2				⇑Sn	**Sn**	**12 33 09.5**	**+5.7**
	comp=E,40nm,1.0s						
TKM2				⇑Lg		12 33 44.7	
	comp=E,28nm,0.6s						
TKM2	**Tokmak 2**	**6.29**	**45**	*e*P	**Pn**	**12 31 52.9**	**-0.4**
	comp=E,27nm,0.5s						
TKM2	**Tokmak 2**	**6.29**	**45**	*e*PN		**12 31 52.9**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,27nm,0.5s						
TKM2	**Tokmak 2**	**6.29**	**45**	P	**Pn**	**12 31 53.1**	**-0.2**
	SNR=21						
MKAR	**Makanchi Array**	**12.43**	**45**	Pn	**Pn**	**12 33 15.3**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=228,slow=13,SNR=18						
AB31	**Akbulak array**	**12.63**	**330**	Pn	**Pn**	**12 33 17.9**	**-1.9**
	comp=Z,2.1nm,0.3s,baz=165,slow=14,SNR=86						
AB31				⇓Sn	**Sn**	**12 35 35.2**	**-3.7**
	comp=Z,6.6nm,0.5s,baz=146,slow=24,SNR=7.2						
AKTK	**Aktyubinsk**	**14.33**	**329**	Pn	**Pn**	**12 33 43.4**	**+0.5**
AKTK				Sn	**Sn**	**12 36 16.7**	**-3.5**
AKTK				Lg		12 38 04.6	
AKTO	**Aktyubinsk**	**14.33**	**329**	⇓Pn	**Pn**	**12 33 40.0**	**-2.9**
	comp=Z,1.6nm,0.8s						
AKTO				⇑Sn	**Sn**	**12 36 16.4**	**-3.9**
	comp=Z,1.2nm,0.8s						
AKTO	**Aktyubinsk**	**14.33**	**329**	P	**Pn**	**12 33 43.4**	**+0.5**
AKTO						12 36 16.7	
AKTO	**Aktyubinsk**	**14.33**	**329**	Pn	**Pn**	**12 33 43.4**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=126,slow=15,SNR=8.9						
AKTO				Sn	**Sn**	**12 36 16.7**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=156,slow=20,SNR=4.1						
AKTO				Lg		12 38 04.6	
	comp=Z,0.1nm,0.3s,baz=59,slow=19,SNR=3.0						
BVA0	**Borovoye Array**	**14.39**	**2**	Pn	**Pn**	**12 33 43.1**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=164,slow=11,SNR=24						
BRVK	**Borovoye**	**14.42**	**2**	*i* P	**Pn**	**12 33 49.6**	**+5.4**
CHKZ	**Chkalovo**	**15.05**	**3**	⇓Pn	**Pn**	**12 33 51.9**	**-0.5**
	comp=Z,1.7nm,0.7s						
CHKZ				⇑Sn	**Sn**	**12 36 38.2**	**+0.4**
	comp=Z,2.9nm,0.8s						
ZAL	**Zalesovo**	**18.52**	**29**	P	**Pn**	**12 34 34.7**	**-1.1**
ZAA0	**Zalesovo Array**	**18.54**	**29**	*e*P	**Pn**	**12 34 34.1**	**-1.9**
ZALV	**Zalesovo Beam**	**18.54**	**29**	P	**Pn**	**12 34 34.7**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=228,slow=11,SNR=20						
NVS	**Novosibirsk**	**18.67**	**25**	*e*P	**Pn**	**12 34 34.9**	**-2.7**
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	**Arti**	**19.22**	**341**	*e*P	**Pn**	**12 34 47.6**	**+3.5**
ARU				*e*S	**S**	**12 38 17.2**	**-0.4**
ZAK	**Zakamensk**	**26.56**	**53**	*e*P	**P**	**12 35 56.2**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
SONM	**Songino Array**	**28.17**	**59**	P	**P**	**12 36 10.2**	**-0.4**
	comp=Z,0.5nm,0.5s,mb3.4,baz=256,slow=8.6,SNR=5.1						
AKASG	**Malin Array Be**	**30.69**	**306**	P	**P**	**12 36 36.5**	**+3.6**
AKASG	**Malin Array Be**	**30.69**	**306**	P	**P**	**12 36 36.5**	**+3.6**
	comp=Z,0.6nm,0.5s,mb3.7,baz=80,slow=7.3,SNR=5.5						
MLR	**Muntele Rosu**	**32.73**	**296**	LR	LR	12 51 36.0	
	comp=Z,31nm,20.6s,baz=172,slow=39						
JOF	**Joensuu**	**33.41**	**329**	*e*p	**P**	**12 36 57.3**	**+0.7**
	comp=Z,1.5nm,0.4s,mb4.3						
BOD	**Bodaibo**	**34.48**	**41**	*e*P	**P**	**12 37 04.9**	**-1.1**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
FINES	**FINESS Array B**	**35.04**	**325**	*i* P	**P**	**12 37 15.1**	**+4.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**35.04**	**325**	P	**P**	**12 37 13.2**	**+2.5**
	comp=Z,0.5nm,0.3s,mb3.9,baz=114,slow=9.8,SNR=6.2						
KAF	**Kangasniemi**	**35.18**	**326**	*e*p	**P**	**12 37 09.9**	**-2.0**
ARCES	**ARCESS Array B**	**38.70**	**337**	P	**P**	**12 37 43.4**	**+1.7**
ARCES	**ARCESS Array B**	**38.70**	**337**	P	**P**	**12 37 43.4**	**+1.7**
	comp=Z,3.8nm,0.8s,mb4.2,baz=99,slow=7.5,SNR=5.4						
HFS	**Hagfors**	**40.65**	**321**	P	**P**	**12 37 60.0**	**+2.0**
	comp=Z,2.0nm,0.5s,mb4.0,baz=106,slow=9.4,SNR=14						
NB2	**NORSAR Subarra**	**41.95**	**322**	P	**P**	**12 38 10.1**	**+1.4**
	comp=Z,1.2nm,0.6s,mb3.7,baz=96,slow=8.6						
NB2	**NORSAR Subarra**	**41.95**	**322**	P	**P**	**12 38 10.1**	**+1.4**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
NOA	**NORSAR Array B**	**41.95**	**322**	P	**P**	**12 38 10.3**	**+1.6**
	comp=Z,0.6nm,0.4s,mb3.6,baz=96,slow=8.0,SNR=3.9						
TIXI	**Tiksi**	**44.25**	**23**	*e*P	**P**	**12 38 27.3**	**+0.2**
	comp=Z,6.4nm,0.7s,mb4.5						
TIXI	**Tiksi**	**44.25**	**23**	*e*P	**P**	**12 38 27.1**	**0.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
TORD	**Torodi Ar. Bea**	**64.61**	**267**	P	**P**	**12 40 58.7**	**+3.0**
	comp=Z,0.5nm,0.6s,mb3.8,baz=51,slow=5.5,SNR=4.9						
INK	**Inuvik**	**71.97**	**9**	*e*P	**P**	**12 41 41.2**	**+0.3**
INK	**Inuvik**	**71.97**	**9**	P	**P**	**12 41 41.3**	**+0.4**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**71.97**	**9**	P	**P**	**12 41 41.2**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=356,slow=5.1,SNR=10						
YKA	**Yellowknife Ar**	**79.15**	**2**	P	**P**	**12 42 23.3**	**+1.2**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	**Yellowknife Ar**	**79.15**	**2**	P	**P**	**12 42 23.4**	**+1.3**
	comp=Z,0.5nm,0.5s,mb3.7,baz=352,slow=5.6,SNR=21						
WRA	**Warramunga Arr**	**84.13**	**121**	*i* P	**P**	**12 42 47.7**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**84.13**	**121**	P	**P**	**12 42 47.8**	**-1.1**
	comp=Z,0.8nm,0.6s,mb4.0,baz=323,slow=4.7,SNR=13						
ASAR	**Alice Springs**	**86.45**	**124**	P	**P**	**12 42 59.4**	**-1.0**
ASAR	**Alice Springs**	**86.45**	**124**	P	**P**	**12 42 59.5**	**-1.0**
	comp=Z,0.3nm,0.6s,mb3.7,baz=311,slow=4.6,SNR=11						

*ROM **30** 13:03:43.3±0.3, 4653N×1382E, h7km±1km, Md2.7/4, Ml2.5/3, Error ellipse: s-maj=3.2km s-min=1.9km az=156.0*
*VIE **30** 13:03:43.7±0.1, 4652N×1386E, h12km±1km, mb2.3/7, ML3.0/8, Error ellipse: s-maj=0.9km s-min=0.7km az=16.0*
*CSEM **30** 13:03:43.5±0.1, 4653N×1382E, h20km, MLS.2/11*
*ISCJB **30** 13:03:43.3±0.2, 4654N±001×1386E±001, h12km, Error ellipse: s-maj=2.1km s-min=1.4km az=10.7*
*LJU **30** 13:03:43.4, 4654N×1384E, h16km, ML2.4*
*PRU **30** 13:03:45.4, 4662N×1390E, h0km*
ISC 30 13:03:44.0±0.2,4657N±001×1386E±001,h4km±4km,n74,
σ0§86/135,24C-15D,Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MYKA	**Terra Mystica**	**0.16**	**293**	⇓*i*Pg	**Pg**	**13 03 48.2**	**+1.1**
	116nm,0.0s						
MYKA				⇓*i*Pg	**Pg**	**13 03 48.2**	**+1.1**
	3µm,0.0s						
MYKA				⇑*i*Sg	**Sg**	**13 03 51.2**	**+1.9**
	85nm,0.1s						
MYKA				⇑*i*Sg	**Sg**	**13 03 51.2**	**+1.9**
	761nm,0.1s						
LSR	**Lussari**	**0.24**	**249**	⇑*i*Pg	**Pg**	**13 03 49.2**	**+0.5**
LSR				*i* Sg	**Sg**	**13 03 52.8**	**+0.9**
LSR	**Lussari**	**0.24**	**249**		**Pg**	**13 03 48.9**	**+0.2**
GORS	**Gorjuse**	**0.27**	**159**	⇓*i*Pg	**Pg**	**13 03 49.6**	**+0.5**
GORS				*i* Sg	**Sg**	**13 03 53.6**	**+1.0**
GORS							
	comp=Z,426nm,0.1s						
GORS	**Gorjuse**	**0.27**	**159**	⇓*i*Pg	**Pg**	**13 03 49.6**	**+0.5**
GORS				*i* Sg	**Sg**	**13 03 53.6**	**+1.0**
	comp=Z,426nm,0.1s						
CADS	**Cadrg**	**0.35**	**194**	*i* Pg	**Pg**	**13 03 50.5**	**-0.1**
CADS				*i* Sg	**Sg**	**13 03 55.4**	**+0.2**
CADS							
	comp=Z,1µm,0.2s						
CADS	**Cadrg**	**0.35**	**194**	*i* Pg	**Pg**	**13 03 50.5**	**-0.2**
CADS				*i* Sg	**Sg**	**13 03 55.4**	**+0.2**
	comp=Z,1µm,0.2s						
PTCC	**Patocco-Chiusa**	**0.38**	**245**	⇑*i*Pg	**Pg**	**13 03 51.1**	**-0.2**
PTCC				Sg	**Sg**	**13 03 56.3**	**0.0**
ROBS	**Robic**	**0.40**	**217**	⇑*i*Pg	**Pg**	**13 03 51.2**	**-0.5**
ROBS				*i* Sg	**Sg**	**13 03 56.3**	**-0.6**
ROBS							
	comp=Z,225nm,0.1s						
ROBS	**Robic**	**0.40**	**217**	⇑*i*Pg	**Pg**	**13 03 51.2**	**-0.5**
ROBS				*i* Sg	**Sg**	**13 03 56.3**	**-0.6**
	comp=Z,225nm,0.1s						
DRE	**Drenchia**	**0.42**	**201**	⇑*i*Pg	**Pg**	**13 03 51.6**	**-0.4**
DRE				*i* Sg	**Sg**	**13 03 57.4**	**-0.1**
DRE	**Drenchia**	**0.42**	**201**		**Pg**	**13 03 51.6**	**-0.4**
OBKA	**Obir**	**0.48**	**97**	*e*Pg	**Pg**	**13 03 53.9**	**+0.7**
	comp=Z,32nm,0.1s,SNR=90						
OBKA				⇑*i*Sg	**Sg**	**13 04 00.7**	**+1.2**
	comp=Z,307nm,0.3s						
MOZS	**Mozjanca**	**0.49**	**124**	*i* Pg	**Pg**	**13 03 54.0**	**+0.6**
PLRO	**Paularo**	**0.49**	**268**	⇑*i*Pg	**Pg**	**13 03 53.0**	**-0.3**
PLRO				*i* Sg	**Sg**	**13 03 59.5**	**-0.3**
PLRO	**Paularo**	**0.49**	**268**		**Pg**	**13 03 52.8**	**-0.6**
PLRO	**Paularo**	**0.49**	**268**	*i* Pg	**Pg**	**13 03 53.0**	**-0.4**
PLRO				*i* Sg	**Sg**	**13 03 59.5**	**-0.2**
GMNA	**Gemona**	**0.52**	**236**	⇑*i*Pg	**Pg**	**13 03 54.4**	**+0.5**
GMNA				Sg	**Sg**	**13 04 02.3**	**+1.7**
	comp=Z,685nm,0.8s						
VOJS	**Vojsko**	**0.54**	**178**	*i* Pg	**Pg**	**13 03 53.6**	**-0.6**
VOJS				*i* Sg	**Sg**	**13 04 01.6**	**+0.4**
VOJS	**Vojsko**	**0.54**	**178**	*i* Pg	**Pg**	**13 03 53.6**	**-0.6**
VOJS				*i* Sg	**Sg**	**13 04 01.5**	**+0.4**
BAD	**Bernadia**	**0.54**	**232**	⇑*i*Pg	**Pg**	**13 03 53.5**	**-0.7**
BAD				*e*Sg	**Sg**	**13 04 01.6**	**+0.4**
BAD	**Bernadia**	**0.54**	**232**		**Pg**	**13 03 53.6**	**-0.7**
BAD	**Bernadia**	**0.54**	**232**	*i* Pg	**Pg**	**13 03 53.5**	**-0.8**
BAD				*e*Sg	**Sg**	**13 04 01.6**	**+0.4**
COLI	**Coloredo**	**0.55**	**218**	⇑*i*Pg	**Pg**	**13 03 53.8**	**-0.6**
COLI				*i* Sg	**Sg**	**13 04 01.8**	**+0.3**
COLI	**Coloredo**	**0.55**	**218**		**Pg**	**13 03 53.9**	**-0.5**
BOO	**Bordano**	**0.58**	**245**	⇑*i*Pg	**Pg**	**13 03 54.3**	**-0.8**
ZOU	**Zoufplan**	**0.61**	**269**	⇑*i*Pg	**Pg**	**13 03 55.0**	**-0.7**
ZOU				*i* Sg	**Sg**	**13 04 03.3**	**-0.3**
BUA	**Buia**	**0.61**	**236**	⇑*i*Pg	**Pg**	**13 03 55.0**	**-0.7**
BUA				*i* Sg	**Sg**	**13 04 04.3**	**+0.5**
BUA	**Buia**	**0.61**	**236**	*i* Pg	**Pg**	**13 03 55.0**	**-0.8**
BUA				*i* Sg	**Sg**	**13 04 04.3**	**+0.6**
KBA	**Koelnbreinsper**	**0.62**	**326**	*e*Pg	**Pg**	**13 03 56.4**	**+0.5**
	comp=Z,29nm,0.1s,SNR=56						
KBA				⇓*i*Sg	**Sg**	**13 04 05.6**	**+1.6**
	comp=Z,48nm,0.1s						
MPRI	**Monte Prat**	**0.68**	**242**	⇑*i*Pg	**Pg**	**13 03 56.3**	**-0.7**
MPRI				*i* Sg	**Sg**	**13 04 05.6**	**-0.3**
JAVS	**Javornik**	**0.69**	**168**	*i* Pg	**Pg**	**13 03 56.4**	**-0.8**
JAVS				*i* Sg	**Sg**	**13 04 06.8**	**+0.7**
JAVS							
	comp=Z,38nm,0.1s						
JAVS	**Javornik**	**0.69**	**168**	*i* Pg	**Pg**	**13 03 56.4**	**-0.7**
JAVS				*i* Sg	**Sg**	**13 04 06.8**	**+0.7**
	comp=Z,38nm,0.1s						
LJU	**Ljubljana**	**0.70**	**138**	*i* Pg	**Pg**	**13 03 57.6**	**+0.2**
LJU				*i* Sg	**Sg**	**13 04 06.1**	**-0.3**
LJU							
	comp=Z,69nm,0.1s						
LJU	**Ljubljana**	**0.70**	**138**	*i* Pg	**Pg**	**13 03 57.6**	**+0.2**
LJU				*i* Sg	**Sg**	**13 04 06.1**	**-0.3**
	comp=Z,69nm,0.1s						
FVI	**Forni Avoltri**	**0.74**	**273**	Pg	**Pg**	**13 03 57.4**	**-0.8**
FVI				Sg	**Sg**	**13 04 07.9**	**0.0**
	comp=Z,235nm,0.2s						
VNDS	**Vrh nad Dolski**	**0.75**	**128**	*i* Pg	**Pg**	**13 03 58.6**	**+0.3**
VNDS				*e*Sg	**Sg**	**13 04 08.1**	**+0.2**
ZAVS	**Zavodnje**	**0.82**	**99**	*i* Pg	**Pg**	**13 03 59.7**	**+0.1**
ZAVS				*i* Sg	**Sg**	**13 04 11.1**	**+0.9**
CSMI	**Casera Mimoias**	**0.83**	**267**	⇓*i*Pg	**Pg**	**13 03 59.3**	**-0.7**
CSMI				*i* Sg	**Sg**	**13 04 10.9**	**+0.2**
TRI	**Trieste**	**0.86**	**184**	Pg	**Pg**	**13 03 59.3**	**-1.1**
TRI				Sg	**Sg**	**13 04 11.7**	**+0.1**
	comp=Z,85nm,0.5s						
PERS	**Pernice**	**0.87**	**85**	⇑*i*Pg	**Pg**	**13 04 00.8**	**+0.1**
PERS							
	comp=Z,126nm,0.2s						
PERS	**Pernice**	**0.87**	**85**	⇑*i*Pg	**P

CLL	**Collm**	**4.78**	**354**	*e*Pn	**Pn**	**13 04 58.0**	**+1.4**
CLL				*i* Sg	**Sg**	**13 06 16.4**	**-1.0**
	comp=Z,9.0nm,0.8s						

*NIED **30** 13:21:00,24.40N×121.70E,h14km,Mw4.2 Best double couple: M○2.29000×10^15 NP1:φs164.00000°,δ28.00000°, λ152.00000°. NP2:φs279.00000°,δ77.00000°,λ65.00000°.*
*NEIC **30** 13:21:44.8±1.6,24.16N×121.93E,h7km,9km,mb4.4/1, Error ellipse: s-maj=13.4km s-min=12.0km az=84.0*
*ISCJB **30** 13:21:45.8±0.8,24.19N±0.006×121.83E±0.003,h22km±6km, mb3.8/9, Error ellipse: s-maj=10.1km s-min=4.8km az=11.9*
*IDC **30** 13:21:51.8±4.2,24.26N×122.18E,h66km±41km,mb3.6/7, mb1 3.7/9,mb1mx3.6/22,mbtmp3.6/9,ML3.5/2,MS3.1/4, Ms1 3.1/4,ms1mx2.8/27, Error ellipse: s-maj=31.4km s-min=16.5km az=69.0*
*BJI **30** 13:21:51.3,24.62N×121.68E,h15km,mB4.5,mb4.2,ML4.0, Ms3.9,Msz3.5*

ISC 30 13:21:45.2±0.9,2413N±0.006×12185E±0.003,h6km±5km,n34, σ0§94/36,mb3.8/9,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NACB	**Ninganchiao**	**0.24**	**280**	*e*P		**Pg**	**13 21 50.6**	**+0.8**
YHNB	**Yeheng**	**0.69**	**321**	*e*P		**Pg**	**13 21 58.3**	**-0.1**
TATO	**Taipei**	**0.90**	**339**	*e*P		**Pg**	**13 22 02.2**	**-0.4**
YOJ	**Yonaguni jima**	**1.11**	**73**	P		**Pg**	**13 22 05.8**	**-0.7**
YOJ				*e*S		**Sg**	**13 22 20.6**	**-0.2**
IRIF	**Iriomote-Funau**	**1.73**	**83**	P		**Pn**	**13 22 15.1**	**-0.7**
HATJ	**Hateruma jima**	**1.79**	**92**	P		**Pn**	**13 22 17.1**	**+0.5**
JKRS	**Kuro-shima**	**1.97**	**87**	P		**Pn**	**13 22 19.3**	**+0.1**
JIJ	**Ishigaki jima**	**2.10**	**83**	P		**Pn**	**13 22 20.2**	**-0.8**
JIJ				S		**Sn**	**13 22 48.7**	**+1.2**
JTJ	**Tarama**	**2.65**	**78**	P		**Pn**	**13 22 28.6**	**+0.2**
QZH	**Quanzhou**	**3.08**	**286**	P		**Pn**	**13 22 34.8**	**+0.5**
QZH				S		**Sn**	**13 23 12.0**	**+0.5**
QZH				Smax				
	comp=N,630nm,1.1s							
QZH				Smax				
	comp=E,560nm,1.4s							
JMJ	**Miyako jima 2**	**3.21**	**77**	P		**Pn**	**13 22 36.5**	**+0.3**
JOGS	**Gusukube**	**3.30**	**78**	P		**Pn**	**13 22 37.8**	**+0.4**
JKE	**Kume jima 2**	**4.97**	**63**	P		**Pn**	**13 23 03.5**	**+3.1**
JAGN	**Aguni-jima**	**5.46**	**62**	P		**Pn**	**13 23 09.6**	**+2.5**
JIH	**Iheya**	**6.23**	**61**	P		**Pn**	**13 23 18.0**	**+0.3**
JOW	**Kunigami**	**6.40**	**64**	P		**Pn**	**13 23 19.2**	**-0.8**
JOW	**Kunigami**	**6.40**	**64**	P		**Pn**	**13 23 19.3**	**-0.7**
	comp=E,3.2nm,0.3s,baz=230,slow=15,SNR=24							
SSE	**Sheshan**	**6.96**	**355**	*e*P		**Pn**	**13 23 27.8**	**+0.1**
SSE				AMB		AMB		
	comp=Z,79nm,0.7s							
SSE				AMB		AMB		
	comp=Z,44nm,4.2s							
SSE				LR		LR		
	comp=N,115nm,15.7s							
SSE				LR		LR		
	comp=E,448nm,15.7s							
SSE				LR		LR		
	comp=Z,342nm,13.0s							
JTK	**Tokunoshima**	**7.35**	**59**	P		**Pn**	**13 23 32.4**	**-0.7**
NJ2	**Nanjing**	**8.32**	**342**	*e*P		**Pn**	**13 23 45.8**	**-0.6**
NJ2				AP			13 23 49.3	
NJ2				XP			13 23 52.3	
NJ2				S		**Sn**	**13 25 20.5**	**-0.2**
NJ2				XS			13 25 26.0	
NJ2				AMB		AMB		
	comp=Z,20nm,0.8s							
NJ2				Smax				
	comp=N,210nm,1.0s							
NJ2				Smax				
	comp=E,150nm,1.0s							
NJ2				LR		LR		
	comp=N,640nm,13.7s							
NJ2				LR		LR		
	comp=E,590nm,12.7s							
NJ2				LR		LR		
	comp=Z,500nm,14.0s							
JNU	**Nakatsue**	**11.96**	**39**	LR		LR	13 29 34.3	
	comp=Z,71nm,20.9s,baz=57,slow=40							
KSRS	**Korea Array**	**14.26**	**20**	P		**Pn**	**13 25 08.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=200,slow=12,SNR=7.0							
KSRS				LR		LR	13 31 25.0	
	comp=Z,77nm,18.1s,baz=200,slow=41							
KMI	**Kunming**	**17.41**	**277**	P		**Pn**	**13 25 56.0**	**+7.2**
KMI				AMB		AMB		
	comp=Z,8.0nm,0.5s							
KMI				LR		LR		
	comp=Z,51nm,14.9s							
CBIJ	**Chichi jima**	**18.57**	**77**	LR		LR	13 33 24.2	
	comp=Z,57nm,18.4s,baz=171,slow=38							
GTA	**Gaotai**	**24.05**	**315**	*e*P		**P**	**13 27 05.8**	**+4.6**
GTA				AP			13 27 09.8	
GTA				XP		sP	13 27 13.0	+9.3
GTA				AMB		AMB		
	comp=Z,5.0nm,1.4s,mb3.8							
ASAJ	**Asahikawa**	**26.18**	**35**	P		**P**	**13 27 16.4**	**-4.0**
	comp=Z,1.4nm,0.4s,mb3.8,baz=259,slow=16,SNR=4.4							
SONM	**Songino Array**	**26.66**	**336**	P		**P**	**13 27 24.8**	**+0.1**
	comp=Z,3.0nm,0.9s,mb3.8,baz=149,slow=11,SNR=12							
SONM				LR		LR	13 38 57.1	
	comp=Z,56nm,18.1s,baz=47,slow=38							
MK31	**Makanchi Array**	**38.80**	**316**	*e*P		**P**	**13 29 11.6**	**+0.9**
MKAR	**Makanchi Array**	**38.80**	**316**	P		**P**	**13 29 11.4**	**+0.7**
	comp=Z,1.2nm,0.5s,mb3.9,baz=102,slow=11,SNR=11							
ZALV	**Zalesovo Beam**	**40.62**	**327**	P		**P**	**13 29 24.6**	**-1.1**
	comp=Z,1.3nm,0.5s,mb3.8,baz=109,slow=9.6,SNR=6.9							
WRA	**Warramunga Arr**	**45.47**	**163**	P		**P**	**13 30 04.3**	**-0.9**
	comp=Z,0.6nm,0.5s,mb3.6,baz=345,slow=8.8,SNR=12							
TIXI	**Tiksi**	**47.71**	**3**	*e*P		**P**	**13 30 19.8**	**-2.6**
	comp=Z,2.5nm,0.8s,mb4.3							
ASAR	**Alice Springs**	**48.93**	**165**	P		**P**	**13 30 32.1**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=354,slow=14,SNR=8.8							
YKA	**Yellowknife Ar**	**82.78**	**23**	P		**P**	**13 34 08.1**	**-1.8**
	comp=Z,0.7nm,0.6s,mb3.9,baz=312,slow=5.1,SNR=21							

*NEIC **30** 13:28:19.1,1772N×9956W,h52km,MD3.8(MEX), After MEX.*

MEX 30 13:28:19.1±0.7,1771N×9954W,h51km±12km,MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MEIG	**Mezcala**	**0.23**	**341**	*i* P		Pn	13 28 26.2	-1.5
MEIG				*i* S		Sn	13 28 32.5	-1.3
ACX	**Acapulco**	**0.91**	**203**	*i* P		Pn	13 28 30.5	-5.2
CAIG	**El Cayaco**	**0.96**	**226**	*i* P		Pn	13 28 34.5	-1.8
CAIG				*i* S		Sn	13 28 47.1	-1.7
PPM	**Popocatepetl**	**1.60**	**33**	*i* P		Pn	13 28 45.3	+0.2
PPM				*i* S		Sn	13 29 10.5	+5.9
PPM	**Popocatepetl**	**1.60**	**33**	*i* P		Pn	13 28 45.3	+0.2
PPM				*i* S		Sn	13 29 03.2	-1.4
UTMO	**Huajuapan**	**1.66**	**86**	*i* P		Pn	13 28 45.7	-0.2
UTMO				*i* S		Sn	13 29 04.1	-1.9
IIO	**Organos**	**2.02**	**22**	*e*P		Pn	13 28 54.7	+3.9
IIO				*i* S		Sn	13 29 25.9	+11
VHO	**Vista Hermosa**	**2.76**	**103**	*e*P		Pn	13 29 17.6	+17
VHO				*i* S		Sn	13 29 34.5	+1.6
VHO	**Vista Hermosa**	**2.76**	**103**	*i* S		Sn	13 29 31.2	-1.7

*NIED **30** 13:31:00,26.00N×128.60E,h20km,Mw4.1 Best double couple: M○1.41000×10^15 NP1:φs206.00000°,δ33.00000°, λ84.00000°. NP2:φs34.00000°,δ57.00000°,λ94.00000°.*
*IDC **30** 13:31:05.9±0.8,25.89N×128.38E,h0km,mb3.8/9, mb1 4.0/10,mb1mx3.9/21,mbtmp3.8/10,ML3.4/1, Error ellipse: s-maj=40.2km s-min=14.3km az=80.0*
*JMA **30** 13:31:08.9±0.2,25.96N×128.59E,h49km±4km,M3.6*
*ISCJB **30** 13:31:08.3±0.4,25.91N±0.003×128.60E±0.003,h33km, mb3.8/11, Error ellipse: s-maj=5.0km s-min=3.5km az=149.2*
*NEIC **30** 13:31:10.9±0.7,25.94N×128.43E,h35km,mb4.4/1, Error ellipse: s-maj=29.2km s-min=12.2km az=83.0*
*BJI **30** 13:31:17.4,26.69N×127.83E,h45km,mB4.6,mb4.0*

ISC 30 13:31:09.7±1.0,2596N±0.004×12855E±0.004,h30km±7km, n32,σ1§02/48,mb3.8/11,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JJT2	**Tamagusuku 2**	**0.74**	**284**	P		**Pb**	**13 31 23.9**	**-0.2**
JJT2				S		**Sb**	**13 31 34.7**	**+0.8**
NAH1	**Naha**	**0.81**	**287**	P		**Pn**	**13 31 24.6**	**-0.4**
NAH1				S		**Sb**	**13 31 35.8**	**-0.1**
JOW	**Kunigami**	**0.90**	**344**	P		**Pn**	**13 31 25.7**	**-0.6**
JOW				*e*S		**Sn**	**13 31 37.9**	**-0.3**
JOW	**Kunigami**	**0.90**	**344**	Pn		**Pn**	**13 31 25.6**	**-0.7**
	166nm,0.3s,baz=148,slow=17,SNR=1517							
JOW				Sn		**Sn**	**13 31 33.1**	**-5.1**
	260nm,0.3s,baz=128,slow=19,SNR=28							
JIH	**Iheya**	**1.19**	**334**	P		**Pn**	**13 31 30.1**	**-0.1**
JIH				*e*S		**Sn**	**13 31 45.4**	**0.0**
JAGN	**Aguni-jima**	**1.33**	**298**	P		**Pn**	**13 31 32.3**	**+0.1**
JAGN				*e*S		**Sn**	**13 31 50.0**	**+1.2**
JKE	**Kume jima 2**	**1.62**	**283**	P		**Pn**	**13 31 35.9**	**-0.3**
JKE				*e*S		**Sn**	**13 31 55.8**	**-0.3**
JTK	**Tokunoshima**	**1.85**	**11**	P		**Pn**	**13 31 39.1**	**-0.2**
JTK				S		**Sn**	**13 32 01.2**	**-0.5**
JMZ	**Minamidaito 2**	**2.41**	**93**	P		**Pn**	**13 31 45.9**	**-1.1**
JMZ				S		**Sn**	**13 32 11.9**	**-3.6**
JAM	**Amami Oshima**	**2.61**	**21**	P		**Pn**	**13 31 49.7**	**-0.1**
JAM				S		**Sn**	**13 32 19.2**	**-1.3**
JZK	**Kikaishima**	**2.66**	**28**	P		**Pn**	**13 31 51.8**	**+1.3**
JZK				S		**Sn**	**13 32 22.2**	**+0.4**
JOGS	**Gusukube**	**3.08**	**248**	P		**Pn**	**13 31 56.7**	**+0.4**
JOGS				S		**Sn**	**13 32 32.2**	**0.0**
JMJ	**Miyako jima 2**	**3.16**	**249**	P		**Pn**	**13 31 57.6**	**+0.3**
JMJ				*e*S		**Sn**	**13 32 34.0**	**0.0**
JTJ	**Tarama**	**3.72**	**250**	*e*S		**Sn**	**13 32 46.7**	**-1.2**
JNN	**Nakanoshima**	**4.04**	**17**	P		**Pn**	**13 32 09.2**	**-0.2**
JNN				S		**Sn**	**13 32 53.3**	**-2.4**
JIJ	**Ishigaki jima**	**4.30**	**249**	P		**Pn**	**13 32 11.7**	**-1.3**
JIJ				*e*S		**Sn**	**13 32 58.1**	**-4.0**
JKRS	**Kuro-shima**	**4.46**	**248**	P		**Pn**	**13 32 15.4**	**+0.2**
JKRS				*e*S		**Sn**	**13 33 03.1**	**-3.0**
JNU	**Nakatsue**	**7.42**	**15**	Pn		**Pn**	**13 32 57.2**	**+1.4**
	0.6nm,0.3s,baz=169,slow=11,SNR=13							
GTA	**Gaotai**	**27.52**	**306**	*e*P		**P**	**13 36 53.0**	**-0.5**
GTA				AMB		AMB		
	comp=Z,8.0nm,1.0s,mb4.3							
SONM	**Songino Array**	**27.93**	**327**	P		**P**	**13 36 59.8**	**+2.7**
	comp=Z,0.9nm,0.6s,mb3.6,baz=135,slow=10,SNR=8.5							
MKAR	**Makanchi Array**	**41.92**	**312**	P		**P**	**13 38 57.8**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.5,baz=100,slow=11,SNR=8.8							
ZALV	**Zalesovo Beam**	**42.63**	**323**	P		**P**	**13 39 03.5**	**+0.4**
	comp=Z,0.3nm,0.4s,mb3.4,baz=101,slow=12,SNR=3.2							
FITZ	**Fitzroy Crossi**	**43.89**	**184**	P		**P**	**13 39 11.7**	**-1.9**
	comp=Z,2.4nm,0.3s,mb4.4,baz=183,slow=17,SNR=9.3							
WRA	**Warramunga Arr**	**45.98**	**172**	P		**P**	**13 39 30.8**	**+0.6**
	comp=Z,0.9nm,0.7s,mb3.8,baz=354,slow=8.5,SNR=10							
ASAR	**Alice Springs**	**49.61**	**174**	P		**P**	**13 40 00.3**	**+2.1**
	comp=Z,0.5nm,0.8s,mb3.6,baz=359,slow=10,SNR=6.1							
BRVK	**Borovoye**	**50.73**	**318**	*e*P		**P**	**13 40 06.2**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.4							
AKASG	**Malin Array Be**	**75.92**	**320**	P		**P**	**13 42 53.1**	**-0.3**
	comp=Z,0.7nm,0.4s,mb3.9,baz=57,slow=7.2,SNR=4.0							
YKA	**Yellowknife Ar**	**78.65**	**25**	P		**P**	**13 43 10.4**	**+2.0**
YKA	**Yellowknife Ar**	**78.65**	**25**	P		**P**	**13 43 10.4**	**+2.1**
	comp=Z,0.1nm,0.3s,mb3.2,baz=306,slow=5.7,SNR=4.7							
NOA	**NORSAR Array B**	**79.68**	**334**	P		**P**	**13 43 15.1**	**+1.0**
NOA	**NORSAR Array B**	**79.68**	**334**	P		**P**	**13 43 15.1**	**+1.0**
	comp=Z,0.9nm,0.8s,mb3.7,baz=55,slow=5.4,SNR=3.1							
CLL	**Collm**	**84.53**	**325**	*e*P		**P**	**13 43 41.0**	**+1.3**

*IDC **30** 13:46:43.7±1.6,4.59S×136.15E,h0km,mb4.1/2,mb1 4.1/5, mb1mx3.8/13,mbtmp4.0/5,ML4.0/3,MS3.0/1,Ms1 3.0/1, ms1mx2.6/17, Error ellipse: s-maj=51.6km s-min=15.0km az=86.0*
*NEIC **30** 13:46:44.1±1.1,4.37S×136.70E,h10km,mb3.7/4, Error ellipse: s-maj=18.1km s-min=14.8km az=55.0*
NEIC Felt [IV] at Timuka.
*ISCJB **30** 13:46:46.4±1.3,4.6S±0.1×136.4E±0.1,h33km,mb4.0/2, Error ellipse: s-maj=19.8km s-min=15.0km az=32.3*

ISC 30 13:46:48.8±1.2,471S±009×1363E±01,h35km,n13, σ1§38/16,mb3.9/2,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KAKA	**Kakadu**	**8.80**	**205**	*e*P		**Pn**	**13 48 58.9**	**+5.3**
	21nm,0.4s							
WB2	**Warramunga Arr**	**15.26**	**187**	*e*P		**Pn**	**13 50 20.8**	**-0.9**
WRA	**Warramunga Arr**	**15.26**	**187**	Pn		**Pn**	**13 50 21.2**	**-0.6**
	0.6nm,0.3s,baz=7.9,slow=13,SNR=28							
WRA				Sn		**Sn**	**13 53 07.4**	**-2.3**
	0.4nm,0.3s,baz=8.4,slow=23,SNR=4.6							
FITZ	**Fitzroy Crossi**	**16.88**	**217**	*e*P		**Pn**	**13 50 47.1**	**+4.6**
	15nm,1.8s							
FITZ				*e*S		**S**	**13 53 49.9**	**-8.7**
FITZ	**Fitzroy Crossi**	**16.88**	**217**	Pn		**Pn**	**13 50 45.3**	**+2.8**
	0.8nm,0.3s,baz=41,slow=10,SNR=11							
FITZ				Sn		**Sn**	**13 53 48.8**	**-0.3**
	0.4nm,0.3s,baz=196,slow=18,SNR=6.2							
CTA	**Charters Tower**	**18.13**	**148**	*e*P		**Pn**	**13 50 57.2**	**-0.7**
	3.3nm,0.9s							
CTA	**Charters Tower**	**18.13**	**148**	P		**Pn**	**13 50 57.9**	**0.0**
	0.3nm,0.3s,baz=310,slow=12,SNR=5.6							
CTAO	**Charters Tower**	**18.13**	**148**	*e*P		**Pn**	**13 50 57.0**	**-0.9**
	2.2nm,0.5s							
ASAR	**Alice Springs**	**18.99**	**187**	P		**Pn**	**13 51 10.1**	**+1.8**
	0.9nm,0.3s,baz=11,slow=12,SNR=85							
ASAR				S		**S**	**13 54 44.2**	**+3.0**
	0.1nm,0.3s,baz=9.1,slow=30,SNR=4.4							
STKA	**Stephens Creek**	**27.49**	**170**	*e*P		**P**	**13 52 32.3**	**+0.4**
	5.3nm,1.1s,mb4.0							
STKA	**Stephens Creek**	**27.49**	**170**	P		**P**	**13 52 33.3**	**+1.4**
	1.5nm,1.0s,mb3.5,baz=349,slow=10,SNR=2.8							
KSRS	**Korea Array**	**42.65**	**350**	LR		LR	14 10 30.2	
	comp=Z,16nm,18.9s,baz=30,slow=34							
MKAR	**Makanchi Array**	**69.90**	**324**	P		**P**	**13 57 55.5**	**-0.7**
	1.3nm,0.5s,mb4.2,baz=111,slow=8.0,SNR=12							

*ROM **30** 13:53:47.2±0.2,42.43N×168.2E,h10km,Md2.8/4,Ml3.1/2, Error ellipse: s-maj=6.6km s-min=2.4km az=142.0*
*ISCJB **30** 13:53:48.9±0.7,42.21N±005×168.7E±007,h3km,18km, Error ellipse: s-maj=11.5km s-min=4.9km az=138.9*
*CSEM **30** 13:53:49.1±0.1,42.22N×168.0E,h12km,MD2.8/4, Error ellipse: s-maj=3.8km s-min=1.9km az=121.0*

ISC 30 13:53:49.6±0.8,4223N±006×1684E±007,h18km±15km, n11,σ1§22/19,Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FGMS	**Monte Sant'Ang**	**0.84**	**232**	Pg		**Pg**	**13 54 05.4**	**-0.7**
FGMS				Sg		**Sg**	**13 54 18.7**	**+1.5**
	185nm,0.3s							
MS1	**Monte Sant'Ang**	**0.85**	**232**	*e*Pg		**Pg**	**13 54 06.0**	**-0.2**
MS1				*e*Sg		**Sg**	**13 54 19.2**	**+1.7**
MSAG	**Monte S. Angel**	**0.86**	**233**	Pg		**Pg**	**13 54 05.6**	**-0.9**
MSAG				Sg		**Sg**	**13 54 19.1**	**+1.2**
	653nm,0.4s							
STON	**Ston**	**0.90**	**45**	*e*Pg		**Pg**	**13 54 07.0**	**-0.3**
STON				Sg		**Sg**	**13 54 20.7**	**+1.6**
STON	**Ston**	**0.90**	**45**	*e*Pg		**Pg**	**13 54 06.9**	**-0.3**
STON				Sg		**Sg**	**13 54 20.7**	**+1.6**
SGRT	**San Giovanni R**	**0.94**	**240**	Pg		**Pg**	**13 54 07.0**	**-1.0**
SGRT				Sg		**Sg**	**13 54 21.1**	**+0.7**
	269nm,0.4s							
RGNG	**Rignano Grg**	**1.09**	**239**	Pg		**Pg**	**13 54 08.9**	**-1.8**
RGNG				Sg		**Sg**	**13 54 24.8**	**-0.1**
CDT	**Castel del Mon**	**1.23**	**200**	*e*Pg		**Pg**	**13 54 11.9**	**-1.4**
SGT	**Sgolgore (BA)**	**1.40**	**185**	*e*Pg		**Pg**	**13 54 14.5**	**-2.1**
SG1				*e*Sg		**Sg**	**13 54 36.2**	**+1.4**
PALZ	**Palazzo San Ge**	**1.45**	**207**	Pg		**Pg**	**13 54 16.5**	**-1.0**
PE1	**Pezze di Greco**	**1.49**	**163**	*e*Pn		**Pn**	**13 54 16.7**	**+1.2**

*IDC **30** 14:13:07.9±7.7,31.51S×179.83E,h484km±101km,mb2.8/2, mb1 3.2/3,mb1mx2.9/13,mbtmp3.0/3, Error ellipse: s-maj=110.0km s-min=43.8km az=7.0*

ISC 30 14:13:07.5±2.9,3125S±02×1790E±05,h400km,n12, σ0§68/12,mb3.1/2,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
URZ	**Urewera**	**7.25**	**192**	P		**Pn**	**14 14 55.0**	**+1.2**
	7.2nm,0.3s,baz=75,slow=2.0,SNR=30							
URZ				S		**S**	**14 16 21.1**	**+0.4**
	2.3nm,0.3s,baz=10,slow=22,SNR=9.0							
URZ	**Urewera**	**7.25**	**192**	*e*PN		**Pn**	**14 14 54.0**	**+0.2**
MWZ	**Matawai**	**7.26**	**189**	*e*PN		**Pn**	**14 14 54.2**	**+0.4**
KNZ	**Kokohu**	**7.91**	**187**	*e*PN		**Pn**	**14 15 02.1**	**+0.8**
BKZ	**Black Stump Fm**	**8.24**	**194**	*e*PN		**Pn**	**14 15 05.1**	**+0.1**
TSZ	**Takapari Road**	**9.21**	**195**	*e*PN		**Pn**	**14 15 15.5**	**-0.8**
BFZ	**Birch Farm**	**9.75**	**192**	*e*PN		**Pn**	**14 15 22.1**	**-0.4**
MRZ	**Mangatainoka R**	**9.87**	**195**	*e*PN		**Pn**	**14 15 22.2**	**-1.6**
THZ	**Tophouse**	**11.65**	**203**	*e*PN		**Pn**	**14 15 44.5**	**0.0**
ASAR	**Alice Springs**	**40.49**	**269**	P		**P**	**14 20 09.9**	**+0.4**
	0.3nm,0.5s,mb2.9,baz=106,slow=7.3,SNR=14							
WRA	**Warramunga Arr**	**41.55**	**275**	P		**P**	**14 20 18.1**	**-0.1**
	0.6nm,0.4s,mb3.3,baz=111,slow=8.1,SNR=27							
FINES	**FINESS Array B**	**144.91**	**338**	PKPbc		PKPdf	14 31 49.9	-7.0
	0.9nm,1.0s,baz=46,slow=5.5,SNR=3.8							

*NEIC **30** 14:16:54.3,16.12N×97.62W,h16km,MD4.1(MEX), After MEX.*

MEX 30 14:16:54.0±0.9,1612N×9761W,h25km±19km,MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PNIG	**Pinotepa**	**0.56**	**299**	*i* P		Pb	14 17 03.0	-2.2
PNIG				*i* S		Sb	14 17 10.7	-2.3
PNIG	**Pinotepa**	**0.56**	**299**	*i* P		Pb	14 17 03.1	-2.2
PNIG				*i* S		Sb	14 17 10.8	-2.2
VHO	**Vista Hermosa**	**1.27**	**42**	*i* P		Pn	14 17 13.8	-2.4
VHO				*i* S		Sn	14 17 28.5	-3.9
OXX	**Oaxaca**	**1.28**	**42**	*i* P		Pn	14 17 14.5	-1.8
OXX				*i* S		Sn	14 17 30.0	-2.7
HUIG	**Huatulco**	**1.49**	**103**	*e*P		Pn	14 17 17.7	-1.4
HUIG				*i* S		Sn	14 17 34.1	-3.7
HUIG	**Huatulco**	**1.49**	**103**	*e*P		Pn	14 17 17.7	-1.4
HUIG				*i* S		Sn	14 17 34.1	-3.7
HUIG				*i* S		Sn	14 17 34.4	-3.4
UTMO	**Huajuapan**	**1.71**	**354**	*i* P		Pn	14 17 21.1	-1.2
UTMO				*i* S		Sn	14 17 40.6	-2.7
TPIG	**Tehuac#an**	**2.30**	**6**	*e*P		Pn	14 17 28.9	-1.4
TPIG				*i* S		Sn	14 17 53.6	-4.2
ACX	**Acapulco**	**2.33**	**289**	*e*P		Pn	14 17 30.0	-0.7
ACX				*i* S		Sn	14 17 54.2	-4.4
CAIG	**El Cayaco**	**2.71**	**290**	*e*P		Pn	14 17 33.2	-2.1
CAIG				*i* S		Sn	14 18 06.9	-1.0
CMIG	**Matias Romero**	**2.79**	**69**	*e*P		Pn	14 17 34.7	-2.3
CMIG				*i* S		Sn	14 18 06.6	-3.3
PLIG	**Platanillo**	**2.89**	**322**	*e*P		Pn	14 17 41.1	+2.6
PLIG				*i* S		Sn	14 18 16.1	+3.6
PLIG	**Platanillo**	**2.89**	**322**	*i* P		Pn	14 17 37.2	-1.3
PLIG				*i* S		Sn	14 18 08.2	-4.3
PPM	**Popocatepetl**	**3.09**	**342**	*e*P		Pn	14 17 42.2	+1.1
PPM				*e*P			14 17 47.2	
PPM				*i* S		Sn	14 18 11.1	-6.2
PPM				*i* S		Sn	14 18 25.3	+8.0
PPM	**Popocatepetl**	**3.09**	**342**	*e*P		Pn	14 17 41.2	+0.1
PPM				*e*P			14 17 42.2	
PPM				*i* S		Sn	14 18 11.1	-6.2
PPM				*i* S		Sn	14 18 16.8	-0.5
IIO	**Organos**	**3.61**	**343**	*e*P		Pn	14 17 50.7	+2.3
IIO				*i* S		Sn	14 18 36.6	+6.4
PTVM	**Pico Tres Padr**	**3.74**	**338**	*e*P		Pn	14 17 49.7	-0.4
PTVM				*i* S		Sn	14 18 43.1	+10
PTVM	**Pico Tres Padr**	**3.74**	**338**	*e*P		Pn	14 17 49.7	-0.4
PTVM				*i* S		Sn	14 18 30.9	-2.4

*NEIC **30** 14:24:03.4±0.6,3160S×7204W,h32km±3km,MD4.0, ML3.5,2C-1D,Off coast of central Chile*

GUC 30 14:24:03.4±0.6,3160S×7204W,h32km±3km,MD4.0, ML3.5,2C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CHNG	**Los Chungos**	**0.54**	**122**	*i* P		Pb	14 23 57.1	-18
CHNG				*i* S		Sb	14 24 05.3	-17
CMCH	**Combarbala**	**0.98**	**65**	*i* P		Pn	14 24 20.8	-0.1
CMCH				*i* S		Sn	14 24 35.1	+1.3
CMCH	**Combarbala**	**0.98**	**65**	*i* P		Pn	14 24 20.8	-0.1
CMCH				*i* S		Sn	14 24 35.1	+1.3
CMCH				AML		AML	14 24 38.5	
	comp=N,4μm,0.6s							
OVCH	**Ovalle**	**1.22**	**36**	*e*P		Pn	14 24 24.9	+0.6
OVCH				*i* S		Sn	14 24 41.1	+1.5
ROCH	**El Roble**	**1.62**	**148**	*e*P		Pn	14 24 32.1	+2.3
JACH	**Jahuel**	**1.64**	**132**	*e*P		Pn	14 24 31.7	+1.7
JACH				*i* S		Sn	14 24 52.7	+2.8
TLL	**Tololo Astrono**	**1.78**	**37**	*e*P		Pn	14 24 34.0	+2.1
TLL				*i* S		Sn	14 24 57.0	+3.7
TLL	**

0.3nm,0.3s,mb3.8,baz=120,slow=8.5,SNR=2.7
UCH Uchtor 56.34 315 *e*P **P 14 43 30.2 -0.3**
8.1nm,1.3s,mb4.6
AML Almayashu 56.88 315 P **P 14 43 35.0 +0.6**
KURK Kurchatov 57.26 326 *e*P **P 14 43 36.0 -0.9**
3.0nm,0.8s,mb4.4
BRVK Borovoye 62.93 326 P **P 14 44 24.9 +9.2**
4.5nm,0.9s,mb4.6
ARU Arti 70.42 327 P **P 14 45 01.5 -1.9**
INK Inuvik 84.96 22 P **P 14 46 28.5 +4.2**
30nm,0.8s
ARCES ARCESS Array B 85.35 340 P **P 14 46 26.3 +0.2**
3.9nm,1.0s,mb4.5,baz=85,slow=3.8,SNR=3.0
FINES FINESS Array B 87.08 332 P **P 14 46 34.4 -0.4**
0.5nm,0.7s,mb3.9,baz=69,slow=7.7,SNR=2.9
YKA Yellowknife Ar 94.39 24 P **P 14 47 11.8 +2.8**
0.3nm,0.6s,mb3.9,baz=304,slow=4.3,SNR=7.2
TORD Torodi Ar. Bea 121.24 291 PKP PKPdf 14 52 44.2 +0.9
0.9nm,0.8s,baz=38,slow=3.2,SNR=3.7

IDC ***30*** *14:37:14.3±1.1, 9.11N×126.35E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=64.7km s-min=18.2km az=76.0*
ISCJB ***30*** *14:37:17.5±1.7, 9.18N±006×126.9E±0.1, h47km±16km, mb3.6/6, Error ellipse: s-maj=19.2km s-min=8.9km az=164.0*
MAN ***30*** *14:37:19, 926N×12668E, h22km, mb4.8, ML3.7, MS3.7*
ISC 30 14:37:19.0±1.9, 917N±006×1269E±01, h40km±19km, n18, σ1§13/23, mb3.6/6, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**1.09**	**207**	⇑*iP*		**Pn**		**14 37 46.5**	**+8.7**
BIPH				*i* S		**Sn**		**14 37 50.0**	**-1.7**
SCPH	**Surigao**	**1.48**	**294**	⇑*eP*		**Pn**		**14 37 41.4**	**-1.7**
SCPH				*e*S		**Sn**		**14 37 58.9**	**-2.3**
BUKP	**Musuan**	**2.19**	**234**	*eP*		**Pn**		**14 37 54.1**	**+1.3**
BUKP				*e*S		**Sn**		**14 38 23.4**	**+4.7**
MSLP	**Maasin**	**2.19**	**296**	*eP*		**Pn**		**14 37 53.0**	**+0.2**
MSLP				*e*S		**Sn**		**14 38 20.2**	**+1.4**
CGP	**Cagayan de Oro**	**2.25**	**252**	⇑*eP*		**Pn**		**14 37 53.6**	**-0.1**
CGP				*e*S		**Sn**		**14 38 20.3**	**+0.1**
PLP	**Palo**	**2.71**	**317**	*eP*		**Pn**		**14 37 60.0**	**-0.1**
PLP				*i* S		**Sn**		**14 38 37.1**	**+5.5**
TBP	**Tagbilaran**	**3.00**	**280**	*eP*		**Pn**		**14 38 04.0**	**0.0**
DCPH	**Dipolog City**	**3.51**	**261**	*eP*		**Pn**		**14 38 11.6**	**+0.6**
SNPH	**Sibulan**	**3.58**	**273**	*eP*		**Pn**		**14 38 14.0**	**+2.1**
OTRP	**Odiongan**	**5.71**	**304**	*eP*		**Pn**		**14 38 46.0**	**+4.7**
BATI	**Kupang**	**19.51**	**189**	P		**Pn**		**14 41 43.4**	**-1.0**
	2.2nm,0.3s,baz=323,slow=20,SNR=5.5								
FITZ	**Fitzroy Crossi**	**27.12**	**183**	P		**P**		**14 42 58.7**	**+0.4**
	0.6nm,0.5s,mb3.4,baz=68,slow=5.4,SNR=2.2								
KSRS	**Korea Array**	**28.18**	**2**	LR		LR		14 52 47.4	
	comp=Z,26nm,20.3s,baz=195,slow=33								
WRA	**Warramunga Arr**	**29.85**	**166**	P		**P**		**14 43 23.1**	**+0.5**
	0.4nm,0.5s,mb3.4,baz=348,slow=9.4,SNR=5.1								
ASAR	**Alice Springs**	**33.35**	**168**	P		**P**		**14 43 54.5**	**+1.1**
	0.3nm,0.4s,mb3.5,baz=353,slow=6.6,SNR=8.7								
MKAR	**Makanchi Array**	**53.25**	**323**	P		**P**		**14 46 33.2**	**-0.2**
	0.8nm,0.6s,mb3.8,baz=116,slow=8.2,SNR=7.4								
ZALV	**Zalesovo Beam**	**55.86**	**331**	P		**P**		**14 46 50.8**	**-1.5**
	0.4nm,0.4s,mb3.9,baz=100,slow=7.5,SNR=3.1								
YKA	**Yellowknife Ar**	**94.52**	**24**	P		**P**		**14 50 39.3**	**+4.4**
	0.1nm,0.5s,mb3.5,baz=301,slow=4.5,SNR=3.1								

IDC 30 14:52:39.9±3.8, 655S×12838E, h304km±38km, mb3.4/2, mb1 3.3/6, mb1mx3.1/15, mbtmp3.2/6, Error ellipse: s-maj=46.4km s-min=13.5km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.92**	**232**	P		Pn		14 54 08.4	+0.1
	6.3nm,0.3s,baz=123,slow=1.1,SNR=13								
BATI				S		S		14 55 19.5	-0.1
	11nm,0.3s,baz=26,slow=22,SNR=7.0								
FITZ	**Fitzroy Crossi**	**11.79**	**193**	P		Pn		14 55 21.1	+1.3
	0.8nm,0.3s,baz=36,slow=13,SNR=12								
FITZ				S		S		14 57 31.3	0.0
	0.3nm,0.3s,baz=323,slow=20,SNR=2.5								
WRA	**Warramunga Arr**	**14.52**	**157**	P		P		14 55 50.1	-1.4
	0.2nm,0.3s,baz=336,slow=12,SNR=21								
WRA				S		S		14 58 27.7	-2.8
	0.2nm,0.3s,baz=331,slow=23,SNR=5.0								
ASAR	**Alice Springs**	**17.83**	**163**	P		P		14 56 28.5	+1.0
	0.5nm,0.3s,baz=344,slow=11,SNR=82								
ASAR				S		S		14 59 37.1	+0.6
	0.1nm,0.3s,baz=347,slow=22,SNR=8.0								
MKAR	**Makanchi Array**	**66.98**	**327**	P		P		15 03 00.8	+0.4
	0.7nm,0.3s,baz=128,slow=6.7,SNR=8.1								
ZALV	**Zalesovo Beam**	**70.48**	**334**	P		P		15 03 21.1	-0.5
	0.7nm,0.4s,baz=129,slow=5.0,SNR=4.8								

ISCJB ***30*** *15:09:22.8±0.9, 106S±0.1×96.1E±0.1, h10km, mb4.3/12, Error ellipse: s-maj=21.3km s-min=11.2km az=145.6*
IDC ***30*** *15:09:24.3±2.7, 1071S×9629E, h0km, mb4.1/8, mb1 4.3/9, mb1mx4.0/22, mbtmp4.2/9, ML4.3/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/26, Error ellipse: s-maj=76.2km s-min=20.0km az=57.0*
NEIC ***30*** *15:09:25.1±1.2, 1069S×9620E, h10km, mb4.7/7, Error ellipse: s-maj=28.1km s-min=13.1km az=63.0*
ISC 30 15:09:24.3±1.0, 106S±01×961E±01, h10km, n24, σ1§28/23, mb4.3/12, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**13.64**	**12**	Pn		**Pn**		**15 12 38.0**	**-0.1**
PSI				LR		LR		15 17 18.9	
PSI	**Prapat**	**13.64**	**12**	Pn		**Pn**		**15 12 38.0**	**-0.1**
	1.5nm,0.3s,baz=176,slow=10,SNR=18								
PSI				LR		LR		15 17 18.9	
	comp=Z,222nm,18.7s,baz=188,slow=35								
KULM	**Kulim**	**16.46**	**16**	*e*Pn		**Pn**		**15 13 13.8**	**-1.8**
KULM				*e*				15 13 22.9	
KSM	**Kuching**	**18.56**	**50**	*e*Pn		**Pn**		**15 13 43.0**	**+1.3**
PALK	**Pallekele**	**23.48**	**319**	P		**P**		**15 14 32.8**	**-1.8**
	15nm,1.2s,mb4.3								
MBWA	**Marble Bar**	**24.98**	**118**	P		**P**		**15 14 55.8**	**+7.4**
	14nm,0.9s,mb4.5								
KKM	**Kota Kinabalu**	**26.00**	**51**	P		**P**		**15 14 56.3**	**-1.4**
BATI	**Kupang**	**27.11**	**92**	P		**P**		**15 15 07.3**	**-0.4**
	10nm,0.8s,mb4.4,baz=191,slow=5.2,SNR=3.6								
WRA	**Warramunga Arr**	**37.95**	**109**	P		**P**		**15 16 42.2**	**-0.3**
	2.1nm,0.8s,mb4.0,baz=283,slow=9.2,SNR=23								
WB2	**Warramunga Arr**	**37.96**	**109**	*e*P		**P**		**15 16 42.2**	**-0.4**
ASAR	**Alice Springs**	**38.25**	**115**	P		**P**		**15 16 44.8**	**-0.1**
	1.9nm,0.8s,mb3.9,baz=290,slow=8.0,SNR=24								
STKA	**Stephens Creek**	**46.95**	**124**	*e*P		**P**		**15 17 55.6**	**0.0**
	3.0nm,0.8s,mb4.3								
STKA	**Stephens Creek**	**46.95**	**124**	P		**P**		**15 17 55.4**	**-0.2**
	60nm,2.1s,mb5.2								
STKA	**Stephens Creek**	**46.95**	**124**	P		**P**		**15 17 55.7**	**+0.1**
	2.8nm,1.0s,mb4.2,baz=328,slow=9.5,SNR=4.7								
CTA	**Charters Tower**	**49.11**	**107**	*e*P		**P**		**15 18 13.7**	**+1.2**
	4.6nm,0.7s,mb4.6								
CTA	**Charters Tower**	**49.11**	**107**	P		**P**		**15 18 12.3**	**-0.2**
	6.5nm,0.8s,mb4.7,baz=267,slow=9.7,SNR=9.3								
CTAO	**Charters Tower**	**49.11**	**107**	*e*P		**P**		**15 18 13.3**	**+0.8**
	9.2nm,0.9s,mb4.8								
KSRS	**Korea Array**	**56.38**	**30**	P		**P**		**15 19 07.0**	**+1.1**
	2.1nm,1.0s,mb4.1,baz=223,slow=8.5,SNR=4.6								
EKS2	**Erkin-Say**	**56.84**	**340**	P		**P**		**15 19 11.0**	**+2.0**
	3.4nm,0.9s,mb4.4								
SONM	**Songino Array**	**58.92**	**8**	P		**P**		**15 19 26.2**	**+2.7**
	0.7nm,0.9s,mb3.7,baz=191,slow=4.4,SNR=2.9								
KMBO	**Kilima Mbogo**	**59.20**	**275**	LR		LR		15 39 35.2	
	comp=Z,48nm,18.8s,baz=89,slow=30								
ZAA0	**Zalesovo Array**	**65.04**	**353**	P		**P**		**15 20 00.9**	**-3.6**
ZALV	**Zalesovo Beam**	**65.04**	**353**	P		**P**		**15 20 06.2**	**+1.6**
	1.0nm,0.6s,mb4.1,baz=172,slow=5.3,SNR=5.0								
BILL	**Bilibino**	**92.55**	**21**	P		**P**		**15 22 34.0**	**-1.5**
	5.3nm,0.8s,mb5.0								

IDC 30 15:18:34.1±2.0, 096S×12760E, h0km, mb3.8/2, mb1 3.8/3, mb1mx3.6/15, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=151.4km s-min=25.3km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.99**	**161**	P		Pn		15 23 08.7	-1.2
	0.2nm,0.3s,baz=340,slow=11,SNR=11								
ASAR	**Alice Springs**	**23.39**	**165**	P		P		15 23 44.5	-0.3
	0.9nm,0.6s,baz=345,slow=10,SNR=13								
MKAR	**Makanchi Array**	**61.89**	**326**	P		P		15 28 55.4	+0.1
	1.0nm,0.5s,baz=123,slow=8.5,SNR=7.3								

ISCJB ***30*** *15:31:43.9±0.6, 3350N±005×49.16E±008, h10km, Error ellipse: s-maj=11.4km s-min=4.0km az=33.7*
CSEM ***30*** *15:31:46.8±0.1, 3350N×49.14E, h20km, ML3.0, Error ellipse: s-maj=3.6km s-min=1.8km az=123.0*
THR ***30*** *15:31:47.5±1.2, 3360N×49.11E, h14km±12km, ML3.0*
KISR ***30*** *15:31:49.0±0.7, 3310N×4928E, h18km±999km, ML2.5*
ISC 30 15:31:45.6±0.6, 3353N±004×4914E±008, h10km, n14, σ1§41/26, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**1.25**	**36**	*e*Pg		**Pg**		**15 32 10.2**	**+0.6**
ASAO				*e*Sg		**Sg**		**15 32 27.2**	**+1.3**
ASAO				AML		AML		15 32 31.4	
	comp=E,143nm,0.4s								
ASAO				AML		AML		15 32 31.6	
	comp=N,206nm,0.5s								
ASAO	**Ashtian**	**1.25**	**36**	*e*Pg		**Pg**		**15 32 10.2**	**+0.6**
	SNR=90								
ASAO				*e*Sg		**Sg**		**15 32 27.2**	**+1.3**
	SNR=90								
GHVR	**GHOM**	**2.02**	**62**	*e*Pg		**Pg**		**15 32 22.9**	**-1.5**
GHVR				*e*Sg		**Sg**		**15 32 50.1**	**-0.5**
GHVR				AML		AML		15 33 00.2	
	comp=N,759nm,0.5s								
GHVR	**GHOM**	**2.02**	**62**	*e*Pg		**Pg**		**15 32 22.9**	**-1.5**
	SNR=90								
GHVR				*e*Sg		**Sg**		**15 32 50.2**	**-0.4**
	SNR=90								
SNGE	**Sanandaj**	**2.15**	**317**	*e*Pg		**Pg**		**15 32 25.6**	**-1.2**
THKV	**Tehran--Karaj**	**2.78**	**31**	*e*Pn		**Pn**		**15 32 32.8**	**+2.7**
THKV				*e*Sg		**Sg**		**15 33 12.9**	**-1.8**
THKV				AML		AML		15 33 21.9	
	comp=E,24nm,0.5s								
THKV	**Tehran--Karaj**	**2.78**	**31**	*e*Pn		**Pn**		**15 32 32.8**	**+2.7**
	SNR=52								
THKV				*e*Sg		**Sg**		**15 33 12.9**	**-1.9**
	comp=E,24nm,0.5s,SNR=90								
NASN	**Na'in**	**3.16**	**102**	*e*Pn		**Pn**		**15 32 40.2**	**+4.9**
MIB	**Mutribah**	**4.02**	**203**	*e*P		**Pn**		**15 32 48.8**	**+1.6**
MIB				*e*S		**Sn**		**15 33 33.3**	**-1.1**
MIB				AML		AML		15 33 40.0	
	comp=Z,11nm,0.6s								
MIB	**Mutribah**	**4.02**	**203**	*e*P		**Pn**		**15 32 48.8**	**+1.6**
MIB				*e*S		**Sn**		**15 33 33.3**	**-1.1**
NAY	**Al-Naaiem**	**4.57**	**201**	*e*P		**Pn**		**15 32 56.1**	**+1.4**
NAY				*e*S		**Sn**		**15 33 47.2**	**-0.6**
NAY				AML		AML		15 33 49.0	
	comp=Z,1.8nm,0.6s								
NAY	**Al-Naaiem**	**4.57**	**201**	*e*P		**Pn**		**15 32 56.1**	**+1.4**
NAY				*e*S		**Sn**		**15 33 47.2**	**-0.6**
	comp=Z,1.8nm,0.6s								
RDF	**Al-Radifah**	**4.79**	**197**	*e*P		**Pn**		**15 32 59.4**	**+1.6**
RDF				*e*S		**Sn**		**15 33 51.6**	**-1.7**
RDF				AML		AML		15 33 57.1	
	comp=Z,8.2nm,0.4s								
RDF	**Al-Radifah**	**4.79**	**197**	*e*P		**Pn**		**15 32 59.4**	**+1.7**
RDF				*e*S		**Sn**		**15 33 51.6**	**-1.7**
	comp=Z,8.2nm,0.4s								

ISCJB ***30*** *15:38:31.9±0.8, 695N±007×7304W±008, h168km±8km, Error ellipse: s-maj=14.0km s-min=9.2km az=37.1*
IDC ***30*** *15:38:31.6±0.8, 672N×7297W, h154km±11km, mb3.1/1, mb1 3.3/3, mb1mx3.0/19, mbtmp3.2/3, Error ellipse: s-maj=58.5km s-min=7.9km az=131.0*
FUNV ***30*** *15:38:31.9, 680N×7319W, h164km, MW3.2*
ISC 30 15:38:32.3±0.7, 690N±006×7306W±007, h157km±8km, n20, σ0§98/27, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.21**	**38**	⇓*iP*		**Pn**		**15 39 00.9**	**+1.3**
CAPV				*e*S		**Sn**		**15 39 21.9**	**+1.4**
ROSC	**El Rosal**	**2.39**	**212**	P		**Pn**		**15 39 12.6**	**+0.1**
	26nm,0.3s,baz=275,slow=20,SNR=36								
ROSC				S		**Sn**		**15 39 41.3**	**-2.3**
	11nm,0.3s,baz=95,slow=23,SNR=7.3								
VIGV	**El Vigia**	**2.56**	**41**	*e*P		**Pn**		**15 39 15.6**	**+1.1**
VIGV				*e*S		**Sn**		**15 39 47.4**	**+0.3**
SOCV	**Socops**	**2.58**	**58**	*e*P		**Pn**		**15 39 16.0**	**+1.2**
SOCV				*e*S		**Sn**		**15 39 47.5**	**-0.2**
SDV	**Santo Domingo**	**3.11**	**51**	P		**Pn**		**15 39 22.7**	**+1.3**
	3.2nm,0.3s,baz=256,slow=5.2,SNR=17								
SDV				S		**Sn**		**15 39 59.9**	**+0.5**
	9.0nm,0.3s,baz=262,slow=22,SNR=32								
ELOV	**Elorza**	**3.56**	**88**	*e*P		**Pn**		**15 39 27.4**	**+0.4**
VIRV	**Villa del Rosa**	**3.63**	**10**	*e*P		**Pn**		**15 39 27.9**	**-0.1**
VIRV				*e*S		**Sn**		**15 40 09.4**	**-2.0**
QARV	**Quebrada Arrib**	**4.13**	**37**	*e*P		**Pn**		**15 39 35.0**	**+0.6**
QARV				*e*S		**Sn**		**15 40 22.1**	**-0.8**
SANV	**Sanarito**	**4.34**	**53**	*e*P		**Pn**		**15 39 37.7**	**+0.5**
SANV				*e*S		**Sn**		**15 40 26.1**	**-1.7**
CURV	**Curarigua**	**4.36**	**45**	*e*P		**Pn**		**15 39 37.8**	**+0.5**
CURV				*e*S		**Sn**		**15 40 26.9**	**-1.3**
DABV	**Dabajuro**	**4.66**	**31**	*e*P		**Pn**		**15 39 41.9**	**+0.6**
TEPV	**Terepaima**	**4.89**	**51**	*e*P		**Pn**		**15 39 43.9**	**-0.5**
SIQV	**Siquisique**	**4.92**	**41**	*e*P		**Pn**		**15 39 45.0**	**+0.2**
BAUV	**El Baul**	**5.37**	**68**	*e*P		**Pn**		**15 39 49.8**	**-1.0**
IMOV	**Isla Los Monje**	**5.83**	**21**	*e*P		**Pn**		**15 39 56.2**	**-0.6**
TURV	**Turiamo**	**6.25**	**55**	*e*P		**Pn**		**15 40 01.5**	**-1.0**
CAOV	**Caicara del Or**	**6.70**	**86**	*e*P		**Pn**		**15 40 08.1**	**-0.3**
YKA	**Yellowknife Ar**	**63.21**	**340**	P		**P**		**15 48 44.4**	**+1.0**
	0.3nm,0.5s,baz=127,slow=6.7,SNR=6.3								
ASAR	**Alice Springs**	**149.21**	**234**	PKPbc		PKPbc		15 58 02.3	-0.7
	0.2nm,0.5s,baz=120,slow=3.4,SNR=7.5								
WRA	**Warramunga Arr**	**150.43**	**241**	PKPbc		PKPbc		15 58 05.4	-0.7
	0.2nm,0.6s,baz=106,slow=2.8,SNR=12								

NEIC ***30*** *15:55:21.7±3.1, 3842N×7334E, h10km, Error ellipse: s-maj=54.4km s-min=17.1km az=142.0*
ISCJB ***30*** *15:55:26.5±1.3, 3899N±009×730E±0.1, h10km, mb4.2/4, MS3.5/2, Error ellipse: s-maj=16.1km s-min=10.4km az=44.0*
IDC ***30*** *15:55:26.4±3.2, 3906N×7318E, h0km, mb3.9/3, mb1 3.8/4, mb1mx3.4/22, mbtmp3.7/4, ML1.9/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/45, Error ellipse: s-maj=72.5km s-min=24.7km az=147.0*
NNC ***30*** *15:55:43.8±2.4, 3984N×7200E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=26.9km s-min=12.8km az=4.0*
ISC 30 15:55:28.5±1.3, 3902N±009×731E±01, h10km, n17, σ1§17/17, mb4.2/4, MS3.5/2, 3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.14**	**8**	*e*Pn		**Pn**		**15 56 19.2**	**+1.3**
UCH	**Uchtor**	**3.38**	**18**	*e*Pn		**Pn**		**15 56 22.1**	**+0.9**
EKS2	**Erkin-Say**	**3.67**	**8**	*e*Pn		**Pn**		**15 56 27.1**	**+1.8**
TKM2	**Tokmak 2**	**4.33**	**25**	⇓Pn		**Pg**		**15 56 48.2**	**-3.2**
	5.1nm,0.7s								
TKM2				⇓Sn		**Sb**		**15 57 37.4**	**+0.5**
	8.6nm,0.6s								
TKM2	**Tokmak 2**	**4.33**	**25**	*e*Pn		**Pn**		**15 56 32.4**	**-1.9**
KK31	**Karatay Array**	**4.52**	**335**	Pn		**Pn**		**15 56 41.2**	**+4.3**
	1.1nm,0.4s,baz=139,slow=12,SNR=17								
KK31				⇓Sn		**Sn**		**15 57 28.5**	**-1.0**
	3.9nm,0.3s,baz=151,slow=20,SNR=7.3								
MKAR	**Makanchi Array**	**10.28**	**38**	Pn		**Pn**		**15 57 55.4**	**-0.5**
MKAR	**Makanchi Array**	**10.28**	**38**	Pn		**Pn**		**15 57 55.4**	**-0.5**
	0.0nm,0.3s,baz=227,slow=12,SNR=7.7								
AB31	**Akbulak array**	**13.90**	**322**	Pn		**Pn**		**15 58 46.3**	**+0.9**
	0.6nm,0.6s,baz=128,slow=12,SNR=6.1								
AB31				Sn		**Sn**		**16 01 08.9**	**-11**
	1.0nm,0.7s,baz=130,slow=24,SNR=3.1								
ZALV	**Zalesovo Beam**	**16.94**	**24**	LR		LR		16 06 30.1	
	comp=Z,21nm,18.9s,baz=220,slow=39								
SONM	**Songino Array**	**25.58**	**59**	LR		LR		16 12 05.2	
	comp=Z,93nm,19.0s,MS3.3,baz=225,slow=39								
FINES	**FINESS Array B**	**36.38**	**324**	P		**P**		**16 02 32.2**	**-0.3**
FINES	**FINESS Array B**	**36.38**	**324**	P		**P**		**16 02 32.2**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=105,slow=9.8,SNR=7.9								
GVD	**Gavdhos**	**39.02**	**280**	*e*P		**P**		**16 02 49.8**	**-5.4**
	38nm,0.8s,mb5.2								
ARCES	**ARCESS Array B**	**39.49**	**336**	P		**P**		**16 02 57.8**	**-0.8**
	5.7nm,1.0s,mb4.3,baz=106,slow=9.5,SNR=5.0								
VRAC	**Vranov**	**40.93**	**304**	LR		LR		16 25 06.6	
	comp=Z,98nm,18.4s,MS3.7,baz=293,slow=44								
TORD	**Torodi Ar. Bea**	**67.43**	**269**	P		**P**		**16 06 24.6**	**0.0**
	0.4nm,0.4s,mb3.8,baz=45,slow=5.8,SNR=6.9								

NEIC ***30*** *15:58:44.1±0.1, 1462S×17777E, h10km, mb5.7/69, MS5.3/140, MW5.7, Error ellipse: s-maj=6.7km s-min=4.1km az=148.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.43; $M_{\theta\theta}$3.60; $M_{\phi\phi}$-0.18; $M_{r\theta}$0.77; $M_{\theta\phi}$0.54; $M_{\phi r}$1.07; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s97.00000°, δ40.00000°, λ-67.00000°. NP2:ϕ_s247.00000°, δ54.00000°, λ-108.00000°. Principal axes: T 3.8000, Plg7.0000°, Azm350.0000°; N 0.0000, Plg15.0000°, Azm258.0000°; P -3.8000, Plg73.0000°, Azm106.0000°;*
NEIC Felt at Suva.
GCMT ***30*** *15:58:44.1±0.1, 1458S×17788E, h12km, MW5.7/99, Moment Tensor Solution. s86,c175; s99,c285; Duration: 1s8 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.93±.05; $M_{\theta\theta}$3.08±.04; $M_{\phi\phi}$-0.15±.04; $M_{r\theta}$-1.06±.12; $M_{\theta\phi}$4.13±.04; $M_{\phi r}$0.37±.12; Best double couple: $M_0$4.91300×10^{17} NP1:ϕ_s199.00000°, δ56.00000°, λ-148.00000°. NP2:ϕ_s90.00000°, δ63.00000°, λ-38.00000°. Principal axes: T 5.9490, Plg4.0000°, Azm146.0000°; N -2.0760, Plg45.0000°, Azm240.0000°; P -3.8760, Plg45.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
BJI ***30*** *15:58:46.9, 14.15S×17808E, h28km, mB5.6, mb5.2, Ms5.5, Msz5.3*
MOS ***30*** *15:58:47.0±1.2, 1458S×17776E, h33km, mb5.7/38, MS5.2/42, Error ellipse: s-maj=9.0km s-min=7.5km az=77.4*
ISCJB ***30*** *15:58:47.8±0.2, 1466S±004×17780E±004, h44km, mb5.4/105, MS5.3/182, Error ellipse: s-maj=6.7km s-min=4.3km az=152.8*
IDC ***30*** *15:58:49.6±3.3, 1474S×17787E, h50km±31km, mb4.7/20, mb1 4.8/22, mb1mx4.8/25, mbtmp4.7/22, ML4.9/3, MS5.2/22, Ms1 5.2/22, ms1mx5.1/26, Error ellipse: s-maj=15.6km s-min=14.5km az=4.0*
ISC 30 15:58:49.5±0.2, 1469S±004×17787E±003, h45km, h45km±2.1km: pP-P, n577, σ0§98/260, mb5.4/105, MS5.3/182, 38C-16D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**6.26**	**12**	*e*Pn		**Pn**		**16 00 10.9**	**-8.5**
	237nm,0.4s								
FUNA				*e*Sn		**Sn**		**16 01 15.5**	**-14**
AFI	**Afiamalu**	**10.07**	**87**	*e*Pn		**Pn**		**16 01 09.2**	**-2.3**
	361nm,1.4s								
AFI	**Afiamalu**	**10.07**	**87**	*e*P		**Pn**		**16 01 09.2**	**-2.4**
AFI				pmax		pmax			
	comp=Z,361nm,1.4s								
DZM	**Mont Dzumac**	**13.09**	**234**	P		**Pn**		**16 01 54.1**	**+1.3**
DZM				LR		LR		16 05 58.3	
DZM	**Mont Dzumac**	**13.09**	**234**	P		**Pn**		**16 01 54.1**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=68,slow=16,SNR=9.3								
DZM				LR		LR		16 05 58.3	
	comp=Z,15µm,20.0s,baz=20,slow=33								
RAO	**Raoul Island**	**15.01**	**166**	⇑*eP*n		**Pn**		**16 02 19.5**	**+1.0**
	comp=Z,2µm,1.3s								
RAO	**Raoul Island**	**15.01**	**166**	⇑*eP*		**Pn**		**16 02 19.5**	**+0.9**
RAO				pmax		pmax			
	comp=Z,2µm,1.3s								
RAO	**Raoul Island**	**15.01**	**166**	P		**Pn**		**16 02 19.3**	**+0.7**
	comp=Z,52nm,0.3s,baz=53,slow=20,SNR=11								
HNR	**Honiara**	**18.28**	**285**	⇑*eP*		**Pn**		**16 02 59.2**	**-0.7**
	comp=Z,835nm,1.0s								
HNR				*e*S		**S**		**16 06 28.8**	**+2.3**
HNR	**Honiara**	**18.28**	**285**	⇑*eP*		**Pn**		**16 02 59.2**	**-0.7**
HNR				pmax		pmax			
	comp=Z,835nm,1.0s								
HNR	**Honiara**	**18.28**	**285**	P		**Pn**		**16 02 59.4**	**-0.6**
	comp=Z,3.3nm,0.3s,baz=257,slow=8.9,SNR=49								
HNR				LR		LR		16 08 52.7	
	comp=Z,25µm,21.2s,baz=165,slow=33								
RAR	**Rarotonga**	**22.23**	**110**	P		**P**		**16 03 43.3**	**+0.9**
	comp=Z,51nm,0.9s,mb4.9,baz=262,slow=3.9,SNR=6.4								
RAR

POHA Pohakuloa 43.09 38 *e*P **P** **16 06 45.3 -0.1**
KAKA Kakadu 44.12 267 ⇓*i*P **P** **16 06 52.5 -1.4**
comp=Z,54nm,1.1s,mb5.2
RKT Rikitea 45.24 108 *e*S **S** **16 13 33.9 -6.0**
comp=Z,1µm,27.5s
RKT *e*LQ 16 17 26.8
comp=Z,8µm,31.8s
RKT *e*LR LR 16 19 51.6
comp=Z,6µm,30.5s
FORT Forrest 48.25 242 *e*P **P** **16 07 25.0 -1.2**
comp=Z,71nm,1.3s,mb5.5
FITZ Fitzroy Crossi 50.09 259 *e*P **P** **16 07 39.8 -0.6**
comp=Z,115nm,1.4s,mb5.7
FITZ Fitzroy Crossi 50.09 259 P **P** **16 07 40.2 -0.1**
comp=Z,60nm,1.2s,mb5.5,baz=95,slow=10,SNR=27
FITZ LR LR 16 27 29.6
comp=Z,2µm,19.3s,MS5.2,baz=269,slow=34
BATI Kupang 53.02 268 P **P** **16 08 03.7 +1.3**
comp=Z,83nm,0.9s,mb5.6,baz=220,slow=1.0,SNR=23
CBIJ Chichi jima 54.09 320 LR LR 16 26 20.9
comp=Z,5µm,21.9s,MS5.5,baz=305,slow=30
MBWA Marble Bar 55.44 254 *e*P **P** **16 08 17.4 -2.4**
comp=Z,130nm,1.5s,mb5.7
MBWA LR LR
comp=Z,2µm,20.0s,MS5.3
DAV Davao City (W) 56.17 289 PFAKE 16 08 40.0 +15
DAV LR LR
comp=Z,2µm,21.0s,MS5.1
KLBR Kellerberrin 57.12 242 *e*P **P** **16 08 30.1 -1.6**
comp=Z,263nm,1.6s,mb6.0
NWAO Narrogin (SRO) 57.62 240 P **P** **16 08 35.1 -0.2**
comp=Z,193nm,1.6s,mb5.9
NWAO LR LR
comp=Z,3µm,20.0s,MS5.5
NWAO Narrogin (SRO) 57.62 240 P **P** **16 08 35.1 -0.1**
NWAO pmax pmax
comp=Z,193nm,1.6s
NWAO MLR MLR
comp=Z,3µm,20.0s
KAPI Kappang 57.92 273 P **P** **16 08 36.8 -0.8**
comp=Z,130nm,1.1s,mb5.9,SNR=7.5
MUN Mundaring 58.45 241 *e*P **P** **16 08 41.8 +0.8**
JHJ Hachijo jima 2 59.85 323 LR LR 16 28 34.1
comp=Z,1µm,21.8s,MS5.0,baz=262,slow=30
TSM Tawau 62.36 283 ⇓P **P** **16 09 10.7 +2.6**
MJAR Matsushiro Arr 63.22 325 P **P** **16 09 12.1 -1.1**
comp=Z,9.6nm,1.1s,mb4.8,baz=150,slow=6.6,SNR=11
MJAR LR LR 16 31 48.6
comp=Z,3µm,22.0s,MS5.4,baz=130,slow=31
MAJO Matsushiro 63.22 325 *e*P **P** **16 09 10.7 -2.6**
comp=Z,63nm,1.5s,mb5.5
MAJO LR LR
comp=Z,3µm,22.0s,MS5.5
MAJO Matsushiro 63.22 325 *e*P **P** **16 09 10.7 -2.5**
MAJO pmax pmax
comp=Z,63nm,1.5s,mb5.5
MAJO MLR MLR
comp=Z,3µm,22.0s,MS5.5
MAT Matsushiro 63.22 325 P **P** **16 09 12.1 -1.1**
MAT S **S** **16 17 39.0 -2.7**
VNDA Vanda 63.36 184 P **P** **16 09 12.8 -0.8**
comp=Z,8.7nm,0.9s,mb4.9,baz=7.4,slow=7.7,SNR=20
VNDA LR LR 16 31 53.9
comp=Z,1µm,20.1s,MS5.1,baz=132,slow=31
SBA Scott Base 63.42 183 *e*P **P** **16 09 15.1 +1.0**
comp=Z,121nm,1.1s,mb5.9
SBA LR LR
comp=Z,2µm,19.0s,MS5.2
SBA Scott Base 63.42 183 *e*P **P** **16 09 15.1 +1.1**
SBA pmax pmax
comp=Z,121nm,1.1s,mb5.9
SBA MLR MLR
comp=Z,2µm,19.0s,MS5.2
JOW Kunigami 63.42 310 P **P** **16 09 14.8 0.0**
comp=Z,10nm,0.9s,mb5.0,baz=124,slow=7.4,SNR=6.0
SDKM Sandakan 63.44 284 ⇓P **P** **16 09 15.5 +0.3**
KDM Kudat 64.20 285 ⇑P **P** **16 09 22.7 +2.5**
KKM Kota Kinabalu 64.49 284 P **P** **16 09 21.7 -0.4**
KKM Kota Kinabalu 64.49 284 ⇓P **P** **16 09 24.0 +1.9**
ERM Erimo 64.86 332 PFAKE 16 09 30.0 +6.1
ERM LR LR
comp=Z,4µm,20.0s,MS5.6
JNU Nakatsue 65.36 318 P **P** **16 09 27.1 -0.2**
comp=Z,10nm,0.9s,mb4.8,baz=148,slow=6.6
BTM Bintulu 66.57 280 ⇑P **P** **16 09 37.2 +1.6**
ASAJ Asahikawa 66.78 333 LR LR 16 35 45.8
comp=Z,3µm,20.1s,MS5.6,baz=252,slow=33
SBUM Sibu 67.17 279 ⇑P **P** **16 09 41.3 +1.9**
SMY Shemya 67.22 358 PFAKE 16 09 50.0 +11
SMY LR LR
comp=Z,4µm,20.0s,MS5.7
CASY Casey 67.58 204 PFAKE 16 09 50.0 +9.0
CASY LR LR
comp=Z,2µm,20.0s,MS5.4
TATO Taipei 67.64 305 PFAKE 16 09 50.0 +7.9
TATO LR LR
comp=Z,2µm,20.0s,MS5.4
KSM Kuching 68.72 277 *e*P **P** **16 09 48.6 -0.6**
KSM Kuching 68.72 277 ⇓P **P** **16 09 49.7 +0.5**
YSS Yuzh-Sakhalins 68.98 335 P **P** **16 09 50.5 +0.5**
comp=Z,24nm,1.3s,mb5.0
YSS LR LR
comp=Z,2µm,20.0s,MS5.4
YSS Yuzh-Sakhalins 68.98 335 *e*P **P** **16 09 52.0 +2.0**
YSS *e* 16 12 18.0
YSS *e*PPP 16 14 08.0
YSS *e*S S 16 18 54.0 +2.7
YSS *e*PPS 16 19 30.0
YSS MLR MLR
comp=E,1µm,20.0s
YSS MLR MLR
comp=Z,1µm,20.0s,MS5.1
PET Petropavlovsk 69.44 348 PFAKE 16 10 00.0 +7.3
PET LR LR
comp=Z,1µm,19.0s,MS5.2
PET Petropavlovsk 69.44 348 *e*P **P** **16 09 53.1 +0.4**
PET *e*S S 16 18 56.7 +0.2
PET *e*PS 16 19 25.8
PET *e*SS SS 16 23 25.6 +0.6
PET pmax pmax
comp=Z,800nm,6.0s
PET pmax pmax
comp=Z,300nm,12.0s
PET MLR MLR
comp=Z,1µm,18.0s,MS5.2
PET MLR MLR
comp=Z,1µm,16.0s
QZH Quanzhou 69.93 304 ⇑*i*P **P** **16 09 55.5 -0.9**
QZH S S 16 19 03.0 -0.4
QZH LR LR
comp=N,2µm,17.7s
QZH LR LR
comp=E,3µm,23.6s
QZH LR LR
comp=Z,2µm,26.8s
KSRS Korea Array 69.94 320 P **P** **16 09 56.5 +0.3**
comp=Z,5.3nm,1.0s,mb4.4,baz=139,slow=7.0,SNR=10
KSRS LR LR 16 35 08.1
comp=Z,3µm,22.0s,MS5.5,baz=120,slow=31
INCN Inchon 70.77 319 PFAKE 16 10 10.0 +8.8
INCN LR LR
comp=Z,3µm,22.0s,MS5.5
SSE Sheshan 70.94 311 *e*P **P** **16 10 02.3 -0.1**
SSE AP pP 16 10 17.3 +1.8
SSE PP PP 16 12 39.0 -1.3
SSE S S 16 19 14.3 -0.7
SSE SCS ScS 16 19 57.0 -6.0
SSE AMB AMB
comp=Z,33nm,0.8s,mb5.3
SSE AMB AMB
comp=Z,77nm,4.0s
SSE LR LR
comp=N,1µm,32.6s,MS5.1
SSE LR LR
comp=E,1µm,32.6s,MS5.1
SSE LR LR
comp=Z,2µm,36.6s,MS5.2
VLA Vladivostok 71.29 326 *i*P **P** **16 10 05.1 +0.9**
SDPT Sand Point 72.13 13 *e*P **P** **16 10 07.1 -1.9**
comp=Z,162nm,1.4s,mb5.8
NJ2 Nanjing 73.14 310 *e*P **P** **16 10 14.3 -1.3**
NJ2 AP pP 16 10 29.0 +0.3
NJ2 XP sP 16 10 31.5 -2.3
NJ2 PP PP 16 13 00.3 +1.2
NJ2 XS sS 16 19 52.5 -10
NJ2 AMB AMB
comp=Z,20nm,0.7s,mb5.2
NJ2 AMB AMB
comp=Z,320nm,7.4s
NJ2 LR LR
comp=N,2µm,19.9s,MS5.5
NJ2 LR LR
comp=E,2µm,22.3s,MS5.5
NJ2 LR LR
comp=Z,2µm,22.3s,MS5.3
GZH Guangzhou 73.44 300 P **P** **16 10 18.8 +1.3**
GZH S S 16 19 52.3 +8.4
GZH LR LR
comp=N,717nm,23.1s,MS5.2
GZH LR LR
comp=E,1µm,21.9s,MS5.2
GZH LR LR
comp=Z,3µm,29.9s
CHGN Chignik 73.46 14 *e*P **P** **16 10 14.5 -2.4**
HABR Khabarovsk 73.48 332 *e*P **P** **16 10 16.8 -0.4**
HABR *e* pP 16 10 28.6 -1.8
HABR *e* 16 13 06.6
HABR *e* 16 20 15.2
HABR *e* 16 20 28.7
HABR pmax pmax
comp=Z,48nm,1.6s,mb5.2
HABR MLR MLR
comp=Z,810nm,18.0s,MS5.0
MDJ Mudanjiang 73.53 326 P **P** **16 10 18.0 +0.5**
MDJ AP pP 16 10 29.3 -1.4
MDJ XP sP 16 10 34.8 -1.0
MDJ PP PP 16 13 00.3 -1.8
MDJ S S 16 19 46.5 +2.5
MDJ SCS ScS 16 20 23.3 +0.4
MDJ AMB AMB
comp=Z,20nm,2.2s,mb4.7
MDJ AMB AMB
comp=Z,375nm,5.5s
MDJ LR LR
comp=N,1µm,21.7s,MS5.3
MDJ LR LR
comp=E,1µm,19.0s,MS5.3
MDJ LR LR
comp=Z,2µm,20.8s,MS5.4
MIR Mirnyy 74.59 204 *e*P **P** **16 10 26.0 +2.5**
MIR pmax pmax
comp=Z,200nm,2.0s,mb5.7
QIZ Qiongzhong 74.88 295 P **P** **16 10 26.8 +0.9**
QIZ S S 16 20 03.5 +3.3
QIZ SS SS 16 24 45.0 -4.4
QIZ AMB AMB
comp=Z,271nm,10.0s
QIZ LR LR
comp=E,688nm,22.8s
QIZ LR LR
comp=Z,2µm,26.6s,MS5.2
QIZ Qiongzhong 74.88 295 PFAKE 16 10 40.0 +14
QIZ LR LR
comp=Z,1µm,22.0s,MS5.2
MYKOM Kota Tinggi 75.02 276 ⇓P **P** **16 10 28.0 +1.1**
SNY Shenyang 75.24 321 ⇓P **P** **16 10 27.5 -0.1**
SNY AP pP 16 10 39.0 -1.8
SNY XP sP 16 10 45.3 -0.6
SNY PP PP 16 13 15.8 -1.0
SNY AMB AMB
comp=Z,17nm,0.9s,mb5.0
SNY AMB AMB
comp=Z,378nm,8.7s
SNY LR LR
comp=N,972nm,20.1s
SNY LR LR
comp=E,751nm,28.5s
SNY LR LR
comp=Z,2µm,39.6s
CN2 Changchun 75.31 324 *e*P **P** **16 10 27.5 -0.4**
CN2 *e*AP pP 16 10 41.0 -0.1
CN2 *e*PP PP 16 13 16.3 -1.0
CN2 *e*S S 16 20 02.5 -1.6
CN2 AMB AMB
comp=Z,30nm,1.2s,mb5.1
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1µm,20.0s,MS5.4
CN2 LR LR
comp=E,1µm,20.0s,MS5.4
CN2 LR LR
comp=Z,1µm,21.0s,MS5.2
QSPA South Pole Qui 75.34 180 LR LR 16 40 34.3
comp=Z,1µm,18.7s,MS5.3,baz=247,slow=33
KLR Kul'dur 75.56 331 *e*P **P** **16 10 25.2 -4.0**
KLR *e*S S 16 20 13.5 +7.0
KLR pmax pmax
comp=E,110nm,2.6s
KLR pmax pmax
comp=Z,150nm,2.6s,mb5.5
KLR pmax pmax
comp=Z,1µm,9.0s
KGM Kluang 75.59 276 ⇓P **P** **16 10 30.3 +0.1**
WHN Wuhan 75.83 307 P **P** **16 10 30.8 -0.4**
WHN S S 16 20 15.0 +4.7
WHN LR LR
comp=Z,4µm,20.6s,MS5.7
KDAK Kodiak Island 76.22 16 *e*P **P** **16 10 32.2 -0.5**
comp=Z,164nm,1.7s,mb5.7
KDAK LR LR
comp=Z,438nm,21.0s,MS4.7
SNCC San Nicolas Is 76.38 50 PFAKE 16 10 50.0 +16
SNCC LR LR
comp=Z,2µm,20.0s,MS5.3
MCCM Marconi Confer 76.40 44 PFAKE 16 10 50.0 +16
MCCM LR LR
comp=Z,1µm,21.0s,MS5.2
TIA Tai'an 76.45 313 *e*P **P** **16 10 34.8 +0.2**
KTGM Kuala Trenggan 76.67 279 ⇑P **P** **16 10 37.9 +1.5**
SAO San Andreas Ge 76.69 46 *e*P **P** **16 10 35.7 -0.3**
comp=Z,82nm,1.4s,mb5.5
SAO LR LR
comp=Z,2µm,20.0s,MS5.4
SAO San Andreas Ge 76.69 46 *e*P **P** **16 10 35.7 -0.2**
SAO pmax pmax
comp=Z,82nm,1.4s,mb5.5
SAO MLR MLR
comp=Z,2µm,20.0s,MS5.4
HOPS Hopland 76.72 43 *e*P **P** **16 10 36.4 +0.3**
comp=Z,115nm,1.3s,mb5.7
HOPS LR LR
comp=Z,1µm,20.0s,MS5.2
KCPM Cahto Peak 76.74 43 *e*P **P** **16 10 36.3 +0.1**
NSHM Saint Helena R 76.78 44 *e*P **P** **16 10 36.5 +0.1**
KIPM Iron Peak 76.88 42 *e*P **P** **16 10 37.3 +0.4**
MA2 Magadan 77.20 346 *e*P **P** **16 10 37.0 -1.3**
comp=Z,31nm,1.4s,mb5.0
MA2 LR LR
comp=Z,1µm,20.0s,MS5.3
MA2 Magadan 77.20 346 ⇑*e*P **P** **16 10 37.2 -1.1**
MA2 pmax pmax
comp=Z,46nm,2.5s,mb5.0
MA2 MLR MLR
comp=Z,500nm,14.0s,MS5.0
KRMB Red Mountain 77.51 41 *e*P **P** **16 10 40.8 +0.4**
FRIM Kepong 77.55 277 ⇑P **P** **16 10 41.4 +0.1**
WDC Whiskeytown Da 77.89 42 *e*P **P** **16 10 42.9 +0.3**
WDC LR LR
comp=Z,1µm,21.0s,MS5.1
OHCM Honcut 77.95 44 *e*P **P** **16 10 42.7 -0.2**
CMB Columbia Colle 78.05 45 *e*P **P** **16 10 43.5 -0.1**
comp=Z,60nm,1.4s,mb5.3
CMB LR LR
comp=Z,1µm,19.0s,MS5.3
CMB Columbia Colle 78.05 45 *e*P **P** **16 10 43.5 0.0**
CMB pmax pmax
comp=Z,60nm,1.4s,mb5.3
CMB MLR MLR
comp=Z,1µm,19.0s,MS5.3
ISA Isabella 78.27 48 *e*P **P** **16 10 45.0 +0.2**
comp=Z,109nm,1.6s,mb5.5
ISA LR LR
comp=Z,1µm,20.0s,MS5.2
ISA Isabella 78.27 48 *e*P **P** **16 10 45.0 +0.2**
ISA pmax pmax
comp=Z,109nm,1.6s,mb5.5
ISA MLR MLR
comp=Z,1µm,20.0s,MS5.2
YBH Yreka Blue Hor 78.39 41 *e*P **P** **16 10 45.9 +0.6**
comp=Z,76nm,1.4s,mb5.4
YBH LR LR
comp=Z,733nm,21.0s,MS5.0
YBH Yreka Blue Hor 78.39 41 *e*P **P** **16 10 45.9 +0.6**
YBH pmax pmax
comp=Z,76nm,1.4s
YBH MLR MLR
comp=Z,733nm,21.0s
SVW2 Sparrevohn 78.45 13 *e*P **P** **16 10 44.3 -0.9**
GAMB Gambell 78.64 5 *e*P **P** **16 10 46.1 -0.1**
comp=Z,158nm,1.7s,mb5.7
PFO Pinyon Flat Ob 78.83 51 P **P** **16 10 48.9 +1.0**
comp=Z,107nm,1.6s,mb5.5,SNR=5.3
PFO Pinyon Flat Ob 78.83 51 *e*P **P** **16 10 48.2 +0.3**
comp=Z,111nm,2.0s,mb5.5
PFO LR LR
comp=Z,1µm,20.0s,MS5.3
PFO Pinyon Flat Ob 78.83 51 *e*P **P** **16 10 48.2 +0.3**
PFO pmax pmax
comp=Z,111nm,2.0s,mb5.4
PFO MLR MLR
comp=Z,1µm,20.0s,MS5.3
MTUM Tungsten Hills 78.99 47 *e*P **P** **16 10 49.5 +0.8**
BJT Baijiatuau 78.99 316 *e*P **P** **16 10 47.5 -1.2**
comp=Z,68nm,1.9s,mb5.2
BJT LR LR
comp=Z,2µm,20.0s,MS5.4
BJT Baijiatuau 78.99 316 *e*P **P** **16 10 47.5 -1.2**
BJT pmax pmax
comp=Z,68nm,1.9s
BJT MLR MLR
comp=Z,2µm,20.0s
BJI Beijing 79.00 316 P **P** **16 10 48.0 -0.7**
BJI AP pP 16 11 00.0 -2.0
BJI PP PP 16 13 45.5 -2.9
BJI S S 16 20 48.3 +4.0
BJI AMB AMB
comp=Z,15nm,1.3s,mb4.8
BJI AMB AMB
comp=Z,354nm,4.8s
BJI LR LR
comp=N,866nm,18.8s
BJI LR LR
comp=E,1µm,27.5s
BJI LR LR
comp=Z,2µm,28.2s
KULM Kulim 79.04 278 P **P** **16 10 50.4 +0.8**
KULM Kulim 79.04 278 ⇑P **P** **16 10 51.2 +1.7**
SLKM Skilak Lake 79.19 15 *e*P **P** **16 10 48.2 -1.1**
SLKM Skilak Lake 79.19 15 P **P** **16 10 48.6 -0.7**
GSC Goldstone 79.31 49 *e*P **P** **16 10 50.5 0.0**
comp=Z,104nm,1.8s,mb5.5
GSC Goldstone 79.31 49 *e*P **P** **16 10 50.5 -0.1**
GSC pmax pmax
comp=Z,104nm,1.8s,mb5.5
COR Corvallis 79.54 38 PFAKE 16 11 00.0 +8.5
COR LR LR
comp=Z,657nm,19.0s,MS5.0
NVAR Mina Array Bea 79.68 46 P **P** **16 10 53.0 +0.6**
comp=Z,18nm,1.1s,mb4.9,baz=218,slow=7.0,SNR=18
IRO Indian Ridge 79.87 39 P **P** **16 10 53.6 +0.3**
BROR Big Rock Looko 79.88 39 P **P** **16 10 53.5 +0.1**
SEY Seymchan 79.89 348 ⇑*e*P **P** **16 10 52.7 -0.3**
TTA Tatalina 80.01 12 *e*P **P** **16 10 53.9 +0.2**
MOD Modoc 80.02 42 *e*P **P** **16 10 53.6 -0.6**
comp=Z,80nm,1.4s,mb5.5
MOD LR LR
comp=Z,729nm,19.0s,MS5.0
PSI Prapat 80.03 276 P **P** **16 10 54.0 -0.9**
comp=Z,18nm,1.1s,mb4.9,baz=182,slow=4.3,SNR=12
GYA Guiyang 80.34 301 P **P** **16 10 56.3 0.0**
GYA AP pP 16 11 10.5 +0.9
GYA XP sP 16 11 15.8 +1.1
GYA PP PP 16 14 02.0 +2.2
GYA S S 16 20 58.0 -1.0
GYA SKS 16 21 06.8
GYA XS sS 16 21 20.0 -1.3
GYA AMB AMB
comp=Z,60nm,1.2s,mb5.4
GYA AMB AMB
comp=Z,150nm,4.5s
GYA LR LR
comp=N,1µm,20.1s,MS5.5
GYA LR LR
comp=E,2µm,20.5s,MS5.5
GYA LR LR
comp=Z,1µm,20.7s,MS5.3
PMR Palmer 80.40 15 *e*P **P** **16 10 54.9 -0.9**
comp=Z,150nm,1.4s,mb5.7
PMR Palmer 80.40 15 *e*P **P** **16 10 54.9 -0.9**
PMR pmax pmax
comp=Z,150nm,1.4s,mb5.7
EYAK Cordova Ski Ar 80.45 17 *e*P **P** **16 10 52.9 -3.2**
comp=Z,85nm,1.6s,mb5.4
TPNV Topopah Spring 80.45 48 *e*P **P** **16 10 56.5 -0.1**
comp=Z,112nm,1.7s,mb5.5
TPNV *e*PP PP 16 13 56.8 -3.7
TPNV LR LR
comp=Z,1µm,20.0s,MS5.3
TPNV Topopah Spring 80.45 48 *e*P **P** **16 10 56.5 -0.2**
TPNV *e* 16 13 56.8
TPNV pmax pmax
comp=Z,112nm,1.7s,mb5.5
TPNV MLR MLR
comp=Z,1µm,20.0s,MS5.3
TIY Taiyuan 80.47 313 ⇑*e*P **P** **16 10 59.3 +2.6**
TIY LR LR
comp=N,643nm,14.2s,MS5.2
TIY LR LR
comp=E,548nm,16.6s,MS5.2
TIY LR LR
comp=Z,912nm,15.5s,MS5.2
TNA Tin City 80.73 6 *e*P **P** **16 10 57.0 -0.5**
comp=Z,115nm,1.8s,mb5.5
TNA LR LR
comp=Z,1µm,22.0s,MS5.2
SML Sawmill 80.79 16 *e*P **P** **16 10 57.4 -0.5**
SML Sawmill 80.79 16 P **P** **16 10 58.2 +0.3**
TDL Tradedollar La 81.13 37 P **P** **16 11 00.8 +0.8**
SIT Sitka 81.33 24 PFAKE 16 11 10.0 +9.2
SIT LR LR
comp=Z,2µm,22.0s,MS5.4
XAN Xi'an 81.47 308 P **P** **16 11 02.5 +0.3**
XAN PP PP 16 14 08.0 -1.0
XAN AMB AMB
comp=Z,23nm,1.3s,mb5.0
XAN AMB AMB
comp=Z,270nm,7.0s
XAN LR LR
comp=N,641nm,21.2s,MS5.1
XAN LR LR
comp=E,785nm,23.6s,MS5.1
XAN LR LR
comp=Z,1µm,22.8s,MS5.2
HIA Hailar 81.70 326 *e*P **P** **16 11 03.3 +0.3**
comp=Z,28nm,1.3s,mb5.0
HIA LR LR
comp=Z,2µm,20.0s,MS5.5
HIA Hailar 81.70 326 *e*P **P** **16 11 03.3 +0.3**
HIA pmax pmax
comp=Z,28nm,1.3s
HIA MLR MLR
comp=Z,2µm,20.0s
MCK McKinley 82.26 14 *e*P **P** **16 11 04.7 -1.0**
comp=Z,152nm,1.4s,mb5.7
MCK LR LR
comp=Z,990nm,22.0s,MS5.1
MCK McKinley 82.26 14 *e*P **P** **16 11 04.7 -0.9**
MCK pmax pmax
comp=Z,152nm,1.4s,mb5.7
MCK MLR MLR
comp=Z,990nm,22.0s,MS5.1
JCW Jim Creek 82.27 36 P **P** **16 11 06.2 +0.2**
HHC Hu-ho-hao-te 82.48 316 *e*P **P** **16 11 07.5 +0.2**
HHC AP pP 16 11 21.0 +0.3
HHC XP sP 16 11 26.0 +0.3
HHC PP PP 16 14 18.8 +1.6
HHC S S 16 21 19.0 -1.7
HHC XS sS 16 21 42.0 -1.0
HHC AMB AMB
comp=Z,16nm,0.7s,mb5.1
HHC AMB AMB
comp=Z,293nm,5.8s
HHC LR LR
comp=N,1µm,21.2s,MS5.4
HHC LR LR
comp=E,2µm,21.8s,MS5.4
HHC LR LR

comp=Z,2µm,25.0s,MS5.4
NST Nakhon Sawan 82.51 288 P **P** **16 11 09.0 +1.0**
TUC Tucson 82.65 54 *e*P **P** **16 11 09.1 +0.8**
comp=Z,104nm,1.7s,mb5.6
TUC Tucson 82.65 54 P **P** **16 11 09.2 +0.8**
TUC pmax pmax
comp=Z,100nm,1.7s,mb5.6
RSW Rattlesnake Hi 82.71 38 P **P** **16 11 08.7 +0.3**
HAWA Hanford 82.74 38 *e*P **P** **16 11 08.6 0.0**
comp=Z,123nm,1.5s,mb5.7
HAWA LR LR
comp=Z,1µm,19.0s,MS5.3
CCUT Cedar City 82.79 48 *e*P **P** **16 11 09.2 +0.2**
ARUT Antelope Range 82.83 48 *e*P **P** **16 11 09.7 +0.5**
ARUT Antelope Range 82.83 48 P **P** **16 11 10.2 +1.0**
GBL Gable Mountain 82.89 38 P **P** **16 11 09.6 +0.3**
BILL Bilibino 82.93 356 *e*P **P** **16 11 07.9 -1.1**
BILL Bilibino 82.93 356⇓ *e*P **P** **16 11 08.0 -1.0**
BILL pmax pmax
comp=Z,40nm,1.9s,mb5.1
MENT Mentasta 82.95 17 *e*P **P** **16 11 08.7 -0.5**
SKAG Skagway 83.02 22 *e*P **P** **16 11 10.1 +0.5**
comp=Z,154nm,1.8s,mb5.7
KMI Kunming 83.18 298 P **P** **16 11 12.5 +1.2**
KMI AP pP 16 11 26.0 +1.3
KMI PP PP 16 14 25.5 +2.2
KMI SKS 16 21 26.3
KMI S S 16 21 28.0 -0.4
KMI XS sS 16 21 49.0 -1.8
KMI AMB AMB
comp=Z,213nm,3.7s
KMI LR LR
comp=N,662nm,22.5s,MS5.3
KMI LR LR
comp=E,1µm,21.4s,MS5.3
KMI LR LR
comp=Z,2µm,22.8s,MS5.5
EPH Ephrata 83.19 37 P **P** **16 11 10.6 -0.2**
IMA2 Indian Mountai 83.28 11 *e*P **P** **16 11 10.6 -0.3**
BMO Blue Mountains 83.36 40 *e*P **P** **16 11 10.8 -0.9**
comp=Z,90nm,1.7s,mb5.5
BMO LR LR
comp=Z,628nm,19.0s,MS5.0
BMO Blue Mountains 83.36 40 *e*P **P** **16 11 10.8 -1.0**
BMO pmax pmax
comp=Z,90nm,1.7s,mb5.5
BMO MLR MLR
comp=Z,628nm,19.0s,MS5.0
BTO Baotou 83.43 315 *e*P **P** **16 11 12.5 +0.3**
COLA College 83.48 14 *e*P **P** **16 11 10.4 -1.5**
comp=Z,179nm,1.4s,mb5.9
COLA LR LR
comp=Z,2µm,22.0s,MS5.4
COLA College 83.48 14 *e*P **P** **16 11 10.5 -1.4**
COLA pmax pmax
comp=Z,179nm,1.4s,mb5.9
COLA MLR MLR
comp=Z,2µm,22.0s,MS5.4
NRGR Nerungri 83.66 334 *e*P **P** **16 11 13.7 +0.7**
NRGR S S 16 21 25.1 -6.8
NRGR smax
comp=N,43nm,0.7s
CLNS Chul'man 83.70 334 *e*P **P** **16 11 08.8 -4.4**
CLNS *e* 16 21 29.1
CLNS pmax pmax
comp=Z,20nm,1.2s,mb5.1
CLNS pmax pmax
comp=N,15nm,1.3s
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS pmax pmax
comp=E,400nm,11.3s
CLNS pmax pmax
comp=N,155nm,11.5s
CLNS pmax pmax
comp=Z,81nm,11.5s
CLNS MLR MLR
comp=Z,700nm,17.0s,MS5.1
CLNS MLR MLR
comp=N,400nm,15.0s,MS5.0
CLNS MLR MLR
comp=E,200nm,16.0s,MS5.0
OD2 Odessa Site #2 83.73 38 P **P** **16 11 13.5 -0.1**
MSU Marysvale 84.03 48 *e*P **P** **16 11 15.9 +0.5**
DUG Dugway 84.28 46 PFAKE 16 11 30.0 +13
DUG LR LR
comp=Z,1µm,19.0s,MS5.3
CD2 Chengdu 84.32 304 P **P** **16 11 17.5 +0.5**
CD2 AP pP 16 11 31.0 +0.6
CD2 XP sP 16 11 36.0 +0.5
CD2 PP PP 16 14 35.0 +2.5
CD2 SKS 16 21 33.5
CD2 S S 16 21 38.5 -1.2
CD2 XS sS 16 22 01.5 -0.6
CD2 AMB AMB
comp=Z,20nm,0.5s,mb5.5
CD2 AMB AMB
comp=Z,410nm,6.6s
CD2 LR LR
comp=N,1µm,19.2s,MS5.5
CD2 LR LR
comp=E,2µm,21.0s,MS5.5
CD2 LR LR
comp=Z,1µm,27.0s
DLBC Dease Lake 84.36 25 *e*P **P** **16 11 16.4 -0.2**
BGU Big Grassy Mou 84.43 45 *e*P **P** **16 11 17.0 -0.3**
CHG Chiang Mai 84.53 291 ⇓P **P** **16 11 18.5 +0.2**
comp=Z,28nm,1.7s,mb5.1
CHTO Chiang Mai 84.53 291 *e*P **P** **16 11 18.1 -0.2**
comp=Z,29nm,1.5s,mb5.2
CHTO LR LR
comp=Z,550nm,20.0s,MS4.9
CHTO Chiang Mai 84.53 291 *e*P **P** **16 11 18.1 -0.2**
CHTO pmax pmax
comp=Z,29nm,1.5s,mb5.2
CHTO MLR MLR
comp=Z,550nm,20.0s,MS4.9
HLID Hailey 84.63 43 PFAKE 16 11 30.0 +12
HLID LR LR
comp=Z,558nm,19.0s,MS5.0
NLU North Lily Min 84.69 47 *e*P **P** **16 11 18.9 +0.3**
NOQ North Oquirrh 84.94 46 *e*P **P** **16 11 20.1 +0.2**
comp=Z,185nm,1.7s,mb5.9
HVU Hansel Valley 84.96 45 *e*P **P** **16 11 20.6 +0.6**
comp=Z,210nm,1.7s,mb6.0
HVU Hansel Valley 84.96 45 P **P** **16 11 20.8 +0.8**
HVU pmax pmax
comp=Z,210nm,1.7s,mb6.0
SPUT South Promonto 84.99 45 *e*P **P** **16 11 20.3 +0.2**
MPU Maple Canyon 85.03 47 *e*P **P** **16 11 21.0 +0.6**
comp=Z,202nm,2.0s,mb5.9
MPU LR LR
comp=Z,2µm,21.0s,MS5.4
TMUT Trail Mountain 85.04 47 *e*P **P** **16 11 21.7 +1.2**
DAWY Dawson 85.06 17 *e*P **P** **16 11 18.5 -1.4**
NEW Newport 85.09 37 PFAKE 16 11 30.0 +10
NEW LR LR
comp=Z,894nm,19.0s,MS5.2
EGAK Eagle 85.10 16 PFAKE 16 11 30.0 +10
EGAK LR LR
comp=Z,1µm,21.0s,MS5.2
CTU Camp Tracy 85.22 46 *e*P **P** **16 11 20.6 -0.7**
comp=Z,227nm,1.8s,mb6.0
YAK Yakutsk 85.30 339 *e*P **P** **16 11 19.4 -1.8**
comp=Z,17nm,1.0s,mb5.1
YAK LR LR
comp=Z,733nm,20.0s,MS5.1
YAK Yakutsk 85.30 339 *e*P **P** **16 11 20.2 -1.0**
YAK *e* 16 14 45.4
YAK *e*PPP 16 16 40.4
YAK *e*S S 16 21 44.4 -3.6
YAK pmax pmax
comp=Z,20nm,1.5s,mb5.0
YAK pmax pmax
comp=N,14nm,1.7s
YAK pmax pmax
comp=E,9.0nm,1.6s
YAK pmax pmax
comp=N,180nm,4.8s
YAK pmax pmax
comp=Z,181nm,4.8s
YAK pmax pmax
comp=E,154nm,5.0s
YAK smax
comp=N,247nm,5.4s
YAK smax
comp=Z,205nm,4.7s
YAK smax
comp=E,396nm,8.2s
JLU Jordanelle 85.39 46 *e*P **P** **16 11 22.9 +0.7**
DAU Daniels Canyon 85.45 46 *e*P **P** **16 11 23.2 +0.7**
DAU *e* pP 16 11 35.3 -0.6
SRU San Rafael 85.46 48 *e*P **P** **16 11 23.1 +0.5**
comp=E,82nm,1.5s,mb5.6
SRU San Rafael 85.46 48 P **P** **16 11 23.4 +0.9**
SRU pmax pmax
comp=Z,82nm,1.5s,mb5.6
MAW Mawson 85.64 200 P **P** **16 11 21.8 -1.2**
comp=Z,9.3nm,0.9s,mb5.0,baz=126,slow=11,SNR=7.1
HWUT Hardware Ranch 85.72 45 *e*P **P** **16 11 23.3 -0.4**
comp=Z,142nm,1.9s,mb5.9
HWUT LR LR
comp=Z,1µm,21.0s,MS5.2
LZH Lanzhou 86.10 309 *e*P **P** **16 11 27.0 +1.2**
LZH AP pP 16 11 38.0 -1.2
LZH XP sP 16 11 43.5 -0.8
LZH PP PP 16 14 50.5 +3.6
LZH *e*S S 16 21 56.3 -0.8
LZH XS sS 16 22 17.0 -2.6
LZH AMB AMB
comp=Z,57nm,1.5s,mb5.6
LZH AMB AMB
comp=Z,335nm,4.4s
LZH LR LR
comp=N,1µm,18.1s
LZH LR LR
comp=Z,2µm,19.0s,MS5.4
MCMT McKenzie Canyo 86.19 42 *e*P **P** **16 11 26.6 +0.6**
MVCO Mesa Verde 86.22 50 PFAKE 16 11 40.0 +14
MVCO LR LR
comp=Z,1µm,21.0s,MS5.3
LAZ Ladron 86.25 53 *e*P **P** **16 11 27.0 +0.5**
LENM Lemitar 86.29 53 *e*P **P** **16 11 27.4 +0.6**
MSO Missoula 86.35 40 *e*P **P** **16 11 25.9 -0.9**
comp=Z,42nm,1.6s,mb5.4
MSO LR LR
comp=Z,569nm,20.0s,MS5.0
AHID Auburn Hatcher 86.50 44 *e*P **P** **16 11 27.7 +0.1**
comp=Z,19nm,0.8s,mb5.4
AHID LR LR
comp=Z,713nm,21.0s,MS5.0
CIT Chita 86.50 326 *e*P **P** **16 11 27.8 +0.4**
CIT *e* 16 11 32.9
CIT *e* 16 21 59.4
CIT pmax pmax
comp=Z,88nm,1.9s,mb5.7
BNM Barren Site 86.56 54 *e*P **P** **16 11 28.1 0.0**
BNM *e* pP 16 11 40.4 -1.2
DLMT Dillon 86.57 41 *e*P **P** **16 11 27.6 -0.3**
comp=Z,161nm,1.5s,mb6.0
LPM Los Pinos Moun 86.61 53 *e*P **P** **16 11 27.9 -0.5**
MNTX Cornudas Mount 86.72 56 PFAKE 16 11 40.0 +11
MNTX LR LR
comp=Z,1µm,19.0s,MS5.2
DCID1 Drake Creek 86.77 43 *e*P **P** **16 11 29.6 +0.7**
CHMT Chamberlain Mo 86.82 40 *e*P **P** **16 11 28.6 -0.4**
TPAW Teton Pass 86.89 44 *e*P **P** **16 11 29.8 +0.4**
comp=Z,198nm,1.7s,mb6.1
TPAW *e*PP PP 16 14 50.1 -2.9
REDW Red Top Meadow 86.90 44 *e*P **P** **16 11 29.9 +0.3**
comp=Z,222nm,1.5s,mb6.2
ANMO Albuquerque 86.96 53 *e*P **P** **16 11 30.3 +0.3**
comp=Z,42nm,1.6s,mb5.4
ANMO LR LR
comp=Z,1µm,21.0s,MS5.2
ANMO Albuquerque 86.96 53 *e*P **P** **16 11 30.3 +0.2**
ANMO pmax pmax
comp=Z,42nm,1.6s
ANMO MLR MLR
comp=Z,1µm,21.0s
SNOW Snow King Moun 87.00 44 *e*P **P** **16 11 30.9 +0.8**
comp=Z,494nm,2.1s,mb6.4
IMW Indian Meadow 87.06 43 *e*P **P** **16 11 30.6 +0.3**
comp=Z,148nm,1.4s,mb6.0
QLMT Earthquake Lak 87.11 42 *e*P **P** **16 11 31.3 +0.8**
MOOW Moose Ponds 87.12 43 *e*P **P** **16 11 31.0 +0.3**
comp=Z,196nm,2.0s,mb6.0
MOOW *e*PP PP 16 14 51.1 -3.8
LOHW Long Hollow 87.17 44 *e*P **P** **16 11 31.0 +0.2**
comp=Z,232nm,2.0s,mb6.1
LOHW *e*PP PP 16 14 51.0 -4.3
FLWY Flagg Ranch 87.29 43 *e*P **P** **16 11 32.4 +1.0**
comp=Z,267nm,1.8s,mb6.2
BOZ Bozeman (W) 87.31 41 *e*P **P** **16 11 31.7 +0.2**
comp=Z,105nm,1.6s,mb5.8
BOZ *e*PP PP 16 14 51.8 -4.6
BOZ LR LR
comp=Z,652nm,20.0s,MS5.0
BOZ Bozeman (W) 87.31 41 *e*P **P** **16 11 31.7 +0.2**
BOZ *e* 16 14 51.8
BOZ pmax pmax
comp=Z,105nm,1.6s,mb5.8
BOZ MLR MLR
comp=Z,652nm,20.0s,MS5.0
WALA Waterton Lakes 87.34 38 *e*P **P** **16 11 30.5 -1.1**
comp=Z,70nm,1.7s,mb5.6
YFT Old Faithful 87.34 43 *e*P **P** **16 11 33.7 +2.0**
YMR Madison River 87.34 43 *e*P **P** **16 11 32.9 +1.2**
comp=Z,230nm,1.6s,mb6.2
YMR LR LR
comp=Z,1µm,21.0s,MS5.3
LTX Lajitas 87.36 59 PFAKE 16 11 40.0 +7.9
LTX LR LR
comp=Z,82nm,20.0s
BW06 Boulder Array 87.54 45 PFAKE 16 11 40.0 +7.3
BW06 LR LR
comp=Z,669nm,19.0s,MS5.1
PDAR Pinedale Array 87.54 45 P **P** **16 11 32.8 +0.1**
comp=Z,19nm,1.1s,mb5.2,baz=222,slow=4.0,SNR=70
PDAR PP PP 16 14 56.0 -2.3
comp=Z,3.4nm,1.2s,baz=239,slow=4.7,SNR=6.0
PDAR LR LR 16 42 24.0
comp=Z,564nm,20.6s,MS5.0,baz=253,slow=30
YNR Norris Junctio 87.55 43 *e*P **P** **16 11 33.9 +1.3**
HRY Holter Researc 87.62 40 *e*P **P** **16 11 33.2 +0.3**
HRY *e* pP 16 11 44.7 -1.7
LKWY Lake 87.67 43 *e*P **P** **16 11 34.7 +1.4**
comp=Z,47nm,1.4s,mb5.5
LKWY LR LR
comp=Z,1µm,20.0s,MS5.3
LKWY Lake 87.67 43 *e*P **P** **16 11 34.7 +1.4**
LKWY pmax pmax
comp=Z,47nm,1.4s,mb5.5
LKWY MLR MLR
comp=Z,1µm,20.0s,MS5.3
SMCO Snowmass 88.05 49 *e*P **P** **16 11 35.4 +0.3**
comp=Z,156nm,1.9s,mb5.9
GCMT Greycliff 88.63 42 *e*P **P** **16 11 38.3 +0.6**
RLMT Red Lodge 88.63 43 *e*P **P** **16 11 38.3 +0.5**
comp=Z,74nm,1.4s,mb5.8
RLMT LR LR
comp=Z,1µm,20.0s,MS5.3
SDCO Great Sand Dun 88.64 50 *e*P **P** **16 11 38.2 +0.2**
comp=Z,65nm,1.8s,mb5.7
SDCO *e*PP PP 16 15 06.2 -1.1
SDCO LR LR
comp=Z,1µm,19.0s,MS5.3
SONM Songino Array 88.80 320 P **P** **16 11 38.8 +0.3**
SONM 16 15 06.4
SONM Songino Array 88.80 320 P **P** **16 11 38.8 +0.3**
comp=Z,6.2nm,1.1s,mb4.9,baz=121,slow=3.8,SNR=33
SONM PP PP 16 15 06.4 -1.9
comp=Z,1.5nm,1.1s,baz=96,slow=10,SNR=4.9
SONM LR LR 16 53 42.6
comp=Z,770nm,18.1s,MS5.2,baz=122,slow=37
BOD Bodaibo 89.13 331 *e*P **P** **16 11 38.6 -1.2**
BOD pmax pmax
comp=Z,14nm,1.5s,mb5.1
ISCO Idaho Springs 89.25 49 PFAKE 16 11 50.0 +9.2
ISCO LR LR
comp=Z,880nm,19.0s,MS5.2
EGMT Eagleton 89.44 40 PFAKE 16 11 50.0 +8.5
EGMT LR LR
comp=Z,506nm,20.0s,MS4.9
EDM Edmonton 89.47 34 *e*P **P** **16 11 40.7 -0.8**
EDM Edmonton 89.47 34 P **P** **16 11 41.3 -0.2**
INK Inuvik 89.78 16 *e*P **P** **16 11 40.6 -2.0**
comp=Z,503nm,1.4s
INK *e*PP PP 16 15 08.3 -7.2
INK Inuvik 89.78 16 *e*P **P** **16 11 40.7 -1.9**
INK pmax pmax
comp=Z,503nm,1.4s
INK Inuvik 89.78 16 P **P** **16 11 40.9 -1.7**
comp=Z,11nm,1.3s,mb5.0,baz=226,slow=3.4,SNR=7.2
INK LR LR 16 53 56.9
comp=Z,637nm,18.3s,MS5.1,baz=246,slow=37
PHWY Pilot Hill 89.87 47 *e*P **P** **16 11 43.9 +0.3**
PHWY *e* 16 15 22.4
GTA Gaotai 90.24 311 *e*P **P** **16 11 46.0 +0.6**
GTA AP pP 16 11 59.5 +0.6
GTA XP sP 16 12 04.8 +0.8
GTA AMB AMB
comp=Z,26nm,1.8s,mb5.3
GTA AMB AMB
comp=Z,270nm,7.3s
GTA LR LR
comp=N,467nm,22.2s
GTA LR LR
comp=E,693nm,27.5s
GTA LR LR
comp=Z,2µm,35.2s
AMTX Amarillo 90.66 54 PFAKE 16 12 00.0 +12
AMTX LR LR
comp=Z,1µm,21.0s,MS5.3
JCT Junction City 90.90 59 PFAKE 16 12 00.0 +11
JCT LR LR
comp=Z,1µm,20.0s,MS5.4
SYO Syowa Base 91.44 194⇓ *e*P **P** **16 11 47.0 -3.5**
SYO Syowa Base 91.44 194⇓ *i*pP pP 16 12 03.8 -0.2
ZAK Zakamensk 91.66 322⇓ *i*P **P** **16 11 51.3 -0.5**
ZAK *e* 16 22 55.7
ZAK pmax pmax
comp=Z,5.0nm,1.3s,mb4.7
ZAK pmax pmax
comp=Z,2.0nm,2.0s
ZAK pmax pmax
comp=Z,3.0nm,2.1s,mb4.2
ZAK pmax pmax
comp=Z,1.0nm,1.4s
KVTX Kingsville 91.70 62 PFAKE 16 12 00.0 +7.5
KVTX LR LR
comp=Z,1µm,21.0s,MS5.3
IRK Irkutsk 91.76 324⇑ *i*P **P** **16 11 51.6 -0.6**
IRK pmax pmax
comp=Z,42nm,2.9s,mb5.3
TLY Talaya 91.91 323 *e*P **P** **16 11 52.5 -0.4**
comp=Z,16nm,1.4s,mb5.2
TLY LR LR
comp=Z,2µm,22.0s,MS5.4
TLY Talaya 91.91 323 *e*P **P** **16 11 52.4 -0.5**
TLY *e*SS SS 16 29 01.4 +1.0
TLY pmax pmax
comp=Z,13nm,1.6s,mb5.0
TIXI Tiksi 92.17 346 *e*P **P** **16 11 51.5 -2.2**
comp=Z,23nm,1.4s,mb5.3
TIXI LR LR
comp=Z,921nm,21.0s,MS5.2
TIXI Tiksi 92.17 346 *e*P **P** **16 11 51.7 -2.0**
TIXI *e*S S 16 22 27.3 -25
TIXI pmax pmax
comp=Z,19nm,1.2s,mb5.3
TIXI MLR MLR
comp=Z,613nm,18.0s,MS5.1
YKA Yellowknife Ar 92.95 25 P **P** **16 11 56.5 -1.0**
YKA PKKP PKKPbc 16 29 07.5 -2.7
YKA LR LR 16 45 24.4
YKA Yellowknife Ar 92.95 25 P **P** **16 11 56.5 -1.0**
comp=Z,5.2nm,0.9s,mb5.0,baz=250,slow=4.5,SNR=64
YKA PKKP PKKPbc 16 29 07.5 -2.7
comp=Z,0.1nm,0.5s,baz=50,slow=2.4,SNR=3.8
YKA LR LR 16 45 24.4
comp=Z,597nm,21.5s,MS5.0,baz=215,slow=30
CBKS Cedar Bluff 93.28 51 PFAKE 16 12 10.0 +10
CBKS LR LR
comp=Z,640nm,19.0s,MS5.1
SNAA Sanae 93.85 180 *e*P **P** **16 12 00.6 -1.0**
SNAA Sanae 93.85 180 *e*P **P** **16 12 00.6 -1.0**
SNAA *e* 16 12 02.5
SNAA *e* 16 12 03.9
SNAA *e* 16 12 07.4
SNAA *e* pP 16 12 10.3 -4.8
SNAA *e* pP 16 12 14.3 -0.8
SNAA *e* pP 16 12 16.5 +1.4
SNAA *e* 16 12 20.1
SNAA *e* 16 12 29.4
HKT Hockley 94.07 60 PFAKE 16 12 10.0 +6.6
HKT LR LR
comp=Z,1µm,19.0s,MS5.4
VNA3 Neumayer Olymp 94.12 178 *e*P **P** **16 12 01.8 -1.1**
VNA3 Neumayer Olymp 94.12 178 *e*P **P** **16 12 01.8 -1.1**
VNA3 *e* 16 12 03.2
VNA3 *e* 16 12 05.0
VNA3 *e* 16 12 08.7
VNA3 *e* pP 16 12 11.5 -4.9
VNA3 *e* pP 16 12 14.5 -1.9
VNA3 *e* pP 16 12 17.7 +1.3
VNA3 *e* 16 12 24.0
VNA3 *e* 16 12 32.7
VNA3 *e* 16 22 51.8
VNA3 *e* 16 22 58.3
MAIT Maitri 94.21 185 *e*P **P** **16 12 07.1 +3.8**
LSA Lhasa 94.36 299 *e*P **P** **16 12 05.1 +0.4**
LSA LR LR
comp=Z,813nm,22.0s,MS5.2
VNA2 Neumayer--Watz 94.52 178 *e*P **P** **16 12 03.3 -1.4**
baz=293,slow=9.3
VNA2 Neumayer--Watz 94.52 178 *e*P **P** **16 12 03.3 -1.4**
baz=192,slow=2.1
VNA2 *e* 16 12 04.7
VNA2 *e* 16 12 06.2
VNA2 *e* 16 12 10.2
VNA2 *e* pP 16 12 14.6 -3.6
VNA2 *e* pP 16 12 17.8 -0.4
VNA2 *e* pP 16 12 21.0 +2.8
VNA2 *e* 16 12 26.0
VNA2 *e* 16 12 37.0
VNA2 *e* 16 22 55.0
VNA2 *e* 16 22 59.4
VNA1 Neumayer--Stat 94.77 178 *e*P **P** **16 12 05.4 -0.4**
VNA1 Neumayer--Stat 94.77 178 *e*P **P** **16 12 05.4 -0.4**
VNA1 *e* 16 12 06.8
VNA1 *e* 16 12 08.5
VNA1 *e* 16 12 12.0
VNA1 *e* pP 16 12 15.5 -3.9
VNA1 *e* pP 16 12 18.8 -0.6
VNA1 *e* pP 16 12 21.1 +1.7
VNA1 *e* 16 12 27.5
VNA1 *e* 16 12 36.3
VNA1 *e* 16 22 57.3
VNA1 *e* 16 23 01.7
NATX Nacogdoches 95.49 59 PFAKE 16 12 20.0 +10
NATX LR LR
comp=Z,2µm,21.0s,MS5.6
KSU1 Kansas State U 95.71 51 PFAKE 16 12 20.0 +9.3
KSU1 LR LR
comp=Z,958nm,19.0s,MS5.3
PLCA Paso Flores 96.12 135 LR LR 16 45 53.5
comp=Z,882nm,21.4s,MS5.2,baz=236,slow=29
FFC Flin Flon 96.28 35 PFAKE 16 12 20.0 +7.1
FFC LR LR
comp=Z,1µm,21.0s,MS5.4
ECSD EROS,Sioux Fal 96.82 47 PFAKE 16 12 30.0 +14
ECSD LR LR
comp=Z,1µm,20.0s,MS5.4
MIAR Mount Ida 97.02 56 PFAKE 16 12 30.0 +13
MIAR LR LR
comp=Z,923nm,19.0s,MS5.3
TGUH Tegucigalpa,Un 98.07 78 PFAKE 16 12 30.0 +8.1
TGUH LR LR
comp=Z,925nm,19.0s,MS5.3
AGMN Agassiz Refuge 98.37 42 PFAKE 16 12 30.0 +7.5
AGMN LR LR
comp=Z,823nm,21.0s,MS5.2
TEIG Tepich 98.50 71 PFAKE 16 12 30.0 +6.3
TEIG LR LR
comp=Z,1µm,21.0s,MS5.4
PALK Pallekele 98.71 275 PFAKE 16 12 40.0 +15
PALK LR LR
comp=Z,446nm,20.0s,MS5.0
JTS JuntasAbangare 99.43 82 PFAKE 16 12 40.0 +12
JTS LR LR
comp=Z,1µm,20.0s,MS5.5
WMQ Urumqi 100.14 313 *e*P Pdif 16 12 29.5 -0.9
WMQ AP 16 12 43.0
WMQ XP 16 12 48.5
WMQ PP PP 16 16 37.3 +0.6

WMQ AMB AMB
comp=Z,13nm,1.1s
WMQ AMB AMB
comp=Z,168nm,4.0s
WMQ LR LR
comp=N,930nm,27.0s,MS5.5
WMQ LR LR
comp=E,2μm,28.0s,MS5.5
WMQ LR LR
comp=Z,3μm,25.2s,MS5.6
LCO Las Campanas 100.84 124 PFAKE 16 12 50.0 +16
LCO LR LR
comp=Z,2μm,22.0s,MS5.5
EYMN Ely 101.18 43 PFAKE 16 12 50.0 +15
EYMN LR LR
comp=Z,745nm,19.0s,MS5.2
JFWS Jewell Farm 101.21 48 PFAKE 16 12 50.0 +15
JFWS LR LR
comp=Z,1μm,19.0s,MS5.4
NNA Nana 101.40 106 PFAKE 16 12 50.0 +14
NNA LR LR
comp=Z,250nm,19.0s,MS4.8
HDIL Hopedale 101.52 51 PFAKE 16 12 50.0 +13
HDIL LR LR
comp=Z,1μm,19.0s,MS5.4
PLAL Pickwick Lake 101.54 57 PFAKE 16 12 50.0 +13
PLAL LR LR
comp=Z,1μm,20.0s,MS5.5
BRAL Brewton 101.70 61 PFAKE 16 12 50.0 +13
BRAL LR LR
comp=Z,799nm,20.0s,MS5.2
LRAL Lakeview Retre 102.09 59 PFAKE 16 12 50.0 +11
LRAL LR LR
comp=Z,1μm,21.0s,MS5.4
COWI Conover 102.49 45 PFAKE 16 12 50.0 +9.2
COWI LR LR
comp=Z,903nm,21.0s,MS5.3
TRQA Tornquist 103.24 135 PFAKE 16 13 00.0 +16
TRQA LR LR
comp=Z,1μm,22.0s,MS5.4
OTAV Otavalo 103.29 93 PFAKE 16 13 00.0 +16
OTAV LR LR
comp=Z,466nm,22.0s,MS5.0
RES Resolute Bay 103.33 16 *e*P Pdif 16 12 42.6 -2.0
comp=Z,953nm,1.8s
RES Resolute Bay 103.33 16 P Pdif 16 12 43.5 -1.1
RES pmax pmax
comp=Z,950nm,1.7s
ZAA0 Zalesovo Array 103.51 323 *e*Pdif Pdif 16 12 44.4 -1.0
ZALV Zalesovo Beam 103.51 323 Pdiff Pdif 16 12 44.2 -1.2
comp=Z,0.3nm,0.5s,baz=103,slow=4.7,SNR=5.7
ZAL Zalesovo 103.53 323 P Pdif 16 12 44.2 -1.2
MKAR Makanchi Array 104.34 315 Pdif Pdif 16 12 48.7 -0.4
MKAR Makanchi Array 104.34 315 Pdiff Pdif 16 12 48.7 -0.4
comp=Z,0.2nm,0.2s,baz=79,slow=6.3,SNR=5.3
GOGA Godfrey 105.08 59 PFAKE 16 17 20.0 +13
GOGA LR LR
comp=Z,1μm,20.0s,MS5.5
HOPE Hope Point 105.33 160 PFAKE 16 17 20.0 +13
HOPE LR LR
comp=Z,6.0nm,20.0s
TZTN Tazewell 105.41 56 PFAKE 16 17 20.0 +12
TZTN LR LR
comp=Z,829nm,21.0s,MS5.2
AAM Ann Arbor 105.95 50 PFAKE 16 17 20.0 +11
AAM LR LR
comp=Z,1μm,21.0s,MS5.5
DWPF Disney 106.07 65 PFAKE 16 17 20.0 +11
DWPF LR LR
comp=Z,893nm,20.0s,MS5.3
ACSO Alum Creek Sta 106.26 52 PFAKE 16 17 20.0 +11
ACSO LR LR
comp=Z,1μm,19.0s,MS5.4
KURK Kurchatov 107.06 319 PFAKE 16 17 20.0 +10
KURK LR LR
comp=Z,1μm,20.0s,MS5.4
NHSC New Hope 107.77 60 PFAKE 16 17 20.0 +7.7
NHSC LR LR
comp=Z,1μm,20.0s,MS5.4
BLA Blacksburg 107.97 55 PFAKE 16 17 20.0 +7.5
BLA LR LR
comp=Z,880nm,20.0s,MS5.3
MCWV Mont Chateau 108.61 53 PFAKE 16 17 30.0 +16
MCWV LR LR
comp=Z,1μm,19.0s,MS5.6
ERPA Erie 108.66 50 PFAKE 16 17 30.0 +16
ERPA LR LR
comp=Z,736nm,21.0s,MS5.2
TKM2 Tokmak 2 108.79 311 PFAKE 16 17 30.0 +16
TKM2 LR LR
comp=Z,1μm,22.0s,MS5.4
UCH Uchtor 109.56 310 PFAKE 16 17 30.0 +15
UCH LR LR
comp=Z,1μm,20.0s,MS5.5
CNNC Cliffs of the 109.86 58 PFAKE 16 17 30.0 +14
CNNC LR LR
comp=Z,2μm,20.0s,MS5.6
EKS2 Erkin-Say 110.12 310 PFAKE 16 17 30.0 +14
EKS2 LR LR
comp=Z,1μm,22.0s,MS5.3
AML Almayashu 110.16 310 PFAKE 16 17 30.0 +14
AML LR LR
comp=Z,1μm,22.0s,MS5.5
SSPA Standing Stone 110.17 52 PFAKE 16 17 30.0 +13
SSPA LR LR
comp=Z,1μm,21.0s,MS5.4
CBN Corbin 110.45 54 PFAKE 16 17 30.0 +13
CBN LR LR
comp=Z,1μm,21.0s,MS5.4
BINY Binghamton 111.63 50 PFAKE 16 17 30.0 +11
BINY LR LR
comp=Z,1μm,20.0s,MS5.5
BRVK Borovoye 112.17 322 PFAKE 16 17 30.0 +10
BRVK LR LR
comp=Z,880nm,21.0s,MS5.3
LONY Lake Ozonia 112.63 48 PFAKE 16 17 30.0 +8.9
LONY LR LR
comp=Z,941nm,20.0s,MS5.4
SDV Santo Domingo 112.90 86 PFAKE 16 17 30.0 +7.5
SDV LR LR
comp=Z,168nm,19.0s,MS4.7
NCB Newcomb 112.91 48 PFAKE 16 17 30.0 +8.4
NCB LR LR
comp=Z,964nm,21.0s,MS5.4
SDDR Presa de Saban 114.04 76 PFAKE 16 17 40.0 +15
SDDR LR LR
comp=Z,1μm,20.0s,MS5.5
LBNH Lisbon 114.55 48 PFAKE 16 17 40.0 +15
LBNH LR LR
comp=Z,1μm,19.0s,MS5.4
WES Weston 115.09 50 PFAKE 16 17 40.0 +14
WES LR LR
comp=Z,2μm,21.0s,MS5.6
KBS Kingsbay 115.39 357 PFAKE 16 17 40.0 +15
KBS LR LR
comp=Z,995nm,22.0s,MS5.4
KBS Kingsbay 115.39 357 *e*SS SS 16 34 27.8 +6.3
KBS AMS AMS 16 58 13.2
comp=Z,353nm,23.5s,MS4.9
PKME Peaks-Kenny Pk 116.34 47 PFAKE 16 17 40.0 +12
PKME LR LR
comp=Z,1μm,19.0s,MS5.5
ARU Arti 118.21 327 PFAKE 16 17 40.0 +8.6
ARU LR LR
comp=Z,1μm,21.0s,MS5.5
ARU Arti 118.21 327 *i* PKIKP PKPdf 16 17 30.4 -1.0
ARU 16 24 31.0
ARU MLR MLR
comp=Z,1μm,19.0s,MS5.5
SFJD Kangerlussuaq 118.94 20 PFAKE 16 17 40.0 +7.5
SFJD LR LR
comp=Z,1μm,22.0s,MS5.4
AKTK Aktyubinsk 120.12 320 PKP PKPdf 16 17 34.3 -1.0
AKTO Aktyubinsk 120.12 320 PKP PKPdf 16 17 34.3 -1.0
comp=Z,2.6nm,0.9s,baz=94,slow=2.6,SNR=6.2
BBSR BB Station 120.77 61 PFAKE 16 17 50.0 +13
BBSR LR LR
comp=Z,567nm,20.0s,MS5.2
LVZ Lovozero 121.78 345 PFAKE 16 17 50.0 +12
LVZ LR LR
comp=Z,1μm,19.0s,MS5.5
KEV Kevo 122.04 348 PFAKE 16 17 50.0 +12
KEV LR LR
comp=Z,2μm,20.0s,MS5.7
JMIC Jan Mayen 123.59 3 *e*SS SS 16 36 07.6 +6.0

JOF Joensuu 126.42 342 *e*pkp 16 17 34.9
SUR Sutherland 128.30 205 PFAKE 16 18 00.0 +8.4
SUR LR LR
comp=Z,790nm,20.0s,MS5.4
MOS Moscow 128.95 332 *e* PKPdf 16 17 50.8 -1.2
MOS *e* 16 18 06.3
MOS MLR MLR
comp=Z,2μm,22.0s,MS5.6
FINES FINESS Array B 129.11 343 PKP PKPdf 16 17 51.7 -0.4
FINES FINESS Array B 129.11 343 PKP PKPdf 16 17 51.7 -0.4
comp=Z,6.6nm,1.1s,baz=35,slow=7.0,SNR=9.4
OBN Obninsk 129.81 332 PFAKE 16 18 00.0 +6.3
OBN LR LR
comp=Z,1μm,20.0s,MS5.5
OBN Obninsk 129.81 332⇑ *i*PKIKP PKPdf 16 17 47.1 -6.6
OBN *e*PS PS 16 30 03.5 -13
OBN *e*SS SS 16 37 43.3 +18
OBN pmax pmax
comp=Z,51nm,1.5s
ZEI Tsey 131.70 315 *e*PKIKP PKPdf 16 17 53.5 -4.2
ZEI *e* 16 20 20.2
KIV Kislovodsk 132.07 317 PFAKE 16 18 10.0 +12
KIV LR LR
comp=Z,1μm,20.0s,MS5.6
KIV Kislovodsk 132.07 317⇑ *i*PKIKP PKPdf 16 17 53.6 -4.7
KIV *e* 16 20 20.7
KIV *e*PS PS 16 30 31.8 -4.6
KIV *e*SS SS 16 37 57.1 +3.0
KIV pmax pmax
comp=Z,16nm,1.8s
KIV MLR MLR
comp=Z,1μm,18.0s,MS5.6
BER Bergen 134.05 355 *e* PP 16 20 26.8 -5.0
BER *e*SS SS 16 38 25.7 +10
BER AMS AMS 17 08 26.6
comp=Z,442nm,24.0s,MS5.1
SOC Sochi 134.18 317 *i* PKIKP PKPdf 16 17 55.6 -6.7
SOC *e* 16 20 31.7
SOC *e*PPP 16 23 30.4
SOC *e* 16 25 06.6
SOC *e* 16 32 32.7
SOC *e*SSS 16 43 14.3
KONO Kongsberg 134.29 352 PFAKE 16 18 10.0 +8.0
KONO LR LR
comp=Z,916nm,21.0s,MS5.5
AKASG Malin Array Be 136.06 332 PKP PKPdf 16 18 05.0 -0.6
comp=Z,0.2nm,0.2s,baz=52,slow=1.4,SNR=7.1
KIEV Kiev 136.07 332 PFAKE 16 18 20.0 +14
KIEV LR LR
comp=Z,1μm,22.0s,MS5.5
LSZ Lusaka 137.75 226 *e*PKPdf PKPdf 16 18 10.0 +0.2
LSZ LR LR
comp=Z,995nm,19.0s,MS5.6
LSZ Lusaka 137.75 226 *e*PKIKP PKPdf 16 18 10.4 +0.6
LSZ *e* 16 18 22.4
KMBO Kilima Mbogo 137.98 251 *e*PKPdf PKPdf 16 18 10.7 +0.4
KMBO LR LR
comp=Z,498nm,21.0s,MS5.2
KMBO Kilima Mbogo 137.98 251 PKP PKPdf 16 18 10.9 +0.6
comp=Z,3.7nm,1.1s,baz=109,slow=1.6,SNR=6.0
ESK Eskdalemuir 139.45 1 PFAKE 16 18 20.0 +8.3
ESK LR LR
comp=Z,674nm,19.0s,MS5.4
OJC Ojcow 140.34 338 *e*PKP PKPdf 16 18 16.2 +2.7
KOLS Kolonicke sedl 140.41 335 *e*PKP PKPdf 16 18 13.9 +0.3
STHS Stebnicka Huta 140.44 336 *e*PKP PKPdf 16 18 14.1 +0.4
ANTO Ankara 140.49 316 PFAKE 16 18 30.0 +16
ANTO LR LR
comp=Z,586nm,20.0s,MS5.3
UZH Uzhgorod 140.63 334⇓ *i*PKIKP PKPdf 16 18 12.4 -1.7
UZH *i* 16 18 19.0
UZH MLR MLR
comp=Z,1μm,20.0s,MS5.6
CRVS Cervenica-Dubn 140.76 335 *e*PKP PKPdf 16 18 12.9 -1.4
RCBR Riachuelo 140.80 119 PFAKE 16 18 30.0 +15
RCBR LR LR
comp=Z,608nm,22.0s,MS5.3
KSP Ksiaz 140.99 341 *e*PKP PKPdf 16 18 15.8 +1.2
KSP *e*SS SS 16 39 33.0 -5.7
KSP LR LR
comp=Z,2μm,26.4s,MS5.7
TSUM Tsumeb 141.13 211 PFAKE 16 18 30.0 +14
TSUM LR LR
comp=Z,862nm,20.0s,MS5.5
OKC Ostrava-Krasne 141.24 339 *e*PKP PKPdf 16 18 14.6 -0.5
UPC Upice 141.37 341 *e*PKP PKPdf 16 18 15.5 +0.2
DPC Dobruska-Polom 141.41 341 *e*PKP PKPdf 16 18 10.5 -4.9
KECS Kecovo 141.49 336 *e*PKP PKPdf 16 18 11.8 -3.8
CLL Collm 141.50 345 *i* PKP PKPdf 16 18 15.7 +0.2
CLL Collm 141.50 345 *e*PKPpre 16 18 10.0
CLL *i* PKPdf PKPdf 16 18 15.7 +0.2
comp=Z,18nm,1.5s
CLL *i* PKiKP PKiKP 16 18 17.9 -0.4
CLL *i* x x 16 18 32.4
CLL *e*PP PP 16 21 19.0 +0.8
CLL *e*PKSdf 16 21 55.0
CLL *e*PPP 16 24 32.0
CLL *e*SKKSac SKKSac 16 28 20.0 +12
CLL *e*PSKS 16 31 29.0
CLL *e*SKKSdf SKKSdf 16 34 50.0 +4.5
CLL *e*SS SS 16 39 51.0 +6.5
CLL *e*PSS 16 40 30.0
CLL *e*SSS 16 45 12.0
CLL *e*SSSS 16 48 48.0
CLZ Clausthal 141.61 348 *e*PKPdf PKPdf 16 18 15.4 -0.3
BRG Berggiesshubel 141.64 344 *e*PKPdf PKPdf 16 18 16.4 +0.6
BRG Berggiesshubel 141.64 344 *e*P PKPdf 16 18 16.1 +0.3
comp=Z,18nm,1.5s
IBBN Ibbenburen 141.65 350 *e*PKPdf PKPdf 16 18 15.9 +0.1
PVCC Panska Ves 141.78 343 *e*PKP PKPdf 16 18 11.7 -4.3
VYHS Vyhne 142.12 337 *e*PKP PKPdf 16 18 14.5 -2.2
PSZ Piszkesteto 142.18 336⇓ *e*PKP PKPdf 16 18 15.1 -1.8
PRU Pruhonice 142.27 342 *e*PKP PKPdf 16 18 13.3 -3.6
PRU AMS AMS 17 14 20.0
comp=Z,1μm,30.6s
TREC Trest 142.59 341 AMS AMS 17 16 40.0
comp=Z,1μm,26.7s
NKC Novy Kostel 142.62 345 *e*PKP PKPdf 16 18 17.6 0.0
NKC AMS AMS 17 14 40.0
comp=Z,2μm,26.3s
UBBA Unterbreizbach 142.65 347 *e*PKPdf PKPdf 16 18 17.9 +0.3
MODS Modra-Piesok 142.79 339 *e*PKP PKPdf 16 18 18.4 +0.5
MODS *e* 16 18 27.4
MODS Modra-Piesok 142.79 339 *e*PKP PKPdf 16 18 18.3 +0.4
MODS *e* 16 18 27.4
ISP Isparta 143.04 315 *e*PKPdf PKPdf 16 18 12.9 -5.8
ROTZ Rotzenmuhle 143.11 344 *e*PKPdf PKPdf 16 18 14.5 -3.9
KHC Kasperske Hory 143.31 343 *e*PKHKP 16 18 10.8
KHC *e* PKPdf 16 18 16.0 -2.8
KHC MLR MLR
comp=Z,1μm,25.2s,MS5.5
KHC Kasperske Hory 143.31 343 *e*PKP 16 18 10.8
KHC *ex* PKPdf 16 18 16.0 -2.8
KHC x x 16 19 24.5
KHC AMS AMS 17 14 50.0
comp=Z,1μm,25.2s
GRA1 Grafenberg Arr 143.43 345 *e*PKPdf PKPdf 16 18 16.3 -2.7
GRA1 LR LR
comp=Z,1μm,18.3s,MS5.6
GRF Grafenberg Arr 143.43 345 *e*PKPdf PKPdf 16 18 16.3 -2.7
GRF *e*L 17 09 45.9
comp=Z,971nm,18.3s
GRFO Grafenberg 143.43 345 PFAKE 16 18 30.0 +11
GRFO LR LR
comp=Z,1μm,22.0s,MS5.7
WET Wettzell 143.50 343 *e*PKPdf PKPdf 16 18 16.2 -3.0
TNS Taunus Mts 143.53 349 *e*PKPdf PKPdf 16 18 16.4 -2.8
GEC2 GERESS Array S 143.54 342 PKIKP PKPdf 16 18 18.0 -1.2
GEC2 GERESS Array S 143.54 342 *e*PKPdf PKPdf 16 18 16.0 -3.2
GERES GERESS Array B 143.54 342 PKhKP 16 18 15.3
comp=Z,1.9nm,0.9s,baz=99,slow=8.2,SNR=10
MEM Membach 143.57 351 PKPdf PKPdf 16 18 17.7 -1.6
SOP Sopron 143.63 339⇑ *e*PKP PKPdf 16 18 16.7 -2.7
CONA Conrad Observa 143.66 339⇑ *i*PKPdf PKPdf 16 18 17.6 -1.8
comp=Z,17nm,1.4s
BCLA Clavier 143.86 352 PKPdf PKPdf 16 18 17.9 -1.8
PGB Panagyurishte 144.18 326 *i* P PKPdf 16 18 19.2 -1.4
PLD Plovdiv 144.19 325 *i* P PKPdf 16 18 18.6 -2.0
GIVF Givet 144.23 352 *e*PKP1 PKPdf 16 18 17.2 -3.2
MOA Molln 144.25 341⇑ *i*P PKPdf 16 18 18.7 -1.8
comp=Z,54nm,1.2s
DOU Dourbes 144.27 353 PKPdf PKPdf 16 18 18.7 -1.8
BAIF Baives 144.35 353 *e*PKP1 PKPdf 16 18 17.8 -2.8

comp=Z,54nm,1.2s
ARSA Arzberg 144.36 339⇑ *i*P PKPdf 16 18 19.4 -1.3
comp=Z,16nm,1.1s
RZN Rozhen 144.46 324 *i* P PKPdf 16 18 19.3 -1.8
WLF Walferdange 144.47 351 *e*PKPdf PKPdf 16 18 19.6 -1.2
WLF Walferdange 144.47 351 PKIKP PKPdf 16 18 20.1 -0.7
WLF Walferdange 144.47 351 PKPdf PKPdf 16 18 19.8 -1.0
WLF Walferdange 144.47 351 *e*PKPdf PKPdf 16 18 19.8 -1.0
VTS Vitosha 144.67 327 *i* P PKPdf 16 18 20.4 -1.0
STU Stuttgart 144.76 347 *e*PKPdf PKPdf 16 18 20.4 -1.0
FUR Furstenfeldbru 144.83 344 *e*PKPdf PKPdf 16 18 21.1 -0.4
LANF Langenberg 144.84 349 PKP PKPdf 16 18 16.7 -4.8
PERS Pernice 145.03 339 *i* PKPdf PKPdf 16 18 20.7 -1.2
PERS *e* 16 18 35.0
MMB Musomiste 145.07 325 *i* P PKPbc 16 18 21.8 +0.2
KBA Koelnbreinsper 145.22 341⇑ *i*P PKPbc 16 18 21.8 -0.1
comp=Z,87nm,1.6s
KKB Krupnik 145.24 326 *i* P PKPbc 16 18 22.0 -0.1
ZAVS Zavodnje 145.24 339 *e*PKPdf PKPdf 16 18 20.9 -1.4
OBKA Obir 145.34 340⇑ *i*P PKPbc 16 18 22.1 -0.2
comp=Z,40nm,1.1s
BFO Black Forest 145.36 348 *e*PKPdf PKPdf 16 18 22.0 -0.4
LOS Limnos 145.37 322 *e*P PKPbc 16 18 22.6 0.0
SPAK Spaichingen-Ko 145.48 347 PKP PKPdf 16 18 18.0 -4.6
CDF Champ du Feu 145.49 349 *e*PKP1 PKPbc 16 18 21.7 -1.0
comp=Z,478nm,1.5s
WATA Walderalm 145.51 343⇑ *i*P PKPdf 16 18 23.1 +0.4
comp=Z,110nm,1.3s
WATA Walderalm 145.51 343⇑ *i*pPKPbc PKPdf 16 18 23.1 +0.4
comp=Z,110nm,1.3s
MYKA Terra Mystica 145.53 341⇑ *i*PKPdf PKPdf 16 18 22.6 -0.2
comp=Z,252nm,1.4s
LEGS Legarje 145.55 338 *e*PKPdf PKPdf 16 18 22.0 -0.8
WTTA Wattenberg 145.56 343⇑ *i*P PKPdf 16 18 23.6 +0.8
comp=Z,132nm,1.2s
WTTA Wattenberg 145.56 343⇑ *i*pPKPbc PKPdf 16 18 23.6 +0.8
comp=Z,132nm,1.2s
SISC Sisak 145.57 337 P PKPdf 16 18 22.5 -0.3
RETA Reutte 145.59 344⇑ *i*pPKPbc PKPdf 16 18 23.6 +0.8
comp=Z,134nm,1.2s
MOTA Moosalm 145.63 344⇑ *i*P PKPdf 16 18 23.6 +0.7
comp=Z,135nm,1.3s
MOTA Moosalm 145.63 344⇑ *i*pPKPbc PKPdf 16 18 23.6 +0.7
comp=Z,135nm,1.3s
ECH Echery 145.70 349 PKP PKPdf 16 18 16.5 -6.5
CHOS Chios Island 145.71 319 *e*P PKPdf 16 18 22.1 -1.2
SQTA Sankt Quirin 145.71 344⇑ *i*P PKPdf 16 18 23.9 +0.9
comp=Z,135nm,1.3s
SQTA Sankt Quirin 145.71 344⇑ *i*pPKPbc PKPdf 16 18 23.9 +0.9
comp=Z,135nm,1.3s
LJU Ljubljana 145.75 339 *e*PKPdf PKPdf 16 18 22.7 -0.5
LJU *e* 16 18 36.5
OUR Ouranopolis 145.76 323 *e*P PKPbc 16 18 22.6 -0.8
MEZF Maizieres J'vi 145.77 351 *e*PKP1 PKPbc 16 18 22.7 -0.9
comp=Z,617nm,1.6s
ABTA Abfaltersbach 145.77 342⇑ *i*PKPab PKPab 16 18 23.5 -0.5
comp=Z,74nm,1.1s
KNT Kendrikon 145.82 325 *e*P PKPdf 16 18 22.7 -0.7
STIP Stip 145.84 327 *e*PKP PKPdf 16 18 22.8 -0.6
FELD Feldberg im Sc 145.86 348 PKP PKPdf 16 18 19.8 -3.5
VAY Valandovo 145.89 326 *e*PKP PKPdf 16 18 22.9 -0.6
THEF They Montfort 145.89 350 PKP PKPdf 16 18 17.6 -5.7
ROBS Robic 145.91 340 *e*PKPdf PKPdf 16 18 22.0 -1.4
BOJS Bojanci 145.96 338 *e*PKPdf PKPdf 16 18 23.6 +0.1
BOJS *e* 16 18 35.0
VOY Vojsko 145.97 340 *e*PKPdf PKPdf 16 18 23.3 -0.2
VOY *e* 16 18 27.0
DAVA Damuels 146.00 345⇑ *i*P PKPdf 16 18 25.0 +1.5
comp=Z,170nm,1.3s
DAVA Damuels 146.00 345⇑ *i*pPKPdf PKPdf 16 18 25.0 +1.5
comp=Z,170nm,1.3s
FLN La Foliniere 146.00 358 *e*PKP1 PKPbc 16 18 22.8 -1.5
comp=Z,420nm,1.3s
FLN *e*MLR MLR
comp=Z,798nm,21.8s,MS5.2
FLN La Foliniere 146.00 358 *e*PKIKP PKPdf 16 18 22.8 -0.7
FLN MLR MLR
comp=Z,800nm,21.8s,MS5.5
FETA Feichten 146.03 344⇑ *i*pPKPdf PKPdf 16 18 25.0 +1.4
comp=Z,101nm,1.3s
SKO Skopje 146.03 328 *e*PKP PKPdf 16 18 23.1 -0.6
JAVS Javornik 146.04 340 *e*PKPdf PKPdf 16 18 23.3 -0.4
JAVS *i* 16 18 35.5
HAU Haudompre 146.05 350 *e*PKP1 PKPbc 16 18 23.5 -1.0
comp=Z,414nm,1.5s
HAU *e*MLR MLR
comp=Z,711nm,22.8s,MS5.1
HAU Haudompre 146.05 350 *e*PKP2 PKPab 16 18 23.5 -1.5
HAU MLR MLR
comp=Z,710nm,22.8s,MS5.4
MOF Molkenrain 146.06 349 PKP PKPdf 16 18 19.5 -4.1
HORT Hortiatis 146.09 324 *e*P PKPdf 16 18 23.6 -0.4
HINF Hinteralfeld 146.14 349 *e*PKP1 PKPbc 16 18 23.6 -1.1
comp=Z,287nm,1.6s
LDF La Druitiere 146.16 358 *e*PKP1 PKPbc 16 18 23.3 -1.5
comp=Z,455nm,1.7s
GRR Gorron 146.38 358 *e*PKP1 PKPbc 16 18 24.2 -1.2
comp=Z,364nm,1.5s
ROSF Rostrenen 146.44 1 *e*PKP1 PKPbc 16 18 24.1 -1.5
comp=Z,333nm,1.8s
DAVOX Davos/Dischmat 146.47 345 PKPbc PKPbc 16 18 25.3 -0.5
comp=Z,16nm,0.9s,baz=34,slow=10,SNR=18
SGMF Saint Gilles 146.53 1 *e*PKP1 PKPbc 16 18 24.4 -1.5
KRUS Krusevo 146.56 327 *e*PKP PKPdf 16 18 23.9 -0.8
LOMF Lomont 146.59 349 PKP PKPdf 16 18 20.6 -3.9
LIT Litokhoron 146.77 324 *e*P PKPdf 16 18 23.2 -1.9
BIA Bitola 146.77 327 *e*PKP PKPdf 16 18 24.4 -0.7
QUIF Quistinic 146.86 1 *e*PKP1 PKPbc 16 18 25.2 -1.6
NVLJ Novalja 146.90 337 P PKPdf 16 18 24.2 -0.9
FNA Florina 146.91 326 *e*P PKPdf 16 18 25.3 0.0
OHR Ohrid 146.98 327 *e*PKP PKPdf 16 18 24.8 -0.6
LOR Lormes 147.14 352 *e*PKP1 PKPbc 16 18 26.6 -1.0
comp=Z,130nm,1.3s
LOR *e*MLR MLR
comp=Z,609nm,20.5s,MS5.1
LOR Lormes 147.14 352 *e*PKP2 PKPbc 16 18 26.6 -1.0
LOR MLR MLR
comp=Z,610nm,20.5s,MS5.4
STON Ston 147.15 333 P PKPdf 16 18 22.5 -3.1
HYF Humbligny 147.28 354 *e*PKP1 PKPbc 16 18 27.3 -0.7
SSF Saint Saulge 147.39 353 *e*PKP1 PKPbc 16 18 27.5 -0.8
comp=Z,228nm,1.3s
CABF La Chapelle 147.44 349 *e*PKP1 PKPbc 16 18 28.0 -0.5
comp=Z,270nm,1.7s
AVF Avril sur Loir 147.67 353 *e*PKP1 PKPbc 16 18 27.9 -1.2
comp=Z,153nm,1.6s
MEV Metsovon 147.69 325 *e*P PKPbc 16 18 30.0 +0.6
SMF Signal de Mont 147.75 352 *e*PKP1 PKPbc 16 18 28.2 -1.2
comp=Z,219nm,1.5s
LTK Loutraki 147.85 321 *e*P PKPdf 16 18 25.8 -1.1
BGF Bois d'Agland 147.96 354 *e*PKP1 PKPbc 16 18 28.9 -1.0
comp=Z,195nm,1.4s
MFF Saint Martin d 148.15 357 *e*PKP1 PKPbc 16 18 29.2 -1.2
comp=Z,196nm,1.5s
TCF Toul-Ste Croi 148.29 354 *e*PKP1 PKPbc 16 18 29.7 -1.1
comp=Z,214nm,1.5s
SELA Sela 148.34 322 *e*P PKPdf 16 18 27.0 -0.7
LPL La Plagne 148.37 348 *e*PKP1 PKPbc 16 18 30.8 -0.2
comp=Z,153nm,1.6s
LPG La Plagne 148.39 348 *e*PKP1 PKPbc 16 18 31.0 -0.1
comp=Z,125nm,1.4s
AGO Saint Agoulin 148.43 353 PKP PKPdf 16 18 28.0 +0.4
PLDF La Plantade 148.45 352 PKP PKPdf 16 18 28.3 +0.6
VLX Vlachokerasia 148.63 321 *e*P PKPdf 16 18 31.3 +3.1
PYM Petit Puy Mans 148.74 353 PKP PKPdf 16 18 28.5 +0.4
GVD Gavdhos 149.03 315 *e*PKPbc PKPbc 16 18 33.5 +0.4
ORIF Oris-en-Rattie 149.11 349 *e*PKP1 PKPbc 16 18 32.3 -0.7
ORIF *e*MLR MLR
comp=Z,730nm,20.5s,MS5.2
MBDF Montbardon 149.12 348 *e*PKP1 PKPbc 16 18 32.3 -0.7
comp=Z,212nm,1.8s
LBL Lubilhac 149.22 353 PKP PKPdf 16 18 30.1 +1.2
PYL PYLOS 149.32 321 *e*P PKPdf 16 18 29.9 +0.5
RJF Les Rejaudoux 149.33 355 *e*PKP1 PKPbc 16 18 32.5 -1.0
RJF *e*MLR MLR
comp=Z,627nm,20.0s,MS5.1
RJF Les Rejaudoux 149.33 355 *e*PKP2 PKPbc 16 18 32.5 -1.0
RJF MLR MLR
comp=Z,630nm,20.0s,MS5.4
VIVF Saint-Julien-l 149.38 350 *e*PKP1 PKPbc 16 18 32.9 -0.7
comp=Z,153nm,1.5s
CAF Calviac 149.66 354 *e*PKP1 PKPbc 16 18 33.5 -0.8
AUTN L'Aution 149.68 346 PKP PKPdf 16 18 29.0 -0.7
TOUF Mont Tournerai 149.70 347 PKP PKPdf 16 18 29.3 -0.4

LFF	**La Frestale**	**149.75**	**356**	*e*PKP1		PKPbc	16 18 33.5	-1.0
	comp=Z,323nm,1.7s							
LUCF	**Luceram**	**149.79**	**346**	PKP		PKPdf	16 18 30.0	+0.1
SBF	**Sospel**	**149.80**	**346**	*e*PKP1		PKPbc	16 18 33.3	-1.4
	comp=Z,261nm,1.5s							
SMRF	**Simiane la Rot**	**150.08**	**349**	*e*PKP1		PKPbc	16 18 35.0	-0.4
	comp=Z,217nm,1.4s							
FRF	**La Foret Royal**	**150.26**	**347**	*e*PKP1		PKPbc	16 18 34.5	-1.3
	comp=Z,204nm,1.5s							
LASF	**Ste Croix**	**150.27**	**351**	*e*PKP1		PKPbc	16 18 35.1	-0.7
LMR	**La Mourre**	**150.51**	**347**	*e*PKP1		PKPbc	16 18 35.1	-1.3
	comp=Z,217nm,1.4s							
PGF	**Pioggiola**	**150.63**	**343**	*e*PKP1		PKPbc	16 18 35.4	-1.3
	comp=Z,266nm,1.3s							
MTLF	**Montolieu**	**151.21**	**353**	*e*PKP1		PKPbc	16 18 37.2	-0.8
	comp=Z,71nm,1.4s							
EPF	**Esparros**	**151.68**	**356**	*e*PKP1		PKPbc	16 18 38.2	-1.0
ETSF	**Etsaut**	**151.86**	**358**	*e*PKP1		PKPbc	16 18 39.0	-0.6
MVO	**Moncorvo**	**153.28**	**8**	*e*PP		PP	16 22 34.6	+7.4
MVO	**Moncorvo**	**153.28**	**8**	*e*SS		SS	16 42 05.7	+8.4
MVO	**Moncorvo**	**153.28**	**8**	*e*LR		LR	17 11 25.5	
	comp=Z,463nm,18.0s							
MTE	**Manteigas**	**153.96**	**9**	*e*PP		PP	16 22 37.9	+6.9
MTE	**Manteigas**	**153.96**	**9**	*e*LR		LR	17 13 12.8	
	comp=Z,474nm,16.0s							
ASCN	**Ascension**	**154.46**	**151**		PFAKE		16 18 50.0	+12
ASCN					LR	LR		
	comp=Z,329nm,19.0s,MS5.2							
PMAFR	**Mafra**	**155.02**	**13**	*e*PKPab		PKPab	16 19 02.2	+0.1
PMAFR	**Mafra**	**155.02**	**13**	*e*PP		PP	16 22 42.4	+5.3
PMAFR	**Mafra**	**155.02**	**13**	*e*SS		SS	16 42 24.6	+8.2
PMAFR	**Mafra**	**155.02**	**13**	*e*LR		LR	17 12 51.9	
	comp=Z,649nm,18.0s							
ESDC	**Sonseca Array**	**155.06**	**3**	PKPab		PKPab	16 19 02.3	0.0
	comp=Z,10.0nm,1.0s,baz=353,slow=3.9,SNR=18							
PAB	**San Pablo**	**155.16**	**4**	PFAKE			16 18 50.0	+12
PAB					LR	LR		
	comp=Z,819nm,22.0s,MS5.5							
PESTR	**Estremoz**	**155.44**	**10**	*e*PP		PP	16 22 43.7	+4.3
PESTR	**Estremoz**	**155.44**	**10**	*e*SS		SS	16 42 31.8	+11
EVO	**Evora**	**155.69**	**11**	*e*PKIKP		PKPdf	16 18 37.6	-1.1
	comp=Z,86nm,1.7s							
EVO				*e*MLR		MLR		
	comp=Z,996nm,21.5s,MS5.3							
PBAR	**Barrancos**	**156.21**	**10**	*e*PKPab		PKPab	16 19 06.5	-0.7
PBAR	**Barrancos**	**156.21**	**10**	*e*PP		PP	16 22 50.5	+6.9
PBAR	**Barrancos**	**156.21**	**10**	*e*LR		LR	17 14 15.2	
	comp=Z,1µm,20.0s							
MORF	**Marmelete**	**156.74**	**13**	*e*PP		PP	16 22 43.5	-3.1
MORF	**Marmelete**	**156.74**	**13**	*e*LR		LR	17 13 52.5	
	comp=Z,525nm,22.0s							
PVAQ	**Vaqueiros**	**156.84**	**11**	*e*PKPab		PKPab	16 19 10.0	+0.1
PVAQ	**Vaqueiros**	**156.84**	**11**	*e*PP		PP	16 22 44.7	-2.4
PVAQ	**Vaqueiros**	**156.84**	**11**	*e*LR		LR	17 14 45.4	
	comp=Z,1µm,22.0s							
PFVI	**Vila Bisbo**	**156.87**	**14**	*e*PP		PP	16 22 51.2	+3.9
PFVI	**Vila Bisbo**	**156.87**	**14**	*e*LR		LR	17 12 29.5	
	comp=Z,524nm,20.0s							
PBDV	**Barranco-do-Ve**	**156.96**	**12**	*e*PKPab		PKPab	16 19 11.1	+0.7
PBDV	**Barranco-do-Ve**	**156.96**	**12**	*e*PP		PP	16 22 45.9	-1.9
PBDV	**Barranco-do-Ve**	**156.96**	**12**	*e*LR		LR	17 14 40.9	
	comp=Z,934nm,20.0s							
MSKU	**Masuku**	**157.49**	**225**		PFAKE		16 18 50.0	+8.2
MSKU					LR	LR		
	comp=Z,5.0nm,22.0s							
LIC	**Lamto**	**171.12**	**161**	*e*PKIKP		PKPdf	16 18 53.0	-0.9
	comp=Z,80nm,1.6s							
LIC				*e*MLR		MLR		
	comp=Z,996nm,21.5s							
LIC	**Lamto**	**171.12**	**161**	*e*PKPdf		PKPdf	16 18 53.0	-0.9
LIC					LR	LR		
	comp=Z,500nm,21.5s							
DBIC	**Dimbokro**	**171.59**	**161**	PKP		PKPdf	16 18 53.0	-1.1
	comp=Z,8.4nm,1.1s,baz=198,slow=2.6,SNR=5.8							
TOA0	**Torodi Ar. Sit**	**175.98**	**248**	*e*PKPdf		PKPdf	16 18 54.1	-1.6
TOA0				*e*PKPab		PKPab	16 20 33.2	-1.8
TORD	**Torodi Ar. Bea**	**175.98**	**248**	PKP		PKPdf	16 18 54.6	-1.1
	comp=Z,8.9nm,1.2s,baz=106,slow=0.8,SNR=18							
TORD					PKPab	PKPab	16 20 34.3	-0.7
	comp=Z,4.5nm,1.2s,baz=100,slow=1.4,SNR=5.8							

*ISCJB **30** 16:02:11.0±0.5,3156S±003×7232W±006,h10km, mb4.7/11,MS4.1/2,Error ellipse: s-maj=7.0km s-min=4.0km az=2.6*

*IDC **30** 16:02:11.0±0.9,3149S×7229W,h0km,mb5.0/3,mb1 4.6/7, mb1mx4.3/16,mbtmp4.5/7,ML4.0/4,MS4.1/2,Ms1 4.1/2, ms1mx3.3/27,Error ellipse: s-maj=30.2km s-min=26.6km az=65.0*

*NEIC **30** 16:02:12.8±0.4,3158S×7209W,h10km,mb4.9/8,Error ellipse: s-maj=8.8km s-min=4.8km az=84.0*

*BJI **30** 16:02:12.8,3160S×72.10W,h10km,mB4.9,Ms5.2,Msz4.7*

*GUC **30** 16:02:13.4±0.8,3161S×7200W,h2km±6km,ML4.8*

ISC 30 16:02:13.1±0.5,3156S±003×7216W±006,h10km, (h11km±7km:pP-P),n64,σ1°10/59,mb4.7/11,MS4.1/2, 4C-10D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.65**	**120**	*i*P	**Pg**	**16 02 08.5**	**-17**
CHNG				*i*S	**Sg**	**16 02 16.4**	**-18**
CMCH	**Combarbala**	**1.06**	**69**	*e*P	**Pg**	**16 02 32.0**	**-1.5**
CMCH				*i*S	**Sg**	**16 02 45.8**	**-1.5**
CMCH	**Combarbala**	**1.06**	**69**	*e*P	**Pg**	**16 02 32.0**	**-1.5**
CMCH				*i*S	**Sg**	**16 02 45.8**	**-1.5**
CMCH				AML	AML	16 02 50.8	
	comp=N,67µm,0.8s						
OVCH	**Ovalle**	**1.25**	**41**	*e*P	**Pn**	**16 02 36.3**	**-0.4**
OVCH				*i*S	**Sb**	**16 02 53.1**	**+0.1**
OVCH	**Ovalle**	**1.25**	**41**	*e*P	**Pn**	**16 02 36.3**	**-0.4**
OVCH				*i*S	**Sb**	**16 02 53.1**	**+0.1**
OVCH				AML	AML	16 02 55.0	
	comp=N,21µm,0.6s						
IHA	**Instituto Hidr**	**1.53**	**164**	*e*P	**Pn**	**16 02 39.5**	**-1.0**
ROCH	**El Roble**	**1.71**	**146**	*i*P	**Pn**	**16 02 42.2**	**-0.8**
JACH	**Jahuel**	**1.74**	**131**	*e*P	**Pn**	**16 02 42.3**	**-1.1**
TLL	**Tololo Astrono**	**1.81**	**40**	*e*P	**Pn**	**16 02 44.5**	**+0.2**
TLL				*i*S	**Sn**	**16 03 08.4**	**+1.1**
TLL	**Tololo Astrono**	**1.81**	**40**	*e*P	**Pn**	**16 02 44.5**	**+0.2**
TLL				*i*S	**Sn**	**16 03 08.4**	**+1.1**
TLL				AML	AML	16 03 14.2	
	comp=N,11µm,0.4s						
LSCH	**La Serena**	**1.82**	**26**	*e*P	**Pn**	**16 02 45.0**	**+0.5**
LSCH				*i*S	**Sn**	**16 03 09.7**	**+2.0**
PEL	**Peldehue**	**2.01**	**142**	*e*P	**Pn**	**16 02 46.9**	**-0.2**
PEL				*i*S	**Sn**	**16 03 12.6**	**+0.2**
PEL				AML	AML	16 03 19.9	
	comp=E,14µm,0.6s						
CLCH	**Cerro Calan**	**2.29**	**144**	*e*P	**Pn**	**16 02 51.2**	**+0.3**
CLCH				S	**Sn**	**16 03 21.5**	**+2.4**
CLCH	**Cerro Calan**	**2.29**	**144**	*e*P	**Pn**	**16 02 51.2**	**+0.3**
CLCH				*i*S	**Sn**	**16 03 21.5**	**+2.4**
CLCH				AML	AML	16 03 28.1	
	comp=N,13µm,0.6s						
FCH	**Farellones**	**2.37**	**139**	*e*P	**Pn**	**16 02 52.3**	**+0.3**
FCH				*i*S	**Sn**	**16 03 23.0**	**+1.9**
PCH	**Pirque**	**2.48**	**146**	*e*P	**Pn**	**16 02 53.4**	**-0.2**
LCO	**Las Campanas**	**2.83**	**27**	*e*Pn	**Pn**	**16 02 54.3**	**-4.1**
LCO				*e*Sn	**Sn**	**16 03 37.6**	**+5.0**
CFAA	**Coronel Fontan**	**3.35**	**92**	Pn	**Pn**	**16 03 07.6**	**+2.1**
	comp=N,2.9nm,0.3s,baz=258,slow=11,SNR=46						
CFAA				Sn	**Sn**	**16 03 52.8**	**+7.5**
	comp=N,9.5nm,0.3s,baz=283,slow=8.8,SNR=8.1						
PLCA	**Paso Flores**	**9.25**	**172**	*e*Pn	**Pn**	**16 04 26.2**	**-0.2**
	comp=N,5.2nm,0.8s						
PLCA	**Paso Flores**	**9.25**	**172**	Pn	**Pn**	**16 04 26.1**	**-0.4**
	comp=N,1.0nm,0.3s,baz=333,slow=12,SNR=13						
TRQA	**Tornquist**	**10.58**	**131**	*e*Pn	**Pn**	**16 04 41.6**	**-3.1**
	comp=N,46nm,1.1s						
LPAZ	**La Paz**	**15.64**	**14**	*e*Pn	**Pn**	**16 05 53.8**	**+0.2**
	comp=N,8.2nm,0.9s						
LPAZ	**La Paz**	**15.64**	**14**	Pn	**Pn**	**16 05 52.3**	**-1.3**
	comp=N,0.1nm,0.3s,baz=178,slow=9.1,SNR=18						
SIV	**San Ignacio**	**18.50**	**36**	P	**Pn**	**16 06 28.9**	**-0.8**
	comp=N,0.4nm,0.3s,baz=229,slow=12,SNR=30						
ATAH	**Atahualpa**	**25.12**	**345**	LR	LR	16 16 03.6	
	comp=N,178nm,18.1s,MS3.6,baz=130,slow=33						
SDV	**Santo Domingo**	**40.24**	**2**	*e*P	**P**	**16 09 49.9**	**-0.3**
	comp=N,5.9nm,0.9s,mb4.3						
VNA3	**Neumayer Olymp**	**51.66**	**159**	*e*P	**P**	**16 11 20.0**	**+0.4**
VNA3	**Neumayer Olymp**	**51.66**	**159**	*e*P	**P**	**16 11 20.0**	**+0.4**
VNA3				*e*	pP	16 11 23.9	+1.1
VNA3				*e*		16 11 30.0	
VNA3				*e*		16 11 35.0	
VNA3				*e*		16 11 38.7	
VNA3				*e*		16 11 42.7	
VNA1	**Neumayer--Stat**	**51.96**	**158**	*e*P	**P**	**16 11 23.5**	**+1.6**
VNA1	**Neumayer--Stat**	**51.96**	**158**	*e*P	**P**	**16 11 23.5**	**+1.6**
VNA1				*e*	pP	16 11 26.4	+1.4
VNA1				*e*		16 11 32.4	
VNA1				*e*		16 11 38.1	
VNA2	**Neumayer--Watz**	**52.30**	**158**	*e*P	**P**	**16 11 24.7**	**+0.3**
	baz=293,slow=9.3						
VNA2	**Neumayer--Watz**	**52.30**	**158**	*e*P	**P**	**16 11 24.7**	**+0.3**
	baz=192,slow=2.1						
VNA2				*e*	pP	16 11 28.0	+0.4
VNA2				*e*		16 11 34.6	
VNA2				*e*		16 11 40.6	
VNA2				*e*		16 11 43.5	
VNA2				*e*		16 11 47.0	
TEIG	**Tepich**	**53.76**	**341**	*e*P	**P**	**16 11 36.2**	**+0.5**
	comp=N,22nm,0.7s,mb5.2						
SNAA	**Sanae**	**53.88**	**159**	*e*P	**P**	**16 11 35.8**	**-0.3**
SNAA	**Sanae**	**53.88**	**159**	*e*P	**P**	**16 11 35.8**	**-0.3**
SNAA				*e*	pP	16 11 38.7	-0.5
SNAA				*e*		16 11 46.1	
SNAA				*e*		16 11 52.2	
SYO	**Syowa Base**	**68.17**	**159**	*e*P	**P**	**16 13 10.4**	**-2.7**
SYO	**Syowa Base**	**68.17**	**159**	*e*PcP	PcP	16 13 37.8	-1.2
WVT	**Waverly**	**68.92**	**346**	*e*P	**P**	**16 13 18.0**	**-0.1**
	comp=N,13nm,0.9s,mb4.9						
DBIC	**Dimbokro**	**74.51**	**72**	P	**P**	**16 13 52.0**	**-0.3**
DBIC	**Dimbokro**	**74.51**	**72**	P	**P**	**16 13 52.0**	**-0.3**
	comp=N,16nm,0.8s,mb5.0,baz=210,slow=6.4,SNR=25						
SUR	**Sutherland**	**76.11**	**119**	P	**P**	**16 14 02.0**	**+0.8**
	comp=N,15nm,1.0s,mb4.9						
BOSA	**Boshof**	**81.30**	**118**	P	**P**	**16 14 29.9**	**0.0**
	comp=N,6.1nm,0.8s,mb4.6,baz=262,slow=6.8,SNR=7.5						
NVAR	**Mina Array Bea**	**81.83**	**325**	P	**P**	**16 14 30.9**	**-1.4**
	comp=N,0.3nm,0.6s,mb3.4,baz=208,slow=3.1,SNR=1.9						
HVU	**Hansel Valley**	**82.01**	**331**	*e*P	**P**	**16 14 35.9**	**+2.8**
	comp=N,36nm,1.5s,mb5.1						
LBTB	**Lobatse**	**83.43**	**115**	*e*P	**P**	**16 14 40.3**	**-0.8**
	comp=N,5.6nm,0.8s,mb4.7						
LBTB	**Lobatse**	**83.43**	**115**	LR	LR	16 48 04.9	
	comp=N,211nm,18.7s,MS4.5,baz=99,slow=33						
TORD	**Torodi Ar. Bea**	**83.48**	**70**	P	**P**	**16 14 40.9**	**-0.5**
	comp=N,12nm,0.8s,mb5.0,baz=255,slow=4.9,SNR=68						
LSZ	**Lusaka**	**90.67**	**108**	*e*P	**P**	**16 15 17.0**	**+0.6**
	comp=N,9.3nm,1.5s,mb4.9						
WRA	**Warramunga Arr**	**122.83**	**210**	PKP	PKPdf	16 21 10.3	+0.3
	comp=N,0.7nm,1.1s,baz=207,slow=5.3,SNR=2.8						
ONI	**Oni**	**128.58**	**58**	P	PKPdf	16 21 25.9	+5.7
BRVK	**Borovoye**	**145.46**	**40**	*e*PKPdf	PKPdf	16 21 51.4	+0.6
KURK	**Kurchatov**	**151.12**	**40**	*e*PKPbc	PKPbc	16 22 05.6	-0.4
TKM2	**Tokmak 2**	**152.10**	**57**	*e*PKPbc	PKPbc	16 22 07.8	-0.8
ZAA0	**Zalesovo Array**	**152.19**	**30**	*e*PKPbc	PKPbc	16 22 08.2	-0.2
ZALV	**Zalesovo Beam**	**152.19**	**30**	PKPbc	PKPbc	16 22 08.8	+0.3
	comp=N,12nm,0.8s,baz=298,slow=3.3,SNR=43						
ZALV					PKPab	PKPab	16 22 18.2	+0.1
	comp=N,25nm,0.8s,baz=300,slow=3.2,SNR=18							
MKAR	**Makanchi Array**	**155.17**	**45**	PKP	PKPdf	16 22 05.2	-1.0
	comp=N,0.1nm,0.2s,baz=263,slow=2.3,SNR=2.3							
MKAR					PKPbc	PKPdf	16 22 15.1	+8.9
	comp=N,1.5nm,0.9s,baz=311,slow=2.4,SNR=9.2							
WMQ	**Urumqi**	**159.96**	**47**	*e*PKP	PKPdf	16 22 07.5	-4.8
SONM	**Songino Array**	**163.71**	**3**	PKPab	PKPab	16 23 06.8	-1.2
	comp=N,0.5nm,0.9s,baz=347,slow=6.1,SNR=3.9							
HHC	**Hu-ho-hao-te**	**170.25**	**343**	*e*PKP	PKPdf	16 22 17.0	-4.1
HHC				APKP		16 22 27.8	
HHC				PKS		16 25 48.3	
HHC				SKKS	SKKSac	16 34 09.3	-4.8
HHC				SS	SS	16 48 25.5	-1.0
HHC				PP	PP		
	comp=Z,223nm,4.5s						
HHC				LR	LR		
	comp=N,233nm,27.4s						
HHC				LR	LR		
	comp=E,646nm,28.9s						
HHC				LR	LR		
	comp=Z,178nm,30.4s						
NJ2	**Nanjing**	**170.62**	**276**	*e*PKP	PKPdf	16 22 18.5	-3.1
KMI	**Kunming**	**172.17**	**144**	PKP	PKPdf	16 22 21.0	-1.6
LZH	**Lanzhou**	**174.39**	**35**	*e*PKP	PKPdf	16 22 24.5	+1.4
LZH				APKP		16 22 26.5	
LZH				XPKP		16 22 27.5	
GYA	**Guiyang**	**174.81**	**168**	*e*PKP	PKPdf	16 22 23.5	0.0
GYA				PKP2	PKPab	16 23 59.8	+2.2
GYA				PKS		16 25 54.5	
GYA				PP	PP	16 27 53.0	+4.1
GYA				SKS	SKSdf	16 29 24.0	-2.8
GYA				SKKS	SKKSac	16 34 37.3	+0.9
GYA				SS	SS	16 49 12.0	+1.2
GYA				PP	PP		
	comp=Z,110nm,7.6s						
GYA				LR	LR		
	comp=N,390nm,21.1s						
GYA				LR	LR		
	comp=E,420nm,20.5s						
GYA				LR	LR		
	comp=Z,350nm,21.7s						
CD2	**Chengdu**	**176.44**	**99**	*e*PKP	PKPdf	16 22 22.8	-1.0
CD2				APKP		16 22 29.0	
CD2				XPKP		16 22 33.0	
CD2				PKP2	PKPab	16 24 04.0	-1.1
CD2				PP	PP	16 27 58.3	-0.3
CD2				SKS	SKSdf	16 29 20.5	-6.5
CD2				SKKS	SKKSac	16 34 39.3	-5.4
CD2				PP	PP		
	comp=Z,100nm,10.2s						
CD2				LR	LR		
	comp=N,160nm,26.8s						
CD2				LR	LR		
	comp=Z,130nm,24.6s						

*NEIC **30** 16:33:52.7,3164S×7191W,h25km±5km,ML4.1(GUC),After GUC.*

GUC 30 16:33:52.7±0.9,3164S×7191W,h25km±5km,MD4.2, ML4.1,5C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.42**	**125**	*i*P	Pb	16 33 45.2	-17
CHNG				*i*S	Sb	16 33 52.2	-16
CMCH	**Combarbala**	**0.91**	**59**	*i*P	Pb	16 34 09.0	-0.8
CMCH				*i*S	Sb	16 34 21.4	-0.1
CMCH	**Combarbala**	**0.91**	**59**	*i*P	Pb	16 34 09.0	-0.8
CMCH				*i*S	Sb	16 34 21.4	-0.1
CMCH				AML	AML	16 34 27.1	
	comp=N,28µm,0.8s						
OVCH	**Ovalle**	**1.20**	**31**	*e*P	Pn	16 34 13.7	-0.1
OVCH				*i*S	Sn	16 34 29.8	+0.6
OVCH	**Ovalle**	**1.20**	**31**	*e*P	Pn	16 34 13.7	-0.1
OVCH				*i*S	Sn	16 34 29.8	+0.6
OVCH				AML	AML	16 34 31.1	
	comp=N,6µm,0.4s						
JACH	**Jahuel**	**1.52**	**133**	*e*P	Pn	16 34 19.8	+1.5
JACH				*i*S	Sn	16 34 40.2	+2.9
ROCH	**El Roble**	**1.53**	**150**	*i*P	Pn	16 34 19.6	+1.3
ROCH				*i*S	Sn	16 34 39.5	+2.0
TLL	**Tololo Astrono**	**1.75**	**33**	P	Pn	16 34 22.3	+0.9
TLL				*i*S	Sn	16 34 45.6	+2.7
TLL	**Tololo Astrono**	**1.75**	**33**	*e*P	Pn	16 34 22.3	+0.9
TLL				*i*S	Sn	16 34 45.6	+2.7
TLL				AML	AML	16 34 52.0	
	comp=E,3µm,0.5s						
LSCH	**La Serena**	**1.82**	**19**	*e*P	Pn	16 34 23.2	+0.9
LSCH				*i*S	Sn	16 34 46.9	+2.3
PEL	**Peldehue**	**1.82**	**146**	*e*P	Pn	16 34 23.8	+1.4
PEL				*i*S	Sn	16 34 46.5	+1.9
PEL				AML	AML	16 34 53.9	
	comp=E,3µm,0.4s						
CLCH	**Cerro Calan**	**2.10**	**147**	*e*P	Pn	16 34 27.9	+1.7
CLCH				*i*S	Sn	16 34 56.4	+4.8
CLCH				AML	AML	16 34 58.9	
	comp=E,2µm,0.5s						
TACH	**Talagante**	**2.17**	**158**	*e*P	Pn	16 34 28.9	+1.8
FCH	**Farellones**	**2.17**	**141**	*e*P	Pn	16 34 29.0	+1.9
FCH				*i*S	Sn	16 34 57.0	+3.8
FCH				AML	AML	16 35 05.2	
	comp=E,745nm,0.4s						
PCH	**Pirque**	**2.30**	**150**	*e*P	Pn	16 34 30.5	+1.5
CHCH	**Chadas Angostu**	**2.52**	**155**	*e*P	Pn	16 34 33.5	+1.5
LCO	**Las Campanas**	**2.82**	**22**	*e*Pn	Pn	16 34 34.5	-1.6
CICH	**Cipreses**	**2.95**	**155**	*e*P	Pn	16 34 40.1	+2.2
SFDO	**San Fernando**	**3.06**	**166**	*e*P	Pn	16 34 40.7	+1.3

KRSC 30 16:42:09.7±0.5,5244N×15935E,h96km±65km,ML3.8,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	**Russkaya**	**0.51**	**270**	*i*P	Pn	16 42 25.7	+0.6
RUS				*i*S	Sn	16 42 37.1	+0.5
PET	**Petropavlovsk**	**0.72**	**324**	*e*P	Pn	16 42 27.6	+0.7
PET				*i*S	Sn	16 42 39.9	+0.1
NLC	**Nalytchevo**	**0.73**	**360**	*e*P	Pn	16 42 28.2	+1.2
NLC				*i*S	Sn	16 42 41.2	+1.2
SPN	**Mys Shipunski**	**0.78**	**32**	*i*P	Pn	16 42 29.1	+1.7
SPN				*i*S	Sn	16 42 42.3	+1.6
GRL	**Gorelyy**	**0.79**	**279**	*e*P	Pn	16 42 28.7	+1.2
GRL				*i*S	Sn	16 42 42.1	+1.2
AVH	**Avacha**	**0.91**	**336**	*e*P	Pn	16 42 29.9	+1.2
AVH				*i*S	Sn	16 42 44.3	+1.3
GNL	**Ganaly**	**1.52**	**327**	*e*P	Pn	16 42 35.9	0.0
GNL				*i*S	Sn	16 42 55.5	-0.2
MIPR	**Malaya Ipel'ka**	**1.60**	**265**	*i*P	Pn	16 42 37.5	+0.6
KII	**Karymskiy**	**1.60**	**2**	*e*P	Pn	16 42 38.2	+1.3
MKZ	**Mys Kozlova**	**2.55**	**33**	*e*P	Pn	16 42 50.5	+1.2
MKZ				*i*S	Sn	16 43 20.1	+0.4
ALID	**Alaid**	**2.84**	**238**	*e*P	Pn	16 42 53.9	+0.7
ALID				*i*S	Sn	16 43 27.0	+0.4
TUMR	**Tumrok**	**2.89**	**9**	*e*P	Pn	16 42 55.9	+2.2
TUMR				*i*S	Sn	16 43 29.9	+2.2
KMNR	**Kamenistaya**	**3.36**	**9**	*e*P	Pn	16 43 02.3	+2.2
KOZ	**Kozyrevsk**	**3.64**	**5**	*e*P	Pn	16 43 05.3	+1.5
SRDR	**Sredinnyy**	**3.89**	**3**	*e*P	Pn	16 43 08.2	+1.0
KLY	**Klyuchi**	**3.96**	**11**	*e*P	Pn	16 43 10.4	+2.3
KBTR	**Krutoberegovo**	**4.29**	**27**	*e*P	Pn	16 43 14.1	+1.5
KBTR				*i*S	Sn	16 44 00.1	-1.3

*NEIC **30** 16:44:42.0,3168S×7188W,h34km±2km,ML3.0(GUC),After GUC.*

GUC 30 16:44:42.0±0.7,3168S×7188W,h34km±2km,MD3.9, ML3.0,2C-2D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.39**	**123**	*i*P	Pb	16 44 33.5	-18
CHNG				*i*S	Sb	16 44 39.7	-17
CMCH	**Combarbala**	**0.90**	**57**	*e*P	Pn	16 44 58.2	0.0
CMCH				*i*S	Sn	16 45 10.9	+0.8
CMCH	**Combarbala**	**0.90**	**57**	*e*P	Pn	16 44 58.2	0.0
CMCH				*i*S	Sn	16 45 10.9	+0.8
CMCH				AML	AML	16 45 12.0	
	comp=E,1µm,0.8s						
OVCH	**Ovalle**	**1.21**	**29**	*e*P	Pn	16 45 03.4	+0.9
OVCH				*i*S	Sn	16 45 19.8	+2.0
OVCH	**Ovalle**	**1.21**	**29**	*e*P	Pn	16 45 03.4	+0.9
OVCH				*i*S	Sn	16 45 19.8	+2.0
OVCH				AML	AML	16 45 24.1	
	comp=N,434nm,0.3s						
JACH	**Jahuel**	**1.48**	**133**	*i*P	Pn	16 45 07.9	+1.7
JACH				*i*S	Sn	16 45 27.8	+3.4
ROCH	**El Roble**	**1.49**	**151**	*e*P	Pn	16 45 07.8	+1.5
ROCH				*i*S	Sn	16 45 28.1	+3.6
TLL	**Tololo Astrono**	**1.77**	**32**	*e*P	Pn	16 45 12.1	+2.0
TLL				*i*S	Sn	16 45 35.1	+3.7
TLL	**Tololo Astrono**	**1.77**	**32**	*e*P	Pn	16 45 12.1	+2.0
TLL				*i*S	Sn	16 45 35.1	+3.7
TLL				AML	AML	16 45 43.2	
	comp=N,201nm,0.5s						
PEL	**Peldehue**	**1.78**	**146**	*e*P	Pn	16 45 11.8	+1.5
PEL				*i*S	Sn	16 45 34.6	+2.8
PEL				AML	AML	16 45 45.0	
	comp=E,422nm,0.5s						
CLCH	**Cerro Calan**	**2.06**	**147**	*i*S	Sn	16 45 41.5	+2.9
CLCH				AML	AML	16 45 51.4	
	comp=N,296nm,0.3s						
FCH	**Farellones**	**2.13**	**141**	*e*P	Pn	16 45 17.1	+2.1
FCH				*i*S	Sn	16 45 44.0	+3.7
FCH				AML	AML	16 45 48.9	
	comp=E,96nm,0.3s						
TACH	**Talagante**	**2.13**	**158**	*e*P	Pn	16 45 16.4	+1.3
PCH	**Pirque**	**2.26**	**150**	*e*P	Pn	16 45 18.7	+1.8
PCH				*i*S	Sn	16 45 46.2	+2.6
CHCH	**Chadas Angostu**	**2.48**	**156**	*e*P	Pn	16 45 21.7	+1.8
CICH	**Cipreses**	**2.91**

ISP Isparta 0.37 258 PG Pg 16 57 00.7 -1.0
ISP SG Sg 16 57 06.7 +0.1
ISP Isparta 0.37 258 ePg Pg 16 56 59.9 -1.8
ISP eSg Sg 16 57 07.5 +0.9
BCK Bucak 0.55 213 PG Pg 16 57 04.7 -0.3
BCK Bucak 0.55 213 P Pg 16 57 04.1 -0.9
SHUT Suhut-Afyon 0.71 333 PG Pg 16 57 06.7 -1.5
ANTB Antalya 1.05 194 PN Pn 16 57 15.5 +0.4
KDHN Kadinhani 1.09 56 iP Pb 16 57 13.7 -1.7
KDHN iS Sg 16 57 32.6 +3.0
KONT Konya--Tatoy 1.10 88 PN Pn 16 57 14.7 -1.2
KIZT Kizilcal 1.20 37 PN Pn 16 57 15.8 -1.5
KHL Karahalli 1.21 290 PN Pn 16 57 15.9 -1.4
GOLH Golhisar 1.31 239 iP Pn 16 57 17.7 -1.0
GOLH iS Sb 16 57 38.1 +2.3
ELL Elmali 1.44 216 PN Pn 16 57 21.4 +0.9
DENT Denizli 1.54 264 PN Pn 16 57 21.2 -0.7
DENT Denizli 1.54 264 Pn Pn 16 57 21.4 -0.5
ESKT Eskisehir 1.60 357 PN Pn 16 57 21.8 -1.0
ESKT Eskisehir 1.60 357 iP Pn 16 57 21.6 -1.1
SEYT Eskypehyr 1.60 357 iP Pn 16 57 21.6 -1.2
GDZ Gediz 1.65 316 iP Pn 16 57 22.1 -1.3
GDZ iS Sn 16 57 43.2 -1.5
KULA Kula-Manisa 1.91 289 PN Pn 16 57 26.5 -0.5
FETY Fethiye 1.97 230 PN Pn 16 57 28.9 +1.0
MANT Manisa 1.98 288 iP Pn 16 57 27.6 -0.4
MANT iS Sg 16 57 58.0 -0.1
BORA Eskisehir 2.00 349 iP Pn 16 57 27.1 -1.1
BORA iS Sg 16 58 00.3 +1.6
BORA Eskisehir 2.00 349 iP Pn 16 57 27.1 -1.2
ERMK Ermenek 2.01 129 iP Pn 16 57 31.5 +3.2
ERMK iS Sg 16 57 58.7 -0.3
GEDT Gedikpinar 2.27 335 Pn Pn 16 57 31.2 -0.8
ANTO Ankara 2.42 36 PN Pn 16 57 34.3 +0.3
ANTO Ankara 2.42 36 eP Pn 16 57 33.4 -0.6
ANTO Ankara 2.42 36 ⇑iP Pn 16 57 35.2 +1.2
ANTO Ankara 2.42 36 ePn Pn 16 57 33.3 -0.7
LOD Lodumlu 2.42 35 PN Pn 16 57 33.7 -0.3
GPA Golpazari 2.42 348 PN Pn 16 57 33.5 -0.6
AYDN Tasoluk 2.46 265 iP Pg 16 57 48.3 +6.8
AYDN iS Sg 16 58 18.2 +4.8
DST Dursunbey 2.48 313 PN Pn 16 57 33.9 -1.0
DST Dursunbey 2.48 313 Pn Pn 16 57 34.9 0.0
GULT Gulveren 2.54 352 PN Pn 16 57 35.2 -0.4
MLSB Milas 2.61 257 PN Pn 16 57 37.2 +0.6
AKS Akhisar 2.66 292 PN Pn 16 57 36.7 -0.6
IZI Iznik 2.68 335 PN Pn 16 57 37.2 -0.4
ADVT Abdulvahap 2.69 340 PN Pn 16 57 37.2 -0.5
IKL Isikli 2.75 127 PN Pn 16 57 41.0 +2.5
IKL Isikli 2.75 127 Pn Pn 16 57 40.5 +2.0
ARG Arkhangelos 2.83 234 eP Pn 16 57 41.1 +1.3
ARG Arkhangelos 2.83 234 eP Pn 16 57 41.5 +1.8
ARG Arkhangelos 2.83 234 P Pn 16 57 41.9 +2.2
GEMT Gemlik 2.87 332 PN Pn 16 57 39.7 -0.5
NIG Nigde 2.89 85 PN Pn 16 57 42.2 +1.8
HENT Hendek 2.90 359 iP Pn 16 57 39.9 -0.8
HENT iS Sg 16 58 34.6 +7.0
YLV Yalova 2.92 335 PN Pn 16 57 40.6 -0.3
BDRM Kayabasi 2.93 254 iP Pn 16 57 41.0 +0.1
BDRM Kayabasi 2.93 254 iP Pn 16 57 41.0 0.0
BTOK Tokmak 2.94 310 iP Pn 16 57 40.8 -0.4
DAT Datca 2.95 247 PN Pn 16 57 42.5 +1.2
KDAG Bornova 2.96 281 iP Pn 16 57 41.0 -0.4
BALB Balikesir 2.96 306 PN Pn 16 57 41.3 -0.2
MERS Mersin 3.02 109 PN Pn 16 57 44.3 +2.0
BODT Bodrum 3.03 255 PN Pn 16 57 43.0 +0.6
ALFC Alevga 3.05 154 P Pn 16 57 42.4 -0.3
60nm,0.7s
ALFC S Sn 16 58 23.7 +4.4
HRT Hereke 3.07 341 PN Pn 16 57 41.9 -1.1
HRT Hereke 3.07 341 Pn Pn 16 57 43.2 +0.2
AKMC Akamas 3.09 159 P Pn 16 57 43.1 -0.1
KCT Karacabey 3.10 320 PN Pn 16 57 43.1 -0.3
CDAG Cicekdag 3.16 56 iP Pn 16 57 43.5 -0.7
AVNT Avonos 3.18 73 iP Pn 16 57 44.2 -0.2
AVNT Avonos 3.18 73 iP Pn 16 57 44.2 -0.2
LEF Lefka 3.19 150 ePN Pn 16 57 45.4 +0.7
LEF Lefka 3.19 150 Pn Pn 16 57 44.0 -0.7
ELDT Eldivan 3.20 36 iP Pn 16 57 43.9 -0.9
PPCY Paphos 3.23 159 P Pn 16 57 46.1 +1.0
SMG Samos 3.28 268 eP Pn 16 57 45.6 -0.2
SMG Samos 3.28 268 eP Pn 16 57 47.5 +1.7
MAMC Mammari 3.29 146 P Pn 16 57 47.1 +1.1
NISR Nisiros 3.33 248 eP Pn 16 57 48.5 +2.0
LFK Lefkose 3.35 141 ePN Pn 16 57 49.2 +2.4
CANT Cankiri 3.38 37 ePN Pn 16 57 47.6 +0.3
BNT Bandirma 3.40 317 ePN Pn 16 57 47.5 +0.1
KDZE Karadeniz Ereo 3.41 6 ePN Pn 16 57 47.4 -0.3
EDC Edincik 3.42 316 ePN Pn 16 57 46.8 -1.0
EDC Edincik 3.42 316 Pn Pn 16 57 47.1 -0.7
ISK Istanbul-Kandi 3.47 335 ePN Pn 16 57 48.0 -0.5
EREN Erenkoy 3.51 132 ePN Pn 16 57 52.1 +3.1
EREN Erenkoy 3.51 132 Pn Pn 16 57 51.3 +2.3
CSS Prodhromos 3.51 146 P Pn 16 57 49.7 +0.6
34nm,0.7s
CSS S Sn 16 58 35.3 +4.7
SZAC Souni-Zanaja 3.52 153 P Pn 16 57 50.4 +1.3
30nm,0.6s
SZAC S Sn 16 58 36.1 +5.4
SAFT Safranbolu 3.58 21 ePN Pn 16 57 49.7 -0.2
AYVA Ayvalik 3.62 294 iP Pn 16 57 50.5 0.0
AYVA Ayvalik 3.62 294 iP Pn 16 57 50.5 -0.1
CORM Corum 3.64 51 ePN Pn 16 57 51.6 +0.8
MRMT Marmara Adasi 3.75 317 ePN Pn 16 57 52.7 +0.5
ELBA Catalca 3.77 330 eP Pn 16 57 52.7 0.0
CTT Catalca 3.77 330 ePN Pn 16 57 52.6 0.0
CTT Catalca 3.77 330 Pn Pn 16 57 52.8 +0.2
PHNC Paralimni 3.82 139 P Pn 16 57 56.3 +3.1
42nm,0.7s
PHNC S Sn 16 58 42.3 +4.1
KARP Karpathos 3.86 233 eP Pn 16 57 53.9 0.0
KARP Karpathos 3.86 233 eP Pn 16 57 54.5 +0.6
CHOS Chios island 3.90 278 ePn Pn 16 57 54.6 +0.2
CHOS eSn Sn 16 58 38.9 -1.3
PRK Paraskevi 3.91 291 eP Pn 16 57 54.6 +0.1
PRK eS Sg 16 58 55.6 -4.4
PRK Paraskevi 3.91 291 eP Pn 16 57 54.0 -0.5
TOS Tosya 3.91 36 ePN Pn 16 57 54.5 0.0
CTKT Corum 4.01 47 iP Pn 16 57 56.5 +0.6
SART Tekirdag 4.03 314 iP Pn 16 57 56.2 0.0
SART Tekirdag 4.03 314 iP Pn 16 57 56.2 0.0
RKY Sarkoy-Tekirda 4.04 314 ePN Pn 16 57 55.9 -0.3
MFT Murefte 4.04 316 ePN Pn 16 57 55.7 -0.7
BALT Daday 4.07 27 iP Pn 16 57 56.4 -0.3
EZN Ezine 4.09 299 ePN Pn 16 57 57.6 +0.6
ANDN Andirin 4.28 93 iP Pn 16 58 02.0 +2.4
BOZC Bozcaada 4.29 298 iP Pn 16 57 59.8 +0.1
APE Apeiranthos 4.40 261 ePn Pn 16 58 02.3 +1.0
APE Apeiranthos 4.40 261 ||eP Pn 16 58 01.9 +0.6
APE Apeiranthos 4.40 261 eP Pn 16 58 02.0 +0.7
APE Apeiranthos 4.40 261 eP Pn 16 58 02.5 +1.2
APE Apeiranthos 4.40 261 ||iP Pn 16 58 02.3 +1.0
COBT Iskenderun 4.45 107 iP Pn 16 58 04.4 +2.5
GADA Gvkgeada 4.55 301 ePN Pn 16 58 04.1 +0.8
BYBT Boyabat 4.60 38 ePN Pn 16 58 04.9 +0.9
BYBT Boyabat 4.60 38 Pn Pn 16 58 05.0 +1.0
BZK Bozkurt 4.66 29 ePN Pn 16 58 05.6 +0.7
ENEZ Enez 4.67 309 ePN Pn 16 58 05.7 +0.7
ZKR Zakros 4.74 235 ePn Pn 16 58 07.0 +1.1
ALN Alexandroupoli 4.83 310 ePn Pn 16 58 07.0 -0.2
ALN eSn Sn 16 59 03.2 0.0
ALN Alexandroupoli 4.83 310 ePn Pn 16 58 07.0 -0.2
ALN eSn Sn 16 59 03.2 0.0
LIA Limnos Island 4.92 295 eP Pn 16 58 04.0 -4.5
LIA eS Sg 16 59 38.1 +5.6
LOS Limnos 5.01 296 ePn Pn 16 58 10.4 +0.8
NPS Neapolis 5.06 240 eP Pn 16 58 11.0 +0.7
NPS Neapolis 5.06 240 eP Pn 16 58 10.5 +0.2
EDRB Edirne 5.09 322 ePN Pn 16 58 09.7 -1.1
EDRB Edirne 5.09 322 Pn Pn 16 58 10.3 -0.5
XRY Khrisi 5.22 236 eP Pn 16 58 13.0 +0.4
GZT Gaziantep 5.27 94 iP Pn 16 58 15.9 +2.8
RDO Rodhopi 5.29 309 eP Pn 16 58 13.6 +0.1
RDO eS Sg 16 59 34.4 -10
RDO Rodhopi 5.29 309 eP Pn 16 58 13.5 0.0
RDO Rodhopi 5.29 309 P Pn 16 58 12.3 -1.2
HWQ Hawqa 5.43 131 ePn Pn 16 58 16.5 +1.1
BHL Bhannes 5.52 135 ePn Pn 16 58 19.0 +2.3
IDI Anoyia 5.55 244 Pn Pn 16 58 16.5 -0.5
14nm,0.3s,baz=46,slow=18,SNR=57
IDI Sn Sn 16 59 19.4 -1.4
15nm,0.3s,baz=281,slow=23,SNR=5.5
IDI LR LR 17 00 28.0
comp=Z,822nm,20.3s,baz=230,slow=38
JMB Yambol 5.65 325 ePn Pn 16 58 18.2 -0.2
JMB eSn Sn 16 59 21.4 -1.8
KDZ Kurdzhali 5.67 313 P Pn 16 58 19.5 +0.8
AOS Alonnisos 5.69 285 ePn Pn 16 58 19.9 +0.9
FKH Fakeheh 5.73 128 ePn Pn 16 58 21.5 +1.9
MALT Malatya 5.90 84 ePn Pn 16 58 23.7 +1.8
131nm,0.8s
MALT Malatya 5.90 84 P Pn 16 58 24.8 +3.0
MALT Malatya 5.90 84 ⇑iP Pn 16 58 24.3 +2.5
MALT Malatya 5.90 84 ePn Pn 16 58 23.7 +1.9
131nm,0.8s
RCY Rachaya 5.93 137 ePn Pn 16 58 22.6 +0.3
OUR Ouranopolis 5.94 296 ePn Pn 16 58 22.2 -0.2
VAM Vamos 5.99 247 eP Pn 16 58 26.9 +3.9
VAM Vamos 5.99 247 eP Pn 16 58 27.0 +3.9
PAIG Paliouri 6.02 292 ePn Pn 16 58 23.8 +0.3
MMAI Mount Meron Ar 6.08 142 Pn Pn 16 58 25.3 +0.9
31nm,0.3s,baz=340,slow=12,SNR=146
MMAI Sn Sn 16 59 34.8 +0.7
16nm,0.3s,baz=332,slow=18,SNR=3.8
MMAI LR LR 17 01 25.4
comp=Z,977nm,18.7s,baz=355,slow=44
PLG Polygyros 6.34 295 ePn Pn 16 58 28.8 +0.9
PLG Polygyros 6.34 295 eP Pn 16 58 29.0 +1.1
GVD Gavdhos 6.34 243 ePn Pn 16 58 28.7 +0.7
140nm,0.6s
GVD Gavdhos 6.34 243 eP Pn 16 58 29.5 +1.6
GVD Gavdhos 6.34 243 ePn Pn 16 58 28.7 +0.8
140nm,0.6s
ELZG Elazig 6.34 82 eP Pn 16 58 30.8 +2.9
PLD Plovdiv 6.37 313 ePn Pn 16 58 27.5 -0.8
GRSN GIRESUNGRSN 6.40 60 iP Pn 16 58 29.3 +0.6
NVR Nevrokopi 6.46 304 eP Pn 16 58 30.4 +0.8
KYTH Kithira 6.54 258 eP Pn 16 58 32.5 +1.8
SOH Sokhos 6.57 299 P Pn 16 58 33.5 +2.4
SZH Strazhica 6.57 326 P Pn 16 58 32.9 +1.8
MMB Musomiste 6.67 306 P Pn 16 58 33.5 +1.0
PVL Pavlikeni 6.81 323 P Pn 16 58 35.2 +0.9
TIRR Tirgusor 6.81 344 P Pn 16 58 35.3 +0.9
TIRR Tirgusor 6.81 344 ⇑iP Pn 16 58 34.4 +0.1
TIRR Tirgusor 6.81 344 P Pn 16 58 35.3 +1.0
VLX Vlachokerasia 6.83 268 eSb Pb 16 58 51.2 -2.0
SEV Sevastopol' 6.93 16 eP Pn 16 58 37.5 +1.6
SEV eS Sn 16 59 55.3 +0.5
SEV pmax pmax
comp=Z,12nm,0.8s
SEV smax
comp=E,24nm,0.9s
SEV smax
comp=E,90nm,0.7s
SEV Sevastopol' 6.93 16 eP Pn 16 58 37.5 +1.6
comp=E,12nm,0.8s
SEV eS Sn 16 59 55.3 +0.5
PGB Panagyurishte 6.96 314 P Pn 16 58 37.1 +0.7
YAL Yalta 6.99 19 eP Pn 16 58 38.6 +1.8
YAL eS Sn 16 59 56.5 +0.2
YAL pmax pmax
comp=Z,73nm,0.8s
YAL smax
comp=N,16nm,0.7s
YAL smax
comp=E,12nm,0.6s
YAL Yalta 6.99 19 eP Pn 16 58 38.6 +1.8
comp=E,73nm,0.8s
YAL eS Sn 16 59 56.5 +0.2
comp=E,16nm,0.7s
KNT Kendrikon 7.03 300 ePn Pn 16 58 34.9 -2.4
ZIMR 7.13 325 P Pn 16 58 40.1 +1.3
HARR Harsova 7.14 342 P Pn 16 58 39.6 +0.7
HARR Harsova 7.14 342 ||iP Pn 16 58 38.9 0.0
HARR Harsova 7.14 342 P Pn 16 58 39.6 +0.7
KKB Krupnik 7.23 306 P Pn 16 58 41.8 +1.7
ALU Alushta 7.24 20 eP Pn 16 58 41.7 +1.5
ALU eS Sn 17 00 02.8 +0.4
ALU pmax pmax
comp=Z,78nm,0.6s
ALU smax
comp=N,39nm,0.7s
ALU Alushta 7.24 20 eP Pn 16 58 41.7 +1.5
comp=N,78nm,0.6s
SIM Simferopol' 7.41 18 P Pn 16 58 43.3 +0.7
SIM S Sn 17 00 09.0 +2.3
SIM pmax pmax
comp=Z,115nm,0.5s
SIM MLR MLR
comp=Z,700nm,16.0s
SIM Simferopol' 7.41 18 P Pn 16 58 43.3 +0.7
comp=Z,115nm,0.5s
ASF Jabal al Asfar 7.52 138 LR LR 17 02 41.2
comp=Z,121nm,18.5s,baz=23,slow=46
HMAT Matruh 7.52 206 P Pn 16 58 43.3 -0.8
HMAT S Sn 17 00 03.0 -6.3
KZN Kozani 7.54 291 eP Pn 16 58 46.1 +1.8
VTS Vitosha 7.55 311 P Pn 16 58 47.0 +2.6
VTS Vitosha 7.55 311 ⇑iP Pn 16 58 45.9 +1.5
SUDU Sudak 7.60 22 eP Pn 16 58 50.8 +5.7
SUDU eS Sn 17 00 10.9 -0.3
SUDU pmax pmax
comp=Z,1.0nm,0.7s
SUDU smax
comp=E,23nm,0.8s
SUDU smax
comp=E,5.0nm,0.7s
KOT Kottamia 8.00 175 ⇑P Pn 16 58 50.4 -0.4
KOT S Sn 17 00 16.3 -5.0
HMYD Mayadein 8.10 181 P Pn 16 58 52.3 +0.2
AYT Al 'Ayyat 8.19 179 P Pn 16 58 53.4 0.0
FYM Al Fayyum 8.20 180 P Pn 16 58 52.7 -0.8
FYM S Sn 17 00 21.4 -4.9
SUZ 8.20 169 P Pn 16 58 53.2 -0.3
HNAT Natroun 8.27 182 P Pn 16 58 54.6 +0.2
HSAF As Saff 8.29 176 P Pn 16 58 54.3 -0.5
GLL Jalalah 8.34 176 P Pn 16 58 54.4 -1.0
HNKL Nakhl 8.35 162 P Pn 16 58 55.5 -0.1
ANN Anapa 8.42 33 eP Pn 16 58 55.7 -0.7
ANN eS Sn 17 00 32.7 +1.2
ANN pmax pmax
comp=Z,14nm,1.0s
ANN MLR MLR
comp=Z,220nm,9.0s
ANN Anapa 8.42 33 eP Pn 16 58 55.7 -0.7
comp=Z,220nm,9.0s
MLR Muntele Rosu 8.45 335 P Pn 16 58 58.3 +1.5
MLR Muntele Rosu 8.45 335 P Pn 16 58 57.7 +0.9
MLR pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 8.45 335 Pn Pn 16 58 57.7 +0.9
comp=N,1.2nm,0.3s,baz=129,slow=3.1,SNR=36
MLR Muntele Rosu 8.45 335 ⇑iP Pn 16 58 58.1 +1.3
BARS Barje 8.52 308 P Pn 16 58 59.9 +2.1
VRI Vrincioaia 8.55 340 ⇑iP Pn 16 58 58.8 +0.7
VRI Vrincioaia 8.55 340 P Pn 16 58 59.6 +1.5
PLOR Plostina 8.55 339 ||iP Pn 16 58 59.6 +1.4
ZNM 8.67 169 ⇑P Pn 16 58 59.4 -0.4
ZAF 8.71 171 ⇑P Pn 16 58 59.4 -1.1
SOC Sochi 8.72 47 eP Pn 16 59 00.7 +0.1
SOC e 17 00 40.1
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC MLR MLR
comp=Z,1μm,13.0s
SOC Sochi 8.72 47 eP Pn 16 59 00.7 +0.1
comp=Z,8.0nm,0.6s
EIL Elat 8.87 157 Pn Pn 16 59 03.0 +0.4
comp=Z,5.9nm,0.3s,baz=327,slow=8.6,SNR=38
EIL Sn Sn 17 00 44.0 +1.4
comp=Z,9.8nm,0.3s,baz=86,slow=21,SNR=5.0
EIL LR LR 17 03 24.9
comp=Z,250nm,21.0s,baz=125,slow=44
HBNS Bani Suwayf 8.95 179 P Pn 16 59 03.2 -0.4
HBNS Bani Suwayf 8.95 179 P Pn 16 59 03.2 -0.5
KIS Kishinev 9.21 351 e Pn 16 59 17.0 +10
KIS eRg 17 02 50.0
KIS LRM 17 04 20.0
comp=Z,800nm,12.0s
GZR Gura Zlata 9.66 323 P Pn 16 59 15.3 +2.0
GZR Gura Zlata 9.66 323 ⇑iP Pn 16 59 14.6 +1.2
GZR Gura Zlata 9.66 323 P Pn 16 59 15.3 +1.9
SWA1 9.68 208 P Pn 16 59 13.2 -0.5
SWA1 S Sn 17 00 55.0 -7.5
HKAT Jabal Katrina 9.71 164 P Pn 16 59 13.6 -0.6
GRB Gharib 9.74 170 ⇑P Pn 16 59 14.3 -0.3
GRUS Gruza 9.78 311 Pn Pn 16 59 15.3 +0.2
MSL Mosul 9.82 96 ex x 16 59 16.0
MSL ex x 17 01 06.0
MSL ex x 17 03 35.0
DIGO Kars 9.96 72 eP Pn 16 59 21.2 +3.7
TR1 10.20 165 P Pn 16 59 20.6 -0.3
DIVS Divcibare 10.33 310 Pn Pn 16 59 24.0 +1.4
SHRM 10.34 164 P Pn 16 59 22.8 -0.1
BZS Buzias 10.38 321 P Pn 16 59 25.6 +2.3
BZS Buzias 10.38 321 ⇑iP Pn 16 59 23.4 +0.1
BZS Buzias 10.38 321 P Pn 16 59 25.5 +2.2
BEO Belgrade 10.48 314 Pn Pn 16 59 25.9 +1.3
ASUT 10.50 177 P Pn 16 59 24.4 -0.7
ONI Oni 10.62 60 P Pn 16 59 30.2 +3.7
KIV Kislovodsk 10.72 52 ePn Pn 16 59 29.7 +1.8
comp=Z,31nm,1.1s
KIV Kislovodsk 10.72 52 ||iP Pn 16 59 30.4 +2.5
DRGR 10.76 328 ⇑P Pn 16 59 29.6 +1.1
DRGR 10.76 328 ⇑iP Pn 16 59 29.6 +1.1
HHRG Al Ghardaqah 10.89 168 P Pn 16 59 29.6 -0.8
HFRF Wahat Farafira 10.97 193 P Pn 16 59 30.9 -0.5
ZEI Tsey 10.99 60 eP Pn 16 59 37.1 +5.4
FGSL Fruska Gora 11.05 314 Pn Pn 16 59 32.5 +0.1
TIP Timpagrande 11.20 281 P Pn 16 59 39.1 +4.6
HSFG 11.59 167 P Pn 16 59 39.9 -0.1
BHD Baghdad 11.86 109 ex x 17 00 15.0
BHD ex x 17 02 53.0
BHD ex x 17 03 14.0
BHD ex x 17 03 33.0
TRPA Tarpa 11.92 332 ⇑iP Pn 16 59 44.3 0.0
PKSM Moragy 12.34 316 P Pn 16 59 52.4 +2.3
PKSM Moragy 12.34 316 ⇑iP Pn 16 59 50.6 +0.5
GTR Jabal at Tayr 12.38 182 P Pn 16 59 51.0 +0.4
AKRG Al Kharijah 12.38 182 P Pn 16 59 51.0 +0.2
HDK1 Dakhla 12.41 187 P Pn 16 59 51.4 +0.3
UZH Uzhgorod 12.42 332 eP Pn 16 59 55.4 +4.2
UZH eS Sn 17 02 17.2 +7.6
UZH MLR MLR
comp=Z,1μm,12.8s
KOLS Kolonicke sedl 12.68 333 ePN Pn 16 59 56.9 +2.2
KIEV Kiev 12.84 355 eP Pn 16 59 55.4 -1.5
comp=Z,19nm,0.9s
KIEV Kiev 12.84 355 eP Pn 16 59 55.4 -1.4
KIEV pmax pmax
comp=Z,19nm,0.9s
KIEV Kiev 12.84 355 eP Pn 16 59 55.4 -1.4
comp=Z,19nm,0.9s
AKASG Malin Array Be 12.84 355 Pn Pn 16 59 52.2 -4.7
comp=Z,0.6nm,0.3s,baz=161,slow=15,SNR=7.4
AKASG Sn Sn 17 02 18.9 -0.9
comp=Z,0.9nm,0.3s,baz=178,slow=23,SNR=2.8
AKASG Malin Array Be 12.84 355 Sn Sn 17 02 18.9 -0.9
PSZ Piszkesteto 12.86 325 ePn Pn 16 59 55.5 -1.7
comp=Z,10nm,1.3s
PSZ ⇑P 16 59 58.8
PSZ P 16 59 59.7
PSZ Piszkesteto 12.86 325 eP Pn 16 59 55.5 -1.6
PSZ pmax pmax
comp=Z,10.0nm,1.3s
PSZ Piszkesteto 12.86 325 ⇑iP Pn 16 59 58.8 +1.6
PSZ Piszkesteto 12.86 325 ePn Pn 16 59 55.5 -1.6
comp=Z,10nm,1.3s
PSZ Piszkesteto 12.86 325 ⇑P Pn 16 59 58.8 +1.6
LVV L'vov 12.90 339 eP Pn 16 59 56.4 -1.3
CRVS Cervenica-Dubn 12.96 331 ePN Pn 17 00 03.4 +4.9
KECS Kecovo 13.02 328 ePN Pn 17 00 03.0 +3.6
VAE Valguarnera 13.12 273 Pn Pn 16 59 57.1 -3.7
comp=Z,4.2nm,0.3s,baz=61,slow=10,SNR=2.5
KWP Kalwaria 13.13 336 eP Pn 17 00 03.5 +2.7
KWP Kalwaria 13.13 336 ⇑iP Pn 17 00 03.4 +2.6
STHS Stebnicka Huta 13.46 332 ePN Pn 17 00 08.4 +3.0
MAK Makhachkala 13.56 63 eP Pn 17 00 17.2 +10
MAK MLR MLR
comp=Z,2μm,26.0s
VYHS Vyhne 13.76 324 ePN Pn 17 00 11.3 +1.8
KOLL Kolacno 14.03 323 ePN Pn 17 00 21.4 +8.3
ZST Bratislava 14.41 320 ePN Pn 17 00 23.3 +5.0
MODS Modra-Piesok 14.43 321 ePN Pn 17 00 26.3 +7.7
VRSR Storozhevoye 14.52 21 eP Pn 17 00 19.0 -0.7
VRSR pmax pmax
comp=Z,2.0nm,1.1s
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,4.0nm,1.0s
VRSR Storozhevoye 14.52 21 eP Pn 17 00 19.0 -0.7
comp=E,2.0nm,1.1s
ARSA Arzberg 14.69 314 ⇑iP Pn 17 00 24.6 +2.5
comp=E,28nm,1.3s,SNR=6.0
OKC Ostrava-Krasne 15.05 326 eP Pn 17 00 28.4 +1.4
OKC AMS AMS 17 07 10.0
comp=Z,2μm,11.9s
VRHR Novokhopersk 15.19 26 eP Pn 17 00 33.1 +4.3
VRHR pmax pmax
comp=N,30nm,0.6s
VRHR pmax pmax
comp=Z,40nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.5s
MORC Moravsky Berou 15.28 325 ePn Pn 17 00 35.6 +5.6
comp=E,6.5nm,0.9s
MORC Moravsky Berou 15.28 325 eP Pn 17 00 35.6 +5.6
MORC pmax pmax
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 15.28 325 ⇑iP Pn 17 00 36.5 +6.5
VRAC Vranov 15.39 322 Pn Pn 17 00 32.3 +0.7
comp=Z,1.1nm,0.3s,baz=180,slow=13,SNR=3.0
MOA Molln 15.73 314 ||iP Pn 17 00 41.4 +5.5
comp=Z,30nm,1.0s,SNR=8.6
MOA Molln 15.73 314 ⇑iP Pn 17 00 41.4 +5.5
comp=Z,30nm,1.0s
RST Umm Al-Ruwaisa 15.75 117 eP Pn 17 00 36.8 +0.5
RST AMb AMB 17 00 43.7
comp=Z,62nm,1.0s
RST Umm Al-Ruwaisa 15.75 117 eP Pn 17 00 36.8 +0.5
comp=Z,62nm,1.0s
VMG Vicchio 15.86 298 P Pn 17 00 41.9 +4.3
NAY Al-Naaiem 16.07 118 eP Pn 17 00 40.8 +0.3
NAY AMb AMB 17 00 45.7
comp=Z,12nm,0.6s
NAY Al-Naaiem 16.07 118 eP Pn 17 00 40.8 +0.4
comp=Z,12nm,0.6s
UMR Umm Al-Rimmam 16.23 116 eP Pn 17 00 43.2 +0.7
UMR AMb AMB 17 00 48.1
comp=Z,109nm,0.6s
UMR Umm Al-Rimmam 16.23 116 eP Pn 17 00 43.2 +0.7
comp=Z,109nm,0.6s
DPC Dobruska-Polom 16.24 325 eP Pn 17 00 43.7 +1.2
DPC AMS AMS 17 08 00.0
comp=Z,2μm,11.9s
KBD Kabd 16.43 117 eP Pn 17 00 45.4 +0.3
KBD AMb AMB 17 00 57.0
comp=Z,539nm,0.8s
KBD Kabd 16.43 117 eP Pn 17 00 45.4 +0.3
comp=Z,539nm,0.8s
CTI Castel Tesino 16.47 306 P Pn 17 00 49.9 +4.4
RDF Al-Radifah 16.48 118 eP Pn 17 00 45.4 -0.3
RDF AMb AMB 17 00 47.3
comp=Z,38nm,1.1s
RDF Al-Radifah 16.48 118 eP Pn 17 00 45.4 -0.3
comp=Z,38nm,1.1s
UPC Upice 16.49 325 eP Pn 17 00 49.2 +3.5
BDI Bagni Di Lucca 16.54 298 P Pn 17 00 51.5 +5.1
GEC2 GERESS Array S 16.59 317 eP Pn 17 00 49.1 +2.1
GEC2 pmax pmax
comp=Z,21nm,1.2s
GEC2 GERESS Array S 16.59 317 eP Pn 17 00 49.1 +2.1
comp=Z,21nm,1.2s
GERES GERESS Array B 16.59 317 Pn Pn 17 00 46.1 -1.0
comp=Z,0.2nm,0.3s,baz=121,slow=13,SNR=20
GSCL Gusciola 16.62 299 P Pn 17 00 51.4 +4.0
MNK Minsk 16.72 354 eP Pn 17 00 49.0 +0.4
ERBM Eremo 16.76 299 P Pn 17 00 52.7 +3.5
KHC Kasperske Hory 16.83 317 eP Pn 17 00 53.0 +3.0
KHC e 17 00 57.0
KHC e 17 01 21.5
KHC Kasperske Hory 16.83 317 eP Pn 17 00 53.0 +3.0
KHC pP pP 17 00 57.0 +2.1
KHC x x 17 01 21.5
KHC AMS AMS 17 08 20.0
comp=Z,1μm,12.3s
QRN Al-Qurain 16.84 118 eP Pn 17 00 50.5 +0.1

QRN AMb AMB 17 00 52.7
comp=Z,54nm,0.8s
PRU Pruhonice 16.85 321 *e*P **Pn 17 00 53.9 +3.7**
PRU AMS AMS 17 08 20.0
comp=Z,700nm,9.6s
APPI Appiano 16.91 307 P **Pn 17 00 56.3 +5.3**
SUW Suwalki 16.96 344 *e*P **Pn 17 00 53.3 +1.6**
PVCC Panska Ves 17.18 322 *e*P **Pn 17 00 56.5 +2.1**
PVCC AMS AMS 17 08 40.0
comp=Z,2µm,12.3s
MABI Malga Bissina 17.21 305 P **Pn 17 00 59.8 +5.0**
WET Wettzell 17.21 316 *e*P **Pn 17 00 57.7 +2.9**
WET pmax pmax
comp=Z,23nm,1.1s
WET Wettzell 17.21 316 *e*P **Pn 17 00 57.7 +2.9**
comp=Z,23nm,1.1s
MOTA Moosalm 17.35 309⇑ *i*P **Pn 17 00 58.6 +2.1**
comp=Z,13nm,1.0s,SNR=7.5
MOTA Moosalm 17.35 309⇑ *i*pP pP 17 00 58.6 -2.1
comp=Z,13nm,1.0s,SNR=7.5
MOTA Moosalm 17.35 309⇑ *i*P **Pn 17 00 58.6 +2.1**
MOTA pmax pmax
comp=Z,13nm,1.0s
PGF Pioggiola 17.39 292 *e*P **Pn 17 00 56.3 -0.7**
comp=Z,74nm,1.3s
PGF Pioggiola 17.39 292 *e*P **Pn 17 00 56.3 -0.7**
PGF pmax pmax
comp=Z,37nm,1.3s
PGF Pioggiola 17.39 292 *e*P **Pn 17 00 56.3 -0.7**
comp=Z,37nm,1.3s
FETA Feichten 17.44 308⇓ *i*P **Pn 17 00 59.4 +1.7**
comp=Z,17nm,0.9s
KEST Kesra 17.44 269 P **Pn 17 00 58.3 +0.5**
comp=Z,0.2nm,0.3s,baz=340,slow=2.1,SNR=18
BRMO Bormio 17.45 306 P **Pn 17 01 02.2 +4.4**
BOB Bobbio (Coli) 17.52 300 P **Pn 17 01 03.1 +4.4**
FUR Furstenfeldbru 17.62 312 *e*P **Pn 17 01 00.8 +1.0**
FUR pmax pmax
comp=Z,29nm,1.2s
FUR Furstenfeldbru 17.62 312 *e*P **Pn 17 01 00.8 +1.0**
comp=Z,29nm,1.2s
OBN Obninsk 17.62 11⇑ *e*P **Pn 17 00 58.9 -0.9**
OBN *e*S **Sn 17 04 09.5 -6.4**
OBN pmax pmax
comp=Z,9.0nm,1.3s
OBN Obninsk 17.62 11 *e*P **Pn 17 00 58.9 -0.9**
comp=Z,9.0nm,1.3s
BRG Berggiesshubel 17.71 322 *e*P **Pn 17 01 03.1 +2.1**
comp=Z,22nm,1.3s
BRG Berggiesshubel 17.71 322 *e*P **Pn 17 01 02.7 +1.7**
comp=Z,22nm,1.3s
BRG S **Sn 17 04 38.0 +20**
BRG
comp=N,984nm,15.4s
BRG
comp=E,1µm,12.0s
BRG
comp=Z,2µm,11.1s
DAVOX Davos/Dischmat 17.88 306 P **Pn 17 01 03.6 +0.4**
baz=148,slow=17
ROTZ Rotzenmuhle 17.92 317 *e*P **Pn 17 01 04.3 +0.7**
comp=Z,24nm,1.0s
NKC Novy Kostel 18.07 319 *e*P **Pn 17 00 57.0 -8.4**
DAVA Damuels 18.08 308⇑ *i*P **Pn 17 01 06.5 +0.9**
comp=Z,14nm,1.1s
TUE Stuetta 18.11 305 P **Pn 17 01 12.3 +6.3**
MOS Moscow 18.38 12 *e*P **Pn 17 01 12.3 +3.1**
MOS pmax pmax
comp=Z,64nm,1.5s
GRA1 Grafenberg Arr 18.42 316 *e*P **Pn 17 01 09.9 +0.2**
comp=Z,9.0nm,1.0s
GRF Grafenberg Arr 18.42 316 *e*P **Pn 17 01 09.9 +0.2**
GRF pmax pmax
comp=Z,9.0nm,1.0s
GRF Grafenberg Arr 18.42 316 *e*P **Pn 17 01 09.9 +0.2**
GRF pmax pmax
comp=Z,9.0nm,1.0s
GRF Grafenberg Arr 18.42 316 *e*P **Pn 17 01 09.9 +0.2**
comp=Z,9.0nm,1.0s
GRFO Grafenberg 18.42 316 Pn **Pn 17 01 04.9 -4.8**
comp=Z,17nm,1.1s
GRFO Grafenberg 18.42 316 P **Pn 17 01 04.9 -4.8**
GRFO pmax pmax
comp=Z,17nm,1.1s
CLL Collm 18.45 322⇑ *i*P **Pn 17 01 12.2 +2.2**
comp=Z,12nm,1.0s
CLL *e*S **Sn 17 04 44.0 +8.0**
CLL Collm 18.45 322⇑ *i*P **Pn 17 01 12.2 +2.2**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 18.45 322⇑ *i*P **Pn 17 01 12.2 +2.2**
comp=Z,12nm,1.0s
CLL *e*Plp 17 01 12.0
CLL *e*S **Sn 17 04 44.0 +8.0**
CLL Collm 18.45 322 *e*P **Pn 17 01 12.2 +2.2**
comp=Z,12nm,1.1s
SBF Sospel 18.73 296 *e*P **Pn 17 01 12.9 -0.6**
comp=Z,29nm,0.8s
SBF Sospel 18.73 296 *e*P **Pn 17 01 12.9 -0.6**
SBF pmax pmax
comp=Z,14nm,0.8s
SBF Sospel 18.73 296 *e*P **Pn 17 01 12.9 -0.6**
comp=Z,14nm,0.8s
MOX Moxa 18.74 319 *e*P **Pn 17 01 15.6 +2.0**
comp=Z,58nm,1.4s
MOX Moxa 18.74 319 *e*P **Pn 17 01 15.6 +2.0**
MOX pmax pmax
comp=Z,58nm,1.4s
MOX Moxa 18.74 319 *e*P **Pn 17 01 13.8 +0.2**
comp=Z,45nm,1.2s
ORO Oropa 18.75 302 P **Pn 17 01 14.2 +0.4**
ORX Oropa 18.75 302 P **Pn 17 01 14.6 +0.8**
STU Stuttgart 19.12 312 *e*P **Pn 17 01 17.9 -0.4**
comp=Z,38nm,1.1s
FRF La Foret Royal 19.24 295 *e*P **Pn 17 01 18.8 -0.9**
LMR La Mourre 19.31 294 *e*P **Pn 17 01 19.5 -1.0**
MBDF Montbardon 19.36 298 *e*P **Pn 17 01 20.5 -0.7**
comp=Z,53nm,0.8s
MBDF Montbardon 19.36 298 *e*P **Pn 17 01 20.5 -0.7**
MBDF pmax pmax
comp=Z,27nm,0.8s
MBDF Montbardon 19.36 298 *e*P **Pn 17 01 20.5 -0.7**
comp=Z,27nm,0.8s
BFO Black Forest 19.46 310 *e*P **Pn 17 01 22.8 +0.5**
BFO pmax pmax
comp=Z,17nm,1.3s
BFO Black Forest 19.46 310 *e*P **Pn 17 01 22.8 +0.5**
comp=Z,17nm,1.3s
FELD Feldberg im Sc 19.48 308 *e*P **Pn 17 01 24.6 +2.1**
BNI Bardonecchia 19.50 299 P **Pn 17 01 24.5 +1.7**
LPG La Plagne 19.55 300 *e*P **Pn 17 01 22.9 -0.5**
comp=Z,125nm,1.1s
LPG La Plagne 19.55 300 *e*P **Pn 17 01 22.9 -0.5**
LPG pmax pmax
comp=Z,62nm,1.0s
LPG La Plagne 19.55 300 *e*P **Pn 17 01 22.9 -0.5**
comp=Z,62nm,1.1s
LPL La Plagne 19.57 301 *e*P **Pn 17 01 22.9 -0.7**
comp=Z,212nm,1.4s
LPL La Plagne 19.57 301 *e*P **Pn 17 01 22.9 -0.7**
LPL pmax pmax
comp=Z,106nm,1.4s
LPL La Plagne 19.57 301 *e*P **Pn 17 01 22.9 -0.7**
comp=Z,106nm,1.4s
UBBA Unterbreizbach 19.68 318 *e*P **Pn 17 01 25.0 0.0**
comp=Z,15nm,1.4s
MOF Molkenrain 20.02 307 *e*P **P 17 01 24.8 -2.4**
ORIF Oris-en-Rattie 20.02 298 *e*P **P 17 01 27.8 +0.5**
comp=Z,61nm,1.0s
ORIF Oris-en-Rattie 20.02 298 *e*P **P 17 01 27.8 +0.5**
ORIF pmax pmax
comp=Z,31nm,1.0s
ORIF Oris-en-Rattie 20.02 298 *e*P **P 17 01 27.8 +0.5**
comp=Z,31nm,1.0s
LANF Langenberg 20.04 311 *e*P **P 17 01 27.2 -0.2**
SMRF Simiane la Rot 20.07 296 *e*P **P 17 01 28.3 +0.5**
comp=Z,59nm,1.1s
SMRF Simiane la Rot 20.07 296 *e*P **P 17 01 28.3 +0.5**
comp=Z,30nm,1.1s
CLZ Clausthal 20.07 321 *e*P **P 17 01 27.1 -0.6**
CLZ pmax pmax
comp=Z,70nm,1.0s
CLZ Clausthal 20.07 321 *e*P **P 17 01 27.1 -0.6**
comp=Z,70nm,1.0s
ECH Echery 20.13 308 *e*P **P 17 01 28.5 +0.1**
CDF Champ du Feu 20.13 309 *e*P **P 17 01 28.5 0.0**
comp=Z,54nm,1.1s
CDF Champ du Feu 20.13 309 *e*P **P 17 01 28.5 0.0**
CDF pmax pmax
comp=Z,27nm,1.1s
CDF Champ du Feu 20.13 309 *e*P **P 17 01 28.5 0.0**
comp=Z,27nm,1.1s
HINF Hinteralfeld 20.18 307 *e*P **P 17 01 29.3 +0.4**
comp=Z,10nm,0.7s
HINF Hinteralfeld 20.18 307 *e*P **P 17 01 29.3 +0.4**
HINF pmax pmax
comp=Z,5.0nm,0.7s
HINF Hinteralfeld 20.18 307 *e*P **P 17 01 29.3 +0.4**
comp=Z,5.2nm,0.7s
TNS Taunus Mts 20.23 315 *e*P **P 17 01 29.7 +0.2**
TNS pmax pmax
comp=Z,14nm,1.3s
TNS Taunus Mts 20.23 315 *e*P **P 17 01 29.7 +0.2**
comp=Z,14nm,1.3s
CABF La Chapelle 20.29 303 *e*P **P 17 01 30.6 +0.4**
comp=Z,44nm,1.0s
CABF La Chapelle 20.29 303 *e*P **P 17 01 30.6 +0.4**
CABF pmax pmax
comp=Z,22nm,1.0s
CABF La Chapelle 20.29 303 *e*P **P 17 01 30.6 +0.4**
comp=Z,22nm,1.0s
BSD Bornholm Skovb 20.36 333 *i*P **P 17 01 29.1 -1.7**
BSD pmax pmax
comp=Z,46nm,1.0s
BSD Bornholm Skovb 20.36 333 *i*P **P 17 01 29.1 -1.7**
comp=Z,46nm,1.0s
BSD *i*S ScP 17 09 13.0 -6.8
HAU Haudompre 20.56 307 *e*P **P 17 01 33.4 +0.3**
comp=Z,34nm,1.0s
HAU Haudompre 20.56 307 *e*P **P 17 01 33.4 +0.3**
HAU pmax pmax
comp=Z,17nm,1.0s
HAU Haudompre 20.56 307 *e*P **P 17 01 33.4 +0.3**
comp=Z,17nm,1.0s
ABH Altenburg 20.59 313 *e*P **P 17 01 36.7 +3.4**
VSU Vasula 20.74 354 *i*P **P 17 01 35.5 +0.5**
VIVF Saint-Julien-l 20.85 298 *e*P **P 17 01 36.5 +0.2**
comp=Z,72nm,1.5s
VIVF Saint-Julien-l 20.85 298 *e*P **P 17 01 36.5 +0.2**
VIVF pmax pmax
comp=Z,36nm,1.5s
VIVF Saint-Julien-l 20.85 298 *e*P **P 17 01 36.5 +0.2**
comp=Z,36nm,1.5s
WLF Walferdange 21.31 311 *e*P **P 17 01 43.0 +1.9**
comp=Z,14nm,1.0s,mb4.2
WLF Walferdange 21.31 311 *e*P **P 17 01 43.1 +1.9**
WLF pmax pmax
comp=Z,14nm,1.0s,mb4.2
WLF Walferdange 21.31 311 P **P 17 01 40.1 -1.1**
comp=Z,14nm,1.4s,mb4.1
WLF Walferdange 21.31 311 *e*P **P 17 01 43.0 +1.8**
comp=Z,14nm,1.0s,mb4.2
LASF Ste Croix 21.31 295 *e*P **P 17 01 40.8 -0.4**
comp=Z,52nm,1.1s,mb4.5
LASF Ste Croix 21.31 295 *e*P **P 17 01 40.8 -0.4**
comp=Z,26nm,1.1s,mb4.5
BSEG Bad Segeberg 21.39 325 *e*P **P 17 01 41.5 -0.5**
comp=Z,16nm,1.0s,mb4.3
BSEG Bad Segeberg 21.39 325 *e*P **P 17 01 41.4 -0.6**
MEZF Maizieres J'vi 21.55 308 *e*P **P 17 01 43.6 -0.1**
comp=Z,39nm,1.1s,mb4.5
MEZF Maizieres J'vi 21.55 308 *e*P **P 17 01 43.6 -0.1**
comp=Z,19nm,1.1s,mb4.5
IBBN Ibbenburen 21.67 319 *e*P **P 17 01 44.8 -0.2**
comp=Z,46nm,1.0s,mb4.9
PLDF La Plantade 21.79 300 *e*P **P 17 01 47.4 +1.0**
SMF Signal de Mont 21.80 302 *e*P **P 17 01 46.0 -0.4**
comp=Z,77nm,1.2s,mb4.7
SMF Signal de Mont 21.80 302 *e*P **P 17 01 46.0 -0.4**
SMF pmax pmax
comp=Z,39nm,1.2s,mb4.7
SMF Signal de Mont 21.80 302 *e*P **P 17 01 46.0 -0.4**
comp=Z,38nm,1.2s,mb4.7
LBL Lubilhac 21.91 298 *e*P **P 17 01 49.1 +1.4**
LOR Lormes 21.94 304 *e*P **P 17 01 47.5 -0.5**
comp=Z,33nm,0.9s,mb4.5
LOR Lormes 21.94 304 *e*P **P 17 01 47.5 -0.5**
LOR pmax pmax
comp=Z,17nm,0.9s,mb4.5
LOR Lormes 21.94 304 *e*P **P 17 01 47.5 -0.5**
comp=Z,16nm,0.9s,mb4.5
WTSB Winterswijk 22.00 317 *e*P **P 17 01 48.4 -0.1**
comp=Z,31nm,1.6s,mb4.5
SSF Saint Saulge 22.12 303 *e*P **P 17 01 49.1 -0.8**
comp=Z,32nm,1.1s,mb4.4
SSF Saint Saulge 22.12 303 *e*P **P 17 01 49.1 -0.8**
SSF pmax pmax
comp=Z,16nm,1.1s,mb4.4
SSF Saint Saulge 22.12 303 *e*P **P 17 01 49.1 -0.8**
comp=Z,16nm,1.1s,mb4.4
AGO Saint Agoulin 22.15 300 *e*P **P 17 01 49.7 -0.5**
AVF Avril sur Loir 22.16 302 *e*P **P 17 01 49.7 -0.6**
comp=Z,52nm,1.1s,mb4.6
AVF Avril sur Loir 22.16 302 *e*P **P 17 01 49.7 -0.6**
AVF pmax pmax
comp=Z,26nm,1.1s,mb4.6
AVF Avril sur Loir 22.16 302 *e*P **P 17 01 49.7 -0.6**
comp=Z,26nm,1.1s,mb4.6
PYM Petit Puy Mans 22.17 300 *e*P **P 17 01 52.0 +1.6**
MTLF Montolieu 22.42 293 *e*P **P 17 01 52.0 -1.1**
comp=Z,35nm,0.9s,mb4.5
MTLF Montolieu 22.42 293 *e*P **P 17 01 52.0 -1.1**
MTLF pmax pmax
comp=Z,18nm,0.9s,mb4.5
MTLF Montolieu 22.42 293 *e*P **P 17 01 52.0 -1.1**
comp=Z,18nm,0.9s,mb4.5
BGF Bois d'Agland 22.44 302 *e*P **P 17 01 52.4 -0.9**
CAF Calviac 22.70 297 *e*P **P 17 01 54.9 -1.1**
TCF Toulx Ste Croi 22.82 301 *e*P **P 17 01 56.1 -1.2**
comp=Z,41nm,1.3s,mb4.4
TCF Toulx Ste Croi 22.82 301 *e*P **P 17 01 56.1 -1.2**
TCF pmax pmax
comp=Z,21nm,1.3s,mb4.4
TCF Toulx Ste Croi 22.82 301 *e*P **P 17 01 56.1 -1.2**
comp=Z,21nm,1.3s,mb4.4
AKTK Aktyubinsk 22.94 48 P **P 17 01 58.3 -0.3**
comp=Z,5.0nm,0.8s,mb4.0
AKTO Aktyubinsk 22.94 48 P **P 17 01 58.3 -0.3**
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.0
AKTO Aktyubinsk 22.94 48 P **P 17 01 58.3 -0.3**
comp=Z,5.2nm,0.8s,mb4.0,baz=248,slow=13,SNR=11
RJF Les Rejaudoux 23.13 298 *e*P **P 17 01 59.1 -1.5**
MUD Monsted U'grnd 23.55 329 *i*P **P 17 02 06.3 +1.4**
MUD pmax pmax
comp=Z,36nm,1.1s,mb4.7
MUD Monsted U'grnd 23.55 329 *i*P **P 17 02 06.3 +1.4**
comp=Z,36nm,1.1s,mb4.7
LFF La Frestale 23.63 297 *e*P **P 17 02 04.0 -1.8**
FINES FINESS Array B 23.75 354 P **P 17 02 06.2 -0.4**
FINES FINESS Array B 23.75 354 P **P 17 02 06.2 -0.5**
FINES pmax pmax
comp=Z,4.0nm,0.7s
FINES FINESS Array B 23.75 354 P **P 17 02 06.2 -0.4**
comp=Z,3.7nm,0.7s,mb3.9,baz=142,slow=9.6,SNR=10
EPF Esparros 23.77 292 *e*P **P 17 02 04.9 -2.2**
comp=Z,19nm,0.9s,mb4.2
EPF Esparros 23.77 292 *e*P **P 17 02 04.9 -2.2**
EPF pmax pmax
comp=Z,9.0nm,0.9s,mb4.2
EPF Esparros 23.77 292 *e*P **P 17 02 04.9 -2.2**
comp=Z,9.4nm,0.9s,mb4.2
KAF Kangasniemi 24.39 355 *e*p **P 17 02 10.3 -2.2**
ETSF Etsaut 24.43 292 *e*P **P 17 02 11.7 -1.4**
comp=Z,43nm,0.9s,mb4.6
ETSF Etsaut 24.43 292 *e*P **P 17 02 11.7 -1.4**
ETSF pmax pmax
comp=Z,22nm,0.9s,mb4.6
ETSF Etsaut 24.43 292 *e*P **P 17 02 11.7 -1.4**
comp=Z,22nm,0.9s,mb4.6
MFF Saint Martin d 24.48 301 *e*P **P 17 02 12.0 -1.5**
comp=Z,18nm,1.0s,mb4.2
MFF Saint Martin d 24.48 301 *e*P **P 17 02 12.0 -1.5**
MFF pmax pmax
comp=Z,9.0nm,1.0s,mb4.2
MFF Saint Martin d 24.48 301 *e*P **P 17 02 12.0 -1.5**
comp=Z,9.2nm,1.0s,mb4.2
HFS Hagfors 24.80 339 P **P 17 02 15.0 -1.2**
HFS pmax pmax
comp=Z,5.0nm,0.9s
HFS Hagfors 24.80 339 P **P 17 02 15.0 -1.2**
comp=Z,4.7nm,0.9s,mb4.0,baz=138,slow=14,SNR=6.9
LDF La Druitiere 24.87 305 *e*P **P 17 02 16.0 -1.0**
SJPF Ste Jean 24.92 292 *e*P **P 17 02 16.1 -1.5**
comp=Z,74nm,1.3s,mb4.8
SJPF Ste Jean 24.92 292 *e*P **P 17 02 16.1 -1.5**
SJPF pmax pmax
comp=Z,37nm,1.3s,mb4.8
SJPF Ste Jean 24.92 292 *e*P **P 17 02 16.1 -1.5**
comp=Z,37nm,1.3s,mb4.8
JOF Joensuu 25.03 0 *e*p **P 17 02 16.7 -1.6**
comp=Z,10.0nm,0.9s,mb4.3
JOF Joensuu 25.03 0 *e*P **P 17 02 16.7 -1.6**
JOF pmax pmax
comp=Z,10.0nm,0.9s,mb4.3
FLN La Foliniere 25.14 306 *e*P **P 17 02 18.4 -1.1**
GRR Gorron 25.30 305 *e*P **P 17 02 19.2 -1.7**
comp=Z,68nm,1.0s,mb4.8
GRR Gorron 25.30 305 *e*P **P 17 02 19.2 -1.7**
GRR pmax pmax
comp=Z,34nm,1.0s,mb4.8
GRR Gorron 25.30 305 *e*P **P 17 02 19.2 -1.7**
comp=Z,34nm,1.0s,mb4.8
PRGR Permogore 25.44 16⇓ *i*P **P 17 02 23.3 +1.3**
PRGR *e*S **S 17 06 54.7 +6.1**
PRGR pmax pmax
comp=Z,59nm,1.6s,mb4.9
PRGR Permogore 25.44 16 *i*P **P 17 02 23.3 +1.3**
comp=Z,59nm,1.6s,mb4.9
KONO Kongsberg 25.68 335 *i*P **P 17 02 23.7 -0.6**
ARU Arti 26.08 36 *e*P **P 17 02 26.4 -1.5**
comp=Z,12nm,0.8s,mb4.5
ARU Arti 26.08 36*d* *i*P **P 17 02 27.5 -0.4**
ARU *e* 17 03 04.8
ARU *e*PPP 17 03 14.2
ARU *e*S **S 17 06 59.8 +1.0**
ARU *e*SSS 17 08 08.2
ARU pmax pmax
comp=Z,20nm,1.2s,mb4.5
ARU Arti 26.08 36 *i*P **P 17 02 27.5 -0.4**
comp=Z,20nm,1.2s,mb4.5
NB2 NORSAR Subarra 26.25 338 P **P 17 02 28.0 -1.4**
comp=Z,4.4nm,0.7s,mb4.1,baz=141,slow=9.3
NB2 NORSAR Subarra 26.25 338 P **P 17 02 28.0 -1.4**
NB2 pmax pmax
comp=Z,4.0nm,0.7s,mb4.1
NOA NORSAR Array B 26.25 338 P **P 17 02 28.1 -1.3**
NOA pmax pmax
comp=Z,4.0nm,0.7s
NOA NORSAR Array B 26.25 338 P **P 17 02 28.1 -1.3**
comp=Z,4.2nm,0.7s,mb4.1,baz=142,slow=9.3,SNR=16
SGMF Saint Gilles 26.38 304 *e*P **P 17 02 29.9 -0.8**
comp=Z,51nm,1.1s,mb4.7
SGMF Saint Gilles 26.38 304 *e*P **P 17 02 29.9 -0.8**
SGMF pmax pmax
comp=Z,25nm,1.1s,mb4.7
SGMF Saint Gilles 26.38 304 *e*P **P 17 02 29.9 -0.8**
comp=Z,25nm,1.1s,mb4.7
QUIF Quistinic 26.72 303 *e*P **P 17 02 33.5 -0.3**
ROSF Rostrenen 26.86 304 *e*P **P 17 02 34.6 -0.5**
ESDC Sonseca Array 27.18 285 P **P 17 02 37.2 -0.8**
comp=Z,1.8nm,0.6s,mb3.8,baz=73,slow=9.5,SNR=9.7
SVE Sverdlovsk 27.26 36 *e*P **P 17 02 38.0 -0.5**
MDT Midelt 29.34 271 P **P 17 02 56.7 -0.7**
comp=Z,3.1nm,0.9s,mb4.1,baz=68,slow=9.1,SNR=5.6
ARCES ARCESS Array B 31.82 356 P **P 17 03 17.8 -1.0**
ARCES ARCESS Array B 31.82 356 P **P 17 03 17.8 -1.0**
ARCES pmax pmax
comp=Z,4.0nm,0.7s
ARCES ARCESS Array B 31.82 356 P **P 17 03 17.8 -1.0**
comp=Z,4.1nm,0.7s,mb4.3,baz=186,slow=5.9,SNR=7.8
EKS2 Erkin-Say 32.74 68 *e*P **P 17 03 25.4 -1.8**
comp=Z,7.1nm,1.1s,mb4.5
EKS2 Erkin-Say 32.74 68 *e*P **P 17 03 25.4 -1.8**
comp=Z,7.1nm,1.1s,mb4.5
UCH Uchtor 33.33 69 *e*P **P 17 03 30.5 -1.9**
comp=Z,3.2nm,0.9s,mb4.2
UCH Uchtor 33.33 69 *e*P **P 17 03 30.5 -1.9**
comp=Z,3.2nm,0.9s,mb4.2
FRU Bishkek 33.33 68 *e*P **P 17 03 33.0 +0.6**
TKM2 Tokmak 2 34.04 67 *e*P **P 17 03 36.8 -1.8**
comp=Z,8.4nm,1.1s,mb4.6
TKM2 Tokmak 2 34.04 67 *e*P **P 17 03 36.8 -1.8**
TKM2 pmax pmax
comp=Z,8.0nm,1.1s,mb4.6
TKM2 Tokmak 2 34.04 67 *e*P **P 17 03 36.8 -1.8**
comp=Z,8.4nm,1.1s,mb4.6
KURK Kurchatov 35.80 53 *e*P **P 17 03 51.5 -2.2**
comp=Z,9.9nm,0.9s,mb4.7
KURK Kurchatov 35.80 53 *i*P **P 17 03 53.3 -0.4**
KURK pmax pmax
comp=Z,7.0nm,1.2s,mb4.5
KURK Kurchatov 35.80 53 *i*P **P 17 03 53.3 -0.4**
comp=Z,7.0nm,1.2s,mb4.5
TORD Torodi Ar. Bea 35.87 234 P **P 17 03 53.9 -0.7**
TORD Torodi Ar. Bea 35.87 234 P **P 17 03 53.9 -0.6**
comp=Z,11nm,0.9s,mb4.8,baz=33,slow=8.9,SNR=57
MK31 Makanchi Array 38.35 60 *i*P **P 17 04 14.9 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.6s,mb4.4
MK31 Makanchi Array 38.35 60 *i*P **P 17 04 14.9 -0.5**
comp=Z,5.0nm,0.6s,mb4.4
MKAR Makanchi Array 38.35 60 P **P 17 04 15.3 -0.1**
MKAR Makanchi Array 38.35 60 P **P 17 04 15.3 -0.1**
MKAR pmax pmax
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 38.35 60 P **P 17 04 15.3 -0.1**
comp=Z,4.5nm,0.7s,mb4.3,baz=276,slow=6.9,SNR=50
NVS Novosibirsk 38.82 47 *e*P **P 17 04 18.4 -0.8**
NVS *e* 17 05 46.4
NVS pmax pmax
comp=N,6.0nm,1.6s
NVS pmax pmax
comp=E,7.0nm,1.6s
NVS pmax pmax
comp=Z,21nm,1.6s,mb4.6
ZAL Zalesovo 39.69 48 P **P 17 04 24.4 -2.1**
ZAA0 Zalesovo Array 39.70 48 *e*P **P 17 04 24.6 -2.0**
ZAA0 Zalesovo Array 39.70 48 *e*P **P 17 04 24.6 -2.0**
ZALV Zalesovo Beam 39.70 48 P **P 17 04 24.4 -2.2**
comp=Z,1.8nm,0.5s,mb4.0,baz=261,slow=8.8,SNR=9.8
WMQ Urumqi 42.59 63 *e*P **P 17 04 50.8 +0.4**
WMQ AP pP 17 04 55.3 +1.7
WMQ XP sP 17 04 57.8 +3.0
WMQ AMB AMB
comp=Z,17nm,1.0s,mb4.7
WMQ AMB AMB
comp=Z,155nm,4.3s
WMQ LR LR
comp=N,325nm,22.1s,MS4.3
WMQ LR LR
comp=E,229nm,18.6s,MS4.3
WMQ LR LR
comp=Z,178nm,18.6s,MS4.0
KOLN Koldanda 44.85 87 *e*P **P 17 05 08.1 -0.8**
comp=Z,25nm,0.9s,mb5.1
DBIC Dimbokro 44.96 235 P **P 17 05 07.3 -2.5**
DBIC pmax pmax
comp=Z,8.0nm,1.0s
DBIC Dimbokro 44.96 235 P **P 17 05 07.3 -2.6**
comp=Z,8.1nm,1.0s,mb4.5,baz=11,slow=11,SNR=6.5
LIC Lamto 45.40 235 *e*P **P 17 05 12.2 -1.2**
comp=Z,31nm,1.1s,mb4.8
LIC Lamto 45.40 235 *e*P **P 17 05 12.2 -1.2**
comp=Z,15nm,1.1s,mb4.8
GKN Gorkha 45.56 86 *e*P **P 17 05 13.5 -1.1**
comp=Z,48nm,1.1s,mb5.3
KKN Kakani 46.17 86 *e*P **P 17 05 18.2 -1.1**
comp=Z,19nm,0.8s,mb5.1
HYB Hyderabad 46.27 103 *i*P **P 17 05 21.0 +0.8**
HYB Hyderabad 46.27 103 *e*P **P 17 05 21.0 +0.8**
JIRN Jiri 46.95 86 *e*P **P 17 05 24.2 -1.2**
comp=Z,29nm,1.0s,mb5.2
ODAN Odare 48.26 86 *e*P **P 17 05 34.1 -1.6**
comp=Z,33nm,1.3s,mb5.2
TAPN Taplejung 48.29 85 *e*P **P 17 05 34.3 -1.6**
comp=Z,16nm,0.8s,mb5.1
MOY Mondy 49.68 50 *e*P **P 17 05 47.4 +1.2**
LSA Lhasa 49.92 81 P **P 17 05 48.5 +0.1**
LSA Lhasa 49.92 81 *e*P **P 17 05 45.7 -2.7**
comp=Z,11nm,1.2s,mb4.8
LSA Lhasa 49.92 81 *e*P **P 17 05 45.7 -2.7**
LSA pmax pmax
comp=Z,11nm,1.2s,mb4.8
LSA Lhasa 49.92 81 *e*P **P 17 05 45.7 -2.7**
comp=Z,11nm,1.2s,mb4.8
TLY Talaya 51.28 50 *e*P **P 17 05 58.7 +0.4**
comp=Z,7.0nm,1.0s,mb4.5

TLY	**Talaya**	**51.28**	**50**	*eP*		**P**	**17 05 58.7**	**+0.4**
TLY				*e*			17 13 19.1	
TLY					pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6							
TLY	**Talaya**	**51.28**	**50**	*eP*		**P**	**17 05 58.7**	**+0.4**
	comp=Z,7.0nm,1.0s,mb4.5							
ZAK	**Zakamensk**	**51.40**	**51**	*eP*		**P**	**17 05 58.9**	**-0.3**
ZAK					pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.0							
ZAK	**Zakamensk**	**51.40**	**51**	*eP*		**P**	**17 05 58.9**	**-0.3**
	comp=Z,3.0nm,1.5s,mb4.0							
GTA	**Gaotai**	**52.55**	**66**	*eP*		**P**	**17 06 07.0**	**-1.0**
GTA					AP	pP	17 06 11.8	+0.6
GTA					XP	sP	17 06 15.0	+2.6
SONM	**Songino Array**	**54.11**	**54**	P		**P**	**17 06 18.6**	**-0.7**
SONM					pmax	pmax		
	comp=Z,2.0nm,0.7s							
SONM	**Songino Array**	**54.11**	**54**	P		**P**	**17 06 18.6**	**-0.7**
	comp=Z,1.8nm,0.7s,mb4.1,baz=283,slow=8.3,SNR=18							
PALK	**Pallekele**	**54.26**	**111**	*eP*		**P**	**17 06 17.9**	**-2.9**
PALK	**Pallekele**	**54.26**	**111**	*eP*		**P**	**17 06 17.9**	**-2.9**
BOD	**Bodaibo**	**55.37**	**40**	*eP*		**P**	**17 06 27.1**	**-1.2**
BOD					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8							
BOD	**Bodaibo**	**55.37**	**40**	*eP*		**P**	**17 06 27.1**	**-1.2**
	comp=Z,8.0nm,0.9s,mb4.8							
LZH	**Lanzhou**	**56.81**	**68**	*eP*		**P**	**17 06 38.5**	**-0.4**
LZH					AP	pP	17 06 41.0	-1.1
LZH					XP	sP	17 06 42.5	-0.8
LZH					AMB	AMB		
	comp=Z,25nm,1.2s,mb5.1							
LZH					AMB	AMB		
	comp=Z,91nm,4.3s							
TIXI	**Tiksi**	**56.91**	**22**	*eP*		**P**	**17 06 38.1**	**-1.0**
	comp=Z,6.9nm,1.0s,mb4.6							
TIXI	**Tiksi**	**56.91**	**22⇑**	*eP*		**P**	**17 06 38.2**	**-0.9**
TIXI					pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.7							
TIXI					MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3							
TIXI	**Tiksi**	**56.91**	**22**	*eP*		**P**	**17 06 38.2**	**-0.9**
	comp=Z,200nm,17.0s							
OPO	**Ambohidratompo**	**58.22**	**162**	P		**P**	**17 06 48.8**	**0.0**
	comp=Z,3.5nm,0.8s,mb4.4,baz=321,slow=9.1,SNR=4.3							
HHC	**Hu-ho-hao-te**	**60.22**	**60**	*eP*		**P**	**17 07 02.8**	**+0.2**
HHC					AP	pP	17 07 07.5	+1.7
HHC					XP	sP	17 07 09.8	+2.8
HHC					PCP	PcP	17 07 48.5	+0.5
HHC					PP	PP	17 09 17.0	+1.9
HHC					SCP	ScP	17 11 48.0	-1.2
HHC					PCS	PcS	17 11 49.3	-1.0
HHC					S	**S**	**17 15 13.0**	**-3.4**
HHC					XS	sS	17 15 21.5	-0.2
HHC					SCS	ScS	17 16 49.5	-3.8
HHC					SS	SS	17 19 11.3	-1.8
HHC					AMB	AMB		
	comp=Z,15nm,0.7s,mb5.1							
HHC					AMB	AMB		
	comp=Z,318nm,5.5s							
HHC					LR	LR		
	comp=N,204nm,28.9s,MS4.6							
HHC					LR	LR		
	comp=E,542nm,27.4s,MS4.6							
HHC					LR	LR		
	comp=Z,114nm,30.4s,MS3.8							
YAK	**Yakutsk**	**61.11**	**32**	*eP*		**P**	**17 07 05.0**	**-3.3**
YAK	**Yakutsk**	**61.11**	**32**	*i* P		**P**	**17 07 07.9**	**-0.4**
YAK					pmax	pmax		
	comp=Z,8.0nm,0.7s,mb5.0							
YAK					MLR	MLR		
	comp=Z,100nm,17.0s,MS4.0							
YAK	**Yakutsk**	**61.11**	**32**	*i* P		**P**	**17 07 07.9**	**-0.4**
	comp=Z,100nm,17.0s							
XAN	**Xi'an**	**61.45**	**68**	P		**P**	**17 07 10.8**	**-0.3**
XAN					AP	pP	17 07 20.8	+6.5
XAN					AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.7							
HIA	**Hailar**	**61.74**	**48**	*eP*		**P**	**17 07 13.1**	**+0.2**
	comp=Z,26nm,1.1s,mb5.3							
HIA	**Hailar**	**61.74**	**48**	*eP*		**P**	**17 07 13.1**	**+0.3**
HIA					pmax	pmax		
	comp=Z,26nm,1.1s							
HIA	**Hailar**	**61.74**	**48**	*eP*		**P**	**17 07 13.1**	**+0.3**
	comp=Z,26nm,1.1s,mb5.3							
RES	**Resolute Bay**	**62.17**	**346**	*eP*		**P**	**17 07 13.9**	**-1.5**
	comp=Z,158nm,1.0s							
RES	**Resolute Bay**	**62.17**	**346**	*eP*		**P**	**17 07 13.9**	**-1.4**
RES					pmax	pmax		
	comp=Z,159nm,1.0s							
RES	**Resolute Bay**	**62.17**	**346**	*eP*		**P**	**17 07 13.9**	**-1.4**
	comp=Z,158nm,1.0s							
GYA	**Guiyang**	**63.49**	**76**	P		**P**	**17 07 25.3**	**+0.4**
GYA					AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0							
BJI	**Beijing**	**63.72**	**59**	P		**P**	**17 07 24.8**	**-1.4**
BJI					AMB	AMB		
	comp=Z,14nm,1.2s,mb4.9							
BJI					AMB	AMB		
	comp=Z,120nm,4.9s							
BJT	**Baijiatuan**	**63.72**	**59**	*eP*		**P**	**17 07 26.1**	**-0.1**
BJT	**Baijiatuan**	**63.72**	**59**	*eP*		**P**	**17 07 26.1**	**-0.1**
SCHQ	**Schefferville**	**64.08**	**320**	P		**P**	**17 07 26.3**	**-2.0**
	comp=Z,3.8nm,0.8s,mb4.5,baz=102,slow=6.2,SNR=4.3							
BOSA	**Boshof**	**66.40**	**185**	P		**P**	**17 07 42.8**	**-0.7**
BOSA					pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6							
BOSA	**Boshof**	**66.40**	**185**	P		**P**	**17 07 42.8**	**-0.7**
	comp=Z,7.3nm,1.2s,mb4.6,baz=0.0,slow=4.0,SNR=4.2							
CN2	**Changchun**	**67.83**	**51**	*eP*		**P**	**17 07 48.5**	**-4.1**
CN2					AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0							
KLR	**Kul'dur**	**68.59**	**44**	*eP*		**P**	**17 07 49.0**	**-8.3**
KLR				*e*			17 08 17.2	
SEY	**Seymchan**	**69.17**	**25⇓**	*eP*		**P**	**17 08 01.2**	**+0.5**
BILL	**Bilibino**	**69.17**	**16**	*eP*		**P**	**17 07 59.5**	**-1.1**
	comp=Z,12nm,1.1s,mb4.7							
BILL	**Bilibino**	**69.17**	**16⇑**	*eP*		**P**	**17 08 00.0**	**-0.6**
BILL				*eS*		S	17 17 13.8	+7.8
BILL					pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8							
BILL	**Bilibino**	**69.17**	**16**	*eP*		**P**	**17 08 00.0**	**-0.6**
	comp=Z,16nm,1.4s,mb4.8							
NJ2	**Nanjing**	**69.64**	**65**	*eP*		**P**	**17 08 04.5**	**+0.4**
NJ2					AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0							
KULM	**Kulim**	**70.76**	**98**	*eP*		**P**	**17 08 09.5**	**-1.7**
MA2	**Magadan**	**70.93**	**28**	*eP*		**P**	**17 08 11.0**	**-0.5**
	comp=Z,13nm,1.0s,mb4.8							
MA2	**Magadan**	**70.93**	**28⇓**	*eP*		**P**	**17 08 11.8**	**+0.3**
MA2					pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8							
PSI	**Prapat**	**70.97**	**102**	P		**P**	**17 08 11.8**	**-0.6**
PSI					pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9							
PSI	**Prapat**	**70.97**	**102**	P		**P**	**17 08 11.8**	**-0.7**
	comp=Z,17nm,0.9s,mb5.0,baz=262,slow=6.7,SNR=11							
VLA	**Vladivostok**	**72.12**	**49⇓**	*eP*		**P**	**17 08 18.5**	**-0.5**
VLA					pmax	pmax		
	comp=Z,47nm,1.6s,mb5.2							
VLA					MLR	MLR		
	comp=Z,300nm,26.0s,MS4.5							
KSRS	**Korea Array**	**72.88**	**56**	P		**P**	**17 08 22.7**	**-1.0**
	comp=Z,9.9nm,1.0s,mb4.7,baz=301,slow=5.4,SNR=16							
KSRS					LR	LR	17 43 31.2	
	comp=Z,107nm,21.8s,MS4.1,baz=295,slow=38							
FCC	**Fort Churchill**	**73.41**	**334**	*eP*		**P**	**17 08 24.9**	**-1.5**
	comp=Z,4.4nm,1.1s,mb4.3							
FCC	**Fort Churchill**	**73.41**	**334**	*eP*		**P**	**17 08 24.9**	**-1.4**
FCC					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3							
INK	**Inuvik**	**73.46**	**354**	*eP*		**P**	**17 08 25.9**	**-0.6**
	comp=Z,21nm,0.6s,mb5.2							
INK	**Inuvik**	**73.46**	**354**	*eP*		**P**	**17 08 25.9**	**-0.6**
INK					pmax	pmax		
	comp=Z,21nm,0.6s							
YSS	**Yuzh-Sakhalins**	**75.84**	**41**	*eP*		**P**	**17 08 38.8**	**-1.9**
	comp=Z,17nm,1.0s,mb4.9							
YSS	**Yuzh-Sakhalins**	**75.84**	**41⇑**	*eP*		**P**	**17 08 41.1**	**+0.4**
YSS					pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8							
YKA	**Yellowknife Ar**	**76.17**	**344**	P		**P**	**17 08 40.9**	**-1.3**
YKA	**Yellowknife Ar**	**76.17**	**344**	P		**P**	**17 08 40.9**	**-1.4**
YKA					pmax	pmax		
	comp=Z,5.0nm,0.8s							
YKA	**Yellowknife Ar**	**76.17**	**344**	P		**P**	**17 08 40.9**	**-1.3**
	comp=Z,5.2nm,0.8s,mb4.5,baz=29,slow=5.6,SNR=58							
IMA2	**Indian Mountai**	**76.28**	**2**	*eP*		**P**	**17 08 42.5**	**-0.4**
ASAJ	**Asahikawa**	**77.61**	**43**	P		**P**	**17 08 50.1**	**-0.7**
ASAJ					pmax	pmax		
	comp=Z,11nm,1.1s							
ASAJ	**Asahikawa**	**77.61**	**43**	P		**P**	**17 08 50.0**	**-0.7**
	comp=Z,10nm,1.1s,mb4.7,baz=239,slow=24,SNR=4.9							
DAWY	**Dawson**	**78.07**	**356**	*eP*		**P**	**17 08 50.8**	**-2.1**
FFC	**Flin Flon**	**79.29**	**334**	*eP*		**P**	**17 08 58.2**	**-1.6**
	comp=Z,13nm,1.3s,mb4.7							
FFC	**Flin Flon**	**79.29**	**334**	*eP*		**P**	**17 08 58.2**	**-1.6**
FFC					pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7							
MAJO	**Matsushiro**	**79.98**	**51**	*eP*		**P**	**17 09 01.2**	**-2.7**
MJAR	**Matsushiro Arr**	**79.98**	**51**	P		**P**	**17 09 03.3**	**-0.6**
MJAR					pmax	pmax		
	comp=Z,4.0nm,0.8s							
MJAR	**Matsushiro Arr**	**79.98**	**51**	P		**P**	**17 09 03.3**	**-0.6**
	comp=Z,4.1nm,0.8s,mb4.4,baz=316,slow=4.2,SNR=9.2							
ULM	**Lac du Bonnet**	**80.52**	**329**	P		**P**	**17 09 05.3**	**-1.2**
	comp=Z,2.8nm,0.7s,mb4.3,baz=22,slow=1.3,SNR=5.8							
SVW2	**Sparrevohn**	**81.19**	**3**	P		**P**	**17 09 09.4**	**-0.5**
EDM	**Edmonton**	**84.11**	**339**	*eP*		**P**	**17 09 23.0**	**-2.3**
GCMT	**Greycliff**	**89.46**	**334**	*eP*		**P**	**17 09 50.8**	**-0.7**
RLMT	**Red Lodge**	**89.90**	**333**	*eP*		**P**	**17 09 53.0**	**-0.6**
	comp=Z,4.7nm,0.8s,mb4.9							
PDAR	**Pinedale Array**	**92.04**	**332**	P		**P**	**17 10 02.6**	**-0.9**
	comp=Z,1.1nm,0.8s,mb4.3,baz=66,slow=5.1,SNR=9.7							
BMO	**Blue Mountains**	**92.77**	**338**	*eP*		**P**	**17 10 04.4**	**-2.5**
	comp=Z,5.6nm,0.9s,mb5.0							
HWUT	**Hardware Ranch**	**93.78**	**333**	*eP*		**P**	**17 10 10.8**	**-0.9**
	comp=Z,2.6nm,0.7s,mb4.8							
ASAR	**Alice Springs**	**113.99**	**102**	PKP		PKiKP	17 15 31.6	-2.3
	comp=Z,0.3nm,0.8s,baz=305,slow=2.3,SNR=4.2							
CTA	**Charters Tower**	**121.77**	**92**	PKIKP		PKPdf	17 15 46.0	-3.0
CTA					pmax	pmax		
	comp=Z,2.0nm,0.9s							
CTA	**Charters Tower**	**121.77**	**92**	PKP		PKPdf	17 15 46.0	-3.0
	comp=Z,2.4nm,0.8s,baz=108,slow=3.2,SNR=3.9							

*ISCJB **30** 16:57:39.4±0.9, 3838N±004×2042E±007, h10km, Error ellipse: s-maj=9.1km s-min=4.3km az=152.3*
*CSEM **30** 16:57:39.0, 3838N×2038E, h3km, ML3.8, After THE SKO 16:57:39.8, 3834N×2017E, h13km*
*THE **30** 16:57:39.0, 3838N×2038E, h3km, ML3.8*
*ATH **30** 16:57:39.5, 3833N×2051E, h21km±10km, MD4.0/10, ML3.8*
*NEIC **30** 16:57:39.1, 3833N×2049E, h16km, ML3.8(ATH), ML3.8(THE), After ATH.*

ISC 30 16:57:39.6±0.9, 3836N±004×2041E±007, h10km, n22, σ1§44/28, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.39**	**130**	*eP*g	**Pg**	**16 57 46.5**	**-0.8**
LKD	**Levkas**	**0.39**	**28**	*eP*g	**Pg**	**16 57 46.2**	**-1.1**
LKD				*eS*g	**Sg**	**16 57 51.7**	**-0.8**
RLS	**Riolos of Patr**	**0.88**	**110**	*eP*N	**Pn**	**16 57 54.9**	**-3.2**
SELA	**Sela**	**1.17**	**94**	*eP*g	**Pg**	**16 57 59.8**	**-2.2**
SELA				*eS*g	**Sg**	**16 58 18.5**	**+1.3**
IGT	**Igoumenitsa**	**1.17**	**357**	*eP*g	**Pg**	**16 58 00.6**	**-1.5**
IGT				*eS*g	**Sg**	**16 58 17.8**	**+0.5**
EVR	**Evrytania**	**1.23**	**63**	*eP*B	**Pb**	**16 58 00.8**	**-2.0**
JAN	**Janina**	**1.34**	**15**	*eP*N	**Pn**	**16 58 05.4**	**+1.1**
KEK	**Kerkira**	**1.43**	**341**	*eP*N	**Pn**	**16 58 06.3**	**+0.7**
AGG	**Agios Georgios**	**1.64**	**66**	*eP*b	**Pb**	**16 58 08.6**	**-1.3**
AGG				*eS*b	**Sb**	**16 58 32.9**	**+2.3**
AGG	**Agios Georgios**	**1.64**	**66**	*eP*b	**Pb**	**16 58 08.6**	**-1.3**
AGG				*eS*b	**Sb**	**16 58 32.8**	**+2.2**
ITM	**Ithomi**	**1.68**	**134**	*eP*N	**Pn**	**16 58 09.9**	**+0.8**
THL	**Klokotos Trika**	**1.73**	**46**	*eP*N	**Pn**	**16 58 11.0**	**+1.3**
VLX	**Vlachokerasia**	**1.84**	**122**	*eS*b	**Sb**	**16 58 38.2**	**+1.6**
KZN	**Kozani**	**2.21**	**28**	*eP*B	**Pb**	**16 58 17.0**	**-2.6**
NEO	**Neokhori**	**2.39**	**66**	*eP*B	**Pb**	**16 58 22.5**	**-0.2**
FNA	**Florina**	**2.53**	**17**	*eP*n	**Pn**	**16 58 21.3**	**+0.6**
FNA				*eS*n	**Sn**	**16 58 54.3**	**+2.7**
VLI	**Veliai**	**2.59**	**129**	*eP*B	**Pb**	**16 58 27.2**	**+1.0**
ATH	**Athens Observa**	**2.63**	**97**	*eP*N	**Pn**	**16 58 21.8**	**-0.3**
KVR	**Kavouri**	**2.70**	**100**	*eP*N	**Pn**	**16 58 20.0**	**-3.1**
PTL	**Penteli**	**2.74**	**96**	*eP*N	**Pn**	**16 58 19.5**	**-4.1**
OHR	**Ohrid**	**2.76**	**6**	*eP*n	**Pn**	**16 58 25.2**	**+1.3**
KRUS	**Krusevo**	**3.07**	**12**	*eP*n	**Pn**	**16 58 29.0**	**+0.8**

*MOS **30** 17:01:43.7±1.2, 2918N×13041E, h33km, mb4.4/15, Error ellipse: s-maj=17.8km s-min=10.1km az=112.6*
*ISCJB **30** 17:01:44.5±0.9, 2915N±004×13053E±006, h40km±8km, mb4.3/31, MS3.8/3, Error ellipse: s-maj=9.6km s-min=6.7km az=29.2*
*NEIC **30** 17:01:47.0±1.0, 2916N×13042E, h44km±10km, mb4.4/10, Error ellipse: s-maj=12.0km s-min=8.8km az=102.0*
*IDC **30** 17:01:47.3±1.3, 2920N×13032E, h50km±11km, mb3.7/14, mb1 3.8/18, mb1mx3.8/27, mbtmp3.7/18, ML3.2/4, MS3.4/4, Ms1 3.4/4, ms1mx3.1/31, Error ellipse: s-maj=18.8km s-min=8.2km az=103.0*
*BJI **30** 17:01:47.0, 2927N×13037E, h37km, mB4.5, mb4.5, Ms4.0, Msz3.8*

ISC 30 17:01:46.7±0.8, 2914N±004×13048E±006, h43km±7km, n73, σ0§99/77, mb4.3/31, MS3.8/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**3.02**	**221**	P	**Pn**	**17 02 31.7**	**-0.3**
	5.8nm,0.3s,baz=76,slow=14,SNR=26						
JOW				S	**Sn**	**17 03 06.6**	**-0.3**
	19nm,0.3s,baz=316,slow=29,SNR=5.9						
JOW				LR	LR	17 04 01.8	
	comp=Z,1μm,19.6s,baz=250,slow=45						
JNU	**Nakatsue**	**3.98**	**5**	P	**Pn**	**17 02 46.0**	**+0.8**
	2.4nm,0.3s,baz=178,slow=7.9,SNR=28						
JNU				S	**Sn**	**17 03 30.9**	**+0.4**
	2.9nm,0.3s,baz=199,slow=33,SNR=6.7						
JNU				LR	LR	17 04 17.0	
	comp=Z,226nm,19.4s,baz=188,slow=38						
KSRS	**Korea Array**	**8.56**	**346**	P	**Pn**	**17 03 48.1**	**+0.1**
	0.1nm,0.3s,baz=168,slow=15,SNR=5.1						
KSRS				LR	LR	17 06 41.2	
	comp=Z,168nm,18.1s,baz=162,slow=35						
YHNB	**Yeheng**	**9.27**	**243**	*eP*	**Pn**	**17 04 03.9**	**+6.1**
MJAR	**Matsushiro Arr**	**9.83**	**39**	P	**Pn**	**17 04 05.7**	**+0.3**
	0.4nm,0.3s,baz=243,slow=14,SNR=5.0						
CBIJ	**Chichi jima**	**10.53**	**98**	P	**Pn**	**17 04 12.9**	**-2.1**
	6.4nm,0.3s,baz=111,slow=23,SNR=2.8						
CBIJ				LR	LR	17 07 16.8	
	comp=Z,212nm,18.6s,baz=320,slow=31						
CN2	**Changchun**	**15.18**	**346**	*eP*	**Pn**	**17 05 23.0**	**+5.0**
CN2				*eA*P	pP	17 05 29.0	-3.6
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=N,300nm,20.0s						
CN2				LR	LR		
	comp=E,400nm,20.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
BJI	**Beijing**	**16.01**	**317**	P	**Pn**	**17 05 28.8**	**0.0**
BJI				AMB	AMB		
	comp=Z,5.0nm,0.8s						
BJI				LR	LR		
	comp=N,666nm,14.4s						
BJI				LR	LR		
	comp=E,397nm,14.4s						
BJI				LR	LR		
	comp=Z,369nm,15.6s						
XAN	**Xi'an**	**19.00**	**290**	P	**Pn**	**17 06 04.8**	**-0.9**
XAN				AP	pP	17 06 11.3	-3.7
XAN				AMB	AMB		
	comp=Z,7.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**19.36**	**312**	*eP*	**Pn**	**17 06 10.3**	**+0.3**
HHC				AP	pP	17 06 22.0	+3.0
HHC				PP		17 06 28.5	
HHC				AMB	AMB		
	comp=Z,15nm,1.0s						
HHC				AMB	AMB		
	comp=Z,105nm,6.6s						
HHC				LR	LR		
	comp=N,232nm,15.9s						
HHC				LR	LR		
	comp=E,751nm,19.2s						
HHC				LR	LR		
	comp=Z,449nm,22.5s						

GYA	**Guiyang**	**21.23**	**268**	P		**P**	**17 06 33.5**	**+4.4**
GYA				PP			17 06 58.3	
GYA				AMB	AMB			
	comp=Z,20nm,0.9s,mb4.5							
GYA				AMB	AMB			
	comp=Z,110nm,3.7s							
GYA				LR	LR			
	comp=N,280nm,15.6s,MS3.8							
GYA				LR	LR			
	comp=E,210nm,16.4s,MS3.8							
GYA				LR	LR			
	comp=Z,250nm,15.4s,MS3.7							
CD2	**Chengdu**	**23.19**	**281**	P		**P**	**17 06 51.0**	**+1.2**
CD2				PP			17 07 23.0	
CD2				S		**S**	**17 10 53.0**	**-5.4**
CD2				XS		sS	17 11 17.0	-0.3
CD2				SS			17 11 41.3	
CD2				AMB	AMB			
	comp=Z,20nm,1.1s,mb4.5							
CD2				AMB	AMB			
	comp=Z,50nm,4.2s							
CD2				LR	LR			
	comp=N,130nm,12.6s							
CD2				LR	LR			
	comp=Z,110nm,14.6s,MS3.4							
LZH	**Lanzhou**	**23.44**	**294**	*eP*		**P**	**17 06 52.5**	**+0.3**
LZH				AP			17 07 05.0	
LZH				XP		sP	17 07 09.5	+1.1
LZH				AMB	AMB			
	comp=Z,42nm,1.5s,mb4.7							
LZH				AMB	AMB			
	comp=Z,130nm,4.1s							
KMI	**Kunming**	**24.99**	**267**	P		**P**	**17 07 07.8**	**+1.3**
KMI				AP			17 07 23.3	
KMI				PP			17 07 49.0	
KMI				S		**S**	**17 11 25.8**	**-1.7**
KMI				AMB	AMB			
	comp=Z,17nm,0.9s,mb4.6							
KMI				AMB	AMB			
	comp=Z,201nm,11.3s							
KMI				LR	LR			
	comp=N,257nm,14.7s,MS4.0							
KMI				LR	LR			
	comp=E,314nm,16.1s,MS4.0							
KMI				LR	LR			
	comp=Z,363nm,13.2s,MS4.1							
SONM	**Songino Array**	**26.35**	**322**	P		**P**	**17 07 18.1**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=293,slow=32,SNR=2.6							
LSA	**Lhasa**	**34.15**	**281**	*eP*		**P**	**17 08 28.6**	**+0.9**
	comp=Z,3.6nm,0.8s,mb4.3							
LSA	**Lhasa**	**34.15**	**281**	*eP*		**P**	**17 08 28.7**	**+0.9**
LSA					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
WMQ	**Urumqi**	**36.97**	**305**	*eP*		**P**	**17 08 52.0**	**+0.2**
WMQ					AP	pP	17 09 07.5	+4.1
TAPN	**Taplejung**	**37.57**	**278**	*eP*		**P**	**17 08 57.7**	**+0.6**
ODAN	**Odare**	**37.96**	**277**	*eP*		**P**	**17 09 00.4**	**0.0**
	comp=Z,21nm,0.8s,mb4.9							
JIRN	**Jiri**	**38.82**	**279**	*eP*		**P**	**17 09 07.9**	**+0.3**
	comp=Z,14nm,0.8s,mb4.7							
KKN	**Kakani**	**39.58**	**279**	*eP*		**P**	**17 09 14.3**	**+0.4**
	comp=Z,21nm,0.6s,mb5.0							
GKN	**Gorkha**	**40.08**	**280**	*eP*		**P**	**17 09 18.1**	**0.0**
	comp=Z,10nm,0.5s,mb4.8							
KOLN	**Koldanda**	**41.03**	**280**	*eP*		**P**	**17 09 26.2**	**+0.2**
	comp=Z,21nm,0.9s,mb4.8							
MKAR	**Makanchi Array**	**41.17**	**309**	P		**P**	**17 09 26.7**	**-0.2**
MKAR				PcP		PcP	17 11 25.9	+0.5
MKAR	**Makanchi Array**	**41.17**	**309**	P		**P**	**17 09 26.7**	**-0.2**
MKAR							17 11 25.9	
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**41.17**	**309**	P		**P**	**17 09 26.7**	**-0.2**
	comp=Z,1.3nm,0.8s,mb3.6,baz=100,slow=9.6,SNR=8.5							
MKAR					PcP	PcP	17 11 25.9	+0.5
	comp=Z,0.2nm,0.3s,baz=99,slow=1.9,SNR=3.6							
ZALV	**Zalesovo Beam**	**41.22**	**320**	P		**P**	**17 09 24.8**	**-2.4**
	comp=Z,0.5nm,0.3s,mb3.6,baz=103,slow=6.7,SNR=4.4							
ZALV					PcP	PcP	17 11 25.4	-0.1
	comp=Z,0.3nm,0.3s,baz=93,slow=3.1,SNR=3.7							
ZAL	**Zalesovo**	**41.23**	**320**	P		**P**	**17 09 24.8**	**-2.4**
ZAL							17 11 25.4	
KURK	**Kurchatov**	**44.16**	**314**	*eP*		**P**	**17 09 51.2**	**+0.2**
	comp=Z,7.5nm,0.8s,mb4.5							
KURK	**Kurchatov**	**44.16**	**314**	*eP*		**P**	**17 09 51.2**	**+0.2**
KURK					pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5							
TKM2	**Tokmak 2**	**45.70**	**303**	*eP*		**P**	**17 10 03.9**	**+0.5**
	comp=Z,4.4nm,1.0s,mb4.3							
TKM2	**Tokmak 2**	**45.70**	**303**	*eP*		**P**	**17 10 03.9**	**+0.5**
TKM2					pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3							
UCH	**Uchtor**	**46.53**	**302**	*eP*		**P**	**17 10 11.4**	**+1.5**
	comp=Z,5.1nm,1.1s,mb4.4							
WRA	**Warramunga Arr**	**48.94**	**175**	P		**P**	**17 10 29.2**	**+0.5**
WRA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
WRA	**Warramunga Arr**	**48.94**	**175**	P		**P**	**17 10 29.2**	**+0.5**
	comp=Z,1.6nm,0.8s,mb4.1,baz=355,slow=8.7,SNR=14							
BRVK	**Borovoye**	**49.56**	**317**	*eP*		**P**	**17 10 32.8**	**-0.3**
	comp=Z,12nm,0.9s,mb4.9							
BRVK	**Borovoye**	**49.56**	**317**	*eP*		**P**	**17 10 32.8**	**-0.4**
BRVK					pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9	

HFS	**Hagfors**	**77.17**	**333**	P	**P**	**17 13 33.1**	**-2.6**
	comp=Z,1.3nm,0.8s,mb3.9,baz=55,slow=12,SNR=2.9						
NOA	**NORSAR Array B**	**77.58**	**334**	P	**P**	**17 13 36.5**	**-1.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA	**NORSAR Array B**	**77.58**	**334**	P	**P**	**17 13 36.5**	**-1.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=47,slow=25,SNR=2.9						
CLL	**Collm**	**82.89**	**326**	*e*P	**P**	**17 14 08.0**	**+1.3**
FCC	**Fort Churchill**	**84.91**	**22**	*e*P	**P**	**17 14 17.4**	**+0.5**
	comp=Z,2.6nm,0.9s,mb4.4						
FCC	**Fort Churchill**	**84.91**	**22**	*e*P	**P**	**17 14 17.4**	**+0.5**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
FFC	**Flin Flon**	**85.10**	**27**	P	**P**	**17 14 19.4**	**+1.5**
	comp=Z,3.1nm,1.0s,mb4.4						
FFC	**Flin Flon**	**85.10**	**27**	P	**P**	**17 14 19.4**	**+1.5**
FFC				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**87.06**	**47**	P	**P**	**17 14 29.6**	**+1.7**
	comp=Z,0.4nm,0.6s,mb3.9,baz=296,slow=4.0,SNR=3.9						

*NIED **30** 17:04:00,29.10N× 13060E, h5km, Mw4.0 Best double couple: M0 1.17000×10^15 NP1:φs 144.00000°, δ32.00000°, λ -22.00000°. NP2:φs 253.00000°, δ79.00000°, λ -120.00000°.*
*ISCJB **30** 17:04:09.5± 1.1, 29.11N± 005× 1306E± 01, h53km± 9km, mb3.4/4, Error ellipse: s-maj=20.0km s-min=5.7km az=19.1*
*JMA **30** 17:04:09.3± 0.1, 29.11N× 13062E, h38km, M3.5*
*IDC **30** 17:04:10.0± 5.1, 29.13N× 13078E, h49km± 21km, mb3.3/4, mb1 3.4/6, mb1mx3.3/22, mbtmp3.4/6, ML2.8/2, Error ellipse: s-maj=104.6km s-min=18.5km az=107.0*
ISC 30 17:04:10.6±1.0, 2912N±005×1306E±01, h44km±10km, n15, σ0§71/20, mb3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.93**	**321**	P	**Pn**	**17 04 26.6**	**-0.6**
JNN				S	**Sn**	**17 04 39.3**	**-0.2**
JAM	**Amami Oshima**	**1.09**	**230**	P	**Pn**	**17 04 29.1**	**-0.3**
JAM				*e*S	**Sn**	**17 04 43.0**	**-0.3**
JKC	**Kuchinoerabu**	**1.38**	**347**	P	**Pn**	**17 04 33.6**	**+0.3**
JKC				*e*S	**Sn**	**17 04 51.0**	**+0.7**
JTN	**Tanegashima 3**	**1.58**	**13**	P	**Pn**	**17 04 35.4**	**-0.6**
JTK	**Tokunoshima**	**1.94**	**227**	P	**Pn**	**17 04 41.7**	**+0.7**
JTSR	**Tashiro 2**	**2.07**	**9**	P	**Pn**	**17 04 42.9**	**+0.1**
JSU	**Suzuyama**	**2.38**	**358**	P	**Pn**	**17 04 46.8**	**-0.3**
JSU				*e*S	**Sn**	**17 05 15.4**	**+0.3**
JOW	**Kunigami**	**3.04**	**222**	P	**Pn**	**17 04 57.0**	**+0.9**
	1.4nm,0.3s,baz=88,slow=28,SNR=5.0						
JIH	**Iheya**	**3.09**	**228**	P	**Pn**	**17 04 56.2**	**-0.6**
JNU	**Nakatsue**	**4.00**	**4**	P	**Pn**	**17 05 10.2**	**+0.9**
	1.1nm,0.3s,baz=23,slow=7.7,SNR=7.0						
JNU				S	**Sn**	**17 05 54.0**	**-0.9**
	1.7nm,0.3s,baz=70,slow=37,SNR=3.8						
JKE	**Kume jima 2**	**4.34**	**231**	P	**Pn**	**17 05 13.7**	**-0.4**
SONM	**Songino Array**	**26.41**	**322**	P	**P**	**17 09 45.0**	**+2.2**
	0.4nm,0.7s,mb3.0,baz=138,slow=8.5,SNR=2.2						
MKAR	**Makanchi Array**	**41.24**	**309**	P	**P**	**17 11 50.8**	**-0.3**
	0.2nm,0.3s,mb3.2,baz=91,slow=9.6,SNR=2.8						
ZALV	**Zalesovo Beam**	**41.28**	**320**	P	**P**	**17 11 50.7**	**-0.6**
	0.4nm,0.4s,mb3.4,baz=103,slow=6.9,SNR=2.6						
FINES	**FINESS Array B**	**71.37**	**331**	P	**P**	**17 15 24.8**	**-0.7**
	0.9nm,0.7s,mb3.8,baz=72,slow=6.2,SNR=5.0						

SKHL 30 17:04:10.4±0.3, 5304N×13441E, h10km±2km, mb3.6/3, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**0.88**	**273**	⇓*i* P	Pg	17 04 26.4	-1.0
EKMR				AMB	AMB	17 04 27.0	
	28nm,0.4s						
EKMR				pPg		17 04 29.1	
EKMR				*e*Sg	Sg	17 04 38.2	-0.6
EKMR				A		17 04 44.0	
	148nm,0.3s						
GRNR	**Gornyy**	**2.59**	**150**	*e*Pg	Pg	17 04 58.8	-1.3
GRNR				AMB	AMB	17 04 59.8	
	57nm,0.5s						
GRNR				AMB	AMB	17 04 59.8	
	23nm,0.5s						
GRNR				AMB	AMB	17 04 59.8	
	48nm,0.5s						
GRNR				sPg		17 05 05.3	
GRNR				*e*Sg	Sg	17 05 33.0	-0.6
GRNR				A		17 05 36.0	
	46nm,0.7s						
BMKR	**Bomnak**	**3.70**	**299**	*e*Pn	Pn	17 05 11.0	+3.5
BMKR				*e*Pg	Pg	17 05 18.0	-3.2
BMKR				pPg		17 05 20.5	
BMKR				*e*Sn	Sn	17 05 51.8	+0.8
BMKR				*e*Sg	Sg	17 06 06.6	-2.4
BMKR				A		17 06 11.9	
	15nm,0.4s						
NKL	**Nikolayevsk**	**3.78**	**86**	*e*Pg	Pg	17 05 19.5	-3.3
NKL				AMB	AMB	17 05 21.4	
	7.0nm,0.6s						
NKL				*e*Sg	Sg	17 06 08.8	-2.9
NKL				A		17 06 13.0	
	75nm,0.8s						
NKL				A		17 06 13.0	
	10.0nm,0.8s						
YASR	**Yasnyy**	**3.88**	**276**	*e*Pg	Pg	17 05 21.5	-3.1
YASR				sPg		17 05 25.7	
YASR				*e*Sg	Sg	17 06 12.6	-2.2
YASR				A		17 06 19.0	
	10.0nm,0.5s						
YASR				A		17 06 19.0	
	4.0nm,0.5s						
YASR				A		17 06 19.0	
	7.0nm,0.5s						
KLR	**Kul'dur**	**4.17**	**205**	*e*rx	rx	17 06 08.0	
KLR				*e*Sg	Sg	17 06 20.8	-3.3
ZEA	**Zeya**	**4.34**	**282**	*e*Sg	Sg	17 06 26.2	-3.5
KROS	**Kirovskiy**	**4.63**	**290**	*e*Pg	Pg	17 05 34.3	-4.7
KROS				*e*Sn	Sn	17 06 16.2	+2.1
KROS				*e*Sg	Sg	17 06 34.8	-4.2
KROS				A		17 06 42.9	
	6.0nm,0.5s						

*CSEM **30** 17:09:01.2± 0.1, 3795N× 3095E, h5km, MD3.2, Error ellipse: s-maj=3.3km s-min=2.4km az=117.0*
*ISK **30** 17:09:01.4, 3795N× 3093E, h8km, MD3.2*
*ISCJB **30** 17:09:02.0± 0.4, 3797N± 003× 3092E± 003, h5km, Error ellipse: s-maj=4.0km s-min=3.5km az=155.2*
*DDA **30** 17:09:04.2, 3801N× 3091E, h7km± 6km, Md3.5*
ISC 30 17:09:02.7±0.6, 3797N±003×3091E±003, h7km±5km, n21, σ1§02/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.34**	**249**	PG	**Pg**	**17 09 08.6**	**-0.7**
ISP				SG	**Sg**	**17 09 14.4**	**+0.7**
BCK	**Bucak**	**0.56**	**207**	PG	**Pg**	**17 09 12.3**	**-1.2**
SHUT	**Suhut-Afyon**	**0.65**	**334**	PG	**Pg**	**17 09 15.1**	**-0.1**
ANTB	**Antalya**	**1.08**	**191**	PG	**Pg**	**17 09 22.4**	**-1.0**
KDHN	**Kadinhani**	**1.10**	**59**	*i* P	**Pg**	**17 09 22.1**	**-1.7**
KDHN				*i* S	**Sg**	**17 09 39.8**	**+1.7**
KONT	**Konya--Tatoy**	**1.15**	**91**	PN	**Pn**	**17 09 23.3**	**-1.8**
KHL	**Karahalli**	**1.15**	**289**	PN	**Pn**	**17 09 24.1**	**-1.1**
KIZT	**Kizilcal**	**1.19**	**40**	PN	**Pn**	**17 09 24.7**	**-1.0**
GOLH	**Golhisar**	**1.29**	**236**	*i* P	**Pn**	**17 09 27.2**	**+0.1**
GOLH				*i* S	**Sg**	**17 09 46.5**	**+2.2**
ESKT	**Eskisehir**	**1.55**	**358**	PN	**Pn**	**17 09 30.4**	**-0.3**
ESKT	**Eskisehir**	**1.55**	**358**	*i* P	**Pn**	**17 09 30.4**	**-0.4**
ESKT				*i* S	**Sn**	**17 09 51.9**	**+0.7**
SEYT	**Eskypehyr**	**1.55**	**358**	*i* P	**Pn**	**17 09 30.4**	**-0.3**
SEYT				*i* S	**Sn**	**17 09 51.8**	**+0.7**
GDZ	**Gediz**	**1.58**	**315**	*i* P	**Pn**	**17 09 31.1**	**0.0**
GDZ				*i* S	**Sn**	**17 09 51.9**	**0.0**
KULA	**Kula-Manisa**	**1.85**	**288**	PN	**Pn**	**17 09 34.4**	**-0.4**
BORA	**Eskisehir**	**1.94**	**350**	*i* P	**Pn**	**17 09 36.2**	**+0.1**
BORA				*i* S	**Sg**	**17 10 06.5**	**+1.4**
FETY	**Fethiye**	**1.97**	**228**	*e*PN	**Pn**	**17 09 36.7**	**+0.3**
ERMK	**Ermenek**	**2.07**	**129**	*i* P	**Pn**	**17 09 39.1**	**+1.2**
ERMK				*i* S	**Sn**	**17 10 06.0**	**+2.1**
IKL	**Isikli**	**2.81**	**127**	*e*PN	**Pn**	**17 09 48.2**	**+0.2**
CDAG	**Cicekdag**	**3.17**	**57**	*i* P	**Pn**	**17 09 52.3**	**-0.6**
CDAG				*i* S	**Sn**	**17 10 30.5**	**-0.6**
AVNT	**Avonos**	**3.21**	**74**	*i* P	**Pb**	**17 10 01.3**	**+1.4**
AVNT				*i* S	**Sb**	**17 10 39.0**	**-0.2**
LEF	**Lefka**	**3.26**	**150**	*e*PN	**Pn**	**17 09 54.0**	**-0.2**

*ISCJB **30** 17:12:22.8± 0.5, 3788N± 003× 3092E± 004, h10km, Error ellipse: s-maj=5.1km s-min=4.4km az=16.9*
*CSEM **30** 17:12:22.4± 0.1, 3792N× 3092E, h12km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.3km az=127.0*
*ISK **30** 17:12:22.5, 3792N× 3091E, h10km, MD3.0*
*DDA **30** 17:12:25.2, 3805N× 3094E, h7km± 1km, Md3.2*
ISC 30 17:12:23.3±0.6, 3791N±003×3092E±004, h9km±6km, n15, σ0§93/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.33**	**258**	PG	**Pg**	**17 12 29.3**	**-0.6**
ISP				SG	**Sg**	**17 12 34.2**	**-0.1**
BCK	**Bucak**	**0.52**	**211**	PG	**Pg**	**17 12 33.8**	**+0.4**
SHUT	**Suhut-Afyon**	**0.70**	**336**	PG	**Pg**	**17 12 36.8**	**-0.1**
ANTB	**Antalya**	**1.03**	**192**	*e*PG	**Pg**	**17 12 43.1**	**0.0**
KDHN	**Kadinhani**	**1.12**	**57**	*i* P	**Pg**	**17 12 44.0**	**-0.8**
KDHN				*i* S	**Sg**	**17 13 00.2**	**+0.8**
KDHN	**Kadinhani**	**1.12**	**57**	*i* P	**Pg**	**17 12 44.0**	**-0.8**
KDHN				*i* S	**Sg**	**17 13 00.2**	**+0.8**
KONT	**Konya--Tatoy**	**1.14**	**88**	*e*PN	**Pn**	**17 12 44.4**	**-1.0**
KHL	**Karahalli**	**1.18**	**291**	*e*PN	**Pn**	**17 12 45.2**	**-0.7**
KIZT	**Kizilcal**	**1.23**	**38**	*e*PN	**Pn**	**17 12 45.7**	**-0.9**
ESKT	**Eskisehir**	**1.61**	**358**	*e*PN	**Pn**	**17 12 51.1**	**-0.8**
ESKT				*e*SN	**Sn**	**17 13 13.2**	**+0.5**
ESKT	**Eskisehir**	**1.61**	**358**	*i* P	**Pn**	**17 12 51.1**	**-0.8**
ESKT				*i* S	**Sn**	**17 13 14.5**	**+1.8**
SEYT	**Eskypehyr**	**1.61**	**358**	*i* P	**Pn**	**17 12 51.1**	**-0.8**
SEYT				*i* S	**Sn**	**17 13 14.5**	**+1.8**
GDZ	**Gediz**	**1.63**	**317**	*i* P	**Pn**	**17 12 52.2**	**+0.1**
GDZ				*i* S	**Sg**	**17 13 17.8**	**+2.0**
BORA	**Eskisehir**	**2.00**	**350**	*i* P	**Pn**	**17 12 57.7**	**+0.5**
BORA				*i* S	**Sg**	**17 13 26.5**	**-1.1**
ERMK	**Ermenek**	**2.03**	**128**	*i* P	**Pn**	**17 13 01.0**	**+3.3**
ERMK				*i* S	**Sg**	**17 13 29.2**	**+0.6**

*IDC **30** 17:15:08.8± 1.9, 106N× 97.19E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/21, mbtmp3.4/6, ML2.7/1, Error ellipse: s-maj=54.5km s-min=22.7km az=60.0*
*ISCJB **30** 17:15:12.2± 1.2, 1.1N± 01× 973E± 01, h33km, mb3.5/6, Error ellipse: s-maj=22.1km s-min=17.1km az=156.7*
*NEIC **30** 17:15:13.5± 0.8, 108N× 9726E, h30km, mb3.8/1, Error ellipse: s-maj=17.0km s-min=12.9km az=64.0*
ISC 30 17:15:14.6±1.2, 11N±01×973E±02, h35km, n10, σ0§42/10, mb3.5/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.31**	**43**	Pn	**Pn**	**17 15 49.7**	**-0.4**
PSI	**Prapat**	**2.31**	**43**	Pn	**Pn**	**17 15 49.7**	**-0.4**
	2.0nm,0.3s,baz=268,slow=8.7,SNR=4.8						
KULM	**Kulim**	**5.30**	**39**	*e*Pn	**Pn**	**17 16 31.9**	**+0.6**
WRA	**Warramunga Arr**	**41.88**	**122**	P	**P**	**17 23 01.2**	**-0.5**
	0.4nm,0.6s,mb3.2,baz=300,slow=9.2,SNR=5.0						
ASAR	**Alice Springs**	**43.24**	**127**	P	**P**	**17 23 13.3**	**+0.6**
	0.2nm,0.8s,mb2.9,baz=305,slow=8.6,SNR=3.8						
UCH	**Uchtor**	**45.78**	**336**	P	**P**	**17 23 33.2**	**+0.4**
	1.1nm,0.9s,mb3.8						
SONM	**Songino Array**	**47.19**	**8**	P	**P**	**17 23 43.5**	**-0.3**
	0.4nm,0.9s,mb3.3,baz=196,slow=6.9,SNR=3.8						
MKAR	**Makanchi Array**	**47.35**	**346**	P	**P**	**17 23 45.0**	**0.0**
	0.4nm,0.4s,mb3.7,baz=157,slow=6.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**17 24 32.2**	**-0.3**
ZALV	**Zalesovo Beam**	**53.66**	**351**	P	**P**	**17 24 32.2**	**-0.3**
	1.0nm,0.7s,mb3.9,baz=183,slow=8.2,SNR=5.9						

*CSEM **30** 17:17:49.7± 0.1, 3793N× 3094E, h5km, MD3.1, Error ellipse: s-maj=2.2km s-min=1.4km az=113.0*
*ISK **30** 17:17:49.6, 3793N× 3095E, h10km, MD3.1*
*ISCJB **30** 17:17:50.1± 0.5, 3792N± 003× 3095E± 004, h5km, Error ellipse: s-maj=4.9km s-min=4.2km az=140.9*
*DDA **30** 17:17:51.8, 3802N× 3101E, h7km± 4km, Md3.1*
ISC 30 17:17:50.6±0.7, 3792N±004×3095E±004, h6km±5km, n19, σ1§07/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.36**	**258**	PG	**Pg**	**17 17 56.9**	**-0.6**
ISP				SG	**Sg**	**17 18 02.5**	**+0.3**
BCK	**Bucak**	**0.54**	**212**	PG	**Pg**	**17 18 01.2**	**+0.2**
SHUT	**Suhut-Afyon**	**0.71**	**334**	PG	**Pg**	**17 18 03.4**	**-0.8**
SHUT				SG	**Sg**	**17 18 14.2**	**+0.8**
ANTB	**Antalya**	**1.04**	**193**	PG	**Pg**	**17 18 10.2**	**-0.4**
KDHN	**Kadinhani**	**1.09**	**56**	*i* P	**Pg**	**17 18 10.8**	**-0.8**
KDHN				*i* S	**Sg**	**17 18 27.8**	**+2.0**
KONT	**Konya--Tatoy**	**1.11**	**88**	PN	**Pn**	**17 18 10.9**	**-1.8**
KHL	**Karahalli**	**1.20**	**290**	PN	**Pn**	**17 18 12.4**	**-1.5**
KIZT	**Kizilcal**	**1.20**	**37**	PN	**Pn**	**17 18 13.7**	**-0.3**
GOLH	**Golhisar**	**1.30**	**239**	*i* P	**Pn**	**17 18 15.5**	**+0.2**
GOLH				*i* S	**Sg**	**17 18 35.7**	**+3.4**
ESKT	**Eskisehir**	**1.60**	**357**	PN	**Pn**	**17 18 18.3**	**-1.1**
ESKT	**Eskisehir**	**1.60**	**357**	*i* P	**Pn**	**17 18 18.2**	**-1.2**
ESKT				*i* S	**Sn**	**17 18 40.8**	**+0.4**
SEYT	**Eskypehyr**	**1.60**	**357**	*i* P	**Pn**	**17 18 18.2**	**-1.2**
SEYT				*i* S	**Sn**	**17 18 40.8**	**+0.4**
GDZ	**Gediz**	**1.64**	**316**	*i* P	**Pn**	**17 18 19.5**	**-0.5**
GDZ				*i* S	**Sn**	**17 18 41.7**	**+0.2**
KULA	**Kula-Manisa**	**1.90**	**289**	*e*PN	**Pn**	**17 18 22.4**	**-1.1**
FETY	**Fethiye**	**1.97**	**230**	*e*PN	**Pn**	**17 18 24.7**	**+0.3**
MANT	**Manisa**	**1.97**	**288**	*i* P	**Pn**	**17 18 24.3**	**-0.2**
MANT				*i* S	**Sn**	**17 18 52.3**	**+2.7**
BORA	**Eskisehir**	**2.00**	**349**	*i* P	**Pn**	**17 18 24.5**	**-0.4**
BORA				*i* S	**Sn**	**17 18 54.2**	**+4.1**
ERMK	**Ermenek**	**2.02**	**129**	*i* P	**Pn**	**17 18 27.2**	**+2.1**
ERMK				*i* S	**Sn**	**17 18 58.5**	**+7.9**
ELDT	**Eldivan**	**3.21**	**36**	*i* P	**Pn**	**17 18 42.0**	**+0.5**

*ISCJB **30** 17:23:01.0± 0.6, 3793N± 003× 3096E± 004, h5km, Error ellipse: s-maj=5.4km s-min=4.2km az=140.8*
*CSEM **30** 17:23:00.2± 0.1, 3793N× 3099E, h8km, MD2.8, Error ellipse: s-maj=2.6km s-min=2.4km az=77.0*
*ISK **30** 17:23:00.4, 3791N× 3094E, h10km, MD2.8*
*DDA **30** 17:23:02.6, 3797N× 3096E, h7km± 6km, Md2.9*
ISC 30 17:23:01.1±0.7, 3792N±004×3097E±004, h5km±6km, n14, σ1§13/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.37**	**258**	PG	**Pg**	**17 23 06.9**	**-1.3**
ISP				SG	**Sg**	**17 23 12.9**	**-0.2**
BCK	**Bucak**	**0.55**	**213**	PG	**Pg**	**17 23 11.9**	**+0.2**
SHUT	**Suhut-Afyon**	**0.71**	**333**	PG	**Pg**	**17 23 14.5**	**-0.2**
SHUT				SG	**Sg**	**17 23 25.1**	**+1.1**
KDHN	**Kadinhani**	**1.09**	**56**	*e*P	**Pg**	**17 23 20.6**	**-1.4**
KDHN				*i* S	**Sg**	**17 23 37.2**	**+1.1**
KONT	**Konya--Tatoy**	**1.10**	**88**	*e*PN	**Pn**	**17 23 22.0**	**-1.2**
KIZT	**Kizilcal**	**1.20**	**37**	*e*PN	**Pn**	**17 23 24.1**	**-0.4**
KHL	**Karahalli**	**1.21**	**290**	*e*PN	**Pn**	**17 23 23.1**	**-1.5**
GOLH	**Golhisar**	**1.31**	**239**	*i* P	**Pn**	**17 23 26.4**	**+0.4**
GOLH				*i* S	**Sg**	**17 23 44.8**	**+1.6**
ESKT	**Eskisehir**	**1.60**	**357**	*i* P	**Pn**	**17 23 29.3**	**-0.7**
ESKT				*i* S	**Sn**	**17 23 51.9**	**+0.9**
ESKT	**Eskisehir**	**1.60**	**357**	*e*Pn	**Pn**	**17 23 29.2**	**-0.8**
SEYT	**Eskypehyr**	**1.60**	**357**	*i* P	**Pn**	**17 23 29.3**	**-0.7**
SEYT				*i* S	**Sn**	**17 23 51.9**	**+0.9**
GDZ	**Gediz**	**1.65**	**315**	*i* P	**Pn**	**17 23 29.9**	**-0.8**
GDZ				*i* S	**Sn**	**17 23 52.0**	**-0.2**
BORA	**Eskisehir**	**2.00**	**349**	*i* P	**Pn**	**17 23 34.9**	**-0.6**
BORA				*i* S	**Sn**	**17 24 03.8**	**+3.0**
ERMK	**Ermenek**	**2.01**	**129**	*i* P	**Pn**	**17 23 38.4**	**+2.7**
ERMK				*i* S	**Sn**	**17 24 06.9**	**+5.7**

*ISCJB **30** 17:28:14.4± 0.7, 3488N± 004× 13687E± 004, h12km± 7km, Error ellipse: s-maj=7.5km s-min=5.5km az=159.9*
*JMA **30** 17:28:14.4, 3491N× 13690E, h15km± 1km, M3.2 Broadband fault plane solution: P waves. NP1: φs 309.00000°, δ43.00000°, λ57.00000°. NP2: φs 171.00000°, δ55.00000°, λ117.00000°. Principal axes: T Plg67.0000°, Azm137.0000°; N Plg22.0000°, Azm334.0000°; P Plg6.0000°, Azm242.0000°;*
JMA Felt II J1.
ISC 30 17:28:14.5±0.6, 3490N±004×13688E±004, h4km±9km, n8, σ0§69/15, 1C-4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.34**	**141**	⇑P	**Pg**	**17 28 21.3**	**+0.2**
JAA				S	**Sg**	**17 28 26.0**	**+0.5**
TSUJ	**Tsu 2**	**0.43**	**244**	⇓P	**Pg**	**17 28 22.9**	**+0.3**
TSUJ				S	**Sg**	**17 28 29.0**	**+0.8**
JIE	**Ise**	**0.53**	**196**	⇓P	**Pg**	**17 28 24.7**	**+0.1**
JIE				S	**Sg**	**17 28 31.8**	**+0.4**
JGM	**Miyama**	**0.81**	**350**	⇓P	**Pg**	**17 28 30.0**	**0.0**
JGM				S	**Sg**	**17 28 40.5**	**0.0**
JKN2	**Miekihoku**	**0.83**	**217**	⇓P	**Pg**	**17 28 29.8**	**-0.6**
JKN2				*e*S	**Sg**	**17 28 40.5**	**-0.6**
JHE	**Heguri**	**1.02**	**256**	P	**Pg**	**17 28 32.8**	**-1.1**
SHZ3	**Shizuoka 3**	**1.10**	**81**	P	**Pb**	**17 28 34.3**	**-1.7**
SHZ3				S	**Sg**	**17 28 49.7**	**-0.2**
MAT	**Matsushiro**	**1.96**	**33**	P	**Pn**	**17 28 48.8**	**+0.4**
MAT				S	**Sn**	**17 29 14.5**	**+1.0**

*CSEM **30** 17:29:50.9± 0.1, 3802N× 3094E, h10km, Mw3.8, Error ellipse: s-maj=1.4km s-min=1.2km az=146.0*
*ISK **30** 17:29:50.9, 3798N× 3094E, h8km, ML3.7*
*DDA **30** 17:29:51.3, 3800N× 3091E, h5km± 8km, Md4.0, Ml3.9*
*NEIC **30** 17:29:51.0, 3802N× 3091E, h10km, ML4.1(NIC), ML3.8(ISK), ML3.1(ATH), After ISK.*
*IDC **30** 17:29:51.0± 1.1, 38.18N× 3117E, h0km, mb3.5/4, mb1 3.7/8, mb1mx3.5/23, mbtmp3.5/8, ML3.7/4, Error ellipse: s-maj=26.7km s-min=17.9km az=58.0*
*ISCJB **30** 17:29:51.6± 0.5, 3797N± 002× 3095E± 002, h11km± 4km, mb3.4/4, Error ellipse: s-maj=3.0km s-min=2.8km az=9.5*
*NIC **30** 17:29:53.3± 0.5, 3794N× 3059E, h25km, mb4.4, ML4.1, MW3.8*
ISC 30 17:29:52.7±0.6, 3796N±002×3092E±002, h11km±4km, n92, σ1§08/120, mb3.4/4, 4C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.34**	**250**	*i* PG	**Pg**	**17 29 58.4**	**-1.1**
ISP				*i* SG	**Sg**	**17 30 04.4**	**+0.3**
ISP	**Isparta**	**0.34**	**250**	*e*Pg	**Pg**	**17 29 58.6**	**-0.9**
ISP				*e*Sg	**Sg**	**17 30 05.4**	**+1.3**
ISP	**Isparta**	**0.34**	**250**	*e*Pg	**Pg**	**17 29 58.6**	**-0.9**
ISP				*i* Sg	**Sg**	**17 30 04.4**	**+0.3**
BCK	**Bucak**	**0.56**	**207**	*i* PG	**Pg**	**17 30 02.1**	**-1.5**
SHUT	**Suhut-Afyon**	**0.66**	**334**	PG	**Pg**	**17 30 04.7**	**-0.7**
ANTB	**Antalya**	**1.08**	**191**	PN	**Pn**	**17 30 13.0**	**-0.8**
KDHN	**Kadinhani**	**1.10**	**59**	*i* P	**Pb**	**17 30 12.0**	**-1.7**
KDHN				*i* S	**Sb**	**17 30 28.8**	**+0.8**
KONT	**Konya--Tatoy**	**1.14**	**90**	PN	**Pn**	**17 30 12.0**	**-2.6**
KHL	**Karahalli**	**1.16**	**289**	PN	**Pn**	**17 30 13.6**	**-1.2**
KIZT	**Kizilcal**	**1.19**	**39**	PN	**Pn**	**17 30 14.3**	**-1.4**
GOLH	**Golhisar**	**1.30**	**236**	*i* P	**Pn**	**17 30 16.8**	**+0.1**
GOLH				*i* S	**Sb**	**17 30 35.4**	**+1.7**
ELL	**Elmali**	**1.46**	**214**	PN	**Pn**	**17 30 18.9**	**0.0**
DENT	**Denizli**	**1.50**	**263**	PN	**Pn**	**17 30 19.9**	**+0.3**
ESKT	**Eskisehir**	**1.56**	**358**	PN	**Pn**	**17 30 19.8**	**-0.5**
ESKT	**Eskisehir**	**1.56**	**358**	*i* P	**Pn**	**17 30 20.2**	**-0.1**
ESKT				*i* S	**Sn**	**17 30 41.5**	**+1.1**
SEYT	**Eskypehyr**	**1.56**	**358**	*i* P	**Pn**	**17 30 20.2**	**-0.1**
SEYT				*i* S	**Sn**	**17 30 41.5**	**+1.0**
GDZ	**Gediz**	**1.59**	**315**	*i* P	**Pn**	**17 30 20.9**	**+0.1**
GDZ				*i* S	**Sg**	**17 30 46.4**	**+2.5**
KULA	**Kula-Manisa**	**1.86**	**288**	PN	**Pn**	**17 30 23.9**	**-0.6**
BORA	**Eskisehir**	**1.95**	**349**	*i* P	**Pn**	**17 30 25.4**	**-0.3**
BORA				*i* S	**Sn**	**17 30 52.2**	**+2.1**
BORA	**Eskisehir**	**1.95**	**349**	*i* P	**Pn**	**17 30 25.4**	**-0.3**
BORA				*i* S	**Sn**	**17 30 52.2**	**+2.0**
FETY	**Fethiye**	**1.97**	**228**	PN	**Pn**	**17 30 26.6**	**+0.6**
ERMK	**Ermenek**	**2.07**	**129**	*i* P	**Pn**	**17 30 28.6**	**+1.2**
ERMK				*i* S	**Sn**	**17 30 57.1**	**+4.1**
ERMK	**Ermenek**	**2.07**	**129**	*i* P	**Pn**	**17 30 28.5**	**+1.2**
ERMK				*i* S	**Sn**	**17 30 57.2**	**+4.1**
ANTO	**Ankara**	**2.40**	**37**	PN	**Pn**	**17 30 30.8**	**-1.1**
ANTO	**Ankara**	**2.40**	**37**	*e*Pn	**Pn**	**17 30 31.8**	**-0.1**
LOD	**Lodumlu**	**2.40**	**36**	PN	**Pn**	**17 30 31.0**	**-0.9**
DST	**Dursunbey**	**2.43**	**313**	PN	**Pn**	**17 30 31.2**	**-1.1**
GULT	**Gulveren**	**2.49**	**353**	PN	**Pn**	**17 30 32.9**	**-0.2**
MLSB	**Milas**	**2.58**	**256**	*e*PN	**Pn**	**17 30 34.7**	**+0.3**
AKHS	**Akhisar**	**2.60**	**292**	*i* P	**Pn**	**17 30 32.3**	**-2.4**
AKHS				*i* S	**Sg**	**17 31 20.2**	**+3.9**
AKS	**Akhisar**	**2.60**	**292**	PN	**Pn**	**17 30 34.1**	**-0.6**

MLR	**Muntele Rosu**	**8.39 335**	⇑	*i*P		**Pn**	**17 31 56.4**	**+2.3**
PLOR	**Plostina**	**8.50 339**	⇑	*i*P		**Pn**	**17 31 55.9**	**+0.3**
EIL	**Elat**	**8.93 157**		Pn		**Pn**	**17 32 01.2**	**-0.3**
	0.4nm,0.3s,baz=332,slow=17,SNR=3.3							
EIL				Sn		**Sn**	**17 33 38.1**	**-4.0**
	0.7nm,0.3s,baz=66,slow=15,SNR=3.5							
EIL	**Elat**	**8.93 157**		Pn		**Pn**	**17 32 01.2**	**-0.3**
EIL				Sn		**Sn**	**17 33 38.1**	**-4.0**
GERES	**GERESS Array B**	**16.54 317**		Pn		**Pn**	**17 33 45.3**	**+0.8**
	0.1nm,0.3s,baz=274,slow=28,SNR=3.2							
CLL	**Collm**	**18.39 322**		*es*P		**Pn**	**17 34 09.0**	**+1.6**
TORD	**Torodi Ar. Bea**	**35.86 234**		P		**P**	**17 36 56.3**	**+3.6**
	0.9nm,0.7s,mb3.8,baz=38,slow=7.3,SNR=4.7							
MKAR	**Makanchi Array**	**38.36 60**		P		**P**	**17 37 12.3**	**-1.3**
	0.3nm,0.5s,mb3.3,baz=268,slow=8.5,SNR=3.9							
SONM	**Songino Array**	**54.11 54**		P		**P**	**17 39 15.8**	**-1.6**
	0.2nm,0.5s,mb3.3,baz=300,slow=10,SNR=3.8							
YKA	**Yellowknife Ar**	**76.11 344**		P		**P**	**17 41 38.7**	**-1.4**
YKA	**Yellowknife Ar**	**76.11 344**		P		**P**	**17 41 38.7**	**-1.4**
	0.3nm,0.6s,mb3.4,baz=27,slow=5.6,SNR=7.5							

CSEM ***30*** *17:45:08.3±0.2, 3791N×3100E, h2km, MD2.9, Error ellipse: s-maj=5.4km s-min=4.3km az=144.0*
ISCJB ***30*** *17:45:09.8±0.5, 3795N±003×3101E±004, h2km, Error ellipse: s-maj=4.6km s-min=4.2km az=176.2*
ISK ***30*** *17:45:09.8, 3788N×3092E, h18km, MD2.9*
DDA ***30*** *17:45:11.4, 3801N×3103E, h7km±4km, Md3.2*
ISC 30 17:45:10.2±0.7, 3797N±004×3100E±004, h3km±7km, n13, σ1§21/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.41**	**253**	PG	**Pg**	**17 45 16.6**	**-1.4**
ISP				SG	**Sg**	**17 45 22.1**	**-1.2**
BCK	**Bucak**	**0.60**	**213**	PG	**Pg**	**17 45 20.7**	**-1.0**
SHUT	**Suhut-Afyon**	**0.69**	**329**	PG	**Pg**	**17 45 24.4**	**+1.0**
SHUT				SG	**Sg**	**17 45 35.6**	**+3.3**
KDHN	**Kadinhani**	**1.04**	**57**	*i*P	**Pg**	**17 45 30.4**	**+0.2**
KDHN				*i*S	**Sg**	**17 45 42.4**	**-1.3**
KDHN	**Kadinhani**	**1.04**	**57**	*i*P	**Sg**	**17 45 30.4**	**+0.3**
KDHN				*i*S	**Sg**	**17 45 42.3**	**-1.3**
KONT	**Konya--Tatoy**	**1.07**	**91**	PN	**Pn**	**17 45 31.2**	**-1.0**
KIZT	**Kizilcal**	**1.15**	**37**	PN	**Pn**	**17 45 33.2**	**0.0**
GOLH	**Golhisar**	**1.35**	**238**	*i*P	**Pn**	**17 45 35.6**	**-0.4**
GOLH				*i*S	**Sg**	**17 45 55.0**	**+1.3**
ESKT	**Eskisehir**	**1.56**	**356**	PN	**Pn**	**17 45 38.4**	**-0.4**
ESKT	**Eskisehir**	**1.56**	**356**	*i*P	**Pn**	**17 45 37.6**	**-1.3**
ESKT				*i*S	**Sn**	**17 45 59.1**	**-0.5**
SEYT	**Eskypehyr**	**1.56**	**356**	*i*P	**Pn**	**17 45 37.6**	**-1.2**
SEYT				*i*S	**Sn**	**17 45 59.1**	**-0.5**
GDZ	**Gediz**	**1.64**	**314**	*i*P	**Pn**	**17 45 39.5**	**-0.5**
GDZ				*i*S	**Sn**	**17 46 02.7**	**+1.1**
ERMK	**Ermenek**	**2.02**	**130**	*i*P	**Pn**	**17 45 47.2**	**+2.0**
ERMK				*i*S	**Sg**	**17 46 17.3**	**+2.3**

CSEM ***30*** *17:50:28.3±0.1, 3394N×4844E, h20km, ML3.1, Error ellipse: s-maj=4.4km s-min=2.5km az=122.0*
KISR ***30*** *17:50:28.7±0.8, 3369N×4829E, h6km±999km, ML2.8*
ISCJB ***30*** *17:50:29.4±2.6, 3390N±006×4831E±009, h21km±29km, Error ellipse: s-maj=15.3km s-min=5.7km az=38.8*
THR ***30*** *17:50:29.3±1.6, 3407N×4848E, h18km, ML3.1*
ISC 30 17:50:29.8±2.6, 340N±01×482E±02, h19km±29km, n19, σ0§69/32, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNGE	**Sanandaj**	**1.30**	**327**	*e*Pg	**Pg**	**17 50 54.7**	**-0.3**
ASAO	**Ashtian**	**1.60**	**70**	*e*Pg	**Pn**	**17 50 54.1**	**-3.0**
ASAO				*e*Sg	**Sn**	**17 51 13.2**	**-4.0**
ASAO				AML	AML	17 51 14.5	
	comp=N,396nm,0.6s						
ASAO				AML	AML	17 51 15.5	
	comp=E,289nm,0.4s						
ASAO	**Ashtian**	**1.60**	**70**	*e*Pg	**Pn**	**17 50 54.1**	**-3.0**
	SNR=92						
ASAO				*e*Sg	**Sn**	**17 51 13.2**	**-4.0**
	SNR=92						
GHVR	**GHOM**	**2.60**	**79**	*e*Pg	**Pn**	**17 51 11.6**	**+0.7**
GHVR				*e*Sg	**Sn**	**17 51 42.3**	**+0.4**
CHTH	**Charan**	**3.06**	**51**	*e*Sg	**Sn**	**17 51 58.3**	**+5.0**
DAMV	**Damavand**	**3.50**	**61**	*e*Pn	**Pn**	**17 51 23.7**	**+0.5**
DAMV				AML	AML	17 52 10.7	
	comp=E,41nm,0.6s						
DAMV				AML	AML	17 52 17.2	
	comp=N,40nm,0.4s						
NASN	**Na'in**	**4.03**	**106**	*e*Pn	**Pn**	**17 51 29.6**	**-0.8**
NASN	**Na'in**	**4.03**	**106**	*e*Pn	**Pn**	**17 51 29.6**	**-0.9**
	SNR=52						
MIB	**Mutribah**	**4.25**	**190**	*e*P	**Pn**	**17 51 34.2**	**+0.7**
MIB				*e*S	**Sn**	**17 52 22.7**	**+0.1**
MIB				AML	AML	17 52 25.5	
	comp=Z,13nm,0.4s						
MIB	**Mutribah**	**4.25**	**190**	*e*P	**Pn**	**17 51 34.2**	**+0.7**
MIB				*e*S	**Sn**	**17 52 22.7**	**+0.1**
	comp=Z,13nm,0.4s						
UMR	**Umm Al-Rimmam**	**4.45**	**186**	*e*P	**Pn**	**17 51 36.1**	**-0.2**
RST	**Umm Al-Ruwaisa**	**4.60**	**193**	*e*P	**Pn**	**17 51 38.6**	**+0.2**
RST				*e*S	**Sn**	**17 52 31.2**	**0.0**
RST				AML	AML	17 52 34.2	
	comp=Z,10nm,0.4s						
RST	**Umm Al-Ruwaisa**	**4.60**	**193**	*e*P	**Pn**	**17 51 38.6**	**+0.2**
RST				*e*S	**Sn**	**17 52 31.2**	**-0.1**
NAY	**Al-Naaiem**	**4.81**	**190**	*e*P	**Pn**	**17 51 41.4**	**+0.2**
NAY				*e*S	**Sn**	**17 52 36.0**	**-0.3**
NAY				AML	AML	17 52 38.5	
	comp=Z,2.4nm,0.3s						
NAY	**Al-Naaiem**	**4.81**	**190**	*e*P	**Pn**	**17 51 41.4**	**+0.2**
NAY				*e*S	**Sn**	**17 52 36.0**	**-0.3**
KBD	**Kabd**	**4.83**	**185**	*e*P	**Pn**	**17 51 41.8**	**+0.3**
KBD				*e*S	**Sn**	**17 52 36.8**	**0.0**
KBD				AML	AML	17 52 38.7	
	comp=Z,25nm,0.4s						
KBD	**Kabd**	**4.83**	**185**	*e*P	**Pn**	**17 51 41.8**	**+0.3**
KBD				*e*S	**Sn**	**17 52 36.8**	**-0.1**
RDF	**Al-Radifah**	**5.09**	**187**	*e*P	**Pn**	**17 51 45.4**	**+0.4**
RDF				*e*S	**Sn**	**17 52 42.6**	**-0.7**
RDF				AML	AML	17 52 45.1	
	comp=Z,8.9nm,0.3s						
RDF	**Al-Radifah**	**5.09**	**187**	*e*P	**Pn**	**17 51 45.4**	**+0.3**
RDF				*e*S	**Sn**	**17 52 42.6**	**-0.7**

IDC 30 17:54:58.7±7.4, 173N×9806E, h133km±41km, mb2.9/5, mb1 3.0/5, mb1mx2.9/20, mbtmp2.9/5, Error ellipse: s-maj=150.4km s-min=19.1km az=59.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**1.38**	**39**	P	Pn	17 55 24.8	-0.9
	1.1nm,0.3s,baz=194,slow=7.4,SNR=5.0						
WRA	**Warramunga Arr**	**41.59**	**123**	P	P	18 02 34.0	+0.2
	0.1nm,0.5s,baz=303,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**43.03**	**128**	P	P	18 02 45.1	-0.3
	0.3nm,0.8s,baz=304,slow=8.4,SNR=3.1						
SONM	**Songino Array**	**46.49**	**8**	P	P	18 03 12.9	+0.4
	0.2nm,0.5s,baz=201,slow=7.6,SNR=3.2						
MKAR	**Makanchi Array**	**46.95**	**345**	P	P	18 03 16.0	0.0
	0.2nm,0.6s,baz=157,slow=7.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**53.18**	**350**	P	P	18 04 02.5	-0.3
	0.6nm,0.4s,baz=191,slow=5.9,SNR=3.8						

IDC 30 18:07:05.7±9.1, 704S×12979E, h102km±96km, mb3.4/3, mb1 3.5/7, mb1mx3.4/15, mbtmp3.4/7, ML4.0/4, Error ellipse: s-maj=94.8km s-min=32.9km az=45.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**6.83**	**242**	P	Pn	18 08 43.8	+0.5
	6.2nm,0.3s,baz=89,slow=6.9,SNR=14						
FITZ	**Fitzroy Crossi**	**11.72**	**200**	P	Pn	18 09 47.8	-1.8
	0.4nm,0.3s,baz=26,slow=14,SNR=4.4						
WRA	**Warramunga Arr**	**13.57**	**161**	P	Pn	18 10 13.8	-0.1
	0.9nm,0.3s,baz=346,slow=13,SNR=40						
ASAR	**Alice Springs**	**17.00**	**167**	P	Pn	18 10 59.0	+1.8
	0.5nm,0.3s,baz=334,slow=10,SNR=24						
SONM	**Songino Array**	**58.41**	**342**	P	P	18 16 51.4	+1.0
	0.2nm,0.4s,baz=163,slow=7.4,SNR=5.0						
MKAR	**Makanchi Array**	**68.14**	**327**	P	P	18 17 55.0	+0.2
	0.8nm,0.5s,baz=119,slow=7.7,SNR=16						
ZALV	**Zalesovo Beam**	**71.52**	**334**	P	P	18 18 14.5	-0.8
	0.4nm,0.4s,baz=118,slow=5.2,SNR=3.0						

NEIC ***30*** *18:07:55.1, 3160S×7202W, h33km, ML3.6(GUC), After GUC.*
GUC 30 18:07:55.1±0.8, 3160S×7202W, h33km±3km, MD4.0, ML3.6, 3C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.53**	**123**	*i*P	Pb	18 07 48.4	-18
CHNG				*i*S	Sb	18 07 56.4	-17
CMCH	**Combarbala**	**0.96**	**64**	⇑*i*P	Pn	18 08 12.3	0.0
CMCH				*i*S	Sn	18 08 26.0	+1.2
CMCH	**Combarbala**	**0.96**	**64**	⇑*i*P	Pn	18 08 12.3	0.0
CMCH				*i*S	Sn	18 08 26.0	+1.2
CMCH				AML	AML	18 08 29.7	
	comp=N,5μm,0.7s						
OVCH	**Ovalle**	**1.21**	**36**	*e*P	Pn	18 08 16.4	+0.7
OVCH				*i*S	Sn	18 08 32.5	+1.6
ROCH	**El Roble**	**1.61**	**148**	*e*P	Pn	18 08 23.0	+1.7
ROCH				*i*S	Sn	18 08 44.6	+3.7
JACH	**Jahuel**	**1.62**	**132**	*e*P	Pn	18 08 23.4	+2.0
JACH				*i*S	Sn	18 08 44.5	+3.4
TLL	**Tololo Astrono**	**1.76**	**36**	*e*P	Pn	18 08 25.5	+2.2
TLL				*i*S	Sn	18 08 48.4	+3.8
TLL	**Tololo Astrono**	**1.76**	**36**	*e*P	Pn	18 08 25.5	+2.2
TLL				*i*S	Sn	18 08 48.4	+3.8
TLL				AML	AML	18 08 53.6	
	comp=N,635nm,0.5s						
PEL	**Peldehue**	**1.91**	**144**	*e*P	Pn	18 08 26.9	+1.6
PEL				*i*S	Sn	18 08 50.5	+2.2
PEL				AML	AML	18 09 03.3	
	comp=E,1μm,0.5s						
CLCH	**Cerro Calan**	**2.19**	**146**	*e*P	Pn	18 08 31.0	+1.9
CLCH				*i*S	Sn	18 08 58.0	+3.0
CLCH				AML	AML	18 09 05.9	
	comp=E,1μm,0.6s						
TACH	**Talagante**	**2.24**	**156**	*e*P	Pn	18 08 31.6	+1.7
FCH	**Farellones**	**2.26**	**140**	⇑*i*P	Pn	18 08 32.0	+1.9
FCH				*i*S	Sn	18 09 00.6	+3.8
FCH				AML	AML	18 09 10.9	
	comp=E,265nm,1.0s						
LMEL	**Las Melosas**	**2.72**	**146**	*e*P	Pn	18 08 38.6	+2.2
LMEL				AML	AML	18 09 25.7	
	comp=N,305nm,0.3s						
LCO	**Las Campanas**	**2.82**	**24**	*e*Pn	Pn	18 08 39.8	+2.0
LCO				*e*S	Sn	18 09 19.1	+8.5
SFDO	**San Fernando**	**3.12**	**165**	*e*P	Pn	18 08 43.2	+1.1

CSEM ***30*** *18:12:34.8±0.1, 3798N×3092E, h5km, MD3.1, Error ellipse: s-maj=2.0km s-min=1.6km az=117.0*
NEIC ***30*** *18:12:34.6, 3798N×3091E, h5km, MD3.1(ISK), After ISK.*
ISCJB ***30*** *18:12:35.6±0.4, 3794N±003×3094E±004, h5km, Error ellipse: s-maj=4.3km s-min=3.9km az=32.7*
ISK ***30*** *18:12:35.2, 3795N×3094E, h8km, MD3.1*
DDA ***30*** *18:12:36.6, 3793N×3107E, h7km±8km, Md3.0*
ISC 30 18:12:36.1±0.6, 3796N±003×3093E±004, h5km±5km, n42, σ1§11/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.35**	**251**	PG	**Pg**	**18 12 42.2**	**-0.8**
ISP				SG	**Sg**	**18 12 48.0**	**+0.4**
ISP	**Isparta**	**0.35**	**251**	Pg	**Pg**	**18 12 41.5**	**-1.4**
ISP				Sg	**Sg**	**18 12 48.5**	**+1.0**
BCK	**Bucak**	**0.56**	**209**	PG	**Pg**	**18 12 47.2**	**+0.2**
BCK	**Bucak**	**0.56**	**209**	Pg	**Pg**	**18 12 46.7**	**-0.3**
BCK	**Bucak**	**0.56**	**209**	Pg	**Pg**	**18 12 46.7**	**-0.3**
SHUT	**Suhut-Afyon**	**0.67**	**333**	PG	**Pg**	**18 12 48.7**	**-0.2**
SHUT				SG	**Sg**	**18 12 59.3**	**+1.7**
ANTB	**Antalya**	**1.08**	**192**	*e*PG	**Pg**	**18 12 56.4**	**-0.4**
KDHN	**Kadinhani**	**1.09**	**59**	*i*P	**Pg**	**18 12 56.1**	**-0.9**
KDHN				*i*S	**Sg**	**18 13 12.2**	**+1.1**
KDHN	**Kadinhani**	**1.09**	**59**	*i*P	**Pg**	**18 12 56.1**	**-0.9**
KDHN				*i*S	**Sg**	**18 13 12.2**	**+1.1**
KONT	**Konya--Tatoy**	**1.13**	**90**	PN	**Pn**	**18 12 56.5**	**-2.1**
KONT	**Konya--Tatoy**	**1.13**	**90**	Pn	**Pn**	**18 12 56.6**	**-2.0**
KONT	**Konya--Tatoy**	**1.13**	**90**	Pn	**Pn**	**18 12 56.6**	**-2.0**
KHL	**Karahalli**	**1.17**	**289**	*e*PN	**Pn**	**18 12 57.3**	**-1.8**
KHL	**Karahalli**	**1.17**	**289**	Pn	**Pn**	**18 12 57.1**	**-2.0**
KIZT	**Kizilcal**	**1.19**	**39**	*e*PN	**Pn**	**18 12 58.4**	**-0.9**
KIZT	**Kizilcal**	**1.19**	**39**	Pn	**Pn**	**18 12 58.4**	**-0.9**
GOLH	**Golhisar**	**1.30**	**237**	*i*P	**Pn**	**18 13 00.5**	**-0.5**
GOLH				*i*S	**Sb**	**18 13 20.6**	**+2.5**
ELL	**Elmali**	**1.46**	**214**	*e*PN	**Pn**	**18 13 03.0**	**-0.1**
ESKT	**Eskisehir**	**1.56**	**358**	*e*PN	**Pn**	**18 13 03.5**	**-1.0**
ESKT	**Eskisehir**	**1.56**	**358**	Pn	**Pn**	**18 13 03.8**	**-0.7**
ESKT	**Eskisehir**	**1.56**	**358**	*i*P	**Pn**	**18 13 03.7**	**-0.8**
ESKT				*i*S	**Sn**	**18 13 26.6**	**+1.5**
ESKT	**Eskisehir**	**1.56**	**358**	Pn	**Pn**	**18 13 03.8**	**-0.7**
SEYT	**Eskypehyr**	**1.56**	**358**	*i*P	**Pn**	**18 13 03.7**	**-0.8**
SEYT				*i*S	**Sn**	**18 13 26.6**	**+1.4**
GDZ	**Gediz**	**1.60**	**315**	*i*P	**Pn**	**18 13 04.1**	**-1.0**
GDZ				*i*S	**Sn**	**18 13 29.7**	**+3.5**
KULA	**Kula-Manisa**	**1.87**	**288**	*e*PN	**Pn**	**18 13 07.8**	**-1.0**
FETY	**Fethiye**	**1.98**	**229**	*e*PN	**Pn**	**18 13 09.7**	**-0.6**
FETY	**Fethiye**	**1.98**	**229**	Pn	**Pn**	**18 13 10.9**	**+0.6**
LOD	**Lodumlu**	**2.40**	**36**	Pn	**Pn**	**18 13 16.8**	**+0.7**
LOD	**Lodumlu**	**2.40**	**36**	Pn	**Pn**	**18 13 16.8**	**+0.7**
GULT	**Gulveren**	**2.49**	**353**	*e*PN	**Pn**	**18 13 18.0**	**+0.7**
IZI	**Iznik**	**2.63**	**335**	Pn	**Pn**	**18 13 18.8**	**-0.5**
IZI	**Iznik**	**2.63**	**335**	Pn	**Pn**	**18 13 18.8**	**-0.5**
IKL	**Isikli**	**2.79**	**127**	*e*PN	**Pn**	**18 13 21.8**	**+0.4**
IKL	**Isikli**	**2.79**	**127**	Pn	**Pn**	**18 13 22.7**	**+1.3**
MERS	**Mersin**	**3.06**	**110**	*e*PN	**Pn**	**18 13 25.4**	**+0.3**
ELDT	**Eldivan**	**3.19**	**37**	*i*P	**Pn**	**18 13 26.0**	**-0.9**
LEF	**Lefka**	**3.24**	**150**	*e*PN	**Pn**	**18 13 27.1**	**-0.5**
LEF	**Lefka**	**3.24**	**150**	Pn	**Pn**	**18 13 29.1**	**+1.5**
LFK	**Lefkose**	**3.39**	**141**	*e*PN	**Pn**	**18 13 30.2**	**+0.5**
LFK	**Lefkose**	**3.39**	**141**	Pn	**Pn**	**18 13 31.5**	**+1.8**
CSS	**Prodhromos**	**3.56**	**146**	*e*PN	**Pn**	**18 13 32.5**	**+0.5**
CSS	**Prodhromos**	**3.56**	**146**	Pn	**Pn**	**18 13 34.1**	**+2.1**

NEIC ***30*** *18:23:33.0±0.3, 755S×15480E, h10km, mb4.5/8, Error ellipse: s-maj=11.1km s-min=7.9km az=139.0*
ISCJB ***30*** *18:23:35.1±2.6, 76S±0.1×15484E±009, h33km±25km, mb4.4/26, Error ellipse: s-maj=19.1km s-min=12.0km az=143.9*
IDC ***30*** *18:23:37.5±4.4, 763S×15479E, h39km±39km, mb4.0/11, mb1 4.1/12, mb1mx4.0/17, mbtmp4.0/12, ML4.3/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/21, Error ellipse: s-maj=25.1km s-min=19.2km az=128.0*
ISC 30 18:23:37.1±2.1, 76S±01×15483E±008, h36km±21km, h17km±5.4km: pP-P, n41, σ0§77/36, mb4.4/26, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.37**	**110**	Pn	**Pn**	**18 24 55.1**	**+0.3**
	10.0nm,0.3s,baz=257,slow=9.0,SNR=10						
HNR				LR	LR	18 26 50.6	
	comp=Z,233nm,18.7s,baz=2.8,slow=36						
CTA	**Charters Tower**	**14.92**	**213**	LR	LR	18 32 23.0	
	comp=Z,186nm,18.4s,baz=19,slow=35						
KAKA	**Kakadu**	**22.61**	**255**	*e*P	**P**	**18 28 35.1**	**+0.3**
	6.5nm,0.6s,mb4.2						
WB2	**Warramunga Arr**	**23.32**	**236**	P	**P**	**18 28 41.3**	**-1.0**
WRA	**Warramunga Arr**	**23.33**	**236**	P	**P**	**18 28 41.0**	**-1.4**
	2.8nm,0.9s,mb3.7,baz=60,slow=10,SNR=22						
ASAR	**Alice Springs**	**25.64**	**229**	P	**P**	**18 29 03.2**	**-0.3**
	1.2nm,0.7s,mb3.5,baz=62,slow=9.4,SNR=22						
STKA	**Stephens Creek**	**27.10**	**205**	*e*P	**P**	**18 29 17.9**	**+1.3**
	2.6nm,0.7s,mb3.9						
STKA	**Stephens Creek**	**27.10**	**205**	P	**P**	**18 29 17.8**	**+1.2**
	4.8nm,1.0s,mb4.0,baz=18,slow=9.3,SNR=7.5						
STKA				LR	LR	18 40 06.8	
	comp=Z,162nm,18.2s,baz=117,slow=36						
FITZ	**Fitzroy Crossi**	**30.26**	**247**	*e*P	**P**	**18 29 44.5**	**-0.4**
	26nm,3.4s						
FITZ	**Fitzroy Crossi**	**30.26**	**247**	P	**P**	**18 29 44.7**	**-0.2**
	1.8nm,0.7s,mb3.9,baz=111,slow=8.6,SNR=6.8						
JOW	**Kunigami**	**42.85**	**324**	P	**P**	**18 31 32.8**	**+0.8**
	2.5nm,0.5s,mb4.2,baz=138,slow=8.2,SNR=5.7						
LZH	**Lanzhou**	**64.64**	**316**	*e*P	**P**	**18 34 13.5**	**+2.2**
LZH				AP	pP	18 34 18.5	-3.8
LZH				XP	sP	18 34 20.0	-6.5
LZH				AMB	AMB		
	comp=Z,16nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,63nm,4.4s						
MA2	**Magadan**	**67.05**	**358**	*e*P	**P**	**18 34 24.8**	**-1.6**
	comp=Z,4.8nm,0.9s,mb4.5						
GTA	**Gaotai**	**69.08**	**317**	*e*P	**P**	**18 34 40.5**	**+1.0**
GTA				AP	pP	18 34 45.3	-5.3
GTA				XP	sP	18 34 48.0	-6.8
GTA				AMB	AMB		
	comp=Z,3.0nm,0.7s,mb4.3						
SONM	**Songino Array**	**69.77**	**328**	P	**P**	**18 34 44.1**	**+0.6**
	comp=Z,1.6nm,0.4s,mb4.3,baz=145,slow=5.7,SNR=39						
VNDA	**Vanda**	**69.97**	**178**	P	**P**	**18 34 44.5**	**+0.2**
	comp=Z,1.1nm,1.0s,mb3.8,baz=279,slow=6.5,SNR=3.6						
TAPN	**Taplejung**	**73.58**	**301**	*e*P	**P**	**18 35 07.4**	**+0.4**
	comp=Z,11nm,0.9s,mb4.8						
ODAN	**Odare**	**73.71**	**301**	*e*P	**P**	**18 35 08.2**	**+0.5**
	comp=Z,12nm,0.6s,mb5.0						
JIRN	**Jiri**	**74.96**	**301**	*e*P	**P**	**18 35 15.5**	**+0.5**
	comp=Z,5.9nm,0.6s,mb4.7						
KKN	**Kakani**	**75.77**	**301**	*e*P	**P**	**18 35 19.2**	**-0.5**
	comp=Z,4.5nm,0.6s,mb4.6						
BILL	**Bilibino**	**75.91**	**4**	*e*P	**P**	**18 35 18.8**	**-0.8**
	comp=Z,7.2nm,0.9s,mb4.6						
GKN	**Gorkha**	**76.38**	**301**	*e*P	**P**	**18 35 23.0**	**-0.1**
	comp=Z,18nm,1.2s,mb4.9						
KOLN	**Koldanda**	**77.20**	**301**	*e*P	**P**	**18 35 27.4**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.4						
SVW2	**Sparrevohn**	**78.64**	**22**	*e*P	**P**	**18 35 34.8**	**-0.1**
TTA	**Tatalina**	**79.66**	**21**	*e*P	**P**	**18 35 40.1**	**-0.5**
	comp=Z,3.7nm,0.8s,mb4.4						
QSPA	**South Pole Qui**	**82.36**	**180**	*e*P	**P**	**18 35 55.1**	**+0.3**
	comp=Z,2.6nm,0.7s,mb4.3						
IMA2	**Indian Mountai**	**82.44**	**19**	*e*P	**P**	**18 35 54.6**	**-0.7**
IMA2				*e*	pP	18 36 03.4	-3.2
MKAR	**Makanchi Array**	**83.76**	**319**	P	**P**	**18 36 02.4**	**-0.1**
MKAR	**Makanchi Array**	**83.76**	**319**	P	**P**	**18 36 02.4**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.4,baz=102,slow=5.3,SNR=28						
ZALV	**Zalesovo Beam**	**84.60**	**326**	P	**P**	**18 36 05.8**	**-0.8**
	comp=Z,1.2nm,0.5s,mb4.3,baz=120,slow=5.4,SNR=8.4						
EGAK	**Eagle**	**86.15**	**23**	*e*P	**P**	**18 36 13.8**	**-0.4**
	comp=Z,11nm,1.2s,mb5.0						
DAWY	**Dawson**	**86.53**	**24**	*e*P	**P**	**18 36 15.8**	**-0.2**
AML	**Almayashu**	**88.53**	**313**	*e*P	**P**	**18 36 27.0**	**+0.8**
	comp=Z,2.6nm,0.8s,mb4.6						
NVAR	**Mina Array Bea**	**92.23**	**52**	P	**P**	**18 36 44.5**	**+1.0**
NVAR	**Mina Array Bea**	**92.23**	**52**	P	**P**	**18 36 44.5**	**+1.0**
	comp=Z,3.5nm,1.0s,mb4.7,baz=243,slow=4.2,SNR=14						
YKA	**Yellowknife Ar**	**96.96**	**28**	P	**P**	**18 37 03.9**	**-0.7**
YKA	**Yellowknife Ar**	**96.96**	**28**	P	**P**	**18 37 03.9**	**-0.7**
	comp=Z,0.5nm,0.6s,mb4.1,baz=265,slow=4.5,SNR=11						
AKASG	**Malin Array Be**	**117.95**	**324**	PKP	PKPdf	18 42 18.9	-1.1
	comp=Z,0.4nm,0.4s,baz=46,slow=2.7,SNR=6.2						
LCO	**Las Campanas**	**123.00**	**132**	*e*PKPdf	PKPdf	18 42 29.3	-1.1
GERES	**GERESS Array B**	**127.50**	**328**	PKP	PKPdf	18 42 38.4	+0.1
	comp=Z,0.5nm,0.6s,baz=263,slow=1.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**153.02**	**284**	PKPbc	PKPbc	18 43 31.7	-0.1
	comp=Z,1.1nm,0.7s,baz=82,slow=2.7,SNR=5.1						

ISK ***30*** *18:37:29.8, 3791N×3095E, h7km, MD3.0*
NEIC ***30*** *18:37:29.8, 3794N×3096E, h8km, MD3.0(ISK), After ISK.*
ISCJB ***30*** *18:37:30.4±0.8, 3792N±004×3094E±004, h8km±7km, Error ellipse: s-maj=6.7km s-min=5.4km az=142.8*
DDA ***30*** *18:37:30.8, 3800N×3092E, h5km, Md3.2*
ISC 30 18:37:30.8±0.7, 3791N±004×3095E±004, h12km±6km, n20, σ0§90/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.35**	**259**	*i*PG	**Pg**	**18 37 36.6**	**-1.2**
ISP				*i*SG	**Sg**	**18 37 42.4**	**-0.1**
ISP	**Isparta**	**0.35**	**259**	Pg	**Pg**	**18 37 37.3**	**-0.5**
ISP				Sg	**Sg**	**18 37 43.3**	**+0.7**
BCK	**Bucak**	**0.53**	**212**	PG	**Pg**

CMIG Lg 19 02 44.1
CMIG Matias Romero 3.81 77 Pn **Pn 19 01 38.5 -0.6**
12nm,0.3s,baz=257,slow=11,SNR=86
CMIG Sn **Sn 19 02 24.8 +0.3**
59nm,0.3s,baz=270,slow=18,SNR=9.7
CMIG Lg 19 02 44.1
65nm,0.3s,baz=12,slow=20,SNR=4.6
CMIG LR LR 19 03 18.4
comp=Z,11μm,21.1s,baz=250,slow=41
CMIG Matias Romero 3.81 77 *e*P **Pn 19 01 38.4 -0.7**
CMIG *i* S **Sn 19 02 26.5 +2.1**
MOIG Morelia 4.10 326 *e*P **Pn 19 01 46.0 +3.0**
MOIG *e*S **Sn 19 02 34.8 +3.3**
MOIG Morelia 4.10 326 *e*P **Pn 19 01 41.2 -1.8**
MOIG *i* S **Sn 19 02 28.4 -3.0**
LVIG Laguna Verde 4.10 33 *i* P **Pn 19 01 41.0 -2.1**
TUIG Tuzandepetl 4.51 66 *e*P **Pn 19 01 45.5 -3.2**
TUIG Tuzandepetl 4.51 66 *i* P **Pn 19 01 48.5 -0.2**
SCX San Cristobal 5.91 85 *e*P **Pn 19 02 08.5 +0.6**
TEIG Tepich 10.72 67 *e*Pn **Pn 19 03 13.8 -0.2**
115nm,0.9s
TEIG *e*Sn **Sn 19 05 16.1 +1.7**
TEIG Tepich 10.72 67 Pn **Pn 19 03 13.7 -0.3**
3.0nm,0.3s,baz=250,slow=3.9,SNR=13
TEIG Sn **Sn 19 05 08.6 -5.8**
4.9nm,0.3s,baz=131,slow=19,SNR=4.2
TEIG LR LR 19 07 33.6
comp=Z,1μm,20.7s,baz=128,slow=38
TEIG Tepich 10.72 67 *e*P **Pn 19 03 13.8 -0.2**
TGUH Tegucigalpa,Un 11.32 100 *e*Pn **Pn 19 03 23.7 +1.5**
21nm,0.3s
LPIG La Paz 13.34 308 Pn **Pn 19 03 46.4 -3.4**
baz=191,slow=8.2,SNR=3.5
JCT Junction City 14.18 356 *e*Pn **Pn 19 04 00.9 -0.3**
71nm,1.2s
JCT Junction City 14.18 356 *e*P **Pn 19 04 01.0 -0.2**
JCT pmax pmax
comp=Z,71nm,1.2s
NATX Nacogdoches 15.87 13 *e*P **Pn 19 04 27.5 +3.6**
comp=Z,107nm,1.0s
MNTX Cornudas Mount 16.50 340 *e*P **Pn 19 04 31.8 -0.2**
comp=Z,65nm,1.5s
MNTX *e* 19 09 24.6
WMOK Wichita Mounta 18.39 360 *e*P **Pn 19 04 52.7 -2.9**
comp=Z,41nm,1.3s
WMOK Wichita Mounta 18.39 360 *e*P **Pn 19 04 52.7 -2.8**
WMOK pmax pmax
comp=Z,41nm,1.3s
AMTX Amarillo 18.72 353 *e*P **Pn 19 04 58.8 -0.8**
comp=Z,71nm,1.1s
MIAR Mount Ida 18.79 13 *e*P **Pn 19 04 57.6 -2.8**
comp=Z,32nm,0.9s
MIAR Mount Ida 18.79 13 *e*P **Pn 19 04 57.6 -2.8**
MIAR pmax pmax
comp=Z,32nm,0.9s
BNM Barren Site 19.16 340 *e*P **Pn 19 05 04.9 +0.1**
LENM Lemitar 19.29 339 *e*P **Pn 19 05 07.1 +0.7**
LENM *e* 19 05 13.1
LPM Los Pinos Moun 19.31 340 *e*P **Pn 19 05 08.2 +1.6**
LAZ Ladron 19.56 339 *e*P **Pn 19 05 09.0 -0.7**
LRAL Lakeview Retre 19.80 30 *e*P **Pn 19 05 11.6 -1.0**
comp=Z,50nm,1.1s
LRAL *e*S **Sn 19 08 55.2 -0.2**
ANMO Albuquerque 19.84 341 *e*P **Pn 19 05 12.1 -0.9**
comp=Z,40nm,1.3s
ANMO Albuquerque 19.84 341 P **Pn 19 05 11.1 -1.9**
comp=Z,0.5nm,0.3s,baz=158,slow=12,SNR=25
ANMO LR LR 19 14 02.6
comp=Z,2μm,21.8s,baz=159,slow=41
PLAL Pickwick Lake 20.95 25 *e*P **P 19 05 24.9 +1.4**
comp=Z,193nm,1.3s
PLAL *e*S **S 19 09 07.6 -10**
GNAR Gosnell 21.11 20 *e*P **P 19 05 28.1 +2.9**
comp=Z,8μm,1.4s
GLAT Glass 21.63 21 *e*P **P 19 05 33.3 +2.4**
GOGA Godfrey 21.96 36 *e*P **P 19 05 33.9 -0.5**
comp=Z,129nm,1.1s,mb5.3
GOGA *e* 19 05 39.9
GOGA Godfrey 21.96 36 *e*P **P 19 05 33.9 -0.5**
GOGA *e* 19 05 39.9
GOGA pmax pmax
comp=Z,129nm,1.1s,mb5.3
WVT Waverly 22.05 24 *e*P **P 19 05 34.2 -1.1**
comp=Z,143nm,1.3s,mb5.2
WVT Waverly 22.05 24 *e*P **P 19 05 34.3 -1.0**
WVT pmax pmax
comp=Z,143nm,1.3s,mb5.2
SWET Sewanee 22.09 29 *e*P **P 19 05 34.5 -1.3**
SDCO Great Sand Dun 22.20 346 *e*P **P 19 05 37.1 +0.1**
comp=Z,88nm,1.6s,mb4.9
WUAZ Wupatki 22.23 332 *e*P **P 19 05 38.8 +1.5**
comp=Z,140nm,1.3s,mb5.2
RCC Rio Carpintero 22.23 77 *e*P **P 19 05 32.5 -5.0**
baz=181
RCC *e*S **S 19 09 25.5 -17**
comp=N,2μm,23.2s
RCC *e*
comp=E,368nm,23.2s
CBKS Cedar Bluff 22.48 358 *e*P **P 19 05 38.5 -1.4**
comp=E,101nm,1.3s,mb5.1
CBKS Cedar Bluff 22.48 358 *e*P **P 19 05 38.5 -1.4**
CBKS pmax pmax
comp=Z,101nm,1.3s,mb5.1
MVCO Mesa Verde 22.57 339 *e*P **P 19 05 40.8 -0.1**
comp=Z,250nm,1.4s,mb5.5
KSU1 Kansas State U 22.83 4 *e*P **P 19 05 42.0 -1.6**
comp=Z,40nm,0.9s,mb4.8
CPCT Cooper Cave 22.95 31 *e*P **P 19 05 44.8 -0.2**
TKL Tuckaleechee C 23.49 32 P **P 19 05 50.7 0.0**
TKL Tuckaleechee C 23.49 32 P **P 19 05 50.7 0.0**
comp=Z,30nm,1.0s,mb4.7,baz=192,slow=10,SNR=8.3
PFO Pinyon Flat Ob 23.50 321 P **P 19 05 51.9 +1.1**
comp=Z,115nm,2.6s,mb4.8,SNR=7.8
PFO Pinyon Flat Ob 23.50 321 *e*P **P 19 05 50.9 +0.2**
comp=Z,159nm,2.0s,mb5.1
PFO Pinyon Flat Ob 23.50 321 *e*P **P 19 05 50.9 +0.1**
PFO pmax pmax
comp=Z,159nm,2.0s,mb5.1
PFO Pinyon Flat Ob 23.50 321 P **P 19 05 49.6 -1.2**
comp=Z,3.5nm,0.7s,mb3.9,baz=123,slow=8.2,SNR=17
PFO LR LR 19 15 26.0
comp=Z,993nm,21.1s,MS4.2,baz=314,slow=38
JSC Jenkinsville 23.86 38 *e*P **P 19 05 54.4 +0.3**
SMCO Snowmass 23.93 344 *e*P **P 19 05 55.5 +0.8**
comp=Z,199nm,1.4s,mb5.3
ISCO Idaho Springs 24.19 347 *e*P **P 19 05 57.1 0.0**
comp=Z,204nm,1.6s,mb5.3
ISCO Idaho Springs 24.19 347 *e*P **P 19 05 57.1 0.0**
ISCO pmax pmax
comp=Z,204nm,1.6s,mb5.3
LHS Liberty Hill 24.26 38 *e*P **P 19 05 58.4 +0.5**
TZTN Tazewell 24.30 31 *e*P **P 19 05 58.1 0.0**
comp=Z,159nm,1.3s,mb5.3
WCI Wyandotte Cave 24.48 24 *e*P **P 19 05 59.6 -0.1**
comp=Z,207nm,1.4s,mb5.4
WCI Wyandotte Cave 24.48 24 *e*P **P 19 05 59.6 -0.1**
WCI pmax pmax
comp=Z,207nm,1.4s,mb5.4
CCUT Cedar City 24.81 331 *e*P **P 19 06 03.0 +0.3**
GSC Goldstone 24.88 323 *e*P **P 19 06 04.2 +0.7**
comp=Z,16nm,0.3s,mb5.0
GSC Goldstone 24.88 323 *e*P **P 19 06 04.2 +0.7**
GSC pmax pmax
comp=Z,16nm,0.3s,mb5.0
SRU San Rafael 24.98 338 *e*P **P 19 06 04.9 +0.7**
comp=Z,53nm,1.2s,mb4.9
SRU *e* 19 06 56.9
SRU San Rafael 24.98 338 *e*P **P 19 06 04.9 +0.6**
SRU *e* 19 06 56.9
SRU pmax pmax
comp=Z,53nm,1.2s,mb5.0
ARUT Antelope Range 25.04 332 *e*P **P 19 06 05.4 +0.6**
MSU Marysvale 25.09 335 *e*P **P 19 06 06.3 +0.9**
TMUT Trail Mountain 25.39 337 *e*P **P 19 06 08.6 +0.5**
HDIL Hopedale 25.56 17 *e*P **P 19 06 09.2 -0.4**
comp=Z,176nm,1.3s,mb5.4
OTAV Otavalo 25.60 127 *e*P **P 19 06 13.2 +3.0**
comp=Z,55nm,1.8s,mb4.8
PHWY Pilot Hill 25.61 348 *e*P **P 19 06 10.8 +0.8**
TPNV Topopah Spring 25.77 326 *e*P **P 19 06 12.3 +0.8**
comp=Z,196nm,1.6s,mb5.4
TPNV Topopah Spring 25.77 326 *e*P **P 19 06 12.4 +0.9**
TPNV pmax pmax
comp=Z,196nm,1.6s,mb5.4
ISA Isabella 26.11 321 *e*P **P 19 06 15.6 +1.0**
comp=Z,59nm,1.5s,mb4.9
ISA Isabella 26.11 321 *e*P **P 19 06 15.6 +1.0**
ISA pmax pmax
comp=Z,59nm,1.5s,mb4.9
MPU Maple Canyon 26.18 337 *e*P **P 19 06 15.9 +0.7**
comp=Z,59nm,1.4s,mb4.9
ELN Prospectdale 26.27 34 *e*P **P 19 06 13.2 -2.8**
NLU North Lily Min 26.29 336 *e*P **P 19 06 17.2 +1.0**
SDDR Presa de Saban 26.32 80 *e*P **P 19 06 18.1 +1.4**
comp=Z,62nm,1.3s,mb5.0
DAU Daniels Canyon 26.39 338 *e*P **P 19 06 17.7 +0.6**
BLA Blacksburg 26.43 34 *e*P **P 19 06 17.3 -0.2**
comp=Z,123nm,1.3s,mb5.3
BLA Blacksburg 26.43 34 *e*P **P 19 06 17.3 -0.2**
BLA pmax pmax
comp=Z,123nm,1.3s,mb5.3
ROSC El Rosal 26.53 113 *e*P **P 19 06 25.4 +6.8**
ROSC El Rosal 26.53 113 LR LR 19 17 28.8
comp=Z,246nm,19.4s,MS3.8,baz=195,slow=38
DUG Dugway 26.79 336 *e*P **P 19 06 21.9 +1.2**
comp=Z,43nm,1.4s,mb4.8
DUG Dugway 26.79 336 *e*P **P 19 06 21.9 +1.2**
DUG pmax pmax
comp=Z,43nm,1.4s,mb4.8
CTU Camp Tracy 26.81 338 *e*P **P 19 06 22.0 +1.1**
comp=Z,35nm,1.3s,mb4.7
MTUM Tungsten Hills 27.33 324 *e*P **P 19 06 26.4 +0.8**
MTUM *e* 19 06 35.0
ECSD EROS,Sioux Fal 27.44 3 *e*P **P 19 06 25.2 -1.2**
comp=Z,25nm,1.1s,mb4.7
BGU Big Grassy Mou 27.50 336 *e*P **P 19 06 27.9 +0.9**
JFWS Jewell Farm 27.54 14 *e*P **P 19 06 26.9 -0.5**
comp=Z,71nm,1.4s,mb5.1
JFWS Jewell Farm 27.54 14 *e*P **P 19 06 26.9 -0.5**
JFWS pmax pmax
comp=Z,71nm,1.4s,mb5.1
ACSO Alum Creek Sta 27.54 27 *e*P **P 19 06 26.7 -0.8**
comp=Z,157nm,1.4s,mb5.5
HWUT Hardware Ranch 27.55 339 *e*P **P 19 06 28.1 +0.6**
comp=Z,13nm,1.0s,mb4.5
NVAR Mina Array Bea 27.96 326 P **P 19 06 31.9 +0.6**
comp=Z,4.7nm,0.8s,mb4.2,baz=137,slow=9.0,SNR=41
PDAR Pinedale Array 27.98 343 P **P 19 06 31.0 -0.3**
comp=Z,6.5nm,1.0s,mb4.2,baz=148,slow=8.7,SNR=40
PDAR LR LR 19 18 25.5
comp=Z,2μm,18.8s,MS4.7,baz=341,slow=38
HVU Hansel Valley 28.14 337 *e*P **P 19 06 33.3 +0.5**
comp=Z,37nm,1.5s,mb4.8
HVU Hansel Valley 28.14 337 *e*P **P 19 06 33.3 +0.5**
HVU pmax pmax
comp=Z,37nm,1.5s,mb4.8
SDV Santo Domingo 28.40 102 *e*P **P 19 06 36.7 +1.3**
comp=Z,14nm,0.8s,mb4.7
SDV Santo Domingo 28.40 102 P **P 19 06 36.7 +1.3**
comp=Z,111nm,0.9s,mb4.5,baz=298,slow=4.1,SNR=13
SDV LR LR 19 18 15.3
comp=Z,916nm,19.9s,MS4.4,baz=326,slow=37
AHID Auburn Hatcher 28.44 341 *e*P **P 19 06 35.6 +0.2**
comp=Z,52nm,1.9s,mb4.8
MCWV Mont Chateau 28.56 32 *e*P **P 19 06 36.9 +0.4**
comp=Z,50nm,1.2s,mb5.1
CMB Columbia Colle 28.85 323 *e*P **P 19 06 38.8 -0.3**
REDW Red Top Meadow 28.90 342 *e*P **P 19 06 40.0 +0.5**
comp=Z,101nm,1.7s,mb5.3
SNOW Snow King Moun 28.96 342 *e*P **P 19 06 40.7 +0.7**
comp=Z,52nm,1.3s,mb5.1
AAM Ann Arbor 29.00 24 *e*P **P 19 06 39.3 -1.1**
comp=Z,123nm,1.6s,mb5.4
AAM Ann Arbor 29.00 24 *e*P **P 19 06 39.3 -1.2**
AAM pmax pmax
comp=Z,123nm,1.6s,mb5.4
TPAW Teton Pass 29.05 342 *e*P **P 19 06 41.5 +0.6**
comp=Z,45nm,1.3s,mb5.0
LOHW Long Hollow 29.05 342 *e*P **P 19 06 41.1 +0.3**
comp=Z,24nm,1.0s,mb4.9
MOOW Moose Ponds 29.22 342 *e*P **P 19 06 42.3 -0.1**
comp=Z,17nm,1.2s,mb4.7
MOOW *e* 19 07 34.3
IMW Indian Meadow 29.41 342 *e*P **P 19 06 44.0 -0.1**
comp=Z,24nm,1.3s,mb4.8
FLWY Flagg Ranch 29.51 342 *e*P **P 19 06 45.4 +0.4**
comp=Z,57nm,1.4s,mb5.1
FLWY *e* 19 06 52.9
FLWY *e* 19 06 59.8
ALLY Alegheny Colle 29.95 29 *e*P **P 19 06 47.3 -1.6**
comp=Z,111nm,2.0s,mb5.2
RLMT Red Lodge 30.09 345 *e*P **P 19 06 50.4 +0.4**
comp=Z,31nm,1.3s,mb4.9
SSPA Standing Stone 30.28 33 *e*P **P 19 06 51.9 0.0**
comp=Z,32nm,1.4s,mb4.9
HLID Hailey 30.29 337 *e*P **P 19 06 52.3 +0.5**
comp=Z,7.2nm,1.0s,mb4.4
OHCM Honcut 30.36 324 *e*P **P 19 06 52.7 +0.2**
ERPA Erie 30.39 28 *e*P **P 19 06 51.5 -1.3**
comp=Z,91nm,1.9s,mb5.2
ATAH Atahualpa 30.68 137 P **P 19 06 54.8 -0.8**
comp=Z,5.1nm,0.9s,mb4.4,baz=29,slow=19,SNR=1.9
ATAH LR LR 19 17 01.7
comp=Z,363nm,20.1s,MS4.0,baz=215,slow=32
WVOR Wild Horse Val 31.14 331 *e*P **P 19 06 59.7 +0.3**
comp=Z,84nm,1.8s,mb5.3
WVOR Wild Horse Val 31.14 331 *e*P **P 19 06 59.7 +0.3**
WVOR pmax pmax
comp=Z,84nm,1.8s,mb5.3
BOZ Bozeman (W) 31.21 342 *e*P **P 19 07 00.6 +0.7**
comp=Z,6.0nm,0.9s,mb4.4
BOZ Bozeman (W) 31.21 342 *e*P **P 19 07 00.6 +0.7**
BOZ pmax pmax
comp=Z,6.0nm,0.9s,mb4.4
DLMT Dillon 31.24 341 *e*P **P 19 07 00.5 +0.2**
comp=Z,37nm,1.0s,mb5.2
LBCM Butte Creek Ri 31.32 326 P **P 19 07 01.8 +0.7**
MOD Modoc 31.55 328 *e*P **P 19 07 02.9 -0.1**
comp=Z,43nm,1.5s,mb5.1
MTP Monte Pirata 31.77 82 *e*P **P 19 07 05.9 +0.8**
LASM Arnica Sink 31.98 327 P **P 19 07 07.0 +0.2**
AGMN Agassiz Refuge 32.03 4 *e*P **P 19 07 06.3 -0.8**
comp=Z,65nm,1.1s,mb5.4
AGMN *e* 19 07 59.6
DGMT Dagmar 32.42 353 *e*P **P 19 07 11.1 +0.6**
comp=Z,67nm,1.3s,mb5.3
BMO Blue Mountains 32.50 335 *e*P **P 19 07 10.3 -1.0**
comp=Z,20nm,1.4s,mb4.7
EGMT Eagleton 32.93 346 *e*P **P 19 07 15.9 +0.8**
comp=Z,135nm,2.0s,mb5.5
MSO Missoula 32.98 341 *e*P **P 19 07 15.7 +0.3**
comp=Z,3.8nm,0.8s,mb4.4
VIPM Ingram Point 33.66 331 P **P 19 07 21.6 +0.2**
PCRV Puerto La Cruz 33.74 96 LR LR 19 21 57.9
comp=Z,818nm,20.4s,MS4.4,baz=75,slow=38
ULM Lac du Bonnet 33.98 3 P **P 19 07 22.8 -1.3**
comp=Z,32nm,1.2s,mb5.1,baz=188,slow=8.3,SNR=19
KEBM Edson Butte 34.34 326 *e*P **P 19 07 27.6 +0.2**
SSOR Sweet Springs 34.79 330 P **P 19 07 31.1 -0.2**
LONY Lake Ozonia 34.86 31 *e*P **P 19 07 31.4 -0.4**
comp=Z,16nm,1.1s,mb4.8
WALA Waterton Lakes 34.96 343 *e*P **P 19 07 32.8 +0.2**
comp=Z,16nm,1.2s,mb4.8
NEW Newport 35.29 339 *e*P **P 19 07 35.2 -0.3**
comp=Z,5.4nm,0.9s,mb4.5
NEW Newport 35.29 339 *e*P **P 19 07 35.2 -0.3**
NEW pmax pmax
comp=Z,5.0nm,0.9s
DPW Davenport 35.34 337 P **P 19 07 37.0 +1.0**
TBM Table Mountain 35.72 334 P **P 19 07 40.0 +0.8**
FFC Flin Flon 38.46 357 P **P 19 08 02.6 +0.2**
comp=Z,119nm,1.4s,mb5.4,SNR=8.5
FFC Flin Flon 38.46 357 *e*P **P 19 08 01.6 -0.7**
comp=Z,56nm,1.4s,mb5.1
FFC *e* 19 08 54.9
FFC Flin Flon 38.46 357 *e*P **P 19 08 01.6 -0.8**
FFC pmax pmax
comp=Z,56nm,1.4s,mb5.1
EDM Edmonton 38.61 346 *e*P **P 19 08 02.6 -1.1**
EDM *e* 19 08 56.1
FCC Fort Churchill 42.57 4 *e*P **P 19 08 35.8 -0.5**
comp=Z,88nm,1.8s,mb5.2
FCC Fort Churchill 42.57 4 *e*P **P 19 08 35.8 -0.5**
FCC pmax pmax
comp=Z,88nm,1.8s,mb5.2
LPAZ La Paz 44.27 135 P **P 19 08 51.3 +0.7**
comp=Z,1.5nm,0.9s,baz=338,slow=11,SNR=3.5
LPAZ LR LR 19 26 02.8
comp=Z,452nm,18.6s,MS4.4,baz=114,slow=34
SCHQ Schefferville 45.68 25 P **P 19 09 01.0 -0.4**
comp=Z,17nm,1.0s,mb4.9,baz=228,slow=5.5,SNR=9.4
SCHQ LR LR 19 29 13.4
comp=Z,600nm,19.0s,MS4.6,baz=248,slow=38
YKA Yellowknife Ar 47.50 350 P **P 19 09 13.3 -2.2**
comp=Z,6.2nm,1.0s,mb4.5,baz=158,slow=7.4,SNR=50
YKA LR LR 19 31 49.1
comp=Z,155nm,20.6s,MS4.0,baz=160,slow=39
TAOE Nuku Hiva Isla 47.96 242 *e*LR LR 19 22 42.0
comp=Z,3μm,25.0s,baz=54
DLBC Dease Lake 48.04 338 *e*P **P 19 09 20.8 +1.1**
SIV San Ignacio 49.10 129 P **P 19 09 27.0 -1.5**
comp=Z,1.8nm,0.7s,mb4.2,baz=301,slow=10,SNR=10
RKT Rikitea 52.78 223 *e*S **S 19 17 24.9 -0.3**
comp=Z,326nm,28.2s
RKT *e*LR LR 19 25 08.3
comp=Z,1μm,26.5s,baz=37
DAWY Dawson 55.21 340 *e*P **P 19 10 13.0 -0.3**
CFAA Coronel Fontan 55.90 148 P **P 19 10 18.1 -0.6**
comp=Z,0.4nm,0.9s,baz=252,slow=9.6,SNR=3.0
MENT Mentasta 56.05 337 *e*P **P 19 10 19.5 +0.2**
EGAK Eagle 56.25 340 *e*P **P 19 10 19.8 -1.0**
comp=Z,17nm,1.3s,mb4.9
INK Inuvik 56.51 345 *e*P **P 19 10 22.1 -0.5**
comp=Z,881nm,1.3s
INK Inuvik 56.51 345 *e*P **P 19 10 22.1 -0.4**
INK pmax pmax
comp=Z,881nm,1.3s
RES Resolute Bay 58.46 1 *e*P **P 19 10 34.7 -1.5**
comp=Z,582nm,1.5s
RES Resolute Bay 58.46 1 *e*P **P 19 10 34.7 -1.6**
RES pmax pmax
comp=Z,582nm,1.5s
COLA College 58.64 338 *e*P **P 19 10 37.0 -0.7**
comp=Z,34nm,1.6s,mb5.1
COLA College 58.64 338 *e*P **P 19 10 37.0 -0.6**
COLA pmax pmax
comp=Z,34nm,1.6s,mb5.1
SVW2 Sparrevohn 60.08 332 *e*P **P 19 10 47.3 -0.3**
PPT Papeete 60.30 238 *e*S **S 19 19 08.1 +3.1**
comp=Z,540nm,26.2s
PPT *e*SS SS 19 23 04.3 +1.5
comp=Z,127nm,25.2s
PPT *e*LQ 19 25 48.1
comp=Z,527nm,26.2s
PPT *e*LR LR 19 28 26.2
comp=Z,754nm,24.2s,baz=57
PPT Papeete 60.30 238 LR LR 19 28 54.3
comp=Z,530nm,20.3s,MS4.7,baz=152,slow=28
TTA Tatalina 60.97 334 *e*P **P 19 10 53.2 -0.5**
PLCA Paso Flores 62.47 156 P **P 19 11 04.1 0.0**
comp=Z,5.5nm,1.1s,mb4.6,baz=0.4,slow=9.9,SNR=4.1
PLCA LR LR 19 31 46.4
comp=Z,431nm,20.9s,MS4.6,baz=344,slow=30
TBI Tubuai 63.29 233 *e*S **S 19 19 44.2 +1.5**
comp=Z,430nm,28.5s
TBI *e*LQ 19 27 10.2
comp=Z,382nm,38.2s
TBI *e*LR LR 19 29 45.9
comp=Z,913nm,28.0s,baz=57
RAR Rarotonga 70.47 240 LR LR 19 33 21.2
comp=Z,296nm,21.8s,MS4.5,baz=25,slow=28
DAG Danmarks Havn 72.01 14⇑ *i*P **P 19 12 02.7 -1.4**
DAG pmax pmax
comp=Z,23nm,1.3s,mb5.0
DAG Danmarks Havn 72.01 14⇑ *i*P **P 19 12 02.7 -1.4**
comp=Z,23nm,1.3s,mb5.0
JMIC Jan Mayen 74.83 20 LR LR 19 45 46.2
comp=Z,252nm,19.0s,MS4.5,baz=109,slow=36
USHA Ushuaia 75.37 162 LR LR 19 37 50.0
comp=Z,373nm,18.5s,MS4.8,baz=217,slow=30
BILL Bilibino 76.89 337‖ *e*P **P 19 12 32.4 -0.3**
BILL *e* 19 15 33.8
BILL *e*S S 19 22 41.6 +21
BILL pmax pmax
comp=Z,37nm,1.9s,mb5.0
BILL MLR MLR
comp=Z,8μm,20.0s
ESDC Sonseca Array 83.40 51 P **P 19 13 07.6 -0.8**
comp=Z,0.4nm,0.5s,baz=307,slow=5.4,SNR=6.5
SEY Seymchan 83.94 334 *i* P **P 19 13 10.7 +0.1**
MDT Midelt 84.75 58 LR LR 19 46 17.4
comp=Z,295nm,19.9s,MS4.7,baz=345,slow=32
KONO Kongsberg 85.06 29 *i* P **P 19 13 17.1 +0.7**
NOA NORSAR Array B 85.21 27 P **P 19 13 17.1 0.0**
comp=Z,1.3nm,0.9s,mb4.1,baz=302,slow=5.1,SNR=3.2
NOA LR LR 19 49 23.6
comp=Z,192nm,21.4s,MS4.5,baz=195,slow=34
ARCES ARCESS Array B 85.97 17 LR LR 19 53 08.4
comp=Z,322nm,18.5s,MS4.8,baz=321,slow=37
MA2 Magadan 86.06 331 *e*P **P 19 13 21.0 -0.4**
comp=Z,41nm,1.8s,mb5.4
MA2 Magadan 86.06 331 *d i*P **P 19 13 17.5 -3.8**
MA2 *e* 19 24 01.1
MA2 pmax pmax
comp=Z,200nm,1.3s,mb6.2
HFS Hagfors 86.71 28 LR LR 19 51 16.9
comp=Z,265nm,20.4s,MS4.6,baz=324,slow=35
CLL Collm 90.40 36 *e*P **P 19 13 42.0 -0.2**
CLL *e*PP PP 19 17 17.0 +1.0
CLL *e*SKKSac SKKSac 19 24 22.0 -6.2
CLL *e*S S 19 24 40.0 +2.4
CLL *e*PS PS 19 25 47.0 +2.6
CLL *e*SS SS 19 30 42.0 +5.2
CLL Lm 19 55 00.0
comp=Z,300nm,19.4s
NKC Novy Kostel 90.56 37 AMS AMS 19 55 00.0
comp=Z,400nm,15.1s
PVCC Panska Ves 91.64 36 AMS AMS 19 55 00.0
comp=Z,400nm,19.7s
KHC Kasperske Hory 91.72 37 *e*P **P 19 13 46.8 -1.6**
KHC AMS AMS 19 55 00.0
comp=Z,500nm,16.6s
PRU Pruhonice 91.88 36 AMS AMS 19 54 10.0
comp=Z,300nm,21.0s
GERES GERESS Array B 91.92 38 P **P 19 13 48.6 -0.8**
comp=Z,0.1nm,0.4s,baz=4.3,slow=5.4,SNR=3.5
GERES LR LR 19 56 11.4
comp=Z,422nm,18.4s,MS4.9,baz=81,slow=36
UPC Upice 92.45 35 *e*P **P 19 13 51.8 0.0**
DPC Dobruska-Polom 92.70 36 *e*P **P 19 13 52.5 -0.4**
DPC AMS AMS 19 55 50.0
comp=Z,400nm,15.5s
YAK Yakutsk 93.14 339 *e*P **P 19 13 54.1 -0.6**
comp=Z,10nm,0.7s,mb5.4
YAK Yakutsk 93.14 339‖ *e*P **P 19 13 54.1 -0.6**
YAK pmax pmax
comp=Z,20nm,1.2s,mb5.4
VRAC Vranov 93.37 36 LR LR 19 57 52.0
comp=Z,252nm,19.6s,MS4.7,baz=352,slow=37
KEST Kesra 94.65 51 LR LR 19 55 32.5
comp=Z,114nm,19.2s,MS4.3,baz=279,slow=35
TORD Torodi Ar. Bea 96.14 74 LR LR 19 54 17.9
comp=Z,363nm,19.6s,MS4.9,baz=325,slow=34
AKASG Malin Array Be 99.27 31 LR LR 19 58 51.6
comp=Z,217nm,21.6s,MS4.6,baz=305,slow=35
CN2 Changchun 107.84 328 *e*PDIF Pdif 19 15 02.0 +1.2
CN2 LR LR
comp=Z,400nm,15.0s,MS5.1
HHC Hu-ho-hao-te 116.58 335 *e*PKP PKPdf 19 19 25.0 -0.2
HHC PP PP 19 20 35.5 +4.2
HHC PKS 19 23 00.5
HHC SKS SKSdf 19 26 32.8 -5.4
HHC SKKS SKKSac 19 27 25.3 -9.0
HHC PP PP
comp=Z,126nm,8.0s
HHC LR LR
comp=N,337nm,21.6s,MS5.3
HHC LR LR
comp=E,786nm,21.6s,MS5.3
HHC LR LR
comp=Z,491nm,17.6s,MS5.2
SSE Sheshan 119.24 321 *e*PKP PKPdf 19 19 30.3 -0.3
SSE LR LR
comp=N,561nm,20.0s,MS5.3
SSE LR LR
comp=E,446nm,20.0s,MS5.3
SSE LR LR
comp=Z,633nm,17.5s,MS5.3
WMQ Urumqi 119.91 355 *e*PKP PKPdf 19 19 31.8 +0.2
NJ2 Nanjing 119.93 323 *e*PKP PKPdf 19 19 32.3 +0.4
NJ2 PP PP 19 21 00.0 +5.1
NJ2 PKS 19 23 07.5
NJ2 PP PP
comp=Z,370nm,7.4s
NJ2 LR LR
comp=N,400nm,21.6s,MS5.1
NJ2 LR LR
comp=E,270nm,24.8s,MS5.1

NJ2				LR	LR			
	comp=Z,270nm,24.8s,MS4.8							
LZH	**Lanzhou**	**123.70**	**338**	*e*PKP	PKPdf	19 19 38.5	-0.6	
LZH				XPKP		19 19 52.5		
LZH				PP	PP	19 21 20.5	+0.4	
LZH				PKS		19 23 14.5		
LZH				SKS	SKSdf	19 26 44.0	-8.0	
LZH				SKKS	SKKSac	19 28 15.0	-6.1	
LZH				PP	PP			
	comp=Z,205nm,4.8s							
LZH				LR	LR			
	comp=N,407nm,19.1s							
LZH				LR	LR			
	comp=Z,596nm,20.5s,MS5.2							
MAW	**Mawson**	**127.33**	**171**	PKP	PKPdf	19 19 43.9	-1.1	
	comp=Z,2.1nm,0.7s,baz=246,slow=5.9,SNR=4.3							
CD2	**Chengdu**	**128.33**	**335**	*e*PKP	PKPdf	19 19 47.5	-0.6	
CD2				PP	PP	19 21 54.8	+3.8	
CD2				PKS		19 23 22.8		
CD2				PP	PP			
	comp=Z,120nm,10.2s							
CD2				LR	LR			
	comp=N,160nm,23.4s							
CD2				LR	LR			
	comp=Z,150nm,24.6s,MS4.6							
WRA	**Warramunga Arr**	**129.55**	**257**	PKP	PKPdf	19 19 48.6	-2.0	
	comp=Z,1.4nm,0.8s,baz=84,slow=2.8,SNR=10							
ASAR	**Alice Springs**	**130.17**	**253**	PKP	PKPdf	19 19 49.8	-1.9	
	comp=Z,0.7nm,0.9s,baz=78,slow=3.9,SNR=5.3							
GYA	**Guiyang**	**130.86**	**329**	PDIF	Pdif	19 16 42.5	-0.6	
GYA				PKP	PKPdf	19 19 52.8	-0.2	
GYA				PP	PP	19 22 11.5	+3.9	
GYA				PKS		19 23 28.0		
GYA				PP	PP			
	comp=Z,130nm,7.6s							
GYA				LR	LR			
	comp=N,280nm,20.6s,MS5.1							
GYA				LR	LR			
	comp=E,230nm,19.4s,MS5.1							
GYA				LR	LR			
	comp=Z,310nm,20.4s,MS5.0							
KMI	**Kunming**	**133.82**	**333**	PKP	PKPdf	19 19 58.5	-0.1	
KMI				PP	PP	19 22 30.0	+3.4	
KMI				SKKS	SKKSac	19 29 15.0	-10	
KMI				PP	PP			
	comp=Z,125nm,6.1s							
KMI				LR	LR			
	comp=N,295nm,16.0s							
KMI				LR	LR			
	comp=E,392nm,24.0s							
KMI				LR	LR			
	comp=Z,246nm,19.9s,MS4.9							
KMBO	**Kilima Mbogo**	**134.15**	**75**	*i* PKIKP	PKPdf	19 20 00.4	+0.9	
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.6s							
KAD	**Karad**	**145.92**	**12**	*e*P	PKPdf	19 20 20.1	-0.6	
KSM	**Kuching**	**146.31**	**299**	*e*PKPdf	PKPdf	19 20 21.4	0.0	
HYB	**Hyderabad**	**146.42**	**5**	*e*P	PKPdf	19 20 22.0	+0.5	
HYB	**Hyderabad**	**146.42**	**5**	*i* PKP	PKPdf	19 20 22.0	+0.5	

*ISCJB **30** 19:06:44.7±0.8,3027S×005×13682E±008,h10km, Error ellipse: s-maj=10.1km s-min=6.6km az=157.6*
*AUST **30** 19:06:47.8, 3038S×13675E,h12km, ML2.5*
*IDC **30** 19:06:52.2±3.3,2962S×13773E, h0km, mb1 3.1/3, mb1mx3.0/13, mbtmp2.8/3, ML2.8/3, Error ellipse: s-maj=76.3km s-min=17.0km az=47.0*

ISC 30 19:06:46.7±0.7,**3032S**×005×**13679E**±008,**h10km**,**n6**, σ1§**05**/12,**South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBOO	**Buckleboo**	**2.56**	**194**	*e*P		**Pn**		**19 07 28.6**	**+0.3**
BBOO				*e*S		**Sn**		**19 07 58.9**	**-0.7**
	5.4nm,0.2s								
STKA	**Stephens Creek**	**4.41**	**112**	*e*P		**Pn**		**19 07 54.3**	**+0.6**
STKA				*e*S		**Sn**		**19 08 44.3**	**-0.7**
	2.3nm,0.2s								
STKA	**Stephens Creek**	**4.41**	**112**	Pn		**Pn**		**19 07 54.1**	**+0.4**
	0.3nm,0.3s,baz=299,slow=9.0,SNR=7.3								
STKA				Sn		**Sn**		**19 08 44.1**	**-0.9**
	1.4nm,0.3s,baz=289,slow=5.7,SNR=7.3								
STKA				Lg				19 09 00.9	
	1.3nm,0.3s,baz=354,slow=23,SNR=4.5								
ASAR	**Alice Springs**	**7.11**	**338**	Pn		**Pn**		**19 08 34.4**	**+3.6**
	0.1nm,0.3s,baz=153,slow=15,SNR=8.4								
ASAR				Sn		**Sn**		**19 09 51.6**	**-0.1**
	0.1nm,0.3s,baz=156,slow=23,SNR=7.0								
CMSA	**Cobar Meteorol**	**7.74**	**101**	*e*P		**Pn**		**19 08 40.0**	**+0.5**
CMSA				*e*S		**Sn**		**19 10 02.2**	**-5.1**
	0.8nm,0.2s								
WRA	**Warramunga Arr**	**10.56**	**347**	Pn		**Pn**		**19 09 19.4**	**+1.2**
	0.1nm,0.3s,baz=158,slow=12,SNR=8.6								
WRA				Sn		**Sn**		**19 11 14.4**	**-2.3**
	0.1nm,0.3s,baz=158,slow=25,SNR=3.2								

*ISCJB **30** 19:08:20.5±1.4, 1593N±006×9888W±005, h27km±9km, mb4.3/15, Error ellipse: s-maj=9.5km s-min=7.1km az=18.0*
*MEX **30** 19:08:20.1±1.0, 1577N×9901W, h24km±25km, MD4.5*
*NEIC **30** 19:08:20.2, 1578N×9901W, h23km, mb4.5/9, MD4.4(MEX), After MEX.*
*IDC **30** 19:08:24.1±2.8, 1671N×9859W, h0km, mb4.2/6, mb1 4.3/8, mb1mx4.0/21, mbtmp4.2/8, ML3.8/2, Error ellipse: s-maj=58.5km s-min=21.5km az=25.0*

ISC 30 19:08:20.6±2.0,**1597N**±007×**9884W**±004,**h10**km±15km, **n43**, σ1§**19**/68,**mb4.3**/15,**3C**,**Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.80**	**59**	⇑*i*P		**Pb**		**19 08 36.7**	**+0.1**
PNIG				*i* S		**Sb**		**19 08 48.9**	**+1.3**
CAIG	**El Cayaco**	**1.74**	**308**	*i* P		**Pn**		**19 08 46.1**	**-4.6**
CAIG				*i* S		**Sn**		**19 09 07.9**	**-5.1**
MEIG	**Mezcala**	**2.08**	**339**	*i* P		**Pn**		**19 08 52.6**	**-2.9**
MEIG				*i* S		**Sn**		**19 09 20.4**	**-1.1**
UTMO	**Huajuapan**	**2.10**	**28**	*i* P		**Pn**		**19 08 54.4**	**-1.4**
UTMO				*i* S		**Sn**		**19 09 23.2**	**+1.3**
VHO	**Vista Hermosa**	**2.30**	**61**	⇑*i*P		**Pn**		**19 08 59.3**	**+0.8**
VHO				*i* S		**Sn**		**19 09 25.3**	**-1.6**
VHO				*i* S		**Sn**		**19 09 31.3**	**+4.4**
VHO	**Vista Hermosa**	**2.30**	**61**	⇑*i*P		**Pn**		**19 08 59.3**	**+0.8**
VHO				*i* S		**Sn**		**19 09 25.3**	**-1.6**
TPIG	**Tehuac#an**	**2.82**	**30**	*i* P		**Pn**		**19 09 04.8**	**-0.8**
TPIG				*i* S		**Sn**		**19 09 40.0**	**+0.4**
PPM	**Popocatepetl**	**3.08**	**4**	*e*P		**Pn**		**19 09 13.6**	**+4.2**
PPM				*i* S		**Sn**		**19 09 50.8**	**+4.5**
PPM	**Popocatepetl**	**3.08**	**4**	*e*P		**Pn**		**19 09 06.0**	**-3.3**
PPM				*e*P				19 09 07.5	
PPM				*i* S		**Sn**		**19 09 44.3**	**-2.0**
UNM	**Universidad Na**	**3.35**	**355**	*e*P		**Pn**		**19 09 17.3**	**+4.3**
UNM				*i* S		**Sn**		**19 09 58.7**	**+5.8**
UNM	**Universidad Na**	**3.35**	**355**	*e*P		**Pn**		**19 09 11.3**	**-1.8**
UNM				*e*P				19 09 17.0	
UNM				*i* S		**Sn**		**19 09 53.8**	**+0.8**
UNM				*i* S		**Sn**		**19 09 54.7**	**+1.8**
SZVM	**Salazar**	**3.37**	**351**	*e*P		**Pn**		**19 09 13.1**	**-0.2**
SZVM				*i* S		**Sn**		**19 09 53.6**	**+0.2**
IIO	**Organos**	**3.60**	**2**	*e*P		**Pn**		**19 09 22.1**	**+5.7**
IIO				*i* S		**Sn**		**19 10 05.0**	**+6.0**
PTVM	**Pico Tres Padr**	**3.61**	**356**	*e*P		**Pn**		**19 09 18.3**	**+1.7**
PTVM				*i* S		**Sn**		**19 10 06.0**	**+6.8**
PTVM	**Pico Tres Padr**	**3.61**	**356**	*i* P		**Pn**		**19 09 15.9**	**-0.6**
PTVM				*e*S		**Sn**		**19 09 58.4**	**-0.9**
CMIG	**Matias Romero**	**3.96**	**73**	*e*P		**Pn**		**19 09 14.7**	**-6.7**
CMIG				*i* S		**Sn**		**19 10 01.5**	**-6.3**
CMIG	**Matias Romero**	**3.96**	**73**	Pn		**Pn**		**19 09 21.5**	**+0.2**
	3.6nm,0.3s,baz=258,slow=11,SNR=25								
CMIG				Sn		**Sn**		**19 10 07.7**	**-0.1**
	11nm,0.3s,baz=264,slow=18,SNR=3.6								
CMIG	**Matias Romero**	**3.96**	**73**	*e*P		**Pn**		**19 09 21.2**	**-0.1**
CMIG				*i* S		**Sn**		**19 10 07.1**	**-0.7**
MOIG	**Morelia**	**4.31**	**329**	*e*P		**Pn**		**19 09 31.9**	**+5.7**
MOIG				*i* S		**Sn**		**19 10 25.9**	**+9.3**
MOIG	**Morelia**	**4.31**	**329**	*e*P		**Pn**		**19 09 23.6**	**-2.6**
MOIG				*e*S		**Sn**		**19 10 16.5**	**-0.1**
ZAIG	**Zacatecas**	**7.62**	**333**	*e*P		**Pn**		**19 10 19.9**	**+8.2**
ZAIG				*i* S		**Sn**		**19 11 52.1**	**+14**
ZAIG	**Zacatecas**	**7.62**	**333**	*e*P		**Pn**		**19 10 14.7**	**+3.0**
ZAIG				*i* S		**Sn**		**19 11 39.1**	**+1.0**
TEIG	**Tepich**	**10.90**	**66**	*e*Pn		**Pn**		**19 10 56.9**	**+0.2**
TEIG	**Tepich**	**10.90**	**66**	Pn		**Pn**		**19 10 56.3**	**-0.4**
	1.4nm,0.3s,baz=315,slow=1.4,SNR=3.6								
TEIG				Sn		**Sn**		**19 12 51.3**	**-7.4**
	0.9nm,0.3s,baz=143,slow=20,SNR=3.6								
PLAL	**Pickwick Lake**	**21.25**	**25**	*e*P		**P**		**19 13 07.2**	**+0.3**
	24nm,1.1s,mb4.4								
WVT	**Waverly**	**22.35**	**24**	*e*P		**P**		**19 13 19.2**	**+0.6**
	16nm,1.0s,mb4.4								
WUAZ	**Wupatki**	**22.46**	**332**	*e*P		**P**		**19 13 21.6**	**+1.8**
	62nm,1.8s,mb4.7								
KSU1	**Kansas State U**	**23.12**	**4**	*e*P		**P**		**19 13 26.7**	**-0.2**
	16nm,1.0s,mb4.4								
CPCT	**Cooper Cave**	**23.24**	**31**	*e*P		**P**		**19 13 27.9**	**-0.3**
SMCO	**Snowmass**	**24.19**	**344**	*e*P		**P**		**19 13 38.6**	**+1.4**
	24nm,1.3s,mb4.5								
ISCO	**Idaho Springs**	**24.46**	**347**	*e*P		**P**		**19 13 39.8**	**+0.1**
	14nm,1.3s,mb4.2								
SRU	**San Rafael**	**25.22**	**338**	*e*P		**P**		**19 13 46.3**	**-0.3**
	7.5nm,1.0s,mb4.2								
MSU	**Marysvale**	**25.33**	**335**	*e*P		**P**		**19 13 48.8**	**+1.3**
NVAR	**Mina Array Bea**	**28.17**	**326**	P		**P**		**19 14 14.9**	**+1.8**
	1.4nm,0.9s,mb3.6,baz=142,slow=10,SNR=6.1								
PDAR	**Pinedale Array**	**28.24**	**343**	P		**P**		**19 14 14.2**	**+0.6**
	2.7nm,0.9s,mb3.9,baz=145,slow=9.5,SNR=14								
SDV	**Santo Domingo**	**28.41**	**101**	P		**P**		**19 14 19.6**	**+4.1**
	1.6nm,0.4s,mb4.0,baz=262,slow=19,SNR=4.3								
GCMT	**Greycliff**	**31.08**	**345**	*e*P		**P**		**19 14 41.8**	**+2.9**
AGMN	**Agassiz Refuge**	**32.33**	**4**	*e*P		**P**		**19 14 49.1**	**-0.6**
	6.7nm,0.8s,mb4.5								
ULM	**Lac du Bonnet**	**34.27**	**3**	P		**P**		**19 15 04.3**	**-2.4**
	5.3nm,1.0s,mb4.4,baz=204,slow=6.9,SNR=5.0								
FFC	**Flin Flon**	**38.75**	**357**	*e*P		**P**		**19 15 43.5**	**-1.3**
	4.9nm,0.9s,mb4.2								
SCHQ	**Schefferville**	**45.98**	**25**	P		**P**		**19 16 42.9**	**-0.8**
	5.8nm,0.8s,mb4.5,baz=237,slow=4.8,SNR=5.2								
YKA	**Yellowknife Ar**	**47.78**	**350**	P		**P**		**19 16 56.7**	**-1.0**
	1.2nm,0.9s,mb3.9,baz=157,slow=7.3,SNR=9.0								
INK	**Inuvik**	**56.77**	**345**	*e*P		**P**		**19 18 04.1**	**-0.3**

*BJI **30** 19:23:52.1, 3776N×3007E, h25km, mB5.1, mb4.8, Ms4.7, Msz4.5*
*NIC **30** 19:23:52.6±0.6, 3826N×3048E, h25km, mb4.7, ML4.5, MW4.1*
*IDC **30** 19:23:55.0±0.6, 3794N×3098E, h0km, mb4.3/19, mb1 4.4/28, mb1mx4.3/32, mbtmp4.3/28, ML3.9/9, MS3.9/13, Ms1 3.9/13, ms1mx3.7/34, Error ellipse: s-maj=12.6km s-min=10.9km az=46.0*
*CSEM **30** 19:23:54.9±0.0, 3789N×3090E, h10km, mb4.5/32, Ms3.9, Mw4.5, Error ellipse: s-maj=1.2km s-min=1.0km az=63.0*
*ISK **30** 19:23:55.4, 3799N×3091E, h5km, ML4.7*
*HLW **30** 19:23:55.6, 38.16N×3124E, h33km, Mb4.5*
*MOS **30** 19:23:55.9±0.9, 3796N×3096E, h13km, mb4.6/39, MS3.9/18, Error ellipse: s-maj=4.3km s-min=2.4km az=118.3*
*GCMT **30** 19:23:56.1±0.4, 3792N×3091E, h14km±1km, MW4.9/56, Moment Tensor Solution. s22,c26; s56,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.06±.16; $M_{\theta\theta}$-0.38±.09; $M_{\phi\phi}$2.44±.11; $M_{r\theta}$-1.23±.29; $M_{r\phi}$0.12±.07; $M_{\theta\phi}$-0.40±.19; Best double couple: M_o2.61200×10^{16} NP1:ϕs158.00000°, δ45.00000°, λ-129.00000°. NP2: ϕs28.00000°, δ57.00000°, λ-57.00000°. Principal axes: T 2.4970, Plg6.0000°, Azm95.0000°; N 0.2310, Plg27.0000°, Azm188.0000°; P -2.7270, Plg62.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **30** 19:23:56.1, 3799N×3092E, h6km, mb4.5/49, ML4.9(THE), ML4.7(ISK), ML4.5(NIC), After ISK.*
*ISCJB **30** 19:23:57.2±0.4, 3792N±001×3095E±001, h25km±3km, mb4.5/67, MS4.2/22, Error ellipse: s-maj=2.1km s-min=1.8km az=135.0*
*THE **30** 19:23:57.7, 3796N×3121E, h13km, ML4.9*
*DDA **30** 19:23:58.7, 3800N×3092E, h7km±6km, Md4.8*
*SZGRF **30** 19:23:59.8, 3789N×3114E, h33km, mb4.4, MS3.9, Turkey*
*NAO **30** 19:24:23.7, 4042N×3015E, h33km, mb4.2*

ISC 30 19:23:57.7±0.5,**3794N**±001×**3096E**±001,**h12**km±3km, **h15**km±.4km:**pP-P**,**n590**,σ1§**18**/652,**mb4.6**/67,**MS4.2**/22, **31C-8D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.37**	**255**	PG		**Pg**		**19 24 03.0**	**-2.0**
ISP				SG		**Sg**		**19 24 09.4**	**-0.6**
ISP	**Isparta**	**0.37**	**255**	*e*P		**Pg**		**19 24 03.2**	**-1.8**
ISP				*e*S		**Sg**		**19 24 10.4**	**+0.5**
ISP	**Isparta**	**0.37**	**255**	*i* P		**Pg**		**19 24 03.2**	**-1.8**
BCK	**Bucak**	**0.56**	**212**	PG		**Pg**		**19 24 07.2**	**-1.4**
BCK	**Bucak**	**0.56**	**212**	P		**Pg**		**19 24 07.4**	**-1.2**
SHUT	**Suhut-Afyon**	**0.69**	**332**	PG		**Pg**		**19 24 09.4**	**-1.7**
ANTB	**Antalya**	**1.06**	**193**	PN		**Pn**		**19 24 17.9**	**-0.5**
KDHN	**Kadinhani**	**1.08**	**57**	*i* P		**Pb**		**19 24 17.0**	**-1.3**
KDHN				*i* S		**Sb**		**19 24 34.0**	**+1.6**
KONT	**Konya--Tatoy**	**1.11**	**89**	PN		**Pn**		**19 24 17.5**	**-1.5**
KONT	**Konya--Tatoy**	**1.11**	**89**	Pn		**Pn**		**19 24 18.8**	**-2.2**
KIZT	**Kizilcal**	**1.19**	**37**	PN		**Pn**		**19 24 18.9**	**-1.2**
KIZT	**Kizilcal**	**1.19**	**37**	Pn		**Pn**		**19 24 16.1**	**-4.0**
KHL	**Karahalli**	**1.20**	**289**	PN		**Pn**		**19 24 18.5**	**-1.7**
KHL	**Karahalli**	**1.20**	**289**	Pn		**Pn**		**19 24 18.4**	**-1.8**
GOLH	**Golhisar**	**1.31**	**238**	*i* P		**Pn**		**19 24 21.4**	**-0.4**
GOLH				*i* S		**Sb**		**19 24 41.5**	**+2.5**
ELL	**Elmali**	**1.45**	**216**	PN		**Pn**		**19 24 24.3**	**+0.6**
ELL	**Elmali**	**1.45**	**216**	P		**Pn**		**19 24 25.7**	**+2.0**
DENT	**Denizli**	**1.54**	**264**	PN		**Pn**		**19 24 24.6**	**-0.3**
DENT	**Denizli**	**1.54**	**264**	Pn		**Pn**		**19 24 24.7**	**-0.2**
ESKT	**Eskisehir**	**1.58**	**357**	PN		**Pn**		**19 24 24.8**	**-0.7**
ESKT	**Eskisehir**	**1.58**	**357**	Pn		**Pn**		**19 24 24.9**	**-0.7**
ESKT	**Eskisehir**	**1.58**	**357**	*i* P		**Pn**		**19 24 25.1**	**-0.5**
ESKT				*i* S		**Sn**		**19 24 46.2**	**+0.2**
ESKT	**Eskisehir**	**1.58**	**357**	Pn		**Pn**		**19 24 24.9**	**-0.6**
SEYT	**Eskypehyr**	**1.58**	**357**	*i* P		**Pn**		**19 24 25.1**	**-0.4**
SEYT				*i* S		**Sn**		**19 24 46.2**	**+0.3**
GDZ	**Gediz**	**1.63**	**315**	*i* P		**Pn**		**19 24 25.7**	**-0.5**
GDZ				*i* S		**Sn**		**19 24 51.3**	**+4.1**
KULA	**Kula-Manisa**	**1.90**	**288**	PN		**Pn**		**19 24 28.6**	**-1.3**
FETY	**Fethiye**	**1.98**	**230**	PN		**Pn**		**19 24 32.2**	**+1.2**
FETY	**Fethiye**	**1.98**	**230**	Pn		**Pn**		**19 24 32.4**	**+1.3**
ERMK	**Ermenek**	**2.02**	**129**	*i* P		**Pn**		**19 24 32.8**	**+1.2**
ERMK				*i* S		**Sn**		**19 25 00.7**	**+3.9**
GEDT	**Gedikpinar**	**2.25**	**335**	Pn		**Pn**		**19 24 33.9**	**-0.8**
ANTO	**Ankara**	**2.40**	**36**	PN		**Pn**		**19 24 37.0**	**+0.2**
ANTO	**Ankara**	**2.40**	**36**	*e*P		**Pn**		**19 24 37.3**	**+0.5**
ANTO	**Ankara**	**2.40**	**36**	‖*i*P		**Pn**		**19 24 37.2**	**+0.4**
GPA	**Golpazari**	**2.40**	**348**	PN		**Pn**		**19 24 36.8**	**0.0**
LOD	**Lodumlu**	**2.40**	**35**	PN		**Pn**		**19 24 36.8**	**0.0**
LOD	**Lodumlu**	**2.40**	**35**	Pn		**Pn**		**19 24 36.8**	**0.0**
DST	**Dursunbey**	**2.47**	**313**	PN		**Pn**		**19 24 37.5**	**-0.2**
GULT	**Gulveren**	**2.52**	**352**	PN		**Pn**		**19 24 38.3**	**-0.1**
MLSB	**Milas**	**2.61**	**257**	PN		**Pn**		**19 24 39.3**	**-0.3**
MLSB	**Milas**	**2.61**	**257**	Pn		**Pn**		**19 24 39.3**	**-0.3**
DERT	**Derbent**	**2.61**	**338**	Pn		**Pn**		**19 24 38.1**	**-1.6**
AKHS	**Akhisar**	**2.64**	**292**	‖*i*P		**Pn**		**19 24 39.4**	**-0.7**
AKHS				*i* S		**Sg**		**19 25 27.0**	**+4.4**
AKS	**Akhisar**	**2.65**	**292**	PN		**Pn**		**19 24 39.4**	**-0.7**
AKS	**Akhisar**	**2.65**	**292**	Pn		**Pn**		**19 24 39.5**	**-0.7**
AKS	**Akhisar**	**2.65**	**292**	Pn		**Pn**		**19 24 39.5**	**-0.6**
IZI	**Iznik**	**2.66**	**335**	PN		**Pn**		**19 24 40.3**	**-0.1**
IZI	**Iznik**	**2.66**	**335**	Pn		**Pn**		**19 24 39.8**	**-0.6**
IZI	**Iznik**	**2.66**	**335**	Pn		**Pn**		**19 24 39.8**	**-0.6**
ADVT	**Abdulvahap**	**2.67**	**340**	PN		**Pn**		**19 24 39.8**	**-0.6**
ADVT	**Abdulvahap**	**2.67**	**340**	Pn		**Pn**		**19 24 40.7**	**+0.3**
IKL	**Isikli**	**2.76**	**127**	PN		**Pn**		**19 24 44.1**	**+2.4**
IKL	**Isikli**	**2.76**	**127**	Pn		**Pn**		**19 24 44.0**	**+2.3**
IKL	**Isikli**	**2.76**	**127**	Pn		**Pn**		**19 24 44.0**	**+2.3**
ARG	**Arkhangelos**	**2.84**	**234**	P		**Pn**		**19 24 46.0**	**+3.1**
ARG	**Arkhangelos**	**2.84**	**234**	*e*P		**Pn**		**19 24 43.7**	**+0.9**
ARG	**Arkhangelos**	**2.84**	**234**	*e*P		**Pn**		**19 24 44.0**	**+1.1**
GEMT	**Gemlik**	**2.85**	**332**	PN		**Pn**		**19 24 42.4**	**-0.5**
GEMT	**Gemlik**	**2.85**	**332**	Pn		**Pn**		**19 24 42.4**	**-0.5**
NIG	**Nigde**	**2.89**	**85**	PN		**Pn**		**19 24 45.1**	**+1.6**
NIG	**Nigde**	**2.89**	**85**	Pn		**Pn**		**19 24 43.7**	**+0.2**
NIG	**Nigde**	**2.89**	**85**	Pn		**Pn**		**19 24 43.7**	**+0.2**
YLV	**Yalova**	**2.90**	**335**	PN		**Pn**		**19 24 42.7**	**-1.0**
BTOK	**Tokmak**	**2.92**	**309**	*i* P		**Pn**		**19 24 43.7**	**-0.3**
BTOK				*i* S		**Sg**		**19 25 29.1**	**-2.5**
BDRM	**Kayabasi**	**2.93**	**254**	*i* P		**Pn**		**19 24 43.5**	**-0.5**
BDRM				*i* S		**Sn**		**19 25 23.5**	**+4.3**
BALB	**Balikesir**	**2.95**	**306**	PN		**Pn**		**19 24 44.3**	**0.0**
BALB	**Balikesir**	**2.95**	**306**	Pn		**Pn**		**19 24 44.3**	**0.0**
KDAG	**Bornova**	**2.95**	**280**	*i* P		**Pn**		**19 24 43.7**	**-0.6**
KDAG				*i* S		**Sg**		**19 25 31.6**	**-0.8**
DAT	**Datca**	**2.95**	**247**	PN		**Pn**		**19 24 45.0**	**+0.6**
BODT	**Bodrum**	**3.03**	**254**	*e*PN		**Pn**		**19 24 45.3**	**-0.1**
BODT	**Bodrum**	**3.03**	**254**	Pn		**Pn**		**19 24 45.3**	**-0.1**
MERS	**Mersin**	**3.03**	**110**	*e*PN		**Pn**		**19 24 46.7**	**+1.3**
HRT	**Hereke**	**3.05**	**341**	PN		**Pn**		**19 24 45.0**	**-0.7**
HRT	**Hereke**	**3.05**	**341**	Pn		**Pn**		**19 24 45.1**	**-0.6**
ALFC	**Alevga**	**3.07**	**154**	P		**Pn**		**19 24 44.0**	**-2.0**
	25nm,0.3s								
ALFC						S			**Sn**	**19 25 25.6**	**+2.9**
KCT	**Karacabey**	**3.08**	**320**	*e*PN		**Pn**		**19 24 46.1**	**-0.1**
KCT	**Karacabey**	**3.08**	**320**	Pn		**Pn**		**19 24 46.1**	**-0.1**
AKMC	**Akamas**	**3.11**	**159**	P		**Pn**		**19 24 44.5**	**-2.0**
CDAG	**Cicekdag**	**3.15**	**57**	*i* P		**Pn**		**19 24 46.9**	**-0.3**
CDAG				*i* S		**Sn**		**19 25 25.1**	**+0.4**
AVNT	**Avonos**	**3.17**	**73**	*i* P		**Pn**		**19 24 48.0**	**+0.6**
AVNT				*i* S		**Sg**		**19 25 34.8**	**-4.9**
ELDT	**Eldivan**	**3.19**	**36**	*i* P		**Pn**		**19 24 47.7**	**+0.1**
ELDT				*i* S		**Sn**		**19 25 28.3**	**+2.7**
LEF	**Lefka**	**3.21**	**150**	*e*PN		**Pn**		**19 24 47.4**	**-0.6**
LEF	**Lefka**	**3.21**	**150**	Pn		**Pn**		**19 24 47.4**	**-0.5**
PPCY	**Paphos**	**3.25**	**159**	P		**Pn**		**19 24 47.7**	**-0.7**
SMG	**Samos**	**3.27**	**267**	*e*P		**Pn**		**19 24 48.9**	**+0.1**
SMG	**Samos**	**3.27**	**267**	*e*P		**Pn**		**19 24 48.5**	**-0.3**
MAMC	**Mammari**	**3.31**	**146**	P		**Pn**		**19 24 48.8**	**-0.4**
LFK	**Lefkose**	**3.36**	**141**	*e*PN		**Pn**		**19 24 51.9**	**+1.9**
LFK	**Lefkose**	**3.36**	**141**	Pn		**Pn**		**19 24 52.0**	**+1.9**
CANT	**Cankiri**	**3.37**	**37**	*e*PN		**Pn**		**19 24 50.8**	**+0.7**
CANT	**Cankiri**	**3.37**	**37**	Pn		**Pn**		**19 24 50.8**	**+0.7**
BNT	**Bandirma**	**3.38**	**317**	*e*PN		**Pn**		**19 24 50.0**	**-0.2**
BNT	**Bandirma**	**3.38**	**317**	P		**Pn**		**19 24 49.6**	**-0.6**
BNT	**Bandirma**	**3.38**	**317**	*e*Pn		**Pn**		**19 24 50.0**	**-0.2**
KDZE	**Karadeniz Ereo**	**3.39**	**6**	*e*PN		**Pn**		**19 24 49.7**	**-0.7**
EDC	**Edincik**	**3.40**	**316**	*e*PN		**Pn**		**19 24 50.0**	**-0.6**
ISK	**Istanbul-Kandi**	**3.45**	**335**	*e*PN		**Pn**		**19 24 51.0**	**-0.2**
ISK	**Istanbul-Kandi**	**3.45**	**335**	P		**Pn**		**19 24 49.7**	**-1.5**
EREN	**Erenkoy**	**3.52**	**132**	*e*PN		**Pn**		**19 24 53.8**	**+1.6**
EREN	**Erenkoy**	**3.52**	**132**	Pn		**Pn**		**19 24 53.9**	**+1.7**
CSS	**Prodhromos**	**3.53**	**147**	P		**Pn**		**19 24 51.2**	**-1.1**
	15nm,0.8s								
CSS						S			**Sn**	**19 25 37.5**	**+3.5**
CSS	**Prodhromos**	**3.53**	**147**	*e*Pn		**Pn**		**19 24 51.5**	**-0.8**
CSS				*e*Sn		**Sn**		**19 25 29.0**	**-5.0**
CSS	**Prodhromos**	**3.53**	**147**	*e*Pn		**Pn**		**19 24 51.5**	**-0.8**
CSS				*e*Sn		**Sn**		**19 25 29.0**	**-5.0**
CSS				S		**Sn**		**19 25 37.5**	**+3.5**
SZAC	**Souni-Zanaja**	**3.53**	**153**	P		**Pn**		**19 24 54.4**	**+2.0**
	30nm,0.8s								
SZAC				S		**Sb**		**19 25 43.4**	**+0.4**

SEV **Sevastopol'** 6.91 16 *e*P Pn 19 25 37.9 -0.8
SEV *e*S Sn 19 26 55.0 -2.2
SEV pmax pmax
comp=Z,9.0nm,0.8s
SEV smax
comp=E,8.0nm,0.7s
SEV smax
comp=N,18nm,1.1s
SEV Sevastopol' 6.91 16 *e*P Pn 19 25 37.9 -0.8
comp=N,9.0nm,0.8s
LIT Litokhoron 6.94 291 *e*Pn Pn 19 25 40.7 +1.6
PGB Panagyurishte 6.94 314 P Pn 19 25 39.4 +0.2
YAL Yalta 6.97 19 *e*P Pn 19 25 40.2 +0.6
YAL *e*S Sn 19 27 00.5 +1.7
YAL pmax pmax
comp=Z,39nm,0.8s
YAL smax
comp=E,22nm,0.9s
YAL smax
comp=N,12nm,0.7s
YAL Yalta 6.97 19 *e*P Pn 19 25 40.2 +0.6
comp=N,39nm,0.8s
YAL *e*S Sn 19 27 00.5 +1.7
comp=N,12nm,0.7s
KNT Kendrikon 7.01 300 *e*Pn Pn 19 25 40.4 +0.3
ZIMR 7.12 325 P Pn 19 25 42.5 +0.9
HARR Harsova 7.12 342 P Pn 19 25 42.0 +0.4
HARR Harsova 7.12 342⇑ *i*P Pn 19 25 41.4 -0.2
HARR Harsova 7.12 342 P Pn 19 25 42.0 +0.4
SELA Sela 7.16 275 *e*Pn Pn 19 25 44.5 +2.3
ITM Ithomi 7.22 267 *e*P Pn 19 25 45.6 +2.7
ITM Ithomi 7.22 267 *e*P Pn 19 25 46.5 +3.6
ALU Alushta 7.22 20 *e*P Pn 19 25 43.7 +0.7
ALU *e*S Sn 19 27 05.6 +0.8
ALU pmax pmax
comp=Z,10.0nm,0.7s
ALU smax
comp=N,248nm,0.9s
ALU smax
comp=E,20nm,0.9s
ALU Alushta 7.22 20 *e*P Pn 19 25 43.7 +0.7
comp=E,10.0nm,0.7s
ALU *e*S Sn 19 27 05.6 +0.8
EVR Evrytania 7.25 281 *e*P Pn 19 25 45.6 +2.2
EVR Evrytania 7.25 281 *e*P Pn 19 25 46.0 +2.6
GRG Griva 7.28 297 *e*Pn Pn 19 25 45.6 +1.9
VAY Valandovo 7.30 300 *e*Pn Pn 19 25 44.0 -0.1
SIM Simferopol' 7.39 18 P Pn 19 25 46.3 +0.9
SIM *e*S Sn 19 27 09.0 -0.2
SIM pmax pmax
comp=Z,38nm,0.6s
SIM MLR MLR
comp=Z,800nm,16.0s
SIM Simferopol' 7.39 18 P Pn 19 25 46.3 +0.9
comp=Z,38nm,0.6s
SIM *e*S Sn 19 27 09.0 -0.2
comp=Z,800nm,16.0s
PYL PYLOS 7.41 265 *e*Pn Pn 19 25 48.2 +2.6
AMAG Maghara 7.51 165 ⇑P Pn 19 25 45.9 -1.1
KZN Kozani 7.53 291 *e*P Pn 19 25 49.0 +1.9
VTS Vitosha 7.53 311 P Pn 19 25 48.6 +1.4
VTS Vitosha 7.53 311⇑ *i*P Pn 19 25 48.7 +1.5
VTS Vitosha 7.53 311 P Pn 19 25 48.6 +1.4
HMAT Matruh 7.53 206 ⇑P Pn 19 25 48.0 +0.7
HMAT S Sn 19 27 10.0 -2.6
SUDU Sudak 7.58 22 *e*P Pn 19 25 48.4 +0.5
SUDU *e*S Sn 19 27 13.3 -0.4
SUDU pmax pmax
comp=Z,1.0nm,0.7s
SUDU smax
comp=N,16nm,0.8s
SUDU smax
comp=E,7.0nm,0.8s
SUDU Sudak 7.58 22 *e*P Pn 19 25 48.4 +0.5
comp=E,1.0nm,0.7s
SUDU *e*S Sn 19 27 13.3 -0.4
FEO Feodosiya 7.82 24 *e*P Pn 19 25 50.7 -0.5
FNA Florina 7.95 294 *e*Pn Pn 19 25 55.1 +2.1
KOT Kottamia 8.02 175 ⇑P Pn 19 25 53.9 -0.1
KOT S Sn 19 27 19.5 -5.2
JAN Janina 8.08 285 *e*P Pn 19 26 01.5 +6.7
JAN Janina 8.08 285 *e*P Pn 19 26 00.0 +5.2
HMYD Mayadein 8.12 181 P Pn 19 25 55.3 -0.1
AYT Al 'Ayyat 8.21 179 P Pn 19 25 56.8 +0.2
FYM Al Fayyum 8.22 179 P Pn 19 25 57.0 +0.2
SUZ 8.22 169 P Pn 19 25 56.0 -0.8
KRUS Krusevo 8.24 298 *e*Pn Pn 19 25 56.0 -0.9
HNAT Natroun 8.29 182 P Pn 19 25 57.2 -0.4
HSAF As Saff 8.31 176 ⇑P Pn 19 25 57.4 -0.6
GLL Jalalah 8.36 176 P Pn 19 25 58.4 -0.3
HNKL Nakhl 8.37 162 ⇑P Pn 19 25 57.5 -1.3
ANN Anapa 8.40 33 *e*P Pn 19 26 04.2 +5.0
ANN *e*S Sn 19 27 45.9 +12
ANN pmax pmax
comp=Z,5.0nm,0.5s
ANN MLR MLR
comp=Z,338nm,10.0s
MLR Muntele Rosu 8.43 335 P Pn 19 26 01.1 +1.6
MLR Muntele Rosu 8.43 335 Pn Pn 19 26 00.8 +1.3
comp=Z,2.1nm,0.3s,baz=134,slow=3.4,SNR=57
MLR Sn Sn 19 27 42.3 +7.8
baz=82,slow=19,SNR=1.8
MLR Lg 19 28 26.0
comp=Z,0.2nm,0.3s,baz=320,slow=19,SNR=2.1
MLR LR LR 19 29 53.0
comp=Z,2μm,18.1s,baz=165,slow=42
MLR Muntele Rosu 8.43 335⇑ *i*P Pn 19 26 00.9 +1.4
SNX Sinaia 8.46 333 ⇑P Pn 19 26 01.0 +1.1
SNX Sinaia 8.46 333⇑ *i*P Pn 19 26 01.0 +1.1
BARS Barje 8.51 308 P Pn 19 26 02.6 +2.0
VRI Vrincioaia 8.53 340 P Pn 19 26 02.0 +1.1
VRI Vrincioaia 8.53 340⇑ *i*P Pn 19 26 01.7 +0.8
VRI Vrincioaia 8.53 340 P Pn 19 26 02.0 +1.1
PLOR Plostina 8.53 339⇑ *i*P Pn 19 26 02.0 +1.0
ZNM 8.69 169 P Pn 19 26 01.6 -1.5
SOC Sochi 8.71 47 *e*P Pn 19 26 01.2 -2.2
SOC *e* 19 27 39.4
SOC pmax pmax
comp=Z,5.0nm,0.6s
SOC MLR MLR
comp=Z,870nm,9.0s
ZAF 8.73 171 P Pn 19 26 02.8 -1.0
EIL Elat 8.89 157 Pn Pn 19 26 04.0 -1.9
EIL Sn Sn 19 27 47.1 +1.1
EIL LR LR 19 30 56.6
EIL Elat 8.89 157 Pn Pn 19 26 04.0 -1.9
comp=Z,1.9nm,0.3s,baz=338,slow=7.5,SNR=20
EIL Sn Sn 19 27 47.1 +1.1
comp=Z,2.0nm,0.3s,baz=308,slow=19,SNR=4.4
EIL LR LR 19 30 56.6
comp=Z,482nm,19.2s,baz=348,slow=48
HBNS Bani Suwayf 8.96 179 P Pn 19 26 07.5 +0.5
KIS Kishinev 9.19 351 *e* Pn 19 26 17.0 +7.0
KIS *e*Rg 19 29 53.0
KIS LRM 19 31 16.0
comp=Z,1μm,12.0s
GZR Gura Zlata 9.64 323 P Pn 19 26 16.4 +0.3
GZR Gura Zlata 9.64 323 ǁ *i*P Pn 19 26 16.6 +0.5
GZR Gura Zlata 9.64 323 P Pn 19 26 16.5 +0.4
HDHB Dhahab 9.69 161 P Pn 19 26 16.6 -0.2
SWA1 9.69 208 P Pn 19 26 18.2 +1.3
SWA1 S Sn 19 28 02.2 -3.5
HKAT Jabal Katrina 9.72 164 ⇑P Pn 19 26 16.9 -0.5
GRB Gharib 9.76 170 P Pn 19 26 17.2 -0.7
MSL Mosul 9.83 96 *ex* x 19 26 25.0
MSL *ex* x 19 28 25.0
TR1 10.22 165 P Pn 19 26 23.7 -0.5
BZS Buzias 10.37 321 P Pn 19 26 26.4 +0.3
BZS Buzias 10.37 321⇑ *i*P Pn 19 26 26.5 +0.4
KIV Kislovodsk 10.71 52 *e*Pn Pn 19 26 30.6 -0.2
comp=Z,11nm,0.9s
KIV Kislovodsk 10.71 52 *i* P Pn 19 26 30.6 -0.2
DRGR 10.74 328 ⇑P Pn 19 26 32.4 +1.1
DRGR 10.74 328⇑ *i*P Pn 19 26 32.3 +1.1
HHRG Al Ghardaqah 10.91 168 ⇑P Pn 19 26 32.8 -0.8
HFRF Wahat Farafira 10.99 192 P Pn 19 26 34.8 +0.1
ZEI Tsey 10.99 60 *e*P Pn 19 26 36.6 +2.0
HSFG 11.61 167 P Pn 19 26 42.6 -0.6
PKSM Moragy 12.32 316 ǁ *i*P Pn 19 26 53.1 +0.3
PKSM Moragy 12.32 316 P Pn 19 26 53.2 +0.4
GTR Jabal at Tayr 12.39 182 ⇑P Pn 19 26 54.1 +0.2
AKRG Al Kharijah 12.40 182 P Pn 19 26 53.8 -0.3
UZH Uzhgorod 12.40 332 *e*P Pn 19 26 57.0 +3.1
UZH *e*S Sn 19 29 18.0 +6.0
UZH MLR MLR
comp=Z,2μm,12.0s
HDK1 Dakhla 12.43 187 ⇑P Pn 19 26 54.9 +0.5
KOLS Kolonicke sedl 12.66 333 *e*PN Pn 19 26 58.1 +0.6
KIEV Kiev 12.82 355 *e*Pn Pn 19 26 57.9 -1.7
comp=Z,21nm,1.0s
KIEV *e*Sn Sn 19 29 27.0 +5.0
KIEV Kiev 12.82 355 *e*P Pn 19 26 57.9 -1.7
KIEV *e* 19 29 27.0
KIEV pmax pmax
comp=Z,21nm,1.0s
AKASG Malin Array Be 12.82 355 P Pn 19 26 57.2 -2.4
AKASG 19 29 17.4
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG smax
comp=N,1.0nm,0.3s
AKASG Malin Array Be 12.82 355 Pn Pn 19 26 57.2 -2.4
comp=N,1.4nm,0.3s,baz=177,slow=12,SNR=13
AKASG Sn Sn 19 29 17.4 -4.8
comp=N,1.3nm,0.3s,baz=163,slow=23,SNR=4.5
PSZ Piszkesteto 12.84 324 *e*Pn Pn 19 27 00.8 +0.8
comp=N,8.2nm,1.1s
PSZ Piszkesteto 12.84 324 *e*P Pn 19 27 00.8 +0.9
PSZ pmax pmax
comp=Z,8.0nm,1.1s
PSZ Piszkesteto 12.84 324⇑ *e*P Pn 19 27 01.3 +1.4
PSZ Piszkesteto 12.84 324 *e*P Pn 19 27 00.8 +0.9
comp=Z,8.0nm,1.1s
LVV L'vov 12.88 339 *e*P Pn 19 26 56.6 -3.8
CRVS Cervenica-Dubn 12.94 331 *e*PN Pn 19 27 01.7 +0.4
CRVS *e*SG 19 31 15.5
KECS Kecovo 13.00 327 *e*PN Pn 19 27 03.8 +1.7
KWP Kalwaria 13.11 336 *e*Pn Pn 19 27 04.5 +0.9
comp=Z,28nm,1.0s
KWP Kalwaria 13.11 336 *e*P Pn 19 27 04.5 +0.9
KWP pmax pmax
comp=Z,28nm,1.0s
KWP Kalwaria 13.11 336 *e*P Pn 19 27 04.5 +0.9
comp=Z,28nm,1.0s
VAE Valguarnera 13.12 273 LR LR 19 32 56.9
comp=Z,294nm,19.6s,baz=320,slow=41
STHS Stebnicka Huta 13.44 332 *e*PN Pn 19 27 07.5 -0.6
MAK Makhachkala 13.56 63 *c i*P Pn 19 27 11.7 +2.0
MAK MLR MLR
comp=Z,526nm,9.0s
MAK Makhachkala 13.56 63 *i* P Pn 19 27 11.7 +2.0
comp=Z,526nm,9.0s
VYHS Vyhne 13.75 324 *e*PN Pn 19 27 12.8 +0.5
VYHS *e*SG 19 31 43.3
NIE Niedzica 13.80 330 *e*P Pn 19 27 14.6 +1.5
SOP Sopron 14.35 317⇑ *e*P Pn 19 27 21.6 +1.1
MODS Modra-Piesok 14.42 321 *e*PN Pn 19 27 29.4 +8.0
MODS *e*SG 19 31 47.5
VRSR Storozhevoye 14.50 21 *c*P Pn 19 27 22.5 0.0
VRSR *e*S Sn 19 30 05.4 +2.3
VRSR pmax pmax
comp=Z,3.0nm,1.3s
VRSR pmax pmax
comp=N,7.0nm,1.0s
VRSR pmax pmax
comp=E,4.0nm,1.1s
VRSR smax
comp=N,2.0nm,1.5s
VRSR smax
comp=Z,3.0nm,2.0s
VRSR smax
comp=E,4.0nm,1.4s
VRSR MLR MLR
comp=Z,70nm,19.0s
VRSR MLR MLR
comp=N,90nm,20.0s
VRSR MLR MLR
comp=E,70nm,18.0s
VRSR Storozhevoye 14.50 21 *e*P Pn 19 27 22.5 0.0
comp=E,7.0nm,1.0s
OJC Ojcow 14.64 331 *e*P Pn 19 27 31.3 +6.8
ARSA Arzberg 14.67 314 P Pn 19 27 26.0 +1.1
OKC Ostrava-Krasne 15.03 326 *e*P Pn 19 27 30.5 +0.7
OKC AMS AMS 19 34 20.0
comp=Z,3μm,11.9s
OKC Ostrava-Krasne 15.03 326 *e*P Pn 19 27 30.5 +0.7
comp=Z,3μm,11.9s
VRHR Novokhopersk 15.17 26 *e*P Pn 19 27 37.0 +5.4
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=N,20nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
MORC Moravsky Berou 15.26 325 *e*P Pn 19 27 37.4 +4.6
comp=E,8.6nm,1.1s
MORC Moravsky Berou 15.26 325 *e*P Pn 19 27 37.4 +4.6
MORC pmax pmax
comp=Z,9.0nm,1.1s
MORC Moravsky Berou 15.26 325⇑ *i*P Pn 19 27 38.8 +6.0
HKFR Khafra 15.30 179 P Pn 19 27 33.9 +0.4
VRAC Vranov 15.38 322 Pn Pn 19 27 35.2 +0.9
comp=Z,0.1nm,0.3s,baz=124,slow=14,SNR=3.0
MOA Molln 15.71 314 *i* P Pn 19 27 44.5 +5.8
comp=Z,33nm,1.1s,SNR=13
RST Umm Al-Ruwaisa 15.76 118 *e*P Pn 19 27 39.5 +0.1
RST AMb AMB 19 27 45.9
comp=Z,69nm,1.2s
MIB Mutribah 15.82 116 *e*P Pn 19 27 40.5 +0.3
MIB AMb AMB 19 27 46.2
comp=Z,71nm,0.6s
VMG Vicchio 15.84 298 P Pn 19 27 44.0 +3.6
TREC Trest 15.91 320 AMS AMS 19 35 10.0
comp=Z,1μm,9.2s
NAY Al-Naaiem 16.08 118 *e*P Pn 19 27 44.0 +0.4
NAY AMb AMB 19 27 49.7
comp=Z,34nm,1.1s
DPC Dobruska-Polom 16.22 325 *e*P Pn 19 27 46.5 +1.2
DPC *e*S Sn 19 31 05.0 +20
DPC Dobruska-Polom 16.22 325 *e*P Pn 19 27 46.5 +1.2
DPC *e*S Sn 19 31 05.0 +20
DPC AMS AMS 19 35 10.0
comp=Z,3μm,11.2s
DPC Dobruska-Polom 16.22 325 *e*P Pn 19 27 46.5 +1.2
comp=Z,3μm,11.2s
UMR Umm Al-Rimmam 16.24 116 *e*P Pn 19 27 46.0 +0.4
UMR AMb AMB 19 27 50.8
comp=Z,81nm,0.6s
ZCCA Zocca 16.34 299 P Pn 19 27 55.1 +8.2
comp=Z,19nm,2.6s
KBD Kabd 16.44 117 *e*P Pn 19 27 47.6 -0.6
KBD AMb AMB 19 27 54.7
comp=Z,184nm,0.9s
CTI Castel Tesino 16.46 306 P Pn 19 27 49.0 +0.7
UPC Upice 16.47 324 *e*P Pn 19 27 52.0 +3.5
UPC *ex* x 19 28 02.7
RDF Al-Radifah 16.49 118 *e*P Pn 19 27 48.3 -0.6
RDF AMb AMB 19 27 54.4
comp=Z,37nm,1.0s
GEC2 GERESS Array S 16.58 317 *e*P Pn 19 27 50.4 +0.6
GEC2 pmax pmax
comp=Z,13nm,0.8s
GEC2 GERESS Array S 16.58 317 *e*P Pn 19 27 50.4 +0.6
comp=Z,13nm,0.8s
GERES GERESS Array B 16.58 317 Pn Pn 19 27 49.8 0.0
comp=Z,0.1nm,0.3s,baz=150,slow=8.8,SNR=14
GERES LR LR 19 34 42.3
comp=Z,381nm,20.1s,baz=121,slow=39
GSCL Gusciola 16.61 299 P Pn 19 27 54.0 +3.7
comp=Z,292nm,2.6s
MNK Minsk 16.70 354 *e*P Pn 19 27 51.0 -0.4
ERBM Eremo 16.75 299 P Pn 19 27 55.1 +3.1
comp=Z,480nm,2.9s
KHC Kasperske Hory 16.81 317 *e*P Pn 19 27 55.3 +2.6
KHC AMS AMS 19 35 20.0
comp=Z,1μm,12.6s
PRU Pruhonice 16.83 321 *e*P Pn 19 27 56.1 +3.1
PRU *e*S Sn 19 31 06.5 +6.7
PRU Pruhonice 16.83 321 *e*P Pn 19 27 56.1 +3.1
PRU *e*S Sn 19 31 06.5 +6.7
PRU AMS AMS 19 35 30.0
comp=Z,800nm,11.4s
SUW Suwalki 16.94 344 P Pn 19 27 55.5 +1.1
PVCC Panska Ves 17.17 322 *e*P Pn 19 27 59.3 +2.1
PVCC *e* 19 28 07.6
PVCC Panska Ves 17.17 322 *e*P Pn 19 27 59.3 +2.1
PVCC *ex* x 19 28 07.6
PVCC AMS AMS 19 35 50.0
comp=Z,2μm,11.7s
WET Wettzell 17.20 316 *e*P Pn 19 27 59.9 +2.3
WET pmax pmax
comp=Z,34nm,1.3s
WET Wettzell 17.20 316 *e*P Pn 19 27 59.9 +2.3
comp=Z,34nm,1.3s
PGF Pioggiola 17.37 292 *e*P Pn 19 27 59.3 -0.6
comp=Z,57nm,1.2s
PGF Pioggiola 17.37 292 *e*P Pn 19 27 59.3 -0.6
PGF pmax pmax
comp=Z,29nm,1.2s
PGF Pioggiola 17.37 292 *e*P Pn 19 27 59.3 -0.6
comp=Z,29nm,1.2s
FETA Feichten 17.43 308⇑ *i*P Pn 19 28 02.8 +2.3
comp=Z,18nm,1.1s,SNR=10
KEST Kesra 17.44 269 P Pn 19 28 00.9 +0.2
comp=Z,0.0nm,0.3s,baz=47,slow=13,SNR=2.7
OBN Obninsk 17.60 11ǁ *e*P Pn 19 28 01.2 -1.4
OBN pmax pmax
comp=Z,31nm,1.2s
OBN MLR MLR
comp=Z,300nm,15.0s
OBN Obninsk 17.60 11 *e*P Pn 19 28 01.2 -1.4
comp=Z,300nm,15.0s
FUR Furstenfeldbru 17.60 312 *e*P Pn 19 28 05.2 +2.6
BRG Berggiesshubel 17.69 322 *e*P Pn 19 28 05.7 +1.9
BRG pmax pmax
comp=Z,16nm,1.7s
BRG MLR MLR
comp=N,686nm,11.9s
BRG MLR MLR
comp=E,943nm,11.6s
BRG MLR MLR
comp=Z,686nm,11.9s
BRG Berggiesshubel 17.69 322 *e*P Pn 19 28 05.6 +1.8
comp=Z,27nm,1.5s
BRG Berggiesshubel 17.69 322 *e*P Pn 19 28 05.7 +1.9
comp=Z,27nm,1.7s
BRG S Sn 19 30 52.0 -29
BRG
comp=N,1μm,11.8s
BRG
comp=E,2μm,11.6s
BRG
comp=Z,1μm,11.8s
DAVOX Davos/Dischmat 17.87 306 P Pn 19 28 06.5 +0.6
comp=Z,0.2nm,0.3s,baz=166,slow=12,SNR=5.7
ROTZ Rotzenmuhle 17.91 317 *e*P Pn 19 28 07.3 +0.9
comp=Z,20nm,1.1s
NKC Novy Kostel 18.05 319 *e*P Pn 19 28 09.3 +1.2
NKC AMS AMS 19 36 10.0
comp=Z,1μm,10.5s
NKC Novy Kostel 18.05 319 *e*P Pn 19 28 09.3 +1.2
comp=Z,1μm,10.5s
DAVA Damuels 18.06 308⇑ *i*P Pn 19 28 09.6 +1.3
comp=Z,21nm,1.2s
TUE Stuetta 18.10 305 P Pn 19 28 12.1 +3.3
MOS Moscow 18.37 12 *e*P Pn 19 28 11.9 -0.1
MOS *e* 19 31 34.9
GRA1 Grafenberg Arr 18.40 316 *e*P Pn 19 28 11.4 -1.1
comp=Z,20nm,1.5s
GRF Grafenberg Arr 18.40 316 *e*P Pn 19 28 11.4 -1.1
GRF pmax pmax
comp=Z,20nm,1.5s
GRF MLR MLR
comp=Z,600nm,20.2s
GRF Grafenberg Arr 18.40 316 *e*P Pn 19 28 11.4 -1.1
comp=Z,20nm,1.5s
GRF *e*L 19 37 03.8
comp=Z,578nm,20.2s
CLL Collm 18.43 322 *e*P Pn 19 28 15.0 +2.2
comp=Z,34nm,1.7s
CLL *e*S Sn 19 31 47.0 +8.6
CLL Collm 18.43 322 *e*sP sP 19 28 15.0 -2.6
comp=Z,34nm,1.7s
CLL *e*PP 19 28 22.0
CLL *e*(PPP) 19 28 28.0
CLL *e*SS 19 31 51.0
comp=N,400nm,10.1s
CLL *e*SS 19 31 51.0
CLL *e*SS 19 31 51.0
comp=Z,300nm,11.5s
CLL LmH 19 34 00.0
comp=N,600nm,19.7s
CLL LmH 19 34 00.0
comp=E,700nm,20.6s
SBF Sospel 18.71 296 *e*P Pn 19 28 15.6 -0.7
MOX Moxa 18.72 319 *e*P Pn 19 28 17.4 +1.0
comp=E,59nm,1.5s
MOX
comp=Z,1μm,13.0s
MOX Moxa 18.72 319 *e*P Pn 19 28 17.4 +1.0
MOX pmax pmax
comp=Z,59nm,1.5s
MOX MLR MLR
comp=Z,1μm,13.0s
MOX Moxa 18.72 319 *e*P Pn 19 28 16.8 +0.4
comp=Z,34nm,1.1s
ORO Oropa 18.74 301 P Pn 19 28 16.3 -0.3
RUE Ruedersdorf 18.85 326 *e*P Pn 19 28 16.4 -1.4
comp=Z,42nm,1.5s
RUE Ruedersdorf 18.85 326 *e*P Pn 19 28 16.4 -1.5
comp=Z,42nm,1.5s
SPAK Spaichingen-Ko 19.07 309 *e*P Pn 19 28 21.5 +0.9
STU Stuttgart 19.11 311 *e*P Pn 19 28 21.0 -0.1
comp=Z,31nm,1.0s
FRF La Foret Royal 19.23 295 *e*P Pn 19 28 21.1 -1.4
LMR La Mourre 19.29 294 *e*P Pn 19 28 21.9 -1.4
MBDF Montbardon 19.35 298 *e*P Pn 19 28 23.0 -1.0
comp=Z,50nm,1.0s
MBDF Montbardon 19.35 298 *e*P Pn 19 28 23.0 -1.0
MBDF pmax pmax
comp=Z,25nm,1.0s
MBDF Montbardon 19.35 298 *e*P Pn 19 28 23.0 -1.0
comp=Z,25nm,1.0s
BFO Black Forest 19.44 310 *e*P Pn 19 28 24.7 -0.4
BFO pmax pmax
comp=Z,43nm,1.6s
BFO Black Forest 19.44 310 *e*P Pn 19 28 24.7 -0.4
comp=Z,43nm,1.6s
BNI Bardonecchia 19.48 299 P Pn 19 28 28.2 +2.6
LPG La Plagne 19.54 300 *e*P Pn 19 28 25.3 -1.0
comp=Z,103nm,1.2s
LPG La Plagne 19.54 300 *e*P Pn 19 28 25.3 -1.0
LPG pmax pmax
comp=Z,52nm,1.2s
LPG La Plagne 19.54 300 *e*P Pn 19 28 25.3 -1.0
comp=Z,52nm,1.2s
LPL La Plagne 19.56 300 *e*P Pn 19 28 25.4 -1.1
comp=Z,76nm,1.3s
LPL La Plagne 19.56 300 *e*P Pn 19 28 25.4 -1.1
LPL pmax pmax
comp=Z,39nm,1.3s
LPL La Plagne 19.56 300 *e*P Pn 19 28 25.4 -1.1
comp=Z,39nm,1.3s
MOF Molkenrain 20.00 307 *e*P P 19 28 33.8 +3.8
ORIF Oris-en-Rattie 20.01 298 *e*P P 19 28 29.9 -0.2
comp=Z,38nm,1.1s
ORIF *e*MLR MLR
comp=Z,997nm,20.0s,MS3.9
ORIF Oris-en-Rattie 20.01 298 *e*P P 19 28 29.9 -0.2
ORIF pmax pmax
comp=Z,19nm,1.1s
ORIF Oris-en-Rattie 20.01 298 *e*P P 19 28 29.9 -0.2
comp=Z,19nm,1.1s
LOMF Lomont 20.02 306 *e*P P 19 28 31.9 +1.7
LANF Langenberg 20.03 311 *e*P P 19 28 32.9 +2.6
CLZ Clausthal 20.05 320 *e*P P 19 28 31.0 +0.5
CLZ pmax pmax
comp=Z,68nm,1.1s
CLZ Clausthal 20.05 320 *e*P P 19 28 31.0 +0.5
comp=Z,68nm,1.1s
SMRF Simiane la Rot 20.06 296 *e*P P 19 28 30.5 -0.1
comp=Z,18nm,0.8s
SMRF Simiane la Rot 20.06 296 *e*P P 19 28 30.5 -0.1
comp=Z,9.1nm,0.8s
ECH Echery 20.12 308 *e*P P 19 28 31.6 +0.3
CDF Champ du Feu 20.12 309 *e*P P 19 28 30.9 -0.4
comp=Z,62nm,1.4s
CDF Champ du Feu 20.12 309 *e*P P 19 28 30.9 -0.4
CDF pmax pmax
comp=Z,31nm,1.4s
CDF Champ du Feu 20.12 309 *e*P P 19 28 30.9 -0.4
comp=Z,31nm,1.4s
HINF Hinteralfeld 20.16 307 *e*P P 19 28 31.9 +0.1
comp=Z,11nm,0.7s
HINF Hinteralfeld 20.16 307 *e*P P 19 28 31.9 +0.1

HINF pmax pmax
comp=Z,5.0nm,0.7s
HINF Hinteralfeld 20.16 307 *eP* **P 19 28 31.9 +0.1**
comp=Z,5.3nm,0.7s
TNS Taunus Mts 20.21 315 *eP* **P 19 28 32.5 +0.2**
TNS pmax pmax
comp=Z,44nm,1.9s
TNS Taunus Mts 20.21 315 *eP* **P 19 28 32.5 +0.2**
comp=Z,44nm,1.9s
CABF La Chapelle 20.28 303 *eP* **P 19 28 32.9 -0.1**
comp=Z,79nm,1.4s
CABF La Chapelle 20.28 303 *eP* **P 19 28 32.9 -0.1**
CABF pmax pmax
comp=Z,40nm,1.4s
CABF La Chapelle 20.28 303 *eP* **P 19 28 32.9 -0.1**
comp=Z,40nm,1.4s
HAU Haudompre 20.55 307 *eP* **P 19 28 35.0 -0.9**
comp=Z,23nm,1.1s
HAU *e*MLR MLR
comp=Z,280nm,17.0s,MS3.4
HAU Haudompre 20.55 307 *eP* **P 19 28 35.0 -0.9**
comp=Z,11nm,1.1s
HAU LR LR
comp=Z,280nm,17.0s,MS3.7
HAU Haudompre 20.55 307 *eP* **P 19 28 35.0 -0.9**
HAU pmax pmax
comp=Z,11nm,1.1s
HAU MLR MLR
comp=Z,280nm,17.0s,MS3.7
ABH Alteburg 20.57 313 *eP* **P 19 28 32.1 -4.0**
VSU Vasula 20.72 354 *i* P **P 19 28 37.8 +0.1**
VSU Vasula 20.72 354 P **P 19 28 37.2 -0.5**
RUP Ruppelstein 20.77 312 *eP* **P 19 28 37.0 -1.4**
VIVF Saint-Julien-l 20.84 298 *eP* **P 19 28 38.9 -0.2**
comp=Z,66nm,1.5s
VIVF Saint-Julien-l 20.84 298 *eP* **P 19 28 38.9 -0.2**
VIVF pmax pmax
comp=Z,33nm,1.5s
VIVF Saint-Julien-l 20.84 298 *eP* **P 19 28 38.9 -0.2**
comp=Z,33nm,1.5s
THEF They Montfort 20.85 308 *eP* **P 19 28 31.6 -7.6**
LASF Ste Croix 21.30 295 *eP* **P 19 28 43.3 -0.8**
comp=Z,52nm,1.3s,mb4.4
LASF Ste Croix 21.30 295 *eP* **P 19 28 43.3 -0.8**
comp=Z,26nm,1.3s,mb4.4
BSEG Bad Segeberg 21.37 325 *eP* **P 19 28 44.1 -0.7**
BSEG pmax pmax
comp=Z,17nm,1.0s,mb4.3
BSEG Bad Segeberg 21.37 325 *eP* **P 19 28 44.1 -0.7**
comp=Z,17nm,1.0s,mb4.3
VAN Vannovskaya 21.39 82 *eP* **P 19 28 47.0 +1.9**
VAN *e*S **S 19 32 44.9 +2.7**
MEZF Maizieres J'vi 21.53 308 *eP* **P 19 28 45.5 -1.0**
comp=Z,20nm,0.8s,mb4.3
MEZF Maizieres J'vi 21.53 308 *eP* **P 19 28 45.5 -1.0**
comp=Z,9.8nm,0.8s,mb4.3
IBBN Ibbenburen 21.65 319 *eP* **P 19 28 48.0 +0.2**
comp=Z,41nm,1.1s,mb4.8
PLDF La Plantade 21.78 300 *eP* **P 19 28 50.3 +1.1**
SMF Signal de Mont 21.78 302 *eP* **P 19 28 48.4 -0.8**
comp=Z,42nm,1.3s,mb4.4
SMF Signal de Mont 21.78 302 *eP* **P 19 28 48.4 -0.8**
SMF pmax pmax
comp=Z,21nm,1.3s,mb4.4
SMF Signal de Mont 21.78 302 *eP* **P 19 28 48.4 -0.8**
comp=Z,21nm,1.3s,mb4.4
LBL Lubilhac 21.90 298 *eP* **P 19 28 52.2 +1.7**
LOR Lormes 21.93 304 *eP* **P 19 28 49.5 -1.3**
comp=Z,39nm,1.2s,mb4.4
LOR *e*MLR MLR
comp=Z,538nm,17.2s,MS3.7
LOR Lormes 21.93 304 *eP* **P 19 28 49.5 -1.3**
comp=Z,19nm,1.2s,mb4.4
LOR LR LR
comp=Z,540nm,17.3s,MS4.0
LOR Lormes 21.93 304 *eP* **P 19 28 49.5 -1.3**
LOR pmax pmax
comp=Z,19nm,1.2s,mb4.4
LOR MLR MLR
comp=Z,540nm,17.3s,MS4.0
WTSB Winterswijk 21.98 317 *eP* **P 19 28 50.9 -0.4**
comp=Z,19nm,0.9s,mb4.5
SSF Saint Saulge 22.11 303 *eP* **P 19 28 51.5 -1.2**
comp=Z,24nm,1.1s,mb4.2
SSF Saint Saulge 22.11 303 *eP* **P 19 28 51.5 -1.2**
SSF pmax pmax
comp=Z,12nm,1.1s,mb4.2
SSF Saint Saulge 22.11 303 *eP* **P 19 28 51.5 -1.2**
comp=Z,12nm,1.1s,mb4.2
AVF Avril sur Loir 22.14 302 *eP* **P 19 28 52.0 -1.1**
comp=Z,57nm,1.4s,mb4.5
AVF Avril sur Loir 22.14 302 *eP* **P 19 28 52.0 -1.1**
AVF pmax pmax
comp=Z,29nm,1.4s,mb4.5
AVF Avril sur Loir 22.14 302 *eP* **P 19 28 52.0 -1.1**
comp=Z,28nm,1.4s,mb4.5
MTLF Montolieu 22.41 293 *eP* **P 19 28 54.3 -1.7**
comp=Z,51nm,1.2s,mb4.5
MTLF Montolieu 22.41 293 *eP* **P 19 28 54.3 -1.7**
MTLF pmax pmax
comp=Z,26nm,1.2s,mb4.5
MTLF Montolieu 22.41 293 *eP* **P 19 28 54.3 -1.7**
comp=Z,26nm,1.2s,mb4.5
BGF Bois d'Agland 22.43 302 *eP* **P 19 28 54.7 -1.5**
BAIF Baives 22.61 311 *eP* **P 19 28 56.3 -1.7**
CAF Calviac 22.68 297 *eP* **P 19 28 57.1 -1.8**
TCF Toulx Ste Croi 22.81 301 *eP* **P 19 28 58.5 -1.7**
comp=Z,70nm,1.4s,mb4.6
TCF Toulx Ste Croi 22.81 301 *eP* **P 19 28 58.5 -1.7**
TCF pmax pmax
comp=Z,35nm,1.4s,mb4.6
TCF Toulx Ste Croi 22.81 301 *eP* **P 19 28 58.5 -1.7**
comp=Z,35nm,1.4s,mb4.6
AKTK Aktyubinsk 22.93 48 P **P 19 29 00.4 -1.0**
AKTK LR LR 19 41 55.5
AKTK Aktyubinsk 22.93 48 P **P 19 29 00.4 -1.0**
comp=Z,255nm,18.6s
AKTO Aktyubinsk 22.93 48 P **P 19 29 00.4 -1.0**
AKTO pmax pmax
comp=Z,6.0nm,1.0s,mb4.0
AKTO MLR MLR
comp=Z,255nm,18.6s,MS3.7
AKTO Aktyubinsk 22.93 48 P **P 19 29 00.4 -1.0**
comp=Z,6.0nm,1.0s,mb4.0,baz=245,slow=12,SNR=9.9
AKTO LR LR 19 41 55.5
comp=Z,255nm,18.6s,MS3.7,baz=78,slow=47
RJF Les Rejaudoux 23.12 298 *eP* **P 19 29 01.5 -2.0**
comp=Z,43nm,1.3s,mb4.4
RJF *e*MLR MLR
comp=Z,1µm,17.8s,MS4.0
RJF Les Rejaudoux 23.12 298 *eP* **P 19 29 01.5 -2.0**
comp=Z,22nm,1.3s,mb4.4
RJF LR LR
comp=Z,1µm,17.8s,MS4.3
RJF Les Rejaudoux 23.12 298 *eP* **P 19 29 01.5 -2.0**
RJF pmax pmax
comp=Z,22nm,1.3s,mb4.4
RJF MLR MLR
comp=Z,1µm,17.8s,MS4.3
LFF La Frestale 23.62 297 *eP* **P 19 29 06.1 -2.5**
FINES FINESS Array B 23.73 354 *i* P **P 19 29 10.0 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 23.73 354 P **P 19 29 08.6 -0.9**
comp=Z,2.2nm,0.5s,mb3.9,baz=148,slow=8.7,SNR=11
EPF Esparros 23.76 292 *eP* **P 19 29 07.7 -2.3**
comp=Z,59nm,1.5s,mb4.5
EPF Esparros 23.76 292 *eP* **P 19 29 07.7 -2.3**
EPF pmax pmax
comp=Z,30nm,1.5s,mb4.5
EPF Esparros 23.76 292 *eP* **P 19 29 07.7 -2.3**
comp=Z,30nm,1.5s,mb4.5
KAF Kangasniemi 24.37 355 *ep* **P 19 29 13.3 -2.0**
ETSF Etsaut 24.42 292 *eP* **P 19 29 14.2 -1.7**
comp=Z,32nm,1.0s,mb4.4
ETSF Etsaut 24.42 292 *eP* **P 19 29 14.2 -1.7**
ETSF pmax pmax
comp=Z,16nm,1.0s,mb4.4
ETSF Etsaut 24.42 292 *eP* **P 19 29 14.2 -1.7**
comp=Z,16nm,1.0s,mb4.4
MFF Saint Martin d 24.46 301 *eP* **P 19 29 14.0 -2.3**
comp=Z,21nm,1.0s,mb4.2
MFF Saint Martin d 24.46 301 *eP* **P 19 29 14.0 -2.3**
MFF pmax pmax
comp=Z,11nm,1.0s,mb4.2
MFF Saint Martin d 24.46 301 *eP* **P 19 29 14.0 -2.3**
comp=Z,11nm,1.0s,mb4.2

HFS Hagfors 24.78 339 P **P 19 29 18.2 -0.8**
HFS pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 24.78 339 P **P 19 29 18.2 -0.9**
comp=Z,4.2nm,0.9s,mb4.0,baz=141,slow=9.6,SNR=6.1
LDF La Druitiere 24.85 305 *eP* **P 19 29 18.3 -1.5**
SJPF Ste Jean 24.91 292 *eP* **P 19 29 18.7 -1.7**
comp=Z,64nm,1.2s,mb4.7
SJPF Ste Jean 24.91 292 *eP* **P 19 29 18.7 -1.7**
SJPF pmax pmax
comp=Z,32nm,1.2s,mb4.7
SJPF Ste Jean 24.91 292 *eP* **P 19 29 18.7 -1.7**
comp=Z,32nm,1.2s,mb4.7
JOF Joensuu 25.01 0 *ep* **P 19 29 19.1 -2.0**
FLN La Foliniere 25.12 306 *eP* **P 19 29 20.6 -1.7**
FLN *e*MLR MLR
comp=Z,557nm,18.6s,MS3.8
FLN La Foliniere 25.12 306 *eP* **P 19 29 20.6 -1.7**
FLN MLR MLR
comp=Z,560nm,18.6s,MS4.1
GRR Gorron 25.28 305 *eP* **P 19 29 22.0 -1.7**
comp=Z,56nm,1.1s,mb4.7
GRR Gorron 25.28 305 *eP* **P 19 29 22.0 -1.7**
GRR pmax pmax
comp=Z,28nm,1.1s,mb4.7
GRR Gorron 25.28 305 *eP* **P 19 29 22.0 -1.7**
comp=Z,28nm,1.1s,mb4.7
PRGR Permogore 25.42 16 *i* P **P 19 29 24.0 -0.8**
PRGR *e*S **S 19 33 48.9 -2.2**
PRGR pmax pmax
comp=Z,55nm,1.1s,mb5.0
PRGR Permogore 25.42 16 *i* P **P 19 29 24.0 -0.8**
comp=Z,55nm,1.1s,mb5.0
ARU Arti 26.06 36 *eP* **P 19 29 29.6 -1.1**
comp=Z,16nm,0.9s,mb4.5
ARU Arti 26.06 36 *eP* **P 19 29 30.5 -0.2**
ARU Arti 26.06 36 *eP* **P 19 29 29.6 -1.1**
comp=Z,16nm,0.9s,mb4.5
NB2 NORSAR Subarra 26.23 338 P **P 19 29 31.5 -0.7**
comp=Z,10.0nm,1.1s,mb4.3,baz=142,slow=10
NB2 NORSAR Subarra 26.23 338 P **P 19 29 31.5 -0.7**
NB2 pmax pmax
comp=Z,10.0nm,1.1s,mb4.3
NOA NORSAR Array B 26.23 338 P **P 19 29 31.5 -0.7**
NOA NORSAR Array B 26.23 338 P **P 19 29 31.5 -0.7**
NOA pmax pmax
comp=Z,4.0nm,0.9s
NOA NORSAR Array B 26.23 338 P **P 19 29 31.5 -0.7**
comp=Z,4.0nm,0.9s,mb4.0,baz=142,slow=9.5,SNR=11
SGMF Saint Gilles 26.36 304 *eP* **P 19 29 32.1 -1.4**
comp=Z,85nm,1.4s,mb4.8
SGMF Saint Gilles 26.36 304 *eP* **P 19 29 32.1 -1.4**
SGMF pmax pmax
comp=Z,43nm,1.4s,mb4.8
SGMF Saint Gilles 26.36 304 *eP* **P 19 29 32.1 -1.4**
comp=Z,43nm,1.4s,mb4.8
QUIF Quistinic 26.71 303 *eP* **P 19 29 35.5 -1.2**
ROSF Rostrenen 26.85 304 *eP* **P 19 29 36.7 -1.2**
ESDC Sonseca Array 27.17 285 P **P 19 29 40.0 -0.9**
comp=Z,2.0nm,0.8s,mb3.7,baz=72,slow=9.7,SNR=6.6
SVE Sverdlovsk 27.24 36 *eP* **P 19 29 41.2 -0.2**
SVE *e*S **S 19 34 15.8 -4.2**
ARCES ARCESS Array B 31.80 356 P **P 19 30 19.9 -1.7**
ARCES ARCESS Array B 31.80 356 P **P 19 30 19.9 -1.7**
ARCES pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 31.80 356 P **P 19 30 19.9 -1.7**
comp=Z,3.8nm,0.8s,mb4.2,baz=202,slow=9.2,SNR=6.0
FRU Bishkek 33.33 68 *eP* **P 19 30 35.0 -0.3**
KURK Kurchatov 35.79 53 *eP* **P 19 30 55.5 -1.0**
comp=Z,5.1nm,0.7s,mb4.6
KURK Kurchatov 35.79 53 *eP* **P 19 30 55.6 -0.9**
KURK pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
KURK Kurchatov 35.79 53 *eP* **P 19 30 55.6 -0.9**
comp=Z,5.0nm,0.7s,mb4.5
TORD Torodi Ar. Bea 35.88 234 P **P 19 30 57.0 -0.5**
comp=Z,4.4nm,0.9s,mb4.4,baz=34,slow=8.5,SNR=12
TORD PP PP 19 32 20.4 +1.2
comp=Z,2.6nm,1.0s,baz=32,slow=11,SNR=3.8
MKAR Makanchi Array 38.35 60 P **P 19 31 18.6 +0.3**
MKAR pmax pmax
comp=Z,4.0nm,1.0s
MKAR MLR MLR
comp=Z,132nm,19.8s
MKAR Makanchi Array 38.35 60 P **P 19 31 18.6 +0.3**
comp=Z,3.7nm,0.9s,mb4.1,baz=282,slow=6.1,SNR=18
MKAR LR LR 19 49 23.2
comp=Z,132nm,19.8s,MS3.8,baz=84,slow=40
NVS Novosibirsk 38.81 47 *eP* **P 19 31 20.9 -1.2**
NVS *e*S **S 19 37 19.8 +0.6**
NVS pmax pmax
comp=Z,15nm,1.4s,mb4.5
NVS pmax pmax
comp=N,5.0nm,1.3s
NVS pmax pmax
comp=E,8.0nm,1.4s
NVS smax
comp=N,9.0nm,2.1s
NVS smax
comp=E,31nm,2.9s
NVS Novosibirsk 38.81 47 *eP* **P 19 31 20.9 -1.2**
comp=E,5.0nm,1.3s,mb4.1
KMBO Kilima Mbogo 39.30 170 LR LR 19 49 36.9
comp=E,113nm,19.0s,MS3.7,baz=88,slow=39
ZAL Zalesovo 39.68 48 P **P 19 31 27.9 -1.5**
ZAA0 Zalesovo Array 39.70 48 *eP* **P 19 31 28.1 -1.4**
ZAA0 Zalesovo Array 39.70 48 *eP* **P 19 31 28.1 -1.4**
ZALV Zalesovo Beam 39.70 48 P **P 19 31 27.9 -1.6**
ZALV LR LR 19 51 28.9
ZALV Zalesovo Beam 39.70 48 P **P 19 31 27.9 -1.6**
comp=E,1.6nm,0.9s,mb3.8,baz=260,slow=8.9,SNR=8.2
ZALV LR LR 19 51 28.9
comp=E,90nm,20.1s,MS3.6,baz=100,slow=42
WMQ Urumqi 42.58 63 *eP* **P 19 31 54.3 +0.9**
WMQ AP pP 19 31 58.8 +1.7
WMQ XP sP 19 32 01.3 +2.8
WMQ AMB AMB
comp=Z,120nm,1.1s,mb5.5
WMQ AMB AMB
comp=Z,229nm,4.8s
WMQ LR LR
comp=N,168nm,26.6s,MS4.2
WMQ LR LR
comp=E,374nm,26.6s,MS4.2
WMQ LR LR
comp=Z,199nm,19.0s
KOLN Koldanda 44.85 87 *eP* **P 19 32 11.5 -0.4**
comp=Z,22nm,1.0s,mb5.0
DBIC Dimbokro 44.97 235 P **P 19 32 11.6 -1.3**
DBIC Dimbokro 44.97 235 P **P 19 32 11.6 -1.3**
DBIC pmax pmax
comp=Z,3.0nm,0.9s
DBIC Dimbokro 44.97 235 P **P 19 32 11.6 -1.3**
comp=Z,3.3nm,0.9s,mb4.2,baz=31,slow=22,SNR=3.4
LIC Lamto 45.41 235 *eP* **P 19 32 14.9 -1.5**
comp=Z,16nm,1.0s,mb4.5
LIC *e*MLR MLR
comp=Z,348nm,21.5s,MS4.0
LIC Lamto 45.41 235 *eP* **P 19 32 14.9 -1.5**
comp=Z,8.1nm,1.0s,mb4.5
LIC LR LR
comp=Z,170nm,21.5s,MS4.0
LIC Lamto 45.41 235 *eP* **P 19 32 14.9 -1.5**
comp=Z,8.1nm,1.0s,mb4.5
GKN Gorkha 45.57 86 *eP* **P 19 32 16.8 -0.7**
comp=Z,29nm,1.0s,mb5.2
KKN Kakani 46.17 86 *eP* **P 19 32 21.5 -0.8**
comp=Z,15nm,0.8s,mb5.0
HYB Hyderabad 46.27 103 *i* P **P 19 32 23.0 -0.2**
HYB Hyderabad 46.27 103 *eP* **P 19 32 23.0 -0.2**
JIRN Jiri 46.95 86 *eP* **P 19 32 28.4 0.0**
comp=Z,23nm,1.0s,mb5.0
ODAN Odare 48.26 86 *eP* **P 19 32 38.0 -0.6**
comp=Z,8.3nm,0.9s,mb4.8
TAPN Taplejung 48.29 85 *eP* **P 19 32 38.3 -0.5**
comp=Z,17nm,1.1s,mb5.0
LSA Lhasa 49.93 81 *eP* **P 19 32 52.2 +0.8**
comp=Z,4.4nm,1.0s,mb4.4
LSA Lhasa 49.93 81 *eP* **P 19 32 52.2 +0.9**
LSA pmax pmax
comp=Z,4.0nm,1.0s,mb4.4
LSA Lhasa 49.93 81 *eP* **P 19 32 52.2 +0.9**
comp=Z,4.4nm,1.0s,mb4.4
TLY Talaya 51.27 50 *eP* **P 19 33 02.1 +0.9**
TLY pmax pmax
comp=Z,6.0nm,1.1s,mb4.4
TLY Talaya 51.27 50 *eP* **P 19 33 02.1 +0.9**
comp=Z,6.0nm,1.1s,mb4.4
ZAK Zakamensk 51.39 51 *i* P **P 19 33 02.5 +0.4**
ZAK *e* 19 34 16.8
ZAK pmax pmax
comp=Z,3.0nm,1.3s,mb4.1
ZAK pmax pmax
comp=Z,1.0nm,1.3s,mb3.6
ZAK Zakamensk 51.39 51 *i* P **P 19 33 02.5 +0.4**
comp=Z,3.0nm,1.3s,mb4.1
SFJD Kangerlussuaq 52.52 331 LR LR 19 56 03.5
comp=Z,126nm,19.9s,MS4.0,baz=324,slow=37
GTA Gaotai 52.55 66 *eP* **P 19 33 11.3 +0.4**
GTA AP pP 19 33 15.5 +0.8
GTA XP sP 19 33 19.0 +2.9
GTA PP PP 19 35 10.0 +0.3
GTA SCS ScS 19 42 59.0 -1.6
GTA AMB AMB
comp=Z,7.0nm,1.2s,mb4.5
GTA AMB AMB
comp=Z,71nm,8.8s
GTA LR LR
comp=N,192nm,19.5s,MS4.2
GTA LR LR
comp=E,133nm,18.0s,MS4.2
GTA LR LR
comp=Z,156nm,13.4s,MS4.2
SONM Songino Array 54.10 54 P **P 19 33 21.4 -0.8**
SONM pmax pmax
comp=Z,3.0nm,1.0s
SONM Songino Array 54.10 54 P **P 19 33 21.4 -0.8**
comp=Z,2.5nm,1.0s,mb4.1,baz=287,slow=8.3,SNR=17
BOD Bodaibo 55.36 40 *eP* **P 19 33 29.3 -1.8**
BOD pmax pmax
comp=Z,6.0nm,1.2s,mb4.5
BOD Bodaibo 55.36 40 *eP* **P 19 33 29.3 -1.8**
comp=Z,6.0nm,1.2s,mb4.5
LZH Lanzhou 56.80 68 *eP* **P 19 33 42.5 +0.7**
LZH AP pP 19 33 46.5 +0.9
LZH XP sP 19 33 49.5 +2.4
LZH AMB AMB
comp=Z,19nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,87nm,4.1s
CD2 Chengdu 59.08 73 *eP* **P 19 33 59.8 +2.0**
CD2 XP sP 19 34 06.8 +3.7
CD2 PP PP 19 36 12.0 +3.8
CD2 S **S 19 42 04.3 -0.4**
CD2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.9
CD2 AMB AMB
comp=Z,20nm,4.2s
CD2 LR LR
comp=N,100nm,12.8s
CD2 LR LR
comp=Z,130nm,13.8s,MS4.2
HHC Hu-ho-hao-te 60.21 60 *eP* **P 19 34 05.8 +0.3**
HHC AP pP 19 34 10.3 +1.0
HHC XP sP 19 34 12.8 +2.0
HHC PCP PcP 19 34 51.5 +0.6
HHC PP PP 19 36 19.8 +1.8
HHC SCP ScP 19 38 51.0 -0.9
HHC AMB AMB
comp=Z,21nm,1.0s,mb5.1
HHC AMB AMB
comp=Z,74nm,5.4s
HHC LR LR
comp=N,337nm,20.8s
HHC LR LR
comp=E,786nm,26.9s
HHC LR LR
comp=Z,491nm,18.2s,MS4.7
YAK Yakutsk 61.09 32 *eP* **P 19 34 10.1 -1.1**
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,8.0nm,1.3s,mb4.7
KMI Kunming 61.15 79 P **P 19 34 13.5 +1.4**
KMI AMB AMB
comp=Z,7.0nm,0.9s,mb4.8
XAN Xi'an 61.44 68 P **P 19 34 13.8 -0.2**
XAN AMB AMB
comp=Z,7.0nm,1.0s,mb4.8
XAN LR LR
comp=N,255nm,10.1s
XAN LR LR
comp=Z,317nm,10.3s,MS4.8
HIA Hailar 61.73 48 *eP* **P 19 34 15.7 0.0**
comp=Z,17nm,1.2s,mb5.0
HIA Hailar 61.73 48 *eP* **P 19 34 15.7 0.0**
HIA pmax pmax
comp=Z,17nm,1.2s
HIA Hailar 61.73 48 *eP* **P 19 34 15.7 0.0**
comp=Z,17nm,1.2s,mb5.0
RES Resolute Bay 62.15 346 *eP* **P 19 34 18.2 0.0**
RES Resolute Bay 62.15 346 *eP* **P 19 34 18.2 +0.1**
GYA Guiyang 63.49 76 P **P 19 34 28.0 +0.2**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb5.0
BJI Beijing 63.71 59 P **P 19 34 29.0 0.0**
BJI S **S 19 43 05.5 +2.2**
BJI AMB AMB
comp=Z,7.0nm,1.1s,mb4.6
BJI LR LR
comp=N,155nm,24.9s,MS4.2
BJI LR LR
comp=E,133nm,27.8s,MS4.2
BJI LR LR
comp=Z,169nm,35.4s
SCHQ Schefferville 64.07 320 P **P 19 34 29.9 -1.3**
comp=Z,3.3nm,0.9s,mb4.3,baz=49,slow=19,SNR=2.5
KLR Kul'dur 68.58 44 *eP* **P 19 34 54.7 -5.4**
KLR MLR MLR
comp=N,600nm,13.5s,MS5.2
KLR MLR MLR
comp=E,600nm,13.5s,MS5.2
KLR MLR MLR
comp=Z,2µm,13.5s
SEY Seymchan 69.16 25 *eP* **P 19 35 04.5 +1.0**
BILL Bilibino 69.16 16 *eP* **P 19 35 01.9 -1.5**
BILL *e* 19 37 40.5
BILL *e*S S 19 44 16.0 +7.5
BILL pmax pmax
comp=Z,35nm,1.8s,mb5.0
BILL MLR MLR
comp=Z,100nm,18.0s,MS4.1
BILL Bilibino 69.16 16 *eP* **P 19 35 01.9 -1.5**
comp=Z,35nm,1.8s,mb5.0
NJ2 Nanjing 69.64 65 *eP* **P 19 35 08.5 +1.5**
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
MA2 Magadan 70.92 28 *eP* **P 19 35 14.3 0.0**
comp=Z,12nm,1.0s,mb4.8
MA2 Magadan 70.92 28 *eP* **P 19 35 14.2 -0.2**
MA2 pmax pmax
comp=Z,14nm,1.1s,mb4.8
MA2 Magadan 70.92 28 *eP* **P 19 35 14.2 -0.2**
comp=Z,14nm,1.1s,mb4.8
PSI Prapat 70.97 102 P **P 19 35 14.2 -1.2**
PSI pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
PSI Prapat 70.97 102 P **P 19 35 14.2 -1.3**
comp=Z,5.1nm,0.5s,mb4.7,baz=262,slow=6.3,SNR=8.1
VLA Vladivostok 72.11 49 *i* P **P 19 35 20.6 -1.3**
KSRS Korea Array 72.88 56 P **P 19 35 25.9 -0.6**
comp=Z,10nm,1.0s,mb4.7,baz=297,slow=6.0,SNR=15
INK Inuvik 73.44 354 *eP* **P 19 35 26.4 -2.9**
comp=Z,870nm,2.1s
INK Inuvik 73.44 354 *eP* **P 19 35 26.4 -2.9**
INK pmax pmax
comp=Z,870nm,2.1s
INK Inuvik 73.44 354 *eP* **P 19 35 26.4 -2.9**
comp=Z,870nm,2.1s
YSS Yuzh-Sakhalins 75.83 41 *eP* **P 19 35 43.0 -0.5**
YSS *e* 19 53 32.0
YSS pmax pmax
comp=Z,30nm,1.0s,mb5.2
YSS MLR MLR
comp=Z,500nm,16.0s,MS4.9
YSS Yuzh-Sakhalins 75.83 41 *eP* **P 19 35 43.0 -0.5**
comp=Z,30nm,1.0s,mb5.2
YKA Yellowknife Ar 76.15 344 P **P 19 35 44.5 -0.5**
YKA Yellowknife Ar 76.15 344 P **P 19 35 44.5 -0.6**

YKA					pmax	pmax				
	comp=Z,4.0nm,1.0s									
YKA	**Yellowknife Ar**	**76.15**	**344**	P	**P**		**19 35 44.5**	**-0.5**		
	comp=Z,4.3nm,1.0s,mb4.3,baz=26,slow=6.0,SNR=38									
YKA	**Yellowknife Ar**	**76.15**	**344**	P	**P**		**19 35 44.5**	**-0.6**		
	comp=Z,4.0nm,1.0s,mb4.3									
IMA2	**Indian Mountai**	**76.26**	**2**	*e*P	**P**		**19 35 43.8**	**-1.9**		
IMA2	**Indian Mountai**	**76.26**	**2**	*e*P	**P**		**19 35 43.8**	**-1.9**		
DAWY	**Dawson**	**78.05**	**356**	*e*P	**P**		**19 35 54.9**	**-0.9**		
DAWY	**Dawson**	**78.05**	**356**	*e*P	**P**		**19 35 54.9**	**-0.8**		
JOW	**Kunigami**	**79.34**	**64**	P	**P**		**19 36 02.6**	**-1.0**		
	comp=Z,18nm,1.2s,mb4.9,baz=318,slow=10,SNR=4.6									
MJAR	**Matsushiro Arr**	**79.97**	**51**	P	**P**		**19 36 06.3**	**-0.5**		
MJAR					pmax	pmax				
	comp=Z,5.0nm,1.0s									
MJAR	**Matsushiro Arr**	**79.97**	**51**	P	**P**		**19 36 06.3**	**-0.5**		
	comp=Z,4.9nm,1.0s,mb4.4,baz=312,slow=4.3,SNR=10									
ULM	**Lac du Bonnet**	**80.50**	**329**	P	**P**		**19 36 08.7**	**-0.7**		
	comp=Z,1.4nm,0.6s,mb4.1,baz=162,slow=8.3,SNR=3.2									
ULM					LR	LR	20 11 19.7			
	comp=Z,149nm,19.7s,MS4.3,baz=26,slow=35									
EDM	**Edmonton**	**84.09**	**339**	*e*P	**P**		**19 36 26.4**	**-1.7**		
EDM	**Edmonton**	**84.09**	**339**	*e*P	**P**		**19 36 26.4**	**-1.7**		
PDAR	**Pinedale Array**	**92.02**	**332**	P	**P**		**19 37 06.0**	**-0.5**		
	comp=Z,0.9nm,0.7s,mb4.2,baz=179,slow=5.9,SNR=9.3									
PDAR					LR	LR	20 22 05.8			
	comp=Z,97nm,18.9s,MS4.3,baz=47,slow=38									

*ISCJB **30** 19:34:03.1±0.8,2416S±004×6698W±009,h172km±9km, mb4.0/11, Error ellipse: s-maj=12.9km s-min=6.4km az=2.3*

*IDC **30** 19:34:05.1±1.5,2398S×6680W,h177km±13km,mb3.9/11, mb1 4.0/15,mb1mx4.0/19,mbtmp3.9/15,Error ellipse: s-maj=18.4km s-min=11.1km az=81.0*

*GUC **30** 19:34:05.7±0.8,2431S×6747W,h220km,ML5.0*

*NEIC **30** 19:34:05.7,2431S×6747W,h220km,MG5.0(GUC),After GUC.*

ISC 30 19:34:03.8±0.7,**2416S**±004×**6695W**±008,**h164**km±9km, **n34**,σ1§**34**/39,**mb4.0**/11,**2C-2D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res	ISC
				Op			h m s		
CEN1	**Los Morros**	**3.07**	**284**	⇓*i*P		**Pn**	**19 34 55.3**	**+2.7**	
CEN1				*i* S		**Sn**	**19 35 32.1**	**+1.6**	
CEN1				AML		AML	19 35 34.9		
	comp=N,2μm,0.5s								
CPN1	**Cerro Paranal**	**3.18**	**261**	*e*P		**Pn**	**19 34 55.7**	**+1.7**	
CPN1				*i* S		**Sn**	**19 35 33.1**	**+0.1**	
CPN1				AML		AML	19 35 40.2		
	comp=N,2μm,0.4s								
ANCH	**Antofagasta**	**3.20**	**278**	⇑*i*P		**Pn**	**19 35 01.0**	**+6.8**	
ANCH				*i* S		**Sn**	**19 35 38.9**	**+5.6**	
ANCH	**Antofagasta**	**3.20**	**278**	⇑*i*P		**Pn**	**19 35 01.0**	**+6.8**	
ANCH				*i* S		**Sn**	**19 35 38.9**	**+5.6**	
ANCH				AML		AML	19 35 41.3		
	comp=N,3μm,0.3s								
CPCH	**Copiapo**	**4.43**	**223**	*e*P		**Pn**	**19 35 09.5**	**-0.4**	
CPCH				*i* S		**Sn**	**19 35 59.1**	**-2.4**	
CDCH	**Caldera**	**4.55**	**230**	⇓*i*P		**Pn**	**19 35 11.5**	**0.0**	
CDCH				*i* S		**Sn**	**19 36 02.2**	**-2.2**	
VACH	**Vallenar**	**5.57**	**217**	*i* S		**Sn**	**19 36 27.5**	**-1.0**	
LCO	**Las Campanas**	**5.89**	**214**	*e*Pn		**Pn**	**19 35 26.7**	**-2.4**	
LCO				*e*Sn		**Sn**	**19 36 28.3**	**-7.7**	
CFAA	**Coronel Fontan**	**7.51**	**188**	P		**Pn**	**19 35 52.8**	**+2.3**	
CFAA				S		**Sn**	**19 37 13.8**	**-0.8**	
CFAA	**Coronel Fontan**	**7.51**	**188**	P		**Pn**	**19 35 52.8**	**+2.3**	
	comp=N,0.9nm,0.3s,baz=5.0,slow=12,SNR=12								
CFAA				S		**Sn**	**19 37 13.8**	**-0.8**	
	comp=N,1.3nm,0.3s,baz=144,slow=16,SNR=8.0								
LPAZ	**La Paz**	**7.91**	**352**	P		**Pn**	**19 35 57.0**	**+1.1**	
	comp=N,7.7nm,0.3s,baz=168,slow=8.2,SNR=68								
LPAZ				S		**Sn**	**19 37 21.1**	**-3.3**	
	comp=N,1.1nm,0.3s,baz=325,slow=18,SNR=3.1								
ARE	**Arequipa**	**8.76**	**330**	*e*P		**Pn**	**19 36 07.0**	**-0.2**	
ARE				*e*S		**Sn**	**19 37 38.0**	**-6.8**	
SIV	**San Ignacio**	**9.82**	**35**	P		**Pn**	**19 36 20.6**	**-0.6**	
	comp=N,9.2nm,0.3s,baz=225,slow=14,SNR=113								
SIV				S		**Sn**	**19 37 56.3**	**-14**	
	comp=N,0.5nm,0.3s,baz=222,slow=16,SNR=3.5								
TRQA	**Tornquist**	**14.49**	**164**	*e*Pn		**Pn**	**19 37 22.8**	**+1.6**	
TRQA				*e*S		**Sn**	**19 40 08.8**	**+6.6**	
PLCA	**Paso Flores**	**16.80**	**190**	P		**Pn**	**19 37 50.6**	**+1.2**	
	comp=N,0.8nm,0.3s,baz=7.2,slow=12,SNR=16								
SNAA	**Sanae**	**59.19**	**161**	P		**P**	**19 43 47.9**	**+0.9**	
	comp=N,1.1nm,0.7s,mb3.8,baz=291,slow=9.6,SNR=12								
DBIC	**Dimbokro**	**67.81**	**71**	P		**P**	**19 44 43.1**	**-1.4**	
	comp=N,3.2nm,0.4s,mb4.4,baz=21,slow=6.8,SNR=14								
VNDA	**Vanda**	**74.56**	**190**	P		**P**	**19 45 26.3**	**+2.3**	
	comp=N,1.6nm,0.9s,mb3.7,baz=150,slow=5.4,SNR=6.3								
TORD	**Torodi Ar. Bea**	**76.58**	**69**	P		**P**	**19 45 35.7**	**-0.8**	
	comp=N,5.6nm,0.6s,mb4.4,baz=258,slow=5.5,SNR=54								
PDAR	**Pinedale Array**	**77.30**	**329**	P		**P**	**19 45 40.1**	**+0.2**	
	comp=N,0.6nm,0.6s,mb3.4,baz=136,slow=8.3,SNR=5.9								
ULM	**Lac du Bonnet**	**78.39**	**342**	P		**P**	**19 45 44.8**	**-1.0**	
	comp=N,3.5nm,0.6s,mb4.2,baz=135,slow=6.2,SNR=8.9								
SCHQ	**Schefferville**	**78.66**	**0**	P		**P**	**19 45 46.2**	**-1.0**	
	comp=N,2.3nm,0.8s,mb3.9,baz=214,slow=15,SNR=3.4								
NVAR	**Mina Array Bea**	**78.69**	**321**	P		**P**	**19 45 48.0**	**+0.2**	
	comp=N,0.4nm,0.4s,mb3.4,baz=138,slow=6.2,SNR=5.9								
BOSA	**Boshof**	**80.62**	**117**	P		**P**	**19 45 58.1**	**-0.5**	
	comp=N,3.3nm,0.6s,mb4.2,baz=183,slow=8.2,SNR=11								
MAW	**Mawson**	**81.28**	**163**	P		**P**	**19 46 02.4**	**+1.2**	
	comp=N,3.5nm,0.8s,mb4.1,baz=203,slow=4.8,SNR=9.8								
YKA	**Yellowknife Ar**	**94.28**	**340**	P		**P**	**19 47 03.2**	**-0.7**	
	comp=N,0.9nm,0.5s,mb4.1,baz=131,slow=4.5,SNR=20								
ASAR	**Alice Springs**	**128.34**	**205**	PKP		PKPdf	19 52 51.0	-0.5	
	comp=N,1.2nm,0.5s,baz=135,slow=1.8,SNR=26								
WRA	**Warramunga Arr**	**131.51**	**207**	PKP		PKPdf	19 52 57.5	-0.2	
	comp=N,1.3nm,0.4s,baz=157,slow=1.8,SNR=43								
WRA				SKPbc		SKPbc	19 56 05.3	-2.5	
	comp=N,0.3nm,0.6s,baz=151,slow=3.4,SNR=12								
ZALV	**Zalesovo Beam**	**143.51**	**28**	PKP		PKPdf	19 53 15.8	-2.7	
	comp=N,1.1nm,0.5s,baz=309,slow=3.2,SNR=7.2								
BATI	**Kupang**	**144.31**	**198**	PKP		PKPdf	19 53 18.2	-2.9	
	comp=N,9.4nm,0.6s,baz=202,slow=4.4,SNR=8.4								
MKAR	**Makanchi Array**	**146.61**	**40**	PKPbc		PKPbc	19 53 23.4	-2.5	
	comp=N,0.7nm,0.3s,baz=301,slow=3.5,SNR=14								
ASAJ	**Asahikawa**	**148.72**	**317**	PKPbc		PKPbc	19 53 30.7	-1.0	
	comp=N,7.5nm,0.9s,baz=180,slow=17,SNR=2.7								
MJAR	**Matsushiro Arr**	**155.11**	**306**	PKPab		PKPab	19 54 02.8	-0.1	
	comp=N,1.3nm,0.9s,baz=90,slow=4.0,SNR=3.4								
SONM	**Songino Array**	**155.78**	**11**	PKP		PKPdf	19 53 39.1	+1.2	
	comp=N,0.3nm,0.8s,baz=76,slow=0.6,SNR=2.7								
SONM				PKPab		PKPab	19 54 04.0	-1.3	
	comp=N,0.5nm,0.8s,baz=331,slow=2.5,SNR=3.6								

*BJI **30** 19:36:51.9,5609N×11024E,h6km,mB4.7,mb4.1,Ms4.3, Msz4.1*

*IDC **30** 19:36:54.4±0.7,5571N×11009E,h0km,mb4.1/16, mb1 4.2/19,mb1mx4.1/27,mbtmp4.1/19,ML3.8/3,Error ellipse: s-maj=17.2km s-min=16.0km az=95.0*

*ISCJB **30** 19:36:54.2±0.2,5562N±002×11020E±003,h10km, mb4.1/28,MS3.8/3,Error ellipse: s-maj=3.2km s-min=2.0km az=147.6*

*MOS **30** 19:36:55.2±0.8,5575N×110.11E,h14km,mb4.4/19,Error ellipse: s-maj=8.6km s-min=6.0km az=72.5*

*BYKL **30** 19:36:56.3±0.3,5569N×11020E,h7km±4km*

*NEIC **30** 19:36:56.9±0.5,5579N×11003E,h10km,mb4.2/7,Error ellipse: s-maj=10.8km s-min=6.9km az=141.0*

ISC 30 19:36:56.1±0.2,**5566N**±002×**11021E**±003,**h10**km,**n119**, σ1§**30**/172,**mb4.1**/28,**MS3.8**/3,**17C-7D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res	ISC
				Op			h m s		
NIZ	**Nizh Angarsk**	**0.40**	**287**	*e*PG		**Pg**	**19 37 03.8**	**0.0**	
NIZ				*e*			19 37 09.3		
NIZ				pmax	pmax				
	comp=Z,826nm,0.6s								
NIZ				smax					
	comp=N,4μm,0.6s								
NIZ	**Nizh Angarsk**	**0.40**	**287**	⇑*i*Pg		**Pg**	**19 37 03.6**	**-0.2**	
NIZ				*e*			19 37 04.5		
NIZ				max			19 37 04.9		
	comp=N,333nm,0.1s								
NIZ				*e*			19 37 08.3		
NIZ				*e*Sg		**Sg**	**19 37 09.1**	**0.0**	
NIZ				Smax			19 37 09.6		
	comp=N,6μm,0.5s								
KMO	**Kumora**	**0.60**	**67**	⇑*i*PG		**Pg**	**19 37 07.1**	**-0.7**	
KMO				*e*			19 37 14.1		
KMO				pmax	pmax				
	comp=Z,1μm,0.2s								
KMO				smax					
	comp=N,8μm,1.1s								
KMO	**Kumora**	**0.60**	**67**	⇑*i*Pg		**Pg**	**19 37 07.2**	**-0.6**	
KMO				Pmax			19 37 07.4		
	comp=N,1μm,0.3s								
KMO				*e*Sg		**Sg**	**19 37 15.0**	**-0.7**	
KMO				Smax			19 37 17.5		
	comp=N,8μm,1.0s								
YLYR	**Ulyunkhan**	**0.95**	**145**	*e*PG		**Pg**	**19 37 14.1**	**-0.3**	
YLYR				*e*			19 37 26.9		
YLYR				pmax	pmax				
	comp=Z,529nm,0.3s								
YLYR				smax					
	comp=N,2μm,0.2s								
YLYR	**Ulyunkhan**	**0.95**	**145**	⇑*i*Pg		**Pg**	**19 37 14.0**	**-0.4**	
YLYR				*e*			19 37 14.9		
YLYR				max			19 37 21.4		
	comp=N,292nm,0.2s								
YLYR				*e*Sg		**Sg**	**19 37 27.2**	**+0.4**	
YLYR				Smax			19 37 33.6		
	comp=N,2μm,0.3s								
YOA	**Uoyan**	**0.97**	**60**	⇓*i*PG		**Pg**	**19 37 13.9**	**-0.9**	
YOA				*i*			19 37 27.7		
YOA				pmax	pmax				
	comp=Z,1μm,0.3s								
YOA				smax					
	comp=N,12μm,0.4s								
YOA	**Uoyan**	**0.97**	**60**	⇓*i*Pg		**Pg**	**19 37 13.9**	**-0.9**	
YOA				Pmax			19 37 18.4		
	comp=N,983nm,0.2s								
YOA				*e*Sg		**Sg**	**19 37 27.6**	**+0.1**	
YOA				Smax			19 37 35.7		
	comp=N,13μm,0.6s								
SVKR	**Severomuysk**	**1.94**	**75**	*e*PN		**Pn**	**19 37 30.6**	**+1.6**	
SVKR				*e*			19 37 32.8		
SVKR				*e*			19 37 57.0		
SVKR				pmax	pmax				
	comp=Z,1μm,0.5s								
SVKR				smax					
	comp=N,7μm,0.6s								
SVKR	**Severomuysk**	**1.94**	**75**	⇓*i*Pg		**Pg**	**19 37 30.7**	**-2.5**	
SVKR				Pmax			19 37 37.6		
	comp=N,1μm,0.6s								
SVKR				*e*Sg		**Sg**	**19 37 57.4**	**-1.0**	
SVKR				Smax			19 38 03.3		
	comp=N,7μm,0.5s								
UKT	**Uakit**	**1.95**	**94**	*e*PN		**Pn**	**19 37 31.0**	**+1.9**	
UKT				*e*S		**Sn**	**19 37 54.9**	**+1.3**	
UKT				*e*			19 37 57.2		
UKT				pmax	pmax				
	comp=Z,565nm,0.6s								
UKT				smax					
	comp=N,3μm,0.9s								
UKT	**Uakit**	**1.95**	**94**	⇓*i*Pg		**Pg**	**19 37 31.1**	**-2.3**	
UKT				Pmax			19 37 36.3		
	comp=N,793nm,1.0s								
UKT				*e*Sg		**Sg**	**19 37 57.1**	**-1.5**	
UKT				Smax			19 38 03.3		
	comp=N,4μm,1.8s								
SYVR	**Suvo**	**2.01**	**184**	*e*PN		**Pn**	**19 37 32.8**	**+2.8**	
SYVR				*e*			19 38 01.6		
SYVR				pmax	pmax				
	comp=Z,2μm,0.7s								
SYVR				smax					
	comp=E,4μm,0.7s								
SYVR	**Suvo**	**2.01**	**184**	⇓*i*Pg		**Pg**	**19 37 33.0**	**-1.6**	
	comp=E,709nm,0.9s								
SYVR				⇓*i*Pg		**Pg**	**19 37 33.0**	**-1.6**	
	comp=E,414nm,0.9s								
SYVR				⇑*i*Pg		**Pg**	**19 37 33.0**	**-1.6**	
	comp=E,976nm,0.9s								
SYVR				Pmax			19 37 33.6		
	comp=E,2μm,0.7s								
SYVR				*e*Sg		**Sg**	**19 38 01.1**	**+0.5**	
SYVR				Smax			19 38 02.9		
	comp=E,4μm,0.7s								
OGRR	**Ongureny**	**2.53**	**218**	*e*PN		**Pn**	**19 37 39.0**	**+1.9**	
OGRR				*e*			19 37 42.0		
OGRR	**Ongureny**	**2.53**	**218**	⇑*i*Pn		**Pn**	**19 37 39.1**	**+2.0**	
OGRR				*e*Pg		**Pg**	**19 37 42.3**	**-2.2**	
OGRR				Pmax			19 37 43.5		
	comp=E,101nm,0.1s								
OGRR				*e*			19 38 10.7		
OGRR				*e*Sg		**Sg**	**19 38 15.4**	**-1.8**	
OGRR				Smax			19 38 18.4		
	comp=E,2μm,1.1s								
MXMB	**Maximikha**	**2.55**	**200**	⇑*i*Pn		**Pn**	**19 37 38.9**	**+1.5**	
MXMB				⇑*i*Pg		**Pg**	**19 37 42.1**	**-2.8**	
MXMB				Pmax			19 37 46.9		
	comp=E,556nm,1.4s								
MXMB				*e*Sg		**Sg**	**19 38 16.6**	**-1.3**	
MXMB				Smax			19 38 21.5		
	comp=E,3μm,0.8s								
BOD	**Bodaibo**	**3.01**	**42**	⇑*i*PN		**Pn**	**19 37 44.9**	**+1.2**	
BOD				*e*			19 37 49.3		
BOD				*e*S		**Sn**	**19 38 19.7**	**-0.1**	
BOD				*e*			19 38 26.8		
BOD				pmax	pmax				
	comp=Z,305nm,0.6s								
BOD				smax					
	comp=N,2μm,0.6s								
BOD	**Bodaibo**	**3.01**	**42**	*e*Pn		**Pn**	**19 37 44.9**	**+1.2**	
BOD				*e*Pg		**Pg**	**19 37 49.3**	**-4.4**	
BOD				Pmax			19 37 50.2		
	comp=N,303nm,0.6s								
BOD				*e*			19 38 21.6		
BOD				*e*Sg		**Sg**	**19 38 27.5**	**-5.1**	
BOD				Smax			19 38 31.2		
	comp=N,2μm,0.8s								
KELR	**Kotokel**	**3.16**	**204**	*e*Pn		**Pn**	**19 37 47.1**	**+1.3**	
KELR				*e*Pg		**Pg**	**19 37 53.2**	**-3.4**	
KELR				Pmax			19 38 00.8		
	comp=N,160nm,0.2s								
KELR				*e*Sn		**Sn**	**19 38 25.1**	**+1.5**	
KELR				*e*Sg		**Sg**	**19 38 34.9**	**-2.7**	
KELR				Smax			19 38 41.0		
	comp=N,2μm,1.1s								
NLYR	**Nelyaty**	**3.19**	**73**	*e*PN		**Pn**	**19 37 47.1**	**+0.9**	
NLYR				*e*			19 37 52.5		
NLYR				*e*S		**Sn**	**19 38 22.6**	**-1.6**	
NLYR				*e*			19 38 34.4		
NLYR	**Nelyaty**	**3.19**	**73**	*e*Pn		**Pn**	**19 37 46.8**	**+0.6**	
NLYR				*e*			19 37 53.0		
NLYR				*e*Sg		**Sg**	**19 38 35.3**	**-3.1**	
ZRHB	**Zarechye**	**3.59**	**211**	*e*Pn		**Pn**	**19 37 55.0**	**+3.2**	
ZRHB				*e*Pg		**Pg**	**19 38 02.6**	**-2.3**	
ZRHB				Pmax			19 38 06.4		
	comp=N,446nm,0.6s								
ZRHB				*e*Sg		**Sg**	**19 38 49.7**	**-1.7**	
ZRHB				Smax			19 39 01.9		
	comp=N,4μm,1.5s								
TRG	**Tyrgan**	**3.69**	**220**	⇑*i*PN		**Pn**	**19 37 55.0**	**+2.0**	
TRG				*e*			19 38 03.4		
TRG				*e*S		**Sn**	**19 38 37.6**	**+1.2**	
TRG				*e*			19 38 50.1		
TRG				pmax	pmax				
	comp=Z,175nm,1.0s								
TRG				smax					
	comp=N,594nm,0.8s								
TRG	**Tyrgan**	**3.69**	**220**	⇑*i*Pn		**Pn**	**19 37 54.9**	**+1.9**	
TRG				*e*Pg		**Pg**	**19 38 02.5**	**-4.1**	
TRG				Pmax			19 38 07.9		
	comp=N,185nm,1.2s								
TRG				*e*Sn		**Sn**	**19 38 35.7**	**-0.7**	
TRG				*e*Sg		**Sg**	**19 38 49.8**	**-4.5**	
TRG				Smax			19 38 57.0		
	comp=N,651nm,1.1s								
CIT	**Chita**	**4.15**	**150**	*e*PN		**Pn**	**19 38 00.0**	**+0.6**	
CIT				*e*			19 38 11.3		
CIT				*e*			19 39 03.1		
CIT				pmax	pmax				
	comp=Z,389nm,1.6s								
CIT				smax					
	comp=N,805nm,1.3s								
CIT	**Chita**	**4.15**	**150**	*e*Pn		**Pn**	**19 37 59.9**	**+0.5**	
CIT				⇑*i*Pg		**Pg**	**19 38 10.3**	**-5.1**	
CIT				Pmax			19 38 12.0		
	comp=N,390nm,1.2s								
CIT				*e*Sg		**Sg**	**19 39 03.9**	**-5.2**	
CIT				Smax			19 39 15.0		
	comp=N,805nm,1.4s								
FFNB	**Fofonovo**	**4.16**	**211**	*e*		**Pb**	**19 38 09.5**	**+0.3**	
FFNB				*e*			19 38 49.6		
FFNB				*e*Sg		**Sg**	**19 39 03.9**	**-5.5**	
FFNB				Smax			19 39 10.5		
	comp=N,789nm,1.0s								
CRS	**Chara**	**4.66**	**71**	*e*PN		**Pn**	**19 38 08.1**	**+1.7**	
CRS				*e*			19 38 20.9		
CRS				*e*			19 39 21.2		
CRS				pmax	pmax				
	comp=Z,251nm,0.9s								
CRS				smax					
	comp=E,1μm,1.1s								
CRS	**Chara**	**4.66**	**71**	*e*PN		**Pn**	**19 38 08.8**	**+1.4**	
CRS				*e*Pg		**Pg**	**19 38 20.8**	**-4.4**	
CRS				Pmax			19 38 28.9		
	comp=E,249nm,0.7s								
CRS				*e*Sg		**Sg**	**19 39 20.9**	**-4.6**	
CRS				Smax			19 39 27.4		
	comp=E,1μm,1.0s								
IRK	**Irkutsk**	**4.90**	**228**	*e*PN		**Pn**	**19 38 10.4**	**+0.7**	
IRK				*e*			19 38 23.4		
IRK				*e*S		**Sn**	**19 39 05.1**	**-1.3**	
IRK				*e*			19 39 28.2		
IRK				pmax	pmax				
	comp=Z,171nm,0.5s								
IRK				smax					
	comp=N,1μm,0.8s								
LSTR	**Listvyanka**	**4.96**	**222**	⇑*i*Pn		**Pn**	**19 38 11.4**	**+0.9**	
LSTR				*e*			19 38 26.4		
LSTR				max			19 38 28.9		
	comp=N,68nm,0.8s								
LSTR				*e*Sg		**Sg**	**19 39 28.3**	**-6.9**	
LSTR				Smax			19 39 32.6		
	comp=N,932nm,1.0s								
TLY	**Talaya**	**5.58**	**227**	*e*Pn		**Pn**	**19 38 19.2**	**+0.2**	
	comp=N,55nm,0.6s								
TLY				*e*Pg		**Pg**	**19 38 35.2**	**-7.6**	
TLY				*e*Sn		**Sn**	**19 39 21.1**	**-2.0**	
TLY				*e*Sg		**Sg**	**19 39 49.1**	**-5.9**	
TLY	**Talaya**	**5.58**	**227**	*e*PN		**Pn**	**19 38 19.1**	**+0.1**	
TLY				*e*			19 38 35.8		
TLY				*e*S		**Sn**	**19 39 22.4**	**-0.7**	
TLY				*e*			19 39 48.1		
TLY				pmax	pmax				
	comp=Z,76nm,1.0s								
TLY				smax					
	comp=E,491nm,1.0s								
TLY	**Talaya**	**5.58**	**227**	*e*Pn		**Pn**	**19 38 19.8**	**+0.8**	
TLY				*e*Pg		**Pg**	**19 38 36.1**	**-6.7**	
TLY				Pmax			19 38 39.3		
	comp=E,76nm,0.8s								
TLY				*e*Sn		**Sn**	**19 39 21.9**	**-1.2**	
TLY				*e*Sg		**Sg**	**19 39 48.2**	**-6.8**	
TLY				Smax			19 39 54.0		
	comp=E,485nm,1.1s								
TUP	**Tupik**	**5.74**	**98**	*e*PN		**Pn**	**19 38 21.7**	**+0.5**	
TUP				*e*			19 38 39.4		
TUP				*e*S		**Sn**	**19 39 25.8**	**-1.2**	
TUP				*e*			19 39 54.8		
TUP				smax					
	comp=N,541nm,1.4s								
TUP	**Tupik**	**5.74**	**98**	*e*Pn		**Pn**	**19 38 22.2**	**+1.0**	
TUP				*e*Pg		**Pg**	**19 38 41.0**	**-4.8**	
TUP				Pmax			19 38 47.8		
	comp=N,98nm,1.8s								
TUP				*e*			19 39 25.2		
TUP				*e*Sg		**Sg**	**19 39 55.2**	**-4.9**	
TUP				Smax			19 40 14.3		
	comp=N,686nm,1.5s								
ARS	**Arshan**	**5.94**	**234**	*e*PN		**Pn**	**19 38 24.9**	**+0.9**	
ARS				*e*S		**Sg**	**19 39 58.9**	**-7.8**	
ARS				smax					
	comp=E,1μm,0.8s								
ARS	**Arshan**	**5.94**	**234**	⇑*i*Pn		**Pn**	**19 38 24.8**	**+0.8**	
ARS				*e*			19 38 45.6		
ARS				*e*			19 39 28.2		
ARS				*e*Sg		**Sg**	**19 39 59.1**	**-7.6**	
ARS				Smax			19 40 29.8		
	comp=E,1μm,0.9s								
KPC	**Khapcheranga**	**6.11**	**167**	*e*PN		**Pn**	**19 38 28.0**	**+1.7**	
KPC				*e*			19 38 48.0		
KPC				*e*			19 40 07.7		
KPC				pmax	pmax				
	comp=Z,74nm,0.9s								
KPC				smax					
	comp=E,458nm,1.4s								
KPC	**Khapcheranga**	**6.11**	**167**	*e*Pn		**Pn**	**19 38 27.5**	**+1.2**	
KPC				*e*Pg		**Pg**	**19 38 47.6**	**-5.4**	
KPC				Pmax			19 38 48.7		
	comp=E,74nm,0.6s								
KPC				*e*Sg		**Sg**	**19 40 07.0**	**-5.0**	
KPC				Smax			19 40 09.6		
	comp=E,471nm,1.3s								
ZAK	**Zakamensk**	**6.74**	**221**	*e*PN		**Pn**	**19 38 36.6**	**+1.7**	
ZAK				*e*			19 38 57.9		
ZAK				*e*S		**Sn**	**19 39 51.6**	**0.0**	
ZAK				*e*			19 40 24.9		
ZAK				pmax	pmax				
	comp=Z,22nm,0.7s								
ZAK				smax					
	comp=N,536nm,1.5s								
ZAK	**Zakamensk**	**6.74**	**221**	*e*Pn		**Pn**	**19 38 36.8**	**+1.9**	
ZAK				*e*			19 39 55.2		
ZAK				*e*Sg		**Sg**	**19 40 27.0**	**-5.1**	
ZAK				Smax			19 40 29.8		
	comp=N,536nm,1.4s								
MOY	**Mondy**	**6.78**	**238**	⇑*i*PN		**Pn**	**19 38 38.0**	**+2.5**	
MOY				*e*

comp=N,9.0nm,0.9s
YAK pmax pmax
comp=Z,13nm,0.9s
YAK pmax pmax
comp=E,14nm,0.8s
YAK pmax pmax
comp=N,309nm,1.1s
YAK pmax pmax
comp=Z,186nm,1.2s
YAK pmax pmax
comp=E,169nm,1.1s
YAK MLR MLR
comp=Z,100nm,5.0s
ZALV Zalesovo Beam 14.72 274 Pn **Pn** **19 40 24.1 +0.1**
comp=Z,0.2nm,0.3s,baz=69,slow=11,SNR=34
ZALV Lg 19 44 38.2
comp=Z,0.1nm,0.3s,baz=58,slow=28,SNR=3.2
ZAL Zalesovo 14.73 274 P **Pn** **19 40 24.2 0.0**
HHC Hu-ho-hao-te 14.85 176 *e*P **Pn** **19 40 29.3 +3.4**
HHC AP pP 19 40 32.5 -2.0
HHC XP sP 19 40 36.3 +0.5
HHC PP 19 40 41.3
HHC S **Sn** **19 43 16.3 +6.0**
HHC SS 19 43 34.0
HHC PCP PcP 19 45 38.0 +2.0
HHC SCS ScS 19 52 46.3 -1.0
HHC AMB AMB
comp=Z,12nm,1.1s
HHC AMB AMB
comp=Z,62nm,6.3s
HHC LR LR
comp=N,420nm,9.7s
HHC LR LR
comp=E,399nm,15.0s
HHC LR LR
comp=Z,476nm,8.7s
NVS Novosibirsk 15.37 278 *e*P **Pn** **19 40 32.4 -0.3**
NVS *e* 19 43 17.9
HABR Khabarovsk 16.82 105 P **Pn** **19 40 53.6 +2.2**
HABR 19 44 02.4
TIXI Tiksi 17.91 19 *i*P **Pn** **19 41 00.2 -4.6**
TIXI pmax pmax
comp=Z,27nm,0.9s
TIXI MLR MLR
comp=Z,133nm,8.0s
WMQ Urumqi 18.66 240 *e*P **Pn** **19 41 14.0 -0.2**
WMQ AP pP 19 41 18.0 +1.3
WMQ XP sP 19 41 21.0 +3.0
WMQ PP 19 41 30.0
WMQ S **Sn** **19 44 38.0 -4.8**
WMQ AMB AMB
comp=Z,2.0nm,0.6s
WMQ AMB AMB
comp=Z,104nm,4.5s
WMQ LR LR
comp=N,392nm,25.2s
WMQ LR LR
comp=E,389nm,24.4s
WMQ LR LR
comp=Z,220nm,17.0s
KURK Kurchatov 19.46 268 *e*P **Pn** **19 41 22.6 -1.2**
comp=Z,9.6nm,0.7s
KURK Kurchatov 19.46 268 *e*P **Pn** **19 41 22.6 -1.2**
KURK pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 19.49 255 P **Pn** **19 41 23.2 -1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR Makanchi Array 19.49 255 P **Pn** **19 41 23.1 -1.0**
comp=Z,0.8nm,0.3s,baz=58,slow=8.6,SNR=50
MA2 Magadan 21.82 63 *e*P **P** **19 41 49.6 +1.6**
comp=Z,2.7nm,0.6s,mb3.9
MA2 Magadan 21.82 63 *e*P **P** **19 41 49.6 +1.5**
MA2 pmax pmax
comp=Z,3.0nm,0.6s,mb3.9
SEY Seymchan 22.36 54 *i*P **P** **19 41 55.0 +1.2**
BRVK Borovoye 23.19 280 *e*P **P** **19 42 02.2 -0.5**
comp=Z,9.1nm,0.7s,mb4.3
BRVK Borovoye 23.19 280 *e*P **P** **19 42 02.2 -0.4**
BRVK pmax pmax
comp=Z,9.0nm,0.7s,mb4.3
NJ2 Nanjing 24.37 162 *e*P **P** **19 42 15.3 +1.2**
NJ2 AP 19 42 19.5
NJ2 XP sP 19 42 23.0 +4.6
NJ2 PP 19 42 49.0
NJ2 AMB AMB
comp=Z,20nm,0.8s,mb4.6
NJ2 AMB AMB
comp=Z,104nm,3.6s
NJ2 LR LR
comp=N,400nm,11.6s,MS4.2
NJ2 LR LR
comp=E,220nm,12.2s,MS4.2
NJ2 LR LR
comp=Z,270nm,14.2s,MS3.9
CD2 Chengdu 25.16 193 *e*P **P** **19 42 25.0 +3.8**
CD2 XP sP 19 42 31.5 +6.0
CD2 PP 19 43 03.0
CD2 S **S** **19 46 47.0 +1.0**
CD2 XS sS 19 46 53.8 +2.7
CD2 SS 19 47 47.3
CD2 AMB AMB
comp=Z,10.0nm,0.6s,mb4.5
CD2 AMB AMB
comp=Z,20nm,4.0s
CD2 LR LR
comp=N,120nm,12.2s,MS3.8
CD2 LR LR
comp=E,110nm,11.8s,MS3.8
CD2 LR LR
comp=Z,100nm,13.2s,MS3.5
EKS2 Erkin-Say 26.80 256 *e*P **P** **19 42 37.8 +1.8**
comp=Z,2.6nm,0.6s,mb3.9
KMI Kunming 30.99 193 P **P** **19 43 19.3 +5.9**
KMI AP pP 19 43 22.8 +6.3
KMI XP sP 19 43 24.5 +6.8
KMI AMB AMB
comp=Z,3.0nm,1.1s,mb4.0
JOF Joensuu 38.51 314 *e*p **P** **19 44 16.4 -1.6**
comp=Z,1.5nm,0.5s,mb4.0
JOF Joensuu 38.51 314 *e*P **P** **19 44 16.4 -1.6**
JOF pmax pmax
comp=Z,2.0nm,0.5s,mb4.1
KAF Kangasniemi 40.94 314 *e*p **P** **19 44 36.6 -1.5**
comp=Z,1.8nm,0.4s,mb4.0,baz=60,slow=7.8
KAF Kangasniemi 40.94 314 *e*P **P** **19 44 36.6 -1.5**
KAF pmax pmax
comp=Z,2.0nm,0.4s,mb4.1
FINES FINESS Array B 41.38 314 P **P** **19 44 41.4 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 41.38 314 P **P** **19 44 41.4 -0.4**
comp=Z,3.2nm,0.6s,mb4.2,baz=65,slow=9.7,SNR=29
IMA2 Indian Mountai 43.31 36 *e*P **P** **19 44 57.7 +0.3**
KIV Kislovodsk 43.42 284⇑ *e*P **P** **19 45 00.2 +1.6**
KIV pmax pmax
comp=Z,4.0nm,0.8s,mb4.2
KIV MLR MLR
comp=Z,100nm,23.0s,MS3.7
COLA College 45.97 36 *e*P **P** **19 45 20.5 +1.8**
comp=Z,6.1nm,0.9s,mb4.5
COLA College 45.97 36 *e*P **P** **19 45 20.5 +1.8**
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.5
AKASG Malin Array Be 46.19 299 P **P** **19 45 19.7 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 46.19 299 P **P** **19 45 19.7 -0.8**
comp=Z,1.7nm,0.5s,mb4.2,baz=45,slow=8.7,SNR=19
HFS Hagfors 47.07 317 P **P** **19 45 26.7 -0.7**
HFS pmax pmax
comp=Z,4.0nm,0.6s
HFS Hagfors 47.07 317 P **P** **19 45 26.7 -0.6**
comp=Z,4.3nm,0.6s,mb4.5,baz=60,slow=8.9,SNR=17
NB2 NORSAR Subarra 47.42 319 P **P** **19 45 29.3 -0.8**
comp=Z,2.8nm,0.7s,mb4.3,baz=46,slow=7.4
NB2 NORSAR Subarra 47.42 319 P **P** **19 45 29.3 -0.8**
NB2 pmax pmax
comp=Z,3.0nm,0.7s,mb4.3
NOA NORSAR Array B 47.42 319 P **P** **19 45 29.7 -0.4**
NOA pmax pmax
comp=Z,3.0nm,0.8s
NOA NORSAR Array B 47.42 319 P **P** **19 45 29.6 -0.4**
comp=Z,3.2nm,0.8s,mb4.3,baz=47,slow=7.3,SNR=14
INK Inuvik 47.81 27 *e*P **P** **19 45 32.9 -0.1**
INK Inuvik 47.81 27 P **P** **19 45 33.1 +0.1**
INK pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 47.81 27 P **P** **19 45 33.0 +0.1**
comp=Z,1.5nm,0.9s,mb4.0,baz=321,slow=8.8,SNR=8.6
BRG Berggiesshubel 53.26 308 *e*P **P** **19 46 14.8 +0.4**
BRG pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
BRG Berggiesshubel 53.26 308 *e*P **P** **19 46 14.8 +0.4**
comp=Z,2.8nm,0.8s,mb4.3
CLL Collm 53.36 309 *i*P **P** **19 46 14.2 -0.9**
comp=Z,4.0nm,1.1s,mb4.3
GERES GERESS Array B 54.82 307 P **P** **19 46 25.1 -0.7**
GERES pmax pmax
comp=Z,1.0nm,0.8s
GERES GERESS Array B 54.82 307 P **P** **19 46 25.1 -0.8**
comp=Z,0.9nm,0.8s,mb3.9,baz=20,slow=5.0,SNR=4.4
EKA Eskdalemuir Ar 56.79 321 P **P** **19 46 39.7 -0.1**
EKA pmax pmax
comp=Z,2.0nm,0.6s
EKA Eskdalemuir Ar 56.79 321 P **P** **19 46 39.6 -0.2**
comp=Z,1.7nm,0.6s,mb4.2,baz=45,slow=6.5,SNR=6.7
YKA Yellowknife Ar 57.11 23 P **P** **19 46 41.1 -0.9**
YKA pmax pmax
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 57.11 23 P **P** **19 46 41.1 -0.9**
comp=Z,1.2nm,0.6s,mb4.1,baz=332,slow=7.1,SNR=23
ESDC Sonseca Array 69.83 311 P **P** **19 48 05.8 -0.6**
comp=Z,1.5nm,0.8s,mb4.0,baz=23,slow=8.1,SNR=4.4
MDT Midelt 75.88 308 P **P** **19 48 40.4 -2.0**
comp=Z,1.4nm,0.7s,mb4.0,baz=37,slow=6.0,SNR=3.5
PDAR Pinedale Array 76.31 29 P **P** **19 48 45.1 +0.4**
comp=Z,0.3nm,0.6s,mb3.4,baz=50,slow=2.3,SNR=2.9
NVAR Mina Array Bea 77.58 37 P **P** **19 48 53.0 +1.1**
comp=Z,0.7nm,0.6s,mb3.8,baz=351,slow=3.4,SNR=5.9
WRA Warramunga Arr 78.04 157 P **P** **19 48 54.7 +0.2**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 78.04 157 P **P** **19 48 54.7 +0.2**
comp=Z,1.2nm,0.7s,mb3.9,baz=348,slow=5.8,SNR=5.9
KMBO Kilima Mbogo 81.38 255 P **P** **19 49 12.4 -0.5**
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO Kilima Mbogo 81.38 255 P **P** **19 49 12.4 -0.5**
comp=Z,0.8nm,0.2s,mb4.2,baz=72,slow=16,SNR=6.6
ASAR Alice Springs 81.55 158 P **P** **19 49 14.1 +0.6**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 81.55 158 P **P** **19 49 14.1 +0.6**
comp=Z,0.8nm,0.8s,mb3.7,baz=358,slow=5.9,SNR=8.8
TORD Torodi Ar. Bea 89.38 293 P **P** **19 49 52.0 -0.9**
comp=Z,0.9nm,0.7s,mb4.2,baz=34,slow=4.6,SNR=5.7
SNAA Sanae 148.41 214 *e*PKPdf PKPbc 19 56 41.6 +0.6
SNAA *e* 19 56 44.8
SNAA *e* 19 56 46.9
SNAA *e* 19 56 51.9
SNAA Sanae 148.41 214 PKP2 PKPbc 19 56 40.1 -0.9
SNAA pmax pmax
comp=Z,1.0nm,1.1s
SNAA Sanae 148.41 214 PKPbc PKPbc 19 56 40.1 -0.9
comp=Z,1.2nm,1.1s,baz=26,slow=10,SNR=3.6
VNA2 Neumayer--Watz 149.82 215 *e*PKPdf PKPbc 19 56 45.8 +1.3
baz=21,slow=1.7
VNA2 *e* 19 56 49.6
VNA2 *e* 19 56 51.6
VNA2 *e* 19 56 57.4
VNA2 *e* 19 56 59.7
VNA1 Neumayer--Stat 150.10 216 *e*PKPdf PKPbc 19 56 46.6 +1.4
VNA1 *e* 19 56 50.4
VNA1 *e* 19 56 51.8
VNA1 *e* 19 56 57.6
VNA3 Neumayer Olymp 150.57 215 *e*PKPdf PKPbc 19 56 47.3 +1.0
VNA3 *e* 19 56 51.0
VNA3 *e* 19 56 53.2
VNA3 *e* 19 56 58.2
VNA3 *e* 19 57 01.4

*ATH **30** 19:40:47.4, 38.19N×2029E, h8km±1km, MD3.3/5*
*NEIC **30** 19:40:47.4, 38.19N×2028E, h8km, MD3.3(ATH), ML2.9(THE), After ATH.*
*ISCJB **30** 19:40:49.4±0.8, 3834N±003×2052E±006, h8km, Error ellipse: s-maj=7.2km s-min=3.9km az=164.7*
*CSEM **30** 19:40:49.1±0.1, 3834N×2045E, h2km, MD3.3, Error ellipse: s-maj=2.6km s-min=1.3km az=77.0*
*THE **30** 19:40:50.0, 3834N×2051E, h3km, ML2.9*
ISC 30 19:40:49.0±1.0, 3831N±004×2044E±007, h3km±8km, n13, σ1§08/18, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**138**	*i*P	G	**Pg**		**19 40 52.8**	**+0.4**
VLS				*e*S	G	**Sg**		**19 40 56.3**	**+1.6**
KFL	**Anninata**	**0.34**	**126**	*e*Pg		**Pg**		**19 40 55.8**	**+0.3**
LKD	**Levkas**	**0.43**	**22**	*e*Pg		**Pg**		**19 40 56.8**	**-0.5**
LKD				*e*Sg		**Sg**		**19 41 03.3**	**+0.4**
RLS	**Riolos of Patr**	**0.85**	**107**	*e*PG		**Pg**		**19 41 05.0**	**-0.2**
SELA	**Sela**	**1.14**	**91**	*e*Pg		**Pg**		**19 41 10.1**	**-0.8**
SELA				*e*Sg		**Sg**		**19 41 25.6**	**-0.2**
IGT	**Igoumenitsa**	**1.23**	**356**	*e*Pg		**Pg**		**19 41 11.2**	**-1.3**
IGT				*e*Sg		**Sg**		**19 41 30.8**	**+2.4**
EVR	**Evrytania**	**1.23**	**60**	*e*PB		**Pb**		**19 41 13.7**	**+0.8**
KEK	**Kerkira**	**1.49**	**341**	*e*PB		**Pb**		**19 41 16.8**	**-0.5**
ITM	**Ithomi**	**1.63**	**133**	*e*PB		**Pb**		**19 41 18.3**	**-1.4**
AGG	**Agios Georgios**	**1.64**	**64**	*e*Pg		**Pg**		**19 41 19.3**	**-1.2**
AGG				*e*Sg		**Sg**		**19 41 41.0**	**-0.7**
PYL	**PYLOS**	**1.75**	**143**	*e*Pb		**Pb**		**19 41 20.7**	**-1.1**
THL	**Klokotos Trika**	**1.76**	**44**	*e*PN		**Pn**		**19 41 22.5**	**+2.2**
VLX	**Vlachokerasia**	**1.80**	**121**	*e*Sb		**Sb**		**19 41 46.4**	**+0.9**

*ISK **30** 19:45:04.5, 3798N×3094E, h2km, MD2.9*
*NEIC **30** 19:45:04.4, 3796N×3094E, h5km, MD3.0(ISK), After ISK.*
*ISCJB **30** 19:45:05.3±0.5, 3798N±004×3096E±004, h2km, Error ellipse: s-maj=5.2km s-min=4.0km az=157.1*
*DDA **30** 19:45:07.4, 38.11N×3090E, h7km±4km, Md2.7*
ISC 30 19:45:05.9±0.7, 3801N±004×3093E±004, h6km±6km, n21, σ0§98/27, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.37**	**244**	PG		**Pg**		**19 45 12.2**	**-0.9**
ISP				SG		**Sg**		**19 45 18.3**	**+0.3**
ISP	**Isparta**	**0.37**	**244**	Pg		**Pg**		**19 45 12.4**	**-0.7**
ISP				Sg		**Sg**		**19 45 18.4**	**+0.4**
BCK	**Bucak**	**0.61**	**207**	PG		**Pg**		**19 45 17.0**	**-0.6**
BCK	**Bucak**	**0.61**	**207**	Pg		**Pg**		**19 45 16.8**	**-0.8**
SHUT	**Suhut-Afyon**	**0.62**	**331**	PG		**Pg**		**19 45 18.6**	**+0.7**
KDHN	**Kadinhani**	**1.06**	**61**	*i*P		**Pg**		**19 45 25.9**	**-0.4**
KDHN				*i*S		**Sg**		**19 45 40.9**	**+0.8**
KONT	**Konya--Tatoy**	**1.13**	**93**	PN		**Pn**		**19 45 26.1**	**-2.2**
KONT	**Konya--Tatoy**	**1.13**	**93**	Pn		**Pn**		**19 45 27.0**	**-1.3**
KIZT	**Kizilcal**	**1.14**	**40**	PN		**Pn**		**19 45 27.9**	**-0.6**
KIZT	**Kizilcal**	**1.14**	**40**	Pn		**Pn**		**19 45 28.2**	**-0.3**
KHL	**Karahalli**	**1.16**	**286**	PN		**Pn**		**19 45 27.1**	**-1.5**
KHL	**Karahalli**	**1.16**	**286**	Pn		**Pn**		**19 45 27.6**	**-1.0**
GOLH	**Golhisar**	**1.33**	**235**	*i*P		**Pn**		**19 45 30.8**	**-0.3**
GOLH				*i*S		**Sb**		**19 45 50.8**	**+2.1**
ELL	**Elmali**	**1.50**	**213**	*e*PN		**Pn**		**19 45 33.4**	**0.0**
ELL	**Elmali**	**1.50**	**213**	Pn		**Pn**		**19 45 33.5**	**+0.1**
ESKT	**Eskisehir**	**1.51**	**358**	*i*P		**Pn**		**19 45 32.6**	**-0.9**
ESKT				*i*S		**Sn**		**19 45 56.2**	**+2.6**
KULA	**Kula-Manisa**	**1.86**	**286**	*e*PN		**Pn**		**19 45 37.8**	**-0.5**
FETY	**Fethiye**	**2.01**	**228**	*e*PN		**Pn**		**19 45 40.9**	**+0.5**
FETY	**Fethiye**	**2.01**	**228**	Pn		**Pn**		**19 45 40.5**	**0.0**
ERMK	**Ermenek**	**2.09**	**130**	*e*P		**Pn**		**19 45 41.2**	**-0.2**
ERMK				*i*S		**Sg**		**19 46 13.7**	**+0.9**
IKL	**Isikli**	**2.82**	**128**	*e*PN		**Pn**		**19 45 52.1**	**+0.6**

*IDC **30** 19:48:57.8±0.6, 2.11N×9688E, h0km, mb4.4/21, mb1 4.5/21, mb1mx4.4/28, mbtmp4.4/21, MS4.3/14, Ms1 4.3/14, ms1mx4.0/32, Error ellipse: s-maj=20.5km s-min=13.0km az=41.0*
*ISCJB **30** 19:49:00.3±0.3, 199N±005×9668E±003, h30km, mb4.7/78, MS4.4/32, Error ellipse: s-maj=6.8km s-min=4.0km az=22.0*
*BJI **30** 19:49:00.9, 186N×9668E, h44km, mB5.1, mb4.8, Ms4.6, Msz4.3*
*MOS **30** 19:49:01.3±0.9, 207N×9671E, h39km, mb5.0/25, MS4.2/5, Error ellipse: s-maj=11.7km s-min=7.1km az=97.2*
*NEIC **30** 19:49:02.4±0.4, 207N×9677E, h30km, mb4.7/22, Error ellipse: s-maj=10.0km s-min=6.0km az=217.0*
ISC 30 19:49:02.8±0.3, 201N±004×9669E±003, h32km, h32km±8km: pP-P, n170, σ1§05/176, mb4.7/78, MS4.4/32, 7C-11D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.37**	**71**	P		**Pn**		**19 49 38.7**	**-0.7**
PSI								19 50 08.9	
PSI	**Prapat**	**2.37**	**71**	Pn		**Pn**		**19 49 38.6**	**-0.8**
	12nm,0.3s,baz=261,slow=9.9,SNR=60								
PSI				Sn		**Sn**		**19 50 08.8**	**+1.4**
	25nm,0.3s,baz=102,slow=21,SNR=5.6								
PSI				LR		LR		19 50 19.6	
	comp=Z,2μm,21.3s,baz=285,slow=38								
TSI	**Tuntungan**	**2.39**	**52**	P		**Pn**		**19 49 39.4**	**-0.3**
	1μm,0.8s								
TSI	**Tuntungan**	**2.39**	**52⇑**	*e*P		**Pn**		**19 49 34.9**	**-4.8**
TSI				*e*S		**Sn**		**19 49 57.4**	**-11**
PPI	**Padang Panjang**	**4.45**	**123**	P		**Pn**		**19 50 17.2**	**+9.2**
	102nm,0.8s								
FRIM	**Kepong**	**5.08**	**76**	⇓P		**Pn**		**19 50 18.1**	**+1.4**
KULM	**Kulim**	**5.12**	**50**	*e*Pn		**Pn**		**19 50 16.3**	**-1.1**
KULM	**Kulim**	**5.12**	**50**	⇑P		**Pn**		**19 50 17.3**	**0.0**
SNG	**Songkhla**	**6.46**	**37**	P		**Pn**		**19 50 36.0**	**+0.4**
	376nm,1.0s								
KGM	**Kluang**	**6.63**	**90**	⇓P		**Pn**		**19 50 39.1**	**+1.0**
MYKOM	**Kota Tinggi**	**7.17**	**92**	⇓P		**Pn**		**19 50 46.6**	**+1.2**
KTGM	**Kuala Trenggan**	**7.23**	**63**	⇓P		**Pn**		**19 50 47.1**	**+0.9**
KSI	**Kapahiang**	**8.15**	**134**	P		**Pn**		**19 51 03.6**	**+4.6**
	106nm,0.9s								
TPI	**Tanjungpandan**	**11.94**	**113**	P		**Pn**		**19 51 52.0**	**+1.1**
	45nm,1.4s								
KSM	**Kuching**	**13.63**	**92**	*e*Pn		**Pn**		**19 52 14.7**	**+0.7**
KSM	**Kuching**	**13.63**	**92**	⇑P		**Pn**		**19 52 15.6**	**+1.7**
SBUM	**Sibu**	**15.53**	**88**	⇓P		**Pn**		**19 52 40.6**	**+1.1**
BTM	**Bintulu**	**16.42**	**86**	⇓P		**Pn**		**19 52 53.8**	**+2.8**
CHG	**Chiang Mai**	**16.84**	**7**	⇓P		**Pn**		**19 52 55.2**	**-1.1**
	32nm,0.8s								
CHTO	**Chiang Mai**	**16.84**	**7**	*e*P		**Pn**		**19 52 54.5**	**-1.8**
	12nm,0.8s								
CHTO	**Chiang Mai**	**16.84**	**7**	*e*P		**Pn**		**19 52 54.5**	**-1.8**
CHTO				pmax	pmax				
	comp=Z,12nm,0.8s								
KMMI	**Kalianget**	**19.45**	**118**	P		**Pn**		**19 53 28.7**	**+0.4**
	comp=Z,44nm,1.1s								
KKM	**Kota Kinabalu**	**19.89**	**78**	*e*P		**Pn**		**19 53 30.3**	**-3.1**
KKM	**Kota Kinabalu**	**19.89**	**78**	⇑P		**Pn**		**19 53 33.0**	**-0.4**
VIS	**Vishakhapatnam**	**20.39**	**321**	*e*P		**P**		**19 53 38.7**	**+1.7**
VIS				AMb		AMB		19 53 42.8	
	comp=Z,31nm,0.7s								
VIS				*i*S		**S**		**19 57 13.2**	**-11**
KDM	**Kudat**	**20.66**	**76**	⇑P		**P**		**19 53 42.8**	**+2.6**
SDKM	**Sandakan**	**20.78**	**79**	⇓P		**P**		**19 53 41.9**	**+0.6**
QIZ	**Qiongzhong**	**21.26**	**36**	P		**P**		**19 53 45.8**	**-0.7**
QIZ				S		**S**		**19 57 41.8**	**+0.6**
QIZ				LR		LR			
	comp=E,753nm,18.8s								
QIZ				LR		LR			
	comp=Z,744nm,18.9s,MS4.1								
TSM	**Tawau**	**21.28**	**83**	⇓P		**P**		**19 53 46.7**	**0.0**
CAL	**Calcutta**	**21.96**	**339**	*ex*		x		19 51 57.7	
PCI	**Palu**	**23.33**	**97**	P		**P**		**19 54 14.7**	**+6.1**
	comp=Z,63nm,1.2s,mb4.9								
HYB	**Hyderabad**	**23.49**	**312**	*i*P		**P**		**19 54 18.0**	**+7.9**
KMI	**Kunming**	**23.71**	**14**	P		**P**		**19 54 12.8**	**+0.8**
KMI				AP				19 54 21.0	
KMI				XP		sP		19 54 25.3	+0.1
KMI				PP				19 54 46.8	
KMI				S		**S**		**19 58 25.5**	**+0.5**
KMI				XS		sS		19 58 38.3	-1.9
KMI				SS				19 59 15.5	
KMI				AMB		AMB			
	comp=Z,16nm,1.0s,mb4.4								
KMI				AMB		AMB			
	comp=Z,223nm,3.1s								
KMI				LR		LR			
	comp=N,612nm,15.5s,MS4.4								
KMI				LR		LR			
	comp=E,864nm,16.5s,MS4.4								
KMI				LR		LR			
	comp=Z,703nm,14.3s,MS4.3								
SHL	**Shillong**	**23.87**	**349**	*e*P		**P**		**19 54 12.0**	**-1.5**
SHL				*i*S		**S**		**19 58 28.0**	**+0.4**
BOK	**Bokaro**	**24.05**	**335**	*e*P		**P**		**19 54 15.2**	**+0.1**
BOK				AMb		AMB		19 54 18.1	
	comp=Z,49nm,0.9s,mb4.9								
BLSP	**Bilaspur**	**24.50**	**326**	*e*P		**P**		**19 54 20.9**	**+1.7**
BLSP				AMb		AMB		19 54 23.1	
	comp=Z,11nm,0.6s,mb4.4								
GYA	**Guiyang**	**26.13**	**21**	P		**P**		**19 54 35.3**	**+1.3**
GYA				AP		pP		19 54 44.5	+1.2
GYA				XP		sP		19 54 48.0	+0.8
GYA				PP				19 55 18.8	
GYA				PCP		PcP		19 58 03.0	+1.9
GYA				S		**S**		**19 59 04.3**	**+0.6**
GYA				XS		sS		19 59 18.5	-0.5
GYA				SS				20 00 12.5	
GYA				SCP		ScP		20 01 29.0	-10
GYA				AMB		AMB			
	comp=Z,10.0nm,0.8s,mb4.4								
GYA				AMB		AMB			
	comp=Z,110nm,4.9s								
GYA				LR		LR			
	comp=N,460nm,18.3s,MS4.3								
GYA				LR		LR			
	comp=E,670nm,17.7s,MS4.3								
GYA				LR		LR			
	comp=Z,790nm,15.0s,MS4.4								
ODAN	**Odare**	**26.27**	**341**	*e*P		**P**		**19 54 35.3**	**0.0**
	comp=Z,84nm,0.9s,mb5.3								
TAPN	**Taplejung**	**26.62**	**342**	*e*P		**P**		**19 54 38.8**	**+0.3**
	comp=Z,53nm,0.7s,mb5.2								
KAD	**Karad**	**26.83**	**306**	*e*P		**P**		**19 54 40.7**	**+0.2**
KAD				AMb		AMB		19 54 53.4	
	comp=Z,13nm,1.3s,mb4.3								
JIRN	**Jiri**	**27.41**	**339**	*e*P		**P**		**19 54 46.2**	**+0.6**
	comp=Z,41nm,0.6s,mb5.1								
POO	**Poona**	**27.76**	**308**	*e*P		**P**		**19 54 48.9**	**+0.1**
POO				AMb		AMB		19 55 05.3	
	comp=Z,21nm,2.2s,mb4.4								
KKN	**Kakani**	**27.86**	**338**	*e*P		**P**		**19 54 50.1**	**+0.5**
	comp=Z,28nm,0.6s,mb5.1								
LSA	**Lhasa**	**28.04**	**350**	P		**P**		**19 54 51.3**	**+0.2**
LSA				AP		pP		19 54 59.0	-1.4
LSA				XP		sP		19 55 04.3	0.0
LSA				AMB		AMB			
	comp=Z,20nm,0.9s,mb4.8								
LSA				LR		LR			
	comp=E,410nm,18.7s								
LSA				LR		LR			
	comp=Z,540nm,20.1s,MS4.1								
LSA	**Lhasa**	**28.04**	**350**	*e*P		**P**		**19 54 51.1**	**0.0**
	comp=Z,12nm,0.6s,mb4.7								
LSA	**Lhasa**	**28.04**	**350**	*e*P		**P**		**19 54 51.2**	**+0.1**
LSA				pmax	pmax				
	comp=Z,11nm,0.6s,mb4.7								
BHPL	**Bhopal**	**28.18**	**320**	*e*P		**P**		**19 54 54.7**	**+2.2**
GKN	**Gorkha**	**28.30**	**337**	*e*P		**P**		**19 54 53.5**	**0.0**
	comp=Z,25nm,0.5s,mb5.1								
KOLN	**Koldanda**	**28.51**	**335**	*e*P		**P**		**19 54 55.6**	**+0.2**
	comp=Z,46nm,0.8s,mb5.3								
BATI	**Kupang**	**29.47**	**115**	P		**P**		**19 55 02.1**	**-2.0**
	comp=Z,4.4nm,0.4s,mb4.5,baz=355,slow=2.3,SNR=4.3								
CD2	**Chengdu**	**29.51**	**12**	P		**P**		**19 55 04.8**	**+0.6**
CD2				AP		pP		19 55 15.0	+1.4
CD2				XP		sP		19 55 19.0	+1.5
CD2				PP		PP		19 56 01.5	-10
CD2				S		**S**		**19 59 56.8**	**-0.1**
CD2				XS		sS		20 00 12.0	-0.3
CD2				SS		SS		20 01 31.0	-32
CD2				AMB		AMB			
	comp=Z,20nm,0.5s,mb5.1								
CD2				AMB		AMB			
	comp=Z,210nm,4.5s								
CD2				LR		LR			
	comp=N,1μm,18.6s,MS4.8								
CD2				LR		LR			
	comp=E,1μm,18.5s,MS4.8								
CD2				LR		LR			
	comp=Z,560nm,16.8s,MS4.3								
QZH	**Quanzhou**	**31.09**	**41**	*e*P		**P**		**19 55 20.3**	**+2.0**
QZH				*e*S		**S**		**20 00 26.0**	**+4.2**
QZH				LR		LR			

comp=N,2µm,16.2s,MS5.0
QZH LR LR
comp=E,1µm,13.9s,MS5.0
QZH LR LR
comp=E,2µm,14.8s,MS4.8
XAN Xi'an 33.85 18 P **P 19 55 40.8 -1.6**
XAN AMB AMB
comp=Z,9.0nm,0.6s,mb4.9
XAN LR LR
comp=N,818nm,20.9s
XAN LR LR
comp=Z,434nm,17.6s,MS4.2
LZH Lanzhou 34.55 10 *e*P **P 19 55 48.0 -0.4**
LZH AP pP 19 55 56.0 -1.8
LZH AMB AMB
comp=Z,25nm,1.1s,mb5.1
LZH AMB AMB
comp=Z,113nm,4.4s
FITZ Fitzroy Crossi 34.82 126 *e*P **P 19 55 50.1 -0.8**
comp=Z,4.8nm,0.6s,mb4.6
FITZ Fitzroy Crossi 34.82 126 P **P 19 55 49.5 -1.4**
comp=Z,2.9nm,0.8s,mb4.3,baz=314,slow=4.1,SNR=6.3
THN Thein Dam 36.12 329 *e*P **P 19 56 01.4 -0.6**
NJ2 Nanjing 36.45 33 *e*P **P 19 56 05.5 +0.7**
NJ2 AP pP 19 56 15.5 +1.3
NJ2 XP sP 19 56 19.0 +0.9
NJ2 PP PP 19 57 29.0 +0.8
NJ2 S **S 20 01 42.0 -2.7**
NJ2 XS sS 20 01 59.0 -1.2
NJ2 AMB AMB
comp=Z,20nm,0.5s,mb5.3
NJ2 AMB AMB
comp=Z,564nm,3.8s
NJ2 LR LR
comp=N,450nm,17.4s,MS4.4
NJ2 LR LR
comp=E,260nm,16.6s,MS4.4
NJ2 LR LR
comp=Z,230nm,18.2s,MS4.0
SSE Sheshan 37.06 36 *e*P **P 19 56 10.0 0.0**
SSE XP sP 19 56 22.3 -1.0
SSE S **S 20 01 53.5 -0.4**
SSE XS sS 20 02 08.8 -0.7
SSE AMB AMB
comp=Z,20nm,0.7s,mb5.1
SSE AMB AMB
comp=Z,56nm,4.5s
SSE LR LR
comp=N,765nm,19.4s,MS4.6
SSE LR LR
comp=E,720nm,19.3s,MS4.6
SSE LR LR
comp=Z,1µm,17.1s,MS4.7
GTA Gaotai 37.33 4 *e*P **P 19 56 11.0 -1.2**
GTA AP pP 19 56 20.8 -0.8
GTA XP sP 19 56 25.0 -0.5
GTA PP PP 19 57 35.5 -2.2
GTA PCP PcP 19 58 30.3 -0.7
GTA S **S 20 01 56.3 -1.5**
GTA XS sS 20 02 17.8 +4.4
GTA SS SS 20 04 26.8 -16
GTA AMB AMB
comp=Z,27nm,1.0s,mb5.0
GTA AMB AMB
comp=Z,129nm,7.7s
GTA LR LR
comp=N,251nm,18.7s,MS4.2
GTA LR LR
comp=E,233nm,19.5s,MS4.2
GTA LR LR
comp=Z,407nm,19.5s,MS4.2
KAKA Kakadu 38.39 113 *e*P **P 19 56 20.0 -1.5**
comp=Z,10nm,0.9s,mb4.5
KAKA *e*pP pP 19 56 29.6 -1.3
JOW Kunigami 39.07 48 P **P 19 56 25.6 -1.4**
comp=Z,7.4nm,0.5s,mb4.7,baz=241,slow=8.1,SNR=10
HHC Hu-ho-hao-te 40.94 17 *e*P **P 19 56 42.3 0.0**
HHC AP pP 19 56 52.0 +0.2
HHC XP sP 19 56 56.3 +0.6
HHC PP PP 19 58 20.5 +3.4
HHC PCP PcP 19 58 43.0 +0.7
HHC SCP ScP 20 02 28.5 -1.4
HHC PCS PcS 20 02 32.5 -0.6
HHC S **S 20 02 53.0 +1.0**
HHC XS sS 20 03 08.5 +0.8
HHC SS SS 20 05 51.0 -3.6
HHC SCS ScS 20 06 43.0 -1.9
HHC AMB AMB
comp=Z,14nm,0.9s,mb4.6
HHC AMB AMB
comp=Z,235nm,5.6s
HHC LR LR
comp=N,337nm,21.0s,MS4.6
HHC LR LR
comp=E,786nm,20.2s,MS4.6
HHC LR LR
comp=Z,491nm,18.4s,MS4.4
KBL Kabul 41.37 325 *e*P **P 19 56 49.8 +3.9**
BJT Baijiatuau 41.77 23 *e*P **P 19 56 49.0 0.0**
comp=Z,22nm,0.8s,mb4.8
BJT *e* pP 19 56 58.5 -0.1
BJT Baijiatuau 41.77 23 *e*P **P 19 56 49.1 0.0**
BJT *e* pP 19 56 58.5 -0.1
BJT pmax pmax
comp=Z,22nm,0.8s
BJI Beijing 41.79 23 P **P 19 56 49.8 +0.5**
BJI AP pP 19 56 58.5 -0.3
BJI AMB AMB
comp=Z,21nm,1.0s,mb4.7
BJI AMB AMB
comp=Z,153nm,3.0s
BJI LR LR
comp=N,639nm,16.5s,MS4.6
BJI LR LR
comp=E,338nm,20.9s,MS4.6
BJI LR LR
comp=Z,307nm,16.8s,MS4.2
WMQ Urumqi 42.39 350 *e*P **P 19 56 55.3 +1.2**
WMQ AP pP 19 57 05.3 +1.6
WMQ XP sP 19 57 09.3 +1.8
WMQ PP PP 19 58 36.8 +4.0
WMQ PCP PcP 19 58 47.8 +0.8
WMQ S **S 20 03 20.0 +6.5**
WMQ XS sS 20 03 36.3 +7.1
WMQ AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
WMQ AMB AMB
comp=Z,205nm,4.9s
WMQ LR LR
comp=N,178nm,22.8s,MS4.3
WMQ LR LR
comp=E,397nm,23.5s,MS4.3
WMQ LR LR
comp=Z,227nm,22.1s,MS4.0
WRA Warramunga Arr 42.90 122 *i* P **P 19 56 57.9 -0.7**
WRA pmax pmax
comp=Z,10.0nm,0.7s
WRA Warramunga Arr 42.90 122 P **P 19 56 57.4 -1.3**
comp=Z,9.7nm,0.7s,mb4.6,baz=301,slow=9.2,SNR=71
WB2 Warramunga Arr 42.91 122 *e*P **P 19 56 58.1 -0.6**
FORT Forrest 44.22 140 *e*P pP 19 57 18.8 +0.1
comp=Z,17nm,0.6s
KZA Kyzart 44.29 337 P **P 19 57 10.2 +0.7**
SNR=7.5
ASAR Alice Springs 44.29 127 P **P 19 57 09.3 -0.5**
comp=Z,5.5nm,0.8s,mb4.3,baz=299,slow=8.0,SNR=58
JNU Nakatsue 44.55 42 P **P 19 57 10.3 -1.4**
comp=Z,9.4nm,0.8s,mb4.7,baz=150,slow=16,SNR=6.1
UCH Uchtor 44.70 337 *e*P **P 19 57 14.2 +1.4**
comp=Z,7.4nm,0.8s,mb4.6
UCH Uchtor 44.70 337 P **P 19 57 14.8 +2.0**
SNR=13
TKM2 Tokmak 2 44.88 338 *e*P **P 19 57 15.5 +1.3**
comp=Z,4.8nm,0.4s,mb4.7
TKM2 Tokmak 2 44.88 338 *e*P **P 19 57 15.5 +1.3**
TKM2 pmax pmax
comp=Z,5.0nm,0.4s,mb4.7
TKM2 Tokmak 2 44.88 338 P **P 19 57 15.6 +1.4**
SNR=8.6
KBK Karagaybulak 44.90 337 P **P 19 57 16.6 +2.3**
SNR=20
AML Almayashu 44.96 336 *e*P **P 19 57 15.2 +0.4**
comp=Z,6.7nm,0.5s,mb4.7
AML Almayashu 44.96 336 P **P 19 57 15.8 +1.0**
SNR=16
EKS2 Erkin-Say 45.37 336 *e*P **P 19 57 19.0 +0.9**
comp=Z,5.1nm,0.6s,mb4.5
EKS2 Erkin-Say 45.37 336 P **P 19 57 19.2 +1.2**
SNR=8.4
KSRS Korea Array 45.48 35 P **P 19 57 18.0 -1.1**
KSRS pmax pmax
comp=Z,8.0nm,0.7s,mb4.7
KSRS MLR MLR
comp=Z,357nm,18.4s,MS4.3
KSRS Korea Array 45.48 35 P **P 19 57 17.9 -1.1**
comp=Z,7.7nm,0.7s,mb4.6,baz=226,slow=9.2,SNR=24
KSRS LR LR 20 18 17.1
comp=Z,357nm,18.4s,MS4.3,baz=217,slow=39
MK31 Makanchi Array 46.34 346 *e*P **P 19 57 24.9 -0.8**
MKAR Makanchi Array 46.34 346 P **P 19 57 25.4 -0.2**
MKAR LR LR 20 20 43.8
MKAR Makanchi Array 46.34 346 P **P 19 57 25.4 -0.2**
comp=Z,14nm,0.5s,mb5.1,baz=161,slow=7.7,SNR=114
MKAR LR LR 20 20 43.8
comp=Z,302nm,20.6s,MS4.2,baz=352,slow=41
SONM Songino Array 46.41 9 P **P 19 57 25.8 -0.5**
comp=Z,7.4nm,0.6s,mb4.8,baz=190,slow=8.0,SNR=82
SONM PcP PcP 19 59 00.0 -0.7
comp=Z,1.6nm,0.6s,baz=193,slow=4.4,SNR=5.4
SNY Shenyang 46.42 28 P **P 19 57 25.8 -0.6**
SNY AMB AMB
comp=Z,12nm,0.7s,mb4.9
ZAK Zakamensk 48.52 6⇑ *i* P **P 19 57 42.9 +0.3**
ZAK pmax pmax
comp=Z,4.0nm,1.7s,mb4.2
CN2 Changchun 48.82 28 *e*P **P 19 57 44.8 -0.2**
CN2 *e*AP pP 19 57 55.5 +0.8
CN2 *e*S **S 20 04 45.0 -1.2**
CN2 AMB AMB
comp=Z,10.0nm,0.7s,mb5.0
CN2 LR LR
comp=N,500nm,15.0s,MS4.7
CN2 LR LR
comp=E,400nm,15.0s,MS4.7
CN2 LR LR
comp=Z,400nm,15.0s,MS4.5
MOY Mondy 49.61 4 *e*P **P 19 57 51.2 +0.3**
TLY Talaya 49.84 6 *e*P **P 19 57 53.9 +1.2**
comp=Z,3.4nm,0.7s,mb4.5
TLY Talaya 49.84 6 *e*P **P 19 57 53.3 +0.7**
TLY *e* 19 59 40.9
TLY *e*S **S 20 04 59.7 -0.5**
TLY pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
TLY MLR MLR
comp=Z,332nm,16.0s,MS4.4
IRK Irkutsk 50.46 6 *e*P **P 19 57 53.0 -4.3**
IRK *e* 19 58 04.5
IRK pmax pmax
comp=Z,19nm,0.8s,mb5.2
KURK Kurchatov 50.88 345 *e*P **P 19 57 59.8 -0.8**
comp=Z,14nm,1.0s,mb4.8
KURK Kurchatov 50.88 345 *e*P **P 19 57 59.8 -0.7**
KURK pmax pmax
comp=Z,14nm,1.0s,mb4.8
HIA Hailar 51.05 19 *e*P **P 19 58 01.1 -0.7**
comp=Z,14nm,0.8s,mb4.9
HIA Hailar 51.05 19 *e*P **P 19 58 01.1 -0.7**
HIA pmax pmax
comp=Z,14nm,0.8s
MDJ Mudanjiang 51.42 30 P **P 19 58 05.0 +0.3**
MDJ AMB AMB
comp=Z,8.0nm,0.7s,mb4.8
MDJ AMB AMB
comp=Z,150nm,6.8s
MAT Matsushiro 51.45 43 P **P 19 58 04.5 -0.6**
MJAR Matsushiro Arr 51.45 43 P **P 19 58 03.2 -1.9**
comp=Z,5.4nm,0.9s,mb4.5,baz=206,slow=6.3,SNR=14
CIT Chita 51.80 13 *e*P **P 19 58 08.3 +0.9**
CIT *e* pP 19 58 16.1 -1.0
CIT pmax pmax
comp=Z,41nm,1.8s,mb5.1
ZAL Zalesovo 52.67 351 P **P 19 58 13.4 -0.4**
ZAA0 Zalesovo Array 52.68 351 *e*P **P 19 58 13.2 -0.7**
ZALV Zalesovo Beam 52.68 351 P **P 19 58 13.4 -0.5**
comp=Z,14nm,0.5s,mb5.2,baz=177,slow=6.2,SNR=98
CTA Charters Tower 53.32 117 *e*P **P 19 58 19.6 +0.3**
comp=Z,5.9nm,0.8s,mb4.6
CTA *e*pP pP 19 58 28.4 -0.6
CTA Charters Tower 53.32 117 *e*P **P 19 58 19.6 +0.3**
CTA *e**PP pP 19 58 28.4 -0.6
CTA pmax pmax
comp=Z,6.0nm,0.8s
CTA Charters Tower 53.32 117 LR LR 20 21 49.7
comp=Z,249nm,19.9s,MS4.3,baz=283,slow=37
CTAO Charters Tower 53.32 117 *e*P **P 19 58 19.2 -0.1**
comp=Z,23nm,1.4s,mb4.9
CTAO *e* pP 19 58 27.7 -1.3
CTAO Charters Tower 53.32 117 *e*P **P 19 58 19.2 -0.1**
CTAO *e* pP 19 58 27.7 -1.3
CTAO pmax pmax
comp=Z,23nm,1.4s,mb4.9
NVS Novosibirsk 53.80 350 *e*P **P 19 58 20.8 -1.3**
NVS *e*S **S 20 05 48.9 -5.6**
NVS pmax pmax
comp=N,11nm,1.0s
NVS pmax pmax
comp=E,9.0nm,1.0s
NVS pmax pmax
comp=Z,17nm,1.0s,mb4.9
NVS smax
comp=N,21nm,2.0s
NVS smax
comp=E,12nm,2.0s
RDF Al-Radifah 53.84 305 *e*P **P 19 58 24.0 +1.0**
RDF AMb AMB 19 58 34.0
comp=Z,12nm,0.7s,mb5.0
NAY Al-Naaiem 54.21 305 *e*P **P 19 58 27.1 +1.5**
NAY AMb AMB 19 58 35.9
comp=Z,6.8nm,0.6s,mb4.8
STKA Stephens Creek 54.28 132 *e*P **P 19 58 25.9 -0.1**
comp=Z,2.4nm,0.8s,mb4.2
STKA *e*pP pP 19 58 35.2 -0.6
STKA Stephens Creek 54.28 132 P **P 19 58 25.5 -0.5**
comp=Z,2.6nm,0.8s,mb4.2,baz=328,slow=7.0,SNR=4.6
STKA LR LR 20 24 05.6
comp=Z,246nm,21.3s,MS4.2,baz=118,slow=39
MIB Mutribah 54.33 306 *e*P **P 19 58 27.4 +0.9**
MIB AMb AMB 19 58 36.2
comp=Z,28nm,1.0s,mb5.2
BRVK Borovoye 55.38 341 *e*P **P 19 58 32.4 -1.2**
comp=Z,6.1nm,0.8s,mb4.7
BRVK Borovoye 55.38 341 *e*P **P 19 58 32.4 -1.2**
BRVK pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KLR Kul'dur 55.77 27 *e*P **P 19 58 30.9 -5.6**
KLR MLR MLR
comp=N,900nm,14.0s,MS5.1
KLR MLR MLR
comp=E,500nm,14.0s,MS5.1
KLR MLR MLR
comp=Z,1µm,14.0s,MS5.2
BOD Bodaibo 57.31 11 *e*P **P 19 58 46.3 -1.0**
BOD pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AKTK Aktyubinsk 58.28 332 P **P 19 58 53.8 -0.5**
AKTO Aktyubinsk 58.28 332 P **P 19 58 53.8 -0.4**
AKTO pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
AKTO Aktyubinsk 58.28 332 P **P 19 58 53.8 -0.5**
comp=Z,5.2nm,0.8s,mb4.6,baz=110,slow=10,SNR=4.2
ASAJ Asahikawa 58.33 37 P **P 19 58 53.1 -1.6**
ASAJ pmax pmax
comp=Z,5.0nm,0.6s
ASAJ Asahikawa 58.33 37 P **P 19 58 53.1 -1.6**
comp=Z,4.9nm,0.6s,mb4.7,baz=204,slow=33,SNR=6.0
KMBO Kilima Mbogo 59.51 268 P **P 19 59 06.5 +3.1**
comp=Z,0.5nm,0.5s,mb3.8,baz=49,slow=20,SNR=2.5
KMBO LR LR 20 20 42.2
comp=Z,302nm,20.1s,MS4.4,baz=94,slow=32
YSS Yuzh-Sakhalins 59.98 35 *e*P **P 19 59 05.7 -0.4**
comp=Z,8.9nm,0.6s,mb5.0
YSS Yuzh-Sakhalins 59.98 35⇓ *e*P **P 19 59 06.0 -0.1**
YSS *e* 19 59 13.0
YSS pmax pmax
comp=Z,30nm,0.8s,mb5.4
ZEI Tsey 62.05 318 *e*P **P 19 59 19.8 -0.5**
ZEI *i* pP 19 59 28.3 -1.9
ZEI *e* 20 01 35.9
ARU Arti 62.24 337 *e*P **P 19 59 22.9 +1.7**
comp=Z,7.2nm,0.9s,mb4.8
ARU Arti 62.24 337 *e*P **P 19 59 21.0 -0.2**
ARU *e* 20 00 01.8
ARU *e* 20 01 37.3
ARU *e*S **S 20 07 45.7 +0.9**
ARU SS SS 20 11 48.8 +0.3
ONI Oni 62.27 318 P **P 19 59 30.3 +8.6**
KIV Kislovodsk 63.36 319⇑ *e*P **P 19 59 28.0 -1.0**
KIV pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
KIV MLR MLR
comp=Z,100nm,19.0s,MS4.0
EIL Elat 64.59 302 LR LR 20 28 15.5
comp=Z,229nm,18.0s,MS4.4,baz=300,slow=36
YAK Yakutsk 64.79 16 *e*P **P 19 59 36.8 -1.2**
comp=Z,44nm,0.9s,mb5.5
YAK *e* pP 19 59 45.3 -2.7
YAK Yakutsk 64.79 16 *i* P **P 19 59 37.0 -1.0**
YAK pmax pmax
comp=Z,41nm,0.8s,mb5.5
YAK MLR MLR
comp=Z,300nm,15.0s,MS4.6
SOC Sochi 65.18 318 *e*P **P 19 59 40.1 -0.8**
SOC *e* 19 59 47.2
SOC pmax pmax
comp=Z,4.0nm,0.3s,mb4.9
ANN Anapa 67.16 318 *e*P **P 19 59 48.0 -5.5**
ANN *e*PP pP 19 59 58.9 -4.6
ANN *e* 20 00 17.8
ANN *e* 20 02 16.6
ANN *e*S S 20 08 39.0 -6.9
ANN *e*SS SS 20 13 05.6 +0.1
ANN pmax pmax
comp=Z,13nm,1.4s,mb4.8
PRGR Permogore 70.69 337 *e*P **P 20 00 14.0 -1.2**
PRGR *e*S S 20 09 20.0 -7.2
PRGR pmax pmax
comp=Z,16nm,0.7s,mb5.1
MA2 Magadan 70.83 26 *e*P **P 20 00 16.0 -0.1**
comp=Z,7.5nm,0.6s,mb4.8
MA2 *e* pP 20 00 23.9 -2.2
MA2 Magadan 70.83 26 *e*P **P 20 00 15.2 -0.9**
MA2 *e* pP 20 00 24.7 -1.4
MA2 pmax pmax
comp=Z,20nm,1.1s,mb5.0
MOS Moscow 71.38 329 *e*P **P 20 00 26.6 +7.1**
OBN Obninsk 71.66 328⇓ *e*P **P 20 00 21.3 +0.1**
OBN pmax pmax
comp=Z,39nm,2.5s,mb4.9
OBN MLR MLR
comp=Z,100nm,22.0s,MS4.0
TIXI Tiksi 72.48 10 *e*P **P 20 00 23.9 -1.9**
TIXI pmax pmax
comp=Z,16nm,1.8s,mb4.7
SEY Seymchan 73.22 23 *i* P **P 20 00 29.3 -1.0**
MAW Mawson 73.38 193 LR LR 20 30 10.3
comp=Z,168nm,18.1s,MS4.4,baz=70,slow=34
AKASG Malin Array Be 74.31 322 *i* P **P 20 00 36.5 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 74.31 322 P **P 20 00 35.8 -1.1**
comp=Z,1.0nm,0.6s,mb4.0,baz=92,slow=4.8,SNR=8.7
BOSA Boshof 74.74 240 LR LR 20 32 35.1
comp=Z,314nm,18.4s,MS4.6,baz=58,slow=35
MLR Muntele Rosu 75.13 317 P **P 20 00 43.2 +1.3**
comp=Z,0.7nm,0.5s,mb3.8,baz=127,slow=18,SNR=2.7
JOF Joensuu 77.20 335 *e*p **P 20 00 51.4 -1.8**
comp=Z,2.7nm,0.6s,mb4.3
FINES FINESS Array B 79.05 333 P **P 20 01 02.9 -0.6**
FINES FINESS Array B 79.05 333 P **P 20 01 02.9 -0.6**
comp=Z,2.2nm,0.6s,mb4.3,baz=93,slow=5.8,SNR=23
KAF Kangasniemi 79.13 333 *e*p **P 20 01 02.8 -1.2**
comp=Z,4.6nm,0.6s,mb4.6,baz=102,slow=5.0
KAF Kangasniemi 79.13 333 *e*P **P 20 01 02.8 -1.2**
KAF pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
RPZ Rata Peaks 80.14 135 LR LR 20 36 55.0
comp=Z,230nm,18.7s,MS4.5,baz=356,slow=36
ARCES ARCESS Array B 81.60 340 LR LR 20 41 06.3
comp=Z,149nm,18.3s,MS4.4,baz=113,slow=38
URZ Urewera 83.72 129 LR LR 20 42 14.0
comp=Z,204nm,19.2s,MS4.5,baz=342,slow=98
GERES GERESS Array B 83.87 319 P **P 20 01 29.9 +0.6**
comp=Z,1.0nm,0.7s,mb4.0,baz=90,slow=5.3,SNR=7.6
GRF Grafenberg Arr 85.54 320 *e*P pP 20 01 46.7 -1.3
comp=Z,5.0nm,1.2s
NB2 NORSAR Subarra 86.05 331 P **P 20 01 39.6 -0.4**
comp=Z,7.7nm,1.4s,mb4.7,baz=90,slow=5.3
NB2 NORSAR Subarra 86.05 331 P **P 20 01 39.6 -0.4**
NB2 pmax pmax
comp=Z,8.0nm,1.4s,mb4.8
NOA NORSAR Array B 86.05 331 P **P 20 01 39.1 -0.9**
comp=Z,1.2nm,0.8s,mb4.2,baz=93,slow=5.3,SNR=4.4
NOA LR LR 20 44 44.9
comp=Z,129nm,20.8s,MS4.3,baz=50,slow=39
DAVOX Davos/Dischmat 86.35 317 P **P 20 01 43.2 +1.4**
comp=Z,1.9nm,0.7s,mb4.4,baz=342,slow=20,SNR=2.7
TORD Torodi Ar. Bea 94.41 283 LR LR 20 45 13.6
comp=Z,156nm,18.1s,MS4.5,baz=95,slow=36
JCT Junction City 144.07 25 *e*PKPdf PKPdf 20 08 34.0 -1.8

NEIC ***30*** *19:51:10.3, 1598N×9905W, h25km, MD4.3(MEX), After MEX.*

MEX 30 19:51:10.6±1.0, 1599N×9904W, h27km±20km, MD4.3, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.96**	**66**	*i* P		Pn 19 51 25.2	-3.0
PNIG				*i* S		Sb 19 51 37.9	-3.1
ACX	**Acapulco**	**1.21**	**316**	*e*P		Pn 19 51 27.7	-4.0
ACX				*i* S		Sn 19 51 43.9	-3.3
CAIG	**El Cayaco**	**1.58**	**312**	*e*P		Pn 19 51 34.9	-1.9
CAIG				*i* S		Sn 19 51 53.7	-2.6
MEIG	**Mezcala**	**2.00**	**344**	*e*P		Pn 19 51 40.2	-2.4
MEIG				*i* S		Sn 19 52 04.9	-1.8
UTMO	**Huajuapan**	**2.17**	**33**	*i* P		Pn 19 51 43.0	-2.0
UTMO				*i* S		Sn 19 52 09.4	-1.6
PLIG	**Platanillo**	**2.43**	**350**	*e*P		Pn 19 51 47.8	-0.7
PLIG				*i* S		Sn 19 52 12.9	-4.3
VHO	**Vista Hermosa**	**2.46**	**64**	*i* P		Pn 19 51 47.4	-1.4
VHO				*i* S		Sn 19 52 16.9	-1.1
OXX	**Oaxaca**	**2.47**	**64**	*e*P		Pn 19 51 47.1	-1.9
OXX				*i* S		Sn 19 52 15.9	-2.4
HUIG	**Huatulco**	**2.83**	**94**	*e*P		Pn 19 51 58.7	+4.8
HUIG				*i* S		Sn 19 52 32.2	+5.1
HUIG	**Huatulco**	**2.83**	**94**	*i* P		Pn 19 51 53.2	-0.8
HUIG				*i* S		Sn 19 52 22.4	-4.8
YAIG	**Yautepec**	**2.85**	**359**	*e*P		Pn 19 51 52.2	-2.1
YAIG				*i* S		Sn 19 52 25.2	-2.5
TPIG	**Tehuac#an**	**2.90**	**33**	*i* P		Pn 19 51 53.4	-1.5
TPIG				*i* S		Sn 19 52 29.1	+0.3
PPM	**Popocatepetl**	**3.08**	**7**	*i* P		Pn 19 51 57.5	+0.1
PPM				*i* S		Sn 19 52 35.1	+1.7
PPM	**Popocatepetl**	**3.08**	**7**	*e*P		Pn 19 51 56.5	-0.9
PPM				*i* P		19 51 57.5	
PPM				*i* S		Sn 19 52 30.8	-2.6
PPM				*i* S		Sn 19 52 35.1	+1.7
SZVM	**Salazar**	**3.33**	**354**	*i* S		Sn 19 52 38.4	-1.1
PTVM	**Pico Tres Padr**	**3.58**	**359**	*e*P		Pn 19 52 05.3	+1.0
PTVM				*i* S		Sn 19 52 47.7	+1.9
IIO	**Organos**	**3.59**	**5**	*e*P		Pn 19 52 09.0	+4.6
IIO				*i* S		Sn 19 52 50.5	+4.6
CMIG	**Matias Romero**	**4.13**	**74**	*e*P		Pn 19 52 08.9	-3.0
CMIG				*i* S		Sn 19 53 00.1	+0.7
MOIG	**Morelia**	**4.20**	**331**	*i* S		Sn 19 52 58.1	-2.9
LVIG	**Laguna Verde**	**4.47**	**34**	*i* S		Sn 19 53 02.1	-5.6

PGC ***30*** *20:00:30.3±0.2, 4869N×12247W, h1km, ML2.8/9, 42km Ssw of Albertabotsford, Bc Washington*

NEIC 30 20:00:30.3, 4869N×12246W, h8km, MD3.0(SEA)**, 5C-3D, After SEA., Washington**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBES	**Silver Beach E**	**0.09**	**19**	P		Pg 20 00 32.6	+0.2
MCW	**Mount Constitu**	**0.25**	**269**	⇓P		Pg 20 00 34.8	-0.4
CMW	**Cultus Mountai**	**0.34**	**139**	⇓P		Pg 20 00 36.7	-0.3
MBW	**Mount Baker**	**0.38**	**75**	⇑P		Pg 20 00 37.6	-0.1
VDB	**Vedder Mountai**	**0.41**	**34**	Trac			
VDB	**Vedder Mountai**	**0.41**	**34**	P		Pg 20 00 37.7	-0.6
VDB				S		Sg 20 00 43.4	-0.4
SNB	**Saturna Island**	**0.48**	**281**	P		Pg 20 00 39.2	-0.4
SNB	**Saturna Island**	**0.48**	**281**	Trac			

SNB	**Saturna Island**	**0.48 281**	P	Pg	20 00 39.2	-0.4
SNB			S	Sg	20 00 46.4	+0.6
HNB	**Haney**	**0.59 352**	Trac			
HNB	**Haney**	**0.59 352**	P	Pg	20 00 40.5	-1.3
HNB			S	Sg	20 00 48.6	-0.9
JCW	**Jim Creek**	**0.60 144**	⇓P	Pg	20 00 41.1	-0.8
VGZ	**Gonzales**	**0.64 245**	P	Pg	20 00 41.4	-1.2
VGZ	**Gonzales**	**0.64 245**	Trac			
VGZ	**Gonzales**	**0.64 245**	P	Pg	20 00 41.4	-1.1
VGZ			S	Sg	20 00 49.9	-0.9
PGC	**Sidney**	**0.66 267**	*e*Pg	Pg	20 00 41.6	-1.3
PGC			*e*Sg	Sg	20 00 50.5	-1.1
PGC	**Sidney**	**0.66 267**	Trac			
PGC	**Sidney**	**0.66 267**	P	Pg	20 00 41.8	-1.2
PGC			S	Sg	20 00 50.6	-0.9
SQM	**Sequim**	**0.73 213**	P	Pg	20 00 43.9	-0.4
GOBB	**Galiano Island**	**0.74 291**	Trac			
GOBB	**Galiano Island**	**0.74 291**	P	Pg	20 00 43.5	-1.1
GOBB			S	Sg	20 00 53.8	-0.4
BLN	**Blyn Mountain**	**0.76 207**	P	Pg	20 00 43.9	-0.9
BLH	**Bald Hill**	**0.90 161**	P	Pg	20 00 46.8	-0.7
BIB	**Bowen Island**	**0.91 323**	Trac			
BIB	**Bowen Island**	**0.91 323**	P	Pg	20 00 45.9	-1.9
BIB			S	Sg	20 00 57.0	-2.6
STW	**Striped Peak**	**0.97 237**	⇑P	Pg	20 00 47.0	-1.8
STW			S	Sg	20 01 00.2	-1.2
HOPB	**Hope**	**0.98 44**	Trac			
HOPB	**Hope**	**0.98 44**	P	Pg	20 00 47.8	-1.3
HOPB			S	Sg	20 01 00.3	-1.5
HTW	**Haystack Looko**	**0.99 152**	⇑P	Pg	20 00 48.1	-1.3
WPB	**Watts Point**	**1.09 333**	Trac			
WPB	**Watts Point**	**1.09 333**	P	Pg	20 00 48.9	-2.3
WPB			S	Sg	20 01 02.7	-2.7
HDW	**Hoodsport**	**1.11 201**	⇑P	Pg	20 00 49.3	-2.3
GNW	**Green Mountain**	**1.15 193**	P	Pg	20 00 50.1	-2.1
OSD	**Olympics--Snow**	**1.20 224**	⇑P	Pb	20 00 51.3	-2.0
OBC	**Olympics--Boni**	**1.26 240**	P	Pn	20 00 51.9	-2.2
RMW	**Rattlesnake Mo**	**1.30 160**	P	Pn	20 00 53.3	-1.4
OOW	**Octopus West**	**1.50 231**	P	Pn	20 00 57.1	-0.3
NLW	**Nelson Butte**	**1.54 112**	P	Pn	20 00 57.6	-0.3
NLWA	**Neilton Lookou**	**1.60 217**	*e*Pn	Pn	20 00 58.0	-0.9
NLWA			*e*Sg	Sg	20 01 21.3	-0.5
GHW	**Garrison Hill**	**1.65 176**	P	Pn	20 00 58.4	-1.1
FMW	**Mount Fremont**	**1.83 163**	P	Pn	20 01 01.6	-0.5
RCS	**Mount Rainier-**	**1.88 165**	P	Pn	20 01 02.5	-0.1
REMR	**Mount Rainier-**	**1.91 167**	P	Pn	20 01 02.9	-0.2
RCM	**Mount Rainier-**	**1.91 165**	P	Pn	20 01 03.0	-0.1
LON	**Longmire**	**1.98 167**	P	Pn	20 01 03.8	-0.3
HAWA	**Hanford**	**3.03 138**	*e*Pn	Pn	20 01 19.2	+0.6
HAWA			*e*Pg	Pg	20 01 24.4	-3.9
HAWA			*e*Sg	Sg	20 02 02.5	-5.1
NEW	**Newport**	**3.58 95**	*e*Pg	Pg	20 01 38.1	-0.6
NEW			*e*Sg	Sg	20 02 20.2	-4.8

NIC ***30*** *20:10:40.6±0.5, 38.18N×3029E, h25km, mb4.6, ML4.2, MW3.9*
NEIC ***30*** *20:10:42.9, 3800N×3093E, h8km, mb4.1/13, ML4.2(NIC), ML4.0(ISK), After ISK.*
ISK ***30*** *20:10:42.8, 3798N×3092E, h5km, ML3.9*
MOS ***30*** *20:10:42.9±0.7, 3799N×3081E, h12km, mb3.8/10, Error ellipse: s-maj=7.0km s-min=4.6km az=108.6*
CSEM ***30*** *20:10:43.0±0.0, 3799N×3093E, h10km, mb3.9/10, Ms3.0, Mw3.9, Error ellipse: s-maj=1.2km s-min=1.0km az=160.0*
ISCJB ***30*** *20:10:44.2±0.4, 3797N±002×3089E±002, h23km±4km, mb3.7/13, MS3.1/2, Error ellipse: s-maj=2.8km s-min=2.7km az=145.6*
DDA ***30*** *20:10:45.0, 3800N×3101E, h8km±2km, Md4.0, Ml4.2*
IDC ***30*** *20:10:47.4±2.0, 3795N×3083E, h37km±21km, mb3.3/8, mb1 3.6/15, mb1mx3.5/28, mbtmp3.5/15, ML3.7/7, MS3.2/3, Ms1 3.2/3, ms1mx2.7/27, Error ellipse: s-maj=17.9km s-min=14.3km az=68.0*
HLW ***30*** *20:11:06.0, 3636N×3117E, h33km, Mb3.6*
ISC 30 20:10:43.7±0.5,**3797N**±001×**3091E**±002,**h6**km±3km,**n228,** σ1**§12**/260,**mb3.7**/13,**MS3.1**/2,**7C-1D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.34**	**249**	*i* PG		**Pg**	**20 10 49.6**	**-0.6**
ISP				*i* SG		**Sg**	**20 10 55.9**	**+1.3**
ISP	**Isparta**	**0.34**	**249**	*e*Pg		**Pg**	**20 10 50.4**	**+0.2**
ISP				*e*Sg		**Sg**	**20 10 57.4**	**+2.8**
ISP	**Isparta**	**0.34**	**249**	*e*Pg		**Pg**	**20 10 50.4**	**+0.2**
ISP				*i* Sg		**Sg**	**20 10 55.9**	**+1.3**
BCK	**Bucak**	**0.56**	**207**	PG		**Pg**	**20 10 54.4**	**-0.1**
BCK				SG		**Sg**	**20 11 02.4**	**+0.5**
BCK	**Bucak**	**0.56**	**207**	P		**Pg**	**20 10 54.3**	**-0.2**
SHUT	**Suhut-Afyon**	**0.65**	**335**	PG		**Pg**	**20 10 56.1**	**0.0**
ANTB	**Antalya**	**1.08**	**191**	PN		**Pn**	**20 11 04.8**	**-0.6**
KDHN	**Kadinhani**	**1.10**	**59**	*i* P		**Pg**	**20 11 03.6**	**-1.2**
KDHN				*i* S		**Sg**	**20 11 17.5**	**-1.6**
KHL	**Karahalli**	**1.15**	**288**	PN		**Pn**	**20 11 05.6**	**-0.7**
KHL	**Karahalli**	**1.15**	**288**	Pn		**Pn**	**20 11 05.1**	**-1.2**
KONT	**Konya--Tatoy**	**1.15**	**91**	PN		**Pn**	**20 11 04.8**	**-1.5**
KONT	**Konya--Tatoy**	**1.15**	**91**	Pn		**Pn**	**20 11 04.8**	**-1.5**
KIZT	**Kizilcal**	**1.19**	**40**	PN		**Pn**	**20 11 05.3**	**-1.6**
KIZT	**Kizilcal**	**1.19**	**40**	Pn		**Pn**	**20 11 05.3**	**-1.5**
GOLH	**Golhisar**	**1.29**	**236**	*i* P		**Pn**	**20 11 09.2**	**+0.9**
GOLH				*i* S		**Sb**	**20 11 28.1**	**+2.8**
ELL	**Elmali**	**1.45**	**213**	PN		**Pn**	**20 11 10.8**	**+0.3**
ELL	**Elmali**	**1.45**	**213**	P		**Pn**	**20 11 10.9**	**+0.4**
DENT	**Denizli**	**1.50**	**262**	PN		**Pn**	**20 11 11.4**	**+0.3**
DENT	**Denizli**	**1.50**	**262**	Pn		**Pn**	**20 11 11.4**	**+0.3**
ESKT	**Eskisehir**	**1.55**	**358**	PN		**Pn**	**20 11 11.7**	**-0.2**
ESKT	**Eskisehir**	**1.55**	**358**	Pn		**Pn**	**20 11 11.1**	**-0.8**
ESKT	**Eskisehir**	**1.55**	**358**	*i* P		**Pn**	**20 11 11.7**	**-0.1**
ESKT				*i* S		**Sn**	**20 11 24.7**	**-7.6**
ESKT	**Eskisehir**	**1.55**	**358**	Pn		**Pn**	**20 11 11.1**	**-0.8**
SEYT	**Eskypehyr**	**1.55**	**358**	*i* P		**Pn**	**20 11 11.7**	**-0.2**
GDZ	**Gediz**	**1.58**	**315**	*i* P		**Pn**	**20 11 12.5**	**-0.2**
GDZ				*i* S		**Sn**	**20 11 34.9**	**+1.8**
KULA	**Kula-Manisa**	**1.85**	**288**	PN		**Pn**	**20 11 15.5**	**-0.5**
BORA	**Eskisehir**	**1.94**	**350**	*i* P		**Pn**	**20 11 17.3**	**+0.1**
BORA				*i* S		**Sn**	**20 11 43.3**	**+1.3**
FETY	**Fethiye**	**1.97**	**228**	PN		**Pn**	**20 11 18.9**	**+1.3**
FETY	**Fethiye**	**1.97**	**228**	Pn		**Pn**	**20 11 18.1**	**+0.5**
FETY	**Fethiye**	**1.97**	**228**	Pn		**Pn**	**20 11 18.1**	**+0.5**
ERMK	**Ermenek**	**2.08**	**129**	*i* P		**Pn**	**20 11 19.8**	**+0.7**
ERMK				*i* S		**Sn**	**20 11 46.4**	**+1.1**
GPA	**Golpazari**	**2.36**	**349**	PN		**Pn**	**20 11 23.6**	**+0.6**
GPA	**Golpazari**	**2.36**	**349**	Pn		**Pn**	**20 11 23.0**	**0.0**
ANTO	**Ankara**	**2.40**	**37**	PN		**Pn**	**20 11 23.3**	**-0.3**
ANTO	**Ankara**	**2.40**	**37**	*e*Pn		**Pn**	**20 11 23.8**	**+0.3**
ANTO				*e*Pg		**Pg**	**20 11 29.0**	**-0.7**
ANTO				*e*Sg		**Sg**	**20 12 01.7**	**+0.8**
ANTO	**Ankara**	**2.40**	**37**	*e*Pg		**Pg**	**20 11 29.0**	**-0.7**
LOD	**Lodumlu**	**2.40**	**36**	PN		**Pn**	**20 11 23.8**	**+0.2**
LOD	**Lodumlu**	**2.40**	**36**	Pn		**Pn**	**20 11 23.2**	**-0.4**
LOD	**Lodumlu**	**2.40**	**36**	Pn		**Pn**	**20 11 23.2**	**-0.4**
DST	**Dursunbey**	**2.42**	**313**	PN		**Pn**	**20 11 24.4**	**+0.6**
DST	**Dursunbey**	**2.42**	**313**	Pn		**Pn**	**20 11 23.7**	**-0.1**
GULT	**Gulveren**	**2.48**	**353**	*e*PN		**Pn**	**20 11 24.5**	**-0.1**
MLSB	**Milas**	**2.57**	**256**	*e*PN		**Pn**	**20 11 26.3**	**+0.4**
MLSB	**Milas**	**2.57**	**256**	Pn		**Pn**	**20 11 26.4**	**+0.5**
MLSB	**Milas**	**2.57**	**256**	Pn		**Pn**	**20 11 26.4**	**+0.5**
AKHS	**Akhisar**	**2.59**	**291**	*i* P		**Pn**	**20 11 26.5**	**+0.3**
AKHS				*i* S		**Sn**	**20 12 01.1**	**+3.1**
AKS	**Akhisar**	**2.59**	**291**	*e*PN		**Pn**	**20 11 26.1**	**-0.1**
AKS	**Akhisar**	**2.59**	**291**	Pn		**Pn**	**20 11 26.2**	**0.0**
AKS	**Akhisar**	**2.59**	**291**	Pn		**Pn**	**20 11 26.2**	**0.0**
IZI	**Iznik**	**2.62**	**335**	*e*PN		**Pn**	**20 11 27.1**	**+0.6**
IZI	**Iznik**	**2.62**	**335**	Pn		**Pn**	**20 11 27.0**	**+0.5**
IZI	**Iznik**	**2.62**	**335**	Pn		**Pn**	**20 11 27.0**	**+0.5**
ADVT	**Abdulvahap**	**2.62**	**340**	PN		**Pn**	**20 11 26.6**	**0.0**
GEMT	**Gemlik**	**2.80**	**332**	*e*PN		**Pn**	**20 11 29.1**	**0.0**
GEMT	**Gemlik**	**2.80**	**332**	Pn		**Pn**	**20 11 29.1**	**+0.1**
IKL	**Isikli**	**2.81**	**127**	*e*PN		**Pn**	**20 11 30.3**	**+1.1**
IKL	**Isikli**	**2.81**	**127**	Pn		**Pn**	**20 11 29.8**	**+0.6**
IKL	**Isikli**	**2.81**	**127**	Pn		**Pn**	**20 11 29.8**	**+0.6**
HENT	**Hendek**	**2.85**	**360**	*i* P		**Pn**	**20 11 27.7**	**-2.0**
HENT				*i* S		**Sg**	**20 12 18.2**	**+2.9**
YLV	**Yalova**	**2.86**	**336**	*e*PN		**Pn**	**20 11 30.0**	**+0.2**
BALB	**Balikesir**	**2.90**	**306**	*e*PN		**Pn**	**20 11 30.7**	**+0.4**
BALB	**Balikesir**	**2.90**	**306**	Pn		**Pn**	**20 11 30.7**	**+0.4**
KDAG	**Bornova**	**2.90**	**280**	*i* P		**Pn**	**20 11 31.0**	**+0.6**
KDAG				*i* S		**Sg**	**20 12 21.1**	**+4.2**
DAT	**Datca**	**2.93**	**246**	*e*PN		**Pn**	**20 11 31.5**	**+0.7**
NIG	**Nigde**	**2.93**	**86**	*e*PN		**Pn**	**20 11 31.5**	**+0.7**
NIG	**Nigde**	**2.93**	**86**	Pn		**Pn**	**20 11 31.5**	**+0.7**
BODT	**Bodrum**	**3.00**	**254**	Pn		**Pn**	**20 11 32.5**	**+0.7**
HRT	**Hereke**	**3.01**	**342**	*e*PN		**Pn**	**20 11 31.8**	**-0.1**
KCT	**Karacabey**	**3.03**	**320**	*e*PN		**Pn**	**20 11 32.7**	**+0.5**
KCT	**Karacabey**	**3.03**	**320**	Pn		**Pn**	**20 11 32.0**	**-0.2**
MERS	**Mersin**	**3.08**	**110**	*e*PN		**Pn**	**20 11 34.2**	**+1.3**
ALFC	**Alevga**	**3.12**	**154**	P		**Pn**	**20 11 32.0**	**-1.4**
ALFC	6.7nm,0.3s				S	**Sn**	**20 12 13.8**	**+2.8**
AKMC	**Akamas**	**3.15**	**158**	P		**Pn**	**20 11 33.1**	**-0.7**
CDAG	**Cicekdag**	**3.17**	**58**	*i* P		**Pn**	**20 11 33.5**	**-0.6**
CDAG				*i* S		**Sn**	**20 12 11.8**	**-0.6**
ELDT	**Eldivan**	**3.19**	**37**	*i* P		**Pn**	**20 11 34.4**	**0.0**
ELDT				*i* S		**Sn**	**20 12 13.6**	**+0.9**
AVNT	**Avonos**	**3.21**	**74**	*i* P		**Pn**	**20 11 34.2**	**-0.5**
AVNT				*i* S		**Sg**	**20 12 24.8**	**-1.9**
LEF	**Lefka**	**3.26**	**150**	Pn		**Pn**	**20 11 34.6**	**-0.8**
LEF	**Lefka**	**3.26**	**150**	Pn		**Pn**	**20 11 34.6**	**-0.8**
PPCY	**Paphos**	**3.29**	**159**	P		**Pn**	**20 11 35.3**	**-0.4**
BNT	**Bandirma**	**3.33**	**317**	*e*PN		**Pn**	**20 11 36.8**	**+0.5**
EDC	**Edincik**	**3.35**	**316**	*e*PN		**Pn**	**20 11 37.2**	**+0.6**
EDC	**Edincik**	**3.35**	**316**	P		**Pn**	**20 11 36.9**	**+0.3**
MAMC	**Mammari**	**3.35**	**146**	P		**Pn**	**20 11 37.5**	**+0.9**
KDZE	**Karadeniz Ereo**	**3.37**	**7**	*e*PN		**Pn**	**20 11 37.5**	**+0.7**
CANT	**Cankiri**	**3.37**	**38**	*e*PN		**Pn**	**20 11 37.4**	**+0.5**
CANT	**Cankiri**	**3.37**	**38**	Pn		**Pn**	**20 11 37.7**	**+0.8**
ISK	**Istanbul-Kandi**	**3.41**	**336**	*e*PN		**Pn**	**20 11 37.0**	**-0.4**
ISK	**Istanbul-Kandi**	**3.41**	**336**	Pn		**Pn**	**20 11 37.1**	**-0.3**
SAFT	**Safranbolu**	**3.55**	**22**	*e*PN		**Pn**	**20 11 39.3**	**0.0**
SAFT	**Safranbolu**	**3.55**	**22**	Pn		**Pn**	**20 11 39.4**	**+0.1**
SAFT	**Safranbolu**	**3.55**	**22**	Pn		**Pn**	**20 11 39.4**	**+0.1**
EREN	**Erenkoy**	**3.58**	**132**	*e*PN		**Pn**	**20 11 40.7**	**+1.0**
EREN	**Erenkoy**	**3.58**	**132**	Pn		**Pn**	**20 11 40.7**	**+1.0**
CSS	**Prodhromos**	**3.58**	**146**	P		**Pn**	**20 11 39.3**	**-0.4**
CSS	4.7nm,0.9s				S	**Sn**	**20 12 26.3**	**+3.9**
SZAC	**Souni-Zanaja**	**3.58**	**153**	P		**Pn**	**20 11 40.9**	**+1.2**
SZAC	10.0nm,0.8s				S	**Sn**	**20 12 25.5**	**+3.1**
CORM	**Corum**	**3.64**	**52**	*e*PN		**Pn**	**20 11 40.9**	**+0.3**
MRMT	**Marmara Adasi**	**3.68**	**317**	*e*PN		**Pn**	**20 11 41.7**	**+0.6**
CTT	**Catalca**	**3.71**	**330**	*e*PN		**Pn**	**20 11 42.7**	**+1.2**
CTT	**Catalca**	**3.71**	**330**	Pn		**Pn**	**20 11 42.4**	**+0.9**
TOS	**Tosya**	**3.90**	**37**	*e*PN		**Pn**	**20 11 44.3**	**+0.2**
TOS	**Tosya**	**3.90**	**37**	Pn		**Pn**	**20 11 44.4**	**+0.3**
TOS	**Tosya**	**3.90**	**37**	Pn		**Pn**	**20 11 44.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**3.97**	**314**	*e*PN		**Pn**	**20 11 45.7**	**+0.6**
RKY	**Sarkoy-Tekirda**	**3.97**	**314**	Pn		**Pn**	**20 11 45.8**	**+0.7**
RKY	**Sarkoy-Tekirda**	**3.97**	**314**	Pn		**Pn**	**20 11 45.8**	**+0.7**
EZN	**Ezine**	**4.03**	**299**	Pn		**Pn**	**20 11 46.1**	**+0.2**
EZN	**Ezine**	**4.03**	**299**	Pn		**Pn**	**20 11 46.1**	**+0.2**
GADA	**Gvkgeada**	**4.49**	**301**	*e*PN		**Pn**	**20 11 53.2**	**+1.0**
GADA	**Gvkgeada**	**4.49**	**301**	Pn		**Pn**	**20 11 53.3**	**+1.1**
GADA	**Gvkgeada**	**4.49**	**301**	Pn		**Pn**	**20 11 53.3**	**+1.1**
BYBT	**Boyabat**	**4.59**	**39**	*e*PN		**Pn**	**20 11 54.1**	**+0.5**
BYBT	**Boyabat**	**4.59**	**39**	Pn		**Pn**	**20 11 54.1**	**+0.5**
ENEZ	**Enez**	**4.61**	**308**	*e*PN		**Pn**	**20 11 54.9**	**+1.1**
BZK	**Bozkurt**	**4.64**	**30**	*e*PN		**Pn**	**20 11 55.0**	**+0.6**
IDI	**Anoyia**	**5.53**	**243**	Pn		**Pn**	**20 12 05.9**	**-0.6**
IDI	1.9nm,0.3s,baz=54,slow=11,SNR=15				Sn	**Sn**	**20 13 09.6**	**-0.8**
MALT	**Malatya**	**5.94**	**84**	*e*Pn		**Pn**	**20 12 14.3**	**+2.1**
MALT	1.9nm,0.3s,baz=90,slow=20,SNR=4.1 39nm,1.5s				pmax	pmax		
MALT	**Malatya**	**5.94**	**84**	*e*P		**Pn**	**20 12 14.3**	**+2.1**
MALT	comp=Z,39nm,1.5s				pmax	pmax		
MALT	**Malatya**	**5.94**	**84**	*e*Pn		**Pn**	**20 12 14.3**	**+2.1**
MMAI	**Mount Meron Ar**	**6.15**	**142**	Pn		**Pn**	**20 12 15.4**	**+0.3**
MMAI	comp=Z,6.4nm,0.3s,baz=335,slow=13,SNR=28				Sn	**Sn**	**20 13 27.9**	**+2.1**
SZH	**Strazhica**	**6.50**	**326**	*i* P		**Pb**	**20 12 35.0**	**-2.2**
MMB	**Musomiste**	**6.61**	**305**	*i* P		**Pn**	**20 12 22.5**	**+1.2**
PVL	**Pavlikeni**	**6.74**	**323**	*i* P		**Pn**	**20 12 24.5**	**+1.3**
TIRR	**Tirgusor**	**6.75**	**345**	⇓*i* P		**Pn**	**20 12 23.2**	**-0.1**
SEV	**Sevastopol'**	**6.89**	**17**	*e*P		**Pn**	**20 12 25.7**	**+0.5**
SEV				*e*S		**Sn**	**20 13 42.0**	**-2.0**
SEV	comp=Z,1.0nm,0.3s				pmax	pmax		
SEV	comp=E,2.0nm,0.8s				smax			
SEV	comp=N,4.0nm,0.9s				smax			
SEV	**Sevastopol'**	**6.89**	**17**	*e*P		**Pn**	**20 12 25.7**	**+0.5**
YAL	comp=N,1.0nm,0.3s **Yalta**	**6.96**	**20**	*e*P		**Pn**	**20 12 28.9**	**+2.8**
YAL	comp=Z,10.0nm,0.9s				pmax	pmax		
YAL	comp=E,13nm,0.3s **Yalta**	**6.96**	**20**	*e*P		**Pn**	**20 12 28.9**	**+2.8**
MANS	**Anshas**	**7.01**	**176**	P		**Pn**	**20 12 34.2**	**+7.3**
KKB	**Krupnik**	**7.16**	**305**	*i* P		**Pn**	**20 12 32.9**	**+3.9**
ALU	**Alushta**	**7.21**	**20**	*e*P		**Pn**	**20 12 29.7**	**+0.2**
ALU				*e*S		**Sn**	**20 13 51.1**	**-0.6**
ALU	comp=Z,4.0nm,0.8s				pmax	pmax		
ALU	comp=N,23nm,0.9s				smax			
ALU	**Alushta**	**7.21**	**20**	*e*P		**Pn**	**20 12 29.7**	**+0.2**
ALU	comp=N,4.0nm,0.8s				*e*S	**Sn**	**20 13 51.1**	**-0.6**
ALU	comp=N,23nm,0.9s				smax			
SIM	**Simferopol'**	**7.38**	**18**	*e*P		**Pn**	**20 12 32.6**	**+0.7**
SIM				*e*S		**Sn**	**20 13 57.3**	**+1.4**
SIM	comp=Z,30nm,1.1s				pmax	pmax		
SIM	comp=N,44nm,1.0s				smax			
SIM	comp=E,32nm,1.3s				smax			
SIM	**Simferopol'**	**7.38**	**18**	*e*P		**Pn**	**20 12 32.6**	**+0.7**
SIM	comp=E,30nm,1.1s				*e*S	**Sn**	**20 13 57.3**	**+1.4**
SIM	comp=E,44nm,1.0s				smax			
HBRG	**Burj al 'Arab**	**7.43**	**187**	P		**Pn**	**20 12 30.9**	**-1.7**
HBRG				S		Sn	20 13 33.0	-24
HBRG	**Burj al 'Arab**	**7.43**	**187**	P		**Pn**	**20 12 30.9**	**-1.7**
HBRG				S		Sn	20 13 33.0	-24
HMAT	**Matruh**	**7.54**	**206**	⇑*e*P		**Pn**	**20 12 35.8**	**+1.6**
HMAT				S		**Sn**	**20 13 42.6**	**-17**
AMAG	**Maghara**	**7.55**	**165**	P		**Pn**	**20 12 32.1**	**-2.2**
SUDU	**Sudak**	**7.57**	**23**	*e*P		**Pn**	**20 12 34.6**	**+0.1**
SUDU				*e*S		**Sn**	**20 14 00.8**	**+0.2**
SUDU	comp=Z,3.0nm,0.6s				pmax	pmax		
SUDU	comp=N,3.0nm,0.8s				smax			
SUDU	comp=E,3.0nm,1.1s				smax			
SUDU	**Sudak**	**7.57**	**23**	*e*P		**Pn**	**20 12 34.6**	**+0.1**
SUDU	comp=E,3.0nm,0.6s				*e*S	**Sn**	**20 14 00.8**	**+0.2**
SUDU	comp=E,3.0nm,0.8s				smax			
ASF	**Jabal al Asfar**	**7.58**	**138**	Pn		**Pn**	**20 12 36.5**	**+1.8**
AANS	comp=E,0.2nm,0.3s,baz=181,slow=11,SNR=4.1	**7.67**	**177**	P		**Pn**	**20 12 34.2**	**-1.7**
MLR	**Muntele Rosu**	**8.38**	**335**	P		**Pn**	**20 12 47.6**	**+2.0**
MLR	comp=Z,1.0nm,0.3s				pmax	pmax		
MLR	comp=Z,108nm,18.8s				MLR	MLR		
MLR	**Muntele Rosu**	**8.38**	**335**	Pn		**Pn**	**20 12 47.6**	**+2.0**
MLR	comp=Z,0.6nm,0.3s,baz=146,slow=5.5,SNR=12				LR	LR	20 16 00.7	
MLR	comp=Z,108nm,18.8s,baz=181,slow=37							
MLR	**Muntele Rosu**	**8.38**	**335**	⇑*i* P		**Pn**	**20 12 47.8**	**+2.2**
VRI	**Vrincioaia**	**8.48**	**340**	⇑*i* P		**Pn**	**20 12 50.7**	**+3.6**
PLOR	**Plostina**	**8.49**	**339**	⇑*i* P		**Pn**	**20 12 49.5**	**+2.3**
EIL	**Elat**	**8.93**	**157**	Pn		**Pn**	**20 12 53.2**	**-0.1**
EIL				Sn		**Sn**	**20 14 30.6**	**-3.6**
EIL	**Elat**	**8.93**	**157**	Pn		**Pn**	**20 12 53.2**	**-0.1**
EIL	comp=Z,0.6nm,0.3s,baz=322,slow=8.2,SNR=6.0 comp=Z,0.4nm,0.3s,baz=78,slow=20,SNR=2.6				Sn	**Sn**	**20 14 30.6**	**-3.6**
GZR	**Gura Zlata**	**9.59**	**323**	⇑*i* P		**Pn**	**20 13 08.7**	**+6.5**
BZS	**Buzias**	**10.31**	**321**	⇑*i* P		**Pn**	**20 13 10.9**	**-1.2**
HFRF	**Wahat Farafira**	**11.01**	**192**	P		**Pn**	**20 13 21.1**	**-0.6**
ZEI	**Tsey**	**11.01**	**60**	*e*P		**Pn**	**20 13 25.0**	**+3.3**
HDK1	**Dakhla**	**12.45**	**186**	⇑*e*P		**Pn**	**20 13 41.1**	**-0.4**
AKASG	**Malin Array Be**	**12.79**	**355**	P		**Pn**	**20 13 46.0**	**+0.1**
AKASG	comp=Z,1.0nm,0.3s				pmax	pmax		
AKASG	**Malin Array Be**	**12.79**	**355**	Pn		**Pn**	**20 13 46.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=170,slow=12,SNR=3.9							
MIB	**Mutribah**	**15.88**	**116**	*e*P		**Pn**	**20 14 27.7**	**0.0**
MIB	comp=Z,24nm,0.8s				AMb	AMB	20 14 33.0	
MIB	**Mutribah**	**15.88**	**116**	*e*P		**Pn**	**20 14 27.7**	**0.0**
NAY	**Al-Naaiem**	**16.13**	**118**	*e*P		**Pn**	**20 14 31.5**	**+0.4**
NAY	comp=Z,8.7nm,0.9s				AMb	AMB	20 14 35.9	
NAY	**Al-Naaiem**	**16.13**	**118**	*e*P		**Pn**	**20 14 31.5**	**+0.4**
UMR	**Umm Al-Rimmam**	**16.29**	**116**	*e*P		**Pn**	**20 14 32.4**	**-0.7**
UMR	comp=Z,23nm,0.6s				AMb	AMB	20 14 37.6	
UMR	**Umm Al-Rimmam**	**16.29**	**116**	*e*P		**Pn**	**20 14 32.4**	**-0.7**
GERES	comp=Z,23nm,0.6s **GERESS Array B**	**16.53**	**317**	Pn		**Pn**	**20 14 38.6**	**+2.6**
GERES	comp=Z,0.1nm,0.3s,baz=134,slow=9.5,SNR=4.9				LR	LR	20 22 00.6	
PGF	comp=Z,111nm,18.2s,baz=72,slow=41 **Pioggiola**	**17.32**	**292**	*e*P		**Pn**	**20 14 44.8**	**-1.3**
PGF	comp=Z,61nm,1.2s				pmax	pmax		
PGF	**Pioggiola**	**17.32**	**292**	*e*P		**Pn**	**20 14 44.8**	**-1.3**
PGF	comp=Z,30nm,1.2s **Pioggiola**	**17.32**	**292**	*e*P		**Pn**	**20 14 44.8**	**-1.3**
DAVOX	comp=Z,30nm,1.2s **Davos/Dischmat**	**17.82**	**306**	LR		LR	20 22 14.2	
MOX	comp=Z,82nm,18.9s,baz=253,slow=39 **Moxa**	**18.67**	**319**	*e*P		**Pn**	**20 15 05.2**	**+2.6**
MOX	comp=Z,15nm,1.4s				pmax	pmax		
MOX	**Moxa**	**18.67**	**319**	*e*P		**Pn**	**20 15 05.2**	**+2.6**
FRF	comp=Z,15nm,1.4s **La Foret Royal**	**19.18**	**295**	*e*P		**Pn**	**20 15 07.3**	**-1.5**
LMR	**La Mourre**	**19.24**	**294**	*e*P		**Pn**	**20 15 07.8**	**-1.8**
LMR	comp=Z,17nm,1.1s				pmax	pmax		
LMR	**La Mourre**	**19.24**	**294**	*e*P		**Pn**	**20 15 07.8**	**-1.8**
LMR	comp=Z,9.0nm,1.1s **La Mourre**	**19.24**	**294**	*e*P		**Pn**	**20 15 07.8**	**-1.8**
MBDF	comp=Z,8.6nm,1.1s **Montbardon**	**19.30**	**298**	*e*P		**Pn**	**20 15 09.1**	**-1.1**
MBDF	comp=Z,9.5nm,0.9s				pmax	pmax		
MBDF	**Montbardon**	**19.30**	**298**	*e*P		**Pn**	**20 15 09.1**	**-1.1**
MBDF	comp=Z,5.0nm,0.9s **Montbardon**	**19.30**	**298**	*e*P		**Pn**	**20 15 09.1**	**-1.1**
LPG	comp=Z,4.8nm,0.9s **La Plagne**	**19.49**	**300**	*e*P		**Pn**	**20 15 11.2**	**-1.3**
LPG	comp=Z,51nm,1.5s				pmax	pmax		
LPG	**La Plagne**	**19.49**	**300**	*e*P		**Pn**	**20 15 11.2**	**-1.3**
LPG	comp=Z,26nm,1.5s **La Plagne**	**19.49**	**300**	*e*P		**Pn**	**20 15 11.2**	**-1.3**
LPL	comp=Z,26nm,1.5s **La Plagne**	**19.50**

YKA	**Yellowknife Ar**	**76.11**	**344**	P	**P**	**20 22 31.0**	**-0.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
YKA	**Yellowknife Ar**	**76.11**	**344**	P	**P**	**20 22 31.0**	**-0.9**
	comp=Z,0.9nm,0.9s,mb3.7,baz=27,slow=6.0,SNR=12						

*IDC **30** 20:23:09.6±1.2, 962S×11835E, h0km, mb3.9/6, mb1 3.9/9, mb1mx3.8/20, mbtmp3.9/9, ML3.7/3, Error ellipse: s-maj=49.3km s-min=16.7km az=40.0*
*NEIC **30** 20:23:11.1±0.5, 959S×11842E, h10km, Error ellipse: s-maj=21.0km s-min=7.3km az=53.0*
*ISCJB **30** 20:23:14.4±2.0, 978S±0.10×11843E±0.09, h58km±20km, mb4.0/5, Error ellipse: s-maj=18.0km s-min=12.6km az=41.2*

ISC 30 20:23:18.4±1.6, 994S±010×11851E±010, h85km±17km, n13, σ1ℑ14/19, mb3.9/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Kupang**	**5.09**	**93**	Pn		**Pn**		**20 24 31.4**	**-0.7**
	31nm,0.3s,baz=287,slow=4.1,SNR=29								
BATI				Sn		**Sn**		**20 25 29.8**	**+0.1**
	9.1nm,0.3s,baz=35,slow=22,SNR=7.7								
FITZ	**Fitzroy Crossi**	**10.66**	**140**	Pn		**Pn**		**20 25 47.9**	**-0.3**
	0.2nm,0.3s,baz=335,slow=9.0,SNR=5.1								
FITZ				Sn		**Sn**		**20 27 42.0**	**-3.8**
	0.6nm,0.3s,baz=187,slow=20,SNR=7.6								
MBWA	**Marble Bar**	**11.22**	**174**	*e*Pn		**Pn**		**20 25 56.6**	**+0.8**
MBWA				*e*Sn		**Sn**		**20 27 51.8**	**-7.5**
WRA	**Warramunga Arr**	**18.23**	**125**	P		**Pn**		**20 27 27.2**	**+1.4**
	0.1nm,0.3s,baz=298,slow=14,SNR=12								
WRA				S		**S**		**20 30 38.1**	**-11**
	0.1nm,0.3s,baz=304,slow=24,SNR=3.8								
WB2	**Warramunga Ar**	**18.24**	**125**	*e*P		**Pn**		**20 27 28.1**	**+2.1**
ASAR	**Alice Springs**	**20.06**	**135**	P		**P**		**20 27 48.9**	**+4.0**
ASAR				S		**S**		**20 31 24.4**	**-1.5**
ASAR	**Alice Springs**	**20.06**	**135**	P		**P**		**20 27 48.9**	**+4.0**
	1.3nm,0.8s,baz=310,slow=10,SNR=17								
ASAR				S		**S**		**20 31 24.4**	**-1.5**
	0.8nm,0.9s,baz=312,slow=22,SNR=3.7								
PSI	**Prapat**	**23.25**	**302**	P		**P**		**20 28 15.8**	**-2.7**
	3.8nm,0.4s,mb4.1,baz=192,slow=7.5,SNR=5.6								
SONM	**Songino Array**	**58.51**	**350**	P		**P**		**20 33 05.7**	**+0.1**
	0.5nm,0.4s,mb3.9,baz=168,slow=8.6,SNR=11								
MKAR	**Makanchi Array**	**65.07**	**333**	P		**P**		**20 33 49.6**	**-0.1**
	2.1nm,0.8s,mb4.0,baz=143,slow=7.7,SNR=22								
ZALV	**Zalesovo Beam**	**69.74**	**340**	P		**P**		**20 34 18.2**	**-0.8**
	0.7nm,0.4s,mb3.8,baz=130,slow=8.2,SNR=6.1								
AKTK	**Aktyubinsk**	**79.72**	**326**	P		**P**		**20 35 17.4**	**+0.7**
AKTO	**Aktyubinsk**	**79.72**	**326**	P		**P**		**20 35 17.4**	**+0.7**
	0.7nm,0.4s,mb3.8,baz=98,slow=11,SNR=3.4								

IDC 30 20:28:23.4±5.6, 1868S×17191W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/16, mbtmp3.7/5, Error ellipse: s-maj=369.7km s-min=25.2km az=151.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**50.53**	**254**	P		P		20 37 23.9	+0.1
	2.1nm,0.6s,baz=90,slow=8.4,SNR=29								
WRA	**Warramunga Arr**	**50.56**	**259**	P		P		20 37 23.5	-0.6
	0.5nm,0.6s,baz=98,slow=6.4,SNR=8.8								
NVAR	**Mina Array Bea**	**75.83**	**41**	P		P		20 40 11.2	-0.3
	0.6nm,0.7s,baz=215,slow=8.5,SNR=4.1								
PDAR	**Pinedale Array**	**83.76**	**41**	P		P		20 40 54.9	+0.5
	0.9nm,1.0s,baz=210,slow=5.2,SNR=4.9								
YKA	**Yellowknife Ar**	**92.53**	**23**	P		P		20 41 35.4	-0.7
	0.1nm,0.4s,baz=222,slow=3.9,SNR=4.4								
GERES	**GERESS Array B**	**149.56**	**353**	PKPbc		PKPbc		20 48 16.2	+1.5
	0.8nm,0.9s,baz=49,slow=3.6,SNR=4.8								

IDC 30 20:28:29.2±2.2, 337N×12611E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/16, mbtmp3.4/3, Error ellipse: s-maj=199.2km s-min=25.6km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.53**	**161**	P		P		20 33 50.7	0.0
	0.5nm,0.6s,baz=340,slow=11,SNR=4.7								
ASAR	**Alice Springs**	**27.92**	**165**	P		P		20 34 21.6	+0.4
	0.2nm,0.6s,baz=353,slow=13,SNR=2.6								
MKAR	**Makanchi Array**	**57.50**	**326**	P		P		20 38 20.1	-0.1
	0.5nm,0.5s,baz=118,slow=8.1,SNR=8.9								

*NEIC **30** 20:33:06.9, 1597N×9912W, h28km, MD4.0(MEX), After MEX.*

MEX 30 20:33:08.1±0.9, 1606N×9912W, h27km±29km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.01**	**71**	*i* P		Pn		20 33 23.2	-3.4
PNIG				*i* S		Sn		20 33 36.0	-3.9
PNIG	**Pinotepa**	**1.01**	**71**	*i* P		Pn		20 33 24.3	-2.2
PNIG				*i* S		Sn		20 33 36.0	-3.9
ACX	**Acapulco**	**1.11**	**317**	*e*P		Pn		20 33 24.5	-3.4
ACX				*i* S		Sn		20 33 37.8	-4.4
CAIG	**El Cayaco**	**1.47**	**312**	*e*P		Pn		20 33 29.5	-3.4
CAIG				*i* S		Sn		20 33 51.7	+0.4
CAIG	**El Cayaco**	**1.47**	**312**	*e*P		Pn		20 33 29.5	-3.4
CAIG				*i* S		Sn		20 33 47.9	-3.4
MEIG	**Mezcala**	**1.92**	**346**	*e*P		Pn		20 33 38.0	-1.0
MEIG				*i* S		Sn		20 34 00.2	-2.0
UTMO	**Huajuapan**	**2.17**	**35**	*e*P		Pn		20 33 39.9	-2.5
UTMO				*i* S		Sn		20 34 05.1	-3.3
PLIG	**Platanillo**	**2.35**	**351**	*e*P		Pn		20 33 43.5	-1.5
PLIG				*i* S		Sn		20 34 10.9	-2.0
OXX	**Oaxaca**	**2.52**	**66**	*e*P		Pn		20 33 45.4	-1.8
OXX				*i* S		Sn		20 34 12.7	-4.4
TPIG	**Tehuac#an**	**2.89**	**35**	*i* S		Sn		20 34 24.2	-2.1
HUIG	**Huatulco**	**2.92**	**95**	*i* S		Sn		20 34 20.0	-6.9
PPM	**Popocatepetl**	**3.03**	**9**	*e*P		Pn		20 33 53.2	-1.0
PPM				*i* S		Sn		20 34 27.8	-1.9
IIO	**Organos**	**3.53**	**6**	*e*P		Pn		20 34 04.5	+3.3
IIO				*i* S		Sn		20 34 44.8	+2.6
CMIG	**Matias Romero**	**4.19**	**75**	*e*P		Pn		20 34 10.7	+0.4
CMIG				*i* S		Sn		20 34 55.0	-3.4

IDC 30 20:36:27.3±2.4, 1561S×17390W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.9/15, mbtmp3.9/5, MS4.2/2, Ms1 4.2/2, ms1mx3.4/19, Error ellipse: s-maj=177.8km s-min=23.3km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.12**	**257**	P		P		20 43 46.9	-1.5
	0.8nm,0.4s,baz=69,slow=17,SNR=2.3								
STKA	**Stephens Creek**	**43.51**	**240**	LR		LR		21 01 04.6	
	comp=Z,164nm,18.3s,baz=206,slow=34								
WRA	**Warramunga Arr**	**49.33**	**257**	P		P		20 45 19.5	+0.9
	1.0nm,0.5s,baz=97,slow=6.8,SNR=12								
ASAR	**Alice Springs**	**49.59**	**252**	P		P		20 45 20.8	+0.2
	5.5nm,0.7s,baz=89,slow=8.3,SNR=40								
NVAR	**Mina Array Bea**	**74.81**	**42**	P		P		20 48 10.4	+0.9
	0.7nm,0.7s,baz=218,slow=7.3,SNR=4.4								
PDAR	**Pinedale Array**	**82.74**	**42**	P		P		20 48 52.1	-0.9
	0.6nm,1.0s,baz=284,slow=6.0,SNR=3.7								
PLCA	**Paso Flores**	**89.73**	**132**	LR		LR		21 21 52.8	
	comp=Z,217nm,20.1s,baz=68,slow=30								
CLL	**Collm**	**143.96**	**353**	*e*(P)		PKPdf		20 56 06.0	+1.4
	comp=Z,6.0nm,1.0s								
KMBO	**Kilima Mbogo**	**145.01**	**244**	PKPbc		PKPbc		20 56 06.6	-0.3
	comp=Z,2.7nm,1.0s,baz=120,slow=7.5,SNR=6.3								
GERES	**GERESS Array B**	**146.27**	**351**	PKPbc		PKPbc		20 56 09.9	+0.1
	comp=Z,1.3nm,1.0s,baz=68,slow=4.9,SNR=5.2								

IDC 30 20:37:25.1±1.2, 081S×12745E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/15, mbtmp3.6/5, Error ellipse: s-maj=128.6km s-min=19.3km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.18**	**161**	P		P		20 42 00.9	-0.4
	1.4nm,0.7s,baz=341,slow=11,SNR=13								
ASAR	**Alice Springs**	**23.57**	**165**	P		P		20 42 36.8	-0.9
	1.5nm,0.8s,baz=338,slow=8.8,SNR=15								
STKA	**Stephens Creek**	**33.67**	**158**	P		P		20 44 09.0	+1.2
	1.8nm,0.7s,baz=347,slow=8.1,SNR=5.1								
SONM	**Songino Array**	**51.80**	**342**	P		P		20 46 35.5	+0.8
	0.3nm,0.8s,baz=163,slow=6.0,SNR=2.3								
MKAR	**Makanchi Array**	**61.69**	**326**	P		P		20 47 44.4	-0.6
	0.3nm,0.3s,baz=122,slow=7.6,SNR=7.3								

*NEIC **30** 20:42:58.6±0.7, 4.15N×7865W, h10km, Error ellipse: s-maj=17.1km s-min=11.7km az=74.0*
*ISCJB **30** 20:43:00.1±0.7, 427N±007×7837W±006, h33km, mb3.6/6, Error ellipse: s-maj=10.4km s-min=7.5km az=159.6*
*IDC **30** 20:43:12.4±3.5, 434N×7785W, h139km±35km, mb3.2/6, mb1 3.6/9, mb1mx3.4/21, mbtmp3.4/9, Error ellipse: s-maj=34.4km s-min=14.5km az=74.0*

ISC 30 20:43:02.2±0.7, 416N±007×7840W±006, h35km, n17, σ1ℑ34/17, mb3.6/6, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**3.90**	**181**	*e*Pn		**Pn**		**20 43 58.3**	**-1.3**
ROSC	**El Rosal**	**4.11**	**80**	P		**Pn**		**20 44 06.8**	**+4.2**
	4.0nm,0.3s,baz=262,slow=16,SNR=4.8								
ROSC				S		**Sn**		**20 44 49.2**	**-0.3**
	1.7nm,0.3s,baz=284,slow=19,SNR=4.1								
BCIP	**Isla Barro Col**	**5.17**	**344**	*e*Pn		**Pn**		**20 44 14.1**	**-3.0**
SDV	**Santo Domingo**	**9.03**	**58**	*e*Pn		**Pn**		**20 45 11.7**	**+1.6**
SDV				*e*Sn		**Sn**		**20 46 51.5**	**+0.9**
SDV	**Santo Domingo**	**9.03**	**58**	P		**Pn**		**20 45 11.6**	**+1.5**
	1.7nm,0.3s,baz=227,slow=2.9,SNR=9.3								
SDV				S		**Sn**		**20 46 48.9**	**-1.7**
	0.3nm,0.3s,baz=94,slow=19,SNR=1.7								
NNA	**Nana**	**16.12**	**175**	P		**Pn**		**20 46 51.4**	**+5.2**
NNA	**Nana**	**16.12**	**175**	P		**Pn**		**20 46 51.4**	**+5.2**
	1.2nm,0.3s,baz=0.0,slow=10,SNR=5.3								
LPAZ	**La Paz**	**22.72**	**154**	P		**P**		**20 48 01.9**	**+0.8**
	0.8nm,0.5s,mb3.4,baz=339,slow=10,SNR=6.2								
SIV	**San Ignacio**	**26.36**	**140**	P		**P**		**20 48 33.6**	**-1.7**
	0.5nm,0.4s,mb3.4,baz=286,slow=20,SNR=4.3								
SWET	**Sewanee**	**31.68**	**348**	*e*P		**P**		**20 49 22.6**	**+0.3**
PLCA	**Paso Flores**	**45.25**	**172**	P		**P**		**20 51 17.7**	**+1.5**
	1.6nm,0.8s,mb3.9,baz=315,slow=7.1,SNR=4.2								
PDAR	**Pinedale Array**	**47.37**	**329**	P		**P**		**20 51 34.1**	**+1.3**
	0.5nm,0.8s,mb3.5,baz=108,slow=8.6,SNR=3.1								
NVAR	**Mina Array Bea**	**49.79**	**319**	P		**P**		**20 51 52.4**	**+0.8**
	0.5nm,0.7s,mb3.6,baz=122,slow=7.4,SNR=6.2								
YKA	**Yellowknife Ar**	**64.05**	**342**	P		**P**		**20 53 30.6**	**-1.5**
	0.2nm,0.3s,mb3.6,baz=132,slow=6.7,SNR=9.7								
SONM	**Songino Array**	**128.05**	**356**	PKP		PKPdf		21 02 03.5	-1.1
	0.4nm,0.7s,baz=21,slow=1.1,SNR=4.6								
ASAR	**Alice Springs**	**143.30**	**235**	PKP		PKPdf		21 02 29.4	-4.2
	0.4nm,0.5s,baz=118,slow=3.9,SNR=7.7								
WRA	**Warramunga Arr**	**144.46**	**241**	PKPbc		PKPdf		21 02 33.6	-2.2
	1.4nm,0.8s,baz=106,slow=3.1,SNR=9.4								

*IDC **30** 20:49:25.3±1.0, 3795N×3081E, h0km, mb3.5/4, mb1 3.6/11, mb1mx3.5/26, mbtmp3.5/11, ML3.6/7, MS2.9/6, Ms1 2.9/6, ms1mx2.6/29, Error ellipse: s-maj=22.0km s-min=14.4km az=67.0*
*ISK **30** 20:49:25.4, 3798N×3096E, h8km, ML3.8*
*CSEM **30** 20:49:25.6±0.0, 3798N×3094E, h10km, mb4.0, Error ellipse: s-maj=1.2km s-min=1.1km az=29.0*
*NEIC **30** 20:49:25.6, 3800N×3093E, h7km, mb4.1/1, ML3.9(ISK), After ISK.*
*ISCJB **30** 20:49:26.3±0.6, 3798N±002×3093E±002, h11km±4km, mb3.7/5, MS2.8/2, Error ellipse: s-maj=3.1km s-min=2.8km az=152.4*
*MOS **30** 20:49:26.6±1.3, 3798N×3085E, h15km, mb4.0/4, Error ellipse: s-maj=9.2km s-min=5.4km az=93.9*
*DDA **30** 20:49:27.4, 3801N×3098E, h4km±1km, Ml4.0*

ISC 30 20:49:26.8±0.6, 3796N±002×3092E±002, h5km±4km, n170, σ1ℑ03/197, mb3.7/5, MS2.8/2, 6C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.35**	**250**	PG		**Pg**		**20 49 32.9**	**-0.7**
ISP				SG		**Sg**		**20 49 39.6**	**+1.5**
ISP	**Isparta**	**0.35**	**250**	Pg		**Pg**		**20 49 33.0**	**-0.6**
ISP				Sg		**Sg**		**20 49 40.0**	**+1.9**
ISP	**Isparta**	**0.35**	**250**	Pg		**Pg**		**20 49 33.0**	**-0.6**
ISP				*e*Sg		**Sg**		**20 49 39.6**	**+1.5**
BCK	**Bucak**	**0.57**	**208**	PG		**Pg**		**20 49 37.0**	**-0.7**
SHUT	**Suhut-Afyon**	**0.66**	**334**	PG		**Pg**		**20 49 38.9**	**-0.6**
ANTB	**Antalya**	**1.08**	**192**	PN		**Pn**		**20 49 47.3**	**-1.3**
KDHN	**Kadinhani**	**1.09**	**59**	*i* P		**Pg**		**20 49 46.3**	**-1.4**
KDHN				*i* S		**Sg**		**20 50 04.5**	**+2.6**
KONT	**Konya--Tatoy**	**1.14**	**90**	PN		**Pn**		**20 49 46.5**	**-2.8**
KONT	**Konya--Tatoy**	**1.14**	**90**	Pn		**Pn**		**20 49 47.6**	**-1.7**
KONT	**Konya--Tatoy**	**1.14**	**90**	Pn		**Pn**		**20 49 47.6**	**-1.7**
KHL	**Karahalli**	**1.16**	**288**	PN		**Pn**		**20 49 47.8**	**-1.9**
KHL	**Karahalli**	**1.16**	**288**	Pn		**Pn**		**20 49 47.9**	**-1.8**
KHL	**Karahalli**	**1.16**	**288**	Pn		**Pn**		**20 49 47.9**	**-1.8**
KIZT	**Kizilcal**	**1.18**	**39**	PN		**Pn**		**20 49 48.3**	**-1.7**
KIZT	**Kizilcal**	**1.18**	**39**	Pn		**Pn**		**20 49 48.3**	**-1.7**
GOLH	**Golhisar**	**1.30**	**237**	*i* P		**Pn**		**20 49 52.0**	**+0.4**
GOLH				*i* S		**Sn**		**20 50 10.0**	**+1.4**
GOLH	**Golhisar**	**1.30**	**237**	*i* P		**Pn**		**20 49 52.0**	**+0.4**
GOLH				*i* S		**Sn**		**20 50 10.1**	**+1.3**
ELL	**Elmali**	**1.46**	**214**	PN		**Pn**		**20 49 53.8**	**0.0**
ELL	**Elmali**	**1.46**	**214**	P		**Pn**		**20 49 53.9**	**+0.1**
DENT	**Denizli**	**1.51**	**263**	PN		**Pn**		**20 49 54.3**	**-0.2**
DENT	**Denizli**	**1.51**	**263**	Pn		**Pn**		**20 49 54.4**	**-0.1**
ESKT	**Eskisehir**	**1.56**	**358**	PN		**Pn**		**20 49 54.4**	**-0.7**
ESKT	**Eskisehir**	**1.56**	**358**	*i* P		**Pn**		**20 49 54.5**	**-0.7**
ESKT				*i* S		**Sn**		**20 50 16.4**	**+0.7**
SEYT	**Eskypehyr**	**1.56**	**358**	*i* P		**Pn**		**20 49 54.5**	**-0.6**
SEYT				*i* S		**Sn**		**20 50 16.4**	**+0.7**
GDZ	**Gediz**	**1.59**	**315**	*i* P		**Pn**		**20 49 55.2**	**-0.4**
GDZ				*i* S		**Sn**		**20 50 17.4**	**+0.7**
KULA	**Kula-Manisa**	**1.86**	**288**	PN		**Pn**		**20 49 58.5**	**-0.9**
BORA	**Eskisehir**	**1.95**	**349**	*i* P		**Pn**		**20 50 00.5**	**0.0**
BORA				*i* S		**Sn**		**20 50 28.4**	**+3.0**
FETY	**Fethiye**	**1.98**	**228**	*e*PN		**Pn**		**20 50 01.2**	**+0.3**
FETY	**Fethiye**	**1.98**	**228**	Pn		**Pn**		**20 50 00.6**	**-0.3**
FETY	**Fethiye**	**1.98**	**228**	Pn		**Pn**		**20 50 00.6**	**-0.3**
ERMK	**Ermenek**	**2.06**	**129**	*i* P		**Pn**		**20 50 03.7**	**+1.7**
ERMK				*i* S		**Sn**		**20 50 29.1**	**+0.9**
ERMK	**Ermenek**	**2.06**	**129**	*i* P		**Pn**		**20 50 03.7**	**+1.6**
ERMK				*i* S		**Sn**		**20 50 29.0**	**+0.8**
GPA	**Golpazari**	**2.37**	**349**	*e*PN		**Pn**		**20 50 05.5**	**-0.8**
ANTO	**Ankara**	**2.40**	**37**	*e*PN		**Pn**		**20 50 05.3**	**-1.4**
LOD	**Lodumlu**	**2.40**	**36**	*e*PN		**Pn**		**20 50 06.0**	**-0.7**
DST	**Dursunbey**	**2.43**	**313**	*e*PN		**Pn**		**20 50 06.5**	**-0.6**
DST	**Dursunbey**	**2.43**	**313**	Pn		**Pn**		**20 50 06.6**	**-0.5**
GULT	**Gulveren**	**2.49**	**353**	*e*PN		**Pn**		**20 50 08.0**	**+0.1**
DERT	**Derbent**	**2.58**	**338**	*e*PN		**Pn**		**20 50 08.6**	**-0.6**
MLSB	**Milas**	**2.59**	**256**	*e*PN		**Pn**		**20 50 08.8**	**-0.5**
AKHS	**Akhisar**	**2.61**	**291**	*i* P		**Pn**		**20 50 09.4**	**-0.2**
AKS	**Akhisar**	**2.61**	**291**	*e*PN		**Pn**		**20 50 08.9**	**-0.7**
AKS	**Akhisar**	**2.61**	**291**	Pn		**Pn**		**20 50 08.9**	**-0.6**
IZI	**Iznik**	**2.62**	**335**	*e*PN		**Pn**		**20 50 10.0**	**+0.2**
IZI	**Iznik**	**2.62**	**335**	Pn		**Pn**		**20 50 09.0**	**-0.8**
IZI	**Iznik**	**2.62**	**335**	Pn		**Pn**		**20 50 09.0**	**-0.8**
ADVT	**Abdulvahap**	**2.63**	**340**	*e*PN		**Pn**		**20 50 09.4**	**-0.5**
ADVT	**Abdulvahap**	**2.63**	**340**	Pn		**Pn**		**20 50 09.4**	**-0.5**
IKL	**Isikli**	**2.80**	**127**	*e*PN		**Pn**		**20 50 12.3**	**+0.1**
IKL	**Isikli**	**2.80**	**127**	Pn		**Pn**		**20 50 12.7**	**+0.5**
GEMT	**Gemlik**	**2.81**	**332**	*e*PN		**Pn**		**20 50 11.4**	**-1.0**
GEMT	**Gemlik**	**2.81**	**332**	Pn		**Pn**		**20 50 11.9**	**-0.5**
GEMT	**Gemlik**	**2.81**	**332**	Pn		**Pn**		**20 50 11.9**	**-0.5**
ARG	**Arkhangelos**	**2.84**	**233**	*e*P		**Pn**		**20 50 14.6**	**+1.8**
HENT	**Hendek**	**2.86**	**360**	*i* P		**Pn**		**20 50 13.2**	**+0.2**
HENT	**Hendek**	**2.86**	**360**	*i* P		**Pn**		**20 50 13.1**	**+0.1**
YLV	**Yalova**	**2.87**	**336**	*e*PN		**Pn**		**20 50 12.7**	**-0.4**
BTOK	**Tokmak**	**2.88**	**309**	*i* P		**Pn**		**20 50 13.4**	**0.0**
BTOK				*i* S		**Sg**		**20 51 00.9**	**+1.4**
BALB	**Balikesir**	**2.91**	**306**	*e*Pn		**Pn**		**20 50 13.2**	**-0.5**
BALB	**Balikesir**	**2.91**	**306**	Pn		**Pn**		**20 50 13.3**	**-0.4**
BALB	**Balikesir**	**2.91**	**306**	Pn		**Pn**		**20 50 13.3**	**-0.4**
NIG	**Nigde**	**2.91**	**86**	*e*PN		**Pn**		**20 50 13.7**	**-0.1**
NIG	**Nigde**	**2.91**	**86**	Pn		**Pn**		**20 50 14.0**	**+0.2**
KDAG	**Bornova**	**2.92**	**280**	*i* P		**Pn**		**20 50 13.8**	**0.0**
KDAG				*i* S		**Sg**		**20 50 57.1**	**-3.3**
DAT	**Datca**	**2.94**	**246**	*e*PN		**Pn**		**20 50 14.4**	**+0.3**
BODT	**Bodrum**	**3.01**	**254**	*e*PN		**Pn**		**20 50 15.5**	**+0.4**
HRT	**Hereke**	**3.02**	**342**	*e*PN		**Pn**		**20 50 14.5**	**-0.7**
HRT	**Hereke**	**3.02**	**342**	Pn		**Pn**		**20 50 14.6**	**-0.6**
KCT	**Karacabey**	**3.04**	**320**	*e*PN		**Pn**		**20 50 16.2**	**+0.6**
KCT	**Karacabey**	**3.04**	**320**	Pn		**Pn**		**20 50 15.2**	**-0.4**
KCT	**Karacabey**	**3.04**	**320**	Pn		**Pn**		**20 50 15.2**	**-0.4**
MERS	**Mersin**	**3.07**	**110**	*e*PN		**Pn**		**20 50 15.5**	**-0.4**
ALFC	**Alevga**	**3.11**	**154**	P		**Pn**		**20 50 15.4**	**-1.1**
	5.0nm,0.2s								
CDAG	**Cicekdag**	**3.16**	**57**	*i* P		**Pn**		**20 50 16.4**	**-0.8**
CDAG				*i* S		**Sn**		**20 50 54.2**	**-1.1**
ELDT	**Eldivan**	**3.19**	**37**	*i* P		**Pn**		**20 50 17.5**	**0.0**
AVNT	**Avonos**	**3.19**	**74**	*i* P		**Pn**		**20 50 17.3**	**-0.3**
SMG	**Samos**	**3.25**	**267**	*e*P		**Pn**		**20 50 18.4**	**0.0**
LEF	**Lefka**	**3.25**	**150**	*e*PN		**Pn**		**20 50 17.2**	**-1.2**
PPCY	**Paphos**	**3.28**	**159**	P		**Pn**		**20 50 21.1**	**+2.3**
BNT	**Bandirma**	**3.34**	**317**	*e*PN		**Pn**		**20 50 18.9**	**-0.8**
MAMC	**Mammari**	**3.34**	**146**	P		**Pn**		**20 50 19.0**	**-0.7**
EDC	**Edincik**	**3.37**	**316**	*e*PN		**Pn**		**20 50 18.9**	**-0.1**
CANT	**Cankiri**	**3.37**	**38**	*e*PN		**Pn**		**20 50 20.1**	**+0.1**
CANT	**Cankiri**	**3.37**	**38**	Pn		**Pn**		**20 50 20.1**	**+0.1**
KDZE	**Karadeniz Ereo**	**3.37**	**7**	*e*PN		**Pn**		**20 50 19.0**	**-1.0**
ISK	**Istanbul-Kandi**	**3.42**	**336**	*e*PN		**Pn**		**20 50 20.1**	**-0.6**
SAFT	**Safranbolu**	**3.54**	**22**	*e*PN		**Pn**		**20 50 21.7**	**-0.7**
SAFT	**Safranbolu**	**3.54**	**22**	Pn		**Pn**		**20 50 22.4**	**0.0**
SAFT	**Safranbolu**	**3.54**	**22**	Pn		**Pn**		**20 50 22.5**	**+0.1**
EREN	**Erenkoy**	**3.56**	**132**	*e*PN		**Pn**		**20 50 22.2**	**-0.5**
EREN	**Erenkoy**	**3.56**	**132**	Pn		**Pn**		**20 50 23.8**	**+1.1**
CSS	**Prodhromos**	**3.57**	**146**	P		**Pn**		**20 50 22.6**	**-0.2**
	1.6nm,0.8s								
SZAC	**Souni-Zanaja**	**3.57**	**153**	P		**Pn**		**20 50 29.3**	**+6.5**
AYVA	**Ayvalik**	**3.58**	**293**	*i* P		**Pn**		**20 50 23.4**	**+0.4**
CORM	**Corum**	**3.63**	**51**	*e*PN		**Pn**		**20 50 22.9**	**-0.8**
CTT	**Catalca**	**3.72**	**330**	*e*PN		**Pn**		**20 50 24.7**	**-0.1**
CTT	**Catalca**	**3.72**	**330**	Pn		**Pn**		**20 50 24.8**	**0.0**
ELBA	**Catalca**	**3.72**	**330**	*e*P		**Pn**		**20 50 29.8**	**+5.0**
PRK	**Paraskevi**	**3.86**	**291**	*e*P		**Pn**		**20 50 27.7**	**+0.8**
PRK				*e*S		**Sg**		**20 51 35.1**	**+4.2**
KARP	**Karpathos**	**3.87**	**233**	*e*P		**Pn**		**20 50 27.0**	**+0.1**
TOS	**Tosya**	**3.89**	**37**	*e*PN		**Pn**		**20 50 27.4**	**+0.2**
TOS	**Tosya**	**3.89**	**37**	Pn		**Pn**		**20 50 27.4**	**+0.2**
RKY	**Sarkoy-Tekirda**	**3.98**	**314**	*e*PN		**Pn**		**20 50 28.6**	**+0.2**
BALT	**Daday**	**4.04**	**27**	*i* P		**Pn**		**20 50 29.3**	**0.0**
EZN	**Ezine**	**4.04**	**299**	*e*PN		**Pn**		**20 50 29.1**	**-0.2**
EZN	**Ezine**	**4.04**	**299**	Pn		**Pn**		**20 50 29.2**	**-0.1**
BOZC	**Bozcaada**	**4.24**	**298**	*i* P		**Pn**		**20 50 32.7**	**+0.7**
BOZC				*i* S		**Sg**		**20 51 39.2**	**-

comp=Z,1.0nm,0.8s
NOA MLR MLR
comp=Z,9.0nm,19.1s
NOA NORSAR Array B 26.20 338 P **P** **20 55 01.0 -1.0**
comp=Z,0.6nm,0.8s,mb3.2,baz=156,slow=9.8,SNR=2.8
NOA LR LR 21 06 34.3
comp=Z,9.2nm,19.1s,MS2.3,baz=140,slow=39
ARCES ARCESS Array B 31.77 356 LR LR 21 10 37.1
comp=Z,54nm,21.3s,MS3.2,baz=114,slow=40
TORD Torodi Ar. Bea 35.87 234 P **P** **20 56 26.5 -1.2**
comp=Z,0.9nm,1.0s,mb3.7,baz=40,slow=11,SNR=3.7
MKAR Makanchi Array 38.36 60 P **P** **20 56 49.6 +1.0**
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 38.36 60 P **P** **20 56 49.6 +1.0**
comp=Z,1.2nm,1.0s,mb3.6,baz=278,slow=6.6,SNR=4.2
TLY Talaya 51.28 50 *eP* **P** **20 58 24.8 -6.6**
TLY pmax pmax
comp=Z,4.0nm,0.9s,mb4.3
YKA Yellowknife Ar 76.11 344 P **P** **21 01 13.0 -2.1**
YKA pmax pmax
comp=Z,1.0nm,0.9s
YKA Yellowknife Ar 76.11 344 P **P** **21 01 13.0 -2.1**
comp=Z,0.6nm,0.9s,mb3.5,baz=25,slow=6.2,SNR=7.4

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*ATH **30** 20:59:53.3, 3820N×2017E, h15km±2km, MD3.5/9*
*NEIC **30** 20:59:53.3, 3820N×2017E, h15km, MD3.5(ATH), ML3.4(THE), After ATH.*
*CSEM **30** 20:59:55.2±0.1, 3834N×2029E, h2km, MD3.5, Error ellipse: s-maj=3.6km s-min=1.5km az=63.0*
*THE **30** 20:59:56.8, 3836N×2044E, h3km, ML3.4*
*ISCJB **30** 20:59:56.6±0.7, 3834N±003×2041E±006, h15km, Error ellipse: s-maj=7.5km s-min=3.5km az=156.7*
*SKO **30** 20:59:58.2, 3845N×2029E, h6km*
ISC 30 20:59:55.5±1.0, **3831N**±003×**2039E**±007, **h1**km±5km, **n23,** σ1§**12**/32, **1C, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**129**	*i*	*i*PB	**21 00 00.6**	**+1.2**
KFL	**Anninata**	**0.37**	**122**	*e*	**Pg**	**21 00 03.6**	**+1.0**
LKD	**Levkas**	**0.45**	**27**	*e*	**Pg**	**21 00 03.7**	**-0.4**
LKD				*e*	**Sg**	**21 00 10.1**	**+0.1**
RLS	**Riolos of Patr**	**0.88**	**106**	*e*	**Pn**	**21 00 12.6**	**-2.5**
SELA	**Sela**	**1.18**	**91**	*e*	**Pg**	**21 00 17.3**	**-0.8**
SELA				*e*	**Sg**	**21 00 35.8**	**+2.3**
IGT	**Igoumenitsa**	**1.23**	**358**	*e*	**Pg**	**21 00 17.1**	**-1.9**
IGT				*e*	**Sg**	**21 00 35.3**	**+0.4**
EVR	**Evrytania**	**1.27**	**61**	*e*	**Pn**	**21 00 20.4**	**0.0**
JAN	**Janina**	**1.40**	**15**	*e*	**Pn**	**21 00 22.5**	**+0.4**
KEK	**Kerkira**	**1.48**	**342**	*e*	**Pn**	**21 00 22.0**	**-1.3**
SRN	**Sarande**	**1.60**	**349**	*i*	Pn	**21 00 25.2**	**+0.2**
SRN				*i*	Sn	**21 00 48.2**	**+1.9**
MEV	**Metsovon**	**1.61**	**24**	*e*	**Pg**	**21 00 25.8**	**-0.6**
ITM	**Ithomi**	**1.66**	**132**	*e*	**Pn**	**21 00 25.0**	**-0.7**
AGG	**Agios Georgios**	**1.68**	**64**	*e*	**Pb**	**21 00 26.4**	**-0.8**
AGG				*e*	**Sb**	**21 00 46.5**	**-2.3**
PYL	**PYLOS**	**1.77**	**142**	*e*	**Pb**	**21 00 27.8**	**-0.9**
PYL				*e*	**Sb**	**21 00 51.2**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**45**	*e*	**Pn**	**21 00 28.6**	**+1.1**
VLX	**Vlachokerasia**	**1.83**	**120**	*e*	**Pb**	**21 00 29.8**	**0.0**
VLX				*e*	**Sb**	**21 00 51.9**	**-1.3**
LKR	**Lokris**	**2.08**	**80**	*e*	**Pn**	**21 00 32.8**	**+1.3**
DID	**Didima**	**2.39**	**109**	*e*	**Pn**	**21 00 37.0**	**+1.2**
DID				*e*	**Sn**	**21 01 06.4**	**+0.7**
NEO	**Neokhori**	**2.43**	**65**	*e*	**Pn**	**21 00 36.7**	**+0.4**
FNA	**Florina**	**2.59**	**17**	*e*	**Pn**	**21 00 38.9**	**+0.3**
FNA				*e*	**Sn**	**21 01 09.6**	**-1.1**
BIA	**Bitola**	**2.80**	**15**	*e*	**Pn**	**21 00 43.2**	**+1.7**
BIA	**Bitola**	**2.80**	**15**	*e*	**Pn**	**21 00 43.1**	**+1.6**
KRUS	**Krusevo**	**3.13**	**12**	*e*	**Pn**	**21 00 46.0**	**+0.1**

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*ISK **30** 21:01:25.6, 3801N×3094E, h7km, MD3.2*
*ISCJB **30** 21:01:26.5±0.5, 3800N±004×3095E±005, h7km, Error ellipse: s-maj=6.2km s-min=4.7km az=38.9*
*NEIC **30** 21:01:26.3, 3801N×3094E, h7km, MD3.1(ISK), After ISK.*
*DDA **30** 21:01:28.1, 3805N×3094E, h7km±7km, Md3.2*
ISC 30 21:01:26.5±0.9, **3801N**±004×**3097E**±005, **h5**km±7km, **n27,** σ1§**05**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.40**	**245**	PG	**Pg**	**21 01 32.7**	**-1.6**
ISP				SG	**Sg**	**21 01 38.7**	**-0.8**
ISP	**Isparta**	**0.40**	**245**	Pg	**Pg**	**21 01 33.5**	**-0.7**
ISP				Sg	**Sg**	**21 01 39.5**	**0.0**
BCK	**Bucak**	**0.63**	**209**	PG	**Pg**	**21 01 39.9**	**+0.3**
BCK	**Bucak**	**0.63**	**209**	Pg	**Pg**	**21 01 39.3**	**+0.7**
SHUT	**Suhut-Afyon**	**0.63**	**329**	PG	**Pg**	**21 01 39.0**	**+0.3**
KDHN	**Kadinhani**	**1.03**	**60**	*i*	P	**21 01 46.4**	**+0.1**
KDHN				*i*	S	**21 02 05.1**	**+5.3**
KONT	**Konya--Tatoy**	**1.10**	**93**	PN	**Pn**	**21 01 47.0**	**-1.6**
KIZT	**Kizilcal**	**1.12**	**39**	PN	**Pn**	**21 01 47.4**	**-1.5**
KIZT	**Kizilcal**	**1.12**	**39**	Pn	**Pn**	**21 01 48.7**	**-0.2**
ANTB	**Antalya**	**1.14**	**193**	*e*	**Pn**	**21 01 48.1**	**-1.1**
KHL	**Karahalli**	**1.18**	**286**	*e*	**Pn**	**21 01 48.5**	**-1.3**
KHL	**Karahalli**	**1.18**	**286**	Pn	**Pn**	**21 01 48.8**	**-1.0**
GOLH	**Golhisar**	**1.36**	**236**	*i*	P	**21 01 51.7**	**-0.5**
GOLH				*i*	S	**21 02 12.3**	**+2.0**
ESKT	**Eskisehir**	**1.51**	**356**	*e*	**Pn**	**21 01 53.7**	**-0.5**
ESKT	**Eskisehir**	**1.51**	**356**	Pn	**Pn**	**21 01 54.7**	**+0.4**
ESKT	**Eskisehir**	**1.51**	**356**	*i*	P	**21 01 54.0**	**-0.2**
ESKT				*i*	S	**21 02 16.1**	**+1.8**
ELL	**Elmali**	**1.52**	**214**	*e*	**Pn**	**21 01 54.1**	**-0.3**
ELL	**Elmali**	**1.52**	**214**	Pn	**Pn**	**21 01 55.2**	**+0.8**
ELL	**Elmali**	**1.52**	**214**	Pn	**Pn**	**21 01 55.2**	**+0.8**
GDZ	**Gediz**	**1.59**	**313**	*i*	P	**21 01 55.8**	**+0.5**
GDZ				*i*	S	**21 02 21.4**	**+5.2**
KULA	**Kula-Manisa**	**1.89**	**286**	*e*	**Pn**	**21 01 58.5**	**-0.9**
FETY	**Fethiye**	**2.04**	**228**	*e*	**Pn**	**21 02 01.6**	**+0.1**
FETY	**Fethiye**	**2.04**	**228**	Pn	**Pn**	**21 02 02.2**	**+0.7**
ERMK	**Ermenek**	**2.06**	**131**	*i*	P	**21 02 04.9**	**+3.0**
ERMK				*i*	S	**21 02 37.4**	**+9.4**
IZI	**Iznik**	**2.60**	**334**	*e*	**Pn**	**21 02 08.5**	**-0.7**
IZI	**Iznik**	**2.60**	**334**	Pn	**Pn**	**21 02 09.7**	**+0.5**
IKL	**Isikli**	**2.80**	**128**	*e*	**Pn**	**21 02 12.5**	**+0.5**

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*ISCJB **30** 21:03:14.8±0.8, 3837N±003×2038E±006, h12km, Error ellipse: s-maj=7.1km s-min=3.3km az=156.6*
*ATH **30** 21:03:14.9, 3834N×2038E, h11km±2km, MD3.5/11*
*NEIC **30** 21:03:14.8, 3834N×2037E, h12km, MD3.5(ATH), ML3.4(THE), After ATH.*
*THE **30** 21:03:15.5, 3838N×2045E, h2km, ML3.4*
*CSEM **30** 21:03:15.1±0.2, 3837N×2038E, h2km, MD3.5, Error ellipse: s-maj=4.0km s-min=1.7km az=64.0*
*SKO **30** 21:03:15.3, 3832N×2010E, h10km*
ISC 30 21:03:14.7±0.8, **3835N**±003×**2041E**±006, **h2**km±5km, **n25,** σ1§**06**/35, **1C, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.22**	**141**	*i*	*i*PG	**21 03 19.9**	**+1.0**
VLS				*e*	**Sg**	**21 03 24.0**	**+2.2**
KFL	**Anninata**	**0.38**	**129**	*e*	**Pg**	**21 03 22.6**	**+0.7**
KFL	**Anninata**	**0.38**	**129**	*e*	**Pg**	**21 03 22.6**	**+0.6**
LKD	**Levkas**	**0.40**	**27**	*e*	**Pg**	**21 03 22.1**	**-0.4**
LKD				*e*	**Sg**	**21 03 27.7**	**0.0**
RLS	**Riolos of Patr**	**0.88**	**109**	*e*	**Pg**	**21 03 31.8**	**+0.3**
RLS				*e*	**Sb**	**21 03 45.5**	**+0.6**
SELA	**Sela**	**1.17**	**93**	*e*	**Pg**	**21 03 36.1**	**-0.9**
SELA				*e*	**Sg**	**21 03 53.4**	**+1.3**
IGT	**Igoumenitsa**	**1.18**	**357**	*e*	**Pg**	**21 03 36.4**	**-1.0**
IGT				*e*	**Sg**	**21 03 53.3**	**+0.5**
EVR	**Evrytania**	**1.23**	**62**	*e*	**Pb**	**21 03 37.2**	**-1.5**
EVR				*e*	**Sb**	**21 03 55.1**	**+0.1**
JAN	**Janina**	**1.35**	**14**	*e*	**Pb**	**21 03 40.6**	**-0.1**
JAN				*e*	**Sb**	**21 04 00.1**	**+1.6**
KEK	**Kerkira**	**1.45**	**341**	*e*	**Pg**	**21 03 41.8**	**-0.6**
KEK				*e*	**Sb**	**21 04 01.6**	**+0.4**
MEV	**Metsovon**	**1.57**	**24**	*e*	**Pg**	**21 03 44.4**	**-0.4**
MEV	**Metsovon**	**1.57**	**24**	*e*	**Pg**	**21 03 44.3**	**-0.5**
AGG	**Agios Georgios**	**1.64**	**65**	*e*	**Pn**	**21 03 44.3**	**-0.3**
AGG				*e*	**Sn**	**21 04 05.5**	**-0.8**
ITM	**Ithomi**	**1.67**	**134**	*e*	**Pb**	**21 03 46.4**	**+0.2**
THL	**Klokotos Trika**	**1.74**	**45**	*e*	**Pn**	**21 03 47.0**	**+1.0**
PYL	**PYLOS**	**1.79**	**144**	*e*	**Pb**	**21 03 47.1**	**-1.2**
PYL				*e*	**Sb**	**21 04 09.8**	**-1.5**
VLX	**Vlachokerasia**	**1.84**	**122**	*e*	**Sb**	**21 04 11.9**	**-0.5**
LKR	**Lokris**	**2.05**	**81**	*e*	**Pb**	**21 03 52.3**	**-0.4**
KZN	**Kozani**	**2.22**	**28**	*e*	**Pn**	**21 03 54.6**	**+2.0**
NEO	**Neokhori**	**2.39**	**66**	*e*	**Pb**	**21 03 55.9**	**-2.6**
FNA	**Florina**	**2.54**	**17**	*e*	**Pn**	**21 03 57.1**	**0.0**
VLI	**Veliai**	**2.58**	**128**	*e*	**Pn**	**21 04 00.3**	**+2.7**
VLI	**Veliai**	**2.58**	**128**	*e*	**Pg**	**21 04 02.8**	**-1.4**
KRUS	**Krusevo**	**3.08**	**12**	*e*	**Pn**	**21 04 04.7**	**+0.2**
KRUS	**Krusevo**	**3.08**	**12**	*e*	**Pn**	**21 04 04.6**	**+0.1**

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*DDA **30** 22:05:23.8, 3797N×3089E, h5km±5km, Md3.6*
*CSEM **30** 22:05:24.8±0.1, 3804N×3090E, h2km, MD3.6, Error ellipse: s-maj=1.5km s-min=1.1km az=152.0*
*ISCJB **30** 22:05:25.5±0.3, 3803N±002×3093E±002, h2km, Error ellipse: s-maj=3.4km s-min=2.7km az=171.0*
*ISK **30** 22:05:25.1, 3804N×3091E, h4km, ML3.7*
ISC 30 22:05:26.1±0.6, **3802N**±002×**3089E**±002, **h1**km±5km, **n50,** σ0§**92**/63, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.35**	**240**	*i*	PG	**22 05 32.8**	**0.0**
ISP				*i*	SG	**22 05 39.1**	**+1.7**
SHUT	**Suhut-Afyon**	**0.59**	**333**		PG	**22 05 37.5**	**0.0**
BCK	**Bucak**	**0.61**	**203**		PG	**22 05 37.0**	**-0.8**
KDHN	**Kadinhani**	**1.09**	**62**	*i*	P	**22 05 45.9**	**-1.1**
KDHN				*i*	S	**22 06 03.2**	**+2.2**
KHL	**Karahalli**	**1.12**	**286**		PN	**22 05 47.5**	**-1.5**
ANTB	**Antalya**	**1.14**	**190**		PN	**22 05 47.8**	**-1.4**
KIZT	**Kizilcal**	**1.16**	**42**		PN	**22 05 47.8**	**-1.7**
KONT	**Konya--Tatoy**	**1.16**	**93**		PN	**22 05 47.1**	**-2.5**
GOLH	**Golhisar**	**1.31**	**234**	*i*	P	**22 05 49.1**	**-2.2**
GOLH				*i*	S	**22 06 08.7**	**+0.4**
ELL	**Elmali**	**1.49**	**212**		PN	**22 05 54.1**	**0.0**
DENT	**Denizli**	**1.49**	**260**		PN	**22 05 53.7**	**-0.4**
ESKT	**Eskisehir**	**1.50**	**359**		PN	**22 05 53.5**	**-0.7**
ESKT	**Eskisehir**	**1.50**	**359**	*i*	P	**22 05 54.0**	**-0.1**
ESKT				*i*	S	**22 06 15.2**	**+0.9**
SEYT	**Eskypehyr**	**1.50**	**359**	*i*	P	**22 05 54.0**	**-0.2**
SEYT				*i*	S	**22 06 15.2**	**+0.9**
GDZ	**Gediz**	**1.54**	**314**	*i*	P	**22 05 54.8**	**+0.1**
GDZ				*i*	S	**22 06 16.8**	**+1.5**
KULA	**Kula-Manisa**	**1.82**	**286**		PN	**22 05 58.4**	**-0.2**
BORA	**Eskisehir**	**1.89**	**350**	*i*	P	**22 05 59.4**	**-0.1**
BORA				*i*	S	**22 06 27.2**	**+0.4**
MANT	**Manisa**	**1.90**	**285**	*i*	P	**22 05 59.1**	**-0.5**
MANT				*i*	S	**22 06 26.1**	**+1.9**
FETY	**Fethiye**	**2.00**	**227**		PN	**22 06 01.3**	**+0.3**
ERMK	**Ermenek**	**2.12**	**130**	*i*	P	**22 06 02.8**	**+0.1**
ERMK				*i*	S	**22 06 30.7**	**+1.0**
ANTO	**Ankara**	**2.37**	**38**		PN	**22 06 06.0**	**-0.1**
LOD	**Lodumlu**	**2.37**	**37**		PN	**22 06 05.6**	**-0.6**
DST	**Dursunbey**	**2.37**	**313**		PN	**22 06 06.1**	**-0.1**
GULT	**Gulveren**	**2.42**	**353**		PN	**22 06 06.3**	**-0.6**
IZI	**Iznik**	**2.56**	**335**		PN	**22 06 08.3**	**-0.5**
AKHS	**Akhisar**	**2.56**	**290**	*i*	P	**22 06 08.2**	**-0.7**
AKHS				*i*	S	**22 06 54.9**	**+6.5**
AKHS	**Akhisar**	**2.56**	**290**	*i*	P	**22 06 08.1**	**-0.7**
AKS	**Akhisar**	**2.56**	**290**		PN	**22 06 08.9**	**+0.1**
ADVT	**Abdulvahap**	**2.57**	**340**	*e*	PN	**22 06 09.0**	**+0.1**
MLSB	**Milas**	**2.58**	**255**	*e*	PN	**22 06 09.1**	**+0.1**
YLV	**Yalova**	**2.80**	**336**	*e*	PN	**22 06 12.2**	**+0.1**
BALB	**Balikesir**	**2.85**	**305**	*e*	PN	**22 06 12.7**	**-0.1**
IKL	**Isikli**	**2.86**	**128**	*e*	PN	**22 06 13.3**	**+0.4**
KDAG	**Bornova**	**2.88**	**279**	*i*	P	**22 06 13.4**	**+0.3**
NIG	**Nigde**	**2.94**	**87**	*e*	PN	**22 06 14.1**	**+0.1**
BODT	**Bodrum**	**3.00**	**252**	*e*	PN	**22 06 15.5**	**+0.6**
MERS	**Mersin**	**3.11**	**111**	*e*	PN	**22 06 16.8**	**+0.4**
CDAG	**Cicekdag**	**3.15**	**58**	*i*	P	**22 06 15.9**	**-1.0**
CDAG				*i*	S	**22 06 53.9**	**-1.4**
ELDT	**Eldivan**	**3.15**	**38**	*i*	P	**22 06 16.8**	**-0.2**
AVNT	**Avonos**	**3.21**	**75**	*i*	P	**22 06 22.6**	**-1.2**
AVNT				*i*	S	**22 07 05.7**	**+2.2**
BNT	**Bandirma**	**3.28**	**316**	*e*	PN	**22 06 19.0**	**+0.3**
EDC	**Edincik**	**3.31**	**316**	*e*	PN	**22 06 19.1**	**+0.1**
CANT	**Cankiri**	**3.34**	**39**	*e*	PN	**22 06 19.4**	**-0.1**
SAFT	**Safranbolu**	**3.50**	**23**	*e*	PN	**22 06 21.2**	**-0.5**
CORM	**Corum**	**3.62**	**52**	*e*	PN	**22 06 23.1**	**-0.3**
EREN	**Erenkoy**	**3.62**	**132**	*e*	PN	**22 06 24.5**	**+1.1**
CTKT	**Corum**	**3.99**	**48**	*i*	P	**22 06 28.3**	**-0.1**
ANDN	**Andirin**	**4.34**	**94**	*i*	P	**22 06 34.8**	**+1.4**
ANDN				*i*	S	**22 07 46.9**	**+1.2**
ENEZ	**Enez**	**4.56**	**308**	*e*	PN	**22 06 37.0**	**+0.7**
EDRB	**Edirne**	**4.97**	**321**	*e*	PN	**22 06 42.4**	**+0.4**

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*ISCJB **30** 22:07:03.0±0.6, 558S±0.1×1254W±0.3, h10km, mb3.9/5, MS4.3/17, Error ellipse: s-maj=23.9km s-min=11.5km az=153.5*
*IDC **30** 22:07:03.7±1.0, 5564S×12552W, h0km, mb3.9/5, mb1 4.1/5, mb1mx4.0/13, mbtmp3.9/5, MS4.2/17, Ms1 4.2/17, ms1mx4.1/22, Error ellipse: s-maj=40.3km s-min=29.5km az=140.0*
*GCMT **30** 22:07:05.2±0.2, 5555S×12471W, h15km, MW5.2/77, Moment Tensor Solution. s44,c62; s77,c111; Duration: 1§0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.59±.16; $M_{\theta\theta}$3.80±.18; $M_{\phi\phi}$-3.21±.13; $M_{r\theta}$1.92±.47; $M_{\theta\phi}$4.95±.12; $M_{\phi r}$2.68±.40; Best double couple: $M_0$6.84000×10^{16} NP1:φs109.00000°, δ63.00000°, λ3.00000°. NP2: φs18.00000°, δ88.00000°, λ153.00000°. Principal axes: T 7.4550, Plg20.0000°, Azm330.0000°; N -1.2330, Plg63.0000°, Azm193.0000°; P -6.2240, Plg17.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **30** 22:07:05.2±0.7, 5569S×12547W, h10km, mb4.1/2 Error ellipse: s-maj=30.7km s-min=22.4km az=133.0*
ISC 30 22:07:04.7±0.6, **558S**±01×**1254W**±03, **h10**km, **(h9**km±3km**:pP-P), n30,** σ1§**00**/13, **mb3.9**/5, **MS4.3**/17, **Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**30.53**	**132**	LR	LR	22 22 20.5	
	comp=Z,462nm,19.2s,MS4.2,baz=347,slow=30						
USHA	**Ushuaia**	**31.68**	**113**	LR	LR	22 22 13.0	
	comp=Z,814nm,21.4s,MS4.4,baz=256,slow=29						
RKT	**Rikitea**	**33.36**	**344**	*e*	LR	22 22 24.7	
	1μm,29.0s,baz=176						
QSPA	**South Pole Qui**	**34.42**	**180**	P	**P**	**22 13 53.4**	**+1.9**
	3.6nm,1.1s,mb4.2						
QSPA	**South Pole Qui**	**34.42**	**180**	P	**P**	**22 13 54.1**	**+2.6**
	1.5nm,0.9s,mb3.9,baz=133,slow=2.4,SNR=3.2						
QSPA					LR	22 24 55.0	
	comp=Z,203nm,20.0s,MS3.9,baz=90,slow=31						
TBI	**Tubuai**	**36.91**	**321**	*e*	**S**	**22 19 59.0**	**+0.9**
	190nm,30.0s						
TBI				*e*	LQ	22 22 27.8	
	362nm,27.0s						
TBI				*e*	LR	22 24 01.1	
	921nm,29.5s						
PPT	**Papeete**	**42.31**	**325**	*e*	**S**	**22 21 18.1**	**-1.1**
	233nm,24.5s						
PPT				*e*	LQ	22 24 49.6	
	1μm,26.2s						
PPT				*e*	LR	22 26 31.6	
	1μm,26.2s,baz=162						
PPT	**Papeete**	**42.31**	**325**	LR	LR	22 28 09.8	
	comp=Z,439nm,18.5s,MS4.4,baz=167,slow=30						
VNA3	**Neumayer Olymp**	**45.49**	**156**	*e*	**P**	**22 15 22.3**	**-1.1**
VNA3				*e*	pP	22 15 25.1	-1.4
VNA3				*e*		22 15 29.0	
VNA3				*e*		22 15 31.7	
VNA3				*e*		22 15 37.2	
VNA3				*e*		22 15 43.4	
VNA3				*e*		22 15 48.7	
VNA2	**Neumayer--Watz**	**46.24**	**156**	*e*	**P**	**22 15 28.8**	**-0.5**
	baz=225,slow=9.3						
VNA2				*e*	pP	22 15 31.4	-1.0
VNA2				*e*		22 15 34.5	
VNA2				*e*		22 15 37.4	
VNA2				*e*		22 15 43.4	
VNA2				*e*		22 15 49.8	
VNA2				*e*		22 15 54.8	
SNAA	**Sanae**	**46.67**	**159**	*e*	**P**	**22 15 31.8**	**-0.9**
SNAA				*e*	pP	22 15 34.3	-1.5
SNAA				*e*		22 15 38.3	
SNAA				*e*		22 15 41.6	
SNAA				*e*		22 15 47.4	
SNAA				*e*		22 15 52.3	
TAOE	**Nuku Hiva Isla**	**48.21**	**340**	*e*	**S**	**22 22 43.0**	**-1.4**
	481nm,26.2s						
TAOE				*e*	LR	22 29 18.4	
	2μm,27.9s						
MAW	**Mawson**	**56.80**	**184**	LR	LR	22 38 32.9	
	comp=Z,286nm,18.2s,MS4.4,baz=348,slow=33						
LPAZ	**La Paz**	**58.45**	**71**	P	**P**	**22 17 01.3**	**+0.7**
	1.2nm,0.8s,mb4.0						
LPAZ	**La Paz**	**58.45**	**71**	P	**P**	**22 17 01.1**	**+0.5**
	1.0nm,0.8s,mb3.9,baz=226,slow=3.4,SNR=3.8						
LPAZ					LR	22 36 08.0	
	comp=Z,142nm,18.2s,MS4.1,baz=19,slow=30						
DZM	**Mont Dzumac**	**59.77**	**275**	LR	LR	22 36 10.2	
	comp=Z,196nm,18.3s,MS4.3,baz=218,slow=29						
STKA	**Stephens Creek**	**65.89**	**249**	LR	LR	22 40 12.4	
	comp=Z,168nm,18.1s,MS4.3,baz=205,slow=30						
ROSC	**El Rosal**	**73.48**	**54**	LR	LR	22 42 31.4	
	comp=Z,65nm,18.6s,MS3.9,baz=178,slow=29						
ASAR	**Alice Springs**	**76.51**	**248**	P	**P**	**22 18 54.9**	**+0.1**
	1.3nm,0.9s,mb3.9,baz=142,slow=5.4,SNR=7.8						
WRA	**Warramunga Arr**	**79.33**	**250**	P	**P**	**22 19 10.4**	**-0.1**
	1.4nm,0.8s,mb3.9,baz=147,slow=5.1,SNR=7.1						
WRA					LR	22 51 01.0	
	comp=Z,204nm,21.5s,MS4.4,baz=165,slow=33						
LPIG	**La Paz**	**80.58**	**14**	LR	LR	22 47 14.1	
	comp=Z,127nm,19.5s,MS4.3,baz=174,slow=30						
FITZ	**Fitzroy Crossi**	**85.39**	**245**	LR	LR	22 53 58.1	
	comp=Z,87nm,19.1s,MS4.2,baz=69,slow=33						
PFO	**Pinyon Flat Ob**	**89.34**	**7**	LR	LR	22 50 14.7	
	comp=Z,155nm,18.0s,MS4.5,baz=109,slow=29						
BOSA	**Boshof**	**92.31**	**154**	LR	LR	22 57 27.8	
	comp=Z,124nm,18.5s,MS4.4,baz=172,slow=33						
BATI	**Kupang**	**93.06**	**247**	LR	LR	22 57 35.3	
	comp=Z,225nm,18.7s,MS4.7,baz=170,slow=33						
NVAR	**Mina Array Bea**	**94.02**	**6**	P	**P**	**22 20 23.2**	**+1.0**
	0.1nm,0.4s,mb3.6,baz=179,slow=9.5,SNR=2.1						
TSUM	**Tsumeb**	**99.03**	**145**	LR	LR	22 57 11.8	
	comp=Z,104nm,19.9s,MS4.3,baz=168,slow=30						
PDAR	**Pinedale Array**	**99.07**	**12**	LR	LR	22 57 23.4	
	comp=Z,111nm,19.4s,MS4.4,baz=21,slow=30						
SONM	**Songino Array**	**147.67**	**278**	PKPbc	PKPbc	22 26 49.9	+1.6
	0.3nm,0.7s,baz=132,slow=4.1,SNR=2.5						
MKAR	**Makanchi Array**	**160.59**	**254**	PKPab	PKPab	22 27 46.1	+0.8
	0.3nm,0.6s,baz=150,slow=3.2,SNR=2.5						

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*ISCJB **30** 22:13:21.7±0.8, 3798N±003×3098E±004, h0km±7km, Error ellipse: s-maj=5.6km s-min=4.6km az=13.7*
*CSEM **30** 22:13:21.0±0.1, 3796N×3097E, h5km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.4km az=125.0*
*ISK **30** 22:13:21.6, 3798N×3094E, h7km, MD3.0*
*DDA **30** 22:13:22.4, 3807N×3094E, h8km±5km, Md3.0*
ISC 30 22:13:22.2±0.7, **3795N**±004×**3101E**±004, **h5**km±6km, **n18,** σ1§**01**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.41**	**255**	PG	**Pg**	**22 13 28.8**	**-1.3**
ISP				SG	**Sg**	**22 13 35.5**	**+0.1**
BCK	**Bucak**	**0.59**	**214**	*e*	PG	**22 13 32.8**	**-0.7**
SHUT	**Suhut-Afyon**	**0.70**	**329**	*e*	PG	**22 13 34.5**	**-1.2**
KDHN	**Kadinhani**	**1.04**	**57**	*i*	P	**22 13 41.4**	**-0.8**
KDHN				*i*	S	**22 13 56.6**	**+0.9**
KONT	**Konya--Tatoy**	**1.07**	**90**	*e*	PN	**22 13 43.5**	**-0.4**
ANTB	**Antalya**	**1.09**	**195**	*e*	PN	**22 13 43.1**	**-1.0**
KIZT	**Kizilcal**	**1.15**	**36**	*e*	PN	**22 13 45.0**	**0.0**
KHL	**Karahalli**	**1.23**	**288**	*e*	PN	**22 13 43.8**	**-2.2**
GOLH	**Golhisar**	**1.35**	**239**	*i*	P	**22 13 48.6**	**+0.9**
GOLH				*i*	S	**22 14 07.8**	**+2.2**
ELL	**Elmali**	**1.48**	**216**	*e*	PN	**22 13 49.5**	**-0.1**
ESKT	**Eskisehir**	**1.57**	**356**	*i*	P	**22 13 51.0**	**+0.3**
ESKT				*i*	S	**22 14 12.2**	**+0.7**
ESKT	**Eskisehir**	**1.57**	**356**	*e*	Pn	**22 13 50.1**	**-0.7**
SEYT	**Eskypehyr**	**1.57**	**356**	*i*	P	**22 13 51.0**	**+0.2**
SEYT				*i*	S	**22 14 12.2**	**+0.7**
GDZ	**Gediz**	**1.65**	**314**	*i*	P	**22 13 51.5**	**-0.3**
GDZ				*i*	S	**22 14 15.8**	**+0.6**
KULA	**Kula-Manisa**	**1.93**	**288**	*e*	PN	**22 13 55.0**	**-0.7**
BORA	**Eskisehir**	**1.97**	**348**	*i*	P	**22 13 56.9**	**+0.5**
MANT	**Manisa**	**2.00**	**286**	*i*	P	**22 13 56.2**	**-0.5**
MANT				*i*	S	**22 14 28.0**	**+1.4**
ERMK	**Ermenek**	**2.00**	**130**	*i*	P	**22 14 02.5**	**+1.8**
ERMK				*i*	S	**22 14 31.3**	**+4.7**

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*ISCJB **30** 22:18:26.1±0.7, 3842N±003×2050E±006, h3km, Error ellipse: s-maj=6.7km s-min=3.7km az=164.4*

FETY	**Fethiye**	**2.01**	**228**	*e*PN	**Pn**	**22 20 29.6 +0.5**
ERMK	**Ermenek**	**2.07**	**130**	*i* P	**Pn**	**22 20 32.1 +2.2**
ERMK				*i* S	**Sg**	**22 21 00.5 -0.3**
ERMK	**Ermenek**	**2.07**	**130**	*i* P	**Pn**	**22 20 32.1 +2.2**
ERMK				*i* S	**Sg**	**22 21 00.4 -0.3**
ANTO	**Ankara**	**2.37**	**37**	*e*PN	**Pn**	**22 20 34.3 +0.2**
ANTO	**Ankara**	**2.37**	**37**	*e*Pn	**Pn**	**22 20 32.6 -1.4**
LOD	**Lodumlu**	**2.37**	**36**	*e*PN	**Pn**	**22 20 33.5 -0.6**
DST	**Dursunbey**	**2.42**	**312**	*e*PN	**Pn**	**22 20 35.3 +0.5**
GULT	**Gulveren**	**2.46**	**352**	*e*PN	**Pn**	**22 20 34.9 -0.4**
IZI	**Iznik**	**2.61**	**334**	*e*PN	**Pn**	**22 20 37.4 +0.1**
AKS	**Akhisar**	**2.61**	**291**	*e*PN	**Pn**	**22 20 36.7 -0.7**
IKL	**Isikli**	**2.81**	**128**	*e*PN	**Pn**	**22 20 41.4 +1.3**
YLV	**Yalova**	**2.85**	**335**	*e*PN	**Pn**	**22 20 41.2 +0.6**
BTOK	**Tokmak**	**2.88**	**309**	*i* P	**Pn**	**22 20 42.8 +1.7**
BTOK				*i* S	**Sg**	**22 21 27.1 +0.3**
BALB	**Balikesir**	**2.90**	**306**	*e*PN	**Pn**	**22 20 42.1 +0.7**
MERS	**Mersin**	**3.06**	**110**	*e*PN	**Pn**	**22 20 44.4 +0.8**
CDAG	**Cicekdag**	**3.14**	**58**	*i* P	**Pn**	**22 20 44.0 -0.6**
CDAG				*i* S	**Sn**	**22 21 22.2 -0.4**
CDAG	**Cicekdag**	**3.14**	**58**	*i* P	**Pn**	**22 20 44.0 -0.6**
CDAG				*i* S	**Sn**	**22 21 22.2 -0.4**
ELDT	**Eldivan**	**3.15**	**37**	*i* P	**Pn**	**22 20 44.8 -0.1**
AVNT	**Avonos**	**3.17**	**74**	*i* P	**Pn**	**22 20 49.9 +4.7**
LEF	**Lefka**	**3.27**	**151**	*e*PN	**Pn**	**22 20 46.5 +0.1**
CANT	**Cankiri**	**3.34**	**38**	*e*PN	**Pn**	**22 20 47.9 +0.5**
EREN	**Erenkoy**	**3.57**	**132**	*e*PN	**Pn**	**22 20 52.1 +1.5**
CSS	**Prodhromos**	**3.58**	**147**	*e*PN	**Pn**	**22 20 52.4 +1.6**
CORM	**Corum**	**3.61**	**52**	*e*PN	**Pn**	**22 20 51.7 +0.6**

NEIC ***30*** *22:34:14.1, 3168S×7192W, h26km, ML3.3(GUC), After GUC.*

GUC 30 22:34:14.1±0.8, 3168S×7192W, h26km±3km, MD4.0, ML3.3, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.41**	**120**	⇓*i*P	Pb	22 34 05.9	-17
CHNG				*i* S	Sb	22 34 12.2	-17
CHNG				AML	AML	22 34 13.3	
	comp=E,988nm,0.5s						
CMCH	**Combarbala**	**0.94**	**58**	⇑*i*P	Pn	22 34 31.0	-0.6
CMCH				*i* S	Sb	22 34 43.8	+0.2
CMCH	**Combarbala**	**0.94**	**58**	⇑*i*P	Pn	22 34 31.0	-0.6
CMCH				*i* S	Sb	22 34 43.8	+0.2
CMCH				AML	AML	22 34 44.8	
	comp=E,4μm,0.8s						
PACH	**Papudo**	**0.95**	**154**	*e*P	Pn	22 34 30.9	-0.8
PACH				*i* S	Sb	22 34 43.9	-0.2
OVCH	**Ovalle**	**1.23**	**30**	*e*P	Pn	22 34 35.7	0.0
OVCH				*i* S	Sn	22 34 51.9	+0.4
ROCH	**El Roble**	**1.50**	**149**	*e*P	Pn	22 34 40.7	+1.4
ROCH				*i* S	Sn	22 35 00.3	+2.2
JACH	**Jahuel**	**1.51**	**132**	*e*P	Pn	22 34 40.5	+1.0
JACH				*i* S	Sn	22 34 59.9	+1.6
TLL	**Tololo Astrono**	**1.79**	**33**	*e*P	Pn	22 34 45.3	+2.0
TLL				*i* S	Sn	22 35 08.1	+2.9
TLL	**Tololo Astrono**	**1.79**	**33**	*e*P	Pn	22 34 45.3	+2.0
TLL				*i* S	Sn	22 35 08.1	+2.9
TLL				AML	AML	22 35 15.7	
	comp=N,521nm,0.4s						
PEL	**Peldehue**	**1.80**	**145**	⇓*i*P	Pn	22 34 44.4	+1.0
PEL				*i* S	Sn	22 35 07.7	+2.3
PEL				AML	AML	22 35 17.2	
	comp=E,1μm,0.5s						
RCDM	**Rinconada Maip**	**2.04**	**153**	*e*P	Pn	22 34 47.9	+1.2
RCDM				*i* S	Sn	22 35 14.4	+3.1
RCDM	**Rinconada Maip**	**2.04**	**153**	*e*P	Pn	22 34 47.9	+1.2
RCDM				*i* S	Sn	22 35 14.4	+3.1
RCDM				AML	AML	22 35 26.0	
	comp=E,214nm,0.6s						
CLCH	**Cerro Calan**	**2.07**	**146**	*e*P	Pn	22 34 48.6	+1.3
CLCH				*i* S	Sn	22 35 14.9	+2.7
CLCH				AML	AML	22 35 22.1	
	comp=E,572nm,0.6s						
TACH	**Talagante**	**2.14**	**157**	⇑*i*P	Pn	22 34 49.4	+1.3
TACH				*i* S	Sn	22 35 13.7	-0.1
FCH	**Farellones**	**2.15**	**140**	⇑*i*P	Pn	22 34 49.6	+1.4
FCH				*i* S	Sn	22 35 17.9	+3.9
FCH				AML	AML	22 35 24.3	
	comp=E,207nm,0.7s						
PCH	**Pirque**	**2.27**	**149**	*e*P	Pn	22 34 51.3	+1.4
PCH				*i* S	Sn	22 35 19.4	+2.2
LMEL	**Las Melosas**	**2.60**	**147**	*e*P	Pn	22 34 56.3	+1.8
LMEL				AML	AML	22 35 39.6	
	comp=N,223nm,0.9s						
LCO	**Las Campanas**	**2.86**	**22**	*e*Pn	Pn	22 34 58.8	+0.7
LCO				*e*Sn	Sn	22 35 31.5	-0.2
CICH	**Cipreses**	**2.92**	**155**	*e*P	Pn	22 35 00.5	+1.7

IDC 30 22:36:09.2±29.0, 1621S×17374W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=541.2km s-min=174.2km az=71.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.15**	**258**	P	P	22 43 30.8	+0.2
	2.6nm,0.6s,baz=81,slow=9.7,SNR=3.3						
STKA	**Stephens Creek**	**43.35**	**241**	P	P	22 44 13.7	+0.3
	3.2nm,0.8s,baz=103,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**49.35**	**257**	P	P	22 45 00.5	-0.3
	1.1nm,0.4s,baz=94,slow=7.3,SNR=9.5						
ASAR	**Alice Springs**	**49.55**	**253**	P	P	22 45 02.0	-0.3
	5.7nm,1.0s,baz=92,slow=7.7,SNR=29						

ISCJB ***30*** *22:45:44.9±6.0, 76N±02×944E±02, h21km±42km, mb3.8/11, Error ellipse: s-maj=44.7km s-min=10.0km az=37.9*
NEIC ***30*** *22:45:48.9±1.2, 756N×9421E, h30km, mb4.0/2, Error ellipse: s-maj=43.4km s-min=12.4km az=52.0*
IDC ***30*** *22:45:52.0±5.4, 745N×9412E, h65km±52km, mb3.4/6, mb1 3.5/7, mb1mx3.3/22, mbtmp3.4/7, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/25, Error ellipse: s-maj=67.2km s-min=25.6km az=63.0*

ISC 30 22:45:46.8±5.9, 75N±02×943E±02, h22km±41km, n17, σ1§10/18, mb3.8/11, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.58**	**135**	P	**Pn**	**22 47 28.4**	**+6.2**
	1.0nm,0.3s,baz=314,slow=9.6,SNR=4.8						
PSI				LR	LR	22 50 29.0	
	comp=Z,106nm,20.1s,baz=314,slow=41						
KULM	**Kulim**	**6.72**	**109**	*e*Pn	**Pn**	**22 47 24.9**	**+0.6**
KULM				*e*Sn	**Sn**	**22 48 39.0**	**-1.2**
TAPN	**Taplejung**	**20.71**	**343**	*e*P	**P**	**22 50 26.5**	**+0.8**
	7.3nm,0.4s						
JIRN	**Jiri**	**21.48**	**340**	*e*P	**P**	**22 50 33.3**	**-0.6**
	6.7nm,0.7s,mb4.1						
KKN	**Kakani**	**21.91**	**338**	*e*P	**P**	**22 50 37.7**	**-1.0**
LSA	**Lhasa**	**22.30**	**353**	*e*P	**P**	**22 50 45.4**	**+2.7**
	4.5nm,0.7s,mb4.0						
GKN	**Gorkha**	**22.35**	**337**	*e*P	**P**	**22 50 40.0**	**-3.3**
	5.8nm,0.7s,mb4.1						
KOLN	**Koldanda**	**22.56**	**335**	*e*P	**P**	**22 50 43.9**	**-1.7**
	6.6nm,0.8s,mb4.1						
MKAR	**Makanchi Array**	**40.49**	**347**	P	**P**	**22 53 23.9**	**-0.1**
	0.9nm,0.8s,mb3.6,baz=171,slow=8.4,SNR=10						
SONM	**Songino Array**	**41.52**	**12**	P	**P**	**22 53 34.0**	**+1.6**
	0.5nm,0.9s,mb3.2,baz=189,slow=5.9,SNR=5.6						
KURK	**Kurchatov**	**45.02**	**346**	*e*P	**P**	**22 54 00.6**	**0.0**
	1.3nm,0.7s,mb3.9						
ZALV	**Zalesovo Beam**	**46.96**	**352**	P	**P**	**22 54 16.0**	**+0.2**
ZALV	**Zalesovo Beam**	**46.96**	**352**	P	**P**	**22 54 16.0**	**+0.2**
	0.9nm,0.4s,mb4.1,baz=182,slow=6.9,SNR=7.8						
ASAR	**Alice Springs**	**49.58**	**130**	P	**P**	**22 54 37.2**	**+0.7**
	0.4nm,0.6s,mb3.6,baz=306,slow=7.6,SNR=4.7						
FINES	**FINESS Array B**	**73.11**	**332**	P	**P**	**22 57 14.8**	**-0.4**
FINES	**FINESS Array B**	**73.11**	**332**	P	**P**	**22 57 14.8**	**-0.4**
	1.3nm,0.9s,mb3.9,baz=93,slow=3.8,SNR=4.5						
GERES	**GERESS Array B**	**78.19**	**318**	P	**P**	**22 57 45.0**	**+0.4**
	0.2nm,0.3s,mb3.5,baz=70,slow=8.7,SNR=3.8						

NEIC ***30*** *22:55:42.3, 3889N×2578E, h5km, MD3.2(ATH), After ATH.*
CSEM ***30*** *22:55:43.7±0.2, 3897N×2581E, h10km, MD3.2, Error ellipse: s-maj=6.7km s-min=3.5km az=70.0*
ATH ***30*** *22:55:43.7, 3904N×2593E, h42km±3km, MD3.2/4*

ISCJB ***30*** *22:55:45.5±1.0, 3890N±004×2608E±009, h10km, Error ellipse: s-maj=10.3km s-min=5.0km az=5.1*
DDA ***30*** *22:55:48.5, 3904N×2617E, h7km±7km, Md2.9*

ISC 30 22:55:45.4±1.0, 3889N±004×2604E±008, h10km, n7, σ0§68/12, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.40**	**27**	⇑*i*P	**Pg**	**22 55 53.3**	**0.0**
PRK				*e*S	**Sg**	**22 55 59.4**	**+0.7**
AYVA	**Ayvalik**	**0.66**	**50**	*i* P	**Pg**	**22 55 57.8**	**-0.4**
AYVA				*i* S	**Sg**	**22 56 06.8**	**-0.1**
BOZC	**Bozcaada**	**0.95**	**1**	*i* P	**Pg**	**22 56 03.1**	**-0.7**
BOZC				*i* S	**Sg**	**22 56 16.7**	**+0.5**
LIA	**Limnos Island**	**1.21**	**327**	*e*P	**Pn**	**22 56 03.0**	**-5.3**
SMG	**Samos**	**1.34**	**152**	*e*P	**Pn**	**22 56 10.1**	**0.0**
SMG				*e*S	**Sb**	**22 56 28.4**	**+0.7**
BTOK	**Tokmak**	**1.78**	**60**	*i* P	**Pg**	**22 56 20.6**	**+1.1**
BTOK				*i* S	**Sg**	**22 56 41.3**	**-1.2**
APE	**Apeiranthos**	**1.86**	**193**	*e*P	**Pn**	**22 56 16.6**	**-0.7**

MOS ***30*** *22:56:48.3±0.9, 5570N×110.14E, h13km, mb4.2/1, Error ellipse: s-maj=25.9km s-min=18.1km az=64.9*

BYKL 30 22:56:48.4±0.2, 5569N×11018E, h5km±5km, 8C-2D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**0.37**	**284**	⇑*i*Pg	Pg	22 56 55.8	+0.2
NIZ				*e*		22 57 00.0	
NIZ				*e*Sg	Sg	22 57 01.3	+0.9
NIZ				Pmax			
	36nm,0.1s						
NIZ				Smax			
	398nm,0.9s						
KMO	**Kumora**	**0.61**	**71**	⇑*i*Pg	Pg	22 56 59.2	-0.9
KMO				*e*Sg	Sg	22 57 07.0	-1.0
KMO				Pmax			
	42nm,0.3s						
KMO				Smax			
	376nm,0.9s						
YOA	**Uoyan**	**0.98**	**62**	*e*PG	Pg	22 57 06.8	-0.3
YOA				*e*		22 57 19.6	
YOA				pmax	pmax		
	comp=Z,86nm,0.3s						
YOA				smax			
	comp=N,553nm,0.4s						
YOA	**Uoyan**	**0.98**	**62**	*e*Pg	Pg	22 57 06.6	-0.5
YOA				*e*Sg	Sg	22 57 19.5	-0.2
YOA				Pmax			
	comp=N,83nm,0.3s						
YOA				Smax			
	comp=N,554nm,0.4s						
YLYR	**Ulyunkhan**	**0.99**	**145**	⇑*i*PG	Pg	22 57 06.2	-1.2
YLYR				*i*		22 57 19.5	
YLYR				pmax	pmax		
	comp=Z,71nm,0.4s						
YLYR				smax			
	comp=N,275nm,0.3s						
YLYR	**Ulyunkhan**	**0.99**	**145**	⇑*i*Pg	Pg	22 57 06.2	-1.2
YLYR				*e*Sg	Sg	22 57 19.3	-0.9
YLYR				Pmax			
	comp=N,71nm,0.3s						
YLYR				Smax			
	comp=N,272nm,0.3s						
SVKR	**Severomuysk**	**1.95**	**76**	*e*PN	Pn	22 57 22.7	+0.6
SVKR				*e*		22 57 23.4	
SVKR				*e*		22 57 49.7	
SVKR				pmax	pmax		
	comp=Z,105nm,0.3s						
SVKR				smax			
	comp=E,412nm,0.4s						
SVKR	**Severomuysk**	**1.95**	**76**	*e*Pn	Pn	22 57 22.7	+0.6
SVKR				*e*Pg	Pg	22 57 23.9	-1.8
SVKR				*e*Sg	Sg	22 57 49.5	-1.5
SVKR				Pmax			
	comp=E,84nm,0.3s						
SVKR				Smax			
	comp=E,419nm,0.4s						
UKT	**Uakit**	**1.97**	**94**	*e*PN	Pn	22 57 23.8	+1.5
UKT				*e*		22 57 49.3	
UKT				pmax	pmax		
	comp=Z,38nm,0.3s						
UKT				smax			
	comp=N,381nm,0.5s						
UKT	**Uakit**	**1.97**	**94**	⇓*i*Pg	Pg	22 57 23.1	-3.0
UKT				*e*Sg	Sg	22 57 49.3	-2.2
UKT				Pmax			
	comp=N,49nm,0.9s						
UKT				Smax			
	comp=N,281nm,0.3s						
SYVR	**Suvo**	**2.04**	**183**	*e*PN	Pn	22 57 24.9	+1.6
SYVR				*e*		22 57 53.4	
SYVR				pmax	pmax		
	comp=Z,111nm,0.6s						
SYVR				smax			
	comp=E,423nm,0.5s						
SYVR	**Suvo**	**2.04**	**183**	⇑*i*Pg	Pg	22 57 25.1	-2.3
SYVR				*e*Sg	Sg	22 57 52.8	-1.0
SYVR				Pmax			
	comp=E,119nm,0.6s						
SYVR				Smax			
	comp=E,425nm,0.5s						
OGRR	**Ongureny**	**2.54**	**217**	⇑*i*	Pn	22 57 31.4	+1.2
OGRR				*e*Pg	Pg	22 57 33.6	-3.5
OGRR				*e*		22 58 03.2	
OGRR				*e*Sg	Sg	22 58 07.1	-2.9
OGRR				Pmax			
	comp=E,19nm,0.7s						
OGRR				Smax			
	comp=E,117nm,0.4s						
MXMB	**Maximikha**	**2.57**	**200**	*e*Pg	Pg	22 57 35.3	-2.3
MXMB				*e*Sg	Sg	22 58 08.3	-2.6
MXMB				Pmax			
	comp=E,11nm,0.1s						
MXMB				Smax			
	comp=E,229nm,0.6s						
BOD	**Bodaibo**	**3.00**	**43**	⇑*i*Pn	Pn	22 57 37.1	+0.6
BOD				*e*Pg	Pg	22 57 41.2	-4.6
BOD				*e*		22 58 13.6	
BOD				*e*Sg	Sg	22 58 19.4	-5.2
BOD				Pmax			
	comp=E,10.0nm,0.3s						
BOD				Smax			
	comp=E,107nm,0.3s						
NLYR	**Nelyaty**	**3.20**	**73**	*e*	Pn	22 57 48.4	+9.2
NLYR				*e*		22 58 22.8	
NLYR				*e*Sg	Sg	22 58 27.8	-3.2
ZRHB	**Zarechye**	**3.61**	**211**	*e*Pg	Pg	22 57 53.9	-3.6
ZRHB				*e*Sg	Sg	22 58 40.4	-3.9
ZRHB				Pmax			
	comp=E,24nm,0.6s						
ZRHB				Smax			
	comp=E,133nm,1.6s						
TRG	**Tyrgan**	**3.70**	**219**	⇓*i*Pn	Pn	22 57 47.6	+1.5
TRG				*e*		22 58 30.5	
TRG				*e*Sg	Sg	22 58 41.7	-5.4
TRG				max			
	comp=E,11nm,0.4s						
TRG				Smax			
	comp=E,42nm,0.8s						
FFNB	**Fofonovo**	**4.17**	**210**	*e*	Pn	22 57 55.4	+2.8
FFNB				*e*Pg	Pg	22 58 03.4	-4.9
FFNB				*e*		22 58 41.6	
FFNB				*e*Sg	Sg	22 58 56.0	-6.3
FFNB				Smax			
	comp=E,75nm,0.3s						
CIT	**Chita**	**4.18**	**150**	*e*Pg	Pg	22 58 03.0	-5.5
CIT				*e*Sg	Sg	22 58 56.0	-6.6
CIT				Pmax			
	comp=E,25nm,0.6s						
CIT				Smax			
	comp=E,45nm,0.5s						
CRS	**Chara**	**4.67**	**72**	*e*PN	Pn	22 58 13.3	+14
CRS				*e*		22 59 11.1	
CRS				pmax	pmax		
	comp=Z,18nm,1.2s						
CRS				smax			
	comp=E,64nm,1.1s						
CRS	**Chara**	**4.67**	**72**	*e*Pn	Pn	22 57 59.7	+0.3
CRS				*e*Pg	Pg	22 58 13.2	-4.5
CRS				*e*Sg	Sg	22 59 12.9	-5.2
CRS				Pmax			
	comp=E,6.0nm,0.9s						
CRS				Smax			
	comp=E,28nm,0.7s						
LSTR	**Listvyanka**	**4.97**	**222**	*e*	Pn	22 58 52.8	+49
LSTR				*e*Sg	Sg	22 59 21.5	-6.4
LSTR				Smax			
	comp=E,44nm,1.7s						
TLY	**Talaya**	**5.59**	**227**	*e*	Pn	22 58 12.3	+0.3
TLY				*e*Pg	Pg	22 58 29.1	-6.2
TLY				*e*		22 59 14.3	
TLY				*e*Sg	Sg	22 59 40.0	-7.6
TLY				Pmax			
	comp=E,3.0nm,0.6s						
TLY				Smax			
	comp=E,22nm,0.6s						
TUP	**Tupik**	**5.76**	**99**	⇑*i*Pn	Pn	22 58 14.1	-0.3
TUP				*e*Pg	Pg	22 58 31.7	-6.9
TUP				*e*Sg	Sg	22 59 46.9	-6.3
TUP				Pmax			
	comp=E,2.0nm,0.6s						
TUP				Smax			
	comp=E,31nm,0.8s						
ARS	**Arshan**	**5.95**	**234**	*e*PN	Pn	22 58 17.7	+0.7
ARS				*e*S	Sn	22 59 22.8	-2.6
ARS				*e*S	Sn	22 59 53.5	+28
ARS				smax			
	comp=E,78nm,0.5s						
ARS	**Arshan**	**5.95**	**234**	*e*Pn	Pn	22 58 17.2	+0.2
ARS				*e*Pg	Pg	22 58 35.1	-7.1
ARS				*e*Sn	Sn	22 59 23.0	-2.4
ARS				*e*Sg	Sg	22 59 50.9	-8.3
ARS				Pmax			
	comp=E,9.0nm,0.5s						
ARS				Smax			
	comp=E,77nm,0.4s						
KPC	**Khapcheranga**	**6.14**	**167**	*e*	Pn	22 58 24.2	+4.5
KPC				*e*Pg	Pg	22 58 39.5	-6.5
KPC				*e*Sg	Sg	22 59 58.7	-6.8
KPC				Pmax			
	comp=E,4.0nm,0.5s						
KPC				Smax			
	comp=E,24nm,1.0s						
ORL	**Orlik**	**6.86**	**247**	*e*PN	Pn	22 58 31.0	+1.4
ORL				*e*		22 58 53.4	
ORL				*e*S	Sn	22 59 47.2	-0.8
ORL				*e*		23 00 22.1	
ORL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ORL				smax			
	comp=N,20nm,1.0s						
ORL	**Orlik**	**6.86**	**247**	*e*Pn	Pn	22 58 30.3	+0.7
ORL				*e*Sn	Sn	22 59 47.3	-0.7
ORL				*e*Sg	Sg	23 00 21.8	-6.8
ORL				Smax			
	comp=N,26nm,1.3s						

ISCJB ***30*** *22:57:10.5±0.9, 3798N±003×3096E±004, h0km±7km, Error ellipse: s-maj=5.0km s-min=4.8km az=139.8*
CSEM ***30*** *22:57:10.5±0.1, 3796N×3095E, h5km, MD3.5, Error ellipse: s-maj=2.8km s-min=2.4km az=114.0*
DDA ***30*** *22:57:10.9, 3809N×3093E, h8km±5km, Md3.4*
ISK ***30*** *22:57:10.4, 3796N×3096E, h7km, MD3.5*

ISC 30 22:57:11.5±0.7, 3796N±003×3094E±004, h4km±6km, n27, σ1§05/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.36**	**252**	PG	**Pg**	**22 57 17.5**	**-0.9**
ISP				SG	**Sg**	**22 57 23.3**	**+0.2**
BCK	**Bucak**	**0.57**	**210**	PG	**Pg**	**22 57 22.4**	**0.0**
SHUT	**Suhut-Afyon**	**0.67**	**333**	PG	**Pg**	**22 57 24.7**	**+0.3**
ANTB	**Antalya**	**1.08**	**192**	*e*PN	**Pn**	**22 57 32.4**	**-0.9**
KDHN	**Kadinhani**	**1.08**	**58**	*i* P	**Pg**	**22 57 30.9**	**-1.4**
KDHN				*i* S	**Sg**	**22 57 50.0**	**+3.7**
KONT	**Konya--Tatoy**	**1.12**	**90**	PN	**Pn**	**22 57 31.5**	**-2.4**
KHL	**Karahalli**	**1.18**	**289**	*e*PN	**Pn**	**22 57 34.4**	**-0.3**
KIZT	**Kizilcal**	**1.18**	**38**	*e*PN	**Pn**	**22 57 32.7**	**-2.1**
GOLH	**Golhisar**	**1.31**	**237**	*i* P	**Pn**	**22 57 36.5**	**0.0**
GOLH				*i* S	**Sg**	**22 57 57.5**	**+3.9**
ELL	**Elmali**	**1.46**	**215**	*e*PN	**Pn**	**22 57 38.6**	**+0.1**
ESKT	**Eskisehir**	**1.56**	**357**	*e*PN	**Pn**	**22 57 38.8**	**-1.2**
GDZ	**Gediz**	**1.61**	**315**	*i* P	**Pn**	**22 57 39.8**	**-0.8**
GDZ				*i* S	**Sg**	**22 58 04.7**	**+1.5**
KULA	**Kula-Manisa**	**1.88**	**288**	*e*PN	**Pn**	**22 57 43.4**	**-0.9**
MANT	**Manisa**	**1.95**	**287**	*i* P	**Pn**	**22 57 44.6**	**-0.7**
MANT				*i* S	**Sn**	**22 58 11.3**	**+1.1**
BORA	**Eskisehir**	**1.96**	**349**	*i* P	**Pn**	**22 57 45.2**	**-0.3**
BORA				*i* S	**Sg**	**22 58 15.3**	**+0.8**
FETY	**Fethiye**	**1.98**	**229**	*e*PN	**Pn**	**22 57 45.7**	**0.0**
ERMK	**Ermenek**	**2.05**	**129**	*i* P	**Pn**	**22 57 48.7**	**+2.0**
ERMK				*i* S	**Sn**	**22 58 15.2**	**+2.6**
GPA	**Golpazari**	**2.38**	**348**	*e*PN	**Pn**	**22 57 51.9**	**+0.7**
LOD	**Lodumlu**	**2.40**	**36**	*e*PN	**Pn**	**22 57 51.4**	**-0.1**
DST	**Dursunbey**	**2.45**	**313**	*e*PN	**Pn**	**22 57 51.8**	**-0.3**
AKS	**Akhisar**	**2.62**	**292**	*e*PN	**Pn**	**22 57 55.0**	**+0.4**
IKL	**Isikli**	**2.78**	**127**	*e*PN	**Pn**	**22 57 56.2**	**-0.6**
MERS	**Mersin**	**3.05**	**110**	*e*PN	**Pn**	**22 58 00.9**	**+0.4**
LEF	**Lefka**	**3.24**	**150**	*e*PN	**Pn**	**22 58 02.8**	**-0.2**
EREN	**Erenkoy**	**3.55**	**132**	*e*PN	**Pn**	**22 58 08.2**	**+0.9**
CORM	**Corum**	**3.63**	**51**	*e*PN	**Pn**	**22 58 08.1**	**-0.3**
CTKT	**Corum**	**4.00**	**47**	*e*P	**Pn**	**22 58 15.2**	**+1.7**

IDC 30 22:57:23.5±3.5, 592S×15078E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/13, mbtmp3.8/2, Error ellipse: s-maj=144.6km s-min=44.8km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**21.19**	**227**	*e*P	P	23 02 10.5	-0.3
WRA	**Warramunga Arr**	**21.20**	**227**	P	P	23 02 10.9	0.0
	1.6nm,0.5s,baz=52,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**23.98**	**221**	P	P	23 02 39.5	-0.3
	1.6nm,0.5s,baz=57,slow=8.7,SNR=24						
TORD	**Torodi Ar. Bea**	**148.70**	**286**	PKPbc	PKPbc	23 17 13.7	-0.2
	0.7nm,0.7s,baz=88,slow=1.8,SNR=2.7						

IDC ***30*** *23:00:02.2±3.4, 284N×9651E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/20, mbtmp3.8/4, Error ellipse: s-maj=137.2km s-min=27.2km az=58.0*
NEIC ***30*** *23:00:06.2±1.4, 278N×9647E, h30km, Error ellipse: s-maj=27.1km s-min=16.3km az=213.0*

ISC 30 23:00:03.3±6.8, 27N±02×965E±01, h11km±45km, n7, σ0§89/9, mb3.8/4, 1C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSI	**Tuntungan**	**2.23**	**70**	⇑*e*P	**Pg**	**23 00 52.0**	**+5.8**
TSI				*e*S	**Sg**	**23 01 25.0**	**+10**
KULM	**Kulim**	**4.89**	**59**	*e*Pn	**Pn**	**23 01 17.9**	**+1.1**
KULM				Sn	**Sn**	**23 02 13.5**	**+0.1**
KKM	**Kota Kinabalu**	**19.96**	**80**	P	**Pn**	**23 04 35.3**	**-2

comp=E,120nm,0.5s
SKR pmax pmax
comp=Z,180nm,0.5s
SKR smax
comp=N,310nm,0.3s
SKR smax
comp=E,3μm,0.3s
ALID Alaid 1.03 266 *eP* **Pn 23 04 28.8 -0.2**
ALID *i* S **Sn 23 04 43.2 -0.5**
MIPR Malaya Ipel'ka 1.35 349 *eP* **Pn 23 04 32.4 -0.5**
MIPR *i* S **Sn 23 04 49.9 -0.7**
GRL Gorelyy 1.69 19 *eP* **Pn 23 04 38.2 +0.9**
GRL *i* S **Sn 23 04 59.8 +1.3**
RUS Russkaya 1.70 29 *eP* **Pn 23 04 37.3 -0.1**
RUS *i* S **Sn 23 04 58.6 0.0**
PET Petropavlovsk 2.27 23 *eP* **Pn 23 04 45.1 +0.3**
PET *i* S **Sn 23 05 12.3 +0.3**
AVH Avacha 2.51 22 *eP* **Pn 23 04 49.4 +1.4**
NLC Nalytchevo 2.59 30 *eP* **Pn 23 04 48.5 -0.7**
NLC *i* S **Sn 23 05 18.4 -1.4**
SPN Mys Shipunski 2.78 38 *eP* **Pn 23 04 51.7 0.0**
SPN *i* S **Sn 23 05 24.1 -0.1**
GNL Ganaly 2.78 9 *eP* **Pn 23 04 52.3 +0.5**
MKZ Mys Kozlova 4.55 36 *eP* **Pn 23 05 14.5 -1.1**
MKZ *i* S **Sn 23 06 03.5 -3.6**
TUMR Tumrok 4.69 21 *eP* **Pn 23 05 19.2 +1.6**
KBTR Krutoberegovo 6.24 30 *eP* **Pn 23 05 37.8 -0.9**

*ISCJB **30** 23:05:43.0±0.5, 3165S×003×6921W×005, h117km±6km, mb3.9/2, Error ellipse: s-maj=7.4km s-min=4.5km az=178.0*
*IDC **30** 23:05:43.5±3.1, 3197S×69.12W, h109km±14km, mb3.7/2, mb1 3.5/4, mb1mx3.3/15, mbtmp3.5/4, Error ellipse: s-maj=56.4km s-min=47.9km az=74.0*
*GUC **30** 23:05:43.5±0.6, 3169S×6948W, h144km±9km, MD3.9, ML3.8*
*NEIC **30** 23:05:43.5, 3169S×6948W, h144km, MD3.9(GUC), After GUC.*

ISC 30 23:05:44.0±0.5, 3165S×003×6921W×005, h112km±6km, n32, σ0§75/49, mb3.9/2, 8C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**0.83**	**87**	P	**Pn**	**23 06 03.8**	**+0.1**
	13nm,0.3s,baz=253,slow=12,SNR=985						
CFAA				S	**Sn**	**23 06 18.4**	**-0.1**
	69nm,0.3s,baz=227,slow=14,SNR=2.11						
JACH	**Jahuel**	**1.56**	**228**	*eP*	**Pn**	**23 06 11.8**	**+0.2**
JACH				*i* S	**Sn**	**23 06 33.4**	**+0.9**
CMCH	**Combarbala**	**1.60**	**287**	⇓*i*P	**Pn**	**23 06 11.9**	**-0.2**
CMCH				*i* S	**Sn**	**23 06 33.6**	**+0.1**
CMCH	**Combarbala**	**1.60**	**287**	⇓*i*P	**Pn**	**23 06 11.9**	**-0.2**
CMCH				*i* S	**Sn**	**23 06 33.6**	**+0.1**
CMCH				AML	AML	23 06 36.8	
	comp=E,5μm,0.7s						
FCH	**Farellones**	**1.90**	**208**	⇑*i*P	**Pn**	**23 06 16.5**	**+0.7**
FCH				*i* S	**Sn**	**23 06 41.6**	**+1.6**
PEL	**Peldehue**	**1.94**	**220**	⇑*i*P	**Pn**	**23 06 15.9**	**-0.4**
PEL				*i* S	**Sn**	**23 06 40.4**	**-0.5**
PEL				AML	AML	23 06 43.5	
	comp=N,705nm,0.3s						
CHNG	**Los Chungos**	**1.96**	**263**	⇑*i*P	**Pn**	**23 05 58.6**	**-18**
CHNG				*i* S	**Sn**	**23 06 22.8**	**-19**
OVCH	**Ovalle**	**2.00**	**301**	*eP*	**Pn**	**23 06 16.6**	**-0.4**
OVCH				*i* S	**Sn**	**23 06 41.8**	**-0.5**
ROCH	**El Roble**	**2.01**	**229**	*eP*	**Pn**	**23 06 16.7**	**-0.4**
TLL	**Tololo Astrono**	**2.02**	**317**	⇑*i*P	**Pn**	**23 06 18.1**	**+0.9**
TLL				*i* S	**Sn**	**23 06 44.1**	**+1.4**
TLL	**Tololo Astrono**	**2.02**	**317**	⇑*i*P	**Pn**	**23 06 18.1**	**+0.9**
TLL				*i* S	**Sn**	**23 06 44.1**	**+1.4**
TLL				AML	AML	23 06 48.5	
	comp=N,583nm,0.6s						
CLCH	**Cerro Calan**	**2.07**	**212**	*eP*	**Pn**	**23 06 17.7**	**-0.2**
CLCH				*i* S	**Sn**	**23 06 44.2**	**+0.4**
CLCH				AML	AML	23 06 46.4	
	comp=E,582nm,0.8s						
PCH	**Pirque**	**2.25**	**209**	⇑*i*P	**Pn**	**23 06 20.4**	**+0.2**
ANTU	**Antumapu**	**2.25**	**212**	*eP*	**Pn**	**23 06 20.1**	**-0.1**
ANTU				*i* S	**Sn**	**23 06 48.1**	**0.0**
ANTU	**Antumapu**	**2.25**	**212**	*eP*	**Pn**	**23 06 20.1**	**-0.1**
ANTU				*i* S	**Sn**	**23 06 48.1**	**0.0**
ANTU				AML	AML	23 06 50.9	
	comp=N,352nm,0.3s						
RCDM	**Rinconada Maip**	**2.27**	**216**	*eP*	**Pn**	**23 06 20.2**	**-0.3**
RCDM				*i* S	**Sn**	**23 06 48.0**	**-0.5**
RCDM	**Rinconada Maip**	**2.27**	**216**	*eP*	**Pn**	**23 06 20.2**	**-0.3**
RCDM				*i* S	**Sn**	**23 06 48.0**	**-0.5**
RCDM				AML	AML	23 06 51.7	
	comp=E,862nm,0.2s						
LMEL	**Las Melosas**	**2.34**	**201**	*eP*	**Pn**	**23 06 22.1**	**+0.7**
LMEL				AML	AML	23 06 58.3	
	comp=N,331nm,0.2s						
LSCH	**La Serena**	**2.47**	**314**	*eP*	**Pn**	**23 06 22.5**	**-0.5**
LSCH				*i* S	**Sn**	**23 06 52.0**	**-1.0**
TACH	**Talagante**	**2.47**	**216**	⇓*i*P	**Pn**	**23 06 22.3**	**-0.7**
TACH				*i* S	**Sn**	**23 06 52.4**	**-0.7**
CHCH	**Chadas Angostu**	**2.58**	**208**	*eP*	**Pn**	**23 06 24.3**	**-0.1**
CHCH				*i* S	**Sn**	**23 06 55.1**	**-0.4**
CACH	**El Canelo**	**2.72**	**205**	⇑*i*P	**Pn**	**23 06 26.9**	**+0.5**
CICH	**Cipreses**	**2.85**	**201**	*eP*	**Pn**	**23 06 28.3**	**+0.3**
LCO	**Las Campanas**	**2.93**	**334**	⇑*e*Pn	**Pn**	**23 06 29.3**	**+0.1**
LCO				*e*Sn	**Sn**	**23 06 59.2**	**-4.7**
VACH	**Vallenar**	**3.35**	**336**	*i* S	**Sn**	**23 07 12.6**	**-1.2**
TRQA	**Tornquist**	**8.72**	**139**	*e*Pn	**Pn**	**23 07 45.5**	**-1.7**
	comp=N,23nm,0.5s						
LPAZ	**La Paz**	**15.33**	**4**	P	**Pn**	**23 09 16.7**	**+2.4**
	comp=N,0.1nm,0.3s,baz=171,slow=5.1,SNR=6.4						
SIV	**San Ignacio**	**17.27**	**27**	P	**Pn**	**23 09 42.2**	**+4.0**
	comp=N,0.2nm,0.3s,baz=203,slow=14,SNR=3.9						
DBIC	**Dimbokro**	**72.16**	**70**	P	**P**	**23 16 56.7**	**-0.2**
	comp=N,1.8nm,0.6s,mb4.1,baz=196,slow=6.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**81.16**	**69**	P	**P**	**23 17 47.6**	**+0.1**
	comp=N,0.9nm,0.7s,mb3.7,baz=250,slow=5.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**150.98**	**32**	PKPbc	PKPbc	23 25 23.3	+0.2
	comp=N,1.6nm,0.4s,baz=304,slow=3.3,SNR=14						
ZALV				pPKPbc	pPKPbc	23 25 53.5	+0.2
	comp=N,0.8nm,0.6s,baz=320,slow=3.7,SNR=4.0						
MKAR	**Makanchi Array**	**153.43**	**47**	PKPbc	PKPbc	23 25 28.3	-0.6
	comp=N,0.1nm,0.3s,baz=269,slow=1.9,SNR=2.1						
MKAR				PKPab	PKPab	23 25 41.9	+0.4
	comp=N,0.6nm,0.6s,baz=295,slow=4.0,SNR=9.9						

*IDC **30** 23:06:17.9±0.7, 754N×12650E, h0km, mb4.0/10, mb1 4.0/10, mb1mx3.9/20, mbtmp3.9/10, MS2.7/2, Ms1 2.7/2, ms1mx2.5/21, Error ellipse: s-maj=51.8km s-min=14.8km az=76.0*
*NEIC **30** 23:06:22.6±0.6, 770N×12694E, h35km, mb4.2/2, Error ellipse: s-maj=22.0km s-min=11.8km az=75.0*
*ISCJB **30** 23:06:24.2±0.9, 753N±004×12680E±008, h62km±8km, mb3.9/12, Error ellipse: s-maj=13.8km s-min=6.7km az=171.2*
*MAN **30** 23:06:28, 770N×12638E, h5km, mb5.0, ML3.9, MS4.0*

ISC 30 23:06:25.5±0.9, 752N±004×12678E±009, h57km±9km, n27, σ1§18/33, mb3.9/12, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.77**	**222**	*eP*	**Pn**	**23 06 39.3**	**-1.1**
MATI				*e*S	**Sn**	**23 06 49.4**	**-1.9**
BIPH	**Bislig**	**0.78**	**328**	⇓*i*P	**Pn**	**23 06 39.0**	**-1.5**
BIPH				*i* S	**Sn**	**23 06 48.8**	**-2.8**
DAV	**Davao City (W)**	**1.27**	**250**	*e*Pn	**Pn**	**23 06 47.6**	**+0.6**
DMPH	**Davao City--Mi**	**1.33**	**251**	⇓*i*P	**Pn**	**23 06 49.0**	**+1.2**
DMPH				*i* S	**Sn**	**23 07 05.4**	**+0.8**
BUKP	**Musuan**	**1.74**	**282**	*eP*	**Pn**	**23 06 53.7**	**+0.4**
CGP	**Cagayan de Oro**	**2.26**	**294**	⇑*i*P	**Pn**	**23 07 01.2**	**+0.7**
CGP				*i* S	**Sn**	**23 07 27.5**	**+0.2**
GSPH	**General Santos**	**2.31**	**232**	⇓*e*P	**Pn**	**23 07 00.2**	**-0.9**
CTBH	**Cotabato--PC H**	**2.53**	**263**	⇑*i*P	**Pn**	**23 07 04.0**	**-0.1**
CTBH				*i* S	**Sn**	**23 07 27.1**	**-6.7**
SCPH	**Surigao**	**2.58**	**331**	⇓*e*P	**Pn**	**23 07 06.9**	**+2.0**
MSLP	**Maasin**	**3.22**	**324**	*eP*	**Pn**	**23 07 14.1**	**+0.5**
TBP	**Tagbilaran**	**3.60**	**307**	*eP*	**Pn**	**23 07 19.5**	**+0.7**
LLP	**Lapu-Lapu**	**3.93**	**315**	*eP*	**Pn**	**23 07 25.3**	**+2.0**
LLP				*e*S	**Sn**	**23 08 07.4**	**-0.8**
GUIM	**Jordan**	**5.16**	**307**	*eP*	**Pn**	**23 07 41.2**	**+1.0**
CNP	**Catarman**	**5.38**	**337**	*eP*	**Pn**	**23 07 43.2**	**0.0**
KAKA	**Kakadu**	**20.87**	**164**	*eP*	**P**	**23 11 03.9**	**+0.9**
	11nm,0.5s						
FITZ	**Fitzroy Crossi**	**25.48**	**183**	P	**P**	**23 11 49.5**	**+0.9**
	1.3nm,0.5s,mb3.7,baz=11,slow=10,SNR=4.6						
WRA	**Warramunga Arr**	**28.29**	**165**	P	**P**	**23 12 12.6**	**-1.1**
	0.6nm,0.3s,mb3.7,baz=356,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**31.77**	**168**	P	**P**	**23 12 45.1**	**+0.7**
	0.4nm,0.4s,mb3.6,baz=338,slow=7.1,SNR=10						
ASAR				PcP	PcP	23 15 35.4	+0.5
	0.6nm,0.5s,baz=351,slow=2.5,SNR=11						
ASAJ	**Asahikawa**	**38.99**	**18**	P	**P**	**23 13 47.3**	**+1.1**
	6.6nm,0.8s,mb4.4,baz=248,slow=16,SNR=4.3						
LSA	**Lhasa**	**40.07**	**308**	P	**P**	**23 13 50.9**	**-4.6**
	1.0nm,0.6s,mb3.7						
STKA	**Stephens Creek**	**41.65**	**161**	P	**P**	**23 14 09.2**	**+0.8**
	1.5nm,0.5s,mb3.8,baz=350,slow=5.7,SNR=6.7						
SONM	**Songino Array**	**43.76**	**340**	P	**P**	**23 14 25.6**	**+0.4**
	0.3nm,0.4s,mb3.4,baz=162,slow=8.1,SNR=8.5						
MKAR	**Makanchi Array**	**54.52**	**324**	P	**P**	**23 15 46.6**	**-0.9**
	1.3nm,0.5s,mb4.2,baz=123,slow=8.0,SNR=18						
ZALV	**Zalesovo Beam**	**57.27**	**332**	P	**P**	**23 16 04.9**	**-2.2**
	0.6nm,0.3s,mb4.1,baz=122,slow=6.7,SNR=5.8						
JOF	**Joensuu**	**85.85**	**333**	*ep*	**P**	**23 18 56.4**	**-2.4**
	0.7nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**88.54**	**332**	P	**P**	**23 19 10.1**	**-1.7**
	0.5nm,0.5s,mb4.1,baz=61,slow=5.8,SNR=7.7						
YKA	**Yellowknife Ar**	**96.05**	**24**	P	**P**	**23 19 46.8**	**+0.4**
	0.3nm,0.7s,mb3.8,baz=299,slow=4.5,SNR=4.9						

*IDC **30** 23:08:46.4±1.3, 0.83S×12.97E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.8/16, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=135.1km s-min=18.6km az=68.0*
*NEIC **30** 23:08:48.0±1.0, 0.92S×12.773E, h10km, mb4.3/1, Error ellipse: s-maj=140.0km s-min=12.2km az=68.0*

ISC 30 23:08:51.5±1.2, 09S±04×1280E±10, h35km, n8, σ0§94/8, mb4.0/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.91**	**162**	P	**Pn**	**23 13 21.2**	**-0.8**
	0.2nm,0.3s,baz=342,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**23.34**	**166**	P	**P**	**23 13 56.9**	**-0.1**
	2.6nm,0.9s,mb3.6,baz=345,slow=10,SNR=13						
STKA	**Stephens Creek**	**33.38**	**159**	P	**P**	**23 15 27.6**	**+0.9**
	6.7nm,1.2s,mb4.5,baz=321,slow=8.3,SNR=4.4						
SONM	**Songino Array**	**52.06**	**342**	P	**P**	**23 17 57.7**	**0.0**
	0.9nm,0.9s,mb3.7,baz=143,slow=8.5,SNR=5.2						
MKAR	**Makanchi Array**	**62.06**	**326**	P	**P**	**23 19 07.7**	**-0.8**
	0.8nm,0.3s,mb4.3,baz=115,slow=8.1,SNR=14						
KURK	**Kurchatov**	**66.30**	**328**	*eP*	**P**	**23 19 34.7**	**-1.5**
	1.5nm,0.6s,mb4.2						
AKTK	**Aktyubinsk**	**78.04**	**322**	P	**P**	**23 20 47.6**	**+1.1**
AKTO	**Aktyubinsk**	**78.04**	**322**	P	**P**	**23 20 47.6**	**+1.1**
	1.1nm,0.8s,mb3.8,baz=113,slow=7.7,SNR=3.9						

*NIED **30** 23:09:00, 3720N×13670E, h20km, Mw3.8 Best double couple: M0 5.83000×10^14 NP1:φ=204.00000°, δ=11.00000°, λ=65.00000°. NP2:φ=49.00000°, δ=80.00000°, λ=95.00000°.*
*IDC **30** 23:09:44.6±0.8, 3723N×13674E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/22, mbtmp3.8/10, ML3.4/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=19.8km s-min=12.9km az=35.0*
*JMA **30** 23:09:46.9, 3723N×13676E, h13km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φ=209.00000°, δ=14.00000°, λ=56.00000°. NP2:φ=64.00000°, δ=78.00000°, λ=98.00000°. Principal axes: T Plg=56.0000°, Azm=344.0000°; N Plg=8.0000°, Azm=242.0000°; P Plg=33.0000°, Azm=147.0000°;*
JMA Felt III J1.
*ISCJB **30** 23:09:46.7±0.6, 3723N±004×13674E±005, h24km±5km, mb3.8/9 Error ellipse: s-maj=7.1km s-min=6.1km az=151.8*
*NEIC **30** 23:09:46.1±0.5, 3721N×13683E, h10km, MG4.7(JMA), Error ellipse: s-maj=12.0km s-min=9.2km az=209.0*
NEIC Recorded [3 JMA] in Ishikawa, [2 JMA] in Toyama and [1 JMA] in Gifu and Niigata Prefectures.
*MOS **30** 23:09:47.7±1.3, 37.16N×136.74E, h33km, mb4.0/6, Error ellipse: s-maj=21.0km s-min=12.4km az=106.4*

ISC 30 23:09:47.2±0.6, 3722N±003×13682E±005, h15km±4km, n29, σ0§98/33, mb3.8/9, 1C-5D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJH	**Hakui**	**0.29**	**186**	⇓P	**Pg**	**23 09 53.4**	**0.0**
JJH				S	**Sg**	**23 09 57.8**	**+0.2**
JSZ	**Suzu**	**0.49**	**62**	⇓P	**Pg**	**23 09 56.9**	**0.0**
JHG	**Hegura jima**	**0.63**	**7**	⇓P	**Pg**	**23 09 58.8**	**-0.8**
JTT	**Ttatey**	**0.74**	**146**	⇓P	**Pg**	**23 10 01.7**	**+0.1**
JTT				S	**Sg**	**23 10 12.9**	**+1.6**
JKG	**Kaga**	**1.02**	**203**	⇓P	**Pb**	**23 10 05.4**	**-1.1**
JKG				S	**Sb**	**23 10 19.4**	**-0.2**
MAJO	**Matsushiro**	**1.30**	**121**	*e*Pn	**Pn**	**23 10 10.1**	**-0.6**
MAJO				*e*Sn	**Sn**	**23 10 26.1**	**-1.7**
MAT	**Matsushiro**	**1.30**	**121**	P	**Pn**	**23 10 10.1**	**-0.6**
MAT				S	**Sb**	**23 10 30.0**	**+2.2**
MJAR	**Matsushiro Arr**	**1.30**	**121**	P	**Pn**	**23 10 10.9**	**+0.1**
MJAR						23 10 29.7	
MJAR				pmax	pmax		
	comp=Z,91nm,0.3s						
MJAR	**Matsushiro Arr**	**1.30**	**121**	Pg	**Pg**	**23 10 10.8**	**-1.4**
	comp=Z,91nm,0.3s,baz=302,slow=15,SNR=331						
MJAR				Lg		23 10 29.7	
	comp=Z,104nm,0.3s,baz=296,slow=30,SNR=15						
JNU	**Nakatsue**	**6.35**	**232**	Pn	**Pn**	**23 11 20.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=249,slow=17,SNR=3.1						
KSRS	**Korea Array**	**7.09**	**275**	Pn	**Pn**	**23 11 30.9**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=92,slow=14,SNR=7.5						
KSRS				LR	LR	23 13 56.3	
	comp=Z,65nm,19.9s,baz=163,slow=36						
YSS	**Yuzh-Sakhalins**	**10.68**	**22**	*i* P	**Pn**	**23 12 23.1**	**+3.7**
KLR	**Kul'dur**	**12.56**	**345**	*eP*	**Pn**	**23 12 45.3**	**+0.2**
KLR				MLR	MLR		
	comp=Z,1μm,12.0s						
MA2	**Magadan**	**24.11**	**17**	⇑*e*P	**P**	**23 15 02.1**	**+0.2**
SONM	**Songino Array**	**24.65**	**305**	P	**P**	**23 15 06.8**	**-0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,71nm,21.7s						
SONM	**Songino Array**	**24.65**	**305**	P	**P**	**23 15 06.8**	**-0.2**
	comp=Z,1.7nm,0.7s,mb3.7,baz=109,slow=9.2,SNR=15						
SONM				LR	LR	23 24 44.8	
	comp=Z,71nm,21.7s,baz=312,slow=37						
ZAK	**Zakamensk**	**27.30**	**310**	*eP*	**P**	**23 15 33.7**	**+2.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.5						
ZALV	**Zalesovo Beam**	**39.08**	**312**	PcP	PcP	23 19 22.1	-0.8
	comp=Z,0.5nm,0.5s,baz=101,slow=4.6,SNR=3.6						
INK	**Inuvik**	**55.88**	**27**	P	**P**	**23 19 24.1**	**+0.4**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**55.88**	**27**	P	**P**	**23 19 24.1**	**+0.4**
	comp=Z,1.1nm,0.7s,mb4.0,baz=288,slow=6.4,SNR=5.6						
WRA	**Warramunga Arr**	**56.90**	**183**	P	**P**	**23 19 30.2**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**56.90**	**183**	P	**P**	**23 19 30.2**	**-1.2**
	comp=Z,0.9nm,0.4s,mb4.1,baz=360,slow=7.7,SNR=4.8						
ASAR	**Alice Springs**	**60.62**	**183**	P	**P**	**23 19 57.4**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**60.62**	**183**	P	**P**	**23 19 57.4**	**+0.1**
	comp=Z,0.6nm,0.7s,mb3.8,baz=15,slow=10,SNR=5.2						
YKA	**Yellowknife Ar**	**65.46**	**29**	P	**P**	**23 20 29.0**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=306,slow=6.7,SNR=5.7						
FINES	**FINESS Array B**	**66.90**	**331**	P	**P**	**23 20 37.1**	**-1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**66.90**	**331**	P	**P**	**23 20 37.1**	**-1.2**
	comp=Z,1.4nm,0.8s,mb4.0,baz=76,slow=5.9,SNR=3.2						
NVAR	**Mina Array Bea**	**77.77**	**51**	P	**P**	**23 21 45.3**	**+1.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=291,slow=5.3,SNR=3.3						
PDAR	**Pinedale Array**	**80.10**	**43**	P	**P**	**23 21 56.0**	**-0.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=269,slow=0.1,SNR=8.7						

KRSC 30 23:38:40.5±0.5, 5332N×16057E, h39km±38km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.40**	**236**	*eP*	**Pn**	23 38 50.8	+1.0
SPN				*i* S	Sn	23 38 57.7	+1.4
NLC	**Nalytchevo**	**0.75**	**259**	*eP*	**Pn**	23 38 55.1	+0.5
NLC				*i* S	Sn	23 39 05.7	+1.0
KII	**Karymskiy**	**0.98**	**318**	*eP*	**Pn**	23 38 58.3	+0.6
KII				*i* S	Sn	23 39 10.5	+0.1
AVH	**Avacha**	**1.10**	**268**	*eP*	**Pn**	23 39 00.5	+1.1
AVH				*i* S	Sn	23 39 15.1	+1.8
PET	**Petropavlovsk**	**1.19**	**256**	*eP*	**Pn**	23 39 01.4	+0.8
PET				*i* S	Sn	23 39 16.4	+0.8
MKZ	**Mys Kozlova**	**1.42**	**29**	*eP*	**Pn**	23 39 03.2	-0.5
MKZ				*i* S	Sn	23 39 19.5	-1.6
RUS	**Russkaya**	**1.53**	**235**	*eP*	**Pn**	23 39 05.6	+0.3
RUS				*i* S	Sn	23 39 24.2	+0.3
GNL	**Ganaly**	**1.61**	**285**	*eP*	**Pn**	23 39 07.8	+1.4
GNL				*i* S	Sn	23 39 27.8	+1.8
GRL	**Gorelyy**	**1.70**	**244**	*eP*	**Pn**	23 39 09.3	+1.8
GRL				*i* S	Sn	23 39 30.1	+2.1
TUMR	**Tumrok**	**1.98**	**353**	*eP*	**Pn**	23 39 13.0	+1.5
TUMR				*i* S	Sn	23 39 36.5	+1.4
KMNR	**Kamenistaya**	**2.45**	**356**	*eP*	**Pn**	23 39 20.3	+2.4
KMNR				*i* S	Sn	23 39 49.4	+2.9
MIPR	**Malaya Ipel'ka**	**2.54**	**247**	*eP*	**Pn**	23 39 21.6	+2.5
MIPR				*i* S	Sn	23 39 52.5	+3.7
KOZ	**Kozyrevsk**	**2.77**	**352**	*eP*	**Pn**	23 39 24.9	+2.6
SRDR	**Sredinnyy**	**3.04**	**351**	P	**Pn**	23 39 29.3	+3.3
KBTR	**Krutoberegovo**	**3.17**	**23**	*eP*	**Pn**	23 39 29.5	+1.7
KBTR				*i* S	Sn	23 40 05.5	+1.1
BDR	**Baidarnaya**	**3.28**	**6**	P	**Pn**	23 39 32.2	+3.0
SMKR	**Semkarok**	**3.31**	**9**	P	**Pn**	23 39 32.2	+2.5
SRKR	**Sorokina**	**3.36**	**6**	P	**Pn**	23 39 33.6	+3.2

*CSEM **30** 23:43:36.7±0.1, 3803N×3093E, h2km, mb3.9, Error ellipse: s-maj=1.6km s-min=1.3km az=157.0*
*IDC **30** 23:43:36.9±1.4, 3765N×3089E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/20, mbtmp3.4/5, ML3.8/1, MS2.8/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=40.6km s-min=25.5km az=135.0*
*ISK **30** 23:43:36.6, 3801N×3092E, h5km, ML3.8*
*MOS **30** 23:43:37.6±2.6, 3800N×3088E, h10km, mb3.9/1, Error ellipse: s-maj=37.2km s-min=13.5km az=65.6*
*NEIC **30** 23:43:37.0, 3801N×3092E, h6km, ML3.8(ISK), After ISK.*
*ISCJB **30** 23:43:38.1±0.8, 3804N±002×3092E±003, h9km±6km, mb3.4/4, Error ellipse: s-maj=4.6km s-min=4.0km az=144.4*

ISC 30 23:43:38.2±0.9, 3801N±003×3094E±003, h0km±7km, n78, σ0§91/85, mb3.5/4, 6C, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.38**	**244**	PG	**Pg**	**23 43 44.5**	**-0.9**
ISP				SG	**Sg**	**23 43 51.1**	**+0.9**
ISP	**Isparta**	**0.38**	**244**	⇑*i*P	**Pg**	**23 43 45.0**	**-0.4**
ISP				*e*S	**Sg**	**23 43 50.9**	**+0.7**
ISP	**Isparta**	**0.38**	**244**	*i* P	**Pg**	**23 43 45.0**	**-0.4**
ISP				*e*Sg	**Sg**	**23 43 51.1**	**+0.9**
BCK	**Bucak**	**0.61**	**207**	PG	**Pg**	**23 43 49.2**	**-0.7**
SHUT	**Suhut-Afyon**	**0.62**	**331**	PG	**Pg**	**23 43 50.2**	**+0.1**
KONT	**Konya--Tatoy**	**1.13**	**93**	PN	**Pn**	**23 43 59.3**	**-1.9**
ANTB	**Antalya**	**1.13**	**192**	PN	**Pn**	**23 43 59.5**	**-1.7**
KIZT	**Kizilcal**	**1.14**	**40**	PN	**Pn**	**23 44 00.1**	**-1.2**
KHL	**Karahalli**	**1.16**	**286**	PN	**Pn**	**23 43 59.6**	**-2.0**
ELL	**Elmali**	**1.50**	**213**	PN	**Pn**	**23 44 05.8**	**-0.5**
ESKT	**Eskisehir**	**1.51**	**357**	PN	**Pn**	**23 44 06.2**	**-0.3**
DENT	**Denizli**	**1.53**	**261**	PN	**Pn**	**23 44 06.3**	**-0.4**
KULA	**Kula-Manisa**	**1.86**	**286**	PN	**Pn**	**23 44 10.6**	**-0.7**
FETY	**Fethiye**	**2.01**	**228**	PN	**Pn**	**23 44 13.8**	**+0.4**
GPA	**Golpazari**	**2.33**	**348**	PN	**Pn**	**23 44 17.9**	**+0.2**
ANTO	**Ankara**	**2.36**	**37**	PN	**Pn**	**23 44 17.8**	**-0.3**
ANTO	**Ankara**	**2.36**	**37**	*e*Pn	**Pn**	**23 44 17.4**	**-0.7**
LOD	**Lodumlu**	**2.36**	**37**	PN	**Pn**	**23 44 17.6**	**-0.5**
DST	**Dursunbey**	**2.41**	**312**	PN	**Pn**	**23 44 18.7**	**-0.1**
GULT	**Gulveren**	**2.44**	**352**	PN	**Pn**	**23 44 19.5**	**+0.2**
IZI	**Iznik**	**2.59**	**334**	PN	**Pn**	**23 44 21.7**	**+0.4**
ADVT	**Abdulvahap**	**2.59**	**339**	PN	**Pn**	**23 44 20.8**	**-0.5**
AKS	**Akhisar**	**2.60**	**290**	PN	**Pn**	**23 44 21.0**	**-0.4**
MLSB	**Milas**	**2.61**	**255**	PN	**Pn**	**23 44 21.3**	**-0.2**
GEMT	**Gemlik**	**2.78**	**331**	*e*PN	**Pn**	**23 44 24.0**	**+0.1**
IKL	**Isikli**	**2.82**	**128**	*

YKA	Yellowknife Ar	76.07 344	P	P		23 55 25.9	-1.2
	comp=Z,0.6nm,0.9s,mb3.7,baz=29,slow=5.6,SNR=6.1						

NIED ***31*** *00:05:00,44.40N×149.10E,h41km,Mw3.8 Best double couple: M0=5.64000×10^14 NP1:φ=336.00000°,δ=53.00000°, λ=25.00000°. NP2:φ=230.00000°,δ=70.00000°,λ=140.00000°.*
MOS ***31*** *00:05:18.9±2.0,44.25N×149.78E,h33km,mb4.1/4,Error ellipse: s-maj=32.2km s-min=21.0km az=29.7*
JMA ***31*** *00:05:23.0±0.5,44.38N×149.11E,h30km,M3.8*
IDC ***31*** *00:05:30.6±7.1,46.16N×148.21E,h0km,mb3.8/5, mb1 3.8/6,mb1mx3.6/20,mbtmp3.8/6,ML3.1/1,MS2.7/1, Ms1 2.7/1,ms1mx2.2/24,Error ellipse: s-maj=156.5km s-min=38.0km az=138.0*

ISC 31 00:05:25.8±1.4,4417N±007×1489E±01,h48km±12km,n31, σ1§08/35,mb3.7/5,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.31	325	*i* PN	Pn	00 05 45.0	-2.7
KUR				*i* S	Sn	00 06 03.5	-0.5
KUR				pmax	pmax		
	comp=N,230nm,0.5s						
KUR				pmax	pmax		
	comp=E,300nm,0.5s						
KUR				pmax	pmax		
	comp=Z,580nm,0.5s						
KUR				smax			
	comp=E,2μm,1.4s						
KUR				smax			
	comp=N,760nm,0.5s						
KUR				smax			
	comp=E,420nm,0.5s						
NEM2	Nemuro 2	2.45	252	P	Pn	00 06 02.4	-0.9
NEM2				*e*S	Sn	00 06 31.8	-0.2
JRA	Rausu	2.76	267	P	Pn	00 06 08.9	+1.4
JNK	Nakash	3.11	261	P	Pn	00 06 12.5	+0.2
JAK	Akkeshi	3.30	251	P	Pn	00 06 14.5	-0.4
JTKR	Abashiri--Toko	3.63	269	P	Pn	00 06 20.8	+1.3
JAR	Ashorobuto	3.85	259	P	Pn	00 06 23.4	+1.0
JAR				*e*S	Sn	00 07 07.2	+0.9
JOB	Onbets	3.92	253	P	Pn	00 06 23.8	+0.3
JOB				*e*S	Sn	00 07 07.7	-0.5
JMP	Maruseppu	4.02	270	P	Pn	00 06 26.4	+1.6
JCH	Churui	4.35	251	*e*S	Sn	00 07 17.0	-1.8
ASAJ	Asahikawa	4.56	272	PN	Pn	00 06 39.4	+7.1
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,91nm,19.6s						
ASAJ	Asahikawa	4.56	272	Pn	Pn	00 06 39.4	+7.1
	comp=Z,0.8nm,0.3s,baz=70,slow=13,SNR=3.8						
ASAJ				LR	LR	00 08 43.8	
	comp=Z,91nm,19.6s,baz=1.6,slow=43						
ERM	Erimo	4.75	245⇑	*e*PN	Pn	00 06 36.5	+1.7
JNBK	Urakawa-nobuka	4.90	249	P	Pn	00 06 36.8	-0.1
JBT2	Biratori 2	4.98	256	P	Pn	00 06 38.9	+0.9
JBT2				*e*S	Sn	00 07 33.5	-0.8
JKB	Kayabe	6.23	251	P	Pn	00 06 54.9	-0.2
JKB				*e*S	Sx	00 08 02.3	
JANG	Nango	6.69	238	P	Pn	00 06 59.3	-2.1
JANG				*e*S	Sx	00 08 11.1	
JTH	Tanohata	6.75	234	*e*S	Sx	00 08 11.1	
JOSM	Okushiri--Mats	7.23	257	P	Pn	00 07 09.9	+1.1
OFUJ	Ofunato	7.45	229	P	Pn	00 07 10.9	-1.0
JRG	Rokugo	7.82	235	P	Pn	00 07 16.4	-0.6
SONM	Songino Array	29.50	292	P	P	00 11 25.7	+0.4
	comp=Z,0.2nm,0.5s,mb3.1,baz=87,slow=9.1,SNR=4.8						
MKAR	Makanchi Array	45.53	298	P	P	00 13 41.4	+0.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	45.53	298	P	P	00 13 41.4	+0.9
	comp=Z,0.9nm,0.5s,mb3.9,baz=76,slow=8.5,SNR=10						
FINES	FINESS Array B	65.08	334	P	P	00 15 58.0	-2.9
FINES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	FINESS Array B	65.08	334	P	P	00 15 58.0	-2.9
	comp=Z,1.1nm,0.9s,mb3.9,baz=39,slow=5.3,SNR=2.7						
NB2	NORSAR Subarra	69.67	340	P	P	00 16 30.0	+0.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=30,slow=6.5						
NOA	NORSAR Array B	69.67	340	P	P	00 16 30.0	+0.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NOA	NORSAR Array B	69.67	340	P	P	00 16 30.0	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=31,slow=6.2,SNR=4.7						
AKASG	Malin Array Be	72.00	324	P	P	00 16 44.0	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	72.00	324	P	P	00 16 44.0	-0.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=32,slow=5.5,SNR=5.0						

IGQ 31 00:08:19.3,098S×7780W,h14km±5km,Mb4.0,Ms3.8, 6C-25D,Error ellipse: s-maj=2.1km s-min=0.9km az=19.6,Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAMB	Tambo	0.63	296	⇓P	Pg	00 08 32.4	+0.7
ANTI	Antisana	0.64	326	⇓P	Pg	00 08 32.0	+0.3
VC1	Cotopaxi 1	0.69	299	⇓P	Pg	00 08 33.4	+0.7
RUN5	Runtun	0.76	235	⇓P	Pg	00 08 34.1	+0.1
RUN5	Runtun	0.76	235	⇓S	Sg	00 08 43.7	-0.3
ULBA	Ulba	0.77	232	⇓P	Pg	00 08 34.1	-0.1
JUIV	Juive	0.80	236	⇓P	Pg	00 08 34.7	-0.1
JUIV	Juive	0.80	236	⇓S	Sg	00 08 45.4	+0.1
RETU	Refugio	0.80	234	⇓P	Pg	00 08 34.9	+0.1
RETU	Refugio	0.80	234	⇓S	Sg	00 08 45.0	-0.3
PATA	Patacocha	0.82	230	⇓P	Pg	00 08 35.4	+0.1
BILB	Tungurahua vol	0.83	237	⇑P	Pg	00 08 35.2	-0.3
BILB	Tungurahua vol	0.83	237	⇑S	Sg	00 08 46.3	-0.1
ARRY	Arrayan	0.84	231	⇓P	Pg	00 08 35.3	-0.3
LAV3	Lava3-Reventad	0.89	11	⇑P	Pb	00 08 36.2	-0.3
CONE	Cono NE Rev Vo	0.92	10	⇑P	Pb	00 08 36.8	-0.1
IGUA	Igualata	0.98	239	P	Pb	00 08 38.4	+0.4
IGUA	Igualata	0.98	239	S	Sb	00 08 49.2	-1.6
CAYR	Refugio Cayamb	1.01	348	⇓P	Pb	00 08 38.7	+0.2
CAYR	Refugio Cayamb	1.01	348	⇓S	Sb	00 08 51.0	-0.6
CAYA	Cayambe	1.06	350	⇓P	Pb	00 08 39.5	+0.1
PORT	Chimborazo Vol	1.08	244	⇓P	Pb	00 08 40.2	+0.4
PORT	Chimborazo Vol	1.08	244	⇓S	Sb	00 08 54.7	+0.9
JUA2	San Juan 2	1.10	313	⇓P	Pb	00 08 40.6	+0.5
JUA2	San Juan 2	1.10	313	⇓S	Sb	00 08 54.9	+0.6
GGP	Refugio Guagua	1.12	315	⇓P	Pb	00 08 41.1	+0.6
GGP	Refugio Guagua	1.12	315	⇓S	Sb	00 08 56.1	+1.2
TERV	Terraza Guagua	1.13	315	⇓P	Pb	00 08 41.3	+0.7
PINO	Pino	1.15	315	⇓P	Pb	00 08 41.5	+0.7
YANA	Yana	1.15	318	⇑P	Pn	00 08 41.2	+0.4
YANA	Yana	1.15	318	⇑S	Sb	00 08 57.3	+1.6
COTA	Cotacachi	1.41	338	⇓P	Pn	00 08 46.8	+2.3
COTA	Cotacachi	1.41	338	⇓S	Sn	00 09 06.8	+4.0
MAG1	Magdalena	2.17	294	P	Pn	00 08 60.0	+5.1

CSEM ***31*** *00:15:32.9±0.5,3800N×3097E,h5km±3km,MD3.7,Error ellipse: s-maj=2.5km s-min=1.6km az=162.0*
ISCJB ***31*** *00:15:33.6±0.6,3800N±002×3096E±003,h7km±5km, Error ellipse: s-maj=3.9km s-min=3.8km az=137.0*
ISK ***31*** *00:15:33.2,3801N×3093E,h8km,MD3.7*
DDA ***31*** *00:15:35.1,3804N×3093E,h5km,Md3.5*

ISC 31 00:15:34.6±0.5,3798N±002×3094E±003,h10km±4km,n51, σ1§03/69,1C,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	Isparta	0.36	248	*i* PG	Pg	00 15 40.6	-1.2
ISP				*i* SG	Sg	00 15 46.7	0.0
BCK	Bucak	0.59	208	PG	Pg	00 15 44.5	-1.5
SHUT	Suhut-Afyon	0.65	332	PG	Pg	00 15 46.6	-0.6
KDHN	Kadinhani	1.07	59⇑	*i* P	Pg	00 15 53.8	-1.5
KDHN				*i* S	Sg	00 16 11.3	+2.1
ANTB	Antalya	1.10	192	PN	Pn	00 15 56.0	-0.1
KONT	Konya--Tatoy	1.12	91	PN	Pn	00 15 55.1	-1.3
KIZT	Kizilcal	1.17	39	PN	Pn	00 15 55.8	-1.2
KHL	Karahalli	1.17	288	PN	Pn	00 15 55.4	-1.6
GOLH	Golhisar	1.32	236	*i* P	Pn	00 15 59.7	+0.6
GOLH				*i* S	Sg	00 16 19.9	+2.8
ELL	Elmali	1.48	214	PN	Pn	00 16 00.8	-0.5
DENT	Denizli	1.52	262	PN	Pn	00 16 01.9	0.0
ESKT	Eskisehir	1.54	357	PN	Pn	00 16 01.8	-0.3
ESKT	Eskisehir	1.54	357	*i* P	Pn	00 16 02.0	-0.1
ESKT				*i* S	Sg	00 16 24.4	+0.2
SEYT	Eskypehyr	1.54	357	*i* P	Pn	00 16 02.0	-0.1
SEYT				*i* S	Sg	00 16 24.4	+0.2
GDZ	Gediz	1.59	315	*i* P	Pn	00 16 02.5	-0.4
GDZ				*i* S	Sg	00 16 27.9	+2.0
KULA	Kula-Manisa	1.87	287	PN	Pn	00 16 05.9	-0.8
BORA	Eskisehir	1.94	349	*i* P	Pn	00 16 07.6	+0.1
BORA				*i* S	Sg	00 16 38.1	+1.2
MANT	Manisa	1.94	286	*i* P	Pn	00 16 07.7	0.0
MANT				*i* S	Sg	00 16 35.0	-2.0
FETY	Fethiye	2.00	228	PN	Pn	00 16 09.2	+0.8
ERMK	Ermenek	2.06	130	*i* P	Pn	00 16 11.4	+2.1
ERMK				*i* S	Sg	00 16 39.7	-1.3
ERMK	Ermenek	2.06	130	*i* P	Pn	00 16 11.4	+2.1
ERMK				*i* S	Sg	00 16 39.7	-1.3
GPA	Golpazari	2.36	348	PN	Pn	00 16 13.4	0.0
ANTO	Ankara	2.38	37	PN	Pn	00 16 13.4	-0.3
LOD	Lodumlu	2.38	36	PN	Pn	00 16 13.1	-0.6
DST	Dursunbey	2.43	313	PN	Pn	00 16 14.2	-0.1
GULT	Gulveren	2.47	352	PN	Pn	00 16 13.7	-1.2
DERT	Derbent	2.57	338	PN	Pn	00 16 15.1	-1.2
MLSB	Milas	2.60	256	*e*PN	Pn	00 16 17.0	+0.3
AKHS	Akhisar	2.61	291	*i* P	Pn	00 16 17.0	+0.1
AKHS				*i* S	Sg	00 17 03.5	+4.9
AKS	Akhisar	2.61	291	PN	Pn	00 16 16.8	-0.1
IZI	Iznik	2.62	335	*e*PN	Pn	00 16 15.8	-1.1
IKL	Isikli	2.80	128	*e*PN	Pn	00 16 20.7	+1.2
HENT	Hendek	2.84	359	*i* P	Pn	00 16 22.0	+2.0
HENT				*i* S	Sg	00 17 01.8	-4.0
YLV	Yalova	2.86	335	*e*PN	Pn	00 16 19.7	-0.5
BTOK	Tokmak	2.88	309	*i* P	Pn	00 16 22.2	+1.6
BTOK				*i* S	Sn	00 17 00.7	+5.3
NIG	Nigde	2.90	86	*e*PN	Pn	00 16 20.9	0.0
BALB	Balikesir	2.91	306	*e*PN	Pn	00 16 21.3	+0.4
KDAG	Bornova	2.92	279	*i* P	Pn	00 16 21.3	+0.1
KDAG				*i* S	Sg	00 17 10.7	+2.1
DAT	Datca	2.95	246	*e*PN	Pn	00 16 21.2	-0.4
MERS	Mersin	3.06	110	*e*PN	Pn	00 16 23.6	+0.6
CDAG	Cicekdag	3.15	57	*i* P	Pn	00 16 23.8	-0.4
CDAG				*i* S	Sn	00 17 01.6	-0.2
ELDT	Eldivan	3.17	37	*i* P	Pn	00 16 24.7	+0.2
ELDT				*i* S	Sn	00 17 07.2	+5.0
ELDT	Eldivan	3.17	37	*i* P	Pn	00 16 24.7	+0.2
ELDT				*i* S	Sn	00 17 07.2	+4.9
EDC	Edincik	3.36	316	*e*PN	Pn	00 16 27.0	-0.2
ISK	Istanbul-Kandi	3.41	335	*e*PN	Pn	00 16 27.2	-0.6
SAFT	Safranbolu	3.53	22	*e*PN	Pn	00 16 30.0	+0.6
EREN	Erenkoy	3.56	132	*e*PN	Pn	00 16 30.9	+0.9
CORM	Corum	3.62	51	*e*PN	Pn	00 16 30.4	-0.3
TOS	Tosya	3.87	37	*e*PN	Pn	00 16 34.0	-0.2
COBT	Iskenderun	4.49	107	*i* P	Pn	00 16 45.1	+2.5
COBT				*i* S	Sb	00 17 52.6	+5.0
EDRB	Edirne	5.03	321	*e*PN	Pn	00 16 50.3	+0.2

NEIC ***31*** *00:23:00.9,3170S×7185W,h32km,ML3.6(GUC),After GUC.*

GUC 31 00:23:00.9±0.9,3170S×7185W,h32km±3km,MD4.0, ML3.6,5C-5D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	Los Chungos	0.35	122⇓	*i* P	Pb	00 22 51.9	-17
CHNG				*i* S	Sb	00 22 57.5	-17
CMCH	Combarbala	0.89	54⇑	*i* P	Pn	00 23 17.2	0.0
CMCH				*i* S	Sn	00 23 29.6	+0.6
CMCH	Combarbala	0.89	54⇑	*i* P	Pn	00 23 17.2	0.0
CMCH				*i* S	Sn	00 23 29.6	+0.6
CMCH				AML	AML	00 23 32.4	
	comp=N,6μm,0.6s						
PACH	Papudo	0.91	157⇑	*i* P	Pn	00 23 17.3	-0.1
PACH				*i* S	Sn	00 23 29.9	+0.6
PTCH	Petorca	0.96	126⇓	*i* P	Pn	00 23 18.6	+0.5
PTCH				*i* S	Sn	00 23 31.4	+0.7
PTCH	Petorca	0.96	126⇓	*i* P	Pn	00 23 18.6	+0.5
PTCH				*i* S	Sn	00 23 31.4	+0.7
PTCH				AML	AML	00 23 33.0	
	comp=N,4μm,0.3s						
OVCH	Ovalle	1.22	27⇑	*i* P	Pn	00 23 22.5	+0.8
OVCH				*i* S	Sn	00 23 38.4	+1.3
IHA	Instituto Hidr	1.33	173	*e*P	Pn	00 23 23.7	+0.4
JACH	Jahuel	1.45	133	*e*P	Pn	00 23 26.4	+1.6
JACH				*i* S	Sn	00 23 45.6	+2.9
ROCH	El Roble	1.45	151	*e*P	Pn	00 23 26.1	+1.3
ROCH				*i* S	Sn	00 23 45.3	+2.5
RCDM	Rinconada Maip	1.99	154	*e*P	Pn	00 23 33.7	+1.4
RCDM				S	Sn	00 23 57.5	+1.5
RCDM	Rinconada Maip	1.99	154	*e*P	Pn	00 23 33.7	+1.4
RCDM				*i* S	Sn	00 23 57.5	+1.5
RCDM				AML	AML	00 24 07.3	
	comp=E,454nm,0.6s						
CLCH	Cerro Calan	2.02	147	*e*P	Pn	00 23 34.3	+1.6
CLCH				*i* S	Sn	00 23 59.8	+2.9
CLCH				AML	AML	00 24 05.8	
	comp=E,1μm,0.7s						
FCH	Farellones	2.09	141⇑	*i* P	Pn	00 23 35.6	+2.0
FCH				*i* S	Sn	00 24 02.0	+3.5
FCH				AML	AML	00 24 08.7	
	comp=E,418nm,0.5s						
TACH	Talagante	2.09	159	*e*P	Pn	00 23 35.1	+1.4
TACH				*i* S	Sn	00 24 01.0	+2.4
PCH	Pirque	2.22	150	*e*P	Pn	00 23 37.2	+1.8
LMEL	Las Melosas	2.55	148	⇓*i* P	Pn	00 23 42.4	+2.4
LMEL				*i* S	Sn	00 24 12.7	+2.8
LMEL	Las Melosas	2.55	148	⇓*i* P	Pn	00 23 42.4	+2.4
LMEL				*i* S	Sn	00 24 12.7	+2.8
LMEL				AML	AML	00 24 24.3	
	comp=E,310nm,0.5s						
LCO	Las Campanas	2.86	21	*e*Pn	Pn	00 23 45.2	+1.0
LCO				*e*Sn	Sn	00 24 23.9	+6.5

CSEM ***31*** *00:23:54.3±0.1,3791N×3098E,h8km,MD3.0,Error ellipse: s-maj=3.7km s-min=2.2km az=164.0*
ISCJB ***31*** *00:23:55.7±0.6,3797N±004×3093E±004,h6km,Error ellipse: s-maj=5.8km s-min=4.6km az=6.7*
ISK ***31*** *00:23:55.0,3795N×3096E,h6km,MD3.0*
DDA ***31*** *00:23:58.4,3808N×3103E,h6km±1km,Md3.1*

ISC 31 00:23:55.7±0.8,3797N±005×3097E±005,h4km±9km,n12, σ0§94/18,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	Isparta	0.38	251	*i* PG	Pg	00 23 02.2	-0.9
ISP				*i* SG	Sg	00 24 08.5	+0.4
BCK	Bucak	0.59	211	PG	Pg	00 24 06.7	-0.4
SHUT	Suhut-Afyon	0.67	331	PG	Pg	00 24 08.7	+0.1
KDHN	Kadinhani	1.06	58	*i* P	Pg	00 24 15.8	-0.2
KDHN				*i* S	Sg	00 24 34.7	+4.9
KONT	Konya--Tatoy	1.10	91	PN	Pn	00 24 16.6	-1.4
KIZT	Kizilcal	1.16	38	*e*PN	Pn	00 24 18.0	-0.7
KHL	Karahalli	1.19	288	*e*PN	Pn	00 24 18.2	-1.0
ESKT	Eskisehir	1.55	357	*i* P	Pn	00 24 24.2	+0.1
ESKT				*i* S	Sn	00 24 45.5	+0.8
ESKT	Eskisehir	1.55	357	*e*Pn	Pn	00 24 24.2	+0.1
SEYT	Eskypehyr	1.55	357	*i* P	Pn	00 24 24.2	+0.1
SEYT				*i* S	Sn	00 24 45.5	+0.8
MANT	Manisa	1.97	286	*i* P	Pg	00 24 32.5	-0.9
MANT				*i* S	Sg	00 25 01.0	+2.1
ERMK	Ermenek	2.04	130	*i* P	Pb	00 24 33.8	+0.4
ERMK				*i* S	Sb	00 25 00.6	+1.5

MEX 31 00:27:35.1±0.5,1530N×9342W,h35km±58km,MD4.2, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.58	51	*e*P	Pn	00 27 58.8	-1.8
CCIG				*i* S	Sn	00 28 17.9	-1.9
SCX	San Cristobal	1.62	28	*e*P	Pn	00 28 01.0	-0.2
CMIG	Matias Romero	2.27	322	*i* P	Pn	00 28 08.6	-1.5
CMIG				*i* S	Sn	00 28 34.8	-2.1

NEIC ***31*** *00:30:38.1,3356S×7028W,h113km,MD3.5(GUC),After GUC.*

GUC 31 00:30:38.1±0.7,3356S×7028W,h113km±2km,MD3.5, ML3.5,10C-9D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJCH	San Jose de Ma	0.10	218	*e*P	Pn	00 30 53.7	0.0
SJCH				*i* S	Sn	00 31 05.8	+0.4
PCH	Pirque	0.20	254	*e*P	Pn	00 30 54.2	+0.3
PCH				*i* S	Sn	00 31 06.9	+1.3
FSR	Penalolen	0.22	293	*e*P	Pn	00 30 54.5	+0.6
FSR				*i* S	Sn	00 31 06.9	+1.1
FSR	Penalolen	0.22	293	*e*P	Pn	00 30 54.5	+0.6
FSR				*i* S	Sn	00 31 06.9	+1.1
FSR				AML	AML	00 31 07.6	
	comp=N,2μm,0.5s						
FCH	Farellones	0.24	358⇑	*i* P	Pn	00 30 54.8	+0.8
FCH				*i* S	Sn	00 31 07.8	+2.0
FCH				AML	AML	00 31 10.5	
	comp=E,2μm,0.2s						
CLCH	Cerro Calan	0.27	308	*e*P	Pn	00 30 54.4	+0.3
CLCH				*i* S	Sn	00 31 07.2	+1.1
CLCH				AML	AML	00 31 08.3	
	comp=E,2μm,0.3s						
DSCH	Colegio Aleman	0.29	305⇑	*i* P	Pn	00 30 54.2	0.0
DSCH				*i* S	Sn	00 31 06.8	+0.6
LMEL	Las Melosas	0.29	167⇑	*i* P	Pn	00 30 54.6	+0.4
LMEL				*i* S	Sn	00 31 06.9	+0.7
LMEL	Las Melosas	0.29	167⇑	*i* P	Pn	00 30 54.6	+0.4
LMEL				*i* S	Sn	00 31 06.9	+0.7
LMEL				AML	AML	00 31 08.5	
	comp=N,944nm,0.3s						
ANTU	Antumapu	0.29	269	*e*P	Pn	00 30 54.6	+0.4
ANTU				*i* S	Sn	00 31 06.8	+0.6
ANTU	Antumapu	0.29	269	*e*P	Pn	00 30 54.6	+0.4
ANTU				*i* S	Sn	00 31 06.8	+0.6
ANTU				AML	AML	00 31 08.1	
	comp=E,1μm,0.3s						
STL	Santa Lucia	0.33	293⇓	*i* P	Pn	00 30 54.3	0.0
STL				*i* S	Sn	00 31 06.8	+0.3
SAN	Santiago	0.34	289⇑	*i* P	Pn	00 30 54.8	+0.4
SAN				*i* S	Sn	00 31 07.0	+0.5
SAN				AML	AML	00 31 07.6	
	comp=N,1μm,0.2s						
RCDM	Rinconada Maip	0.44	280	*e*P	Pn	00 30 55.1	+0.2
RCDM				*i* S	Sn	00 31 08.0	+0.5
RCDM	Rinconada Maip	0.44	280	*e*P	Pn	00 30 55.1	+0.2
RCDM				*i* S	Sn	00 31 08.0	+0.5
RCDM				AML	AML	00 31 09.2	
	comp=N,4μm,0.1s						
CHCH	Chadas Angostu	0.48	220⇓	*i* P	Pn	00 30 55.5	+0.3
CHCH				*i* S	Sn	00 31 08.5	+0.5
PEL	Peldehue	0.54	321	*e*P	Pn	00 30 56.0	+0.4
PEL				*i* S	Sn	00 31 09.4	+0.8
PEL				AML	AML	00 31 11.8	
	comp=E,3μm,0.3s						
TACH	Talagante	0.55	261⇓	*i* P	Pn	00 30 55.9	+0.3
TACH				*i* S	Sn	00 31 09.1	+0.3
CACH	El Canelo	0.61	205⇑	*i* P	Pn	00 30 56.8	+0.7
CACH				*i* S	Sn	00 31 10.9	+1.3
CICH	Cipreses	0.76	189⇓	*i* P	Pn	00 30 57.8	+0.6
CICH				*i* S	Sn	00 31 12.8	+1.1
ROCH	El Roble	0.85	314⇑	*i* P	Pn	00 30 59.0	+0.9
ROCH				*i* S	Sn	00 31 14.3	+1.2
JACH	Jahuel	0.92	343⇓	*i* P	Pn	00 30 59.5	+0.8
JACH				*i* S	Sn	00 31 15.3	+1.1
LNV	Longovilo	1.02	247⇑	*i* P	Pn	00 30 59.5	-0.2
LCCH	Las Cruces	1.08	274⇑	*i* P	Pn	00 31 01.0	+0.7
LCCH				*i* S	Sn	00 31 17.5	+0.4
SFDO	San Fernando	1.21	210⇓	*i* P	Pn	00 31 02.2	+0.4
SFDO				*i* S	Sn	00 31 20.5	+0.8
IHA	Instituto Hidr	1.26	295	*e*P	Pn	00 31 02.5	+0.2
IHA				*i* S	Sn	00 31 20.9	+0.3
PTCH	Petorca	1.41	337⇓	*i* P	Pn	00 31 04.4	+0.8
PTCH				*i* S	Sn	00 31 24.4	+0.7
PTCH	Petorca	1.41	337⇓	*i* P	Pn	00 31 04.8	+0.8
PTCH				*i* S	Sn	00 31 24.4	+0.7
PTCH				AML	AML	00 31 25.1	
	comp=N,3μm,0.5s						
PACH	Papudo	1.41	316⇑	*i* P	Pn	00 31 04.2	+0.2
CHNG	Los Chungos	1.96	328⇓	*i* P	Pn	00 30 54.5	-16
CHNG				*i* S	Sn	00 31 19.0	-17
CMCH	Combarbala	2.46	346	*e*P	Pn	00 31 17.3	+0.2
CMCH				AML	AML	00 31 49.5	
	comp=N,683nm,0.6s						

ISCJB ***31*** *00:35:58.8±0.8,3794N±004×3103E±005,h1km±11km, Error ellipse: s-maj=7.0km s-min=5.5km az=41.0*
CSEM ***31*** *00:35:58.5±0.2,3792N×3101E,h8km,MD2.9,Error ellipse: s-maj=4.0km s-min=3.1km az=120.0*
ISK ***31*** *00:35:58.7,3793N×3096E,h17km,MD2.9*
DDA ***31*** *00:36:01.7,3808N×3094E,h6km,Md2.9*

ISC 31 00:35:59.9±0.6,3793N±003×3097E±004,h12km±7km,n11, σ1§08/19,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	Isparta	0.38	257	*i* PG	Pg	00 36 05.9	-1.5
ISP				*i* SG	Sg	00 36 12.3	-0.2
BCK	Bucak	0.56	213	PG	Pg	00 36 10.3	-0.5
BCK				SG	Sg	00 36 19.4	+1.2
SHUT	Suhut-Afyon	0.70	332	PG	Pg	00 36 12.9	-0.7
SHUT				SG	Sg	00 36 23.7	+0.8
KDHN	Kadinhani	1.08	56	*i* P	Pg	00 36 19.8	-0.9
KDHN				*i* S	Sg	00 36 36.9	+2.1
KONT	Konya--Tatoy	1.10	89	*e*PN	Pn	00 36 19.9	-1.3
KIZT	Kizilcal	1.19	37	*e*PN	Pn	00 36 21.1	-1.3
GOLH	Golhisar	1.32	239	*i* P

CLCH				*i* S	Sn	00 49 08.1	+2.8		
CLCH				AML	AML	00 49 17.3			
	comp=N,304nm,0.4s								
TACH	**Talagante**	**2.14**	**158**	*e*P	Pn	00 48 42.8	+1.4		
FCH	**Farellones**	**2.15**	**141**	*e*P	Pn	00 48 42.9	+1.5		
FCH				*i* S	Sn	00 49 09.9	+3.0		
FCH				AML	AML	00 49 15.8			
	comp=E,142nm,0.3s								
PCH	**Pirque**	**2.27**	**149**	*e*P	Pn	00 48 45.0	+1.7		
LMEL	**Las Melosas**	**2.60**	**147**	⇓*i*P	Pn	00 48 50.0	+2.2		
LMEL				*i* S	Sn	00 49 21.2	+2.9		
LMEL	**Las Melosas**	**2.60**	**147**	⇓*i*P	Pn	00 48 50.0	+2.2		
LMEL				*i* S	Sn	00 49 21.2	+2.9		
LMEL				AML	AML	00 49 31.2			
	comp=N,109nm,0.1s								

CSEM ***31*** *00:53:37.1±0.1,3790N×3099E,h5km,MD2.9,Error ellipse: s-maj=2.7km s-min=1.8km az=140.0*
ISK ***31*** *00:53:37.6,3790N×3099E,h12km,MD2.9*
ISCJB ***31*** *00:53:38.9±0.6,3791N±004×3094E±005,h12km,Error ellipse: s-maj=6.0km s-min=4.2km az=43.5*
DDA ***31*** *00:53:40.2,3799N×3095E,h6km±9km,Md2.9*
ISC 31 00:53:38.8±0.7,3791N±004×3099E±005,h5km±7km,n12, σ1§**17/20,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ISP	**Isparta**	**0.39**	**260**	*i* PG	**Pg**	**00 53 45.4**		**-0.9**
ISP				*i* SG	**Sg**	**00 53 51.7**		**+0.3**
BCK	**Bucak**	**0.55**	**215**	PG	**Pg**	**00 53 48.0**		**-1.4**
BCK				SG	**Sg**	**00 53 57.0**		**+0.4**
SHUT	**Suhut-Afyon**	**0.73**	**332**	PG	**Pg**	**00 53 51.8**		**-1.0**
SHUT				SG	**Sg**	**00 54 03.1**		**+0.9**
KDHN	**Kadinhani**	**1.07**	**55**	*i* P	**Pg**	**00 53 59.2**		**-0.2**
KDHN				*i* S	**Sg**	**00 54 14.1**		**+0.8**
KONT	**Konya--Tatoy**	**1.08**	**88**	*e*PN	**Pn**	**00 53 59.7**		**-0.9**
KIZT	**Kizilcal**	**1.19**	**36**	*e*PN	**Pn**	**00 54 01.2**		**-0.9**
KHL	**Karahalli**	**1.23**	**290**	PN	**Pn**	**00 54 00.6**		**-2.0**
GOLH	**Golhisar**	**1.32**	**240**	*i* P	**Pn**	**00 54 03.9**		**0.0**
GOLH				*i* S	**Sg**	**00 54 23.8**		**+2.5**
ESKT	**Eskisehir**	**1.61**	**356**	*i* P	**Pn**	**00 54 07.6**		**-0.2**
ESKT				*i* S	**Sn**	**00 54 30.2**		**+1.3**
ESKT	**Eskisehir**	**1.61**	**356**	*e*Pn	**Pn**	**00 54 07.3**		**-0.5**
SEYT	**Eskypehyr**	**1.61**	**356**	*i* P	**Pn**	**00 54 07.6**		**-0.2**
SEYT				*i* S	**Sn**	**00 54 30.2**		**+1.3**
ERMK	**Ermenek**	**1.99**	**129**	*i* P	**Pn**	**00 54 15.7**		**+2.6**
ERMK				*i* S	**Sn**	**00 54 44.4**		**+6.1**

ATH ***31*** *00:57:27.9,3824N×2222E,h20km±4km,MD3.2/8*
ISCJB ***31*** *00:57:28.5±0.5,3828N±003×22.13E±004,h20km±5km, Error ellipse: s-maj=5.4km s-min=4.6km az=156.9*
CSEM ***31*** *00:57:28.5±0.1,3827N×2218E,h10km,ML2.9,Error ellipse: s-maj=3.2km s-min=2.9km az=53.0*
THE ***31*** *00:57:28.3,3829N×2218E,h9km,ML2.9*
NEIC ***31*** *00:57:28.3,3829N×2218E,h10km,MD3.2(ATH), ML2.9(THE),After THE.*
ISC 31 00:57:28.5±0.5,3827N±003×2218E±004,h16km±4km,n14, σ1§**18/26,1C,Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SELA	**Sela**	**0.23**	**271**	*e*Pg	**Pg**	**00 57 32.7**		**-0.9**
SELA				*e*Sg	**Sg**	**00 57 36.6**		**-0.5**
RLS	**Riolos of Patr**	**0.60**	**249**	*e*PB	**Pb**	**00 57 39.7**		**-0.9**
RLS				*e*SN	**Sg**	**00 57 49.3**		**+1.0**
LTK	**Loutraki**	**0.67**	**112**	*e*Pg	**Pg**	**00 57 41.4**		**-0.2**
LTK				*e*Sg	**Sg**	**00 57 51.0**		**+0.7**
LTK	**Loutraki**	**0.67**	**112**	*e*Pg	**Pg**	**00 57 41.3**		**-0.2**
LTK				*e*Sg	**Sg**	**00 57 51.0**		**+0.6**
EVR	**Evrytania**	**0.71**	**336**	⇑*i*PB	**Pb**	**00 57 41.3**		**-1.1**
EVR				*e*SN	**Sg**	**00 57 52.9**		**+1.2**
LKR	**Lokris**	**0.74**	**59**	*e*PN	**Pn**	**00 57 41.9**		**-2.4**
LKR				*e*SN	**Sn**	**00 57 52.7**		**-2.6**
AGG	**Agios Georgios**	**0.76**	**9**	*e*Pg	**Pg**	**00 57 42.1**		**-1.1**
AGG				*e*Sg	**Sg**	**00 57 53.4**		**+0.1**
VLX	**Vlachokerasia**	**0.91**	**170**	*e*Pg	**Pg**	**00 57 45.0**		**-1.2**
VLX				*e*Sg	**Sg**	**00 57 59.7**		**+1.5**
ITM	**Ithomi**	**1.11**	**191**	*e*PN	**Pn**	**00 57 48.4**		**-0.9**
ITM				*e*SN	**Sn**	**00 58 04.2**		**-0.1**
DID	**Didima**	**1.13**	**132**	*e*Pg	**Pg**	**00 57 50.1**		**-0.2**
DID				*e*Sg	**Sg**	**00 58 05.9**		**+0.8**
VLS	**Valsamata**	**1.26**	**266**	*e*PB	**Pb**	**00 57 51.2**		**-0.6**
VLS				*e*SN	**Sn**	**00 58 11.6**		**+3.6**
THL	**Klokotos Trika**	**1.30**	**354**	*e*PN	**Pn**	**00 57 53.2**		**+1.3**
THL				*e*SN	**Sn**	**00 58 11.8**		**+2.8**
NEO	**Neokhori**	**1.32**	**38**	*e*PN	**Pn**	**00 57 53.5**		**+1.3**
VLI	**Veliai**	**1.66**	**159**	*e*PN	**Pn**	**00 57 57.6**		**+0.7**

CSEM ***31*** *01:02:00.9±0.2,3794N×3096E,h10km,MD3.0,Error ellipse: s-maj=5.7km s-min=4.1km az=158.0*
ISK ***31*** *01:02:01.3,3797N×3094E,h10km,MD3.0*
ISCJB ***31*** *01:02:02.3±0.6,3798N±004×3090E±004,h10km,Error ellipse: s-maj=5.5km s-min=4.6km az=139.7*
DDA ***31*** *01:02:04.6,3811N×3105E,h4km,Md3.2*
ISC 31 01:02:02.9±0.8,3801N±004×3085E±006,h7km±9km,n13, σ1§**29/20,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ISP	**Isparta**	**0.32**	**239**	*i* PG	**Pg**	**01 02 08.1**		**-1.0**
ISP				*i* SG	**Sg**	**01 02 14.3**		**+1.0**
BCK	**Bucak**	**0.58**	**201**	PG	**Pg**	**01 02 13.5**		**-0.6**
BCK				SG	**Sg**	**01 02 21.5**		**+0.2**
SHUT	**Suhut-Afyon**	**0.59**	**337**	PG	**Pg**	**01 02 15.5**		**+1.1**
KHL	**Karahalli**	**1.09**	**287**	PN	**Pn**	**01 02 24.0**		**-0.7**
KDHN	**Kadinhani**	**1.12**	**62**	*i* P	**Pb**	**01 02 22.0**		**-2.6**
KDHN				*i* S	**Sb**	**01 02 41.1**		**+1.8**
KIZT	**Kizilcal**	**1.19**	**42**	PN	**Pn**	**01 02 24.0**		**-1.9**
KONT	**Konya--Tatoy**	**1.19**	**92**	PN	**Pn**	**01 02 23.2**		**-2.8**
ESKT	**Eskisehir**	**1.51**	**360**	PN	**Pn**	**01 02 29.7**		**-0.7**
ESKT	**Eskisehir**	**1.51**	**360**	*i* P	**Pn**	**01 02 29.9**		**-0.5**
ESKT				*i* S	**Sn**	**01 02 51.5**		**+1.2**
SEYT	**Eskypehyr**	**1.51**	**360**	*i* P	**Pn**	**01 02 29.9**		**-0.5**
SEYT				*i* S	**Sn**	**01 02 51.5**		**+1.2**
KULA	**Kula-Manisa**	**1.80**	**287**	*e*PN	**Pn**	**01 02 33.9**		**-0.4**
MANT	**Manisa**	**1.87**	**286**	*i* P	**Pg**	**01 02 39.2**		**+0.5**
MANT				*i* S	**Sg**	**01 03 07.5**		**+4.5**
ERMK	**Ermenek**	**2.13**	**129**	*i* P	**Pn**	**01 02 40.4**		**+1.4**
ERMK				*i* S	**Sn**	**01 03 06.9**		**+1.3**

IDC ***31*** *01:09:33.3±1.6,1283N×12526E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.5/18,mbtmp3.5/5,Error ellipse: s-maj=175.6km s-min=19.8km az=68.0*
ISCJB ***31*** *01:09:38.5±2.6,1228N±010×1234E±02,h51km±27km, mb3.5/5,Error ellipse: s-maj=31.0km s-min=13.8km az=161.3*
ISC 31 01:09:39.5±2.7,1230N±009×1234E±02,h44km±29km,n9, σ1§**27/13,mb3.5/5,1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CNP	**Catarman**	**1.25**	**80**	*e*P	**Pn**	**01 09 58.9**		**-1.7**
CNP				*e*S	**Sn**	**01 10 16.9**		**+0.6**
PVCP	**Virac**	**1.48**	**30**	⇓*i*P	**Pn**	**01 10 02.7**		**-1.1**
PVCP				*i* S	**Sn**	**01 10 21.8**		**-0.1**
PVCP	**Virac**	**1.48**	**30**	*e*P	**Pn**	**01 10 02.6**		**-1.2**
PVCP				*e*S	**Sn**	**01 10 22.4**		**+0.4**
PLP	**Palo**	**1.92**	**126**	*e*P	**Pn**	**01 10 11.7**		**+2.0**
PLP				*e*S	**Sn**	**01 10 39.0**		**+6.4**
WRA	**Warramunga Arr**	**33.80**	**161**	P	**P**	**01 16 16.8**		**-0.8**
	0.4nm,0.8s,mb3.4,baz=348,slow=8.8,SNR=2.8							
ASAR	**Alice Springs**	**37.19**	**164**	P	**P**	**01 16 47.2**		**+0.6**
	0.3nm,0.6s,mb3.3,baz=2.5,slow=6.5,SNR=4.2							
SONM	**Songino Array**	**38.17**	**341**	P	**P**	**01 16 56.5**		**+1.8**
	0.4nm,0.9s,mb3.1,baz=154,slow=7.8,SNR=4.3							
STKA	**Stephens Creek**	**47.26**	**159**	P	**P**	**01 18 07.1**		**-1.5**
	1.1nm,0.4s,mb4.1,baz=338,slow=5.4,SNR=2.5							
MKAR	**Makanchi Array**	**48.72**	**323**	P	**P**	**01 18 24.0**		**+4.3**
	0.6nm,0.8s,mb3.6,baz=117,slow=7.1,SNR=4.6							

ISCJB ***31*** *01:20:56.2±1.0,523N±02×320W±02,h10km,mb3.4/6, Error ellipse: s-maj=25.2km s-min=14.7km az=7.5*
IDC ***31*** *01:20:56.7±1.1,5236N×3184W,h0km,mb3.3/6,mb1 3.6/7, mb1mx3.5/25,mbtmp3.4/7,ML3.8/1,MS3.4/1,Ms1 3.4/1, ms1mx2.5/34,Error ellipse: s-maj=41.4km s-min=20.7km az=19.0*
NEIC ***31*** *01:20:57.8±0.8,5233N×3200W,h10km,mb4.4/3,Error ellipse: s-maj=22.2km s-min=12.2km az=191.0*
ISC 31 01:20:57.9±1.0,523N±02×319W±02,h10km,n12,σ0§69/9, mb3.4/6,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ESK	**Eskdalemuir**	**17.18**	**68**	Pn	**Pn**	**01 24 58.2**		**+0.5**
	7.6nm,0.8s							
EKA	**Eskdalemuir Ar**	**17.20**	**68**	P	**Pn**	**01 24 58.6**		**+0.6**
	0.2nm,0.3s,baz=267,slow=10,SNR=6.5							
ESDC	**Sonseca Array**	**23.01**	**112**	P	**P**	**01 26 02.4**		**-0.3**
	0.9nm,0.8s,mb3.3,baz=312,slow=9.8,SNR=4.2							
NOA	**NORSAR Array B**	**24.84**	**52**	P	**P**	**01 26 19.7**		**-0.3**
	0.6nm,0.8s,mb3.2,baz=255,slow=9.2,SNR=2.9							
AKASG	**Malin Array Be**	**37.11**	**67**	P	**P**	**01 28 07.6**		**-0.6**
	0.2nm,0.3s,mb3.4,baz=301,slow=9.5,SNR=2.6							
YKA	**Yellowknife Ar**	**42.66**	**317**	P	**P**	**01 28 53.0**		**-1.1**
YKA				PcP	PcP	01 30 48.4		+2.6
YKA	**Yellowknife Ar**	**42.66**	**317**	P	**P**	**01 28 53.0**		**-1.1**
	0.5nm,0.8s,mb3.3,baz=62,slow=8.7,SNR=6.7							
YKA				PcP	PcP	01 30 48.3		+2.6
	0.1nm,0.5s,baz=72,slow=3.4,SNR=3.6							
TORD	**Torodi Ar. Bea**	**47.43**	**133**	P	**P**	**01 29 32.5**		**0.0**
	0.3nm,0.5s,mb3.5,baz=342,slow=8.7,SNR=3.6							
PDAR	**Pinedale Array**	**50.89**	**292**	P	**P**	**01 30 00.0**		**+1.3**
	0.4nm,0.6s,mb3.5,baz=62,slow=8.8,SNR=5.1							
NEW	**Newport**	**51.57**	**302**	LR	LR	01 50 46.7		
	comp=Z,37nm,18.9s,baz=351,slow=35							
WRA	**Warramunga Arr**	**145.98**	**24**	PKPbc	PKPbc	01 40 37.5		-0.1
	0.6nm,0.7s,baz=338,slow=3.0,SNR=4.6							
ASAR	**Alice Springs**	**149.43**	**26**	PKP	PKPdf	01 40 42.0		-0.6
	0.6nm,0.6s,baz=357,slow=2.0,SNR=3.6							
ASAR				PKPbc	PKPbc	01 40 46.5		-0.5
	0.6nm,0.6s,baz=346,slow=2.2,SNR=9.2							

DDA ***31*** *01:20:40.5,3802N×3096E,h7km±16km,Md4.0*
MOS ***31*** *01:20:59.6±0.9,3771N×3050E,h12km,mb4.5/9,Error ellipse: s-maj=8.2km s-min=6.1km az=121.0*
NEIC ***31*** *01:20:59.0,3817N×3097E,h9km,mb4.3/17,ML4.1(ISK), After ISK.*
IDC ***31*** *01:21:02.2±0.9,3791N×3088E,h0km,mb3.6/7, mb1 3.8/13,mb1mx3.7/26,mbtmp3.6/13,ML3.8/5,MS3.1/6, Ms1 3.1/6,ms1mx2.8/38,Error ellipse: s-maj=19.1km s-min=15.1km az=72.0*
ISCJB ***31*** *01:21:03.4±0.2,3799N±002×3093E±002,h10km, mb4.0/19,MS3.0/5,Error ellipse: s-maj=2.9km s-min=2.8km az=44.8*
ISK ***31*** *01:21:03.3,3800N×3091E,h9km,ML4.2*
CSEM ***31*** *01:21:04.8±0.1,3802N×3088E,h20km,mb3.8/4,Ms3.0, Error ellipse: s-maj=1.7km s-min=1.5km az=21.0*
ISC 31 01:21:04.7±0.2,3799N±002×3090E±003,h10km,n172, σ1§**03/182,mb4.0/19,MS3.0/5,2C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ISP	**Isparta**	**0.34**	**245**	PG	**Pg**	**01 21 10.3**		**-1.2**
ISP				SG	**Sg**	**01 21 16.7**		**+0.7**
ISP	**Isparta**	**0.34**	**245**	*e*P	**Pg**	**01 21 10.3**		**-1.2**
ISP				*e*S	**Sg**	**01 21 16.8**		**+0.8**
BCK	**Bucak**	**0.58**	**205**	PG	**Pg**	**01 21 15.4**		**-0.6**
SHUT	**Suhut-Afyon**	**0.63**	**334**	PG	**Pg**	**01 21 17.4**		**+0.5**
KONT	**Konya--Tatoy**	**1.16**	**92**	*e*PN	**Pn**	**01 21 25.1**		**-1.8**
GOLH	**Golhisar**	**1.30**	**235**	*i* S	**Sb**	**01 21 45.0**		**-1.0**
GOLH	**Golhisar**	**1.30**	**235**	*i* S	**Sb**	**01 21 45.0**		**-1.0**
ELL	**Elmali**	**1.47**	**213**	*e*PN	**Pn**	**01 21 31.4**		**+0.2**
DENT	**Denizli**	**1.50**	**262**	*e*PN	**Pn**	**01 21 30.8**		**-0.8**
ESKT	**Eskisehir**	**1.53**	**359**	*e*PN	**Pn**	**01 21 31.5**		**-0.6**
KULA	**Kula-Manisa**	**1.84**	**287**	*e*PN	**Pn**	**01 21 35.7**		**-0.6**
FETY	**Fethiye**	**1.98**	**228**	*e*PN	**Pn**	**01 21 38.6**		**+0.4**
GPA	**Golpazari**	**2.34**	**349**	*e*PN	**Pn**	**01 21 43.4**		**+0.1**
ANTO	**Ankara**	**2.39**	**38**	*e*PN	**Pn**	**01 21 44.0**		**+0.1**
ANTO	**Ankara**	**2.39**	**38**	⇑*i*P	**Pn**	**01 21 44.4**		**+0.5**
ANTO	**Ankara**	**2.39**	**38**	S	**Sg**	**01 22 21.3**		**-0.2**
ANTO	**Ankara**	**2.39**	**38**	P	**Pn**	**01 21 44.4**		**+0.5**
LOD	**Lodumlu**	**2.39**	**37**	*e*PN	**Pn**	**01 21 43.6**		**-0.3**
DST	**Dursunbey**	**2.40**	**313**	*e*PN	**Pn**	**01 21 44.1**		**0.0**
GULT	**Gulveren**	**2.46**	**353**	*e*PN	**Pn**	**01 21 44.7**		**-0.2**
MLSB	**Milas**	**2.57**	**255**	*e*PN	**Pn**	**01 21 46.4**		**0.0**
AKS	**Akhisar**	**2.58**	**291**	*e*PN	**Pn**	**01 21 46.5**		**-0.1**
IZI	**Iznik**	**2.60**	**335**	*e*PN	**Pn**	**01 21 46.9**		**+0.2**
ADVT	**Abdulvahap**	**2.60**	**340**	*e*PN	**Pn**	**01 21 45.8**		**-1.1**
GEMT	**Gemlik**	**2.78**	**332**	*e*PN	**Pn**	**01 21 49.0**		**-0.3**
IKL	**Isikli**	**2.83**	**127**	*e*PN	**Pn**	**01 21 50.5**		**+0.6**
YLV	**Yalova**	**2.84**	**336**	*e*PN	**Pn**	**01 21 50.4**		**+0.4**
BALB	**Balikesir**	**2.88**	**306**	*e*PN	**Pn**	**01 21 51.2**		**+0.6**
NIG	**Nigde**	**2.93**	**86**	*e*PN	**Pn**	**01 21 51.9**		**+0.5**
HRT	**Hereke**	**2.99**	**342**	*e*PN	**Pn**	**01 21 51.9**		**-0.2**
MERS	**Mersin**	**3.09**	**110**	*e*PN	**Pn**	**01 21 53.7**		**+0.1**
ALFC	**Alevga**	**3.14**	**154**	P	**Pn**	**01 21 52.8**		**-1.4**
	7.2nm,0.5s							
LEF	**Lefka**	**3.28**	**150**	*e*PN	**Pn**	**01 21 56.2**		**+0.1**
PPCY	**Paphos**	**3.31**	**159**	P	**Pn**	**01 21 59.7**		**+3.2**
BNT	**Bandirma**	**3.31**	**317**	*e*PN	**Pn**	**01 21 57.0**		**+0.4**
EDC	**Edincik**	**3.33**	**316**	*e*PN	**Pn**	**01 21 56.2**		**-0.7**
CANT	**Cankiri**	**3.36**	**38**	*e*PN	**Pn**	**01 21 57.0**		**-0.3**
MAMC	**Mammari**	**3.37**	**146**	P	**Pn**	**01 21 56.1**		**-1.3**
ISK	**Istanbul-Kandi**	**3.39**	**336**	*e*PN	**Pn**	**01 21 57.5**		**-0.1**
SAFT	**Safranbolu**	**3.53**	**22**	*e*PN	**Pn**	**01 21 58.8**		**-0.8**
EREN	**Erenkoy**	**3.59**	**132**	*e*PN	**Pn**	**01 22 01.0**		**+0.6**
CSS	**Prodhromos**	**3.60**	**146**	P	**Pn**	**01 22 00.6**		**+0.1**
	3.0nm,0.6s							
SZAC	**Sozi-Zanaja**	**3.60**	**153**	P	**Pn**	**01 22 05.9**		**+5.4**
	5.3nm,0.8s							
CORM	**Corum**	**3.64**	**52**	*e*PN	**Pn**	**01 22 00.9**		**-0.1**
CTT	**Catalca**	**3.69**	**330**	*e*PN	**Pn**	**01 22 02.7**		**+0.9**
TOS	**Tosya**	**3.89**	**37**	*e*PN	**Pn**	**01 22 03.8**		**-0.7**
RKY	**Sarkoy-Tekirda**	**3.95**	**314**	*e*PN	**Pn**	**01 22 05.5**		**+0.1**
MFT	**Murefte**	**3.96**	**316**	*e*PN	**Pn**	**01 22 06.0**		**+0.5**
EZN	**Ezine**	**4.01**	**299**	*e*PN	**Pn**	**01 22 07.0**		**+0.8**
GADA	**Gvkgeada**	**4.47**	**301**	*e*PN	**Pn**	**01 22 12.6**		**+0.1**
ENEZ	**Enez**	**4.59**	**308**	*e*PN	**Pn**	**01 22 14.4**		**+0.2**
BZK	**Bozkurt**	**4.63**	**30**	*e*PN	**Pn**	**01 22 15.6**		**+0.9**
EDRB	**Edirne**	**5.01**	**322**	*e*PN	**Pn**	**01 22 20.0**		**+0.1**
IDI	**Anoyia**	**5.53**	**243**	Pn	**Pn**	**01 22 27.2**		**+0.1**
	1.4nm,0.3s,baz=87,slow=15,SNR=9.5							
IDI				Sn	**Sn**	**01 23 30.4**		**-0.3**
	0.9nm,0.3s,baz=299,slow=19,SNR=1.9							
IDI				LR	LR	01 24 38.2		
	comp=Z,127nm,20.8s,baz=64,slow=39							
JMB	**Yambol**	**5.56**	**325**	*i* P	**Pn**	**01 22 28.5**		**+1.0**
DIM	**Dimitrovgrad**	**5.78**	**316**	*i* P	**Pn**	**01 22 31.2**		**+0.7**
MALT	**Malatya**	**5.94**	**85**	⇓*i*P	**Pn**	**01 22 34.4**		**+1.7**
MMAI	**Mount Meron Ar**	**6.17**	**142**	Pn	**Pn**	**01 22 36.0**		**+0.1**
	3.0nm,0.3s,baz=336,slow=12,SNR=11							
MMAI				Sn	**Sn**	**01 23 47.0**		**+0.5**
	1.2nm,0.3s,baz=315,slow=26,SNR=2.5							
MMAI				LR	LR	01 25 35.9		
	comp=Z,193nm,18.3s,baz=200,slow=45							
GVD	**Gavdhos**	**6.33**	**242**	*e*Pn	**Pn**	**01 22 40.3**		**+2.2**
MMB	**Musomiste**	**6.59**	**305**	*i* P	**Pn**	**01 22 41.5**		**-0.1**
PVL	**Pavlikeni**	**6.72**	**323**	*i* P	**Pn**	**01 22 44.0**		**+0.6**
TIRR	**Tirgusor**	**6.73**	**345**	S	**Sn**	**01 23 58.6**		**-1.6**
SEV	**Sevastopol'**	**6.88**	**17**	*e*P	**Pn**	**01 22 48.3**		**+2.8**
SEV				pmax	pmax			
	comp=Z,2.0nm,0.3s							
SEV	**Sevastopol'**	**6.88**	**17**	*e*P	**Pn**	**01 22 48.3**		**+2.8**
	comp=Z,2.0nm,0.3s							
YAL	**Yalta**	**6.94**	**20**	*e*P	**Pn**	**01 22 50.6**		**+4.2**
YAL				*e*S	**Sn**	**01 24 05.5**		**+0.1**
YAL				pmax	pmax			
	comp=Z,18nm,0.5s							
YAL				smax				
	comp=E,19nm,0.9s							
YAL				smax				
	comp=N,18nm,0.6s							
ALU	**Alushta**	**7.19**	**20**	*e*P	**Pn**	**01 22 48.5**		**-1.3**
ALU				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ALU	**Alushta**	**7.19**	**20**	*e*P	**Pn**	**01 22 48.5**		**-1.3**
	comp=Z,7.0nm,0.8s							
SIM	**Simferopol'**	**7.36**	**18**	*de*P	**Pn**	**01 22 53.6**		**+1.4**
SIM				S	**Sn**	**01 24 14.0**		**-1.8**
SIM				pmax	pmax			
	comp=Z,9.0nm,0.6s							
SIM				MLR	MLR			
	comp=Z,120nm,15.0s							
SIM	**Simferopol'**	**7.36**	**18**	*e*P	**Pn**	**01 22 53.6**		**+1.4**
	comp=Z,9.0nm,0.6s							
SIM				S	**Sn**	**01 24 14.0**		**-1.8**
	comp=Z,120nm,15.0s							
SUDU	**Sudak**	**7.55**	**23**	*e*P	**Pn**	**01 22 57.8**		**+3.0**
SUDU				*e*S	**Sn**	**01 24 19.2**		**-1.2**
SUDU				pmax	pmax			
	comp=Z,3.0nm,0.8s							
SUDU				smax				
	comp=N,5.0nm,0.8s							
SUDU				smax				
	comp=E,1.0nm,0.8s							
SUDU	**Sudak**	**7.55**	**23**	*e*P	**Pn**	**01 22 57.8**		**+3.0**
	comp=E,3.0nm,0.8s							
SUDU				*e*S	**Sn**	**01 24 19.2**		**-1.2**
MLR	**Muntele Rosu**	**8.36**	**335**	Pn	**Pn**	**01 23 07.0**		**+1.2**
MLR				LR	LR	01 26 35.6		
MLR	**Muntele Rosu**	**8.36**	**335**	P	**Pn**	**01 23 07.1**		**+1.2**
MLR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MLR				MLR	MLR			
	comp=Z,115nm,20.0s							
MLR	**Muntele Rosu**	**8.36**	**335**	Pn	**Pn**	**01 23 07.1**		**+1.2**
	comp=Z,1.0nm,0.3s,baz=214,slow=0.3,SNR=9.4							
MLR				LR	LR	01 26 35.7		
	comp=Z,115nm,20.0s,baz=326,slow=40							
BARS	**Barje**	**8.44**	**308**	Pn	**Pn**	**01 23 08.4**		**+1.4**
EIL	**Elat**	**8.95**	**157**	Pn	**Pn**	**01 23 09.8**		**-4.3**
	comp=Z,0.3nm,0.3s,baz=347,slow=6.3,SNR=4.6							
EIL				Sn	**Sn**	**01 24 54.6**		**-0.4**
	comp=Z,0.9nm,0.3s,baz=73,slow=17,SNR=4.2							
BZS	**Buzias**	**10.30**	**321**	P	**Pn**	**01 23 22.9**		**-9.5**
BZS	**Buzias**	**10.30**	**321**	⇑*i*P	**Pn**	**01 23 22.9**		**-10**
ONI	**Oni**	**10.63**	**60**	P	**Pn**	**01 23 38.3**		**+1.3**
KIV	**Kislovodsk**	**10.72**	**52**	*e*Pn	**Pn**	**01 23 45.0**		**+6.9**
ZEI	**Tsey**	**11.00**	**60**	*e*P	**Pn**	**01 23 45.7**		**+3.6**
AKASG	**Malin Array Be**	**12.77**	**355**	P	**Pn**	**01 24 05.6**		**-0.6**
AKASG						01 26 33.5		
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG				smax				
	comp=N,1.0nm,0.3s							
AKASG	**Malin Array Be**	**12.77**	**355**	Pn	**Pn**	**01 24 05.6**		**-0.6**
	comp=N,0.5nm,0.3s,baz=180,slow=12,SNR=4.1							
AKASG				Sn	**Sn**	**01 26 33.5**		**+5.2**
	comp=N,0.8nm,0.3s,baz=184,slow=26,SNR=9.4							
VRAC	**Vranov**	**15.31**	**322**	Pn	**Pn**	**01 24 46.4**		**+5.7**
	comp=N,0.1nm,0.3s,baz=140,slow=7.4,SNR=3.9							
RST	**Umm Al-Ruwaisa**	**15.82**	**118**	*e*P	**Pn**	**01 24 49.4**		**+1.8**
RST				AMb	AMB	01 24 52.6		
	comp=Z,16nm,0.9s							
RST	**Umm Al-Ruwaisa**	**15.82**	**118**	*e*P	**Pn**	**01 24 49.4**		**+1.8**
	comp=Z,16nm,0.9s							
MIB	**Mutribah**	**15.89**	**116**	*e*P	**Pn**	**01 24 51.6**		**+3.2**
MIB				AMb	AMB	01 24 53.0		
	comp=Z,26nm,0.7s							
MIB	**Mutribah**	**15.89**	**116**	*e*P	**Pn**	**01 24 51.6**		**+3.2**
	comp=Z,26nm,0.7s							
NAY	**Al-Naaiem**	**16.15**	**118**	*e*P	**Pn**	**01 24 50.2**		**-1.6**
NAY				AMb	AMB	01 24 57.6		
	comp=Z,9.0nm,1.1s							
GERES	**GERESS Array B**	**16.51**	**317**	Pn	**Pn**	**01 24 58.9**		**+2.7**
	comp=Z,0.1nm,0.3s,baz=124,slow=11,SNR=6.4							
GERES				LR	LR	01 31 02.0		
	comp=Z,55nm,18.6s,baz=279,slow=36							
PGF	**Pioggiola**	**17.31**	**292**	*e*P	**Pn**	**01 25 00.

LOR					LR	LR		
	comp=Z,90nm,17.4s,MS3.2							
LOR	**Lormes**	**21.86**	**304**	*e*P	**P**		**01 25 53.6**	**-3.8**
LOR					pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.1							
LOR					MLR	MLR		
	comp=Z,90nm,17.4s,MS3.2							
AVF	**Avril sur Loir**	**22.08**	**302**	*e*P	**P**		**01 25 54.9**	**-4.8**
	comp=Z,56nm,1.6s,mb4.4							
AVF	**Avril sur Loir**	**22.08**	**302**	*e*P	**P**		**01 25 54.9**	**-4.8**
AVF					pmax	pmax		
	comp=Z,28nm,1.6s,mb4.4							
AVF	**Avril sur Loir**	**22.08**	**302**	*e*P	**P**		**01 25 54.9**	**-4.8**
	comp=Z,28nm,1.6s,mb4.4							
MTLF	**Montolieu**	**22.35**	**293**	*e*P	**P**		**01 25 57.1**	**-5.5**
	comp=Z,25nm,1.4s,mb4.2							
MTLF	**Montolieu**	**22.35**	**293**	*e*P	**P**		**01 25 57.1**	**-5.5**
MTLF					pmax	pmax		
	comp=Z,12nm,1.4s,mb4.1							
MTLF	**Montolieu**	**22.35**	**293**	*e*P	**P**		**01 25 57.1**	**-5.5**
	comp=Z,12nm,1.4s,mb4.2							
BGF	**Bois d'Agland**	**22.36**	**301**	*e*P	**P**		**01 25 58.0**	**-4.8**
	comp=Z,32nm,1.2s,mb4.3							
BGF	**Bois d'Agland**	**22.36**	**301**	*e*P	**P**		**01 25 58.0**	**-4.8**
	comp=Z,16nm,1.2s,mb4.3							
CAF	**Calviac**	**22.62**	**297**	*e*P	**P**		**01 25 59.6**	**-5.9**
AKTK	**Aktyubinsk**	**22.93**	**48**	P	**P**		**01 26 09.0**	**+0.2**
AKTK	**Aktyubinsk**	**22.93**	**48**	P	**P**		**01 26 09.0**	**+0.2**
	comp=Z,2.0nm,0.9s,mb3.5							
AKTO	**Aktyubinsk**	**22.93**	**48**	P	**P**		**01 26 09.0**	**+0.2**
AKTO					pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5							
AKTO	**Aktyubinsk**	**22.93**	**48**	P	**P**		**01 26 09.0**	**+0.2**
	comp=Z,1.6nm,0.9s,mb3.5,baz=259,slow=14,SNR=3.5							
LFF	**La Frestale**	**23.55**	**297**	*e*P	**P**		**01 26 09.3**	**-6.0**
FINES	**FINESS Array B**	**23.68**	**354**	P	**P**		**01 26 15.7**	**-0.6**
FINES					pmax	pmax		
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**23.68**	**354**	P	**P**		**01 26 15.7**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.4,baz=183,slow=24,SNR=3.4							
EPF	**Esparros**	**23.70**	**292**	*e*P	**P**		**01 26 09.8**	**-6.9**
	comp=Z,42nm,1.5s,mb4.3							
EPF	**Esparros**	**23.70**	**292**	*e*P	**P**		**01 26 09.8**	**-6.9**
	comp=Z,21nm,1.5s,mb4.3							
SJPF	**Ste Jean**	**24.85**	**292**	*e*P	**P**		**01 26 20.5**	**-6.7**
	comp=Z,91nm,1.6s,mb4.8							
SJPF	**Ste Jean**	**24.85**	**292**	*e*P	**P**		**01 26 20.5**	**-6.7**
SJPF					pmax	pmax		
	comp=Z,46nm,1.6s,mb4.8							
SJPF	**Ste Jean**	**24.85**	**292**	*e*P	**P**		**01 26 20.5**	**-6.7**
	comp=Z,46nm,1.6s,mb4.8							
FLN	**La Foliniere**	**25.06**	**306**	*e*P	**P**		**01 26 23.2**	**-5.8**
	comp=Z,113nm,1.4s,mb4.9							
FLN				*e*	MLR	MLR		
	comp=Z,70nm,20.5s,MS2.9							
FLN	**La Foliniere**	**25.06**	**306**	*e*P	**P**		**01 26 23.2**	**-5.8**
	comp=Z,57nm,1.4s,mb4.9							
FLN					LR	LR		
	comp=Z,70nm,20.5s,MS3.2							
FLN	**La Foliniere**	**25.06**	**306**	*e*P	**P**		**01 26 23.2**	**-5.8**
FLN					pmax	pmax		
	comp=Z,57nm,1.4s,mb4.9							
FLN					MLR	MLR		
	comp=Z,70nm,20.5s,MS3.2							
GRR	**Gorron**	**25.21**	**305**	*e*P	**P**		**01 26 24.0**	**-6.5**
	comp=Z,160nm,1.7s,mb5.0							
GRR	**Gorron**	**25.21**	**305**	*e*P	**P**		**01 26 24.0**	**-6.5**
GRR					pmax	pmax		
	comp=Z,80nm,1.7s,mb5.0							
GRR	**Gorron**	**25.21**	**305**	*e*P	**P**		**01 26 24.0**	**-6.5**
	comp=Z,80nm,1.7s,mb5.0							
NOA	**NORSAR Array B**	**26.17**	**338**	P	**P**		**01 26 37.9**	**-1.1**
NOA					LR	LR	01 39 06.8	
NOA	**NORSAR Array B**	**26.17**	**338**	P	**P**		**01 26 37.9**	**-1.1**
NOA					pmax	pmax		
	comp=Z,1.0nm,0.8s							
NOA					MLR	MLR		
	comp=Z,50nm,20.1s							
NOA	**NORSAR Array B**	**26.17**	**338**	P	**P**		**01 26 37.9**	**-1.1**
	comp=Z,0.9nm,0.8s,mb3.4,baz=148,slow=12,SNR=3.5							
NOA					LR	LR	01 39 06.8	
	comp=Z,50nm,20.1s,MS3.0,baz=135,slow=41							
TORD	**Torodi Ar. Bea**	**35.87**	**234**	P	**P**		**01 28 02.6**	**-2.3**
	comp=Z,0.9nm,0.9s,mb3.7,baz=46,slow=4.8,SNR=4.2							
TORD					LR	LR	01 45 10.2	
	comp=Z,49nm,21.2s,MS3.2,baz=45,slow=40							
MKAR	**Makanchi Array**	**38.36**	**60**	P	**P**		**01 28 25.5**	**-0.3**
	comp=Z,0.3nm,0.6s,mb3.2,baz=259,slow=6.8,SNR=2.8							
SONM	**Songino Array**	**54.11**	**54**	P	**P**		**01 30 29.2**	**-0.3**
	comp=Z,0.3nm,0.7s,mb3.3,baz=259,slow=2.9,SNR=3.5							
BOD	**Bodaibo**	**55.35**	**40**	*e*P	**P**		**01 30 38.1**	**-0.3**
BOD				*e*			01 30 47.1	
BOD					pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4							
BOD	**Bodaibo**	**55.35**	**40**	*e*P	**P**		**01 30 38.1**	**-0.3**
	comp=Z,4.0nm,1.1s,mb4.4							
YKA	**Yellowknife Ar**	**76.09**	**344**	P	**P**		**01 32 50.8**	**-1.3**
YKA	**Yellowknife Ar**	**76.09**	**344**	P	**P**		**01 32 50.8**	**-1.3**
YKA					pmax	pmax		
	comp=Z,1.0nm,1.0s							
YKA	**Yellowknife Ar**	**76.09**	**344**	P	**P**		**01 32 50.8**	**-1.3**
	comp=Z,1.2nm,1.0s,mb3.8,baz=24,slow=6.1,SNR=13							

NIED ***31*** *01:25:00,44.30N×149.40E,h23km,Mw4.4 Best double couple: M₀4.75000×10¹⁵ NP1:φs195.00000°,δ31.00000°, λ60.00000°. NP2:φs49.00000°,δ64.00000°,λ107.00000°.*

IDC ***31*** *01:25:20.0±0.7,44.32N×149.22E,h0km,mb4.4/23, mb1 4.5/25,mb1mx4.4/30,mbtmp4.4/25,ML3.8/2,MS3.8/9, Ms1 3.8/9,ms1mx3.4/26,Error ellipse: s-maj=18.5km s-min=15.5km az=161.0*

BJI ***31*** *01:25:20.6,4425N×149.29E,h15km,mB4.9,mb4.7,Ms4.2, Msz3.9*

NEIC ***31*** *01:25:21.7±0.4,44.28N×149.23E,h10km,mb4.8/28, MS4.2/1,Error ellipse: s-maj=10.2km s-min=6.8km az=153.0*

ISCJB ***31*** *01:25:23.3±0.3,4420N±004×14921E±004,h32km, mb4.6/79,MS4.0/16,Error ellipse: s-maj=6.4km s-min=2.8km az=150.4*

JMA ***31*** *01:25:23.1±0.6,4429N×149.37E,h30km,M4.6*

MOS ***31*** *01:25:24.6±1.1,44.37N×149.16E,h37km,mb4.9/45, MS4.1/6,Error ellipse: s-maj=10.0km s-min=5.4km az=113.1*

SKHL ***31*** *01:25:24.1±1.8,44.32N×149.13E,h46km±14km,mb4.9/5, Ms3.9/1*

SZGRF ***31*** *01:25:30.4,44.70N×149.54E,h47km,mb4.8,Kuril Islands, Russia*

ISC 31 01:25:25.5±0.3,4419N±004×14922E±004,h37km, h37km±4.5km:pP-P,n265,σ1s09/280,mb4.6/79,MS4.0/16, 28C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.42**	**318**	*b* iPN	**Pn**	**01 25 46.6**	**-2.2**
KUR				*i* S	**Sn**	**01 26 04.8**	**-1.5**
KUR				pmax	pmax		
	comp=Z,6μm,1.4s						
KUR				pmax	pmax		
	comp=N,1μm,0.5s						
KUR				pmax	pmax		
	comp=E,900nm,0.5s						
KUR				pmax	pmax		
	comp=Z,2μm,0.5s						
KUR				smax			
	comp=N,8μm,0.5s						
KUR				smax			
	comp=E,3μm,0.5s						
KUR				smax			
	comp=N,18μm,1.4s						
KUR				smax			
	comp=E,8μm,1.4s						
KUR	**Kuril'sk**	**1.42**	**318**	⇑ iP	**Pn**	**01 25 46.6**	**-2.2**
KUR				⇓ *i* P		01 25 46.6	
KUR				AMB	AMB	01 25 57.0	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	01 25 57.0	
	comp=E,897nm,0.5s						
KUR				AMB	AMB	01 25 57.0	
	comp=E,2μm,0.5s						
KUR				*i* S	**Sn**	**01 26 04.8**	**-1.5**
KUR				A		01 26 10.0	
	comp=E,15μm,1.4s						
KUR				A		01 26 10.0	
	comp=E,18μm,1.4s						
KUR				A		01 26 10.0	
	comp=E,8μm,1.4s						
KUR				A		01 26 10.0	
	comp=E,8μm,0.5s						
KUR				A		01 26 10.0	
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.42**	**267**	⇓ *i* PN	**Pn**	**01 26 02.1**	**-0.5**
YUK				S	**Sn**	**01 26 29.3**	**-1.7**
YUK				pmax	pmax		
	comp=Z,580nm,0.3s						
YUK				pmax	pmax		
	comp=N,230nm,0.5s						
YUK				pmax	pmax		
	comp=E,220nm,0.3s						
YUK				smax			
	comp=N,9μm,1.4s						
YUK				smax			
	comp=E,8μm,0.8s						
YUK				smax			
	comp=N,7μm,0.9s						
YUK				smax			
	comp=E,4μm,0.6s						
YUK				MLR	MLR		
	comp=Z,3μm,15.0s						
YUK				MLR	MLR		
	comp=E,3μm,12.0s						
YUK	**Yuzh-Kuril'sk**	**2.42**	**267**	⇓ *i* P	**Pn**	**01 26 02.1**	**-0.5**
YUK				AMB	AMB	01 26 03.5	
	comp=E,220nm,0.3s						
YUK				AMB	AMB	01 26 03.5	
	comp=E,580nm,0.3s						
YUK				AMB	AMB	01 26 03.5	
	comp=E,230nm,0.5s						
YUK				*e*S	**Sn**	**01 26 29.3**	**-1.7**
YUK				A		01 26 53.0	
	comp=E,9μm,1.4s						
YUK				A		01 26 53.0	
	comp=E,8μm,0.8s						
YUK				A		01 26 54.5	
	comp=E,7μm,0.8s						
YUK				A		01 26 54.5	
	comp=E,4μm,0.6s						
YUK				AMS	AMS	01 27 12.0	
	comp=E,3μm,15.0s						
YUK				AMS	AMS	01 27 12.0	
	comp=E,3μm,12.0s						
NEM2	**Nemuro 2**	**2.65**	**253**	P	**Pn**	**01 26 04.3**	**-1.4**
NEM2				*e*S	**Sn**	**01 26 35.2**	**-1.4**
JRA	**Rausu**	**2.96**	**267**	P	**Pn**	**01 26 10.8**	**+0.8**
JNK	**Nakash**	**3.31**	**261**	P	**Pn**	**01 26 14.6**	**-0.2**
JNK				*e*S	**Sn**	**01 26 54.0**	**+1.2**
JAK	**Akkeshi**	**3.50**	**252**	P	**Pn**	**01 26 16.5**	**-0.8**
JAK				S	**Sn**	**01 26 57.0**	**-0.4**
JTKR	**Abashiri--Toko**	**3.83**	**269**	P	**Pn**	**01 26 23.1**	**+1.1**
JAR	**Ashorobuto**	**4.05**	**259**	P	**Pn**	**01 26 25.3**	**+0.4**
JOB	**Onbets**	**4.12**	**254**	P	**Pn**	**01 26 25.8**	**-0.1**
JMP	**Maruseppu**	**4.22**	**270**	P	**Pn**	**01 26 28.7**	**+1.4**
JCH	**Churui**	**4.55**	**252**	P	**Pn**	**01 26 31.7**	**-0.1**
JCH				*e*S	**Sn**	**01 27 23.0**	**-0.4**
JKK2	**Kamakawa 2**	**4.68**	**268**	P	**Pn**	**01 26 35.1**	**+1.6**
ASAJ	**Asahikawa**	**4.77**	**271**	P	**Pn**	**01 26 36.7**	**+1.9**
ASAJ	**Asahikawa**	**4.77**	**271**	PN	**Pn**	**01 26 35.1**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,20.0s						
ASAJ	**Asahikawa**	**4.77**	**271**	Pn	**Pn**	**01 26 35.0**	**+0.3**
	comp=Z,4.4nm,0.3s,baz=91,slow=12,SNR=14						
ASAJ				LR	LR	01 28 41.7	
	comp=Z,1μm,20.0s,baz=156,slow=42						
JFR	**Furan**	**4.92**	**260**	P	**Pn**	**01 26 38.3**	**+1.5**
ERM	**Erimo**	**4.94**	**246**	*e*Pn	**Pn**	**01 26 37.8**	**+0.6**
ERM				*e*Sn	**Sn**	**01 27 30.0**	**-3.1**
JEM	**Erimo**	**4.94**	**246**	P	**Pn**	**01 26 38.0**	**+0.8**
JEM				*e*S	**Sn**	**01 27 33.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**5.10**	**250**	P	**Pn**	**01 26 38.9**	**-0.4**
JNBK				*e*S	**Sn**	**01 27 35.1**	**-1.8**
JAB	**Ashibetsu**	**5.11**	**265**	P	**Pn**	**01 26 42.3**	**+2.9**
JBT2	**Biratori 2**	**5.18**	**257**	P	**Pn**	**01 26 40.4**	**-0.1**
JSS	**Shosan**	**5.29**	**275**	P	**Pn**	**01 26 45.6**	**+3.6**
YSS	**Yuzh-Sakhalins**	**5.31**	**304**	*e*Pn	**Pn**	**01 26 45.8**	**+3.5**
YSS	**Yuzh-Sakhalins**	**5.31**	**304**	*e*P	**Pn**	**01 26 44.9**	**+2.6**
YSS				*e*S	**Sn**	**01 27 42.8**	**+0.6**
YSS				A		01 27 44.0	
	comp=Z,50nm,0.9s						
YSS				AMS	AMS	01 28 56.0	
	comp=Z,900nm,17.0s						
YSS				AMS	AMS	01 28 56.0	
	comp=Z,500nm,16.0s						
YSS				AMS	AMS	01 28 56.0	
	comp=Z,1μm,17.0s						
JWK2	**Keihoku**	**5.33**	**285**	P	**Pn**	**01 26 46.6**	**+4.0**
JHR	**Hokuryu**	**5.43**	**268**	P	**Pn**	**01 26 45.9**	**+2.0**
JEW	**Eniwo**	**5.81**	**259**	P	**Pn**	**01 26 50.9**	**+1.8**
JNB	**Noboribetsu**	**6.21**	**257**	P	**Pn**	**01 26 55.0**	**+0.4**
JSK	**Shakotan**	**6.39**	**266**	P	**Pn**	**01 26 59.4**	**+2.4**
JKB	**Kayabe**	**6.42**	**252**	P	**Pn**	**01 26 57.3**	**-0.2**
JYM2	**Yakumo 2**	**6.80**	**255**	P	**Pn**	**01 27 02.5**	**-0.1**
JSH	**Shimam**	**6.86**	**260**	P	**Pn**	**01 27 04.3**	**+0.8**
JANG	**Nango**	**6.87**	**239**	P	**Pn**	**01 27 01.2**	**-2.4**
JANG				*e*S	**Sn**	**01 28 13.3**	**-7.2**
JTM	**Tenmabayashi**	**6.92**	**243**	P	**Pn**	**01 27 02.9**	**-1.4**
JTM				*e*S	**Sn**	**01 28 16.3**	**-5.4**
JTH	**Tanohata**	**6.93**	**235**	P	**Pn**	**01 27 01.1**	**-3.4**
JTH				*e*S	**Sn**	**01 28 13.2**	**-8.8**
UGL	**Uglegorsk**	**6.94**	**317**	*e*P	**Pn**	**01 27 10.0**	**+5.5**
UGL				AMB	AMB	01 27 11.7	
	comp=Z,18nm,0.7s						
UGL				AMS	AMS	01 30 03.0	
	comp=Z,1μm,15.0s						
UGL				AMS	AMS	01 30 03.0	
	comp=Z,1μm,17.0s						
UGL				AMS	AMS	01 30 03.0	
	comp=Z,1μm,16.0s						
JSR	**Shiriuchi**	**6.99**	**251**	P	**Pn**	**01 27 04.7**	**-0.6**
JOSM	**Okushiri--Mats**	**7.43**	**257**	P	**Pn**	**01 27 11.5**	**+0.1**
OFUJ	**Ofunato**	**7.62**	**231**	P	**Pn**	**01 27 10.6**	**-3.3**
OFUJ				*e*S	**Sn**	**01 28 30.4**	**-8.5**
SKR	**Severo-Kuril's**	**8.00**	**33**	*e*P	**Pn**	**01 27 18.9**	**-0.2**
SKR				AMB	AMB	01 27 23.7	
	comp=Z,80nm,0.5s						
JRG	**Rokugo**	**8.00**	**236**	P	**Pn**	**01 27 17.1**	**-2.1**
JRG				*e*S	**Sn**	**01 28 43.0**	**-5.4**
TYV	**Tymovskoe**	**8.02**	**329**	*e*P	**Pn**	**01 27 20.0**	**+0.7**
TYV				AMB	AMB	01 27 24.0	
	comp=Z,11nm,0.8s						
TYV				AMB	AMB	01 27 24.0	
	comp=Z,20nm,0.8s						
TYV				AMS	AMS	01 30 20.0	
	comp=Z,1μm,16.0s						
TYV				AMS	AMS	01 30 20.0	
	comp=Z,800nm,14.0s						
TYV				AMS	AMS	01 30 20.0	
	comp=Z,1μm,17.0s						
JIO	**Ouri**	**8.24**	**229**	P	**Pn**	**01 27 20.1**	**-2.3**
JIO				*e*S	**Sn**	**01 28 45.1**	**-9.1**
TEY	**Ternei**	**9.04**	**280**	*e*P	**Pn**	**01 27 33.0**	**-0.4**
TEY				AMS	AMS	01 31 36.0	
	comp=Z,1μm,14.0s						
JFK	**Kawauchi**	**9.30**	**226**	*e*S	**Sn**	**01 29 10.0**	**-10**
OKH	**Okha**	**10.24**	**338**	AMS	AMS	01 32 17.6	
	comp=Z,600nm,10.0s						
OKH				AMS	AMS	01 32 17.6	
	comp=Z,1μm,14.0s						
HABR	**Khabarovsk**	**10.69**	**299**	PN	**Pn**	**01 27 52.3**	**-3.7**
KLR	**Kul'dur**	**13.00**	**299**	*e*PN	**Pn**	**01 28 28.8**	**+1.3**
KLR				MLR	MLR		
	comp=N,500nm,12.5s						
KLR				MLR	MLR		
	comp=Z,1μm,12.5s						
MDJ	**Mudanjiang**	**14.04**	**279**	P	**Pn**	**01 28 39.3**	**-2.4**
MDJ				AMB	AMB		
	comp=Z,11nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,88nm,4.3s						
MDJ				LR	LR		
	comp=N,212nm,16.1s						
MDJ				LR	LR		
	comp=E,285nm,17.4s						
MDJ				LR	LR		
	comp=Z,398nm,17.0s						
MA2	**Magadan**	**15.44**	**3**	*e*Pn	**Pn**	**01 29 00.3**	**+0.1**
	comp=Z,4.7nm,0.5s						
MA2	**Magadan**	**15.44**	**3**	*i* P	**Pn**	**01 28 59.3**	**-1.0**
CN2	**Changchun**	**17.10**	**277**	*e*P	**Pn**	**01 29 21.0**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.7s						
CN2				LR	LR		
	comp=N,400nm,12.0s						
CN2				LR	LR		
	comp=E,500nm,12.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
ZEA	**Zeya**	**17.24**	**311**	*e*P	**Pn**	**01 29 21.5**	**-1.6**
ZEA				AMB	AMB	01 29 22.7	
	comp=Z,11nm,0.9s						
KSRS	**Korea Array**	**17.44**	**255**	P	**Pn**	**01 29 23.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=58,slow=12,SNR=5.3						
KSRS				LR	LR	01 36 46.9	
	comp=Z,253nm,18.4s,baz=16,slow=39						
SEY	**Seymchan**	**18.87**	**4**	⇑ *e*P	**Pn**	**01 29 41.2**	**-1.8**
SNY	**Shenyang**	**18.88**	**272**	⇓ P	**Pn**	**01 29 43.5**	**+0.2**
SNY				S	**S**	**01 33 17.3**	**+2.6**
SNY				AMB	AMB		
	comp=Z,19nm,0.7s						
SNY				AMB	AMB		
	comp=Z,269nm,5.3s						
SNY				LR	LR		
	comp=N,215nm,14.5s						
SNY				LR	LR		
	comp=E,339nm,19.1s						
SNY				LR	LR		
	comp=Z,298nm,17.9s						
HIA	**Hailar**	**20.76**	**295**	*i* P	**P**	**01 30 01.6**	**-1.3**
YAK	**Yakutsk**	**21.22**	**334**	⇑ *e*P	**P**	**01 30 05.9**	**-1.9**
YAK				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.5						
BJI	**Beijing**	**24.76**	**272**	P	**P**	**01 30 43.0**	**-0.5**
BJI				S	**S**	**01 35 08.8**	**+5.5**
BJI				AMB	AMB		
	comp=Z,13nm,1.5s,mb4.2						
BJI				LR	LR		
	comp=N,182nm,17.3s,MS3.9						
BJI				LR	LR		
	comp=E,299nm,22.0s,MS3.9						
BJI				LR	LR		
	comp=Z,285nm,19.5s,MS3.8						
BJT	**Baijiatuan**	**24.78**	**272**	*e*P	**P**	**01 30 42.8**	**-0.9**
	comp=Z,17nm,0.7s,mb4.7						
BJT	**Baijiatuan**	**24.78**	**272**	*e*P	**P**	**01 30 42.8**	**-0.9**
BJT				pmax	pmax		
	comp=Z,17nm,0.7s						
SSE	**Sheshan**	**25.62**	**249**	*e*P	**P**	**01 30 50.8**	**-0.6**
SSE				AP	pP	01 31 00.0	-1.7
SSE				XP	sP	01 31 03.8	-2.3
SSE				S	**S**	**01 35 14.8**	**-2.2**
SSE				XS	sS	01 35 28.8	-5.4
SSE				AMB	AMB		
	comp=Z,27nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,25nm,3.5s						
SSE				LR	LR		
	comp=N,183nm,20.8s,MS3.7						
SSE				LR	LR		
	comp=E,130nm,20.8s,MS3.7						
SSE				LR	LR		
	comp=Z,255nm,17.0s,MS3.8						
TIA	**Tai'an**	**25.65**	**263**	*e*P	**P**	**01 30 52.5**	**+0.8**
NJ2	**Nanjing**	**26.63**	**253**	*e*P	**P**	**01 31 01.5**	**+1.0**
NJ2				AP	pP	01 31 10.8	0.0
NJ2				XP	sP	01 31 15.8	+0.5
NJ2				PP		01 31 42.5	
NJ2				S	**S**	**01 35 41.0**	**+8.0**
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,220nm,5.2s						
NJ2				LR	LR		
	comp=N,700nm,16.4s,MS4.3						
NJ2				LR	LR		
	comp=E,450nm,19.6s,MS4.3						
NJ2				LR	LR		
	comp=Z,450nm,19.6s,MS4.0						
HHC	**Hu-ho-hao-te**	**27.79**	**276**	*e*P	**P**	**01 31 15.5**	**+4.6**
HHC				AP	pP	01 31 22.3	+1.1
HHC				AMB	AMB		
	comp=Z,22nm,0.7s,mb4.9						
HHC				LR	LR		
	comp=N,177nm,11.9s,MS4.1						
HHC				LR	LR		
	comp=E,266nm,11.9s,MS4.1						
HHC				LR	LR		
	comp=Z,248nm,16.9s,MS3.9						
BTO	**Baotou**	**28.98**	**277**	*e*P	**P**	**01 31 25.5**	**+4.1**
TIXI	**Tiksi**	**29.25**	**347**	*i* P	**P**	**01 31 20.7**	**-2.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
SONM	**Songino Array**	**29.68**	**292**	P	**P**	**01 31 28.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM				MLR	MLR		
	comp=Z,320nm,19.3s						
SONM	**Songino Array**	**29.68**	**292**	P	**P**	**01 31 28.1**	**+0.5**
	comp=Z,2.8nm,0.6s,mb4.2,baz=79,slow=8.5,SNR=26						
SONM				LR	LR	01 44 42.9	
	comp=Z,320nm,19.3s,MS4.0,baz=276,slow=39						
TLY	**Talaya**	**31.01**	**300**	*e*P	**P**	**01 31 39.7**	**+0.4**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.1						
TLY				MLR	MLR		
	comp=Z,278nm,16.0s,MS4.0						
ZAK	**Zakamensk**	**31.36**	**298**	*e*P	**P**	**01 31 40.8**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.6s,mb3.7						
LZH	**Lanzhou**	**35.25**	**273**	*e*P	**P**	**01 32 18.0**	**+1.6**
LZH				XP	sP	01 32 29.0	-2.3
LZH				AMB	AMB		
	comp=Z,51nm,1.0s,mb5.4						
GTA	**Gaotai**	**36.69**	**280**	*e*P	**P**	**01 32 30.0**	**+1.3**
GTA				AP	pP	01 32 37.5	-1.7
GTA				XP	sP	01 32 41.3	-2.3
GTA				AMB	AMB		
	comp=Z,7.0nm,1.1s,mb4.4						
GTA				AMB	AMB		
	comp=Z,72nm,7.6s						
GTA				LR	LR		
	comp=N,136nm,20.6s						
GTA				LR	LR		
	comp=E,191nm,14.5s						
GTA				LR	LR		
	comp=Z,218nm,14.1s						
IMA2	**Indian Mountai**	**37.47**	**34**	*e*P	**P**	**01 32 35.6**	**+0.6**
KDAK	**Kodiak Island**	**37.85**	**48**	P	**P**	**01 32 37.4**	**-0.9**
	comp=Z,5.6nm,0.8s,mb4.3,baz=293,slow=5.4,SNR=3.1						
CD2	**Chengdu**	**37.93**	**265**	P	**P**	**01 32 39.5**	**+0.2**
CD2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
COLA	**College**	**39.83**	**36**	*e*P	**P**	**01 32 53.3**	**-1.6**
	comp=Z,5.4nm,0.8s,mb4.3						
ZALV	**Zalesovo Beam**	**41.93**	**307**	P	**P**	**01 33 10.8**	**-1.4**
	comp=Z,1.2nm,0.4s,mb3.9,baz=72,slow=7.9,SNR=7.2						
ZALV				PcP	PcP	01 35 07.1	+0.1
	comp=Z,3.3nm,0.7s,baz=71,slow=3.9,SNR=11						
ZALV				LR	LR	01 51 53.4	
	comp=Z,90nm,18.9s,MS3.7,baz=158,slow=38						
ZAL	**Zalesovo**	**41.94**	**307**	P	**P**	**01 33 10.8**	**-1.5**
ZAL						01 35 07.1	
EGAK	**Eagle**	**42.70**	**36**	*e*P	**P**	**01 33 18.0**	**-0.3**
	comp=Z,11nm,1.3s,mb4.4						

ULHL Ulahol 51.56 295 P **P** **01 34 28.8 +1.1**
SNR=24
TKM2 Tokmak 2 51.66 296 P **P** **01 34 29.7 +1.2**
SNR=12
USP Ospenovka 52.20 297 P **P** **01 34 33.4 +1.0**
SNR=5.3
KBK Karagaybulak 52.21 296 P **P** **01 34 33.7 +1.2**
SNR=16
KZA Kyzart 52.29 295 P **P** **01 34 35.3 +2.1**
SNR=28
JIRN Jiri 52.40 274 *e*P **P** **01 34 35.2 +1.1**
comp=Z,19nm,0.7s,mb5.2
AAK Ala-Archa 52.51 296 P **P** **01 34 35.5 +0.7**
SNR=10
EKS2 Erkin-Say 52.96 297 P **P** **01 34 39.0 +0.9**
SNR=18
KKN Kakani 52.98 275 *e*P **P** **01 34 39.2 +0.8**
AML Almayashu 53.27 296 P **P** **01 34 41.9 +1.5**
SNR=13
GKN Gorkha 53.31 275 *e*P **P** **01 34 41.5 +0.6**
comp=Z,31nm,1.0s,mb5.2
KOLN Koldanda 54.19 276 *e*P **P** **01 34 48.1 +0.8**
comp=Z,32nm,1.1s,mb5.2
HNR Honiara 54.25 167 LR LR 01 54 38.8
comp=Z,75nm,20.1s,MS3.8,baz=180,slow=32
YKA Yellowknife Ar 54.60 34 P **P** **01 34 49.8 0.0**
YKA pmax pmax
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 54.60 34 P **P** **01 34 49.8 +0.1**
comp=Z,1.0nm,0.7s,mb4.0,baz=298,slow=7.0,SNR=11
KK31 Karatay Array 54.82 299 *i* P **P** **01 34 51.7 0.0**
KK31 pmax pmax
comp=Z,7.0nm,0.5s,mb5.0
ARU Arti 55.04 317 *e*P **P** **01 34 52.1 -0.9**
ARU Arti 55.04 317 *c i*P **P** **01 34 51.9 -1.1**
ARU *e* 01 36 55.9
ARU *e*S **S** **01 42 31.1 -1.4**
ARU pmax pmax
comp=Z,9.0nm,1.2s,mb4.7
ARU MLR MLR
comp=Z,206nm,17.0s,MS4.3
AKTK Aktyubinsk 58.38 311 P **P** **01 35 16.4 -0.4**
AKTO Aktyubinsk 58.38 311 P **P** **01 35 16.4 -0.4**
AKTO pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
AKTO Aktyubinsk 58.38 311 P **P** **01 35 16.4 -0.4**
comp=Z,2.6nm,0.7s,mb4.4,baz=56,slow=5.5,SNR=14
ARCES ARCESS Array B 59.35 340 P **P** **01 35 22.5 -0.8**
comp=Z,5.3nm,0.9s,mb4.6,baz=17,slow=8.9,SNR=5.0
ARCES LR LR 02 07 35.7
comp=Z,60nm,18.1s,MS3.8,baz=12,slow=43
KBL Kabul 60.44 291 *e*P **P** **01 35 31.2 -0.1**
JOF Joensuu 62.39 333 *e*p **P** **01 35 42.8 -1.2**
comp=Z,8.1nm,0.4s,mb5.2
JOF Joensuu 62.39 333 *e*P **P** **01 35 42.8 -1.2**
JOF pmax pmax
comp=Z,8.0nm,0.4s,mb5.2
HYB Hyderabad 64.28 270 *e*P **P** **01 35 57.5 +0.3**
HYB Hyderabad 64.28 270 *i* P **P** **01 35 57.5 +0.3**
FFC Flin Flon 64.45 37 *e*P **P** **01 35 58.0 +0.2**
comp=Z,5.8nm,0.9s,mb4.6
FFC Flin Flon 64.45 37 *e*P **P** **01 35 58.0 +0.3**
FFC pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
KAF Kangasniemi 64.58 334 *e*p **P** **01 35 56.1 -2.4**
comp=Z,5.9nm,0.7s,mb4.7,baz=40,slow=6.2
KAF Kangasniemi 64.58 334 *e*P **P** **01 35 56.1 -2.4**
KAF pmax pmax
comp=Z,6.0nm,0.7s,mb4.7
FINES FINESS Array B 65.15 334 P **P** **01 36 00.5 -1.7**
FINES FINESS Array B 65.15 334 P **P** **01 36 00.5 -1.7**
FINES pmax pmax
comp=Z,8.0nm,0.6s
FINES FINESS Array B 65.15 334 P **P** **01 36 00.5 -1.7**
comp=Z,7.6nm,0.6s,mb4.9,baz=42,slow=8.8,SNR=38
WRA Warramunga Arr 65.26 195 *i* P **P** **01 36 07.0 +3.7**
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 65.26 195 P **P** **01 36 03.6 +0.3**
comp=Z,1.8nm,0.8s,mb4.2,baz=16,slow=7.0,SNR=7.4
BOZ Bozeman (W) 65.49 50 *e*P **P** **01 36 05.2 +0.6**
comp=Z,2.5nm,0.7s,mb4.8
BOZ Bozeman (W) 65.49 50 *e*P **P** **01 36 05.3 +0.6**
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
OBN Obninsk 65.84 324⇓ *e*P **P** **01 36 06.6 -0.1**
OBN pmax pmax
comp=Z,14nm,1.1s,mb4.9
OBN MLR MLR
comp=Z,100nm,20.0s,MS4.0
NVAR Mina Array Bea 66.08 59 P **P** **01 36 08.3 -0.2**
comp=Z,0.4nm,0.5s,mb3.7,baz=290,slow=5.8,SNR=3.6
VRSR Storozhevoye 67.35 320 *e*P **P** **01 36 17.0 +0.5**
VRSR pmax pmax
comp=N,6.0nm,0.9s
VRSR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
VRSR pmax pmax
comp=E,6.0nm,1.0s
PDAR Pinedale Array 68.48 51 P **P** **01 36 23.9 +0.2**
comp=E,0.5nm,0.7s,mb3.7,baz=258,slow=2.5,SNR=5.2
ASAR Alice Springs 68.97 195 P **P** **01 36 28.1 +1.3**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 68.97 195 P **P** **01 36 28.1 +1.3**
comp=Z,1.0nm,0.8s,mb3.8,baz=14,slow=6.7,SNR=4.5
NB2 NORSAR Subarra 69.72 340 P **P** **01 36 30.4 -0.7**
comp=Z,9.0nm,0.5s,mb5.0,baz=30,slow=6.5
NB2 NORSAR Subarra 69.72 340 P **P** **01 36 30.4 -0.7**
NB2 pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
NOA NORSAR Array B 69.72 340 P **P** **01 36 30.5 -0.6**
NOA pmax pmax
comp=Z,12nm,0.5s
NOA MLR MLR
comp=Z,26nm,18.1s
NOA NORSAR Array B 69.72 340 P **P** **01 36 30.5 -0.6**
comp=Z,12nm,0.5s,mb5.1,baz=31,slow=6.3,SNR=59
NOA LR LR 02 11 56.1
comp=Z,26nm,18.1s,MS3.5,baz=100,slow=40
HFS Hagfors 69.85 338 P **P** **01 36 31.7 -0.2**
HFS pmax pmax
comp=Z,10.0nm,0.5s
HFS Hagfors 69.85 338 P **P** **01 36 31.7 -0.2**
comp=Z,9.5nm,0.5s,mb5.0,baz=53,slow=5.9,SNR=76
KIV Kislovodsk 70.57 313 *e*P **P** **01 36 38.0 +1.4**
KIV Kislovodsk 70.57 313⇑ *e*P **P** **01 36 38.1 +1.5**
KIV pmax pmax
comp=Z,13nm,0.8s,mb4.9
KIV MLR MLR
comp=Z,200nm,16.0s,MS4.5
KIV Kislovodsk 70.57 313⇑ *i*P **P** **01 36 38.2 +1.6**
ZEI Tsey 70.73 311 *e*P **P** **01 36 37.0 -0.6**
ZEI *e**P pP 01 36 46.1 -2.7
ZEI pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
TBLG Delisi 70.97 310 P **P** **01 36 40.6 +1.5**
ONI Oni 71.10 311 P **P** **01 36 41.0 +1.2**
AKASG Malin Array Be 72.10 325 *i* P **P** **01 36 45.4 -0.3**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 72.10 325 P **P** **01 36 44.8 -0.9**
comp=Z,4.6nm,0.5s,mb4.6,baz=37,slow=6.1,SNR=33
KIEV Kiev 72.11 325 *e*P **P** **01 36 45.3 -0.5**
comp=Z,10nm,1.0s,mb4.7
KIEV Kiev 72.11 325 *e*P **P** **01 36 45.3 -0.5**
KIEV pmax pmax
comp=Z,10.0nm,1.0s,mb4.7
SOC Sochi 72.38 314 *e*P **P** **01 36 47.9 +0.4**
SOC pmax pmax
comp=Z,11nm,0.7s,mb4.9
ANN Anapa 72.68 316 *e*P **P** **01 36 48.2 -1.1**
ANN *e* 01 37 07.0
ANN pmax pmax
comp=Z,9.0nm,0.5s,mb5.0
ANMO Albuquerque 75.53 55 *i* P **P** **01 37 07.7 +1.6**
KWP Kalwaria 75.56 327 *e*P **P** **01 37 06.6 +0.6**
comp=Z,12nm,0.9s,mb4.8
KWP Kalwaria 75.56 327 *e*P **P** **01 37 06.6 +0.6**
KWP pmax pmax
comp=Z,12nm,0.9s,mb4.8
KWP Kalwaria 75.56 327⇑ *i*P **P** **01 37 06.7 +0.7**
BSEG Bad Segeberg 76.14 336 *e*P **P** **01 37 09.1 -0.1**
BSEG pmax pmax
comp=Z,12nm,1.1s,mb4.7
BSEG Bad Segeberg 76.14 336 *e*P **P** **01 37 09.1 -0.1**
comp=Z,12nm,1.1s,mb4.7
OJC Ojcow 76.18 329 *e*P **P** **01 37 10.1 +0.6**
KOLS Kolonicke sedl 76.29 327 *e*P **P** **01 37 08.7 -1.4**
STHS Stebnicka Huta 76.29 328 *e*P **P** **01 37 11.7 +1.5**
comp=Z,5.9nm,1.3s,mb4.4
STHS Stebnicka Huta 76.29 328 *e*P **P** **01 37 11.7 +1.5**
STHS pmax pmax
comp=Z,6.0nm,1.3s,mb4.4
SCHQ Schefferville 76.70 20 P **P** **01 37 12.0 -0.4**
comp=Z,2.0nm,0.8s,mb4.1,baz=4.8,slow=12,SNR=2.6
MALT Malatya 76.82 311⇑ *i*P **P** **01 37 14.8 +1.5**
MALT Malatya 76.82 311⇑ *i*P **P** **01 37 14.8 +1.4**
TRPA Tarpa 76.83 327⇓ *i*P **P** **01 37 14.2 +1.0**
VRI Vrincioaia 76.89 323⇑ *i*P **P** **01 37 15.5 +1.9**
PLOR Plostina 76.93 323⇓ *i*P **P** **01 37 14.3 +0.5**
OKC Ostrava-Krasne 77.10 330 *e*P **P** **01 37 15.4 +0.7**
TIRR Tirgusor 77.23 321⇑ P **P** **01 37 16.0 +0.4**
TIRR Tirgusor 77.23 321⇑ *i*P **P** **01 37 16.0 +0.4**
HARR Harsova 77.27 321⇑ *i*P **P** **01 37 16.4 +0.6**
UPC Upice 77.29 332 *e*P **P** **01 37 15.7 0.0**
UPC *e*PCP PcP 01 37 24.8 -1.5
DPC Dobruska-Polom 77.31 331 *e*P **P** **01 37 16.6 +0.7**
DPC *e*PCP PcP 01 37 28.1 +1.7
KECS Kecovo 77.34 328 *e*P **P** **01 37 14.9 -1.2**
comp=Z,1.3nm,0.7s,mb4.0
KECS Kecovo 77.34 328 *e*P **P** **01 37 14.9 -1.2**
KECS pmax pmax
comp=Z,1.0nm,0.7s,mb3.9
MORC Moravsky Berou 77.36 330 P **P** **01 37 19.9 +3.7**
comp=Z,5.6nm,0.8s,mb4.5
MORC Moravsky Berou 77.36 330 P **P** **01 37 19.9 +3.7**
MORC pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MORC Moravsky Berou 77.36 330⇑ *i*P **P** **01 37 16.9 +0.7**
MLR Muntele Rosu 77.52 323⇑ P **P** **01 37 18.5 +1.3**
MLR Muntele Rosu 77.52 323 P **P** **01 37 18.0 +0.9**
MLR pmax pmax
comp=Z,3.0nm,0.5s
MLR Muntele Rosu 77.52 323 P **P** **01 37 18.0 +0.9**
comp=Z,3.0nm,0.5s,mb4.4,baz=165,slow=5.6,SNR=8.1
MLR Muntele Rosu 77.52 323⇑ *i*P **P** **01 37 18.5 +1.4**
UMR Umm Al-Rimmam 77.53 299 *e*P **P** **01 37 17.5 0.0**
UMR AMb AMB 01 37 18.5
comp=Z,18nm,0.5s,mb5.2
MIB Mutribah 77.60 299 *e*P **P** **01 37 17.8 -0.1**
MIB AMb AMB 01 37 19.0
comp=Z,14nm,0.8s,mb5.0
CLL Collm 77.60 334⇑ *i*P **P** **01 37 17.3 -0.2**
comp=Z,7.0nm,0.6s,mb4.8
CLL *i* 01 37 31.8
CLL Collm 77.60 334⇑ *i*P **P** **01 37 17.3 -0.2**
CLL *i* 01 37 31.8
CLL pmax pmax
comp=Z,7.0nm,0.6s,mb4.8
CLL Collm 77.60 334⇑ *i*P **P** **01 37 17.3 -0.2**
comp=Z,7.0nm,0.6s,mb4.8
CLL *i* sPcP 01 37 31.8
comp=Z,10.0nm,0.6s
CLL Collm 77.60 334 *e*P **P** **01 37 17.3 -0.2**
comp=Z,7.0nm,0.6s,mb4.8
PVCC Panska Ves 77.76 332 *e*P **P** **01 37 18.8 +0.4**
PVCC *e*PCP PcP 01 37 32.1 +3.8
CLZ Clausthal 77.95 335 *e*P **P** **01 37 17.6 -1.8**
CLZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.6
CLZ Clausthal 77.95 335 *e*P **P** **01 37 17.6 -1.8**
comp=Z,8.0nm,1.0s,mb4.6
VYHS Vyhne 77.96 329 *e*P **P** **01 37 20.2 +0.7**
QRN Al-Qurain 77.97 298 *e*P **P** **01 37 20.1 +0.1**
QRN AMb AMB 01 37 21.0
comp=Z,24nm,0.5s,mb5.4
RST Umm Al-Ruwaisa 78.02 299 *e*P **P** **01 37 19.9 -0.3**
RST AMb AMB 01 37 21.6
comp=Z,20nm,0.9s,mb5.0
PSZ Piszkesteto 78.03 328⇑ P **P** **01 37 20.7 +0.8**
PSZ Piszkesteto 78.03 328⇑ *i*P **P** **01 37 20.7 +0.7**
NAY Al-Naaiem 78.04 299 *e*P **P** **01 37 20.3 0.0**
NAY AMb AMB 01 37 21.0
comp=Z,7.2nm,0.8s,mb4.6
KOLL Kolacno 78.05 329 *e*P **P** **01 37 20.1 +0.1**
RDF Al-Radifah 78.07 299 *e*P **P** **01 37 20.9 +0.3**
RDF AMb AMB 01 37 21.8
comp=Z,19nm,0.6s,mb5.2
EKA Eskdalemuir Ar 78.12 344 P **P** **01 37 18.8 -1.5**
EKA pmax pmax
comp=Z,2.0nm,0.6s
EKA Eskdalemuir Ar 78.12 344 P **P** **01 37 18.8 -1.5**
comp=Z,1.7nm,0.6s,mb4.2,baz=18,slow=5.0,SNR=10
PRU Pruhonice 78.23 332 *e*P **P** **01 37 21.5 +0.5**
PRU *e*PCP PcP 01 37 33.6 +3.2
SMOL Smolenice 78.46 330 *e*P **P** **01 37 21.1 -1.2**
ANTO Ankara 78.63 315 *e*P **P** **01 37 24.5 +1.1**
comp=Z,4.8nm,0.6s,mb4.6
ANTO Ankara 78.63 315 *e*P **P** **01 37 24.5 +1.1**
ANTO pmax pmax
comp=Z,5.0nm,0.6s,mb4.6
ANTO Ankara 78.63 315⇑ *i*P **P** **01 37 24.6 +1.2**
MODS Modra-Piesok 78.63 330 *e*P **P** **01 37 24.2 +0.9**
GDL2 Guadalupe Moun 78.70 56 *e*P **P** **01 37 31.1 +7.2**
ZST Bratislava 78.85 330 *e*P **P** **01 37 25.3 +0.9**
ZST *e*PP PP 01 40 12.9 -10
ZST LR LR
comp=Z,100nm,18.0s,MS4.2
ZST Bratislava 78.85 330 *e*P **P** **01 37 25.3 +0.9**
ZST *e*PP PP 01 40 12.9 -10
GZR Gura Zlata 78.94 325⇑ *i*P **P** **01 37 25.6 +0.6**
UBBA Unterbreizbach 78.96 335 *e*P **P** **01 37 25.1 +0.1**
KHC Kasperske Hory 79.29 332 *e*P **P** **01 37 27.5 +0.7**
KHC *e*PCP PcP 01 37 38.9 +3.9
GERES GERESS Array B 79.49 332 P **P** **01 37 27.2 -0.7**
GERES pmax pmax
comp=Z,2.0nm,0.5s
GERES GERESS Array B 79.49 332 P **P** **01 37 27.2 -0.7**
comp=Z,1.7nm,0.5s,mb4.2,baz=38,slow=5.9,SNR=18
WET Wettzell 79.51 333 *e*P **P** **01 37 28.6 +0.6**
WET pmax pmax
comp=Z,6.0nm,1.0s,mb4.5
WET Wettzell 79.51 333 *e*P **P** **01 37 28.6 +0.6**
comp=Z,6.0nm,1.0s,mb4.5
GRA1 Grafenberg Arr 79.57 334 *e*P **P** **01 37 28.8 +0.4**
comp=Z,7.0nm,0.7s,mb4.7
GRA1 *e*pP pP 01 37 42.3 +2.6
GRF Grafenberg Arr 79.57 334 *e*P **P** **01 37 28.8 +0.4**
GRF *e**PP pP 01 37 42.3 +2.6
GRF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
GRF Grafenberg Arr 79.57 334 *e*P **P** **01 37 28.8 +0.4**
GRF *e**PP pP 01 37 42.3 +2.6
GRF pmax pmax
comp=Z,7.0nm,0.7s,mb4.7
GRF Grafenberg Arr 79.57 334 *e*P **P** **01 37 28.8 +0.4**
comp=Z,7.0nm,0.7s,mb4.7
GRF *e*pP pP 01 37 42.3 +2.6
PKSM Moragy 79.93 328⇑ P **P** **01 37 31.0 +0.6**
PKSM Moragy 79.93 328⇑ *i*P **P** **01 37 31.0 +0.6**
VTS Vitosha 81.02 323⇑ P **P** **01 37 37.1 +0.8**
VTS Vitosha 81.02 323⇑ *i*P **P** **01 37 37.1 +0.8**
BFO Black Forest 81.67 335 *e*P **P** **01 37 39.6 0.0**
comp=Z,7.1nm,1.1s,mb4.5
BFO Black Forest 81.67 335 *e*P **P** **01 37 39.7 +0.1**
BFO pmax pmax
comp=Z,7.0nm,1.1s,mb4.5
BFO Black Forest 81.67 335 *e*P **P** **01 37 39.9 +0.3**
comp=Z,5.0nm,1.1s,mb4.4
CDF Champ du Feu 81.92 335 *e*P **P** **01 37 40.6 -0.3**
MMAI Mount Meron Ar 82.38 309 P **P** **01 37 43.9 +0.3**
comp=Z,2.2nm,0.6s,mb4.3,baz=41,slow=6.6,SNR=14
LOR Lormes 83.94 337 *e*P **P** **01 37 51.1 -0.3**
SSF Saint Saulge 84.23 337 *e*P **P** **01 37 52.5 -0.4**
comp=Z,10nm,0.9s,mb4.7
SSF Saint Saulge 84.23 337 *e*P **P** **01 37 52.5 -0.4**
comp=Z,5.1nm,0.9s,mb4.7
SSF Saint Saulge 84.23 337 *e*P **P** **01 37 52.5 -0.4**
SSF pmax pmax
comp=Z,5.0nm,0.9s,mb4.6
SMF Signal de Mont 84.51 337 *e*P **P** **01 37 53.5 -0.9**
comp=Z,17nm,0.9s,mb4.9
SMF Signal de Mont 84.51 337 *e*P **P** **01 37 53.5 -0.9**
comp=Z,8.3nm,0.9s,mb4.9
SMF Signal de Mont 84.51 337 *e*P **P** **01 37 53.5 -0.9**
SMF pmax pmax
comp=Z,8.0nm,0.9s,mb4.8
AVF Avril sur Loir 84.52 337 *e*P **P** **01 37 54.7 +0.3**
comp=Z,15nm,1.0s,mb4.8
AVF Avril sur Loir 84.52 337 *e*P **P** **01 37 54.7 +0.3**
comp=Z,7.7nm,1.0s,mb4.8
AVF Avril sur Loir 84.52 337 *e*P **P** **01 37 54.7 +0.3**
AVF pmax pmax
comp=Z,8.0nm,1.0s,mb4.8
LPL La Plagne 84.68 335 *e*P **P** **01 37 53.8 -1.4**
comp=Z,13nm,0.9s,mb4.8
LPL La Plagne 84.68 335 *e*P **P** **01 37 53.8 -1.4**
comp=Z,6.5nm,0.9s,mb4.8
LPL La Plagne 84.68 335 *e*P **P** **01 37 53.8 -1.4**
LPL pmax pmax
comp=Z,7.0nm,0.9s,mb4.8
LPG La Plagne 84.69 335 *e*P **P** **01 37 54.0 -1.3**
comp=Z,22nm,1.1s,mb4.9
LPG La Plagne 84.69 335 *e*P **P** **01 37 54.0 -1.3**
comp=Z,11nm,1.1s,mb4.9
LPG La Plagne 84.69 335 *e*P **P** **01 37 54.0 -1.3**
LPG pmax pmax
comp=Z,11nm,1.1s,mb4.9
EIL Elat 85.14 307 P **P** **01 37 58.0 +0.2**
comp=Z,2.2nm,0.6s,mb4.5,baz=306,slow=6.0,SNR=4.6
MBDF Montbardon 85.38 334 *e*P **P** **01 37 57.8 -0.9**
ORIF Oris-en-Rattie 85.48 335 *e*P **P** **01 37 58.4 -0.8**
comp=Z,13nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.48 335 *e*P **P** **01 37 58.4 -0.8**
comp=Z,6.4nm,0.8s,mb4.8
ORIF Oris-en-Rattie 85.48 335 *e*P **P** **01 37 58.4 -0.8**
ORIF pmax pmax
comp=Z,6.0nm,0.8s,mb4.8
MFF Saint Martin d 85.62 339 *e*P **P** **01 37 59.7 -0.2**
comp=Z,18nm,0.9s,mb5.0
MFF Saint Martin d 85.62 339 *e*P **P** **01 37 59.7 -0.2**
comp=Z,9.1nm,0.9s,mb5.0
MFF Saint Martin d 85.62 339 *e*P **P** **01 37 59.7 -0.2**
MFF pmax pmax
comp=Z,9.0nm,0.9s,mb5.0
VIVF Saint-Julien-l 85.90 336 *e*P **P** **01 38 00.6 -0.7**
comp=Z,12nm,0.9s,mb4.8
VIVF Saint-Julien-l 85.90 336 *e*P **P** **01 38 00.6 -0.7**
comp=Z,6.3nm,0.9s,mb4.8
VIVF Saint-Julien-l 85.90 336 *e*P **P** **01 38 00.6 -0.7**
VIVF pmax pmax
comp=Z,6.0nm,0.9s,mb4.8
IDI Anoyia 86.12 317 P **P** **01 38 01.8 -0.8**
comp=Z,5.4nm,0.7s,mb4.9,baz=358,slow=11,SNR=5.5
KEST Kesra 92.50 328 LR LR 02 25 35.7
comp=Z,37nm,19.2s,MS3.9,baz=321,slow=39
SNAA Sanae 149.32 197 PKPbc PKPbc 01 45 09.3 +0.4
comp=Z,0.4nm,1.0s,baz=174,slow=16,SNR=2.3
PLCA Paso Flores 150.66 97 PKIKP PKPbc 01 45 14.2 +1.1
PLCA pmax pmax
comp=Z,2.0nm,1.0s
PLCA Paso Flores 150.66 97 PKPbc PKPbc 01 45 14.2 +1.1
comp=Z,1.9nm,0.9s,baz=267,slow=10,SNR=1.8
VNA2 Neumayer--Watz 150.82 196 *e*PKPdf PKPdf 01 45 07.5 +0.6
VNA2 *e* 01 45 13.3
VNA2 *e* 01 45 20.3
VNA2 *e* 01 45 26.2
VNA2 *e* 01 45 31.2
VNA2 *e* 01 45 38.4
VNA2 *e* 01 45 44.6
VNA2 *e* 01 45 50.4
VNA2 *e* 01 45 57.2
VNA2 *e* 01 46 01.0
VNA2 *e* 01 46 02.9
VNA3 Neumayer Olymp 150.97 194 *e*PKPdf PKPdf 01 45 05.8 -1.3
VNA3 *e* 01 45 11.6
VNA3 *e* 01 45 19.2
VNA3 *e* 01 45 26.8
VNA3 *e* 01 45 31.9
VNA3 *e* 01 45 38.4
VNA3 *e* 01 45 44.5
VNA3 *e* 01 45 51.2
VNA3 *e* 01 45 57.6
VNA3 *e* 01 46 01.1
VNA3 *e* 01 46 03.4

*ISCJB **31** 01:26:16.9±1.0, 3840N±003×2039E±007, h1km±7km, Error ellipse: s-maj=10.1km s-min=4.7km az=158.5*
*THE **31** 01:26:17.6, 3841N×2041E, h3km, ML3.1*
*ATH **31** 01:26:17.9, 3840N×2048E, h12km±2km, MD3.3/6*
*NEIC **31** 01:26:17.9, 3840N×2048E, h12km, MD3.3(ATH), After ATH.*
*CSEM **31** 01:26:18.9±0.1, 3840N×2053E, h2km, MD3.3, Error ellipse: s-maj=3.4km s-min=1.6km az=76.0*
ISC 31 01:26:17.2±1.0, 3839N±004×2037E±008, h6km±6km, n13, σ1§02/20, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.28**	**141**	*e*PG	**Pg**	**01 26 23.1**	**+0.5**
VLS				*e*SG	**Sg**	**01 26 27.3**	**+1.0**
LKD	**Levkas**	**0.38**	**35**	*e*Pg	**Pg**	**01 26 24.4**	**-0.2**
LKD				*e*Sg	**Sg**	**01 26 29.7**	**+0.1**
KFL	**Anninata**	**0.43**	**131**	*e*Pg	**Pg**	**01 26 25.6**	**0.0**
RLS	**Riolos of Patr**	**0.93**	**111**	*e*PB	**Pb**	**01 26 34.1**	**-1.6**
IGT	**Igoumenitsa**	**1.14**	**359**	*e*Pg	**Pg**	**01 26 38.8**	**-0.2**
IGT				*e*Sg	**Sg**	**01 26 55.1**	**+1.3**
SELA	**Sela**	**1.20**	**95**	*e*Pg	**Pg**	**01 26 39.0**	**-1.3**
SELA				*e*Sg	**Sg**	**01 26 56.5**	**+0.6**
EVR	**Evrytania**	**1.24**	**65**	*e*PN	**Pn**	**01 26 39.7**	**-1.4**
JAN	**Janina**	**1.31**	**16**	*e*PB	**Pb**	**01 26 42.5**	**+0.2**
KEK	**Kerkira**	**1.39**	**342**	*e*PB	**Pb**	**01 26 44.5**	**+0.9**
AGG	**Agios Georgios**	**1.66**	**67**	*e*Pb	**Pb**	**01 26 46.7**	**-1.4**
AGG				*e*Sb	**Sb**	**01 27 09.6**	**+0.4**
THL	**Klokotos Trika**	**1.73**	**47**	*e*PB	**Pb**	**01 26 49.1**	**-0.4**
VLX	**Vlachokerasia**	**1.89**	**122**	*e*Pb	**Pb**	**01 26 50.0**	**-2.1**
VLX				*e*Sb	**Sb**	**01 27 16.6**	**+0.7**
DID	**Didima**	**2.43**	**110**	*e*Pn	**Pn**	**01 26 58.1**	**+0.6**
DID				*e*Sn	**Sn**	**01 27 29.6**	**+2.1**

*NIED **31** 01:34:00, 4420N×14940E, h17km, Mw4.2 Best double couple: M◎2.60000×10^15 NP1:φs228.00000°, δ28.00000°, λ95.00000°. NP2:φs43.00000°, δ62.00000°, λ88.00000°.*
*IDC **31** 01:34:49.1±0.7, 4413N×14927E, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.1/28, mbtmp4.1/21, ML3.6/2, MS3.7/3, Ms1 3.7/3, ms1mx3.2/25, Error ellipse: s-maj=19.5km s-min=15.7km az=151.0*
*BJI **31** 01:34:50.3, 4436N×14966E, h27km, mB4.9, mb4.6, Ms4.1, Msz3.7*
*NEIC **31** 01:34:50.9±0.5, 4416N×14928E, h10km, mb4.7/16, Error ellipse: s-maj=13.8km s-min=7.8km az=142.0*
*ISCJB **31** 01:34:52.4±0.3, 4389N±005×14937E±004, h38km, mb4.4/45, MS3.8/2, Error ellipse: s-maj=7.1km s-min=3.1km az=154.3*
*JMA **31** 01:34:53.9±0.9, 4416N×14936E, h30km, M4.6*
*SKHL **31** 01:34:53.1±1.6, 4410N×14932E, h38km±6km, mb5.0/3, Ms3.8/1*
*MOS **31** 01:34:54.2±1.4, 4407N×14915E, h48km, mb4.8/24, Error ellipse: s-maj=10.7km s-min=7.0km az=112.1*
*SZGRF **31** 01:35:03.8, 4452N×14650E, h41km, mb4.5, Kuril Islands, Russia*
ISC 31 01:34:54.8±0.4, 4398N±005×14933E±005, h40km, h40km±2.5km:pP-P, n161, σ1§22/182, mb4.4/45, MS3.8/2, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.63**	**321**	*e*PN	**Pn**	**01 35 16.5**	**-4.5**
KUR				*i* S	**Sn**	**01 35 35.3**	**-5.5**
KUR				pmax	pmax		
	comp=Z,4μm,1.4s						
KUR				pmax	pmax		
	comp=N,760nm,0.5s						
KUR				pmax	pmax		
	comp=E,680nm,0.5s						
KUR				pmax	pmax		
	comp=Z,990nm,0.5s						
KUR				smax			
	comp=N,4μm,0.5s						
KUR				smax			
	comp=E,2μm,0.5s						
KUR				smax			
	comp=N,8μm,1.4s						
KUR				smax			
	comp=E,5μm,1.4s						
KUR	**Kuril'sk**	**1.63**	**321**	*e*P	**Pn**	**01 35 16.5**	**-4.5**
KUR				AMB	AMB	01 35 24.6	

comp=E,4μm,1.4s
KUR AMB AMB 01 35 28.8
comp=E,760nm,0.5s
KUR AMB AMB 01 35 28.8
comp=E,684nm,0.5s
KUR AMB AMB 01 35 28.8
comp=E,988nm,0.5s
KUR *i* S **Sn** **01 35 35.3 -5.5**
KUR A 01 35 40.0
comp=E,8μm,1.4s
KUR A 01 35 40.0
comp=E,5μm,1.4s
KUR A 01 35 40.0
comp=E,4μm,0.5s
KUR A 01 35 40.0
comp=E,2μm,0.5s
YUK Yuzh-Kuril'sk 2.50 273 *e*PN **Pn** **01 35 32.3 -0.6**
YUK S **Sn** **01 36 00.5 -1.7**
YUK pmax pmax
comp=Z,430nm,0.3s
YUK smax
comp=N,2μm,0.3s
YUK smax
comp=E,1μm,0.3s
YUK smax
comp=N,4μm,0.8s
YUK smax
YUK comp=E,4μm,0.8s MLR MLR
comp=Z,2μm,16.0s
YUK Yuzh-Kuril'sk 2.50 273 *e*P **Pn** **01 35 32.3 -0.6**
YUK AMB AMB 01 35 33.5
comp=Z,430nm,0.3s
YUK AMB AMB 01 35 33.5
comp=Z,110nm,0.4s
YUK *e*S **Sn** **01 36 00.5 -1.7**
YUK A 01 36 05.0
comp=Z,2μm,0.3s
YUK A 01 36 05.0
comp=Z,1μm,0.3s
YUK A 01 36 14.0
comp=Z,4μm,0.8s
YUK AMS AMS 01 36 41.0
comp=Z,2μm,16.0s
NEM2 Nemuro 2 2.67 258 P **Pn** **01 35 34.5 -0.8**
NEM2 *e*S **Sn** **01 36 04.6 -1.8**
JRA Rausu 3.04 271 P **Pn** **01 35 40.8 +0.5**
JNK Nakash 3.36 265 P **Pn** **01 35 44.6 -0.1**
JNK *e*S **Sn** **01 36 23.2 -0.2**
JAK Akkeshi 3.51 255 P **Pn** **01 35 46.4 -0.4**
JAK *e*S **Sn** **01 36 25.5 -1.6**
JTKR Abashiri--Toko 3.91 272 P **Pn** **01 35 52.8 +0.5**
JAR Ashorobuto 4.09 262 P **Pn** **01 35 55.2 +0.4**
JAR *e*S **Sn** **01 36 42.1 +0.7**
JOB Onbets 4.14 257 P **Pn** **01 35 55.7 +0.2**
JOB *e*S **Sn** **01 36 42.1 -0.5**
JMP Maruseppu 4.31 272 P **Pn** **01 35 58.7 +1.0**
JCH Churui 4.56 255 P **Pn** **01 36 01.5 +0.3**
JCH *e*S **Sn** **01 36 53.1 +0.1**
JKK2 Kamakawa 2 4.76 271 P **Pn** **01 36 05.6 +1.7**
ASAJ Asahikawa 4.86 274 P **Pn** **01 36 07.6 +2.4**
ASAJ Asahikawa 4.86 274 PN **Pn** **01 36 06.8 +1.6**
ASAJ pmax pmax
comp=Z,3.0nm,0.3s
ASAJ MLR MLR
comp=Z,739nm,19.8s
ASAJ Asahikawa 4.86 274 Pn **Pn** **01 36 06.8 +1.6**
comp=Z,2.6nm,0.3s,baz=90,slow=8.1,SNR=9.5
ASAJ LR LR 01 38 12.1
comp=Z,739nm,19.8s,baz=116,slow=42
JSE Soyaes 4.93 284 P **Pn** **01 36 07.9 +1.7**
ERM Erimo 4.93 249 *e*Pn **Pn** **01 36 08.1 +1.8**
ERM *e*Sn **Sn** **01 37 00.7 -1.4**
JEM Erimo 4.93 249 P **Pn** **01 36 08.0 +1.7**
JFR Furan 4.96 263 P **Pn** **01 36 08.2 +1.5**
JNBK Urakawa-nobuka 5.10 253 P **Pn** **01 36 09.2 +0.5**
JBT2 Biratori 2 5.22 259 P **Pn** **01 36 10.5 +0.3**
JSS Shosan 5.39 277 P **Pn** **01 36 15.1 +2.5**
JWK2 Keihoku 5.47 287 P **Pn** **01 36 16.5 +2.8**
YSS Yuzh-Sakhalins 5.50 305 *e*Pn **Pn** **01 36 16.4 +2.3**
comp=Z,20nm,0.6s
YSS Yuzh-Sakhalins 5.50 305 *e*P **Pn** **01 36 18.4 +4.3**
YSS *e*S **Sn** **01 37 20.0 +4.0**
YSS A 01 37 21.9
comp=Z,40nm,0.8s
YSS AMS AMS 01 38 27.0
comp=Z,300nm,17.0s
YSS AMS AMS 01 38 27.0
comp=Z,600nm,17.0s
YSS AMS AMS 01 38 27.0
comp=Z,800nm,17.0s
JHR Hokuryu 5.50 270 P **Pn** **01 36 16.9 +2.8**
JEW Eniwo 5.85 262 P **Pn** **01 36 20.7 +1.8**
JNB Noboribetsu 6.24 259 P **Pn** **01 36 25.0 +0.7**
JNB *e*S **Sn** **01 37 33.7 -0.6**
JKB Kayabe 6.44 254 P **Pn** **01 36 27.3 +0.3**
JKB *e*S **Sn** **01 37 36.0 -3.1**
JSK Shakotan 6.45 268 P **Pn** **01 36 28.6 +1.4**
JYM2 Yakumo 2 6.82 257 P **Pn** **01 36 32.7 +0.5**
JANG Nango 6.83 241 P **Pn** **01 36 31.1 -1.3**
JANG *e*S **Sn** **01 37 43.3 -5.5**
JTH Tanohata 6.87 237 P **Pn** **01 36 31.3 -1.6**
JTH *e*S **Sn** **01 37 42.3 -7.5**
JTM Tenmabayashi 6.90 245 P **Pn** **01 36 33.0 -0.3**
JTM *e*S **Sn** **01 37 46.0 -4.4**
JSR Shiriuchi 7.00 253 P **Pn** **01 36 35.2 +0.5**
JSR *e*S **Sn** **01 37 49.0 -4.0**
UGL Uglegorsk 7.15 318 *e*P **Pn** **01 36 40.0 +3.3**
UGL AMS AMS 01 39 35.0
comp=Z,800nm,16.0s
UGL AMS AMS 01 39 35.0
comp=Z,800nm,17.0s
UGL AMS AMS 01 39 35.0
comp=Z,700nm,17.0s
JOSM Okushiri--Mats 7.46 259 P **Pn** **01 36 41.7 +0.6**
OFUJ Ofunato 7.54 232 P **Pn** **01 36 40.9 -1.3**
OFUJ S **Sn** **01 38 00.5 -5.9**
JRG Rokugo 7.95 238 P **Pn** **01 36 48.0 +0.2**
JRG *e*S **Sn** **01 38 10.6 -5.8**
JIO Ouri 8.16 230 P **Pn** **01 36 49.0 -1.6**
JIO *e*S **Sn** **01 38 14.1 -7.4**
TYV Tymovskoe 8.24 329 *e*P **Pn** **01 36 51.0 -0.6**
TYV AMB AMB 01 36 57.2
comp=Z,11nm,0.8s
TYV AMB AMB 01 36 57.2
comp=Z,9.0nm,0.8s
TYV AMB AMB 01 36 57.2
comp=Z,26nm,1.0s
JYA Atsumi 9.02 237 *e*S **Sn** **01 38 36.0 -6.5**
JFK Kawauchi 9.21 227 *e*S **Sn** **01 38 39.1 -8.1**
HABR Khabarovsk 10.86 299 *e*PN **Pn** **01 37 22.5 -5.1**
MAJO Matsushiro 11.28 233 *e*Pn **Pn** **01 37 33.4 +0.1**
comp=Z,18nm,0.3s
MAJO Matsushiro 11.28 233 *e*PN **Pn** **01 37 33.4 +0.1**
MAJO pmax pmax
comp=Z,18nm,0.3s
MJAR Matsushiro Arr 11.28 233 PN **Pn** **01 37 32.6 -0.7**
MJAR pmax pmax
comp=Z,1.0nm,0.3s
MJAR Matsushiro Arr 11.28 233 Pn **Pn** **01 37 32.6 -0.7**
comp=Z,0.5nm,0.3s,baz=29,slow=14,SNR=3.3
KLR Kul'dur 13.17 300 *e*PN **Pn** **01 38 00.0 +0.9**
CN2 Changchun 17.21 278 *e*P **Pn** **01 38 49.5 -2.5**
CN2 LR LR
comp=N,300nm,12.0s
CN2 LR LR
comp=E,300nm,12.0s
CN2 LR LR
comp=Z,300nm,17.0s
ZEA Zeya 17.44 312 *e*P **Pn** **01 38 51.9 -2.8**
ZEA AMB AMB 01 38 53.0
comp=Z,12nm,1.0s
KSRS Korea Array 17.46 255 P **Pn** **01 38 55.4 +0.2**
comp=Z,0.2nm,0.3s,baz=64,slow=13,SNR=3.2
KSRS LR LR 01 45 19.8
comp=Z,134nm,19.6s,baz=219,slow=36
SEY Seymchan 19.07 4 *e*P **Pn** **01 39 12.1 -2.5**
HIA Hailar 20.92 295 *i* P **P** **01 39 30.3 -3.4**
YAK Yakutsk 21.45 334 *e*P **P** **01 39 35.8 -3.4**
YAK pmax pmax
comp=Z,22nm,0.8s,mb4.5
BOD Bodaibo 25.88 315 *e*P **P** **01 40 17.5 -4.9**
BOD pmax pmax
comp=Z,2.0nm,1.5s,mb3.4

NJ2 Nanjing 26.65 254 *e*P **P** **01 40 30.5 +0.8**
NJ2 PP 01 41 13.3
NJ2 S **S** **01 44 57.0 -5.0**
NJ2 XS sS 01 45 23.5 +3.3
NJ2 AMB AMB
comp=Z,10.0nm,0.7s,mb4.5
NJ2 AMB AMB
comp=Z,130nm,4.7s
NJ2 LR LR
comp=N,440nm,13.8s
NJ2 LR LR
comp=E,480nm,28.0s
NJ2 LR LR
comp=Z,220nm,16.6s,MS3.8
TIXI Tiksi 29.48 347 *i* P **P** **01 40 50.8 -3.7**
SONM Songino Array 29.84 293 P **P** **01 40 57.8 -0.2**
SONM pmax pmax
comp=Z,1.0nm,0.5s
SONM MLR MLR
comp=Z,226nm,18.1s
SONM Songino Array 29.84 293 P **P** **01 40 57.8 -0.2**
comp=Z,1.1nm,0.5s,mb3.9,baz=82,slow=8.4,SNR=13
SONM LR LR 01 54 13.1
comp=Z,226nm,18.1s,MS3.8,baz=61,slow=39
ZAK Zakamensk 31.53 298 *e*P **P** **01 41 12.3 -0.6**
ZAK pmax pmax
comp=Z,1.0nm,1.3s,mb3.5
LZH Lanzhou 35.34 273 *e*P **P** **01 41 47.0 +0.8**
LZH AP pP 01 41 51.5 -5.7
LZH AMB AMB
comp=Z,25nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,63nm,4.1s
GTA Gaotai 36.81 280 *e*P **P** **01 41 59.8 +1.1**
GTA AP pP 01 42 07.0 -2.8
GTA XP sP 01 42 11.5 -3.0
GTA AMB AMB
comp=Z,7.0nm,0.9s,mb4.5
IMA2 Indian Mountai 37.61 34 *e*P **P** **01 42 05.0 -0.2**
KDAK Kodiak Island 37.93 48 P **P** **01 42 07.0 -0.9**
comp=Z,5.2nm,0.8s,mb4.3,baz=288,slow=8.9,SNR=2.8
CD2 Chengdu 38.00 266 P **P** **01 42 09.5 +0.7**
CD2 AMB AMB
comp=Z,20nm,0.7s,mb5.0
COLA College 39.96 36 *i* P **P** **01 42 26.9 +2.1**
ZALV Zalesovo Beam 42.12 307 P **P** **01 42 40.5 -2.2**
comp=Z,0.4nm,0.3s,mb3.5,baz=85,slow=8.4,SNR=3.7
ZALV PcP PcP 01 44 36.2 -0.4
comp=Z,1.8nm,0.8s,baz=64,slow=3.4,SNR=6.1
ZAL Zalesovo 42.13 307 P **P** **01 42 40.5 -2.3**
ZAL 01 44 36.2
EGAK Eagle 42.82 36 *e*P **P** **01 42 48.7 +0.4**
comp=Z,3.2nm,0.8s,mb4.1
WMQ Urumqi 43.47 292 P **P** **01 42 55.0 +1.2**
INK Inuvik 45.41 31 P **P** **01 43 09.8 +0.8**
INK pmax pmax
comp=Z,1.0nm,0.4s
INK Inuvik 45.41 31 P **P** **01 43 09.8 +0.8**
comp=Z,1.2nm,0.4s,mb4.1,baz=283,slow=9.9,SNR=8.0
MKAR Makanchi Array 45.87 298 P **P** **01 43 12.9 0.0**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 45.87 298 P **P** **01 43 12.9 0.0**
comp=Z,4.0nm,0.7s,mb4.4,baz=75,slow=8.3,SNR=24
KURK Kurchatov 46.71 304 *e*P **P** **01 43 17.9 -1.6**
comp=Z,3.0nm,0.6s,mb4.4
KURK Kurchatov 46.71 304 *e*P **P** **01 43 17.9 -1.5**
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
TAPN Taplejung 51.58 273 *e*P **P** **01 43 56.8 -0.2**
ULHL Ulahol 51.73 295 P **P** **01 43 58.8 +1.0**
SNR=10
TKM2 Tokmak 2 51.83 296 *e*P **P** **01 43 58.8 +0.1**
comp=Z,11nm,1.1s,mb4.7
TKM2 Tokmak 2 51.83 296 *e*P **P** **01 43 58.8 +0.2**
TKM2 pmax pmax
comp=Z,11nm,1.1s,mb4.7
TKM2 Tokmak 2 51.83 296 P **P** **01 44 00.0 +1.4**
SNR=7.3
KBK Karagaybulak 52.37 296 P **P** **01 44 03.7 +1.0**
SNR=8.3
KZA Kyzart 52.45 295 P **P** **01 44 05.2 +1.9**
SNR=14
JIRN Jiri 52.49 274 *e*P **P** **01 44 01.4 -2.4**
AAK Ala-Archa 52.68 296 P **P** **01 44 05.9 +1.0**
SNR=6.0
KKN Kakani 53.07 275 *e*P **P** **01 44 06.5 -1.6**
comp=Z,5.0nm,0.3s,mb4.8
EKS2 Erkin-Say 53.13 297 *e*P **P** **01 44 08.7 +0.4**
comp=Z,9.7nm,0.9s,mb4.7
EKS2 *e* pP 01 44 20.9 +1.1
EKS2 Erkin-Say 53.13 297 P **P** **01 44 09.0 +0.8**
SNR=13
GKN Gorkha 53.41 275 *e*P **P** **01 44 11.5 +0.9**
comp=Z,6.4nm,0.4s,mb4.9
AML Almayashu 53.44 296 *e*P **P** **01 44 11.5 +0.9**
comp=Z,4.1nm,0.8s,mb4.4
AML Almayashu 53.44 296 P **P** **01 44 11.9 +1.4**
SNR=5.9
YKA Yellowknife Ar 54.73 34 P **P** **01 44 19.9 +0.2**
YKA pmax pmax
comp=Z,1.0nm,0.8s
YKA Yellowknife Ar 54.73 34 P **P** **01 44 19.9 +0.2**
comp=Z,0.7nm,0.8s,mb3.7,baz=297,slow=6.7,SNR=7.4
AKTK Aktyubinsk 58.58 311 P **P** **01 44 46.4 -0.8**
AKTO Aktyubinsk 58.58 311 P **P** **01 44 46.4 -0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.6s,mb4.0
AKTO Aktyubinsk 58.58 311 P **P** **01 44 46.4 -0.8**
comp=Z,1.4nm,0.6s,mb4.2,baz=59,slow=5.0,SNR=7.1
KBL Kabul 60.59 291 *e*P **P** **01 45 00.8 -0.5**
comp=Z,6.1nm,0.8s,mb4.8
JOF Joensuu 62.61 333 *e*p **P** **01 45 12.1 -2.3**
comp=Z,4.4nm,0.3s,mb5.1
JOF Joensuu 62.61 333 *e*P **P** **01 45 12.1 -2.3**
JOF pmax pmax
comp=Z,4.0nm,0.3s,mb5.0
KAF Kangasniemi 64.81 334 *e*p **P** **01 45 27.3 -1.6**
WRA Warramunga Arr 65.07 196 P **P** **01 45 32.2 +1.2**
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 65.07 196 P **P** **01 45 32.2 +1.2**
comp=Z,0.8nm,0.6s,mb3.9,baz=13,slow=6.6,SNR=4.8
FINES FINESS Array B 65.38 334 P **P** **01 45 30.7 -1.9**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 65.38 334 P **P** **01 45 30.7 -1.9**
comp=Z,3.3nm,0.6s,mb4.5,baz=41,slow=8.3,SNR=20
BOZ Bozeman (W) 65.57 50 *e*P **P** **01 45 35.2 +1.1**
comp=Z,1.9nm,0.8s,mb4.2
BOZ Bozeman (W) 65.57 50 *e*P **P** **01 45 35.2 +1.1**
BOZ pmax pmax
comp=Z,2.0nm,0.8s,mb4.2
OBN Obninsk 66.06 325 *i* P **P** **01 45 37.1 0.0**
OBN pmax pmax
comp=Z,14nm,1.2s,mb4.9
NVAR Mina Array Bea 66.12 59 P **P** **01 45 38.5 +0.8**
comp=Z,0.5nm,0.7s,mb3.7,baz=305,slow=6.5,SNR=4.0
PDAR Pinedale Array 68.55 51 P **P** **01 45 52.1 -1.0**
comp=Z,0.3nm,0.4s,mb3.5,baz=27,slow=2.8,SNR=5.2
ASAR Alice Springs 68.78 195 P **P** **01 45 55.5 +0.9**
ASAR pmax pmax
comp=Z,1.0nm,0.8s
ASAR Alice Springs 68.78 195 P **P** **01 45 55.5 +1.0**
comp=Z,0.6nm,0.8s,mb3.6,baz=13,slow=5.2,SNR=5.0
NB2 NORSAR Subarra 69.95 340 P **P** **01 46 00.4 -1.0**
comp=Z,4.6nm,0.5s,mb4.7,baz=30,slow=6.5
NB2 NORSAR Subarra 69.95 340 P **P** **01 46 00.4 -1.0**
NB2 pmax pmax
comp=Z,5.0nm,0.5s,mb4.7
NOA NORSAR Array B 69.95 340 P **P** **01 46 00.5 -0.9**
NOA pmax pmax
comp=Z,5.0nm,0.6s
NOA NORSAR Array B 69.95 340 P **P** **01 46 00.5 -1.0**
comp=Z,4.6nm,0.6s,mb4.6,baz=30,slow=6.3,SNR=29
HFS Hagfors 70.08 338 P **P** **01 46 01.0 -1.2**
HFS pmax pmax
comp=Z,4.0nm,0.4s
HFS Hagfors 70.08 338 P **P** **01 46 01.0 -1.3**
comp=Z,4.3nm,0.4s,mb4.8,baz=36,slow=5.5,SNR=43
KIV Kislovodsk 70.78 313 *e*P **P** **01 46 07.8 +1.0**
KIV pmax pmax
comp=Z,6.0nm,0.7s,mb4.6
ZEI Tsey 70.93 311 *e*P **P** **01 46 07.8 +0.1**
AKASG Malin Array Be 72.32 325 P **P** **01 46 15.4 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 72.32 325 P **P** **01 46 15.4 -0.5**
comp=Z,2.7nm,0.6s,mb4.4,baz=37,slow=6.1,SNR=19
KWP Kalwaria 75.78 327 *e*P **P** **01 46 37.3 +1.2**
UPC Upice 77.51 332 *e*P **P** **01 46 46.8 +0.9**
UPC *e*pP pP 01 46 58.6 +0.7
DPC Dobruska-Polom 77.54 331 *e*P **P** **01 46 47.4 +1.3**
DPC *e*pP pP 01 46 57.5 -0.6
CLL Collm 77.83 334 *e*P **P** **01 46 47.0 -0.7**
CLL *i* pPcP pP 01 46 59.8 +0.1
VRAC Vranov 78.32 331 P **P** **01 46 51.1 +0.7**
VRAC pmax pmax
comp=Z,2.0nm,0.5s
VRAC Vranov 78.32 331 P **P** **01 46 51.1 +0.7**
comp=Z,2.0nm,0.5s,mb4.3,baz=65,slow=12,SNR=3.6
EKA Eskdalemuir Ar 78.35 344 P **P** **01 46 50.1 -0.4**
EKA pmax pmax
comp=Z,1.0nm,0.5s
EKA Eskdalemuir Ar 78.35 344 P **P** **01 46 50.0 -0.4**
comp=Z,0.7nm,0.5s,mb3.9,baz=20,slow=5.3,SNR=5.5
KHC Kasperske Hory 79.51 332 *e*P **P** **01 46 57.5 +0.5**
KHC *e*pP pP 01 47 10.0 +1.0
GERES GERESS Array B 79.72 332 P **P** **01 46 57.5 -0.6**
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 79.72 332 P **P** **01 46 57.5 -0.6**
comp=Z,0.9nm,0.5s,mb4.0,baz=44,slow=5.9,SNR=9.3
GRA1 Grafenberg Arr 79.80 334 *e*P **P** **01 46 59.6 +1.1**
comp=Z,4.0nm,1.1s,mb4.3
GRA1 *e*pP pP 01 47 11.4 +0.8
GRF Grafenberg Arr 79.80 334 *e*P **P** **01 46 59.6 +1.1**
GRF *e**PP pP 01 47 11.4 +0.8
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
GRF Grafenberg Arr 79.80 334 *e*P **P** **01 46 59.6 +1.1**
GRF *e**PP pP 01 47 11.4 +0.8
GRF pmax pmax
comp=Z,4.0nm,1.1s,mb4.3
GRF Grafenberg Arr 79.80 334 *e*P **P** **01 46 59.6 +1.1**
comp=Z,4.0nm,1.1s,mb4.3
GRF *e*pP pP 01 47 11.4 +0.8
MMAI Mount Meron Ar 82.58 309 P **P** **01 47 14.6 +1.0**
comp=Z,1.0nm,0.6s,mb4.1,baz=30,slow=5.8,SNR=6.4
LOR Lormes 84.17 337 *e*P **P** **01 47 21.1 -0.4**
comp=Z,8.2nm,0.8s,mb4.6
LOR Lormes 84.17 337 *e*P **P** **01 47 21.1 -0.4**
comp=Z,4.1nm,0.8s,mb4.6
LOR Lormes 84.17 337 *e*P **P** **01 47 21.1 -0.4**
LOR pmax pmax
comp=Z,4.0nm,0.8s,mb4.6
SSF Saint Saulge 84.46 337 *e*P **P** **01 47 22.2 -0.8**
comp=Z,23nm,1.3s,mb4.9
SSF Saint Saulge 84.46 337 *e*P **P** **01 47 22.2 -0.8**
comp=Z,12nm,1.3s,mb4.8
SSF Saint Saulge 84.46 337 *e*P **P** **01 47 22.2 -0.8**
SSF pmax pmax
comp=Z,12nm,1.3s,mb4.9
SMF Signal de Mont 84.74 337 *e*P **P** **01 47 23.3 -1.1**
comp=Z,14nm,1.0s,mb4.8
SMF Signal de Mont 84.74 337 *e*P **P** **01 47 23.3 -1.1**
comp=Z,7.1nm,1.0s,mb4.8
SMF Signal de Mont 84.74 337 *e*P **P** **01 47 23.3 -1.1**
SMF pmax pmax
comp=Z,7.0nm,1.0s,mb4.8
LPL La Plagne 84.91 335 *e*P **P** **01 47 23.7 -1.6**
comp=Z,9.8nm,1.0s,mb4.6
LPL La Plagne 84.91 335 *e*P **P** **01 47 23.7 -1.6**
comp=Z,4.9nm,1.0s,mb4.6
LPL La Plagne 84.91 335 *e*P **P** **01 47 23.7 -1.6**
LPL pmax pmax
comp=Z,5.0nm,1.0s,mb4.6
LPG La Plagne 84.92 335 *e*P **P** **01 47 23.2 -2.1**
comp=Z,29nm,1.4s,mb4.9
LPG La Plagne 84.92 335 *e*P **P** **01 47 23.2 -2.1**
comp=Z,15nm,1.4s,mb4.9
LPG La Plagne 84.92 335 *e*P **P** **01 47 23.2 -2.1**
LPG pmax pmax
comp=Z,15nm,1.4s,mb4.9
MBDF Montbardon 85.60 334 *e*P **P** **01 47 27.5 -1.3**
ORIF Oris-en-Rattie 85.71 335 *e*P **P** **01 47 28.0 -1.3**
comp=Z,16nm,0.9s,mb5.0
ORIF Oris-en-Rattie 85.71 335 *e*P **P** **01 47 28.0 -1.3**
comp=Z,7.8nm,0.9s,mb4.9
ORIF Oris-en-Rattie 85.71 335 *e*P **P** **01 47 28.0 -1.3**
ORIF pmax pmax
comp=Z,8.0nm,0.9s,mb5.0
MFF Saint Martin d 85.85 339 *e*P **P** **01 47 29.4 -0.6**
TORD Torodi Ar. Bea 115.95 325 PKP PKPdf 01 53 32.3 -1.3
comp=Z,0.3nm,0.4s,baz=31,slow=0.8,SNR=4.3

NIED ***31*** *01:44:00,44.50N×149.40E,h20km,Mw3.9 Best double couple: M0 7.01000×10^14 NP1:φs198.00000°,δ37.00000°, λ78.00000°. NP2:φs32.00000°,δ54.00000°,λ99.00000°.*
IDC ***31*** *01:44:03.7±5.9,44.76N×149.28E,h0km,mb3.7/8, mb1 3.8/9,mb1mx3.7/20,mbtmp3.7/9,ML3.2/1,Error ellipse: s-maj=152.6km s-min=24.2km az=163.0*
JMA ***31*** *01:44:03.8±0.6,44.46N×149.37E,h30km,M4.0*
NEIC ***31*** *01:44:04.2±1.8,44.56N×149.32E,h10km,mb4.4/2,Error ellipse: s-maj=41.4km s-min=16.4km az=169.0*
ISCJB ***31*** *01:44:05.0±1.2,44.0N±0.1×149.3E±0.1,h50km±12km, mb3.7/11,Error ellipse: s-maj=20.5km s-min=10.4km az=156.6*
MOS ***31*** *01:44:05.7±1.5,44.47N×149.16E,h36km,mb4.2/6,Error ellipse: s-maj=16.3km s-min=12.5km az=128.0*
ISC 31 01:44:06.5±1.2,442N±01×1493E±01,h38km±12km,n46,
σ1s00/52,mb3.7/11,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.46 317**	⇑	*i*PN	**Pn**	**01 44 27.8**	**-2.6**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,420nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.47 268**		*e*PN	**Pn**	**01 44 43.7**	**-0.6**
YUK				S	**Sn**	**01 45 13.6**	**+0.4**
YUK				pmax	pmax		
	comp=Z,180nm,0.3s						
YUK				smax			
	comp=N,580nm,0.5s						
YUK				smax			
	comp=E,200nm,0.5s						
NEM2	**Nemuro 2**	**2.69 254**		P	**Pn**	**01 44 46.1**	**-1.2**
NEM2				*e*S	**Sn**	**01 45 17.3**	**-1.4**
JRA	**Rausu**	**3.01 267**		P	**Pn**	**01 44 52.0**	**+0.3**
JNK	**Nakash**	**3.36 261**		P	**Pn**	**01 44 56.1**	**-0.3**
JNK				*e*S	**Sn**	**01 45 34.6**	**-0.4**
JAK	**Akkeshi**	**3.54 252**		P	**Pn**	**01 44 58.0**	**-0.9**
JTKR	**Abashiri--Toko**	**3.88 269**		P	**Pn**	**01 45 04.3**	**+0.6**
JAR	**Ashorobuto**	**4.10 259**		P	**Pn**	**01 45 06.9**	**+0.3**
JAR				*e*S	**Sn**	**01 45 53.5**	**+0.3**
JOB	**Onbets**	**4.17 254**		P	**Pn**	**01 45 07.3**	**-0.2**
JMP	**Maruseppu**	**4.28 270**		P	**Pn**	**01 45 10.2**	**+1.2**
JCH	**Churui**	**4.59 252**		P	**Pn**	**01 45 13.5**	**+0.1**
JCH				S	**Sn**	**01 46 05.8**	**+0.3**
JKK2	**Kamakawa 2**	**4.73 269**		P	**Pn**	**01 45 17.2**	**+2.0**
ASAJ	**Asahikawa**	**4.82 272**		PN	**Pn**	**01 45 18.5**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**4.82 272**		Pn	**Pn**	**01 45 18.5**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=238,slow=32,SNR=2.9						
JFR	**Furan**	**4.96 261**		P	**Pn**	**01 45 19.9**	**+1.4**
ERM	**Erimo**	**4.98 246**		*e*PN	**Pn**	**01 45 19.7**	**+0.9**
JEM	**Erimo**	**4.98 246**		P	**Pn**	**01 45 19.8**	**+1.0**
JNBK	**Urakawa-nobuka**	**5.14 251**		P	**Pn**	**01 45 20.5**	**-0.4**
JNBK				*e*S	**Sn**	**01 46 17.8**	**-1.1**
JBT2	**Biratori 2**	**5.23 257**		P	**Pn**	**01 45 21.9**	**-0.3**
YSS	**Yuzh-Sakhalins**	**5.36 303**		*e*PN	**Pn**	**01 45 18.1**	**-5.8**
JNB	**Noboribetsu**	**6.26 257**		P	**Pn**	**01 45 36.4**	**+0.2**
JKB	**Kayabe**	**6.47 252**		P	**Pn**	**01 45 38.5**	**-0.7**
JYM2	**Yakumo 2**	**6.84 256**		P	**Pn**	**01 45 44.2**	**-0.1**
JANG	**Nango**	**6.91 239**		*e*S	**Sn**	**01 46 54.9**	**-7.5**
JOSM	**Okushiri--Mats**	**7.48 257**		P	**Pn**	**01 45 53.4**	**+0.4**
JRG	**Rokugo**	**8.04 236**		P	**Pn**	**01 45 59.7**	**-1.0**
YAK	**Yakutsk**	**21.25 334**		P	**P**	**01 48 46.3**	**-2.7**
	comp=Z,11nm,0.4s,mb4.5						
YAK	**Yakutsk**	**21.25 334**		P	**P**	**01 48 46.3**	**-2.7**
YAK				pmax	pmax		
	comp=Z,11nm,0.4s,mb4.5						
BILL	**Bilibino**	**25.53 15**		*e*P	**P**	**01 49 34.4**	**+3.2**

BILL pmax pmax
comp=Z,1.0nm,1.3s,mb3.2
TIXI Tiksi 29.27 347 *e*P **P 01 50 06.4 +1.8**
TIXI pmax pmax
comp=Z,2.0nm,1.8s,mb3.5
SONM Songino Array 29.73 292 P **P 01 50 09.5 +0.5**
comp=Z,0.4nm,0.5s,mb3.4,baz=82,slow=9.6,SNR=2.7
INK Inuvik 45.25 31 P **P 01 52 19.1 -0.5**
INK pmax pmax
comp=Z,1.0nm,1.1s
INK Inuvik 45.25 31 P **P 01 52 19.1 -0.6**
comp=Z,1.1nm,1.1s,mb3.6,baz=277,slow=1.8,SNR=3.4
MKAR Makanchi Array 45.75 298 P **P 01 52 24.2 +0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 45.75 298 P **P 01 52 24.1 +0.2**
comp=Z,0.7nm,0.6s,mb3.8,baz=73,slow=8.8,SNR=7.3
YKA Yellowknife Ar 54.58 35 P **P 01 53 29.0 -1.5**
YKA Yellowknife Ar 54.58 35 P **P 01 53 38.3 +7.8**
YKA Yellowknife Ar 54.58 35 P **P 01 53 29.0 -1.5**
comp=Z,0.1nm,0.5s,mb3.1,baz=300,slow=6.9,SNR=3.1
FINES FINESS Array B 65.19 334 P **P 01 54 43.3 0.0**
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 65.19 334 P **P 01 54 42.8 -0.6**
comp=Z,1.1nm,0.6s,mb4.0,baz=44,slow=8.5,SNR=5.6
NB2 NORSAR Subarra 69.75 340 P **P 01 55 12.3 +0.2**
comp=Z,1.1nm,0.5s,mb4.0,baz=30,slow=6.5
NB2 NORSAR Subarra 69.75 340 P **P 01 55 12.3 +0.2**
NB2 pmax pmax
comp=Z,1.0nm,0.5s,mb4.0
NOA NORSAR Array B 69.75 340 P **P 01 55 12.0 -0.1**
NOA pmax pmax
comp=Z,2.0nm,0.4s
NOA NORSAR Array B 69.75 340 P **P 01 55 12.0 -0.1**
comp=Z,1.9nm,0.4s,mb4.4,baz=30,slow=6.3,SNR=10
AKASG Malin Array Be 72.14 325 P **P 01 55 26.6 -0.2**
comp=Z,0.3nm,0.4s,mb3.5,baz=32,slow=5.4,SNR=5.2
GERES GERESS Array B 79.52 332 P **P 01 56 09.3 +0.3**
comp=Z,0.2nm,0.3s,mb3.5,baz=29,slow=6.3,SNR=4.3

NIED ***31*** *02:06:00, 44.30N× 149.30E, h23km, Mw4.6 Best double couple: M0 8.09000×10^15 NP1:φ=198.00000°, δ=28.00000°, λ=59.00000°. NP2:φ=52.00000°, δ=66.00000°, λ=105.00000°.*

SKHL ***31*** *02:06:05.0±2.1, 44.10N× 149.40E, h33km±2km, mb4.9/5, Ms4.2/3*

IDC ***31*** *02:06:05.2±0.7, 44.35N× 149.05E, h0km, mb4.1/16, mb1 4.3/17, mb1mx4.2/21, mbtmp4.1/17, MS4.0/11, Ms1 4.0/11, ms1mx3.7/29, Error ellipse: s-maj=19.9km s-min=15.6km az=144.0*

BJI ***31*** *02:06:06.1, 44.06N× 149.31E, h24km, mB4.8, mb4.5, Ms4.4, Msz4.1*

NEIC ***31*** *02:06:08.4±0.5, 44.50N× 148.86E, h10km, mb4.6/39, Error ellipse: s-maj=14.0km s-min=7.3km az=163.0*

JMA ***31*** *02:06:08.3±0.8, 44.32N× 149.31E, h30km, M4.7*

MOS ***31*** *02:06:08.6±1.4, 44.25N× 149.08E, h33km, mb4.7/41, Error ellipse: s-maj=9.3km s-min=6.0km az=111.5*

ISCJB ***31*** *02:06:10.1±0.7, 44.10N±004× 149.10E±005, h48km±5km, mb4.5/79, MS4.1/17, Error ellipse: s-maj=8.1km s-min=5.3km az=146.1*

SZGRF ***31*** *02:06:10.7, 44.20N× 149.82E, h47km, mb4.2, Kuril Islands, Russia*

ISC 31 02:06:12.0±0.6, 4412N±004×14909E±005, h48km±4km, h44km±4.6km:pP-P,n214,σ1§32/229,mb4.5/79,MS4.1/17, 5C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**1.42**	**322**	*b*	*i*PN	**Pn**	**02 06 31.0**	**-4.3**
KUR				*i*	S	**Sn**	**02 06 53.0**	**+0.2**
KUR					pmax	pmax		
	comp=Z,10μm,1.6s							
KUR					pmax	pmax		
	comp=N,1μm,0.5s							
KUR					pmax	pmax		
	comp=E,760nm,0.5s							
KUR					pmax	pmax		
	comp=Z,3μm,0.5s							
KUR					smax			
	comp=N,9μm,0.5s							
KUR					smax			
	comp=E,4μm,0.5s							
KUR					smax			
	comp=N,20μm,1.4s							
KUR					smax			
	comp=E,12μm,1.4s							
KUR	**Kuril'sk**	**1.42**	**322**	⇑ *i*	P	**Pn**	**02 06 31.5**	**-3.8**
KUR				⇓ *i*	P		02 06 31.5	
KUR					AMB	AMB	02 06 50.3	
	comp=E,1μm,0.5s							
KUR					AMB	AMB	02 06 50.3	
	comp=E,760nm,0.5s							
KUR					AMB	AMB	02 06 50.3	
	comp=E,3μm,0.5s							
KUR				*i*	S	**Sn**	**02 06 53.0**	**+0.2**
KUR					A		02 06 54.0	
	comp=E,9μm,0.5s							
KUR					A		02 06 54.0	
	comp=E,4μm,0.5s							
KUR					A		02 06 55.0	
	comp=E,20μm,1.4s							
KUR					A		02 06 55.0	
	comp=E,12μm,1.4s							
YUK	**Yuzh-Kuril'sk**	**2.33**	**269**	*e*	PN	**Pn**	**02 06 47.2**	**-0.5**
YUK					S	**Sn**	**02 07 17.3**	**+2.2**
YUK					pmax	pmax		
	comp=Z,470nm,0.6s							
YUK					smax			
	comp=E,3μm,0.6s							
YUK					smax			
	comp=N,2μm,0.6s							
YUK					smax			
	comp=N,6μm,1.0s							
YUK					smax			
	comp=E,6μm,0.6s							
YUK					MLR	MLR		
	comp=Z,3μm,16.0s							
YUK					MLR	MLR		
	comp=E,4μm,11.0s							
YUK	**Yuzh-Kuril'sk**	**2.33**	**269**	*e*	P	**Pn**	**02 06 47.2**	**-0.5**
YUK					AMB	AMB	02 06 48.0	
	comp=E,470nm,0.6s							
YUK				*e*	S	**Sn**	**02 07 17.3**	**+2.2**
YUK					A		02 07 39.0	
	comp=E,6μm,0.6s							
YUK					A		02 07 39.0	
	comp=E,6μm,1.0s							
YUK					A		02 07 39.0	
	comp=E,2μm,0.6s							
YUK					A		02 07 39.0	
	comp=E,3μm,0.6s							
YUK					AMS	AMS	02 08 57.0	
	comp=E,4μm,11.0s							
YUK					AMS	AMS	02 08 57.0	
	comp=E,3μm,16.0s							
NEM2	**Nemuro 2**	**2.54**	**254**		P	**Pn**	**02 06 49.4**	**-1.2**
NEM2					eS	**Sn**	**02 07 19.3**	**-1.0**
JRA	**Rausu**	**2.87**	**268**		P	**Pn**	**02 06 55.3**	**+0.2**
JNK	**Nakash**	**3.21**	**262**		P	**Pn**	**02 06 59.4**	**-0.4**
JNK					eS	**Sn**	**02 07 38.2**	**+1.5**
JAK	**Akkeshi**	**3.38**	**252**		P	**Pn**	**02 07 01.3**	**-0.9**
JTKR	**Abashiri--Toko**	**3.74**	**270**		P	**Pn**	**02 07 07.6**	**+0.5**
JAR	**Ashorobuto**	**3.94**	**260**		P	**Pn**	**02 07 10.1**	**+0.2**
JOB	**Onbets**	**4.01**	**254**		P	**Pn**	**02 07 10.8**	**0.0**
JMP	**Maruseppu**	**4.13**	**270**		P	**Pn**	**02 07 13.2**	**+0.7**
JCH	**Churui**	**4.44**	**252**		P	**Pn**	**02 07 16.5**	**-0.2**
JCH					eS	**Sn**	**02 08 08.4**	**+1.4**
JKK2	**Kamakawa 2**	**4.58**	**269**		P	**Pn**	**02 07 20.0**	**+1.3**
ASAJ	**Asahikawa**	**4.68**	**272**		Pn	**Pn**	**02 07 17.2**	**-2.7**
	baz=92,slow=7.1,SNR=2.0							
ASAJ					LR	LR	02 09 26.7	
	comp=E,2μm,19.8s,baz=16,slow=43							
JFR	**Furan**	**4.81**	**261**		P	**Pn**	**02 07 23.3**	**+1.5**
JEM	**Erimo**	**4.83**	**246**		P	**Pn**	**02 07 22.4**	**+0.4**
ERM	**Erimo**	**4.83**	**246**	*e*	Pn	**Pn**	**02 07 22.2**	**+0.2**
ERM					eSn	Sn	02 08 48.7	+32
JNBK	**Urakawa-nobuka**	**4.98**	**251**		P	**Pn**	**02 07 23.5**	**-0.7**
JBT2	**Biratori 2**	**5.08**	**257**		P	**Pn**	**02 07 25.3**	**-0.1**
JSS	**Shosan**	**5.21**	**276**		P	**Pn**	**02 07 30.0**	**+2.8**
JWK2	**Keihoku**	**5.26**	**286**		P	**Pn**	**02 07 30.9**	**+2.9**
YSS	**Yuzh-Sakhalins**	**5.28**	**305**	*e*	Pn	**Pn**	**02 07 28.1**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.28**	**305**	*e*	P	**Pn**	**02 07 27.9**	**-0.3**
YSS				*e*	S	**Sn**	**02 08 26.0**	**-1.7**
YSS					A		02 08 33.0	
	comp=E,40nm,0.8s							
YSS					A		02 08 33.0	
	comp=E,50nm,0.6s							
YSS					AMS	AMS	02 09 41.0	
	comp=E,2μm,18.0s							
YSS					AMS	AMS	02 09 41.0	
	comp=E,900nm,17.0s							
YSS					AMS	AMS	02 09 41.0	
	comp=E,1μm,17.0s							
JHR	**Hokuryu**	**5.33**	**269**		P	**Pn**	**02 07 31.3**	**+2.3**
JEW	**Eniwo**	**5.71**	**260**		P	**Pn**	**02 07 35.5**	**+1.5**
JNB	**Noboribetsu**	**6.10**	**257**		P	**Pn**	**02 07 39.7**	**+0.2**
JNB					eS	**Sn**	**02 08 48.4**	**+0.4**
JSK	**Shakotan**	**6.29**	**266**		P	**Pn**	**02 07 43.9**	**+1.9**
JKB	**Kayabe**	**6.31**	**252**		P	**Pn**	**02 07 42.0**	**-0.4**
JKB					eS	**Sn**	**02 08 51.1**	**-2.1**
JYM2	**Yakumo 2**	**6.69**	**256**		P	**Pn**	**02 07 47.4**	**-0.1**
JANG	**Nango**	**6.75**	**239**		P	**Pn**	**02 07 45.9**	**-2.5**
JANG					eS	**Sn**	**02 08 58.0**	**-5.9**
JSH	**Shimam**	**6.75**	**261**		P	**Pn**	**02 07 49.0**	**+0.6**
JTM	**Tenmabayashi**	**6.80**	**243**		P	**Pn**	**02 07 48.4**	**-0.7**
JTM					eS	**Sn**	**02 09 01.3**	**-3.9**
JTH	**Tanohata**	**6.81**	**235**		P	**Pn**	**02 07 46.1**	**-3.1**
JTH					eS	**Sn**	**02 08 57.8**	**-7.5**
JSR	**Shiriuchi**	**6.88**	**251**		P	**Pn**	**02 07 49.8**	**-0.4**
UGL	**Uglegorsk**	**6.93**	**318**	*e*	P	**Pn**	**02 07 52.0**	**+1.2**
UGL					AMB	AMB	02 07 57.0	
	comp=E,20nm,0.6s							
UGL					AMS	AMS	02 10 49.0	
	comp=E,1μm,15.0s							
UGL					AMS	AMS	02 10 49.0	
	comp=E,2μm,17.0s							
UGL					AMS	AMS	02 10 49.0	
	comp=E,2μm,16.0s							
JOSM	**Okushiri--Mats**	**7.33**	**257**		P	**Pn**	**02 07 56.1**	**-0.2**
OFUJ	**Ofunato**	**7.50**	**230**		P	**Pn**	**02 07 55.7**	**-2.9**
OFUJ					eS	**Sn**	**02 09 16.5**	**-5.8**
JRG	**Rokugo**	**7.88**	**236**		P	**Pn**	**02 08 02.9**	**-1.0**
JRG					eS	**Sn**	**02 09 27.7**	**-4.1**
TYV	**Tymovskoe**	**8.03**	**329**	*e*	P	**Pn**	**02 08 06.0**	**+0.1**
TYV					AMB	AMB	02 08 11.0	
	comp=E,20nm,0.8s							
TYV					AMB	AMB	02 08 11.0	
	comp=E,11nm,0.8s							
TYV					AMS	AMS	02 11 16.0	
	comp=E,1μm,15.0s							
TYV					AMS	AMS	02 11 16.0	
	comp=E,2μm,15.0s							
TYV					AMS	AMS	02 11 16.0	
	comp=E,2μm,16.0s							
SKR	**Severo-Kuril's**	**8.11**	**33**	*e*	P	**Pn**	**02 08 02.5**	**-4.5**
SKR					AMB	AMB	02 08 05.9	
	comp=E,30nm,0.5s							
SKR					AMB	AMB	02 08 05.9	
	comp=E,80nm,0.5s							
JIO	**Ouri**	**8.12**	**228**		P	**Pn**	**02 08 03.0**	**-4.2**
JIO					eS	**Sn**	**02 09 30.1**	**-7.4**
TEY	**Ternei**	**8.96**	**280**	*e*	P	**Pn**	**02 08 23.0**	**+4.3**
TEY					AMS	AMS	02 12 29.0	
	comp=E,2μm,16.0s							
JFK	**Kawauchi**	**9.18**	**226**		P	**Pn**	**02 08 19.0**	**-2.7**
MJAR	**Matsushiro Arr**	**11.23**	**231**		Pn	**Pn**	**02 08 48.5**	**-1.1**
	baz=33,slow=14,SNR=1.9							
KLR	**Kul'dur**	**12.95**	**299**	*e*	PN	**Pn**	**02 09 14.7**	**+1.6**
KLR					MLR	MLR		
	comp=E,600nm,13.0s							
KLR					MLR	MLR		
	comp=Z,2μm,13.0s							
MA2	**Magadan**	**15.52**	**3**	*i*	P	**Pn**	**02 09 50.8**	**+3.5**
CN2	**Changchun**	**17.02**	**277**	*e*	P	**Pn**	**02 10 07.0**	**+0.7**
CN2					AMB	AMB		
	comp=Z,10.0nm,0.9s							
CN2					LR	LR		
	comp=Z,700nm,16.0s							
ZEA	**Zeya**	**17.22**	**312**	*e*	P	**Pn**	**02 10 07.1**	**-1.6**
ZEA					AMB	AMB	02 10 12.2	
	comp=Z,12nm,1.0s							
JNU	**Nakatsue**	**17.93**	**238**		LR	LR	02 18 25.2	
	comp=Z,382nm,18.4s,baz=350,slow=41							
SNY	**Shenyang**	**18.79**	**272**	⇑	P	**Pn**	**02 10 29.3**	**+1.3**
SNY					AMB	AMB		
	comp=Z,12nm,0.9s							
SNY					AMB	AMB		
	comp=Z,157nm,3.9s							
SNY					LR	LR		
	comp=N,366nm,16.9s							
SNY					LR	LR		
	comp=E,459nm,19.8s							
SNY					LR	LR		
	comp=Z,538nm,19.4s							
SEY	**Seymchan**	**18.95**	**5**	⇓ *e*	P	**Pn**	**02 10 26.2**	**-3.5**
HIA	**Hailar**	**20.71**	**295**	*i*	P	**P**	**02 10 42.3**	**-5.6**
YAK	**Yakutsk**	**21.25**	**334**	*i*	P	**P**	**02 10 53.6**	**0.0**
YAK					pmax	pmax		
	comp=Z,15nm,0.6s,mb4.5							
BJI	**Beijing**	**24.67**	**272**		P	**P**	**02 11 28.8**	**+0.7**
BJI					AMB	AMB		
	comp=Z,18nm,1.1s,mb4.5							
BJI					LR	LR		
	comp=N,283nm,17.6s,MS4.2							
BJI					LR	LR		
	comp=E,592nm,19.6s,MS4.2							
BJI					LR	LR		
	comp=E,453nm,19.6s,MS4.0							
SSE	**Sheshan**	**25.51**	**249**	*e*	P	**P**	**02 11 33.0**	**-2.7**
SSE					AP	pP	02 11 42.3	-5.9
SSE					S	**S**	**02 15 59.5**	**-0.2**
SSE					XS	sS	02 16 14.3	-6.5
SSE					AMB	AMB		
	comp=Z,48nm,0.7s,mb5.1							
SSE					AMB	AMB		
	comp=Z,110nm,5.3s							
SSE					LR	LR		
	comp=N,272nm,19.9s,MS3.9							
SSE					LR	LR		
	comp=E,233nm,20.0s,MS3.9							
SSE					LR	LR		
	comp=Z,381nm,17.9s,MS4.0							
BOD	**Bodaibo**	**25.66**	**315**	*e*	P	**P**	**02 11 32.8**	**-4.0**
BOD					pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8							
NJ2	**Nanjing**	**26.52**	**253**	*e*	P	**P**	**02 11 44.5**	**-0.4**
NJ2					AP	pP	02 11 48.3	-9.1
NJ2					PP		02 12 29.3	
NJ2					S	**S**	**02 16 20.0**	**+4.3**
NJ2					XS	sS	02 16 29.0	-7.9
NJ2					AMB	AMB		
	comp=Z,20nm,0.5s,mb4.9							
NJ2					AMB	AMB		
	comp=Z,130nm,4.0s							
NJ2					LR	LR		
	comp=N,1μm,15.6s,MS4.6							
NJ2					LR	LR		
	comp=E,830nm,18.2s,MS4.6							
NJ2					LR	LR		
	comp=Z,820nm,18.2s,MS4.3							
TIXI	**Tiksi**	**29.30**	**347**	*i*	P	**P**	**02 12 09.2**	**-0.1**
SONM	**Songino Array**	**29.63**	**292**		P	**P**	**02 12 12.2**	**-0.2**
SONM					pmax	pmax		
	comp=Z,1.0nm,0.5s							
SONM					MLR	MLR		
	comp=Z,552nm,18.5s							
SONM	**Songino Array**	**29.63**	**292**		P	**P**	**02 12 12.2**	**-0.3**
	comp=Z,1.3nm,0.5s,mb3.9,baz=78,slow=8.4,SNR=18							
SONM					LR	LR	02 25 27.6	
	comp=Z,552nm,18.5s,MS4.2,baz=280,slow=39							
WHN	**Wuhan**	**30.53**	**255**	*e*	P	**P**	**02 12 23.5**	**+2.9**
WHN					S	**S**	**02 17 20.8**	**+2.1**
WHN					LR	LR		
	comp=Z,948nm,17.0s,MS4.5							
TLY	**Talaya**	**30.97**	**300**	*e*	P	**P**	**02 12 22.4**	**-1.8**
TLY					pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4							
TLY					MLR	MLR		
	comp=Z,470nm,16.0s,MS4.2							
ZAK	**Zakamensk**	**31.32**	**298**	*e*	P	**P**	**02 12 27.1**	**-0.2**
ZAK					pmax	pmax		
	comp=Z,1.0nm,1.4s,mb3.5							
LZH	**Lanzhou**	**35.16**	**273**	*e*	P	**P**	**02 13 02.0**	**+1.1**
LZH					AP	pP	02 13 14.5	+0.8
LZH					AMB	AMB		
	comp=Z,35nm,1.5s,mb5.1							
LZH					AMB	AMB		
	comp=Z,123nm,4.5s							
LZH					LR	LR		
	comp=E,459nm,15.6s							
LZH					LR	LR		
	comp=Z,383nm,17.0s,MS4.2							
TTA	**Tatalina**	**36.26**	**39**	*e*	P	**P**	**02 13 10.0**	**0.0**
	comp=Z,4.2nm,0.8s,mb4.4							
TTA	**Tatalina**	**36.26**	**39**	*e*	P	**P**	**02 13 10.0**	**-0.1**
TTA					pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4							
SVW2	**Sparrevohn**	**36.35**	**42**	*e*	P	**P**	**02 13 13.4**	**+2.5**
GTA	**Gaotai**	**36.61**	**280**	*e*	P	**P**	**02 13 14.5**	**+1.1**
GTA					AP	pP	02 13 19.0	-7.1
GTA					XP	sP	02 13 22.0	-10
GTA					S	**S**	**02 18 50.8**	**-1.9**
GTA					AMB	AMB		
	comp=Z,5.0nm,0.8s,mb4.4							
GTA					AMB	AMB		
	comp=Z,87nm,8.4s							
GTA					LR	LR		
	comp=N,277nm,17.2s,MS4.4							
GTA					LR	LR		
	comp=E,339nm,13.0s,MS4.4							
GTA					LR	LR		
	comp=Z,252nm,14.9s,MS4.1							
IMA2	**Indian Mountai**	**37.59**	**34**	*e*	P	**P**	**02 13 20.2**	**-1.1**
CD2	**Chengdu**	**37.84**	**265**		P	**P**	**02 13 24.5**	**+0.7**
CD2					AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1							
COLA	**College**	**39.95**	**36**	*e*	P	**P**	**02 13 43.5**	**+2.4**
	comp=Z,4.8nm,0.8s,mb4.3							
COLA	**College**	**39.95**	**36**	*i*	P	**P**	**02 13 41.1**	**0.0**
ZALV	**Zalesovo Beam**	**41.90**	**307**		P	**P**	**02 13 54.9**	**-2.4**
	comp=Z,1.2nm,0.4s,mb3.9,baz=81,slow=8.3,SNR=6.4							
ZALV					PcP	PcP	02 15 51.6	-0.4
	comp=Z,1.7nm,0.6s,baz=93,slow=2.9,SNR=6.5							
ZALV					LR	LR	02 32 28.4	
	comp=Z,161nm,18.6s,MS3.9,baz=58,slow=38							
ZAL	**Zalesovo**	**41.91**	**307**		P	**P**	**02 13 54.9**	**-2.4**
ZAL							02 15 51.6	
EGAK	**Eagle**	**42.81**	**36**	*e*	P	**P**	**02 14 03.3**	**-1.2**
	comp=Z,10nm,1.2s,mb4.4							
WMQ	**Urumqi**	**43.26**	**292**	*e*	P	**P**	**02 14 10.5**	**+2.1**
INK	**Inuvik**	**45.38**	**31**		P	**P**	**02 14 24.2**	**-0.8**
INK					pmax	pmax		
	comp=Z,2.0nm,0.5s							
INK	**Inuvik**	**45.38**	**31**		P	**P**	**02 14 24.1**	**-0.9**
	comp=Z,2.4nm,0.5s,mb4.3,baz=260,slow=5.5,SNR=12							
MK31	**Makanchi Array**	**45.66**	**298**	*e*	P	**P**	**02 14 27.6**	**+0.1**
MKAR	**Makanchi Array**	**45.66**	**298**		P	**P**	**02 14 26.8**	**-0.7**
MKAR					LR	LR	02 35 04.4	
MKAR	**Makanchi Array**	**45.66**	**298**		P	**P**	**02 14 27.3**	**-0.2**
MKAR					pmax	pmax		
	comp=Z,5.0nm,0.8s							
MKAR	**Makanchi Array**	**45.66**	**298**		P	**P**	**02 14 26.8**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.5,baz=74,slow=9.4,SNR=17							
MKAR					LR	LR	02 35 04.4	
	comp=Z,592nm,18.2s,MS4.6,baz=357,slow=38							
KURK	**Kurchatov**	**46.49**	**304**	⇑ *e*	P	**P**	**02 14 32.7**	**-1.3**
BRVK	**Borovoye**	**50.40**	**310**	*e*	P	**P**	**02 15 02.9**	**-1.1**
	comp=Z,2.1nm,0.6s,mb4.3							
BRVK	**Borovoye**	**50.40**	**310**	*e*	P	**P**	**02 15 02.9**	**-1.1**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3							
TAPN	**Taplejung**	**51.40**	**272**	*e*	P	**P**	**02 15 13.7**	**+1.8**
	comp=Z,6.9nm,0.5s,mb4.8							
ULHL	**Ulahol**	**51.51**	**295**		P	**P**	**02 15 13.6**	**+1.0**
	SNR=13							
TKM2	**Tokmak 2**	**51.61**	**296**	*e*	P	**P**	**02 15 13.7**	**+0.4**
	comp=Z,9.8nm,1.0s,mb4.7							
TKM2	**Tokmak 2**	**51.61**	**296**	*e*	P	**P**	**02 15 13.7**	**+0.4**
TKM2					pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7							
TKM2	**Tokmak 2**	**51.61**	**296**		P	**P**	**02 15 14.1**	**+0.8**
	SNR=8.6							
ODAN	**Odare**	**51.92**	**272**	*e*	P	**P**	**02 15 16.8**	**+1.0**
	comp=Z,9.8nm,0.4s,mb5.1							
KBK	**Karagaybulak**	**52.16**	**296**		P	**P**	**02 15 18.2**	**+0.8**
	SNR=8.6							
KZA	**Kyzart**	**52.24**	**295**		P	**P**	**02 15 19.9**	**+2.0**
	SNR=21							
FRU	**Bishkek**	**52.29**	**296**	*e*	P	**P**	**02 15 19.0**	**+0.7**
JIRN	**Jiri**	**52.31**	**274**	*e*	P	**P**	**02 15 19.7**	**+1.0**
	comp=Z,8.7nm,0.5s,mb4.9							
AAK	**Ala-Archa**	**52.46**	**296**		P	**P**	**02 15 20.3**	**+0.7**
	SNR=5.8							
UCH	**Uchtor**	**52.65**	**296**	*e*	P	**P**	**02 15 21.6**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.2							
EKS2	**Erkin-Say**	**52.91**	**297**	*e*	P	**P**	**02 15 23.2**	**+0.3**
	comp=Z,6.2nm,0.6s,mb4.7							
EKS2	**Erkin-Say**	**52.91**	**297**		P	**P**	**02 15 23.7**	**+0.8**
	SNR=13							
AML	**Almayashu**	**53.22**	**296**		P	**P**	**02 15 26.7**	**+1.4**
	SNR=8.2							
GKN	**Gorkha**	**53.23**	**275**	*e*	P	**P**	**02 15 26.1**	**+0.6**
	comp=Z,6.2nm,0.4s,mb4.9							
KOLN	**Koldanda**	**54.11**	**276**	*e*	P	**P**	**02 15 32.8**	**+0.9**
	comp=Z,13nm,0.9s,mb4.9							
YKA	**Yellowknife Ar**	**54.71**	**34**	*i*	P	**P**	**02 15 34.5**	**-1.3**
YKA	**Yellowknife Ar**	**54.71**	**34**		P	**P**	**02 15 34.6**	**-1.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=299,slow=7.0,SNR=9.3							
YKA					LR	LR	02 41 34.0	
	comp=Z,61nm,19.6s,MS3.7,baz=10.0,slow=39							
KK31	**Karatay Array**	**54.78**	**299**	*i*	P	**P**	**02 15 36.5**	**0.0**
KK31					pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7							
ARU	**Arti**	**55.03**	**317**	*e*	P	**P**	**02 15 36.7**	**-1.5**
	comp=Z,4.0nm,0.6s,mb4.6							
ARU	**Arti**	**55.03**	**317**	*e*	P	**P**	**02 15 36.7**	**-1.5**
ARU					pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6							
ARCES	**ARCESS Array B**	**59.39**	**340**		P	**P**	**02 16 05.8**	**-2.9**
ARCES					pmax	pmax		
	comp=Z,3.0nm,0.8s							
ARCES					MLR	MLR		
	comp=Z,74nm,20.5s							
ARCES	**ARCESS Array B**	**59.39**	**340**		P	**P**	**02 16 05.8**	**-3.0**
	comp=Z,3.2nm,0.8s,mb4.4,baz=43,slow=6.0,SNR=6.2							
ARCES					LR	LR	02 47 00.2	
	comp=Z,74nm,20.5s,MS3.8,baz=64,slow=42							
NEW	**Newport**	**61.03**	**50**		P	**P**	**02 16 19.9**	**-0.4**
NEW					pmax	pmax		
	comp=Z,2.0nm,0.8s							
NEW	**Newport**	**61.03**	**50**		P	**P**	**02 16 19.9**	**-0.4**
	comp=Z,1.8nm,0.8s,mb4.3,baz=281,slow=2.3,SNR=3.4							
WDC	**Whiskeytown Da**	**62.28**	**59**	*e*	P	**P**	**02 16 32.1**	**+3.3**
	comp=Z,6.7nm,1.4s,mb4.6							
WDC	**Whiskeytown Da**	**62.28**	**59**	*e*	P	**P**	**02 16 32.1**	**+3.3**
WDC					pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.6							
JOF	**Joensuu**	**62.41**	**333**	*ep*		P	**02 16 27.5**	**-1.8**
	comp=Z,5.1nm,0.3s,mb5.1							
JOF	**Joensuu**	**62.41**	**333**	*e*	P	**P**	**02 16 27.5**	**-1.8**
JOF					pmax	pmax		
	comp=Z,5.0nm,0.3s,mb5.1							
BMO	**Blue Mountains**

OBN						MLR	MLR			
	comp=Z,100nm,14.0s,MS4.2									
IMW	**Indian Meadow**	**67.10**	**51**	*eP*		**P**		**02 17 00.2**	**0.0**	
	comp=Z,4.7nm,1.0s,mb4.5									
MOOW	**Moose Ponds**	**67.30**	**51**	*eP*		**P**		**02 17 04.0**	**+2.5**	
	comp=Z,3.8nm,1.1s,mb4.3									
TPAW	**Teton Pass**	**67.35**	**51**	*eP*		**P**		**02 17 04.0**	**+2.2**	
	comp=Z,8.6nm,1.2s,mb4.7									
LOHW	**Long Hollow**	**67.47**	**51**	*eP*		**P**		**02 17 06.1**	**+3.6**	
	comp=Z,3.7nm,0.9s,mb4.4									
LAO	**LASA Array**	**67.83**	**46**	*eP*		**P**		**02 17 06.1**	**+1.4**	
	comp=Z,2.3nm,0.5s,mb4.5									
DUG	**Dugway**	**68.39**	**55**	*eP*		**P**		**02 17 10.9**	**+2.6**	
	comp=Z,3.6nm,0.9s,mb4.4									
DUG	**Dugway**	**68.39**	**55**	*eP*		**P**		**02 17 10.9**	**+2.5**	
DUG					pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.5									
BW06	**Boulder Array**	**68.60**	**51**	*eP*		**P**		**02 17 11.8**	**+2.3**	
	comp=Z,3.8nm,1.1s,mb4.2									
PDAR	**Pinedale Array**	**68.60**	**51**	P		**P**		**02 17 07.8**	**-1.8**	
	comp=Z,0.4nm,0.5s,mb3.6,baz=199,slow=0.8,SNR=6.3									
ASAR	**Alice Springs**	**68.87**	**195**	P		**P**		**02 17 14.3**	**+3.0**	
	comp=Z,0.4nm,0.8s,mb3.4,baz=12,slow=6.2,SNR=3.6									
NB2	**NORSAR Subarra**	**69.76**	**340**	P		**P**		**02 17 15.2**	**-1.3**	
	comp=Z,3.9nm,0.4s,mb4.7,baz=28,slow=6.5									
NB2	**NORSAR Subarra**	**69.76**	**340**	P		**P**		**02 17 15.2**	**-1.3**	
NB2					pmax	pmax				
	comp=Z,4.0nm,0.4s,mb4.7									
NOA	**NORSAR Array B**	**69.76**	**340**	P		**P**		**02 17 15.2**	**-1.3**	
NOA					pmax	pmax				
	comp=Z,6.0nm,0.5s									
NOA					MLR	MLR				
	comp=Z,46nm,18.2s									
NOA	**NORSAR Array B**	**69.76**	**340**	P		**P**		**02 17 15.2**	**-1.3**	
	comp=Z,5.6nm,0.5s,mb4.8,baz=30,slow=6.4,SNR=43									
NOA					LR	LR		02 52 22.1		
	comp=Z,46nm,18.2s,MS3.8,baz=180,slow=40									
ULM	**Lac du Bonnet**	**70.36**	**38**	P		**P**		**02 17 21.1**	**+0.7**	
	comp=Z,1.8nm,0.9s,mb4.0,baz=338,slow=9.7,SNR=2.8									
SRU	**San Rafael**	**70.44**	**54**	*eP*		**P**		**02 17 21.8**	**+0.7**	
	comp=Z,2.3nm,0.9s,mb4.1									
SRU	**San Rafael**	**70.44**	**54**	*eP*		**P**		**02 17 21.8**	**+0.8**	
SRU					pmax	pmax				
	comp=Z,2.0nm,0.9s,mb4.0									
KIV	**Kislovodsk**	**70.56**	**313**	*eP*		**P**		**02 17 23.1**	**+1.5**	
KIV					pmax	pmax				
	comp=Z,27nm,1.9s,mb4.8									
ZEI	**Tsey**	**70.71**	**311**	*eP*		**P**		**02 17 21.8**	**-0.8**	
ZEI				*i*		pP		02 17 32.4	-4.0	
ZEI					pmax	pmax				
	comp=Z,3.0nm,0.7s,mb4.3									
ONI	**Oni**	**71.08**	**311**	P		**P**		**02 17 25.7**	**+0.8**	
AKASG	**Malin Array Be**	**72.11**	**325**	*i* P		**P**		**02 17 30.1**	**-0.8**	
AKASG					pmax	pmax				
	comp=Z,2.0nm,0.4s									
AKASG	**Malin Array Be**	**72.11**	**325**	P		**P**		**02 17 30.1**	**-0.8**	
	comp=Z,2.1nm,0.4s,mb4.4,baz=36,slow=6.1,SNR=23									
KIEV	**Kiev**	**72.12**	**325**	*eP*		**P**		**02 17 29.8**	**-1.1**	
	comp=Z,14nm,1.3s,mb4.7									
KIEV	**Kiev**	**72.12**	**325**	*eP*		**P**		**02 17 29.8**	**-1.1**	
KIEV					pmax	pmax				
	comp=Z,14nm,1.3s,mb4.7									
SMCO	**Snowmass**	**72.44**	**52**	*eP*		**P**		**02 17 34.5**	**+1.3**	
	comp=Z,6.9nm,1.2s,mb4.5									
ANN	**Anapa**	**72.67**	**316**	*eP*		**P**		**02 17 34.1**	**-0.2**	
ANN					pmax	pmax				
	comp=Z,9.0nm,0.9s,mb4.7									
ISCO	**Idaho Springs**	**72.79**	**51**	*eP*		**P**		**02 17 37.3**	**+2.1**	
	comp=Z,1.6nm,0.8s,mb4.0									
ISCO	**Idaho Springs**	**72.79**	**51**	*eP*		**P**		**02 17 37.3**	**+2.2**	
ISCO					pmax	pmax				
	comp=Z,2.0nm,0.8s,mb4.1									
KWP	**Kalwaria**	**75.57**	**327**	*eP*		**P**		**02 17 51.3**	**+0.1**	
	comp=Z,10nm,0.8s,mb4.8									
KWP	**Kalwaria**	**75.57**	**327**	*eP*		**P**		**02 17 51.3**	**+0.1**	
KWP					pmax	pmax				
	comp=Z,10.0nm,0.8s,mb4.8									
KWP	**Kalwaria**	**75.57**	**327**	*i*	*iP*	**P**		**02 17 51.6**	**+0.4**	
OJC	**Ojcow**	**76.20**	**329**	*eP*		**P**		**02 17 55.1**	**+0.4**	
SCHQ	**Schefferville**	**76.80**	**20**	P		**P**		**02 17 57.2**	**-0.9**	
SCHQ					LR	LR		02 53 06.7		
SCHQ	**Schefferville**	**76.80**	**20**	P		**P**		**02 17 57.2**	**-0.9**	
	comp=Z,2.4nm,0.8s,mb4.2,baz=260,slow=12,SNR=3.5									
SCHQ					LR	LR		02 53 06.7		
	comp=Z,84nm,18.2s,MS4.1,baz=93,slow=37									
MALT	**Malatya**	**76.80**	**311**	*eP*		**P**		**02 17 59.8**	**+1.4**	
	comp=Z,1.4nm,0.8s,mb3.9									
MALT	**Malatya**	**76.80**	**311**	*eP*		**P**		**02 17 59.8**	**+1.4**	
MALT					pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.8									
VRI	**Vrincioaia**	**76.89**	**323**	*i*	*iP*	**P**		**02 18 00.1**	**+1.4**	
DPC	**Dobruska-Polom**	**77.33**	**331**	*eP*		**P**		**02 18 02.0**	**+0.9**	
DPC					*ex*	x		02 18 14.4		
MORC	**Moravsky Berou**	**77.38**	**330**	*eP*		**P**		**02 18 01.9**	**+0.5**	
	comp=Z,18nm,1.5s,mb4.8									
MORC	**Moravsky Berou**	**77.38**	**330**	*eP*		**P**		**02 18 01.9**	**+0.5**	
MORC					pmax	pmax				
	comp=Z,18nm,1.5s,mb4.8									
MLR	**Muntele Rosu**	**77.52**	**323**	*i*	*iP*	**P**		**02 18 01.9**	**-0.4**	
MIB	**Mutribah**	**77.55**	**299**	*eP*		**P**		**02 18 02.6**	**-0.2**	
MIB					AMb	AMB		02 18 03.9		
	comp=Z,6.0nm,0.5s,mb4.8									
CLL	**Collm**	**77.63**	**334**	*i* P		**P**		**02 18 02.1**	**-0.6**	
CLL				*i*		pP		02 18 10.8	-5.9	
CLL				*i*		pP		02 18 16.5	-0.2	
CLL					pmax	pmax				
	comp=Z,6.0nm,0.6s,mb4.7									
CLL	**Collm**	**77.63**	**334**	*i* P		**P**		**02 18 02.1**	**-0.6**	
	comp=Z,6.0nm,0.6s,mb4.7									
CLL				*i*	x	x		02 18 10.8		
CLL				*i*	pPcP	pP		02 18 16.5	-0.2	
PVCC	**Panska Ves**	**77.78**	**332**	*eP*		**P**		**02 18 04.0**	**+0.4**	
PVCC				*ex*		x		02 18 16.4		
QRN	**Al-Qurain**	**77.92**	**298**	*eP*		**P**		**02 18 04.9**	**+0.1**	
QRN					AMb	AMB		02 18 05.8		
	comp=Z,17nm,0.4s,mb5.3									
RST	**Umm Al-Ruwaisa**	**77.98**	**299**	*eP*		**P**		**02 18 04.9**	**-0.2**	
RST					AMb	AMB		02 18 06.3		
	comp=Z,7.6nm,0.8s,mb4.7									
NAY	**Al-Naaiem**	**78.00**	**299**	*eP*		**P**		**02 18 04.9**	**-0.3**	
NAY					AMb	AMB		02 18 07.1		
	comp=Z,6.3nm,1.1s,mb4.5									
RDF	**Al-Radifah**	**78.03**	**299**	*eP*		**P**		**02 18 05.5**	**+0.1**	
RDF					AMb	AMB		02 18 09.4		
	comp=Z,14nm,0.8s,mb4.9									
PRU	**Pruhonice**	**78.25**	**332**	*eP*		**P**		**02 18 06.9**	**+0.7**	
PRU				*ex*		x		02 18 17.7		
BZS	**Buzias**	**79.25**	**325**	*i*	*iP*	**P**		**02 18 11.0**	**-0.8**	
KHC	**Kasperske Hory**	**79.31**	**332**	*eP*		**P**		**02 18 11.9**	**-0.2**	
KHC				*ex*		x		02 18 24.2		
GERES	**GERESS Array B**	**79.51**	**332**	P		**P**		**02 18 12.8**	**-0.3**	
	comp=Z,1.1nm,0.5s,mb4.0,baz=33,slow=5.7,SNR=17									
GERES					LR	LR		03 00 10.4		
	comp=Z,113nm,18.3s,MS4.2,baz=63,slow=41									
GRA1	**Grafenberg Arr**	**79.60**	**334**	*eP*		**P**		**02 18 13.9**	**+0.3**	
	comp=Z,3.0nm,1.1s,mb4.1									
GRA1					*ep*	pP		02 18 27.5	-0.1	
GRF	**Grafenberg Arr**	**79.60**	**334**	*eP*		**P**		**02 18 13.9**	**+0.3**	
GRF					*e**PP	pP		02 18 27.5	-0.1	
GRF					pmax	pmax				
	comp=Z,3.0nm,1.1s,mb4.1									
GRF	**Grafenberg Arr**	**79.60**	**334**	*eP*		**P**		**02 18 13.9**	**+0.3**	
GRF					*e**PP	pP		02 18 27.5	-0.1	
GRF					pmax	pmax				
	comp=Z,3.0nm,1.1s,mb4.1									
GRF	**Grafenberg Arr**	**79.60**	**334**	*eP*		**P**		**02 18 13.9**	**+0.3**	
	comp=Z,3.0nm,1.1s,mb4.1									
GRF					*ep*	pP		02 18 27.5	-0.1	
CDF	**Champ du Feu**	**81.95**	**335**	*eP*		**P**		**02 18 24.8**	**-1.4**	
LOR	**Lormes**	**83.97**	**337**	*eP*		**P**		**02 18 35.1**	**-1.6**	
	comp=Z,6.3nm,0.8s,mb4.5									
LOR	**Lormes**	**83.97**	**337**	*eP*		**P**		**02 18 35.1**	**-1.6**	
	comp=Z,3.2nm,0.8s,mb4.5									
LOR	**Lormes**	**83.97**	**337**	*eP*		**P**		**02 18 35.1**	**-1.6**	
LOR					pmax	pmax				
	comp=Z,3.0nm,0.8s,mb4.5									
SSF	**Saint Saulge**	**84.26**	**337**	*eP*		**P**		**02 18 36.5**	**-1.7**	
	comp=Z,14nm,1.2s,mb4.7									
SSF	**Saint Saulge**	**84.26**	**337**	*eP*		**P**		**02 18 36.5**	**-1.7**	
	comp=Z,7.2nm,1.2s,mb4.7									
SSF	**Saint Saulge**	**84.26**	**337**	*eP*		**P**		**02 18 36.5**	**-1.7**	
SSF					pmax	pmax				
	comp=Z,7.0nm,1.2s,mb4.7									
SMF	**Signal de Mont**	**84.55**	**337**	*eP*		**P**		**02 18 37.7**	**-1.9**	
	comp=Z,19nm,1.1s,mb4.8									
SMF	**Signal de Mont**	**84.55**	**337**	*eP*		**P**		**02 18 37.7**	**-1.9**	
	comp=Z,9.3nm,1.1s,mb4.8									
SMF	**Signal de Mont**	**84.55**	**337**	*eP*		**P**		**02 18 37.7**	**-1.9**	
SMF					pmax	pmax				
	comp=Z,9.0nm,1.1s,mb4.8									
LPL	**La Plagne**	**84.71**	**334**	*eP*		**P**		**02 18 37.6**	**-2.8**	
	comp=Z,4.8nm,0.7s,mb4.5									
LPL	**La Plagne**	**84.71**	**334**	*eP*		**P**		**02 18 37.6**	**-2.8**	
	comp=Z,2.4nm,0.7s,mb4.4									
LPL	**La Plagne**	**84.71**	**334**	*eP*		**P**		**02 18 37.6**	**-2.8**	
LPL					pmax	pmax				
	comp=Z,2.0nm,0.7s,mb4.4									
LPG	**La Plagne**	**84.72**	**334**	*eP*		**P**		**02 18 37.4**	**-3.1**	
	comp=Z,7.5nm,0.7s,mb4.6									
LPG	**La Plagne**	**84.72**	**334**	*eP*		**P**		**02 18 37.4**	**-3.1**	
	comp=Z,3.8nm,0.7s,mb4.6									
LPG	**La Plagne**	**84.72**	**334**	*eP*		**P**		**02 18 37.4**	**-3.1**	
LPG					pmax	pmax				
	comp=Z,4.0nm,0.7s,mb4.7									
MBDF	**Montbardon**	**85.40**	**334**	*eP*		**P**		**02 18 41.4**	**-2.5**	
	comp=Z,15nm,1.0s,mb4.8									
MBDF	**Montbardon**	**85.40**	**334**	*eP*		**P**		**02 18 41.4**	**-2.5**	
	comp=Z,7.3nm,1.0s,mb4.8									
MBDF	**Montbardon**	**85.40**	**334**	*eP*		**P**		**02 18 41.4**	**-2.5**	
MBDF					pmax	pmax				
	comp=Z,7.0nm,1.0s,mb4.8									
ORIF	**Oris-en-Rattie**	**85.51**	**335**	*eP*		**P**		**02 18 42.1**	**-2.4**	
	comp=Z,9.2nm,0.7s,mb4.8									
ORIF	**Oris-en-Rattie**	**85.51**	**335**	*eP*		**P**		**02 18 42.1**	**-2.4**	
	comp=Z,4.6nm,0.7s,mb4.8									
ORIF	**Oris-en-Rattie**	**85.51**	**335**	*eP*		**P**		**02 18 42.1**	**-2.4**	
ORIF					pmax	pmax				
	comp=Z,5.0nm,0.7s,mb4.8									
MFF	**Saint Martin d**	**85.66**	**339**	*eP*		**P**		**02 18 43.8**	**-1.4**	
	comp=Z,17nm,1.0s,mb4.9									
MFF	**Saint Martin d**	**85.66**	**339**	*eP*		**P**		**02 18 43.8**	**-1.4**	
	comp=Z,8.6nm,1.0s,mb4.9									
MFF	**Saint Martin d**	**85.66**	**339**	*eP*		**P**		**02 18 43.8**	**-1.4**	
MFF					pmax	pmax				
	comp=Z,9.0nm,1.0s,mb5.0									
KEST	**Kesra**	**92.52**	**328**	LR		LR		03 05 35.9		
	comp=Z,53nm,18.4s,MS4.0,baz=247,slow=39									
VNA2	**Neumayer--Watz**	**150.72**	**196**	*e*	PKPdf	PKPdf		02 25 50.6	-1.1	
VNA2				*e*				02 25 57.8		
VNA2				*e*				02 26 00.8		
VNA2				*e*				02 26 05.4		
VNA2				*e*				02 26 09.4		
VNA2				*e*				02 26 13.0		
VNA2				*e*				02 26 18.2		
VNA2				*e*				02 26 23.5		
VNA2				*e*				02 26 28.1		
VNA2				*e*				02 26 31.2		
VNA2				*e*				02 26 39.3		
VNA3	**Neumayer Olymp**	**150.88**	**194**	*e*	PKPdf	PKPdf		02 25 50.9	-1.1	
VNA3				*e*				02 25 57.1		
VNA3				*e*				02 26 01.0		
VNA3				*e*				02 26 06.0		
VNA3				*e*				02 26 10.5		
VNA3				*e*				02 26 13.7		
VNA3				*e*				02 26 18.7		
VNA3				*e*				02 26 23.7		
VNA3				*e*				02 26 28.3		
VNA3				*e*				02 26 30.9		
VNA3				*e*				02 26 39.4		
VNA1	**Neumayer--Stat**	**151.12**	**195**	*e*	PKPdf	PKPdf		02 25 50.2	-2.2	
VNA1				*e*				02 25 56.9		
VNA1				*e*				02 26 00.6		
VNA1				*e*				02 26 04.3		
VNA1				*e*				02 26 08.3		
VNA1				*e*				02 26 11.8		
VNA1				*e*				02 26 15.4		
VNA1				*e*				02 26 19.6		
VNA1				*e*				02 26 29.9		
VNA1				*e*				02 26 32.2		

*MOS **31** 02:31:37.2±0.5,54.16N×167.43E,h50km,mb3.8/1,Error ellipse: s-maj=36.6km s-min=22.4km az=173.6*
*KRSC **31** 02:31:37.5±1.7,54.12N×167.14E,h20km±20km,ML4.2*
*ISCJB **31** 02:31:40.0±1.6,54.19N±009×167.1E±0.1,h84km±23km, mb3.5/2,Error ellipse: s-maj=17.8km s-min=10.3km az=135.5*
*IDC **31** 02:31:44.3±4.5,5464N×17002E,h0km,mb3.4/3, mb1 3.8/3,mb1mx3.5/20,mbtmp3.4/3,Error ellipse: s-maj=148.7km s-min=35.7km az=178.0*
ISC 31 02:31:41.1±1.6,5422N±009×1672E±02,h73km±24km,n15, σ0°91/23,mb3.5/2,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**3.20**	**310**	*eP*		**Pn**	**02 32 28.6**	**-0.3**
KBTR				*i*	S	**Sn**	**02 33 05.6**	**-0.2**
MKZ	**Mys Kozlova**	**3.21**	**278**	*eP*		**Pn**	**02 32 28.0**	**-1.1**
MKZ				*i*	S	**Sn**	**02 33 05.1**	**-1.0**
TUMR	**Tumrok**	**4.21**	**288**	*eP*		**Pn**	**02 32 43.8**	**+1.0**
TUMR				*i*	S	**Sn**	**02 32 32.8**	**+2.1**
KMNR	**Kamenistaya**	**4.29**	**294**	*eP*		**Pn**	**02 32 42.5**	**-1.3**
SPN	**Mys Shipunski**	**4.40**	**258**	*eP*		**Pn**	**02 32 45.3**	**-0.1**
SPN				*i*	S	**Sn**	**02 33 34.8**	**-0.5**
NLC	**Nalytchevo**	**4.77**	**260**	*eP*		**Pn**	**02 32 50.1**	**-0.3**
NLC				*i*	S	**Sn**	**02 33 43.4**	**-1.0**
AVH	**Avacha**	**5.10**	**263**	*eP*		**Pn**	**02 32 55.6**	**+0.7**
AVH				*i*	S	**Sn**	**02 33 53.0**	**+0.6**
PET	**Petropavlovsk**	**5.21**	**260**	P		**Pn**	**02 32 57.2**	**+0.7**
PET				*i*	S	**Sn**	**02 33 55.7**	**+0.5**
GNL	**Ganaly**	**5.48**	**268**	*eP*		**Pn**	**02 33 01.0**	**+0.9**
RUS	**Russkaya**	**5.49**	**255**	*eP*		**Pn**	**02 32 59.9**	**-0.4**
RUS				*i*	S	**Sn**	**02 34 00.2**	**-1.8**
GRL	**Gorelyy**	**5.70**	**257**	*eP*		**Pn**	**02 33 04.3**	**+1.2**
GRL				*i*	S	**Sn**	**02 34 07.8**	**+0.7**
YKA	**Yellowknife Ar**	**39.42**	**46**	P		**P**	**02 39 02.7**	**-0.6**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.6s							
YKA	**Yellowknife Ar**	**39.42**	**46**	P		**P**	**02 39 02.7**	**-0.5**
	comp=Z,0.5nm,0.6s,mb3.5,baz=295,slow=8.5,SNR=8.6							
MKAR	**Makanchi Array**	**51.39**	**299**	P		pP	02 40 59.6	+3.1
	comp=Z,0.4nm,0.7s,baz=52,slow=7.5,SNR=2.7							
PDAR	**Pinedale Array**	**53.25**	**66**	P		**P**	**02 40 52.1**	**+0.3**
	comp=Z,0.2nm,0.4s,mb3.5,baz=348,slow=3.1,SNR=4.1							

*CSEM **31** 02:35:45.9±0.1,3796N×3092E,h5km,MD2.9,Error ellipse: s-maj=2.8km s-min=2.0km az=128.0*
*ISCJB **31** 02:35:46.7±0.5,3799N±004×3090E±005,h3km,Error ellipse: s-maj=6.4km s-min=4.3km az=140.7*
*ISK **31** 02:35:46.3,3797N×3088E,h3km,MD2.9*
*DDA **31** 02:35:47.3,3800N×3101E,h5km±3km,Md3.2*
ISC 31 02:35:47.1±0.7,3799N±004×3090E±005,h4km±7km,n16, σ1°05/23,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ISP	**Isparta**	**0.34**	**244**	*i*	PG	**Pg**	**02 35 53.1**	**-0.5**
ISP					SG	**Sg**	**02 35 58.5**	**+0.4**
BCK	**Bucak**	**0.59**	**205**		PG	**Pg**	**02 35 57.9**	**-0.4**
SHUT	**Suhut-Afyon**	**0.62**	**334**		PG	**Pg**	**02 35 59.6**	**+0.6**
KDHN	**Kadinhani**	**1.09**	**61**	*i*	P	**Pg**	**02 36 05.9**	**-2.1**
KDHN				*i*	S	**Sg**	**02 36 23.4**	**+1.1**
ANTB	**Antalya**	**1.11**	**190**	*e*	PN	**Pn**	**02 36 08.0**	**-1.3**
KHL	**Karahalli**	**1.13**	**287**	*e*	PN	**Pn**	**02 36 08.3**	**-1.3**
KONT	**Konya--Tatoy**	**1.16**	**92**	*e*	PN	**Pn**	**02 36 09.2**	**-0.7**
KIZT	**Kizilcal**	**1.17**	**41**	*e*	PN	**Pn**	**02 36 09.8**	**-0.4**
GOLH	**Golhisar**	**1.30**	**235**	*i*	P	**Pn**	**02 36 11.9**	**0.0**
GOLH				*i*	S	**Sg**	**02 36 32.4**	**+3.2**
GOLH	**Golhisar**	**1.30**	**235**	*i*	P	**Pn**	**02 36 11.9**	**-0.1**
GOLH				*i*	S	**Sg**	**02 36 32.1**	**+3.2**
ELL	**Elmali**	**1.47**	**213**	*e*	PN	**Pn**	**02 36 14.5**	**+0.2**
ESKT	**Eskisehir**	**1.52**	**359**	*i*	P	**Pn**	**02 36 14.4**	**-0.7**
ESKT				*i*	S	**Sn**	**02 36 36.2**	**+0.9**
SEYT	**Eskypehyr**	**1.52**	**359**	*i*	P	**Pn**	**02 36 14.4**	**-0.6**
SEYT				*i*	S	**Sn**	**02 36 36.2**	**+0.9**
KULA	**Kula-Manisa**	**1.84**	**287**	*e*	PN	**Pn**	**02 36 19.6**	**+0.3**
ERMK	**Ermenek**	**2.10**	**129**	*i*	P	**Pn**	**02 36 25.0**	**+2.1**
ERMK				*i*	S	**Sn**	**02 36 55.4**	**+6.0**
IKL	**Isikli**	**2.83**	**127**	*e*	PN	**Pn**	**02 36 33.7**	**+0.7**

*CSEM **31** 02:38:08.3±0.1,3797N×3097E,h10km,MD2.9,Error ellipse: s-maj=2.6km s-min=1.8km az=137.0*
*ISK **31** 02:38:08.6,3797N×3097E,h10km,MD2.9*
*ISCJB **31** 02:38:09.4±1.1,3801N±004×3089E±006,h5km±10km, Error ellipse: s-maj=8.0km s-min=6.5km az=19.3*
*DDA **31** 02:38:09.2,3791N×3096E,h4km±6km,Md2.9*
ISC 31 02:38:09.9±0.7,3799N±005×3090E±005,h11km±6km,n14, σ1°15/20,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ISP	**Isparta**	**0.34**	**244**	*i*	PG	**Pg**	**02 38 16.4**	**-0.3**
ISP				*i*	SG	**Sg**	**02 38 22.7**	**+1.4**
BCK	**Bucak**	**0.59**	**205**		PG	**Pg**	**02 38 20.6**	**-0.7**
SHUT	**Suhut-Afyon**	**0.62**	**334**		PG	**Pg**	**02 38 22.1**	**+0.1**
KDHN	**Kadinhani**	**1.09**	**61**	*i*	P	**Pg**	**02 38 29.4**	**-1.5**
KDHN				*i*	S	**Sg**	**02 38 46.7**	**+1.6**
KHL	**Karahalli**	**1.14**	**287**	*e*	PN	**Pn**	**02 38 31.7**	**0.0**
KONT	**Konya--Tatoy**	**1.16**	**92**		PN	**Pn**	**02 38 30.1**	**-1.8**
KIZT	**Kizilcal**	**1.17**	**41**		PN	**Pn**	**02 38 31.4**	**-0.8**
GOLH	**Golhisar**	**1.30**	**235**	*i*	P	**Pn**	**02 38 32.6**	**-1.4**
GOLH				*i*	S	**Sb**	**02 38 55.5**	**+4.4**
ELL	**Elmali**	**1.47**	**213**	*e*	PN	**Pn**	**02 38 36.2**	**-0.1**
ESKT	**Eskisehir**	**1.52**	**359**	*i*	P	**Pn**	**02 38 37.8**	**+0.8**
ESKT				*i*	S	**Sn**	**02 38 57.5**	**+0.6**
ESKT	**Eskisehir**	**1.52**	**359**	*e*	Pn	**Pn**	**02 38 36.7**	**-0.3**
SEYT	**Eskypehyr**	**1.52**	**359**	*i*	P	**Pn**	**02 38 37.8**	**+0.8**
SEYT				*i*	S	**Sn**	**02 38 57.5**	**+0.7**
KULA	**Kula-Manisa**	**1.84**	**287**	*e*	PN	**Pn**	**02 38 41.3**	**0.0**
ERMK	**Ermenek**	**2.10**	**129**	*i*	P	**Pn**	**02 38 48.3**	**+3.4**
ERMK				*i*	S	**Sn**	**02 39 14.1**	**+3.2**

*ISCJB **31** 02:45:05.5±0.4,2485N±006×12186E±003,h98km±4km, mb3.4/6,Error ellipse: s-maj=10.0km s-min=4.7km az=15.3*
*NEIC **31** 02:45:06.5±0.6,2482N×12192E,h94km±6km,Error ellipse: s-maj=14.3km s-min=13.3km az=79.0*
NEIC Recorded [2 TAP] in I-lan and [1 TAP] in Hsin-chu, Hua-lien and T'ao-yuan Counties.
*JMA **31** 02:45:06.8±0.1,2497N×12197E,h95km±3km,M3.5*
*IDC **31** 02:45:07.3±4.5,2486N×12199E,h101km±42km,mb3.2/6, mb1 3.4/7,mb1mx3.2/19,mbtmp3.2/7,Error ellipse: s-maj=41.0km s-min=21.2km az=68.0*
*BJI **31** 02:45:13.4,2537N×121.13E,h15km,ML3.7*
ISC 31 02:45:06.5±0.4,2482N±006×12187E±004,h93km±4km, n19,σ0°71/29,mb3.4/6,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TATO	**Taipei**	**0.38**	**294**	*e*	Pn	**Pn**	**02 45 21.1**	**+0.4**
TATO				*e*	Sn	**Sn**	**02 45 31.2**	**-0.2**
YHNB	**Yeheng**	**0.47**	**251**	*e*	Pn	**Pn**	**02 45 22.0**	**+0.5**
YHNB				*e*	Sn	**Sn**	**02 45 32.0**	**-0.5**
NACB	**Ninganchiao**	**0.69**	**201**	*e*	Pn	**Pn**	**02 45 23.3**	**0.0**
NACB				*e*	Sn	**Sn**	**02 45 36.7**	**+1.0**
YOJ	**Yonaguni jima**	**1.10**	**109**	P		**Pn**	**02 45 27.8**	**+0.2**
YOJ				*e*	S	**Sn**	**02 45 43.5**	**0.0**
IRIF	**Iriomote-Funau**	**1.76**	**106**	P		**Pn**	**02 45 35.7**	**-0.1**
IRIF				*e*	S	**Sn**	**02 45 57.7**	**-0.3**
HATJ	**Hateruma jima**	**1.92**	**113**	P		**Pn**	**02 45 38.4**	**+0.5**
HATJ				*e*	S	**Sn**	**02 46 02.1**	**+0.4**
JKRS	**Kuro-shima**	**2.04**	**106**	P		**Pn**	**02 45 39.6**	**+0.3**
JKRS				*e*	S	**Sn**	**02 46 04.4**	**+0.1**
JIJ	**Ishigaki jima**	**2.12**	**102**	P		**Pn**	**02 45 40.3**	**-0.1**
JIJ				*e*	S	**Sn**	**02 46 05.3**	**-1.0**
JTJ	**

SEYT	**Eskypehyr**	**1.49 357**	*i* P	**Pn**	**02 56 36.2**	**+1.3**
SEYT			*i* S	**Sn**	**02 56 53.3**	**-1.3**
ELL	**Elmali**	**1.53 214**	*e*PN	**Pn**	**02 56 36.0**	**+0.5**
KULA	**Kula-Manisa**	**1.88 286**	*e*PN	**Pn**	**02 56 40.4**	**+0.2**
MANT	**Manisa**	**1.95 284**	*e*P	**Pn**	**02 56 48.8**	**+7.6**
MANT			*i* S	**Sn**	**02 57 15.3**	**+9.4**
ERMK	**Ermenek**	**2.08 131**	*i* P	**Pn**	**02 56 36.1**	**-6.9**
ERMK			*i* S	**Sn**	**02 57 14.2**	**+4.9**
IKL	**Isikli**	**2.82 129**	*e*PN	**Pn**	**02 56 53.5**	**+0.3**

IDC ***31*** *02:58:07.3±0.7, 3304S×17846W, h0km, mb4.7/9, mb1 4.8/11, mb1mx4.7/15, mbtmp4.7/11, ML5.0/2, MS4.5/11, Ms1 4.5/11, ms1mx4.3/21, Error ellipse: s-maj=21.7km s-min=17.6km az=73.0*

GCMT ***31*** *02:58:07.8±0.3, 3333S×17804W, h24km±1km, MW5.1/57, Moment Tensor Solution. s41,c52; s57,c83; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.46±.19; Mθθ-0.56±.14; Mφφ-2.90±.14; Mrθ0.66±.21; Mrφ-1.18±.09; Mθφ3.59±.22; Best double couple: Mo5.00400×10^16 NP1:φs211.00000°, δ22.00000°, λ106.00000°. NP2: φs14.00000°, δ69.00000°, λ84.00000°. Principal axes: T 5.0780, Plg66.0000°, Azm273.0000°; N -0.1520, Plg6.0000°, Azm16.0000°; P -4.9300, Plg23.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***31*** *02:58:07.8±4.2, 3312S×17851W, h1km±25km, mb4.9/6 Error ellipse: s-maj=13.4km s-min=10.3km az=105.0*

ISCJB ***31*** *02:58:08.9±1.9, 3333S±004×1788W±0.1, h12km±12km, mb4.8/14, MS4.5/9, Error ellipse: s-maj=14.8km s-min=6.8km az=14.9*

MOS ***31*** *02:58:12.5±1.6, 3307S×17864W, h33km, mb5.0/7, Error ellipse: s-maj=25.9km s-min=17.5km az=85.8*

ISC 31 02:58:10.8±2.2, 3329S±005×1788W±01, h13km±13km, h10km±.4km:pP-P,n102,σ1§26/59, mb4.8/14, MS4.5/9, 5C-2D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.10**	**11**	P		**Pn**	**02 59 08.6**	**-4.5**
RAO							02 59 51.8	
RAO	comp=Z,114nm,0.3s			pmax		pmax		
RAO	comp=N,181nm,0.3s			smax				
RAO	**Raoul Island**	**4.10**	**11**	Pn		**Pn**	**02 59 08.6**	**-4.5**
	comp=N,114nm,0.3s,baz=84,slow=23,SNR=3.1							
RAO				Sn		**Sn**	**02 59 51.8**	**-9.1**
	comp=N,181nm,0.3s,baz=89,slow=21,SNR=3.7							
PUZ	**Puketiti**	**5.33**	**206**	PN		**Pn**	**02 59 28.9**	**-1.1**
PUZ				SN		**Sn**	**03 00 31.8**	**+0.5**
MWZ	**Matawai**	**5.85**	**210**	PN		**Pn**	**02 59 36.9**	**-0.1**
MWZ				SN		**Sn**	**03 00 45.9**	**+2.0**
URZ	**Urewera**	**5.96**	**213**	Pn		**Pn**	**02 59 39.9**	**+1.2**
	comp=N,27nm,0.3s,baz=0.6,slow=3.6,SNR=74							
URZ				Sn		**Sn**	**03 00 48.8**	**+2.0**
	comp=N,33nm,0.3s,baz=164,slow=21,SNR=10							
URZ	**Urewera**	**5.96**	**213**	PN		**Pn**	**02 59 39.8**	**+1.1**
URZ				SN		**Sn**	**03 00 48.0**	**+1.2**
KNZ	**Kokohu**	**6.38**	**205**	PN		**Pn**	**02 59 42.1**	**-2.3**
KNZ				SN		**Sn**	**03 00 56.6**	**-0.6**
BKZ	**Black Stump Fm**	**6.98**	**212**	PN		**Pn**	**02 59 52.0**	**-0.7**
BKZ				SN		**Sn**	**03 01 12.2**	**+0.3**
MRZ	**Mangatainoka R**	**8.62**	**210**	PN		**Pn**	**03 00 11.6**	**-3.5**
MRZ				SN		**Sn**	**03 01 47.4**	**-4.6**
SNZO	**South Karori**	**9.52**	**211**	*e*Pn		**Pn**	**03 00 25.5**	**-2.0**
SNZO				*e*Sn		**Sn**	**03 02 09.1**	**-5.2**
NNZ	**Nelson**	**10.06**	**216**	SN		**Sn**	**03 02 22.0**	**-5.6**
QRZ	**Quartz Range**	**10.22**	**220**	SN		**Sn**	**03 02 28.1**	**-3.3**
THZ	**Tophouse**	**10.71**	**215**	SN		**Sn**	**03 02 36.9**	**-6.5**
KHZ	**Kahutara**	**10.93**	**211**	SN		**Sn**	**03 02 39.4**	**-9.4**
MQZ	**McQueen's Vall**	**12.36**	**210**	SN		**Sn**	**03 03 11.9**	**-12**
RPZ	**Rata Peaks**	**13.18**	**214**	LR		LR	03 06 55.4	
	comp=N,3μm,18.3s,baz=41,slow=39							
DZM	**Mont Dzumac**	**17.17**	**307**	P		**Pn**	**03 02 17.2**	**+6.8**
	comp=N,0.4nm,0.3s,baz=88,slow=16,SNR=6.2							
DZM				LR		LR	03 07 30.0	
	comp=N,3μm,20.9s,baz=165,slow=33							
TBI	**Tubuai**	**27.59**	**77**	*e*LR		LR	03 10 41.4	
	comp=N,839nm,29.2s,baz=232							
PPT	**Papeete**	**30.56**	**66**	*e*LR		LR	03 12 03.6	
	comp=N,582nm,22.0s,baz=233							
PPT	**Papeete**	**30.56**	**66**	LR		LR	03 13 40.6	
	comp=N,470nm,20.8s,MS4.1,baz=255,slow=31							
STKA	**Stephens Creek**	**33.26**	**261**	*e*P		**P**	**03 04 49.5**	**+1.7**
	comp=N,1.6nm,0.5s,mb4.2							
STKA				*e*			03 07 29.4	
STKA	**Stephens Creek**	**33.26**	**261**	P		**P**	**03 04 49.5**	**+1.7**
	comp=N,2.4nm,0.8s,mb4.2,baz=64,slow=6.2,SNR=5.7							
STKA				PcP		PcP	03 07 28.8	-1.2
	comp=N,2.5nm,0.6s,baz=97,slow=7.3,SNR=6.9							
STKA				LR		LR	03 17 58.2	
	comp=N,2μm,18.4s,MS4.9,baz=75,slow=36							
CTA	**Charters Tower**	**33.71**	**284**	⇑*i*P		**P**	**03 04 54.5**	**+2.7**
	comp=N,11nm,0.4s,mb5.1							
CTA	**Charters Tower**	**33.71**	**284**	P		**P**	**03 04 54.2**	**+2.4**
CTA				pmax		pmax		
	comp=Z,13nm,0.5s							
CTA	**Charters Tower**	**33.71**	**284**	P		**P**	**03 04 54.2**	**+2.4**
	comp=Z,13nm,0.5s,mb5.2,baz=114,slow=10.0,SNR=53							
CTAO	**Charters Tower**	**33.71**	**284**	*e*P		**P**	**03 04 54.5**	**+2.7**
	comp=Z,14nm,0.5s,mb5.2							
RKT	**Rikitea**	**39.69**	**87**	*e*LR		LR	03 16 19.2	
	comp=Z,933nm,30.5s,baz=248							
ASAR	**Alice Springs**	**42.35**	**270**	P		**P**	**03 06 05.9**	**+1.2**
ASAR							03 07 57.3	
ASAR				S		**S**	**03 12 23.5**	**-2.2**
ASAR	comp=Z,25nm,0.6s			pmax		pmax		
ASAR	comp=Z,3.0nm,0.7s			pmax		pmax		
ASAR	comp=N,1.0nm,0.8s			smax				
ASAR	**Alice Springs**	**42.35**	**270**	P		**P**	**03 06 05.8**	**+1.2**
	comp=N,25nm,0.6s,mb5.0,baz=110,slow=7.5,SNR=233							
ASAR				PcP		PcP	03 07 57.3	-0.8
	comp=N,3.0nm,0.7s,baz=119,slow=4.2,SNR=4.6							
ASAR				S		**S**	**03 12 23.4**	**-2.2**
	comp=N,0.5nm,0.8s,baz=110,slow=16,SNR=5.6							
TAOE	**Nuku Hiva Isla**	**43.12**	**65**	*e*LR		LR	03 17 49.5	
	comp=N,1μm,27.6s							
WB2	**Warramunga Arr**	**43.60**	**276**	⇑*i*P		**P**	**03 06 15.4**	**+0.6**
WRA	**Warramunga Arr**	**43.61**	**276**	P		**P**	**03 06 15.5**	**+0.6**
WRA							03 08 00.2	
WRA				S		**S**	**03 12 41.3**	**-2.8**
WRA	comp=Z,13nm,0.5s			pmax		pmax		
WRA	comp=Z,1.0nm,0.6s			pmax		pmax		
WRA	comp=N,1.0nm,0.9s			smax				
WRA	comp=Z,500nm,19.6s			MLR		MLR		
WRA	**Warramunga Arr**	**43.61**	**276**	P		**P**	**03 06 15.5**	**+0.6**
	comp=Z,13nm,0.5s,mb4.9,baz=117,slow=7.6,SNR=112							
WRA				PcP		PcP	03 08 00.2	-2.1
	comp=Z,1.2nm,0.6s,baz=124,slow=3.2,SNR=2.8							
WRA				S		**S**	**03 12 41.3**	**-2.8**
	comp=Z,0.9nm,0.9s,baz=33,slow=28,SNR=5.0							
WRA				LR		LR	03 23 32.7	
	comp=Z,500nm,19.6s,MS4.4,baz=125,slow=35							
FORT	**Forrest**	**44.71**	**258**	⇓*i*P		**P**	**03 06 23.8**	**+0.2**
	comp=Z,16nm,0.7s,mb5.0							
VNDA	**Vanda**	**45.16**	**186**	P		**P**	**03 06 28.5**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=34,slow=9.4,SNR=2.5							
KAKA	**Kakadu**	**48.83**	**283**	*e*P		**P**	**03 06 55.1**	**-0.9**
	comp=Z,5.6nm,0.4s,mb5.0							
FITZ	**Fitzroy Crossi**	**51.73**	**273**	*e*P		**P**	**03 07 18.4**	**+0.4**
	comp=Z,11nm,0.6s,mb5.0							
FITZ	**Fitzroy Crossi**	**51.73**	**273**	P		**P**	**03 07 17.8**	**-0.2**
	comp=Z,5.6nm,0.7s,mb4.6,baz=151,slow=9.3,SNR=16							
MBWA	**Marble Bar**	**55.28**	**266**	*e*P		**P**	**03 07 43.6**	**-0.4**
	comp=Z,6.1nm,0.8s,mb4.7							
QSPA	**South Pole Qui**	**56.83**	**180**	P		**P**	**03 07 54.7**	**+0.4**
	comp=Z,15nm,1.0s,mb5.0,baz=26,slow=3.8,SNR=20							
MIR	**Mirnyy**	**59.25**	**208**	⇑*i*P		**P**	**03 08 13.0**	**+1.6**
MIR				pmax		pmax		
	comp=Z,100nm,1.0s,mb5.8							
MAW	**Mawson**	**69.37**	**201**	P		**P**	**03 09 19.8**	**+2.1**
MAW				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MAW	**Mawson**	**69.37**	**201**	P		**P**	**03 09 19.8**	**+2.2**
	comp=Z,2.9nm,0.7s,mb4.3,baz=149,slow=6.6,SNR=5.7							
SYO	**Syowa Base**	**74.15**	**193**	⇑*e*P		**P**	**03 09 45.0**	**-1.4**
SNAA	**Sanae**	**75.29**	**179**	*e*		**P**	**03 09 52.6**	**-0.4**
SNAA				*e*		pP	03 09 55.4	-1.9
SNAA				*e*			03 09 59.3	
SNAA				*e*			03 10 02.6	
SNAA				*e*			03 10 08.9	
SNAA				*e*			03 10 15.9	
SNAA				*e*			03 10 20.4	
SNAA				*e*			03 10 28.6	
SNAA				*e*			03 10 35.0	
SNAA				*e*			03 10 40.9	
VNA3	**Neumayer Olymp**	**75.47**	**176**	*e*		**P**	**03 09 53.7**	**-0.3**
VNA3				*e*		pP	03 09 56.7	-1.7
VNA3				*e*			03 10 00.6	
VNA3				*e*			03 10 04.2	
VNA3				*e*			03 10 08.8	
VNA3				*e*			03 10 16.3	
VNA3				*e*			03 10 20.5	
VNA3				*e*			03 10 30.1	
VNA3				*e*			03 10 35.5	
VNA3				*e*			03 10 42.6	
VNA2	**Neumayer--Watz**	**75.90**	**177**	*e*		**P**	**03 09 56.7**	**+0.3**
	baz=186,slow=4.7							
VNA2				*e*		pP	03 09 59.7	-1.1
VNA2				*e*			03 10 02.8	
VNA2				*e*			03 10 06.2	
VNA2				*e*			03 10 12.6	
VNA2				*e*			03 10 19.9	
VNA2				*e*			03 10 23.6	
VNA2				*e*			03 10 33.6	
VNA2				*e*			03 10 38.4	
VNA2				*e*			03 10 44.1	
VNA1	**Neumayer--Stat**	**76.13**	**177**	*e*		**P**	**03 09 48.2**	**-10**
VNA1				*e*		pP	03 09 51.6	-11
VNA1				*e*			03 09 56.0	
VNA1				*e*			03 09 59.7	
VNA1				*e*			03 10 05.1	
VNA1				*e*			03 10 12.8	
VNA1				*e*			03 10 16.3	
VNA1				*e*			03 10 25.4	
VNA1				*e*			03 10 31.1	
VNA1				*e*			03 10 37.0	
MJAR	**Matsushiro Arr**	**80.24**	**326**	LR		LR	03 42 11.7	
	comp=Z,229nm,21.2s,MS4.5,baz=95,slow=33							
PLCA	**Paso Flores**	**81.04**	**133**	P		**P**	**03 10 24.4**	**-1.0**
	comp=Z,2.2nm,0.9s,mb4.1,baz=187,slow=3.4,SNR=2.8							
PLCA				LR		LR	03 39 57.0	
	comp=Z,241nm,20.0s,MS4.5,baz=211,slow=31							
PSI	**Prapat**	**85.06**	**277**	LR		LR	03 50 42.1	
	comp=Z,259nm,18.3s,MS4.7,baz=263,slow=37							
KSRS	**Korea Array**	**86.11**	**320**	P		**P**	**03 10 50.4**	**-0.8**
	comp=Z,0.8nm,0.6s,mb4.1,baz=138,slow=6.1,SNR=3.1							
KSRS				LR		LR	03 43 46.9	
	comp=Z,97nm,20.1s,MS4.2,baz=285,slow=32							
YSS	**Yuzh-Sakhalins**	**87.05**	**335**	*e*P		**P**	**03 10 55.1**	**-0.5**
PET	**Petropavlovsk**	**88.17**	**347**	*e*P		**P**	**03 11 00.5**	**-0.2**
	comp=Z,11nm,0.7s,mb5.2							
LPAZ	**La Paz**	**97.57**	**115**	LR		LR	03 47 40.2	
	comp=Z,87nm,18.7s,MS4.3,baz=60,slow=30							
PDAR	**Pinedale Array**	**98.69**	**44**	LR		LR	03 49 08.9	
	comp=Z,142nm,18.6s,MS4.5,baz=267,slow=31							
YKA	**Yellowknife Ar**	**108.34**	**26**	PKKPbc		PKKPbc	03 27 48.3	-1.9
	comp=Z,0.3nm,0.6s,baz=49,slow=3.1,SNR=5.2							
MKAR	**Makanchi Array**	**119.08**	**309**	PKIKP		PKPdf	03 16 57.3	-1.6
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
MKAR	**Makanchi Array**	**119.08**	**309**	PKP		PKPdf	03 16 57.2	-1.6
	comp=Z,0.5nm,0.4s,baz=206,slow=2.1,SNR=4.3							
TKM2	**Tokmak 2**	**122.42**	**303**	*e*PKPdf		PKPdf	03 17 04.6	-0.8
KURK	**Kurchatov**	**122.52**	**313**	*e*PKPdf		PKPdf	03 17 04.1	-1.2
AML	**Almayashu**	**123.54**	**302**	*e*PKPdf		PKPdf	03 17 07.6	+0.1
EKS2	**Erkin-Say**	**123.63**	**302**	*e*PKPdf		PKPdf	03 17 07.6	-0.1
KBL	**Kabul**	**124.68**	**292**	*e*PKPdf		PKPdf	03 17 10.4	+0.3
BRVK	**Borovoye**	**128.03**	**314**	*e*PKPdf		PKPdf	03 17 15.2	-0.7
KMBO	**Kilima Mbogo**	**131.78**	**232**	SKPbc		SKPbc	03 20 50.1	+0.4
	comp=Z,2.2nm,1.0s,baz=70,slow=2.1,SNR=5.0							
ARCES	**ARCESS Array B**	**141.25**	**347**	*i* PKHKP			03 17 33.3	
ARCES				pmax		pmax		
	comp=Z,7.0nm,1.0s							
ARCES	**ARCESS Array B**	**141.25**	**347**	PKhKP			03 17 33.3	
	comp=Z,6.7nm,1.0s,baz=28,slow=3.3,SNR=9.6							
JOF	**Joensuu**	**144.82**	**337**	*e*p		PKPdf	03 17 43.4	-3.1
	comp=Z,4.5nm,0.4s							
JOF	**Joensuu**	**144.82**	**337**	*e*PKIKP		PKPdf	03 17 43.4	-3.1
JOF				pmax		pmax		
	comp=Z,5.0nm,0.4s							
HAKT	**HAKKARI**	**145.31**	**289**	*i* P		PKPbc	03 17 48.2	+0.2
DYDN	**Diyadin**	**145.48**	**293**	*i* P		PKPdf	03 17 48.1	-0.3
ONI	**Oni**	**145.71**	**298**	P		PKPdf	03 17 49.2	+0.6
TUTA	**Tutak**	**146.15**	**292**	*i* P		PKPdf	03 17 50.3	+0.7
KAF	**Kangasniemi**	**147.01**	**338**	*e*p		PKPdf	03 17 50.3	+0.1
	comp=Z,3.4nm,0.4s							
KAF	**Kangasniemi**	**147.01**	**338**	*e*PKP2		PKPdf	03 17 50.3	+0.1
KAF				pmax		pmax		
	comp=Z,3.0nm,0.4s							
OBN	**Obninsk**	**147.09**	**322**	⇓*i*PKP2		PKPdf	03 17 51.9	+1.3
OBN				pmax		pmax		
	comp=Z,10.0nm,1.0s							
VRSR	**Storozhevoye**	**147.13**	**314**	*c i*PKP2		PKPdf	03 17 51.8	+1.0
VRSR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
VRSR				pmax		pmax		
	comp=N,2.0nm,0.7s							
VRSR				pmax		pmax		
	comp=E,2.0nm,0.9s							
FIA1	**FINESS Array S**	**147.59**	**338**	*e*PKPbc		PKPbc	03 17 53.1	-0.8
FINES	**FINESS Array B**	**147.59**	**338**	PKP2		PKPbc	03 17 52.6	-1.3
FINES				pmax		pmax		
	comp=Z,5.0nm,0.4s							
FINES	**FINESS Array B**	**147.59**	**338**	PKPbc		PKPbc	03 17 52.6	-1.3
	comp=Z,5.1nm,0.4s,baz=39,slow=5.7,SNR=78							
ELZG	**Elazig**	**149.10**	**291**	*i* P		PKPdf	03 17 57.0	+2.5
MALT	**Malatya**	**149.53**	**290**	*e*PKPbc		PKPbc	03 17 59.5	-0.2
ANN	**Anapa**	**149.84**	**303**	*e*PKHKP			03 17 59.3	
ANN				pmax		pmax		
	comp=Z,21nm,0.6s							
GZT	**Gaziantep**	**150.17**	**288**	*i* P		PKPbc	03 18 00.9	-0.4
ANDN	**Andirin**	**151.15**	**289**	*e*P		PKPbc	03 18 03.3	-0.3
NB2	**NORSAR Subarra**	**151.49**	**350**	PKP		PKPbc	03 18 02.4	-1.2
	comp=Z,6.9nm,0.9s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**151.49**	**350**	PKIKP		PKPbc	03 18 02.6	-1.0
NOA				pmax		pmax		
	comp=Z,2.0nm,0.5s							
NOA	**NORSAR Array B**	**151.49**	**350**	PKPbc		PKPbc	03 18 02.6	-1.0
	comp=Z,1.6nm,0.5s,baz=14,slow=4.1,SNR=15							
BOYT	**Boyabat**	**152.14**	**297**	*i* P		PKPbc	03 18 05.9	+0.1
DBIC	**Dimbokro**	**152.92**	**167**	PKIKP		PKPbc	03 18 07.3	-1.0
DBIC				pmax		pmax		
	comp=Z,1.0nm,0.5s							
DBIC	**Dimbokro**	**152.92**	**167**	PKPbc		PKPbc	03 18 07.2	-1.1
	comp=Z,1.0nm,0.5s,baz=203,slow=3.9,SNR=8.3							
AKASG	**Malin Array Be**	**153.10**	**319**	PKIKP		PKPbc	03 18 06.3	-1.3
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**153.10**	**319**	PKPbc		PKPbc	03 18 06.2	-1.3
	comp=Z,2.2nm,0.5s,baz=49,slow=2.3,SNR=17							
ANTO	**Ankara**	**153.88**	**294**	*e*PKPbc		PKPbc	03 18 09.2	-0.4
TORD	**Torodi Ar. Bea**	**159.94**	**181**	PKPab		PKPab	03 18 48.6	-0.7
	comp=Z,6.4nm,1.1s,baz=174,slow=3.7,SNR=21							
CLL	**Collm**	**160.04**	**338**	*e*PKP2		PKPab	03 18 48.0	-0.9
CLL	**Collm**	**160.04**	**338**	*i* PKPab		PKPab	03 18 47.4	-1.5
CLL				Lm			03 33 00.0	
	comp=Z,100nm,19.5s							
BRG	**Berggiesshubel**	**160.10**	**336**	*e*PKP2		PKPab	03 18 48.0	-1.1
BRG				pmax		pmax		
	comp=Z,2.0nm,1.0s							
BRG	**Berggiesshubel**	**160.10**	**336**	*e*(P)		PKPab	03 18 48.0	-1.2
	comp=Z,3.5nm,1.0s							
GERES	**GERESS Array B**	**161.86**	**333**	PKP2		PKPab	03 18 52.9	-4.0
GERES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
GERES	**GERESS Array B**	**161.86**	**333**	PKPab		PKPab	03 18 52.9	-4.1
	comp=Z,0.5nm,0.6s,baz=49,slow=4.1,SNR=5.0							

NIED ***31*** *02:58:00, 4430N×14920E, h14km, Mw4.5 Best double couple: Mo6.05000×10^15 NP1:φs186.00000°, δ23.00000°, λ54.00000°. NP2:φs44.00000°, δ71.00000°, λ104.00000°.*

IDC ***31*** *02:58:33.2±0.6, 4424N×14920E, h0km, mb4.4/17, mb1 4.5/19, mb1mx4.4/23, mbtmp4.3/19, ML3.5/2, MS4.0/10, Ms1 4.0/10, ms1mx3.6/41, Error ellipse: s-maj=20.2km s-min=14.1km az=144.0*

BJI ***31*** *02:58:33.8, 4451N×14944E, h19km, mB5.0, mb4.7, Ms4.3, Msz4.0*

NEIC ***31*** *02:58:04.9±0.3, 4420N×14919E, h10km, mb4.7/59, Error ellipse: s-maj=8.0km s-min=4.7km az=162.0*

ISCJB ***31*** *02:58:35.2±1.1, 4418N±004×14925E±004, h22km±7km, mb4.6/105, MS4.1/17, Error ellipse: s-maj=7.2km s-min=4.1km az=155.2*

JMA ***31*** *02:58:38.5±0.8, 4430N×149.17E, h30km, M4.5*

SZGRF ***31*** *02:58:38.8, 44.17N×149.83E, h46km, mb4.5, Kuril Islands, Russia*

MOS ***31*** *02:58:39.9±1.0, 4441N×149.10E, h50km, mb4.9/52, Error ellipse: s-maj=9.1km s-min=5.4km az=109.5*

SKHL ***31*** *02:58:40.1±2.6, 4428N×149.07E, h48km±17km, mb5.5/1, mbh5.2/1, Ms4.4/2*

ISC 31 02:58:38.0±1.0, 4421N±004×14922E±004, h29km±7km, h41km±2.6km:pP-P,n326,σ1§02/329, mb4.6/105, MS4.1/17, 25C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.41**	**317**	*e*PN		**Pn**	**02 59 00.5**	**-1.2**
KUR				*i* S		**Sn**	**02 59 18.0**	**-1.2**
KUR	comp=N,4μm,1.6s			pmax		pmax		
KUR	comp=Z,8μm,1.6s			pmax		pmax		
KUR	comp=N,4μm,0.5s			smax				
KUR	comp=E,4μm,0.5s			smax				
KUR	comp=N,16μm,1.6s			smax				
KUR	comp=E,10μm,1.6s			smax				
YUK	**Yuzh-Kuril'sk**	**2.43**	**267**	*e*PN		**Pn**	**02 59 15.5**	**-0.2**
YUK				*e*S		**Sn**	**02 59 44.0**	**-0.4**
YUK	comp=Z,540nm,0.3s			pmax		pmax		
YUK	comp=E,230nm,0.5s			pmax		pmax		
YUK	comp=E,2μm,0.7s			smax				
YUK	comp=N,3μm,0.6s			smax				
YUK	comp=N,10μm,1.0s			smax				
YUK	comp=E,7.0nm,1.0s			MLR		MLR		
YUK	comp=Z,3μm,14.0s			MLR		MLR		
YUK	comp=E,4μm,12.0s			MLR		MLR		
YUK	**Yuzh-Kuril'sk**	**2.43**	**267**	*e*P		**Pn**	**02 59 15.5**	**-0.2**
YUK				AMB		AMB	02 59 17.5	
YUK	comp=E,540nm,0.3s			AMB		AMB	02 59 17.5	
YUK	comp=E,230nm,0.5s			AMB		AMB	02 59 17.5	
YUK				*e*S		**Sn**	**02 59 44.0**	**-0.4**
YUK				A			03 00 04.0	
YUK	comp=E,10μm,1.0s			A			03 00 04.0	
YUK	comp=E,6μm,1.0s			A			03 00 04.0	
YUK	comp=E,2μm,0.7s			A			03 00 04.0	
YUK	comp=E,3μm,0.6s			AMS		AMS	03 00 25.0	
YUK	comp=E,4μm,12.0s			AMS		AMS	03 00 25.0	
YUK	comp=E,3μm,14.0s			AMS		AMS	03 00 25.0	
NEM2	**Nemuro 2**	**2.66**	**253**	P		**Pn**	**02 59 18.0**	**-0.9**
NEM2				*e*S		**Sn**	**02 59 47.5**	**-2.6**
JRA	**Rausu**	**2.97**	**266**	P		**Pn**	**02 59 24.0**	**+0.9**
JNK	**Nakash**	**3.31**	**261**	P		**Pn**	**02 59 28.0**	**+0.1**
JNK				*e*S		**Sn**	**03 00 07.0**	**+0.7**
JAK	**Akkeshi**	**3.50**	**251**	P		**Pn**	**02 59 30.2**	**-0.3**
JTKR	**Abashiri--Toko**	**3.83**	**268**	P		**Pn**	**02 59 36.4**	**+1.3**
JAR	**Ashorobuto**	**4.05**	**259**	P		**Pn**	**02 59 38.8**	**+0.7**
JOB	**Onbets**	**4.13**	**253**	P		**Pn**	**02 59 39.4**	**+0.3**
JMP	**Maruseppu**	**4.23**	**269**	P		**Pn**	**02 59 42.1**	**+1.7**
JCH	**Churui**	**4.56**	**252**	P		**Pn**	**02 59 45.1**	**+0.1**
JKK2	**Kamakawa 2**	**4.68**	**268**	P		**Pn**	**02 59 48.4**	**+1.7**
ASAJ	**Asahikawa**	**4.77**	**271**	P		**Pn**	**02 59 51.0**	**+3.1**
ASAJ	**Asahikawa**	**4.77**	**271**	PN		**Pn**	**02 59 49.5**	**+1.6**
ASAJ	comp=Z,3.0nm,0.3s			pmax		pmax		
ASAJ	comp=Z,2μm,19.7s			MLR		MLR		
ASAJ	**Asahikawa**	**4.77**	**271**	Pn		**Pn**	**02 59 49.5**	**+1.6**
	comp=Z,3.1nm,0.3s,baz=91,slow=9.4,SNR=17							
ASAJ				LR		LR	03 01 54.9	
	comp=Z,2μm,19.7s,baz=135,slow=42							
JFR	**Furan**	**4.92**	**260**	P		**Pn**	**02 59 51.3**	**+1.3**
ERM	**Erimo**	**4.95**	**246**	*e*Pn		**Pn**	**02 59 51.6**	**+1.2**
ERM	**Erimo**	**4.95**	**246**	*i* PN		**Pn**	**02 59 51.6**	**+1.2**
JEM	**Erimo**	**4.95**	**246**	P		**Pn**	**02 59 51.6**	**+1.2**
JNBK	**Urakawa-nobuka**	**5.10**	**250**	P		**Pn**	**02 59 52.3**	**-0.2**
JAB	**Ashibetsu**	**5.11**	**264**	P		**Pn**	**02 59 55.8**	**+3.2**
JBT2	**Biratori 2**	**5.19**	**256**	P		**Pn**	**02 59 53.7**	**0.0**
JSS	**Shosan**	**5.29**	**275**	P		**Pn**	**02 59 58.9**	**+3.8**
YSS	**Yuzh-Sakhalins**	**5.30**	**303**	*e*Pn		**Pn**	**02 59 59.4**	**+4.1**
	comp=Z,50nm,0.6s							
YSS	**Yuzh-Sakhalins**	**5.30**	**303**	*e*PN		**Pn**	**02 59 57.0**	**+1.8**
YSS				*e*S		**

TYV AMS AMS 03 03 32.0
comp=Z,1μm,16.0s
TYV AMS AMS 03 03 32.0
comp=Z,1μm,17.0s
JRG Rokugo 8.02 236 P **Pn 03 00 31.0 -1.5**
JRG *eS* **Sn 03 01 55.4 -6.7**
JIO Ouri 8.25 229 P **Pn 03 00 33.5 -2.3**
JIO *eS* **Sn 03 01 58.9 -9.1**
TEY Ternei 9.04 280 *eP* **Pn 03 00 47.0 +0.5**
TEY AMS AMS 03 04 41.0
comp=Z,2μm,18.0s
JYA Atsumi 9.08 235 P **Pn 03 00 45.6 -1.5**
JFK Kawauchi 9.31 226 P **Pn 03 00 47.5 -2.8**
OKH Okha 10.22 338 *eL* 03 03 32.0
OKH AMS AMS 03 05 26.4
comp=Z,2μm,15.0s
OKH AMS AMS 03 05 26.4
comp=Z,1μm,15.0s
HABR Khabarovsk 10.68 298 *e*PN **Pn 03 01 16.1 +7.2**
MJAR Matsushiro Arr 11.36 231 Pn **Pn 03 01 17.1 -1.2**
comp=Z,0.3nm,0.3s,baz=30,slow=14,SNR=9.8
MAJO Matsushiro 11.36 231 *e*Pn **Pn 03 01 16.3 -2.0**
comp=Z,5.0nm,0.5s
MAJO *e* 03 01 30.2
MAJO Matsushiro 11.36 231 *e*PN **Pn 03 01 16.3 -2.0**
MAJO pmax pmax
comp=Z,5.0nm,0.5s
MAT Matsushiro 11.36 231 P **Pn 03 01 16.2 -2.1**
MAT *eS* **Sn 03 03 20.8 -3.4**
KLR Kul'dur 12.99 299 *e*PN **Pn 03 01 42.0 +1.5**
KLR MLR MLR
comp=E,500nm,13.5s
KLR MLR MLR
comp=Z,1μm,13.5s
MDJ Mudanjiang 14.04 279 P **Pn 03 01 55.0 +0.2**
MDJ AMB AMB
comp=Z,13nm,0.8s
MDJ AMB AMB
comp=Z,98nm,5.0s
MDJ LR LR
comp=N,324nm,13.9s
MDJ LR LR
comp=E,329nm,16.8s
MDJ LR LR
comp=Z,528nm,15.3s
MA2 Magadan 15.42 3 *e*P **Pn 03 02 13.2 0.0**
MA2 *eS* **Sn 03 05 02.2 -0.7**
MA2 pmax pmax
comp=Z,10.0nm,0.9s
MA2 MLR MLR
comp=Z,200nm,18.0s
CN2 Changchun 17.10 277 *e*P **Pn 03 02 34.5 -0.3**
CN2 AMB AMB
comp=Z,30nm,0.9s
CN2 LR LR
comp=Z,600nm,16.0s
ZEA Zeya 17.22 311 *e*P **Pn 03 02 35.3 -0.9**
ZEA AMB AMB 03 02 43.0
comp=Z,28nm,1.4s
KSRS Korea Array 17.45 255 P **Pn 03 02 37.2 -2.0**
comp=Z,0.2nm,0.3s,baz=54,slow=12,SNR=8.2
SEY Seymchan 18.85 4⇓*e*P **Pn 03 02 54.2 -1.9**
SNY Shenyang 18.88 272 ⇑P **Pn 03 02 56.8 +0.2**
SNY AMB AMB
comp=Z,24nm,0.9s
SNY AMB AMB
comp=Z,149nm,4.0s
SNY LR LR
comp=E,333nm,18.7s
SNY LR LR
comp=Z,431nm,19.9s
YAK Yakutsk 21.20 334 *i* P **P 03 03 18.4 -2.5**
YAK pmax pmax
comp=Z,25nm,0.8s,mb4.6
BJI Beijing 24.76 272 P **P 03 03 56.8 -0.2**
BJI S **S 03 08 26.0 +8.6**
BJI AMB AMB
comp=Z,23nm,1.0s,mb4.7
BJI LR LR
comp=N,322nm,15.0s,MS4.2
BJI LR LR
comp=E,461nm,17.5s,MS4.2
BJI LR LR
comp=Z,417nm,22.5s,MS3.9
BILL Bilibino 25.52 15 *i* P **P 03 04 03.2 -0.4**
BILL pmax pmax
comp=Z,3.0nm,0.9s,mb3.8
BOD Bodaibo 25.66 315 *e*P **P 03 04 00.3 -4.6**
BOD pmax pmax
comp=Z,4.0nm,1.0s,mb3.9
TIA Tai'an 25.66 263 *e*P **P 03 04 05.5 +0.3**
NJ2 Nanjing 26.64 253 *e*P **P 03 04 20.3 +6.2**
NJ2 PP 03 05 02.3
NJ2 S **S 03 08 50.5 +3.2**
NJ2 XS sS 03 09 06.5 +5.4
NJ2 AMB AMB
comp=Z,10.0nm,0.8s,mb4.4
NJ2 AMB AMB
comp=Z,300nm,3.8s
NJ2 LR LR
comp=N,910nm,16.4s,MS4.5
NJ2 LR LR
comp=E,610nm,15.5s,MS4.5
NJ2 LR LR
comp=Z,650nm,17.6s,MS4.2
HHC Hu-ho-hao-te 27.79 276 *e*P **P 03 04 28.0 +3.6**
HHC AP pP 03 04 31.8 -1.0
HHC XP sP 03 04 34.8 -1.5
HHC S **S 03 09 07.3 +2.0**
HHC XS sS 03 09 16.8 -2.4
HHC AMB AMB
comp=Z,31nm,0.9s,mb4.9
HHC AMB AMB
comp=Z,154nm,4.6s
HHC LR LR
comp=N,193nm,11.9s,MS4.2
HHC LR LR
comp=E,432nm,15.5s,MS4.2
HHC LR LR
comp=Z,404nm,17.8s,MS4.0
BTO Baotou 28.98 277 *e*P **P 03 04 35.0 +0.1**
TIXI Tiksi 29.23 347 *e*P **P 03 04 33.5 -3.3**
comp=Z,2.7nm,0.8s,mb4.0
TIXI Tiksi 29.23 347 *i* P **P 03 04 33.8 -3.0**
TIXI pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
SONM Songino Array 29.68 292 P **P 03 04 41.4 +0.4**
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM MLR MLR
comp=Z,426nm,18.7s
SONM Songino Array 29.68 292 P **P 03 04 41.4 +0.3**
comp=Z,3.4nm,0.7s,mb4.2,baz=78,slow=8.4,SNR=28
SONM LR LR 03 17 56.0
comp=Z,426nm,18.7s,MS4.1,baz=225,slow=39
WHN Wuhan 30.64 255 *e*P **P 03 04 53.0 +3.3**
TLY Talaya 31.00 300 *e*P **P 03 04 51.9 -0.8**
TLY pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
TLY MLR MLR
comp=Z,357nm,16.0s,MS4.1
ZAK Zakamensk 31.35 298 *e*P **P 03 04 55.6 -0.2**
ZAK pmax pmax
comp=Z,2.0nm,1.2s,mb3.8
LZH Lanzhou 35.25 273 *e*P **P 03 05 31.0 +1.1**
LZH AP pP 03 05 38.0 -0.4
LZH XP sP 03 05 40.5 -1.4
LZH AMB AMB
comp=Z,51nm,1.0s,mb5.4
LZH AMB AMB
comp=Z,171nm,4.6s
LZH LR LR
comp=E,217nm,15.7s
LZH LR LR
comp=Z,290nm,17.2s,MS4.1
TTA Tatalina 36.13 39 *e*P **P 03 05 36.9 -0.2**
comp=Z,17nm,1.2s,mb4.9
TTA Tatalina 36.13 39 *e*P **P 03 05 36.9 -0.2**
TTA pmax pmax
comp=Z,17nm,1.2s,mb4.8
SVW2 Sparrevohn 36.22 42 *e*P **P 03 05 39.2 +1.3**
GTA Gaotai 36.69 280 *e*P **P 03 05 43.5 +1.3**
GTA AP pP 03 05 50.8 +0.1
GTA XP sP 03 05 54.8 +0.6
GTA AMB AMB
comp=Z,12nm,1.0s,mb4.7
GTA AMB AMB
comp=Z,203nm,8.0s
GTA LR LR
comp=N,180nm,18.7s,MS4.2
GTA LR LR
comp=E,260nm,14.1s,MS4.2
GTA LR LR
comp=Z,323nm,14.5s,MS4.2
IMA2 Indian Mountai 37.46 34 *e*P **P 03 05 48.8 +0.4**
KDAK Kodiak Island 37.83 48 P **P 03 05 50.6 -1.1**
comp=Z,10nm,0.8s,mb4.6,baz=255,slow=7.7,SNR=7.7
CD2 Chengdu 37.94 265 P **P 03 05 53.0 +0.1**
CD2 AMB AMB
comp=Z,60nm,0.7s,mb5.4
GYA Guiyang 38.48 257 P **P 03 05 57.5 0.0**
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,210nm,5.9s
COLA College 39.81 36 *e*P **P 03 06 10.2 +2.0**
comp=Z,11nm,0.9s,mb4.6
COLA College 39.81 36 *e*P **P 03 06 10.2 +2.0**
COLA pmax pmax
comp=Z,11nm,0.9s,mb4.6
ZALV Zalesovo Beam 41.91 307 P **P 03 06 23.9 -1.7**
comp=Z,1.0nm,0.4s,mb3.8,baz=60,slow=6.4,SNR=3.7
ZALV PcP PcP 03 08 20.7 0.0
comp=Z,4.4nm,0.6s,baz=84,slow=2.7,SNR=13
ZALV LR LR 03 25 06.8
comp=Z,140nm,18.7s,MS3.9,baz=53,slow=38
ZAL Zalesovo 41.93 307 P **P 03 06 24.0 -1.7**
ZAL 03 08 20.7
KMI Kunming 42.08 259 P **P 03 06 28.0 +0.7**
KMI AMB AMB
comp=Z,18nm,0.8s,mb4.8
KMI LR LR
comp=N,260nm,7.6s
KMI LR LR
comp=E,411nm,7.4s
KMI LR LR
comp=Z,209nm,12.5s,MS4.2
EGAK Eagle 42.68 36 *e*P **P 03 06 31.6 -0.1**
comp=Z,14nm,1.0s,mb4.6
WMQ Urumqi 43.31 292 P **P 03 06 38.0 +0.9**
INK Inuvik 45.25 31 P **P 03 06 51.8 -0.5**
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 45.25 31 P **P 03 06 51.8 -0.4**
comp=Z,4.1nm,0.9s,mb4.3,baz=292,slow=6.6,SNR=18
MK31 Makanchi Array 45.69 298 *i* P **P 03 06 56.3 +0.2**
MK31 pmax pmax
comp=Z,11nm,0.7s,mb4.9
MKAR Makanchi Array 45.69 298 P **P 03 06 55.9 -0.2**
MKAR PcP PcP 03 08 33.4 -0.2
MKAR LR LR 03 27 32.6
MKAR Makanchi Array 45.69 298 P **P 03 06 55.9 -0.2**
comp=Z,8.3nm,0.7s,mb4.8,baz=76,slow=8.4,SNR=55
MKAR PcP PcP 03 08 33.4 -0.2
comp=Z,1.6nm,0.7s,baz=72,slow=5.7,SNR=2.6
MKAR LR LR 03 27 32.6
comp=Z,474nm,18.2s,MS4.5,baz=354,slow=38
KURK Kurchatov 46.51 304 *e*P **P 03 07 01.4 -1.0**
comp=Z,3.5nm,0.6s,mb4.5
KURK Kurchatov 46.51 304 *e*P **P 03 07 01.4 -1.0**
KURK pmax pmax
comp=Z,3.0nm,0.6s,mb4.4
CHTO Chiang Mai 48.85 255 *e*P **P 03 07 20.1 -0.9**
comp=Z,11nm,1.0s,mb4.8
CHTO Chiang Mai 48.85 255 *e*P **P 03 07 20.1 -0.9**
CHTO pmax pmax
comp=Z,11nm,1.0s,mb4.8
DLBC Dease Lake 49.32 43 P **P 03 07 25.4 +1.3**
baz=315,slow=11
BRVK Borovoye 50.41 310 *e*P **P 03 07 31.8 -0.7**
comp=Z,4.3nm,0.8s,mb4.5
BRVK Borovoye 50.41 310 *e*P **P 03 07 31.8 -0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s,mb4.5
TAPN Taplejung 51.49 272 *e*P **P 03 07 41.8 +0.9**
comp=Z,19nm,0.9s,mb5.0
ULHL Ulahol 51.56 295 P **P 03 07 42.3 +1.1**
SNR=32
TKM2 Tokmak 2 51.65 296 *e*P **P 03 07 42.8 +0.8**
comp=Z,13nm,0.8s,mb4.9
TKM2 Tokmak 2 51.65 296 *e*P **P 03 07 42.8 +0.9**
TKM2 pmax pmax
comp=Z,13nm,0.8s,mb4.9
TKM2 Tokmak 2 51.65 296 P **P 03 07 43.1 +1.2**
SNR=16
USP Ospenovka 52.19 297 P **P 03 07 46.9 +0.9**
SNR=6.6
KBK Karagaybulak 52.20 296 P **P 03 07 47.1 +1.1**
SNR=14
KZA Kyzart 52.28 295 P **P 03 07 48.7 +2.0**
SNR=30
FRU Bishkek 52.33 296 *e*P **P 03 07 47.0 0.0**
JIRN Jiri 52.40 274 *e*P **P 03 07 48.3 +0.6**
comp=Z,16nm,0.7s,mb5.1
AAK Ala-Archa 52.50 296 P **P 03 07 49.1 +0.8**
SNR=9.9
UCH Uchtor 52.69 296 *e*P **P 03 07 50.5 +0.9**
comp=Z,4.0nm,0.7s,mb4.5
UCH Uchtor 52.69 296 P **P 03 07 50.9 +1.3**
SNR=5.3
EKS2 Erkin-Say 52.95 297 *e*P **P 03 07 52.0 +0.5**
comp=Z,14nm,0.8s,mb5.0
EKS2 Erkin-Say 52.95 297 P **P 03 07 52.5 +0.9**
SNR=15
KKN Kakani 52.98 275 *e*P **P 03 07 52.6 +0.6**
comp=Z,39nm,0.9s,mb5.3
AML Almayashu 53.27 296 *e*P **P 03 07 54.9 +1.0**
comp=Z,11nm,0.8s,mb4.8
AML Almayashu 53.27 296 P **P 03 07 55.4 +1.5**
SNR=12
GKN Gorkha 53.31 275 *e*P **P 03 07 55.0 +0.6**
comp=Z,15nm,0.5s,mb5.2
KOLN Koldanda 54.19 276 *e*P **P 03 08 01.3 +0.4**
comp=Z,32nm,1.0s,mb5.2
YKA Yellowknife Ar 54.58 35 P **P 03 08 03.3 +0.1**
YKA pmax pmax
comp=Z,2.0nm,0.7s
YKA Yellowknife Ar 54.58 35 P **P 03 08 03.3 +0.1**
comp=Z,2.2nm,0.7s,mb4.3,baz=297,slow=6.8,SNR=26
ARU Arti 55.03 317 *e*P **P 03 08 06.2 -0.3**
comp=Z,6.8nm,0.6s,mb4.8
ARU Arti 55.03 317 *c i*P **P 03 08 05.9 -0.6**
ARU *e* 03 09 06.1
ARU *e* 03 10 04.9
ARU *eS* **S 03 15 45.4 -1.2**
ARU *eS*S sS 03 19 25.1 -4.7
ARU pmax pmax
comp=Z,16nm,2.5s,mb4.6
PONG Pong 57.19 284 *e*P PcP 03 09 16.2 -0.5
ARCES ARCESS Array B 59.33 340 P **P 03 08 35.1 -1.6**
ARCES LR LR 03 39 49.0
ARCES ARCESS Array B 59.33 340 P **P 03 08 35.1 -1.6**
comp=Z,6.3nm,0.9s,mb4.6,baz=30,slow=6.2,SNR=6.4
ARCES LR LR 03 39 49.0
comp=Z,71nm,20.9s,MS3.8,baz=39,slow=42
KBO Bosley Butte 60.18 59 *e*P **P 03 08 46.5 +3.6**
PSI Prapat 60.49 242 P **P 03 08 46.1 +0.7**
PSI pmax pmax
comp=Z,10.0nm,1.0s,mb4.8
PSI Prapat 60.49 242 P **P 03 08 46.1 +0.7**
comp=Z,9.9nm,0.9s,mb4.8,baz=290,slow=2.5,SNR=6.9
JOF Joensuu 62.37 333 *ep* **P 03 08 54.8 -2.7**
comp=Z,6.2nm,0.3s,mb5.2
JOF Joensuu 62.37 333 *e*P **P 03 08 54.8 -2.7**
JOF pmax pmax
comp=Z,6.0nm,0.3s,mb5.2
MOD Modoc 62.75 57 *e*P **P 03 09 00.9 +0.5**
comp=Z,2.8nm,0.7s,mb4.5
BMO Blue Mountains 62.78 53 *e*P **P 03 09 01.1 +0.6**
comp=Z,1.4nm,0.8s,mb4.1
WVOR Wild Horse Val 63.43 56 *e*P **P 03 09 06.2 +1.3**
comp=Z,3.5nm,0.9s,mb4.5
WVOR Wild Horse Val 63.43 56 *e*P **P 03 09 06.2 +1.3**
WVOR pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
HYB Hyderabad 64.28 270 *e*P **P 03 09 11.0 +0.2**
HYB Hyderabad 64.28 270 *i* P **P 03 09 11.0 +0.2**
FFC Flin Flon 64.43 38 *e*P **P 03 09 11.4 +0.2**
comp=Z,5.9nm,0.8s,mb4.7
FFC Flin Flon 64.43 38 *e*P **P 03 09 11.5 +0.3**
FFC pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
KAF Kangasniemi 64.56 334 *ep* **P 03 09 09.5 -2.4**
comp=Z,7.8nm,0.7s,mb4.8
KAF Kangasniemi 64.56 334 *e*P **P 03 09 09.5 -2.4**
KAF pmax pmax
comp=Z,8.0nm,0.7s,mb4.9
FINES FINESS Array B 65.13 334 P **P 03 09 14.4 -1.3**
FINES pmax pmax
comp=Z,9.0nm,0.7s
FINES FINESS Array B 65.13 334 P **P 03 09 14.4 -1.3**
comp=Z,9.2nm,0.7s,mb4.9,baz=45,slow=8.4,SNR=21
HLID Hailey 65.21 53 *e*P **P 03 09 16.8 +0.3**
comp=Z,3.5nm,1.0s,mb4.3
WRA Warramunga Arr 65.28 195 *i* P **P 03 09 21.2 +4.2**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 65.28 195 P **P 03 09 16.4 -0.6**
comp=Z,1.8nm,1.0s,mb4.0,baz=16,slow=6.7,SNR=3.5
BOZ Bozeman (W) 65.48 50 *e*P **P 03 09 18.7 +0.5**
comp=Z,3.2nm,0.7s,mb4.5
BOZ Bozeman (W) 65.48 50 *e*P **P 03 09 18.7 +0.5**
BOZ pmax pmax
comp=Z,3.0nm,0.7s,mb4.4
OBN Obninsk 65.82 324 *c i*P **P 03 09 19.9 -0.3**
OBN pmax pmax
comp=Z,27nm,1.2s,mb5.2
OBN MLR MLR
comp=Z,100nm,16.0s,MS4.1
MOOW Moose Ponds 67.17 51 *e*P **P 03 09 29.6 +0.6**
comp=Z,3.6nm,1.0s,mb4.5
TPAW Teton Pass 67.22 51 *e*P **P 03 09 29.6 +0.2**
comp=Z,9.9nm,1.0s,mb4.8
LOHW Long Hollow 67.33 51 *e*P **P 03 09 30.9 +0.8**
comp=Z,6.0nm,1.1s,mb4.5
VRSR Storozhevoye 67.34 320 *c i*P **P 03 09 29.8 -0.2**
VRSR pmax pmax
comp=N,4.0nm,0.9s
VRSR pmax pmax
comp=Z,6.0nm,0.9s,mb4.6
VRSR pmax pmax
comp=E,4.0nm,0.8s
LAO LASA Array 67.69 46 *e*P **P 03 09 32.7 +0.4**
comp=E,4.6nm,0.6s,mb4.7
DUG Dugway 68.26 55 *e*P **P 03 09 36.3 +0.3**
comp=E,2.9nm,0.9s,mb4.3
DUG Dugway 68.26 55 *e*P **P 03 09 36.3 +0.3**
DUG pmax pmax
comp=Z,3.0nm,0.9s,mb4.3
BW06 Boulder Array 68.46 51 *e*P **P 03 09 37.5 +0.3**
comp=Z,2.6nm,0.8s,mb4.3
PDAR Pinedale Array 68.46 51 P **P 03 09 36.5 -0.8**
comp=Z,1.2nm,0.8s,mb4.0,baz=279,slow=1.3,SNR=9.0
ASAR Alice Springs 68.99 195 P **P 03 09 48.4 +7.9**
ASAR pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 68.99 195 P **P 03 09 40.7 +0.2**
comp=Z,0.4nm,0.5s,mb3.6,baz=13,slow=7.1,SNR=3.5
MPU Maple Canyon 69.07 54 *e*P **P 03 09 41.4 +0.3**
comp=Z,3.8nm,0.8s,mb4.4
NB2 NORSAR Subarra 69.70 340 P **P 03 09 43.8 -0.8**
comp=Z,11nm,0.6s,mb5.0,baz=30,slow=6.5
NB2 NORSAR Subarra 69.70 340 P **P 03 09 43.8 -0.8**
comp=Z,11nm,0.6s,mb5.0
NB2 NORSAR Subarra 69.70 340 P **P 03 09 43.8 -0.8**
NB2 pmax pmax
comp=Z,11nm,0.6s,mb5.0
NOA NORSAR Array B 69.70 340 P **P 03 09 43.8 -0.8**
NOA pmax pmax
comp=Z,14nm,0.8s
NOA MLR MLR
comp=Z,54nm,18.1s
NOA NORSAR Array B 69.70 340 P **P 03 09 43.8 -0.8**
comp=Z,14nm,0.8s,mb5.0,baz=31,slow=6.2,SNR=74
NOA LR LR 03 44 06.1
comp=Z,54nm,18.1s,MS3.8,baz=225,slow=39
ULM Lac du Bonnet 70.22 38 P **P 03 09 46.9 -1.1**
comp=Z,1.2nm,0.7s,mb3.9,baz=296,slow=5.3,SNR=3.1
SRU San Rafael 70.31 54 *e*P **P 03 09 49.2 +0.5**
comp=Z,5.6nm,0.8s,mb4.5
SRU San Rafael 70.31 54 *e*P **P 03 09 49.2 +0.5**
SRU pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
KIV Kislovodsk 70.56 313 *e*P **P 03 09 51.4 +1.2**
comp=Z,15nm,0.8s,mb5.0
KIV Kislovodsk 70.56 313 *c i*P **P 03 09 51.2 +1.1**
KIV pmax pmax
comp=Z,18nm,0.8s,mb5.0
ZEI Tsey 70.72 311 *e*P **P 03 09 51.5 +0.4**
ZEI pmax pmax
comp=Z,7.0nm,0.8s,mb4.6
TBLG Delisi 70.96 310 P **P 03 09 54.0 +1.4**
ONI Oni 71.09 311 P **P 03 09 54.8 +1.4**
AGMN Agassiz Refuge 71.64 40 *e*P **P 03 09 55.0 -1.7**
comp=Z,35nm,1.9s,mb5.0
SUW Suwalki 71.86 330 *e*P **P 03 09 57.4 -0.4**
AKASG Malin Array Be 72.08 325 P **P 03 09 58.8 -0.4**
AKASG pmax pmax
comp=Z,10.0nm,0.8s
AKASG Malin Array Be 72.08 325 P **P 03 09 58.8 -0.4**
comp=Z,10nm,0.8s,mb4.8,baz=36,slow=5.9,SNR=37
KIEV Kiev 72.09 325 *e*P **P 03 09 58.7 -0.6**
comp=Z,14nm,0.9s,mb4.9
KIEV *e* 03 10 11.3
KIEV Kiev 72.09 325 *e*P **P 03 09 58.7 -0.6**
KIEV *e* 03 10 11.3
KIEV pmax pmax
comp=Z,14nm,0.9s,mb4.9
SMCO Snowmass 72.31 52 *e*P **P 03 10 00.6 -0.2**
comp=Z,4.1nm,0.8s,mb4.4
SOC Sochi 72.37 314 *i* P **P 03 10 03.0 +1.9**
ISCO Idaho Springs 72.66 51 *e*P **P 03 10 03.5 +0.7**
comp=Z,9.0nm,1.4s,mb4.5
ISCO Idaho Springs 72.66 51 *e*P **P 03 10 03.6 +0.8**
ISCO pmax pmax
comp=Z,9.0nm,1.4s,mb4.5
ANN Anapa 72.67 316 *e*P **P 03 10 02.5 -0.3**
ANN pmax pmax
comp=Z,8.0nm,0.7s,mb4.8
ANMO Albuquerque 75.51 55 *e*P **P 03 10 19.7 +0.1**
comp=Z,2.5nm,1.0s,mb4.1
ANMO Albuquerque 75.51 55 *e*P **P 03 10 19.7 +0.1**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
KWP Kalwaria 75.54 327 *e*P **P 03 10 20.6 +1.1**
KWP Kalwaria 75.54 327⇑*i*P **P 03 10 19.9 +0.4**
OJC Ojcow 76.16 329 *e*P **P 03 10 23.2 +0.2**
KOLS Kolonicke sedl 76.27 327 *e*P **P 03 10 24.1 +0.4**
STHS Stebnicka Huta 76.28 328 *e*P **P 03 10 24.7 +1.0**
comp=Z,6.3nm,1.2s,mb4.4
STHS Stebnicka Huta 76.28 328 *e*P **P 03 10 24.7 +1.0**
STHS pmax pmax
comp=Z,6.0nm,1.2s,mb4.4
CRVS Cervenica-Dubn 76.61 328 *e*P **P 03 10 26.1 +0.5**
NIE Niedzica 76.63 329 *e*P **P 03 10 26.8 +1.1**
SCHQ Schefferville 76.68 20 P **P 03 10 25.4 -0.5**
comp=Z,1.9nm,0.8s,mb4.1,baz=270,slow=14,SNR=4.5
MALT Malatya 76.81 311⇑P **P 03 10 28.1 +1.2**
MALT Malatya 76.81 311⇑*i*P **P 03 10 28.1 +1.2**
TRPA Tarpa 76.81 327⇑*i*P **P 03 10 27.2 +0.4**
VRI Vrincioaia 76.87 323⇓P **P 03 10 27.8 +0.7**
VRI Vrincioaia 76.87 323⇓*i*P **P 03 10 27.8 +0.7**
OKC Ostrava-Krasne 77.08 330 *e*P **P 03 10 28.9 +0.7**
OKC *e* 03 10 41.6
OKC Ostrava-Krasne 77.08 330 *e*PCP **P 03 10 28.9 +0.7**
OKC *ep*P pP 03 10 41.6 +4.3
UPC Upice 77.27 332 *e*P **P 03 10 29.9 +0.6**
UPC Upice 77.27 332 *e*PCP **P 03 10 29.9 +0.6**
DPC Dobruska-Polom 77.29 331 *e*P **P 03 10 30.0 +0.6**
DPC *e* 03 10 42.5
DPC Dobruska-Polom 77.29 331 *e*PCP **P 03 10 30.0 +0.6**
DPC *ep*P pP 03 10 42.5 +4.0
KECS Kecovo 77.33 328 *e*P **P 03 10 29.1 -0.5**
comp=Z,2.1nm,0.8s,mb4.1
KECS Kecovo 77.33 328 *e*P **P 03 10 29.1 -0.5**
KECS pmax pmax
comp=Z,2.0nm,0.8s,mb4.1
MORC Moravsky Berou 77.34 330 *e*P **P 03 10 30.1 +0.3**
comp=Z,7.2nm,0.9s,mb4.6
MORC *e* 03 10 43.0
MORC Moravsky Berou 77.34 330 *e*P **P 03 10 30.1 +0.4**
MORC *e* 03 10 43.0
MORC pmax pmax
comp=Z,7.0nm,0.9s,mb4.6
MORC Moravsky Berou 77.34 330⇓*i*P **P 03 10 29.9 +0.2**
MLR Muntele Rosu 77.50 323⇑P **P 03 10 31.6 +0.9**
MLR Muntele Rosu 77.50 323⇑*i*P **P 03 10 31.6 +0.9**

UMR	**Umm Al-Rimmam**	**77.53**	**299**	*e*P		**P**	**03 10 30.3**	**-0.8**
UMR				AMb		AMB	03 10 32.0	
	comp=Z,18nm,0.7s,mb5.1							
CLL	**Collm**	**77.58**	**334**	⇑*i*P		**P**	**03 10 30.6**	**-0.4**
	comp=Z,10.0nm,0.7s,mb4.8							
CLL				*i* pPcP			03 10 43.8	
CLL				*i* sPcP			03 10 45.2	
CLL				*i* x		x	03 10 50.2	
CLL				LmV			03 49 00.0	
	comp=Z,100nm,19.5s							
BRG	**Berggiesshubel**	**77.65**	**333**	*e*P		**P**	**03 10 31.3**	**-0.1**
BRG				*e*			03 10 44.4	
BRG				pmax	pmax			
	comp=Z,2.0nm,0.8s,mb4.1							
BRG				pmax	pmax			
	comp=Z,6.0nm,1.5s,mb4.3							
BRG	**Berggiesshubel**	**77.65**	**333**	*e*P		**P**	**03 10 31.3**	**-0.1**
	comp=Z,2.5nm,0.8s,mb4.2							
BRG				*e*			03 10 44.4	
	comp=Z,10.0nm,1.5s							
PVCC	**Panska Ves**	**77.74**	**332**	*e*P		**P**	**03 10 32.2**	**+0.3**
PVCC				*e*			03 10 45.7	
PVCC	**Panska Ves**	**77.74**	**332**	*e*PCP		**P**	**03 10 32.2**	**+0.3**
PVCC				*e*pP		pP	03 10 45.7	+4.7
DRGR		**77.82**	**326**	⇑P		**P**	**03 10 32.9**	**+0.5**
DRGR		**77.82**	**326**	⇑*i*P		**P**	**03 10 32.9**	**+0.5**
VYHS	**Vyhne**	**77.94**	**329**	*i* P		**P**	**03 10 33.7**	**+0.6**
	comp=Z,1.9nm,0.9s,mb4.0							
VYHS	**Vyhne**	**77.94**	**329**	*i* P		**P**	**03 10 33.7**	**+0.6**
VYHS				pmax	pmax			
	comp=Z,2.0nm,0.9s,mb4.0							
QRN	**Al-Qurain**	**77.95**	**298**	*e*P		**P**	**03 10 33.1**	**-0.3**
QRN				AMb		AMB	03 10 34.4	
	comp=Z,30nm,0.6s,mb5.4							
PSZ	**Piszkesteto**	**78.02**	**328**	*e*P		**P**	**03 10 33.6**	**+0.2**
	comp=Z,4.3nm,0.8s,mb4.4							
PSZ				⇑P			03 10 34.5	
PSZ	**Piszkesteto**	**78.02**	**328**	*e*P		**P**	**03 10 33.7**	**+0.2**
PSZ				pmax	pmax			
	comp=Z,4.0nm,0.8s,mb4.4							
PSZ	**Piszkesteto**	**78.02**	**328**	⇑*i*P		**P**	**03 10 34.5**	**+1.0**
NAY	**Al-Naaiem**	**78.03**	**299**	*e*P		**P**	**03 10 32.8**	**-1.1**
NAY				AMb		AMB	03 10 34.9	
	comp=Z,6.8nm,0.9s,mb4.6							
RDF	**Al-Radifah**	**78.06**	**299**	*e*P		**P**	**03 10 33.4**	**-0.6**
RDF				AMb		AMB	03 10 35.3	
	comp=Z,24nm,0.7s,mb5.2							
VRAC	**Vranov**	**78.08**	**331**	⇑P		**P**	**03 10 34.8**	**+1.0**
VRAC	**Vranov**	**78.08**	**331**	⇑*i*P		**P**	**03 10 34.8**	**+1.0**
PRU	**Pruhonice**	**78.21**	**332**	*e*P		**P**	**03 10 34.6**	**+0.1**
PRU				*e*			03 10 48.0	
PRU	**Pruhonice**	**78.21**	**332**	*e*PCP		**P**	**03 10 34.6**	**+0.1**
PRU				*e*pP		pP	03 10 48.0	+4.3
TREC	**Trest**	**78.47**	**331**	*e*P		**P**	**03 10 35.4**	**-0.6**
TREC	**Trest**	**78.47**	**331**	*e*PCP		**P**	**03 10 35.4**	**-0.6**
MOX	**Moxa**	**78.60**	**334**	*e*P		pP	03 10 49.8	+4.0
MODS	**Modra-Piesok**	**78.61**	**330**	*e*P		**P**	**03 10 38.2**	**+1.4**
ANTO	**Ankara**	**78.62**	**315**	*e*P		**P**	**03 10 37.8**	**+0.8**
	comp=Z,8.2nm,0.7s,mb4.8							
ANTO	**Ankara**	**78.62**	**315**	*e*P		**P**	**03 10 37.8**	**+0.8**
ANTO				pmax	pmax			
	comp=Z,8.0nm,0.7s,mb4.8							
ANTO	**Ankara**	**78.62**	**315**	⇑*i*P		**P**	**03 10 38.1**	**+1.1**
NKC	**Novy Kostel**	**78.69**	**333**	*e*P		**P**	**03 10 36.6**	**-0.6**
NKC	**Novy Kostel**	**78.69**	**333**	*e*PCP		**P**	**03 10 36.6**	**-0.6**
GZR	**Gura Zlata**	**78.93**	**325**	⇑P		**P**	**03 10 38.4**	**-0.1**
GZR	**Gura Zlata**	**78.93**	**325**	⇑*i*P		**P**	**03 10 38.4**	**-0.2**
BZS	**Buzias**	**79.22**	**326**	⇑P		**P**	**03 10 40.8**	**+0.6**
BZS	**Buzias**	**79.22**	**326**	⇑*i*P		**P**	**03 10 40.8**	**+0.6**
KHC	**Kasperske Hory**	**79.27**	**332**	*e*P		**P**	**03 10 40.9**	**+0.6**
KHC				*e*			03 10 53.0	
KHC	**Kasperske Hory**	**79.27**	**332**	*e*PCP		**P**	**03 10 40.9**	**+0.6**
KHC				*e*pP		pP	03 10 53.0	+3.5
GERES	**GERESS Array B**	**79.47**	**332**	P		**P**	**03 10 41.6**	**+0.1**
GERES				pmax	pmax			
	comp=Z,3.0nm,0.6s							
GERES				MLR	MLR			
	comp=Z,103nm,18.7s							
GERES	**GERESS Array B**	**79.47**	**332**	P		**P**	**03 10 41.6**	**+0.1**
	comp=Z,2.6nm,0.6s,mb4.3,baz=34,slow=5.6,SNR=23							
GERES				LR		LR	03 50 00.9	
	comp=Z,103nm,18.7s,MS4.2,baz=49,slow=39							
GRA1	**Grafenberg Arr**	**79.55**	**334**	*e*P		**P**	**03 10 42.3**	**+0.4**
	comp=Z,6.0nm,1.0s,mb4.5							
GRA1				*e*pP		pP	03 10 55.6	+4.5
GRF	**Grafenberg Arr**	**79.55**	**334**	*e*P		**P**	**03 10 42.3**	**+0.4**
GRF				*e**PP		pP	03 10 55.6	+4.5
GRF				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**79.55**	**334**	*e*P		**P**	**03 10 42.3**	**+0.4**
GRF				*e**PP		pP	03 10 55.6	+4.5
GRF				pmax	pmax			
	comp=Z,6.0nm,1.0s,mb4.5							
GRF	**Grafenberg Arr**	**79.55**	**334**	*e*P		**P**	**03 10 42.3**	**+0.4**
	comp=Z,6.0nm,1.0s,mb4.5							
GRF				*e*pP		pP	03 10 55.6	+4.5
PKSM	**Moragy**	**79.91**	**328**	⇑P		**P**	**03 10 43.6**	**-0.3**
PKSM	**Moragy**	**79.91**	**328**	⇑*i*P		**P**	**03 10 43.6**	**-0.3**
MEM	**Membach**	**80.29**	**337**	P		**P**	**03 10 46.3**	**+0.4**
	comp=Z,6.6nm,1.9s,mb4.2							
BCLA	**Clavier**	**80.66**	**338**	P		**P**	**03 10 46.4**	**-1.5**
	comp=Z,11nm,1.8s,mb4.5							
VTS	**Vitosha**	**81.01**	**323**	⇓P		**P**	**03 10 50.6**	**+0.7**
VTS	**Vitosha**	**81.01**	**323**	⇓*i*P		**P**	**03 10 50.6**	**+0.7**
CDF	**Champ du Feu**	**81.90**	**335**	*e*P		**P**	**03 10 53.6**	**-0.9**
	comp=Z,13nm,1.1s,mb4.5							
CDF	**Champ du Feu**	**81.90**	**335**	*e*P		**P**	**03 10 53.6**	**-0.9**
	comp=Z,6.6nm,1.1s,mb4.5							
CDF	**Champ du Feu**	**81.90**	**335**	*e*P		**P**	**03 10 53.6**	**-0.9**
CDF				pmax	pmax			
	comp=Z,7.0nm,1.1s,mb4.5							
ASF	**Jabal al Asfar**	**82.15**	**308**	LR		LR	03 53 54.0	
	comp=Z,85nm,18.9s,MS4.1,baz=248,slow=40							
HAU	**Haudompre**	**82.54**	**336**	*e*P		**P**	**03 10 57.3**	**-0.5**
MIAR	**Mount Ida**	**83.06**	**48**	*e*P		**P**	**03 11 00.1**	**-0.7**
	comp=Z,4.7nm,0.9s,mb4.5							
MIAR				*e*			03 11 16.7	
MIAR	**Mount Ida**	**83.06**	**48**	*e*P		**P**	**03 11 00.1**	**-0.7**
MIAR				*e*			03 11 16.7	
MIAR				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.5							
LOR	**Lormes**	**83.92**	**337**	*e*P		**P**	**03 11 04.9**	**-0.1**
	comp=Z,10nm,0.9s,mb4.7							
LOR	**Lormes**	**83.92**	**337**	*e*P		**P**	**03 11 04.9**	**-0.1**
	comp=Z,5.1nm,0.9s,mb4.7							
LOR	**Lormes**	**83.92**	**337**	*e*P		**P**	**03 11 04.9**	**-0.1**
LOR				pmax	pmax			
	comp=Z,5.0nm,0.9s,mb4.6							
SSF	**Saint Saulge**	**84.21**	**337**	*e*P		**P**	**03 11 05.9**	**-0.5**
	comp=Z,16nm,1.2s,mb4.7							
SSF	**Saint Saulge**	**84.21**	**337**	*e*P		**P**	**03 11 05.9**	**-0.5**
	comp=Z,7.9nm,1.3s,mb4.7							
SSF	**Saint Saulge**	**84.21**	**337**	*e*P		**P**	**03 11 05.9**	**-0.5**
SSF				pmax	pmax			
	comp=Z,8.0nm,1.3s,mb4.7							
SMF	**Signal de Mont**	**84.49**	**337**	*e*P		**P**	**03 11 06.7**	**-1.2**
	comp=Z,52nm,1.4s,mb5.2							
SMF	**Signal de Mont**	**84.49**	**337**	*e*P		**P**	**03 11 06.7**	**-1.2**
	comp=Z,26nm,1.4s,mb5.2							
SMF	**Signal de Mont**	**84.49**	**337**	*e*P		**P**	**03 11 06.7**	**-1.2**
SMF				pmax	pmax			
	comp=Z,26nm,1.4s,mb5.2							
AVF	**Avril sur Loir**	**84.50**	**337**	*e*P		**P**	**03 11 07.2**	**-0.7**
	comp=Z,11nm,1.0s,mb4.7							
AVF	**Avril sur Loir**	**84.50**	**337**	*e*P		**P**	**03 11 07.2**	**-0.7**
	comp=Z,5.4nm,1.0s,mb4.6							
AVF	**Avril sur Loir**	**84.50**	**337**	*e*P		**P**	**03 11 07.2**	**-0.7**
AVF				pmax	pmax			
	comp=Z,5.0nm,1.0s,mb4.6							
LPL	**La Plagne**	**84.66**	**335**	*e*P		**P**	**03 11 07.5**	**-1.3**
	comp=Z,14nm,1.0s,mb4.8							
LPL	**La Plagne**	**84.66**	**335**	*e*P		**P**	**03 11 07.5**	**-1.3**
	comp=Z,7.2nm,1.0s,mb4.8							
LPL	**La Plagne**	**84.66**	**335**	*e*P		**P**	**03 11 07.5**	**-1.3**
LPL				pmax	pmax			
	comp=Z,7.0nm,1.0s,mb4.8							
LPG	**La Plagne**	**84.67**	**335**	*e*P		**P**	**03 11 08.0**	**-0.8**
	comp=Z,13nm,0.8s,mb4.8							
LPG	**La Plagne**	**84.67**	**335**	*e*P		**P**	**03 11 08.0**	**-0.8**
	comp=Z,6.7nm,0.8s,mb4.8							
LPG	**La Plagne**	**84.67**	**335**	*e*P		**P**	**03 11 08.0**	**-0.8**
LPG				pmax	pmax			
	comp=Z,7.0nm,0.8s,mb4.8							
EIL	**Elat**	**85.12**	**307**	LR		LR	03 56 39.9	
	comp=Z,83nm,18.1s,MS4.2,baz=273,slow=41							
TCF	**Toulx Ste Croi**	**85.27**	**338**	*e*P		**P**	**03 11 11.3**	**-0.5**
	comp=Z,20nm,1.0s,mb4.9							
TCF	**Toulx Ste Croi**	**85.27**	**338**	*e*P		**P**	**03 11 11.3**	**-0.5**
	comp=Z,9.9nm,1.0s,mb4.9							
TCF	**Toulx Ste Croi**	**85.27**	**338**	*e*P		**P**	**03 11 11.3**	**-0.5**
TCF				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.9							
MBDF	**Montbardon**	**85.36**	**334**	*e*P		**P**	**03 11 11.4**	**-0.9**
	comp=Z,7.6nm,0.7s,mb4.7							
MBDF	**Montbardon**	**85.36**	**334**	*e*P		**P**	**03 11 11.4**	**-0.9**
	comp=Z,3.8nm,0.7s,mb4.6							
MBDF	**Montbardon**	**85.36**	**334**	*e*P		**P**	**03 11 11.4**	**-0.9**
MBDF				pmax	pmax			
	comp=Z,4.0nm,0.7s,mb4.7							
ORIF	**Oris-en-Rattie**	**85.46**	**335**	*e*P		**P**	**03 11 11.3**	**-1.5**
	comp=Z,20nm,1.0s,mb4.9							
ORIF	**Oris-en-Rattie**	**85.46**	**335**	*e*P		**P**	**03 11 11.3**	**-1.5**
	comp=Z,9.9nm,1.0s,mb4.9							
ORIF	**Oris-en-Rattie**	**85.46**	**335**	*e*P		**P**	**03 11 11.3**	**-1.5**
ORIF				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb4.9							
MFF	**Saint Martin d**	**85.60**	**339**	*e*P		**P**	**03 11 12.9**	**-0.6**
VIVF	**Saint-Julien-l**	**85.88**	**336**	*e*P		**P**	**03 11 13.5**	**-1.4**
SBF	**Sospel**	**85.92**	**333**	*e*P		**P**	**03 11 14.7**	**-0.4**
	comp=Z,92nm,1.2s,mb5.6							
SBF	**Sospel**	**85.92**	**333**	*e*P		**P**	**03 11 14.7**	**-0.4**
	comp=Z,46nm,1.2s,mb5.6							
SBF	**Sospel**	**85.92**	**333**	*e*P		**P**	**03 11 14.7**	**-0.4**
SBF				pmax	pmax			
	comp=Z,46nm,1.2s,mb5.6							
RJF	**Les Rejaudoux**	**86.37**	**338**	*e*P		**P**	**03 11 15.9**	**-1.4**
	comp=Z,21nm,1.2s,mb5.0							
RJF	**Les Rejaudoux**	**86.37**	**338**	*e*P		**P**	**03 11 15.9**	**-1.4**
	comp=Z,10nm,1.2s,mb4.9							
RJF	**Les Rejaudoux**	**86.37**	**338**	*e*P		**P**	**03 11 15.9**	**-1.4**
RJF				pmax	pmax			
	comp=Z,10.0nm,1.2s,mb4.9							
SMRF	**Simiane la Rot**	**86.41**	**335**	*e*P		**P**	**03 11 16.3**	**-1.2**
	comp=Z,26nm,1.2s,mb5.0							
SMRF	**Simiane la Rot**	**86.41**	**335**	*e*P		**P**	**03 11 16.3**	**-1.2**
	comp=Z,26nm,1.2s,mb5.3							
CAF	**Calviac**	**86.57**	**337**	*e*P		**P**	**03 11 17.7**	**-0.6**
	comp=Z,22nm,1.2s,mb5.0							
CAF	**Calviac**	**86.57**	**337**	*e*P		**P**	**03 11 17.7**	**-0.6**
	comp=Z,11nm,1.2s,mb5.0							
CAF	**Calviac**	**86.57**	**337**	*e*P		**P**	**03 11 17.7**	**-0.6**
CAF				pmax	pmax			
	comp=Z,11nm,1.2s,mb5.0							
LMR	**La Mourre**	**86.69**	**334**	*e*P		**P**	**03 11 17.7**	**-1.2**
	comp=Z,19nm,1.0s,mb5.0							
LMR	**La Mourre**	**86.69**	**334**	*e*P		**P**	**03 11 17.7**	**-1.2**
	comp=Z,9.6nm,1.0s,mb5.0							
LMR	**La Mourre**	**86.69**	**334**	*e*P		**P**	**03 11 17.7**	**-1.2**
LMR				pmax	pmax			
	comp=Z,10.0nm,1.0s,mb5.0							
ETSF	**Etsaut**	**89.16**	**338**	*e*P		**P**	**03 11 29.6**	**-1.1**
KEST	**Kesra**	**92.48**	**328**	LR		LR	03 57 55.2	
	comp=Z,38nm,18.0s,MS3.9,baz=308,slow=38							
TORD	**Torodi Ar. Bea**	**115.72**	**325**	PKP	PKPdf		03 17 16.8	-1.1
	comp=Z,0.4nm,0.9s,baz=124,slow=2.1,SNR=3.6							
SNAA	**Sanae**	**149.34**	**197**	PKHKP			03 18 22.0	
SNAA				pmax	pmax			
	comp=Z,1.0nm,1.1s							
SNAA	**Sanae**	**149.34**	**197**	PKPbc	PKPbc		03 18 22.0	-0.6
	comp=Z,1.0nm,1.1s,baz=144,slow=19,SNR=2.9							
PLCA	**Paso Flores**	**150.66**	**97**	PKPbc	PKPbc		03 18 26.4	-0.3
PLCA	**Paso Flores**	**150.66**	**97**	PKIKP	PKPbc		03 18 26.4	-0.4
PLCA				pmax	pmax			
	comp=Z,2.0nm,0.9s							
PLCA	**Paso Flores**	**150.66**	**97**	PKPbc	PKPbc		03 18 26.4	-0.3
	comp=Z,2.1nm,0.9s,baz=328,slow=5.0,SNR=3.0							
VNA2	**Neumayer--Watz**	**150.84**	**196**	*e*PKPdf	PKPdf		03 18 20.7	+0.1
VNA2				*e*			03 18 26.9	
VNA2				*e*			03 18 30.6	
VNA2				*e*			03 18 34.7	
VNA2				*e*			03 18 38.0	
VNA2				*e*			03 18 40.2	
VNA2				*e*			03 18 42.8	
VNA2				*e*			03 18 45.1	
VNA2				*e*			03 18 47.7	
VNA2				*e*			03 18 51.3	
VNA2				*e*			03 18 54.9	
VNA2				*e*			03 19 03.0	
VNA2				*e*			03 19 07.6	
VNA2				*e*			03 19 11.8	
VNA2				*e*			03 19 16.7	
VNA3	**Neumayer Olymp**	**150.99**	**194**	*e*PKPdf	PKPdf		03 18 20.3	-0.5
VNA3				*e*			03 18 26.1	
VNA3				*e*			03 18 30.0	
VNA3				*e*			03 18 33.9	
VNA3				*e*			03 18 37.0	
VNA3				*e*			03 18 39.3	
VNA3				*e*			03 18 42.3	
VNA3				*e*			03 18 44.3	
VNA3				*e*			03 18 47.7	
VNA3				*e*			03 18 50.9	
VNA3				*e*			03 18 55.3	
VNA3				*e*			03 19 02.2	
VNA3				*e*			03 19 07.4	
VNA3				*e*			03 19 11.4	
VNA3				*e*			03 19 15.9	

*NIED **31** 03:13:00, 44.40N×149.30E, h20km, Mw4.0 Best double couple: M₀1.29000×10¹⁵ NP1:φs197.00000°, δ27.00000°, λ73.00000°. NP2:φs36.00000°, δ64.00000°, λ99.00000°.*

*IDC **31** 03:13:24.9±0.9, 44.31N×149.15E, h0km, mb3.9/12, mb1 4.0/14, mb1mx4.0/20, mbtmp3.9/14, ML3.6/1, MS3.4/4, Ms1 3.4/4, ms1mx3.1/41, Error ellipse: s-maj=25.8km s-min=19.0km az=134.0*

*NEIC **31** 03:13:26.9±0.5, 44.30N×149.05E, h10km, mb4.1/13, Error ellipse: s-maj=14.0km s-min=8.4km az=153.0*

*BJI **31** 03:13:27.4, 44.33N×149.52E, h38km, mB5.1, mb4.5*

*JMA **31** 03:13:28.2±0.6, 44.40N×149.27E, h30km, M4.1*

*ISCJB **31** 03:13:29.3±1.0, 44.13N±006×149.15E±008, h45km±9km, mb3.9/26, Error ellipse: s-maj=11.2km s-min=7.5km az=40.9*

*MOS **31** 03:13:30.5±1.0, 44.34N×149.07E, h51km, mb4.2/12, Error ellipse: s-maj=13.9km s-min=11.7km az=128.1*

ISC 31 03:13:31.0±0.9, **4416N**±006×**14915E**±008, **h41**km±8km, **n83**,σ1**19**/86, **mb3.9**/26, **1C**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.41**	**320**	⇑*i*	PN		**Pn**	**03 13 51.0**	**-3.1**
KUR				*i*	S		**Sn**	**03 14 11.0**	**-0.4**
KUR				pmax	pmax				
	comp=Z,2μm,1.6s								
KUR				pmax	pmax				
	comp=N,300nm,0.5s								
KUR				pmax	pmax				
	comp=E,230nm,0.5s								
KUR				pmax	pmax				
	comp=Z,680nm,0.5s								
KUR				smax					
	comp=N,5μm,1.6s								
YUK	**Yuzh-Kuril'sk**	**2.37**	**268**	*e*P	N		**Pn**	**03 14 06.9**	**-0.4**
YUK				S			**Sn**	**03 14 35.9**	**+0.8**
YUK				pmax	pmax				
	comp=Z,270nm,0.3s								
YUK				smax					
	comp=N,990nm,0.6s								
YUK				smax					
	comp=E,470nm,0.6s								
NEM2	**Nemuro 2**	**2.59**	**253**	P			**Pn**	**03 14 09.3**	**-1.1**
NEM2				*e*S			**Sn**	**03 14 39.2**	**-1.4**
JRA	**Rausu**	**2.91**	**267**	P			**Pn**	**03 14 15.3**	**+0.6**
JNK	**Nakash**	**3.25**	**261**	P			**Pn**	**03 14 19.4**	**-0.1**
JAK	**Akkeshi**	**3.44**	**252**	P			**Pn**	**03 14 21.0**	**-1.0**
JAK				*e*S			**Sn**	**03 15 00.8**	**-0.6**
JTKR	**Abashiri--Toko**	**3.78**	**269**	P			**Pn**	**03 14 27.6**	**+0.9**
JAR	**Ashorobuto**	**3.99**	**259**	P			**Pn**	**03 14 30.0**	**+0.4**
JMP	**Maruseppu**	**4.17**	**270**	P			**Pn**	**03 14 33.4**	**+1.3**
JCH	**Churui**	**4.49**	**252**	P			**Pn**	**03 14 36.5**	**+0.1**
JKK2	**Kamakawa 2**	**4.62**	**269**	P			**Pn**	**03 14 40.3**	**+2.0**
ASAJ	**Asahikawa**	**4.71**	**272**	P			**Pn**	**03 14 41.9**	**+2.4**
ASAJ	**Asahikawa**	**4.71**	**272**	PN			**Pn**	**03 14 41.5**	**+2.0**
ASAJ				pmax	pmax				
	comp=Z,2.0nm,0.3s								
ASAJ				MLR	MLR				
	comp=Z,373nm,19.7s								
ASAJ	**Asahikawa**	**4.71**	**272**	Pn			**Pn**	**03 14 41.5**	**+1.9**
	comp=Z,1.5nm,0.3s,baz=86,slow=15,SNR=12								
ASAJ				LR			LR	03 16 46.6	
	comp=Z,373nm,19.7s,baz=123,slow=43								
JFR	**Furan**	**4.86**	**260**	P			**Pn**	**03 14 43.0**	**+1.5**
JEM	**Erimo**	**4.88**	**246**	P			**Pn**	**03 14 42.7**	**+0.9**
ERM	**Erimo**	**4.88**	**246**	*e*Pn			**Pn**	**03 14 43.5**	**+1.7**
ERM				*e*Sg			Sn	03 16 08.4	+31
JNBK	**Urakawa-nobuka**	**5.04**	**250**	P			**Pn**	**03 14 43.6**	**-0.3**
JAB	**Ashibetsu**	**5.05**	**265**	P			**Pn**	**03 14 46.8**	**+2.6**
JBT2	**Biratori 2**	**5.13**	**257**	P			**Pn**	**03 14 45.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**5.29**	**304**	*e*PN			**Pn**	**03 14 48.0**	**+0.7**
JNB	**Noboribetsu**	**6.15**	**257**	P			**Pn**	**03 14 59.7**	**+0.4**
JNB				*e*S			**Sn**	**03 16 09.5**	**+1.2**
JKB	**Kayabe**	**6.37**	**252**	P			**Pn**	**03 15 02.0**	**-0.2**
JKB				*e*S			**Sn**	**03 16 11.1**	**-2.5**
JYM2	**Yakumo 2**	**6.74**	**255**	P			**Pn**	**03 15 07.4**	**+0.1**
JANG	**Nango**	**6.81**	**239**	P			**Pn**	**03 15 05.9**	**-2.4**
JTM	**Tenmabayashi**	**6.86**	**243**	P			**Pn**	**03 15 08.2**	**-0.7**
JTM				*e*S			**Sn**	**03 16 20.7**	**-5.0**
JTH	**Tanohata**	**6.87**	**235**	*e*S			Sx	03 16 18.1	
JSR	**Shiriuchi**	**6.93**	**251**	P			**Pn**	**03 15 10.0**	**0.0**
JOSM	**Okushiri--Mats**	**7.38**	**257**	P			**Pn**	**03 15 16.7**	**+0.7**
OFUJ	**Ofunato**	**7.56**	**230**	*e*S			Sx	03 16 35.1	
JRG	**Rokugo**	**7.94**	**236**	P			**Pn**	**03 15 22.6**	**-1.2**
JRG				*e*S			Sx	03 16 46.6	
JIO	**Ouri**	**8.18**	**228**	P			**Pn**	**03 15 24.8**	**-2.3**
JIO				*e*S			Sx	03 16 49.1	
MJAR	**Matsushiro Arr**	**11.29**	**231**	Pn			**Pn**	**03 16 07.4**	**-2.2**
	baz=34,slow=13,SNR=2.6								
KSRS	**Korea Array**	**17.39**	**255**	P			**Pn**	**03 17 29.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=49,slow=14,SNR=4.1								
KSRS				LR			LR	03 23 21.1	
	comp=Z,62nm,19.9s,baz=310,slow=34								
JNU	**Nakatsue**	**17.99**	**238**	LR			LR	03 24 39.4	
	comp=Z,110nm,19.2s,baz=141,slow=37								
BILL	**Bilibino**	**25.58**	**15**	*e*P			**P**	**03 19 00.3**	**+4.6**
BILL				pmax	pmax				
	comp=Z,1.0nm,1.3s,mb3.2								
TIXI	**Tiksi**	**29.27**	**347**	*e*P			**P**	**03 19 23.7**	**-5.0**
TIXI				pmax	pmax				
	comp=Z,1.0nm,0.8s,mb3.6								
SONM	**Songino Array**	**29.65**	**292**	P			**P**	**03 19 32.2**	**-0.1**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.7s								
SONM	**Songino Array**	**29.65**	**292**	P			**P**	**03 19 32.2**	**-0.1**
	comp=Z,1.3nm,0.7s,mb3.8,baz=74,slow=8.9,SNR=10								
WHN	**Wuhan**	**30.58**	**255**	*e*P			**P**	**03 19 42.5**	**+1.8**
IMA2	**Indian Mountai**	**37.53**	**34**	*e*P			**P**	**03 20 39.7**	**-0.8**
COLA	**College**	**39.89**	**36**	*e*P			**P**	**03 20 59.5**	**-0.7**
	comp=Z,2.4nm,0.7s,mb4.0								
COLA	**College**	**39.89**	**36**	*e*P			**P**	**03 20 59.5**	**-0.8**
COLA				pmax	pmax				
	comp=Z,2.0nm,0.7s,mb4.0								
ZALV	**Zalesovo Beam**	**41.90**	**307**	PcP			PcP	03 23 11.7	-0.2
	comp=Z,1.0nm,0.5s,baz=64,slow=3.4,SNR=2.5								
EGAK	**Eagle**	**42.75**	**36**	*e*P			**P**	**03 21 23.2**	**-0.6**
	comp=Z,1.5nm,0.7s,mb3.8								
INK	**Inuvik**	**45.32**	**31**	P			**P**	**03 21 42.7**	**-1.6**
INK				pmax	pmax				
	comp=Z,1.0nm,0.5s								
INK	**Inuvik**	**45.32**	**31**	P			**P**	**03 21 42.6**	**-1.6**
	comp=Z,0.8nm,0.5s,mb3.8,baz=252,slow=5.5,SNR=11								
MK31	**Makanchi Array**	**45.67**	**298**	*e*P			**P**	**03 21 47.1**	**-0.3**
MKAR	**Makanchi Array**	**45.67**	**298**	P			**P**	**03 21 47.2**	**-0.1**
MKAR				LR			LR	03 42 15.0	
MKAR	**Makanchi Array**	**45.67**	**298**	P			**P**	**03 21 47.2**	**-0.1**
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.7s								
MKAR				MLR	MLR				
	comp=Z,78nm,19.0s								
MKAR	**Makanchi Array**	**45.67**	**298**	P			**P**	**03 21 47.2**	**-0.1**
	comp=Z,2.1nm,0.7s,mb4.2,

KDHN	**Kadinhani**	**1.15**	**55**	*i* P	**Pn**	**03 25 15.0**	**-0.7**
KDHN				*i* S	**Sn**	**03 25 32.3**	**+1.4**
KHL	**Karahalli**	**1.20**	**293**	*e*PN	**Pn**	**03 25 15.9**	**-0.6**
KIZT	**Kizilcal**	**1.26**	**36**	*e*PN	**Pn**	**03 25 16.8**	**-0.6**
ESKT	**Eskisehir**	**1.65**	**358**	*i* P	**Pn**	**03 25 22.8**	**0.0**
ESKT				*i* S	**Sn**	**03 25 44.5**	**+1.1**
ESKT	**Eskisehir**	**1.65**	**358**	*e*Pn	**Pn**	**03 25 21.9**	**-0.9**
SEYT	**Eskypehyr**	**1.65**	**358**	*i* P	**Pn**	**03 25 22.8**	**0.0**
SEYT				*i* S	**Sn**	**03 25 44.5**	**+1.1**
ERMK	**Ermenek**	**2.00**	**127**	*i* P	**Pn**	**03 25 34.5**	**+6.9**
ERMK				*e*S	**Sn**	**03 25 59.7**	**+7.7**

NEIC ***31*** *03:26:09.2, 1579N×9904W, h20km, MD4.1(MEX), After MEX.*

MEX 31 03:26:09.1±0.7, 1582N×9908W, h16km±18km, MD4.1, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**1.08**	**58**	*i* P	Pb	03 26 25.5	-3.9
PNIG				*i* S	Sb	03 26 38.9	-4.3
ACX	**Acapulco**	**1.32**	**322**	*e*P	Pn	03 26 29.0	-3.9
ACX				*i* S	Sn	03 26 45.0	-5.1
CAIG	**El Cayaco**	**1.68**	**317**	*e*P	Pn	03 26 34.7	-3.1
CAIG				*i* S	Sn	03 26 57.0	-2.0
CAIG	**El Cayaco**	**1.68**	**317**	*e*P	Pn	03 26 34.7	-3.1
CAIG				*i* S	Sn	03 26 52.4	-6.6
MEIG	**Mezcala**	**2.16**	**346**	*i* P	Pn	03 26 41.6	-2.8
MEIG				*i* S	Sn	03 27 04.6	-6.3
VHO	**Vista Hermosa**	**2.57**	**61**	*i* P	Pn	03 26 47.9	-2.2
VHO				*i* S	Sn	03 27 16.8	-4.2
PLIG	**Platanillo**	**2.59**	**351**	*i* P	Pn	03 26 48.8	-1.6
PLIG				*i* S	Sn	03 27 16.7	-4.9
HUIG	**Huatulco**	**2.86**	**91**	*i* S	Sn	03 27 26.1	-2.0
YAIG	**Yautepec**	**3.03**	**0**	*e*P	Pn	03 26 54.6	-1.8
YAIG				*i* S	Sn	03 27 28.4	-3.9
TPIG	**Tehuac#an**	**3.06**	**32**	*e*P	Pn	03 26 53.8	-3.1
TPIG				*i* S	Sn	03 27 30.2	-2.9
PPM	**Popocatepetl**	**3.26**	**7**	*e*P	Pn	03 26 57.9	-1.7
PPM				*i* S	Sn	03 27 36.8	-1.3
PPM	**Popocatepetl**	**3.26**	**7**	*e*P	Pn	03 26 57.0	-2.6
PPM				*e*P		03 26 57.9	
PPM				*i* S	Sn	03 27 36.8	-1.3
SZVM	**Salazar**	**3.50**	**355**	*i* S	Sn	03 27 40.1	-3.9
PBVM	**Pinon**	**3.60**	**360**	*e*P	Pn	03 26 59.6	-4.7
PBVM				*i* S	Sn	03 27 39.5	-7.1
PTVM	**Pico Tres Padr**	**3.75**	**359**	*e*P	Pn	03 27 10.3	+3.9
PTVM				*i* S	Sn	03 27 49.3	-1.0
IIO	**Organos**	**3.77**	**5**	*e*P	Pn	03 27 00.4	-6.2
IIO				*i* S	Sn	03 27 51.4	+0.8
CMIG	**Matias Romero**	**4.22**	**72**	*e*P	Pn	03 27 09.6	-3.1
CMIG				*i* S	Sn	03 28 00.3	-1.3
MOIG	**Morelia**	**4.34**	**333**	*i* S	Sn	03 27 48.6	-16
MOIG	**Morelia**	**4.34**	**333**	*i* S	Sn	03 28 03.2	-1.4

IDC ***31*** *03:37:24.4±1.9, 1097N×12603E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.6/18, mbtmp3.6/6, Error ellipse: s-maj=226.4km s-min=20.2km az=69.0*

MAN ***31*** *03:37:25, 1108N×12651E, h38km, mb4.0, ML2.8, MS2.5*

ISCJB ***31*** *03:37:26.9±0.9, 111N±0.1×12641E±008, h33km, mb3.6/6, Error ellipse: s-maj=14.8km s-min=11.3km az=20.8*

ISC 31 03:37:29.1±0.9, 111N±01×12633E±009, h35km, n9, σ0s99/10, mb3.6/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.32**	**274**	*e*P	**Pn**	**03 37 48.6**	**-2.5**
PLP				*i* S	**Sn**	**03 38 08.8**	**+1.3**
MSLP	**Maasin**	**1.71**	**237**	*e*P	**Pn**	**03 37 56.3**	**-0.1**
CNP	**Catarman**	**2.17**	**312**	*e*P	**Pn**	**03 38 01.9**	**-0.8**
WRA	**Warramunga Arr**	**31.81**	**166**	P	**P**	**03 43 50.2**	**-0.4**
	0.7nm,1.1s,mb3.4,baz=342,slow=8.9,SNR=5.3						
ASAR	**Alice Springs**	**35.31**	**168**	P	**P**	**03 44 21.8**	**+0.8**
	0.3nm,0.3s,mb3.6,baz=349,slow=7.0,SNR=7.5						
SONM	**Songino Array**	**40.29**	**339**	P	**P**	**03 45 04.3**	**+1.5**
	0.2nm,0.8s,mb2.9,baz=146,slow=8.4,SNR=2.1						
MKAR	**Makanchi Array**	**51.43**	**322**	P	**P**	**03 46 30.7**	**0.0**
	0.5nm,0.6s,mb3.6,baz=124,slow=8.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**53.96**	**331**	P	**P**	**03 46 49.2**	**-0.1**
	0.5nm,0.3s,mb3.9,baz=110,slow=8.1,SNR=3.8						
FINES	**FINESS Array B**	**85.22**	**332**	P	**P**	**03 50 01.5**	**-0.3**
	0.7nm,0.5s,mb4.0,baz=84,slow=5.9,SNR=6.8						

MOS ***31*** *03:41:48.1±1.2, 2581S×17908W, h375km, mb5.1/29, Error ellipse: s-maj=10.6km s-min=8.0km az=137.6*

ISCJB ***31*** *03:41:49.4±0.1, 2621S±002×17904W±004, h394km, mb4.9/93, Error ellipse: s-maj=4.8km s-min=2.7km az=24.7*

BJI ***31*** *03:41:49.8, 2558S×17888W, h384km, mB5.0, mb4.9*

GCMT ***31*** *03:41:50.3±0.6, 2576S×17908W, h397km±2km, MW5.2/46, Moment Tensor Solution. s46,c58; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr0.39±.28; Mθθ1.84±.52; Mφφ-2.23±.47; Mrθ1.69±.40; Mθφ-1.80±.40; Mφr-6.99±.34; Best double couple: M0 7.66800×10^16 NP1:φs67.00000°, δ20.00000°, λ172.00000°. NP2:φs164.00000°, δ87.00000°, λ70.00000°. Principal axes: T 7.2960, Plg44.0000°, Azm55.0000°; N 0.7480, Plg20.0000°, Azm165.0000°; P -8.0400, Plg39.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s.*

IDC ***31*** *03:41:50.4±0.6, 2589S×17908W, h386km±5km, mb4.6/21, mb1 4.6/22, mb1mx4.6/23, mbtmp4.6/22 Error ellipse: s-maj=10.7km s-min=9.1km az=176.0*

NEIC ***31*** *03:41:50.4±0.1, 2614S×17908W, mb5.0/66, Error ellipse: s-maj=5.3km s-min=3.1km az=124.0*

BGS ***31*** *03:41:50.3, 2614S×17908W, h395km, mb5.0(NEIC)*

ISC 31 03:41:50.7±0.1, 2626S±002×17900W±004, h397km, h397km±1.0km:pP-P, n395, σ0s99/277, mb4.9/92, 30C-23D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.14**	**162**	*e*Pn	**Pn**	**03 42 57.6**	**+2.9**
RAO				*e*Sn	**S**	**03 43 39.3**	**-7.2**
RAO	**Raoul Island**	**3.14**	**162**	P	**Pn**	**03 42 57.5**	**+2.8**
	3µm,0.3s,baz=69,slow=16,SNR=102						
RAO				S	**S**	**03 43 46.2**	**-0.3**
	3µm,0.3s,baz=66,slow=20,SNR=5.8						
PUZ	**Puketiti**	**12.01**	**190**	*e*P	**P**	**03 44 29.7**	**-0.8**
PUZ				S	**S**	**03 46 41.1**	**-1.4**
PUZ	**Puketiti**	**12.01**	**190**	*e*PN	**Pn**	**03 44 29.3**	**-2.6**
PUZ				SN	**S**	**03 46 41.1**	**-1.4**
MWZ	**Matawai**	**12.40**	**193**	*e*P	**P**	**03 44 35.9**	**+1.2**
MWZ				S	**S**	**03 46 49.8**	**-0.5**
MWZ	**Matawai**	**12.40**	**193**	*e*PN	**Pn**	**03 44 34.6**	**-1.8**
MWZ				SN	**S**	**03 46 49.8**	**-0.5**
URZ	**Urewera**	**12.41**	**194**	P	**P**	**03 44 35.1**	**+0.2**
	36nm,0.3s,baz=1.5,slow=1.7,SNR=79						
URZ				S	**S**	**03 46 52.0**	**+1.3**
	44nm,0.3s,baz=67,slow=17,SNR=15						
URZ	**Urewera**	**12.41**	**194**	*e*PN	**Pn**	**03 44 33.5**	**-3.0**
KNZ	**Kokohu**	**13.03**	**192**	P	**P**	**03 44 43.6**	**+1.9**
KNZ	**Kokohu**	**13.03**	**192**	PN	**P**	**03 44 42.0**	**+0.3**
KNZ				SN	**S**	**03 47 04.5**	**+1.4**
BKZ	**Black Stump Fm**	**13.42**	**195**	*e*P	**P**	**03 44 47.1**	**+1.1**
BKZ	**Black Stump Fm**	**13.42**	**195**	PN	**P**	**03 44 45.2**	**-0.8**
BKZ				*e*SN	**S**	**03 47 09.2**	**-1.8**
WNVZ	**Wahianoa**	**13.80**	**198**	P	**P**	**03 44 51.3**	**+1.2**
MOVZ	**Moawhango**	**13.83**	**197**	P	**P**	**03 44 49.8**	**-0.7**
DZM	**Mont Dzumac**	**13.92**	**284**	P	**P**	**03 44 54.6**	**+2.9**
	34nm,0.3s,baz=86,slow=15,SNR=179						
DZM				ScP	ScP	03 52 42.2	+3.6
	0.2nm,0.3s,baz=256,slow=5.9,SNR=3.2						
AFI	**Afiamalu**	**14.03**	**30**	*e*Pn	**P**	**03 44 47.0**	**-5.9**
	167nm,0.8s						
AFI				*e*Sn	S	03 47 02.9	-21
AFI	**Afiamalu**	**14.03**	**30**	*e*P	**P**	**03 44 47.0**	**-5.9**
AFI				pmax	pmax		
	comp=Z,167nm,0.8s						
TSZ	**Takapari Road**	**14.39**	**196**	*e*P	**P**	**03 44 56.1**	**-0.5**
TSZ	**Takapari Road**	**14.39**	**196**	PN	**P**	**03 44 54.6**	**-2.0**
TSZ				SN	**S**	**03 47 30.9**	**+0.5**
BFZ	**Birch Farm**	**14.92**	**194**	*e*P	**P**	**03 45 03.5**	**+1.2**
BFZ	**Birch Farm**	**14.92**	**194**	PN	**P**	**03 45 03.2**	**+0.9**
BFZ				SN	**S**	**03 47 39.5**	**-1.3**
MRZ	**Mangatainoka R**	**15.06**	**196**	*e*P	**P**	**03 45 03.6**	**-0.2**
MRZ	**Mangatainoka R**	**15.06**	**196**	PN	**P**	**03 45 02.2**	**-1.6**
MRZ				SN	**S**	**03 47 39.0**	**-4.6**
KIW	**Kapiti Island**	**15.42**	**198**	P	**P**	**03 45 07.2**	**-0.5**
KIW	**Kapiti Island**	**15.42**	**198**	SN	**S**	**03 47 49.5**	**-1.3**
CAW	**Cannon Point**	**15.61**	**197**	P	**P**	**03 45 09.8**	**+0.1**
MRW	**Makara Radio**	**15.82**	**198**	P	**P**	**03 45 11.9**	**-0.1**
MRW	**Makara Radio**	**15.82**	**198**	PN	**P**	**03 45 11.0**	**-1.0**
TCW	**Tory Channel**	**15.92**	**199**	P	**P**	**03 45 12.0**	**-1.1**
QRZ	**Quartz Range**	**16.14**	**204**	*e*P	**P**	**03 45 16.2**	**+0.7**
QRZ	**Quartz Range**	**16.14**	**204**	PN	**P**	**03 45 16.2**	**+0.7**
NNZ	**Nelson**	**16.20**	**201**	*e*P	**P**	**03 45 15.2**	**-0.9**
NNZ	**Nelson**	**16.20**	**201**	PN	**P**	**03 45 15.0**	**-1.1**
NNZ				*e*SN	**S**	**03 48 08.1**	**+1.9**
TUWZ	**Tuamarina**	**16.22**	**199**	PN	**P**	**03 45 15.3**	**-1.0**
TUWZ				SN	**S**	**03 48 06.3**	**-0.2**
THZ	**Tophouse**	**16.85**	**201**	*e*P	**P**	**03 45 22.1**	**-0.9**
THZ	**Tophouse**	**16.85**	**201**	PN	**P**	**03 45 21.5**	**-1.5**
THZ				SN	**S**	**03 48 19.9**	**+1.2**
KHZ	**Kahutara**	**17.25**	**199**	*e*P	**P**	**03 45 26.2**	**-1.0**
KHZ	**Kahutara**	**17.25**	**199**	PN	**P**	**03 45 26.2**	**-1.0**
KHZ				SN	**S**	**03 48 25.3**	**-1.2**
RAR	**Rarotonga**	**18.30**	**78**	P	**P**	**03 45 37.8**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=351,slow=5.2,SNR=4.2						
MQZ	**McQueen's Vall**	**18.69**	**199**	SN	**S**	**03 48 53.9**	**+0.5**
WVZ	**Waitaha Valley**	**18.76**	**204**	PN	**P**	**03 45 42.8**	**-0.4**
RPZ	**Rata Peaks**	**19.20**	**202**	P	**P**	**03 45 47.8**	**0.0**
	comp=Z,9.3nm,0.3s,baz=13,slow=2.4,SNR=11						
RPZ				S	**S**	**03 49 05.0**	**+3.0**
	comp=Z,1.8nm,0.3s,baz=45,slow=20,SNR=4.8						
FOZ	**Fox Glacier**	**19.57**	**205**	*e*P	**P**	**03 45 50.9**	**-0.3**
FOZ	**Fox Glacier**	**19.57**	**205**	PN	**P**	**03 45 50.7**	**-0.5**
LBZ	**Lake Benmore**	**20.09**	**203**	*e*P	**P**	**03 45 55.4**	**-0.6**
LBZ	**Lake Benmore**	**20.09**	**203**	PN	**P**	**03 45 55.2**	**-0.8**
JCZ	**Jackson Bay**	**20.36**	**206**	P	**P**	**03 45 59.6**	**+1.1**
JCZ	**Jackson Bay**	**20.36**	**206**	PN	**P**	**03 45 59.2**	**+0.7**
WKZ	**Wanaka**	**20.90**	**204**	*e*P	**P**	**03 46 03.3**	**-0.1**
WKZ	**Wanaka**	**20.90**	**204**	PN	**P**	**03 46 02.7**	**-0.7**
HNR	**Honiara**	**26.04**	**306**	*e*P	**P**	**03 46 47.1**	**-2.9**
	comp=Z,142nm,0.8s,mb5.5						
HNR	**Honiara**	**26.04**	**306**	*e*P	**P**	**03 46 47.1**	**-2.9**
HNR				pmax	pmax		
	comp=Z,142nm,0.8s,mb5.5						
HNR	**Honiara**	**26.04**	**306**	P	**P**	**03 46 46.9**	**-3.1**
	comp=Z,197nm,0.8s,mb5.6,baz=80,slow=2.1,SNR=7.3						
ARMA	**Armidale**	**26.14**	**254**	*e*P	**P**	**03 46 53.2**	**+2.4**
RIV	**Riverview**	**26.85**	**247**	⇑*i*P	**P**	**03 47 00.6**	**+3.6**
TBI	**Tubuai**	**26.95**	**90**	*e*P	**P**	**03 46 58.0**	**0.0**
	comp=Z,258nm,0.9s,mb5.7						
CNB	**Canberra Magne**	**28.54**	**244**	*e*P	**P**	**03 47 15.6**	**+3.7**
	comp=Z,305nm,0.7s,mb5.7						
PAE	**Paea**	**28.54**	**79**	*e*P	**P**	**03 47 10.9**	**-1.2**
	comp=Z,103nm,0.9s,mb5.1						
PAE	**Paea**	**28.54**	**79**	*e*P	**P**	**03 47 10.9**	**-1.2**
PAE				pmax	pmax		
	comp=Z,103nm,0.9s,mb5.2						
PPT	**Papeete**	**28.58**	**78**	*e*P	**P**	**03 47 11.6**	**-0.9**
	comp=Z,32nm,0.9s,mb4.6						
PPT	**Papeete**	**28.58**	**78**	*e*P	**P**	**03 47 11.6**	**-0.9**
PPT				pmax	pmax		
	comp=Z,32nm,0.9s						
TVO	**Taravao**	**28.79**	**79**	*e*P	**P**	**03 47 13.0**	**-1.3**
	comp=Z,138nm,0.8s,mb5.3						
TVO	**Taravao**	**28.79**	**79**	*e*P	**P**	**03 47 13.0**	**-1.3**
TVO				pmax	pmax		
	comp=Z,138nm,0.8s,mb5.3						
MEH	**Mehetia**	**29.80**	**80**	*e*P	**P**	**03 47 22.3**	**-0.8**
	comp=Z,71nm,0.8s,mb5.0						
PMOR	**Pomariorio Ree**	**31.11**	**75**	*e*P	**P**	**03 47 33.4**	**-1.2**
	comp=Z,41nm,0.9s,mb4.8						
VAH	**Vaihoa**	**31.24**	**76**	*e*P	**P**	**03 47 34.3**	**-1.4**
	comp=Z,99nm,1.1s,mb5.0						
CTA	**Charters Tower**	**32.46**	**274**	⇓*i*P	**P**	**03 47 46.6**	**+0.4**
	comp=Z,322nm,0.8s,mb5.7						
CTA				*e*SCP	ScP	03 53 31.9	+4.0
CTA	**Charters Tower**	**32.46**	**274**	⇓*i*P	**P**	**03 47 46.6**	**+0.4**
CTA				pmax	pmax		
	comp=Z,322nm,0.8s						
CTA	**Charters Tower**	**32.46**	**274**	P	**P**	**03 47 46.7**	**+0.5**
	comp=Z,295nm,0.6s,mb5.8,baz=98,slow=11,SNR=312						
CTA				ScP	ScP	03 53 31.7	+3.8
	comp=Z,36nm,0.9s,baz=139,slow=2.8,SNR=13						
CTAO	**Charters Tower**	**32.46**	**274**	*e*P	**P**	**03 47 46.7**	**+0.5**
	comp=Z,340nm,0.8s,mb5.7						
CTAO				pmax	pmax		
	comp=Z,340nm,0.8s,mb5.7						
STKA	**Stephens Creek**	**34.76**	**251**	*e*P	**P**	**03 48 06.6**	**+1.0**
	comp=Z,88nm,0.6s,mb5.3						
STKA				*e*SCP	ScP	03 53 39.4	+3.5
STKA				*e*SCS	ScS	03 57 42.9	+2.5
STKA	**Stephens Creek**	**34.76**	**251**	P	**P**	**03 48 06.8**	**+1.1**
	comp=Z,105nm,0.6s,mb5.3,baz=96,slow=9.7,SNR=182						
STKA				ScP	ScP	03 53 38.8	+2.9
	comp=Z,14nm,0.8s,baz=54,slow=4.1,SNR=6.6						
ADE	**Adelaide**	**37.19**	**246**	*e*P	**P**	**03 48 27.0**	**+1.0**
RKT	**Rikitea**	**39.99**	**95**	*e*P	**P**	**03 48 49.0**	**-0.1**
	comp=Z,81nm,1.3s,mb4.9						
RKT	**Rikitea**	**39.99**	**95**	*e*P	**P**	**03 48 49.0**	**-0.1**
RKT				pmax	pmax		
	comp=Z,81nm,1.3s,mb4.9						
ASAR	**Alice Springs**	**42.59**	**263**	P	**P**	**03 49 09.8**	**-0.2**
	comp=Z,144nm,0.7s,mb5.4,baz=92,slow=7.5,SNR=436						
ASAR				ScP	ScP	03 54 08.6	+2.4
	comp=Z,17nm,1.0s,baz=116,slow=4.2,SNR=17						
ASAR				S	**S**	**03 55 04.5**	**+1.9**
	comp=Z,9.6nm,0.9s,baz=105,slow=16,SNR=12						
ASAR				ScS	ScS	03 58 28.2	+1.5
	comp=Z,1.4nm,0.7s,baz=113,slow=7.1,SNR=5.9						
WB2	**Warramunga Arr**	**43.19**	**268**	⇓*i*P	**P**	**03 49 14.0**	**-0.7**
WB2				*e*S	**S**	**03 55 08.3**	**-3.0**
WRA	**Warramunga Arr**	**43.20**	**268**	P	**P**	**03 49 14.1**	**-0.7**
WRA				*PP	pP	03 50 31.6	-0.4
WRA				S	**S**	**03 55 11.2**	**-0.3**
WRA	**Warramunga Arr**	**43.20**	**268**	P	**P**	**03 49 14.1**	**-0.7**
	comp=Z,237nm,0.8s,mb5.6,baz=104,slow=7.9,SNR=329						
WRA				pP	pP	03 50 31.6	-0.5
	comp=Z,4.1nm,0.6s,baz=100,slow=6.9,SNR=1.4						
WRA				ScP	ScP	03 54 11.6	+2.9
	comp=Z,16nm,1.1s,baz=105,slow=4.6,SNR=13						
WRA				S	**S**	**03 55 11.2**	**-0.2**
	comp=Z,5.5nm,1.0s,baz=100,slow=15,SNR=5.5						
FORT	**Forrest**	**46.38**	**252**	⇓*i*P	**P**	**03 49 38.9**	**-0.6**
	comp=Z,333nm,0.5s,mb5.9						
KAKA	**Kakadu**	**47.45**	**277**	⇓*i*P	**P**	**03 49 46.4**	**-1.4**
	comp=Z,138nm,0.6s,mb5.5						
FITZ	**Fitzroy Crossi**	**51.58**	**267**	⇓*i*P	**P**	**03 50 18.3**	**-0.2**
	comp=Z,275nm,0.6s,mb5.7						
FITZ				*e*PCP	PcP	03 51 45.8	+20
FITZ	**Fitzroy Crossi**	**51.58**	**267**	P	**P**	**03 50 18.4**	**-0.2**
	comp=Z,120nm,0.5s,mb5.4,baz=114,slow=9.3,SNR=136						
FITZ				pP	pP	03 51 38.3	-0.8
	comp=Z,13nm,0.8s,baz=154,slow=9.1,SNR=1.9						
SBA	**Scott Base**	**52.09**	**184**	*e*P	**P**	**03 50 26.5**	**+5.2**
	comp=Z,57nm,0.8s,mb4.8						
SBA	**Scott Base**	**52.09**	**184**	*e*P	**P**	**03 50 26.5**	**+5.1**
SBA				pmax	pmax		
	comp=Z,57nm,0.8s,mb4.8						
VNDA	**Vanda**	**52.12**	**185**	P	**P**	**03 50 24.9**	**+3.4**
	comp=Z,9.7nm,0.6s,mb4.2,baz=0.1,slow=8.1,SNR=92						
KLBR	**Kellerberrin**	**54.95**	**249**	⇓*i*P	**P**	**03 50 42.2**	**-0.3**
	comp=Z,71nm,0.6s,mb5.1						
NWAO	**Narrogin (SRO)**	**55.12**	**247**	*e*P	**P**	**03 50 43.5**	**-0.2**
	comp=Z,12nm,0.7s,mb4.2						
NWAO	**Narrogin (SRO)**	**55.12**	**247**	*e*P	**P**	**03 50 43.5**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,12nm,0.7s						
NWAO	**Narrogin (SRO)**	**55.12**	**247**	P	**P**	**03 50 43.5**	**-0.2**
	comp=Z,20nm,0.8s,mb4.4,baz=107,slow=9.6,SNR=11						
NWAO				ScP	ScP	03 55 02.5	+3.1
	comp=Z,4.5nm,0.7s,baz=145,slow=7.9,SNR=3.8						
MBWA	**Marble Bar**	**55.89**	**261**	*e*P	**P**	**03 50 48.3**	**-1.0**
	comp=Z,34nm,0.7s,mb4.8						
MUN	**Mundaring**	**56.16**	**248**	*e*P	**P**	**03 50 50.8**	**-0.2**
BATI	**Kupang**	**56.32**	**275**	P	**P**	**03 50 53.0**	**+0.6**
	comp=Z,119nm,0.6s,mb5.4,baz=146,slow=1.3,SNR=32						
CASY	**Casey**	**58.41**	**207**	⇓*i*P	**P**	**03 51 07.8**	**+1.8**
QSPA	**South Pole Qui**	**63.84**	**180**	P	**P**	**03 51 45.3**	**+3.5**
QSPA	**South Pole Qui**	**63.84**	**180**	P	**P**	**03 51 45.3**	**+3.5**
	comp=Z,43nm,1.0s,mb4.9,baz=35,slow=3.9						
MYLDM	**Lahad Datu**	**68.06**	**288**	⇓P	**P**	**03 52 10.5**	**+1.0**
TSM	**Tawau**	**68.16**	**287**	⇓P	**P**	**03 52 06.7**	**-3.3**
SDKM	**Sandakan**	**69.42**	**287**	⇓P	**P**	**03 52 17.3**	**-0.4**
KKM	**Kota Kinabalu**	**70.46**	**287**	*e*P	**P**	**03 52 23.3**	**-0.6**
KKM	**Kota Kinabalu**	**70.46**	**287**	⇓P	**P**	**03 52 23.7**	**-0.3**
BTM	**Bintulu**	**71.78**	**283**	⇓P	**P**	**03 52 32.2**	**+0.4**
SBUM	**Sibu**	**72.18**	**282**	⇑P	**P**	**03 52 34.4**	**+0.3**
JOW	**Kunigami**	**73.23**	**312**	P	**P**	**03 52 39.3**	**-0.7**
	comp=Z,9.7nm,0.4s,mb4.6,baz=117,slow=18,SNR=3.6						
KSM	**Kuching**	**73.40**	**280**	*e*P	**P**	**03 52 40.7**	**-0.6**
KSM	**Kuching**	**73.40**	**280**	⇑P	**P**	**03 52 41.0**	**-0.2**
MJAR	**Matsushiro Arr**	**74.34**	**325**	P	**P**	**03 52 44.7**	**-1.4**
	comp=Z,14nm,0.8s,mb4.7,baz=161,slow=5.7,SNR=42						
MAJO	**Matsushiro**	**74.34**	**325**	*e*P	**P**	**03 52 44.8**	**-1.3**
	comp=Z,18nm,0.8s,mb4.8						
MAJO	**Matsushiro**	**74.34**	**325**	*e*P	**P**	**03 52 44.8**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
MAT	**Matsushiro**	**74.34**	**325**	P	**P**	**03 52 44.6**	**-1.5**
MAW	**Mawson**	**75.87**	**200**	⇓*i*P	**P**	**03 52 56.9**	**+2.6**
	comp=Z,35nm,0.5s,mb5.2						
MAW	**Mawson**	**75.87**	**200**	⇓*i*P	**P**	**03 52 56.9**	**+2.6**
MAW				pmax	pmax		
	comp=Z,35nm,0.5s						
MAW	**Mawson**	**75.87**	**200**	P	**P**	**03 52 57.0**	**+2.7**
	comp=Z,40nm,0.5s,mb5.3,baz=132,slow=6.5,SNR=123						
JNU	**Nakatsue**	**75.88**	**318**	P	**P**	**03 52 53.6**	**-1.2**
	comp=Z,15nm,0.8s,mb4.7,baz=232,slow=4.6,SNR=5.4						
ERM	**Erimo**	**76.40**	**332**	*e*P	**P**	**03 52 56.1**	**-1.5**
ASAJ	**Asahikawa**	**78.36**	**333**	P	**P**	**03 53 07.3**	**-0.9**
	comp=Z,16nm,0.9s,mb4.7,baz=238,slow=7.0,SNR=8.8						
MYKOM	**Kota Tinggi**	**79.28**	**277**	⇑P	**P**	**03 53 14.0**	**+0.1**
KGM	**Kluang**	**79.86**	**277**	⇓P	**P**	**03 53 17.4**	**+0.4**
KSRS	**Korea Array**	**80.62**	**320**	P	**P**	**03 53 20.3**	**-0.2**
	comp=Z,9.1nm,0.7s,mb4.6,baz=131,slow=5.8,SNR=26						
YSS	**Yuzh-Sakhalins**	**80.64**	**335**	*e*P	**P**	**03 53 18.3**	**-2.0**
	comp=Z,12nm,0.6s,mb4.8						
YSS	**Yuzh-Sakhalins**	**80.64**	**335**	*e*P	**P**	**03 53 20.1**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
SYO	**Syowa Base**	**80.94**	**193**	⇑*i*P	**P**	**03 53 21.7**	**0.0**
SYO	**Syowa Base**	**80.94**	**193**	⇓*e*PcP	PcP	03 53 25.0	-1.9
SYO	**Syowa Base**	**80.94**	**193**	⇑*e*pP	pP	03 54 54.0	+2.8
KTGM	**Kuala Trenggan**	**81.52**	**280**	⇓P	**P**	**03 53 26.6**	**+0.9**
FRIM	**Kepong**	**81.91**	**278**	⇑P	**P**	**03 53 27.5**	**-0.2**
SNAA	**Sanae**	**82.31**	**179**	*e*P	**P**	**03 53 28.8**	**+0.1**
SNAA				*e*		03 53 30.8	
SNAA				*e*		03 53 33.1	
SNAA				*e*		03 53 40.2	
SNAA				*e*		03 53 44.1	
SNAA				*e*		03 53 47.8	
SNAA				*e*	pP	03 55 01.3	+2.7
SNAA				*e*		03 55 04.1	
SNAA				*e*		03 55 08.3	
SNAA				*e*		03 55 12.0	
SNAA				*e*		03 55 17.6	
SNAA				*e*		03 55 21.7	
SNAA	**Sanae**	**82.31**	**179**	⇑*e*P	**P**	**03 53 30.4**	**+1.7**
QIZ	**Qiongzhong**	**82.42**	**295**	P	**P**	**03 53 30.5**	**+0.3**
VNA3	**Neumayer Olymp**	**82.48**	**177**	*e*P	**P**	**03 53 30.3**	**+0.7**
VNA3				*e*		03 53 32.0	
VNA3				*e*		03 53 34.5	
VNA3				*e*		03 53 41.7	
VNA3				*e*		03 53 45.4	
VNA3				*e*		03 53 49.4	
VNA3				*e*	pP	03 55 02.1	+2.6
VNA3				*e*		03 55 06.7	
VNA3				*e*		03 55 12.2	

TPNV Topopah Spring 86.21 46 *e*P **P** **03 53 48.7 +0.1**
comp=Z,27nm,0.9s,mb5.0
TPNV *ep*P pP 03 55 20.5 +1.0
TPNV Topopah Spring 86.21 46 *e*P **P** **03 53 48.7 +0.1**
TPNV *e**PP pP 03 55 20.5 +1.0
TPNV pmax pmax
comp=Z,27nm,0.9s,mb5.0
CN2 Changchun 86.31 323 ⇓P **P** **03 53 49.0 +0.1**
CN2 AMB AMB
comp=Z,20nm,1.1s,mb4.8
KDAK Kodiak Island 86.60 14 P **P** **03 53 49.3 -0.6**
comp=Z,6.9nm,0.7s,mb4.5
MOD Modoc 86.82 40 *e*P **P** **03 53 51.0 -0.4**
comp=Z,8.9nm,0.9s,mb4.5
MOD *ep*P pP 03 55 21.8 -0.6
TUC Tucson 87.24 52 *e*P **P** **03 53 54.5 +0.9**
comp=Z,31nm,0.8s,mb5.1
TUC *ep*P pP 03 55 26.8 +2.1
TUC Tucson 87.24 52 *e*P **P** **03 53 54.5 +0.9**
TUC pmax pmax
comp=Z,31nm,0.8s,mb5.1
WVOR Wild Horse Val 88.11 40 *e*P **P** **03 53 57.2 -0.2**
comp=Z,19nm,1.0s,mb4.8
WVOR Wild Horse Val 88.11 40 *e*P **P** **03 53 57.2 -0.2**
WVOR pmax pmax
comp=Z,19nm,1.0s,mb4.8
TDH Tom, Dick, Har 88.19 36 P **P** **03 53 58.0 +0.3**
CCUT Cedar City 88.43 46 *e*P **P** **03 53 59.8 +0.8**
CCUT *ep*P pP 03 55 31.3 +0.8
NLWA Neilton Lookou 88.51 34 *e*P **P** **03 53 59.6 +0.5**
comp=Z,27nm,0.9s,mb5.0
ARUT Antelope Range 86.52 46 *e*P **P** **03 54 00.1 +0.7**
OOW Octopus West 88.58 33 P **P** **03 54 00.9 +1.4**
GYA Guiyang 88.72 300 P **P** **03 54 00.5 -0.2**
GYA AP pP 03 55 33.8 +1.7
GYA XP sP 03 56 14.0 +0.9
GYA PP PP 03 57 38.3 +1.8
GYA SKS 04 03 50.8
GYA S S 04 04 11.8 -1.5
GYA XS sS 04 06 54.0 -1.9
GYA AMB AMB
comp=Z,10.0nm,0.8s,mb4.6
GYA AMB AMB
comp=Z,290nm,6.3s
ASR Mount Adams--S 88.85 36 P **P** **03 54 01.3 +0.5**
MA2 Magadan 89.07 345 *e*P **P** **03 54 00.8 -0.7**
MA2 pmax pmax
comp=Z,10.0nm,0.9s,mb4.5
HDW Hoodsport 89.09 34 P **P** **03 54 02.9 +1.1**
SVW2 Sparrevohn 89.10 11 *e*P **P** **03 53 59.8 -1.7**
LON Longmire 89.13 35 P **P** **03 54 02.2 +0.2**
RCM Mount Rainier- 89.23 35 P **P** **03 54 03.4 +0.9**
FMW Mount Fremont 89.32 35 P **P** **03 54 03.7 +0.7**
BJI Beijing 89.35 316 P **P** **03 54 03.5 +0.2**
BJI AMB AMB
comp=Z,18nm,0.9s,mb4.8
GSM Grass Mountain 89.44 35 P **P** **03 54 04.5 +1.0**
SLKM Skilak Lake 89.59 14 *e*P **P** **03 54 02.6 -1.3**
SLKM *ep*P pP 03 55 36.0 +0.5
MSU Marysvale 89.75 46 *e*P **P** **03 54 05.9 +0.8**
MXC Moxie City 89.82 36 P **P** **03 54 05.8 +0.5**
CMW Cultus Mountai 90.08 34 P **P** **03 54 07.2 +0.8**
SNIWA Snively Ranch 90.08 36 P **P** **03 54 07.2 +0.7**
MDW Midway 90.12 36 P **P** **03 54 07.2 +0.5**
DUG Dugway 90.29 44 *e*P **P** **03 54 07.3 -0.4**
comp=Z,13nm,1.4s,mb4.6
DUG Dugway 90.29 44 *e*P **P** **03 54 07.3 -0.3**
DUG pmax pmax
comp=Z,13nm,1.4s,mb4.6
BMO Blue Mountains 90.37 39 *e*P **P** **03 54 07.6 -0.3**
comp=Z,10nm,0.9s,mb4.7
BMO *ep*P pP 03 55 39.0 -0.5
TTA Tatalina 90.75 10 *e*P **P** **03 54 08.4 -0.8**
comp=Z,9.0nm,0.9s,mb4.6
TTA *ep*P pP 03 55 42.1 +1.3
TTA Tatalina 90.75 10 *e*P **P** **03 54 08.4 -0.8**
TTA pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
PMR Palmer 90.80 14 *e*P **P** **03 54 07.7 -1.7**
comp=Z,13nm,1.0s,mb4.7
PMR Palmer 90.80 14 *e*P **P** **03 54 07.7 -1.8**
PMR pmax pmax
comp=Z,13nm,1.0s,mb4.7
TMUT Trail Mountain 90.81 46 *e*P **P** **03 54 11.2 +1.1**
MNTX Cornudas Mount 90.81 55 *e*P **P** **03 54 10.4 +0.1**
comp=Z,17nm,0.9s,mb4.9
XAN Xi'an 90.90 308 P **P** **03 54 10.8 +0.2**
XAN AMB AMB
comp=Z,17nm,0.8s,mb4.9
LENM Lemitar 90.93 52 *e*P **P** **03 54 11.6 +0.8**
LAZ Ladron 90.93 52 *e*P **P** **03 54 11.6 +0.8**
LAZ *ep*P pP 03 55 43.1 +0.6
MPU Maple Canyon 90.94 45 *e*P **P** **03 54 11.0 +0.4**
comp=Z,16nm,1.0s,mb4.8
NOQ North Oquirrh 90.99 44 *e*P **P** **03 54 11.4 +0.5**
comp=Z,17nm,1.0s,mb4.8
KMI Kunming 91.15 297 P **P** **03 54 13.8 +1.8**
KMI AP pP 03 55 45.3 +1.6
KMI SKS 04 04 05.3
KMI S S 04 04 33.5 -2.0
KMI AMB AMB
comp=Z,18nm,0.7s,mb5.0
KMI LR LR
comp=Z,25nm,30.9s
SRU San Rafael 91.15 46 *e*P **P** **03 54 11.8 +0.2**
comp=Z,14nm,0.9s,mb4.8
SRU San Rafael 91.15 46 *e*P **P** **03 54 11.8 +0.1**
SRU pmax pmax
comp=Z,14nm,0.9s,mb4.8
BNM Barren Site 91.17 52 *e*P **P** **03 54 11.9 0.0**
BNM *ep*P pP 03 55 44.1 +0.5
HVU Hansel Valley 91.22 43 *e*P **P** **03 54 12.1 +0.2**
comp=Z,41nm,1.2s,mb5.1
HVU Hansel Valley 91.22 43 *e*P **P** **03 54 12.1 +0.2**
HVU pmax pmax
comp=Z,41nm,1.2s,mb5.1
CTU Camp Tracy 91.24 45 *e*P **P** **03 54 12.1 0.0**
comp=Z,22nm,1.0s,mb4.9
LPM Los Pinos Moun 91.25 52 *e*P **P** **03 54 12.8 +0.6**
HLID Hailey 91.26 41 *e*P **P** **03 54 12.4 +0.3**
comp=Z,17nm,0.9s,mb4.9
HLID *ep*P pP 03 55 43.9 +0.1
HLID *e**PP PP 03 57 52.7 -3.4
CHTO Chiang Mai 91.34 290 *e*P **P** **03 54 13.9 +0.9**
comp=Z,26nm,1.0s,mb5.0
CHTO Chiang Mai 91.34 290 *e*P **P** **03 54 13.9 +0.9**
CHTO pmax pmax
comp=Z,26nm,1.0s,mb5.0
JLU Jordanelle 91.38 45 *e*P **P** **03 54 12.8 +0.1**
JLU *ep*P pP 03 55 45.4 +1.0
DAU Daniels Canyon 91.40 45 *e*P **P** **03 54 13.7 +0.9**
ANMO Albuquerque 91.70 52 *e*P **P** **03 54 14.4 +0.1**
comp=Z,15nm,1.2s,mb4.8
ANMO *ep*P pP 03 55 44.8 -1.2
ANMO Albuquerque 91.70 52 *e*P **P** **03 54 14.4 +0.1**
ANMO *e**PP pP 03 55 44.8 -1.2
ANMO pmax pmax
comp=Z,15nm,1.2s
SEY Seymchan 91.75 347⇑*e*P **P** **03 54 13.2 -0.6**
HWUT Hardware Ranch 91.87 44 *e*P **P** **03 54 14.5 -0.4**
comp=Z,6.5nm,0.7s,mb4.7
NEW Newport 92.55 36 *e*P **P** **03 54 17.1 -0.8**
HHC Hu-ho-hao-te 92.71 315 *e*P **P** **03 54 20.5 +1.7**
HHC AP pP 03 55 50.0 -0.6
HHC XP sP 03 56 28.0 -3.5
HHC PP PP 03 58 11.3 +3.8
HHC SKS 04 04 15.8
HHC S S 04 04 50.0 +1.5
HHC XS sS 04 07 27.0 -5.8
HHC AMB AMB
comp=Z,13nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,92nm,6.8s
HHC LR LR
comp=N,102nm,24.3s
HHC LR LR
comp=E,142nm,21.3s
HHC LR LR
comp=Z,90nm,25.9s
MCK McKinley 92.76 13 *e*P **P** **03 54 16.8 -1.6**
comp=Z,7.3nm,0.9s,mb4.6
MCK McKinley 92.76 13 *e*P **P** **03 54 16.8 -1.7**
MCK pmax pmax
comp=Z,7.0nm,0.9s,mb4.6

HIA Hailar 92.84 325 *e*P **P** **03 54 18.9 -0.3**
MCMT McKenzie Canyo 92.91 41 *e*P **P** **03 54 19.7 +0.1**
MCMT *ep*P pP 03 55 51.1 -0.3
CD2 Chengdu 93.12 303 P **P** **03 54 22.3 +1.4**
CD2 AP pP 03 55 51.5 -1.2
CD2 XP sP 03 56 30.0 -3.6
CD2 PP PP 03 58 13.5 +2.6
CD2 SKS 04 04 18.0
CD2 S S 04 04 52.3 -0.2
CD2 XS sS 04 07 30.0 -7.0
CD2 AMB AMB
comp=Z,40nm,0.9s,mb5.3
CD2 AMB AMB
comp=Z,60nm,8.8s
CD2 LR LR
comp=N,250nm,20.0s
CD2 LR LR
comp=E,340nm,18.8s
CD2 LR LR
comp=Z,280nm,16.8s
REDW Red Top Meadow 93.28 43 *e*P **P** **03 54 21.7 +0.3**
comp=Z,30nm,1.3s,mb5.1
REDW *ep*P pP 03 55 53.2 0.0
TPAW Teton Pass 93.29 43 *e*P **P** **03 54 21.9 +0.5**
comp=Z,6.2nm,0.8s,mb4.6
SNOW Snow King Moun 93.40 43 *e*P **P** **03 54 22.4 +0.5**
comp=Z,22nm,0.9s,mb5.1
SMCO Snowmass 93.52 48 *e*P **P** **03 54 22.5 -0.1**
comp=Z,12nm,0.9s,mb4.9
IMW Indian Meadow 93.52 42 *e*P **P** **03 54 22.5 +0.1**
comp=Z,19nm,1.2s,mb5.0
IMW *ep*P pP 03 55 53.6 -0.6
IMW *e**PP PP 03 58 10.7 -3.1
MOOW Moose Ponds 93.56 42 *e*P **P** **03 54 22.2 -0.4**
comp=Z,14nm,1.7s,mb4.7
MOOW *ep*P pP 03 55 54.1 -0.4
LOHW Long Hollow 93.57 43 *e*P **P** **03 54 22.6 -0.1**
comp=Z,20nm,1.5s,mb4.9
LOHW *ep*P pP 03 55 53.0 -1.5
QLMT Earthquake Lak 93.75 41 *e*P **P** **03 54 23.9 +0.5**
QLMT *ep*P pP 03 55 55.6 +0.3
BW06 Boulder Array 93.75 44 *e*P **P** **03 54 23.0 -0.6**
comp=Z,7.3nm,0.9s,mb4.7
PDAR Pinedale Array 93.75 44 P **P** **03 54 23.1 -0.4**
comp=Z,6.3nm,0.8s,mb4.7,baz=205,slow=2.9,SNR=60
PDAR *ep*P pP 03 55 54.2 -1.2
comp=Z,1.6nm,0.9s,baz=224,slow=2.8,SNR=5.3
PDAR PP PP 03 58 10.6 -5.0
comp=Z,1.2nm,0.9s,baz=235,slow=5.2,SNR=4.6
PDAR PKKPbc PKKPbc 04 11 25.4 -1.6
comp=Z,0.5nm,0.7s,baz=96,slow=3.0,SNR=5.6
FLWY Flagg Ranch 93.77 42 *e*P **P** **03 54 23.7 +0.1**
comp=Z,35nm,1.4s,mb5.2
FLWY *ep*P pP 03 55 55.7 +0.3
SDCO Great Sand Dun 93.79 50 *e*P **P** **03 54 23.8 0.0**
comp=Z,3.7nm,0.8s,mb4.5
SDCO *ep*P pP 03 55 54.7 -1.0
CHMT Chamberlain Mo 93.87 39 *e*P **P** **03 54 23.2 -0.8**
CHMT *ep*P pP 03 55 55.1 -0.7
CHMT *e**PP PP 03 58 12.3 -4.0
COLA College 94.00 13 *e*P **P** **03 54 22.3 -1.8**
comp=Z,6.1nm,0.8s,mb4.7
COLA College 94.00 13 *e*P **P** **03 54 22.3 -1.8**
COLA pmax pmax
comp=Z,6.0nm,0.8s,mb4.7
BOZ Bozeman (W) 94.08 40 *e*P **P** **03 54 24.6 -0.4**
comp=Z,5.1nm,0.8s,mb4.6
BOZ *ep*P pP 03 55 56.3 -0.5
BOZ Bozeman (W) 94.08 40 *e*P **P** **03 54 24.6 -0.4**
BOZ *e**PP pP 03 55 56.3 -0.5
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
JCT Junction City 94.40 58 *e*P **P** **03 54 26.1 -0.7**
comp=Z,3.2nm,0.8s,mb4.4
JCT Junction City 94.40 58 *e*P **P** **03 54 26.1 -0.7**
JCT pmax pmax
comp=Z,3.0nm,0.8s,mb4.4
BILL Bilibino 94.64 354 *e*P **P** **03 54 26.2 -0.8**
BILL Bilibino 94.64 354 *e*P **P** **03 54 25.2 -1.8**
BILL pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
ISCO Idaho Springs 94.75 48 *e*P **P** **03 54 28.3 +0.2**
comp=Z,2.1nm,0.7s,mb4.3
ISCO Idaho Springs 94.75 48 *e*P **P** **03 54 28.3 +0.2**
ISCO pmax pmax
comp=Z,2.0nm,0.7s,mb4.3
EGAK Eagle 95.38 15 *e*P **P** **03 54 29.4 -1.0**
comp=Z,11nm,1.0s,mb4.8
EGAK *ep*P pP 03 56 02.3 0.0
LZH Lanzhou 95.53 307 *e*P **P** **03 54 35.0 +3.2**
LZH AMB AMB
comp=Z,15nm,1.0s,mb5.1
LZH AMB AMB
comp=Z,66nm,4.1s
SONM Songino Array 99.47 319 P Pdif 03 54 49.3 -0.1
comp=Z,1.7nm,0.9s,baz=132,slow=3.1,SNR=5.9
SONM PP PP 03 59 00.3 +1.3
comp=Z,0.7nm,1.0s,baz=140,slow=5.0,SNR=3.9
GTA Gaotai 99.88 309 *e*P Pdif 03 54 55.8 +4.6
GTA AP pP 03 56 25.0 +1.6
GTA XP sP 03 57 03.3 -0.9
GTA PP PP 03 59 08.0 +5.7
GTA SKS 04 04 55.0
GTA S Sdif 04 05 50.3 +0.6
GTA SS SS 04 12 56.5 +2.8
GTA AMB AMB
comp=Z,5.0nm,0.9s,mb4.9
GTA AMB AMB
comp=Z,121nm,9.5s
GTA LR LR
comp=N,153nm,14.5s
GTA LR LR
comp=E,131nm,13.3s
GTA LR LR
comp=Z,101nm,11.8s
INK Inuvik 100.04 16 P Pdif 03 54 49.6 -2.3
comp=Z,1.5nm,0.7s,baz=243,slow=4.1,SNR=8.5
INK PP PP 03 58 54.7 -8.1
comp=Z,1.5nm,0.9s,baz=162,slow=9.5,SNR=3.7
YKA Yellowknife Ar 102.09 25 P Pdif 03 54 59.3 -1.7
YKA PP PP 03 59 06.8 -11
YKA Yellowknife Ar 102.09 25 P Pdif 03 54 59.3 -1.7
comp=Z,0.4nm,0.7s,baz=234,slow=4.0,SNR=11
YKA PP PP 03 59 06.8 -11
comp=Z,0.5nm,0.8s,baz=238,slow=7.1,SNR=3.8
YKA PKiKP PKiKP 03 59 19.2 -1.1
comp=Z,0.3nm,0.7s,baz=244,slow=1.6,SNR=4.6
YKA PKKPbc PKKPbc 04 11 00.6 -4.0
comp=Z,0.7nm,0.8s,baz=40,slow=2.6,SNR=9.5
ZALV Zalesovo Beam 114.33 320 PKP PKiKP 03 59 39.7 -3.8
comp=Z,0.6nm,0.4s,baz=343,slow=1.5,SNR=5.0
ZAL Zalesovo 114.34 320 PKiKP PKiKP 03 59 39.7 -3.8
MKAR Makanchi Array 114.40 312 PKP PKiKP 03 59 42.9 -1.0
MKAR SKP 04 02 41.3
MKAR PKKPbc PKKPbc 04 10 25.2 0.0
MKAR PKKPab PKKPab 04 10 31.8 +1.5
MKAR Makanchi Array 114.40 312⇑*i*PKIKP PKiKP 03 59 42.9 -1.0
MKAR Makanchi Array 114.40 312 PKP PKiKP 03 59 42.9 -1.0
comp=Z,1.3nm,0.7s,baz=66,slow=3.0,SNR=9.8
MKAR SKP 04 02 41.3
comp=Z,1.0nm,0.5s,baz=117,slow=0.3,SNR=3.7
MKAR PKKPbc PKKPbc 04 10 25.2 0.0
comp=Z,0.6nm,0.6s,baz=305,slow=4.3,SNR=4.0
MKAR PKKPab PKKPab 04 10 31.8 +1.5
comp=Z,0.7nm,0.7s,baz=289,slow=3.7,SNR=4.4
KURK Kurchatov 117.52 316 *e*PKPdf PKPdf 03 59 48.7 -1.1
KURK *e*SKPdf SKPdf 04 02 47.8 +1.0
TKM2 Tokmak 2 118.28 306 *e*PKPdf PKPdf 03 59 50.8 -0.6
SUR Sutherland 118.71 199 *e*PKPdf PKPdf 03 59 54.1 +1.3
UCH Uchtor 118.94 306 *e*PKPdf PKPdf 03 59 53.1 +0.3
EKS2 Erkin-Say 119.55 306 *e*PKPdf PKPdf 03 59 53.3 -0.7
BOSA Boshof 120.68 205 PKP PKPdf 03 59 56.4 -0.3
comp=Z,4.0nm,1.0s,baz=234,slow=14,SNR=4.3
BRVK Borovoye 122.86 318 *e*PKPdf PKPdf 03 59 59.0 -1.0
AKTK Aktyubinsk 130.61 315 PKP PKPdf 04 00 14.1 -0.7
AKTK SKPbc SKPbc 04 03 01.4 +0.6
AKTO Aktyubinsk 130.61 315 PKP PKPdf 04 00 14.1 -0.7
comp=Z,2.7nm,0.7s,baz=78,slow=2.5,SNR=9.9
AKTO SKPbc SKPbc 04 03 01.4 +0.6
comp=Z,6.5nm,0.9s,baz=91,slow=3.4,SNR=15
TSUM Tsumeb 132.03 201 *e*PKPdf PKPdf 04 00 19.8 +1.2
ARCES ARCESS Array B 134.37 348 PKP PKPdf 04 00 18.9 -2.4
comp=Z,5.2nm,0.7s,baz=5.0,slow=2.8,SNR=13
ARCES pPKP pPKPdf 04 02 02.3 +4.0
comp=Z,6.5nm,0.9s,baz=26,slow=20,SNR=1.8

ARCES SKPbc SKPbc 04 03 13.7 +0.6
comp=Z,16nm,0.9s,baz=23,slow=3.6,SNR=12
KMBO Kilima Mbogo 135.68 238 *e*PKPdf PKPdf 04 00 26.7 +1.1
KMBO Kilima Mbogo 135.68 238 PKP PKPdf 04 00 26.7 +1.1
comp=Z,2.0nm,0.9s,baz=34,slow=4.8,SNR=4.1
KMBO SKPbc SKPbc 04 03 21.4 +2.3
comp=Z,7.1nm,0.9s,baz=120,slow=3.4,SNR=11
JOF Joensuu 138.25 340 *ep* PKPdf 04 00 20.0 -8.7
QRN Al-Qurain 138.51 284 *e*P PKPdf 04 00 33.0 +2.7
QRN AMb AMB 04 00 33.7
comp=Z,40nm,0.7s
UMR Umm Al-Rimmam 138.79 286 *e*P PKPdf 04 00 33.1 +2.3
UMR AMb AMB 04 00 34.6
comp=Z,14nm,0.5s
RDF Al-Radifah 138.86 285 *e*P PKPdf 04 00 33.7 +2.8
RDF AMb AMB 04 00 34.3
comp=Z,24nm,0.5s
RST Umm Al-Ruwaisa 139.41 285 *e*P PKPdf 04 00 34.3 +2.4
RST AMb AMB 04 00 35.2
comp=Z,20nm,0.8s
KAF Kangasniemi 140.36 342 *ep* 04 00 21.0
comp=Z,1.5nm,0.5s
KAF Kangasniemi 140.36 342 *e*PKHKP 04 00 21.0
KAF pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 140.96 341 PKhKP 04 00 25.4
comp=Z,2.0nm,0.7s,baz=31,slow=4.4,SNR=15
FINES SKPbc SKPbc 04 03 33.3 +1.1
comp=Z,2.0nm,0.7s,baz=44,slow=4.5,SNR=4.1
OBN Obninsk 141.24 328 *i* PKIKP PKPdf 04 00 34.2 -0.2
OBN pmax pmax
comp=Z,3.0nm,0.9s
KIV Kislovodsk 142.06 309 *i* PKIKP PKPdf 04 00 35.7 -0.5
HAKT HAKKARI 142.32 298 *i* P PKPdf 04 00 33.6 -3.3
ERZM Erzurum 143.85 302 *i* P PKPdf 04 00 39.4 -0.1
BNGL BINGOL 144.16 301⇑*i*P PKPdf 04 00 40.6 +0.6
SOC Sochi 144.23 309 *i* PKIKP PKPdf 04 00 39.0 -1.0
NB2 NORSAR Subarra 144.54 351 PKP PKPdf 04 00 38.0 -2.0
comp=Z,25nm,0.8s,baz=15,slow=3.2
NB2 NORSAR Subarra 144.54 351 PKP PKPdf 04 00 38.0 -2.0
baz=15,slow=3.2
NOA NORSAR Array B 144.54 351 PKP PKPdf 04 00 38.1 -1.9
comp=Z,17nm,0.8s,baz=16,slow=2.5,SNR=83
NOA pPKP pPKPdf 04 02 21.6 +4.4
comp=Z,1.7nm,0.7s,baz=16,slow=2.4,SNR=3.0
NOA SKPbc SKPbc 04 03 41.6 +0.7
comp=Z,1.5nm,0.7s,baz=14,slow=4.2,SNR=3.8
MARD Mardin 144.67 298 *i* P PKPdf 04 00 42.0 +1.0
NAO01 NORSAR Array S 144.77 352 *e*PKPdf PKPdf 04 00 39.4 -1.0
KELT Kelkit 145.39 303 *i* P PKPdf 04 00 43.8 +1.7
ANN Anapa 145.42 312 *i* PKIKP PKPdf 04 00 41.0 -1.0
ANN pmax pmax
comp=Z,45nm,0.8s
ELZG Elazig 145.91 301 *i* P PKPdf 04 00 45.8 +2.7
GRSN GIRESUNGRSN 145.96 305 *i* P PKPdf 04 00 44.5 +1.5
KONO Kongsberg 146.09 352 *e*PKPbc PKPbc 04 00 43.2 -1.1
LRW Lerwick 146.10 2 *e*P PKPdf 04 00 43.2 +0.5
MALT Malatya 146.37 300 *e*PKPbc PKPbc 04 00 46.5 +0.6
MALT Malatya 146.37 300⇓*i*P PKPdf 04 00 45.0 +1.1
GZT Gaziantep 147.20 299 *i* P PKPdf 04 00 48.5 +3.3
AKASG Malin Array Be 147.43 326 PKPbc PKPbc 04 00 47.2 -1.2
AKASG pPKPbc pPKPbc 04 02 24.1 0.0
AKASG Malin Array Be 147.43 326 PKPbc PKPbc 04 00 47.2 -1.2
comp=Z,3.6nm,0.5s,baz=44,slow=3.9,SNR=26
AKASG pPKPbc pPKPbc 04 02 24.1 0.0
comp=Z,2.1nm,0.7s,baz=47,slow=4.1,SNR=2.1
KIEV Kiev 147.44 326 *e*PKPbc PKPbc 04 00 46.7 -1.6
SUW Suwalki 147.77 335 *e*PKP PKPbc 04 00 52.1 +3.0
BOYT Boyabat 148.27 307⇑*i*P PKPbc 04 00 51.3 +0.4
KPL Plockton 148.58 7 *e*P PKPbc 04 00 50.2 -0.8
CTKT Corum 148.59 306 *i* P PKPbc 04 00 52.1 +0.5
MDO Dochfour 148.60 6 *e*P PKPdf 04 00 49.5 +2.6
MMAI Meron Ar 149.44 291 PKPbc PKPbc 04 00 54.9 +0.9
comp=Z,13nm,0.4s,baz=74,slow=6.2,SNR=68
MMAI pPKPbc pPKPbc 04 02 33.6 +3.4
comp=Z,6.2nm,0.8s,baz=106,slow=2.7,SNR=3.8
ELDT Eldivan 149.62 306 *i* P PKPbc 04 00 54.2 0.0
EAB Aberfoyle 149.84 6 *e*P PKPdf 04 00 52.1 +3.2
EBH Black Hill 149.86 5 *e*P PKPdf 04 00 53.3 +4.4
EIL Elat 149.88 284 PKPbc PKPbc 04 00 55.7 +0.5
EIL pPKPbc pPKPbc 04 02 32.5 +1.1
EIL Elat 149.88 284 PKPbc PKPbc 04 00 55.7 +0.5
comp=Z,22nm,0.8s,baz=346,slow=1.4,SNR=34
EIL pPKPbc pPKPbc 04 02 32.5 +1.1
comp=Z,2.3nm,0.8s,baz=94,slow=8.4,SNR=1.7
PGBU Glenifferbraes 150.20 6 *e*P PKPbc 04 00 54.1 -0.9
EAU Auchinoon 150.26 5 *e*P PKPdf 04 00 53.8 +4.2
ANTO Ankara 150.27 305 *e*PKPbc PKPbc 04 00 55.9 +0.2
ANTO *e*PKPab PKPab 04 01 03.5 -0.1
ANTO Ankara 150.27 305⇑*i*P PKPbc 04 00 55.7 0.0
EBL Broad Law 150.36 5 *e*P PKPdf 04 00 54.7 +4.9
ECK Cauldkaine Hil 150.94 5 *e*P PKPdf 04 00 55.6 +5.0
CSS Prodhromos 150.95 295 *e*PKPbc PKPbc 04 00 57.2 -0.3
CSS *e*PKPab PKPab 04 01 06.5 -0.1
ERMK Ermenek 150.99 299 *i* P PKPbc 04 00 59.0 +1.5
GAL1 Galloway 151.11 7 *e*P PKPdf 04 00 54.9 +3.9
KWP Kalwaria 151.25 330 *e*PKP PKPbc 04 00 57.2 -0.4
KWP Kalwaria 151.25 330⇑*i*P PKPbc 04 00 56.8 -0.9
XAL Allendale 151.32 4 *e*P PKPbc 04 00 56.7 -1.0
TIRR Tirgusor 151.40 316⇑P PKPdf 04 00 55.2 +3.5
TIRR Tirgusor 151.40 316⇑*i*P PKPdf 04 00 55.2 +3.5
HARR Harsova 151.57 317⇑P PKPbc 04 00 58.7 +0.1
HARR Harsova 151.57 317⇑*i*P PKPbc 04 00 58.7 +0.1
VRI Vrincioaia 151.64 320⇑P PKPbc 04 00 58.3 -0.4
VRI Vrincioaia 151.64 320⇑*i*P PKPbc 04 00 58.3 -0.4
PLOR Plostina 151.70 320⇑*i*P PKPbc 04 00 57.7 -1.1
KOLS Kolonicke sedl 151.96 329 *e*PKP PKPbc 04 00 58.3 -1.0
KOLS *e* 04 02 39.7
STHS Stebnicka Huta 152.06 331 *e*PKP PKPbc 04 00 58.2 -1.3
STHS *e* 04 01 10.7
STHS *e* 04 02 39.0
STHS *e* 04 02 56.1
STHS Stebnicka Huta 152.06 331 *e*PKIKP PKPbc 04 00 58.2 -1.3
STHS *e* 04 01 10.7
STHS Stebnicka Huta 152.06 331 *e*PKP PKPbc 04 00 58.1 -1.4
STHS *e* 04 01 10.7
STHS *e* 04 02 39.0
STHS *e* 04 02 56.1
MLR Muntele Rosu 152.31 320⇑P PKPbc 04 00 60.0 -0.2
MLR Muntele Rosu 152.31 320⇑*i*P PKPbc 04 01 00.0 -0.2
CRVS Cervenica-Dubn 152.34 330 *e*PKP PKPbc 04 01 01.1 +1.0
CRVS *e* 04 02 38.7
CRVS *e* 04 02 49.7
KECS Kecovo 153.09 331 *e*PKP PKPab 04 01 17.0 +1.8
KECS *e*PP PP 04 04 40.0 -10
SBD1 Bryn Du 153.19 6 *e*P PKPbc 04 01 01.4 -0.4
CLL Collm 153.36 343 *e*P PKPbc 04 01 01.0 -1.3
CLL *i* 04 01 09.6
CLL *i* 04 01 15.5
CLL Collm 153.36 343 *e*PKIKP PKPbc 04 01 01.0 -1.3
CLL *i* 04 01 15.5
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 153.36 343 *e*PKPbc PKPbc 04 01 01.0 -1.3
comp=Z,5.0nm,0.8s
CLL ⇓*i*PKPab PKPab 04 01 15.2 -1.0
comp=Z,6.0nm,0.7s
CLL Collm 153.36 343 *i* (P) pPKPab 04 02 41.1 -7.9
comp=Z,4.0nm,0.9s
CLL *i* x x 04 02 43.8
comp=Z,13nm,1.1s
CLL *i* x x 04 02 55.0
CLL Collm 153.36 343 *ep*PKPab pPKPab 04 02 43.4 -5.6
BRG Berggiesshubel 153.50 341 *e*PKIKP PKiKP 04 01 10.3 +7.7
BRG *e* PKPab 04 01 15.9 -0.9
BRG *e* 04 02 41.9
BRG pmax pmax
comp=Z,3.0nm,0.9s
BRG pmax pmax
comp=Z,2.0nm,0.5s
BRG pmax pmax
comp=Z,4.0nm,1.1s
BRG Berggiesshubel 153.50 341 *ep*PKPab pPKPab 04 02 43.8 -5.8
BRG Berggiesshubel 153.50 341 *e*P PKiKP 04 01 10.3 +7.6
comp=Z,5.0nm,0.9s
BRG *e* PKPab 04 01 15.9 -0.8
comp=Z,3.5nm,0.5s
BRG *e* 04 02 41.9
comp=Z,7.2nm,1.1s
FBE Freiberg 153.62 342 *ep*PKPab pPKPab 04 02 44.2 -5.9
BTOK Tokmak 153.75 308⇑*i*P PKPab 04 01 17.9 -0.4
PSZ Piszkesteto 153.78 330 *e*PKPab PKPab 04 01 16.6 -1.4
VYHS Vyhne 153.79 333 *e*PKP PKPbc 04 01 03.3 0.0

VYHS e 04 01 20.7
VYHS e 04 03 00.4
VRAC Vranov 154.00 336 ⇑P PKPab 04 01 17.1 -1.9
VRAC Vranov 154.00 336 ⇓P PKPab 04 01 17.1 -1.9
KDAG Bornova 154.81 305 *i* P PKPab 04 01 22.2 -0.6
KHC Kasperske Hory 155.16 340 *e*PKP PKPab 04 01 19.5 -4.4
KHC e 04 01 27.0
KHC e 04 03 02.5
KHC Kasperske Hory 155.16 340 *e*PKPab PKPab 04 01 19.5 -4.4
KHC x x 04 01 27.0
KHC x x 04 03 02.5
GERES GERESS Array B 155.37 340 PKPbc PKPdf 04 01 05.5 +8.3
comp=Z,0.2nm,0.4s,baz=42,slow=1.6,SNR=3.1
GERES PKPab PKPab 04 01 24.7 -0.2
comp=Z,0.8nm,0.6s,baz=38,slow=5.0,SNR=5.0
VTS Vitosha 155.59 318 ⇑P PKPab 04 01 24.9 -1.2
VTS Vitosha 155.59 318 ⇓P PKPab 04 01 24.9 -1.2
PKSM Moragy 155.62 329 ⇑P PKPdf 04 01 04.8 +7.1
PKSM Moragy 155.62 329 ⇑P PKPdf 04 01 04.8 +7.2
BAIF Baives 156.10 355 *e*PKP2 PKPab 04 01 26.3 -1.7
CDF Champ du Feu 157.34 349 *e*PKP2 PKPab 04 01 31.7 -1.7
MEZF Maizieres J'vi 157.57 353 *e*PKP2 PKPab 04 01 32.9 -1.4
IDI Anoyia 157.63 299 PKPab PKPab 04 01 35.9 +0.7
comp=Z,10nm,0.8s,baz=16,slow=2.2,SNR=4.2
SGMF Saint Gilles 157.86 6 *e*PKP2 PKPab 04 01 34.4 -1.2
comp=Z,79nm,1.1s
HAU Haudompre 157.89 350 *e*PKP2 PKPab 04 01 34.1 -1.6
comp=Z,8.4nm,0.8s
SSF Saint Saulge 159.14 355 *e*PKP2 PKPab 04 01 39.5 -1.7
comp=Z,12nm,0.8s
CABF La Chapelle 159.28 350 *e*PKP2 PKPab 04 01 40.6 -1.3
AVF Avril sur Loir 159.42 355 *e*PKP2 PKPab 04 01 40.5 -1.9
SMF Signal de Mont 159.53 354 *e*PKP2 PKPab 04 01 41.0 -1.9
comp=Z,30nm,1.1s
BGF Bois d'Agland 159.68 356 *e*PKP2 PKPab 04 01 41.7 -1.9
TCF Toulx Ste Croi 159.98 358 *e*PKP2 PKPab 04 01 43.4 -1.5
comp=Z,16nm,1.2s
LPL La Plagne 160.24 348 *e*PKP2 PKPab 04 01 45.3 -0.7
LPG La Plagne 160.25 348 *e*PKP2 PKPab 04 01 45.5 -0.6
ORIF Oris-en-Rattie 160.97 349 *e*PKP2 PKPab 04 01 48.2 -1.1
comp=Z,18nm,0.9s
RJF Les Rejaudoux 160.99 359 *e*PKP2 PKPab 04 01 47.3 -2.0
comp=Z,9.0nm,0.9s
MBDF Montbardon 160.99 347 *e*PKP2 PKPab 04 01 47.4 -2.0
comp=Z,4.8nm,0.7s
CAF Calviac 161.35 358 *e*PKP2 PKPab 04 01 49.2 -1.7
LASF Ste Croix 162.07 353 *e*PKP2 PKPab 04 01 52.6 -1.5
MTLF Montolieu 162.93 357 *e*PKP2 PKPab 04 01 56.3 -1.6
comp=Z,6.6nm,0.9s
TORD Torodi Ar. Bea 166.94 183 PKP PKPdf 04 01 09.1 -1.2
comp=Z,0.9nm,0.7s,baz=205,slow=0.4,SNR=4.5
TORD PKPab PKPab 04 02 17.5 +1.3
comp=Z,4.6nm,0.7s,baz=174,slow=4.0,SNR=31
TORD PP PP 04 06 02.9 -0.8
comp=Z,1.2nm,0.9s,baz=168,slow=4.4,SNR=3.1
MDT Midelt 171.84 35 PKP PKPdf 04 01 12.9 +0.1
comp=Z,0.8nm,0.7s,baz=18,slow=6.2,SNR=2.7
MDT PKPab PKPab 04 02 37.2 -0.5
comp=Z,9.1nm,1.0s,baz=334,slow=5.4,SNR=13

IDC ***31*** *04:04:46.6±1.1, 1094N×12620E, h0km, mb4.0/8, mb1 4.0/8, mb1mx3.8/18, mbtmp4.0/8, Error ellipse: s-maj=157.6km s-min=16.3km az=69.0*
MAN ***31*** *04:04:48, 1105N×12649E, h30km, mb4.8, ML3.7, MS3.7*
ISCJB ***31*** *04:04:50.1±2.3, 1099N±009×1264E±02, h36km±20km, mb4.2/12, Error ellipse: s-maj=26.2km s-min=12.6km az=160.3*
NEIC ***31*** *04:04:58.2±7.7, 1081N×12603E, h95km±73km, mb4.3/3, Error ellipse: s-maj=35.0km s-min=11.2km az=64.0*
ISC 31 04:04:51.2±3.7, 1099N±008×12636E±009, h29km±27km, n21, σ0°83/22, mb4.2/12, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.37**	**277**	*e*P	**Pn**	**04 05 11.3**	**-3.0**
PLP				*i* S	**Sn**	**04 05 31.9**	**+0.4**
MSLP	**Maasin**	**1.71**	**240**	*e*P	**Pn**	**04 05 18.6**	**-0.3**
OCLP	**Ormoc**	**1.72**	**272**	*e*P	**Pn**	**04 05 19.0**	**-0.2**
TBP	**Tagbilaran**	**2.78**	**243**	*e*P	**Pn**	**04 05 34.6**	**+1.0**
PVCP	**Virac**	**3.37**	**320**	*e*P	**Pn**	**04 05 41.5**	**-0.4**
RCP	**Roxas**	**3.59**	**279** ⇑	*e*P	**Pn**	**04 05 45.4**	**+0.5**
GUIM	**Jordan**	**3.73**	**265**	*e*P	**Pn**	**04 05 47.3**	**+0.6**
WRA	**Warramunga Arr**	**31.72**	**166**	P	**P**	**04 11 11.8**	**-0.8**
	0.7nm,0.6s,mb3.7,baz=346,slow=9.2,SNR=6.6						
ASAR	**Alice Springs**	**35.22**	**168**	P	**P**	**04 11 42.6**	**-0.5**
	0.5nm,0.3s,mb3.9,baz=346,slow=7.1,SNR=8.9						
SONM	**Songino Array**	**40.38**	**339**	P	**P**	**04 12 27.5**	**+1.1**
	0.7nm,0.9s,mb3.4,baz=166,slow=8.3,SNR=4.7						
SONM				PcP	PcP	04 14 29.6	+0.4
	0.4nm,0.6s,baz=170,slow=4.2,SNR=2.7						
STKA	**Stephens Creek**	**45.05**	**162**	P	**P**	**04 13 05.2**	**+0.8**
	1.1nm,0.7s,mb3.8,baz=339,slow=4.1,SNR=2.4						
MKAR	**Makanchi Array**	**51.52**	**322**	P	**P**	**04 13 54.3**	**+0.1**
	1.9nm,0.7s,mb4.1,baz=121,slow=8.1,SNR=12						
ZALV	**Zalesovo Beam**	**54.04**	**331**	P	**P**	**04 14 12.2**	**-0.5**
	1.4nm,0.3s,mb4.3,baz=114,slow=6.8,SNR=11						
KURK	**Kurchatov**	**55.53**	**325**	*e*P	**P**	**04 14 23.2**	**-0.4**
	4.5nm,1.0s,mb4.5						
BRVK	**Borovoye**	**61.20**	**325**	*e*P	**P**	**04 15 02.8**	**-0.3**
	2.0nm,0.6s,mb4.4						
MCK	**McKinley**	**77.88**	**27**	*e*P	**P**	**04 16 46.8**	**+1.0**
COLA	**College**	**78.34**	**26**	*e*P	**P**	**04 16 49.7**	**+1.3**
	1.6nm,0.7s,mb4.1						
JOF	**Joensuu**	**82.60**	**333**	*e*p	**P**	**04 17 05.5**	**-5.8**
ARCES	**ARCESS Array B**	**83.56**	**340**	P	**P**	**04 17 16.1**	**0.0**
	27nm,1.3s,mb5.2,baz=83,slow=6.2,SNR=5.4						
FINES	**FINESS Array B**	**85.31**	**332**	P	**P**	**04 17 24.7**	**-0.4**
	1.3nm,0.6s,mb4.2,baz=69,slow=6.1,SNR=17						
HFS	**Hagfors**	**91.46**	**332**	P	**P**	**04 17 52.9**	**-1.6**
	1.3nm,0.8s,mb4.3,baz=84,slow=6.1,SNR=5.9						

MAN 31 04:06:24, 1376N×12044E, h62km, mb4.1, ML2.9, MS2.6, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.19**	**262**	*e*P	Pn	04 06 36.0	+2.4
LUBP				*e*S	Sn	04 06 42.8	+2.1
BOAC	**Boac**	**1.39**	**102**	*e*P	Pn	04 06 48.2	+0.8
BUSP	**Coron**	**1.77**	**188**	*e*P	Pn	04 06 53.8	+1.4
OTRP	**Odiongan**	**2.07**	**132**	*e*P	Pn	04 06 59.4	+2.9
BALP	**Baler**	**2.25**	**29**	*e*P	Pn	04 06 59.8	+0.9
ENPP	**El Nido**	**2.73**	**202**	*e*P	Pn	04 07 06.7	+1.2
ENPP	**El Nido**	**2.73**	**202**	*e*P	Sn	04 07 37.3	0.0
CUYO	**Cuyo Island**	**2.95**	**169**	*e*P	Pn	04 07 09.5	+1.1
CUYO	**Cuyo Island**	**2.95**	**169**	*e*P	Sn	04 07 39.8	-2.9

BJI ***31*** *04:07:03.7, 1941S×17672E, h84km, mB5.0, mb4.8, Ms4.7, Msz4.3*
MOS ***31*** *04:07:05.2±1.4, 1917S×17583E, h56km, mb4.8/14, MS4.5/4, Error ellipse: s-maj=16.5km s-min=12.9km az=78.8*
ORF ***31*** *04:07:07.9, 1569S×17687E, h30km, mb5.6*
SZGRF ***31*** *04:07:07.6, 1969S×17534E, h33km, South of Fiji Islands*
ISCJB ***31*** *04:07:07.6±2.6, 1914S±007×17577E±007, h83km±23km, mb4.5/46, Error ellipse: s-maj=12.1km s-min=11.1km az=40.7*
IDC ***31*** *04:07:08.0±4.8, 1906S×17584E, h76km±39km, mb4.2/15, mb1 4.3/17, mb1mx4.3/20, mbtmp4.2/17, ML4.0/2, MS3.8/11, Ms1 3.8/11, ms1mx3.7/17, Error ellipse: s-maj=23.6km s-min=18.1km az=64.0*
NEIC ***31*** *04:07:09.0±1.4, 1904S×17580E, h84km±11km, mb4.6/23, Error ellipse: s-maj=9.0km s-min=6.2km az=149.0*
ISC 31 04:07:08.9±2.1, 1913S±007×17582E±007, h82km±18km, h76km±8.4km:pP-P, n201, σ0°80/79, mb4.5/46, 6C-11D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.25**	**250**	P	**Pn**	**04 09 19.2**	**-0.4**
	0.5nm,0.3s,baz=93,slow=23,SNR=7.4						
DZM				LR	LR	04 12 16.7	
	comp=Z,802nm,19.9s,baz=38,slow=33						
RAO	**Raoul Island**	**11.58**	**152**	LR	LR	04 13 11.9	
	comp=Z,992nm,20.0s,baz=333,slow=31						
HNR	**Honiara**	**18.14**	**300**	LR	LR	04 16 58.6	
	comp=Z,484nm,21.9s,baz=178,slow=33						
URZ	**Urewera**	**19.09**	**177**	P	**Pn**	**04 11 27.0**	**+0.3**
	1.3nm,0.3s,baz=11,slow=7.6,SNR=9.7						

RPZ	**Rata Peaks**	**24.84**	**188**	P	**P**	**04 12 25.2**	**+1.7**
	15nm,0.8s,mb4.5,baz=103,slow=2.4,SNR=4.1						
RPZ				LR	LR	04 20 21.4	
	comp=Z,157nm,18.3s,baz=11,slow=32						
CTA	**Charters Tower**	**27.85**	**263**	LR	LR	04 22 32.3	
	comp=Z,251nm,20.0s,baz=57,slow=33						
TBI	**Tubuai**	**32.59**	**104**	*e*S	**S**	**04 18 43.7**	**+1.2**
	98nm,24.2s						
TBI				*e*LR	LR	04 22 08.8	
	645nm,31.5s						
PPT	**Papeete**	**32.85**	**93**	*e*S	**S**	**04 18 53.0**	**+6.2**
	114nm,24.5s						
PPT				*e*LR	LR	04 22 16.1	
	744nm,29.0s,baz=256						
STKA	**Stephens Creek**	**33.25**	**241**	P	**P**	**04 13 39.5**	**+1.2**
	24nm,0.9s,mb5.0,baz=89,slow=5.8,SNR=29						
STKA				LR	LR	04 26 27.3	
	comp=Z,93nm,18.1s,baz=29,slow=35						
WRA	**Warramunga Arr**	**39.03**	**262**	P	**P**	**04 14 26.6**	**-1.2**
WRA						04 16 36.4	
WRA	**Warramunga Arr**	**39.03**	**262**	P	**P**	**04 14 26.6**	**-1.2**
	1.2nm,0.7s,mb3.9,baz=96,slow=8.9,SNR=10.0						
WRA				PcP	PcP	04 16 36.4	-0.2
	1.5nm,0.9s,baz=90,slow=3.4,SNR=4.6						
WRA				LR	LR	04 28 55.7	
	comp=Z,116nm,19.3s,baz=180,slow=34						
ASAR	**Alice Springs**	**39.19**	**256**	P	**P**	**04 14 28.7**	**-0.4**
	5.1nm,0.8s,mb4.4,baz=83,slow=8.7,SNR=39						
ASAR				PcP	PcP	04 16 36.8	-0.3
	1.8nm,0.8s,baz=98,slow=3.0,SNR=8.4						
TAOE	**Nuku Hiva Isla**	**43.82**	**83**	*e*LR	LR	04 27 32.7	
	443nm,24.8s						
FORT	**Forrest**	**44.53**	**245**	*e*P	**P**	**04 15 13.0**	**+0.4**
	33nm,0.7s,mb5.2						
RKT	**Rikitea**	**45.91**	**104**	*e*LR	LR	04 28 17.0	
	463nm,31.2s,baz=275						
FITZ	**Fitzroy Crossi**	**47.43**	**263**	P	**P**	**04 15 36.4**	**+0.8**
	9.2nm,1.1s,mb4.4,baz=104,slow=11,SNR=7.8						
FITZ				LR	LR	04 32 08.2	
	comp=Z,121nm,21.1s,baz=266,slow=32						
BATI	**Kupang**	**51.07**	**272**	P	**P**	**04 16 02.4**	**-1.0**
	8.1nm,0.4s,mb5.1,baz=45,slow=4.3,SNR=3.3						
MBWA	**Marble Bar**	**52.46**	**258**	*e*P	**P**	**04 16 13.8**	**+0.2**
	24nm,0.9s,mb5.2						
KLBR	**Kellerberrin**	**53.37**	**244**	*e*P	**P**	**04 16 19.9**	**-0.3**
	89nm,1.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**53.79**	**243**	P	**P**	**04 16 23.8**	**+0.5**
	15nm,1.0s,mb5.0,baz=41,slow=6.6,SNR=4.8						
VNDA	**Vanda**	**58.83**	**184**	P	**P**	**04 16 58.0**	**-0.3**
VNDA				PcP	PcP	04 17 47.2	+0.2
VNDA				LR	LR	04 38 48.7	
VNDA	**Vanda**	**58.83**	**184**	P	**P**	**04 16 58.1**	**-0.3**
VNDA						04 17 47.2	
VNDA	**Vanda**	**58.83**	**184**	P	**P**	**04 16 58.0**	**-0.3**
	0.5nm,0.5s,mb3.8,baz=323,slow=2.3,SNR=8.5						
VNDA				PcP	PcP	04 17 47.2	+0.2
	1.4nm,0.8s,baz=10.0,slow=4.2,SNR=3.8						
VNDA				LR	LR	04 38 48.7	
	comp=Z,100nm,19.9s,baz=92,slow=32						
SBA	**Scott Base**	**58.93**	**182**	*e*P	**P**	**04 16 59.8**	**+0.7**
	26nm,1.7s,mb5.0						
SBA	**Scott Base**	**58.93**	**182**	*e*P	**P**	**04 16 59.8**	**+0.8**
SBA				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.0						
MJAR	**Matsushiro Art**	**65.79**	**327**	LR	LR	04 41 07.0	
	comp=Z,83nm,21.5s,baz=115,slow=31						
KSM	**Kuching**	**67.45**	**280**	*e*P	**P**	**04 17 56.4**	**-0.1**
KSRS	**Korea Array**	**72.11**	**322**	P	**P**	**04 18 24.4**	**0.0**
	comp=Z,3.0nm,0.9s,mb4.1,baz=138,slow=5.1,SNR=4.8						
KSRS				LR	LR	04 43 58.6	
	comp=Z,40nm,19.9s,baz=6.8,slow=31						
YSS	**Yuzh-Sakhalins**	**72.21**	**337**	*e*P	**P**	**04 18 26.8**	**+1.9**
YSS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
NJ2	**Nanjing**	**74.59**	**312**	*e*P	**P**	**04 18 40.5**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
PSI	**Prapat**	**78.56**	**277**	P	**P**	**04 19 01.2**	**-0.9**
PSI	**Prapat**	**78.56**	**277**	P	**P**	**04 19 01.2**	**-0.9**
	comp=Z,5.7nm,0.8s,mb4.5,baz=135,slow=7.1,SNR=5.3						
MAW	**Mawson**	**80.81**	**201**	P	**P**	**04 19 13.3**	**0.0**
	comp=Z,3.2nm,0.8s,mb4.2,baz=91,slow=3.7,SNR=7.8						
CMB	**Columbia Colle**	**82.54**	**46**	*e*P	**P**	**04 19 22.4**	**-0.4**
	comp=Z,2.2nm,0.8s,mb4.0						
CMB	**Columbia Colle**	**82.54**	**46**	*e*P	**P**	**04 19 22.4**	**-0.4**
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
MTUM	**Tungsten Hills**	**83.44**	**47**	*e*P	**P**	**04 19 27.9**	**+0.5**
SEY	**Seymchan**	**83.85**	**349**	*e*P	**P**	**04 19 28.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**84.30**	**317**	*e*P	**P**	**04 19 32.0**	**+0.3**
HHC				AP	pP	04 19 52.8	-1.0
HHC				XP	sP	04 20 00.5	-2.2
HHC				PP	PP	04 22 48.5	+0.7
HHC				SKS		04 29 46.8	
HHC				S	S	04 29 50.5	-0.2
HHC				SS	SS	04 35 27.3	+4.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,72nm,7.4s						
HHC				LR	LR		
	comp=N,118nm,24.3s						
HHC				LR	LR		
	comp=E,218nm,22.8s						
HHC				LR	LR		
	comp=Z,112nm,22.8s						
CHTO	**Chiang Mai**	**84.32**	**292**	*e*P	**P**	**04 19 33.0**	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.2						
CHTO	**Chiang Mai**	**84.32**	**292**	*e*P	**P**	**04 19 33.0**	**+0.7**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
TPNV	**Topopah Spring**	**84.86**	**48**	*e*P	**P**	**04 19 34.8**	**+0.1**
	comp=Z,8.9nm,1.0s,mb4.7						
TPNV	**Topopah Spring**	**84.86**	**48**	*e*P	**P**	**04 19 34.8**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
CD2	**Chengdu**	**85.19**	**305**	*e*P	**P**	**04 19 36.0**	**-0.5**
CD2				XP	sP	04 20 05.0	-2.4
CD2				PP	PP	04 22 56.3	+1.0
CD2				SKS		04 29 50.5	
CD2				S	S	04 29 58.3	-1.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,30nm,5.8s						
CD2				LR	LR		
	comp=E,180nm,18.6s						
CD2				LR	LR		
	comp=Z,100nm,16.8s						
SYO	**Syowa Base**	**86.68**	**194**	*e*P	**P**	**04 19 41.0**	**-2.2**
SYO	**Syowa Base**	**86.68**	**194**	*e*PcP	PcP	04 19 46.0	+0.6
BILL	**Bilibino**	**87.20**	**356**	*e*P	**P**	**04 19 45.0**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.9						
LZH	**Lanzhou**	**87.37**	**310**	*e*P	**P**	**04 19 47.5**	**+0.5**
LZH				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,76nm,5.1s						
BMO	**Blue Mountains**	**87.99**	**41**	*e*P	**P**	**04 19 49.1**	**-0.7**
	comp=Z,8.6nm,1.5s,mb4.6						
BMO	**Blue Mountains**	**87.99**	**41**	*e*P	**P**	**04 19 49.1**	**-0.6**
BMO				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
COLA	**College**	**88.25**	**15**	*e*P	**P**	**04 19 48.5**	**-2.0**
	comp=Z,5.4nm,1.1s,mb4.5						
COLA	**College**	**88.25**	**15**	*e*P	**P**	**04 19 48.5**	**-2.0**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
DUG	**Dugway**	**88.74**	**47**	*e*P	**P**	**04 19 53.6**	**+0.2**
	comp=Z,4.4nm,1.2s,mb4.4						
DUG	**Dugway**	**88.74**	**47**	*e*P	**P**	**04 19 53.6**	**+0.2**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
YAK	**Yakutsk**	**88.76**	**340**	*e*P	**P**	**04 19 53.8**	**+0.8**
HLID	**Hailey**	**89.20**	**43**	*e*P	**P**	**04 19 55.8**	**+0.3**
	comp=Z,2.4nm,0.8s,mb4.3						
SNAA	**Sanae**	**89.43**	**180**	P	**P**	**04 19 54.7**	**-1.5**
	comp=Z,1.1nm,0.8s,mb4.0,baz=179,slow=7.5,SNR=7.8						
TMUT	**Trail Mountain**	**89.47**	**48**	*e*P	**P**	**04 19 57.7**	**+0.8**
NEW	**Newport**	**89.78**	**38**	*e*P	**P**	**04 19 57.1**	**-1.0**
	comp=Z,5.3nm,1.0s,mb4.6						
NEW	**Newport**	**89.78**	**38**	*e*P	**P**	**04 19 57.1**	**-1.0**
NEW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VNA3	**Neumayer Olymp**	**89.78**	**178**	*e*P	**P**	**04 19 57.1**	**-0.8**

VNA3				*e*		04 20 01.4	
VNA3				*e*		04 20 04.2	
VNA3				*e*		04 20 08.8	
VNA3				*e*	pP	04 20 14.9	-5.2
VNA3				*e*	pP	04 20 17.0	-3.1
VNA3				*e*	pP	04 20 20.7	+0.6
EGAK	**Eagle**	**89.89**	**17**	*e*P	**P**	**04 19 57.0**	**-1.3**
	comp=Z,5.6nm,0.9s,mb4.7						
DAU	**Daniels Canyon**	**89.91**	**47**	*e*P	**P**	**04 19 59.7**	**+0.8**
VNA2	**Neumayer--Watz**	**90.16**	**179**	*e*P	**P**	**04 19 59.0**	**-0.6**
VNA2				*e*		04 20 03.4	
VNA2				*e*		04 20 06.1	
VNA2				*e*		04 20 10.3	
VNA2				*e*	pP	04 20 17.1	-4.7
VNA2				*e*	pP	04 20 19.0	-2.8
VNA2				*e*	pP	04 20 22.5	+0.7
HWUT	**Hardware Ranch**	**90.21**	**46**	*e*P	**P**	**04 20 00.2**	**-0.1**
	comp=Z,2.3nm,0.7s,mb4.4						
LAZ	**Ladron**	**90.45**	**54**	*e*P	**P**	**04 20 02.1**	**+0.5**
MCMT	**McKenzie Canyo**	**90.78**	**42**	*e*P	**P**	**04 20 03.0**	**+0.2**
MNTX	**Cornudas Mount**	**90.79**	**57**	*e*P	**P**	**04 20 03.6**	**+0.4**
	comp=Z,6.2nm,1.4s,mb4.5						
SONM	**Songino Array**	**90.97**	**321**	P	**P**	**04 20 03.7**	**+0.1**
	comp=Z,2.5nm,1.0s,mb4.3,baz=131,slow=1.9,SNR=9.3						
ANMO	**Albuquerque**	**91.18**	**53**	*e*P	**P**	**04 20 05.1**	**+0.2**
	comp=Z,2.0nm,0.8s,mb4.3						
ANMO	**Albuquerque**	**91.18**	**53**	*e*P	**P**	**04 20 05.1**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TPAW	**Teton Pass**	**91.42**	**44**	*e*P	**P**	**04 20 06.3**	**+0.5**
REDW	**Red Top Meadow**	**91.44**	**44**	*e*P	**P**	**04 20 06.4**	**+0.5**
	comp=Z,8.5nm,1.1s,mb4.8						
CHMT	**Chamberlain Mo**	**91.45**	**40**	*e*P	**P**	**04 20 05.5**	**-0.5**
IMW	**Indian Meadow**	**91.61**	**44**	*e*P	**P**	**04 20 07.4**	**+0.7**
	comp=Z,5.9nm,1.1s,mb4.7						
GTA	**Gaotai**	**91.65**	**311**	*e*P	**P**	**04 20 08.3**	**+1.3**
GTA				AMB	AMB		
	comp=Z,3.0nm,1.2s,mb4.4						
MOOW	**Moose Ponds**	**91.67**	**44**	*e*P	**P**	**04 20 07.2**	**+0.2**
	comp=Z,2.7nm,1.1s,mb4.4						
BOZ	**Bozeman (W)**	**91.91**	**42**	*e*P	**P**	**04 20 08.0**	**-0.1**
	comp=Z,3.5nm,1.3s,mb4.4						
BOZ	**Bozeman (W)**	**91.91**	**42**	*e*P	**P**	**04 20 08.0**	**0.0**
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.4						
BW06	**Boulder Array**	**92.05**	**45**	*e*P	**P**	**04 20 08.4**	**-0.3**
	comp=Z,1.3nm,0.8s,mb4.2						
PDAR	**Pinedale Array**	**92.05**	**45**	P	**P**	**04 20 07.7**	**-1.1**
	comp=Z,1.3nm,0.8s,mb4.2,baz=216,slow=3.4,SNR=11						
SMCO	**Snowmass**	**92.42**	**49**	*e*P	**P**	**04 20 11.1**	**+0.5**
	comp=Z,8.0nm,1.2s,mb4.8						
SDCO	**Great Sand Dun**	**92.95**	**51**	*e*P	**P**	**04 20 13.0**	**0.0**
	comp=Z,1.6nm,0.9s,mb4.3						
AMTX	**Amarillo**	**94.82**	**55**	*e*P	**P**	**04 20 20.6**	**-1.1**
TIXI	**Tiksi**	**96.00**	**347**	*e*P	**P**	**04 20 26.7**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb4.2						
YKA	**Yellowknife Ar**	**97.78**	**26**	P	**P**	**04 20 33.3**	**-1.2**
YKA	**Yellowknife Ar**	**97.78**	**26**	P	**P**	**04 20 33.3**	**-1.2**
	comp=Z,0.5nm,0.8s,mb4.1,baz=251,slow=4.2,SNR=9.9						
WMQ	**Urumqi**	**101.67**	**312**	*e*P	Pdif	04 20 51.8	-0.5
KURK	**Kurchatov**	**109.07**	**318**	*e*PKP	PKiKP	04 25 28.0	-0.9
AKTK	**Aktyubinsk**	**122.17**	**318**	PKP	PKPdf	04 25 53.6	-0.4
AKTO	**Aktyubinsk**	**122.17**	**318**	PKIKP	PKPdf	04 25 53.6	-0.4
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKTO	**Aktyubinsk**	**122.17**	**318**	PKP	PKPdf	04 25 53.6	-0.4
	comp=Z,2.0nm,0.7s,baz=42,slow=3.8,SNR=10						
FINES	**FINESS Array B**	**132.69**	**341**	PKP	PKPdf	04 26 12.5	-1.2
	comp=Z,1.6nm,0.8s,baz=349,slow=1.9,SNR=3.8						
LSZ	**Lusaka**	**133.27**	**225**	*e*PKPdf	PKPdf	04 26 16.9	+0.7
MALT	**Malatya**	**138.46**	**307**	*e*PKPdf	PKPdf	04 26 25.8	+0.6
CFR	**Carcaliu**	**142.69**	**321**	P	PKPdf	04 26 36.0	+3.4
KOLS	**Kolonicke sedl**	**143.43**	**330**	*e*PKP	PKPdf	04 26 32.6	-1.2
STHS	**Stebnicka Huta**	**143.55**	**332**	*e*PKP	PKPdf	04 26 32.8	-1.2
MLR	**Muntele Rosu**	**143.78**	**323**	⇑P	PKPdf	04 26 32.5	-2.1
MLR	**Muntele Rosu**	**143.78**	**323**	PKIKP	PKPdf	04 26 33.2	-1.3
MLR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MLR	**Muntele Rosu**	**143.78**	**323**	PKP	PKPdf	04 26 33.2	-1.3
	comp=Z,4.6nm,0.7s,baz=16,slow=4.5,SNR=6.7						
MLR	**Muntele Rosu**	**143.78**	**323**	⇑*i*P	PKPdf	04 26 32.5	-2.0
CRVS	**Cervenica-Dubn**	**143.82**	**331**	*e*PKP	PKPdf	04 26 32.8	-1.7
EKA	**Eskdalemuir Ar**	**143.85**	**359**	PKP	PKPdf	04 26 33.9	-0.4
	comp=Z,1.2nm,0.7s,baz=96,slow=7.8,SNR=4.4						
NIE	**Niedzica**	**143.96**	**333**	*e*PKP	PKPdf	04 26 33.7	-1.0
KSP	**Ksiaz**	**144.44**	**338**	*e*PKP	PKPdf	04 26 34.4	-1.1
**O

WLF	**Walferdange**	**148.43**	**347**	*e*PKPbc	PKPbc	04 26 46.0	+0.1
VNDS	**Vrh nad Dolski**	**148.92**	**334**	*i* PKPbc	PKPbc	04 26 46.8	-0.4
KRUS	**Krusevo**	**149.00**	**321**	*e*PKP	PKPdf	04 26 44.5	+1.0
LJU	**Ljubljana**	**149.03**	**334**	*i* PKPbc	PKPbc	04 26 47.7	+0.1
BOJS	**Bojanci**	**149.16**	**333**	*i* PKPbc	PKPbc	04 26 48.1	+0.3
VOJS	**Vojsko**	**149.31**	**335**	*i* PKPbc	PKPbc	04 26 47.7	-0.5
CDF	**Champ du Feu**	**149.35**	**345**	*e*PKP1	PKPbc	04 26 48.0	-0.2
	comp=Z,23nm,1.1s						
OHR	**Ohrid**	**149.42**	**321**	*e*PKP	PKPbc	04 26 46.3	-2.3
FETA	**Feichten**	**149.62**	**340**	⇓ *i* PKiKP	PKiKP	04 26 49.1	-0.8
	comp=Z,9.4nm,1.0s						
MEZF	**Maizieres J'vi**	**149.76**	**348**	*e*PKP1	PKPbc	04 26 49.3	+0.1
HAU	**Haudompre**	**149.95**	**346**	*e*PKP1	PKPbc	04 26 49.5	-0.2
	comp=Z,25nm,1.2s						
HAU				*e*MLR	MLR		
	comp=Z,111nm,19.5s						
HAU	**Haudompre**	**149.95**	**346**	*e*PKHKP	PKPbc	04 26 49.5	-0.2
HAU				MLR	MLR		
	comp=Z,110nm,19.5s						
HINF	**Hinteralfeld**	**150.01**	**345**	*e*PKP1	PKPbc	04 26 49.5	-0.3
DAVOX	**Davos/Dischmat**	**150.10**	**340**	PKPbc	PKPbc	04 26 50.7	+0.6
	comp=Z,11nm,0.7s,baz=53,slow=0.8,SNR=14						
FLN	**La Foliniere**	**150.29**	**355**	*e*PKP1	PKPbc	04 26 50.0	-0.5
FLN				*e*MLR	MLR		
	comp=Z,96nm,19.8s						
FLN	**La Foliniere**	**150.29**	**355**	*e*PKIKP	PKPbc	04 26 50.0	-0.5
FLN				MLR	MLR		
	comp=Z,100nm,19.8s						
LDF	**La Druitiere**	**150.43**	**355**	*e*PKP1	PKPbc	04 26 50.8	0.0
GRR	**Gorron**	**150.69**	**355**	*e*PKP1	PKPbc	04 26 51.0	-0.5
LOR	**Lormes**	**151.18**	**349**	*e*PKP1	PKPbc	04 26 52.3	-0.3
	comp=Z,15nm,0.9s						
LOR				*e*MLR	MLR		
	comp=Z,63nm,22.0s						
LOR	**Lormes**	**151.18**	**349**	*e*PKIKP	PKPbc	04 26 52.3	-0.3
LOR				MLR	MLR		
	comp=Z,60nm,22.0s						
CABF	**La Chapelle**	**151.32**	**345**	*e*PKP1	PKPbc	04 26 53.1	+0.1
HYF	**Humbligny**	**151.39**	**350**	*e*PKP1	PKPbc	04 26 53.2	+0.1
SSF	**Saint Saulge**	**151.44**	**349**	*e*PKP1	PKPbc	04 26 53.1	-0.1
	comp=Z,23nm,1.0s						
AVF	**Avril sur Loir**	**151.73**	**349**	*e*PKP1	PKPbc	04 26 53.3	-0.6
SMF	**Signal de Mont**	**151.78**	**348**	*e*PKP1	PKPbc	04 26 53.7	-0.3
BGF	**Bois d'Agland**	**152.04**	**350**	*e*PKP1	PKPbc	04 26 53.9	-0.7
	comp=Z,5.7nm,0.6s						
LPL	**La Plagne**	**152.17**	**343**	*e*PKP1	PKPbc	04 26 55.3	+0.3
	comp=Z,9.6nm,1.0s						
LPG	**La Plagne**	**152.19**	**343**	*e*PKP1	PKPbc	04 26 55.4	+0.4
	comp=Z,7.5nm,0.8s						
MFF	**Saint Martin d**	**152.40**	**354**	*e*PKP1	PKPbc	04 26 54.9	-0.5
	comp=Z,38nm,1.1s						
TCF	**Toulx Ste Croi**	**152.41**	**350**	*e*PKP1	PKPbc	04 26 55.0	-0.5
MBDF	**Montbardon**	**152.89**	**343**	*e*PKP1	PKPbc	04 26 57.1	+0.5
	comp=Z,11nm,0.9s						
ORIF	**Oris-en-Rattie**	**152.95**	**344**	*e*PKP1	PKPbc	04 26 56.5	-0.2
	comp=Z,8.2nm,0.8s						
ORIF				*e*MLR	MLR		
	comp=Z,59nm,17.5s						
VIVF	**Saint-Julien-l**	**153.31**	**346**	*e*PKP1	PKPbc	04 26 57.4	-0.1
	comp=Z,10.0nm,0.9s						
SBF	**Sospel**	**153.48**	**341**	*e*PKP1	PKPbc	04 26 57.4	-0.5
SMRF	**Simiane la Rot**	**153.91**	**344**	*e*PKP1	PKPbc	04 26 58.9	+0.1
FRF	**La Foret Royal**	**154.00**	**342**	*e*PKP1	PKPbc	04 26 58.7	-0.3
	comp=Z,13nm,0.9s						
PGF	**Pioggiola**	**154.12**	**337**	*e*PKP1	PKPbc	04 26 59.3	0.0
LASF	**Ste Croix**	**154.23**	**347**	*e*PKP1	PKPbc	04 27 00.3	+0.8
LMR	**La Mourre**	**154.24**	**342**	*e*PKP1	PKPbc	04 26 59.0	-0.6
TORD	**Torodi Ar. Bea**	**171.80**	**224**	PKP	PKPdf	04 27 08.4	-0.4
	comp=Z,2.2nm,1.1s,baz=291,slow=0.9,SNR=6.3						
TORD				PKPab	PKPab	04 28 31.2	0.0
	comp=Z,0.9nm,0.7s,baz=119,slow=4.0,SNR=4.6						

MAN 31 04:28:21,1114N×12628E,h116km,mb3.7,ML2.4,MS1.9,
Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**1.27**	**271**	*e*P	Pn	04 28 47.3	+1.7
PLP				*i* S	Sn	04 29 06.5	+2.3
MSLP	**Maasin**	**1.72**	**234**	*e*P	Pn	04 28 53.8	+3.0

*THE **31** 04:33:00.6, 3835N×2043E, h3km, ML4.1*
*ISCJB **31** 04:33:00.7±0.5, 3835N±002×2042E±005, h10km, Error ellipse: s-maj=5.8km s-min=2.9km az=157.6*
*ATH **31** 04:33:00.7, 3835N×2050E, h13km±1km, MD3.8/18*
*CSEM **31** 04:33:01.7±0.1, 3834N×2054E, h2km, MD3.8, Error ellipse: s-maj=2.2km s-min=1.3km az=65.0*
*NEIC **31** 04:33:03.0, 3829N×2052E, h10km, MD3.8(ATH), ML4.1(THE), After ATH.*
*SKO **31** 04:33:03.5, 3851N×2015E, h25km*
ISC 31 04:33:01.3±0.6, 3834N±002×2043E±005, h10km, n43, σ1s20/54, 1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**142**	⇓ *i* PG	**Pg**	**04 33 04.8**	**-0.7**
VLS				*e*SG	**Sg**	**04 33 08.9**	**+0.5**
KFL	**Anninata**	**0.36**	**129**	*e*Pg	**Pg**	**04 33 07.4**	**-1.0**
LKD	**Levkas**	**0.41**	**25**	*e*Pg	**Pg**	**04 33 07.4**	**-1.9**
LKD				*e*Sg	**Sg**	**04 33 13.9**	**-0.8**
RLS	**Riolos of Patr**	**0.86**	**109**	*e*PB	**Pb**	**04 33 16.5**	**-1.8**
SELA	**Sela**	**1.15**	**93**	*e*Pg	**Pg**	**04 33 21.1**	**-2.3**
SELA				*e*Sg	**Sg**	**04 33 39.4**	**+1.1**
IGT	**Igoumenitsa**	**1.20**	**356**	*e*Pg	**Pg**	**04 33 21.8**	**-2.4**
IGT				*e*Sg	**Sg**	**04 33 40.3**	**+0.5**
EVR	**Evrytania**	**1.22**	**61**	*e*PN	**Pn**	**04 33 22.5**	**-1.9**
EVR				*e*SB	**Sb**	**04 33 38.7**	**-1.6**
JAN	**Janina**	**1.36**	**14**	*e*PB	**Pb**	**04 33 26.2**	**-0.6**
JAN				*e*SB	**Sb**	**04 33 44.3**	**+0.1**
KEK	**Kerkira**	**1.46**	**340**	*e*PB	**Pb**	**04 33 28.3**	**-0.2**
MEV	**Metsovon**	**1.57**	**23**	*e*Pg	**Pg**	**04 33 29.5**	**-2.0**
ITM	**Ithomi**	**1.66**	**134**	*e*PG	**Pg**	**04 33 31.0**	**-2.0**
THL	**Klokotos Trika**	**1.74**	**45**	*e*PN	**Pn**	**04 33 31.5**	**0.0**
PYL	**PYLOS**	**1.78**	**144**	*e*Pb	**Pn**	**04 33 31.7**	**-0.3**
PYL				*e*Sb	**Sb**	**04 33 56.5**	**+0.3**
VLX	**Vlachokerasia**	**1.82**	**121**	*e*Pb	**Pb**	**04 33 33.1**	**-1.5**
VLX				*e*Sb	**Sb**	**04 33 59.0**	**+1.6**
LTK	**Loutraki**	**2.02**	**98**	*e*PN	**Pn**	**04 33 36.0**	**+0.6**
LKR	**Lokris**	**2.04**	**80**	*e*PN	**Pn**	**04 33 36.0**	**+0.4**
KZN	**Kozani**	**2.22**	**27**	*e*PN	**Pn**	**04 33 39.0**	**+0.8**
DID	**Didima**	**2.37**	**110**	*e*Pn	**Pn**	**04 33 40.8**	**+0.7**
DID				*e*Sn	**Sn**	**04 34 11.4**	**+2.2**
LIT	**Litokhoron**	**2.38**	**42**	*e*Pn	**Pn**	**04 33 40.5**	**+0.2**
LIT				*e*Sn	**Sn**	**04 34 11.8**	**+2.2**
NEO	**Neokhori**	**2.39**	**65**	*e*PN	**Pn**	**04 33 41.3**	**+0.9**
NAIG	**Nisos Aigina**	**2.48**	**103**	*e*PB	**Pn**	**04 33 42.0**	**+0.3**
FNA	**Florina**	**2.55**	**16**	*e*Pn	**Pn**	**04 33 42.8**	**+0.2**
FNA				*e*Sn	**Sn**	**04 34 15.3**	**+1.5**
VLI	**Veliai**	**2.56**	**128**	*e*PN	**Pn**	**04 33 44.5**	**+1.6**
VLI	**Veliai**	**2.56**	**128**	*e*Pg	**Pb**	**04 33 46.2**	**-1.2**
ATH	**Athens Observa**	**2.62**	**97**	*e*PN	**Pn**	**04 33 44.5**	**+0.9**
PTL	**Penteli**	**2.72**	**95**	*e*PB	**Pn**	**04 33 46.5**	**+1.5**
OHR	**Ohrid**	**2.79**	**6**	*e*Pn	**Pn**	**04 33 46.4**	**+0.5**
OHR	**Ohrid**	**2.79**	**6**	*e*Pn	**Pn**	**04 33 44.7**	**-1.2**
AOS	**Alonnisos**	**2.82**	**72**	*e*Pn	**Pn**	**04 33 46.7**	**+0.3**
KYTH	**Kithira**	**2.92**	**134**	*e*Pb	**Pb**	**04 33 51.0**	**-2.4**
KYTH	**Kithira**	**2.92**	**134**	*e*PB	**Pb**	**04 33 50.0**	**-3.4**
PAIG	**Paliouri**	**2.98**	**57**	*e*Pn	**Pn**	**04 33 48.0**	**-0.6**
TIP	**Timpagrande**	**2.99**	**287**	P	**Pn**	**04 33 52.4**	**+3.6**
GRG	**Griva**	**3.03**	**30**	*e*Pn	**Pn**	**04 33 49.4**	**+0.2**
HORT	**Hortiatis**	**3.06**	**42**	*e*Pn	**Pn**	**04 33 49.6**	**-0.1**
KRUS	**Krusevo**	**3.09**	**11**	*e*Pn	**Pn**	**04 33 50.3**	**+0.2**
PLG	**Polygyros**	**3.10**	**48**	*e*PN	**Pn**	**04 33 50.8**	**+0.6**
PE1	**Pezze di Greco**	**3.39**	**318**	*e*Pn	**Pn**	**04 33 55.9**	**+1.7**
KNT	**Kendrikon**	**3.40**	**33**	*e*Pn	**Pn**	**04 33 54.2**	**-0.2**
SG1	**Sgolgore (BA)**	**3.83**	**312**	*e*Pn	**Pn**	**04 34 00.3**	**+0.1**
NVR	**Nevrokopi**	**4.00**	**40**	*e*Pb	**Pn**	**04 34 05.9**	**+3.3**
NVR	**Nevrokopi**	**4.00**	**40**	*e*PN	**Pn**	**04 34 04.3**	**+1.7**
RDO	**Rodhopi**	**4.83**	**53**	*e*PN	**Pn**	**04 34 14.6**	**+0.6**

*THE **31** 04:52:41.7, 3838N×2048E, h3km, ML3.6*
*CSEM **31** 04:52:41.6±0.3, 3837N×2044E, h0km±1km, MD3.6, Error ellipse: s-maj=5.0km s-min=1.7km az=63.0*
*ATH **31** 04:52:41.8, 3835N×2057E, h5km, MD3.6/5*
*NEIC **31** 04:52:41.8, 3835N×2057E, h5km, MD3.6(ATH), ML3.6(THE), After ATH.*
*ISCJB **31** 04:52:41.2±0.7, 3837N±003×2048E±007, h10km, Error ellipse: s-maj=8.2km s-min=3.3km az=156.4*
*SKO **31** 04:52:44.8, 3854N×2015E, h34km*
ISC 31 04:52:41.5±0.8, 3835N±003×2046E±007, h10km, n17, σ1s24/24, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**150**	*e*PG	**Pg**	**04 52 44.5**	**-1.2**
VLS				*e*SG	**Sg**	**04 52 49.0**	**+0.4**
KFL	**Anninata**	**0.35**	**133**	*e*Pg	**Pg**	**04 52 47.7**	**-0.8**
LKD	**Levkas**	**0.38**	**23**	*e*Pg	**Pg**	**04 52 47.6**	**-1.4**
LKD				*e*Sg	**Sg**	**04 52 53.7**	**-0.5**
SELA	**Sela**	**1.13**	**93**	*e*Pg	**Pg**	**04 53 02.7**	**-0.5**
SELA				*e*Sg	**Sg**	**04 53 18.9**	**+1.1**
IGT	**Igoumenitsa**	**1.18**	**355**	*e*Pg	**Pg**	**04 53 02.4**	**-1.8**
IGT				*e*Sg	**Sg**	**04 53 20.8**	**+1.2**
EVR	**Evrytania**	**1.20**	**62**	*e*PG	**Pg**	**04 53 02.5**	**-2.0**
JAN	**Janina**	**1.34**	**13**	*e*PG	**Pg**	**04 53 06.5**	**-0.7**
KEK	**Kerkira**	**1.45**	**339**	*e*PB	**Pb**	**04 53 10.0**	**+1.4**
KEK				*e*SB	**Sg**	**04 53 31.0**	**+2.7**
MEV	**Metsovon**	**1.55**	**22**	*e*Pg	**Pg**	**04 53 10.3**	**-1.0**
ITM	**Ithomi**	**1.69**	**135**	*e*PB	**Pb**	**04 53 13.0**	**+1.0**
PYL	**PYLOS**	**1.77**	**145**	*e*Pb	**Pb**	**04 53 12.5**	**-1.6**
VLX	**Vlachokerasia**	**1.81**	**122**	*e*Pb	**Pb**	**04 53 14.5**	**-0.2**
VLX				*e*Sb	**Sb**	**04 53 37.5**	**+0.2**
LIT	**Litokhoron**	**2.35**	**41**	*e*Pn	**Pn**	**04 53 21.5**	**+1.3**
DID	**Didima**	**2.35**	**110**	*e*Pn	**Pn**	**04 53 21.9**	**+1.8**
DID				*e*Sn	**Sn**	**04 53 51.2**	**+2.1**
FNA	**Florina**	**2.53**	**16**	*e*Pn	**Pn**	**04 53 23.2**	**+0.6**
KRUS	**Krusevo**	**3.07**	**11**	*e*Pn	**Pn**	**04 53 29.5**	**-0.6**
KRUS	**Krusevo**	**3.07**	**11**	*e*Pn	**Pn**	**04 53 29.4**	**-0.7**

*CSEM **31** 04:54:22.8±0.1, 3796N×3097E, h10km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.7km az=132.0*
*ISK **31** 04:54:23.1, 3796N×3094E, h8km, MD2.9*
*ISCJB **31** 04:54:24.0±0.6, 3798N±003×3094E±004, h12km±6km, Error ellipse: s-maj=5.3km s-min=4.5km az=4.1*
*DDA **31** 04:54:26.2, 3809N×3096E, h9km±12km, Md3.0*
ISC 31 04:54:24.3±0.7, 3795N±003×3095E±004, h12km±6km, n20, σ0s99/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.36**	**254**	*i* PG	**Pg**	**04 54 29.7**	**-1.8**
ISP				*i* SG	**Sg**	**04 54 36.3**	**-0.1**
ISP	**Isparta**	**0.36**	**254**	*e*Pn	**Pg**	**04 54 31.1**	**-0.4**
	597nm,0.6s						
ISP				*i* Sg	**Sg**	**04 54 36.3**	**-0.1**
BCK	**Bucak**	**0.56**	**211**	PG	**Pg**	**04 54 35.6**	**+0.3**
SHUT	**Suhut-Afyon**	**0.68**	**333**	PG	**Pg**	**04 54 36.7**	**-0.8**
SHUT				SG	**Sg**	**04 54 46.9**	**+0.4**
ANTB	**Antalya**	**1.07**	**193**	*e*PN	**Pn**	**04 54 44.7**	**-0.4**
KDHN	**Kadinhani**	**1.08**	**58**	*i* P	**Pb**	**04 54 43.7**	**-1.3**
KDHN				*i* S	**Sb**	**04 55 00.4**	**+1.3**
KONT	**Konya--Tatoy**	**1.12**	**90**	*e*PN	**Pn**	**04 54 44.2**	**-1.5**
KONT				*e*SN	**Sn**	**04 55 00.7**	**-0.3**
KHL	**Karahalli**	**1.19**	**289**	*e*PN	**Pn**	**04 54 45.5**	**-1.2**
GOLH	**Golhisar**	**1.31**	**238**	*i* P	**Pn**	**04 54 50.2**	**+1.9**
GOLH				*i* S	**Sg**	**04 55 10.3**	**+3.9**
GOLH	**Golhisar**	**1.31**	**238**	*i* P	**Pn**	**04 54 50.2**	**+1.8**
GOLH				*i* S	**Sg**	**04 55 10.4**	**+3.9**
ELL	**Elmali**	**1.46**	**215**	*e*PN	**Pn**	**04 54 50.4**	**0.0**
ESKT	**Eskisehir**	**1.57**	**357**	*i* P	**Pn**	**04 54 51.7**	**-0.3**
ESKT				*i* S	**Sn**	**04 55 11.1**	**-1.1**
ESKT	**Eskisehir**	**1.57**	**357**	*e*Pn	**Pn**	**04 54 51.2**	**-0.8**
SEYT	**Eskypehyr**	**1.57**	**357**	*i* P	**Pn**	**04 54 51.7**	**-0.3**
SEYT				*i* S	**Sn**	**04 55 11.1**	**-1.2**
KULA	**Kula-Manisa**	**1.89**	**288**	*e*PN	**Pn**	**04 54 55.7**	**-0.6**
BORA	**Eskisehir**	**1.97**	**349**	*i* P	**Pn**	**04 54 58.1**	**+0.6**
BORA				*i* S	**Sg**	**04 55 29.2**	**+1.7**
FETY	**Fethiye**	**1.98**	**229**	*e*PN	**Pn**	**04 54 58.5**	**+0.9**
ERMK	**Ermenek**	**2.04**	**129**	*i* P	**Pg**	**04 55 02.8**	**-0.5**
ERMK				*i* S	**Sg**	**04 55 35.1**	**+5.3**
IKL	**Isikli**	**2.77**	**127**	*e*PN	**Pn**	**04 55 10.2**	**+1.7**
CDAG	**Cicekdag**	**3.15**	**57**	*i* P	**Pn**	**04 55 13.8**	**+0.1**
CDAG				*i* S	**Sn**	**04 55 51.6**	**+0.3**

*MEX **31** 05:03:15.3±0.5, 1391N×9356W, h20km±130km, MD4.9*
*IDC **31** 05:03:15.6±0.6, 1466N×9289W, h0km, mb4.4/20, mb1 4.5/22, mb1mx4.5/25, mbtmp4.4/22, ML3.8/2, MS4.3/22, Ms1 4.4/22, ms1mx4.2/28, Error ellipse: s-maj=22.0km s-min=11.7km az=62.0*
*ISCJB **31** 05:03:18.9±0.5, 1446N±004×93.14W±003, h37km±4km, mb4.8/88, MS4.5/30, Error ellipse: s-maj=7.8km s-min=3.1km az=37.8*
*SZGRF **31** 05:03:20.4, 1468N×9446W, h33km, mb5.0, Off coast of Chiapas, Mexico*
*GCMT **31** 05:03:21.3±0.3, 1431N×9332W, h12km, MW5.1/75, Moment Tensor Solution. s54,c76; s75,c116; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.26±.11; Mθθ-3.10±.09; Mϕϕ-0.16±. 13; Mre4.00±.25; Mθϕ 1.49±.09; Mϕr-2.51±.33; Best double couple: Ms5.87700×10^16^ NP1:ϕs283.00000°, δ19.00000°, λ73.00000°. NP2: ϕs121.00000°, δ72.00000°, λ96.00000°. Principal axes: T 5.6820, Plg63.0000°, Azm39.0000°; N 0.3860, Plg5.0000°, Azm299.0000°; P -6.0730, Plg27.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **31** 05:03:21.3±0.6, 1449N×9307W, h43km±4km, mb4.9/83 Error ellipse: s-maj=6.6km s-min=4.1km az=210.0*
*MOS **31** 05:03:22.1±0.9, 1467N×9299W, h56km, mb5.0/36, MS4.7/5, Error ellipse: s-maj=9.4km s-min=5.4km az=93.0*
*BJI **31** 05:03:23.3, 1450N×9310W, h42km, mB5.2, Ms5.2, Msz4.8*
ISC 31 05:03:22.0±0.4, 1453N±003×9308W±003, h47km±3km, n312, σ1s08/299, mb4.8/88, MS4.5/30, 2C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.97**	**27**	*i* P	**Pn**	**05 03 55.1**	**+2.2**
CCIG				*i* S	**Sn**	**05 04 27.4**	**+11**
CCIG	**Comitan**	**1.97**	**27**	*i* P	**Pn**	**05 03 55.6**	**+2.7**
CCIG				*i* S	**Sn**	**05 04 27.4**	**+11**
SCX	**San Cristobal**	**2.24**	**11**	*i* P	**Pn**	**05 03 58.4**	**+1.7**
SCX				*i* S	**Sn**	**05 04 25.9**	**+2.8**
SCX	**San Cristobal**	**2.24**	**11**	*i* P	**Pn**	**05 03 58.4**	**+1.7**
SCX				*i* S	**Sn**	**05 04 32.0**	**+8.9**
CMIG	**Matias Romero**	**3.08**	**326**	Pn	**Pn**	**05 04 05.2**	**-3.0**
CMIG				Sn	**Sn**	**05 04 42.7**	**-1.2**
CMIG				LR	LR	05 05 00.2	
CMIG	**Matias Romero**	**3.08**	**326**	Pn	**Pn**	**05 04 05.2**	**-3.0**
	29nm,0.3s,baz=153,slow=11,SNR=180						
CMIG				Sn	**Sn**	**05 04 42.7**	**-1.2**
	128nm,0.3s,baz=84,slow=17,SNR=7.6						
CMIG				LR	LR	05 05 00.3	
	comp=Z,1μm,21.9s,baz=146,slow=34						
CMIG	**Matias Romero**	**3.08**	**326**	*i* P	**Pn**	**05 04 05.2**	**-3.1**
CMIG				*i* S	**Sn**	**05 04 42.8**	**-1.1**
HUIG	**Huatulco**	**3.17**	**293**	*e*P	**Pn**	**05 04 10.1**	**+0.6**
HUIG				*i* S	**Sn**	**05 04 39.4**	**-6.7**
HUIG	**Huatulco**	**3.17**	**293**	*e*P	**Pn**	**05 04 00.8**	**-8.7**
HUIG				*i* S	**Sn**	**05 04 35.6**	**-11**
RTR	**El Retiro**	**3.39**	**100**	*e*P	x	05 04 55.4	
RTR				*e*S	x	05 05 33.7	
SBLS	**San Blas**	**3.42**	**101**	*e*P	x	05 04 55.8	
SBLS				*e*S	x	05 05 36.3	
TUIG	**Tuzandepetl**	**3.72**	**340**	*e*P	**Pn**	**05 04 13.5**	**-3.4**
TUIG	**Tuzandepetl**	**3.72**	**340**	*e*P	**Pn**	**05 04 17.0**	**0.0**
OXX	**Oaxaca**	**4.33**	**306**	*e*P	**Pn**	**05 04 22.6**	**-2.8**
OXX				*i* S	**Sn**	**05 05 24.4**	**+10**
VHO	**Vista Hermosa**	**4.33**	**306**	*i* P	**Pn**	**05 04 23.3**	**-2.1**
VHO				*i* S	**Sn**	**05 05 12.8**	**-1.8**
VHO	**Vista Hermosa**	**4.33**	**306**	*e*P	**Pn**	**05 04 19.9**	**-5.5**
VHO				*i* S	**Sn**	**05 05 09.5**	**-5.1**
SCIG	**Sabancuy**	**4.77**	**22**	*i* P	**Pn**	**05 04 33.8**	**+2.3**
SCIG				*i* S	**Sn**	**05 05 36.0**	**+11**
PNIG	**Pinotepa**	**5.21**	**292**	*e*P	**Pn**	**05 04 35.2**	**-2.2**
PNIG	**Pinotepa**	**5.21**	**292**	*i* P	**Pn**	**05 04 31.8**	**-5.6**
PNIG				*i* S	**Sn**	**05 05 24.5**	**-12**
TPIG	**Tehuac#an**	**5.64**	**314**	*e*P	**Pn**	**05 04 35.7**	**-7.7**
TGUH	**Tegucigalpa,Un**	**5.65**	**94**	*e*Pn	**Pn**	**05 04 42.6**	**-0.9**
	227nm,0.8s						
LVIG	**Laguna Verde**	**6.07**	**329**	*i* S	**Sn**	**05 05 56.1**	**-1.4**
TEL3	**Telica 3**	**6.37**	**107**	*e*P	**Pn**	**05 04 53.5**	**+0.1**
TELN	**Telica**	**6.37**	**107**	*e*P	**Pn**	**05 04 54.5**	**+1.1**
LEON	**Leon**	**6.37**	**108**	*e*P	**Pn**	**05 04 55.0**	**+1.6**
CNGN	**Cerro Negro**	**6.53**	**107**	*e*P	**Pn**	**05 04 57.2**	**+1.7**

MOMJ	**Momotombo**	**6.70**	**108**	*e*P	**Pn**	**05 04 56.3**	**-1.7**
MOMN	**Momotombo**	**6.70**	**108**	*e*P	**Pn**	**05 04 59.2**	**+1.3**
COPN	**Copaltepe**	**6.73**	**110**	*e*P	**Pn**	**05 04 57.3**	**-1.0**
CSAN		**6.88**	**109**	*e*P	**Pn**	**05 05 02.4**	**+1.9**
APYN	**Apoyeque**	**6.93**	**108**	*e*P	**Pn**	**05 05 00.3**	**-0.8**
PPM	**Popocatepetl**	**6.97**	**311**	*i* P	**Pn**	**05 05 03.9**	**+2.3**
PPM				*i* S	Sn	05 06 44.0	+24
PPM	**Popocatepetl**	**6.97**	**311**	*i* P	**Pn**	**05 04 52.6**	**-9.0**
PPM				*e*P		05 04 56.5	
PPM				*e*S	**Sn**	**05 06 09.5**	**-10**
PPM				*i* S	**Sn**	**05 06 11.6**	**-7.9**
ACX	**Acapulco**	**6.98**	**290**	*e*P	**Pn**	**05 04 56.5**	**-5.3**
XAVN	**Gruta Xavier**	**6.99**	**109**	*e*P	**Pn**	**05 05 02.6**	**+0.8**
TISN	**Laguna Tiscapa**	**7.04**	**109**	*e*P	**Pn**	**05 05 01.9**	**-0.7**
MGAN	**Managua**	**7.06**	**109**	*e*P	**Pn**	**05 05 01.6**	**-1.2**
MGAN				*i*		05 06 55.1	
	comp=E,206nm,0.8s						
CRUN	**El Crucero**	**7.07**	**110**	*e*P	**Pn**	**05 05 03.1**	**+0.2**
PYTN	**Playitas**	**7.11**	**105**	*e*P	**Pn**	**05 05 03.6**	**+0.1**
MEIG	**Mezcala**	**7.13**	**299**	*i* P	**Pn**	**05 05 01.9**	**-1.9**
PLIG	**Platanillo**	**7.26**	**303**	*e*P	**Pn**	**05 05 07.8**	**+2.2**
PLIG	**Platanillo**	**7.26**	**303**	*e*P	**Pn**	**05 05 04.5**	**-1.1**
TEIG	**Tepich**	**7.29**	**38**	*e*Pn	**Pn**	**05 05 06.2**	**+0.2**
	comp=E,247nm,0.5s						
TEIG				Sn	**Sn**	**05 06 25.4**	**-2.0**
TEIG	**Tepich**	**7.29**	**38**	Pn	**Pn**	**05 04 59.6**	**-6.3**
	comp=E,0.7nm,0.3s,baz=331,slow=11,SNR=7.2						
TEIG				Sn	**Sn**	**05 06 25.4**	**-2.0**
	comp=E,14nm,0.3s,baz=156,slow=22,SNR=3.0						
TEIG	**Tepich**	**7.29**	**38**	*e*P	**Pn**	**05 05 07.5**	**+1.5**
CAIG	**El Cayaco**	**7.36**	**291**	*e*P	**Pn**	**05 05 05.0**	**-2.0**
CAIG	**El Cayaco**	**7.36**	**291**	*i* P	**Pn**	**05 05 02.4**	**-4.6**
IIO	**Organos**	**7.38**	**314**	*e*P	**Pn**	**05 05 07.8**	**+0.6**
PBVM	**Pinon**	**7.54**	**311**	*e*P	**Pn**	**05 05 07.8**	**-1.6**
PTVM	**Pico Tres Padr**	**7.66**	**312**	*e*P	**Pn**	**05 05 09.8**	**-1.3**
SZVM	**Salazar**	**7.69**	**309**	*i* P	**Pn**	**05 05 02.0**	**-9.4**
SZVM				*i* S	**Sn**	**05 06 29.2**	**-8.0**
SSN	**San Juan del S**	**7.74**	**114**	*e*P	**Pn**	**05 05 11.8**	**-0.4**
JCR	**Jicaral**	**9.07**	**120**	*e*P	**Pn**	**05 05 30.8**	**+0.4**
MOIG	**Morelia**	**9.29**	**305**	*e*P	**Pn**	**05 05 31.8**	**-1.6**
PRS1	**Puriscal**	**9.69**	**117**	*e*P	**Pn**	**05 05 39.5**	**+0.6**
LCR2	**La Lucha 2**	**10.07**	**117**	*e*P	**Pn**	**05 05 43.2**	**-0.9**
URSC	**Urasca**	**10.22**	**116**	*e*P	**Pn**	**05 05 46.6**	**+0.5**
BAR1		**10.91**	**118**	*e*P	**Pn**	**05 05 55.2**	**-0.4**
SOR	**Soroa**	**12.59**	**48**	*e*P	**Pn**	**05 06 17.9**	**-0.6**
BCIP	**Isla Barro Col**	**14.01**	**111**	*e*Pn	**Pn**	**05 06 37.9**	**-0.1**
MGV	**Manicaragua**	**14.54**	**57**	*e*P	**Pn**	**05 06 43.9**	**-1.1**
HKT	**Hockley**	**15.56**	**351**	*e*P	**Pn**	**05 06 57.7**	**-0.5**
	comp=E,252nm,1.8s						
HKT	**Hockley**	**15.56**	**351**	*e*P	**Pn**	**05 06 57.7**	**-0.5**
HKT				pmax

ISCO pmax pmax
comp=Z,13nm,1.1s,mb4.4
JFWS Jewell Farm 28.39 4 *e*P **P 05 09 11.2 -0.7**
comp=Z,12nm,0.7s,mb4.6
JFWS Jewell Farm 28.39 4 *e*P **P 05 09 11.2 -0.7**
JFWS pmax pmax
comp=Z,12nm,0.7s,mb4.6
PFO Pinyon Flat Ob 28.45 316 P **P 05 09 13.0 +0.4**
comp=Z,3.5nm,1.0s,mb4.0,baz=112,slow=10,SNR=3.9
PFO LR LR 05 20 47.0
comp=Z,674nm,18.4s,MS4.3,baz=136,slow=37
CCUT Cedar City 29.16 326 *e*P **P 05 09 20.2 +1.4**
ECSD EROS,Sioux Fal 29.26 355 *e*P **P 05 09 18.6 -1.0**
comp=Z,6.9nm,0.7s,mb4.5
ARUT Antelope Range 29.38 326 *e*P **P 05 09 22.3 +1.6**
DAU Daniels Canyon 30.29 332 *e*P **P 05 09 29.8 +1.1**
TPNV Topopah Spring 30.41 321 *e*P **P 05 09 31.3 +1.5**
comp=Z,20nm,1.5s,mb4.6
TPNV Topopah Spring 30.41 321 *e*P **P 05 09 31.3 +1.4**
TPNV pmax pmax
comp=Z,20nm,1.5s,mb4.6
JLU Jordanelle 30.53 332 *e*P **P 05 09 31.7 +0.8**
DUG Dugway 30.85 330 *e*P **P 05 09 34.6 +0.9**
comp=Z,19nm,1.6s,mb4.7
DUG Dugway 30.85 330 *e*P **P 05 09 34.6 +0.9**
DUG pmax pmax
comp=Z,19nm,1.6s,mb4.7
HWUT Hardware Ranch 31.39 333 *e*P **P 05 09 39.0 +0.6**
comp=Z,38nm,1.7s,mb5.0
HWUT *e*PcP PcP 05 12 31.1 -0.1
BW06 Boulder Array 31.52 336 *e*P **P 05 09 39.5 -0.1**
comp=Z,10nm,1.3s,mb4.5
PDAR Pinedale Array 31.52 336 P **P 05 09 40.0 +0.4**
comp=Z,2.0nm,0.9s,mb3.9,baz=145,slow=8.5,SNR=15
PDAR PcP PcP 05 12 30.4 -1.1
comp=Z,1.0nm,0.9s,baz=126,slow=4.7,SNR=2.8
PDAR LR LR 05 25 38.9
comp=Z,374nm,18.6s,MS4.1,baz=156,slow=43
HVU Hansel Valley 32.07 332 *e*P **P 05 09 45.6 +1.2**
comp=Z,27nm,1.2s,mb5.0
HVU Hansel Valley 32.07 332 *e*P **P 05 09 45.6 +1.2**
HVU pmax pmax
comp=Z,27nm,1.2s,mb5.0
AHID Auburn Hatcher 32.13 335 *e*P **P 05 09 45.4 +0.4**
comp=Z,12nm,0.6s,mb4.9
REDW Red Top Meadow 32.53 336 *e*P **P 05 09 49.1 +0.7**
comp=Z,58nm,1.2s,mb5.4
SNOW Snow King Moun 32.57 336 *e*P **P 05 09 49.7 +0.9**
comp=Z,60nm,0.9s,mb5.5
LOHW Long Hollow 32.64 336 *e*P **P 05 09 49.8 +0.4**
comp=Z,25nm,1.1s,mb5.1
TPAW Teton Pass 32.67 336 *e*P **P 05 09 50.8 +1.1**
comp=Z,58nm,1.4s,mb5.3
MOOW Moose Ponds 32.81 336 *e*P **P 05 09 51.6 +0.8**
comp=Z,35nm,1.4s,mb5.1
MOOW *e*PcP PcP 05 12 34.8 -0.2
DCID1 Drake Creek 32.85 335 *e*P **P 05 09 52.0 +0.7**
IMW Indian Meadow 33.01 336 *e*P **P 05 09 53.5 +0.9**
comp=Z,22nm,1.1s,mb5.0
IMW *e*PcP PcP 05 12 36.1 +0.4
FLWY Flagg Ranch 33.07 336 *e*P **P 05 09 53.6 +0.4**
comp=Z,45nm,1.4s,mb5.2
LKWY Lake 33.37 337 *e*P **P 05 09 57.4 +1.7**
comp=Z,21nm,1.1s,mb5.0
LKWY Lake 33.37 337 *e*P **P 05 09 57.4 +1.7**
LKWY pmax pmax
comp=Z,21nm,1.1s,mb5.0
YFT Old Faithful 33.44 337 *e*P **P 05 09 58.9 +2.6**
RLMT Red Lodge 33.44 339 *e*P **P 05 09 56.4 +0.1**
comp=Z,16nm,1.2s,mb4.8
YNR Norris Junctio 33.60 337 *e*P **P 05 09 59.5 +1.7**
YMR Madison River 33.67 337 *e*P **P 05 09 59.7 +1.4**
comp=Z,72nm,1.5s,mb5.4
AGMN Agassiz Refuge 33.75 357 *e*P **P 05 09 57.3 -1.8**
comp=Z,8.2nm,0.8s,mb4.7
LAO LASA Array 33.90 344 *e*P **P 05 10 00.5 +0.1**
comp=Z,25nm,1.2s,mb5.0
QLMT Earthquake Lak 33.98 336 *e*P **P 05 10 02.9 +1.9**
GCMT Greycliff 34.16 339 *e*P **P 05 10 02.8 +0.2**
HLID Hailey 34.22 332 *e*P **P 05 10 03.8 +0.7**
comp=Z,11nm,1.0s,mb4.8
MCMT McKenzie Canyo 34.55 335 *e*P **P 05 10 07.5 +1.6**
BOZ Bozeman (W) 34.74 337 *e*P **P 05 10 08.2 +0.5**
comp=Z,5.4nm,0.8s,mb4.5
BOZ Bozeman (W) 34.74 337 *e*P **P 05 10 08.2 +0.5**
BOZ pmax pmax
comp=Z,5.0nm,0.8s,mb4.5
DLMT Dillon 34.88 336 *e*P **P 05 10 10.2 +1.3**
comp=Z,28nm,1.1s,mb5.1
DGMT Dagmar 35.07 347 *e*P **P 05 10 10.2 -0.3**
comp=Z,12nm,0.8s,mb4.9
WVOR Wild Horse Val 35.48 327 *e*P **P 05 10 14.7 +0.7**
comp=Z,26nm,1.3s,mb5.0
WVOR Wild Horse Val 35.48 327 *e*P **P 05 10 14.7 +0.7**
WVOR pmax pmax
comp=Z,26nm,1.3s,mb5.0
ULM Lac du Bonnet 35.70 357 *e*P **P 05 10 13.6 -2.2**
comp=Z,13nm,1.2s,mb4.7
ULM Lac du Bonnet 35.70 357 P **P 05 10 13.9 -1.9**
comp=Z,5.1nm,0.7s,mb4.6,baz=172,slow=8.6,SNR=11
ULM PcP PcP 05 12 41.5 -1.7
comp=Z,5.2nm,1.0s,baz=236,slow=3.6,SNR=2.8
ULM LR LR 05 27 56.0
comp=Z,378nm,19.7s,MS4.2,baz=185,slow=42
MOD Modoc 36.03 325 *e*P **P 05 10 19.0 +0.3**
comp=Z,11nm,0.9s,mb4.8
EGMT Eagleton 36.15 341 *e*P **P 05 10 20.1 +0.5**
comp=Z,68nm,1.5s,mb5.4
LTIM Timbered Crate 36.24 323 P **P 05 10 21.3 +0.7**
CHMT Chamberlain Mo 36.42 337 *e*P **P 05 10 22.4 +0.3**
BMO Blue Mountains 36.55 331 *e*P **P 05 10 23.0 -0.1**
comp=Z,15nm,1.4s,mb4.6
MSO Missoula 36.62 336 *e*P **P 05 10 24.0 +0.3**
comp=Z,11nm,1.1s,mb4.6
NEW Newport 39.07 334 *e*P **P 05 10 43.6 -0.7**
comp=Z,10nm,1.3s,mb4.4
NEW Newport 39.07 334 *e*P **P 05 10 43.6 -0.8**
NEW pmax pmax
comp=Z,10.0nm,1.3s
LPAZ La Paz 39.30 140 P **P 05 10 46.3 -0.4**
comp=Z,2.1nm,0.8s,mb3.9,baz=336,slow=4.2,SNR=7.3
LPAZ LR LR 05 25 24.3
comp=Z,334nm,21.6s,MS4.1,baz=99,slow=34
FFC Flin Flon 40.71 352 *e*P **P 05 10 57.0 -0.9**
comp=Z,14nm,1.3s,mb4.4
FFC Flin Flon 40.71 352 *e*P **P 05 10 57.0 -0.9**
FFC pmax pmax
comp=Z,14nm,1.3s,mb4.4
SIV San Ignacio 43.81 133 P **P 05 11 21.6 -2.1**
comp=Z,14nm,1.1s,mb4.6,baz=303,slow=9.6,SNR=18
SCHQ Schefferville 45.10 21 P **P 05 11 31.8 -1.7**
SCHQ PP PP 05 13 13.5 -6.0
SCHQ LR LR 05 31 46.0
SCHQ Schefferville 45.10 21 P **P 05 11 31.8 -1.7**
comp=Z,2.5nm,0.8s,mb4.1,baz=258,slow=11,SNR=3.9
SCHQ PP PP 05 13 13.5 -6.0
comp=Z,5.3nm,0.9s,baz=232,slow=10.0,SNR=8.3
SCHQ LR LR 05 31 46.0
comp=Z,2μm,19.5s,MS4.9,baz=51,slow=38
YKA Yellowknife Ar 50.28 347 P **P 05 12 13.2 -0.2**
YKA Yellowknife Ar 50.28 347 P **P 05 12 13.2 -0.2**
comp=Z,12nm,0.7s,mb5.0,baz=152,slow=7.2,SNR=197
TAOE Nuku Hiva Isla 52.14 246 *e*S **S 05 19 50.0 +0.5**
comp=Z,2μm,26.7s
TAOE *e*LR LR 05 27 11.6
comp=Z,984nm,26.1s
RKT Rikitea 55.50 228 *e*S **S 05 20 39.8 +5.1**
comp=Z,316nm,26.8s
RKT *e*LR LR 05 29 15.7
comp=Z,704nm,27.0s
PLCA Paso Flores 58.82 160 *e*P **P 05 13 16.7 +1.0**
comp=Z,31nm,1.3s,mb5.2
PLCA Paso Flores 58.82 160 P **P 05 13 16.8 +1.1**
comp=Z,17nm,1.2s,mb5.0,baz=336,slow=6.2,SNR=9.7
PLCA LR LR 05 33 22.0
comp=Z,279nm,19.4s,MS4.4,baz=106,slow=31
EYAK Cordova Ski Ar 59.54 333 *e*P **P 05 13 21.5 +1.1**
comp=Z,17nm,1.4s,mb4.9
EGAK Eagle 59.84 338 *e*P **P 05 13 22.0 -0.4**
comp=Z,11nm,1.1s,mb4.8
TRQA Tornquist 59.89 152 *e*P **P 05 13 24.2 +1.1**
comp=Z,10nm,1.3s,mb4.7
COLA College 62.36 337 *e*P **P 05 13 38.7 -0.7**
comp=Z,6.2nm,0.9s,mb4.7
COLA College 62.36 337 *e*P **P 05 13 38.7 -0.8**
COLA pmax pmax
comp=Z,6.0nm,0.9s,mb4.7

PPT Papeete 64.20 242 *e*S **S 05 22 29.6 +2.8**
comp=Z,122nm,26.2s
PPT Papeete 64.20 242 *e*LR LR 05 32 36.0
comp=Z,408nm,27.5s
PPT Papeete 64.20 242 LR LR 05 33 36.7
comp=Z,229nm,20.6s,MS4.3,baz=311,slow=28
SVW2 Sparrevohn 64.21 331 *e*P **P 05 13 50.3 -1.5**
TTA Tatalina 64.96 333 *e*P **P 05 13 55.4 -1.3**
comp=Z,36nm,1.5s,mb5.2
TTA Tatalina 64.96 333 *e*P **P 05 13 55.4 -1.2**
TTA pmax pmax
comp=Z,36nm,1.5s,mb5.2
TBI Tubuai 66.76 236 *e*LR LR 05 34 15.3
comp=Z,380nm,27.8s,baz=66
DAG Danmarks Havn 72.40 13⇑ *e*P **P 05 14 42.4 -0.4**
DAG pmax pmax
comp=Z,12nm,1.2s,mb4.7
DAG Danmarks Havn 72.40 13⇑ *i*P **P 05 14 42.4 -0.4**
comp=Z,12nm,1.2s,mb4.7
EKA Eskdalemuir Ar 78.15 36 P **P 05 15 14.3 -1.8**
comp=Z,4.3nm,1.1s,mb4.3,baz=279,slow=6.9,SNR=6.3
ROSF Rostrenen 79.17 43 *e*P **P 05 15 22.0 0.0**
QUIF Quistinic 79.31 43 *e*P **P 05 15 22.5 -0.3**
SGMF Saint Gilles 79.66 43 *e*P **P 05 15 24.4 -0.2**
ESDC Sonseca Array 80.21 52 P **P 05 15 25.8 -2.0**
comp=Z,2.7nm,0.8s,mb4.2,baz=281,slow=6.3,SNR=5.6
ESDC LR LR 05 45 47.4
comp=Z,238nm,19.4s,MS4.5,baz=270,slow=32
BILL Bilibino 80.58 338 *e*P **P 05 15 29.1 -0.1**
comp=Z,12nm,0.9s,mb4.8
BILL Bilibino 80.58 338 *e*P **P 05 15 27.3 -1.9**
BILL pmax pmax
comp=Z,12nm,1.7s,mb4.5
GRR Gorron 80.75 42 *e*P **P 05 15 30.0 -0.5**
comp=Z,44nm,1.1s,mb5.0
GRR Gorron 80.75 42 *e*P **P 05 15 30.0 -0.5**
comp=Z,22nm,1.1s,mb5.0
GRR Gorron 80.75 42 *e*P **P 05 15 30.0 -0.5**
GRR pmax pmax
comp=Z,22nm,1.1s,mb5.0
FLN La Foliniere 80.92 42 *e*P **P 05 15 31.2 -0.2**
FLN *e*MLR MLR
comp=Z,374nm,19.5s,MS4.5
FLN La Foliniere 80.92 42 *e*P **P 05 15 31.2 -0.2**
FLN MLR MLR
comp=Z,370nm,19.5s,MS4.8
LDF La Druitiere 81.19 42 *e*P **P 05 15 32.7 -0.1**
comp=Z,32nm,1.2s,mb4.8
LDF La Druitiere 81.19 42 *e*P **P 05 15 32.7 -0.1**
comp=Z,16nm,1.2s,mb4.8
LDF La Druitiere 81.19 42 *e*P **P 05 15 32.7 -0.1**
LDF pmax pmax
comp=Z,16nm,1.2s,mb4.8
SJPF Ste Jean 81.56 48 *e*P **P 05 15 34.7 -0.2**
comp=Z,50nm,1.4s,mb5.0
SJPF Ste Jean 81.56 48 *e*P **P 05 15 34.7 -0.2**
comp=Z,25nm,1.4s,mb5.0
SJPF Ste Jean 81.56 48 *e*P **P 05 15 34.7 -0.2**
SJPF pmax pmax
comp=Z,25nm,1.4s,mb5.0
MFF Saint Martin d 81.58 44 *e*P **P 05 15 34.9 -0.1**
ETSF Etsaut 82.08 48 *e*P **P 05 15 37.4 -0.3**
LFF La Frestale 82.55 46 *e*P **P 05 15 39.6 -0.5**
EPF Esparros 82.70 48 *e*P **P 05 15 40.8 -0.1**
RJF Les Rejaudoux 83.00 45 *e*P **P 05 15 40.7 -1.7**
RJF *e*MLR MLR
comp=Z,342nm,21.8s,MS4.4
RJF Les Rejaudoux 83.00 45 *e*P **P 05 15 40.7 -1.7**
RJF MLR MLR
comp=Z,340nm,21.6s,MS4.7
TCF Toulx Ste Croi 83.24 44 *e*P **P 05 15 42.7 -0.9**
comp=Z,15nm,1.1s,mb4.6
TCF Toulx Ste Croi 83.24 44 *e*P **P 05 15 42.7 -0.9**
comp=Z,7.3nm,1.1s,mb4.6
TCF Toulx Ste Croi 83.24 44 *e*P **P 05 15 42.7 -0.9**
TCF pmax pmax
comp=Z,7.0nm,1.1s,mb4.6
CAF Calviac 83.47 45 *e*P **P 05 15 44.4 -0.4**
comp=Z,19nm,1.3s,mb4.7
CAF Calviac 83.47 45 *e*P **P 05 15 44.4 -0.4**
comp=Z,9.6nm,1.3s,mb4.7
CAF Calviac 83.47 45 *e*P **P 05 15 44.4 -0.4**
CAF pmax pmax
comp=Z,10.0nm,1.3s,mb4.7
BAIF Baives 83.60 40 *e*P **P 05 15 44.8 -0.6**
BGF Bois d'Agland 83.60 44 *e*P **P 05 15 44.7 -0.8**
comp=Z,5.6nm,0.6s,mb4.6
BGF Bois d'Agland 83.60 44 *e*P **P 05 15 44.7 -0.8**
comp=Z,2.8nm,0.6s,mb4.6
BGF Bois d'Agland 83.60 44 *e*P **P 05 15 44.7 -0.8**
BGF pmax pmax
comp=Z,3.0nm,0.6s,mb4.6
AVF Avril sur Loir 83.88 43 *e*P **P 05 15 46.2 -0.7**
SSF Saint Saulge 83.92 43 *e*P **P 05 15 46.5 -0.6**
comp=Z,6.6nm,0.8s,mb4.5
SSF Saint Saulge 83.92 43 *e*P **P 05 15 46.5 -0.6**
comp=Z,3.3nm,0.8s,mb4.5
SSF Saint Saulge 83.92 43 *e*P **P 05 15 46.5 -0.6**
SSF pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
MTLF Montolieu 83.96 47 *e*P **P 05 15 47.1 -0.3**
comp=Z,8.4nm,0.9s,mb4.6
MTLF Montolieu 83.96 47 *e*P **P 05 15 47.1 -0.3**
comp=Z,4.2nm,0.9s,mb4.6
MTLF Montolieu 83.96 47 *e*P **P 05 15 47.1 -0.3**
MTLF pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LOR Lormes 84.10 43 *e*P **P 05 15 47.5 -0.5**
comp=Z,5.9nm,0.8s,mb4.5
LOR *e*MLR MLR
comp=Z,371nm,18.2s,MS4.5
LOR Lormes 84.10 43 *e*P **P 05 15 47.5 -0.5**
comp=Z,3.0nm,0.8s,mb4.5
LOR LR LR
comp=Z,370nm,18.3s,MS4.8
LOR Lormes 84.10 43 *e*P **P 05 15 47.5 -0.5**
LOR pmax pmax
comp=Z,3.0nm,0.8s,mb4.5
LOR MLR MLR
comp=Z,370nm,18.3s,MS4.8
NB2 NORSAR Subarra 84.18 28 P **P 05 15 47.8 -0.3**
NB2 pmax pmax
comp=Z,34nm,1.7s,mb5.2
NOA NORSAR Array B 84.18 28 P **P 05 15 48.4 +0.2**
comp=Z,3.6nm,1.0s,mb4.5,baz=291,slow=5.0,SNR=8.0
NOA LR LR 05 51 56.0
comp=Z,312nm,21.1s,MS4.7,baz=295,slow=35
BCLA Clavier 84.19 40 P **P 05 15 49.4 +1.0**
SMF Signal de Mont 84.25 43 *e*P **P 05 15 48.3 -0.4**
WLF Walferdange 84.92 40 P **P 05 15 53.6 +1.6**
LASF Ste Croix 84.92 46 *e*P **P 05 15 51.9 -0.3**
VIVF Saint-Julien-l 85.28 45 *e*P **P 05 15 53.9 -0.1**
HAU Haudompre 85.52 42 *e*P **P 05 15 54.8 -0.3**
HAU *e*MLR MLR
comp=Z,354nm,19.2s,MS4.5
HAU Haudompre 85.52 42 *e*P **P 05 15 54.8 -0.3**
HAU MLR MLR
comp=Z,350nm,19.3s,MS4.8
CABF La Chapelle 85.75 43 *e*P **P 05 15 55.6 -0.7**
HINF Hinteralfeld 85.90 42 *e*P **P 05 15 56.4 -0.6**
ARCES ARCESS Array B 85.97 18 P **P 05 15 56.7 -0.2**
ARCES LR LR 05 54 36.2
ARCES ARCESS Array B 85.97 18 P **P 05 15 56.7 -0.2**
comp=Z,2.5nm,0.6s,mb4.7,baz=297,slow=5.3,SNR=11
ARCES LR LR 05 54 36.2
comp=Z,457nm,18.1s,MS4.9,baz=321,slow=36
CDF Champ du Feu 85.99 41 *e*P **P 05 15 56.6 -0.9**
ORIF Oris-en-Rattie 86.09 45 *e*P **P 05 15 57.3 -0.7**
ORIF *e*MLR MLR
comp=Z,248nm,19.8s,MS4.3
SMRF Simiane la Rot 86.14 46 *e*P **P 05 15 57.5 -0.8**
LPL La Plagne 86.49 44 *e*P **P 05 15 59.5 -0.5**
LPG La Plagne 86.51 44 *e*P **P 05 15 59.8 -0.3**
DBIC Dimbokro 86.64 84 P **P 05 16 01.9 +0.6**
DBIC LR LR 05 52 13.9
DBIC Dimbokro 86.64 84 P **P 05 16 01.9 +0.6**
comp=Z,3.6nm,0.9s,mb4.6,baz=240,slow=13,SNR=5.2
DBIC LR LR 05 52 13.9
comp=Z,116nm,18.2s,MS4.3,baz=266,slow=34
MBDF Montbardon 86.75 45 *e*P **P 05 16 00.8 -0.5**
comp=Z,9.4nm,1.0s,mb4.7
MBDF Montbardon 86.75 45 *e*P **P 05 16 00.8 -0.5**
comp=Z,4.7nm,1.0s,mb4.7
MBDF Montbardon 86.75 45 *e*P **P 05 16 00.8 -0.5**
MBDF pmax pmax
comp=Z,5.0nm,1.0s,mb4.7

LMR La Mourre 86.98 46 *e*P **P 05 16 01.9 -0.5**
comp=Z,51nm,1.5s,mb5.2
LMR La Mourre 86.98 46 *e*P **P 05 16 01.9 -0.5**
comp=Z,26nm,1.5s,mb5.2
LMR La Mourre 86.98 46 *e*P **P 05 16 01.9 -0.5**
LMR pmax pmax
comp=Z,26nm,1.5s,mb5.2
FRF La Foret Royal 87.01 46 *e*P **P 05 16 01.6 -0.9**
SBF Sospel 87.46 45 *e*P **P 05 16 04.2 -0.5**
SEY Seymchan 87.84 335 *e*P **P 05 16 04.9 -1.2**
GRA1 Grafenberg Arr 88.04 39 *e*P **P 05 16 07.8 +0.4**
comp=Z,17nm,1.7s,mb5.0
GRF Grafenberg Arr 88.04 39 *e*P **P 05 16 07.8 +0.4**
GRF pmax pmax
comp=Z,17nm,1.7s,mb5.0
GRF Grafenberg Arr 88.04 39 *e*P **P 05 16 07.8 +0.4**
GRF pmax pmax
comp=Z,17nm,1.7s,mb5.0
GRF Grafenberg Arr 88.04 39 *e*P **P 05 16 07.8 +0.4**
comp=Z,17nm,1.7s,mb5.0
CLL Collm 88.53 37 *e*P **P 05 16 13.0 +3.4**
CLL *e*S S 05 26 50.0 -2.1
CLL LR LR
comp=Z,300nm,20.4s,MS4.7
CLL Collm 88.53 37 *e*(P) **P 05 16 13.0 +3.4**
CLL *e*S S 05 26 50.0 -2.1
CLL *e*PS 05 28 02.0
CLL *e*PPS 05 28 35.0
CLL *e*x x 05 34 13.0
CLL *e*SSS 05 36 42.0
CLL Lm 05 56 00.0
comp=N,200nm,21.0s
CLL Lm 05 56 00.0
comp=E,100nm,20.3s
CLL Lm 05 56 00.0
comp=Z,300nm,20.4s
PGF Pioggiola 88.96 46 *e*P **P 05 16 11.4 -0.5**
comp=Z,43nm,1.1s,mb5.4
PGF Pioggiola 88.96 46 *e*P **P 05 16 11.4 -0.5**
comp=Z,22nm,1.1s,mb5.4
PGF Pioggiola 88.96 46 *e*P **P 05 16 11.4 -0.5**
PGF pmax pmax
comp=Z,22nm,1.1s,mb5.4
TIXI Tiksi 89.53 348 *e*P **P 05 16 12.3 -1.6**
comp=Z,20nm,1.4s,mb5.2
TIXI Tiksi 89.53 348 *e*P **P 05 16 12.5 -1.4**
TIXI pmax pmax
comp=Z,18nm,1.5s,mb5.2
GERES GERESS Array B 89.86 39 P **P 05 16 16.3 +0.4**
comp=Z,1.2nm,0.9s,mb4.2,baz=252,slow=1.3,SNR=6.1
GERES LR LR 05 57 26.7
comp=Z,264nm,19.6s,MS4.7,baz=271,slow=36
MA2 Magadan 90.15 333 *e*P **P 05 16 16.6 -0.5**
MA2 *e*S S 05 27 06.7 -0.3
MA2 pmax pmax
comp=Z,10.0nm,1.0s,mb5.1
FINES FINESS Array B 90.47 25 P **P 05 16 17.9 -0.5**
comp=Z,3.0nm,1.0s,mb4.6,baz=322,slow=5.3,SNR=6.4
TORD Torodi Ar. Bea 91.27 76 P **P 05 16 21.8 -1.4**
comp=Z,0.9nm,0.9s,mb4.1,baz=292,slow=5.0,SNR=2.5
TORD LR LR 05 55 32.2
comp=Z,207nm,19.3s,MS4.6,baz=285,slow=34
KEST Kesra 91.41 53 LR LR 05 56 00.6
comp=Z,77nm,19.5s,MS4.2,baz=249,slow=35
RAO Raoul Island 92.58 241 LR LR 05 48 05.2
comp=Z,163nm,19.5s,MS4.5,baz=28,slow=29
PRGR Permogore 97.38 19 *e*P **P 05 16 48.1 -2.1**
AKASG Malin Array Be 97.86 33 LR LR 06 04 01.2
comp=Z,223nm,18.9s,MS4.7,baz=310,slow=37
URZ Urewera 98.69 233 LR LR 05 50 53.8
comp=Z,113nm,18.3s,MS4.4,baz=198,slow=29
ZALV Zalesovo Beam 111.78 1 PP PP 05 22 31.6 -1.7
comp=Z,0.4nm,0.3s,baz=337,slow=10,SNR=6.3
SONM Songino Array 115.53 346 PKP PKPdf 05 21 59.1 +0.1
SONM PP PP 05 23 00.5 +0.4
SONM Songino Array 115.53 346 PKP PKPdf 05 21 59.1 +0.1
comp=Z,0.5nm,0.9s,baz=27,slow=1.6,SNR=2.7
SONM PP PP 05 23 00.5 +0.4
comp=Z,0.5nm,0.9s,baz=35,slow=5.3,SNR=3.7
MKAR Makanchi Array 118.82 4 PKP PKPdf 05 22 04.0 -1.3
comp=Z,0.2nm,0.3s,baz=21,slow=2.9,SNR=5.2
HHC Hu-ho-hao-te 120.35 338 *e*PKP PKPdf 05 22 06.3 -2.2
HHC PP PP 05 23 37.3 +3.5
HHC PKS 05 25 41.5
HHC SKS SKSdf 05 29 13.3 -3.5
HHC SKKS SKKSac 05 30 27.0 -3.9
HHC SS SS 05 40 02.5 +4.6
HHC PP PP
comp=Z,108nm,8.7s
HHC LR LR
comp=N,138nm,31.9s,MS4.7
HHC LR LR
comp=E,229nm,28.9s,MS4.7
HHC LR LR
comp=Z,107nm,30.4s,MS4.3
BOSA Boshof 121.53 115 PKP PKPdf 05 22 13.0 +2.0
BOSA Boshof 121.53 115 PKP PKPdf 05 22 13.0 +2.0
comp=Z,2.7nm,0.7s,baz=238,slow=4.3,SNR=5.3
EKS2 Erkin-Say 121.83 11 *e*PKPdf PKPdf 05 22 12.0 +0.7
TKM2 Tokmak 2 121.90 10 *e*PKPdf PKPdf 05 22 11.3 -0.1
WMQ Urumqi 121.93 359 *e*PKP PKPdf 05 22 11.5 +0.1
WMQ XPKP 05 22 35.5
UCH Uchtor 122.38 11 *e*PKPdf PKPdf 05 22 12.6 +0.3
NJ2 Nanjing 124.49 327 *e*PKP PKPdf 05 22 17.5 +0.8
GTA Gaotai 125.01 348 *e*PKP PKPdf 05 22 21.3 +3.8
GTA XPKP 05 22 35.5
GTA PP PP 05 24 12.3 +7.2
GTA PKS 05 25 56.8
GTA SKS SKSdf 05 29 26.3 +0.6
GTA SKKS SKKSac 05 31 00.5 -0.5
GTA SS SS 05 40 58.8 +2.1
GTA PP PP
comp=Z,197nm,11.0s
GTA LR LR
comp=N,119nm,19.8s,MS4.9
GTA LR LR
comp=E,217nm,20.5s,MS4.9
GTA LR LR
comp=Z,122nm,14.8s
STKA Stephens Creek 127.40 241 PKP PKPdf 05 22 24.0 +1.8
comp=Z,3.0nm,0.8s,baz=154,slow=2.0,SNR=4.0
CD2 Chengdu 132.01 340 *e*PKP PKPdf 05 22 28.8 -2.2
CD2 XPKP 05 22 54.0
CD2 PP PP 05 24 53.8 +2.6
CD2 PKS 05 26 03.8
CD2 PP PP
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,130nm,24.6s,MS4.8
CD2 LR LR
comp=E,160nm,24.2s,MS4.8
CD2 LR LR
comp=Z,120nm,22.8s,MS4.5
WRA Warramunga Arr 134.50 256 PKP PKPdf 05 22 37.6 +1.6
comp=Z,2.0nm,1.0s,baz=88,slow=2.1,SNR=6.4
ASAR Alice Springs 134.85 251 PKP PKPdf 05 22 38.4 +1.9
comp=Z,1.1nm,0.9s,baz=110,slow=2.0,SNR=7.6
GYA Guiyang 134.96 335 *e*PDIF Pdif 05 19 36.8 -0.7
GYA PKP PKPdf 05 22 35.3 -1.4
GYA XPKP 05 22 56.0
GYA PP PP 05 25 13.0 +2.8
GYA PKS 05 26 10.3
GYA SKS SKSdf 05 29 39.5 -4.8
GYA SKKS SKKSac 05 31 58.5 -4.6
GYA SS SS 05 42 59.3 -0.4
GYA PP PP
comp=Z,120nm,7.2s
GYA LR LR
comp=N,180nm,19.8s,MS5.0
GYA LR LR
comp=E,210nm,20.4s,MS5.0
GYA LR LR
comp=Z,170nm,19.6s,MS4.8
KMI Kunming 137.68 338 PKP PKPdf 05 22 39.0 -2.8
BHJ Bhuj 138.82 24 *e*P PKPdf 05 22 43.0 -1.0
CHTO Chiang Mai 144.82 340 *e*PKPdf PKPdf 05 22 52.4 -2.4
HYB Hyderabad 147.20 15 *e*P PKPdf 05 22 59.5 +0.7
HYB Hyderabad 147.20 15 *i* PKP PKPdf 05 22 59.5 +0.7
MBWA Marble Bar 148.12 253 *e*PKPbc PKPbc 05 23 04.2 +0.8

*NEIC **31** 05:27:53.0±0.6, 4740N×15380E, h10km, mb4.0/3, Error ellipse: s-maj=22.8km s-min=11.0km az=138.0*
*ISCJB **31** 05:27:56.3±1.3, 47.34N±0.08×153.9E±0.1, h51km±12km,*

mb3.7/10,MS3.2/2,Error ellipse: s-maj=17.9km s-min=7.1km az=138.6
*MOS **31** 05:27:56.3±0.6,4735N×15386E,h50km,mb4.1/6,Error ellipse: s-maj=18.0km s-min=11.9km az=55.2*
*IDC **31** 05:28:00.6±4.9,4734N×15373E,h73km±46km,mb3.3/6, mb1 3.6/8,mb1mx3.4/21,mbtmp3.4/8,ML3.6/2,MS3.3/2, Ms1 3.3/2,ms1mx2.8/15,Error ellipse: s-maj=34.3km s-min=24.3km az=124.0*

ISC 31 05:27:58.3±1.2,4731N±009×1539E±01,h53km±11km,n28, σ0§95/29,mb3.7/10,MS3.2/2,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.66**	**22**	*e*PN	**Pn**	**05 28 51.5**	**-0.9**
SKR				*e*S	**Sn**	**05 29 34.5**	**+0.2**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax			
	comp=N,80nm,0.4s						
SKR				smax			
	comp=E,70nm,0.4s						
KUR	**Kuril'sk**	**4.70**	**246**	*e*PN	**Pn**	**05 29 04.2**	**-2.4**
KUR				pmax	pmax		
	comp=Z,130nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.64**	**271**	*e*Pn	**Pn**	**05 29 47.9**	**+1.0**
	comp=Z,16nm,0.6s						
YSS	**Yuzh-Sakhalins**	**7.64**	**271**	*e*PN	**Pn**	**05 29 47.1**	**+0.2**
YSS				*e*S	**Sn**	**05 31 13.0**	**+1.0**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				pmax	pmax		
	comp=N,20nm,0.9s						
YSS				pmax	pmax		
	comp=E,30nm,0.9s						
ASAJ	**Asahikawa**	**8.56**	**252**	PN	**Pn**	**05 30 00.5**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**8.56**	**252**	P	**Pn**	**05 30 00.5**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=102,slow=11,SNR=4.6						
ERM	**Erimo**	**9.33**	**239**	*e*Pn	**Pn**	**05 30 11.5**	**+1.4**
ERM	**Erimo**	**9.33**	**239**	*e*PN	**Pn**	**05 30 11.8**	**+1.7**
MJAR	**Matsushiro Arr**	**15.87**	**233**	P	**Pn**	**05 31 36.7**	**-1.5**
MJAR	**Matsushiro Arr**	**15.87**	**233**	P	**Pn**	**05 31 36.7**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=32,slow=10,SNR=3.8						
VLA	**Vladivostok**	**16.08**	**263**	*e*P	**Pn**	**05 31 40.0**	**-0.7**
YAK	**Yakutsk**	**20.16**	**326**	*e*P	**P**	**05 32 27.9**	**0.0**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSRS	**Korea Array**	**21.51**	**252**	P	**P**	**05 32 42.5**	**-0.1**
	comp=Z,4.1nm,1.0s,mb3.8,baz=53,slow=11,SNR=4.6						
KSRS				LR	LR	05 39 39.6	
	comp=Z,31nm,20.8s,MS2.7,baz=330,slow=33						
TIXI	**Tiksi**	**27.09**	**343**	*e*P	**P**	**05 33 35.0**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.3						
COLA	**College**	**35.34**	**39**	*e*P	**P**	**05 34 48.0**	**-0.1**
	comp=Z,1.7nm,0.6s,mb4.2						
COLA	**College**	**35.34**	**39**	*e*P	**P**	**05 34 48.0**	**0.0**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
EGAK	**Eagle**	**38.20**	**39**	*e*P	**P**	**05 35 12.6**	**+0.2**
	comp=Z,1.4nm,0.9s,mb3.7						
KURK	**Kurchatov**	**47.53**	**304**	*e*P	**P**	**05 36 27.1**	**-0.8**
	comp=Z,1.1nm,0.7s,mb4.0						
KURK	**Kurchatov**	**47.53**	**304**	*e*P	**P**	**05 36 27.1**	**-0.8**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
YKA	**Yellowknife Ar**	**50.13**	**37**	*i* P	**P**	**05 36 49.0**	**+1.3**
YKA	**Yellowknife Ar**	**50.13**	**37**	P	**P**	**05 36 47.4**	**-0.3**
	comp=Z,0.2nm,0.7s,mb3.3,baz=292,slow=7.5,SNR=4.5						
HNR	**Honiara**	**56.74**	**173**	LR	LR	06 01 02.2	
	comp=Z,64nm,18.2s,MS3.8,baz=5.2,slow=35						
FINES	**FINESS Array B**	**63.77**	**335**	*i* P	**P**	**05 38 24.5**	**+0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**63.77**	**335**	P	**P**	**05 38 23.5**	**-0.7**
	comp=Z,0.6nm,0.4s,mb4.0,baz=40,slow=8.4,SNR=8.4						
PDAR	**Pinedale Array**	**63.96**	**55**	P	**P**	**05 38 27.6**	**+1.9**
	comp=Z,0.6nm,0.8s,mb3.7,baz=318,slow=2.0,SNR=5.4						
AKASG	**Malin Array Be**	**71.39**	**327**	P	**P**	**05 39 12.0**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.6,baz=32,slow=6.9,SNR=6.2						
ASAR	**Alice Springs**	**72.92**	**199**	P	**P**	**05 39 21.9**	**+0.2**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**72.92**	**199**	P	**P**	**05 39 21.6**	**-0.1**
	comp=Z,0.5nm,0.8s,mb3.5,baz=8.4,slow=5.6,SNR=6.7						

*IDC **31** 06:01:27.9±1.0,4657N×15594E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.7/20,mbtmp3.6/7,ML3.5/1,Error ellipse: s-maj=33.0km s-min=23.3km az=128.0*
*ISCJB **31** 06:01:30.9±0.8,466N±01×1557E±02,h33km,mb3.6/6, Error ellipse: s-maj=21.6km s-min=13.2km az=41.5*
*MOS **31** 06:01:31.3±1.2,4658N×15553E,h33km,mb4.3/2,Error ellipse: s-maj=31.7km s-min=20.1km az=66.7*

ISC 31 06:01:33.2±0.8,466N±01×1557E±02,h35km,n14, σ0§92/14,mb3.6/6,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.12**	**3**	*e*PN	**Pn**	**06 02 33.5**	**0.0**
ASAJ	**Asahikawa**	**9.58**	**260**	PN	**Pn**	**06 03 48.9**	**+0.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**9.58**	**260**	Pn	**Pn**	**06 03 48.9**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=102,slow=20,SNR=3.3						
ERM	**Erimo**	**10.11**	**248**	*e*PN	**Pn**	**06 03 53.4**	**-2.3**
MKAR	**Makanchi Array**	**48.62**	**299**	*i* P	**P**	**06 10 14.0**	**+0.8**
MKAR	**Makanchi Array**	**48.62**	**299**	P	**P**	**06 10 14.2**	**+1.0**
	comp=Z,0.4nm,0.8s,mb3.5,baz=67,slow=9.3,SNR=4.4						
YKA	**Yellowknife Ar**	**49.97**	**37**	P	**P**	**06 10 23.0**	**-0.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=294,slow=7.3,SNR=7.6						
PDAR	**Pinedale Array**	**63.37**	**55**	P	**P**	**06 11 57.9**	**-0.9**
	comp=Z,0.5nm,0.8s,mb3.7,baz=246,slow=2.6,SNR=3.8						
WRA	**Warramunga Arr**	**68.98**	**202**	P	**P**	**06 12 34.9**	**+0.1**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**68.98**	**202**	P	**P**	**06 12 34.9**	**+0.1**
	comp=Z,0.7nm,0.7s,mb3.7,baz=23,slow=6.7,SNR=4.0						
ASAR	**Alice Springs**	**72.66**	**201**	P	**P**	**06 12 58.5**	**+1.5**
ASAR	**Alice Springs**	**72.66**	**201**	P	**P**	**06 12 57.9**	**+0.8**
	comp=Z,0.2nm,0.5s,mb3.3,baz=23,slow=5.2,SNR=5.3						
AKASG	**Malin Array Be**	**72.68**	**328**	P	**P**	**06 12 57.3**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**72.68**	**328**	P	**P**	**06 12 57.3**	**+0.3**
	comp=Z,1.0nm,0.4s,mb4.1,baz=32,slow=5.8,SNR=6.6						

*IDC **31** 06:02:06.9±7.5,3596N×7095E,h184km±68km,mb3.2/6, mb1 3.3/8,mb1mx3.1/23,mbtmp3.2/8,Error ellipse: s-maj=40.2km s-min=23.5km az=19.0*
*ISCJB **31** 06:02:08.1±1.1,3632N±005×707E±0.1,h187km±14km, mb3.2/5,Error ellipse: s-maj=16.2km s-min=6.1km az=154.2*
*NEIC **31** 06:02:14.7±2.6,3677N×7065E,h200km,mb3.5/1,Error ellipse: s-maj=37.9km s-min=11.8km az=168.0*
*NNC **31** 06:02:16.6±1.6,3696N×7069E,h224km±24km,mb3.1, mpv4.4,Error ellipse: s-maj=18.4km s-min=9.8km az=27.0*

ISC 31 06:02:08.6±1.0,3627N±005×707E±01,h177km±13km,n34, σ0§78/43,mb3.2/5,2C-7D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.31**	**21**	⇓*i* P	**Pn**	**06 03 40.1**	**+0.6**
AML				*e*S	**Sn**	**06 04 47.3**	**-3.9**
AML	**Almayashu**	**6.31**	**21**	P	**Pn**	**06 03 40.1**	**+0.6**
	SNR=188						
UCH	**Uchtor**	**6.66**	**25**	⇓*i* P	**Pn**	**06 03 44.8**	**+0.7**
UCH				*e*S	**Sn**	**06 04 53.8**	**-5.6**
UCH	**Uchtor**	**6.66**	**25**	P	**Pn**	**06 03 44.8**	**+0.7**
	SNR=57						
EKS2	**Erkin-Say**	**6.83**	**20**	*e*P	**Pn**	**06 03 46.3**	**+0.1**
EKS2				*e*S	**Sn**	**06 04 59.1**	**-4.2**
EKS2	**Erkin-Say**	**6.83**	**20**	P	**Pn**	**06 03 46.6**	**+0.4**
	SNR=18						
KK31	**Karatay Array**	**6.83**	**359**	⇓P	**Pn**	**06 03 46.0**	**-0.2**
	8.2nm,0.3s,baz=174,slow=12,SNR=372						
KK31				⇑S	**Sn**	**06 04 57.3**	**-6.1**
	13nm,0.5s,baz=188,slow=22,SNR=16						
KK31	**Karatay Array**	**6.83**	**359**	P	**Pn**	**06 03 46.0**	**-0.2**
KK31				S	**Sn**	**06 04 57.3**	**-6.1**
AAK	**Ala-Archa**	**7.01**	**24**	P	**Pn**	**06 03 49.4**	**+0.7**
	SNR=23						
SDNR	**Sundarnagar**	**7.08**	**130**	*e*P	**Pn**	**06 03 56.5**	**+6.8**
SDNR				*e*S	**Sn**	**06 05 11.5**	**+2.0**
KBK	**Karagaybulak**	**7.19**	**26**	P	**Pn**	**06 03 51.9**	**+0.8**
	SNR=17						
CHMS	**Chumysh**	**7.42**	**24**	P	**Pn**	**06 03 54.4**	**+0.2**
	SNR=6.9						
USP	**Ospenovka**	**7.59**	**22**	P	**Pn**	**06 03 56.1**	**-0.2**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.66**	**28**	⇑P	**Pn**	**06 03 57.5**	**+0.3**
	17nm,0.5s						
TKM2				⇓S	**Sn**	**06 05 19.3**	**-3.8**
	7.4nm,0.7s						
TKM2	**Tokmak 2**	**7.66**	**28**	⇓*i* P	**Pn**	**06 03 57.5**	**+0.3**
TKM2	**Tokmak 2**	**7.66**	**28**	P	**Pn**	**06 03 57.7**	**+0.5**
	SNR=38						
KHET	**Khetri**	**9.26**	**150**	*e*S	**Sn**	**06 06 00.1**	**-1.5**
KHET				AML	AML	06 06 02.3	
	comp=E,9.8nm,0.7s						
KHET				AML	AML	06 06 03.3	
	comp=N,9.7nm,0.4s						
JOSI	**Joshimath**	**9.36**	**125**	*e*S	**Sn**	**06 06 03.4**	**-0.8**
JOSI				AML	AML	06 06 11.4	
	comp=E,16nm,0.2s						
JOSI				AML	AML	06 06 11.6	
	comp=N,33nm,0.1s						
KUDL	**Kundal**	**9.48**	**147**	*e*S	**Sn**	**06 06 01.4**	**-5.6**
KUDL				AML	AML	06 06 06.5	
	comp=E,14nm,0.6s						
KUDL				AML	AML	06 06 08.6	
	comp=N,6.9nm,0.4s						
AGRA	**Agra**	**10.93**	**143**	*e*S	**Sn**	**06 06 31.8**	**-10**
AGRA				AML	AML	06 06 38.2	
	comp=E,94nm,0.4s						
AGRA				AML	AML	06 06 39.6	
	comp=N,71nm,0.1s						
MKAR	**Makanchi Array**	**13.64**	**36**	P	**Pn**	**06 05 15.4**	**+0.8**
	comp=N,0.2nm,0.3s,baz=225,slow=16,SNR=19						
AB31	**Akbulak array**	**15.16**	**332**	⇓P	**Pn**	**06 05 32.3**	**-1.2**
	comp=N,0.6nm,0.3s						
AB31				⇓S	**S**	**06 08 13.7**	**-8.4**
	comp=N,0.7nm,0.7s						
AB31	**Akbulak array**	**15.16**	**332**	P	**Pn**	**06 05 32.3**	**-1.2**
AB31				S	**S**	**06 08 13.7**	**-8.4**
KURK	**Kurchatov**	**15.54**	**19**	*e*P	**Pn**	**06 05 38.4**	**+0.2**
	comp=N,1.3nm,0.6s						
AKTK	**Aktyubinsk**	**16.85**	**331**	P	**Pn**	**06 05 54.2**	**+0.3**
AKTO	**Aktyubinsk**	**16.85**	**331**	P	**Pn**	**06 05 54.2**	**+0.3**
	comp=N,0.7nm,0.3s,baz=142,slow=10,SNR=13						
ZAA0	**Zalesovo Array**	**20.24**	**25**	*e*P	**P**	**06 06 29.5**	**-0.3**
ZALV	**Zalesovo Beam**	**20.24**	**25**	P	**P**	**06 06 29.7**	**-0.2**
	comp=N,3.7nm,0.3s,baz=218,slow=11,SNR=16						
FINES	**FINESS Array B**	**37.52**	**326**	P	**P**	**06 09 05.7**	**+0.6**
	comp=N,1.2nm,0.7s,mb3.6,baz=117,slow=7.2,SNR=3.4						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**06 10 01.2**	**0.0**
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**06 10 01.2**	**0.0**
	comp=N,0.6nm,0.7s,mb3.3,baz=119,slow=8.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**65.44**	**269**	P	**P**	**06 12 32.5**	**-0.3**
	comp=N,0.5nm,0.5s,mb3.6,baz=52,slow=5.6,SNR=5.2						
YKA	**Yellowknife Ar**	**81.49**	**2**	P	**P**	**06 14 05.4**	**-0.3**
	comp=N,0.1nm,0.4s,mb2.8,baz=353,slow=5.7,SNR=4.9						
WRA	**Warramunga Arr**	**82.10**	**122**	P	**P**	**06 14 04.7**	**-4.7**
	comp=N,0.1nm,0.4s,mb2.8,baz=324,slow=4.3,SNR=7.2						

*ISCJB **31** 06:18:55.1±0.4,1696N±003×9981W±002,h40km±3km, mb4.5/57,MS3.8/12,Error ellipse: s-maj=4.9km s-min=3.2km az=25.4*
*NEIC **31** 06:18:56.3,1690N×9991W,h45km,mb4.5/53,After MEX.*
NEIC Felt [III] at Acapulco and [II] at Arcelia.
*IDC **31** 06:18:57.0±5.9,1718N×9964W,h33km±43km,mb4.2/9, mb1 4.4/12,mb1mx4.1/22,mbtmp4.2/12,ML4.2/3,MS3.6/12, Ms1 3.6/12,ms1mx3.5/22,Error ellipse: s-maj=30.8km s-min=15.6km az=56.0*
*MEX **31** 06:18:57.0±0.6,1695N×9983W,h12km±6km,MD4.7*
*BJI **31** 06:18:57.3,1690N×9990W,h44km,mB5.3,Ms5.3,Msz4.6*

ISC 31 06:18:56.1±0.5,1700N±003×9978W±002,h28km±4km, h37km±1.2km:pP-P,n161,σ1§15/177,mb4.5/57,MS3.8/12, 1C-1D,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.19**	**226**	*i* P	**Pb**	**06 19 01.3**	**-0.6**
ACX				*i* S	**Sb**	**06 19 06.6**	**+0.7**
CAIG	**El Cayaco**	**0.47**	**276**	*i* S	**Sb**	**06 19 10.9**	**-1.8**
MEIG	**Mezcala**	**0.94**	**9**	*i* P	**Pn**	**06 19 12.8**	**-0.6**
MEIG				⇓*i* P		06 19 12.8	
PLIG	**Platanillo**	**1.41**	**11**	*i* P	**Pn**	**06 19 20.0**	**0.0**
PLIG				*i* S	**Sn**	**06 19 37.4**	**-0.2**
PNIG	**Pinotepa**	**1.69**	**111**	⇑*i* P	**Pn**	**06 19 23.6**	**-0.2**
PNIG				*i* S	**Sn**	**06 19 43.6**	**-1.0**
YAIG	**Yautepec**	**1.97**	**20**	*i* P	**Pn**	**06 19 27.1**	**-0.5**
YAIG				*i* S	**Sn**	**06 19 52.3**	**+0.8**
PPM	**Popocatepetl**	**2.33**	**28**	*i* P	**Pn**	**06 19 32.5**	**-0.1**
PPM				*i* P		06 19 32.8	
PPM				*i* S	**Sn**	**06 20 02.5**	**+2.2**
PPM				*i* S	**Sn**	**06 20 06.6**	**+6.3**
SZVM	**Salazar**	**2.34**	**9**	*i* P	**Pn**	**06 19 33.2**	**+0.5**
SZVM				*e*S	**Sn**	**06 20 00.9**	**+0.3**
UNM	**Universidad Na**	**2.39**	**14**	*i* P	**Pn**	**06 19 33.5**	**+0.1**
UNM				*i* P		06 19 33.5	
UNM				*i* S	**Sn**	**06 20 02.4**	**+0.7**
PBVM	**Pinon**	**2.52**	**15**	*e*P	**Pn**	**06 19 34.9**	**-0.3**
PBVM				*i* S	**Sn**	**06 20 08.4**	**+3.4**
PTVM	**Pico Tres Padr**	**2.66**	**14**	*e*P	**Pn**	**06 19 34.1**	**-3.0**
PTVM				*i* S	**Sn**	**06 20 10.2**	**+1.9**
TPIG	**Tehuac#an**	**2.70**	**58**	*i* P	**Pn**	**06 19 38.1**	**+0.4**
TPIG				*i* S	**Sn**	**06 20 13.2**	**+3.7**
VHO	**Vista Hermosa**	**2.91**	**88**	*i* P	**Pn**	**06 19 41.9**	**+1.3**
VHO				*i* S	**Sn**	**06 20 13.6**	**-1.1**
OXX	**Oaxaca**	**2.92**	**88**	*i* P	**Pn**	**06 19 41.7**	**+1.0**
OXX				*i* S	**Sn**	**06 20 16.1**	**+1.2**
MOIG	**Morelia**	**2.98**	**334**	*e*P	**Pn**	**06 19 42.2**	**+0.6**
MOIG				*i* S	**Sn**	**06 20 17.9**	**+1.4**
MMIG	**Aquila**	**3.64**	**291**	*e*P	**Pn**	**06 19 49.5**	**-1.1**
MMIG				*i* S	**Sn**	**06 20 29.0**	**-3.5**
HUIG	**Huatulco**	**3.73**	**109**	*e*P	**Pn**	**06 19 52.8**	**+1.0**
HUIG				*i* S	**Sn**	**06 20 34.1**	**-0.7**
LVIG	**Laguna Verde**	**4.19**	**49**	*e*P	**Pn**	**06 19 56.8**	**-1.3**
LVIG				*i* S	**Sn**	**06 20 51.5**	**+5.4**
LVIG	**Laguna Verde**	**4.19**	**49**	*e*P	**Pn**	**06 19 56.8**	**-1.3**
LVIG				*i* S	**Sn**	**06 20 48.2**	**+2.1**
CMIG	**Matias Romero**	**4.68**	**88**	Pn	**Pn**	**06 20 05.3**	**+0.4**
	8.1nm,0.3s,baz=262,slow=12,SNR=93						
CMIG				Sn	**Sn**	**06 20 55.4**	**-3.0**
	31nm,0.3s,baz=265,slow=22,SNR=4.2						
CMIG				Lg		06 21 21.7	
	46nm,0.3s,baz=173,slow=16,SNR=3.3						
CMIG				LR	LR	06 22 12.8	
	comp=Z,981nm,18.1s,baz=261,slow=43						
CMIG	**Matias Romero**	**4.68**	**88**	*e*P	**Pn**	**06 20 05.6**	**+0.7**
CMIG				*i* S	**Sn**	**06 21 00.5**	**+2.1**
TUIG	**Tuzandepetl**	**5.21**	**78**	*e*P	**Pn**	**06 20 18.9**	**+6.7**
CJM	**Chamela**	**5.59**	**297**	*e*P	**Pn**	**06 20 18.3**	**+0.9**
CJM				*i* S	**Sn**	**06 21 13.1**	**-7.6**
CJM	**Chamela**	**5.59**	**297**	*i* P	**Pn**	**06 20 17.5**	**+0.1**
CJM				*i* S	**Sn**	**06 21 20.1**	**-0.6**
ANIG	**Ahuacatlan**	**6.03**	**313**	*e*P	**Pn**	**06 20 23.4**	**-0.1**
ANIG				*i* S	**Sn**	**06 21 30.2**	**-1.5**
ZAIG	**Zacatecas**	**6.31**	**336**	*i* P	**Pn**	**06 20 29.4**	**+2.1**
ZAIG				*i* S	**Sn**	**06 21 32.1**	**-6.4**
ZAIG	**Zacatecas**	**6.31**	**336**	*e*P	**Pn**	**06 20 25.4**	**-2.0**
ZAIG				*i* S	**Sn**	**06 21 39.7**	**+1.1**
SCX	**San Cristobal**	**6.84**	**91**	*e*P	**Pn**	**06 20 37.0**	**+2.3**
CCIG	**Comitan**	**7.36**	**94**	*e*P	**Pn**	**06 20 42.9**	**+1.2**
CCIG				*i* S	**Sn**	**06 22 01.5**	**-2.9**
CCIG	**Comitan**	**7.36**	**94**	*e*P	**Pn**	**06 20 42.9**	**+1.2**
CCIG				*i* S	**Sn**	**06 22 04.5**	**+0.2**
LNIG	**Linares**	**7.87**	**2**	*e*P	**Pn**	**06 20 50.7**	**+2.0**
LNIG				*i* S	**Sn**	**06 22 22.4**	**+5.7**
TEIG	**Tepich**	**11.37**	**72**	Pn	**Pn**	**06 21 35.3**	**-1.4**
TEIG				*i* S	**Sn**	**06 23 23.5**	**-19**
TEIG				Sn	**Sn**	**06 23 33.6**	**-9.2**
TEIG	**Tepich**	**11.37**	**72**	Pn	**Pn**	**06 21 35.3**	**-1.4**
	2.0nm,0.3s,baz=276,slow=16,SNR=12						
TEIG				Sn	**Sn**	**06 23 33.6**	**-9.2**
	2.1nm,0.3s,baz=348,slow=19,SNR=3.4						
TEIG	**Tepich**	**11.37**	**72**	*e*P	**Pn**	**06 21 36.1**	**-0.6**
TEIG				*i* S	**Sn**	**06 23 45.9**	**+3.1**
TGUH	**Tegucigalpa,Un**	**12.40**	**102**	*e*Pn	**Pn**	**06 21 53.7**	**+2.8**
	32nm,1.0s						
JCT	**Junction City**	**13.42**	**360**	*e*Pn	**Pn**	**06 22 05.1**	**+0.4**
NATX	**Nacogdoches**	**15.41**	**17**	*e*Pn	**Pn**	**06 22 32.3**	**+0.7**
MNTX	**Cornudas Mount**	**15.49**	**342**	*e*Pn	**Pn**	**06 22 32.9**	**+0.2**
	4.3nm,0.7s						
GDL2	**Guadalupe Moun**	**15.70**	**345**	*e*Pn	**Pn**	**06 22 36.9**	**+1.6**
JCR	**Jicaral**	**15.93**	**115**	*e*P	**Pn**	**06 22 43.9**	**+5.5**
PRS1	**Puriscal**	**16.57**	**113**	*e*P	**Pn**	**06 22 51.2**	**+4.6**
LAJ	**Bijagual**	**16.79**	**113**	*e*P	**Pn**	**06 22 51.0**	**+1.6**
LCR2	**La Lucha 2**	**16.95**	**113**	*e*P	**Pn**	**06 22 52.2**	**+0.8**
URSC	**Urasca**	**17.11**	**113**	*e*P	**Pn**	**06 23 00.1**	**+6.7**
WMOK	**Wichita Mounta**	**17.69**	**3**	*e*Pn	**Pn**	**06 22 57.8**	**-2.6**
	6.1nm,0.6s						
BAR1		**17.78**	**114**	*e*P	**Pn**	**06 23 08.9**	**+7.2**
AMTX	**Amarillo**	**17.89**	**355**	*e*Pn	**Pn**	**06 23 02.0**	**-1.0**
	31nm,0.8s						
BNM	**Barren Site**	**18.15**	**341**	*e*P	**Pn**	**06 23 07.4**	**+1.2**
TUC	**Tucson**	**18.21**	**329**	*e*P	**Pn**	**06 23 08.1**	**+1.2**
	4.6nm,0.8s						
LENM	**Lemitar**	**18.27**	**341**	*e*Pn	**Pn**	**06 23 08.4**	**+0.7**
LPM	**Los Pinos Moun**	**18.30**	**342**	*e*Pn	**Pn**	**06 23 07.8**	**-0.2**
MIAR	**Mount Ida**	**18.34**	**16**	*e*P	**Pn**	**06 23 06.3**	**-2.1**
	14nm,0.5s						
LAZ	**Ladron**	**18.55**	**341**	*e*P	**Pn**	**06 23 11.8**	**+0.9**
ANMO	**Albuquerque**	**18.85**	**343**	*e*Pn	**Pn**	**06 23 14.0**	**-0.6**
	4.1nm,0.5s						
ANMO	**Albuquerque**	**18.85**	**343**	P	**Pn**	**06 23 14.6**	**-0.1**
	0.9nm,0.3s,baz=151,slow=12,SNR=32						
ANMO				LR	LR	06 31 35.0	
	comp=Z,265nm,19.1s,baz=175,slow=40						
LRAL	**Lakeview Retre**	**19.70**	**33**	*e*P	**Pn**	**06 23 22.2**	**-2.6**
	11nm,0.6s						
LRAL				*e*pP	pP	06 23 31.8	+1.0
PLAL	**Pickwick Lake**	**20.74**	**28**	*e*P	**P**	**06 23 32.0**	**-2.5**
	21nm,0.6s						
GNAR	**Gosnell**	**20.79**	**23**	*e*Pn	**P**	**06 23 35.6**	**+0.6**
	391nm,0.7s						
SDCO	**Great Sand Dun**	**21.27**	**347**	*e*P	**P**	**06 23 40.3**	**+0.1**
	16nm,1.0s,mb4.3						
GLAT	**Glass**	**21.33**	**24**	*e*P	**P**	**06 23 40.8**	**-0.1**
MVCO	**Mesa Verde**	**21.56**	**341**	*e*P	**P**	**06 23 43.6**	**+0.3**
	17nm,0.8s,mb4.5						
CBKS	**Cedar Bluff**	**21.73**	**0**	*e*P	**P**	**06 23 43.4**	**-1.8**
	24nm,0.7s,mb4.7						
WVT	**Waverly**	**21.81**	**27**	*e*P	**P**	**06 23 43.8**	**-2.3**
	12nm,0.5s,mb4.6						
SWET	**Sewanee**	**21.95**	**32**	*e*P	**P**	**06 23 45.2**	**-2.3**
GOGA	**Godfrey**	**21.97**	**39**	*e*P	**P**	**06 23 46.3**	**-1.5**
	19nm,0.5s,mb4.8						
KSU1	**Kansas State U**	**22.20**	**7**	*e*P	**P**	**06 23 48.3**	**-1.8**
	38nm,1.1s,mb4.7						
PFO	**Pinyon Flat Ob**	**22.33**	**321**	P	**P**	**06 23 53.1**	**+1.5**
	2.6nm,0.8s,mb3.7,baz=147,slow=6.9,SNR=4.6						
LDFC	**Landfair**	**22.62**	**326**	*e*P	**P**	**06 23 57.2**	**+2.5**
CPCT	**Cooper Cave**	**22.86**	**34**	*e*P	**P**	**06 23 54.9**	**-2.3**
SMCO	**Snowmass**	**22.97**	**346**	*e*P	**P**	**06 23 58.4**	**+0.1**
	15nm,0.8s,mb4.5						
ISCO	**Idaho Springs**	**23.28**	**349**	*e*P	**P**	**06 24 00.9**	**-0.7**
	13nm,0.6s,mb4.5						
TKL	**Tuckaleechee C**	**23.41**	**34**	P	**P**	**06 24 00.7**	**-2.3**
	12nm,0.6s,mb4.5,baz=185,slow=6.2,SNR=22						
TKL				LR	LR	06 34 19.7	
	comp=Z,59nm,21.9s,MS3.0,baz=235,slow=40						
COW	**Cow Castle Cre**	**23.69**	**43**	*e*P	**P**	**06 24 05.6**	**-0.1**
CCUT	**Cedar City**	**23.71**	**332**	*e*P	**P**	**06 24 07.4**	**+1.6**
GSC	**Goldstone**	**23.72**	**323**	*e*P	**P**	**06 24 07.5**	**+1.6**
NHSC	**New Hope**	**23.86**	**44**	*e*P	**P**	**06 24 07.4**	**+0.2**
	143nm,1.1s,mb5.3						
NHSC				*e*pP		06 24 17.2	
NHSC				*e*sP	sP	06 24 21.8	+3.0
SRU	**San Rafael**	**23.95**	**339**	*e*P	**P**	**06 24 08.5**	**+0.5**
	8.1nm,0.7s,mb4.3						
MSU	**Marysvale**	**24.03**	**336**	*e*P	**P**	**06 24 09.5**	**+0.8**
TZTN	**Tazewell**	**24.20**	**33**	P	**P**	**06 24 09.2**	**-1

FFC	**Flin Flon**	**37.69**	**358**	*e*P		**P**	**06 26 07.7**	**-1.2**
	24nm,0.7s,mb5.0							
SCHQ	**Schefferville**	**45.45**	**26**	P		**P**	**06 27 11.1**	**-1.3**
	7.7nm,0.5s,mb4.8,baz=238,slow=5.7,SNR=49							
SCHQ				LR		LR	06 46 43.8	
	comp=Z,90nm,20.6s,MS3.7,baz=186,slow=37							
LPAZ	**La Paz**	**45.47**	**135**	P		**P**	**06 27 13.8**	**+0.8**
LPAZ	**La Paz**	**45.47**	**135**	P		**P**	**06 27 13.8**	**+0.8**
	0.9nm,0.7s,mb3.7,baz=352,slow=7.1,SNR=3.1							
YKA	**Yellowknife Ar**	**46.62**	**351**	P		**P**	**06 27 20.2**	**-1.3**
	8.3nm,0.7s,mb4.8,baz=157,slow=7.1,SNR=115							
TAOE	**Nuku Hiva Isla**	**47.47**	**240**	*e*LR		LR	06 40 41.7	
	444nm,25.4s							
RKT	**Rikitea**	**52.67**	**222**	*e*T			07 24 26.2	
	12nm,0.3s							
EGAK	**Eagle**	**55.24**	**340**	*e*P		**P**	**06 28 26.2**	**-0.2**
	7.7nm,0.8s,mb4.8							
PMR	**Palmer**	**56.41**	**334**	*e*P		**P**	**06 28 34.8**	**0.0**
	7.9nm,0.8s,mb4.8							
PMR				*e*pP		pP	06 28 45.6	+2.1
CFAA	**Coronel Fontan**	**57.02**	**148**	P		**P**	**06 28 41.0**	**+1.4**
CFAA	**Coronel Fontan**	**57.02**	**148**	P		**P**	**06 28 41.0**	**+1.4**
	0.3nm,0.9s,mb3.3,baz=0.0,slow=12							
PMOR	**Pomariorio Ree**	**57.14**	**239**	*e*T			07 30 03.3	
	2.4nm,0.2s							
MCK	**McKinley**	**57.41**	**336**	*e*P		**P**	**06 28 42.0**	**+0.2**
	3.9nm,0.6s,mb4.6							
MCK				*e*pP		pP	06 28 52.9	+2.4
PPT	**Papeete**	**59.87**	**237**	*e*LR		LR	06 46 26.5	
	126nm,26.5s							
TTA	**Tatalina**	**59.89**	**334**	*e*P		**P**	**06 28 58.6**	**-0.5**
	2.7nm,0.6s,mb4.5							
TTA				*e*pP		pP	06 29 10.4	+2.6
TBI	**Tubuai**	**62.97**	**232**	*e*T			07 37 19.1	
	5.3nm,0.3s							
DAG	**Danmarks Havn**	**71.53**	**14**	*i* P		**P**	**06 30 12.0**	**-2.0**
	5.6nm,0.2s,mb5.2							
NB2	**NORSAR Subarra**	**85.01**	**27**	P		**P**	**06 31 28.6**	**-0.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=296,slow=5.3							
NOA	**NORSAR Array B**	**85.01**	**27**	P		**P**	**06 31 29.1**	**+0.4**
	comp=Z,0.6nm,0.6s,mb3.9,baz=294,slow=4.9,SNR=4.1							
NOA				LR		LR	07 08 16.0	
	comp=Z,25nm,19.9s,MS3.6,baz=300,slow=35							
ARCES	**ARCESS Array B**	**85.55**	**17**	P		**P**	**06 31 28.9**	**-2.4**
	comp=Z,6.5nm,1.0s,mb4.8,baz=343,slow=3.8,SNR=3.7							
ARCES				LR		LR	07 11 06.9	
	comp=Z,33nm,18.9s,MS3.8,baz=266,slow=37							
TIXI	**Tiksi**	**85.68**	**346**	*e*P		**P**	**06 31 30.9**	**-1.1**
	comp=Z,1.4nm,0.4s,mb4.5							
TIXI				*e*pP		pP	06 31 41.3	+0.3
GERES	**GERESS Array B**	**91.93**	**37**	LR		LR	07 12 30.9	
	comp=Z,45nm,20.1s,MS3.9,baz=6.3,slow=35							
TORD	**Torodi Ar. Bea**	**96.88**	**74**	LR		LR	07 13 41.7	
	comp=Z,33nm,19.6s,MS3.8,baz=225,slow=34							
AKASG	**Malin Array Be**	**99.13**	**30**	LR		LR	07 15 17.5	
	comp=Z,33nm,21.5s,MS3.8,baz=0.0,slow=34							
HHC	**Hu-ho-hao-te**	**115.51**	**334**	*e*PKP		PKPdf	06 37 35.8	+0.1
HHC				XPKP			06 37 50.5	
HHC				PP		PP	06 38 40.5	+3.9
HHC				PKS			06 41 11.0	
HHC				SKS		SKSdf	06 44 43.3	-2.8
HHC				SKKS		SKKSac	06 45 28.8	-8.4
HHC				SS		SS	06 54 31.0	-2.3
HHC				PP		PP		
	comp=Z,104nm,6.2s							
HHC				LR		LR		
	comp=N,92nm,30.4s,MS4.4							
HHC				LR		LR		
	comp=E,122nm,31.9s,MS4.4							
HHC				LR		LR		
	comp=Z,93nm,33.5s,MS4.2							
NJ2	**Nanjing**	**118.77**	**323**	*e*PKP		PKPdf	06 37 43.5	+1.2
WMQ	**Urumqi**	**119.09**	**354**	*e*PKP		PKPdf	06 37 42.3	-0.3
GTA	**Gaotai**	**120.97**	**342**	PKP		PKPdf	06 37 41.5	-4.8
GTA				PKS			06 41 16.5	
GTA				SKS		SKSdf	06 44 47.0	-10
GTA				PP		PP		
	comp=Z,108nm,10.3s							
GTA				LR		LR		
	comp=N,190nm,16.8s,MS5.0							
GTA				LR		LR		
	comp=E,235nm,17.6s,MS5.0							
GTA				LR		LR		
	comp=Z,94nm,14.5s,MS4.6							
CD2	**Chengdu**	**127.27**	**334**	*e*PKP		PKPdf	06 37 59.3	+0.7
WRA	**Warramunga Arr**	**128.77**	**258**	PKP		PKPdf	06 38 01.1	-0.5
	comp=Z,1.1nm,0.9s,baz=85,slow=2.5,SNR=7.1							
ASAR	**Alice Springs**	**129.46**	**253**	PKP		PKPdf	06 38 02.6	-0.2
	comp=Z,0.6nm,0.9s,baz=73,slow=1.5,SNR=4.7							
KMI	**Kunming**	**132.73**	**332**	PKP		PKPdf	06 38 08.5	-0.6

CASC 31 06:32:44.9±1.7, 848N×8298W, h1km±5km, MD3.8, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.53**	**94**	*e*S	Sg	06 33 04.6	+2.6
BAR1		**0.83**	**337**	⇓*i*P	Pg	06 33 01.6	+0.8
BAR1				*e*S	Sg	06 33 14.2	+2.6
CNI	**Changuinola**	**1.04**	**26**	⇓*i*P	Pg	06 33 05.7	+0.8
URSC	**Urasca**	**1.56**	**330**	⇓*e*P	Pn	06 33 13.1	-0.8
URSC				*e*S	Sn	06 33 35.1	+0.3
LCR2	**La Lucha 2**	**1.61**	**321**	*e*P	Pn	06 33 14.5	0.0
LCR2				*e*S	Sn	06 33 36.9	+0.9
LAJ	**Bijagual**	**1.78**	**321**	*e*P	Pn	06 33 18.9	+2.0
LAJ				*e*S	Sn	06 33 48.1	+8.0
PRS1	**Puriscal**	**1.99**	**319**	*e*P	Pn	06 33 18.9	-0.8
PRS1				*e*S	Sn	06 33 46.4	+1.0
CGA2	**Cerro Gallo 2**	**2.12**	**316**	*e*P	Pn	06 33 22.0	+0.5
CGA2				*e*S	Sn	06 33 49.4	+0.9
AZU	**Azuero**	**2.77**	**104**	*e*P	Pn	06 33 30.0	-0.4
PTP	**Ponta Puerca**	**19.47**	**58**	⇑*i*P		06 32 51.6	

*ISCJB **31** 06:34:18.7±0.8, 3841N±003×2045E±007, h2km, Error ellipse: s-maj=7.8km s-min=3.9km az=163.4*
*ATH **31** 06:34:18.5, 3842N×2046E, h5km±3km, MD3.4/8*
*CSEM **31** 06:34:19.5±0.1, 3842N×2048E, h2km, MD3.4, Error ellipse: s-maj=3.9km s-min=1.9km az=69.0*
*THE **31** 06:34:19.3, 3841N×2049E, h3km, ML3.5*
*NEIC **31** 06:34:19.3, 3841N×2049E, h0km, MD3.4(ATH), ML3.5(THE), After THE.*

ISC 31 06:34:18.8±0.9, 3841N±003×2044E±007, h2km±7km, n13, σ1§07/19, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.26**	**152**	⇑*i*PG	**Pg**	**06 34 24.3**	**+0.5**
VLS				*e*SG	**Sg**	**06 34 28.4**	**+1.2**
LKD	**Levkas**	**0.34**	**29**	*e*Pg	**Pg**	**06 34 25.3**	**-0.1**
LKD				*e*Sg	**Sg**	**06 34 30.9**	**+1.1**
KFL	**Anninata**	**0.41**	**137**	*e*Pg	**Pg**	**06 34 26.6**	**-0.1**
RLS	**Riolos of Patr**	**0.88**	**113**	*e*PB	**Pb**	**06 34 35.4**	**-1.5**
IGT	**Igoumenitsa**	**1.12**	**356**	*e*Pg	**Pg**	**06 34 40.4**	**0.0**
IGT				*e*Sg	**Sg**	**06 34 57.1**	**+2.1**
SELA	**Sela**	**1.15**	**96**	*e*Pg	**Pg**	**06 34 39.5**	**-1.5**
SELA				*e*Sg	**Sg**	**06 34 55.9**	**0.0**
EVR	**Evrytania**	**1.19**	**64**	*e*PB	**Pb**	**06 34 40.9**	**-1.2**
JAN	**Janina**	**1.29**	**14**	*e*PB	**Pb**	**06 34 42.5**	**-1.3**
KEK	**Kerkira**	**1.39**	**339**	*e*PB	**Pb**	**06 34 45.0**	**-0.6**
THL	**Klokotos Trika**	**1.69**	**46**	*e*PG	**Pg**	**06 34 49.6**	**-1.6**
THL				*e*SB	**Sb**	**06 35 13.1**	**+0.8**
ITM	**Ithomi**	**1.70**	**136**	*e*PN	**Pn**	**06 34 50.9**	**+1.4**
LKR	**Lokris**	**2.02**	**82**	*e*PN	**Pb**	**06 34 56.8**	**+0.5**
LTK	**Loutraki**	**2.03**	**100**	*e*Pn	**Pn**	**06 34 53.2**	**-0.8**
LTK				*e*Sn	**Sn**	**06 35 21.2**	**+1.2**

*ISCJB **31** 06:46:05.8±0.2, 5036N±001×569E±002, h10km, Error ellipse: s-maj=2.4km s-min=1.6km az=32.9*
*STR **31** 06:46:07.4±1.1, 5056N×595E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **31** 06:46:08.4±0.1, 5047N×574E, h15km, ML3.1/19, Error ellipse: s-maj=1.3km s-min=0.9km az=139.0*
*LDG **31** 06:46:08.3±0.1, 5047N×574E, h16km, Md3.2/2, Ml3.0/22, Error ellipse: s-maj=1.3km s-min=1.0km az=150.0*
*UCC **31** 06:46:08.5±0.4, 5047N×574E, h20km±1km, ML2.3*
*NEIC **31** 06:46:08.3, 5047N×574E, h16km, ML3.0(LDG), ML2.5(SZGRF), After LDG.*
*BGR **31** 06:46:10.0±0.6, 5047N×604E, h5km, ML2.5/4, Error ellipse: s-maj=7.8km s-min=3.3km az=103.0*

*BNS **31** 06:46:09.6±0.4, 5048N×581E, h18km±4km, ML2.5*

ISC 31 06:46:07.1±0.2, 5041N±001×572E±002, h10km, n101, σ1§24/242, 13C-2D, Belgium

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCLA	**Clavier**	**0.27**	**272**	⇑P	**Pg**	**06 46 15.0**	**+2.5**
BCLA				S	**Sg**	**06 46 19.3**	**+3.2**
	comp=E,270nm,0.1s						
BCLA	**Clavier**	**0.27**	**272**	P	**Pg**	**06 46 14.9**	**+2.5**
MEM	**Membach**	**0.27**	**43**	⇑P	**Pg**	**06 46 13.8**	**+1.2**
MEM				S	**Sg**	**06 46 17.3**	**+1.1**
	comp=E,293nm,0.3s						
MEM	**Membach**	**0.27**	**43**	P	**Pg**	**06 46 13.7**	**+1.1**
HGN	**Heimansgroeve**	**0.38**	**21**	⇑*e*Pg	**Pg**	**06 46 15.2**	**+0.6**
	comp=E,226nm,0.1s,baz=210						
HGN				*e*Sg	**Sg**	**06 46 19.6**	**0.0**
HGN	**Heimansgroeve**	**0.38**	**21**	⇑*e*Pg	**Pg**	**06 46 15.2**	**+0.7**
	comp=E,226nm,0.1s						
HGN				*e*Sg	**Sg**	**06 46 19.6**	**0.0**
BEBN	**Eben Emael**	**0.39**	**356**	⇑P	**Pg**	**06 46 15.4**	**+0.7**
BEBN				S	**Sg**	**06 46 20.1**	**+0.2**
	comp=E,123nm,0.2s						
BEBN	**Eben Emael**	**0.39**	**356**	P	**Pg**	**06 46 15.3**	**+0.6**
DREG	**Dreilaegerbach**	**0.41**	**52**	⇑*i*Pg	**Pg**	**06 46 16.0**	**+0.8**
DREG				*e*Sg	**Sg**	**06 46 21.1**	**+0.4**
	comp=E,335nm,0.2s						
KLL	**Kalltalsperre**	**0.45**	**58**	⇑*e*Pg	**Pg**	**06 46 16.6**	**+0.8**
KLL				*e*Sg	**Sg**	**06 46 21.8**	**+0.1**
	comp=E,370nm,0.2s						
HILG	**Hillesheim**	**0.63**	**101**	*e*Pg	**Pg**	**06 46 21.0**	**+1.7**
HILG				*e*Sg	**Sg**	**06 46 28.6**	**+1.2**
	comp=E,155nm,0.3s						
GIVF	**Givet**	**0.65**	**242**	*e*Pg	**Pg**	**06 46 21.8**	**+2.1**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**06 46 31.1**	**+2.9**
	comp=E,153nm,0.3s,SNR=1.0						
GIVF	**Givet**	**0.65**	**242**	*e*Pg	**Pg**	**06 46 21.8**	**+2.1**
	SNR=1.0						
GIVF				*e*Sg	**Sg**	**06 46 31.1**	**+2.9**
	comp=E,77nm,0.3s,SNR=1.0						
STB	**Steinbach**	**0.74**	**75**	⇑*e*Pg	**Pg**	**06 46 22.0**	**+0.6**
STB				*e*Sg	**Sg**	**06 46 31.1**	**+0.1**
	comp=E,188nm,0.1s						
DOU	**Dourbes**	**0.79**	**247**	⇑P	**Pg**	**06 46 23.9**	**+1.7**
DOU				S	**Sg**	**06 46 34.6**	**+2.1**
	comp=N,52nm,0.1s						
DOU	**Dourbes**	**0.79**	**247**	P	**Pg**	**06 46 23.9**	**+1.7**
WLF	**Walferdange**	**0.80**	**159**	*e*Pg	**Pg**	**06 46 25.1**	**+2.6**
	SNR=6.7						
WLF				*e*Sg	**Sg**	**06 46 36.1**	**+3.2**
WLF	**Walferdange**	**0.80**	**159**	*e*Pg	**Pg**	**06 46 25.1**	**+2.6**
WLF				*e*Sg	**Sg**	**06 46 36.5**	**+3.6**
WLF	**Walferdange**	**0.80**	**159**	⇑P	**Pg**	**06 46 25.1**	**+2.6**
WLF				S	**Sg**	**06 46 36.1**	**+3.2**
	comp=E,77nm,42.0s						
BD11	**Borschemich**	**0.81**	**34**	*e*Pg	**Pg**	**06 46 22.8**	**+0.1**
BD11				*e*Sg	**Sg**	**06 46 33.7**	**+0.5**
BD09	**Hochneukirch**	**0.83**	**34**	⇑*e*Pg	**Pg**	**06 46 23.2**	**+0.1**
SNF	**Seneffe**	**0.92**	**277**	⇑P	**Pg**	**06 46 25.4**	**+0.5**
SNF	**Seneffe**	**0.92**	**277**	P	**Pg**	**06 46 25.3**	**+0.5**
UCC	**Uccle**	**0.95**	**295**	⇑P	**Pg**	**06 46 25.9**	**+0.6**
UCC				S	**Sg**	**06 46 37.0**	**-0.6**
UCC	**Uccle**	**0.95**	**295**	P	**Pg**	**06 46 25.8**	**+0.5**
BAIF	**Baives**	**1.03**	**251**	*e*Pn	**Pn**	**06 46 27.9**	**+0.3**
	SNR=1.0						
BAIF				*e*Sn	**Sn**	**06 46 41.5**	**-0.5**
	comp=E,126nm,0.2s,SNR=1.0						
BAIF	**Baives**	**1.03**	**251**	*e*Pn	**Pn**	**06 46 27.9**	**+0.3**
	SNR=1.0						
BAIF				*e*Sn	**Sn**	**06 46 41.5**	**-0.5**
	comp=E,63nm,0.2s,SNR=1.0						
BGG	**Burgeitz**	**1.06**	**101**	⇓*e*Pg	**Pg**	**06 46 27.7**	**+0.3**
BGG				*e*Sg	**Sg**	**06 46 40.9**	**-0.3**
	comp=E,126nm,0.2s						
BNS	**Bensberg**	**1.08**	**59**	*e*Pg	**Pg**	**06 46 27.4**	**-0.5**
BNS				*e*Sg	**Sg**	**06 46 40.7**	**-1.2**
	comp=E,144nm,0.2s						
RUP	**Ruppelstein**	**1.12**	**129**	Pg	**Pg**	**06 46 29.0**	**+0.4**
HOBG	**Hohbusch**	**1.18**	**60**	⇓*e*Pg	**Pg**	**06 46 28.8**	**-0.8**
HOBG				*e*Sg	**Sg**	**06 46 42.8**	**-2.2**
	comp=E,129nm,0.5s						
ABH	**Alteburg**	**1.29**	**114**	Pg	**Pg**	**06 46 31.1**	**-0.8**
ABH				Sg	**Sg**	**06 46 46.8**	**-1.8**
WTSB	**Winterswijk**	**1.70**	**23**	*e*Pg	**Pg**	**06 46 35.2**	**-4.4**
TNS	**Taunus Mts**	**1.76**	**95**	*e*Pn	**Pn**	**06 46 37.8**	**+0.2**
	SNR=2.6						
TNS				*e*Pg	**Pg**	**06 46 41.6**	**+0.8**
	SNR=2.6						
TNS				*e*Sg	**Sg**	**06 47 00.4**	**-3.3**
TNS	**Taunus Mts**	**1.76**	**95**	*e*Pn	**Pn**	**06 46 37.3**	**-0.3**
TNS				*e*Sg	**Sg**	**06 47 00.3**	**-3.3**
RFYF	**Reffroy**	**1.79**	**185**	*e*Pn	**Pn**	**06 46 37.7**	**-0.3**
	baz=357						
RFYF	**Reffroy**	**1.79**	**185**	*e*Pg	**Pg**	**06 46 42.8**	**+1.4**
	baz=0.6						
RFYF				*e*Sn	**Sn**	**06 46 58.8**	**-2.0**
	baz=2.5						
RFYF				*e*Sg	**Sg**	**06 47 07.1**	**+2.5**
	comp=E,26nm,0.2s						
RFYF	**Reffroy**	**1.79**	**185**	*e*Pn	**Pn**	**06 46 37.7**	**-0.3**
RFYF				*e*Pg	**Pg**	**06 46 42.8**	**+1.4**
RFYF				*e*Sn	**Sn**	**06 46 58.8**	**-2.0**
RFYF				*e*Sg	**Sg**	**06 47 07.1**	**+2.5**
RFYF	**Reffroy**	**1.79**	**185**	*e*Pg	**Pg**	**06 46 42.8**	**+1.4**
RFYF				*e*Sn	**Sn**	**06 46 58.8**	**-2.0**
RFYF				*e*Sg	**Sg**	**06 47 07.1**	**+2.5**
	comp=E,13nm,0.2s						
MEZF	**Maizieres J'vi**	**1.96**	**193**	*e*Pn	**Pn**	**06 46 40.3**	**0.0**
	baz=18,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.96**	**193**	*e*Pg	**Pg**	**06 46 46.0**	**+1.3**
	baz=15						
MEZF				*e*Sn	**Sn**	**06 47 02.7**	**-2.3**
	baz=7.8,SNR=1.0						
MEZF				*e*Sg	**Sg**	**06 47 11.9**	**+1.8**
	comp=E,30nm,0.4s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.96**	**193**	*e*Pn	**Pn**	**06 46 40.3**	**0.0**
MEZF				*e*Pg	**Pg**	**06 46 46.0**	**+1.3**
MEZF				*e*Sn	**Sn**	**06 47 02.7**	**-2.3**
MEZF				*e*Sg	**Sg**	**06 47 11.9**	**+1.8**
MEZF	**Maizieres J'vi**	**1.96**	**193**	*e*Pg	**Pg**	**06 46 46.0**	**+1.3**
MEZF				*e*Sn	**Sn**	**06 47 02.7**	**-2.3**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**06 47 11.9**	**+1.8**
	comp=E,15nm,0.4s,SNR=1.0						
THEF	**They Montfort**	**2.19**	**175**	Pn	**Pn**	**06 46 44.2**	**+0.6**
CDF	**Champ du Feu**	**2.25**	**152**	*e*Pg	**Pg**	**06 46 51.5**	**+1.4**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**06 47 09.9**	**-2.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**06 47 20.3**	**+1.1**
	comp=E,5.4nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**2.25**	**152**	*e*Pn	**Pn**	**06 46 43.8**	**-0.5**
CDF				*e*Pg	**Pg**	**06 46 51.5**	**+1.4**
CDF				*e*Sn	**Sn**	**06 47 09.9**	**-2.1**
CDF				*e*Sg	**Sg**	**06 47 20.3**	**+1.1**
CDF	**Champ du Feu**	**2.25**	**152**	*e*Pg	**Pg**	**06 46 51.5**	**+1.4**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**06 47 09.9**	**-2.1**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**06 47 20.3**	**+1.1**
	comp=E,2.7nm,0.2s,SNR=1.0						
SFTF	**Sexfontaines**	**2.25**	**192**	*e*Pg	**Pg**	**06 46 51.5**	**+1.2**
SFTF				*e*Sn	**Sn**	**06 47 10.4**	**-1.8**
	baz=12						
SFTF				*e*Sg	**Sg**	**06 47 21.4**	**+2.0**
	comp=E,20nm,0.2s,baz=14						
SFTF	**Sexfontaines**	**2.25**	**192**	*e*Pn	**Pn**	**06 46 44.1**	**-0.3**
SFTF				*e*Pg	**Pg**	**06 46 51.5**	**+1.2**
SFTF				*e*Sn	**Sn**	**06 47 10.4**	**-1.8**
SFTF				*e*Sg	**Sg**	**06 47 21.4**	**+2.0**
SFTF	**Sexfontaines**	**2.25**	**192**	*e*Pg	**Pg**	**06 46 51.5**	**+1.2**
SFTF				*e*Sn	**Sn**	**06 47 10.4**	**-1.8**
SFTF				*e*Sg	**Sg**	**06 47 21.4**	**+2.0**
	comp=E,9.9nm,0.2s						
MENF	**Mencas**	**2.28**	**275**	Pn	**Pn**	**06 46 45.8**	**+1.1**
IBBN	**Ibbenburen**	**2.29**	**33**	*e*Sn	**Sn**	**06 47 09.8**	**-3.3**
IBBN				*e*Sg	**Sg**	**06 47 18.1**	**-2.5**
HAU	**Haudompre**	**2.44**	**170**	*e*Pg	**Pg**	**06 46 54.7**	**+0.8**
HAU				*e*Sn	**Sn**	**06 47 14.6**	**-2.3**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**06 47 26.6**	**+1.0**
	comp=E,17nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**2.44**	**170**	*e*Pn	**Pn**	**06 46 46.9**	**-0.1**
HAU				*e*Pg	**Pg**	**06 46 54.7**	**+0.8**
HAU				*e*Sn	**Sn**	**06 47 14.6**	**-2.3**
HAU				*e*Sg	**Sg**	**06 47 26.6**	**+1.0**
HAU	**Haudompre**	**2.44**	**170**	*e*Pg	**Pg**	**06 46 54.7**	**+0.8**
HAU				*e*Sn	**Sn**	**06 47 14.6**	**-2.3**
	SNR=1.0						
HAU				*e*Sg	**Sg**	**06 47 26.6**	**+1.0**
	comp=E,8.6nm,0.2s,SNR=1.0						
BFO	**Black Forest**	**2.69**	**140**	*e*Pn	**Pn**	**06 46 52.0**	**+1.6**
	SNR=1.2						
BFO				*e*Sn	**Sn**	**06 47 21.1**	**-2.0**
BFO				*e*Sg	**Sg**	**06 47 32.7**	**-0.9**
HINF	**Hinteralfeld**	**2.70**	**164**	*e*Pg	**Pg**	**06 47 00.0**	**+1.1**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**06 47 20.8**	**-2.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**06 47 33.9**	**0.0**
	comp=E,6.0nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**2.70**	**164**	*e*Pn	**Pn**	**06 46 50.6**	**+0.1**
HINF				*e*Pg	**Pg**	**06 47 00.0**	**+1.1**
HINF				*e*Sn	**Sn**	**06 47 20.8**	**-2.5**
HINF				*e*Sg	**Sg**	**06 47 33.9**	**0.0**
HINF	**Hinteralfeld**	**2.70**	**164**	*e*Pg	**Pg**	**06 47 00.0**	**+1.1**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**06 47 20.8**	**-2.5**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**06 47 33.9**	**0.0**
	comp=E,3.0nm,0.2s,SNR=1.0						
MOF	**Molkenrain**	**2.73**	**160**	Pn	**Pn**	**06 46 52.5**	**+1.6**
CLZ	**Clausthal**	**3.26**	**62**	*e*Pg	**Pg**	**06 47 06.9**	**-2.7**
	SNR=1.5						
CLZ				*e*Sg	**Sg**	**06 47 46.2**	**-5.7**
LOR	**Lormes**	**3.38**	**202**	*e*Pn	**Pn**	**06 46 59.4**	**-0.4**
	baz=21,SNR=1.0						
LOR	**Lormes**	**3.38**	**202**	*e*Pg	**Pg**	**06 47 12.0**	**+0.2**
	baz=23						
LOR				*e*Sn	**Sn**	**06 47 37.5**	**-2.4**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**06 47 56.4**	**+0.9**
	comp=E,9.3nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.38**	**202**	*e*Pn	**Pn**	**06 46 59.4**	**-0.4**
LOR				*e*Pg	**Pg**	**06 47 12.0**	**+0.2**
LOR				*e*Sn	**Sn**	**06 47 37.5**	**-2.4**
LOR				*e*Sg	**Sg**	**06 47 56.4**	**+0.9**
LOR	**Lormes**	**3.38**	**202**	*e*Pg	**Pg**	**06 47 12.0**	**+0.2**
LOR				*e*Sn	**Sn**	**06 47 37.5**	**-2.4**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**06 47 56.4**	**+0.9**
	comp=E,4.7nm,0.3s,SNR=1.0						
GRF	**Grafenberg Arr**	**3.62**	**99**	*e*Sg	**Sg**	**06 47 58.3**	**-5.0**
SSF	**Saint Saulge**	**3.66**	**204**	*e*Pg	**Pg**	**06 47 17.4**	**+0.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**06 47 43.5**	**-3.3**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**06 48 05.5**	**+1.0**
	comp=E,7.1nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.66**	**204**	*e*Pn	**Pn**	**06 47 03.8**	**+0.1**
SSF				*e*Pg	**Pg**	**06 47 17.4**	**+0.3**
SSF				*e*Sn	**Sn**	**06 47 43.5**	**-3.3**
SSF				*e*Sg	**Sg**	**06 48 05.5**	**+1.0**
SSF	**Saint Saulge**	**3.66**	**204**	*e*Pg	**Pg**	**06 47 17.4**	**+0.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**06 47 43.5**	**-3.3**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**06 48 05.5**	**+1.0**
	comp=E,3.5nm,0.3s,SNR=1.0						
HYF	**Humbligny**	**3.75**	**214**	*e*Pg	**Pg**	**06 47 18.7**	**-0.1**
CABF	**La Chapelle**	**3.81**	**176**	*e*Pg	**Pg**	**06 47 20.3**	**+0.2**
CABF				*e*Sn	**Sn**	**06 47 47.2**	**-3.4**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**06 48 10.0**	**+0.6**
	comp=E,8.2nm,0.5s						
CABF	**La Chapelle**	**3.81**	**176**	*e*Pn	**Pn**	**06 47 06.4**	**+0.6**
CABF				*e*Pg	**Pg**	**06 47 20.3**	**+0.2**
CABF				*e*Sn	**Sn**	**06 47 47.2**	**-3.4**
CABF				*e*Sg	**Sg**	**06 48 10.0**	**+0.6**
CABF	**La Chapelle**	**3.81**	**176**	*e*Pg	**Pg**	**06 47 20.3**	**+0.2**
CABF				*e*Sn	**Sn**	**06 47 47.2**	**-3.4**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**06 48 10.0**	**+0.6**
	comp=E,4.1nm,0.5s						
AVF	**Avril sur Loir**	**3.95**	**204**	*e*Pg	**Pg**	**06 47 23.0**	**+0.3**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**06 47 51.4**	**-2.6

GRR				*e*Sg	**Sg**	**06 48 39.2**	**-0.2**
	comp=E,1.9nm,0.2s,SNR=1.0							
MFF	**Saint Martin d**	**5.45**	**228**	*e*Pn	**Pn**	**06 47 28.0**	**-0.3**
	SNR=1.0							
MFF				*e*Sn	**Sn**	**06 48 25.6**	**-5.4**
	comp=E,1.9nm,0.2s,SNR=1.0							
MFF	**Saint Martin d**	**5.45**	**228**	*e*Pn	**Pn**	**06 47 28.0**	**-0.3**
	SNR=1.0							
MFF				*e*Sn	**Sn**	**06 48 25.6**	**-5.4**
	comp=E,0.9nm,0.2s,SNR=1.0							
ORIF	**Oris-en-Rattie**	**5.50**	**179**	*e*Pn	**Pn**	**06 47 29.1**	**+0.1**
ORIF				*e*Sn	**Sn**	**06 48 28.0**	**-4.2**
	comp=E,2.4nm,0.4s							
VIVF	**Saint-Julien-l**	**5.60**	**188**	*e*Pn	**Pn**	**06 47 30.6**	**+0.2**
VIVF				*e*Sn	**Sn**	**06 48 30.2**	**-4.6**
	comp=E,2.3nm,0.5s,SNR=1.0							
VIVF	**Saint-Julien-l**	**5.60**	**188**	*e*Pn	**Pn**	**06 47 30.6**	**+0.2**
VIVF				*e*Sn	**Sn**	**06 48 30.2**	**-4.6**
	comp=E,1.1nm,0.5s,SNR=1.0							
SGMF	**Saint Gilles**	**5.82**	**251**	*e*Pn	**Pn**	**06 47 32.1**	**-1.3**
SGMF				*e*Sn	**Sn**	**06 48 35.1**	**-5.1**
ROSF	**Rostrenen**	**6.23**	**254**	*e*Pn	**Pn**	**06 47 37.0**	**-2.0**
ROSF				*e*Sn	**Sn**	**06 48 44.3**	**-5.8**
QUIF	**Quistinic**	**6.34**	**250**	*e*Pn	**Pn**	**06 47 39.1**	**-1.4**
LASF	**Ste Croix**	**6.46**	**192**	*e*Pn	**Pn**	**06 47 42.7**	**+0.5**

RSPR 31 06:52:46.5,1912N×6918W,h15km±15km,MD3.8/7,2C-6D,
Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**0.38**	**210**	∥*i*P	Pg	06 52 54.0	-0.2
DR12				*e*S	Sg	06 52 59.3	-0.2
STDO	**Santo Domingo**	**0.97**	**227**	∥*e*P	Pb	06 53 03.1	-1.9
STDO				*e*S	Sb	06 53 16.0	-1.5
SDDR	**Presa de Saban**	**2.00**	**267**	∥*e*P	Pn	06 53 19.6	-0.1
SDDR	**Presa de Saban**	**2.00**	**267**	*e*S	Sn	06 53 45.7	+1.2
LSP	**Las Mesas**	**2.19**	**115**	∥*e*P	Pn	06 53 27.0	+4.7
CRPR	**Cabo Rojo, PR**	**2.25**	**119**	∥*e*P	Pn	06 53 27.9	+4.8
LRS	**Lares**	**2.36**	**110**	∥*e*P	Pn	06 53 31.9	+7.2
CBYP	**Canovanas**	**3.26**	**104**	∥*e*P	Pn	06 53 38.1	+1.1
HUMP	**Col San Antoni**	**3.30**	**107**	∥*e*P	Pn	06 53 41.1	+3.5
HUMP	**Col San Antoni**	**3.30**	**107**	*e*S	Sn	06 54 17.1	+0.6

IDC ***31*** *07:31:33.6±0.9,2047S×16897E,h0km,mb4.4/9, mb1 4.5/10,mb1mx4.5/14,mbtmp4.4/10,ML3.7/1,MS4.0/12, Ms1 4.0/12,ms1mx3.8/25,Error ellipse: s-maj=31.3km s-min=18.8km az=143.0*

ISCJB ***31*** *07:31:35.6±0.3,2062S±007×16896E±006,h22km, mb4.7/34,MS4.1/14,Error ellipse: s-maj=10.4km s-min=6.1km az=147.1*

LDG ***31*** *07:31:35.5±0.0,2019S×16868E,h10km,Mb4.8/2,Error ellipse: s-maj=4.6km s-min=0.8km az=128.0*

GCMT ***31*** *07:31:36.4±0.4,2050S×16872E,h22km±1km,MW4.9/44, Moment Tensor Solution. s26,c29; s44,c56; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.35±.18; $M_{\theta\theta}$0.12±.13; $M_{\phi\phi}$-2.48±.12; $M_{r\theta}$0.16±.24; $M_{\theta\phi}$0.75±.09; $M_{\phi r}$-1.08±.18; Best double couple: $M_0$2.74200×10^{16} NP1:ϕ_s342.00000°,δ33.00000°,λ85.00000°. NP2: ϕ_s168.00000°,δ57.00000°,λ94.00000°. Principal axes: T 2.5800, Plg78.0000°, Azm90.0000°; N 0.3160, Plg3.0000°, Azm346.0000°; P -2.9030, Plg12.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BGS ***31*** *07:31:36.3,2050S×16898E,h18km,mb4.9(NEIC)*

NEIC ***31*** *07:31:36.4±0.4,2050S×16898E,mb4.9/16,Error ellipse: s-maj=15.5km s-min=7.7km az=148.0*

BJI ***31*** *07:31:36.3,2050S×16900E,h18km,mB5.0,mb4.9,Ms5.2, Msz4.8*

SZGRF ***31*** *07:31:37.6,2036S×16958E,h33km, Vanuatu Islands*

MOS ***31*** *07:31:37.7±1.5,2053S×16890E,h33km,mb5.0/9,Error ellipse: s-maj=15.3km s-min=12.4km az=156.8*

ISC 31 07:31:37.4±0.3,2061S±006×16898E±006,h23km,
h23km±1.9km:pP-P,n153,σ1§23/72,mb4.7/34,MS4.1/14,
1C-1D,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.77**	**238**	Pn	**Pn**	**07 32 18.7**	**-1.8**
	11nm,0.3s,baz=62,slow=18,SNR=220						
DZM				Sn	**Sn**	**07 32 50.9**	**-2.4**
	65nm,0.3s,baz=326,slow=21,SNR=12						
DZM				LR	LR	07 33 19.4	
	comp=Z,3μm,18.0s,baz=264,slow=37						
RAO	**Raoul Island**	**14.66**	**128**	LR	LR	07 39 18.6	
	comp=Z,285nm,18.5s,baz=337,slow=32						
EIDS	**Eidsvold**	**17.14**	**251**	*e*Pn	**Pn**	**07 35 36.5**	**+0.9**
	44nm,1.8s						
ARMA	**Armidale**	**18.43**	**235**	*e*P	**Pn**	**07 35 51.5**	**0.0**
URZ	**Urewera**	**18.94**	**160**	P	**Pn**	**07 36 03.6**	**+6.1**
	0.9nm,0.3s,baz=292,slow=4.1,SNR=8.1						
URZ				LR	LR	07 42 18.4	
	comp=Z,664nm,19.1s,baz=35,slow=34						
AFI	**Afiamalu**	**19.54**	**73**	P	**Pn**	**07 36 02.9**	**-2.0**
	12nm,0.5s						
AFI				*e*pP		07 36 08.3	
AFI	**Afiamalu**	**19.54**	**73**	P	**Pn**	**07 36 02.9**	**-2.0**
AFI				pmax	pmax		
	comp=Z,12nm,0.5s						
CTA	**Charters Tower**	**21.32**	**267**	*e*P	**P**	**07 36 24.0**	**+1.2**
	comp=Z,13nm,1.2s,mb4.1						
CTA				*e*sP	sP	07 36 32.9	+0.7
CTA				*e*S	**S**	**07 40 24.8**	**+6.2**
CTA	**Charters Tower**	**21.32**	**267**	*e*P	**P**	**07 36 24.0**	**+1.2**
CTA				*e**SP	sP	07 36 32.9	+0.7
CTA				*e*S	**S**	**07 40 24.8**	**+6.2**
CTA				pmax	pmax		
	comp=Z,13nm,1.2s						
CTA	**Charters Tower**	**21.32**	**267**	P	**P**	**07 36 23.9**	**+1.1**
	comp=Z,6.3nm,0.7s,mb4.1,baz=78,slow=15,SNR=8.2						
CTA				LR	LR	07 44 08.6	
	comp=Z,372nm,18.7s,MS3.8,baz=92,slow=35						
CTAO	**Charters Tower**	**21.32**	**267**	*e*P	**P**	**07 36 24.1**	**+1.3**
	comp=Z,45nm,1.0s,mb4.8						
CTAO	**Charters Tower**	**21.32**	**267**	*e*P	**P**	**07 36 24.1**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,45nm,1.0s,mb4.8						
CNB	**Canberra Magne**	**22.63**	**226**	*e*P	**P**	**07 36 39.4**	**+2.7**
	comp=Z,60nm,1.8s,mb4.7						
CNB				*e*pP		07 36 44.4	
RPZ	**Rata Peaks**	**23.10**	**176**	LR	LR	07 45 05.5	
	comp=Z,483nm,18.8s,MS4.0,baz=175,slow=35						
STKA	**Stephens Creek**	**26.93**	**240**	*e*P	**P**	**07 37 17.8**	**+0.8**
	comp=Z,6.9nm,0.6s,mb4.4						
STKA				*e*sP	sP	07 37 27.9	+1.1
STKA	**Stephens Creek**	**26.93**	**240**	P	**P**	**07 37 17.8**	**+0.7**
	comp=Z,10nm,0.8s,mb4.4,baz=74,slow=8.9,SNR=22						
STKA				LR	LR	07 46 39.7	
	comp=Z,415nm,20.3s,MS4.0,baz=30,slow=34						
RAR	**Rarotonga**	**29.17**	**97**	LR	LR	07 46 03.9	
	comp=Z,211nm,18.6s,MS3.8,baz=241,slow=30						
WB2	**Warramunga Arr**	**32.46**	**265**	*e*P	**P**	**07 38 04.5**	**-1.7**
WB2				*e*pP	pP	07 38 09.5	-3.7
WB2				*e*sP	sP	07 38 14.8	-1.2
WRA	**Warramunga Arr**	**32.47**	**265**	P	**P**	**07 38 05.0**	**-1.3**
	comp=Z,1.6nm,0.5s,mb4.1,baz=86,slow=6.1,SNR=40						
WRA				LR	LR	07 51 35.1	
	comp=Z,415nm,18.1s,MS4.2,baz=95,slow=37						
ASAR	**Alice Springs**	**32.59**	**258**	P	**P**	**07 38 06.5**	**-0.8**
	comp=Z,9.5nm,0.6s,mb4.9,baz=84,slow=9.3,SNR=185						
KAKA	**Kakadu**	**35.81**	**277**	*e*P	**P**	**07 38 34.7**	**-0.7**
	comp=Z,20nm,1.0s,mb5.0						
PPT	**Papeete**	**39.21**	**93**	*e*S	**S**	**07 45 01.6**	**-1.8**
	comp=Z,120nm,24.9s						
PPT				*e*LR	LR	07 49 44.2	
	comp=Z,326nm,27.0s						
PPT	**Papeete**	**39.21**	**93**	LR	LR	07 50 35.6	
	comp=Z,161nm,21.6s,MS3.8,baz=257,slow=29						
FITZ	**Fitzroy Crossi**	**40.88**	**266**	*e*P	**P**	**07 39 17.9**	**-0.1**
	comp=Z,14nm,0.6s,mb4.8						
FITZ				*e*pP	pP	07 39 22.5	-2.6
FITZ				*e*sP	sP	07 39 28.2	+0.3
FITZ	**Fitzroy Crossi**	**40.88**	**266**	P	**P**	**07 39 18.1**	**+0.1**
	comp=Z,7.5nm,0.7s,mb4.5,baz=132,slow=9.4,SNR=21						
FITZ				LR	LR	07 56 54.6	
	comp=Z,133nm,18.5s,MS3.8,baz=253,slow=37						
BATI	**Kupang**	**44.76**	**276**	LR	LR	07 58 39.5	
	comp=Z,279nm,20.1s,MS4.2,baz=272,slow=36						
MBWA	**Marble Bar**	**45.87**	**260**	*e*P	**P**	**07 39 58.3**	**0.0**
NWAO	**Narrogin (SRO)**	**47.38**	**244**	*e*P	**P**	**07 40 09.2**	**-0.8**
	comp=Z,13nm,0.9s,mb4.9						
NWAO	**Narrogin (SRO)**	**47.38**	**244**	*e*P	**P**	**07 40 09.2**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,13nm,0.9s						
TAOE	**Nuku Hiva Isla**	**50.38**	**84**	*e*S	**S**	**07 47 47.8**	**+2.4**
	comp=Z,329nm,25.0s						
TAOE				*e*LR	LR	07 54 53.7	
	comp=Z,429nm,24.6s						
VNDA	**Vanda**	**57.06**	**182**	P	**P**	**07 41 22.2**	**+1.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=360,slow=8.1,SNR=5.1						
SBA	**Scott Base**	**57.30**	**181**	*e*P	**P**	**07 41 24.0**	**+1.1**
	comp=Z,43nm,1.6s,mb5.2						
SBA				*e*pP	pP	07 41 33.5	+3.3
SBA	**Scott Base**	**57.30**	**181**	*e*P	**P**	**07 41 24.0**	**+1.1**
SBA				*e**PP	pP	07 41 33.5	+3.3
SBA				pmax	pmax		
	comp=Z,43nm,1.6s,mb5.2						
MJAR	**Matsushiro Arr**	**63.85**	**333**	P	**P**	**07 42 05.8**	**-2.3**
	comp=Z,2.7nm,0.7s,mb4.4,baz=168,slow=7.7,SNR=7.9						
MAT	**Matsushiro**	**63.85**	**333**	P	**P**	**07 42 08.1**	**0.0**
QSPA	**South Pole Qui**	**69.45**	**180**	*e*P	**P**	**07 42 44.1**	**+0.8**
	comp=Z,15nm,0.9s,mb4.9						
NJ2	**Nanjing**	**71.03**	**316**	*e*P	**P**	**07 42 54.5**	**+0.9**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3						
YSS	**Yuzh-Sakhalins**	**71.30**	**341**	*e*P	**P**	**07 42 55.6**	**+0.7**
	comp=Z,30nm,1.3s,mb5.1						
YSS	**Yuzh-Sakhalins**	**71.30**	**341**	*e*P	**P**	**07 42 54.1**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
PSI	**Prapat**	**72.41**	**280**	LR	LR	08 16 39.2	
	comp=Z,100nm,18.0s,MS4.1,baz=340,slow=37						
MDJ	**Mudanjiang**	**74.21**	**332**	P	**P**	**07 43 12.8**	**+0.6**
MDJ				S	S	07 52 48.0	+3.6
MDJ				SCS	ScS	07 53 22.5	+1.2
MDJ				SS	SS	07 57 30.3	-0.4
MDJ				AMB	AMB		
	comp=Z,9.0nm,1.1s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,122nm,3.9s						
CN2	**Changchun**	**75.50**	**329**	*e*P	**P**	**07 43 20.3**	**+0.6**
CN2				*e*XP	sP	07 43 31.5	+1.5
CN2				*e*S	S	07 52 59.5	+0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
GYA	**Guiyang**	**76.41**	**305**	P	**P**	**07 43 27.0**	**+1.7**
GYA				AP	pP	07 43 34.8	+2.0
GYA				XP	sP	07 43 37.0	+1.5
GYA				PCP	PcP	07 43 39.3	+2.3
GYA				PP	PP	07 46 21.0	+3.6
GYA				S	S	07 53 10.8	+1.3
GYA				XS	sS	07 53 22.5	+0.6
GYA				SKS		07 53 32.5	
GYA				SCS	ScS	07 53 38.5	-1.3
GYA				SS	SS	07 58 08.3	+3.6
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,480nm,18.8s,MS5.0						
GYA				LR	LR		
	comp=E,410nm,18.4s,MS5.0						
GYA				LR	LR		
	comp=Z,570nm,19.6s,MS4.9						
KLR	**Kul^{l}dur**	**77.02**	**336**	*e*P	**P**	**07 43 21.4**	**-6.8**
BJI	**Beijing**	**77.85**	**321**	P	**P**	**07 43 32.3**	**-0.8**
BJI				AMB	AMB		
	comp=Z,7.0nm,0.8s,mb4.6						
FALS	**False Pass**	**78.79**	**16**	*e*P	**P**	**07 43 34.9**	**-3.0**
KMI	**Kunming**	**78.79**	**302**	P	**P**	**07 43 41.8**	**+3.1**
KMI				AMB	AMB		
	comp=Z,8.0nm,1.1s,mb4.6						
CD2	**Chengdu**	**80.88**	**308**	*e*P	**P**	**07 43 51.8**	**+1.9**
CD2				AP	pP	07 43 58.0	+0.6
CD2				XP	sP	07 44 01.3	+1.2
CD2				PP	PP	07 46 59.0	+4.3
CD2				S	S	07 53 58.5	+1.3
CD2				XS	sS	07 54 09.0	-0.7
CD2				SS	SS	07 59 16.0	+4.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CD2				AMB	AMB		
	comp=Z,20nm,5.8s						
CD2				LR	LR		
	comp=N,190nm,14.4s						
CD2				LR	LR		
	comp=Z,120nm,12.0s,MS4.5						
HHC	**Hu-ho-hao-te**	**81.10**	**320**	*e*P	**P**	**07 43 52.8**	**+2.0**
HHC				AP	pP	07 44 00.8	+2.5
HHC				XP	sP	07 44 03.8	+2.7
HHC				PP	PP	07 47 01.3	+4.9
HHC				S	S	07 54 00.8	+1.7
HHC				SKS		07 54 06.5	
HHC				XS	sS	07 54 14.3	+2.7
HHC				SS	SS	07 59 21.0	+6.2
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC				LR	LR		
	comp=N,145nm,27.4s,MS4.4						
HHC				LR	LR		
	comp=E,174nm,27.4s,MS4.4						
HHC				LR	LR		
	comp=Z,82nm,28.9s,MS3.9						
LZH	**Lanzhou**	**83.47**	**312**	*e*P	**P**	**07 44 05.0**	**+1.7**
LZH				AP	pP	07 44 09.5	-1.4
LZH				XP	sP	07 44 12.3	-1.3
LZH				AMB	AMB		
	comp=Z,16nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,76nm,5.1s						
SYO	**Syowa Base**	**83.55**	**196**	∥*e*P	**P**	**07 44 03.6**	**+0.3**
SYO	**Syowa Base**	**83.55**	**196**	∥*e*PcP	PcP	07 44 06.6	-0.9
SLKM	**Skilak Lake**	**87.32**	**19**	P	**P**	**07 44 21.9**	**0.0**
SNAA	**Sanae**	**87.79**	**183**	*e*P	**P**	**07 44 24.0**	**-0.3**
SNAA				*e*		07 44 28.4	
SNAA				*e*	pP	07 44 32.1	+0.2
SNAA				*e*		07 44 37.1	
SNAA				*e*		07 44 39.4	
SNAA				*e*		07 44 43.3	
SNAA				*e*		07 44 45.4	
SNAA				*e*		07 44 53.8	
SNAA				*e*		07 44 58.8	
SNAA				*e*		07 45 04.1	
SNAA				*e*		07 45 07.0	
SNAA				*e*		07 45 10.2	
GTA	**Gaotai**	**87.89**	**314**	*e*P	**P**	**07 44 25.5**	**+0.3**
GTA				AP	pP	07 44 33.8	+1.0
GTA				XP	sP	07 44 37.3	+1.8
GTA				PP	PP	07 47 54.8	+3.0
GTA				S	S	07 55 06.0	-0.9
GTA				XS	sS	07 55 18.3	-1.2
GTA				SS	SS	08 00 56.8	+1.7
GTA				AMB	AMB		
	comp=Z,3.0nm,0.8s,mb4.6						
GTA				AMB	AMB		
	comp=Z,43nm,7.3s						
GTA				LR	LR		
	comp=N,101nm,20.3s,MS4.6						
GTA				LR	LR		
	comp=E,182nm,18.0s,MS4.6						
GTA				LR	LR		
	comp=Z,122nm,16.8s,MS4.4						
SONM	**Songino Array**	**88.17**	**323**	P	**P**	**07 44 27.4**	**+1.1**
	comp=Z,2.3nm,0.9s,mb4.4,baz=139,slow=5.6,SNR=9.0						
VNA3	**Neumayer Olymp**	**88.39**	**180**	*e*P	**P**	**07 44 27.0**	**-0.1**
VNA3				*e*	pP	07 44 32.1	-2.6
VNA3				*e*	pP	07 44 35.4	+0.7
VNA3				*e*		07 44 40.7	
VNA3				*e*		07 44 42.6	
VNA3				*e*		07 44 46.5	
VNA3				*e*		07 44 49.0	
VNA3				*e*		07 44 57.1	
VNA3				*e*		07 45 02.0	
VNA3				*e*		07 45 07.4	
VNA3				*e*		07 45 11.4	
VNA3				*e*		07 45 15.1	
YBH	**Yreka Blue Hor**	**88.45**	**44**	*e*P	**P**	**07 44 28.0**	**+0.2**
	comp=Z,56nm,2.2s,mb5.4						
YBH	**Yreka Blue Hor**	**88.45**	**44**	*e*P	**P**	**07 44 28.0**	**+0.2**
YBH				pmax	pmax		
	comp=Z,56nm,2.2s						
PMR	**Palmer**	**88.50**	**19**	*e*P	**P**	**07 44 27.9**	**+0.4**
ISA	**Isabella**	**88.53**	**51**	*e*P	**P**	**07 44 27.6**	**-0.8**
VNA2	**Neumayer--Watz**	**88.67**	**181**	*e*P	**P**	**07 44 28.0**	**-0.5**
VNA2				*e*	pP	07 44 33.4	-2.7
VNA2				*e*	pP	07 44 36.2	+0.1
VNA2				*e*		07 44 41.5	
VNA2				*e*		07 44 44.2	
VNA2				*e*		07 44 48.5	
VNA2				*e*		07 44 50.0	
VNA2				*e*		07 44 59.1	
VNA2				*e*		07 45 04.0	
VNA2				*e*		07 45 09.7	
VNA2				*e*		07 45 13.9	
VNA2				*e*		07 45 17.1	
NVAR	**Mina Array Bea**	**89.89**	**49**	P	**P**	**07 44 34.4**	**-0.2**
	comp=Z,1.0nm,0.7s,mb4.3,baz=211,slow=5.9,SNR=9.1						
BOD	**Bodaibo**	**90.45**	**334**	*e*P	**P**	**07 44 35.0**	**-1.8**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.7						
TPNV	**Topopah Spring**	**90.71**	**51**	*e*P	**P**	**07 44 37.8**	**-0.7**
	comp=Z,2.0nm,0.6s,mb4.6						
TPNV	**Topopah Spring**	**90.71**	**51**	*e*P	**P**	**07 44 37.8**	**-0.7**
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
ZAK	**Zakamensk**	**91.26**	**324**	*e*P	**P**	**07 44 40.1**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.3						
WVOR	**Wild Horse Val**	**91.45**	**45**	*e*P	**P**	**07 44 41.6**	**-0.2**
	comp=Z,4.5nm,1.0s,mb4.8						
WVOR	**Wild Horse Val**	**91.45**	**45**	*e*P	**P**	**07 44 41.6**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.8						
TLY	**Talaya**	**91.75**	**326**	*e*P	**P**	**07 44 41.2**	**-1.7**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.5						
TUC	**Tucson**	**92.96**	**57**	*e*P	**P**	**07 44 52.5**	**+3.5**
TIXI	**Tiksi**	**96.03**	**348**	*e*P	**P**	**07 45 02.9**	**+0.7**
	comp=Z,31nm,2.5s,mb5.3						
TIXI	**Tiksi**	**96.03**	**348**	*e*P	**P**	**07 45 02.9**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,31nm,2.5s,mb5.3						
HRY	**Holter Researc**	**97.64**	**43**	*e*P	**P**	**07 45 08.7**	**-1.4**
PDAR	**Pinedale Array**	**97.72**	**47**	P	**P**	**07 45 13.6**	**+3.1**
	comp=Z,0.2nm,0.6s,mb3.9,baz=205,slow=4.0,SNR=3.0						
PDAR				PP	PP	07 49 08.7	-0.3
	comp=Z,0.2nm,0.3s,baz=243,slow=6.5,SNR=4.1						
WMQ	**Urumqi**	**97.98**	**314**	*e*P	**P**	**07 45 11.5**	**-0.1**
WMQ				AP	pP	07 45 18.3	-1.0
WMQ				XP	sP	07 45 21.0	-1.0
WMQ				AMB	AMB		
	comp=Z,4.0nm,0.6s,mb5.1						
WMQ				LR	LR		
	comp=N,53nm,22.3s						
WMQ				LR	LR		
	comp=Z,28nm,19.0s,MS3.8						
PHWY	**Pilot Hill**	**100.11**	**50**	*e*Pdif	Pdif	07 45 16.5	-4.6
YKA	**Yellowknife Ar**	**101.99**	**27**	P	Pdif	07 45 28.8	-0.7
YKA	**Yellowknife Ar**	**101.99**	**27**	P	Pdif	07 45 28.8	-0.7
	comp=Z,0.1nm,0.4s,baz=254,slow=4.2,SNR=3.5						
ARCES	**ARCESS Array B**	**126.33**	**345**	PKP	PKPdf	07 50 35.9	-1.6
ARCES	**ARCESS Array B**	**126.33**	**345**	PKP	PKPdf	07 50 35.9	-1.6
	comp=Z,6.5nm,1.0s,baz=17,slow=1.3,SNR=7.4						
AKASG	**Malin Array Be**	**136.45**	**323**	PKP	PKPdf	07 50 57.6	+0.4
	comp=Z,0.4nm,0.4s,baz=56,slow=2.2,SNR=3.1						
MCD	**Coleburn Disti**	**142.64**	**353**	*e*P	PKPdf	07 51 03.9	-4.4
DPC	**Dobruska-Polom**	**143.30**	**331**	*e*PKP	PKPdf	07 51 07.9	-1.8
PVCC	**Panska Ves**	**143.97**	**332**	*e*PKP	PKPdf	07 51 09.2	-1.6
BRG	**Berggiesshubel**	**143.98**	**333**	*e*PKPbc	PKPdf	07 51 08.0	-2.8
BRG	**Berggiesshubel**	**143.98**	**333**	*e*P	PKPdf	07 51 08.2	-2.6
	comp=Z,15nm,1.6s						
BRG				*e*		07 51 16.4	
	comp=Z,9.9nm,1.0s						
CLL	**Collm**	**144.05**	**334**	*e*PKP	PKPdf	07 51 10.0	-0.9
CLL				*ep*PKP	pPKPdf	07 51 18.0	-0.8
CLL	**Collm**	**144.05**	**334**	*e*PKPdf	PKPdf	07 51 10.0	-0.9
CLL				*ep*PKPdf	pPKPdf	07 51 18.0	-0.8
CLL				*e*(pPKiKP)		07 51 22.0	
CLL	**Collm**	**144.05**	**334**	*e*PKPbc	PKPdf	07 51 08.2	-2.7
PRU	**Pruhonice**	**144.37**	**331**	*e*PKiKP	PKPdf	07 51 18.1	+6.6
PRU	**Pruhonice**	**144.37**	**331**	*ep*PKP	pPKPdf	07 51 18.1	-1.3
CLZ	**Clausthal**	**144.65**	**337**	*e*PKPbc	PKPdf	07 51 11.0	-1.0
EKA	**Eskdalemuir Ar**	**144.83**	**352**	PKP	PKPdf	07 51 09.9	-2.3
	comp=Z,3.2nm,0.4s,baz=357,slow=2.8,SNR=28						
ESK	**Eskdalemuir**	**144.85**	**352**	*e*P	PKPdf	07 51 10.0	-2.2
NKC	**Novy Kostel**	**145.10**	**333**	*e*PKP	PKPdf	07 51 12.1	-0.7
MOX	**Moxa**	**145.12**	**335**	*e*PKP	PKPdf	07 51 11.9	-0.9
	comp=Z,32nm,1.4s						
MOX	**Moxa**	**145.12**	**335**	*e*PKPbc	PKPbc	07 51 11.8	-0.5
XAL	**Allendale**	**145.16**	**351**	*e*PKPbc	PKPbc	07 51 11.6	-0.7
IBBN	**Ibbenburen**	**145.17**	**340**	*e*PKPbc	PKPbc	07 51 11.8	-0.6
KHC	**Kasperske Hory**	**145.42**	**331**	*e*PKiKP	PKPdf	07 51 12.5	-0.9
KHC				*e*		07 51 21.8	
KHC	**Kasperske Hory**	**145.42**	**331**	*e*PKP	PKPdf	07 51 12.5	-0.9
KHC				*ep*PKP	pPKPdf	07 51 21.8	+0.6
KHC				*e*x	x	07 51 35.5	
GAL1	**Galloway**	**145.47**	**354**	*e*P	PKPdf	07 51 12.4	-0.8
GEC2	**GERESS Array S**	**145.57**	**331**	*e*PKPbc	PKPbc	07 51 13.0	-0.8
GERES	**GERESS Array B**	**145.57**	**331**	PKiKP	PKPdf	07 51 13.7	0.0
GERES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GERES	**GERESS Array B**	**145.57**	**331**	PKPbc	PKPbc	07 51 13.7	-0.1
	comp=Z,3.8nm,0.7s,baz=28,slow=3.2,SNR=21						
UBBA	**Unterbreizbach**	**145.61**	**336**	*e*PKPbc

LASF	**Ste Croix**	**153.53**	**335**	*e*PKP1	PKPbc	07 51 33.4	-0.7
LFF	**La Frestale**	**153.86**	**341**	*e*PKP1	PKPbc	07 51 34.0	-0.8

*IDC **31** 07:52:08.4±0.8, 2053N×120.12E, h0km, mb3.9/9, mb1 4.1/10, mb1mx4.0/19, mbtmp3.9/10, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/35, Error ellipse: s-maj=35.5km s-min=17.7km az=70.0*
*NEIC **31** 07:52:11.0±7.0, 2054N×120.13E, h17km±44km, Error ellipse: s-maj=22.7km s-min=10.8km az=69.0*
*ISCJB **31** 07:52:11.5±0.6, 2054N±005×120.1E±0.1, h33km, mb3.8/9, Error ellipse: s-maj=17.2km s-min=5.5km az=166.4*
*MAN **31** 07:52:12, 2045N×12004E, h53km, mb3.9, ML2.7, MS2.4*

ISC 31 07:52:13.4±0.6, 2055N±005×1202E±01, h35km, n16, σ0°79/20, mb3.8/9, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
PIP	**Pasuquin**	**2.25**	**169**	⇑*i*P		**Pn**	**07 52 46.4**	**-1.7**
PIP				*e*S		**Sn**	**07 53 11.9**	**-2.9**
APYP	**Conner**	**2.86**	**159**	*e*P		**Pn**	**07 52 56.3**	**-0.2**
SGCP	**Mt. Cagua**	**2.90**	**142**	*e*P		**Pn**	**07 52 56.9**	**-0.3**
CVP	**Callao Caves**	**3.24**	**151**	⇑*e*P		**Pn**	**07 53 02.5**	**+0.8**
CVP				*e*S		**Sn**	**07 53 40.0**	**+1.0**
NACB	**Ninganchiao**	**3.85**	**20**	*e*Pn		**Pn**	**07 53 09.5**	**-0.6**
NACB				*e*Sn		**Sn**	**07 53 48.9**	**-5.2**
YHNB	**Yeheng**	**4.25**	**15**	*e*Pn		**Pn**	**07 53 15.2**	**-0.4**
YHNB				*e*Sn		**Sn**	**07 53 59.4**	**-4.7**
KSRS	**Korea Array**	**18.15**	**20**	P		**Pn**	**07 56 22.3**	**-0.3**
	0.1nm,0.3s,baz=202,slow=11,SNR=5.6							
KSRS				LR		LR	08 03 28.0	
	comp=Z,18nm,18.7s,baz=165,slow=37							
MJAR	**Matsushiro Arr**	**22.42**	**41**	P		**P**	**07 57 09.4**	**+0.4**
	1.0nm,0.6s,mb3.4,baz=216,slow=10,SNR=4.0							
SONM	**Songino Array**	**29.41**	**341**	P		**P**	**07 58 13.7**	**+0.3**
	0.7nm,0.6s,mb3.5,baz=161,slow=6.3,SNR=5.8							
MKAR	**Makanchi Array**	**40.38**	**319**	P		**P**	**07 59 48.4**	**+0.6**
	1.4nm,0.8s,mb3.7,baz=116,slow=8.9,SNR=11							
WRA	**Warramunga Arr**	**42.57**	**160**	P		**P**	**08 00 05.9**	**-0.1**
	2.0nm,0.8s,mb3.9,baz=342,slow=9.1,SNR=9.6							
ZALV	**Zalesovo Beam**	**42.84**	**330**	P		**P**	**08 00 08.0**	**+0.2**
	3.1nm,0.7s,mb4.2,baz=116,slow=8.4,SNR=16							
ASAR	**Alice Springs**	**45.94**	**162**	P		**P**	**08 00 33.5**	**+0.6**
	0.8nm,0.8s,mb3.7,baz=345,slow=6.8,SNR=8.5							
FINES	**FINESS Array B**	**74.10**	**330**	P		**P**	**08 03 46.0**	**+0.3**
	2.5nm,0.8s,mb4.2,baz=96,slow=8.4,SNR=7.5							
NOA	**NORSAR Array B**	**80.98**	**332**	P		**P**	**08 04 23.8**	**-0.4**
	0.6nm,0.8s,mb3.6,baz=65,slow=5.3,SNR=2.7							
YKA	**Yellowknife Ar**	**86.68**	**22**	P		**P**	**08 04 53.8**	**+0.6**
	2.1nm,0.9s,mb4.4,baz=312,slow=4.8,SNR=32							

*NEIC **31** 07:52:56.1, 3169S×7196W, h33km±2km, MD3.8, ML3.1, 9C-1D, Near coast of central Chile*

GUC 31 07:52:56.1±0.8, 3169S×7196W, h33km±2km, MD3.8, ML3.1, 9C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CHNG	**Los Chungos**	**0.43**	**116**	⇓*i*P		Pb	07 52 48.0	-18
CHNG				*i* S		Sb	07 52 54.7	-18
PACH	**Papudo**	**0.95**	**153**	⇑*i*P		Pn	07 53 13.2	0.0
PACH				*i* S		Sn	07 53 26.6	+1.1
CMCH	**Combarbala**	**0.96**	**58**	⇑*i*P		Pn	07 53 13.2	-0.1
CMCH				*i* S		Sn	07 53 27.1	+1.2
CMCH	**Combarbala**	**0.96**	**58**	⇑*i*P		Pn	07 53 13.2	-0.1
CMCH				*i* S		Sn	07 53 27.1	+1.2
CMCH					AML	AML	07 53 27.8	
	comp=E,1μm,0.7s							
PTCH	**Petorca**	**1.04**	**123**	⇑*i*P		Pn	07 53 14.9	+0.6
PTCH				*i* S		Sn	07 53 28.5	+0.8
PTCH	**Petorca**	**1.04**	**123**	⇑*i*P		Pn	07 53 14.9	+0.6
PTCH				*i* S		Sn	07 53 28.5	+0.8
PTCH					AML	AML	07 53 30.4	
	comp=N,2μm,0.2s							
ROCH	**El Roble**	**1.51**	**148**	⇑*i*P		Pn	07 53 22.4	+1.6
ROCH				*i* S		Sn	07 53 42.6	+3.3
JACH	**Jahuel**	**1.52**	**131**	*e*P		Pn	07 53 22.8	+1.8
JACH				*i* S		Sn	07 53 42.7	+3.1
PEL	**Peldehue**	**1.80**	**144**	*e*P		Pn	07 53 26.3	+1.4
PEL					AML	AML	07 53 54.9	
	comp=E,405nm,0.1s							
TLL	**Tololo Astrono**	**1.81**	**33**	*e*P		Pn	07 53 27.2	+2.3
TLL				*i* S		Sn	07 53 50.5	+3.7
TLL	**Tololo Astrono**	**1.81**	**33**	*e*P		Pn	07 53 27.2	+2.3
TLL				*i* S		Sn	07 53 50.5	+3.7
TLL					AML	AML	07 54 01.5	
	comp=N,213nm,0.5s							
RCDM	**Rinconada Maip**	**2.04**	**152**	⇑*i*P		Pn	07 53 29.3	+1.3
RCDM				*i* S		Sn	07 53 54.8	+2.4
RCDM	**Rinconada Maip**	**2.04**	**152**	⇑*i*P		Pn	07 53 29.3	+1.3
RCDM				*i* S		Sn	07 53 54.8	+2.4
RCDM					AML	AML	07 54 02.1	
	comp=E,129nm,0.4s							
CLCH	**Cerro Calan**	**2.08**	**145**	⇑*i*P		Pn	07 53 30.2	+1.6
CLCH				*i* S		Sn	07 53 56.4	+3.0
CLCH					AML	AML	07 54 04.0	
	comp=N,254nm,0.6s							
TACH	**Talagante**	**2.14**	**157**	*e*P		Pn	07 53 31.1	+1.7
FCH	**Farellones**	**2.15**	**140**	*e*P		Pn	07 53 31.6	+1.9
FCH				*i* S		Sn	07 53 58.7	+3.4
FCH					AML	AML	07 54 05.5	
	comp=E,94nm,0.5s							
PCH	**Pirque**	**2.28**	**148**	*e*P		Pn	07 53 33.2	+1.9
LMEL	**Las Melosas**	**2.61**	**146**	*e*P		Pn	07 53 37.8	+1.9
LMEL				*i* S		Sn	07 54 09.6	+3.2
LMEL	**Las Melosas**	**2.61**	**146**	*e*P		Pn	07 53 37.8	+1.9
LMEL				*i* S		Sn	07 54 09.6	+3.2
LMEL					AML	AML	07 54 20.9	
	comp=N,112nm,0.2s							

*NEIC **31** 08:02:33.7, 3164S×7189W, h30km, ML2.9(GUC), After GUC.*

GUC 31 08:02:33.7±0.9, 3164S×7189W, h30km±4km, MD3.8, ML2.9, 6C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
CHNG	**Los Chungos**	**0.41**	**127**	⇓*i*P		Pb	08 02 24.8	-18
CHNG				*i* S		Sb	08 02 31.1	-18
CMCH	**Combarbala**	**0.89**	**59**	⇑*i*P		Pn	08 02 49.7	-0.5
CMCH				*i* S		Sn	08 03 02.3	+0.4
CMCH	**Combarbala**	**0.89**	**59**	⇑*i*P		Pn	08 02 49.7	-0.5
CMCH				*i* S		Sn	08 03 02.3	+0.4
CMCH					AML	AML	08 03 03.7	
	comp=E,1μm,0.7s							
PACH	**Papudo**	**0.98**	**157**	*e*P		Pn	08 02 51.4	0.0
PACH				*i* S		Sn	08 03 04.5	+0.3
JACH	**Jahuel**	**1.52**	**134**	*e*P		Pn	08 03 00.5	+1.7
JACH				*i* S		Sn	08 03 19.7	+2.2
ROCH	**El Roble**	**1.52**	**151**	*e*P		Pn	08 03 00.5	+1.6
TLL	**Tololo Astrono**	**1.74**	**33**	⇑*i*P		Pn	08 03 04.0	+2.3
TLL				*i* S		Sn	08 03 28.1	+5.2
TLL	**Tololo Astrono**	**1.74**	**33**	⇑*i*P		Pn	08 03 04.0	+2.3
TLL				*e*S		Sn	08 03 28.1	+5.2
TLL					AML	AML	08 03 34.1	
	comp=E,229nm,0.6s							
PEL	**Peldehue**	**1.81**	**146**	⇑*i*P		Pn	08 03 04.4	+1.5
PEL				*i* S		Sn	08 03 28.1	+3.2
PEL					AML	AML	08 03 33.5	
	comp=E,188nm,0.3s							
RCDM	**Rinconada Maip**	**2.06**	**154**	*e*P		Pn	08 03 07.3	+1.1
RCDM				*i* S		Sn	08 03 33.6	+2.7
CLCH	**Cerro Calan**	**2.09**	**147**	*e*P		Pn	08 03 08.0	+1.3
CLCH				*i* S		Sn	08 03 34.1	+2.4
CLCH					AML	AML	08 03 38.2	
	comp=N,114nm,0.4s							
FCH	**Farellones**	**2.16**	**142**	*e*P		Pn	08 03 09.4	+1.7
FCH				*i* S		Sn	08 03 37.1	+3.7
FCH					AML	AML	08 03 43.0	
	comp=E,54nm,0.2s							
TACH	**Talagante**	**2.17**	**158**	⇑*i*P		Pn	08 03 09.3	+1.6
TACH				*i* S		Sn	08 03 36.2	+2.7
ANTU	**Antumapu**	**2.20**	**152**	*e*P		Pn	08 03 09.3	+1.1
ANTU				*i* S		Sn	08 03 36.7	+2.4
ANTU	**Antumapu**	**2.20**	**152**	*e*P		Pn	08 03 09.3	+1.1
ANTU				*i* S		Sn	08 03 36.7	+2.4
ANTU					AML	AML	08 03 47.2	
	comp=E,70nm,0.5s							
LMEL	**Las Melosas**	**2.62**	**148**	*e*P		Pn	08 03 15.7	+1.7
LMEL				*i* S		Sn	08 03 47.8	+3.0
LMEL	**Las Melosas**	**2.62**	**148**	*e*P		Pn	08 03 15.7	+1.7
LMEL				*i* S		Sn	08 03 47.8	+3.0
LMEL					AML	AML	08 03 59.5	
	comp=N,76nm,0.1s							

*LDG **31** 08:08:38.8±0.2, 2021S×16933E, h10km, Mb5.1/3, Error ellipse: s-maj=16.7km s-min=4.7km az=135.0*
*BJI **31** 08:08:38.4, 2071S×170.17E, h35km, mB5.2, mb5.0, Ms5.2, Msz4.8*
*SZGRF **31** 08:08:39.6, 21.15S×170.27E, h37km, Southeast of Loyalty Islands*
*MOS **31** 08:08:40.5±1.2, 2068S×16948E, h33km, mb5.1/13, Error ellipse: s-maj=13.4km s-min=11.5km az=30.4*
*ISCJB **31** 08:08:40.7±0.3, 2074S±005×16948E±005, h36km, mb4.8/39, MS4.2/16, Error ellipse: s-maj=8.5km s-min=6.1km az=145.4*
*BGS **31** 08:08:42.7, 2058S×16950E, h33km, mb4.8(NEIC)*
*IDC **31** 08:08:42.9±2.1, 2072S×16943E, h42km±16km, mb4.3/14, mb1 4.5/16, mb1mx4.5/18, mbtmp4.4/16, ML4.2/2, MS3.8/14, Ms1 3.8/14, ms1mx3.7/21, Error ellipse: s-maj=17.9km s-min=14.8km az=135.0*
*NEIC **31** 08:08:42.7±0.3, 2058S×16950E, mb4.8/17, Error ellipse: s-maj=11.9km s-min=7.5km az=152.0*

ISC 31 08:08:42.5±0.3, 2077S±006×16951E±005, h38km, h38km±1.7km:pP-P, n247, σ1°20/77, mb4.8/39, MS4.2/16, 18C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
DZM	**Mont Dzumac**	**3.13**	**245**	P		**Pn**	**08 09 28.2**	**-1.1**
	29nm,0.3s,baz=66,slow=17,SNR=116							
DZM				S		**Sn**	**08 10 04.2**	**-1.4**
	46nm,0.3s,baz=151,slow=23,SNR=5.9							
DZM				LR		LR	08 10 21.4	
	comp=Z,513nm,21.6s,baz=17,slow=32							
HNR	**Honiara**	**14.56**	**319**	LR		LR	08 16 57.5	
	comp=Z,154nm,18.3s,baz=176,slow=34							
FUNA	**Funafuti**	**15.35**	**39**	*e*Pn		**Pn**	**08 12 13.9**	**-2.6**
	38nm,0.8s							
EIDS	**Eidsvold**	**17.56**	**251**	P		**Pn**	**08 12 47.5**	**+3.1**
	5.8nm,1.0s							
URZ	**Urewera**	**18.63**	**161**	P		**Pn**	**08 12 58.5**	**+1.2**
	1.0nm,0.3s,baz=333,slow=6.7,SNR=6.8							
URZ				LR		LR	08 19 05.2	
	comp=Z,257nm,18.7s,baz=202,slow=33							
ARMA	**Armidale**	**18.75**	**236**	*e*P		**Pn**	**08 13 01.8**	**+2.9**
AFI	**Afiamalu**	**19.11**	**72**	*e*P		**Pn**	**08 13 03.3**	**0.0**
SNZO	**South Karori**	**20.94**	**169**	P		**P**	**08 13 25.3**	**+3.4**
CTA	**Charters Tower**	**21.80**	**268**	*e*P		**P**	**08 13 33.1**	**+1.7**
	6.9nm,0.7s,mb4.2							
CTA	**Charters Tower**	**21.80**	**268**	*e*P		**P**	**08 13 33.1**	**+1.7**
CTA					pmax	pmax		
	comp=Z,7.0nm,0.7s							
CTA	**Charters Tower**	**21.80**	**268**	P		**P**	**08 13 32.2**	**+0.8**
	comp=Z,7.9nm,0.7s,mb4.2,baz=95,slow=11,SNR=17							
CTA				LR		LR	08 21 20.4	
	comp=Z,344nm,20.4s,MS3.8,baz=83,slow=35							
CTAO	**Charters Tower**	**21.80**	**268**	*e*P		**P**	**08 13 33.3**	**+1.9**
	comp=Z,7.5nm,0.9s,mb4.1							
CTAO	**Charters Tower**	**21.80**	**268**	*e*P		**P**	**08 13 33.3**	**+1.9**
CTAO					pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2							
RPZ	**Rata Peaks**	**22.91**	**177**	LR		LR	08 21 33.8	
	comp=Z,424nm,19.3s,MS3.9,baz=358,slow=34							
STKA	**Stephens Creek**	**27.28**	**240**	*e*P		**P**	**08 14 24.7**	**+1.3**
	comp=Z,3.4nm,0.6s,mb4.0							
STKA					*e*PCP	PcP	08 17 43.1	+0.6
STKA	**Stephens Creek**	**27.28**	**240**	P		**P**	**08 14 24.8**	**+1.4**
	comp=Z,3.4nm,0.6s,mb4.0,baz=82,slow=11,SNR=8.2							
STKA					PcP	PcP	08 17 42.9	+0.4
	comp=Z,4.4nm,0.8s,baz=34,slow=2.2,SNR=5.4							
STKA				LR		LR	08 24 48.1	
	comp=Z,359nm,19.2s,MS4.0,baz=22,slow=35							
WB2	**Warramunga Arr**	**32.94**	**265**	*e*P		**P**	**08 15 12.5**	**-1.1**
WB2					*e*PCP	PcP	08 17 57.3	-0.1
WRA	**Warramunga Arr**	**32.95**	**265**	P		**P**	**08 15 12.1**	**-1.6**
WRA							08 17 57.0	
WRA	**Warramunga Arr**	**32.95**	**265**	P		**P**	**08 15 12.1**	**-1.6**
	comp=Z,2.0nm,0.5s,mb4.3,baz=100,slow=7.9,SNR=29							
WRA					PcP	PcP	08 17 57.0	-0.4
	comp=Z,3.1nm,1.0s,baz=95,slow=2.5,SNR=7.6							
WRA				LR		LR	08 28 46.0	
	comp=Z,303nm,18.4s,MS4.0,baz=100,slow=37							
ASAR	**Alice Springs**	**33.04**	**258**	P		**P**	**08 15 14.2**	**-0.2**
	comp=Z,11nm,0.8s,mb4.8,baz=84,slow=9.1,SNR=77							
ASAR					PcP	PcP	08 17 57.2	-0.4
	comp=Z,4.0nm,0.8s,baz=108,slow=3.3,SNR=14							
KAKA	**Kakadu**	**36.32**	**277**	*e*P		**P**	**08 15 42.4**	**-0.5**
	comp=Z,5.2nm,0.6s,mb4.6							
TBI	**Tubuai**	**38.03**	**102**	*e*LR		LR	08 26 15.1	
	comp=Z,261nm,27.5s							
PPT	**Papeete**	**38.71**	**92**	*e*LR		LR	08 26 42.4	
	comp=Z,327nm,27.0s							
PPT	**Papeete**	**38.71**	**92**	LR		LR	08 28 37.9	
	comp=Z,90nm,18.9s,MS3.6,baz=251,slow=31							
FITZ	**Fitzroy Crossi**	**41.36**	**266**	*e*P		**P**	**08 16 25.2**	**+0.1**
	comp=Z,16nm,0.9s,mb4.7							
FITZ	**Fitzroy Crossi**	**41.36**	**266**	P		**P**	**08 16 25.0**	**-0.1**
	comp=Z,8.1nm,1.0s,mb4.3,baz=113,slow=12,SNR=9.8							
FITZ				LR		LR	08 33 08.4	
	comp=Z,191nm,18.9s,MS4.0,baz=107,slow=36							
BATI	**Kupang**	**45.27**	**276**	LR		LR	08 35 19.2	
	comp=Z,287nm,19.5s,MS4.2,baz=143,slow=35							
MBWA	**Marble Bar**	**46.33**	**260**	*e*P		**P**	**08 17 04.8**	**-0.2**
	comp=Z,22nm,1.0s,mb5.0							
KLBR	**Kellerberrin**	**47.30**	**246**	*e*P		**P**	**08 17 11.7**	**-0.8**
	comp=Z,12nm,0.5s,mb5.1							
KLBR					*e*pP	pP	08 17 24.3	+0.8
KLBR					*e*sP	sP	08 17 30.5	+2.5
TAOE	**Nuku Hiva Isla**	**49.90**	**84**	*e*LR		LR	08 31 50.7	
	comp=Z,569nm,26.4s							
VNDA	**Vanda**	**56.91**	**182**	P		**P**	**08 18 23.2**	**0.0**
	comp=Z,2.1nm,0.9s,mb4.2,baz=13,slow=7.5,SNR=10.0							
MJAR	**Matsushiro Arr**	**64.22**	**332**	P		**P**	**08 19 12.2**	**-1.4**
	comp=Z,11nm,0.8s,mb4.9,baz=168,slow=7.1,SNR=24							
MJAR					PcP	PcP	08 19 48.4	+0.3
	comp=Z,5.0nm,0.8s,baz=160,slow=3.6,SNR=4.7							
MAJO	**Matsushiro**	**64.22**	**332**	*e*P		**P**	**08 19 12.9**	**-0.6**
	comp=Z,32nm,1.2s,mb5.2							
MAJO					*e*pP	pP	08 19 22.1	-2.8
MAJO	**Matsushiro**	**64.22**	**332**	*e*P		**P**	**08 19 12.9**	**-0.6**
MAJO					*e**PP	pP	08 19 22.1	-2.8
MAJO					pmax	pmax		
	comp=Z,31nm,1.2s,mb5.2							
MAT	**Matsushiro**	**64.22**	**332**	P		**P**	**08 19 12.9**	**-0.6**
YHNB	**Yeheng**	**65.05**	**312**	*e*P		**P**	**08 19 18.7**	**-0.5**
JNU	**Nakatsue**	**65.06**	**325**	LR		LR	08 43 10.8	
	comp=Z,56nm,20.8s,MS3.7,baz=35,slow=32							
ASAJ	**Asahikawa**	**69.12**	**340**	P		**P**	**08 19 45.8**	**+1.2**
	comp=Z,17nm,0.8s,mb5.0,baz=225,slow=5.3,SNR=6.3							
ASAJ				LR		LR	08 48 29.5	
	comp=Z,71nm,18.4s,MS3.9,baz=24,slow=35							
QSPA	**South Pole Qui**	**69.29**	**180**	*e*P		**P**	**08 19 46.4**	**+1.2**
	comp=Z,38nm,0.8s,mb5.4							
KSRS	**Korea Array**	**69.91**	**326**	P		**P**	**08 19 50.0**	**+0.4**
	comp=Z,4.2nm,1.0s,mb4.3,baz=142,slow=6.2,SNR=6.4							
KSRS				LR		LR	08 48 14.7	
	comp=Z,45nm,18.4s,MS3.8,baz=147,slow=34							
NJ2	**Nanjing**	**71.48**	**316**	*e*P		**P**	**08 20 00.5**	**+1.2**
NJ2					AMB	AMB		
	comp=Z,20nm,0.5s,mb5.3							
YSS	**Yuzh-Sakhalins**	**71.60**	**341**	*e*P		**P**	**08 20 01.0**	**+1.3**
PSI	**Prapat**	**72.93**	**280**	P		**P**	**08 20 07.2**	**-1.3**
	comp=Z,3.1nm,0.5s,mb4.5,baz=135,slow=14,SNR=5.1							
PSI				LR		LR	08 53 49.0	
	comp=Z,74nm,18.8s,MS4.0,baz=22,slow=37							
MDJ	**Mudanjiang**	**74.58**	**332**	P		**P**	**08 20 18.0**	**+0.6**
MDJ					AP	pP	08 20 27.5	-1.5
MDJ					XP	sP	08 20 31.5	-1.8
MDJ					S	S	08 29 52.5	+2.3
MDJ					AMB	AMB		
	comp=Z,17nm,0.8s,mb5.0							
MDJ					AMB	AMB		
	comp=Z,46nm,3.2s							
MDJ					LR	LR		
	comp=N,109nm,3.9s							
MDJ					LR	LR		
	comp=E,102nm,3.3s							
MDJ					LR	LR		
	comp=Z,188nm,4.0s							
CN2	**Changchun**	**75.89**	**329**	⇑P		**P**	**08 20 25.0**	**+0.1**
CN2				*e*AP		pP	08 20 35.3	-1.2
CN2					AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2							
CN2					AMB	AMB		
	comp=Z,200nm,5.0s							
GYA	**Guiyang**	**76.90**	**305**	P		**P**	**08 20 32.8**	**+1.7**
GYA					AP	pP	08 20 42.8	+0.1
GYA					PCP	PcP	08 20 44.5	+2.4
GYA					XP	sP	08 20 46.8	-0.2
GYA					PP	PP	08 23 27.8	+3.1
GYA					S	S	08 30 17.3	+0.8
GYA					XS	sS	08 30 33.8	-2.0
GYA					SKS		08 30 37.5	
GYA					SCS	ScS	08 30 44.3	-0.9
GYA					SS	SS	08 35 16.8	+2.7
GYA					AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1							
GYA					AMB	AMB		
	comp=Z,120nm,5.6s							
GYA					LR	LR		
	comp=N,460nm,18.6s,MS5.0							
GYA					LR	LR		
	comp=E,430nm,18.9s,MS5.0							
GYA					LR	LR		
	comp=Z,470nm,19.0s,MS4.8							
MAW	**Mawson**	**77.12**	**202**	*e*P		**P**	**08 20 32.9**	**+1.3**
	comp=Z,6.8nm,0.7s,mb4.7							
MAW	**Mawson**	**77.12**	**202**	*e*P		**P**	**08 20 32.9**	**+1.3**
MAW					pmax	pmax		
	comp=Z,7.0nm,0.7s							
MAW	**Mawson**	**77.12**	**202**	P		**P**	**08 20 32.5**	**+0.9**
	comp=Z,5.7nm,0.8s,mb4.6,baz=93,slow=6.9,SNR=9.6							
KLR	**Kul'dur**	**77.36**	**336**	*e*P		**P**	**08 20 30.0**	**-3.1**
BJI	**Beijing**	**78.28**	**321**	P		**P**	**08 20 38.8**	**+0.3**
BJI					AMB	AMB		
	comp=Z,12nm,0.9s,mb4.8							
KMI	**Kunming**	**79.30**	**302**	P		**P**	**08 20 46.0**	**+1.6**
KMI					AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0							
CHTO	**Chiang Mai**	**79.52**	**295**	*e*P		**P**	**08 20 46.9**	**+1.2**
	comp=Z,6.2nm,0.7s,mb4.7							
CHTO					*e*pP	pP	08 21 00.7	+3.3
CHTO	**Chiang Mai**	**79.52**	**295**	*e*P		**P**	**08 20 46.9**	**+1.2**
CHTO					*e**PP	pP	08 21 00.7	+3.3
CHTO					pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6							
CD2	**Chengdu**	**81.37**	**308**	*e*P		**P**	**08 20 57.0**	**+1.6**
CD2					AP	pP	08 21 07.3	+0.2
CD2					XP	sP	08 21 11.8	+0.4
CD2					PP	PP	08 24 05.0	+3.1
CD2					S	S	08 31 04.3	+0.4
CD2					XS	sS	08 31 21.8	-1.5
CD2					SS	SS	08 36 24.0	+3.0
CD2					AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8							
CD2					AMB	AMB		
	comp=Z,30nm,4.8s							
CD2					LR	LR		
	comp=N,480nm,15.6s							
CD2					LR	LR		
	comp=Z,240nm,14.4s,MS4.7							
HHC	**Hu-ho-hao-te**	**81.54**	**319**	*e*P		**P**	**08 20 58.3**	**+2.2**
HHC					AP	pP	08 21 08.5	+0.7
HHC					XP	sP	08 21 12.5	+0.4
HHC					PP	PP	08 24 08.0	+4.9
HHC					S	S	08 31 07.5	+2.2
HHC					SKS		08 31 11.0	
HHC					XS	sS	08 31 24.0	-0.7
HHC					SS	SS	08 36 26.0	+2.7
HHC					AMB	AMB		
	comp=Z,16nm,0.9s,mb5.0							
HHC					AMB	AMB		
	comp=Z,145nm,7.6s							
HHC					LR	LR		
	comp=N,97nm,31.9s,MS4.4							
HHC					LR	LR		
	comp=E,233nm,30.4s,MS4.4							
HHC					LR	LR		
	comp=Z,87nm,25.9s,MS4.0							
SYO	**Syowa Base**	**83.54**	**196**	⇑*e*P		**P**	**08 21 04.8**	**-1.3**
SYO	**Syowa Base**	**83.54**	**196**	⇑*e*pP		pP	08 21 19.4	+1.5
LZH	**Lanzhou**	**83.94**	**312**	*e*P		**P**	**08 21 10.0**	**+1.3**
LZH					AP	pP	08 21 19.0	-1.4
LZH					XP	sP	08 21 23.5	-1.2
LZH					PP	PP	08 24 24.0	+1.1
LZH					*e*S	S	08 31 33.0	+3.1
LZH					SS	SS	08 36 59.0	0.0
LZH					AMB	AMB		
	comp=Z,24nm,1.1s,mb5.2							
LZH					AMB	AMB		
	comp=Z,129nm,5.2s							
LZH					LR	LR		
	comp=N,1μm,14.4s							
LZH					LR	LR		
	comp=Z,1μm,15.6s,MS5.4							
CLNS	**Chul'man**	**85.90**	**337**	*e*P		**P**	**08 21 16.7**	**-1.3**
CLNS					pmax	pmax		
	comp=N,12nm,0.9s							
CLNS					pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5							
CLNS					pmax	pmax		
	comp=E,6.0nm,0.7s							
CIT	**Chita**	**87.33**	**329**	*e*P		**P**	**08 21 24.8**	**-0.3**
CIT				*e*		pP	08 21 35.6	-1.3
CIT				*e*			08 21 43.4	
CIT					pmax	pmax		
	comp=Z,23nm,1.3s,mb5.2							
SNAA	**Sanae**	**87.65**	**182**	*e*P		**P**	**08 21 24.7**

comp=Z,4.6nm,0.8s,mb4.9
TPNV Topopah Spring 90.42 50 *e*P **P** **08 21 40.7 +0.6**
TPNV pmax pmax
comp=Z,5.0nm,0.8s,mb4.9
BOD Bodaibo 90.81 334 *e*P **P** **08 21 39.4 -2.0**
BOD pmax pmax
comp=Z,11nm,1.0s,mb5.1
ZAK Zakamensk 91.68 324⇑ *i*P **P** **08 21 45.1 -0.5**
ZAK pmax pmax
comp=Z,6.0nm,1.1s,mb4.8
TLY Talaya 92.16 325 *e*P **P** **08 21 47.6 -0.1**
comp=Z,6.4nm,0.7s,mb5.1
TLY *e*pP pP 08 21 58.9 -0.7
TLY Talaya 92.16 325 *e*P **P** **08 21 47.7 -0.1**
TLY *e**PP pP 08 21 58.9 -0.7
TLY pmax pmax
comp=Z,6.0nm,0.7s,mb5.0
TUC Tucson 92.63 57 *e*P **P** **08 21 51.0 +0.5**
EGAK Eagle 93.28 19 *e*P **P** **08 21 51.1 -1.5**
comp=Z,2.0nm,0.5s,mb4.8
EGAK *e*pP pP 08 22 04.0 -0.5
MOY Mondy 93.58 325 *e*P **P** **08 21 54.4 +0.1**
HRY Holter Researc 97.42 43 *e*P **P** **08 22 10.9 -1.1**
PDAR Pinedale Array 97.47 47 P **P** **08 22 12.0 -0.3**
comp=Z,0.4nm,0.8s,mb3.9,baz=222,slow=2.4,SNR=3.8
INK Inuvik 97.91 18 PKiKP PKiKP 08 26 45.1 -1.9
comp=Z,0.5nm,0.7s,baz=126,slow=2.6,SNR=6.9
RLMT Red Lodge 98.51 45 *e*P **P** **08 22 19.0 +2.1**
YKA Yellowknife Ar 101.91 27 P Pdif 08 22 30.5 -1.6
comp=Z,0.1nm,0.4s,baz=258,slow=5.1,SNR=7.7
YKA PKiKP PKiKP 08 26 51.7 -2.6
comp=Z,0.1nm,0.4s,baz=251,slow=1.7,SNR=5.3
MKAR Makanchi Array 103.00 315 P Pdif 08 22 37.0 +0.1
comp=Z,0.3nm,0.5s,baz=104,slow=5.4,SNR=3.4
ZALV Zalesovo Beam 103.48 323 Pdiff Pdif 08 22 37.6 -1.4
comp=Z,0.4nm,0.3s,baz=85,slow=3.3,SNR=3.7
ZAL Zalesovo 103.49 323 P Pdif 08 22 37.6 -1.5
MCWV Mont Chateau 118.61 55 *e*PKPdf PKPdf 08 27 28.1 +1.6
AKTK Aktyubinsk 119.36 317 PKP PKPdf 08 27 25.6 -1.9
AKTO Aktyubinsk 119.36 317 PKIKP PKPdf 08 27 25.7 -1.9
AKTO pmax pmax
comp=Z,1.0nm,0.6s
AKTO Aktyubinsk 119.36 317 PKP PKPdf 08 27 25.6 -1.9
comp=Z,1.1nm,0.6s,baz=135,slow=5.7,SNR=3.8
SDV Santo Domingo 120.96 92 *e*PKPdf PKPdf 08 27 30.7 -1.0
ARCES ARCESS Array B 126.61 345 PKP PKPdf 08 27 40.0 -0.9
comp=Z,4.9nm,0.5s,baz=72,slow=1.8,SNR=34
HUMP Col San Antoni 127.95 83 *e*PKPdf PKPdf 08 27 43.6 -1.4
JOF Joensuu 129.25 337 *e*pkp PKPdf 08 27 43.9 -2.2
KAF Kangasniemi 131.57 338 *e*pkp PKPdf 08 27 48.3 -2.2
FINES FINESS Array B 132.09 337 PKP PKPdf 08 27 48.8 -2.8
FINES SKPbc SKPbc 08 31 12.4 -2.6
FINES FINESS Array B 132.09 337 PKhKP 08 27 35.0
comp=Z,1.0nm,0.7s,baz=23,slow=6.2,SNR=4.7
FINES PKP PKPdf 08 27 48.8 -2.8
comp=Z,1.9nm,0.3s,baz=78,slow=2.3,SNR=17
FINES SKPbc SKPbc 08 31 12.4 -2.6
comp=Z,1.9nm,0.8s,baz=67,slow=4.3,SNR=5.9
AKASG Malin Array Be 136.87 324 PKP PKPdf 08 27 59.4 -1.4
AKASG Malin Array Be 136.87 324 PKP PKPdf 08 27 59.4 -1.4
comp=Z,0.3nm,0.3s,baz=44,slow=2.4,SNR=5.4
NB2 NORSAR Subarra136.98 345 PKPdf 08 27 50.6
comp=Z,1.4nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B 136.98 345 PKP PKPdf 08 27 59.8 -1.0
comp=Z,2.8nm,0.8s,baz=34,slow=2.0,SNR=10
HFS Hagfors 137.09 342 PKP PKPdf 08 27 59.0 -2.0
HFS Hagfors 137.09 342 PKhKP 08 27 47.3
comp=Z,1.1nm,0.6s,baz=96,slow=5.2,SNR=5.0
HFS PKP PKPdf 08 27 59.0 -2.0
comp=Z,1.3nm,0.6s,baz=90,slow=5.9,SNR=4.7
MLR Muntele Rosu 141.28 318 PKP PKPdf 08 28 07.9 -1.2
comp=Z,1.4nm,0.6s,baz=278,slow=10,SNR=3.1
KOLS Kolonicke sedl 141.62 325 *e*PKP PKPdf 08 28 05.3 -4.3
CRVS Cervenica-Dubn 142.08 325 *e*PKP PKPdf 08 28 09.6 -0.8
KECS Kecovo 142.85 325 *e*PKP PKPdf 08 28 07.7 -4.1
OKC Ostrava-Krasne 143.18 329 *e*PKP PKPdf 08 28 11.4 -0.9
KPL Plockton 143.31 356 *e*P PKPdf 08 28 07.8 -4.5
KPL AMb AMB 08 28 11.7
comp=Z,29nm,2.3s
MORC Moravsky Berou 143.51 329 *e*PKPdf PKPdf 08 28 09.4 -3.5
MORC Moravsky Berou 143.51 329⇑ *i*P PKPdf 08 28 09.8 -3.1
DPC Dobruska-Polom 143.68 331 *e*PKP PKPdf 08 28 10.6 -2.6
DPC *ex* x 08 28 21.4
VYHS Vyhne 143.70 327 *e*PKP PKPdf 08 28 11.5 -1.8
UPC Upice 143.71 331 *e*PKP PKPdf 08 28 10.7 -2.5
RZN Rozhen 143.74 313 *i* P PKPdf 08 28 10.5 -3.1
BZS Buzias 143.85 321⇑ *i*P PKPdf 08 28 11.3 -2.3
VRAC Vranov 144.28 329 PKP PKPdf 08 28 12.6 -1.6
comp=Z,12nm,0.7s,baz=60,slow=1.9,SNR=10
VRAC Vranov 144.28 329 *i*P PKPdf 08 28 12.4 -1.9
PVCC Panska Ves 144.34 332 *e*PKP PKPdf 08 28 12.5 -1.8
PVCC *ep*PKP pPKPdf 08 28 24.0 -2.5
BRG Berggiesshubel 144.35 333 *e*PKP PKPdf 08 28 12.2 -2.1
BRG Berggiesshubel 144.35 333⇑ *i*PKP PKPdf 08 28 12.4 -1.9
comp=Z,50nm,0.9s
VTS Vitosha 144.36 315 *i* P PKPdf 08 28 13.3 -1.3
VTS Vitosha 144.36 315⇓ *i*P PKPdf 08 28 13.2 -1.4
CLL Collm 144.41 335⇑ *i*PKP PKPdf 08 28 12.3 -2.1
CLL *i* 08 28 23.3
CLL Collm 144.41 335⇑ *i*PKPdf PKPdf 08 28 12.3 -2.1
comp=Z,39nm,0.7s
CLL *i* pPKPdf pPKPdf 08 28 23.3 -3.3
CLL Collm 144.41 335 *e*PKPbc PKPdf 08 28 12.1 -2.3
ESY Stoneypath 144.41 352 *e*P PKPdf 08 28 11.9 -2.4
MMB Musomiste 144.45 313 *i* P PKPdf 08 28 12.8 -2.0
NRDL Niedersach Rie 144.54 338 *e*PKPbc PKPdf 08 28 12.8 -1.8
FBE Freiberg 144.56 334 *e*PKPbc PKPdf 08 28 13.0 -1.7
MODS Modra-Piesok 144.57 328 *e*PKP PKPdf 08 28 13.7 -1.1
EAU Auchinoon 144.58 353 *e*P PKPdf 08 28 12.4 -2.2
EBL Broad Law 144.61 353 *e*P PKPdf 08 28 12.0 -2.6
PRU Pruhonice 144.74 332 *e*PKP PKPdf 08 28 13.5 -1.5
PRU *ep*PKP pPKPdf 08 28 24.7 -2.5
KKB Krupnik 144.76 314 *i* P PKPdf 08 28 12.2 -3.1
ZST Bratislava 144.78 327 *e*PKP PKPdf 08 28 14.5 -0.7
TREC Trest 144.81 330 *e*PKP PKPdf 08 28 13.9 -1.3
TREC *ep*PKP pPKPdf 08 28 25.0 -2.4
CLZ Clausthal 144.99 337 *e*PKPbc PKPdf 08 28 14.1 -1.3
EKA Eskdalemuir Ar 145.05 353 PKP PKPdf 08 28 13.6 -1.8
comp=Z,14nm,0.6s,baz=354,slow=2.2,SNR=44
ESK Eskdalemuir 145.07 353 *e*P PKPbc 08 28 13.6 -1.3
ESK AMb AMB 08 28 15.6
comp=Z,58nm,1.6s
ECK Cauldkaine Hil 145.20 353 *e*P PKPbc 08 28 13.9 -1.4
PKSM Moragy 145.22 324⇑ *i*P PKPbc 08 28 15.4 -0.3
GMK Mull of Kintyr 145.28 355⇑ *i*P PKPbc 08 28 14.5 -1.1
WERD Werda 145.35 334 *e*PKPbc PKPbc 08 28 15.8 -0.2
WERD *ep*PKPab pPKPab 08 28 26.9 -1.2
XAL Allendale 145.39 352⇑ *i*P PKPbc 08 28 14.8 -1.2
GUNZ Gunzen 145.41 334 *e*PKPbc PKPbc 08 28 16.2 +0.1
GUNZ *ep*PKPab pPKPab 08 28 27.3 -1.0
WERN Wernitzgruen 145.44 334 *ep*PKPab pPKPab 08 28 27.5 -0.9
NKC Novy Kostel 145.46 334 *e*PKP PKPdf 08 28 16.1 -0.2
NKC *ep*PKP pPKPdf 08 28 28.0 -0.4
MOX Moxa 145.47 335 *e*PKP PKPdf 08 28 15.9 -0.4
comp=Z,48nm,1.1s
MOX *e* 08 28 27.7
MOX Moxa 145.47 335 *e*PKPbc PKPbc 08 28 15.5 -0.8
MOX *ep*PKPab pPKPab 08 28 27.3 -1.2
IBBN Ibbenburen 145.48 340 *e*PKPbc PKPbc 08 28 15.6 -0.7
CONA Conrad Observa 145.58 328 *i* PKPab PKPab 08 28 17.2 +0.2
comp=Z,56nm,0.9s,SNR=21
GCL Cushendall 145.59 356 *e*P PKPdf 08 28 15.5 -0.8
GAL1 Galloway 145.68 354⇓ *e*P PKPdf 08 28 15.6 -0.9
GAL1 AMb AMB 08 28 16.8
comp=Z,77nm,0.9s
MANZ Manzenberg 145.79 334 *ep*PKPab pPKPab 08 28 28.5 -1.2
KHC Kasperske Hory 145.80 332 *e*PKP PKPdf 08 28 17.3 +0.4
KHC *ep*PKP pPKPdf 08 28 28.3 -0.8
ROTZ Rotzenmuhle 145.91 333 *e*PKPbc PKPbc 08 28 17.0 -0.7
GEC2 GERESS Array S 145.95 331 *e*PKPbc PKPbc 08 28 17.2 -0.7
GERES GERESS Array B 145.95 331 PKP2 PKPab 08 28 17.7 -0.7
GERES pmax pmax
comp=Z,20nm,0.7s
GERES pmax pmax
comp=N,1.0nm,0.7s
GERES GERESS Array B 145.95 331 PKPbc PKPbc 08 28 17.7 -0.2
comp=N,20nm,0.7s,baz=29,slow=3.7,SNR=101
GERES SKPbc SKPbc 08 31 53.6 -0.6
comp=N,0.5nm,0.7s,baz=341,slow=2.1,SNR=3.9
UBBA Unterbreizbach 145.95 337 *e*PKPbc PKPbc 08 28 17.0 -0.8
UBBA *ep*PKPab pPKPab 08 28 28.9 -1.4
WET Wettzell 146.10 332 *e*PKPbc PKPbc 08 28 18.1 -0.2
HPK Haverah Park 146.18 351 *e*P PKPdf 08 28 17.5 +0.1
HPK AMb AMB 08 28 20.0
comp=Z,94nm,1.5s
GRF Grafenberg Arr 146.38 334 *e*PKPbc PKPbc 08 28 18.7 -0.4
GRF *e*PKPab PKPab 08 28 20.9 +0.9
GRFO Grafenberg 146.38 334 *e*PKPbc PKPbc 08 28 19.1 0.0
GRFO *e*PKPab PKPab 08 28 20.5 +0.5
MOA Molln 146.41 329 *i* P PKPdf 08 28 18.8 +0.8
comp=Z,20nm,1.1s,SNR=12
KBI1 Birley Grange 146.85 350 *e*P PKPdf 08 28 19.2 +0.7
TNS Taunus Mts 147.01 337 *e*PKPbc PKPbc 08 28 20.3 -0.6
TNS *e*PKPab PKPab 08 28 23.0 +0.6
KWE Weaver Farm 147.13 350 *e*P PKPdf 08 28 20.3 +1.3
KBA Koelnbreinsper 147.39 329⇑ *i*P PKPdf 08 28 21.0 +1.4
comp=Z,18nm,0.8s
SBD1 Bryn Du 147.44 352⇑ *e*P PKPdf 08 28 21.2 +1.7
MEM Membach 147.50 340 PKPbc PKPbc 08 28 21.9 -0.3
MEM PKPab PKPab 08 28 24.0 -0.4
FUR Furstenfeldbru 147.53 332 *e*PKPab PKPab 08 28 25.3 +0.7
HLM1 Long Mynd 147.77 351 *e*P PKPdf 08 28 22.0 +1.9
UCC Uccle 147.83 342 PKPbc PKPbc 08 28 22.5 -0.7
VOY Vojsko 147.86 327 *e*PKP PKPdf 08 28 22.3 +1.9
VOY *e* 08 28 25.3
VOY *e* 08 28 33.4
PTCC Patocco-Chiusa 147.87 328 P PKPdf 08 28 22.3 +1.9
BCLA Clavier 147.89 341 PKPbc PKPbc 08 28 22.8 -0.6
BCLA PKPab PKPab 08 28 25.6 -0.3
STU Stuttgart 147.92 335 *e*PKPbc PKPbc 08 28 23.1 -0.4
STU *e*PKPab PKPab 08 28 26.4 +0.3
WTTA Wattenberg 148.06 331⇑ *i*P PKPdf 08 28 23.4 +2.7
comp=Z,12nm,0.6s
WLF Walferdange 148.28 339 *e*PKPbc PKPbc 08 28 24.7 +0.3
WLF *e*PKPab PKPab 08 28 28.3 +0.9
WLF Walferdange 148.28 339 PKPbc PKPbc 08 28 24.7 +0.3
WLF Walferdange 148.28 339 *e*PKPbc PKPbc 08 28 24.0 -0.4
WLF *e*PKPab PKPab 08 28 27.7 +0.2
LANF Langenberg 148.28 337 PKP PKPbc 08 28 23.8 -0.6
RETA Reutte 148.28 332 *i* PKPbc PKPbc 08 28 23.8 -0.6
comp=Z,19nm,1.2s,SNR=7.8
SQTA Sankt Quirin 148.28 331⇑ *i*P PKPbc 08 28 24.0 -0.5
comp=Z,9.5nm,0.7s,SNR=12
MCH1 Michaelchurch 148.29 351 *e*P PKPdf 08 28 22.0 +1.1
MCH1 AMb AMB 08 28 28.2
comp=Z,69nm,1.9s
GIVF Givet 148.31 341 *e*PKP1 PKPbc 08 28 23.9 -0.6
comp=Z,28nm,0.6s
DOU Dourbes 148.39 341 PKPbc PKPbc 08 28 24.2 -0.4
BAIF Baives 148.54 342 *e*PKP1 PKPbc 08 28 24.5 -0.6
comp=Z,9.3nm,0.5s
BFO Black Forest 148.61 336 *e*PKPbc PKPbc 08 28 24.3 -1.0
BFO *e*PKPab PKPab 08 28 28.8 -0.1
FETA Feichten 148.65 332⇑ *i*PKiKP PKiKP 08 28 25.2 -1.7
comp=Z,26nm,0.9s,SNR=20
CDF Champ du Feu 148.94 337 *e*PKP1 PKPbc 08 28 25.5 -0.7
ECH Echery 149.15 337 PKP PKPdf 08 28 24.7 +2.2
DAVOX Davos/Dischmat 149.21 332 PKPbc PKPbc 08 28 26.7 -0.1
comp=Z,26nm,0.6s,baz=94,slow=0.4,SNR=38
THEF They Montfort 149.56 338 PKP PKPbc 08 28 26.2 -1.5
HINF Hinteralfeld 149.60 337 *e*PKP1 PKPbc 08 28 26.9 -0.9
comp=Z,12nm,0.6s
HAU Haudompre 149.62 337 *e*PKP1 PKPbc 08 28 27.2 -0.7
comp=Z,19nm,0.6s
MEZF Maizieres J'vi 149.65 339 *e*PKP1 PKPbc 08 28 27.7 -0.2
TUE Stuetta 149.68 332 P PKPbc 08 28 26.4 -1.6
RGNG Rignano Grg 149.68 319 P PKPbc 08 28 27.7 -0.5
VAI Varese 150.40 332 P PKPbc 08 28 28.8 -1.0
CABF La Chapelle 150.89 336 *e*PKP1 PKPbc 08 28 30.7 -0.2
comp=Z,38nm,0.6s
FLN La Foliniere 150.94 346 *e*PKP1 PKPbc 08 28 30.0 -1.0
comp=Z,72nm,0.6s
LDF La Druitiere 151.02 346 *e*PKP1 PKPbc 08 28 30.1 -1.1
comp=Z,26nm,0.5s
LOR Lormes 151.11 340 *e*PKP1 PKPbc 08 28 30.8 -0.6
comp=Z,36nm,0.7s
GRR Gorron 151.38 347 *e*PKP1 PKPbc 08 28 31.1 -0.9
comp=Z,49nm,0.5s
SSF Saint Saulge 151.41 340 *e*PKP1 PKPbc 08 28 31.5 -0.6
comp=Z,24nm,0.6s
LPL La Plagne 151.54 334 *e*PKP1 PKPbc 08 28 32.3 -0.2
comp=Z,18nm,0.5s
LPG La Plagne 151.55 334 *e*PKP1 PKPbc 08 28 32.4 -0.1
comp=Z,42nm,0.8s
SMF Signal de Mont 151.67 339 *e*PKP1 PKPbc 08 28 31.9 -0.8
AVF Avril sur Loir 151.70 340 *e*PKP1 PKPbc 08 28 31.8 -1.0
SGMF Saint Gilles 151.85 349 *e*PKP1 PKPbc 08 28 32.0 -1.1
comp=Z,32nm,0.5s
ROSF Rostrenen 151.89 350 *e*PKP1 PKPbc 08 28 31.9 -1.3
comp=Z,30nm,0.6s
BNI Bardonecchia 151.94 334 *e*PKPbc PKPbc 08 28 33.4 0.0
BGF Bois d'Agland 152.07 340 *e*PKP1 PKPbc 08 28 32.9 -0.8
comp=Z,28nm,0.6s
MBDF Montbardon 152.16 333 *e*PKP1 PKPbc 08 28 33.1 -0.8
comp=Z,13nm,0.6s
QUIF Quistinic 152.28 349 *e*PKP1 PKPbc 08 28 32.7 -1.4
comp=Z,12nm,0.5s
PLDF La Plantade 152.33 339 PKP PKPbc 08 28 33.6 -0.7
ORIF Oris-en-Rattie 152.38 334 *e*PKP1 PKPbc 08 28 33.8 -0.6
comp=Z,32nm,0.6s
SAOF Saorge 152.41 331 PKP PKPbc 08 28 33.2 -1.3
AGO Saint Agoulin 152.42 339 PKP PKPbc 08 28 34.0 -0.5
AUTN L'Aution 152.46 331 PKP PKPbc 08 28 33.8 -0.8
TCF Toulx Ste Croi 152.51 341 *e*PKP1 PKPbc 08 28 33.8 -0.9
comp=Z,22nm,0.7s
TOUF Mont Tournerai 152.52 332 PKP PKPbc 08 28 33.8 -1.0
SBF Sospel 152.56 331 *e*PKP1 PKPbc 08 28 33.6 -1.3
PYM Petit Puy Mans 152.73 339 PKP PKPbc 08 28 34.3 -0.9
PGF Pioggiola 152.80 327 *e*PKP1 PKPbc 08 28 34.6 -0.8
comp=Z,75nm,0.9s
MFF Saint Martin d 152.88 344 *e*PKP1 PKPbc 08 28 34.5 -1.0
comp=Z,15nm,0.7s
CALN Calern 152.89 332 PKP PKPbc 08 28 34.3 -1.3
VIVF Saint-Julien-l 152.90 336 *e*PKP1 PKPbc 08 28 34.8 -0.8
comp=Z,7.6nm,0.5s
LBL Lubilhac 153.10 338 PKP PKPbc 08 28 36.6 +0.6
FRF La Foret Royal 153.15 332 *e*PKP1 PKPbc 08 28 35.0 -1.2
comp=Z,13nm,0.5s
SMRF Simiane la Rot 153.27 334 *e*PKP1 PKPbc 08 28 36.0 -0.4
comp=Z,11nm,0.7s
LMR La Mourre 153.39 332 *e*PKP1 PKPbc 08 28 35.6 -1.1
comp=Z,12nm,0.6s
RJF Les Rejaudoux 153.60 341 *e*PKP1 PKPbc 08 28 36.3 -0.8
comp=Z,8.8nm,0.8s
CAF Calviac 153.77 340 *e*PKP1 PKPbc 08 28 36.9 -0.6
LASF Ste Croix 153.87 336 *e*PKP1 PKPbc 08 28 37.1 -0.6
comp=Z,22nm,1.0s
LFF La Frestale 154.17 341 *e*PKP1 PKPbc 08 28 38.3 0.0
comp=Z,14nm,0.7s
MTLF Montolieu 155.11 338 *e*PKP1 PKPdf 08 28 39.5 +8.0
comp=Z,6.4nm,0.8s
ESDC Sonseca Array 160.35 345 PKPab PKPab 08 29 18.6 -0.2
comp=Z,0.8nm,0.5s,baz=24,slow=4.1,SNR=3.2
DBIC Dimbokro 164.96 202 PKPab PKPab 08 29 40.3 +0.6
comp=Z,3.4nm,0.8s,baz=100,slow=12,SNR=5.1
TORD Torodi Ar. Bea 166.10 239 PKP PKPdf 08 28 42.9 -1.4
comp=Z,0.7nm,0.6s,baz=3.2,slow=1.4,SNR=6.2
TORD PKPab PKPab 08 29 44.2 -0.7
comp=Z,0.8nm,0.6s,baz=105,slow=5.3,SNR=8.5

*IDC **31** 08:15:05.2±9.4, **2991S×17903W, h370**km±95km, **mb3.1**/2, **mb1 3.4**/3, **mb1mx3.1**/13, **mbtmp3.2**/3, **Error ellipse: s-maj=94.1km s-min=47.6km az=16.0, Kermadec Islands region***

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.93**	**200**	P		Pn	08 17 11.8	+1.4
	2.1nm,0.3s,baz=39,slow=13,SNR=9.7						
URZ				S		S	08 18 50.7	-2.2
	2.3nm,0.3s,baz=85,slow=19,SNR=10.0						
ASAR	**Alice Springs**	**42.25**	**267**	P		P	08 22 23.9	0.0
	0.5nm,0.5s,baz=104,slow=7.0,SNR=8.0						
WRA	**Warramunga Arr**	**43.19**	**272**	P		P	08 22 31.2	-0.1
	1.3nm,0.3s,baz=110,slow=8.0,SNR=42						
FINES	**FINESS Array B**	**144.38**	**340**	PKP	PKPdf		08 33 56.0	-0.9
	0.9nm,0.3s,baz=57,slow=4.1,SNR=16						

*ISK **31** 08:19:59.0, **3797N×3096E, h4**km, **MD2.6, Turkey***

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.38**	**251**	PG	Pg	08 20 06.3	+0.1
ISP				SG	Sg	08 20 12.3	+1.2
BCK	**Bucak**	**0.58**	**210**	PG	Pg	08 20 11.2	+1.0
BCK				SG	Sg	08 20 20.4	+2.6
SHUT	**Suhut-Afyon**	**0.67**	**331**	PG	Pg	08 20 13.1	+1.3
SHUT				SG	Sg	08 20 22.7	+2.3
KDHN	**Kadinhani**	**1.07**	**58**	*i* P	Pg	08 20 20.0	+0.5
KONT	**Konya--Tatoy**	**1.11**	**91**	PN	Pn	08 20 21.0	-0.3
KIZT	**Kizilcal**	**1.16**	**38**	PN	Pn	08 20 21.5	-0.6
KHL	**Karahalli**	**1.19**	**288**	PN	Pn	08 20 22.6	+0.3
ESKT	**Eskisehir**	**1.55**	**357**	*e*P	Pn	08 20 25.7	-1.7

*IDC **31** 08:32:12.4±9.1, 6**48S×13027E, h103**km±81km, **mb3.8/2, mb1 4.1/6, mb1mx3.7/15, mbtmp4.0/6, ML4.4/4, Error ellipse: s-maj=97.6km s-min=24.6km az=53.0*
*NEIC **31** 08:32:17.1±2.9, 669S×12984E, h145**km±25km, **mb4.2/2, Error ellipse: s-maj=36.6km s-min=23.4km az=57.0*
*ISCJB **31** 08:32:20.8±1.7, 709S±0.1×12989E±0.08, h203**km±17km, **mb3.8/2, Error ellipse: s-maj=17.5km s-min=9.9km az=33.5*

ISC 31 08:32:22.3±2.0, 72S±0.1×12985E±008, h163km±14km, **n12, σ1°14/17, mb3.8/2, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.08**	**155**	*e*P	Pn	**08 33 50.6**	**+0.4**
	17nm,0.2s						
KAKA				*e*S	Sn	**08 35 00.0**	**+0.9**
BATI	**Kupang**	**6.83**	**243**	P	Pn	**08 34 00.5**	**+0.4**
	32nm,0.3s,baz=136,slow=3.6,SNR=31						
BATI				S	Sn	**08 35 17.5**	**+0.5**
	18nm,0.3s,baz=15,slow=18,SNR=8.3						
FITZ	**Fitzroy Crossi**	**11.62**	**200**	*e*P	Pn	**08 35 04.2**	**+0.8**
	6.8nm,0.6s						
FITZ				*e*S	Sn	**08 37 10.4**	**-1.8**
FITZ	**Fitzroy Crossi**	**11.62**	**200**	P	Pn	**08 35 03.7**	**+0.3**
	0.8nm,0.3s,baz=35,slow=16,SNR=22						
FITZ				S	Sn	**08 37 10.1**	**-2.1**
	3.1nm,0.3s,baz=287,slow=6.9,SNR=13						
WRA	**Warramunga Arr**	**13.43**	**162**	P	Pn	**08 35 24.3**	**-2.2**
	1.3nm,0.3s,baz=347,slow=13,SNR=55						
WRA				S	Sn	**08 37 49.7**	**-5.9**
	1.7nm,0.3s,baz=338,slow=22,SNR=8.5						
WB2	**Warramunga Arr**	**13.44**	**161**	*e*P	Pn	**08 35 25.1**	**-1.5**
WB2				*e*S	Sn	**08 37 50.1**	**-5.6**
ASAR	**Alice Springs**	**16.87**	**167**	P	Pn	**08 36 10.3**	**+1.4**
	1.4nm,0.3s,baz=344,slow=9.1,SNR=66						
ASAR				S	S	**08 39 16.8**	**+0.8**
	0.6nm,0.3s,baz=336,slow=16,SNR=5.7						
STKA	**Stephens Creek**	**26.92**	**158**	*e*P	P	**08 37 48.4**	**+0.1**
	1.3nm,0.3s,mb4.0						
STKA	**Stephens Creek**	**26.92**	**158**	P	P	**08 37 48.6**	**+0.3**
	1.9nm,0.4s,mb4.1,baz=334,slow=8.7,SNR=10						
MKAR	**Makanchi Array**	**58.28**	**327**	P	P	**08 43 00.1**	**-5.4**
	0.6nm,0.5s,mb3.5,baz=120,slow=8.0,SNR=4.4						
LPAZ	**La Paz**	**150.68**	**143**	PKPbc	PKPbc	08 51 54.5	-1.6
LPAZ	**La Paz**	**150.68**	**143**	PKPbc	PKPbc	08 51 54.5	-1.6
	0.5nm,0.4s,baz=180,slow=1.0,SNR=4.7						

*NEIC **31** 08:45:53.5, 1693N×9982W, h38**km, MD3.9(MEX), After MEX.*

MEX 31 08:45:54.0±0.6, 1694N×9981W, h32km±9km, **MD3.9, 2D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.13**	**237**	*i* P	Pb	08 45 58.5	-1.2
ACX				*i* S	Sb	08 46 02.6	-1.1
ACX	**Acapulco**	**0.13**	**237**	*i* P	Pb	08 45 58.6	-1.1
ACX				*i* S	Sb	08 46 02.6	-1.1
CAIG	**El Cayaco**	**0.45**	**284**⇓	*i*P	Pb	08 46 02.1	-1.7
CAIG				*i* S	Sb	08 46 08.1	-2.5
CAIG	**El Cayaco**	**0.45**	**284**⇓	*i*P	Pb	08 46 02.1	-1.7
CAIG				*i* S	Sb	08 46 08.7	-1.9
MEIG	**Mezcala**	**1.00**	**10**	*i* P	Pn	08 46 09.9	-2.0
MEIG				*i* S	Sn	08 46 21.8	-3.0
PLIG	**Platanillo**	**1.48**	**11**	*i* P	Pn	08 46 16.0	-2.4
PLIG				*i* S	Sn	08 46 35.0	-1.7
PLIG	**Platanillo**	**1.48**	**11**	*i* P	Pn	08 46 16.0	-2.4
PLIG				*i* S	Sn	08 46 34.3	-2.4
YAIG	**Yautepec**	**2.04**	**20**	*e*P	Pn	08 46 21.6	-4.5
YAIG				*i* S	Sn	08 46 49.5	-1.0
YAIG	**Yautepec**	**2.04**	**20**	*e*P	Pn	08 46 24.5	-1.7
YAIG				*i* S	Sn	08 46 49.5	-1.0
PPM	**Popocatepetl**	**2.40**	**28**	*e*P	Pn	08 46 29.6	-1.5
PPM				*i* S	Sn	08 47 03.2	+3.8
PPM	**Popocatepetl**	**2.40**	**28**	*e*P	Pn	08 46 29.5	-1.6
PPM				*e*P		08 46 29.6	
PPM				*i* S	Sn	08 46 57.8	-1.6
SZVM	**Salazar**	**2.41**	**10**	*e*P	Pn	08 46 29.7	-1.5
SZVM				*i* S	Sn	08 46 59.8	+0.2
PTVM	**Pico Tres Padr**	**2.72**	**14**	*e*P	Pn	08 46 37.0	+1.4
PTVM				*i* S	Sn	08 47 09.4	+2.0
PTVM	**Pico Tres Padr**	**2.72**	**14**	*i* P	Pn	08 46 33.4	-2.1
PTVM				*i* S	Sn	08 47 04.7	-2.8
TPIG	**Tehuac#an**	**2.76**	**57**	*e*P	Pn	08 46 35.5	-0.6
TPIG				*i* S	Sn	08 47 06.3	-2.0
IIO	**Organos**	**2.83**	**21**	*e*P	Pn	08 46 35.8	-1.3
IIO				*i* S	Sn	08 47 14.0	+3.8
VHO	**Vista Hermosa**	**2.94**	**87**	*e*P	Pn	08 46 39.1	+0.5
VHO				*i* S	Sn	08 47 12.2	-0.6
VHO	**Vista Hermosa**	**2.94**	**87**	*e*P	Pn	08 46 38.4	-0.2
VHO				*i* S	Sn	08 47 10.0	-2.9

MEX 31 08:46:15.2±0.5, 1776N×9398W, h106km±11km, **MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUIG	**Tuzandepetl**	**0.50**	**303**	*e*P	Pn	08 46 30.8	-0.9
TUIG				*i* S	Sn	08 46 42.1	-2.0
CMIG	**Matias Romero**	**1.09**	**232**	*i* P	Pn	08 46 35.7	-1.4
CMIG				*i* S	Sn	08 46 52.3	-1.4
CCIG	**Comitan**	**2.29**	**130**	*i* P	Pn	08 46 50.9	-0.9
CCIG				*i* S	Sn	08 47 18.6	-1.3

*IDC **31** 08:46:35.6±1.6, 423N×12441E, h0**km, mb3.7/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, Error ellipse: s-maj=118.7km s-min=23.0km az=66.0*
*ISCJB **31** 08:46:38.6±2.6, 44N±0.1×1246E±0.3, h40**km±31km, mb3.6/5, Error ellipse: s-maj=44.7km s-min=16.5km az=167.1*

ISC 31 08:46:39.5±5.0, 439N±005×1246E±02, h31km±40km, **n7, σ0°59/9, mb3.6**/5, **2C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.71**	**11**⇑	*e*P	Pn	**08 47 07.2**	**0.0**
GSPH				*i* S	Sn	**08 47 28.6**	**+0.5**
CTBH	**Cotabato--PC H**	**2.84**	**352**⇑	*i*P	Pn	**08 47 22.9**	**+0.2**
CTBH				*e*S	Sn	**08 47 54.8**	**-1.1**

MRZ	**Mangatainoka R**	**1.32 135**	P	Pn	08 58 05.7	+0.1
MRZ	**Mangatainoka R**	**1.32 135**	PN	Pn	08 58 05.7	0.0
TCW	**Tory Channel**	**1.47 182**	P	Pn	08 58 07.0	+0.2
TCW	**Tory Channel**	**1.47 182**	PN	Pn	08 58 07.0	+0.2
TCW			SN	S	08 58 33.4	-0.9
CAW	**Cannon Point**	**1.48 158**	P	Pn	08 58 07.0	+0.2
CAW	**Cannon Point**	**1.48 158**	PN	Pn	08 58 07.0	+0.2
MRW	**Makara Radio**	**1.52 170**	P	Pn	08 58 07.3	+0.2
MRW	**Makara Radio**	**1.52 170**	PN	Pn	08 58 07.3	+0.2
SNZO	**South Karori**	**1.59 170**	P	Pn	08 58 07.9	+0.1
SNZO	**South Karori**	**1.59 170**	PN	Pn	08 58 07.9	+0.1
NNZ	**Nelson**	**1.65 206**	P	Pn	08 58 08.2	-0.1
NNZ	**Nelson**	**1.65 206**	PN	Pn	08 58 08.2	-0.1
MTW	**Mount Morrison**	**1.68 148**	P	Pn	08 58 08.6	+0.1
MTW			S	S	08 58 38.0	+0.7
MTW	**Mount Morrison**	**1.68 148**	PN	Pn	08 58 08.6	+0.1
TUWZ	**Tuamarina**	**1.72 190**	PN	Pn	08 58 08.9	0.0
QRZ	**Quartz Range**	**1.76 231**	P	Pn	08 58 07.7	-1.6
QRZ			S	S	08 58 30.9	-7.8
QRZ	**Quartz Range**	**1.76 231**	PN	Pn	08 58 07.7	-1.6
BKZ	**Black Stump Fm**	**1.76 72**	*eP*	Pn	08 58 07.9	-1.5
BKZ	**Black Stump Fm**	**1.76 72**	PN	Pn	08 58 07.9	-1.5
MSWZ	**Moikau Station**	**1.81 158**	P	Pn	08 58 09.9	+0.1
MSWZ	**Moikau Station**	**1.81 158**	PN	Pn	08 58 09.9	+0.1
TRWZ	**Traveller**	**1.95 149**	PN	Pn	08 58 11.3	+0.2
PXZ	**Pawanui**	**1.96 99**	PN	Pn	08 58 11.2	0.0
BSWZ	**Blackbirch Sta**	**2.01 190**	P	Pn	08 58 11.7	+0.1
BSWZ	**Blackbirch Sta**	**2.01 190**	PN	Pn	08 58 11.7	+0.1
THZ	**Tophouse**	**2.30 208**	P	Pn	08 58 14.2	-0.4
THZ	**Tophouse**	**2.30 208**	PN	Pn	08 58 14.2	-0.4
URZ	**Urewera**	**2.62 57**	P	Pn	08 58 14.8	-3.3
URZ	**Urewera**	**2.62 57**	PN	Pn	08 58 14.8	-3.2
KNZ	**Kokohu**	**2.68 76**	*eP*	Pn	08 58 17.4	-1.4
KNZ	**Kokohu**	**2.68 76**	PN	Pn	08 58 17.4	-1.4
KHZ	**Kahutara**	**2.75 192**	*eP*	Pn	08 58 19.0	-0.4
KHZ	**Kahutara**	**2.75 192**	PN	Pn	08 58 19.0	-0.4
DSZ	**Denniston Nort**	**2.78 223**	*eP*	Pn	08 58 18.7	-1.1
DSZ	**Denniston Nort**	**2.78 223**	PN	Pn	08 58 18.7	-1.1
LTZ	**Lake Taylor**	**3.42 206**	*eP*	Pn	08 58 25.3	-1.9
LTZ	**Lake Taylor**	**3.42 206**	PN	Pn	08 58 25.3	-1.8
MQZ	**McQueen's Vall**	**4.16 197**	*eP*	Pn	08 58 34.1	-2.0
MQZ	**McQueen's Vall**	**4.16 197**	PN	Pn	08 58 34.1	-2.0

IDC 31 09:06:54.1±1.1, 3999S×4562E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/20, mbtmp3.9/7, MS3.8/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=95.6km s-min=19.1km az=26.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**20.24 298**		P	P	09 11 31.7	+0.8
	2.0nm,0.6s,baz=125,slow=12,SNR=1.7						
BOSA				LR	LR	09 17 54.4	
	comp=Z,92nm,22.0s,baz=134,slow=33						
SUR	**Sutherland**	**21.37 283**		P	P	09 11 43.4	+0.3
	7.5nm,1.1s,baz=127,slow=15,SNR=2.3						
LBTB	**Lobatse**	**22.47 306**		P	P	09 11 54.9	+0.1
	3.7nm,0.8s,baz=166,slow=8.1,SNR=4.7						
LBTB				LR	LR	09 18 59.8	
	comp=Z,151nm,19.4s,baz=348,slow=32						
MATP	**Matopo**	**24.40 318**		P	P	09 12 14.2	+0.1
	2.0nm,0.6s,baz=156,slow=10,SNR=4.6						
LSZ	**Lusaka**	**28.95 323**		LR	LR	09 23 13.3	
	comp=Z,197nm,19.4s,baz=116,slow=34						
MAW	**Mawson**	**29.26 167**		LR	LR	09 21 13.0	
	comp=Z,182nm,19.8s,baz=75,slow=29						
KMBO	**Kilima Mbogo**	**39.42 347**		LR	LR	09 28 54.6	
	comp=Z,58nm,21.1s,baz=88,slow=34						
DBIC	**Dimbokro**	**65.68 303**		LR	LR	09 43 52.2	
	comp=Z,108nm,18.7s,baz=213,slow=34						
TORD	**Torodi Ar. Bea**	**66.78 313**		P	P	09 17 48.0	+0.6
	0.9nm,0.7s,baz=132,slow=4.6,SNR=5.6						
TORD				LR	LR	09 46 18.5	
	comp=Z,45nm,18.4s,baz=125,slow=35						
USHA	**Ushuaia**	**70.07 214**		LR	LR	09 43 19.1	
	comp=Z,389nm,19.5s,baz=212,slow=31						
ASAR	**Alice Springs**	**73.94 108**		P	P	09 18 32.1	+0.8
	0.5nm,0.7s,baz=226,slow=5.7,SNR=6.9						
WRA	**Warramunga Arr**	**76.51 105**		P	P	09 18 46.1	-0.1
	1.3nm,1.0s,baz=226,slow=4.5,SNR=6.9						
ULM	**Lac du Bonnet**	**151.25 304**		PKPbc	PKPbc	09 26 47.8	-1.0
	1.8nm,0.7s,baz=54,slow=4.3,SNR=5.3						
YKA	**Yellowknife Ar**	**154.50 339**		PKPbc	PKPbc	09 26 55.1	-0.4
	0.1nm,0.6s,baz=41,slow=1.6,SNR=3.6						

*NIED **31** 09:20:00, 4440N×14920E, h56km, Mw3.7 Best double couple: M₀4.27000×10¹⁴ NP1:ϕ₁s49.00000°, δ85.00000°, λ180.00000°. NP2:ϕ₂s139.00000°, δ90.00000°, λ5.00000°.*

JMA 31 09:20:42.6±0.7, 4443N×14924E, h30km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.74 248**		P	Pn	09 21 23.4	-1.1
NEM2				eS	Sn	09 21 53.5	-3.1
JRA	**Rausu**	**3.00 262**		P	Pn	09 21 29.2	+1.1
JNK	**Nakash**	**3.37 257**		P	Pn	09 21 33.3	+0.2
JNK				eS	Sn	09 22 12.2	+0.1
JAK	**Akkeshi**	**3.59 248**		P	Pn	09 21 35.3	-0.9
JTKR	**Abashiri--Toko**	**3.86 265**		P	Pn	09 21 41.8	+1.9
JAR	**Ashorobuto**	**4.12 256**		P	Pn	09 21 44.0	+0.6
JMP	**Maruseppu**	**4.25 266**		P	Pn	09 21 47.5	+2.3
JCH	**Churui**	**4.64 249**		P	Pn	09 21 51.2	+0.6
JCH				eS	Sn	09 22 42.7	-0.8
JFR	**Furan**	**4.97 258**		P	Pn	09 21 57.1	+1.9
JNBK	**Urakawa-nobuka**	**5.20 248**		P	Pn	09 21 57.7	-0.5
JNBK				eS	Sn	09 22 52.0	-5.1
JBT2	**Biratori 2**	**5.26 254**		P	Pn	09 21 59.1	0.0
JNB	**Noboribetsu**	**6.28 255**		P	Pn	09 22 13.7	+0.5
JNB				eS	Sn	09 23 22.2	-1.7
JKB	**Kayabe**	**6.52 250**		P	Pn	09 22 16.0	-0.4
JKB				eS	Sn	09 23 24.8	-4.8
OFUJ	**Ofunato**	**7.78 229**		eS	Sn	09 23 50.2	-11

*IDC **31** 09:25:22.8±0.9, 3156S×7187W, h0km, mb4.7/3, mb1 4.3/6, mb1mx4.1/15, mbtmp4.3/6, ML4.0/3, Error ellipse: s-maj=28.4km s-min=18.7km az=9.0*

*ISCJB **31** 09:25:23.2±1.2, 3157S±002×7219W±006, h15km±8km, mb4.3/4, Error ellipse: s-maj=8.5km s-min=3.7km az=179.2*

*GUC **31** 09:25:24.9±0.8, 3157S×7208W, h30km±2km, ML4.5*

*NEIC **31** 09:25:24.9, 3157S×7208W, h30km, ML4.5(GUC), After GUC.*

ISC 31 09:25:23.4±1.0, 3157S±002×7209W±006, h4km±5km, h7km±3km:pP-P, n47, σ0s59/64, mb4.3/4, 5C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.59 122**		⇓*iP*	**Pg**	**09 25 18.9**	**-16**
CHNG				*i* S	**Sg**	**09 25 26.9**	**-16**
CMCH	**Combarbala**	**1.01 67**		⇑*iP*	**Pg**	**09 25 42.4**	**-0.5**
CMCH				*i* S	**Sg**	**09 25 56.8**	**+0.8**
CMCH	**Combarbala**	**1.01 67**		⇓*iP*	**Pg**	**09 25 42.4**	**-0.5**
CMCH				*i* S	**Sg**	**09 25 56.8**	**+0.8**
CMCH				AML	AML	09 26 01.3	
	comp=N,38μm,0.7s						
PACH	**Papudo**	**1.11 150**		⇑*iP*	**Pg**	**09 25 44.7**	**0.0**
PACH				*i* S	**Sg**	**09 25 59.2**	**0.0**
PTCH	**Petorca**	**1.20 125**		⇓*iP*	**Pg**	**09 25 45.9**	**-0.6**
PTCH				*i* S	**Sg**	**09 26 02.0**	**-0.1**
PTCH	**Petorca**	**1.20 125**		⇓*iP*	**Pg**	**09 25 45.9**	**-0.6**
PTCH				*i* S	**Sg**	**09 26 02.0**	**-0.1**
PTCH				AML	AML	09 26 04.0	
	comp=N,20μm,0.2s						
OVCH	**Ovalle**	**1.23 39**		*eP*	**Pg**	**09 25 46.7**	**-0.3**
OVCH				*i* S	**Sg**	**09 26 02.5**	**-0.4**
ROCH	**El Roble**	**1.67 147**		*eP*	**Pn**	**09 25 53.0**	**-0.4**
JACH	**Jahuel**	**1.68 131**		*eP*	**Pn**	**09 25 53.8**	**+0.1**
JACH				*i* S	**Sn**	**09 26 15.7**	**+0.1**
TLL	**Tololo Astrono**	**1.78 39**		*eP*	**Pn**	**09 25 55.3**	**+0.3**
TLL				*i* S	**Sn**	**09 26 19.0**	**+0.9**
TLL	**Tololo Astrono**	**1.78 39**		*eP*	**Pn**	**09 25 55.3**	**+0.3**
TLL				*i* S	**Sn**	**09 26 19.0**	**+0.9**
TLL				AML	AML	09 26 29.1	
	comp=N,5μm,0.5s						
LSCH	**La Serena**	**1.81 24**		*i* P	**Pn**	**09 25 55.0**	**-0.3**
LSCH				*i* S	**Sn**	**09 26 18.2**	**-0.5**
PEL	**Peldehue**	**1.97 143**		⇓*iP*	**Pn**	**09 25 57.5**	**+0.1**
PEL				*i* S	**Sn**	**09 26 22.2**	**-0.4**
PEL				AML	AML	09 26 28.7	
	comp=E,11μm,0.5s						
RCDM	**Rinconada Maip**	**2.20 151**		*eP*	**Pn**	**09 26 00.6**	**-0.1**
RCDM				*i* S	**Sn**	**09 26 27.7**	**-0.5**
RCDM	**Rinconada Maip**	**2.20 151**		*eP*	**Pn**	**09 26 00.6**	**-0.1**
RCDM				*i* S	**Sn**	**09 26 27.7**	**-0.5**
RCDM				AML	AML	09 26 37.2	
	comp=E,3μm,0.5s						
SAN	**Santiago**	**2.23 148**		*i* S	**Sn**	**09 26 29.1**	**0.0**
SAN				AML	AML	09 26 41.9	
	comp=N,2μm,0.5s						
CLCH	**Cerro Calan**	**2.24 145**		⇑*iP*	**Pn**	**09 26 01.4**	**+0.1**
CLCH				AML	AML	09 26 37.3	
	comp=E,6μm,0.7s						
TACH	**Talagante**	**2.29 155**		*eP*	**Pn**	**09 26 02.1**	**+0.2**
FSR	**Penalolen**	**2.31 146**		*eP*	**Pn**	**09 26 02.4**	**+0.1**
FSR				*i* S	**Sn**	**09 26 30.4**	**-0.7**
FSR	**Penalolen**	**2.31 146**		*eP*	**Pn**	**09 26 02.4**	**+0.1**
FSR				*i* S	**Sn**	**09 26 30.4**	**-0.7**
FSR				AML	AML	09 26 41.1	
	comp=N,4μm,0.7s						
FCH	**Farellones**	**2.32 139**		⇑*iP*	**Pn**	**09 26 02.7**	**+0.4**
FCH				AML	AML	09 26 43.1	
	comp=E,2μm,0.3s						
ANTU	**Antumapu**	**2.34 149**		*eP*	**Pn**	**09 26 02.6**	**0.0**
ANTU				*i* S	**Sn**	**09 26 31.3**	**-0.5**
ANTU	**Antumapu**	**2.34 149**		*eP*	**Pn**	**09 26 02.6**	**0.0**
ANTU				*i* S	**Sn**	**09 26 31.3**	**-0.5**
ANTU				AML	AML	09 26 47.5	
	comp=E,4μm,0.5s						
PCH	**Pirque**	**2.44 147**		*eP*	**Pn**	**09 26 04.2**	**+0.2**
PCH				*i* S	**Sn**	**09 26 34.9**	**+0.7**
CHCH	**Chadas Angostu**	**2.65 153**		*eP*	**Pn**	**09 26 07.1**	**+0.3**
LMEL	**Las Melosas**	**2.77 145**		*eP*	**Pn**	**09 26 09.2**	**+0.6**
LMEL				AML	AML	09 26 54.5	
	comp=N,2μm,0.3s						
LCO	**Las Campanas**	**2.82 26**		*ePn*	**Pn**	**09 26 09.0**	**-0.3**
CICH	**Cipreses**	**3.08 153**		*eP*	**Pn**	**09 26 13.5**	**+0.8**
SFDO	**San Fernando**	**3.17 164**		⇓*iP*	**Pn**	**09 26 14.1**	**+0.1**
VACH	**Vallenar**	**3.20 21**		*eP*	**Pn**	**09 26 14.3**	**-0.2**
CFAA	**Coronel Fontan**	**3.29 92**		Pn	**Pn**	**09 26 17.4**	**+1.8**
CFAA				Lg		09 27 01.5	
CFAA	**Coronel Fontan**	**3.29 92**		Pn	**Pn**	**09 26 17.4**	**+1.8**
	comp=N,3.2nm,0.3s,baz=270,slow=11,SNR=123						
CFAA				Pg	**Pg**	**09 26 20.7**	**-5.8**
	comp=N,17nm,0.3s,baz=257,slow=16,SNR=216						
CFAA				Lg		09 27 01.5	
	comp=N,5.5nm,0.3s,baz=154,slow=20,SNR=6.5						
PLCA	**Paso Flores**	**9.22 173**		*ePn*	**Pn**	**09 27 37.2**	**0.0**
	comp=N,3.7nm,0.6s						
PLCA	**Paso Flores**	**9.22 173**		Pn	**Pn**	**09 27 37.2**	**+0.1**
	comp=N,0.5nm,0.3s,baz=333,slow=12,SNR=9.4						
TRQA	**Tornquist**	**10.53 131**		*ePn*	**Pn**	**09 27 55.0**	**0.0**
	comp=N,8.1nm,0.5s						
LPAZ	**La Paz**	**15.64 14**		Pn	**Pn**	**09 29 05.3**	**+0.6**
	comp=N,0.1nm,0.3s,baz=189,slow=9.3,SNR=10						
SIV	**San Ignacio**	**18.48 35**		P	**Pn**	**09 29 39.4**	**-1.0**
	comp=N,0.3nm,0.3s,baz=221,slow=12,SNR=12						
VNA3	**Neumayer Olymp**	**51.62 159**		*e*	**P**	**09 34 30.7**	**+0.2**
VNA3				*e*	pP	09 34 32.6	+0.7
VNA3				*e*		09 34 35.4	
VNA3				*e*		09 34 41.2	
VNA3				*e*		09 34 46.1	
VNA3				*e*		09 34 50.3	
VNA2	**Neumayer--Watz**	**52.27 158**		*e*	**P**	**09 34 35.5**	**+0.2**
	baz=283,slow=8.9						
VNA2				*e*	pP	09 34 37.5	+0.8
VNA2				*e*		09 34 40.7	
VNA2				*e*		09 34 45.3	
VNA2				*e*		09 34 50.2	
VNA2				*e*		09 34 53.3	
SNAA	**Sanae**	**53.85 159**		*e*	**P**	**09 34 46.5**	**-0.5**
SNAA				*e*	pP	09 34 48.7	+0.3
SNAA				*e*		09 34 51.2	
SNAA				*e*		09 34 56.4	
SNAA				*e*		09 35 02.6	
DBIC	**Dimbokro**	**74.46 72**		P	**P**	**09 37 01.6**	**-1.6**
	comp=N,9.1nm,0.8s,mb4.7,baz=208,slow=5.9,SNR=10						
BOSA	**Boshof**	**81.24 118**		P	**P**	**09 37 40.1**	**-0.7**
	comp=N,4.2nm,0.9s,mb4.4,baz=267,slow=4.1,SNR=5.6						
NVAR	**Mina Array Bea**	**81.87 325**		P	**P**	**09 37 45.4**	**+1.6**
	comp=N,0.2nm,0.6s,mb3.2,baz=121,slow=4.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**83.43 70**		P	**P**	**09 37 51.8**	**-0.6**
	comp=N,6.0nm,0.8s,mb4.7,baz=286,slow=6.6,SNR=34						
WRA	**Warramunga Arr**	**122.85 210**		PKP	PKPdf	09 44 23.0	+1.7
	comp=N,0.4nm,0.9s,baz=155,slow=1.8,SNR=3.2						
ZALV	**Zalesovo Beam**	**152.17 30**		PKPbc	PKPbc	09 45 19.1	-0.5
	comp=N,8.0nm,0.7s,baz=300,slow=3.1,SNR=31						
ZALV				PKPab	PKPab	09 45 28.9	-0.5
	comp=N,6.3nm,0.5s,baz=315,slow=2.8,SNR=11						
MKAR	**Makanchi Array**	**155.14 45**		PKPbc	PKPdf	09 45 24.6	+7.1
	comp=N,0.3nm,0.4s,baz=339,slow=3.1,SNR=5.6						
MKAR				PKPab	PKPab	09 45 41.4	-0.8
	comp=N,1.0nm,0.7s,baz=308,slow=4.0,SNR=7.3						

*NIED **31** 09:39:00, 4440N×14920E, h17km, Mw3.6 Best double couple: M₀3.11000×10¹⁴ NP1:ϕ₁s206.00000°, δ30.00000°, λ82.00000°. NP2:ϕ₂s35.00000°, δ60.00000°, λ95.00000°.*

*NEIC **31** 09:39:30.4±1.0, 4431N×14925E, h10km, mb4.2/1, Error ellipse: s-maj=27.1km s-min=14.4km az=133.0*

*JMA **31** 09:39:32.5±0.7, 4440N×14925E, h30km, M3.7*

*MOS **31** 09:39:33.3±1.1, 4428N×149.15E, h50km, mb4.4/1, Error ellipse: s-maj=21.0km s-min=16.8km az=106.1*

*ISCJB **31** 09:39:34.6±1.3, 4409N±008×1490E±01, h64km±11km, mb3.7/8, Error ellipse: s-maj=16.2km s-min=8.6km az=42.3*

*IDC **31** 09:39:36.4±4.9, 4422N×14920E, h57km±43km, mb3.4/7, mb1 3.5/8, mb1mx3.3/21, mbtmp3.4/8, ML3.1/1, Error ellipse: s-maj=33.3km s-min=24.4km az=110.0*

ISC 31 09:39:35.9±1.2, 4412N±007×1491E±01, h57km±11km, n33, σ1s10/43, mb3.7/8, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.41 323**		⇑*iPN*	**Pn**	**09 39 55.3**	**-3.9**
KUR				*i* S	**Sn**	**09 40 16.5**	**-0.2**
KUR				pmax	pmax		
	comp=N,140nm,0.5s						
KUR				pmax	pmax		
	comp=E,110nm,0.5s						
KUR				pmax	pmax		
	comp=Z,240nm,0.5s						
KUR				smax			
	comp=N,990nm,0.6s						
KUR				smax			
	comp=E,420nm,0.6s						
NEM2	**Nemuro 2**	**2.52 254**		P	**Pn**	**09 40 13.2**	**-1.2**
NEM2				eS	**Sn**	**09 40 43.2**	**-0.7**
JRA	**Rausu**	**2.85 268**		P	**Pn**	**09 40 19.2**	**+0.3**
JNK	**Nakash**	**3.19 262**		P	**Pn**	**09 40 23.3**	**-0.2**
JNK				eS	**Sn**	**09 40 58.7**	**-1.6**
JAK	**Akkeshi**	**3.37 252**		P	**Pn**	**09 40 25.2**	**-0.8**
JAK				eS	**Sn**	**09 41 03.9**	**-0.8**
JTKR	**Abashiri--Toko**	**3.72 270**		P	**Pn**	**09 40 31.8**	**+1.0**
JAR	**Ashorobuto**	**3.93 260**		P	**Pn**	**09 40 33.4**	**-0.2**
JOB	**Onbets**	**3.99 254**		P	**Pn**	**09 40 34.6**	**+0.1**
JOB				eS	**Sn**	**09 41 21.3**	**+1.3**
JCH	**Churui**	**4.42 252**		P	**Pn**	**09 40 41.2**	**+0.8**
JCH				eS	**Sn**	**09 41 31.6**	**+1.1**
ASAJ	**Asahikawa**	**4.66 272**		PN	**Pn**	**09 40 45.3**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**4.66 272**		P	**Pn**	**09 40 45.2**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=85,slow=16,SNR=6.4						
ERM	**Erimo**	**4.81 246**		*ePn*	**Pn**	**09 40 46.4**	**+0.6**
JEM	**Erimo**	**4.81 246**		P	**Pn**	**09 40 47.0**	**+1.3**
JNBK	**Urakawa-nobuka**	**4.97 250**		P	**Pn**	**09 40 46.9**	**-1.0**
JNBK				eS	**Sn**	**09 41 43.3**	**-0.6**
JAB	**Ashibetsu**	**4.99 265**		P	**Pn**	**09 40 50.9**	**+2.7**
JBT2	**Biratori 2**	**5.06 257**		P	**Pn**	**09 40 49.6**	**+0.5**
JNB	**Noboribetsu**	**6.09 257**		P	**Pn**	**09 41 03.6**	**+0.4**
JNB				eS	**Sn**	**09 42 12.7**	**+1.3**
JKB	**Kayabe**	**6.30 252**		P	**Pn**	**09 41 05.9**	**-0.2**
JKB				eS	**Sn**	**09 42 14.4**	**-2.2**
JTM	**Tenmabayashi**	**6.79 243**		eS	**Sn**	**09 42 24.5**	**-4.1**
JTH	**Tanohata**	**6.79 235**		eS	**Sn**	**09 42 21.7**	**-7.1**
OFUJ	**Ofunato**	**7.49 230**		eS	**Sn**	**09 42 38.7**	**-7.1**
JIO	**Ouri**	**8.11 228**		P	**Pn**	**09 41 28.5**	**-2.4**
JIO				eS	**Sn**	**09 42 52.1**	**-8.9**
INK	**Inuvik**	**45.39 31**		P	**P**	**09 47 47.9**	**-0.3**
	comp=Z,0.8nm,0.8s,mb3.6,baz=266,slow=6.4,SNR=4.5						
MKAR	**Makanchi Array**	**45.64 298**		P	**P**	**09 47 51.5**	**+1.1**
	comp=Z,0.2nm,0.3s,mb3.6,baz=74,slow=7.5,SNR=5.7						
YKA	**Yellowknife Ar**	**54.72 34**		P	**P**	**09 48 58.0**	**-0.9**
YKA	**Yellowknife Ar**	**54.72 34**		P	**P**	**09 48 58.0**	**-0.9**
	comp=Z,0.2nm,0.7s,mb3.3,baz=294,slow=6.5,SNR=5.0						
JOF	**Joensuu**	**62.40 333**		*ep*	**P**	**09 49 50.1**	**-2.2**
	comp=Z,1.1nm,0.3s,mb4.5						
WRA	**Warramunga Arr**	**65.16 195**		P	**P**	**09 50 12.1**	**+1.3**
	comp=Z,0.3nm,0.9s,mb3.3,baz=8.5,slow=7.9,SNR=3.4						
FINES	**FINESS Array B**	**65.17 334**		P	**P**	**09 50 10.7**	**+0.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=32,slow=9.0,SNR=6.6						
NB2	**NORSAR Subarra**	**69.75 340**		P	**P**	**09 50 39.3**	**-0.1**
	comp=Z,1.0nm,0.5s,mb4.0,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**69.75 340**		P	**P**	**09 50 39.3**	**-0.1**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
NOA	**NORSAR Array B**	**69.75 340**		P	**P**	**09 50 39.2**	**-0.2**
	comp=Z,1.1nm,0.6s,mb4.0,baz=30,slow=6.2,SNR=6.5						
AKASG	**Malin Array Be**	**72.09 325**		P	**P**	**09 50 54.2**	**+0.4**
	comp=Z,0.2nm,0.2s,mb3.6,baz=34,slow=5.6,SNR=3.1						

MEX 31 09:47:37.8±0.4, 1607N×9756W, h15km±5km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.63 301**		*i* P	Pg	09 47 48.2	-2.0
PNIG				*i* S	Sg	09 47 56.5	-2.1
VHO	**Vista Hermosa**	**1.27 38**		*i* P	Pn	09 47 57.6	-3.5
VHO				*i* S	Sb	09 48 13.1	-4.6
HUIG	**Huatulco**	**1.43 102**		*eP*	Pn	09 48 00.8	-2.4
HUIG				*i* S	Sn	09 48 16.6	-5.2
TPIG	**Tehuac#an**	**2.35 5**		*i* P	Pn	09 48 12.4	-3.5
TPIG				*i* S	Sn	09 48 39.8	-4.7
ACX	**Acapulco**	**2.40 290**		*eP*	Pn	09 48 20.0	+3.5
MEIG	**Mezcala**	**2.70 313**		*eP*	Pn	09 48 18.2	-2.5
MEIG				*i* S	Sn	09 48 49.3	-3.9
CMIG	**Matias Romero**	**2.76 68**		*i* P	Pn	09 48 18.0	-3.6
CMIG				*i* S	Sn	09 48 51.0	-3.7

CASC 31 09:55:29.8±1.6, 847N×8284W, h16km±8km, MD3.6, 1C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTCR	**Cotoan**	**0.43 10**		⇓*iP*	Pg	09 55 39.0	+0.4
CTCR				*e*S	Sg	09 55 46.2	+1.8
BAR1		**0.90 329**		*eP*	Pb	09 55 45.5	-1.5
BAR1				*e*S	Sb	09 55 58.3	-0.5
CNI	**Changuinola**	**0.99 19**		⇓*iP*	Pb	09 55 47.8	-0.8
URSC	**Urasca**	**1.64 326**		*eP*	Pn	09 55 57.3	-0.7
URSC				*e*S	Sn	09 56 19.2	+0.4
LCR2	**La Lucha 2**	**1.71 318**		*eP*	Pn	09 55 59.1	+0.2
LCR2				*e*S	Sn	09 56 21.7	+1.3
PRS1	**Puriscal**	**2.09 316**		*eP*	Pn	09 56 03.9	-0.3
PRS1				*e*S	Sn	09 56 31.4	+1.5
PTP	**Ponta Puerca**	**19.34 58**		*eP*		09 55 34.7	
PTP				*e*S		09 55 41.1	

*NIED **31** 10:03:00, 4660N×15320E, h11km, Mw3.8 Best double couple: M₀5.57000×10¹⁴ NP1:ϕ₁s316.00000°, δ75.00000°, λ3.00000°. NP2:ϕ₂s226.00000°, δ87.00000°, λ165.00000°.*

*IDC **31** 10:03:49.7±0.8, 4707N×15301E, h0km, mb3.9/14, mb1 4.1/15, mb1mx4.0/23, mbtmp3.9/15, ML3.6/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/35, Error ellipse: s-maj=21.9km s-min=16.7km az=161.0*

*ISCJB **31** 10:03:49.2±1.1, 4624N±001×1531E±01, h43km±11km, mb3.9/16, MS3.5/2, Error ellipse: s-maj=21.1km s-min=8.6km az=148.3*

*BJI **31** 10:03:50.0, 4666N×15336E, h36km, mB4.8, mb4.4*

*NEIC **31** 10:03:51.0±0.7, 4700N×15294E, h10km, mb4.1/1, Error ellipse: s-maj=18.7km s-min=13.1km az=137.0*

*MOS **31** 10:03:54.8±1.6, 4688N×15255E, h51km, mb3.9/6, Error ellipse: s-maj=13.3km s-min=10.0km az=61.2*

ISC 31 10:03:51.1±2.1, 4641N±01×1530E±01, h31km±16km, n54, σ1s32/53, mb3.9/16, MS3.5/2, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.79 254**		⇓*iPN*	**Pn**	**10 04 46.2**	**-1.1**

INK	**Inuvik**	**41.98**	**32**	P	**P**	**10 11 38.8**	**+0.1**
	comp=Z,0.9nm,0.7s,mb3.5,baz=287,slow=11,SNR=11						
ZALV	**Zalesovo Beam**	**42.76**	**306**	P	**P**	**10 11 44.1**	**-1.1**
	comp=Z,0.6nm,0.5s,mb3.6,baz=64,slow=6.6,SNR=3.1						
ZALV				LR	LR	10 31 02.1	
	comp=Z,48nm,18.0s,MS3.4,baz=63,slow=38						
ZAL	**Zalesovo**	**42.77**	**306**	P	**P**	**10 11 44.1**	**-1.2**
MKAR	**Makanchi Array**	**47.04**	**298**	P	**P**	**10 12 19.1**	**-0.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=64,slow=8.4,SNR=7.5						
MKAR				LR	LR	10 33 56.7	
	comp=Z,45nm,18.1s,MS3.5,baz=354,slow=39						
KURK	**Kurchatov**	**47.50**	**304**	*e*P	**P**	**10 12 20.4**	**-2.4**
YKA	**Yellowknife Ar**	**51.24**	**37**	P	**P**	**10 12 51.2**	**0.0**
YKA	**Yellowknife Ar**	**51.24**	**37**	P	**P**	**10 12 52.3**	**+1.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**51.24**	**37**	P	**P**	**10 12 51.2**	**0.0**
	comp=Z,0.6nm,0.8s,mb3.6,baz=297,slow=7.3,SNR=12						
AKTK	**Aktyubinsk**	**58.91**	**312**	P	**P**	**10 13 47.0**	**+0.3**
AKTO	**Aktyubinsk**	**58.91**	**312**	P	**P**	**10 13 47.0**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=76,slow=9.5,SNR=6.8						
NVAR	**Mina Array Bea**	**62.65**	**62**	P	**P**	**10 14 12.6**	**+0.2**
	comp=Z,1.0nm,0.7s,mb4.0,baz=298,slow=4.9,SNR=12						
FINES	**FINESS Array B**	**64.32**	**335**	P	**P**	**10 14 22.9**	**-0.1**
	comp=Z,1.1nm,0.6s,mb4.1,baz=32,slow=7.6,SNR=9.6						
PDAR	**Pinedale Array**	**65.00**	**54**	P	**P**	**10 14 28.2**	**+0.5**
	comp=Z,1.4nm,0.8s,mb4.0,baz=282,slow=1.7,SNR=14						
WRA	**Warramunga Arr**	**68.17**	**199**	P	pP	10 14 57.3	-0.6
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**68.17**	**199**	P	pP	10 14 55.8	-2.0
	comp=Z,1.0nm,0.8s,baz=18,slow=7.4,SNR=5.2						
NB2	**NORSAR Subarra**	**68.53**	**341**	P	**P**	**10 14 50.1**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.9,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**68.53**	**341**	P	**P**	**10 14 50.1**	**+0.1**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NOA	**NORSAR Array B**	**68.53**	**341**	P	**P**	**10 14 50.1**	**+0.1**
	comp=Z,1.1nm,0.6s,mb4.0,baz=27,slow=6.2,SNR=7.4						
HFS	**Hagfors**	**68.75**	**340**	P	**P**	**10 14 50.8**	**-0.6**
	comp=Z,2.0nm,0.7s,mb4.2,baz=41,slow=4.7,SNR=6.6						
AKASG	**Malin Array Be**	**71.80**	**326**	P	**P**	**10 15 10.0**	**-0.1**
AKASG	**Malin Array Be**	**71.80**	**326**	P	**P**	**10 15 10.0**	**-0.1**
	comp=Z,2.7nm,0.5s,mb4.4,baz=34,slow=6.3,SNR=13						
ASAR	**Alice Springs**	**71.86**	**198**	P	pP	10 15 19.1	-1.5
	comp=Z,0.7nm,0.8s,baz=10,slow=5.7,SNR=5.1						

IDC 31 10:10:55.5±14.0, **430S**×**12639E**, **h377**km±63km, **mb2.8**/2, **mb1 3.0**/5, **mb1mx2.8**/18, **mbtmp2.9**/5, **Error ellipse: s-maj=196.9km s-min=85.6km az=175.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**6.47**	**205**	P	Pn	10 12 32.3	-0.2
	4.8nm,0.3s,baz=90,slow=5.1,SNR=4.3						
FITZ	**Fitzroy Crossi**	**13.74**	**183**	P	P	10 13 53.7	-1.5
	0.2nm,0.3s,baz=15,slow=16,SNR=3.5						
WRA	**Warramunga Arr**	**17.37**	**154**	P	P	10 14 34.5	0.0
	0.3nm,0.3s,baz=333,slow=10,SNR=24						
ASAR	**Alice Springs**	**20.58**	**160**	P	P	10 15 07.2	+0.3
	0.7nm,0.6s,baz=341,slow=7.6,SNR=19						
STKA	**Stephens Creek**	**30.93**	**154**	P	P	10 16 38.9	-0.1
	2.1nm,1.1s,baz=331,slow=10,SNR=3.3						

*ISCJB **31** 10:21:53.5±0.8, 3837N±003×2055E±007, h2km±10km, Error ellipse: s-maj=10.1km s-min=4.8km az=165.8*
*CSEM **31** 10:21:53.3±0.2, 3835N×2049E, h0km±2km, MD3.5, Error ellipse: s-maj=5.3km s-min=2.7km az=66.0*
*THE **31** 10:21:54.0, 3838N×2056E, h9km, ML3.1*
*ATH **31** 10:21:54.3, 3834N×2057E, h4km, MD3.5/7*
*NEIC **31** 10:21:54.0, 3838N×2056E, h10km, MD3.5(ATH), ML3.1(THE), After THE.*

ISC 31 10:21:53.6±0.9, **3835N**±004×**2052E**±008, **h11**km±7km, **n12**, **σ0**§**98**/16, **1C, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**163**	⇑*i*P	**Pg**	**10 21 57.0**	**-0.6**
VLS				*e*SG	**Sg**	**10 22 01.0**	**+0.7**
KFL	**Anninata**	**0.32**	**139**	*e*Pg	**Pg**	**10 21 59.9**	**-0.2**
KFL	**Anninata**	**0.32**	**139**	*e*Pg	**Pg**	**10 21 59.8**	**-0.2**
LKD	**Levkas**	**0.37**	**16**	*e*Pg	**Pg**	**10 21 59.9**	**-1.0**
LKD				*e*Sg	**Sg**	**10 22 06.0**	**+0.2**
RLS	**Riolos of Patr**	**0.80**	**111**	*e*PB	**Pb**	**10 22 09.0**	**-0.5**
SELA	**Sela**	**1.08**	**94**	*e*Pg	**Pg**	**10 22 13.7**	**-0.7**
SELA				*e*Sg	**Sg**	**10 22 29.3**	**+0.9**
EVR	**Evrytania**	**1.15**	**60**	*e*PB	**Pb**	**10 22 15.4**	**-0.1**
IGT	**Igoumenitsa**	**1.19**	**353**	*e*Pg	**Pg**	**10 22 15.3**	**-1.1**
IGT				*e*Sg	**Sg**	**10 22 33.0**	**+1.2**
JAN	**Janina**	**1.33**	**11**	*e*PB	**Pb**	**10 22 16.0**	**-2.5**
KEK	**Kerkira**	**1.47**	**338**	*e*PB	**Pb**	**10 22 22.7**	**+1.8**
ITM	**Ithomi**	**1.62**	**136**	*e*PB	**Pb**	**10 22 24.0**	**+0.6**
THL	**Klokotos Trika**	**1.68**	**43**	*e*PB	**Pb**	**10 22 25.3**	**+0.8**

IDC 31 10:34:55.8±56.0, **2416S**×**17789W**, **h0km**, **mb4.0**/3, **mb1 4.1**/3, **mb1mx3.8**/13, **mbtmp4.0**/3, **Error ellipse: s-maj=1031.0km s-min=156.2km az=88.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.42**	**249**	P	P	10 42 01.9	-0.3
	1.4nm,0.4s,baz=90,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**43.89**	**260**	P	P	10 43 04.2	-0.2
	0.8nm,0.6s,baz=92,slow=7.9,SNR=18						
WRA	**Warramunga Arr**	**44.31**	**266**	P	P	10 43 08.1	+0.3
	1.3nm,0.8s,baz=104,slow=8.2,SNR=22						

*IDC **31** 10:42:15.8±3.2, 448S×15279E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/15, mbtmp4.1/3, Error ellipse: s-maj=118.9km s-min=45.3km az=123.0*

NEIC 31 10:42:26.6±2.0, **510S**×**15249E**, **h30**km, **mb4.1**/2, **Error ellipse: s-maj=71.7km s-min=29.1km az=157.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**21.18**	**248**	*e*P	P	10 47 10.5	+0.7
	3.8nm,0.5s						
WB2	**Warramunga Arr**	**23.00**	**229**	*e*P	P	10 47 29.4	+0.3
WRA	**Warramunga Arr**	**23.01**	**229**	P	P	10 47 29.6	+0.4
	5.6nm,0.5s,baz=54,slow=9.9,SNR=93						
ASAR	**Alice Springs**	**25.71**	**222**	P	P	10 47 54.2	-0.2
	0.5nm,0.5s,baz=55,slow=9.1,SNR=16						
FITZ	**Fitzroy Crossi**	**29.24**	**242**	*e*P	P	10 48 25.0	-1.1
	3.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**29.24**	**242**	P	P	10 48 24.0	-2.1
	1.2nm,0.3s,baz=69,slow=9.2,SNR=11						
PMSA	**Palmer Station**	**105.26**	**165**	*e*PKP	PKiKP	11 00 46.2	+0.2
TORD	**Torodi Ar. Bea**	**150.10**	**288**	PKPbc	PKPbc	11 02 09.6	-5.9
	0.5nm,0.4s,baz=88,slow=2.2,SNR=7.0						

*NIED **31** 10:48:00, 4450N×14920E, h14km, Mw3.6 Best double couple: M0 2.86000×10^14 NP1:φ=214.00000°, δ30.00000°, λ93.00000°. NP2:φ=30.00000°, δ60.00000°, λ88.00000°.*
*NEIC **31** 10:48:32.2±1.9, 4454N×14916E, h10km, mb4.1/1, Error ellipse: s-maj=52.0km s-min=15.6km az=139.0*
*IDC **31** 10:48:33.9±5.1, 4514N×14902E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/20, mbtmp3.6/5, ML3.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/34, Error ellipse: s-maj=130.1km s-min=31.5km az=159.0*
*JMA **31** 10:48:33.3±0.5, 4445N×14923E, h30km, M3.7*
*ISCJB **31** 10:48:33.2±1.7, 4419N±008×1492E±02, h46km±15km, mb3.6/4, Error ellipse: s-maj=19.8km s-min=11.3km az=23.6*
*MOS **31** 10:48:34.2±1.1, 4437N×14919E, h50km, mb4.3/1, Error ellipse: s-maj=26.6km s-min=23.0km az=43.6*

ISC 31 10:48:36.0±1.7, **4423N**±008×**1491E**±02, **h50**km±15km, **n27**, **σ1**§**01**/31, **mb3.6**/4, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.35**	**319**	*e*PN	**Pn**	**10 48 56.0**	**-2.4**
KUR				*e*S	**Sn**	**10 49 15.0**	**-0.1**
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				pmax	pmax		
	comp=E,150nm,0.5s						
KUR				pmax	pmax		
	comp=Z,280nm,0.5s						
KUR				smax			
	comp=N,570nm,0.5s						
KUR				smax			
	comp=E,760nm,0.5s						
NEM2	**Nemuro 2**	**2.60**	**252**	P	**Pn**	**10 49 14.2**	**-1.3**
NEM2				*e*S	**Sn**	**10 49 44.6**	**-1.2**
JRA	**Rausu**	**2.90**	**266**	P	**Pn**	**10 49 20.4**	**+0.8**
JNK	**Nakash**	**3.25**	**260**	P	**Pn**	**10 49 24.0**	**-0.4**
JNK				*e*S	**Sn**	**10 50 02.9**	**+1.1**
JAK	**Akkeshi**	**3.44**	**251**	P	**Pn**	**10 49 26.0**	**-1.1**
JTKR	**Abashiri--Toko**	**3.77**	**268**	P	**Pn**	**10 49 32.3**	**+0.8**
JAR	**Ashorobuto**	**3.99**	**258**	P	**Pn**	**10 49 34.7**	**+0.1**
JMP	**Maruseppu**	**4.16**	**269**	P	**Pn**	**10 49 38.1**	**+1.2**
JCH	**Churui**	**4.50**	**251**	P	**Pn**	**10 49 41.8**	**+0.3**
ASAJ	**Asahikawa**	**4.70**	**271**	PN	**Pn**	**10 49 46.1**	**+1.8**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,92nm,18.9s						
ASAJ	**Asahikawa**	**4.70**	**271**	Pn	**Pn**	**10 49 46.0**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=85,slow=11,SNR=6.9						
ASAJ				LR	LR	10 51 51.3	
	comp=Z,92nm,18.9s,baz=209,slow=42						
JFR	**Furan**	**4.86**	**260**	P	**Pn**	**10 49 47.5**	**+1.1**
ERM	**Erimo**	**4.90**	**245**	*e*Pn	**Pn**	**10 49 48.1**	**+1.1**
JEM	**Erimo**	**4.90**	**245**	P	**Pn**	**10 49 47.5**	**+0.5**
JNBK	**Urakawa-nobuka**	**5.04**	**250**	P	**Pn**	**10 49 48.6**	**-0.4**
JBT2	**Biratori 2**	**5.13**	**256**	P	**Pn**	**10 49 50.2**	**0.0**
JNB	**Noboribetsu**	**6.15**	**256**	P	**Pn**	**10 50 04.3**	**+0.1**
JKB	**Kayabe**	**6.37**	**251**	P	**Pn**	**10 50 06.3**	**-0.9**
JKB				*e*S	**Sn**	**10 51 15.5**	**-3.1**
OFUJ	**Ofunato**	**7.59**	**230**	*e*S	**Sn**	**10 51 40.2**	**-8.3**
JIO	**Ouri**	**8.21**	**228**	*e*S	**Sn**	**10 51 53.8**	**-10**
MKAR	**Makanchi Array**	**45.62**	**298**	P	**P**	**10 56 52.0**	**+0.8**
MKAR	**Makanchi Array**	**45.62**	**298**	P	**P**	**10 56 52.0**	**+0.8**
	comp=Z,0.2nm,0.5s,mb3.4,baz=79,slow=8.4,SNR=5.5						
MKAR				LR	LR	11 17 29.8	
	comp=Z,35nm,18.5s,baz=354,slow=38						
YKA	**Yellowknife Ar**	**54.61**	**34**	P	**P**	**10 57 58.5**	**-0.4**
	comp=Z,0.1nm,0.6s,mb3.0,baz=297,slow=7.1,SNR=3.6						
FINES	**FINESS Array B**	**65.09**	**334**	P	**P**	**10 59 09.9**	**-1.0**
	comp=Z,0.6nm,0.5s,mb3.9,baz=51,slow=7.3,SNR=6.1						
NB2	**NORSAR Subarra**	**69.66**	**340**	P	**P**	**10 59 40.5**	**+0.7**
	comp=Z,0.8nm,0.5s,mb3.9,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**69.66**	**340**	P	**P**	**10 59 40.5**	**+0.7**
NB2				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
NOA	**NORSAR Array B**	**69.66**	**340**	P	**P**	**10 59 39.6**	**-0.2**
	comp=Z,1.3nm,0.5s,mb4.2,baz=30,slow=6.3,SNR=5.5						

*NEIC **31** 10:55:27.7, 3166S×7186W, h38km, MD3.7(GUC), After GUC.*

GUC 31 10:55:27.7±0.7, **3166S**×**7186W**, **h38**km±4km, **MD3.7, ML2.8, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.88**	**57**	⇑*i*P	Pn	10 55 43.7	+0.2
CMCH				*i* S	Sn	10 55 56.7	+1.6
CMCH	**Combarbala**	**0.88**	**57**	⇑*i*P	Pn	10 55 43.7	+0.2
CMCH				*i* S	Sn	10 55 56.7	+1.6
CMCH				AML	AML	10 55 58.2	
	comp=E,842nm,0.5s						
JACH	**Jahuel**	**1.49**	**134**	*e*P	Pn	10 55 53.6	+1.7
JACH				*i* S	Sn	10 56 13.4	+3.3
TLL	**Tololo Astrono**	**1.74**	**32**	*e*P	Pn	10 55 57.1	+1.7
TLL				*i* S	Sn	10 56 19.7	+3.4
TLL	**Tololo Astrono**	**1.74**	**32**	*e*P	Pn	10 55 57.1	+1.7
TLL				*i* S	Sn	10 56 19.7	+3.4
TLL				AML	AML	10 56 28.7	
	comp=N,104nm,0.5s						
PEL	**Peldehue**	**1.79**	**146**	*e*P	Pn	10 55 57.7	+1.6
PEL				*i* S	Sn	10 56 19.9	+2.4
PEL				AML	AML	10 56 25.9	
	comp=E,201nm,0.3s						
CLCH	**Cerro Calan**	**2.07**	**148**	*i* P	Pn	10 56 01.6	+1.7
CLCH				*i* S	Sn	10 56 29.2	+4.8
CLCH				AML	AML	10 56 35.5	
	comp=E,132nm,0.6s						
FCH	**Farellones**	**2.13**	**142**	*e*P	Pn	10 56 02.8	+2.1
FCH				*i* S	Sn	10 56 29.2	+3.2
FCH				AML	AML	10 56 35.0	
	comp=E,58nm,0.3s						
LMEL	**Las Melosas**	**2.59**	**148**	*e*P	Pn	10 56 08.7	+1.6
LMEL				*i* S	Sn	10 56 39.8	+2.4
LMEL	**Las Melosas**	**2.59**	**148**	*e*P	Pn	10 56 08.7	+1.6
LMEL				*i* S	Sn	10 56 39.8	+2.4
LMEL				AML	AML	10 56 56.1	
	comp=N,49nm,0.7s						

*NEIC **31** 11:01:29.9, 3158S×7199W, h9km, ML3.3(GUC), After GUC.*

GUC 31 11:01:29.9±0.9, **3158S**×**7199W**, **h9**km±9km, **MD4.0, ML3.3, 4C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.52**	**126**	⇑*i*P	Pg	11 01 23.4	-17
CHNG				*i* S	Sg	11 01 31.4	-15
CMCH	**Combarbala**	**0.94**	**65**	⇑*i*P	Pg	11 01 47.4	-0.6
CMCH				*i* S	Sg	11 02 00.8	+0.7
CMCH	**Combarbala**	**0.94**	**65**	⇑*i*P	Pg	11 01 47.4	-0.6
CMCH				*i* S	Sg	11 02 00.8	+0.7
CMCH				AML	AML	11 02 04.8	
	comp=E,3μm,0.6s						
PACH	**Papudo**	**1.06**	**154**	*e*P	Pg	11 01 49.4	-0.9
PACH				*i* S	Sg	11 02 03.9	-0.4
JACH	**Jahuel**	**1.62**	**133**	*e*P	Pn	11 01 58.4	-0.2
JACH				*i* S	Sn	11 02 19.8	+0.2
ROCH	**El Roble**	**1.62**	**149**	⇑*i*P	Pn	11 01 59.0	+0.4
ROCH				*i* S	Sn	11 02 20.3	+0.7
TLL	**Tololo Astrono**	**1.74**	**36**	*e*P	Pn	11 02 00.7	+0.5
TLL				*i* S	Sn	11 02 23.7	+1.1
TLL	**Tololo Astrono**	**1.74**	**36**	*e*P	Pn	11 02 00.7	+0.5
TLL				*i* S	Sn	11 02 23.7	+1.1
TLL				AML	AML	11 02 31.2	
	comp=E,331nm,0.5s						
PEL	**Peldehue**	**1.91**	**145**	*e*P	Pn	11 02 02.4	-0.3
PEL				*i* S	Sn	11 02 27.5	+0.7
PEL				AML	AML	11 02 33.4	
	comp=E,529nm,0.3s						
LCCH	**Las Cruces**	**1.92**	**169**	*e*P	Pn	11 02 06.1	+3.3
CLCH	**Cerro Calan**	**2.19**	**146**	*e*P	Pn	11 02 07.3	+0.8
CLCH				*i* S	Sn	11 02 36.3	+2.6
CLCH				AML	AML	11 02 43.5	
	comp=E,348nm,0.7s						
TACH	**Talagante**	**2.25**	**157**	*e*P	Pn	11 02 07.1	-0.3
FCH	**Farellones**	**2.26**	**141**	*e*P	Pn	11 02 08.2	+0.7
FCH				*i* S	Sn	11 02 38.3	+2.8
FCH				AML	AML	11 02 46.6	
	comp=E,99nm,0.5s						
CHCH	**Chadas Angostu**	**2.60**	**155**	⇓*i*P	Pn	11 02 13.6	+1.4
LCO	**Las Campanas**	**2.79**	**24**	*e*Pn	Pn	11 02 13.8	-1.0

*NEIC **31** 11:06:07.7±0.3, 363N×12657E, h10km, mb4.7/8, Error ellipse: s-maj=25.5km s-min=6.6km az=75.0*
*BJI **31** 11:06:09.9, 396N×12644E, h8km, mB4.8, mb4.7*
*IDC **31** 11:06:10.0±3.6, 361N×12651E, h25km±22km, mb4.3/17, mb1 4.3/17, mb1mx4.2/22, mbtmp4.2/17, MS3.6/4, Ms1 3.7/4, ms1mx3.1/30, Error ellipse: s-maj=36.0km s-min=11.2km az=76.0*
*ISCJB **31** 11:06:12.8±1.5, 366N±005×1267E±0.1, h67km±14km, mb4.5/37, Error ellipse: s-maj=18.0km s-min=7.8km az=164.1*
*MOS **31** 11:06:12.5±0.8, 365N×12677E, h66km, mb4.8/11, Error ellipse: s-maj=26.1km s-min=8.2km az=102.3*

ISC 31 11:06:13.9±1.4, **364N**±005×**1267E**±01, **h61**km±13km, **n73**, **σ0**§**78**/70, **mb4.5**/36, **1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**3.00**	**324**	⇓*e*P	**Pn**	**11 06 58.7**	**-0.4**
BATI	**Kupang**	**14.09**	**192**	Pn	**Pn**	**11 09 33.9**	**+3.4**
	1.6nm,0.3s,baz=294,slow=20,SNR=2.4						
KAKA	**Kakadu**	**17.21**	**161**	*e*P	**Pn**	**11 10 10.5**	**+0.1**
	9.4nm,0.6s						
YHNB	**Yeheng**	**21.53**	**347**	*e*P	**P**	**11 10 58.1**	**0.0**
FITZ	**Fitzroy Crossi**	**21.63**	**183**	*e*P	**P**	**11 10 59.2**	**-0.1**
	9.6nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.63**	**183**	P	**P**	**11 10 58.5**	**-0.8**
	3.1nm,0.8s,mb3.8,baz=352,slow=9.1,SNR=6.8						
JOW	**Kunigami**	**23.11**	**4**	P	**P**	**11 11 15.3**	**+0.5**
	21nm,0.8s,mb4.6,baz=216,slow=8.4,SNR=4.2						
WRA	**Warramunga Arr**	**24.61**	**163**	P	**P**	**11 11 28.1**	**-0.5**
	7.3nm,0.6s,mb4.4,baz=343,slow=11,SNR=48						
WRA				PcP	PcP	11 15 06.0	+0.7
	0.5nm,0.5s,baz=338,slow=2.5,SNR=3.2						
WRA				S	**S**	**11 15 49.3**	**+3.6**
	0.8nm,0.7s,baz=347,slow=18,SNR=3.8						
WB2	**Warramunga Arr**	**24.61**	**163**	*e*P	**P**	**11 11 27.8**	**-0.9**
ASAR	**Alice Springs**	**28.03**	**166**	P	**P**	**11 11 59.4**	**-0.2**
	0.7nm,0.4s,mb3.6,baz=348,slow=8.2,SNR=20						
ASAR				PcP	PcP	11 15 14.1	+0.8
	1.0nm,0.7s,baz=338,slow=2.3,SNR=5.3						
ASAR				S	**S**	**11 16 44.8**	**+5.0**
	0.2nm,0.6s,baz=348,slow=17,SNR=2.6						
WHN	**Wuhan**	**29.20**	**338**	*e*P	**P**	**11 12 10.8**	**+1.0**
NJ2	**Nanjing**	**29.21**	**346**	*e*P	**P**	**11 12 08.5**	**-1.4**
JNU	**Nakatsue**	**29.59**	**7**	LR	LR	11 23 22.1	
	comp=Z,55nm,18.1s,baz=230,slow=35						
KSRS	**Korea Array**	**33.67**	**2**	P	**P**	**11 12 50.0**	**+1.0**
KSRS				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KSRS	**Korea Array**	**33.67**	**2**	P	**P**	**11 12 50.0**	**+1.0**
	comp=Z,6.9nm,0.8s,mb4.7,baz=179,slow=10,SNR=20						
XAN	**Xi'an**	**34.48**	**333**	P	**P**	**11 12 55.3**	**-0.9**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HNR	**Honiara**	**35.58**	**112**	LR	LR	11 25 43.1	
	comp=Z,440nm,21.2s,baz=214,slow=33						
BJT	**Baijiatuau**	**37.45**	**347**	*e*P	**P**	**11 13 21.6**	**+0.2**
	comp=Z,18nm,0.5s,mb5.2						
BJT	**Baijiatuau**	**37.45**	**347**	*e*P	**P**	**11 13 21.7**	**+0.3**
BJT				pmax	pmax		
	comp=Z,18nm,0.5s						
BJI	**Beijing**	**37.47**	**347**	P	**P**	**11 13 22.0**	**+0.4**
BJI				AMB	AMB		
	comp=Z,42nm,1.1s,mb5.2						
STKA	**Stephens Creek**	**38.05**	**159**	*e*P	**P**	**11 13 26.8**	**+0.2**
	comp=Z,5.8nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**38.05**	**159**	P	**P**	**11 13 27.5**	**+0.8**
	comp=Z,7.3nm,0.6s,mb4.6,baz=334,slow=8.6,SNR=19						
MDJ	**Mudanjiang**	**40.88**	**3**	P	**P**	**11 13 51.0**	**+1.0**
MDJ				AMB	AMB		
	comp=Z,15nm,1.1s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,79nm,5.1s						
ASAJ	**Asahikawa**	**42.68**	**17**	P	**P**	**11 14 05.0**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ASAJ	**Asahikawa**	**42.68**	**17**	P	**P**	**11 14 05.0**	**+0.2**
	comp=Z,7.1nm,0.7s,mb4.5,baz=232,slow=11,SNR=10						
GTA	**Gaotai**	**43.16**	**329**	*e*P	**P**	**11 14 08.8**	**+0.1**
GTA				AP	pP	11 14 16.3	-7.9
GTA				XP	sP	11 14 20.0	-11
GTA				AMB	AMB		
	comp=Z,4.0nm,1.3s,mb4.0						
TAPN	**Taplejung**	**44.05**	**306**	*e*P	**P**	**11 14 16.4**	**+0.3**
	comp=Z,4.7nm,0.4s,mb4.5						
HABR	**Khabarovsk**	**45.23**	**8**	*e*P	**P**	**11 14 23.3**	**-1.8**
HABR				*e*		11 16 01.8	
HABR				*e*		11 16 07.9	
HABR				*e*SS	SS	11 24 06.0	-19
YSS	**Yuzh-Sakhalins**	**45.33**	**15**	*e*P	**P**	**11 14 24.7**	**-1.2**
YSS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
JIRN	**Jiri**	**45.41**	**306**	*e*P	**P**	**11 14 27.3**	**+0.4**
	comp=Z,8.9nm,0.7s,mb4.7						
KLR	**Kul'dur**	**45.62**	**5**	*e*P	**P**	**11 14 24.2**	**-4.0**
HIA	**Hailar**	**45.84**	**354**	*e*P	**P**	**11 14 31.1**	**+1.1**
	comp=Z,22nm,1.1s,mb5.0						
HIA	**Hailar**	**45.84**	**354**	*e*P	**P**	**11 14 31.1**	**+1.2**
HIA				pmax	pmax		
	comp=Z,22nm,1.1s						
GKN	**Gorkha**	**46.80**	**306**	*e*P	**P**	**11 14 38.0**	**+0.2**
SONM	**Songino Array**	**47.37**	**341**	P	**P**	**11 14 42.0**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=160,slow=8.9,SNR=9.3						
SONM				PcP	PcP	11 16 13.4	+1.6
	comp=Z,1.5nm,0.8s,baz=137,slow=3.6,SNR=4.8						
KOLN	**Koldanda**	**47.56**	**305**	*e*P	**P**	**11 14 44.2**	**+0.5**
	comp=Z,24nm,0.6s,mb5.4						
CIT	**Chita**	**49.45**	**349**	*e*P	**P**	**11 14 58.8**	**+1.0**
CIT				*e*	pP	11 15 17.7	+4.1
CIT				pmax	pmax		
	comp=Z,30nm,1.7s,mb5.0						
BOD	**Bodaibo**	**54.95**	**352**	*e*P	**P**	**11 15 38.2**	**-0.3**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
MK31	**Makanchi Array**	**57.62**	**325**	*e*P	**P**	**11 15 58.3**	**+0.6**
MKAR	**Makanchi Array**	**57.62**	**325**	P	**P**	**11 15 58.0**	**+0.2**
	comp=Z,3.6nm,0.5s,mb4.7,baz=121,slow=8.4,SN

comp=Z,27nm,22.0s,baz=180,slow=35
YKA Yellowknife Ar 99.59 24 P Pdif 11 19 49.2 -1.3
YKA Yellowknife Ar 99.59 24 P Pdif 11 19 49.2 -1.3
comp=Z,0.2nm,0.7s,baz=303,slow=4.4,SNR=6.3
TORD Torodi Ar. Bea 122.93 288 PKP PKPdf 11 25 03.4 -1.0
comp=Z,0.3nm,0.4s,baz=31,slow=3.3,SNR=3.8

IDC 31 11:09:12.6±1.9, 3322S×7779E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/17, mbtmp4.1/3, MS3.8/9, Ms1 3.7/9, ms1mx3.3/37, Error ellipse: s-maj=56.3km s-min=40.7km az=140.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**32.92**	**101**	LR	LR	11 25 51.4	
	comp=Z,113nm,21.8s,baz=90,slow=30						
BOSA	**Boshof**	**44.92**	**261**	LR	LR	11 33 54.4	
	comp=Z,32nm,18.3s,baz=319,slow=33						
LBTB	**Lobatse**	**45.94**	**266**	LR	LR	11 33 27.9	
	comp=Z,110nm,20.4s,baz=296,slow=32						
ASAR	**Alice Springs**	**49.74**	**94**	P	P	11 18 06.5	-0.3
	1.5nm,0.8s,baz=244,slow=6.3,SNR=11						
WRA	**Warramunga Arr**	**51.71**	**90**	P	P	11 18 22.0	+0.2
	3.4nm,0.8s,baz=245,slow=7.3,SNR=11						
STKA	**Stephens Creek**	**53.03**	**107**	LR	LR	11 38 12.9	
	comp=Z,103nm,19.0s,baz=206,slow=33						
TSUM	**Tsumeb**	**55.12**	**269**	LR	LR	11 38 39.7	
	comp=Z,85nm,18.2s,baz=142,slow=32						
VNDA	**Vanda**	**56.56**	**165**	LR	LR	11 37 54.4	
	comp=Z,131nm,19.1s,baz=302,slow=30						
QSPA	**South Pole Qui**	**56.93**	**180**	P	P	11 18 59.2	+0.3
	1.9nm,1.0s,baz=134,slow=14,SNR=4.6						
CTA	**Charters Tower**	**61.61**	**96**	LR	LR	11 42 52.9	
	comp=Z,86nm,18.1s,baz=311,slow=33						
TORD	**Torodi Ar. Bea**	**85.82**	**289**	LR	LR	11 56 06.6	
	comp=Z,59nm,20.7s,baz=185,slow=33						
DBIC	**Dimbokro**	**87.50**	**280**	LR	LR	11 56 34.8	
	comp=Z,37nm,20.1s,baz=203,slow=32						
YKA	**Yellowknife Ar**	**149.66**	**11**	PKPbc	PKPbc	11 29 03.0	-0.3
	0.4nm,0.8s,baz=322,slow=2.6,SNR=6.7						

*NAO **31** 11:09:24.3±1.7, 6764N×3399E, ML2.0*
HEL 31 11:09:24.1±0.3, 6766N×3405E, h0km, ML1.5, ML2.0(NAO), Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.41**	**263**	*i* P	Pg	11 09 31.6	-0.4
APA0				*i* S	Sg	11 09 37.0	-0.2
APA0				*e*RG		11 09 39.1	
APA0	**Apatity Array**	**0.41**	**263**	Pg	Pg	11 09 31.6	-0.4
	baz=85,slow=16						
APA0				Lg		11 09 37.0	
	baz=79,slow=37						
APA0				Rg		11 09 39.1	
	baz=79,slow=37						
KU6	**Riekki**	**2.32**	**227**	*e*P	Pn	11 10 04.0	+0.5
	baz=42						
KU6				*e*SG	Sg	11 10 34.8	-3.7
MSF	**Maaselka**	**2.65**	**231**	*e*P	Pn	11 10 08.0	0.0
MSF				*e*SB	Sb	11 10 43.5	-1.8
MSF				MSG		11 10 43.5	
	comp=Z,0.8nm,0.2s						
SGF	**Sodankyl**	**2.90**	**269**	*e*PG	Pg	11 10 15.2	-4.3
	baz=75						
SGF				*e*SB	Sb	11 10 51.2	-1.3
SGF				MSG		11 10 51.2	
	comp=Z,1.9nm,0.2s						
ARA0	**ARCESS Array S**	**3.66**	**305**	*e*P	Pn	11 10 21.9	+0.1
ARA0				*e*PG	Pg	11 10 30.1	-4.0
ARA0				*e*S	Sn	11 11 03.6	-2.0
ARA0				*e*SG	Sg	11 11 16.0	-5.4
ARA0	**ARCESS Array S**	**3.66**	**305**	Pn	Pn	11 10 21.9	+0.1
	baz=124,slow=16						
ARA0				Pg	Pg	11 10 30.1	-4.0
	baz=117,slow=16						
ARA0				Sn	Sn	11 11 03.6	-2.0
	baz=120,slow=28						
ARA0				Lg		11 11 16.0	
	baz=116,slow=37						
OUL	**Oulu**	**4.17**	**236**	*e*SG	Sg	11 11 35.0	-3.0
FIA0	**FINESS Array S**	**7.12**	**213**	*e*S	Sn	11 12 26.8	-3.9
FIA0				*e*SG	Sg	11 13 02.5	-10
FIA0	**FINESS Array S**	**7.12**	**213**	Sn	Sn	11 12 26.8	-3.9
	baz=32,slow=22						
FIA0				Lg		11 13 02.5	
	baz=32,slow=28						

*SGS **31** 11:29:36.6, 3037N×3645E, h12km*
*ISCJB **31** 11:29:40.6±1.2, 2983N±005×3620E±0.10, h0km, Error ellipse: s-maj=12.8km s-min=6.7km az=164.7*
*HLW **31** 11:29:40.5, 2998N×3653E, h25km, Mb3.3*
*GII **31** 11:29:41.6±1.4, 2986N×3616E, h0km*
*CSEM **31** 11:29:42.0±0.2, 2979N×3607E, h1km, ML3.3, Error ellipse: s-maj=6.0km s-min=2.9km az=84.0, Mining explosion.*
ISC 31 11:29:41.0±1.2, 2983N±005×362E±01, h0km, n16, σ0§52/18, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HQLS		**1.14**	**243**	P	**Pg**	**11 30 03.1**	**+0.4**
ZFRI	**Zfri**	**1.15**	**309**	Pg	**Pg**	**11 30 03.2**	**+0.1**
PRNI	**Paran**	**1.17**	**297**	Pg	**Pg**	**11 30 03.7**	**+0.2**
JLOS		**1.26**	**210**	P	**Pg**	**11 30 05.9**	**+0.8**
KRMI	**Paran Flat**	**1.33**	**283**	Pg	**Pg**	**11 30 06.5**	**+0.1**
HBST	**Basata**	**1.43**	**245**	P	**Pn**	**11 30 08.1**	**-0.1**
RMNI	**Mount Ramon**	**1.47**	**302**	Pn	**Pn**	**11 30 08.7**	**0.0**
RMNI				Sn	**Sn**	**11 30 29.6**	**+0.8**
MZDA	**Masada**	**1.65**	**334**	Pn	**Pn**	**11 30 10.9**	**-0.3**
HDHB	**Dhahab**	**1.78**	**232**	P	**Pn**	**11 30 12.8**	**-0.2**
YTIR	**Yattir**	**1.80**	**328**	Pn	**Pn**	**11 30 13.7**	**+0.5**
HNKL	**Nakhl**	**1.94**	**274**	P	**Pn**	**11 30 14.5**	**-0.8**
HNKL				S	**Sn**	**11 30 39.4**	**-1.0**
RSHS		**1.97**	**220**	S	**Sn**	**11 30 44.8**	**+3.9**
RSHS		**1.97**	**220**	P	**Pn**	**11 30 15.0**	**-0.5**
HKAT	**Jabal Katrina**	**2.34**	**237**	P	**Pn**	**11 30 20.8**	**+0.1**
TR1		**2.69**	**228**	P	**Pn**	**11 30 25.3**	**-0.2**
WJHS		**3.09**	**177**	P	**Pn**	**11 30 30.9**	**-0.1**

*NIED **31** 11:35:00, 4730N×15290E, h35km, Mw4.0 Best double couple: M0 1.06000×10^15 NP1:φs221.00000°, δ51.00000°, λ-168.00000°. NP2:φs123.00000°, δ80.00000°, λ-39.00000°.*
*ISCJB **31** 11:36:00.5±1.0, 4715N±009×1529E±0.1, h70km±9km, mb3.6/12, Error ellipse: s-maj=20.5km s-min=5.7km az=43.2*
*IDC **31** 11:36:01.6±0.9, 4717N×15256E, h64km±7km, mb3.5/12, mb1 3.8/12, mb1mx3.7/19, mbtmp3.5/12, MS3.4/1, Ms1 3.4/1, ms1mx2.5/30, Error ellipse: s-maj=24.5km s-min=18.1km az=124.0*
*MOS **31** 11:36:01.1±1.0, 4716N×15291E, h70km, mb4.1/2, Error ellipse: s-maj=21.0km s-min=10.8km az=57.8*
*NEIC **31** 11:36:02.1±0.6, 4731N×15276E, Error ellipse: s-maj=20.1km s-min=10.6km az=140.0*
ISC 31 11:36:02.7±0.8, 4718N±009×1529E±01, h71km±8km, h66km±1.4km:pP-P, n46, σ1§33/53, mb3.6/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.98**	**242**	PN	**Pn**	**11 37 00.5**	**-0.7**
KUR				*e*S	**Sn**	**11 37 47.5**	**+1.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.5s						
KUR				smax			
	comp=N,260nm,0.7s						
KUR				smax			
	comp=E,170nm,0.7s						
SKR	**Severo-Kuril's**	**4.11**	**30**	*e*PN	**Pn**	**11 37 02.5**	**-0.4**
SKR				*e*S	**Sn**	**11 37 49.5**	**-0.1**
SKR				pmax	pmax		
	comp=Z,50nm,0.5s						
SKR				smax			
	comp=N,160nm,0.6s						
SKR				smax			
	comp=E,80nm,0.6s						
SKR				smax			
	comp=Z,80nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.83**	**240**	*e*PN	**Pn**	**11 37 27.1**	**+0.6**
YUK				*e*S	**Sn**	**11 38 38.0**	**+6.1**
YUK				smax			
	comp=E,170nm,0.5s						
NEM2	**Nemuro 2**	**6.31**	**235**	P	**Pn**	**11 37 30.6**	**-2.4**
NEM2				*e*S	**Sn**	**11 38 38.3**	**-5.3**
JRA	**Rausu**	**6.33**	**242**	P	**Pn**	**11 37 33.8**	**+0.5**
JNK	**Nakash**	**6.77**	**241**	P	**Pn**	**11 37 39.1**	**-0.2**
YSS	**Yuzh-Sakhalins**	**6.91**	**272**	*e*Pn	**Pn**	**11 37 39.7**	**-1.4**
	comp=E,14nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.91**	**272**	*e*PN	**Pn**	**11 37 43.5**	**+2.3**
JTKR	**Abashiri--Toko**	**7.06**	**246**	P	**Pn**	**11 37 44.9**	**+1.7**
JAK	**Akkeshi**	**7.13**	**237**	P	**Pn**	**11 37 42.1**	**-2.2**
JAK				*e*S	**Sn**	**11 38 58.3**	**-5.5**
JMP	**Maruseppu**	**7.38**	**248**	P	**Pn**	**11 37 49.6**	**+1.9**
JAR	**Ashorobuto**	**7.50**	**242**	P	**Pn**	**11 37 49.6**	**+0.3**
JOB	**Onbets**	**7.69**	**239**	P	**Pn**	**11 37 51.4**	**-0.5**
ASAJ	**Asahikawa**	**7.82**	**251**	PN	**Pn**	**11 37 53.3**	**-0.3**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ	**Asahikawa**	**7.82**	**251**	P	**Pn**	**11 37 53.3**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=84,slow=18,SNR=8.4						
JKK2	**Kamakawa 2**	**7.83**	**249**	P	**Pn**	**11 37 56.0**	**+2.2**
JCH	**Churui**	**8.14**	**239**	P	**Pn**	**11 37 56.6**	**-1.5**
JCH				*e*S	**Sn**	**11 39 22.6**	**-5.9**
JFR	**Furan**	**8.29**	**245**	P	**Pn**	**11 38 02.6**	**+2.5**
ERM	**Erimo**	**8.64**	**237**	*e*Pn	**Pn**	**11 38 05.1**	**+0.3**
ERM				*e*Sn	**Sn**	**11 39 43.2**	**+2.7**
JNBK	**Urakawa-nobuka**	**8.70**	**239**	P	**Pn**	**11 38 03.5**	**-2.2**
JNBK				*e*S	**Sn**	**11 39 37.1**	**-5.1**
JNB	**Noboribetsu**	**9.63**	**245**	P	**Pn**	**11 38 17.5**	**-0.8**
JKB	**Kayabe**	**9.96**	**242**	P	**Pn**	**11 38 20.3**	**-2.6**
JKB				*e*S	**Sn**	**11 40 05.3**	**-7.7**
JYM2	**Yakumo 2**	**10.24**	**245**	P	**Pn**	**11 38 25.3**	**-1.3**
MA2	**Magadan**	**12.48**	**355**	*e*PN	**Pn**	**11 38 58.1**	**+1.1**
MA2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**15.21**	**231**	P	**Pn**	**11 39 35.5**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=45,slow=9.3,SNR=7.8						
KSRS	**Korea Array**	**20.77**	**251**	P	**P**	**11 40 38.5**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=51,slow=12,SNR=4.5						
INK	**Inuvik**	**41.38**	**33**	P	**P**	**11 43 42.3**	**+1.0**
	comp=Z,2.4nm,0.9s,mb4.0,baz=278,slow=7.3,SNR=13						
ZALV	**Zalesovo Beam**	**42.22**	**305**	PcP	PcP	11 45 40.5	-0.5
	comp=Z,1.4nm,0.7s,baz=68,slow=4.0,SNR=8.4						
MKAR	**Makanchi Array**	**46.59**	**297**	P	**P**	**11 44 21.5**	**-1.7**
MKAR				PcP	PcP	11 45 55.5	-0.7
MKAR	**Makanchi Array**	**46.59**	**297**	P	**P**	**11 44 21.5**	**-1.7**
	comp=Z,0.1nm,0.2s,mb3.1,baz=69,slow=6.9,SNR=2.2						
MKAR				PcP	PcP	11 45 55.5	-0.6
	comp=Z,0.5nm,0.5s,baz=61,slow=2.7,SNR=5.0						
YKA	**Yellowknife Ar**	**50.68**	**37**	P	**P**	**11 44 55.0**	**+0.7**
YKA				pP	pP	11 45 11.2	-1.0
YKA				PcP	PcP	11 46 10.5	-0.1
YKA	**Yellowknife Ar**	**50.68**	**37**	P	**P**	**11 44 55.0**	**+0.7**
	comp=Z,0.5nm,0.5s,mb3.8,baz=298,slow=7.0,SNR=12						
YKA				pP	pP	11 45 11.2	-1.0
	comp=Z,1.5nm,0.6s,baz=297,slow=7.0,SNR=19						
YKA				PcP	PcP	11 46 10.5	-0.1
	comp=Z,0.4nm,0.9s,baz=306,slow=3.6,SNR=3.5						
AKTO	**Aktyubinsk**	**58.31**	**312**	LR	LR	12 13 10.6	
	comp=Z,29nm,18.8s,baz=48,slow=38						
NVAR	**Mina Array Bea**	**62.39**	**62**	P	**P**	**11 46 18.7**	**+1.0**
	comp=Z,0.5nm,0.7s,mb3.7,baz=303,slow=4.8,SNR=5.6						
NVAR				pP	pP	11 46 36.5	+0.2
	comp=Z,0.4nm,0.6s,baz=292,slow=5.2,SNR=3.8						
FINES	**FINESS Array B**	**63.58**	**335**	P	**P**	**11 46 26.8**	**+1.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**63.58**	**335**	P	**P**	**11 46 23.9**	**-1.3**
	comp=Z,0.5nm,0.5s,mb3.6,baz=25,slow=10,SNR=5.4						
PDAR	**Pinedale Array**	**64.63**	**54**	P	**P**	**11 46 33.8**	**+1.3**
	comp=Z,0.8nm,0.8s,mb3.6,baz=326,slow=1.6,SNR=8.6						
PDAR				pP	pP	11 46 50.5	-0.6
	comp=Z,1.5nm,0.8s,baz=297,slow=1.7,SNR=8.9						
NOA	**NORSAR Array B**	**67.76**	**341**	P	**P**	**11 46 51.7**	**-0.5**
NOA	**NORSAR Array B**	**67.76**	**341**	P	**P**	**11 46 51.7**	**-0.5**
	comp=Z,1.1nm,0.9s,mb3.7,baz=28,slow=6.4,SNR=3.8						
WRA	**Warramunga Arr**	**68.87**	**199**	P	**P**	**11 46 59.4**	**-0.1**
WRA	**Warramunga Arr**	**68.87**	**199**	P	**P**	**11 46 58.5**	**-1.0**
	comp=Z,0.2nm,0.5s,mb3.2,baz=16,slow=6.7,SNR=5.7						
AKASG	**Malin Array Be**	**71.09**	**326**	P	**P**	**11 47 12.4**	**-0.5**
	comp=Z,0.3nm,0.3s,mb3.6,baz=32,slow=5.4,SNR=3.2						
ASAR	**Alice Springs**	**72.56**	**198**	P	**P**	**11 47 22.8**	**+0.9**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**72.56**	**198**	P	**P**	**11 47 21.3**	**-0.6**
	comp=Z,0.9nm,0.8s,mb3.7,baz=22,slow=5.2,SNR=8.4						
SCHQ	**Scheffervill**	**72.98**	**23**	P	**P**	**11 47 22.6**	**-1.5**
	comp=Z,3.1nm,0.8s,mb4.2,baz=315,slow=5.6,SNR=2.6						
GERES	**GERESS Array B**	**77.99**	**334**	P	**P**	**11 47 52.2**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.4,baz=18,slow=4.1,SNR=2.2						

*KISR **31** 12:18:06.6±0.7, 2785N×5686E, h34km±999km, ML3.8*
*CSEM **31** 12:18:09.8±0.4, 2748N×5686E, h10km, mb4.8, Error ellipse: s-maj=10.5km s-min=5.9km az=43.0*
ISC 31 12:18:11.7±1.8, 2730N±010×569E±01, h10km, n15, σ0§75/26, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTHS		**6.36**	**241**	S	**Sn**	**12 20 57.2**	**-0.9**
BTHS		**6.36**	**241**	P	**Pn**	**12 19 46.5**	**+1.0**
BOQSS		**6.89**	**260**	P	**Pn**	**12 19 53.9**	**+1.1**
QRN	**Al-Qurain**	**8.08**	**282**	*e*P	**Pn**	**12 20 08.9**	**-0.2**
QRN				*e*S	**Sn**	**12 21 41.6**	**+1.1**
QRN				AML	AML	12 21 43.2	
	comp=Z,13nm,0.2s						
KBD	**Kabd**	**8.34**	**285**	*e*P	**Pn**	**12 20 12.9**	**+0.2**
KBD				*e*S	**Sn**	**12 21 46.8**	**-0.2**
KBD				AML	AML	12 21 47.0	
	comp=Z,46nm,0.3s						
KBD	**Kabd**	**8.34**	**285**	*e*P	**Pn**	**12 20 12.9**	**+0.2**
KBD				*e*S	**Sn**	**12 21 46.8**	**-0.2**
	comp=Z,46nm,0.3s						
UMR	**Umm Al-Rimmam**	**8.40**	**288**	*e*P	**Pn**	**12 20 13.3**	**-0.1**
UMR				*e*S	**Sn**	**12 21 48.4**	**0.0**
UMR				AML	AML	12 21 48.9	
	comp=Z,7.8nm,0.3s						
UMR	**Umm Al-Rimmam**	**8.40**	**288**	*e*P	**Pn**	**12 20 13.4**	**-0.1**
UMR				*e*S	**Sn**	**12 21 48.4**	**0.0**
	comp=Z,7.8nm,0.3s						
RDF	**Al-Radifah**	**8.42**	**283**	*e*P	**Pn**	**12 20 13.6**	**-0.2**
RDF				*e*S	**Sn**	**12 21 49.8**	**+0.8**
RDF				AML	AML	12 21 51.2	
	comp=Z,6.0nm,0.2s						
RDF	**Al-Radifah**	**8.42**	**283**	*e*P	**Pn**	**12 20 13.6**	**-0.2**
RDF				*e*S	**Sn**	**12 21 49.8**	**+0.8**
NAY	**Al-Naaiem**	**8.74**	**285**	*e*P	**Pn**	**12 20 18.3**	**+0.1**
NAY				*e*S	**Sn**	**12 21 56.8**	**-0.1**
NAY				AML	AML	12 21 58.2	
	comp=Z,1.7nm,0.2s						
NAY	**Al-Naaiem**	**8.74**	**285**	*e*P	**Pn**	**12 20 18.3**	**+0.1**
NAY				*e*S	**Sn**	**12 21 56.8**	**0.0**
	comp=Z,1.7nm,0.2s						
MIB	**Mutribah**	**8.78**	**289**	*e*P	**Pn**	**12 20 18.5**	**-0.2**
MIB				*e*S	**Sn**	**12 21 56.8**	**-0.9**
MIB				AML	AML	12 21 57.7	
	comp=Z,2.6nm,0.3s						
MIB	**Mutribah**	**8.78**	**289**	*e*P	**Pn**	**12 20 18.5**	**-0.2**
MIB				*e*S	**Sn**	**12 21 56.8**	**-0.9**
	comp=Z,2.6nm,0.3s						
ASYS		**11.17**	**274**	P	**Pn**	**12 20 49.7**	**-1.8**

*IDC **31** 12:22:31.9±0.9, 3466N×1368E, h0km, mb3.7/7, mb1 3.8/15, mb1mx3.8/28, mbtmp3.8/15, ML3.8/8, MS3.0/6, Ms1 3.0/6, ms1mx2.7/35, Error ellipse: s-maj=20.8km s-min=18.7km az=134.0*
*ISCJB **31** 12:22:32.4±1.7, 3459N±005×1375E±005, h17km±15km, mb3.6/7, MS2.8/2, Error ellipse: s-maj=8.3km s-min=6.4km az=6.3*
*ROM **31** 12:22:32.3±0.9, 3460N×1372E, h10km, Ml4.3/19, Error ellipse: s-maj=14.9km s-min=5.6km az=169.0*
*NEIC **31** 12:22:32.3, 3460N×1372E, h10km, ML4.3(ROM), After ROM.*
*CSEM **31** 12:22:34.8±0.4, 3454N×1375E, h30km, ML4.3, Error ellipse: s-maj=8.8km s-min=4.9km az=15.0*
ISC 31 12:22:34.9±1.8, 3464N±005×1370E±004, h22km±15km, n71, σ1§01/73, mb3.6/7, MS2.8/2, 1D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDD	**Wield Dalam**	**1.39**	**29**	Pn	**Pn**	**12 22 57.6**	**-1.5**
WDD				Sn	**Sn**	**12 23 16.1**	**-0.7**
	4μm,0.4s						
HMDC	**Modica**	**2.47**	**20**	Pn	**Pn**	**12 23 13.4**	**-0.5**
	1μm,0.6s						
PTS	**Pantelleria**	**2.57**	**328**	Pn	**Pn**	**12 23 14.2**	**-1.1**
	115nm,0.2s						
HAVL	**Avola**	**2.58**	**26**	Pn	**Pn**	**12 23 14.5**	**-1.0**
	1μm,0.7s						
PZI	**Palazzolo**	**2.61**	**22**	Pn	**Pn**	**12 23 15.1**	**-0.7**
	21nm,0.2s						
FAVR	**Favara**	**2.62**	**359**	Pn	**Pn**	**12 23 17.1**	**+1.2**
	267nm,0.5s						
RAFF	**Raffo Rosso**	**2.63**	**12**	Pn	**Pn**	**12 23 15.4**	**-0.7**
	1μm,0.6s						
HVZN	**Vizzini**	**2.66**	**18**	Pn	**Pn**	**12 23 16.2**	**-0.3**
	1μm,0.6s						
SSY	**Sortino**	**2.74**	**24**	Pn	**Pn**	**12 23 17.2**	**-0.4**
	1μm,0.4s						
AGST	**Augusta-Monte**	**2.89**	**25**	Pn	**Pn**	**12 23 18.8**	**-0.8**
	688nm,0.6s						
VAE	**Valguarnera**	**2.89**	**11**	Pn	**Pn**	**12 23 19.2**	**-0.4**
	12nm,0.3s,baz=9.9,slow=14,SNR=11						
VAE				Sn	**Sn**	**12 23 53.4**	**-0.3**
	37nm,0.3s,baz=176,slow=14,SNR=4.9						
HAGA	**Augusta**	**2.89**	**24**	Pn	**Pn**	**12 23 18.9**	**-0.7**
	701nm,0.4s						
MCT	**Mte Cammarata**	**2.98**	**359**	Pn	**Pn**	**12 23 23.0**	**+2.1**
	223nm,0.9s						
ECNV	**Catenanuova**	**3.06**	**15**	Pn	**Pn**	**12 23 23.0**	**+1.0**
	1μm,0.6s						
GALF	**Gagliano Caste**	**3.14**	**13**	Pn	**Pn**	**12 23 24.5**	**+1.4**
	1μm,0.5s						
CORL	**Corleone**	**3.26**	**354**	Pn	**Pn**	**12 23 24.4**	**-0.3**
	534nm,0.8s						
CSLB	**Castelbuono**	**3.30**	**5**	Pn	**Pn**	**12 23 25.8**	**+0.5**
	389nm,0.7s						
GIB	**Gibilmanna**	**3.35**	**4**	Pn	**Pn**	**12 23 26.8**	**+0.8**
	1μm,0.6s						
ERC	**Erice**	**3.50**	**345**	Pn	**Pn**	**12 23 27.9**	**-0.2**
	615nm,0.6s						
MMME	**Mongiuffi-Meli**	**3.52**	**20**	Pn	**Pn**	**12 23 28.5**	**+0.2**
	483nm,0.6s						
KEST	**Kesra**	**3.73**	**288**	Pn	**Pn**	**12 23 30.4**	**-0.7**
	1.2nm,0.3s,baz=70,slow=3.7,SNR=102						
KEST				Sn	**Sn**	**12 24 12.2**	**-2.2**
	2.5nm,0.3s,baz=254,slow=21,SNR=11						
MPAZ	**Palizzi**	**3.79**	**29**	Pn	**Pn**	**12 23 31.9**	**-0.1**
	223nm,0.6s						
MSI	**Messina ING**	**3.86**	**22**	Pn	**Pn**	**12 23 33.8**	**+0.9**
	1μm,0.6s						
VPL	**Vulcano Piano**	**3.87**	**15**	Pn	**Pn**	**12 23 34.5**	**+1.4**
	629nm,0.7s						
MSRU	**Castanea**	**3.90**	**21**	Pn	**Pn**	**12 23 34.0**	**+0.5**
	557nm,0.7s						
SOI	**Samo**	**3.91**	**28**	Pn	**Pn**	**12 23 33.7**	**0.0**
	44nm,0.2s						
SCLL	**Scilla**	**3.95**	**24**	Pn	**Pn**	**12 23 34.9**	**+0.6**
	86nm,0.5s						
IFIL	**Filicudi I Eol**	**3.98**	**10**	Pn	**Pn**	**12 23 34.8**	**+0.2**
	1μm,0.7s						
PLAC	**Placanica**	**4.39**	**29**	Pn	**Pn**	**12 23 40.4**	**+0.1**
	63nm,0.7s						
SERS	**Sersale**	**5.00**	**28**	Pn	**Pn**	**12 23 48.8**	**+0.2**
	56nm,0.8s						
CARO	**Carolei**	**5.02**	**23**	Pn	**Pn**	**12 23 49.2**	**+0.2**
	107nm,0.7s						
VSL	**Villasalto**	**5.95**	**326**	Pn	**Pn**	**12 24 01.6**	**-0.1**
	58nm,1.2s						
DGI	**Dorgali Grotta**	**6.53**	**331**	Pn	**Pn**	**12 24 10.2**	**+0.5**
	216nm,2.5s						
VLS	**Valsamata**	**6.58**	**56**	*e*P	**Pn**	**12 24 08.7**	**-1.6**
VLS				*e*S	**Sn**	**12 25 18.4**	**-6.2**
KEK	**Kerkira**	**7.02**	**42**	*e*P	**Pn**	**12 24 13.7**	**-2.7**
RLS	**Riolos of Patr**	**7.13**	**59**	*e*P	**Pn**	**12 24 17.8**	**-0.1**
ITM	**Ithomi**	**7.14**	**67**	*e*P	**Pn**	**12 24 16.8**	**-1.2**
EVR	**Evrytania**	**7.78**	**54**	*e*P	**Pn**	**12 24 27.2**	**+0.5**
VLI	**Velíai**	**7.79**	**72**	*e*P	**Pn**	**12 24 27.6**	**+0.5**
THL	**Klokotos Trika**	**8.26**	**51**	*e*P	**Pn**	**12 24 32.9**	**-0.4**
LKR	**Lokris**	**8.47**	**59**	*e*P	**Pn**	**12 24 36.9**	**+0.6**
PGF	**Pioggiola**	**8.71**	**336**	*e*P	**Pn**	**12 24 41.9**	**+2.4**
	59nm,1.1s						
IDI	**Anoyia**	**9.21**	**83**	Pn	**Pn**	**12 24 46.0**	**-0.4**
IDI				Sn	**Sn**	**12 26 24.0**	**-5.3**
IDI	**Anoyia**	**9.21**	**83**	Pn	**Pn**	**12 24 46.0**	**-0.4**
	1.0nm,0.3s,baz=271,slow=16,SNR=5.2						
IDI				Sn	**Sn**	**12 26 24.0**	**-5.3**
	1.1nm,0.3s,baz=315,slow=20,SNR=3.4						
IDI				LR	LR	12 28 38.8	
	comp=Z,68nm,21.1s,baz=274,slow=40						
IDI	**Anoyia**	**9.21**	**83**	Pn	**Pn**	**12 24 46.0**	**-0.4**
IDI				Sn	**Sn**	**12 26 24.0**	**-5.3**
PLG	**Polygyros**	**9.62**	**51**	*e*P	**Pn**	**12 24 50.1**	**-1.9**
LMR	**La Mourre**	**10.32**	**329**	*e*P	**Pn**	**12 25 02.6**	**+1.0**
	5.8nm,0.5s						
FRF	**La Foret Royal**	**10.45**	**331**	*e*P	**Pn**	**12 25 01.7**	**-1.7**
MBDF	**Montbardon**	**11.39**	**334**	*e*P	**Pn**	**12 25 19.2**	**+2.9**
	30nm,1.1s						
ORIF	**Oris-en-Rattie**	**11.89**	**332**	*e*P	**Pn**	**12 25 27.5**	**+4.4**
DAVOX	**Davos/Dischmat**	**12.46**	**348**	LR	LR	12 30 46.0	
	comp=Z,62nm,18.4s,baz=198,slow=40						
GERES	**GERESS Array B**	**14.19**	**360**	Pn	**Pn**	**12 25 55.

PTCH	**Petorca**	**1.00**	**133**	⇑	*i*P		Pn	12 25 36.1	+0.5
PTCH					*i* S		Sn	12 25 49.8	+1.3
PTCH	**Petorca**	**1.00**	**133**	⇑	*i*P		Pn	12 25 36.1	+0.5
PTCH					*i* S		Sn	12 25 49.8	+1.3
PTCH					AML		AML	12 25 50.5	
	comp=N,2μm,0.3s								
OVCH	**Ovalle**	**1.09**	**28**	⇑	*i*P		Pn	12 25 37.3	+0.5
OVCH					*i* S		Sn	12 25 52.1	+1.4
JACH	**Jahuel**	**1.50**	**138**		*i*P		Pn	12 25 44.3	+1.9
JACH					*i* S		Sn	12 26 03.7	+2.9
ROCH	**El Roble**	**1.54**	**155**	⇑	*i*P		Pn	12 25 44.4	+1.4
ROCH					*i* S		Sn	12 26 05.1	+3.3
TLL	**Tololo Astrono**	**1.64**	**31**		AML		AML	12 26 13.1	
	comp=E,450nm,0.3s								
PEL	**Peldehue**	**1.82**	**149**	⇑	*i*P		Pn	12 25 48.6	+1.7
PEL					*i* S		Sn	12 26 11.2	+2.5
PEL					AML		AML	12 26 21.7	
	comp=E,657nm,0.4s								
CLCH	**Cerro Calan**	**2.10**	**150**		*e*P		Pn	12 25 52.6	+1.9
CLCH					*i* S		Sn	12 26 18.1	+2.5
CLCH					AML		AML	12 26 26.2	
	comp=E,526nm,0.8s								
FCH	**Farellones**	**2.16**	**144**	⇑	*i*P		Pn	12 25 53.7	+2.2
FCH					*i* S		Sn	12 26 20.7	+3.7
TACH	**Talagante**	**2.19**	**161**		*i*P		Pn	12 25 53.5	+1.5
TACH					*i* S		Sn	12 26 20.3	+2.5
PCH	**Pirque**	**2.31**	**152**		*i*P		Pn	12 25 55.1	+1.6
PCH					*i* S		Sn	12 26 23.4	+2.7
CHCH	**Chadas Angostu**	**2.54**	**158**	⇑	*i*P		Pn	12 25 58.3	+1.6
CHCH					*i* S		Sn	12 26 29.1	+2.7
LMEL	**Las Melosas**	**2.63**	**150**		*i*P		Pn	12 25 60.0	+2.0
LMEL					*i* S		Sn	12 26 31.5	+2.8
LMEL	**Las Melosas**	**2.63**	**150**		*i*P		Pn	12 25 60.0	+2.0
LMEL					*i* S		Sn	12 26 31.5	+2.8
LMEL					AML		AML	12 26 44.5	
	comp=N,259nm,0.2s								
LCO	**Las Campanas**	**2.73**	**21**		*e*Pn		Pn	12 26 01.5	+2.2
LCO					*e*S		Sn	12 26 35.0	+3.9
SFDO	**San Fernando**	**3.10**	**168**		*i*P		Pn	12 26 06.1	+1.7
SFDO					*i* S		Sn	12 26 42.2	+2.0

SZGRF ***31*** *12:48:59.8, 56.46S×124.94W, h33km, mb6.2, Southern East Pacific Rise*

IDC ***31*** *12:49:01.6±0.4, 55.86S×123.48W, h0km, mb5.0/15, mb1 5.1/15, mb1mx5.1/16, mbtmp5.0/15, MS6.1/21, Ms1 6.1/21, ms1mx5.8/24, Error ellipse: s-maj=18.6km s-min=10.9km az=171.0*

ISCJB ***31*** *12:49:02.2±0.2, 56.16S±0.005×123.27W±0.08, h10km, mb5.2/56, MS6.1/203, Error ellipse: s-maj=6.7km s-min=6.3km az=151.4*

MOS ***31*** *12:49:03.1±1.4, 55.97S×123.34W, h10km, mb5.6/21, MS6.0/39, Error ellipse: s-maj=20.0km s-min=10.7km az=80.2*

GCMT ***31*** *12:49:03.7±0.1, 55.94S×123.61W, h12km, MW6.2/107, Moment Tensor Solution. s104,c234; s107,c427; Duration: 3s2 Moment tensor: Scale 10^18Nm; Mrr-0.17±.01; Mθθ1.67±.02; Mφφ-1.50±.01; Mrθ-0.12±.04; Mθφ2.28±.01; Mφr-0.14±.04; Best double couple: M○2.78200×10^18 NP1:φs287.00000°, δ87.00000°, λ1.00000°. NP2:φs197.00000°, δ89.00000°, λ177.00000°. Principal axes: T 2.8720, Plg3.0000°, Azm152.0000°; N -0.1730, Plg86.0000°, Azm357.0000°; P -2.6930, Plg1.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***31*** *12:49:03.7±0.2, 56.08S×123.27W, h10km, mb5.4/44, MS6.1/158, MW6.2 Error ellipse: s-maj=8.3km s-min=6.9km az=159.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^18Nm; Mrr-0.41; Mθθ1.45; Mφφ-1.04; Mrθ0.21; Mθφ1.80; Mφr-0.07; Best double couple: M○2.20000×10^18 NP1:φs17.00000°, δ84.00000°, λ-178.00000°. NP2:φs287.00000°, δ88.00000°, λ-6.00000°. Principal axes: T 2.4000, Plg3.0000°, Azm332.0000°; N -0.4000, Plg83.0000°, Azm91.0000°; P -2.0000, Plg6.0000°, Azm242.0000°;*

BJI ***31*** *12:49:04.7, 56.10S×123.30W, h10km, mB5.9, Ms6.1, Msz6.0*

ISC 31 12:49:03.2±2.8, 5610S±005×12330W±009, h5km±16km, h6km±.3km:pP-P,n522,σ1ŝ06/131,mb5.2/56,MS6.1/203, 29C-16D,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.41**	**131**		*e*P		**P**	**12 55 08.4**	**+1.6**
	186nm,1.1s,mb5.7								
PMSA						LR	LR		
	comp=Z,40μm,22.0s,MS6.0								
PMSA	**Palmer Station**	**29.41**	**131**		P		**P**	**12 55 08.9**	**+2.1**
	comp=Z,128nm,1.1s,mb5.6,baz=253,slow=6.1,SNR=7.6								
PMSA						LR	LR	13 03 37.8	
	comp=Z,38μm,21.9s,MS6.0,baz=263,slow=30								
USHA	**Ushuaia**	**30.44**	**111**		P		**P**	**12 55 17.8**	**+1.7**
	comp=Z,65nm,1.0s,mb5.3,baz=228,slow=9.5,SNR=11								
USHA						LR	LR	13 04 16.9	
	comp=Z,37μm,20.4s,MS6.0,baz=221,slow=30								
RPN	**Rapa Nui**	**30.66**	**25**		PFAKE			12 55 30.0	+12
RPN						LR	LR		
	comp=Z,14μm,19.0s,MS5.6								
PTCN	**Pitcairn Islan**	**31.40**	**348**		PFAKE			12 55 40.0	+15
PTCN						LR	LR		
	comp=Z,65μm,22.0s,MS6.2								
SBA	**Scott Base**	**31.77**	**202**		*e*P		**P**	**12 55 32.1**	**+4.5**
	comp=Z,77nm,1.6s,mb5.3								
SBA						LR	LR		
	comp=Z,14μm,19.0s,MS5.7								
SBA	**Scott Base**	**31.77**	**202**		*e*P		**P**	**12 55 32.1**	**+4.5**
SBA					pmax		pmax		
	comp=Z,77nm,1.6s,mb5.3								
SBA					MLR		MLR		
	comp=Z,14μm,19.0s,MS5.7								
VNDA	**Vanda**	**32.83**	**203**		P		**P**	**12 55 41.6**	**+4.8**
VNDA					PcP		PcP	12 58 22.4	+1.1
VNDA					S		**S**	**13 01 02.9**	**+8.9**
VNDA	**Vanda**	**32.83**	**203**		P		**P**	**12 55 41.6**	**+4.8**
	comp=Z,8.3nm,0.9s,mb4.7,baz=92,slow=7.7,SNR=19								
VNDA					PcP		PcP	12 58 22.4	+1.1
	comp=Z,2.8nm,0.7s,baz=86,slow=2.9,SNR=7.4								
VNDA					S		**S**	**13 01 02.9**	**+8.9**
	comp=Z,1.8nm,1.2s,baz=24,slow=10.0,SNR=1.9								
RKT	**Rikitea**	**34.05**	**341**		*e*S		**S**	**13 01 17.0**	**+3.1**
	comp=Z,4μm,21.7s								
RKT					*e*LQ			13 03 10.6	
	comp=Z,15μm,46.8s								
RKT					*e*LR		LR	13 04 31.8	
	comp=Z,126μm,27.5s,baz=170								
QSPA	**South Pole Qui**	**34.08**	**180**	⇑	*e*P		**P**	**12 55 51.5**	**+3.8**
	comp=Z,50nm,0.8s,mb5.5								
QSPA						LR	LR		
	comp=Z,25μm,20.0s,MS5.9								
QSPA	**South Pole Qui**	**34.08**	**180**		P		**P**	**12 55 51.2**	**+3.4**
	comp=Z,46nm,1.0s,mb5.4,baz=98,slow=4.0,SNR=68								
PLCA	**Paso Flores**	**37.24**	**88**		P		**P**	**12 56 15.4**	**+0.2**
PLCA					PcP		PcP	12 58 33.7	-1.1
PLCA					LR		LR	13 07 44.9	
PLCA	**Paso Flores**	**37.24**	**88**		P		**P**	**12 56 15.4**	**+0.2**
PLCA								12 58 33.7	
PLCA	**Paso Flores**	**37.24**	**88**		P		**P**	**12 56 15.4**	**+0.2**
	comp=Z,15nm,1.0s,mb4.8,baz=226,slow=9.3,SNR=12								
PLCA					PcP		PcP	12 58 33.7	-1.1
	comp=Z,3.1nm,1.0s,baz=214,slow=3.4,SNR=3.5								
PLCA					LR		LR	13 07 44.9	
	comp=Z,16μm,20.3s,MS5.8,baz=227,slow=30								
EFI	**East Falkland**	**37.41**	**111**		*e*P		**P**	**12 56 15.8**	**-0.8**
	comp=Z,115nm,1.3s,mb5.5								
EFI						LR	LR		
	comp=Z,37μm,22.0s,MS6.1								
EFI	**East Falkland**	**37.41**	**111**		*e*P		**P**	**12 56 15.8**	**-0.8**
EFI					pmax		pmax		
	comp=Z,115nm,1.3s,mb5.5								
EFI					MLR		MLR		
	comp=Z,37μm,22.0s,MS6.1								
TBI	**Tubuai**	**37.95**	**319**		*e*S		**S**	**13 02 16.2**	**+2.7**
	comp=Z,13μm,18.8s								
TBI					*e*LQ			13 04 32.3	
	comp=Z,25μm,39.5s								
TBI					*e*LR		LR	13 06 19.7	
	comp=Z,83μm,26.5s,baz=163								
SNZO	**South Karori**	**42.02**	**264**		PFAKE			12 57 10.0	+15
SNZO						LR	LR		
	comp=Z,25μm,22.0s,MS6.0								
RPZ	**Rata Peaks**	**42.45**	**258**		P		**P**	**12 56 57.9**	**-0.6**
	comp=Z,33nm,1.1s,mb4.9,baz=53,slow=2.7,SNR=3.0								
RPZ					S		**S**	**13 03 25.8**	**+5.3**
	comp=Z,17nm,1.1s,baz=300,slow=20,SNR=1.9								
RPZ					LR		LR	13 11 25.9	
	comp=Z,52μm,18.0s,MS6.5,baz=121,slow=32								
URZ	**Urewera**	**42.78**	**269**		P		**P**	**12 57 02.0**	**+0.8**
	comp=Z,14nm,1.1s,mb4.6,baz=188,slow=18,SNR=3.6								
URZ					S		**S**	**13 03 24.5**	**-0.9**
	comp=Z,4.1nm,0.9s,baz=196,slow=20,SNR=2.1								
URZ					LR		LR	13 10 30.0	
	comp=Z,32μm,20.0s,MS6.2,baz=132,slow=30								
PAE	**Paea**	**43.22**	**322**		*e*P		**P**	**12 57 06.3**	**+1.3**
	comp=Z,122nm,1.2s,mb5.5								
PAE	**Paea**	**43.22**	**322**		*e*P		**P**	**12 57 06.3**	**+1.3**
PAE					pmax		pmax		
	comp=Z,122nm,1.2s,mb5.5								
PPT	**Papeete**	**43.30**	**322**		*e*S		**S**	**13 03 36.3**	**+2.8**
	comp=Z,9μm,15.5s								
PPT					*e*LQ			13 06 53.0	
	comp=Z,87μm,26.8s								
PPT					*e*LR		LR	13 09 04.3	
	comp=Z,99μm,25.8s,baz=162								
PPT	**Papeete**	**43.30**	**322**		LR		LR	13 10 56.2	
	comp=Z,30μm,19.4s,MS6.2,baz=154,slow=30								
TRQA	**Tornquist**	**43.88**	**92**		*e*P		**P**	**12 57 09.8**	**-0.4**
	comp=Z,66nm,1.2s,mb5.2								
TRQA						LR	LR		
	comp=Z,15μm,19.0s,MS5.9								
RAR	**Rarotonga**	**44.09**	**307**		LR		LR	13 10 20.9	
	comp=Z,13μm,21.9s,MS5.8,baz=150,slow=29								
VNA3	**Neumayer Olymp**	**44.67**	**155**		*e*P		**P**	**12 57 17.7**	**+1.6**
VNA3					*e*		pP	12 57 19.5	+1.7
VNA3					*e*			12 57 22.2	
VNA3					*e*			12 57 26.2	
VNA3					*e*			12 57 30.0	
VNA3					*e*			12 57 34.3	
VNA3					*e*			12 57 40.7	
VNA3					*e*			12 57 50.9	
VNA3					*e*			12 58 56.9	
VNA3					*e*			12 59 01.6	
VNA3					*e*			12 59 02.9	
VNA3					*e*			12 59 04.5	
VNA3					*e*			12 59 09.0	
VNA3					*e*			12 59 11.7	
VNA3					*e*			12 59 18.9	
VNA3					*e*			12 59 20.7	
TLL	**Tololo Astrono**	**44.80**	**77**		*e*P		**P**	**12 57 16.8**	**-0.8**
VAH	**Vaihoa**	**44.84**	**326**		*e*P		**P**	**12 57 18.9**	**+0.9**
	comp=Z,115nm,1.3s,mb5.6								
CFAA	**Coronel Fontan**	**45.11**	**81**		P		**P**	**12 57 19.0**	**-1.1**
	comp=Z,1.4nm,0.9s,mb3.8,baz=226,slow=6.5,SNR=14								
CFAA					S		**S**	**13 03 55.3**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=299,slow=19,SNR=3.3								
PMOR	**Pomariorio Ree**	**45.14**	**325**		*e*P		**P**	**12 57 21.3**	**+0.9**
	comp=Z,50nm,1.3s,mb5.2								
VNA1	**Neumayer--Stat**	**45.42**	**155**		*e*P		**P**	**12 57 24.1**	**+2.0**
VNA1					*e*		pP	12 57 25.7	+1.9
VNA1					*e*			12 57 28.4	
VNA1					*e*			12 57 32.8	
VNA1					*e*			12 57 36.2	
VNA1					*e*			12 57 40.3	
VNA1					*e*			12 57 46.0	
VNA1					*e*			12 57 55.5	
VNA1					*e*			12 59 00.8	
VNA1					*e*			12 59 06.6	
VNA2	**Neumayer--Watz**	**45.43**	**155**		*e*P		**P**	**12 57 24.0**	**+1.9**
	baz=216,slow=9.3								
VNA2					*e*		pP	12 57 25.6	+1.8
VNA2					*e*			12 57 28.3	
VNA2					*e*			12 57 32.5	
VNA2					*e*			12 57 35.9	
VNA2					*e*			12 57 40.1	
VNA2					*e*			12 57 45.7	
VNA2					*e*			12 57 56.0	
VNA2					*e*			12 59 00.2	
VNA2					*e*			12 59 05.7	
VNA2					*e*			12 59 07.1	
VNA2					*e*			12 59 08.8	
VNA2					*e*			12 59 14.2	
VNA2					*e*			12 59 16.5	
VNA2					*e*			12 59 22.7	
VNA2					*e*			12 59 24.3	
LCO	**Las Campanas**	**45.75**	**76**		*e*P		**P**	**12 57 24.4**	**-0.8**
	comp=Z,11nm,0.7s,mb4.9								
LCO						LR	LR		
	comp=Z,6μm,19.0s,MS5.6								
SNAA	**Sanae**	**45.90**	**158**		*e*P		**P**	**12 57 27.3**	**+1.4**
SNAA					*e*		pP	12 57 29.3	+1.7
SNAA					*e*			12 57 32.0	
SNAA					*e*			12 57 35.8	
SNAA					*e*			12 57 38.5	
SNAA					*e*			12 57 42.2	
SNAA					*e*			12 57 47.9	
SNAA					*e*			12 57 55.7	
SNAA					*e*			12 59 01.9	
SNAA					*e*			12 59 09.2	
SNAA					*e*			12 59 11.3	
SNAA					*e*			12 59 17.8	
SNAA	**Sanae**	**45.90**	**158**	⇑	*e*P		**P**	**12 57 24.0**	**-1.9**
SNAA	**Sanae**	**45.90**	**158**		P		**P**	**12 57 27.2**	**+1.4**
	comp=Z,12nm,1.1s,mb4.7,baz=238,slow=6.1,SNR=26								
RAO	**Raoul Island**	**46.67**	**282**		PFAKE			12 57 40.0	+7.5
RAO						LR	LR		
	comp=Z,5μm,19.0s,MS5.5								
RAO	**Raoul Island**	**46.67**	**282**		LR		LR	13 13 00.5	
	comp=Z,4μm,18.2s,MS5.4,baz=145,slow=31								
TAOE	**Nuku Hiva Isla**	**48.96**	**338**		*e*S		**S**	**13 04 58.0**	**+3.3**
	comp=Z,25μm,24.8s								
TAOE					*e*LQ			13 09 54.9	
	comp=Z,10μm,26.0s								
TAOE					*e*LR		LR	13 11 37.4	
	comp=Z,193μm,27.0s,baz=183								
MAIT	**Maitri**	**49.44**	**162**		*e*P		**P**	**12 57 52.4**	**-0.9**
CASY	**Casey**	**51.41**	**205**		*e*P		**P**	**12 58 09.1**	**+0.9**
	comp=Z,29nm,1.0s,mb5.2								
CASY						LR	LR		
	comp=Z,14μm,20.0s,MS6.0								
SYO	**Syowa Base**	**54.57**	**173**	⇑	*e*P		**P**	**12 58 31.0**	**-0.5**
SYO	**Syowa Base**	**54.57**	**173**	⇑	*i*pP		pP	12 58 32.2	-1.0
SYO	**Syowa Base**	**54.57**	**173**	⇑	*e*PP		PP	13 00 32.4	-0.9
MIR	**Mirnyy**	**54.66**	**197**	⇑	*i*P		**P**	**12 58 36.0**	**+3.8**
MIR					*i*			12 58 41.0	
MIR					*i* S		**S**	**13 06 20.0**	**+7.9**
MIR					*i*			13 08 28.0	
MIR					*e*SSS			13 11 50.0	
MIR					pmax		pmax		
	comp=Z,200nm,2.0s,mb5.8								
MIR					MLR		MLR		
	comp=Z,2μm,20.0s,MS5.2								
TAU	**Tasmania Unive**	**55.51**	**243**		*e*P		**P**	**12 58 39.2**	**+0.6**
	comp=Z,165nm,1.9s,mb5.7								
TAU						LR	LR		
	comp=Z,23μm,21.0s,MS6.2								
TAU	**Tasmania Unive**	**55.51**	**243**		*e*P		**P**	**12 58 39.3**	**+0.6**
TAU					pmax		pmax		
	comp=Z,165nm,1.9s,mb5.7								
TAU					MLR		MLR		
	comp=Z,23μm,21.0s,MS6.2								
ARE	**Arequipa**	**55.55**	**66**		*e*P		**P**	**12 58 37.0**	**-2.3**
AFI	**Afiamalu**	**56.05**	**299**		*e*P		**P**	**12 58 41.4**	**-1.5**
	comp=Z,48nm,1.1s,mb5.4								
AFI						LR	LR		
	comp=Z,5μm,22.0s,MS5.5								
AFI	**Afiamalu**	**56.05**	**299**		*e*P		**P**	**12 58 41.4**	**-1.4**
AFI					pmax		pmax		
	comp=Z,48nm,1.1s,mb5.4								
AFI					MLR		MLR		
	comp=Z,5μm,22.0s,MS5.5								
MAW	**Mawson**	**56.52**	**183**		*e*P		**P**	**12 58 47.1**	**+1.5**
	comp=Z,30nm,1.0s,mb5.3								
MAW	**Mawson**	**56.52**	**183**		P		**P**	**12 58 46.3**	**+0.7**
MAW					S		**S**	**13 06 33.2**	**-3.7**
MAW					pmax		pmax		
	comp=Z,36nm,1.0s								
MAW					smax				
	comp=N,4.0nm,1.0s								
MAW	**Mawson**	**56.52**	**183**		P		**P**	**12 58 46.3**	**+0.7**
	comp=N,36nm,1.0s,mb5.3,baz=174,slow=6.5,SNR=22								
MAW					S		**S**	**13 06 33.2**	**-3.7**
	comp=N,3.9nm,1.0s,baz=143,slow=18,SNR=1.9								
MAW					LR		LR	13 21 36.9	
	comp=N,36μm,20.3s,MS6.5,baz=165,slow=34								
NNA	**Nana**	**56.73**	**58**		PFAKE			12 59 00.0	+12
NNA						LR	LR		
	comp=Z,16μm,21.0s,MS6.1								
LPAZ	**La Paz**	**57.44**	**69**		*e*P		**P**	**12 58 52.4**	**-0.3**
	comp=Z,41nm,1.1s,mb5.4								
LPAZ						LR	LR		
	comp=Z,11μm,21.0s,MS5.9								
LPAZ	**La Paz**	**57.44**	**69**		P		**P**	**12 58 52.9**	**+0.1**
	comp=Z,22nm,1.1s,mb5.1,baz=198,slow=5.3,SNR=28								
LPAZ					S		**S**	**13 06 38.5**	**-12**
	comp=Z,0.6nm,0.6s,baz=246,slow=10.0,SNR=1.9								
LPAZ					LR		LR	13 17 46.5	
	comp=Z,9μm,18.9s,MS5.9,baz=206,slow=30								
CNB	**Canberra Magne**	**60.14**	**250**		*e*P		**P**	**12 59 11.9**	**+0.6**
	comp=Z,117nm,1.5s,mb5.7								
DZM	**Mont Dzumac**	**60.99**	**273**		P		**P**	**12 59 16.8**	**-0.4**
	comp=Z,14nm,1.0s,mb5.0,baz=65,slow=16,SNR=5.6								
DZM					S		**S**	**13 07 36.6**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=128,slow=19,SNR=1.4								
DZM					LR		LR	13 20 09.7	
	comp=Z,24μm,20.6s,MS6.3,baz=140,slow=31								
ARMA	**Armidale**	**62.69**	**256**		*e*P		**P**	**12 59 29.2**	**+0.6**
ARMA					*e*S		**S**	**13 07 52.7**	**-4.7**
FUNA	**Funafuti**	**65.19**	**293**		PFAKE			13 00 00.0	+15
FUNA						LR	LR		
	comp=Z,11μm,19.0s,MS6.1								
OTAV	**Otavalo**	**66.81**	**50**		*e*P		**P**	**12 59 55.2**	**-0.4**
	comp=Z,73nm,1.4s,mb5.5								
OTAV						LR	LR		
	comp=Z,7μm,22.0s,MS5.8								
STKA	**Stephens Creek**	**66.87**	**247**		*e*P		**P**	**12 59 55.7**	**-0.2**
	comp=Z,12nm,0.8s,mb5.0								
STKA					*i* S		S	13 08 51.7	+2.8
STKA	**Stephens Creek**	**66.87**	**247**		P		**P**	**12 59 55.6**	**-0.2**
	comp=Z,27nm,1.2s,mb5.1,baz=118,slow=5.0,SNR=14								
STKA					S		S	13 08 47.8	-1.1
	comp=Z,1.1nm,0.2s,baz=317,slow=19,SNR=1.2								
STKA					LR		LR	13 24 25.7	
	comp=Z,19μm,18.2s,MS6.4,baz=149,slow=32								
EIDS	**Eidsvold**	**66.94**	**259**		*e*P		**P**	**12 59 56.2**	**-0.2**
	comp=Z,11nm,0.9s,mb4.9								
TRIS	**Tristan da Cun**	**70.33**	**128**		PFAKE			13 00 30.0	+13
TRIS						LR	LR		
	comp=Z,7μm,19.0s,MS5.9								
ROSC	**El Rosal**	**72.73**	**52**		*e*P		**P**	**13 00 34.2**	**+2.2**
ROSC	**El Rosal**	**72.73**	**52**		P		**P**	**13 00 32.4**	**+0.3**
	comp=Z,11nm,0.9s,mb4.8,baz=107,slow=19,SNR=11								
ROSC					S		S	13 09 53.0	-5.0
	comp=Z,3.3nm,0.3s,baz=287,slow=19,SNR=1.7								
ROSC					LR		LR	13 27 12.7	
	comp=Z,8μm,19.5s,MS6.0,baz=188,slow=32								
CTA	**Charters Tower**	**73.82**	**258**	⇓	*i*P		**P**	**13 00 38.0**	**-0.5**
	comp=Z,29nm,0.9s,mb5.2								
CTA					*e*S		S	13 10 14.2	+3.8
CTA	**Charters Tower**	**73.82**	**258**	⇓	*i*P		**P**	**13 00 38.0**	**-0.5**
CTA					*e*S		S	13 10 14.2	+3.8
CTA					pmax		pmax		
	comp=Z,29nm,0.9s								
CTA	**Charters Tower**	**73.82**	**258**		S		S	13 10 06.0	-4.4
	comp=Z,6.3nm,1.1s,baz=350,slow=12,SNR=2.2								
CTA					LR		LR	13 28 44.6	
	comp=Z,13μm,19.1s,MS6.2,baz=136,slow=32								
CTAO	**Charters Tower**	**73.82**	**258**		*e*P		**P**	**13 00 38.0**	**-0.5**
	comp=Z,48nm,1.0s,mb5.4								
CTAO						LR	LR		
	comp=Z,12μm,20.0s,MS6.2								
CTAO	**Charters Tower**	**73.82**	**258**		*e*P		**P**	**13 00 38.0**	**-0.5**
CTAO					pmax		pmax		
	comp=Z,48nm,1.0s,mb5.4								
CTAO					MLR		MLR		
	comp=Z,12μm,20.0s,MS6.2								
BCIP	**Isla Barro Col**	**74.31**	**45**		PFAKE			13 00 50.0	+8.7
BCIP						LR	LR		
	comp=Z,9μm,20.0s,MS6.0								
FORT	**Forrest**	**74.48**	**238**		*e*P		**P**	**13 00 42.2**	**-0.1**
	comp=Z,48nm,1.2s,mb5.3								
HNR	**Honiara**	**74.84**	**276**		*e*P		**P**	**13 00 46.3**	**+1.8**
	comp=Z,42nm,1.1s,mb5.3								
HNR						LR	LR		
	comp=Z,4μm,19.0s,MS5.7								
HNR	**Honiara**	**74.84**	**276**		*e*P		**P**	**13 00 46.3**	**+1.8**
HNR					pmax		pmax		
	comp=Z,42nm,1.1s,mb5.3								
HNR					MLR		MLR		
	comp=Z,4μm,19.0s,MS5.7								
HNR	**Honiara**	**74.84**	**276**		LR		LR	13 27 18.5	
	comp=Z,2μm,19.8s,MS5.4,baz=176,slow=31								
TGUH	**Tegucigalpa,Un**	**76.12**	**36**		*e*P		**P**	**13 00 52.5**	**+0.8**
	comp=Z,50nm,1.0s,mb5.4								
TGUH						LR	LR		
	comp=Z,9μm,22.0s,MS6.0								
ASAR	**Alice Springs**	**77.48**	**246**		P		**P**	**13 00 58.1**	**-1.4**
	comp=Z,14nm,0.9s,mb4.9,baz=145,slow=5.2,SNR=71								
NWAO	**Narrogin (SRO)**	**77.51**	**229**		*e*P		**P**	**13 00 58.5**	**-1.0**
	comp=Z,32nm,1.2s,mb5.1								
NWAO						LR	LR		
	comp=Z,11μm,21.0s,MS6.2								
NWAO	**Narrogin (SRO)**	**77.51**	**229**		*e*P		**P**	**13 00 58.5**	**-1.0**
NWAO					pmax		pmax		
	comp=Z,32nm,1.2s								
NWAO					MLR		MLR		
	comp=Z,11μm,21.0s								
SDV	**Santo Domingo**	**77.95**	**53**		*e*P		**P**	**13 01 01.7**	**-0.3**
	comp=Z,43nm,1.4s,mb5.2								
SDV						LR	LR		
	comp=Z,3μm,22.0s,MS5.5								
KLBR	**Kellerberrin**	**78.44**	**230**		*e*P		**P**	**13 01

JCT MLR MLR
comp=Z,50nm,1.1s,mb5.8

BAR Barrett 88.61 6 *e*P **P 13 01 55.9 -0.6**
TUC Tucson 88.71 11 *e*P **P 13 01 56.8 -0.1**
TUC LR LR
comp=Z,47nm,1.5s,mb5.6

TUC Tucson 88.71 11 *e*P **P 13 01 56.8 -0.2**
TUC pmax pmax
comp=Z,47nm,1.5s,mb5.6

TUC MLR MLR
comp=Z,8μm,20.0s,MS6.1

MNTX Cornudas Mount 88.78 15 *e*P **P 13 01 56.3 -1.0**
MNTX LR LR
comp=Z,46nm,1.6s,mb5.6

HKT Hockley 88.85 24 *e*P **P 13 01 58.0 +0.3**
HKT pmax pmax
comp=Z,27nm,1.6s,mb5.3

HKT MLR MLR
comp=Z,2μm,22.0s,MS5.6

SNCC San Nicolas Is 89.05 3 PFAKE 13 02 10.0 +11
SNCC LR LR
comp=Z,11μm,19.0s,MS6.3

PFO Pinyon Flat Ob 89.55 6 *e*P **P 13 02 00.8 -0.1**
PFO LR LR
comp=Z,26nm,1.3s,mb5.4

PFO Pinyon Flat Ob 89.55 6 *e*P **P 13 02 00.8 -0.1**
PFO pmax pmax
comp=Z,26nm,1.3s,mb5.4

PFO MLR MLR
comp=Z,13μm,19.0s,MS6.4

MWC Mount Wilson 90.08 4 *e*P **P 13 02 03.9 +0.5**
NATX Nacogdoches 90.86 24 PFAKE 13 02 20.0 +13
NATX LR LR
comp=Z,2μm,20.0s,MS5.6

LENM Lemitar 90.98 13 *e*P **P 13 02 09.6 +2.0**
BNM Barren Site 91.02 14 *e*P **P 13 02 08.0 +0.3**
LDFC Landfair 91.09 7 *e*P **P 13 02 08.6 +0.5**
DWPF Disney 91.12 36 PFAKE 13 02 20.0 +12
DWPF LR LR
comp=Z,4μm,20.0s,MS5.8

LPM Los Pinos Moun 91.17 14 *e*P **P 13 02 07.6 -0.8**
LAZ Ladron 91.20 13 *e*P **P 13 02 09.0 +0.4**
GSC Goldstone 91.21 5 *e*P **P 13 02 09.4 +0.8**
PTRM Twissleman Ran 91.44 3 *e*P **P 13 02 09.1 -0.6**
BOSA Boshof 91.47 153 P **P 13 02 08.6 -1.7**
comp=Z,6.6nm,0.9s,mb5.0,baz=197,slow=7.1,SNR=7.4

BOSA LR LR 13 38 10.7
comp=Z,12μm,21.1s,MS6.3,baz=196,slow=32

ISA Isabella 91.50 4 *e*P **P 13 02 09.9 -0.1**
comp=Z,25nm,1.2s,mb5.4

ISA LR LR
comp=Z,15μm,20.0s,MS6.4

ISA Isabella 91.50 4 *e*P **P 13 02 09.9 0.0**
ISA pmax pmax
comp=Z,25nm,1.2s,mb5.4

ISA MLR MLR
comp=Z,15μm,20.0s,MS6.4

ANMO Albuquerque 91.82 14 *e*P **P 13 02 10.9 -0.6**
comp=Z,7.6nm,0.9s,mb5.0

ANMO LR LR
comp=Z,4μm,20.0s,MS5.9

ANMO Albuquerque 91.82 14 *e*P **P 13 02 10.9 -0.6**
ANMO pmax pmax
comp=Z,8.0nm,0.9s

ANMO MLR MLR
comp=Z,4μm,20.0s

WUAZ Wupatki 91.82 10 *e*P **P 13 02 10.9 -0.6**
comp=Z,40nm,1.5s,mb5.5

WUAZ LR LR
comp=Z,7μm,22.0s,MS6.1

BRAL Brewton 92.10 31 PFAKE 13 02 20.0 +7.2
BRAL LR LR
comp=Z,4μm,21.0s,MS5.8

AMTX Amarillo 92.48 18 *e*P **P 13 02 13.7 -0.8**
comp=Z,23nm,1.2s,mb5.4

AMTX LR LR
comp=Z,4μm,21.0s,MS5.9

SAO San Andreas Ge 92.52 1 PFAKE 13 02 30.0 +15
SAO LR LR
comp=Z,14μm,19.0s,MS6.4

WMOK Wichita Mounta 92.87 20 *e*P **P 13 02 14.5 -1.8**
WMOK LR LR
comp=Z,3μm,21.0s,MS5.8

TPNV Topopah Spring 92.88 6 *e*P **P 13 02 15.8 -0.5**
TPNV LR LR
comp=Z,12μm,20.0s,MS6.3

CCUT Cedar City 93.67 8 *e*P **P 13 02 19.8 -0.1**
MIAR Mount Ida 93.78 24 PFAKE 13 02 30.0 +10
MIAR LR LR
comp=Z,2μm,19.0s,MS5.6

MVCO Mesa Verde 93.80 12 *e*P **P 13 02 21.6 +1.1**
comp=Z,21nm,1.3s,mb5.4

MVCO LR LR
comp=Z,10μm,19.0s,MS6.3

CMB Columbia Colle 93.81 2 *e*P **P 13 02 20.6 +0.1**
comp=Z,11nm,1.4s,mb5.1

CMB LR LR
comp=Z,11μm,20.0s,MS6.3

CMB Columbia Colle 93.81 2 *e*P **P 13 02 20.6 +0.1**
CMB pmax pmax
comp=Z,11nm,1.4s,mb5.1

CMB MLR MLR
comp=Z,11μm,20.0s,MS6.3

ASCN Ascension 93.81 110 PFAKE 13 02 30.0 +8.7
ASCN LR LR
comp=Z,4μm,21.0s,MS5.8

MCCM Marconi Confer 93.88 0 PFAKE 13 02 30.0 +9.1
MCCM LR LR
comp=Z,11μm,19.0s,MS6.3

ARUT Antelope Range 93.90 8 *e*P **P 13 02 20.8 -0.2**
BATI Kupang 94.02 245 LR LR 13 39 38.3
comp=Z,26μm,21.6s,MS6.7,baz=150,slow=32

LRAL Lakeview Retre 94.02 30 PFAKE 13 02 30.0 +8.4
LRAL LR LR
comp=Z,5μm,22.0s,MS6.0

NVAR Mina Array Bea 94.26 4 P **P 13 02 22.5 -0.1**
comp=Z,1.7nm,0.8s,baz=166,slow=4.1,SNR=14

SDCO Great Sand Dun 94.70 14 *e*P **P 13 02 24.6 -0.1**
comp=Z,8.5nm,1.6s,mb4.9

SDCO LR LR
comp=Z,5μm,21.0s,MS6.0

MSU Marysvale 94.72 9 *e*P **P 13 02 24.7 0.0**
HOPS Hopland 94.73 0 PFAKE 13 02 40.0 +15
HOPS LR LR
comp=Z,12μm,21.0s,MS6.3

LBTB Lobatse 94.99 152 PFAKE 13 02 40.0 +13
LBTB LR LR
comp=Z,8μm,20.0s,MS6.2

OHCM Honcut 95.08 1 *e*P **P 13 02 26.2 -0.2**
GOGA Godfrey 95.40 33 PFAKE 13 02 40.0 +12
GOGA LR LR
comp=Z,2μm,19.0s,MS5.6

SRU San Rafael 95.47 10 *e*P **P 13 02 29.1 +1.0**
comp=Z,4.1nm,1.1s,mb4.8

SRU San Rafael 95.47 10 *e*P **P 13 02 29.1 +1.0**
SRU pmax pmax
comp=Z,4.0nm,1.1s,mb4.8

PLAL Pickwick Lake 95.56 28 PFAKE 13 02 40.0 +11
PLAL LR LR
comp=Z,3μm,20.0s,MS5.8

NHSC New Hope 96.14 35 PFAKE 13 02 40.0 +8.6
NHSC LR LR
comp=Z,2μm,19.0s,MS5.7

NLU North Lily Min 96.16 9 *e*P **P 13 02 31.4 +0.1**
MPU Maple Canyon 96.26 9 *e*P **P 13 02 34.6 +2.9**
comp=Z,16nm,1.4s,mb5.2

MPU LR LR
comp=Z,18μm,20.0s,MS6.5

WDC Whiskeytown Da 96.32 1 PFAKE 13 02 40.0 +8.1
WDC LR LR
comp=Z,12μm,20.0s,MS6.4

DUG Dugway 96.34 8 *e*P **P 13 02 33.3 +1.2**
comp=Z,7.4nm,1.3s,mb5.0

DUG LR LR
comp=Z,8μm,21.0s,MS6.2

DUG Dugway 96.34 8 *e*P **P 13 02 33.3 +1.2**
DUG pmax pmax
comp=Z,7.0nm,1.3s,mb4.9

DUG MLR MLR
comp=Z,8μm,21.0s,MS6.2

WVT Waverly 96.71 28 PFAKE 13 02 40.0 +6.2
WVT LR LR
comp=Z,2μm,20.0s,MS5.7

ISCO Idaho Springs 96.71 14 PFAKE 13 02 50.0 +16
ISCO LR LR
comp=Z,13μm,19.0s,MS6.4

YBH Yreka Blue Hor 97.47 0 PFAKE 13 02 50.0 +13
YBH LR LR
comp=Z,13μm,20.0s,MS6.4

KSU1 Kansas State U 97.51 21 PFAKE 13 02 50.0 +13
KSU1 LR LR
comp=Z,3μm,21.0s,MS5.8

MOD Modoc 97.67 2 PFAKE 13 02 50.0 +12
MOD LR LR
comp=Z,9μm,19.0s,MS6.3

HWUT Hardware Ranch 97.85 9 PFAKE 13 02 50.0 +11
HWUT LR LR
comp=Z,9μm,20.0s,MS6.3

TSUM Tsumeb 98.05 143 PFAKE 13 02 50.0 +9.5
TSUM LR LR
comp=Z,8μm,22.0s,MS6.2

WVOR Wild Horse Val 98.25 3 PFAKE 13 02 50.0 +9.4
WVOR LR LR
comp=Z,9μm,21.0s,MS6.2

TZTN Tazewell 98.29 31 PFAKE 13 02 50.0 +9.0
TZTN LR LR
comp=Z,2μm,21.0s,MS5.6

CNNC Cliffs of the 98.85 36 PFAKE 13 02 50.0 +6.5
CNNC LR LR
comp=Z,5μm,20.0s,MS6.0

AHID Auburn Hatcher 99.04 9 PFAKE 13 03 00.0 +16
AHID LR LR
comp=Z,9μm,19.0s,MS6.3

WCI Wyandotte Cave 99.09 29 PFAKE 13 03 00.0 +15
WCI LR LR
comp=Z,3μm,22.0s,MS5.7

BW06 Boulder Array 99.18 10 PFAKE 13 03 00.0 +15
BW06 LR LR
comp=Z,11μm,20.0s,MS6.4

PDAR Pinedale Array 99.18 10 P **P 13 02 45.1 +0.3**
comp=Z,0.2nm,0.6s,baz=116,slow=6.1,SNR=2.8

PDAR LR LR 13 39 22.8
comp=Z,9μm,19.8s,MS6.3,baz=203,slow=30

HLID Hailey 99.58 7 PFAKE 13 03 00.0 +13
HLID LR LR
comp=Z,6μm,21.0s,MS6.0

BLA Blacksburg 99.84 33 PFAKE 13 03 00.0 +11
BLA LR LR
comp=Z,4μm,19.0s,MS6.0

COR Corvallis 100.32 360 PFAKE 13 03 00.0 +9.3
COR LR LR
comp=Z,10μm,20.0s,MS6.3

HDIL Hopedale 100.52 26 PFAKE 13 03 00.0 +8.4
HDIL LR LR
comp=Z,3μm,21.0s,MS5.8

BMO Blue Mountains 100.71 4 PFAKE 13 03 00.0 +7.5
BMO LR LR
comp=Z,8μm,20.0s,MS6.2

LKWY Lake 100.89 9 PFAKE 13 03 00.0 +6.8
LKWY LR LR
comp=Z,9μm,19.0s,MS6.3

YMR Madison River 100.94 9 PFAKE 13 03 00.0 +6.5
YMR LR LR
comp=Z,6μm,21.0s,MS6.1

BBSR BB Station 101.20 47 PFAKE 13 03 10.0 +15
BBSR LR LR
comp=Z,2μm,21.0s,MS5.7

RLMT Red Lodge 101.55 10 PFAKE 13 03 10.0 +14
RLMT LR LR
comp=Z,11μm,20.0s,MS6.4

CBN Corbin 101.72 35 PFAKE 13 03 10.0 +13
CBN LR LR
comp=Z,6μm,20.0s,MS6.1

BOZ Bozeman (W) 101.85 8 PFAKE 13 03 10.0 +12
BOZ LR LR
comp=Z,9μm,19.0s,MS6.3

ACSO Alum Creek Sta 101.88 30 PFAKE 13 03 10.0 +12
ACSO LR LR
comp=Z,2μm,22.0s,MS5.6

ECSD EROS,Sioux Fal 101.99 19 PFAKE 13 03 10.0 +12
ECSD LR LR
comp=Z,3μm,19.0s,MS5.8

GUMO Guam 102.17 276 PFAKE 13 03 10.0 +11
GUMO LR LR
comp=Z,2μm,20.0s,MS5.6

HAWA Hanford 102.17 3 PFAKE 13 03 10.0 +11
HAWA LR LR
comp=Z,6μm,21.0s,MS6.1

MCWV Mont Chateau 102.27 33 PFAKE 13 03 10.0 +11
MCWV LR LR
comp=Z,5μm,20.0s,MS6.0

JFWS Jewell Farm 102.53 24 PFAKE 13 03 10.0 +9.5
JFWS LR LR
comp=Z,3μm,19.0s,MS5.8

MSO Missoula 102.86 7 PFAKE 13 03 10.0 +8.0
MSO LR LR
comp=Z,9μm,19.0s,MS6.3

NLWA Neilton Lookou 103.12 360 PFAKE 13 03 10.0 +6.8
NLWA LR LR
comp=Z,6μm,21.0s,MS6.1

LAO LASA Array 103.42 12 PFAKE 13 03 10.0 +5.5
LAO LR LR
comp=Z,4μm,22.0s,MS5.8

AAM Ann Arbor 103.61 29 PFAKE 13 03 20.0 +15
AAM LR LR
comp=Z,2μm,22.0s,MS5.7

SSPA Standing Stone 103.77 34 PFAKE 13 03 20.0 +14
SSPA LR LR
comp=Z,5μm,21.0s,MS6.0

NEW Newport 104.12 4 PFAKE 13 03 20.0 +12
NEW LR LR
comp=Z,6μm,21.0s,MS6.1

EGMT Eagleton 104.37 9 PFAKE 13 03 20.0 +11
EGMT LR LR
comp=Z,2μm,20.0s,MS5.7

ERPA Erie 104.48 32 PFAKE 13 03 20.0 +11
ERPA LR LR
comp=Z,4μm,20.0s,MS6.0

LSZ Lusaka 104.97 152 PFAKE 13 03 20.0 +8.6
LSZ LR LR
comp=Z,13μm,19.0s,MS6.5

DGMT Dagmar 105.42 13 PFAKE 13 07 40.0 +14
DGMT LR LR
comp=Z,6μm,19.0s,MS6.2

GLMI Grayling 105.70 28 PFAKE 13 07 40.0 +13
GLMI LR LR
comp=Z,3μm,21.0s,MS5.8

BINY Binghamton 105.79 35 PFAKE 13 07 40.0 +13
BINY LR LR
comp=Z,3μm,20.0s,MS5.8

COWI Conover 105.80 24 PFAKE 13 07 40.0 +13
COWI LR LR
comp=Z,3μm,20.0s,MS5.8

AGMN Agassiz Refuge 106.53 19 PFAKE 13 07 40.0 +12
AGMN LR LR
comp=Z,7μm,19.0s,MS6.2

EYMN Ely 107.04 22 PFAKE 13 07 40.0 +11
EYMN LR LR
comp=Z,3μm,21.0s,MS5.9

HRV Harvard--Oak R 107.52 38 PFAKE 13 07 40.0 +10
HRV LR LR
comp=Z,6μm,21.0s,MS6.1

DAV Davao City (W) 107.56 256 PFAKE 13 07 40.0 +9.0
DAV LR LR
comp=Z,3μm,19.0s,MS5.9

NCB Newcomb 107.94 35 PFAKE 13 07 40.0 +9.3
NCB LR LR
comp=Z,5μm,20.0s,MS6.1

LONY Lake Ozonia 108.41 34 PFAKE 13 07 40.0 +8.4
LONY LR LR
comp=Z,5μm,21.0s,MS6.1

LBNH Lisbon 108.93 36 PFAKE 13 07 40.0 +7.4
LBNH LR LR
comp=Z,6μm,21.0s,MS6.2

DIB Dawson Inlet, 109.20 354 T 15 05 20.1
SNR=11

VIB Van Inlet 109.26 354 T 15 05 20.8
PKME Peaks-Kenny Pk 110.72 38 PFAKE 13 07 50.0 +14
PKME LR LR
comp=Z,4μm,20.0s,MS6.0

FFC Flin Flon 111.83 13 PFAKE 13 07 50.0 +12
FFC LR LR
comp=Z,7μm,22.0s,MS6.2

WRAK Wrangell Islan 112.41 355 PFAKE 13 07 50.0 +11
WRAK LR LR
comp=Z,8μm,20.0s,MS6.3

SIT Sitka 113.22 353 PFAKE 13 07 50.0 +10
SIT LR LR
comp=Z,16μm,20.0s,MS6.6

UNV Unalaska Valle 115.17 333 PFAKE 13 08 00.0 +16
UNV LR LR
comp=Z,12μm,22.0s,MS6.5

KDAK Kodiak Island 115.95 343 PFAKE 13 08 00.0 +15
KDAK LR LR
comp=Z,5μm,20.0s,MS6.2

ADK Adak 116.29 326 PFAKE 13 08 00.0 +14
ADK LR LR
comp=Z,10μm,21.0s,MS6.4

YKA Yellowknife Ar 118.45 5 PKP PKPdf 13 07 48.1 -2.0
comp=Z,0.7nm,0.8s,baz=176,slow=2.5,SNR=10
YKA PKKPbc PKKPbc 13 18 08.3 +0.9
comp=Z,0.5nm,0.7s,baz=358,slow=3.6,SNR=7.5

PMR Palmer 119.10 346 PFAKE 13 08 00.0 +8.6
PMR LR LR
comp=Z,8μm,21.0s,MS6.3

TORD Torodi Ar. Bea 120.01 113 PKP PKPdf 13 07 53.1 -1.6
comp=Z,1.3nm,0.9s,baz=222,slow=1.9,SNR=4.4
TORD PKKPbc PKKPbc 13 17 59.5 -1.3
comp=Z,0.8nm,0.8s,baz=85,slow=2.5,SNR=3.7

SMY Shemya 120.05 321 PFAKE 13 08 00.0 +6.5
SMY LR LR
comp=Z,11μm,22.0s,MS6.4

KMBO Kilima Mbogo 120.80 157 PFAKE 13 08 10.0 +14
KMBO LR LR
comp=Z,8μm,19.0s,MS6.3

MCK McKinley 121.13 347 *e*PKPdf PKPdf 13 07 55.7 +0.4
MCK LR LR
comp=Z,5μm,22.0s,MS6.1

EGAK Eagle 121.33 351 *e*PKPdf PKPdf 13 07 54.5 -1.1
EGAK LR LR
comp=Z,15μm,20.0s,MS6.7

COLA College 122.10 348 *e*PKPdf PKPdf 13 07 56.0 -1.1
COLA LR LR
comp=Z,10μm,19.0s,MS6.5

MJAR Matsushiro Arr 123.90 286 PKP PKPdf 13 07 59.4 -2.1
comp=Z,2.3nm,1.0s,baz=131,slow=3.4,SNR=3.2

MAJO Matsushiro 123.90 286 PFAKE 13 08 10.0 +8.5
MAJO LR LR
comp=Z,2μm,20.0s,MS5.8

IMA2 Indian Mountai 123.99 346 *e*PKPdf PKPdf 13 07 60.0 -0.7
PDA Ponta Delgada 124.33 72 *i* LR LR 13 48 56.0
INK Inuvik 124.33 355 *e*PKPdf PKPdf 13 08 00.2 -1.1
TATO Taipei 124.36 264 PFAKE 13 08 10.0 +7.3
TATO LR LR
comp=Z,4μm,20.0s,MS6.0

ERM Erimo 125.32 294 PFAKE 13 08 20.0 +16
ERM LR LR
comp=Z,4μm,21.0s,MS6.0

QIZ Qiongzhong 125.90 249 PFAKE 13 08 20.0 +14
QIZ LR LR
comp=Z,2μm,22.0s,MS5.8

QZH Quanzhou 125.95 262 *e*PKP PKPdf 13 08 09.0 +3.2
QZH PP PP 13 10 02.3 +3.1
QZH LR LR
comp=Z,4μm,28.0s,MS6.0

TNA Tin City 125.97 339 *e*PKPdf PKPdf 13 08 05.5 +1.0
TNA LR LR
comp=Z,4μm,19.0s,MS6.1

PET Petropavlovsk 126.16 313 *e*PKP PKPdf 13 08 08.2 +3.0
PET LR LR
comp=Z,6μm,19.0s,MS6.3

PALK Pallekele 127.73 211 PFAKE 13 08 20.0 +10
PALK LR LR
comp=Z,6μm,20.0s,MS6.3

YSS Yuzh-Sakhalins 129.04 298 PFAKE 13 08 20.0 +9.1
YSS LR LR
comp=Z,4μm,19.0s,MS6.2

SSE Sheshan 129.25 269 *e*PKP PKPdf 13 08 14.5 +2.6
SSE PP PP 13 10 24.8 +3.8
SSE SS SS 13 27 48.0 +5.8
SSE PP PP
comp=Z,116nm,12.0s

SSE LR LR
comp=N,2μm,31.1s,MS5.8

SSE LR LR
comp=E,1μm,31.1s,MS5.8

SSE LR LR
comp=Z,4μm,35.5s,MS5.8

INCN Inchon 130.91 279 PFAKE 13 08 30.0 +15
INCN LR LR
comp=Z,2μm,21.0s,MS5.8

CHTO Chiang Mai 131.18 238 *e*PKPdf PKPdf 13 08 16.4 +0.5
CHTO LR LR
comp=Z,5μm,20.0s,MS6.2

NJ2 Nanjing 131.28 268 *e*PKP PKPdf 13 08 12.5 -3.2
NJ2 XPKP 13 08 27.0
NJ2 PP PP
comp=Z,490nm,9.5s

NJ2 LR LR
comp=N,7μm,36.8s,MS6.2

NJ2 LR LR
comp=E,4μm,35.0s,MS6.2

NJ2 LR LR
comp=Z,4μm,35.0s,MS5.9

MA2 Magadan 133.85 315 *e*PKPdf PKPdf 13 08 18.9 -0.7
MA2 *e*PKP PKPdf 13 08 22.9 +3.3
MA2 LR LR
comp=Z,5μm,22.0s,MS6.2

MA2 Magadan 133.85 315 *i* PKIKP PKPdf 13 08 22.9 +3.3
MA2 *e*SS SS 13 28 36.9 -0.9
MA2 *e*SSS 13 33 34.9
MA2 pmax pmax
comp=Z,1.0nm,1.3s

HABR Khabarovsk 133.91 295 *i* PKIKP PKPdf 13 08 25.1 +5.0
HABR *e* 13 10 51.9
HABR *e*PPP 13 13 51.9
HABR *e* 13 15 31.7
SFJD Kangerlussuaq 134.11 32 PFAKE 13 08 30.0 +10
SFJD LR LR
comp=Z,4μm,19.0s,MS6.1

BILL Bilibino 134.18 330 *e*PKPdf PKPdf 13 08 22.2 +2.2
BILL LR LR
comp=Z,7μm,20.0s,MS6.4

BILL Bilibino 134.18 330 *e*PKIKP PKPdf 13 08 21.9 +1.9
BILL *e*PP PP 13 10 58.2 +5.9
BILL *e* 13 21 06.4
BILL pmax pmax
comp=Z,7.0nm,1.5s

MDJ Mudanjiang 134.23 288 PKP PKPdf 13 08 22.0 +1.2
MDJ SS SS 13 28 45.3 +2.4
MDJ LR LR
comp=N,1μm,16.4s,MS6.0

MDJ LR LR
comp=E,2μm,15.7s,MS6.0

MDJ LR LR
comp=Z,2μm,15.3s,MS6.0

MDJ Mudanjiang 134.23 288 PFAKE 13 08 30.0 +9.2
MDJ LR LR
comp=Z,3μm,22.0s,MS5.9

KMI Kunming 134.61 246 PKP PKPdf 13 08 23.3 +1.1
KMI XPKP 13 08 27.8
KMI PP PP 13 11 01.3 +6.0
KMI PKS 13 11 58.0
KMI SKS SKSdf 13 15 31.5 -2.2
KMI SKKS SKKSac 13 17 50.3 -0.8
KMI SS SS 13 28 47.5 +0.3
KMI PP PP
comp=Z,538nm,9.3s

KMI LR LR
comp=N,2μm,18.6s,MS5.9

KMI LR LR
comp=E,2μm,21.1s,MS5.9

CN2 Changchun 135.92 284 *e*PKP PKPdf 13 08 27.5 +3.5
CN2 *e*PP PP 13 11 11.3 +7.6
CN2 PP PP
comp=Z,300nm,6.0s

CN2 LR LR
comp=N,2μm,19.0s,MS5.9

CN2 LR LR
comp=E,1μm,19.0s,MS5.9

CN2 LR LR
comp=Z,2μm,21.0s,MS5.9

KLR Kul'dur 136.08 294 *e*PKIKP PKPdf 13 08 19.3 -4.8
KLR *e* 13 29 00.0
KLR *e* 13 34 05.5
KLR MLR MLR
comp=N,1μm,18.0s,MS6.1

KLR MLR MLR

comp=E,3µm,18.0s,MS6.1
PAB San Pablo 137.30 86 PFAKE 13 08 40.0 +13
PAB LR LR
comp=Z,4µm,22.0s,MS6.1
ESDC Sonseca Array 137.61 86 PKP PKPdf 13 08 26.9 -0.3
comp=Z,1.6nm,0.8s,baz=201,slow=1.8,SNR=6.4
HYB Hyderabad 137.98 212 *e*PKP PKPdf 13 08 31.0 +2.4
HYB Hyderabad 137.98 212 *i* PKP PKPdf 13 08 31.0 +2.4
HYB *e* 13 12 08.0
HYB *e*SS SS 13 29 38.0 +11
HYB LR LR 14 05 52.0
comp=Z,8.1nm,20.0s
BJT Baijiatuau 138.51 273 PFAKE 13 08 40.0 +11
BJT LR LR
comp=Z,4µm,22.0s,MS6.1
BJI Beijing 138.53 273 PKP PKPdf 13 08 33.0 +4.0
BJI PP PP 13 11 22.8 +2.8
BJI SKKS SKKSac 13 18 18.0 +4.1
BJI SS SS 13 29 35.8 +1.6
BJI LR LR
comp=N,2µm,23.3s,MS5.8
BJI LR LR
comp=E,1µm,24.3s,MS5.8
BJI LR LR
comp=Z,3µm,22.2s,MS6.0
CD2 Chengdu 138.72 252 PKP PKPdf 13 08 28.3 -1.3
CD2 XPKP 13 08 37.3
CD2 PP PP 13 11 24.0 +2.9
CD2 PKS 13 12 02.0
CD2 SKS SKSdf 13 15 33.5 -7.0
CD2 PP PP
comp=Z,1µm,10.2s
CD2 LR LR
comp=N,3µm,20.4s
CD2 LR LR
comp=E,4µm,26.4s
CD2 LR LR
comp=Z,3µm,24.0s,MS6.0
SHL Shillong 140.28 235 *e*P PKPdf 13 08 33.0 +0.4
SHL *ex* x 13 11 51.0
POO Poona 140.32 206 *ex* x 13 08 28.0
SJPF Ste Jean 141.44 85 *e*PKP1 PKPdf 13 08 33.3 -0.8
HHC Hu-ho-hao-te 141.66 270 *e*PKP PKPdf 13 08 30.5 -4.1
HHC PP PP 13 11 40.0 +0.8
HHC SS SS 13 30 08.0 -2.9
HHC PP PP
comp=Z,387nm,4.5s
HHC LR LR
comp=N,1µm,20.8s,MS5.8
HHC LR LR
comp=E,2µm,23.7s,MS5.8
HHC LR LR
comp=Z,2µm,25.0s,MS5.8
ETSF Etsaut 141.67 85 *e*PKP1 PKPdf 13 08 33.7 -0.9
EPF Esparros 142.26 86 *e*PKP1 PKPdf 13 08 34.6 -1.0
HIA Hailar 142.40 287 PFAKE 13 08 50.0 +14
HIA LR LR
comp=Z,4µm,19.0s,MS6.2
LZH Lanzhou 142.60 258 *e*PKP PKPdf 13 08 32.5 -4.0
LZH APKP 13 08 36.0
LZH XPKP 13 08 37.5
LZH PP PP 13 11 47.5 +2.6
LZH PKS 13 12 07.0
LZH SS SS 13 30 18.5 -3.2
LZH PP PP
comp=Z,1µm,8.4s
LZH LR LR
comp=E,3µm,18.0s
LZH LR LR
comp=Z,4µm,19.2s,MS6.1
BORG Borgarnes 142.95 44 PFAKE 13 08 50.0 +14
BORG LR LR
comp=Z,3µm,20.0s,MS6.0
QUIF Quistinic 143.33 77 *e*PKP1 PKPdf 13 08 36.4 -0.9
ODAN Odare 143.38 230 *e*P PKPdf 13 08 35.3 -2.9
ROSF Rostrenen 143.51 76 *e*PKP1 PKPdf 13 08 36.6 -1.1
comp=Z,41nm,1.1s
TAPN Taplejung 143.68 231 *e*P PKPdf 13 08 37.1 -1.6
comp=Z,77nm,1.2s
LFF La Frestale 143.69 84 *e*PKP1 PKPdf 13 08 37.2 -0.9
CLNS Chul'man 143.75 300 *e*PKIKP PKPdf 13 08 38.9 +1.1
CLNS pmax pmax
comp=Z,51nm,1.1s
CLNS pmax pmax
comp=N,17nm,1.0s
CLNS pmax pmax
comp=E,17nm,1.0s
SGMF Saint Gilles 143.86 77 *e*PKP1 PKPdf 13 08 37.4 -0.9
YAK Yakutsk 143.88 310 *e*PKPdf PKPdf 13 08 34.3 -3.6
YAK *e*PKPdf PKPdf 13 08 37.4 -0.4
YAK *e*PKP PKPdf 13 08 41.8 +3.9
YAK LR LR
comp=Z,4µm,21.0s,MS6.2
LSA Lhasa 144.13 237 PKP PKPdf 13 08 37.5 -1.9
LSA LR LR
comp=N,2µm,35.7s,MS5.8
LSA LR LR
comp=E,2µm,33.0s,MS5.8
LSA LR LR
comp=Z,4µm,37.0s,MS5.9
LSA Lhasa 144.13 237 PFAKE 13 08 50.0 +11
LSA LR LR
comp=Z,4µm,21.0s,MS6.1
MFF Saint Martin d 144.21 81 *e*PKP1 PKPdf 13 08 37.8 -1.1
RJF Les Rejaudoux 144.35 84 *e*PKP1 PKPdf 13 08 38.1 -1.1
RJF *e*MLR MLR
comp=Z,7µm,22.5s,MS6.0
RJF Les Rejaudoux 144.35 84 *e*PKIKP PKPdf 13 08 38.1 -1.1
RJF MLR MLR
comp=Z,7µm,22.5s,MS6.3
CAF Calviac 144.42 85 *e*PKP1 PKPdf 13 08 37.3 -2.1
comp=Z,62nm,1.2s
JIRN Jiri 144.60 229 *e*P PKPdf 13 08 38.9 -1.3
comp=Z,229nm,1.1s
GRR Gorron 144.86 78 *e*PKP1 PKPdf 13 08 38.8 -1.2
LASF Ste Croix 144.89 87 *e*PKP1 PKPdf 13 08 38.7 -1.5
comp=Z,142nm,1.6s
FRNF Fournols 144.98 84 PKP PKPdf 13 08 38.7 -1.6
KKN Kakani 145.09 228 *e*P PKPbc 13 08 40.3 -0.3
comp=Z,345nm,1.3s
VERF Verneugheol 145.16 84 PKP PKPdf 13 08 37.9 -2.7
LBL Lubilhac 145.27 85 PKP PKPdf 13 08 39.9 -0.9
FLN La Foliniere 145.28 78 *e*PKP1 PKPbc 13 08 38.8 -1.7
comp=Z,37nm,0.8s
FLN *e*MLR MLR
comp=Z,3µm,22.8s,MS5.6
FLN La Foliniere 145.28 78 *e*PKP2 PKPab 13 08 38.8 -1.8
FLN MLR MLR
comp=Z,3µm,22.8s,MS5.9
TCF Toulx Ste Croi 145.33 83 *e*PKP1 PKPbc 13 08 39.1 -1.7
comp=Z,103nm,1.4s
LDF La Druitiere 145.38 78 *e*PKP1 PKPbc 13 08 39.2 -1.7
comp=Z,190nm,1.4s
PYM Petit Puy Mans 145.45 84 PKP PKPdf 13 08 40.2 -0.9
GKN Gorkha 145.54 227 *e*P PKPdf 13 08 41.1 -0.8
comp=Z,126nm,1.1s
DGI Dorgali Grotta 145.64 97 PKP PKPdf 13 08 36.5 -5.1
COLF Collangettes 145.69 85 PKP PKPdf 13 08 41.2 -0.3
AGO Saint Agoulin 145.70 84 PKP PKPdf 13 08 40.9 -0.6
KOLN Koldanda 145.76 225 *e*P PKPdf 13 08 41.7 -0.5
comp=Z,307nm,1.2s
SMRF Simiane la Rot 145.79 89 *e*PKP1 PKPbc 13 08 40.6 -1.7
comp=Z,212nm,1.7s
VIVF Saint-Julien-l 145.83 87 *e*PKP1 PKPbc 13 08 40.8 -1.6
comp=Z,174nm,1.8s
BGF Bois d'Agland 145.84 83 *e*PKP1 PKPbc 13 08 40.9 -1.5
LMR La Mourre 145.91 90 *e*PKP1 PKPbc 13 08 40.9 -1.8
comp=Z,89nm,1.2s
PLDF La Plantade 145.93 84 PKP PKPdf 13 08 39.9 -2.0
FRF La Foret Royal 146.13 90 *e*PKP1 PKPbc 13 08 41.5 -1.8
HYF Humbligny 146.15 82 *e*PKP1 PKPbc 13 08 41.6 -1.7
HAVL Avola 146.26 107 PKP PKPdf 13 08 45.5 +2.7
AVF Avril sur Loir 146.26 83 *e*PKP1 PKPbc 13 08 41.8 -1.8
comp=Z,30nm,0.9s
CALN Calern 146.38 90 PKP PKPdf 13 08 43.8 +1.0
SMF Signal de Mont 146.45 84 *e*PKP1 PKPbc 13 08 42.3 -1.9
comp=Z,52nm,1.1s
SSF Saint Saulge 146.51 83 *e*PKP1 PKPbc 13 08 42.5 -1.8
comp=Z,30nm,1.2s
ORIF Oris-en-Rattie 146.55 88 *e*PKP1 PKPbc 13 08 42.7 -1.8
comp=Z,57nm,1.3s
ORIF *e*MLR MLR
comp=Z,5µm,21.8s,MS6.0
MVIF Mont Vial 146.62 90 PKP PKPdf 13 08 45.1 +1.9
REVF Revere 146.65 91 PKP PKPdf 13 08 43.8 +0.6
LUCF Luceram 146.73 90 PKP PKPdf 13 08 44.2 +0.8
SBF Sospel 146.76 90 *e*PKP1 PKPbc 13 08 43.5 -1.7
comp=Z,94nm,1.1s
PGF Pioggiola 146.79 94 *e*PKP1 PKPbc 13 08 43.4 -1.9
comp=Z,36nm,1.1s
LOR Lormes 146.82 83 *e*PKP1 PKPbc 13 08 43.1 -2.1
comp=Z,84nm,1.3s
LOR *e*MLR MLR
comp=Z,4µm,21.2s,MS5.8
LOR Lormes 146.82 83 *e*PKIKP PKPdf 13 08 43.1 -0.3
LOR MLR MLR
comp=Z,4µm,21.3s,MS6.1
AUTN L'Aution 146.84 90 PKP PKPdf 13 08 44.2 +0.7
MBDF Montbardon 146.93 89 *e*PKP1 PKPbc 13 08 43.8 -1.8
comp=Z,14nm,0.8s
DAG Danmarks Havn 147.00 24⇑ *i*PKIKP PKPdf 13 08 42.6 -0.3
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 147.00 24⇑ *i*P PKPdf 13 08 42.6 -0.3
LHO Holmfirth 147.04 69 P PKPdf 13 08 45.0 +1.5
BNI Bardonecchia 147.08 88 *e*PKPbc PKPbc 13 08 45.7 -0.3
TIXI Tiksi 147.14 326 *e*PKPdf PKPdf 13 08 43.3 +0.1
TIXI LR LR
comp=Z,6µm,20.0s,MS6.4
TIXI Tiksi 147.14 326 *i* PKIKP PKPdf 13 08 42.7 -0.5
TIXI *e*SS SS 13 31 11.6 -1.2
TIXI *e*SSS 13 36 40.4
TIXI pmax pmax
comp=Z,111nm,1.2s
ESK Eskdalemuir 147.16 66 *e*PKPdf PKPdf 13 08 43.8 +0.2
ESK LR LR
comp=Z,2µm,20.0s,MS6.0
CIT Chita 147.20 287 *e*PKIKP PKPdf 13 08 44.3 +0.4
CIT *e* 13 08 51.7
CIT pmax pmax
comp=Z,184nm,1.6s
GTA Gaotai 147.21 258 *e*PKP PKPdf 13 08 45.8 +1.5
GTA PP PP 13 12 16.3 +3.9
GTA PKS 13 12 19.5
GTA SKS SKSdf 13 15 48.0 -5.2
GTA SKKS SKKSac 13 19 01.5 -2.5
GTA SS SS 13 31 10.8 -3.6
GTA LR LR
comp=N,961nm,24.0s,MS5.9
GTA LR LR
comp=E,2µm,20.1s,MS5.9
GTA LR LR
comp=Z,2µm,22.8s,MS5.8
AGRA Agra 147.35 217 *e*P PKPdf 13 08 46.6 +1.6
LPG La Plagne 147.39 88 *e*PKP1 PKPbc 13 08 45.6 -1.3
LPL La Plagne 147.39 87 *e*PKP1 PKPbc 13 08 45.5 -1.4
RSP Reno Superiore 147.46 88 PKP PKPdf 13 08 45.6 +1.1
AJM Ajmer 147.68 211 *e*P PKPbc 13 08 48.0 -0.3
CABF La Chapelle 147.68 85 *e*PKP1 PKPbc 13 08 46.1 -1.6
comp=Z,74nm,1.3s
MENF Mencas 147.69 76 PKP PKPdf 13 08 52.9 +8.2
ORO Oropa 148.16 88 PKP PKPdf 13 08 47.3 +1.6
MEZF Maizieres J'vi 148.18 82 *e*PKP1 PKPbc 13 08 47.5 -1.4
comp=Z,43nm,1.1s
LOMF Lomont 148.52 85 PKP PKPdf 13 08 51.6 +5.4
THEF They Montfort 148.55 83 PKP PKPdf 13 08 48.8 +2.6
BAIF Baives 148.56 79 *e*PKP1 PKPbc 13 08 48.0 -1.8
comp=Z,26nm,1.0s
SONA Sohna 148.58 216 *e*P PKPdf 13 08 48.0 +1.1
HAU Haudompre 148.63 83 *e*PKP1 PKPbc 13 08 48.6 -1.5
comp=Z,37nm,1.1s
HAU *e*MLR MLR
comp=Z,2µm,21.8s,MS5.7
HAU Haudompre 148.63 83 *e*PKIKP PKPbc 13 08 48.6 -1.5
HAU MLR MLR
comp=Z,2µm,21.8s,MS6.0
KUDL Kundal 148.67 215 *e*P PKPdf 13 08 44.8 -2.3
GUAR Guarcino 148.69 99 PKP PKPbc 13 08 50.1 -0.4
VAI Varese 148.74 89 PKP PKPbc 13 08 49.1 -1.4
TIP Timpagrande 148.76 106 *e*PKPbc PKPbc 13 08 49.7 -1.0
DOU Dourbes 148.79 79 PKP PKPdf 13 08 49.6 +3.1
HINF Hinteralfeld 148.80 84 *e*PKP1 PKPbc 13 08 48.8 -1.7
comp=Z,17nm,0.8s
KHET Khetri 148.83 214 *e*P PKPdf 13 08 46.5 -0.9
SNF Seneffe 148.83 78 PKPbc PKPbc 13 08 49.7 -0.8
GSCL Gusciola 148.83 92 PKP PKPbc 13 08 49.5 -1.2
SONM Songino Array 148.90 276 PKP2 PKPbc 13 08 49.8 -1.0
SONM pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 148.90 276 PKPbc PKPbc 13 08 49.8 -1.0
comp=Z,8.2nm,0.9s,baz=158,slow=3.5,SNR=36
GIVF Givet 148.92 79 *e*PKP1 PKPbc 13 08 49.3 -1.5
NDI New Delhi 148.93 217 *e*P PKPbc 13 08 50.0 -1.5
MOF Molkenrain 148.98 84 PKP PKPdf 13 08 50.3 +3.4
FNVD Fontana Vidola 149.02 93 PKP PKPbc 13 08 50.6 -0.6
BHGR Bahadurgarh 149.03 216 *e*P PKPdf 13 08 44.6 -3.0
AQU L'Aquila 149.12 98 *e*PKPbc PKPbc 13 08 51.1 -0.4
ECH Echery 149.19 84 PKP PKPdf 13 08 48.6 +1.3
SFI Santa Sofia 149.26 94 PKP PKPbc 13 08 51.1 -0.7
JMIC Jan Mayen 149.26 36 *e*SS SS 13 31 44.6 +7.9
JMIC AMS AMS 14 11 02.3
comp=Z,4µm,21.1s,MS6.1
BCLA Clavier 149.34 79 PKP PKPdf 13 08 58.0 +11
CDF Champ du Feu 149.37 83 *e*PKP1 PKPbc 13 08 50.3 -1.6
WLF Walferdange 149.42 81 *e*PKPbc PKPbc 13 08 52.4 +0.3
WLF Walferdange 149.42 81 PKPbc PKPbc 13 08 53.6 +1.6
BOD Bodaibo 149.51 297⇓ *i*PKHKP 13 08 49.3
BOD pmax pmax
comp=Z,150nm,1.3s
RTK Rohtak 149.52 216 *e*P PKPdf 13 08 48.9 +0.4
FSSB Fossombrone 149.64 95 PKP PKPbc 13 08 51.5 -1.3
JOSI Joshimath 149.81 222 *ex* x 13 08 54.7
JOSI AMb AMB 13 09 01.3
comp=Z,217nm,1.1s
MEM Membach 149.83 79 PKP PKPdf 13 08 52.2 +4.0
HGN *e*PP PP 13 12 24.8 -3.0
HGN Heimansgroeve 149.87 78 *e*PKP PKPdf 13 08 58.5 +10
comp=Z,54nm,1.4s
BFO Black Forest 149.91 84 *e*PKPbc PKPbc 13 08 52.0 -1.3
BFO *e*PKPab PKPab 13 08 59.2 +0.2
BFO LR LR
comp=Z,2µm,19.0s,MS6.0
BFO Black Forest 149.91 84 *e*PKPbc PKPbc 13 08 52.0 -1.3
BFO *e*PKPab PKPab 13 08 59.2 +0.2
LANF Langenberg 149.97 83 PKP PKPdf 13 08 52.9 +4.4
BRMO Bormio 150.00 89 PKP PKPbc 13 08 52.7 -0.8
DDI Dehra Dun 150.15 219 *e*P PKPdf 13 08 50.5 +1.1
DAVA Damuels 150.19 87⇑ *i*P PKPbc 13 08 53.4 -0.5
comp=Z,91nm,1.3s,SNR=7.6
DAVA Damuels 150.19 87⇑ *i*pPKPdf pPKPdf 13 08 53.4 +2.7
comp=Z,91nm,1.3s,SNR=7.6
KKR Kurukshetra 150.24 217 *e*P PKPdf 13 08 48.4 -1.1
FETA Feichten 150.52 88 *i* pPKPdf pPKPdf 13 08 54.0 +2.8
comp=Z,108nm,1.2s,SNR=13
STU Stuttgart 150.63 84 *e*PKPbc PKPbc 13 08 54.6 -0.4
STU *e*PKPab PKPab 13 09 01.5 -0.5
RETA Reutte 150.80 88⇑ *i*pPKPdf pPKPdf 13 08 54.3 +2.6
comp=Z,56nm,1.4s,SNR=7.0
SQTA Sankt Quirin 150.90 88⇑ *i*P PKPbc 13 08 54.9 -0.7
comp=Z,112nm,1.6s,SNR=8.6
SQTA Sankt Quirin 150.90 88⇑ *i*pPKPdf pPKPdf 13 08 54.9 +3.1
comp=Z,112nm,1.6s,SNR=8.6
MOTA Moosalm 150.91 88⇓ *i*P PKPbc 13 08 54.7 -1.0
comp=Z,91nm,1.5s,SNR=12
MOTA Moosalm 150.91 88⇓ *i*pPKPdf pPKPdf 13 08 54.7 +2.8
comp=Z,91nm,1.5s,SNR=12
WTSB Winterswijk 150.93 77 *e*PKP PKPab 13 09 02.1 -0.9
comp=Z,65nm,1.4s
TNS Taunus Mts 150.98 81 *e*PKPbc PKPbc 13 08 55.1 -0.6
TNS *e*PKPab PKPab 13 09 02.2 -1.1
WTTA Wattenberg 151.16 89 *i* P PKPbc 13 08 55.6 -0.7
comp=Z,106nm,1.2s,SNR=11
WTTA Wattenberg 151.16 89 *i* pPKPdf pPKPdf 13 08 55.6 +3.3
comp=Z,106nm,1.2s,SNR=11
FUR Furstenfeldbru 151.47 87 *e*PKPbc PKPbc 13 08 56.6 -0.4
FUR *e*PKPab PKPab 13 09 03.8 -1.6
VOY Vojsko 151.71 93 *e*PKPdf PKPdf 13 08 56.4 +5.1
VOY *e* 13 09 03.4
CADS Cadrg 151.74 92 *e*PKPdf PKPdf 13 08 56.7 +5.4
CEY Cerknica 151.83 94 *e*PKPdf PKPdf 13 08 56.9 +5.4
MYKA Terra Mystica 151.92 91⇑ *i*pPKPdf pPKPdf 13 08 56.9 +3.5
comp=Z,98nm,1.5s
ZAK Zakamensk 151.99 278 *e*PKIKP PKPdf 13 08 55.1 +3.6
ZAK pmax pmax
comp=Z,16nm,1.5s
GRFO Grafenberg 152.25 84 PFAKE 13 09 00.0 +8.1
GRFO LR LR
comp=Z,4µm,20.0s,MS6.2
GRF Grafenberg Arr 152.25 84 *e*PKPbc PKPbc 13 08 58.0 -0.7
GRF *e*SS SS 13 32 18.3 +7.6
GRF *e*L 14 29 55.8
comp=Z,4µm,19.7s
IRK Irkutsk 152.33 282⇑ *i*PKIKP PKPbc 13 08 56.6 -2.2
IRK *e* 13 09 04.1
IRK pmax pmax
comp=Z,32nm,1.0s
PDKS Podkum 152.34 94 *e*PKPdf PKPdf 13 08 58.9 +6.7
OBKA Obir 152.36 92⇑ *i*P PKPbc 13 08 57.9 -1.1
comp=Z,53nm,1.2s,SNR=8.6
OBKA Obir 152.36 92⇑ *i*pPKPdf pPKPdf 13 08 57.9 +3.9
comp=Z,53nm,1.2s,SNR=8.6
TLY Talaya 152.42 281 *e*PKPbc PKPbc 13 08 57.8 -1.2
TLY LR LR
comp=Z,3µm,20.0s,MS6.1
TLY Talaya 152.42 281 *e*PKIKP PKPbc 13 08 56.7 -2.3
TLY *i* 13 09 04.1
TLY *e*SS SS 13 32 17.7 +5.2
TLY pmax pmax
comp=Z,36nm,1.4s
ZAVS Zavodnje 152.58 93 *e*PKPdf PKPdf 13 08 58.6 +6.1
KBS Kingsbay 152.82 17 PFAKE 13 09 00.0 +8.0
KBS LR LR
comp=Z,6µm,20.0s,MS6.4
KBS Kingsbay 152.82 17 *e*SS SS 13 32 23.2 +7.5
CLZ Clausthal 152.83 79 *e*PKPbc PKPbc 13 08 59.5 -0.4
THN Thein Dam 152.88 217 *ex* x 13 09 02.2
WET Wettzell 152.89 86 *e*PKPbc PKPbc 13 08 58.9 -1.2
WET *e*PKPab PKPab 13 09 11.9 +0.5
MOX Moxa 152.95 82 *e*PKP PKPbc 13 08 59.8 -0.4
comp=Z,56nm,1.6s
MOX
comp=Z,2µm,20.0s
MOX Moxa 152.95 82 *e*PKIKP PKPbc 13 08 59.8 -0.4
MOX pmax pmax
comp=Z,56nm,1.6s
MOX MLR MLR
comp=Z,2µm,20.0s,MS5.8
MOX Moxa 152.95 82 *e*PKPbc PKPbc 13 08 59.7 -0.5
MOX *e*PKPab PKPab 13 09 12.1 +0.5
GEC2 GERESS Array S 153.19 87 *e*PKPbc PKPbc 13 09 00.0 -0.8
GERES GERESS Array B 153.19 87 PKP PKPdf 13 08 52.3 -1.1
comp=Z,0.4nm,0.5s,baz=236,slow=0.4,SNR=2.8
GERES PKPbc PKPbc 13 08 59.8 -1.0
comp=Z,5.6nm,0.9s,baz=202,slow=1.4,SNR=18
NKC Novy Kostel 153.21 84 *e*PKP PKPbc 13 09 00.9 +0.1
NKC *ex* x 13 32 26.6
NKC AMS AMS 14 05 20.0
comp=Z,4µm,31.4s
BER Bergen 153.21 59 *e*SS SS 13 32 20.7 -0.2
BER AMS AMS 14 11 44.2
comp=Z,3µm,20.4s,MS6.1
KHC Kasperske Hory 153.27 87 *e*PKIKP PKPbc 13 08 59.9 -1.1
KHC *e* 13 09 11.3
KHC MLR MLR
comp=Z,3µm,23.9s,MS6.0
KHC Kasperske Hory 153.27 87 *e*PKP PKPbc 13 08 59.9 -1.1
KHC *ex* x 13 09 11.3
KHC *ex* x 13 09 33.0
KHC *e*SS SS 13 32 06.9 -15
KHC *ex* x 13 37 42.9
KHC AMS AMS 14 09 50.0
comp=Z,3µm,23.9s
ARSA Arzberg 153.33 92⇓ *i*P PKPbc 13 08 59.7 -1.5
comp=Z,17nm,1.4s
ARSA Arzberg 153.33 92⇓ *i*pPKPdf pPKPdf 13 08 59.7 +4.2
comp=Z,17nm,1.4s
BHL Bhannes 153.48 138 *e*P PKPdf 13 09 16.0 +22
CSS Prodhromos 153.50 133 *e*PKPdf PKPdf 13 08 54.3 0.0
BSEG Bad Segeberg 153.70 75 *e*PKPbc PKPbc 13 09 01.1 -0.6
MOY Mondy 153.87 279 *e*PKIKP PKPbc 13 09 01.4 -0.8
MOY pmax pmax
comp=Z,85nm,2.5s
MUD Monsted U'grnd 154.02 69 *e*PKP2 PKPab 13 09 18.6 +2.6
MUD MLR MLR
comp=Z,3µm,20.0s,MS6.2
MUD Monsted U'grnd 154.02 69 *i* P PKPab 13 09 18.6 +2.6
MUD
comp=Z,3µm,20.0s
CLL Collm 154.03 82 *e*pPKPdf pPKPdf 13 08 59.0 +2.7
CLL *i* PKPdiff 13 09 01.9
comp=Z,6.0nm,1.0s
CLL *e*pPKPdiff 13 09 08.0
CLL *e*PKPab PKPab 13 09 15.0 -1.2
comp=Z,26nm,1.5s
CLL *i* pPKPab pPKPab 13 09 20.0 +2.0
CLL *ex* x 13 09 26.0
CLL *e*PPk 13 12 45.0
CLL *e*PPlp 13 12 55.0
CLL *ex* x 13 14 34.0
CLL *e*SKSdf SKSdf 13 16 06.0 +4.7
CLL *e*PPPrev 13 22 12.0
CLL *e*PSKS 13 23 12.0
CLL *e*PPS 13 26 00.0
CLL *ex* x 13 28 42.0
CLL Lm 13 29 00.0
comp=N,3µm,21.9s
CLL Lm 13 29 00.0
comp=E,2µm,19.8s
CLL Lm 13 29 00.0
comp=Z,4µm,21.4s
CLL *e*SS SS 13 32 31.0 +0.8
CLL *e*PSS 13 33 18.0
CLL *e*SSS 13 38 12.0
CLL *e*SSSS 13 42 24.0
CLL Collm 154.03 82 *e*PKPbc PKPbc 13 09 01.6 -0.9
PRU Pruhonice 154.25 86 *e*PKIKP PKPbc 13 09 03.2 +0.1
PRU *e* 13 09 16.2
PRU *e* 13 32 28.9
PRU MLR MLR
comp=Z,4µm,30.6s,MS6.1
PRU Pruhonice 154.25 86 *e*PKP PKPbc 13 09 03.2 +0.1
PRU *ex* x 13 09 16.2
PRU *e*SS SS 13 32 28.9 -3.7
PRU *ex* x 13 37 55.0
PRU AMS AMS 14 05 20.0
comp=Z,4µm,30.6s
BRG Berggiesshubel 154.35 84 PKP PKPdf 13 08 55.0 +0.1
BRG *e* 13 09 10.3
BRG *e* 13 09 36.3
BRG *e* 13 12 48.0
BRG SS SS 13 32 26.0 -7.7
BRG LR LR
comp=Z,1µm,17.3s,MS5.8
BRG Berggiesshubel 154.35 84 PKP PKPdf 13 08 55.0 +0.1
BRG *e* 13 09 10.3
comp=Z,11nm,1.2s
BRG *e* 13 09 36.3
comp=Z,57nm,2.1s
BRG *e* 13 12 48.0
BRG SS SS 13 32 26.0 -7.7
BRG
comp=N,918nm,17.7s
BRG
comp=E,2µm,22.5s
BRG
comp=Z,2µm,17.3s
TREC Trest 154.43 88 *e*PKP PKPbc 13 09 01.4 -2.1
TREC *ex* x 13 09 16.0
PKSM Moragy 154.47 97⇑ P PKPdf 13 08 54.4 -0.8
PKSM Moragy 154.47 97⇑ *i*P PKPdf 13 08 54.4 -0.9
PVCC Panska Ves 154.53 85 AMS AMS 14 05 50.0
comp=Z,3µm,27.5s
VTS Vitosha 154.63 108⇓ *i*P PKPdf 13 09 06.0 +10
MOL Molde 154.66 55 *e*SS SS 13 32 36.3 -0.4
MOL AMS AMS 14 15 57.2
comp=Z,3µm,11.6s,MS6.3
MODS Modra-Piesok 154.94 91 *e*PKP PKPdf 13 09 01.0 +5.2
MODS *e* 13 09 19.4
VRAC Vranov 155.05 89⇓ *i*P PKPdf 13 09 06.8 +11
KONO Kongsberg 155.12 62 PFAKE 13 09 10.0 +14
KONO LR LR
comp=Z,4µm,20.0s,MS6.2
KONO Kongsberg 155.12 62 *e*SS SS 13 32 42.0 +0.3
UPC Upice 155.33 86 *e*PKP PKPdf 13 09 00.3 +4.0
UPC *ex* x 13 09 20.5
DPC Dobruska-Polom 155.43 86 *e*PKIKP PKPdf 13 09 03.0 +6.6
DPC *e* 13 09 19.2
DPC *e* 13 32 40.0
DPC MLR MLR
comp=Z,3µm,27.5s,MS6.0
DPC Dobruska-Polom 155.43 86 *e*PKP PKPdf 13 09 03.0 +6.6

DPC				*ex*	x	13 09 19.2			
DPC				*eSS*	SS	13 32 40.0	-5.3		
DPC				*ex*	x	13 37 58.5			
DPC				AMS	AMS	14 06 00.0			
	comp=Z,3μm,27.5s								
COP	**Copenhagen**	**155.49**	**72**	*e*PKP2	PKPab	13 09 22.1	-0.1		
COP				*i*		13 32 39.4			
COP				MLR	MLR				
	comp=Z,1μm,22.0s,MS5.6								
COP	**Copenhagen**	**155.49**	**72**	*i* P	PKPab	13 09 22.1	-0.1		
COP				*e*		13 22 31.4			
COP				*i*		13 32 39.4			
COP									
	comp=Z,1μm,22.0s								
KSP	**Ksiaz**	**155.65**	**85**	*e*PKP	PKPdf	13 09 01.1	+4.4		
KSP				*eSS*	SS	13 32 50.0	+2.3		
KSP				*eSSS*		13 38 20.0			
KSP				LR	LR				
	comp=Z,8μm,22.4s,MS6.5								
KSP	**Ksiaz**	**155.65**	**85**	*e*PKIKP	PKPdf	13 09 01.1	+4.4		
KSP				*eSS*	SS	13 32 50.0	+2.3		
KSP				MLR	MLR				
	comp=Z,8μm,22.4s,MS6.5								
BZS	**Buzias**	**155.75**	**101**	⇓P	PKPdf	13 08 56.1	-0.9		
BZS	**Buzias**	**155.75**	**101**	⇓*i*P	PKPdf	13 08 56.1	-0.9		
MORC	**Moravsky Berou**	**155.82**	**89**	*e*PKPdf	PKPdf	13 08 56.1	-0.9		
MORC				*e*PKPdif		13 09 04.3			
MORC	**Moravsky Berou**	**155.82**	**89**	⇑*i*P	PKPdf	13 08 56.6	-0.4		
VYHS	**Vyhne**	**155.88**	**92**	*e*PKP	PKPdf	13 08 56.0	-1.1		
PSZ	**Piszkesteto**	**156.16**	**94**	*e*PKPdf	PKPdf	13 08 57.1	-0.4		
PSZ	**Piszkesteto**	**156.16**	**94**	⇑*i*P	PKPdf	13 08 57.2	-0.3		
NB2	**NORSAR Subarra**	**156.17**	**59**	PKP	PKPdf	13 09 02.9	+5.8		
	comp=Z,88nm,2.5s,baz=240,slow=2.1								
NB2	**NORSAR Subarra**	**156.17**	**59**	PKP	PKPdf	13 09 02.9	+5.8		
	baz=240,slow=2.1								
NOA	**NORSAR Array B**	**156.17**	**59**	PKP	PKPdf	13 08 55.2	-1.9		
	comp=Z,1.3nm,1.0s,baz=277,slow=0.7,SNR=2.6								
OKC	**Ostrava-Krasne**	**156.19**	**89**	*e*PKP	PKPdf	13 08 56.4	-1.1		
OKC				*e*		13 09 04.0			
OKC				*e*		13 32 55.4			
OKC	**Ostrava-Krasne**	**156.19**	**89**	*e*PKP	PKPdf	13 08 56.4	-1.1		
OKC				*ex*	x	13 09 04.0			
OKC				*eSS*	SS	13 32 55.4	+1.8		
OKC				AMS	AMS	14 11 30.0			
	comp=Z,2μm,25.7s								
BSD	**Bornholm Skovb**	**156.63**	**75**	*i* P	PKPdf	13 09 02.9	+5.0		
BSD									
	comp=Z,3μm,21.0s								
NSS	**Namsos**	**156.77**	**51**	AMS	AMS	14 18 35.4			
	comp=Z,6μm,16.9s,MS6.5								
KECS	**Kecovo**	**156.80**	**94**	*e*PKP	PKPdf	13 09 04.0	+5.7		
KECS				*e*		13 09 26.9			
WMQ	**Urumqi**	**156.80**	**251**	⇑PKP	PKPdf	13 08 57.8	-0.7		
WMQ				APKP		13 09 02.8			
WMQ				XPKP		13 09 05.8			
WMQ				PP	PP				
	comp=Z,1μm,8.0s								
WMQ				LR	LR				
	comp=N,5μm,26.0s,MS6.3								
WMQ				LR	LR				
	comp=E,3μm,24.0s,MS6.3								
WMQ				LR	LR				
	comp=Z,2μm,24.0s,MS5.9								
KBL	**Kabul**	**156.83**	**207**	*e*PKPdf	PKPdf	13 08 58.5	-0.3		
KBL				*e*PKPdif		13 09 10.6			
KBL				*e*PKPab	PKPab	13 09 29.3	+0.8		
DRGR		**157.07**	**100**	⇓*i*P	PKPdf	13 08 59.4	+0.7		
OJC	**Ojcow**	**157.31**	**89**	*e*PKP	PKPdf	13 09 05.1	+6.2		
ANTO	**Ankara**	**157.38**	**126**	*e*PKPdf	PKPdf	13 08 59.2	-0.1		
ANTO				*e*PKPdif		13 09 06.6			
ANTO				*e*PKPab	PKPab	13 09 30.2	-0.6		
ANTO				LR	LR				
	comp=Z,4μm,22.0s,MS6.2								
STHS	**Stebnicka Huta**	**157.71**	**92**	*e*PKP	PKPdf	13 09 04.2	+4.8		
STHS				*e*		13 09 28.3			
UZH	**Uzhgorod**	**157.88**	**95**	*e*PKIKP	PKPdf	13 08 55.0	-4.7		
UZH				*i*		13 09 29.2			
UZH				*e*		13 16 05.0			
MLR	**Muntele Rosu**	**158.03**	**106**	⇓P	PKPdf	13 08 58.9	-1.0		
MLR	**Muntele Rosu**	**158.03**	**106**	⇓*i*P	PKPdf	13 08 58.9	-1.1		
MALT	**Malatya**	**158.42**	**138**	*e*PKPdf	PKPdf	13 09 00.5	-0.2		
MALT				*e*PKPab	PKPab	13 09 35.2	-0.1		
MALT	**Malatya**	**158.42**	**138**	⇑*i*P	PKPdf	13 09 04.4	+3.7		
KWP	**Kalwaria**	**158.64**	**93**	*e*PKPdf	PKPdf	13 09 00.7	+0.2		
KWP	**Kalwaria**	**158.64**	**93**	⇑*i*P	PKPdf	13 09 00.5	0.0		
VRI	**Vrincioaia**	**158.70**	**106**	⇓*i*P	PKPdf	13 09 06.7	+6.0		
KSH	**Kashi**	**159.08**	**226**	*e*PKP	PKPdf	13 08 57.8	-3.6		
KSH				*e*APKP		13 09 07.3			
KSH				*e*XPKP		13 09 12.3			
KSH				LR	LR				
	comp=N,1μm,9.4s								
KSH				LR	LR				
	comp=E,2μm,6.3s								
KSH				LR	LR				
	comp=Z,3μm,16.8s,MS6.2								
LVV	**L'vov**	**159.48**	**94**	*e*PKIKP	PKPdf	13 09 04.1	+2.6		
KIS	**Kishinev**	**160.53**	**106**	*e*PKP2	PKPab	13 09 36.0	-8.3		
KIS	**Kishinev**	**160.53**	**106**	*e*PKP2	PKPab	13 09 36.0	-8.3		
KIS				*e*SKP		13 12 08.0			
KIS	**Kishinev**	**160.53**	**106**	*e*PP	PP	13 13 34.0	+6.6		
KIS				*e*SKS	SKSdf	13 15 52.0	-16		
KIS				*e*SKKS	SKKSac	13 20 05.0	-11		
KIS				*e*L		14 07 08.0			
KIS				LRM		14 29 12.0			
	comp=Z,2μm,20.0s								
ARCES	**ARCESS Array B**	**160.72**	**33**	PKP2	PKPab	13 09 43.2	-1.3		
ARCES				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ARCES	**ARCESS Array B**	**160.72**	**33**	PKPab	PKPab	13 09 43.1	-1.4		
	comp=Z,4.1nm,0.8s,baz=316,slow=5.0,SNR=1.9								
KEV	**Kevo**	**161.07**	**32**	PFAKE		13 09 10.0	+7.3		
KEV				LR	LR				
	comp=Z,6μm,21.0s								
MKAR	**Makanchi Array**	**161.63**	**250**	PKP	PKPdf	13 09 07.3	+3.4		
	comp=Z,0.2nm,0.6s,baz=59,slow=1.4,SNR=3.4								
MKAR				PKPab	PKPab	13 09 48.1	-1.1		
	comp=Z,4.2nm,0.9s,baz=121,slow=4.7,SNR=14								
MKAR				PP	PP	13 13 31.2	-2.0		
	comp=Z,4.3nm,1.0s,baz=132,slow=5.4,SNR=11								
SIM	**Simferopol'**	**161.90**	**119**	*c i*PKIKP	PKPdf	13 08 55.0	-9.3		
SIM				PPS		13 27 06.6			
SIM				SS	SS	13 33 49.9	-3.9		
SIM				pmax	pmax				
	comp=Z,95nm,8.6s								
UCH	**Uchtor**	**161.96**	**227**	PFAKE		13 09 20.0	+16		
UCH				LR	LR				
	comp=Z,5μm,22.0s								
TKM2	**Tokmak 2**	**162.07**	**231**	*e*PKPdf	PKPdf	13 09 05.3	+0.8		
TKM2				LR	LR				
	comp=Z,6μm,21.0s								
AML	**Almayashu**	**162.21**	**225**	PFAKE		13 09 20.0	+15		
AML				LR	LR				
	comp=Z,4μm,19.0s								
EKS2	**Erkin-Say**	**162.62**	**226**	PFAKE		13 09 20.0	+15		
EKS2				LR	LR				
	comp=Z,4μm,22.0s								
KIEV	**Kiev**	**162.80**	**97**	*e*PKPdf	PKPdf	13 09 03.5	-1.5		
KIEV				LR	LR				
	comp=Z,5μm,22.0s								
AKASG	**Malin Array Be**	**162.81**	**97**	PKP	PKPdf	13 09 03.0	-2.1		
AKASG				PKPab	PKPab	13 09 52.6	-1.6		
AKASG	**Malin Array Be**	**162.81**	**97**	PKP	PKPdf	13 09 03.0	-2.1		
	comp=Z,1.9nm,0.9s,baz=265,slow=1.7,SNR=13								
AKASG				PKPab	PKPab	13 09 52.6	-1.6		
	comp=Z,2.8nm,0.9s,baz=250,slow=4.8,SNR=4.1								
ANN	**Anapa**	**163.38**	**125**	*e*PKIKP	PKPdf	13 09 08.1	+2.3		
ANN				*e*		13 13 39.1			
ANN				*e*		13 16 09.8			
ANN				*eSS*	SS	13 34 07.2	-1.7		
ANN				*eSSS*		13 40 33.7			
ANN				pmax	pmax				
	comp=Z,28nm,1.4s								
SOC	**Sochi**	**163.42**	**132**	*e*PKIKP	PKPdf	13 09 03.0	-2.9		
SOC				*e*		13 09 54.1			
MNK	**Minsk**	**163.53**	**84**	*e*PKIKP	PKPdf	13 09 05.0	-0.6		
ZALV	**Zalesovo Beam**	**163.78**	**274**	PKP	PKPdf	13 09 03.6	-2.2		
	comp=Z,0.3nm,0.2s,baz=106,slow=3.1,SNR=3.3								
ZALV				PKPab	PKPab	13 09 56.3	-2.1		
	comp=Z,4.3nm,0.9s,baz=114,slow=3.6,SNR=7.9								
ZALV				PP	PP	13 13 44.8	0.0		
	comp=Z,0.4nm,0.4s,baz=134,slow=4.2,SNR=2.8								
ZAL	**Zalesovo**	**163.79**	**274**	PKIKP	PKPdf	13 09 03.7	-2.2		
ZAL						13 09 56.3			
ZAL						13 13 44.8			
LVZ	**Lovozero**	**164.41**	**32**	PFAKE		13 09 20.0	+14		
LVZ				LR	LR				
	comp=Z,6μm,21.0s								
KIV	**Kislovodsk**	**164.91**	**138**	*e*PKPdf	PKPdf	13 09 06.8	-0.4		
KIV				LR	LR				
	comp=Z,6μm,20.0s								
KIV	**Kislovodsk**	**164.91**	**138**	⇑*i*PKIKP	PKPdf	13 09 06.5	-0.7		
KIV				*i*		13 10 02.8			
KIV				*e*		13 13 57.1			
KIV				*e*PPS		13 27 36.5			
KIV				pmax	pmax				
	comp=Z,17nm,1.2s								
NVS	**Novosibirsk**	**164.93**	**276**	⇑*i*PKP2	PKPab	13 10 01.7	-1.8		
NVS				*e*		13 13 52.9			
NVS				pmax	pmax				
	comp=Z,72nm,1.9s								
NVS				pmax	pmax				
	comp=N,21nm,2.0s								
NVS				pmax	pmax				
	comp=E,45nm,2.1s								
MAK	**Makhachkala**	**165.57**	**152**	PKIKP	PKPdf	13 09 04.5	-3.3		
MAK				*i*		13 13 54.2			
MAK				*e*		13 16 05.5			
MAK				*e*		13 27 32.1			
MAK				*eSS*	SS	13 34 27.3	-3.5		
MAK				*eSSS*		13 40 54.9			
MAK				pmax	pmax				
	comp=Z,197nm,1.5s								
KURK	**Kurchatov**	**165.89**	**257**	PFAKE		13 09 20.0	+12		
KURK				LR	LR				
	comp=Z,6μm,21.0s								
KURK	**Kurchatov**	**165.89**	**257**	⇑*i*PKIKP	PKPdf	13 09 15.2	+7.4		
OBN	**Obninsk**	**168.57**	**87**	PFAKE		13 09 20.0	+10		
OBN				LR	LR				
	comp=Z,12μm,22.0s								
OBN	**Obninsk**	**168.57**	**87**	⇑*e*PKIKP	PKPdf	13 09 15.2	+5.6		
OBN				*e*		13 14 14.7			
OBN				*e*PPS		13 27 59.3			
OBN				*i* SS	SS	13 35 05.7	+3.5		
OBN				pmax	pmax				
	comp=Z,19nm,0.9s								
BRVK	**Borovoye**	**171.54**	**255**	PFAKE		13 09 20.0	+8.6		
BRVK				LR	LR				
	comp=Z,10μm,20.0s								
ARU	**Arti**	**178.91**	**288**	*e*PKPdf	PKPdf	13 09 13.2	-0.1		
ARU				LR	LR				
	comp=Z,6μm,22.0s								
ARU	**Arti**	**178.91**	**288**	PKIKP	PKPdf	13 09 15.1	+1.8		
ARU						13 11 02.6			

IDC 31 13:01:10.9±3.9, 1771S×17668W, h0km, mb4.2/3, mb1 4.5/3, mb1mx3.9/14, mbtmp4.2/3, Error ellipse: s-maj=121.0km s-min=42.3km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.28**	**259**	P	P		13 09 38.1	-0.5
	1.0nm,0.3s,baz=92,slow=7.5,SNR=39							
ASAR	**Alice Springs**	**46.43**	**254**	P	P		13 09 39.9	+0.2
	7.4nm,0.5s,baz=88,slow=8.5,SNR=122							
MJAR	**Matsushiro Arr**	**68.74**	**322**	P	P		13 12 17.3	+0.6
	0.7nm,0.8s,baz=152,slow=5.8,SNR=4.1							
GERES	**GERESS Array B**	**147.81**	**347**	PKPbc	PKPbc		13 20 56.6	-1.1
	0.5nm,0.5s,baz=3.8,slow=2.9,SNR=5.0							

*NEIC **31** 13:06:36.0, 1575N×9671W, h23km, MD4.3(MEX), After MEX.*

MEX 31 13:06:36.6±0.6, 1580N×9666W, h25km±12km, MD4.4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.53**	**93**	*e*P		Pb	13 06 45.8	-1.5
HUIG				*e*S		Sb	13 06 52.6	-2.1
VHO	**Vista Hermosa**	**1.27**	**357**	*e*P		Pn	13 06 56.4	-2.3
VHO				*e*S		Sn	13 07 11.6	-3.3
PNIG	**Pinotepa**	**1.53**	**293**	*e*P		Pn	13 07 00.9	-1.4
PNIG				*e*S		Sn	13 07 19.9	-1.5
PNIG	**Pinotepa**	**1.53**	**293**	*e*P		Pn	13 07 00.3	-2.0
PNIG				*i* S		Sn	13 07 18.4	-3.0
CMIG	**Matias Romero**	**2.13**	**53**	*e*P		Pn	13 07 07.8	-2.8
CMIG				*e*S		Sn	13 07 36.3	0.0
CMIG	**Matias Romero**	**2.13**	**53**	*e*P		Pn	13 07 07.8	-2.8
CMIG				*i* S		Sn	13 07 35.0	-1.2
TPIG	**Tehuac#an**	**2.69**	**346**	*e*P		Pn	13 07 17.2	-1.0
TPIG				*i* S		Sn	13 07 47.1	-2.9
ACX	**Acapulco**	**3.30**	**289**	*e*P		Pn	13 07 16.4	-10
ACX				*i* S		Sn	13 08 09.2	+4.0
ACX	**Acapulco**	**3.30**	**289**	*i* P		Pn	13 07 25.7	-1.0
ACX				*e*S		Sn	13 08 04.5	-0.7
MEIG	**Mezcala**	**3.54**	**307**	*e*P		Pn	13 07 36.6	+6.7
MEIG				*i* S		Sn	13 08 09.6	-1.3
CAIG	**El Cayaco**	**3.68**	**290**	*e*P		Pn	13 07 38.0	+6.1
CAIG				*e*S		Sn	13 08 14.9	+0.4
CAIG	**El Cayaco**	**3.68**	**290**	*i* P		Pn	13 07 33.7	+1.8
CAIG				*i* S		Sn	13 08 09.7	-4.7
PLIG	**Platanillo**	**3.75**	**314**	*e*P		Pn	13 07 42.7	+10
PLIG				*e*S		Sn	13 08 14.9	-1.2
PPM	**Popocatepetl**	**3.75**	**330**	*e*P		Pn	13 07 31.6	-1.2
PPM				*e*S		Sn	13 08 22.0	+5.8
PPM	**Popocatepetl**	**3.75**	**330**	*e*P		Pn	13 07 31.6	-1.2
PPM				*i* S		Sn	13 08 16.0	-0.3
YAIG	**Yautepec**	**3.82**	**323**	*e*P		Pn	13 07 41.6	+7.8
YAIG				*e*S		Sn	13 08 14.3	-3.6
SCX	**San Cristobal**	**3.98**	**76**	*e*P		Pn	13 07 33.3	-2.6
SCX				*i* S		Sn	13 08 20.7	-1.1
IIO	**Organos**	**4.25**	**333**	*e*P		Pn	13 07 30.0	-10
IIO				*e*S		Sn	13 08 25.9	-2.7
SZVM	**Salazar**	**4.36**	**324**	*i* P		Pn	13 07 37.9	-3.4
SZVM				*i* S		Sn	13 08 29.4	-1.9
CCIG	**Comitan**	**4.37**	**83**	*e*P		Pn	13 07 40.4	-1.0
CCIG				*e*S		Sn	13 08 25.7	-5.9
CCIG	**Comitan**	**4.37**	**83**	*i* P		Pn	13 07 40.8	-0.6
CCIG				*i* S		Sn	13 08 29.0	-2.6

*NIED **31** 13:32:00, 3890N×14160E, h74km, Mw4.9 Best double couple: M0 2.44000×10^16 NP1:φs359.00000°, δ36.00000°, λ81.00000°. NP2:φs190.00000°, δ54.00000°, λ96.00000°.*

*ISCJB **31** 13:32:07.2±0.1, 3892N±002×14155E±003, h74km, mb5.0/157, Error ellipse: s-maj=3.7km s-min=2.4km az=136.9*

*MOS **31** 13:32:07.8±0.7, 3909N×14148E, h73km, mb5.3/78, Error ellipse: s-maj=7.7km s-min=4.1km az=102.1*

*BJI **31** 13:32:07.3, 3886N×14167E, h97km, mB5.1, mb5.1*

*IDC **31** 13:32:08.3±0.4, 3884N×14148E, h73km±3km, mb4.6/25, mb1 4.7/31, mb1mx4.7/33, mbtmp4.7/31, MS3.7/2, Ms1 3.7/2, ms1mx3.3/29, Error ellipse: s-maj=11.3km s-min=7.9km az=98.0*

*NEIC **31** 13:32:08.3±0.1, 3886N×14142E, mb5.1/99, MW4.9(NIED), Error ellipse: s-maj=4.5km s-min=3.4km az=150.0*

NEIC Recorded [3 JMA] in Akita, Iwate and Miyagi; [2 JMA] in Aomori, Fukushima and Yamagata Prefectures.

*JMA **31** 13:32:08.6, 3887N×14159E, h77km±1km, M4.8 Broadband fault plane solution: P waves. NP1: φs18.00000°, δ41.00000°, λ111.00000°. NP2: φs171.00000°, δ52.00000°, λ73.00000°. Principal axes: T Plg75.0000°, Azm26.0000°; N Plg14.0000°, Azm182.0000°; P Plg6.0000°, Azm273.0000°;*

JMA Felt III J1.

*SZGRF **31** 13:32:10.7, 3938N×141.19E, h75km, mb5.1, Eastern Honshu, Japan*

ISC 31 13:32:08.8±0.1, 3890N±002×14153E±003, h76km, h76km±.9km: pP-P, n425, c0 96/454, mb5.0/157, 29C-11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.21**	**32**	⇑P		**Pn**	**13 32 20.2**	**+0.1**
OFUJ						**Sn**	**13 32 29.0**	**+0.6**
JMK	**Ichinoseki**	**0.24**	**281**	⇑P		**Pn**	**13 32 20.5**	**+0.2**
JMK						**Sn**	**13 32 29.1**	**+0.4**
JIO	**Ouri**	**0.47**	**197**	⇑P		**Pn**	**13 32 21.7**	**-0.2**
JIO						**Sn**	**13 32 31.2**	**-0.3**
JOM	**Ohasama**	**0.60**	**342**	⇑P		**Pn**	**13 32 23.6**	**+0.5**
JOM						**Sn**	**13 32 34.7**	**+1.1**
JOU	**Okura**	**0.86**	**232**	⇑P		**Pn**	**13 32 26.4**	**+0.4**
JOU				*e*S		**Sn**	**13 32 39.6**	**+0.9**
JYK	**Kaneyama**	**0.91**	**271**	⇓P		**Pn**	**13 32 27.3**	**+0.8**
JYK				S		**Sn**	**13 32 41.4**	**+1.7**
JMM	**Marumori**	**1.19**	**209**	⇑P		**Pn**	**13 32 29.5**	**-0.4**
JMM				*e*S		**Sn**	**13 32 45.0**	**-0.7**
JYS	**Shirataka**	**1.33**	**240**	⇓P		**Pn**	**13 32 32.5**	**+0.7**
JYS				S		**Sn**	**13 32 50.4**	**+1.4**
JYA	**Atsumi**	**1.45**	**258**	⇓P		**Pn**	**13 32 34.1**	**+0.8**
JYA				*e*S		**Sn**	**13 32 53.5**	**+1.7**
JAH	**Hinai**	**1.46**	**332**	⇓P		**Pn**	**13 32 34.6**	**+1.2**
JANG	**Nango**	**1.47**	**360**	P		**Pn**	**13 32 33.7**	**+0.2**
JFK	**Kawauchi**	**1.62**	**199**	⇑P		**Pn**	**13 32 35.3**	**-0.2**
JFK				S		**Sn**	**13 32 54.8**	**-0.9**
ERM	**Erimo**	**3.35**	**21**	Pn		**Pn**	**13 32 57.8**	**-0.9**
	1μm,0.4s,SNR=86							
ERM	**Erimo**	**3.35**	**21**	*e*Pn		**Pn**	**13 32 56.8**	**-1.9**
ERM				*e*Sn		**Sn**	**13 33 35.2**	**-2.1**
MJAR	**Matsushiro Arr**	**3.53**	**229**	P		**Pn**	**13 33 03.4**	**+2.1**
	64nm,0.3s,baz=38,slow=13,SNR=1052							
MAJO	**Matsushiro**	**3.53**	**229**	⇓*i*Pn		**Pn**	**13 33 03.4**	**+2.1**
MAT	**Matsushiro**	**3.53**	**229**	P		**Pn**	**13 33 03.3**	**+2.0**
MAT				*e*S		**Sn**	**13 33 46.1**	**+4.2**
ASAJ	**Asahikawa**	**5.27**	**8**	P		**Pn**	**13 33 24.4**	**-0.5**
ASAJ				S		**Sn**	**13 34 24.9**	**+0.6**
ASAJ				pmax	pmax			
	comp=Z,24nm,0.3s							
ASAJ				smax				
	comp=N,16nm,0.3s							
ASAJ	**Asahikawa**	**5.27**	**8**	P		**Pn**	**13 33 24.4**	**-0.6**
	comp=N,24nm,0.3s,baz=201,slow=10,SNR=66							
ASAJ				S		**Sn**	**13 34 24.9**	**+0.6**
	comp=N,16nm,0.3s,baz=14,slow=33,SNR=3.7							
JHJ	**Hachijo jima 2**	**5.94**	**194**	P		**Pn**	**13 33 32.0**	**-2.1**
	comp=N,57nm,0.3s,baz=68,slow=9.9,SNR=18							
JHJ				S		**Sn**	**13 34 35.2**	**-5.6**
	comp=N,115nm,0.3s,baz=97,slow=22,SNR=8.6							
YUK	**Yuzh-Kuril'sk**	**6.07**	**31**	*e*P		**Pn**	**13 33 34.1**	**-1.8**
YUK				*e*S		**Sn**	**13 34 38.4**	**-5.5**
YUK				pmax	pmax			
	comp=Z,340nm,0.3s							
YUK				pmax	pmax			
	comp=N,180nm,0.4s							
YUK				smax				
	comp=N,4μm,0.4s							
YUK				smax				
	comp=E,4μm,0.4s							
YUK				smax				
	comp=N,6μm,1.0s							
YUK				smax				
	comp=E,8μm,0.4s							
KUR	**Kuril'sk**	**7.89**	**35**	*e*P		**Pn**	**13 33 56.0**	**-4.6**
KUR				*i* S		**Sn**	**13 35 19.0**	**-9.3**
KUR				pmax	pmax			
	comp=N,160nm,0.8s							
KUR				pmax	pmax			
	comp=E,130nm,0.8s							
KUR				pmax	pmax			
	comp=Z,340nm,0.8s							
KUR				smax				
	comp=N,4μm,1.6s							
KUR				smax				
	comp=E,3μm,1.6s							
KUR				smax				
	comp=N,710nm,0.9s							
KUR				smax				
	comp=E,2μm,0.9s							
YSS	**Yuzh-Sakhalins**	**8.10**	**6**	*e*Pn		**Pn**	**13 34 02.7**	**-0.8**
	comp=E,66nm,0.8s							
YSS				*e*Sn		**Sn**	**13 35 35.3**	**+1.9**
YSS	**Yuzh-Sakhalins**	**8.10**	**6**	⇓*e*P		**Pn**	**13 34 03.0**	**-0.5**
YSS				*e*S		**Sn**	**13 35 30.6**	**-2.8**
YSS				pmax	pmax			
	comp=N,30nm,1.0s							
YSS				pmax	pmax			
	comp=Z,50nm,1.0s							
YSS				smax				
	comp=N,70nm,1.1s							
YSS				smax				
	comp=E,40nm,1.1s							
YSS				MLR	MLR			
	comp=Z,500nm,16.0s							
YSS				MLR	MLR			
	comp=N,400nm,17.0s							
YSS				MLR	MLR			
	comp=E,600nm,15.0s							
VLA	**Vladivostok**	**8.41**	**303**	*e*P		**Pn**	**13 34 07.4**	**-0.4**
VLA				pmax	pmax			
	comp=Z,178nm,2.5s							
JNU	**Nakatsue**	**10.37**	**239**	P		**Pn**	**13 34 34.5**	**-0.2**
	comp=Z,1.9nm,0.3s,baz=30,slow=11,SNR=14							
JNU				LR	LR		13 38 50.7	
	comp=Z,370nm,20.7s,baz=302,slow=39							
HABR	**Khabarovsk**	**10.65**	**336**	*e*P		**Pn**	**13 34 36.6**	**-1.7**
HABR				*e*			13 36 32.0	
KSRS	**Korea Array**	**10.81**	**267**	P		**Pn**	**13 34 42.0**	**+1.4**
	comp=Z,2.7nm,0.3s,baz=81,slow=14,SNR=68							
KSRS				LR	LR		13 38 41.2	
	comp=Z,426nm,19.6s,baz=255,slow=36							
CBIJ	**Chichi jima**	**11.79**	**177**	P		**Pn**	**13 34 50.9**	**-3.1**
	comp=Z,7.5nm,0.3s,baz=121,slow=21,SNR=8.1							
CBIJ				S		**Sn**	**13 36 50.6**	**-13**
	comp=Z,8.6nm,0.3s,baz=106,slow=20,SNR=4.7							
INCN	**Inchon**	**11.81**	**268**	*e*Pn		**Pn**	**13 34 59.5**	**+5.3**
	comp=Z,17nm,0.5s							
KLR	**Kul'dur**	**12.48**	**329**	*e*P		**Pn**	**13 34 58.8**	**-4.4**
KLR				pmax	pmax			
	comp=N,40nm,1.6s							
KLR				pmax	pmax			
	comp=E,100nm,1.6s							
KLR				pmax	pmax			
	comp=Z,100nm,1.6s							
CN2	**Changchun**	**13.03**	**297**	*e*P		**Pn**	**13 35 12.0**	**+1.3**
CN2				*e*AP			13 35 22.8	
CN2				*e*XP			13 35 34.3

BJI Beijing 19.59 281 P **Pn** **13 36 29.0 -3.7**
BJI AMB AMB
comp=Z,15nm,0.8s
BJT Baijiatuau 19.60 281 *e*P **Pn** **13 36 28.1 -4.8**
comp=Z,31nm,0.6s
BJT Baijiatuau 19.60 281 *e*P **Pn** **13 36 28.1 -4.7**
BJT pmax pmax
comp=Z,31nm,0.6s
NJ2 Nanjing 19.66 257 *e*P **Pn** **13 36 31.3 -2.4**
NJ2 AP pP 13 36 45.5 -1.4
NJ2 PP 13 36 51.3
NJ2 S **S** **13 40 04.0 -5.3**
NJ2 AMB AMB
comp=Z,60nm,0.6s
NJ2 AMB AMB
comp=Z,520nm,6.4s
NJ2 LR LR
comp=N,4μm,24.2s
NJ2 LR LR
comp=E,4μm,27.2s
NJ2 LR LR
comp=Z,3μm,25.0s
NRGR Nerungri 20.95 333 *e*P **P** **13 36 45.1 -0.1**
NRGR S **S** **13 40 31.7 -2.4**
NRGR smax
comp=E,55nm,0.5s
CLNS Chul'man 21.03 334 *e*P **P** **13 36 44.6 -1.5**
CLNS *e*PPP 13 37 09.4
CLNS *e*S **S** **13 40 31.5 -4.2**
CLNS *e* 13 40 48.4
CLNS pmax pmax
comp=N,18nm,0.8s
CLNS pmax pmax
comp=Z,37nm,0.8s,mb4.8
CLNS pmax pmax
comp=E,12nm,0.7s
CLNS pmax pmax
comp=N,23nm,0.7s
CLNS pmax pmax
comp=Z,19nm,0.7s,mb4.5
CLNS pmax pmax
comp=E,21nm,1.1s
CLNS smax
comp=N,52nm,1.2s
CLNS smax
comp=Z,10.0nm,0.8s
CLNS smax
comp=E,21nm,1.1s
CLNS MLR MLR
comp=Z,400nm,14.0s
CLNS MLR MLR
comp=N,100nm,10.0s
CLNS MLR MLR
comp=E,300nm,14.0s
MA2 Magadan 21.51 13 *e*P **P** **13 36 50.7 -0.5**
comp=E,67nm,0.8s,mb5.0
MA2 *e* 13 37 15.9
MA2 Magadan 21.51 13⇑ *e*P **P** **13 36 50.9 -0.3**
MA2 pmax pmax
comp=Z,83nm,0.9s,mb5.1
YHNB Yeheng 22.18 236 *e*P **P** **13 36 55.4 -3.2**
NACB Ninganchiao 22.39 235 *e*P **P** **13 36 57.6 -3.2**
HHC Hu-ho-hao-te 23.03 284 *e*P **P** **13 37 04.8 -2.6**
HHC AP 13 37 22.0
HHC PP 13 37 37.5
HHC PCP PcP 13 40 54.5 +0.3
HHC S **S** **13 41 06.8 -5.3**
HHC SCP ScP 13 44 24.5 -0.8
HHC PCS PcS 13 44 30.8 -2.5
HHC SCS ScS 13 48 08.5 -2.7
HHC AMB AMB
comp=Z,18nm,1.1s,mb4.3
HHC AMB AMB
comp=Z,165nm,4.3s
HHC LR LR
comp=N,2μm,36.9s
HHC LR LR
comp=E,1μm,39.5s
HHC LR LR
comp=Z,737nm,23.0s
CIT Chita 23.43 313 *e*P **P** **13 37 09.1 -1.9**
CIT *e* 13 37 27.5
CIT *e* 13 37 34.3
CIT *e* 13 38 01.0
CIT *e* 13 41 14.6
WHN Wuhan 23.78 258 ⇑P **P** **13 37 12.8 -1.6**
QZH Quanzhou 23.85 241 P **P** **13 37 08.5 -6.5**
BTO Baotou 24.22 284 *e*P **P** **13 37 16.0 -2.3**
YAK Yakutsk 24.27 346 *e*P **P** **13 37 17.1 -1.4**
comp=Z,113nm,0.8s,mb5.2
YAK *e* 13 37 42.3
YAK *e*S **S** **13 41 32.0 +0.3**
YAK Yakutsk 24.27 346 *e*P **P** **13 37 17.1 -1.4**
YAK *e* 13 37 42.3
YAK *e*S **S** **13 41 32.0 +0.3**
YAK pmax pmax
comp=Z,113nm,0.8s,mb5.2
SEY Seymchan 24.94 12⇑ *e*P **P** **13 37 24.3 -0.3**
BOD Bodaibo 26.02 326 *e*P **P** **13 37 34.3 -0.1**
BOD pmax pmax
comp=Z,17nm,0.7s,mb4.6
XAN Xi'an 26.58 270 P **P** **13 37 39.5 -0.3**
XAN AMB AMB
comp=Z,62nm,0.7s,mb5.2
SONM Songino Array 26.86 301 P **P** **13 37 42.4 +0.3**
SONM *PP pP 13 38 00.0 +0.3
SONM 13 41 02.9
SONM Songino Array 26.86 301 P **P** **13 37 42.4 +0.3**
comp=Z,7.8nm,0.7s,mb4.3,baz=100,slow=9.1,SNR=38
SONM pP pP 13 38 00.0 +0.3
comp=Z,2.1nm,0.6s,baz=109,slow=7.8,SNR=2.7
SONM PcP PcP 13 41 02.9 +0.3
comp=Z,4.0nm,0.9s,baz=114,slow=2.1,SNR=6.6
SONM ScP ScP 13 44 35.7 -0.3
comp=Z,0.6nm,0.7s,baz=207,slow=0.3,SNR=3.6
TLY Talaya 29.21 308 *e*P **P** **13 38 03.3 +0.3**
comp=Z,9.5nm,1.0s,mb4.4
TLY Talaya 29.21 308 *e*P **P** **13 38 03.4 +0.4**
TLY pmax pmax
comp=Z,11nm,1.3s,mb4.3
ZAK Zakamensk 29.22 306 *e*P **P** **13 38 03.4 +0.3**
ZAK *e* 13 41 08.4
ZAK pmax pmax
comp=Z,5.0nm,1.0s,mb4.1
ZAK pmax pmax
comp=Z,3.0nm,1.1s,mb3.8
LZH Lanzhou 29.89 277 *e*P **P** **13 38 09.0 -0.2**
LZH AP pP 13 38 29.5 +2.5
LZH AMB AMB
comp=Z,38nm,1.0s,mb5.0
LZH AMB AMB
comp=Z,164nm,4.1s
MOY Mondy 30.83 308 *e*P **P** **13 38 17.9 +0.6**
GYA Guiyang 31.67 257 ⇓*i*P **P** **13 38 26.5 +1.5**
GYA AP pP 13 38 45.8 +3.0
GYA XP sP 13 38 54.3 +2.7
GYA PP PP 13 39 34.0 -3.7
GYA PCP PcP 13 41 17.5 +2.3
GYA S **S** **13 43 29.0 +0.1**
GYA XS sS 13 44 01.3 +1.7
GYA PCS PcS 13 45 01.5 +1.6
GYA SS SS 13 45 23.5 -24
GYA AMB AMB
comp=Z,40nm,0.8s,mb5.2
GYA AMB AMB
comp=Z,230nm,4.2s
GYA LR LR
comp=N,2μm,22.1s
GYA LR LR
comp=E,3μm,20.9s
GYA LR LR
comp=Z,2μm,20.7s
CD2 Chengdu 31.81 267 P **P** **13 38 26.0 -0.2**
CD2 AP pP 13 38 44.0 0.0
CD2 PP PP 13 39 34.3 -4.9
CD2 S **S** **13 43 29.5 -1.5**
CD2 SS SS 13 45 24.8 -25
CD2 SCS ScS 13 48 48.5 -2.1
CD2 AMB AMB
comp=Z,50nm,0.7s,mb5.3
CD2 AMB AMB
comp=Z,80nm,4.2s
CD2 LR LR
comp=N,240nm,13.6s
CD2 LR LR
comp=E,290nm,14.6s
CD2 LR LR
comp=Z,270nm,15.4s
GTA Gaotai 32.14 284 *e*P **P** **13 38 26.0 -3.0**
GTA PCP PcP 13 41 17.3 +1.0
GTA S **S** **13 43 24.5 -12**
GTA SCP ScP 13 44 53.5 +0.4
GTA PCS PcS 13 45 01.5 +0.3
GTA AMB AMB
comp=Z,347nm,9.5s
GTA LR LR
comp=N,845nm,20.2s
GTA LR LR
comp=E,582nm,19.4s
GTA LR LR
comp=Z,391nm,17.1s
BILL Bilibino 32.21 17 *e*P **P** **13 38 28.8 -0.5**
comp=Z,24nm,1.0s,mb4.9
BILL *e* 13 38 55.1
BILL Bilibino 32.21 17 *e*P **P** **13 38 28.8 -0.5**
BILL *e* 13 38 55.1
BILL pmax pmax
comp=Z,24nm,1.0s,mb4.9
TIXI Tiksi 33.45 353 *e*P **P** **13 38 38.8 -1.2**
comp=Z,14nm,0.9s,mb4.8
TIXI *e*pP pP 13 38 57.7 -0.2
TIXI *e*sP sP 13 39 05.1 -1.7
TIXI Tiksi 33.45 353 *e*P **P** **13 38 38.9 -1.1**
TIXI *e* 13 39 05.1
TIXI pmax pmax
comp=Z,9.0nm,0.9s,mb4.6
QIZ Qiongzhong 33.82 243 P **P** **13 38 45.3 +1.5**
KMI Kunming 35.37 259 P **P** **13 38 57.0 -0.2**
KMI AP pP 13 39 15.8 +0.6
KMI XP sP 13 39 26.0 +2.0
KMI PP PP 13 40 20.0 +1.3
KMI S **S** **13 44 24.3 -1.9**
KMI XS sS 13 44 58.3 +1.2
KMI SS SS 13 46 46.3 -16
KMI AMB AMB
comp=Z,46nm,1.0s,mb5.3
KMI AMB AMB
comp=Z,509nm,13.3s
KMI LR LR
comp=N,918nm,30.3s
KMI LR LR
comp=E,1μm,23.9s
KMI LR LR
comp=Z,4μm,28.7s
TNA Tin City 39.19 31 *e*P **P** **13 39 29.7 +0.7**
comp=Z,45nm,1.0s,mb5.2
TNA *e*sP sP 13 39 56.7 +0.7
WMQ Urumqi 40.11 295 P **P** **13 39 38.0 +1.2**
WMQ AP pP 13 39 56.0 +0.9
WMQ PP PP 13 41 15.0 +4.7
WMQ PCP PcP 13 41 43.0 +3.0
WMQ S **S** **13 45 38.0 +0.5**
WMQ AMB AMB
comp=Z,59nm,0.8s,mb5.5
WMQ AMB AMB
comp=Z,620nm,9.4s
WMQ LR LR
comp=N,2μm,29.2s
WMQ LR LR
comp=E,2μm,31.5s
WMQ LR LR
comp=Z,994nm,24.6s
ZAA0 Zalesovo Array 40.74 311 *e*P **P** **13 39 42.1 +0.1**
ZAA0 *e*pP pP 13 39 58.6 -1.7
ZAA0 *e*sP sP 13 40 08.0 -1.1
ZALV Zalesovo Beam 40.74 311 P **P** **13 39 42.2 +0.3**
comp=Z,14nm,0.5s,mb5.1,baz=90,slow=8.0,SNR=57
ZALV PcP PcP 13 41 41.9 0.0
comp=Z,11nm,0.9s,baz=96,slow=3.0,SNR=7.3
ZALV ScP ScP 13 45 24.0 -0.6
comp=Z,0.3nm,0.4s,baz=83,slow=4.6,SNR=3.1
ZAL Zalesovo 40.76 311 P **P** **13 39 42.3 +0.2**
ZAL 13 41 41.9
NVS Novosibirsk 41.63 312 *e*P **P** **13 39 49.1 -0.1**
NVS *e**PP pP 13 40 04.3 -3.3
NVS *e*S **S** **13 45 50.7 -9.2**
NVS pmax pmax
comp=Z,33nm,2.0s,mb4.7
NVS pmax pmax
comp=E,17nm,1.5s
NVS smax
comp=E,75nm,3.1s
CHTO Chiang Mai 41.87 254 *e*P **P** **13 39 52.2 +0.6**
comp=E,12nm,0.6s,mb4.8
CHTO *e*pP pP 13 40 08.2 -1.8
CHTO *e*PcP PcP 13 41 45.7 -0.4
CHTO Chiang Mai 41.87 254 *e*P **P** **13 39 52.2 +0.6**
CHTO *e**PP pP 13 40 08.2 -1.8
CHTO *e* 13 41 45.7
CHTO pmax pmax
comp=Z,12nm,0.6s,mb4.8
LSA Lhasa 42.16 273 P **P** **13 39 55.8 +1.9**
LSA AMB AMB
comp=Z,20nm,0.6s,mb5.0
LSA Lhasa 42.16 273 *e*P **P** **13 39 55.5 +1.6**
comp=Z,13nm,0.6s,mb4.8
LSA Lhasa 42.16 273 *e*P **P** **13 39 55.5 +1.6**
LSA pmax pmax
comp=Z,13nm,0.6s,mb4.8
IMP Imphal 42.35 265 *ex* **P** **13 39 56.0 +0.5**
IMP *ex* x 13 39 56.0
MK31 Makanchi Array 43.23 300 *i* P **P** **13 40 02.8 +0.5**
MK31 pmax pmax
comp=Z,51nm,0.8s,mb5.3
MKAR Makanchi Array 43.23 300 P **P** **13 40 02.7 +0.4**
MKAR PcP PcP 13 41 49.8 -0.4
MKAR ScP ScP 13 45 34.4 -0.3
MKAR Makanchi Array 43.23 300 P **P** **13 40 02.7 +0.4**
MKAR 13 41 49.8
MKAR Makanchi Array 43.23 300 P **P** **13 40 02.7 +0.4**
comp=Z,33nm,0.8s,mb5.1,baz=86,slow=9.8,SNR=172
MKAR PcP PcP 13 41 49.8 -0.4
comp=Z,3.0nm,0.9s,baz=84,slow=5.9,SNR=2.5
MKAR ScP ScP 13 45 34.4 -0.3
comp=Z,0.9nm,0.9s,baz=59,slow=5.6,SNR=3.6
SHL Shillong 43.55 267 *e*P **P** **13 40 06.0 +0.9**
SHL *ex* x 13 46 23.0
TTA Tatalina 43.85 36 *e*P **P** **13 40 07.0 0.0**
comp=Z,64nm,1.8s,mb5.0
TTA *e*pP pP 13 40 22.7 -2.8
TTA *e*sP sP 13 40 34.5 +0.2
TTA Tatalina 43.85 36 *e*P **P** **13 40 07.0 0.0**
TTA *e**PP pP 13 40 22.7 -2.8
TTA *e**SP sP 13 40 34.5 +0.3
TTA pmax pmax
comp=Z,64nm,1.8s,mb5.0
SVW2 Sparrevohn 43.99 39 *e*P **P** **13 40 09.3 +1.0**
SVW2 *e*sP sP 13 40 35.8 +0.3
KURK Kurchatov 44.87 307 P **P** **13 40 15.6 +0.2**
comp=Z,405nm,0.7s,mb6.3,SNR=51
KURK Kurchatov 44.87 307 *e*P **P** **13 40 15.0 -0.4**
comp=Z,42nm,0.6s,mb5.3
KURK *e*pP pP 13 40 34.9 +0.9
KURK *e*sP sP 13 40 42.0 -0.6
KURK Kurchatov 44.87 307 *e*P **P** **13 40 15.0 -0.4**
KURK *e**PP pP 13 40 34.9 +0.9
KURK *e**SP sP 13 40 42.1 -0.5
KURK pmax pmax
comp=Z,42nm,0.6s,mb5.3
IMA2 Indian Mountai 45.04 31 *e*P **P** **13 40 17.2 +0.7**
IMA2 *e*pP pP 13 40 30.8 -4.3
IMA2 *e*sP sP 13 40 44.3 +0.6
IMA2 *e*PcP PcP 13 41 57.2 +1.2
KDAK Kodiak Island 45.66 43 P **P** **13 40 21.8 +0.3**
KDAK pP pP 13 40 39.7 -0.4
KDAK sP sP 13 40 48.1 -0.7
KDAK PcP PcP 13 41 58.9 +0.5
KDAK Kodiak Island 45.66 43 P **P** **13 40 21.8 +0.3**
comp=Z,26nm,0.9s,mb5.0,baz=293,slow=4.3,SNR=18
KDAK pP pP 13 40 39.7 -0.4
comp=Z,7.7nm,0.7s,baz=170,slow=3.1,SNR=3.5
KDAK sP sP 13 40 48.1 -0.7
comp=Z,34nm,0.8s,baz=279,slow=3.2,SNR=12
KDAK PcP PcP 13 41 58.9 +0.5
comp=Z,4.8nm,0.7s,baz=214,slow=7.3,SNR=2.4
TAPN Taplejung 45.93 272 *e*P **P** **13 40 24.9 +0.8**
comp=Z,27nm,0.7s,mb5.1
TAPN Taplejung 45.93 272 *e*P **P** **13 40 25.0 +0.9**
comp=Z,27nm,0.7s,mb5.1
ODAN Odare 46.42 272 *e*P **P** **13 40 28.9 +1.0**
comp=Z,55nm,0.8s,mb5.3
ODAN Odare 46.42 272 *e*P **P** **13 40 28.9 +1.0**
comp=Z,61nm,0.8s,mb5.4
JIRN Jiri 46.97 274 *e*P **P** **13 40 33.1 +0.9**
comp=Z,30nm,0.6s,mb5.2
JIRN Jiri 46.97 274 *e*P **P** **13 40 33.2 +1.0**
comp=Z,30nm,0.6s,mb5.2
MCK McKinley 47.04 35 *e*P **P** **13 40 32.2 0.0**
comp=Z,17nm,0.9s,mb4.8
MCK McKinley 47.04 35 *e*P **P** **13 40 32.2 0.0**
MCK pmax pmax
comp=Z,17nm,0.9s,mb4.8
PMR Palmer 47.08 38 *e*P **P** **13 40 32.8 +0.3**
comp=Z,21nm,1.1s,mb4.8
PMR *e*sP sP 13 40 58.8 -1.2
PMR Palmer 47.08 38 *e*P **P** **13 40 32.8 +0.2**
PMR *e**SP sP 13 40 58.8 -1.1
PMR pmax pmax
comp=Z,21nm,1.1s,mb4.8
COLA College 47.46 33 *e*P **P** **13 40 35.9 +0.5**
comp=Z,16nm,0.9s,mb4.8
COLA *e*pP pP 13 40 51.8 -2.5
COLA *e*sP sP 13 41 03.3 +0.4
COLA College 47.46 33 *e*P **P** **13 40 35.9 +0.4**
COLA *e**PP pP 13 40 51.8 -2.4
COLA *e**SP sP 13 41 03.3 +0.5
COLA pmax pmax
comp=Z,16nm,0.9s,mb4.8
KKN Kakani 47.61 274 *e*P **P** **13 40 37.8 +0.6**
comp=Z,128nm,0.7s,mb5.8
KKN Kakani 47.61 274 *e*P **P** **13 40 37.9 +0.7**
comp=Z,128nm,0.7s,mb5.8
GKN Gorkha 48.01 275 *e*P **P** **13 40 40.8 +0.5**
comp=Z,62nm,0.6s,mb5.7
GKN Gorkha 48.01 275 *e*P **P** **13 40 40.8 +0.5**
comp=Z,62nm,0.6s,mb5.7
ULHL Ulahol 48.61 296 P **P** **13 40 47.5 +2.8**
SNR=16
TKM2 Tokmak 2 48.84 297 *e*P **P** **13 40 46.9 +0.5**
comp=Z,18nm,0.6s,mb5.2
TKM2 Tokmak 2 48.84 297 *e*P **P** **13 40 46.9 +0.5**
TKM2 pmax pmax
comp=Z,19nm,0.6s,mb5.2
TKM2 Tokmak 2 48.84 297 P **P** **13 40 47.7 +1.2**
SNR=29
KOLN Koldanda 48.93 275 *e*P **P** **13 40 48.1 +0.8**
comp=Z,55nm,0.8s,mb5.5
KOLN Koldanda 48.93 275 *e*P **P** **13 40 47.9 +0.6**
comp=Z,55nm,0.8s,mb5.5
KZA Kyzart 49.36 296 P **P** **13 40 50.4 0.0**
SNR=9.7
KBK Karagaybulak 49.38 297 P **P** **13 40 50.9 +0.4**
SNR=23
BRVK Borovoye 49.45 311 P **P** **13 40 51.5 +0.6**
comp=Z,78nm,0.7s,mb5.8,SNR=8.3
BRVK Borovoye 49.45 311 *e*P **P** **13 40 50.9 0.0**
comp=Z,12nm,0.9s,mb4.8
BRVK Borovoye 49.45 311 *e*P **P** **13 40 50.9 0.0**
BRVK pmax pmax
comp=Z,12nm,0.9s,mb4.8
USP Ospenovka 49.49 298 P **P** **13 40 53.0 +1.6**
SNR=9.2
FRU Bishkek 49.55 297 *e*P **P** **13 40 53.0 +1.1**
FRU *e* 13 41 18.0
AAK Ala-Archa 49.70 297 P **P** **13 40 52.0 -1.0**
comp=Z,59nm,0.8s,mb5.6,SNR=6.2
AAK Ala-Archa 49.70 297 P **P** **13 40 53.5 +0.5**
SNR=7.7
EKS2 Erkin-Say 50.19 297 P **P** **13 40 58.7 +2.0**
SNR=5.2
EGAK Eagle 50.32 33 *e*P **P** **13 40 56.9 -0.4**
comp=Z,29nm,1.3s,mb5.0
EGAK *e*pP pP 13 41 13.7 -2.5
EGAK *e*sP sP 13 41 24.4 -0.4
AML Almayashu 50.43 297 P **P** **13 40 59.1 +0.5**
SNR=12
BATI Kupang 51.62 203 P **P** **13 41 07.2 -0.4**
comp=Z,21nm,0.8s,mb5.2,baz=59,slow=1.9,SNR=6.0
KAKA Kakadu 52.04 191 *e*P **P** **13 41 10.2 -0.5**
comp=Z,39nm,1.1s,mb5.3
INK Inuvik 52.69 28 *e*P **P** **13 41 15.4 +0.4**
comp=Z,598nm,0.8s
INK Inuvik 52.69 28 P **P** **13 41 15.7 +0.7**
INK pmax pmax
comp=Z,18nm,0.9s
INK Inuvik 52.69 28 P **P** **13 41 15.7 +0.7**
comp=Z,18nm,0.8s,mb5.1,baz=295,slow=6.6,SNR=115
SVE Sverdlovsk 53.82 316⇓ *e*P **P** **13 41 23.8 +0.4**
SVE *e*S **S** **13 48 57.5 +5.3**
SVE pmax pmax
comp=Z,41nm,0.9s,mb5.5
SKAG Skagway 54.17 39 *e*P **P** **13 41 27.2 +1.2**
comp=Z,8.0nm,1.1s,mb4.7
SKAG *e*sP sP 13 41 54.0 +0.4
ARU Arti 55.03 318 P **P** **13 41 32.4 +0.2**
comp=Z,228nm,1.1s,mb6.1,SNR=8.5
ARU Arti 55.03 318 *e*P **P** **13 41 31.8 -0.4**
comp=Z,44nm,1.1s,mb5.4
ARU Arti 55.03 318*c i*P **P** **13 41 30.4 -1.8**
ARU *e**PP pP 13 41 49.3 -2.1
ARU *e* 13 42 28.0
ARU *e*S **S** **13 49 06.1 -2.4**
ARU *e*SS SS 13 52 49.4 -3.1
ARU pmax pmax
comp=Z,47nm,1.2s,mb5.4
DLBC Dease Lake 57.11 39 P **P** **13 41 49.2 +2.2**
DLBC Dease Lake 57.11 39 P **P** **13 41 49.2 +2.2**
baz=272,slow=6.7
AKTK Aktyubinsk 57.51 311 P **P** **13 41 49.9 -0.1**
AKTK PcP PcP 13 42 42.2 -0.4
AKTO Aktyubinsk 57.51 311 P **P** **13 41 49.9 -0.1**
comp=Z,5.1nm,0.4s,mb4.9,baz=64,slow=5.3,SNR=27
AKTO PcP PcP 13 42 42.2 -0.4
comp=Z,6.1nm,0.7s,baz=94,slow=9.3,SNR=3.9
ALE Alert 58.24 4 P **P** **13 41 53.9 -0.8**
comp=Z,145nm,0.9s,mb6.0,SNR=7.3
HYB Hyderabad 58.36 267 *e*P **P** **13 41 54.0 -2.4**
HYB Hyderabad 58.36 267 *i* P **P** **13 41 54.0 -2.4**
FITZ Fitzroy Crossi 58.63 198⇑ *i*P **P** **13 41 57.7 -0.3**
comp=Z,12nm,0.9s,mb4.9
FITZ Fitzroy Crossi 58.63 198 P **P** **13 41 57.9 0.0**
comp=Z,4.0nm,0.7s,mb4.6,baz=21,slow=8.2,SNR=8.6
CTA Charters Tower 58.85 175 P **P** **13 41 57.8 -1.6**
comp=Z,3.0nm,0.5s,mb4.6,baz=351,slow=7.0,SNR=9.2
WB2 Warramunga Arr 58.92 188⇑ *i*P **P** **13 41 58.9 -1.1**
WRA Warramunga Arr 58.92 188 P **P** **13 41 58.9 -1.1**
comp=Z,34nm,0.7s,mb5.5,baz=6.0,slow=7.1,SNR=273
WRA pP pP 13 42 17.4 -2.0
comp=Z,6.3nm,0.8s,baz=6.5,slow=7.3,SNR=3.5
WRA PcP PcP 13 42 47.9 -0.5
comp=Z,4.2nm,0.7s,baz=359,slow=3.7,SNR=6.7
PRGR Permogore 59.26 326⇓ *i*P **P** **13 42 00.8 -1.1**
PRGR *e**PP pP 13 42 20.9 -0.4
PRGR *e*S **S** **13 50 09.3 +5.5**
RES Resolute Bay 60.77 15 *e*P **P** **13 42 11.6 -0.5**
comp=Z,440nm,0.9s
RES *e*pP pP 13 42 30.4 -1.1
RES *e*sP sP 13 42 39.2 -0.8
RES Resolute Bay 60.77 15 *e*P **P** **13 42 11.6 -0.5**
RES *e**PP pP 13 42 30.4 -1.2
RES *e**SP sP 13 42 39.2 -0.8
RES pmax pmax
comp=Z,440nm,0.9s
APA Apatity 61.03 335⇑ *e*P **P** **13 42 14.0 +0.1**
APA pmax pmax
comp=Z,43nm,1.2s,mb5.3
YKA Yellowknife Ar 62.15 31 P **P** **13 42 21.5 -0.1**
YKA pP pP 13 42 42.3 +1.2
YKA sP sP 13 42 49.4 -0.1
YKA PcP PcP 13 43 01.3 +0.3
YKA P'P' 14 11 28.3
YKA Yellowknife Ar 62.15 31 P **P** **13 42 21.5 -0.1**
YKA *PP pP 13 42 42.3 +1.2
YKA *SP sP 13 42 49.4 -0.1
YKA 13 43 01.3
YKA Yellowknife Ar 62.15 31 P **P** **13 42 21.5 -0.1**
comp=Z,5.6nm,0.8s,mb4.6,baz=301,slow=6.7,SNR=98
YKA pP pP 13 42 42.3 +1.2
comp=Z,2.0nm,0.8s,baz=302,slow=6.5,SNR=3.8
YKA sP sP 13 42 49.4 -0.1
comp=Z,2.1nm,0.7s,baz=299,slow=6.5,SNR=4.9
YKA PcP PcP 13 43 01.3 +0.3
comp=Z,2.5nm,0.8s,baz=305,slow=4.2,SNR=9.4
YKA PKPPKP 14 11 28.3
comp=Z,0.4nm,0.8s,baz=122,slow=2.1,SNR=4.3

ARCES ARCESS Array B 62.28 339 P **P** **13 42 22.6 +0.3**
comp=Z,13nm,0.9s,mb5.0,baz=27,slow=5.7,SNR=6.7
ARCES pP 13 42 41.8 0.0
comp=Z,3.6nm,0.7s,baz=51,slow=8.4,SNR=1.7
ASAR Alice Springs 62.65 188 P **P** **13 42 24.7 -0.5**
comp=Z,12nm,0.7s,mb5.0,baz=1.5,slow=5.3,SNR=170
ASAR PKPPKP 14 11 35.0
comp=Z,0.8nm,0.8s,baz=172,slow=1.8,SNR=7.4
MBWA Marble Bar 63.14 203 *eP* **P** **13 42 27.3 -1.2**
comp=Z,9.7nm,0.6s,mb4.9
MBWA *ep*P pP 13 42 45.8 -2.4
DAG Danmarks Havn 63.92 355 ⇓*iP* **P** **13 42 32.5 -0.6**
DAG pmax pmax
comp=Z,12nm,0.7s,mb4.8
DAG MLR MLR
comp=Z,11μm,18.0s
DAG MLR MLR
comp=N,5μm,19.0s
DAG MLR MLR
comp=E,5μm,16.0s
DAG Danmarks Havn 63.92 355 ⇓*iP* **P** **13 42 32.5 -0.6**
comp=E,12nm,0.7s,mb4.8
DAG
comp=Z,11μm,18.0s
JOF Joensuu 64.36 332 *ep* **P** **13 42 34.1 -2.0**
comp=Z,4.0nm,0.4s,mb4.6
DZM Mont Dzumac 64.99 154 P **P** **13 42 41.2 +0.6**
comp=Z,22nm,1.1s,mb4.9,baz=30,slow=6.4,SNR=6.5
OSD Olympics--Snow 65.27 48 P **P** **13 42 44.4 +2.1**
NLWA Neilton Lookou 65.39 48 *eP* **P** **13 42 44.3 +1.2**
comp=Z,60nm,1.0s,mb5.4
NLWA *es*P sP 13 43 12.3 +1.1
OBN Obninsk 66.66 323 ⇑*iP* **P** **13 42 50.9 -0.2**
OBN *i* 13 43 19.7
OBN pmax pmax
comp=Z,14nm,0.8s,mb4.8
KAF Kangasniemi 66.69 332 *ep* **P** **13 42 49.7 -1.5**
comp=Z,11nm,0.6s,mb4.9,baz=48,slow=6.0
KAF Kangasniemi 66.69 332 *eP* **P** **13 42 49.7 -1.5**
KAF pmax pmax
comp=Z,11nm,0.6s,mb4.9
TDL Tradedollar La 66.91 48 P **P** **13 42 55.0 +2.1**
FINES FINESS Array B 67.21 332 P **P** **13 42 54.1 -0.3**
comp=Z,14nm,0.8s,mb4.8,baz=46,slow=8.2,SNR=37
FINES pP pP 13 43 13.8 -0.4
comp=Z,6.1nm,0.7s,baz=33,slow=7.5,SNR=4.9
FINES sP sP 13 43 21.9 -0.8
comp=Z,3.6nm,0.6s,baz=29,slow=12,SNR=2.9
WTV Waterville 67.47 46 P **P** **13 42 57.5 +1.1**
VRSR Storozhevoye 67.58 318 *eP* **P** **13 42 57.5 +0.5**
VRSR pmax pmax
comp=Z,4.0nm,0.9s,mb4.2
VRSR pmax pmax
comp=N,5.0nm,1.0s
VRSR pmax pmax
comp=E,6.0nm,0.9s
VORD Divnogorie 67.67 318 *eP* **P** **13 42 56.9 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.7s,mb4.8
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,20nm,0.7s
TDH Tom, Dick, Har 67.73 49 P **P** **13 42 59.8 +1.7**
VTHM Trough 68.52 49 P **P** **13 43 04.8 +1.9**
NEW Newport 68.73 45 *eP* **P** **13 43 04.7 +0.4**
comp=E,23nm,0.9s,mb5.0
NEW *ep*P pP 13 43 25.8 +1.7
NEW *es*P sP 13 43 32.0 -0.4
NEW Newport 68.73 45 *eP* **P** **13 43 04.7 +0.5**
NEW *e**PP pP 13 43 25.8 +1.7
NEW *e**SP sP 13 43 32.0 -0.4
NEW pmax pmax
comp=Z,23nm,0.9s
VIPM Ingram Point 68.86 49 P **P** **13 43 06.9 +1.8**
ZEI Tsey 69.70 309 *eP* **P** **13 43 10.2 -0.1**
ZEI *i* pP 13 43 30.7 +0.5
KIV Kislovodsk 69.76 310 P **P** **13 43 11.7 +1.0**
comp=Z,399nm,0.8s,mb6.3,SNR=8.6
KIV Kislovodsk 69.76 310 *eP* **P** **13 43 11.2 +0.5**
comp=Z,62nm,0.9s,mb5.4
KIV *ep*P pP 13 43 28.9 -1.7
KIV Kislovodsk 69.76 310 *eP* **P** **13 43 11.2 +0.5**
KIV *e**PP pP 13 43 28.9 -1.6
KIV pmax pmax
comp=Z,62nm,0.9s,mb5.4
STKA Stephens Creek 70.42 180 ⇑*iP* **P** **13 43 14.0 -0.6**
comp=Z,4.5nm,0.8s,mb4.3
STKA Stephens Creek 70.42 180 P **P** **13 43 14.4 -0.2**
comp=Z,3.8nm,0.6s,mb4.4,baz=349,slow=7.1,SNR=11
FORT Forrest 70.45 192 *eP* **P** **13 43 14.1 -0.7**
comp=Z,24nm,0.7s,mb5.1
LBCM Butte Creek Ri 70.49 53 P **P** **13 43 16.9 +1.7**
WVOR Wild Horse Val 71.23 50 *eP* **P** **13 43 20.4 +0.8**
comp=Z,42nm,1.4s,mb5.1
WVOR Wild Horse Val 71.23 50 *eP* **P** **13 43 20.4 +0.8**
WVOR pmax pmax
comp=Z,42nm,1.4s,mb5.1
CHMT Chamberlain Mo 71.64 44 *eP* **P** **13 43 21.9 -0.2**
FFC Flin Flon 72.09 33 P **P** **13 43 24.9 +0.3**
comp=Z,152nm,0.9s,mb5.8,SNR=8.8
FFC Flin Flon 72.09 33 *eP* **P** **13 43 23.9 -0.7**
comp=Z,20nm,0.8s,mb5.0
FFC *ep*P pP 13 43 43.6 -0.9
FFC *es*P sP 13 43 52.3 -0.6
FFC Flin Flon 72.09 33 *eP* **P** **13 43 23.9 -0.7**
FFC *e**PP pP 13 43 43.6 -1.0
FFC *e**SP sP 13 43 52.3 -0.6
FFC pmax pmax
comp=Z,20nm,0.8s,mb5.0
FCC Fort Churchill 72.29 27 *eP* **P** **13 43 25.1 -0.6**
comp=Z,24nm,1.0s,mb5.0
FCC *ep*P pP 13 43 44.7 -1.0
FCC Fort Churchill 72.29 27 *eP* **P** **13 43 25.2 -0.5**
FCC *e**PP pP 13 43 44.7 -1.0
FCC pmax pmax
comp=Z,24nm,1.0s,mb5.0
ANN Anapa 72.31 314 *eP* **P** **13 43 25.2 -0.9**
ANN *e**PP pP 13 43 41.7 -4.3
ANN *eS* S 13 52 42.1 -1.1
ANN *eSS* SS 13 57 21.9 +0.3
ANN pmax pmax
comp=Z,27nm,1.3s,mb4.9
ANN MLR MLR
comp=Z,3μm,23.0s
NB2 NORSAR Subarra 72.50 337 P **P** **13 43 26.5 -0.4**
comp=Z,19nm,0.8s,mb5.0,baz=38,slow=6.2
NB2 NORSAR Subarra 72.50 337 P **P** **13 43 26.5 -0.4**
NB2 pmax pmax
comp=Z,19nm,0.8s,mb5.0
NOA NORSAR Array B 72.50 337 P **P** **13 43 26.8 -0.1**
comp=Z,15nm,0.8s,mb4.9,baz=39,slow=6.0,SNR=51
CMB Columbia Colle 72.72 55 *eP* **P** **13 43 29.1 +0.5**
comp=Z,24nm,1.1s,mb4.9
CMB Columbia Colle 72.72 55 *eP* **P** **13 43 29.1 +0.5**
CMB pmax pmax
comp=Z,24nm,1.1s,mb4.9
EGMT Eagleton 72.81 42 *eP* **P** **13 43 29.2 +0.2**
comp=Z,38nm,0.8s,mb5.3
EGMT *ep*P pP 13 43 49.4 +0.4
EGMT *es*P sP 13 43 57.0 -0.4
AKASG Malin Array Be 72.88 322 P **P** **13 43 28.9 -0.4**
AKASG Malin Array Be 72.88 322 P **P** **13 43 28.9 -0.4**
comp=Z,10nm,0.6s,mb4.8,baz=46,slow=5.9,SNR=54
KIEV Kiev 72.89 322 *eP* **P** **13 43 28.5 -0.9**
comp=Z,35nm,1.4s,mb5.0
KIEV Kiev 72.89 322 *eP* **P** **13 43 28.5 -0.9**
KIEV pmax pmax
comp=Z,35nm,1.4s,mb5.0
DLMT Dillon 72.96 45 *eP* **P** **13 43 30.8 +0.8**
comp=Z,50nm,0.9s,mb5.3
HLID Hailey 73.04 47 *eP* **P** **13 43 31.2 +0.8**
comp=Z,16nm,1.0s,mb4.8
MCMT McKenzie Canyo 73.15 46 *eP* **P** **13 43 31.3 +0.3**
NVAR Mina Array Bea 73.80 54 P **P** **13 43 36.3 +1.3**
comp=Z,14nm,0.8s,mb4.8,baz=305,slow=4.0,SNR=126
QLMT Earthquake Lak 73.94 45 *eP* **P** **13 43 36.5 +0.9**
SFJD Kangerlussuaq 74.02 5 *iP* **P** **13 43 35.4 -0.4**
SFJD *i* pP 13 43 55.4 -0.4
SFJD pmax pmax
comp=Z,19nm,0.9s,mb4.8
SFJD MLR MLR
comp=Z,2μm,23.0s
SFJD Kangerlussuaq 74.02 5 *iP* **P** **13 43 35.4 -0.4**
comp=Z,19nm,0.9s,mb4.8
SFJD *i* pP 13 43 55.4 -0.4
comp=Z,2μm,23.0s
KONO Kongsberg 74.10 337 ⇑*eP* **P** **13 43 34.3 -2.0**
GCMT Greycliff 74.28 43 *eP* **P** **13 43 38.6 +0.9**
YMR Madison River 74.29 45 *eP* **P** **13 43 39.1 +1.3**
comp=Z,68nm,1.4s,mb5.2
YMR *ep*P pP 13 43 57.3 -0.5
IMW Indian Meadow 74.80 46 *eP* **P** **13 43 42.4 +1.7**
comp=Z,34nm,0.9s,mb5.1
DCID1 Drake Creek 74.85 46 *eP* **P** **13 43 42.9 +1.9**
RLMT Red Lodge 74.93 44 *eP* **P** **13 43 42.3 +0.9**
comp=Z,21nm,0.8s,mb4.9
MIB Mutribah 74.95 296 *eP* **P** **13 43 40.8 -1.0**
MIB AMb AMB 13 43 42.5
comp=Z,49nm,0.8s,mb5.3
QRN Al-Qurain 75.16 295 *eP* **P** **13 43 42.5 -0.5**
QRN AMb AMB 13 43 43.2
comp=Z,63nm,0.5s,mb5.6
RDF Al-Radifah 75.32 295 *eP* **P** **13 43 43.3 -0.6**
RDF AMb AMB 13 43 45.0
comp=Z,71nm,0.8s,mb5.4
DGMT Dagmar 75.33 39 *eP* **P** **13 43 43.4 -0.2**
comp=Z,41nm,1.3s,mb5.0
DGMT *ep*P pP 13 44 03.2 -0.5
DGMT *es*P sP 13 44 12.2 +0.2
NAY Al-Naaiem 75.34 296 *eP* **P** **13 43 43.1 -0.9**
NAY AMb AMB 13 43 43.9
comp=Z,20nm,0.7s,mb5.0
ISA Isabella 75.36 56 *eP* **P** **13 43 43.7 -0.4**
comp=Z,8.8nm,0.9s,mb4.5
ISA Isabella 75.36 56 *eP* **P** **13 43 43.7 -0.4**
ISA pmax pmax
comp=Z,9.0nm,0.9s,mb4.5
RST Umm Al-Ruwaisa 75.36 296 *eP* **P** **13 43 42.8 -1.4**
RST AMb AMB 13 43 43.8
comp=Z,37nm,0.8s,mb5.2
LAO LASA Array 75.51 41 *eP* **P** **13 43 45.4 +0.7**
comp=Z,47nm,1.0s,mb5.2
LAO *ep*P pP 13 44 06.2 +1.4
LAO *es*P sP 13 44 12.4 -0.7
MALT Malatya 75.70 308 *eP* **P** **13 43 47.1 +1.2**
comp=Z,16nm,1.0s,mb4.7
MALT Malatya 75.70 308 *eP* **P** **13 43 47.2 +1.2**
MALT pmax pmax
comp=Z,16nm,1.0s,mb4.7
HWUT Hardware Ranch 75.90 48 *eP* **P** **13 43 48.2 +1.1**
comp=Z,37nm,1.1s,mb5.0
HWUT *ep*P pP 13 44 09.0 +1.8
HWUT *es*P sP 13 44 16.1 +0.6
TPNV Topopah Spring 76.00 54 *eP* **P** **13 43 48.5 +0.8**
comp=Z,28nm,0.9s,mb5.0
TPNV Topopah Spring 76.00 54 *eP* **P** **13 43 48.5 +0.8**
TPNV pmax pmax
comp=Z,28nm,0.9s,mb5.0
DUG Dugway 76.07 49 *eP* **P** **13 43 48.9 +0.9**
comp=Z,29nm,0.8s,mb5.1
DUG Dugway 76.07 49 *eP* **P** **13 43 48.9 +0.9**
DUG pmax pmax
comp=Z,29nm,0.8s,mb5.1
BW06 Boulder Array 76.30 46 *eP* **P** **13 43 49.7 +0.5**
comp=Z,17nm,0.8s,mb4.8
PDAR Pinedale Array 76.30 46 P **P** **13 43 49.9 +0.6**
comp=Z,14nm,0.7s,mb4.8,baz=268,slow=2.4,SNR=142
DAU Daniels Canyon 76.85 49 *eP* **P** **13 43 52.9 +0.4**
ARUT Antelope Range 77.22 52 *eP* **P** **13 43 52.7 -1.8**
KOLS Kolonicke sedl 77.37 324 *eP* **P** **13 43 55.2 0.0**
STHS Stebnicka Huta 77.49 325 *eP* **P** **13 43 56.7 +0.9**
comp=Z,6.8nm,0.9s,mb4.4
STHS Stebnicka Huta 77.49 325 *eP* **P** **13 43 56.7 +0.9**
STHS pmax pmax
comp=Z,7.0nm,0.9s,mb4.4
MSU Marysvale 77.52 50 *eP* **P** **13 43 57.8 +1.5**
OJC Ojcow 77.54 326 *eP* **P** **13 43 56.4 +0.3**
OJC *ePcP* PcP 13 44 11.9 +5.7
CRVS Cervenica-Dubn 77.76 324 *eP* **P** **13 43 57.9 +0.5**
ULM Lac du Bonnet 77.90 34 P **P** **13 43 57.6 -0.5**
comp=Z,17nm,0.9s,mb4.8,baz=307,slow=6.5,SNR=30
ULM pP pP 13 44 17.9 -0.4
comp=Z,4.0nm,0.8s,baz=327,slow=7.4,SNR=3.8
NIE Niedzica 77.90 325 *eP* **P** **13 43 59.0 +0.9**
PFO Pinyon Flat Ob 77.94 57 P **P** **13 43 59.0 +0.4**
comp=Z,69nm,0.9s,mb5.4,SNR=5.2
SRU San Rafael 78.12 49 *eP* **P** **13 44 00.3 +0.8**
comp=Z,27nm,0.8s,mb5.0
SRU San Rafael 78.12 49 *eP* **P** **13 44 00.4 +0.8**
SRU pmax pmax
comp=Z,27nm,0.8s,mb5.0
BSEG Bad Segeberg 78.44 333 *eP* **P** **13 44 01.3 +0.3**
comp=Z,24nm,1.0s,mb4.9
KECS Kecovo 78.51 324 *eP* **P** **13 44 01.4 -0.1**
comp=Z,1.8nm,0.9s,mb3.9
KECS Kecovo 78.51 324 *eP* **P** **13 44 01.4 -0.1**
KECS pmax pmax
comp=Z,2.0nm,0.9s,mb4.0
OKC Ostrava-Krasne 78.54 327 *eP* **P** **13 44 01.9 +0.2**
KSP Ksiaz 78.56 328 *eP* **P** **13 44 02.3 +0.5**
MORC Moravsky Berou 78.85 327 *eP* **P** **13 44 03.3 0.0**
comp=Z,13nm,1.0s,mb4.7
MORC Moravsky Berou 78.85 327 *eP* **P** **13 44 03.3 0.0**
MORC pmax pmax
comp=Z,13nm,1.0s,mb4.7
DPC Dobruska-Polom 78.93 328 *eP* **P** **13 44 04.4 +0.6**
DPC *ep*P pP 13 44 24.4 +0.4
UPC Upice 78.94 328 *eP* **P** **13 44 04.4 +0.6**
UPC *ep*P pP 13 44 24.1 0.0
PSZ Piszkesteto 79.19 324 *eP* **P** **13 44 05.5 +0.3**
comp=Z,8.3nm,1.0s,mb4.5
PSZ Piszkesteto 79.19 324 *eP* **P** **13 44 05.5 +0.2**
PSZ pmax pmax
comp=Z,8.0nm,1.0s,mb4.5
VYHS Vyhne 79.24 325 *iP* **P** **13 44 06.0 +0.5**
comp=Z,8.8nm,1.5s,mb4.4
VYHS Vyhne 79.24 325 *iP* **P** **13 44 06.0 +0.5**
VYHS pmax pmax
comp=Z,9.0nm,1.5s,mb4.4
AGMN Agassiz Refuge 79.35 35 *eP* **P** **13 44 05.3 -0.9**
comp=Z,12nm,1.0s,mb4.7
BRG Berggiesshubel 79.49 329 *eP* **P** **13 44 06.7 -0.1**
BRG pmax pmax
comp=Z,6.0nm,1.0s,mb4.4
BRG Berggiesshubel 79.49 329 *eP* **P** **13 44 06.8 -0.1**
comp=Z,15nm,1.3s,mb4.7
BRG Berggiesshubel 79.49 329 *eP* **P** **13 44 06.7 -0.2**
comp=Z,10.0nm,1.0s,mb4.6
PVCC Panska Ves 79.51 329 *eP* **P** **13 44 07.2 +0.3**
PVCC *ep*P pP 13 44 27.6 +0.4
CLL Collm 79.53 330 ⇑*iP* **P** **13 44 06.8 -0.2**
comp=Z,17nm,0.9s,mb4.9
CLL *i* pP pP 13 44 27.2 -0.1
CLL S S 13 54 18.0 +16
CLL Collm 79.53 330 ⇑*iP* **P** **13 44 06.8 -0.2**
CLL *i* *PP pP 13 44 27.2 -0.1
CLL S S 13 54 18.0 +16
CLL pmax pmax
comp=Z,17nm,0.9s,mb4.9
CLL Collm 79.53 330 ⇑*iP* **P** **13 44 06.8 -0.2**
comp=Z,17nm,0.9s,mb4.9
CLL *i* pP pP 13 44 27.2 -0.1
CLL *eP*P PP 13 47 11.0 +3.4
CLL Collm 79.53 330 *eP* **P** **13 44 06.8 -0.2**
comp=Z,17nm,0.9s,mb4.9
PRU Pruhonice 79.94 328 *eP* **P** **13 44 09.5 +0.2**
PRU *ep*P pP 13 44 30.2 +0.6
MODS Modra-Piesok 80.02 326 *eP* **P** **13 44 10.5 +0.8**
TREC Trest 80.08 327 *eP* **P** **13 44 10.4 +0.3**
TREC *ep*P pP 13 44 31.2 +0.8
CLZ Clausthal 80.10 332 *eP* **P** **13 44 10.3 +0.2**
CLZ pmax pmax
comp=Z,20nm,1.0s,mb4.9
CLZ Clausthal 80.10 332 *eP* **P** **13 44 10.3 +0.2**
comp=Z,20nm,1.0s,mb4.9
ISCO Idaho Springs 80.49 46 *eP* **P** **13 44 13.2 +0.8**
comp=Z,4.8nm,0.7s,mb4.4
ISCO Idaho Springs 80.49 46 *eP* **P** **13 44 13.3 +0.9**
ISCO pmax pmax
comp=Z,5.0nm,0.7s,mb4.5
MOX Moxa 80.59 330 *eP* **P** **13 44 12.7 0.0**
comp=Z,24nm,1.6s,mb4.8
MOX Moxa 80.59 330 *eP* **P** **13 44 12.7 0.0**
MOX pmax pmax
comp=Z,24nm,1.6s,mb4.8
MOX Moxa 80.59 330 *eP* **P** **13 44 12.6 -0.1**
comp=Z,19nm,1.3s,mb4.8
NKC Novy Kostel 80.59 330 *eP* **P** **13 44 13.1 +0.3**
CONA Conrad Observa 80.97 326 ⇑*iP* **P** **13 44 15.6 +0.8**
comp=Z,9.9nm,1.0s,mb4.6
KHC Kasperske Hory 81.00 328 *eP* **P** **13 44 15.2 +0.2**
KHC *ep*P pP 13 44 36.0 +0.7
ROTZ Rotzenmuhle 81.05 329 *eP* **P** **13 44 15.4 +0.2**
comp=Z,27nm,1.6s,mb4.8
GEC2 GERESS Array S 81.17 328 *eP* **P** **13 44 15.8 -0.1**
GEC2 pmax pmax
comp=Z,6.0nm,1.1s,mb4.3
GEC2 GERESS Array S 81.17 328 *eP* **P** **13 44 15.8 -0.1**
comp=Z,6.0nm,1.1s,mb4.3
GERES GERESS Array B 81.17 328 P **P** **13 44 15.9 0.0**
comp=Z,4.4nm,1.0s,mb4.3,baz=34,slow=5.0,SNR=12
WET Wettzell 81.28 329 *eP* **P** **13 44 16.6 +0.2**
WET pmax pmax
comp=Z,13nm,1.2s,mb4.6
WET Wettzell 81.28 329 *eP* **P** **13 44 16.6 +0.2**
comp=Z,13nm,1.2s,mb4.6
GRA1 Grafenberg Arr 81.50 330 *eP* **P** **13 44 18.2 +0.6**
comp=Z,31nm,1.2s,mb5.0
GRA1 *ep*P pP 13 44 38.3 +0.3
GRF Grafenberg Arr 81.50 330 *eP* **P** **13 44 18.2 +0.6**
GRF *e**PP pP 13 44 38.3 +0.3
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.0
GRF Grafenberg Arr 81.50 330 *eP* **P** **13 44 18.2 +0.6**
GRF *e**PP pP 13 44 38.3 +0.3
GRF pmax pmax
comp=Z,31nm,1.2s,mb5.0
GRF Grafenberg Arr 81.50 330 *eP* **P** **13 44 18.2 +0.6**
comp=Z,31nm,1.2s,mb5.0
GRF *ep*P pP 13 44 38.3 +0.3
MOA Molln 81.72 327 ⇑*iP* **P** **13 44 18.9 +0.2**
comp=Z,7.4nm,0.9s,mb4.5
SDCO Great Sand Dun 81.96 47 *eP* **P** **13 44 21.2 +0.9**
comp=Z,6.8nm,0.9s,mb4.5
SDCO *ep*P pP 13 44 41.3 +0.7
TNS Taunus Mts 82.13 332 *eP* **P** **13 44 20.9 0.0**
TNS pmax pmax
comp=Z,16nm,1.3s,mb4.7
TNS Taunus Mts 82.13 332 *eP* **P** **13 44 20.9 0.0**
comp=Z,16nm,1.3s,mb4.7
ECSD EROS,Sioux Fal 82.40 38 *eP* **P** **13 44 21.8 -0.7**
comp=Z,18nm,0.8s,mb5.0
ECSD *ep*P pP 13 44 41.9 -0.9
GOLS Golise 82.55 325 *eP* **P** **13 44 22.8 -0.4**
MEM Membach 82.69 333 P **P** **13 44 24.1 +0.3**
FUR Furstenfeldbru 82.70 329 *eP* **P** **13 44 24.3 +0.4**
FUR pmax pmax
comp=Z,27nm,0.9s,mb5.1
FUR Furstenfeldbru 82.70 329 *eP* **P** **13 44 24.3 +0.4**
comp=Z,27nm,0.9s,mb5.1
PDKS Podkum 82.79 326 *eP* **P** **13 44 24.1 -0.3**
BCLA Clavier 83.09 334 P **P** **13 44 25.8 -0.1**
ANMO Albuquerque 83.31 50 *eP* **P** **13 44 28.0 +0.7**
comp=Z,22nm,1.2s,mb4.9
ANMO *ep*P pP 13 44 49.2 +1.4
ANMO *es*P sP 13 44 56.9 +0.9
ANMO Albuquerque 83.31 50 *eP* **P** **13 44 28.0 +0.6**
ANMO *e**PP pP 13 44 49.2 +1.4
ANMO *e**SP sP 13 44 56.9 +0.9
ANMO pmax pmax
comp=Z,22nm,1.2s
JAVS Javornik 83.33 326 *eP* **P** **13 44 26.3 -0.9**
MOTA Moosalm 83.43 329 ⇑*iP* **P** **13 44 27.7 0.0**
comp=Z,27nm,1.3s,mb4.9,SNR=7.0
MOTA Moosalm 83.43 329 ⇑*iP* **P** **13 44 27.7 0.0**
MOTA pmax pmax
comp=Z,27nm,1.3s,mb4.9
RETA Reutte 83.45 329 *iP* **P** **13 44 28.1 +0.3**
comp=Z,31nm,1.2s,mb5.0,SNR=9.8
URZ Urewera 83.46 153 P **P** **13 44 26.5 -1.2**
comp=Z,13nm,0.8s,mb4.8,baz=207,slow=4.1,SNR=4.3
SCHQ Schefferville 83.52 16 P **P** **13 44 28.2 +0.2**
comp=Z,10nm,0.8s,mb4.7,baz=353,slow=6.6,SNR=12
GIVF Givet 83.52 334 *eP* **P** **13 44 27.6 -0.5**
LPM Los Pinos Moun 83.65 51 *eP* **P** **13 44 30.2 +1.1**
LPM *ep*P pP 13 44 50.7 +1.2
LPM *es*P sP 13 44 58.2 +0.5
BFO Black Forest 83.72 331 *eP* **P** **13 44 29.1 -0.1**
BFO pmax pmax
comp=Z,35nm,1.2s,mb5.1
BFO Black Forest 83.72 331 *eP* **P** **13 44 29.1 -0.1**
comp=Z,35nm,1.2s,mb5.1
BNM Barren Site 83.76 51 *eP* **P** **13 44 30.6 +1.0**
BAIF Baives 83.77 334 *eP* **P** **13 44 28.8 -0.6**
FETA Feichten 83.84 329 ⇑*iP* **P** **13 44 29.9 +0.1**
comp=Z,16nm,1.2s,mb4.7
DAVA Damuels 83.97 329 ⇑*iP* **P** **13 44 30.6 +0.2**
comp=Z,34nm,1.1s,mb5.1,SNR=9.7
DAVA Damuels 83.97 329 ⇑*iPcP* PcP 13 44 30.6 -3.7
comp=Z,34nm,1.1s,SNR=9.7
CDF Champ du Feu 84.05 331 *eP* **P** **13 44 30.3 -0.6**
comp=Z,85nm,1.5s,mb5.0
CDF *ep*P pP 13 44 51.3 0.0
CDF Champ du Feu 84.05 331 *eP* **P** **13 44 30.3 -0.6**
comp=Z,43nm,1.5s,mb5.0
CDF *ep*P pP 13 44 51.3 0.0
CDF Champ du Feu 84.05 331 *eP* **P** **13 44 30.3 -0.6**
CDF *e**PP pP 13 44 51.3 0.0
CDF pmax pmax
comp=Z,43nm,1.5s,mb5.1
HINF Hinteralfeld 84.70 331 *eP* **P** **13 44 33.7 -0.5**
comp=Z,26nm,1.3s,mb4.7
HINF Hinteralfeld 84.70 331 *eP* **P** **13 44 33.7 -0.5**
comp=Z,13nm,1.3s,mb4.7
HINF Hinteralfeld 84.70 331 *eP* **P** **13 44 33.7 -0.5**
HINF pmax pmax
comp=Z,13nm,1.3s,mb4.7
HAU Haudompre 84.74 332 *eP* **P** **13 44 33.6 -0.7**
comp=Z,27nm,1.0s,mb4.8
HAU Haudompre 84.74 332 *eP* **P** **13 44 33.6 -0.7**
comp=Z,14nm,1.0s,mb4.8
HAU Haudompre 84.74 332 *eP* **P** **13 44 33.6 -0.7**
HAU pmax pmax
comp=Z,14nm,1.0s,mb4.8
MEZF Maizieres J'vi 84.79 333 *eP* **P** **13 44 34.2 -0.4**
comp=Z,119nm,1.5s,mb5.3
MEZF Maizieres J'vi 84.79 333 *eP* **P** **13 44 34.2 -0.4**
comp=Z,119nm,1.5s,mb5.6
CABF La Chapelle 86.00 331 *eP* **P** **13 44 40.0 -0.6**
comp=Z,37nm,1.2s,mb4.9
CABF La Chapelle 86.00 331 *eP* **P** **13 44 40.0 -0.6**
comp=Z,18nm,1.2s,mb4.9
CABF La Chapelle 86.00 331 *eP* **P** **13 44 40.0 -0.6**
CABF pmax pmax
comp=Z,18nm,1.2s,mb4.9
JFWS Jewell Farm 86.01 35 *eP* **P** **13 44 39.8 -1.0**
comp=Z,13nm,0.8s,mb4.9
JFWS Jewell Farm 86.01 35 *eP* **P** **13 44 39.8 -1.0**
JFWS pmax pmax
comp=Z,13nm,0.8s,mb4.9
LOR Lormes 86.27 333 *eP* **P** **13 44 41.1 -0.8**
comp=Z,59nm,1.1s,mb5.1
LOR *ep*P pP 13 45 02.0 -0.5
LOR Lormes 86.27 333 *eP* **P** **13 44 41.1 -0.8**
comp=Z,29nm,1.1s,mb5.1
LOR *ep*P pP 13 45 02.0 -0.5
LOR Lormes 86.27 333 *eP* **P** **13 44 41.1 -0.8**
LOR *e**PP pP 13 45 02.0 -0.5
LOR pmax pmax
comp=Z,29nm,1.1s,mb5.1
FLN La Foliniere 86.44 336 *eP* **P** **13 44 41.8 -1.0**
LDF La Druitiere 86.48 336 *eP* **P** **13 44 42.0 -0.9**
comp=Z,84nm,1.4s,mb5.2
LDF La Druitiere 86.48 336 *eP* **P** **13 44 42.0 -0.9**
comp=Z,42nm,1.4s,mb5.2
LDF La Druitiere 86.48 336 *eP* **P** **13 44 42.0 -0.9**
LDF pmax pmax
comp=Z,42nm,1.4s,mb5.2
SSF Saint Saulge 86.57 333 *eP* **P** **13 44 42.7 -0.7**
comp=Z,32nm,1.0s,mb4.9
SSF Saint Saulge 86.57 333 *eP* **P** **13 44 42.7 -0.7**
comp=Z,16nm,1.0s,mb4.9
SSF Saint Saulge 86.57 333 *eP* **P** **13 44 42.7 -0.7**
SSF pmax pmax
comp=Z,16nm,1.0s,mb4.9
LPL La Plagne 86.66 330 *eP* **P** **13 44 43.4 -0.5**
comp=Z,12nm,0.7s,mb4.6
LPL *ep*P pP 13 45 04.4 -0.1
LPL La Plagne 86.66 330 *eP* **P** **13 44 43.4 -0.5**
comp=Z,6.3nm,0.7s,mb4.7
LPL *ep*P pP 13 45 04.4 -0.1
LPL La Plagne 86.66 330 *eP* **P** **13 44 43.4 -0.5**
LPL *e**PP pP 13 45 04.4 -0.1
LPL pmax pmax
comp=Z,6.0nm,0.7s,mb4.6

LPG	**La Plagne**	**86.67**	**330**	*eP*	**P**	**13 44 43.7**	**-0.3**		
	comp=Z,16nm,0.7s,mb4.7								
LPG	**La Plagne**	**86.67**	**330**	*eP*	**P**	**13 44 43.7**	**-0.3**		
	comp=Z,7.9nm,0.7s,mb4.8								
LPG	**La Plagne**	**86.67**	**330**	*eP*	**P**	**13 44 43.7**	**-0.3**		
LPG				pmax	pmax				
	comp=Z,8.0nm,0.7s,mb4.8								
HYF	**Humbligny**	**86.70**	**333**	*eP*	**P**	**13 44 43.7**	**-0.3**		
SMF	**Signal de Mont**	**86.80**	**332**	*eP*	**P**	**13 44 44.0**	**-0.6**		
	comp=Z,84nm,1.4s,mb5.2								
SMF	**Signal de Mont**	**86.80**	**332**	*eP*	**P**	**13 44 44.0**	**-0.6**		
	comp=Z,42nm,1.4s,mb5.2								
SMF	**Signal de Mont**	**86.80**	**332**	*eP*	**P**	**13 44 44.0**	**-0.6**		
SMF				pmax	pmax				
	comp=Z,42nm,1.4s,mb5.2								
AVF	**Avril sur Loir**	**86.85**	**333**	*eP*	**P**	**13 44 44.2**	**-0.6**		
	comp=Z,71nm,1.1s,mb5.2								
AVF				*epP*	pP	13 45 05.1	-0.3		
AVF	**Avril sur Loir**	**86.85**	**333**	*eP*	**P**	**13 44 44.2**	**-0.6**		
	comp=Z,36nm,1.1s,mb5.2								
AVF				*epP*	pP	13 45 05.1	-0.3		
AVF	**Avril sur Loir**	**86.85**	**333**	*eP*	**P**	**13 44 44.2**	**-0.6**		
AVF				*e**PP	pP	13 45 05.1	-0.3		
AVF				pmax	pmax				
	comp=Z,36nm,1.1s,mb5.2								
GRR	**Gorron**	**86.89**	**336**	*eP*	**P**	**13 44 44.1**	**-0.9**		
	comp=Z,55nm,1.1s,mb5.1								
GRR				*epP*	pP	13 45 05.2	-0.3		
GRR	**Gorron**	**86.89**	**336**	*eP*	**P**	**13 44 44.1**	**-0.9**		
	comp=Z,28nm,1.1s,mb5.1								
GRR				*epP*	pP	13 45 05.2	-0.3		
GRR	**Gorron**	**86.89**	**336**	*eP*	**P**	**13 44 44.1**	**-0.9**		
GRR				*e**PP	pP	13 45 05.2	-0.3		
GRR				pmax	pmax				
	comp=Z,28nm,1.1s,mb5.1								
BGF	**Bois d'Agland**	**87.23**	**333**	*eP*	**P**	**13 44 45.8**	**-0.9**		
MBDF	**Montbardon**	**87.31**	**330**	*eP*	**P**	**13 44 47.0**	**-0.1**		
ORIF	**Oris-en-Rattie**	**87.50**	**330**	*eP*	**P**	**13 44 47.3**	**-0.7**		
	comp=Z,8.8nm,0.9s,mb4.4								
ORIF	**Oris-en-Rattie**	**87.50**	**330**	*eP*	**P**	**13 44 47.3**	**-0.7**		
	comp=Z,4.4nm,0.9s,mb4.4								
ORIF	**Oris-en-Rattie**	**87.50**	**330**	*eP*	**P**	**13 44 47.3**	**-0.7**		
ORIF				pmax	pmax				
	comp=Z,4.0nm,0.9s,mb4.3								
SGMF	**Saint Gilles**	**87.54**	**337**	*eP*	**P**	**13 44 47.5**	**-0.6**		
	comp=Z,70nm,1.2s,mb5.2								
SGMF	**Saint Gilles**	**87.54**	**337**	*eP*	**P**	**13 44 47.5**	**-0.6**		
	comp=Z,35nm,1.2s,mb5.3								
SGMF	**Saint Gilles**	**87.54**	**337**	*eP*	**P**	**13 44 47.5**	**-0.6**		
SGMF				pmax	pmax				
	comp=Z,35nm,1.2s,mb5.3								
ROSF	**Rostrenen**	**87.69**	**337**	*eP*	**P**	**13 44 48.1**	**-0.7**		
	comp=Z,78nm,1.1s,mb5.3								
ROSF	**Rostrenen**	**87.69**	**337**	*eP*	**P**	**13 44 48.1**	**-0.7**		
	comp=Z,39nm,1.1s,mb5.3								
ROSF	**Rostrenen**	**87.69**	**337**	*eP*	**P**	**13 44 48.1**	**-0.7**		
ROSF				pmax	pmax				
	comp=Z,39nm,1.1s,mb5.3								
TCF	**Toulx Ste Croi**	**87.69**	**333**	*eP*	**P**	**13 44 48.6**	**-0.3**		
	comp=Z,37nm,1.1s,mb5.0								
TCF				*epP*	pP	13 45 09.5	0.0		
TCF	**Toulx Ste Croi**	**87.69**	**333**	*eP*	**P**	**13 44 48.6**	**-0.3**		
	comp=Z,19nm,1.1s,mb5.0								
TCF				*epP*	pP	13 45 09.5	0.0		
TCF	**Toulx Ste Croi**	**87.69**	**333**	*eP*	**P**	**13 44 48.6**	**-0.3**		
TCF				*e**PP	pP	13 45 09.5	0.0		
TCF				pmax	pmax				
	comp=Z,19nm,1.1s,mb5.0								
SBF	**Sospel**	**87.76**	**329**	*eP*	**P**	**13 44 48.5**	**-0.7**		
WMOK	**Wichita Mounta**	**87.91**	**46**	*eP*	**P**	**13 44 49.9**	**-0.2**		
	comp=Z,12nm,1.1s,mb4.8								
WMOK	**Wichita Mounta**	**87.91**	**46**	*eP*	**P**	**13 44 49.9**	**-0.2**		
WMOK				pmax	pmax				
	comp=Z,12nm,1.1s,mb4.8								
VIVF	**Saint-Julien-l**	**88.01**	**331**	*eP*	**P**	**13 44 49.9**	**-0.5**		
	comp=Z,36nm,1.2s,mb5.0								
VIVF	**Saint-Julien-l**	**88.01**	**331**	*eP*	**P**	**13 44 49.9**	**-0.5**		
	comp=Z,18nm,1.2s,mb5.0								
VIVF	**Saint-Julien-l**	**88.01**	**331**	*eP*	**P**	**13 44 49.9**	**-0.5**		
VIVF				pmax	pmax				
	comp=Z,18nm,1.2s,mb5.0								
QUIF	**Quistinic**	**88.03**	**337**	*eP*	**P**	**13 44 49.8**	**-0.6**		
PGF	**Pioggiola**	**88.19**	**327**	*eP*	**P**	**13 44 50.7**	**-0.6**		
	comp=Z,33nm,1.1s,mb5.0								
PGF	**Pioggiola**	**88.19**	**327**	*eP*	**P**	**13 44 50.7**	**-0.6**		
	comp=Z,16nm,1.1s,mb5.0								
PGF	**Pioggiola**	**88.19**	**327**	*eP*	**P**	**13 44 50.7**	**-0.6**		
PGF				pmax	pmax				
	comp=Z,16nm,1.1s,mb5.0								
MFF	**Saint Martin d**	**88.23**	**335**	*eP*	**P**	**13 44 50.5**	**-0.9**		
MFF				*epP*	pP	13 45 12.0	0.0		
HDIL	**Hopedale**	**88.31**	**36**	*eP*	**P**	**13 44 51.6**	**-0.3**		
	comp=Z,28nm,0.9s,mb5.3								
HDIL				*epP*	pP	13 45 10.9	-1.6		
HDIL				*esP*	sP	13 45 20.1	-0.6		
FRF	**La Foret Royal**	**88.33**	**329**	*eP*	**P**	**13 44 51.0**	**-0.9**		
	comp=Z,46nm,1.4s,mb5.0								
FRF	**La Foret Royal**	**88.33**	**329**	*eP*	**P**	**13 44 51.0**	**-0.9**		
	comp=Z,23nm,1.4s,mb5.0								
FRF	**La Foret Royal**	**88.33**	**329**	*eP*	**P**	**13 44 51.0**	**-0.9**		
FRF				pmax	pmax				
	comp=Z,23nm,1.4s,mb5.0								
SMRF	**Simiane la Rot**	**88.40**	**330**	*eP*	**P**	**13 44 51.2**	**-1.1**		
LMR	**La Mourre**	**88.57**	**329**	*eP*	**P**	**13 44 52.3**	**-0.8**		
RJF	**Les Rejaudoux**	**88.78**	**333**	*eP*	**P**	**13 44 53.3**	**-0.8**		
RJF				*epP*	pP	13 45 14.6	-0.1		
CAF	**Calviac**	**88.92**	**332**	*eP*	**P**	**13 44 54.0**	**-0.7**		
LASF	**Ste Croix**	**88.98**	**331**	*eP*	**P**	**13 44 54.4**	**-0.6**		
LFF	**La Frestale**	**89.38**	**333**	*eP*	**P**	**13 44 56.0**	**-0.8**		
MTLF	**Montolieu**	**90.22**	**332**	*eP*	**P**	**13 45 00.1**	**-0.7**		
MSNY	**Massena**	**90.28**	**25**	*eP*	**P**	**13 45 00.2**	**-0.8**		
JCT	**Junction City**	**90.43**	**49**	*eP*	**P**	**13 45 02.1**	**+0.1**		
	comp=Z,13nm,0.8s,mb5.1								
JCT	**Junction City**	**90.43**	**49**	*eP*	**P**	**13 45 02.1**	**+0.1**		
JCT				pmax	pmax				
	comp=Z,13nm,0.8s,mb5.1								
MIAR	**Mount Ida**	**90.89**	**43**	*eP*	**P**	**13 45 03.7**	**-0.4**		
	comp=Z,12nm,0.8s,mb5.1								
MIAR				*epP*	pP	13 45 23.7	-1.1		
MIAR				*esP*	sP	13 45 31.9	-1.0		
MIAR	**Mount Ida**	**90.89**	**43**	*eP*	**P**	**13 45 03.7**	**-0.4**		
MIAR				*e**PP	pP	13 45 23.7	-1.0		
MIAR				*e**SP	sP	13 45 31.9	-1.0		
MIAR				pmax	pmax				
	comp=Z,12nm,0.8s,mb5.1								
EPF	**Esparros**	**91.18**	**333**	*eP*	**P**	**13 45 04.3**	**-1.0**		
ETSF	**Etsaut**	**91.61**	**333**	*eP*	**P**	**13 45 06.0**	**-1.3**		
ESDC	**Sonseca Array**	**95.66**	**334**	P	**P**	**13 45 25.4**	**-0.5**		
	comp=Z,1.4nm,0.8s,mb4.4,baz=29,slow=3.4,SNR=4.5								
TORD	**Torodi Ar. Bea**	**116.07**	**316**	PKP	PKPdf	13 50 42.4	-1.2		
	comp=Z,0.9nm,0.8s,baz=256,slow=2.1,SNR=3.7								
TORD				PP	PP	13 51 35.0	-13		
	comp=Z,0.7nm,0.7s,baz=18,slow=5.2,SNR=3.2								
DBIC	**Dimbokro**	**124.98**	**318**	PKP	PKPdf	13 50 59.3	-1.4		
	comp=Z,1.9nm,0.6s,baz=10,slow=3.9,SNR=4.8								
QSPA	**South Pole Qui**	**128.64**	**180**	*e*PKPdf	PKPdf	13 51 04.8	-0.9		
QSPA	**South Pole Qui**	**128.64**	**180**	PKP	PKPdf	13 51 05.3	-0.4		
	comp=Z,3.3nm,0.6s,baz=235,slow=1.8,SNR=7.9								
LPAZ	**La Paz**	**145.64**	**57**	PKP2	PKPab	13 51 39.5	0.0		
LPAZ				pmax	pmax				
	comp=Z,23nm,0.8s								
LPAZ	**La Paz**	**145.64**	**57**	PKPbc	PKPbc	13 51 39.5	+0.4		
	comp=Z,23nm,0.8s,baz=349,slow=5.0,SNR=56								
PLCA	**Paso Flores**	**155.36**	**105**	PKPab	PKPab	13 52 19.3	+0.4		
	comp=Z,2.9nm,0.7s,baz=288,slow=4.3,SNR=5.3								

*ISCJB **31** 13:33:32.5±2.5,3669N±006×732E±0.1,h15km±20km, mb3.8/8,Error ellipse: s-maj=19.1km s-min=5.9km az=154.3*
*IDC **31** 13:33:32.3±1.1,3669N×7303E,h0km,mb3.9/8, mb1 4.0/11,mb1mx3.8/24,mbtmp3.9/11,ML3.6/3,Error ellipse: s-maj=33.9km s-min=20.4km az=48.0*
*NNC **31** 13:33:42.9±4.6,3728N×7220E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=40.7km s-min=33.6km az=173.0*

ISC 31 13:33:36.8±2.5,3668N±005×731E±01,h32km±20km,n28, σ1§34/36,mb3.8/8,6C-3D,Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THN	**Thein Dam**	**4.75**	**152**	*eP*		**Pn**	**13 34 50.9**	**+4.8**
THN				*eS*		**Sn**	**13 35 46.9**	**+6.8**
SDNR	**Sundarnagar**	**6.08**	**147**	*eP*		**Pn**	**13 35 08.5**	**+4.1**
SDNR				*eS*		**Sn**	**13 36 20.5**	**+7.7**
TKM2	**Tokmak 2**	**6.52**	**16**	⇑Pn		**Pn**	**13 35 16.1**	**+5.7**
	4.8nm,0.8s							
TKM2				⇓Lg			13 37 00.3	
	40nm,1.9s							
KK31	**Karatay Array**	**6.72**	**344**	⇑Pn		**Pn**	**13 35 14.4**	**+1.3**
	1.9nm,0.3s,baz=148,slow=12,SNR=38							
KK31				⇓Sn		**Sn**	**13 36 28.1**	**-0.3**
	2.5nm,0.4s,baz=184,slow=28							
KHET	**Khetri**	**8.88**	**164**	*eP*		**Pn**	**13 35 38.9**	**-3.9**
KHET				AMb		AMB	13 35 39.2	
	comp=Z,7.5nm,0.7s							
KHET				*eS*		**Sn**	**13 37 18.5**	**-3.1**
KUDL	**Kundal**	**8.98**	**160**	*eP*		**Pn**	**13 35 45.4**	**+1.3**
KUDL				AMb		AMB	13 35 47.1	
	comp=Z,4.5nm,0.6s							
KUDL				*eS*		**Sn**	**13 37 22.1**	**-2.0**
SONA	**Sohna**	**9.05**	**157**	*eP*		**Pn**	**13 35 47.1**	**+1.9**
SONA				AMb		AMB	13 35 50.5	
	comp=Z,9.9nm,0.2s							
SONA				*eS*		**Sn**	**13 37 26.7**	**+0.8**
MKAR	**Makanchi Array**	**12.21**	**31**	Pn		**Pn**	**13 36 29.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=214,slow=14,SNR=5.9							
KOLN	**Koldanda**	**12.56**	**132**	*eP*		**Pn**	**13 36 33.7**	**+0.6**
	comp=Z,6.9nm,0.3s							
GKN	**Gorkha**	**13.03**	**128**	*eP*		**Pn**	**13 36 38.4**	**-1.1**
	comp=Z,16nm,0.4s							
KKN	**Kakani**	**13.58**	**127**	*eP*		**Pn**	**13 36 45.0**	**-2.1**
JIRN	**Jiri**	**14.26**	**125**	*eP*		**Pn**	**13 36 53.6**	**-2.8**
	comp=Z,14nm,0.4s							
KURK	**Kurchatov**	**14.58**	**14**	⇓Pn		**Pn**	**13 37 05.3**	**+4.7**
	comp=Z,2.2nm,0.8s							
TAPN	**Taplejung**	**15.48**	**123**	*eP*		**Pn**	**13 37 09.8**	**-2.8**
	comp=Z,6.3nm,0.4s							
AB31	**Akbulak array**	**15.80**	**327**	⇑Pn		**Pn**	**13 37 14.7**	**-2.0**
	comp=Z,2.4nm,0.8s,baz=128,slow=12							
AB31				⇑Sn		**Sn**	**13 39 59.8**	**-11**
	comp=Z,1.7nm,0.8s,baz=115,slow=22							
BVA0	**Borovoye Array**	**16.46**	**354**	Pn		**Pn**	**13 37 23.9**	**-1.1**
	comp=Z,2.5nm,2.8s,baz=193,slow=4.8,SNR=12							
AKTO	**Aktyubinsk**	**17.52**	**326**	⇑Pn		**Pn**	**13 37 39.2**	**+0.9**
	comp=Z,0.6nm,0.8s							
AKTO				⇑Sn		**Sn**	**13 40 43.5**	**-8.8**
	comp=Z,0.9nm,1.2s							
AKTO	**Aktyubinsk**	**17.52**	**326**	P		**Pn**	**13 37 38.9**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=137,slow=10,SNR=12							
ZALV	**Zalesovo Beam**	**19.09**	**22**	P		**Pn**	**13 37 56.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=215,slow=10.0,SNR=18							
AKASG	**Malin Array Be**	**34.16**	**308**	P		**P**	**13 40 18.9**	**+0.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=106,slow=9.9,SNR=3.3							
FINES	**FINESS Array B**	**38.29**	**325**	P		**P**	**13 40 53.6**	**-0.2**
	comp=Z,1.1nm,0.6s,mb3.8,baz=93,slow=8.0,SNR=7.6							
ARCES	**ARCESS Array B**	**41.63**	**337**	P		**P**	**13 41 21.5**	**0.0**
	comp=Z,5.3nm,1.0s,mb4.1,baz=110,slow=7.8,SNR=3.1							
NB2	**NORSAR Subarra**	**45.26**	**323**	P		**P**	**13 41 49.8**	**-1.0**
	comp=Z,1.0nm,0.5s,mb3.9,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**45.26**	**323**	P		**P**	**13 41 50.1**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.6,baz=90,slow=8.5,SNR=6.3							
INK	**Kuvik**	**73.45**	**10**	P		**P**	**13 45 05.4**	**0.0**
	comp=Z,1.0nm,0.6s,mb3.9,baz=341,slow=4.1,SNR=6.2							
WRA	**Warramunga Arr**	**80.66**	**123**	P		**P**	**13 45 47.9**	**+1.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=323,slow=4.6,SNR=6.6							
YKA	**Yellowknife Ar**	**80.98**	**4**	P		**P**	**13 45 47.8**	**+0.2**
	comp=Z,0.3nm,0.5s,mb3.5,baz=350,slow=5.4,SNR=5.6							
ASAR	**Alice Springs**	**82.98**	**126**	P		**P**	**13 45 59.9**	**+1.2**
	comp=Z,0.4nm,0.6s,mb3.6,baz=317,slow=5.2,SNR=3.6							

*GII **31** 13:41:02.9±0.4,3271N×3607E,h50km,ML1.2/1*
*ISCJB **31** 13:41:43.2±0.7,3377N±003×3571E±0.10,h10km,Error ellipse: s-maj=11.5km s-min=4.3km az=178.2*
*GRAL **31** 13:41:43.4±1.9,3376N×3571E,h14km±15km,MD3.0*

ISC 31 13:41:43.5±0.7,3378N±003×357E±01,h10km,n7, σ0§83/11,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BHL	**Bhannes**	**0.13**	**355**	*i* Pg		**Pg**	**13 41 46.2**	**-0.3**
BHL				*i* Sg		**Sg**	**13 41 49.2**	**+0.6**
RCY	**Rachaya**	**0.32**	**156**	*e*Pg		**Pg**	**13 41 48.7**	**-1.1**
RCY				*e*Sg		**Sg**	**13 41 54.1**	**0.0**
MATL	**Matirih**	**0.40**	**225**	*e*Pg		**Pg**	**13 41 51.0**	**-0.4**
HRI	**Mount Hermon**	**0.51**	**174**	*i* Pg		**Pg**	**13 42 01.0**	**+0.8**
HWQ	**Hawqa**	**0.55**	**25**	*i* Pg		**Pg**	**13 41 52.8**	**-1.4**
HWQ				*i* Sg		**Sg**	**13 42 02.5**	**+1.0**
KSHT	**Keshet**	**0.80**	**171**	Pg		**Pg**	**13 41 59.2**	**+0.3**
HNTI	**Hanita**	**0.81**	**211**	Pg		**Pg**	**13 42 02.9**	**+4.0**
HNTI				Sg		**Sg**	**13 42 17.5**	**+8.0**

*ISCJB **31** 13:44:10.9±1.2,7089S±008×1699E±0.9,h10km,mb3.6/2, Error ellipse: s-maj=40.9km s-min=10.9km az=179.0*
*IDC **31** 13:44:15.0±6.1,7070S×16844E,h0km,mb3.6/2, mb1 4.0/4,mb1mx3.9/10,mbtmp3.8/4,ML3.7/1,Error ellipse: s-maj=240.2km s-min=26.0km az=78.0*

ISC 31 13:44:12.2±1.2,7085S±008×1706E±08,h10km, (h7km±2.3km:pP-P),n10,σ1§19/9,mb3.6/2,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNDA	**Vanda**	**7.10**	**195**	Pn		**Pn**	**13 45 59.3**	**+3.4**
	1.3nm,0.3s,baz=28,slow=16,SNR=78							
VNDA				Sn		**Sn**	**13 47 16.1**	**-0.4**
	1.4nm,0.3s,baz=114,slow=20,SNR=3.2							
QSPA	**South Pole Qui**	**19.20**	**180**	P		**Pn**	**13 48 42.2**	**+5.6**
	0.1nm,0.3s,baz=69,slow=3.0,SNR=11							
SNAA	**Sanae**	**37.65**	**183**	*e*PKPdf		**P**	**13 51 26.7**	**+0.1**
SNAA				*e*		pP	13 51 28.4	-1.3
SNAA				*e*			13 51 32.1	
SNAA				*e*			13 51 38.1	
SNAA				*e*			13 51 49.8	
SNAA				*e*			13 51 52.0	
SNAA				*e*			13 51 54.2	
SNAA				*e*			13 51 56.5	
VNA3	**Neumayer Olymp**	**38.14**	**180**	*e*PKPdf		**P**	**13 51 33.0**	**+2.2**
VNA3				*e*		pP	13 51 34.5	+0.6
VNA3				*e*			13 51 38.1	
VNA3				*e*			13 51 43.4	
VNA3				*e*			13 51 53.9	
VNA3				*e*			13 51 56.3	
VNA3				*e*			13 51 58.6	
VNA3				*e*			13 52 01.4	
VNA2	**Neumayer--Watz**	**38.45**	**181**	*e*PKPdf		**P**	**13 51 32.5**	**-0.9**
	baz=65,slow=1.9							
VNA2				*e*		pP	13 51 33.8	-2.7
VNA2				*e*		pP	13 51 36.8	+0.3
VNA2				*e*			13 51 41.5	
VNA2				*e*			13 51 53.4	
VNA2				*e*			13 51 56.5	
VNA2				*e*			13 51 58.0	
VNA2				*e*			13 52 01.0	
VNA1	**Neumayer--Stat**	**38.74**	**181**	*e*PKPdf		**P**	**13 51 34.1**	**-1.7**
VNA1				*e*		pP	13 51 35.8	-3.1
VNA1				*e*			13 51 39.0	
VNA1				*e*			13 51 44.6	
VNA1				*e*			13 51 55.1	
VNA1				*e*			13 51 58.7	
VNA1				*e*			13 52 00.6	
ASAR	**Alice Springs**	**51.72**	**316**	P		**P**	**13 53 19.1**	**-0.2**
	0.7nm,0.8s,mb3.7,baz=161,slow=7.7,SNR=8.4							
WRA	**Warramunga Arr**	**55.22**	**317**	P		**P**	**13 53 45.0**	**+0.1**
	0.6nm,0.9s,mb3.6,baz=164,slow=6.2,SNR=2.8							
DIB	**Dawson Inlet,**	**130.23**	**41**	T			16 27 42.2	
VIB	**Van Inlet**	**130.26**	**41**	T			16 27 44.5	

IDC 31 13:48:27.1±4.9,418S×14558E,h0km,mb3.9/3,mb1 4.0/4, mb1mx3.6/14,mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=107.7km s-min=64.0km az=142.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAKA	**Kakadu**	**15.50**	**236**	*eP*		Pn	13 52 14.7	+7.5
	6.6nm,0.8s							
CTA	**Charters Tower**	**15.83**	**178**	Pn		Pn	13 52 13.3	+1.9
	0.3nm,0.3s,baz=359,slow=17,SNR=3.7							
WB2	**Warramunga Arr**	**19.11**	**214**	*eP*		Pn	13 52 53.7	+1.3
WRA	**Warramunga Arr**	**19.12**	**214**	P		Pn	13 52 52.7	+0.2
	0.2nm,0.3s,baz=36,slow=9.9,SNR=26							
ASAR	**Alice Springs**	**22.41**	**209**	P		P	13 53 27.2	-0.3
	0.8nm,0.5s,baz=36,slow=9.7,SNR=10							
FITZ	**Fitzroy Crossi**	**23.92**	**233**	*eP*		P	13 53 46.9	+4.0
	4.9nm,1.0s							
STKA	**Stephens Creek**	**27.80**	**187**	*e*P		P	13 54 17.3	-0.7
	0.9nm,0.3s							
STKA	**Stephens Creek**	**27.80**	**187**	P		P	13 54 16.9	-1.1
	1.2nm,0.4s,baz=17,slow=11,SNR=7.4							
QSPA	**South Pole Qui**	**85.78**	**180**	P		P	14 01 08.8	+1.0
	0.6nm,0.7s,baz=283,slow=4.7,SNR=6.7							

IDC 31 13:55:25.8±3.2,3363S×17856W,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.6/13,mbtmp3.6/3,ML3.6/1,Error ellipse: s-maj=75.3km s-min=36.8km az=118.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**5.80**	**216**	Pn		Pn	13 56 53.6	+0.5
	1.5nm,0.3s,baz=291,slow=3.5,SNR=12							
URZ				Sn		Sn	13 57 58.8	-1.6
	2.6nm,0.3s,baz=157,slow=18,SNR=5.7							
ASAR	**Alice Springs**	**42.56**	**271**	P		P	14 03 23.5	0.0
	0.4nm,0.7s,baz=109,slow=6.7,SNR=4.6							
WRA	**Warramunga Arr**	**43.84**	**276**	P		P	14 03 34.0	+0.1
	0.3nm,0.3s,baz=116,slow=8.0,SNR=9.8							
FINES	**FINESS Array B**	**147.98**	**338**	PKPbc		PKPbc	14 15 11.6	-0.7
	1.5nm,0.9s,baz=20,slow=6.1,SNR=4.4							

IDC 31 14:17:02.0±1.0,258N×12823E,h0km,mb3.7/6,mb1 3.9/6, mb1mx3.7/16,mbtmp3.8/6,MS4.3/1,Ms1 4.3/1, ms1mx3.7/24,Error ellipse: s-maj=70.0km s-min=16.9km az=80.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.17**	**165**	P		P	14 22 11.1	+0.7
	1.5nm,0.5s,baz=347,slow=10,SNR=23							
WB2	**Warramunga Arr**	**23.17**	**165**	*eP*		P	14 22 10.8	+0.3
ASAR	**Alice Springs**	**26.66**	**168**	P		P	14 22 42.5	-0.3
	0.4nm,0.6s,baz=350,slow=7.9,SNR=14							
ASAR				PcP		PcP	14 26 06.2	-0.7
	0.2nm,0.3s,baz=3.8,slow=1.9,SNR=6.0							
HNR	**Honiara**	**33.78**	**111**	LR		LR	14 36 10.7	
	comp=Z,507nm,19.3s,baz=357,slow=34							
KSRS	**Korea Array**	**34.71**	**360**	P		P	14 23 55.0	+1.3
	1.1nm,0.6s,baz=173,slow=9.7,SNR=5.5							
MJAR	**Matsushiro Arr**	**35.03**	**14**	P		P	14 23 55.6	-1.0
	0.7nm,0.5s,baz=176,slow=9.6,SNR=3.9							
STKA	**Stephens Creek**	**36.54**	**161**	*e*P		P	14 24 10.9	+1.4
	2.0nm,0.8s							
STKA	**Stephens Creek**	**36.54**	**161**	P		P	14 24 09.6	+0.1
	2.4nm,0.6s,baz=340,slow=7.8,SNR=11							
MKAR	**Makanchi Array**	**59.35**	**325**	P		P	14 27 05.8	-0.2
	0.3nm,0.4s,baz=114,slow=8.1,SNR=6.2							

*IDC **31** 14:22:18.4±1.9,3754N×6921E,h0km,mb3.7/2,mb1 3.8/5, mb1mx3.5/23,mbtmp3.7/5,ML3.5/3,Error ellipse: s-maj=31.9km s-min=24.9km az=163.0*
*ISCJB **31** 14:22:26.6±2.8,381N±0.1×690E±0.2,h72km±27km, mb3.5/2,Error ellipse: s-maj=28.6km s-min=12.8km az=37.5*
*NNC **31** 14:22:27.1±8.4,3807N×6893E,h34km±57km,mb3.7, mpv3.4,Error ellipse: s-maj=51.4km s-min=32.3km az=47.0*

ISC 31 14:22:26.6±2.9,380N±002×689E±01,h46km±27km,n13, σ1§10/15,mb3.6/2,1C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**5.26**	**13**	Pn		**Pn**	**14 23 44.9**	**+2.2**
	0.5nm,0.4s,baz=191,slow=12,SNR=8.9							
KK31				⇓Pg		Pn	14 24 02.7	+20
	3.5nm,0.7s,baz=194,slow=17,SNR=9.9							
KK31				⇑Lg			14 25 14.0	
	7.6nm,0.5s,baz=192,slow=29,SNR=6.5							
UCH	**Uchtor**	**6.05**	**44**	P		**Pn**	**14

CDF				*e*Sg	**Sg**	**14 42 35.2**	**-0.1**
	11nm,0.2s,SNR=1.0						
THEF	**They Montfort**	**0.44**	**258**	Pg	**Pg**	**14 42 30.0**	**+0.7**
THEF				Sg	**Sg**	**14 42 36.3**	**+1.0**
HINF	**Hinteralfeld**	**0.53**	**164**	*e*Pg	**Pg**	**14 42 31.6**	**+0.7**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**14 42 38.5**	**+0.6**
	46nm,0.2s,SNR=1.0						
HINF				*e*Sn	**Sg**	**14 42 41.5**	**+3.6**
HINF	**Hinteralfeld**	**0.53**	**164**	*e*Pg	**Pg**	**14 42 31.6**	**+0.7**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**14 42 38.5**	**+0.6**
	23nm,0.2s,SNR=1.0						
HINF				*e*Sn	**Sg**	**14 42 41.5**	**+3.6**
RFYF	**Reffroy**	**0.83**	**292**	*e*Pg	**Pg**	**14 42 37.7**	**+1.1**
	baz=116						
RFYF				*e*Sn	**Sn**	**14 42 49.6**	**+0.5**
	35nm,0.2s,baz=110						
RFYF	**Reffroy**	**0.83**	**292**	*e*Pg	**Pg**	**14 42 37.7**	**+1.1**
	baz=116						
RFYF				*e*Sn	**Sn**	**14 42 49.6**	**+0.5**
	17nm,0.2s,baz=110						
LOMF	**Lomont**	**0.98**	**172**	Pg	**Pg**	**14 42 40.3**	**+0.9**
LOMF				Sg	**Sg**	**14 42 53.2**	**+1.0**
LANF	**Langenberg**	**1.02**	**49**	Pg	**Pg**	**14 42 40.9**	**+0.7**
FELD	**Feldberg im Sc**	**1.02**	**115**	Pg	**Pg**	**14 42 40.5**	**+0.3**
FELD				Sg	**Sg**	**14 42 53.8**	**+0.2**
BBS	**Basel-Blauen**	**1.04**	**145**	Pg	**Pg**	**14 42 41.6**	**+1.0**
MEZF	**Maizieres J'vi**	**1.07**	**280**	*e*Pg	**Pg**	**14 42 41.7**	**+0.6**
	baz=101						
MEZF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
	13nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.07**	**280**	*e*Pn	**Pn**	**14 42 41.1**	**+0.5**
MEZF				*e*Pg	**Pg**	**14 42 41.7**	**+0.6**
MEZF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
MEZF	**Maizieres J'vi**	**1.07**	**280**	*e*Pg	**Pg**	**14 42 41.7**	**+0.6**
	baz=101						
MEZF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
	6.3nm,0.3s,SNR=1.0						
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pn	**Pn**	**14 42 41.5**	**+0.9**
	baz=94						
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pg	**Pg**	**14 42 42.0**	**+0.9**
SFTF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
	9.9nm,0.2s						
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pn	**Pn**	**14 42 41.5**	**+0.9**
SFTF				*e*Pg	**Pg**	**14 42 42.0**	**+0.9**
SFTF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
SFTF	**Sexfontaines**	**1.07**	**264**	*e*Pg	**Pg**	**14 42 42.0**	**+0.9**
SFTF				*e*Sg	**Sg**	**14 42 55.9**	**+0.8**
	4.9nm,0.2s						
BFO	**Black Forest**	**1.13**	**89**	*e*Pg	**Pg**	**14 42 42.1**	**-0.2**
BFO				*e*Sg	**Sg**	**14 42 55.2**	**-1.9**
BFO	**Black Forest**	**1.13**	**89**	*e*Pg	**Pg**	**14 42 42.1**	**-0.2**
BFO				*e*Sg	**Sg**	**14 42 55.2**	**-1.9**
WLF	**Walferdange**	**1.38**	**347**	*e*Pg	**Pg**	**14 42 47.4**	**+0.4**
WLF				*e*Sg	**Sg**	**14 43 04.9**	**-0.1**
SPAK	**Spaichingen-Ko**	**1.46**	**98**	Pg	**Pg**	**14 42 48.7**	**+0.2**
CABF	**La Chapelle**	**1.75**	**192**	*e*Pg	**Pg**	**14 42 54.7**	**+0.7**
CABF				*e*Sg	**Sg**	**14 43 17.1**	**+0.3**
	12nm,0.6s,SNR=1.0						
CABF	**La Chapelle**	**1.75**	**192**	*e*Pn	**Pn**	**14 42 50.8**	**+0.8**
CABF				*e*Pg	**Pg**	**14 42 54.7**	**+0.7**
CABF				*e*Sg	**Sg**	**14 43 17.1**	**+0.3**
CABF	**La Chapelle**	**1.75**	**192**	*e*Pg	**Pg**	**14 42 54.7**	**+0.7**
CABF				*e*Sg	**Sg**	**14 43 17.1**	**+0.3**
	5.9nm,0.6s,SNR=1.0						
GIVF	**Givet**	**2.14**	**327**	*e*Pg	**Pg**	**14 43 01.2**	**-0.3**
GIVF				*e*Sg	**Sg**	**14 43 28.7**	**-0.6**
	4.9nm,0.2s,SNR=1.0						
GIVF	**Givet**	**2.14**	**327**	*e*Pg	**Pg**	**14 43 01.2**	**-0.3**
GIVF				*e*Sg	**Sg**	**14 43 28.7**	**-0.6**
	2.5nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.15**	**242**	*e*Pn	**Pn**	**14 42 55.8**	**+0.4**
	baz=62,SNR=1.0						
LOR	**Lormes**	**2.15**	**242**	*e*Pg	**Pg**	**14 43 01.5**	**-0.1**
	baz=63						
LOR				*e*Sn	**Sn**	**14 43 21.6**	**0.0**
	baz=71,SNR=1.0						
LOR				*e*Sg	**Sg**	**14 43 29.7**	**+0.3**
	5.9nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.15**	**242**	*e*Pn	**Pn**	**14 42 55.8**	**+0.4**
LOR				*e*Pg	**Pg**	**14 43 01.5**	**-0.1**
LOR				*e*Sn	**Sn**	**14 43 21.6**	**0.0**
LOR				*e*Sg	**Sg**	**14 43 29.7**	**+0.3**
LOR	**Lormes**	**2.15**	**242**	*e*Pg	**Pg**	**14 43 01.5**	**-0.1**
	baz=63						
LOR				*e*Sn	**Sn**	**14 43 21.6**	**0.0**
	baz=71,SNR=1.0						
LOR				*e*Sg	**Sg**	**14 43 29.7**	**+0.3**
	3.0nm,0.2s,SNR=1.0						
TNS	**Taunus Mts**	**2.24**	**31**	*e*Sg	**Sg**	**14 43 31.1**	**-1.4**
BAIF	**Baives**	**2.36**	**318**	*e*Pg	**Pg**	**14 43 05.1**	**-0.5**
BAIF				*e*Sg	**Sg**	**14 43 35.3**	**-0.9**
	2.0nm,0.3s,SNR=1.0						
BAIF	**Baives**	**2.36**	**318**	*e*Pn	**Pn**	**14 42 58.7**	**+0.4**
BAIF				*e*Pg	**Pg**	**14 43 05.1**	**-0.5**
BAIF				*e*Sg	**Sg**	**14 43 35.3**	**-0.9**
BAIF	**Baives**	**2.36**	**318**	*e*Pg	**Pg**	**14 43 05.1**	**-0.5**
BAIF				*e*Sg	**Sg**	**14 43 35.3**	**-0.9**
	1.0nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**2.46**	**240**	*e*Pg	**Pg**	**14 43 07.0**	**-0.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**14 43 38.2**	**-1.2**
	5.9nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**2.46**	**240**	*e*Pn	**Pn**	**14 42 59.7**	**0.0**
SSF				*e*Pg	**Pg**	**14 43 07.0**	**-0.6**
SSF				*e*Sg	**Sg**	**14 43 38.2**	**-1.2**
SSF	**Saint Saulge**	**2.46**	**240**	*e*Pg	**Pg**	**14 43 07.0**	**-0.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**14 43 38.2**	**-1.2**
	3.0nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**2.53**	**229**	*e*Pg	**Pg**	**14 43 08.3**	**-0.6**
SMF				*e*Sg	**Sg**	**14 43 41.3**	**-0.3**
	9.8nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**2.53**	**229**	*e*Pn	**Pn**	**14 43 00.7**	**+0.1**
SMF				*e*Pg	**Pg**	**14 43 08.3**	**-0.6**
SMF				*e*Sg	**Sg**	**14 43 41.3**	**-0.3**
SMF	**Signal de Mont**	**2.53**	**229**	*e*Pg	**Pg**	**14 43 08.3**	**-0.6**
SMF				*e*Sg	**Sg**	**14 43 41.3**	**-0.3**
	4.9nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Pg	**Pg**	**14 43 11.8**	**-0.3**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**14 43 46.8**	**-0.3**
	2.4nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Pn	**Pn**	**14 43 03.3**	**+0.3**
AVF				*e*Pg	**Pg**	**14 43 11.8**	**-0.3**
AVF				*e*Sg	**Sg**	**14 43 46.8**	**-0.3**
AVF	**Avril sur Loir**	**2.70**	**237**	*e*Pg	**Pg**	**14 43 11.8**	**-0.3**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**14 43 46.8**	**-0.3**
	1.2nm,0.2s,SNR=1.0						
LPL	**La Plagne**	**2.81**	**179**	*e*Pg	**Pg**	**14 43 13.6**	**-0.6**
LPL	**La Plagne**	**2.81**	**179**	*e*Pn	**Pn**	**14 43 04.4**	**-0.1**
LPL				*e*Pg	**Pg**	**14 43 13.6**	**-0.6**
LPL	**La Plagne**	**2.81**	**179**	*e*Pg	**Pg**	**14 43 13.6**	**-0.6**
LPG	**La Plagne**	**2.83**	**178**	*e*Pg	**Pg**	**14 43 13.9**	**-0.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**14 43 37.2**	**-1.2**
	1.6nm,0.4s,SNR=1.0						
LPG	**La Plagne**	**2.83**	**178**	*e*Pg	**Pg**	**14 43 13.9**	**-0.7**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**14 43 37.2**	**-1.2**
	0.8nm,0.4s,SNR=1.0						
HYF	**Humbligny**	**2.89**	**250**	*e*Pg	**Pg**	**14 43 15.2**	**-0.6**
BGF	**Bois d'Agland**	**3.12**	**237**	*e*Pg	**Pg**	**14 43 19.5**	**-0.6**
BGF				*e*Sg	**Sg**	**14 43 59.3**	**-1.2**
	7.6nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**3.12**	**237**	*e*Pn	**Pn**	**14 43 09.1**	**+0.4**
BGF				*e*Pg	**Pg**	**14 43 19.5**	**-0.6**
BGF				*e*Sg	**Sg**	**14 43 59.3**	**-1.2**
BGF	**Bois d'Agland**	**3.12**	**237**	*e*Pg	**Pg**	**14 43 19.5**	**-0.6**
BGF				*e*Sg	**Sg**	**14 43 59.3**	**-1.2**
	3.8nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*P	**Pn**	**14 43 16.7**	**+3.5**
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*Pg	**Pg**	**14 43 25.1**	**-1.3**
ORIF				*e*Sg	**Sg**	**14 44 09.9**	**-1.1**
	1.3nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*Pn	**Pn**	**14 43 13.7**	**+0.5**
ORIF				*e*Pg	**Pg**	**14 43 25.1**	**-1.3**
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*P	**Pn**	**14 43 16.7**	**+3.5**
ORIF	**Oris-en-Rattie**	**3.44**	**189**	*e*Pg	**Pg**	**14 43 25.1**	**-1.3**
ORIF				*e*Sg	**Sg**	**14 44 09.9**	**-1.1**
	0.6nm,0.2s						
TCF	**Toulx Ste Croi**	**3.63**	**238**	*e*Pg	**Pg**	**14 43 28.9**	**-1.1**
TCF				*e*Sg	**Sg**	**14 44 15.4**	**-1.6**
	2.1nm,0.3s						
TCF	**Toulx Ste Croi**	**3.63**	**238**	*e*Pn	**Pn**	**14 43 16.1**	**+0.3**
TCF				*e*Pg	**Pg**	**14 43 28.9**	**-1.1**
TCF				*e*Sg	**Sg**	**14 44 15.4**	**-1.6**
TCF	**Toulx Ste Croi**	**3.63**	**238**	*e*Pg	**Pg**	**14 43 28.9**	**-1.1**
TCF				*e*Sg	**Sg**	**14 44 15.4**	**-1.6**
	1.0nm,0.3s						
CAF	**Calviac**	**4.63**	**224**	*e*Pg	**Pg**	**14 43 46.8**	**-2.2**
	SNR=1.0						

*ISCJB **31** 14:54:06.0±8.0, 68S±0.1×154.4E±0.1, h26km±56km, mb4.5/25, Error ellipse: s-maj=18.6km s-min=16.0km az=30.6*
*BJI **31** 14:54:08.0, 6.48S×154.15E, h18km, mB5.3, mb4.5*
*NEIC **31** 14:54:09.8±0.4, 6.81S×154.38E, mb4.6/7, Error ellipse: s-maj=13.8km s-min=10.7km az=113.0*
*IDC **31** 14:54:10.1±0.5, 6.81S×154.33E, h43km±4km, mb4.1/13, mb1 4.3/14, mb1mx4.2/16, mbtmp4.1/14, ML4.2/1, Error ellipse: s-maj=19.9km s-min=13.8km az=100.0*

ISC 31 14:54:10.2±4.1, 69S±01×15442E±010, h45km±38km, h44km±1.6km: pP-P, n40, σ0.986/33, mb4.5/25, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**15.35**	**210**	P		**Pn**	**14 57 49.4**	**+5.6**
	0.1nm,0.3s,baz=39,slow=15,SNR=3.7							
DZM	**Mont Dzumac**	**19.06**	**144**	P		**Pn**	**14 58 30.4**	**+0.5**
	0.8nm,0.3s,baz=352,slow=11,SNR=8.8							
KAKA	**Kakadu**	**22.42**	**253**	*e*P		**P**	**14 59 06.3**	**+1.1**
	13nm,0.7s,mb4.5							
WB2	**Warramunga Arr**	**23.42**	**234**	*e*P		**P**	**14 59 14.3**	**-1.2**
WRA	**Warramunga Arr**	**23.43**	**234**	P		**P**	**14 59 14.3**	**-1.3**
	7.7nm,0.9s,mb4.1,baz=54,slow=9.2,SNR=40							
WRA				PcP		PcP	15 03 01.8	+0.9
	1.5nm,0.9s,baz=60,slow=2.2,SNR=8.1							
ASAR	**Alice Springs**	**25.84**	**228**	P		**P**	**14 59 36.6**	**-0.9**
	4.5nm,1.0s,mb4.0,baz=57,slow=9.7,SNR=19							
STKA	**Stephens Creek**	**27.61**	**204**	*e*P		**P**	**14 59 52.5**	**-0.9**
	1.5nm,0.4s,mb4.0							
STKA	**Stephens Creek**	**27.61**	**204**	P		**P**	**14 59 52.6**	**-0.8**
	1.5nm,0.6s,mb3.8,baz=14,slow=11,SNR=6.8							
FITZ	**Fitzroy Crossi**	**30.19**	**246**	*e*P		**P**	**15 00 16.4**	**-0.1**
	7.0nm,0.8s,mb4.4							
FITZ	**Fitzroy Crossi**	**30.19**	**246**	P		**P**	**15 00 16.6**	**+0.1**
	2.8nm,0.6s,mb4.2,baz=87,slow=9.2,SNR=9.8							
FITZ				pP		pP	15 00 28.0	-0.5
	4.1nm,0.7s,baz=74,slow=9.9,SNR=6.9							
KSRS	**Korea Array**	**50.56**	**333**	P		**P**	**15 03 03.7**	**-0.6**
	1.6nm,0.9s,mb3.9,baz=152,slow=7.4,SNR=4.0							
KSRS				pP		pP	15 03 14.2	-2.6
	1.7nm,0.7s,baz=145,slow=6.9,SNR=5.5							
LZH	**Lanzhou**	**63.83**	**316**	*e*P		**P**	**15 04 39.5**	**+1.5**
LZH				XP		sP	15 04 50.5	-5.7
LZH				AMB		AMB		
	comp=Z,15nm,1.1s,mb4.9							
LZH				AMB		AMB		
	comp=Z,76nm,4.5s							
GTA	**Gaotai**	**68.26**	**317**	*e*P		**P**	**15 05 07.0**	**+0.6**
GTA				AP		pP	15 05 13.0	-6.5
GTA				XP		sP	15 05 16.8	-7.9
GTA				AMB		AMB		
	comp=Z,5.0nm,1.6s,mb4.3							
SONM	**Songino Array**	**68.92**	**328**	P		**P**	**15 05 11.5**	**+1.1**
	comp=Z,1.8nm,0.5s,mb4.2,baz=141,slow=5.3,SNR=15							
SONM				pP		pP	15 05 23.3	-0.2
	comp=Z,1.7nm,0.5s,baz=146,slow=6.6,SNR=7.6							
VNDA	**Vanda**	**70.72**	**178**	P		**P**	**15 05 21.9**	**+0.9**
	comp=Z,0.9nm,0.7s,mb3.8,baz=324,slow=7.6,SNR=6.2							
VNDA				pP		pP	15 05 35.6	+1.4
	comp=Z,1.3nm,0.9s,baz=351,slow=6.7,SNR=3.3							
LSA	**Lhasa**	**70.73**	**305**	P		**P**	**15 05 21.3**	**-0.6**
TAPN	**Taplejung**	**72.85**	**301**	*e*P		**P**	**15 05 35.3**	**+0.6**
	comp=Z,7.1nm,0.7s,mb4.7							
ODAN	**Odare**	**72.98**	**301**	*e*P		**P**	**15 05 36.0**	**+0.5**
	comp=Z,23nm,0.6s,mb5.3							
JIRN	**Jiri**	**74.23**	**301**	*e*P		**P**	**15 05 43.5**	**+0.7**
	comp=Z,8.3nm,0.5s,mb4.9							
BILL	**Bilibino**	**75.20**	**5**	*e*P		**P**	**15 05 46.2**	**-1.3**
	comp=Z,2.8nm,0.8s,mb4.2							
GKN	**Gorkha**	**75.65**	**301**	*e*P		**P**	**15 05 51.2**	**+0.2**
	comp=Z,14nm,0.6s,mb5.0							
KOLN	**Koldanda**	**76.47**	**301**	*e*P		**P**	**15 05 55.9**	**+0.2**
	comp=Z,17nm,0.7s,mb5.1							
MK31	**Makanchi Array**	**82.93**	**319**	*e*P		**P**	**15 06 30.5**	**+0.2**
MK31				*e*		pP	15 06 43.8	+0.1
MKAR	**Makanchi Array**	**82.93**	**319**	P		**P**	**15 06 30.6**	**+0.3**
	comp=Z,4.2nm,0.8s,mb4.5,baz=101,slow=5.0,SNR=45							
MKAR				pP		pP	15 06 43.9	+0.2
	comp=Z,4.8nm,0.7s,baz=98,slow=5.7,SNR=14							
QSPA	**South Pole Qui**	**83.11**	**180**	*e*P		**P**	**15 06 31.4**	**+0.7**
	comp=Z,16nm,1.2s,mb4.9							
ZALV	**Zalesovo Beam**	**83.76**	**326**	P		**P**	**15 06 33.6**	**-0.7**
ZALV				pP		pP	15 06 46.7	-1.1
ZALV	**Zalesovo Beam**	**83.76**	**326**	P		**P**	**15 06 33.6**	**-0.7**
	comp=Z,3.7nm,0.6s,mb4.7,baz=113,slow=5.9,SNR=19							
ZALV				pP		pP	15 06 46.7	-1.1
	comp=Z,3.1nm,0.6s,baz=128,slow=5.8,SNR=8.9							
MAW	**Mawson**	**84.30**	**203**	P		**P**	**15 06 37.8**	**+0.8**
	comp=Z,2.9nm,0.7s,mb4.5,baz=95,slow=11,SNR=4.2							
KURK	**Kurchatov**	**86.38**	**322**	*e*P		**P**	**15 06 47.4**	**-0.2**
	comp=Z,6.3nm,1.1s,mb4.8							
BRVK	**Borovoye**	**91.92**	**323**	*e*P		**P**	**15 07 12.3**	**-1.4**
	comp=Z,6.8nm,1.4s,mb4.8							
NVAR	**Mina Array Bea**	**92.09**	**52**	P		**P**	**15 07 15.8**	**+1.0**
	comp=Z,3.7nm,1.0s,mb4.7,baz=251,slow=4.1,SNR=20							
NVAR				pP		pP	15 07 28.2	-0.2
	comp=Z,1.7nm,0.9s,baz=262,slow=3.9,SNR=6.5							
YKA	**Yellowknife Ar**	**96.49**	**28**	P		**P**	**15 07 33.1**	**-1.3**
	comp=Z,0.3nm,0.5s,mb4.0,baz=266,slow=5.0,SNR=9.3							
PDAR	**Pinedale Array**	**99.03**	**48**	P		**P**	**15 07 45.4**	**-1.0**
	comp=Z,0.5nm,0.7s,mb4.2,baz=260,slow=2.6,SNR=5.2							
AKASG	**Malin Array Be**	**117.10**	**324**	PKP		PKPdf	15 12 49.5	-0.7
	comp=Z,0.6nm,0.5s,baz=58,slow=2.2,SNR=7.4							
AKASG				pPKP		pPKPdf	15 13 02.8	-1.4
	comp=Z,2.1nm,0.9s,baz=61,slow=1.8,SNR=3.1							
NOA	**NORSAR Array B**	**119.39**	**340**	PKP		PKPdf	15 12 53.5	-0.8
	comp=Z,0.5nm,0.6s,baz=44,slow=1.9,SNR=3.0							
NOA				pPKP		pPKPdf	15 13 07.2	-1.1
	comp=Z,0.4nm,0.6s,baz=45,slow=1.9,SNR=2.1							
BOSA	**Boshof**	**119.66**	**232**	PKP		PKPdf	15 12 56.7	+0.8
	comp=Z,2.2nm,0.9s,baz=90,slow=6.1,SNR=3.1							
GERES	**GERESS Array B**	**126.65**	**329**	PKP		PKPdf	15 13 09.4	+0.8
	comp=Z,1.4nm,0.7s,baz=90,slow=1.6,SNR=10							
GERES				pPKP		pPKPdf	15 13 22.6	-0.1
	comp=Z,1.1nm,0.6s,baz=70,slow=1.6,SNR=4.7							
LPAZ	**La Paz**	**132.02**	**119**	PKP		PKPdf	15 13 21.2	+1.4
	comp=Z,1.2nm,0.8s,baz=230,slow=10,SNR=3.8							
TOA0	**Torodi Ar. Sit**	**152.44**	**285**	*e*PKPbc		PKPbc	15 14 01.6	-0.8
TORD	**Torodi Ar. Bea**	**152.44**	**285**	PKPbc		PKPbc	15 14 02.2	-0.3
	comp=Z,2.8nm,0.8s,baz=51,slow=3.0,SNR=11							
TORD				pPKPbc		pPKPbc	15 14 15.7	-0.7
	comp=Z,6.2nm,0.9s,baz=63,slow=2.5,SNR=12							

IDC 31 15:02:22.2±3.0, 3219S×17817W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/13, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=68.6km s-min=36.0km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.18**	**211**	Pn		Pn	15 04 08.0	-0.5
	0.5nm,0.3s,baz=276,slow=19,SNR=4.9							
URZ				Sn		Sn	15 05 29.6	-1.1
	1.8nm,0.3s,baz=165,slow=21,SNR=8.7							
ASAR	**Alice Springs**	**42.90**	**269**	P		P	15 10 22.9	+0.3
	0.4nm,0.5s,baz=108,slow=7.5,SNR=27							
WRA	**Warramunga Arr**	**44.05**	**274**	P		P	15 10 31.8	-0.1
	0.7nm,0.3s,baz=112,slow=7.9,SNR=35							
KAF	**Kangasniemi**	**146.17**	**340**	*e*pkp		PKPdf	15 22 01.3	-1.3
FINES	**FINESS Array B**	**146.76**	**339**	PKPbc		PKPbc	15 22 04.4	-0.9
	0.8nm,0.5s,baz=11,slow=2.8,SNR=7.0							

WEL 31 15:07:02.7±0.6, 3774S×17624E, h217km±10km, ML3.5/3, Error ellipse: s-maj=23.2km s-min=12.3km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.86**	**127**	PN		Pn	15 07 33.2	0.0
URZ				SN		S	15 07 57.5	+0.3
MWZ	**Matawai**	**1.18**	**121**	PN		Pn	15 07 35.1	-0.2
MWZ				SN		S	15 08 01.0	+0.3
BKZ	**Black Stump Fm**	**1.44**	**172**	PN		Pn	15 07 37.6	+0.3
BKZ				SN		S	15 08 03.9	-0.6

*NAO **31** 15:07:20.6±1.2, 6754N×3381E, ML2.1*
HEL 31 15:07:19.8±0.2, 6764N×3398E, h0km, ML2.0, ML2.1(NAO), Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.38**	**265**	*i* P		Pg	15 07 26.7	-0.3
APA0				*i* S		Sg	15 07 31.4	-0.5
APA0				*e*RG			15 07 33.5	
APA0	**Apatity Array**	**0.38**	**265**	Pg		Pg	15 07 26.7	-0.3
	baz=101,slow=16							
APA0				Lg			15 07 31.4	
	baz=80,slow=37							
APA0				Rg			15 07 33.5	
	baz=83,slow=37							
KU6	**Riekki**	**2.29**	**227**	*e*PB		Pb	15 07 59.7	-2.2
	baz=42							
KU6				*e*SG		Sg	15 08 30.3	-3.0
MSF	**Maaselka**	**2.62**	**231**	*e*PB		Pb	15 08 04.8	-2.7
MSF				*e*SG		Sg	15 08 40.3	-3.5
MSF				MSG			15 08 40.3	
	comp=Z,2.3nm,0.2s							
SGF	**Sodankyl**	**2.87**	**269**	*e*P		Pn	15 08 05.9	-0.7
	baz=75							
SGF				*e*SB		Sb	15 08 44.7	-2.6
SGF				MSG			15 08 44.7	
	comp=Z,10nm,0.4s							
ARA0	**ARCESS Array S**	**3.64**	**305**	*e*P		Pn	15 08 17.2	0.0
ARA0				*e*PG		Pg	15 08 25.1	-4.3
ARA0				*e*S		Sn	15 09 00.1	-0.7
ARA0				*e*SG		Sg	15 09 10.9	-5.6
ARA0	**ARCESS Array S**	**3.64**	**305**	Pn		Pn	15 08 17.2	0.0
	baz=122,slow=16							
ARA0				Pg		Pg	15 08 25.1	-4.3
	baz=116,slow=16							
ARA0				Sn		Sn	15 09 00.1	-0.7
	baz=124,slow=28							
ARA0				Lg			15 09 10.9	
	baz=119,slow=37							
HEF	**Hetta**	**3.95**	**286**	*e*P		Pn	15 08 21.6	0.0
	baz=91							
HEF				*e*SG		Sg	15 09 21.6	-5.0
OUL	**Oulu**	**4.14**	**235**	*e*PB		Pb	15 08 30.2	-3.2
	baz=41							
OUL				*e*SG		Sg	15 09 28.2	-4.6
FIA0	**FINESS Array S**	**7.09**	**212**	Pn		Pn	15 09 04.1	-0.5
	baz=26,slow=14							
FIA0				Sn		Sn	15 10 21.9	-3.8
	baz=35,slow=22							
FIA0				Lg			15 10 54.8	
	baz=18,slow=22							
FIA0	**FINESS Array S**	**7.09**	**212**	*e*P		Pn	15 09 04.1	-0.5
FIA0				*e*S		Sn	15 10 21.9	-3.8
FIA0				*e*SG		Sg	15 10 54.8	-12
SPA0	**Spitsbergen Ar**	**11.69**	**342**	Pn		Pn	15 10 04.7	-2.8
	baz=148,slow=12							
SPA0	**Spitsbergen Ar**	**11.69**	**342**	*e*P		Pn	15 10 04.7	-2.8

*ISCJB **31** 15:08:51.4±4.6, 198S±02×1782W±02, h586km±57km, mb3.4/5, Error ellipse: s-maj=31.1km s-min=24.5km az=174.6*
*IDC **31** 15:08:53.9±4.1, 1973S×178.19W, h601km±49km, mb2.8/5, mb1 3.1/5, mb1mx2.9/14, mbtmp2.8/5, Error ellipse: s-maj=24.6km s-min=20.2km az=164.0*

ISC 31 15:08:52.9±4.7, 198S±02×1782W±02, h589km±56km, n9, σ0.976/8, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**44.52**	**256**	P		**P**	**15 16 14.1**	**+0.6**
	0.3nm,0.3s,mb3.3,baz=88,slow=8.8,SNR=10							
ASAR				S	

SZH	**Strazhica**	**1.91**	**182**	*e*P	**Pn**	**15 56 55.6 +1.5**
PVL	**Pavlikeni**	**2.02**	**194**	*e*P	**Pn**	**15 56 56.4 +0.8**
PSN	**Preselentsi**	**2.16**	**133**	*e*P	**Pn**	**15 56 57.0 -0.5**
PRD	**Provadia**	**2.21**	**153**	*i* P	**Pn**	**15 57 01.3 +3.0**
GZR	**Gura Zlata**	**2.29**	**277** ⇑	*i*P	**Pn**	**15 56 58.5 -0.9**
GZR				*i* S	**Sn**	**15 57 27.6 0.0**
DRGR		**2.81**	**306** ⇓	*i*P	**Pn**	**15 57 06.5 0.0**
BZS	**Buzias**	**3.13**	**280** ⇑	*i*P	**Pn**	**15 57 10.4 -0.4**
VTS	**Vitosha**	**3.28**	**219**	*e*P	**Pn**	**15 57 17.1 +4.1**
MMB	**Musomiste**	**3.95**	**206**	*e*P	**Pb**	**15 57 30.6 -0.7**

IDC 31 16:05:11.9±3.6, 608S×12814E, h382km±37km, mb2.7/1, mb1 3.1/4, mb1mx2.9/14, mbtmp3.0/4, Error ellipse: s-maj=53.2km s-min=17.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**6.04**	**227**	P	Pn	16 06 44.8	+0.4
	14nm,0.3s,baz=64,slow=0.7,SNR=38						
BATI				S	S	16 07 59.8	+0.3
	3.9nm,0.3s,baz=325,slow=23,SNR=2.8						
FITZ	**Fitzroy Crossi**	**12.20**	**191**	P	P	16 07 56.7	+2.2
	0.3nm,0.3s,baz=66,slow=12,SNR=9.5						
WRA	**Warramunga Arr**	**15.04**	**157**	P	P	16 08 25.1	-0.5
	0.6nm,0.3s,baz=335,slow=12,SNR=28						
WRA				S	S	16 11 03.4	-2.7
	0.2nm,0.3s,baz=338,slow=23,SNR=7.8						
ASAR	**Alice Springs**	**18.34**	**163**	P	P	16 09 01.1	+0.2
	0.1nm,0.3s,baz=342,slow=12,SNR=11						
ASAR				S		16 12 11.4	+0.9
	0.1nm,0.3s,baz=336,slow=15,SNR=7.3						
MKAR	**Makanchi Array**	**66.45**	**327**	P	P	16 15 21.5	+0.1
	0.2nm,0.4s,baz=114,slow=8.8,SNR=2.1						

*ISCJB **31** 16:07:54.9±1.4, 3859N±006×3845E±008, h6km±7km, Error ellipse: s-maj=12.8km s-min=6.8km az=138.8*
*DDA **31** 16:07:55.0, 3807N×3916E, h7km±5km, Md2.5*
*CSEM **31** 16:07:55.1±0.2, 3853N×3844E, h11km±1km, MD2.8, Error ellipse: s-maj=6.3km s-min=3.0km az=115.0*
*ISK **31** 16:07:55.1, 3855N×3845E, h6km, MD2.8*

ISC 31 16:07:55.2±1.5, 3858N±007×3845E±008, h7km±7km, n7, σ0§93/13, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYA	**Malataya**	**0.26**	**184**	PG	**Pg**	**16 08 00.6**	**+0.3**
MYA				SG	**Sg**	**16 08 03.6**	**-0.1**
MALT	**Malatya**	**0.27**	**183**	PG	**Pg**	**16 08 00.1**	**-0.5**
MALT				SG	**Sg**	**16 08 03.2**	**-0.9**
ELZG	**Elazig**	**0.43**	**101**	*i* P	**Pg**	**16 08 04.9**	**+1.3**
ELZG				*i* S	**Sg**	**16 08 09.9**	**+0.7**
URFA	**Urfa**	**1.18**	**165**	*e*PN	**Pn**	**16 08 17.3**	**-0.8**
URFA				*e*SN	**Sn**	**16 08 34.1**	**-0.2**
GZT	**Gaziantep**	**1.41**	**210**	*i* P	**Pn**	**16 08 22.3**	**+1.1**
GZT				*i* S	**Sb**	**16 08 39.8**	**-0.2**
EZC	**Erzincan**	**1.58**	**42**	*e*PN	**Pn**	**16 08 21.6**	**-2.0**
KMRS	**Kahramanmaras**	**1.63**	**229**	*e*PN	**Pn**	**16 08 23.9**	**-0.4**
KMRS				*e*SN	**Sn**	**16 08 47.0**	**+1.6**

*NEIC **31** 16:11:59.0, 1788N×10183W, h47km, MD3.4(MEX), After MEX.*

MEX 31 16:11:58.5±0.7, 1799N×10181W, h10km±8km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.50**	**139**	*i* P	Pg	16 12 07.7	-0.6
ZIIG				*i* S	Sg	16 12 14.9	0.0
ZIIG	**Zihuatanejo**	**0.50**	**139**	*i* P	Pg	16 12 07.7	-0.5
ZIIG				*i* S	Sg	16 12 14.9	0.0
MMIG	**Aquila**	**1.49**	**282**	*i* P	Pn	16 12 22.4	-2.9
MMIG				*i* S	Sn	16 12 39.1	-5.7
CAIG	**El Cayaco**	**1.74**	**122**	*e*P	Pn	16 12 24.5	-4.4
CAIG				*e*S	Sn	16 12 44.6	-6.6
CAIG	**El Cayaco**	**1.74**	**122**	*e*P	Pn	16 12 24.5	-4.4
CAIG				*i* S	Sn	16 12 46.2	-4.9
MEIG	**Mezcala**	**2.09**	**91**	*i* P	Pn	16 12 30.5	-3.0
MEIG				*i* S	Sn	16 12 55.5	-4.1
PLIG	**Platanillo**	**2.23**	**79**	*i* P	Pn	16 12 32.4	-3.1
PLIG				*i* S	Sn	16 12 58.6	-4.6
SZVM	**Salazar**	**2.66**	**60**	*e*P	Pn	16 12 37.6	-3.8
SZVM				*i* S	Sn	16 13 11.2	-2.6
YAIG	**Yautepec**	**2.75**	**71**	*e*P	Pn	16 12 38.8	-3.9
YAIG				*i* S	Sn	16 13 12.7	-3.3
UNM	**Universidad Na**	**2.83**	**61**	*e*P	Pn	16 12 45.0	+1.2
PTVM	**Pico Tres Padr**	**3.02**	**58**	*e*Pn	Pn	16 12 44.1	-2.2
PTVM				*i* S	Sn	16 13 20.1	-2.5
PPM	**Popocatepetl**	**3.21**	**70**	*e*P	Pn	16 12 47.4	-1.6
PPM				*i* S	Sn	16 13 25.4	-1.9
PPM	**Popocatepetl**	**3.21**	**70**	*e*P	Pn	16 12 46.0	-3.0
PPM				*e*P		16 12 47.4	
PPM				*i* S	Sn	16 13 25.4	-1.9
IIO	**Organos**	**3.33**	**61**	*e*P	Pn	16 12 47.3	-3.5
IIO				*i* S	Sn	16 13 25.9	-4.5
ANIG	**Ahuacatlan**	**3.98**	**321**	*i* P	Pn	16 12 58.3	-1.3
ANIG				*i* S	Sn	16 13 42.6	-3.7
TPIG	**Tehuac#an**	**4.25**	**83**	*e*P	Pn	16 13 00.6	-2.8
TPIG				*i* S	Sn	16 13 48.8	-4.2
LNIG	**Linares**	**7.22**	**17**	*e*P	Pn	16 13 42.0	-2.1
LNIG				*i* S	Sn	16 15 05.1	-1.1

IDC 31 16:16:27.6±1.5, 4966S×12628E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/12, mbtmp3.8/4, Error ellipse: s-maj=122.9km s-min=26.1km az=110.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**21.14**	**39**	P	P	16 21 13.3	-0.7
	3.6nm,0.8s,baz=214,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**26.63**	**16**	P	P	16 22 08.0	+0.2
	2.7nm,0.9s,baz=184,slow=9.4,SNR=17						
WRA	**Warramunga Arr**	**30.34**	**15**	P	P	16 22 40.6	-0.3
	0.4nm,0.8s,baz=195,slow=8.5,SNR=3.4						
SNAA	**Sanae**	**53.75**	**198**	S	P	16 25 50.5	-0.4
	1.7nm,1.0s,baz=175,slow=8.3,SNR=3.9						
YKA	**Yellowknife Ar**	**145.08**	**45**	PKPbc	PKPbc	16 36 05.4	+0.4
	0.6nm,0.9s,baz=272,slow=3.5,SNR=5.7						

*NEIC **31** 16:20:59.4±3.5, 761S×12798E, h122km±39km, mb4.9/1, Error ellipse: s-maj=36.4km s-min=29.6km az=78.0*
*IDC **31** 16:21:02.2±7.8, 761S×12822E, h154km±85km, mb3.2/2, mb1 3.5/5, mb1mx3.3/13, mbtmp3.4/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/12, Error ellipse: s-maj=78.9km s-min=26.2km az=35.0*
*ISCJB **31** 16:21:04.3±1.6, 80S±01×12820E±009, h208km±19km, mb3.1/2, Error ellipse: s-maj=19.2km s-min=11.3km az=40.5*

ISC 31 16:21:05.5±1.5, 801S±009×1282E±01, h199km±15km, n8, σ0§57/12, mb3.1/2, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**4.95**	**243**	P	**Pn**	**16 22 19.7**	**+0.5**
	9.9nm,0.3s,baz=131,slow=2.4,SNR=26						
BATI				S	**Sn**	**16 23 17.6**	**+0.3**
	13nm,0.3s,baz=80,slow=14,SNR=13						
KAKA	**Kakadu**	**6.29**	**138**	*e*Pn	**Pn**	**16 22 36.2**	**-0.3**
	25nm,0.4s						
KAKA				*e*Sn	**Sn**	**16 23 43.2**	**-5.4**
FITZ	**Fitzroy Crossi**	**10.33**	**193**	P	**Pn**	**16 23 29.1**	**+0.1**
	0.7nm,0.3s,baz=34,slow=15,SNR=15						
FITZ				S	**Sn**	**16 25 23.3**	**-1.1**
	1.3nm,0.3s,baz=295,slow=21,SNR=7.3						
WRA	**Warramunga Arr**	**13.29**	**154**	P	**Pn**	**16 24 07.4**	**+0.7**
	0.8nm,0.3s,baz=324,slow=14,SNR=43						
WRA				S	**Sn**	**16 26 29.2**	**-5.8**
	1.3nm,0.3s,baz=325,slow=25,SNR=6.6						
ASAR	**Alice Springs**	**16.52**	**161**	P	**Pn**	**16 24 50.5**	**+4.4**
	0.6nm,0.3s,baz=340,slow=10,SNR=65						
ASAR				S	**S**	**16 27 48.2**	**+0.5**
	0.1nm,0.3s,baz=334,slow=17,SNR=4.3						
CTA	**Charters Tower**	**21.24**	**126**	LR	LR	16 33 47.5	
	comp=Z,117nm,20.7s,baz=235,slow=36						
MKAR	**Makanchi Array**	**68.08**	**328**	P	**P**	**16 31 43.6**	**0.0**
	0.3nm,0.6s,mb3.1,baz=132,slow=6.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**71.69**	**335**	P	**P**	**16 32 04.8**	**-0.7**
	0.2nm,0.4s,mb3.1,baz=117,slow=8.3,SNR=3.7						

*NEIC **31** 16:29:46.1±3.1, 865S×11921E, h74km±33km, mb4.3/3, Error ellipse: s-maj=38.2km s-min=18.6km az=48.0*
*IDC **31** 16:29:49.1±5.4, 870S×11924E, h105km±54km, mb3.4/4, mb1 3.5/7, mb1mx3.4/17, mbtmp3.4/7, MS2.9/1, Ms1 2.9/1, ms1mx1.9/19, Error ellipse: s-maj=54.0km s-min=28.1km az=65.0*
*ISCJB **31** 16:29:51.6±2.0, 895±02×1194E±02, h159km±18km, mb4.0/5, Error ellipse: s-maj=34.7km s-min=12.3km az=137.8*

ISC 31 16:29:54.9±1.7, 90S±02×1195E±02, h179km±15km, n14, σ1§06/21, mb4.0/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Kupang**	**4.24**	**107**	P	**Pn**	**16 30 58.7**	**-0.4**
	36nm,0.3s,baz=345,slow=3.7,SNR=98						
BATI				S	**Sn**	**16 31 48.9**	**-0.3**
	19nm,0.3s,baz=316,slow=23,SNR=8.8						
BATI				LR	LR	16 33 11.0	
	comp=Z,124nm,18.1s,baz=123,slow=44						
FITZ	**Fitzroy Crossi**	**10.83**	**147**	*e*P	**Pn**	**16 32 24.7**	**-0.5**
	4.0nm,0.6s						
FITZ				*e*S	**Sn**	**16 34 20.0**	**-5.6**
FITZ	**Fitzroy Crossi**	**10.83**	**147**	P	**Pn**	**16 32 25.0**	**-0.3**
	0.3nm,0.3s,baz=335,slow=14,SNR=6.3						
FITZ				S	**Sn**	**16 34 21.5**	**-4.1**
	0.7nm,0.3s,baz=188,slow=20,SNR=6.0						
KAKA	**Kakadu**	**13.20**	**107**	*e*P	**Pn**	**16 32 55.8**	**+0.1**
	4.1nm,0.3s						
KAKA				*e*S	**Sn**	**16 35 13.5**	**-9.0**
KAKA	**Kakadu**	**13.20**	**107**	*e*P	**Pn**	**16 32 55.8**	**+0.1**
KAKA				*e*S	**Sn**	**16 35 13.5**	**-9.0**
KAKA				*e*Sn	**Sn**	**16 35 13.8**	**-8.7**
WRA	**Warramunga Arr**	**17.98**	**129**	P	**Pn**	**16 33 56.4**	**+2.5**
	0.3nm,0.3s,baz=307,slow=14,SNR=13						
WRA				S	**S**	**16 37 08.4**	**-0.8**
	0.1nm,0.3s,baz=312,slow=22,SNR=4.7						
WB2	**Warramunga Arr**	**17.99**	**129**	*e*P	**Pn**	**16 33 55.1**	**+1.0**
ASAR	**Alice Springs**	**20.05**	**138**	P	**P**	**16 34 19.2**	**+4.8**
	0.4nm,0.3s,baz=315,slow=9.7,SNR=14						
SONM	**Songino Array**	**57.76**	**350**	P	**P**	**16 39 28.1**	**+1.1**
	0.4nm,0.6s,mb3.5,baz=164,slow=8.5,SNR=2.7						
KBL	**Kabul**	**64.45**	**315**	P	**P**	**16 40 11.1**	**-1.3**
	9.2nm,1.8s,mb4.3						
MK31	**Makanchi Array**	**64.69**	**333**	*e*P	**P**	**16 40 12.7**	**-0.9**
MKAR	**Makanchi Array**	**64.69**	**333**	P	**P**	**16 40 13.1**	**-0.5**
	0.8nm,0.5s,mb3.6,baz=148,slow=8.1,SNR=11						
AML	**Almayashu**	**65.91**	**324**	*e*P	**P**	**16 40 23.4**	**+1.8**
	3.0nm,0.7s,mb4.2						
ZALV	**Zalesovo Beam**	**69.22**	**339**	P	**P**	**16 40 41.4**	**-0.7**
	1.2nm,0.3s,mb4.0,baz=136,slow=4.9,SNR=7.1						

*ISCJB **31** 16:32:16.7±0.5, 2953N±005×1392E±0.1, h434km±5km, mb3.4/13, Error ellipse: s-maj=18.4km s-min=6.2km az=166.0*
*IDC **31** 16:32:17.4±0.8, 2950N×139.14E, h424km±8km, mb3.1/10, mb1 3.2/13, mb1mx3.1/24, mbtmp3.1/13, Error ellipse: s-maj=24.1km s-min=9.3km az=85.0*
*JMA **31** 16:32:17.4±0.2, 2971N×13985E, h456km, M3.7*
*NEIC **31** 16:32:18.2±1.2, 2956N×13904E, h434km±13km, mb3.3/3, Error ellipse: s-maj=15.6km s-min=10.0km az=100.0*

ISC 31 16:32:17.7±0.5, 2955N±005×1392E±01, h426km±6km, n32, σ0§99/41, mb3.4/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.56**	**133**	P	**P**	**16 33 27.6**	**+0.1**
CBIJ				*e*S	**S**	**16 34 22.8**	**-1.4**
CBIJ	**Chichi jima**	**3.56**	**133**	P	**P**	**16 33 28.2**	**+0.7**
	10nm,0.3s,baz=276,slow=23,SNR=8.1						
CBIJ				S	**S**	**16 34 23.1**	**-1.1**
	39nm,0.3s,baz=272,slow=22,SNR=16						
JHJ2	**Mitsune**	**3.59**	**8**	P	**P**	**16 33 29.0**	**+1.5**
JHJ	**Hachijo jima 2**	**3.59**	**7**	P	**P**	**16 33 29.0**	**+1.4**
	11nm,0.3s,baz=73,slow=19,SNR=5.5						
JHJ				S	**S**	**16 34 25.6**	**+1.1**
	12nm,0.3s,baz=72,slow=20,SNR=3.0						
JHHJ	**Haha-jima-NKT**	**3.90**	**138**	P	**P**	**16 33 31.0**	**+0.5**
JHHJ				*e*S	**S**	**16 34 28.8**	**-0.7**
JIE	**Ise**	**5.29**	**337**	P	**P**	**16 33 46.3**	**+2.6**
BSO3	**Boso 3**	**5.35**	**11**	P	**P**	**16 33 44.1**	**-0.1**
BSO3				*e*S	**S**	**16 34 54.3**	**-0.6**
BSO4	**Boso 4**	**5.50**	**9**	*e*S	**S**	**16 34 56.7**	**-1.2**
JOD2	**Odawara 2**	**5.70**	**359**	P	**P**	**16 33 48.0**	**+0.1**
JOD2				*e*S	**S**	**16 35 00.6**	**-0.9**
JHU	**Hanno**	**6.29**	**0**	P	**P**	**16 33 53.8**	**-0.2**
JHU				S	**S**	**16 35 09.0**	**-3.8**
JRY	**Ryogami san**	**6.46**	**358**	P	**P**	**16 33 57.0**	**+1.2**
JRY				S	**S**	**16 35 14.8**	**-1.4**
JAG	**Ashikaga**	**6.86**	**1**	P	**P**	**16 33 59.5**	**-0.7**
MJAR	**Matsushiro Arr**	**7.03**	**353**	P	**P**	**16 34 02.1**	**+0.1**
	0.5nm,0.3s,baz=168,slow=10,SNR=7.5						
MAT	**Matsushiro**	**7.03**	**353**	P	**P**	**16 34 02.1**	**+0.1**
JHO	**Hitachi**	**7.13**	**9**	P	**P**	**16 34 03.3**	**+0.2**
JHO				S	**S**	**16 35 24.6**	**-4.9**
ENH	**Enshi**	**25.77**	**279**	P	**P**	**16 37 12.1**	**-0.4**
	0.9nm,0.9s,mb3.2						
FITZ	**Fitzroy Crossi**	**49.16**	**197**	P	**P**	**16 40 24.9**	**-0.1**
	1.1nm,0.6s,mb3.4,baz=3.6,slow=10,SNR=2.9						
KURK	**Kurchatov**	**49.42**	**313**	*e*P	**P**	**16 40 25.6**	**-1.0**
	1.9nm,1.0s,mb3.4						
WRA	**Warramunga Arr**	**49.43**	**186**	P	**P**	**16 40 26.6**	**-0.4**
	0.5nm,0.3s,mb3.3,baz=1.0,slow=7.8,SNR=14						
WRA				ScP	ScP	16 44 54.3	-1.4
	0.4nm,1.1s,baz=0.3,slow=4.8,SNR=5.7						
ASAR	**Alice Springs**	**53.16**	**186**	P	**P**	**16 40 53.9**	**-0.3**
	0.3nm,0.4s,mb2.8,baz=22,slow=11,SNR=10						
KDAK	**Kodiak Island**	**54.00**	**38**	P	**P**	**16 41 00.8**	**+1.0**
	2.3nm,0.8s,mb3.5,baz=255,slow=12,SNR=2.7						
BRVK	**Borovoye**	**54.55**	**316**	*e*P	**P**	**16 41 06.3**	**+2.6**
	2.7nm,0.8s,mb3.5						
INK	**Inuvik**	**61.90**	**25**	P	**P**	**16 41 54.1**	**+0.5**
	0.5nm,0.5s,mb3.3,baz=256,slow=7.5,SNR=4.5						
ARCES	**ARCESS Array B**	**70.37**	**340**	P	**P**	**16 42 46.6**	**-0.1**
	4.3nm,1.0s,mb3.9,baz=81,slow=9.5,SNR=12						
YKA	**Yellowknife Ar**	**71.22**	**28**	P	**P**	**16 42 52.2**	**+0.4**
YKA	**Yellowknife Ar**	**71.22**	**28**	P	**P**	**16 42 52.2**	**+0.4**
	0.3nm,0.4s,mb3.2,baz=296,slow=6.0,SNR=7.2						
JOF	**Joensuu**	**71.73**	**333**	*e*p	**P**	**16 42 53.2**	**-1.6**
FINES	**FINESS Array B**	**74.60**	**333**	P	**P**	**16 43 10.3**	**-1.1**
	0.7nm,0.5s,mb3.5,baz=70,slow=5.3,SNR=8.9						
NB2	**NORSAR Subarra**	**80.37**	**337**	P	**P**	**16 43 42.1**	**-0.8**
	comp=Z,0.4nm,0.5s,mb3.3,baz=48,slow=4.8						
NOA	**NORSAR Array B**	**80.37**	**337**	P	**P**	**16 43 41.9**	**-1.0**
	comp=Z,1.0nm,0.7s,mb3.5,baz=48,slow=4.9,SNR=3.5						
NVAR	**Mina Array Bea**	**81.02**	**51**	P	**P**	**16 43 48.2**	**+1.4**
NVAR	**Mina Array Bea**	**81.02**	**51**	P	**P**	**16 43 48.2**	**+1.4**
	comp=Z,0.3nm,0.5s,mb3.3,baz=109,slow=0.6,SNR=3.9						

*IDC **31** 16:40:24.6±1.1, 580S×153.11E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/16, mbtmp4.1/9, Error ellipse: s-maj=33.4km s-min=20.4km az=90.0*
*ISCJB **31** 16:40:27.0±0.6, 581S±008×1532E±0.1, h33km, mb4.2/17, Error ellipse: s-maj=18.5km s-min=11.2km az=12.8*
*NEIC **31** 16:40:36.0±3.6, 588S×153.13E, h100km±33km, mb4.3/13, Error ellipse: s-maj=18.9km s-min=16.5km az=96.0*

ISC 31 16:40:29.3±0.6, 581S±008×1532E±01, h35km, n26, σ0§98/24, mb4.2/17, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**15.70**	**205**	*e*P	**Pn**	**16 44 12.3**	**+4.3**
	4.5nm,1.0s						
CTAO	**Charters Tower**	**15.70**	**205**	P	**Pn**	**16 44 12.3**	**+4.3**
	18nm,1.3s						
DZM	**Mont Dzumac**	**20.65**	**143**	P	**P**	**16 45 06.2**	**0.0**
	12nm,1.0s,baz=2.4,slow=6.6,SNR=3.9						
KAKA	**Kakadu**	**21.55**	**250**	*e*P	**P**	**16 45 16.3**	**+0.4**
	17nm,0.5s,mb4.7						
WB2	**Warramunga Arr**	**23.05**	**231**	*e*P	**P**	**16 45 31.0**	**-0.8**
WRA	**Warramunga Arr**	**23.06**	**231**	P	**P**	**16 45 30.9**	**-1.1**
	2.4nm,0.9s,mb3.6,baz=55,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.66**	**224**	P	**P**	**16 45 56.2**	**+0.1**
	3.7nm,0.8s,mb3.9,baz=56,slow=8.9,SNR=34						
STKA	**Stephens Creek**	**28.10**	**201**	P	**P**	**16 46 16.6**	**-1.3**
	3.6nm,0.7s,mb4.1						
STKA	**Stephens Creek**	**28.10**	**201**	P	**P**	**16 46 19.4**	**+1.5**
	1.0nm,0.3s,mb3.9,baz=353,slow=8.1,SNR=3.3						
FITZ	**Fitzroy Crossi**	**29.50**	**243**	*e*P	**P**	**16 46 30.0**	**-0.6**
	5.5nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**29.50**	**243**	P	**P**	**16 46 30.6**	**0.0**
	2.0nm,0.5s,mb4.1,baz=54,slow=9.1,SNR=9.9						
HIA	**Hailar**	**62.09**	**336**	P	**P**	**16 50 45.5**	**-1.0**
	6.7nm,1.0s,mb4.7						
MA2	**Magadan**	**65.20**	**359**	*e*P	**P**	**16 51 05.5**	**-1.3**
	3.1nm,0.8s,mb4.4						
MA2				*e*	pP	16 51 16.4	-1.2
SONM	**Songino Array**	**67.36**	**328**	P	**P**	**16 51 22.2**	**+1.4**
	1.2nm,0.5s,mb4.2,baz=136,slow=5.8,SNR=12						
YAK	**Yakutsk**	**70.02**	**348**	P	**P**	**16 51 37.0**	**-0.2**
	12nm,1.0s,mb4.8						
VNDA	**Vanda**	**71.82**	**178**	P	**P**	**16 51 48.8**	**+0.8**
	1.2nm,0.9s,mb3.8,baz=332,slow=5.7,SNR=4.1						
BILL	**Bilibino**	**74.25**	**5**	*e*P	**P**	**16 52 01.8**	**-0.6**
	2.6nm,0.9s,mb4.2						
TIXI	**Tiksi**	**78.93**	**352**	*e*P	**P**	**16 52 28.4**	**-0.4**
	5.5nm,1.3s,mb4.3						
MKAR	**Makanchi Array**	**81.31**	**319**	P	**P**	**16 52 43.3**	**+1.1**
	0.9nm,0.7s,mb3.8,baz=100,slow=5.0,SNR=6.4						
ZALV	**Zalesovo Beam**	**82.18**	**326**	P	**P**	**16 52 46.4**	**-0.2**
	1.2nm,0.6s,mb4.0,baz=97,slow=5.5,SNR=6.2						
KURK	**Kurchatov**	**84.77**	**322**	*e*P	**P**	**16 52 58.5**	**-1.5**
	5.5nm,1.1s,mb4.6						
TKM2	**Tokmak 2**	**84.88**	**314**	*e*P	**P**	**16 53 01.2**	**+0.5**
	5.6nm,1.2s,mb4.6						
UCH	**Uchtor**	**85.51**	**313**	P	**P**	**16 53 05.0**	**+1.1**
EKS2	**Erkin-Say**	**86.13**	**313**	P	**P**	**16 53 09.4**	**+2.5**
	1.4nm,0.8s,mb4.2						
LBTB	**Lobatse**	**120.53**	**237**	P	PKPdf	16 59 16.8	-1.3
TORD	**Torodi Ar. Bea**	**150.94**	**287**	PKPbc	PKPbc	17 00 19.5	0.0
	1.8nm,0.8s,baz=65,slow=1.8,SNR=10						

IDC 31 16:40:56.3±3.3, 3324S×17860W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.8/13, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=74.8km s-min=37.0km az=115.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.11**	**214**	Pn	Pn	16 42 28.6	+0.8
	1.6nm,0.3s,baz=232,slow=3.3,SNR=9.8						
URZ				Sn	Sn	16 43 36.8	-1.6
	1.1nm,0.3s,baz=202,slow=21,SNR=6.8						
ASAR	**Alice Springs**	**42.53**	**270**	P	P	16 48 54.0	+0.2
	0.8nm,0.6s,baz=113,slow=8.2,SNR=7.2						
WRA	**Warramunga Arr**	**43.78**	**275**	P	P	16 49 03.6	-0.2
	0.4nm,0.4s,baz=116,slow=7.8,SNR=7.3						
FINES	**FINESS Array B**	**147.60**	**338**	PKPbc	PKPbc	17 00 40.8	-0.9
	1.5nm,1.0s,baz=21,slow=5.9,SNR=3.8						

IDC 31 17:14:39.5±4.7, 2070S×16872E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.5/13, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=152.8km s-min=34.5km az=138.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.52**	**237**	Pn	Pn	17 15 21.7	0.0
	4.1nm,0.3s,baz=119,slow=22,SNR=25						
DZM				Sn	Sn	17 15 52.4	-0.8
	8.6nm,0.3s,baz=98,slow=23,SNR=9.9						
WRA	**Warramunga Arr**	**32.22**	**265**	P	P	17 21 10.3	+0.6
	0.2nm,0.5s,baz=93,slow=8.3,SNR=7.1						
ASAR	**Alice Springs**	**32.33**	**258**	P	P	17 21 10.6	0.0
	0.7nm,0.7s,baz=88,slow=8.9,SNR=12						
GERES	**GERESS Array B**	**145.53**	**330**	PKPbc	PKPbc	17 34 18.6	-1.0
	1.0nm,0.7s,baz=29,slow=3.0,SNR=5.8						

FUNV 31 17:27:49.0, 1045N×6264W, h3km, MW3.5, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUNV	**Guanoco**	**0.41**	**227** ⇑	*i*P	Pg	17 27 57.1	+0.2
GUNV				*e*S	Sg	17 28 03.4	+1.0
GUIV	**Guiria**	**0.45**	**64** ⇑	*i*P	Pg	17 27 58.2	+0.5
GUIV				*e*S	Sg	17 28 04.7	+1.1
CRUV	**Carupano**	**0.63**	**291**	*e*P	Pg	17 28 00.1	-1.0
CRUV				*e*S	Sg	17 28 08.4	-1.0
ITEV	**Isla Los Testi**	**1.02**	**332**	*e*P	Pg	17 28 08.2	-0.5
ITEV				*e*S	Sg	17 28 22.2	+0.2
ORIV	**Oritupano**	**1.57**	**209**	*e*P	Pn	17 28 16.9	-0.8
PCRV	**Puerto La Cruz**	**1.99**	**262**	*e*P	Pn	17 28 23.0	-0.6
BIRV	**Birongo**	**3.57**	**271**	*e*P	Pn	17 28 43.7	-1.7
BIRV				*e*S	Sn	17 29 25.3	-2.8
CAOV	**Caicara del

IDC 31 19:20:22.9±2.8, 2153S×16865E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/13, mbtmp3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.9/21, Error ellipse: s-maj=78.9km s-min=34.8km az=153.0, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.12**	**255**	Pn	Pn	19 21 01.3	+1.6
	1.7nm,0.3s,baz=74,slow=21,SNR=47						
DZM				Sn	Sn	19 21 27.6	+0.8
	16nm,0.3s,baz=110,slow=22,SNR=10						
RAO	**Raoul Island**	**14.36**	**125**	LR	LR	19 28 15.6	
	comp=Z,284nm,18.1s,baz=100,slow=33						
WRA	**Warramunga Arr**	**32.09**	**267**	P	P	19 26 51.6	-0.4
	0.7nm,1.2s,baz=104,slow=8.6,SNR=3.4						
ASAR	**Alice Springs**	**32.11**	**260**	P	P	19 26 51.3	-0.7
	0.5nm,0.6s,baz=82,slow=10,SNR=5.9						
KHC	**Kasperske Hory**	**146.07**	**330**	*e*P	PKPdf	19 40 03.5	-0.3
KHC				*ex*	x	19 40 28.0	
GERES	**GERESS Array B**	**146.21**	**330**	PKPbc	PKPbc	19 40 04.9	-0.2
	0.8nm,0.8s,baz=55,slow=5.1,SNR=6.3						

*ISCJB **31** 19:35:32.6±0.3, 4319N±002×008W±002, h7km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=150.6*
*MDD **31** 19:35:34.8±0.2, 4308N×009W, h10km±1km, mbLg1.6/21, Error ellipse: s-maj=2.7km s-min=1.5km az=5.0, PRXIMO*
*LDG **31** 19:35:34.2±0.1, 4309N×0.12W, h10km, Md2.5/2, Ml2.4/9, Error ellipse: s-maj=1.0km s-min=0.8km az=80.0*
*CSEM **31** 19:35:34.8±0.1, 4311N×008W, h10km, ML2.4/11, Error ellipse: s-maj=1.1km s-min=0.9km az=136.0*
*STR **31** 19:35:34.8±0.1, 4305N×009W, h5km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 31 19:35:33.8±0.3, 4313N±002×009W±002, h13km±2km, n71, σ0.73/111, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.14**	**126**	Pg	**Pg**	**19 35 37.5**	**+0.2**
LABF				Sg	**Sg**	**19 35 39.8**	**+0.1**
LABF	**Labassere**	**0.14**	**126**	P	**Pg**	**19 35 37.5**	**+0.2**
LABF				S	**Sg**	**19 35 39.8**	**+0.1**
REYF	**Montagne du Re**	**0.23**	**254**	P	**Pg**	**19 35 38.9**	**+0.2**
REYF				S	**Sg**	**19 35 42.3**	**+0.3**
VIEF	**Viey**	**0.26**	**162**	Pg	**Pg**	**19 35 38.8**	**-0.4**
VIEF				Sg	**Sg**	**19 35 41.6**	**-1.3**
VIEF	**Viey**	**0.26**	**162**	P	**Pg**	**19 35 38.9**	**-0.3**
VIEF				S	**Sg**	**19 35 41.7**	**-1.1**
EPF	**Esparros**	**0.33**	**108**	*e*Pg	**Pg**	**19 35 41.0**	**+0.6**
EPF				*e*Sg	**Sg**	**19 35 45.4**	**+0.5**
	29nm,0.2s						
EPF	**Esparros**	**0.33**	**108**	*e*Pg	**Pg**	**19 35 41.0**	**+0.6**
EPF				*e*Sg	**Sg**	**19 35 45.4**	**+0.5**
	15nm,0.2s						
ETSF	**Etsaut**	**0.42**	**236**	*e*Pg	**Pg**	**19 35 41.7**	**-0.3**
ETSF				*e*Sg	**Sg**	**19 35 46.7**	**-0.9**
	39nm,0.2s						
ETSF	**Etsaut**	**0.42**	**236**	*e*Pg	**Pg**	**19 35 41.7**	**-0.3**
ETSF				*e*Sg	**Sg**	**19 35 46.7**	**-0.9**
	20nm,0.2s						
RESF	**Ens**	**0.45**	**136**	Pg	**Pg**	**19 35 42.4**	**-0.2**
RESF				Sg	**Sg**	**19 35 48.4**	**-0.2**
RESF	**Ens**	**0.45**	**136**	P	**Pg**	**19 35 42.7**	**0.0**
RESF				S	**Sg**	**19 35 48.5**	**-0.2**
FDAF	**Les Forges d'A**	**0.47**	**228**	P	**Pg**	**19 35 42.6**	**-0.4**
FDAF				S	**Sg**	**19 35 48.4**	**-1.0**
EBIE	**Bielsa**	**0.48**	**159**	Pg	**Pg**	**19 35 42.7**	**-0.5**
	8.0nm,0.1s,SNR=102						
EBIE				Lg		19 35 48.3	
	27nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**0.48**	**159**	Pg	**Pg**	**19 35 42.7**	**-0.4**
	8.0nm,0.1s,SNR=102						
EBIE				Lg		19 35 48.3	
	27nm,0.1s,SNR=7.9						
LARF	**Larrau**	**0.67**	**262**	Pg	**Pg**	**19 35 47.3**	**+0.6**
LARF				Sg	**Sg**	**19 35 56.6**	**+1.1**
LARF	**Larrau**	**0.67**	**262**	P	**Pg**	**19 35 47.4**	**+0.7**
LARF				S	**Sg**	**19 35 56.6**	**+1.1**
MELF	**Melles**	**0.67**	**112**	P	**Pg**	**19 35 47.1**	**+0.2**
MELF				S	**Sg**	**19 35 56.1**	**+0.5**
SJPF	**Ste Jean**	**0.83**	**269**	*e*Pg	**Pg**	**19 35 49.7**	**-0.2**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**19 36 00.5**	**-0.3**
	4.7nm,0.2s						
SJPF	**Ste Jean**	**0.83**	**269**	*e*Pg	**Pg**	**19 35 49.7**	**-0.2**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**19 36 00.5**	**-0.3**
	2.3nm,0.2s						
SALF	**Salau**	**1.01**	**111**	Pg	**Pg**	**19 35 53.6**	**+0.4**
SALF	**Salau**	**1.01**	**111**	P	**Pb**	**19 35 53.6**	**+0.5**
SALF				S	**Sb**	**19 36 06.6**	**+0.3**
CTRE	**Tremp**	**1.03**	**142**	P	**Pb**	**19 35 53.3**	**-0.1**
CTRE				S	**Sb**	**19 36 07.1**	**+0.3**
	4.0nm,0.5s						
IZUN	**Zunzarren**	**1.04**	**255**	Pg	**Pg**	**19 35 53.9**	**+0.1**
	0.6nm,0.1s,SNR=7.9						
IZUN				Lg		19 36 08.2	
	2.2nm,0.2s,SNR=7.9						
IZUN	**Zunzarren**	**1.04**	**255**	Pg	**Pg**	**19 35 53.9**	**+0.1**
	0.6nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**1.05**	**272**	Pg	**Pg**	**19 35 54.7**	**+0.6**
	1.4nm,0.1s,SNR=8.0						
ELIZ				Lg		19 36 08.8	
	2.9nm,0.3s,SNR=9.4						
IUSE	**Utxeti**	**1.09**	**261**	Pg	**Pg**	**19 35 55.7**	**+1.1**
	1.7nm,0.1s,SNR=7.9						
IUSE				Lg		19 36 09.4	
	3.5nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**1.09**	**261**	Pg	**Pg**	**19 35 55.7**	**+1.0**
	1.7nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**1.10**	**251**	Pg	**Pg**	**19 35 55.9**	**+0.9**
	0.9nm,0.1s,SNR=4.0						
IUNC				Lg		19 36 10.4	
	2.8nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**1.10**	**251**	Pg	**Pg**	**19 35 55.9**	**+0.9**
	0.9nm,0.1s,SNR=4.0						
CEST	**Esterri de Car**	**1.12**	**118**	P	**Pb**	**19 35 55.1**	**+0.1**
CEST				S	**Sb**	**19 36 11.1**	**+1.6**
	2.7nm,0.3s						
EARA	**Aranguren**	**1.15**	**252**	Pg	**Pg**	**19 35 57.5**	**+1.6**
	2.4nm,0.2s,SNR=7.9						
EARA				Lg		19 36 14.1	
	6.9nm,0.2s,SNR=7.9						
CSOR	**Sort**	**1.18**	**130**	P	**Pn**	**19 35 56.0**	**+0.1**
CSOR				S	**Sb**	**19 36 11.8**	**+0.7**
	13nm,0.2s						
CORG	**Organya**	**1.37**	**131**	P	**Pn**	**19 35 59.9**	**+1.3**
CAVN	**Les Avellanes**	**1.40**	**153**	P	**Pn**	**19 36 00.0**	**+1.1**
ESAC	**San Caprasio**	**1.44**	**191**	Pg	**Pg**	**19 36 01.1**	**-0.3**
	14nm,0.2s,SNR=14						
ESAC				Lg		19 36 19.4	
	62nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**1.44**	**191**	Pg	**Pg**	**19 36 01.1**	**-0.3**
	14nm,0.2s,SNR=14						
MTLF	**Montolieu**	**1.70**	**82**	*e*Pn	**Pn**	**19 36 02.5**	**-0.6**
MTLF	**Montolieu**	**1.70**	**82**	*e*Pg	**Pg**	**19 36 06.2**	**-0.1**
MTLF				*e*Sn	**Sn**	**19 36 22.0**	**-2.7**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**19 36 28.5**	**+0.2**
	2.1nm,0.2s						
MTLF	**Montolieu**	**1.70**	**82**	Pn	**Pn**	**19 36 02.5**	**-0.6**
MTLF				Pg	**Pg**	**19 36 06.2**	**-0.1**
MTLF				Lg		19 36 28.5	
	1.1nm,0.2s						
MTLF	**Montolieu**	**1.70**	**82**	*e*Pg	**Pg**	**19 36 06.2**	**-0.1**
MTLF				*e*Sn	**Sn**	**19 36 22.0**	**-2.7**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**19 36 28.5**	**+0.2**
	1.0nm,0.2s						
EMIR	**Miracle**	**1.70**	**135**	Pg	**Pg**	**19 36 06.2**	**-0.2**
	SNR=4.0						
EMIR				Lg		19 36 28.0	
	3.3nm,0.2s,SNR=4.0						
EMIR	**Miracle**	**1.70**	**135**	Pg	**Pg**	**19 36 06.2**	**-0.2**
	SNR=4.0						
ECRI	**Cripan**	**1.86**	**254**	Pg	**Pg**	**19 36 07.9**	**-1.5**
	1.0nm,0.2s,SNR=7.9						
ECRI				Lg		19 36 33.5	
	1.4nm,0.1s,SNR=7.9						
LFF	**La Frestale**	**1.90**	**18**	*e*Pn	**Pn**	**19 36 05.8**	**-0.1**
LFF	**La Frestale**	**1.90**	**18**	*e*Pg	**Pg**	**19 36 10.7**	**+0.5**
LFF				*e*Sg	**Sg**	**19 36 35.8**	**+0.9**
	9.7nm,0.3s,SNR=1.0						
LFF	**La Frestale**	**1.90**	**18**	Pn	**Pn**	**19 36 05.8**	**-0.1**
LFF				Pg	**Pg**	**19 36 10.7**	**+0.5**
LFF				Lg		19 36 35.8	
	4.8nm,0.3s						
LFF	**La Frestale**	**1.90**	**18**	*e*Pg	**Pg**	**19 36 10.7**	**+0.5**
LFF				*e*Sg	**Sg**	**19 36 35.8**	**+0.9**
	4.8nm,0.3s,SNR=1.0						
EPOB	**Poblet**	**1.98**	**154**	Pg	**Pg**	**19 36 10.4**	**-1.3**
	0.5nm,0.1s,SNR=7.7						
EPOB				Lg		19 36 35.0	
	4.1nm,0.2s,SNR=5.0						
EPOB	**Poblet**	**1.98**	**154**	Pg	**Pg**	**19 36 10.4**	**-1.3**
	0.5nm,0.1s,SNR=7.7						
ERTA	**Horta de San J**	**2.20**	**172**	Pg	**Pg**	**19 36 15.0**	**-0.9**
	0.2nm,0.1s,SNR=7.9						
ERTA				Lg		19 36 41.4	
	4.1nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.20**	**172**	Pg	**Pg**	**19 36 15.0**	**-0.9**
	0.2nm,0.1s,SNR=7.9						
CAF	**Calviac**	**2.37**	**40**	*e*Pn	**Pn**	**19 36 12.1**	**-0.3**
CAF	**Calviac**	**2.37**	**40**	*e*Pg	**Pg**	**19 36 19.1**	**-0.1**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**19 36 50.1**	**+0.2**
	3.3nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.37**	**40**	Pn	**Pn**	**19 36 12.1**	**-0.3**
CAF				Pg	**Pg**	**19 36 19.1**	**-0.1**
CAF				Lg		19 36 50.1	
	1.7nm,0.2s						
CAF	**Calviac**	**2.37**	**40**	*e*Pg	**Pg**	**19 36 19.1**	**-0.1**
	SNR=1.0						
CAF				*e*Sg	**Sg**	**19 36 50.1**	**+0.2**
	1.6nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.46**	**27**	*e*Pn	**Pn**	**19 36 13.1**	**-0.5**
RJF	**Les Rejaudoux**	**2.46**	**27**	*e*Pg	**Pg**	**19 36 21.0**	**+0.1**
RJF				*e*Sg	**Sg**	**19 36 53.0**	**+0.3**
	3.8nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.46**	**27**	Pn	**Pn**	**19 36 13.1**	**-0.5**
RJF				Pg	**Pg**	**19 36 21.0**	**+0.1**
RJF				Lg		19 36 53.0	
	1.9nm,0.2s						
RJF	**Les Rejaudoux**	**2.46**	**27**	*e*Pg	**Pg**	**19 36 21.0**	**+0.1**
RJF				*e*Sg	**Sg**	**19 36 53.0**	**+0.3**
	1.9nm,0.2s,SNR=1.0						
ETOR	**Torete**	**2.74**	**213**	Pn	**Pn**	**19 36 18.8**	**+1.4**
	2.2nm,0.2s,SNR=7.9						
ETOR				Sn	**Sn**	**19 36 49.5**	**-0.9**
	2.9nm,0.3s,SNR=7.9						
ETOR				Lg		19 36 59.2	
	3.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**2.74**	**213**	Pn	**Pn**	**19 36 18.8**	**+1.4**
	2.2nm,0.2s,SNR=7.9						
ETOR				Sn	**Sn**	**19 36 49.5**	**-0.9**
	2.9nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.78**	**186**	Pg	**Pg**	**19 36 22.4**	**-4.6**
	0.1nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**19 36 50.8**	**-0.7**
	0.3nm,0.1s,SNR=4.0						
EMOS				Lg		19 36 58.8	
	0.9nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**3.02**	**70**	*e*Sg	**Sg**	**19 37 10.0**	**-0.6**
	1.4nm,0.3s						
LASF	**Ste Croix**	**3.02**	**70**	*e*Sg	**Sg**	**19 37 10.0**	**-0.6**
	0.7nm,0.3s						
MFF	**Saint Martin d**	**3.47**	**359**	*e*Sg	**Sg**	**19 37 24.3**	**-0.8**
	1.6nm,0.2s						
MFF	**Saint Martin d**	**3.47**	**359**	*e*Sg	**Sg**	**19 37 24.3**	**-0.8**
	0.8nm,0.2s						
TCF	**Toulx Ste Croi**	**3.56**	**27**	*e*Pn	**Pn**	**19 36 28.0**	**-0.6**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**19 37 27.3**	**-0.6**
	1.8nm,0.3s						
TCF	**Toulx Ste Croi**	**3.56**	**27**	*e*Pn	**Pn**	**19 36 28.0**	**-0.6**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**19 37 27.3**	**-0.6**
	0.9nm,0.3s						
VIVF	**Saint-Julien-l**	**3.84**	**62**	*e*Pn	**Pn**	**19 36 32.2**	**-0.4**
BGF	**Bois d'Agland**	**4.01**	**30**	*e*Sg	**Sg**	**19 37 41.6**	**-0.9**
	10nm,0.4s						
BGF	**Bois d'Agland**	**4.01**	**30**	*e*Sg	**Sg**	**19 37 41.6**	**-0.9**
	5.1nm,0.4s						

*BJI **31** 19:37:14.2, 079N×12292E, h39km, mB5.3, mb5.0, Ms5.2, Msz5.0*
*ISCJB **31** 19:37:16.0±0.2, 127N±002×12275E±003, h26km, mb5.0/102, MS5.0/81, Error ellipse: s-maj=4.2km s-min=3.1km az=1.7*
*MOS **31** 19:37:17.0±1.4, 131N×12265E, h33km, mb5.3/36, MS4.9/15, Error ellipse: s-maj=12.4km s-min=6.2km az=111.5*
*NEIC **31** 19:37:17.8±2.2, 127N×12263E, h28km±16km, mb5.2/41, MS4.9/25, MW5.5, Error ellipse: s-maj=7.8km s-min=4.8km az=66.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^17^Nm; Mrr0.85; Mθθ-1.74; Mϕϕ0.89; Mrθ-2.14; Mθϕ-0.15; Mrϕ0.38; Best double couple: Mo2.60000×10^17^ NP1:φs55.00000°, δ20.00000°, λ44.00000°. NP2: φs283.00000°, δ76.00000°, λ105.00000°. Principal axes: T 2.1800, Plg56.0000°, Azm213.0000°; N 0.7700, Plg15.0000°, Azm99.0000°; P -2.9400, Plg30.0000°, Azm1.0000°;*
NEIC Felt [III] at Gorontalo.
*GCMT **31** 19:37:17.8±0.1, 156N×12263E, h26km, MW5.6/101, Moment Tensor Solution. s89,c159; s101,c231; Duration: 1s6 Moment tensor: Scale 10^17^Nm; Mrr1.84±.04; Mθθ-1.97±.03; Mϕϕ0.12±.03; Mrθ-2.66±.08; Mθϕ0.27±.02; Mrϕ0.23±.06; Best double couple: Mo3.29000×10^17^ NP1:φs275.00000°, δ72.00000°, λ89.00000°. NP2:φs100.00000°, δ18.00000°, λ94.00000°. Principal axes: T 3.2090, Plg63.0000°, Azm183.0000°; N 0.1610, Plg1.0000°, Azm276.0000°; P -3.3710, Plg27.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*IDC **31** 19:37:19.6±2.4, 130N×12266E, h39km±20km, mb4.6/26, mb1 4.6/27, mb1mx4.6/28, mbtmp4.6/27, ML4.9/1, MS4.9/26, Ms1 4.9/26, ms1mx4.8/40 Error ellipse: s-maj=13.3km s-min=7.7km az=70.0*

ISC 31 19:37:18.1±0.2, 126N±002×12277E±003, h28km, h28km±1.2km: pP-P, n302, σ1§30/295, mb5.0/102, MS5.0/81, 26C-20D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCI	**Palu**	**3.63**	**234**	P	**Pn**	**19 38 11.6**	**-1.0**
	2μm,1.1s						
GSPH	**General Santos**	**5.27**	**24**⇑	*e*P	**Pn**	**19 38 34.7**	**-0.3**
GSPH				*e*S	**Sn**	**19 39 32.0**	**-2.9**
TARAI	**Tarakan**	**5.59**	**292**	P	**Pn**	**19 38 37.7**	**-1.7**
	635nm,1.3s						
TSM	**Tawau**	**5.75**	**302**	⇑P	**Pn**	**19 38 39.9**	**-1.8**
DMPH	**Davao City--Mi**	**6.40**	**25**⇑	*i*P	**Pn**	**19 38 51.8**	**+1.1**
DMPH				*i* S	**Sn**	**19 39 59.5**	**-3.4**
DAV	**Davao City (W)**	**6.42**	**26**	⇓*e*Pn	**Pn**	**19 38 52.1**	**+1.3**
	1μm,1.0s						
KAPI	**Kappang**	**6.92**	**206**	Pn	**Pn**	**19 38 59.4**	**+1.7**
	2μm,0.4s,SNR=72						
SDKM	**Sandakan**	**7.07**	**308**	⇑P	**Pn**	**19 38 59.1**	**-0.7**
DCPH	**Dipolog City**	**7.30**	**5**	⇓*e*P	**Pn**	**19 39 02.8**	**-0.2**
AAI	**Ambon**	**7.31**	**132**	P	**Pn**	**19 39 07.0**	**+3.8**
	263nm,1.0s						
CGP	**Cagayan de Oro**	**7.40**	**15**	⇓*e*P	**Pn**	**19 39 07.1**	**+2.7**
SNPH	**Sibulan**	**8.05**	**3**	*e*P	**Pn**	**19 39 14.0**	**+0.8**
KKM	**Kota Kinabalu**	**8.09**	**306**	⇓*i*Pn	**Pn**	**19 39 12.9**	**-0.9**
KKM				*e*Sn	**Sn**	**19 40 34.4**	**-10**
KKM	**Kota Kinabalu**	**8.09**	**306**	⇓P	**Pn**	**19 39 14.4**	**+0.6**
KDM	**Kudat**	**8.16**	**314**	⇑P	**Pn**	**19 39 16.5**	**+1.6**
TBP	**Tagbilaran**	**8.45**	**7**	*e*P	**Pn**	**19 39 20.2**	**+1.4**
SCPH	**Surigao**	**8.89**	**18**⇑	*e*P	**Pn**	**19 39 31.6**	**+6.8**
SCPH				*e*S	**Sn**	**19 40 57.3**	**-6.9**
SCPH	**Surigao**	**8.89**	**18**	⇓*e*P	**Sn**	**19 40 57.9**	**-6.2**
BATP	**Bataraza**	**8.98**	**327**	*e*P	**Pn**	**19 39 26.9**	**+0.9**
MSLP	**Maasin**	**9.06**	**13**	*e*P	**Pn**	**19 39 25.9**	**-1.2**
GUIM	**Jordan**	**9.31**	**359**	*e*P	**Pn**	**19 39 30.2**	**-0.4**
CUYO	**Cuyo Island**	**9.69**	**350**	*e*P	**Pn**	**19 39 34.7**	**-1.1**
BTM	**Bintulu**	**9.87**	**281**	⇓P	**Pn**	**19 39 40.5**	**+2.3**
ENPP	**El Nido**	**10.43**	**342**	*e*P	**Pn**	**19 39 43.9**	**-2.1**
SBUM	**Sibu**	**10.61**	**277**	⇑P	**Pn**	**19 39 49.7**	**+1.3**
BUSP	**Coron**	**10.98**	**347**	*e*P	**Pn**	**19 39 52.6**	**-0.8**
OTRP	**Odiongan**	**11.06**	**356**	*e*P	**Pn**	**19 39 54.9**	**+0.3**
CNP	**Catarman**	**11.34**	**9**	*e*P	**Pn**	**19 40 00.5**	**+2.1**
BATI	**Kupang**	**11.42**	**176**	Pn	**Pn**	**19 40 06.2**	**+6.7**
	4.3nm,0.3s,baz=13,slow=1.2,SNR=13						
BATI				LR	LR	19 44 31.1	
	comp=Z,13μm,22.0s,baz=350,slow=38						
KMMI	**Kalianget**	**12.05**	**227**	P	**Pn**	**19 40 11.1**	**+3.0**
	138nm,1.8s						
PVCP	**Virac**	**12.34**	**6**	*e*P	**Pn**	**19 40 15.3**	**+3.3**
KSM	**Kuching**	**12.46**	**271**⇑	*e*Pn	**Pn**	**19 40 10.1**	**-3.6**
KSM	**Kuching**	**12.46**	**271**	⇓P	**Pn**	**19 40 15.1**	**+1.4**
POLP	**Polilio Island**	**13.41**	**357**	*e*P	**Pn**	**19 40 29.7**	**+3.0**
KRKI	**Karangkates**	**13.90**	**228**	P	**Pn**	**19 40 40.1**	**+6.7**
	209nm,1.2s						
PCPH	**Palayan**	**14.31**	**353**	⇓*e*P	**Pn**	**19 40 40.9**	**+1.9**
BALP	**Baler**	**14.44**	**355**	*e*P	**Pn**	**19 40 41.4**	**+0.7**
SCZP	**Santa Cruz**	**14.70**	**349**	*e*P	**Pn**	**19 40 44.6**	**+0.3**
BCPH	**Baguio City Da**	**15.18**	**352**⇑	*e*P	**Pn**	**19 40 50.8**	**+0.1**
BOLP	**Bolinao**	**15.29**	**350**	*e*P	**Pn**	**19 40 52.0**	**-0.2**
BJII	**Banjamegara**	**15.57**	**237**	P	**Pn**	**19 40 57.2**	**+1.3**
	185nm,1.6s						
CAUP	**Cauayan**	**15.62**	**357**	*e*P	**Pn**	**19 40 56.5**	**0.0**
CVP	**Callao Caves**	**16.37**	**357**⇑	*e*P	**Pn**	**19 41 10.0**	**+3.9**
APYP	**Conner**	**16.57**	**355**	*e*P	**Pn**	**19 41 08.2**	**-0.4**
KAKA	**Kakadu**	**16.87**	**146**	*e*P	**Pn**	**19 41 12.0**	**-0.4**
	50nm,0.6s						
CBJI	**Citeko**	**17.63**	**244**	P	**Pn**	**19 41 23.3**	**+1.4**
	251nm,1.5s						
SBJI	**Serang**	**18.16**	**246**	P	**Pn**	**19 41 31.5**	**+3.1**
	253nm,1.5s						
MYKOM	**Kota Tinggi**	**18.92**	**272**	⇓P	**Pn**	**19 41 37.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.44**	**172**	*e*P	**Pn**	**19 41 43.2**	**-0.7**
	79nm,0.6s						
FITZ				*e*S	**Sn**	**19 45 28.3**	**+7.0**
FITZ	**Fitzroy Crossi**	**19.44**	**172**	P	**Pn**	**19 41 43.3**	**-0.6**
	3.0nm,0.3s,baz=5.7,slow=11,SNR=48						
FITZ				S	**Sn**	**19 45 21.8**	**+0.5**
	0.1nm,0.3s,baz=215,slow=20,SNR=2.1						
FITZ				LR	LR	19 50 11.7	
	comp=Z,2μm,19.1s,baz=344,slow=40						
KGM	**Kluang**	**19.46**	**272**	⇑P	**Pn**	**19 41 44.0**	**-0.2**
KTGM	**Kuala Trenggan**	**20.01**	**282**	⇓P	**P**	**19 41 50.8**	**+1.8**
KSI	**Kapahiang**	**20.75**	**256**	P	**P**	**19 41 57.0**	**+0.1**
	697nm,1.1s						
FRIM	**Kepong**	**21.22**	**276**	⇑P	**P**	**19 42 03.4**	**+1.4**
QIZ	**Qiongzhong**	**21.74**	**325**	P	**P**	**19 42 07.0**	**-0.5**
QIZ				S	**S**	**19 45 57.5**	**-9.2**
QIZ				AMB	AMB		
	comp=Z,73nm,1.5s,mb4.9						
QIZ				LR	LR		
	comp=N,3μm,16.3s						
QIZ				LR	LR		
	comp=Z,3μm,17.2s,MS4.7						
QIZ	**Qiongzhong**	**21.74**	**325**	*e*P	**P**	**19 42 10.6**	**+3.1**
	comp=Z,181nm,1.4s,mb5.3						
QIZ				*e*		19 42 22.8	
QIZ				LR	LR		
	comp=Z,3μm,20.0s,MS4.7						
UBT	**Ubonrachathani**	**22.37**	**309**	P	**P**	**19 42 23.0**	**+8.8**
PPI	**Padang Panjang**	**22.44**	**266**	P	**P**	**19 42 15.0**	**0.0**
	comp=Z,142nm,1.1s,mb5.3						
KULM	**Kulim**	**22.44**	**281**⇑	*i*P	**P**	**19 42 14.0**	**-1.1**
KULM	**Kulim**	**22.44**	**281**	⇑P	**P**	**19 42 15.5**	**+0.4**
MBWA	**Marble Bar**	**22.47**	**187**⇑	*i*P	**P**	**19 42 14.2**	**-1.1**
	comp=Z,50nm,1.1s,mb4.9						
MBWA				LR	LR		
	comp=Z,4μm,20.0s,MS4.8						
HKC	**Hong Kong Obse**	**22.53**	**339**	P	**P**	**19 42 16.0**	**+0.1**
HKC				S	**S**	**19 46 26.0**	**+4.0**
NACB	**Ninganchiao**	**22.81**	**357**	P	**P**	**19 42 14.6**	**-4.3**
NACB				*e*		19 42 34.3	
SNG	**Songkhla**	**22.85**	**286**	P	**P**	**19 42 21.0**	**+1.6**
	comp=Z,270nm,0.9s,mb5.7						
YHNB	**Yeheng**	**23.32**	**357**	*e*P	**P**	**19 42 22.3**	**-1.8**
GZH	**Guangzhou**	**23.55**	**338**	P	**P**	**19 42 29.8**	**+3.3**
GZH				S	**S**	**19 46 46.5**	**+7.7**
GZH				LR	LR		
	comp=N,3μm,16.6s,MS4.9						
GZH				LR	LR		
	comp=E,2μm,17.0s,MS4.9						
GZH				LR	LR		
	comp=Z,7μm,17.3s,MS5.2						
PSI	**Prapat**	**23.88**	**274**	P	**P**	**19 42 29.1**	**-0.6**
PSI				S	**S**	**19 46 42.8**	**-1.6**
PSI	**Prapat**	**23.88**	**274**	P	**P**	**19 42 29.1**	**-0.6**
	comp=Z,78nm,1.1s,mb5.1,baz=86,slow=5.7,SNR=59						
PSI				S	**S**	**19 46 42.8**	**-1.6**
	comp=Z,1.8nm,0.5s,baz=132,slow=22,SNR=5.0						
PSI				LR	LR	19 53 07.8	
	comp=Z,7μm,20.2s,MS5.1,baz=106,slow=40						
QZH	**Quanzhou**	**23.89**	**351**	*i* P	**P**	**19 42 29.0**	**-0.6**
QZH				S	**S**	**19 46 43.0**	**-1.3**
QZH				AMB	AMB		
	comp=Z,1μm,3.4s						
QZH				LR	LR		
	comp=N,5μm,16.0s,MS5.1						
QZH				LR	LR		
	comp=E,2μm,14.2s,MS5.1						
QZH				LR	LR		
	comp=Z,6μm,20.7s						
WRA	**Warramunga Arr**	**23.93**	**152**	P	**P**	**19 42 29.3**	**-0.7**
WRA

comp=Z,10µm,17.8s,MS5.5
KMI Kunming 30.61 322 P **P** **19 43 31.5 +1.5**
KMI AP pP 19 43 38.8 +0.7
KMI XP sP 19 43 41.3 -0.2
KMI PP PP 19 44 31.0 -8.4
KMI PCP PcP 19 46 30.0 +1.8
KMI S **S** **19 48 32.8 +2.2**
KMI SS SS 19 50 15.0 -27
KMI AMB AMB
comp=Z,11nm,1.3s,mb4.5
KMI AMB AMB
comp=Z,124nm,4.4s
KMI LR LR
comp=N,1µm,17.1s,MS4.8
KMI LR LR
comp=E,1µm,16.2s,MS4.8
KMI LR LR
comp=Z,2µm,17.5s,MS4.8
NJ2 Nanjing 30.85 354 *e*P **P** **19 43 33.8 +1.8**
NJ2 PP PP 19 44 32.8 -9.2
NJ2 S **S** **19 48 35.5 +1.3**
NJ2 AMB AMB
comp=Z,30nm,1.0s,mb5.1
NJ2 AMB AMB
comp=Z,450nm,4.6s
NJ2 LR LR
comp=N,3µm,18.4s,MS5.2
NJ2 LR LR
comp=E,3µm,15.8s,MS5.2
NJ2 LR LR
comp=Z,3µm,16.9s,MS5.0
CTA Charters Tower 31.30 134 *e*P **P** **19 43 38.0 +1.9**
comp=Z,10nm,1.0s,mb4.6
CTA Charters Tower 31.30 134 *e*P **P** **19 43 38.0 +1.9**
CTA pmax pmax
comp=Z,10.0nm,1.0s
CTA Charters Tower 31.30 134 P **P** **19 43 38.4 +2.2**
comp=Z,13nm,1.0s,mb4.7,baz=321,slow=12,SNR=6.6
CTAO Charters Tower 31.30 134 *e*P **P** **19 43 36.9 +0.7**
comp=Z,70nm,1.8s,mb5.2
CTAO *e* 19 43 50.9
CTAO LR LR
comp=Z,2µm,19.0s,MS4.8
CTAO Charters Tower 31.30 134 *e*P **P** **19 43 36.9 +0.8**
CTAO *e* 19 43 50.9
CTAO pmax pmax
comp=Z,70nm,1.8s,mb5.2
CTAO MLR MLR
comp=Z,2µm,19.0s,MS4.8
CBIJ Chichi jima 31.74 34 LR LR 19 54 13.6
comp=Z,1µm,20.9s,MS4.5,baz=155,slow=32
FORT Forrest 32.25 171 *e*P **P** **19 43 44.2 -0.1**
comp=Z,33nm,0.6s,mb5.3
FORT *e*S **S** **19 49 04.5 +8.4**
JNU Nakatsue 32.60 13 LR LR 19 55 48.9
comp=Z,1µm,18.9s,MS4.5,baz=352,slow=34
KLBR Kellerberrin 33.01 188 *e*P **P** **19 43 49.8 -1.2**
comp=Z,79nm,1.7s,mb5.4
MUN Mundaring 33.63 190 *e*P **P** **19 43 55.2 -1.2**
NWAO Narrogin (SRO) 34.40 188 *e*P **P** **19 44 01.1 -1.9**
comp=Z,100nm,1.5s,mb5.5
NWAO LR LR
comp=Z,2µm,20.0s,MS4.8
NWAO Narrogin (SRO) 34.40 188 *e*P **P** **19 44 01.1 -1.9**
NWAO pmax pmax
comp=Z,100nm,1.5s
NWAO MLR MLR
comp=Z,2µm,20.0s
NWAO Narrogin (SRO) 34.40 188 P **P** **19 44 01.6 -1.4**
comp=Z,14nm,0.9s,mb4.9,baz=7.6,slow=11,SNR=5.7
CD2 Chengdu 34.56 330 P **P** **19 44 05.3 +0.8**
CD2 AP pP 19 44 11.3 -1.3
CD2 PP PP 19 45 22.5 -0.6
CD2 PCP PcP 19 46 38.5 -0.5
CD2 S **S** **19 49 33.5 +1.6**
CD2 SS SS 19 51 47.0 -15
CD2 SCS ScS 19 54 23.5 -2.0
CD2 AMB AMB
comp=Z,40nm,1.0s,mb5.3
CD2 AMB AMB
comp=Z,370nm,5.9s
CD2 LR LR
comp=N,2µm,20.4s,MS4.9
CD2 LR LR
comp=E,2µm,21.6s,MS4.9
CD2 LR LR
comp=Z,1µm,20.4s,MS4.7
XAN Xi'an 35.10 340 P **P** **19 44 09.5 +0.4**
XAN S **S** **19 49 38.8 -1.3**
XAN AMB AMB
comp=Z,10.0nm,0.8s,mb4.8
XAN AMB AMB
comp=Z,158nm,6.3s
XAN LR LR
comp=N,1µm,18.3s,MS5.1
XAN LR LR
comp=E,3µm,17.8s,MS5.1
XAN LR LR
comp=Z,5µm,17.3s,MS5.3
JHJ Hachijo jima 2 35.50 25 LR LR 19 59 01.4
comp=Z,1µm,19.1s,MS4.7,baz=12,slow=37
KSRS Korea Array 36.33 7 P **P** **19 44 19.5 -0.2**
comp=Z,3.8nm,1.0s,mb4.3,baz=189,slow=12,SNR=7.4
KSRS LR LR 20 01 47.7
comp=Z,2µm,18.9s,MS5.0,baz=184,slow=40
STKA Stephens Creek 37.47 153⇓ *i*P **P** **19 44 30.2 +0.8**
comp=Z,25nm,0.6s,mb5.2
STKA Stephens Creek 37.47 153 P **P** **19 44 30.3 +0.9**
comp=Z,35nm,0.8s,mb5.2,baz=324,slow=8.5,SNR=63
STKA LR LR 20 00 08.4
comp=Z,1µm,20.1s,MS4.6,baz=320,slow=36
DL2 Dalian 37.49 359 P **P** **19 44 28.0 -1.4**
DL2 S **S** **19 50 15.5 -1.0**
DL2 AMB AMB
comp=Z,20nm,1.2s,mb4.8
DL2 AMB AMB
comp=Z,100nm,9.3s
DL2 LR LR
comp=N,600nm,16.0s,MS4.7
DL2 LR LR
comp=E,700nm,16.3s,MS4.7
DL2 LR LR
comp=Z,720nm,16.8s,MS4.5
TIY Taiyuan 37.51 346⇑ *e*P **P** **19 44 27.8 -1.8**
TIY PP PP 19 45 57.8 +2.2
TIY S **S** **19 50 20.5 +3.6**
TIY SS SS 19 52 57.8 -4.3
TIY LR LR
comp=N,3µm,19.1s
TIY LR LR
comp=E,1µm,13.9s
TIY LR LR
comp=Z,3µm,18.8s,MS5.1
MAJO Matsushiro 37.91 20 *e*P **P** **19 44 33.5 +0.5**
comp=Z,47nm,1.4s,mb5.0
MAJO *e* 19 44 45.2
MAJO LR LR
comp=Z,2µm,22.0s,MS4.9
MAJO Matsushiro 37.91 20 *e*P **P** **19 44 33.5 +0.5**
MAJO *e* 19 44 45.2
MAJO pmax pmax
comp=Z,47nm,1.4s,mb5.0
MAJO MLR MLR
comp=Z,2µm,22.0s,MS4.9
MAT Matsushiro 37.91 20 P **P** **19 44 32.2 -0.8**
MAT S **S** **19 50 26.0 +3.0**
MJAR Matsushiro Arr 37.91 20 P **P** **19 44 32.3 -0.7**
comp=Z,6.4nm,0.8s,mb4.4,baz=196,slow=9.5,SNR=12
MJAR LR LR 19 59 17.2
comp=Z,1µm,18.1s,MS4.8,baz=185,slow=35
HNR Honiara 38.52 107 *e*P **P** **19 44 39.1 +0.6**
comp=Z,102nm,1.0s,mb5.5
HNR LR LR
comp=Z,909nm,19.0s,MS4.6
HNR Honiara 38.52 107 *e*P **P** **19 44 39.1 +0.6**
HNR pmax pmax
comp=Z,102nm,1.0s,mb5.5
HNR MLR MLR
comp=Z,909nm,19.0s,MS4.6
HNR Honiara 38.52 107 P **P** **19 44 38.3 -0.2**
comp=Z,72nm,0.8s,mb5.4,baz=236,slow=0.7,SNR=8.6
LZH Lanzhou 38.85 335 *e*P **P** **19 44 42.0 +1.0**
LZH AP pP 19 44 48.0 -1.2
LZH PP PP 19 46 16.5 +6.2
LZH PCP PcP 19 46 54.5 +2.7
LZH *e*S **S** **19 50 37.0 -0.3**
LZH SS SS 19 53 22.0 -7.2
LZH AMB AMB
comp=Z,64nm,1.2s,mb5.2
LZH AMB AMB
comp=Z,219nm,5.3s
LZH LR LR
comp=E,2µm,14.6s
LZH LR LR
comp=Z,2µm,17.6s,MS5.0
ADE Adelaide 39.00 159 *e*P **P** **19 44 43.9 +1.7**
BJT Baijiatuau 39.05 352 *e*P **P** **19 44 43.0 +0.5**
comp=Z,33nm,0.8s,mb5.1
BJT *e* 19 44 54.4
BJT LR LR
comp=Z,2µm,19.0s,MS5.0
BJT Baijiatuau 39.05 352 *e*P **P** **19 44 43.0 +0.5**
BJT *e* 19 44 54.4
BJT pmax pmax
comp=Z,33nm,0.8s
BJT MLR MLR
comp=Z,2µm,19.0s
BJI Beijing 39.07 352 P **P** **19 44 43.3 +0.6**
BJI XP sP 19 44 53.8 -0.5
BJI PP PP 19 46 14.5 +1.9
BJI S **S** **19 50 40.8 +0.4**
BJI SS SS 19 53 36.0 +2.5
BJI SCS ScS 19 54 46.8 -3.5
BJI AMB AMB
comp=Z,18nm,1.0s,mb4.8
BJI LR LR
comp=N,967nm,16.9s,MS4.8
BJI LR LR
comp=E,1µm,19.8s,MS4.8
BJI LR LR
comp=Z,1µm,16.9s,MS4.8
SNY Shenyang 40.40 1⇑P **P** **19 44 54.0 +0.3**
SNY AMB AMB
comp=Z,23nm,2.5s,mb4.5
SNY AMB AMB
comp=Z,271nm,10.4s
SNY LR LR
comp=N,2µm,19.1s,MS5.1
SNY LR LR
comp=E,1µm,19.1s,MS5.1
SNY LR LR
comp=Z,3µm,18.0s,MS5.1
HHC Hu-ho-hao-te 40.70 347 *e*P **P** **19 44 58.3 +2.0**
HHC AP pP 19 45 05.5 +1.0
HHC XP sP 19 45 09.0 +1.1
HHC PP PP 19 46 36.0 +5.6
HHC PCP PcP 19 46 59.0 +1.4
HHC SCP ScP 19 50 45.8 +0.4
HHC PCS PcS 19 50 48.8 +0.6
HHC S **S** **19 51 08.0 +3.2**
HHC XS sS 19 51 21.8 +3.4
HHC SS SS 19 54 06.3 +0.2
HHC AMB AMB
comp=Z,28nm,0.8s,mb4.9
HHC AMB AMB
comp=Z,339nm,7.2s
HHC LR LR
comp=N,2µm,17.5s,MS5.2
HHC LR LR
comp=E,2µm,18.7s,MS5.2
HHC LR LR
comp=Z,2µm,18.0s,MS5.1
BTO Baotou 40.84 345 *e*P **P** **19 44 57.0 -0.4**
BTO S **S** **19 51 04.8 -2.2**
LSA Lhasa 41.28 316 P **P** **19 45 02.5 +1.2**
LSA AP pP 19 45 11.5 +2.0
LSA XP sP 19 45 15.0 +2.1
LSA LR LR
comp=N,430nm,22.8s,MS4.6
LSA LR LR
comp=E,960nm,24.6s,MS4.6
LSA LR LR
comp=Z,1µm,30.1s
LSA Lhasa 41.28 316 *e*P **P** **19 45 02.3 +1.0**
comp=Z,31nm,1.1s,mb4.8
LSA LR LR
comp=Z,940nm,20.0s,MS4.7
LSA Lhasa 41.28 316 *e*P **P** **19 45 02.3 +1.0**
LSA pmax pmax
comp=Z,31nm,1.1s,mb4.8
LSA MLR MLR
comp=Z,940nm,20.0s,MS4.7
ARMA Armidale 41.80 141 *e*P **P** **19 45 08.2 +2.7**
VIS Vishakhapatnam 42.06 295 *e*P **P** **19 45 06.7 -1.1**
VIS AMb AMB 19 45 12.6
comp=Z,34nm,1.3s,mb4.8
BOK Bokaro 42.17 305 *e*P **P** **19 45 08.7 +0.1**
PALK Pallekele 42.35 279 *e*P **P** **19 45 08.0 -2.3**
comp=Z,27nm,1.0s,mb4.8
PALK LR LR
comp=Z,3µm,21.0s,MS5.1
CN2 Changchun 42.43 3 *e*P **P** **19 45 13.5 +3.1**
CN2 *e*XP sP 19 45 22.5 +0.5
CN2 *e*S **S** **19 51 35.0 +4.6**
CN2 SS SS 19 54 39.0 -1.3
CN2 AMB AMB
comp=Z,10.0nm,1.0s,mb4.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1µm,17.0s,MS5.0
CN2 LR LR
comp=E,1µm,17.0s,MS5.0
CN2 LR LR
comp=Z,2µm,17.0s,MS5.0
ODAN Odare 42.44 310 *e*P **P** **19 45 18.6 +7.8**
TAPN Taplejung 42.45 311 *e*P **P** **19 45 18.2 +7.3**
GTA Gaotai 43.37 334 *e*P **P** **19 45 16.3 -1.8**
GTA PCP PcP 19 47 01.5 -4.9
GTA PP PP 19 47 03.5 +4.2
GTA SCP ScP 19 50 56.3 +0.1
GTA S **S** **19 51 46.8 +2.5**
GTA SS SS 19 55 00.0 +1.1
GTA AMB AMB
comp=Z,13nm,0.5s,mb4.9
GTA AMB AMB
comp=Z,212nm,9.5s
GTA LR LR
comp=N,2µm,18.0s,MS5.1
GTA LR LR
comp=E,1µm,16.8s,MS5.1
GTA LR LR
comp=Z,2µm,18.4s,MS5.1
JIRN Jiri 43.77 310 *e*P **P** **19 45 24.5 +3.0**
CNB Canberra Magne 44.06 148 *e*P **P** **19 45 26.4 +2.7**
comp=Z,40nm,1.4s,mb5.0
KKN Kakani 44.53 310 *e*P **P** **19 45 28.2 +0.6**
BLSP Bilaspur 44.64 301 *e*P **P** **19 45 28.1 -0.5**
BLSP AMb AMB 19 45 42.1
comp=Z,52nm,1.4s,mb5.2
GKN Gorkha 45.13 310 *e*P **P** **19 45 31.6 -0.8**
ASAJ Asahikawa 46.17 20 P **P** **19 45 41.3 +1.0**
comp=Z,8.7nm,0.7s,mb4.8,baz=244,slow=13,SNR=4.4
ASAJ LR LR 20 05 50.0
comp=Z,2µm,19.1s,MS5.0,baz=221,slow=37
TRD Trivandrum 46.17 281 *e*P **P** **19 45 40.9 0.0**
TRD AMb AMB 19 45 54.7
comp=Z,124nm,1.1s,mb5.7
HYB Hyderabad 46.33 293 *e*P **P** **19 45 41.0 -1.0**
HYB *e* 19 45 43.0
HYB *e* pP 19 45 49.0 -1.4
HYB *e*S **S** **19 52 30.0 +2.1**
HYB Hyderabad 46.33 293 *i* P **P** **19 45 41.0 -1.0**
HYB *e* pP 19 45 49.0 -1.4
HYB *e* 19 45 54.0
HYB *e*S **S** **19 52 30.0 +2.1**
HIA Hailar 47.90 357 *e*P **P** **19 45 53.4 -0.3**
comp=Z,61nm,1.3s,mb5.5
HIA *e* 19 46 05.2
HIA LR LR
comp=Z,2µm,19.0s,MS5.2
HIA Hailar 47.90 357 *e*P **P** **19 45 53.4 -0.3**
HIA *e* 19 46 05.2
HIA pmax pmax
comp=Z,61nm,1.3s
HIA MLR MLR
comp=Z,2µm,19.0s
HABR Khabarovsk 48.22 11 *e*P **P** **19 45 56.7 +0.5**
HABR 19 47 47.2
HABR *e*S **S** **19 52 55.0 +1.2**
HABR *e* 19 53 10.8
HABR pmax pmax
comp=Z,39nm,2.0s,mb5.1
KLR Kul'dur 48.41 8 *e*P **P** **19 45 52.7 -5.0**
KLR *e* 19 56 18.0
KLR MLR MLR
comp=E,1µm,14.0s
KLR MLR MLR
comp=Z,2µm,14.0s,MS5.2
DZM Mont Dzumac 48.50 121 P **P** **19 45 59.4 +0.5**
comp=Z,12nm,1.0s,mb4.9,baz=299,slow=3.5,SNR=4.2
SONM Songino Array 48.52 345 P **P** **19 45 58.7 +0.1**
comp=Z,15nm,1.1s,mb4.9,baz=163,slow=8.2,SNR=41
SONM LR LR 20 07 51.3
comp=Z,3µm,18.8s,MS5.2,baz=163,slow=38
YSS Yuzh-Sakhalins 48.74 18 *e*P **P** **19 46 00.4 +0.2**
comp=Z,12nm,0.9s,mb4.9
YSS LR LR
comp=Z,1µm,20.0s,MS4.8
YSS Yuzh-Sakhalins 48.74 18 *e*P **P** **19 46 08.9 +8.6**
YSS *e* pP 19 46 15.2 +6.5
YSS *e* 19 53 02.0
YSS MLR MLR
comp=N,1µm,19.0s,MS4.9
YSS MLR MLR
comp=Z,1µm,19.0s,MS4.8
YSS MLR MLR
comp=E,500nm,18.0s,MS4.9
BHPL Bhopal 49.09 300 *e*P **P** **19 46 02.3 -1.1**
BHPL AMb AMB 19 46 06.1
comp=Z,30nm,1.1s,mb5.2
TAU Tasmania Unive 49.20 156 PFAKE 19 46 20.0 +16
TAU LR LR
comp=Z,2µm,20.0s,MS5.1
KAD Karad 50.34 291 *e*P **P** **19 46 12.0 -1.0**
POO Poona 50.94 293 *e*P **P** **19 46 16.8 -0.7**
CIT Chita 51.18 353 *e*P **P** **19 46 19.3 +0.6**
CIT *e* 19 46 30.9
CIT pmax pmax
comp=Z,145nm,2.5s,mb5.5
NDI New Delhi 51.28 306 *ex* x 19 46 20.0
DDI Dehra Dun 51.30 309 *e*P **P** **19 46 19.0 -1.0**
ZAK Zakamensk 51.68 344⇑ *i*P **P** **19 46 22.4 -0.1**
ZAK pmax pmax
comp=Z,11nm,1.1s,mb4.7
WMQ Urumqi 52.61 328 P **P** **19 46 31.5 +2.0**
WMQ AP pP 19 46 37.8 -0.2
WMQ PCP PcP 19 47 42.5 +3.1
WMQ PP PP 19 48 31.8 +3.0
WMQ S **S** **19 53 56.5 +1.4**
WMQ AMB AMB
comp=Z,41nm,1.2s,mb5.2
WMQ AMB AMB
comp=Z,458nm,4.5s
WMQ LR LR
comp=N,802nm,20.0s,MS4.9
WMQ LR LR
comp=E,732nm,19.5s,MS4.9
WMQ LR LR
comp=Z,923nm,19.0s,MS4.8
TLY Talaya 52.76 345⇓ *e*P **P** **19 46 30.7 +0.2**
comp=Z,42nm,1.5s,mb5.2
TLY LR LR
comp=Z,1µm,19.0s,MS5.0
TLY Talaya 52.76 345 *e*P **P** **19 46 31.8 +1.3**
TLY *e*PPP 19 49 37.7
TLY *e*S **S** **19 53 50.8 -6.1**
TLY *e*PS 19 54 05.5
TLY pmax pmax
comp=Z,44nm,1.2s,mb5.3
TLY MLR MLR
comp=Z,1µm,20.0s,MS5.0
IRK Irkutsk 53.12 346⇓ *i*P **P** **19 46 33.9 +0.8**
IRK *e* 19 46 45.9
IRK pmax pmax
comp=Z,37nm,2.2s,mb4.9
MOY Mondy 53.47 343 *e*P **P** **19 46 36.2 +0.5**
MOY pmax pmax
comp=Z,112nm,2.4s,mb5.4
THN Thein Dam 54.01 310 *e*P **P** **19 46 38.2 -1.9**
CLNS Chul'man 55.44 1 *e*P **P** **19 46 58.0 +8.1**
CLNS *e**PP pP 19 47 04.2 +5.8
CLNS *e* 19 47 55.0
CLNS *e* 19 48 56.2
CLNS *e*PPP 19 50 06.9
CLNS *e*S **S** **19 54 42.9 +10**
CLNS pmax pmax
comp=N,6.0nm,0.8s
CLNS pmax pmax
comp=Z,13nm,0.8s,mb5.0
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=Z,13nm,0.9s,mb5.0
CLNS pmax pmax
comp=N,2.0nm,0.6s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS smax
comp=E,279nm,13.8s
CLNS smax
comp=Z,224nm,10.9s
CLNS smax
comp=N,301nm,12.5s
CLNS MLR MLR
comp=Z,2µm,17.0s,MS5.2
CLNS MLR MLR
comp=N,1µm,18.0s,MS5.1
CLNS MLR MLR
comp=E,500nm,16.0s,MS5.1
BOD Bodaibo 56.83 354 *e*P **P** **19 46 59.3 -0.5**
BOD *e* 19 47 13.9
BOD pmax pmax
comp=Z,19nm,1.4s,mb4.9
BOD pmax pmax
comp=Z,5.0nm,1.2s,mb4.4
KSH Kashi 57.10 318 *e*P **P** **19 47 04.8 +2.7**
KSH *e*AP pP 19 47 14.3 +3.6
KSH *e*XP sP 19 47 18.5 +4.6
KSH *e*PCP PcP 19 47 57.3 +0.5
KSH *e*PP PP 19 49 17.0 +7.8
KSH *e*SCP ScP 19 51 52.8 -2.1
KSH *e*PCS PcS 19 51 57.5 -0.2
KSH *e*S **S** **19 54 58.5 +2.9**
KSH *e*XS sS 19 55 15.5 +5.9
KSH *e*SCS ScS 19 56 48.8 -1.0
KSH AMB AMB
comp=Z,19nm,0.2s,mb5.8
KSH AMB AMB
comp=Z,656nm,5.5s
KSH LR LR
comp=N,1µm,5.5s
KSH LR LR
comp=E,1µm,7.4s
KSH LR LR
comp=Z,936nm,5.6s
MK31 Makanchi Array 57.43 328 *e*P **P** **19 47 04.0 -0.3**
MKAR Makanchi Array 57.43 328 P **P** **19 47 04.6 +0.2**
MKAR LR LR 20 13 51.7
MKAR Makanchi Array 57.43 328 P **P** **19 47 04.6 +0.2**
comp=Z,3.2nm,0.6s,mb4.6,baz=127,slow=8.2,SNR=35
MKAR LR LR 20 13 51.7
comp=Z,1µm,18.1s,MS5.1,baz=159,slow=38
ULHL Ulahol 58.31 321 P **P** **19 47 11.3 +0.7**
SNR=8.4
TKM2 Tokmak 2 59.07 321⇑ *e*P **P** **19 47 16.1 +0.2**
comp=Z,42nm,1.0s,mb5.4
TKM2 *e* 19 47 30.4
TKM2 LR LR
comp=Z,965nm,19.0s,MS5.0
TKM2 Tokmak 2 59.07 321⇑ *e*P **P** **19 47 16.1 +0.2**
TKM2 *e* 19 47 30.5
TKM2 pmax pmax
comp=Z,42nm,1.0s,mb5.4
TKM2 MLR MLR
comp=Z,965nm,19.0s,MS5.0
TKM2 Tokmak 2 59.07 321 P **P** **19 47 16.5 +0.6**
SNR=10
KBK Karagaybulak 59.34 321 P **P** **19 47 18.6 +0.8**
SNR=7.2
UCH Uchtor 59.41 320⇑ *e*P **P** **19 47 19.1 +0.8**
comp=Z,53nm,1.4s,mb5.4
UCH *e* 19 47 33.7
UCH LR LR
comp=Z,1µm,21.0s,MS4.9
PET Petropavlovsk 59.56 24 *e*P pP 19 47 29.7 +2.1

PET eS S 19 55 31.2 +4.0
PET pmax pmax
comp=Z,43nm,1.3s,mb5.3
PET pmax pmax
comp=Z,200nm,18.7s
PET MLR MLR
comp=Z,700nm,19.0s,MS4.8
AAK Ala-Archa 59.62 320 P P 19 47 19.5 -0.2
comp=Z,64nm,1.4s,mb5.5,SNR=9.7
AAK Ala-Archa 59.62 320 P P 19 47 20.2 +0.5
SNR=8.0
FRU Bishkek 59.64 321 eP P 19 47 24.0 +4.1
FRU e pP 19 47 33.0 +4.6
FRU e 19 55 34.0
FRU pmax pmax
comp=Z,250nm,2.8s,mb5.8
AML Almayashu 59.89 319⇓ iP P 19 47 22.5 +1.0
comp=Z,41nm,1.1s,mb5.4
AML Almayashu 59.89 319 P P 19 47 22.9 +1.3
SNR=11
USP Ospenovka 59.94 321 P P 19 47 21.8 -0.1
SNR=12
EKS2 Erkin-Say 60.09 320 eP P 19 47 23.5 +0.5
comp=Z,31nm,1.0s,mb5.3
EKS2 e 19 47 37.0
EKS2 LR LR
comp=Z,891nm,20.0s,MS4.9
EKS2 Erkin-Say 60.09 320 P P 19 47 24.1 +1.1
SNR=12
YAK Yakutsk 60.85 4 eP P 19 47 28.5 +0.8
comp=Z,28nm,0.8s,mb5.4
YAK LR LR
comp=Z,768nm,19.0s,MS4.9
YAK Yakutsk 60.85 4 eP P 19 47 29.2 +1.5
YAK i *PP pP 19 47 39.3 +3.0
YAK e 19 48 10.1
YAK e 19 49 43.4
YAK ePPP 19 51 06.6
YAK eS S 19 55 41.4 -2.0
YAK e*SS sS 19 55 55.5 -2.0
YAK i 19 57 13.1
YAK eSS SS 19 59 38.3 -4.5
YAK pmax pmax
comp=Z,13nm,0.7s,mb5.2
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=Z,264nm,4.3s
YAK pmax pmax
comp=N,183nm,5.2s
YAK pmax pmax
comp=E,219nm,5.0s
YAK smax
comp=N,693nm,10.4s
YAK smax
comp=Z,226nm,4.9s
YAK smax
comp=E,138nm,4.8s
YAK MLR MLR
comp=Z,1µm,17.0s,MS5.0
YAK MLR MLR
comp=N,655nm,16.0s,MS5.0
YAK MLR MLR
comp=E,547nm,16.0s,MS5.0
ZAA0 Zalesovo Array 61.08 335 eP P 19 47 28.5 -1.0
ZAL Zalesovo 61.08 335 P P 19 47 28.3 -1.2
ZALV Zalesovo Beam 61.08 335 P P 19 47 28.3 -1.2
comp=E,1.7nm,0.6s,mb4.4,baz=122,slow=5.4,SNR=12
ZALV LR LR 20 15 29.5
comp=E,705nm,18.9s,MS4.8,baz=357,slow=38
ZALV PKPPKP 20 16 50.9
comp=E,0.3nm,0.4s,baz=268,slow=4.5,SNR=3.9
KURK Kurchatov 61.78 330 P P 19 47 34.7 +0.4
comp=E,150nm,1.2s,mb6.0,SNR=6.9
KURK Kurchatov 61.78 330 eP P 19 47 33.3 -0.9
comp=E,30nm,0.9s,mb5.4
KURK LR LR
comp=Z,679nm,19.0s,MS4.8
KURK Kurchatov 61.78 330 eP P 19 47 33.3 -1.0
KURK pmax pmax
comp=Z,30nm,0.9s,mb5.4
KURK MLR MLR
comp=Z,679nm,19.0s,MS4.8
MA2 Magadan 62.09 16 eP P 19 47 35.2 -1.0
comp=Z,26nm,0.9s,mb5.4
MA2 LR LR
comp=Z,465nm,20.0s,MS4.6
MA2 Magadan 62.09 16⇑ eP P 19 47 37.3 +1.1
MA2 pmax pmax
comp=Z,12nm,1.1s,mb4.9
RPZ Rata Peaks 62.13 142 P P 19 47 38.8 +2.0
comp=Z,59nm,0.8s,mb5.7,baz=351,slow=3.0,SNR=19
RPZ LR LR 20 16 28.5
comp=Z,1µm,18.3s,MS5.1,baz=294,slow=38
NVS Novosibirsk 62.37 335 eP P 19 47 40.0 +1.9
NVS i S S 19 56 01.4 -1.5
NVS pmax pmax
comp=Z,67nm,1.9s,mb5.5
NVS pmax pmax
comp=N,47nm,1.7s
NVS pmax pmax
comp=E,33nm,1.4s
NVS smax
comp=N,43nm,2.1s
NVS smax
comp=E,71nm,2.1s
URZ Urewera 63.55 134 P P 19 47 47.5 +1.2
comp=E,6.7nm,0.6s,mb4.9,baz=104,slow=5.9,SNR=8.2
SEY Seymchan 65.36 14⇑ eP P 19 47 57.6 0.0
BRVK Borovoye 67.37 329 eP P 19 48 09.3 -1.4
comp=E,31nm,1.3s,mb5.2
BRVK LR LR
comp=Z,639nm,21.0s,MS4.8
BRVK Borovoye 67.37 329 eP P 19 48 09.3 -1.4
BRVK pmax pmax
comp=Z,31nm,1.3s,mb5.2
BRVK MLR MLR
comp=Z,639nm,21.0s,MS4.8
DRV Dumont d'Urvil 68.87 173 P sP 19 48 39.0 +7.2
DRV SP ScS 19 58 25.0 +7.0
DRV L 20 06 00.0
DRV R 20 11 00.0
TIXI Tiksi 70.40 2 eP P 19 48 26.1 -3.0
comp=Z,19nm,1.1s,mb4.9
TIXI Tiksi 70.40 2 eP P 19 48 27.4 -1.8
TIXI eS S 19 57 35.0 -4.8
TIXI pmax pmax
comp=Z,22nm,1.3s,mb4.9
TIXI MLR MLR
comp=Z,1µm,17.0s,MS5.2
BILL Bilibino 72.97 16 P P 19 48 44.5 -0.3
comp=Z,19nm,1.3s,mb4.9
BILL LR LR
comp=Z,5µm,20.0s,MS5.8
BILL Bilibino 72.97 16 eP P 19 48 43.4 -1.3
BILL e 19 48 58.0
BILL pmax pmax
comp=Z,5.0nm,1.2s,mb4.3
AKTK Aktyubinsk 73.18 323 P P 19 48 45.5 -0.9
AKTK LR LR 20 23 31.2
AKTO Aktyubinsk 73.18 323 P P 19 48 45.5 -0.9
comp=Z,2.8nm,0.7s,mb4.3,baz=120,slow=8.7,SNR=11
AKTO LR LR 20 23 31.2
comp=Z,740nm,20.9s,MS4.9,baz=113,slow=38
SVE Sverdlovsk 74.03 330⇑ eP P 19 48 50.3 -0.9
SVE eS S 19 58 23.1 +1.1
SVE pmax pmax
comp=Z,44nm,1.2s,mb5.3
SVE MLR MLR
comp=Z,657nm,19.0s,MS4.9
ARU Arti 74.94 329 eP P 19 48 54.5 -2.0
comp=Z,34nm,1.2s,mb5.2
ARU e 19 49 09.5
ARU LR LR
comp=Z,628nm,20.0s,MS4.9
ARU Arti 74.94 329⇑ eP P 19 48 54.2 -2.3
ARU pmax pmax
comp=Z,6.0nm,0.8s,mb4.6
MIB Mutribah 76.74 300 eP P 19 49 05.8 -1.6
MIB AMb AMB 19 49 19.4
comp=Z,20nm,0.7s,mb5.1
OPO Ambohidratompo 76.75 251 P P 19 49 06.6 -1.0
comp=Z,9.1nm,1.0s,mb4.7,baz=76,slow=4.2,SNR=7.3
NAY Al-Naaiem 76.77 300 eP P 19 49 05.4 -2.1
NAY AMb AMB 19 49 17.0
comp=Z,8.2nm,0.9s,mb4.7
RST Umm Al-Ruwaisa 77.01 300 eP P 19 49 07.4 -1.5
RST AMb AMB 19 49 20.1
comp=Z,35nm,1.1s,mb5.2
MAK Makhachkala 78.38 314 eP P 19 49 14.1 -2.1
MAK eS S 19 59 05.9 -4.4
MAK pmax pmax
comp=Z,150nm,1.5s,mb5.7
MAW Mawson 80.09 200 P P 19 49 25.9 +0.8
comp=Z,12nm,1.1s,mb4.7,baz=78,slow=6.0,SNR=5.4
MAW LR LR 20 19 54.7
comp=Z,846nm,19.2s,MS5.1,baz=66,slow=32
DYDN Diyadin 80.78 310 eP P 19 49 30.4 +1.1
ZEI Tsey 80.98 313 eP P 19 49 31.3 +0.9
ZEI e*PP pP 19 49 41.3 +2.1
VNDA Vanda 81.51 172 P P 19 49 33.0 +0.4
comp=Z,17nm,0.7s,mb5.1,baz=314,slow=6.1,SNR=103
VNDA LR LR 20 24 53.7
comp=Z,1µm,19.5s,MS5.2,baz=327,slow=35
KIV Kislovodsk 81.99 314 P P 19 49 36.0 +0.3
comp=Z,8.4nm,1.0s,mb4.6
KIV LR LR
comp=Z,385nm,19.0s,MS4.8
KIV Kislovodsk 81.99 314 eP P 19 49 34.1 -1.6
KIV pmax pmax
comp=Z,7.0nm,1.3s,mb4.4
SBA Scott Base 82.47 171 eP P 19 49 38.4 +0.9
comp=Z,65nm,1.4s,mb5.4
SBA e pP 19 49 47.7 +1.3
SBA Scott Base 82.47 171 eP P 19 49 38.4 +0.9
SBA e pP 19 49 47.7 +1.3
SBA pmax pmax
comp=Z,65nm,1.4s,mb5.4
PRGR Permogore 82.80 332 eP P 19 49 37.0 -2.5
PRGR eS S 19 59 54.6 -1.2
PRGR pmax pmax
comp=Z,24nm,1.2s,mb5.1
SOC Sochi 84.10 314 eP P 19 49 44.8 -1.8
SOC e*PP pP 19 49 54.7 -0.8
SOC eS S 20 00 00.7 -9.0
SOC eSSS 20 09 00.5
SOC pmax pmax
comp=Z,16nm,1.5s,mb4.9
MALT Malatya 84.78 308 eP P 19 49 51.4 +1.1
comp=Z,17nm,1.3s,mb5.0
MALT e pP 19 50 01.3 +2.3
MALT Malatya 84.78 308 eP P 19 49 51.4 +1.2
MALT e pP 19 50 01.3 +2.2
MALT pmax pmax
comp=Z,17nm,1.3s,mb5.0
SVW2 Sparrevohn 84.86 29 eP P 19 49 49.8 -0.2
TTA Tatalina 84.88 27 eP P 19 49 45.0 -5.2
comp=Z,83nm,2.1s,mb5.5
TTA Tatalina 84.88 27 eP P 19 49 45.0 -5.2
TTA pmax pmax
comp=Z,83nm,2.1s,mb5.5
VRSR Storozhevoye 85.00 321 eP P 19 49 49.7 -1.3
VRSR pmax pmax
comp=Z,2.0nm,1.1s,mb4.2
VRSR pmax pmax
comp=N,2.0nm,3.2s
VRSR pmax pmax
comp=E,6.0nm,4.1s
KMBO Kilima Mbogo 85.55 269 eP P 19 49 55.5 +1.0
comp=E,22nm,1.5s,mb5.2
KMBO LR LR
comp=Z,607nm,20.0s,MS5.0
KMBO Kilima Mbogo 85.55 269 eP P 19 49 55.6 +1.1
KMBO pmax pmax
comp=Z,22nm,1.5s
KMBO MLR MLR
comp=Z,607nm,20.0s
KMBO Kilima Mbogo 85.55 269 P P 19 49 55.5 +1.0
comp=Z,5.3nm,1.2s,mb4.7,baz=49,slow=8.1,SNR=8.8
KMBO LR LR 20 27 38.8
comp=Z,502nm,19.1s,MS4.9,baz=96,slow=35
ANN Anapa 85.81 315 eP P 19 49 52.0 -3.2
ANN e 19 50 07.2
ANN eS S 20 00 15.3 -11
ANN eSS SS 20 06 00.7 -3.1
ANN pmax pmax
comp=Z,58nm,1.3s,mb5.7
KDAK Kodiak Island 86.08 32 P P 19 49 56.9 +0.6
comp=Z,2.2nm,0.6s,mb4.6,baz=221,slow=18,SNR=4.6
MOS Moscow 86.23 326 eP P 19 49 55.9 -1.1
MOS e pP 19 50 02.4 -3.5
MOS e 19 53 23.1
MOS e 20 00 24.4
ANDN Andirin 86.40 307 eP P 19 49 58.7 +0.4
OBN Obninsk 86.80 325 eP P 19 49 58.4 -1.4
comp=Z,52nm,1.3s,mb5.6
OBN LR LR
comp=Z,601nm,20.0s,MS5.0
OBN Obninsk 86.80 325⇓ iP P 19 49 59.1 -0.7
OBN i 19 50 13.0
OBN pmax pmax
comp=Z,24nm,1.1s,mb5.3
AVNT Avonos 87.59 309 iP P 19 50 02.4 -1.6
PMR Palmer 88.00 29 P P 19 50 04.1 -1.3
MCK McKinley 88.12 26 eP P 19 50 04.4 -1.6
comp=Z,14nm,1.1s,mb5.1
MCK McKinley 88.12 26 eP P 19 50 04.4 -1.6
MCK pmax pmax
comp=Z,14nm,1.1s,mb5.1
PPT Papeete 88.14 108 eS S 20 00 52.5 +2.4
comp=Z,1µm,27.5s
PPT Papeete 88.14 108 eLR LR 20 18 31.7
comp=Z,392nm,26.5s
PPT Papeete 88.14 108 LR LR 20 26 40.8
comp=Z,268nm,18.9s,MS4.7,baz=279,slow=34
TBI Tubuai 88.44 113 eS S 20 00 57.7 +4.9
comp=Z,859nm,28.2s
TBI Tubuai 88.44 113 eLR LR 20 18 27.8
comp=Z,291nm,34.2s
APA Apatity 88.61 337⇓ eP P 19 50 06.5 -1.7
APA pmax pmax
comp=Z,62nm,1.6s,mb5.7
APA MLR MLR
comp=Z,2µm,17.0s,MS5.5
COLA College 88.61 25 eP P 19 50 08.5 +0.2
SYO Syowa Base 88.71 201⇑ eP P 19 50 06.4 -2.3
SYO Syowa Base 88.71 201⇓ ePcP PcP 19 50 08.0 -2.2
SYO Syowa Base 88.71 201⇓ ePP PP 19 53 34.6 -2.9
CSS Prodhromos 88.83 305 eP P 19 50 09.5 -0.5
comp=Z,48nm,1.1s,mb5.7
JOF Joensuu 89.56 333 ep P 19 50 10.2 -2.6
comp=Z,4.6nm,0.6s,mb5.0
AKASG Malin Array Be 91.29 321 P P 19 50 19.2 -2.0
AKASG LR LR 20 37 41.1
AKASG Malin Array Be 91.29 321 iP P 19 50 18.8 -2.3
AKASG Malin Array Be 91.29 321 P P 19 50 19.2 -1.9
comp=Z,0.2nm,0.2s,mb4.0,baz=83,slow=4.6,SNR=6.7
AKASG LR LR 20 37 41.1
comp=Z,428nm,18.1s,MS4.9,baz=75,slow=40
ARCES ARCESS Array B 91.38 340 P P 19 50 19.0 -2.2
comp=Z,4.0nm,1.0s,mb4.7,baz=338,slow=9.2,SNR=4.0
ARCES LR LR 20 35 37.3
comp=Z,968nm,19.5s,MS5.2,baz=86,slow=38
EGAK Eagle 91.47 25 eP P 19 50 21.3 -0.3
comp=Z,9.1nm,1.2s,mb5.0
KAF Kangasniemi 91.93 332 ep P 19 50 20.4 -3.4
baz=80,slow=4.2
FINES FINESS Array B 92.12 331 P P 19 50 22.2 -2.5
comp=Z,1.4nm,0.7s,mb4.4,baz=37,slow=5.2,SNR=7.6
DAWY Dawson 92.32 26 eP P 19 50 24.6 -0.9
BJO Bjornoya 92.42 345 AMS AMS 20 39 48.1
comp=Z,1µm,15.6s,MS5.4
KBS Kingsbay 92.72 350 eSKS 20 01 02.4
KBS eSS SS 20 07 43.0 +0.5
KBS AMS AMS 20 35 48.3
comp=Z,413nm,19.1s,MS4.9
TRO Tromso 93.63 340 eSS SS 20 07 56.9 +1.0
TRO AMS AMS 20 37 33.9
comp=Z,570nm,17.6s,MS5.1
INK Inuvik 93.89 21 LR LR 20 39 11.2
comp=Z,280nm,18.8s,MS4.8,baz=252,slow=40
LVV L'vov 94.69 320 eP P 19 50 44.3 +7.5
LVV MLR MLR
comp=N,220nm,22.4s,MS4.7
LVV MLR MLR
comp=Z,300nm,22.4s,MS4.7
LVV MLR MLR
comp=E,220nm,21.1s,MS4.7
LSZ Lusaka 94.75 255 eP P 19 50 36.3 -1.5
comp=E,8.8nm,1.1s,mb5.1
LSZ Lusaka 94.75 255 eP P 19 50 36.3 -1.5
LSZ pmax pmax
comp=Z,9.0nm,1.1s,mb5.1
UZH Uzhgorod 95.99 319 eP P 19 50 38.6 -4.2
UZH i 19 50 52.6
UZH eS S 20 01 51.6 -8.1
TAOE Nuku Hiva Isla 97.19 99 eLR LR 20 22 32.5
comp=Z,1µm,26.6s
NSS Namsos 97.70 336 AMS AMS 20 41 57.7
comp=Z,686nm,14.0s,MS5.3
NOA NORSAR Array B 99.19 333 pP pP 19 51 09.2 +3.3
comp=Z,2.4nm,1.0s,baz=70,slow=4.7,SNR=5.9
NOA LR LR 20 41 19.9
comp=Z,1µm,18.1s,MS5.4,baz=75,slow=39
DPC Dobruska-Polom 99.48 321 AMS AMS 20 38 10.0
comp=Z,600nm,20.2s
MOL Molde 100.25 335 AMS AMS 20 42 19.3
comp=Z,1µm,15.1s,MS5.5
TREC Trest 100.25 321 AMS AMS 20 43 30.0
comp=Z,600nm,18.3s
KONO Kongsberg 100.43 332 AMS AMS 20 41 13.5
comp=Z,605nm,19.4s,MS5.1
PVCC Panska Ves 100.52 322 AMS AMS 20 43 20.0
comp=Z,600nm,21.4s
PRU Pruhonice 100.68 321 AMS AMS 20 43 30.0
comp=Z,600nm,18.3s
BRG Berggiesshubel 100.81 322 eP PKiKP 19 55 21.1 -9.0
comp=Z,7.5nm,1.5s
BRG e 20 02 39.0
BRG i 20 03 59.0
BRG e 20 09 36.0
BRG comp=N,362nm,20.0s
BRG comp=E,397nm,19.0s
BRG comp=Z,528nm,21.1s
CLL Collm 101.26 323 ePP PP 19 55 21.0 +5.6
CLL i PKiKP PKiKP 19 55 38.6 +7.7
CLL eSKSac SKSac 20 01 42.0 -1.9
CLL eSdif Sdif 20 02 44.0 0.0
CLL eSP SP 20 04 13.0 -1.8
CLL ePPS 20 05 12.0
CLL eSS SS 20 09 51.0 +6.9
CLL eSSS 20 13 32.0
CLL ex x 20 17 54.0
JMIC Jan Mayen 101.28 345 AMS AMS 20 43 13.6
comp=Z,394nm,22.7s,MS4.9
KHC Kasperske Hory 101.51 321 AMS AMS 20 46 40.0
comp=Z,800nm,20.8s
RKT Rikitea 101.76 113 eLR LR 20 24 52.4
comp=Z,780nm,36.8s
NKC Novy Kostel 101.91 322 AMS AMS 20 42 00.0
comp=Z,700nm,17.4s
BER Bergen 102.12 333 eSS SS 20 09 44.7 -11
BER AMS AMS 20 41 55.1
comp=Z,1µm,23.0s,MS5.4
YKA Yellowknife Ar 103.36 24 pP 19 51 27.0
comp=Z,0.4nm,0.8s,baz=307,slow=4.9,SNR=3.4
YKA PKKPbc PKKPbc 20 07 19.1 +7.0
comp=Z,0.1nm,0.6s,baz=106,slow=2.7,SNR=4.5
KRMB Red Mountain 106.43 46 ePdif Pdif 19 51 30.8 +1.5
KRMB e 19 51 42.8
NVAR Mina Array Bea 111.49 48 PKKPbc PKKPbc 20 06 52.9 +7.0
comp=Z,1.3nm,1.1s,baz=108,slow=6.0,SNR=6.0
PDAR Pinedale Array 115.80 40 PKKPbc PKKPbc 20 06 30.9 -0.6
comp=Z,2.4nm,1.0s,baz=96,slow=1.8,SNR=14
MSU Marysvale 115.91 46 ePKPdf PKPdf 19 55 59.3 +0.6
MSU e 19 56 09.2
MVCO Mesa Verde 119.10 45 ePKPdf PKPdf 19 56 06.2 +1.4
TORD Torodi Ar. Bea 119.85 286 PKP PKPdf 19 56 05.6 -1.4
TORD pPKP pPKPdf 19 56 17.0 +0.9
TORD PKKPbc PKKPbc 20 06 18.6 +2.3
TORD Torodi Ar. Bea 119.85 286 PKP PKPdf 19 56 05.6 -1.3
comp=Z,1.8nm,0.8s,baz=59,slow=1.0,SNR=7.6
TORD pPKP pPKPdf 19 56 17.0 +0.9
comp=Z,2.7nm,0.6s,baz=134,slow=1.3,SNR=8.1
TORD PKKPbc PKKPbc 20 06 18.6 +2.3
comp=Z,1.4nm,0.8s,baz=251,slow=6.8,SNR=5.4
ANMO Albuquerque 121.59 47⇑ iPKIKP PKPdf 19 56 09.2 -0.6
DBIC Dimbokro 127.14 279 PKP PKPdf 19 56 20.9 -0.1
comp=Z,10.0nm,1.1s,baz=11,slow=5.7,SNR=4.6
DBIC pPKP pPKPdf 19 56 31.9 +1.7
comp=Z,9.5nm,1.1s,baz=140,slow=5.4,SNR=4.2
JCT Junction City 128.65 48 ePKPdf PKPdf 19 56 24.0 +0.6
JCT e 19 56 32.7
MIAR Mount Ida 130.73 40 ePKPdf PKPdf 19 56 27.9 +0.6
PLCA Paso Flores 138.89 165 PKP PKPdf 19 56 43.8 +1.5
comp=Z,3.3nm,0.9s,baz=200,slow=8.0,SNR=4.7
LPAZ La Paz 161.60 145 PKP PKPdf 19 57 18.6 +1.1
comp=Z,1.3nm,0.9s,baz=141,slow=1.7,SNR=6.3
LPAZ PKPab PKPab 19 58 04.7 +2.5
comp=Z,2.3nm,0.8s,baz=280,slow=1.4,SNR=6.3

IDC 31 20:02:52.0±2.5, 1522S×17757W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, MS4.0/1, Ms1 4.0/1, ms1mx3.2/27, Error ellipse: s-maj=161.6km s-min=29.9km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**22.70**	**282**	LR	LR	20 15 25.2	
	comp=Z,321nm,18.5s,baz=181,slow=33						
STKA	**Stephens Creek**	**40.67**	**239**	P	P	20 10 33.6	-0.6
	3.3nm,1.0s,baz=84,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**46.35**	**252**	P	P	20 11 20.6	+0.4
	0.7nm,0.6s,baz=84,slow=8.4,SNR=13						
NVAR	**Mina Array Bea**	**76.93**	**44**	P	P	20 14 47.2	+0.8
	0.3nm,0.6s,baz=213,slow=8.2,SNR=3.7						
GERES	**GERESS Array B**	**145.21**	**347**	PKPbc	PKPbc	20 22 29.1	-2.1
	0.5nm,0.8s,baz=14,slow=2.8,SNR=4.1						
MMAI	**Mount Meron Ar**	**145.28**	**307**	PKPbc	PKPbc	20 22 32.0	+0.1
	3.5nm,1.0s,baz=90,slow=5.8,SNR=4.6						

*IDC **31** 20:03:02.3±3.8, 878N×124 24E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.6/3, Error ellipse: s-maj=430.3km s-min=28.5km az=63.0*

*MAN **31** 20:03:02, 935N×125 35E, h1km, mb4.7, ML3.6, MS3.5*

*ISCJB **31** 20:03:03.2±1.0, 938N±004×125 46E±007, h18km±8km, mb3.5/3, Error ellipse: s-maj=12.2km s-min=5.8km az=15.2*

ISC 31 20:03:02.9±0.9, 936N±004×12542E±007, h7km±6km, n14, σ1§04/19, mb3.5/3, 3C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.42**	**10**⇑	eP	**Pg**	**20 03 10.8**	**-0.4**
SCPH				eS	**Sg**	**20 03 16.8**	**+0.1**
MSLP	**Maasin**	**0.94**	**324**	eP	**Pg**	**20 03 20.0**	**-1.1**
CGP	**Cagayan de Oro**	**1.15**	**218**⇑	iP	**Pg**	**20 03 24.7**	**-0.3**
CGP				eS	**Sg**	**20 03 41.1**	**+1.2**
BUKP	**Musuan**	**1.51**	**193**	eP	**Pn**	**20 03 30.5**	**0.0**
TBP	**Tagbilaran**	**1.57**	**282**	eP	**Pg**	**20 03 40.0**	**+7.0**
LLP	**Lapu-Lapu**	**1.71**	**304**	eP	**Pn**	**20 03 33.4**	**+0.2**
LLP				eS	**Sn**	**20 03 54.0**	**-1.4**
PLP	**Palo**	**1.84**	**347**	eP	**Pn**	**20 03 36.2**	**+1.2**
PLP				eS	**Sn**	**20 04 00.2**	**+1.6**
OCLP	**Ormoc**	**1.86**	**335**	eP	**Pn**	**20 03 34.7**	**-0.5**
DCPH	**Dipolog City**	**2.18**	**249**⇑	eP	**Pn**	**20 03 38.7**	**-1.0**
DCPH				eS	**Sn**	**20 04 07.2**	**+0.3**
PAGZ	**Pagadian**	**2.51**	**233**	eP	**Pn**	**20 03 45.2**	**+0.9**
CNP	**Catarman**	**3.21**	**347**	eP	**Pn**	**20 03 55.4**	**+1.5**
ASAR	**Alice Springs**	**33.86**	**166**	P	**P**	**20 09 43.5**	**-2.8**
	0.2nm,0.5s,mb3.3,baz=348,slow=7.0,SNR=5.2						
STKA	**Stephens Creek**	**43.83**	**160**	P	**P**	**20 11 10.1**	**+0.3**
	1.7nm,0.8s,mb3.9,baz=327,slow=8.9,SNR=4.2						
MKAR	**Makanchi Array**	**52.24**	**324**	P	**P**	**20 12 13.6**	**-1.2**
	0.4nm,0.7s,mb3.4,baz=120,slow=7.3,SNR=4.9						

*ISCJB **31** 20:06:50.3±0.5, 4370N±004×105 16W±0.06, h0km, Error ellipse: s-maj=6.6km s-min=5.4km az=39.6*

*NEIC **31** 20:06:52.3±0.4, 4374N×105 22W, h0km, ML3.2, Error ellipse: s-maj=6.1km s-min=5.5km az=141.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **31** 20:06:52.1±1.8, 4389N×105 58W, h0km, mb4.2/2, mb1 4.0/5, mb1mx3.6/22, mbtmp3.8/5, ML2.6/2, MS3.5/1, Ms1 3.4/1, ms1mx2.3/42, Error ellipse: s-maj=59.7km s-min=8.5km az=148.0*

ISC 31 20:06:52.4±0.5, 4374N±004×10521W±006, h0km, n38, σ0§98/39, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHWY	Pilot Hill	2.44	184	*e*Pn	Pn	20 07 34.5	+1.0
RWWY	Rawlins	2.53	216	*e*Pn	Pn	20 07 35.6	+1.0
LAO	LASA Array	3.04	347	*e*Pn	Pn	20 07 41.6	+0.1
LAO				*e*Sn	Sn	20 08 21.7	+3.1
RLMT	Red Lodge	3.22	297	*e*Pn	Pn	20 07 44.1	-0.1
PDAR	Pinedale Array	3.32	254	Pn	Pn	20 07 45.6	+0.1
	5.4nm,0.3s,baz=72,slow=16,SNR=144						
PDAR				Lg		20 08 29.4	
	9.9nm,0.3s,baz=73,slow=26,SNR=4.9						
BW06	Boulder Array	3.32	254	*e*Pn	Pn	20 07 45.5	-0.1
LOHW	Long Hollow	3.92	270	*e*Pn	Pn	20 07 54.3	+0.6
ISCO	Idaho Springs	3.95	185	*e*Pn	Pn	20 07 55.4	+1.2
FLWY	Flagg Ranch	3.98	277	*e*Pn	Pn	20 07 54.9	+0.2
MOOW	Moose Ponds	4.01	272	*e*Pn	Pn	20 07 55.6	+0.6
SNOW	Snow King Moun	4.04	268	*e*Pn	Pn	20 07 52.5	-2.8
YNR	Norris Junctio	4.05	286	*e*Pn	Pn	20 07 55.9	+0.3
YFT	Old Faithful	4.12	282	*e*Pn	Pn	20 07 53.1	-3.3
REDW	Red Top Meadow	4.12	267	*e*Pn	Pn	20 07 57.2	+0.7
IMW	Indian Meadow	4.15	274	*e*Pn	Pn	20 07 58.7	+1.7
TPAW	Teton Pass	4.18	269	*e*Pn	Pn	20 07 57.3	0.0
YMR	Madison River	4.24	285	*e*Pn	Pn	20 07 58.6	+0.4
DCID1	Drake Creek	4.34	270	*e*Pn	Pn	20 07 59.1	-0.4
AHID	Auburn Hatcher	4.41	259	Pn	Pn	20 07 56.7	-3.9
SMCO	Snowmass	4.75	197	*e*Pn	Pn	20 08 03.3	-1.8
DGMT	Dagmar	4.78	8	*e*Pn	Pn	20 08 07.0	+1.4
BOZ	Bozeman (W)	4.96	295	*e*Pn	Pn	20 08 07.3	-0.7
HWUT	Hardware Ranch	5.15	248	*e*Pn	Pn	20 08 10.4	-0.2
	11nm,0.3s						
DLMT	Dillon	5.52	290	Pn	Pn	20 08 13.7	-2.1
CTU	Camp Tracy	5.73	240	*e*Pn	Pn	20 08 18.5	-0.1
	6.2nm,0.4s						
SPUT	South Promonto	5.88	248	*e*Pn	Pn	20 08 20.8	+0.1
SDCO	Great Sand Dun	5.99	182	*e*Pn	Pn	20 08 22.4	+0.1
	1.5nm,0.3s						
SRU	San Rafael	6.11	223	*e*Pn	Pn	20 08 22.7	-1.2
	8.1nm,0.3s						
ECSD	EROS,Sioux Fal	6.23	87	*e*Pn	Pn	20 08 26.1	+0.7
	7.1nm,0.4s						
BGU	Big Grassy Mou	6.44	247	*e*Pn	Pn	20 08 28.5	+0.1
HLID	Hailey	6.68	272	*e*Pn	Pn	20 08 32.1	+0.4
	1.2nm,0.4s						
AGMN	Agassiz Refuge	7.94	52	*e*Pn	Pn	20 08 48.3	-0.6
	5.1nm,0.4s						
ULM	Lac du Bonnet	9.11	41	Pn	Pn	20 09 03.5	-1.5
ULM				Lg		20 11 34.8	
ULM	Lac du Bonnet	9.11	41	Pn	Pn	20 09 03.5	-1.5
	0.6nm,0.3s,baz=228,slow=12,SNR=8.5						
ULM				Lg		20 11 34.8	
	0.4nm,0.3s,baz=139,slow=20,SNR=2.1						
WUAZ	Wupatki	9.49	212	*e*Pn	Pn	20 09 10.2	0.0
	2.5nm,0.5s						
NVAR	Mina Array Bea	11.21	246	Pn	Pn	20 09 33.9	+0.1
	2.3nm,0.8s,baz=336,slow=8.0,SNR=3.6						
ARCES	ARCESS Array B	61.40	18	P	P	20 17 09.0	-0.6
	3.0nm,1.1s,baz=339,slow=7.4,SNR=4.6						
FINES	FINESS Array B	68.01	23	P	P	20 17 52.8	-0.1

NIED ***31*** *20:24:00, 44.30N×149.30E, h17km, Mw4.3 Best double couple: M0 3.07000×10^15 NP1:ϕs208.00000°, δ27.00000°, λ84.00000°. NP2:ϕs35.00000°, δ63.00000°, λ93.00000°.*

IDC ***31*** *20:24:15.7±0.8, 44.24N×149.20E, h0km, mb4.1/17, mb1 4.2/19, mb1mx4.1/25, mbtmp4.1/19, ML3.3/2, MS3.8/1, Ms1 3.8/1, ms1mx2.9/41, Error ellipse: s-maj=21.5km s-min=16.8km az=130.0*

BJI ***31*** *20:24:16.3, 44.21N×149.43E, h24km, mB5.1, mb4.5, Ms4.0, Msz3.9*

NEIC ***31*** *20:24:17.6±0.4, 44.27N×149.16E, h10km, mb4.5/21, Error ellipse: s-maj=11.9km s-min=6.4km az=144.0*

ISCJB ***31*** *20:24:18.2±0.3, 44.07N±004×149.31E±004, h33km, mb4.3/48, Error ellipse: s-maj=6.1km s-min=2.9km az=151.7*

SKHL ***31*** *20:24:18.0±2.9, 44.24N×149.29E, h37km±4km, mb4.7/2, Ms3.8/1*

JMA ***31*** *20:24:19.1±0.4, 44.33N×149.31E, h30km, M4.6*

MOS ***31*** *20:24:20.3±1.2, 44.33N×149.19E, h43km, mb4.6/19, Error ellipse: s-maj=11.3km s-min=7.3km az=102.9*

SZGRF ***31*** *20:24:29.8, 45.82N×149.92E, h33km, mb4.4, Kuril Islands, Russia*

ISC 31 20:24:20.5±0.3, 4409N±004×14931E±004, h35km, (h18km±4.6km:pP-P), n148, σ1§21/171, mb4.3/48, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.54	319	*i* PN	Pn	20 24 42.0	-3.4
KUR				*i* S	Sn	20 25 02.5	-1.6
KUR				pmax	pmax		
	comp=Z,5μm,1.4s						
KUR				pmax	pmax		
	comp=N,700nm,0.5s						
KUR				pmax	pmax		
	comp=E,680nm,0.5s						
KUR				smax			
	comp=N,2μm,0.5s						
KUR				smax			
	comp=E,3μm,0.5s						
KUR				smax			
	comp=N,10μm,1.6s						
KUR				smax			
	comp=E,7μm,1.6s						
KUR	Kuril'sk	1.54	319⇑	*i* P	Pn	20 24 42.0	-3.4
KUR			⇓	*i* P		20 24 42.0	
KUR				AMB	AMB	20 24 42.6	
	comp=E,5μm,1.4s						
KUR				AMB	AMB	20 24 50.0	
	comp=E,699nm,0.5s						
KUR				AMB	AMB	20 24 50.0	
	comp=E,684nm,0.5s						
KUR				AMB	AMB	20 24 50.0	
	comp=E,2μm,0.5s						
KUR				*e*S	Sn	20 25 02.5	-1.6
KUR				A		20 25 05.4	
	comp=E,2μm,0.5s						
KUR				A		20 25 05.4	
	comp=E,3μm,0.5s						
KUR				A		20 25 16.0	
	comp=E,10μm,1.6s						
KUR				A		20 25 16.0	
	comp=E,7μm,1.6s						
YUK	Yuzh-Kuril'sk	2.48	270	*e*P	Pn	20 24 57.7	-0.7
YUK				*i* S	Sn	20 25 26.0	-1.4
YUK				A		20 25 42.0	
	comp=E,2μm,0.5s						
YUK				A		20 25 42.0	
	comp=E,700nm,0.5s						
YUK				A		20 25 45.0	
	comp=E,3μm,1.0s						
YUK				A		20 25 45.0	
	comp=E,2μm,1.0s						
YUK				AMS	AMS	20 27 14.0	
	comp=E,4μm,23.0s						
YUK				AMS	AMS	20 27 14.0	
	comp=E,3μm,15.0s						
NEM2	Nemuro 2	2.68	256	P	Pn	20 25 00.1	-1.0
NEM2				*e*S	Sn	20 25 30.7	-1.6
JRA	Rausu	3.02	269	P	Pn	20 25 06.1	+0.3
JRA				*e*S	Sn	20 25 42.1	+1.4
JNK	Nakash	3.36	263	P	Pn	20 25 10.1	-0.3
JNK				*e*S	Sn	20 25 48.7	-0.2
JAK	Akkeshi	3.52	254	P	Pn	20 25 12.1	-0.6
JAK				*e*S	Sn	20 25 51.7	-1.4
JTKR	Abashiri--Toko	3.89	270	P	Pn	20 25 18.6	+0.9
JAR	Ashorobuto	4.09	261	P	Pn	20 25 20.9	+0.4
JAR				*e*S	Sn	20 26 07.9	+0.8
JOB	Onbets	4.15	255	P	Pn	20 25 21.5	+0.2
JOB				*e*S	Sn	20 26 07.5	-1.1
JMP	Maruseppu	4.29	271	P	Pn	20 25 24.2	+1.1
JCH	Churui	4.58	253	P	Pn	20 25 27.0	-0.1
JCH				*e*S	Sn	20 26 17.8	-1.2
JKK2	Kamakawa 2	4.74	270	P	Pn	20 25 31.1	+1.8
ASAJ	Asahikawa	4.83	273	P	Pn	20 25 32.6	+2.0
ASAJ	Asahikawa	4.83	273	PN	Pn	20 25 32.5	+1.9
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,976nm,19.6s						
ASAJ	Asahikawa	4.83	273	Pn	Pn	20 25 32.5	+1.9
	comp=Z,2.3nm,0.3s,baz=105,slow=8.6,SNR=21						
ASAJ				LR	LR	20 27 36.9	
	comp=Z,976nm,19.6s,baz=179,slow=42						
JEM	Erimo	4.96	247	P	Pn	20 25 33.6	+1.2
JEM				*e*S	Sn	20 26 28.5	+0.1
ERM	Erimo	4.96	247	*e*Pn	Pn	20 25 33.7	+1.3
JFR	Furan	4.96	262	P	Pn	20 25 34.2	+1.8
JNBK	Urakawa-nobuka	5.12	252	P	Pn	20 25 34.4	-0.2
JNBK				*e*S	Sn	20 26 31.2	-1.2
JAB	Ashibetsu	5.16	266	P	Pn	20 25 37.6	+2.5
JBT2	Biratori 2	5.22	258	P	Pn	20 25 36.1	+0.1
JBT2				*e*S	Sn	20 26 36.4	+1.5
JSS	Shosan	5.36	276	P	Pn	20 25 40.9	+3.0
JWK2	Keihoku	5.42	286	P	Pn	20 25 41.8	+3.1
YSS	Yuzh-Sakhalins	5.42	304	*e*Pn	Pn	20 25 40.0	+1.3
	comp=Z,26nm,0.4s						
YSS	Yuzh-Sakhalins	5.42	304	*e*P	Pn	20 25 40.3	+1.6
YSS				*e*S	Sn	20 26 41.0	+1.2
YSS				A		20 26 46.3	
	comp=Z,30nm,0.7s						
YSS				A		20 26 46.3	
	comp=Z,30nm,0.9s						
YSS				AMS	AMS	20 27 51.0	
	comp=Z,900nm,17.0s						
YSS				AMS	AMS	20 27 51.0	
	comp=Z,600nm,15.0s						
JHR	Hokuryu	5.49	269	P	Pn	20 25 42.4	+2.8
JEW	Eniwo	5.85	260	P	Pn	20 25 46.4	+1.8
JNB	Noboribetsu	6.25	258	P	Pn	20 25 50.6	+0.5
JNB				*e*S	Sn	20 26 59.0	-1.2
JSK	Shakotan	6.44	267	P	Pn	20 25 55.0	+2.3
JKB	Kayabe	6.45	253	P	Pn	20 25 52.9	0.0
JKB				*e*S	Sn	20 27 01.9	-3.4
JYM2	Yakumo 2	6.83	256	P	Pn	20 25 58.3	+0.2
JANG	Nango	6.87	240	P	Pn	20 25 56.7	-1.9
JANG				*e*S	Sn	20 27 08.9	-6.6
JTH	Tanohata	6.92	236	P	Pn	20 25 57.0	-2.3
JTH				*e*S	Sn	20 27 09.9	-6.8
JTM	Tenmabayashi	6.93	244	P	Pn	20 25 58.6	-0.8
JTM				*e*S	Sn	20 27 12.1	-4.9
JSR	Shiriuchi	7.02	252	P	Pn	20 26 00.4	-0.3
JSR				*e*S	Sn	20 27 15.0	-4.2
JOSM	Okushiri--Mats	7.47	258	P	Pn	20 26 07.7	+0.8
OFUJ	Ofunato	7.60	231	P	Pn	20 26 06.4	-2.3
OFUJ				*e*S	Sn	20 27 25.9	-7.6
JRG	Rokugo	8.00	237	P	Pn	20 26 13.2	-0.9
JRG				*e*S	Sn	20 27 38.0	-5.3
SKR	Severo-Kuril's	8.05	33	*e*P	Pn	20 26 13.5	-1.3
TYV	Tymovskoe	8.13	329	*e*P	Pn	20 26 16.2	+0.3
TYV				AMB	AMB	20 26 23.2	
	comp=Z,7.0nm,0.8s						
TYV				AMB	AMB	20 26 23.2	
	comp=Z,11nm,0.8s						
TYV				AMB	AMB	20 26 23.2	
	comp=Z,13nm,0.8s						
TYV				AMB	AMB	20 26 46.0	
	comp=Z,600nm,1.5s						
TYV				AMB	AMB	20 26 46.0	
	comp=Z,500nm,5.0s						
TYV				AMB	AMB	20 26 46.0	
	comp=Z,1μm,1.0s						
JIO	Ouri	8.22	229	P	Pn	20 26 14.7	-2.4
JIO				*e*S	Sn	20 27 39.5	-9.2
JOG2	Oga 2	8.22	243	P	Pn	20 26 17.0	-0.1
JFK	Kawauchi	9.27	226	*e*S	Sn	20 28 06.2	-8.4
MJAR	Matsushiro Arr	11.33	232	Pn	Pn	20 26 58.4	-1.4
	comp=Z,0.2nm,0.3s,baz=29,slow=15,SNR=4.4						
MAJO	Matsushiro	11.33	232	*e*Pn	Pn	20 26 59.1	-0.7
KLR	Kul'dur	13.10	299	*e*PN	Pn	20 27 30.2	+6.3
CN2	Changchun	17.18	277	*e*P	Pn	20 28 17.3	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	17.35	312	*e*P	Pn	20 28 17.5	-2.1
ZEA				AMB	AMB	20 28 28.2	
	comp=Z,14nm,1.2s						
KSRS	Korea Array	17.48	255	P	Pn	20 28 22.0	+0.7
	comp=Z,0.1nm,0.3s,baz=67,slow=11,SNR=2.9						
SEY	Seymchan	18.96	4	*e*P	Pn	20 28 35.0	-4.3
YAK	Yakutsk	21.34	334	*e*P	P	20 29 01.2	-2.9
	comp=Z,14nm,0.6s,mb4.5						
YAK	Yakutsk	21.34	334	*e*P	P	20 29 01.1	-3.0
YAK				*e*S	S	20 32 52.5	-6.3
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.2						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				smax			
	comp=N,2.0nm,1.0s						
BILL	Bilibino	25.62	15	*e*P	P	20 29 44.2	-2.0
	comp=N,7.9nm,0.9s,mb4.2						
BILL	Bilibino	25.62	15	*e*P	P	20 29 44.2	-2.0
BILL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
TIXI	Tiksi	29.36	347	*e*P	P	20 30 15.5	-4.1
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.5						
SONM	Songino Array	29.78	293	P	P	20 30 23.1	-0.5
	comp=Z,0.8nm,0.4s,mb3.8,baz=82,slow=8.8,SNR=9.6						
ZAK	Zakamensk	31.46	298	*e*P	P	20 30 36.4	-2.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.5						
LZH	Lanzhou	35.31	273	*e*P	P	20 31 13.0	+0.9
LZH				AP	pP	20 31 19.0	-3.2
LZH				XP	sP	20 31 22.0	-4.5
LZH				AMB	AMB		
	comp=Z,32nm,1.0s,mb5.2						
LZH				AMB	AMB		
	comp=Z,146nm,5.1s						
TTA	Tatalina	36.19	39	P	P	20 31 20.9	+1.6
	comp=Z,8.3nm,1.1s,mb4.6						
TTA	Tatalina	36.19	39	P	P	20 31 20.9	+1.7
TTA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
GTA	Gaotai	36.77	280	*e*P	P	20 31 25.8	+1.3
GTA				AP	pP	20 31 33.3	-1.4
GTA				XP	sP	20 31 36.5	-2.4
GTA				AMB	AMB		
	comp=Z,5.0nm,0.9s,mb4.3						
IMA2	Indian Mountai	37.52	34	*e*P	P	20 31 29.8	-0.8
KDAK	Kodiak Island	37.87	48	P	P	20 31 32.0	-1.6
	comp=Z,3.6nm,0.8s,mb4.2,baz=0.0,slow=3.0,SNR=3.7						
CD2	Chengdu	37.99	265	P	P	20 31 35.3	+0.4
CD2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.3						
MCK	McKinley	39.41	38	P	P	20 31 48.2	+1.7
	comp=Z,10nm,1.2s,mb4.4						
MCK	McKinley	39.41	38	P	P	20 31 48.2	+1.8
MCK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.4						
COLA	College	39.88	36	P	P	20 31 49.5	-0.8
	comp=Z,10nm,1.3s,mb4.4						
COLA	College	39.88	36	P	P	20 31 49.6	-0.7
COLA				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.4						
ZALV	Zalesovo Beam	42.04	307	P	P	20 32 06.7	-1.5
	comp=Z,0.7nm,0.4s,mb3.7,baz=72,slow=7.4,SNR=6.3						
ZALV				PcP	PcP	20 34 02.8	+0.2
	comp=Z,1.7nm,0.7s,baz=72,slow=4.8,SNR=7.6						
ZAL	Zalesovo	42.05	307	P	P	20 32 06.7	-1.6
ZAL						20 34 02.8	
KMI	Kunming	42.11	259	P	P	20 32 09.8	+0.6
KMI				AP	pP	20 32 15.0	-4.5
KMI				XP	sP	20 32 17.3	-6.3
KMI				AMB	AMB		
	comp=Z,7.0nm,1.3s,mb4.1						
EGAK	Eagle	42.74	36	*e*P	P	20 32 14.4	+0.6
	comp=Z,7.4nm,1.0s,mb4.4						
WMQ	Urumqi	43.41	292	*e*P	P	20 32 19.3	-0.2
INK	Inuvik	45.32	31	*e*P	P	20 32 34.9	+0.5
	comp=Z,142nm,0.9s						
INK	Inuvik	45.32	31	P	P	20 32 35.0	+0.5
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	45.32	31	P	P	20 32 35.0	+0.5
	comp=Z,2.7nm,1.0s,mb4.0,baz=261,slow=10.0,SNR=10						
MK31	Makanchi Array	45.80	298	*e*P	P	20 32 38.3	-0.3
MKAR	Makanchi Array	45.80	298	*i* P	P	20 32 38.7	+0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	45.80	298	P	P	20 32 38.4	-0.2
	comp=Z,2.9nm,0.7s,mb4.3,baz=76,slow=8.6,SNR=24						
KURK	Kurchatov	46.63	304	*e*P	P	20 32 43.2	-1.8
LSA	Lhasa	47.73	273	*e*P	P	20 32 55.7	+1.8
	comp=Z,4.3nm,1.0s,mb4.4						
LSA	Lhasa	47.73	273	*e*P	P	20 32 55.7	+1.8
LSA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BRVK	Borovoye	50.53	310	P	P	20 33 14.0	-0.9
TAPN	Taplejung	51.55	273	*e*P	P	20 33 24.0	+1.0
	comp=Z,16nm,1.1s,mb4.9						
ULHL	Ulahol	51.66	295	P	P	20 33 24.5	+0.9
	SNR=14						
TKM2	Tokmak 2	51.76	296	*e*P	P	20 33 24.5	+0.2
	comp=Z,12nm,1.2s,mb4.7						
TKM2	Tokmak 2	51.76	296	*e*P	P	20 33 24.5	+0.2
TKM2				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
TKM2	Tokmak 2	51.76	296	P	P	20 33 25.3	+1.0
	SNR=6.9						
USP	Ospenovka	52.30	297	P	P	20 33 29.0	+0.6
	SNR=12						
KBK	Karagaybulak	52.31	296	P	P	20 33 29.3	+0.9
	SNR=9.4						
KZA	Kyzart	52.39	295	P	P	20 33 30.9	+1.9
	SNR=19						
JIRN	Jiri	52.47	274	*e*P	P	20 33 30.8	+1.0
	comp=Z,9.1nm,0.6s,mb4.9						
AAK	Ala-Archa	52.61	296	P	P	20 33 31.2	+0.6
	SNR=5.1						
UCH	Uchtor	52.80	296	*e*P	P	20 33 33.6	+1.6
	comp=Z,2.3nm,0.8s,mb4.2						
KKN	Kakani	53.05	275	*e*P	P	20 33 34.8	+0.7
	comp=Z,4.5nm,0.5s,mb4.7						
EKS2	Erkin-Say	53.06	297	*e*P	P	20 33 34.2	+0.2
	comp=Z,8.2nm,0.8s,mb4.7						
EKS2	Erkin-Say	53.06	297	P	P	20 33 34.6	+0.7
	SNR=12						
AML	Almayashu	53.37	296	*e*P	P	20 33 37.1	+0.9
	comp=Z,4.3nm,0.7s,mb4.5						
AML	Almayashu	53.37	296	P	P	20 33 37.6	+1.4
	SNR=6.4						
GKN	Gorkha	53.38	275	*e*P	P	20 33 37.0	+0.5
	comp=Z,6.5nm,0.4s,mb4.9						
RES	Resolute Bay	54.19	17	*e*P	P	20 33 41.6	-0.2
	comp=Z,91nm,0.8s						
KOLN	Koldanda	54.26	276	*e*P	P	20 33 43.8	+0.8
YKA	Yellowknife Ar	54.65	34	*i* P	P	20 33 45.7	+0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	54.65	34	P	P	20 33 45.8	+0.6
	comp=Z,0.8nm,0.7s,mb3.8,baz=296,slow=6.7,SNR=9.3						
ARU	Arti	55.16	317	*e*P	P	20 33 46.6	-2.5
	comp=Z,4.6nm,0.8s,mb4.6						
ARU	Arti	55.16	317	*e*P	P	20 33 46.6	-2.4
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
AKTK	Aktyubinsk	58.49	311	P	P	20 34 11.9	-0.8
AKTO	Aktyubinsk	58.49	311	P	P	20 34 11.9	-0.8
	comp=Z,1.4nm,0.8s,mb4.1,baz=52,slow=13,SNR=4.7						
ARCES	ARCESS Array B	59.47	340	P	P	20 34 18.1	-1.2
	comp=Z,2.7nm,0.8s,mb4.3,baz=39,slow=6.6,SNR=9.5						
JOF	Joensuu	62.51	333	*e*p	P	20 34 38.3	-1.6
	comp=Z,3.8nm,0.3s,mb5.0						
FFC	Flin Flon	64.49	37	*e*P	P	20 34 53.2	0.0
	comp=Z,3.5nm,1.0s,mb4.3						
FFC	Flin Flon	64.49	37	*e*P	P	20 34 53.2	0.0
FFC				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
KAF	Kangasniemi	64.70	334	*e*p	P	20 34 52.9	-1.5
	comp=Z,1.8nm,0.5s,mb4.4,baz=40,slow=6.2						
KAF	Kangasniemi	64.70	334	*e*P	P	20 34 52.9	-1.5
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
FCC	Fort Churchill	64.94	31	*e*P	P	20 34 55.6	-0.4
	comp=Z,2.4nm,0.8s,mb4.3						
FCC	Fort Churchill	64.94	31	*e*P	P	20 34 55.6	-0.4
FCC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WRA	Warramunga Arr	65.17	196	P	P	20 34 58.7	+0.8
	comp=Z,0.7nm,0.9s,mb3.7,baz=12,slow=6.9,SNR=4.8						
FINES	FINESS Array B	65.27	334	*i* P	P	20 34 57.0	-1.1
FINES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	65.27	334	P	P	20 34 56.5	-1.6
	comp=Z,4.4nm,0.8s,mb4.5,baz=51,slow=5.0,SNR=22						
PDAR	Pinedale Array	68.50	51	P	P	20 35 22.3	+3.4
	comp=Z,0.8nm,0.8s,mb3.8,baz=335,slow=4.0,SNR=2.6						
ASAR	Alice Springs	68.88	195	P	P	20 35 22.9	+1.5
	comp=Z,0.1nm,0.4s,baz=12,slow=6.6,SNR=3.3						
NB2	NORSAR Subarra	69.84	340	P	P	20 35 26.6	-0.4
	comp=Z,16nm,1.1s,mb4.9,baz=28,slow=6.5						
NB2	NORSAR Subarra	69.84	340	P	P	20 35 26.6	-0.4
NB2				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
NOA	NORSAR Array B	69.84	340	P	P	20 35 26.5	-0.4
NOA	NORSAR Array B	69.84	340	P	P	20 35 26.5	-0.4
	comp=Z,5.3nm,0.7s,mb4.6,baz=30,slow=6.2,SNR=28						
KIV	Kislovodsk	70.69	313	*e*P	P	20 35 33.9	+1.4
	comp=Z,4.7nm,0.8s,mb4.5						
KIV	Kislovodsk	70.69	313⇓	*e*P	P	20 35 33.5	+1.0
KIV				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
AKASG	Malin Array Be	72.22	325	*i* P	P	20 35 41.0	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	72.22	325	P	P	20 35 41.1	-0.5
	comp=Z,2.2nm,0.5s,mb4.3,baz=37,slow=6.0,SNR=23						
KWP	Kalwaria	75.68	327	*e*P	P	20 36 01.5	-0.3
	comp=Z,28nm,1.3s,mb5.0						
KWP	Kalwaria	75.68	327	*e*P	P	20 36 01.5	-0.3
KWP				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
SCHQ	Schefferville	76.77	21	P	P	20 36 08.5	+0.6
	comp=Z,2.1nm,0.8s,mb4.1,baz=248,slow=9.6,SNR=3.4						
UPC	Upice	77.41	332	*e*P	P	20 36 11.3	-0.3
DPC	Dobruska-Polom	77.43	331	*e*P	P	20 36 12.5	+0.8
DPC				*e*PCP	PcP	20 36 24.7	+2.6
MORC	Moravsky Berou	77.48	330	*e*P	P	20 36 12.0	0.0
	comp=Z,4.7nm,1.0s,mb4.4						
MORC	Moravsky Berou	77.48	330	*e*P	P	20 36

RLS	**Riolos of Patr**	**0.94**	**106**	*e*PB	**Pb**	**20 45 54.7**	**-1.2**
RLS				*e*SB	**Sb**	**20 46 07.2**	**-1.6**
IGT	**Igoumenitsa**	**1.21**	**1**	*e*Pg	**Pg**	**20 45 59.3**	**-0.8**
IGT				*e*Sg	**Sg**	**20 46 18.1**	**+2.4**
IGT	**Igoumenitsa**	**1.21**	**1**	*e*Pg	**Pg**	**20 45 59.3**	**-0.7**
IGT				*e*Sg	**Sg**	**20 46 18.0**	**+2.3**
SELA	**Sela**	**1.24**	**92**	*e*Pg	**Pg**	**20 45 58.9**	**-1.7**
SELA				*e*Sg	**Sg**	**20 46 18.3**	**+1.6**
EVR	**Evrytania**	**1.31**	**63**	*e*PN	**Pn**	**20 46 00.8**	**-1.3**
EVR				*e*SB	**Sb**	**20 46 19.8**	**+0.5**
JAN	**Janina**	**1.39**	**17**	*e*PB	**Pb**	**20 46 03.4**	**-0.2**
KEK	**Kerkira**	**1.45**	**344**	*e*PB	**Pb**	**20 46 04.3**	**-0.1**
MEV	**Metsovon**	**1.62**	**26**	*e*Pg	**Pg**	**20 46 06.6**	**-1.3**
ITM	**Ithomi**	**1.71**	**131**	*e*PN	**Pn**	**20 46 09.0**	**+1.4**
THL	**Klokotos Trika**	**1.81**	**46**	*e*PN	**Pn**	**20 46 10.5**	**+1.5**
VLX	**Vlachokerasia**	**1.89**	**120**	*e*Pb	**Pb**	**20 46 10.3**	**-1.7**
VLX				*e*Sb	**Sb**	**20 46 35.0**	**-1.0**
LKR	**Lokris**	**2.13**	**80**	*e*PN	**Pn**	**20 46 15.0**	**+1.7**
DID	**Didima**	**2.45**	**109**	*e*Pn	**Pn**	**20 46 18.5**	**+0.8**
DID				*e*Sn	**Sn**	**20 46 48.5**	**+0.3**
NEO	**Neokhori**	**2.47**	**66**	*e*Pb	**Pb**	**20 46 18.8**	**-3.1**
NEO	**Neokhori**	**2.47**	**66**	*e*PN	**Pn**	**20 46 20.1**	**+2.0**
FNA	**Florina**	**2.59**	**18**	*e*Pn	**Pn**	**20 46 19.1**	**-0.5**
FNA				*e*Sn	**Sn**	**20 46 50.5**	**-1.2**
FNA	**Florina**	**2.59**	**18**	*e*Pn	**Pn**	**20 46 19.1**	**-0.6**
FNA				*e*Sn	**Sn**	**20 46 50.5**	**-1.1**
VLI	**Veliai**	**2.63**	**127**	*e*PN	**Pn**	**20 46 21.9**	**+1.7**
VLI	**Veliai**	**2.63**	**127**	*e*Pg	**Pg**	**20 46 25.8**	**-1.4**

*ISCJB **31** 20:56:32.0±0.8, 3578N±006×2196E±007, h10km, mb3.8/7, Error ellipse: s-maj=10.4km s-min=5.7km az=38.1*
*CSEM **31** 20:56:34.8±0.3, 3583N×2204E, h16km±2km, ML3.7, Error ellipse: s-maj=6.9km s-min=2.5km az=37.0*
*ATH **31** 20:56:35.8, 3596N×2222E, h11km±9km, MD3.7/12, ML3.6*
*NEIC **31** 20:56:35.7, 3596N×2221E, h10km, ML3.7(ATH), After ATH.*
*IDC **31** 20:56:38.4±3.7, 3592N×2218E, h52km±41km, mb3.6/7, mb1 3.6/8, mb1mx3.3/21, mbtmp3.5/8, ML2.7/1, Error ellipse: s-maj=26.5km s-min=22.1km az=140.0*
ISC 31 20:56:34.4±1.3, 3591N±006×2208E±007, h15km±8km, n29, σ1$24/33, mb3.7/7, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.86**	**64**	*e*PB		**Pb**	**20 56 50.0**	**-1.0**
VLI	**Veliai**	**1.06**	**41**	*e*PB		**Pb**	**20 56 53.9**	**-0.6**
ITM	**Ithomi**	**1.27**	**355**	*e*PN		**Pn**	**20 56 58.5**	**+0.9**
VAM	**Vamos**	**1.80**	**106**	*e*PB		**Pb**	**20 57 05.9**	**-1.2**
GVD	**Gavdhos**	**1.96**	**122**	Pn		**Pn**	**20 57 01.7**	**-5.4**
GVD				*e*Pg		**Pg**	**20 57 12.0**	**0.0**
NAIG	**Nisos Aigina**	**2.16**	**31**	*e*PG		**Pg**	**20 57 14.0**	**-1.9**
RLS	**Riolos of Patr**	**2.20**	**347**	*e*Pn		**Pb**	**20 57 13.5**	**-0.3**
RLS				P		**Pg**	**20 57 17.6**	**+1.1**
KVR	**Kavouri**	**2.35**	**35**	*e*PN		**Pn**	**20 57 15.5**	**+3.1**
IDI	**Anoyia**	**2.38**	**104**	P		**Pn**	**20 57 14.2**	**+1.4**
	2.1nm,0.3s,baz=268,slow=11,SNR=12							
IDI				S		**Sn**	**20 57 41.7**	**-0.1**
	6.6nm,0.3s,baz=71,slow=24,SNR=6.0							
ATH	**Athens Observa**	**2.44**	**32**	*e*PN		**Pn**	**20 57 17.5**	**+3.8**
PTL	**Penteli**	**2.57**	**33**	*e*PN		**Pn**	**20 57 18.5**	**+3.0**
EVR	**Evrytania**	**3.01**	**356**	*e*PB		**Pb**	**20 57 27.0**	**-0.6**
APE	**Apeiranthos**	**3.01**	**66**	*e*PN		**Pn**	**20 57 22.9**	**+1.3**
NEO	**Neokhori**	**3.51**	**15**	P		**Pn**	**20 57 32.4**	**+4.0**
JAN	**Janina**	**3.86**	**346**	*e*PN		**Pn**	**20 57 34.5**	**+1.2**
TIP	**Timpagrande**	**5.34**	**309**	*e*Pn		**Pn**	**20 57 54.0**	**+0.5**
TIP				P			20 57 55.5	
TIP				*e*Sn		**Sn**	**20 58 52.4**	**-2.3**
TIP	**Timpagrande**	**5.34**	**309**	*e*Pn		**Pn**	**20 57 54.0**	**+0.5**
TIP	**Timpagrande**	**5.34**	**309**	P		**Pn**	**20 57 55.5**	**+2.0**
AKASG	**Malin Array Be**	**15.66**	**17**	P		**Pn**	**21 00 17.8**	**+3.4**
	0.5nm,0.3s,baz=214,slow=11,SNR=4.1							
HFS	**Hagfors**	**24.84**	**350**	P		**P**	**21 01 55.6**	**-0.3**
	0.8nm,0.5s,mb3.5,baz=153,slow=11,SNR=10							
FINES	**FINESS Array B**	**25.68**	**4**	P		**P**	**21 02 03.0**	**-0.5**
	0.6nm,0.7s,mb3.3,baz=170,slow=10,SNR=5.4							
NOA	**NORSAR Array B**	**26.09**	**348**	P		**P**	**21 02 07.0**	**-0.2**
	1.0nm,0.9s,mb3.3,baz=161,slow=8.2,SNR=2.7							
NOA	**NORSAR Array B**	**26.09**	**348**	P		**P**	**21 02 06.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**29.16**	**224**	P		**P**	**21 02 35.4**	**+0.3**
	0.8nm,0.7s,mb3.5,baz=35,slow=9.9,SNR=4.6							
ARCES	**ARCESS Array B**	**33.73**	**2**	P		**P**	**21 03 14.5**	**-0.3**
	6.5nm,0.9s,mb4.5,baz=198,slow=8.5,SNR=4.2							
MKAR	**Makanchi Array**	**45.46**	**57**	P		**P**	**21 04 52.0**	**-0.7**
	1.3nm,0.5s,mb4.0,baz=275,slow=7.0,SNR=14							
MKAR	**Makanchi Array**	**45.46**	**57**	P		**P**	**21 04 52.0**	**-0.8**
ZALV	**Zalesovo Beam**	**46.31**	**47**	P		**P**	**21 04 57.4**	**-1.9**
ZALV	**Zalesovo Beam**	**46.31**	**47**	P		**P**	**21 04 57.4**	**-1.9**
	0.6nm,0.3s,mb3.9,baz=270,slow=9.1,SNR=5.0							

IDC 31 20:58:46.0±2.1, 601S×14784E, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.7/15, mbtmp4.0/5, ML4.0/1, Error ellipse: s-maj=47.2km s-min=37.6km az=107.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	**19.07**	**222**	*e*P		Pn	21 03 10.0	-0.9
WRA	**Warramunga Arr**	**19.07**	**222**	P		Pn	21 03 10.2	-0.8
	0.4nm,0.3s,baz=49,slow=12,SNR=28							
WRA				PcP		PcP	21 07 35.4	0.0
	0.0nm,0.3s,baz=41,slow=2.1,SNR=5.2							
ASAR	**Alice Springs**	**22.09**	**216**	P		P	21 03 43.3	+0.4
	1.9nm,0.5s,baz=52,slow=9.1,SNR=59							
BATI	**Kupang**	**24.29**	**259**	P		P	21 04 05.8	+0.5
	6.2nm,0.6s,baz=82,slow=7.1,SNR=2.9							
FITZ	**Fitzroy Crossi**	**24.77**	**239**	*e*P		P	21 04 10.2	+0.5
	5.7nm,0.5s							
FITZ	**Fitzroy Crossi**	**24.77**	**239**	P		P	21 04 10.2	+0.5
	2.8nm,0.5s,baz=57,slow=8.8,SNR=13							
STKA	**Stephens Creek**	**26.39**	**192**	*e*P		P	21 04 25.4	+1.2
	3.0nm,1.6s							
STKA	**Stephens Creek**	**26.39**	**192**	P		P	21 04 24.8	+0.5
	1.2nm,0.5s,baz=21,slow=9.6,SNR=4.8							
TORD	**Torodi Ar. Bea**	**145.90**	**285**	PKPbc		PKPbc	21 18 26.1	-2.5
	0.3nm,0.3s,baz=87,slow=2.7,SNR=7.0							

*ISCJB **31** 21:36:41.0±0.7, 3799N±002×3096E±003, h1km±6km, Error ellipse: s-maj=4.6km s-min=3.6km az=35.3*
*CSEM **31** 21:36:40.6±0.1, 3799N×3095E, h5km, MD3.5, Error ellipse: s-maj=2.6km s-min=1.4km az=126.0*
*DDA **31** 21:36:40.9, 3797N×3100E, h14km±4km, Md3.4*
*ISK **31** 21:36:40.9, 3799N×3092E, h5km, MD3.5*
ISC 31 21:36:42.0±0.6, 3798N±002×3093E±003, h6km±5km, n45, σ0$98/54, 4C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ISP	**Isparta**	**0.36**	**248**	*i* PG		**Pg**	**21 36 47.6**	**-1.4**
ISP				*i* SG		**Sg**	**21 36 53.5**	**-0.2**
BCK	**Bucak**	**0.58**	**208**	PG		**Pg**	**21 36 52.7**	**-0.5**
BCK				SG		**Sg**	**21 37 01.1**	**+0.3**
SHUT	**Suhut-Afyon**	**0.65**	**333**	PG		**Pg**	**21 36 54.0**	**-0.5**
KDHN	**Kadinhani**	**1.08**	**59**	*i* P		**Pg**	**21 37 01.4**	**-1.3**
KDHN				*i* S		**Sg**	**21 37 19.1**	**+2.4**
ANTB	**Antalya**	**1.10**	**192**	PN		**Pn**	**21 37 03.0**	**-0.9**
KONT	**Konya--Tatoy**	**1.13**	**91**	PN		**Pn**	**21 37 02.7**	**-1.7**
KHL	**Karahalli**	**1.16**	**288**	PN		**Pn**	**21 37 03.3**	**-1.5**
KIZT	**Kizilcal**	**1.17**	**39**	PN		**Pn**	**21 37 03.4**	**-1.5**
ALT	**Altintas**	**1.25**	**329**	PN		**Pn**	**21 37 05.2**	**-0.9**
GOLH	**Golhisar**	**1.31**	**236**	*i* P		**Pn**	**21 37 06.2**	**-0.7**
GOLH				*i* S		**Sb**	**21 37 26.0**	**+1.8**
ELL	**Elmali**	**1.47**	**214**	PN		**Pn**	**21 37 09.3**	**+0.2**
DENT	**Denizli**	**1.52**	**262**	PN		**Pn**	**21 37 09.2**	**-0.5**
ESKT	**Eskisehir**	**1.54**	**358**	PN		**Pn**	**21 37 09.7**	**-0.4**
ESKT	**Eskisehir**	**1.54**	**358**	*i* P		**Pn**	**21 37 10.0**	**-0.1**
ESKT				*i* S		**Sn**	**21 37 31.6**	**+1.2**
SEYT	**Eskypehyr**	**1.54**	**358**	*i* P		**Pn**	**21 37 10.0**	**-0.1**
SEYT				*i* S		**Sn**	**21 37 31.6**	**+1.2**
GDZ	**Gediz**	**1.59**	**315**	*i* P		**Pn**	**21 37 10.4**	**-0.3**
GDZ				*i* S		**Sg**	**21 37 35.7**	**+2.6**
KULA	**Kula-Manisa**	**1.87**	**287**	PN		**Pn**	**21 37 14.5**	**0.0**
BORA	**Eskisehir**	**1.94**	**349**	*i* P		**Pn**	**21 37 15.3**	**-0.2**
BORA				*i* S		**Sg**	**21 37 44.2**	**0.0**
FETY	**Fethiye**	**1.99**	**228**	PN		**Pn**	**21 37 16.6**	**+0.4**
ANTO	**Ankara**	**2.38**	**37**	*e*PN		**Pn**	**21 37 21.2**	**-0.4**
ANTO	**Ankara**	**2.38**	**37**	⇓*i* P		**Pg**	**21 37 28.2**	**+0.5**
LOD	**Lodumlu**	**2.38**	**36**	*e*PN		**Pn**	**21 37 21.6**	**-0.1**
DST	**Dursunbey**	**2.42**	**313**	*e*PN		**Pn**	**21 37 21.5**	**-0.7**
GULT	**Gulveren**	**2.47**	**353**	*e*PN		**Pn**	**21 37 22.7**	**-0.2**
MLSB	**Milas**	**2.59**	**256**	*e*PN		**Pn**	**21 37 24.9**	**+0.4**
AKHS	**Akhisar**	**2.61**	**291**	*i* P		**Pn**	**21 37 24.7**	**0.0**
IZI	**Iznik**	**2.61**	**335**	*e*PN		**Pn**	**21 37 24.4**	**-0.4**
IKL	**Isikli**	**2.80**	**127**	*e*PN		**Pn**	**21 37 28.6**	**+1.2**
YLV	**Yalova**	**2.85**	**335**	*e*PN		**Pn**	**21 37 28.5**	**+0.4**
BALB	**Balikesir**	**2.90**	**306**	*e*PN		**Pn**	**21 37 28.5**	**-0.3**
BDRM	**Kayabasi**	**2.92**	**253**	*i* P		**Pn**	**21 37 32.2**	**+3.3**
DAT	**Datca**	**2.95**	**246**	*e*PN		**Pn**	**21 37 29.5**	**+0.1**
MERS	**Mersin**	**3.07**	**110**	*e*PN		**Pn**	**21 37 32.4**	**+1.4**
CDAG	**Cicekdag**	**3.15**	**57**	*i* P		**Pn**	**21 37 31.6**	**-0.6**
CDAG				*i* S		**Sn**	**21 38 09.4**	**-0.7**
ELDT	**Eldivan**	**3.17**	**37**	*i* P		**Pn**	**21 37 32.5**	**0.0**
AVNT	**Avonos**	**3.19**	**74**	*i* P		**Pn**	**21 37 36.3**	**+3.6**
LEF	**Lefka**	**3.26**	**150**	*e*PN		**Pn**	**21 37 33.6**	**-0.1**
CANT	**Cankiri**	**3.35**	**38**	*e*PN		**Pn**	**21 37 35.2**	**+0.2**
SAFT	**Safranbolu**	**3.53**	**22**	*e*PN		**Pn**	**21 37 37.6**	**+0.2**
EREN	**Erenkoy**	**3.57**	**132**	*e*PN		**Pn**	**21 37 39.1**	**+1.2**
CORM	**Corum**	**3.62**	**51**	*e*PN		**Pn**	**21 37 38.4**	**-0.3**
MALT	**Malatya**	**5.92**	**84**	⇑*i* P		**Pg**	**21 38 41.8**	**+6.4**
TIRR	**Tirgusor**	**6.75**	**344**	⇑*i* P		**Pn**	**21 38 25.9**	**+4.3**
MLR	**Muntele Rosu**	**8.38**	**335**	⇑*i* P		**Pn**	**21 38 48.3**	**+4.3**
PKSM	**Moragy**	**12.28**	**316**	⇑*i* P		**Pn**	**21 39 40.0**	**+2.7**

*IDC **31** 21:44:45.0±32.0, 2269S×17926W, h550km±313km, mb3.4/4, mb1 3.6/4, mb1mx3.2/14, mbtmp3.4/4, Error ellipse: s-maj=217.6km s-min=93.6km az=82.0*
NEIC 31 21:44:40.4±2.0, 2286S×17893W, h514km±23km, mb4.5/8, Error ellipse: s-maj=51.9km s-min=15.1km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.19**	**39**	P		P	21 47 10.6	+0.1
	42nm,1.0s							
CTA	**Charters Tower**	**32.47**	**268**	*e*P		P	21 50 28.5	+0.2
	9.0nm,0.4s							
CTA	**Charters Tower**	**32.47**	**268**	P		P	21 50 28.5	+0.3
	10nm,0.4s,baz=97,slow=11,SNR=24							
CTAO	**Charters Tower**	**32.47**	**268**	*e*P		P	21 50 28.2	0.0
	12nm,0.5s							
STKA	**Stephens Creek**	**36.03**	**247**	*e*P		P	21 50 58.1	+0.1
	2.7nm,1.5s							
STKA	**Stephens Creek**	**36.03**	**247**	P		P	21 50 57.9	0.0
	1.2nm,0.4s,baz=84,slow=6.8,SNR=6.5							
ASAR	**Alice Springs**	**43.18**	**259**	P		P	21 51 55.8	+0.1
	2.6nm,0.7s,baz=99,slow=6.8,SNR=25							
WB2	**Warramunga Arr**	**43.46**	**265**	*e*P		P	21 51 57.5	-0.4
WRA	**Warramunga Arr**	**43.47**	**265**	P		P	21 51 57.6	-0.4
	1.9nm,0.3s,baz=96,slow=8.1,SNR=103							
KAKA	**Kakadu**	**47.21**	**274**	*e*P		P	21 52 26.7	0.0
	3.6nm,0.6s							
FORT	**Forrest**	**47.60**	**249**	*e*P		P	21 52 29.2	-0.2
	22nm,0.6s							
FITZ	**Fitzroy Crossi**	**51.90**	**264**	*e*P		P	21 53 02.2	+0.9
	4.8nm,0.6s							
KLBR	**Kellerberrin**	**56.30**	**246**	*e*P		P	21 53 32.3	+0.2
	44nm,1.5s							
AKASG	**Malin Array Be**	**144.62**	**329**	PKP		PKPdf	22 03 17.9	-0.1
	0.3nm,0.4s,baz=47,slow=4.4,SNR=6.0							

*IDC **31** 21:55:23.4±0.5, 2055S×169.15E, h0km, mb4.7/20, mb1 4.8/22, mb1mx4.8/24, mbtmp4.7/22, ML4.2/2, MS5.1/20, Ms1 5.1/20, ms1mx5.0/26, Error ellipse: s-maj=13.1km s-min=11.0km az=67.0*
*BGS **31** 21:55:24.8, 2051S×169.17E, h10km, mb5.3(NEIC)*
*NEIC **31** 21:55:24.8±0.2, 2051S×169.17E, h10km, mb5.3/32, MS5.2/57, MW5.6, Error ellipse: s-maj=9.0km s-min=5.8km az=144.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}2.37; $M_{\theta\theta}$-0.52; $M_{\phi\phi}$-1.85; $M_{r\theta}$1.05; $M_{\theta\phi}$1.31; $M_{\phi r}$-1.96; Best double couple: M_o3.30000×10^{17} NP1:ϕ326.00000°, δ24.00000°, λ85.00000°. NP2: ϕ151.00000°, δ66.00000°, λ92.00000°. Principal axes: T 3.2100, Plg69.0000°, Azm65.0000°; N 0.2800, Plg2.0000°, Azm330.0000°; P -3.4900, Plg21.0000°, Azm239.0000°;*
*GCMT **31** 21:55:24.8±0.1, 2054S×16883E, h24km, MW5.7/101, Moment Tensor Solution. s94,c192; s101,c232; Duration: 1!6 Moment tensor: Scale 10^{17}Nm; M_{rr}3.32±.04; $M_{\theta\theta}$-0.42±.03; $M_{\phi\phi}$-2.90±.03; $M_{r\theta}$0.78±.06; $M_{\theta\phi}$1.37±.03; $M_{\phi r}$-1.57±.06; Best double couple: M_o3.83700×10^{17} NP1:ϕ337.00000°, δ31.00000°, λ92.00000°. NP2:ϕ155.00000°, δ59.00000°, λ89.00000°. Principal axes: T 3.7430, Plg76.0000°, Azm61.0000°; N 0.1860, Plg1.0000°, Azm156.0000°; P -3.9300, Plg14.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*BJI **31** 21:55:26.2, 2013S×169.19E, h18km, mB5.7, mb5.0, Ms5.2, Msz5.0*
*SZGRF **31** 21:55:27.5, 2091S×16972E, h33km, mb5.2, Vanuatu Islands*
*LDG **31** 21:55:27.1±0.2, 2003S×16859E, h10km, Mb5.3/2, Ms5.2/10, Error ellipse: s-maj=15.7km s-min=3.5km az=125.0*
*MOS **31** 21:55:27.4±1.4, 2049S×169.12E, h33km, mb5.5/32, MS5.2/34, Error ellipse: s-maj=11.1km s-min=9.0km az=107.3*
*ISCJB **31** 21:55:27.2±0.2, 2056S±004×169.10E±004, h33km, mb5.1/76, MS5.2/94, Error ellipse: s-maj=6.6km s-min=5.2km az=150.3*
ISC 31 21:55:23.6±2.0, 2053S±004×16918E±004, h0km±11km, n389, σ1$03/185, mb5.2/76, MS5.2/94, 41C-10D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.98**	**238**	Pn		**Pn**	**21 56 10.2**	**-1.8**
	17nm,0.3s,baz=61,slow=18,SNR=117							
DZM				Sn		**Sn**	**21 56 41.0**	**-7.4**
	105nm,0.3s,baz=77,slow=19,SNR=6.5							
HNR	**Honiara**	**14.18**	**320**	*e*Pn		**Pn**	**21 58 37.9**	**-7.8**
	206nm,1.4s							
HNR	**Honiara**	**14.18**	**320**	*e*P		**Pn**	**21 58 50.1**	**+4.4**
HNR				pmax		pmax		
	comp=Z,210nm,1.4s							
HNR	**Honiara**	**14.18**	**320**	Pn		**Pn**	**21 58 39.4**	**-6.4**
	comp=Z,4.6nm,0.3s,baz=126,slow=2.6,SNR=3.0							
HNR				LR		LR	22 02 31.5	
	comp=Z,3μm,20.9s,baz=174,slow=30							
RAO	**Raoul Island**	**14.57**	**129**	LR		LR	22 03 19.2	
	comp=Z,8μm,21.9s,baz=121,slow=33							
FUNA	**Funafuti**	**15.37**	**40**	*e*Pn		**Pn**	**21 59 05.4**	**+3.6**
	comp=Z,881nm,2.0s							
EIDS	**Eidsvold**	**17.35**	**250**	⇓*i* Pn		**Pn**	**21 59 28.6**	**+1.5**
	comp=Z,416nm,2.5s							
EIDS				*e*Sn		**Sn**	**22 02 50.4**	**+10**
ARMA	**Armidale**	**18.63**	**235**	⇓*e*Pn		**Pn**	**21 59 44.5**	**+1.5**
	comp=Z,20nm,2.2s							
URZ	**Urewera**	**18.96**	**160**	P		**Pn**	**21 59 47.4**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=343,slow=6.1,SNR=8.7							
URZ				S		**Sn**	**22 03 20.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=142,slow=12,SNR=1.9							
URZ				LR		LR	22 05 59.0	
	comp=Z,11μm,19.6s,baz=23,slow=34							
SNZO	**South Karori**	**21.24**	**168**	P		**P**	**22 00 15.3**	**+4.2**
SNZO				LR		LR		
	comp=Z,10μm,19.0s,MS5.2							
CTA	**Charters Tower**	**21.50**	**267**	*e*P		**P**	**22 00 15.6**	**+1.4**
	comp=Z,27nm,0.9s,mb4.7							
CTA				*e*			22 00 20.9	
CTA				*e*S		**S**	**22 04 14.5**	**+0.9**
CTA	**Charters Tower**	**21.50**	**267**	*e*P		**P**	**22 00 15.6**	**+1.4**
CTA				*e*S		**S**	**22 04 14.5**	**+0.9**
CTA				pmax		pmax		
	comp=Z,27nm,0.9s							
CTA	**Charters Tower**	**21.50**	**267**	P		**P**	**22 00 13.5**	**-0.7**
	comp=Z,62nm,1.0s,mb5.0,baz=91,slow=13,SNR=16							
CTA				S		**S**	**22 04 13.8**	**+0.3**
	comp=Z,5.8nm,0.9s,baz=243,slow=16,SNR=2.3							
CTA				LR		LR	22 05 56.9	
	comp=Z,2μm,20.7s,MS4.5,baz=89,slow=30							
CTAO	**Charters Tower**	**21.50**	**267**	*e*Pn		**P**	**22 00 14.9**	**+0.8**
	comp=Z,125nm,1.1s,mb5.2							
CTAO				*e*S		**S**	**22 04 12.1**	**-1.4**
CTAO				LR		LR		
	comp=Z,8μm,19.0s,MS5.2							
CTAO	**Charters Tower**	**21.50**	**267**	*e*P		**P**	**22 00 14.9**	**+0.7**
CTAO				*e*S		**S**	**22 04 12.1**	**-1.5**
CTAO				pmax		pmax		
	comp=Z,125nm,1.1s,mb5.3							
CTAO				MLR		MLR		
	comp=Z,8μm,19.0s,MS5.2							
CNB	**Canberra Magne**	**22.82**	**226**	⇓*i* P		**P**	**22 00 29.7**	**+1.6**
	comp=Z,108nm,1.3s,mb5.2							
CNB				*e*			22 00 37.1	
CNB				*e*S		**S**	**22 04 41.5**	**+2.9**
RPZ	**Rata Peaks**	**23.17**	**177**	P		**P**	**22 00 30.6**	**-1.1**
	comp=Z,6.7nm,0.9s,mb4.2,baz=292,slow=18,SNR=2.2							
RPZ				LR		LR	22 08 25.0	
	comp=Z,7μm,20.6s,MS5.1,baz=344,slow=34							
STKA	**Stephens Creek**	**27.13**	**240**	⇓*i* P		**P**	**22 01 09.3**	**+0.9**
	comp=Z,14nm,0.9s,mb4.7							
STKA				*e*			22 01 15.1	
STKA				*e*S		**S**	**22 05 47.7**	**-0.1**
STKA	**Stephens Creek**	**27.13**	**240**	P		**P**	**22 01 08.3**	**-0.1**
	comp=Z,9.4nm,0.8s,mb4.5,baz=65,slow=8.1,SNR=15							
STKA				LR		LR	22 11 45.0	
	comp=Z,7μm,18.6s,MS5.2,baz=65,slow=36							
TAU	**Tasmania Unive**	**28.88**	**214**	P		**P**	**22 01 30.7**	**+6.7**
TAU				LR		LR		
	comp=Z,4μm,20.0s,MS5.0							
RAR	**Rarotonga**	**29.00**	**97**	PFAKE			22 01 40.0	+15
RAR				LR		LR		
	comp=Z,1.0nm,19.0s							
RAR	**Rarotonga**	**29.00**	**97**	LR		LR	22 10 25.6	
	comp=Z,3μm,20.4s,MS4.9,baz=259,slow=31							
WB2	**Warramunga Arr**	**32.65**	**265**	*e*P		**P**	**22 01 56.0**	**-1.5**
WB2				*e*			22 02 01.6	
WRA	**Warramunga Arr**	**32.66**	**265**	P		**P**	**22 01 56.4**	**-1.2**
	comp=Z,6.9nm,0.9s,mb4.6,baz=89,slow=8.3,SNR=20							
WRA				LR		LR	22 15 19.4	
	comp=Z,8μm,18.7s,MS5.4,baz=95,slow=37							
ASAR	**Alice Springs**	**32.78**	**258**	P		**P**	**22 01 58.0**	**-0.6**
	comp=Z,18nm,0.9s,mb5.0,baz=81,slow=9.0,SNR=112							
TBI	**Tubuai**	**38.38**	**102**	*e*S		**S**	**22 08 44.3**	**+1.6**
	comp=Z,1μm,30.5s							
TBI				*e*LQ			22 11 39.3	
	comp=Z,8μm,30.5s							
TBI				*e*LR		LR	22 13 24.0	
	comp=Z,3μm,24.2s,baz=269							
PPT	**Papeete**	**39.03**	**93**	*e*S		**S**	**22 08 51.6**	**-1.0**
	comp=Z,2μm,26.8s							
PPT				*e*LQ			22 11 54.6	
	comp=Z,10μm,29.2s							
PPT				*e*LR		LR	22 13 33.6	
	comp=Z,5μm,23.8s,baz=256							
PPT	**Papeete**	**39.03**	**93**	LR		LR	22 15 23.9	
	comp=Z,2μm,18.0s,MS5.0,baz=259,slow=31							
FITZ	**Fitzroy Crossi**	**41.07**	**266**	*e*P		**P**	**22 03 09.4**	**+0.2**
	comp=Z,21nm,0.9s,mb4.9							
FITZ				*e*			22 03 15.0	
FITZ				*e*S		**S**	**22 09 19.2**	**-4.0**
FITZ	**Fitzroy Crossi**	**41.07**	**266**	P		**P**	**22 03 09.2**	**-0.1**
	comp=Z,13nm,1.0s,mb4.6,baz=116,slow=12,SNR=16							
GUMO	**Guam**	**41.48**	**323**	PFAKE			22 03 20.0	+7.5
GUMO				LR		LR		
	comp=Z,2μm,19.0s,MS5.0							
BATI	**Kupang**	**44.94**	**276**	P		**P**	**22 03 41.8**	**+1.1**
	comp=Z,13nm,0.7s,mb4.9,baz=147,slow=3.2,SNR=5.4							
BATI				LR		LR	22 22 33.4	
	comp=Z,6μm,20.5s,MS5.5,baz=137,slow=36							
MBWA	**Marble Bar**	**46.06**	**260**	⇓*i* P		**P**	**22 03 49.3**	**-0.2**
	comp=Z,127nm,1.5s,mb5.7							
MBWA				LR		LR		
	comp=Z,10μm,19.0s,MS5.8							
KLBR	**Kellerberrin**	**47.12**	**246**	*e*P		**P**	**22 03 56.5**	**-1.1**
	comp=Z,43nm,1.3s,mb5.4							
KLBR				*e*			22 04 02.5	
NWAO	**Narrogin (SNO)**	**47.59**	**244**	P		**P**	**22 04 00.9**	**-0.

SSE LR LR
comp=E,461nm,20.6s,MS4.7
SSE LR LR
comp=Z,550nm,19.1s,MS4.8
QSPA South Pole Qui 69.53 180 LR LR 22 35 09.5
comp=Z,2μm,18.4s,MS5.4,baz=250,slow=34
KSRS Korea Array 69.53 326 P **P** **22 06 35.2 +1.1**
comp=Z,3.9nm,1.0s,mb4.5,baz=148,slow=5.7,SNR=9.8
KSRS LR LR 22 35 07.5
comp=Z,846nm,20.4s,MS5.0,baz=125,slow=34
GZH Guangzhou 69.59 306 P **P** **22 06 35.5 +0.7**
GZH S S 22 15 44.5 +0.2
GZH LR LR
comp=N,278nm,20.3s,MS4.8
GZH LR LR
comp=E,547nm,20.4s,MS4.8
GZH LR LR
comp=Z,715nm,19.7s,MS4.9
QIZ Qiongzhong 70.17 300 P **P** **22 06 40.0 +1.5**
QIZ XP sP 22 06 53.0 +15
QIZ S S 22 15 51.0 -0.3
QIZ AMB AMB
comp=Z,319nm,6.9s
QIZ LR LR
comp=E,411nm,19.7s
QIZ LR LR
comp=Z,523nm,19.4s,MS4.8
INCN Inchon 70.24 325 *e*P **P** **22 06 39.4 +0.9**
comp=Z,91nm,1.3s,mb5.7
INCN *e* 22 06 45.9
NJ2 Nanjing 71.09 316 *e*P **P** **22 06 46.0 +2.2**
NJ2 AP 22 06 57.0
NJ2 XP sP 22 06 59.3 +15
NJ2 S S 22 15 57.5 -4.1
NJ2 XS sS 22 16 12.5 +11
NJ2 AMB AMB
comp=Z,50nm,1.0s,mb5.6
NJ2 AMB AMB
comp=Z,730nm,8.2s
NJ2 LR LR
comp=N,2μm,26.3s,MS5.5
NJ2 LR LR
comp=E,2μm,24.4s,MS5.5
NJ2 LR LR
comp=Z,2μm,26.5s,MS5.2
YSS Yuzh-Sakhalins 71.28 341⇑ *i*P **P** **22 06 45.8 +1.2**
comp=Z,132nm,1.5s,mb5.8
YSS LR LR
comp=Z,2μm,20.0s,MS5.4
YSS Yuzh-Sakhalins 71.28 341⇑ *e*P **P** **22 06 44.0 -0.6**
YSS pmax pmax
comp=Z,65nm,1.3s,mb5.6
KULM Kulim 71.96 283⇑ *i*P **P** **22 06 48.4 -1.1**
KULM *e* 22 06 55.5
PSI Prapat 72.58 280 P **P** **22 06 52.7 -0.6**
PSI Prapat 72.58 280 P **P** **22 06 52.7 -0.6**
comp=Z,4.0nm,0.9s,mb4.5,baz=110,slow=12,SNR=6.0
ADK Adak 73.16 9 PFAKE 22 07 10.0 +14
ADK LR LR
comp=Z,2μm,20.0s,MS5.3
WHN Wuhan 73.17 313 P **P** **22 06 56.5 +0.2**
WHN S S 22 16 25.0 -0.5
WHN LR LR
comp=Z,1μm,22.0s,MS5.1
PET Petropavlovsk 73.81 353 *e*P **P** **22 07 00.2 +0.7**
PET *e*S S 22 16 29.9 -1.8
PET *e*PS 22 16 52.8
PET *e*PPS 22 17 12.3
DL2 Dalian 74.01 323 *i*P **P** **22 07 01.5 +0.5**
DL2 S S 22 16 33.5 -1.1
DL2 AMB AMB
comp=Z,40nm,1.4s,mb5.3
DL2 AMB AMB
comp=Z,250nm,7.1s
DL2 LR LR
comp=N,230nm,17.0s,MS4.7
DL2 LR LR
comp=E,280nm,16.0s,MS4.7
DL2 LR LR
comp=Z,330nm,17.6s,MS4.7
MDJ Mudanjiang 74.22 332 PFAKE 22 07 10.0 +7.8
MDJ LR LR
comp=Z,558nm,19.0s,MS4.9
TIA Tai'an 74.87 319 *e*P **P** **22 07 06.5 +0.4**
SNY Shenyang 75.02 326⇑ P **P** **22 07 06.8 -0.1**
SNY S S 22 16 45.0 -0.8
SNY AMB AMB
comp=Z,26nm,2.3s,mb4.8
SNY AMB AMB
comp=Z,558nm,4.1s
SNY LR LR
comp=N,426nm,18.6s,MS5.0
SNY LR LR
comp=E,438nm,16.8s,MS5.0
SNY LR LR
comp=Z,558nm,20.2s,MS4.8
HABR Khabarovsk 75.16 337 *e*P **P** **22 07 05.2 -2.3**
HABR *e* 22 07 17.8
HABR *e* 22 09 52.9
HABR *e*S S 22 16 37.8 -9.3
HABR *e* 22 17 09.5
HABR *e* 22 17 13.8
HABR *e* 22 17 14.6
HABR *e*SS SS 22 21 27.7 -9.2
CN2 Changchun 75.53 329⇑⇑ P **P** **22 07 08.5 -1.2**
CN2 *e*AP 22 07 18.8
CN2 *e*XP sP 22 07 22.8 +13
CN2 *e*S S 22 16 46.8 -4.6
CN2 SS SS 22 21 41.8 -0.8
CN2 AMB AMB
comp=Z,30nm,1.0s,mb5.4
CN2 AMB AMB
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,16.0s,MS5.1
CN2 LR LR
comp=E,600nm,16.0s,MS5.1
CN2 LR LR
comp=Z,600nm,19.0s,MS4.9
GYA Guiyang 76.51 305 P **P** **22 07 16.3 +0.6**
GYA AP 22 07 29.0
GYA PCP PcP 22 07 30.0 +2.6
GYA PP PP 22 10 12.5 +4.6
GYA S S 22 17 01.3 -1.6
GYA SKS 22 17 22.3
GYA SCS ScS 22 17 28.8 -4.3
GYA SS SS 22 22 00.0 +1.8
GYA AMB AMB
comp=Z,40nm,1.0s,mb5.5
GYA AMB AMB
comp=Z,130nm,7.4s
GYA LR LR
comp=N,2μm,18.2s,MS5.7
GYA LR LR
comp=E,3μm,17.3s,MS5.7
GYA LR LR
comp=Z,2μm,18.0s,MS5.4
UNV Unalaska Valle 76.98 15 PFAKE 22 07 30.0 +12
UNV LR LR
comp=Z,7μm,20.0s,MS6.0
KLR Kul'dur 77.02 336 *i* P **P** **22 07 15.0 -3.1**
KLR *e*S S 22 17 04.0 -3.5
KLR *e*SS SS 22 22 06.0 +1.0
KLR pmax pmax
comp=E,63nm,2.0s
KLR pmax pmax
comp=Z,180nm,2.0s,mb5.8
KLR pmax pmax
comp=Z,900nm,8.5s
MAW Mawson 77.22 202 P **P** **22 07 19.9 +0.7**
comp=Z,5.6nm,0.9s,mb4.7,baz=90,slow=7.8,SNR=3.9
MAW LR LR 22 38 25.5
comp=Z,1μm,18.3s,MS5.3,baz=98,slow=33
BJT Baijiatuau 77.89 321⇑ *e*P **P** **22 07 23.8 +0.6**
comp=Z,59nm,1.5s,mb5.5
BJT LR LR
comp=Z,1μm,20.0s,MS5.2
BJT Baijiatuau 77.89 321⇑ *e*P **P** **22 07 23.8 +0.6**
BJT pmax pmax
comp=Z,59nm,1.5s
BJT MLR MLR
comp=Z,1μm,20.0s
BJI Beijing 77.90 321 P **P** **22 07 23.3 +0.1**
BJI XP sP 22 07 37.0 +14
BJI PP PP 22 10 25.0 +5.7
BJI S S 22 17 16.8 -0.7
BJI AMB AMB
comp=Z,19nm,2.2s,mb4.8
BJI AMB AMB
comp=Z,539nm,4.3s
BJI LR LR
comp=N,845nm,17.6s,MS5.2
BJI LR LR
comp=E,622nm,16.8s,MS5.2
BJI LR LR
comp=Z,788nm,20.8s,MS5.0
TIY Taiyuan 78.74 317 *e*P **P** **22 07 30.0 +2.0**
TIY S S 22 17 29.8 +3.2
TIY AMB AMB
comp=Z,472nm,4.0s
TIY LR LR
comp=N,393nm,14.2s
TIY LR LR
comp=E,675nm,21.4s
TIY LR LR
comp=Z,241nm,15.9s,MS4.6
KMI Kunming 78.91 302 P **P** **22 07 30.5 +1.3**
KMI PCP PcP 22 07 39.8 +2.0
KMI AP 22 07 42.3
KMI XP sP 22 07 46.0 +17
KMI S S 22 17 27.5 -1.4
KMI SKS 22 17 39.0
KMI SCS ScS 22 17 48.0 -4.6
KMI SS SS 22 22 36.0 +1.6
KMI AMB AMB
comp=Z,20nm,1.5s,mb4.9
KMI AMB AMB
comp=Z,493nm,3.1s
KMI LR LR
comp=N,371nm,16.3s,MS4.9
KMI LR LR
comp=E,377nm,19.1s,MS4.9
KMI LR LR
comp=Z,633nm,17.0s,MS5.0
XAN Xi'an 78.94 313 P **P** **22 07 29.0 -0.1**
XAN S S 22 17 27.8 -1.1
XAN XS sS 22 17 35.5 +6.5
XAN AMB AMB
comp=Z,14nm,0.9s,mb5.0
XAN AMB AMB
comp=Z,587nm,9.4s
XAN LR LR
comp=E,426nm,20.7s
XAN LR LR
comp=Z,698nm,16.6s,MS5.1
CM31 Chiang Mai Arr 78.98 294 PFAKE 22 07 40.0 +10
CM31 LR LR
comp=Z,384nm,19.0s,MS4.8
CHTO Chiang Mai 79.14 295⇑ *i*P **P** **22 07 31.3 +0.7**
comp=Z,45nm,1.3s,mb5.3
CHTO *e* 22 07 38.3
CHTO *e* 22 07 49.1
CHTO Chiang Mai 79.14 295⇑ *i*P **P** **22 07 31.3 +0.8**
CHTO *e* 22 07 38.3
CHTO *e* 22 07 49.1
CHTO pmax pmax
comp=Z,45nm,1.3s,mb5.3
CD2 Chengdu 80.97 308 P **P** **22 07 40.5 +0.3**
CD2 AP 22 07 51.5
CD2 XP sP 22 07 55.3 +15
CD2 PP PP 22 10 48.0 +2.9
CD2 S S 22 17 47.5 -3.0
CD2 XS sS 22 18 05.3 +15
CD2 SS SS 22 23 07.0 +1.8
CD2 AMB AMB
comp=Z,20nm,1.5s,mb4.9
CD2 AMB AMB
comp=Z,640nm,8.0s
CD2 LR LR
comp=N,530nm,19.2s
CD2 LR LR
comp=E,650nm,24.4s
CD2 LR LR
comp=Z,640nm,28.8s
HHC Hu-ho-hao-te 81.16 320 *e*P **P** **22 07 41.8 +0.8**
HHC AP 22 07 52.0
HHC XP sP 22 07 55.8 +15
HHC PP PP 22 10 48.8 +2.3
HHC S S 22 17 49.5 -2.5
HHC SKS 22 17 53.8
HHC XS sS 22 18 05.8 +14
HHC AMB AMB
comp=Z,25nm,1.0s,mb5.2
HHC AMB AMB
comp=Z,367nm,5.7s
HHC LR LR
comp=N,424nm,18.6s
HHC LR LR
comp=E,502nm,23.7s
HHC LR LR
comp=Z,795nm,23.5s,MS5.0
MA2 Magadan 81.23 351 *e*P **P** **22 07 39.0 -1.9**
MA2 LR LR
comp=Z,2μm,22.0s,MS5.4
MA2 Magadan 81.23 351⇑ *e*P **P** **22 07 38.4 -2.5**
MA2 pmax pmax
comp=Z,4.0nm,1.3s,mb4.3
BTO Baotou 81.96 319 *e*P **P** **22 07 42.8 -2.4**
HIA Hailar 82.19 330 *e*P **P** **22 07 46.0 -0.2**
comp=Z,18nm,1.3s,mb5.0
HIA LR LR
comp=Z,784nm,20.0s,MS5.1
HIA Hailar 82.19 330 *e*P **P** **22 07 46.0 -0.2**
HIA pmax pmax
comp=Z,18nm,1.3s
HIA MLR MLR
comp=Z,784nm,20.0s
LZH Lanzhou 83.55 312 *e*P **P** **22 07 55.8 +2.2**
LZH AP 22 08 03.5
LZH XP sP 22 08 05.5 +12
LZH SKS 22 18 11.0
LZH *e*S S 22 18 14.0 -2.8
LZH XS sS 22 18 26.3 +10
LZH SS SS 22 23 44.3 +1.0
LZH AMB AMB
comp=Z,71nm,1.5s,mb5.7
LZH AMB AMB
comp=Z,316nm,4.4s
LZH LR LR
comp=E,460nm,16.6s
LZH LR LR
comp=Z,712nm,17.5s,MS5.1
SYO Syowa Base 83.69 196⇑ *e*X **P** **22 07 51.2 -2.6**
SYO Syowa Base 83.69 196⇓ *e*pP pP 22 07 55.8 +1.9
SEY Seymchan 84.23 352⇑ *e*P **P** **22 07 54.1 -2.3**
KDAK Kodiak Island 84.26 19 P **P** **22 07 56.2 -0.5**
KDAK LR LR
comp=Z,606nm,19.0s,MS5.0
KDAK Kodiak Island 84.26 19 P **P** **22 07 56.2 -0.5**
comp=Z,6.4nm,0.8s,mb4.9,baz=196,slow=2.7,SNR=5.5
NRGR Nerungri 85.48 337 *e*P **P** **22 08 03.8 +0.9**
CLNS Chul'man 85.55 337 *e*P **P** **22 08 03.4 +0.2**
CLNS *e**PP 22 08 10.4
CLNS *e* 22 11 16.8
CLNS *e*S S 22 18 29.4 -6.4
CLNS *e*PS 22 19 23.2
CLNS pmax pmax
comp=Z,98nm,1.4s,mb5.8
CLNS pmax pmax
comp=N,60nm,1.5s
CLNS pmax pmax
comp=E,11nm,1.2s
CLNS pmax pmax
comp=Z,2.0nm,1.0s,mb4.2
CLNS pmax pmax
comp=N,1.0nm,0.8s
CLNS pmax pmax
comp=E,2.0nm,0.7s
CLNS smax
comp=N,265nm,14.3s
CLNS smax
comp=Z,111nm,13.5s
CLNS smax
comp=E,365nm,16.2s
CLNS MLR MLR
comp=Z,300nm,16.0s,MS4.8
CLNS MLR MLR
comp=N,300nm,21.0s
CLNS MLR MLR
comp=E,300nm,15.0s
IMP Imphal 85.89 298 *ex* **P** **22 08 07.0 +1.3**
IMP *ex* x 22 08 07.0
SVW2 Sparrevohn 86.15 16 *e*P **P** **22 08 06.0 0.0**
KIPM Iron Peak 86.80 45 *e*P **P** **22 08 09.1 -0.8**
CIT Chita 86.97 329 *e*P **P** **22 08 10.6 +0.3**
CIT *e* 22 08 17.6
CIT *e* 22 11 28.2
CIT pmax pmax
comp=Z,78nm,2.8s,mb5.4
KHMM Horse Mountain 87.17 44 *e*P **P** **22 08 11.9 +0.3**
SLKM Skilak Lake 87.18 19 *e*P **P** **22 08 04.4 -6.8**
SLKM Skilak Lake 87.18 19 P **P** **22 08 11.2 0.0**
NVL N'lazarevskaya 87.58 187 *i* P **P** **22 08 13.8 +0.6**
NVL *e*S S 22 18 51.9 -3.6
NVL pmax pmax
comp=Z,9.0nm,0.8s,mb5.2
NVL pmax pmax
comp=N,3.0nm,1.0s
NVL pmax pmax
comp=E,4.0nm,1.0s
NVL MLR MLR
comp=N,587nm,16.6s
NVL MLR MLR
comp=Z,1μm,16.6s,MS5.4
NVL MLR MLR
comp=E,121nm,5.5s
MAIT Maitri 87.58 187 *e*P **P** **22 08 10.1 -3.1**
TNA Tin City 87.58 9 PFAKE 22 08 20.0 +7.0
TNA LR LR
comp=Z,662nm,20.0s,MS5.0
WDC Whiskeytown Da 87.81 45 *e*P **P** **22 08 14.8 +0.1**
comp=Z,18nm,1.4s,mb5.2
WDC Whiskeytown Da 87.81 45 *e*P **P** **22 08 14.8 +0.1**
WDC pmax pmax
comp=Z,18nm,1.4s,mb5.2
SNAA Sanae 87.88 183 *e*P **P** **22 08 13.6 -1.0**
SNAA *e* 22 08 16.1
SNAA *e* 22 08 17.2
SNAA *e* 22 08 19.2
SNAA *e* 22 08 20.9
SNAA *e* 22 08 24.2
SNAA *e* 22 08 28.8
SNAA *e* 22 08 35.5
SNAA Sanae 87.88 183⇑ *e*P **P** **22 08 13.3 -1.3**
SNAA Sanae 87.88 183 P **P** **22 08 14.5 -0.1**
comp=Z,2.7nm,0.9s,mb4.6,baz=214,slow=3.6,SNR=4.4
SHL Shillong 87.91 298 *e*P **P** **22 08 17.0 +1.5**
OHCM Honcut 87.91 47 *e*P **P** **22 08 15.5 +0.3**
GTA Gaotai 87.97 313 *e*P **P** **22 08 14.8 -0.7**
GTA AP 22 08 25.3
GTA XP sP 22 08 29.3 +14
GTA PP PP 22 11 40.5 -1.5
GTA SKS 22 18 38.0
GTA S S 22 18 57.3 -2.8
GTA XS sS 22 19 13.0 +13
GTA SS SS 22 24 49.3 +1.1
GTA AMB AMB
comp=Z,10.0nm,1.6s,mb4.9
GTA AMB AMB
comp=Z,355nm,8.4s
GTA LR LR
comp=N,278nm,19.9s,MS5.0
GTA LR LR
comp=E,451nm,20.6s,MS5.0
GTA LR LR
comp=Z,516nm,18.3s,MS5.0
MWC Mount Wilson 88.00 52 *e*P **P** **22 08 16.2 +0.4**
MWC Mount Wilson 88.00 52 *e*P **P** **22 08 15.8 +0.1**
CMB Columbia Colle 88.05 48⇑ *i*P **P** **22 08 16.0 0.0**
comp=Z,6.8nm,1.0s,mb4.9
CMB LR LR
comp=Z,2μm,20.0s,MS5.4
CMB Columbia Colle 88.05 48⇑ *i*P **P** **22 08 16.0 +0.1**
CMB pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
CMB MLR MLR
comp=Z,2μm,20.0s,MS5.4
YAK Yakutsk 88.08 343 *e*P **P** **22 08 14.8 -0.7**
YAK LR LR
comp=Z,1μm,21.0s,MS5.3
YAK Yakutsk 88.08 343 *c i*P **P** **22 08 15.1 -0.3**
YAK *e*S S 22 18 33.3 -27
YAK *i* 22 18 56.5
YAK *e*SS SS 22 24 48.4 -0.4
YAK *i* SSS 22 28 18.1
YAK pmax pmax
comp=Z,31nm,1.0s,mb5.6
YAK pmax pmax
comp=N,12nm,1.5s
YAK pmax pmax
comp=E,11nm,1.8s
YAK smax
comp=E,253nm,6.2s
YAK smax
comp=Z,140nm,3.4s
YAK smax
comp=N,144nm,4.9s
YAK MLR MLR
comp=Z,835nm,17.0s,MS5.2
YAK MLR MLR
comp=N,757nm,18.0s,MS5.3
YAK MLR MLR
comp=E,698nm,19.0s,MS5.3
SONM Songino Array 88.21 323 P **P** **22 08 16.7 +0.3**
comp=E,4.4nm,1.0s,mb4.8,baz=138,slow=4.1,SNR=24
SONM LR LR 22 48 45.5
comp=E,664nm,19.4s,MS5.1,baz=246,slow=36
YBH Yreka Blue Hor 88.26 44 *e*P **P** **22 08 16.6 -0.2**
comp=E,38nm,1.5s,mb5.5
YBH Yreka Blue Hor 88.26 44 *e*P **P** **22 08 16.6 -0.2**
YBH pmax pmax
comp=Z,39nm,1.5s
ISA Isabella 88.33 51 *e*P **P** **22 08 16.4 -0.9**
comp=Z,27nm,1.4s,mb5.4
ISA LR LR
comp=Z,1μm,19.0s,MS5.4
ISA Isabella 88.33 51 *e*P **P** **22 08 16.4 -0.9**
ISA pmax pmax
comp=Z,27nm,1.4s,mb5.4
ISA MLR MLR
comp=Z,1μm,19.0s,MS5.4
BILL Bilibino 88.33 359⇑ *e*P **P** **22 08 15.3 -1.3**
comp=Z,8.0nm,0.9s,mb5.0
BILL LR LR
comp=Z,616nm,19.0s,MS5.0
BILL Bilibino 88.33 359 *e*P **P** **22 08 14.4 -2.1**
BILL pmax pmax
comp=Z,7.0nm,1.0s,mb5.0
PMR Palmer 88.36 19 PFAKE 22 08 30.0 +13
PMR LR LR
comp=Z,2μm,19.0s,MS5.7
VNA3 Neumayer Olymp 88.47 180 *e*P **P** **22 08 16.9 -0.5**
VNA3 *e* 22 08 18.9
VNA3 *e* 22 08 20.6
VNA3 *e* 22 08 22.4
VNA3 *e* 22 08 23.6
VNA3 *e* 22 08 27.1
VNA3 *e* 22 08 31.4
VNA3 *e* 22 08 40.5
LBCM Butte Creek Ri 88.72 45 P **P** **22 08 19.7 +0.6**
VNA2 Neumayer--Watz 88.76 181 *e*P **P** **22 08 18.6 -0.2**
baz=182,slow=4.5
VNA2 *e* 22 08 20.3
VNA2 *e* 22 08 21.6
VNA2 *e* 22 08 23.4
VNA2 *e* 22 08 25.1
VNA2 *e* 22 08 29.3
VNA2 *e* 22 08 32.8
VNA2 *e* 22 08 41.6
PFO Pinyon Flat Ob 88.93 53 *e*P **P** **22 08 20.6 +0.4**
comp=Z,90nm,2.7s,mb5.5
PFO Pinyon Flat Ob 88.93 53 *e*P **P** **22 08 20.6 +0.4**
PFO pmax pmax
comp=Z,90nm,2.7s,mb5.5
MTUM Tungsten Hills 89.03 49 *e*P **P** **22 08 21.2 +0.7**
VNA1 Neumayer--Stat 89.05 181 *e*P **P** **22 08 19.8 -0.4**
VNA1 *e* 22 08 21.4
VNA1 *e* 22 08 23.5
VNA1 *e* 22 08 24.9
VNA1 *e* 22 08 26.8
VNA1 *e* 22 08 30.6
VNA1 *e* 22 08 34.3
VNA1 *e* 22 08 43.0
GSC Goldstone 89.39 52 *e*P **P** **22 08 22.6 +0.3**

NVAR Mina Array Bea 89.69 49 P P 22 08 24.2 +0.6
comp=Z,6.2nm,1.0s,mb4.8,baz=212,slow=5.4,SNR=16
MOD Modoc 89.92 45 eP P 22 08 24.8 +0.2
MCK McKinley 90.10 17 P P 22 08 26.3 +1.4
comp=Z,8.5nm,1.4s,mb4.8
MCK LR LR
comp=Z,791nm,19.0s,MS5.2
MCK McKinley 90.10 17 P P 22 08 26.3 +1.4
MCK pmax pmax
comp=Z,8.0nm,1.4s,mb4.8
MCK MLR MLR
comp=Z,791nm,19.0s,MS5.2
LSA Lhasa 90.15 302 P P 22 08 26.0 0.0
LSA Lhasa 90.15 302 eP P 22 08 25.5 -0.5
comp=Z,23nm,1.4s,mb5.2
LSA LR LR
comp=Z,411nm,20.0s,MS4.9
LSA Lhasa 90.15 302 eP P 22 08 25.5 -0.5
LSA pmax pmax
comp=Z,23nm,1.4s,mb5.2
LSA MLR MLR
comp=Z,411nm,20.0s,MS4.9
TPNV Topopah Spring 90.51 51 eP P 22 08 27.9 +0.4
comp=Z,25nm,1.5s,mb5.3
TPNV Topopah Spring 90.51 51 eP P 22 08 27.9 +0.4
TPNV pmax pmax
comp=Z,25nm,1.5s,mb5.3
VIPM Ingram Point 90.94 42 P P 22 08 30.2 +0.9
GNW Green Mountain 91.07 39 eP P 22 08 30.8 +1.0
PALK Pallekele 91.09 277 PFAKE 22 08 40.0 +9.2
PALK LR LR
comp=Z,578nm,20.0s,MS5.0
PGC Sidney 91.25 38 eP P 22 08 31.2 +0.6
WVOR Wild Horse Val 91.26 45 eP P 22 08 30.2 -0.6
comp=Z,12nm,1.0s,mb5.2
WVOR Wild Horse Val 91.26 45 eP P 22 08 30.2 -0.7
WVOR pmax pmax
comp=Z,12nm,1.0s,mb5.2
COLA College 91.28 17 P P 22 08 27.9 -2.4
comp=Z,2.8nm,0.7s,mb4.7
COLA LR LR
comp=Z,1μm,20.0s,MS5.3
COLA College 91.28 17 P P 22 08 28.0 -2.4
COLA pmax pmax
comp=Z,3.0nm,0.7s,mb4.7
COLA MLR MLR
comp=Z,1μm,20.0s,MS5.3
ZAK Zakamensk 91.30 324 eP P 22 08 30.7 -0.1
ZAK pmax pmax
comp=Z,8.0nm,2.3s,mb4.6
WPW White Pass 91.41 40 P P 22 08 32.2 +0.7
FMW Mount Fremont 91.45 40 P P 22 08 32.4 +0.8
GSM Grass Mountain 91.50 40 P P 22 08 32.7 +0.8
IRK Irkutsk 91.75 326 eP P 22 08 28.2 -4.6
IRK pmax pmax
comp=Z,23nm,2.2s,mb5.1
TLY Talaya 91.78 325 PFAKE 22 08 40.0 +7.0
TLY LR LR
comp=Z,550nm,20.0s,MS5.0
TLY Talaya 91.78 325 eP P 22 08 32.8 -0.2
TLY pmax pmax
comp=Z,15nm,1.2s,mb5.2
TLY MLR MLR
comp=Z,503nm,20.0s,MS5.0
TAPN Taplejung 92.04 298 eP P 22 08 34.6 -0.2
comp=Z,41nm,1.5s,mb5.5
ODAN Odare 92.12 298 eP P 22 08 35.2 0.0
comp=Z,35nm,1.2s,mb5.5
CCUT Cedar City 92.86 51 eP P 22 08 39.2 +0.9
EGAK Eagle 93.16 19 eP P 22 08 37.8 -1.2
comp=Z,7.6nm,1.1s,mb5.0
MOY Mondy 93.20 325 eP P 22 08 39.5 -0.1
MOY pmax pmax
comp=Z,68nm,3.0s
BMO Blue Mountains 93.20 43 eP P 22 08 39.2 -0.6
comp=Z,49nm,2.8s,mb5.5
DLBC Dease Lake 93.21 27 eP P 22 08 39.5 0.0
DAWY Dawson 93.22 20 eP P 22 08 35.8 -3.5
JIRN Jiri 93.41 298 eP P 22 08 41.4 +0.2
comp=Z,26nm,1.2s,mb5.5
KKN Kakani 94.21 298 eP P 22 08 44.8 0.0
comp=Z,60nm,1.6s,mb5.7
HLID Hailey 94.55 45 eP P 22 08 44.6 -1.4
NEW Newport 94.79 40 PFAKE 22 09 00.0 +13
NEW LR LR
comp=Z,606nm,21.0s,MS5.0
NEW Newport 94.79 40 LR LR 22 46 55.5
comp=Z,601nm,19.1s,MS5.1,baz=51,slow=33
GKN Gorkha 94.82 298 eP P 22 08 46.9 -0.7
comp=Z,50nm,1.6s,mb5.7
KOLN Koldanda 95.60 297 eP P 22 08 50.4 -0.8
comp=Z,44nm,1.7s,mb5.7
HWUT Hardware Ranch 95.72 48 PFAKE 22 09 00.0 +8.6
HWUT LR LR
comp=Z,933nm,20.0s,MS5.3
TIXI Tiksi 95.98 348 eP P 22 08 51.3 -0.6
TIXI Tiksi 95.98 348 eP P 22 08 50.7 -1.2
TIXI pmax pmax
comp=Z,4.0nm,1.4s,mb4.8
ANMO Albuquerque 97.07 55 PFAKE 22 09 10.0 +12
ANMO LR LR
comp=Z,677nm,21.0s,MS5.1
ANMO Albuquerque 97.07 55 eP P 22 08 56.8 -0.9
PDAR Pinedale Array 97.53 47 P P 22 08 59.2 -0.4
comp=Z,1.5nm,1.2s,mb4.6,baz=251,slow=4.5,SNR=6.0
PDAR LR LR 22 50 51.0
comp=Z,625nm,18.5s,MS5.1,baz=249,slow=34
PLCA Paso Flores 97.61 139 LR LR 22 43 41.4
comp=Z,527nm,19.6s,MS5.0,baz=230,slow=30
INK Inuvik 97.78 18 eP P 22 08 57.7 -2.4
comp=Z,364nm,1.4s
INK Inuvik 97.78 18 eP P 22 08 57.7 -2.4
INK pmax pmax
comp=Z,364nm,1.4s
WMQ Urumqi 98.05 314 ⇑P P 22 09 01.8 -0.1
WMQ AP 22 09 12.3
WMQ XP sP 22 09 16.3 +14
WMQ PP PP 22 13 04.0 +2.8
WMQ SKS 22 19 35.8
WMQ S S 22 20 22.8 -7.2
WMQ XS sS 22 20 40.8 +11
WMQ AMB AMB
comp=Z,9.0nm,1.4s,mb5.3
WMQ AMB AMB
comp=Z,168nm,4.2s
WMQ LR LR
comp=N,377nm,20.3s,MS5.0
WMQ LR LR
comp=E,338nm,20.3s,MS5.0
WMQ LR LR
comp=Z,408nm,21.8s,MS4.9
SDCO Great Sand Dun 98.74 53 PFAKE 22 09 20.0 +15
SDCO LR LR
comp=Z,664nm,19.0s,MS5.2
YKA Yellowknife Ar 101.83 27 P Pdif 22 09 19.2 +0.5
comp=Z,0.2nm,0.6s,baz=257,slow=4.7,SNR=5.3
MKAR Makanchi Array 102.61 315 Pdiff Pdif 22 09 23.6 +1.4
comp=Z,0.1nm,0.2s,baz=156,slow=3.9,SNR=2.5
MKAR PP PP 22 13 37.3 +1.6
comp=Z,0.2nm,0.2s,baz=94,slow=8.6,SNR=5.8
ZALV Zalesovo Beam 103.11 323 Pdiff Pdif 22 09 22.6 -1.8
comp=Z,0.3nm,0.4s,baz=67,slow=4.8,SNR=2.1
ZAL Zalesovo 103.11 323 P Pdif 22 09 22.6 -1.8
KURK Kurchatov 105.96 319 PFAKE 22 14 00.0 +11
KURK LR LR
comp=Z,575nm,20.0s,MS5.1
TKM2 Tokmak 2 106.23 310 PFAKE 22 14 00.0 +10
TKM2 LR LR
comp=Z,343nm,20.0s,MS4.9
UCH Uchtor 106.86 309 PFAKE 22 14 00.0 +8.8
UCH LR LR
comp=Z,343nm,21.0s,MS4.9
EKS2 Erkin-Say 107.48 310 PFAKE 22 14 00.0 +7.7
EKS2 LR LR
comp=Z,542nm,21.0s,MS5.1
BRVK Borovoye 111.43 320 PFAKE 22 14 10.0 +11
BRVK LR LR
comp=Z,684nm,20.0s,MS5.2
ARU Arti 118.24 324 PFAKE 22 14 20.0 +7.6
ARU LR LR
comp=Z,551nm,22.0s,MS5.1
ARU Arti 118.24 324 PKIKP PKPdf 22 14 11.6 -0.8
KBS Kingsbay 120.61 355 ePP PP 22 15 33.8 -10
KBS eSS SS 22 32 14.8 +0.9
KBS AMS AMS 23 06 57.8
comp=Z,246nm,22.0s,MS4.8

APA Apatity 125.43 341 ⇑iPKIKP PKPdf 22 14 21.0 -4.9
APA pmax pmax
comp=Z,43nm,1.3s
APA MLR MLR
comp=Z,1μm,20.0s,MS5.5
SCHQ Schefferville 125.98 36 PKP PKPdf 22 14 25.8 -1.5
SCHQ Schefferville 125.98 36 PKP PKPdf 22 14 25.8 -1.5
comp=Z,4.2nm,1.0s,baz=310,slow=7.9,SNR=3.7
ARCES ARCESS Array B 126.29 345 PKP PKPdf 22 14 26.6 -0.9
comp=Z,4.4nm,1.0s,baz=114,slow=2.2,SNR=4.1
MAK Makhachkala 126.73 309 ePKIKP PKPdf 22 14 36.5 +7.4
MAK ePS PS 22 26 22.3 -7.9
MAK pmax pmax
comp=Z,106nm,1.4s
TRO Tromso 127.69 347 e PP 22 16 15.7 -16
TRO AMS AMS 23 04 49.4
comp=Z,286nm,17.1s,MS5.0
KMBO Kilima Mbogo 128.27 251 ePKPdf PKPdf 22 14 33.7 +0.7
KMBO Kilima Mbogo 128.27 251 PKP PKPdf 22 14 33.6 +0.6
comp=Z,1.7nm,0.9s,baz=36,slow=2.0,SNR=5.1
JMIC Jan Mayen 129.51 359 ePP PP 22 16 38.3 -4.9
JMIC AMS AMS 23 11 50.0
comp=Z,332nm,21.1s,MS5.0
KIV Kislovodsk 130.07 311 PFAKE 22 14 50.0 +15
KIV LR LR
comp=Z,461nm,19.0s,MS5.2
KIV Kislovodsk 130.07 311 i PKIKP PKPdf 22 14 34.3 -1.1
KIV pmax pmax
comp=Z,5.0nm,1.1s
OBN Obninsk 130.53 326 PFAKE 22 14 50.0 +14
OBN LR LR
comp=Z,816nm,22.0s,MS5.4
OBN Obninsk 130.53 326 i PKIKP PKPdf 22 14 33.1 -2.9
OBN e 22 16 57.4
OBN pmax pmax
comp=Z,6.0nm,0.7s
OBN MLR MLR
comp=Z,800nm,22.0s,MS5.4
FINES FINESS Array B 131.75 337 PKP PKPdf 22 14 35.3 -2.8
comp=Z,0.5nm,0.5s,baz=48,slow=2.8,SNR=6.5
FINES SKPbc SKPbc 22 18 05.7 +0.6
comp=Z,1.3nm,1.0s,baz=46,slow=6.0,SNR=3.9
SOC Sochi 132.25 311 eP Pdif 22 11 29.7 -4.3
SOC e 22 16 58.8
SOC eSSS 22 39 34.7
ANN Anapa 133.56 313 i PKIKP PKPdf 22 14 43.6 +1.6
ANN e 22 17 17.2
ANN e 22 21 47.6
ANN pmax pmax
comp=Z,48nm,1.4s
SIM Simferopol' 135.77 314 cPKIKP PKPdf 22 14 52.1 +5.9
SIM 22 17 26.2
SIM pmax pmax
comp=Z,51nm,9.5s
AKASG Malin Array Be 136.50 324 PKP PKPdf 22 14 44.5 -2.9
comp=Z,0.4nm,0.5s,baz=70,slow=1.9,SNR=5.8
NOA NORSAR Array B 136.67 345 PKP PKPdf 22 14 46.1 -1.2
comp=Z,1.4nm,1.0s,baz=32,slow=1.9,SNR=3.6
KONO Kongsberg 138.28 345 PFAKE 22 15 00.0 +10
KONO LR LR
comp=Z,983nm,19.0s,MS5.6
KONO Kongsberg 138.28 345 AMS AMS 23 17 44.3
comp=Z,754nm,20.1s,MS5.4
BER Bergen 138.57 348 AMS AMS 23 20 34.1
comp=Z,390nm,21.2s,MS5.1
KOLS Kolonicke sedl 141.25 325 ePKP PKPdf 22 14 55.4 -0.7
STHS Stebnicka Huta 141.51 326 ePKP PKPdf 22 14 57.2 +0.7
CRVS Cervenica-Dubn 141.70 325 ePKP PKPdf 22 14 57.1 +0.2
KECS Kecovo 142.47 325 ePKP PKPdf 22 14 59.1 +0.8
OKC Ostrava-Krasne 142.81 329 ePKP PKPdf 22 14 56.7 -2.1
OKC AMS AMS 23 16 20.0
comp=Z,800nm,24.0s
BSEG Bad Segeberg 142.94 339 ePKPbc PKPdf 22 14 55.1 -3.8
KPL Plockton 143.04 355 eP PKPdf 22 14 54.3 -4.7
DPC Dobruska-Polom 143.32 331 ePKP PKPdf 22 14 55.9 -3.8
DPC AMS AMS 23 18 30.0
comp=Z,1μm,19.4s
VYHS Vyhne 143.33 327 ePKP PKPdf 22 14 57.5 -2.3
UPC Upice 143.35 331 ePKP PKPdf 22 14 56.7 -3.1
KOLL Kolacno 143.50 327 ePKP PKPdf 22 14 57.9 -2.2
BUD Budapest 143.86 325⇑ePKP PKPdf 22 14 57.9 -2.9
PVCC Panska Ves 143.98 332 ePKP PKPdf 22 14 58.5 -2.4
PVCC epPKP pPKPdf 22 15 05.2 +4.3
PVCC AMS AMS 23 17 10.0
comp=Z,1μm,21.5s
BRG Berggiesshubel 143.99 333 PKP 22 14 54.0
BRG e 22 14 58.4
BRG i 22 18 12.0
BRG e 22 23 05.0
BRG SS SS 22 37 10.0 +11
BRG LR LR
comp=Z,470nm,16.2s,MS5.3
BRG Berggiesshubel 143.99 333 PKHKP 22 14 54.0
BRG e 22 14 58.4
BRG i 22 18 12.0
BRG MLR MLR
comp=Z,470nm,16.2s,MS5.3
BRG Berggiesshubel 143.99 333 ePKPbc PKPdf 22 14 58.0 -2.9
BRG Berggiesshubel 143.99 333 PKP 22 14 54.0
BRG e 22 14 58.4
comp=Z,84nm,1.6s
BRG i 22 18 12.0
BRG e 22 23 05.0
BRG SS SS 22 37 10.0 +11
BRG
comp=N,620nm,15.9s
BRG
comp=E,407nm,24.0s
BRG
comp=Z,782nm,16.2s
SMOL Smolenice 144.03 328 ePKP PKPdf 22 14 59.6 -1.4
CLL Collm 144.05 334⇑iPKP PKPdf 22 14 58.2 -2.8
CLL i PKP PKPdf 22 15 05.3 +4.3
CLL i pPKP pPKPdf 22 15 11.6 +11
CLL ePP PP 22 18 18.0 +3.5
CLL eSKS SKSdf 22 22 11.0 -0.6
CLL LR LR
comp=Z,700nm,18.4s,MS5.5
CLL Collm 144.05 334⇑iPKPdf PKPdf 22 14 58.2 -2.8
comp=Z,69nm,1.6s
CLL ePKPlp 22 15 01.0
comp=Z,400nm,18.1s
CLL i PKiKP PKiKP 22 15 05.3 +0.8
comp=Z,57nm,1.6s
CLL i x x 22 15 11.6
CLL i x x 22 15 19.4
CLL ePP PP 22 18 18.0 +3.5
comp=Z,200nm,18.5s
CLL ePPP 22 21 28.0
CLL eSKSdf SKSdf 22 22 11.0 -0.6
CLL ePPS 22 30 44.0
CLL eSS SS 22 37 06.0 +6.4
CLL eSSS 22 42 12.0
CLL LmV 23 26 00.0
comp=Z,700nm,18.4s
CLL Collm 144.05 334 ePKPbc PKPdf 22 14 58.6 -2.4
EAB Aberfoyle 144.06 354 eP PKPdf 22 14 56.5 -4.3
MODS Modra-Piesok 144.20 328 ePKP PKPdf 22 15 00.0 -1.3
EAU Auchinoon 144.31 353 eP PKPdf 22 14 58.7 -2.5
EBL Broad Law 144.33 352 eP PKPdf 22 14 58.2 -3.1
PRA Prague 144.37 332 PKP PKPdf 22 15 00.0 -1.6
PRU Pruhonice 144.38 332 ePKP PKPdf 22 14 59.3 -2.3
PRU epPKP pPKPdf 22 15 06.4 +4.8
PRU AMS AMS 23 16 40.0
comp=Z,1μm,26.6s
TREC Trest 144.45 330 ePKP PKPdf 22 14 59.8 -1.9
TREC AMS AMS 23 19 40.0
comp=Z,1μm,23.2s
PGBU Glenifferbraes 144.45 354 eP PKPdf 22 14 59.0 -2.5
CLZ Clausthal 144.64 337 ePKPbc PKPdf 22 15 00.5 -1.5
EKA Eskdalemuir Ar 144.77 352 PKP PKPdf 22 15 00.9 -1.2
comp=Z,6.7nm,0.5s,baz=356,slow=2.4,SNR=10
ESK Eskdalemuir 144.79 352⇑eP PKPdf 22 14 59.9 -2.2
ESK Eskdalemuir 144.79 352 ePKIKP PKPdf 22 14 59.8 -2.3
ESK MLR MLR
comp=Z,660nm,22.0s,MS5.4
ECK Cauldkaine Hil 144.92 352⇑eP PKPdf 22 15 00.3 -2.0
VAY Valandovo 144.96 314 ePKP PKPdf 22 15 01.0 -1.9
GMK Mull of Kintyr 145.01 355⇑eP PKPbc 22 15 00.8 -1.0
SOP Sopron 145.02 327⇑ePKP PKPdf 22 15 02.1 -0.7
NKC Novy Kostel 145.10 334 ePKP PKPdf 22 15 02.2 -0.6
NKC e 22 15 09.3
NKC Novy Kostel 145.10 334 ePKP PKPdf 22 15 02.2 -0.6
NKC epPKP pPKPdf 22 15 09.3 +6.5

NKC AMS AMS 23 21 10.0
comp=Z,700nm,24.4s
XAL Allendale 145.11 351 eP PKPbc 22 15 00.9 -1.2
MOX Moxa 145.12 335 ePKP PKPdf 22 15 02.1 -0.7
comp=Z,144nm,1.8s
MOX
comp=Z,600nm,18.0s
MOX Moxa 145.12 335 ePKPbc PKPbc 22 15 01.9 -0.4
IBBN Ibenburen 145.15 340 ePKPbc PKPbc 22 15 02.1 -0.3
CONA Conrad Observa 145.21 328⇑iPKPdf PKPdf 22 15 03.3 +0.2
comp=Z,63nm,1.3s,SNR=28
GCD Castle Douglas 145.33 353⇑eP PKPbc 22 15 01.7 -1.1
GCL Cushendall 145.33 355⇑eP PKPbc 22 15 02.0 -0.9
GAL1 Galloway 145.41 354⇑eP PKPbc 22 15 01.9 -1.2
KHC Kasperske Hory 145.44 331 ePKP PKPdf 22 15 03.5 +0.1
KHC epPKP pPKPdf 22 15 10.2 +6.7
KHC AMS AMS 23 17 50.0
comp=Z,1μm,21.3s
ROTZ Rotzenmuhle 145.56 333 ePKPbc PKPbc 22 15 03.7 -0.1
GEC2 GERESS Array S 145.59 331 ePKPbc PKPbc 22 15 03.2 -0.7
GERES GERESS Array B 145.59 331 PKPbc PKPbc 22 15 03.8 0.0
comp=Z,11nm,0.8s,baz=47,slow=2.4,SNR=63
WET Wettzell 145.74 332 ePKPbc PKPbc 22 15 04.0 -0.3
KRUS Krusevo 145.82 315 ePKP PKPdf 22 15 03.0 -1.4
ARSA Arzberg 145.83 327⇑iP PKPdf 22 15 04.5 +0.4
comp=Z,45nm,1.4s,SNR=20
HPK Haverah Park 145.89 350 eP PKPdf 22 15 04.3 +0.2
KOGS Kog 145.99 326 ePKPdf PKPdf 22 15 04.8 +0.3
GRA1 Grafenberg Arr 146.03 334 ePKPbc PKPbc 22 15 05.0 -0.2
GRA1 LR LR
comp=Z,400nm,20.3s,MS5.2
GRF Grafenberg Arr 146.03 334 ePKPbc PKPbc 22 15 05.0 -0.2
GRF eL 23 24 11.9
comp=Z,444nm,20.3s
GRFO Grafenberg 146.03 334 ePKPdf PKPdf 22 15 04.9 +0.5
MOA Molln 146.04 329⇑iP PKPdf 22 15 05.3 +0.7
comp=Z,46nm,1.3s,SNR=12
GMM Mts of Mourne 146.14 355 eP PKPdf 22 15 04.1 -0.3
OHR Ohrid 146.25 315 ePKP PKPdf 22 15 03.7 -1.4
SISC Sisak 146.55 324 P PKPdf 22 15 05.8 +0.4
DMUB Kingscourt 146.55 356 eP PKPdf 22 15 04.0 -1.2
DMUB Kingscourt 146.55 356⇑iP PKPdf 22 15 05.9 +0.7
KBI1 Birley Grange 146.56 350 eP PKPdf 22 15 05.8 +0.6
TNS Taunus Mts 146.67 337 ePKPbc PKPbc 22 15 06.5 -0.6
LEGS Legarje 146.80 326 ePKPdf PKPdf 22 15 07.3 +1.4
CRES Cresnjev 146.81 326 ePKPdf PKPdf 22 15 07.4 +1.6
KWE Weaver Farm 146.84 350 eP PKPdf 22 15 06.8 +1.1
CWF Charnwood Fore 147.02 349 eP PKPdf 22 15 07.3 +1.3
KBA Koelnbreinsper 147.03 329⇑iP PKPdf 22 15 07.6 +1.4
comp=Z,21nm,1.2s,SNR=7.2
BEBN Eben Emael 147.11 341 PKP PKPdf 22 15 08.9 +2.7
DLF Lyons Farm 147.12 355 eP PKPdf 22 15 05.5 -0.7
DLF Lyons Farm 147.12 355⇑iP PKPdf 22 15 07.4 +1.2
BOJS Bojanci 147.13 325 ePKPdf PKPbc 22 15 08.7 +0.1
DCN Croghan 147.13 356⇑iP PKPdf 22 15 07.4 +1.2
LJU Ljubljana 147.15 327 ePKPdf PKPdf 22 15 08.3 +1.9
SBD1 Bryn Du 147.16 352⇑eP PKPbc 22 15 08.3 -0.1
MEM Membach 147.17 340 PKP PKPbc 22 15 08.1 -0.4
FUR Furstenfeldbru 147.18 332 ePKPbc PKPbc 22 15 08.3 -0.3
STON Ston 147.32 319 P PKPdf 22 15 07.3 +0.4
VOJS Vojsko 147.49 327 ePKPdf PKPdf 22 15 08.8 +1.8
UCC Uccle 147.51 342 PKP PKPdf 22 15 09.1 +2.2
BCLA Clavier 147.56 341 PKPbc PKPbc 22 15 09.6 +0.1
STU Stuttgart 147.57 335 ePKPbc PKPbc 22 15 09.5 -0.2
WATA Walderalm 147.67 331⇓iP PKPbc 22 15 09.4 -0.6
comp=Z,33nm,1.6s,SNR=8.2
WATA Walderalm 147.67 331⇓ipPKPdf pPKPdf 22 15 09.4 +2.1
comp=Z,33nm,1.6s,SNR=8.2
WTTA Wattenberg 147.69 331⇑iP PKPbc 22 15 09.8 -0.3
comp=Z,36nm,1.2s,SNR=7.2
WTTA Wattenberg 147.69 331⇑ipPKPdf pPKPdf 22 15 09.8 +2.4
comp=Z,36nm,1.2s,SNR=7.2
SNF Seneffe 147.79 342 PKP PKPdf 22 15 09.8 +2.4
MOTA Moosalm 147.87 331⇓iP PKPbc 22 15 10.1 -0.5
comp=Z,36nm,1.4s,SNR=14
MOTA Moosalm 147.87 331⇓ipPKPdf pPKPdf 22 15 10.1 +2.5
comp=Z,36nm,1.4s,SNR=14
RETA Reutte 147.92 332⇑ipPKPdf pPKPdf 22 15 10.2 +2.5
comp=Z,28nm,1.8s
SQTA Sankt Quirin 147.92 331 i P PKPbc 22 15 10.4 -0.3
comp=Z,41nm,1.5s,SNR=16
SQTA Sankt Quirin 147.92 331 i pPKPdf pPKPdf 22 15 10.4 +2.7
comp=Z,41nm,1.5s,SNR=16
LANF Langenberg 147.93 337 PKP PKPbc 22 15 11.1 +0.5
WLF Walferdange 147.94 339 ePKPdf PKPdf 22 15 06.1 -1.6
WLF ePKPbc PKPbc 22 15 10.8 +0.2
WLF Walferdange 147.94 339 PKP PKPbc 22 15 11.4 +0.7
WLF Walferdange 147.94 339 ePKPbc PKPbc 22 15 10.7 +0.1
NVLJ Novalja 147.94 324 P PKPdf 22 15 09.7 +1.8
HTR Trewern Hill 147.97 351 eP PKPbc 22 15 10.4 -0.2
GIVF Givet 147.99 341 ePKP1 PKPbc 22 15 10.4 -0.3
comp=Z,152nm,1.4s
MCH1 Michaelchurch 148.00 351 eP PKPdf 22 15 09.9 +2.2
DOU Dourbes 148.06 341 PKPbc PKPbc 22 15 10.6 -0.3
BAIF Baives 148.21 342 ePKP1 PKPbc 22 15 10.9 -0.4
comp=Z,161nm,1.7s
BFO Black Forest 148.26 335 ePKPbc PKPbc 22 15 09.9 -1.6
FETA Feichten 148.29 331 i pPKPdf pPKPdf 22 15 11.4 +3.1
comp=Z,36nm,1.1s,SNR=20
MENF Mencas 148.33 344 PKP PKPbc 22 15 12.0 +0.4
CDF Champ du Feu 148.60 337 ePKP1 PKPbc 22 15 11.9 -0.5
comp=Z,71nm,1.2s
ECH Echery 148.81 337 PKP PKPbc 22 15 12.6 -0.4
MOF Molkenrain 149.12 336 PKP PKPbc 22 15 13.9 +0.1
THEF They Montfort 149.22 338 PKP PKPbc 22 15 14.3 +0.3
HINF Hinteralfeld 149.25 336 ePKP1 PKPbc 22 15 13.4 -0.7
HAU Haudompre 149.28 337 ePKP1 PKPbc 22 15 13.7 -0.5
comp=Z,37nm,1.0s
HAU eMLR MLR
comp=Z,744nm,19.8s,MS5.2
HAU Haudompre 149.28 337 ePKP2 PKPbc 22 15 13.7 -0.5
HAU MLR MLR
comp=Z,740nm,19.8s,MS5.5
MEZF Maizieres J'vi 149.31 339 ePKP1 PKPbc 22 15 14.0 -0.2
comp=Z,208nm,1.5s
LOMF Lomont 149.65 336 PKP PKPbc 22 15 15.2 +0.1
TIP Timpagrande 149.89 314 ePKPdf PKPdf 22 15 09.4 -1.8
TIP ePKPbc PKPbc 22 15 15.8 -0.1
AQU L'Aquila 150.18 322 ePKPbc PKPbc 22 15 16.6 0.0
AQU ePKPab PKPbc 22 15 23.5 +1.0
CABF La Chapelle 150.54 336 ePKP1 PKPbc 22 15 17.4 +0.1
FLN La Foliniere 150.63 346 ePKP1 PKPbc 22 15 17.5 +0.1
comp=Z,31nm,0.8s
FLN eMLR MLR
comp=Z,1μm,20.2s,MS5.4
FLN La Foliniere 150.63 346 ePKIKP PKPbc 22 15 17.5 +0.1
FLN MLR MLR
comp=Z,1μm,20.3s,MS5.7
LDF La Druitiere 150.71 345 ePKP1 PKPbc 22 15 18.0 +0.4
LOR Lormes 150.78 339 ePKP1 PKPbc 22 15 17.0 -0.8
comp=Z,35nm,1.1s
LOR eMLR MLR
comp=Z,627nm,19.2s,MS5.1
LOR Lormes 150.78 339 ePKIKP PKPbc 22 15 17.0 -0.8
LOR MLR MLR
comp=Z,630nm,19.3s,MS5.4
GRR Gorron 151.07 346 ePKP1 PKPbc 22 15 18.5 0.0
SSF Saint Saulge 151.08 340 ePKP1 PKPbc 22 15 17.2 -1.3
comp=Z,32nm,1.1s
HYF Humbligny 151.17 341 ePKP1 PKPbc 22 15 18.4 -0.3
LPL La Plagne 151.19 334 ePKP1 PKPbc 22 15 18.9 +0.1
LPG La Plagne 151.19 334 ePKP1 PKPbc 22 15 19.0 +0.1
comp=Z,13nm,0.7s
SMF Signal de Mont 151.33 339 ePKP1 PKPbc 22 15 18.8 -0.3
AVF Avril sur Loir 151.37 339 ePKP1 PKPbc 22 15 19.7 +0.5
SGMF Saint Gilles 151.55 348 ePKP1 PKPbc 22 15 20.2 +0.6
BNI Bardonecchia 151.59 333 ePKPbc PKPbc 22 15 19.1 -0.6
ROSF Rostrenen 151.60 349 ePKP1 PKPbc 22 15 20.3 +0.6
BGF Bois d'Agland 151.74 340 ePKP1 PKPbc 22 15 20.6 +0.5
comp=Z,12nm,0.7s
MBDF Montbardon 151.81 333 ePKP1 PKPbc 22 15 20.8 +0.5
QUIF Quistinic 151.99 349 ePKP1 PKPbc 22 15 21.2 +0.6
PLDF La Plantade 151.99 338 PKP PKPbc 22 15 20.6 -0.1
ORIF Oris-en-Rattie 152.03 334 ePKP1 PKPbc 22 15 20.3 -0.5
comp=Z,14nm,0.7s
ORIF eMLR MLR
comp=Z,700nm,21.0s,MS5.1
TCF Toulx Ste Croi 152.18 340 ePKP1 PKPbc 22 15 20.8 -0.3
SBF Sospel 152.19 331 ePKP1 PKPbc 22 15 21.7 +0.5
PYM Petit Puy Mans 152.39 339 PKP PKPbc 22 15 20.2 -1.4
PGF Pioggiola 152.43 327 ePKP1 PKPbc 22 15 22.2 +0.4
comp=Z,159nm,1.4s
MFF Saint Martin d 152.57 344 ePKP1 PKPbc 22 15 22.4 +0.5
FRF La Foret Royal 152.79 331 ePKP1 PKPbc 22 15 22.9 +0.4

SMRF	**Simiane la Rot**	**152.92 333**	*e*PKP1	PKPbc	22 15 23.2	+0.4
LMR	**La Mourre**	**153.03 331**	*e*PKP1	PKPbc	22 15 23.6	+0.5
RJF	**Les Rejaudoux**	**153.27 340**	*e*PKP1	PKPbc	22 15 24.0	+0.5
RJF			*e*MLR	MLR		
	comp=Z,794nm,20.0s,MS5.2					
RJF	**Les Rejaudoux**	**153.27 340**	*e*PKIKP	PKPbc	22 15 24.0	+0.5
RJF			MLR	MLR		
	comp=Z,790nm,20.0s,MS5.5					
CAF	**Calviac**	**153.43 339**	*e*PKP1	PKPbc	22 15 24.6	+0.7
LFF	**La Frestale**	**153.84 341**	*e*PKP1	PKPbc	22 15 25.3	+0.5
ESDC	**Sonseca Array**	**160.03 344**	PKPab	PKPab	22 16 03.8	-0.6
	comp=Z,1.5nm,0.8s,baz=17,slow=3.2,SNR=6.5					
TOA0	**Torodi Ar. Sit**	**165.96 240**	*e*PKPdf	PKPdf	22 15 29.9	-1.5
TORD	**Torodi Ar. Bea**	**165.96 240**	PKP	PKPdf	22 15 30.1	-1.3
	comp=Z,0.9nm,1.1s,baz=246,slow=6.3,SNR=4.0					

IDC 31 21:56:54.5±3.7, 1274N×14289E, h204km±56km, mb3.3/5, mb1 3.5/6, mb1mx3.3/20, mbtmp3.4/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/36, Error ellipse: s-maj=91.3km s-min=15.2km az=89.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.10**	**66**	P	Pn	21 57 34.8	+0.4
	17nm,0.3s,baz=5.0,slow=23,SNR=15						
GUMO				S	Sn	21 58 05.7	+0.3
	24nm,0.3s,baz=4.8,slow=23,SNR=8.1						
CBIJ	**Chichi jima**	**14.30**	**357**	LR	LR	22 05 11.2	
	comp=Z,234nm,21.0s,baz=153,slow=35						
MJAR	**Matsushiro Arr**	**24.07**	**351**	P	P	22 01 50.8	-0.4
	1.4nm,0.8s,baz=171,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**33.55**	**195**	P	P	22 03 15.0	-0.2
	2.5nm,0.5s,baz=12,slow=9.3,SNR=14						
ASAR	**Alice Springs**	**37.23**	**194**	P	P	22 03 46.7	+0.2
	1.0nm,0.5s,baz=23,slow=11,SNR=6.9						
SONM	**Songino Array**	**46.34**	**326**	P	P	22 05 00.7	+0.7
	0.4nm,0.4s,baz=142,slow=7.9,SNR=3.8						
FINES	**FINESS Array B**	**91.11**	**335**	P	P	22 09 35.0	-0.8
	1.1nm,1.0s,baz=28,slow=6.3,SNR=3.8						

CSEM 31 22:01:53.5, 3860N×3189E, h10km, MD2.9, After ISK
ISK 31 22:01:53.5, 3860N×3189E, h10km, MD2.9
ISCJB 31 22:01:54.1±0.7, 3858N±005×3189E±008, h10km, Error ellipse: s-maj=10.3km s-min=4.6km az=147.6

ISC 31 22:01:54.4±0.7, 3859N±005×3189E±008, h10km, n7, σ0§46/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDHN	**Kadinhani**	**0.20**	**112**	*i* P	**Pg**	**22 01 58.0**	**-0.5**
KIZT	**Kizilcal**	**0.29**	**359**	PG	**Pg**	**22 01 59.7**	**-0.4**
KIZT				SG	**Sg**	**22 02 04.0**	**0.0**
KONT	**Konya--Tatoy**	**0.75**	**150**	PG	**Pg**	**22 02 09.3**	**+0.5**
KONT				SG	**Sg**	**22 02 18.8**	**+0.8**
SHUT	**Suhut-Afyon**	**1.05**	**268**	*e*PG	**Pg**	**22 02 13.8**	**-0.7**
ESKT	**Eskisehir**	**1.23**	**319**	PN	**Pn**	**22 02 17.7**	**+0.1**
ESKT				SN	**Sn**	**22 02 34.3**	**+0.1**
ESKT	**Eskisehir**	**1.23**	**319**	*i* P	**Pn**	**22 02 17.9**	**+0.4**
ESKT				*i* S	**Sb**	**22 02 34.4**	**+0.8**
ALT	**Altintas**	**1.46**	**289**	*e*PN	**Pn**	**22 02 20.4**	**-0.4**

CSEM 31 22:18:51.6±0.1, 3795N×3102E, h5km, MD3.0, Error ellipse: s-maj=2.0km s-min=1.3km az=104.0
ISK 31 22:18:51.2, 3795N×3094E, h2km, MD3.0
ISCJB 31 22:18:52.2±0.4, 3798N±003×3095E±004, h2km, Error ellipse: s-maj=4.8km s-min=4.0km az=142.4
DDA 31 22:18:54.4, 3800N×3094E, h7km±3km, Md3.1

ISC 31 22:18:52.4±0.7, 3799N±004×3094E±004, h1km±6km, n18, σ1§02/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ISP	**Isparta**	**0.37**	**247**	PG	**Pg**	**22 18 58.6**	**-0.8**
ISP				SG	**Sg**	**22 19 04.7**	**+0.6**
BCK	**Bucak**	**0.59**	**208**	*e*PG	**Pg**	**22 19 02.7**	**-1.1**
SHUT	**Suhut-Afyon**	**0.64**	**332**	*e*PG	**Pg**	**22 19 06.0**	**+1.3**
KDHN	**Kadinhani**	**1.07**	**60**	*i* P	**Pg**	**22 19 12.1**	**-0.8**
KDHN				*i* S	**Sg**	**22 19 28.4**	**+1.6**
ANTB	**Antalya**	**1.11**	**192**	*e*PG	**Pg**	**22 19 13.0**	**-0.6**
KONT	**Konya--Tatoy**	**1.13**	**92**	*e*PN	**Pn**	**22 19 13.6**	**-1.7**
KIZT	**Kizilcal**	**1.16**	**40**	*e*PN	**Pn**	**22 19 14.1**	**-1.7**
KHL	**Karahalli**	**1.16**	**287**	*e*PN	**Pn**	**22 19 15.2**	**-0.6**
ALT	**Altintas**	**1.25**	**329**	*e*PN	**Pn**	**22 19 15.9**	**-1.1**
GOLH	**Golhisar**	**1.32**	**236**	*i* P	**Pg**	**22 19 17.7**	**0.0**
GOLH				*i* S	**Sg**	**22 19 36.5**	**+1.6**
ELL	**Elmali**	**1.48**	**214**	*e*PN	**Pn**	**22 19 19.9**	**-0.3**
ESKT	**Eskisehir**	**1.53**	**358**	*i* P	**Pn**	**22 19 20.3**	**-0.6**
ESKT				*i* S	**Sn**	**22 19 41.9**	**+0.5**
ESKT	**Eskisehir**	**1.53**	**358**	*e*Pn	**Pn**	**22 19 21.1**	**+0.2**
SEYT	**Eskypehyr**	**1.53**	**358**	*i* P	**Pn**	**22 19 20.3**	**-0.6**
SEYT				*i* S	**Sn**	**22 19 41.9**	**+0.5**
GDZ	**Gediz**	**1.58**	**314**	*i* P	**Pn**	**22 19 21.6**	**0.0**
GDZ				*i* S	**Sn**	**22 19 43.4**	**+0.7**
KULA	**Kula-Manisa**	**1.87**	**287**	*e*PN	**Pn**	**22 19 25.5**	**0.0**
FETY	**Fethiye**	**2.00**	**228**	*e*PN	**Pn**	**22 19 27.1**	**-0.2**
ERMK	**Ermenek**	**2.07**	**130**	*i* P	**Pn**	**22 19 30.0**	**+1.7**
ERMK				*i* S	**Sn**	**22 19 56.3**	**+1.6**

ISCJB 31 22:30:12.7±0.6, 521N±02×1765W±0.1, h106km±5km, mb3.9/9, Error ellipse: s-maj=29.3km s-min=9.9km az=157.5
IDC 31 22:30:12.3±0.7, 523N×17662W, h90km±6km, mb3.6/9, mb1 3.9/10, mb1mx3.5/25, mbtmp3.6/10, Error ellipse: s-maj=35.5km s-min=12.6km az=156.0
NEIC 31 22:30:13.8±0.9, 5208N×17644W, h101km±9km, mb3.8/1, Error ellipse: s-maj=31.0km s-min=13.4km az=156.0

ISC 31 22:30:13.7±0.6, 521N±02×1765W±01, h102km±5km, h95km±2.1km: pP-P, n18, σ0§84/20, mb3.9/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADK	**Adak**	**0.22**	**216**	P	**Pn**	**22 30 28.2**	**0.0**
ADK				S	**Sn**	**22 30 39.0**	**+0.2**
ATKA	**Atka Island**	**1.41**	**83**	P	**Pn**	**22 30 38.9**	**0.0**
ATKA				S	**Sn**	**22 30 57.9**	**-0.1**
SVW2	**Sparrevohn**	**14.58**	**43**	*e*P	**Pn**	**22 33 38.9**	**+4.3**
KDAK	**Kodiak Island**	**14.84**	**58**	P	**Pn**	**22 33 36.0**	**-2.0**
	1.8nm,0.3s,baz=263,slow=8.3,SNR=16						
SLKM	**Skilak Lake**	**16.75**	**49**	*e*Pn	**Pn**	**22 34 01.6**	**-0.1**
MCK	**McKinley**	**18.54**	**40**	*e*P	**P**	**22 34 23.9**	**+1.9**
	3.8nm,0.7s						
DAWY	**Dawson**	**22.62**	**44**	*e*P	**P**	**22 35 06.5**	**+0.9**
INK	**Inuvik**	**26.07**	**35**	*e*P	**P**	**22 35 36.5**	**-0.7**
	40nm,0.9s,mb4.8						
INK	**Inuvik**	**26.07**	**35**	P	**P**	**22 35 33.7**	**-3.5**
	0.4nm,0.3s,mb3.3,baz=216,slow=4.7,SNR=4.1						
INK				sP	sP	22 36 04.6	-6.9
	3.3nm,0.9s,baz=264,slow=7.9,SNR=7.7						
YKA	**Yellowknife Ar**	**33.71**	**48**	P	**P**	**22 36 43.4**	**-1.3**
	0.7nm,0.9s,mb3.5,baz=284,slow=8.3,SNR=6.1						
MJAR	**Matsushiro Arr**	**35.32**	**262**	P	**P**	**22 36 59.1**	**+0.3**
	1.3nm,0.6s,mb4.0,baz=45,slow=6.9,SNR=8.2						
NEW	**Newport**	**37.29**	**72**	P	**P**	**22 37 15.8**	**+0.2**
	2.2nm,0.4s,mb4.4,baz=300,slow=11,SNR=5.4						
KSRS	**Korea Array**	**41.07**	**272**	P	**P**	**22 37 46.9**	**-0.2**
	0.8nm,0.5s,mb3.8,baz=59,slow=7.3,SNR=4.3						
NVAR	**Mina Array Bea**	**42.04**	**85**	P	**P**	**22 37 55.9**	**+0.9**
	0.6nm,0.5s,mb3.6,baz=300,slow=8.2,SNR=3.7						
PDAR	**Pinedale Array**	**44.73**	**74**	P	**P**	**22 38 16.8**	**+0.3**
	3.8nm,0.6s,mb4.3,baz=322,slow=3.0,SNR=33						
PDAR				pP	pP	22 38 38.0	-2.2
	0.3nm,0.8s,baz=322,slow=2.8,SNR=1.6						
PDAR				PcP	PcP	22 39 56.4	-0.6
	0.4nm,0.5s,baz=215,slow=0.7,SNR=3.7						
TXAR	**Lajitas Array**	**57.13**	**83**	P	**P**	**22 39 49.8**	**+0.2**
	baz=315,slow=6.4						
WRA	**Warramunga Arr**	**83.52**	**226**	P	**P**	**22 42 29.3**	**-0.8**
	0.3nm,0.5s,mb3.4,baz=32,slow=5.8,SNR=3.4						
WRA				pP	pP	22 42 54.9	-1.5
	0.6nm,0.9s,baz=36,slow=5.5,SNR=2.0						
ASAR	**Alice Springs**	**86.98**	**224**	P	**P**	**22 42 47.4**	**+0.1**
	0.6nm,0.7s,mb3.7,baz=25,slow=5.1,SNR=9.4						
ASAR				pP	pP	22 43 12.4	-1.3
	0.5nm,0.7s,baz=27,slow=5.3,SNR=4.1						

SOF 31 22:35:20.3, 3925N×2412E, h8km, MD3.0

ISCJB 31 22:35:20.9±0.5, 3930N±002×2388E±004, h0km±4km, Error ellipse: s-maj=4.6km s-min=3.2km az=7.5
ATH 31 22:35:22.9, 3933N×2394E, h26km±1km, MD3.5/10, ML3.5
NEIC 31 22:35:22.9, 3933N×2394E, h26km, ML3.5(ATH), ML3.4(THE), After ATH.
CSEM 31 22:35:23.7±0.1, 3932N×2389E, h20km, ML3.4, Error ellipse: s-maj=2.2km s-min=1.4km az=105.0
THE 31 22:35:24.1, 3932N×2395E, h18km, ML3.4
SKO 31 22:35:25.2, 3962N×2396E, h7km

ISC 31 22:35:21.6±0.5, 3929N±002×2391E±004, h4km±4km, n44, σ1§14/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.12**	**191**	*e*Pg	**Pg**	**22 35 27.0**	**+3.0**
NEO	**Neokhori**	**0.53**	**272**	*e*PN	**Pg**	**22 35 34.1**	**+2.2**
NEO				*e*SN	**Sg**	**22 35 42.6**	**+3.8**
PAIG	**Paliouri**	**0.66**	**344**	*e*Pg	**Pg**	**22 35 35.9**	**+1.6**
PAIG				*e*Sg	**Sg**	**22 35 45.4**	**+2.5**
LKR	**Lokris**	**0.96**	**228**	*e*PN	**Pn**	**22 35 41.8**	**0.0**
LKR				*e*SN	**Sn**	**22 35 56.3**	**+0.4**
OUR	**Ouranopolis**	**1.04**	**3**	*e*Pg	**Pg**	**22 35 42.5**	**+0.8**
LOS	**Limnos**	**1.11**	**54**	*e*Pg	**Pg**	**22 35 43.0**	**+0.2**
LOS				*e*Sg	**Sg**	**22 35 57.9**	**+0.6**
LOS	**Limnos**	**1.11**	**54**	*e*Pg	**Pg**	**22 35 43.0**	**+0.1**
LOS				*e*Sg	**Sg**	**22 35 57.9**	**+0.6**
PLG	**Polygyros**	**1.14**	**342**	*e*Pg	**Pg**	**22 35 43.6**	**+0.1**
PLG				*e*Sg	**Sg**	**22 35 58.9**	**+0.6**
PLG	**Polygyros**	**1.14**	**342**	*e*PN	**Pn**	**22 35 43.9**	**-0.5**
PLG				*e*SN	**Sn**	**22 35 59.0**	**-1.4**
PTL	**Penteli**	**1.24**	**182**	*e*PN	**Pn**	**22 35 46.5**	**+0.8**
ATH	**Athens Observa**	**1.32**	**187**	*e*PN	**Pn**	**22 35 47.8**	**+0.9**
LIT	**Litokhoron**	**1.36**	**307**	*e*Pg	**Pg**	**22 35 47.1**	**-0.6**
LIT				*e*Sg	**Sg**	**22 36 04.5**	**-0.9**
HORT	**Hortiatis**	**1.45**	**335**	*e*Pg	**Pg**	**22 35 48.2**	**-1.2**
HORT				*e*Sg	**Sg**	**22 36 07.1**	**-1.0**
LTK	**Loutraki**	**1.47**	**211**	*e*Pg	**Pg**	**22 35 49.5**	**-0.2**
LTK				*e*Sg	**Sg**	**22 36 08.5**	**-0.2**
THL	**Klokotos Trika**	**1.49**	**281**	*e*PN	**Pn**	**22 35 49.8**	**+0.6**
THE	**Thessaloniki**	**1.52**	**332**	*e*Pg	**Pg**	**22 35 49.6**	**-1.2**
NAIG	**Nisos Aigina**	**1.56**	**192**	*e*PB	**Pb**	**22 35 50.8**	**-0.3**
SOH	**Sokhos**	**1.59**	**345**	*e*Pg	**Pg**	**22 35 50.5**	**-1.5**
EVR	**Evrytania**	**1.68**	**258**	*e*PN	**Pn**	**22 35 53.1**	**+1.3**
PRK	**Paraskevi**	**1.83**	**91**	*e*PN	**Pn**	**22 35 54.6**	**+0.7**
DID	**Didima**	**1.86**	**197**	*e*Pb	**Pb**	**22 35 54.8**	**-1.4**
DID				*e*Sb	**Sb**	**22 36 18.1**	**-1.6**
SELA	**Sela**	**1.88**	**238**	*e*Pb	**Pb**	**22 35 55.7**	**-0.7**
CHOS	**Chios island**	**1.90**	**118**	*e*Pb	**Pb**	**22 35 55.7**	**-1.2**
KNT	**Kendrikon**	**2.02**	**338**	*e*Pn	**Pn**	**22 35 56.8**	**+0.3**
GRG	**Griva**	**2.03**	**326**	*e*Pn	**Pn**	**22 35 57.0**	**+0.5**
GRG				*e*Sn	**Sn**	**22 36 21.9**	**-0.4**
NVR	**Nevrokopi**	**2.06**	**359**	*e*PN	**Pn**	**22 35 57.1**	**+0.1**
MEV	**Mesovon**	**2.13**	**284**	*e*Pn	**Pn**	**22 35 59.3**	**+1.3**
RDO	**Rodhopi**	**2.23**	**33**	*e*PN	**Pn**	**22 35 59.3**	**-0.1**
VAY	**Valandovo**	**2.27**	**334**	*e*Pn	**Pn**	**22 35 58.5**	**-1.4**
RLS	**Riolos of Patr**	**2.27**	**238**	*e*PB	**Pb**	**22 36 02.1**	**-1.1**
ALN	**Alexandroupoli**	**2.29**	**45**	*e*Pn	**Pn**	**22 36 00.3**	**+0.1**
MMB	**Musomiste**	**2.30**	**357**	*i* P	**Pn**	**22 36 01.1**	**+0.8**
FNA	**Florina**	**2.45**	**308**	*e*Pn	**Pn**	**22 36 02.9**	**+0.5**
RZN	**Rozhen**	**2.47**	**14**	*i* P	**Pn**	**22 36 03.0**	**+0.3**
KDZ	**Kurdzhali**	**2.62**	**25**	*i* P	**Pn**	**22 36 03.5**	**-1.2**
ITM	**Ithomi**	**2.62**	**217**	*e*PB	**Pb**	**22 36 07.5**	**-1.7**
KKB	**Krupnik**	**2.65**	**346**	*i* P	**Pn**	**22 36 05.4**	**+0.3**
VLI	**Velia**	**2.68**	**197**	*e*PN	**Pn**	**22 36 06.6**	**+1.1**
IGT	**Igoumenitsa**	**2.78**	**276**	*e*Pn	**Pn**	**22 36 10.3**	**+3.3**
KRUS	**Krusevo**	**2.91**	**316**	*e*Pn	**Pn**	**22 36 09.7**	**+1.0**
KEK	**Kerkira**	**3.21**	**279**	*e*PN	**Pn**	**22 36 15.0**	**+2.2**
KEK	**Kerkira**	**3.21**	**279**	*e*Pb	**Pb**	**22 36 15.9**	**-3.3**
PGB	**Panagyurishte**	**3.26**	**3**	*i* P	**Pg**	**22 36 21.1**	**-3.0**
VTS	**Vitosha**	**3.34**	**351**	*i* P	**Pb**	**22 36 20.5**	**-0.9**

IDC 31 22:44:40.0±1.7, 1540S×17722W, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.2/15, mbtmp4.1/7, MS4.3/11, Ms1 4.3/11, ms1mx4.0/25, Error ellipse: s-maj=109.4km s-min=20.5km az=143.0
NEIC 31 22:44:45.6±0.5, 1520S×17736W, h35km, mb4.8/5, Error ellipse: s-maj=25.9km s-min=9.5km az=146.0
ISCJB 31 22:44:46.7±2.3, 155S±03×1772W±02, h67km±25km, mb4.2/12, Error ellipse: s-maj=52.1km s-min=11.9km az=146.2

ISC 31 22:44:48.5±2.0, 155S±03×1772W±02, h69km±23km, n44, σ0§76/19, mb4.2/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.45**	**74**	*e*Pn	**Pn**	**22 46 06.9**	**-0.3**
	118nm,1.4s						
RAO	**Raoul Island**	**13.74**	**183**	LR	LR	22 52 32.5	
	comp=Z,586nm,21.2s,baz=310,slow=34						
DZM	**Mont Dzumac**	**16.84**	**245**	Pn	**Pn**	**22 48 40.4**	**+0.6**
	0.1nm,0.3s,baz=72,slow=20,SNR=1.7						
RAR	**Rarotonga**	**17.48**	**112**	LR	LR	22 53 48.6	
	comp=Z,1µm,19.3s,baz=256,slow=31						
HNR	**Honiara**	**23.12**	**282**	LR	LR	22 57 15.8	
	comp=Z,2µm,20.3s,baz=181,slow=33						
PPT	**Papeete**	**26.54**	**98**	eLQ		22 55 47.0	
	736nm,29.2s						
PPT				eLR	LR	22 57 00.5	
	1µm,25.8s,baz=264						
PPT	**Papeete**	**26.54**	**98**	LR	LR	22 57 41.0	
	comp=Z,662nm,19.5s,baz=265,slow=29						
TBI	**Tubuai**	**27.26**	**111**	eLR	LR	22 57 30.1	
	2µm,27.0s,baz=289						
TAOE	**Nuku Hiva Isla**	**36.75**	**84**	eLR	LR	23 01 38.8	
	1µm,26.7s						
RKT	**Rikitea**	**40.45**	**108**	eLR	LR	23 03 33.7	
	896nm,26.8s						
TAU	**Tasmania Unive**	**40.84**	**221**	P	**P**	**22 52 23.1**	**-0.3**
	34nm,1.2s,mb5.1						
STKA	**Stephens Creek**	**40.86**	**239**	*e*P	**P**	**22 52 24.2**	**+0.5**
STKA	**Stephens Creek**	**40.86**	**239**	P	**P**	**22 52 23.8**	**0.0**
	12nm,0.9s,mb4.7,baz=69,slow=8.7,SNR=9.9						
STKA				LR	LR	23 05 37.9	
	comp=Z,225nm,19.4s,baz=303,slow=31						
WRA	**Warramunga Arr**	**46.28**	**257**	P	**P**	**22 53 07.6**	**+0.2**
	1.1nm,0.6s,mb3.7,baz=89,slow=7.5,SNR=5.1						
WRA				PcP	PcP	22 54 43.7	+1.7
	1.3nm,0.9s,baz=86,slow=3.5,SNR=5.1						
ASAR	**Alice Springs**	**46.63**	**252**	P	**P**	**22 53 09.2**	**-1.0**
	3.8nm,0.7s,mb4.2,baz=86,slow=8.1,SNR=30						
ASAR				PcP	PcP	22 54 44.9	+1.8
	0.8nm,0.9s,baz=93,slow=5.3,SNR=3.6						
MJAR	**Matsushiro Arr**	**66.69**	**322**	LR	LR	23 18 30.6	
	comp=Z,263nm,20.8s,baz=115,slow=30						
KSRS	**Korea Array**	**73.69**	**317**	LR	LR	23 24 03.3	
	comp=Z,145nm,18.7s,baz=301,slow=32						
KDAK	**Kodiak Island**	**75.76**	**13**	P	**P**	**22 56 27.3**	**+0.9**
	3.0nm,0.8s,mb4.1,baz=276,slow=4.9,SNR=3.8						
LPIG	**La Paz**	**76.20**	**60**	LR	LR	23 21 10.1	
	comp=Z,170nm,20.0s,baz=284,slow=29						
NVAR	**Mina Array Bea**	**76.85**	**44**	P	**P**	**22 56 35.0**	**+2.0**
	0.9nm,0.7s,mb3.6,baz=235,slow=9.5,SNR=3.2						
SLKM	**Skilak Lake**	**78.75**	**13**	*e*P	**P**	**22 56 43.3**	**+0.1**
BBB	**Bella Bella**	**79.62**	**28**	LR	LR	23 25 29.4	
	comp=Z,146nm,19.2s,baz=29,slow=31						
TTA	**Tatalina**	**79.88**	**10**	*e*P	**P**	**22 56 50.1**	**+0.9**
	16nm,1.3s,mb4.7						
MCK	**McKinley**	**81.91**	**12**	*e*P	**P**	**22 56 59.0**	**-1.0**
	7.5nm,0.9s,mb4.5						
COLA	**College**	**83.15**	**12**	*e*P	**P**	**22 57 05.3**	**-1.1**
	7.4nm,0.9s,mb4.5						
DAWY	**Dawson**	**84.43**	**16**	*e*P	**P**	**22 57 12.6**	**-0.3**
EGAK	**Eagle**	**84.56**	**15**	*e*P	**P**	**22 57 12.7**	**-1.0**
	5.0nm,1.0s,mb4.4						
PDAR	**Pinedale Array**	**84.77**	**43**	P	**P**	**22 57 15.1**	**-0.2**
	0.5nm,0.9s,mb3.5,baz=182,slow=5.1,SNR=3.9						
EDM	**Edmonton**	**87.48**	**33**	*e*P	**P**	**22 57 28.5**	**+0.2**
YKA	**Yellowknife Ar**	**91.63**	**24**	P	**P**	**22 57 47.7**	**+0.2**
YKA				LR	LR	23 33 05.2	
YKA	**Yellowknife Ar**	**91.63**	**24**	P	**P**	**22 57 47.7**	**+0.2**
	0.7nm,0.9s,mb3.9,baz=247,slow=4.4,SNR=7.0						
YKA				LR	LR	23 33 05.2	
	comp=Z,254nm,18.6s,baz=340,slow=32						
PLCA	**Paso Flores**	**92.15**	**133**	LR	LR	23 27 31.7	
	comp=Z,198nm,21.2s,baz=176,slow=28						
KOLS	**Kolonicke sedl**	**143.01**	**339**	*e*PKP	PKPdf	23 04 13.7	-0.6
VYHS	**Vyhne**	**144.53**	**342**	*e*PKP	PKPdf	23 04 18.7	+1.7
MODS	**Modra-Piesok**	**145.09**	**343**	*e*PKP	PKPdf	23 04 19.4	+1.4
GRA1	**Grafenberg Arr**	**145.19**	**350**	*e*PKP	PKPdf	23 04 19.2	+1.1
GRF	**Grafenberg Arr**	**145.19**	**350**	*e*PKP	PKPdf	23 04 19.2	+1.1
KHC	**Kasperske Hory**	**145.29**	**348**	*e*PKP	PKPdf	23 04 19.6	+1.3
ZST	**Bratislava**	**145.30**	**343**	*e*PKP	PKPdf	23 04 20.2	+1.9
GIVF	**Givet**	**145.42**	**358**	*e*PKP2	PKPab	23 04 20.8	+2.1
GERES	**GERESS Array B**	**145.53**	**347**	PKPbc	PKPbc	23 04 19.8	+0.9
	2.5nm,0.9s,baz=29,slow=3.0,SNR=12						
CDF	**Champ du Feu**	**146.94**	**355**	*e*PKP2	PKPab	23 04 23.9	-0.7
	8.9nm,0.9s						
HAU	**Haudompre**	**147.42**	**356**	*e*PKP2	PKPab	23 04 26.2	-0.3
	26nm,1.2s						
HINF	**Hinteralfeld**	**147.57**	**355**	*e*PKP2	PKPab	23 04 26.4	-0.7

MAN 31 22:45:57, 1687N×12231E, h1km, mb3.9, ML2.6, MS2.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.22**	**29**	*e*P	P*g*	22 46 01.9	+0.6
PALP				*e*S	Sg	22 46 05.8	+1.5
CVP	**Callao Caves**	**0.95**	**331⇑**	*e*P	Pg	22 46 16.0	+0.7
CVP				*i* S	Sg	22 46 32.6	+4.9
BALP	**Baler**	**1.32**	**212**	*e*P	Pg	22 46 22.9	+0.5
BALP				*e*S	Sg	22 46 42.2	+2.6
APYP	**Conner**	**1.42**	**314**	*e*P	Pn	22 46 24.5	+0.5
APYP				*e*S	Sg	22 46 46.4	+3.7
PCPH	**Palayan**	**1.75**	**222**	*e*P	Pn	22 46 30.1	+1.7
PCPH				*e*S	Sn	22 46 56.2	+4.9
POLP	**Polilio Island**	**2.16**	**190**	*e*P	Sn	22 47 00.7	-0.8
BOLP	**Bolinao**	**2.35**	**258**	*e*P	Pn	22 46 40.8	+4.0

IDC 31 23:06:05.7±1.4, 3209S×17799W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.9/13, mbtmp3.9/3, ML3.4/1, Error ellipse: s-maj=47.0km s-min=36.5km az=143.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.34**	**212**	Pn	Pn	23 07 53.7	-0.5
	0.6nm,0.3s,baz=138,slow=5.4,SNR=6.5						
URZ				Sn	Sn	23 09 14.6	-3.5
	1.2nm,0.3s,baz=178,slow=16,SNR=8.0						
ASAR	**Alice Springs**	**43.05**	**269**	P	P	23 14 07.7	+0.3
	1.0nm,0.6s,baz=105,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**44.19**	**274**	P	P	23 14 16.3	-0.3
	1.3nm,0.4s,baz=113,slow=7.8,SNR=7.8						
KAF	**Kangasniemi**	**146.14**	**340**	*e*p	PKPdf	23 25 43.6	-2.4
FINES	**FINESS Array B**	**146.73**	**339**	PKPbc	PKPbc	23 25 48.8	0.0
	1.9nm,0.7s,baz=55,slow=5.4,SNR=12						
NB2	**NORSAR Subarra**	**150.42**	**351**	PKP	PKPbc	23 25 58.2	-0.1
	comp=Z,2.2nm,1.0s,baz=14,slow=3.4						
NOA	**NORSAR Array B**	**150.42**	**351**	PKPbc	PKPbc	23 25 57.5	-0.8
	comp=Z,0.7nm,0.8s,baz=14,slow=4.1,SNR=3.2						
AKASG	**Malin Array Be**	**152.63**	**321**	PKPbc	PKPbc	23 26 02.9	-0.8
	comp=Z,0.3nm,0.4s,baz=53,slow=1.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**161.14**	**179**	PKPab	PKPab	23 26 51.8	+0.1
	comp=Z,0.5nm,0.9s,baz=150,slow=6.0,SNR=2.2						

NEIC 31 23:39:52.7, 1081N×6175W, h13km, MD3.4(TRN), After TRN.

TRN 31 23:39:52.7, 1081N×6175W, h13km, MD3.5, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TCE	**Chacachacare**	**0.11**	**183**	*e*P	Pg	23 39 55.9	+0.1
TCE				*e*S	Sg	23 39 58.4	+0.5
TRN	**Trinidad (W)**	**0.37**	**115**	*e*P	Pg	23 40 00.5	+0.3
TRN				*e*S	Sg	23 40 05.1	-0.1
TPP	**Pointe-a-Pierr**	**0.57**	**149**	*e*P	Pg	23 40 03.4	-0.3
TPP				*

	comp=N,52nm,0.2s						
TACH	**Talagante**	**3.12**	**216**	*e*P	Pn	23 51 18.7	+0.3
TACH				*i* S	Sn	23 51 56.6	+0.4
CHCH	**Chadas Angostu**	**3.22**	**209**	*i* P	Pn	23 51 20.4	+0.7
CHCH				*i* S	Sn	23 51 59.5	+0.9

KRSC 31 23:57:07.1±0.1, 5412N×15905E, h197km±27km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNL	**Ganaly**	**0.78**	**237**	*e*P	Pn	23 57 35.8	+0.7
GNL				*i* S	Sn	23 57 57.3	+0.6
AVH	**Avacha**	**0.88**	**192**	*e*P	Pn	23 57 36.3	+0.6
NLC	**Nalytchevo**	**0.97**	**169**	*e*P	Pn	23 57 37.4	+1.1
NLC				*i* S	Sn	23 57 59.8	+1.0
PET	**Petropavlovsk**	**1.12**	**192**	*e*P	Pn	23 57 38.7	+1.3
PET				*i* S	Sn	23 58 02.6	+1.8
SPN	**Mys Shipunski**	**1.18**	**150**	*e*P	Pn	23 57 38.6	+0.8
SPN				*i* S	Sn	23 58 01.4	-0.1
TUMR	**Tumrok**	**1.33**	**28**	*i* P	Pn	23 57 41.1	+2.2
TUMR				*i* S	Sn	23 58 06.4	+2.6
MKZ	**Mys Kozlova**	**1.63**	**73**	*e*P	Pn	23 57 43.0	+1.4
MKZ				*i* S	Sn	23 58 08.2	-0.2
RUS	**Russkaya**	**1.72**	**191**	*e*P	Pn	23 57 43.0	+0.4
RUS				*i* S	Sn	23 58 09.9	-0.1
SRDR	**Sredinnyy**	**2.23**	**10**	*e*P	Pn	23 57 48.5	+0.8
MIPR	**Malaya Ipel'ka**	**2.31**	**218**	P	Pn	23 57 49.5	+0.9
KBTR	**Krutoberegovo**	**3.01**	**44**	*e*P	Pn	23 57 57.5	+1.0
KBTR				*i* S	Sn	23 58 34.5	-0.8

*TEH **31** 23:56:38.3, 3795N×4470E, h18km, ML3.5*
*NSSP **31** 23:57:45.0, 3800N×4482E, h10km, ML3.1*
*CSEM **31** 23:57:49.7±0.5, 3827N×4467E, h2km, ML3.1, Error ellipse: s-maj=13.6km s-min=9.8km az=144.0*
*ISCJB **31** 23:57:53.9±0.6, 3803N±003×4484E±003, h15km±5km, Error ellipse: s-maj=6.1km s-min=3.6km az=157.9*
*ISK **31** 23:57:53.8, 3800N×4474E, h7km, MD3.7*
*THR **31** 23:57:57.5±0.4, 3808N×4476E, h14km±7km, ML2.8*
ISC 31 23:57:54.6±0.5, 3799N±004×4479E±003, h14km±5km, n30, σ1§36/40, 4D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HKR	**Hakkari**	**0.93**	**244**	PG	**Pg**	**23 58 11.4**	**-1.1**
HKR				SG	**Sg**	**23 58 24.1**	**-0.5**
HAKT	**HAKKARI**	**0.96**	**243**	*i* P	**Pb**	**23 58 12.0**	**-1.0**
IAZR	**Azarshahr**	**1.00**	**108**	*e*Pg	**Pg**	**23 58 13.4**	**-0.5**
IAZR				*e*Sg	**Sg**	**23 58 27.3**	**+0.4**
IAZR				*e*		23 58 34.4	
	comp=Z,14μm,0.2s						
IAZR	**Azarshahr**	**1.00**	**108**	*e*Pg	**Pg**	**23 58 13.4**	**-0.5**
IAZR				*e*Sg	**Sg**	**23 58 27.3**	**+0.4**
IMRD	**Marand**	**1.02**	**45**	*e*Sg	**Sg**	**23 58 30.4**	**+2.8**
IMRD				*e*		23 58 14.9	
	comp=Z,21μm,0.1s						
ITBZ	**Tabriz**	**1.10**	**77**	*e*Sg	**Sg**	**23 58 30.8**	**+0.6**
ITBZ				*e*		23 58 35.4	
	comp=Z,8μm,0.2s						
VANT	**Van**	**1.19**	**293**	PN	**Pn**	**23 58 18.7**	**+1.8**
CUKT	**Cukurca**	**1.19**	**232**	PN	**Pn**	**23 58 16.6**	**-0.3**
CUKT				SN	**Sn**	**23 58 33.3**	**+0.3**
TVAN	**Van**	**1.21**	**297**	*i* P	**Pn**	**23 58 16.6**	**-0.6**
VANB	**Van**	**1.25**	**299**	PN	**Pn**	**23 58 17.0**	**-0.7**
CLDR	**Caldiran**	**1.34**	**330**	PN	**Pn**	**23 58 18.6**	**-0.3**
MAKU	**Maku**	**1.36**	**357**	*e*Pg	**Pg**	**23 58 21.2**	**+0.4**
MAKU				*e*Sg	**Sg**	**23 58 38.8**	**+0.2**
MAKU				AML	AML	23 58 48.1	
	comp=N,125nm,0.6s						
MAKU				AML	AML	23 58 48.4	
	comp=E,186nm,0.4s						
MAKU	**Maku**	**1.36**	**357**	*e*Pg	**Pg**	**23 58 21.2**	**+0.4**
	SNR=90						
MAKU				*e*Sg	**Sg**	**23 58 38.8**	**+0.2**
	comp=E,186nm,0.4s,SNR=90						
MGRZ	**Megri**	**1.46**	**51**	⇓P	**Pn**	**23 58 14.5**	**-6.1**
MGRZ				S	**Sn**	**23 58 35.4**	**-4.1**
KDR	**Kadzharan**	**1.55**	**41**	⇓P	**Pn**	**23 58 16.3**	**-5.5**
KDR				S	**Sn**	**23 58 38.1**	**-3.6**
DYDN	**Diyadin**	**1.77**	**331**	*i* P	**Pn**	**23 58 28.4**	**+3.5**
XTNZ	**Xhotanan**	**1.79**	**44**	⇓P	**Pn**	**23 58 20.2**	**-5.0**
XTNZ				S	**Sn**	**23 58 44.0**	**-3.8**
EGVZ	**Egvard**	**1.85**	**48**	⇓P	**Pn**	**23 58 21.1**	**-4.9**
EGVZ				S	**Sn**	**23 58 46.5**	**-2.8**
SIRT	**Sirnak**	**1.92**	**256**	*e*PN	**Pn**	**23 58 28.0**	**+1.0**
TUTA	**Tutak**	**2.09**	**313**	*i* P	**Pn**	**23 58 32.4**	**+3.2**
AGRB	**Hanur-Agry**	**2.11**	**319**	*e*PN	**Pn**	**23 58 30.0**	**+0.4**
MSL	**Mosul**	**2.17**	**219**	*ex*	x	23 58 33.0	
MSL				*ex*	x	23 58 37.0	
MSL				*ex*	x	23 59 00.0	
MSL				*ex*	x	23 59 05.0	
GRMI	**Germi**	**2.58**	**71**	*e*Pn	**Pn**	**23 58 40.9**	**+4.9**
GRMI				*e*Sg	**Sg**	**23 59 17.8**	**+0.4**
GRMI				AML	AML	23 59 22.9	
	comp=N,49nm,0.6s						
GRMI				AML	AML	23 59 28.3	
	comp=E,40nm,0.6s						
BTMT	**Batman**	**2.61**	**275**	*e*PN	**Pn**	**23 58 39.1**	**+2.7**
DIGO	**Kars**	**2.66**	**336**	*i* P	**Pg**	**23 58 44.7**	**-0.8**
MARD	**Mardin**	**3.25**	**259**	*i* P	**Pg**	**23 58 53.6**	**-3.3**
ERZM	**Erzurum**	**3.28**	**307**	*i* P	**Pg**	**23 58 55.4**	**-2.1**
EZM	**Erzurum**	**3.28**	**307**	*e*PN	**Pn**	**23 58 47.1**	**+1.5**
BINT	**Bingol**	**3.49**	**286**	*e*PN	**Pn**	**23 58 50.4**	**+1.9**
SNGE	**Sanandaj**	**3.55**	**144**	*e*Pn	**Pn**	**23 58 55.5**	**+6.1**

ISC Computed Locations for March 2007

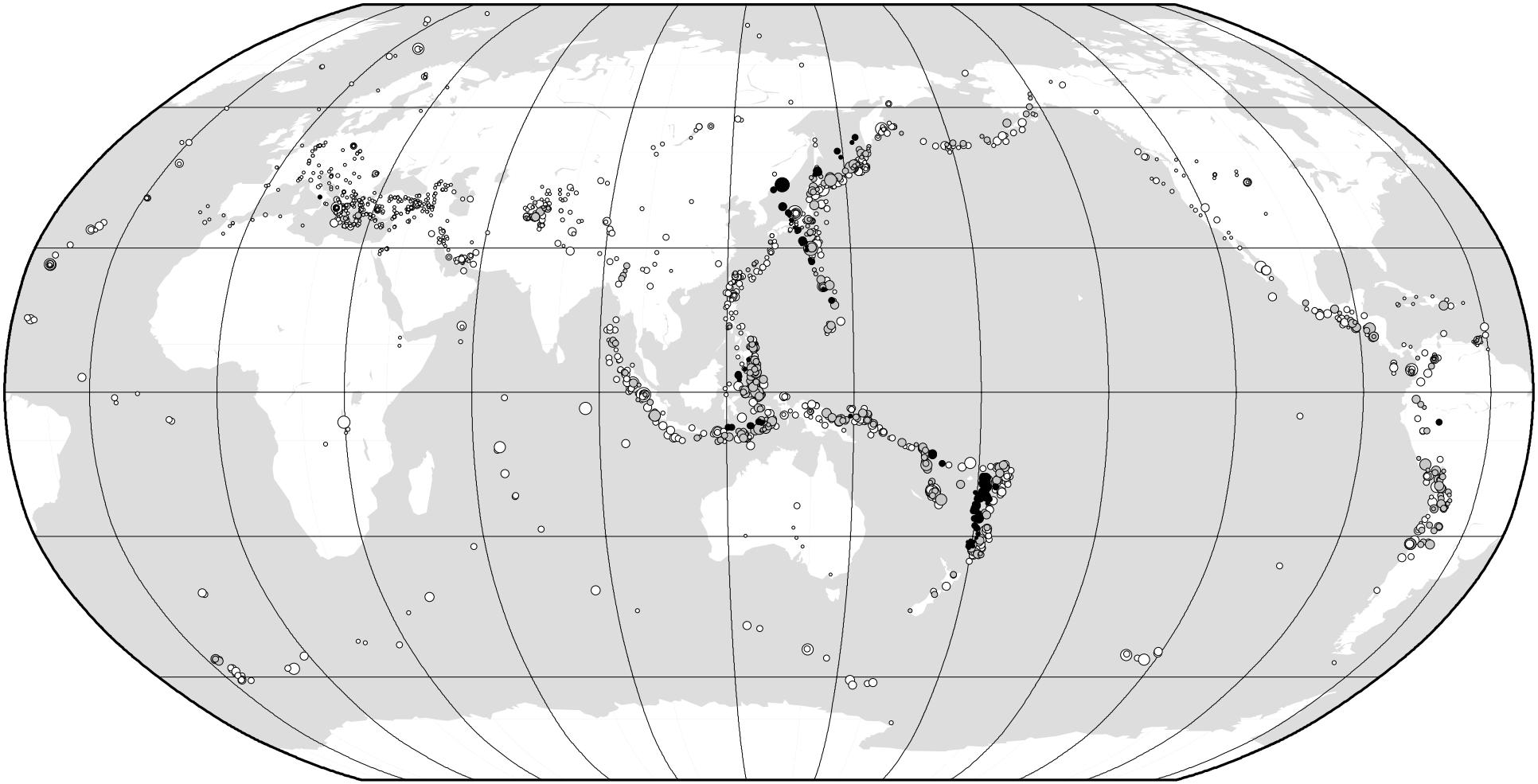

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

2286 Events